OBG

FINAL

Phase II Sediment Remedial Investigation Report
Hercules Incorporated – Former Kenvil Works
Kenvil, New Jersey

Hercules Incorporated
Wilmington, Delaware

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1 INTRODUCTION

Hercules Incorporated (Hercules) retained O'Brien & Gere Engineers, Inc. (OBG) to prepare this Phase II Remedial Investigation Report (RIR) summarizing the results of Remedial Investigation (RI) activities conducted at the former Kenvil Works Facility (Facility), located in Kenvil, New Jersey. RI activities were conducted as part of the ongoing environmental investigation at the Facility in fulfillment of a March 10, 1995 Remedial Agreement (RA) between New Jersey Department of Environmental Protection (NJDEP) and Hercules and in accordance with New Jersey's Industrial Site Recovery Act (ISRA) and New Jersey Administrative Code (N.J.A.C.) 7:26E –*Technical Requirements for Site Remediation* (TRSR).

The RIR is presented in six volumes due to the magnitude of the investigation and is organized as follows:

- Volume A – RI Summary Document. This volume of the report presents RI objectives, a summary of previous investigations, brief summary of scope of work, data quality control objectives, a description of Facility drainage systems, a brief summary of results, and conclusions and recommendations.
- Volume B – Phase II Soil remedial investigation.
- Volume C – Phase II Groundwater remedial investigation.
- Volume D – Phase II Sediment remedial investigation.
- Volume E – Phase II Surface Water remedial investigation.
- Volume F – Ecological Risk Assessment.

This organization provides a series of stand-alone, focused documents to facilitate review of the RIR. Where appropriate, volumes cross reference each other and the reviewer may occasionally find it necessary to refer to other volumes of this RIR. Each volume builds upon previous investigation findings (i.e., site investigation [SI] and Phase I RI) and leverages professional judgment based on extensive historic Explosive and Energetic (E&E) manufacturing operations experience. The findings and conclusions of each media-specific volume and the ecological risk assessment are tied together in a comprehensive conceptual site model and overall RI conclusions and recommendations presented in the summary volume. The approach and organization of the RIR was developed in conjunction with the licensed site remediation professional (LSRP) for the Facility (Mark Foley, WSP USA Corp., LSRP ID No. 575999) and fulfills RI reporting requirements established at N.J.A.C. 7:26E-4.9.

This volume, Volume D – Phase II Sediment-RI Report, presents the results of sediment investigations (SI, Phase I RI and Phase II RI) conducted at the Facility to characterize and delineate Facility-related influences on sediment. The Phase II RI results are evaluated in the context of specific Phase II RI objectives, and as part of the comprehensive sediment dataset relative to overall RI objectives.

1.1 SCOPE AND OBJECTIVES

The Phase II Sediment-RI collected additional information to supplement the findings of the surface-water and sediment site investigation (SW/SD-SI) and Phase I Sediment-RI, in order to complete the characterization of the Facility as required in the TRSR and address comments provided by the NJDEP (Appendix A). During the Phase II Sediment-RI, data were collected to complete the following objectives:

- Evaluate sediment quality outside of defined channels within wetland areas
- Confirm the depth of constituents at concentrations above applicable standards/benchmarks at select locations
- Further characterize the extent of Facility-related influences in the interior of the Facility (former operational areas)
- Evaluate surface water/sediment interactions

1.2 REPORT ORGANIZATION

This volume (Volume D – Phase II Sediment-RI) addresses Facility-related influences on sediment, presenting the results of Phase II RI soil sampling and refining the conclusions of the Phase I Sediment-RIR (MWH Americas Inc. [MWH], 2007) and the Surface Water and Sediment Site Investigation Report (SW/SD-SIR) (MWH, 2004).

Hercules conducted the Sediment-SI between 1999 and 2003, submitted the SW/SED-SIR in 2004, and received NJDEP approval of the Sediment-SIR in 2005. Following the SI, Hercules developed the Area I Remedial Investigation Work Plan (Area I RIWP, MWH, 2005) and Revised Site-Wide Remedial Investigation Work Plan (Revised Site-Wide RIWP) (MWH, 2006) framing Phase I RI activities. Hercules presented the results of the Phase I RI activities to NJDEP in the Phase I Sediment RI Report7, and received comments from NJDEP on the Phase I Sediment-RI in 2010. In 2011, Hercules retained the LSRP for the Facility and developed a framework in which to address NJDEP's 2010 comments and complete the RI within regulatory timeframe established by the Site Remediation Reform Act (N.J.S.A. 58:10C-1 et seq.). Phase II RI sampling activities outlined in the Phase II Remedial Investigation Memorandum (OBG, 2013) were developed in consultation with the LSRP in November 2013.

The Phase II RI sampling focused on filling data gaps identified in NJDEP's 2010 comments on the Phase I RI and completing characterization of conditions onsite as required by the TRSR.

The remainder of this volume is organized as follows:

- Section 2 presents a detailed description of the Phase II Sediment-RI field scope of work (SOW) and laboratory activities.
- Section 3 presents the data quality control discussion.
- Section 4 describes the types of surface water features present at the Facility.
- Section 5 discusses the criteria used to evaluate the sediment analytical results and presents the findings of the Sediment-RI.
- Section 6 presents conclusions for the Sediment remedial investigation.

2 SCOPE OF WORK

The Phase II RI Scope of Work builds upon the findings of previous environmental investigations at the Facility, addresses data gaps necessary to fulfill RI requirements per the TRSR, and addresses specific NJDEP comments concerning sediment quality outside of defined channels, vertical delineation, and surface water/sediment interactions. In addition, the Phase II RI Scope of Work considers comments issued by NJDEP in November 2010 on the Phase I Sediment RI Report (MWH, 2007). Results from previous investigations, summarized below, were used as the basis for the Phase II RI field sampling objectives and activities. Specifically, these objectives include:

- Evaluating sediment quality outside of defined channels within wetland areas
- Confirming the depth of constituents at concentrations above applicable standards at select locations
- Further characterizing the extent of Facility-related influences in the interior of the Facility (former operational areas)
- Evaluating surface water/sediment interactions

This section summarizes previous sediment investigations conducted at the Facility, and presents the scope of work for the Phase II Sediment RI, including focused objectives, sediment sample identification process, and sampling and analytical methods.

2.1 SUMMARY OF PREVIOUS INVESTIGATIONS

During the SI and Phase I Sediment-RI, 157 SI sediment samples and 403 RI sediment samples were collected from intermittent streams, perennial streams, wetlands, and ponds within the five drainage areas delineated at the Facility (see Section 4) and submitted for laboratory analysis. The data were compared to the sediment screening benchmarks recommended by NJDEP at the time of the investigation, these benchmarks included the lowest effects level (LEL) and severe effects level (SEL) values published in *Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario* (Persaud et al. 1993), consistent with NJDEP's Guidelines for Sediment Quality Evaluations (1998).

Previous investigation findings are summarized below:

- Facility-related constituents with an established LEL or SEL are delineated within the boundaries of the Facility.

- A volatile organic compound (VOC) (tetrachloroethene [PCE]) was detected at concentrations exceeding its LEL in the Western Drainage Area sediment. PCE in sediment is believed to be attributable to the discharge of a regional chlorinated VOC groundwater plume unrelated to former Facility operations.

- Semi-volatile organic compounds (SVOC) detected in sediment at the Facility at concentrations exceeding their respective LELs/SELs are comprised primarily of polycyclic aromatic hydrocarbons (PAH) constituents.

- Non-PAH SVOCs (2,4-dinitrotoluene (2,4-DNT), 2,6-dinitrotoluene (2,6-DNT), Bis(2-Ethylhexyl)Phthalate, 4,6-Dinitro-2-Methylphenol, Di-N-Butyl Phthalate, Diethyl Phthalate, and N-Nitrosodiphenylamine) detected in sediment at the Facility at concentrations exceeding their respective LELs/SELs are associated with historic manufacturing processes.

- Metals detected in sediment at the Facility at concentrations exceeding their respective LELs/SELs are associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility, recover unusable land, and establish numerous narrow gauge rail beds. Prior to the 1920's, it is known that spent acids resulting from the nitration process of E&E manufacture (sour water) was discharged to the Facility's surface water bodies as no commercially viable means of recovering spent acids was available. The low pH sour water is believed to possibly contain Metal constituents derived from contact with process vessels and piping. Detected concentrations of Metal constituents exceeding either the LEL or SEL without associated PAH constituents attributed to historic fill are believed to be derived from the historic practice of discharging sour water to the surface water bodies.

- E&E constituents detected at concentrations exceeding their respective LELs at the Facility are associated with historical manufacturing operations.

- Metal and SVOC constituents identified in the SI sediment sample SD-E16-3-01 at concentrations exceeding the LEL or SEL adjacent to the only surface water discharge point SW-E16-3-01 are attributed to impacts from Route 46. Sediment samples collected during the RI at the same location and up-gradient did not indicate any Metal or SVOC exceedances. Similar effects were observed at all surface water inflow points adjacent to roads Route 46 and Howard Boulevard and the New Jersey Transit Rail.

NJDEP commented on the Phase I RI conclusions listed above in its November 2010 comment letter, requiring additional delineation of the lateral extent of Facility-related influences in sediment beyond the defined stream channels, and vertical delineation at a subset of SI/RI sample locations. Based on the findings of the Phase I Sediment RI Report and associated NJDEP comments, Hercules prepared a Phase II RI Work Plan Memorandum (OBG 2013) outlining the scope of work summarized below.

2.2 PHASE II SEDIMENT RI SCOPE OF WORK

The Phase II Sediment RI sediment sampling activities generated data to supplement the results of the Sediment/Surface Water SI and Phase I Sediment RI and complete characterization of sediment at the Facility as required in the TRSR.

Specific Phase II Sediment RI objectives include:

- Evaluating sediment quality outside of defined channels within wetland areas
- Confirming the depth of constituents at concentrations above applicable standards at select locations
- Further characterizing the extent of Facility-related influences in the interior of the Facility (former operational areas)
- Evaluating surface water/sediment interactions

In accordance with the Phase II Remedial Investigation Memorandum (OBG, 2013) (Appendix B), 26 sediment samples were collected from Facility to achieve these objectives. Where possible, a single sample/sample location was used to fulfill data needs for multiple objectives (i.e., Phase II Sediment RI sample SD-R2-C-15-1 evaluated sediment quality outside the defined stream channel as well as surface water/sediment interaction).

Twenty (20) sediment samples were collected from the following locations and analyzed for Target Compound List (TCL) SVOCs, Target Analyte List (TAL) Metals, and E&E constituents to evaluate sediment quality outside of defined stream channels within wetland areas:

- SD-R2-G-12-1
- SD-R2-G-12-3
- SD-R2-G-12-4
- SD-R2-G-12-5
- SD-R2-F-14-1
- SD-R2-F-14-2
- SD-R2-E-13-1
- SD-R2-D-14-1
- SD-R2-C-12-6
- SD-R2-C-11-1
- SD-R2-C-15-1
- SD-R2-C-15-2
- SD-R2-K-5-1
- SD-R2-K-5-2
- SD-R2-O-4-1
- SD-R2-O-4-2
- SD-R2-E-16-3
- SD-R2-E-10-1
- SD-R2-E-10-2
- SD-R2-O-4-3

Five (5) sediment samples were collected from the following locations and analyzed for TCL VOCs (locations SD-R2-E-16-1 and SD-R2-E-16-1D only), TCL SVOCs, TAL Metals, and E&E constituents to delineate the vertical extent of Facility-related influences on sediment relative to applicable comparison criteria.

- SD-R2-E-16-1 (depth 0 to 0.5 ft.) – outfall near Route 46
- SD-R2-E-16-1D (depth 2 to 2.5 ft.) – outfall near Route 46
- SD-R2-M-7-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-M-7-01 of Phase I RI
- SD-R2-L-5-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-01 of Phase I RI
- SD-R2-L-5-02D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-02 of Phase I RI

Seven (7) co-located surface-water and sediment samples were collected from the following locations and analyzed for TCL SVOCs, TAL Metals, and E&E constituents to evaluate the influence of constituents in sediment on overlying surface water.

- SW-R2-B-15-1 and SD-R2-C-15-1
- SW-R2-B-15-2 and SD-R2-C-15-2
- SW-R2-E-16-1 and SD-R2-E-16-1
- SW-R2-E-16-3 and SD-R2-E-16-3
- SW-R2-F-14-1 and SD-R2-F-14-1
- SW-R2-F-14-2 and SD-R2-F-14-2
- SW-R2-G-12-2 and SD-R2-G-12-3

A total of 15 co-located surface water/sediment sample locations were proposed as part of the Phase II RI Memorandum (OBG, 2013). However, a lack of surface water present during sampling reduced the number of sample locations.

Figure D-1 presents sediment sample locations. Tables D-1 and D-2 present analytical parameters and methods, and sample results, respectively.

Deviations from the Phase II RI Memorandum included:

- A reduction in the number of co-located surface-water and sediment sample pairs from 15 (as proposed in the Phase II RI Memorandum) to 7 based on field conditions. Eight (8) proposed surface-water samples were unable to be collected due to an absence of surface water at these locations. Each of the 15 proposed sediment samples were collected.

- The elimination of one sediment sample based on field conditions. Sediment was not present at proposed sample SD-R2-G-12-2 presented in the Phase II RI Memorandum (OBG, 2013). Substrate conditions observed in the field were not depositional in nature and did not possess the hydrology necessary to support a benthic invertebrate community, and thus are not sediment by definition. Rather, the substrate was considered soil and no sample was collected. The photograph log (Appendix C) presents additional details related to substrate conditions at this location.

Additional noteworthy observations were made by field personnel relative to the conditions at sample location SD-R2-O-4-3. Overland flow represents the primary source of hydrology to the isolated miscellaneous pond targeted by the proposed sample location SD-R2-O-4-3. Standing water was not observed at the time of sampling, however, the substrate was moist, potentially hydric, and contained organic matter and the material was sampled as if it were sediment. The photograph log (Appendix C) presents additional details related to substrate conditions at this location.

2.2.1 Sediment Sampling Methods

Sediment samples were collected using one of three sampling methods, a simple scoop (for compact sediments), a bucket auger (for cohesive sediments), or a loose sediment sampling kit (for liquefied sediments). The sediment sampling activities were conducted in accordance with the Final Field Quality Assurance Project Plan (FQAPP) (MWH, 2006) and the Phase II RI Memorandum (OBG, 2013) and are described below.

To ensure the safety of field and laboratory personnel field screening for the presence of E&E constituents was conducted prior to the collection of the sediment samples. The screening process included:

- Visually inspecting the sampling location for the presence of E&E constituents
- For sediments free of visible quantities E&E constituents, field testing for residual E&E constituents was conducted using the EX-PRAY® system in accordance with Section 5.1 of the FQAPP. E&E constituents were not identified at concentrations requiring modification to the Phase II Remedial Investigation Memorandum at any of the sediment sample locations.

2.2.1.1 Simple Scoop

Some shallow samples analyzed for TCL SVOCs, E&E compounds, and TAL Metals were collected using stainless steel scoops. Only the most cohesive/compact sediments from the 0-0.5 ft sample interval were collected using this technique, which is summarized below:

- A new decontaminated stainless steel scoop was used to removed sample material from the location-specific interval;
- Sample material was placed into a decontaminated stainless steel bowl and homogenized; and
- Sample material was transferred from the stainless steel bowl to laboratory-supplied sample containers.

2.2.1.2 Bucket Auger

Most shallow sediment samples were collected with a decontaminated stainless steel bucket auger, provided the sediment was sufficiently cohesive to be held within the bucket auger without losing the fine grained components of the sediment. The bucket auger was advanced by hand at each sampling location for classification and sample collection. It was then advanced at 6-inch intervals and removed from the borehole for evaluation. Sediment sample collection procedures using a bucket auger are summarized below:

- The bucket auger was advanced to the desired depth and removed for sediment classification and sample collection;
- The sample material collected from the auger was placed into a decontaminated stainless steel bowl and homogenized; and
- Sample material was transferred from the stainless steel bowl to laboratory-supplied sample containers.

2.2.1.3 Loose Sediment Sampling Kit

Sediment that was too unconsolidated for collection using a bucket auger was sampled using the loose sediment sampling kit. The loose sediment sampling kit consists of a hollow, cylindrical auger outfitted to accommodate a disposable plastic liner; a tapered tip; and an attachable slide hammer that is used to advance the auger when deeper samples are required. Samples requiring use of this kit were collected as summarized below:

- A new plastic liner was inserted into the mouth of the auger and secured by screwing on the auger's tip, and the slide hammer was attached if necessary;
- The auger was advanced into the sediment to the desired depth and removed for sediment classification and sample collection;
- The auger tip was removed, exposing the plastic liner and sample material contained therein; and
- Plastic liner was removed from the auger and sample material was transferred from within the liner to the laboratory-supplied sample containers.

All non-disposable equipment was decontaminated and disposable sampling equipment and personal protective equipment replaced between samples.

2.2.2 Surveying

Sediment sampling locations were established by a New Jersey-licensed surveyor using a hand-held global positioning system (GPS) unit with sub-meter accuracy. Horizontal control was referenced to the New Jersey State Plane Coordinate system (North American Datum of 1983 [NAD83]). Vertical control was referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

2.2.3 Utility Mark Out

Prior to mobilizing to the Facility to conduct the Phase II Sediment RI, sediment locations were marked in the field by an OBG geologist. After the locations were marked, New Jersey One Call was notified of the planned sampling activities and a utility mark out was requested. The sediment sampling locations were subsequently cleared.

2.2.4 Sample Identification

Unique sample identifications (IDs) were provided for each sample. The sample IDs included the matrix type (SD for sediment), an indication they were collected during the Phase II RI (R2), a grid square location and boring number within the grid square. If two samples were collected from the same location, a "D" was placed at the end of the deep sample ID.

A typical sample ID from the Phase II RI is SD-R2-G-12-1. This ID indicates the following:

- The sample is a sediment sample (SD)
- The sample was collected during the second phase of the remedial investigation (R2)
- the sample was the first boring collected from grid square G12 (G-12-1)
- the sample is a surface sample, as the "D" designation is absent

2.2.5 Laboratory Analysis

The sediment and associated quality control samples collected were submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples were analyzed for the following parameters:

- TCL VOCs using USEPA Methods 8000C/8260B
- TCL SVOCs using USEPA Methods 8000C/8270D
- E&E using USEPA Method 8330
- Perchlorate using USEPA Method 6850
- Nitrocellulose using Lancaster Laboratory SOP
- TAL Metals using USEPA Methods 6010C/6020A
- Mercury using USEPA Methods 7470A/7471A
- Total organic carbon (TOC) Method 5310 C-2000.

Prior to shipping sediment samples to the laboratory, the soil samples were screened for E&E constituents. The E&E screening indicated there were no E&E concentrations that would restrict shipment to the laboratory.

Quality Assurance/Quality Control (QA/QC) samples that were collected as part of the sediment sampling program included the following:

- One trip blank sample per sample shipment that required analysis for TCL VOCs
- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One matrix spike (MS)/matrix spike duplicate (MSD) sample per sample delivery group

3 SUMMARY OF DATA QUALITY

This section provides an evaluation of laboratory data for Phase II RI sediment samples in the context of NJDEP's 2014 Data Quality Assessment and Data Usability Evaluation Technical Guidance (NJDEP, 2014). The SI and Phase I RI sediment data were previously reviewed in the Soils SIR and Phase I RIR, respectively, and found to be of sufficient quality for use in evaluating site conditions and subsequent actions...

The data quality review performed on samples collected during the Phase II Sediment RI included an evaluation of holding times, case narrative information, field and trip blank results, and duplicate analyses. The evaluation was conducted for VOCs, SVOCs, E&E constituents, and TAL Metals. Laboratory data packages are provided in Appendix D. The sediment samples were included in the following sample delivery groups (SDG):

- KVM03
- KVM04
- KVM05
- KVM06

3.1 HOLDING TIMES

For each sample collected during the Phase II Sediment RI, the data packages were reviewed to verify that sample analysis occurred within the required holding time. The holding time criteria for each of the analyses performed during the Phase II RI are listed below:

Analysis	Holding Time Information
TCL VOCs	Preservation of encore sampler within 48 hours from collection. Analysis must be performed within 7 days from collection.
TCL SVOCs	14 days from collection to extraction; 40 days from extraction to analysis
E&E Constituents	14 days from collection to extraction; 40 days from extraction to analysis
Nitrocellulose	14 days from collection to preparation; 28 days from preparation to analysis
Dioxins/ Dibenzofurans	30 days from collection to extraction; 45 days from extraction to analysis
TAL Metals	180 days from collection to analysis
Mercury	28 days from collection to analysis

All samples were analyzed within the required holding times.

3.2 REVIEW OF CASE NARRATIVE INFORMATION

Summaries of the information provided in the Case Narratives for each SDG are provided below:

- SDG KVM03 – For samples SD-R2-L-5-02D and SD-R2-L-5-01D, the recoveries for the SVOC Laboratory Control Sample (LCS) and/or Laboratory Control Sample Duplicate (LCSD) were outside the QC acceptance limits but biased high. For samples SD-R2-L-5-02D, SD-R2-L-5-01D, SD-R2-K-5-2, and SD-R2-K-5-1, the SVOC reporting limits were elevated due to interference from the sample matrix. For samples SD-R2-L-5-02D, SD-R2-L-5-01D, SD-R2-K-5-2, and SD-R2-K-5-1 the recoveries for the E&E LCS and/or LCSD were outside the QC acceptance limits but biased high.

- SDG KVM04 – For samples SD-R2-M-7-01D, SD-R2-M-7-01D, SD-R2-0-4-1, SD-R2-O-4-2, SD-R2-O-4-3, SD-R2-E-16-1, SD-R2-F-14-1, SD-R2-F-14-2, SD-R2-G-12-1, SD-R2-G-12-3, and SD-R2-D-14-1, the SVOC reporting limits were elevated due to interference from the sample matrix. For samples SD-R2-O-4-1, SD-R2-O-4-2, SD-R2-O-4-3, SD-R2-F-14-1, SD-R2-F-14-2, SD-R2-G-12-1, SD-R2-G-12-3, SD-R2-D-14-1, SD-R2-E16-3, SD-R2-E-16-1, SD-R2-E-16-1D, SD-R2-F-14-2, SD-R2-G-12-1, SD-R2-G-12-3, SD-R2-D-14-1, and DUP-02 the recoveries for the E&E LCS and/or LCSD were outside the QC acceptance limits but biased high. For samples SD-R2-M-7-01D and SD-R2-F-14-1, the HMX in spiking standards was 20 to 25% lower than reported by the manufacturer. For samples SD-R2-G-12-1, SD-R2-D-14-1, SD-R2-O-4-1, SD-R2-O-4-2, SD-R2-O-4-3, SD-R2-M-7-01D, SD-R2-E-16-3, SD-R2-F-14-2, and SD-R2-G-12-3, E&E reporting limits were elevated due to interference from the sample matrix.

- SDG KVM05 – For samples SD-R2-G-12-4, SD-R2-G-12-4_MS, SD-R2-G-12-4_MSD, SD-R2-G-12-5, SD-R2-C-15-2, and SD-R2-C-15-1, SVOC reporting limits were elevated due to interference from the sample matrix. For samples SD-R2-G-12-5, SD-R2-G-12-4_MS, SD-R2-G-12-4_MSD, SD-R2-G-12-5, and SD-R2-C-15-2, the E&E LCS and/or LCSD recoveries for were outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The results were accepted based on this allowance.

- SDG KVM06 – For samples SD-R2-E-13-1, D-R2-C-12-6, SD-R2-C-11-1, SD-R2-E-10-1, SD-R2-E-10-1_MS, SD-R2-E-10-1_MSD, and SD-R2-E-10-2, SVOC reporting limits were elevated due to interference from the sample matrix. For samples SD-R2-E-10-2, SD-R2-E-10-1, SD-R2-E-10-1_DUP, SD-R2-E-10-1_MS, and SD-R2-E-10-1_MSD, Metals reporting limits were elevated due to interference from the sample matrix. For E&E samples SD-R2-E-13-1, SD-R2-C-12-6, SD-R2-C-11-1, SD-R2-E-10-1, SD-R2-E-10-1_MS, and SD-R2-E-10-2, the concentration of HMX was low in the spiking standard used for MS/MSD and LCS. For sample SD-R2-C-12-6, E&E reporting limits were elevated due to interference from the sample matrix.

3.2.1 Effects on Data Quality

Based on the review of the Case Narratives, the issues highlighted by the laboratory had the following effect on data quality:

- No data were qualified based on LCS/LSCD recoveries outside of the QC window because they were within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards or resulted in biased high sample results.

- Detection limits were elevated in samples where matrix interference was noted, these data were not qualified

- Where the concentration of HMX was low in the spiking standard, evaluation of the standard indicated the manufacturer's value was 20-25% below their reported concentration. HMX concentrations were subsequently adjusted to compensate for the discrepancy by the laboratory. No additional action is required.

Based on the review, the data are of sufficient quality for use in evaluating site conditions and subsequent actions.

3.3 FIELD AND TRIP BLANK RESULTS

No VOCs, SVOCs or E&E constituents were detected in the field and trip blank samples. Calcium was detected in a field blank sample collected on November 5, 2013 (SDG KVM-04) and analyzed for Metals. Calcium, an essential nutrient commonly found in surface water and groundwater, is not a constituent of concern (COC) at the Facility.

3.4 DUPLICATE SAMPLE RESULTS

Field duplicate analyses were reviewed and are included in data table D-2. Duplicate sediment sample analysis results showed a variability of concentrations, associated with the heterogeneity of the sediment sample matrix. This type of variability is commonly encountered during the analysis of sediment samples. Where duplicate sample data yielded a higher constituent concentration than the original sample, the result from the duplicate sample was compared to the applicable benchmark to assess delineation.

3.5 TENTATIVELY IDENTIFIED COMPOUNDS

Tentatively identified compounds (TICs) were identified in five of the 24 surface water samples collected during the Phase II Sediment RI. The concentrations of SVOC TICs ranged from 68 mg/kg to 57,000 mg/kg. All reported TICs were listed as unknown SVOCs. Targeted SVOCs were detected at concentrations exceeding the LEL or SEL in four of the 24 sediment samples where SVOC TICs were reported. At the remaining sediment sample location, laboratory reporting limits were elevated above the LEL and SEL for select compounds. Suggesting that targeted analytes may be present in the sample but not detectable due to matrix interference. This suggests a link between the presence of SVOCs at concentrations exceeding the LEL and SEL and the presence of SVOC TICs. As constituents of unknown chemical composition, the potential effects (e.g., toxicity) of the TICs on sediment receptors could not be evaluated. Where applicable, TICs will be considered during the remedial action selection process.

4 DRAINAGE AREA DESCRIPTIONS

The Facility has a diverse network of surface water drainage systems that are comprised of both natural and anthropogenic features. The following sections describe the individual drainage areas within the Facility as well as the feature types that make up the drainage areas.

4.1 DRAINAGE AREAS

The drainage network consists of two primary drainage areas – the Northern Drainage Area and Southern Drainage Area. Each of these drainage areas has been further broken down into groups of contributory features. Comingled with the related flowing features of these drainage areas are a number of isolated ponds. The SI and Phase I RI investigated and evaluated drainage features using a subset of five secondary drainage areas, as noted in the following list. Similarly, the ecological risk assessment (ERA) (see Volume F – Ecological Evaluation/Ecological Risk Assessment) uses a tiered approach to evaluate the Facility's drainage network, with the first tier assessing the two primary drainage areas, and a subsequent evaluation focused on tertiary drainages.

The breakdown of the Facility's drainage network is illustrated in the hierarchical tree below.

Drainage Area Distribution

~1ª~	~2ª~	~3ª~
Northern Drainage Area	Duck Pond and Tributaries	Duck Pond
		Eastern Tributary (incl. Shooting Pond)
		Western Tributary
	Miscellaneous Ponds	Northeast Ponds
		Unnamed Ponds
		TNT-PETN-NG Ditches
Southern Drainage Area	Eastern Drainage Area	Central Drainage Basin
		Maintenance-NG Area Ditches
		Maintenance-Dynamite Area Ditches - West
	Central Drainage Area	Development Area Stream
		Maintenance-Dynamite Area Ditches - East
	Western Drainage Area	Miscellaneous Offsite Streams - Upper
		Miscellaneous Offsite Streams - Lower

A description of each drainage area follows.

4.1.1.1.1 Northern Drainage Area

Duck Pond serves as the primary drainage feature in the Northern Drainage Area, receiving water from surrounding stream channels, wetlands, and Shooting Pond. A series of isolated wetlands and pools also exist in the Northern Drainage Area. Flowing features in the Northern Drainage Area flow from offsite onto the Facility.

4.1.1.1.2 Duck Pond and Its Tributaries

Duck Pond encompasses nearly nine acres and is the largest surface water body at the Facility. Duck Pond is a closed system with two inlets and no outlets, and originates within the Facility boundary. One inlet originates in a large wetland near the C&D Landfill and flows east through the Development Area, where it discharges into the northwest corner of Duck Pond. The second inlet originates at Shooting Pond and discharges via a small stream to the northeast corner of Duck Pond. Shooting Pond is the deepest surface water body at the Facility, approximately 15 ft deep in the center. Shooting Pond is stabilized with a sheet pile wall along its western shore

and is armored along its eastern shore with rip-rap. Duck Pond and Shooting Pond are perennial surface water bodies. The tributaries to Duck Pond and Shooting Pond are seasonally intermittent and can be dry during the summer months.

4.1.1.1.3 Miscellaneous Ponds

There are fourteen miscellaneous ponds in the Northern Drainage Area at the Facility. Eleven are located in the Storage Area, two in the Development Area, and one in the Miscellaneous/ Offsite Area. There are no inlets or outlets at any of these ponds, and most are seasonally intermittent.

4.1.1.1.4 Southern Drainage Area

Surface water flows on to the Facility at four discrete locations in the Southern Drainage Area. These features include:

- a small stream channel along the northwestern Facility boundary, near the intersection of Howard Boulevard and Interstate 80 (headwaters of the Eastern Drainage Area described below)
- a man-made ditch through uplands draining stormwater from Howard Boulevard along the western ridgeline adjacent to the TNT and PETN Areas (contributory source of hydrology to the Central Drainage Area described below)
- a man-made ditch within the southern wetland complex draining stormwater from Howard Boulevard (contributory source of hydrology to the Western Drainage Area described below)
- a managed natural stream channel associated with the Black River that drains stormwater from Route 46. This stream enters the facility approximately 1,000-feet east of the intersection of Howard Blvd and Route 46 (contributory source of hydrology to the Western Drainage Area described below)

Overland flow and surface water runoff generally drain in a southeasterly direction via a series of ditches and swales to the southern wetland complex. The Southern Drainage Area receive surface water and suspended sediment from many of the former operational areas of the Facility (i.e., TNT, PETN, NG, AN, Dynamite, Maintenance, Finishing, A-Line, and portions of B-Line and Storage Areas). The Southern Drainage Area also receives offsite stormwater runoff from Howard Boulevard and Route 46 via three of the features listed above. Ultimately the wetland complex drains to a single tributary flowing offsite at the southeastern corner of the Facility approximately 300-feet west of the intersection of Hercules Rd and Route 46. Surface water and sediment data at and proximate to this outlet indicate that Facility-related influences cease upstream of the outlet.

4.1.1.1.5 Eastern Drainage Area

The small headwater stream of the Eastern Drainage Area flows onto the Facility east of the New Jersey Transit Railway (located along the northern boundary of the Facility) and immediately west of the C&D Landfill. The stream flows southwest through the Development Area to Powder Mill Road, where it is then piped underground along the road, flowing through the Finishing Area in a southerly direction. The pipe crosses under Powder Mill Road, emerging above ground near the wastewater treatment plant, and continues southwest through the Maintenance Area and into the Dynamite Area. Tributaries include former process ditches from the B-Line Area and the Maintenance Area. The main channel is perennial, while the tributaries are intermittent. A weir is located in the southern down-gradient portion of the Dynamite Area adjacent to Patrol Road within this drainage area. The weir restricts the flow of sediment from the former manufacturing operations historically performed upgradient. The Eastern Drainage Area converges into the Western and Central Drainage Areas within the Miscellaneous/Offsite Area, in the southern portion of the Facility.

4.1.1.1.6 Central Drainage Area

The Central Drainage Area is formed by an off-site stream that flows generally south from Howard Boulevard. The stream enters the Facility near the existing Morris County Municipal Utilities Authority (MCMUA) water pump station, flows into the Miscellaneous/Offsite Area, and continues through the trinitrotoluene (TNT), Pentaerythritol Tetranitrate (PETN), nitroglycerin (NG), and Dynamite Areas, respectively. Its tributaries consist of smaller streams and former process ditches. Segments of the main stream and tributaries are intermittent and dependent on precipitation events. A weir is located in the southern downgradient portion of the Dynamite Area adjacent to Patrol Road within this drainage area. The weir restricts the flow of sediment from the former manufacturing operations historically performed upgradient.

4.1.1.1.7 Western Drainage Area

The Western Drainage Area originates from one drainage ditch and one stream that flow into the southwest corner of the Facility. The drainage ditch directs surface water east from Howard Boulevard, approximately 300 feet north of the intersection of Howard Boulevard with Route 46, discharging into wetland and is derived from surface water runoff from the adjacent shopping center. The stream flows north from Route 46 approximately 1,000 feet east from the intersection of Howard Boulevard with Route 46. The primary channel turns east and is joined by the Central and Eastern Drainage Areas. From the confluence of the Central, Western, and Eastern Drainage Areas, the channel flows southward and exits the Facility at Route 46, approximately 300 feet west of the intersection of Route 46 with Hercules Road. This is the only location where surface water and sediment exit the Facility. The channels and the majority of the tributaries of the Western Drainage Area are perennial streams, carrying surface water throughout the year.

4.1.1.1.8 Miscellaneous Ponds

There are two miscellaneous ponds in the Southern Drainage Area at the Facility located in the NG Area. Alterations to the management of process water at the Facility in the 1970s altered the source of hydrology to these ponds. Since that time they have transitioned to ephemeral wetlands and rarely hold standing water.

4.2 SURFACE WATER FEATURE TYPES

Aquatic features within the drainage areas described in Section 4.1 consist of the four feature types described below.

- Intermittent Streams
- Streams
- Wetland Areas
- Ponds

Many of the drainage systems incorporate combinations of the surface water feature types listed above. However, every drainage system does not possess all of the identified surface water feature types.

Intermittent Streams

Intermittent streams are similar to streams, but are typically smaller and do not convey water during the entire year, a consequence of being primarily influenced by precipitation. Intermittent streams generally act as tributaries to other streams during seasonal periods of high precipitation. Many former process ditch remnants are classified as intermittent streams.

Streams

Streams are characterized as channelized bodies of water that have bed and bank, and flow through the Site. They are generally less than 5 ft wide and less than 2 ft deep. Streams are typically perennial and are dry only during periods of severe drought. They are fed by groundwater, precipitation, and/or overland runoff.

Wetland Areas

Wetlands at the Site are typically characterized by low lying areas and topographic depressions that are frequently saturated and often contain some degree of seasonally variable surface water. The most common wetland types observed at the Site during the sampling effort were bogs and swamps.

Ponds

Ponds are characterized as depressions in the ground that retain surface water. The majority of the ponds at the Site (with the exception of Duck Pond and Shooting Pond) are generally less than 50 ft in diameter and less than 2 ft deep. Most of the Site ponds fluctuate significantly in water level due to variations in seasonal precipitation. Duck Pond and Shooting Pond have been historically modified during Site development, and are much larger and deeper than the other ponds on the Site.

4.3 SUMMARY

The breakdown of the Facility's drainage features facilitated the initial characterization of surface water and sediment quality in the Phase I RI and the focused evaluations of aquatic receptors provided in the Ecological Evaluation/Ecological Risk Assessment (Volume F). The categorization of drainage area features into feature types enables the development of organic carbon normalized sediment quality benchmarks using organic carbon value averages based on a dataset collected from features with similar flow regimes and sediment characteristics.

For the purposes of evaluating overall RI objectives (i.e., horizontal and vertical delineation, characterization of sediment quality) a Facility-wide approach was taken. Where applicable, drainage areas provide context to the Facility-wide evaluation and feature types support development of the conceptual site model as it relates to constituents in sediment and their associated fate and transport.

5 RESULTS

The Phase II Sediment-RI was implemented in the Fall of 2013 by OBG, in accordance with the Phase II Remedial Investigation Memorandum (OBG, 2013). The Phase II Sediment RI included the collection of 26 sediment samples from 24 locations. These 26 samples supplement the SI/Phase I RI sediment dataset (560 sediment samples).

Sections 5.3.1 through 5.3.3 evaluate the Phase II RI sediment data in the context of specific Phase II RI objectives presented in Section 2.0. The Phase II objectives focus on filling data gaps identified following the Phase I RI and address NJDEP comments regarding the magnitude and extent of Facility-related influences on sediment quality in select locations.

Section 5.3.4 incorporates the Phase II RI sediment data into the comprehensive site wide sediment characterization dataset for the purposes of fulfilling overall RI objectives in accordance with the TRSR. The overall RI data evaluation employs a site-wide, holistic approach to demonstrate horizontal and vertical delineation of Facility-related influences on sediment quality.

The following tables and figures support the data evaluations that follow.

- Tables
  - Phase II RI Analytical Methods and Criteria Summary are presented in Table D-1
  - Phase II RI Sediment - Analytical Results are presented in Table D-2
- Figures
  - Figure D-1 presents the Phase II RI sediment sample locations
  - Figure D-2 presents the Phase II RI sediment sample analytical results
  - Figure D-3 presents the composite areal extent of exceedances of the LEL and SEL inclusive of all analytical groups
  - Figures D-4 through D-31 present the facility-wide Sediment RI results for specific COCs and analyte groups

5.1 SEDIMENT QUALITY BENCHMARKS

This section presents the sources and hierarchical selection of sediment quality benchmarks used as comparison criteria during the evaluation of SI, Phase I RI, and Phase II RI sediment data. The NJDEP's Ecological Screening Criteria (ESC) table (NJDEP 2009) served as the primary source of benchmarks. This table consolidates benchmark values from a variety of sources, often resulting in multiple benchmark values for the same constituent. Where multiple values were presented in the ESC table, the most conservative value was selected for use in establishing delineation of Facility-related constituents in sediment. Where the ESC table did not provide a benchmark, values from other nationally-recognized sources were used.

Sediment quality benchmarks were preferentially selected from the following sources:

- NJDEP ESC Table (March 10, 2009) – Sediment – Fresh Water Criteria - Lowest Effects Level (LEL) and Severe Effects Level (SEL) values. Source of these values include Persaud et al. (1993), USEPA Region 5 RCRA Ecological Screening Levels (USEPA 2003), and the NOAA Screening Quick Reference Table (NOAA 2008).

  USEPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmark (USEPA 2006) for Hexahydro-1,3,5-Trinitro-1,3,5-Triazine (RDX), sourced from Talmadge et al. (1999).

- *Munition constituents: Preliminary sediment screening criteria for the protection of marine benthic invertebrates* Pascoe et al. (2010) for 1,3,5-Trinitrobenzene and Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX).

For the purpose of this report, the terms LEL and SEL are used as collective terms and encompass the aforementioned benchmark sources as a whole, where applicable. Generally speaking, LELs represent constituent concentrations at or below which effects to target receptor populations (typically benthic invertebrates for sediment benchmarks) are unlikely to occur. Whereas, SELs represent constituent concentrations at which effects to a significant portion (typically 50 or 90 percent) of a target receptor population are expected to occur. Discussion associated with achieving delineation focuses on the LEL benchmarks. Together with the LEL, the SEL benchmarks establish a bounded range that provides context to the magnitude of constituent concentrations.

SEL benchmarks for PAHs provided in the ESC table are based on 100 percent organic carbon, and require normalization to site-specific organic carbon values. As discussed in Section 4, the aquatic features at the Facility have been segregated among four categories based on the feature conditions (i.e., intermittent streams, streams, wet areas, and ponds). Average organic carbon values were calculated for each feature type to support the calculation of feature-specific SELs. The table below summarizes the calculated SELs. Complete SEL calculations for PAHs are provided in Appendix E.

PAH Constituent	Calculated SEL (mg/kg)			
	Intermittent Streams (14,569 mg/kg TOC)	**Streams** (16,393 mg/kg TOC)	**Wet Areas** (31,171 mg/kg TOC)	**Ponds** (48,975 mg/kg TOC)
Acenaphthene	0.007	0.008	0.02	0.02
Acenaphthylene	0.009	0.01	0.02	0.03
Anthracene	5.4	6.1	11.5	18.1
Benzo(a)anthracene	21.6	24.3	46.1	72.5
Benzo(b)flouranthene	26.2	29.5	56.1	88.2
Benzo(a)pyrene	21.0	23.6	44.9	70.5
Benzo(g,h,i)perylene	4.7	5.2	10.0	15.7
Benzo(k)fluoranthene	19.5	22.0	41.8	65.6
Chrysene	6.7	7.5	14.3	22.5
Dibenz(a,h)anthracene	1.9	2.1	4.1	6.4
Fluoranthene	14.9	16.7	31.8	50.0
Fluorene	2.3	2.6	5.0	7.8
Indeno(1,2,3-c,d)pyrene	4.7	5.2	10.0	15.7
Phenanthrene	13.8	15.6	29.6	46.5
Pyrene	12.4	13.9	26.5	41.6

Similarly, E&E benchmarks from Pascoe et al. (2010) require organic carbon normalization. The table below summarizes the low (LEL) and high (SEL) range benchmarks calculated for each feature type.

E&E Constituent	Calculated Benchmarks (LEL [SEL], µg/kg)			
	Intermittent Streams (14,569 mg/kg TOC)	**Streams** (16,393 mg/kg TOC)	**Wet Areas** (31,171 mg/kg TOC)	**Ponds** (48,975 mg/kg TOC)
1,3,5-Trinitrobenzene	2.33 [12.4]	2.62 [13.9]	4.99 [26.5]	7.84 [41.6]
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	5.54 [625]	6.23 [703]	11.8 [1,337]	18.6 [2,101]

A number of sediment quality benchmarks have changed since the preparation of the SI and Phase I RI reports. These changes are attributable to regulatory updates, average TOC value changes based on additional sampling data, and identification and incorporation of alternative sources where NJDEP does not provide ESC. Table D-1 presents the sediment quality benchmarks used in this volume of the Phase II RIR. For the purposes of evaluating overall RI objectives (Section 5.4 and Figures D-3 through D-31), these benchmarks have been applied to SI, Phase I RI, and Phase II RI results. Updated SI and RI sediment data tables are provided in Appendix G.

5.2 CONSTITUENT INFLUENCES UNRELATED TO HISTORICAL FACILITY OPERATIONS

Historical facility operations influenced sediment quality in Facility surface-water features via historical material management and disposal processes prior to the advent of environmental regulations (e.g., RCRA) and/or waste reclamation technologies (e.g., spent acid recovery), as well as via accidental releases associated with process upsets (e.g., 1940 explosion). Beyond these operational influences, historical onsite and offsite development have also influenced sediment quality.

Historical Facility development and improvement made use of historic fill materials (a common practice in the late 1800s and early 1900s) including fly ash, bottom ash, and slag as fill material (historic fill) generated by the local iron ore processing industry to improve the grade of the Facility, recover unusable land, and establish numerous narrow gauge rail beds and roadways. Areas of historic fill material were mapped as part of the SI, and further characterized with regards to their constituent makeup (i.e., PAHs and Metals) during the RI. Alterations to the Facility drainage networks associated with further development resulted in ditches cut through the placed historic fill material. Changes in flow regimes and ditch hydrology attributable to precipitation runoff and non-contact process water use at the Facility had the potential to erode the bed and bank of the ditches and distribute historic fill materials throughout the drainage network. Often, the ditches drained to a central drainage feature or pooled area, where water velocity slowed and suspended sediment (including historic fill) deposited and accumulated over time.

Areas adjacent to and surrounding the Facility grew along with the Facility. Over time, roadway improvements and stormwater management practices associated with municipal growth have influenced sediment quality in aquatic features around the undeveloped perimeter of the Facility. These influences are evident where ditches draining Howard Boulevard and Route 46 flow onto the Facility and in stormwater management basins onsite receiving runoff from adjacent landowners (e.g., NJ Transit). Localized influences attributable to stormwater are also occurring where the Facility's southern drainage area exits the Facility through a culvert beneath Route 46. Characterization of sediment quality at the Facility during the SI/RI included areas influenced by historic fill and offsite sources. Sediment samples located within these areas represent (8 percent) of the total number of sediment samples characterizing sediment quality at the Facility (586 samples). However, this small group of samples along the perimeter of the Facility also represents the majority of locations at which delineation appears incomplete. A discussion of these samples as they relate to the overall characterization of Facility-related influences on sediment quality follows.

- A series of sediment samples characterized ditches flowing onto the Facility from Howard Boulevard and Route 46 in the Western Drainage Area (grid cells A15, B14/15/16, C15/16). The ditches traverse a forested wetland undeveloped during the operational history of the Facility, ditch sediment sample locations occur upgradient of the confluence with ditches draining former operational areas. At 23 sample locations in upgradient ditches Metals and PAHs were detected at concentrations greater than their respective LELs. Despite the close proximity to the TNT and Dynamite Areas where E&E constituent detections are most prevalent, E&E constituents were not detected at concentrations exceeding their respective LELs in these upgradient drainage sediment samples. A number of light industrial properties border Route 46 (to the south) and the wetland complex (to the north). Given the hydrology of these ditches, constituents and concentrations detected in sediment, and absence of historical Facility operations in the area, it is reasonable to conclude that the concentrations of Metals and PAHs identified in sediment at these locations are attributable to stormwater runoff from Howard Boulevard and Route 46, and unrelated to Facility operations.

- A series of sediment samples were collected from a linear ditch draining stormwater runoff from Howard Boulevard atop the western ridgeline (grid cells B8 and C9). The three most upgradient sample (nearest to Howard Boulevard) had concentrations of Metals and PAHs exceeding their respective LELs. Constituent concentrations in two additional downgradient samples located upgradient of former operational areas did not exceed LELs. Topographically, this ditch drains down an undeveloped ridgeline and enters former operational areas of the Facility at an elevation approximately 20 to 40 feet below the elevation of the three upgradient sample locations. Concentrations were highest at the location nearest to Howard Boulevard. Given the constituents detected, concentration trends, and upgradient location relative to former operational areas, it is reasonable to conclude that the concentrations of Metals and PAHs identified in sediment are attributable to stormwater runoff from Howard Boulevard and unrelated to Facility operations.

- Three sediment samples were collected from a stormwater management feature adjacent to the former Facility entrance along Howard Boulevard (grid cell H5). Metals and PAH concentrations in each sample exceeded their respective LELs. Topographically, this feature is at a higher elevation than the surrounding areas in the Development Area and lower than Howard Boulevard, and a former entrance/parking area (impervious surface) spans the area between Howard Boulevard and the stormwater feature. Further, a portion of the stormwater runoff generated by the recently-constructed NJ Transit Mount Arlington Train Station flows through this feature. Given the current and historical role of the feature, as well as its location (geographically and topographically) relative to offsite sources, it is reasonable to conclude that the concentrations of Metals and PAHs identified in sediment are attributable to stormwater runoff from Howard Boulevard and unrelated to Facility operations.

- A series of sediment samples were collected to characterize sediment quality in three isolated ponds along the Facility perimeter road and NJ Transit rail line (grid cells K4/5 and O4). Metals concentrations in seventeen samples exceeded their corresponding LELs, and zinc concentrations in one sediment sample exceeded the SEL. Two PAHs, pyrene and fluoranthene, were also detected in the largest of the three ponds at concentrations exceeding their LELs. These isolated ponds occur on the Facility side of the perimeter road and drain wetlands that have formed in the valley between the perimeter road and the NJ Transit rail line. The rail line was constructed as part of the Lackawanna and Western Railroad in the mid-1800s. Construction used wooden ties coated in creosote (a potential source of PAHs), and likely relied on nearby sources of ash and slag as bedding material to create the rail bed. Upon construction of the Facility's perimeter security road at the beginning of World War II, the wetlands existing adjacent to the rail corridor were traversed by the road bed and the flow of water channeled beneath the road via culverts leading to the isolated ponds. Given the construction, maintenance and long-term operational history of the rail line as well as the drainage patterns created by the construction of the perimeter security road, it is reasonable to conclude that the concentrations of Metals and PAHs identified in sediment are unrelated to Facility operations.

- Surface water flowing through the Western Drainage Area drains offsite through a culvert beneath Route 46. Two tributaries feed the ditch that drains offsite. The most upgradient tributary is a combination of flow from

various drainage areas within the TNT, Dynamite, Maintenance, AN, and A-Line, and Development Areas. The other tributary drains western portions of the drainage consisting primarily of stormwater that runs onto the facility via ditches from Howard Boulevard and Route 46. At the confluence of the ditch and culvert, Metals and PAHs were detected at concentrations exceeding their respective LELs. However, multiple upgradient sediment samples collected from locations downgradient of the confluence with the ditch draining the former operational areas of the Facility do not identify Metals or PAHs at concentrations exceeding their respective LELs. Given the length of ditch possessing sediment absent influences from the Facility, and the localized nature of the concentrations exceeding LELs in proximity to Route 46 stormwater outfalls, it is reasonable to conclude that the concentrations of Metals and PAHs identified in sediment are attributable to stormwater runoff from Route 46 and unrelated to Facility operations.

Appendix F provides a list of the specific sample locations included in the features referenced above.

Based on the information provided, offsite influences on sediment quality are believed to represent sources related to stormwater runoff and historical offsite sources. The sections that follow evaluate the Phase II RI data relative to Phase II RI objectives and the comprehensive sediment characterization dataset relative to overall RI objectives. The discussion is organized by constituent class, with discussions specific to individual constituents where applicable. Rather than address each of the locations discussed herein as part of the evaluation of delineation for each constituent, a general reference to the information presented in this section will be included.

5.3 PHASE II RESULTS

The Phase II Sediment RI sampling locations are indicated on Figure D-1. The results of the laboratory analysis of the sediment samples are presented on Table D-2. Figure D-2 graphically presents the results of the analysis of sediment samples collected during the Phase II Sediment-RI. Figure D-3 depicts the extent of sediment LEL and SEL exceedances.

The following sections evaluate Phase II RI sediment data in the context of the specific Phase II RI objectives. Additional evaluation of these results occurs as part of the Facility-wide characterization dataset in Section 5.3, as well as in Volume – F – Ecological Evaluation / Ecological Risk Assessment.

5.3.1 Evaluation of Sediment Quality Outside Stream Channels in Wetland Areas

Twenty (20) sediment samples were collected from the following locations and analyzed for SVOCs, Metals, and E&E constituents to evaluate sediment quality outside of defined stream channels within wetland areas:

- SD-R2-G-12-1
- SD-R2-G-12-3
- SD-R2-G-12-4
- SD-R2-G-12-5
- SD-R2-F-14-1
- SD-R2-F-14-2
- SD-R2-E-13-1
- SD-R2-D-14-1
- SD-R2-C-12-6
- SD-R2-C-11-1
- SD-R2-C-15-1
- SD-R2-C-15-2
- SD-R2-K-5-1
- SD-R2-K-5-2
- SD-R2-O-4-1
- SD-R2-O-4-2
- SD-R2-E-16-3
- SD-R2-E-10-1
- SD-R2-E-10-2
- SD-R2-O-4-3

5.3.1.1 SVOCs

The following SVOCs were detected at concentrations exceeding their respective LELs in 12 of the 20 sediment samples. There were no exceedances of the SEL at these locations.

- 2-Methylnaphthalene
- Acenaphthene
- Acenaphthylene
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Chrysene
- Dibenzo(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-c,d)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-c,d)pyrene, Phenanthrene, and Pyrene are PAHs commonly found in the samples collected from the historic fill emplaced at the Facility.

LEL exceedances were noted at the following locations:

- As indicated in Figure D-2, the following six samples with LEL exceedances are located in or adjacent to historic fill:
  - SD-R2-G-12-1
  - SD-R2-G-12-3
  - SD-R2-G-12-4
  - SD-R2-G-12-5
  - SD-R2-E-10-1
  - SD-R2-E-10-2

- The following three samples with LEL exceedances are located adjacent to stream channels where LEL exceedances were previously identified:
  - SD-R2-F-14-1
  - SD-R2-F-14-2
  - SD-R2-C-15-1

- The following two samples with LEL exceedances are located in wetland areas away from stream channels, historic fill, and adjacent to stream channels where LEL and/or SEL exceedances were previously identified:
  - SD-R2-E13-1 – down gradient of historic fill
  - SD-R2-K-5-1 – in the vicinity of the former Experimental Dynamite Area

- One sample with LEL exceedances (SD-R2-O-4-1) is located adjacent to the NJ Transit rail line. PAHs at this location are believed to represent off-site contributions (see discussion in Section 5.2)

5.3.1.2 Metals

The following Metal constituents were detected at concentrations exceeding their respective LEL or SELs in the 20 samples collected from outside of defined stream channels The laboratory analysis of these samples indicated exceedances of the LEL at 20 sample locations and exceedance of the SEL at 10 locations.

- Antimony - LEL and SEL
- Arsenic- LEL and SEL
- Cadmium- LEL
- Chromium- LEL and SEL
- Copper- LEL and SEL
- Lead- LEL
- Manganese- LEL and SEL

- Mercury- LEL and SEL
- Nickel- LEL
- Silver- LEL
- Zinc- LEL

As indicated on Figure D1, the following constituents exceeded their respective SELs at the eight sediment sample locations listed below.

- SD-R2-G-12-1 (lead and mercury)
- SD-R2-G-12-4 (manganese and mercury)
- SD-R2-G-12-5 (mercury)
- SD-R2-C-12-6 (lead)
- SD-R2-C-11-1 (antimony, arsenic, and lead)
- SD-R2-E-10-1 (lead and manganese)
- SD-R2-E-10-2 (arsenic)
- SD-R2-D-14-1(manganese)

With the exception of SD-R2-C-12-6 and SD-R2-C-11-1, these sediment samples were collected from locations adjacent to culverts passing beneath a former narrow gauge rail bed and roadway. The elevated base of the rail bed and roadway, as well as the bedding material that the culverts pass through are constructed of historic fill material.

Sediment samples SD-R2-C-12-6 and SD-R2-C-11-1 were collected from former drainage features that collected stormwater runoff from the adjacent, upgradient TNT, NG, and PETN areas that utilized acid in the manufacturing process. Currently, these features exist as an intermittently inundated wetland (SD-R2-C-11-1) and a dry stream segment with saturated bed sediment (SD-R2-C-12-6) fed primarily by precipitation and localized overland flow of runoff.

The following two samples with SEL exceedances are located adjacent to stream channels where LEL exceedances were previously identified within the existing channel.

- SD-R2- F-14-1 (chromium, lead, and mercury)
- SD-R2- F-14-2 (lead and mercury)

Historically this area was managed as a depositional pool with a weir located at the outlet end for the purpose of capturing Facility related constituents prior to exiting the operational portion of the Facility. Changes to hydrology associated with the cessation of Facility operations (e.g., WWTP discharges, managed stormwater) has reduced flow through this area, enabling shallow depositional areas to transition to fringing wetland habitats and the former pool to revert to a channelized ditch.

5.3.1.3 E&E Constituents

E&E constituents were not detected at concentrations exceeding their respective LELs at the sampled locations from outside of defined stream channels.

5.3.1.4 General Conclusions

There were exceedances of the LEL or SEL in all 20 sediment samples collected from outside of defined stream channels. Of these 20 locations, eight samples (SD-R2-G-12-1, SD-R2-G-12-3, SD-R2-G-12-4, SD-R2-G-12-5, SD-R2-C-12-6, SD-R2-C-11-1, SD-R2-E-10-1, SD-R2-E-10-2) were located in or adjacent to historic fill material. The presence of PAHs and Metals in sediment at these locations is attributed to the presence of historic fill in close proximity to the sample locations. PAHs and Metals were also detected in three sediment samples (SD-R2-F-14-1, SD-R2-F-14-2, SD-R2-C-15-1) located adjacent to stream channels that were down gradient of historic fill.

At five sediment sample locations in the interior of the Facility in wetland areas away from stream channels and historic fill (SD-R2-C-15-2, SD-R2-D-14-1, SD-R2-E-13-1, SD-R2-0-4-2, SD-R2-0-4-3), the presence of PAHs and Metals exceeding the LELs is attributed to storm runoff from areas where historic fill was emplaced.

At two locations outside of defined stream channels (SD-R2-K-5-1, SD-R2-K-5-2), the presence of PAHs and Metals at concentrations exceeding the LEL is attributed to former operations in Experimental Dynamite Area.

The presence of PAHs and Metals in sediment samples collected from locations adjacent to Route 46 (SD-R2-E-16-3) and the NJ transit line (SD-R2-O-4-1) at concentrations exceeding the LEL are attributed to off-site influences, as discussed in Section 5.2. The absence of E&E constituents at concentrations exceeding the LEL at these locations further supports the conclusion that PAHs and Metals present in sediments outside defined streamed channels at concentrations exceeding the LEL and SEL are unrelated to Facility operations.

5.3.2 Relationship between Surface Water and Sediment

Co-located surface water and sediment samples were collected within the former operational areas of the Facility during the Phase II RI in an effort to evaluate the influence of COCs in sediment on overlying surface water. A total of 15 co-located surface water/sediment sample locations were proposed as part of the Phase II RI Memorandum (OBG, 2013). However, the lack of surface water present during sampling reduced the number of sample locations to 7. The co-located sample locations used to evaluate the relationship between surface water and sediment are as follows:

- SW-R2-B-15-1 and SD-R2-C-15-1
- SW-R2-B-15-2 and SD-R2-C-15-2
- SW-R2-E-16-1 and SD-R2-E-16-1
- SW-R2-E-16-3 and SD-R2-E-16-3
- SW-R2-F-14-1 and SD-R2-F-14-1
- SW-R2-F-14-2 and SD-R2-F-14-2
- SW-R2-G-12-2 and SD-R2-G-12-3

Note: co-located surface water samples SW-R2-B-15-1 and SW-R2-B-15-2 were collected from grid C-15. These samples were erroneously labeled in the Phase II RI Memorandum.

Surface water and sediment samples collected from co-located areas were analyzed for SVOCs, Metals, and a single E&E constituent.

5.3.2.1 SVOCs

SVOCs, limited to a subset of PAHs, were detected in sediment, but not in surface water at five (SW-R2-E-16-1, SW-R2-E-16-3, SW-R2-F-14-1, SW-R2-F-14-2, SW-R2-G-12-2) of the seven co-located sample locations. At one location (SW-R2-B-15-1), SVOCs were detected in surface water and sediment. Additionally, SVOCs were detected in surface water, but not in sediment at one of the seven co-located sample locations (SW-R2-B-15-2/SD-R2-C-15-2).

A summary of the SVOCs detected at these locations and the matrices in which they were detected is provided below (Table D-3):

- 2-Methylnaphthalene (sediment only)
- Acenaphthene (sediment only)
- Acenaphthylene (sediment only)
- Anthracene (sediment only)
- Benzo(a)anthracene (surface water and sediment)
- Benzo(a)pyrene (surface water and sediment)
- Benzo(b)fluoranthene (surface water and sediment)
- Benzo(g,h,i)perylene (surface water and sediment)
- Benzo(k)fluoranthene (surface water and sediment)
- Chrysene (surface water and sediment)
- Fluoranthene (surface water and sediment)
- Indeno(1,2,3-c,d)pyrene (surface water and sediment)
- Phenanthrene (surface water and sediment)
- Pyrene (surface water and sediment)

Concentrations of SVOCs were greater in sediment samples compared to surface water. These findings are consistent with the physiochemical properties of the detected constituents, as PAHs have an affinity to bind to organic carbon in sediment rather than partition to the aqueous phase. At the single sample location where an SVOC was detected in co-located surface water and sediment, the concentration in the surface water sample was four orders of magnitude lower than the concentration in the sediment sample. This indicates minimal partitioning of SVOCs from sediment to surface water. In the location where SVOCs were detected in surface water but not sediment, there were elevated detection limits for the sediment sample. As such, an evaluation of a relationship between surface-water and sediment concentrations could not be quantified. As discussed in Section 5.2 the location where SVOCs were detected in a co-located surface water and sediment sample receives runoff from adjacent Route 46.

5.3.2.2 Metals

Metals were detected in co-located surface water and sediment samples. With the exception of antimony, each constituent was detected in sediment. The constituents detected in sediment were also detected in surface water, with the exception of beryllium, selenium and silver. A summary of the Metals detected at these locations and the matrices in which they were detected is provided below (Table D-3):

- Aluminum (surface water and sediment)
- Antimony (surface water only)
- Arsenic (surface water and sediment)
- Barium (surface water and sediment)
- Beryllium (sediment only)
- Cadmium (surface water and sediment)
- Calcium (surface water and sediment)
- Chromium (surface water and sediment)
- Cobalt (surface water and sediment)
- Copper (surface water and sediment)

- Iron (surface water and sediment)
- Lead (surface water and sediment)
- Magnesium (surface water and sediment)
- Manganese (surface water and sediment)
- Mercury (surface water and sediment)
- Nickel (surface water and sediment)
- Potassium (surface water and sediment)
- Selenium (sediment only)
- Silver (sediment only)
- Vanadium (surface water and sediment)
- Zinc (surface water and sediment)

Beryllium, selenium, and silver were detected in sediment and not in surface water, indicating these constituents are not partitioning from sediment to surface water. Barium, calcium, iron, magnesium, and manganese were detected in both surface water and sediment samples from each co-location. These Metals are essential nutrients common to surface water and commonly found in the earth's crust. Manganese concentrations in sediment did not exceed its LEL, and LELs/SELs are unavailable for barium, calcium, iron and magnesium. Similarly, barium was not detected in surface water at concentrations exceeding it surface water quality standard, and surface water quality standards are unavailable for calcium, iron, magnesium, and manganese,

The remaining Metals were detected at varying frequencies between surface water and sediment. Note that antimony was detected only in a single surface water sample (SW-R2-B-15-2) and was not detected in sediment. The concentrations of the Metals detected in sediment were typically two to five orders of magnitude higher in sediment than in surface water. This indicates minimal partitioning of Metals from sediment to surface water.

5.3.2.3 E&E Constituents

A single E&E constituent (4-amino-2,6-dinitrotoluene) was detected in surface water at two locations (SW-R2-E-16-1 and SW-R2-E16-3) at four order of magnitude below its corresponding surface water quality comparison criteria, and not detected in the corresponding sediment samples. These findings in sediment are consistent with five additional Phase I RI sediment samples collected in close proximity to the Phase II RI co-located surface water and sediment samples. The E&E constituent detected in surface water is discussed further in Volume D – Phase II Surface Water RI Report.

5.3.2.4 General Conclusions

SVOCs were detected in sediment, but not in surface water at five of the seven co-located sample points. At two of the seven co-located sample points SVOCs were detected in surface water. However, where an SVOC was detected in both the surface water and sediment, the concentrations in the surface water sample were four orders of magnitude lower than the concentrations in the sediment sample. This indicates minimal partitioning of SVOCs from sediment to surface water. Additionally, the location where SVOCs were detected in both surface water and sediment samples receives runoff from adjacent Route 46, the presence of SVOCs at this location is not believed to be a result of site activities as discussed in Section 5.2.

Beryllium, selenium, and silver were detected in sediment and not in surface water, indicating these constituents are not partitioning from sediment to surface water. Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, and zinc were detected in surface water and sediment. However, the concentrations of the Metals detected in sediment were typically three to five orders of magnitude higher than in sediment than in surface water. This indicates minimal partitioning of Metals from sediment to surface water. Aluminum, barium, calcium, iron, magnesium, potassium, and manganese were detected in both surface water and sediment samples from each co-location. As indicated in *Elemental Concentrations in Soil and Other Surficial Materials of the*

Counterminous United States, USGS Professional Paper 720, 1984 (USGS, 1984), these Metals are commonly found in surficial geologic materials in the vicinity of the Facility.

E&E constituents were not detected in sediment samples collected from the seven co-located sample points. The E&E constituent 4-amino-2,6-dinitrotoluene was detected in two of the seven co-located sample points at concentrations below its most stringent criteria. The meaning of this finding is discussed further in Volume D – Phase II Surface Water RIR.

5.3.3 Evaluation of Vertical Delineation Results

Sediment samples were collected within the former operational areas of the Facility during the Phase II Sediment RI in an effort to delineate the vertical extent of sediment quality at the following five locations:

- SD-R2-E-16-1 (depth 0 to 0.5 ft.)
- SD-R2-E-16-1D (depth 2 to 2.5 ft.)
- SD-R2-M-7-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-M-7-01 of Phase I RI
- SD-R2-L-5-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-01 of Phase I RI
- SD-R2-L-5-02D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-02 of Phase I RI

Sediment samples were analyzed for VOCs (locations SD-R2-E-16-1 and SD-R2-E-16-1D only), SVOCs, Metals, and E&E constituents. The following section presents the constituents and number of exceedances of the LEL or SEL at these locations.

Based on the description of the samples collected at locations SD-R2-E-16-1D (construction fill material composed of pebbly, gravely silt with trace fine sand and no organic matter) and SD-R2-M-7-01D (glacial till material composed of clay with some sand and no organic matter), it appears that these delineation samples were collected from below the depositional sediment layer and the physical (vertical) limit of sediment has been defined.

5.3.3.1 VOCs

A total of two VOC samples were analyzed to delineate vertical sediment quality at sample locations SD-R2-E-16-1 and SD-R2-E-16-1D. No VOCs were detected that exceeded the LEL and/or SEL at these sediment sample locations. Vertical delineation of VOCs in sediment is complete.

5.3.3.2 SVOCs

A total of five SVOC samples were collected and analyzed to delineate vertical sediment quality during the Phase II RI. The results of these activities are discussed below.

At sample location SD-R2-E-16-1/ SD-R2-E-16-1D no SVOCs were detected in the surface sample. However, the following SVOCs were detected at concentrations exceeding their respective LELs at the deep interval:

- Acenaphthene
- Acenaphthylene
- Benzo(a)anthracene
- Benzo(g,h,i)perylene
- Chrysene
- Fluoranthene
- Phenanthrene
- Pyrene

Vertical delineation of SVOCs was not accomplished at this location. However, as this sampling point is adjacent to Route 46, the presence of PAHs at concentrations exceeding their respective LELs at this location is interpreted to not be associated with Facility operations. However, as this sampling point is adjacent to Route 46, the presence of SVOCs at concentrations exceeding the LEL at this location is interpreted to be the result of excavating and grading activities associated with road construction and maintenance over time.

At previous sample location SD-R-M-7-01, ten PAHs exceeded LEL benchmarks at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-M-7-01D, no SVOCs were detected. Vertical delineation of SVOCs at this location has been completed.

At previous sample location SD-R-L-5-01, three SVOCs (benzo[a]pyrene, benzo[k][fluoranthene, and 2,4-dinitrotoluene) exceeded the LEL at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-L-5-01D, benzo[a]pyrene was detected at a concentration exceeding the LEL, while the remaining two constituents were not detected at detection limits exceeding the LEL. Vertical delineation of SVOCs at this location remains incomplete. However, the LEL is a screening benchmark developed to be protective of benthic invertebrate communities occupying the biologically active zone in sediment (conservatively established as 0-12 inches for this Facility). The lower sample interval occurs approximately 1.5 feet below the biologically-active zone and this area will be addressed via active remediation in association with the adjacent old burning grounds (M5-3). Delineation in this area will be completed as part the remedy.

At sample location SD-R-L-5-02, one SVOC (2,4-dinitrotoluene) exceeded the LEL at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-L-5-02D, dibenzo(a,h)anthracene was detected at a concentration exceeding the LEL and 2,4-dinitrotoluene was non-detect at a detection limit that exceeded the LEL. Vertical delineation of SVOCs at this location remains incomplete. However, the LEL is a screening benchmark developed to be protective of benthic invertebrate communities occupying the biologically active zone in sediment. The lower sample interval occurs approximately 1.5 feet below the biologically-active zone and this area will be addressed via active remediation in association with the adjacent old burning grounds (M5-3). Delineation in this area will be completed as part the remedy.

5.3.3.3 Metals

Five samples were collected and analyzed for Metals to delineate vertical sediment quality during the Phase II RI. The results of these activities are discussed below.

At sample location SD-R2-E-16-1/ SD-R2-E-16-1D the following Metals were detected at concentrations exceeding the LEL:

- Copper
- Lead

The concentrations of these Metals increased slightly with depth. Vertical delineation of Metals was not accomplished at this location. However, as this sampling point is adjacent to Route 46, the presence of lead and copper at concentrations exceeding the LEL at this location is interpreted to not be associated with Facility operations.

At previous sample location SD-R-M-7-01, there Metals (copper, lead and mercury) exceeded their respective LELs at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-M-7-01D the following Metals exceeded the LEL:

- Aluminum
- Chromium
- Zinc

Additionally, chromium exceeded the SEL.

Vertical delineation of Metals was not accomplished at this location. The concentration of aluminum was within the range of natural background concentrations reported in the NJDEP's *Ambient Levels of Metals in New Jersey Soils* (NJDEP, 2003).

At previous sample location SD-R-L-5-01, four Metals (cadmium, copper, lead, and zinc) exceeded the LEL or SEL standards at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-L-5-01D, four Metals exceeded the LEL:

- Copper (LEL)
- Lead (LEL and SEL)
- Mercury (LEL)
- Zinc (LEL)

Vertical delineation of cadmium was established at this location. Although the vertical extent of copper, lead and zinc were not delineated at this location, the concentrations of these elements decreased with depth.

At previous sample location SD-R-L-5-02, five Metals (arsenic, cadmium, copper, lead and zinc) exceeding the LEL were detected at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-L-5-02D, the two Metals listed below exceeded the LEL or SEL:

- Chromium (LEL and SEL)
- Zinc (LEL)

Vertical delineation of arsenic, cadmium, copper, and lead was established at this location. Chromium concentration increased with depth at this location but zinc slightly decreased with depth. Vertical delineation of chromium and zinc was not accomplished at this location.

5.3.3.4 E&E Constituents

A total of five samples were collected and analyzed for E&E constituents to delineate vertical sediment quality during the Phase II RI. The results of these activities are discussed below.

At sample location SD-R2-E-16-1/ SD-R2-E-16-1D no E&E constituents were detected at concentrations exceeding the LEL. Vertical delineation of E&E constituents at this location is complete.

At previous sample location SD-R-M-7-01, no E&E constituents exceeded LEL at a depth of 0.5-1 ft. E&E constituents were inadvertently added to the analyte list for the Phase II RI sediment sample (SD-R2-M-7-01D) collected at this location. The absence of E&E constituents at concentrations exceeding the LEL is consistent with previous results and confirms vertical delineation is complete at this location.

At previous sample location SD-R-L-5-01, two E&E constituents exceeded the LEL at a depth of 0.5-1 ft. At vertical delineation sample location SD-R2-L-5-01D, no E&E constituents were detected at concentrations exceeding the LEL. Vertical delineation of E&E constituents at this location is complete.

At previous sample location SD-R-L-5-02, no E&E constituents exceeded LEL at a depth of 0.5-1 ft. E&E constituents were inadvertently added to the analyte list for the Phase II RI sediment sample (SD-R2-L-5-02D) collected at this location. The absence of E&E constituents at concentrations exceeding the LEL is consistent with previous results and confirms vertical delineation is complete at this location.

5.3.3.5 General Conclusions

Sediment samples were collected from the Facility during the Phase II Sediment RI in an effort to delineate the vertical extent of constituents at concentrations exceeding the LEL at the following five locations:

- SD-R2-E-16-1 (depth 0 to 0.5 ft.)
- SD-R2-E-16-1D (depth 2 to 2.5 ft.)
- SD-R2-M-7-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-M-7-01 of Phase I RI
- SD-R2-L-5-01D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-01 of Phase I RI
- SD-R2-L-5-02D (depth 2.5 to 3 ft.) – corresponding to sample location SD-R-L-5-02 of Phase I RI

The following conclusions are provided based on the results of the vertical delineation activities conducted during the Phase II Sediment RI:

- VOCs were either not detected, or detected at concentrations less than the LEL and/or SEL in sediment samples SD-R2-E-16-1 and SD-R2-E-16-1D. No further characterization of VOCs at this location is proposed.

- At sample location SD-R2-E-16-1/ SD-R2-E-16-1D the vertical extent of SVOCs and Metals has not been delineated. However, as this sample location receives runoff from Route 46, the presence of SVOCs and Metals at this location is not believed to be the result of manufacturing activities conducted at the Facility as discussed in Section 5.2. No further action is proposed for this location.

- At sample location SD-R-L-5-02/ SD-R2-L-5-02D, the vertical extent of SVOCs detected at a concentration exceeding the LEL has not been delineated. However, this sample location will be included in the remediation of the old burning grounds (M5-3) and delineation will be completed as part of the remedy.

- The vertical extent of Metals detected at concentrations exceeding the LEL or SEL has not been delineated. Two samples (SD-R-L-5-01/ SD-R2-L-5-01D) are located at the Route 46 culvert where surface water exits the Facility (see Section 5.2). Two samples (SD-R-L-5-01/ SD-R2-L-5-01D) are located in an area that will be included in the remediation of the old burning grounds (M5-3) and delineation will be completed as part of the remedy.

- At sample location (SD-R2-M-7-01D), the vertical extent of Metals has not been delineated. However, the vertical extent of sediment has been established and no further investigation of this area is recommended. At all vertical delineation locations, E&E constituents were either not detected, or detected at concentrations less than the LEL. No further characterization of the vertical distribution of E&E constituents in sediment is proposed.

5.3.4 Facility Wide Evaluation of Sediment Sample Results

This section incorporates the Phase II RI sediment data into the comprehensive site wide sediment characterization dataset for the purposes of fulfilling overall RI objectives in accordance with the TRSR. The overall RI data evaluation employs a site-wide, holistic approach to demonstrate horizontal and vertical delineation of Facility-related influences on sediment quality.

This section compares SI and Phase I RI sediment data to the most recent sediment screening benchmarks. Based on the results of the 586 sediment samples collected during the SI, Phase I RI, and Phase II RI, 4 VOCs, 22 SVOCs, 13 Metals, and 7 E&E constituents were detected at concentrations exceeding their respective LEL and/or SEL.

As indicated on Figure D-3, the extent of sediment with COCs at concentrations exceeding the LEL and SEL have been delineated within the former operational areas of the Facility with the noted exceptions related to offsite

influences at the Facility boundaries discussed in Section 5.2. In certain areas, lateral delineation was achieved relative to the physical boundaries of the aquatic feature (i.e., wetland/upland interface) in lieu of sediment samples with constituent concentrations less than benchmarks. Similarly, the vertical limits of depositional sediment was established using the sediment/glacial till interface (i.e., boring refusal) in lieu of sediment samples with constituent concentrations less than benchmarks.

As discussed in Section 5.2, surface water features draining the former operational area of the Facility merge into a single flowing feature that exits the Facility through a culvert beneath Route 46 in grid E16. There are a series of sediment samples with constituent concentrations less than LEL/SEL benchmarks upgradient of the culvert. In the immediate vicinity of the culvert storm water runoff-related influences (e.g., Metals and PAHs) are found at concentrations exceeding LEL/SEL benchmarks that represent off-site influence as Facility-related influences on sediment quality occur within the former operational areas.

A detailed presentation of the results of the SI and RI for sediment is presented by analytical group in Sections 5.3.1 through 5.3.4.

5.3.4.1 VOCs

The SI and RI collected a total of 146 samples for VOCs. The laboratory analysis of these samples indicated 22 LEL exceedances. SEL have not been established for these constituents. The LEL exceedance rate ranged from 0.7% (chlorobenzene) to 6.2% (methylene chloride). The table below presents a summary of VOC constituents exceeding a benchmark.

SUMMARY OF VOC BENCHMARK EXCEEDANCES

Constituent	LEL	SEL	Number of Exceedances	
			LEL	SEL
Chlorobenzene	0.291	NS	1	0
Chloroform	0.121	NS	7	0
Methylene Chloride	0.159	NS	9	0
Tetrachloroethene	0.45	NS	5	0

Due to relatively small number of VOC detections in sediment samples at the Facility, a single map depicting the combined distribution of VOCs was prepared (Figure D-4). As indicated on Figure D-4 the extent of VOCs in sediment at concentrations exceeding the LEL has been delineated.

Historical VOC sources are believed to be small, single release events (likely attributed to maintenance activities). NJDEP has acknowledged the influence of a regional chlorinated VOC plume on conditions in the southern portion of the Facility.

5.3.4.2 5.3.4.2 SVOCs

The SI and RI collected a total of 341 samples for SVOCs. The laboratory analysis of these samples indicated the LEL exceedance rate ranged from 0.6% (benzo[b]fluoranthene and diethylphthalate) to 22.6% (pyrene) and the SEL exceedance rate ranged from 0% (various constituents) to 14.9% (acenaphthylene). The table below presents a summary of SVOC constituents exceeding a benchmark.

SUMMARY OF SVOC BENCHMARK EXCEEDANCES

Constituent	LEL (mg/kg)	SEL (mg/kg)	Number of Exceedances	
			LEL	SEL

1,4-Dichlorobenzene	0.318	NS	5	0
2-Methylnaphthalene	0.0202	NS	5	0
Acenaphthene	0.00671	0.007-0.02	18	18
Acenaphthylene	0.00587	0.009-0.03	51	51
Anthracene	0.0572	5.4-18.1	24	1
Benzo[a]anthracene	0.108	21.6-72.5	57	1
Benzo[a]pyrene	0.15	21-70.5	51	1
Benzo[b]fluoranthene	10.4	26.2-88.2	2	0
Benzo[g,h,i]perylene	0.17	4.7-14.7	74	1
Benzo[k]fluoranthene	0.24	19.5-65.6	44	1
Bis(2-Ethylhexyl)phthalate	0.182	0.75	15	5
Chrysene	0.166	6.7-22.5	72	2
Dibenzo[a,h]Anthracene	0.33	1.9-6.4	56	1
Diethylphthalate	0.295	NS	2	0
Di-n-butylphthalate	1.114	0.11	6	6
Fluoranthene	0.423	14.9-50	52	1
Fluorene	0.0774	2.3-7.8	11	1
Indeno[1,2,3-cd]pyrene	0.2	4.7-15.7	30	0
Naphthalene	0.176	NS	9	0
Phenanthrene	0.204	13.8-46.50	34	1
Pyrene	0.195	12.4-41.6	77	1

These SVOCs can be separated into three general categories; PAHs, phthalates, and others. Various explosive constituents also appear on the SVOC analyte list, however, they were not detected at concentrations greater than their respective LELs and thus are not discussed further.

Historical sources related to these three categories include: imported historic fill containing PAHs, phthalates used in the production of smokeless gunpowder, and other miscellaneous constituents of unknown origin.

For the PAHs that frequently exceeded a benchmark (acenaphthylene, benzo(a)anthracene, benzo(a)pyrene, benzo[g,h,i]perylene, benzo[k]fluoranthene, chrysene, dibenzo[a,h]anthracene, fluoranthene, phenanthrene, and pyrene) individual maps depicting the distribution of these SVOCS were prepared. For SVOCs that were detected at concentrations exceeding a benchmark in less than 1% of samples collected (anthracene, acenaphthene, benzo[b]fluoranthene, bis(2-ethylhexyl)phthalate, 1,4-Dichlorobenzene, diethylphthalate, di-n-butylphthalate, fluorene, indeno[1,2,3-cd]pyrene, 2-Methylnaphthalene, and naphthalene), a single map depicting the combined distribution of these SVOCs was prepared.

The following is a description of the SVOCs detected in sediment during the SI/RI:

5.3.4.2.1.1 Pyrene

The SI and RI collected a total of 341 sediment samples analyzed for pyrene. The laboratory analysis of these samples indicated exceedances of the LEL at 77 sample locations (22.6% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

As indicated on Figure D-5 the extent of pyrene in sediment at concentrations exceeding the LEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.2.1.2 Benzo[g,h,i]perylene

The site and remedial investigations collected a total of 341 sediment samples analyzed for benzo[g,h,i]perylene. The analysis of these samples indicated exceedances of the LEL at 74 sample locations (21.7% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

As indicated on Figure D-6 the extent of benzo[g,h,i]perylene in sediment at concentrations exceeding the LEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.2.1.3 Chrysene

A total of 341 sediment samples were collected and analyzed for chrysene during the site and remedial investigations at the Facility. The laboratory analysis of these samples indicated exceedances of the LEL at 72 sample locations (21.1% of samples analyzed) and the exceedance of the SEL at 2 locations (0.6% of samples analyzed).

Figure D-7 indicates the extent of chrysene in sediment at concentrations exceeding either the LEL or SEL and demonstrates delineation within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.2.1.4 Benzo[a]anthracene

The site and remedial investigations collected a total of 341 sediment samples analyzed for benzo[a]anthracene. The analysis of these samples indicated exceedances of the LEL at 57 sample locations (16.7% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

As indicated in Figure D-8 the extent of benzo[a]anthracene in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.2.1.5 Dibenzo[a,h]Anthracene

The site and remedial investigations collected a total of 341 sediment samples analyzed for dibenzo[a,h]anthracene. The laboratory analysis of the samples indicated exceedances of the LEL at 56 sample locations (16.4% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

As indicated in Figure D-9 the lateral extent of dibenzo[a,h]anthracene in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

5.3.4.2.1.6 Fluoranthene

A total of 341 sediment samples were collected and analyzed for fluoranthene during the site and remedial investigations at the Facility. The laboratory analysis of these samples indicated exceedances of the LEL at 52

sample locations (15.2% of samples analyzed) and the exceedance of the SEL at one location SEL at one sample location (0.3% of samples analyzed).

As indicated in Figure D-10 the extent of fluoranthene in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.2.1.7 **Acenaphthylene***

The site and remedial investigations collected a total of 341 sediment samples analyzed for acenaphthylene. The analysis of these samples indicated exceedances of the LEL and SEL at 51 sample locations (15% LEL/of samples analyzed).

As indicated in Figure D-11 the extent of acenaphthylene in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.2.1.8 **Benzo[a]pyrene***

The site and remedial investigations collected a total of 341 sediment samples analyzed for benzo[a]pyrene. The laboratory analysis of these samples indicated exceedances of the LEL at 51 sample locations (15% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

Figure D-12 indicates the lateral extent of benzo[a]pyrene in sediment at concentrations exceeding either the LEL (15% of samples analyzed) or SEL and demonstrates delineation within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

*5.3.4.2.1.9 **Benzo[k]fluoranthene***

The site and remedial investigations collected a total of 341 sediment samples analyzed for benzo[k]fluoranthene. The laboratory analysis of these samples indicated exceedances of the LEL at 44 sample locations (12.9% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

Figure D-13 indicates the extent of benzo[k]fluoranthene in sediment at concentrations exceeding either the LEL or SEL and demonstrates delineation within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.2.1.10 **Phenanthrene***

The site and remedial investigations collected a total of 341 sediment samples analyzed for phenanthrene. The laboratory analysis of these samples indicated exceedances of the LEL at 34 sample locations (10% of samples analyzed) and the exceedance of the SEL at one sample location (0.3% of samples analyzed).

Figure D-14 indicates that the extent of phenanthrene in sediment at concentrations exceeding either the LEL or SEL and demonstrates delineation within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.2.1.11 **Remaining SVOCs***

For the remaining 11 SVOCs that were detected at concentrations exceeding a screening benchmark in less than 10% of samples (1,4-Dichlorobenzene, 2-Methylnaphthalene, acenaphthene, anthracene, benzo[b]fluoranthene, bis(2-ethylhexyl)phthalate, diethylphthalate, di-n-butylphthalate, fluorene, indeno[1,2,3-cd]pyrene, and naphthalene), a single map depicting the combined distribution of these SVOCs was prepared. For the remaining SVOCs, the number of samples analyzed ranged from 0.6% (benzo[b]fluoranthene and diethylphthalate) to 7% (anthracene) and the number of samples analyzed ranged from 0% (benzo[b]fluoranthene and indeno[1,2,3-cd]pyrene) to 5.3% (acenaphthene). SELs have not been developed for the following SVOCs:

- 1,4-Dichlorobenzene
- 2-Methylnaphthalene
- Diethylphthalate
- Naphthalene

SUMMARY OF BENCHMARK EXCEEDANCES FOR REMAINING SVOCS

Constituent	LEL (mg/kg)	SEL (mg/kg)	Number of Exceedances		Exceedance Rate (%)	
			LEL	SEL	LEL	SEL
1,4-Dichlorobenzene	0.318	NS	5	NA	1.5	NA
2-Methylnaphthalene	0.0202	NS	5	NA	1.5	NA
Acenaphthene	0.00671	0.007-0.02	18	18	5.3	5.3
Anthracene	0.0572	5.4-18.1	24	1	7.0	0.3
Benzo[b]fluoranthene	10.4	26.2-88.2	2	0	0.6	0.0
Bis(2-Ethylhexyl)phthalate	0.182	0.75	15	5	4.4	1.5
Diethylphthalate	0.295	NS	2	NA	0.6	NA
Di-n-butylphthalate	1.114	0.11	6	6	1.8	1.8
Fluorene	0.0774	2.3-7.8	11	1	3.2	0.3
Indeno[1,2,3-cd]pyrene	0.2	4.7-15.7	30	0	8.8	0.0
Naphthalene	0.176	NS	9	NA	2.6	NA

As indicated on Figure D-15 the extent of the remaining SVOCs in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.3 Metals

Metals detected at concentrations exceeding either LEL or SEL at the Facility are primarily associated with the historically common practice of using fly ash, bottom ash, and slag as fill material (historic fill) to improve the grade of the Facility, recover unusable land, and establish numerous narrow gauge rail beds. Streams and drainage ditches transect historic fill material and erosion of the fill material and deposition in the beds of the streams and drainage ditches occurs. Additionally, surface water drainage that flows into the streams, drainage ditches and ponds often comes in contact with historic fill before entering the surface water body. This surface flow has the ability to carry historic fill constituents into the surface water bodies. To a lesser extent, these constituents are associated with historic manufacturing processes when found outside the area of historic fill or where concentrations exceed the typical concentration for historic fill. In addition, Metals occur naturally at varying concentrations in the earth's crust. The Soils SI evaluated local and regional background Metals concentrations and established a site-specific background value for mercury and a regional background value for beryllium.

The SI and RI collected a total of 589 samples for Metals. The laboratory analysis of these samples indicated the

LEL exceedance rate ranged from 2.8% (cobalt) to 57.9% (lead) and the SEL exceedance rate ranged from 0.3% (cadmium) to 17.1% (lead). The table below presents a summary of Metals exceeding a benchmark.

SUMMARY OF METALS BENCHMARK EXCEEDANCES

Constituent	LEL (mg/kg)	SEL (mg/kg)	Number of Exceedances	
			LEL	SEL
Aluminum	0.0255	NS	7	NA
Antimony	NS	5	NA	5
Arsenic	6	33	188	5
Cadmium	0.6	10	159	2
Chromium	26	110	80	7
Cobalt	50	NS	1	NA
Copper	16	110	331	28
Lead	31	250	341	101
Manganese	630	1,100	4	3
Mercury	0.2	2	230	34
Nickel	16	75	63	5
Silver	1	NS	24	NA
Zinc	120	820	201	8

For the Metals that frequently exceeded a benchmark (aluminum, antimony, arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc) individual maps depicting the distribution of these Metals were prepared. For Metals that were detected at concentrations exceeding a benchmark in less than 1% of samples collected (cobalt and manganese), a single map depicting the combined distribution of these Metals was prepared. The following is a description of the Metals detected in sediment during the SI/RI:

*5.3.4.3.1.1 **Arsenic***

The site and remedial investigation collected a total of 589 sediment samples analyzed for arsenic. The laboratory analysis of these samples indicated exceedances of the LEL at 188 sample locations (31.9% of samples analyzed) and the exceedance of the SEL at five sample locations (0.8% of samples analyzed).

As indicated in Figure D-16 the extent of arsenic in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.3.1.2 **Copper***

A total of 589 sediment samples were collected and analyzed for copper during the site and remedial investigations at the Facility. The analysis of these samples indicated exceedances of the LEL at 331 sample locations (56.2% of samples analyzed) and the exceedance of the SEL at 28 sample locations (4.8% of samples analyzed).

As indicated on Figure D-17 the lateral extent of copper in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning

grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

*5.3.4.3.1.3 **Lead***

The site and remedial investigations collected a total of 589 sediment samples analyzed for lead. The laboratory analysis of these samples indicated exceedances of the LEL at 341 sample locations (57.9% of samples analyzed) and the exceedance of the SEL at 101 sample locations (17.1% of samples analyzed).

As indicated on Figure D-18 the lateral extent of lead in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

*5.3.4.3.1.4 **Mercury***

The site and remedial investigations collected a total of 589 sediment samples analyzed for mercury. The laboratory analysis of these samples indicated exceedances of the LEL at 230 sample locations (39% of samples analyzed) and the exceedance of the SEL at 34 sample locations (5.8% of samples analyzed).

As indicated on Figure D-19 the lateral extent of mercury in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

5.3.4.3.1.5 ***Zinc***

The site and remedial investigations collected a total of 589 sediment samples analyzed for zinc. The laboratory analysis of these samples indicated exceedances of the LEL at 201 sample locations (34.1% of samples analyzed) and the exceedance of the SEL at 8 sample locations (51.4% of samples analyzed).

As indicated on Figure D-20 the lateral extent of zinc in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

5.3.4.3.1.6 ***Cadmium***

The site and remedial investigations collected a total of 589 sediment samples analyzed for cadmium. The laboratory analysis of these samples indicated exceedances of the LEL at 159 sample locations (27% of samples analyzed) and the exceedance of the SEL at two sample locations (0.3% of samples analyzed).

As indicated on Figure D-21 the extent of cadmium in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

5.3.4.3.1.7 ***Chromium***

The site and remedial investigations collected a total of 589 sediment samples analyzed for chromium. The laboratory analysis of these samples indicated exceedances of the LEL at 80 sample locations (13.6% of samples analyzed) and the exceedance of the SEL at seven sample locations (1.2% of samples analyzed).

As indicated on Figure D-22 the lateral extent of chromium in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2. In the northwest corner of Duck Pond the vertical extent of this constituent in sediment has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the old burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

5.3.4.3.1.8 ***Nickel***

The site and remedial investigations collected a total of 589 sediment samples analyzed for nickel. The laboratory analysis of these samples indicated exceedances of the LEL at 63 sample locations (10.7% of samples analyzed) and the exceedance of the SEL at five sample locations (0.8% of samples analyzed).

As indicated on Figure D-23 the extent of nickel in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.3.1.9 **Aluminum***

The site and remedial investigations collected a total of 36 sediment samples analyzed for aluminum (5.6% of samples analyzed). The laboratory analysis of these samples indicated exceedances of the LEL at 2 sample locations. There is no SEL for aluminum.

As indicated on Figure D-24 the extent of aluminum in sediment at concentrations exceeding either the LEL has been delineated within the former operational areas of the Facility.

*5.3.4.3.1.10 **Silver***

The site and remedial investigations collected a total of 589 sediment samples analyzed for silver. The laboratory analysis of these samples indicated exceedances of the LEL at 24 sample locations (4.1% of samples analyzed). There were no exceedances of the SEL.

As indicated on Figure D-25 the extent of silver in sediment at concentrations exceeding either the LEL has been delineated within the former operational areas of the Facility, with the noted exceptions related to offsite influences at the Facility boundaries discussed in Section 5.2.

*5.3.4.3.1.11 **Antimony***

The site and remedial investigations collected a total of 179 sediment samples analyzed for antimony. The laboratory analysis of these samples indicated exceedances of the SEL at five sample locations (2.8% of samples analyzed). A LEL has not been established for this constituent.

As indicated on Figure D-26 the extent of antimony in sediment at concentrations exceeding SEL has been delineated within the former operational areas of the Facility.

*5.3.4.3.1.12 **Remaining Metals***

As there were few detections of manganese (5) and cobalt (1) at concentrations exceeding a benchmark, a single map depicting the combined distribution of these Metals was prepared. The laboratory analyses of these samples indicated total exceedances of LELs at 5 sample locations and the exceedance of the SELs at 3 locations. For the remaining Metals, the LEL exceedance rate ranged from 2.8% (cobalt) to 11.1% (manganese). Manganese has an SEL exceedance rate of 8.3%. A SEL has not been developed for cobalt.

SUMMARY OF BENCHMARK EXCEEDANCES FOR REMAINING METALS

Constituent	LEL (mg/kg)	SEL (mg/kg)	Number of Exceedances		Exceedance Rate (%)	
			LEL	SEL	LEL	SEL
Manganese	630	1100	4	3	11.1	8.3
Cobalt	50	NS	1	NA	2.8	NA

As indicated on Figure D-27 the extent of remaining Metals in sediment at concentrations exceeding either the LEL or SEL has been delineated within the former operational areas of the Facility.

E&E

The SI and RI collected a total of 516 samples for E&E constituents. The laboratory analysis of these samples indicated the LEL exceedance rate ranged from 0.2% (1,3,5-trinitrobenzene and HMX) to 4.5% (2,4-Dinitrotoluene) and the SEL exceedance rate ranged from 0% (HMX) to 0.2% (1,3,5-trinitrobenzene). Please note two E&E constituents (2,4-dinitrotoluene and nitrobenzene) were analyzed using both Methods 8330 and 8270C. The 8270 data was utilized for these constituents as they are more precise. 2,4-dinitrotoluene and nitrobenzene are discussed in the E&E compound section due to their close relation to E&E manufacturing. The table below presents a summary of E&E constituents exceeding a benchmark.

SUMMARY OF E&E BENCHMARK EXCEEDANCES

Constituent	LEL (µg/kg)	SEL (µg/kg)	Number of Exceedances	
			LEL	SEL
1,3,5-TRINITROBENZENE	2.33-7.84	12.4-41.6	1	1
2,4,6-TRINITROTOLUENE	92	NS	18	NA
2,4-Dinitrotoluene	14.4	NS	14	NA
2,6-Dinitrotoluene	39.8	NS	5	NA
Nitrobenzene	145	NS	11	NA
RDX	13	NS	2	NA
HMX	5.54-18.6	625-2101	1	0

For the E&E constituents that frequently exceeded a benchmark (2,4,6-trinitrotoluene, 2,4-dinitrotoluene, nitrobenzene) individual maps depicting the distribution of these Metals were prepared. For E&E constituents that were detected at concentrations exceeding a benchmark in less than 2% of samples collected (1,3,5-trinitrobenzene, 2,6-dinitrotoluene, HMX, and RDX), a single map depicting the combined distribution of these E&E constituents was prepared. The following is a description of the E&E constituents detected in sediment during the SI/RI investigations:

5.3.4.3.1.13 ***2,4,6-Trinitrotoluene***

The site and remedial investigations collected a total of 516 sediment samples analyzed for 2,4,6-trinitrotoluene. The laboratory analysis of these samples indicated exceedances of the LEL at 18 sample locations (3.5% of samples analyzed). A SEL has not been established for this constituent.

As indicated on Figure D-28 the extent of 2,4,6-trinitrotoluene in sediment at concentrations exceeding the LEL has been delineated within the former operational areas of the Facility. The distribution of TNT is limited to the Western and Central Drainage Areas, down gradient of the TNT and Dynamite Areas.

5.3.4.3.1.14 ***2,4-Dinitrotoluene***

The site and remedial investigations collected a total of 308 sediment samples analyzed for 2,4-dinitrotoluene. The laboratory analysis of these samples indicated exceedances of the LEL at 14 sample locations (3.5% of samples analyzed). A SEL has not been established for this constituent.

As indicated on Figure D-29 the extent of 2,4-dinitrotoluene in sediment at concentrations exceeding the LEL has been delineated within the former operational areas of the Facility.

5.3.4.3.1.15 ***Nitrobenzene***

The site and remedial investigations collected a total of 515 sediment samples analyzed for nitrobenzene (2.1% of samples analyzed). The laboratory analysis of these samples indicated exceedances of the LEL at 11 sample locations. A SEL has not been established for this constituent.

As indicated on Figure D-30 the extent of nitrobenzene in sediment at concentrations exceeding the LEL has been delineated within the former operational areas of the Facility.

5.3.4.3.1.16 ***Remaining E&E Constituents***

For the remaining four E&E constituents that were detected at concentrations exceeding a benchmark in less than 2% of samples (1,3,5-trinitrobenzene, 2,6-dinitrotoluene, HMX, and RDX), a single map depicting the combined distribution of these E&E constituents was prepared. For the remaining E&E constituents, the of samples analyzed ranged from 0.2% (1,3,5-Trinitrobenzene and HMX) to 1.5% (2,6-Dinitrotoluene) and the of samples analyzed ranged from 0% (HMX) to 0.2% (1,3,5-trinitrobenzene) SELs have not been developed for 2,6-Dinitrotoluene and RDX.

SUMMARY OF BENCHMARK EXCEEDANCES FOR REMAINING Metals

Constituent	LEL (mg/kg)	SEL (mg/kg)	Number of Exceedances		Exceedance Rate (%)	
			LEL	SEL	LEL	SEL
1,3,5-Trinitrobenzene	2.33-7.84	12.4-41.6	1	1	0.2	0.2
2,6-Dinitrotoluene	39.8	NS	5	NA	1.5	NA
RDX	13	NS	2	NA	0.4	NA
HMX	5.54-18.6	625-2101	1	0	0.2	0.0

As indicated on Figure D-31 the extent of the remaining E&E constituents in sediment at concentrations exceeding the LEL have been delineated within the former operational areas of the Facility.

6 CONCLUSIONS

6.1 PHASE II SEDIMENT RI FINDINGS

As presented in Section 2.2, Phase II RI sediment sampling focused on the following:

- Evaluating sediment quality outside of defined channels within wetland areas
- Evaluating surface water/sediment interactions
- Confirming the depth of constituents at concentrations above applicable standards at select locations
- Further characterization of the extent of Facility-related influences in the interior of the Facility (former operational areas)

A total of 26 sediment samples were collected and analyzed in support of these objectives. The required sample frequencies, analytical suites, and quality assurance/quality control samples presented in the Phase II RI Memorandum (OBG, 2013) were met for sediment samples collected during the Phase II RI field sampling, with the exception of one proposed sample that was not collected because it was located within an upland area (discussed in Section 2.2). A review of the laboratory analytical data indicated that the data are acceptable and of a quality appropriate for evaluating site conditions and subsequent actions.

The following subsections summarize the investigation findings relative to the Phase II RI objectives.

6.2 SPECIFIC PHASE II SEDIMENT RI FINDINGS

6.2.1 Evaluation of Sediment Quality Outside Stream Channels

The evaluation of sediment quality outside of stream channels indicated exceedances of the LEL or SEL in all 20 sediment samples collected from outside of defined stream channels. However, further analysis of the results indicates three separate sources for the presence of constituents in sediment at concentrations exceeding the LEL/SEL. These sources include historic fill, Facility operations, and offsite influences and are further evaluated below.

- Of these 20 locations, 16 samples were located in or adjacent to historic fill material, adjacent to stream channels that were down gradient of historic fill, or in the interior portions of the Facility in wetland areas that received runoff from areas where historic fill was emplaced. This illustrates the wide ranging effect the presence of historic fill has on sediment quality.

- Former Facility operations effected sediment quality outside of defined stream channels at two locations in Experimental Dynamite Area, which is located in the Development Area.

- At two locations (Route 46 (SD-R2-E-16-3) and the NJ transit line (SD-R2-O-4-1)), the presence of PAHs and Metals, in sediment samples at concentrations exceeding the LEL/SEL is attributed to off-site influences. The absence of Facility related constituents at these locations further supports an offsite source for the PAHs and Metals.

6.2.2 Relationship between Surface Water and Sediment

The evaluation of the relationship between surface water quality and sediment quality conducted as part of the Phase II Sediment RI indicated the following:

- SVOCs were detected in sediment, but not in surface water at five of the seven co-located sample points. At two of the seven co-located sample points SVOCs were detected in surface water at concentrations four orders of magnitude lower than the concentrations in the sediment sample, indicating minimal partitioning of SVOCs from sediment to surface water.

- Beryllium, selenium, and silver were detected in sediment and not in surface water, indicating these constituents are not partitioning from sediment to surface water.

- Arsenic, cadmium, chromium, cobalt, copper, lead, mercury, nickel, vanadium, and zinc were detected in surface water and sediment. However, the concentrations of the Metals detected in sediment were typically three to five orders of magnitude higher than in sediment than in surface water, indicating minimal partitioning of Metals from sediment to surface water.

- Aluminum, barium, calcium, iron, magnesium, potassium, and manganese were detected in both surface water and sediment samples from each co-location. As indicated in *Elemental Concentrations in Soil and Other Surficial Materials of the Counterminous United States*, USGS Professional Paper 720, 1984 (USGS, 1984), these Metals are commonly found in surficial geologic materials in the vicinity of the Facility.

- E&E constituents were not detected in sediment samples collected from the seven co-located sample points. As such, no conclusions related to the effect E&E constituents present in sediment have on surface water could be made.

6.2.3 Evaluation of Vertical Delineation Results

The evaluation of the vertical delineation results conducted as part of the Phase II Sediment RI indicated the following:

- At two of the four locations (SD-R2-E-16-1D and SD-R2-M-7-01D) the vertical extent of sediment has been established but LEL exceedances were identified at the base of the sediment layer. No further investigations are proposed for these areas. Furthermore, at one of these locations (SD-R2-E-16-1D) the presence of constituents at concentrations exceeding a benchmark is attributed to off-site influence (See Section 5.2).

- At two locations (SD-R2-L-5-01D and SD-R2-L-5-02D) in the northwest corner of Duck Pond, the vertical extent of this constituents in sediment exceeding a benchmark has not been delineated. However, delineation of constituent concentrations in sediment in this area of the Facility will be addressed as part of the remedy for the Old Burning grounds and associated influences on adjacent Duck Pond sediment. (see Section 5.3.3).

6.3 OVERALL RI FINDINGS – SEDIMENT

Data collected during Phase II RI field sampling activities were incorporated into the site characterization dataset (SI, Phase I RI and Phase II RI data). The following subsections summarize the evaluation of the dataset in the context of the overall remedial investigation objectives.

6.3.1 Site Characterization

The SI, Phase I RI and Phase II RI sediment samples identified 4 VOCs, 22 SVOCs, 13 Metals, and 7 E&E Constituents, at concentrations exceeding one or more comparison criteria (i.e., LEL and SEL). Sediment sampling results are summarized below.

- VOCs detected at concentrations exceeding the LEL or SEL have been delineated.

- The extent of soils with SVOCs at concentrations exceeding the LEL or SEL has been delineated within the former operational areas of the facility. However, SVOCs were detected at various locations along the perimeter of the Facility, in areas beyond the influence of Facility operations and/or in close proximity to transportation routes (roadways, parking lots), are believed to represent off-site influences.

- Metals, with the exception of lead, arsenic, cadmium, chromium, copper, nickel, and zinc, have not been delineated at the property boundary. However, the extent of sediment with lead, arsenic, cadmium, chromium, copper, nickel, and zinc at concentrations exceeding comparison criteria has been delineated within the former operational areas of the Facility. Metals that were detected at various locations along the perimeter of the Facility, in areas beyond the influence of Facility operations and/or in close proximity to transportation routes (roadways, parking lots), are believed to represent off-site influences.

- E&E constituents detected at concentrations exceeding the LEL have been delineated.

The information in this Phase II Sediment RIR defines the extent of Facility-related influences on sediment quality relative to applicable screening benchmarks. Screening benchmarks are values below which no adverse ecological effects are expected. Exceeding these benchmarks indicates the potential for an effect. The potential for effects is evaluated in the Ecological Evaluation/Ecological Risk Assessment (Volume F), and the resulting scientifically-based risk management decisions will identify areas requiring remedial action and support remedy selection and design.

6.3.2 Historic Fill

RI data and a historic fill investigation indicate that historic fill is widespread with an areal extent estimated to be 161 acres. Sediment samples collected within areas of known historic fill, in wetland areas adjacent to historic fill, and in stream channels that traverse through or are down gradient of historic fill commonly have SVOCs and Metals at concentrations exceeding the LEL and/or SEL. The detected constituents and concentrations are similar to those previously listed in Table 4-2 (Summary of Target Contaminant Concentrations in Typical Historic Fill Material) of the TRSR.

6.3.3 Extent of COCs

Historical development and manufacturing practices, process upsets, decontamination activities, and runoff associated with precipitation events introduced manufacturing products and byproducts into sediments present in the wetlands, stream channels, and ponds at the Facility. These constituents (i.e., VOCs, SVOCs, Metals, E&E constituents, and PCBs) remain present at concentrations greater than LEL and SEL. Given the means by which these constituents were introduced to Facility sediment and the physiochemical properties (e.g., hydrophobicity, affinity for binding to organic carbon), they remain contained within the Facility and occur primarily within the former operational areas.

As identified in Section 5.2 there are several surface water bodies and wetland areas on the perimeter of the Facility where COCs were detected at concentrations exceeding one or more comparison criterion. As no manufacturing, storage or maintenance actives were conducted in these areas, the presence of COCs in sediment in these areas is likely attributed to either runoff from adjacent roadways or rail lines. Segregation of these isolated areas from Facility-related influences observed in the former process areas, coupled with the constituents associated with historical manufacturing operations in these areas further supports the influence of anthropogenic sources unrelated to the Facility.

6.4 RECOMMENDATIONS

Based on the Results of the Sediment RI, the following activities will be conducted by Hercules as part of the remedial action for sediment:

- Facility-related influences on sediment quality occurred as acute releases during manufacturing operations (i.e., spills) and chronic, ongoing erosion from adjacent upland areas (i.e., burning grounds, banks composed of historic fill). Release and transport mechanisms are discussed in greater detail in the conceptual site model presented in the Phase II RIR Summary (Volume A). The Ecological Evaluation/Ecological Risk Assessment (Volume F) acknowledges that remedial action is necessary in certain areas of the Facility, prioritizes these areas based on complexity and severity, and outlines presumptive remedies associated with each area. The areas addressed in the EE/ERA include areas influencing sediment quality (i.e., old burning ground [M5-3], TNT Area). Hercules is committed to addressing these areas, and other areas identified via ongoing risk assessment activities. Comprehensive remedies addressing both upland source areas and related sediment influences will be developed to address protection of both human health and environment.
- Maintain existing weirs and ensure proper future function of the weirs

TABLES

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
VOCS	1,1,1-Trichloroethane	71-55-6	ug/kg	213	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	850	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,1,2-Trichloroethane	79-00-5	ug/kg	518	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,1-Dichloroethane	75-34-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,1-Dichloroethene	75-35-4	ug/kg	19.4	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2,4-Trichlorobenzene	120-82-1	ug/kg	5,062	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2-Dibromoethane	106-93-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2-Dichlorobenzene	95-50-1	ug/kg	294	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2-Dichloroethane	107-06-2	ug/kg	260	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,2-Dichloropropane	78-87-5	ug/kg	333	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,3-Dichlorobenzene	541-73-1	ug/kg	1,315	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	1,4-Dichlorobenzene	106-46-7	ug/kg	318	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	2-Butanone	78-93-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B

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Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
VOCS	2-Chloroethylvinylether	110-75-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	2-Hexanone	591-78-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	4-Methyl-2-Pentanone	108-10-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Acetone	67-64-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Acrolein	107-02-8	ug/kg	0.00152	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Acrylonitrile	107-13-1	ug/kg	1.2	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Amyl Alcohol	71-41-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Benzene	71-43-2	ug/kg	142	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Bromodichloromethane	75-27-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Bromoform	75-25-2	ug/kg	492	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Bromomethane	74-83-9	ug/kg	1.37	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Carbon disulfide	75-15-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Carbon Tetrachloride	56-23-5	ug/kg	1,450	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Chlorobenzene	108-90-7	ug/kg	291	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
VOCS	Chloroethane	75-00-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Chloroform	67-66-3	ug/kg	121	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Chloromethane	74-87-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	cis-1,2-Dichloroethene	156-59-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Cis-1,3-Dichloropropene	10061-01-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Cyclohexane	110-82-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Di-N-Propyl Ether (1,1' -oxybis-Propane)	111-43-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Dibromochloromethane	124-48-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Dichlorodifluoromethane	75-71-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Diethyl Ether (Ethyl ether)	60-29-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Ethane, 1,1,2-trichloro-1,2,2-trifluoro	76-13-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Ethanol	64-17-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Ethylbenzene	100-41-4	ug/kg	175	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Hexachlorobutadiene	87-68-3	ug/kg	26.5	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B

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Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
VOCS	Isopropylbenzene	98-82-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Methanol	67-56-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Methyl Acetate	79-20-9	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Methylcyclohexane	108-87-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Methylene Chloride	75-09-2	ug/kg	159	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Methyl t-butyl ether	1634-04-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	N-Butyl Ether	142-96-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8015B
VOCS	Perchlorate	14797-73-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8321B
VOCS	Styrene	100-42-5	ug/kg	254	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Tetrachloroethylene(PCE)	127-18-4	ug/kg	450	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Toluene	108-88-3	ug/kg	1,220	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	trans-1,2-Dichloroethene	156-60-5	ug/kg	654	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Trans-1,3-Dichloropropene	10061-02-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Trichloroethylene(TCE)	79-01-6	ug/kg	112	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B

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Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
VOCS	Trichlorofluoromethane	75-69-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Vinyl Chloride	75-01-4	ug/kg	202	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
VOCS	Xylenes, (total)	1330-20-7	ug/kg	120	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8260B
SVOCS	1,1'-Biphenyl	92-52-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1,2,4-Trichlorobenzene	120-82-1	ug/kg	5,062	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1,2-Dichlorobenzene	95-50-1	ug/kg	294	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1,2-Diphenylhydrazine	122-66-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1,3-Dichlorobenzene	541-73-1	ug/kg	1,315	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1,4-Dichlorobenzene	106-46-7	ug/kg	318	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	1-Methylnaphthalene	90-12-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,4,5-Trichlorophenol	95-95-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,4,6-Trichlorophenol	88-06-2	ug/kg	208	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,4-Dichlorophenol	120-83-2	ug/kg	81.7	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,4-Dimethylphenol	105-67-9	ug/kg	304	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C

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Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
SVOCS	2,4-Dinitrophenol	51-28-5	ug/kg	6.21	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,4-Dinitrotoluene	121-14-2	ug/kg	14.4	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2,6-Dinitrotoluene	606-20-2	ug/kg	39.8	Site Specific	NS	Site Specific	SW8270C
SVOCS	2-Chloronaphthalene	91-58-7	ug/kg	417	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2-Chlorophenol	95-57-8	ug/kg	31.9	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2-Methylnaphthalene	91-57-6	ug/kg	20.2	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2-Methylphenol	95-48-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2-Nitroaniline	88-74-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	2-Nitrophenol	88-75-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	3,3-Dichlorobenzidine	91-94-1	ug/kg	127	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	3&4-Methylphenol	106-44-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	3-Nitroaniline	99-09-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4-Bromophenyl-phenylether	101-55-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C

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Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
SVOCS	4-Chloro-3-methylphenol	59-50-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4-Chloroaniline	106-47-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4-Nitroaniline	100-01-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	4-Nitrophenol	100-02-7	ug/kg	13.3	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Acenaphthene	83-32-9	ug/kg	6.71	NJ ESC Freshwater Criteria, March 2009	7-20	Calculated basedon TOC	SW8270C
SVOCS	Acenaphthylene	208-96-8	ug/kg	5.87	NJ ESC Freshwater Criteria, March 2009	9-30	Calculated basedon TOC	SW8270C
SVOCS	Acetophenone	98-86-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Anthracene	120-12-7	ug/kg	57.2	NJ ESC Freshwater Criteria, March 2009	370,000	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Atrazine	1912-24-9	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzaldehyde	100-52-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzidine	92-87-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzo[a]anthracene	56-55-3	ug/kg	108	NJ ESC Freshwater Criteria, March 2009	21,600-72,500	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzo[a]pyrene	50-32-8	ug/kg	150	NJ ESC Freshwater Criteria, March 2009	21,000-70,500	NJ ESC Freshwater Criteria, March 2009	SW8270C

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Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
SVOCS	Benzo[b]fluoranthene	205-99-2	ug/kg	10,400	NJ ESC Freshwater Criteria, March 2009	26,200-88,200	Calculated basedon TOC	SW8270C
SVOCS	Benzo[g,h,i]perylene	191-24-2	ug/kg	170	NJ ESC Freshwater Criteria, March 2009	4,700-15,700	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzo[k]fluoranthene	207-08-9	ug/kg	240	NJ ESC Freshwater Criteria, March 2009	19,500-65,600	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Benzyl Butyl Phthalate	85-68-7	ug/kg	1,970	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Bis(2-Chloroethoxy) methane	111-91-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	111-44-4	ug/kg	3,520	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Bis(2-Chloroisopropyl) ether	108-60-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Bis(2-Ethylhexyl) phthalate	117-81-7	ug/kg	182	NJ ESC Freshwater Criteria, March 2009	750	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Caprolactam	105-60-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Carbazole	86-74-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Chrysene	218-01-9	ug/kg	166	NJ ESC Freshwater Criteria, March 2009	6,700-22,500	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Di-n-butylphthalate	84-74-2	ug/kg	1,114	NJ ESC Freshwater Criteria, March 2009	110	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Di-n-octylphthalate	117-84-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Dibenz[a,h]Anthracene	53-70-3	ug/kg	33	NJ ESC Freshwater Criteria, March 2009	1.,900-6,400	NJ ESC Freshwater Criteria, March 2009	SW8270C

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Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
SVOCS	Dibenzofuran	132-64-9	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Diethylphthalate	84-66-2	ug/kg	295	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Dimethylphthalate	131-11-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Dinitrotoluene mixture	25321-14-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Fluoranthene	206-44-0	ug/kg	423	NJ ESC Freshwater Criteria, March 2009	14,900-50,000	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Fluorene	86-73-7	ug/kg	77.4	NJ ESC Freshwater Criteria, March 2009	2,300-7,800	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Hexachlorobenzene	118-74-1	ug/kg	20	NJ ESC Freshwater Criteria, March 2009	24,000	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Hexachlorobutadiene	87-68-3	ug/kg	26.5	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Hexachlorocyclopentadiene	77-47-4	ug/kg	901	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Hexachloroethane	67-72-1	ug/kg	584	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Indeno[1,2,3-cd]pyrene	193-39-5	ug/kg	200	NJ ESC Freshwater Criteria, March 2009	4,700-15,700	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Isophorone	78-59-1	ug/kg	432	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	N-Nitroso-Di-N-Propylamine	621-64-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	N-Nitrosodimethylamine	62-75-9	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
SVOCS	N-Nitrosodiphenylamine	86-30-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Naphthalene	91-20-3	ug/kg	160	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Saline Criteria, March 2009	SW8270C
SVOCS	Nitrobenzene	98-95-3	ug/kg	145	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Pentachlorophenol	87-86-5	ug/kg	23,000	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Phenanthrene	85-01-8	ug/kg	204	NJ ESC Freshwater Criteria, March 2009	13,800-46,500	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Phenol	108-95-2	ug/kg	49.1	NJ ESC Freshwater Criteria, March 2009	48	NJ ESC Freshwater Criteria, March 2009	SW8270C
SVOCS	Pyrene	129-00-0	ug/kg	195	NJ ESC Freshwater Criteria, March 2009	12,400-41,600	NJ ESC Freshwater Criteria, March 2009	SW8270C
Metals	Aluminum	7429-90-5	ug/kg	25,500,000	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Antimony	7440-36-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	3,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Arsenic	7440-38-2	ug/kg	6,000	NJ ESC Freshwater Criteria, March 2009	33,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Barium	7440-39-3	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Beryllium	7440-41-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Cadmium	7440-43-9	ug/kg	600	NJ ESC Freshwater Criteria, March 2009	10,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Calcium	7440-70-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
Metals	Chromium	7440-47-3	ug/kg	26,000	NJ ESC Freshwater Criteria, March 2009	110,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Cobalt	7440-48-4	ug/kg	50,000	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Copper	7440-50-8	ug/kg	16,000	NJ ESC Freshwater Criteria, March 2009	110,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Iron	7439-89-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Lead	7439-92-1	ug/kg	31,000	NJ ESC Freshwater Criteria, March 2009	250,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Magnesium	7439-95-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Manganese	7439-96-5	ug/kg	630,000	NJ ESC Freshwater Criteria, March 2009	1,100,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Mercury	7439-97-6	ug/kg	174	NJ ESC Freshwater Criteria, March 2009	2,000	NJ ESC Freshwater Criteria, March 2009	SW7471A
Metals	Nickel	7440-02-0	ug/kg	16,000	NJ ESC Freshwater Criteria, March 2009	75,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Potassium	7440-09-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Selenium	7782-49-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Silver	7440-22-4	ug/kg	500	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Sodium	7440-23-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Thallium	7440-28-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
Metals	Vanadium	7440-62-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW6010B
Metals	Zinc	7440-66-6	ug/kg	120,000	NJ ESC Freshwater Criteria, March 2009	820,000	NJ ESC Freshwater Criteria, March 2009	SW6010B
E&E	1,2-Dinitrobenzene	528-29-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	1,3,5-Trinitrobenzene	99-35-4	ug/kg	2	Site Specific	2,330-7,840	Site Specific	SW8330
E&E	1,3-Dinitrobenzene	99-65-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	1,4-Dinitrobenzene	100-25-4	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	1-Nitronaphthalene	86-57-7	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	2,4,6-Trinitrotoluene	118-96-7	ug/kg	92	Site Specific	NS	Site Specific	SW8330
E&E	2,4-Dinitrotoluene	121-14-2	ug/kg	14.4	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	2,6-Dinitrotoluene	606-20-2	ug/kg	39.8	Site Specific	NS	Site Specific	SW8330
E&E	2-Amino-4,6-dinitrotoluene	35572-78-2	ug/kg	NS	Site Specific	NS	Site Specific	SW8330
E&E	2-Nitrotoluene	88-72-2	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	3-Nitrotoluene	99-08-1	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	4-Amino-2,6-dinitrotoluene	19406-51-0	ug/kg	NS	Site Specific	NS	Site Specific	SW8330

Table 1 - Phase II RI Sediment Analytical Methods and Criteria Summary

Hercules Incorporated
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Cas Rn	Units	LEL	Source of LEL	SEL	Source of SEL	Analytical Method
E&E	4-Nitrotoluene	99-99-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	Dinitrotoluene mixture	25321-14-6	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	Hexahydro-1,3,5-Trinitro-1,3,5-Triazine	121-82-4	ug/kg	13	Site Specific	NS	Site Specific	SW8330
E&E	Nitrobenzene	98-95-3	ug/kg	145	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	Nitrocellulose	9004-70-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8332
E&E	Nitroglycerin	55-63-0	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8332
E&E	Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine	2691-41-0	ug/kg	6	Site Specific	5,540-18,600	Site Specific	SW8330
E&E	Pentaerythritol Tetranitrate	78-11-5	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
E&E	TETRYL	479-45-8	ug/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	SW8330
GENERAL CHEMISTRY	pH	12408-02-5	PH	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	E150.1
GENERAL CHEMISTRY	Total Organic Carbon	7440-44-0	mg/kg	NS	NJ ESC Freshwater Criteria, March 2009	NS	NJ ESC Freshwater Criteria, March 2009	LLOYD KAHN

Table D-2 - Phase II RI Analytical Results

Hercules Incorporated
Kenvil Works Facility, New Jersey

				Sample Location	SD-R2-L-5-01D	SD-R2-L-5-02	SD-R2-M-7-01D	SD-R2-0-4-1	SD-R2-0-4-2	SD-R2-0-4-3
				Field Sample ID	SD-R2-L-5-01D_20131104	SD-R2-L-5-02_20131104	SD-R2-M-7-01D_20131105	SD-R2-0-4-1_20131105	SD-R2-0-4-2_20131105	SD-R2-0-4-3_20131105
				Sample Date	11/04/2013	11/04/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013
				Sample Type	N	N	N	N	N	N
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
VOC	1,1,1-Trichloroethane	ug/kg	213	NS	NA	NA	NA	NA	NA	NA
VOC	1,1,2,2-Tetrachloroetl	ug/kg	850	NS	NA	NA	NA	NA	NA	NA
VOC	1,1,2-Trichloro-1,2,2-	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,1,2-Trichloroethane	ug/kg	518	NS	NA	NA	NA	NA	NA	NA
VOC	1,1-Dichloroethane (1	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,1-Dichloroethene (1	ug/kg	19.4	NS	NA	NA	NA	NA	NA	NA
VOC	1,2,4-Trichlorobenzer	ug/kg	5,062	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dibromo-3-chlor	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dibromoethane	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dichlorobenzene	ug/kg	294	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dichloroethane	ug/kg	260	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dichloroethene (c	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dichloroethene (t	ug/kg	654	NS	NA	NA	NA	NA	NA	NA
VOC	1,2-Dichloropropane	ug/kg	333	NS	NA	NA	NA	NA	NA	NA
VOC	1,3-Dichlorobenzene	ug/kg	1,315	NS	NA	NA	NA	NA	NA	NA
VOC	1,3-Dichloropropene	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,3-Dichloropropene	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	1,4-Dichlorobenzene	ug/kg	318	NS	NA	NA	NA	NA	NA	NA
VOC	2-Butanone (Methyl	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	2-Hexanone	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	4-Methyl-2-pentanon	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Acetone	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Benzene	ug/kg	142	NS	NA	NA	NA	NA	NA	NA
VOC	Bromodichlorometha	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Bromoform	ug/kg	492	NS	NA	NA	NA	NA	NA	NA
VOC	Bromomethane	ug/kg	1.37	NS	NA	NA	NA	NA	NA	NA
VOC	Carbon Disulfide	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Carbon Tetrachloride	ug/kg	1,450	NS	NA	NA	NA	NA	NA	NA
VOC	Chlorobenzene	ug/kg	291	NS	NA	NA	NA	NA	NA	NA
VOC	Chloroethane	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Chloroform	ug/kg	121	NS	NA	NA	NA	NA	NA	NA
VOC	Chloromethane	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Cyclohexane	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Dibromochlorometha	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Dichlorodifluorometh	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Ethylbenzene	ug/kg	175	NS	NA	NA	NA	NA	NA	NA
VOC	Isopropylbenzene (C	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Methyl Acetate	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Methyl tert butyl ethe	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Methylcyclohexane	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Methylene Chloride	ug/kg	159	NS	NA	NA	NA	NA	NA	NA
VOC	Styrene	ug/kg	254	NS	NA	NA	NA	NA	NA	NA
VOC	Tetrachloroethylene (	ug/kg	450	NS	NA	NA	NA	NA	NA	NA
VOC	Toluene	ug/kg	1,220	NS	NA	NA	NA	NA	NA	NA
VOC	Trichloroethene	ug/kg	112	NS	NA	NA	NA	NA	NA	NA
VOC	Trichlorofluorometha	ug/kg	NS	NS	NA	NA	NA	NA	NA	NA
VOC	Vinyl Chloride	ug/kg	202	NS	NA	NA	NA	NA	NA	NA
VOC	Xylenes-Total	ug/kg	120	NS	NA	NA	NA	NA	NA	NA

Table D-2 - Phase II RI Analytical Results

Hercules Incorporated
Kenvil Works Facility, New Jersey

				Sample Location Field Sample ID Sample Date Sample Type
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**
VOC	1,1,1-Trichloroethane	ug/kg	213	NS
VOC	1,1,2,2-Tetrachloroetl	ug/kg	850	NS
VOC	1,1,2-Trichloro-1,2,2-	ug/kg	NS	NS
VOC	1,1,2-Trichloroethane	ug/kg	518	NS
VOC	1,1-Dichloroethane (1	ug/kg	NS	NS
VOC	1,1-Dichloroethene (1	ug/kg	19.4	NS
VOC	1,2,4-Trichlorobenzer	ug/kg	5,062	NS
VOC	1,2-Dibromo-3-chlor(	ug/kg	NS	NS
VOC	1,2-Dibromoethane	ug/kg	NS	NS
VOC	1,2-Dichlorobenzene	ug/kg	294	NS
VOC	1,2-Dichloroethane	ug/kg	260	NS
VOC	1,2-Dichloroethene (c	ug/kg	NS	NS
VOC	1,2-Dichloroethene (t	ug/kg	654	NS
VOC	1,2-Dichloropropane	ug/kg	333	NS
VOC	1,3-Dichlorobenzene	ug/kg	1,315	NS
VOC	1,3-Dichloropropene	ug/kg	NS	NS
VOC	1,3-Dichloropropene	ug/kg	NS	NS
VOC	1,4-Dichlorobenzene	ug/kg	318	NS
VOC	2-Butanone (Methyl	ug/kg	NS	NS
VOC	2-Hexanone	ug/kg	NS	NS
VOC	4-Methyl-2-pentanon	ug/kg	NS	NS
VOC	Acetone	ug/kg	NS	NS
VOC	Benzene	ug/kg	142	NS
VOC	Bromodichlorometha	ug/kg	NS	NS
VOC	Bromoform	ug/kg	492	NS
VOC	Bromomethane	ug/kg	1.37	NS
VOC	Carbon Disulfide	ug/kg	NS	NS
VOC	Carbon Tetrachloride	ug/kg	1,450	NS
VOC	Chlorobenzene	ug/kg	291	NS
VOC	Chloroethane	ug/kg	NS	NS
VOC	Chloroform	ug/kg	121	NS
VOC	Chloromethane	ug/kg	NS	NS
VOC	Cyclohexane	ug/kg	NS	NS
VOC	Dibromochlorometha	ug/kg	NS	NS
VOC	Dichlorodifluorometh	ug/kg	NS	NS
VOC	Ethylbenzene	ug/kg	175	NS
VOC	Isopropylbenzene (C	ug/kg	NS	NS
VOC	Methyl Acetate	ug/kg	NS	NS
VOC	Methyl tert butyl ethe	ug/kg	NS	NS
VOC	Methylcyclohexane	ug/kg	NS	NS
VOC	Methylene Chloride	ug/kg	159	NS
VOC	Styrene	ug/kg	254	NS
VOC	Tetrachloroethylene (	ug/kg	450	NS
VOC	Toluene	ug/kg	1,220	NS
VOC	Trichloroethene	ug/kg	112	NS
VOC	Trichlorofluorometha	ug/kg	NS	NS
VOC	Vinyl Chloride	ug/kg	202	NS
VOC	Xylenes-Total	ug/kg	120	NS

Table D-2 - Phase II RI Analytical Results

Hercules Incorporated
Kenvil Works Facility, New Jersey

				Sample Location	SD-R2-L-5-01D	SD-R2-L-5-02	SD-R2-M-7-01D	SD-R2-0-4-1	SD-R2-0-4-2	SD-R2-0-4-3
				Field Sample ID	SD-R2-L-5-01D_20131104	SD-R2-L-5-02_20131104	SD-R2-M-7-01D_20131105	SD-R2-0-4-1_20131105	SD-R2-0-4-2_20131105	SD-R2-0-4-3_20131105
				Sample Date	11/04/2013	11/04/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013
				Sample Type	N	N	N	N	N	N
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
SVOC	1,1-Biphenyl	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	1-Methylnaphthalene	ug/kg	NS	NS	NA	NA	NA	5200 U	83 J	190 U
SVOC	2,4,5-Trichloropheno	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2,4,6-Trichloropheno	ug/kg	208	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2,4-Dichlorophenol	ug/kg	81.7	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2,4-Dimethylphenol	ug/kg	304	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2,4-Dinitrophenol	ug/kg	6.21	NS	55000 U	36000 U	46000 U	NA	NA	NA
SVOC	2,4-Dinitrotoluene	ug/kg	14.4	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	2,6-Dinitrotoluene^	ug/kg	39.8	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2-Chloronaphthalene	ug/kg	417	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2-Chlorophenol	ug/kg	31.9	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	2-Methylnaphthalene	ug/kg	20.2	NS	930 U	610 U	780 U	5200 U	63 J	190 U
SVOC	2-Nitrophenol	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	3-Nitroaniline	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	3,3'-Dichlorobenzidin	ug/kg	127	NS	18000 U	12000 U	15000 U	NA	NA	NA
SVOC	4-Chloro-3-methylph	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	4-Chlorophenyl- pher	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	4-Bromophenyl phen	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	4,6-Dinitro-2-methylp	ug/kg	NS	NS	27000 U	18000 U	23000 U	NA	NA	NA
SVOC	4-Nitrophenol	ug/kg	13.3	NS	27000 U	18000 U	23000 U	NA	NA	NA
SVOC	Acenaphthene	ug/kg	6.71	7-20	930 U	610 U	780 U	5200 U	270 U	190 U
SVOC	Acenaphthylene	ug/kg	5.87	9-30	930 U	610 U	780 U	5200 U	270 U	190 U
SVOC	Acetophenone	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Anthracene	ug/kg	57.2	5,400-18,100	930 U	610 U	780 U	5200 U	270 U	190 U
SVOC	Atrazine	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Benzaldehyde	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Benzo(a)Anthracene	ug/kg	108	21,600-72,500	930 U	610 U	780 U	5200 U	57 J	190 U
SVOC	Benzo(a)Pyrene	ug/kg	150	21,000-70,500	270 J	130 J	780 U	5200 U	270 U	190 U
SVOC	Benzo(b)Fluoranthen	ug/kg	10,400	22,600-88,200	930 U	140 J	780 U	5200 U	120 J	49 J
SVOC	Benzo(ghi)Perylene	ug/kg	170	4,700-15,700	930 U	160 J	780 U	5200 U	86 J	190 U
SVOC	Benzo(k)Fluoranthen	ug/kg	240	19,500-65,600	930 U	130 J	780 U	5200 U	59 J	190 U
SVOC	Bis(2-Chloroethoxy)M	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Bis(2-Chloroethyl)Eth	ug/kg	3,520	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Bis(2-Chloro-Isoprop	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Bis[2-Ethylhexyl] Pht	ug/kg	182	750	9300 U	6100 U	7800 U	NA	NA	NA
SVOC	Butylbenzyl Phthalate	ug/kg	1,970	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Caprolactam	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Carbazole	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Chrysene	ug/kg	166	6,700-22.500	930 U	130 J	780 U	5200 U	110 J	41 J
SVOC	Cresol, o (Methylphen	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Cresol, m&p (methylp	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Dibenzo(a,h)Anthrace	ug/kg	33	1,900-6,400	930 U	180 J	780 U	5200 U	270 U	190 U
SVOC	Dibenzofuran	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Diethyl Phthalate	ug/kg	295	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Dimethyl Phthalate	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Di-n-Octyl Phthalate	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Fluoranthene	ug/kg	423	14,900-50,000	930 U	610 U	780 U	1100 J	180 J	56 J
SVOC	Fluorene	ug/kg	77.4	2,300-7,8000	930 U	610 U	780 U	5200 U	270 U	190 U
SVOC	Hexachlorobenzene	ug/kg	20	24,000	930 U	610 U	780 U	NA	NA	NA
SVOC	Hexachlorobutadiene	ug/kg	26.5	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Hexachlorocyclopenta	ug/kg	901	NS	27000 U	18000 U	23000 U	NA	NA	NA
SVOC	Hexachloroethane	ug/kg	584	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Indeno(1,2,3-cd)Pyren	ug/kg	200	4,700-15,700	930 U	200 J	780 U	5200 U	64 J	190 U
SVOC	Isophorone	ug/kg	432	NS	1800 U	1200 U	1500 U	NA	NA	NA

				Sample Location Field Sample ID Sample Date Sample Type
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**
SVOC	1,1-Biphenyl	ug/kg	NS	NS
SVOC	1-Methylnaphthalene	ug/kg	NS	NS
SVOC	2,4,5-Trichlorophenol	ug/kg	NS	NS
SVOC	2,4,6-Trichlorophenol	ug/kg	208	NS
SVOC	2,4-Dichlorophenol	ug/kg	81.7	NS
SVOC	2,4-Dimethylphenol	ug/kg	304	NS
SVOC	2,4-Dinitrophenol	ug/kg	6.21	NS
SVOC	2,4-Dinitrotoluene	ug/kg	14.4	NS
SVOC	2,6-Dinitrotoluene^	ug/kg	39.8	NS
SVOC	2-Chloronaphthalene	ug/kg	417	NS
SVOC	2-Chlorophenol	ug/kg	31.9	NS
SVOC	2-Methylnaphthalene	ug/kg	20.2	NS
SVOC	2-Nitrophenol	ug/kg	NS	NS
SVOC	3-Nitroaniline	ug/kg	NS	NS
SVOC	3,3'-Dichlorobenzidin	ug/kg	127	NS
SVOC	4-Chloro-3-methylphe	ug/kg	NS	NS
SVOC	4-Chlorophenyl- phen	ug/kg	NS	NS
SVOC	4-Bromophenyl phen	ug/kg	NS	NS
SVOC	4,6-Dinitro-2-methylp	ug/kg	NS	NS
SVOC	4-Nitrophenol	ug/kg	13.3	NS
SVOC	Acenaphthene	ug/kg	6.71	7-20
SVOC	Acenaphthylene	ug/kg	5.87	9-30
SVOC	Acetophenone	ug/kg	NS	NS
SVOC	Anthracene	ug/kg	57.2	5,400-18,100
SVOC	Atrazine	ug/kg	NS	NS
SVOC	Benzaldehyde	ug/kg	NS	NS
SVOC	Benzo(a)Anthracene	ug/kg	108	21,600-72,500
SVOC	Benzo(a)Pyrene	ug/kg	150	21,000-70,500
SVOC	Benzo(b)Fluoranthene	ug/kg	10,400	22,600-88,200
SVOC	Benzo(ghi)Perylene	ug/kg	170	4,700-15,700
SVOC	Benzo(k)Fluoranthene	ug/kg	240	19,500-65,600
SVOC	Bis(2-Chloroethoxy)M	ug/kg	NS	NS
SVOC	Bis(2-Chloroethyl)Etl	ug/kg	3,520	NS
SVOC	Bis(2-Chloro-Isoprop	ug/kg	NS	NS
SVOC	Bis[2-Ethylhexyl] Pht	ug/kg	182	750
SVOC	Butylbenzyl Phthalate	ug/kg	1,970	NS
SVOC	Caprolactam	ug/kg	NS	NS
SVOC	Carbazole	ug/kg	NS	NS
SVOC	Chrysene	ug/kg	166	6,700-22.500
SVOC	Cresol, o (Methylphen	ug/kg	NS	NS
SVOC	Cresol, m&p (methyl	ug/kg	NS	NS
SVOC	Dibenzo(a,h)Anthrace	ug/kg	33	1,900-6,400
SVOC	Dibenzofuran	ug/kg	NS	NS
SVOC	Diethyl Phthalate	ug/kg	295	NS
SVOC	Dimethyl Phthalate	ug/kg	NS	NS
SVOC	Di-n-Octyl Phthalate	ug/kg	NS	NS
SVOC	Fluoranthene	ug/kg	423	14,900-50,000
SVOC	Fluorene	ug/kg	77.4	2,300-7,8000
SVOC	Hexachlorobenzene	ug/kg	20	24,000
SVOC	Hexachlorobutadiene	ug/kg	26.5	NS
SVOC	Hexachlorocyclopenta	ug/kg	901	NS
SVOC	Hexachloroethane	ug/kg	584	NS
SVOC	Indeno(1,2,3-cd)Pyrer	ug/kg	200	4,700-15,700
SVOC	Isophorone	ug/kg	432	NS

Table D-2 - Phase II RI Analytical Results

Hercules Incorporated
Kenvil Works Facility, New Jersey

				Sample Location	SD-R2-L-5-01D	SD-R2-L-5-02	SD-R2-M-7-01D	SD-R2-0-4-1	SD-R2-0-4-2	SD-R2-0-4-3
				Field Sample ID	SD-R2-L-5-01D_20131104	SD-R2-L-5-02_20131104	SD-R2-M-7-01D_20131105	SD-R2-0-4-1_20131105	SD-R2-0-4-2_20131105	SD-R2-0-4-3_20131105
				Sample Date	11/04/2013	11/04/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013
				Sample Type	N	N	N	N	N	N
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
SVOC	Naphthalene	ug/kg	160	NS	930 U	610 U	780 U	5200 U	90 J	190 U
SVOC	Di-n-butyl Phthalate	ug/kg	1,114	110	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Nitrobenzene	ug/kg	145	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	N-Nitroso-di-n-propy	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	N-Nitrosodiphenylam	ug/kg	NS	NS	3,800	1200 J	1500 U	NA	NA	NA
SVOC	o-Nitroaniline (2-Ni	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	p-Chloroaniline (4-C	ug/kg	NS	NS	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	Pentachlorophenol	ug/kg	23,000	NS	9300 U	6100 U	7800 U	NA	NA	NA
SVOC	Phenanthrene	ug/kg	204	13,800-46,000	930 U	610 U	780 U	1100 J	200 J	49 J
SVOC	Phenol	ug/kg	49.1	48	1800 U	1200 U	1500 U	NA	NA	NA
SVOC	p-Nitroaniline (4-Ni	ug/kg	NS	NS	9200 U	5900 U	7600 U	NA	NA	NA
SVOC	Pyrene	ug/kg	195	12,4000-41-600	930 U	610 U	780 U	1100 J	160 J	57 J
E & E	1,2-Dinitrobenzene (D	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	1,3-Dinitrobenzene (M	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	1,4-Dinitrobenzene (P	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	1,3,5-Trinitrobenzene	ug/kg	2	2,330-7,840	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	1-Nitronaphthalene	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	2,4,6-Trinitrotoluene/	ug/kg	92	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	2,4-Dinitrotoluene	ug/kg	14.4	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	2,6-Dinitrotoluene^	ug/kg	39.8	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	2-Amino-4,6-Dinitrot	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	2-Nitrotoluene	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	3-Nitrotoluene	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	4-Amino-2,6-Dinitrot	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	4-Nitrotoluene	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	HMX^	ug/kg	6	5,540-18,600	2100 U	1300 U	1100 U	7700 U	2000 U	1400 U
E & E	Nitrobenzene	ug/kg	145	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	Nitroglycerin	ug/kg	NS	NS	28,000	21,000	9200 U	61000 U	16000 U	11000 U
E & E	RDX^	ug/kg	13	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	Tetryl	ug/kg	NS	NS	840 U	540 U	460 U	3100 U	810 U	550 U
E & E	Pentaerythriol Tetrani	ug/kg	NS	NS	17000 U	11000 U	9200 U	61000 U	16000 U	11000 U
Metal	Aluminum (Al)	ug/kg	25,500,000	NS	7,110,000	7,030,000	27,200,000	12,200,000	15,600,000	38,000,000
Metal	Antimony (Sb)	ug/kg	NS	3,000	5520 U	3550 U	30300 U	198000 U	52700 U	36300 U
Metal	Arsenic (As)	ug/kg	6,000	33,000	3400 J	5,290	30300 U	198000 U	52700 U	36300 U
Metal	Barium (Ba)	ug/kg	NS	NS	261,000	101,000	111,000	153,000	119,000	191,000
Metal	Beryllium (Be)	ug/kg	NS	NS	416 J	463 J	7570 U	49500 U	13200 U	9080 U
Metal	Cadmium (Cd)	ug/kg	600	10,000	408 J	366 J	7570 U	49500 U	13200 U	9080 U
Metal	Calcium (Ca)	ug/kg	NS	NS	1,260,000	3,720,000	1,130,000	6,970,000	706,000	490,000
Metal	Chromium (Cr)	ug/kg	26,000	110,000	9,120	13,900	857,000	21400 J	16300 J	25800 J
Metal	Cobalt (Co)	ug/kg	50,000	NS	1,660	2,640	5360 J	49500 U	13200 U	1960 J
Metal	Copper (Cu)	ug/kg	16,000	110,000	41,700	37,000	9420 J	98700 J	31,000	15000 J
Metal	Iron (Fe)	ug/kg	NS	NS	5,780,000	11,000,000	11,500,000	9,200,000	2,340,000	4,640,000
Metal	Lead (Pb)	ug/kg	31,000	250,000	162,000	259,000	16200 J	214,000	42,400	39,400
Metal	Magnesium (Mg)	ug/kg	NS	NS	926,000	1,890,000	2,560,000	1,220,000	443,000	1,240,000
Metal	Manganese (Mn)	ug/kg	630,000	1,100,000	50,600	91,300	90,700	135,000	46,000	25,600
Metal	Mercury (Hg)	ug/kg	174	2,000	176 J	254	84.1 J	1010 U	67.1 J	166 J
Metal	Nickel (Ni)	ug/kg	16,000	75,000	6,270	11,900	16,000	17500 J	7460 J	17600 J
Metal	Potassium (K)	ug/kg	NS	NS	343,000	665,000	924,000	4950000 U	412,000	665,000
Metal	Potassium (K)	ug/kg	NS	NS	343,000	665,000	924,000	4950000 U	412,000	665,000
Metal	Selenium (Se)	ug/kg	NS	NS	5520 U	3550 U	30300 U	198000 U	52700 U	36300 U
Metal	Silver (Ag)	ug/kg	500	NS	1380 U	887 U	7570 U	49500 U	5060 J	3120 J
Metal	Sodium (Na)	ug/kg	NS	NS	64100 J	188,000	1510000 U	9910000 U	46300 J	37700 J
Metal	Thallium (Tl)	ug/kg	NS	NS	8270 U	5320 U	45400 U	297000 U	79100 U	54500 U
Metal	Vanadium (V)	ug/kg	NS	NS	11,200	21,400	26,900	49500 U	20,100	26,100
Metal	Zinc (Zn)	ug/kg	120,000	820,000	235,000	263,000	121,000	279,000	67,100	63,200
Gen Chem	Total Organic Carbor	mg/kg	NS	NS	60,300	38,700	13,900	227,000	105,000	39,500

Notes:
VOCS = Volatile organic compounds
SVOCS = Semi-volatile organic compounds
E&E = Explosive and energetic compounds
FWC-LEL= Fresh Water Criteria - Lowest Effe
FWC-SEL= Fresh Water Criteria - Severe Effec
NA = Not analyzed ; NS = No standard
^ Site Speific Screening Level = Criteria were p
U = Indicates that the constituent was analyzed f
J = Indicates that the constituent was analyzed fo
and/or number indicates an estimated value
B = Indicates that the constituent was found in th
concentrations greater than the FWC-LEL
Shade = Indicates that the constituent was detec
greater than the FWC-SEL

				Sample Location Field Sample ID Sample Date Sample Type	
Analytical Group	**Constituent**	**Units**	**FWC-LEL**	**FWC-SEL**	
SVOC	Naphthalene	ug/kg	160	NS	
SVOC	Di-n-butyl Phthalate	ug/kg	1,114	110	
SVOC	Nitrobenzene	ug/kg	145	NS	
SVOC	N-Nitroso-di-n-propy	ug/kg	NS	NS	
SVOC	N-Nitrosodiphenylam	ug/kg	NS	NS	cts Level
SVOC	o-Nitroaniline (2-Nit	ug/kg	NS	NS	cts Level
SVOC	p-Chloroaniline (4-C	ug/kg	NS	NS	
SVOC	Pentachlorophenol	ug/kg	23,000	NS	rovided to Hercules by NJDEP in the 6/19/2003 correspondence
SVOC	Phenanthrene	ug/kg	204	13,800-46,000	for but not detected, number indicates the method detection limit
SVOC	Phenol	ug/kg	49.1	48	or and was detected below the reporting limit,
SVOC	p-Nitroaniline (4-Nit	ug/kg	NS	NS	
SVOC	Pyrene	ug/kg	195	12,4000-41-600	he associated blank
E & E	1,2-Dinitrobenzene (C	ug/kg	NS	NS	
E & E	1,3-Dinitrobenzene (M	ug/kg	NS	NS	ted by laboratory analysis at concentrations
E & E	1,4-Dinitrobenzene (P	ug/kg	NS	NS	
E & E	1,3,5-Trinitrobenzene	ug/kg	2	2,330-7,840	
E & E	1-Nitronaphthalene	ug/kg	NS	NS	
E & E	2,4,6-Trinitrotoluene^	ug/kg	92	NS	
E & E	2,4-Dinitrotoluene	ug/kg	14.4	NS	
E & E	2,6-Dinitrotoluene^	ug/kg	39.8	NS	
E & E	2-Amino-4,6-Dinitrot	ug/kg	NS	NS	
E & E	2-Nitrotoluene	ug/kg	NS	NS	
E & E	3-Nitrotoluene	ug/kg	NS	NS	
E & E	4-Amino-2,6-Dinitrot	ug/kg	NS	NS	
E & E	4-Nitrotoluene	ug/kg	NS	NS	
E & E	HMX^	ug/kg	6	5,540-18,600	
E & E	Nitrobenzene	ug/kg	145	NS	
E & E	Nitroglycerin	ug/kg	NS	NS	
E & E	RDX^	ug/kg	13	NS	
E & E	Tetryl	ug/kg	NS	NS	
E & E	Pentaerythriol Tetrani	ug/kg	NS	NS	
Metal	Aluminum (Al)	ug/kg	25,500,000	NS	
Metal	Antimony (Sb)	ug/kg	NS	3,000	
Metal	Arsenic (As)	ug/kg	6,000	33,000	
Metal	Barium (Ba)	ug/kg	NS	NS	
Metal	Beryllium (Be)	ug/kg	NS	NS	
Metal	Cadmium (Cd)	ug/kg	600	10,000	
Metal	Calcium (Ca)	ug/kg	NS	NS	
Metal	Chromium (Cr)	ug/kg	26,000	110,000	
Metal	Cobalt (Co)	ug/kg	50,000	NS	
Metal	Copper (Cu)	ug/kg	16,000	110,000	
Metal	Iron (Fe)	ug/kg	NS	NS	
Metal	Lead (Pb)	ug/kg	31,000	250,000	
Metal	Magnesium (Mg)	ug/kg	NS	NS	
Metal	Manganese (Mn)	ug/kg	630,000	1,100,000	
Metal	Mercury (Hg)	ug/kg	174	2,000	
Metal	Nickel (Ni)	ug/kg	16,000	75,000	
Metal	Potassium (K)	ug/kg	NS	NS	
Metal	Potassium (K)	ug/kg	NS	NS	
Metal	Selenium (Se)	ug/kg	NS	NS	
Metal	Silver (Ag)	ug/kg	500	NS	
Metal	Sodium (Na)	ug/kg	NS	NS	
Metal	Thallium (Tl)	ug/kg	NS	NS	
Metal	Vanadium (V)	ug/kg	NS	NS	
Metal	Zinc (Zn)	ug/kg	120,000	820,000	
Gen Chem	Total Organic Carbon	mg/kg	NS	NS	

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Sample ID	SW-R2-B-15-1	SD-R2-C-15-1	SW-R2-B-15-2	SD-R2-C-15-2	SW-R2-E-16-1	SD-R2-E-16-1	SW-R2-E-16-3
Sample Date	11/06/2013	11/06/2013	11/06/2013	11/06/2013	11/05/2013	11/05/2013	11/05/2013
Sample Matrix	WS	SE	WS	SE	WS	SE	WS
Constituent	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
SVOCs	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l
2-Methylnaphthalene	0.5 U	2400 U	0.5 U	4000 U	0.5 U	700 U	0.5 U
Acenaphthene	0.5 U	2400 U	0.5 U	4000 U	0.5 U	700 U	0.5 U
Acenaphthylene	0.5 U	2400 U	0.5 U	4000 U	0.5 U	700 U	0.5 U
Anthracene	0.5 U	2400 U	0.5 U	4000 U	0.5 U	700 U	0.5 U
Benzo(a)Anthracene	0.1 J	2400 U	0.1 J	4000 U	0.5 U	190 J	0.5 U
Benzo(a)Pyrene	0.2 J	2400 U	0.2 J	4000 U	0.5 U	210 J	0.5 U
Benzo(b)Fluoranthene	0.2 J	570 J	0.2 J	4000 U	0.5 U	290 J	0.5 U
Benzo(ghi)Perylene^	0.2 J	2400 U	0.1 J	4000 U	0.5 U	170 J	0.5 U
Benzo(k)Fluoranthene	0.1 J	2400 U	0.1 J	4000 U	0.5 U	160 J	0.5 U
Chrysene	0.2 J	520 J	0.2 J	4000 U	0.5 U	230 J	0.5 U
Fluoranthene	0.3 J	850 J	0.4 J	4000 U	0.5 U	360 J	0.5 U
Indeno(1,2,3-cd)Pyrene	0.1 J	2400 U	0.5 U	4000 U	0.5 U	150 J	0.5 U
Phenanthrene	0.1 J	500 J	0.2 J	4000 U	0.5 U	240 J	0.5 U
Pyrene	0.4 J	990 J	0.3 J	4000 U	0.5 U	390 J	0.5 U
E&E Compounds	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l
4-Amino-2,6-Dinitrotoluene^	0.6 U	1200 U	0.7 U	2200 U	0.9	410 U	0.77
Metals	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l
Aluminum (Al)	646	9,620,000	1,430	8,460,000	200 U	6,240,000	148 J
Antimony (Sb)	1 U	9250 U	0.46 J	15900 U	1 U	2690 U	1 U
Arsenic (As)	0.55 J	5070 J	3.8	15900 U	2 U	1340 J	2 U
Barium (Ba)	63.7	117,000	70.6	82,400	37.8	39,500	39.4
Beryllium (Be)	5 U	745 J	5 U	913 J	5 U	281 J	5 U
Cadmium (Cd)	5 U	1030 J	1 J	1040 J	5 U	673 U	5 U
Calcium (Ca)	61,700	16,200,000	25,000	6,580,000	36,300	1,780,000	36,100
Chromium (Cr)	2.5 J	20,600	6.5 J	14,400	15 U	12,200	15 U
Cobalt (Co)	5 U	3,600	12.4	5,850	5 U	4,080	5 U
Copper (Cu)	10 U	31,600	10.5	23,600	10 U	16,300	10 U

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Sample ID	SD-R2-E16-3	SW-R2-F-14-1	SD-R2-F-14-1	SW-R2-F-14-2	SD-R2-F-14-2	SW-R2-G-12-2	SD-R2-G-12-3
Sample Date	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/05/2013	11/5/2013	11/05/2013
Sample Matrix	SE	WS	SE	WS	SE	WS	SE
Constituent	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**	**Result**
SVOCs	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg
2-Methylnaphthalene	130 U	0.5 U	780	0.5 U	180 J	0.5 U	220 U
Acenaphthene	130 U	0.5 U	480 J	0.5 U	520 U	0.5 U	220 U
Acenaphthylene	39 J	0.5 U	2,400	0.5 U	510 J	0.5 U	65 J
Anthracene	37 J	0.5 U	2,100	0.5 U	410 J	0.5 U	60 J
Benzo(a)Anthracene	88 J	0.5 U	4,300	0.5 U	1,100	0.5 U	200 J
Benzo(a)Pyrene	110 J	0.5 U	4,200	0.5 U	1,400	0.5 U	290
Benzo(b)Fluoranthene	140	0.5 U	5,500	0.5 U	2,300	0.5 U	430
Benzo(ghi)Perylene^	95 J	0.5 U	2,700	0.5 U	1,100	0.5 U	230
Benzo(k)Fluoranthene	64 J	0.5 U	2,100	0.5 U	810	0.5 U	190 J
Chrysene	110 J	0.5 U	6,600	0.5 U	1,600	0.5 U	300
Fluoranthene	170	0.5 U	11,000	0.5 U	2,900	0.5 U	560
Indeno(1,2,3-cd)Pyrene	59 J	0.5 U	2,200	0.5 U	890	0.5 U	180 J
Phenanthrene	93 J	0.5 U	9,700	0.5 U	1,800	0.5 U	280
Pyrene	200	0.5 U	13,000	0.5 U	3,100	0.5 U	550
E&E Compounds	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg
4-Amino-2,6-Dinitrotoluene^	380 U	0.6 U	1100 U	0.6 U	1500 U	0.6 U	660 U
Metals	ug/kg	ug/l	ug/kg	ug/l	ug/kg	ug/l	ug/kg
Aluminum (Al)	4,910,000	107 J	18,300,000	200 U	16,300,000	200 U	7,350,000
Antimony (Sb)	25100 U	1 U	7690 U	1 U	101000 U	1 U	43500 U
Arsenic (As)	25100 U	2 U	22,600	2 U	101000 U	2 U	43500 U
Barium (Ba)	31,900	38.3	71,100	37.5	78,200	37.8	50,800
Beryllium (Be)	6280 U	5 U	1410 J	5 U	25100 U	5 U	10900 U
Cadmium (Cd)	6280 U	5 U	1530 J	5 U	25100 U	5 U	10900 U
Calcium (Ca)	2,150,000	57,600	10,600,000	56,500	10,200,000	51,100	2,820,000
Chromium (Cr)	15500 J	15 U	246,000	15 U	64500 J	15 U	22200 J
Cobalt (Co)	2950 J	5 U	8,810	5 U	10400 J	5 U	4590 J
Copper (Cu)	10500 J	10 U	91,600	10 U	58,000	10 U	18300 J

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Sample ID Sample Date Sample Matrix	
Constituent	
SVOCs	
2-Methylnaphthalene	
Acenaphthene	
Acenaphthylene	
Anthracene	
Benzo(a)Anthracene	
Benzo(a)Pyrene	
Benzo(b)Fluoranthene	
Benzo(ghi)Perylene^	
Benzo(k)Fluoranthene	
Chrysene	
Fluoranthene	
Indeno(1,2,3-cd)Pyrene	
Phenanthrene	
Pyrene	
E&E Compounds	
4-Amino-2,6-Dinitrotoluene^	
Metals	
Aluminum (Al)	
Antimony (Sb)	
Arsenic (As)	
Barium (Ba)	
Beryllium (Be)	
Cadmium (Cd)	
Calcium (Ca)	
Chromium (Cr)	
Cobalt (Co)	
Copper (Cu)	

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Iron (Fe)	2,290	13,400,000	21,000	12,400,000	926	23,100,000	1,450
Lead (Pb)	5	84,400	22.5	105,000	0.35 J	56,200	0.73 J
Magnesium (Mg)	26,300	2,320,000	9,730	1,370,000	14,600	1,390,000	14,400
Manganese (Mn)	416	331,000	1,620	384,000	631	394,000	739
Mercury (Hg)	0.2 U	207 J	0.08 J	100 J	0.2 U	119 J	0.2 U
Nickel (Ni)	10 U	8,530	7.4 J	10,600	10 U	6,760	10 U
Potassium (K)	3,860	416,000	3,180	324000 J	1,990	362,000	1,960
Selenium (Se)	20 U	5580 J	20 U	15900 U	20 U	2690 U	20 U
Silver (Ag)	5 U	943 J	5 U	1580 J	5 U	673 U	5 U
Sodium (Na)	82,000	692,000	53,100	304000 J	72,200	134000 J	71,600
Vanadium (V)	2 J	33,800	5.6	25,700	5 U	24,000	5 U
Zinc (Zn)	15 J	132,000	61.7	117,000	20 U	74,200	2.1 J

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Iron (Fe)	13,700,000	275	28,300,000	118 J	17,700,000	142 J	19,400,000	
Lead (Pb)	40,100	1.9	1,120,000	0.54 J	386,000	1 U	36,200	
Magnesium (Mg)	1,480,000	22,300	3,080,000	21,900	3,330,000	20,800	1,380,000	
Manganese (Mn)	109,000	100	66,700	75.6	118,000	210	137,000	
Mercury (Hg)	34.8 J	0.2 U	11,000	0.2 U	4,260	0.2 U	334	
Nickel (Ni)	4740 J	10 U	17,200	10 U	21100 J	10 U	7550 J	
Potassium (K)	551000 J	1,750	639,000	1,810	481000 J	3,100	1090000 U	
Selenium (Se)	25100 U	20 U	7690 U	20 U	101000 U	20 U	43500 U	
Silver (Ag)	6280 U	5 U	2,980	5 U	11100 J	5 U	3760 J	
Sodium (Na)	1260000 U	82,700	624,000	89,600	5030000 U	86,600	2180000 U	
Vanadium (V)	13,600	5 U	43,500	5 U	49,100	5 U	22,000	
Zinc (Zn)	62,900	20 U	390,000	20 U	371,000	20 U	105,000	

Table D-3 - Comparison of Surface Water and Sediment Sample Results November 2013

Hercules Incorporated
Kenvil Works Facility, New Jersey

Iron (Fe)
Lead (Pb)
Magnesium (Mg)
Manganese (Mn)
Mercury (Hg)
Nickel (Ni)
Potassium (K)
Selenium (Se)
Silver (Ag)
Sodium (Na)
Vanadium (V)
Zinc (Zn)

				sys_loc_code	SW-R2-B-15-1	SW-R2-B-15-2
				sys_sample_code	V-R2-B-15-1_201311	DUP-03_20131106
				sample_name	SW-R2-B-15-1	DUP-03
				sample_date_yyyy-MM-dd	2013-11-06	2013-11-06
				sample_date_MM/dd/yyyy	11/06/2013	11/06/2013
				matrix_code	WS	WS
				sample_type_code	N	FD
				start_depth		
				end_depth		
				depth_unit	ft	ft
cas_rn	chemical_name	report_result_unit	result_type_code	analytic_method		
100-01-6	4-Nitroaniline	ug/l	TRG	SW8270C	< 1 U	< 1 U
100-02-7	4-Nitrophenol	ug/l	TRG	SW8270C	< 32 U	< 32 U
100-25-4	P-DINITROBENZENE	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
100-52-7	Benzaldehyde	ug/l	TRG	SW8270C	< 5 U	< 5 U
101-55-3	4-Bromophenyl-pher	ug/l	TRG	SW8270C	< 1 U	< 1 U
105-60-2	Caprolactam	ug/l	TRG	SW8270C	< 16 U	< 16 U
105-67-9	2,4-Dimethylphenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
106-44-5	3&4-Methylphenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
106-47-8	4-Chloroaniline	ug/l	TRG	SW8270C	< 1 U	< 1 U
108-60-1	Bis(2-Chloroisopropy	ug/l	TRG	SW8270C	< 1 U	< 1 U
108-95-2	Phenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
111-44-4	Bis(2-Chloroethyl)Eth	ug/l	TRG	SW8270C	< 1 U	< 1 U
111-91-1	Bis(2-Chloroethoxy)m	ug/l	TRG	SW8270C	< 1 U	< 1 U
117-81-7	Bis(2-Ethylhexyl)phth	ug/l	TRG	SW8270C	< 5 U	< 5 U
117-84-0	Di-n-octylphthalate	ug/l	TRG	SW8270C	< 5 U	< 5 U
118-74-1	Hexachlorobenzene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
118-96-7	2,4,6-TRINITROTOLU	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
120-12-7	Anthracene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
120-83-2	2,4-Dichlorophenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
121-14-2	2,4-Dinitrotoluene	ug/l	TRG	SW8270C	< 5 U	< 5 U
121-14-2	2,4-Dinitrotoluene	ug/l	TRG	SW8330	< 2 U	< 2 U
121-82-4	RDX (Cyclonite)	ug/l	TRG	SW8330	< 0.5 U	< 0.5 U
129-00-0	Pyrene	ug/l	TRG	SW8270C	0.4 J	< 0.5 U
131-11-3	Dimethylphthalate	ug/l	TRG	SW8270C	< 5 U	< 5 U
132-64-9	Dibenzofuran	ug/l	TRG	SW8270C	< 1 U	< 1 U

1912-24-9	Atrazine	ug/l	TRG	SW8270C	< 5 U	< 5 U
191-24-2	Benzo[g,h,i]perylene	ug/l	TRG	SW8270C	0.2 J	< 0.5 U
193-39-5	Indeno[1,2,3-cd]pyre	ug/l	TRG	SW8270C	0.1 J	< 0.5 U
19406-51-0	4-Amino-2,6-dinitrot	ug/l	TRG	SW8330	< 0.6 U	0.92
205-99-2	Benzo[b]fluoranthen	ug/l	TRG	SW8270C	0.2 J	< 0.5 U
206-44-0	Fluoranthene	ug/l	TRG	SW8270C	0.3 J	< 0.5 U
207-08-9	Benzo[k]fluoranthen	ug/l	TRG	SW8270C	0.1 J	< 0.5 U
208-96-8	Acenaphthylene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
218-01-9	Chrysene	ug/l	TRG	SW8270C	0.2 J	< 0.5 U
2691-41-0	OCTAHYDRO-1,3,5,7	ug/l	TRG	SW8330	< 2 U	< 2 U
35572-78-2	2-Amino-4,6-dinitrot	ug/l	TRG	SW8330	< 0.6 U	0.36 J
479-45-8	TETRYL	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
50-32-8	Benzo[a]pyrene	ug/l	TRG	SW8270C	0.2 J	< 0.5 U
51-28-5	2,4-Dinitrophenol	ug/l	TRG	SW8270C	< 32 U	< 32 U
528-29-0	O-DINITROBENZENE	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
534-52-1	4,6-Dinitro-2-methyl	ug/l	TRG	SW8270C	< 16 U	< 16 U
53-70-3	Dibenzo[a,h]Anthrac	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
55-63-0	NITROGLYCERIN	ug/l	TRG	SW8330	< 15 U	< 15 U
56-55-3	Benzo[a]anthracene	ug/l	TRG	SW8270C	0.1 J	< 0.5 U
59-50-7	4-Chloro-3-methylph	ug/l	TRG	SW8270C	< 1 U	< 1 U
606-20-2	2,6-Dinitrotoluene	ug/l	TRG	SW8270C	< 1 U	< 1 U
606-20-2	2,6-Dinitrotoluene	ug/l	TRG	SW8330	< 1.3 U	< 1.3 U
621-64-7	N-Nitroso-Di-N-Propy	ug/l	TRG	SW8270C	< 1 U	< 1 U
67-72-1	Hexachloroethane	ug/l	TRG	SW8270C	< 5 U	< 5 U
7005-72-3	4-Chlorophenyl-phen	ug/l	TRG	SW8270C	< 1 U	< 1 U
7429-90-5	Aluminum	ug/l	TRG	SW6010B	646	1430
7439-89-6	Iron	ug/l	TRG	SW6010B	2290	21000
7439-92-1	Lead	ug/l	TRG	SW6020	5	21.6
7439-95-4	Magnesium	ug/l	TRG	SW6010B	26300	9860
7439-96-5	Manganese	ug/l	TRG	SW6010B	416	1670
7439-97-6	Mercury	ug/l	TRG	SW7470A	< 0.2 U	0.062 J
7440-02-0	Nickel	ug/l	TRG	SW6010B	< 10 U	6.9 J
7440-09-7	Potassium	ug/l	TRG	SW6010B	3860	4130
7440-22-4	Silver	ug/l	TRG	SW6010B	< 5 U	< 5 U
7440-23-5	Sodium	ug/l	TRG	SW6010B	82000	53600
7440-28-0	Thallium	ug/l	TRG	SW6020	< 0.5 U	< 0.5 U

7440-36-0	Antimony	ug/l	TRG	SW6020	< 1 U	0.57 J
7440-38-2	Arsenic	ug/l	TRG	SW6020	0.55 J	4.2
7440-39-3	Barium	ug/l	TRG	SW6010B	63.7	72.9
7440-41-7	Beryllium	ug/l	TRG	SW6010B	< 5 U	< 5 U
7440-43-9	Cadmium	ug/l	TRG	SW6010B	< 5 U	1.2 J
7440-47-3	Chromium	ug/l	TRG	SW6010B	2.5 J	6 J
7440-48-4	Cobalt	ug/l	TRG	SW6010B	< 5 U	11.9
7440-50-8	Copper	ug/l	TRG	SW6010B	< 10 U	11.1
7440-62-2	Vanadium	ug/l	TRG	SW6010B	2 J	5.6
7440-66-6	Zinc	ug/l	TRG	SW6010B	15 J	61.5
7440-70-2	Calcium	ug/l	TRG	SW6010B	61700	25300
77-47-4	Hexachlorocyclopent	ug/l	TRG	SW8270C	< 16 U	< 16 U
7782-49-2	Selenium	ug/l	TRG	SW6010B	< 20 U	< 20 U
78-11-5	PENTAERYTHRITOL	ug/l	TRG	SW8330	< 18 U	< 18 U
78-59-1	Isophorone	ug/l	TRG	SW8270C	< 1 U	< 1 U
83-32-9	Acenaphthene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
84-66-2	Diethylphthalate	ug/l	TRG	SW8270C	< 5 U	< 5 U
84-74-2	Di-n-butylphthalate	ug/l	TRG	SW8270C	< 5 U	< 5 U
85-01-8	Phenanthrene	ug/l	TRG	SW8270C	0.1 J	< 0.5 U
85-68-7	Butylbenzylphthalate	ug/l	TRG	SW8270C	< 5 U	< 5 U
86-30-6	N-Nitrosodiphenylam	ug/l	TRG	SW8270C	< 1 U	< 1 U
86-57-7	1-NITRONAPHTHALE	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
86-73-7	Fluorene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
86-74-8	Carbazole	ug/l	TRG	SW8270C	< 1 U	< 1 U
87-68-3	Hexachlorobutadiene	ug/l	TRG	SW8270C	< 1 U	< 1 U
87-86-5	Pentachlorophenol	ug/l	TRG	SW8270C	< 5 U	< 5 U
88-06-2	2,4,6-Trichlorophenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
88-72-2	2-Nitrotoluene	ug/l	TRG	SW8330	< 0.75 U	< 0.75 U
88-74-4	2-Nitroaniline	ug/l	TRG	SW8270C	< 1 U	< 1 U
88-75-5	2-Nitrophenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
9/7/7440	Potassium	ug/l	TRG	SW6010B	3860	4130
91-20-3	Naphthalene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
91-57-6	2-Methylnaphthalene	ug/l	TRG	SW8270C	< 0.5 U	< 0.5 U
91-58-7	2-Chloronaphthalene	ug/l	TRG	SW8270C	< 1 U	< 1 U
91-94-1	3,3-Dichlorobenzidin	ug/l	TRG	SW8270C	< 5 U	< 5 U
92-52-4	1,1'-Biphenyl	ug/l	TRG	SW8270C	< 1 U	< 1 U

95-48-7	2-Methylphenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
95-57-8	2-Chlorophenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
95-95-4	2,4,5-Trichlorophenol	ug/l	TRG	SW8270C	< 1 U	< 1 U
98-86-2	Acetophenone	ug/l	TRG	SW8270C	< 1 U	< 1 U
98-95-3	Nitrobenzene	ug/l	TRG	SW8270C	< 1 U	< 1 U
98-95-3	Nitrobenzene	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
99-08-1	3-NITROTOLUENE	ug/l	TRG	SW8330	< 1.2 U	< 1.2 U
99-09-2	3-Nitroaniline	ug/l	TRG	SW8270C	< 1 U	< 1 U
99-35-4	1,3,5-TRINITROBENZ	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
99-65-0	M-DINITROBENZENE	ug/l	TRG	SW8330	< 0.6 U	< 0.6 U
99-99-0	4-NITROTOLUENE	ug/l	TRG	SW8330	< 1.2 U	< 1.2 U
ARC-HARD-CACO3	Hardness (as CaCO3)	ug/l	TRG	SM2340C	265000	108000
ARC-PH	pH	su	TRG	SM4500-H-B	7.7	7
ARC-TSVOCTICS	Total SVOC TICs	ug/l	TIC	SW8270C	54 J	23 J
UNKSEMIVOA1	Unknown	ug/l	TIC	SW8270C	26 J	7 J
UNKSEMIVOA10	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA11	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA12	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA13	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA14	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA15	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA16	Unknown Semivolatil	ug/l	TIC	SW8270C		
UNKSEMIVOA17	Unknown Semivolatil	ug/l	TIC	SW8270C		
UNKSEMIVOA18	Unknown Semivolatil	ug/l	TIC	SW8270C		
UNKSEMIVOA19	Unknown Semivolatil	ug/l	TIC	SW8270C		
UNKSEMIVOA2	Unknown	ug/l	TIC	SW8270C	19 J	6 J
UNKSEMIVOA20	Unknown Semivolatil	ug/l	TIC	SW8270C		
UNKSEMIVOA3	Unknown	ug/l	TIC	SW8270C	9 J	5 J
UNKSEMIVOA4	Unknown	ug/l	TIC	SW8270C		4 J
UNKSEMIVOA5	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA6	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA7	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA8	Unknown	ug/l	TIC	SW8270C		
UNKSEMIVOA9	Unknown	ug/l	TIC	SW8270C		

SW-R2-B-15-2 W-R2-B-15-2_201311 SW-R2-B-15-2 2013-11-06 11/06/2013 WS N ft	SW-R2-D-12-1 W-R2-D-12-1_201311 SW-R2-D-12-1 2013-11-06 11/06/2013 WS N ft	SW-R2-D-12-3 W-R2-D-12-3_201311 SW-R2-D-12-3 2013-11-06 11/06/2013 WS N ft	SW-R2-E-16-1 W-R2-E-16-1_201311 SW-R2-E-16-1 2013-11-05 11/05/2013 WS N ft	SW-R2-E-16-3 W-R2-E-16-3_201311 SW-R2-E-16-3 2013-11-05 11/05/2013 WS N ft	SW-R2-F-14-1 W-R2-F-14-1_201311 SW-R2-F-14-1 2013-11-05 11/05/2013 WS N ft	SW-R2-F-14-2 W-R2-F-14-2_201311 SW-R2-F-14-2 2013-11-05 11/05/2013 WS N ft
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 30 U	< 32 U	< 31 U	< 31 U	< 31 U	< 31 U	< 31 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 15 U	< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
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< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
0.3 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 0.7 U	< 0.6 U	< 0.6 U	0.9	0.77	< 0.6 U	< 0.6 U
0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
0.4 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
< 0.7 U	< 0.6 U	< 0.6 U	0.31 J	< 0.6 U	< 0.6 U	< 0.6 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 30 U	< 32 U	< 31 U	< 31 U	< 31 U	< 31 U	< 31 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 15 U	< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U
0.1 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1.3 U	< 1.3 U	< 1.3 U	< 1.3 U	< 1.3 U	< 1.3 U	< 1.3 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
1430	219	512	< 200 U	148 J	107 J	< 200 U
21000	12400	28000	926	1450	275	118 J
22.5	17.1	39.6	0.35 J	0.73 J	1.9	0.54 J
9730	7890	7980	14600	14400	22300	21900
1620	1490	2060	631	739	100	75.6
0.08 J	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
7.4 J	< 10 U	1.6 J	< 10 U	< 10 U	< 10 U	< 10 U
3180	2040	1930	1990	1960	1750	1810
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
53100	54700	54900	72200	71600	82700	89600
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U

0.46 J	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
3.8	2.1	5	< 2 U	< 2 U	< 2 U	< 2 U
70.6	99.4	133	37.8	39.4	38.3	37.5
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
1 J	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
6.5 J	< 15 U	2 J	< 15 U	< 15 U	< 15 U	< 15 U
12.4	< 5 U	2.1 J	< 5 U	< 5 U	< 5 U	< 5 U
10.5	< 10 U	6.9 J	< 10 U	< 10 U	< 10 U	< 10 U
5.6	< 5 U	2.2 J	< 5 U	< 5 U	< 5 U	< 5 U
61.7	20.9	42.1	< 20 U	2.1 J	< 20 U	< 20 U
25000	19100	19700	36300	36100	57600	56500
< 15 U	< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 18 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
0.2 J	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
3180	2040	1930	1990	1960	1750	1810
< 0.5 U	< 0.5 U	< 0.5 U	0.9	< 0.5 U	< 0.5 U	0.1 J
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U

< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
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< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
111000	87000	88400	154000	155000	237000	236000
6.9	6.9	6.9	7.4	7.4	8	8
290 J	< -1 U	< -1 U	6 J	6 J	< -1 U	< -1 U
170 J			6 J	6 J		
6 J						
5 J						
5 J						
5 J						
5 J						
5 J						
27 J						
13 J						
12 J						
9 J						
8 J						
7 J						
6 J						
6 J						

SW-R2-G-12-2 W-R2-G-12-2_201311 SW-R2-G-12-2 2013-11-05 11/05/2013 WS N ft	SW-R2-L-5-2 W-R2-L-5-2_201311C SW-R2-L-5-2 2013-11-04 11/04/2013 WS N ft	SW-R2-M-5-1 W-R2-M-5-1_201311C SW-R2-M-5-1 2013-11-04 11/04/2013 WS N ft	SW-R2-M-5-2 DUP-01_20131104 DUP-01 2013-11-04 11/04/2013 WS FD ft	SW-R2-M-5-2 W-R2-M-5-2_201311C SW-R2-M-5-2 2013-11-04 11/04/2013 WS N ft	SW-R2-M-6-1 W-R2-M-6-1_201311C SW-R2-M-6-1 2013-11-05 11/05/2013 WS N ft	SW-R2-N-5-1 W-R2-N-5-1_201311C SW-R2-N-5-1 2013-11-05 11/05/2013 WS N ft
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 31 U	< 31 U	< 30 U	< 31 U	< 31 U	< 31 U	< 32 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	5
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
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< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
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< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
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< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 2 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
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< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 31 U	< 31 U	< 30 U	< 31 U	< 31 U	< 31 U	< 32 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
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< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U
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< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 200 U	474	< 200 U	88.1 J	< 200 U	< 200 U	605
142 J	838	178 J	204	202	184 J	1080
< 1 U	14	1.1	2.5	2.1	0.99 J	5
20800	3770	3560	3700	3640	3700	901
210	23	12.7	16.5	15.3	9.2	140
< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U
3100	820	674	634	570	608	1100
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
86600	5490	5340	5330	5250	5230	1270
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U

< 1 U	0.34 J	0.41 J	< 1 U	< 1 U	< 1 U	< 1 U
< 2 U	1.9 J	1.3 J	1.5 J	1.3 J	0.89 J	1.3 J
37.8	33.7	25.2	25.5	24.6	20.9	33.2
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 10 U	5.9 J	< 10 U	2.7 J	< 10 U	< 10 U	5.2 J
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	4.3 J
< 20 U	21.8	2.1 J	2.6 J	2.5 J	< 20 U	20.4
51100	9140	8400	9140	9010	9030	3030
< 16 U	< 15 U	< 15 U	< 15 U	< 15 U	< 15 U	< 16 U
< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 18 U	< 18 U
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< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
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< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
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< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U	< 5 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U	< 0.75 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
3100	820	674	634	570	608	1100
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
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< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
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< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
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< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U	< 1 U
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< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U	< 1.2 U
222000	38700	36900	38800	38900	38600	< 25000 U
7.7	7.2	7.2	7.2	7.2	7.2	4.6
< -1 U	17 J	6 J	5 J	5 J	27 J	340 J
	7 J	6 J	5 J	5 J	27 J	47 J
						13 J
						12 J
						11 J
						11 J
						10 J
						9 J
						9 J
						8 J
						7 J
						7 J
	6 J					35 J
						6 J
	4 J					33 J
						26 J
						24 J
						20 J
						18 J
						16 J
						16 J

SW-R2-N-5-2 W-R2-N-5-2_20131105 SW-R2-N-5-2 2013-11-05 11/05/2013 WS N   ft
< 1 U
< 31 U
< 0.6 U
< 5 U
< 1 U
< 16 U
< 1 U
< 1 U
< 1 U
< 1 U
< 1 U
< 1 U
< 1 U
< 5 U
< 5 U
< 0.5 U
< 0.6 U
< 0.5 U
< 1 U
< 5 U
< 2 U
< 0.5 U
< 0.5 U
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< 1 U

< 5 U
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< 0.5 U
< 0.5 U
< 0.5 U
< 2 U
< 0.6 U
< 0.6 U
< 0.5 U
< 31 U
< 0.6 U
< 16 U
< 0.5 U
< 15 U
< 0.5 U
< 1 U
< 1 U
< 1.3 U
< 1 U
< 5 U
< 1 U
433
874
2.9
730
87.7
< 0.2 U
< 10 U
1390
< 5 U
1650
< 0.5 U

< 1 U
1.1 J
25.6
< 5 U
< 5 U
< 15 U
< 5 U
< 10 U
< 5 U
11.6 J
2480
< 16 U
< 20 U
< 18 U
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< 0.5 U
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1390
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< 1 U
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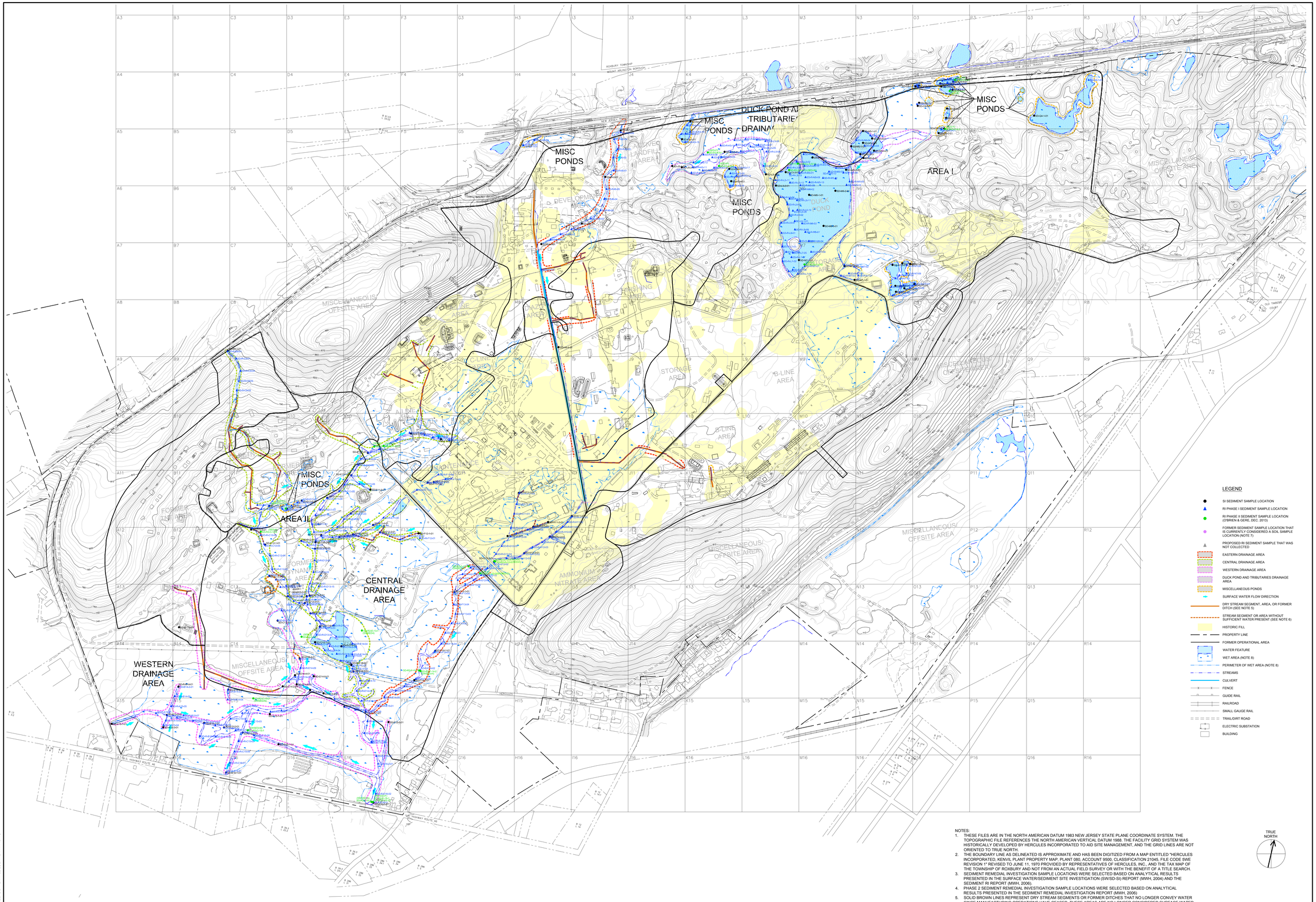
< 1 U
< 1 U
< 0.6 U
< 1.2 U
< 1 U
< 0.6 U
< 0.6 U
< 1.2 U
< 25000 U
4.6
51 J
11 J
8 J
6 J
6 J
5 J
5 J
5 J
4 J

FIGURES

SAVED: 5/2/16 7:44 AM



LEGEND

- SI SEDIMENT SAMPLE LOCATION
- RI PHASE I SEDIMENT SAMPLE LOCATION
- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
- FORMER SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATION (NOTE 7)
- PROPOSED RI SEDIMENT SAMPLE THAT WAS NOT COLLECTED
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 5)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 6)
- HISTORIC FILL
- PROPERTY LINE
- FORMER OPERATIONAL AREA
- WATER FEATURE
- WET AREA (NOTE 8)
- PERIMETER OF WET AREA (NOTE 8)
- STREAMS
- CULVERT
- FENCE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:
1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988. THE FACILITY GRID SYSTEM WAS HISTORICALLY DEVELOPED BY HERCULES INCORPORATED TO AID SITE MANAGEMENT, AND THE GRID LINES ARE NOT ORIENTED TO TRUE NORTH.
2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
3. SEDIMENT REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SD-SI) REPORT (MWH, 2004) AND THE SEDIMENT RI REPORT (MWH, 2006).
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5. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
6. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
7. SITE INVESTIGATION SEDIMENT SAMPLE LOCATIONS DENOTED IN PURPLE ARE INCLUDED IN VOLUME B - SOIL REMEDIAL INVESTIGATION. THESE SAMPLES ARE NO LONGER CONSIDERED AS SEDIMENTS (MWH, 2006) AND ARE MORE PROPERLY DEFINED AS SOILS.
8. THIS PLAN IS ADAPTED FROM FIGURES AS PRESENTED IN THE SEDIMENT REMEDIAL INVESTIGATION REPORT (MWH, 2006).
9. PERIMETER OF WET AREAS ADAPTED FROM A FACILITY-WIDE WETLAND ASSESSMENT CONDUCTED MAY THROUGH JULY 2011 BY ARCADIS. THESE BOUNDARIES HAVE NOT BEEN FIELD VERIFIED AND/OR APPROVED BY NJDEP - DIVISION OF LAND USE REGULATION VIA A LETTER INTERPRETATION.

TRUE NORTH

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1"=250' 250 0 250 500

IN CHARGE OF
DESIGNED BY
CHECKED BY
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

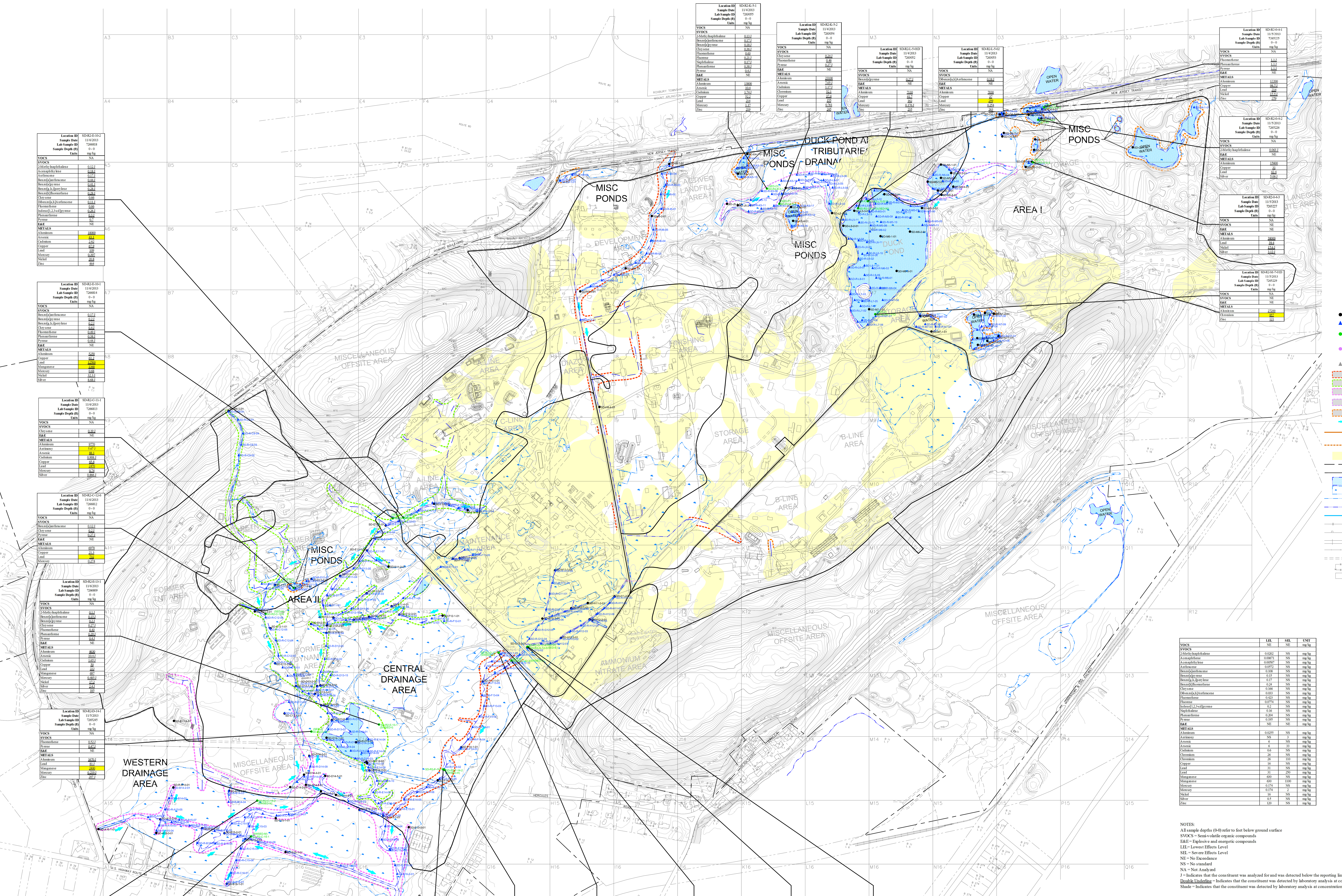
SAMPLE LOCATION MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-1

I:\AS\RLAND.2420\50725.KENVIL-REMEDIAL.DOCS\DWG\SHEETS\D-1 SAMPLE LOCATION MAP.DWG



Location ID	SD-R2-K-5-1
Sample Date	11/4/2013
Lab Sample ID	7263055
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.13 J
Benzo[a]anthracene	0.17 J
Benzo[a]pyrene	0.18 J
Chrysene	0.36 J
Fluoranthene	0.63
Fluorene	0.21 J
Naphthalene	0.17 J
Phenanthrene	0.38 J
Pyrene	0.4 J
E&E	NE
METALS	
Aluminum	13800
Arsenic	10.4
Cadmium	1.74 J
Copper	52.2
Lead	214
Mercury	1.17
Zinc	219

Location ID	SD-R2-K-5-2
Sample Date	11/4/2013
Lab Sample ID	7263054
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Chrysene	0.24 J
Fluoranthene	0.46
Pyrene	0.27 J
E&E	NE
METALS	
Aluminum	23100
Arsenic	7.05 J
Cadmium	1.17 J
Chromium	52.1
Copper	37.4
Lead	155
Mercury	0.761
Zinc	245

Location ID	SD-R2-L-5-01D
Sample Date	11/4/2013
Lab Sample ID	7263052
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Benzo[a]pyrene	0.27 J
E&E	NE
METALS	
Aluminum	7110
Copper	41.7
Lead	162
Mercury	0.176 J
Zinc	235

Location ID	SD-R2-L-5-02
Sample Date	11/4/2013
Lab Sample ID	7263053
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Dibenzo[a,h]Anthracene	0.18 J
E&E	NE
METALS	
Aluminum	7030
Copper	37
Lead	259
Mercury	0.254
Zinc	263

Location ID	SD-R2-O-4-1
Sample Date	11/5/2013
Lab Sample ID	7265225
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Fluoranthene	1.1 J
Phenanthrene	1.1 J
Pyrene	1.1 J
E&E	NE
METALS	
Aluminum	12200
Copper	98.7 J
Lead	214
Nickel	17.5 J
Zinc	279

Location ID	SD-R2-O-4-2
Sample Date	11/5/2013
Lab Sample ID	7265226
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.063 J
E&E	NE
METALS	
Aluminum	15600
Copper	31
Lead	42.4
Silver	5.06 J

Location ID	SD-R2-O-4-3
Sample Date	11/5/2013
Lab Sample ID	7265227
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	NE
E&E	NE
METALS	
Aluminum	38000
Lead	39.4
Nickel	17.6 J
Silver	3.12 J

Location ID	SD-R2-M-7-01D
Sample Date	11/5/2013
Lab Sample ID	7265229
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	NE
E&E	NE
METALS	
Aluminum	27200
Chromium	857
Zinc	121

Location ID	SD-R2-E-10-2
Sample Date	11/6/2013
Lab Sample ID	7266818
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.12 J
Acenaphthylene	0.18 J
Anthracene	0.17 J
Benzo[a]anthracene	0.44 J
Benzo[a]pyrene	0.41 J
Benzo[g,h,i]perylene	0.28 J
Benzo[k]fluoranthene	0.28 J
Chrysene	0.66
Dibenzo[a,h]Anthracene	0.11 J
Fluoranthene	0.66
Indeno[1,2,3-cd]pyrene	0.26 J
Phenanthrene	0.3 J
Pyrene	0.7
E&E	NE
METALS	
Aluminum	18000
Arsenic	43.1
Cadmium	2.62
Copper	67.9
Lead	109
Mercury	0.397
Nickel	20.8
Zinc	464

Location ID	SD-R2-E-10-1
Sample Date	11/6/2013
Lab Sample ID	7266814
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Benzo[a]anthracene	0.17 J
Benzo[a]pyrene	0.2 J
Benzo[g,h,i]perylene	0.2 J
Chrysene	0.4 J
Fluoranthene	0.49 J
Phenanthrene	0.38 J
Pyrene	0.44 J
E&E	NE
METALS	
Aluminum	5250
Copper	61.2
Lead	12500
Manganese	1360
Mercury	0.68
Nickel	32.3 J
Silver	8.68 J

Location ID	SD-R2-C-11-1
Sample Date	11/6/2013
Lab Sample ID	7266813
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Chrysene	0.19 J
E&E	NE
METALS	
Aluminum	9770
Antimony	5.67 J
Arsenic	88.1
Cadmium	0.908 J
Copper	65.8
Lead	2470
Mercury	0.74
Silver	0.866 J

Location ID	SD-R2-C-12-6
Sample Date	11/6/2013
Lab Sample ID	7266812
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Benzo[a]anthracene	0.12 J
Chrysene	0.2 J
Pyrene	0.27 J
E&E	NE
METALS	
Aluminum	6970
Copper	21.3
Lead	732
Mercury	0.274

Location ID	SD-R2-E-13-1
Sample Date	11/6/2013
Lab Sample ID	7266809
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.1 J
Benzo[a]anthracene	0.15 J
Benzo[a]pyrene	0.2 J
Chrysene	0.27 J
Fluoranthene	0.43
Phenanthrene	0.29 J
Pyrene	0.4 J
E&E	NE
METALS	
Aluminum	4630
Arsenic	10.4 J
Cadmium	1.65 J
Copper	50
Lead	222
Manganese	697
Mercury	0.485 J
Nickel	17.2
Silver	2.4 J
Zinc	185

Location ID	SD-R2-D-14-1
Sample Date	11/5/2013
Lab Sample ID	7265245
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Fluoranthene	0.52 J
Pyrene	0.47 J
E&E	NE
METALS	
Aluminum	1670 J
Lead	81 J
Manganese	2400
Mercury	0.219 J
Zinc	207 J

Location ID	SD-R2-C-15-2
Sample Date	11/6/2013
Lab Sample ID	7266806
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	NE
E&E	NE
METALS	
Aluminum	8460
Cadmium	1.04 J
Copper	23.6
Lead	105
Silver	1.58 J

Location ID	SD-R2-C-15-1
Sample Date	11/6/2013
Lab Sample ID	7266808
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Chrysene	0.52 J
Fluoranthene	0.85 J
Phenanthrene	0.5 J
Pyrene	0.99 J
E&E	NE
METALS	
Aluminum	9620
Cadmium	1.03 J
Copper	31.6
Lead	84.4
Mercury	0.207 J
Silver	0.943 J
Zinc	132

Location ID	SD-R2-E16-3
Sample Date	11/5/2013
Lab Sample ID	7265234
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Acenaphthylene	0.039 J
Pyrene	0.2
E&E	NE
METALS	
Aluminum	4910
Lead	40.1

Location ID	SD-R2-E-16-1	SD-R2-E-16-1D
Sample Date	11/5/2013	11/5/2013
Lab Sample ID	7265236	7265237
Sample Depth (ft)	0 - 0	0 - 0
Units	mg/kg	mg/kg
VOCS	NE	NE
SVOCS		
2-Methylnaphthalene	NE	0.063 J
Acenaphthene	NE	0.018 J
Acenaphthylene	NE	0.13
Anthracene	NE	0.11
Benzo[a]anthracene	0.19 J	0.39
Benzo[a]pyrene	0.21 J	0.36
Benzo[g,h,i]perylene	NE	0.18
Chrysene	0.23 J	0.5
Dibenzo[a,h]Anthracene	NE	0.068
Fluoranthene	NE	1.1
Fluorene	NE	0.089
Phenanthrene	0.24 J	1.6
Pyrene	0.39 J	0.95
E&E	NE	NE
METALS		
Aluminum	6240	8490
Copper	16.3	24.3
Lead	56.2	57.2

Location ID	SD-R2-F-14-1
Sample Date	11/5/2013
Lab Sample ID	7265239
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.78
Acenaphthene	0.48 J
Acenaphthylene	2.4
Anthracene	2.1
Benzo[a]anthracene	4.3
Benzo[a]pyrene	4.2
Benzo[g,h,i]perylene	2.7
Benzo[k]fluoranthene	2.1
Chrysene	6.6
Dibenzo[a,h]Anthracene	0.56 J
Fluoranthene	11
Fluorene	1.5
Indeno[1,2,3-cd]pyrene	2.2
Naphthalene	0.77
Phenanthrene	9.7
Pyrene	13
E&E	NE
METALS	
Aluminum	18300
Arsenic	22.6
Cadmium	1.53 J
Chromium	246
Copper	91.6
Lead	1120
Mercury	11
Nickel	17.2
Silver	2.98
Zinc	390

Location ID	SD-R2-F-14-2
Sample Date	11/5/2013
Lab Sample ID	7265241
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
2-Methylnaphthalene	0.18 J
Acenaphthylene	0.51 J
Anthracene	0.41 J
Benzo[a]anthracene	1.1
Benzo[a]pyrene	1.4
Benzo[g,h,i]perylene	1.1
Benzo[k]fluoranthene	0.81
Chrysene	1.6
Dibenzo[a,h]Anthracene	0.25 J
Fluoranthene	2.9
Fluorene	0.23 J
Indeno[1,2,3-cd]pyrene	0.89
Naphthalene	0.17 J
Phenanthrene	1.8
Pyrene	3.1
E&E	NE
METALS	
Aluminum	16300
Chromium	64.5 J
Copper	58
Lead	386
Mercury	4.26
Nickel	21.1 J
Silver	11.1 J
Zinc	371

Location ID	SD-R2-G-12-1
Sample Date	11/5/2013
Lab Sample ID	7265242
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Fluoranthene	0.96 J
Pyrene	0.96 J
E&E	NE
METALS	
Aluminum	6210
Chromium	53.1 J
Copper	92.5
Lead	720
Mercury	2.97
Nickel	28 J
Silver	13.4 J
Zinc	140 J

Location ID	DUP-02	SD-R2-G-12-3
Sample Date	11/5/2013	11/5/2013
Lab Sample ID	7265246	7265244
Sample Depth (ft)	0 - 0	0 - 0
Units	mg/kg	mg/kg
VOCS	NA	NA
SVOCS		
Acenaphthylene	0.035 J	0.065 J
Anthracene	NE	0.06 J
Benzo[a]anthracene	NE	0.2 J
Benzo[a]pyrene	NE	0.29
Benzo[g,h,i]perylene	NE	0.23
Chrysene	NE	0.3
Dibenzo[a,h]Anthracene	NE	0.05 J
Fluoranthene	NE	0.56
Phenanthrene	NE	0.28
Pyrene	0.23	0.55
E&E	NE	NE
METALS		
Aluminum	6330	7350
Copper	18.5	18.3 J
Lead	NE	36.2
Mercury	NE	0.334
Silver	NE	3.76 J

Location ID	SD-R2-G-12-4
Sample Date	11/6/2013
Lab Sample ID	7266800
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Acenaphthylene	0.19 J
Anthracene	0.22 J
Benzo[a]anthracene	0.4 J
Benzo[a]pyrene	0.54
Benzo[g,h,i]perylene	0.5
Chrysene	0.71
Dibenzo[a,h]Anthracene	0.16 J
Fluoranthene	1
Indeno[1,2,3-cd]pyrene	0.42 J
Phenanthrene	0.55
Pyrene	0.99
E&E	NE
METALS	
Aluminum	15900
Arsenic	22.6
Cadmium	3.3
Chromium	73.3
Copper	44.1
Lead	92.6
Manganese	7290
Mercury	3.33
Nickel	18.3
Silver	2.46
Zinc	438

Location ID	SD-R2-G-12-5
Sample Date	11/6/2013
Lab Sample ID	7266804
Sample Depth (ft)	0 - 0
Units	mg/kg
VOCS	NA
SVOCS	
Acenaphthylene	0.26 J
Anthracene	0.28 J
Benzo[a]anthracene	0.67
Benzo[a]pyrene	0.96
Benzo[g,h,i]perylene	0.85
Benzo[k]fluoranthene	0.59
Chrysene	1.2
Dibenzo[a,h]Anthracene	0.26 J
Fluoranthene	1.6
Fluorene	0.11 J
Indeno[1,2,3-cd]pyrene	0.64
Naphthalene	0.19 J
Phenanthrene	0.9
Pyrene	1.9
E&E	NE
METALS	
Aluminum	21700
Arsenic	11.3
Cadmium	1.12 J
Chromium	74.5
Copper	56.8
Lead	123
Mercury	3.94
Nickel	20.2
Silver	0.864 J
Zinc	350

LEGEND

- SI SEDIMENT SAMPLE LOCATION
- RI PHASE I SEDIMENT SAMPLE LOCATION
- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
- FORMER SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATION
- PROPOSED RI SEDIMENT SAMPLE THAT WAS NOT COLLECTED
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 6)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 7)
- HISTORIC FILL
- PROPERTY LINE
- FORMER OPERATIONAL AREA
- WATER FEATURE
- WET AREA (NOTE 9)
- PERIMETER OF WET AREA (NOTE 9)
- STREAMS
- CULVERT
- FENCE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

	LEL	SEL	UNIT
VOCS	NE	NE	mg/kg
SVOCS			
2-Methylnaphthalene	0.0202	NS	mg/kg
Acenaphthene	0.00671	NS	mg/kg
Acenaphthylene	0.00587	NS	mg/kg
Anthracene	0.0572	NS	mg/kg
Benzo[a]anthracene	0.108	NS	mg/kg
Benzo[a]pyrene	0.15	NS	mg/kg
Benzo[g,h,i]perylene	0.17	NS	mg/kg
Benzo[k]fluoranthene	0.24	NS	mg/kg
Chrysene	0.166	NS	mg/kg
Dibenzo[a,h]Anthracene	0.033	NS	mg/kg
Fluoranthene	0.423	NS	mg/kg
Fluorene	0.0774	NS	mg/kg
Indeno[1,2,3-cd]pyrene	0.2	NS	mg/kg
Naphthalene	0.16	NS	mg/kg
Phenanthrene	0.204	NS	mg/kg
Pyrene	0.195	NS	mg/kg
E&E	NE	NE	mg/kg
METALS			
Aluminum	0.0255	NS	mg/kg
Antimony	NS	3	mg/kg
Arsenic	6	NS	mg/kg
Arsenic	6	33	mg/kg
Cadmium	0.6	NS	mg/kg
Chromium	26	NS	mg/kg
Chromium	26	110	mg/kg
Copper	16	NS	mg/kg
Lead	31	NS	mg/kg
Lead	31	250	mg/kg
Manganese	630	NS	mg/kg
Manganese	630	1100	mg/kg
Mercury	0.174	NS	mg/kg
Mercury	0.174	2	mg/kg
Nickel	16	NS	mg/kg
Silver	0.5	NS	mg/kg
Zinc	120	NS	mg/kg

NOTES:
All sample depths (0-0) refer to feet below ground surface
SVOCS = Semi-volatile organic compounds
E&E = Explosive and energetic compounds
LEL= Lowest Effects Level
SEL = Severe Effects Level
NE = No Exceedance
NS = No standard
NA = Not Analyzed
J = Indicates that the constituent was analyzed for and was detected below the reporting limit, and/or number indicates an estimated value
Double Underline = Indicates that the constituent was detected by laboratory analysis at concentrations greater than the LEL
Shade = Indicates that the constituent was detected by laboratory analysis at concentrations greater than the SEL

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DESIGNED BY	JAL
CHECKED BY	MAH
DRAWN BY	RJD

NO.	DATE	REVISION	INT.

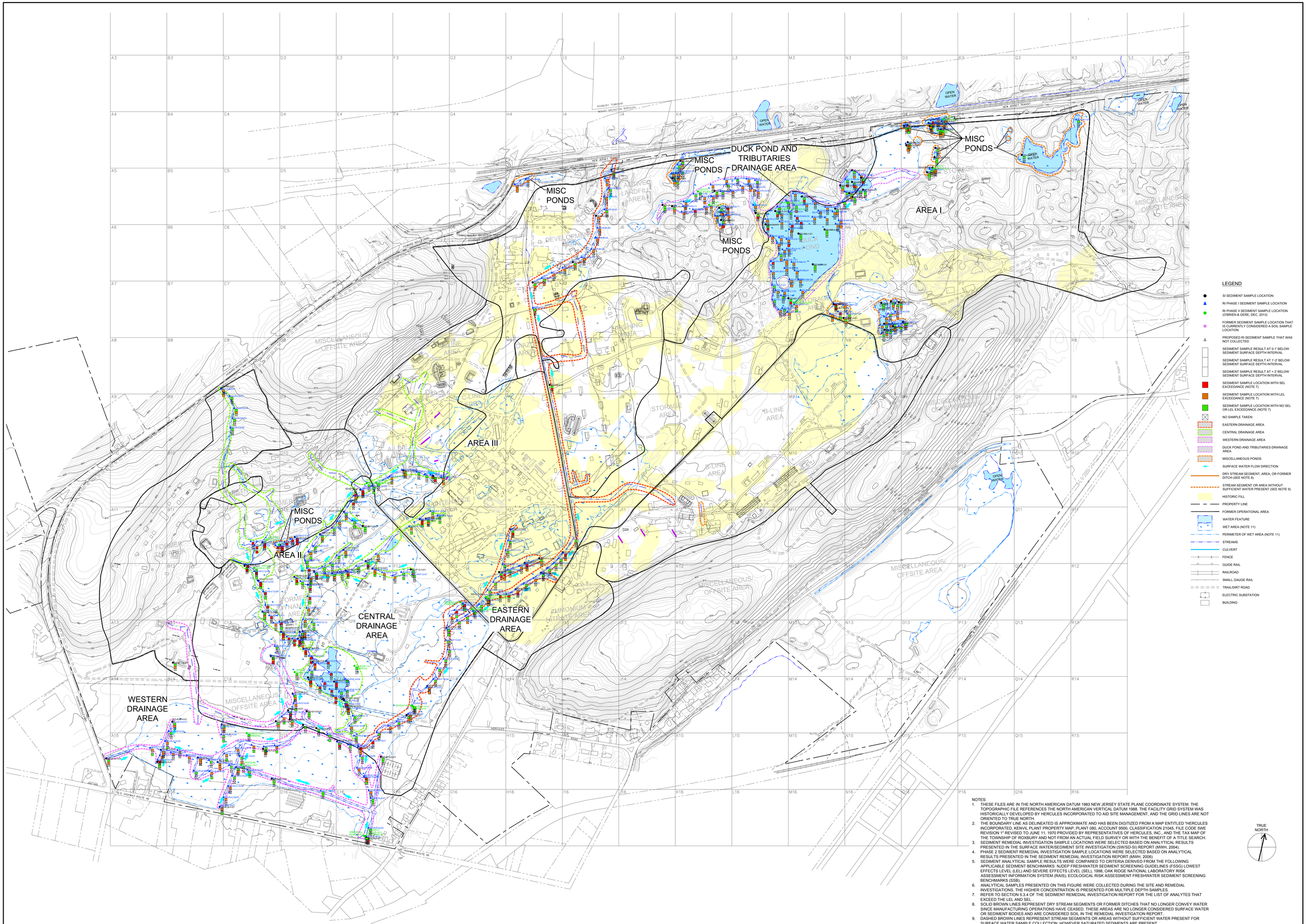
O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT
KENVIL, NEW JERSEY

SEDIMENT
PHASE II SEDIMENT SAMPLING RESULTS

FILE NO. 2420.50725 -
DATE MAY 2016
D-2

SAVED: 5/2/16 8:27 AM



LEGEND

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- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
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- ELECTRIC SUBSTATION
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NOTES:

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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. REFER TO SECTION 6.3.4 OF THE SEDIMENT REMEDIAL INVESTIGATION REPORT FOR THE LIST OF ANALYTES THAT EXCEED THE LEL AND SEL.
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
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TRUE NORTH

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1"=250' 250 0 250 500

IN CHARGE OF	MSK
DESIGNED BY	JAL
CHECKED BY	MAH
DRAWN BY	RJD

NO.	DATE	REVISION	INT.

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EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

SITE WIDE AREAL EXTENT OF EXCEEDANCES MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-3

I:\ASRLAP\2420\50725\KENVIL-REMEDIAL\DOCS\DWG\SHEETS\D-3 SITE WIDE AREAL EXTENT OF EXCEEDANCES MAP.DWG

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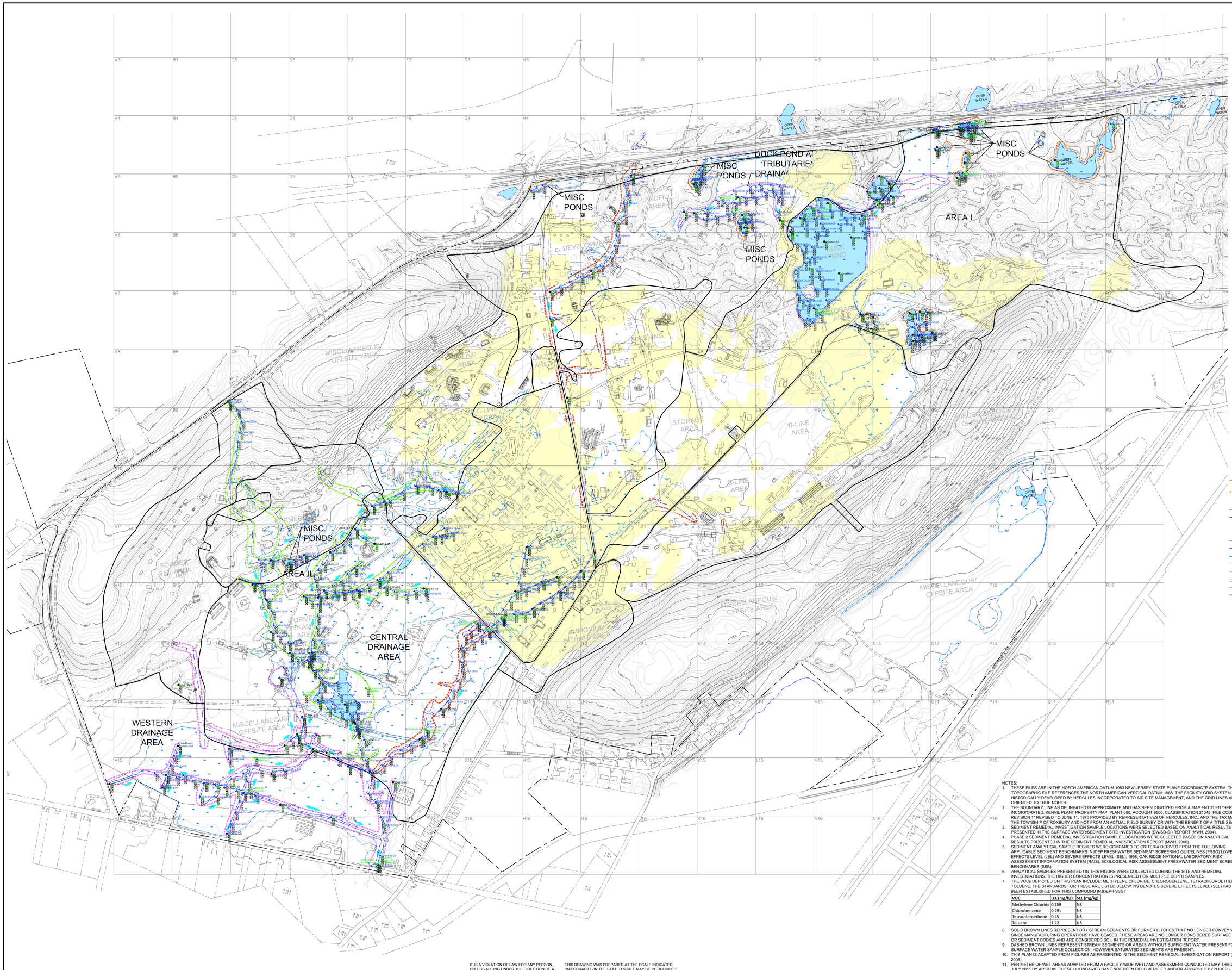

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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE VOCs DEPICTED ON THIS PLAN INCLUDE: METHYLENE CHLORIDE, CHLOROBENZENE, TETRACHLOROETHENE, AND TOLUENE. THE STANDARDS FOR THESE ARE LISTED BELOW. NS DENOTES SEVERE EFFECTS LEVEL (SEL) HAS NOT BEEN ESTABLISHED FOR THIS COMPOUND [NJDEP-FSSG]

VOC	LEL (mg/kg)	SEL (mg/kg)
Methylene Chloride	0.159	NS
Chlorobenzene	0.291	NS
Tetrachloroethene	0.45	NS
Toluene	1.22	NS

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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TRUE NORTH

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

REMAINING VOC EXCEEDANCES MAP WITH AREAL EXTENT

FILE NO. 2420.50725 -

DATE MAY 2016

D-4

J:\ASHLAND.2420\50725.KEN\R-REMEDIAL\DOCS\DWG\SHEETS\A-1 REMAINING VOC EXCEEDANCES MAP WITH AREAL EXTENT.DWG

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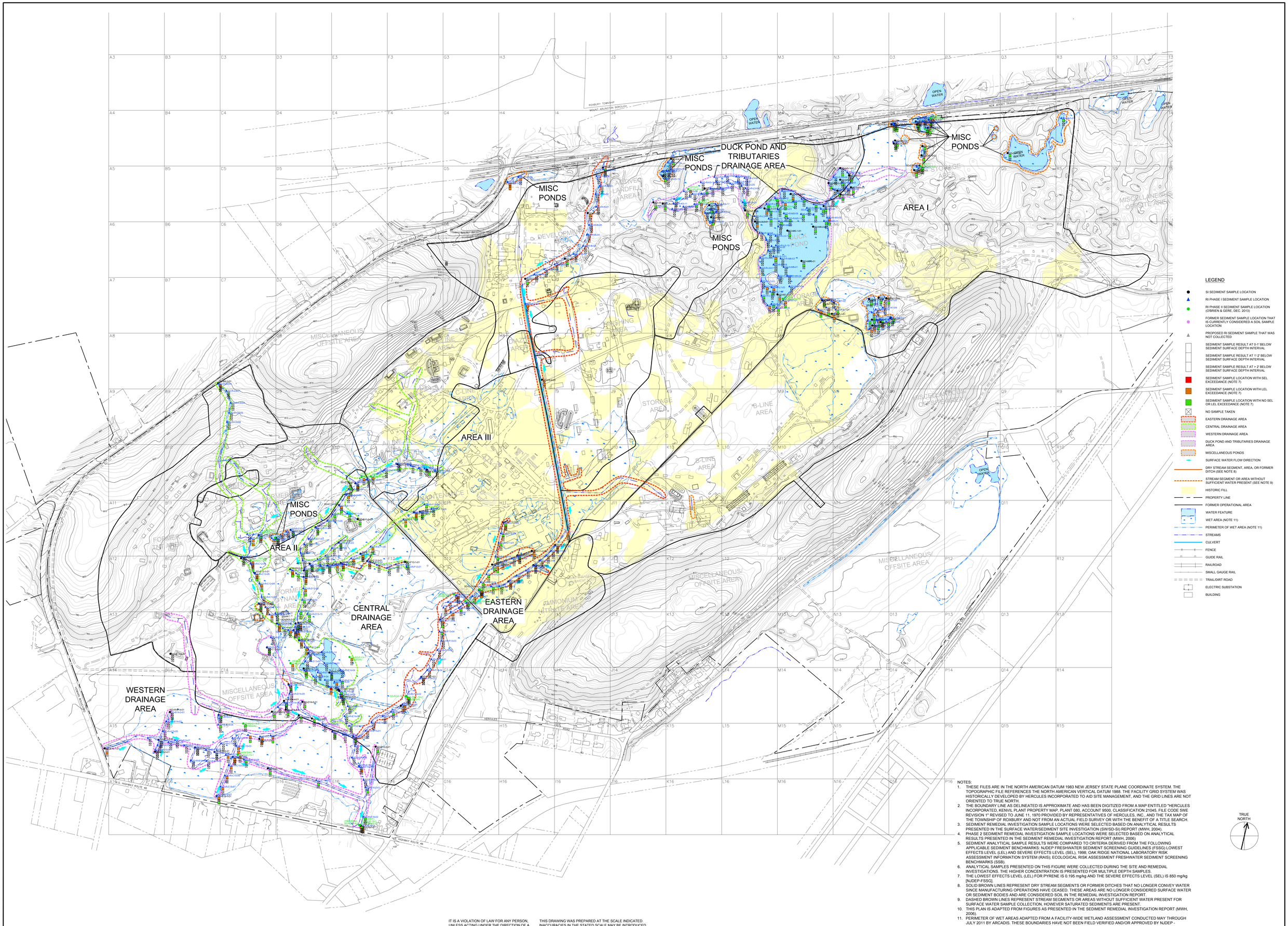

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR PYRENE IS 0.195 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 850 mg/kg [NJDEP-FSSG].
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IN CHARGE OF MSK
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EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

PYRENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-5

J:\KENLAND\2420\50725\EXE\KVL-REMEDIAL\DOCS\DWG\SHEETS\2-5 PYRENE AREAL EXTENT MAP.DWG

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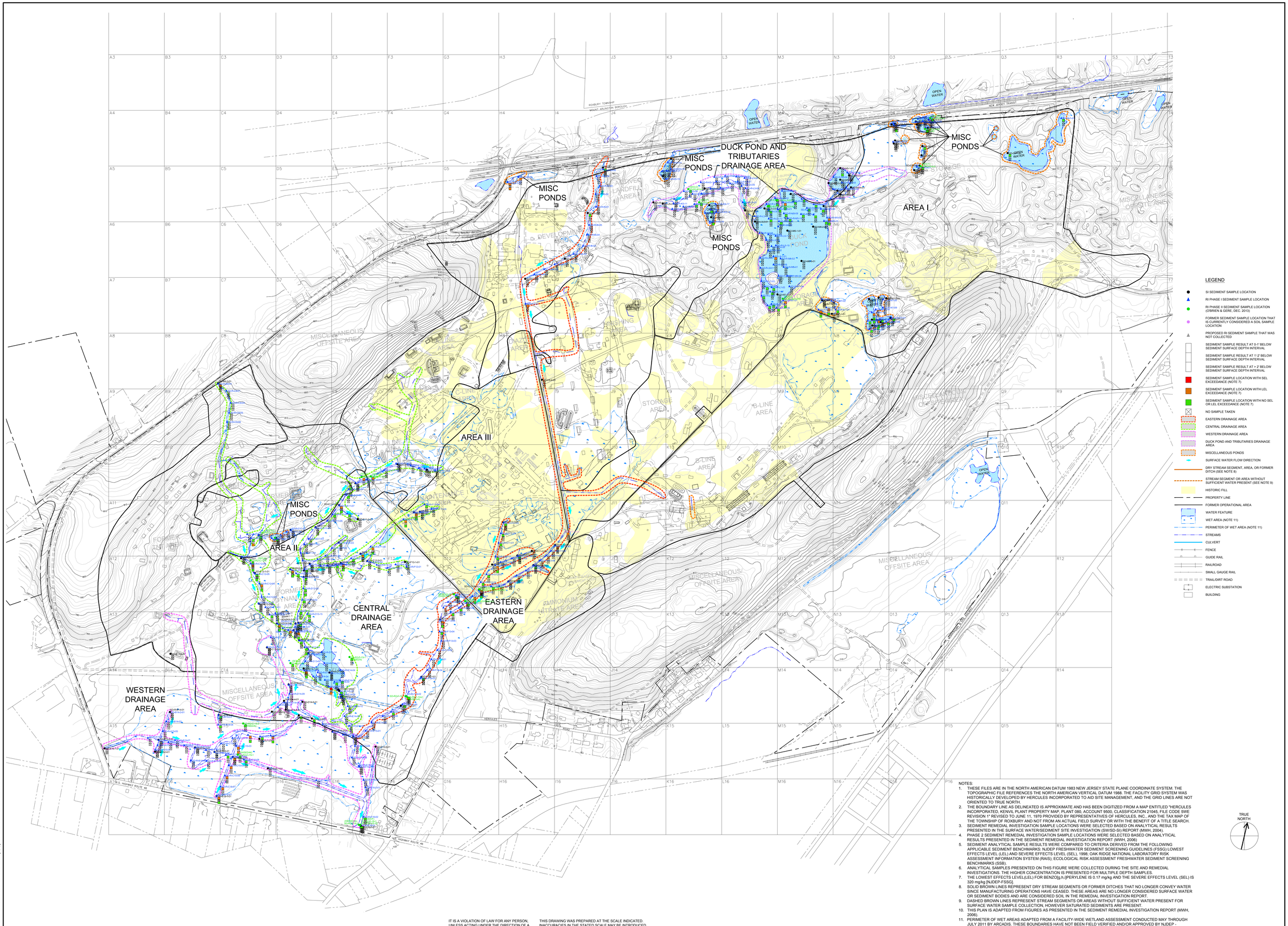

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PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

BENZO[G,H,I]PERYLENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-6

J:\ASHLAND\2420\50725\EXCEL\KENVIL-REMEDIAL\DOCS\DWGS\SHEETS\D-6 BENZO(G,H,I)PERYLENE AREAL EXTENT MAP.DWG

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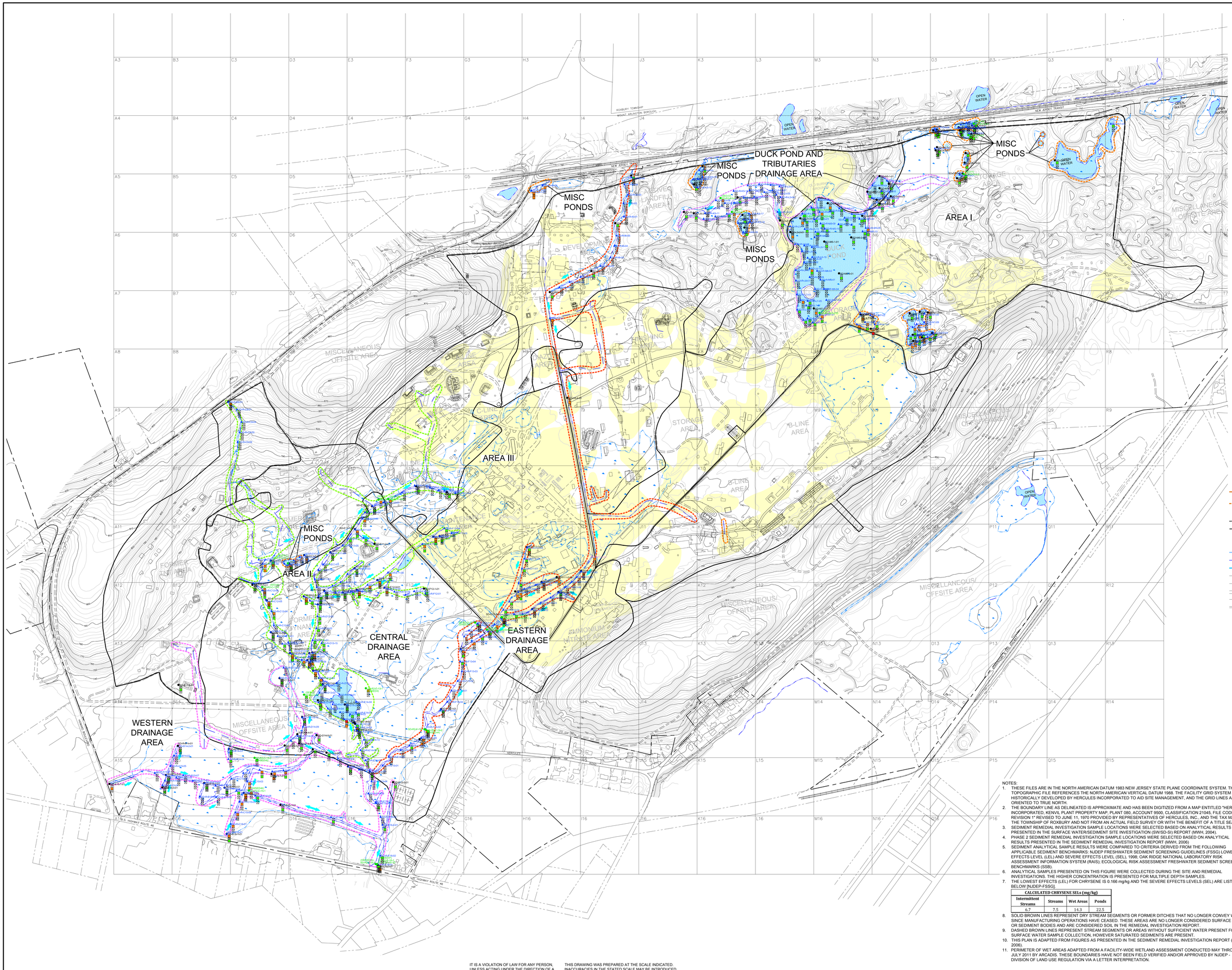

LEGEND

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- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
- FORMER SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATION
- PROPOSED RI SEDIMENT SAMPLE THAT WAS NOT COLLECTED
- SEDIMENT SAMPLE RESULT AT 0-1' BELOW SEDIMENT SURFACE DEPTH INTERVAL
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NOTES:

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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS (LEL) FOR CHRYSENE IS 0.166 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW [NJDEP-FSSG].

CALCULATED CHRYSENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
6.7	7.5	14.3	22.5

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
10. THIS PLAN IS ADAPTED FROM FIGURES AS PRESENTED IN THE SEDIMENT REMEDIAL INVESTIGATION REPORT (MWH, 2006).
11. PERIMETER OF WET AREAS ADAPTED FROM A FACILITY-WIDE WETLAND ASSESSMENT CONDUCTED MAY THROUGH JULY 2011 BY ARCADIS. THESE BOUNDARIES HAVE NOT BEEN FIELD VERIFIED AND/OR APPROVED BY NJDEP - DIVISION OF LAND USE REGULATION VIA A LETTER INTERPRETATION.

TRUE NORTH

1"=250'

250 0 250 500

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

CHRYSENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-7

I:\ASHLAND.2420\50725.KEN\R-REMEDIAL\DOCS\DWS\SHEETS\D-7 CHRYSENE AREAL EXTENT MAP.DWG

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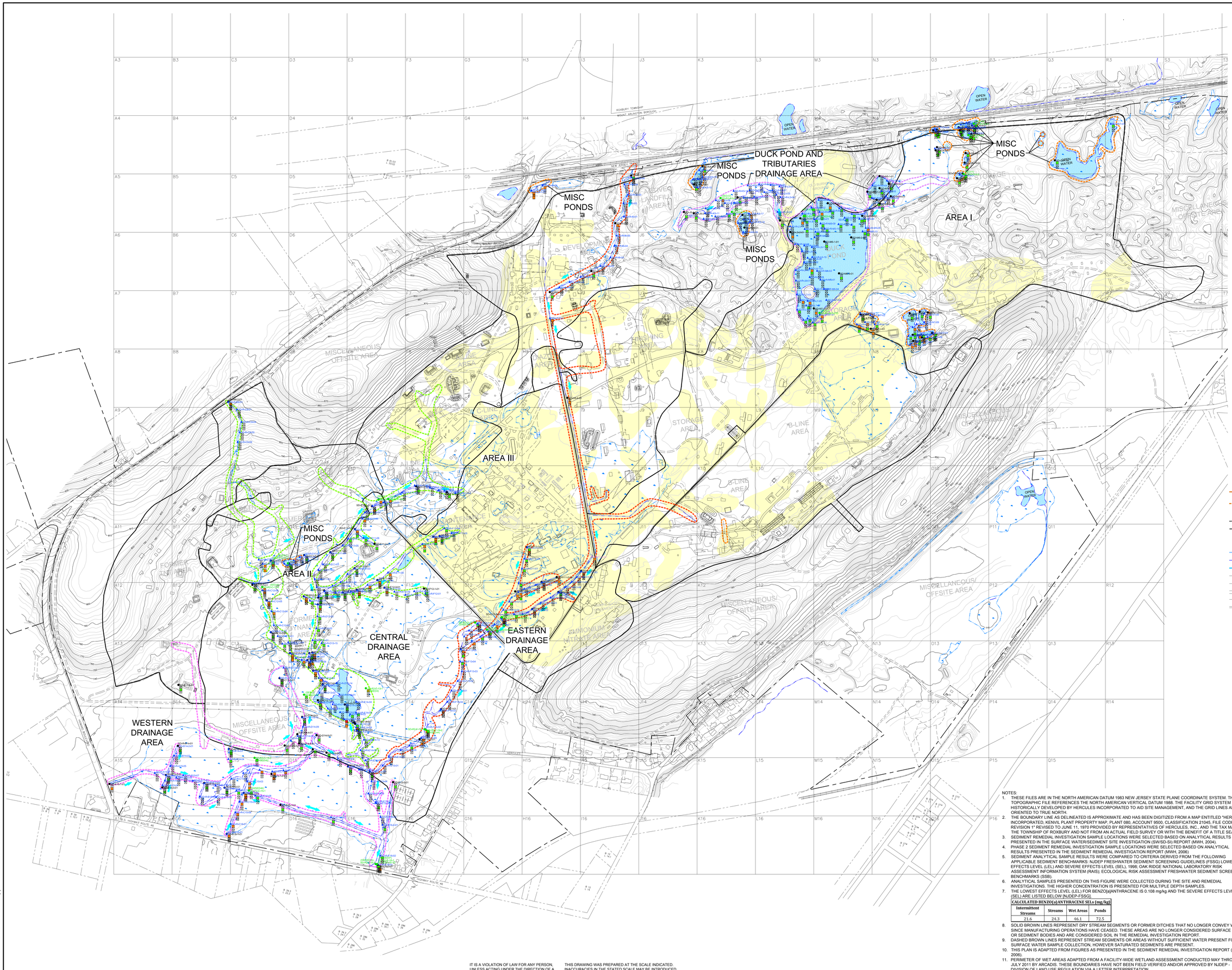

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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR BENZO[a]ANTHRACENE IS 0.108 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW [NJDEP-FSSG].

CALCULATED BENZO(a)ANTHRACENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
21.6	24.3	46.1	72.5

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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TRUE NORTH

1"=250' 250 0 250 500

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

BENZO[A]ANTHRACENE AREAL EXTENT MAP

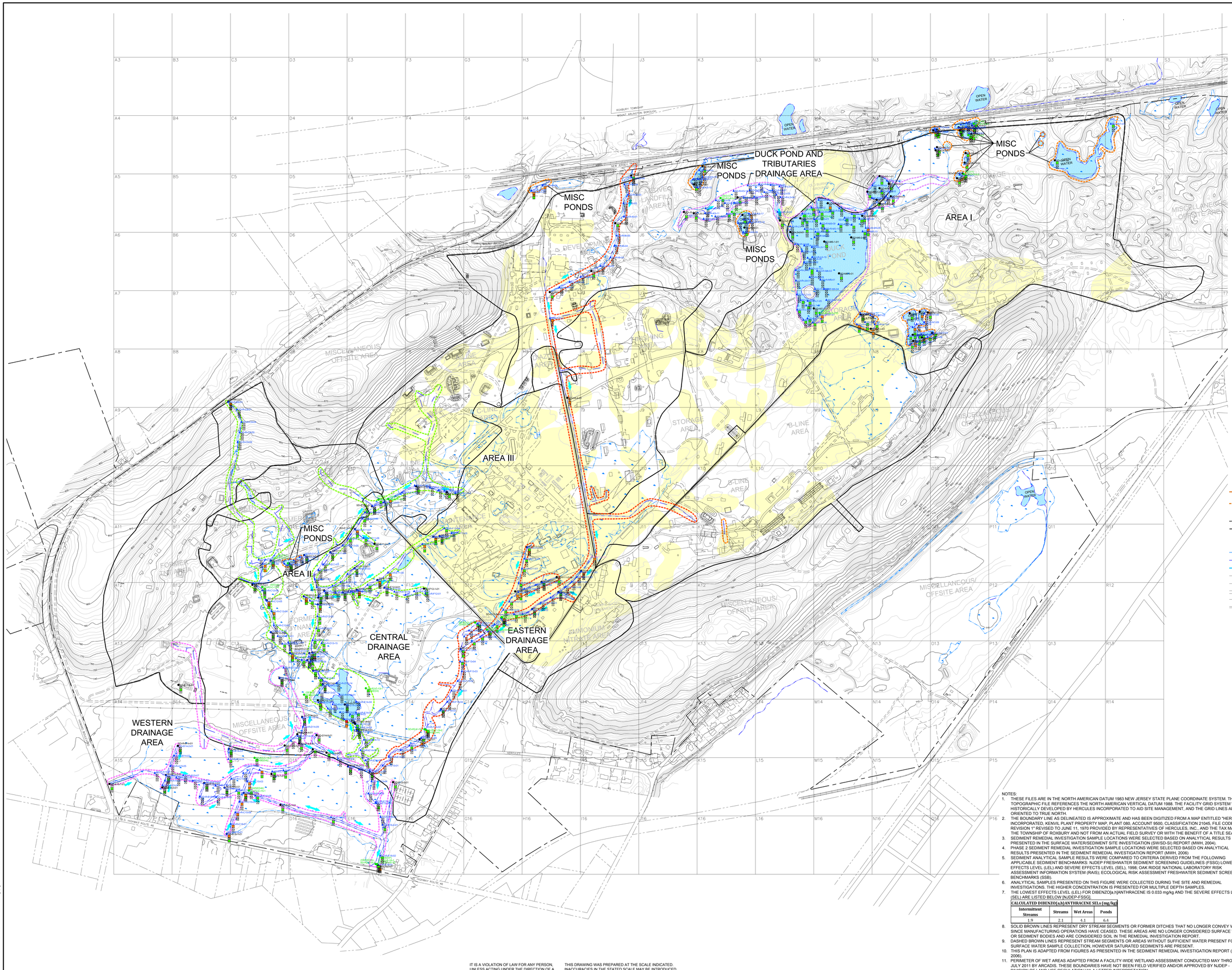
FILE NO. 2420.50725 -

DATE MAY 2016

D-8

J:\ASHLAND\2420\50725\KENVIL-REMEDIAL\DOCS\DWG\SHEETS\2-8 BENZO[A]ANTHRACENE AREAL EXTENT MAP.DWG

SAVED: 6/2/16 8:30 AM



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7. THE LOWEST EFFECTS LEVEL (LEL) FOR DIBENZO[a,h]ANTHRACENE IS 0.033 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW [NJDEP-FSSG].

CALCULATED DIBENZO(a,h)ANTHRACENE SELs (mg/kg)

Intermittent Streams	Streams	Wet Areas	Ponds
1.9	2.1	4.1	6.4

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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1"=250' 250 0 250 500

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

DIBENZO[A,H]ANTHRACENE AREAL EXTENT MAP

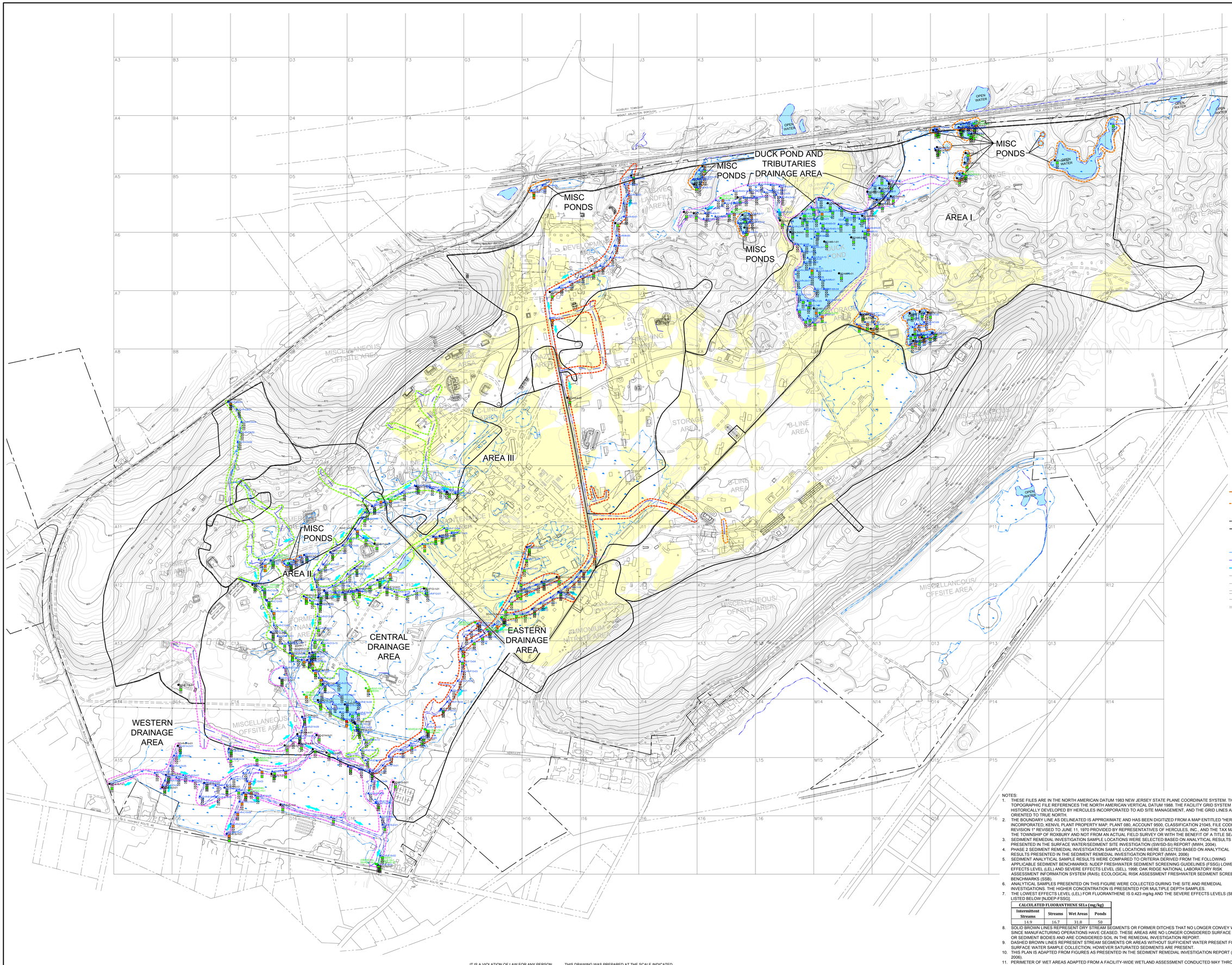
FILE NO. 2420.50725 -

DATE MAY 2016

D-9

L:\ASHLAND.2420\50725.KENVIL-REMEDIAL\DOCS\DWG\SHEETS\D-9 DIBENZ[A,H]ANTHRACENE AREAL EXTENT MAP.DWG

SAVED: 6/9/16 8:49 AM



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7. THE LOWEST EFFECTS LEVEL (LEL) FOR FLUORANTHENE IS 0.423 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW [NJDEP-FSSG].

CALCULATED FLUORANTHENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
14.9	16.7	31.8	50

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

FLUORANTHENE AREAL EXTENT MAP

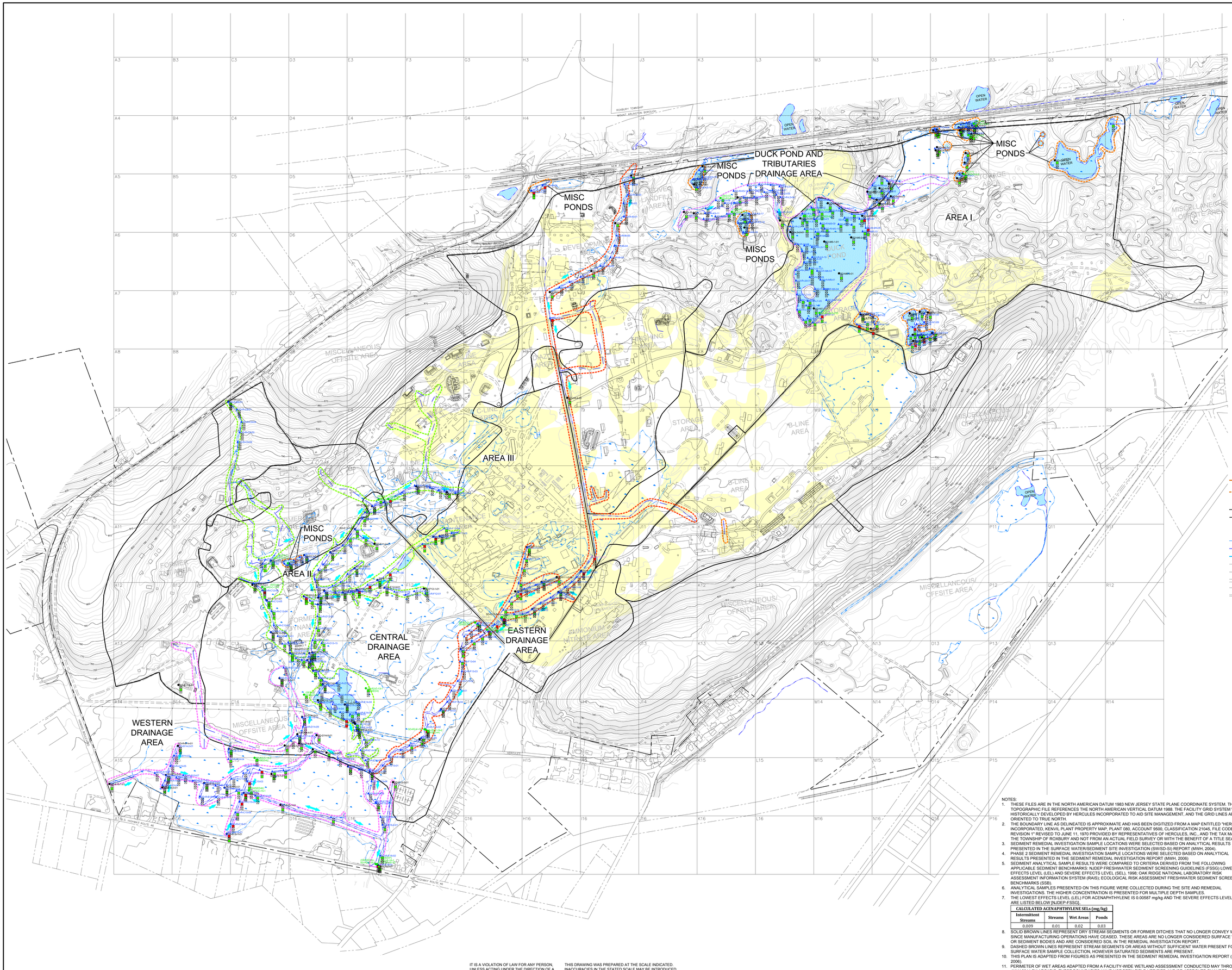
FILE NO. 2420.50725 -

DATE MAY 2016

D-10

J:\SCHLAND\2420\50725\KENVIL-REMEDIAL\DOCS\DWG\SHEETS\3-10 FLUORANTHENE AREAL EXTENT MAP.DWG

SAVED: 6/2/16 8:51 AM



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- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 9)
- HISTORIC FILL
- PROPERTY LINE
- FORMER OPERATIONAL AREA
- WATER FEATURE
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- PERIMETER OF WET AREA (NOTE 11)
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- CULVERT
- FENCE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

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3. SEDIMENT REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SED-SI) REPORT (MWH, 2004).
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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR ACENAPHTHYLENE IS 0.00587 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) ARE LISTED BELOW (NJDEP-FSSG).

CALCULATED ACENAPHTHYLENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
0.009	0.01	0.02	0.03

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
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TRUE NORTH

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1"=250' (250 0 250 500)

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT
KENVIL, NEW JERSEY

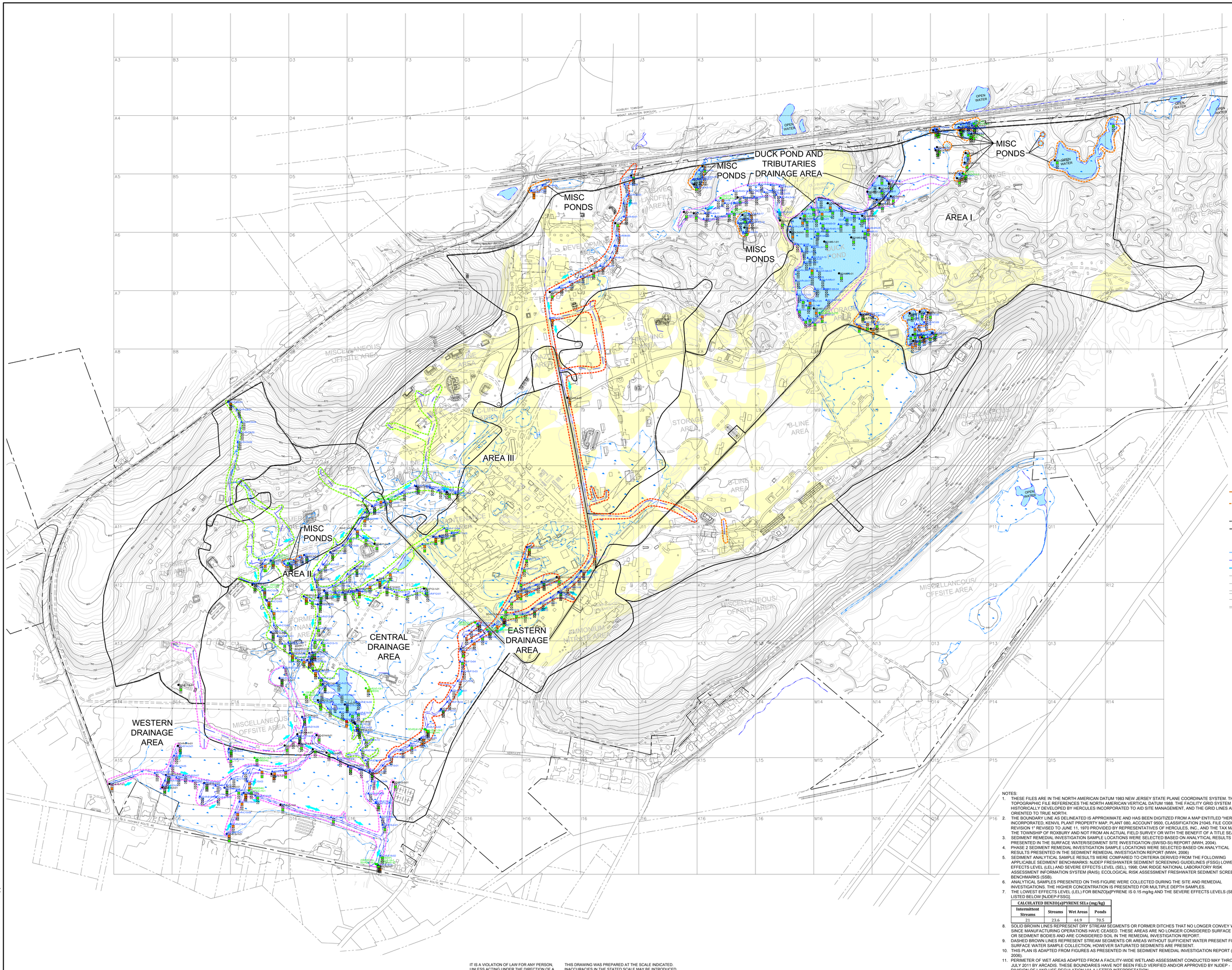
SEDIMENT
ACENAPHTHYLENE AREAL EXTENT MAP

FILE NO. 2420.50725 -
DATE MAY 2016

D-11

J:\ASHLAND.2420\50725.KENVIL-REMEDIAL\DOCS\DWG\SHEETS\D-11 ACENAPHTHYLENE AREAL EXTENT MAP.DWG

SAVED: 6/9/16 8:45 AM



LEGEND

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- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR BENZO[a]PYRENE IS 0.15 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW [NJDEP-FSSG].

CALCULATED BENZO(a)PYRENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
21	23.6	44.9	70.5

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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TRUE NORTH

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250 0 250 500

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

BENZO[A]PYRENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-12

J:\ASHLAND.2420\50725.KENVIL-REMEDIAL\DOCS\DWG\SHEETS\D-12 BENZO[a]PYRENE AREAL EXTENT MAP.DWG

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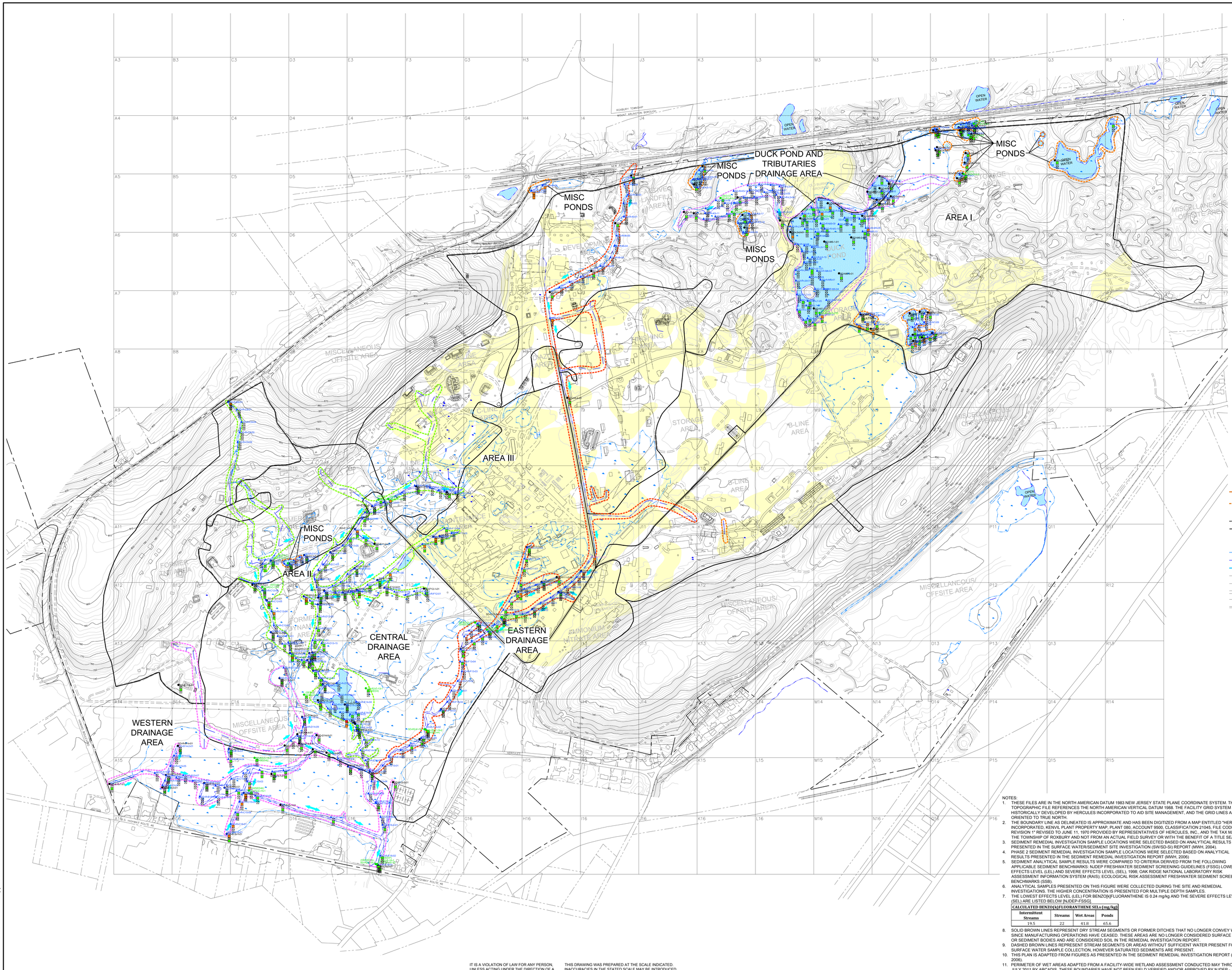

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR BENZO[K]FLUORANTHENE IS 0.24 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW (NJDEP-FSSG).

CALCULATED BENZO(K)FLUORANTHENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
19.5	22	41.8	65.6

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

BENZO[K]FLUORANTHENE AREAL EXTENT MAP

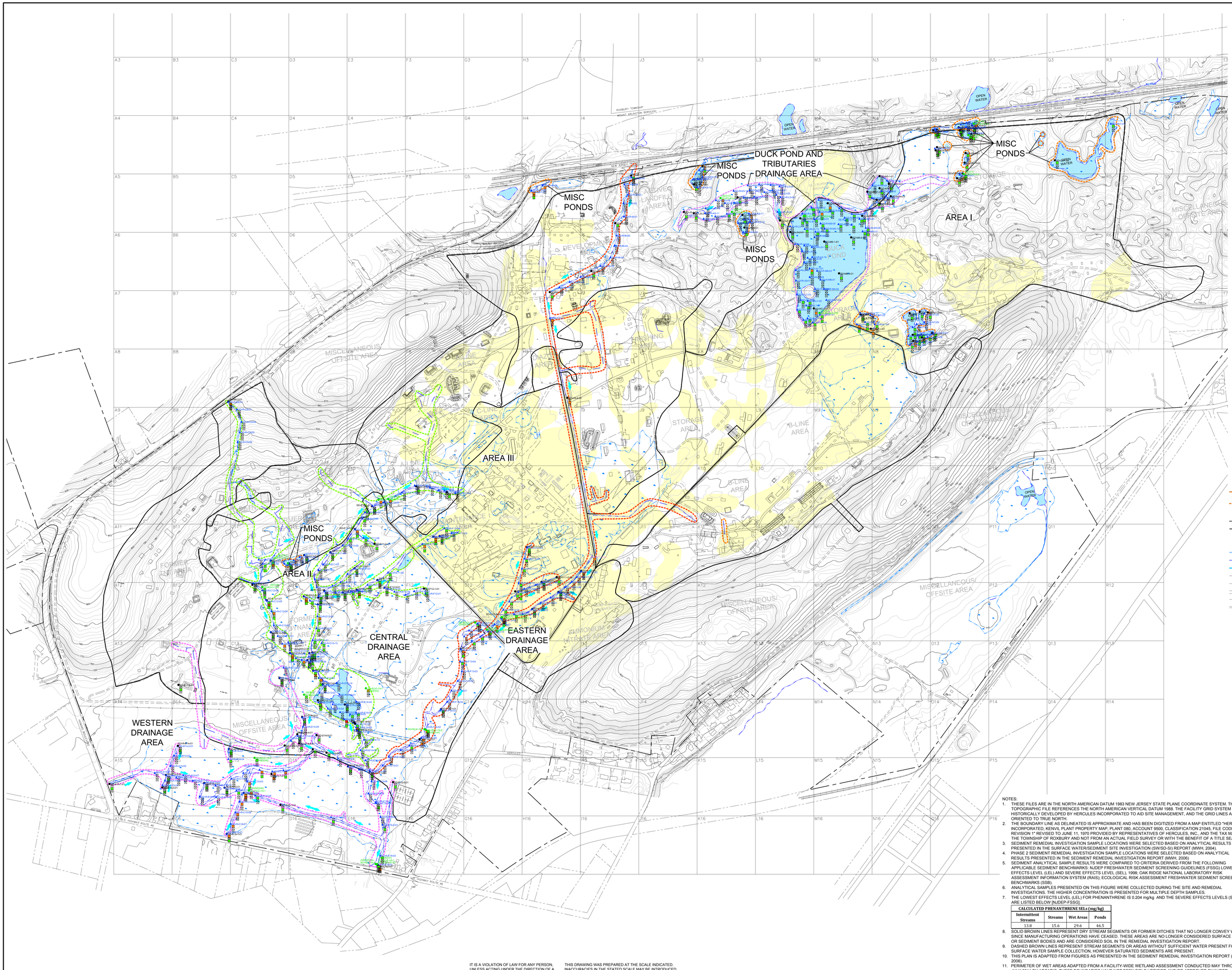
FILE NO. 2420.50725 -

DATE MAY 2016

D-13

L:\ACAD\KENVIL AND ZAZZO\725\KENVIL-REMEDIAL\DOCS\DWGS\SHEETS\D-13 BENZO[K]FLUORANTHENE AREAL EXTENT MAP.DWG

SAVED: 6/2/16 8:24 AM



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7. THE LOWEST EFFECTS LEVEL (LEL) FOR PHENANTHRENE IS 0.204 mg/kg AND THE SEVERE EFFECTS LEVELS (SEL) ARE LISTED BELOW (NJDEP-FSSG).

CALCULATED PHENANTHRENE SELs (mg/kg)			
Intermittent Streams	Streams	Wet Areas	Ponds
13.8	15.6	29.6	46.5

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EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT
KENVIL, NEW JERSEY

SEDIMENT
PHENANTHRENE AREAL EXTENT MAP

FILE NO. 2420.50725 -
DATE MAY 2016

D-14

L:\ACAD\MXD\2420\50725\EXE\NVIL-REMEDIAL\DOCS\DWGS\SHEETS\D-14 PHENANTHRENE AREAL EXTENT MAP.DWG

SAVED: 6/2/16 9:23 AM

AREA I

AREA II

AREA III

MISC PONDS

MISC PONDS

MISC PONDS

MISC PONDS

DUCK POND AND TRIBUTARIES DRAINAGE AREA

CENTRAL DRAINAGE AREA

EASTERN DRAINAGE AREA

WESTERN DRAINAGE AREA

MISCELLANEOUS OFFSITE AREA

MISCELLANEOUS OFFSITE AREA

MISCELLANEOUS OFFSITE AREA

MISCELLANEOUS OFFSITE AREA

AMMONIUM NITRATE SITE AREA

DEVELOPMENT LANDFILL AREA

FORMER 2,4-D AREA

FORMER 2,4,5-T AREA

FORMER MAINTENANCE AREA

FORMER STORAGE AREA

STORAGE AREA

STORAGE AREA

STORAGE AREA

WASHING AREA

A-LINE AREA

B-LINE AREA

C-LINE AREA

D-LINE AREA

OPEN WATER

OPEN WATER

OPEN WATER

OPEN WATER

OPEN WATER

OPEN WATER

ROXBURY TOWNSHIP

MOUNT ARLINGTON BOROUGH

NEW JERSEY TRANSIT

HOWARD BOULEVARD

HOWARD BOULEVARD

HOWARD BOULEVARD

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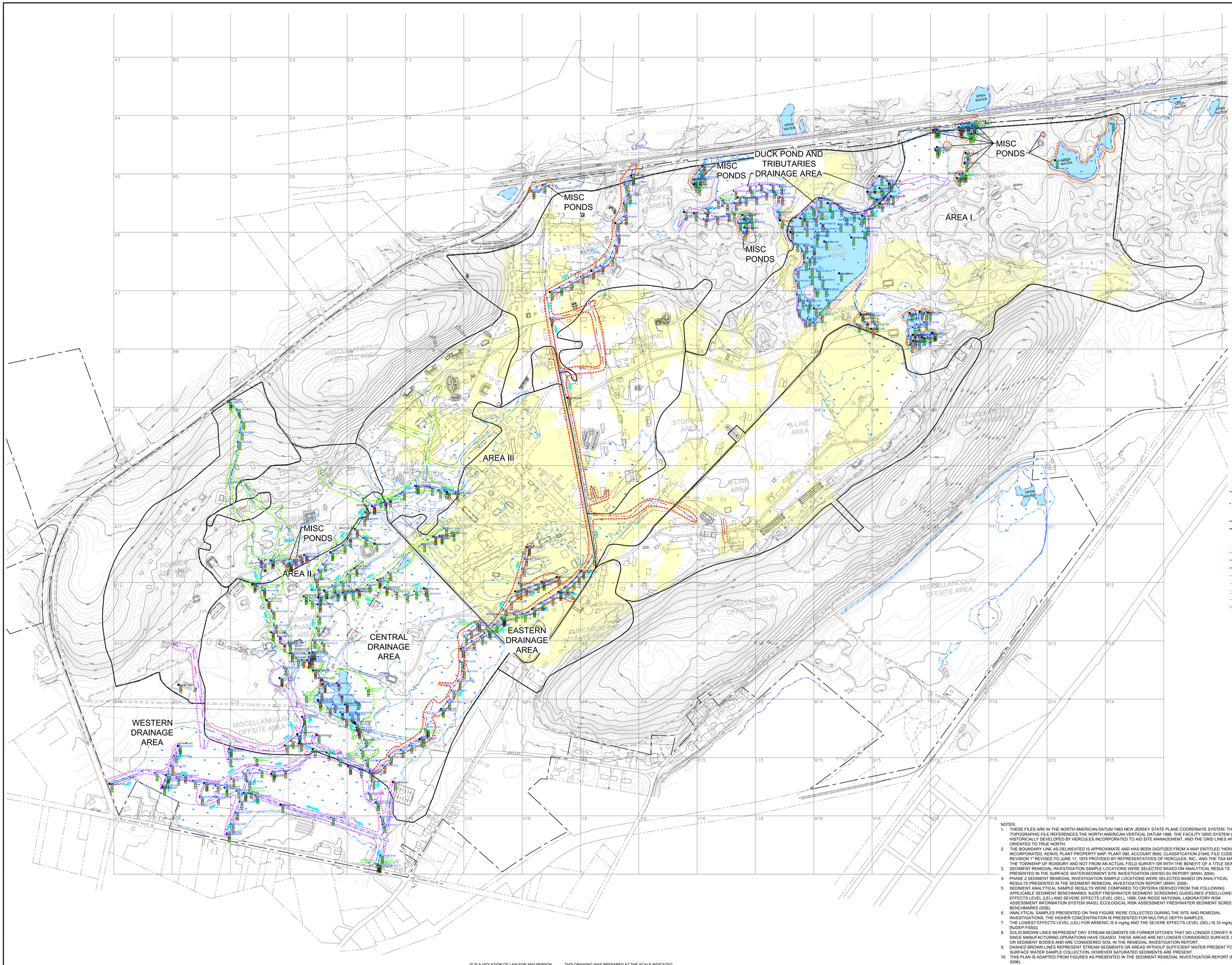
AREA I
AREA II
AREA III
MISC PONDS
MISC PONDS
MISC PONDS
MISC PONDS
DUCK POND AND TRIBUTARIES DRAINAGE AREA
EASTERN DRAINAGE AREA
CENTRAL DRAINAGE AREA
WESTERN DRAINAGE AREA
MISCELLANEOUS OFFSITE AREA
MISCELLANEOUS OFFSITE AREA
MISCELLANEOUS OFFSITE AREA
MISCELLANEOUS OFFSITE AREA
OPEN WATER
OPEN WATER
OPEN WATER
OPEN WATER
OPEN WATER
OPEN WATER
DUCK POND
STORAGE AREA
STORAGE AREA
STORAGE AREA
STORAGE AREA
B-LINE AREA
B-LINE AREA
B-LINE AREA
A-LINE AREA
A-LINE AREA
A-LINE AREA
FORMER NAPHTHA STORAGE AREA
FORMER NAPHTHA STORAGE AREA
FORMER NAPHTHA STORAGE AREA
AMMONIUM NITRATE AREA
AMMONIUM NITRATE AREA
DEVELOPMENT AREA
DEVELOPMENT AREA
DEVELOPMENT

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AREA I

AREA II

AREA III

MISC PONDS

DUCK POND AND TRIBUTARIES DRAINAGE AREA

EASTERN DRAINAGE AREA

CENTRAL DRAINAGE AREA

WESTERN DRAINAGE AREA

MISCELLANEOUS OFFSITE AREA

LEGEND

- SI SEDIMENT SAMPLE LOCATION
- RI PHASE I SEDIMENT SAMPLE LOCATION
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- SEDIMENT SAMPLE LOCATION WITH NO SEL OR LEL EXCEEDANCE (NOTE 7)
- NO SAMPLE TAKEN
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- SURFACE WATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 8)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 9)
- HISTORIC FILL
- PROPERTY LINE
- FORMER OPERATIONAL AREA
- WATER FEATURE
- WET AREA (NOTE 11)
- PERIMETER OF WET AREA (NOTE 11)
- STREAMS
- CULVERT
- FENCE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:

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2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR COPPER IS 16 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 110 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
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11. PERIMETER OF WET AREAS ADAPTED FROM A FACILITY-WIDE WETLAND ASSESSMENT CONDUCTED MAY THROUGH JULY 2011 BY ARCADIS. THESE BOUNDARIES HAVE NOT BEEN FIELD VERIFIED AND/OR APPROVED BY NJDEP - DIVISION OF LAND USE REGULATION VIA A LETTER INTERPRETATION.

TRUE NORTH

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1"=250' (250 0 250 500)

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

COPPER AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-17

L:\ASHLAND.2420\50725.KENVIL-REMEDIAL\DOCS\DWGS\SHEETS\3-1T COPPER AREAL EXTENT MAP.DWG

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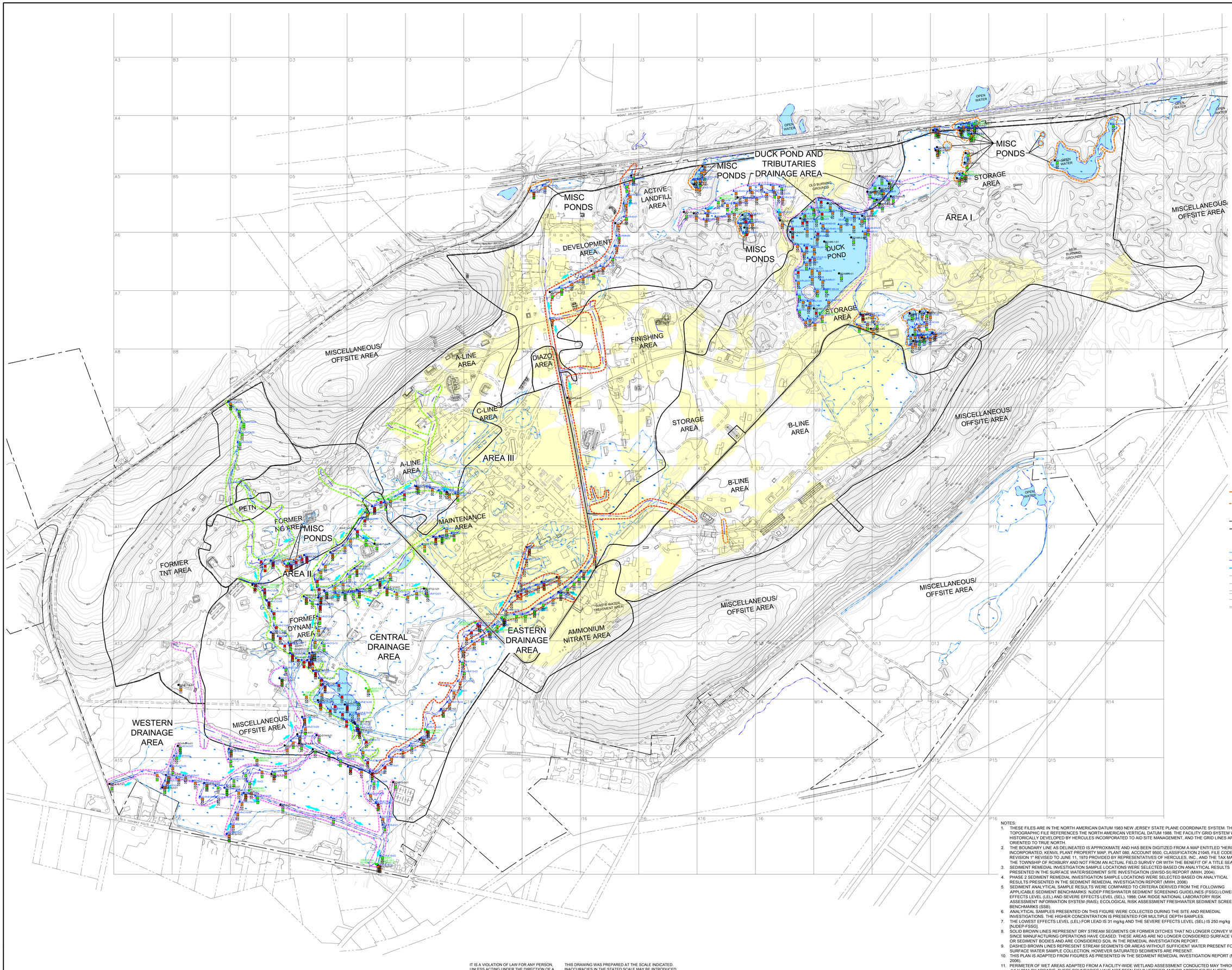

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- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 8)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 9)
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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR LEAD IS 31 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 250 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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TRUE NORTH

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250 0 250 500

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IN CHARGE OF	MSK			
DESIGNED BY	JAL			
CHECKED BY	MAH			
DRAWN BY	RJD	NO.	DATE	REVISION

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

LEAD AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-18

J:\ASHLAND\2420\50725.KEN\RI-REMEDIAL\DOCS\DWG\SHEETS\D-18 LEAD AREAL EXTENT MAP.DWG

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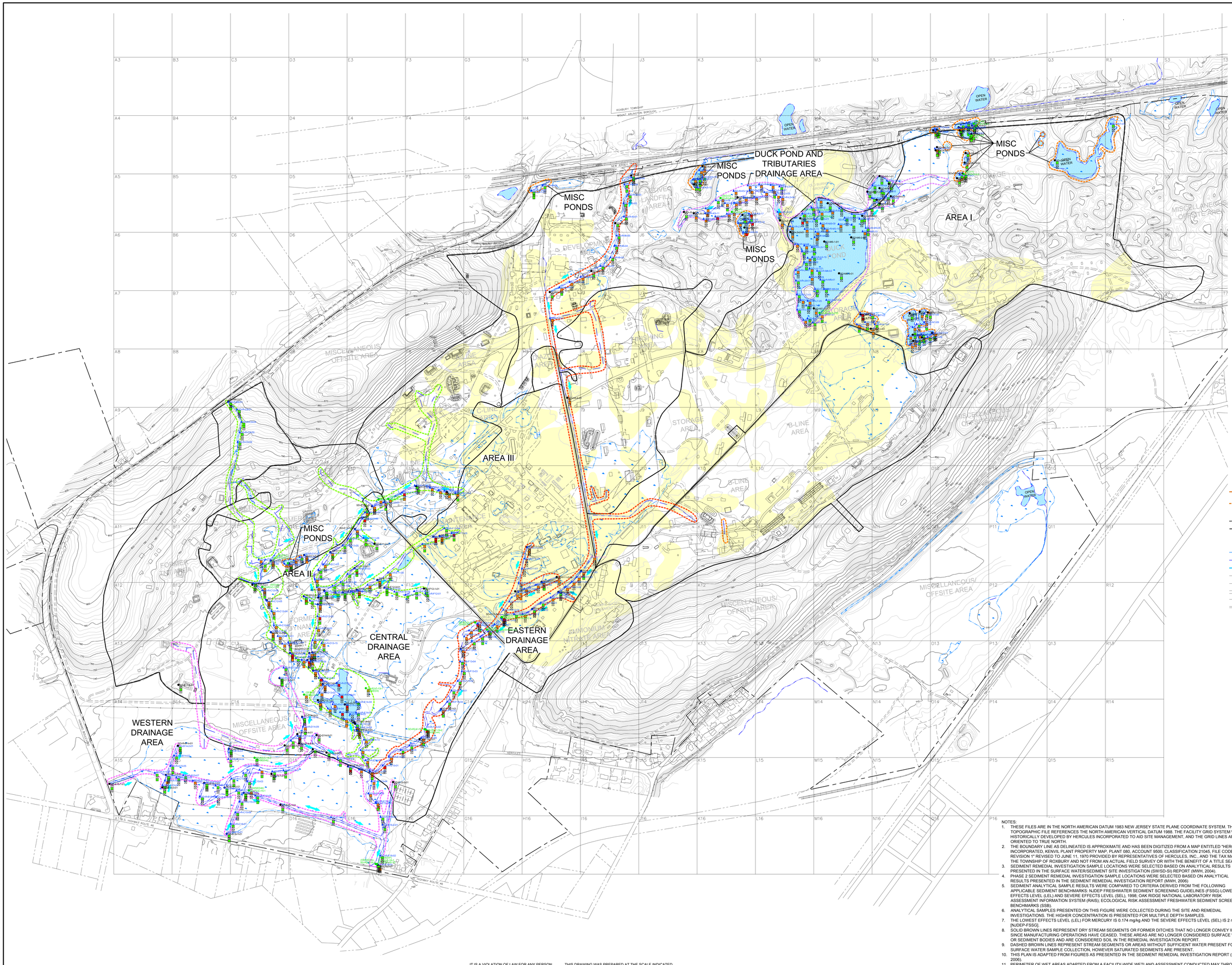

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR MERCURY IS 0.174 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 2 mg/kg (NJDEP-FSSG).
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

MERCURY AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-19

I:\ASHLAND.2420\50725.KEN\R-REMEDIAL\DOCS\DWGS\SHEETS\D-19 MERCURY AREAL EXTENT MAP.DWG

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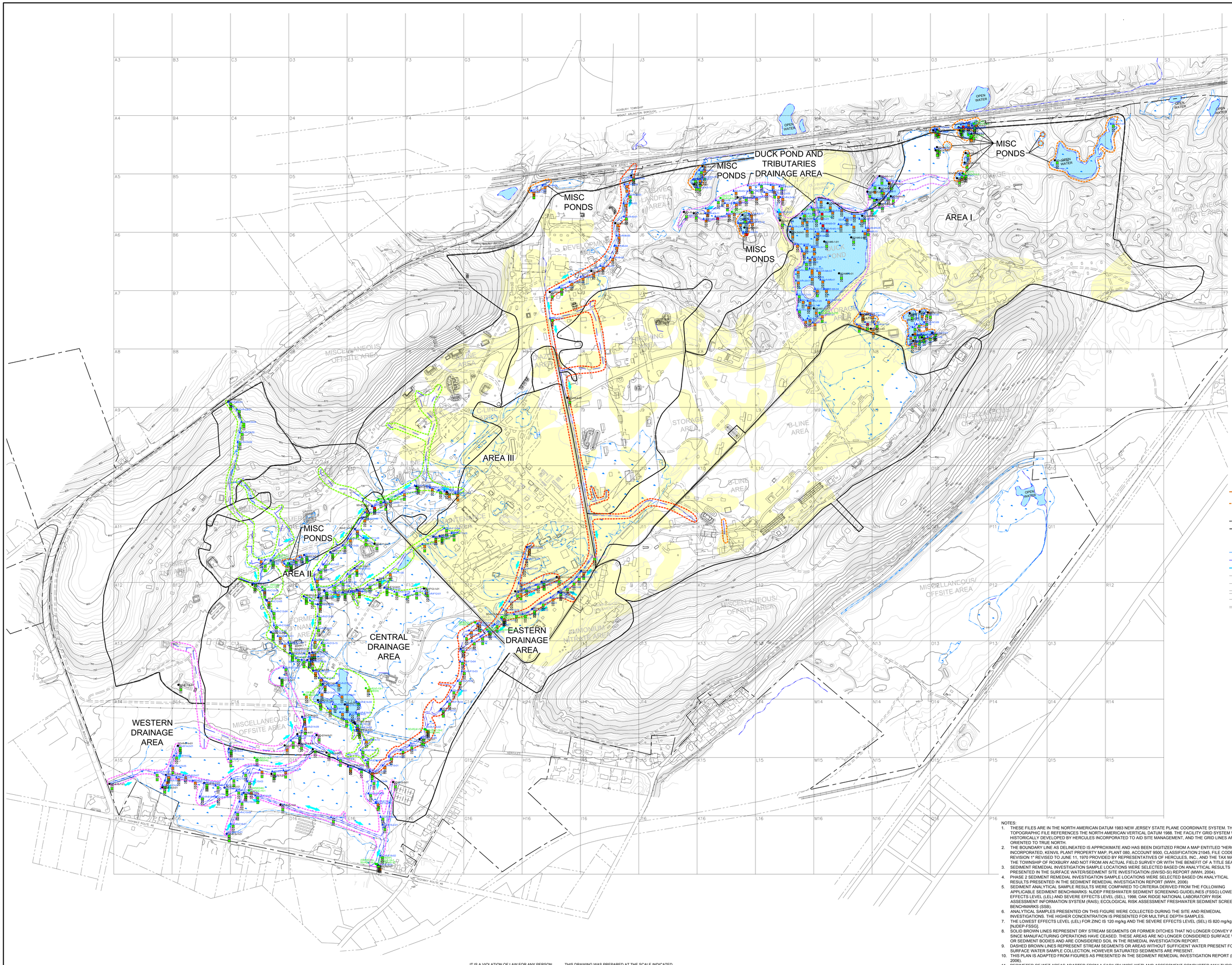

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KENVIL, NEW JERSEY

SEDIMENT

ZINC AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-20

J:\ASHLAND.2420\50725.KENVIL-REMEDIAL\DOCS\DWG\SHEETS\X-20 ZINC AREAL EXTENT MAP.DWG

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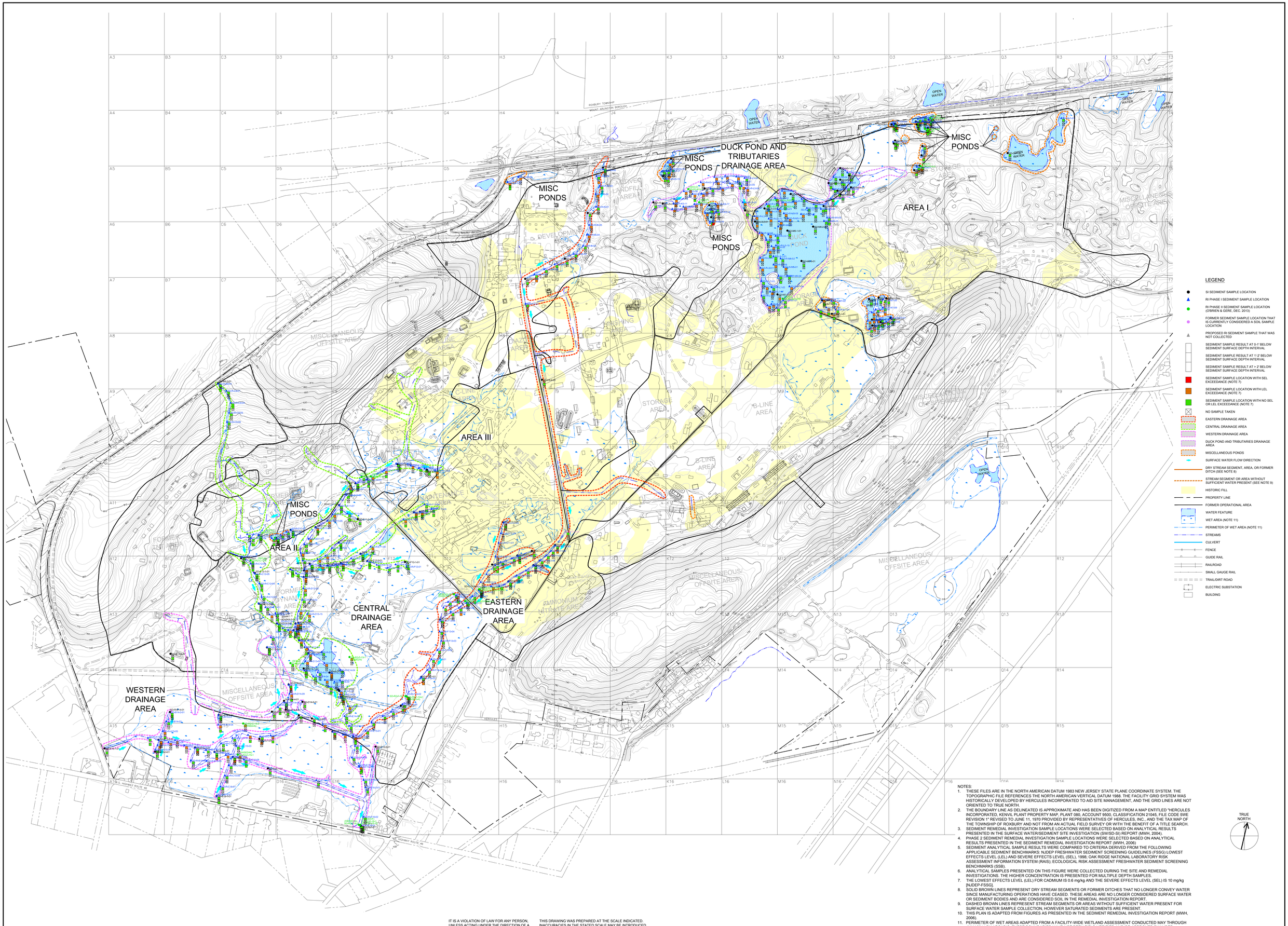

LEGEND

- SI SEDIMENT SAMPLE LOCATION
- RI PHASE I SEDIMENT SAMPLE LOCATION
- RI PHASE II SEDIMENT SAMPLE LOCATION (O'BRIEN & GERE, DEC. 2013)
- FORMER SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATION
- PROPOSED RI SEDIMENT SAMPLE THAT WAS NOT COLLECTED
- SEDIMENT SAMPLE RESULT AT 0-1' BELOW SEDIMENT SURFACE DEPTH INTERVAL
- SEDIMENT SAMPLE RESULT AT 1'-2' BELOW SEDIMENT SURFACE DEPTH INTERVAL
- SEDIMENT SAMPLE RESULT AT > 2' BELOW SEDIMENT SURFACE DEPTH INTERVAL
- SEDIMENT SAMPLE LOCATION WITH SEL EXCEEDANCE (NOTE 7)
- SEDIMENT SAMPLE LOCATION WITH LEL EXCEEDANCE (NOTE 7)
- SEDIMENT SAMPLE LOCATION WITH NO SEL OR LEL EXCEEDANCE (NOTE 7)
- NO SAMPLE TAKEN
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 8)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 9)
- HISTORIC FILL
- PROPERTY LINE
- FORMER OPERATIONAL AREA
- WATER FEATURE
- WET AREA (NOTE 11)
- PERIMETER OF WET AREA (NOTE 11)
- STREAMS
- CULVERT
- FENCE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988. THE FACILITY GRID SYSTEM WAS HISTORICALLY DEVELOPED BY HERCULES INCORPORATED TO AID SITE MANAGEMENT, AND THE GRID LINES ARE NOT ORIENTED TO TRUE NORTH.
2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
3. SEDIMENT REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SD-SI) REPORT (MWH, 2004).
4. PHASE 2 SEDIMENT REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SEDIMENT REMEDIAL INVESTIGATION REPORT (MWH, 2006)
5. SEDIMENT ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SEDIMENT BENCHMARKS: NJDEP FRESHWATER SEDIMENT SCREENING GUIDELINES (FSSG) LOWEST EFFECTS LEVEL (LEL) AND SEVERE EFFECTS LEVEL (SEL), 1998; OAK RIDGE NATIONAL LABORATORY RISK ASSESSMENT INFORMATION SYSTEM (RAIS); ECOLOGICAL RISK ASSESSMENT FRESHWATER SEDIMENT SCREENING BENCHMARKS (SSB).
6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR CADMIUM IS 0.6 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 10 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
10. THIS PLAN IS ADAPTED FROM FIGURES AS PRESENTED IN THE SEDIMENT REMEDIAL INVESTIGATION REPORT (MWH, 2006).
11. PERIMETER OF WET AREAS ADAPTED FROM A FACILITY-WIDE WETLAND ASSESSMENT CONDUCTED MAY THROUGH JULY 2011 BY ARCADIS. THESE BOUNDARIES HAVE NOT BEEN FIELD VERIFIED AND/OR APPROVED BY NJDEP - DIVISION OF LAND USE REGULATION VIA A LETTER INTERPRETATION.

TRUE NORTH

1"=250'

250 0 250 500

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT
KENVIL, NEW JERSEY

SEDIMENT
CADMIUM AREAL EXTENT MAP

FILE NO. 2420.50725 -
DATE MAY 2016

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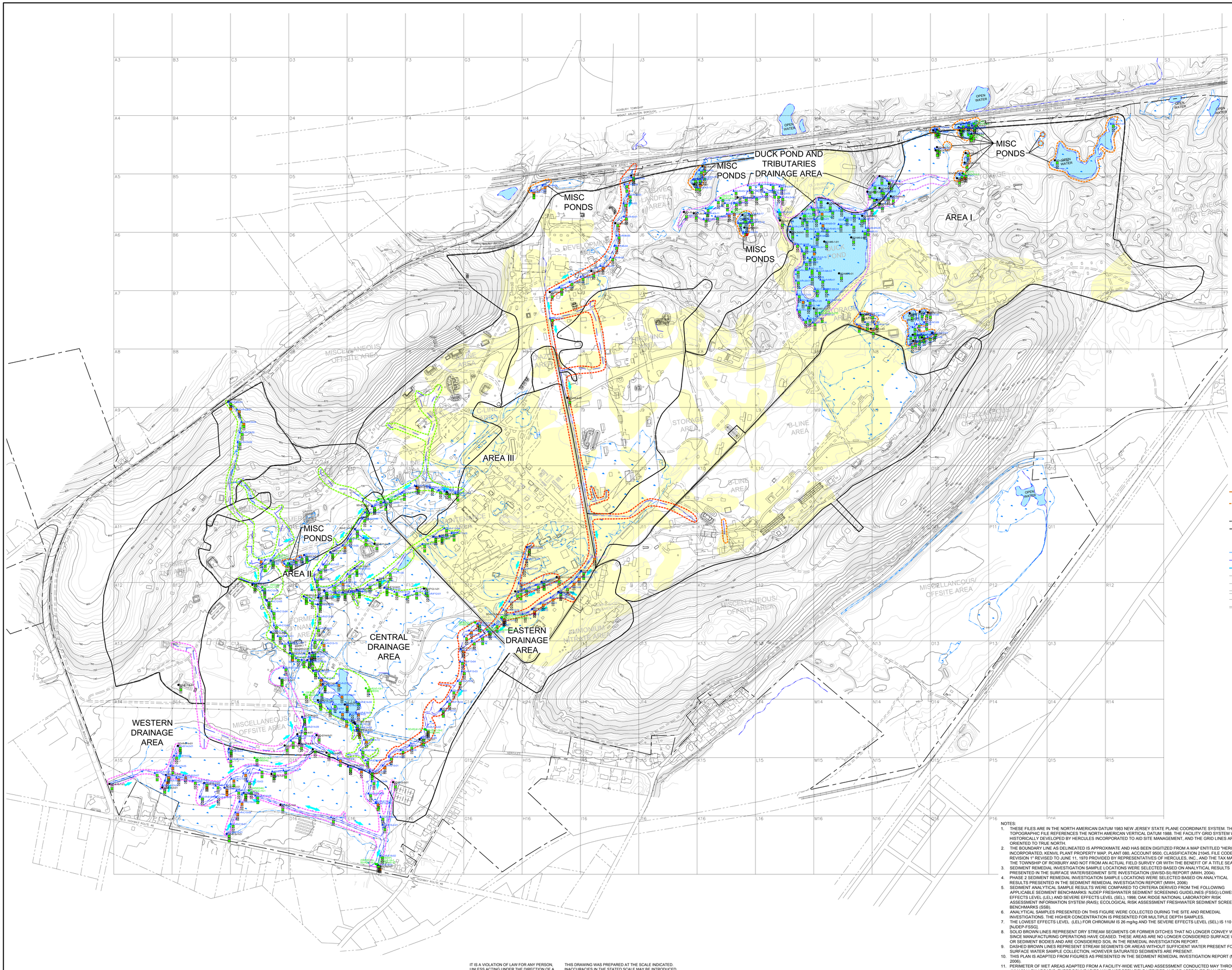

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- SURFACE WATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (SEE NOTE 8)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (SEE NOTE 9)
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6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE LOWEST EFFECTS LEVEL (LEL) FOR CHROMIUM IS 26 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 110 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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1"=250' 250 0 250 500

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT
KENVIL, NEW JERSEY

SEDIMENT

CHROMIUM AREAL EXTENT MAP

FILE NO. 2420.50725 -
DATE MAY 2016
D-22

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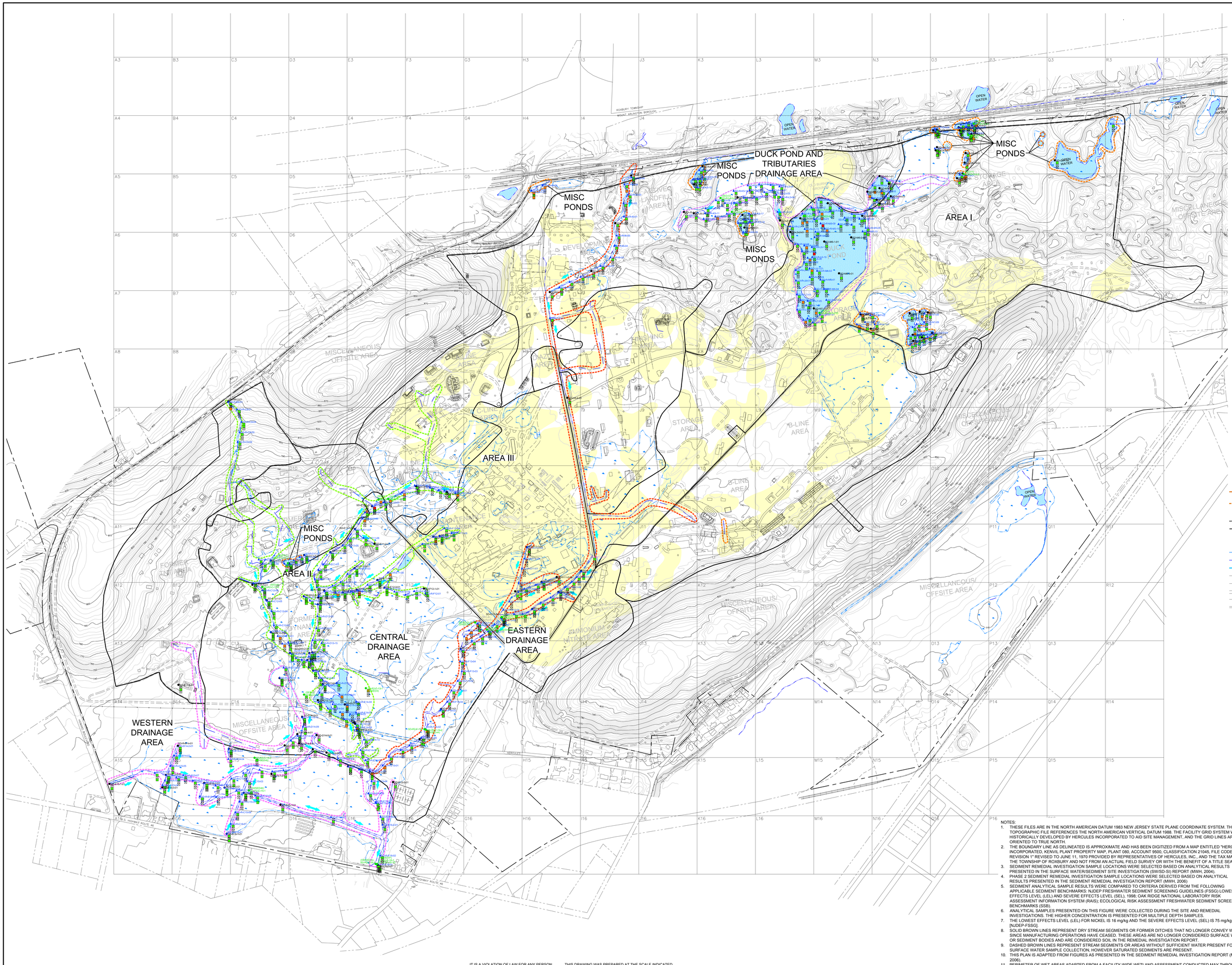

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR NICKEL IS 16 mg/kg AND THE SEVERE EFFECTS LEVEL (SEL) IS 75 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

NICKEL AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-23

J:\KENJ-MD-2420\50725\EXE\KENVIL-REMEDIAL\DOCS\DWG\SHEETS\2X3 NICKEL AREAL EXTENT MAP.DWG

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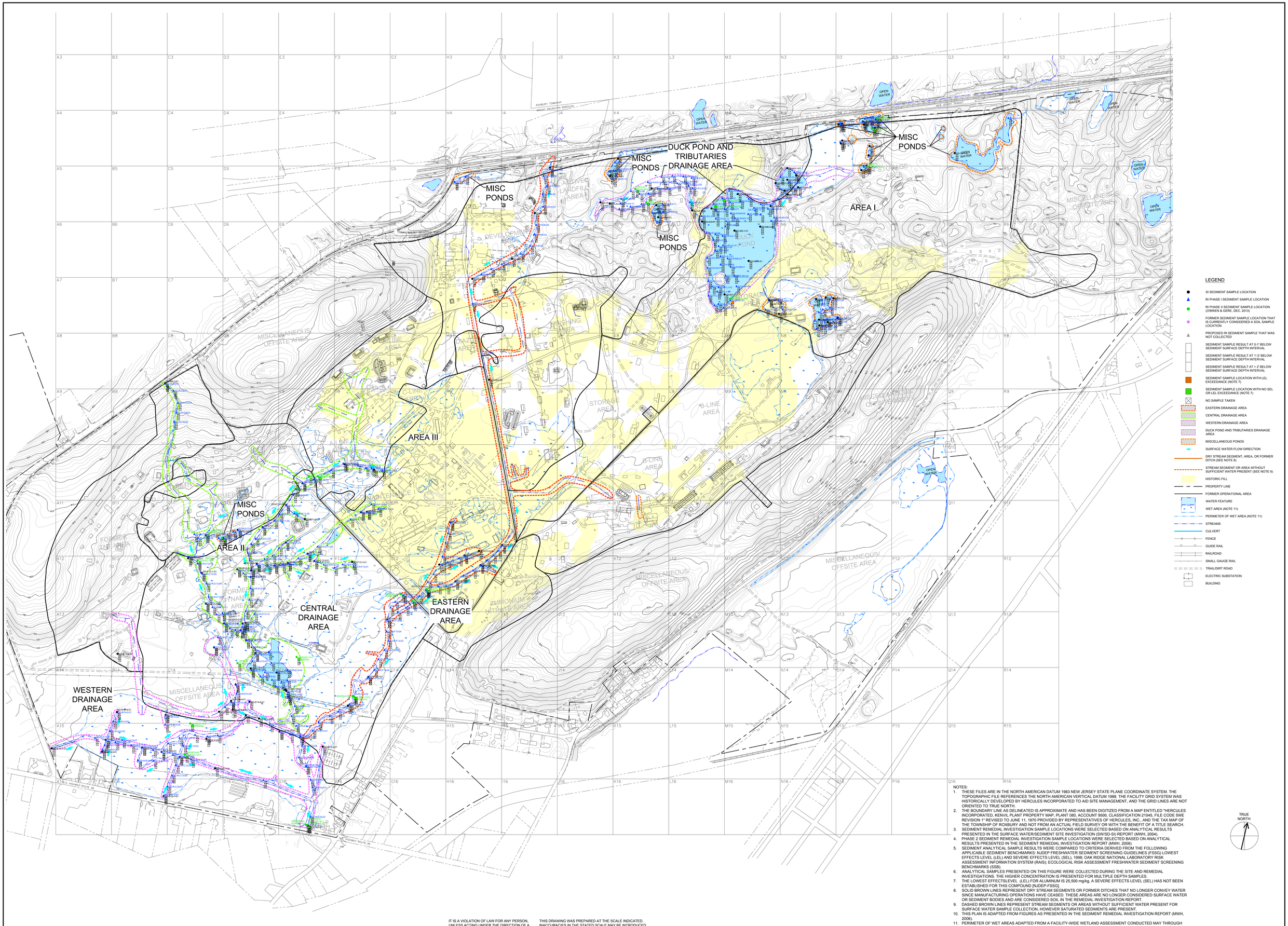
AREA I
AREA II
AREA III
MISC PONDS
MISC PONDS
MISC PONDS
MISC PONDS
DUCK POND AND TRIBUTARIES DRAINAGE AREA
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WESTERN DRAINAGE AREA
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MISCELLANEOUS OFFSITE AREA
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MISCELLANEOUS OFFSITE AREA
DUCK POND
OPEN WATER
OPEN WATER
OPEN WATER

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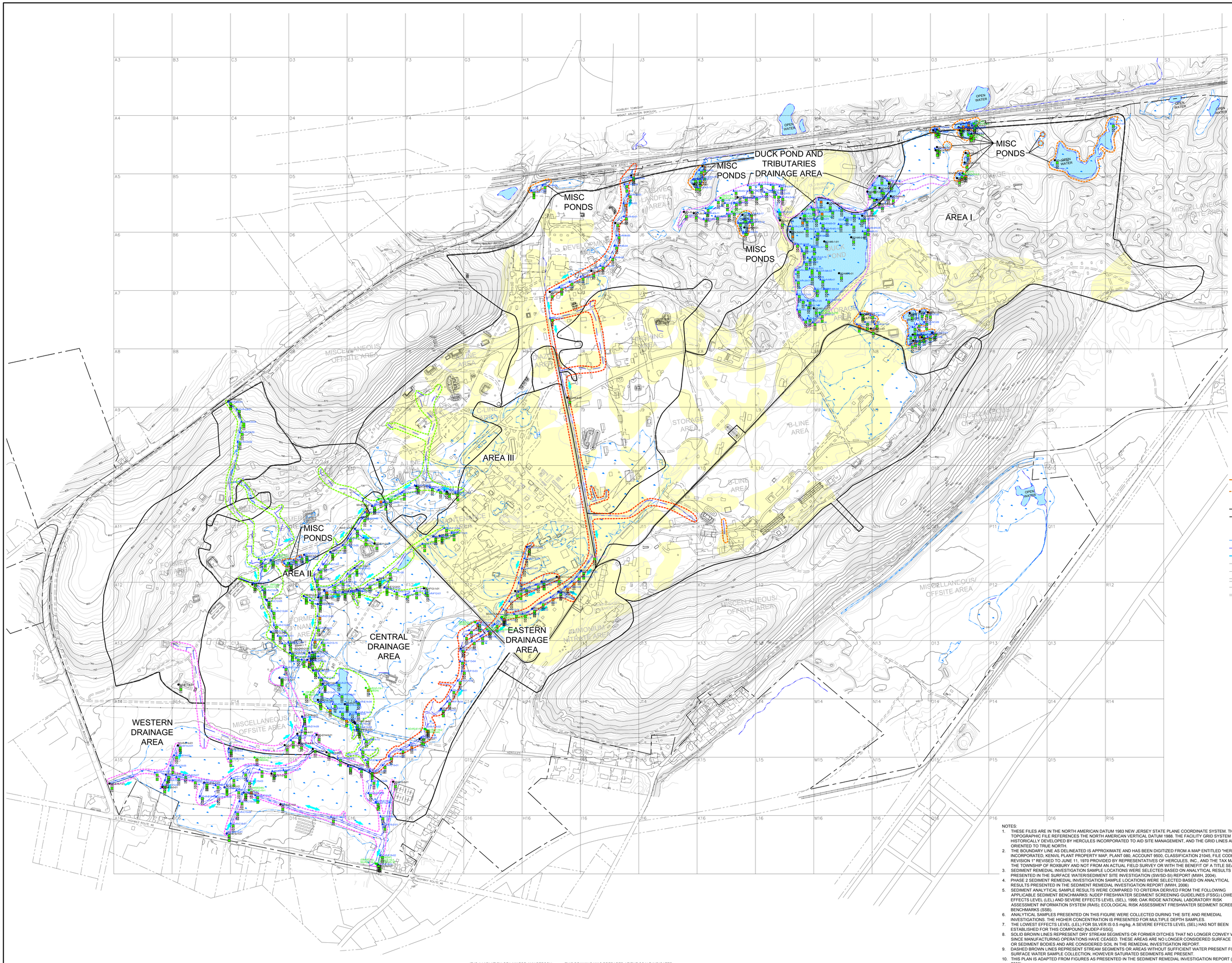
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MISCELLANEOUS OFFSITE AREA
MISCELLANEOUS OFFSITE AREA
DUCK POND
OPEN WATER
OPEN WATER
OPEN WATER
OPEN WATER
OPEN WATER
STORAGE AREA
STORAGE AREA
STORAGE AREA
B-LINE AREA
B-LINE AREA
B-LINE AREA
A-LINE AREA
A-LINE AREA
FORMER DYE AREA
FORMER DYE AREA
FORMER DYE AREA
FORMER DYE AREA
FORMER DYE AREA
AMMONIUM NITRATE AREA
DEVELOPMENT AREA
DEVELOPMENT AREA
ROXBURY TOWNSHIP
MOUNT ARLINGTON BOROUGH
NEW JERSEY TRANSIT
NEW JERSEY TRANSIT
SANDSHORE ROAD
SANDSHORE ROAD
HOWARD BOULEVARD
HOWARD BOULEVARD
HOWARD BOULEVAR

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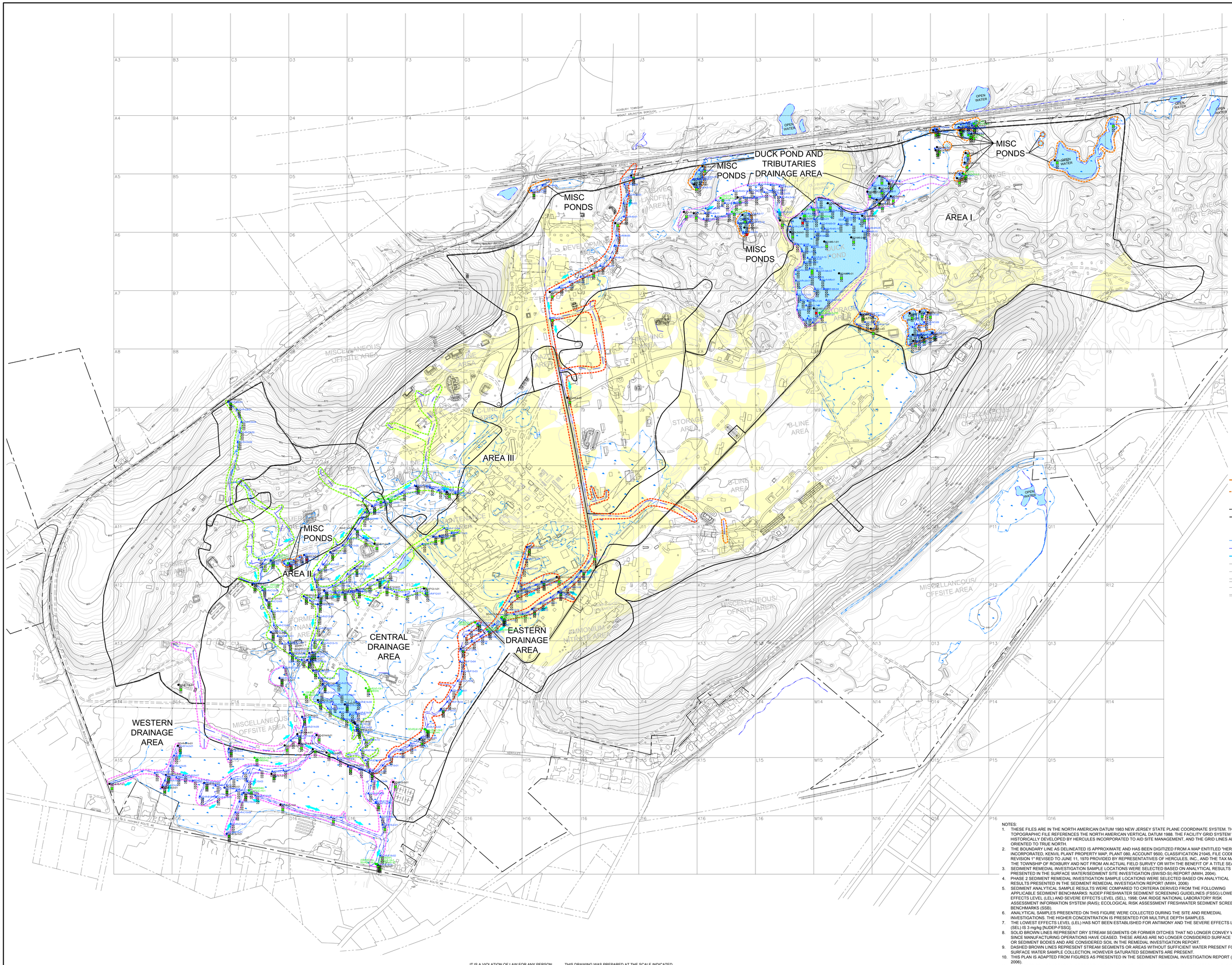

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7. THE LOWEST EFFECTS LEVEL (LEL) HAS NOT BEEN ESTABLISHED FOR ANTIMONY AND THE SEVERE EFFECTS LEVEL (SEL) IS 3 mg/kg [NJDEP-FSSG].
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
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TRUE NORTH

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1"=250' 250 0 250 500

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

ANTIMONY AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-26

J:\ASHLAND.2420\50725.KEN\R-REMEDIAL\DOCS\DWG\SHEETS\X-26 ANTIMONY AREAL EXTENT MAP.DWG

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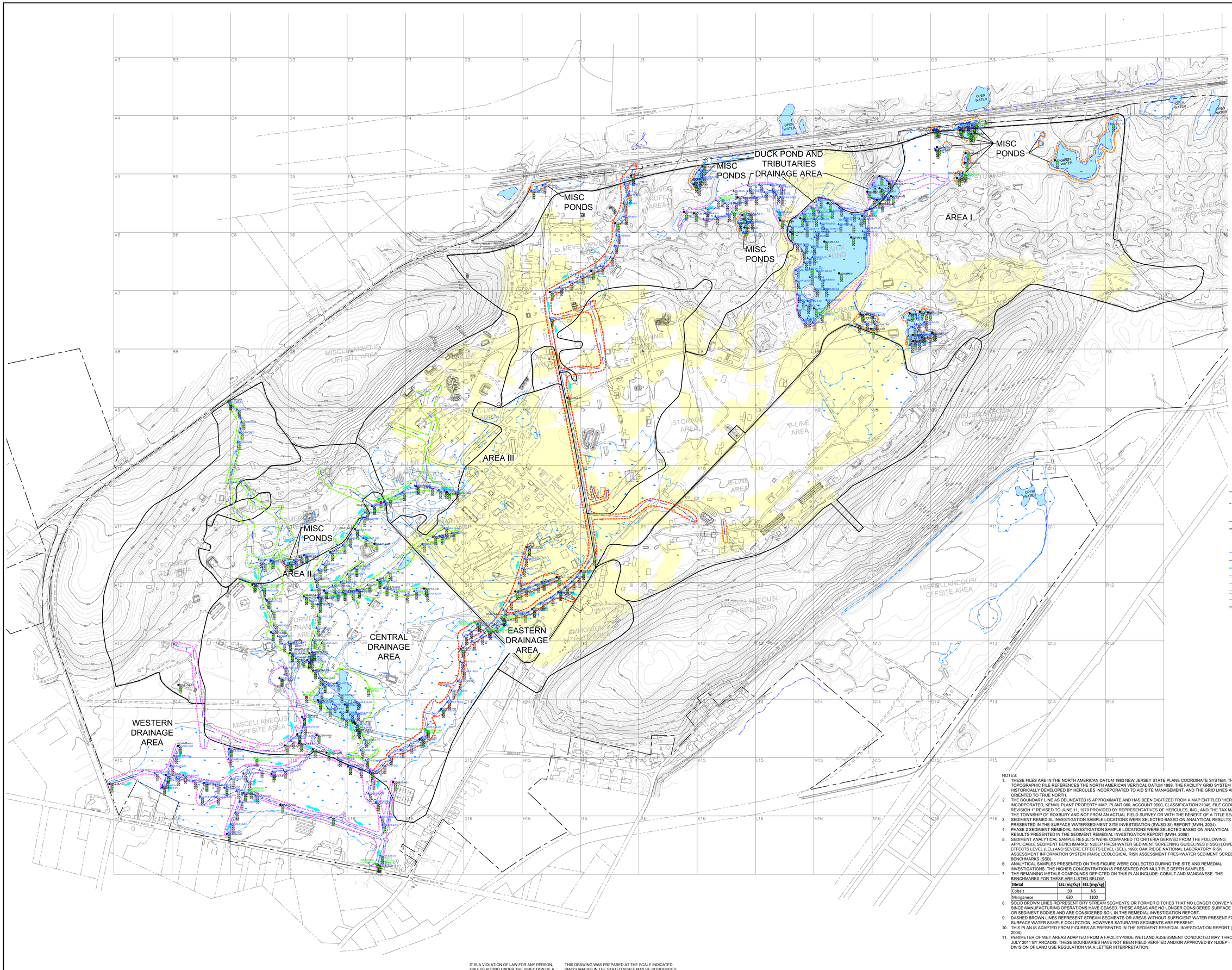
AREA I
AREA II
AREA III
MISC PONDS
MISC PONDS
MISC PONDS
MISC PONDS
DUCK POND AND TRIBUTARIES DRAINAGE AREA
EASTERN DRAINAGE AREA
CENTRAL DRAINAGE AREA
WESTERN DRAINAGE AREA
OPEN WATER
OPEN WATER
OPEN WATER

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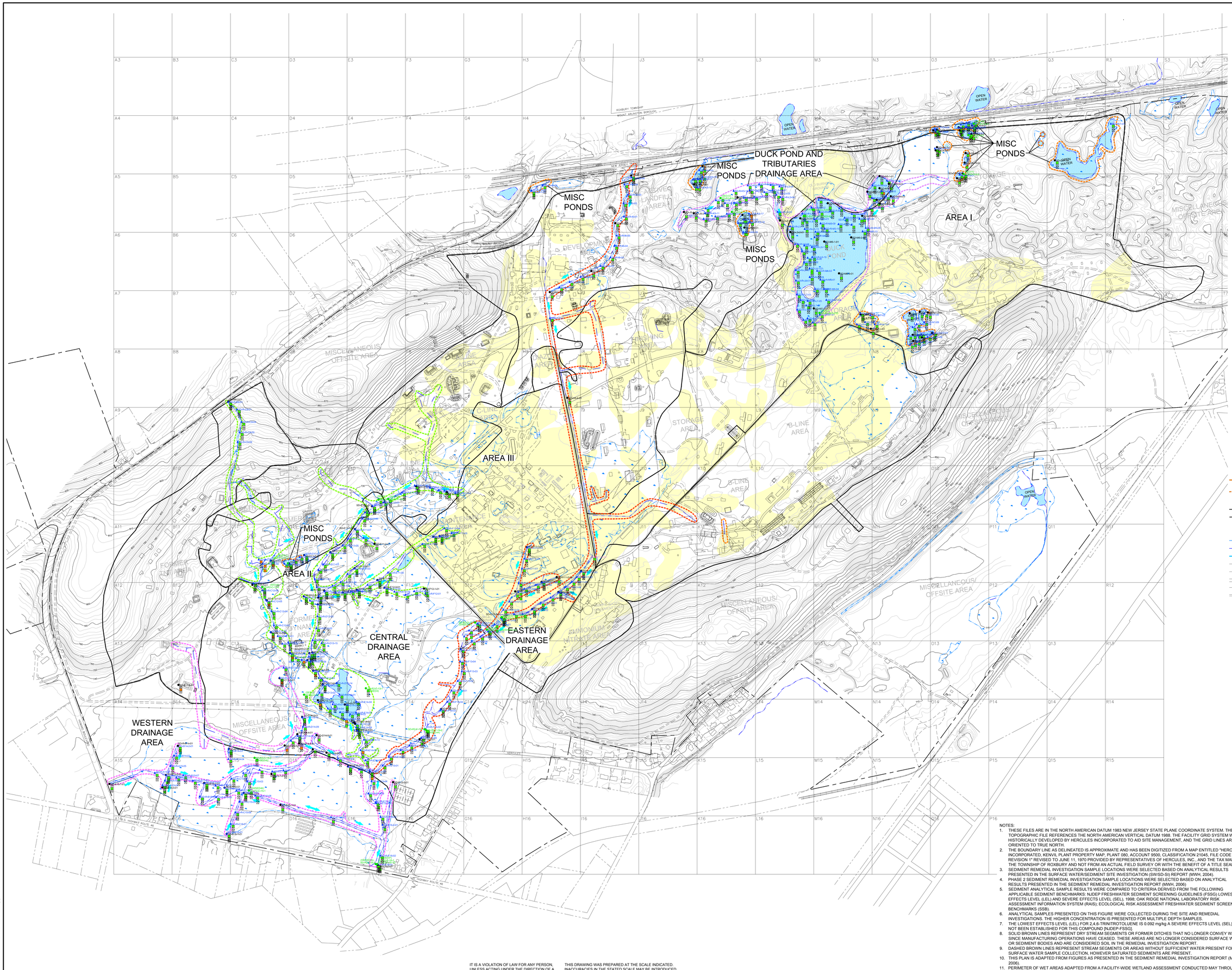

LEGEND

- SI SEDIMENT SAMPLE LOCATION
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- ELECTRIC SUBSTATION
- BUILDING

NOTES:

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2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE SWE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
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7. THE LOWEST EFFECTS LEVEL (LEL) FOR 2,4,6-TRINITROTOLUENE IS 0.092 mg/kg.A SEVERE EFFECTS LEVEL (SEL)HAS NOT BEEN ESTABLISHED FOR THIS COMPOUND [NJDEP-FSSG].
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TRUE NORTH

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250 0 250 500

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IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

2,4,6-TRINITROTOLUENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-28

J:\ASHLAND.2420\50725.KENVIL-REMEDIAL.DOCS\DWG\SHEETS\2-D-28 2,4,6-TRINITROTOLUENE AREAL EXTENT MAP.DWG

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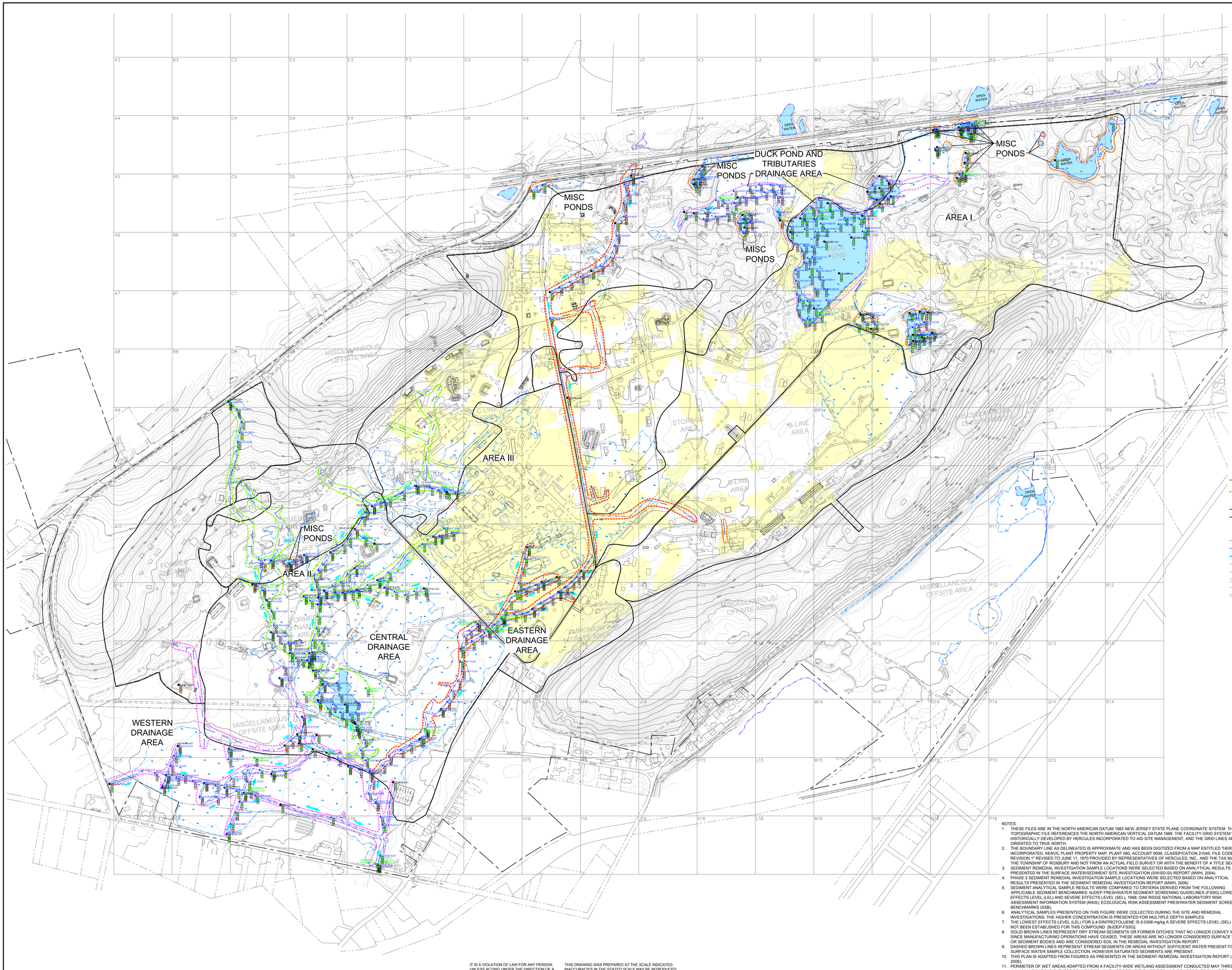

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR 2,4-DINITROTOLUENE IS 0.0398 mg/kg A SEVERE EFFECTS LEVEL (SEL) HAS NOT BEEN ESTABLISHED FOR THIS COMPOUND (NJDEP-FSSG).
8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
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1"=250' (250 0 250 500)

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

2,4-DINITROTOLUENE AREAL EXTENT MAP

FILE NO. 2420.50725 -

DATE MAY 2016

D-29

J:\ASHLAND\2420\50725\KENVIL-REMEDIAL\DOCS\DWG\SHEETS\X-29 2,4-DINITROTOLUENE AREAL EXTENT MAP.DWG

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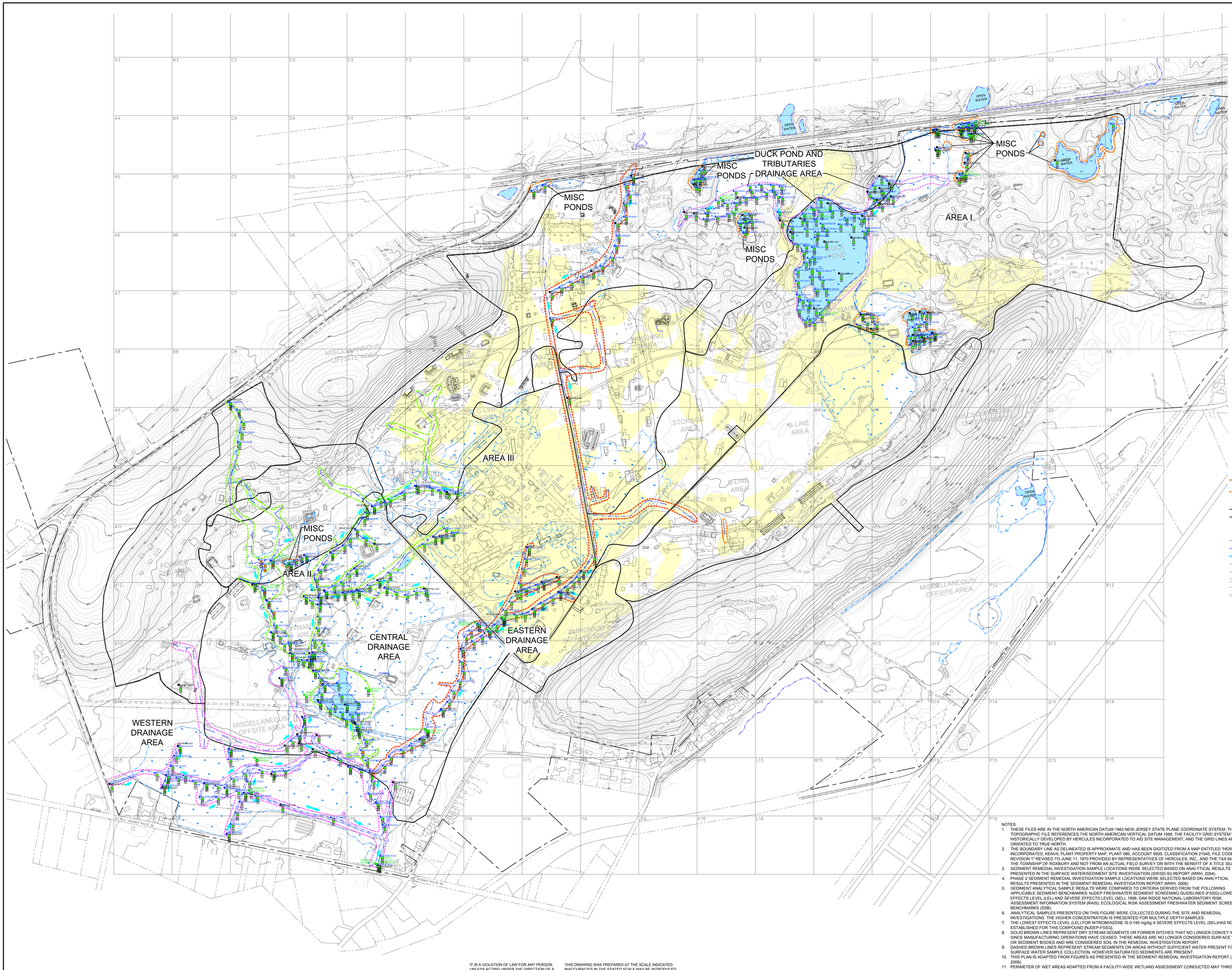

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7. THE LOWEST EFFECTS LEVEL (LEL) FOR NITROBENZENE IS 0.145 mg/kg A SEVERE EFFECTS LEVEL (SEL)HAS NOT BEEN ESTABLISHED FOR THIS COMPOUND (NJDEP-FSSG).
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EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT

NITROBENZENE AREAL EXTENT MAP

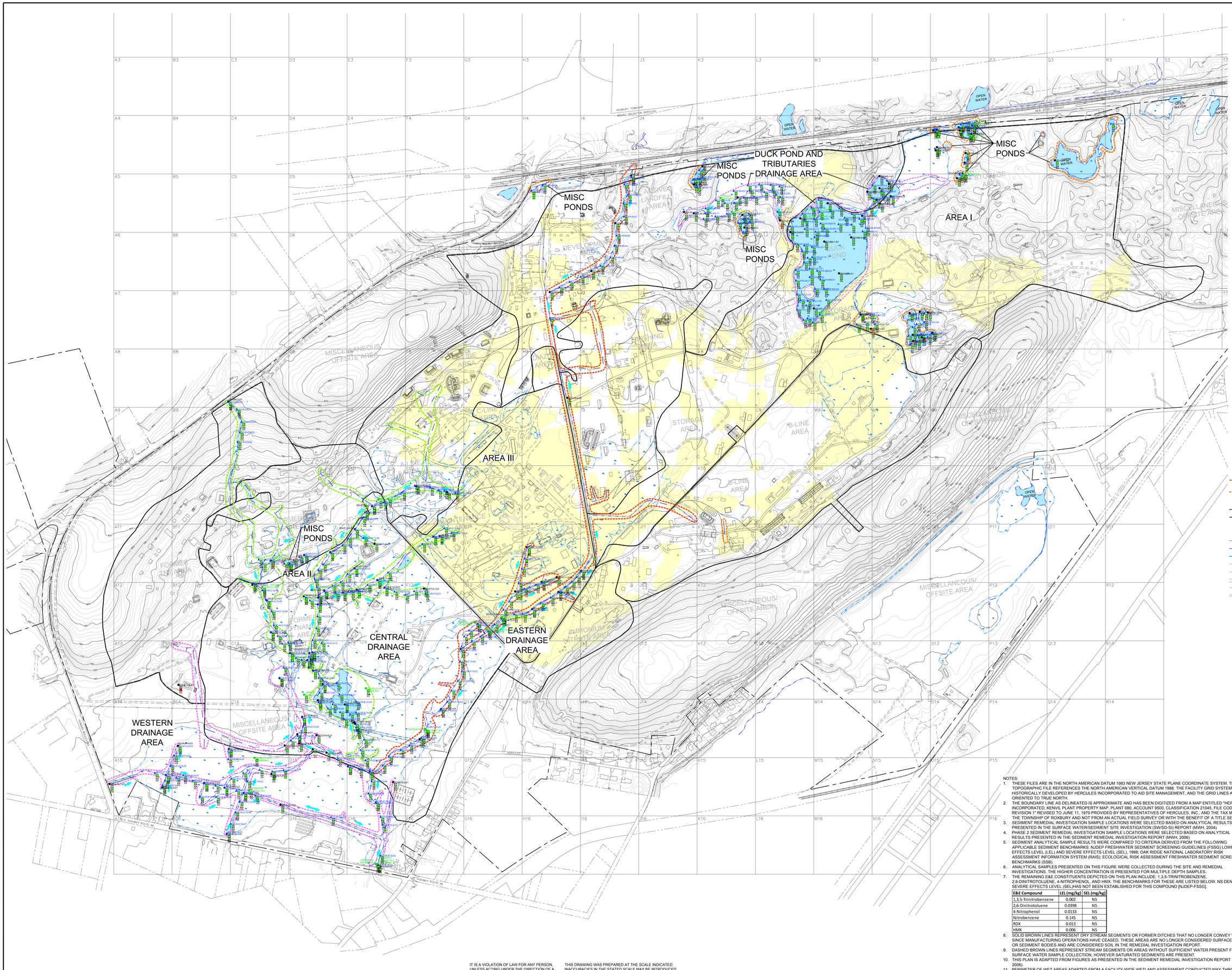
FILE NO. 2420.50725 -

DATE MAY 2016

D-30

J:\KENVIL\MXD\2420507252\KENVIL-REMEDIAL\DOCS\DWGS\SHEETS\SI-30 NITROBENZENE AREAL EXTENT MAP.DWG

SAVED: 5/2/16 10:46 AM



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5. SEDIMENT ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SEDIMENT BENCHMARKS: NJDEP FRESHWATER SEDIMENT SCREENING GUIDELINES (FSSG) LOWEST EFFECTS LEVEL (LEL) AND SEVERE EFFECTS LEVEL (SEL), 1998; OAK RIDGE NATIONAL LABORATORY RISK ASSESSMENT INFORMATION SYSTEM (RAIS); ECOLOGICAL RISK ASSESSMENT FRESHWATER SEDIMENT SCREENING BENCHMARKS (SSB).
6. ANALYTICAL SAMPLES PRESENTED ON THIS FIGURE WERE COLLECTED DURING THE SITE AND REMEDIAL INVESTIGATIONS. THE HIGHER CONCENTRATION IS PRESENTED FOR MULTIPLE DEPTH SAMPLES.
7. THE REMAINING E&E CONSTITUENTS DEPICTED ON THIS PLAN INCLUDE: 1,3,5-TRINITROBENZENE, 2,6-DINITROTOLUENE, 4-NITROPHENOL, AND HMX. THE BENCHMARKS FOR THESE ARE LISTED BELOW. NS DENOTES SEVERE EFFECTS LEVEL (SEL) HAS NOT BEEN ESTABLISHED FOR THIS COMPOUND [NJDEP-FSSG].

E&E Compound	LEL (mg/kg)	SEL (mg/kg)
1,3,5-Trinitrobenzene	0.002	NS
2,6-Dinitrotoluene	0.0398	NS
4-Nitrophenol	0.0133	NS
Nitrobenzene	0.145	NS
RDX	0.013	NS
HMX	0.006	NS

8. SOLID BROWN LINES REPRESENT DRY STREAM SEGMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
9. DASHED BROWN LINES REPRESENT STREAM SEGMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
10. THIS PLAN IS ADAPTED FROM FIGURES AS PRESENTED IN THE SEDIMENT REMEDIAL INVESTIGATION REPORT (MWH, 2006).
11. PERIMETER OF WET AREAS ADAPTED FROM A FACILITY-WIDE WETLAND ASSESSMENT CONDUCTED MAY THROUGH JULY 2011 BY ARCADIS. THESE BOUNDARIES HAVE NOT BEEN FIELD VERIFIED AND/OR APPROVED BY NJDEP - DIVISION OF LAND USE REGULATION VIA A LETTER INTERPRETATION.

TRUE NORTH

1"=250' 250 0 250 500

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ENGINEER, TO ALTER THIS DOCUMENT.

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED BY ANY MEANS. USE THE GRAPHIC SCALE BAR TO DETERMINE THE ACTUAL SCALE.

IN CHARGE OF MSK
DESIGNED BY JAL
CHECKED BY MAH
DRAWN BY RJD

NO.	DATE	REVISION	INT.

O'BRIEN & GERE
O'BRIEN & GERE ENGINEERS, INC
EAST NORRITON, PENNSYLVANIA

HERCULES INCORPORATED - KENVIL WORKS FACILITY
PHASE II REMEDIAL INVESTIGATION REPORT

KENVIL, NEW JERSEY

SEDIMENT
REMAINING E&E CONSTITUENTS EXCEEDANCES WITH AREAL EXTENT MAP

FILE NO. 2420.50725 -
DATE MAY 2016

D-31

J:\ASHLAND.2420\50725.KEN\R-REMEDIAL\DOCS\DWGS\SHEETS\2x3-1 REMAINING E&E CONSTITUENTS EXCEEDANCES WITH AREAL EXTENT MAP.DWG

APPENDICES

APPENDIX A

NJDEP Comment Letter

State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Case Management
401 East State Street
P.O. Box 028
Trenton, NJ 08625-0028

BOB MARTIN
Commissioner

CERTIFIED MAIL
No. 7007 2680 0000 2719 7659

Bruce Hough, Remedial Project Manager
Ashland Incorporated
Ashland Hercules Research Center
500 Hercules Road, Bldg 8139/7
Wilmington, DE 19808-1599

November 18, 2010

NOTICE OF DEFICIENCY

Re: Draft Remedial Investigation Report
Hercules Incorporated, Kenvil Works (aka Alliant)
100 Howard Boulevard
Roxbury Township, Morris County, New Jersey
SRP PI# 000741

Dear Mr. Hough:

The New Jersey Department of Environmental Protection (Department or NJDEP) acknowledges receipt of the Remedial Investigation Report (RIR) on May 31, 2007, and the Additional Ground Water Remedial Investigation Sampling Report (AGWRI) on June 24, 2009. The RIR and the AGWRI were prepared by MWH Americas, Inc., and Environmental Alliance, Inc., respectively, on behalf of Hercules, Inc. (Hercules). The documents were submitted pursuant to the Industrial Site Recovery Act regulations at N.J.A.C. 7:26B (ISRA Rule), the Remediation Agreement executed on March 10, 1995 and the Technical Requirements for Site Remediation at N.J.A.C. 7:26E (Tech Regs).

As agreed to by the Department, Hercules prepared and submitted the RIR as five (5) separate volumes: four media-specific volumes (Volumes B through E) to address soil, ground water, sediment and surface water, and one summary volume (Volume A) to evaluate the data across all media. The discussions in Volume A focused on the three areas (Areas I, II and III) previously devised by Hercules and are loosely based on redevelopment potential, historic operations, contamination identified in the Site Investigation (SI), and ease of future remedial actions. This format was agreeable because of the large amount of data (4,400 samples) collected as part of the SI and RI, and the large area of the site (1200 acres). However, upon review of the RIR, it became apparent to DEP that Areas I, II and III, and even the "production areas" within each

Area, are too large to allow for valuable data interpretation and discussion. Plus, the Tech Regs require RI of contaminated sites to address specific Areas of Concern (AOCs).

This information was conveyed to Hercules in various conversations, emails and meetings. In response, Hercules sent a letter to DEP dated December 1, 2009 discussing the approach Hercules intends to follow to complete the RI at this site. Proposed activities include completion of a Case Inventory Document (CID) to describe the large number of previously identified AOCs followed by a second phase of sampling to evaluate individual and groupings of similar and/or related AOCs.

This revised approach is acceptable to DEP, however, the RIR, as written, does not conform to the Remediation Agreement and the Tech Rule and reflects the following deficiency:

Deficiency

Failure to conduct a remedial investigation in accordance with 7:26E-4, including delineation of contamination to the applicable remediation standards in all media pursuant to the Department's guidance, determination of off-site migration of contamination, and evaluation of impacts to human and ecological receptors. [N.J.A.C. 7:26E-4.1(b)]

In addition to the above deficiency, DEP has numerous comments on the RIR that must be addressed in the final RIR. The comments have been enclosed for your convenience.

Corrective Actions

To correct the deficiency and address the enclosed comments, please take the following actions or make the required submittals within the timeframes indicated:

Submit within 180 calendar days of receipt of this letter a CID that includes all AOCs, including those that were previously identified in the SI phase in accordance with N.J.A.C. 7:26E-4.2(b)11.

Submit within 18 months of receipt of this letter, a Phase II Remedial Investigation Report documenting completion of the RI to the applicable remediation standards in all media pursuant to the Department's guidance, determination of off-site migration of contamination, and evaluation of impacts to human and ecological receptors in accordance with N.J.A.C. 7:26E-4.8.

Note that if deficiencies included herein are not addressed to the Department's satisfaction within the specified time period the Department will consider them to be violations and may assess penalties pursuant to N.J.A.C. 7:26C-10.

If you require copies of Department Guidance Documents or applications, many of these are available on the internet http://www.state.nj.us/dep/srp. If you have any questions or

would like to schedule a meeting regarding this matter contact me by telephone at (609)633-1494, or by email at Donna.Gaffigan@dep.state.nj.us, prior to the date indicated.

Sincerely,

Donna L. Gaffigan, Case Manager
Bureau of Case Management

Enclosures

C: Edward Meeks, Ashland
Roxbury Township Clerk
Roxbury Township Health Department
Barry Tornick, USEPA
Marc Romanell, NJDEP/BGWPA
James Kealy, NJDEP/BEERA
Allan S. Motter, NJDEP/BEERA
Nancy Hamill, NJDEP/BEERA/ETRA

General Comments
Volumes A, B, C, D & E

As agreed to by NJDEP, the RIR was submitted as five separate volumes with the last (Volume A) submitted to pull together the information from the other four volumes into a summary narrative. The five volumes of the RIR are:

- Volume A- Summary
- Volume B- Soil
- Volume C - Groundwater
- Volume D - Sediment
- Volume E – Surface Water

The Executive Summary presented in Volume A states that the RIR is the culmination of two major field investigations (SI and RI) spanning more than eight years. The main findings of the RIR are summarized in as follows:

- There is a explosives and energetics influenced groundwater plume in the southwest corner of the property in Area II that will require additional delineation. There is no evidence of any other potential off-site contamination caused by site related constituents.
- The nature and extent of contamination is generally well delineated. The need for any further delineation is minor. Any additional delineation should be effectively completed as remedy pre-design or remedial action activities with the benefit of the known future use of the facility. The data presented in the RIR provides a sound basis to perform a remedial alternatives analysis and begin the remedy selection process.
- Based on site-wide characterization and conceptual site model, there is no unacceptable on-site human health risk. There is no unacceptable off-site human health risk with the possible exception of the energetics and explosives influenced groundwater plume in the southwest portion of the property. No containment or stabilization activities are necessary to prevent on-site exposure or off-site migration of site related constituents for soil, sediment, or surface water.

NJDEP does not agree with these findings in their entirely:

- NJDEP can agree that the groundwater plume in the southwest corner of the site requires additional delineation. However, NJDEP cannot yet agree that there is no off-site contamination caused by site related constitutents. There are questions about the surface water and sediment data as discussed in the following comments. In addition, the western ridge is referred to as a no-flow boundary, that eliminates the potential for ground water in the valley fill aquifer to migrate westerly. While this may be true, it has not been confirmed. In addition, this area of the site is known to have faults, folds and fractures; all of which have the potential to act as ground water migration pathways. As such, it is recommended

that Hercules refrain from the use of definitive statements unless/until they can be verified.

- NJDEP can agree that the nature and extent of contamintion is *generally defined.* Because of the vast size of the site and the large number of areas of concern (ACOs) previously identified in the SI, the RI soil sampling program was approved to proceed in using a grid pattern to cover the entire site, with numerous additional samples collected in specific locations to supplement the SI data. However, based upon review of the data, additional delineation is required, particularly to more specifically define if and how contamination source areas in the soil are impacting other medial and to evaluate impacts to receptors. An evaluation of the site by evaluating each area of concern (AOC) appears to be the best way forward. Completion of the CID form will assist in identifying all of the AOCs along with the impacted media, contaminants of concern, receptors and current status.

  NJDEP agrees that the data presented in the RIR allows Hercules to begin the remedy selection process.

- NJDEP believes the finding that there is no unacceptable on-site human health risk is misleading as it indicates that the contamination on the site is minimal. This overlooks the fact that there are some very contaminated areas on the site that have clearly impacted the site surface and subsurface soils, sediment, ground water and surface water. Hercules' finding that there is no unacceptable human health risk is only accurate if the future land use remains unchanged. Current land use is vacant with site access is restricted to appropprietely trained personnel. Public access is currently restricted; the site is fenced, monitored by security personnel and ringed with no trespassing signs. The conclusion must be revised to clearly state that the concentrations of contaminants found in the site soil and groundwater would present a high exposure risk if reuse were to occur without extensive remediation efforts.

  In addition, the statement that "no containment or stabilization activities are necessary to prevent on-site exposure or off-site migration of site related constituents for soil, sediment, or surface water" is premature because the on-site exposure risk to ecological receptors has not been accessed pursuant to N.J.A.C. 7:26E-4.1(a)5 and 7:26E-4.7.

NJDEP's general comments on the RI in its entirely are included in the first section below. Specific comments on individual Volumes A through E appear in subsequent sections.

1. New Jersey promulgated its Remediation Standards, N.J.A.C. 7:26D on June 2, 2008. The CID and all subsequant documents shall make proper reference to these standards. Additional site-specific cleanup *criteria* will be provided to Hercules under separate cover.

2. NJDEP finds that information concerning soil to groundwater and surface water interaction, and impacts to surface water system media and receptors, is not adequately discussed in the RIR narrative to draw informed conclusions. Information provided in the SI and RIR must be pulled together in the RIR narrative in Volume A. This discussion must include the boring log and test pit observations, as well as previous geophysical work and removal actions that have occurred at specific AOCs. The RIR must identify and discuss the areas where the data indicates that contaminants are being transported into streams and ponds. The discussion must include an assessment of whether or not these interactions are continuing or have been abated. Completion of the CID should assist with this effort.

3. After careful review of this RIR, it is difficult to determine if the areas of concern on the site have been adequately delineated according to 7:26E-4.1(b). The RIR does not discuss any of the AOCs and many are not clearly shown on site figures. The RIR must discuss the nature and extent of contamination detected in each significant AOC. The AOCs should be clearly depicted on relevant site figures which include delineation sample locations and text boxes with concentrations of COCs detected above NJDEP criteria. The RIR narrative must summarize the sample data for each AOC area including contaminant type, concentration range and depth and discuss whether or not the contamination has been delineated and is having an impact on groundwater or nearby sediment or surface water receptors.

4. In some areas, product material was observed in soil borings or test pits. It must be clarified if the product material was sampled. While soil sample and groundwater sample data has been provided in the RIR Tables, there was no narrative or other attempt to correlate boring or test pit logs observations with the analytical data in the text of the RIR. This is a serious omission as it affects the determination of compliance with source delineation requirements at N.J.A.C. 7:26E-3.4(a) and N.J.A.C. 7:26E-4.4(h)3(i).

5. Cross sections shall include the boring observations in addition to sample results pursuant to N.J.A.C. 7:26E-4.8(c)5.

6. There was extensive use and storage of acetone at many of the AOCs including within the A Line, B Line, PETN Area, Development Area, and Finishing Area. Justification must be provided for not analyzing groundwater samples for acetone in these areas pursuant to N.J.A.C. 7:26E-3.4.

7. The site history mentions that sulfuric acid production occurred at the site. Pursuant to N.J.A.C. 7:26E:3.1(b)1iv, the RIR must indicate what process of sulfuric acid production was used at the site. If the lead chamber process was used at the facility, the RIR must include discussion of whether there was processing or storage of arsenopyrite ores at the site.

8. There is too much information provided on some single figures, making them difficult to understand. AOC-specific figures for significant AOCs shall be provided. These figures must include all AOC sample locations and exceedances and can be imbedded within the RIR narrative.

9. The boring and test pit logs and data tables were not labeled with respect to their specific AOC location pursuant to N.J.A.C. 7:26E-4.8(d)1. Going back and forth between the RI sampling summary tables and the figures and boring logs in order to link them to an AOC, and then sort the logs by AOC, was a very cumbersome process.

Specific Comments
Volume A - Summary

1. **Executive Summary** - See General Comment Nos. 1 and 2, above.

2. **Section 6.0 RI Conclusions** - See General Comment Nos. 1 and 2, above.

3. **Section 6.1.2 Historic Fill** – Please refer to comment for Volume B, Section 5.5, below.

4. **Section 6.1.4 Analytical Results** - It is stated on page A-6-4 that "limited influence to groundwater from constituents in soil were noted across the site with the exception of two areas: These are:

   The southern area of Grid L10 and northern area of Grid L11 where soil samples contain trinitrotoluene (TNT) and dinitrotoluene (DNT), and groundwater samples (specifically MW-27) have TNT breakdown products at concentrations exceeding New Jersey Ground Water Quality Standards (GWQS).

   "The TNT Area, the Pentaerythritol Tetranitrate (PETN) Area, and the western Dynamite and Nitroglycerine (NG) Areas all have soils with constituents detected at concentrations exceeding the IGWSCC and show a connection to groundwater quality in the area. Groundwater samples taken in these areas indicate TNT, TNT breakdown constituents and NG exceeding the GWQS."

   The RIR must discuss whether or not there are any discrete AOC source areas within Area II that are acting as a continuing source of groundwater contamination. Is the source of the groundwater impact from the high concentrations of TNT and other explosives scattered throughout the soil in this general area? Or are there any discrete source areas such as red water lagoons, gravel pits, former settling ponds, or debris from a former production area such as a former grinding house or filter house?

5. **Section 6.3 Sediment RI Conclusions** - As stated in the comment for Volume B, Section 5.5, NJDEP cannot agree at this time that semi-volatile organic compounds (SVOCs) and metals detected at concentrations exceeding the sediment Lowest Effects Level (LEL) or Severe Effects Level (SEL) are associated with emplacement of historic fill. This has not yet been proven and this statement may need to be changed based on further characterization and delineation.

6. **Section 6.4.4 Surface Water RI Conclusions** - NJDEP cannot agree with the statement on page A-6-17 that the source of the polynuclear aromatic hydrocarbons (PAHs), and total metals in the surface water samples is solely historic fill at the site. Hercules has not provided sufficient data to prove that the source of the PAHs and total metals is not due to site related activities in the vicinity of the Duck Pond and Tributaries. This statement is not currently supported by the data provided and may need to be changed based on further characterization and delineation.

7. **Section 6.4.4 Surface Water RI Conclusions** - NJDEP cannot agree with the statement on page A-6-17, that dissolved metals detected at concentrations exceeding the SWQS in the Duck Pond and Tributaries is attributed to naturally occurring tannic acid produced from decaying hardwood vegetation. Hercules has not provided sufficient data to prove that the source of the dissolved metals is not related to site-specific disposal and burning ground operations especially in the vicinity of the K5 Pond and other Duck Pond Tributaries. This statement is not currently supported by the site data and may need to be changed based on further characterization and delineation. Site related impacts are particularly likely in the Central and Eastern Drainage Areas, Miscellaneous Ponds in the NG Area, and Duck Pond and Tributaries and Ponds.

8. **Section 6.4.4 Surface Water RI Conclusions** - Surface Water sampling is required in the miscellaneous ponds in the NG Area where elevated metals (lead) have been detected in sediments. Apparently no surface water samples have been collected from this area.

9. **Section 6.4.4 Surface RI Water Conclusions** - Additional surface water sampling is required in the northern and western portions of the Duck Pond and its northwestern stream tributary, due to data gaps.

10. **Section 6.5 Summary of RI Conclusions** - Second Bullet: Hercules states that the need for any additional delineation of the nature and extent of contamination at the site is minor, and does not affect the site wide characterization of environmental media. The conclusion further states that any further delineation would most effectively be completed as a remedy pre-design. NJDEP believes that this statement is premature pending resolution of the comments.

11. **Section 7.2.1, Primary Analytical Groups of Concern** - The conclusion on page A-7-5 that SVOC PAHs are attributed to historic fill is not currently supported by the RI data. This statement may need to be changed as indicated in comments above.

12. **Section 7.2.1, Primary Analytical Groups of Concern** - The conclusion on page A-7-5 that dissolved metals are attributed to naturally occurring tannic acid is not currently supported by the site data. This statement may need to be changed as indicated above.

13. **Section 8.0 Future Actions** - NJDEP recommends that in addition to the proposed sampling activities identified in Sections 8.1 -8.3, Hercules consider the following additional sampling activities:

    - Central Drainage Area: Additional delineation of surface water and groundwater impacts is required since there is no surface water data from the miscellaneous ponds in Grids C11 and D11 which exhibited very high concentrations of lead in sediment.

- Duck Pond and Tributaries Drainage Area: Additional delineation of surface water is required in the northern and western portions of the Duck Pond to evaluate the impacts from contaminant source areas in these portions of the site.
- Duck Pond and Tributaries Drainage Area: Additional characterization of sediment is required in the eastern portions of the Duck Pond to evaluate the impacts contaminant source areas in these portions of the site.
- Western Drainage Area: Vertical delineation of explosive contamination in sediments.

14. **Section 8.0 Future Actions** - Additional delineation may be required in other AOCs on the site depending on Hercules response to many of the comments above. This includes:

    - Sampling from test pits and borings where significant contamination or product material was encountered. This may include areas within the M5 disposal area and burning ground, N6 and M8 disposal areas and other areas indicated in the above comments.
    - Delineation at surface impoundments or test pits in the B13 grid area/red water lagoon.
    - Surface soil sampling from the 0-6" interval from various AOCs throughout the site, particularly burning grounds and areas where surface discharges may have occurred.
    - Sample all burning grounds soils with analyses for dioxins. Confirm that all past burning ground AOCs have been sampled for PCBs, in addition to explosives, VOCs, SVOCs and metals.
    - Horizontal and vertical delineation of explosive contamination is required to delineate the extent of TNT and other explosives in Area II in all directions around TP-R-C13-666-1,2,4 and 5 and SB-R-D14. It must be clarified whether or not wetland sediments in this vicinity have been characterized.
    - In general, clarification is required that the TNT hotspots in Area II, identified on Figure B-38, have been adequately delineated. Clean zone samples must be identified.

15. **Section 8.1 Future Actions Ground Water Sampling** - The proposed additional sampling is acceptable. Hercules should ensure that both horizontal and vertical delineation activities are conducted. For the southwestern plume, this must include off-site delineation.

16. **Appendix J, Facility Background Information** - This section of the RIR should include summary information regarding each of the AOCs investigated in the SI and RI.

Specific Comments
Volume B - Soil

1. **Section 2.4 Soil Sampling** - Horizontal delineation: It is stated on page B-2-4 that horizontal delineation soil samples "were collected from a 6 inch interval from 0-2' below ground surface (bgs) biased to the interval with the highest potential environmental concern." Tables indicate that most surface soil samples were collected from 6-12" interval. This is deficient according to NJAC 7:26E-3.6(a)3 which states that initial characterization soil samples (except VOC samples) shall be collected at 0-6 inches below grade except as required pursuant to NJAC 7:26E-3.9. Clarification or justification must be provided for not collecting horizontal delineation and surface characterization soil samples from the top 0-6" interval.

2. **Section 2.4 Soil Sampling** - Vertical delineation: The first paragraph on page B-2-5 states that vertical delineation soil samples were collected from "the first 6-inch interval of native soils encountered. If evidence of potential environmental concern was observed, the first 6-inch interval below the potential environmental concern was sampled." It appears from the wording that soil samples were collected from 0-6" below the areas of greatest contamination. This sampling procedure is deficient according to N.J.A.C. 7:26E-3.4(a)1 which requires that all soil samples must be biased to the suspected location of greatest contamination. Clarification on this issue is required.

3. **Section 2.4.1.3 Soil Sampling at SI AOCs Reserved for the RI** - Forty-four (44) AOCs were reserved for the RI during the SI based on existing analytical data or if field observations (made during the SI) indicated that various constituents would likely exceed the applicable direct contact residential soil cleanup criteria. All 44 AOCs are presented on Figure B-46 and Tables B2-1, B3-1, B4-1, and B5-1. As stated in the above comments, it appears that no (0-6") were collected from any of the AOCs. This must be clarified and justification must be provided for not collecting surface soil samples from the top 6" as required by N.J.A.C. 7:26E-3.6(a)3. The RIR narrative must provide some historical information regarding the nature of these AOCs. In addition, Figure B-46 should be revised or some other figure added to include the sample locations and relevant data that are used to determine the nature and extent of contamination at each of these AOCs.

4. **Section 2.4.1.3 Soil Sampling at SI AOCs Reserved for the RI** - It is stated on page B-2-9 that 80 exploratory visual observation soil borings were advanced around the perimeter of the four largest AOCs (B13-2, M5-3, M8-1 and N6-1) to better define the AOC boundaries. The reader is referred to the boring logs, which are provided in Appendix B. However, the exploratory borings are not identified and the text of the RIR does not discuss the results of these exploratory borings. Therefore, it is not possible for a reviewer to know which boring logs to review to determine if the exploratory boring program has accomplished the stated objective of visually delineating the boundaries of the AOCs. The text of the RIR must identify the exploratory borings and discuss the observations and conclusions of this part of the

investigation. The RIR makes no attempt to interpret the observations from these borings or to define the AOC boundaries. This must be provided. Also, a figure must be provided to present the results of this effort.

5. **Section 2.4.1.3 Soil Sampling at SI AOCs Reserved for the RI** - Analytical Sampling: It is stated on page B-2-9 that "If field screening and professional judgment indicated that significant quantities of E&E were present, samples were not collected directly from the interval with the highest potential of environmental concern. In these cases, samples were collected directly below the interval due to health and safety concerns. This practice was used in a limited number of AOCs predominantly located in the TNT Area and western Dynamite Area." The text must identify the specific samples where this practice was used and the significance of not collecting a sample from the most contaminated zone in these potential source areas.

6. **Section 2.4.2 Site-Wide Grid-Based Soil Sampling Strategy** - It is stated on page B-2-10 that the majority of the RI samples were collected using a grid-based approach. Soil sample locations were placed at a frequency of every 250-ft. This sampling approach is acceptable for diffuse areas of contamination. However, additional samples will be required to complete delineation of specific AOCs, where field observations indicate that a more AOC sampling specific approach is required.

7. **Section 2.4.4 Recently Identified AOCs Not Previously Investigated** - It is stated on page B-2-12 that eight additional AOCs (debris areas) were identified in the RI field activities. The RIR states that these areas may have been historically low-lying portions of the Facility that were filled with debris (historic fill, scrap steel/iron, and general refuse). A total of nine exploratory visual observation test pits were reportedly excavated to a maximum depth of 9-ft. bgs in the center of each AOC. No analytical samples were collected. The RIR indicates that these test pits were visually inspected and classified, but no samples were collected. The intention of the test pits was to provide a preliminary assessment of the nature of the debris present within each area. The RIR states that the soil boring logs are provided in Appendix B and photos are presented in Appendix C and that the recently identified debris areas will be addressed in the future actions work plan included in Volume A. It is not possible to review this information because the boring logs could not be located and the RIR does not discuss the test pit results. The RIR must provide the exploratory test pit logs, discuss the observations and make some interpretation of the observations within the text of the RIR.

8. **Section 2.4.5 Sample Locations Proposed But Not Sampled** - It is stated on page B-2.13 that all proposed soil samples were collected during the RI with the exception of 20 samples that could not be collected due to refusal or lack of recovery. These missing soil samples are identified in Section 2.4.5, however specific information is lacking. Additional information must be provided regarding these missing samples including the AOC that each were to be located in and the significance of the missing data on AOC specific delineation. The proposed location of these missing samples must be shown on a site figure.

9. **Section 5.1.1 Soil Quality Standards** - It is stated on page B-5-4 that the only SI exceedances for constituents with criteria updated since the SI are summarized in this RIR. The complete SI results are attached as a supplement disk to the RIR. The RIR should present and discuss all SI and RI data exceedances in the RIR narrative. This is needed to obtain a complete picture of site wide contamination and to ensure appropriate delineation has been accomplished. Completion of the CID should assist with this.

10. **Section 5.2 Frequent Exceedance Constituents (FECs)** - The E&E compound 2-amino-4,6-dinitrotoluene (2-A-DNT) was found in excess of the Impact to Ground Water Soil Cleanup Criteria (IGWSCC) in 130 soil samples. This is more than 5.8 % of the samples. Also, 1,3-dinitrobnzene (DNB13) was found in 80 samples or over 3.5% of the soil samples. Unless adequate explanation is provided, both of these must be included as FECs. Also, based on the data provided, it is required that copper and zinc must be added as FEC constituents of concern in the old burning ground (M5-3) and other debris disposal areas.

11. **Section 5.3 Organization of Results** - It is stated on page B-5-12 that Figures B-46 presents SI AOCs reserved for the RI and Figure B-47 presents recently identified AOCs not previously investigated. As stated previously, these figures must show the sample locations and exploratory trenches that are being used to delineate the contamination or provide preliminary characterization at these AOCs.

12. **Section 5.5 Historic Fill Discussion** - The RIR states, on page B5-19, that over 900 test pits were advanced within Areas I and III. Test pit logs and photos are presented in Appendix E. Figure B-2 presents the locations of the historic fill test pits. The RIR states that Hercules imported potentially large quantities of fly ash, bottom ash, and slag (historic fill) from local available sources that is believed to have possessed metal and PAH constituents prior to entering the Facility. It is not certain, but believed that the former iron foundries located in Dover, New Jersey, approximately four (4) miles east of the Facility, was the primary source of historic fill. It is most likely that fly-ash, bottom ash, and slag from on-site Facility boilers were added to the imported historic fill, but the RIR indicates that this likely represented a very small fraction of the total historic fill emplaced.

    The RIR claims that the distribution of the historic fill is reported to be widespread and heterogeneously distributed across the Facility. The RIR indicates that the fill under the property and site can be characterized as "Historic Fill Material," defined in N.J.A.C. 7:26E-1.8 as "non-indigenous material, which was contaminated prior to emplacement, and is in no way connected with the operations at the location of emplacement..."

    NJDEP does not doubt that fill material from off site sources may have been used to fill low-lying areas of the site prior to development. However, many of the boring logs and test pit logs clearly indicate that the ash and slag material is mixed in the

disposal areas and site-related discharges that are clearly due to Hercules operations. Appendix J of Volume A discusses fires, explosions, land disposal and burning ground practices as well as liquid waste disposal on the ground and in unlined ditches and surface impoundments as well as numerous accidents and spills. The site history indicates that there were numerous burning grounds located in various locations around the site, including one on the northern portion of the Duck Pond. Fill material throughout the site includes debris from historic explosions and fires over the many years of operation. Drums, lead flooring and pipes and various types of debris from former buildings, including a lead smelter and various types of process equipment, as well as other waste materials were buried on site or deposited in ponds, low lying areas and other locations throughout the facility. In many of these areas, it is not possible to discern the contamination related to site-related burning and disposal activities from any potential off-site fill material.

NJDEP does not agree with the RIR, which seems to indicate that, nearly every observation of ash and slag material within an excavation should be considered historic fill. Numerous sections of the RIR also state that nearly all PAH and metals exceedances in soils, sediments, surface water and groundwater are be caused by historic fill. Based on the boring logs, analytical data and field observations as well as site history, NJDEP believes that in areas with site-related impacts it is not possible to determine whether PAH and metals contaminated soils are related to placement of historic fill or site related activities. Therefore, the conclusions regarding historic fill discussed in numerous sections of the RIR and depicted on Figure B-2 must be changed.

13. **Section 5.6.2 Area I Analytical Results** - It is stated on page B-5-28 that the majority of SVOC constituents detected at concentrations exceeding the Residential Direct Contact Soil Cleanup Criteria (RDCSCC) and Non-Residential Direct Contact Soil Cleanup Criteria (NRDCSCC) are PAHs commonly associated with historic fill. It is stated on page B-5-30, that arsenic and lead are commonly associated with historic fill. The RIR must discuss the other potential site related sources of SVOCs at these locations within Area I. As stated above, these include burning ground operations, site related debris and bullet disposal and landfilling, demolition and filling building fires and explosions, and discharges from former manufacturing operations.

14. **Section 5.6.2 Area I Analytical Results** - It is stated throughout this section that "soil samples with SVOCs, metals, E&E and PCBs detected at concentrations exceeding either the RDCSCC or NRDCSCC are located in close proximity to surface water features (Figure B-6) may locally affect the quality of surface water and sediments, although it is not the intent of this volume to fully characterize these interactions." The document is deficient pursuant to N.J.A.C.7:26E-3.13(b)4. NJDEP finds that information concerning soil to groundwater and surface water interaction, and impacts to surface water system media and receptors, is not adequately discussed in the RIR narrative to draw informed conclusions. The RIR must identify and discuss the areas where the data indicates that contaminants are

being transported into streams and ponds. The discussion must include an assessment of whether or not these interactions are continuing or have been abated.

15. **Section 5.6.4 Recently Identified AOCs Not Previously Investigated** - It is stated on page B-5-34 that seven additional AOCs (debris areas) were identified the RI field activities. These are presented on Figure B-46. The RIR states that these areas may have been historically low-lying portions of the Facility that were filled with debris (historic fill, scrap steel/iron, and general refuse). Exploratory visual observation test pits were reportedly excavated in the center of each AOC. No analytical samples were collected. The RIR indicates that these test pits were visually inspected and classified, but no samples were collected. The intention of the test pits was to provide a preliminary assessment of the nature of the debris present within each area. The RIR states that the soil boring logs are provided in Appendix B and photos are presented in Appendix C and that the recently identified debris areas will be addressed in the future actions work plan included in Volume A. It is not possible to review this information because the boring logs could not be located and the RIR does not discuss the test pit results. The RIR must provide the exploratory test pit logs, discuss the observations and make some interpretation of the observations within the text of the RIR.

16. **Section 5.7.2 Area II Analytical Results** - It is stated on page B-5-41 that the majority of SVOC constituents detected at concentrations exceeding the RDCSCC/NRDCSCC are PAHs commonly associated with historic fill. It is stated on page B-5-42, that the arsenic and lead exceedances are commonly associated with historic fill. The RIR must discuss the other potential site related sources of SVOCs and metals at these locations within Area II. As stated above, these include burning ground operations, site related debris disposal including lead flooring and other sources and landfilling, demolition and filling, building fires and explosions, and discharges from former manufacturing operations.

17. **Section 5.7.2 Area II Analytical Results** – Please refer to the comment for Section 5.6.2, above, regarding soil, groundwater, surface water, and sediment interactions.

18. **Section 5.8.2 Area III Analytical Results** - It is stated on page B-5-53 that the majority of SVOC constituents detected at concentrations exceeding the RDCSCC/NRDCSCC are PAHs commonly associated with historic fill. It is stated on page B-5-54, that the arsenic and lead exceedances are commonly associated with historic fill. The RIR must discuss the other potential site related sources of SVOCs and metals at these locations within Area II. As stated above, these include burning ground operations, site related debris disposal including lead flooring and other sources and landfilling, demolition and filling, building fires and explosions, and discharges from former manufacturing operations.

19. **Section 5.8.2 Area III Analytical Results** – Please refer to the comment for Section 5.6.2, above, regarding soil, groundwater, surface water, and sediment interactions.

20. **Section 5.8.4 Recently Identified AOCs Not Previously Investigated** - It is stated on page B-5-57 that one additional AOC (debris areas) was identified the RI field activities. This is presented on Figure B-47. See comment for Section 5.6.4, above.

21. **Section 6.1.1 QA / QC** - It is stated on page B-6.1 that all proposed soil samples were collected during the RI with the exception of 20 samples that could not be collected due to refusal or lack of recovery. These missing soil samples are identified in Section 2.4.5, however specific information is lacking. Additional information must be provided regarding these missing samples including the AOC that each were to be located in and the significance of the missing data on AOC specific delineation. The proposed location of these missing samples must be shown on a site figure.

22. **Appendix E** - A review of the historic fill boring logs indicates that several test pits contained tar, sheen and/or other substances (described as "black sticky," "black shiny wax-like," "Vaseline-like," "black wax-like," "yellow wax-like," etc.) that may be considered product pursuant to N.J.A.C. 7:26E-2.1(a)11. Since the test pit locations are only provided in latitude/longitude, and not in site map grid coordinates, it is not possible to easily identify them on a site map. As such, it is unknown if soil or ground water contamination may be associated with the materials in these test pits. Furthermore, it does not appear that any proposal exists to address the materials encountered as required by N.J.A.C. 7:26E-6.1(d).

Specific Comments
Volume C – Groundwater

1. Well permits, well records and well certification Forms A and B were not submitted. Hercules shall provide all well information per N.J.A.C. 7:26E-4.8(c)6.

2. The RIR does not include the results of a well search pursuant to N.J.A.C. 7:26E-4.8(b)2ii. The well search shall be conducted per N.J.A.C. 7:26E-3.7(e)3i. Note that all available local and county records shall be reviewed in addition to NJDEP records.

3. It is noted that MW5P and MW22 are damaged. They shall be properly abandoned per N.J.A.C. 7:26E-4.4(g)11. Copies of the well abandonment reports shall be provided.

4. A review of the sampling logs and well records (accessed from the Bureau of Water Allocation) indicates discrepancies in well depths for numerous wells. For almost all of these wells, the depths reported on the sampling logs are shallower than those reported on the well records. This may be the result of siltation or the provision of incorrect well permit numbers. The permit numbers for OB1 and OB3, for example, appear to be reversed based on a well record review. Hercules shall ensure that the well permit numbers are correct and that the construction specifications reported on the well records are accurate. Any change in well information (e.g., depth, permit number, screened interval, etc.) must be documented in writing as required and provided in the RIR.

5. Location information included in future reports shall be provided in New Jersey State Plane Coordinates (NAD83) pursuant to N.J.A.C. 7:26E-3.13(c)3v(1).

6. A positive displacement pump is recommended for all future temporary well point sampling activities since the use of a peristaltic pump can result in a loss of VOCs. Such pumps are available in small diameters (i.e., <1 inch).

7. Future VOC and SVOC analyses shall include library searches for tentatively identified compounds (TICs).

8. **Section 2.3 Development of Monitoring Wells** - It is stated that the air-lift method of development was used at some wells. It is understood that this was discussed with the prior case manager. For future reference, however, this method shall not be used for development. Please refer to Sections 6.9.9.1 and 6.9.9.2 of the Field Sampling Procedures Manual (FSPM).

9. **Section 2.4 Monitoring Well Sampling** - It is stated that one ground water sample was collected at the depth of greatest potential contamination or mid-screen. A 10' screen was assumed for existing wells where documentation was unavailable. The collection of one sample does not comply with the Low-Flow Purging and Sampling (LFPS) requirements described in Section 6.9.2.2 of the FSPM. Samples are required

for each 5' of saturated screen. Many of the new wells have screens up to 20' long. In addition, contrary to Hercules' assumption, a well record review indicates that most of the referenced existing wells have 15-20' screens. In the future, Hercules shall use acceptable sampling methods pursuant to N.J.A.C. 7:26E-4.4(d), such as those included in the FSPM.

10. **Section 2.5 Synoptic Water Level Measurements** - It is stated that several points were not used since the data were considered anomalous. It is also stated that information that could be used to correct the data (construction details, valid survey) could not be located for OB3, MW9P and MW10. Records for these wells should be obtained during the required well search. All wells with uncertain survey information shall be re-surveyed.

11. **Section 2.8 Hydraulic Oil Pipeline Investigation** - Trench samples were subjected to BTEX, MTBE, PAH, PHC and fingerprint analyses. Per Table 2-1 of N.J.A.C. 7:26E et seq., VO+10 and BN+15 analyses are required for ground water samples where hydraulic oils are of concern. Hercules shall analyze the ground water samples for the required parameters per N.J.A.C. 7:26E- 2.1(d).

12. **Appendix D** - Many of the well logs contain incomplete information (e.g., no depth-to-water or flow rate data). In addition, well logs are not provided for MW7PD, 12D, 18D, 27D, 38, 38D, 39, 40, 41 and 41D. Hercules shall provide complete, accurate information per N.J.A.C. 7:26E-1.6(e), including the missing logs. Future logs shall contain complete information or notations as to why the information was not provided.

13. **Appendix E** - Hercules shall correct and provide the following: 1. The sampling logs for MW6P and MW7P have the same permit number. 2. Logs are provided for MW48 and MW48D, but data are not included on Tables C-11 or C-13. 3. Many of the SI sampling logs were incomplete and MW25 was purged dry. Hercules shall provide complete, accurate information per N.J.A.C. 7:26E-1.6(e), and shall ensure that all future logs are complete and accurate and that wells are properly purged and sampled.

14. **Appendix F** - A review of the data for several wells indicates a concave upward (or double straight line) effect. The first (early) segment is generally indicative of well storage (i.e., drainage from sand or gravel pack). Automated analysis procedures emphasize early data because most software programs perform the straight-line fit using the actual response data and not a logarithm of the data. It appears that this was the case with some of the data since the straight line in these situations was fit to the early portion of the data. Butler (1998) reports that, for the Bouwer-Rice method, a straight line should be fit to normalized response data in the range of 0.2 to 0.3. It must be clarified if the AQTESOLV program, used by Hercules, accounted for this and made the necessary corrections. If not, the data should be re-analyzed.

15. **Table C-14** - A review of Table C-14 indicates that the sample from GW-R-TR-01 was not analyzed for PHCs. This omission shall be clarified.

16. **Final Field Quality Assurance Project Plan (QAPP)** - It is stated in Section 9.3.1.1 of the Final Field QAPP (included as Appendix G in Volume A) that if a well is pumped at 0.5 gpm or less and purges dry, the well will be sampled upon recovery. Pursuant to Section 6.9.2.4 of the FSPM, purging a well to dryness is unacceptable. If excessive drawdown is noted, purging should cease before the water level reaches the pump. Sampling should then commence upon recovery. This procedure shall be observed in future sampling events.

17. **Revised Site-Wide RI Work Plan** - It is stated in Section 3.3.3 of the Revised Site-Wide RI Work Plan (included as Appendix I in Volume A) that the depth-to-water and depth-to-bottom will be measured prior to purging and sampling. This is acceptable only for standard purging and sampling procedures. For low-flow purging and sampling, the well depth should be measured after sampling or at least 48 hours prior to sampling per Section 6.9.2.2.5.9 of the FSPM.

Reference: Butler, J.J., Jr., 1998. *The Design, Performance, and Analysis of Slug Tests*, Lewis Publishers, New York, 252p.

Specific Comments
Volume D - Sediments

1. **Section 5.4 Western Drainage Area Analytical Results** - It is stated on page D-5-15 that SVOCs and metals detected at concentrations exceeding either the LEL or SEL at the Facility are comprised primarily of PAH constituents. These constituents are associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility, recover unusable land, and establish numerous narrow gauge rail beds. As stated above in regard to the historic fill discussion, based on the site history, NJDEP does not agree that all elevated metals and PAHs in sediments are associated with historic fill. This may be a valid conclusion in a few unimpacted areas away from the site operations. However for the majority of the site, the data clearly shows elevated PAHs and metals that are related to operational areas of the site. This can be readily seen in the miscellaneous ponds and streams in the Central Drainage Area and Duck Pond and northwest Tributaries Drainage Area. The RIR must indicate that the data shows elevated PAHs and metals (especially lead and arsenic) in sediment samples, which are likely due to burning ground activities and site related operations and disposal activities. Sediment samples in the miscellaneous ponds in the Central Drainage Area had lead at concentrations as high as 148,000 mg/kg. Stream sediments in this area contained lead up to 6250 mg/kg. This same comment applies to Section 5.5, the Central Drainage Area, Section 5.6 Eastern Drainage Area, Section 5.7, Duck Pond and Tributaries, Section 5.8, Miscellaneous Ponds Analytical Results and Section 6, Conclusions on page D-6-2.

2. **Section 2.4 Laboratory Analysis** - The RI analyte list is based on contaminants identified during the SI where concentrations exceeded sediment screening criteria. If contaminants were detected in the SI, but screening criteria were not available, they were not analyzed in the RI. This is not acceptable pursuant to NJDEP and USEPA Region II policy. Detected contaminants lacking screening criteria must not be culled; these contaminants must be identified and carried throughout the RI and risks assessment processes (e.g. 5 of 10 explosive compounds and benzo(b)fluoranthene were detected in the SI and inappropriately culled from the RI). It must be clarified why benzo(b)fluoranthene does not appear in Table D-2.

3. **Section 2.4 Laboratory Analysis** - It must be clarified whether non-target compounds and TICs were quantified and are available as a component of the SI and RI data sets.

4. **Section 4.0 Drainage Area Description** - Miscellaneous Ponds: Hercules states that "the miscellaneous ponds are seasonally intermittent and can be dry during the summer months." Hercules should clarify which, if any, ponds function as vernal pools.

5. **Section 5.1.1 Sediment Quality Standards** - Since sediment benchmarks have not been promulgated, the term "standards" should be replaced with "screening criteria" in future reports.

6. **Section 5.1.1 Sediment Quality Standards** – First bullet: The term "NJDEP Freshwater Sediment Screening Guidelines LEL/SEL" should be replaced with the primary reference in future documents: "Persaud, D., Jaagumagi, R., and Hayton, A. 1993. *Guidelines for the protection and management of aquatic sediment quality in Ontario*. Ontario Ministry of the Environment, Ottawa, Ontario. 23p.

7. **Section 5.2 Frequency Exceedance Constituents** - This approach must be used with caution during RI data evaluation and remedial action selection, so as not to minimize concern for "hot spots,' where elevated individual non-FEC contaminants may be indicative of a source area. An example is elevated TNT in the Western Drainage Area where only 5 of 74 samples exceeded the LEL, the maximum concentration detected was 3 orders of magnitude above the LEL.

8. **Section 5.3 Organization of Results** - Figures: Hercules states that "Figure D-6 presents the composite site-wide areal extent of all analytical group exceedences with inferred horizontal extent of sediment contamination." Hercules must clarify whether further delineation is proposed and should provide a figure containing only site-related contaminants exceeding ecological screening criteria (ESC).

9. **Section 5.3 Organization of Results** - Hercules further states that "Samples SD-R-F14-02 … and SD-R-H11-04 were in error not selected for metals analysis." Hercules is required to provide delineation for the metals contamination in all areas.

10. **Section 5.4 Western Drainage Area Analytical Results** - Hercules states that "the removal of the impervious surfaces greatly increased the natural infiltration of precipitation, and therefore significantly reduced or eliminated surface water runoff in some areas, causing segments of former areas to become dry and no longer contain sediment." Hercules must also determine whether contaminants in these areas exceed soil ESC.

11. **Section 5.4.3 Metals** - Hercules states that "this stream enters the Facility at SD-R-E16-3-01/SD-R-E16-01 and represents contamination entering the Facility. The contamination is believed to be derived from surface water drainage originating from U.S. Highway Route 46." There is a clean sample immediately down gradient of this sample; therefore contaminants below this area cannot be attributed to off-site contamination.

12. **Section 5.5 Central Drainage Area Analytical Results** - Hercules states that "some areas identified in the SI with concentrations exceeding the LEL or SEL could not be sampled to define horizontal or vertical extent in the RI because the stream segment, pond, wet area, or former ditch no longer conveys water." Hercules must determine whether contaminants in these areas exceed soil SSC.

13. **Section 5.6 Eastern Drainage Area Analytical Results** – Please refer to comment for Section 5.5, above.

14. **Section 5.6.2 Metals** - Hercules states that "vertical delineation is defined in the southeastern portion of this area [SD-R-G12-11] by the physical boundary." Hercules should delineate the contamination in the other horizontal directions as well as vertically.
15. Hercules also states that "vertical delineation is defined in the northern and eastern portions of this area [SD-R-G12-01] by the physical boundary." Hercules should delineate the contamination in the other horizontal directions as well as vertically.
16. Hercules further states that "the southern horizontal limit of this stream segment has not been defined by the LEL and SEL compliance because this stream enters an underground culvert." Hercules should state whether the LEL and SEL are met at the point where the stream emerges from the culvert.

17. **Section 5.7.2 Metals** - Hercules states that the "vertical sample [SD-R-M7-01, SD-R-L5-01 and SD-R-L5-02] was collected at the same locations utilized for horizontal delineation." Hercules is advised that vertical delineation must be accomplished at the area of exceedence, not at an area of compliance. Therefore, this vertical delineation is not acceptable.

18. **Section 5.7.3 E&E** – Please refer to comment for Section 5.7.2, above.

19. **Section 5.8 Miscellaneous Ponds Analytical Results** – Pleaser refer to comments for Section 5.4, above.

20. **Section 5.8 Miscellaneous Ponds Analytical Results** – Hercules states that SVOCs are "constituents are associated with the historically common practice of using fly ash as fill material (historic fill)." If fly ash from the site was also used at the site, it may not be possible to determine which contaminants are associated with historic placement of fly ash and which are associated with site-related fly ash. The issue of historic fill material was discussed at length in a previous comment.

21. **Section 6.0 Conclusions** - The conclusions shall be modified to identify any data gaps, such as:

    - Dioxin/furan analysis at areas of historic burning ground operations
    - Delineation beyond established "horizontal limits," e.g. where flooding of streams or other water bodies may have caused contaminant migration beyond the banks
    - Data needs for analytes that were culled upon SI completion based on lack of screening criteria, as discussed above.

Specific Comments
Volume E – Surface Water

1. **Section 4.2 Surface Water/Groundwater Interaction** - Groundwater plume discharge zones to surface water and groundwater sample results need to be shown on figures along with the surface water system surface water, sediment and any ecological sample locations and results. This is needed to determine if groundwater contaminant impacts at the Duck Pond have been characterized. This information has not been pulled together in the figures, tables and data discussions of any of the reports and a comprehensive understanding of this part of the remedial investigation remains outstanding. Compound specific parameters (VOC, SVOC, explosives, and inorganic/general water quality parameters, including ammonia, total phosphorus, orth-phosphate, TDS and chloride) need to be evaluated in groundwater plume discharge zones at the Duck Pond. Additional investigation may be needed if parameters were not included, samples were in the wrong locations, etc. Temperature probes maybe an effective means to locate groundwater discharge points and some of the parameters of concern (e.g. explosives, VOCs) may be amenable to streambed sampling using passive diffusion bags.

2. **Section 5.2 Frequent Exceedence Constituents (FEC)** - Hercules states that "surface water FECs are defined for the purpose of this report as constituents with detected concentrations exceeding the SWQS at a frequency greater than 10% on a site-wide basis." Hercules is advised that contaminants must be considered on an area-specific basis as well. A concentration of exceedences in a certain area may be indicative of a point source release and must be addressed.

3. **Section 5.2 Frequent Exceedence Constituents (FEC)** - Hercules further states that dissolved metals and tetrachloroethene (PCE) were not selected as FECs based on the limited number of samples analyzed for these constituents. Hercules is advised that dissolved metals and PCE will need to be addressed on an area specific basis.

4. **Section 5.3 Organization of Results** - Hercules states that "horizontal limits of surface water exceedences are inferred to be half the distance between Surface Water Quality Standards (SWQS) exceedence points and compliance points." Hercules needs to delineate the exceedences to confirm the horizontal limits of surface water exceedences.

5. **Section 5.3 Organization of Results** - Hercules further states that "these are conservative assumptions that were used to graphically depict the data and the actual extent of constituents present may be less than shown." Hercules is advised that the actual extent of constituents present may be *more than shown* as well.

6. **Section 5.3 Organization of Results** - Figures: Hercules states that "groundwater sample locations with constituents detected at concentrations exceeding the Groundwater Quality Standards (GWQS) and associated with surface water exceedences are color-coded red and are bold." Hercules should compare

groundwater contaminants associated with surface water to the SWQS as well as the GWQS.

7. **Section 5.4 Western Drainage Area Analytical Results** - Hercules does not provide the depth at which the surface water samples were collected. If the contaminant source is groundwater or sediment, then Hercules should collect the surface water samples at a depth of 0"-6" above the sediment.

8. **Section 5.4.5 Western Drainage Area Summary** - Hercules states that "total metals concentrations detected above the SWQS are attributed to the presence of very fine sediments (silt sized and smaller) that have become suspended within the surface water column." If the metals are associated with the sediments at the site, then total metals must be considered during evaluation of environmental impacts.

Specific Comments
Additional Groundwater Remedial Investigation Sampling Report

1. **Section 2.1 Synoptic...Groundwater Elevations** - It is stated that the wells were field screened with a PID. Such readings are not, however, included in the sampling logs or any table. PID readings are required per N.J.A.C. 7:26E-3.13(c)7i(3).

2. **Section 2.2 Monitoring Well Sampling** - It is stated that MW11 was not sampled because it was sediment-laden. It shall be redeveloped (via pumping and surge block) per Sections 6.9.9.1 and A.6.1.5.1 of the Field Sampling Procedures Manual.

3. **Tables 1a and 2** - It is noted that the screened intervals for 35 wells are from historic logs that may or may not be accurate. Down-hole video was used at 6 other wells to determine construction. Hercules must confirm construction details for all wells.

4. **Appendix I** – The water level readings for MW4, MW7P and MW11 do not match those on Table 2 and shall be clarified.

5. **Tables** Contaminants were detected in the deepest samples at several monitor well and well point locations. Delineation (vertical) is therefore incomplete.

6. **Section 7.0 Recommendations** - DEP agrees that further off-site delineation is warranted in the southwest direction. Hercules must continue to address horizontal and vertical delineation per N.J.A.C. 7:26E-4.4(h)3i.

7. **Section 7.0 Recommendations** - The proposal for re-surveying several of the wells is acceptable. A revised Form B shall be provided for each well.

8. **Section 7.0 Recommendations** - MW5P and MW22 are still noted to be damaged. Proper abandonment was required, above. Hercules states that they will be abandoned. This is acceptable. Procedures shall comply with N.J.A.C. 7:9D-3. Copies of the well abandonment reports shall be provided.

Appendix B

Phase II RI Memorandum

TO:	Edward Meeks	**cc:**	Michael Kozar
FROM:	John Lucey		Mark Foley
RE:	Phase II Remedial Investigations		
FILE:	2420/46425		
DATE:	October 4, 2013		

INTRODUCTION

This memorandum has been prepared to document planned Phase II Remedial Investigations (RI) at Hercules Incorporated's (Hercules) Former Kenvil Works facility in Kenvil, New Jersey (the Site). These investigations will be conducted to delineate the extent of constituents detected a concentrations exceeding the applicable remediation standards in the various media present at the Site. This memorandum has been prepared in accordance with the scope of work detailed in Hercules's March 26, 2010 Request for bid and subsequent meetings between Hercules and O'Brien & Gere. O'Brien & Gere assumes the scope of work detailed below, the planned investigation methods, and subsequent reports will be reviewed by Hercules' Licensed Site Remediation Professional (LSRP).

The additional RI planned for Site will include the following:

- Groundwater Sampling
- Monitoring Well Installation
- Surface Water Sampling
- Sediment Sampling
- Soil Screening for Dioxins at Former Burning Grounds
- Down-Gradient (off-Site) Delineation of the TNT Area Groundwater Plume Using Waterloo Sampling Techniques
- Soil Sampling to Delineate the Extent of Constituents at Concentrations above applicable Standards

The remedial investigations will be conducted in accordance with the procedures detailed in the following New Jersey Department of Protection (NJDEP) approved documents prepared by MWH Americas, Inc. (MWH) on behalf of Hercules:

- 2005 Revised Field Quality Assurance Project Plan (FQAPP)
- 2006 Revised Site-Wide Remedial Investigation Work Plan (RIWP)

Additionally, laboratory analysis and sample handling will be conducted in accordance with 2013 *Quality Assurance Project Plan* (QAPP) prepared by O'Brien & Gere.

Sample locations were selected based on the data provided in the following reports and correspondence:

- Remedial Investigation Report Volume A - Summary (May 2007) by MWH
- Remedial Investigation Report Volume B - Soil - Text, Figures, Tables and Appendices (April 2007) by MWH
- Remedial Investigation Report Volume C - Groundwater - Text, Figures, Tables and Appendices (February 2007) by MWH
- Remedial Investigation Report Volume D - Sediment - Text, Figures, Tables and Appendices (December 2006) by MWH
- Remedial Investigation Report Volume E - Surfacewater - Text, Figures, Tables and Appendices (March 2007) by MWH
- Additional Groundwater Remedial Investigation Sampling Report (June 2009) by Environmental Alliance (EA)
- November 18, 2010 Letter from the NJDEP

PDF versions of these documents are provided on CD in Attachment 1

The following tables and figures detailing sampling locations and required laboratory analysis are provided:

Tables

Table 1 – Groundwater Screening Plan for E&E Compounds
Table 2 – Proposed Monitoring Well Construction Details
Table 3 - Surfacewater Sampling Plan
Table 4 - Sediment Sampling Plan
Table 5 – Groundwater Sampling Plan
Table 6 - Burning Grounds Soil Screening Plan
Table 7 – Off-Site TNT Groundwater Sampling Plan
Table 8 – Soil Sampling Plan

Figures

Figure 1 - Site Plan Showing Monitoring Well Locations
Figure 2 - Site Plan Showing Surface Water Sample Locations
Figure 3 - Site Plan Showing Sediment Sample Locations
Figure 4 - Site Plan Showing Burning Grounds Soil Boring Locations
Figure 5 - Off-Site TNT Groundwater Sampling Locations

Additional information provided in this memorandum include:

- Project organization/contact
- Procedures for equipment decontamination
- Sample handling and field custody procedures
- Field logbook procedures

PROJECT ORGANIZATION/CONTACT INFORMATION

O'Brien & Gere will be responsible for project management, sample collection, data reduction and reporting. LSRP services will be provided by WSP Environment & Energy. The LSRP will oversee and approve the development of work plan related documents and the Remedial Investigation Report. Responsibilities for key project team members are summarized below.

Regulatory Agency and Client Key Personnel

An independent LSRP, contracted by Hercules, has oversight authority on behalf of Hercules for corresponding with NJDEP.

The LSRP contact information is as follows:

Mark Foley -LSRP
Senior Project Director
WSP Environment & Energy
200 Cottontail Lane, Suite A112W
Somerset, NJ 08873
mark.foley@wspgroup.com
(732) 564-0888 ext. 16 - Office

Hercules Representative

Mr. Edward Meeks is the primary contacts at Hercules and is responsible for the execution of each phase of the project, including any correspondence and coordinating activities with NJDEP.

Hercules's contact information is as follows:

Edward Meeks - Project Manager
Remediation Project Manager
500 Hercules Road
Building 8139/130
Wilmington, DE 19808-1599
edmeeks@ashland.com
(302) 995-3433 – Office

O'Brien & Gere Key Personnel

O'Brien & Gere Project Officer

Mike Kozar, P.G. is the O'Brien & Gere Project Officer and has overall responsibility for meeting the stated project objectives. In addition, he is responsible for providing the O'Brien & Gere Project Manager with access to O'Brien & Gere corporate resources.

The O'Brien & Gere Project Officer contact information is as follows:

Michael Kozar – Vice President
O'Brien & Gere Project Officer
Bentwood Campus

301 East Germantown Pike/3rd floor
East Norriton, PA 19401
Michael.Kozar@obg.com
(484) 804-7212 – Office

O'Brien & Gere Project Manager

John Lucey, P.G. is the O'Brien & Gere Project Manager and is responsible for implementing the project and has the authority to commit the resources necessary to meet project objectives and requirements. His primary function is to meet the technical, financial, and scheduling objectives and will provide direction to O'Brien & Gere Project Team.

The O'Brien & Gere Project Manager contact information is as follows:

John Lucey –Project Associate
O'Brien & Gere Project Manager
200 Biddle Avenue
Suite 203
Newark, DE 19702
John.Lucey@obg.com
(302) 804-7212 – Office

O'Brien & Gere QA Officer

Karen Storne is the O'Brien & Gere QA Officer (QAO) for this project. She will manage and be responsible for QA/QC review of data generated during the sample collection activities. If QA problems or deficiencies requiring special action are identified, the O'Brien & Gere QAO, Project Manager, and Project Officer will determine the appropriate corrective action. The QAO will then be responsible for follow-up and oversight of corrective action implementation, to the satisfaction of Hercules and the NJDEP representative.

The O'Brien & QA Officer contact information is as follows:

Karen Storne–Technical Associate
O'Brien & Gere QA Officer
333 West Washington Street
Syracuse, NY 13202
Karen.Storne@obg.com
(315) 662-3458

O'Brien & Gere Field Investigation Manager

The O'Brien & Gere Field Investigation Manager will be responsible for directing and coordinating the day-to-day activities while field activities are underway.

O'Brien & Gere Field Sampling Personnel

O'Brien & Gere field sampling personnel will be responsible for collection, packaging, preservation, and shipping of environmental samples in accordance with the QAPP and applicable NJDEP requirements. Field sampling personnel will also collect field data and monitor Site health and safety.

Health and Safety Coordinator

Karin Robachefski, CHST, OHST is the O'Brien & Gere Health & Safety Coordinator and will be responsible for monitoring Site health and safety during the sampling events.

The O'Brien & Gere Health and Safety Coordinator contact information is as follows:

Karin Robachefski
Health & Safety Specialist
1090 King Georges Post Road
Suite 904
Edison, NJ 08837
Karin.Robachefski@obg.com
732-638-2943

Laboratory Management

Eurofins Lancaster Laboratories of Lancaster, Pennsylvania will analyze samples collected during the sampling activities. The laboratory contact information is as follows:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, Pennsylvania 17601
717-656-2300

Laboratory Project Manager

Wendy Kozma is the Laboratory Project Manager for Eurofins Lancaster Laboratories and will be responsible for:

- Coordinating sample bottle delivery and sample pickups from the Site
- Supervising the in-house chain-of-custodies.
- Scheduling sample analysis.
- Overseeing data review.
- Overseeing preparation of analytical reports.

It will be the responsibility of the Lancaster Laboratory Project Manager to approve final analytical reports prior to submission to O'Brien & Gere.

Monitoring Well Installation

Drilling Services

Drilling services will be provided by Summit Drilling Co., Inc. The drilling services will include monitoring well installation, monitoring well development, soil boring installation, management of investigation derived waste, monitoring well permitting, and preparation of monitoring well Forms A.

Summit Drilling Co., Inc contact information is as follows:

David Adams
Project Manager
81 Chimney Rock Road
Bridgewater, NJ 08807
908-722-4266

Surveying Services

Surveying services will be provided by Vargo Associates. The surveying services will include surveying locations and elevations of newly installed monitoring wells, soil borings, dioxin screening locations, and Waterloo sampling locations. The surveyor will prepare monitoring well Forms B and provide the elevation and location data in electronic format (MS Excel).

Vargo Associates contact information is as follows:

Mike Vargo
Vargo Associates Surveying Manager
2771 Delsea Drive, Franklinville, NJ 08322
Franklinville, NJ 08322
(856) 694-1716

REMEDIAL INVESTIGATION ACTIVITIES

Task 1 - Groundwater E&E Screening

Groundwater sampling results from 2006 and 2008 indicated the cyclotrimethylenetrinitramine (RDX) plume has migrated approximately 500 feet in two years. To accurately locate the leading edge of the RDX plume, 16 monitoring wells (MW-15 through MW-18, MW-23, MW-25, MW-33 through MW-37, MW-41, and MW-J2 through MW-J5) will be sampled for explosive and energetic (E&E) compounds (see Table 1) prior to installing monitoring wells MW-52 and MD-52D, which are intended to monitor the downgradient edge of the RDX plume. The groundwater E&E screening activities will be conducted prior to mobilizing to the Site to for monitoring well installation.

Purging and Sampling Methods

Prior to commencing well purging and groundwater sample collection, the depth to groundwater and depth to bottom of each monitoring well in the vicinity of the RDX plume will be obtained and recorded. These measurements will be used to calculate monitoring well purge volumes and groundwater flow in the vicinity of the RDX plume. The depth to water will be measured in each well by slowly lowering a decontaminated electronic water level meter to the nearest 0.01 foot and will be recorded in the field notebook.

The monitoring wells will be purged and sampled using conventional groundwater sampling techniques. The monitoring well purging activities will be accomplished by removing three casing volumes of water with a submersible electric pump with new dedicated polyethylene discharge tubing. Pumping rates will be kept as low as is reasonably (See well sampling data forms in MHW's *RI Report Volume C*) to avoid pumping the well dry. If the well is pumped at a rate of 0.5 gallons per minute (gpm) or less and purged dry, no additional purging will be considered necessary and the well will be allowed to recover until a sufficient quantity of water is present in the well to collect the groundwater sample. Purge water will be discharged to the ground surface down gradient of the well. The field parameters pH, specific conductance, temperature, dissolved oxygen, oxidation reduction potential, and turbidity will be measured at the start of the purge, after each well volume has been removed and at the time of sampling. After each well is purged a groundwater sample will be collected with a dedicated, disposable Teflon® bailer.

Field procedures, including groundwater depth measurements (for elevation calculations and purge volume calculations), monitoring well purging and field testing of groundwater quality (including pH, specific conductance, temperature, dissolved oxygen, oxidation reduction potential, and turbidity), decontamination of purging and sampling equipment and groundwater sampling, will be conducted in accordance with the procedures detailed in the FQAPP.

Laboratory Analysis

The groundwater and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for E&E compounds, as indicated in Table 1.

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the E&E screening program will include the following:

- One duplicate sample per each 10 field samples
- One field blank per each 10 field samples
- One MS/MSD sample per sample delivery group

Task 2 - Monitoring Well Installation

O'Brien & Gere will install ten (10) additional unconsolidated monitoring wells to complete the delineation of constituents of concern (COCs) in groundwater. The monitoring wells will be used to evaluate groundwater quality along the eastern edge of B-Line, delineate the southern extent of the TNT plume at the site boundary, delineate the depth of groundwater impact in the TNT Area groundwater plume, and evaluate groundwater quality downgradient of the RDX plume. Proposed monitoring well locations are indicated on Figure 1.

The rational for the installation of each well, anticipated well depths, and selected drilling methods are provided in Table 2. The locations for monitoring wells MW-52 and MD-52D, which are intended to monitor the downgradient edge of the RDX plume, may change based on the results of the E&E groundwater screening activities described above. Monitoring well installation, development, and surveying activities are summarized below.

Preparatory Activities

A minimum of three weeks prior to the installation of the monitoring wells, the selected driller will submit monitoring permits to the NJDEP. The driller will notify New Jersey One Call of the planned drilling activities, a minimum of 72 hours prior to drilling, to obtain a utility mark out. Monitoring wells locations will be cleared by Hercules, prior to mobilization of the drill rig.

Monitoring Well Installation Activities

The monitoring wells will be installed using either hollow stem auger (shallow wells) or mud rotary (deep wells) drilling techniques. Continuous split spoon samples will be collected during the installation of the pilot boring at each monitoring well location. The split spoon samples will be screened by an O'Brien & Gere geologist using a photo ionization detector (PID). The O'Brien & Gere geologist will also describe the soil cuttings using the *Burmeister Soil Classification* System. Soil cuttings generated during the well installation process will be spread across the ground surface, in proximity to the well. Standard Operating Procedures for monitoring well installation are provided in the February 2006 FQAPP prepared by MWH.

The monitoring wells will be constructed using Schedule 40 PVC casing and 0.010-inch, slotted PVC well screen, in accordance with the specifications provided in Table 2. Screen zone length will not exceed 10 feet. Morie No. 0 gravel pack will be placed from the bottom of the boring to five feet above the top of the screen zone. The remainder of the annular space will be tremie grouted using a cement-bentonite grout. The monitoring well installations will be completed with locking, steel casings. Detailed monitoring well installation procedures are provided in Section 3.3.1 of the RIWP.

After monitoring well activities have been completed, the driller will prepare Monitoring Well Forms A for the newly installed wells.

Monitoring Well Development

The monitoring wells will be developed using pumping and surging techniques until the discharge is clear. Water quality parameters (pH, conductivity, temperature, dissolved oxygen, and turbidity) along with the discharge rate will be measured periodically during the development process and recorded in the field

notebook. Well development water will be discharged to the ground surface down gradient from the well head. Detailed monitoring well development procedures are provided in Section 3.3.2 of the RIWP.

Monitoring Well Surveying

A New Jersey licensed surveyor will establish the horizontal location and elevation of the newly installed wells. Horizontal control will be established to the nearest 0.1 ft and referenced to the New Jersey State Plane Coordinate system (NAD 83). Vertical control will be established to the nearest 0.01 ft and referenced to the NGVD 1929. The surveyor will prepare Monitoring Well Forms B for the newly surveyed wells.

Task 3 - Surface Water Sampling

The surface water sample collection program will include the collection of 25 surface water samples to evaluate surface water outside defined channels, confirm surface water quality exiting site, and to evaluate dissolved constituents present in surface water adjacent to Duck Pond. The surface water sample locations are indicated on Figure 2. Analytical parameters and rationale for the collection of the surface water samples are provided on Table 3. Surface water sampling procedures are summarized below.

Surface water samples will be collected from the Eastern, Central and Western Drainage Areas and Tributaries to Duck Pond by walking into the selected areas (downstream to upstream), as water depths in these areas are typically less than two feet. The collection of surface water samples from Duck Pond may require the use of a boat as water depths can be in excess of four feet.

Surface Water Sampling Access

Access to surface water sampling locations can be achieved by utilizing a small raft or boat (to be provided by Hercules), a temporary bridge placed over narrow stream channels, and hip waders in shallow wetland areas.

Surface Water Sampling Methods

Two types of surface water sampling will be conducted (discrete depth sampling and surface sampling). Discrete depth sampling will be conducted at one location (See Location F on Table 3 and Figure 2). Surface sampling will be conducted in shallower water bodies such as the southern wetlands. The surface water sampling procedures are summarized below.

Discrete Depth Sampling

Discrete depth samples will be collected with a weighted bottle sampler. The weighted bottle sampler consists of a glass bottle equipped with a stopper that can be remotely removed from the surface, and weights to carry the bottle to the desired sampling depth. The discrete depth surface water sampling activities will be conducted in accordance with the procedures summarized below:

- The weighted bottle sampler will be lowered to the desired sampling depth
- The stopper will be removed from the bottle to allow it to fill with water
- The stopper is replaced in the bottle
- The sampler is retrieved and the collected sample is transferred to laboratory provided sample containers

Detailed discrete depth surface water sampling procedures are provided in Section 10.1 of the FQAPP.

Shallow Surface Water Sampling

Shallow surface water samples will be collected using a dip sampler. Deeper, discrete depth, surface water samples (greater than one foot) will be collected using a weighted bottle sampler. Shallow surface water samples will be collected by slowly submerging a laboratory-provided glass sample bottle horizontally into the water at the designated sample collection point. The bottle will be gradually turned upright, keeping the lip just under the surface so that only surface water is collected. Care will be taken to minimize surface disturbance throughout the sampling process. If the water is not deep enough to turn the bottle upright, the bottle will be held at an angle as steep as possible with the lip remaining just under the surface. In the event field personnel cannot easily access the sampling point or disturbance of the sediment is expected, the glass sample collection container will be attached to a pole of sufficient length to reach the sampling point.

Detailed surface water sampling procedures are provided in Section 10.2 of the FQAPP

Co-Located Samples

When surface water and sediment samples are taken at the same locations, the surface water sample will be collected first to minimize turbidity and reduce the potential of contaminating the surface water sample with disturbed sediment. Where samples are collected at multiple depth intervals, the samples will be collected in descending order from shallowest to deepest. In addition, down-stream samples will be collected prior to up-stream samples.

Laboratory Analysis

The surface water and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for the following parameter, as indicated in Table 3:

- Semi-volatile organic compounds (SVOCs)
- E&E Compounds
- Target Analyte List (TAL) Metals
- Hardness
- pH

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the surface water sampling program will include the following:

- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One MS/MSD sample per sample delivery group

Surface Water Sampling Point Documentation

Surface water sampling locations will be documented using GPS methodologies. After each surface water sample has been collected horizontal location will be established and referenced to the New Jersey State Plane Coordinate system (NAD 83). Horizontal coordinates will be recorded in the field book.

Task 4 - Sediment Sampling

The sediment sample collection program will include the collection of 25 sediment samples to confirm depth of constituents at concentrations above applicable standards, confirm sediment quality adjacent to site outfall, and evaluate sediment quality outside defined channels within wetland areas. The sediment samples with be collected from the streams, wetlands and ponds present at the Site. The sediment sample locations are indicated on Figure 4. Analytical parameters and rationale for the collection of the sediment samples are provided on Table 4.

Sediment samples will be collected from the Eastern, Central and Western Drainage Areas and Tributaries to Duck Pond by walking into the selected areas (downstream to upstream) as water depths in these areas are typically less than two feet. The collection of sediment samples from Duck Pond may require the use of a boat as water depths can be in excess of four feet. Sediment sampling procedures are summarized below.

Sediment Sampling Access

Access to sediment sampling locations can be achieved by utilizing a small raft or boat (to be provided by Hercules), a temporary bridge placed over narrow stream channels, and hip waders in shallow wetland areas.

Sediment Sample Collection Methods

Sediment samples will be collected using one of two sampling devices. The two sediment sampling techniques involve the soil coring device/bucket auger (cohesive/compact sediments) and the silver bullet sampler (liquefied sediments). The soil coring device/bucket auger and silver bullet sampling procedures are described below.

Soil Coring Device/Bucket Auger

Shallow sediment samples can be collected with a bucket auger, provided the sediment is sufficiently cohesive or competent to be held within the bucket auger without losing the fine grained components of the sediment. The soil bucket auger will be advanced by hand at each sampling location for classification and sample collection. The bucket auger will be advanced at 6-inch intervals and then removed from the borehole for evaluation. Sediment sample collection procedures using a bucket auger are summarized below:

- Sample intervals will be selected for analyses as specified in Table 4.
- The bucket auger will be advanced to the desired depth and removed for sediment classification and sample collection.
- The sample material collected will be placed into a decontaminated stainless steel bowl and homogenized.
- Sample material will be transferred from the stainless steel bowl to the laboratory-supplied sample containers

Detailed procedures for collecting sediment samples using a bucket auger are provided in Section 8.2.1 of the FQAPP.

Silver Bullet Sampler

The silver bullet sampler is an aluminum alloy cylinder into which a laboratory provided clean glass collection tube is inserted. The silver bullet sampler is generally utilized to collect samples of liquefied sediments. The top of the sampler is equipped with a T-handle which is used to push the sampler to the desired depth within the sediment. Once the desired sampling depth is reached, the sampler is rotated 360° counter clockwise filling the collection jar with sediment. After the silver bullet sampler is retrieved, sediment samples will be collected in the following manner:

- The contents of the silver bullet sampler will then be emptied into a decontaminated stainless steel bowl and homogenized.
- Sample material for non-VOC analysis will transferred from the stainless steel bowl to the laboratory-supplied sample containers

Detailed procedures for collecting sediment samples using a silver bullet sampler are provided in Section 8.2.2 of the FQAPP.

Co-Located Samples

When surface water and sediment samples are taken at the same locations, the surface water sample will be collected first to minimize turbidity and reduce the potential of contaminating the surface water sample with disturbed sediment. Where sediment samples are collected at multiple depth intervals, the sediment samples will be collected in descending order from shallowest to deepest. In addition, sediment samples from down-stream locations will be collected prior to those from up-stream locations.

Laboratory Analysis

The sediment and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for the following parameter, as indicated in Table 4:

- Polynuclear aromatic hydrocarbons (PAHs)
- E&E Compounds
- TAL Metals
- Moisture
- Percent solids
- Total organic carbons (TOC)

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the sediment sampling program will include the following:

- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One MS/MSD sample per sample delivery group

E&E Screening

Prior to shipping sediment samples to the laboratory, the samples will be screened for E&E compounds. If the screening indicates E&E compounds are not present, the sediments will shipped to the laboratory. Field screening for E&E compounds will be conducted in accordance with Section 5.1 of the FQAPP. E&E field screening kits will be provided by Hercules.

Sediment Sampling Point Documentation

Sediment sampling points will be documented using GPS methodologies. After each sediment sample has been collected horizontal location will be established and referenced to the New Jersey State Plane Coordinate system (NAD 83). Horizontal coordinates will be recorded in the field book.

Task 5 - Groundwater Sampling

At least two weeks after the new monitoring wells have been developed; O'Brien & Gere will collect groundwater samples from the 10 newly-installed monitoring wells (MW-43D, MW-49, MW-49D, MW-50, MW-50D, MW-51, MW-52, MW-52D, MW-53, and MW-53D) using low-flow sampling techniques. One groundwater sample will be collected from each wetted 5-foot section of screen length (i.e., two samples per well), consistent with NJDEP policy. The samples will be analyzed for VOCs, SVOCs, TAL metals, and E&E compounds. The groundwater samples will be collected to delineate the extent of COCs in groundwater

The *Additional GW-RI Report* (June 2009) prepared by Environmental Alliance identified 17 monitoring wells with lead present in groundwater samples at concentrations exceeding the NJDEP Class IIA GWQC. The previous groundwater sampling activities at the Site only identified two monitoring wells with lead present in the samples at concentrations exceeding the Class IIA GWQC. To further evaluate lead concentrations at these locations additional groundwater samples will be collected from the following 17 monitoring wells using low-flow sampling techniques: (MW-3A , MW-5, MW-7PD, MW-10, MW-12, MW-12D, MW-16, MW-21, MW-26D, MW-34, MW-37, MW-40, MW-44, MW-44D, MW-47, MW-J1D, and MW-J2).

The analytical parameters for the groundwater samples and pump depth settings are provided on Table 5. Monitoring well locations are indicated on Figure 1. Groundwater sampling procedures are summarized below.

Well Purging Methodology

Groundwater sampling will be conducted in accordance with the low-flow sampling procedures detailed in the February FQAPP prepared by MWH, as modified below. Each well will be purged minimum of two hours to reduce turbidity. A Grundfos® 2-inch diameter adjustable speed submersible pump and new, dedicated tubing Teflon®-lined tubing will be used to purge each monitoring well prior to sampling. The pump will be lowered into the well until the pump intake is at the required sampling interval (see above tables). The wells will be pumped at a rate to prevent drawdown from exceeding 0.3 feet (less than 0.5 L/min). Discharge from the pump will be diverted to a flow-through cell with a multi-meter probe capable of measuring pH, temperature, conductivity, dissolved oxygen (DO), oxidation-reduction potential and (ORP. Turbidity will be measured using a separate meter external to the flow-through cell. Stabilization parameters are as follow:

- ± 0.1 pH units
- ± 3 percent for temperature
- ± 3 percent for conductivity
- ± 10 percent for dissolved oxygen
- ± 10 millivolts (mV) for ORP

- ± 10 percent for turbidity, with the maximum turbidity less than 40 Nephelometric Turbidity Units
- <0.3 feet of water level drawdown

If these parameters have not stabilized after two hours, the LSRP will be notified. Based on information provided by O'Brien & Gere, the LSRP will decide which of the following three options should be considered:

- Continue purging in an attempt to achieve stabilization
- Discontinue purging, do not collect samples, and document attempts to reach stabilization in the log book
- Discontinue purging, collect samples, and document attempts to reach stabilization in the log book

For wells with two sampling intervals, the sample from the upper interval will be collected first. After that sample has been collected, the pump will be lowered to second sample interval and purging will commence. Pumps will be decontaminated between wells in accordance with the procedures detailed in the FQAPP.

Laboratory Analysis

Groundwater samples for newly installed monitoring well will be analyzed for the following parameters:

- VOCs
- SVOCs
- E&E compounds
- TAL Metals

Groundwater samples to be collected from existing monitoring wells will be analyzed for total and dissolved lead. The analytical parameters for the groundwater are summarized in Table 5. Following stabilization of water-quality parameters, as described above, the discharge from the well pump will be removed from the flow-through cell. At this point, the pumping rate and depth to water will be measured to ensure that a rate increase has not occurred due to the drop in hydraulic head associated with the closed flow-through cell. If necessary, the pumping rate will be reduced to match the purge rate.

Groundwater samples will be collected in appropriate sample containers as listed in QAPP. Sample bottles will be filled from each monitoring well in the following order:

- VOCs
- SVOCs
- E&E Compounds
- TAL Metals

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the groundwater sampling program will include the following:

- One trip blank sample per sample shipment that require analysis for VOCs
- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One MS/MSD sample per sample delivery group

Task 6 - Soil Sampling At Open Burning Grounds

O'Brien & Gere will collect 20 soil samples from around four former open burning grounds present at the Site to screen for the presence of dioxins and furans. These samples were requested by the NJDEP to evaluate if dioxin and furan compounds are present around the former burning grounds. The former open burning ground soil sample locations are indicated on Figure 4. Sampling depth and analytical methods are provided on Table 6. Soil sampling procedures are summarized below.

Soil Sampling

An O'Brien & Gere geologist will collect these dioxin/furan screening samples from shallow soil borings installed using direct push techniques. One soil sample will be collected from each soil boring biased to depth based on the presence of visible ash and analyzed for dioxins and furans. If ash is not observed, a soil sample will be collected from 0 to 0.5 foot below ground surface.

Soil borings will be backfilled to grade with original cuttings. After abandonment, a stake will be driven at each soil sample location.

Laboratory Analysis

The soil and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for dioxins and dibenzofurans as indicated in Table 6.

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the soil sampling program will include the following:

- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One MS/MSD sample per sample delivery group

E&E Screening

Prior to shipping of the soil samples to the laboratory, the samples will be screened for E&E compounds. If the screening indicates concentrated E&E compounds (greater than 10%) are not present, the sediments will shipped to the laboratory. Field screening for E&E compounds will be conducted in accordance with Section 5.1 of the FQAPP.

Burning Ground Sampling Point Documentation

The locations of the Burning Ground soil boring locations will be established using a hand held GPS unit with sub-meter accuracy. Horizontal control will be referenced to the New Jersey State Plane Coordinate system (NAD 83). Vertical control will be referenced to the NGVD 1929.

Task 7 - Down-Gradient Delineation of the TNT Area Groundwater Plume

To define the maximum extent of trinitrotoluene (TNT) and its degradation products, 2-amino-4,6-dinitrotoluene (2A-DNT) and 4-amino-2,6-dinitrotoluene (4A-DNT) in groundwater, O'Brien & Gere will supervise the collection of downgradient groundwater samples from six off-Site boring locations. These

samples will be collected from soil borings installed on private (commercial) properties located southwest of the Site. The groundwater samples will be collected using a Waterloo Profiler ™ operated by Stone Environmental. O'Brien & Gere will supervise the drilling and collection of down-gradient groundwater samples. The Waterloo sample locations are indicated on the aerial photograph provided as Figure 5. Sampling depth and analytical methods are provided on Table 7. Waterloo sampling procedures are described below.

Waterloo Sampling Procedures

Groundwater samples will be collected using a modified Waterloo Profiler™ in accordance with procedures detailed in the NJDEP's 1994 *Alternative Ground Water Sampling Techniques Guide and* in the Stone SOP provided in Exhibit 2 of the QAPP. The Waterloo Profiler™ consists of a probe containing integrated sensors and sampling ports that is driven into the subsurface using direct push techniques. The integrated sensors are capable of measuring the hydraulic conductivity of the formation, hydraulic head, and physiochemical properties (pH, specific conductance, DO, and ORP). The Waterloo Profiler™ will be used to collect real time hydrostratigraphic data which will be used to ensure samples are being collected from sandy intervals. After the sampling interval is selected, the interval will be purged using an internal nitrogen gas drive pump. Physiochemical properties will be measured during the purging process to ensure formation stability prior to collecting a groundwater sample. A Geoprobe™ 66235 CPT direct push rig will be used to advance a modified Waterloo Profiler™ with minimal disturbance (i.e. minimal use of the hydraulic hammer imparting energy into the subsurface).

Groundwater samples will be collected by the modified Waterloo Profiler™ from the following discrete intervals at each location:

- 15 ft bgs,
- 30 ft bgs,
- 60 ft bgs,
- 90 ft bgs,
- 120 ft bgs.

Sampling depths may be adjusted based on hydrostratigraphic information obtained during boring installation.

Preparatory Activities

A minimum of three weeks prior to the Waterloo Profiling activities, the selected driller will submit soil boring permits to the NJDEP. The driller will notify New Jersey One Call of the planned drilling activities, a minimum of 72 hours prior to drilling, to obtain a utility mark out. Waterloo Profiling locations will be cleared by Hercules, prior to mobilization of the drill rig, to ensure drill rig access.

Laboratory Analysis

The groundwater and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for E&E compounds as indicated on Table 7.

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the off-Site groundwater sampling program will include the following:

- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One matrix spike (MS) and one matrix spike duplicate (MSD) sample per sample delivery group

Waterloo Sampling Point Documentation

The locations of the Waterloo sample points will be established using a hand held GPS unit with sub-meter accuracy. Horizontal control will be referenced to the New Jersey State Plane Coordinate system (NAD 83). Vertical control will be referenced to the NGVD 1929.

Task 8 - Soil Sampling

Soil sampling will be conducted to delineate the vertical extent of constituents at concentrations above applicable standards, delineate the outbound extent of constituents at concentrations above applicable standards, and refine the extent of constituents at concentrations above applicable standards between individual AOCs. A total of 76 soil samples will be collected from a series of 38 soil borings. The soil borings will be installed by a New Jersey-licensed driller. The soil sample locations are indicated on Figure 4. Analytical parameter, sample depths and the rationale for the collection of the soil samples are provided on Table 8. Soil sampling procedures are summarized below.

Soil Sampling

Soil cores will be collected using a combination of hand auger and direct push (Geoprobe ™) sampling methods. Direct push soil sampling methods utilize a hydraulic hammer mounted on a truck or an all terrain vehicle to advance sampling devices into the subsurface. Soil samples collected using direct push methods will be obtained using the Macro Core (MC) sampling system. The MC sampling system consists of an open, steel tube that houses an acetate liner. The liner is held in place with a drive cap at the top and a cutting shoe at the bottom and is designed for continuous soil sample collection. If probe hole "cave-in" is significant, it may be necessary to use a closed piston assembly that fits into the MC. The closed piston assembly MC sampler remains completely closed when driven to depth and are opened by releasing a stop pin from the surface. Releasing the stop pin allows a piston to retract inside of the sample tube as it is being displaced by the sample core. The anticipated maximum depth of the soil borings is 10 feet. Direct push sampling procedures are detailed in Section 7.3.2 of the FQAPP.

After the MC sampler is retrieved, the liner will be removed and cut open to allow access to the soil core for field screening and sample collection. The soil core will be screened with a photoionization detector and logged by a geologist using the using the *Burmeister Soil Classification System*. Field screening procedures are detailed in Section 5.2 of the FQAPP.

Two soil samples will be collected from each soil boring. One soil sample will be collected from the 0 to 0.5 foot interval below the ground surface or the concrete, asphalt, or crushed stone, if the area is paved. The second sample will be taken from one of the following intervals:

- Sample depths will be biased based on visual observations and field screening with a PID
- The six-inch interval above the water table if no anthropogenic feature warranting biasing (e.g. stained soil, ash, etc.) is observed
- The base (9.5 to 10 ft bg interval) of the boring if no anthropogenic feature warranting biasing is observed and the water table is not encountered

Soil samples that will be analyzed for VOCs will be collected directly from the soil core using an Encore sampler. After the VOC sample is collected, the remaining portion of the selected sampling interval will be placed into a

decontaminated stainless steel bowl and homogenized. The soils will then be transferred from the bowl to the appropriate sample containers.

Soil borings will be backfilled to grade with original cuttings. If the soil boring extends below the water table, the portion of the soil boring below the water table will be sealed with a bentonite slurry. After abandonment, a stake will be driven at each soil sample location for later use by a New Jersey-licensed surveyor.

Laboratory Analysis

The soil and associated quality control samples generated will be submitted to Eurofins Lancaster Laboratories, a New Jersey certified laboratory, for analysis. The samples will be analyzed for VOCs, SVOCs, E&E Compounds, TAL Metals as indicated on Table 8.

Sample bottle requirements and preservation methods are detailed in Table 1 of the QAPP.

QA/QC samples that will be collected as part of the soil sampling program will include the following:

- One trip blank sample per sample shipment that requires analysis for VOCs
- One duplicate sample per each 20 field samples
- One field blank per each 10 field samples but no more than one per day
- One MS/MSD sample per sample delivery group

E&E Screening

Prior to shipping soil samples to the laboratory, the soil samples will be screened for E&E compounds. If the screening indicates significant E&E compounds are not present (greater than 10%), the sediments will shipped to the laboratory. Field screening for E&E compounds will be conducted in accordance with Section 5.1 of the FQAPP.

Soil Sampling Point Documentation

The locations of the soil borings points will be established using a hand held GPS unit with sub-meter accuracy. Horizontal control will be referenced to the New Jersey State Plane Coordinate system (NAD 83). Vertical control will be referenced to the NGVD 1929.

EQUIPMENT DECONTAMINATION PROCEDURES

All non-disposable equipment used in field sampling activities will be decontaminated before and after use. Dedicated, disposable equipment used for aqueous sampling will be decontaminated by the manufacturer. The Field Investigation Manager will ensure that appropriate decontamination procedures are followed.

Drill Rig

The drill rig and associated sampling equipment (i.e., augers, drill rods, etc.) will be decontaminated prior to arrival at the site and between at each monitoring well location prior to mobilization to the next monitoring drilling site. Decontamination of this equipment will be performed at a centralized decontamination pad. The following procedures will be used to decontaminate the drill rig and associated sampling equipment:

- The drill rig will be driven on to the decontamination pad and parked
- The associated drilling equipment (i.e. drill rods, augers, split spoons) will be staged on metal stands off the ground
- The drill rig and associated equipment will be thoroughly cleaned on the decontamination pad using a high-pressure steam cleaner and potable water
- Decontaminated equipment will be staged in a clean location prior to use

Direct Push Sampling Equipment

All direct push sampling equipment used to advance soil sampling equipment (i.e., The direct push rig, drill rods, MC etc.) will be decontaminated prior to arrival at and upon leaving the Site. Between each subsurface sampling location the drill rods and MC will be decontaminated. Decontamination of the drill rods and MC equipment can be done at the boring location.

Prior to leaving the site, the direct push rig will be thoroughly cleaned at the last boring location using a high-pressure steam cleaner and potable water. Since acetate liners are being used, the MC system and drill rods will be decontaminated by washing with a non phosphate detergent and rinsing with potable water. The drill rods and MC system will then be rinsed with distilled water. The decontaminated equipment will be placed in a clean location protected from fugitive dust prior to field use

Non-Disposable Sampling Equipment

All non-disposable sampling equipment (i.e. soil coring devices, sediment samplers, spoons, bowls, surface water samplers etc.) will be decontaminated prior to mobilization to each sampling location. The following procedures will be used to decontaminate the aqueous and manual sampling equipment:

- Equipment will be washed with potable water and non-phosphate detergent.
- Equipment will be thoroughly rinsed with potable water
- Equipment will be rinsed with distilled water
- Equipment used to collect samples for metals analysis will be rinsed with a 10 percent solution of laboratory grade nitric acid followed by another rinse with distilled water
- Equipment used to collect samples for organic analysis will be rinsed with pesticide-grade acetone rinse and air dried followed by another rinse with distilled water.
- Equipment will be wrapped in aluminum foil, shiny side out
- Information concerning decontamination methodology, date, time, and personnel will be recorded in the field logbook.

Field Measurement and Standard Purging Equipment

All field measurement equipment (i.e., static water level indicator, pH meter, conductivity meter or submersible pump) will be decontaminated prior to each use. Decontamination of this equipment will be conducted as described below:

- Equipment will be washed with potable water and non-phosphate detergent and a potable water rinse
- Submersible pumps will be cleaned with a non-phosphate detergent and a potable water rinse followed by a 10 gallon flush of potable water through the pump.
- Equipment will be rinsed with distilled water and allowed to air dry
- The decontaminated equipment will be placed in a clean location protected from fugitive dust prior to field use

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Low Flow Groundwater Sampling Equipment Decontamination

New tubing will be dedicated for use in each well and will not require decontamination. The pumps, however, will require decontamination prior to and following use. If existing tubing is present in the well, O'Brien & Gere will remove and dispose of the tubing prior to installing the new tubing. Non-disposable sampling equipment, including the pump and support cable and electrical wires which contact the sample, must be decontaminated thoroughly each day before use ("daily decon") and after each well is sampled ("between-well decon"). Decon procedures are summarized below.

Daily decontamination of pumps will be conducted in the following manner:

- Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes.
- Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes. Use the detergent sparingly.
- Rinse: Operate pump in a deep basin of potable water for 5 minutes.
- Disassemble pump.
- Wash pump parts: Place the disassembled parts of the pump into a deep basin containing 8 to 10 gallons of non-phosphate detergent solution. Scrub all pump parts with a brush.
- Rinse pump parts with potable water.
- Rinse the following pump parts with distilled/ deionized water: inlet screen, the shaft, the suction interconnector, the motor lead assembly, and the stator housing.
- Place impeller assembly in a large glass beaker and rinse with 1% nitric acid (HNO_3).
- Rinse impeller assembly with potable water.
- Rinse impeller assembly with distilled/deionized water.

Between-well decontamination of pumps will be conducted in the following manner:

- Pre-rinse: Operate pump in a deep basin containing 8 to 10 gallons of potable water for 5 minutes.
- Wash: Operate pump in a deep basin containing 8 to 10 gallons of a non-phosphate detergent solution, such as Alconox, for 5 minutes. Use the detergent sparingly.
- Rinse: Operate pump in a deep basin of potable water for 5 minutes.
- Final Rinse: Operate pump in a deep basin of distilled/deionized water to pump out 1 to 2 gallons of this final rinse water.

SAMPLE HANDLING, FIELD CUSTODY AND SAMPLE DOCUMENTATION PROCEDURES

Sample Handling Procedures

The following sample handling procedures will be utilized for all sampling events conducted at the facility:

- New disposable nitrile gloves will be used when collecting samples for chemical analysis
- As applicable, sample containers will be filled in the following order: VOCs, SVOCs, pesticides/PCBs, dioxins, metals, and water quality parameters (e.g. hardness).
- All aqueous VOC containers will be filled to zero headspace

After collection, the will be immediately placed in appropriate laboratory-supplied containers, labeled, maintained in coolers at 4°C, and will be maintained under a chain-of-custody (see below) at all times.

Environmental samples will be packed prior to shipment using the following procedures:

- Use only clean, sturdy coolers in good repair.
- Secure and tape the drain plug
- Be sure the lids on all bottles are tight (will not leak), place the bottles inside Ziploc plastic baggies and seal the baggies
- Put ice that has been placed in heavy-duty polyethylene Ziploc plastic baggies sealed on top of and between the samples to maintain the inside temperature at approximately 4 °C ±2 °C
- Pack samples securely to eliminate breakage during shipment
- When possible, sample container preparation and packing for shipment will be completed in a well-organized and clean area. Sample containers will be prepared for shipment by wiping containers clean of debris/water using paper towels. Paper towels will be disposed with the personal protective equipment (PPE).
- Place chain-of-custody record into a Ziploc plastic bag, tape the bag to the inner side of the cooler lid, and close the cooler and securely tape the top of the cooler shut.
- Two custody seals will be affixed to the latch and lid of the cooler. The number of the security seal will be recorded on the chain-of-custody form. The custody seals will consist of adhesive-backed tape that easily rips if it is disturbed. The field sampler will initial and date the seal. The seals must be broken to open the cooler and will indicate tampering if the seal is broken before receipt at the laboratory.
- A label containing the name and address of the shipper will be placed on the outside of the container.

The coolers will be delivered to the laboratory via a courier service. Prior to shipment of sample coolers, the field sampling team will contact the laboratory to notify the laboratory of the shipment.

Samples will remain in the custody of the sampler until transfer of custody is completed. Transfer consists of:

- Delivery of samples to courier and
- Signature of the courier on the chain-of-custody form as receiving the samples and signature of sampler as relinquishing the samples.

Sample Labeling

A completed sample identification label or tag will be attached to each investigative or QC sample. The identification on the label must be sufficient to enable cross-reference with the logbook. The sample label will be

filled out using waterproof, non-erasable ink and will be attached to the sample container using adhesive. The sample labels/tags will contain the following information:

- Sample location/number identification
- Site/Project name
- Date and time of sample collection
- Designation of the sample as a grab or composite
- Type of sample matrix
- Name/initials of the sampler
- Whether the sample is preserved or unpreserved
- Aanlyses to be performed

Unique sample identifications (IDs) will be provided for each sample. The sample IDs will include the matrix type, an indication they were collected during the second phase of the remedial investigation (R2), a grid square location and serial sample ID for surface water, sediment and soil samples, and monitoring well location for groundwater samples. Matrix types will be abbreviated as described below:

- GW for groundwater
- SW for surface water
- SO for soil
- SD for sediment

A typical sample ID would be SW-R2-E-16-3. This ID indicates the following:

- The sample is a surface water sample
- The sample was collected during the second phase of the remedial investigation
- the sample was collected from grid square E-16
- the sample is the third surface water sample collected from grid square E-16 during the second phase of the remedial investigation

Chain-of-Custody Procedures

Chain-of-custody procedures will be instituted and followed throughout the sampling collection process. Samples are physical evidence and will be handled according to strict chain-of-custody protocols. The O'Brien & Gere QAO must be prepared to produce documentation that traces the samples from the field to the laboratory and through analysis. USEPA has defined custody of evidence as follows:

- In actual possession
- In view after being in physical possession
- In a locked laboratory or in a secure, restricted area.

The field sampler is personally responsible for the care and custody of the sample until transferred.

Chain-of-custody records will be kept starting at the time that sample containers are placed in the coolers for transportation to the laboratory. One completed chain-of-custody record must be kept with each sample cooler at all times.

Example chain-of-custody forms are provided in the laboratory's Quality Assurance Manual (Exhibit 1 of the QAPP). The following measures will be taken when completing a chain-of-custody record:

- Chain-of-custody forms will be completed in waterproof, non-erasable ink.
- Chain-of-custody forms will be completed neatly using printed text.
- If a simple mistake is made, the error will be lined out with a single line and initialed and dated.
- Each separate sample entry will be sequentially numbered.
- The use of "Ditto" or quotation marks to indicate repetitive information in columnar entries should be avoided. If numerous repetitive entries must be made in the same column, a continuous vertical arrow will be used between the first entry and the next different entry.
- When more than one chain-of-custody form is used for a single shipment, each form will be consecutively numbered using the "Page ___ of ___" format.
- If necessary, additional instructions will be placed directly onto the chain-of-custody form.
- Acronyms used on a chain-of-custody form will be defined.

The chain-of-custody form will contain the following information:

- Project identification and number;
- Sample description/location;
- Required analysis;
- Date and time of sample collection;
- Type and matrix of sample;
- Number of sample containers;
- Analysis requested/comments;
- Sampler signature/date/time;
- Date and signature of the field representative;
- Date and signature of the laboratory representative;
- Carrier used to ship coolers; and
- Air bill number (if shipped by a commercial carrier).

In the case that high concentrations are suspected to be present in the samples, a note to that effect will be included on the chain-of-custody form.

Field Logbook Procedures

The field logbook will be used to note information regarding collection of samples and any observations. All entries will be signed and dated. Field logbooks will be waterproof and bound. The logbook will be dedicated to the project and pages will not be removed. Corrections will be made by drawing a single line through the incorrect data and initialing and dating the correction that was made to the side of the error. An initialed diagonal line will be used to indicate the end of an entry or the end of the day's activities.

The following information will be recorded in the field logbook by the field sampling team:

- Name and title of author, date, and time of site entry, physical/environmental conditions during the field activity and meteorological data;
- Project number, client name, Site name, names of field crew members, and names of visitors
- Sample media, sample collection method, including equipment utilized
- Date and time of sample collection, number and volume of samples collected, sample and QA/QC identification numbers, and required analyses
- Description of sample locations and the sampling process
- Field observations including field measurements made, equipment used, and soil logs
- Calculations, results, and calibration data for field sampling and measurements

- References for maps and photographs of the sample location
- Dates and method of sample shipments

After a field activity has been completed, copies of the field notes will be made and stored in the project file.

Table 1 - E. Groundwater Screening Plan for E Compounds
Former Kenvil Works
Kenvil, New Jersey

Monitor Well Designation	Depth[1]	Screen Interval[1]	Pump Intake Depth[2]	Well Diameter[2]	Sampling Method	Analytes
MW-15	23.1	8.1-23.1	17 to 19	4	Conventional	E&E Compounds
MW-16	18.02	13.42 - 18.02	28 to 30	4	Conventional	E&E Compounds
MW-17	20.2	5.2-20.2	12.7	4	Conventional	E&E Compounds
MW-18	63	53-63	58	4	Conventional	E&E Compounds
MW-23	15.3	5.3-15.3	10.3	4	Conventional	E&E Compounds
MW-25	20.67	10.67-20.67	15.7	4	Conventional	E&E Compounds
MW-33	23.3	8.3-23.3	15.8	2	Conventional	E&E Compounds
MW-34	28	13-28	20.5	2	Conventional	E&E Compounds
MW-35	27	7-27	17	2	Conventional	E&E Compounds
MW-36	22	7-22	14.5	2	Conventional	E&E Compounds
MW-37	20	5-20	12.5	2	Conventional	E&E Compounds
MW-41	16	6-16	11	2	Conventional	E&E Compounds
MW-J2	16.79	6.79-16.79	11.8	4	Conventional	E&E Compounds
MW-J3	21.7	8.7-21.7	15.2	4	Conventional	E&E Compounds
MW-J4	16.29	7.79-16.29	12.1	4	Conventional	E&E Compounds
MW-J5	13.44	4.44-13.44	9.5	4	Conventional	E&E Compounds

Notes:
[1] Feet below ground surface
[2] casing diameter reported in inches

Table 2 - Proposed Monitoring Well Construction Details
Former Kenvil Works
Kenvil, New Jersey

Monitor Well Designation	Well Location	Casing Diameter[1]	Screen Length[2]	Total Depth[3]	Well Screen Interval[2]	Rational of Installation
MW-43D	TNT Area	2	10	60.0	50 to 60	Delinate depth of groundwater impact in the TNT Ground Water plume
MW-49	TNT Area	2	10	30.0	20 to 30	Evaluate groundwater quality along the southern edge of the TNT Plume
MW-49D	TNT Area	2	10	60.0	50 to 60	Evaluate groundwater quality along the southern edge of the TNT Plume
MW-50	Miscellaneous Offsite Area	2	10	30.0	20 to 30	Delineate the southern extent of the TNT plume as it exits the site
MW-50D	North Side - Delaware	2	10	60.0	50 to 60	Delineate the southern extent of the TNT plume as it exits the site
MW-51	TNT Area	2	10	30.0	20 to 30	Delineate the northern extent of the TNT plume
MW-52	Maintenance Area	2	10	30.0	20 to 30	Evaluate groundwater quality downgradient of the RDX Plume
MW-52D	Maintenance Area	2	10	60.0	50 to 60	Evaluate groundwater quality downgradient of the RDX Plume
MW-53	B-Line	2	10	30.0	20 to 30	Evaluate groundwater quality along the eastern edge of B-Line
MW-53D	B-Line	2	10	60.0	50 to 60	Evaluate groundwater quality along the eastern edge of B-Line

Notes:
[1] casing diameter reported in inches
[2] Feet below ground surface

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Table 3 - Surfacewater Sampling Plan
Former Kenvil Works
Kenvil, New Jersey

MAP ID	Surface Water Sample ID	Location	Sample Depth1	Analytes	Rationale
A	SW-R2-G-12-1	G-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-G-12-1
B	SW-R2-G-12-1	G-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-G-5-1
C	SW-R2-G-12-2	G-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-G-12-3
F	SW-R2-E-16-1	E-16	Surface	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Confirm surfacewater quality adjacent to to the outfall, co-located with SD-R2-E-16-1
F	SW-R2-E-16-1D	E-16	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Confirm surfacewater quality adjacent to to the outfall, co-located with SD-R2-E-16-1
G	SW-R2-F-14-1	F-14	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-F-14-1
H	SW-R2-F-14-2	F-14	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-F-14-2
I	SW-R2-E-13-1	E-13	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-E-13-1
J	SW-R2-D-14-1	D-14	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-D-14-1
K	SW-R2-C-12-1	C-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-C-12-6
L	SW-R2-C-11-1	C-11	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-C-11-1
M	SW-R2-B-15-1	B-15	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-B-15-1
N	SW-R2-B-15-2	B-15	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel, co-located with SD-R2-B-15-2
S	SW-R2-E-16-3	E-16	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Confirm surfacewater quality adjacent to to the outfall, co-located with SD-R2-E-16-1
AA	SW-R2-E-11-1	E-11	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel
BB	SW-R2-F-11-1	F-11	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel
CC	SW-R2-L-5-1	L-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality at the northwest inlet to Duck Pond
DD	SW-R2-M-5-1	M-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality at the northeast inlet to Duck Pond
EE	SW-R2-M-5-2	M-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate groundwater discharge to Duck Pond
FF	SW-R2-L-5-2	L-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate groundwater discharge to Duck Pond
GG	SW-R2-M-6-1	M-6	2.5 to 3	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate groundwater discharge to Duck Pond
HH	SW-R2-D-12-1	D-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel
II	SD-R2-D-12-3	D-12	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel
JJ	SW-R2-N-5-1	N-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel
KK	SW-R2-N-5-2	N-5	0 to 0.5	SVOCs, E&E Compounds, TAL Metals, Hardness, pH	Evaluate surfacewater quality outside the defined stream channel

Notes:
[1] Feet below water surface
Shading indiactes surface water sample is co-colated with a sediment sample

Table 4- Sediment Sampleing Plan
Former Kenvil Works
Kenvil, New Jersey

Map ID	Sediment Sample ID	Location	Sample Depth1	Analytes	Rationale
A	SD-R2-G-12-1	G-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel adjacent to SD-R-G12-11 (NJDEP Comment 14). Co-located with surface water sample SW-R2-G-12-1
B	SD-R2-G-12-2	G-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel adjacent to SD-R-G12-11 (NJDEP Comment 14). Co-located with surface water sample SW-R2-G-12-2
C	SD-R2-G-12-3	G-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel adjacent to SD-R-G12-11 (NJDEP Comment 14). Co-located with surface water sample SW-R2-G-12-2
D	SD-R2-G-12-4	G-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel adjacent to SD-R-G12-01 (NJDEP Comment 15)
E	SD-R2-G-12-5	G-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel adjacent to SD-R-G12-01 (NJDEP Comment 15)
F	SD-R2-E-16-1	E-16	0 to 0.5	VOCs, SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC	Confirm sediment quality adjacent to to the outfall. Co-located with surface water sample SW-R2-E-16-1
F	SD-R2-E-16-1D	E-16	2 to 2.5	VOCs, SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC	Confirm sediment quality adjacent to to the outfall. Co-located with surface water sample SW-R2-E-163-1
G	SD-R2-F-14-1	F-14	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
H	SD-R2-F-14-2	F-14	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
I	SD-R2-E-13-1	E-13	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-E-13-1
J	SD-R2-D-14-1	D-14	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-D-14-1.
K	SD-R2-C-12-6	C-12	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-C-12-1.
L	SD-R2-C-11-1	C-11	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-C-11-1.
M	SD-R2-C-15-1	C-15	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-B-15-1.
N	SD-R2-C-15-2	C-15	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-B-15-2.
O	SD-R2-K-5-1	K-5	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
P	SD-R2-K-5-2	K-5	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
Q	SD-R2-O-4-1	O-4	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
R	SD-R2-O-4-2	O-4	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
S	SD-R2-E16-3	E-16	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel. Co-located with surface water sample SW-R2-E-16-3.
T	SD-R2-E-10-1	E-10	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
U	SD-R2-E-10-2	E-10	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel
V	SD-R2-M-7-01D	M-7	2.5 to 3	SVOCs, TAL Metals, moisture, solids, TOC	Vertical delination at SD-R-M-7-01 (NJDEP Comment 17)
W	SD-R2-L-5-01D	L-5	2.5 to 3	SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC	Vertical delination at SD-R-L-5-01 (NJDEP Comment 17)
X	SD-R2-L-5-02 D	L-5	2.5 to 3	SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC	Vertical delination at SD-R-L-5-02 (NJDEP Comment 17)
Y	SD-R2-O-4-3	O-4	0 to 0.5	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC	Evaluate sediment quality outside the defined stream channel

Notes:
[1] Feet below sediment surface
Shading indiactes sediment sample is co-colated with a surface water sample

Table 5 - Groundwater Sampling Plan
Former Kenvil Works
Kenvil, New Jersey

Monitor Well Designation	Well Location	Pump Intake Depth[2]	Sampling Method	Analytes
MW-3A	Development Area	18	Low-Flow	Total Lead/Dissolved Lead
MW-5	Development Area	29	Low-Flow	Total Lead/Dissolved Lead
MW-7PD	Development Area	55	Low-Flow	Total Lead/Dissolved Lead
MW-10	Storage Area	16	Low-Flow	Total Lead/Dissolved Lead
MW-12	Duck Pond	11.5	Low-Flow	Total Lead/Dissolved Lead
MW-12D	Duck Pond	39	Low-Flow	Total Lead/Dissolved Lead
MW-16	A-Line	11	Low-Flow	Total Lead/Dissolved Lead
MW-21	Dynamite Area	14	Low-Flow	Total Lead/Dissolved Lead
MW-26D	B-Line	57	Low-Flow	Total Lead/Dissolved Lead
MW-34	A-Line	19.5	Low-Flow	Total Lead/Dissolved Lead
MW-37	NG Area	14.5	Low-Flow	Total Lead/Dissolved Lead
MW-40	Dynamite Area	9	Low-Flow	Total Lead/Dissolved Lead
MW-44	Dynamite Area	17	Low-Flow	Total Lead/Dissolved Lead
MW-44D	Dynamite Area	54	Low-Flow	Total Lead/Dissolved Lead
MW-47	TNT Area	24.6	Low-Flow	Total Lead/Dissolved Lead
MW-J1D	Maintenance Area	55	Low-Flow	Total Lead/Dissolved Lead
MW-J2	Maintenance Area	11	Low-Flow	Total Lead/Dissolved Lead
MW-43D	TNT Area	52.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		57.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-49	TNT Area	22.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		27.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-49D	TNT Area	52.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		57.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-50	Miscellaneous Offsite Area	22.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		27.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-50D	North Side - Delaware	52.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		57.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-51	TNT Area	22.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		27.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-52	Maintenance Area	22.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		27.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-52D	Maintenance Area	52.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		57.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-53	B-Line	22.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		27.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
MW-53D	B-Line	52.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals
		57.5	Low-Flow	VOCs, SVOCs, E&E Comouunds, TAL Metals

Notes:
[1] casing diameter reported in inches
[2] Feet below ground surface

Table 6 - Burning Grounds Soil Screening Plan
Former Kenvil Works
Kenvil, New Jersey

Burning Ground	Map Label	Soil Sample ID	Location	Sample Depth1	Analytes	Rationale
Development Area Old Burning Ground	D1	SO-R2-M-5-1	M-5	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the northern edge of the Development Area Old Burning Ground
	D2	SO-R2-M-5-2	M-5	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the eastern edge of the Development Area Old Burning Ground
	D3	SO-R2-L-5-1	L-5	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the western edge of the Development Area Old Burning Ground
	D4	SO-R2-M-5-3	M-5	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the southern edge of the Development Area Old Burning Ground
	D5	SO-R2-M-5-4	M-5	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans in the center of the Development Area Old Burning Ground
New Burning Ground	D6	SO-R2-Q-6-1	Q-6	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the northern edge of the New Burning Grounds
	D7	SO-R2-Q-6--2	Q-6	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the eastern edge of the New Burning Grounds
	D8	SO-R2-Q-6--3	Q-6	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the western edge of the New Burning Grounds
	D9	SO-R2-Q-6--4	Q-6	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the southern edge of the New Burning Grounds
	D10	SO-R2-Q-6--5	Q-6	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans in the center of the New Burning Grounds
Maintainence Area Former Burning	D11	SO-R2-G-11-1	G-11	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the northern edge of the Maintainence Area Former Burning Ground
	D12	SO-R2-H-11-2	H-11	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the eastern edge of the Maintainence Area Former Burning Ground
	D13	SO-R2-G-11-2	G-11	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the western edge of the Maintainence Area Former Burning Ground
	D14	SO-R2-H-11-3	H-11	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the southern edge of the Maintainence Area Former Burning Ground
	D15	SO-R2-H-11-4	H-11	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans in the center of the Maintainence Area Former Burning Ground
Ammonium Nitrate Area FormerBurning	D16	SO-R2-H-12-1	H-12	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the northern edge of the Maintainence Area Former Burning Ground
	D17	SO-R2-I-13-1	I-13	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the eastern edge of the Maintainence Area Former Burning Ground
	D18	SO-R2-H-13-1	H-13	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the western edge of the Maintainence Area Former Burning Ground
	D19	SO-R2-H-13-2	H-13	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans on the southernedge of the Maintainence Area Former Burning Ground
	D20	SO-R2-H-13-3	H-13	0 to 2	Dioxins/Furans	Screen for the presence of dioxins/furans in the center of the Maintainence Area Former Burning Ground

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Notes:
[1] Feet below ground surface

Table 7 - Off-Site TNT Groundwater Sampling Plan
Former Kenvil Works
Kenvil, New Jersey

Sample Designation	Sample Location	Sample Depth1	Sampling Method	Analytes
GW-R2-CPT-33	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds
GW-R2-CPT-34	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds
GW-R2-CPT-35	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds
GW-R2-CPT-36	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds
GW-R2-CPT-37	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds
GW-R2-CPT-38	Offfsite	15	Waterloo	E&E Compounds
		30	Waterloo	E&E Compounds
		60	Waterloo	E&E Compounds
		90	Waterloo	E&E Compounds
		120	Waterloo	E&E Compounds

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Notes:

[1] Feet below ground surface

Table 8- Soil Sampling Plan
Former Kenvil Works
Kenvil, New Jersey

Map ID	Soil Sample ID	Location	Sample Depth1	Analytes	Rationale
A	SO-R2-I-13-2	I13	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-I-13-2D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
B	SO-R2-M-11-1	M11	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-M-11-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
C	SO-R2-0-8-1	O8	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-0-8-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
D	SO-R2-R-7-1	R7	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-R-7-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
E	SO-R2-R-7-2	R7	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-R-7-2D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
F	SO-R2--R-4-1	R4	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-R-4-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
G	SO-R2-N-4-1	N4	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-N-4-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
H	SO-R2-L-4-1	L4	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-L-4-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
I	SO-R2-K-5-1	K5	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-K-5-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
J	SO-R2-G-5-1	G5	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-G-5-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
K	SO-R2-F-7-1	F-7	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-F-7-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
L	SO-R2-F-8-1	F8	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-F-8-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
M	SO-R2-E-9-1	E9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-E-9-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
N	SO-R2-C-8-1	C8	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-C-8-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
O	SO-R2-C-8-2	C8	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-C-8-2D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
P	SO-R2-B-8-1	B9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-B-9-1		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
Q	SO-R2-B-9-2	B9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-B-9-2D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
R	SO-R2-B-9-3	B9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-B-9-3D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
S	SO-R2-A-11-1	A11	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-A-11-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
T	SO-R2-B-14-1	B14	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-B-14-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
U	SO-R2-A-14-1	A14	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-A-14-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances

Table 8- Soil Sampling Plan
Former Kenvil Works
Kenvil, New Jersey

Map ID	Soil Sample ID	Location	Sample Depth1	Analytes	Rationale
V	SO-R2-E-16-1	E16	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-E-16-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
W	SO-R2-G-14-1	G14	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-G-14-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
X	SO-R2-H-14-1	H14	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-H-14-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
Y	SO-R2-P-4-1	P4	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
	SO-R2-P-4-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Outbound delination of soil exceedances
Z	SO-R2-Q-5-1	Q5	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-Q-5-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
AA	SO-R2-J-5-1	J5	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-J-5-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
BB	SO-R2-J-5-2	J5	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-J-5-2D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
CC	SO-R2-G-6-1	G6	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-G-6-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
DD	SO-R2-G-7-1	G7	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-G-7-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
EE	SO-R2-H-9-1	H9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-H-9-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
FF	SO-R2-F-12-1	F-12	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-F-12-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
GG	SO-R2-C-14-1	C14	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-C-14-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
HH	SO-R2-B-12-1	B12	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-B-12-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
II	SO-R2-C-12-1	C12	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-C-12-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
JJ	SO-R2-H-11-4	H11	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-AH11-4D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
KK	SO-R2-H-10-1	H10	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-AH10-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
LL	SO-R2-K-9-1	K9	0 to 0.5	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs
	SO-R2-K-9-1D		TBD	SVOCs, VOCs, E&E Compounds, TAL Metals	Refine the extent soil exceedances between individual AOCs

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Notes:
[1] Feet below ground surface
TBD = To be determined based on field screening
AOCs = Areas of Concern

May 09, 2013 - 12:19pm



LEGEND:

- PROPOSED SHALLOW MONITORING WELL LOCATION (APPROX)
- PROPOSED DEEP MONITORING WELL LOCATION (APPROX)
- SURFACE WATER SAMPLE LOCATION
- SHALLOW MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- PROPOSED RI GROUNDWATER SAMPLE THAT WAS NOT COLLECTED
- E&E SCREENING CONE PENETROMETER (CPT) SAMPLE LOCATION
- CONE PENETROMETER (CPT) SAMPLE LOCATION
- TRENCH SAMPLE LOCATION
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTIONS
- GROUNDWATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA , OR FORMER DITCH (REFER TO NOTE 5)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (REFER TO NOTE 6)
- TRENCH FOR HYDRAULIC OIL INVESTIGATION
- WEIR
- PROPERTY LINE
- WATER FEATURE
- REMEDIAL AREA
- FORMER OPERATIONAL AREA
- UTILITY POLE
- LIGHT POLE
- WET AREA
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- CULVERT
- STREAMS
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.
2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
3. GROUNDWATER REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE GROUNDWATER SITE INCESTIGATION(GW–SI) REPORT (MWH, 2004). SURFACE WATER REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SD–SI) REPORT (MWH, 2004).
4. SAMPLE LOCATIONS PRESENTED IN THIS FIGURE WERE COLLECTED DURING THE REMEDIAL INVESTIGATION.
5. SOLID BROWN LINES REPRESENT DRY STREAM SEDIMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
6. DASHED BROWN LINES REPRESENT STREAM SEDIMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
7. MW–5P AND MW–22 COULD NOT BE SAMPLED DUE TO DAMAGE INCURRED DURING DEMOLITION EFFORTS.
8. PLAN ADAPTED FROM DRAWING TITLED "GROUNDWATER – SAMPLE LOCATION MAP" AS PRESENTED IN THE REMEDIAL INVESTIGATION REPORT, VOLUME C – GROUNDWATER FIGURE C–1 PRODUCED BY MWH AMERICAS, INC..

NO.	DATE	REVISION	INIT.

1"=250' 250 0 250 500

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PHASE II REMEDIAL INVESTIGATION WORK PLAN
HERCULES INCORPORATED
KENVIL WORKS FACILITY

SITE PLAN WITH PROPOSED MONITORING WELL LOCATIONS

IN CHARGE OF MSK
DESIGNED BY JAL CHECKED BY JAL
DRAWN BY RJD

FILE NO. 2420.46424–01
DATE MAY 2013

FIGURE 1

DRAFT

I:\Ashland.2420\46424-KENVIL-WORKS--PH\DOCS\DWG\SHEETS\46424G1-Figure 1.dwg

May 09, 2013 - 9:00am

i:\ashland.2420\46424.KENVIL--WORKS--PH\DOCS\DWG\SHEETS\46424d02--Figure 2.dwg

MISCELLANEOUS/OFFSITE AREA

NEW JERSEY TRANSIT

DUCK POND AND TRIBUTARIES DRAINAGE AREA

MISC. PONDS

STORAGE AREA

MISCELLANEOUS/ OFFSITE AREA

CONSTRUCTION & DEMOLITION LANDFILL

DUCK POND

AREA I

DEVELOPMENT AREA

HOWARD BOULEVARD

MISCELLANEOUS/ OFFSITE AREA

DIAZO AREA

FINISHING AREA

B-LINE AREA

A-LINE AREA

AREA III

MAINTENANCE AREA

PETRO-NG AREA

DYNAMITE AREA

CENTRAL DRAINAGE AREA

EASTERN DRAINAGE AREA

TNT AREA

WESTERN DRAINAGE AREA

MISCELLANEOUS/ OFFSITE AREA

MISCELLANEOUS/ OFFSITE AREA

WASTEWATER TREATMENT PLANT

HERCULES ROAD

KENVIL - BERKSHIRE VALLEY ROAD

TOWANDA CREEK & DRIVE-IN THEATER

U.S. HIGHWAY ROUTE 46

LEGEND:

- PROPOSED PHASE II RI SURFACE WATER SAMPLE (APPROX)
- SURFACE WATER SAMPLE LOCATION
- SHALLOW MONITORING WELL LOCATION
- DEEP MONITORING WELL LOCATION
- PROPOSED SURFACE WATER SAMPLE THAT WAS NOT COLLECTED
- E&E SCREENING CONE PENETROMETER (CPT) SAMPLE LOCATION
- CONE PENETROMETER (CPT) SAMPLE LOCATION
- TRENCH SAMPLE LOCATION
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTION
- GROUNDWATER FLOW DIRECTION
- DRY STREAM SEGMENT, AREA , OR FORMER DITCH (REFER TO NOTE 5)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (REFER TO NOTE 6)
- TRENCH FOR HYDRAULIC OIL INVESTIGATION
- WEIR
- PROPERTY LINE
- WATER FEATURE
- REMEDIAL AREA
- FORMER OPERATIONAL AREA
- UTILITY POLE
- LIGHT POLE
- WET AREA
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- CULVERT
- STREAMS
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.
2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.
3. GROUNDWATER REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE GROUNDWATER SITE INCESTIGATION(GW-SI) REPORT (MWH, 2004). SURFACE WATER REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SD-SI) REPORT (MWH, 2004).
4. SAMPLE LOCATIONS PRESENTED IN THIS FIGURE WERE COLLECTED DURING THE REMEDIAL INVESTIGATION.
5. SOLID BROWN LINES REPRESENT DRY STREAM SEDIMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
6. DASHED BROWN LINES REPRESENT STREAM SEDIMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION. HOWEVER SATURATED SEDIMENTS ARE PRESENT.
7. PLAN ADAPTED FROM DRAWING TITLED "SURFACE WATER - SAMPLE LOCATION MAP" AS PRESENTED IN THE REMEDIAL INVESTIGATION REPORT, VOLUME E - SURFACE WATER FIGURE E-1 PRODUCED BY MWH AMERICAS, INC..

NO.	DATE	REVISION	INIT.

1"=250' 250 0 250 500

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PHASE II REMEDIAL INVESTIGATION WORK PLAN
HERCULES INCORPORATED
KENVIL WORKS FACILITY

SITE PLAN WITH PROPOSED SURFACE WATER SAMPLING LOCATIONS

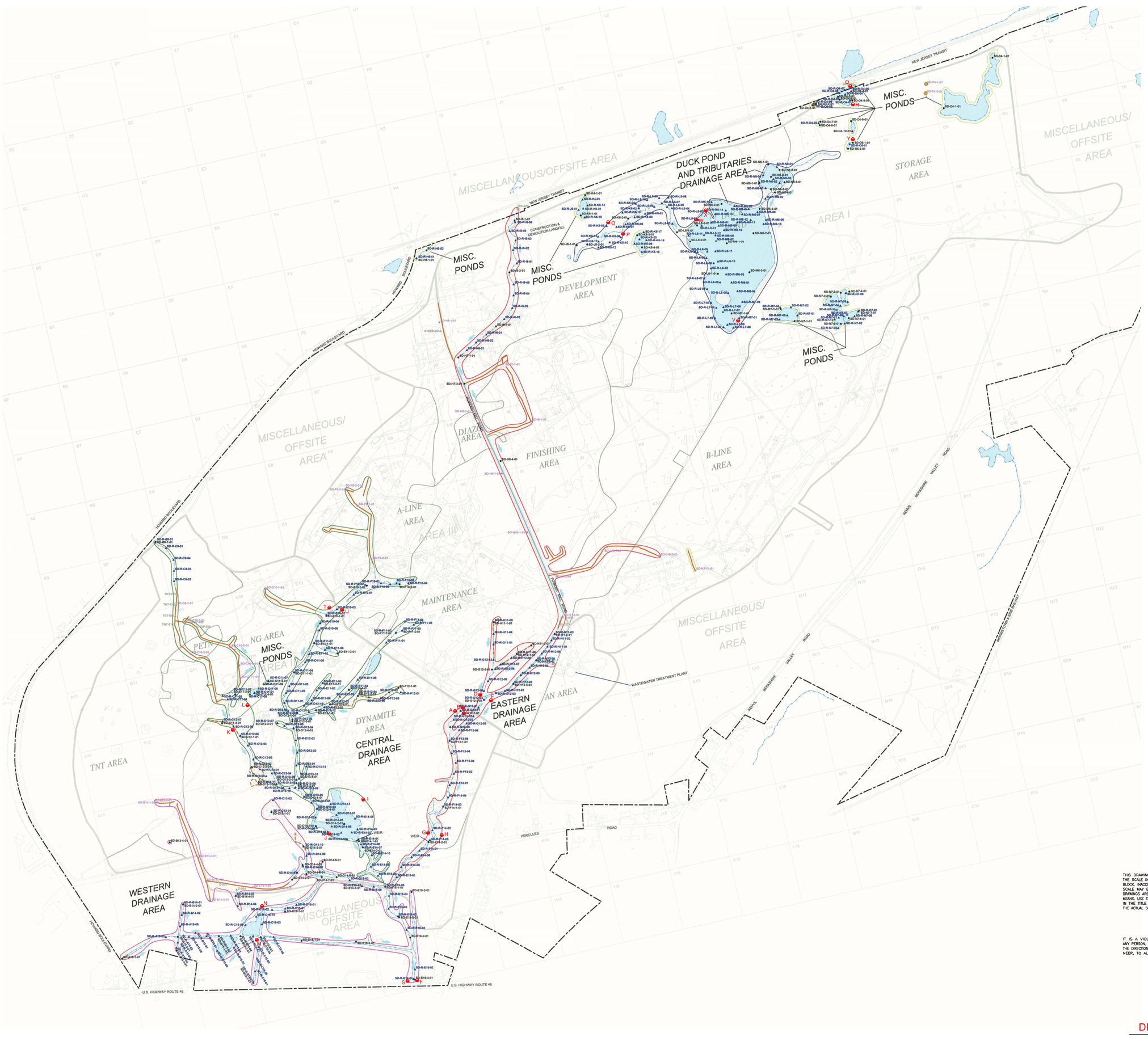
IN CHARGE OF MSK
DESIGNED BY JAL CHECKED BY JAL
DRAWN BY RJD

FILE NO. 2420.46424-02
DATE MAY 2013
FIGURE 2

DRAFT

May 09, 2013 - 8:19am

I:\Vanland.2420\V46424-KENVIL-WORKS-PHI\DOCS\DWG\SHEETS\46424G3-Figure 3.dwg



LEGEND:

- PROPOSED PHASE II RI SEDIMENT SAMPLE LOCATION (APPROX)
- RI SEDIMENT SAMPLE LOCATION
- SI SEDIMENT SAMPLE LOCATION
- FORMER SI SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATION (REFER TO NOTE 8)
- PROPOSED RI SEDIMENT SAMPLE THAT WAS NOT COLLECTED
- EASTERN DRAINAGE AREA
- CENTRAL DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- MISCELLANEOUS PONDS
- SURFACE WATER FLOW DIRECTIONS
- DRY STREAM SEGMENT, AREA, OR FORMER DITCH (REFER TO NOTE 6)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (REFER TO NOTE 7)
- WEIR
- PROPERTY LINE
- WATER FEATURE
- REMEDIAL AREA
- FORMER OPERATIONAL AREA
- UTILITY POLE
- LIGHT POLE
- WET AREA
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- CULVERT
- STREAMS
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- BUILDING

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.
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3. DASHED TOPOGRAPHIC CONTOURS INDICATE AREAS WHERE THE GROUND IS OBSCURED BY DENSE TREES OR SHADOWS. THESE AREAS MAY NOT CONFORM TO ACCURACY STANDARDS.
4. SEDIMENT REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SURFACE WATER/SEDIMENT SITE INVESTIGATION (SW/SD-SI) REPORT (MWH, 2004).
5. FOURTEEN SEDIMENT SAMPLES WERE PROPOSED IN THE REMEDIAL ACTION WORK PLAN THAT WERE NOT COLLECTED BECAUSE THESE SAMPLES WERE LOCATED IN AREAS WHICH WERE BACKFILLED DURING SITE IMPROVEMENT ACTIVITIES OR WERE LOCATED OFF-SITE. THESE SAMPLES ARE: A1SED-001, D-001, D-004, D-016, M-037, M-038, NGP-002, NGP-004, TNT-010, TNT-011, TNT-012, TNT-013, MIS-049, MIS-058.
6. SOLID BROWN LINES REPRESENT DRY STREAM SEDIMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
7. DASHED BROWN LINES REPRESENT STREAM SEDIMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
8. SITE INVESTIGATION SEDIMENT SAMPLE LOCATIONS DENOTED IN PURPLE ARE INCLUDED IN VOLUME B - SOIL REMEDIAL INVESTIGATION. THESE SAMPLES ARE NO LONGER CONSIDERED AS SEDIMENTS AND ARE MORE PROPERLY DEFINED AS SOILS.
9. PLAN ADAPTED FROM DRAWING TITLED "SEDIMENT - SITE WIDE AREAL EXTENT OF EXCEEDANCES" AS PRESENTED IN THE REMEDIAL INVESTIGATION REPORT, VOLUME D - SEDIMENT FIGURE D-1 PRODUCED BY MWH AMERICAS, INC..

NO.	DATE	REVISION	INIT.

1"=250' (250 0 250 500)

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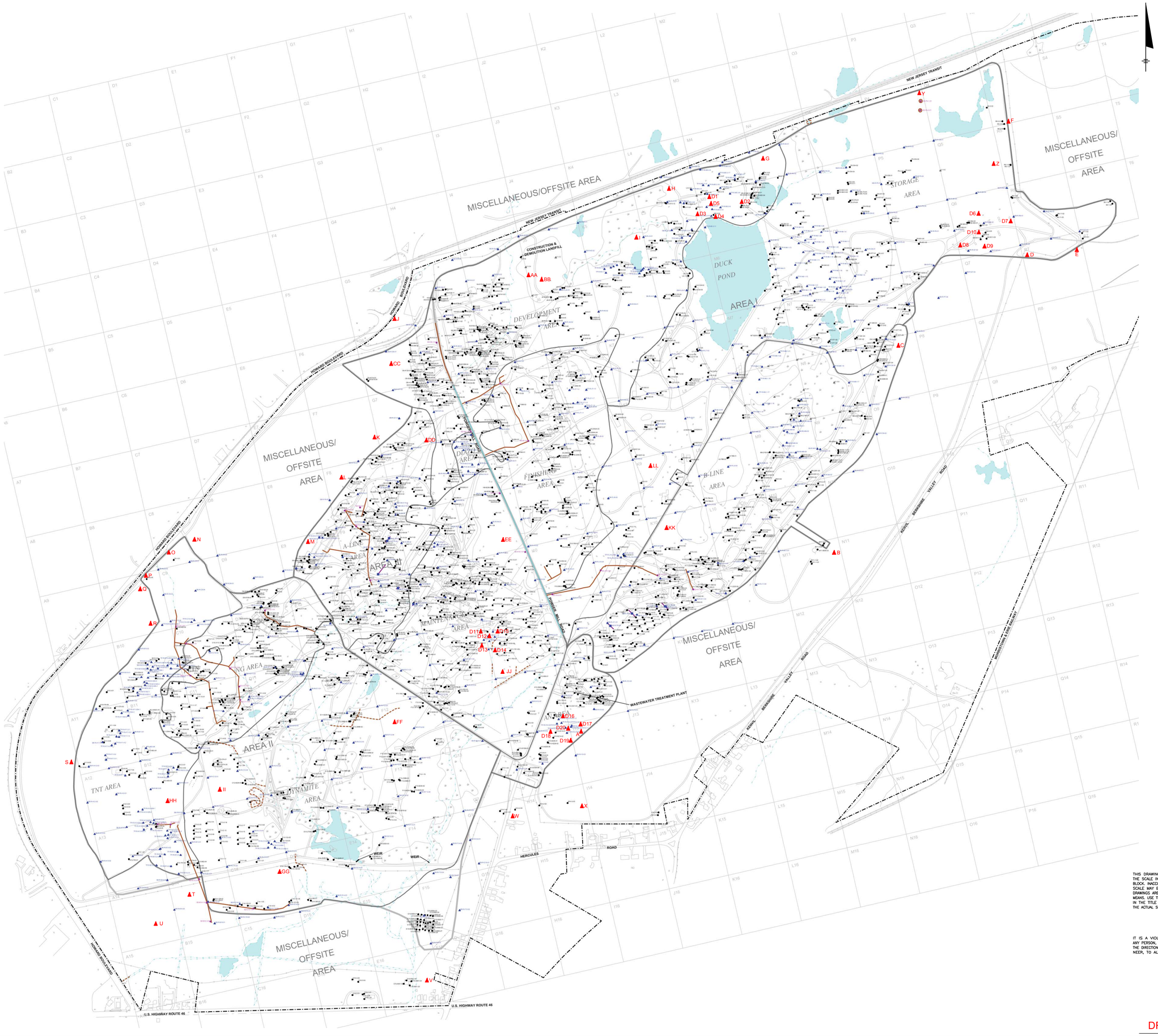
PHASE II REMEDIAL INVESTIGATION WORK PLAN
HERCULES INCORPORATED
KENVIL WORKS FACILITY

SITE PLAN WITH PROPOSED SEDIMENT SAMPLE LOCATIONS

DRAFT

IN CHARGE OF MSK	FILE NO. 2420.46424-03	FIGURE 3
DESIGNED BY JAL CHECKED BY JAL	DATE MAY 2013	
DRAWN BY RJD		

May 09, 2013 - 1:38pm



LEGEND:

- PROPOSED PHASE II RI SOIL BORING LOCATION (APPROX)
- RI SOIL SAMPLE LOCATION
- TRENCH SAMPLE LOCATION
- SI SOIL SAMPLE LOCATION
- FORMER SI SEDIMENT SAMPLE LOCATION THAT IS CURRENTLY CONSIDERED A SOIL SAMPLE LOCATON (REFER TO NOTE 7)
- PROPOSED RI SOIL SAMPLE THAT WAS NOT COLLECTED
- DRY STREAM SEGMENT, AREA , OR FORMER DITCH (REFER TO NOTE 5)
- STREAM SEGMENT OR AREA WITHOUT SUFFICIENT WATER PRESENT (REFER TO NOTE 6)
- TRENCH FOR HYDRAULIC OIL INVESTIGATION
- WEIR
- PROPERTY LINE
- WATER FEATURE
- REMEDIAL AREA
- FORMER OPERATIONAL AREA
- UTILITY POLE
- LIGHT POLE
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3. SOIL REMEDIAL INVESTIGATION SAMPLE LOCATIONS WERE SELECTED BASED ON ANALYTICAL RESULTS PRESENTED IN THE SOILS SITE INCESTIGATION(SOILS-SI) REPORT (MWH, 2004) AND A UNIFORM GRID SYSTEM
4. SEDIMENT SAMPLES COLLECTED FROM FORMER DRAINAGE AREAS ARE NO LONGER CONSIDERED AS SEDIMENTS AND ARE NOW DEFINED AS SOILS. TWENTY-NINE SI SEDIMENT SAMPLES WERE RE-DEFINED AS SOIL SAMPLES IN THE REMEDIAL INVESTIGATION REPORT (RIR). REFER TO TEXT (VOLUME B) FOR MORE DETAILED DEFINITION.
5. SOLID BROWN LINES REPRESENT DRY STREAM SEDIMENTS OR FORMER DITCHES THAT NO LONGER CONVEY WATER SINCE MANUFACTURING OPERATIONS HAVE CEASED. THESE AREAS ARE NO LONGER CONSIDERED SURFACE WATER OR SEDIMENT BODIES AND ARE CONSIDERED SOIL IN THE REMEDIAL INVESTIGATION REPORT.
6. DASHED BROWN LINES REPRESENT STREAM SEDIMENTS OR AREAS WITHOUT SUFFICIENT WATER PRESENT FOR SURFACE WATER SAMPLE COLLECTION, HOWEVER SATURATED SEDIMENTS ARE PRESENT.
7. SITE INVESTIGATION SEDIMENT SAMPLE LOCATIONS DENOTED IN PURPLE ARE INCLUDED IN VOLUME B AND HAVE BEEN EXCLUDED FROM VOLUME D - SEDIMENT REMEDIAL INVESTIGATION. THESE SAMPLES ARE NO LONGER CONSIDERED AS SEDIMENTS AND ARE MORE PROPERLY DEFINED AS SOILS.
8. PLAN ADAPTED FROM DRAWING TITLED "SOIL - SAMPLE LOCATION MAP" AS PRESENTED IN THE REMEDIAL INVESTIGATION REPORT, VOLUME B - SOILS FIGURE B-1 PRODUCED BY MWH AMERICAS, INC.

NO.	DATE	REVISION	INIT.

1"=250' 250 0 250 500

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PHASE II REMEDIAL INVESTIGATION WORK PLAN HERCULES INCORPORATED KENVIL WORKS FACILITY

SITE PLAN WITH PROPOSED SOIL BORING LOCATIONS

IN CHARGE OF MSK
DESIGNED BY JAL CHECKED BY JAL
DRAWN BY RJD

FILE NO. 2420.46424-04
DATE MAY 2013
FIGURE 4

DRAFT

C:\Users\vetlin\appdata\local\temp\AcPublish_4684\4642404-Figure 4.dwg

Figure 5
Proposed Off-Site Groundwater Sample Locations



Appendix C

Photographs of Select Sediment Sample Locations

APPENDIX C – PHOTOGRAPHIC LOG

CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
1	11/5/13

DESCRIPTION

Looking northeast at sample location SW-R2-G-12-3, situated approximately 10 ft downstream of a culverted stormwater outfall. The culvert conveyed water into a small, deep depression surrounded by tall grasses.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
2	11/5/13

DESCRIPTION

Looking into the deeply eroded channel where locations SW-R2-E-11-1 and SW-R2-F-11-1 were proposed. At the time of the field investigation, no surface water was present at either location.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
3	11/5/13

DESCRIPTION

Looking down into the center of a deeply eroded channel where locations SW-R2-E-11-1 and SW-R2-F-11-1 were proposed. Upon investigation, the channel's substrate appeared to be composed largely of fill and silt, with some cobbles.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
4	11/5/13

DESCRIPTION

There was no surface water present at sample location SW-R2-G-12-2. The soils in the area were dry, suggesting that surface water flow in the immediate area ceased long before the sampling effort.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
5	11/5/13

DESCRIPTION

Looking southwest from location SW-R2-G-12-2. The entire area surrounding this proposed sample location was devoid of surface water at the time of the field visit.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
6	11/4/13

DESCRIPTION

Looking northeast at sample location SW-R2-L-5-1. A wide, channeled depression that once conveyed overland flow towards the east side of Duck Pond, no surface water was present at this location at the time of the sampling effort.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
7	11/4/13

DESCRIPTION

Looking southeast across Duck Pond, near sampling location SW-R2-L-5-2. The sample was collected in approximately 6 inches of water in the mucky shallows pictured.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
8	11/6/13

DESCRIPTION

Looking at sample location SW-R2-E-13-1, which was proposed in a lowland depression overgrown with cattails, moss, and tussock sedges. No surface water was present at the time of the site visit.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
9	11/6/13

DESCRIPTION

Looking north near sample locations SW-R2-D-12-1 and SW-R2-D-12-3, which were positioned just downstream of a pool emanating from a sheet metal culvert. The channel was mostly shallow, with much organic debris.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
10	11/6/13

DESCRIPTION

Looking down at sample location SW-R2-D-12-3. Organic debris including full logs disrupted flow of this small stream channel.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
11	11/5/13

DESCRIPTION

Looking south across the area from which sample SW-R2-N-5-1 was collected, a mucky swamp area with deep standing water.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
12	11/5/13

DESCRIPTION

Looking northeast at sample location SW-R2-E16-3, which was situated alongside a stream flowing south and off of the Site.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
13	11/6/13

DESCRIPTION

There was no surface water present at sample location SW-R2-C-11-1, a transitional area situated along the edge of a thick stand of Common Reed.



CLIENT NAME:	SITE LOCATION:	PROJECT NO.
Hercules Incorporated	Kenvil, New Jersey	2420|50725

PHOTO NO.	DATE:
14	11/6/13

DESCRIPTION

Looking southwest at sample location SW-R2-B-15-2, which was positioned on the northern edge of a large bog. The water at this location was full of well-degraded organic content.



Appendix D

Laboratory Data Packages

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2425 New Holland Pike, Lancaster, PA 17601 · 717-656-2300 · Fax: 717-656-2681 · www.LancasterLabs.com

Type I Data Package

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

Project: Hercules Phase II R.I.
Sediment, Surface Water and Water Samples
Collected on 11/04/13

SDG# KVM03

GROUP	SAMPLE NUMBERS
1431224	7263051-7263060

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/09/2013**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Wendy Kozma at (717) 556-7257.

2425 New Holland Pike, Lancaster, PA 17601 · 717-656-2300 · Fax: 717-656-2681 · www.LancasterLabs.com

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b. QC Summary 2332
c. Raw Data 2337
12. Moisture Data 2348

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Sample Reference List for SDG Number KVM03
with a Data Package Type of I

06716 - Ashland, Inc.

Project: Hercules Phase II R.I.

Lab Sample Number	Lab Sample Code	Client Sample Description
7263051	FFHEC	SW-R2-L-5-2 Grab Surfacewater Sample
7263052	WHERC	SD-R2-L-5-01D Grab Sediment Sample
7263053	XHERC	SD-R2-L-5-02 D Grab Sediment Sample
7263054	PHERC	SD-R2-K-5-2 Grab Sediment Sample
7263055	OHERC	SD-R2-K-5-1 Grab Sediment Sample
7263056	DDHER	SW-R2-M-5-1 Grab Surfacewater Sample
7263057	EEHER	SW-R2-M-5-2 Grab Surfacewater Sample
7263058	F1HER	DUP-01 Grab Surfacewater Sample
7263059	FB1HE	FB-01_11042013 Grab Water Sample
7263060	FB2HE	FB-02_11042013 Grab Water Sample

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Sample pH Log

SDG: KVM03

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7263051	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263051	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263056	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263056	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263057	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263057	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263058	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263058	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263059	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263059	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263060	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263060	091A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7263060	091B	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

00159 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A, September 1994

05705 WW/TL SW 846 ICP Digest (tot)

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

05711 SW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A Modified, September 1994.

01643 Aluminum
01743 Aluminum
06944 Antimony
06935 Arsenic
07046 Barium
06946 Barium
07047 Beryllium
06947 Beryllium
07049 Cadmium
06949 Cadmium
01750 Calcium
01650 Calcium
07051 Chromium
06951 Chromium
06952 Cobalt
07052 Cobalt
07053 Copper
06953 Copper
01654 Iron
01754 Iron
06955 Lead

01657 Magnesium
01757 Magnesium
07058 Manganese
06958 Manganese
07061 Nickel
06961 Nickel
01662 Potassium
01762 Potassium
07036 Selenium
06936 Selenium
07066 Silver
06966 Silver
01667 Sodium
01767 Sodium
06925 Thallium
06971 Vanadium
07071 Vanadium
07072 Zinc
06972 Zinc

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010B, December 1996.

06024 Antimony
06025 Arsenic
06035 Lead
06045 Thallium

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020, September 1994.

06050 ICP/MS SW-846 Water Digest

The sample is digested with nitric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A Modified, July 1992

05708 SW SW846 ICP/ICP MS Digest

The sample is digested with nitric acid, hydrochloric acid and hydrogen peroxide.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3050B, December 1996

06915 Nitroaromatics/Amines Wat Ext

The sample is passed through a Porapak RDX cartridge. The cartridge is then eluted with acetonitrile and the extract is brought to 5 mL. The extract is diluted to 10 mL using a calcium chloride solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06916 Nitroaromatics/Amines in Water

The sample is extracted into acetonitrile using SPE on a Porapak RDX cartridge. The extract is analyzed using High Performance Liquid Chromatography with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06917 Nitroaromatics/Amines Sol Ext

The sample is extracted with acetonitrile in a vial using a chilled ultrasonic bath. The vial is centrifuged and the acetonitrile removed. The extract is brought to volume with calcium chloride solution and filtered prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06918 Nitroaromatics/Amines in Solid

The sample is extracted into acetonitrile using an ultrasonic bath. The extract is analyzed using High Performance Liquid Chromatography (HPLC) with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

00813 BNA Water Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, December 1996

10724 PAH 8270 (microwave)
10727 TCL 8270 (microwave)
04678 TCL SW846 Semivolatiles/Waters

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270C, December 1996

10809 BNA Soil Microwave
10814 BNA Soil Microwave PAH

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546, Revision 0, February 2007.

00383 TOC by Lloyd Kahn

Total organic carbon is determined by acidifying a sample aliquot and heating it to remove any inorganic carbon. The sample is then heated to 900oC for combustion of the remaining organic carbon. The resulting carbon dioxide from the organic carbon is detected by a nondispersive infrared detector that has been calibrated to directly display the mass of carbon dioxide detected. The mass is proportional to the mass of total organic carbon in the sample.

Reference: Lloyd Kahn (modified)

00273 Total Organic Carbon

TOC is determined by first removing the inorganic carbon from a sample. The remaining carbon is then oxidized to carbon dioxide, which is measured by a nondispersive infrared detector. The mass of carbon dioxide detected is proportional to the mass of TOC in the sample.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 5310 C-2000

12152 pH

The activity of hydrogen ions in the sample is measured using a glass electrode and a reference electrode.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 4500 H/B-2000

12147 Total Hardness

The concentration of calcium and magnesium ions is determined by titration with EDTA to a blue endpoint, in the presence of Eriochrome Black T indicator. The result is expressed in mg/L calcium carbonate.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2340 C-1997

00111 Moisture

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G-1997

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

November 25, 2013

Project: Hercules Phase II R.I.

Submittal Date: 11/04/2013
Group Number: 1431224
SDG: KVM03
PO Number: 4501686843
Release Number: KENVIL
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
SW-R2-L-5-2 Grab Surfacewater Sample	7263051
SD-R2-L-5-01D Grab Sediment Sample	7263052
SD-R2-L-5-02 D Grab Sediment Sample	7263053
SD-R2-K-5-2 Grab Sediment Sample	7263054
SD-R2-K-5-1 Grab Sediment Sample	7263055
SW-R2-M-5-1 Grab Surfacewater Sample	7263056
SW-R2-M-5-2 Grab Surfacewater Sample	7263057
DUP-01 Grab Surfacewater Sample	7263058
FB-01_11042013 Grab Water Sample	7263059
FB-02_11042013 Grab Water Sample	7263060
Trip Blank Grab Water Sample	7263061

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Ashland	Attn: Ed Meeks
ELECTRONIC COPY TO	OBG	Attn: John Lucey

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: SW-R2-L-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263051
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 11:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FFHEC SDG#: KVM03-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-L-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263051
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 11:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FFHEC SDG#: KVM03-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-L-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263051
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 11:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FFHEC SDG#: KVM03-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	474		82.8	200	1
07046	Barium	7440-39-3	33.7		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	9,140		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	5.9	J	2.7	10.0	1
01754	Iron	7439-89-6	838		43.0	200	1
01757	Magnesium	7439-95-4	3,770		16.7	100	1
07058	Manganese	7439-96-5	23.0		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	820		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	5,490		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	21.8		2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	0.34	J	0.34	1.0	1
06025	Arsenic	7440-38-2	1.9	J	0.78	2.0	1
06035	Lead	7439-92-1	14.0		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	38,700		3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2		0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-L-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263051
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 11:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FFHEC SDG#: KVM03-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13310WAG026	11/08/2013 11:53	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13310WAG026	11/07/2013 09:20	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 00:50	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:20	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 02:49	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 18:49	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 18:49	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 18:49	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 18:49	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:19	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 00:00	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13309003103A	11/05/2013 18:19	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FFHEC

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7263051
Sample wt/vol: 244 (g/mL) mL Lab File ID: hk0264.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.723	7	J
2.		Unknown	18.822	4	J
3.		Unknown	22.004	6	J
4.					
5.	SVOCTIC	Total SVOC TICs		17	J
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page 1 of 1

FORM I SV-1

Sample Description: SD-R2-L-5-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263052
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 12:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

WHERC SDG#: KVM03-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			mg/kg		mg/kg	mg/kg	
10727	Acenaphthene	83-32-9	N.D.		0.18	0.93	20
10727	Acenaphthylene	208-96-8	N.D.		0.18	0.93	20
10727	Acetophenone	98-86-2	N.D.		0.92	1.8	20
10727	Anthracene	120-12-7	N.D.		0.18	0.93	20
10727	Atrazine	1912-24-9	N.D.		1.8	9.2	20
10727	Benzaldehyde	100-52-7	N.D.		3.7	9.2	20
10727	Benzo(a)anthracene	56-55-3	N.D.		0.18	0.93	20
10727	Benzo(a)pyrene	50-32-8	0.27	J	0.18	0.93	20
10727	Benzo(b)fluoranthene	205-99-2	N.D.		0.18	0.93	20
10727	Benzo(g,h,i)perylene	191-24-2	N.D.		0.18	0.93	20
10727	Benzo(k)fluoranthene	207-08-9	N.D.		0.18	0.93	20
10727	1,1'-Biphenyl	92-52-4	N.D.		0.92	1.8	20
10727	4-Bromophenyl-phenylether	101-55-3	N.D.		0.92	1.8	20
10727	Butylbenzylphthalate	85-68-7	N.D.		3.7	9.2	20
10727	Di-n-butylphthalate	84-74-2	N.D.		3.7	9.2	20
10727	Caprolactam	105-60-2	N.D.		1.8	9.2	20
10727	Carbazole	86-74-8	N.D.		0.92	1.8	20
10727	4-Chloro-3-methylphenol	59-50-7	N.D.		0.92	1.8	20
10727	4-Chloroaniline	106-47-8	N.D.		0.92	1.8	20
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.		0.92	1.8	20
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.		0.92	1.8	20
10727	2-Chloronaphthalene	91-58-7	N.D.		0.38	1.8	20
10727	2-Chlorophenol	95-57-8	N.D.		0.92	1.8	20
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.		0.92	1.8	20
10727	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		0.92	1.8	20
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10727	Chrysene	218-01-9	N.D.		0.18	0.93	20
10727	Dibenz(a,h)anthracene	53-70-3	N.D.		0.18	0.93	20
10727	Dibenzofuran	132-64-9	N.D.		0.92	1.8	20
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.		5.5	18	20
10727	2,4-Dichlorophenol	120-83-2	N.D.		0.92	1.8	20
10727	Diethylphthalate	84-66-2	N.D.		3.7	9.2	20
10727	2,4-Dimethylphenol	105-67-9	N.D.		0.92	1.8	20
10727	Dimethylphthalate	131-11-3	N.D.		3.7	9.2	20
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		9.2	27	20
10727	2,4-Dinitrophenol	51-28-5	N.D.		16	55	20
10727	2,4-Dinitrotoluene	121-14-2	N.D.		3.7	9.2	20
10727	2,6-Dinitrotoluene	606-20-2	N.D.		0.92	1.8	20
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		3.7	9.3	20
10727	Fluoranthene	206-44-0	N.D.		0.18	0.93	20
10727	Fluorene	86-73-7	N.D.		0.18	0.93	20
10727	Hexachlorobenzene	118-74-1	N.D.		0.18	0.93	20
10727	Hexachlorobutadiene	87-68-3	N.D.		0.92	1.8	20
10727	Hexachlorocyclopentadiene	77-47-4	N.D.		9.2	27	20
10727	Hexachloroethane	67-72-1	N.D.		1.8	9.2	20
10727	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.18	0.93	20
10727	Isophorone	78-59-1	N.D.		0.92	1.8	20
10727	2-Methylnaphthalene	91-57-6	N.D.		0.18	0.93	20

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263052
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 12:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

WHERC SDG#: KVM03-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		mg/kg	mg/kg	mg/kg	
10727	2-Methylphenol	95-48-7	N.D.	0.92	1.8	20
10727	4-Methylphenol	106-44-5	N.D.	0.92	1.8	20
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10727	Naphthalene	91-20-3	N.D.	0.18	0.93	20
10727	2-Nitroaniline	88-74-4	N.D.	0.92	1.8	20
10727	3-Nitroaniline	99-09-2	N.D.	3.7	9.2	20
10727	4-Nitroaniline	100-01-6	N.D.	3.7	9.2	20
10727	Nitrobenzene	98-95-3	N.D.	0.92	1.8	20
10727	2-Nitrophenol	88-75-5	N.D.	0.92	1.8	20
10727	4-Nitrophenol	100-02-7	N.D.	9.2	27	20
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.92	1.8	20
10727	N-Nitrosodiphenylamine	86-30-6	3.8	0.92	1.8	20
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10727	Di-n-octylphthalate	117-84-0	N.D.	3.7	9.2	20
10727	Pentachlorophenol	87-86-5	N.D.	1.8	9.3	20
10727	Phenanthrene	85-01-8	N.D.	0.18	0.93	20
10727	Phenol	108-95-2	N.D.	0.92	1.8	20
10727	Pyrene	129-00-0	N.D.	0.18	0.93	20
10727	2,4,5-Trichlorophenol	95-95-4	N.D.	0.92	1.8	20
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	0.92	1.8	20
Reporting limits were raised due to interference from the sample matrix.						

00893 Semivolatile Library Search

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Explosives	**SW-846 8330**		mg/kg	mg/kg	mg/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.42	0.84	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.28	0.84	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.	0.28	0.84	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.	0.28	0.84	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.	0.28	0.84	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.	0.28	0.84	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.	0.28	0.84	1
06918	HMX	2691-41-0	N.D.	0.70	2.1	1
06918	Nitrobenzene	98-95-3	N.D.	0.28	0.84	1
06918	Nitroglycerin	55-63-0	28	5.6	17	1
06918	1-Nitronaphthalene	86-57-7	N.D.	0.28	0.84	1
06918	2-Nitrotoluene	88-72-2	N.D.	0.56	0.84	1
06918	3-Nitrotoluene	99-08-1	N.D.	0.70	0.84	1
06918	4-Nitrotoluene	99-99-0	N.D.	0.56	0.84	1
06918	PETN	78-11-5	N.D.	5.6	17	1
06918	RDX	121-82-4	N.D.	0.35	0.84	1
06918	Tetryl	479-45-8	N.D.	0.43	0.84	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.28	0.84	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.28	0.84	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263052
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 12:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

WHERC SDG#: KVM03-02

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	7,110		19.9	55.2	1
06944	Antimony	7440-36-0	N.D.		2.04	5.52	1
06935	Arsenic	7440-38-2	3.40	J	1.93	5.52	1
06946	Barium	7440-39-3	261		0.0910	1.38	1
06947	Beryllium	7440-41-7	0.416	J	0.185	1.38	1
06949	Cadmium	7440-43-9	0.408	J	0.210	1.38	1
01650	Calcium	7440-70-2	1,260		9.21	55.2	1
06951	Chromium	7440-47-3	9.12		0.441	4.14	1
06952	Cobalt	7440-48-4	1.66		0.273	1.38	1
06953	Copper	7440-50-8	41.7		0.800	2.76	1
01654	Iron	7439-89-6	5,780		9.98	55.2	1
06955	Lead	7439-92-1	162		1.38	4.14	1
01657	Magnesium	7439-95-4	926		4.61	27.6	1
06958	Manganese	7439-96-5	50.6		0.229	1.38	1
06961	Nickel	7440-02-0	6.27		0.359	2.76	1
01662	Potassium	7440-09-7	343		23.0	138	1
06936	Selenium	7782-49-2	N.D.		2.21	5.52	1
06966	Silver	7440-22-4	N.D.		0.469	1.38	1
01667	Sodium	7440-23-5	64.1	J	46.1	276	1
06925	Thallium	7440-28-0	N.D.		1.43	8.27	1
06971	Vanadium	7440-62-2	11.2		0.359	1.38	1
06972	Zinc	7440-66-6	235		0.552	5.52	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.176	J	0.0276	0.276	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	60,300		3,400	10,200	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	64.1		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10727	TCL 8270 (microwave)	SW-846 8270C	1	13313SLC026	11/14/2013 10:04	Brian K Graham	20
10809	BNA Soil Microwave	SW-846 3546	1	13313SLC026	11/11/2013 06:15	Roman Kuropatkin	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263052
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 12:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

WHERC SDG#: KVM03-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 12:44	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06944	Antimony	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06935	Arsenic	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06946	Barium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06947	Beryllium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06949	Cadmium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06952	Cobalt	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06953	Copper	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06961	Nickel	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06936	Selenium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06966	Silver	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06925	Thallium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06971	Vanadium	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	133095708002	11/06/2013 22:30	John W Yanzuk II	1
00159	Mercury	SW-846 7471A	1	133095711001	11/07/2013 13:26	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133095708002	11/06/2013 09:55	Denise K Conners	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133095711001	11/06/2013 13:00	Denise K Conners	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 00:35	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13312820010B	11/08/2013 22:14	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

WHERC

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 7263052
Sample wt/vol: 30.4 (g/mL) g Lab File ID: gk0570.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: 64 Decanted: (Y/N) Date Extracted: 11/11/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/13
Injection Volume: 1 (uL) Dilution Factor: 20
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 5 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.024	9.5	J
2.		Unknown	3.955	4.1	J
3.		Unknown	10.063	36	J
4.		Unknown	13.823	11	J
5.		Unknown	14.529	7.5	J
6.					
7.	SVOCTIC	Total SVOC TICs		68	J
8.					
9.					
10.					
11.					
12.					
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page 1 of 1

FORM I SV-1

Sample Description: SD-R2-L-5-02 D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263053
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 13:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

XHERC SDG#: KVM03-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			mg/kg		mg/kg	mg/kg	
10727	Acenaphthene	83-32-9	N.D.		0.12	0.61	20
10727	Acenaphthylene	208-96-8	N.D.		0.12	0.61	20
10727	Acetophenone	98-86-2	N.D.		0.59	1.2	20
10727	Anthracene	120-12-7	N.D.		0.12	0.61	20
10727	Atrazine	1912-24-9	N.D.		1.2	5.9	20
10727	Benzaldehyde	100-52-7	N.D.		2.4	5.9	20
10727	Benzo(a)anthracene	56-55-3	N.D.		0.12	0.61	20
10727	Benzo(a)pyrene	50-32-8	0.13	J	0.12	0.61	20
10727	Benzo(b)fluoranthene	205-99-2	0.14	J	0.12	0.61	20
10727	Benzo(g,h,i)perylene	191-24-2	0.16	J	0.12	0.61	20
10727	Benzo(k)fluoranthene	207-08-9	0.13	J	0.12	0.61	20
10727	1,1'-Biphenyl	92-52-4	N.D.		0.59	1.2	20
10727	4-Bromophenyl-phenylether	101-55-3	N.D.		0.59	1.2	20
10727	Butylbenzylphthalate	85-68-7	N.D.		2.4	5.9	20
10727	Di-n-butylphthalate	84-74-2	N.D.		2.4	5.9	20
10727	Caprolactam	105-60-2	N.D.		1.2	5.9	20
10727	Carbazole	86-74-8	N.D.		0.59	1.2	20
10727	4-Chloro-3-methylphenol	59-50-7	N.D.		0.59	1.2	20
10727	4-Chloroaniline	106-47-8	N.D.		0.59	1.2	20
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.		0.59	1.2	20
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.		0.59	1.2	20
10727	2-Chloronaphthalene	91-58-7	N.D.		0.25	1.2	20
10727	2-Chlorophenol	95-57-8	N.D.		0.59	1.2	20
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.		0.59	1.2	20
10727	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		0.59	1.2	20
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10727	Chrysene	218-01-9	0.13	J	0.12	0.61	20
10727	Dibenz(a,h)anthracene	53-70-3	0.18	J	0.12	0.61	20
10727	Dibenzofuran	132-64-9	N.D.		0.59	1.2	20
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.		3.6	12	20
10727	2,4-Dichlorophenol	120-83-2	N.D.		0.59	1.2	20
10727	Diethylphthalate	84-66-2	N.D.		2.4	5.9	20
10727	2,4-Dimethylphenol	105-67-9	N.D.		0.59	1.2	20
10727	Dimethylphthalate	131-11-3	N.D.		2.4	5.9	20
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		5.9	18	20
10727	2,4-Dinitrophenol	51-28-5	N.D.		11	36	20
10727	2,4-Dinitrotoluene	121-14-2	N.D.		2.4	5.9	20
10727	2,6-Dinitrotoluene	606-20-2	N.D.		0.59	1.2	20
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		2.4	6.1	20
10727	Fluoranthene	206-44-0	N.D.		0.12	0.61	20
10727	Fluorene	86-73-7	N.D.		0.12	0.61	20
10727	Hexachlorobenzene	118-74-1	N.D.		0.12	0.61	20
10727	Hexachlorobutadiene	87-68-3	N.D.		0.59	1.2	20
10727	Hexachlorocyclopentadiene	77-47-4	N.D.		5.9	18	20
10727	Hexachloroethane	67-72-1	N.D.		1.2	5.9	20
10727	Indeno(1,2,3-cd)pyrene	193-39-5	0.20	J	0.12	0.61	20
10727	Isophorone	78-59-1	N.D.		0.59	1.2	20
10727	2-Methylnaphthalene	91-57-6	N.D.		0.12	0.61	20

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-02 D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263053
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 13:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

XHERC SDG#: KVM03-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**	**mg/kg**	**mg/kg**	
10727	2-Methylphenol	95-48-7	N.D.	0.59	1.2	20
10727	4-Methylphenol	106-44-5	N.D.	0.59	1.2	20
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10727	Naphthalene	91-20-3	N.D.	0.12	0.61	20
10727	2-Nitroaniline	88-74-4	N.D.	0.59	1.2	20
10727	3-Nitroaniline	99-09-2	N.D.	2.4	5.9	20
10727	4-Nitroaniline	100-01-6	N.D.	2.4	5.9	20
10727	Nitrobenzene	98-95-3	N.D.	0.59	1.2	20
10727	2-Nitrophenol	88-75-5	N.D.	0.59	1.2	20
10727	4-Nitrophenol	100-02-7	N.D.	5.9	18	20
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.59	1.2	20
10727	N-Nitrosodiphenylamine	86-30-6	1.2 J	0.59	1.2	20
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10727	Di-n-octylphthalate	117-84-0	N.D.	2.4	5.9	20
10727	Pentachlorophenol	87-86-5	N.D.	1.2	6.1	20
10727	Phenanthrene	85-01-8	N.D.	0.12	0.61	20
10727	Phenol	108-95-2	N.D.	0.59	1.2	20
10727	Pyrene	129-00-0	N.D.	0.12	0.61	20
10727	2,4,5-Trichlorophenol	95-95-4	N.D.	0.59	1.2	20
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	0.59	1.2	20
Reporting limits were raised due to interference from the sample matrix.						

00893 Semivolatile Library Search

The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

Explosives	**SW-846 8330**		**mg/kg**	**mg/kg**	**mg/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.27	0.54	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.18	0.54	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.	0.18	0.54	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.	0.18	0.54	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.	0.18	0.54	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.	0.18	0.54	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.	0.18	0.54	1
06918	HMX	2691-41-0	N.D.	0.45	1.3	1
06918	Nitrobenzene	98-95-3	N.D.	0.18	0.54	1
06918	Nitroglycerin	55-63-0	21	3.6	11	1
06918	1-Nitronaphthalene	86-57-7	N.D.	0.18	0.54	1
06918	2-Nitrotoluene	88-72-2	N.D.	0.36	0.54	1
06918	3-Nitrotoluene	99-08-1	N.D.	0.45	0.54	1
06918	4-Nitrotoluene	99-99-0	N.D.	0.36	0.54	1
06918	PETN	78-11-5	N.D.	3.6	11	1
06918	RDX	121-82-4	N.D.	0.22	0.54	1
06918	Tetryl	479-45-8	N.D.	0.27	0.54	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.18	0.54	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.18	0.54	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-02 D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263053
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 13:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

XHERC SDG#: KVM03-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	7,030	12.8	35.5	1
06944	Antimony	7440-36-0	N.D.	1.31	3.55	1
06935	Arsenic	7440-38-2	5.29	1.24	3.55	1
06946	Barium	7440-39-3	101	0.0586	0.887	1
06947	Beryllium	7440-41-7	0.463 J	0.119	0.887	1
06949	Cadmium	7440-43-9	0.366 J	0.135	0.887	1
01650	Calcium	7440-70-2	3,720	5.93	35.5	1
06951	Chromium	7440-47-3	13.9	0.284	2.66	1
06952	Cobalt	7440-48-4	2.64	0.176	0.887	1
06953	Copper	7440-50-8	37.0	0.515	1.77	1
01654	Iron	7439-89-6	11,000	6.42	35.5	1
06955	Lead	7439-92-1	259	0.887	2.66	1
01657	Magnesium	7439-95-4	1,890	2.96	17.7	1
06958	Manganese	7439-96-5	91.3	0.147	0.887	1
06961	Nickel	7440-02-0	11.9	0.231	1.77	1
01662	Potassium	7440-09-7	665	14.8	88.7	1
06936	Selenium	7782-49-2	N.D.	1.42	3.55	1
06966	Silver	7440-22-4	N.D.	0.302	0.887	1
01667	Sodium	7440-23-5	188	29.6	177	1
06925	Thallium	7440-28-0	N.D.	0.923	5.32	1
06971	Vanadium	7440-62-2	21.4	0.231	0.887	1
06972	Zinc	7440-66-6	263	0.355	3.55	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.254	0.0175	0.175	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	38,700	2,700	8,110	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	44.2	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10727	TCL 8270 (microwave)	SW-846 8270C	1	13313SLC026	11/14/2013 10:30	Brian K Graham	20
10809	BNA Soil Microwave	SW-846 3546	1	13313SLC026	11/11/2013 06:15	Roman Kuropatkin	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-L-5-02 D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263053
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 13:30 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

XHERC SDG#: KVM03-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 14:51	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06944	Antimony	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06935	Arsenic	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06946	Barium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06947	Beryllium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06949	Cadmium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06952	Cobalt	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06953	Copper	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06961	Nickel	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06936	Selenium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06966	Silver	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06925	Thallium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06971	Vanadium	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	133095708002	11/06/2013 22:34	John W Yanzuk II	1
00159	Mercury	SW-846 7471A	1	133095711001	11/07/2013 13:28	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133095708002	11/06/2013 09:55	Denise K Conners	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133095711001	11/06/2013 13:00	Denise K Conners	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 02:08	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13312820010B	11/08/2013 22:14	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

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EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

XHERC

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 7263053
Sample wt/vol: 30.2 (g/mL) g Lab File ID: gk0571.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: 44 Decanted: (Y/N) Date Extracted: 11/11/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/13
Injection Volume: 1 (uL) Dilution Factor: 20
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 5 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.378	6.1	J
2.		Unknown	10.063	24	J
3.		Unknown	12.133	66	J
4.		Unknown	14.144	4.7	J
5.		Unknown	14.578	4.9	J
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7.	SVOCTIC	Total SVOC TICs		100	J
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FORM I SV-1

Sample Description: SD-R2-K-5-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263054
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:20 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

PHERC SDG#: KVM03-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	**mg/kg**	
10724	Acenaphthene	83-32-9	N.D.		0.087	0.45	1
10724	Acenaphthylene	208-96-8	N.D.		0.087	0.45	1
10724	Anthracene	120-12-7	N.D.		0.087	0.45	1
10724	Benzo(a)anthracene	56-55-3	N.D.		0.087	0.45	1
10724	Benzo(a)pyrene	50-32-8	0.089	J	0.087	0.45	1
10724	Benzo(b)fluoranthene	205-99-2	0.21	J	0.087	0.45	1
10724	Benzo(g,h,i)perylene	191-24-2	0.10	J	0.087	0.45	1
10724	Benzo(k)fluoranthene	207-08-9	0.095	J	0.087	0.45	1
10724	Chrysene	218-01-9	0.24	J	0.087	0.45	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		0.087	0.45	1
10724	Fluoranthene	206-44-0	0.46		0.087	0.45	1
10724	Fluorene	86-73-7	N.D.		0.087	0.45	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.087	0.45	1
10724	1-Methylnaphthalene	90-12-0	N.D.		0.087	0.45	1
10724	2-Methylnaphthalene	91-57-6	N.D.		0.087	0.45	1
10724	Naphthalene	91-20-3	N.D.		0.087	0.45	1
10724	Phenanthrene	85-01-8	0.19	J	0.087	0.45	1
10724	Pyrene	129-00-0	0.27	J	0.087	0.45	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**mg/kg**		**mg/kg**	**mg/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		0.66	1.3	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		0.44	1.3	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		0.44	1.3	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		0.44	1.3	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		0.44	1.3	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		0.44	1.3	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		0.44	1.3	1
06918	HMX	2691-41-0	N.D.		1.1	3.3	1
06918	Nitrobenzene	98-95-3	N.D.		0.44	1.3	1
06918	Nitroglycerin	55-63-0	N.D.		8.7	26	1
06918	1-Nitronaphthalene	86-57-7	N.D.		0.44	1.3	1
06918	2-Nitrotoluene	88-72-2	N.D.		0.87	1.3	1
06918	3-Nitrotoluene	99-08-1	N.D.		1.1	1.3	1
06918	4-Nitrotoluene	99-99-0	N.D.		0.87	1.3	1
06918	PETN	78-11-5	N.D.		8.7	26	1
06918	RDX	121-82-4	N.D.		0.55	1.3	1
06918	Tetryl	479-45-8	N.D.		0.67	1.3	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.44	1.3	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.44	1.3	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	23,100		30.3	84.0	1
06944	Antimony	7440-36-0	N.D.		3.11	8.40	1
06935	Arsenic	7440-38-2	7.05	J	2.94	8.40	1
06946	Barium	7440-39-3	164		0.139	2.10	1
06947	Beryllium	7440-41-7	2.04	J	0.281	2.10	1
06949	Cadmium	7440-43-9	1.17	J	0.319	2.10	1
01650	Calcium	7440-70-2	13,300		14.0	84.0	1
06951	Chromium	7440-47-3	52.1		0.672	6.30	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-K-5-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263054
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:20 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

PHERC SDG#: KVM03-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	2.78		0.416	2.10	1
06953	Copper	7440-50-8	37.4		1.22	4.20	1
01654	Iron	7439-89-6	10,500		15.2	84.0	1
06955	Lead	7439-92-1	155		2.10	6.30	1
01657	Magnesium	7439-95-4	2,320		7.01	42.0	1
06958	Manganese	7439-96-5	164		0.349	2.10	1
06961	Nickel	7440-02-0	14.8		0.546	4.20	1
01662	Potassium	7440-09-7	460		35.0	210	1
06936	Selenium	7782-49-2	N.D.		3.36	8.40	1
06966	Silver	7440-22-4	N.D.		0.714	2.10	1
01667	Sodium	7440-23-5	121	J	70.1	420	1
06925	Thallium	7440-28-0	N.D.		2.18	12.6	1
06971	Vanadium	7440-62-2	26.6		0.546	2.10	1
06972	Zinc	7440-66-6	245		0.840	8.40	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.761		0.0406	0.406	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	192,000		5,490	16,500	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	77.1		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/13/2013 18:15	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 15:33	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06944	Antimony	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06935	Arsenic	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06946	Barium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-K-5-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263054
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:20 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

PHERC SDG#: KVM03-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06947	Beryllium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06949	Cadmium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06952	Cobalt	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06953	Copper	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06961	Nickel	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06936	Selenium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06966	Silver	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06925	Thallium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06971	Vanadium	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	133095708002	11/06/2013 22:38	John W Yanzuk II	1
00159	Mercury	SW-846 7471A	1	133095711001	11/07/2013 13:30	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133095708002	11/06/2013 09:55	Denise K Conners	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133095711001	11/06/2013 13:00	Denise K Conners	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 02:22	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13312820010B	11/08/2013 22:14	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-K-5-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263055
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:40 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

OHERC SDG#: KVM03-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**mg/kg**		**mg/kg**	**mg/kg**	
10724	Acenaphthene	83-32-9	N.D.		0.10	0.53	1
10724	Acenaphthylene	208-96-8	N.D.		0.10	0.53	1
10724	Anthracene	120-12-7	N.D.		0.10	0.53	1
10724	Benzo(a)anthracene	56-55-3	0.17	J	0.10	0.53	1
10724	Benzo(a)pyrene	50-32-8	0.18	J	0.10	0.53	1
10724	Benzo(b)fluoranthene	205-99-2	0.41	J	0.10	0.53	1
10724	Benzo(g,h,i)perylene	191-24-2	0.16	J	0.10	0.53	1
10724	Benzo(k)fluoranthene	207-08-9	0.15	J	0.10	0.53	1
10724	Chrysene	218-01-9	0.36	J	0.10	0.53	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		0.10	0.53	1
10724	Fluoranthene	206-44-0	0.63		0.10	0.53	1
10724	Fluorene	86-73-7	0.21	J	0.10	0.53	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	0.15	J	0.10	0.53	1
10724	1-Methylnaphthalene	90-12-0	0.12	J	0.10	0.53	1
10724	2-Methylnaphthalene	91-57-6	0.13	J	0.10	0.53	1
10724	Naphthalene	91-20-3	0.17	J	0.10	0.53	1
10724	Phenanthrene	85-01-8	0.38	J	0.10	0.53	1
10724	Pyrene	129-00-0	0.40	J	0.10	0.53	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**mg/kg**		**mg/kg**	**mg/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		0.78	1.6	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		0.52	1.6	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		0.52	1.6	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		0.52	1.6	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		0.52	1.6	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		0.52	1.6	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		0.52	1.6	1
06918	HMX	2691-41-0	N.D.		1.3	3.9	1
06918	Nitrobenzene	98-95-3	N.D.		0.52	1.6	1
06918	Nitroglycerin	55-63-0	N.D.		10	31	1
06918	1-Nitronaphthalene	86-57-7	N.D.		0.52	1.6	1
06918	2-Nitrotoluene	88-72-2	N.D.		1.0	1.6	1
06918	3-Nitrotoluene	99-08-1	N.D.		1.3	1.6	1
06918	4-Nitrotoluene	99-99-0	N.D.		1.0	1.6	1
06918	PETN	78-11-5	N.D.		10	31	1
06918	RDX	121-82-4	N.D.		0.65	1.6	1
06918	Tetryl	479-45-8	N.D.		0.80	1.6	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.52	1.6	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.52	1.6	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	13,800		37.6	104	1
06944	Antimony	7440-36-0	N.D.		3.85	10.4	1
06935	Arsenic	7440-38-2	10.4		3.65	10.4	1
06946	Barium	7440-39-3	175		0.172	2.60	1
06947	Beryllium	7440-41-7	1.85	J	0.349	2.60	1
06949	Cadmium	7440-43-9	1.74	J	0.396	2.60	1
01650	Calcium	7440-70-2	13,200		17.4	104	1
06951	Chromium	7440-47-3	18.6		0.833	7.81	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-K-5-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263055
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:40 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

OHERC SDG#: KVM03-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	2.97		0.516	2.60	1
06953	Copper	7440-50-8	52.2		1.51	5.21	1
01654	Iron	7439-89-6	23,400		18.9	104	1
06955	Lead	7439-92-1	214		2.60	7.81	1
01657	Magnesium	7439-95-4	1,730		8.70	52.1	1
06958	Manganese	7439-96-5	514		0.432	2.60	1
06961	Nickel	7440-02-0	15.2		0.677	5.21	1
01662	Potassium	7440-09-7	430		43.4	260	1
06936	Selenium	7782-49-2	5.49	J	4.17	10.4	1
06966	Silver	7440-22-4	N.D.		0.885	2.60	1
01667	Sodium	7440-23-5	138	J	87.0	521	1
06925	Thallium	7440-28-0	N.D.		2.71	15.6	1
06971	Vanadium	7440-62-2	36.7		0.677	2.60	1
06972	Zinc	7440-66-6	219		1.04	10.4	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	1.17		0.0515	0.515	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	244,000		9,270	27,800	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	80.8		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/13/2013 18:40	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 16:16	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06944	Antimony	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06935	Arsenic	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06946	Barium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-K-5-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7263055
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 14:40 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

OHERC SDG#: KVM03-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06947	Beryllium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06949	Cadmium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
01650	Calcium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06951	Chromium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06952	Cobalt	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06953	Copper	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
01654	Iron	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06955	Lead	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
01657	Magnesium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06958	Manganese	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06961	Nickel	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
01662	Potassium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06936	Selenium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06966	Silver	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
01667	Sodium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06925	Thallium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06971	Vanadium	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
06972	Zinc	SW-846 6010B	1	133095708002	11/06/2013 22:42	John W Yanzuk II	1
00159	Mercury	SW-846 7471A	1	133095711001	11/07/2013 13:32	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133095708002	11/06/2013 09:55	Denise K Conners	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133095711001	11/06/2013 13:00	Denise K Conners	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 02:32	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13312820010B	11/08/2013 22:14	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-1 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263056
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:00 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DDHER SDG#: KVM03-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-1 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263056
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:00 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DDHER SDG#: KVM03-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	30	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-1 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263056
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:00 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DDHER SDG#: KVM03-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	25.2		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	8,400		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	178	J	43.0	200	1
01757	Magnesium	7439-95-4	3,560		16.7	100	1
07058	Manganese	7439-96-5	12.7		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	674		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	5,340		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	2.1	J	2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	0.41	J	0.34	1.0	1
06025	Arsenic	7440-38-2	1.3	J	0.78	2.0	1
06035	Lead	7439-92-1	1.1		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	36,900		3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2		0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-1 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263056
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:00 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DDHER SDG#: KVM03-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13310WAG026	11/08/2013 12:22	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13310WAG026	11/07/2013 09:20	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 01:32	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:31	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 02:53	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 18:54	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 18:54	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 18:54	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 18:54	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:21	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 00:08	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13309003103A	11/05/2013 18:23	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DDHER

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7263056
Sample wt/vol: 249 (g/mL) mL Lab File ID: hk0265.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.723	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SW-R2-M-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263057
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:10 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

EEHER SDG#: KVM03-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263057
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:10 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

EEHER SDG#: KVM03-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263057
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:10 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

EEHER SDG#: KVM03-07

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	24.6		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	9,010		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	202		43.0	200	1
01757	Magnesium	7439-95-4	3,640		16.7	100	1
07058	Manganese	7439-96-5	15.3		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	570		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	5,250		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	2.5	J	2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	1.3	J	0.78	2.0	1
06035	Lead	7439-92-1	2.1		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	38,900		3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2		0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-5-2 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263057
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:10 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

EEHER SDG#: KVM03-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13310WAG026	11/08/2013 12:51	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13310WAG026	11/07/2013 09:20	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 02:14	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:35	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 02:56	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 18:56	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 18:56	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 18:56	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 18:56	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:23	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104B	11/08/2013 00:52	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13309003103A	11/05/2013 18:33	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EEHER

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7263057
Sample wt/vol: 244 (g/mL) mL Lab File ID: hk0266.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.722	5	J
2.					
3.	SVOCTIC	Total SVOC TICs		5	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: DUP-01 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263058
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

F1HER SDG#: KVM03-08FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	12	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-01 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263058
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

F1HER SDG#: KVM03-08FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
	Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of: bis(2-Ethylhexyl)phthalate was not detected in the re-extraction.					
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		**ug/l**	**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-01 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263058
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

F1HER SDG#: KVM03-08FD

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1
06916	PETN	78-11-5	N.D.		6.0	18	1
06916	RDX	121-82-4	N.D.		0.20	0.50	1
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	88.1	J	82.8	200	1
07046	Barium	7440-39-3	25.5		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	9,140		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	2.7	J	2.7	10.0	1
01754	Iron	7439-89-6	204		43.0	200	1
01757	Magnesium	7439-95-4	3,700		16.7	100	1
07058	Manganese	7439-96-5	16.5		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	634		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	5,330		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	2.6	J	2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	1.5	J	0.78	2.0	1
06035	Lead	7439-92-1	2.5		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	38,800		3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2		0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

*=This limit was used in the evaluation of the final result

Sample Description: DUP-01 Grab Surfacewater Sample
Hercules Phase II R.I.

LL Sample # WW 7263058
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

F1HER SDG#: KVM03-08FD

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13310WAG026	11/08/2013 13:21	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13310WAG026	11/07/2013 09:20	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 02:57	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:39	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 03:00	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 18:58	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 18:58	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 18:58	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 18:58	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:25	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 01:08	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13309003103A	11/05/2013 18:36	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

F1HER

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7263058
Sample wt/vol: 245 (g/mL) mL Lab File ID: hk0267.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	22.016	5	J
2.					
3.	SVOCTIC	Total SVOC TICs		5	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: FB-01_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263059
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB1HE SDG#: KVM03-09FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/l**	**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.	82.8	200	1
07046	Barium	7440-39-3	N.D.	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	N.D.	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	N.D.	43.0	200	1
01757	Magnesium	7439-95-4	N.D.	16.7	100	1
07058	Manganese	7439-96-5	N.D.	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	N.D.	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	N.D.	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	N.D.	2.0	20.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.	0.78	2.0	1
06035	Lead	7439-92-1	N.D.	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263059
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB1HE SDG#: KVM03-09FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Wet Chemistry	**SM 2340 C-1997**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.4	0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 03:39	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:43	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 03:04	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 18:59	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 18:59	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 18:59	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 18:59	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:27	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263059
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:45 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB1HE SDG#: KVM03-09FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 01:24	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13309003103A	11/05/2013 18:26	Michele L Graham	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263060
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:50 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB2HE SDG#: KVM03-10FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263060
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:50 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB2HE SDG#: KVM03-10FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263060
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:50 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB2HE SDG#: KVM03-10FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.	82.8	200	1
07046	Barium	7440-39-3	N.D.	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	N.D.	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	N.D.	43.0	200	1
01757	Magnesium	7439-95-4	N.D.	16.7	100	1
07058	Manganese	7439-96-5	N.D.	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	N.D.	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	N.D.	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	N.D.	2.0	20.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.	0.78	2.0	1
06035	Lead	7439-92-1	N.D.	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry	**SM 5310 C-2000**		**ug/L**	**ug/L**	**ug/L**	
00273	Total Organic Carbon	n.a.	N.D.	500	1,000	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13310WAG026	11/08/2013 13:50	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13310WAG026	11/07/2013 09:20	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133110017A	11/19/2013 04:22	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11042013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263060
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013 15:50 by RB

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB2HE SDG#: KVM03-10FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133110017A	11/08/2013 13:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07046	Barium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07047	Beryllium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07049	Cadmium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
01750	Calcium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07051	Chromium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07052	Cobalt	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07053	Copper	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
01754	Iron	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
01757	Magnesium	SW-846 6010B	1	133095705007	11/08/2013 12:46	Joanne M Gates	1
07058	Manganese	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07061	Nickel	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
01762	Potassium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07036	Selenium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07066	Silver	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
01767	Sodium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07071	Vanadium	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
07072	Zinc	SW-846 6010B	1	133095705007	11/08/2013 03:08	John W Yanzuk II	1
06024	Antimony	SW-846 6020	1	133126050002A	11/10/2013 19:01	John P Hook	1
06025	Arsenic	SW-846 6020	1	133126050002A	11/10/2013 19:01	John P Hook	1
06035	Lead	SW-846 6020	1	133126050002A	11/10/2013 19:01	John P Hook	1
06045	Thallium	SW-846 6020	1	133126050002A	11/10/2013 19:01	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:29	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133095705007	11/06/2013 10:25	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133126050002	11/10/2013 08:00	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
00273	Total Organic Carbon	SM 5310 C-2000	1	13312049501B	11/08/2013 08:10	James S Mathiot	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FB2HE

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7263060
Sample wt/vol: 240 (g/mL) mL Lab File ID: hk0268.d
Level: (low/med) LOW Date Received: 11/04/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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page 1 of 1

FORM I SV-1

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2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: Trip Blank Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7263061
LL Group # 1431224
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/04/2013

Submitted: 11/04/2013 19:30
Reported: 11/25/2013 08:14

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

TBLHE SDG#: KVM03-11TB*

General Sample Comments

State of New Jersey Lab Certification No. PA011

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13310SLF026	Sample number(s): 7263054-7263055								
Acenaphthene	N.D.	0.003	0.017	mg/kg	98		83-111		
Acenaphthylene	N.D.	0.003	0.017	mg/kg	108		83-127		
Anthracene	N.D.	0.003	0.017	mg/kg	100		82-118		
Benzo(a)anthracene	N.D.	0.003	0.017	mg/kg	96		81-117		
Benzo(a)pyrene	N.D.	0.003	0.017	mg/kg	98		84-122		
Benzo(b)fluoranthene	N.D.	0.003	0.017	mg/kg	100		76-124		
Benzo(g,h,i)perylene	N.D.	0.003	0.017	mg/kg	96		77-122		
Benzo(k)fluoranthene	N.D.	0.003	0.017	mg/kg	107		80-125		
Chrysene	N.D.	0.003	0.017	mg/kg	97		77-116		
Dibenz(a,h)anthracene	N.D.	0.003	0.017	mg/kg	98		81-123		
Fluoranthene	N.D.	0.003	0.017	mg/kg	100		79-123		
Fluorene	N.D.	0.003	0.017	mg/kg	99		86-118		
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017	mg/kg	97		77-122		
1-Methylnaphthalene	N.D.	0.003	0.017	mg/kg	101		77-115		
2-Methylnaphthalene	N.D.	0.003	0.017	mg/kg	92		80-114		
Naphthalene	N.D.	0.003	0.017	mg/kg	95		77-115		
Phenanthrene	N.D.	0.003	0.017	mg/kg	99		85-116		
Pyrene	N.D.	0.003	0.017	mg/kg	101		81-114		
Batch number: 13310WAG026	Sample number(s): 7263051,7263056-7263058,7263060								
Acenaphthene	N.D.	0.1	0.5	ug/l	99	97	69-122	1	30
Acenaphthylene	N.D.	0.1	0.5	ug/l	110	110	84-125	0	30
Acetophenone	N.D.	0.5	1	ug/l	96	95	71-110	1	30
Anthracene	N.D.	0.1	0.5	ug/l	105	105	82-116	0	30
Atrazine	N.D.	2.	5	ug/l	106	105	67-127	1	30
Benzaldehyde	N.D.	1.	5	ug/l	71	70	19-100	0	30
Benzo(a)anthracene	N.D.	0.1	0.5	ug/l	105	105	84-121	1	30
Benzo(a)pyrene	N.D.	0.1	0.5	ug/l	103	104	82-116	0	30
Benzo(b)fluoranthene	N.D.	0.1	0.5	ug/l	105	103	82-121	2	30
Benzo(g,h,i)perylene	N.D.	0.1	0.5	ug/l	104	105	81-121	0	30
Benzo(k)fluoranthene	N.D.	0.1	0.5	ug/l	100	101	81-122	1	30
1,1'-Biphenyl	N.D.	0.5	1	ug/l	97	96	60-120	1	30
4-Bromophenyl-phenylether	N.D.	0.5	1	ug/l	103	104	75-115	1	30
Butylbenzylphthalate	N.D.	2.	5	ug/l	100	100	70-122	0	30
Di-n-butylphthalate	N.D.	2.	5	ug/l	101	101	72-120	0	30
Caprolactam	N.D.	5.	15	ug/l	40	35	14-46	15	30
Carbazole	N.D.	0.5	1	ug/l	103	103	70-128	0	30
4-Chloro-3-methylphenol	N.D.	0.5	1	ug/l	102	102	67-131	0	30
4-Chloroaniline	N.D.	0.5	1	ug/l	94	95	46-112	1	30
bis(2-Chloroethoxy)methane	N.D.	0.5	1	ug/l	97	97	65-125	0	30
bis(2-Chloroethyl)ether	N.D.	0.5	1	ug/l	96	95	73-112	1	30
2-Chloronaphthalene	N.D.	0.4	1	ug/l	99	98	60-138	0	30
2-Chlorophenol	N.D.	0.5	1	ug/l	102	101	76-111	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Chlorophenyl-phenylether	N.D.	0.5	1	ug/l	101	102	77-114	1	30
2,2'-oxybis(1-Chloropropane)	N.D.	0.5	1	ug/l	81	81	55-123	0	30
Chrysene	N.D.	0.1	0.5	ug/l	102	103	81-120	0	30
Dibenz(a,h)anthracene	N.D.	0.1	0.5	ug/l	107	106	83-124	0	30
Dibenzofuran	N.D.	0.5	1	ug/l	102	101	81-110	1	30
3,3'-Dichlorobenzidine	N.D.	2.	5	ug/l	78	77	47-108	1	30
2,4-Dichlorophenol	N.D.	0.5	1	ug/l	101	101	84-114	0	30
Diethylphthalate	N.D.	2.	5	ug/l	104	103	60-121	1	30
2,4-Dimethylphenol	N.D.	0.5	1	ug/l	95	93	66-125	2	30
Dimethylphthalate	N.D.	2.	5	ug/l	97	94	50-127	3	30
4,6-Dinitro-2-methylphenol	N.D.	5.	15	ug/l	86	83	68-131	4	30
2,4-Dinitrophenol	N.D.	10.	30	ug/l	79	74	43-137	7	30
2,4-Dinitrotoluene	N.D.	1.	5	ug/l	112	113	81-120	1	30
2,6-Dinitrotoluene	N.D.	0.5	1	ug/l	110	109	81-124	1	30
bis(2-Ethylhexyl)phthalate	8	2.	5	ug/l	103	103	78-117	0	30
Fluoranthene	N.D.	0.1	0.5	ug/l	105	105	71-129	0	30
Fluorene	N.D.	0.1	0.5	ug/l	103	103	71-126	1	30
Hexachlorobenzene	N.D.	0.1	0.5	ug/l	101	100	74-126	1	30
Hexachlorobutadiene	N.D.	0.5	1	ug/l	78	76	56-119	2	30
Hexachlorocyclopentadiene	N.D.	5.	15	ug/l	85	82	21-126	4	30
Hexachloroethane	N.D.	1.	5	ug/l	72	70	55-109	3	30
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5	ug/l	106	104	83-121	2	30
Isophorone	N.D.	0.5	1	ug/l	96	97	68-124	1	30
2-Methylnaphthalene	N.D.	0.1	0.5	ug/l	92	92	63-120	0	30
2-Methylphenol	N.D.	0.5	1	ug/l	100	95	61-118	4	30
4-Methylphenol	N.D.	0.5	1	ug/l	93	88	54-112	5	30
Naphthalene	N.D.	0.1	0.5	ug/l	95	95	75-108	0	30
2-Nitroaniline	N.D.	0.5	1	ug/l	111	111	84-122	0	30
3-Nitroaniline	N.D.	0.5	1	ug/l	106	106	70-118	1	30
4-Nitroaniline	N.D.	0.5	1	ug/l	96	97	61-110	0	30
Nitrobenzene	N.D.	0.5	1	ug/l	91	91	67-123	1	30
2-Nitrophenol	N.D.	0.5	1	ug/l	106	106	84-118	0	30
4-Nitrophenol	N.D.	10.	30	ug/l	53	48	16-91	10	30
N-Nitroso-di-n-propylamine	N.D.	0.5	1	ug/l	91	90	71-117	1	30
N-Nitrosodiphenylamine	N.D.	0.5	1	ug/l	105	103	80-115	1	30
Di-n-octylphthalate	N.D.	2.	5	ug/l	106	105	72-129	1	30
Pentachlorophenol	N.D.	1.	5	ug/l	80	80	50-129	1	30
Phenanthrene	N.D.	0.1	0.5	ug/l	99	99	68-127	0	30
Phenol	N.D.	0.5	1	ug/l	62	56	23-82	9	30
Pyrene	N.D.	0.1	0.5	ug/l	102	102	81-112	1	30
2,4,5-Trichlorophenol	N.D.	0.5	1	ug/l	104	104	81-121	0	30
2,4,6-Trichlorophenol	N.D.	0.5	1	ug/l	100	100	84-119	1	30

Batch number: 13313SLC026 Sample number(s): 7263052-7263053

Acenaphthene	N.D.	0.003	0.017	mg/kg	97	83-111
Acenaphthylene	N.D.	0.003	0.017	mg/kg	111	83-127
Acetophenone	N.D.	0.017	0.033	mg/kg	90	70-116
Anthracene	N.D.	0.003	0.017	mg/kg	105	82-118
Atrazine	N.D.	0.033	0.17	mg/kg	101	69-145
Benzaldehyde	N.D.	0.067	0.17	mg/kg	45	10-97
Benzo(a)anthracene	N.D.	0.003	0.017	mg/kg	107	81-117
Benzo(a)pyrene	N.D.	0.003	0.017	mg/kg	105	84-122
Benzo(b)fluoranthene	N.D.	0.003	0.017	mg/kg	107	76-124
Benzo(g,h,i)perylene	N.D.	0.003	0.017	mg/kg	103	77-122
Benzo(k)fluoranthene	N.D.	0.003	0.017	mg/kg	96	80-125
1,1'-Biphenyl	N.D.	0.017	0.033	mg/kg	92	76-117

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
4-Bromophenyl-phenylether	N.D.	0.017	0.033	mg/kg	103		84-120		
Butylbenzylphthalate	N.D.	0.067	0.17	mg/kg	100		80-118		
Di-n-butylphthalate	N.D.	0.067	0.17	mg/kg	102		84-120		
Caprolactam	N.D.	0.033	0.17	mg/kg	99		67-117		
Carbazole	N.D.	0.017	0.033	mg/kg	103		84-119		
4-Chloro-3-methylphenol	N.D.	0.017	0.033	mg/kg	109		80-124		
4-Chloroaniline	N.D.	0.017	0.033	mg/kg	101*		10-100		
bis(2-Chloroethoxy)methane	N.D.	0.017	0.033	mg/kg	100		71-121		
bis(2-Chloroethyl)ether	N.D.	0.017	0.033	mg/kg	96		77-115		
2-Chloronaphthalene	N.D.	0.007	0.033	mg/kg	111		56-144		
2-Chlorophenol	N.D.	0.017	0.033	mg/kg	99		80-122		
4-Chlorophenyl-phenylether	N.D.	0.017	0.033	mg/kg	100		83-115		
2,2'-oxybis(1-Chloropropane)	N.D.	0.017	0.033	mg/kg	74		61-120		
Chrysene	N.D.	0.003	0.017	mg/kg	101		77-116		
Dibenz(a,h)anthracene	N.D.	0.003	0.017	mg/kg	106		81-123		
Dibenzofuran	N.D.	0.017	0.033	mg/kg	97		85-115		
3,3'-Dichlorobenzidine	N.D.	0.10	0.33	mg/kg	90		10-119		
2,4-Dichlorophenol	N.D.	0.017	0.033	mg/kg	107		81-123		
Diethylphthalate	N.D.	0.067	0.17	mg/kg	100		82-113		
2,4-Dimethylphenol	N.D.	0.017	0.033	mg/kg	111		83-120		
Dimethylphthalate	N.D.	0.067	0.17	mg/kg	100		82-113		
4,6-Dinitro-2-methylphenol	N.D.	0.17	0.50	mg/kg	93		56-132		
2,4-Dinitrophenol	N.D.	0.30	1.0	mg/kg	78		24-136		
2,4-Dinitrotoluene	N.D.	0.067	0.17	mg/kg	104		81-122		
2,6-Dinitrotoluene	N.D.	0.017	0.033	mg/kg	109		83-120		
bis(2-Ethylhexyl)phthalate	N.D.	0.067	0.17	mg/kg	103		81-121		
Fluoranthene	N.D.	0.003	0.017	mg/kg	105		79-123		
Fluorene	N.D.	0.003	0.017	mg/kg	100		86-118		
Hexachlorobenzene	N.D.	0.003	0.017	mg/kg	104		80-121		
Hexachlorobutadiene	N.D.	0.017	0.033	mg/kg	102		76-115		
Hexachlorocyclopentadiene	N.D.	0.17	0.50	mg/kg	119		70-138		
Hexachloroethane	N.D.	0.033	0.17	mg/kg	96		76-109		
Indeno(1,2,3-cd)pyrene	N.D.	0.003	0.017	mg/kg	104		77-122		
Isophorone	N.D.	0.017	0.033	mg/kg	98		77-119		
2-Methylnaphthalene	N.D.	0.003	0.017	mg/kg	91		80-114		
2-Methylphenol	N.D.	0.017	0.033	mg/kg	101		82-125		
4-Methylphenol	N.D.	0.017	0.033	mg/kg	100		73-124		
Naphthalene	N.D.	0.003	0.017	mg/kg	95		83-112		
2-Nitroaniline	N.D.	0.017	0.033	mg/kg	106		84-126		
3-Nitroaniline	N.D.	0.067	0.17	mg/kg	106		69-122		
4-Nitroaniline	N.D.	0.067	0.17	mg/kg	80		51-107		
Nitrobenzene	N.D.	0.017	0.033	mg/kg	93		73-118		
2-Nitrophenol	N.D.	0.017	0.033	mg/kg	105		83-125		
4-Nitrophenol	N.D.	0.17	0.50	mg/kg	84		55-133		
N-Nitroso-di-n-propylamine	N.D.	0.017	0.033	mg/kg	81		70-113		
N-Nitrosodiphenylamine	N.D.	0.017	0.033	mg/kg	101		83-118		
Di-n-octylphthalate	N.D.	0.067	0.17	mg/kg	103		80-139		
Pentachlorophenol	N.D.	0.033	0.17	mg/kg	81		57-120		
Phenanthrene	N.D.	0.003	0.017	mg/kg	98		85-116		
Phenol	N.D.	0.017	0.033	mg/kg	100		76-124		
Pyrene	N.D.	0.003	0.017	mg/kg	100		81-114		
2,4,5-Trichlorophenol	N.D.	0.017	0.033	mg/kg	107		86-123		
2,4,6-Trichlorophenol	N.D.	0.017	0.033	mg/kg	103		81-123		
Batch number: 133110004A	Sample number(s): 7263052-7263055								
4-Amino-2,6-Dinitrotoluene	N.D.	0.15	0.30	mg/kg	103		98-143		

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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2-Amino-4,6-Dinitrotoluene	N.D.		0.10	0.30	mg/kg	99		84-115		
1,2-Dinitrobenzene	N.D.		0.10	0.30	mg/kg	118		94-129		
1,3-Dinitrobenzene	N.D.		0.10	0.30	mg/kg	119		97-119		
1,4-Dinitrobenzene	N.D.		0.10	0.30	mg/kg	106		83-122		
2,4-Dinitrotoluene	N.D.		0.10	0.30	mg/kg	116*		91-112		
2,6-Dinitrotoluene	N.D.		0.10	0.30	mg/kg	104		86-137		
HMX	N.D.		0.25	0.75	mg/kg	95		79-104		
Nitrobenzene	N.D.		0.10	0.30	mg/kg	109*		89-107		
Nitroglycerin	N.D.		2.0	6.0	mg/kg	100		70-118		
1-Nitronaphthalene	N.D.		0.10	0.30	mg/kg	126*		83-122		
2-Nitrotoluene	N.D.		0.20	0.30	mg/kg	100		91-113		
3-Nitrotoluene	N.D.		0.25	0.30	mg/kg	126*		88-121		
4-Nitrotoluene	N.D.		0.20	0.30	mg/kg	99		89-119		
PETN	N.D.		2.0	6.0	mg/kg	99		67-136		
RDX	N.D.		0.13	0.30	mg/kg	106		87-111		
Tetryl	N.D.		0.15	0.30	mg/kg	111		80-112		
1,3,5-Trinitrobenzene	N.D.		0.10	0.30	mg/kg	103		83-119		
2,4,6-Trinitrotoluene	N.D.		0.10	0.30	mg/kg	116		85-122		
Batch number: 133110017A	Sample number(s): 7263051,7263056-7263060									
4-Amino-2,6-Dinitrotoluene	N.D.		0.30	0.60	ug/l	102		97-156		
2-Amino-4,6-Dinitrotoluene	N.D.		0.20	0.60	ug/l	83		65-107		
1,2-Dinitrobenzene	N.D.		0.20	0.60	ug/l	110		90-118		
1,3-Dinitrobenzene	N.D.		0.20	0.60	ug/l	105		78-121		
1,4-Dinitrobenzene	N.D.		0.30	0.60	ug/l	92		81-108		
2,4-Dinitrotoluene	N.D.		0.72	2.0	ug/l	101		71-111		
2,6-Dinitrotoluene	N.D.		0.45	1.3	ug/l	107		84-157		
HMX	N.D.		0.65	2.0	ug/l	79		73-112		
Nitrobenzene	N.D.		0.20	0.60	ug/l	95		71-111		
Nitroglycerin	N.D.		5.2	15	ug/l	88		73-116		
1-Nitronaphthalene	N.D.		0.20	0.60	ug/l	106		69-125		
2-Nitrotoluene	N.D.		0.25	0.75	ug/l	85		74-115		
3-Nitrotoluene	N.D.		0.40	1.2	ug/l	105		76-115		
4-Nitrotoluene	N.D.		0.60	1.2	ug/l	88		76-120		
PETN	N.D.		6.0	18	ug/l	97		73-126		
RDX	N.D.		0.20	0.50	ug/l	99		70-117		
Tetryl	N.D.		0.40	0.60	ug/l	103		43-133		
1,3,5-Trinitrobenzene	N.D.		0.20	0.60	ug/l	98		72-119		
2,4,6-Trinitrotoluene	N.D.		0.20	0.60	ug/l	109		75-119		
Batch number: 133095705007	Sample number(s): 7263051,7263056-7263060									
Aluminum	N.D.		82.8	200	ug/l	108		90-112		
Barium	N.D.		0.33	5.0	ug/l	107		90-110		
Beryllium	N.D.		0.67	5.0	ug/l	105		90-111		
Cadmium	N.D.		0.76	5.0	ug/l	106		90-112		
Calcium	N.D.		33.4	200	ug/l	104		90-112		
Chromium	N.D.		1.6	15.0	ug/l	106		90-110		
Cobalt	N.D.		1.3	5.0	ug/l	106		90-110		
Copper	N.D.		2.7	10.0	ug/l	108		90-112		
Iron	N.D.		43.0	200	ug/l	103		90-112		
Magnesium	21.9	J	16.7	100	ug/l	107		89-110		
Manganese	N.D.		0.83	5.0	ug/l	107		90-110		
Nickel	N.D.		1.5	10.0	ug/l	108		90-111		
Potassium	N.D.		98.0	500	ug/l	103		90-110		
Selenium	N.D.		8.4	20.0	ug/l	107		80-120		
Silver	N.D.		2.1	5.0	ug/l	114		80-120		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Sodium	N.D.		167.	1,000	ug/l	105		87-114		
Vanadium	N.D.		2.0	5.0	ug/l	108		90-110		
Zinc	N.D.		2.0	20.0	ug/l	107		90-110		
Batch number: 133095708002	Sample number(s): 7263052-7263055									
Aluminum	N.D.		7.21	20.0	mg/kg	98		80-120		
Antimony	N.D.		0.740	2.00	mg/kg	100		80-120		
Arsenic	N.D.		0.700	2.00	mg/kg	100		80-120		
Barium	N.D.		0.0330	0.500	mg/kg	103		80-120		
Beryllium	N.D.		0.0670	0.500	mg/kg	101		80-120		
Cadmium	N.D.		0.0760	0.500	mg/kg	102		80-120		
Calcium	8.40	J	3.34	20.0	mg/kg	100		80-120		
Chromium	N.D.		0.160	1.50	mg/kg	102		80-120		
Cobalt	N.D.		0.0990	0.500	mg/kg	105		80-120		
Copper	N.D.		0.290	1.00	mg/kg	108		80-120		
Iron	N.D.		3.62	20.0	mg/kg	100		80-120		
Lead	N.D.		0.500	1.50	mg/kg	106		80-120		
Magnesium	N.D.		1.67	10.0	mg/kg	98		80-120		
Manganese	N.D.		0.0830	0.500	mg/kg	103		80-120		
Nickel	N.D.		0.130	1.00	mg/kg	107		80-120		
Potassium	N.D.		8.34	50.0	mg/kg	100		80-120		
Selenium	N.D.		0.800	2.00	mg/kg	102		80-120		
Silver	N.D.		0.170	0.500	mg/kg	100		80-120		
Sodium	N.D.		16.7	100	mg/kg	98		80-120		
Thallium	N.D.		0.520	3.00	mg/kg	106		80-120		
Vanadium	N.D.		0.130	0.500	mg/kg	101		80-120		
Zinc	0.246	J	0.200	2.00	mg/kg	103		80-120		
Batch number: 133095711001	Sample number(s): 7263052-7263055									
Mercury	N.D.		0.0100	0.100	mg/kg	103		80-120		
Batch number: 133105713004	Sample number(s): 7263051,7263056-7263060									
Mercury	N.D.		0.060	0.20	ug/l	95		80-120		
Batch number: 133126050002A	Sample number(s): 7263051,7263056-7263060									
Antimony	N.D.		0.34	1.0	ug/l	92		80-120		
Arsenic	N.D.		0.78	2.0	ug/l	102		86-120		
Lead	N.D.		0.085	1.0	ug/l	100		90-110		
Thallium	N.D.		0.15	0.50	ug/l	97		90-115		
Batch number: 13311049532A	Sample number(s): 7263052-7263055									
TOC by Lloyd Kahn	N.D.		100.	300	mg/kg	83		47-143		
Batch number: 13312049501B	Sample number(s): 7263060									
Total Organic Carbon	N.D.		500.	1,000	ug/L	101		91-113		
Batch number: 13309003103A	Sample number(s): 7263051,7263056-7263059									
pH						100		93-106		
Batch number: 13311001104A	Sample number(s): 7263051,7263056,7263058-7263059									
Total Hardness	N.D.		3,000.	5,000	ug/l	103		96-110		
Batch number: 13311001104B	Sample number(s): 7263057									
Total Hardness	N.D.		3,000.	5,000	ug/l	103		96-110		
Batch number: 13312820010B	Sample number(s): 7263052-7263055									

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Moisture					100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13310SLF026	Sample number(s): 7263054-7263055 UNSPK: P262294								
Acenaphthene	75	94	61-128	23	30				
Acenaphthylene	82	102	67-130	22	30				
Anthracene	72	96	41-142	29	30				
Benzo(a)anthracene	69	90	32-150	26	30				
Benzo(a)pyrene	71	96	36-151	30	30				
Benzo(b)fluoranthene	74	97	29-150	27	30				
Benzo(g,h,i)perylene	69	92	41-147	29	30				
Benzo(k)fluoranthene	73	101	44-145	33*	30				
Chrysene	69	91	28-146	27	30				
Dibenz(a,h)anthracene	71	94	54-142	28	30				
Fluoranthene	72	95	30-151	27	30				
Fluorene	74	95	55-128	24	30				
Indeno(1,2,3-cd)pyrene	69	93	44-147	29	30				
1-Methylnaphthalene	81*	99	82-115	20	30				
2-Methylnaphthalene	74	91	39-140	20	30				
Naphthalene	77	94	44-142	20	30				
Phenanthrene	72	96	34-147	28	30				
Pyrene	74	98	29-148	27	30				
Batch number: 13313SLC026	Sample number(s): 7263052-7263053 UNSPK: P263082								
Acenaphthene	97	68	61-128	36*	30				
Acenaphthylene	109	79	67-130	33*	30				
Acetophenone	90	62	57-118	37*	30				
Anthracene	100	72	41-142	34*	30				
Atrazine	80	66	34-152	20	30				
Benzaldehyde	51	46	10-85	11	30				
Benzo(a)anthracene	102	74	32-150	32*	30				
Benzo(a)pyrene	102	73	36-151	33*	30				
Benzo(b)fluoranthene	106	74	29-150	36*	30				
Benzo(g,h,i)perylene	100	69	41-147	37*	30				
Benzo(k)fluoranthene	92	68	44-145	31*	30				
1,1'-Biphenyl	91	65	64-120	35*	30				
4-Bromophenyl-phenylether	100	71	66-122	35*	30				
Butylbenzylphthalate	96	70	67-126	32*	30				
Di-n-butylphthalate	97	70	70-124	33*	30				
Caprolactam	97	69	34-131	34*	30				
Carbazole	98	72	63-126	31*	30				
4-Chloro-3-methylphenol	109	77	61-131	35*	30				
4-Chloroaniline	83	37	11-114	78*	30				
bis(2-Chloroethoxy)methane	100	69	58-122	37*	30				
bis(2-Chloroethyl)ether	96	68	66-122	34*	30				
2-Chloronaphthalene	111	64	50-140	54*	30				
2-Chlorophenol	98	70*	71-130	34*	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
4-Chlorophenyl-phenylether	98	70	65-117	34*	30				
2,2'-oxybis(1-Chloropropane)	75	54	47-120	33*	30				
Chrysene	97	72	28-146	30	30				
Dibenz(a,h)anthracene	103	72	54-142	36*	30				
Dibenzofuran	96	69	65-124	33*	30				
3,3'-Dichlorobenzidine	83	55	10-143	40*	30				
2,4-Dichlorophenol	106	77	54-135	32*	30				
Diethylphthalate	96	68	66-120	34*	30				
2,4-Dimethylphenol	111	77	62-132	36*	30				
Dimethylphthalate	96	69	69-119	33*	30				
4,6-Dinitro-2-methylphenol	103	72	10-148	36*	30				
2,4-Dinitrophenol	102	70	20-143	37*	30				
2,4-Dinitrotoluene	103	75	39-144	33*	30				
2,6-Dinitrotoluene	106	77	54-134	33*	30				
bis(2-Ethylhexyl)phthalate	99	72	60-134	32*	30				
Fluoranthene	99	74	30-151	30	30				
Fluorene	100	71	55-128	34*	30				
Hexachlorobenzene	101	71	46-132	36*	30				
Hexachlorobutadiene	102	70	65-125	37*	30				
Hexachlorocyclopentadiene	118	82	10-153	37*	30				
Hexachloroethane	93	68	24-138	32*	30				
Indeno(1,2,3-cd)pyrene	102	71	44-147	37*	30				
Isophorone	98	69	68-119	35*	30				
2-Methylnaphthalene	91	66	39-140	33*	30				
2-Methylphenol	102	73	62-133	34*	30				
4-Methylphenol	100	69	59-132	38*	30				
Naphthalene	95	67	44-142	34*	30				
2-Nitroaniline	104	76	64-131	32*	30				
3-Nitroaniline	102	70	31-145	38*	30				
4-Nitroaniline	89	59	30-131	41*	30				
Nitrobenzene	92	66	63-125	34*	30				
2-Nitrophenol	107	73	45-146	38*	30				
4-Nitrophenol	84	64	25-142	28	30				
N-Nitroso-di-n-propylamine	82	56*	58-126	39*	30				
N-Nitrosodiphenylamine	97	69	59-135	34*	30				
Di-n-octylphthalate	103	75	48-155	32*	30				
Pentachlorophenol	102	70	23-145	38*	30				
Phenanthrene	95	69	34-147	33*	30				
Phenol	100	70	61-130	36*	30				
Pyrene	97	69	29-148	34*	30				
2,4,5-Trichlorophenol	110	77	64-131	36*	30				
2,4,6-Trichlorophenol	103	72	60-136	37*	30				
Batch number: 133110004A	Sample number(s): 7263052-7263055 UNSPK: 7263052								
4-Amino-2,6-Dinitrotoluene	97	101	85-118	4	50				
2-Amino-4,6-Dinitrotoluene	96	101	69-113	5	50				
1,2-Dinitrobenzene	111	116	80-120	4	50				
1,3-Dinitrobenzene	106	108	89-119	2	50				
1,4-Dinitrobenzene	93	99	82-117	5	50				
2,4-Dinitrotoluene	103	108	81-111	5	50				
2,6-Dinitrotoluene	95	92	86-114	4	50				
HMX	87	90	72-107	4	50				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Nitrobenzene	102	105	86-108	3	50				
Nitroglycerin	123*	119*	73-116	3	50				
1-Nitronaphthalene	114	118	89-131	3	50				
2-Nitrotoluene	92	96	79-112	4	50				
3-Nitrotoluene	108	119	72-119	9	50				
4-Nitrotoluene	97	100	90-118	3	50				
PETN	91	94	71-133	4	50				
RDX	100	103	75-108	3	50				
Tetryl	91	106	58-125	15	50				
1,3,5-Trinitrobenzene	97	100	58-135	3	50				
2,4,6-Trinitrotoluene	103	107	92-114	4	50				
Batch number: 133110017A	Sample number(s): 7263051,7263056-7263060 UNSPK: P266118								
4-Amino-2,6-Dinitrotoluene	95	97	80-120	2	30				
2-Amino-4,6-Dinitrotoluene	81	80	80-120	1	30				
1,2-Dinitrobenzene	107	108	80-120	1	30				
1,3-Dinitrobenzene	105	104	80-120	1	30				
1,4-Dinitrobenzene	91	90	80-120	0	30				
2,4-Dinitrotoluene	101	100	80-120	0	30				
2,6-Dinitrotoluene	111	109	80-120	2	30				
HMX	76	77	34-105	1	30				
Nitrobenzene	99	97	75-144	2	30				
Nitroglycerin	87	87	80-120	0	30				
1-Nitronaphthalene	108	108	43-114	0	30				
2-Nitrotoluene	84	83	80-120	2	30				
3-Nitrotoluene	104	102	80-120	2	30				
4-Nitrotoluene	85	86	80-120	1	30				
PETN	92	91	80-120	0	30				
RDX	88	87	80-120	1	30				
Tetryl	99	91	45-113	9	30				
1,3,5-Trinitrobenzene	92	91	80-120	0	30				
2,4,6-Trinitrotoluene	106	105	80-120	1	30				
Batch number: 133095705007	Sample number(s): 7263051,7263056-7263060 UNSPK: P256054 BKG: P256054								
Aluminum	130*	129*	75-125	1	20	675	697	3 (1)	20
Barium	101	101	78-118	0	20	503	514	2	20
Beryllium	110	111	87-114	1	20	N.D.	N.D.	0 (1)	20
Cadmium	104	104	83-116	0	20	N.D.	N.D.	0 (1)	20
Calcium	348 (2)	304 (2)	75-125	1	20	150,000	152,000	2	20
Chromium	105	107	76-120	2	20	7.5 J	7.2 J	4 (1)	20
Cobalt	104	104	82-112	1	20	N.D.	N.D.	0 (1)	20
Copper	107	106	86-122	1	20	23.6	20.6	13 (1)	20
Iron	154 (2)	120 (2)	75-125	2	20	17,900	18,100	1	20
Magnesium	299 (2)	238 (2)	75-125	2	20	61,200	63,000	3	20
Manganese	115	114	75-125	0	20	993	1,010	2	20
Nickel	104	105	86-115	0	20	2.6 J	1.9 J	28* (1)	20
Potassium	124	121	77-128	1	20	30,000	30,500	2	20
Selenium	107	106	75-125	1	20	N.D.	N.D.	0 (1)	20
Silver	121	119	75-125	2	20	N.D.	N.D.	0 (1)	20
Sodium	273 (2)	214 (2)	75-125	2	20	267,000	278,000	4	20
Vanadium	110	111	90-117	1	20	2.9 J	3.1 J	5 (1)	20
Zinc	106	106	85-117	0	20	86.9	87.3	1 (1)	20

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 133095708002	Sample number(s): 7263052-7263055 UNSPK: P257240 BKG: P257240								
Aluminum	3344 (2)	3061 (2)	75-125	3	20	10,400	9,480	9	20
Antimony	33*	29*	75-125	10	20	N.D.	N.D.	0 (1)	20
Arsenic	94	94	75-125	0	20	9.86	10.0	1 (1)	20
Barium	107	116	75-125	7	20	46.0	41.4	10	20
Beryllium	94	96	83-119	2	20	0.532	0.512	4 (1)	20
Cadmium	91	93	75-125	2	20	0.229 J	0.248 J	8 (1)	20
Calcium	133 (2)	67 (2)	75-125	4	20	6,600	6,410	3	20
Chromium	128*	125	75-125	2	20	22.6	21.3	6	20
Cobalt	90	91	78-113	1	20	8.29	7.80	6	20
Copper	99	105	75-125	3	20	24.0	23.6	2	20
Iron	524 (2)	838 (2)	75-125	2	20	17,600	17,300	2	20
Lead	87	92	75-125	3	20	11.5	12.0	5	20
Magnesium	411 (2)	502 (2)	75-125	2	20	7,990	7,770	3	20
Manganese	87	96	75-125	2	20	186	177	5	20
Nickel	90	93	75-125	3	20	21.1	20.7	2	20
Potassium	158*	149*	75-125	2	20	2,430	2,280	6	20
Selenium	96	100	75-125	3	20	N.D.	N.D.	0 (1)	20
Silver	94	97	75-125	3	20	N.D.	N.D.	0 (1)	20
Sodium	89	94	75-125	3	20	930	907	3	20
Thallium	91	92	78-119	1	20	0.787 J	0.641 J	20 (1)	20
Vanadium	113	113	75-125	0	20	19.4	18.0	7	20
Zinc	89	95	75-125	3	20	51.9	53.0	2	20
Batch number: 133095711001	Sample number(s): 7263052-7263055 UNSPK: P257240 BKG: P257240								
Mercury	99	101	80-120	2	20	0.0330 J	0.0243 J	30* (1)	20
Batch number: 133105713004	Sample number(s): 7263051,7263056-7263060 UNSPK: P265230 BKG: P265230								
Mercury	94	91	80-120	3	20	N.D.	N.D.	0 (1)	20
Batch number: 133126050002A	Sample number(s): 7263051,7263056-7263060 UNSPK: P265127 BKG: P265127								
Antimony	98	112	75-125	11	20	1.1	0.92 J	18 (1)	20
Arsenic	65 (2)	70 (2)	75-125	1	20	57.1	59.8	5	20
Lead	166*	166*	89-120	0	20	4.3	4.4	2 (1)	20
Thallium	97	109	85-125	11	20	N.D.	N.D.	0 (1)	20
Batch number: 13311049532A	Sample number(s): 7263052-7263055 UNSPK: P262379 BKG: P262379								
TOC by Lloyd Kahn	81		59-125			1,570	1,030	41* (1)	15
Batch number: 13312049501B	Sample number(s): 7263060 UNSPK: P265107 BKG: P265107								
Total Organic Carbon	108		63-142			1,900	1,900	0 (1)	4
Batch number: 13309003103A	Sample number(s): 7263051,7263056-7263059 BKG: P261520								
pH						8.1	8.2	1	3
Batch number: 13311001104A	Sample number(s): 7263051,7263056,7263058-7263059 UNSPK: P265230 BKG: P265230								
Total Hardness	91	87	67-120	1	5	155,000	155,000	0	5
Batch number: 13311001104B	Sample number(s): 7263057 UNSPK: P265230 BKG: 7263057								
Total Hardness	91	87	67-120	1	5	38,900	38,800	0	5

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13312820010B	Sample number(s): 7263052-7263055					BKG: 7263052			
Moisture						64.1	61.5	4	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PAH 8270 (microwave)
Batch number: 13310SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7263054	86	99	99
7263055	87	96	98
Blank	81	100	108
LCS	82	98	101
MS	65	75	74
MSD	83	94	98
Limits:	60-120	69-120	66-137

Analysis Name: TCL SW846 Semivolatiles/Waters
Batch number: 13310WAG026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7263051	61	42	92	83	92	104
7263056	66	45	97	80	88	103
7263057	67	47	96	83	93	104
7263058	63	45	97	79	90	95
7263060	71	51	97	81	92	106
Blank	70	48	102	85	95	109
LCS	75	56	102	86	95	104
LCSD	71	51	103	88	95	105
Limits:	10-107	10-83	22-150	60-123	63-121	47-146

Analysis Name: TCL 8270 (microwave)
Batch number: 13313SLC026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7263052	75	81	71	74	77	86
7263053	76	81	75	78	79	82
Blank	90	97	104	88	91	107
LCS	101	106	107	95	99	106
MS	101	105	106	95	97	102
MSD	71	76	76	66	69	73
Limits:	61-120	63-126	42-134	60-120	69-120	66-137

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431224
Reported: 11/25/13 at 08:14 AM

Surrogate Quality Control

Analysis Name: Nitroaromatics/Amines in Solid
Batch number: 133110004A

	2-Nitro-m-xylene
7263052	101
7263053	111
7263054	100
7263055	107
Blank	106
LCS	111
MS	97
MSD	110
Limits:	63-150

Analysis Name: Nitroaromatics/Amines in Water
Batch number: 133110017A

	2-Nitro-m-xylene
7263051	98
7263056	90
7263057	84
7263058	85
7263059	96
7263060	85
Blank	98
LCS	92
MS	77
MSD	88
Limits:	73-122

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 06716 For Eurofins Lancaster Laboratories Environmental use only Group # 1431224 Sample # 7803051-61

Instructions on reverse side correspond with circled numbers.

COC # 340700

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucey	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:
Name of state where samples were collected: New Jersey	

4 Matrix: Sediment ☒ Soil ☐ Water: Potable ☐ Ground ☐ NPDES ☒ Surface ☐ Other: ____

5 Analysis Requested — Preservation Codes

For Lab Use Only: FSC: ____ SCR#: ____

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

6 Remarks: O = H_3PO_4

2 Sample Identification	Collected Date	Collected Time	3 Grab	Composite	Sediment (Soil)	Water (Potable / Ground / NPDES / Surface)	Other	Total # of Containers	METALS	TOC	pH	Hardness (N)	Metals (N)	SVOCs	Nitroaromatics	TOC (O)	TCL SV-39G Semi Vis		
FF	11/4/13	1130	✓			✓		7			✓	✓	✓	✓	✓				
W	11/4/13	1245		✓	✓			2	✓	✓									
X	11/4/13	1330		✓	✓			2	✓	✓									
P	11/4/13	1420		✓	✓			2	✓	✓									
O	11/4/13	1440		✓	✓			2	✓	✓									
DD	11/4/13	1500	✓			✓		7			✓	✓	✓	✓	✓				
EE	11/4/13	1510	✓			✓		7			✓	✓	✓	✓	✓				
DUP-01	11/4/13		✓			✓		7			✓	✓	✓	✓	✓				
FB-01_11042013	11/4/13	1545	✓			✓		7			✓	✓	✓	✓	✓				
FB-02_11042013	11/4/13	1550	✓			✓		7					✓		✓	✓	✓		

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: John.Lucey@obg.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/4/13	1645	Bill DeLong	11-4-13	16:45
Bill DeLong	11-4-13	19:30			
			Pat Gh	11/4/13	1930

EDD Required? Yes No

If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.9-3.0 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7044 0713

Wendy Kozma 1431224

From: John Lucey [John.Lucey@obg.com]
Sent: Tuesday, November 05, 2013 2:00 PM
To: Wendy Kozma
Cc: Robert P. Barnes
Subject: RE: Acknowledgement(1431224, Hercules Phase II R.I., 11/04/2013 19:30:00)

Wendy,

I have a few changes to the chain-of-custody. The following sample ID's need to be revised:

ID on Chain	Actual Sample ID
W	SD-R2-L-5-01D
X	SD-R2-L-5-02 D
P	SD-R2-K-5-2
O	SD-R2-K-5-1
FF	SW-R2-L-5-2
DD	SW-R2-M-5-1
EE	SW-R2-M-5-2

The analyte list for the sediment samples also need to be revised as indicated below:

ID on Chain	Actual Sample ID	Analyte List
W	SD-R2-L-5-01D	SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC
X	SD-R2-L-5-02 D	SVOCs, E&E Compounds, TAL Metals, moisture, solids, TOC
P	SD-R2-K-5-2	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC
O	SD-R2-K-5-1	PAHs, E&E Compounds, TAL Metals, moisture, solids, TOC

Also, the analytic list for FB-02_11042013 should be: SVOCs, E&E Compounds, TAL Metals, TOC.

Please let me know if you have any questions.

Thanks,

John

1431224

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]
Sent: Tuesday, November 05, 2013 12:09 PM
To: edmeeks@ashland.com; John Lucey
Subject: Acknowledgement(1431224, Hercules Phase II R.I., 11/04/2013 19:30:00)

Good afternoon John, A few questions on this first submittal group:

1) Do you need us to provide a validation package and/or EDD? If so, send directly to you?
2) I have the results being sent to you and Ed. Is this OK?
3) For some reason the field submitted a TB with no VOA samples. We will just hold it (not run it).

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A# 6716, Gr# 1431224, Samples 7263051-61

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:33 AM
To: Wendy Kozma
Subject: RE: Ashland

yes and yes

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]
Sent: Friday, November 08, 2013 8:29 AM
To: John Lucey
Subject: RE: Ashland

OK--thanks for letting me know.

Does this include the Surfacewater/Sediment received this week?
And I'm confirming non-interpretive TICs? 10 VOC and 20 SVOC?

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:10 AM
To: Wendy Kozma
Subject: Ashland

Wendy,

For all VOC and SVOC analyses we need to run TICs

John

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Environmental Sample Administration Receipt Documentation Log

1431224

Client/Project: Ashland

Date of Receipt: 11/4/13

Time of Receipt: 1930

Source Code: 01

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	0.9	TB	WI	y	B	
2	↓	3.0	↓	↓	↓	↓	
3		2.0					
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 2

Paperwork Discrepancy/Unpacking Problems:

Recd 1 container for W time = 1230 on ~~500~~ 125mL @AG 11/4/13

Soil Jar, time = 1245 on COC and large soil Jar.

Recd Only 5 containers for FB-01_11042013

Unpacker Signature/Emp#: Pat Sh 3472 **Date/Time:** 11/4/13 1945

Issued by Dept. 6042 Management

2174.06

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

TCL 8270 (microwave)
PAH 8270 (microwave)

		Matrix			
Sample #	Client ID	Liquid	Solid	DF	Comments
7263051	SW-R2-L-5-2	X		1	
7263052	SD-R2-L-5-01D		X	20	
7263053	SD-R2-L-5-02		X	20	
7263054	SD-R2-K-5-2		X	1	
7263055	SD-R2-K-5-1		X	1	
7263056	SW-R2-M-5-1	X		1	
7263057	SW-R2-M-5-2	X		1	
7263058	DUP-01	X		1	Field Duplicate Sample
7263060	FB-02_11042013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

For noncompliant preparation/method blanks, corrective action is not required if the sample is ND or > 10 times the blank concentration, unless otherwise specified in the method or by the client.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

(Sample number(s): 7263058: Analysis: 04678)
Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial. Similar results were obtained in both trials with the exception of:
bis(2-Ethylhexyl)phthalate was not detected in the re-extraction.

LCS/LCSD

(Sample number(s): 7263052-7263053: Analysis: 10727)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

(Sample number(s): 7263052-7263053: Analysis: 10727)
Reporting limits were raised due to interference from the sample matrix.

(Sample number(s): 7263054-7263055: Analysis: 10724)
Reporting limits were raised due to interference from the sample matrix.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Ashland, Inc.
SDG: KVM03

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
PAH 8270 (microwave)	13310SLF026	SBLKLF310	11/13/2013 13:20:00
		310LFLCS	11/13/2013 13:44:00
		7263054	11/13/2013 18:15:00
		7263055	11/13/2013 18:40:00
TCL 8270 (microwave)	13313SLC026	SBLKLC313	11/13/2013 15:08:00
		313LCLCS	11/13/2013 15:37:00
		7263052	11/14/2013 10:04:00
		7263053	11/14/2013 10:30:00
TCL SW846 Semivolatiles/Waters	13310WAG026	SBLKWG310	11/08/2013 05:05:00
		310WGLCS	11/08/2013 05:34:00
		310WGLCSD	11/08/2013 06:03:00
		7263051	11/08/2013 11:53:00
		7263056	11/08/2013 12:22:00
		7263057	11/08/2013 12:51:00
		7263058	11/08/2013 13:21:00
		7263060	11/08/2013 13:50:00
TCL SW846 Semivolatiles/Waters	13316WAK026	SBLKWK316	11/14/2013 22:15:00
		316WKLCS	11/14/2013 22:42:00
		7263058RE	11/15/2013 00:29:00

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: KVM03
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13310SLF026 / SBLKLF310 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Naphthalene	11/13/13	N.D.	mg/kg	0.003	0.017
2-Methylnaphthalene	11/13/13	N.D.	mg/kg	0.003	0.017
1-Methylnaphthalene	11/13/13	N.D.	mg/kg	0.003	0.017
Acenaphthylene	11/13/13	N.D.	mg/kg	0.003	0.017
Acenaphthene	11/13/13	N.D.	mg/kg	0.003	0.017
Fluorene	11/13/13	N.D.	mg/kg	0.003	0.017
Phenanthrene	11/13/13	N.D.	mg/kg	0.003	0.017
Anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(a)anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Chrysene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(b)fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(k)fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(a)pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Indeno(1,2,3-cd)pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Dibenz(a,h)anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(g,h,i)perylene	11/13/13	N.D.	mg/kg	0.003	0.017

13313SLC026 / SBLKLC313 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/13/13	N.D.	mg/kg	0.067	0.17
Phenol	11/13/13	N.D.	mg/kg	0.017	0.033
bis(2-Chloroethyl)ether	11/13/13	N.D.	mg/kg	0.017	0.033
2-Chlorophenol	11/13/13	N.D.	mg/kg	0.017	0.033
2-Methylphenol	11/13/13	N.D.	mg/kg	0.017	0.033
4-Methylphenol	11/13/13	N.D.	mg/kg	0.017	0.033
N-Nitroso-di-n-propylamine	11/13/13	N.D.	mg/kg	0.017	0.033
Acetophenone	11/13/13	N.D.	mg/kg	0.017	0.033
Hexachloroethane	11/13/13	N.D.	mg/kg	0.033	0.17
Nitrobenzene	11/13/13	N.D.	mg/kg	0.017	0.033
Isophorone	11/13/13	N.D.	mg/kg	0.017	0.033
2-Nitrophenol	11/13/13	N.D.	mg/kg	0.017	0.033
2,4-Dimethylphenol	11/13/13	N.D.	mg/kg	0.017	0.033
2,2'-oxybis(1-Chloropropane)	11/13/13	N.D.	mg/kg	0.017	0.033
bis(2-Chloroethoxy)methane	11/13/13	N.D.	mg/kg	0.017	0.033
2,4-Dichlorophenol	11/13/13	N.D.	mg/kg	0.017	0.033
Naphthalene	11/13/13	N.D.	mg/kg	0.003	0.017
4-Chloroaniline	11/13/13	N.D.	mg/kg	0.017	0.033
Hexachlorobutadiene	11/13/13	N.D.	mg/kg	0.017	0.033
Caprolactam	11/13/13	N.D.	mg/kg	0.033	0.17
4-Chloro-3-methylphenol	11/13/13	N.D.	mg/kg	0.017	0.033
2-Methylnaphthalene	11/13/13	N.D.	mg/kg	0.003	0.017
Hexachlorocyclopentadiene	11/13/13	N.D.	mg/kg	0.17	0.50
2,4,6-Trichlorophenol	11/13/13	N.D.	mg/kg	0.017	0.033

Fraction: Semivolatiles by GC/MS

13313SLC026 / SBLKLC313 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,4,5-Trichlorophenol	11/13/13	N.D.	mg/kg	0.017	0.033
1,1'-Biphenyl	11/13/13	N.D.	mg/kg	0.017	0.033
2-Chloronaphthalene	11/13/13	N.D.	mg/kg	0.007	0.033
2-Nitroaniline	11/13/13	N.D.	mg/kg	0.017	0.033
Dimethylphthalate	11/13/13	N.D.	mg/kg	0.067	0.17
2,6-Dinitrotoluene	11/13/13	N.D.	mg/kg	0.017	0.033
Acenaphthylene	11/13/13	N.D.	mg/kg	0.003	0.017
3-Nitroaniline	11/13/13	N.D.	mg/kg	0.067	0.17
Acenaphthene	11/13/13	N.D.	mg/kg	0.003	0.017
2,4-Dinitrophenol	11/13/13	N.D.	mg/kg	0.30	1.0
4-Nitrophenol	11/13/13	N.D.	mg/kg	0.17	0.50
2,4-Dinitrotoluene	11/13/13	N.D.	mg/kg	0.067	0.17
Dibenzofuran	11/13/13	N.D.	mg/kg	0.017	0.033
Diethylphthalate	11/13/13	N.D.	mg/kg	0.067	0.17
Fluorene	11/13/13	N.D.	mg/kg	0.003	0.017
4-Chlorophenyl-phenylether	11/13/13	N.D.	mg/kg	0.017	0.033
4-Nitroaniline	11/13/13	N.D.	mg/kg	0.067	0.17
4,6-Dinitro-2-methylphenol	11/13/13	N.D.	mg/kg	0.17	0.50
N-Nitrosodiphenylamine	11/13/13	N.D.	mg/kg	0.017	0.033
4-Bromophenyl-phenylether	11/13/13	N.D.	mg/kg	0.017	0.033
Hexachlorobenzene	11/13/13	N.D.	mg/kg	0.003	0.017
Atrazine	11/13/13	N.D.	mg/kg	0.033	0.17
Pentachlorophenol	11/13/13	N.D.	mg/kg	0.033	0.17
Phenanthrene	11/13/13	N.D.	mg/kg	0.003	0.017
Anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Carbazole	11/13/13	N.D.	mg/kg	0.017	0.033
Di-n-butylphthalate	11/13/13	N.D.	mg/kg	0.067	0.17
Fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Butylbenzylphthalate	11/13/13	N.D.	mg/kg	0.067	0.17
bis(2-Ethylhexyl)phthalate	11/13/13	N.D.	mg/kg	0.067	0.17
3,3'-Dichlorobenzidine	11/13/13	N.D.	mg/kg	0.10	0.33
Benzo(a)anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Chrysene	11/13/13	N.D.	mg/kg	0.003	0.017
Di-n-octylphthalate	11/13/13	N.D.	mg/kg	0.067	0.17
Benzo(b)fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(k)fluoranthene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(a)pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Indeno(1,2,3-cd)pyrene	11/13/13	N.D.	mg/kg	0.003	0.017
Dibenz(a,h)anthracene	11/13/13	N.D.	mg/kg	0.003	0.017
Benzo(g,h,i)perylene	11/13/13	N.D.	mg/kg	0.003	0.017

1F

EPA SAMPLE NO.

SBLKLC3137

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLC313

Sample wt/vol: 30.0 (g/mL) g Lab File ID: gk0517.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/11/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 1 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:

Number TICs found: 1 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.973	1.0	J
2.					
3.	SVOCTIC	Total SVOC TICs		1.0	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

Fraction: Semivolatiles by GC/MS

13310WAG026 / SBLKWG310 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/08/13	N.D.	ug/l	1	5
Phenol	11/08/13	N.D.	ug/l	0.5	1
bis(2-Chloroethyl)ether	11/08/13	N.D.	ug/l	0.5	1
2-Chlorophenol	11/08/13	N.D.	ug/l	0.5	1
2-Methylphenol	11/08/13	N.D.	ug/l	0.5	1
2,2'-oxybis(1-Chloropropane)	11/08/13	N.D.	ug/l	0.5	1
4-Methylphenol	11/08/13	N.D.	ug/l	0.5	1
N-Nitroso-di-n-propylamine	11/08/13	N.D.	ug/l	0.5	1
Acetophenone	11/08/13	N.D.	ug/l	0.5	1
Hexachloroethane	11/08/13	N.D.	ug/l	1	5
Nitrobenzene	11/08/13	N.D.	ug/l	0.5	1
Isophorone	11/08/13	N.D.	ug/l	0.5	1
2-Nitrophenol	11/08/13	N.D.	ug/l	0.5	1
2,4-Dimethylphenol	11/08/13	N.D.	ug/l	0.5	1
bis(2-Chloroethoxy)methane	11/08/13	N.D.	ug/l	0.5	1
2,4-Dichlorophenol	11/08/13	N.D.	ug/l	0.5	1
Naphthalene	11/08/13	N.D.	ug/l	0.1	0.5
4-Chloroaniline	11/08/13	N.D.	ug/l	0.5	1
Hexachlorobutadiene	11/08/13	N.D.	ug/l	0.5	1
Caprolactam	11/08/13	N.D.	ug/l	5	15
4-Chloro-3-methylphenol	11/08/13	N.D.	ug/l	0.5	1
2-Methylnaphthalene	11/08/13	N.D.	ug/l	0.1	0.5
Hexachlorocyclopentadiene	11/08/13	N.D.	ug/l	5	15
2,4,6-Trichlorophenol	11/08/13	N.D.	ug/l	0.5	1
2,4,5-Trichlorophenol	11/08/13	N.D.	ug/l	0.5	1
1,1'-Biphenyl	11/08/13	N.D.	ug/l	0.5	1
2-Chloronaphthalene	11/08/13	N.D.	ug/l	0.4	1
2-Nitroaniline	11/08/13	N.D.	ug/l	0.5	1
Dimethylphthalate	11/08/13	N.D.	ug/l	2	5
2,6-Dinitrotoluene	11/08/13	N.D.	ug/l	0.5	1
Acenaphthylene	11/08/13	N.D.	ug/l	0.1	0.5
3-Nitroaniline	11/08/13	N.D.	ug/l	0.5	1
Acenaphthene	11/08/13	N.D.	ug/l	0.1	0.5
2,4-Dinitrophenol	11/08/13	N.D.	ug/l	10	30
4-Nitrophenol	11/08/13	N.D.	ug/l	10	30
2,4-Dinitrotoluene	11/08/13	N.D.	ug/l	1	5
Dibenzofuran	11/08/13	N.D.	ug/l	0.5	1
Diethylphthalate	11/08/13	N.D.	ug/l	2	5
Fluorene	11/08/13	N.D.	ug/l	0.1	0.5
4-Chlorophenyl-phenylether	11/08/13	N.D.	ug/l	0.5	1
4-Nitroaniline	11/08/13	N.D.	ug/l	0.5	1
4,6-Dinitro-2-methylphenol	11/08/13	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	11/08/13	N.D.	ug/l	0.5	1
4-Bromophenyl-phenylether	11/08/13	N.D.	ug/l	0.5	1
Hexachlorobenzene	11/08/13	N.D.	ug/l	0.1	0.5

Fraction: Semivolatiles by GC/MS

13310WAG026 / SBLKWG310 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Atrazine	11/08/13	N.D.	ug/l	2	5
Pentachlorophenol	11/08/13	N.D.	ug/l	1	5
Phenanthrene	11/08/13	N.D.	ug/l	0.1	0.5
Anthracene	11/08/13	N.D.	ug/l	0.1	0.5
Carbazole	11/08/13	N.D.	ug/l	0.5	1
Di-n-butylphthalate	11/08/13	N.D.	ug/l	2	5
Fluoranthene	11/08/13	N.D.	ug/l	0.1	0.5
Pyrene	11/08/13	N.D.	ug/l	0.1	0.5
Butylbenzylphthalate	11/08/13	N.D.	ug/l	2	5
bis(2-Ethylhexyl)phthalate	11/08/13	8	ug/l	2	5
3,3'-Dichlorobenzidine	11/08/13	N.D.	ug/l	2	5
Benzo(a)anthracene	11/08/13	N.D.	ug/l	0.1	0.5
Chrysene	11/08/13	N.D.	ug/l	0.1	0.5
Di-n-octylphthalate	11/08/13	N.D.	ug/l	2	5
Benzo(b)fluoranthene	11/08/13	N.D.	ug/l	0.1	0.5
Benzo(k)fluoranthene	11/08/13	N.D.	ug/l	0.1	0.5
Benzo(a)pyrene	11/08/13	N.D.	ug/l	0.1	0.5
Indeno(1,2,3-cd)pyrene	11/08/13	N.D.	ug/l	0.1	0.5
Dibenz(a,h)anthracene	11/08/13	N.D.	ug/l	0.1	0.5
Benzo(g,h,i)perylene	11/08/13	N.D.	ug/l	0.1	0.5

13316WAK026 / SBLKWK316 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/14/13	N.D.	ug/l	1	5
Phenol	11/14/13	N.D.	ug/l	0.5	1
bis(2-Chloroethyl)ether	11/14/13	N.D.	ug/l	0.5	1
2-Chlorophenol	11/14/13	N.D.	ug/l	0.5	1
2-Methylphenol	11/14/13	N.D.	ug/l	0.5	1
2,2'-oxybis(1-Chloropropane)	11/14/13	N.D.	ug/l	0.5	1
4-Methylphenol	11/14/13	N.D.	ug/l	0.5	1
N-Nitroso-di-n-propylamine	11/14/13	N.D.	ug/l	0.5	1
Acetophenone	11/14/13	N.D.	ug/l	0.5	1
Hexachloroethane	11/14/13	N.D.	ug/l	1	5
Nitrobenzene	11/14/13	N.D.	ug/l	0.5	1
Isophorone	11/14/13	N.D.	ug/l	0.5	1
2-Nitrophenol	11/14/13	N.D.	ug/l	0.5	1
2,4-Dimethylphenol	11/14/13	N.D.	ug/l	0.5	1
bis(2-Chloroethoxy)methane	11/14/13	N.D.	ug/l	0.5	1
2,4-Dichlorophenol	11/14/13	N.D.	ug/l	0.5	1
Naphthalene	11/14/13	N.D.	ug/l	0.1	0.5
4-Chloroaniline	11/14/13	N.D.	ug/l	0.5	1
Hexachlorobutadiene	11/14/13	N.D.	ug/l	0.5	1
Caprolactam	11/14/13	N.D.	ug/l	5	15
4-Chloro-3-methylphenol	11/14/13	N.D.	ug/l	0.5	1
2-Methylnaphthalene	11/14/13	N.D.	ug/l	0.1	0.5

Fraction: Semivolatiles by GC/MS

13316WAK026 / SBLKWK316 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Hexachlorocyclopentadiene	11/14/13	N.D.	ug/l	5	15
2,4,6-Trichlorophenol	11/14/13	N.D.	ug/l	0.5	1
2,4,5-Trichlorophenol	11/14/13	N.D.	ug/l	0.5	1
1,1'-Biphenyl	11/14/13	N.D.	ug/l	0.5	1
2-Chloronaphthalene	11/14/13	N.D.	ug/l	0.4	1
2-Nitroaniline	11/14/13	N.D.	ug/l	0.5	1
Dimethylphthalate	11/14/13	N.D.	ug/l	2	5
2,6-Dinitrotoluene	11/14/13	N.D.	ug/l	0.5	1
Acenaphthylene	11/14/13	N.D.	ug/l	0.1	0.5
3-Nitroaniline	11/14/13	N.D.	ug/l	0.5	1
Acenaphthene	11/14/13	N.D.	ug/l	0.1	0.5
2,4-Dinitrophenol	11/14/13	N.D.	ug/l	10	30
4-Nitrophenol	11/14/13	N.D.	ug/l	10	30
2,4-Dinitrotoluene	11/14/13	N.D.	ug/l	1	5
Dibenzofuran	11/14/13	N.D.	ug/l	0.5	1
Diethylphthalate	11/14/13	N.D.	ug/l	2	5
Fluorene	11/14/13	N.D.	ug/l	0.1	0.5
4-Chlorophenyl-phenylether	11/14/13	N.D.	ug/l	0.5	1
4-Nitroaniline	11/14/13	N.D.	ug/l	0.5	1
4,6-Dinitro-2-methylphenol	11/14/13	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	11/14/13	N.D.	ug/l	0.5	1
4-Bromophenyl-phenylether	11/14/13	N.D.	ug/l	0.5	1
Hexachlorobenzene	11/14/13	N.D.	ug/l	0.1	0.5
Atrazine	11/14/13	N.D.	ug/l	2	5
Pentachlorophenol	11/14/13	N.D.	ug/l	1	5
Phenanthrene	11/14/13	N.D.	ug/l	0.1	0.5
Anthracene	11/14/13	N.D.	ug/l	0.1	0.5
Carbazole	11/14/13	N.D.	ug/l	0.5	1
Di-n-butylphthalate	11/14/13	N.D.	ug/l	2	5
Fluoranthene	11/14/13	N.D.	ug/l	0.1	0.5
Pyrene	11/14/13	N.D.	ug/l	0.1	0.5
Butylbenzylphthalate	11/14/13	N.D.	ug/l	2	5
bis(2-Ethylhexyl)phthalate	11/14/13	N.D.	ug/l	2	5
3,3'-Dichlorobenzidine	11/14/13	N.D.	ug/l	2	5
Benzo(a)anthracene	11/14/13	N.D.	ug/l	0.1	0.5
Chrysene	11/14/13	N.D.	ug/l	0.1	0.5
Di-n-octylphthalate	11/14/13	N.D.	ug/l	2	5
Benzo(b)fluoranthene	11/14/13	N.D.	ug/l	0.1	0.5
Benzo(k)fluoranthene	11/14/13	N.D.	ug/l	0.1	0.5
Benzo(a)pyrene	11/14/13	N.D.	ug/l	0.1	0.5
Indeno(1,2,3-cd)pyrene	11/14/13	N.D.	ug/l	0.1	0.5
Dibenz(a,h)anthracene	11/14/13	N.D.	ug/l	0.1	0.5
Benzo(g,h,i)perylene	11/14/13	N.D.	ug/l	0.1	0.5

1F

EPA SAMPLE NO.

SBLKWG3108

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: SBLKWG310

Sample wt/vol: 250 (g/mL) mL Lab File ID: hk0252.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.758	49	J
2.		Unknown	20.518	5	J
3.		Unknown	21.748	7	J
4.		Unknown	22.570	11	J
5.					
6.	SVOCTIC	Total SVOC TICs		72	J
7.					
8.					
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FORM I SV-1

eurofins | Lancaster Laboratories Environmental

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM03
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13310SLF026	Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLF310	81	60 - 120	100	69 - 120	108	66 - 137
310LFLCS	82	60 - 120	98	69 - 120	101	66 - 137
7263054	86	60 - 120	99	69 - 120	99	66 - 137
7263055	87	60 - 120	96	69 - 120	98	66 - 137

13313SLC026	Phenol-d6		2-Fluorophenol		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	6666.667 ug/kg	Spike Added	6666.667 ug/kg	Spike Added	6666.667 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLC313	90	61 - 120	97	63 - 126	104	42 - 134	88	60 - 120	91	69 - 120	107	66 - 137
313LCLCS	101	61 - 120	106	63 - 126	107	42 - 134	95	60 - 120	99	69 - 120	106	66 - 137
7263052	75	61 - 120	81	63 - 126	71	42 - 134	74	60 - 120	77	69 - 120	86	66 - 137
7263053	76	61 - 120	81	63 - 126	75	42 - 134	78	60 - 120	79	69 - 120	82	66 - 137

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM03
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

13310WAG026	2-Fluorophenol		Phenol-d6		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWG310	70	10 - 107	48	10 - 83	102	22 - 150	85	60 - 123	95	63 - 121	109	47 - 146
310WGLCS	75	10 - 107	56	10 - 83	102	22 - 150	86	60 - 123	95	63 - 121	104	47 - 146
310WGLCSD	71	10 - 107	51	10 - 83	103	22 - 150	88	60 - 123	95	63 - 121	105	47 - 146
7263051	61	10 - 107	42	10 - 83	92	22 - 150	83	60 - 123	92	63 - 121	104	47 - 146
7263056	66	10 - 107	45	10 - 83	97	22 - 150	80	60 - 123	88	63 - 121	103	47 - 146
7263057	67	10 - 107	47	10 - 83	96	22 - 150	83	60 - 123	93	63 - 121	104	47 - 146
7263058	63	10 - 107	45	10 - 83	97	22 - 150	79	60 - 123	90	63 - 121	95	47 - 146
7263060	71	10 - 107	51	10 - 83	97	22 - 150	81	60 - 123	92	63 - 121	106	47 - 146

13316WAK026	2-Fluorophenol		Phenol-d6		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWK316	63	10 - 107	49	10 - 83	96	22 - 150	100	60 - 123	92	63 - 121	99	47 - 146
316WKLCS	53	10 - 107	42	10 - 83	80	22 - 150	104	60 - 123	95	63 - 121	61	47 - 146
7263058RE	65	10 - 107	48	10 - 83	96	22 - 150	99	60 - 123	92	63 - 121	96	47 - 146

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 310LFLCS	Batch: **13310SLF026** (Sample number(s): 7263054-7263055)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	1666.67	1577.64	NA	95	NA	77-115	NA	NA
2-Methylnaphthalene	1666.67	1525.83	NA	92	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1678.43	NA	101	NA	77-115	NA	NA
Acenaphthylene	1666.67	1800.23	NA	108	NA	83-127	NA	NA
Acenaphthene	1666.67	1630.27	NA	98	NA	83-111	NA	NA
Fluorene	1666.67	1651.5	NA	99	NA	86-118	NA	NA
Phenanthrene	1666.67	1657.55	NA	99	NA	85-116	NA	NA
Anthracene	1666.67	1673.99	NA	100	NA	82-118	NA	NA
Fluoranthene	1666.67	1664.89	NA	100	NA	79-123	NA	NA
Pyrene	1666.67	1683.45	NA	101	NA	81-114	NA	NA
Benzo(a)anthracene	1666.67	1598.49	NA	96	NA	81-117	NA	NA
Chrysene	1666.67	1612.59	NA	97	NA	77-116	NA	NA
Benzo(b)fluoranthene	1666.67	1659.95	NA	100	NA	76-124	NA	NA
Benzo(k)fluoranthene	1666.67	1784.46	NA	107	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1636.6	NA	98	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1620.16	NA	97	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1637.18	NA	98	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1607.4	NA	96	NA	77-122	NA	NA

LCS: 313LCLCS	Batch: **13313SLC026** (Sample number(s): 7263052-7263053)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	1666.67	746.71	NA	45	NA	10-97	NA	NA
Phenol	1666.67	1669.92	NA	100	NA	76-124	NA	NA
bis(2-Chloroethyl)ether	1666.67	1597.62	NA	96	NA	77-115	NA	NA
2-Chlorophenol	1666.67	1651.38	NA	99	NA	80-122	NA	NA
2-Methylphenol	1666.67	1684.98	NA	101	NA	82-125	NA	NA
4-Methylphenol	1666.67	1665.08	NA	100	NA	73-124	NA	NA
N-Nitroso-di-n-propylamine	1666.67	1342.77	NA	81	NA	70-113	NA	NA
Acetophenone	1666.67	1501.32	NA	90	NA	70-116	NA	NA
Hexachloroethane	1666.67	1596.66	NA	96	NA	76-109	NA	NA
Nitrobenzene	1666.67	1555.8	NA	93	NA	73-118	NA	NA
Isophorone	1666.67	1639.49	NA	98	NA	77-119	NA	NA
2-Nitrophenol	1666.67	1745.55	NA	105	NA	83-125	NA	NA
2,4-Dimethylphenol	1666.67	1846.05	NA	111	NA	83-120	NA	NA
2,2'-oxybis(1-Chloropropane)	1666.67	1229.8	NA	74	NA	61-120	NA	NA
bis(2-Chloroethoxy)methane	1666.67	1665.82	NA	100	NA	71-121	NA	NA
2,4-Dichlorophenol	1666.67	1786.82	NA	107	NA	81-123	NA	NA
Naphthalene	1666.67	1581.09	NA	95	NA	83-112	NA	NA
4-Chloroaniline	1666.67	1688.89	NA	101 *	NA	10-100	NA	NA
Hexachlorobutadiene	1666.67	1692.67	NA	102	NA	76-115	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 313LCLCS	Batch: **13313SLC026** (Sample number(s): 7263052-7263053)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Caprolactam	1666.67	1657.53	NA	99	NA	67-117	NA	NA
4-Chloro-3-methylphenol	1666.67	1824.53	NA	109	NA	80-124	NA	NA
2-Methylnaphthalene	1666.67	1521.5	NA	91	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1705.81	NA	102	NA	77-115	NA	NA
Hexachlorocyclopentadiene	3333.33	3964.8	NA	119	NA	70-138	NA	NA
2,4,6-Trichlorophenol	1666.67	1720.01	NA	103	NA	81-123	NA	NA
2,4,5-Trichlorophenol	1666.67	1789.94	NA	107	NA	86-123	NA	NA
1,1'-Biphenyl	1666.67	1530.23	NA	92	NA	76-117	NA	NA
2-Chloronaphthalene	1666.67	1851.51	NA	111	NA	56-144	NA	NA
2-Nitroaniline	1666.67	1766.36	NA	106	NA	84-126	NA	NA
Dimethylphthalate	1666.67	1660.38	NA	100	NA	82-113	NA	NA
2,6-Dinitrotoluene	1666.67	1810.98	NA	109	NA	83-120	NA	NA
Acenaphthylene	1666.67	1856.53	NA	111	NA	83-127	NA	NA
3-Nitroaniline	1666.67	1768.47	NA	106	NA	69-122	NA	NA
Acenaphthene	1666.67	1609.38	NA	97	NA	83-111	NA	NA
2,4-Dinitrophenol	3333.33	2587.91	NA	78	NA	24-136	NA	NA
4-Nitrophenol	1666.67	1403.8	NA	84	NA	55-133	NA	NA
2,4-Dinitrotoluene	1666.67	1739.65	NA	104	NA	81-122	NA	NA
Dibenzofuran	1666.67	1616.73	NA	97	NA	85-115	NA	NA
Diethylphthalate	1666.67	1662.82	NA	100	NA	82-113	NA	NA
Fluorene	1666.67	1666.26	NA	100	NA	86-118	NA	NA
4-Chlorophenyl-phenylether	1666.67	1669.83	NA	100	NA	83-115	NA	NA
4-Nitroaniline	1666.67	1341.66	NA	80	NA	51-107	NA	NA
4,6-Dinitro-2-methylphenol	1666.67	1545.79	NA	93	NA	56-132	NA	NA
N-Nitrosodiphenylamine	1666.67	1688.36	NA	101	NA	83-118	NA	NA
4-Bromophenyl-phenylether	1666.67	1719.51	NA	103	NA	84-120	NA	NA
Hexachlorobenzene	1666.67	1725.37	NA	104	NA	80-121	NA	NA
Atrazine	1666.67	1682.38	NA	101	NA	69-145	NA	NA
Pentachlorophenol	1666.67	1356.22	NA	81	NA	57-120	NA	NA
Phenanthrene	1666.67	1639.83	NA	98	NA	85-116	NA	NA
Anthracene	1666.67	1742.32	NA	105	NA	82-118	NA	NA
Carbazole	1666.67	1715.75	NA	103	NA	84-119	NA	NA
Di-n-butylphthalate	1666.67	1698.28	NA	102	NA	84-120	NA	NA
Fluoranthene	1666.67	1750.63	NA	105	NA	79-123	NA	NA
Pyrene	1666.67	1674.35	NA	100	NA	81-114	NA	NA
Butylbenzylphthalate	1666.67	1671.84	NA	100	NA	80-118	NA	NA
bis(2-Ethylhexyl)phthalate	1666.67	1711.88	NA	103	NA	81-121	NA	NA
3,3'-Dichlorobenzidine	1666.67	1500.67	NA	90	NA	10-119	NA	NA
Benzo(a)anthracene	1666.67	1780.1	NA	107	NA	81-117	NA	NA
Chrysene	1666.67	1689.14	NA	101	NA	77-116	NA	NA
Di-n-octylphthalate	1666.67	1713.81	NA	103	NA	80-139	NA	NA
Benzo(b)fluoranthene	1666.67	1775.27	NA	107	NA	76-124	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 313LCLCS	Batch: **13313SLC026** (Sample number(s): 7263052-7263053)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzo(k)fluoranthene	1666.67	1602.66	NA	96	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1745.73	NA	105	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1734.87	NA	104	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1768.98	NA	106	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1712.34	NA	103	NA	77-122	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 310WGLCS LCSD: 310WGLCSD	Batch: **13310WAG026** (Sample number(s): 7263051, 7263056-7263058, 7263060)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	50	35.36	35.23	71	70	19-100	0	30
Phenol	50	30.91	28.14	62	56	23-82	9	30
bis(2-Chloroethyl)ether	50	47.85	47.29	96	95	73-112	1	30
2-Chlorophenol	50	51.19	50.29	102	101	76-111	2	30
2-Methylphenol	50	49.87	47.7	100	95	61-118	4	30
2,2'-oxybis(1-Chloropropane)	50	40.75	40.67	81	81	55-123	0	30
4-Methylphenol	50	46.46	44	93	88	54-112	5	30
N-Nitroso-di-n-propylamine	50	45.33	44.81	91	90	71-117	1	30
Acetophenone	50	48.2	47.55	96	95	71-110	1	30
Hexachloroethane	50	35.93	34.86	72	70	55-109	3	30
Nitrobenzene	50	45.35	45.59	91	91	67-123	1	30
Isophorone	50	48.11	48.45	96	97	68-124	1	30
2-Nitrophenol	50	52.76	52.86	106	106	84-118	0	30
2,4-Dimethylphenol	50	47.6	46.7	95	93	66-125	2	30
bis(2-Chloroethoxy)methane	50	48.72	48.57	97	97	65-125	0	30
2,4-Dichlorophenol	50	50.57	50.65	101	101	84-114	0	30
Naphthalene	50	47.32	47.39	95	95	75-108	0	30
4-Chloroaniline	50	46.91	47.29	94	95	46-112	1	30
Hexachlorobutadiene	50	38.8	38.08	78	76	56-119	2	30
Caprolactam	50	20.23	17.45	40	35	14-46	15	30
4-Chloro-3-methylphenol	50	50.85	51.02	102	102	67-131	0	30
2-Methylnaphthalene	50	45.91	46.03	92	92	63-120	0	30
Hexachlorocyclopentadiene	100	84.59	81.65	85	82	21-126	4	30
2,4,6-Trichlorophenol	50	50.22	49.95	100	100	84-119	1	30
2,4,5-Trichlorophenol	50	52	52.01	104	104	81-121	0	30
1,1'-Biphenyl	50	48.46	48.01	97	96	60-120	1	30
2-Chloronaphthalene	50	49.46	49.25	99	98	60-138	0	30
2-Nitroaniline	50	55.45	55.6	111	111	84-122	0	30
Dimethylphthalate	50	48.61	47.15	97	94	50-127	3	30
2,6-Dinitrotoluene	50	54.85	54.5	110	109	81-124	1	30
Acenaphthylene	50	55.23	54.97	110	110	84-125	0	30
3-Nitroaniline	50	53.05	52.75	106	106	70-118	1	30
Acenaphthene	50	49.25	48.67	99	97	69-122	1	30
2,4-Dinitrophenol	100	79.46	74.29	79	74	43-137	7	30
4-Nitrophenol	50	26.33	23.78	53	48	16-91	10	30
2,4-Dinitrotoluene	50	55.78	56.38	112	113	81-120	1	30
Dibenzofuran	50	50.97	50.42	102	101	81-110	1	30
Diethylphthalate	50	51.96	51.68	104	103	60-121	1	30
Fluorene	50	51.3	51.67	103	103	71-126	1	30
4-Chlorophenyl-phenylether	50	50.55	50.89	101	102	77-114	1	30
4-Nitroaniline	50	48.24	48.28	96	97	61-110	0	30
4,6-Dinitro-2-methylphenol	50	42.97	41.49	86	83	68-131	4	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 310WGLCS LCSD: 310WGLCSD	Batch: **13310WAG026** (Sample number(s): 7263051, 7263056-7263058, 7263060)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodiphenylamine	50	52.37	51.59	105	103	80-115	1	30
4-Bromophenyl-phenylether	50	51.36	51.88	103	104	75-115	1	30
Hexachlorobenzene	50	50.32	50.04	101	100	74-126	1	30
Atrazine	50	52.85	52.57	106	105	67-127	1	30
Pentachlorophenol	50	39.81	40.14	80	80	50-129	1	30
Phenanthrene	50	49.4	49.6	99	99	68-127	0	30
Anthracene	50	52.53	52.42	105	105	82-116	0	30
Carbazole	50	51.38	51.47	103	103	70-128	0	30
Di-n-butylphthalate	50	50.56	50.72	101	101	72-120	0	30
Fluoranthene	50	52.55	52.74	105	105	71-129	0	30
Pyrene	50	51.09	50.76	102	102	81-112	1	30
Butylbenzylphthalate	50	50.05	49.98	100	100	70-122	0	30
bis(2-Ethylhexyl)phthalate	50	51.31	51.39	103	103	78-117	0	30
3,3'-Dichlorobenzidine	50	39.07	38.74	78	77	47-108	1	30
Benzo(a)anthracene	50	52.67	52.32	105	105	84-121	1	30
Chrysene	50	51.21	51.36	102	103	81-120	0	30
Di-n-octylphthalate	50	52.87	52.35	106	105	72-129	1	30
Benzo(b)fluoranthene	50	52.36	51.53	105	103	82-121	2	30
Benzo(k)fluoranthene	50	50.16	50.51	100	101	81-122	1	30
Benzo(a)pyrene	50	51.64	51.88	103	104	82-116	0	30
Indeno(1,2,3-cd)pyrene	50	53.09	52.13	106	104	83-121	2	30
Dibenz(a,h)anthracene	50	53.26	53.15	107	106	83-124	0	30
Benzo(g,h,i)perylene	50	52.2	52.29	104	105	81-121	0	30

LCS: 316WKLCS	Batch: **13316WAK026** (Sample number(s): 7263058)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	50	44.5	NA	89	NA	19-100	NA	NA
Phenol	50	23.85	NA	48	NA	23-82	NA	NA
bis(2-Chloroethyl)ether	50	49.35	NA	99	NA	73-112	NA	NA
2-Chlorophenol	50	35.63	NA	71 *	NA	76-111	NA	NA
2-Methylphenol	50	38.44	NA	77	NA	61-118	NA	NA
2,2'-oxybis(1-Chloropropane)	50	60.55	NA	121	NA	55-123	NA	NA
4-Methylphenol	50	34.89	NA	70	NA	54-112	NA	NA
N-Nitroso-di-n-propylamine	50	51.97	NA	104	NA	71-117	NA	NA
Acetophenone	50	49.59	NA	99	NA	71-110	NA	NA
Hexachloroethane	50	45.49	NA	91	NA	55-109	NA	NA
Nitrobenzene	50	55.69	NA	111	NA	67-123	NA	NA
Isophorone	50	55.04	NA	110	NA	68-124	NA	NA
2-Nitrophenol	50	43.08	NA	86	NA	84-118	NA	NA
2,4-Dimethylphenol	50	45.03	NA	90	NA	66-125	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 316WKLCS	Batch: **13316WAK026** (Sample number(s): 7263058)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
bis(2-Chloroethoxy)methane	50	48.51	NA	97	NA	65-125	NA	NA
2,4-Dichlorophenol	50	37.73	NA	75 *	NA	84-114	NA	NA
Naphthalene	50	47.9	NA	96	NA	75-108	NA	NA
4-Chloroaniline	50	43.41	NA	87	NA	46-112	NA	NA
Hexachlorobutadiene	50	45.54	NA	91	NA	56-119	NA	NA
Caprolactam	50	14.26	NA	29	NA	14-46	NA	NA
4-Chloro-3-methylphenol	50	41.16	NA	82	NA	67-131	NA	NA
2-Methylnaphthalene	50	46.15	NA	92	NA	63-120	NA	NA
Hexachlorocyclopentadiene	100	87.88	NA	88	NA	21-126	NA	NA
2,4,6-Trichlorophenol	50	37.76	NA	76 *	NA	84-119	NA	NA
2,4,5-Trichlorophenol	50	38.98	NA	78 *	NA	81-121	NA	NA
1,1'-Biphenyl	50	47.04	NA	94	NA	60-120	NA	NA
2-Chloronaphthalene	50	50.17	NA	100	NA	60-138	NA	NA
2-Nitroaniline	50	53.37	NA	107	NA	84-122	NA	NA
Dimethylphthalate	50	47.89	NA	96	NA	50-127	NA	NA
2,6-Dinitrotoluene	50	55.34	NA	111	NA	81-124	NA	NA
Acenaphthylene	50	52.42	NA	105	NA	84-125	NA	NA
3-Nitroaniline	50	46.76	NA	94	NA	70-118	NA	NA
Acenaphthene	50	47.7	NA	95	NA	69-122	NA	NA
2,4-Dinitrophenol	100	67.81	NA	68	NA	43-137	NA	NA
4-Nitrophenol	50	23.23	NA	46	NA	16-91	NA	NA
2,4-Dinitrotoluene	50	55.74	NA	111	NA	81-120	NA	NA
Dibenzofuran	50	46.05	NA	92	NA	81-110	NA	NA
Diethylphthalate	50	47.48	NA	95	NA	60-121	NA	NA
Fluorene	50	47.04	NA	94	NA	71-126	NA	NA
4-Chlorophenyl-phenylether	50	45.81	NA	92	NA	77-114	NA	NA
4-Nitroaniline	50	42.35	NA	85	NA	61-110	NA	NA
4,6-Dinitro-2-methylphenol	50	40.27	NA	81	NA	68-131	NA	NA
N-Nitrosodiphenylamine	50	50.37	NA	101	NA	80-115	NA	NA
4-Bromophenyl-phenylether	50	50.48	NA	101	NA	75-115	NA	NA
Hexachlorobenzene	50	48.95	NA	98	NA	74-126	NA	NA
Atrazine	50	54.89	NA	110	NA	67-127	NA	NA
Pentachlorophenol	50	29.11	NA	58	NA	50-129	NA	NA
Phenanthrene	50	48.89	NA	98	NA	68-127	NA	NA
Anthracene	50	50.08	NA	100	NA	82-116	NA	NA
Carbazole	50	51.3	NA	103	NA	70-128	NA	NA
Di-n-butylphthalate	50	51.72	NA	103	NA	72-120	NA	NA
Fluoranthene	50	52.32	NA	105	NA	71-129	NA	NA
Pyrene	50	49.61	NA	99	NA	81-112	NA	NA
Butylbenzylphthalate	50	52.08	NA	104	NA	70-122	NA	NA
bis(2-Ethylhexyl)phthalate	50	51.04	NA	102	NA	78-117	NA	NA
3,3'-Dichlorobenzidine	50	36.57	NA	73	NA	47-108	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 316WKLCS	Batch: **13316WAK026** (Sample number(s): 7263058)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzo(a)anthracene	50	49.56	NA	99	NA	84-121	NA	NA
Chrysene	50	50.14	NA	100	NA	81-120	NA	NA
Di-n-octylphthalate	50	50.11	NA	100	NA	72-129	NA	NA
Benzo(b)fluoranthene	50	49.5	NA	99	NA	82-121	NA	NA
Benzo(k)fluoranthene	50	54.15	NA	108	NA	81-122	NA	NA
Benzo(a)pyrene	50	52.09	NA	104	NA	82-116	NA	NA
Indeno(1,2,3-cd)pyrene	50	55.6	NA	111	NA	83-121	NA	NA
Dibenz(a,h)anthracene	50	57.36	NA	115	NA	83-124	NA	NA
Benzo(g,h,i)perylene	50	57.97	NA	116	NA	81-121	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0400y.d DFTPP Injection Date: 11/12/13

Instrument ID: HP10623 DFTPP Injection Time: 09:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.3
68	Less than 2.0% of mass 69	0.74 (1.28)1
69	Mass 69 relative abundance	57.9
70	Less than 2.0% of mass 69	0.39 (0.67)1
127	40.0 - 60.0% of mass 198	56.1
197	Less than 1.0% of mass 198	0.33
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.85
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 1.00% of mass 198	2.68
441	Present, and less than mass 443	8.26
442	Greater than 40.0 % of mass 198	50.1
443	17.0 - 23.0% of mass 442	8.79 (17.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ck0401.d	11/12/13	09:38
02	STD3083 - SSTD.5	ck0402.d	11/12/13	10:10
03	STD3083 - SSTD1	ck0403.d	11/12/13	10:35
04	STD3083 - SSTD120	ck0404.d	11/12/13	10:59
05	STD3083 - SSTD80	ck0405.d	11/12/13	11:24
06	STD3083 - SSTD50	ck0406.d	11/12/13	11:49
07	STD3083 - SSTD15	ck0407.d	11/12/13	12:13
08	STD3083 - SSTD5	ck0408.d	11/12/13	12:38
09	8270MDL3083 - SSTD0.50	ck0409.d	11/12/13	13:03
10	PAHMDL3083 - SSTD0.10	ck0410.d	11/12/13	13:27
11	8270ICV2463 - SSTD050	ck0411.d	11/12/13	13:52
12	BASICV2463 - SSTD050	ck0412.d	11/12/13	14:17

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0460.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 08:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.2
68	Less than 2.0% of mass 69	0.6 (1.46)1
69	Mass 69 relative abundance	41.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.93
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.76
441	Present, and less than mass 443	9.51
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	10.9 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD030 - SSTD3083	ck0461.d	11/13/13	08:44
02	SBLKWA316	ck0462.d	11/13/13	09:13
03	316WALCS	ck0463.d	11/13/13	09:37
04	316WALCSD	ck0464.d	11/13/13	10:02
05	7273602	ck0468.d	11/13/13	11:40
06	7272361	ck0465a.d	11/13/13	12:05
07	7272362	ck0466a.d	11/13/13	12:30
08	7272363	ck0467a.d	11/13/13	12:55
09	SBLKLF310	ck0469.d	11/13/13	13:20
10	310LFLCS	ck0470.d	11/13/13	13:44
11	7262294	ck0474.d	11/13/13	14:09
12	7262294MS	ck0475.d	11/13/13	14:34
13	7262294MSD	ck0476.d	11/13/13	14:58
14	7262296	ck0477.d	11/13/13	15:23
15	7262298	ck0478.d	11/13/13	15:48
16	7262300	ck0479.d	11/13/13	16:12
17	7262302	ck0480.d	11/13/13	16:37
18	7262304	ck0481.d	11/13/13	17:02

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0460.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 08:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.2
68	Less than 2.0% of mass 69	0.6 (1.46)1
69	Mass 69 relative abundance	41.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.93
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.76
441	Present, and less than mass 443	9.51
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	10.9 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7262306	ck0482.d	11/13/13	17:26
20	7262308	ck0483.d	11/13/13	17:51
21	7263054	ck0484.d	11/13/13	18:15
22	7263055	ck0485.d	11/13/13	18:40
23	7265225	ck0486.d	11/13/13	19:04
24	7265227	ck0488.d	11/13/13	19:54
25	7265234	ck0489.d	11/13/13	20:18

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dj1180.d DFTPP Injection Date: 10/29/13

Instrument ID: HP19760 DFTPP Injection Time: 11:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.61 (1.3)1
69	Mass 69 relative abundance	47.1
70	Less than 2.0% of mass 69	0.22 (0.47)1
127	40.0 - 60.0% of mass 198	47.2
197	Less than 1.0% of mass 198	0.62
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.79
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.6
441	Present, and less than mass 443	7.96
442	Greater than 40.0 % of mass 198	54.0
443	17.0 - 23.0% of mass 442	10.5 (19.4)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	dj1181.d	10/29/13	11:28
02	STD2813 - SSTD.125	dj1182.d	10/29/13	11:55
03	STD2813 - SSTD30	dj1183.d	10/29/13	12:21
04	STD2813 - SSTD.25	dj1184.d	10/29/13	12:48
05	STD2813 - SSTD1.25	dj1185.d	10/29/13	13:15
06	STD2813 - SSTD3.75	dj1186.d	10/29/13	13:42
07	STD2813 - SSTD12.5	dj1187.d	10/29/13	14:08
08	STD2813 - SSTD20	dj1188.d	10/29/13	14:35
09	MDL2813 - SSTD0.125	dj1189.d	10/29/13	15:02
10	PAH2813 - SSTD0.025	dj1190.d	10/29/13	15:28
11	ICV2463 - SSTD12.5	dj1191.d	10/29/13	15:55
12	BASICV2463 - SSTD12.5	dj1192.d	10/29/13	16:22

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0510b.d DFTPP Injection Date: 11/14/13

Instrument ID: HP19760 DFTPP Injection Time: 20:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.3
68	Less than 2.0% of mass 69	0.84 (1.56)1
69	Mass 69 relative abundance	54.0
70	Less than 2.0% of mass 69	0.31 (0.57)1
127	40.0 - 60.0% of mass 198	49.4
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.66
275	10.0 - 30.0% of mass 198	23.5
365	Greater than 1.00% of mass 198	2.44
441	Present, and less than mass 443	8.78
442	Greater than 40.0 % of mass 198	58.4
443	17.0 - 23.0% of mass 442	11.1 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD125	dk0512.d	11/14/13	21:01
02	SBLKWK316	dk0513.d	11/14/13	22:15
03	316WKLCS	dk0514.d	11/14/13	22:42
04	7270420	dk0515.d	11/14/13	23:08
05	7270421MS	dk0516.d	11/14/13	23:35
06	7270422MSD	dk0517.d	11/15/13	00:02
07	7263058RE	dk0518.d	11/15/13	00:29
08	7263093RE	dk0519.d	11/15/13	00:55
09	7263094RE	dk0520.d	11/15/13	01:22
10	7267302	dk0521.d	11/15/13	01:49
11	7267303	dk0522.d	11/15/13	02:16
12	7268209	dk0523.d	11/15/13	02:42
13	7268211	dk0524.d	11/15/13	03:09
14	7268551	dk0525.d	11/15/13	03:36
15	7268555	dk0527.d	11/15/13	04:03
16	7268560	dk0528.d	11/15/13	04:29
17	7268620	dk0529.d	11/15/13	04:56
18	7268621	dk0530.d	11/15/13	05:23

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0510b.d DFTPP Injection Date: 11/14/13

Instrument ID: HP19760 DFTPP Injection Time: 20:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	54.3
68	Less than 2.0% of mass 69	0.84 (1.56)1
69	Mass 69 relative abundance	54.0
70	Less than 2.0% of mass 69	0.31 (0.57)1
127	40.0 - 60.0% of mass 198	49.4
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.66
275	10.0 - 30.0% of mass 198	23.5
365	Greater than 1.00% of mass 198	2.44
441	Present, and less than mass 443	8.78
442	Greater than 40.0 % of mass 198	58.4
443	17.0 - 23.0% of mass 442	11.1 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7269118	dk0531.d	11/15/13	05:49
20	7270419	dk0532.d	11/15/13	06:16
21	7270424	dk0533.d	11/15/13	06:43
22	7270839	dk0534.d	11/15/13	07:10
23	7270841	dk0535.d	11/15/13	07:37
24	7268554	dk0526.d	11/15/13	08:03

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0320y.d DFTPP Injection Date: 11/09/13

Instrument ID: HP11165 DFTPP Injection Time: 19:53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.6
68	Less than 2.0% of mass 69	0.81 (1.63)1
69	Mass 69 relative abundance	49.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	49.6
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.82
275	10.0 - 30.0% of mass 198	21.3
365	Greater than 1.00% of mass 198	2.36
441	Present, and less than mass 443	8.51
442	Greater than 40.0 % of mass 198	55.8
443	17.0 - 23.0% of mass 442	10.8 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	gk0321.d	11/09/13	20:09
02	STD3083 - SSTD.5	gk0322.d	11/09/13	20:49
03	STD3083 - SSTD120	gk0323.d	11/09/13	21:16
04	STD3083 - SSTD80	gk0324.d	11/09/13	21:42
05	STD3083 - SSTD50	gk0325.d	11/09/13	22:09
06	STD3083 - SSTD15	gk0326.d	11/09/13	22:35
07	STD3083 - SSTD5	gk0327.d	11/09/13	23:01
08	STD3083 - SSTD1	gk0328.d	11/09/13	23:27
09	8270MDL3083 - SSTD0.5	gk0329.d	11/09/13	23:54
10	PAHMDL3083 - SSTD0.1	gk0330.d	11/10/13	00:20
11	ICV2463 - SSTD050	gk0331.d	11/10/13	00:47
12	BAS2813 - SSTD50	gk0333.d	11/10/13	01:13
13	BAS2813 - SSTD120	gk0334.d	11/10/13	01:39
14	BAS2813 - SSTD80	gk0335.d	11/10/13	02:05
15	BAS2813 - SSTD30	gk0336.d	11/10/13	02:31
16	BAS2813 - SSTD15	gk0337.d	11/10/13	02:57
17	BAS2813 - SSTD5	gk0338.d	11/10/13	03:23
18	BASMDL2813 - SSTD001	gk0339.d	11/10/13	03:51

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0320y.d DFTPP Injection Date: 11/09/13

Instrument ID: HP11165 DFTPP Injection Time: 19:53

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	45.6
68	Less than 2.0% of mass 69	0.81 (1.63)1
69	Mass 69 relative abundance	49.7
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	40.0 - 60.0% of mass 198	49.6
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.82
275	10.0 - 30.0% of mass 198	21.3
365	Greater than 1.00% of mass 198	2.36
441	Present, and less than mass 443	8.51
442	Greater than 40.0 % of mass 198	55.8
443	17.0 - 23.0% of mass 442	10.8 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	BASICV2463 - SSTD050	gk0332.d	11/10/13	04:19

FORM V SV

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0390.d DFTPP Injection Date: 11/11/13

Instrument ID: HP11165 DFTPP Injection Time: 10:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.2
68	Less than 2.0% of mass 69	0.79 (1.64)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.33 (0.67)1
127	40.0 - 60.0% of mass 198	51.0
197	Less than 1.0% of mass 198	0.51
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.35
275	10.0 - 30.0% of mass 198	20.6
365	Greater than 1.00% of mass 198	2.16
441	Present, and less than mass 443	7.77
442	Greater than 40.0 % of mass 198	51.0
443	17.0 - 23.0% of mass 442	9.48 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	gk0391.d	11/11/13	10:57
02	PDA2843 - SSTD50	gk0392.d	11/11/13	11:33
03	BAS3153 - SSTD50	gk0393.d	11/11/13	12:11
04	BAS3153 - SSTD5	gk0394.d	11/11/13	12:37
05	BAS3153 - SSTD15	gk0395.d	11/11/13	13:03
06	BAS3153 - SSTD30	gk0396.d	11/11/13	13:32
07	BAS3153 - SSTD80	gk0397.d	11/11/13	13:59
08	BAS3153 - SSTD120	gk0398.d	11/11/13	14:26
09	BAS3153 - SSTD001	gk0399.d	11/11/13	14:52
10	BASICV2463 - SSTD050	gk0399a.d	11/11/13	15:19
11	SBLKLD308	gk0400.d	11/11/13	15:47
12	308LDLCS	gk0401.d	11/11/13	16:14
13	7261462	gk0421.d	11/11/13	16:40
14	7257840	gk0402.d	11/11/13	17:07
15	7257840MS	gk0403.d	11/11/13	17:33
16	7257840MSD	gk0404.d	11/11/13	17:59
17	7257841	gk0405.d	11/11/13	18:25
18	7257842	gk0406.d	11/11/13	18:51

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0390.d DFTPP Injection Date: 11/11/13

Instrument ID: HP11165 DFTPP Injection Time: 10:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	44.2
68	Less than 2.0% of mass 69	0.79 (1.64)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.33 (0.67)1
127	40.0 - 60.0% of mass 198	51.0
197	Less than 1.0% of mass 198	0.51
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.35
275	10.0 - 30.0% of mass 198	20.6
365	Greater than 1.00% of mass 198	2.16
441	Present, and less than mass 443	7.77
442	Greater than 40.0 % of mass 198	51.0
443	17.0 - 23.0% of mass 442	9.48 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7257843	gk0407.d	11/11/13	19:18
20	7257844	gk0408.d	11/11/13	19:44
21	7257845	gk0409.d	11/11/13	20:10
22	7257846	gk0410.d	11/11/13	20:36
23	7257847	gk0411.d	11/11/13	21:03
24	7257848	gk0412.d	11/11/13	21:30
25	7257849	gk0413.d	11/11/13	21:57

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0510z.d DFTPP Injection Date: 11/13/13

Instrument ID: HP11165 DFTPP Injection Time: 11:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.4
68	Less than 2.0% of mass 69	0.68 (1.45)1
69	Mass 69 relative abundance	46.8
70	Less than 2.0% of mass 69	0.23 (0.49)1
127	40.0 - 60.0% of mass 198	54.2
197	Less than 1.0% of mass 198	0.63
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.59
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.03
441	Present, and less than mass 443	8.76
442	Greater than 40.0 % of mass 198	53.3
443	17.0 - 23.0% of mass 442	10.6 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	gk0511.d	11/13/13	12:09
02	PDA2843 - SSTD50	gk0512.d	11/13/13	12:44
03	BAS3153 - SSTD30	gk0513.d	11/13/13	13:10
04	SBLKWD313	gk0514.d	11/13/13	13:49
05	313WDLCS	gk0515.d	11/13/13	14:15
06	313WDLCSD	gk0516.d	11/13/13	14:42
07	SBLKLC313	gk0517.d	11/13/13	15:08
08	313LCLCS	gk0518.d	11/13/13	15:37
09	SBLKLG310	gk0519.d	11/13/13	16:04
10	310LGLCS	gk0520.d	11/13/13	16:31
11	7263082	gk0521.d	11/13/13	16:58
12	7263083MS	gk0522.d	11/13/13	17:24
13	7263084MSD	gk0523.d	11/13/13	17:50
14	7262714	gk0524.d	11/13/13	18:16
15	7262714MS	gk0525.d	11/13/13	18:43
16	7262714MSD	gk0526.d	11/13/13	19:09
17	7267406	gk0529.d	11/13/13	20:30
18	7267408	gk0530.d	11/13/13	20:56

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0510z.d DFTPP Injection Date: 11/13/13

Instrument ID: HP11165 DFTPP Injection Time: 11:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.4
68	Less than 2.0% of mass 69	0.68 (1.45)1
69	Mass 69 relative abundance	46.8
70	Less than 2.0% of mass 69	0.23 (0.49)1
127	40.0 - 60.0% of mass 198	54.2
197	Less than 1.0% of mass 198	0.63
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.59
275	10.0 - 30.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.03
441	Present, and less than mass 443	8.76
442	Greater than 40.0 % of mass 198	53.3
443	17.0 - 23.0% of mass 442	10.6 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7267410	gk0531.d	11/13/13	21:22
20	7267412	gk0532.d	11/13/13	21:48
21	7267414	gk0533.d	11/13/13	22:15
22	7267416	gk0534.d	11/13/13	22:41
23	7267418	gk0535.d	11/13/13	23:07
24	7267420	gk0536.d	11/13/13	23:33

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0550.d DFTPP Injection Date: 11/14/13

Instrument ID: HP11165 DFTPP Injection Time: 00:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.6
68	Less than 2.0% of mass 69	0.6 (1.37)1
69	Mass 69 relative abundance	44.2
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.84
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.12
275	10.0 - 30.0% of mass 198	21.0
365	Greater than 1.00% of mass 198	2.08
441	Present, and less than mass 443	9.09
442	Greater than 40.0 % of mass 198	58.9
443	17.0 - 23.0% of mass 442	11.6 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	gk0551.d	11/14/13	01:14
02	BAS3153 - SSTD30	gk0552.d	11/14/13	01:40
03	PDA2843 - SSTD30	gk0553.d	11/14/13	02:08
04	AAP2033 - SSTD50	gk0553a.d	11/14/13	02:35
05	SBLKLF316	gk0554.d	11/14/13	03:02
06	316LFLCS	gk0555.d	11/14/13	03:29
07	316LFLCSD	gk0556.d	11/14/13	03:55
08	SBLKLB314	gk0557.d	11/14/13	04:21
09	314LBLCS	gk0558.d	11/14/13	04:47
10	SBLKWJ316	gk0559.d	11/14/13	05:13
11	316WJLCS	gk0560.d	11/14/13	05:39
12	7249990RE	gk0561.d	11/14/13	06:05
13	7249991RE	gk0562.d	11/14/13	06:31
14	7249992MSDSD	gk0563.d	11/14/13	06:57
15	7246099RE	gk0564.d	11/14/13	07:23
16	7249986RE	gk0565.d	11/14/13	07:50
17	7249989RE	gk0566.d	11/14/13	08:16
18	7249993RE	gk0567.d	11/14/13	08:42

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: gk0550.d DFTPP Injection Date: 11/14/13

Instrument ID: HP11165 DFTPP Injection Time: 00:50

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.6
68	Less than 2.0% of mass 69	0.6 (1.37)1
69	Mass 69 relative abundance	44.2
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	40.0 - 60.0% of mass 198	51.1
197	Less than 1.0% of mass 198	0.84
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.12
275	10.0 - 30.0% of mass 198	21.0
365	Greater than 1.00% of mass 198	2.08
441	Present, and less than mass 443	9.09
442	Greater than 40.0 % of mass 198	58.9
443	17.0 - 23.0% of mass 442	11.6 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7249994RE	gk0568.d	11/14/13	09:08
20	7267423	gk0569.d	11/14/13	09:37
21	7263052	gk0570.d	11/14/13	10:04
22	7263053	gk0571.d	11/14/13	10:30
23	7263076	gk0572.d	11/14/13	10:58
24	7263077	gk0573.d	11/14/13	11:25
25	7263078	gk0574.d	11/14/13	11:52
26	7263079	gk0575.d	11/14/13	12:18
27	7263080	gk0576.d	11/14/13	12:45

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: hj1360.d DFTPP Injection Date: 10/28/13

Instrument ID: HP18831 DFTPP Injection Time: 23:00

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	40.5
68	Less than 2.0% of mass 69	0.77 (1.54)1
69	Mass 69 relative abundance	49.7
70	Less than 2.0% of mass 69	0.26 (0.53)1
127	40.0 - 60.0% of mass 198	47.9
197	Less than 1.0% of mass 198	0.64
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.82
275	10.0 - 30.0% of mass 198	21.3
365	Greater than 1.00% of mass 198	2.06
441	Present, and less than mass 443	7.53
442	Greater than 40.0 % of mass 198	52.5
443	17.0 - 23.0% of mass 442	10.2 (19.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	hj1361.d	10/28/13	23:13
02	STD2813 - SSTD30	hj1362.d	10/29/13	00:07
03	STD2813 - SSTD20	hj1363.d	10/29/13	00:36
04	STD2813 - SSTD12.5	hj1364.d	10/29/13	01:05
05	STD2813 - SSTD3.75	hj1365.d	10/29/13	01:34
06	STD2813 - SSTD1.25	hj1366.d	10/29/13	02:03
07	STD2813 - SSTD.25	hj1367.d	10/29/13	02:32
08	STD2553 - SSTD.125	hj1368.d	10/29/13	03:02
09	STDMDL2553 - SSTD.125	hj1369.d	10/29/13	03:31
10	STDPAH2813 - SSTD.025	hj1370.d	10/29/13	03:59
11	ICV2463 - SSTD12.5	hj1371.d	10/29/13	04:28
12	BASICV2463 - SSTD12.5	hj1372.d	10/29/13	04:57

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: hk0250.d DFTPP Injection Date: 11/08/13

Instrument ID: HP18831 DFTPP Injection Time: 04:18

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	34.0
68	Less than 2.0% of mass 69	0.65 (1.48)1
69	Mass 69 relative abundance	44.1
70	Less than 2.0% of mass 69	0.25 (0.56)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.64
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.69
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	1.76
441	Present, and less than mass 443	7.86
442	Greater than 40.0 % of mass 198	54.7
443	17.0 - 23.0% of mass 442	10.6 (19.4)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	hk0251.d	11/08/13	04:33
02	SBLKWG310	hk0252.d	11/08/13	05:05
03	310WGLCS	hk0253.d	11/08/13	05:34
04	310WGLCSD	hk0254.d	11/08/13	06:03
05	7252510RE	hk0255.d	11/08/13	06:32
06	7259172RE	hk0256.d	11/08/13	07:02
07	7265270	hk0273.d	11/08/13	07:31
08	STD2813	hk0251a.d	11/08/13	08:00
09	7263028	hk0263.d	11/08/13	11:24
10	7263051	hk0264.d	11/08/13	11:53
11	7263056	hk0265.d	11/08/13	12:22
12	7263057	hk0266.d	11/08/13	12:51
13	7263058	hk0267.d	11/08/13	13:21
14	7263060	hk0268.d	11/08/13	13:50
15	7263075	hk0269.d	11/08/13	14:19
16	7263092	hk0270.d	11/08/13	14:48
17	7263093	hk0271.d	11/08/13	15:17
18	7263094	hk0272.d	11/08/13	15:47

FORM V SV

(3) US 1987
11/25/13

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane				0.657	0.613	0.705	0.685	0.626	0.639	0.654	5	AVG	
N-Nitrosodimethylamine				1.169	1.124	1.349	1.264	1.171	1.190	1.211	7	AVG	
Pyridine				1.771	1.771	2.170	1.861	1.763	1.931	1.878	8	AVG	
2-Picoline				1.780	1.854	2.053	2.016	1.883	1.910	1.916	5	AVG	
N-Nitrosomethylethylamine				0.957	0.853	0.992	0.934	0.873	0.887	0.916	6	AVG	
Methyl methanesulfonate				0.869	0.861	0.998	0.971	0.908	0.919	0.921	6	AVG	
N-Nitrosodiethylamine			1.050	0.813	0.847	0.958	0.936	0.885	0.881	0.910	9	AVG	
Ethyl methanesulfonate			0.793	0.846	0.803	0.851	0.871	0.816	0.821	0.829	3	AVG	
Benzaldehyde			1.762	1.612	0.983	0.860	0.939			1.231	34	1STDEG	
Aniline			3.265	2.842	2.785	3.206	3.146	2.976	3.105	3.046	6	AVG	
Phenol	*		2.706	2.274	2.388	2.705	2.714	2.571	2.623	2.569	7	AVG	*
bis(2-Chloroethyl)ether			1.846	1.786	1.745	1.930	1.856	1.797	1.804	1.824	3	AVG	
2-Chlorophenol			1.914	1.515	1.493	1.568	1.642	1.536	1.548	1.602	9	AVG	
1,3-Dichlorobenzene			1.764	1.586	1.547	1.600	1.696	1.556	1.570	1.617	5	AVG	
1,4-Dichlorobenzene	*		1.784	1.613	1.608	1.607	1.724	1.607	1.609	1.650	4	AVG	*
Benzyl alcohol				1.268	1.199	1.338	1.295	1.223	1.194	1.253	5	AVG	
1,2-Dichlorobenzene			1.614	1.478	1.523	1.535	1.630	1.527	1.535	1.549	3	AVG	
2-Methylphenol			1.837	1.594	1.633	1.754	1.782	1.660	1.674	1.705	5	AVG	
2,2'-oxybis(1-Chloropropane)			2.619	2.137	2.057	2.529	2.208	2.054	2.105	2.244	10	AVG	
bis(2-Chloroisopropyl)ether			2.659	2.137	2.057	2.529	2.208	2.054	2.105	2.250	11	AVG	
N-Nitrosopyrrolidine			1.051	0.919	0.953	1.092	1.077	1.017	1.033	1.021	6	AVG	
Acetophenone			2.701	2.655	2.490	2.566	2.587	2.428	2.366	2.542	5	AVG	
N-Nitroso-di-n-propylamine	#		1.822	1.452	1.478	1.765	1.648	1.582	1.642	1.627	8	AVG	#
N-Nitrosomorpholine				1.097	1.102	1.290	1.188	1.125	1.155	1.159	6	AVG	
4-Methylphenol			2.162	1.857	1.876	2.053	2.121	1.998	2.059	2.018	6	AVG	
o-Toluidine			3.019	2.713	2.775	3.006	3.029	2.880	2.960	2.912	4	AVG	
Hexachloroethane				0.636	0.597	0.629	0.657	0.624	0.625	0.628	3	AVG	
Nitrobenzene			0.492	0.415	0.421	0.493	0.474	0.449	0.455	0.457	7	AVG	
N-Nitrosopiperidine			0.223	0.188	0.196	0.208	0.210	0.197	0.196	0.203	6	AVG	
Isophorone			0.931	0.758	0.781	0.891	0.847	0.797	0.806	0.830	8	AVG	
2-Nitrophenol	*		0.156	0.134	0.153	0.162	0.172	0.167	0.167	0.159	8	AVG	*
2,4-Dimethylphenol			0.456	0.377	0.383	0.419	0.421	0.397	0.406	0.408	7	AVG	
O,O,O-triethylphosphorothioate				0.171	0.171	0.167	0.181	0.166	0.166	0.170	3	AVG	
bis(2-Chloroethoxy)methane			0.575	0.482	0.471	0.500	0.516	0.460	0.527	0.504	8	AVG	
Benzoic acid				0.212	0.269	0.291	0.250	0.288	0.279	0.265	11	AVG	
2,4-Dichlorophenol	*		0.279	0.263	0.274	0.274	0.297	0.277	0.281	0.278	4	AVG	*
1,2,4-Trichlorobenzene				0.289	0.294	0.283	0.313	0.290	0.287	0.293	4	AVG	
Naphthalene		1.110	1.082	1.019	1.026	1.050	1.112	1.038	1.052	1.061	3	AVG	
4-Chloroaniline			0.515	0.447	0.444	0.458	0.479	0.444	0.451	0.462	6	AVG	
2,6-Dichlorophenol			0.256	0.249	0.258	0.262	0.280	0.263	0.264	0.262	4	AVG	
Hexachloropropene				0.155	0.162	0.159	0.179	0.169	0.170	0.166	5	AVG	
Hexachlorobutadiene	*		0.158	0.150	0.149	0.136	0.155	0.141	0.138	0.147	6	AVG	*
Caprolactam				0.164	0.151	0.159	0.157	0.149	0.143	0.154	5	AVG	
N-Nitrosodi-n-butylamine				0.305	0.401	0.453	0.431	0.404	0.404	0.400	13	AVG	
4-Chloro-3-methylphenol	*		0.363	0.333	0.345	0.372	0.371	0.348	0.355	0.355	4	AVG	*
Safrole				0.269	0.281	0.277	0.298	0.281	0.280	0.281	3	AVG	
2-Methylnaphthalene		0.741	0.775	0.730	0.746	0.751	0.786	0.742	0.753	0.753	2	AVG	
1-Methylnaphthalene		0.698	0.707	0.665	0.682	0.684	0.725	0.675	0.677	0.689	3	AVG	
Hexachlorocyclopentadiene	#			0.182	0.195	0.198	0.226	0.218	0.218	0.206	8	AVG	#
1,2,4,5-Tetrachlorobenzene			0.495	0.475	0.472	0.446	0.509	0.474	0.468	0.477	4	AVG	
cis-Isosafrole				0.768	0.730	0.764	0.816	0.759	0.757	0.766	4	AVG	
2,4,6-Trichlorophenol	*		0.315	0.291	0.306	0.297	0.336	0.317	0.315	0.311	5	AVG	*

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

11-13-13

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
2,4,5-Trichlorophenol			0.343	0.304	0.333	0.330	0.375	0.345	0.348	0.339	6	AVG	
trans-Isosafrole				0.527	0.529	0.544	0.574	0.539	0.539	0.542	3	AVG	
Isosafrole				0.469	0.471	0.485	0.511	0.480	0.480	0.483	3	AVG	
1,1'-Biphenyl			1.727	1.642	1.490	1.465	1.575	1.506	1.441	1.550	7	AVG	
2-Chloronaphthalene			1.288	1.072	1.025	1.006	1.351	1.014	1.146	1.129	12	AVG	
Diphenyl ether			0.776	0.766	0.756	0.756	0.809	0.771	0.769	0.772	2	AVG	
2-Nitroaniline			0.373	0.312	0.344	0.374	0.403	0.387	0.384	0.368	8	AVG	
1,4-Naphthoquinone				0.430	0.467	0.480	0.517	0.480	0.475	0.475	6	AVG	
1,4-Dinitrobenzene				0.104	0.127	0.133	0.165	0.166	0.164	0.143	18	1STDEG	
Dimethylphthalate				1.336	1.342	1.332	1.426	1.307	1.315	1.343	3	AVG	
1,3-Dinitrobenzene				0.140	0.181	0.183	0.223	0.220	0.220	0.195	17	1STDEG	
2,6-Dinitrotoluene			0.256	0.234	0.279	0.274	0.314	0.305	0.296	0.280	10	AVG	
Acenaphthylene		1.861	1.795	1.656	1.684	1.752	1.856	1.741	1.751	1.762	4	AVG	
3-Nitroaniline			0.322	0.302	0.331	0.341	0.378	0.359	0.357	0.342	7	AVG	
Acenaphthene	*	1.221	1.280	1.163	1.188	1.205	1.281	1.211	1.206	1.220	3	AVG	*
2,4-Dinitrophenol	#			0.062	0.081	0.081	0.102	0.111	0.108	0.091	21	1STDEG	#
Pentachlorobenzene			0.415	0.422	0.410	0.390	0.440	0.407	0.402	0.412	4	AVG	
4-Nitrophenol	#			0.185	0.200	0.215	0.229	0.221	0.220	0.212	8	AVG	#
Dibenzofuran			1.808	1.622	1.608	1.631	1.752	1.633	1.640	1.671	5	AVG	
2,4-Dinitrotoluene				0.282	0.337	0.349	0.414	0.393	0.394	0.361	14	AVG	
1-Naphthylamine				1.279	1.324	1.409	1.477	1.369	1.378	1.373	5	AVG	
2,3,4,6-Tetrachlorophenol			0.213	0.217	0.237	0.231	0.270	0.251	0.254	0.239	9	AVG	
2-Naphthylamine				1.303	1.365	1.448	1.513	1.400	1.398	1.404	5	AVG	
Diethylphthalate				1.367	1.361	1.401	1.470	1.366	1.359	1.387	3	AVG	
Thionazin				0.283	0.283	0.311	0.326	0.314	0.317	0.306	6	AVG	
Fluorene		1.462	1.494	1.376	1.379	1.413	1.507	1.439	1.429	1.437	3	AVG	
4-Chlorophenyl-phenylether			0.692	0.641	0.624	0.608	0.670	0.617	0.625	0.639	5	AVG	
5-Nitro-o-toluidine			0.339	0.320	0.362	0.390	0.428	0.408	0.410	0.380	11	AVG	
4-Nitroaniline			0.420	0.328	0.371	0.394	0.413	0.383	0.380	0.384	8	AVG	
4,6-Dinitro-2-methylphenol				0.055	0.066	0.067	0.088	0.093	0.094	0.077	21	1STDEG	
N-Nitrosodiphenylamine (1)	*		0.661	0.642	0.652	0.668	0.706	0.678	0.685	0.670	3	AVG	*
1,2-Diphenylhydrazine			0.950	0.861	0.900	1.052	0.980	0.971	1.008	0.960	7	AVG	
Tetraethyldithiopyrophosphate				0.127	0.129	0.147	0.141	0.136	0.141	0.137	6	AVG	
1,3,5-Trinitrobenzene				0.029	0.041	0.043	0.060	0.065	0.067	0.051	30	1STDEG	
Diallate (peak 1)				0.457	0.457	0.529	0.503	0.490	0.511	0.491	6	AVG	
Phorate			0.592	0.500	0.530	0.650	0.601	0.579	0.688	0.592	11	AVG	
Phenacetin			0.485	0.410	0.434	0.491	0.484	0.464	0.474	0.463	7	AVG	
4-Bromophenyl-phenylether				0.187	0.183	0.177	0.194	0.182	0.185	0.185	3	AVG	
Diallate (peak 2)				0.221	0.195	0.223	0.216	0.212	0.214	0.213	5	AVG	
Hexachlorobenzene		0.198	0.191	0.180	0.182	0.166	0.190	0.175	0.177	0.182	6	AVG	
Dimethoate				0.320	0.351	0.405	0.381	0.356	0.358	0.362	8	AVG	
Diallate TRANS/CIS				0.398	0.392	0.453	0.431	0.421	0.437	0.422	6	AVG	
Atrazine			0.249	0.230	0.207	0.201	0.186			0.215	12	AVG	
Pentachlorophenol	*			0.086	0.095	0.094	0.111	0.110	0.111	0.101	11	AVG	*
Pentachloronitrobenzene				0.070	0.077	0.076	0.087	0.082	0.084	0.079	8	AVG	
4-Aminobiphenyl			0.821	0.718	0.815	0.747	0.728	0.632	0.613	0.725	11	AVG	
Pronamide			0.355	0.321	0.337	0.356	0.370	0.350	0.356	0.349	5	AVG	
Dinoseb				0.057	0.085	0.090	0.124	0.132	0.138	0.104	30	1STDEG	
Phenanthrene		1.228	1.173	1.120	1.111	1.139	1.209	1.157	1.166	1.163	3	AVG	
Anthracene		1.244	1.182	1.124	1.160	1.189	1.238	1.214	1.224	1.197	3	AVG	
Carbazole			1.194	1.119	1.123	1.164	1.230	1.169	1.178	1.168	3	AVG	
Methyl parathion				0.141	0.196	0.226	0.251	0.242	0.245	0.217	19	1STDEG	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

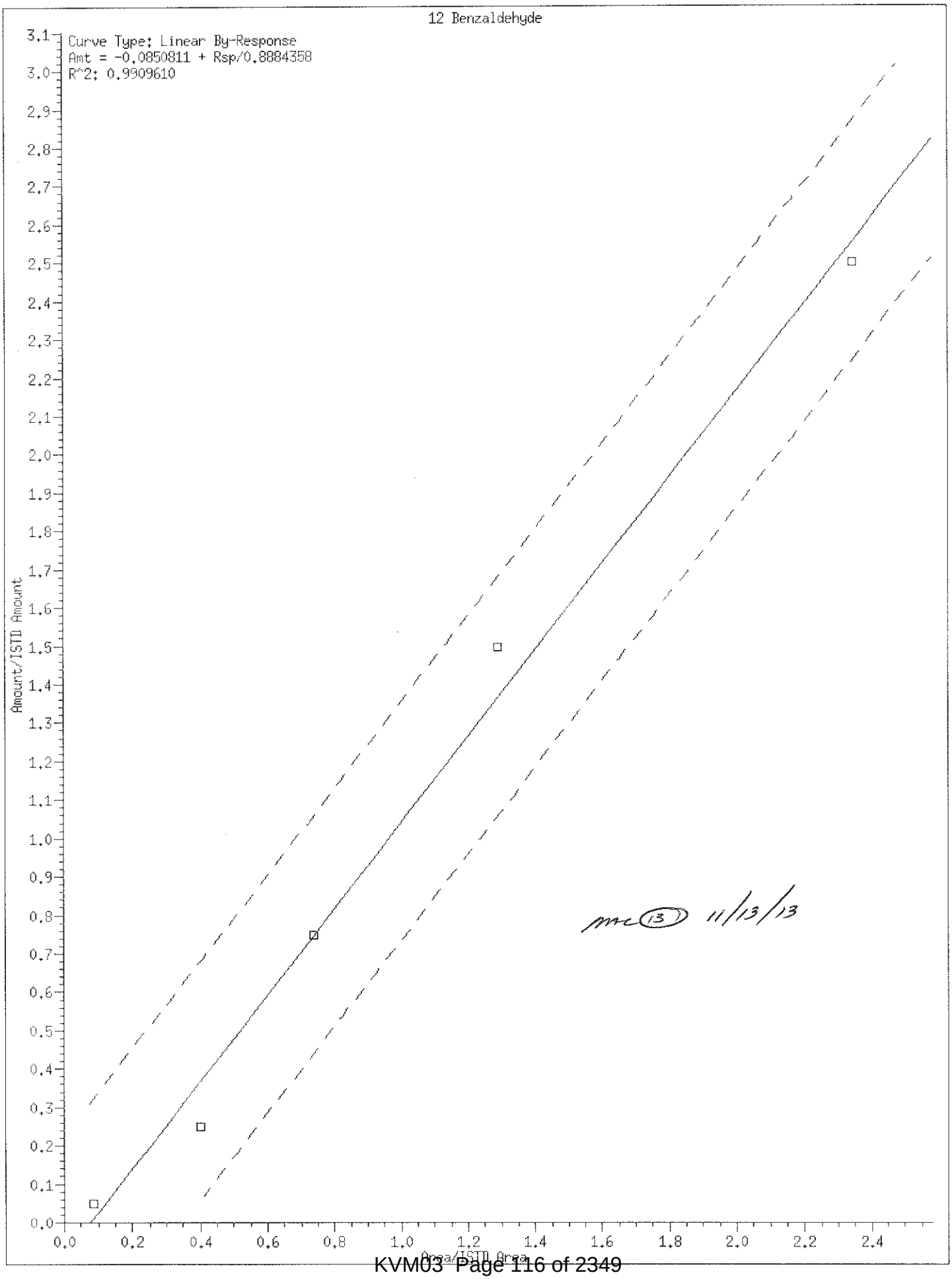
Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

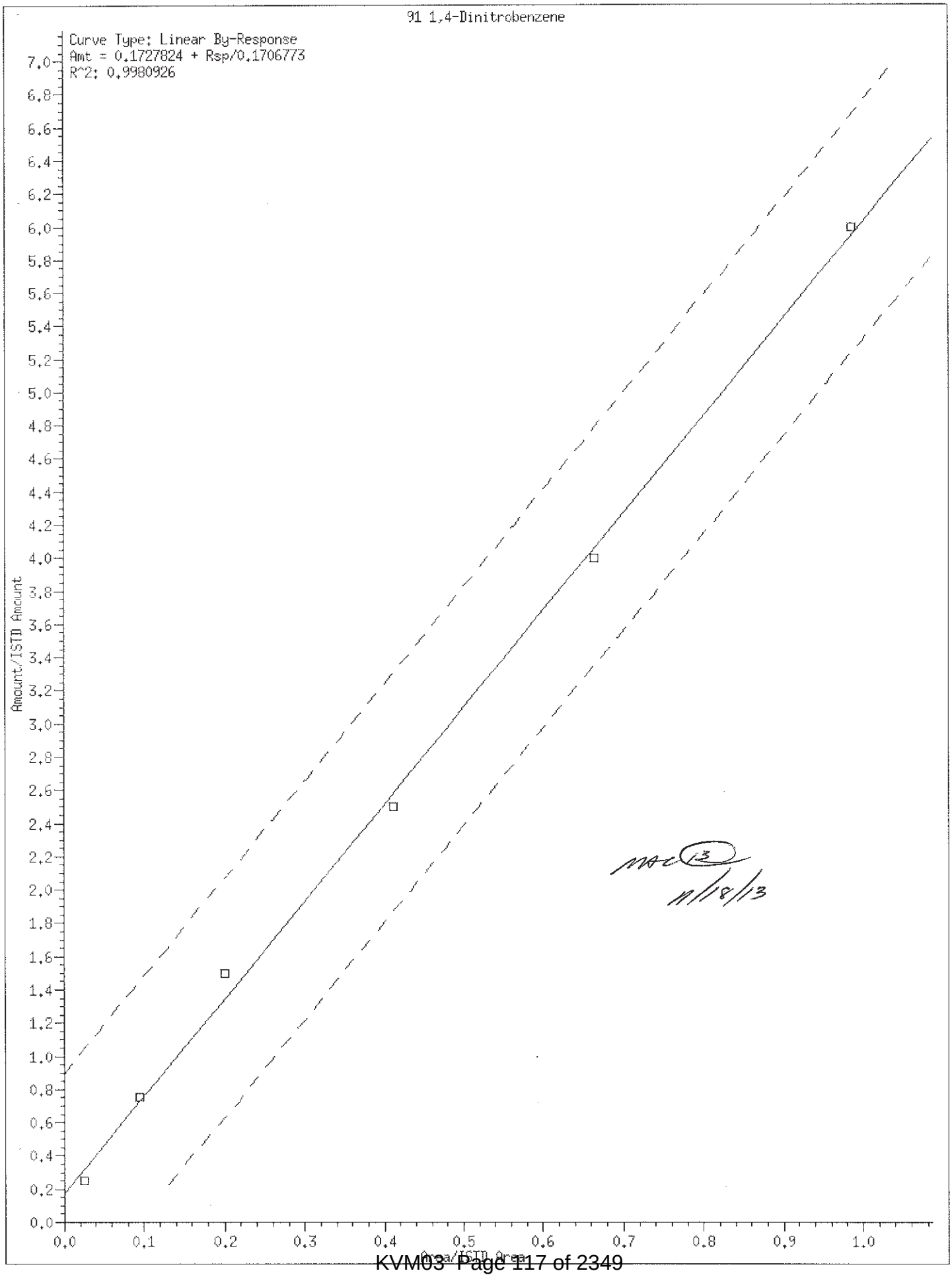
LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
Di-n-butylphthalate				1.313	1.349	1.410	1.447	1.367	1.383	1.378	3	AVG	
Parathion				0.112	0.144	0.165	0.178	0.175	0.183	0.160	17	1STDEG	
4-Nitroquinoline-1-oxide				0.040	0.062	0.072	0.095	0.099	0.105	0.079	32	1STDEG	
Isodrin			0.161	0.125	0.125	0.126	0.131	0.127	0.126	0.131	10	AVG	
Fluoranthene	*	1.258	1.298	1.252	1.277	1.276	1.380	1.331	1.330	1.300	3	AVG	*
Benzidine				0.811	0.780	0.835	0.908	0.795	0.783	0.819	6	AVG	
Pyrene		1.166	1.117	1.058	1.078	1.074	1.171	1.101	1.122	1.111	4	AVG	
p-Dimethylaminoazobenzene			0.200	0.198	0.220	0.217	0.237	0.218	0.225	0.216	6	AVG	
Chlorobenzilate			0.317	0.298	0.331	0.352	0.364	0.342	0.354	0.337	7	AVG	
3,3'-Dimethylbenzidine				0.652	0.660	0.698	0.759	0.662	0.675	0.684	6	AVG	
Butylbenzylphthalate				0.499	0.518	0.540	0.565	0.523	0.535	0.530	4	AVG	
2-Acetylaminofluorene				0.381	0.439	0.505	0.543	0.499	0.512	0.480	12	AVG	
3,3'-Dichlorobenzidine				0.374	0.378	0.385	0.423	0.377	0.380	0.386	5	AVG	
4,4'-Methylenebis(2-Chloroanil				0.168	0.179	0.190	0.210	0.192	0.192	0.189	8	AVG	
Benzo(a)anthracene		0.985	1.028	0.967	1.002	1.004	1.129	1.036	1.045	1.024	5	AVG	
Chrysene		0.994	1.036	0.976	0.959	0.948	1.046	0.971	0.973	0.988	4	AVG	
bis(2-Ethylhexyl)phthalate				0.692	0.705	0.755	0.783	0.732	0.746	0.735	5	AVG	
6-Methylchrysene				0.702	0.714	0.727	0.788	0.721	0.721	0.729	4	AVG	
Di-n-octylphthalate	*			1.275	1.416	1.600	1.573	1.563	1.630	1.510	9	AVG	*
Dibenz(a,h)acridine				0.765	0.827	0.889	0.929	0.880	0.905	0.866	7	AVG	
Dibenz(a,j)acridine				0.994	0.993	0.979	1.070	0.975	0.964	0.996	4	AVG	
7,12-Dimethylbenz[a]anthracene			0.502	0.513	0.549	0.573	0.617	0.601	0.617	0.567	8	AVG	
Benzo(b)fluoranthene		1.087	1.183	1.104	1.217	1.174	1.251	1.361	1.393	1.221	9	AVG	
Quinoline				0.726	0.729	0.733	0.771	0.714	0.716	0.731	3	AVG	
Benzo(k)fluoranthene		1.265	1.229	1.232	1.213	1.268	1.392	1.174	1.194	1.246	5	AVG	
Benzo(a)pyrene	*	1.311	1.234	1.066	1.135	1.169	1.241	1.179	1.199	1.192	6	AVG	*
3-Methylcholanthrene			0.599	0.565	0.589	0.596	0.636	0.598	0.601	0.597	4	AVG	
NDPA as diphenylamine				0.642	0.652	0.668	0.706	0.678	0.685	0.672	3	AVG	
Indeno(1,2,3-cd)pyrene		1.224	1.259	1.239	1.260	1.269	1.361	1.260	1.274	1.268	3	AVG	
Dibenz(a,h)anthracene		0.989	1.038	1.029	1.062	1.077	1.161	1.055	1.075	1.061	5	AVG	
Benzo(g,h,i)perylene		1.077	1.136	1.073	1.048	1.069	1.143	1.043	1.054	1.080	4	AVG	
Indene				3.591	3.362	3.575	3.518	3.354	3.360	3.460	3	AVG	
1-Chloronaphthalene			1.189	1.047	1.106	1.115	1.167	1.146	1.005	1.111	6	AVG	
2-Fluorophenol				1.464	1.443	1.524	1.573	1.476	1.498	1.496	3	AVG	
Phenol-d5				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6	AVG	
Phenol-d6				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6	AVG	
Nitrobenzene-d5				0.389	0.404	0.466	0.452	0.434	0.440	0.431	7	AVG	
2-Fluorobiphenyl				1.233	1.224	1.239	1.338	1.256	1.255	1.258	3	AVG	
2,4,6-Tribromophenol				0.117	0.118	0.114	0.131	0.122	0.123	0.121	5	AVG	
Terphenyl-d14				0.705	0.702	0.685	0.758	0.713	0.727	0.715	4	AVG	
									Average %RSD	7			

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


12 Benzaldehyde
Curve Type: Linear By-Response
Amt = -0.0850811 + Rsp/0.8884358
R^2: 0.9909610
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.5
3.0
3.1

mc (13) 11/13/13


91 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1727824 + Rsp/0.1706773
R^2: 0.9980926
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
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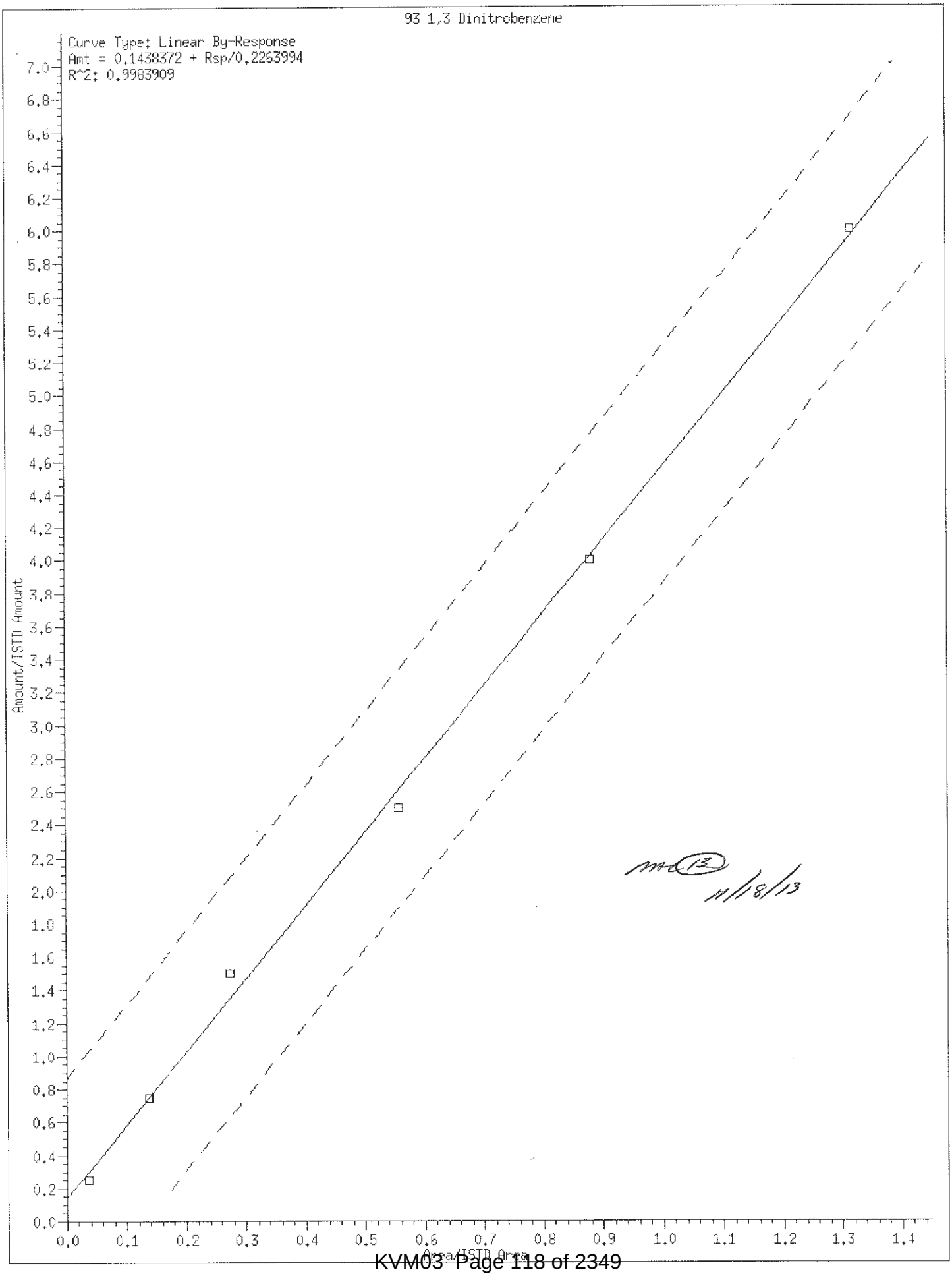
6.0
6.2
6.4
6.6
6.8
7.0


93 1,3-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1438372 + Rsp/0.2263994
R^2: 0.9983909
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
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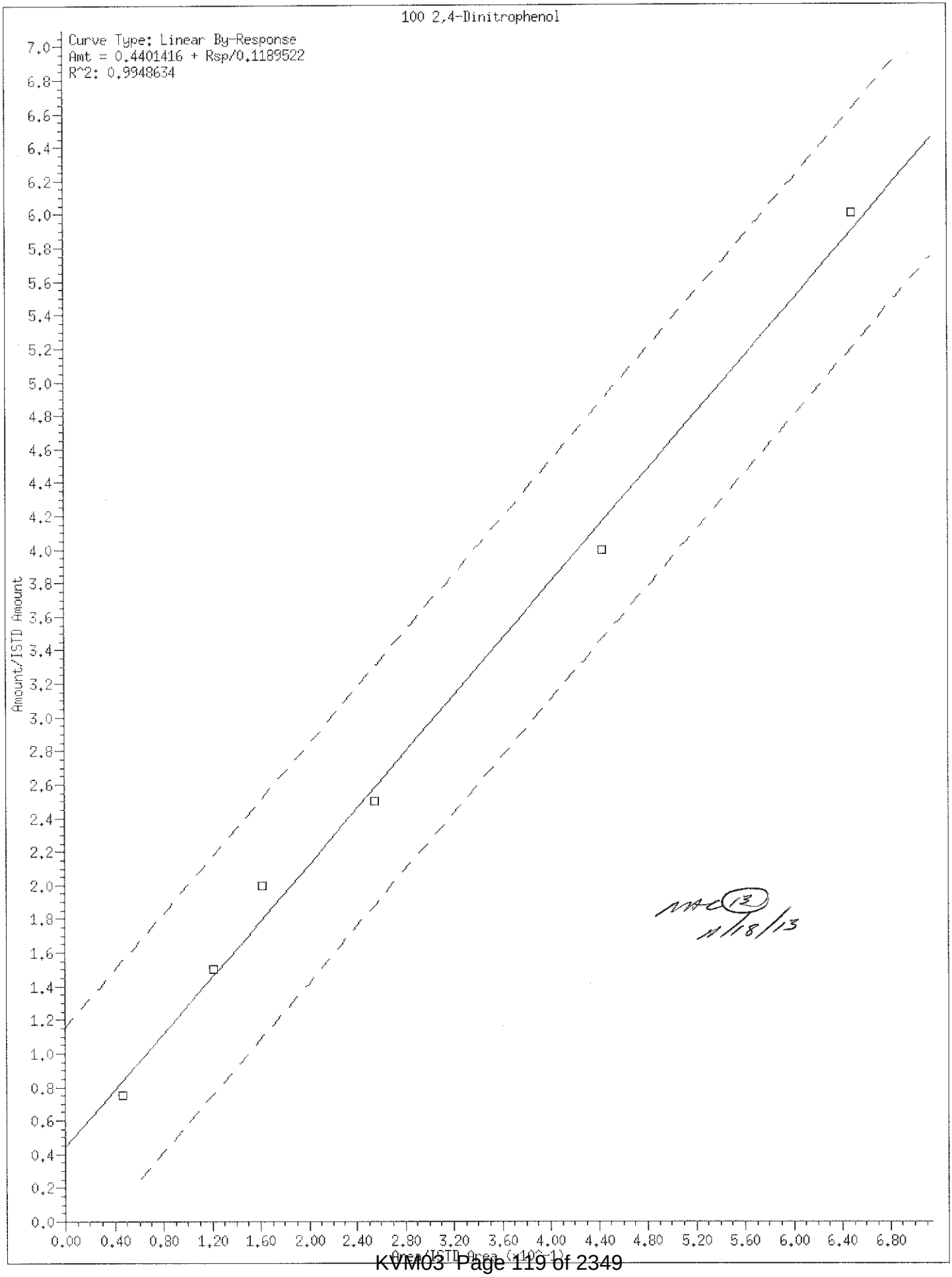
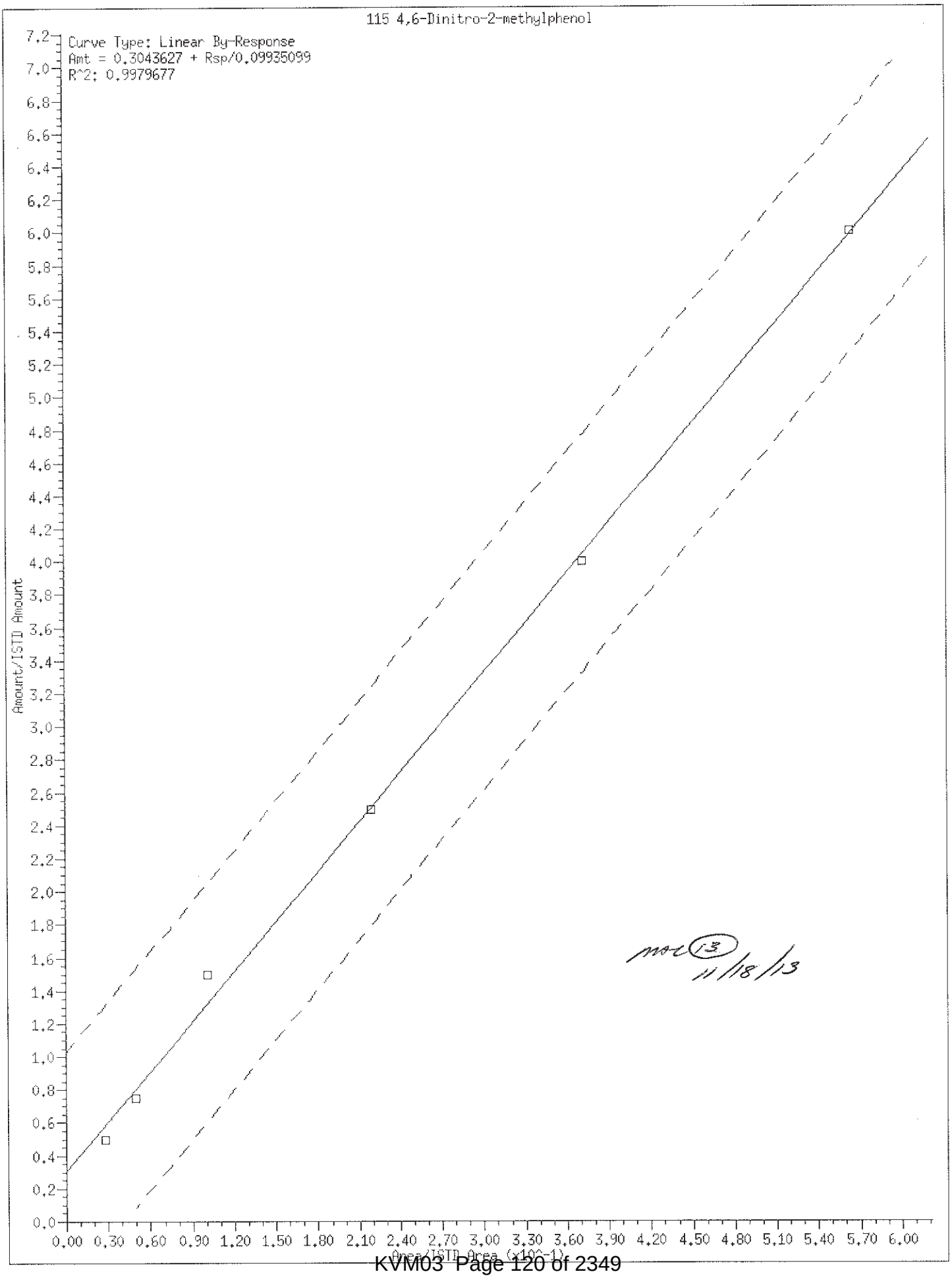
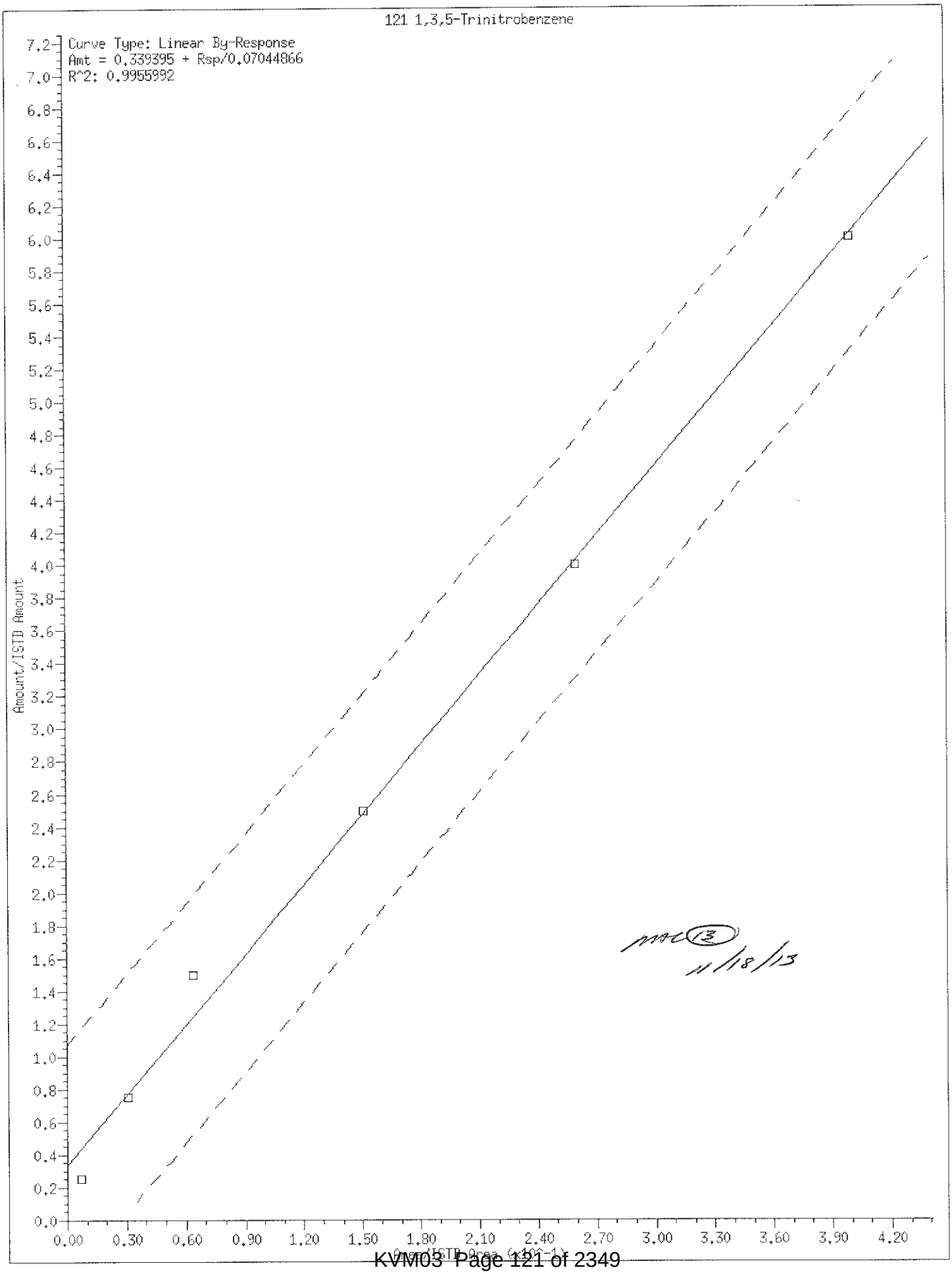
11/18/13



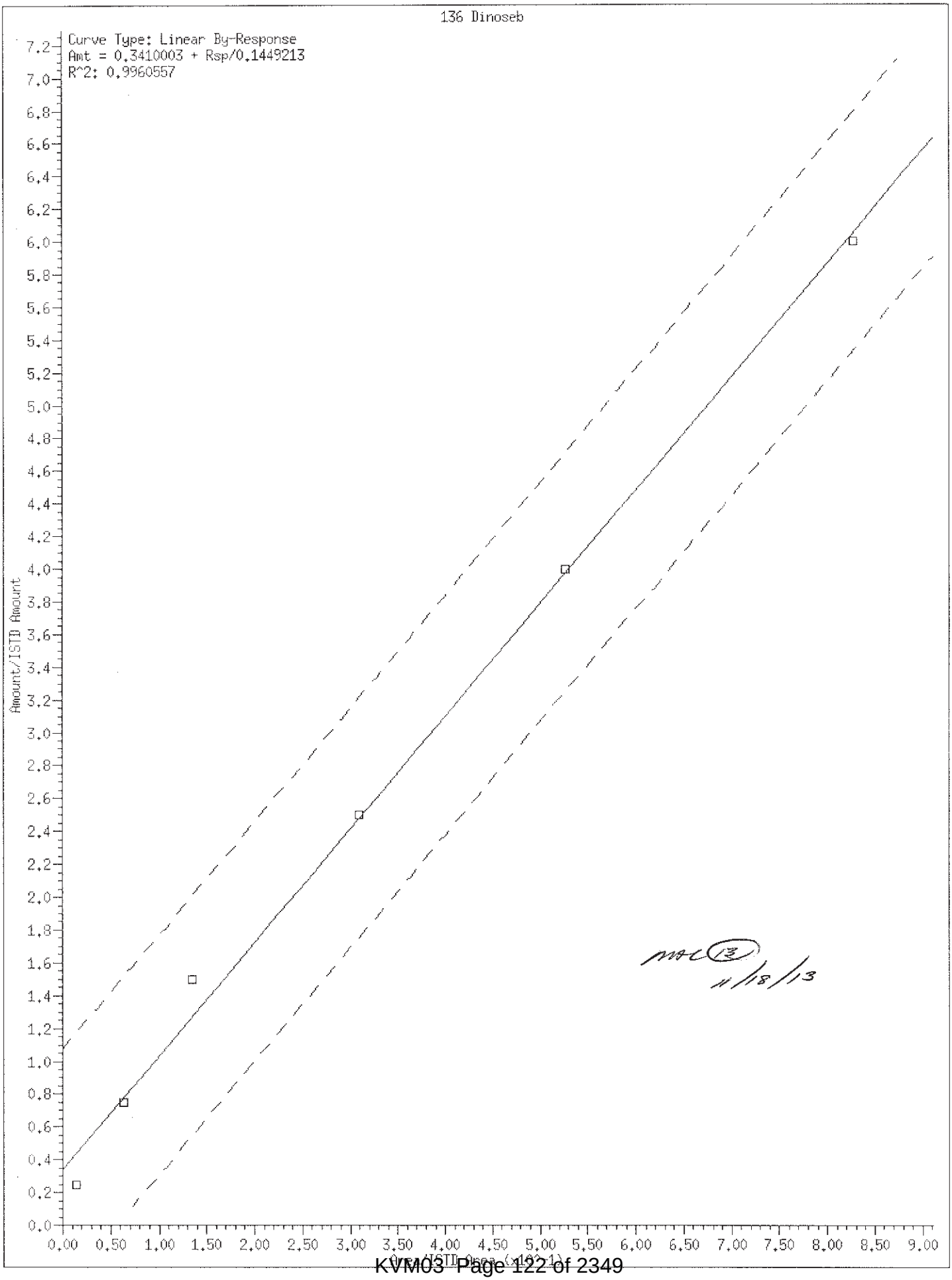
MAC (12) 11/18/13



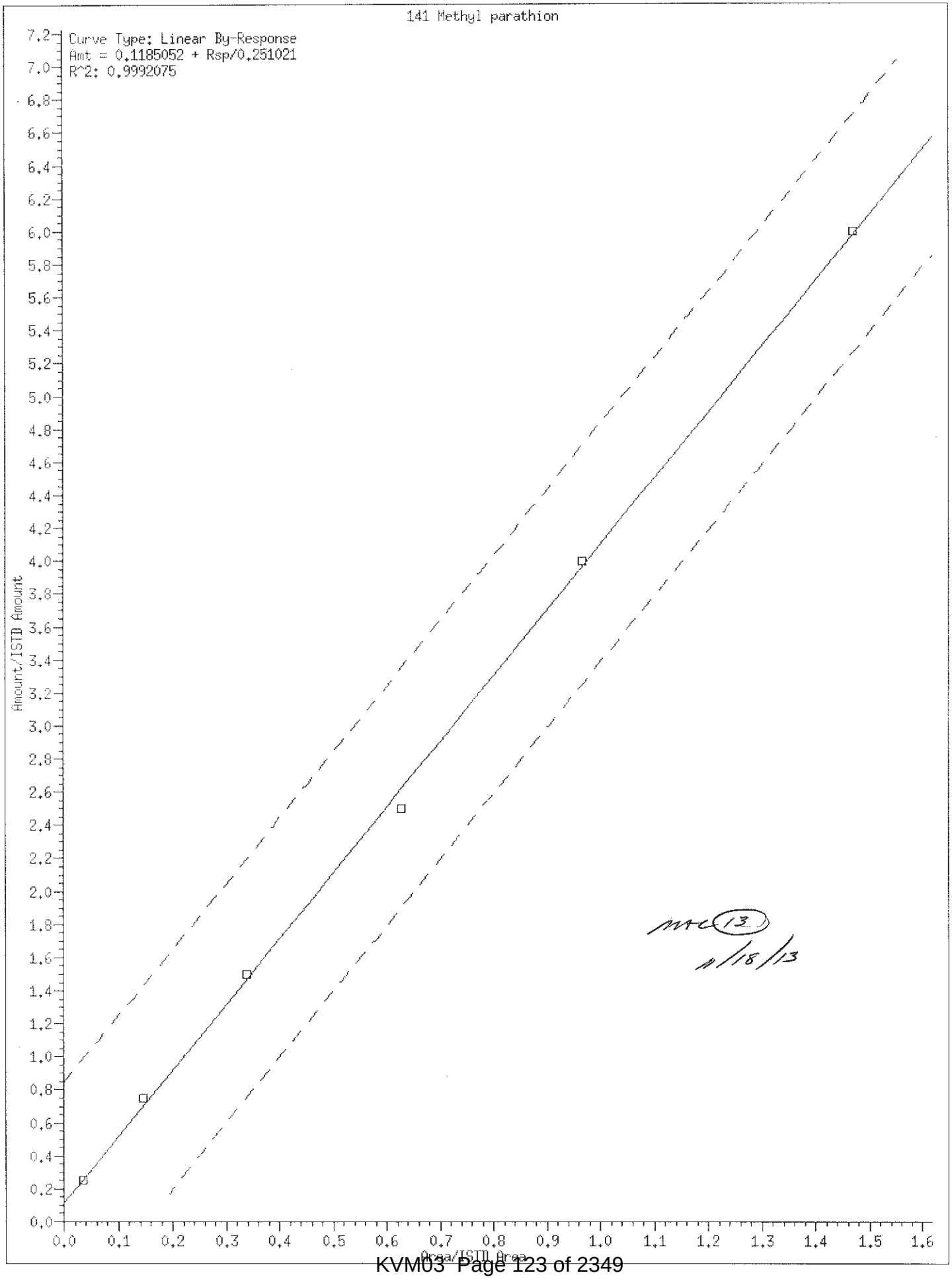
mac (13) 11/18/13



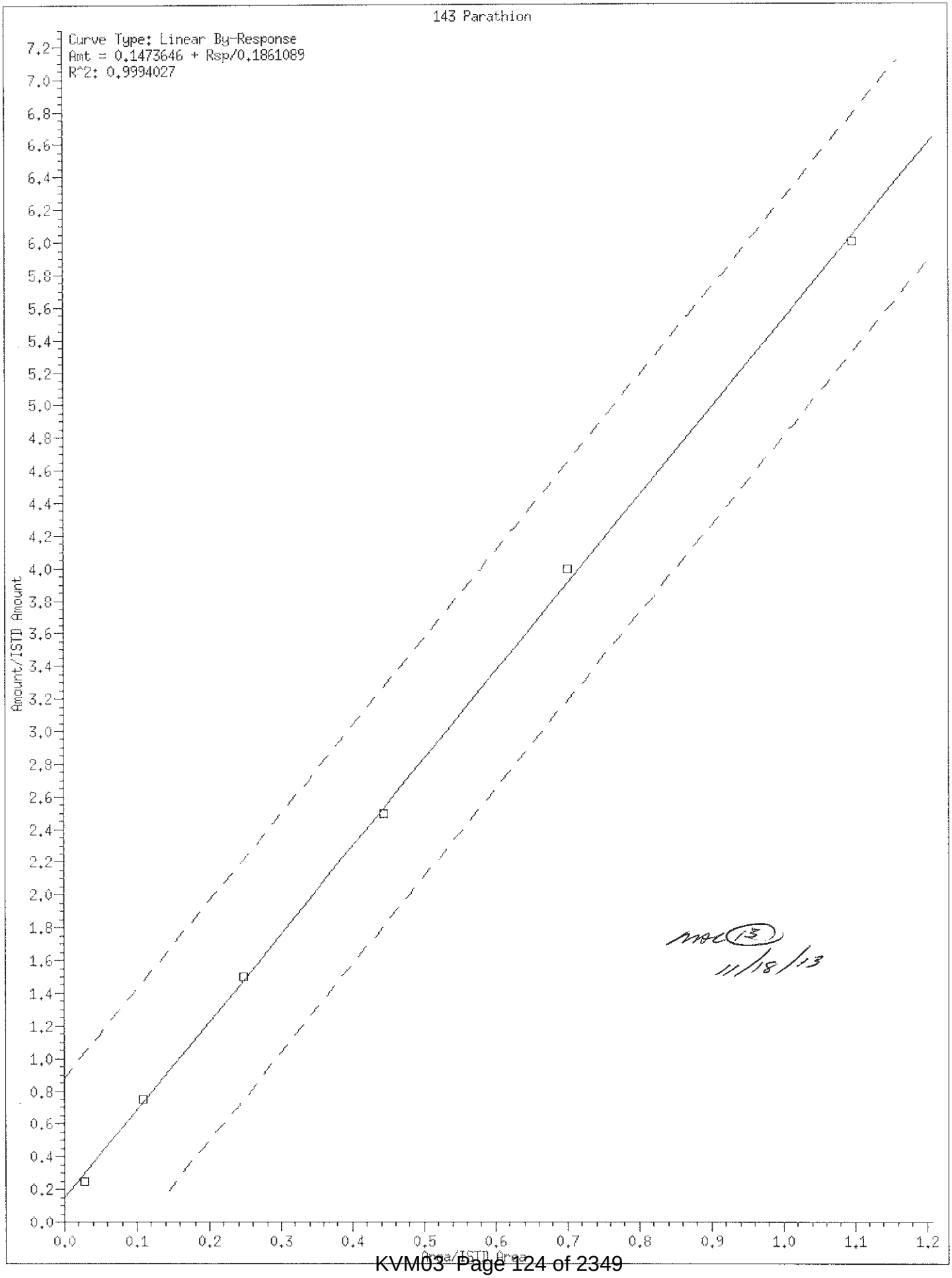
mac (13) 11/18/13



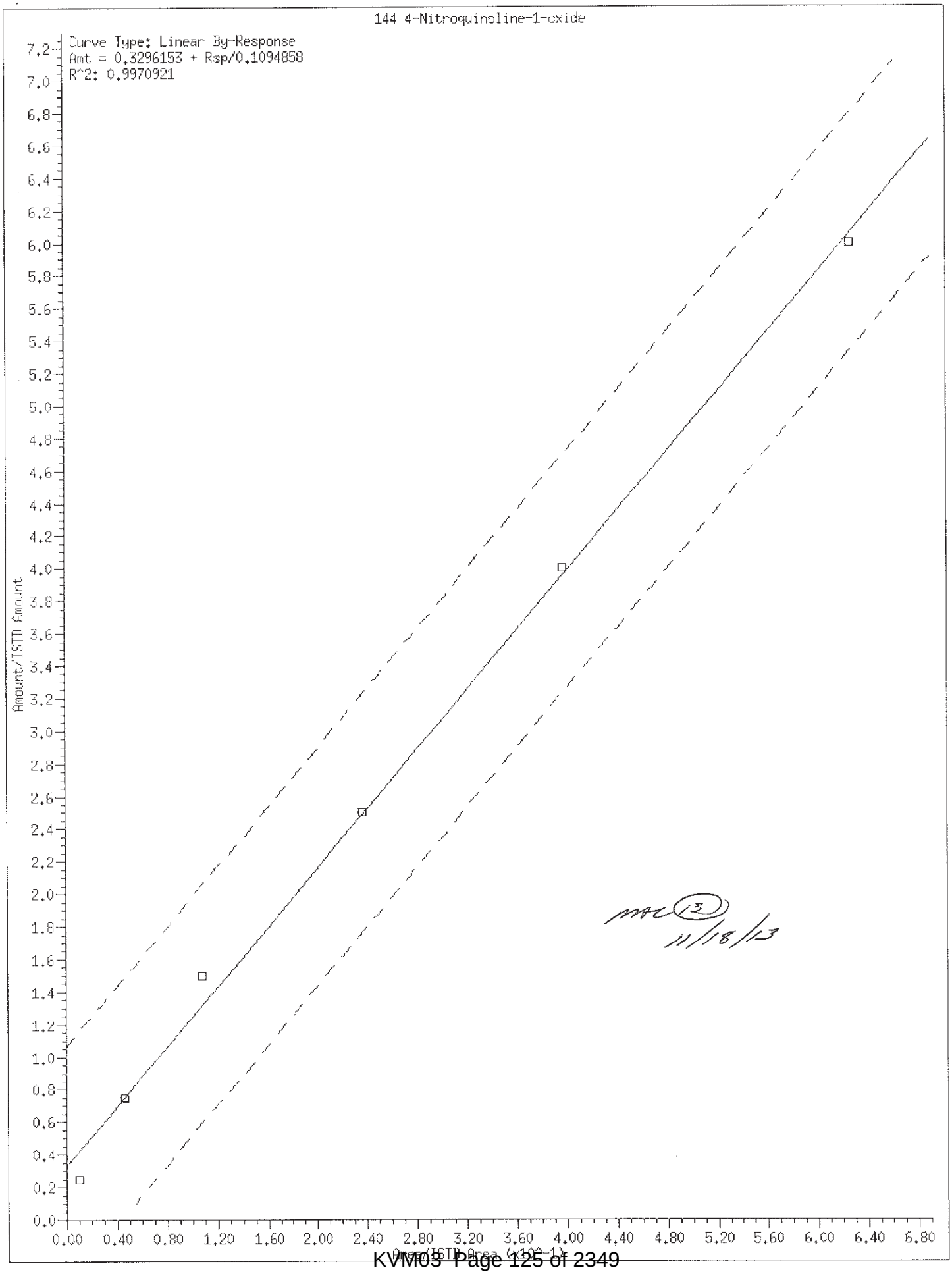
MAC 13
11/18/13


141 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.1185052 + Rsp/0.251021
R^2: 0.9992075
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2

MC (13.)
11/18/13


143 Parathion
Curve Type: Linear By-Response
Amt = 0.1473646 + Rsp/0.1861089
R^2: 0.9994027
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2

11/18/13


144 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.3296153 + Rsp/0.1094858
R^2: 0.9970921
Amount/ISTD Amount
Amount/ISTD Area (Axis 1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80

MAC (3) 11/18/13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d SSTD030
/chem/HP10623.i/13nov12a.b/ck0402.d SSTD0.50
/chem/HP10623.i/13nov12a.b/ck0403.d SSTD001
/chem/HP10623.i/13nov12a.b/ck0404.d SSTD120
/chem/HP10623.i/13nov12a.b/ck0405.d SSTD080
/chem/HP10623.i/13nov12a.b/ck0406.d SSTD050
/chem/HP10623.i/13nov12a.b/ck0407.d SSTD015
/chem/HP10623.i/13nov12a.b/ck0408.d SSTD005

Area Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	77457	114510	75301	103965	112327	97224	131335	105420	102192	18
Naphthalene-d8	361204	513472	339882	487375	520142	451858	603190	484406	470191	18
Acenaphthene-d10	222517	310493	207488	296224	313745	275969	377352	296800	287574	19
Phenanthrene-d10	404202	571166	383931	530074	570162	513309	694958	547696	526937	19
Pyrene-d10	503289	702415	473300	657394	718943	638551	855313	679864	653634	19
Perylene-d12	430377	629898	429576	539486	595376	568380	733981	600759	565979	18

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d
1,4-Dichlorobenzene-d4	5.225	5.225	5.225	5.226	5.226	5.226	5.226	5.226
Naphthalene-d8	6.461	6.461	6.461	6.468	6.468	6.468	6.461	6.461
Acenaphthene-d10	8.177	8.171	8.171	8.177	8.177	8.177	8.177	8.171
Phenanthrene-d10	9.622	9.616	9.616	9.628	9.622	9.622	9.622	9.616
Pyrene-d10	10.999	10.999	10.999	11.005	11.005	10.999	10.999	10.999
Perylene-d12	13.606	13.606	13.606	13.612	13.612	13.612	13.606	13.606

Comments: MAC (13) 11/13/13

Report generated on 11/13/2013 at 00:1

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	47.96	-4	20	YES
N-Nitrosodimethylamine	50.00	43.72	-13	20	YES
Pyridine	50.00	47.53	-5	20	YES
2-Picoline	50.00	47.33	-5	20	YES
N-Nitrosomethylethylamine	50.00	47.41	-5	20	YES
Methyl methanesulfonate	50.00	54.11	8	20	YES
N-Nitrosodiethylamine	50.00	47.99	-4	20	YES
Ethyl methanesulfonate	50.00	51.16	2	20	YES
Aniline	50.00	49.00	-2	20	YES
Phenol	50.00	48.07	-4	20	YES
bis(2-Chloroethyl)ether	50.00	48.26	-3	20	YES
2-Chlorophenol	50.00	48.77	-2	20	YES
1,3-Dichlorobenzene	50.00	50.29	1	20	YES
1,4-Dichlorobenzene	50.00	50.27	1	20	YES
Benzyl alcohol	50.00	49.43	-1	20	YES
1,2-Dichlorobenzene	50.00	50.86	2	20	YES
2-Methylphenol	50.00	49.03	-2	20	YES
2,2'-oxybis(1-Chloropropane	50.00	44.07	-12	20	YES
bis(2-Chloroisopropyl)ether	50.00	43.96	-12	20	YES
N-Nitrosopyrrolidine	50.00	49.78	0	20	YES
Acetophenone	50.00	48.21	-4	20	YES
N-Nitroso-di-n-propylamine	50.00	45.85	-8	20	YES
N-Nitrosomorpholine	50.00	47.57	-5	20	YES
4-Methylphenol	50.00	48.84	-2	20	YES
o-Toluidine	50.00	48.77	-2	20	YES
Hexachloroethane	50.00	49.32	-1	20	YES
Nitrobenzene	50.00	44.62	-11	20	YES
N-Nitrosopiperidine	50.00	49.77	0	20	YES
Isophorone	50.00	48.53	-3	20	YES
2-Nitrophenol	50.00	49.37	-1	20	YES
2,4-Dimethylphenol	50.00	48.25	-3	20	YES
O,O,O-triethylphosphorothio	50.00	50.74	1	20	YES
bis(2-Chloroethoxy)methane	50.00	47.27	-5	20	YES
Benzoic acid	100.00	100.04	0	20	YES
2,4-Dichlorophenol	50.00	51.53	3	20	YES
1,2,4-Trichlorobenzene	50.00	53.64	7	20	YES
Naphthalene	50.00	49.91	0	20	YES

NC = Could not calculate

Comments: MC (12) 11/13/13

HIGH- 4-AMINOBIPHENYL 4-NITROQUINOLINE-1-OXIDE BENZALDEHYDE

LOW- NITROSODI-N-BUTYLAMINE INDENE

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
4-Chloroaniline	50.00	51.73	3	20	YES
2,6-Dichlorophenol	50.00	51.88	4	20	YES
Hexachloropropene	50.00	51.99	4	20	YES
Hexachlorobutadiene	50.00	51.57	3	20	YES
N-Nitrosodi-n-butylamine	50.00	38.17	-24	20	NO *
4-Chloro-3-methylphenol	50.00	50.50	1	20	YES
Safrole	50.00	51.53	3	20	YES
2-Methylnaphthalene	50.00	49.27	-1	20	YES
1-Methylnaphthalene	50.00	50.86	2	20	YES
Hexachlorocyclopentadiene	100.00	114.67	15	20	YES
1,2,4,5-Tetrachlorobenzene	50.00	49.72	-1	20	YES
cis-Isosafrole	5.50	5.67	3	20	YES
2,4,6-Trichlorophenol	50.00	50.84	2	20	YES
2,4,5-Trichlorophenol	50.00	53.22	6	20	YES
trans-Isosafrole	44.50	45.97	3	20	YES
Isosafrole	50.00	51.65	3	20	YES
1,1'-Biphenyl	50.00	47.21	-6	20	YES
2-Chloronaphthalene	50.00	58.78	18	20	YES
Diphenyl ether	50.00	50.47	1	20	YES
2-Nitroaniline	50.00	51.09	2	20	YES
1,4-Naphthoquinone	62.50	62.63	0	20	YES
1,4-Dinitrobenzene	50.00	46.69	-7	20	YES
Dimethylphthalate	50.00	51.10	2	20	YES
1,3-Dinitrobenzene	50.00	47.86	-4	20	YES
2,6-Dinitrotoluene	50.00	54.31	9	20	YES
Acenaphthylene	50.00	53.72	7	20	YES
3-Nitroaniline	50.00	54.04	8	20	YES
Acenaphthene	50.00	49.66	-1	20	YES
2,4-Dinitrophenol	100.00	99.41	-1	20	YES
Pentachlorobenzene	50.00	51.87	4	20	YES
4-Nitrophenol	50.00	52.41	5	20	YES
Dibenzofuran	50.00	49.40	-1	20	YES
2,4-Dinitrotoluene	50.00	55.30	11	20	YES
1-Naphthylamine	100.00	105.26	5	20	YES
2,3,4,6-Tetrachlorophenol	50.00	58.60	17	20	YES
2-Naphthylamine	100.00	102.68	3	20	YES
Diethylphthalate	50.00	50.91	2	20	YES

NC = Could not calculate

Comments:

* NON-CCC compound, ok if < ± 50% LS 1997

11/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Thionazin	50.00	47.52	-5	20	YES
Fluorene	50.00	51.14	2	20	YES
4-Chlorophenyl-phenylether	50.00	50.27	1	20	YES
5-Nitro-o-toluidine	50.00	55.72	11	20	YES
4-Nitroaniline	50.00	53.30	7	20	YES
4,6-Dinitro-2-methylphenol	50.00	49.87	0	20	YES
N-Nitrosodiphenylamine	50.00	51.00	2	20	YES
1,2-Diphenylhydrazine	50.00	47.81	-4	20	YES
Tetraethyldithiopyrophospha	50.00	46.11	-8	20	YES
1,3,5-Trinitrobenzene	50.00	48.72	-3	20	YES
Diallate (peak 1)	37.50	33.99	-9	20	YES
Phorate	50.00	44.71	-11	20	YES
Phenacetin	50.00	50.51	1	20	YES
4-Bromophenyl-phenylether	50.00	51.35	3	20	YES
Diallate (peak 2)	12.50	11.31	-10	20	YES
Hexachlorobenzene	50.00	50.51	1	20	YES
Dimethoate	50.00	47.93	-4	20	YES
Diallate TRANS/CIS	50.00	45.30	-9	20	YES
Pentachlorophenol	50.00	53.73	7	20	YES
Pentachloronitrobenzene	50.00	51.93	4	20	YES
4-Aminobiphenyl	50.00	66.98	34	20	NO *
Pronamide	50.00	49.24	-2	20	YES
Dinoseb	50.00	48.62	-3	20	YES
Phenanthrene	50.00	49.88	0	20	YES
Anthracene	50.00	51.31	3	20	YES
Carbazole	50.00	52.05	4	20	YES
Methyl parathion	50.00	48.83	-2	20	YES
Di-n-butylphthalate	50.00	50.47	1	20	YES
Parathion	50.00	51.49	3	20	YES
4-Nitroquinoline-1-oxide	600.00	770.33	28	20	NO P
Isodrin	50.00	48.07	-4	20	YES
Fluoranthene	50.00	52.98	6	20	YES
Benzidine	250.00	246.85	-1	20	YES
Pyrene	50.00	50.02	0	20	YES
p-Dimethylaminoazobenzene	50.00	53.06	6	20	YES
Chlorobenzilate	50.00	47.58	-5	20	YES
3,3'-Dimethylbenzidine	100.00	102.46	2	20	YES

NC = Could not calculate

Comments:

* Non-ccc compound, ok if < ±50% CS (95)

4/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Butylbenzylphthalate	50.00	49.18	-2	20	YES
2-Acetylaminofluorene	50.00	51.65	3	20	YES
3,3'-Dichlorobenzidine	50.00	49.72	-1	20	YES
4,4'-Methylenebis(2-Chloroa	50.00	49.37	-1	20	YES
Benzo(a)anthracene	50.00	52.16	4	20	YES
Chrysene	50.00	50.52	1	20	YES
bis(2-Ethylhexyl)phthalate	50.00	48.64	-3	20	YES
Di-n-octylphthalate	50.00	49.02	-2	20	YES
7,12-Dimethylbenz[a]anthrac	50.00	53.57	7	20	YES
Benzo(b)fluoranthene	50.00	49.93	0	20	YES
Benzo(k)fluoranthene	50.00	54.82	10	20	YES
Benzo(a)pyrene	50.00	50.56	1	20	YES
3-Methylcholanthrene	50.00	50.48	1	20	YES
Indeno(1,2,3-cd)pyrene	50.00	51.91	4	20	YES
Dibenz(a,h)anthracene	50.00	52.34	5	20	YES
Benzo(g,h,i)perylene	50.00	51.23	2	20	YES
6-Methylchrysene	50.00	49.68	-1	20	YES
Dibenz(a,h)acridine	50.00	49.96	0	20	YES
Dibenz(a,j)acridine	50.00	50.79	2	20	YES
Quinoline	50.00	50.58	1	20	YES
Indene	50.00	36.40	-27	20	NO ☆

NC = Could not calculate

Comments:

☆ Non-cc compound, o/c of ± 50%.

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP10623

Method: SW-846 8270C | File ID: ck0412.d

ICV SAMPLE ID: BASICV2463 | BATCH: 13NOV12A026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	79.82	60	20	NO
Caprolactam	50.00	48.35	-3	20	YES
Atrazine	50.00	52.72	5	20	YES

NC = Could not calculate

Comments: MAC (3) 11/13/13

* non-CCC compound, ok if < ± 50%

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.644	0.649	0.605	0.626	0.603	0.650	0.629	3	AVG
N-Nitrosodimethylamine		0.980	1.115	1.001	1.178	1.168	1.164	1.172	1.111	8	AVG
Pyridine			1.951	1.687	1.897	1.953	1.913	1.970	1.895	6	AVG
2-Picoline		2.157	1.905	1.890	2.018	2.008	1.988	2.008	1.996	4	AVG
N-Nitrosomethylethylamine		0.801	0.829	0.828	0.913	0.870	0.874	0.891	0.858	5	AVG
Methyl methanesulfonate		1.005	0.942	0.944	1.027	0.976	0.980	0.991	0.981	3	AVG
N-Nitrosodiethylamine		0.833	0.774	0.791	0.866	0.829	0.833	0.841	0.824	4	AVG
Ethyl methanesulfonate		0.845	0.764	0.765	0.817	0.787	0.795	0.790	0.795	4	AVG
Benzaldehyde			1.591	1.577	1.533	1.435	1.282	1.140	1.426	13	AVG
Aniline		3.071	2.865	2.832	3.030	2.871	2.852	2.825	2.907	3	AVG
Phenol		2.550	2.375	2.318	2.444	2.314	2.282	2.240	2.360	5	AVG
bis(2-Chloroethyl)ether		2.016	1.840	1.825	1.915	1.837	1.807	1.796	1.862	4	AVG
2-Chlorophenol		1.504	1.404	1.405	1.541	1.455	1.464	1.447	1.460	3	AVG
1,3-Dichlorobenzene		1.672	1.589	1.550	1.593	1.543	1.534	1.512	1.570	3	AVG
1,4-Dichlorobenzene		1.739	1.598	1.562	1.600	1.559	1.551	1.511	1.588	5	AVG
Benzyl alcohol			1.015	1.013	1.052	1.035	1.033	1.047	1.033	2	AVG
1,2-Dichlorobenzene		1.581	1.532	1.470	1.503	1.469	1.453	1.393	1.486	4	AVG
Indene		2.774	2.562	2.417	2.569	2.474	2.458	2.319	2.510	6	AVG
2-Methylphenol		1.536	1.430	1.441	1.531	1.447	1.446	1.424	1.465	3	AVG
2,2'-oxybis(1-Chloropropane)		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
bis(2-Chloroisopropyl)ether		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
N-Nitrosopyrrolidine		0.815	0.766	0.817	0.905	0.848	0.857	0.858	0.838	5	AVG
Acetophenone		2.429	2.337	2.282	2.249	2.241	2.257	2.241	2.291	3	AVG
N-Nitroso-di-n-propylamine		1.433	1.348	1.319	1.401	1.290	1.243	1.197	1.319	6	AVG
N-Nitrosomorpholine		1.186	1.089	1.039	1.078	0.994	0.961	0.931	1.040	8	AVG
4-Methylphenol		1.739	1.655	1.630	1.732	1.618	1.576	1.507	1.637	5	AVG
o-Toluidine		2.746	2.533	2.502	2.629	2.490	2.433	2.351	2.526	5	AVG
Hexachloroethane		0.722	0.667	0.657	0.690	0.659	0.660	0.646	0.671	4	AVG
Nitrobenzene		0.513	0.494	0.479	0.504	0.487	0.474	0.467	0.488	3	AVG
N-Nitrosopiperidine		0.202	0.194	0.197	0.209	0.203	0.199	0.197	0.200	3	AVG
Isophorone		0.853	0.815	0.807	0.874	0.843	0.821	0.815	0.832	3	AVG
2-Nitrophenol		0.143	0.146	0.155	0.192	0.178	0.180	0.180	0.168	12	AVG
2,4-Dimethylphenol		0.418	0.396	0.400	0.424	0.414	0.404	0.395	0.407	3	AVG
O,O,O-triethylphosphorothioate		0.188	0.177	0.179	0.181	0.184	0.180	0.175	0.181	3	AVG
bis(2-Chloroethoxy)methane		0.581	0.558	0.537	0.550	0.524	0.534	0.518	0.543	4	AVG
Benzoic acid				0.183	0.294	0.257	0.287	0.330	0.270	20	1STDEG
2,4-Dichlorophenol		0.287	0.271	0.283	0.299	0.297	0.291	0.283	0.287	3	AVG
1,2,4-Trichlorobenzene		0.355	0.328	0.312	0.317	0.320	0.314	0.300	0.321	5	AVG
Naphthalene	1.011	1.213	1.102	1.061	1.069	1.065	1.024	0.984	1.066	7	AVG
4-Chloroaniline		0.483	0.439	0.432	0.459	0.441	0.425	0.413	0.442	5	AVG
2,6-Dichlorophenol		0.274	0.274	0.277	0.286	0.282	0.275	0.264	0.276	3	AVG
Hexachloropropene		0.194	0.178	0.194	0.211	0.211	0.216	0.213	0.203	7	AVG
Hexachlorobutadiene		0.201	0.190	0.183	0.183	0.188	0.186	0.179	0.187	4	AVG
Quinoline		0.771	0.704	0.685	0.721	0.697	0.691	0.674	0.706	5	AVG
Caprolactam			0.118	0.127	0.134	0.131	0.130	0.129	0.128	5	AVG
N-Nitrosodi-n-butylamine			0.297	0.300	0.320	0.305	0.382	0.377	0.330	12	AVG
4-Chloro-3-methylphenol		0.339	0.321	0.335	0.371	0.353	0.350	0.346	0.345	5	AVG
Safrole		0.267	0.271	0.266	0.280	0.278	0.274	0.264	0.271	2	AVG
2-Methylnaphthalene	0.703	0.762	0.734	0.709	0.725	0.712	0.684	0.654	0.710	5	AVG
1-Methylnaphthalene	0.644	0.686	0.654	0.644	0.660	0.645	0.627	0.598	0.645	4	AVG
Hexachlorocyclopentadiene			0.229	0.245	0.293	0.281	0.297	0.297	0.273	11	AVG
1,2,4,5-Tetrachlorobenzene		0.626	0.594	0.571	0.579	0.568	0.566	0.552	0.580	4	AVG

BCm 10-29-13

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
cis-Isosafrole		0.081	0.079	0.081	0.091	0.087	0.087	0.089	0.085	6	AVG
2,4,6-Trichlorophenol		0.332	0.337	0.354	0.399	0.378	0.381	0.378	0.366	7	AVG
2,4,5-Trichlorophenol		0.361	0.336	0.361	0.415	0.390	0.397	0.384	0.378	7	AVG
trans-Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
1,1'-Biphenyl		1.619	1.541	1.485	1.433	1.403	1.369	1.314	1.452	7	AVG
2-Chloronaphthalene		1.255	1.171	1.079	1.151	1.074	1.101	0.966	1.114	8	AVG
1-Chloronaphthalene		1.202	1.152	1.116	1.110	1.071	0.994	1.043	1.098	6	AVG
Diphenyl ether		0.844	0.835	0.802	0.829	0.786	0.782	0.747	0.803	4	AVG
2-Nitroaniline		0.286	0.305	0.340	0.405	0.367	0.369	0.358	0.347	12	AVG
1,4-Naphthoquinone			0.407	0.460	0.526	0.501	0.500	0.482	0.479	9	AVG
1,4-Dinitrobenzene			0.122	0.151	0.211	0.184	0.192	0.198	0.176	19	1STDEG
Dimethylphthalate			1.320	1.297	1.315	1.247	1.216	1.162	1.260	5	AVG
1,3-Dinitrobenzene			0.182	0.200	0.246	0.222	0.224	0.224	0.216	10	AVG
2,6-Dinitrotoluene		0.229	0.260	0.281	0.317	0.291	0.293	0.283	0.279	10	AVG
Acenaphthylene	1.693	1.708	1.693	1.689	1.783	1.684	1.675	1.601	1.691	3	AVG
3-Nitroaniline		0.252	0.294	0.321	0.365	0.335	0.337	0.339	0.320	12	AVG
Acenaphthene	1.224	1.268	1.181	1.154	1.194	1.121	1.110	1.053	1.163	6	AVG
2,4-Dinitrophenol				0.095	0.147	0.121	0.154	0.172	0.138	22	1STDEG
Pentachlorobenzene		0.525	0.460	0.452	0.466	0.452	0.456	0.439	0.464	6	AVG
4-Nitrophenol			0.158	0.192	0.231	0.212	0.215	0.217	0.204	13	AVG
Dibenzofuran		1.817	1.713	1.662	1.696	1.611	1.583	1.497	1.654	6	AVG
2,4-Dinitrotoluene		0.297	0.323	0.359	0.393	0.373	0.381	0.378	0.358	10	AVG
2,4_2,6-Dinitrotoluenes		0.527	0.583	0.640	0.710	0.664	0.674		0.633	11	AVG
1-Naphthylamine		1.203	1.209	1.214	1.240	1.193	1.197	1.160	1.202	2	AVG
2,3,4,6-Tetrachlorophenol		0.273	0.260	0.298	0.327	0.302	0.315	0.313	0.298	8	AVG
2-Naphthylamine		1.246	1.260	1.259	1.281	1.206	1.215	1.168	1.234	3	AVG
Diethylphthalate			1.251	1.221	1.296	1.222	1.239	1.217	1.241	2	AVG
Thionazin		0.281	0.274	0.274	0.284	0.265	0.257	0.242	0.268	6	AVG
Fluorene	1.345	1.412	1.371	1.346	1.392	1.318	1.268	1.199	1.331	5	AVG
4-Chlorophenyl-phenylether		0.724	0.695	0.663	0.663	0.636	0.631	0.610	0.660	6	AVG
5-Nitro-o-toluidine		0.322	0.361	0.369	0.384	0.355	0.359	0.355	0.358	5	AVG
4-Nitroaniline		0.293	0.324	0.337	0.349	0.338	0.333	0.333	0.330	5	AVG
4,6-Dinitro-2-methylphenol				0.086	0.126	0.119	0.133	0.139	0.121	17	1STDEG
N-Nitrosodiphenylamine (1)		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
1,2-Diphenylhydrazine		1.031	1.032	1.003	1.050	0.978	0.916	0.888	0.985	6	AVG
Tetraethyldithiopyrophosphate		0.142	0.134	0.142	0.154	0.144	0.141	0.139	0.142	4	AVG
1,3,5-Trinitrobenzene			0.043	0.062	0.094	0.088	0.099	0.103	0.081	29	1STDEG
Diallate (peak 1)		0.497	0.508	0.502	0.530	0.489	0.461	0.450	0.491	6	AVG
Phorate		0.549	0.588	0.593	0.635	0.582	0.546		0.582	6	AVG
Phenacetin		0.330	0.373	0.405	0.474	0.442	0.439	0.438	0.414	12	AVG
4-Bromophenyl-phenylether		0.202	0.202	0.195	0.203	0.197	0.192	0.191	0.197	3	AVG
Diallate (peak 2)		0.196	0.199	0.206	0.227	0.212	0.211	0.215	0.209	5	AVG
Hexachlorobenzene	0.200	0.211	0.198	0.190	0.197	0.190	0.188	0.187	0.195	4	AVG
Dimethoate			0.322	0.367	0.433	0.393	0.383	0.382	0.380	10	AVG
Atrazine		0.196	0.210	0.216	0.209	0.204	0.198	0.185	0.203	5	AVG
Pentachlorophenol			0.097	0.119	0.149	0.144	0.150	0.153	0.135	17	1STDEG
Pentachloronitrobenzene		0.071	0.085	0.093	0.098	0.097	0.096	0.093	0.091	10	AVG
4-Aminobiphenyl		0.743	0.765	0.784	0.837	0.804	0.776	0.742	0.779	4	AVG
Pronamide		0.263	0.300	0.331	0.369	0.354	0.348	0.341	0.329	11	AVG
Phenanthrene	1.182	1.238	1.172	1.109	1.117	1.074	1.033	0.997	1.115	7	AVG
Dinoseb			0.078	0.123	0.184	0.178	0.197	0.205	0.161	31	1STDEG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

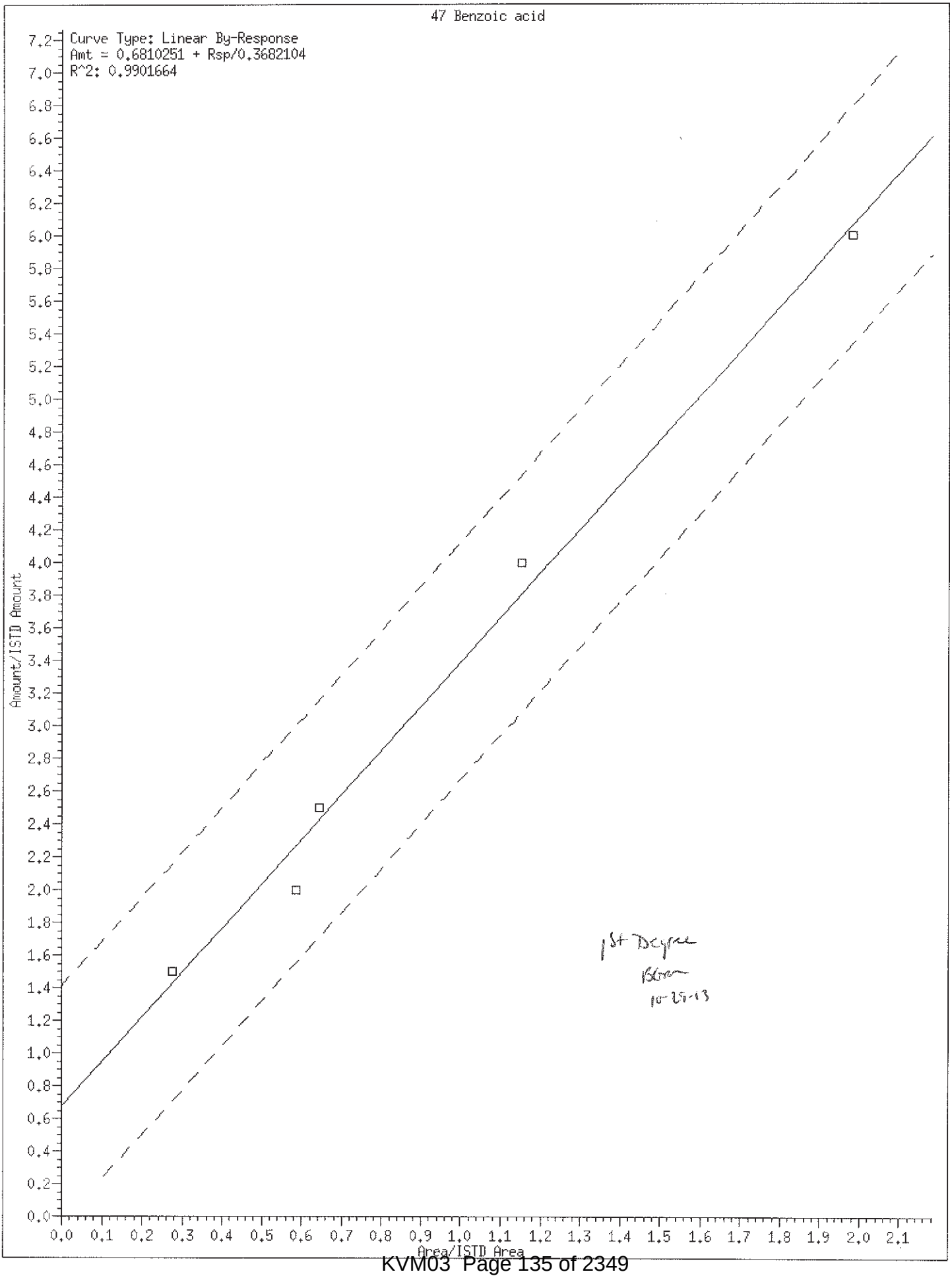
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

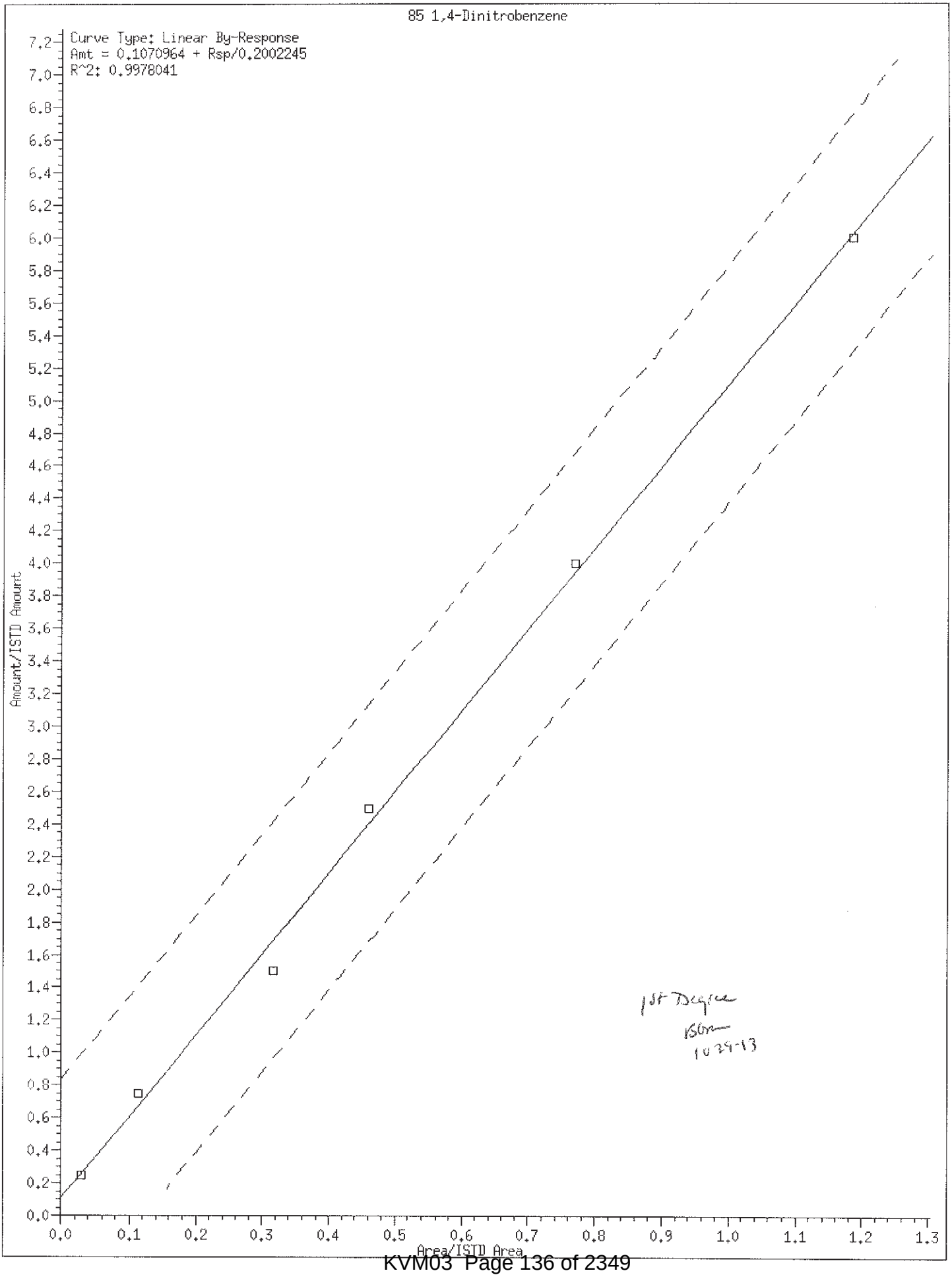
LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

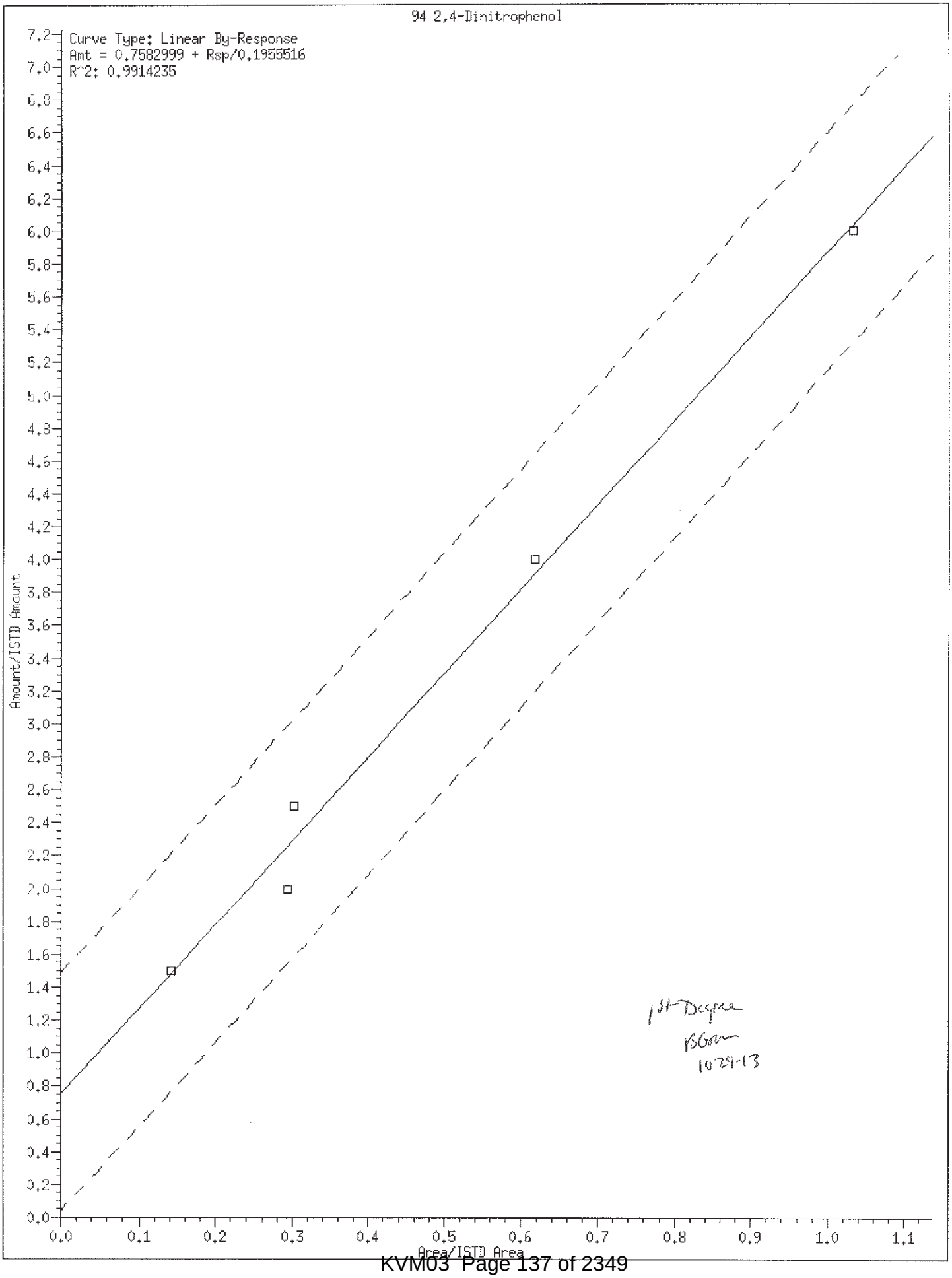
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Anthracene	1.117	1.108	1.139	1.122	1.170	1.118	1.072	1.049	1.112	3	AVG
Carbazole		1.086	1.072	1.083	1.145	1.085	1.046	1.015	1.076	4	AVG
Methyl parathion			0.186	0.238	0.313	0.282	0.286	0.285	0.265	17	1STDEG
Di-n-butylphthalate			1.169	1.259	1.410	1.310	1.270	1.227	1.274	6	AVG
Parathion			0.124	0.162	0.200	0.183	0.182	0.181	0.172	15	1STDEG
4-Nitroquinoline-1-oxide			0.031	0.053	0.101	0.095	0.118	0.130	0.088	43	1STDEG
Isodrin		0.125	0.127	0.133	0.142	0.138	0.136	0.134	0.134	4	AVG
Fluoranthene	1.229	1.221	1.220	1.264	1.329	1.285	1.257	1.228	1.254	3	AVG
Benzidine			0.559	0.651	0.702	0.675	0.646	0.617	0.642	8	AVG
Pyrene	1.163	1.156	1.080	1.034	1.057	1.037	0.996	0.969	1.062	7	AVG
p-Dimethylaminoazobenzene		0.126	0.155	0.184	0.220	0.213	0.214	0.216	0.190	19	1STDEG
Chlorobenzilate			0.264	0.285	0.330	0.308	0.304	0.302	0.299	8	AVG
3,3'-Dimethylbenzidine			0.461	0.592	0.722	0.695	0.667	0.644	0.630	15	AVG
Butylbenzylphthalate			0.403	0.443	0.498	0.470	0.454	0.443	0.452	7	AVG
2-Acetylaminofluorene			0.209	0.291	0.434	0.385	0.397	0.421	0.356	25	1STDEG
Benzo(a)anthracene	0.865	0.782	0.857	0.904	0.975	0.954	0.933	0.936	0.901	7	AVG
3,3'-Dichlorobenzidine			0.272	0.308	0.348	0.345	0.337	0.343	0.325	9	AVG
4,4'-Methylenebis(2-Chloroanil			0.138	0.163	0.188	0.184	0.178	0.180	0.172	11	AVG
Chrysene	0.884	0.883	0.909	0.896	0.914	0.895	0.858	0.847	0.886	3	AVG
bis(2-Ethylhexyl)phthalate			0.492	0.563	0.682	0.624	0.601	0.604	0.594	11	AVG
6-Methylchrysene		0.554	0.580	0.612	0.668	0.657	0.641	0.646	0.623	7	AVG
Dibenz(a,h)acridine			0.535	0.637	0.767	0.762	0.791	0.798	0.715	15	AVG
Di-n-octylphthalate			0.965	1.220	1.588	1.494	1.476	1.477	1.370	17	1STDEG
Dibenz(a,j)acridine			0.621	0.736	0.790	0.823	0.829	0.803	0.767	10	AVG
7,12-Dimethylbenz[a]anthracene		0.431	0.484	0.527	0.494	0.570	0.575	0.578	0.523	11	AVG
Benzo(b)fluoranthene	1.110	1.157	1.127	1.166	1.208	1.215	1.237	1.202	1.178	4	AVG
Benzo(k)fluoranthene	1.192	1.174	1.167	1.199	1.202	1.233	1.168	1.168	1.188	2	AVG
Benzo(a)pyrene	1.047	1.096	1.029	1.032	1.124	1.128	1.102	1.090	1.081	4	AVG
3-Methylcholanthrene		0.432	0.456	0.496	0.548	0.552	0.556	0.559	0.515	10	AVG
NDPA as diphenylamine		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
Indeno(1,2,3-cd)pyrene	0.806	0.767	0.875	0.959	1.037	1.052	1.061	1.030	0.948	12	AVG
Dibenz(a,h)anthracene	0.686	0.626	0.738	0.803	0.873	0.909	0.906	0.883	0.803	14	AVG
Benzo(g,h,i)perylene	0.723	0.759	0.749	0.785	0.841	0.859	0.857	0.821	0.799	7	AVG
Diallate TRANS/CIS		0.422	0.431	0.428	0.454	0.420	0.399	0.391	0.421	5	AVG
2-Fluorophenol		1.513	1.464	1.431	1.556	1.478	1.481	1.469	1.485	3	AVG
Phenol-d5		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Phenol-d6		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Nitrobenzene-d5		0.483	0.457	0.451	0.479	0.461	0.449	0.441	0.460	3	AVG
2-Fluorobiphenyl		1.405	1.305	1.252	1.266	1.212	1.179	1.122	1.249	7	AVG
2,4,6-Tribromophenol		0.111	0.120	0.128	0.141	0.132	0.141	0.147	0.131	10	AVG
Terphenyl-d14		0.646	0.625	0.614	0.642	0.618	0.610	0.609	0.623	2	AVG

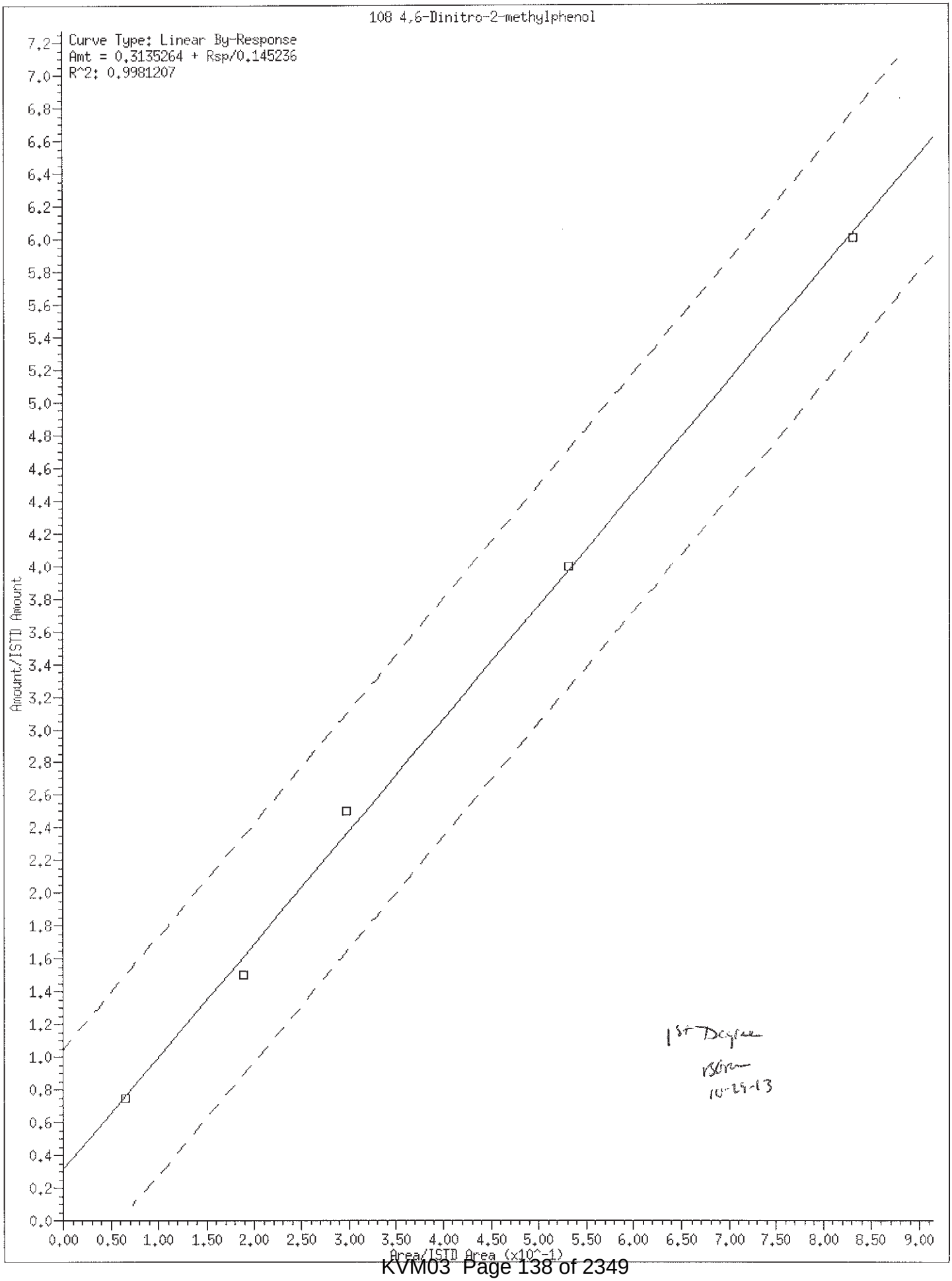
Average %RSD 7

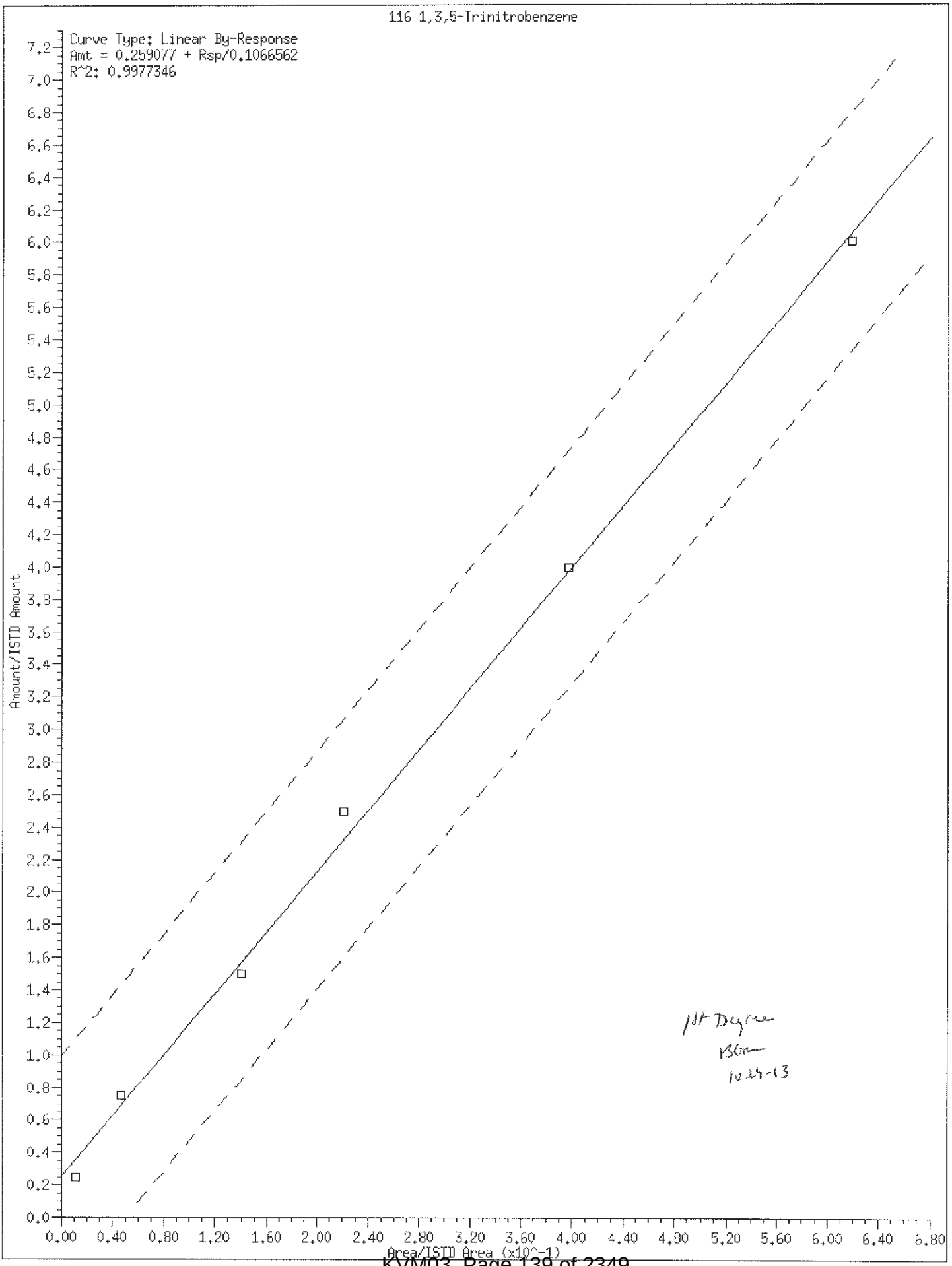
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

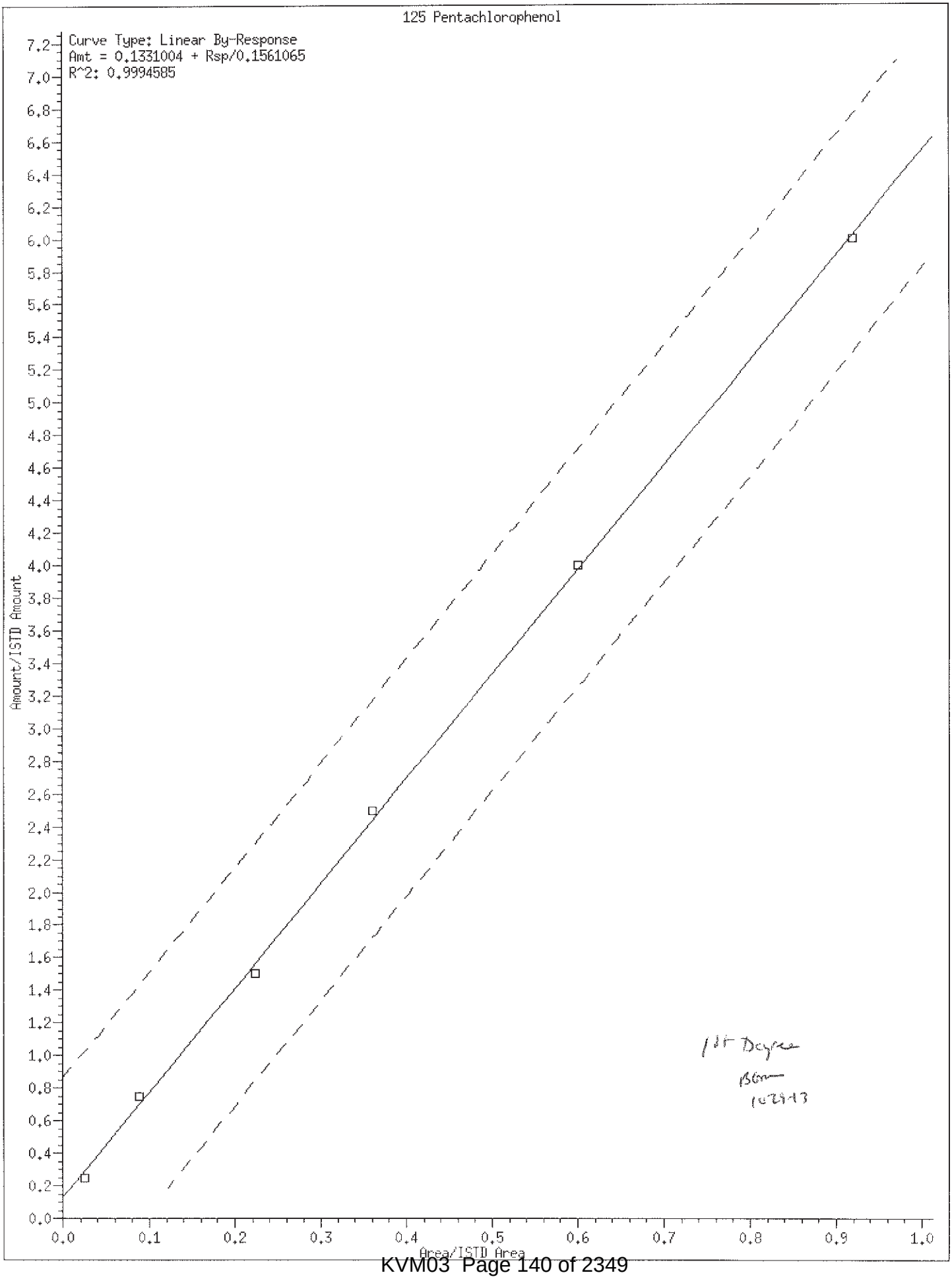

47 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.6810251 + Rsp/0.3682104
R^2: 0.9901664
Amount/ISTD Amount
Area/ISTD Area
1st Degree
10-25-13

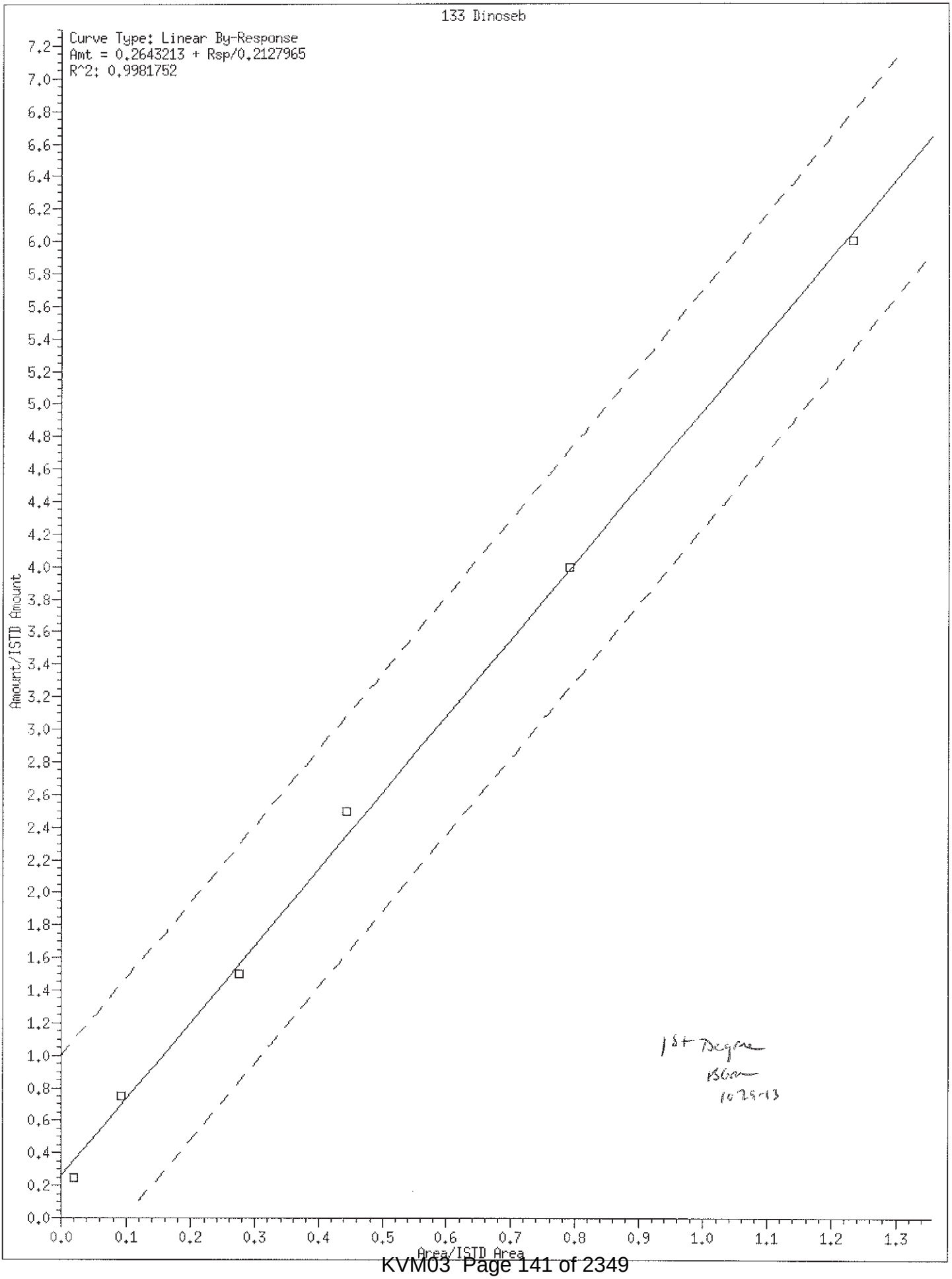

85 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1070964 + Rsp/0.2002245
R^2: 0.9978041
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BSM
10-29-13

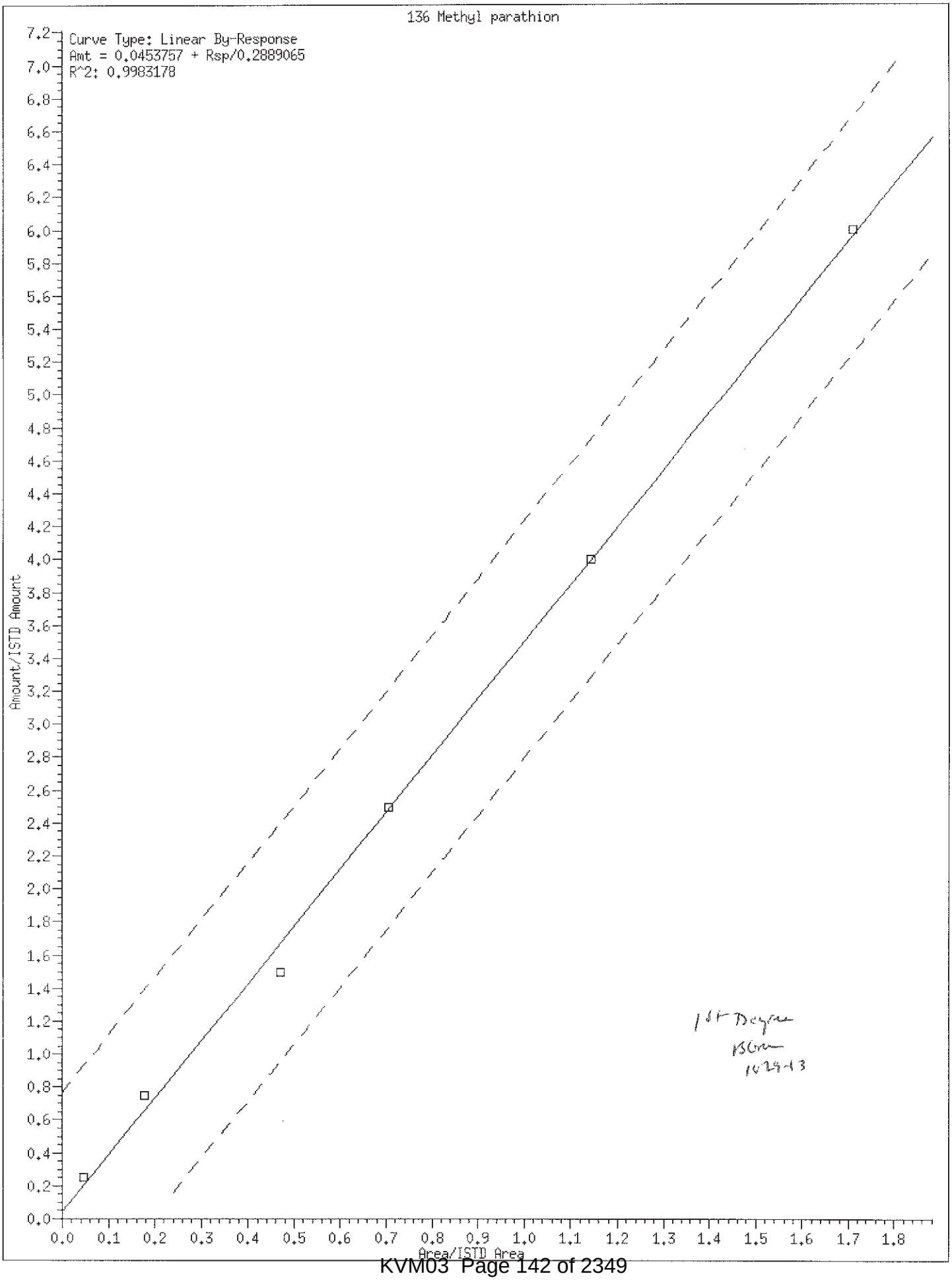

94 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0.7582999 + Rsp/0.1955516
R^2: 0.9914235
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGorn
10-29-13

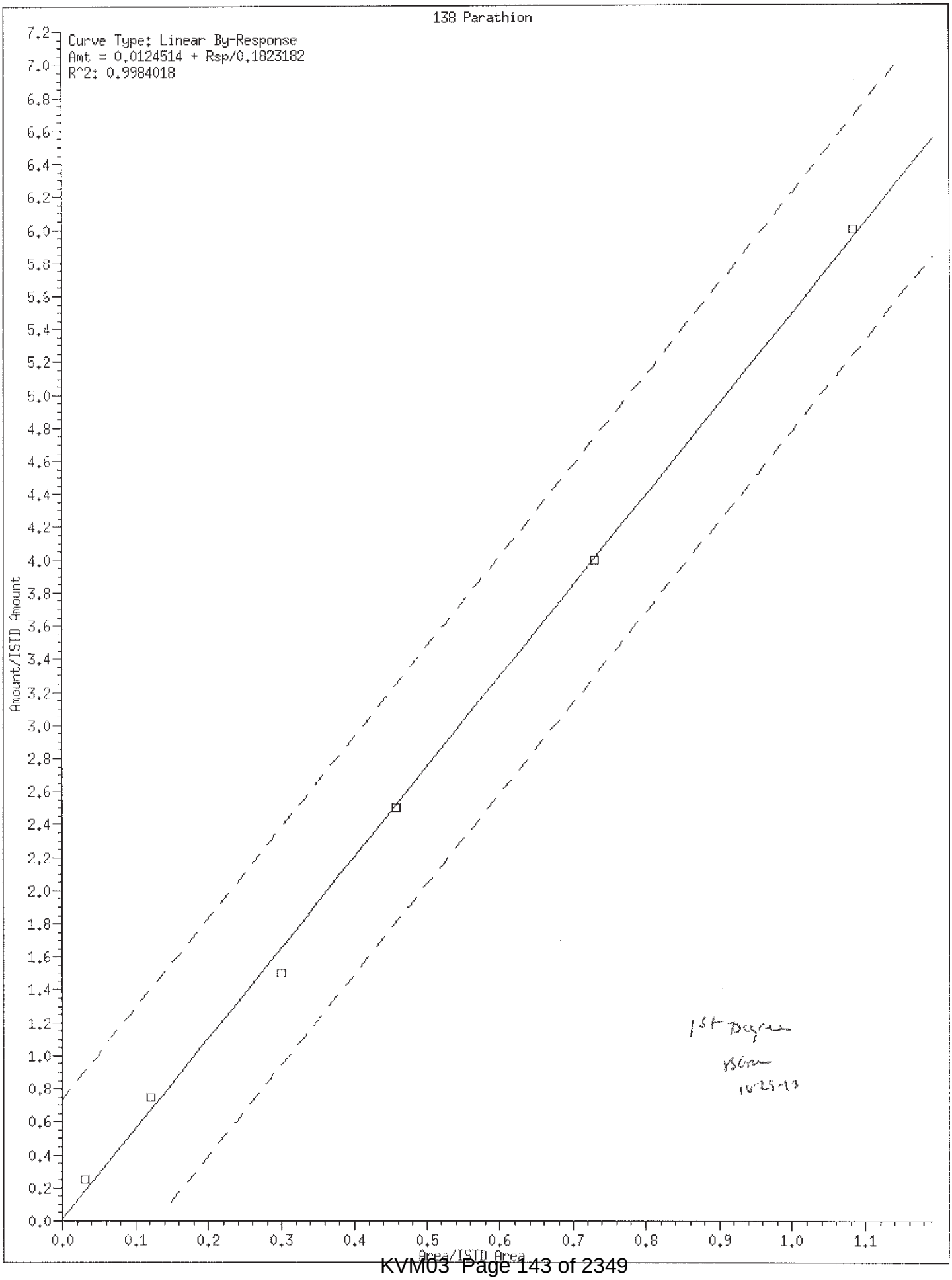

108 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3135264 + Rsp/0.145236
R^2: 0.9981207
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
RSO
10-29-13

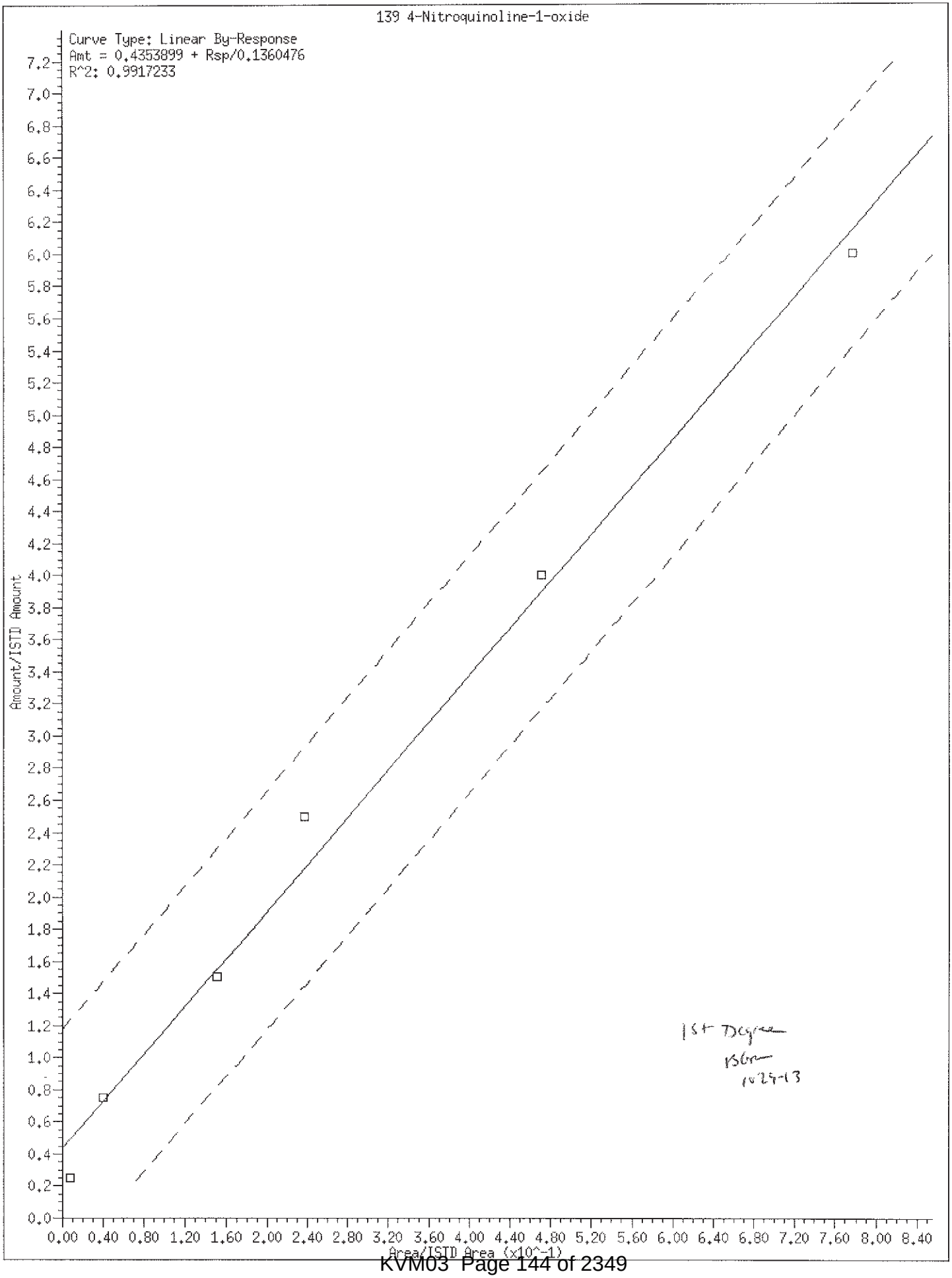

116 1,3,5-Trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.259077 + Rsp/0.1066562
R^2: 0.9977346
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
1st Degree
RSO
10-24-13

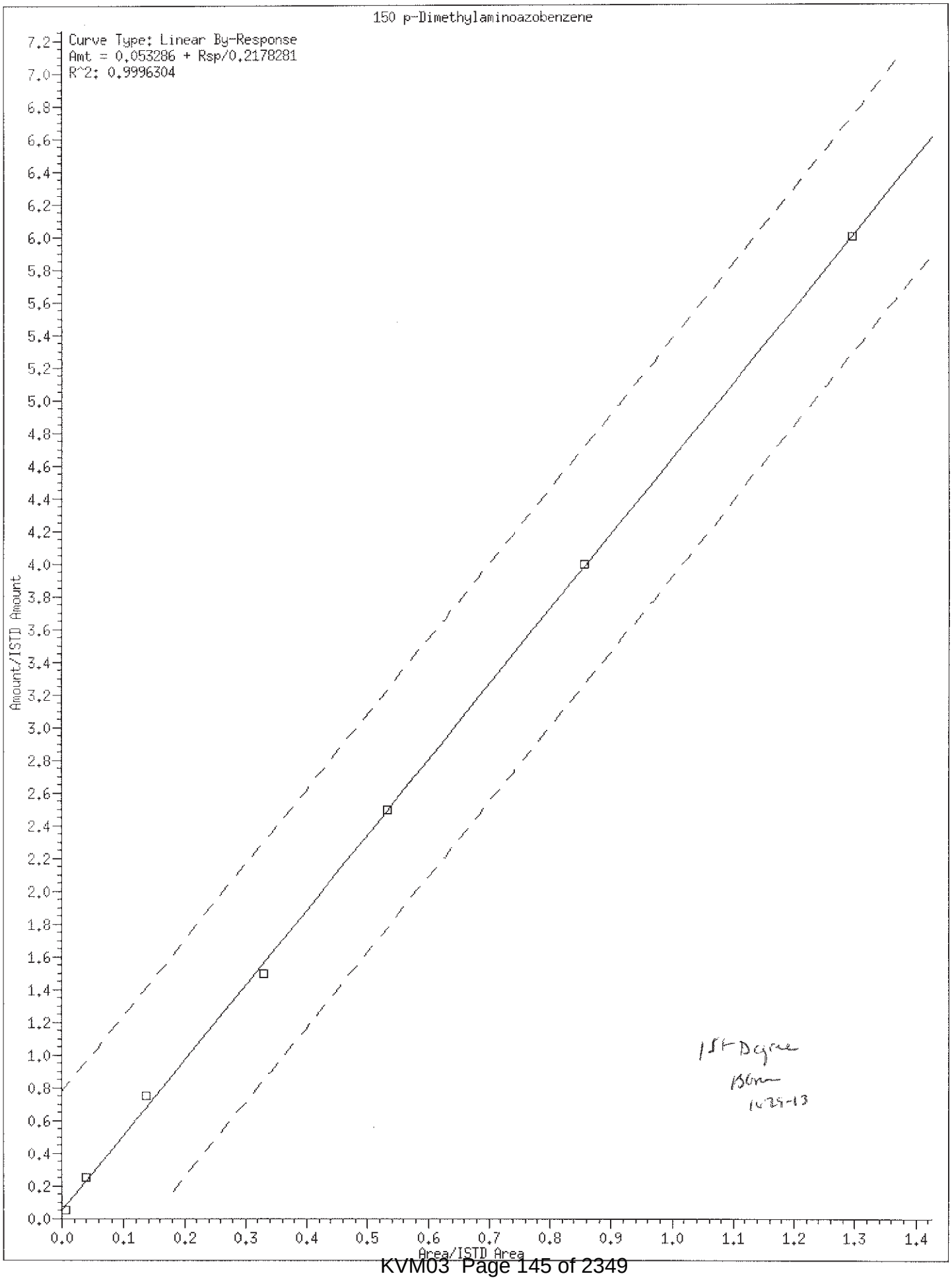

125 Pentachlorophenol
Curve Type: Linear By-Response
Amt = 0.1331004 + Rsp/0.1561065
R^2: 0.9994585
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.1
0.3
0.5
0.7
0.9

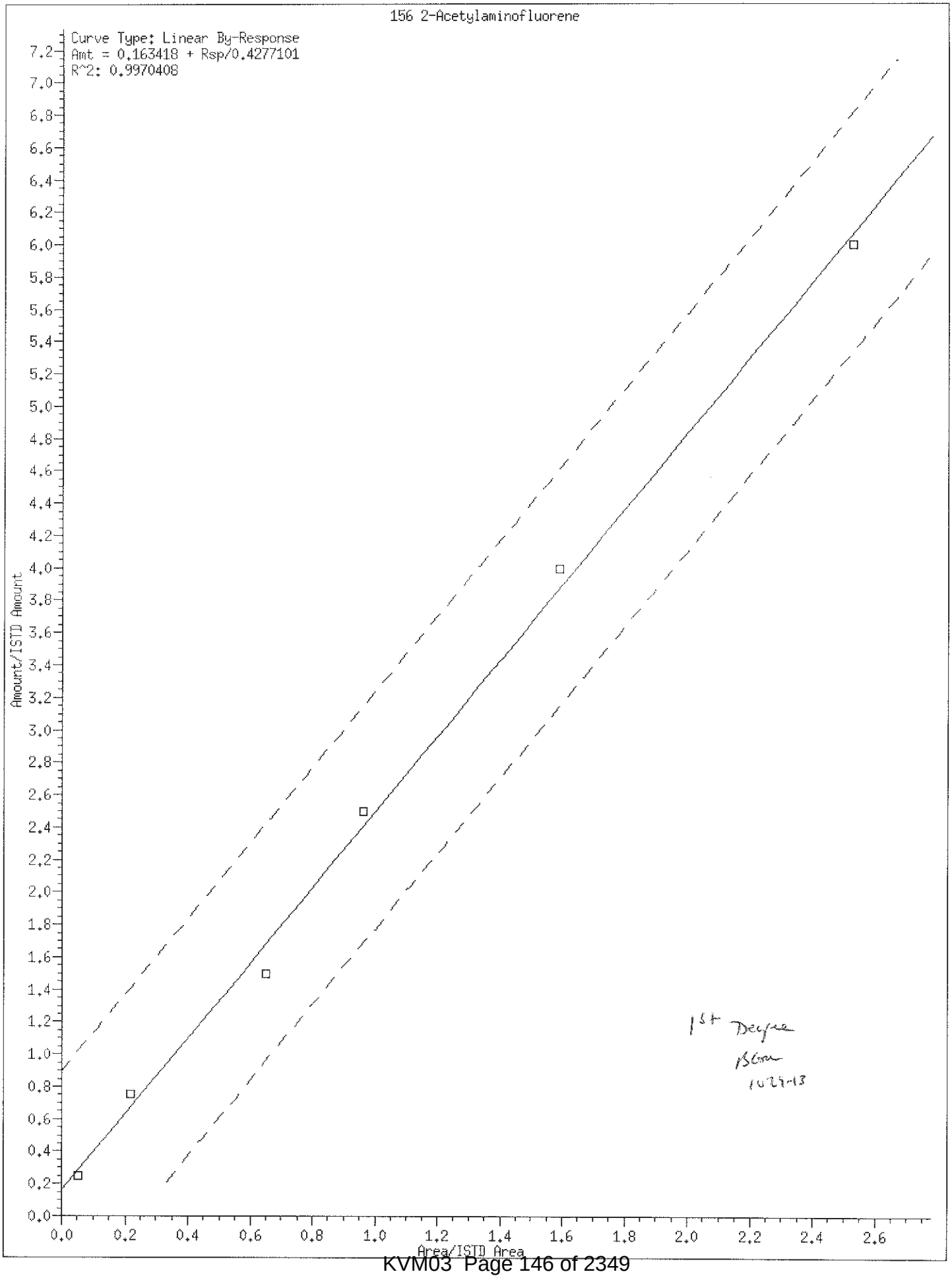

133 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2643213 + Rsp/0.2127965
R^2: 0.9981752
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-29-13

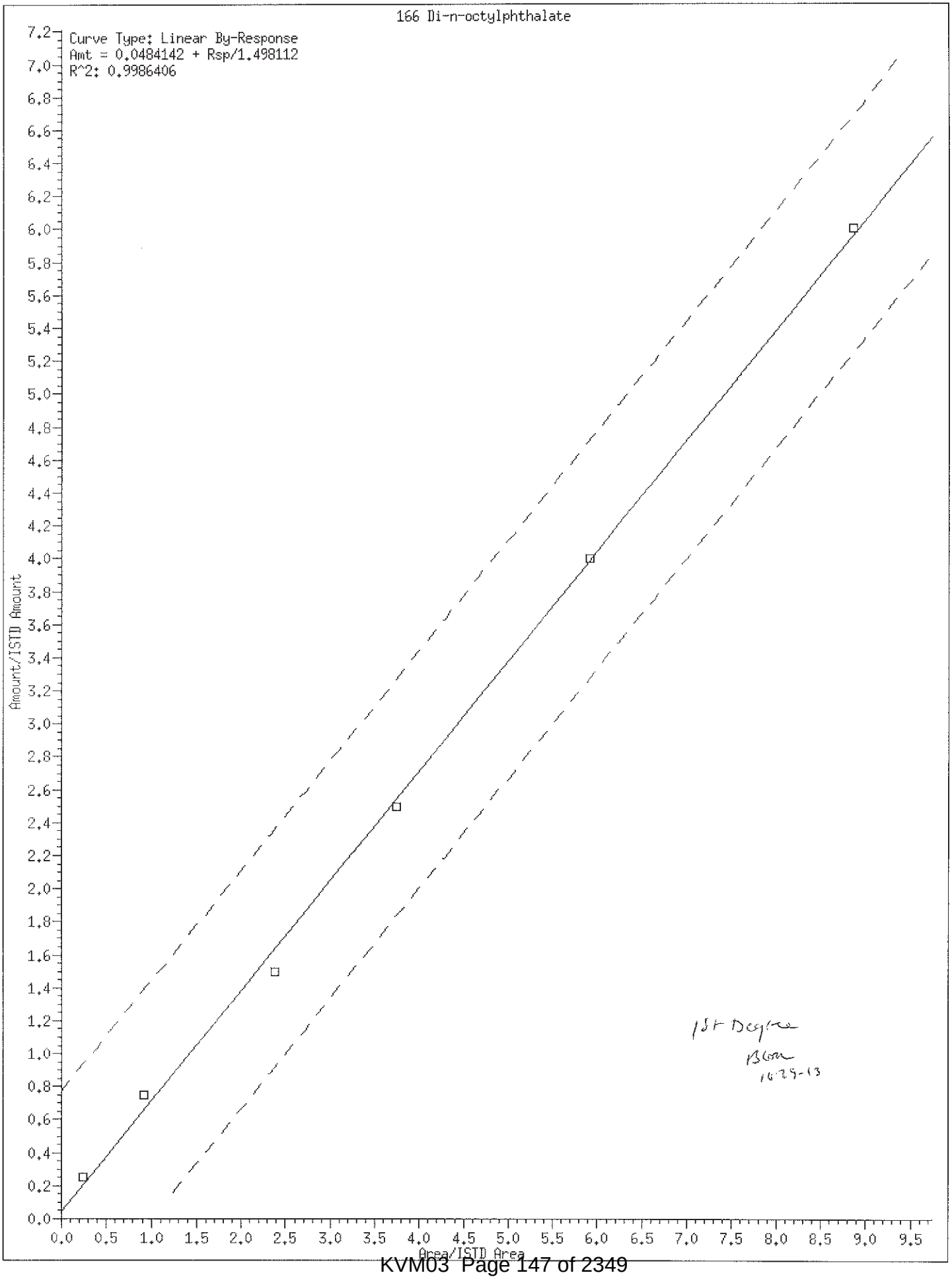

136 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.0453757 + Rsp/0.2889065
R^2: 0.9983178
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BCm
10-29-13


138 Parathion
Curve Type: Linear By-Response
Amt = 0.0124514 + Rsp/0.1823182
R^2: 0.9984018
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BSim
10-29-13


139 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.4353899 + Rsp/0.1360476
R^2: 0.9917233
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
BGM
10-29-13


150 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.053286 + Rsp/0.2178281
R^2: 0.9996304
Amount/ISTD Amount
Area/ISTD Area
1st Degree
150mm
10-29-13


156 2-Acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.163418 + Rsp/0.4277101
R^2: 0.9970408
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1st Degree
BCom
10-23-13


166 Di-n-octylphthalate
Curve Type: Linear By-Response
Amt = 0.0484142 + Rsp/1.498112
R^2: 0.9986406
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
1629-13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d SSTD7.5
/chem/HP19760.i/13oct29.b/dj1182.d SSTD0.125
/chem/HP19760.i/13oct29.b/dj1183.d SSTD30
/chem/HP19760.i/13oct29.b/dj1184.d SSTD0.25
/chem/HP19760.i/13oct29.b/dj1185.d SSTD1.25
/chem/HP19760.i/13oct29.b/dj1186.d SSTD3.75
/chem/HP19760.i/13oct29.b/dj1187.d SSTD12.5
/chem/HP19760.i/13oct29.b/dj1188.d SSTD20

Area Summary

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d	Avg. Area	%RSD
	File ID:									
1,4-Dichlorobenzene-d4	151909	172486	136880	126889	138331	140563	139035	134726	142602	10
Naphthalene-d8	608104	675195	543087	495519	535285	552831	538194	531119	559917	10
Acenaphthene-d10	340173	386904	309287	282862	303956	315878	311099	302476	319079	10
Phenanthrene-d10	574655	662675	533001	486096	512509	538913	522070	525961	544485	10
Pyrene-d10	743541	830589	680467	607939	649692	695223	668822	677846	694265	10
Perylene-d12	528760	590527	487829	409698	447306	486848	459604	467732	484788	11

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

BSG 10-29-13

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d
	File ID:							
1,4-Dichlorobenzene-d4	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029
Naphthalene-d8	7.987	7.987	7.993	7.987	7.987	7.987	7.993	7.993
Acenaphthene-d10	10.797	10.791	10.797	10.791	10.791	10.791	10.797	10.797
Phenanthrene-d10	12.691	12.685	12.697	12.685	12.685	12.685	12.691	12.691
Pyrene-d10	14.649	14.644	14.649	14.644	14.644	14.644	14.644	14.650
Perylene-d12	19.120	19.114	19.126	19.114	19.114	19.114	19.114	19.120

Comments: _____

Report generated on 10/29/2013 at 21:53

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.81	3	30	YES
N-Nitrosodimethylamine	12.50	13.15	5	30	YES
Pyridine	12.50	11.90	-5	30	YES
2-Picoline	12.50	12.58	1	30	YES
N-Nitrosomethylethylamine	12.50	12.97	4	30	YES
Methyl methanesulfonate	12.50	13.65	9	30	YES
N-Nitrosodiethylamine	12.50	12.86	3	30	YES
Ethyl methanesulfonate	12.50	13.05	4	30	YES
Phenol	12.50	12.63	1	30	YES
Aniline	12.50	12.94	4	30	YES
bis(2-Chloroethyl)ether	12.50	12.52	0	30	YES
2-Chlorophenol	12.50	12.95	4	30	YES
1,3-Dichlorobenzene	12.50	12.74	2	30	YES
1,4-Dichlorobenzene	12.50	12.73	2	30	YES
Benzyl alcohol	12.50	13.05	4	30	YES
1,2-Dichlorobenzene	12.50	12.66	1	30	YES
Indene	12.50	11.89	-5	30	YES
2-Methylphenol	12.50	12.66	1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	11.85	-5	30	YES
bis(2-Chloroisopropyl)ether	12.50	11.85	-5	30	YES
N-Nitrosopyrrolidine	12.50	13.14	5	30	YES
Acetophenone	12.50	12.38	-1	30	YES
N-Nitroso-di-n-propylamine	12.50	12.45	0	30	YES
N-Nitrosomorpholine	12.50	12.33	-1	30	YES
4-Methylphenol	12.50	12.58	1	30	YES
o-Toluidine	12.50	12.43	-1	30	YES
Hexachloroethane	12.50	12.67	1	30	YES
Nitrobenzene	12.50	12.46	0	30	YES
N-Nitrosopiperidine	12.50	13.34	7	30	YES
Isophorone	12.50	13.18	5	30	YES
2-Nitrophenol	12.50	13.55	8	30	YES
2,4-Dimethylphenol	12.50	12.95	4	30	YES
O,O,O-triethylphosphorothio	12.50	12.83	3	30	YES
Benzoic acid	25.00	22.14	-11	30	YES
bis(2-Chloroethoxy)methane	12.50	12.79	2	30	YES
2,4-Dichlorophenol	12.50	13.47	8	30	YES
1,2,4-Trichlorobenzene	12.50	13.27	6	30	YES

NC = Could not calculate

Comments: _____

BSon 10-29-13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	12.50	12.69	2	30	YES
4-Chloroaniline	12.50	13.20	6	30	YES
2,6-Dichlorophenol	12.50	13.42	7	30	YES
Hexachloropropene	12.50	14.21	14	30	YES
Hexachlorobutadiene	12.50	13.04	4	30	YES
Quinoline	12.50	12.68	1	30	YES
N-Nitrosodi-n-butylamine	12.50	12.00	-4	30	YES
4-Chloro-3-methylphenol	12.50	13.26	6	30	YES
Safrole	12.50	13.42	7	30	YES
2-Methylnaphthalene	12.50	12.56	0	30	YES
1-Methylnaphthalene	12.50	13.06	5	30	YES
Hexachlorocyclopentadiene	25.00	32.20	29	30	NO
1,2,4,5-Tetrachlorobenzene	12.50	12.53	0	30	YES
2,4,6-Trichlorophenol	12.50	13.16	5	30	YES
2,4,5-Trichlorophenol	12.50	13.20	6	30	YES
Isosafrole	12.50	13.37	7	30	YES
1,1'-Biphenyl	12.50	12.23	-2	30	YES
2-Chloronaphthalene	12.50	12.29	-2	30	YES
Diphenyl ether	12.50	12.54	0	30	YES
2-Nitroaniline	12.50	13.42	7	30	YES
1,4-Naphthoquinone	15.63	15.93	2	30	YES
1,4-Dinitrobenzene	12.50	12.46	0	30	YES
Dimethylphthalate	12.50	12.57	1	30	YES
1,3-Dinitrobenzene	12.50	13.22	6	30	YES
2,6-Dinitrotoluene	12.50	13.50	8	30	YES
Acenaphthylene	12.50	13.55	8	30	YES
3-Nitroaniline	12.50	13.57	9	30	YES
Acenaphthene	12.50	12.33	-1	30	YES
2,4-Dinitrophenol	25.00	24.19	-3	30	YES
Pentachlorobenzene	12.50	12.67	1	30	YES
4-Nitrophenol	12.50	13.36	7	30	YES
Dibenzofuran	12.50	12.48	0	30	YES
2,4-Dinitrotoluene	12.50	13.66	9	30	YES
1-Naphthylamine	25.00	24.62	-2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.94	12	30	YES
2-Naphthylamine	25.00	24.01	-4	30	YES
Diethylphthalate	12.50	12.76	2	30	YES

NC = Could not calculate

Comments: _____

→ OK IN SIC, NOT A CC
< 50%
BSM
10-29-13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluorene	12.50	12.62	1	30	YES
Thionazin	12.50	11.96	-4	30	YES
4-Chlorophenyl-phenylether	12.50	12.40	-1	30	YES
5-Nitro-o-toluidine	12.50	13.20	6	30	YES
4-Nitroaniline	12.50	12.89	3	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.86	3	30	YES
N-Nitrosodiphenylamine	12.50	13.29	6	30	YES
1,2-Diphenylhydrazine	12.50	12.44	0	30	YES
Tetraethyldithiopyrophospha	12.50	12.48	0	30	YES
1,3,5-Trinitrobenzene	12.50	12.77	2	30	YES
Diallate (peak 1)	9.38	9.16	-2	30	YES
Phorate	12.50	12.15	-3	30	YES
Phenacetin	12.50	13.76	10	30	YES
4-Bromophenyl-phenylether	12.50	12.70	2	30	YES
Diallate (peak 2)	3.13	3.10	-1	30	YES
Hexachlorobenzene	12.50	12.53	0	30	YES
Dimethoate	12.50	13.02	4	30	YES
Pentachlorophenol	12.50	12.57	1	30	YES
Pentachloronitrobenzene	12.50	13.79	10	30	YES
4-Aminobiphenyl	12.50	14.36	15	30	YES
Pronamide	12.50	12.93	3	30	YES
Phenanthrene	12.50	12.27	-2	30	YES
Dinoseb	12.50	13.11	5	30	YES
Anthracene	12.50	12.90	3	30	YES
Carbazole	12.50	13.08	5	30	YES
Methyl parathion	12.50	13.14	5	30	YES
Di-n-butylphthalate	12.50	13.10	5	30	YES
Parathion	12.50	12.45	0	30	YES
4-Nitroquinoline-1-oxide	150.00	168.75	13	30	YES
Isodrin	12.50	12.54	0	30	YES
Fluoranthene	12.50	13.25	6	30	YES
Benzidine	62.50	60.48	-3	30	YES
Pyrene	12.50	12.38	-1	30	YES
p-Dimethylaminoazobenzene	12.50	13.36	7	30	YES
Chlorobenzilate	12.50	12.37	-1	30	YES
3,3'-Dimethylbenzidine	25.00	25.93	4	30	YES
Butylbenzylphthalate	12.50	13.20	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Acetylaminofluorene	12.50	12.60	1	30	YES
Benzo(a)anthracene	12.50	13.47	8	30	YES
3,3'-Dichlorobenzidine	12.50	12.82	3	30	YES
4,4'-Methylenebis(2-Chloroa	12.50	12.73	2	30	YES
Chrysene	12.50	12.86	3	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.24	6	30	YES
6-Methylchrysene	12.50	12.50	0	30	YES
Di-n-octylphthalate	12.50	13.15	5	30	YES
Benzo(b)fluoranthene	12.50	13.52	8	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.66	9	30	YES
Benzo(k)fluoranthene	12.50	13.14	5	30	YES
Benzo(a)pyrene	12.50	13.57	9	30	YES
3-Methylcholanthrene	12.50	13.83	11	30	YES
Dibenz(a,h)acridine	12.50	13.41	7	30	YES
Dibenz(a,j)acridine	12.50	13.26	6	30	YES
Indeno(1,2,3-cd)pyrene	12.50	14.40	15	30	YES
Dibenz(a,h)anthracene	12.50	14.44	16	30	YES
Benzo(g,h,i)perylene	12.50	13.92	11	30	YES
Diallate TRANS/CIS	12.50	12.24	-2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1192.d

ICV SAMPLE ID: BASICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.17	5	30	YES
Caprolactam	12.50	13.12	5	30	YES
Atrazine	12.50	13.46	8	30	YES

BGM 10-29-13

NC = Could not calculate

Comments:

Page 1 of 1

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/11/13 11/11/13

Calibration Times: 12:11 14:26

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID: RRF5 = gk0394.d RRF15 = gk0395.d
RRF30 = gk0396.d RRF50 = gk0393.d RRF80 = gk0397.d RRF120 = gk0398.d

COMPOUND	RRF	RRF	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD
Benzaldehyde			1.603	1.578	1.512	1.553	1.518	1.560	1.554	2	AVG
								Average %RSD		1	

Chad A. Moline
Senior Chemist

NOV 1 1 2013

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP11165.i/13nov11a.b/gk0393.d SSTD050
/chem/HP11165.i/13nov11a.b/gk0394.d SSTD005
/chem/HP11165.i/13nov11a.b/gk0395.d SSTD015
/chem/HP11165.i/13nov11a.b/gk0396.d SSTD030
/chem/HP11165.i/13nov11a.b/gk0397.d SSTD080
/chem/HP11165.i/13nov11a.b/gk0398.d SSTD120

Area Summary

File ID:

Internal Standard Name	gk0393.d	gk0394.d	gk0395.d	gk0396.d	gk0397.d	gk0398.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	83444	87389	79231	83166	88247	83451	84155	4	Yes
Naphthalene-d8	381088	380774	359609	374064	367506	360062	370517	3	Yes
Acenaphthene-d10	227738	228378	209948	222689	209187	208580	217753	4	Yes
Phenanthrene-d10	436195	430605	400970	429470	386783	394581	413101	5	Yes
Pyrene-d10	509456	505860	464518	481905	447893	459543	478196	5	Yes
Perylene-d12	425824	429959	412615	410367	418007	427645	420736	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	gk0393.d	gk0394.d	gk0395.d	gk0396.d	gk0397.d	gk0398.d	Avg. RT
1,4-Dichlorobenzene-d4	5.696	5.696	5.696	5.696	5.696	5.696	5.696
Naphthalene-d8	6.931	6.931	6.931	6.931	6.931	6.931	6.931
Acenaphthene-d10	8.648	8.648	8.648	8.648	8.648	8.648	8.648
Phenanthrene-d10	10.103	10.098	10.098	10.098	10.098	10.098	10.099
Pyrene-d10	11.494	11.494	11.488	11.488	11.488	11.488	11.490
Perylene-d12	14.157	14.157	14.157	14.157	14.157	14.157	14.157

Comments: _____

Report generated on 11/11/2013 at 14:53

Chad A. Moline
Senior Chemist

NOV 11 2013

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0399a.d

ICV SAMPLE ID: BASICV2463 BATCH: 13NOV11A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	49.87	0	20	YES

NC = Could not calculate

Comments: _____

Chad A. Moline
Senior Chemist

NOV 13 2013

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/09/13 11/09/13

Calibration Times: 20:09 23:27

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = gk0322.d RRF1 = gk0328.d RRF5 = gk0327.d RRF15 = gk0326.d
RRF30 = gk0321.d RRF50 = gk0325.d RRF80 = gk0324.d RRF120 = gk0323.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD		CAL. METHOD	
1,4-Dioxane				0.741	0.679	0.695	0.746	0.683	0.666	0.702	5		AVG	
N-Nitrosodimethylamine				1.165	1.121	1.206	1.363	1.288	1.242	1.231	7		AVG	
Pyridine				1.919	1.966	1.985	2.102	1.991	2.009	1.995	3		AVG	
2-Picoline				2.009	1.992	2.000	2.196	2.103	2.009	2.051	4		AVG	
N-Nitrosomethylethylamine				1.203	1.059	1.007	1.076	1.012	0.958	1.053	8		AVG	
Methyl methanesulfonate				0.961	0.935	0.994	1.067	1.027	0.988	0.995	5		AVG	
N-Nitrosodiethylamine			0.830	0.923	0.910	0.953	1.070	1.011	0.962	0.951	8		AVG	
Ethyl methanesulfonate			0.947	0.923	0.932	0.944	1.042	0.997	0.926	0.959	5		AVG	
Aniline			3.162	3.026	3.095	3.065	3.459	3.209	3.019	3.148	5		AVG	
Phenol	*		2.827	2.720	2.720	2.712	3.057	3.001	2.808	2.835	5		AVG	*
bis(2-Chloroethyl)ether			2.133	1.971	1.950	1.951	2.166	2.050	1.942	2.023	5		AVG	
2-Chlorophenol			1.415	1.536	1.551	1.580	1.784	1.695	1.617	1.597	7		AVG	
1,3-Dichlorobenzene			1.648	1.585	1.547	1.550	1.707	1.624	1.531	1.599	4		AVG	
1,4-Dichlorobenzene	*		1.670	1.578	1.546	1.577	1.728	1.650	1.576	1.618	4		AVG	*
Benzyl alcohol			1.179	1.331	1.312	1.309	1.457	1.393	1.236	1.317	7		AVG	
1,2-Dichlorobenzene			1.779	1.517	1.519	1.538	1.689	1.594	1.487	1.589	7		AVG	
2-Methylphenol			1.610	1.702	1.767	1.770	1.987	1.919	1.818	1.796	7		AVG	
2,2'-oxybis(1-Chloropropane)			2.630	2.636	2.698	2.709	2.966	2.733	2.622	2.713	4		AVG	
bis(2-Chloroisopropyl)ether			2.630	2.636	2.698	2.709	2.966	2.733	2.622	2.713	4		AVG	
N-Nitrosopyrrolidine			1.150	1.072	1.119	1.092	1.260	1.236	1.108	1.148	6		AVG	
Acetophenone			3.062	2.940	2.798	2.722	2.979	2.830	2.537	2.838	6		AVG	
N-Nitroso-di-n-propylamine	#		1.671	1.584	1.682	1.694	1.868	1.753	1.590	1.692	6		AVG	#
N-Nitrosomorpholine				1.260	1.322	1.300	1.414	1.323	1.190	1.302	6		AVG	
4-Methylphenol			1.996	2.055	2.146	2.119	2.377	2.256	2.031	2.140	6		AVG	
o-Toluidine			2.975	2.993	3.052	3.089	3.426	3.217	2.958	3.101	5		AVG	
Hexachloroethane				0.614	0.606	0.613	0.695	0.648	0.618	0.632	5		AVG	
Nitrobenzene			0.506	0.452	0.454	0.464	0.506	0.460	0.454	0.471	5		AVG	
N-Nitrosopiperidine			0.201	0.209	0.209	0.209	0.225	0.208	0.203	0.209	4		AVG	
Isophorone			0.830	0.827	0.870	0.861	0.925	0.861	0.839	0.859	4		AVG	
2-Nitrophenol	*		0.152	0.163	0.191	0.182	0.210	0.193	0.189	0.183	11		AVG	*
2,4-Dimethylphenol			0.361	0.389	0.415	0.413	0.446	0.413	0.397	0.405	7		AVG	
O,O,O-triethylphosphorothioate				0.164	0.168	0.169	0.177	0.162	0.158	0.167	4		AVG	
bis(2-Chloroethoxy)methane			0.553	0.522	0.519	0.529	0.544	0.508	0.493	0.524	4		AVG	
Benzoic acid				0.331	0.381	0.327	0.346	0.370	0.353	0.351	6		AVG	
2,4-Dichlorophenol	*		0.254	0.255	0.283	0.279	0.306	0.283	0.272	0.276	6		AVG	*
1,2,4-Trichlorobenzene				0.286	0.290	0.283	0.312	0.280	0.279	0.288	4		AVG	
Naphthalene		1.085	1.119	1.027	1.025	1.034	1.109	1.019	1.012	1.054	4		AVG	
4-Chloroaniline			0.411	0.418	0.456	0.456	0.485	0.444	0.434	0.444	6		AVG	
2,6-Dichlorophenol			0.268	0.268	0.276	0.275	0.298	0.274	0.262	0.275	4		AVG	
Hexachloropropene				0.146	0.144	0.150	0.172	0.154	0.153	0.153	6		AVG	
Hexachlorobutadiene	*		0.140	0.133	0.131	0.138	0.145	0.133	0.132	0.136	4		AVG	*
Caprolactam				0.186	0.183	0.165	0.175	0.167	0.150	0.171	8		AVG	
N-Nitrosodi-n-butylamine			0.480	0.443	0.449	0.433	0.463	0.434	0.416	0.445	5		AVG	
4-Chloro-3-methylphenol	*		0.366	0.348	0.402	0.378	0.421	0.389	0.372	0.382	6		AVG	*
Safrole				0.258	0.277	0.279	0.297	0.275	0.268	0.276	5		AVG	
2-Methylnaphthalene		0.700	0.752	0.747	0.750	0.739	0.801	0.734	0.714	0.742	4		AVG	
1-Methylnaphthalene		0.644	0.646	0.660	0.692	0.679	0.723	0.672	0.653	0.671	4		AVG	
Hexachlorocyclopentadiene	#			0.161	0.175	0.192	0.221	0.203	0.210	0.194	12		AVG	#
1,2,4,5-Tetrachlorobenzene			0.479	0.471	0.454	0.470	0.501	0.456	0.462	0.470	3		AVG	
cis-Isosafrole				0.667	0.718	0.735	0.782	0.756	0.744	0.734	5		AVG	
2,4,6-Trichlorophenol	*		0.292	0.333	0.343	0.357	0.383	0.362	0.364	0.348	8		AVG	*
2,4,5-Trichlorophenol			0.285	0.361	0.362	0.367	0.411	0.377	0.374	0.362	10		AVG	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

FORM VI SV-1

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/09/13 11/09/13

Calibration Times: 20:09 23:27

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = gk0322.d RRF1 = gk0328.d RRF5 = gk0327.d RRF15 = gk0326.d
RRF30 = gk0321.d RRF50 = gk0325.d RRF80 = gk0324.d RRF120 = gk0323.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD		CAL. METHOD	
trans-Isosafrole				0.501	0.513	0.519	0.573	0.527	0.534	0.528	5		AVG	
Isosafrole				0.446	0.457	0.462	0.510	0.469	0.475	0.470	5		AVG	
1,1'-Biphenyl			1.731	1.689	1.542	1.510	1.564	1.443	1.384	1.552	8		AVG	
2-Chloronaphthalene			1.323	1.143	1.104	1.309	1.228	1.036	1.070	1.173	10		AVG	
Diphenyl ether			0.803	0.764	0.740	0.773	0.824	0.747	0.758	0.773	4		AVG	
2-Nitroaniline			0.369	0.368	0.421	0.409	0.460	0.432	0.431	0.413	8		AVG	
1,4-Naphthoquinone				0.425	0.483	0.496	0.534	0.488	0.479	0.484	7		AVG	
1,4-Dinitrobenzene				0.171	0.200	0.200	0.235	0.223	0.220	0.208	11		AVG	
Dimethylphthalate				1.343	1.356	1.351	1.435	1.317	1.292	1.349	4		AVG	
1,3-Dinitrobenzene				0.221	0.251	0.250	0.279	0.260	0.257	0.253	7		AVG	
2,6-Dinitrotoluene			0.209	0.296	0.317	0.316	0.346	0.316	0.314	0.302	14		AVG	
Acenaphthylene		1.563	1.612	1.622	1.677	1.709	1.850	1.724	1.728	1.686	5		AVG	
3-Nitroaniline			0.355	0.352	0.386	0.384	0.414	0.387	0.380	0.380	6		AVG	
Acenaphthene	*	1.271	1.262	1.175	1.188	1.185	1.273	1.166	1.159	1.210	4		AVG	*
2,4-Dinitrophenol	#			0.138	0.167	0.168	0.204	0.205	0.211	0.182	16		1STDEG	#
Pentachlorobenzene			0.479	0.415	0.416	0.409	0.441	0.405	0.396	0.423	7		AVG	
4-Nitrophenol	#			0.217	0.225	0.234	0.235	0.232	0.229	0.228	3		AVG	#
Dibenzofuran			1.857	1.636	1.619	1.623	1.723	1.574	1.555	1.655	6		AVG	
2,4-Dinitrotoluene				0.402	0.434	0.422	0.454	0.422	0.410	0.424	4		AVG	
2,4_2,6-Dinitrotoluenes				0.698	0.751	0.738	0.800	0.739	0.724	0.742	5		AVG	
1-Naphthylamine				1.296	1.381	1.365	1.463	1.342	1.326	1.362	4		AVG	
2,3,4,6-Tetrachlorophenol				0.259	0.293	0.291	0.322	0.297	0.298	0.293	7		AVG	
2-Naphthylamine				1.268	1.398	1.400	1.455	1.329	1.316	1.361	5		AVG	
Diethylphthalate				1.378	1.381	1.358	1.463	1.342	1.327	1.375	3		AVG	
Thionazin				0.302	0.275	0.271	0.293	0.264	0.250	0.276	7		AVG	
Fluorene		1.389	1.413	1.412	1.430	1.371	1.458	1.314	1.267	1.382	5		AVG	
4-Chlorophenyl-phenylether			0.717	0.628	0.635	0.624	0.658	0.594	0.565	0.632	8		AVG	
5-Nitro-o-toluidine			0.438	0.439	0.437	0.416	0.445	0.423	0.408	0.429	3		AVG	
4-Nitroaniline			0.408	0.416	0.419	0.415	0.426	0.395	0.387	0.409	3		AVG	
4,6-Dinitro-2-methylphenol				0.117	0.125	0.129	0.154	0.150	0.154	0.138	12		AVG	
N-Nitrosodiphenylamine (1)	*		0.648	0.648	0.647	0.661	0.715	0.658	0.679	0.665	4		AVG	*
NDPA as diphenylamine				0.648	0.647	0.661	0.715	0.658	0.679	0.668	4		AVG	
1,2-Diphenylhydrazine			0.896	0.927	0.929	0.978	1.060	0.979	1.002	0.967	6		AVG	
Tetraethyldithiopyrophosphate				0.129	0.133	0.134	0.146	0.136	0.135	0.136	4		AVG	
1,3,5-Trinitrobenzene				0.054	0.075	0.082	0.099	0.097	0.098	0.084	21		1STDEG	
Diallate (peak 1)				0.511	0.517	0.514	0.552	0.517	0.512	0.521	3		AVG	
Phorate			0.621	0.720	0.811	0.827	0.917	0.860	0.863	0.803	13		AVG	
Phenacetin			0.394	0.440	0.456	0.456	0.493	0.465	0.471	0.454	7		AVG	
4-Bromophenyl-phenylether				0.185	0.183	0.183	0.204	0.186	0.191	0.189	4		AVG	
Diallate (peak 2)				0.264	0.235	0.232	0.244	0.230	0.231	0.240	5		AVG	
Hexachlorobenzene		0.184	0.165	0.179	0.174	0.176	0.191	0.175	0.177	0.178	4		AVG	
Dimethoate				0.377	0.391	0.392	0.417	0.379	0.372	0.388	4		AVG	
Diallate TRANS/CIS				0.449	0.447	0.443	0.475	0.445	0.442	0.450	3		AVG	
Atrazine		0.221	0.239	0.231	0.214	0.187	0.188			0.213	10		AVG	
Pentachlorophenol	*			0.105	0.113	0.121	0.132	0.129	0.133	0.122	9		AVG	*
Pentachloronitrobenzene				0.073	0.078	0.073	0.083	0.077	0.077	0.077	5		AVG	
4-Aminobiphenyl			0.616	0.682	0.754	0.649	0.664	0.568	0.548	0.640	11		AVG	
Pronamide			0.242	0.292	0.323	0.318	0.341	0.321	0.328	0.309	11		AVG	
Dinoseb				0.118	0.163	0.170	0.210	0.207	0.216	0.181	21		1STDEG	
Phenanthrene		1.224	1.238	1.143	1.167	1.144	1.236	1.149	1.161	1.183	4		AVG	
Anthracene		1.023	1.126	1.144	1.175	1.162	1.280	1.183	1.207	1.163	6		AVG	
Carbazole			1.033	1.092	1.087	1.078	1.153	1.080	1.102	1.089	3		AVG	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C
SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date(s): 11/09/13 11/09/13

Calibration Times: 20:09 23:27

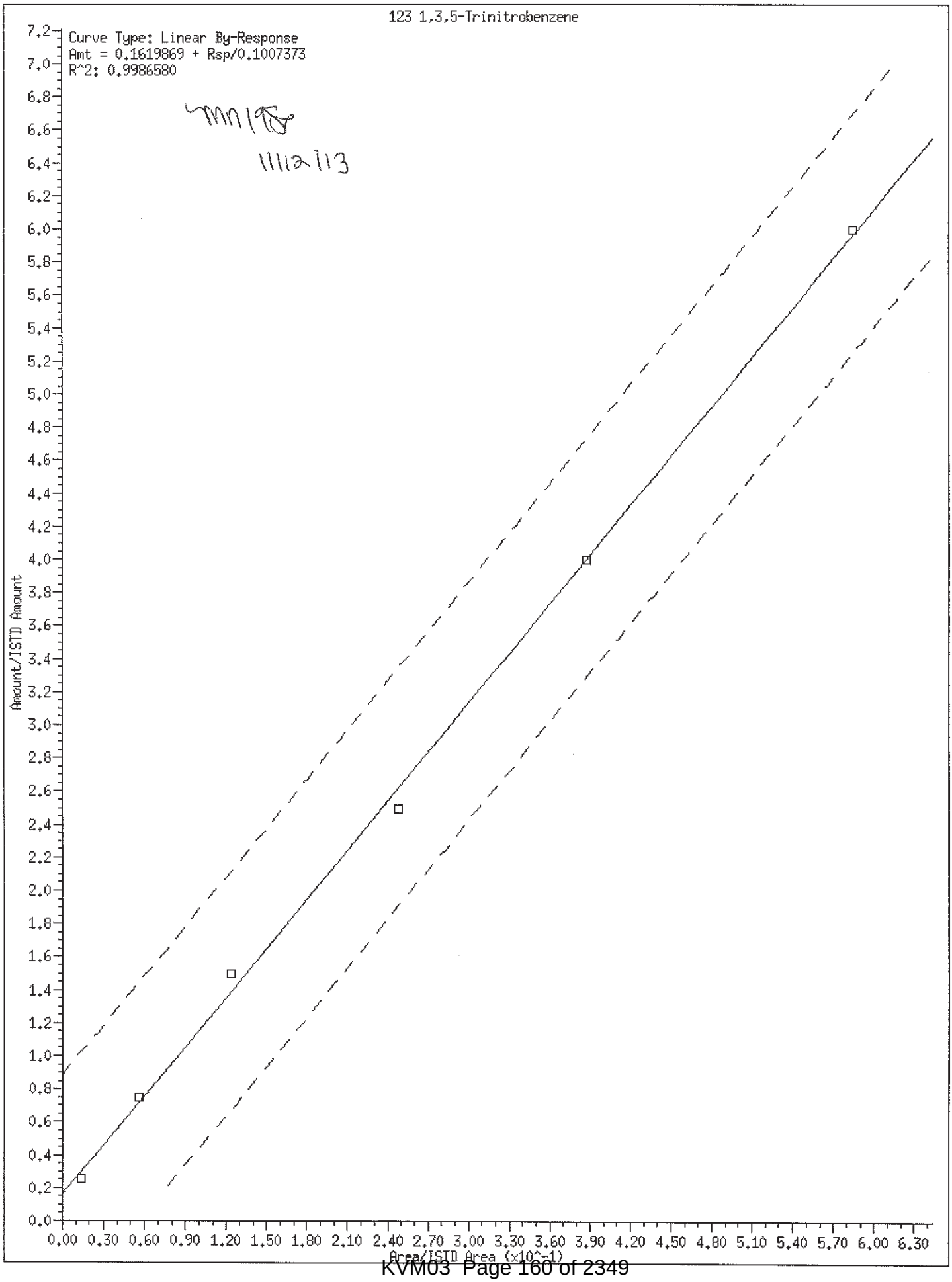
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

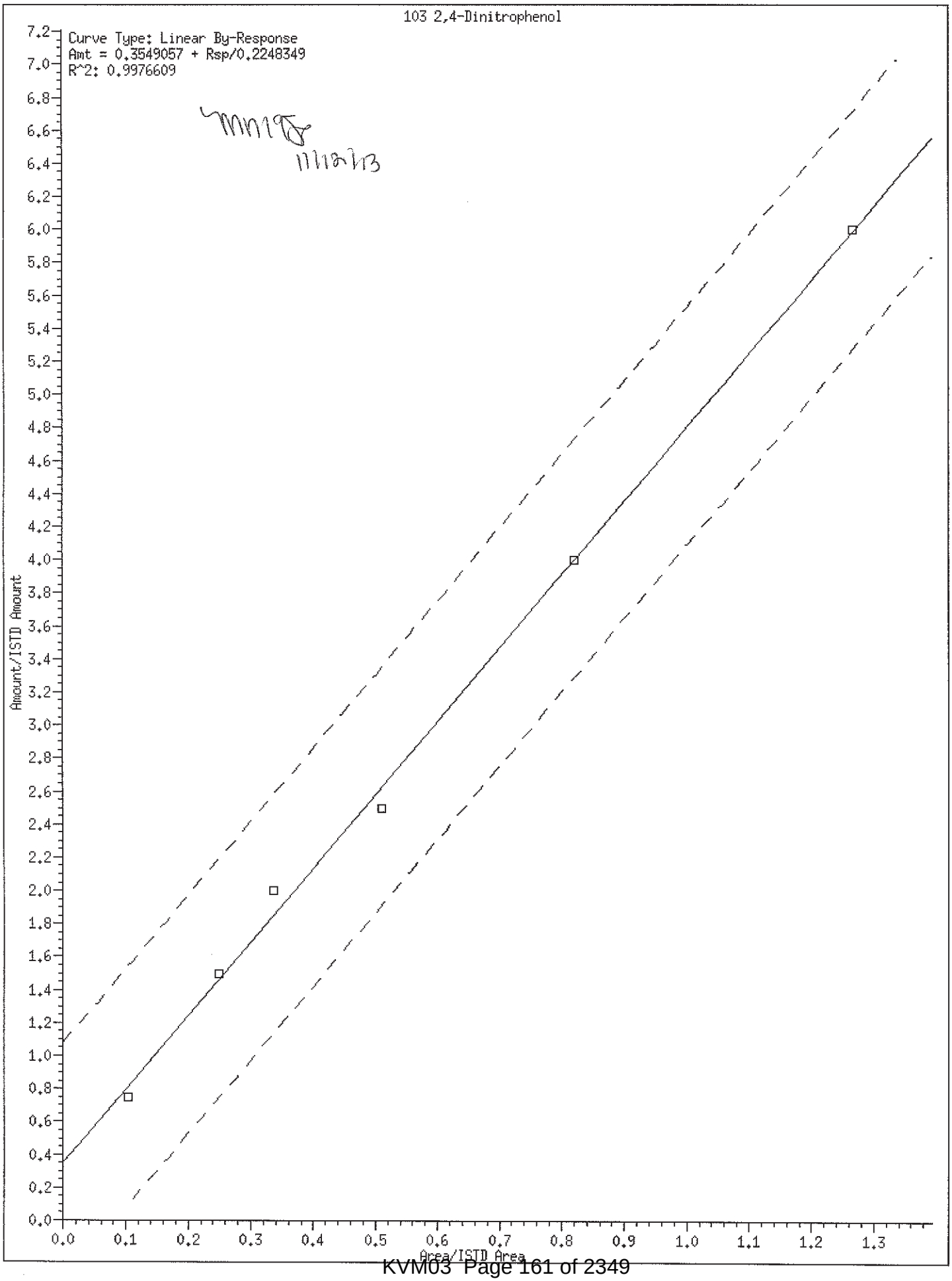
LAB FILE ID:RRF0.5 = gk0322.d RRF1 = gk0328.d RRF5 = gk0327.d RRF15 = gk0326.d
RRF30 = gk0321.d RRF50 = gk0325.d RRF80 = gk0324.d RRF120 = gk0323.d

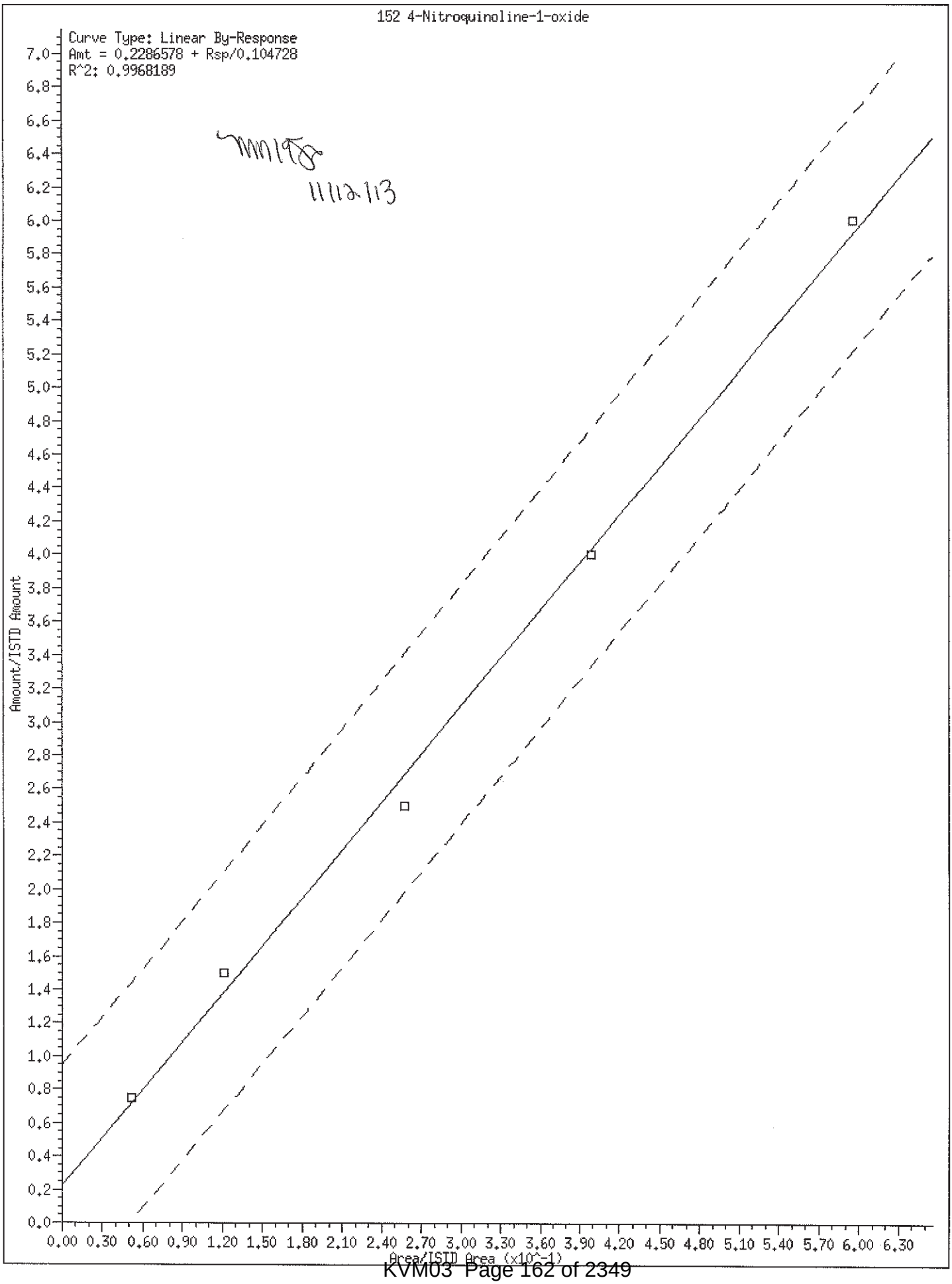
COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
Methyl parathion				0.222	0.266	0.269	0.294	0.273	0.266	0.265	9	AVG	
Di-n-butylphthalate				1.178	1.280	1.303	1.412	1.316	1.345	1.306	6	AVG	
Parathion				0.134	0.172	0.169	0.193	0.179	0.186	0.172	12	AVG	
4-Nitroquinoline-1-oxide					0.069	0.081	0.103	0.100	0.099	0.090	16	1STDEG	
Isodrin			0.102	0.118	0.117	0.121	0.127	0.119	0.121	0.118	6	AVG	
Fluoranthene	*	1.192	1.195	1.160	1.206	1.204	1.291	1.214	1.227	1.211	3	AVG	*
Benzidine				0.751	0.728	0.768	0.836	0.754	0.728	0.761	5	AVG	
Pyrene		1.224	1.235	1.136	1.096	1.102	1.171	1.097	1.092	1.144	5	AVG	
p-Dimethylaminoazobenzene			0.154	0.181	0.203	0.211	0.239	0.226	0.221	0.205	14	AVG	
Chlorobenzilate			0.263	0.302	0.325	0.337	0.361	0.339	0.334	0.323	10	AVG	
3,3'-Dimethylbenzidine				0.530	0.556	0.597	0.679	0.604	0.603	0.595	9	AVG	
Butylbenzylphthalate				0.476	0.510	0.517	0.554	0.517	0.512	0.515	5	AVG	
2-Acetylaminofluorene				0.332	0.412	0.428	0.477	0.459	0.460	0.428	12	AVG	
3,3'-Dichlorobenzidine				0.331	0.344	0.356	0.383	0.353	0.339	0.351	5	AVG	
4,4'-Methylenebis(2-Chloroanil				0.139	0.166	0.170	0.185	0.171	0.163	0.166	9	AVG	
Benzo(a)anthracene		0.957	0.911	0.935	0.985	0.966	1.040	0.952	0.941	0.961	4	AVG	
Chrysene		0.881	0.956	0.965	0.932	0.954	0.983	0.930	0.903	0.938	4	AVG	
bis(2-Ethylhexyl)phthalate				0.630	0.698	0.707	0.760	0.719	0.701	0.702	6	AVG	
6-Methylchrysene				0.629	0.659	0.668	0.716	0.669	0.664	0.667	4	AVG	
Di-n-octylphthalate	*			1.186	1.367	1.450	1.665	1.631	1.647	1.491	13	AVG	*
Dibenz(a,h)acridine				0.671	0.740	0.745	0.817	0.789	0.779	0.757	7	AVG	
Dibenz(a,j)acridine				0.742	0.838	0.872	0.939	0.861	0.850	0.850	8	AVG	
7,12-Dimethylbenz[a]anthracene			0.465	0.522	0.550	0.555	0.608	0.568	0.557	0.547	8	AVG	
Benzo(b)fluoranthene		1.125	1.091	1.086	1.225	1.262	1.280	1.330	1.268	1.208	8	AVG	
Quinoline				0.734	0.767	0.742	0.806	0.749	0.722	0.753	4	AVG	
Benzo(k)fluoranthene		1.178	1.249	1.266	1.274	1.263	1.460	1.257	1.298	1.281	6	AVG	
Benzo(a)pyrene	*	0.951	0.972	1.041	1.087	1.103	1.215	1.122	1.130	1.078	8	AVG	*
3-Methylcholanthrene			0.475	0.474	0.506	0.521	0.571	0.536	0.526	0.516	7	AVG	
Indeno(1,2,3-cd)pyrene		1.063	1.011	1.041	1.097	1.118	1.202	1.128	1.084	1.093	5	AVG	
Dibenz(a,h)anthracene		0.888	0.801	0.881	0.945	0.925	0.993	0.928	0.897	0.907	6	AVG	
Benzo(g,h,i)perylene		0.861	0.910	0.898	0.910	0.939	0.999	0.942	0.911	0.921	4	AVG	
Indene			2.748	3.017	2.850	2.873	3.112	2.970	2.802	2.910	4	AVG	
1-Chloronaphthalene			1.182	1.014	1.024	1.061	1.092	1.089	1.064	1.075	5	AVG	
2-Fluorophenol				1.491	1.519	1.557	1.743	1.635	1.565	1.585	6	AVG	
Phenol-d5				2.204	2.311	2.329	2.631	2.510	2.321	2.384	7	AVG	
Phenol-d6				2.204	2.311	2.329	2.631	2.510	2.321	2.384	7	AVG	
Nitrobenzene-d5				0.412	0.439	0.440	0.477	0.441	0.436	0.441	5	AVG	
2-Fluorobiphenyl				1.217	1.196	1.212	1.310	1.183	1.190	1.218	4	AVG	
2,4,6-Tribromophenol				0.127	0.136	0.132	0.144	0.133	0.129	0.134	5	AVG	
Terphenyl-d14				0.720	0.715	0.707	0.749	0.703	0.686	0.713	3	AVG	

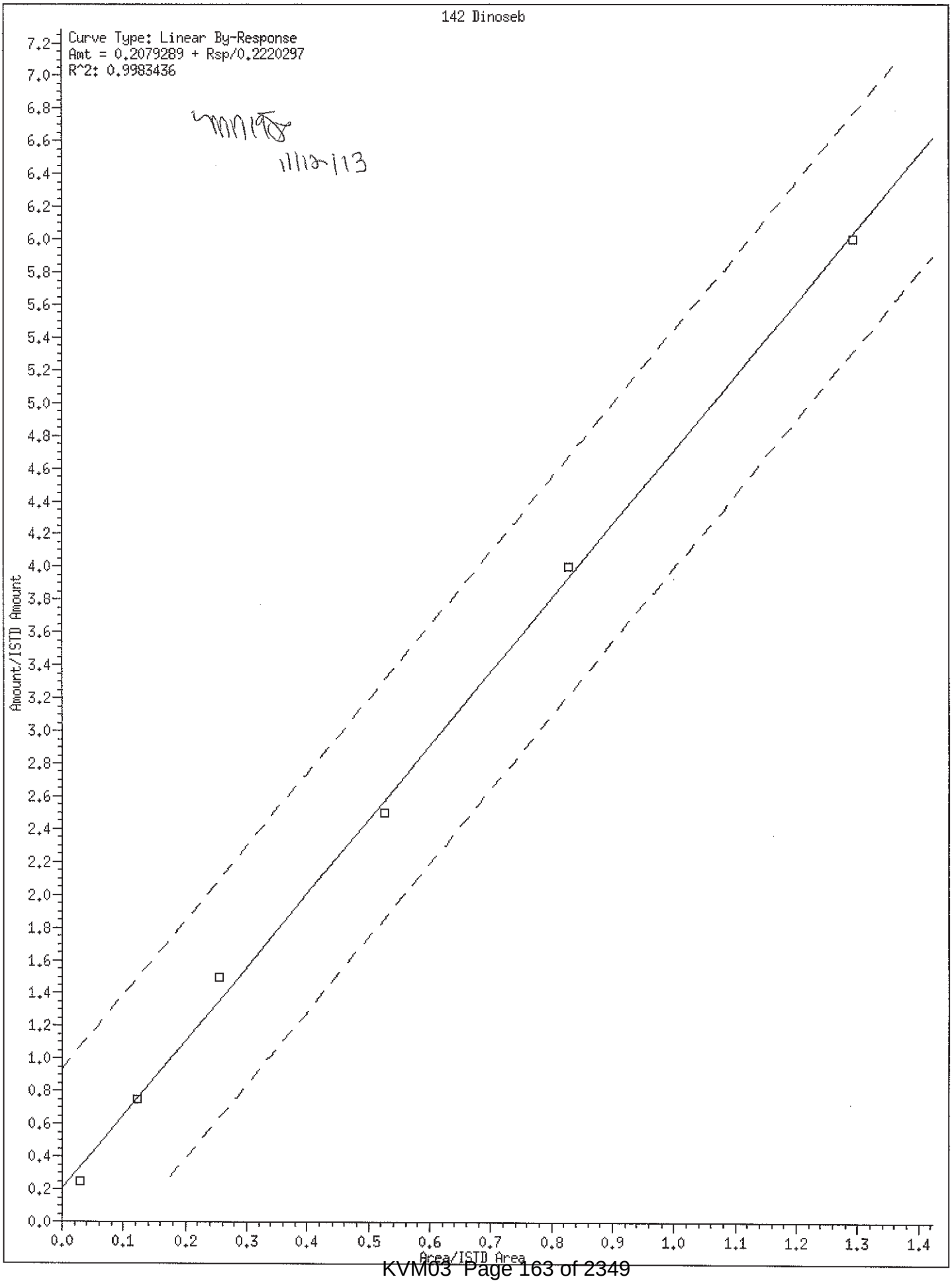
Average %RSD 6

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


123 1,3,5-Trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1619869 + Rsp/0.1007373
R^2: 0.9986580
11/12/13
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00 6.30


103 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0.3549057 + Rsp/0.2248349
R^2: 0.9976609
11/12/13
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2


152 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.2286578 + Rsp/0.104728
R^2: 0.9968189
11/12/13
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40 5.70 6.00 6.30


142 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2079289 + Rsp/0.2220297
R^2: 0.9983436
11/13/13
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP11165.i/13nov09a.b/gk0321.d SSTD030
/chem/HP11165.i/13nov09a.b/gk0322.d SSTD0.5
/chem/HP11165.i/13nov09a.b/gk0323.d SSTD120
/chem/HP11165.i/13nov09a.b/gk0324.d SSTD080
/chem/HP11165.i/13nov09a.b/gk0325.d SSTD050
/chem/HP11165.i/13nov09a.b/gk0326.d SSTD015
/chem/HP11165.i/13nov09a.b/gk0327.d SSTD005
/chem/HP11165.i/13nov09a.b/gk0328.d SSTD001

Area Summary

	File ID:									
Internal Standard Name	gk0321.d	gk0322.d	gk0323.d	gk0324.d	gk0325.d	gk0326.d	gk0327.d	gk0328.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	98225	76893	104648	88665	92779	92425	96220	74521	90547	11
Naphthalene-d8	474393	352998	522383	466409	468154	446720	465396	346938	442924	14
Acenaphthene-d10	290403	219769	309204	289232	286500	286597	282557	216277	272567	13
Phenanthrene-d10	538113	455156	540036	523376	523726	544867	530723	436717	511589	8
Pyrene-d10	603267	551156	612531	583899	589856	628070	617604	537317	590462	5
Perylene-d12	475964	457057	455487	438745	448865	495666	488351	433474	461701	5

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:							
Internal Standard Name	gk0321.d	gk0322.d	gk0323.d	gk0324.d	gk0325.d	gk0326.d	gk0327.d	gk0328.d
1,4-Dichlorobenzene-d4	5.749	5.749	5.754	5.754	5.755	5.749	5.749	5.749
Naphthalene-d8	6.990	6.990	6.995	6.990	6.990	6.990	6.985	6.985
Acenaphthene-d10	8.707	8.707	8.712	8.707	8.707	8.707	8.702	8.702
Phenanthrene-d10	10.162	10.156	10.167	10.162	10.162	10.162	10.156	10.157
Pyrene-d10	11.552	11.552	11.558	11.552	11.553	11.547	11.547	11.547
Perylene-d12	14.227	14.221	14.232	14.227	14.227	14.222	14.221	14.222

Comments: _____

_____

Report generated on 11/10/2013 at 08:24

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0331.d

ICV SAMPLE ID: ICV2463 BATCH: 13NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	49.36	-1	20	YES
N-Nitrosodimethylamine	50.00	48.52	-3	20	YES
Pyridine	50.00	47.57	-5	20	YES
2-Picoline	50.00	48.29	-3	20	YES
N-Nitrosomethylethylamine	50.00	46.26	-7	20	YES
Methyl methanesulfonate	50.00	55.12	10	20	YES
N-Nitrosodiethylamine	50.00	51.66	3	20	YES
Ethyl methanesulfonate	50.00	51.91	4	20	YES
Phenol	50.00	50.53	1	20	YES
Aniline	50.00	52.31	5	20	YES
bis(2-Chloroethyl)ether	50.00	49.91	0	20	YES
2-Chlorophenol	50.00	52.33	5	20	YES
1,3-Dichlorobenzene	50.00	50.39	1	20	YES
1,4-Dichlorobenzene	50.00	51.21	2	20	YES
Benzyl alcohol	50.00	53.35	7	20	YES
1,2-Dichlorobenzene	50.00	49.14	-2	20	YES
Indene	50.00	44.83	-10	20	YES
2-Methylphenol	50.00	53.03	6	20	YES
2,2'-oxybis(1-Chloropropane	50.00	47.99	-4	20	YES
bis(2-Chloroisopropyl)ether	50.00	47.99	-4	20	YES
N-Nitrosopyrrolidine	50.00	53.23	6	20	YES
Acetophenone	50.00	48.88	-2	20	YES
4-Methylphenol	50.00	52.87	6	20	YES
N-Nitroso-di-n-propylamine	50.00	50.91	2	20	YES
N-Nitrosomorpholine	50.00	51.26	3	20	YES
o-Toluidine	50.00	51.78	4	20	YES
Hexachloroethane	50.00	49.72	-1	20	YES
Nitrobenzene	50.00	48.88	-2	20	YES
N-Nitrosopiperidine	50.00	51.37	3	20	YES
Isophorone	50.00	52.49	5	20	YES
2-Nitrophenol	50.00	53.26	7	20	YES
2,4-Dimethylphenol	50.00	52.92	6	20	YES
O,O,O-triethylphosphorothio	50.00	48.95	-2	20	YES
Benzoic acid	100.00	96.44	-4	20	YES
bis(2-Chloroethoxy)methane	50.00	51.79	4	20	YES
2,4-Dichlorophenol	50.00	54.07	8	20	YES
1,2,4-Trichlorobenzene	50.00	52.66	5	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0331.d

ICV SAMPLE ID: ICV2463 BATCH: 13NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	50.00	50.71	1	20	YES
4-Chloroaniline	50.00	55.21	10	20	YES
2,6-Dichlorophenol	50.00	52.12	4	20	YES
Hexachloropropene	50.00	51.35	3	20	YES
Hexachlorobutadiene	50.00	49.86	0	20	YES
Quinoline	50.00	52.47	5	20	YES
N-Nitrosodi-n-butylamine	50.00	38.48	-23	20	NO **
4-Chloro-3-methylphenol	50.00	53.64	7	20	YES
Safrole	50.00	52.32	5	20	YES
2-Methylnaphthalene	50.00	51.13	2	20	YES
1-Methylnaphthalene	50.00	53.64	7	20	YES
Hexachlorocyclopentadiene	100.00	115.50	16	20	YES
1,2,4,5-Tetrachlorobenzene	50.00	49.07	-2	20	YES
cis-Isosafrole	5.50	5.49	0	20	YES
2,4,6-Trichlorophenol	50.00	53.10	6	20	YES
2,4,5-Trichlorophenol	50.00	53.75	8	20	YES
trans-Isosafrole	44.50	46.08	4	20	YES
Isosafrole	50.00	51.77	4	20	YES
1,1'-Biphenyl	50.00	47.59	-5	20	YES
2-Chloronaphthalene	50.00	51.63	3	20	YES
Diphenyl ether	50.00	49.97	0	20	YES
2-Nitroaniline	50.00	53.16	6	20	YES
1,4-Naphthoquinone	62.50	62.97	1	20	YES
1,4-Dinitrobenzene	50.00	54.04	8	20	YES
Dimethylphthalate	50.00	51.25	2	20	YES
1,3-Dinitrobenzene	50.00	52.54	5	20	YES
2,6-Dinitrotoluene	50.00	55.16	10	20	YES
Acenaphthylene	50.00	56.23	12	20	YES
3-Nitroaniline	50.00	54.78	10	20	YES
Acenaphthene	50.00	50.77	2	20	YES
2,4-Dinitrophenol	100.00	102.05	2	20	YES
4-Nitrophenol	50.00	52.91	6	20	YES
Pentachlorobenzene	50.00	49.55	-1	20	YES
2,4-Dinitrotoluene	50.00	53.54	7	20	YES
Dibenzofuran	50.00	49.60	-1	20	YES
1-Naphthylamine	100.00	105.40	5	20	YES
2,3,4,6-Tetrachlorophenol	50.00	55.03	10	20	YES

NC = Could not calculate

Comments: __** non-CCC, OK if greater than 20% 11/18/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0331.d

ICV SAMPLE ID: ICV2463 BATCH: 13NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Naphthylamine	100.00	105.14	5	20	YES
Diethylphthalate	50.00	52.11	4	20	YES
Thionazin	50.00	49.80	0	20	YES
Fluorene	50.00	52.54	5	20	YES
4-Chlorophenyl-phenylether	50.00	50.21	0	20	YES
5-Nitro-o-toluidine	50.00	52.03	4	20	YES
4-Nitroaniline	50.00	52.62	5	20	YES
4,6-Dinitro-2-methylphenol	50.00	53.64	7	20	YES
N-Nitrosodiphenylamine	50.00	50.40	1	20	YES
1,2-Diphenylhydrazine	50.00	51.03	2	20	YES
Tetraethyldithiopyrophospha	50.00	49.94	0	20	YES
1,3,5-Trinitrobenzene	50.00	51.03	2	20	YES
Diallate (peak 1)	37.50	36.26	-3	20	YES
Phorate	50.00	52.18	4	20	YES
Phenacetin	50.00	51.90	4	20	YES
4-Bromophenyl-phenylether	50.00	51.06	2	20	YES
Diallate (peak 2)	12.50	11.99	-4	20	YES
Hexachlorobenzene	50.00	49.69	-1	20	YES
Dimethoate	50.00	47.63	-5	20	YES
Pentachlorophenol	50.00	51.07	2	20	YES
Pentachloronitrobenzene	50.00	50.43	1	20	YES
4-Aminobiphenyl	50.00	65.91	32	20	NO **
Pronamide	50.00	50.48	1	20	YES
Dinoseb	50.00	48.98	-2	20	YES
Phenanthrene	50.00	49.25	-2	20	YES
Anthracene	50.00	52.38	5	20	YES
Carbazole	50.00	51.91	4	20	YES
Methyl parathion	50.00	52.61	5	20	YES
Di-n-butylphthalate	50.00	52.73	5	20	YES
Parathion	50.00	51.12	2	20	YES
4-Nitroquinoline-1-oxide	600.00	747.29	25	20	NO **
Isodrin	50.00	49.90	0	20	YES
Fluoranthene	50.00	51.73	3	20	YES
Benzidine	250.00	236.09	-6	20	YES
Pyrene	50.00	49.13	-2	20	YES
p-Dimethylaminoazobenzene	50.00	57.30	15	20	YES
Chlorobenzilate	50.00	51.59	3	20	YES

NC = Could not calculate

Comments: _** non-CCC, OK if greater than 20% 11/10/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0331.d

ICV SAMPLE ID: ICV2463 BATCH: 13NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
3,3'-Dimethylbenzidine	100.00	103.59	4	20	YES
Butylbenzylphthalate	50.00	51.67	3	20	YES
2-Acetylaminofluorene	50.00	54.19	8	20	YES
3,3'-Dichlorobenzidine	50.00	49.05	-2	20	YES
4,4'-Methylenebis(2-Chloroa	50.00	50.18	0	20	YES
Benzo(a)anthracene	50.00	52.00	4	20	YES
Chrysene	50.00	51.08	2	20	YES
bis(2-Ethylhexyl)phthalate	50.00	51.87	4	20	YES
6-Methylchrysene	50.00	49.75	-1	20	YES
Di-n-octylphthalate	50.00	54.01	8	20	YES
7,12-Dimethylbenz[a]anthrac	50.00	52.56	5	20	YES
Benzo(b)fluoranthene	50.00	54.34	9	20	YES
Benzo(k)fluoranthene	50.00	50.04	0	20	YES
Benzo(a)pyrene	50.00	53.98	8	20	YES
3-Methylcholanthrene	50.00	51.84	4	20	YES
Dibenz(a,h)acridine	50.00	51.57	3	20	YES
Dibenz(a,j)acridine	50.00	50.81	2	20	YES
Indeno(1,2,3-cd)pyrene	50.00	52.81	6	20	YES
Dibenz(a,h)anthracene	50.00	53.25	7	20	YES
Benzo(g,h,i)perylene	50.00	52.10	4	20	YES
2,4_2,6-Dinitrotoluenes	50.00	53.08	6	20	YES
Diallate TRANS/CIS	50.00	48.29	-3	20	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP11165

Method: SW-846 8270C File ID: gk0332.d

ICV SAMPLE ID: BASICV2463 BATCH: 13NOV09A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	49.17	-2	20	YES
Caprolactam	50.00	51.35	3	20	YES
Atrazine	50.00	51.15	2	20	YES

NC = Could not calculate

Comments: _____

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 10/28/13 10/29/13

Calibration Times: 23:13 03:02

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = hj1368.d RRF0.25 = hj1367.d RRF1.25 = hj1366.d RRF3.75 = hj1365.d
RRF7.5 = hj1361.d RRF12.5 = hj1364.d RRF20 = hj1363.d RRF30 = hj1362.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.626	0.596	0.635	0.643	0.652	0.628	0.630	3	AVG
N-Nitrosodimethylamine		1.028	1.001	0.942	1.079	1.094	1.118	1.117	1.054	6	AVG
Pyridine		2.247	1.691	1.530	1.693	1.796	1.826	1.792	1.796	12	AVG
2-Picoline		1.870	1.801	1.689	1.772	1.757	1.749	1.734	1.768	3	AVG
N-Nitrosomethylethylamine		0.844	0.774	0.758	0.790	0.791	0.788	0.787	0.790	3	AVG
Methyl methanesulfonate		0.994	0.949	0.927	0.989	0.979	0.968	0.970	0.968	2	AVG
N-Nitrosodiethylamine		0.715	0.704	0.698	0.732	0.743	0.747	0.744	0.726	3	AVG
Ethyl methanesulfonate		0.733	0.757	0.693	0.731	0.739	0.750	0.744	0.735	3	AVG
Benzaldehyde			1.464	1.468	1.420	1.406	1.232	1.080	1.345	12	AVG
Phenol		2.385	2.234	2.161	2.267	2.236	2.211	2.150	2.235	3	AVG
Aniline		2.790	2.576	2.483	2.615	2.618	2.579	2.528	2.598	4	AVG
bis(2-Chloroethyl)ether		1.816	1.673	1.606	1.673	1.677	1.642	1.617	1.672	4	AVG
2-Chlorophenol		1.264	1.367	1.342	1.403	1.400	1.382	1.366	1.361	3	AVG
1,3-Dichlorobenzene		1.691	1.584	1.525	1.573	1.578	1.558	1.533	1.577	3	AVG
1,4-Dichlorobenzene		1.728	1.616	1.540	1.590	1.607	1.579	1.550	1.601	4	AVG
Benzyl alcohol			0.920	0.943	0.909	0.972	0.968	0.984	0.949	3	AVG
1,2-Dichlorobenzene		1.569	1.482	1.459	1.501	1.499	1.483	1.441	1.491	3	AVG
Indene		2.630	2.368	2.264	2.405	2.423	2.393	2.273	2.394	5	AVG
2-Methylphenol		1.272	1.312	1.319	1.350	1.369	1.347	1.321	1.327	2	AVG
2,2'-oxybis(1-Chloropropane)		2.118	1.969	1.887	1.951	1.896	1.895	1.829	1.935	5	AVG
bis(2-Chloroisopropyl)ether		2.118	1.969	1.887	1.951	1.896	1.895	1.829	1.935	5	AVG
N-Nitrosopyrrolidine		0.618	0.672	0.677	0.727	0.735	0.739	0.731	0.700	7	AVG
Acetophenone		2.172	2.183	2.136	2.073	2.164	2.161	2.162	2.150	2	AVG
4-Methylphenol		1.613	1.550	1.515	1.560	1.566	1.526	1.489	1.546	3	AVG
N-Nitroso-di-n-propylamine		1.241	1.314	1.268	1.338	1.318	1.290	1.277	1.292	3	AVG
N-Nitrosomorpholine		0.901	0.953	0.910	0.950	0.937	0.920	0.911	0.926	2	AVG
o-Toluidine		2.400	2.411	2.334	2.426	2.412	2.364	2.333	2.383	2	AVG
Hexachloroethane		0.654	0.625	0.619	0.642	0.646	0.635	0.623	0.635	2	AVG
Nitrobenzene		0.482	0.490	0.483	0.494	0.493	0.490	0.480	0.488	1	AVG
N-Nitrosopiperidine		0.185	0.180	0.181	0.190	0.192	0.191	0.188	0.187	2	AVG
Isophorone		0.776	0.814	0.826	0.861	0.852	0.857	0.851	0.834	4	AVG
2-Nitrophenol		0.133	0.157	0.170	0.184	0.189	0.192	0.190	0.174	13	AVG
2,4-Dimethylphenol		0.373	0.407	0.404	0.422	0.412	0.413	0.407	0.405	4	AVG
O,O,O-triethylphosphorothioate		0.205	0.206	0.207	0.207	0.209	0.205	0.203	0.206	1	AVG
Benzoic acid			0.107	0.147	0.160	0.198	0.224	0.229	0.178	27	1STDEG
bis(2-Chloroethoxy)methane		0.506	0.503	0.487	0.508	0.479	0.487	0.405	0.482	7	AVG
2,4-Dichlorophenol		0.274	0.293	0.299	0.309	0.309	0.306	0.302	0.299	4	AVG
1,2,4-Trichlorobenzene		0.383	0.368	0.354	0.362	0.358	0.359	0.346	0.361	3	AVG
Naphthalene	0.954	1.102	1.029	0.990	1.026	1.016	1.003	0.984	1.013	4	AVG
4-Chloroaniline		0.438	0.423	0.423	0.437	0.434	0.433	0.426	0.431	1	AVG
2,6-Dichlorophenol		0.274	0.288	0.288	0.302	0.297	0.294	0.288	0.290	3	AVG
Hexachloropropene		0.184	0.199	0.222	0.234	0.242	0.246	0.240	0.224	11	AVG
Hexachlorobutadiene		0.219	0.214	0.212	0.215	0.215	0.214	0.207	0.214	2	AVG
Quinoline		0.663	0.644	0.642	0.667	0.668	0.664	0.647	0.656	2	AVG
Caprolactam			0.113	0.127	0.118	0.123	0.115	0.109	0.118	6	AVG
N-Nitrosodi-n-butylamine			0.288	0.295	0.306	0.387	0.382	0.390	0.341	15	AVG
4-Chloro-3-methylphenol		0.285	0.311	0.335	0.355	0.353	0.351	0.351	0.335	8	AVG
Safrole		0.244	0.273	0.276	0.284	0.286	0.285	0.280	0.276	5	AVG
2-Methylnaphthalene	0.652	0.717	0.723	0.709	0.734	0.722	0.719	0.704	0.710	4	AVG
1-Methylnaphthalene	0.608	0.644	0.651	0.647	0.667	0.658	0.651	0.644	0.646	3	AVG
Hexachlorocyclopentadiene			0.204	0.240	0.267	0.284	0.294	0.291	0.263	13	AVG
1,2,4,5-Tetrachlorobenzene		0.641	0.602	0.573	0.585	0.579	0.574	0.560	0.587	5	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

OCT 2 9 2013

Joe Gambler
Senior Chemist

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 10/28/13 10/29/13

Calibration Times: 23:13 03:02

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = hj1368.d RRF0.25 = hj1367.d RRF1.25 = hj1366.d RRF3.75 = hj1365.d
RRF7.5 = hj1361.d RRF12.5 = hj1364.d RRF20 = hj1363.d RRF30 = hj1362.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
cis-Isosafrole		0.076	0.072	0.076	0.079	0.079	0.079	0.078	0.077	3	AVG
2,4,6-Trichlorophenol		0.310	0.349	0.364	0.394	0.394	0.393	0.402	0.372	9	AVG
2,4,5-Trichlorophenol		0.303	0.354	0.378	0.410	0.399	0.398	0.379	0.375	10	AVG
trans-Isosafrole		0.417	0.420	0.424	0.463	0.451	0.456	0.461	0.442	5	AVG
Isosafrole		0.417	0.420	0.424	0.463	0.451	0.456	0.461	0.442	5	AVG
1,1'-Biphenyl		1.473	1.412	1.399	1.353	1.382	1.389	1.371	1.397	3	AVG
2-Chloronaphthalene		1.119	1.092	1.042	1.140	1.098	1.187	1.163	1.120	4	AVG
1-Chloronaphthalene		1.113	1.079	1.078	1.030	1.029	0.905	0.884	1.017	9	AVG
Diphenyl ether		0.798	0.793	0.752	0.785	0.766	0.762	0.749	0.772	3	AVG
2-Nitroaniline		0.232	0.286	0.322	0.338	0.344	0.339	0.339	0.314	13	AVG
1,4-Naphthoquinone			0.362	0.423	0.454	0.459	0.456	0.393	0.424	9	AVG
1,4-Dinitrobenzene			0.133	0.167	0.183	0.196	0.201	0.178	0.176	14	AVG
Dimethylphthalate			1.236	1.215	1.246	1.195	1.080	0.972	1.157	9	AVG
1,3-Dinitrobenzene			0.183	0.213	0.227	0.228	0.217	0.200	0.211	8	AVG
2,6-Dinitrotoluene		0.201	0.273	0.296	0.304	0.299	0.297	0.258	0.275	13	AVG
Acenaphthylene	1.342	1.354	1.487	1.483	1.571	1.544	1.532	1.508	1.477	6	AVG
3-Nitroaniline		0.229	0.277	0.291	0.309	0.308	0.319	0.320	0.293	11	AVG
Acenaphthene	1.074	1.128	1.100	1.074	1.110	1.080	1.083	1.062	1.089	2	AVG
2,4-Dinitrophenol			0.075	0.115	0.145	0.155	0.177	0.169	0.139	28	1STDEG
Pentachlorobenzene		0.537	0.483	0.459	0.478	0.465	0.464	0.455	0.477	6	AVG
4-Nitrophenol			0.146	0.193	0.220	0.219	0.214	0.213	0.201	14	AVG
Dibenzofuran		1.625	1.594	1.546	1.601	1.543	1.528	1.261	1.528	8	AVG
2,4-Dinitrotoluene		0.268	0.351	0.373	0.387	0.401	0.369	0.345	0.356	12	AVG
1-Naphthylamine		1.036	1.069	1.055	1.101	1.096	1.109	0.977	1.063	4	AVG
2,3,4,6-Tetrachlorophenol		0.252	0.283	0.303	0.321	0.323	0.330	0.282	0.299	9	AVG
2-Naphthylamine		1.034	1.093	1.036	1.112	1.111	1.123	0.966	1.068	5	AVG
Diethylphthalate			1.139	1.132	1.152	1.116	1.065	0.984	1.098	6	AVG
Thionazin		0.222	0.241	0.237	0.255	0.236	0.225	0.205	0.232	7	AVG
Fluorene	1.170	1.255	1.275	1.268	1.310	1.258	1.232	1.024	1.224	7	AVG
4-Chlorophenyl-phenylether		0.716	0.671	0.633	0.668	0.620	0.617	0.493	0.631	11	AVG
5-Nitro-o-toluidine		0.258	0.306	0.334	0.350	0.344	0.319	0.299	0.316	10	AVG
4-Nitroaniline		0.253	0.299	0.303	0.304	0.294	0.291	0.281	0.289	6	AVG
4,6-Dinitro-2-methylphenol			0.081	0.103	0.129	0.134	0.145	0.150	0.123	21	1STDEG
N-Nitrosodiphenylamine (1)		0.567	0.591	0.589	0.604	0.593	0.570	0.559	0.582	3	AVG
NDPA as diphenylamine		0.567	0.591	0.589	0.604	0.593	0.570	0.559	0.582	3	AVG
1,2-Diphenylhydrazine		0.852	0.868	0.864	0.887	0.862	0.891	0.794	0.860	4	AVG
Tetraethyldithiopyrophosphate		0.121	0.124	0.131	0.135	0.130	0.129	0.130	0.128	4	AVG
1,3,5-Trinitrobenzene			0.045	0.073	0.088	0.098	0.108	0.115	0.088	30	1STDEG
Diallate (peak 1)		0.396	0.423	0.432	0.433	0.418	0.420	0.405	0.418	3	AVG
Phorate		0.439	0.516	0.537	0.533	0.525	0.528	0.512	0.513	7	AVG
Phenacetin		0.252	0.343	0.377	0.386	0.379	0.404	0.413	0.365	15	AVG
4-Bromophenyl-phenylether		0.213	0.202	0.206	0.209	0.205	0.196	0.197	0.204	3	AVG
Diallate (peak 2)		0.175	0.185	0.183	0.182	0.174	0.181	0.176	0.179	2	AVG
Hexachlorobenzene	0.196	0.218	0.201	0.198	0.201	0.197	0.211	0.192	0.202	4	AVG
Dimethoate			0.301	0.331	0.336	0.337	0.345	0.351	0.333	5	AVG
Atrazine		0.186	0.212	0.218	0.202	0.199	0.199	0.195	0.202	5	AVG
Pentachlorophenol			0.083	0.111	0.131	0.135	0.151	0.161	0.129	22	1STDEG
Pentachloronitrobenzene		0.073	0.086	0.092	0.099	0.097	0.104	0.095	0.092	11	AVG
4-Aminobiphenyl		0.657	0.712	0.725	0.778	0.765	0.766	0.749	0.736	6	AVG
Pronamide		0.251	0.309	0.318	0.334	0.333	0.338	0.339	0.317	10	AVG
Dinoseb			0.076	0.133	0.177	0.187	0.204	0.209	0.164	31	1STDEG
Phenanthrene	1.085	1.161	1.094	1.055	1.098	1.038	1.079	1.143	1.094	4	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date(s): 10/28/13 10/29/13

Calibration Times: 23:13 03:02

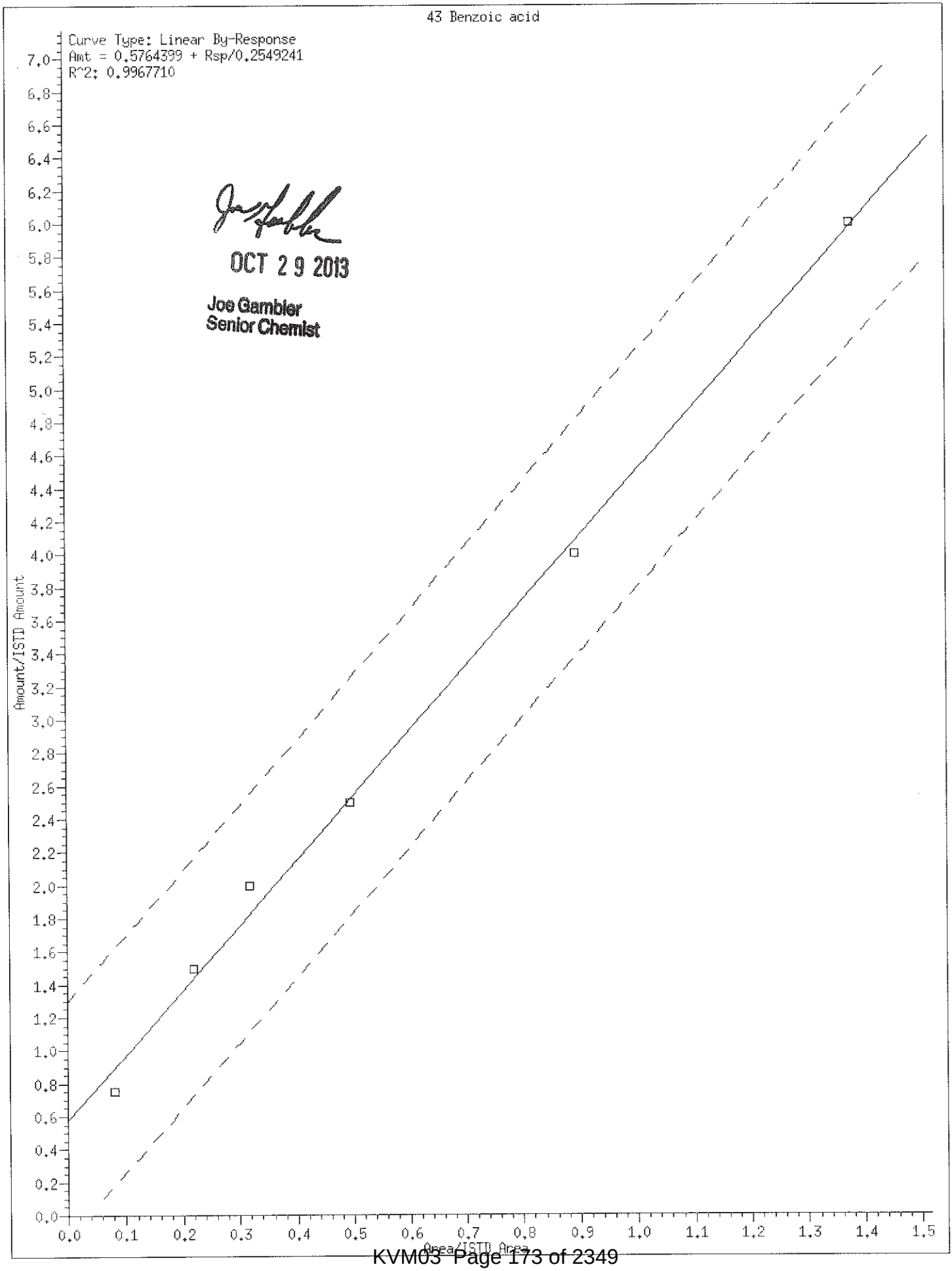
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

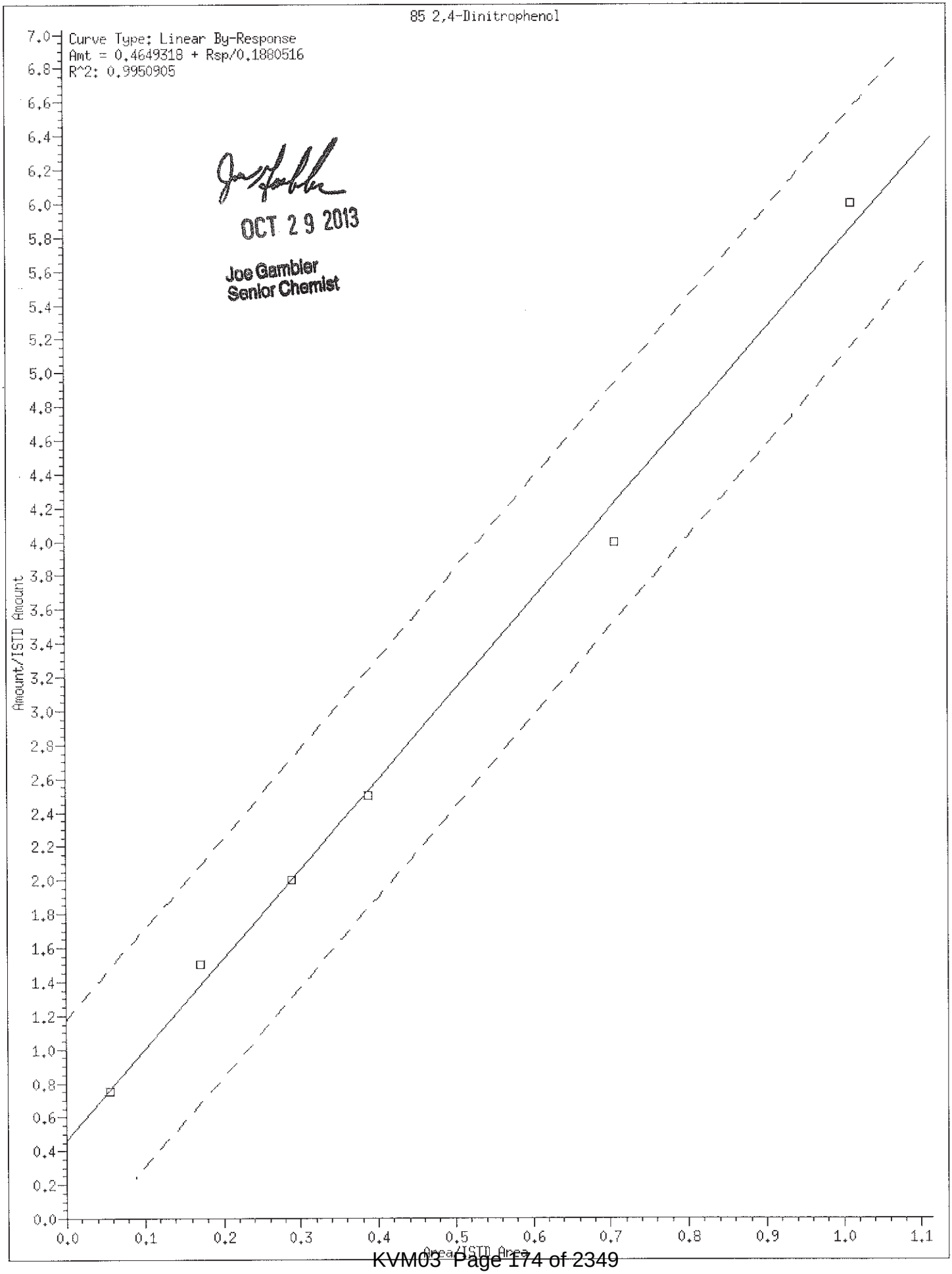
LAB FILE ID:RRF0.125 = hj1368.d RRF0.25 = hj1367.d RRF1.25 = hj1366.d RRF3.75 = hj1365.d
RRF7.5 = hj1361.d RRF12.5 = hj1364.d RRF20 = hj1363.d RRF30 = hj1362.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Anthracene	0.939	1.043	1.067	1.078	1.113	1.069	1.100	1.082	1.061	5	AVG
Carbazole		0.981	0.986	1.000	1.036	1.008	1.034	1.046	1.013	3	AVG
Methyl parathion			0.182	0.227	0.246	0.252	0.262	0.269	0.240	13	AVG
Di-n-butylphthalate			1.084	1.172	1.215	1.204	1.245	1.241	1.194	5	AVG
Parathion			0.119	0.149	0.161	0.163	0.174	0.180	0.158	14	AVG
4-Nitroquinoline-1-oxide			0.037	0.063	0.088	0.103	0.124	0.137	0.092	41	1STDEG
Isodrin		0.120	0.121	0.128	0.133	0.131	0.137	0.137	0.130	5	AVG
Fluoranthene	1.026	1.118	1.198	1.222	1.257	1.259	1.309	1.340	1.216	8	AVG
Benzidine			0.482	0.567	0.707	0.677	0.676	0.646	0.626	14	AVG
Pyrene	1.100	1.112	1.043	1.018	1.041	1.023	1.014	1.003	1.044	4	AVG
p-Dimethylaminoazobenzene		0.125	0.171	0.198	0.215	0.218	0.220	0.222	0.196	18	1STDEG
Chlorobenzilate			0.269	0.296	0.308	0.303	0.308	0.304	0.298	5	AVG
3,3'-Dimethylbenzidine			0.501	0.578	0.711	0.690	0.681	0.678	0.640	13	AVG
Butylbenzylphthalate			0.403	0.430	0.453	0.447	0.449	0.450	0.439	4	AVG
2-Acetylaminofluorene			0.271	0.357	0.411	0.427	0.434	0.449	0.392	17	1STDEG
3,3'-Dichlorobenzidine			0.319	0.337	0.375	0.372	0.371	0.364	0.356	6	AVG
4,4'-Methylenebis(2-Chloroanil			0.154	0.175	0.185	0.187	0.187	0.187	0.179	7	AVG
Benzo(a)anthracene	0.781	0.837	0.952	0.966	1.001	1.000	0.997	0.984	0.940	9	AVG
Chrysene	0.877	0.892	0.939	0.912	0.938	0.929	0.929	0.927	0.918	2	AVG
bis(2-Ethylhexyl)phthalate			0.525	0.567	0.605	0.609	0.609	0.603	0.586	6	AVG
6-Methylchrysene		0.602	0.638	0.665	0.702	0.698	0.689	0.706	0.671	6	AVG
Di-n-octylphthalate			1.032	1.204	1.388	1.365	1.369	1.339	1.283	11	AVG
Benzo(b)fluoranthene	1.050	1.101	1.165	1.223	1.279	1.229	1.243	1.225	1.189	7	AVG
7,12-Dimethylbenz[a]anthracene		0.435	0.504	0.524	0.566	0.553	0.557	0.543	0.526	9	AVG
Benzo(k)fluoranthene	1.215	1.219	1.241	1.217	1.255	1.225	1.202	1.146	1.215	3	AVG
Benzo(a)pyrene	1.036	1.020	1.106	1.108	1.180	1.170	1.165	1.135	1.115	5	AVG
3-Methylcholanthrene		0.534	0.534	0.557	0.595	0.594	0.597	0.579	0.570	5	AVG
Dibenz(a,h)acridine			0.732	0.803	0.882	0.890	0.898	0.869	0.846	8	AVG
Dibenz(a,j)acridine			0.827	0.878	0.925	0.944	0.927	0.899	0.900	5	AVG
Indeno(1,2,3-cd)pyrene	1.022	1.045	1.092	1.133	1.197	1.210	1.195	1.155	1.131	6	AVG
Dibenz(a,h)anthracene	0.885	0.906	0.922	0.971	1.029	1.033	1.018	0.964	0.966	6	AVG
Benzo(g,h,i)perylene	0.903	0.981	0.974	0.973	1.042	1.027	1.018	0.965	0.985	4	AVG
Diallate TRANS/CIS		0.341	0.363	0.370	0.370	0.357	0.360	0.348	0.358	3	AVG
2-Fluorophenol		1.382	1.387	1.344	1.411	1.411	1.404	1.381	1.388	2	AVG
Phenol-d5		1.816	1.905	1.876	1.976	1.948	1.940	1.907	1.910	3	AVG
Phenol-d6		1.816	1.905	1.876	1.976	1.948	1.940	1.907	1.910	3	AVG
Nitrobenzene-d5		0.434	0.464	0.463	0.484	0.478	0.479	0.467	0.467	4	AVG
2-Fluorobiphenyl		1.282	1.245	1.201	1.241	1.204	1.208	1.187	1.224	3	AVG
2,4,6-Tribromophenol		0.113	0.125	0.132	0.136	0.137	0.128	0.119	0.127	7	AVG
Terphenyl-d14		0.680	0.670	0.670	0.678	0.663	0.653	0.631	0.664	3	AVG

Average %RSD 7

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


43 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.5764399 + Rsp/0.2549241
R^2: 0.9967710
OCT 2 9 2013
Joe Gambler
Senior Chemist
Amount/ISTD Amount
Area/ISTD Area



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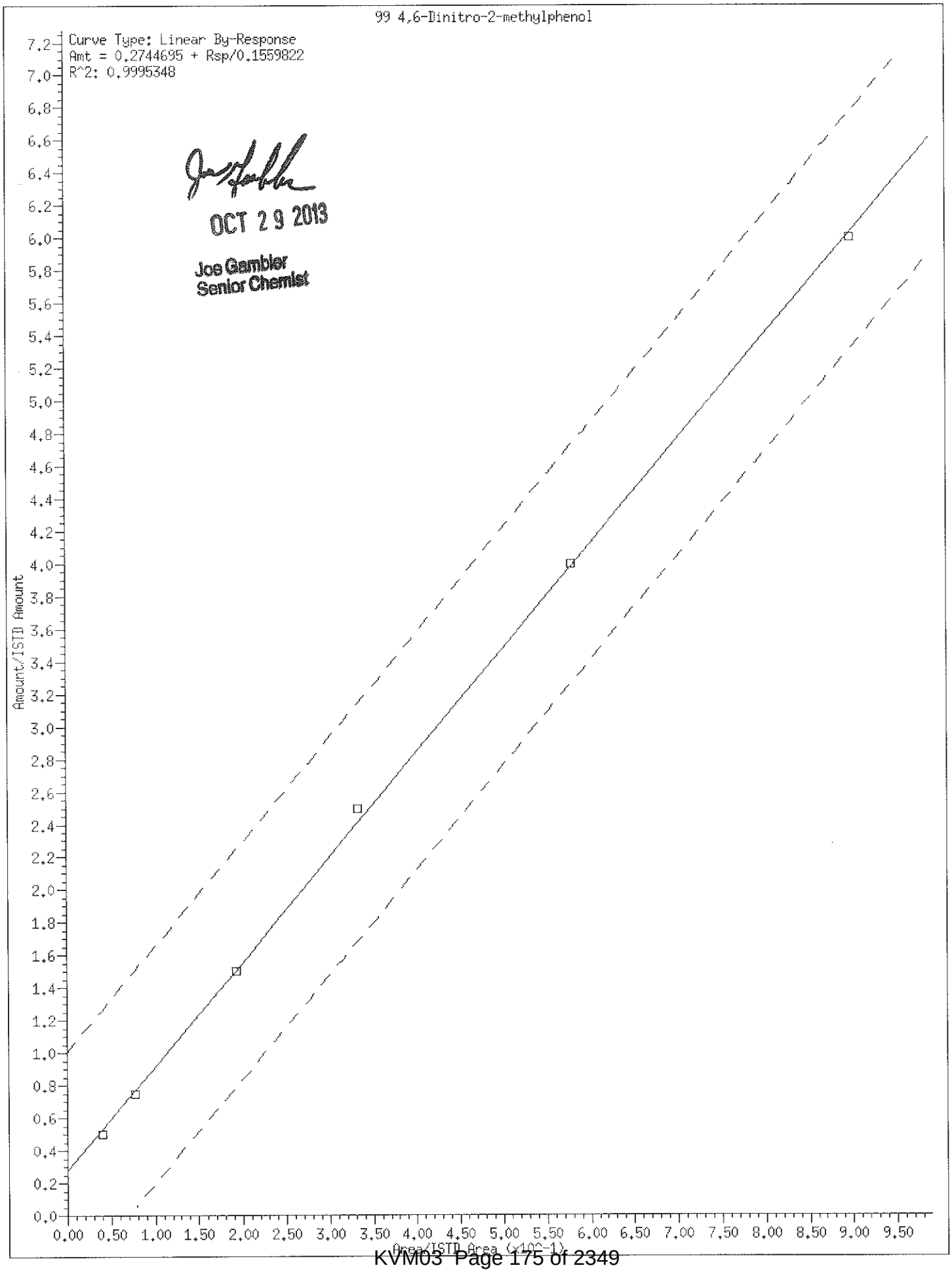
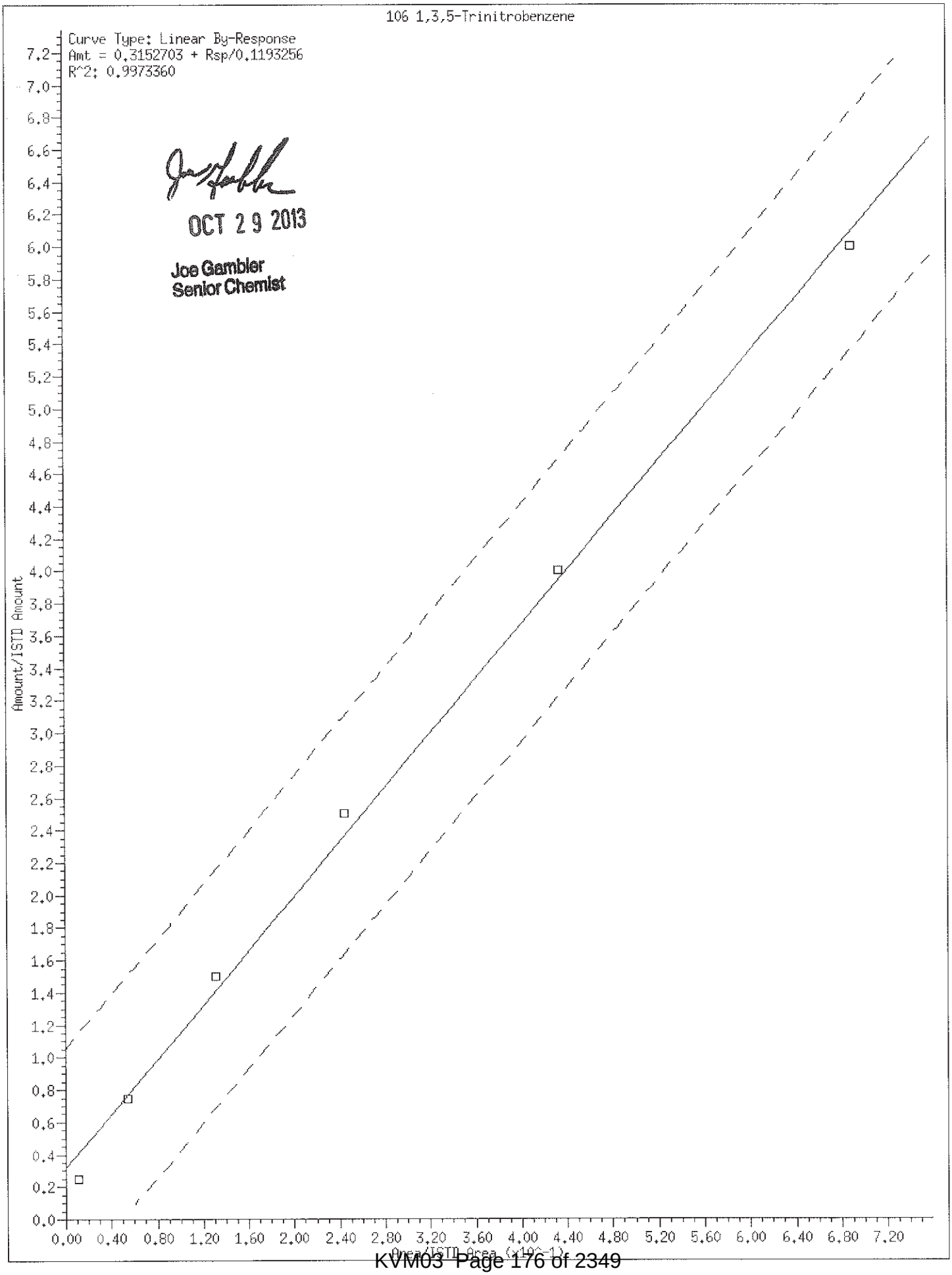
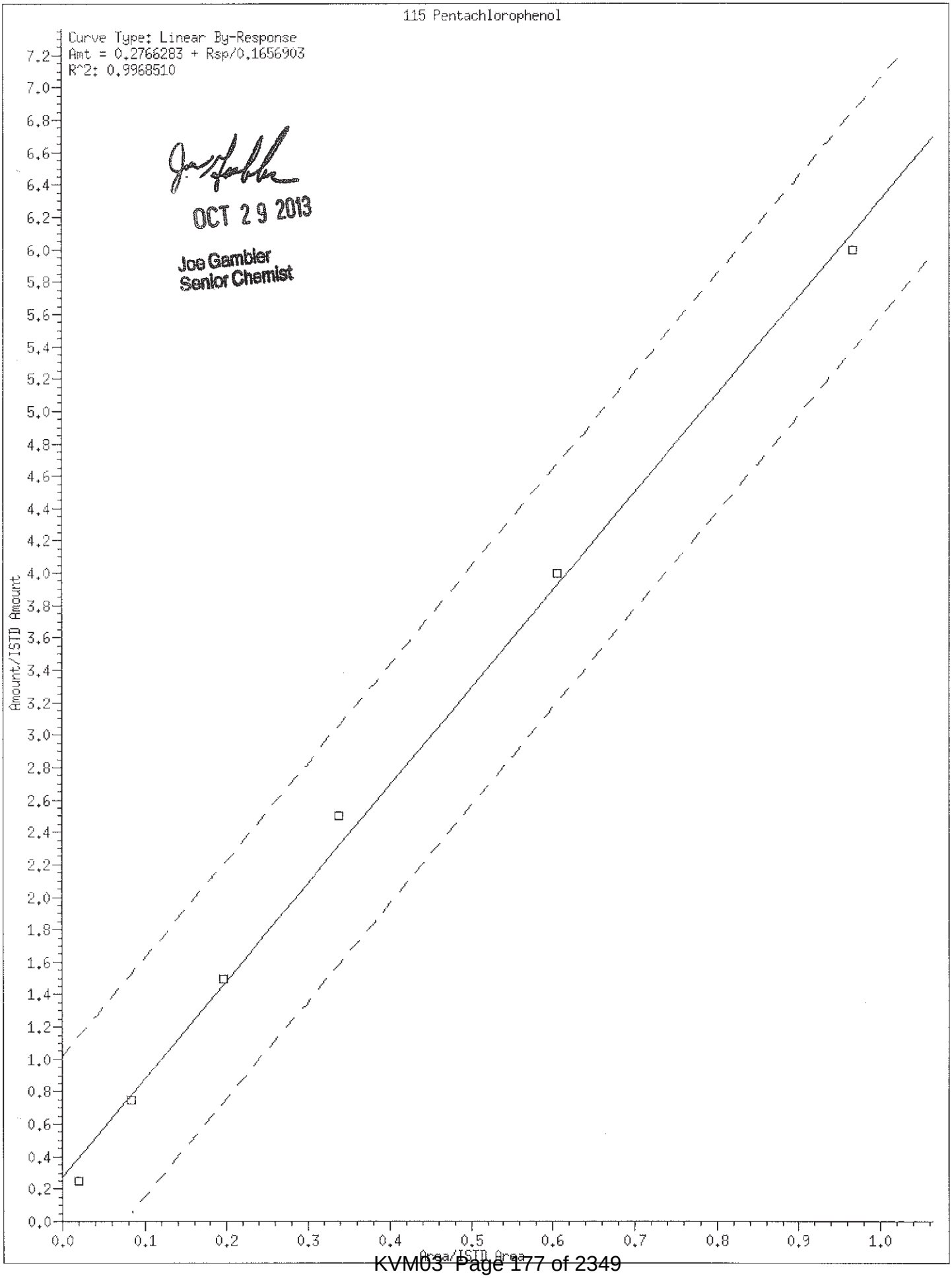

99 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.2744695 + Rsp/0.1559822
R^2: 0.9995348
OCT 29 2013
Joe Gambler
Senior Chemist
Amount/ISTD Amount
Area/ISTD Area (x100-1)



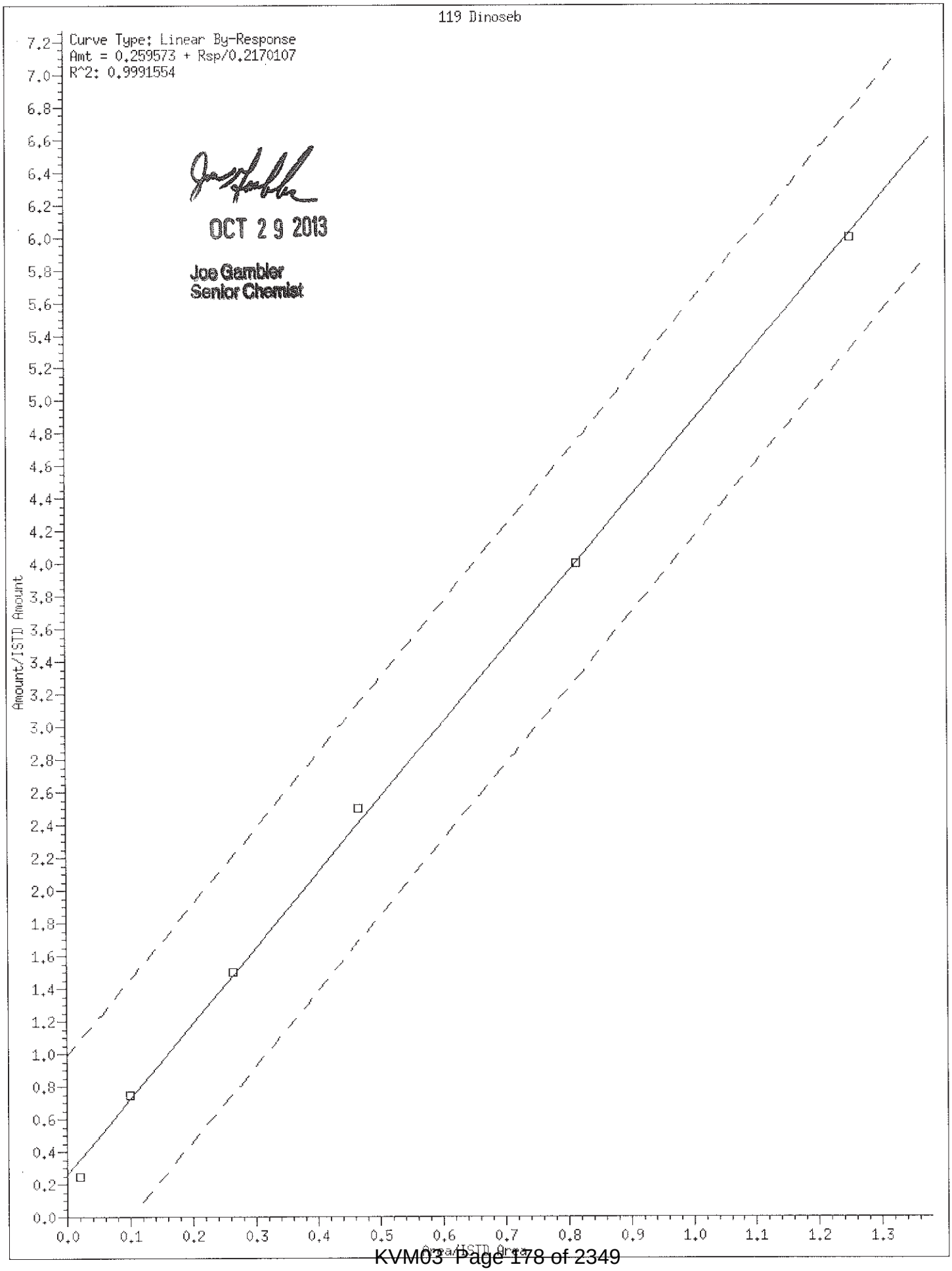
OCT 29 2013

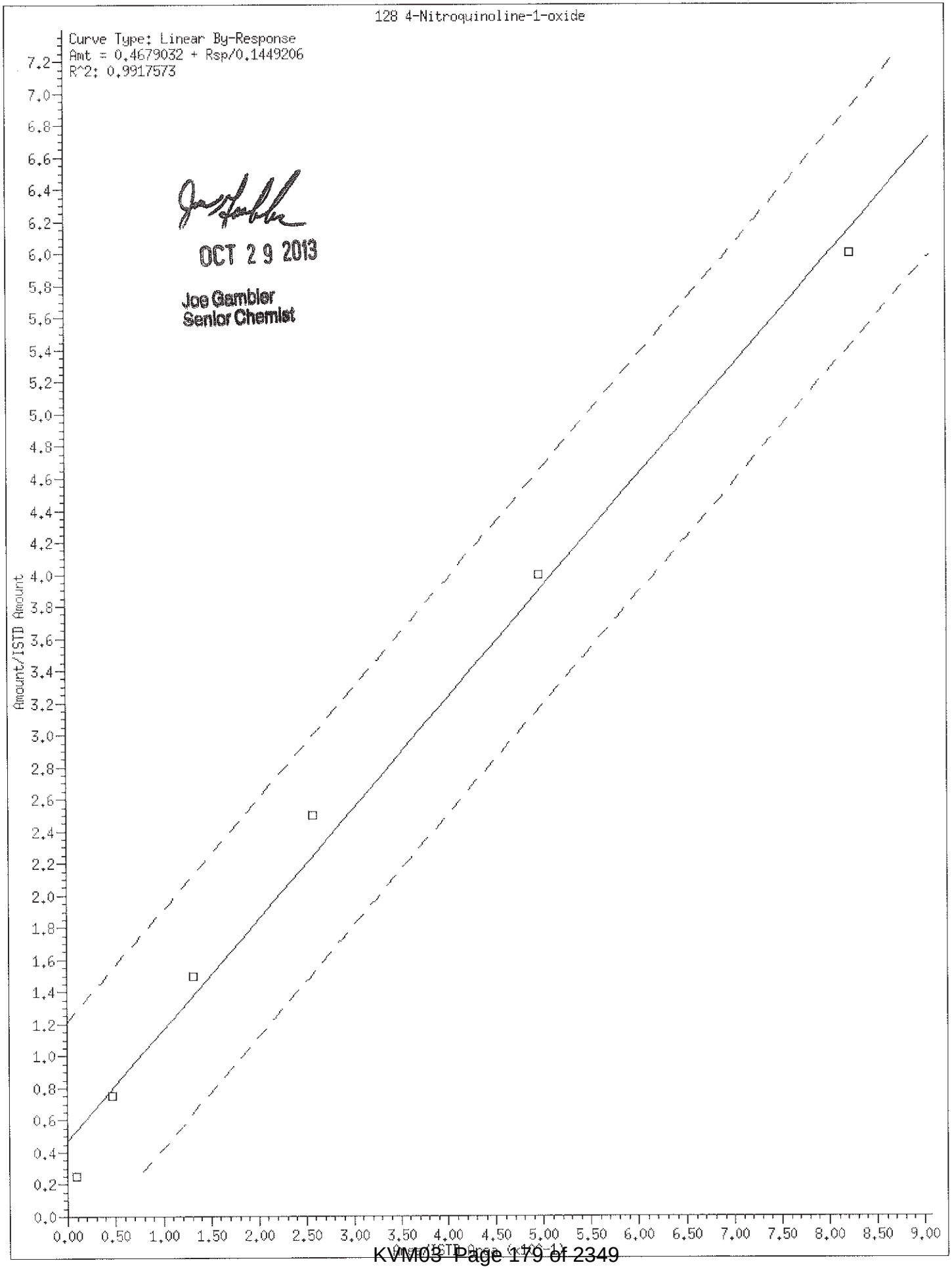
Joe Gambler
Senior Chemist



OCT 29 2013

Joe Gambler
Senior Chemist


119 Dinoseb
Curve Type: Linear By-Response
Amt = 0.259573 + Rsp/0.2170107
R^2: 0.9991554
OCT 2 9 2013
Joe Gambler
Senior Chemist
Amount/ISTD Amount
Area/ISTD Area


128 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.4679032 + Rsp/0.1449206
R^2: 0.9917573
OCT 2 9 2013
Joe Gambler
Senior Chemist
Amount/ISTD Amount
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
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6.8
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7.2
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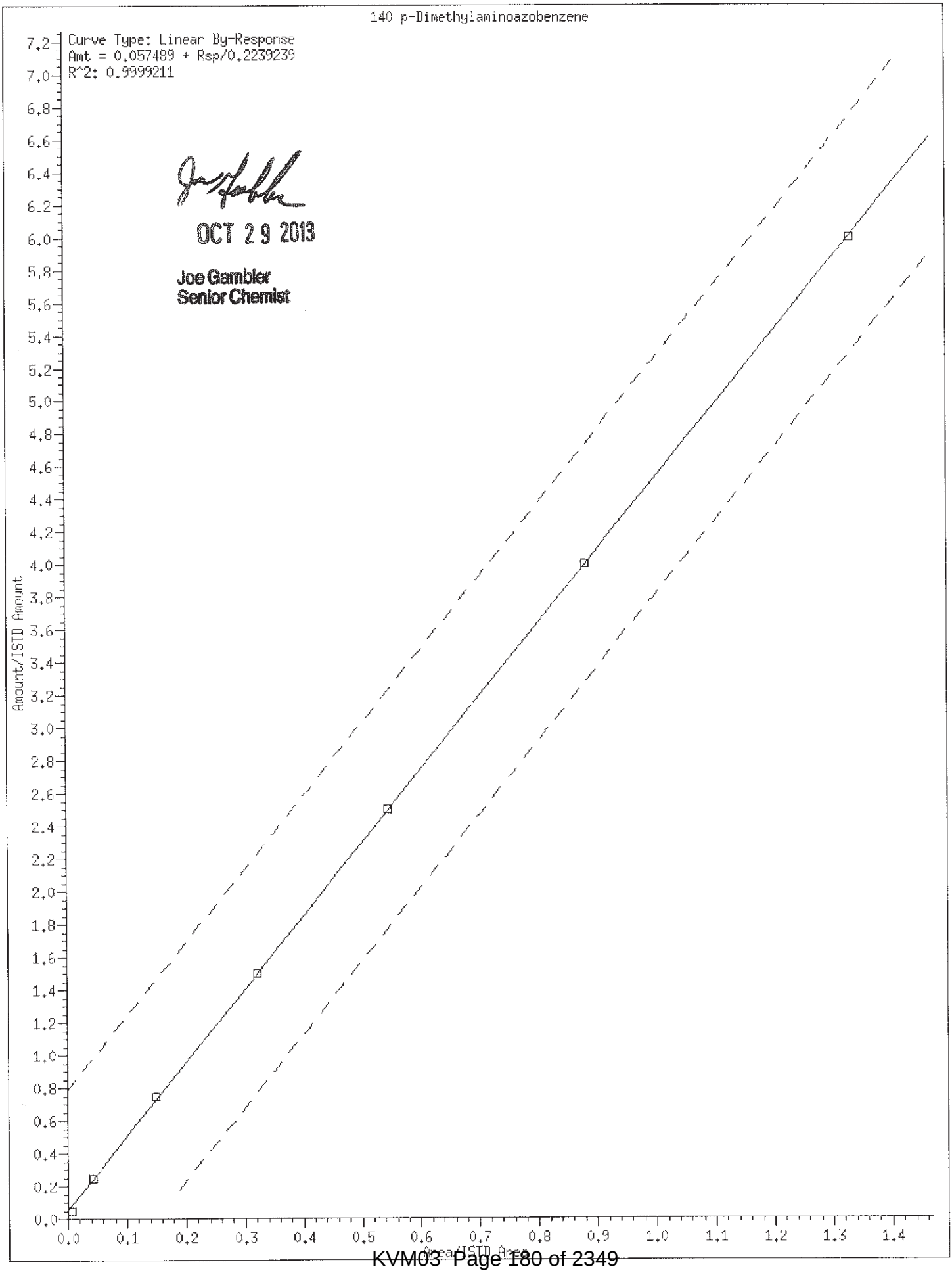
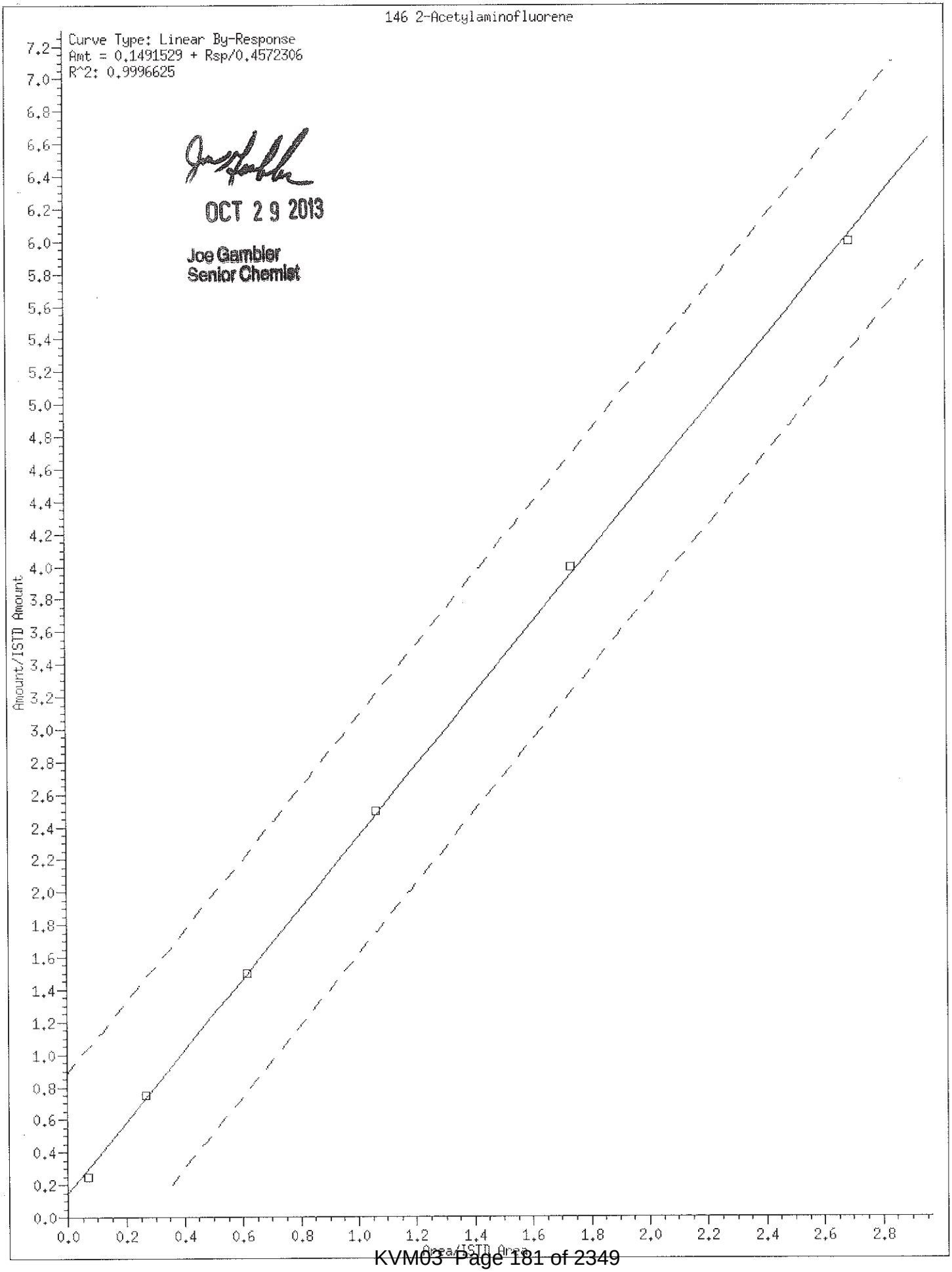
7.00
7.50
8.00
8.50
9.00


140 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.057489 + Rsp/0.2239239
R^2: 0.9999211
OCT 2 9 2013
Joe Gambler
Senior Chemist
Amount/ISTD Amount
Area/ISTD Area



OCT 29 2013

Joe Gambler
Senior Chemist

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP18831.i/13oct28b.b/hj1361.d SSTD7.5
/chem/HP18831.i/13oct28b.b/hj1362.d SSTD030
/chem/HP18831.i/13oct28b.b/hj1363.d SSTD020
/chem/HP18831.i/13oct28b.b/hj1364.d SSTD12.5
/chem/HP18831.i/13oct28b.b/hj1365.d SSTD3.75
/chem/HP18831.i/13oct28b.b/hj1366.d SSTD1.25
/chem/HP18831.i/13oct28b.b/hj1367.d SSTD0.25
/chem/HP18831.i/13oct28b.b/hj1368.d SSTD.125

Area Summary

	File ID:									
Internal Standard Name	hj1361.d	hj1362.d	hj1363.d	hj1364.d	hj1365.d	hj1366.d	hj1367.d	hj1368.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	187821	185533	181696	184094	189830	186419	173917	231931	190155	9
Naphthalene-d8	721826	715749	697833	714487	723682	719763	683726	881453	732315	8
Acenaphthene-d10	452920	446471	437336	448939	457622	452080	423605	552628	458950	9
Phenanthrene-d10	790436	688670	716407	775306	786881	778608	729988	978806	780638	11
Pyrene-d10	974611	930720	925376	954733	981200	967868	913026	1209773	982163	10
Perylene-d12	732405	754442	723059	733022	749778	749170	704570	953438	762486	10

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:							
Internal Standard Name	hj1361.d	hj1362.d	hj1363.d	hj1364.d	hj1365.d	hj1366.d	hj1367.d	hj1368.d
1,4-Dichlorobenzene-d4	6.896	6.896	6.896	6.896	6.896	6.891	6.896	6.896
Naphthalene-d8	8.826	8.832	8.831	8.826	8.826	8.826	8.826	8.826
Acenaphthene-d10	11.606	11.612	11.612	11.606	11.606	11.606	11.606	11.606
Phenanthrene-d10	13.489	13.500	13.494	13.494	13.488	13.489	13.489	13.488
Pyrene-d10	15.465	15.476	15.470	15.465	15.464	15.465	15.464	15.464
Perylene-d12	19.953	19.958	19.952	19.953	19.947	19.947	19.947	19.947

Comments: _____

Report generated on 10/29/2013 at 04:33

OCT 29 2013

Joe Gambler
Senior Chemist

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270C MINI File ID: hj1371.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT28B026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.98	4	20	YES
N-Nitrosodimethylamine	12.50	13.24	6	20	YES
Pyridine	12.50	12.44	0	20	YES
2-Picoline	12.50	12.49	0	20	YES
N-Nitrosomethylethylamine	12.50	12.95	4	20	YES
Methyl methanesulfonate	12.50	13.90	11	20	YES
N-Nitrosodiethylamine	12.50	13.31	6	20	YES
Ethyl methanesulfonate	12.50	13.48	8	20	YES
Phenol	12.50	12.90	3	20	YES
Aniline	12.50	13.23	6	20	YES
bis(2-Chloroethyl)ether	12.50	12.83	3	20	YES
2-Chlorophenol	12.50	13.32	7	20	YES
1,3-Dichlorobenzene	12.50	12.95	4	20	YES
1,4-Dichlorobenzene	12.50	13.02	4	20	YES
Benzyl alcohol	12.50	13.45	8	20	YES
1,2-Dichlorobenzene	12.50	12.85	3	20	YES
2-Methylphenol	12.50	13.01	4	20	YES
2,2'-oxybis(1-Chloropropane	12.50	12.51	0	20	YES
bis(2-Chloroisopropyl)ether	12.50	12.51	0	20	YES
N-Nitrosopyrrolidine	12.50	14.04	12	20	YES
Acetophenone	12.50	12.78	2	20	YES
4-Methylphenol	12.50	12.80	2	20	YES
N-Nitroso-di-n-propylamine	12.50	13.18	5	20	YES
N-Nitrosomorpholine	12.50	13.26	6	20	YES
o-Toluidine	12.50	12.72	2	20	YES
Hexachloroethane	12.50	12.84	3	20	YES
Nitrobenzene	12.50	12.86	3	20	YES
N-Nitrosopiperidine	12.50	13.49	8	20	YES
Isophorone	12.50	13.66	9	20	YES
2-Nitrophenol	12.50	13.82	11	20	YES
2,4-Dimethylphenol	12.50	13.22	6	20	YES
O,O,O-triethylphosphorothio	12.50	12.60	1	20	YES
Benzoic acid	25.00	16.75	-33	20	NO
bis(2-Chloroethoxy)methane	12.50	13.14	5	20	YES
2,4-Dichlorophenol	12.50	13.42	7	20	YES
1,2,4-Trichlorobenzene	12.50	13.08	5	20	YES
Naphthalene	12.50	12.78	2	20	YES

NC = Could not calculate

Comments:

All components > 20% are Non-CCC, OK To REPORT

OCT 29 2013

Joe Gambler
Senior Chemist

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270C MINI File ID: hj1371.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT28B026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
4-Chloroaniline	12.50	13.37	7	20	YES
2,6-Dichlorophenol	12.50	13.35	7	20	YES
Hexachloropropene	12.50	13.86	11	20	YES
Hexachlorobutadiene	12.50	12.67	1	20	YES
N-Nitrosodi-n-butylamine	12.50	11.88	-5	20	YES
4-Chloro-3-methylphenol	12.50	13.79	10	20	YES
Safrole	12.50	13.67	9	20	YES
2-Methylnaphthalene	12.50	12.89	3	20	YES
1-Methylnaphthalene	12.50	13.35	7	20	YES
Hexachlorocyclopentadiene	25.00	32.17	29	20	NO
1,2,4,5-Tetrachlorobenzene	12.50	12.25	-2	20	YES
cis-Isosafrole	12.50	13.05	4	20	YES
2,4,6-Trichlorophenol	12.50	13.37	7	20	YES
2,4,5-Trichlorophenol	12.50	13.49	8	20	YES
trans-Isosafrole	11.13	13.54	22	20	NO
Isosafrole	12.50	13.54	8	20	YES
1,1'-Biphenyl	12.50	12.55	0	20	YES
2-Chloronaphthalene	12.50	12.75	2	20	YES
Diphenyl ether	12.50	12.67	1	20	YES
2-Nitroaniline	12.50	13.87	11	20	YES
1,4-Naphthoquinone	15.63	16.41	5	20	YES
1,4-Dinitrobenzene	12.50	14.09	13	20	YES
Dimethylphthalate	12.50	12.14	-3	20	YES
1,3-Dinitrobenzene	12.50	13.02	4	20	YES
2,6-Dinitrotoluene	12.50	14.08	13	20	YES
Acenaphthylene	12.50	14.35	15	20	YES
3-Nitroaniline	12.50	13.98	12	20	YES
Acenaphthene	12.50	12.74	2	20	YES
2,4-Dinitrophenol	25.00	24.99	0	20	YES
4-Nitrophenol	12.50	13.58	9	20	YES
Pentachlorobenzene	12.50	12.58	1	20	YES
Dibenzofuran	12.50	12.95	4	20	YES
2,4-Dinitrotoluene	12.50	13.71	10	20	YES
1-Naphthylamine	25.00	27.24	9	20	YES
2,3,4,6-Tetrachlorophenol	12.50	14.49	16	20	YES
2-Naphthylamine	25.00	25.25	1	20	YES
Diethylphthalate	12.50	12.54	0	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270C MINI File ID: hj1371.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT28B026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluorene	12.50	13.20	6	20	YES
Thionazin	12.50	12.10	-3	20	YES
4-Chlorophenyl-phenylether	12.50	12.64	1	20	YES
5-Nitro-o-toluidine	12.50	13.64	9	20	YES
4-Nitroaniline	12.50	13.34	7	20	YES
4,6-Dinitro-2-methylphenol	12.50	12.57	1	20	YES
N-Nitrosodiphenylamine	12.50	13.68	9	20	YES
1,2-Diphenylhydrazine	12.50	13.69	10	20	YES
Tetraethyldithiopyrophospha	12.50	12.66	1	20	YES
1,3,5-Trinitrobenzene	12.50	12.60	1	20	YES
Diallate (peak 1)	9.38	9.44	1	20	YES
Phorate	12.50	13.16	5	20	YES
Phenacetin	12.50	14.21	14	20	YES
4-Bromophenyl-phenylether	12.50	13.55	8	20	YES
Diallate (peak 2)	3.13	3.14	0	20	YES
Hexachlorobenzene	12.50	13.09	5	20	YES
Dimethoate	12.50	13.30	6	20	YES
Pentachlorophenol	12.50	12.61	1	20	YES
Pentachloronitrobenzene	12.50	14.10	13	20	YES
4-Aminobiphenyl	12.50	14.73	18	20	YES
Pronamide	12.50	12.94	4	20	YES
Dinoseb	12.50	12.64	1	20	YES
Phenanthrene	12.50	12.70	2	20	YES
Anthracene	12.50	13.39	7	20	YES
Carbazole	12.50	13.49	8	20	YES
Methyl parathion	12.50	14.37	15	20	YES
Di-n-butylphthalate	12.50	13.27	6	20	YES
Parathion	12.50	13.93	11	20	YES
4-Nitroquinoline-1-oxide	150.00	153.34	2	20	YES
Isodrin	12.50	12.66	1	20	YES
Fluoranthene	12.50	13.73	10	20	YES
Benzidine	62.50	62.22	0	20	YES
Pyrene	12.50	12.51	0	20	YES
p-Dimethylaminoazobenzene	12.50	13.32	7	20	YES
Chlorobenzilate	12.50	12.38	-1	20	YES
3,3'-Dimethylbenzidine	25.00	26.32	5	20	YES
Butylbenzylphthalate	12.50	13.14	5	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270C MINI File ID: hj1371.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT28B026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Acetylaminofluorene	12.50	12.35	-1	20	YES
Benzo(a)anthracene	12.50	13.59	9	20	YES
3,3'-Dichlorobenzidine	12.50	12.75	2	20	YES
4,4'-Methylenebis(2-Chloroa	12.50	12.63	1	20	YES
Chrysene	12.50	12.93	3	20	YES
bis(2-Ethylhexyl)phthalate	12.50	13.20	6	20	YES
6-Methylchrysene	12.50	12.37	-1	20	YES
Di-n-octylphthalate	12.50	14.13	13	20	YES
Benzo(b)fluoranthene	12.50	13.51	8	20	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.28	6	20	YES
Benzo(k)fluoranthene	12.50	13.02	4	20	YES
Benzo(a)pyrene	12.50	13.79	10	20	YES
3-Methylcholanthrene	12.50	13.62	9	20	YES
Dibenz(a,h)acridine	12.50	12.98	4	20	YES
Dibenz(a,j)acridine	12.50	12.51	0	20	YES
Indeno(1,2,3-cd)pyrene	12.50	13.57	9	20	YES
Dibenz(a,h)anthracene	12.50	13.58	9	20	YES
Benzo(g,h,i)perylene	12.50	13.31	7	20	YES
Diallate TRANS/CIS	12.50	12.59	1	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP18831

Method: SW-846 8270C MINI File ID: hj1372.d

ICV SAMPLE ID: BASICV2463 BATCH: 13OCT28B026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.67	9	20	YES
Caprolactam	12.50	13.19	6	20	YES
Atrazine	12.50	13.80	10	20	YES

NC = Could not calculate

Comments: _____

OCT 2 9 2013

Joe Gambler
Senior Chemist

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.654	0.612	28.080	30.0	-6
	N-Nitrosodimethylamine	1.211	1.085	26.880	30.0	-10
	Pyridine	1.878	1.761	28.130	30.0	-6
	2-Picoline	1.916	1.841	28.820	30.0	-4
	N-Nitrosomethylethylamine	0.916	0.836	27.380	30.0	-9
	Methyl methanesulfonate	0.921	0.881	28.710	30.0	-4
	N-Nitrosodiethylamine	0.910	0.855	28.200	30.0	-6
	Ethyl methanesulfonate	0.829	0.821	29.730	30.0	-1
	Benzaldehyde	1.231	0.783	24.720	30.0	-18
	Aniline	3.046	2.892	28.480	30.0	-5
*	Phenol	2.569	2.405	28.090	30.0	-6*
	bis(2-Chloroethyl)ether	1.824	1.720	28.290	30.0	-6
	2-Chlorophenol	1.602	1.538	28.790	30.0	-4
	1,3-Dichlorobenzene	1.617	1.586	29.430	30.0	-2
*	1,4-Dichlorobenzene	1.650	1.605	29.170	30.0	-3*
	Benzyl alcohol	1.253	1.230	29.450	30.0	-2
	1,2-Dichlorobenzene	1.549	1.534	29.720	30.0	-1
	2-Methylphenol	1.705	1.641	28.870	30.0	-4
	2,2'-oxybis(1-Chloropropane)	2.244	1.987	26.560	30.0	-11
	bis(2-Chloroisopropyl)ether	2.250	1.987	26.490	30.0	-12
	N-Nitrosopyrrolidine	1.020	1.008	29.620	30.0	-1
	Acetophenone	2.542	2.460	29.030	30.0	-3
#	N-Nitroso-di-n-propylamine	1.627	1.458	26.890	30.0	-10#
	N-Nitrosomorpholine	1.159	1.093	28.270	30.0	-6
	4-Methylphenol	2.018	1.919	28.530	30.0	-5
	o-Toluidine	2.912	2.863	29.500	30.0	-2
	Hexachloroethane	0.628	0.602	28.760	30.0	-4
	Nitrobenzene	0.457	0.373	24.510	30.0	-18
	N-Nitrosopiperidine	0.203	0.199	29.370	30.0	-2
	Isophorone	0.830	0.771	27.870	30.0	-7
*	2-Nitrophenol	0.159	0.112	21.090	30.0	-30*
	2,4-Dimethylphenol	0.408	0.383	28.160	30.0	-6
	O,O,O-triethylphosphorothioate	0.170	0.171	30.040	30.0	0
	bis(2-Chloroethoxy)methane	0.504	0.448	26.680	30.0	-11
	Benzoic acid	0.265	0.183	27.710	40.0	-31
*	2,4-Dichlorophenol	0.278	0.277	29.940	30.0	0*

JM6/546
PAH : HCB ONLY
11-13-13

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,2,4-Trichlorobenzene	0.292	0.290	29.710	30.0	-1
	Naphthalene	1.061	1.026	29.020	30.0	-3
	4-Chloroaniline	0.462	0.456	29.610	30.0	-1
	2,6-Dichlorophenol	0.262	0.267	30.580	30.0	2
	Hexachloropropene	0.166	0.163	29.610	30.0	-1
*	Hexachlorobutadiene	0.147	0.146	29.900	30.0	0*
	Caprolactam	0.154	0.155	30.300	30.0	1
	N-Nitrosodi-n-butylamine	0.400	0.389	29.230	30.0	-3
*	4-Chloro-3-methylphenol	0.355	0.340	28.730	30.0	-4*
	Safrole	0.281	0.278	29.630	30.0	-1
	2-Methylnaphthalene	0.753	0.739	29.440	30.0	-2
	1-Methylnaphthalene	0.689	0.680	29.600	30.0	-1
#	Hexachlorocyclopentadiene	0.206	0.197	28.670	30.0	-4#
	1,2,4,5-Tetrachlorobenzene	0.477	0.464	29.170	30.0	-3
	cis-Isosafrole	0.766	0.740	3.190	3.3	-3
*	2,4,6-Trichlorophenol	0.311	0.311	29.930	30.0	0*
	2,4,5-Trichlorophenol	0.339	0.332	29.380	30.0	-2
	trans-Isosafrole	0.542	0.527	25.930	26.7	-3
	Isosafrole	0.483	0.469	29.140	30.0	-3
	1,1'-Biphenyl	1.550	1.447	28.020	30.0	-7
	2-Chloronaphthalene	1.129	0.997	26.510	30.0	-12
	Diphenyl ether	0.772	0.757	29.410	30.0	-2
	2-Nitroaniline	0.368	0.280	22.790	30.0	-24
	1,4-Naphthoquinone	0.475	0.470	29.660	30.0	-1
	1,4-Dinitrobenzene	0.143	0.090	19.240	30.0	-36
	Dimethylphthalate	1.343	1.340	29.940	30.0	0
	1,3-Dinitrobenzene	0.194	0.128	19.800	30.0	-34
	2,6-Dinitrotoluene	0.280	0.226	24.190	30.0	-19
	Acenaphthylene	1.762	1.701	28.960	30.0	-3
	3-Nitroaniline	0.342	0.295	25.920	30.0	-14
*	Acenaphthene	1.219	1.168	28.740	30.0	-4*
#	2,4-Dinitrophenol	0.091	0.059	28.750	40.0	-28#
	Pentachlorobenzene	0.412	0.424	30.880	30.0	3
#	4-Nitrophenol	0.212	0.186	26.430	30.0	-12#
	Dibenzofuran	1.671	1.614	28.990	30.0	-3
	2,4-Dinitrotoluene	0.361	0.265	22.000	30.0	-27

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.373	1.369	29.910	30.0	0
	2,3,4,6-Tetrachlorophenol	0.239	0.242	30.380	30.0	1
	2-Naphthylamine	1.405	1.392	29.740	30.0	-1
	Diethylphthalate	1.387	1.372	29.660	30.0	-1
	Thionazin	0.306	0.278	27.240	30.0	-9
	Fluorene	1.437	1.374	28.670	30.0	-4
	4-Chlorophenyl-phenylether	0.639	0.638	29.950	30.0	0
	5-Nitro-o-toluidine	0.380	0.329	26.020	30.0	-13
	4-Nitroaniline	0.384	0.367	28.670	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.051	21.520	30.0	-28
*	N-Nitrosodiphenylamine (1)	0.670	0.645	28.880	30.0	-4*
	1,2-Diphenylhydrazine	0.960	0.838	26.180	30.0	-13
	Tetraethyldithiopyrophosphate	0.137	0.120	26.280	30.0	-12
	1,3,5-Trinitrobenzene	0.051	0.028	18.560	30.0	-38
	Diallate (peak 1)	0.491	0.430	19.690	22.5	-12
	Phorate	0.592	0.496	25.160	30.0	-16
	Phenacetin	0.463	0.404	26.160	30.0	-13
	4-Bromophenyl-phenylether	0.185	0.185	30.130	30.0	0
	Diallate (peak 2)	0.213	0.187	6.570	7.5	-12
	Hexachlorobenzene	0.182	0.183	30.180	30.0	1
	Dimethoate	0.362	0.317	26.320	30.0	-12
	Diallate TRANS/CIS	0.422	0.369	26.260	30.0	-12
	Atrazine	0.215	0.191	26.700	30.0	-11
*	Pentachlorophenol	0.101	0.099	29.330	30.0	-2*
	Pentachloronitrobenzene	0.079	0.070	26.690	30.0	-11
	4-Aminobiphenyl	0.725	0.692	28.630	30.0	-5
	Pronamide	0.349	0.332	28.470	30.0	-5
	Dinoseb	0.104	0.063	19.880	30.0	-34
	Phenanthrene	1.163	1.107	28.570	30.0	-5
	Anthracene	1.197	1.143	28.640	30.0	-5
	Carbazole	1.168	1.108	28.470	30.0	-5
	Methyl parathion	0.217	0.145	19.670	30.0	-34
	Di-n-butylphthalate	1.378	1.278	27.810	30.0	-7
	Parathion	0.160	0.109	20.550	30.0	-32
	4-Nitroquinoline-1-oxide	0.079	0.047	19.500	30.0	-35
	Isodrin	0.131	0.121	27.720	30.0	-8

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
* Fluoranthene	1.300	1.244	28.690	30.0	-4*
Benzidine	0.819	0.774	85.060	90.0	-5
Pyrene	1.111	1.060	28.620	30.0	-5
p-Dimethylaminoazobenzene	0.216	0.212	29.450	30.0	-2
Chlorobenzilate	0.337	0.312	27.770	30.0	-7
3,3'-Dimethylbenzidine	0.684	0.648	28.390	30.0	-5
Butylbenzylphthalate	0.530	0.493	27.900	30.0	-7
2-Acetylaminofluorene	0.480	0.394	24.650	30.0	-18
3,3'-Dichlorobenzidine	0.386	0.372	28.900	30.0	-4
4,4'-Methylenebis(2-Chloroanil	0.189	0.179	28.400	30.0	-5
Benzo(a)anthracene	1.024	0.981	28.720	30.0	-4
Chrysene	0.988	0.924	28.060	30.0	-6
bis(2-Ethylhexyl)phthalate	0.735	0.674	27.510	30.0	-8
6-Methylchrysene	0.729	0.696	28.650	30.0	-4
Dibenz(a,h)acridine	0.866	0.841	29.120	30.0	-3
* Di-n-octylphthalate	1.510	1.379	27.410	30.0	-9*
Dibenz(a,j)acridine	0.996	0.986	29.710	30.0	-1
7,12-Dimethylbenz[a]anthracene	0.567	0.575	30.420	30.0	1
Quinoline	0.731	0.736	30.190	30.0	1
Benzo(b)fluoranthene	1.221	1.263	31.030	30.0	3
Benzo(k)fluoranthene	1.246	1.169	28.140	30.0	-6
* Benzo(a)pyrene	1.192	1.139	28.670	30.0	-4*
3-Methylcholanthrene	0.597	0.578	29.010	30.0	-3
NDPA as diphenylamine	0.672	0.645	28.810	30.0	-4
Indeno(1,2,3-cd)pyrene	1.268	1.244	29.440	30.0	-2
Dibenz(a,h)anthracene	1.061	1.053	29.770	30.0	-1
Benzo(g,h,i)perylene	1.080	1.047	29.080	30.0	-3
Indene	3.460	3.409	29.560	30.0	-1
1-Chloronaphthalene	1.111	1.115	30.120	30.0	0
2-Fluorophenol	1.496	1.441	57.780	60.0	-4
Phenol-d5	2.202	2.126	57.940	60.0	-3
Phenol-d6	2.202	2.126	57.940	60.0	-3
Nitrobenzene-d5	0.431	0.339	47.240	60.0	-21
2-Fluorobiphenyl	1.258	1.208	57.640	60.0	-4
2,4,6-Tribromophenol	0.121	0.129	64.120	60.0	7

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.715	0.697	58.490	60.0	-3
			Average %Drift:		8

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov13a.b/ck0461.d

Area Summary

File ID:

Internal Standard Name	ck0461.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	119096	131335	65668	262670	Yes
Naphthalene-d8	567152	603190	301595	1206380	Yes
Acenaphthene-d10	363022	377352	188676	754704	Yes
Phenanthrene-d10	690322	694958	347479	1389916	Yes
Pyrene-d10	847467	855313	427656	1710626	Yes
Perylene-d12	700104	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0461.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.201	5.226	Yes
Naphthalene-d8	6.437	6.461	Yes
Acenaphthene-d10	8.146	8.177	Yes
Phenanthrene-d10	9.591	9.622	Yes
Pyrene-d10	10.974	10.999	Yes
Perylene-d12	13.575	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-13-13

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/14/13 Time: 21:01

Lab File ID: dk0512.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
N-Nitrosodimethylamine	1.111	1.218	13.700	12.5	10
Pyridine	1.895	1.959	12.920	12.5	3
2-Picoline	1.996	1.964	12.300	12.5	-2
N-Nitrosomethylethylamine	0.858	0.889	12.950	12.5	4
Methyl methanesulfonate	0.981	1.055	13.440	12.5	8
N-Nitrosodiethylamine	0.824	0.814	12.340	12.5	-1
Ethyl methanesulfonate	0.795	0.827	13.010	12.5	4
Benzaldehyde	1.426	1.513	13.260	12.5	6
Aniline	2.907	2.821	12.130	12.5	-3
Phenol	2.360	2.428	12.860	12.5	3
bis(2-Chloroethyl)ether	1.862	1.856	12.460	12.5	0
2-Chlorophenol	1.460	1.469	12.570	12.5	1
1,3-Dichlorobenzene	1.570	1.530	12.180	12.5	-3
1,4-Dichlorobenzene	1.589	1.547	12.170	12.5	-3
Benzyl alcohol	1.033	1.064	12.880	12.5	3
1,2-Dichlorobenzene	1.486	1.443	12.140	12.5	-3
Indene	2.510	2.454	14.660	15.0	-2
2-Methylphenol	1.465	1.544	13.170	12.5	5
2,2'-oxybis(1-Chloropropane)	2.312	2.920	15.790	12.5	26
bis(2-Chloroisopropyl)ether	2.312	2.920	15.790	12.5	26
N-Nitrosopyrrolidine	0.838	0.848	12.660	12.5	1
Acetophenone	2.291	2.364	12.900	12.5	3
N-Nitroso-di-n-propylamine	1.319	1.388	13.160	12.5	5
N-Nitrosomorpholine	1.040	1.305	15.690	12.5	26
4-Methylphenol	1.637	1.658	12.660	12.5	1
o-Toluidine	2.526	2.537	12.550	12.5	0
Hexachloroethane	0.671	0.683	12.720	12.5	2
Nitrobenzene	0.488	0.545	13.950	12.5	12
N-Nitrosopiperidine	0.200	0.201	12.550	12.5	0
Isophorone	0.832	0.917	13.780	12.5	10
2-Nitrophenol	0.168	0.190	14.180	12.5	13
2,4-Dimethylphenol	0.407	0.439	13.480	12.5	8
O,O,O-triethylphosphorothioate	0.181	0.176	12.160	12.5	-3
bis(2-Chloroethoxy)methane	0.543	0.552	12.710	12.5	2
Benzoic acid	0.270	0.164	8.980	12.5	-28
2,4-Dichlorophenol	0.287	0.298	12.950	12.5	4

11/14/13

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/14/13 Time: 21:01

Lab File ID: dk0512.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,4-Trichlorobenzene	0.321	0.332	12.930	12.5	3
Naphthalene	1.066	1.033	12.110	12.5	-3
4-Chloroaniline	0.442	0.443	12.550	12.5	0
2,6-Dichlorophenol	0.276	0.281	12.730	12.5	2
Hexachloropropene	0.203	0.216	13.320	12.5	7
Hexachlorobutadiene	0.187	0.185	12.380	12.5	-1
Quinoline	0.706	0.693	12.260	12.5	-2
Caprolactam	0.128	0.135	13.140	12.5	5
N-Nitrosodi-n-butylamine	0.330	0.344	13.020	12.5	4
4-Chloro-3-methylphenol	0.345	0.379	13.730	12.5	10
Safrole	0.271	0.275	12.690	12.5	1
2-Methylnaphthalene	0.710	0.704	12.390	12.5	-1
1-Methylnaphthalene	0.645	0.642	12.450	12.5	0
Hexachlorocyclopentadiene	0.273	0.247	11.310	12.5	-10
1,2,4,5-Tetrachlorobenzene	0.580	0.530	11.440	12.5	-8
cis-Isosafrole	0.085	0.084	12.340	12.5	-1
2,4,6-Trichlorophenol	0.366	0.376	12.850	12.5	3
2,4,5-Trichlorophenol	0.378	0.392	12.970	12.5	4
trans-Isosafrole	0.478	0.477	12.470	12.5	0
Isosafrole	0.478	0.477	12.470	12.5	0
1,1'-Biphenyl	1.452	1.359	11.700	12.5	-6
2-Chloronaphthalene	1.114	1.076	12.070	12.5	-3
1-Chloronaphthalene	1.098	1.087	12.370	12.5	-1
Diphenyl ether	0.803	0.775	12.060	12.5	-4
2-Nitroaniline	0.347	0.378	13.610	12.5	9
1,4-Naphthoquinone	0.479	0.473	12.340	12.5	-1
1,4-Dinitrobenzene	0.176	0.204	13.260	12.5	6
Dimethylphthalate	1.260	1.255	12.450	12.5	0
1,3-Dinitrobenzene	0.216	0.230	13.270	12.5	6
2,6-Dinitrotoluene	0.279	0.307	13.730	12.5	10
Acenaphthylene	1.691	1.658	12.260	12.5	-2
3-Nitroaniline	0.320	0.339	13.230	12.5	6
Acenaphthene	1.163	1.098	11.810	12.5	-6
2,4-Dinitrophenol	0.138	0.155	13.710	12.5	10
Pentachlorobenzene	0.464	0.436	11.740	12.5	-6
4-Nitrophenol	0.204	0.242	14.800	12.5	18

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/14/13 Time: 21:01

Lab File ID: dk0512.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibenzofuran	1.654	1.510	11.410	12.5	-9
2,4-Dinitrotoluene	0.358	0.396	13.860	12.5	11
2,4_2,6-Dinitrotoluenes	0.633	0.703	27.590	12.5	121
1-Naphthylamine	1.202	1.162	12.090	12.5	-3
2,3,4,6-Tetrachlorophenol	0.298	0.284	11.890	12.5	-5
2-Naphthylamine	1.234	1.176	11.910	12.5	-5
Diethylphthalate	1.241	1.189	11.980	12.5	-4
Thionazin	0.268	0.269	12.540	12.5	0
Fluorene	1.331	1.254	11.780	12.5	-6
4-Chlorophenyl-phenylether	0.660	0.595	11.260	12.5	-10
5-Nitro-o-toluidine	0.358	0.351	12.260	12.5	-2
4-Nitroaniline	0.330	0.328	12.430	12.5	-1
4,6-Dinitro-2-methylphenol	0.120	0.138	13.470	12.5	8
N-Nitrosodiphenylamine (1)	0.622	0.601	12.080	12.5	-3
1,2-Diphenylhydrazine	0.985	1.100	13.950	12.5	12
Tetraethyldithiopyrophosphate	0.142	0.161	14.170	12.5	13
1,3,5-Trinitrobenzene	0.082	0.105	13.550	12.5	8
Diallate (peak 1)	0.491	0.530	10.110	9.4	8
Phorate	0.582	0.665	14.270	12.5	14
Phenacetin	0.414	0.498	15.020	12.5	20
4-Bromophenyl-phenylether	0.197	0.198	12.530	12.5	0
Diallate (peak 2)	0.209	0.234	3.480	3.1	12
Hexachlorobenzene	0.195	0.192	12.300	12.5	-2
Dimethoate	0.380	0.438	14.400	12.5	15
Atrazine	0.203	0.217	13.360	12.5	7
Pentachlorophenol	0.135	0.120	10.240	12.5	-18
Pentachloronitrobenzene	0.091	0.095	13.120	12.5	5
4-Aminobiphenyl	0.779	0.762	12.240	12.5	-2
Pronamide	0.329	0.362	13.740	12.5	10
Phenanthrene	1.115	1.043	11.690	12.5	-6
Dinoseb	0.161	0.180	11.900	12.5	-5
Anthracene	1.112	1.091	12.260	12.5	-2
Carbazole	1.076	1.058	12.290	12.5	-2
Methyl parathion	0.265	0.329	14.450	12.5	16
Di-n-butylphthalate	1.275	1.316	12.910	12.5	3
Parathion	0.172	0.208	14.330	12.5	15

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/14/13 Time: 21:01

Lab File ID: dk0512.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitroquinoline-1-oxide	0.088	0.100	11.370	12.5	-9
Isodrin	0.134	0.138	12.940	12.5	4
Fluoranthene	1.254	1.279	12.750	12.5	2
Benzidine	0.642	0.660	38.600	37.5	3
Pyrene	1.061	1.011	11.900	12.5	-5
p-Dimethylaminoazobenzene	0.190	0.206	12.070	12.5	-3
Chlorobenzilate	0.299	0.324	13.550	12.5	8
3,3'-Dimethylbenzidine	0.630	0.678	13.440	12.5	8
Butylbenzylphthalate	0.452	0.465	12.860	12.5	3
2-Acetylaminofluorene	0.356	0.419	13.070	12.5	5
Benzo(a)anthracene	0.901	0.905	12.550	12.5	0
3,3'-Dichlorobenzidine	0.325	0.336	12.920	12.5	3
4,4'-Methylenebis(2-Chloroanil	0.172	0.174	12.690	12.5	2
Chrysene	0.886	0.879	12.410	12.5	-1
bis(2-Ethylhexyl)phthalate	0.594	0.621	13.060	12.5	5
6-Methylchrysene	0.623	0.650	13.050	12.5	4
Dibenz(a,h)acridine	0.715	0.756	13.210	12.5	6
Di-n-octylphthalate	1.370	1.468	12.490	12.5	0
Dibenz(a,j)acridine	0.767	0.914	14.890	12.5	19
7,12-Dimethylbenz[a]anthracene	0.523	0.536	12.810	12.5	2
Benzo(b)fluoranthene	1.178	1.190	12.630	12.5	1
Benzo(k)fluoranthene	1.188	1.248	13.140	12.5	5
Benzo(a)pyrene	1.081	1.151	13.310	12.5	7
3-Methylcholanthrene	0.515	0.557	13.540	12.5	8
NDPA as diphenylamine	0.622	0.601	12.080	12.5	-3
Indeno(1,2,3-cd)pyrene	0.948	1.138	15.010	12.5	20
Dibenz(a,h)anthracene	0.803	0.950	14.780	12.5	18
Benzo(g,h,i)perylene	0.799	0.960	15.010	12.5	20
Diallate TRANS/CIS	0.421	0.456	13.540	12.5	8
2-Fluorophenol	1.485	1.489	25.070	25.0	0
Phenol-d5	2.039	2.091	25.640	25.0	3
Phenol-d6	2.039	2.091	25.640	25.0	3
Nitrobenzene-d5	0.460	0.498	27.070	25.0	8
2-Fluorobiphenyl	1.249	1.187	23.770	25.0	-5
2,4,6-Tribromophenol	0.131	0.135	25.680	25.0	3

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/14/13 Time: 21:01

Lab File ID: dk0512.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.623	0.622	24.950	25.0	0
			Average %Drift:		7

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d **
/chem/HP19760.i/13oct29.b/dj1182.d
/chem/HP19760.i/13oct29.b/dj1183.d
/chem/HP19760.i/13oct29.b/dj1184.d
/chem/HP19760.i/13oct29.b/dj1185.d
/chem/HP19760.i/13oct29.b/dj1186.d
/chem/HP19760.i/13oct29.b/dj1187.d
/chem/HP19760.i/13oct29.b/dj1188.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/13nov14b.b/dk0512.d

Area Summary

File ID:

Internal Standard Name	dk0512.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	96017	151909	75954	303818	Yes
Naphthalene-d8	372726	608104	304052	1216208	Yes
Acenaphthene-d10	219681	340173	170086	680346	Yes
Phenanthrene-d10	359468	574655	287328	1149310	Yes
Pyrene-d10	459485	743541	371770	1487082	Yes
Perylene-d12	328252	528760	264380	1057520	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dk0512.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.854	6.029	Yes
Naphthalene-d8	7.818	7.987	Yes
Acenaphthene-d10	10.622	10.797	Yes
Phenanthrene-d10	12.534	12.691	Yes
Pyrene-d10	14.457	14.649	Yes
Perylene-d12	18.899	19.120	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11/14/13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 12:09

Lab File ID: gk0511.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.702	0.758	32.390	30.0	8
	N-Nitrosodimethylamine	1.231	1.181	28.790	30.0	-4
	Pyridine	1.995	1.974	29.680	30.0	-1
	2-Picoline	2.051	2.180	31.880	30.0	6
	N-Nitrosomethylethylamine	1.053	1.037	29.560	30.0	-1
	Methyl methanesulfonate	0.995	0.928	27.970	30.0	-7
	N-Nitrosodiethylamine	0.951	1.006	31.730	30.0	6
	Ethyl methanesulfonate	0.959	0.995	31.120	30.0	4
	Aniline	3.148	3.420	32.590	30.0	9
*	Phenol	2.835	3.063	32.410	30.0	8*
	bis(2-Chloroethyl)ether	2.023	2.090	30.990	30.0	3
	2-Chlorophenol	1.597	1.604	30.130	30.0	0
	1,3-Dichlorobenzene	1.599	1.551	29.100	30.0	-3
*	1,4-Dichlorobenzene	1.618	1.597	29.610	30.0	-1*
	Benzyl alcohol	1.317	1.430	32.570	30.0	9
	1,2-Dichlorobenzene	1.589	1.511	28.520	30.0	-5
	2-Methylphenol	1.796	1.908	31.870	30.0	6
	2,2'-oxybis(1-Chloropropane)	2.713	2.356	26.050	30.0	-13
	bis(2-Chloroisopropyl)ether	2.713	2.356	26.050	30.0	-13
	N-Nitrosopyrrolidine	1.148	1.206	31.510	30.0	5
	Acetophenone	2.838	2.838	29.990	30.0	0
#	N-Nitroso-di-n-propylamine	1.692	1.509	26.760	30.0	-11#
	N-Nitrosomorpholine	1.302	1.141	26.300	30.0	-12
	4-Methylphenol	2.140	2.261	31.690	30.0	6
	o-Toluidine	3.101	3.278	31.710	30.0	6
	Hexachloroethane	0.632	0.638	30.280	30.0	1
	Nitrobenzene	0.471	0.445	28.330	30.0	-6
	N-Nitrosopiperidine	0.209	0.223	31.940	30.0	6
	Isophorone	0.859	0.861	30.060	30.0	0
*	2-Nitrophenol	0.183	0.197	32.370	30.0	8*
	2,4-Dimethylphenol	0.405	0.441	32.680	30.0	9
	O,O,O-triethylphosphorothioate	0.167	0.172	30.970	30.0	3
	bis(2-Chloroethoxy)methane	0.524	0.553	31.660	30.0	6
	Benzoic acid	0.351	0.379	43.110	40.0	8
*	2,4-Dichlorophenol	0.276	0.290	31.520	30.0	5*
	1,2,4-Trichlorobenzene	0.288	0.294	30.590	30.0	2

Chad A. Moline
Senior Chemist

NOV 13 2013

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7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 12:09

Lab File ID: gk0511.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Naphthalene	1.054	1.027	29.240	30.0	-3
	4-Chloroaniline	0.444	0.475	32.150	30.0	7
	2,6-Dichlorophenol	0.275	0.284	31.080	30.0	4
	Hexachloropropene	0.153	0.157	30.780	30.0	3
*	Hexachlorobutadiene	0.136	0.139	30.690	30.0	2*
	Caprolactam	0.171	0.183	32.120	30.0	7
	N-Nitrosodi-n-butylamine	0.445	0.372	25.090	30.0	-16
*	4-Chloro-3-methylphenol	0.382	0.420	33.000	30.0	10*
	Safrole	0.276	0.283	30.790	30.0	3
	2-Methylnaphthalene	0.742	0.743	30.030	30.0	0
	1-Methylnaphthalene	0.671	0.671	30.010	30.0	0
#	Hexachlorocyclopentadiene	0.194	0.177	27.380	30.0	-9#
	1,2,4,5-Tetrachlorobenzene	0.470	0.475	30.300	30.0	1
	cis-Isosafrole	0.734	0.754	3.390	3.3	3
*	2,4,6-Trichlorophenol	0.348	0.372	32.080	30.0	7*
	2,4,5-Trichlorophenol	0.362	0.392	32.440	30.0	8
	trans-Isosafrole	0.528	0.510	25.820	26.7	-3
	Isosafrole	0.470	0.454	29.020	30.0	-3
	1,1'-Biphenyl	1.552	1.476	28.540	30.0	-5
	2-Chloronaphthalene	1.173	1.161	29.680	30.0	-1
	Diphenyl ether	0.773	0.765	29.710	30.0	-1
	2-Nitroaniline	0.413	0.444	32.260	30.0	8
	1,4-Naphthoquinone	0.484	0.475	29.450	30.0	-2
	1,4-Dinitrobenzene	0.208	0.219	31.570	30.0	5
	Dimethylphthalate	1.349	1.340	29.800	30.0	-1
	1,3-Dinitrobenzene	0.253	0.264	31.260	30.0	4
	2,6-Dinitrotoluene	0.302	0.329	32.690	30.0	9
	Acenaphthylene	1.686	1.712	30.460	30.0	2
	3-Nitroaniline	0.380	0.395	31.200	30.0	4
*	Acenaphthene	1.210	1.180	29.250	30.0	-2*
#	2,4-Dinitrophenol	0.182	0.211	44.690	40.0	12#
	Pentachlorobenzene	0.423	0.420	29.800	30.0	-1
#	4-Nitrophenol	0.228	0.238	31.250	30.0	4#
	Dibenzofuran	1.655	1.605	29.080	30.0	-3
	2,4-Dinitrotoluene	0.424	0.449	31.780	30.0	6
	2,4_2,6-Dinitrotoluenes	0.742	0.778	31.490	30.0	5

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 12:09

Lab File ID: gk0511.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.362	1.375	30.290	30.0	1
	2,3,4,6-Tetrachlorophenol	0.293	0.306	31.330	30.0	4
	2-Naphthylamine	1.361	1.409	31.050	30.0	3
	Diethylphthalate	1.375	1.375	30.000	30.0	0
	Thionazin	0.276	0.290	31.500	30.0	5
	Fluorene	1.382	1.398	30.360	30.0	1
	4-Chlorophenyl-phenylether	0.632	0.623	29.600	30.0	-1
	5-Nitro-o-toluidine	0.429	0.437	30.540	30.0	2
	4-Nitroaniline	0.409	0.416	30.480	30.0	2
	4,6-Dinitro-2-methylphenol	0.138	0.144	31.360	30.0	5
*	N-Nitrosodiphenylamine (1)	0.665	0.657	29.620	30.0	-1*
	NDPA as diphenylamine	0.668	0.657	29.490	30.0	-2
	1,2-Diphenylhydrazine	0.967	0.900	27.910	30.0	-7
	Tetraethyldithiopyrophosphate	0.136	0.138	30.430	30.0	1
	1,3,5-Trinitrobenzene	0.084	0.094	31.190	30.0	4
	Diallate (peak 1)	0.521	0.516	22.310	22.5	-1
	Phorate	0.803	0.797	29.800	30.0	-1
	Phenacetin	0.454	0.485	32.060	30.0	7
	4-Bromophenyl-phenylether	0.189	0.188	29.850	30.0	0
	Diallate (peak 2)	0.240	0.220	6.870	7.5	-8
	Hexachlorobenzene	0.178	0.177	29.820	30.0	-1
	Dimethoate	0.388	0.424	32.770	30.0	9
	Diallate TRANS/CIS	0.450	0.442	29.440	30.0	-2
	Atrazine	0.213	0.188	26.490	30.0	-12
*	Pentachlorophenol	0.122	0.127	31.240	30.0	4*
	Pentachloronitrobenzene	0.077	0.076	29.530	30.0	-2
	4-Aminobiphenyl	0.640	0.668	31.310	30.0	4
	Pronamide	0.309	0.330	32.050	30.0	7
	Dinoseb	0.181	0.200	31.190	30.0	4
	Phenanthrene	1.183	1.138	28.860	30.0	-4
	Anthracene	1.163	1.163	30.020	30.0	0
	Carbazole	1.089	1.100	30.310	30.0	1
	Methyl parathion	0.265	0.310	35.140	30.0	17
	Di-n-butylphthalate	1.306	1.328	30.510	30.0	2
	Parathion	0.172	0.195	34.010	30.0	13
	4-Nitroquinoline-1-oxide	0.090	0.088	29.810	30.0	-1

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 12:09

Lab File ID: gk0511.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Isodrin	0.118	0.117	29.890	30.0	0
*	Fluoranthene	1.211	1.243	30.780	30.0	3*
	Benzidine	0.761	0.788	93.200	90.0	4
	Pyrene	1.144	1.065	27.940	30.0	-7
	p-Dimethylaminoazobenzene	0.205	0.220	32.220	30.0	7
	Chlorobenzilate	0.323	0.330	30.700	30.0	2
	3,3'-Dimethylbenzidine	0.595	0.668	33.700	30.0	12
	Butylbenzylphthalate	0.515	0.516	30.090	30.0	0
	2-Acetylaminofluorene	0.428	0.510	35.760	30.0	19
	3,3'-Dichlorobenzidine	0.351	0.390	33.320	30.0	11
	4,4'-Methylenebis(2-Chloroanil	0.166	0.188	33.970	30.0	13
	Benzo(a)anthracene	0.961	0.993	31.010	30.0	3
	Chrysene	0.938	0.956	30.580	30.0	2
	bis(2-Ethylhexyl)phthalate	0.702	0.743	31.720	30.0	6
	6-Methylchrysene	0.667	0.712	32.010	30.0	7
	Dibenz(a,h)acridine	0.757	0.821	32.570	30.0	9
*	Di-n-octylphthalate	1.491	1.498	30.140	30.0	0*
	Dibenz(a,j)acridine	0.850	0.863	30.440	30.0	1
	7,12-Dimethylbenz[a]anthracene	0.547	0.548	30.100	30.0	0
	Quinoline	0.753	0.741	29.510	30.0	-2
	Benzo(b)fluoranthene	1.208	1.141	28.340	30.0	-6
	Benzo(k)fluoranthene	1.281	1.212	28.380	30.0	-5
*	Benzo(a)pyrene	1.077	1.114	31.030	30.0	3*
	3-Methylcholanthrene	0.516	0.553	32.210	30.0	7
	Indeno(1,2,3-cd)pyrene	1.093	1.155	31.700	30.0	6
	Dibenz(a,h)anthracene	0.907	0.951	31.460	30.0	5
	Benzo(g,h,i)perylene	0.921	0.954	31.080	30.0	4
	Indene	2.910	3.064	37.900	36.0	5
	1-Chloronaphthalene	1.075	0.988	27.560	30.0	-8
	2-Fluorophenol	1.585	1.711	64.780	60.0	8
	Phenol-d5	2.385	2.573	64.750	60.0	8
	Phenol-d6	2.385	2.573	64.750	60.0	8
	Nitrobenzene-d5	0.441	0.442	60.180	60.0	0
	2-Fluorobiphenyl	1.218	1.207	59.430	60.0	-1
	2,4,6-Tribromophenol	0.134	0.148	66.550	60.0	11

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 12:09

Lab File ID: gk0511.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.713	0.695	58.410	60.0	-3
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP11165.i/13nov09a.b/gk0321.d
/chem/HP11165.i/13nov09a.b/gk0322.d
/chem/HP11165.i/13nov09a.b/gk0323.d
/chem/HP11165.i/13nov09a.b/gk0324.d
/chem/HP11165.i/13nov09a.b/gk0325.d
/chem/HP11165.i/13nov09a.b/gk0326.d **
/chem/HP11165.i/13nov09a.b/gk0327.d
/chem/HP11165.i/13nov09a.b/gk0328.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP11165.i/13nov13a.b/gk0511.d

Area Summary

File ID:

Internal Standard Name	gk0511.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	77606	92425	46212	184850	Yes
Naphthalene-d8	374010	446720	223360	893440	Yes
Acenaphthene-d10	231911	286597	143298	573194	Yes
Phenanthrene-d10	436601	544867	272434	1089734	Yes
Pyrene-d10	517775	628070	314035	1256140	Yes
Perylene-d12	441467	495666	247833	991332	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Chad A. Moline
Senior Chemist

NOV 13 2013

Internal Standard Name	gk0511.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.599	5.749	Yes
Naphthalene-d8	6.835	6.990	Yes
Acenaphthene-d10	8.552	8.707	Yes
Phenanthrene-d10	10.007	10.162	Yes
Pyrene-d10	11.392	11.547	Yes
Perylene-d12	14.045	14.222	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/13/13 Time: 13:10

Lab File ID: gk0513.d Init. Calib. Date(s): 11/11/13 11/11/13

Init. Calib. Times(s): 12:11 14:26

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Benzaldehyde	1.554	1.463	28.240	30.0	-6
			Average %Drift:		6

Chad A. Moline
Senior Chemist

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SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:14

Lab File ID: gk0551.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.702	0.727	31.070	30.0	4
	N-Nitrosodimethylamine	1.231	1.122	27.340	30.0	-9
	Pyridine	1.995	1.780	26.770	30.0	-11
	2-Picoline	2.051	2.141	31.310	30.0	4
	N-Nitrosomethylethylamine	1.053	0.999	28.470	30.0	-5
	Methyl methanesulfonate	0.995	0.875	26.370	30.0	-12
	N-Nitrosodiethylamine	0.951	0.991	31.240	30.0	4
	Ethyl methanesulfonate	0.959	0.951	29.770	30.0	-1
	Aniline	3.148	3.246	30.940	30.0	3
*	Phenol	2.835	2.927	30.970	30.0	3*
	bis(2-Chloroethyl)ether	2.023	2.019	29.940	30.0	0
	2-Chlorophenol	1.597	1.552	29.150	30.0	-3
	1,3-Dichlorobenzene	1.599	1.577	29.600	30.0	-1
*	1,4-Dichlorobenzene	1.618	1.630	30.220	30.0	1*
	Benzyl alcohol	1.317	1.388	31.620	30.0	5
	1,2-Dichlorobenzene	1.589	1.526	28.810	30.0	-4
	2-Methylphenol	1.796	1.849	30.890	30.0	3
	2,2'-oxybis(1-Chloropropane)	2.713	2.199	24.310	30.0	-19
	bis(2-Chloroisopropyl)ether	2.713	2.201	24.330	30.0	-19
	N-Nitrosopyrrolidine	1.148	1.147	29.960	30.0	0
	Acetophenone	2.838	2.730	28.860	30.0	-4
#	N-Nitroso-di-n-propylamine	1.692	1.462	25.930	30.0	-14#
	N-Nitrosomorpholine	1.302	1.067	24.590	30.0	-18
	4-Methylphenol	2.140	2.173	30.470	30.0	2
	o-Toluidine	3.101	3.169	30.650	30.0	2
	Hexachloroethane	0.632	0.667	31.640	30.0	5
	Nitrobenzene	0.471	0.447	28.490	30.0	-5
	N-Nitrosopiperidine	0.209	0.224	32.110	30.0	7
	Isophorone	0.859	0.859	29.990	30.0	0
*	2-Nitrophenol	0.183	0.196	32.120	30.0	7*
	2,4-Dimethylphenol	0.405	0.436	32.330	30.0	8
	O,O,O-triethylphosphorothioate	0.167	0.174	31.400	30.0	5
	bis(2-Chloroethoxy)methane	0.524	0.563	32.210	30.0	7
	Benzoic acid	0.351	0.384	43.750	40.0	9
*	2,4-Dichlorophenol	0.276	0.294	31.910	30.0	6*
	1,2,4-Trichlorobenzene	0.288	0.300	31.210	30.0	4

BCm 11-14-13

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:14

Lab File ID: gk0551.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Naphthalene	1.054	1.025	29.190	30.0	-3
	4-Chloroaniline	0.444	0.480	32.490	30.0	8
	2,6-Dichlorophenol	0.275	0.284	31.020	30.0	3
	Hexachloropropene	0.153	0.163	31.850	30.0	6
*	Hexachlorobutadiene	0.136	0.144	31.840	30.0	6*
	Caprolactam	0.171	0.182	31.890	30.0	6
	N-Nitrosodi-n-butylamine	0.445	0.349	23.510	30.0	-22
*	4-Chloro-3-methylphenol	0.382	0.418	32.780	30.0	9*
	Safrole	0.276	0.278	30.240	30.0	1
	2-Methylnaphthalene	0.742	0.744	30.060	30.0	0
	1-Methylnaphthalene	0.671	0.689	30.790	30.0	3
#	Hexachlorocyclopentadiene	0.194	0.167	25.850	30.0	-14#
	1,2,4,5-Tetrachlorobenzene	0.470	0.460	29.300	30.0	-2
	cis-Isosafrole	0.734	0.755	3.390	3.3	3
*	2,4,6-Trichlorophenol	0.348	0.361	31.140	30.0	4*
	2,4,5-Trichlorophenol	0.362	0.381	31.540	30.0	5
	trans-Isosafrole	0.528	0.528	26.690	26.7	0
	Isosafrole	0.470	0.470	29.990	30.0	0
	1,1'-Biphenyl	1.552	1.476	28.530	30.0	-5
	2-Chloronaphthalene	1.173	1.120	28.640	30.0	-5
	Diphenyl ether	0.773	0.756	29.340	30.0	-2
	2-Nitroaniline	0.413	0.430	31.260	30.0	4
	1,4-Naphthoquinone	0.484	0.474	29.380	30.0	-2
	1,4-Dinitrobenzene	0.208	0.226	32.600	30.0	9
	Dimethylphthalate	1.349	1.333	29.640	30.0	-1
	1,3-Dinitrobenzene	0.253	0.255	30.270	30.0	1
	2,6-Dinitrotoluene	0.302	0.325	32.300	30.0	8
	Acenaphthylene	1.686	1.685	29.990	30.0	0
	3-Nitroaniline	0.380	0.395	31.210	30.0	4
*	Acenaphthene	1.210	1.159	28.750	30.0	-4*
#	2,4-Dinitrophenol	0.182	0.201	42.770	40.0	7#
	Pentachlorobenzene	0.423	0.430	30.540	30.0	2
#	4-Nitrophenol	0.228	0.231	30.300	30.0	1#
	Dibenzofuran	1.655	1.605	29.090	30.0	-3
	2,4-Dinitrotoluene	0.424	0.450	31.830	30.0	6
	2,4_2,6-Dinitrotoluenes	0.742	0.775	31.350	30.0	5

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:14

Lab File ID: gk0551.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.362	1.375	30.280	30.0	1
	2,3,4,6-Tetrachlorophenol	0.293	0.309	31.570	30.0	5
	2-Naphthylamine	1.361	1.396	30.780	30.0	3
	Diethylphthalate	1.375	1.376	30.030	30.0	0
	Thionazin	0.276	0.300	32.600	30.0	9
	Fluorene	1.382	1.379	29.930	30.0	0
	4-Chlorophenyl-phenylether	0.632	0.642	30.470	30.0	2
	5-Nitro-o-toluidine	0.429	0.437	30.530	30.0	2
	4-Nitroaniline	0.409	0.402	29.500	30.0	-2
	4,6-Dinitro-2-methylphenol	0.138	0.142	30.830	30.0	3
*	N-Nitrosodiphenylamine (1)	0.665	0.642	28.940	30.0	-4*
	NDPA as diphenylamine	0.668	0.642	28.820	30.0	-4
	1,2-Diphenylhydrazine	0.967	0.871	27.020	30.0	-10
	Tetraethyldithiopyrophosphate	0.136	0.133	29.470	30.0	-2
	1,3,5-Trinitrobenzene	0.084	0.091	30.470	30.0	2
	Diallate (peak 1)	0.521	0.517	22.370	22.5	-1
	Phorate	0.803	0.782	29.230	30.0	-3
	Phenacetin	0.454	0.484	31.980	30.0	7
	4-Bromophenyl-phenylether	0.189	0.185	29.420	30.0	-2
	Diallate (peak 2)	0.240	0.229	7.190	7.5	-4
	Hexachlorobenzene	0.178	0.175	29.550	30.0	-2
	Dimethoate	0.388	0.417	32.230	30.0	7
	Diallate TRANS/CIS	0.450	0.445	29.680	30.0	-1
	Atrazine	0.213	0.198	27.810	30.0	-7
*	Pentachlorophenol	0.122	0.115	28.180	30.0	-6*
	Pentachloronitrobenzene	0.077	0.077	30.220	30.0	1
	4-Aminobiphenyl	0.640	0.671	31.420	30.0	5
	Pronamide	0.309	0.327	31.700	30.0	6
	Dinoseb	0.181	0.195	30.530	30.0	2
	Phenanthrene	1.183	1.144	29.010	30.0	-3
	Anthracene	1.163	1.169	30.170	30.0	1
	Carbazole	1.089	1.091	30.060	30.0	0
	Methyl parathion	0.265	0.302	34.170	30.0	14
	Di-n-butylphthalate	1.306	1.333	30.640	30.0	2
	Parathion	0.172	0.193	33.700	30.0	12
	4-Nitroquinoline-1-oxide	0.090	0.083	28.240	30.0	-6

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:14

Lab File ID: gk0551.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Isodrin	0.118	0.119	30.270	30.0	1
* Fluoranthene	1.211	1.237	30.640	30.0	2*
Benzidine	0.761	0.782	92.560	90.0	3
Pyrene	1.144	1.116	29.260	30.0	-2
p-Dimethylaminoazobenzene	0.205	0.221	32.340	30.0	8
Chlorobenzilate	0.323	0.332	30.880	30.0	3
3,3'-Dimethylbenzidine	0.595	0.661	33.340	30.0	11
Butylbenzylphthalate	0.515	0.517	30.140	30.0	0
2-Acetylaminofluorene	0.428	0.500	35.040	30.0	17
3,3'-Dichlorobenzidine	0.351	0.381	32.520	30.0	8
4,4'-Methylenebis(2-Chloroanil	0.166	0.185	33.430	30.0	11
Benzo(a)anthracene	0.961	1.001	31.250	30.0	4
Chrysene	0.938	0.938	30.000	30.0	0
bis(2-Ethylhexyl)phthalate	0.702	0.734	31.350	30.0	5
6-Methylchrysene	0.667	0.690	31.010	30.0	3
Dibenz(a,h)acridine	0.757	0.814	32.280	30.0	8
* Di-n-octylphthalate	1.491	1.508	30.330	30.0	1*
Dibenz(a,j)acridine	0.850	0.853	30.090	30.0	0
7,12-Dimethylbenz[a]anthracene	0.547	0.554	30.420	30.0	1
Quinoline	0.753	0.747	29.760	30.0	-1
Benzo(b)fluoranthene	1.208	1.200	29.800	30.0	-1
Benzo(k)fluoranthene	1.281	1.214	28.430	30.0	-5
* Benzo(a)pyrene	1.077	1.086	30.240	30.0	1*
3-Methylcholanthrene	0.516	0.539	31.390	30.0	5
Indeno(1,2,3-cd)pyrene	1.093	1.129	31.000	30.0	3
Dibenz(a,h)anthracene	0.907	0.952	31.470	30.0	5
Benzo(g,h,i)perylene	0.921	0.934	30.410	30.0	1
Indene	2.910	2.950	36.490	36.0	1
1-Chloronaphthalene	1.075	0.983	27.420	30.0	-9
2-Fluorophenol	1.585	1.656	62.710	60.0	5
Phenol-d5	2.385	2.458	61.850	60.0	3
Phenol-d6	2.385	2.458	61.850	60.0	3
Nitrobenzene-d5	0.441	0.436	59.370	60.0	-1
2-Fluorobiphenyl	1.218	1.191	58.650	60.0	-2
2,4,6-Tribromophenol	0.134	0.151	67.750	60.0	13

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:14

Lab File ID: gk0551.d Init. Calib. Date(s): 11/09/13 11/09/13

Init. Calib. Times(s): 20:09 23:27

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.713	0.720	60.590	60.0	1
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time
Summary

Initial Calibration Standards:

/chem/HP11165.i/13nov09a.b/gk0321.d
/chem/HP11165.i/13nov09a.b/gk0322.d
/chem/HP11165.i/13nov09a.b/gk0323.d
/chem/HP11165.i/13nov09a.b/gk0324.d
/chem/HP11165.i/13nov09a.b/gk0325.d
/chem/HP11165.i/13nov09a.b/gk0326.d **
/chem/HP11165.i/13nov09a.b/gk0327.d
/chem/HP11165.i/13nov09a.b/gk0328.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP11165.i/13nov14.b/gk0551.d

Area Summary

File ID:

Internal Standard Name	gk0551.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	74036	92425	46212	184850	Yes
Naphthalene-d8	342972	446720	223360	893440	Yes
Acenaphthene-d10	218531	286597	143298	573194	Yes
Phenanthrene-d10	416030	544867	272434	1089734	Yes
Pyrene-d10	484837	628070	314035	1256140	Yes
Perylene-d12	404229	495666	247833	991332	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	gk0551.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.576	5.749	Yes
Naphthalene-d8	6.806	6.990	Yes
Acenaphthene-d10	8.523	8.707	Yes
Phenanthrene-d10	9.972	10.162	Yes
Pyrene-d10	11.358	11.547	Yes
Perylene-d12	14.000	14.222	Yes

RBCm
11-19-13

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

_____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP11165 Calibration Date: 11/14/13 Time: 01:40

Lab File ID: gk0552.d Init. Calib. Date(s): 11/11/13 11/11/13

Init. Calib. Times(s): 12:11 14:26

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Benzaldehyde	1.554	1.448	27.960	30.0	-7

Average %Drift: 7

BSm 11-14-13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 11/08/13 Time: 04:33

Lab File ID: hk0251.d Init. Calib. Date(s): 10/28/13 10/29/13

Init. Calib. Times(s): 23:13 03:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.630	0.514	6.120	7.5	-18
N-Nitrosodimethylamine	1.054	1.025	7.290	7.5	-3
Pyridine	1.796	1.502	6.270	7.5	-16
2-Picoline	1.768	1.726	7.330	7.5	-2
N-Nitrosomethylethylamine	0.790	0.764	7.250	7.5	-3
Methyl methanesulfonate	0.968	0.868	6.730	7.5	-10
N-Nitrosodiethylamine	0.726	0.721	7.440	7.5	-1
Ethyl methanesulfonate	0.735	0.728	7.430	7.5	-1
Benzaldehyde	1.345	1.283	7.150	7.5	-5
Phenol	2.235	2.203	7.390	7.5	-1
Aniline	2.598	2.565	7.400	7.5	-1
bis(2-Chloroethyl)ether	1.672	1.621	7.270	7.5	-3
2-Chlorophenol	1.361	1.426	7.860	7.5	5
1,3-Dichlorobenzene	1.577	1.574	7.480	7.5	0
1,4-Dichlorobenzene	1.601	1.598	7.480	7.5	0
Benzyl alcohol	0.949	0.908	7.170	7.5	-4
1,2-Dichlorobenzene	1.491	1.504	7.570	7.5	1
Indene	2.394	2.381	8.950	9.0	-1
2-Methylphenol	1.327	1.387	7.840	7.5	4
2,2'-oxybis(1-Chloropropane)	1.935	1.668	6.470	7.5	-14
bis(2-Chloroisopropyl)ether	1.935	1.668	6.470	7.5	-14
N-Nitrosopyrrolidine	0.700	0.724	7.760	7.5	3
Acetophenone	2.150	2.069	7.220	7.5	-4
4-Methylphenol	1.546	1.574	7.640	7.5	2
N-Nitroso-di-n-propylamine	1.292	1.214	7.050	7.5	-6
N-Nitrosomorpholine	0.926	0.820	6.640	7.5	-11
o-Toluidine	2.383	2.416	7.600	7.5	1
Hexachloroethane	0.635	0.628	7.420	7.5	-1
Nitrobenzene	0.488	0.448	6.890	7.5	-8
N-Nitrosopiperidine	0.187	0.193	7.760	7.5	3
Isophorone	0.834	0.813	7.310	7.5	-3
2-Nitrophenol	0.174	0.188	8.100	7.5	8
2,4-Dimethylphenol	0.405	0.408	7.550	7.5	1
O,O,O-triethylphosphorothioate	0.206	0.211	7.690	7.5	3
Benzoic acid	0.178	0.130	7.980	10.0	-20
bis(2-Chloroethoxy)methane	0.482	0.486	7.570	7.5	1

FORM VII SV-1

11-06-2013

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 11/08/13 Time: 04:33

Lab File ID: hk0251.d Init. Calib. Date(s): 10/28/13 10/29/13

Init. Calib. Times(s): 23:13 03:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dichlorophenol	0.299	0.306	7.670	7.5	2
1,2,4-Trichlorobenzene	0.361	0.359	7.450	7.5	-1
Naphthalene	1.013	1.027	7.610	7.5	1
4-Chloroaniline	0.431	0.442	7.690	7.5	3
2,6-Dichlorophenol	0.290	0.301	7.780	7.5	4
Hexachloropropene	0.224	0.218	7.290	7.5	-3
Hexachlorobutadiene	0.214	0.210	7.370	7.5	-2
Quinoline	0.656	0.681	7.780	7.5	4
Caprolactam	0.118	0.122	7.800	7.5	4
N-Nitrosodi-n-butylamine	0.341	0.291	6.390	7.5	-15
4-Chloro-3-methylphenol	0.335	0.351	7.880	7.5	5
Safrole	0.276	0.291	7.930	7.5	6
2-Methylnaphthalene	0.710	0.740	7.820	7.5	4
1-Methylnaphthalene	0.646	0.671	7.790	7.5	4
Hexachlorocyclopentadiene	0.263	0.227	6.460	7.5	-14
1,2,4,5-Tetrachlorobenzene	0.587	0.588	7.500	7.5	0
cis-Isosafrole	0.077	0.078	7.590	7.5	1
2,4,6-Trichlorophenol	0.372	0.389	7.850	7.5	5
2,4,5-Trichlorophenol	0.375	0.389	7.780	7.5	4
trans-Isosafrole	0.442	0.460	7.810	7.5	4
Isosafrole	0.442	0.460	7.810	7.5	4
1,1'-Biphenyl	1.397	1.344	7.220	7.5	-4
2-Chloronaphthalene	1.120	1.145	7.670	7.5	2
1-Chloronaphthalene	1.017	1.020	7.520	7.5	0
Diphenyl ether	0.772	0.784	7.610	7.5	1
2-Nitroaniline	0.314	0.359	8.570	7.5	14
1,4-Naphthoquinone	0.424	0.462	8.170	7.5	9
1,4-Dinitrobenzene	0.176	0.195	8.300	7.5	11
Dimethylphthalate	1.157	1.225	7.940	7.5	6
1,3-Dinitrobenzene	0.211	0.232	8.240	7.5	10
2,6-Dinitrotoluene	0.275	0.308	8.380	7.5	12
Acenaphthylene	1.477	1.562	7.930	7.5	6
3-Nitroaniline	0.293	0.318	8.140	7.5	8
Acenaphthene	1.089	1.113	7.660	7.5	2
2,4-Dinitrophenol	0.139	0.119	8.670	10.0	-13
Pentachlorobenzene	0.477	0.485	7.620	7.5	2

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 11/08/13 Time: 04:33

Lab File ID: hk0251.d Init. Calib. Date(s): 10/28/13 10/29/13

Init. Calib. Times(s): 23:13 03:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.201	0.182	6.790	7.5	-9
Dibenzofuran	1.528	1.580	7.750	7.5	3
2,4-Dinitrotoluene	0.356	0.401	8.440	7.5	13
1-Naphthylamine	1.063	1.072	7.560	7.5	1
2,3,4,6-Tetrachlorophenol	0.299	0.319	8.010	7.5	7
2-Naphthylamine	1.068	1.082	7.600	7.5	1
Diethylphthalate	1.098	1.193	8.150	7.5	9
Thionazin	0.232	0.250	8.100	7.5	8
Fluorene	1.224	1.299	7.960	7.5	6
4-Chlorophenyl-phenylether	0.631	0.657	7.810	7.5	4
5-Nitro-o-toluidine	0.316	0.350	8.310	7.5	11
4-Nitroaniline	0.289	0.322	8.350	7.5	11
4,6-Dinitro-2-methylphenol	0.123	0.111	6.720	7.5	-10
N-Nitrosodiphenylamine (1)	0.582	0.598	7.710	7.5	3
NDPA as diphenylamine	0.582	0.598	7.710	7.5	3
1,2-Diphenylhydrazine	0.860	0.800	6.980	7.5	-7
Tetraethyldithiopyrophosphate	0.128	0.128	7.470	7.5	0
1,3,5-Trinitrobenzene	0.088	0.084	6.840	7.5	-9
Diallate (peak 1)	0.418	0.423	5.690	5.6	1
Phorate	0.513	0.518	7.580	7.5	1
Phenacetin	0.365	0.382	7.860	7.5	5
4-Bromophenyl-phenylether	0.204	0.210	7.740	7.5	3
Diallate (peak 2)	0.179	0.183	1.910	1.9	2
Hexachlorobenzene	0.202	0.203	7.540	7.5	1
Dimethoate	0.333	0.338	7.600	7.5	1
Atrazine	0.202	0.204	7.600	7.5	1
Pentachlorophenol	0.129	0.124	6.990	7.5	-7
Pentachloronitrobenzene	0.092	0.093	7.540	7.5	1
4-Aminobiphenyl	0.736	0.762	7.760	7.5	4
Pronamide	0.317	0.336	7.930	7.5	6
Dinoseb	0.164	0.147	6.390	7.5	-15
Phenanthrene	1.094	1.079	7.400	7.5	-1
Anthracene	1.061	1.109	7.830	7.5	4
Carbazole	1.013	1.033	7.650	7.5	2
Methyl parathion	0.240	0.250	7.840	7.5	4
Di-n-butylphthalate	1.194	1.210	7.600	7.5	1

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 11/08/13 Time: 04:33

Lab File ID: hk0251.d Init. Calib. Date(s): 10/28/13 10/29/13

Init. Calib. Times(s): 23:13 03:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Parathion	0.158	0.160	7.620	7.5	2
4-Nitroquinoline-1-oxide	0.092	0.059	5.410	7.5	-28
Isodrin	0.130	0.131	7.580	7.5	1
Fluoranthene	1.216	1.272	7.840	7.5	5
Benzidine	0.626	0.596	21.450	22.5	-5
Pyrene	1.044	1.039	7.460	7.5	-1
p-Dimethylaminoazobenzene	0.196	0.218	7.610	7.5	1
Chlorobenzilate	0.298	0.290	7.290	7.5	-3
3,3'-Dimethylbenzidine	0.640	0.651	7.630	7.5	2
Butylbenzylphthalate	0.439	0.443	7.570	7.5	1
2-Acetylaminofluorene	0.391	0.408	7.440	7.5	-1
3,3'-Dichlorobenzidine	0.356	0.364	7.660	7.5	2
4,4'-Methylenebis(2-Chloroanil	0.179	0.181	7.580	7.5	1
Benzo(a)anthracene	0.940	0.982	7.840	7.5	4
Chrysene	0.918	0.944	7.720	7.5	3
bis(2-Ethylhexyl)phthalate	0.586	0.596	7.620	7.5	2
6-Methylchrysene	0.671	0.684	7.650	7.5	2
Di-n-octylphthalate	1.283	1.325	7.740	7.5	3
Benzo(b)fluoranthene	1.189	1.187	7.480	7.5	0
7,12-Dimethylbenz[a]anthracene	0.526	0.484	6.890	7.5	-8
Benzo(k)fluoranthene	1.215	1.267	7.820	7.5	4
Benzo(a)pyrene	1.115	1.164	7.830	7.5	4
3-Methylcholanthrene	0.570	0.582	7.660	7.5	2
Dibenz(a,h)acridine	0.846	0.830	7.360	7.5	-2
Dibenz(a,j)acridine	0.900	0.932	7.770	7.5	4
Indeno(1,2,3-cd)pyrene	1.131	1.164	7.720	7.5	3
Dibenz(a,h)anthracene	0.966	1.014	7.870	7.5	5
Benzo(g,h,i)perylene	0.985	1.023	7.790	7.5	4
Diallate TRANS/CIS	0.358	0.363	7.590	7.5	1
2-Fluorophenol	1.388	1.411	15.240	15.0	2
Phenol-d5	1.910	1.941	15.250	15.0	2
Phenol-d6	1.910	1.941	15.250	15.0	2
Nitrobenzene-d5	0.467	0.436	14.020	15.0	-7
2-Fluorobiphenyl	1.224	1.233	15.110	15.0	1
2,4,6-Tribromophenol	0.127	0.141	16.660	15.0	11

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP18831 Calibration Date: 11/08/13 Time: 04:33

Lab File ID: hk0251.d Init. Calib. Date(s): 10/28/13 10/29/13

Init. Calib. Times(s): 23:13 03:02

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.664	0.675	15.250	15.0	2
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP18831.i/13oct28b.b/hj1361.d **
/chem/HP18831.i/13oct28b.b/hj1362.d
/chem/HP18831.i/13oct28b.b/hj1363.d
/chem/HP18831.i/13oct28b.b/hj1364.d
/chem/HP18831.i/13oct28b.b/hj1365.d
/chem/HP18831.i/13oct28b.b/hj1366.d
/chem/HP18831.i/13oct28b.b/hj1367.d
/chem/HP18831.i/13oct28b.b/hj1368.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP18831.i/13nov08.b/hk0251.d

Area Summary

File ID:

Internal Standard Name	hk0251.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	101984	187821	93910	375642	Yes
Naphthalene-d8	397290	721826	360913	1443652	Yes
Acenaphthene-d10	252327	452920	226460	905840	Yes
Phenanthrene-d10	440301	790436	395218	1580872	Yes
Pyrene-d10	552473	974611	487306	1949222	Yes
Perylene-d12	420890	732405	366202	1464810	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	hk0251.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.751	6.896	Yes
Naphthalene-d8	8.680	8.826	Yes
Acenaphthene-d10	11.472	11.606	Yes
Phenanthrene-d10	13.360	13.489	Yes
Pyrene-d10	15.313	15.465	Yes
Perylene-d12	19.772	19.953	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-08-2013

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	119096		5.201		567152		6.437		363022		8.146	
	UPPER LIMIT	238192		5.701		1134304		6.937		726044		8.646	
	LOWER LIMIT	59548		4.701		283576		5.937		181511		7.646	
	LLI SAMPLE NO.												
01	SBLKWA316	108499		5.201		477413		6.437		294988		8.146	
02	316WALCS	132168		5.201		622633		6.437		380050		8.152	
03	316WALCSD	122539		5.201		559633		6.437		352032		8.152	
04	7273602	114459		5.201		522448		6.437		331637		8.146	
05	7272361	102890		5.201		462059		6.437		298049		8.146	
06	7272362	110178		5.201		493303		6.437		319940		8.146	
07	7272363	101914		5.201		456233		6.437		291724		8.146	
08	SBLKLF310	105657		5.201		452226		6.437		267135		8.146	
09	310LFLCS	105509		5.201		488949		6.437		300041		8.152	
10	7262294	107819		5.201		483470		6.437		306099		8.146	
11	7262294MS	116109		5.201		528113		6.437		333829		8.152	
12	7262294MSD	115340		5.201		533954		6.437		334320		8.152	
13	7262296	117170		5.201		516989		6.437		317343		8.146	
14	7262298	111806		5.201		500131		6.437		308260		8.146	
15	7262300	114343		5.201		503451		6.437		313944		8.146	
16	7262302	113960		5.201		519904		6.437		332035		8.146	
17	7262304	136583		5.201		611077		6.437		380442		8.146	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	690322	9.591	847467	10.974	700104	13.575
	UPPER LIMIT	1380644	10.091	1694934	11.474	1400208	14.075
	LOWER LIMIT	345161	9.091	423734	10.474	350052	13.075
	LLI SAMPLE NO.						
01	SBLKWA316	556278	9.591	678386	10.968	558704	13.575
02	316WALCS	661811	9.591	786591	10.974	635368	13.575
03	316WALCSD	638901	9.591	764110	10.974	622281	13.575
04	7273602	621775	9.591	764895	10.968	624757	13.575
05	7272361	579432	9.591	688484	10.968	569427	13.575
06	7272362	616911	9.591	740672	10.968	596235	13.575
07	7272363	569936	9.591	684449	10.968	564411	13.575
08	SBLKLF310	507161	9.591	608615	10.968	488624	13.575
09	310LFLCS	546606	9.591	671064	10.975	522975	13.575
10	7262294	561081	9.591	675043	10.968	527228	13.575
11	7262294MS	615094	9.591	734498	10.975	568678	13.575
12	7262294MSD	602598	9.591	717939	10.975	516868	13.575
13	7262296	594457	9.591	716469	10.968	516634	13.575
14	7262298	578214	9.591	696992	10.968	502578	13.575
15	7262300	599543	9.591	731625	10.968	516679	13.575
16	7262302	607498	9.591	722453	10.968	510944	13.575
17	7262304	683335	9.591	784645	10.975	572887	13.575

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	119096		5.201		567152		6.437		363022		8.146	
	UPPER LIMIT	238192		5.701		1134304		6.937		726044		8.646	
	LOWER LIMIT	59548		4.701		283576		5.937		181511		7.646	
	LLI SAMPLE NO.												
18	7262306	122955		5.201		576716		6.437		358322		8.146	
19	7262308	119792		5.201		545379		6.437		334021		8.146	
20	7263054	135704		5.201		615207		6.437		364026		8.152	
21	7263055	139978		5.201		636301		6.437		381609		8.152	
22	7265225	138554		5.201		646752		6.437		393344		8.152	
23	7265227	121409		5.201		546826		6.437		339475		8.152	
24	7265234	127658		5.201		576833		6.437		351478		8.152	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS4(PHN)			IS5(PYR)			IS6(PRY)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	690322		9.591		847467		10.974		700104		13.575	
	UPPER LIMIT	1380644		10.091		1694934		11.474		1400208		14.075	
	LOWER LIMIT	345161		9.091		423734		10.474		350052		13.075	
	LLI SAMPLE NO.												
18	7262306	649399		9.591		786063		10.968		589108		13.575	
19	7262308	601831		9.591		693969		10.974		504889		13.575	
20	7263054	647452		9.591		744662		10.975		562679		13.582	
21	7263055	648178		9.591		737970		10.974		559637		13.581	
22	7265225	698742		9.591		803275		10.975		575274		13.575	
23	7265227	612465		9.591		718080		10.974		548469		13.581	
24	7265234	623707		9.591		732409		10.975		541194		13.582	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0512.d Date Analyzed: 11/14/13

Instrument ID: HP19760 Time Analyzed: 21:01

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	96017	5.854	372726	7.818	219681	10.622
UPPER LIMIT	192034	6.354	745452	8.318	439362	11.122
LOWER LIMIT	48009	5.354	186363	7.318	109841	10.122
LLI SAMPLE NO.						
01 SBLKWK316	77397	5.848	301438	7.813	169563	10.616
02 316WKLCS	81284	5.854	314886	7.818	182196	10.616
03 7270420	79586	5.854	307571	7.812	174605	10.616
04 7270421MS	84262	5.854	322139	7.818	185834	10.616
05 7270422MSD	82872	5.854	322363	7.818	185190	10.616
06 7263058RE	81905	5.854	317310	7.818	180934	10.616
07 7263093RE	82781	5.854	318603	7.818	179527	10.616
08 7263094RE	83014	5.854	318774	7.818	180967	10.616
09 7267302	84129	5.854	322124	7.818	185734	10.616
10 7267303	82314	5.854	320468	7.818	184267	10.616
11 7268209	83366	5.854	325450	7.818	182965	10.616
12 7268211	84657	5.854	323999	7.813	183490	10.616
13 7268551	79015	5.854	303130	7.818	175980	10.616
14 7268555	85897	5.854	334571	7.818	187505	10.616
15 7268560	84437	5.854	321954	7.818	184412	10.616
16 7268620	84083	5.854	319516	7.818	177695	10.616
17 7268621	82532	5.854	322375	7.818	187325	10.616

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0512.d Date Analyzed: 11/14/13

Instrument ID: HP19760 Time Analyzed: 21:01

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	359468	12.534	459485	14.457	328252	18.899
	UPPER LIMIT	718936	13.034	918970	14.957	656504	19.399
	LOWER LIMIT	179734	12.034	229743	13.957	164126	18.399
	LLI SAMPLE NO.						
01	SBLKWK316	281307	12.528	342565	14.457	233221	18.893
02	316WKLCS	288607	12.528	373991	14.457	262210	18.893
03	7270420	291679	12.528	354640	14.451	232125	18.893
04	7270421MS	299809	12.528	382622	14.457	271840	18.893
05	7270422MSD	299085	12.528	383059	14.457	266405	18.893
06	7263058RE	298355	12.528	366022	14.451	245364	18.893
07	7263093RE	296036	12.528	359225	14.451	232340	18.893
08	7263094RE	301905	12.528	358575	14.451	231838	18.893
09	7267302	313548	12.528	395499	14.457	261382	18.893
10	7267303	306248	12.528	377013	14.451	253106	18.893
11	7268209	306296	12.528	374662	14.451	242547	18.893
12	7268211	307465	12.528	370872	14.451	234380	18.893
13	7268551	286657	12.528	356807	14.451	246693	18.893
14	7268555	312726	12.528	379387	14.451	247488	18.893
15	7268560	305079	12.528	381834	14.451	266370	18.893
16	7268620	285295	12.534	358165	14.463	259788	18.899
17	7268621	306468	12.528	375757	14.451	246966	18.893

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0512.d Date Analyzed: 11/14/13

Instrument ID: HP19760 Time Analyzed: 21:01

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	96017		5.854		372726		7.818		219681		10.622	
	UPPER LIMIT	192034		6.354		745452		8.318		439362		11.122	
	LOWER LIMIT	48009		5.354		186363		7.318		109841		10.122	
	LLI SAMPLE NO.												
18	7269118	84553		5.854		326183		7.818		188106		10.616	
19	7270419	79653		5.854		305581		7.818		178250		10.616	
20	7270424	82363		5.854		321451		7.818		183102		10.616	
21	7270839	82447		5.854		321183		7.818		186106		10.616	
22	7270841	86914		5.854		339385		7.818		192015		10.616	
23	7268554	77811		5.854		292988		7.818		173843		10.616	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0512.d Date Analyzed: 11/14/13

Instrument ID: HP19760 Time Analyzed: 21:01

	IS4(PHN)			IS5(PYR)			IS6(PRY)		
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
12 HOUR STD	359468		12.534		459485		14.457		328252		18.899	
UPPER LIMIT	718936		13.034		918970		14.957		656504		19.399	
LOWER LIMIT	179734		12.034		229743		13.957		164126		18.399	
LLI SAMPLE NO.												
18 7269118	307571		12.528		381756		14.451		260578		18.893	
19 7270419	301862		12.528		367433		14.457		260507		18.893	
20 7270424	303382		12.528		365729		14.451		229543		18.893	
21 7270839	308064		12.528		376516		14.451		248988		18.893	
22 7270841	318211		12.528		386119		14.457		255565		18.893	
23 7268554	281604		12.528		354702		14.457		244678		18.893	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0511.d Date Analyzed: 11/13/13

Instrument ID: HP11165 Time Analyzed: 12:09

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	77606	5.599	374010	6.835	231911	8.552
UPPER LIMIT	155212	6.099	748020	7.335	463822	9.052
LOWER LIMIT	38803	5.099	187005	6.335	115956	8.052
LLI SAMPLE NO.						
01 SBLKWD313	66385	5.599	285533	6.835	172286	8.546
02 313WDLCS	64990	5.599	304581	6.835	188248	8.552
03 313WDLCSD	60168	5.599	276741	6.835	178234	8.552
04 SBLKLC313	57306	5.599	249953	6.835	151070	8.546
05 313LCLCS	65995	5.599	301646	6.835	185153	8.552
06 SBLKLG310	58738	5.599	256925	6.835	152411	8.546
07 310LGLCS	65588	5.599	306895	6.835	199662	8.552
08 7263082	67097	5.599	306842	6.829	183610	8.546
09 7263083MS	73774	5.599	338718	6.835	207254	8.552
10 7263084MSD	65089	5.599	297240	6.835	182727	8.546
11 7262714	66785	5.599	303589	6.835	178369	8.557
12 7262714MS	71142	5.599	323519	6.835	196183	8.562
13 7262714MSD	68858	5.599	297250	6.835	181294	8.562
14 7267406	67978	5.599	303085	6.835	188172	8.546
15 7267408	74760	5.599	337792	6.835	196002	8.546
16 7267410	68291	5.599	322458	6.835	197316	8.546
17 7267412	77819	5.599	343433	6.835	200569	8.546

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0511.d Date Analyzed: 11/13/13

Instrument ID: HP11165 Time Analyzed: 12:09

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	436601	10.007	517775	11.392	441467	14.045
UPPER LIMIT	873202	10.507	1035550	11.892	882934	14.545
LOWER LIMIT	218301	9.507	258888	10.892	220734	13.545
	LLI SAMPLE NO.					
01 SBLKWD313	331778	10.001	388508	11.387	367625	14.040
02 313WDLCS	358835	10.001	421109	11.392	339464	14.039
03 313WDLCSD	335863	10.001	386337	11.392	310730	14.040
04 SBLKLC313	289508	9.996	342396	11.386	318246	14.034
05 313LCLCS	337765	10.001	390520	11.392	317593	14.039
06 SBLKLG310	300648	9.996	359213	11.386	309717	14.034
07 310LGLCS	390277	10.001	451837	11.392	347502	14.039
08 7263082	346864	9.996	402528	11.386	336285	14.034
09 7263083MS	385137	10.001	434197	11.386	338038	14.039
10 7263084MSD	343970	10.001	405141	11.386	312652	14.034
11 7262714	325074	10.001	370789	11.392	300414	14.039
12 7262714MS	338157	10.007	350921	11.403	275897	14.045
13 7262714MSD	306163	10.006	319917	11.397	256791	14.045
14 7267406	347642	10.001	378407	11.386	267947	14.039
15 7267408	334783	10.001	365533	11.387	285153	14.039
16 7267410	361133	10.001	382010	11.392	267638	14.039
17 7267412	342932	10.001	378305	11.387	291047	14.039

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0511.d Date Analyzed: 11/13/13

Instrument ID: HP11165 Time Analyzed: 12:09

	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD		77606		5.599		374010		6.835		231911		8.552	
	UPPER LIMIT		155212		6.099		748020		7.335		463822		9.052	
	LOWER LIMIT		38803		5.099		187005		6.335		115956		8.052	
	LLI SAMPLE NO.													
18	7267414		67002		5.599		305025		6.835		184232		8.546	
19	7267416		69970		5.599		315344		6.835		184768		8.546	
20	7267418		72112		5.599		323053		6.835		190832		8.546	
21	7267420		68468		5.599		313886		6.835		185459		8.546	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0511.d Date Analyzed: 11/13/13

Instrument ID: HP11165 Time Analyzed: 12:09

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	436601	10.007	517775	11.392	441467	14.045
UPPER LIMIT	873202	10.507	1035550	11.892	882934	14.545
LOWER LIMIT	218301	9.507	258888	10.892	220734	13.545
LLI SAMPLE NO.						
18 7267414	334373	10.001	361824	11.392	259211	14.039
19 7267416	335343	10.001	363107	11.392	261356	14.039
20 7267418	333880	10.001	367307	11.392	271251	14.039
21 7267420	326286	10.001	355671	11.392	268068	14.039

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0551.d Date Analyzed: 11/14/13

Instrument ID: HP11165 Time Analyzed: 01:14

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	74036		5.576		342972		6.806		218531		8.523	
	UPPER LIMIT	148072		6.076		685944		7.306		437062		9.023	
	LOWER LIMIT	37018		5.076		171486		6.306		109266		8.023	
	LLI SAMPLE NO.												
01	SBLKLF316	67090		5.570		309739		6.806		193919		8.518	
02	316LFLCS	64664		5.570		303686		6.806		196620		8.518	
03	316LFLCSD	70316		5.570		322759		6.806		205177		8.517	
04	SBLKLB314	73363		5.571		323540		6.806		198378		8.518	
05	314LBLCS	67655		5.571		326540		6.806		211023		8.523	
06	SBLKWJ316	70196		5.571		310327		6.806		187973		8.518	
07	316WJLCS	65222		5.570		309653		6.806		200391		8.523	
08	7249990RE	66995		5.571		304132		6.806		182154		8.518	
09	7249991RE	78040		5.570		356766		6.806		219147		8.523	
10	7249992MSDSD	75742		5.571		348956		6.806		210210		8.523	
11	7246099RE	72885		5.570		333674		6.806		205874		8.517	
12	7249986RE	75234		5.570		343524		6.811		207237		8.523	
13	7249989RE	72397		5.570		331749		6.806		203598		8.517	
14	7249993RE	73015		5.570		334617		6.806		203652		8.517	
15	7249994RE	72743		5.570		332346		6.806		201478		8.518	
16	7267423	82485		5.571		377707		6.806		225462		8.518	
17	7263052	72024		5.570		337836		6.806		201103		8.517	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0551.d Date Analyzed: 11/14/13

Instrument ID: HP11165 Time Analyzed: 01:14

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	416030		9.972		484837		11.358		404229		14.000	
	UPPER LIMIT	832060		10.472		969674		11.858		808458		14.500	
	LOWER LIMIT	208015		9.472		242419		10.858		202115		13.500	
	LLI SAMPLE NO.												
01	SBLKLF316	381245		9.967		449619		11.358		390973		14.000	
02	316LFLCS	375741		9.967		433247		11.358		358790		14.000	
03	316LFLCSD	394818		9.972		461485		11.358		372971		14.000	
04	SBLKLB314	398818		9.967		474255		11.352		400810		13.995	
05	314LBLCS	397866		9.972		433348		11.358		307737		14.000	
06	SBLKWJ316	375581		9.967		443657		11.352		381136		13.995	
07	316WJLCS	376825		9.972		410831		11.358		317958		14.000	
08	7249990RE	359209		9.967		432452		11.352		366408		13.995	
09	7249991RE	404819		9.972		442371		11.363		341433		14.000	
10	7249992MSDSD	391400		9.972		431377		11.358		340578		14.000	
11	7246099RE	383428		9.967		441502		11.352		362616		13.994	
12	7249986RE	380669		9.967		450006		11.352		375146		13.995	
13	7249989RE	383877		9.967		445996		11.352		375978		13.994	
14	7249993RE	391993		9.967		458291		11.352		379329		13.994	
15	7249994RE	377849		9.967		432942		11.352		350263		13.995	
16	7267423	378781		9.972		394296		11.358		309892		14.005	
17	7263052	359680		9.972		397306		11.357		308511		14.000	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0551.d Date Analyzed: 11/14/13

Instrument ID: HP11165 Time Analyzed: 01:14

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	74036		5.576		342972		6.806		218531		8.523	
	UPPER LIMIT	148072		6.076		685944		7.306		437062		9.023	
	LOWER LIMIT	37018		5.076		171486		6.306		109266		8.023	
	LLI SAMPLE NO.												
18	7263053	75633		5.570		349299		6.806		209667		8.518	
19	7263076	81775		5.576		371263		6.806		228253		8.517	
20	7263077	78682		5.570		367974		6.806		222897		8.518	
21	7263078	73800		5.570		351302		6.806		212686		8.517	
22	7263079	77884		5.570		367408		6.806		217258		8.518	
23	7263080	87058		5.576		412093		6.806		242003		8.523	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): gk0551.d Date Analyzed: 11/14/13

Instrument ID: HP11165 Time Analyzed: 01:14

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	416030		9.972		484837		11.358		404229		14.000	
	UPPER LIMIT	832060		10.472		969674		11.858		808458		14.500	
	LOWER LIMIT	208015		9.472		242419		10.858		202115		13.500	
	LLI SAMPLE NO.												
18	7263053	385993		9.967		428889		11.358		323314		14.000	
19	7263076	394072		9.972		419606		11.358		301964		14.005	
20	7263077	401166		9.972		414777		11.358		294979		14.000	
21	7263078	382298		9.972		395700		11.358		291505		14.000	
22	7263079	376732		9.972		388520		11.358		282962		14.000	
23	7263080	410168		9.972		416705		11.358		303292		14.005	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): hk0251.d Date Analyzed: 11/08/13

Instrument ID: HP18831 Time Analyzed: 04:33

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	101984	6.751	397290	8.680	252327	11.472
	UPPER LIMIT	203968	7.251	794580	9.180	504654	11.972
	LOWER LIMIT	50992	6.251	198645	8.180	126164	10.972
	LLI SAMPLE NO.						
01	SBLKWG310	71933	6.745	281408	8.680	173751	11.466
02	310WGLCS	76745	6.751	299216	8.680	186171	11.466
03	310WGLCSD	79047	6.751	303167	8.680	189740	11.466
04	7252510RE	75799	6.745	297168	8.680	183396	11.466
05	7259172RE	74900	6.745	287429	8.680	175413	11.466
06	7265270	72648	6.745	279625	8.680	170178	11.466
07	STD2813	102262	6.751	397060	8.680	254363	11.466
08	7263028	71530	6.745	278781	8.680	170165	11.466
09	7263051	71375	6.745	273715	8.680	167478	11.466
10	7263056	71870	6.745	277225	8.680	169712	11.466
11	7263057	70937	6.745	274573	8.680	168234	11.466
12	7263058	71283	6.745	280379	8.680	170714	11.466
13	7263060	72170	6.745	276327	8.680	167986	11.466
14	7263075	69404	6.745	265277	8.680	162251	11.466
15	7263092	69954	6.745	268528	8.680	163323	11.466
16	7263093	71320	6.745	273355	8.680	165196	11.466
17	7263094	71175	6.745	273922	8.680	169124	11.466

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): hk0251.d Date Analyzed: 11/08/13

Instrument ID: HP18831 Time Analyzed: 04:33

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	440301	13.360	552473	15.313	420890	19.772
UPPER LIMIT	880602	13.860	1104946	15.813	841780	20.272
LOWER LIMIT	220151	12.860	276237	14.813	210445	19.272
	LLI SAMPLE NO.					
01	SBLKWG310	300275	13.354	364294	15.307	293658	19.766
02	310WGLCS	314486	13.360	394781	15.307	302370	19.772
03	310WGLCSD	320442	13.360	403512	15.307	308714	19.772
04	7252510RE	318154	13.355	382083	15.307	297770	19.766
05	7259172RE	302715	13.355	365409	15.307	285703	19.766
06	7265270	290330	13.355	353717	15.307	269454	19.766
07	STD2813	441175	13.360	551663	15.307	422866	19.772
08	7263028	286374	13.354	346161	15.307	267611	19.766
09	7263051	285531	13.354	351513	15.307	271542	19.766
10	7263056	290986	13.355	355295	15.307	274643	19.766
11	7263057	288404	13.354	357031	15.307	271457	19.766
12	7263058	293645	13.355	356843	15.307	272646	19.766
13	7263060	286367	13.354	347440	15.307	260769	19.766
14	7263075	277519	13.355	334216	15.307	249465	19.766
15	7263092	274555	13.355	335241	15.307	249495	19.766
16	7263093	285656	13.355	344935	15.307	259036	19.766
17	7263094	288083	13.354	350480	15.307	263053	19.766

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10724: PAH 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Naphthalene	3	17	ug/kg
2-Methylnaphthalene	3	17	ug/kg
1-Methylnaphthalene	3	17	ug/kg
Acenaphthylene	3	17	ug/kg
Acenaphthene	3	17	ug/kg
Fluorene	3	17	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

10727: TCL 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Benzaldehyde	67	170	ug/kg
Phenol	17	33	ug/kg
bis(2-Chloroethyl)ether	17	33	ug/kg
2-Chlorophenol	17	33	ug/kg
2-Methylphenol	17	33	ug/kg
4-Methylphenol	17	33	ug/kg
N-Nitroso-di-n-propylamine	17	33	ug/kg
Acetophenone	17	33	ug/kg
Hexachloroethane	33	170	ug/kg
Nitrobenzene	17	33	ug/kg
Isophorone	17	33	ug/kg
2-Nitrophenol	17	33	ug/kg
2,4-Dimethylphenol	17	33	ug/kg
2,2'-oxybis(1-Chloropropane)	17	33	ug/kg
bis(2-Chloroethoxy)methane	17	33	ug/kg
2,4-Dichlorophenol	17	33	ug/kg
Naphthalene	3	17	ug/kg
4-Chloroaniline	17	33	ug/kg
Hexachlorobutadiene	17	33	ug/kg
Caprolactam	33	170	ug/kg
4-Chloro-3-methylphenol	17	33	ug/kg
2-Methylnaphthalene	3	17	ug/kg
Hexachlorocyclopentadiene	170	500	ug/kg
2,4,6-Trichlorophenol	17	33	ug/kg
2,4,5-Trichlorophenol	17	33	ug/kg
1,1'-Biphenyl	17	33	ug/kg

Fraction: Semivolatiles by GC/MS

10727: TCL 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
2-Chloronaphthalene	7	33	ug/kg
2-Nitroaniline	17	33	ug/kg
Dimethylphthalate	67	170	ug/kg
2,6-Dinitrotoluene	17	33	ug/kg
Acenaphthylene	3	17	ug/kg
3-Nitroaniline	67	170	ug/kg
Acenaphthene	3	17	ug/kg
2,4-Dinitrophenol	300	1,000	ug/kg
4-Nitrophenol	170	500	ug/kg
2,4-Dinitrotoluene	67	170	ug/kg
Dibenzofuran	17	33	ug/kg
Diethylphthalate	67	170	ug/kg
Fluorene	3	17	ug/kg
4-Chlorophenyl-phenylether	17	33	ug/kg
4-Nitroaniline	67	170	ug/kg
4,6-Dinitro-2-methylphenol	170	500	ug/kg
N-Nitrosodiphenylamine	17	33	ug/kg
4-Bromophenyl-phenylether	17	33	ug/kg
Hexachlorobenzene	3	17	ug/kg
Atrazine	33	170	ug/kg
Pentachlorophenol	33	170	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Carbazole	17	33	ug/kg
Di-n-butylphthalate	67	170	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Butylbenzylphthalate	67	170	ug/kg
bis(2-Ethylhexyl)phthalate	67	170	ug/kg
3,3'-Dichlorobenzidine	100	330	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Di-n-octylphthalate	67	170	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
1,4-Dioxane	1	5	ug/l
N-Nitrosodimethylamine	2	5	ug/l
Pyridine	2	5	ug/l
Benzaldehyde	1	5	ug/l
Phenol	0.5	1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Phenol	0.5	1	ug/l
Aniline	1	5	ug/l
a-methylstyrene	1	5	ug/l
bis(2-Chloroethyl)ether	0.5	1	ug/l
bis(2-Chloroethyl)ether	0.5	1	ug/l
2-Chlorophenol	0.5	1	ug/l
2-Chlorophenol	0.5	1	ug/l
1,3-Dichlorobenzene	1	5	ug/l
1,4-Dichlorobenzene	1	5	ug/l
Benzyl alcohol	5	15	ug/l
1,2-Dichlorobenzene	1	5	ug/l
2-Methylphenol	0.5	1	ug/l
2-Methylphenol	0.5	1	ug/l
2,2'-oxybis(1-Chloropropane)	0.5	1	ug/l
2,2'-oxybis(1-Chloropropane)	0.5	1	ug/l
bis(2-Chloroisopropyl)ether	1	5	ug/l
4-Methylphenol	0.5	1	ug/l
4-Methylphenol	0.5	1	ug/l
N-Nitroso-di-n-propylamine	0.5	1	ug/l
N-Nitroso-di-n-propylamine	0.5	1	ug/l
Acetophenone	0.5	1	ug/l
Acetophenone	0.5	1	ug/l
o-Toluidine	1	5	ug/l
Hexachloroethane	1	5	ug/l
Nitrobenzene	0.5	1	ug/l
Nitrobenzene	0.5	1	ug/l
Isophorone	0.5	1	ug/l
Isophorone	0.5	1	ug/l
2-Nitrophenol	0.5	1	ug/l
2-Nitrophenol	0.5	1	ug/l
2,4-Dimethylphenol	0.5	1	ug/l
2,4-Dimethylphenol	0.5	1	ug/l
Benzoic acid	6	15	ug/l
bis(2-Chloroethoxy)methane	0.5	1	ug/l
bis(2-Chloroethoxy)methane	0.5	1	ug/l
1,2,3,4-Tetrahydronaphthalene	1	5	ug/l
2,4-Dichlorophenol	0.5	1	ug/l
2,4-Dichlorophenol	0.5	1	ug/l
1,2,4-Trichlorobenzene	1	5	ug/l
Naphthalene	0.1	0.5	ug/l
Naphthalene	0.1	0.5	ug/l
4-Chloroaniline	0.5	1	ug/l
4-Chloroaniline	0.5	1	ug/l
Hexachlorobutadiene	0.5	1	ug/l
Hexachlorobutadiene	0.5	1	ug/l
Caprolactam	5	15	ug/l
4-Chloro-3-methylphenol	0.5	1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
4-Chloro-3-methylphenol	0.5	1	ug/l
2-Methylnaphthalene	0.1	0.5	ug/l
2-Methylnaphthalene	0.1	0.5	ug/l
1-Methylnaphthalene	1	5	ug/l
Hexachlorocyclopentadiene	5	15	ug/l
2,4,6-Trichlorophenol	0.5	1	ug/l
2,4,6-Trichlorophenol	0.5	1	ug/l
2,4,5-Trichlorophenol	0.5	1	ug/l
2,4,5-Trichlorophenol	0.5	1	ug/l
1,1'-Biphenyl	0.5	1	ug/l
1,1'-Biphenyl	0.5	1	ug/l
2-Chloronaphthalene	0.4	1	ug/l
2-Chloronaphthalene	0.4	1	ug/l
1-Chloronaphthalene	1	5	ug/l
Diphenyl ether	1	5	ug/l
2-Nitroaniline	0.5	1	ug/l
2-Nitroaniline	0.5	1	ug/l
Dimethylphthalate	2	5	ug/l
2,6-Dinitrotoluene	0.5	1	ug/l
2,6-Dinitrotoluene	0.5	1	ug/l
Acenaphthylene	0.1	0.5	ug/l
Acenaphthylene	0.1	0.5	ug/l
3-Nitroaniline	0.5	1	ug/l
3-Nitroaniline	0.5	1	ug/l
Acenaphthene	0.1	0.5	ug/l
Acenaphthene	0.1	0.5	ug/l
2,4-Dinitrophenol	10	30	ug/l
2,4-Dinitrophenol	10	30	ug/l
4-Nitrophenol	10	30	ug/l
2,4-Dinitrotoluene	1	5	ug/l
Dibenzofuran	0.5	1	ug/l
Dibenzofuran	0.5	1	ug/l
1-Naphthylamine	5	15	ug/l
2,3,4,6-Tetrachlorophenol	2	5	ug/l
2-Naphthylamine	5	15	ug/l
Diethylphthalate	2	5	ug/l
Fluorene	0.1	0.5	ug/l
Fluorene	0.1	0.5	ug/l
4-Chlorophenyl-phenylether	0.5	1	ug/l
4-Chlorophenyl-phenylether	0.5	1	ug/l
4-Nitroaniline	0.5	1	ug/l
4-Nitroaniline	0.5	1	ug/l
4,6-Dinitro-2-methylphenol	5	15	ug/l
N-Nitrosodiphenylamine	0.5	1	ug/l
N-Nitrosodiphenylamine	0.5	1	ug/l
1,2-Diphenylhydrazine	1	5	ug/l
4-Bromophenyl-phenylether	0.5	1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
4-Bromophenyl-phenylether	0.5	1	ug/l
Hexachlorobenzene	0.1	0.5	ug/l
Hexachlorobenzene	0.1	0.5	ug/l
Atrazine	2	5	ug/l
Pentachlorophenol	1	5	ug/l
Pentachlorophenol	1	5	ug/l
Phenanthrene	0.1	0.5	ug/l
Phenanthrene	0.1	0.5	ug/l
Anthracene	0.1	0.5	ug/l
Anthracene	0.1	0.5	ug/l
Carbazole	0.5	1	ug/l
Carbazole	0.5	1	ug/l
Di-n-butylphthalate	2	5	ug/l
Fluoranthene	0.1	0.5	ug/l
Fluoranthene	0.1	0.5	ug/l
Benzidine	20	60	ug/l
Pyrene	0.1	0.5	ug/l
Pyrene	0.1	0.5	ug/l
4,4'-Methylenedianiline	1	5	ug/l
Butylbenzylphthalate	2	5	ug/l
bis(2-Ethylhexyl)phthalate	2	5	ug/l
3,3'-Dichlorobenzidine	2	5	ug/l
Benzo(a)anthracene	0.1	0.5	ug/l
Benzo(a)anthracene	0.1	0.5	ug/l
Chrysene	0.1	0.5	ug/l
Chrysene	0.1	0.5	ug/l
Di-n-octylphthalate	2	5	ug/l
Benzo(b)fluoranthene	0.1	0.5	ug/l
Benzo(b)fluoranthene	0.1	0.5	ug/l
Benzo(k)fluoranthene	0.1	0.5	ug/l
Benzo(k)fluoranthene	0.1	0.5	ug/l
Benzo(a)pyrene	0.1	0.5	ug/l
Benzo(a)pyrene	0.1	0.5	ug/l
Indeno(1,2,3-cd)pyrene	0.1	0.5	ug/l
Indeno(1,2,3-cd)pyrene	0.1	0.5	ug/l
Dibenz(a,h)anthracene	0.1	0.5	ug/l
Dibenz(a,h)anthracene	0.1	0.5	ug/l
Benzo(g,h,i)perylene	0.1	0.5	ug/l
Benzo(g,h,i)perylene	0.1	0.5	ug/l
Octachlorostyrene	2	10	ug/l
2,4_2,6-Dinitrotoluenes	1	5	ug/l
Total PAHs	1	5	ug/l
1,2,4,5-Tetrachlorobenzene	2	5	ug/l

FFHEC

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263051

Data file: /chem/HP18831.i/13nov08.b/hk0264.d
Data file Sample Info. Line: FFHEC;7263051;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 09-Nov-2013 05:17 jmg00346

Injection date and time: **08-NOV-2013 11:53**
Instrument ID: **HP18831.i** Batch: **13310WAG**

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745(0.006)	782	152	71375 (-30)	5.00	
48) Naphthalene-d8	8.680(0.000)	1114	136	273715 (-31)	5.00	
83) Acenaphthene-d10	11.466(0.006)	1592	164	167478 (-34)	5.00	
120) Phenanthrene-d10	13.354(0.006)	1916	188	285531 (-35)	5.00	
134) Pyrene-d10	15.307(0.006)	2251	212	351513 (-36)	5.00	
158) Perylene-d12	19.766(0.006)	3016	264	271542 (-35)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874(-0.001)	112	608121	30.681	61%		10 - 107
13) Phenol-d6	(1)	6.244(-0.001)	99	575070	21.096	42%		10 - 83
36) Nitrobenzene-d5	(2)	7.578(0.001)	82	527329	20.633	83%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.423(0.000)	172	945320	23.057	92%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515(-0.001)	330	194882	45.797	92%		22 - 150
137) Terphenyl-d14	(5)	15.622(0.000)	244	1215521	26.050	104%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
18) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) 4-Methylphenol	(1)			Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
39) Isophorone	(2)			Not Detected					0.1
40) 2-Nitrophenol	(2)			Not Detected					0.1
41) 2,4-Dimethylphenol	(2)			Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
46) 2,4-Dichlorophenol	(2)			Not Detected					0.1
49) Naphthalene	(2)			Not Detected					0.03
50) 4-Chloroaniline	(2)			Not Detected					0.1
53) Hexachlorobutadiene	(2)			Not Detected					0.1
55) Caprolactam	(2)			Not Detected					1
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/13nov08.b/hk0264.d Injection date and time: **08-NOV-2013 11:53**
Data file Sample Info. Line: FFHEC;7263051;1;0;SAMPLE;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 09-Nov-2013 05:17 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

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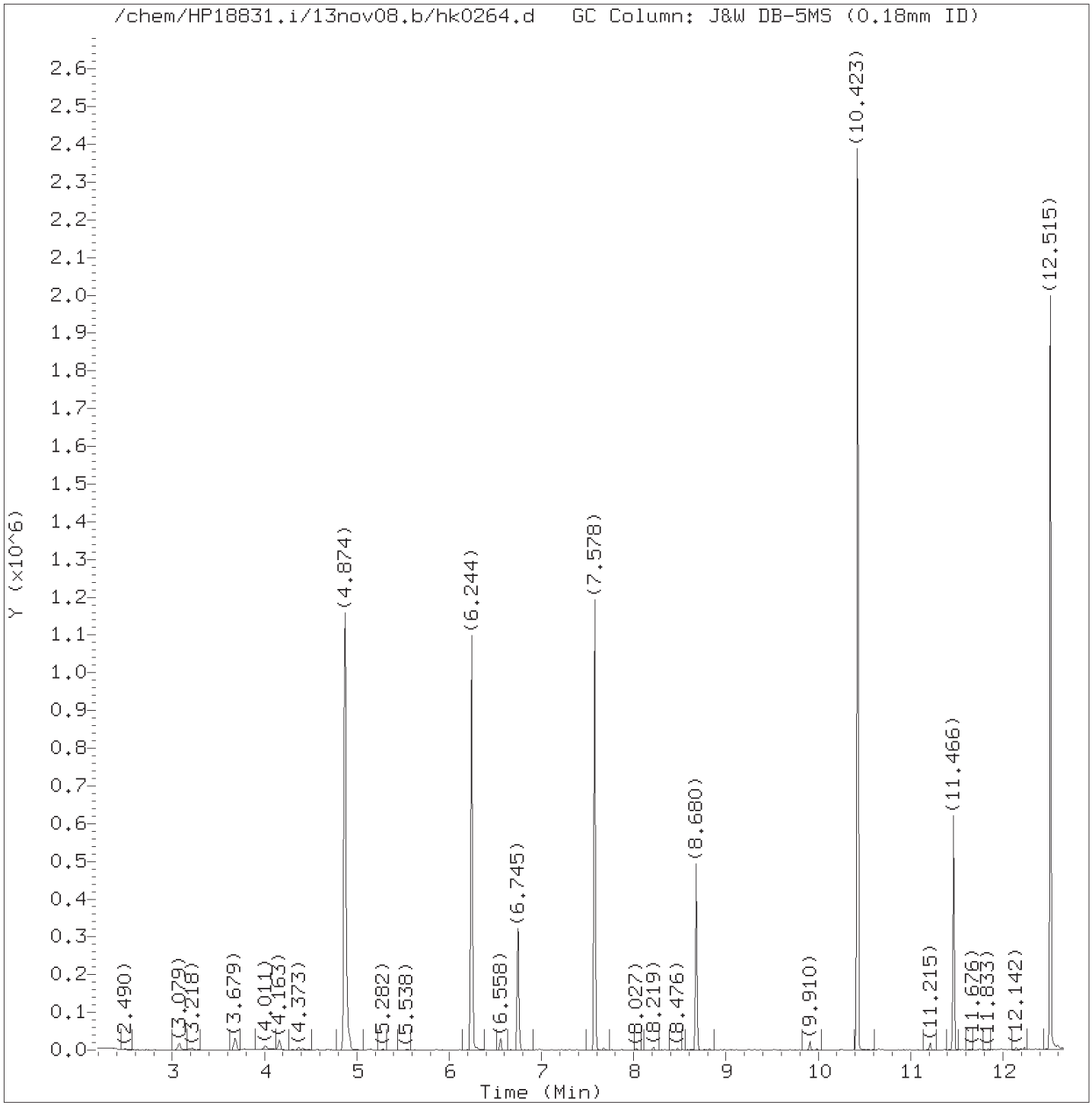
Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:17 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

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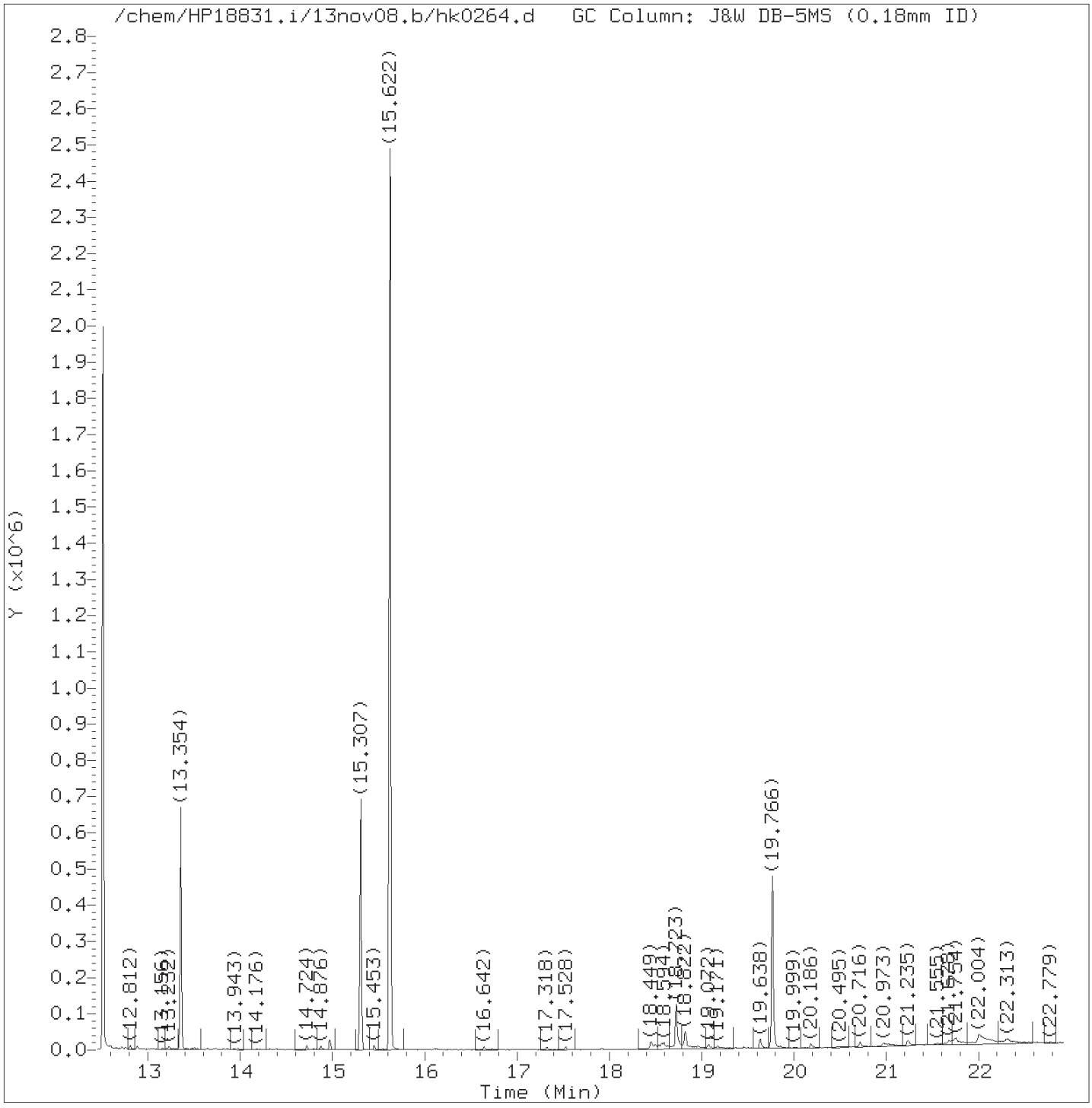
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:17 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:17 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	608121	30.681
13)$Phenol-d6	(1)	6.244	99	575070	21.096
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	71375	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	527329	20.633
48)*Naphthalene-d8	(2)	8.680	136	273715	5.000
68)$2-Fluorobiphenyl	(3)	10.423	172	945320	23.057
83)*Acenaphthene-d10	(3)	11.466	164	167478	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	194882	45.797
120)*Phenanthrene-d10	(4)	13.354	188	285531	5.000
134)*Pyrene-d10	(5)	15.307	212	351513	5.000
137)$Terphenyl-d14	(5)	15.622	244	1215521	26.050
158)*Perylene-d12	(6)	19.766	264	271542	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FFHEC

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7263051

Sample wt/vol: 244 (g/mL) mL Lab File ID: hk0264.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

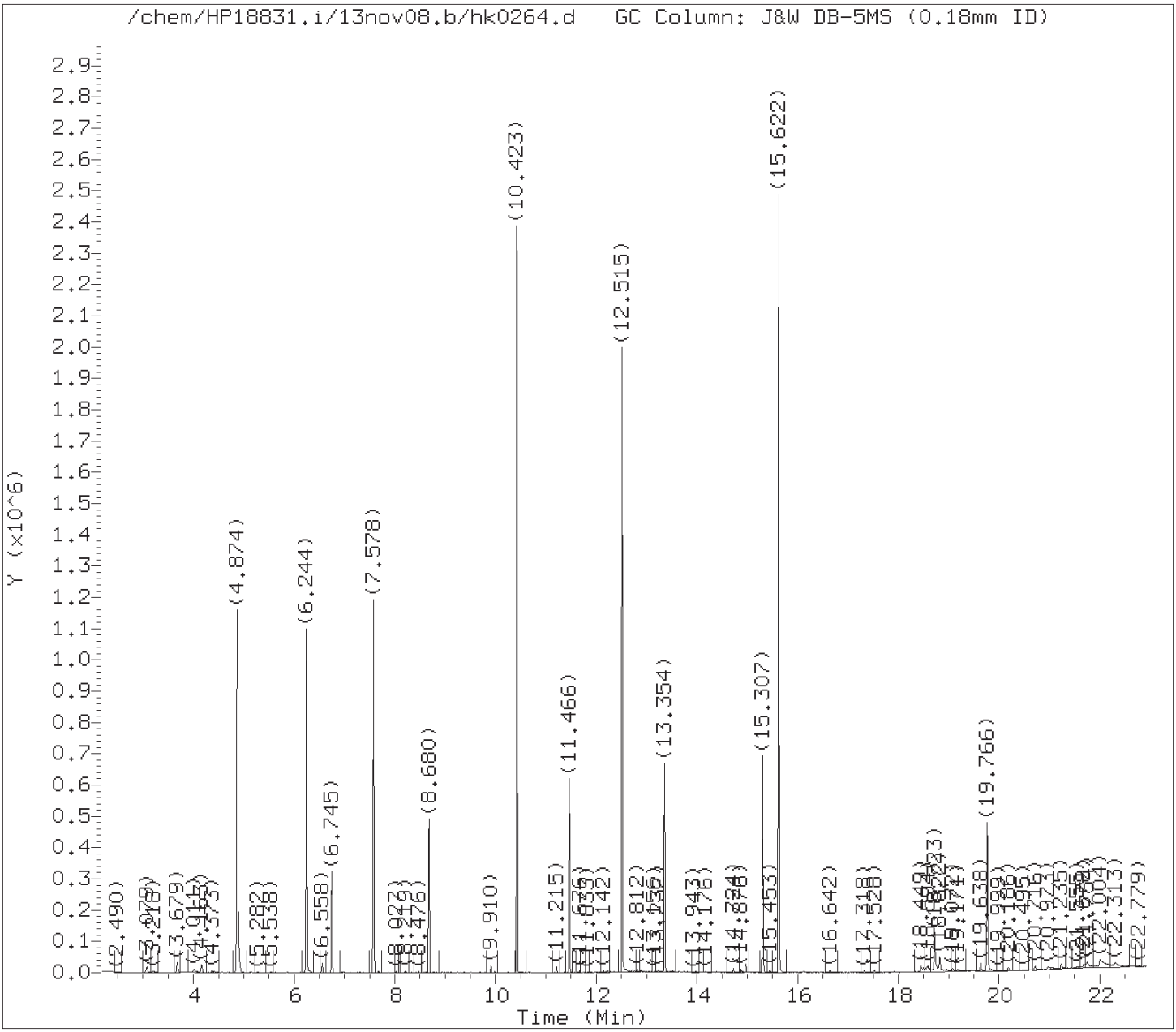
GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.723	7	J
2.		Unknown	18.822	4	J
3.		Unknown	22.004	6	J
4.					
5.	SVOCTIC	Total SVOC TICs		17	J
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

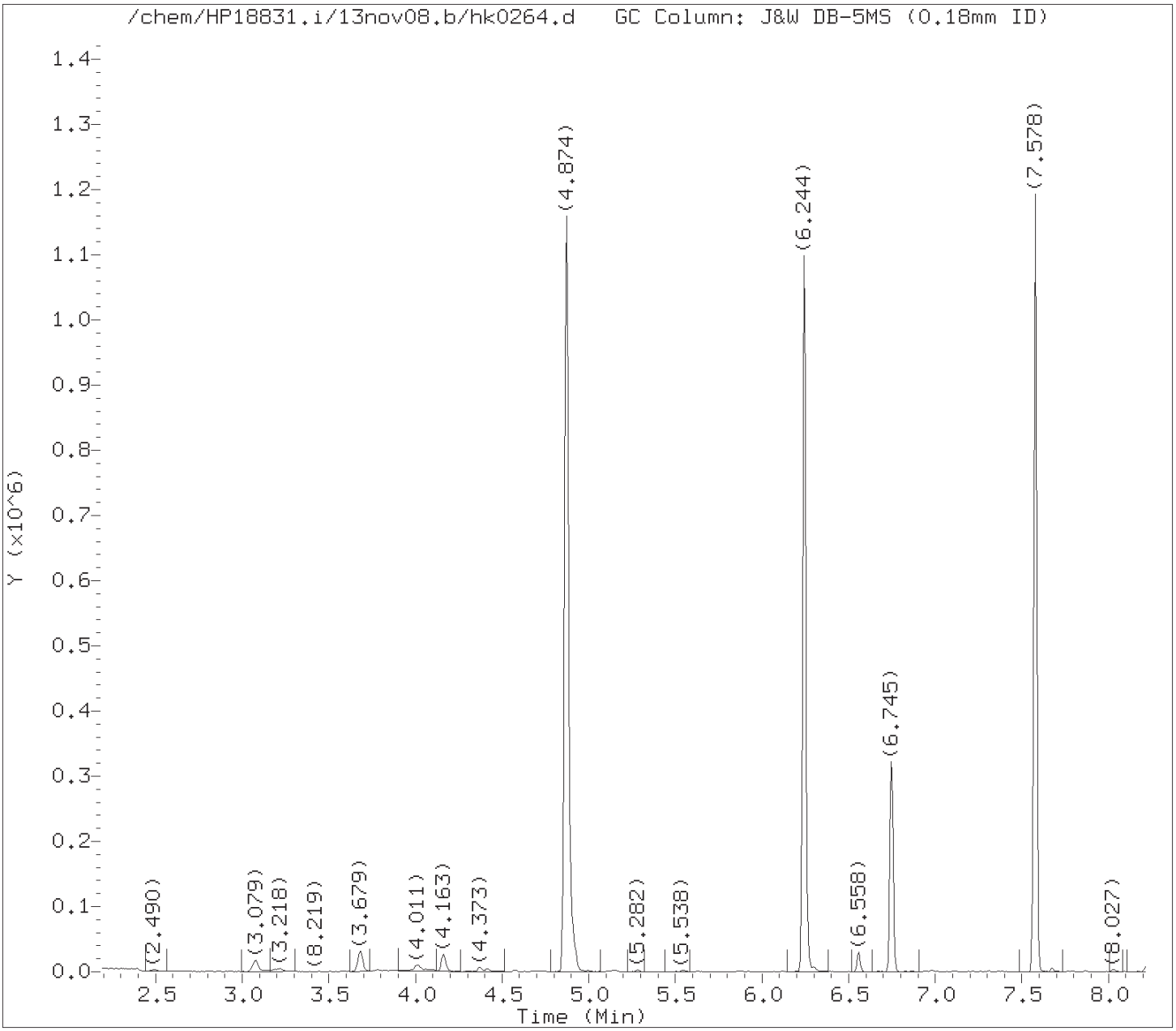
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

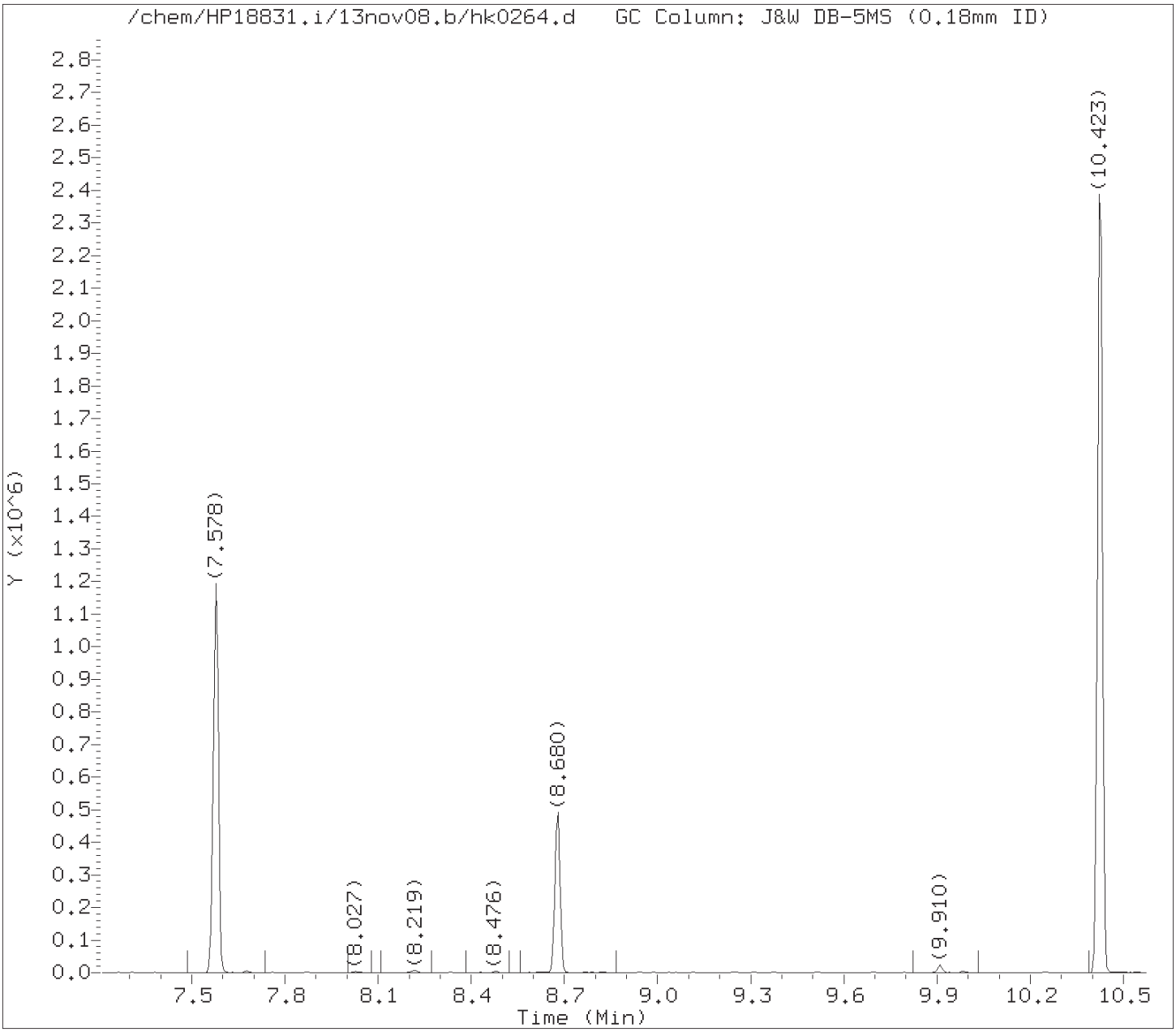
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

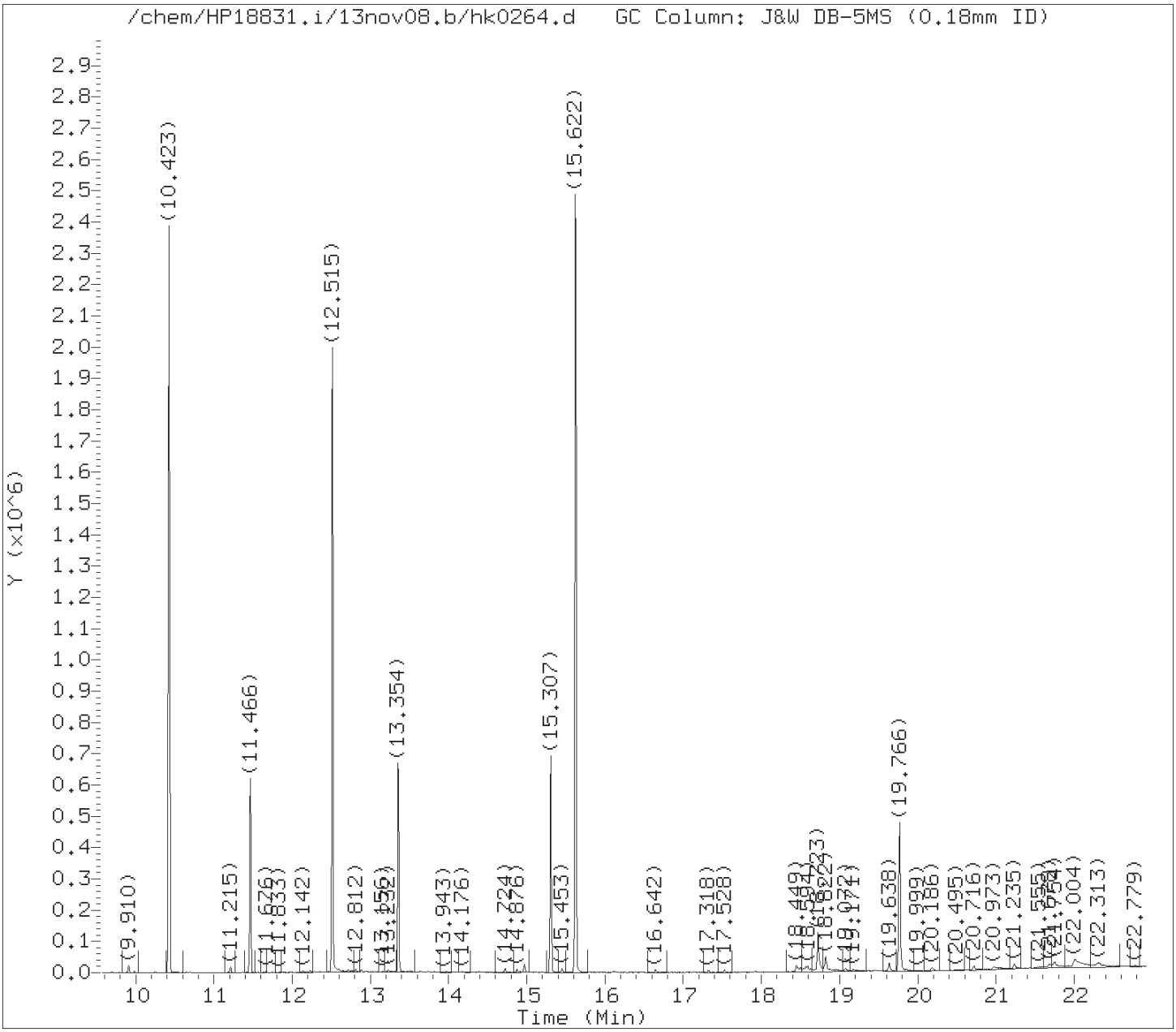
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

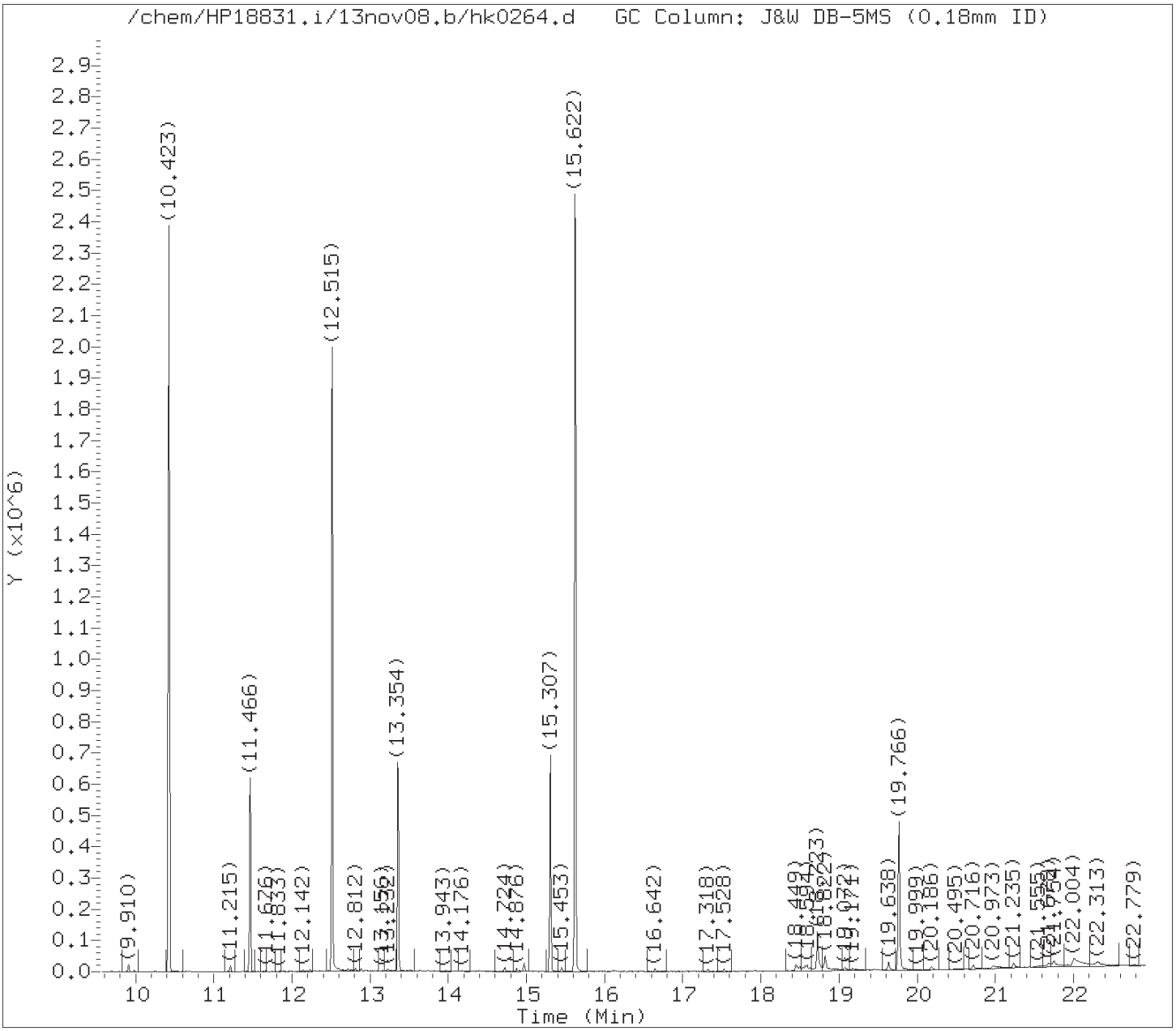
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

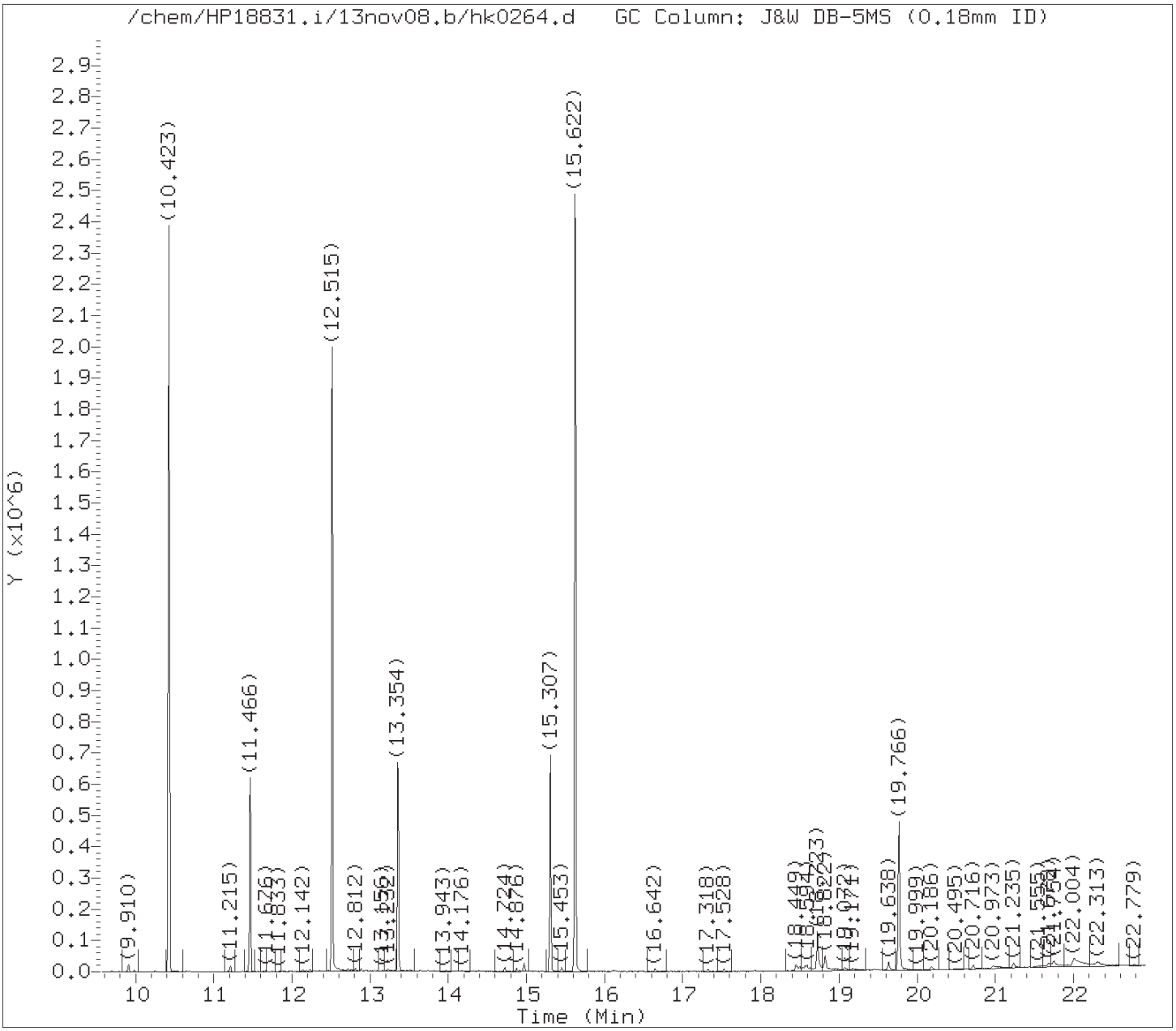
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: Phenanthrene-d10 at 13.354 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

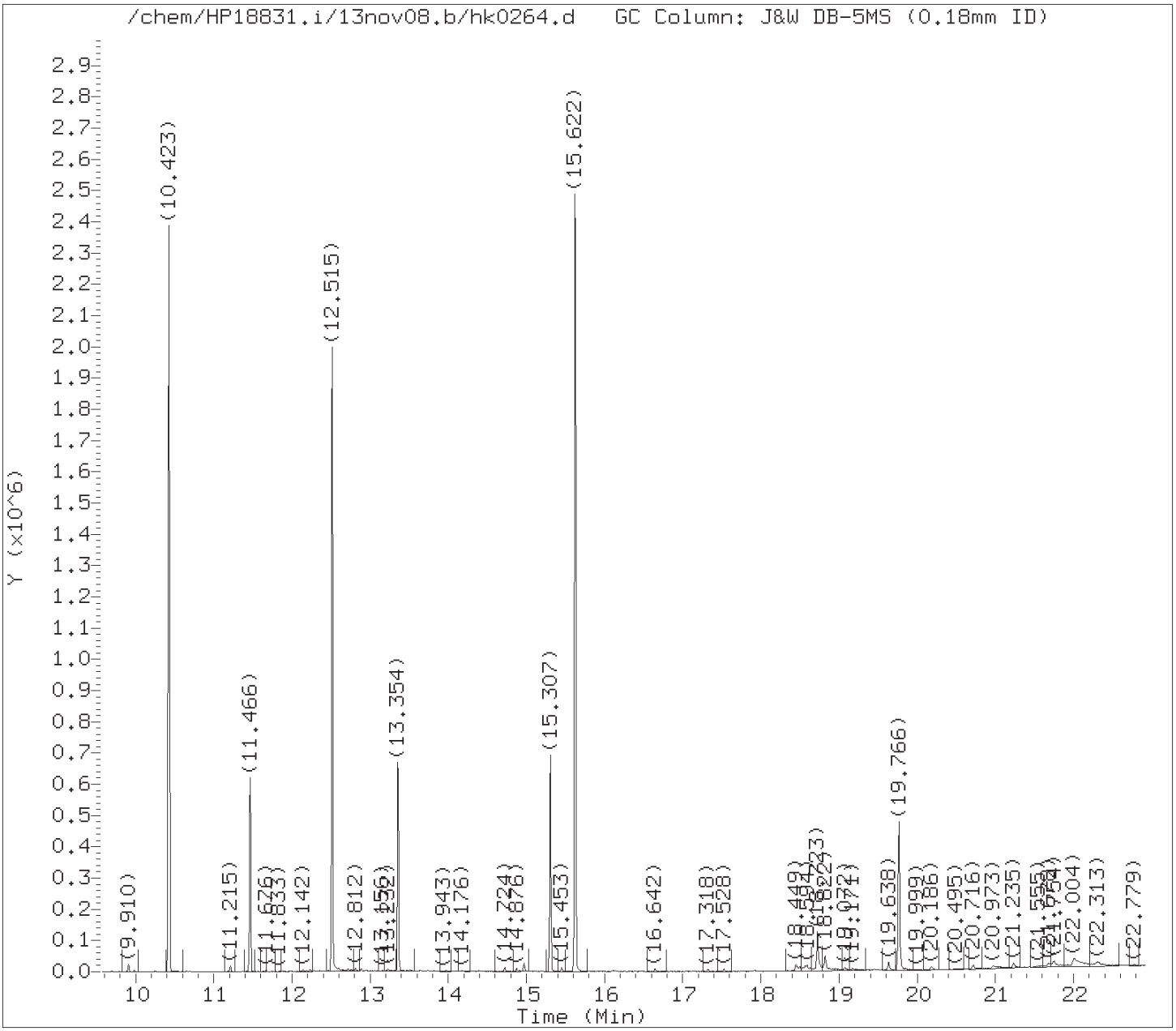
Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.537

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0264.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 11:53 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:21 jmg00346

Sample Name: FFHEC Lab Sample ID: 7263051

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.537
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0264.d
Lab Smp Id: 7263051 Client Smp ID: FFHEC
Inj Date : 08-NOV-2013 11:53
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : FFHEC;7263051;1;0;SAMPLE;;;
Misc Info : 13310WAG;newall1;;244;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 3 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	244.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 158 Perylene-d12	19.766	740801	5.000

	CONCENTRATIONS			QUANT			
	RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:			
	18.723	245210	1.65503574	6.78293	0		0	158
Unknown					CAS #:			
	18.822	152249	1.02759972	4.21147	0		0	158

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
22.004	230130	1.55324821	6.36577	0		0	158

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0264.d

Date : 08-NOV-2013 11:53

Client ID: FFHEC

Instrument: HP18831.i

Sample Info: FFHEC;7263051;1;0;SAMPLE;;;

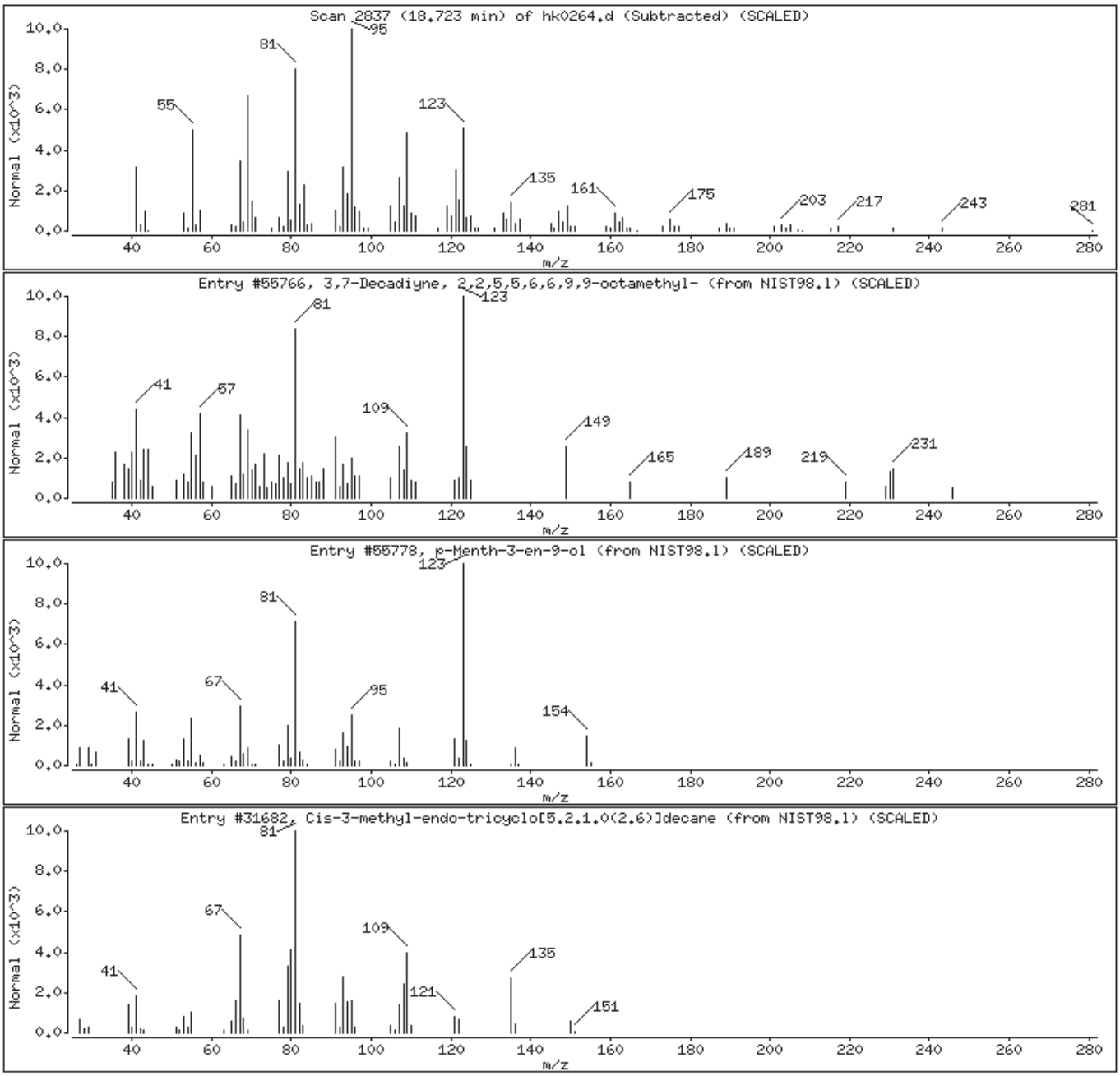
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
3,7-Decadiyne, 2,2,5,5,6,6,9,9-octamethy	17553-35-4	NIST98.1	55766	38	C18H30	246
p-Menth-3-en-9-ol	15714-10-0	NIST98.1	55778	35	C10H18O	154
Cis-3-methyl-endo-tricyclo[5.2.1.0(2,6)]	1000215-29-0	NIST98.1	31682	30	C11H18	150



Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0264.d

Date : 08-NOV-2013 11:53

Client ID: FFHEC

Instrument: HP18831.i

Sample Info: FFHEC;7263051;1;0;SAMPLE;;;

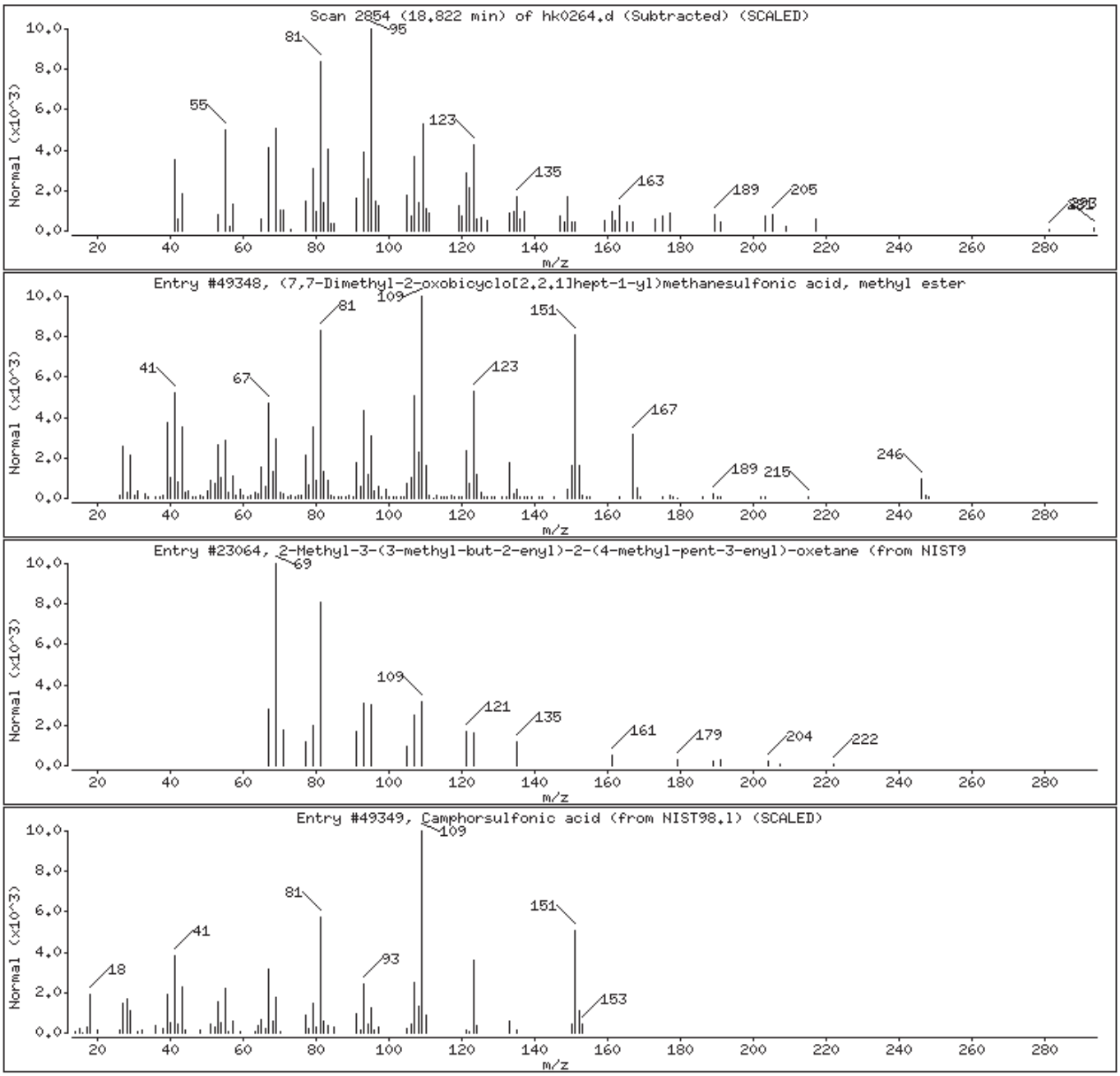
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
(7,7-Dimethyl-2-oxobicyclo[2.2.1]hept-1-	1000197-55-6	NIST98.1	49348	49	C11H18O4S	246
2-Methyl-3-(3-methyl-but-2-enyl)-2-(4-me	1000144-10-2	NIST98.1	23064	43	C15H26O	222
Camphorsulfonic acid	3144-16-9	NIST98.1	49349	43	C10H16O4S	232



Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0264.d

Date : 08-NOV-2013 11:53

Client ID: FFHEC

Instrument: HP18831.i

Sample Info: FFHEC;7263051;1;0;SAMPLE;;;

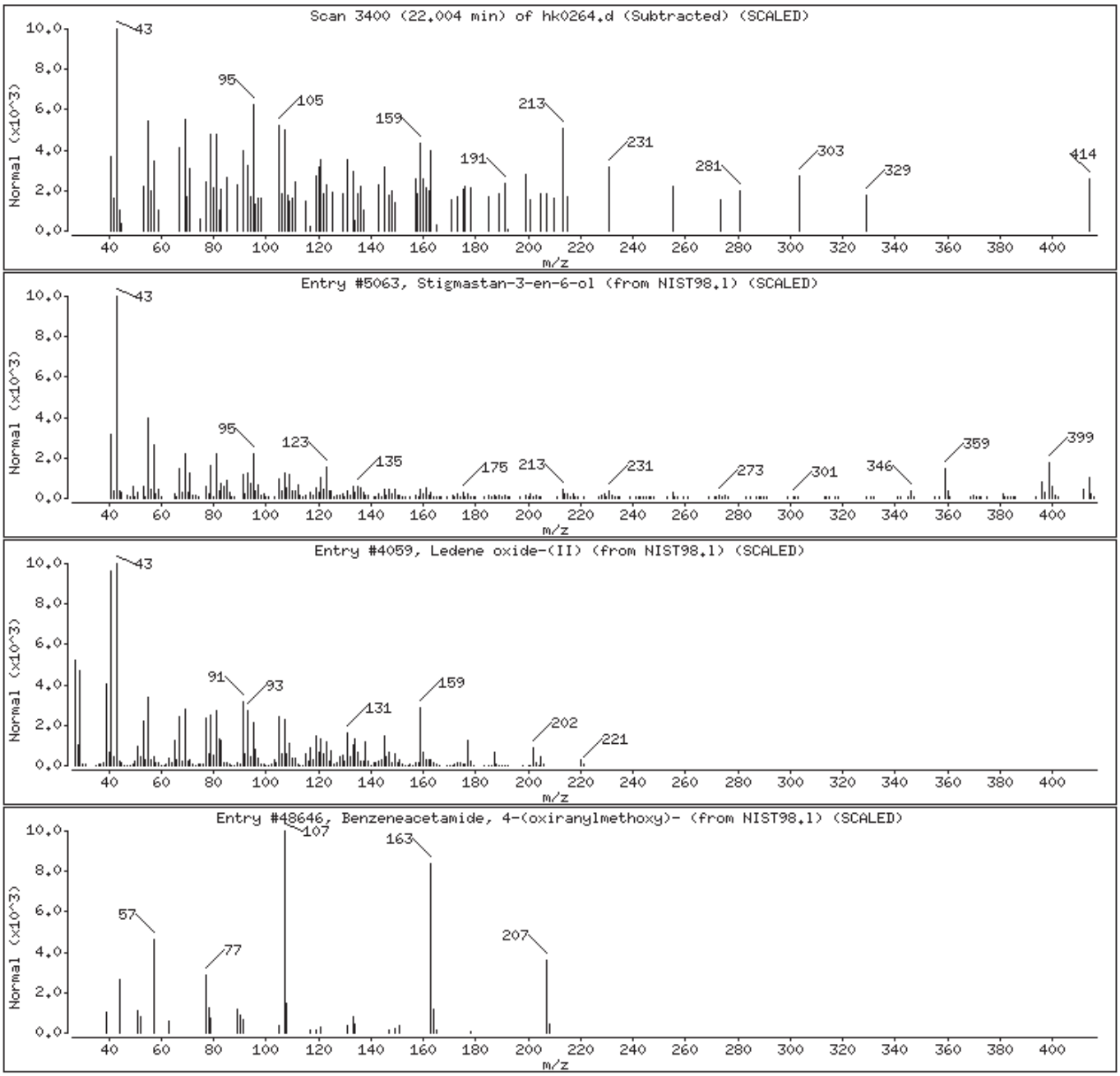
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Stigmastan-3-en-6-ol	1000214-19-7	NIST98.1	5063	14	C29H50O	414
Ledene oxide-(II)	1000159-36-7	NIST98.1	4059	12	C15H24O	220
Benzeneacetamide, 4-(oxiranylmethoxy)-	29122-69-8	NIST98.1	48646	10	C11H13NO3	207



Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:26.
Target 3.5 esignature user ID: jmg00346

WHERC

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263052

Data file: /chem/HP11165.i/13nov14.b/gk0570.d
Data file Sample Info. Line: WHERC;7263052;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Injection date and time: **14-NOV-2013 10:04**
Instrument ID: **HP11165.i** Batch: **13313SLC**

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 03:02
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov14.b/gk0551.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 20 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.4 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.570	(0.006)	670	152	72024	(-3)	20.00	
63) Naphthalene-d8	6.806	(0.000)	901	136	337836	(-1)	20.00	
101) Acenaphthene-d10	8.517	(0.006)	1221	164	201103	(-8)	20.00	
140) Phenanthrene-d10	9.972	(0.000)	1493	188	359680	(-14)	20.00	
164) Pyrene-d10	11.357	(0.000)	1752	212	397306	(-18)	20.00	
188) Perylene-d12	14.000	(0.000)	2246	264	308511	(-24)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 2-Fluorophenol	(1)	4.324	(-0.002)	112	46139	8.084	81%		63 - 126
17) Phenol-d6	(1)	5.265	(-0.001)	99	64238	7.481	75%		61 - 120
41) Nitrobenzene-d5	(2)	6.110	(0.001)	82	27660	3.714	74%		60 - 120
84) 2-Fluorobiphenyl	(3)	7.870	(0.000)	172	46888	3.828	77%		69 - 120
121) 2,4,6-Tribromophenol	(3)	9.293	(0.000)	330	9508	7.076	71%		42 - 134
166) Terphenyl-d14	(5)	11.545	(0.000)	244	61020	4.306	86%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Benzaldehyde	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.5
20) bis(2-Chloroethyl)ether	(1)				Not Detected					0.5
21) 2-Chlorophenol	(1)				Not Detected					0.5
30) 2-Methylphenol	(1)				Not Detected					0.5
31) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
35) Acetophenone	(1)				Not Detected					0.5
37) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.5
36) 4-Methylphenol	(1)				Not Detected					0.5
40) Hexachloroethane	(1)				Not Detected					1
42) Nitrobenzene	(2)				Not Detected					0.5
45) Isophorone	(2)				Not Detected					0.5
48) 2-Nitrophenol	(2)				Not Detected					0.5
52) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
64) Naphthalene	(2)				Not Detected					0.1
65) 4-Chloroaniline	(2)				Not Detected					0.5
69) Hexachlorobutadiene	(2)				Not Detected					0.5
74) Caprolactam	(2)				Not Detected					1
75) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
77) 2-Methylnaphthalene	(2)				Not Detected					0.1
79) Hexachlorocyclopentadiene	(3)				Not Detected					5
82) 2,4,6-Trichlorophenol	(3)				Not Detected					0.5
83) 2,4,5-Trichlorophenol	(3)				Not Detected					0.5
87) 1,1'-Biphenyl	(3)				Not Detected					0.5
88) 2-Chloronaphthalene	(3)				Not Detected					0.2

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49. Target 3.5 esignature user ID: bkg00522

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/13nov14.b/gk0570.d Injection date and time: **14-NOV-2013 10:04**
Data file Sample Info. Line: WHERC;7263052;2;0;SAMPLE;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 03:02
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov14.b/gk0551.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 20 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.4 g

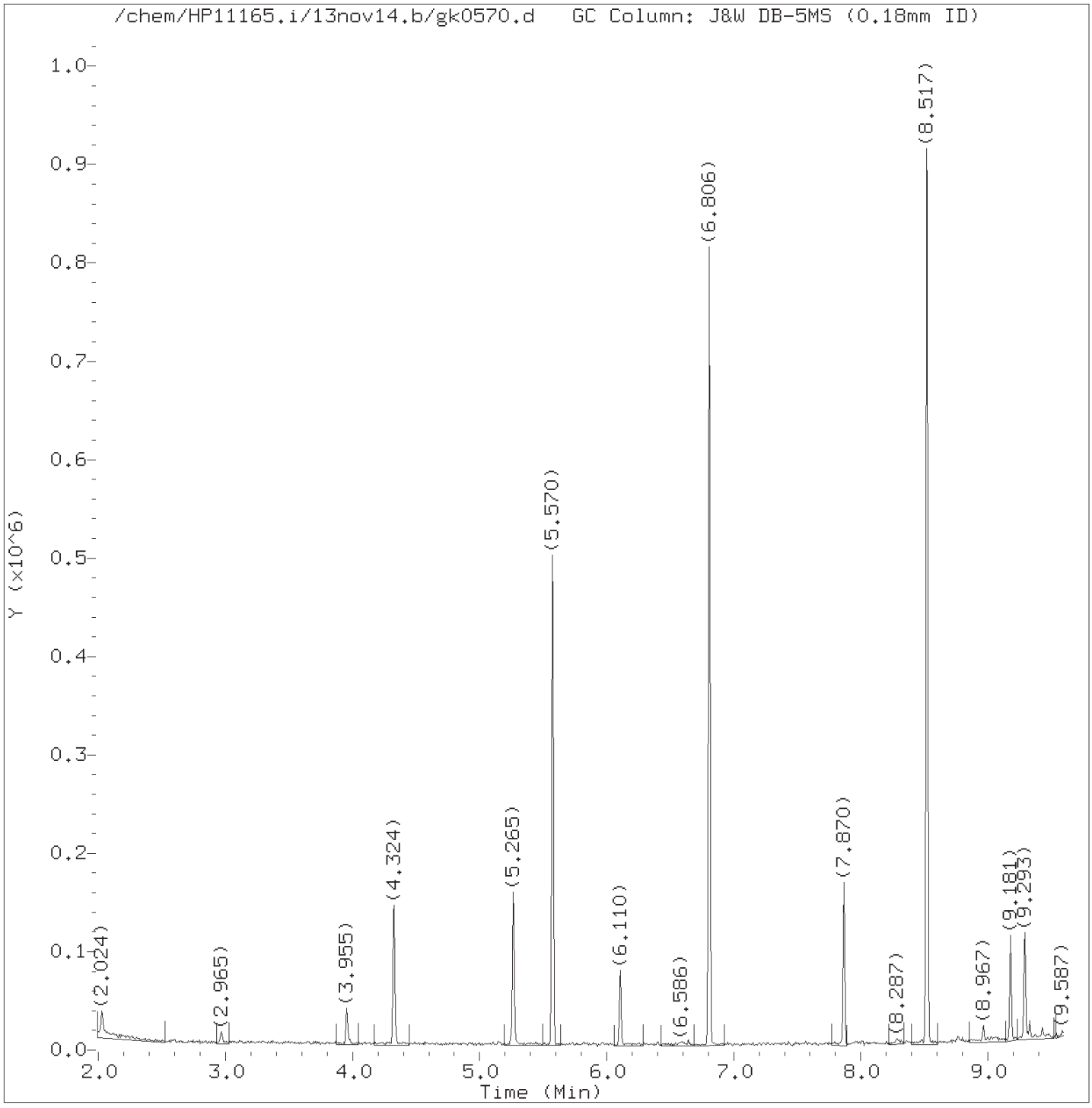
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
91) 2-Nitroaniline	(3)			Not Detected					0.5
94) Dimethylphthalate	(3)			Not Detected					2
97) 2,6-Dinitrotoluene	(3)			Not Detected					0.5
99) Acenaphthylene	(3)			Not Detected					0.1
100) 3-Nitroaniline	(3)			Not Detected					2
102) Acenaphthene	(3)			Not Detected					0.1
103) 2,4-Dinitrophenol	(3)			Not Detected					9
104) 4-Nitrophenol	(3)			Not Detected					5
107) Dibenzofuran	(3)			Not Detected					0.5
106) 2,4-Dinitrotoluene	(3)			Not Detected					2
111) Diethylphthalate	(3)			Not Detected					2
113) Fluorene	(3)			Not Detected					0.1
114) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.5
116) 4-Nitroaniline	(3)			Not Detected					2
117) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					5
118) N-Nitrosodiphenylamine	(4)	9.180(0.000)	169	24807	2.074	1364.59			0.5
127) 4-Bromophenyl-phenylether	(4)			Not Detected					0.5
129) Hexachlorobenzene	(4)			Not Detected					0.1
132) Atrazine	(4)			Not Detected					1
133) Pentachlorophenol	(4)			Not Detected					1
143) Phenanthrene	(4)			Not Detected					0.1
144) Anthracene	(4)			Not Detected					0.1
146) Carbazole	(4)			Not Detected					0.5
149) Di-n-butylphthalate	(4)			Not Detected					2
157) Fluoranthene	(4)			Not Detected					0.1
165) Pyrene	(5)			Not Detected					0.1
173) Butylbenzylphthalate	(5)			Not Detected					2
175) 3,3'-Dichlorobenzidine	(5)			Not Detected					3
177) Benzo(a)anthracene	(5)			Not Detected					0.1
178) Chrysene	(5)			Not Detected					0.1
179) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					2
183) Di-n-octylphthalate	(6)			Not Detected					2
185) Benzo(b)fluoranthene	(6)			Not Detected					0.1
186) Benzo(k)fluoranthene	(6)			Not Detected					0.1
187) Benzo(a)pyrene	(6)	13.941(0.000)	252	2404M	0.145	95.18			0.1
193) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
194) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
196) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49. Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:16. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

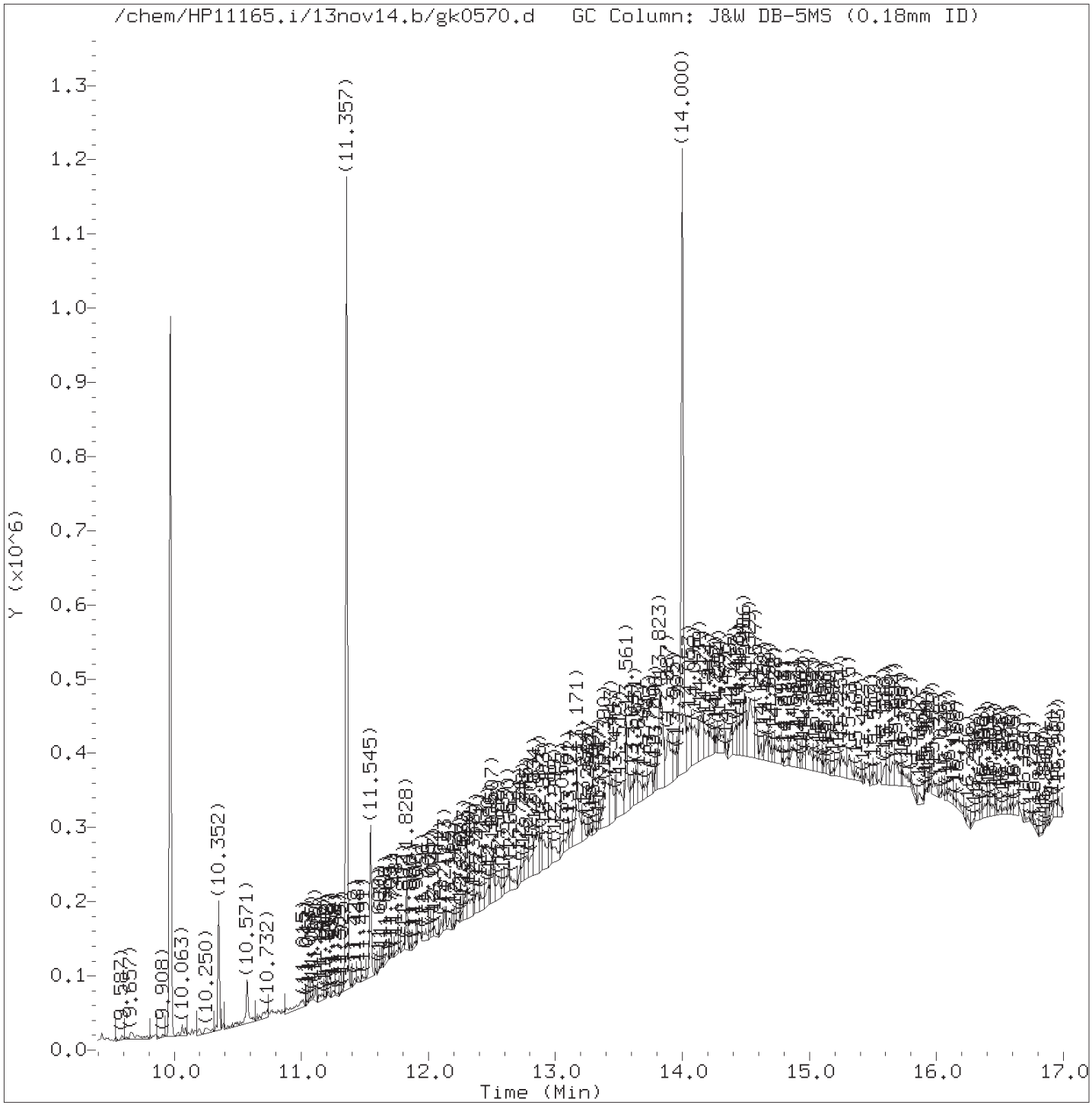
Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Digitally signed by Brian K. Graham
on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Digitally signed by Brian K. Graham
on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

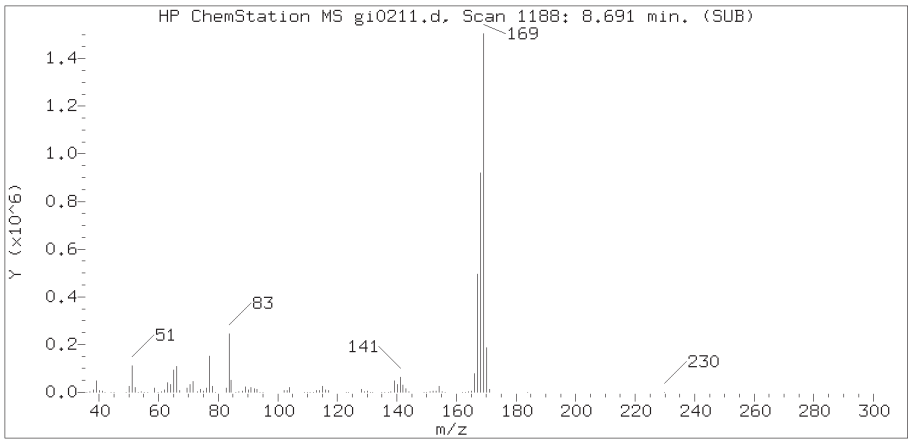
Sample Name: WHERC Lab Sample ID: 7263052

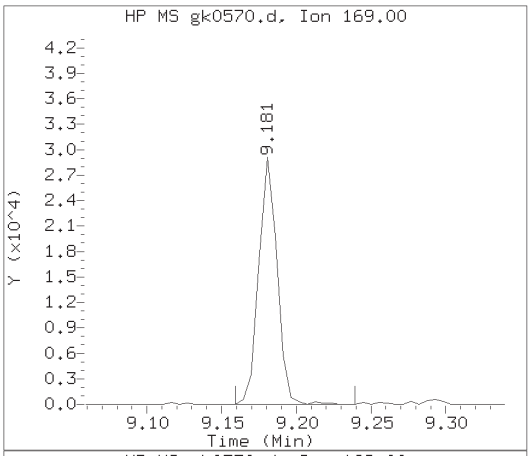
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
10)$2-Fluorophenol	(1)	4.324	112	46139	8.084
17)$Phenol-d6	(1)	5.265	99	64238	7.481
25)*1,4-Dichlorobenzene-d4	(1)	5.570	152	72024	20.000
41)$Nitrobenzene-d5	(2)	6.110	82	27660	3.714
63)*Naphthalene-d8	(2)	6.806	136	337836	20.000
84)$2-Fluorobiphenyl	(3)	7.870	172	46888	3.828
101)*Acenaphthene-d10	(3)	8.517	164	201103	20.000
118) N-Nitrosodiphenylamine	(4)	9.181	169	24807	2.074
121)$2,4,6-Tribromophenol	(3)	9.293	330	9508	7.076
140)*Phenanthrene-d10	(4)	9.972	188	359680	20.000
164)*Pyrene-d10	(5)	11.357	212	397306	20.000
166)$Terphenyl-d14	(5)	11.545	244	61020	4.306
187) Benzo(a)pyrene	(6)	13.941	252	2404M	0.145
188)*Perylene-d12	(6)	14.000	264	308511	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

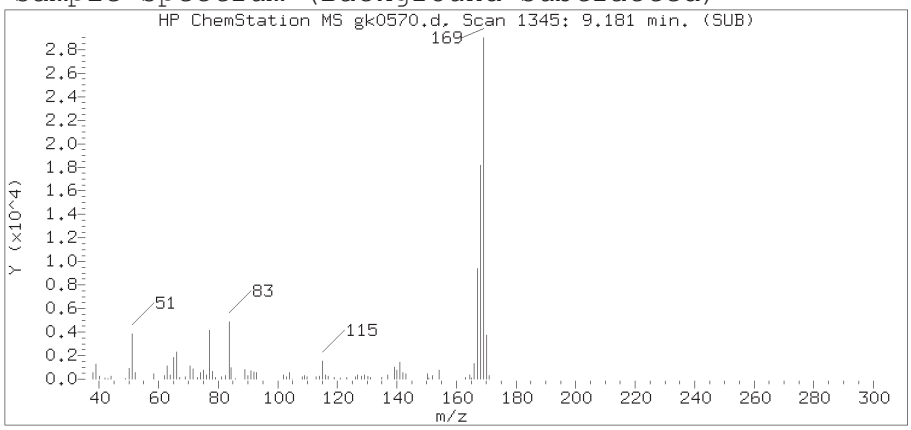
Digitally signed by Brian K. Graham
on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

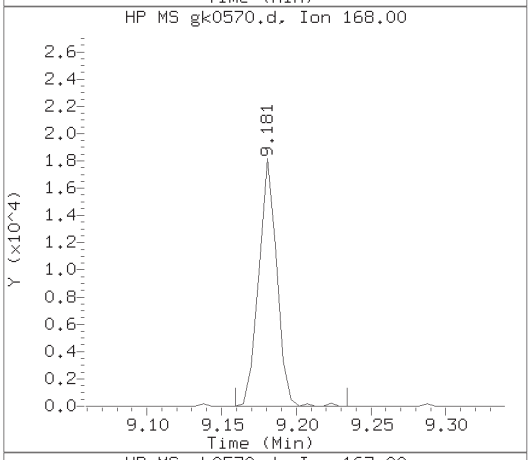
Reference Standard Spectrum for N-Nitrosodiphenylamine



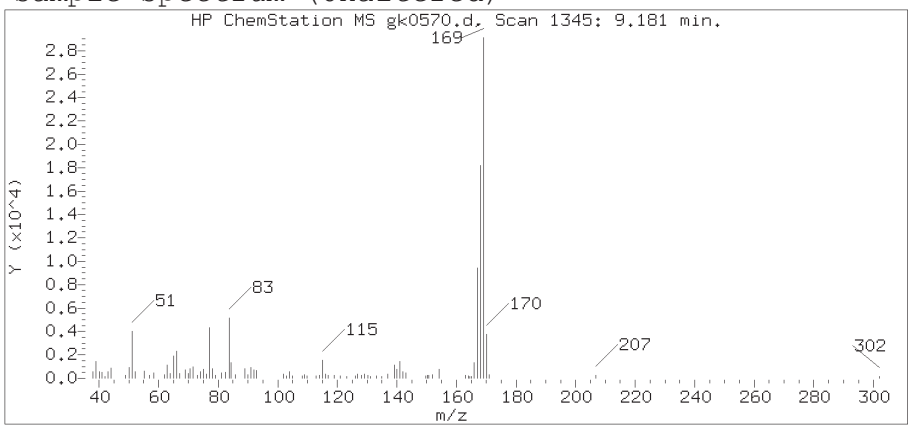


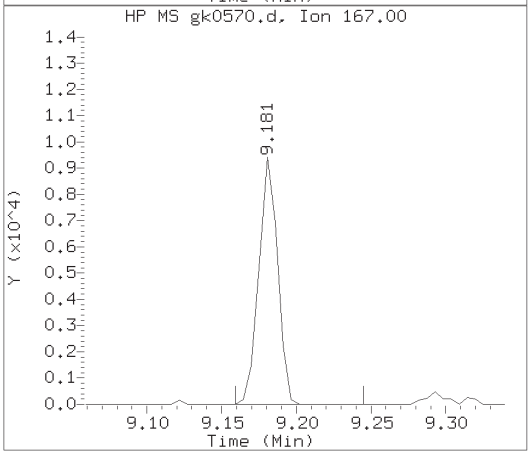
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

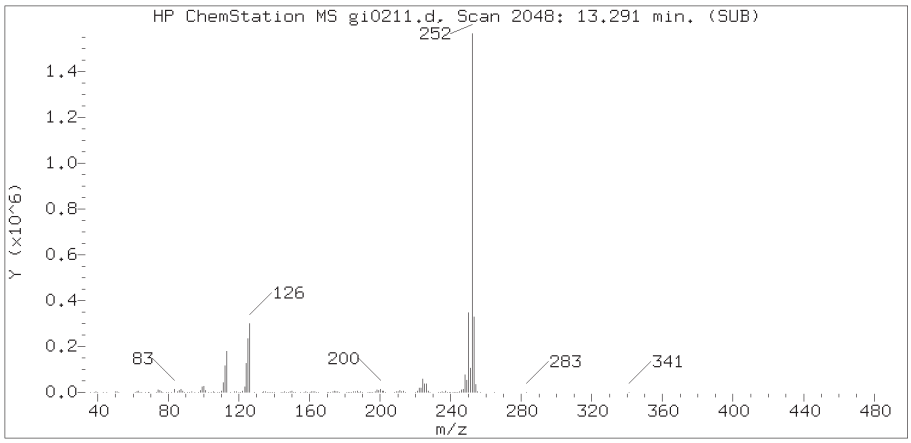
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

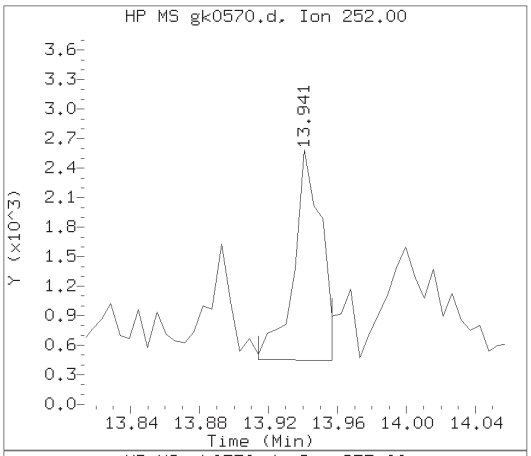
Sample Name: WHERC Lab Sample ID: 7263052

Compound Number	: 118
Compound Name	: N-Nitrosodiphenylamine
Scan Number	: 1345
Retention Time (minutes)	: 9.181
Relative Retention Time	: 0.00054
Quant Ion	: 169.00
Area (flag)	: 24807
On-column Amount (ng/ul)	: 2.0742

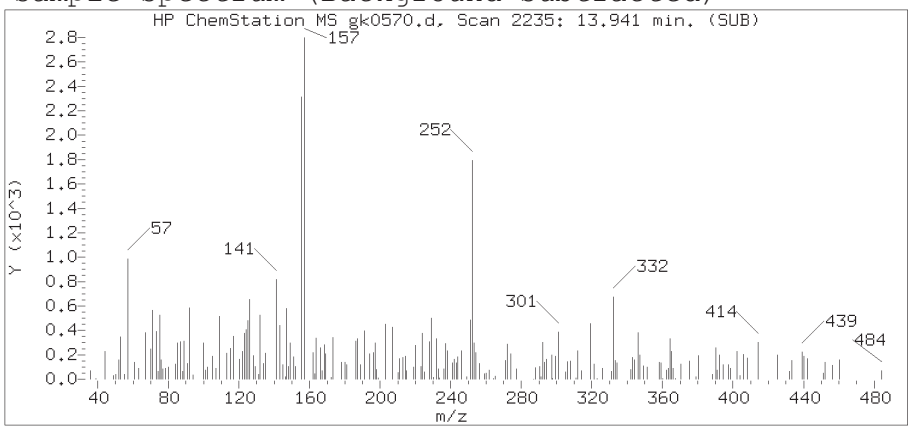
Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature ID: bkg00522

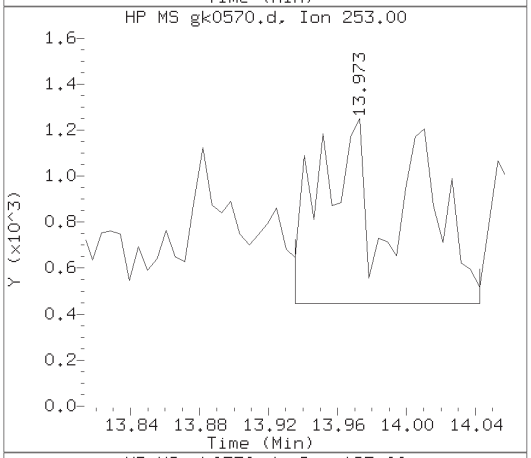
Reference Standard Spectrum for Benzo(a)pyrene



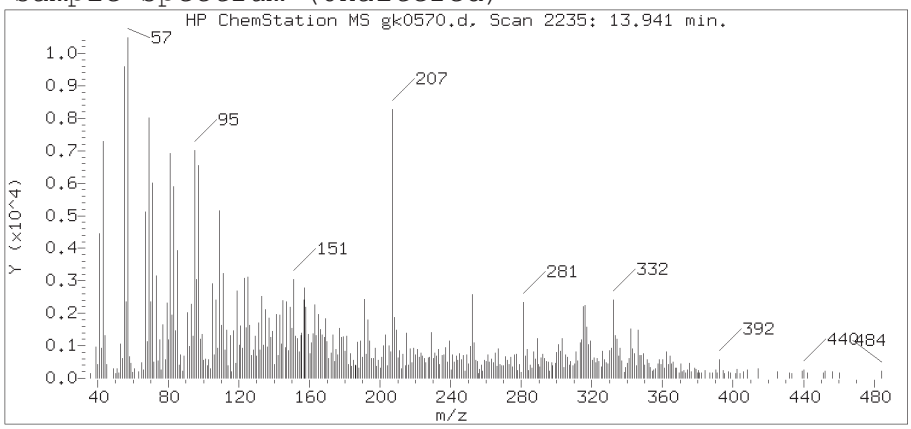


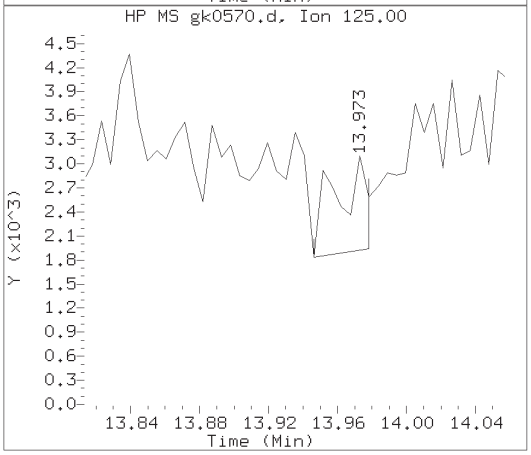
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

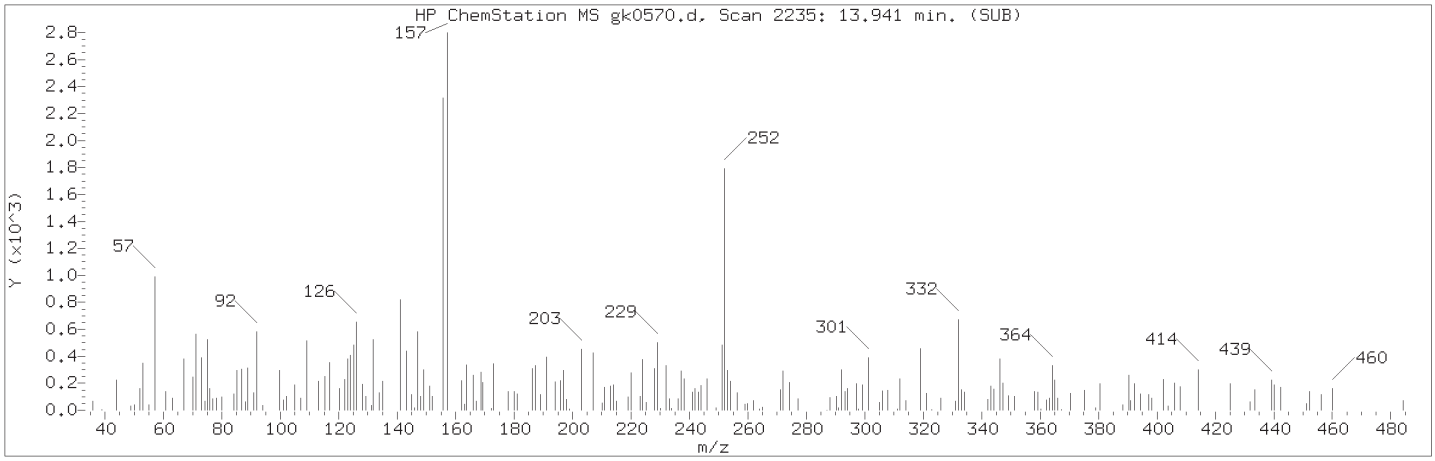
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

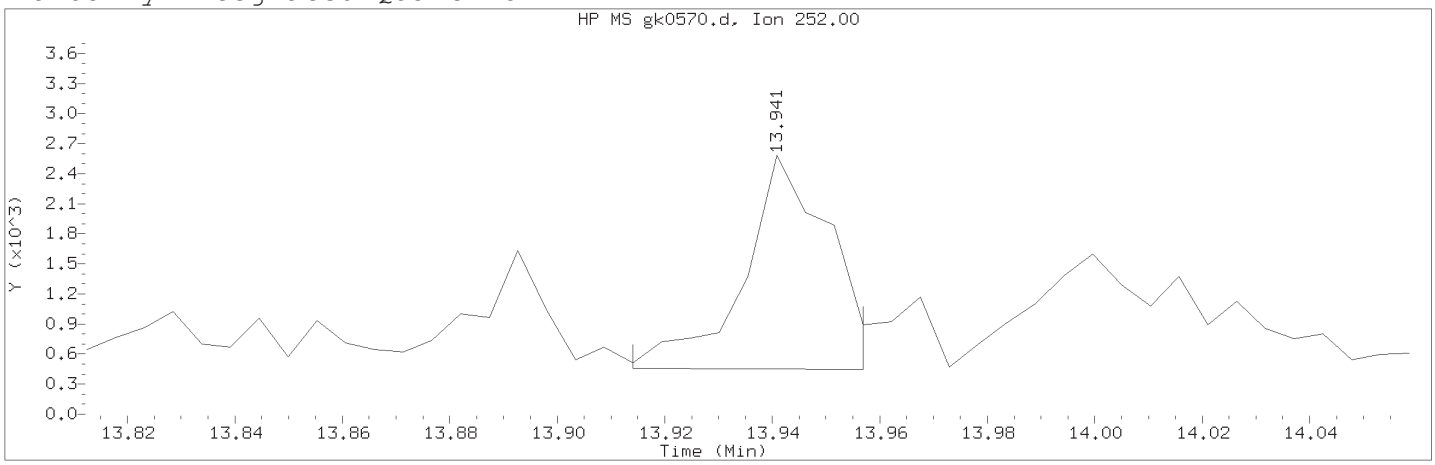
Compound Number	: 187
Compound Name	: Benzo(a)pyrene
Scan Number	: 2235
Retention Time (minutes)	: 13.941
Relative Retention Time	: 0.00076
Quant Ion	: 252.00
Area (flag)	: 2404M
On-column Amount (ng/ul)	: 0.1447

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

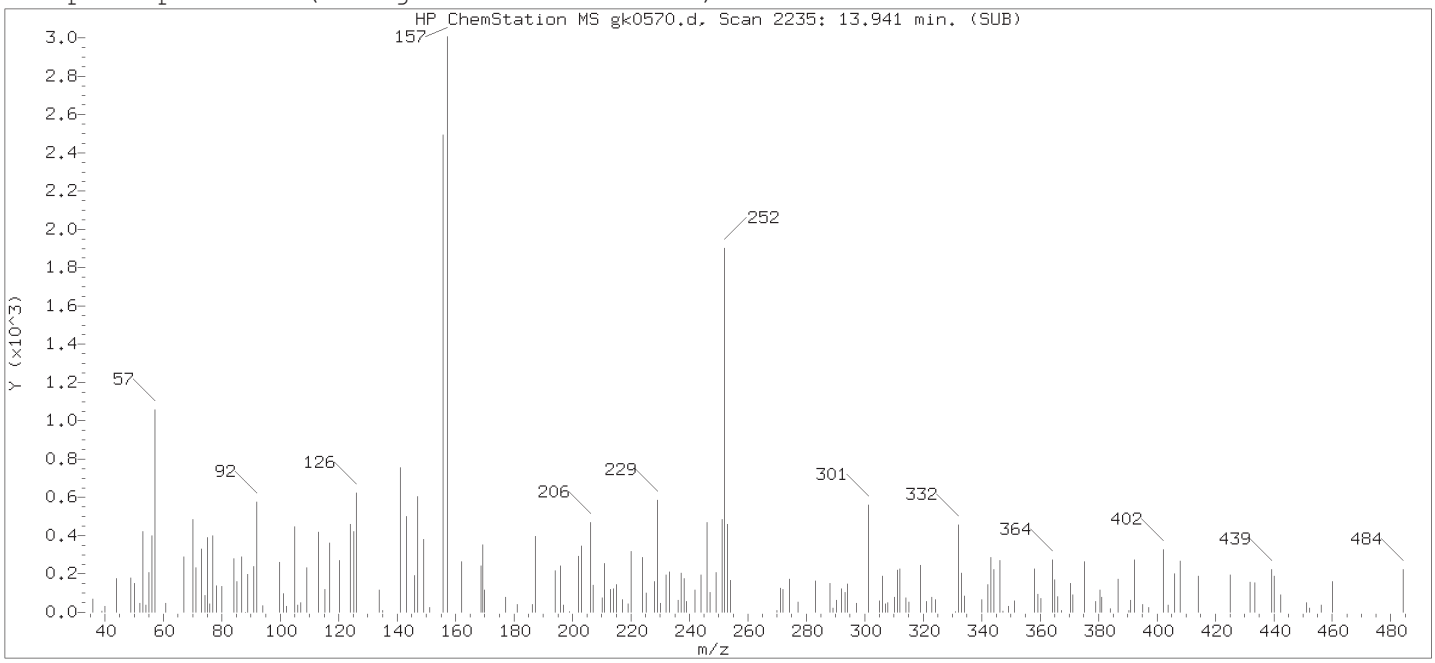
Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2235		
Retention Time (minutes)	: 13.941		
Quant Ion	: 252.00		
Area (flag)	: 2404M		
On-column Amount (ng/ul)	: 0.1447		
Integration start scan	: 2229	Integration stop scan:	2237
Y at integration start	: 456	Y at integration end:	449

Reason for manual integration: improper integration

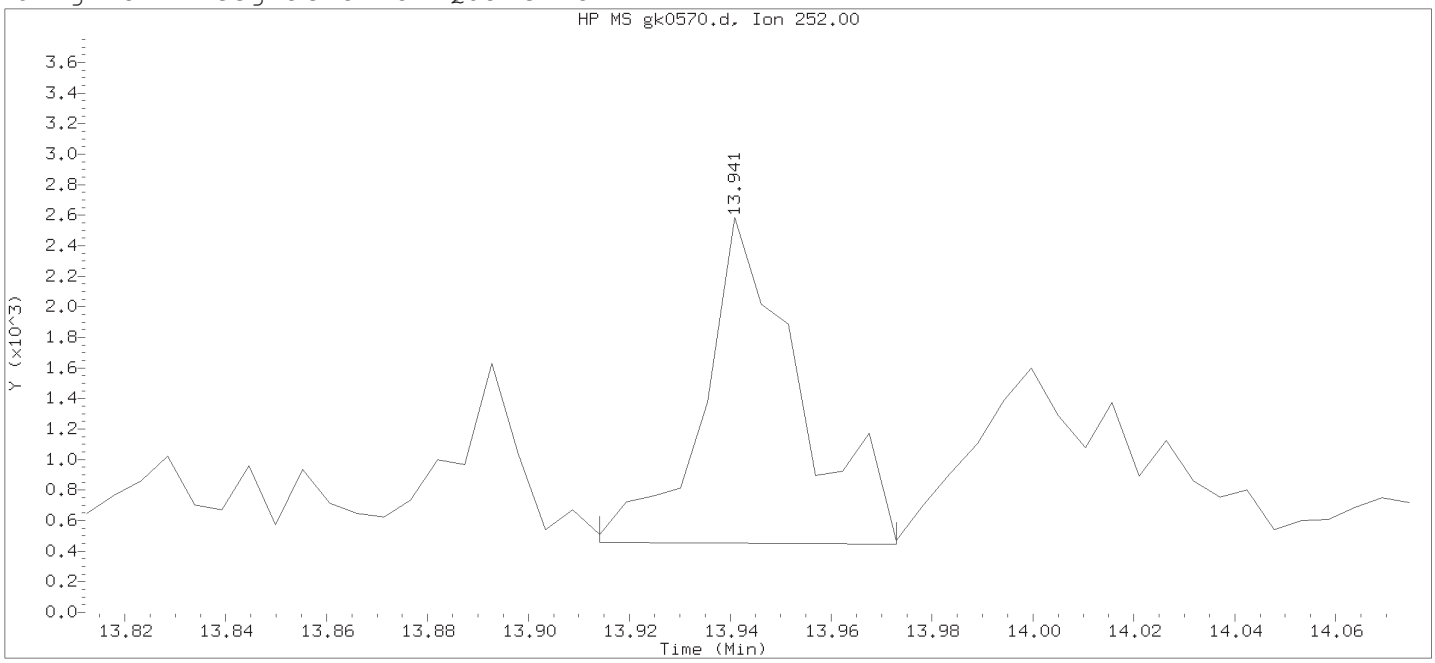
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:16.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:20 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2235		
Retention Time (minutes)	: 13.941		
Quant Ion	: 252.00		
Area	: 2786		
On-column Amount (ng/ul)	: 0.1676		
Integration start scan	: 2229	Integration stop scan:	2240
Y at integration start	: 456	Y at integration end:	445

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

WHERC

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 7263052

Sample wt/vol: 30.4 (g/mL) g Lab File ID: gk0570.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: 64 Decanted: (Y/N) Date Extracted: 11/11/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/13

Injection Volume: 1 (uL) Dilution Factor: 20

GPC Cleanup: N pH: Extraction: Mic

Number TICs found: 5 CONCENTRATION UNITS: (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.024	9.5	J
2.		Unknown	3.955	4.1	J
3.		Unknown	10.063	36	J
4.		Unknown	13.823	11	J
5.		Unknown	14.529	7.5	J
6.					
7.	SVOCTIC	Total SVOC TICs		68	J
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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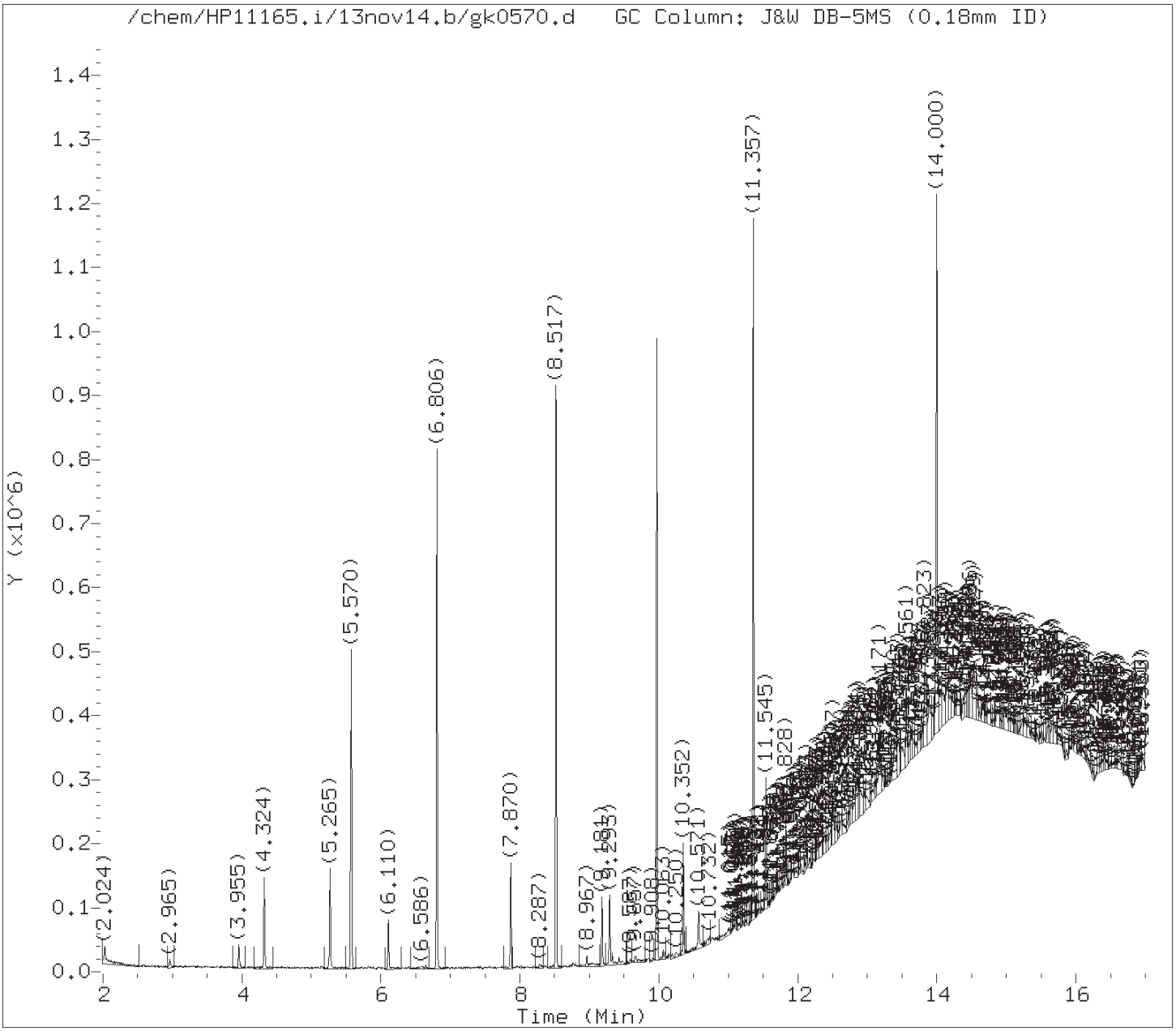
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

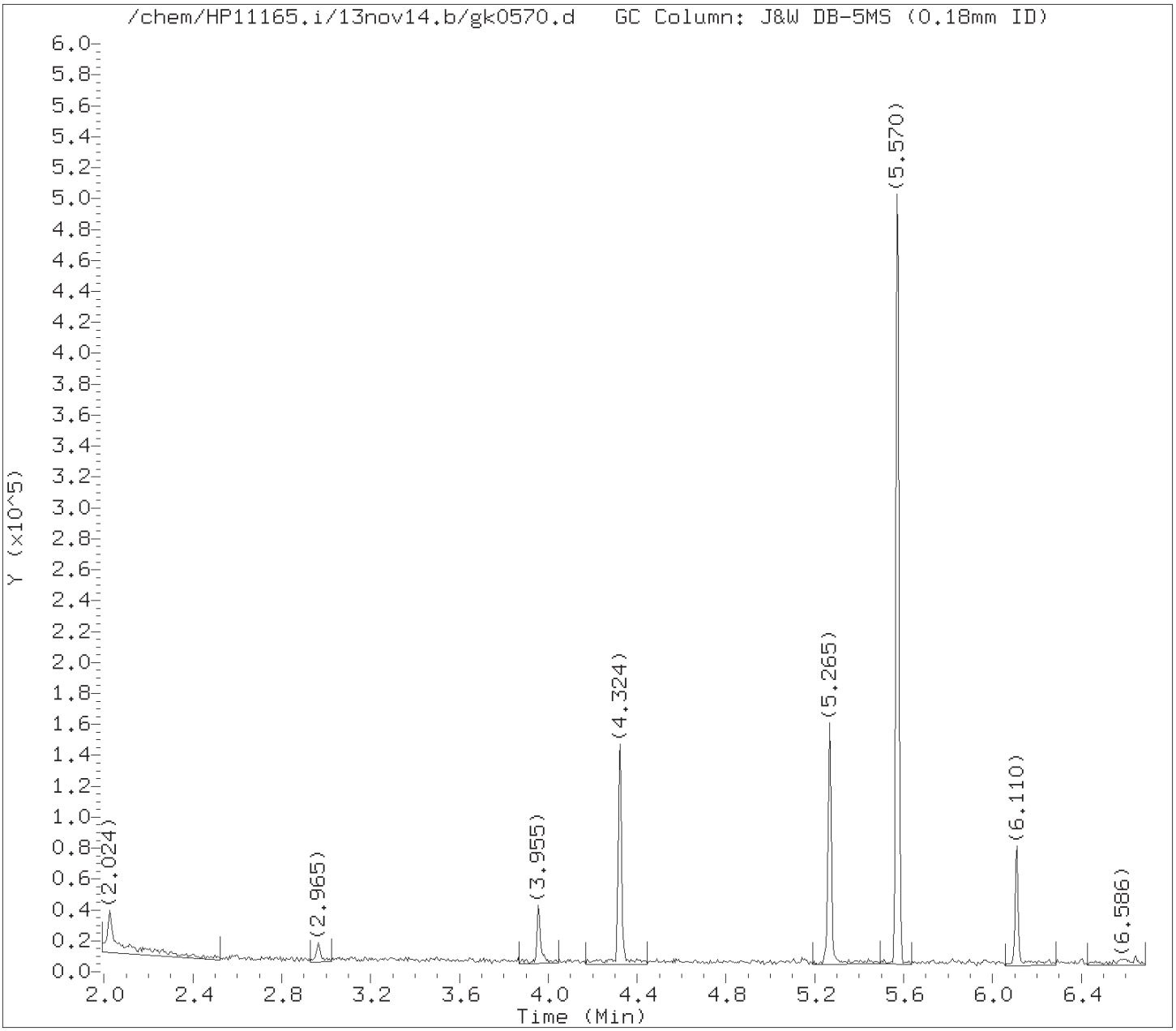
Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Chromatogram Start Time (min.): 1.992
Chromatogram End Time (min.): 17.000

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

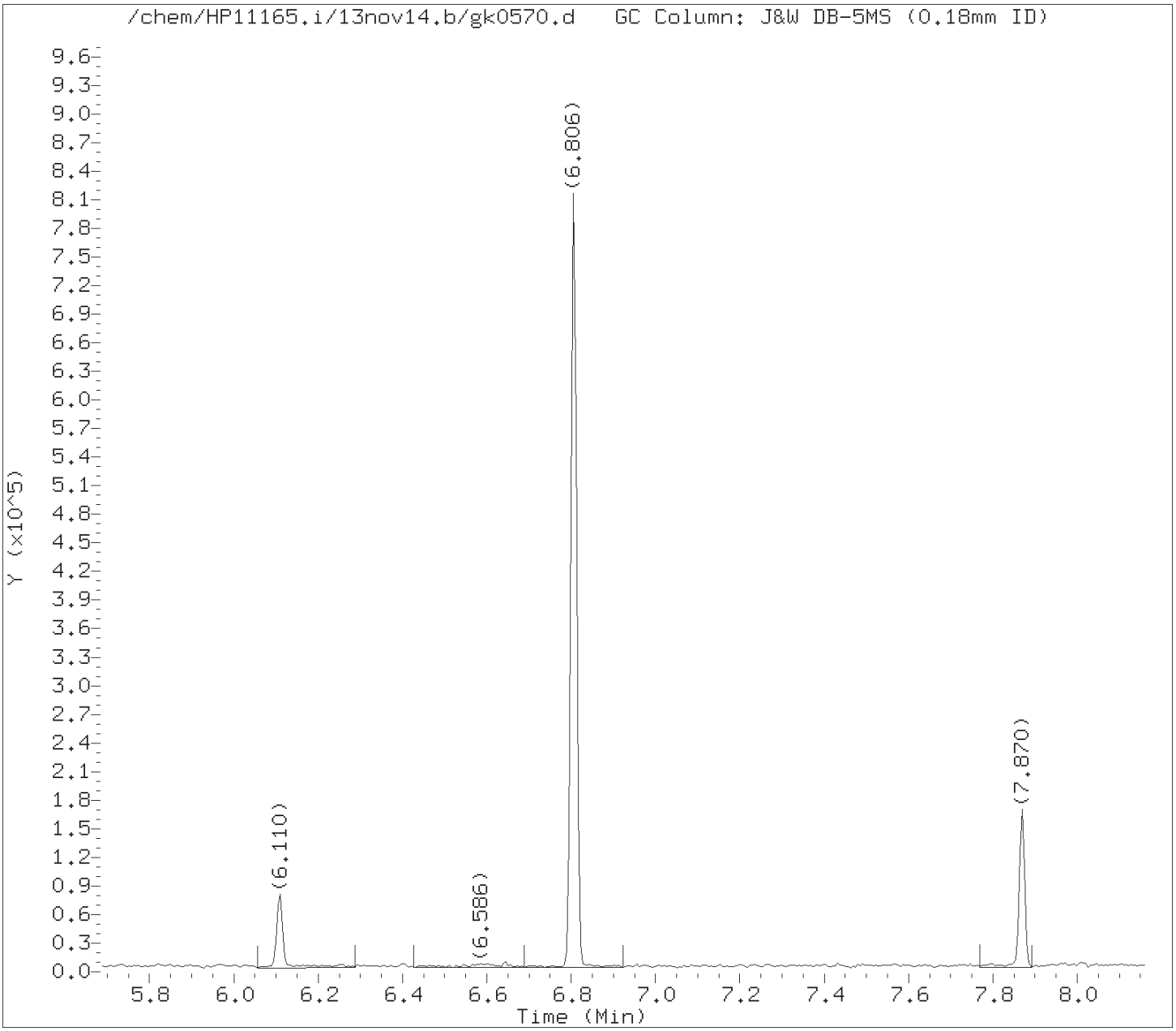
Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.570 minutes
Chromatogram Start Time (min.): 1.992
Chromatogram End Time (min.): 6.188

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

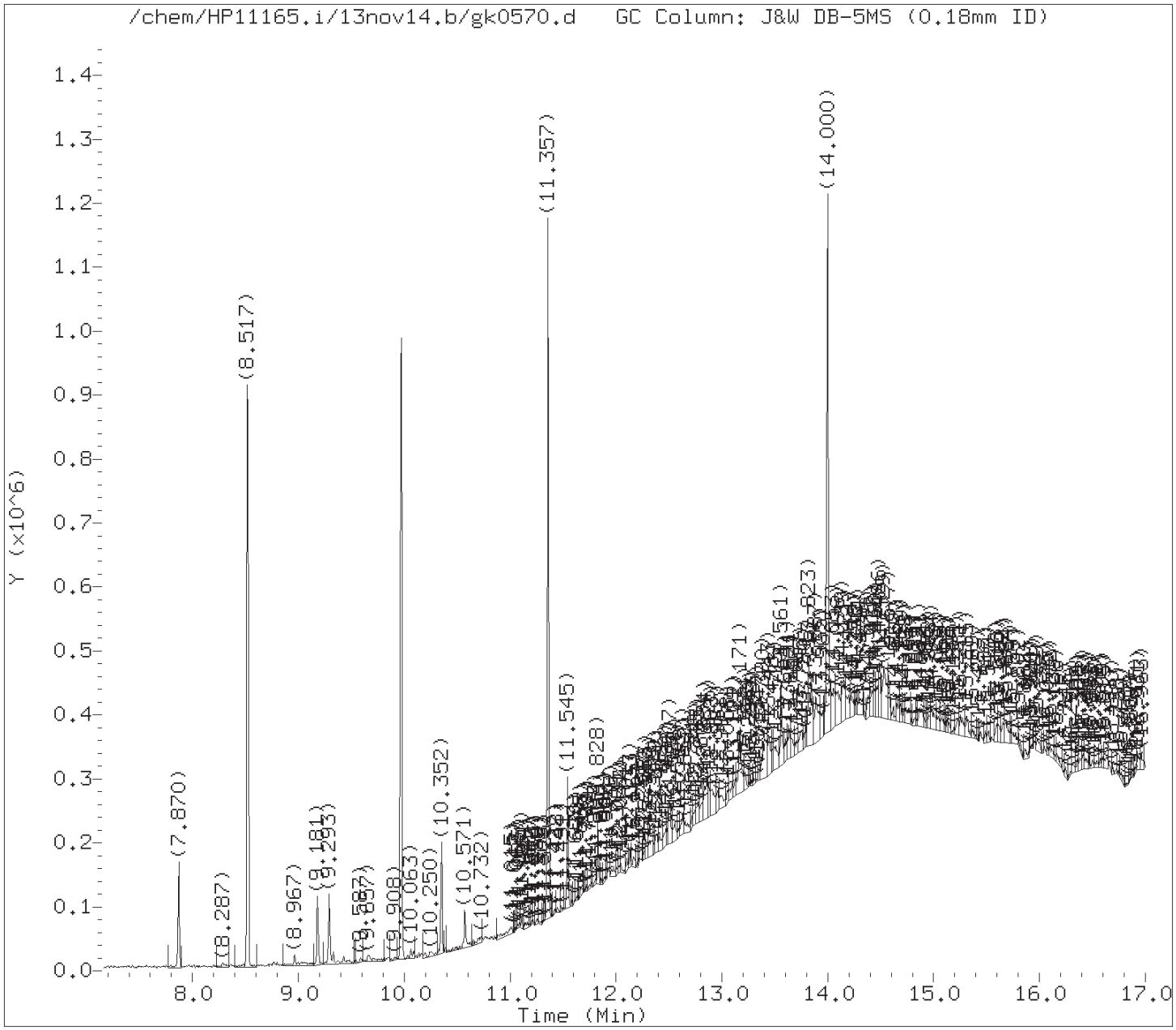
Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: Naphthalene-d8 at 6.806 minutes
Chromatogram Start Time (min.): 6.188
Chromatogram End Time (min.): 7.662

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

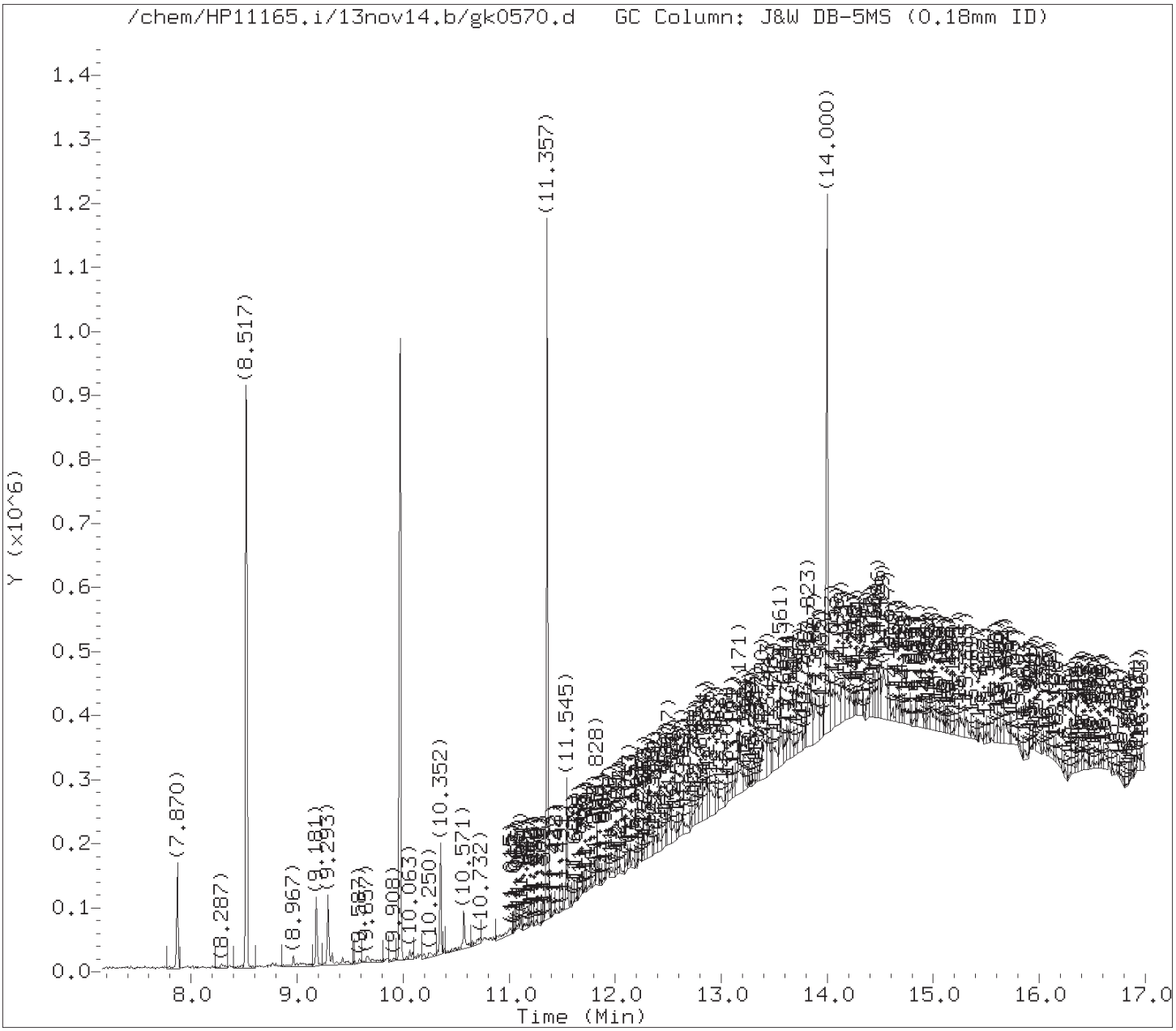
Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: Acenaphthene-d10 at 8.517 minutes
Chromatogram Start Time (min.): 7.662
Chromatogram End Time (min.): 9.245

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

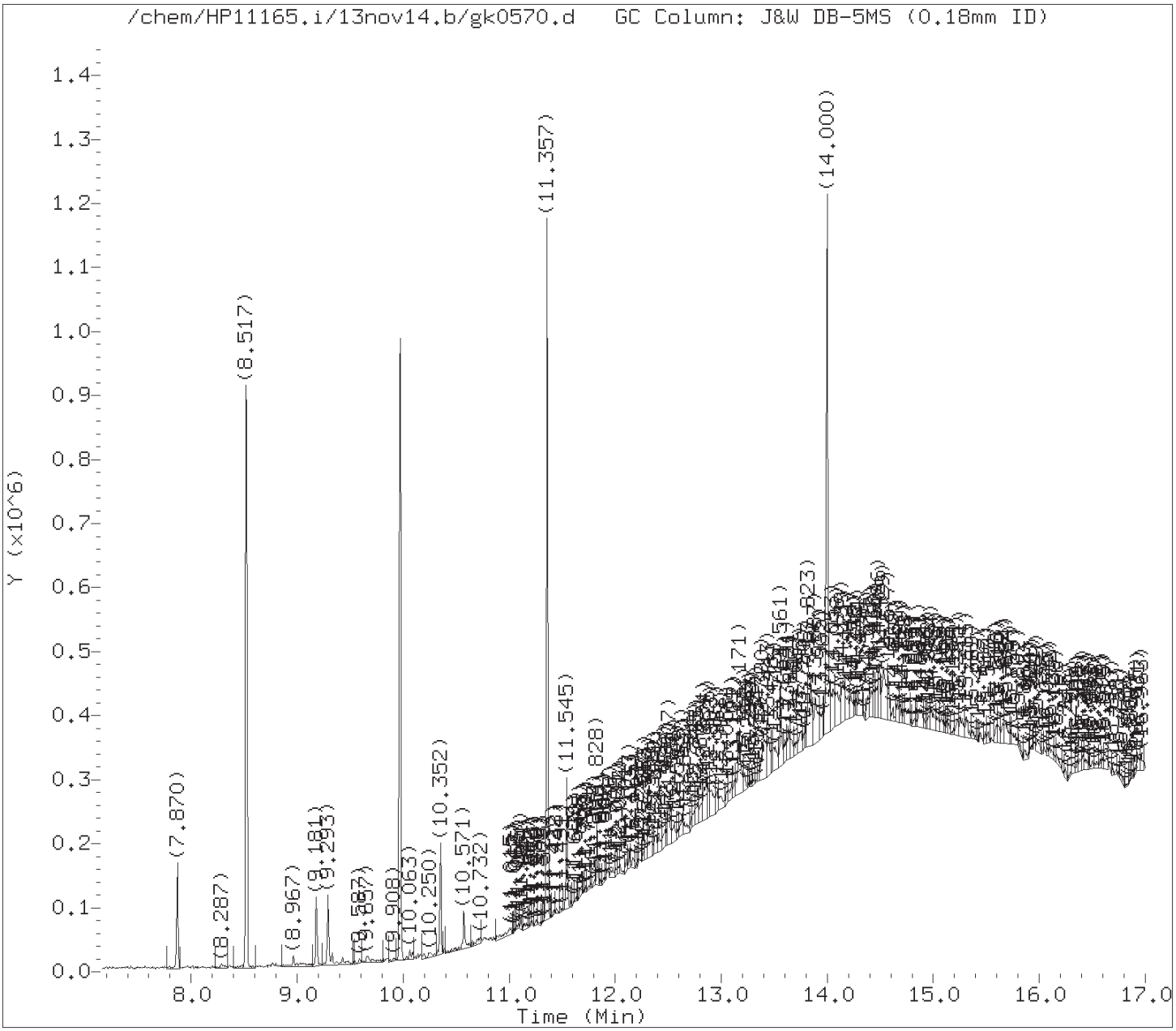
Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: Phenanthrene-d10 at 9.972 minutes
Chromatogram Start Time (min.): 9.245
Chromatogram End Time (min.): 10.665

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: Pyrene-d10 at 11.357 minutes
Chromatogram Start Time (min.): 10.665
Chromatogram End Time (min.): 12.679

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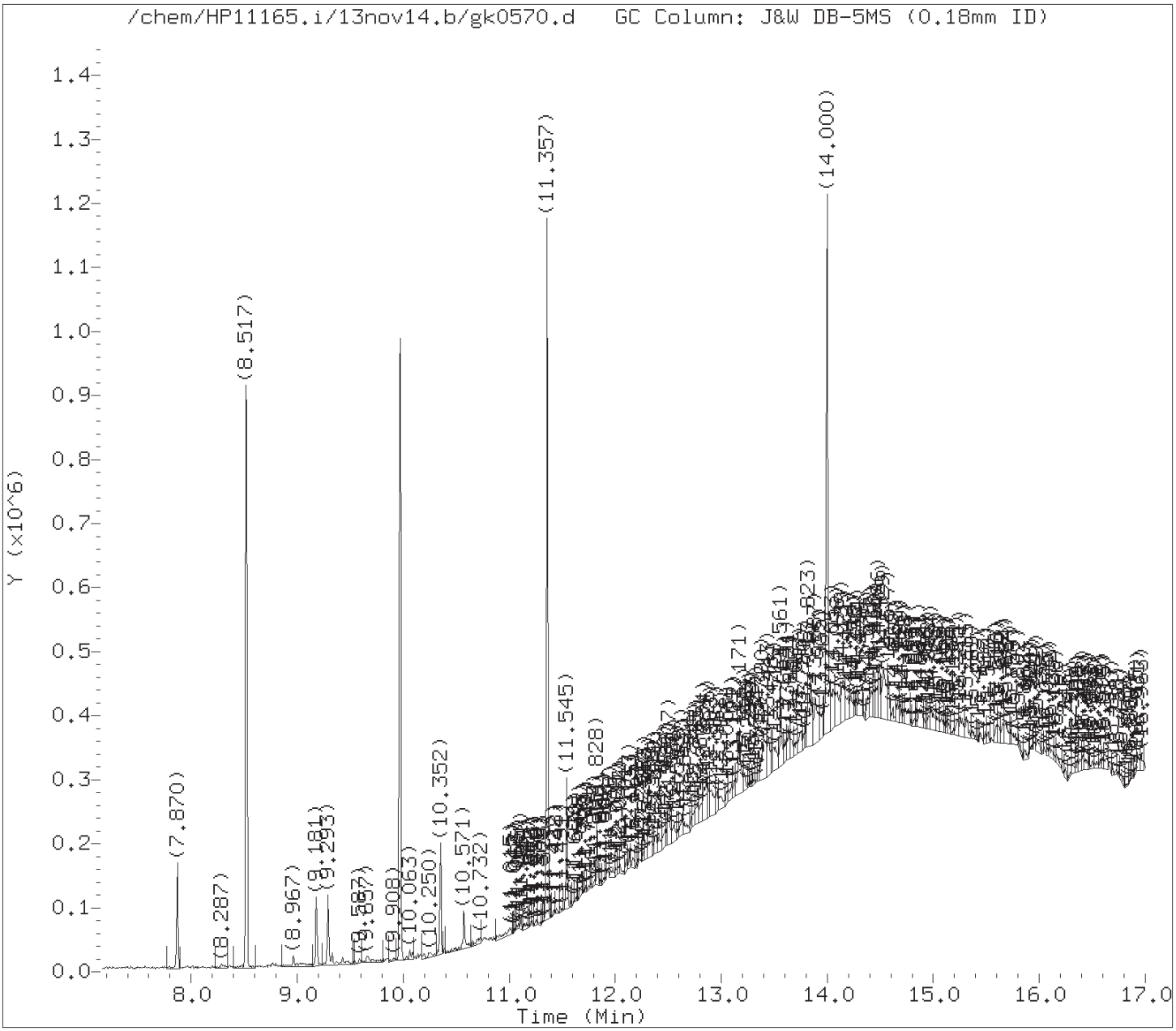
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0570.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:04 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:27 bkg00522

Sample Name: WHERC Lab Sample ID: 7263052

Internal Standard referenced: Perylene-d12 at 14.000 minutes
Chromatogram Start Time (min.): 12.679
Chromatogram End Time (min.): 17.000

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Lancaster Labs

Data file : /chem/HP11165.i/13nov14.b/gk0570.d
Lab Smp Id: 7263052 Client Smp ID: WHERC
Inj Date : 14-NOV-2013 10:04
Operator : bkg00522 Inst ID: HP11165.i
Smp Info : WHERC;7263052;2;0;SAMPLE;;;
Misc Info : 13313SLC;1847.sub;30.4;;1000;0;gk0517;10727;
Comment : Max. number of TICs to report is 20, 5 TICs were found initially.
Method : /chem/HP11165.i/13nov14.b/mnew8270.m
Meth Date : 14-Nov-2013 03:02 bkg00522 Quant Type: ISTD
Cal Date : 09-NOV-2013 22:09 Cal File: gk0325.d
Als bottle: 27
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50
Processing Host: d26cs02

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	30.40000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 25 1,4-Dichlorobenzene-d4	5.570	480534	20.000
* 164 Pyrene-d10	11.357	1021981	20.000
* 188 Perylene-d12	14.000	1023245	20.000

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.024	124933	5.19974917	3420.88761	0		0	25
Unknown				CAS #:			
3.955	53564	2.22936842	1466.68975	0		0	25(L)
Unknown				CAS #:			
10.063	1001875	19.6065091	12899.01913	0		0	164
Unknown				CAS #:			
13.823	303152	5.92531229	3898.23176	0		0	188
Unknown				CAS #:			
14.529	210844	4.12107521	2711.23369	0		0	188

QC Flag Legend

L - Operator selected an alternate library search match.

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0570.d

Date : 14-NOV-2013 10:04

Client ID: WHERC

Instrument: HP11165.i

Sample Info: WHERC;7263052;2;0;SAMPLE;;;

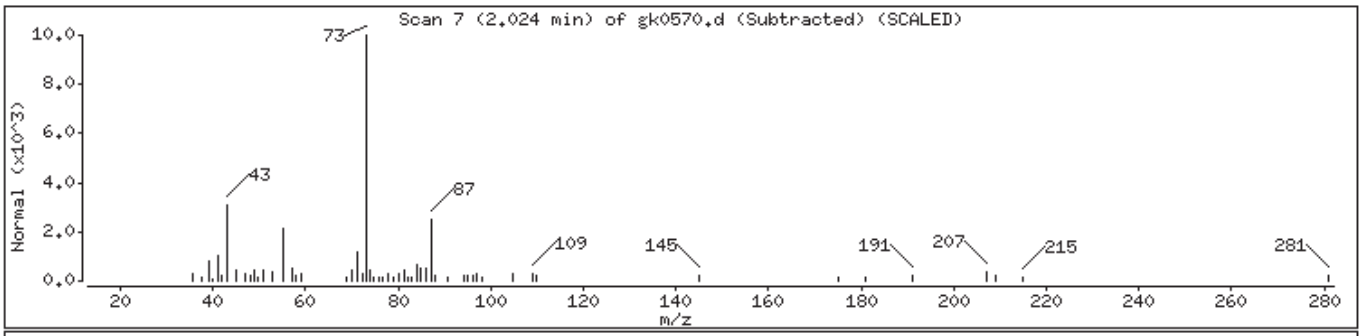
Volume Injected (uL): 1.0

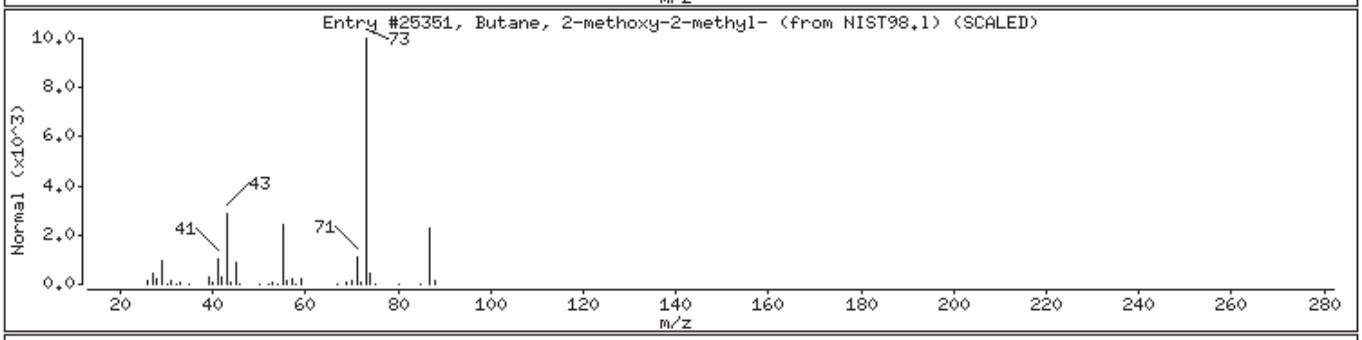
Operator: bkg00522

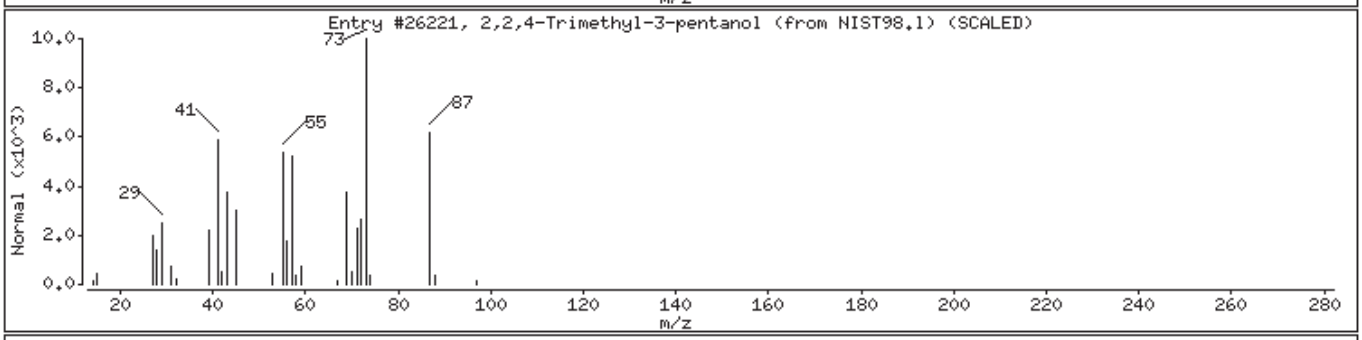
Column phase: J&W DB-5MS

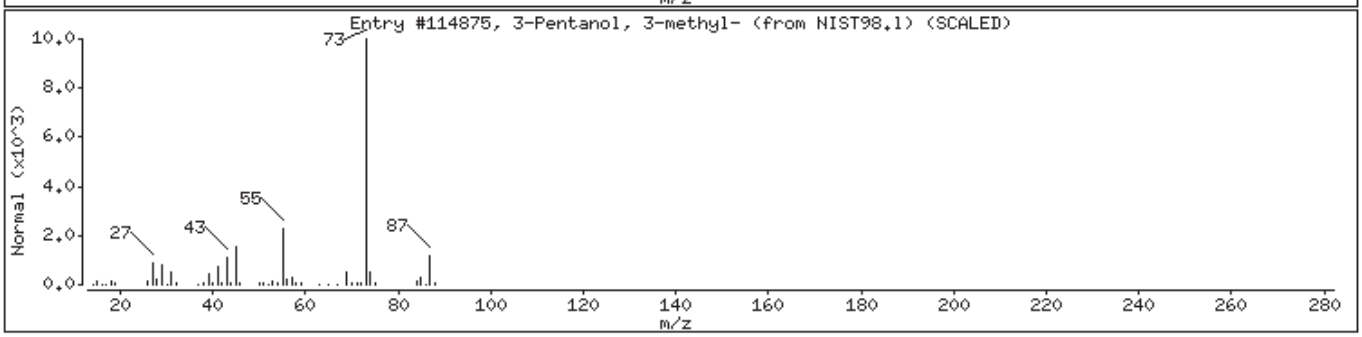
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Butane, 2-methoxy-2-methyl-	994-05-8	NIST98.l	25351	47	C6H140	102
2,2,4-Trimethyl-3-pentanol	5162-48-1	NIST98.l	26221	23	C8H180	130
3-Pentanol, 3-methyl-	77-74-7	NIST98.l	114875	17	C6H140	102









Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0570.d

Date : 14-NOV-2013 10:04

Client ID: WHERC

Instrument: HP11165.i

Sample Info: WHERC;7263052;2;0;SAMPLE;;;

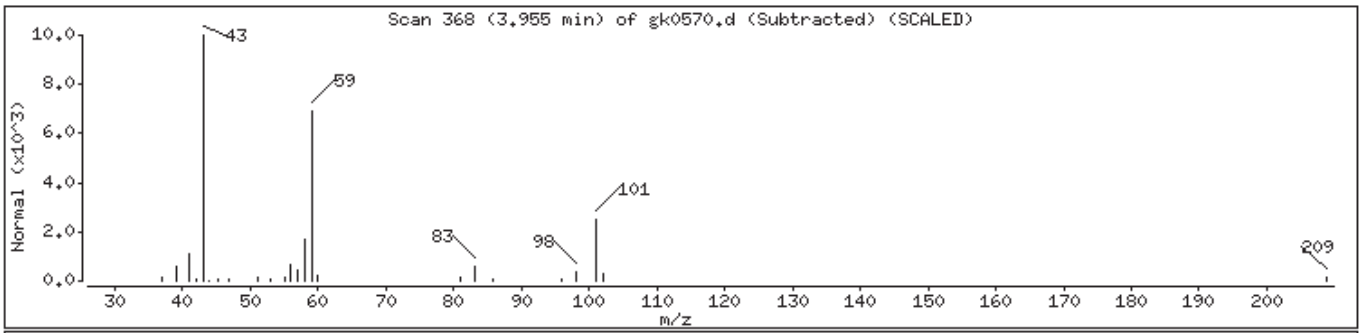
Volume Injected (uL): 1.0

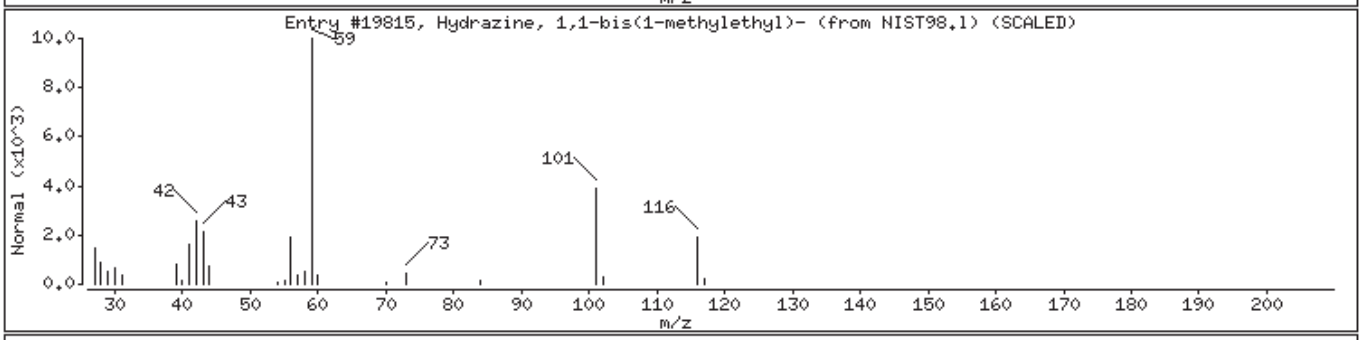
Operator: bkg00522

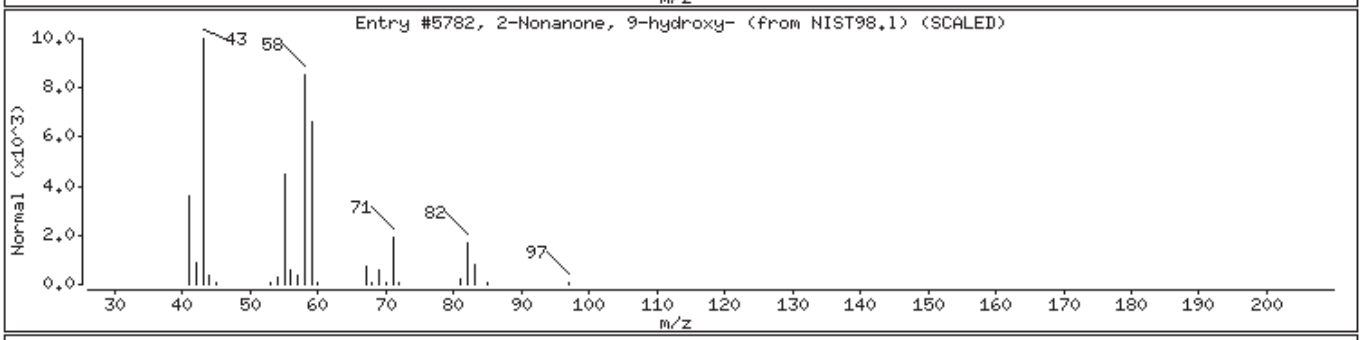
Column phase: J&W DB-5MS

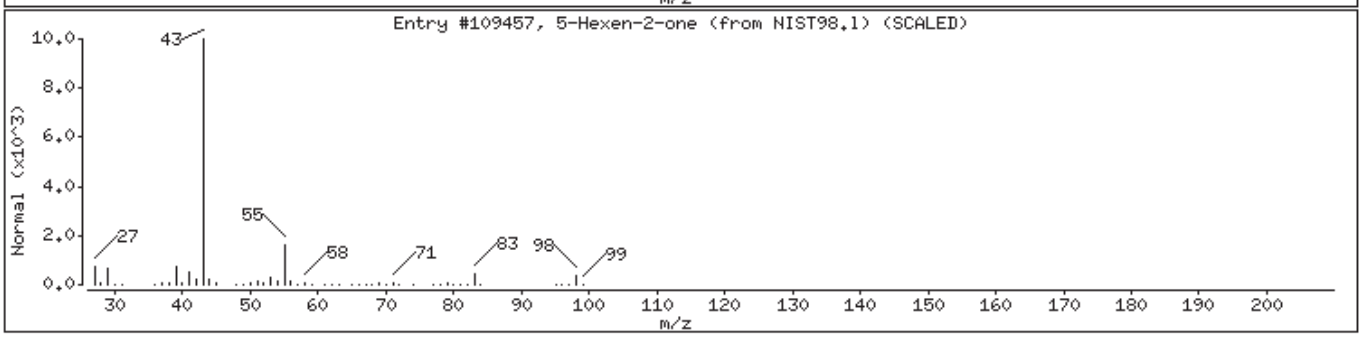
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hydrazine, 1,1-bis(1-methylethyl)-	921-14-2	NIST98.l	19815	33	C6H16N2	116
2-Nonanone, 9-hydroxy-	25368-56-3	NIST98.l	5782	28	C9H18O2	158
5-Hexen-2-one	109-49-9	NIST98.l	109457	9	C6H10O	98









Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0570.d

Date : 14-NOV-2013 10:04

Client ID: WHERC

Instrument: HP11165.i

Sample Info: WHERC;7263052;2;0;SAMPLE;;;

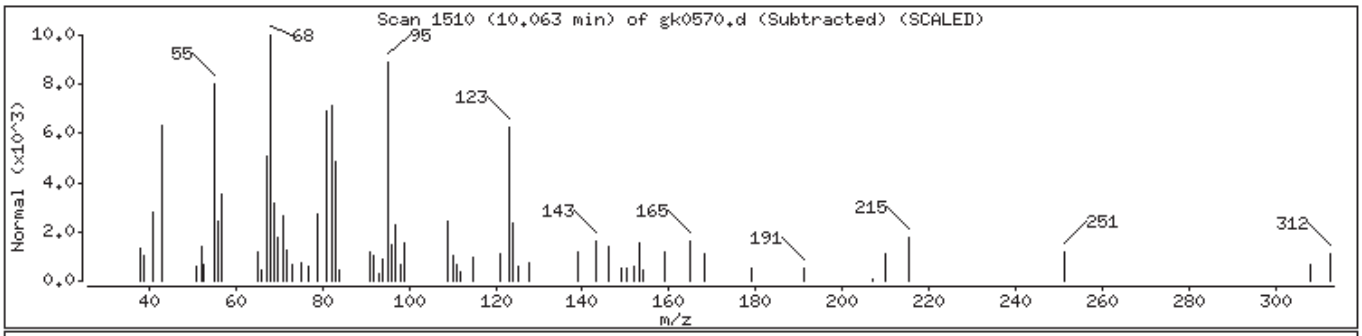
Volume Injected (uL): 1.0

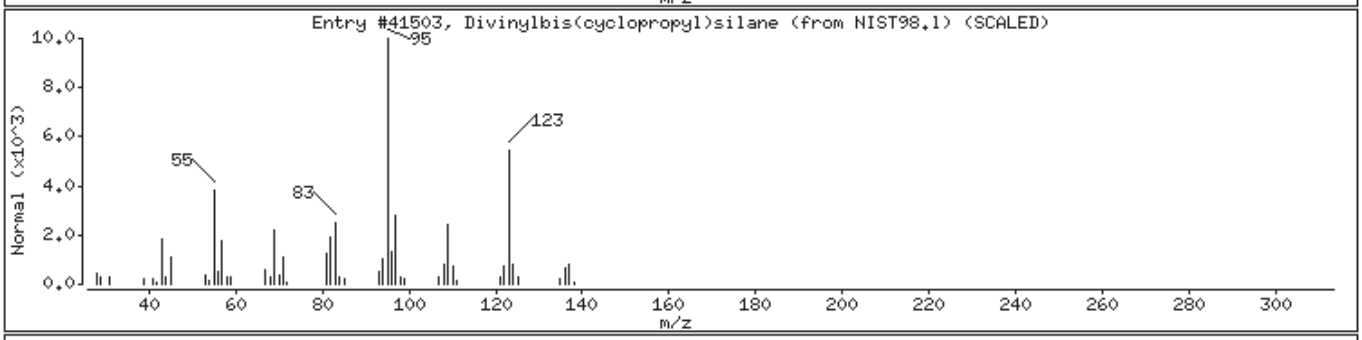
Operator: bkg00522

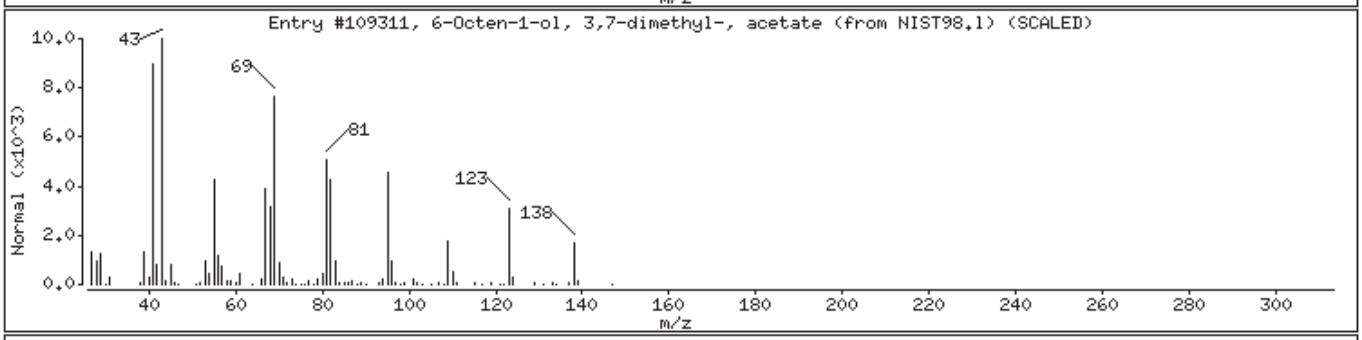
Column phase: J&W DB-5MS

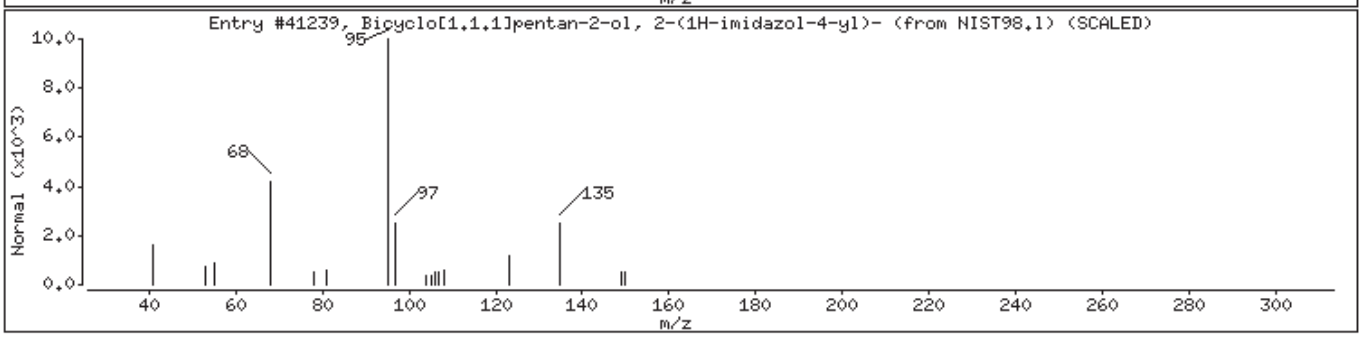
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Divinylbis(cyclopropyl)silane	1000109-95-2	NIST98.1	41503	43	C10H16Si	164
6-Octen-1-ol, 3,7-dimethyl-, acetate	150-84-5	NIST98.1	109311	43	C12H22O2	198
Bicyclo[1.1.1]pentan-2-ol, 2-(1H-imidazo	69393-38-0	NIST98.1	41239	43	C8H10N2O	150









Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0570.d

Date : 14-NOV-2013 10:04

Client ID: WHERC

Instrument: HP11165.i

Sample Info: WHERC;7263052;2;0;SAMPLE;;;

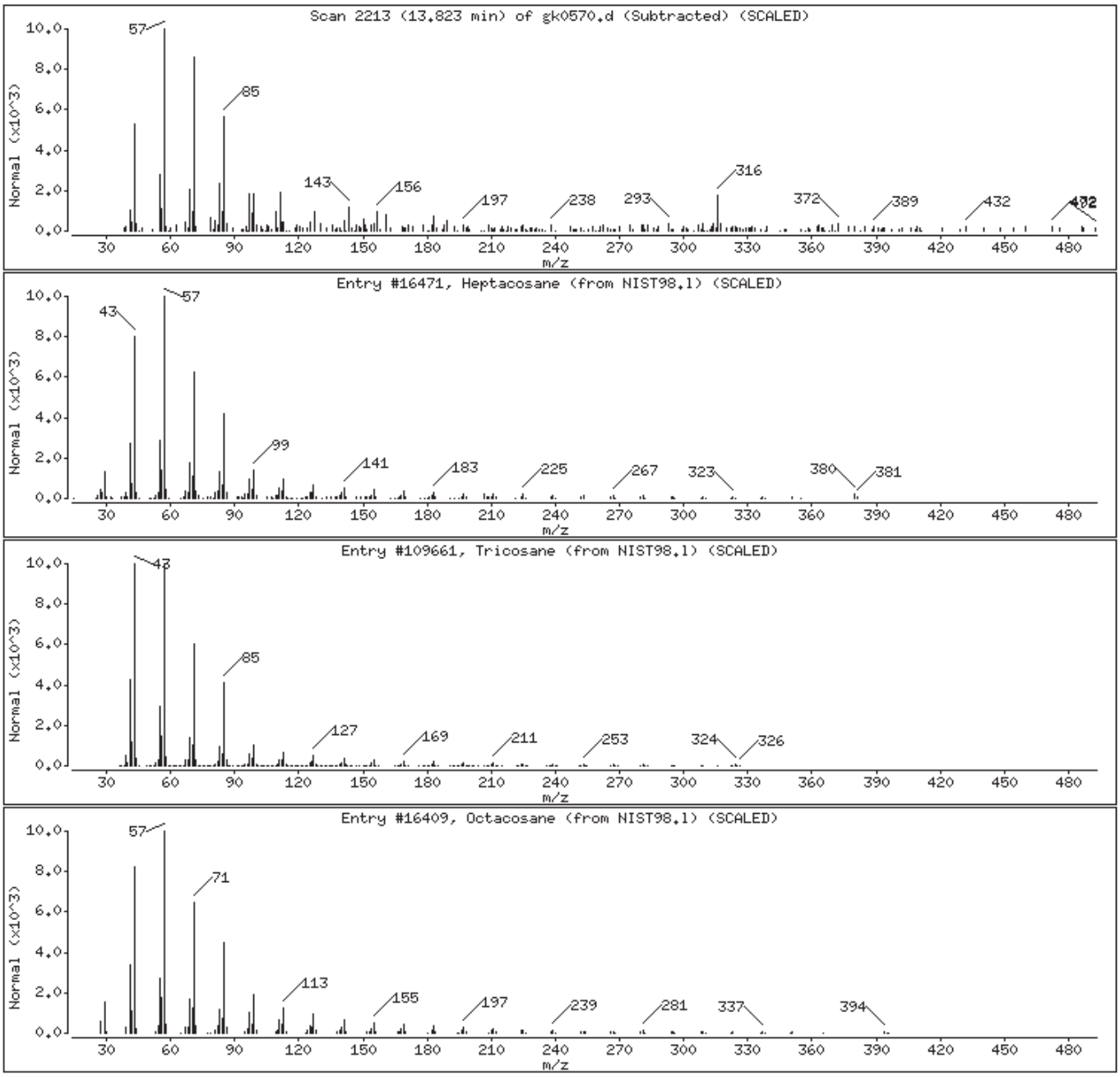
Volume Injected (uL): 1.0

Operator: bkg00522

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Heptacosane	593-49-7	NIST98.1	16471	76	C27H56	380
Tricosane	638-67-5	NIST98.1	109661	76	C23H48	324
Octacosane	630-02-4	NIST98.1	16409	76	C28H58	394



Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0570.d

Date : 14-NOV-2013 10:04

Client ID: WHERC

Instrument: HP11165.i

Sample Info: WHERC;7263052;2;0;SAMPLE;;;

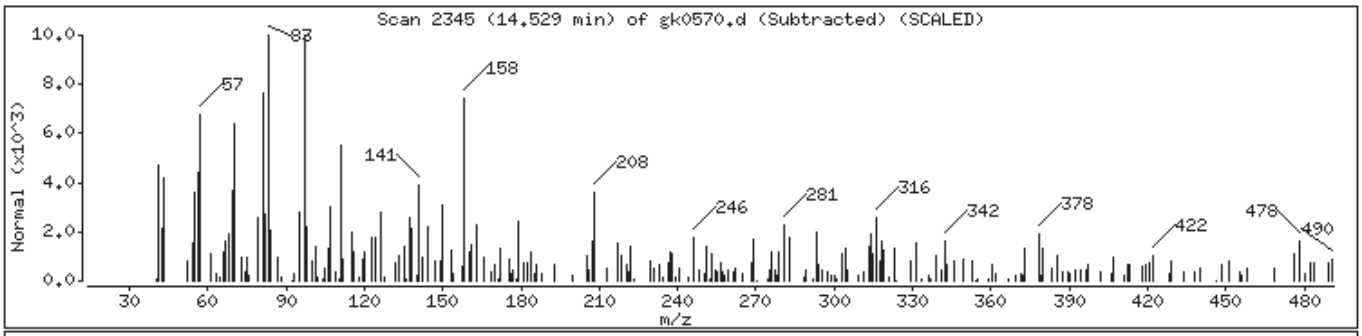
Volume Injected (uL): 1.0

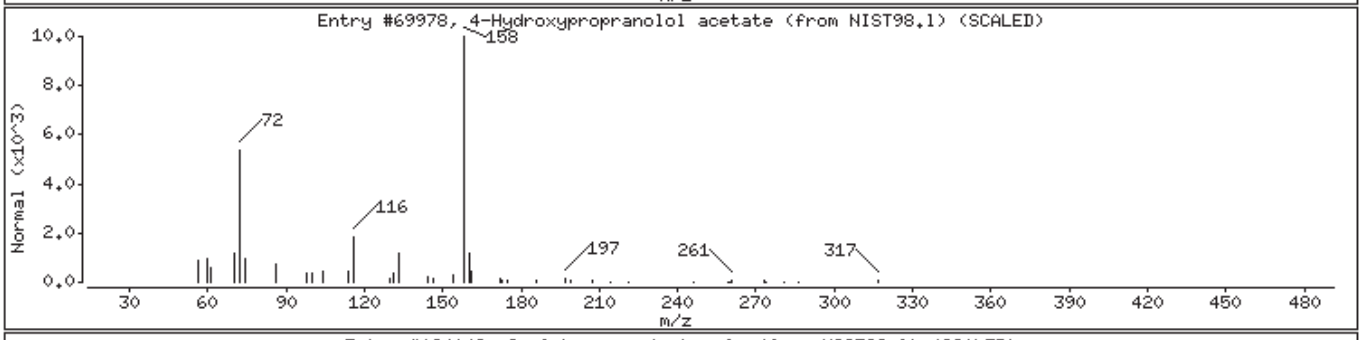
Operator: bkg00522

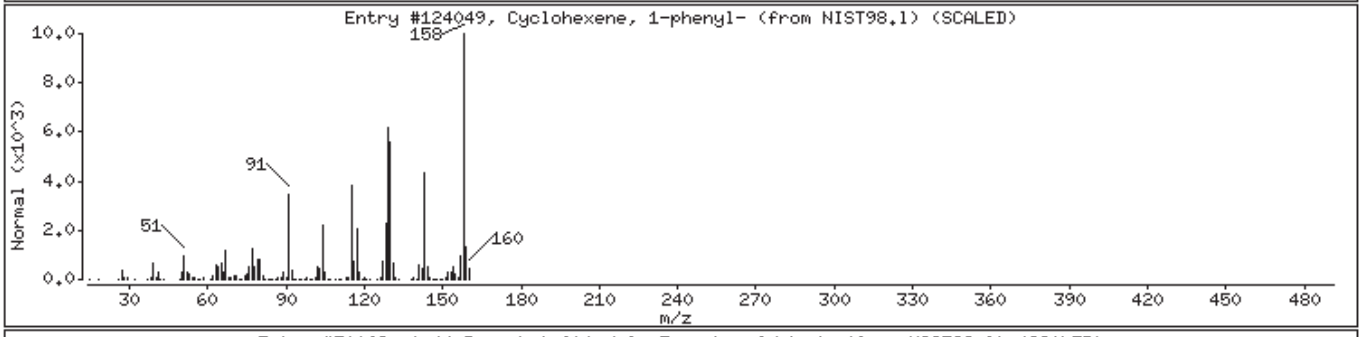
Column phase: J&W DB-5MS

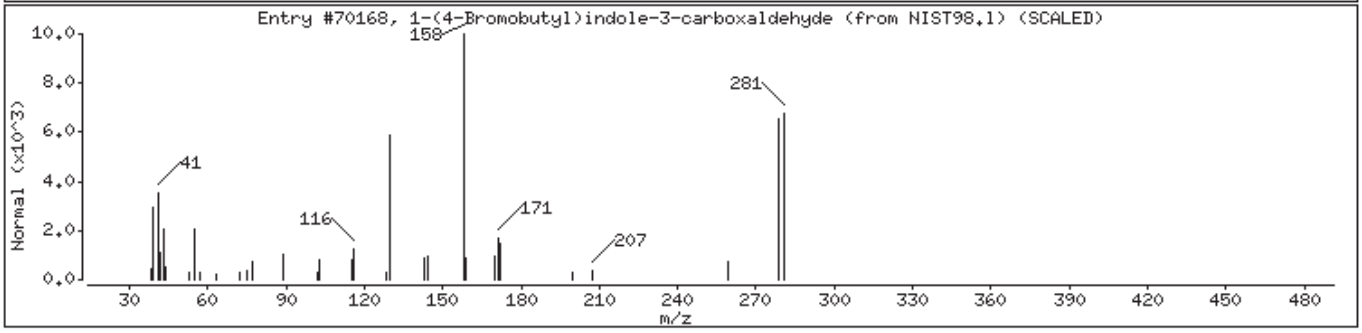
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
4-Hydroxypropranolol acetate	1000120-31-9	NIST98.1	69978	14	C18H23NO4	317
Cyclohexene, 1-phenyl-	771-98-2	NIST98.1	124049	10	C12H14	158
1-(4-Bromobutyl)indole-3-carboxaldehyde	1000223-20-6	NIST98.1	70168	10	C13H14BrNO	279









Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

XHERC

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263053

Data file: /chem/HP11165.i/13nov14.b/gk0571.d
Data file Sample Info. Line: XHERC;7263053;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Injection date and time: **14-NOV-2013 10:30**
Instrument ID: **HP11165.i** Batch: **13313SLC**

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 03:02
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov14.b/gk0551.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 20 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.570	(0.005)	670	152	75633	(2)	20.00	
63) Naphthalene-d8	6.806	(0.000)	901	136	349299	(2)	20.00	
101) Acenaphthene-d10	8.518	(0.005)	1221	164	209667	(-4)	20.00	
140) Phenanthrene-d10	9.967	(0.005)	1492	188	385993	(-7)	20.00	
164) Pyrene-d10	11.358	(0.000)	1752	212	428889	(-12)	20.00	
188) Perylene-d12	14.000	(0.000)	2246	264	323314	(-20)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 2-Fluorophenol	(1)	4.324	(-0.002)	112	48315	8.062	81%		63 - 126
17) Phenol-d6	(1)	5.271	(-0.002)	99	68873	7.638	76%		61 - 120
41) Nitrobenzene-d5	(2)	6.111	(0.001)	82	29991	3.895	78%		60 - 120
84) 2-Fluorobiphenyl	(3)	7.870	(0.000)	172	50362	3.944	79%		69 - 120
121) 2,4,6-Tribromophenol	(3)	9.293	(0.000)	330	10516	7.506	75%		42 - 134
166) Terphenyl-d14	(5)	11.545	(0.000)	244	62615	4.093	82%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Benzaldehyde	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.5
20) bis(2-Chloroethyl)ether	(1)				Not Detected					0.5
21) 2-Chlorophenol	(1)				Not Detected					0.5
30) 2-Methylphenol	(1)				Not Detected					0.5
31) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
35) Acetophenone	(1)				Not Detected					0.5
37) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.5
36) 4-Methylphenol	(1)				Not Detected					0.5
40) Hexachloroethane	(1)				Not Detected					1
42) Nitrobenzene	(2)				Not Detected					0.5
45) Isophorone	(2)				Not Detected					0.5
48) 2-Nitrophenol	(2)				Not Detected					0.5
52) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
64) Naphthalene	(2)				Not Detected					0.1
65) 4-Chloroaniline	(2)				Not Detected					0.5
69) Hexachlorobutadiene	(2)				Not Detected					0.5
74) Caprolactam	(2)				Not Detected					1
75) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
77) 2-Methylnaphthalene	(2)				Not Detected					0.1
79) Hexachlorocyclopentadiene	(3)				Not Detected					5
82) 2,4,6-Trichlorophenol	(3)				Not Detected					0.5
83) 2,4,5-Trichlorophenol	(3)				Not Detected					0.5
87) 1,1'-Biphenyl	(3)				Not Detected					0.5
88) 2-Chloronaphthalene	(3)				Not Detected					0.2

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52. Target 3.5 esignature user ID: bkg00522

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/13nov14.b/gk0571.d Injection date and time: **14-NOV-2013 10:30**
Data file Sample Info. Line: XHERC;7263053;2;0;SAMPLE;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 03:02
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov14.b/gk0551.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 20 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30.2 g

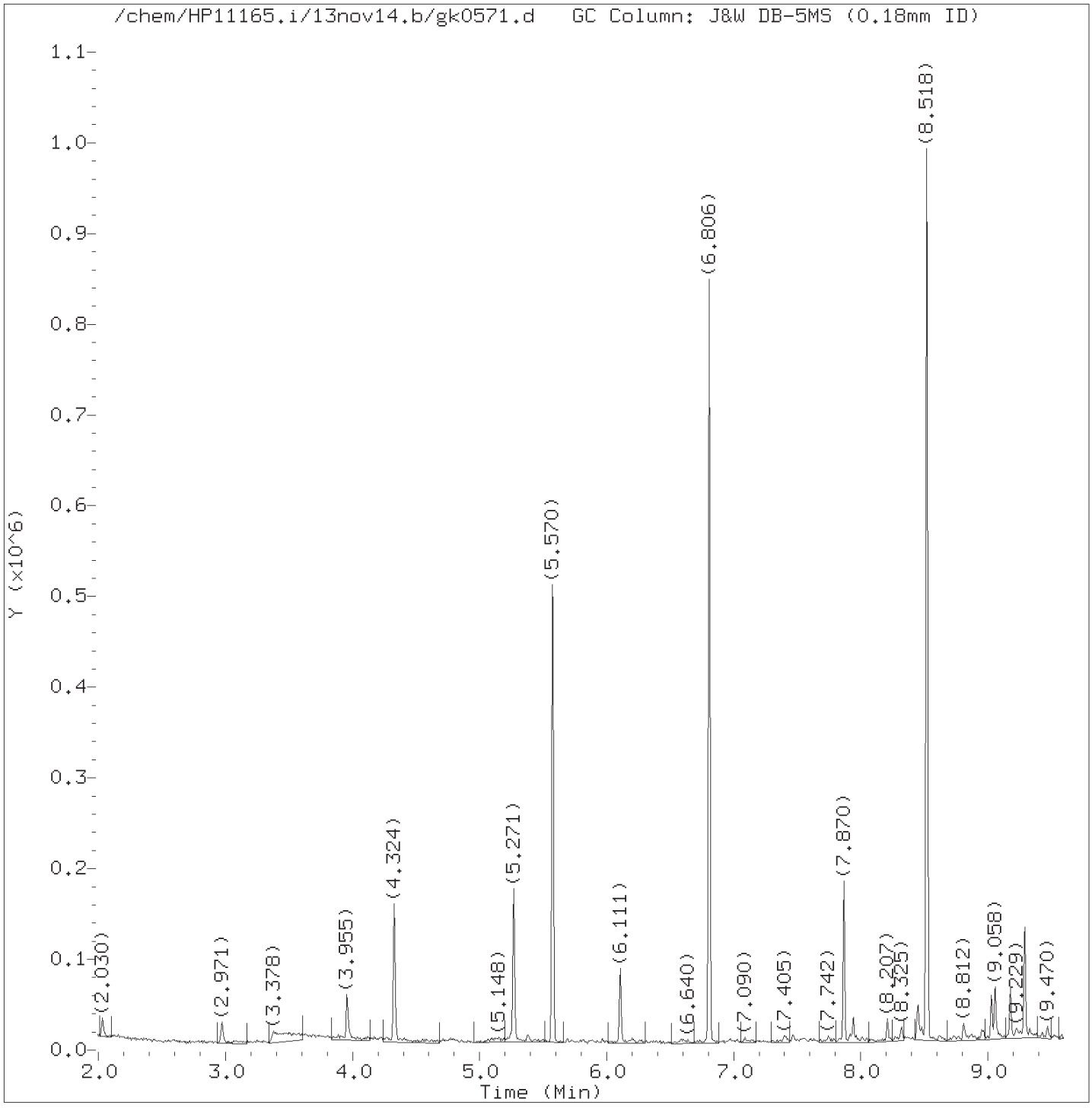
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
91) 2-Nitroaniline	(3)				Not Detected					0.5
94) Dimethylphthalate	(3)				Not Detected					2
97) 2,6-Dinitrotoluene	(3)				Not Detected					0.5
99) Acenaphthylene	(3)				Not Detected					0.1
100) 3-Nitroaniline	(3)				Not Detected					2
102) Acenaphthene	(3)				Not Detected					0.1
103) 2,4-Dinitrophenol	(3)				Not Detected					9
104) 4-Nitrophenol	(3)				Not Detected					5
107) Dibenzofuran	(3)				Not Detected					0.5
106) 2,4-Dinitrotoluene	(3)				Not Detected					2
111) Diethylphthalate	(3)				Not Detected					2
113) Fluorene	(3)				Not Detected					0.1
114) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
116) 4-Nitroaniline	(3)				Not Detected					2
117) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
118) N-Nitrosodiphenylamine	(4)	9.181	(0.000)	169	12482	0.973	644.04			0.5
127) 4-Bromophenyl-phenylether	(4)				Not Detected					0.5
129) Hexachlorobenzene	(4)				Not Detected					0.1
132) Atrazine	(4)				Not Detected					1
133) Pentachlorophenol	(4)				Not Detected					1
143) Phenanthrene	(4)				Not Detected					0.1
144) Anthracene	(4)				Not Detected					0.1
146) Carbazole	(4)				Not Detected					0.5
149) Di-n-butylphthalate	(4)				Not Detected					2
157) Fluoranthene	(4)				Not Detected					0.1
165) Pyrene	(5)				Not Detected					0.1
173) Butylbenzylphthalate	(5)				Not Detected					2
175) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
177) Benzo(a)anthracene	(5)				Not Detected					0.1
178) Chrysene	(5)	12.598	(0.000)	228	2203M	0.110	72.55			0.1
179) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					2
183) Di-n-octylphthalate	(6)				Not Detected					2
185) Benzo(b)fluoranthene	(6)	13.631	(0.000)	252	2286M	0.117	77.50			0.1
186) Benzo(k)fluoranthene	(6)	13.663	(0.000)	252	2330M	0.113	74.53			0.1
187) Benzo(a)pyrene	(6)	13.941	(0.000)	252	1950M	0.112	74.17			0.1
193) Indeno(1,2,3-cd)pyrene	(6)	15.112	(0.000)	276	2938M	0.166	110.15			0.1
194) Dibenz(a,h)anthracene	(6)	15.134	(0.000)	278	2273M	0.155	102.65			0.1
196) Benzo(g,h,i)perylene	(6)	15.417	(0.001)	276	2064M	0.139	91.81			0.1

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52. Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

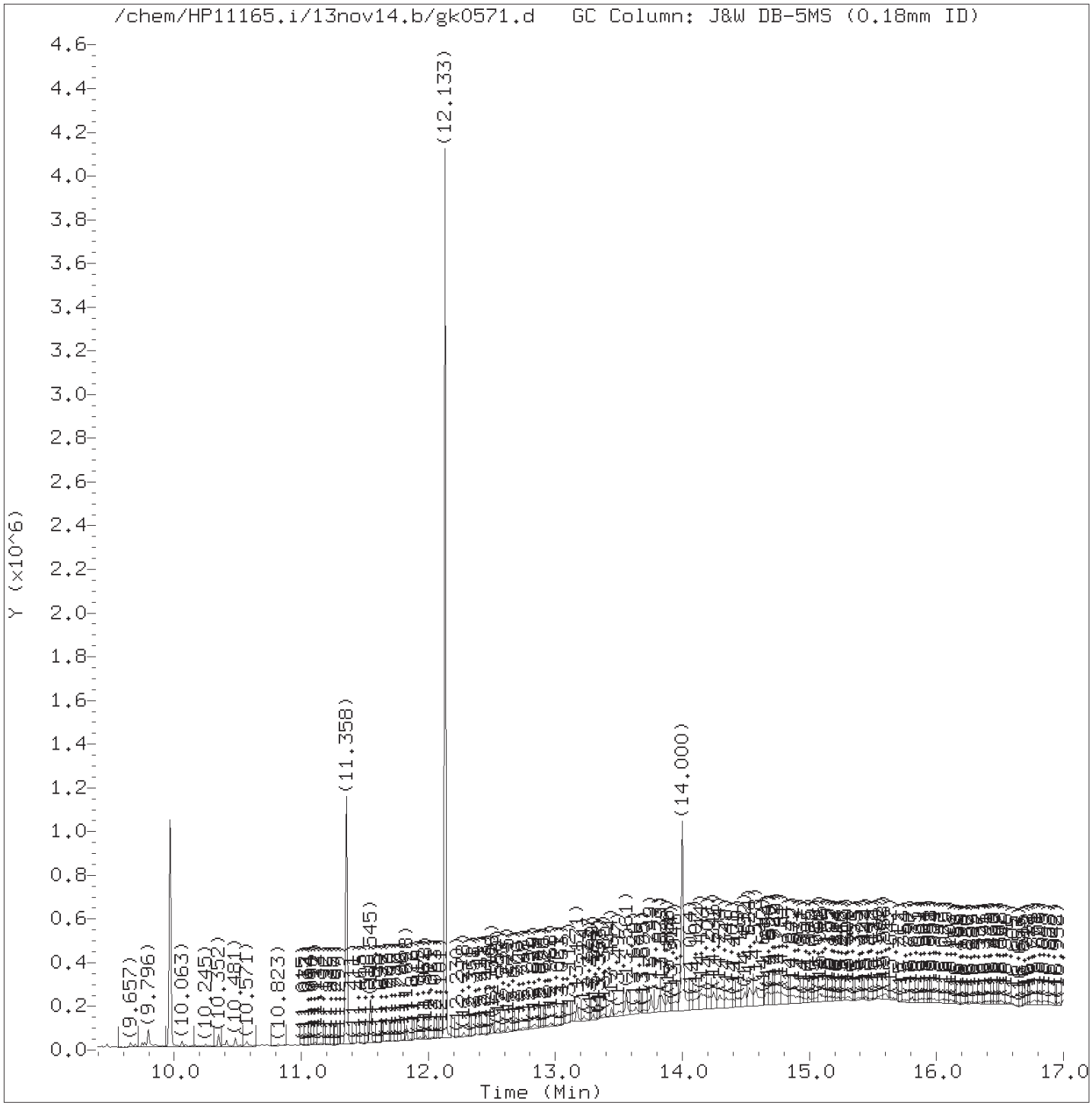
Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

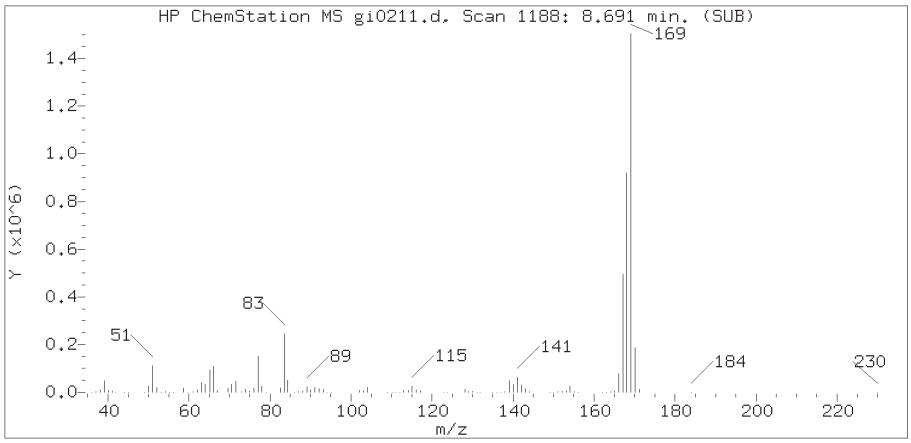
Sample Name: XHERC Lab Sample ID: 7263053

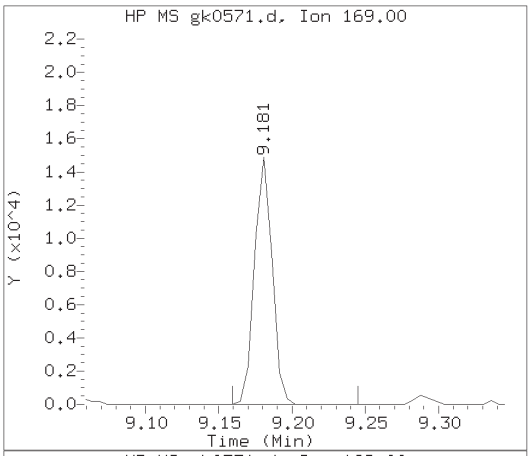
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
10)$2-Fluorophenol	(1)	4.324	112	48315	8.062
17)$Phenol-d6	(1)	5.271	99	68873	7.638
25)*1,4-Dichlorobenzene-d4	(1)	5.570	152	75633	20.000
41)$Nitrobenzene-d5	(2)	6.111	82	29991	3.895
63)*Naphthalene-d8	(2)	6.806	136	349299	20.000
84)$2-Fluorobiphenyl	(3)	7.870	172	50362	3.944
101)*Acenaphthene-d10	(3)	8.518	164	209667	20.000
118) N-Nitrosodiphenylamine	(4)	9.181	169	12482	0.973
121)$2,4,6-Tribromophenol	(3)	9.293	330	10516	7.506
140)*Phenanthrene-d10	(4)	9.967	188	385993	20.000
164)*Pyrene-d10	(5)	11.358	212	428889	20.000
166)$Terphenyl-d14	(5)	11.545	244	62615	4.093
178) Chrysene	(5)	12.599	228	2203M	0.110
185) Benzo(b)fluoranthene	(6)	13.631	252	2286M	0.117
186) Benzo(k)fluoranthene	(6)	13.663	252	2330M	0.113
187) Benzo(a)pyrene	(6)	13.941	252	1950M	0.112
188)*Perylene-d12	(6)	14.000	264	323314	20.000
193) Indeno(1,2,3-cd)pyrene	(6)	15.112	276	2938M	0.166
194) Dibenz(a,h)anthracene	(6)	15.134	278	2273M	0.155
196) Benzo(g,h,i)perylene	(6)	15.417	276	2064M	0.139

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

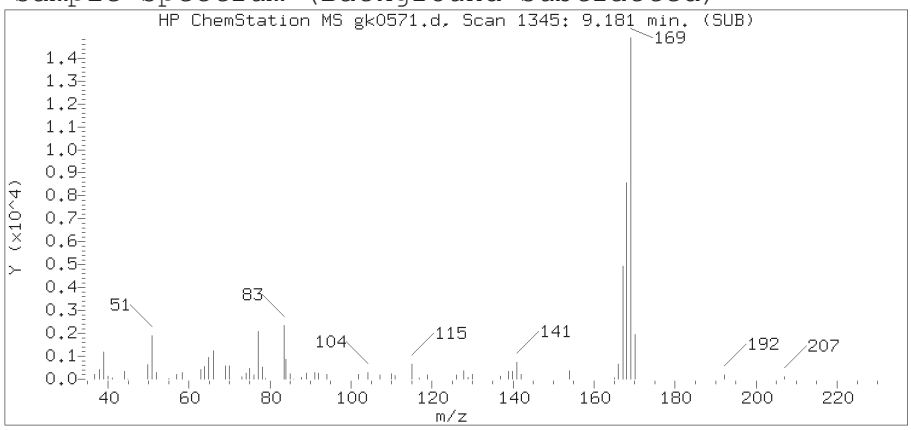
Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

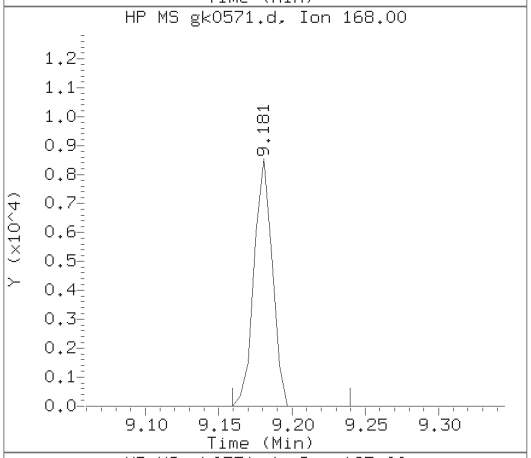
Reference Standard Spectrum for N-Nitrosodiphenylamine



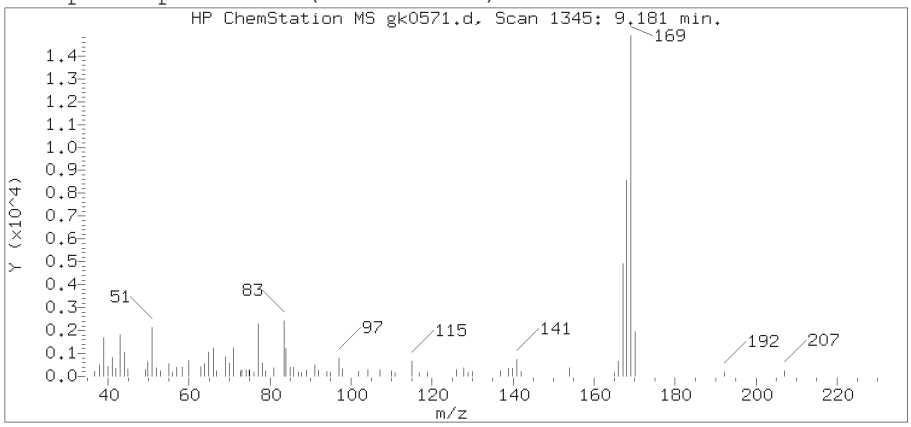


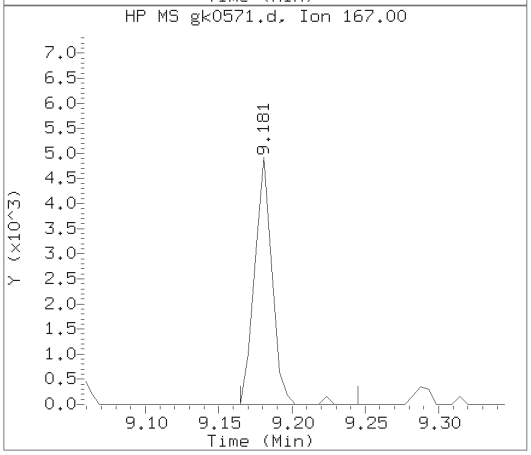
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

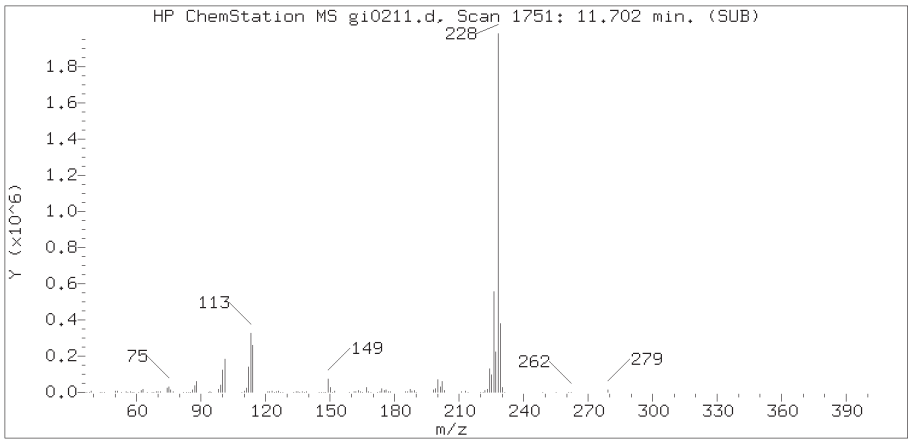
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

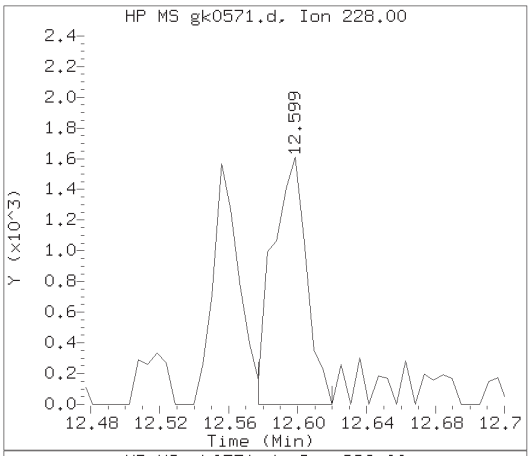
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 118
Compound Name	: N-Nitrosodiphenylamine
Scan Number	: 1345
Retention Time (minutes)	: 9.181
Relative Retention Time	: 0.00004
Quant Ion	: 169.00
Area (flag)	: 12482
On-column Amount (ng/ul)	: 0.9725

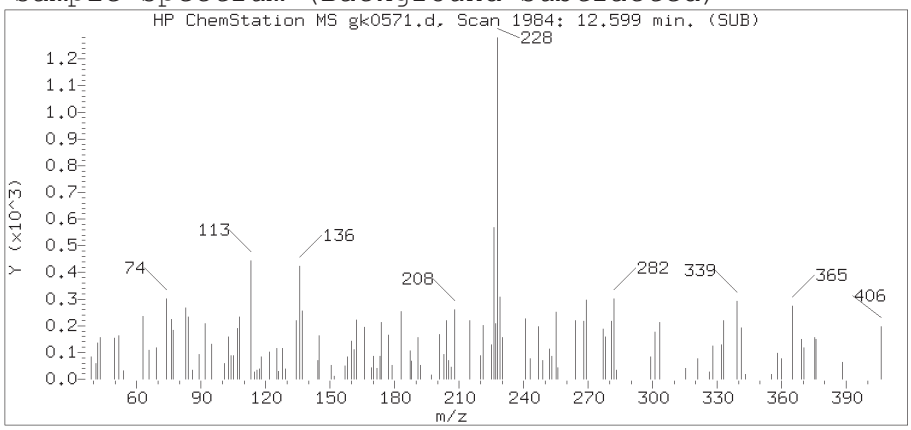
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

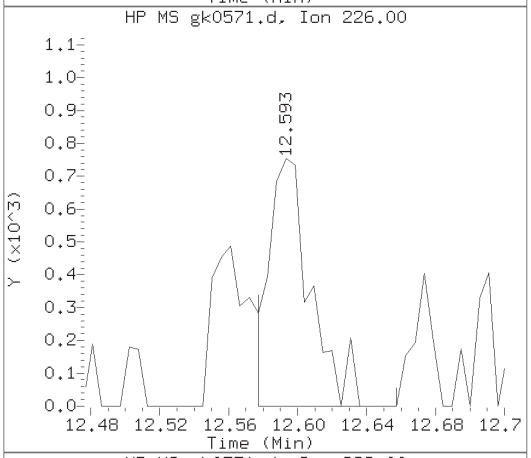
Reference Standard Spectrum for Chrysene



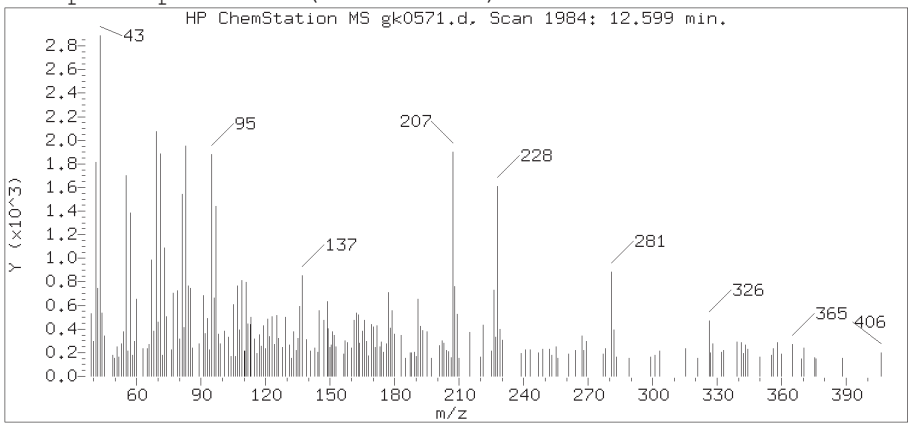


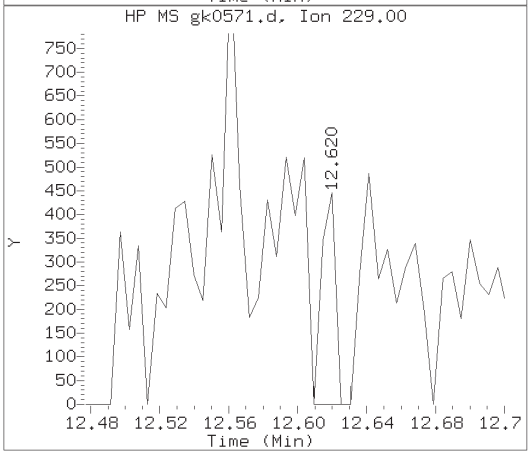
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

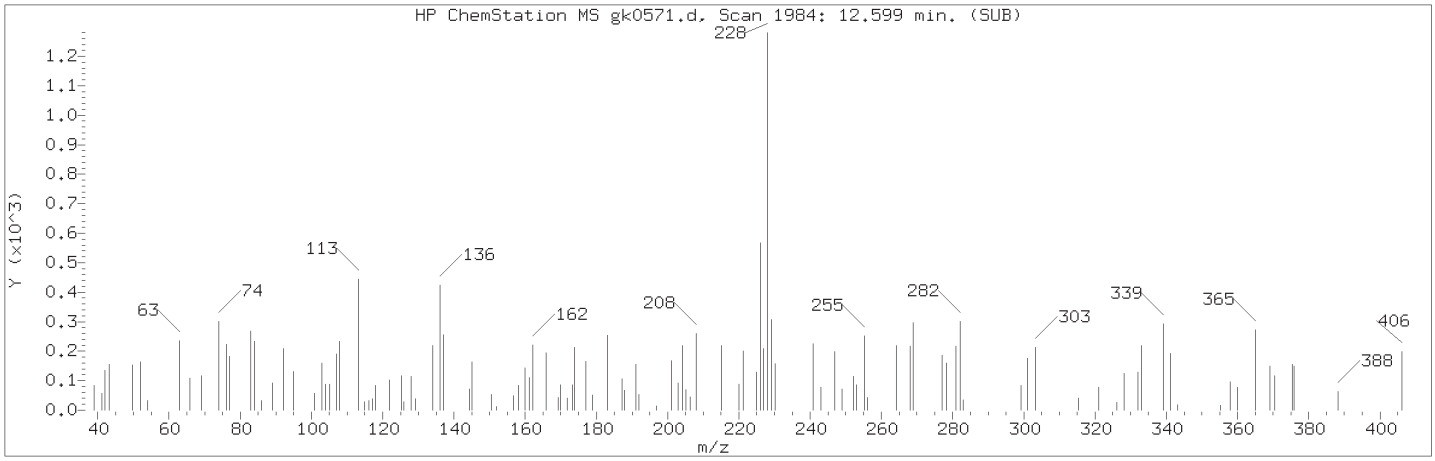
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

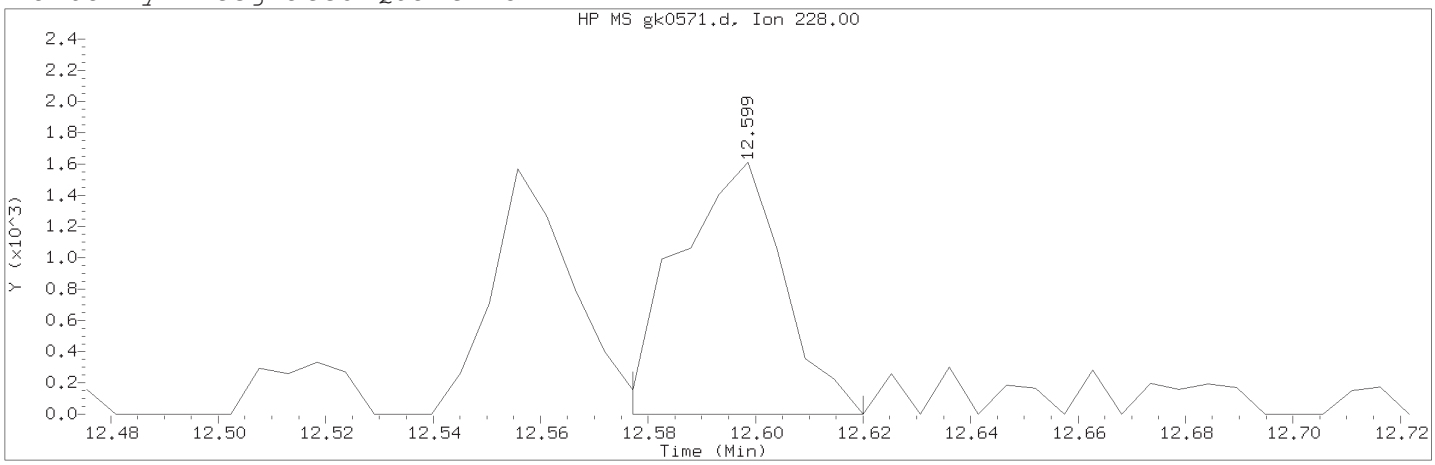
Compound Number	: 178
Compound Name	: Chrysene
Scan Number	: 1984
Retention Time (minutes)	: 12.599
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 2203M
On-column Amount (ng/ul)	: 0.1095

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

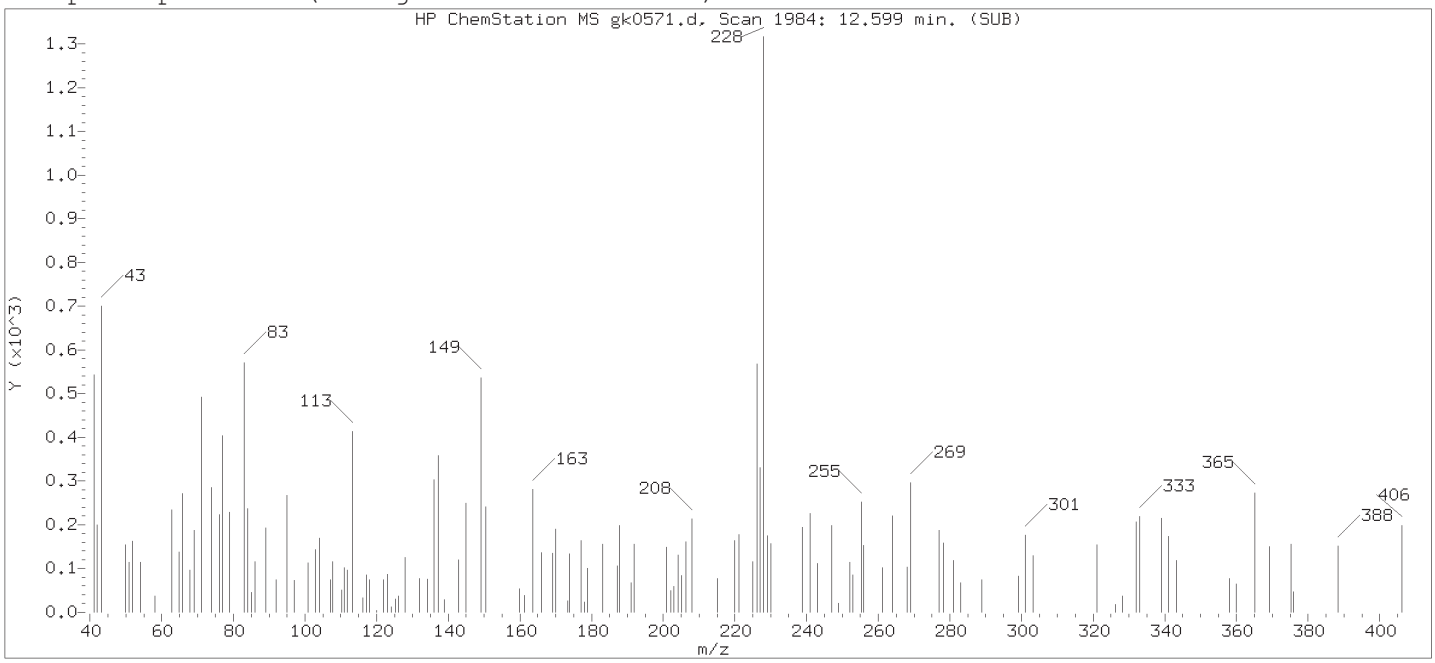
Compound Number	: 178		
Compound Name	: Chrysene		
Scan Number	: 1984		
Retention Time (minutes)	: 12.599		
Quant Ion	: 228.00		
Area (flag)	: 2203M		
On-column Amount (ng/ul)	: 0.1095		
Integration start scan	: 1979	Integration stop scan:	1987
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

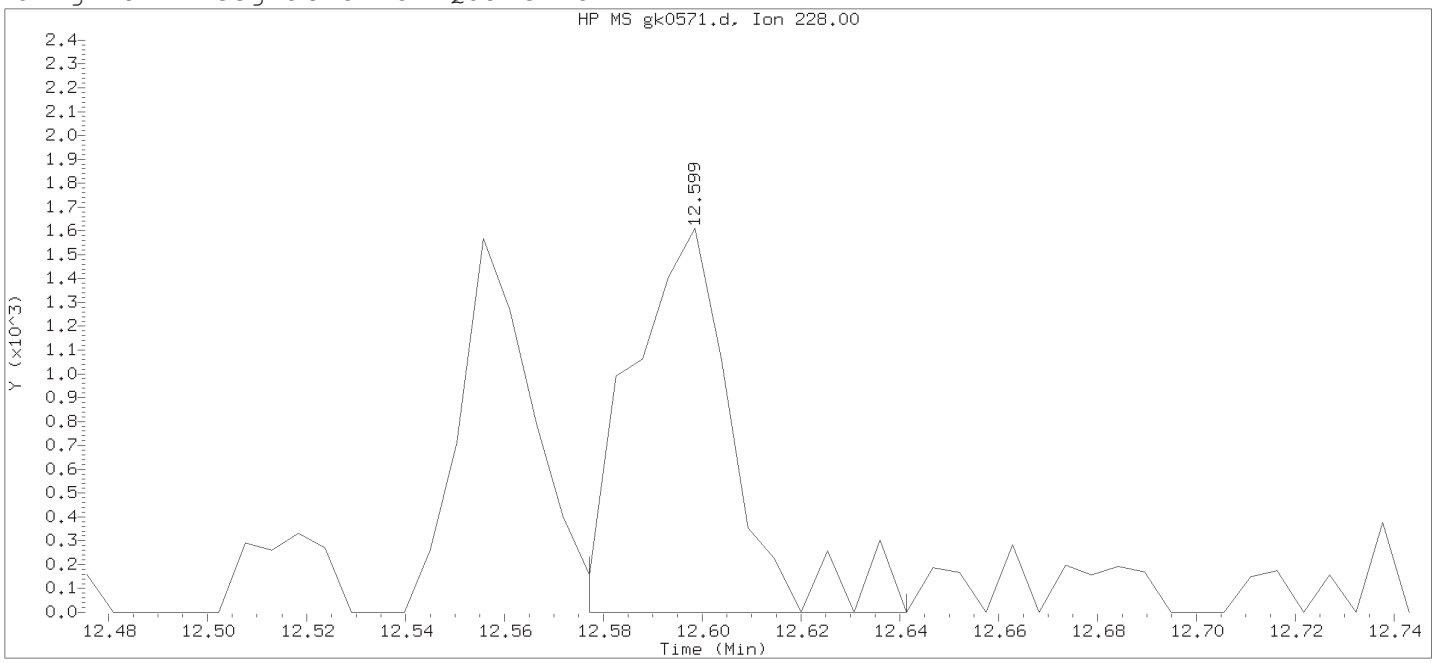
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

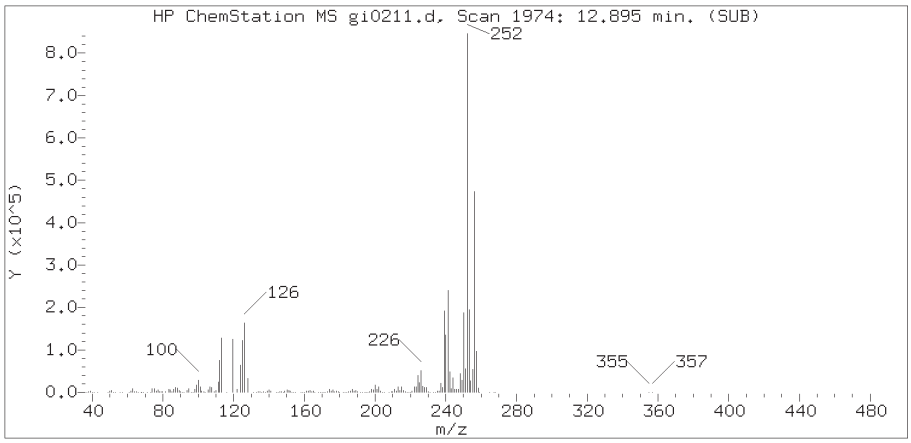
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

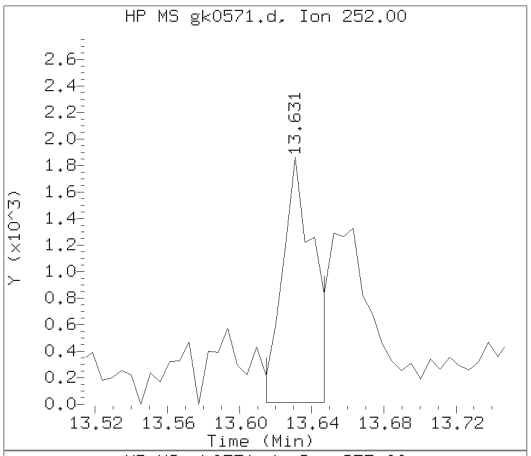
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 178		
Compound Name	: Chrysene		
Scan Number	: 1984		
Retention Time (minutes)	: 12.599		
Quant Ion	: 228.00		
Area	: 2359		
On-column Amount (ng/ul)	: 0.1173		
Integration start scan	: 1979	Integration stop scan:	1991
Y at integration start	: 0	Y at integration end:	0

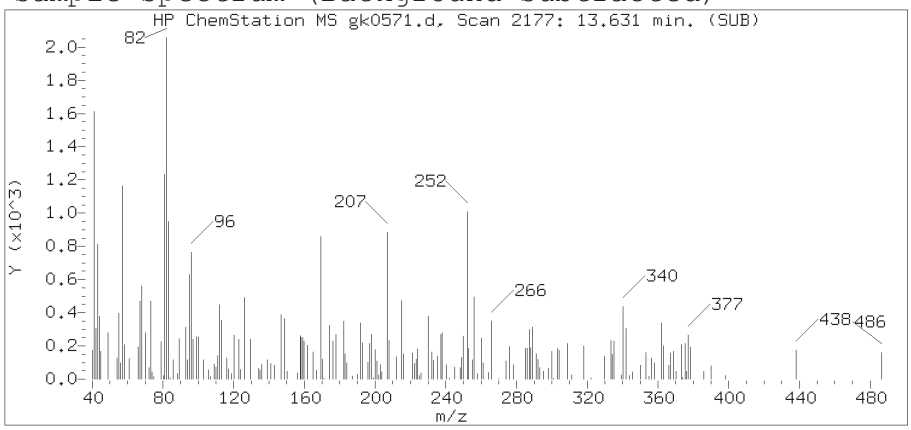
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature used: Bkg00522

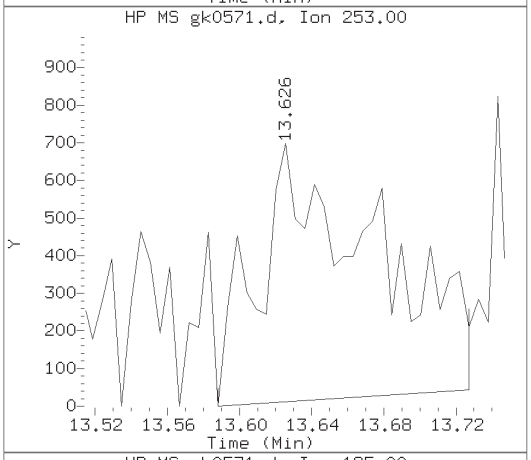
Reference Standard Spectrum for Benzo(b)fluoranthene



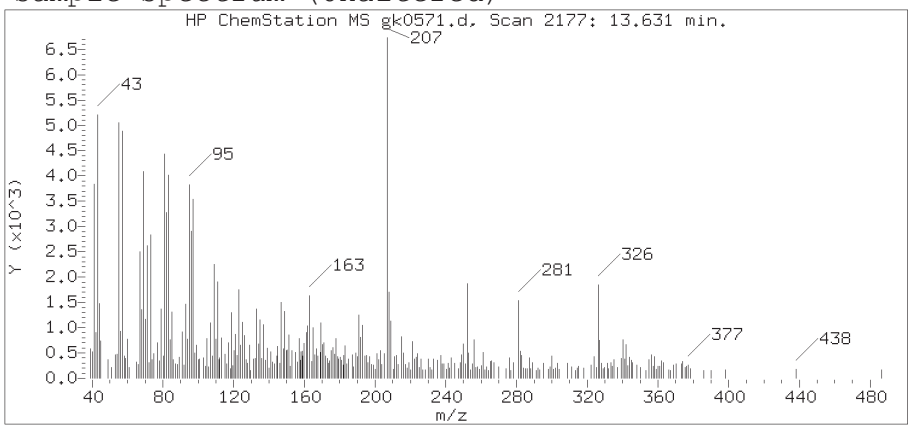


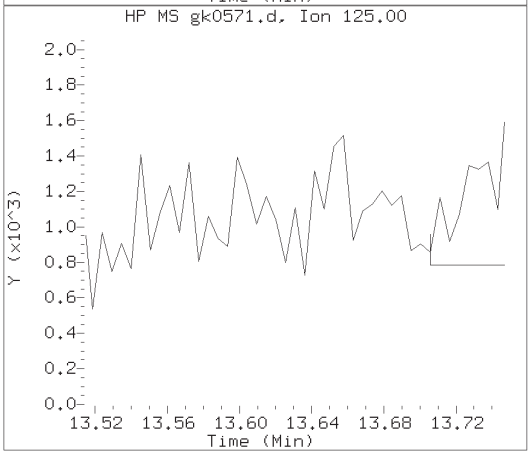
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

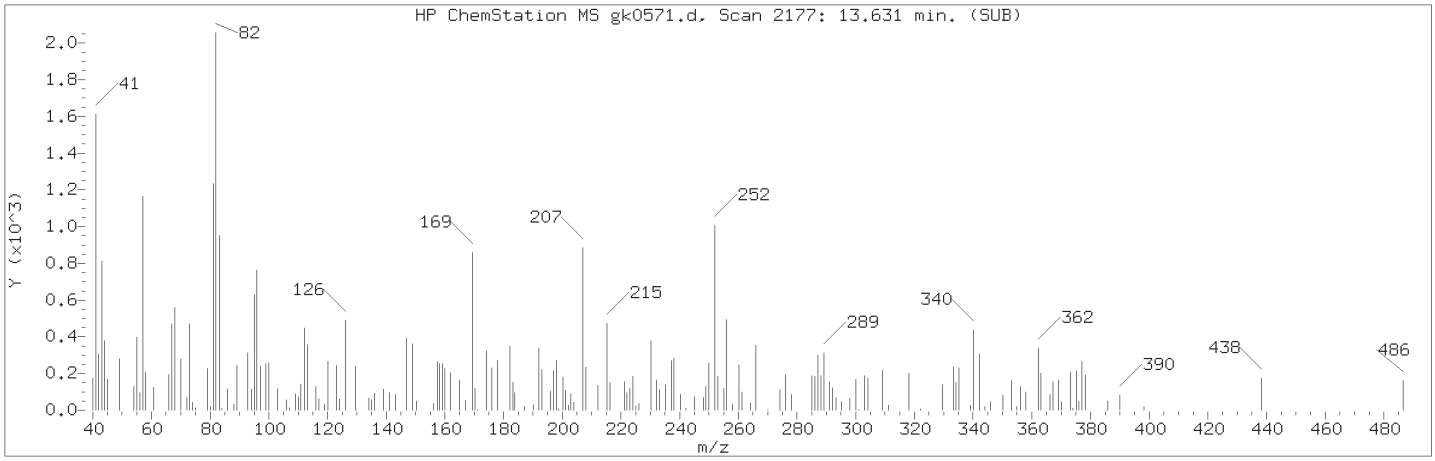
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

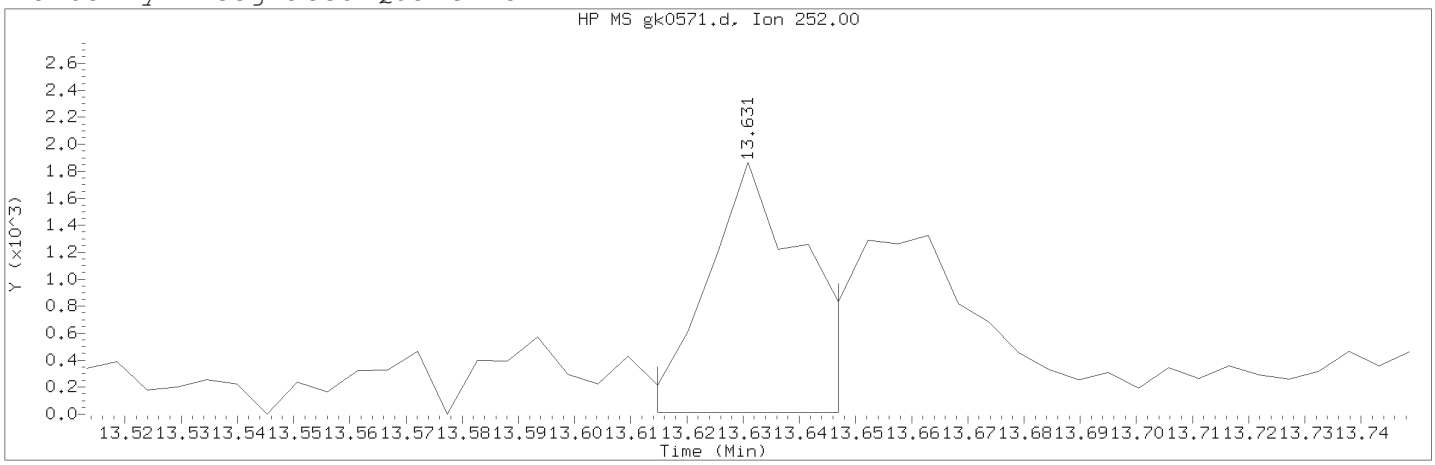
Compound Number	: 185
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 2177
Retention Time (minutes)	: 13.631
Relative Retention Time	: 0.00076
Quant Ion	: 252.00
Area (flag)	: 2286M
On-column Amount (ng/ul)	: 0.1170

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

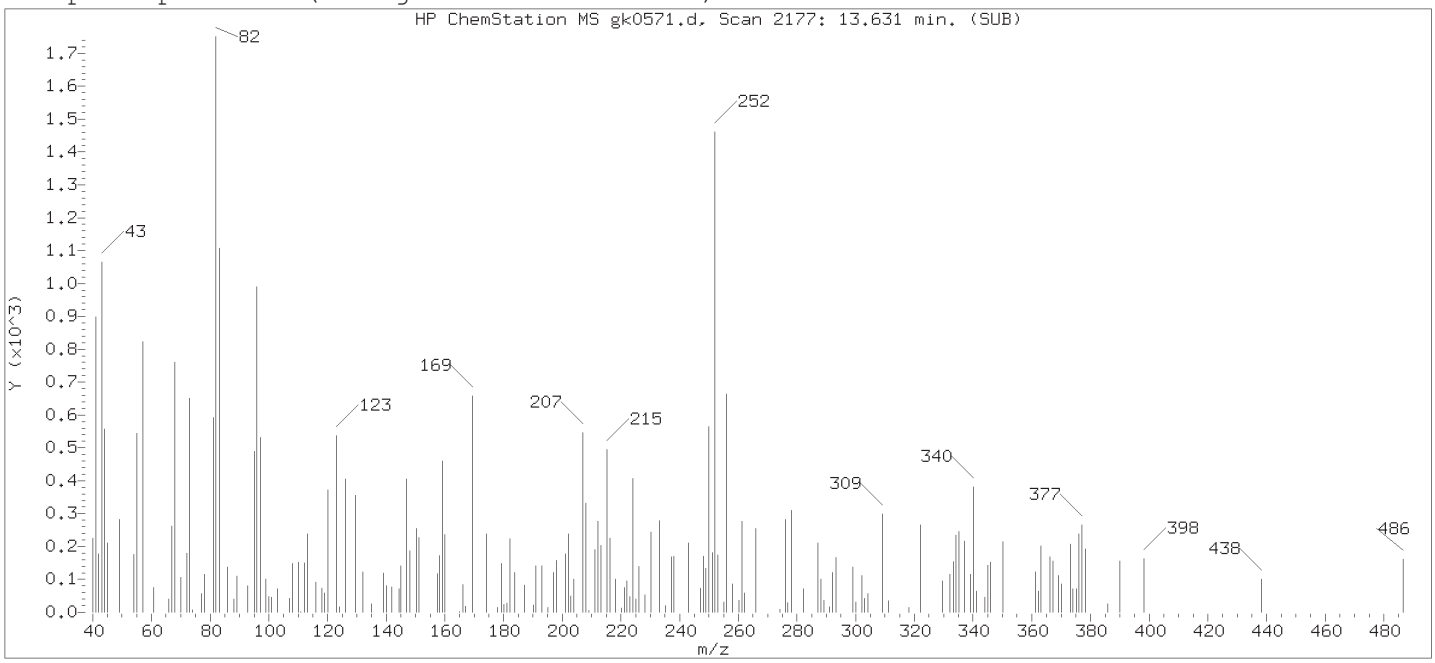
Compound Number : 185
Compound Name : Benzo(b)fluoranthene
Scan Number : 2177
Retention Time (minutes) : 13.631
Quant Ion : 252.00
Area (flag) : 2286M
On-column Amount (ng/ul) : 0.1170
Integration start scan : 2173 Integration stop scan: 2179
Y at integration start : 12 Y at integration end: 12

Reason for manual integration: improper integration

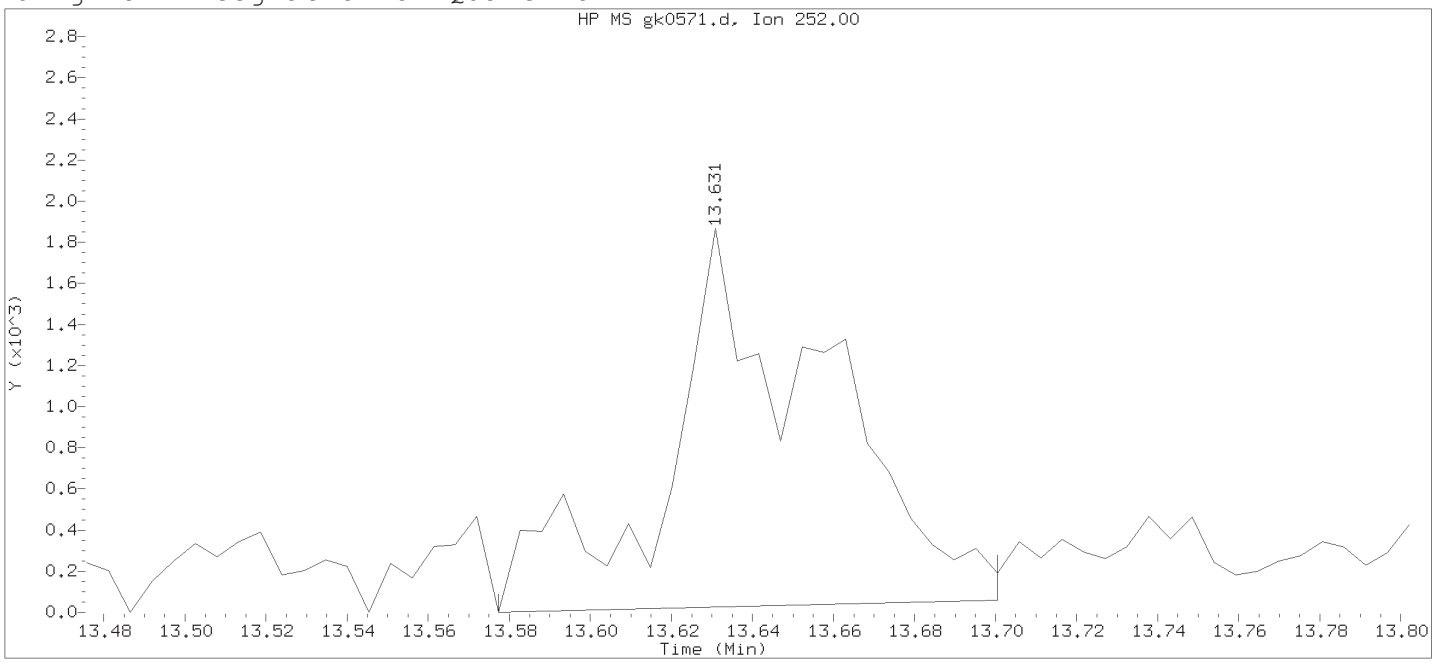
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

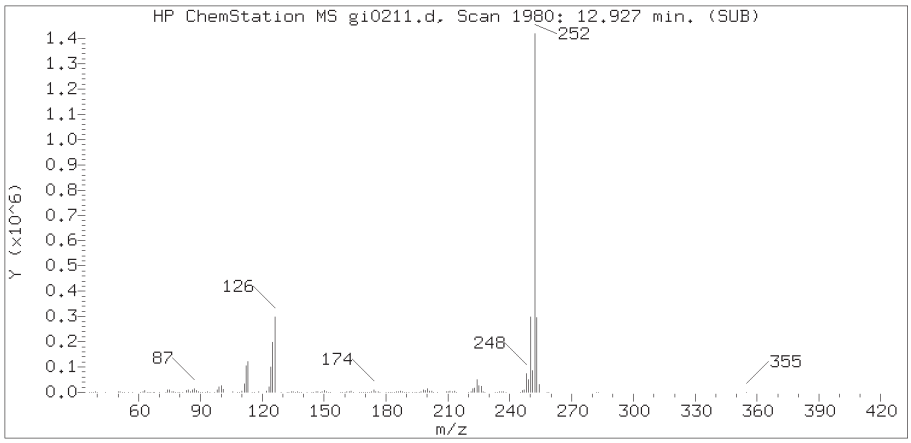
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

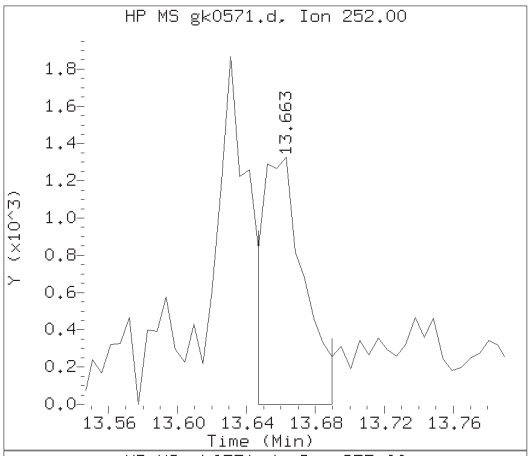
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2177		
Retention Time (minutes)	: 13.631		
Quant Ion	: 252.00		
Area	: 5032		
On-column Amount (ng/ul)	: 0.2576		
Integration start scan	: 2166	Integration stop scan:	2189
Y at integration start	: 0	Y at integration end:	59

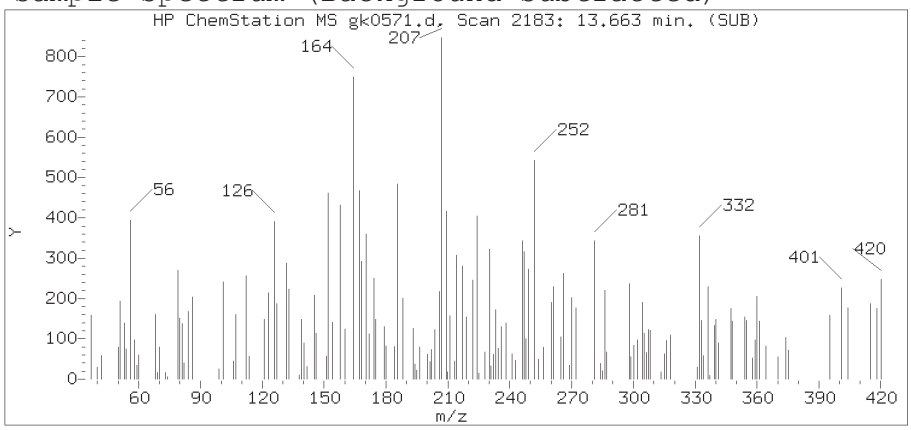
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature used: Bkg00522

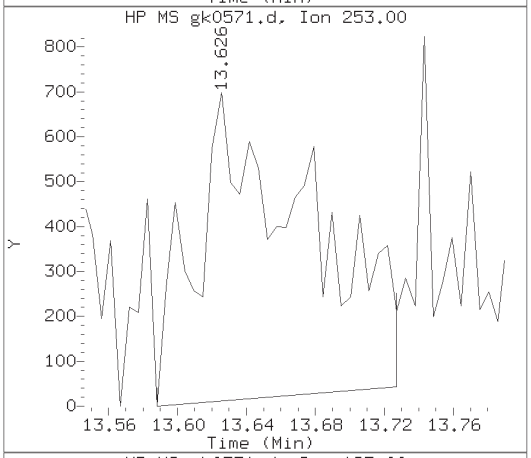
Reference Standard Spectrum for Benzo(k)fluoranthene



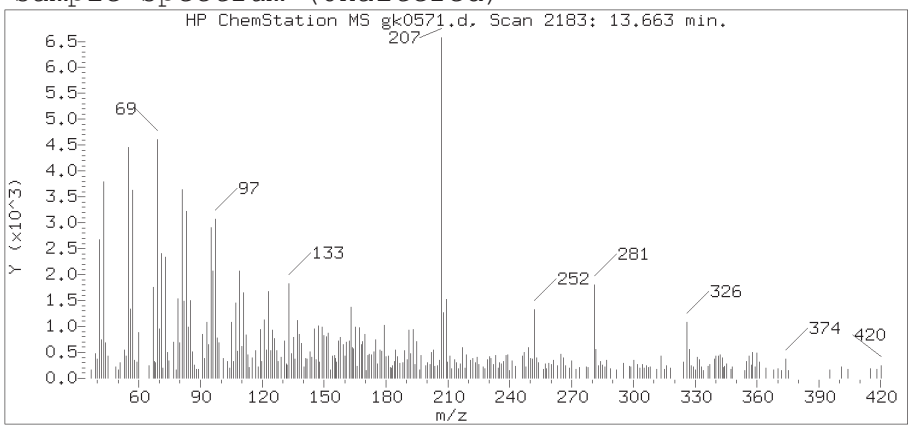


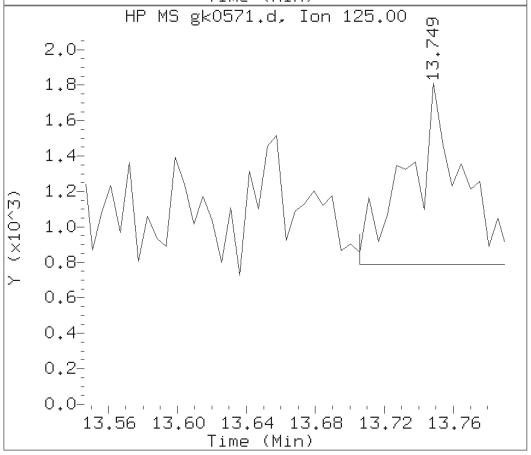
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

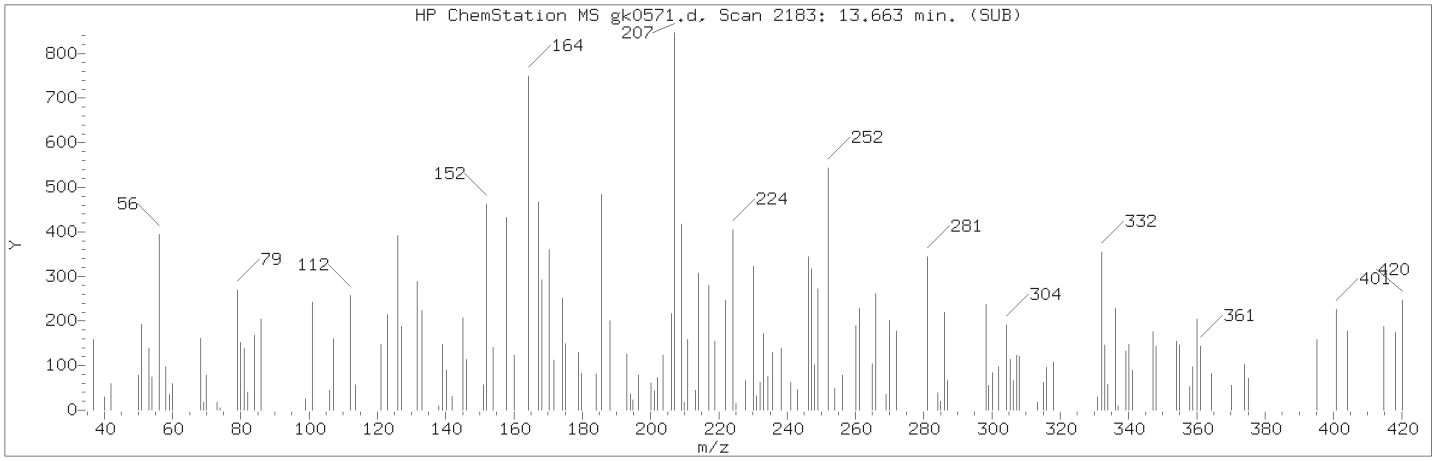
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

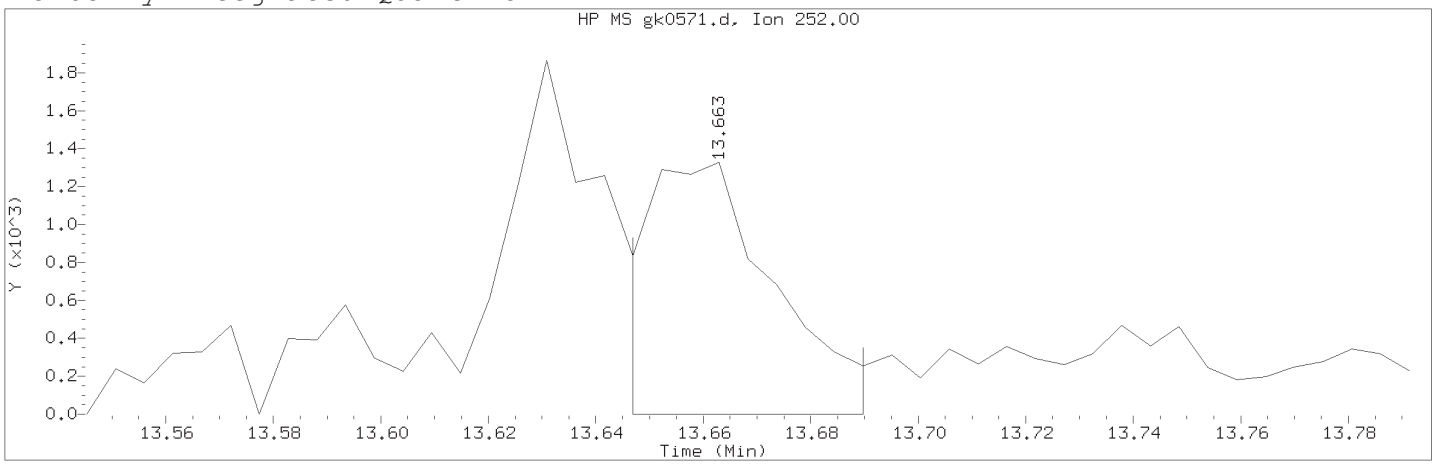
Compound Number	: 186
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 2183
Retention Time (minutes)	: 13.663
Relative Retention Time	: 0.00038
Quant Ion	: 252.00
Area (flag)	: 2330M
On-column Amount (ng/ul)	: 0.1125

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

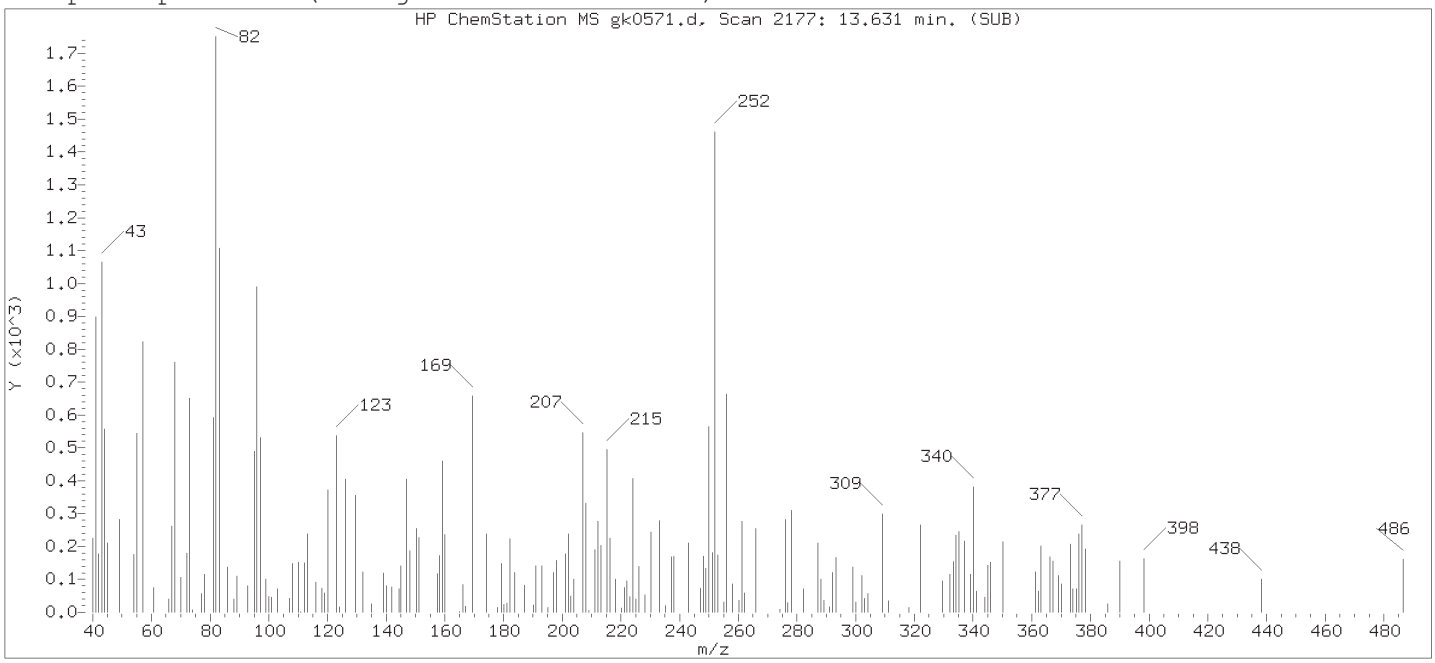
Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2183		
Retention Time (minutes)	: 13.663		
Quant Ion	: 252.00		
Area (flag)	: 2330M		
On-column Amount (ng/ul)	: 0.1125		
Integration start scan	: 2179	Integration stop scan:	2187
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

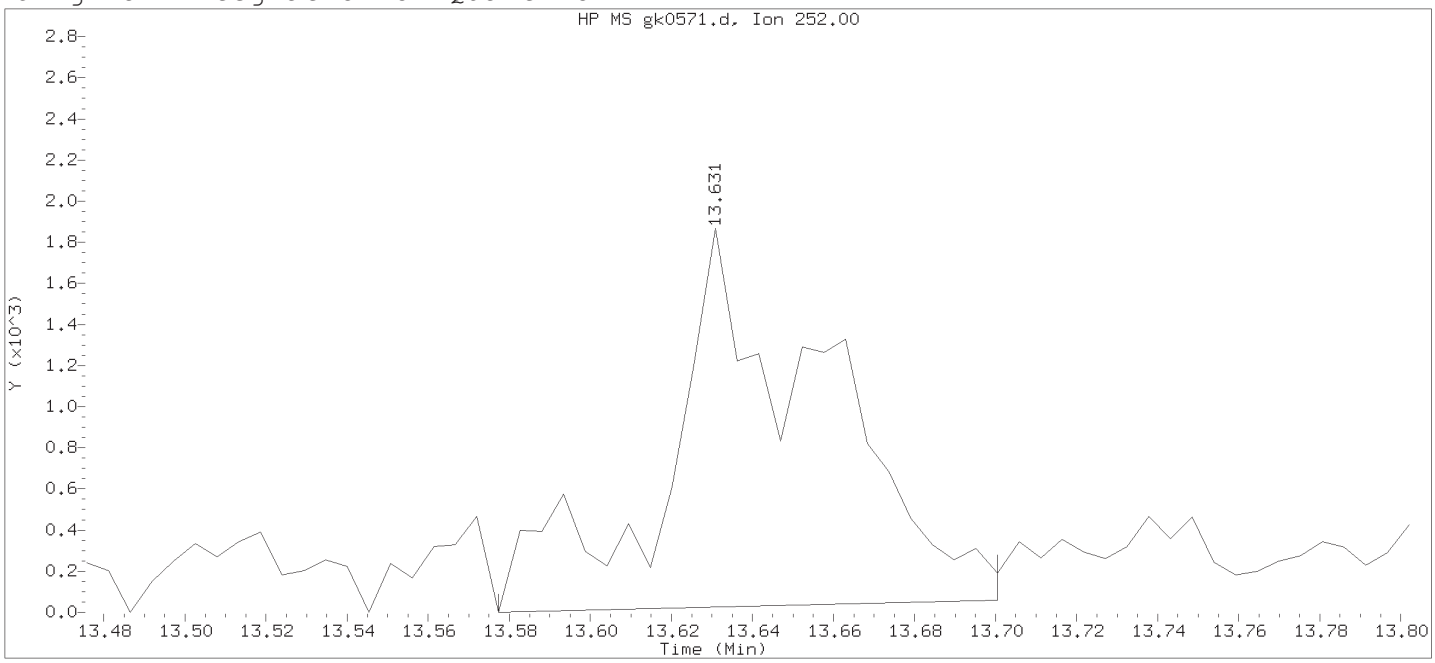
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

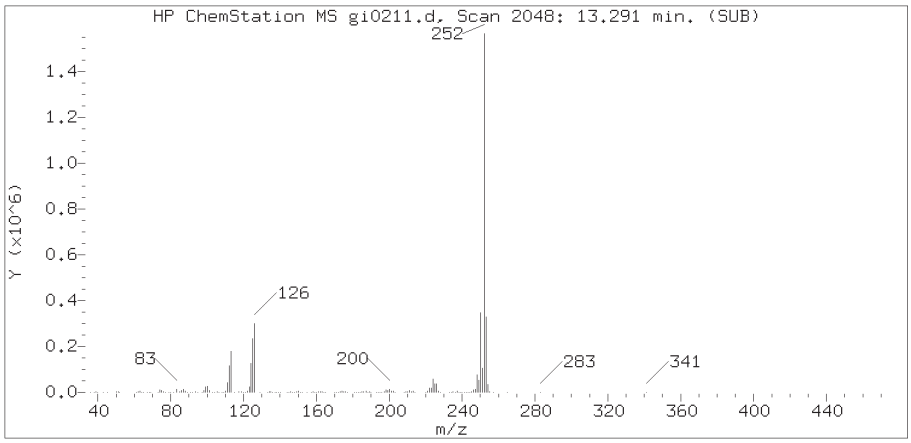
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

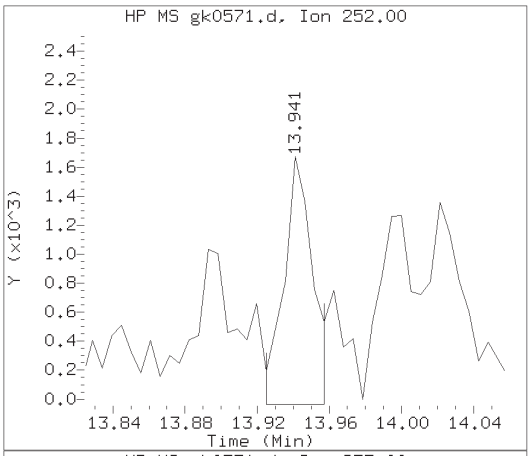
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2177		
Retention Time (minutes)	: 13.631		
Quant Ion	: 252.00		
Area	: 5032		
On-column Amount (ng/ul)	: 0.2430		
Integration start scan	: 2166	Integration stop scan:	2189
Y at integration start	: 0	Y at integration end:	59

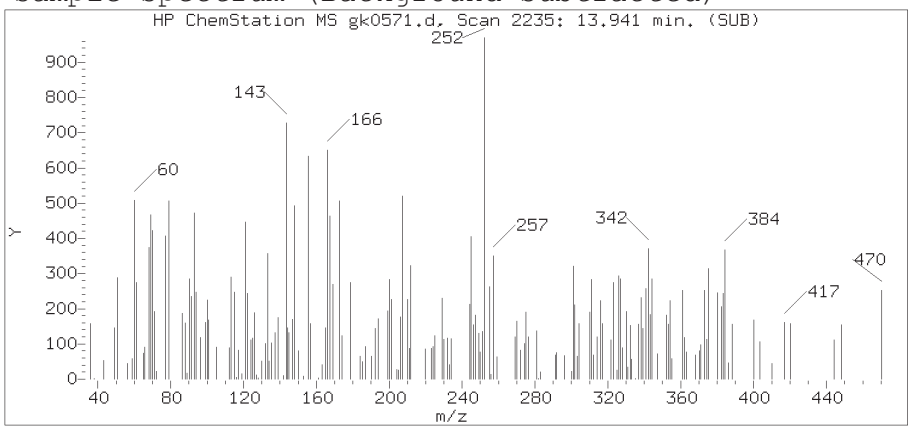
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

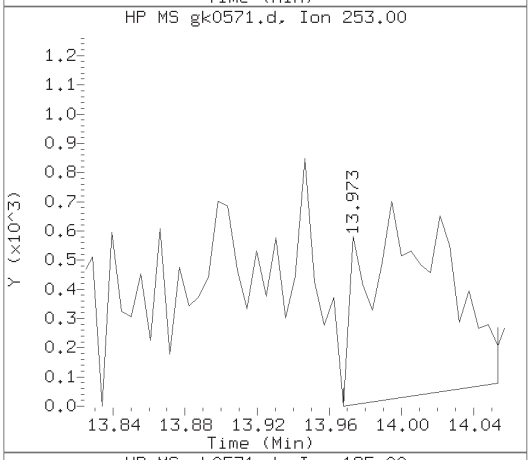
Reference Standard Spectrum for Benzo(a)pyrene



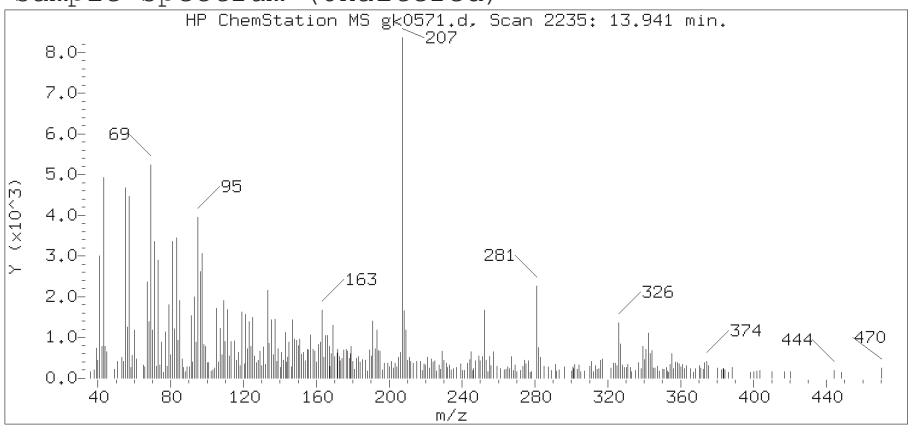


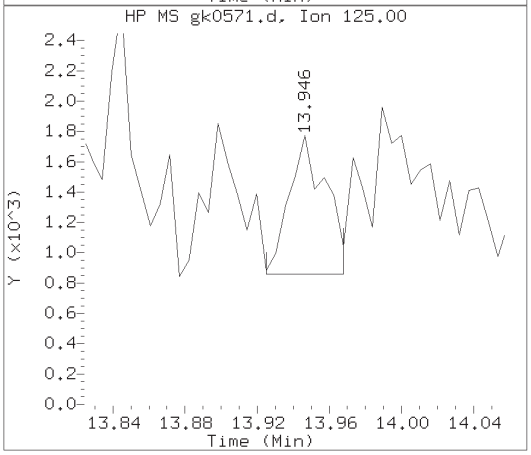
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

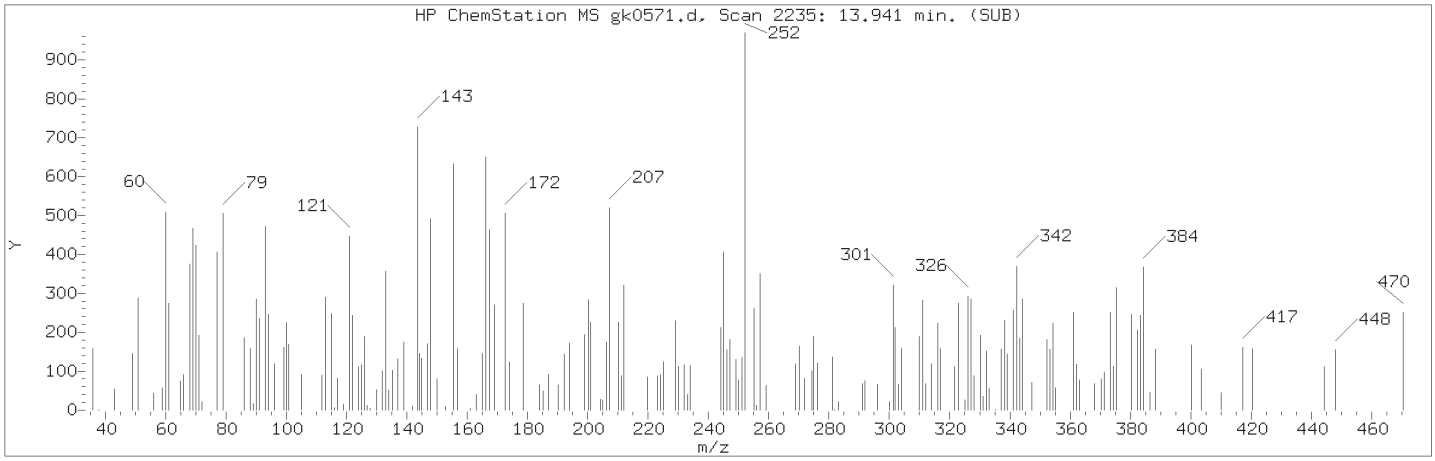
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

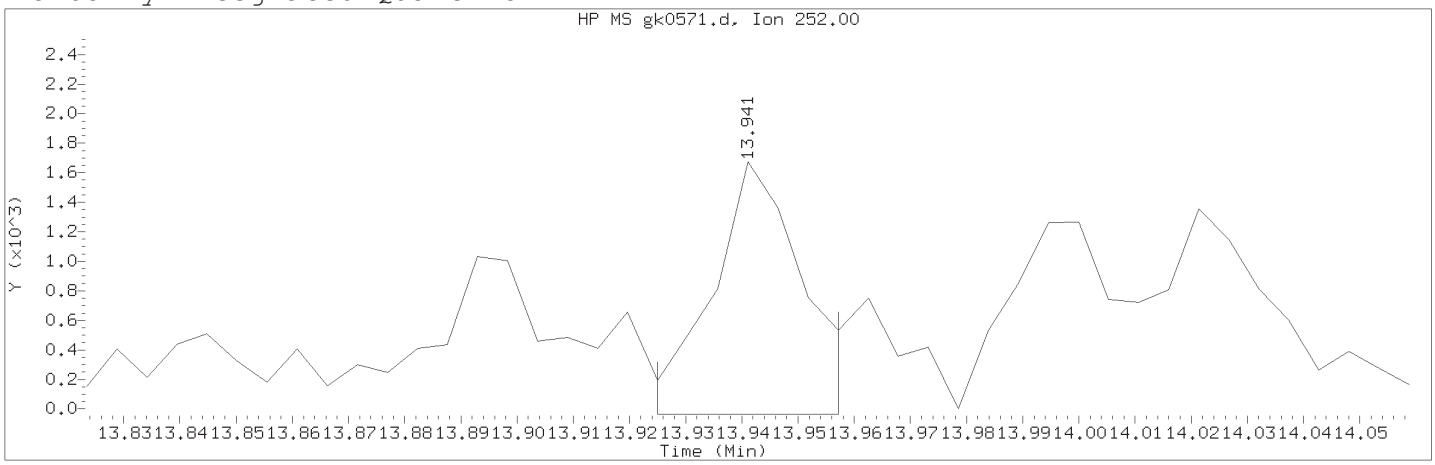
Compound Number	: 187
Compound Name	: Benzo(a)pyrene
Scan Number	: 2235
Retention Time (minutes)	: 13.941
Relative Retention Time	: 0.00076
Quant Ion	: 252.00
Area (flag)	: 1950M
On-column Amount (ng/ul)	: 0.1120

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

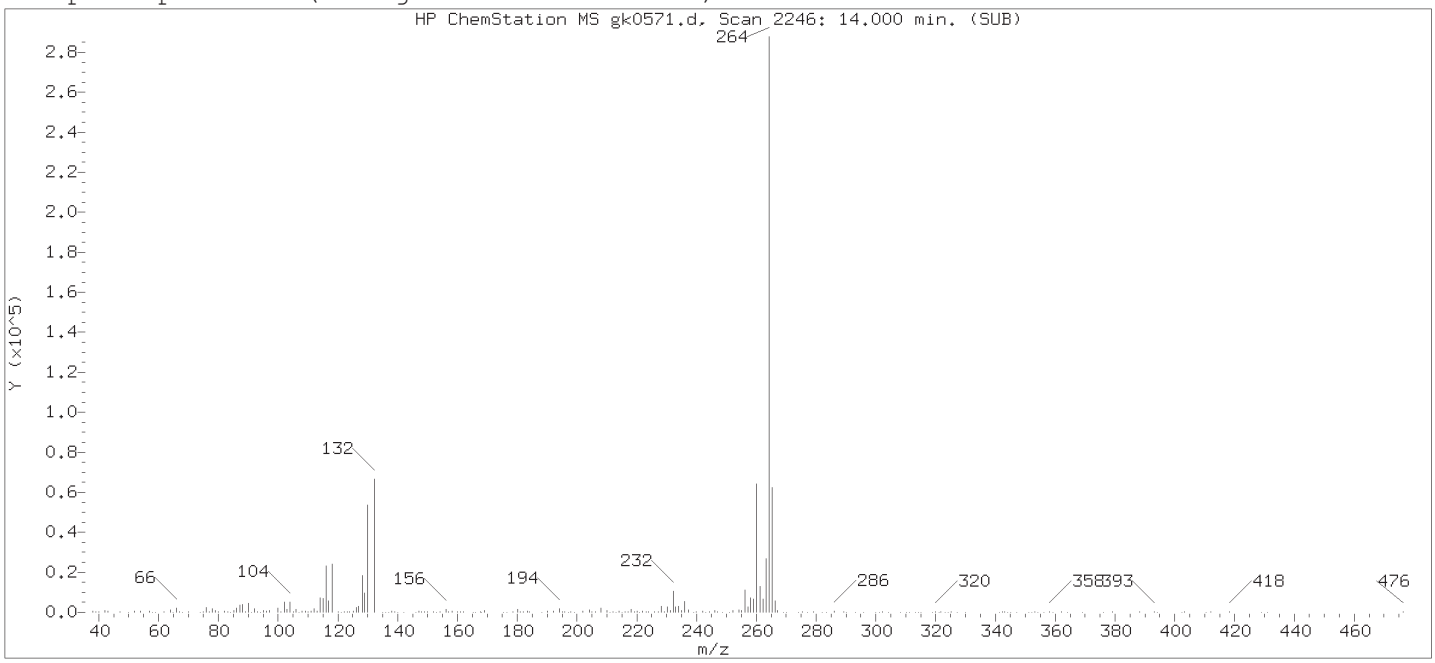
Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2235		
Retention Time (minutes)	: 13.941		
Quant Ion	: 252.00		
Area (flag)	: 1950M		
On-column Amount (ng/ul)	: 0.1120		
Integration start scan	: 2231	Integration stop scan:	2237
Y at integration start	: -35	Y at integration end:	-35

Reason for manual integration: improper integration

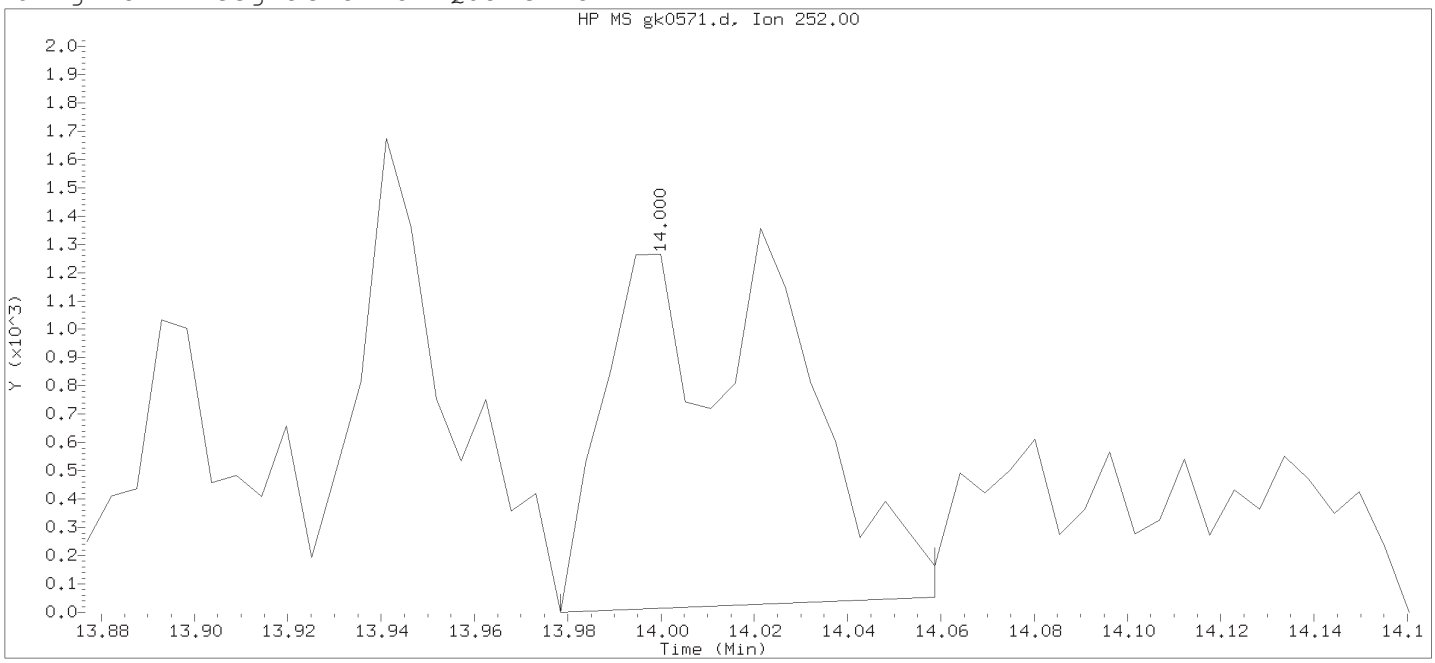
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

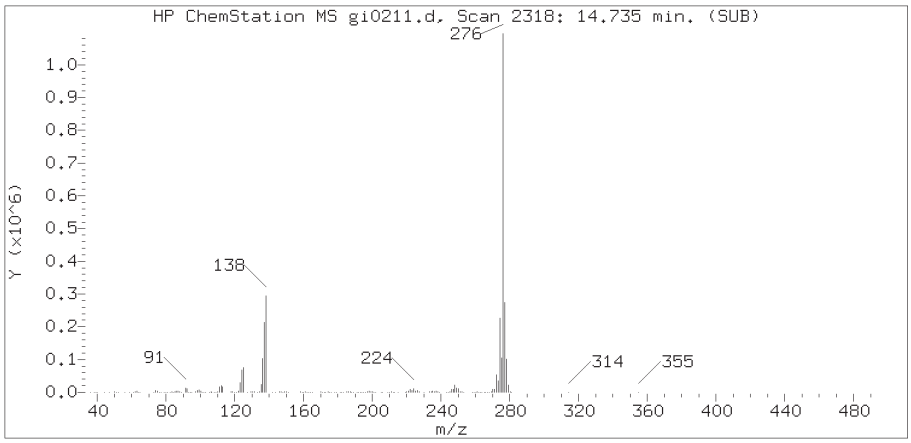
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

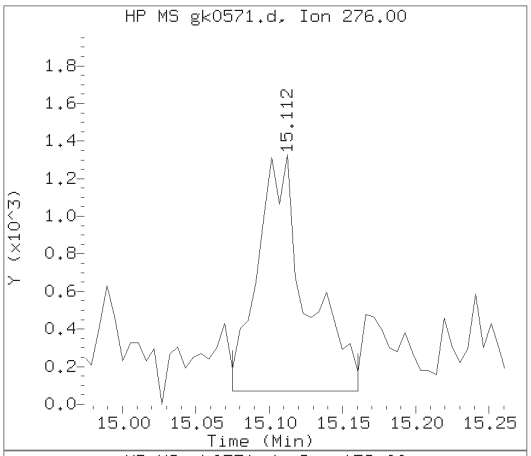
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2246		
Retention Time (minutes)	: 14.000		
Quant Ion	: 252.00		
Area	: 3440		
On-column Amount (ng/ul)	: 0.1975		
Integration start scan	: 2241	Integration stop scan:	2256
Y at integration start	: 0	Y at integration end:	53

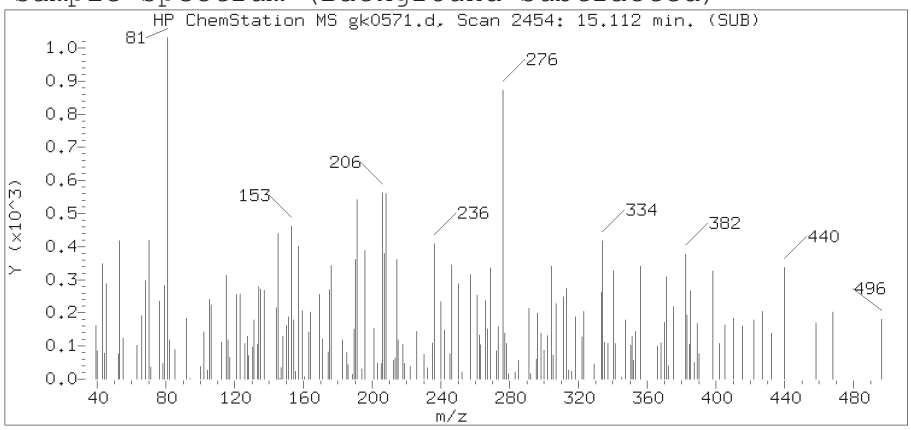
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

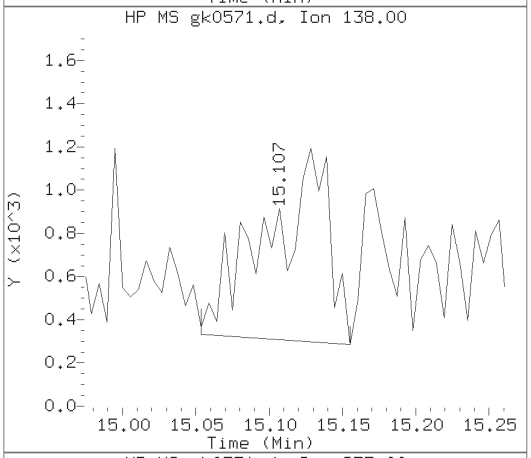
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



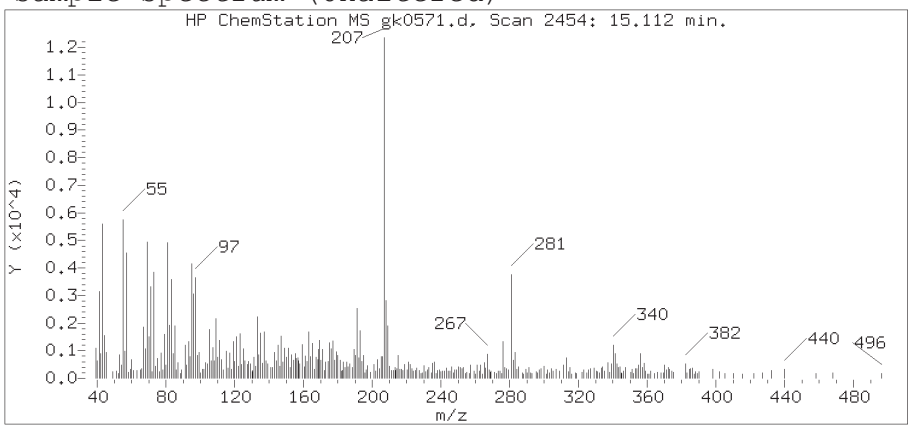


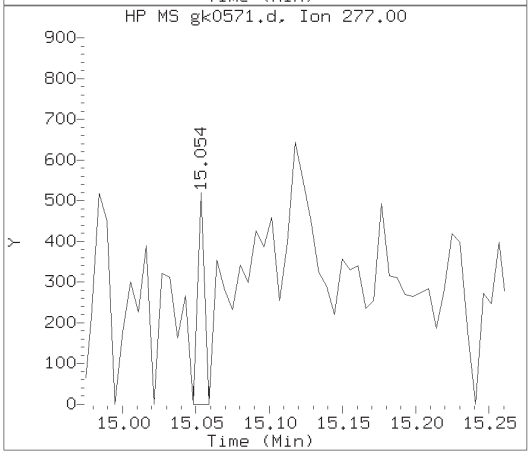
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

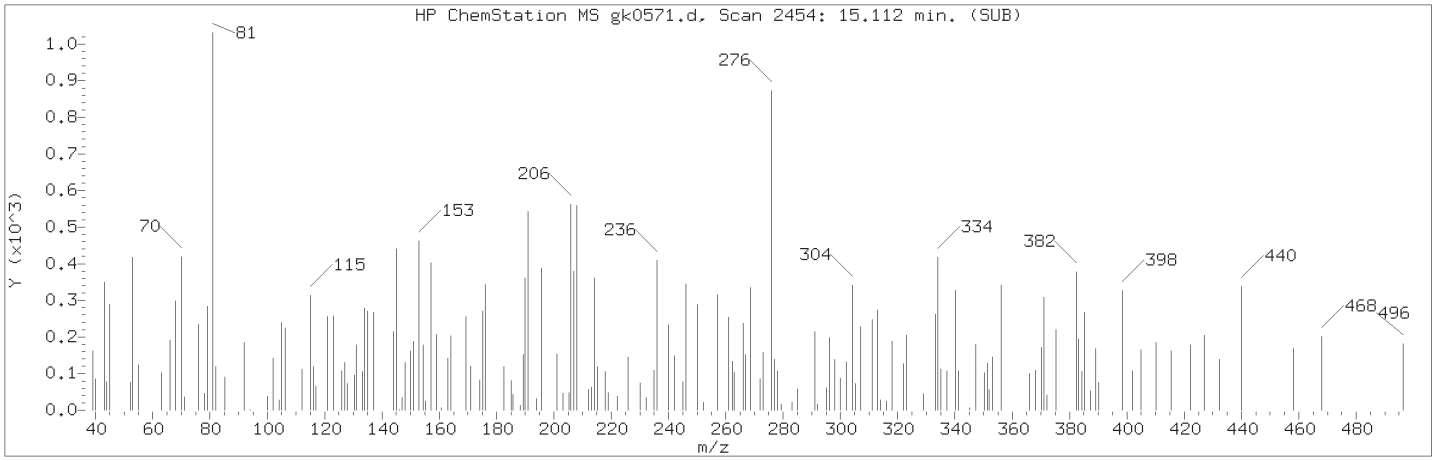
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

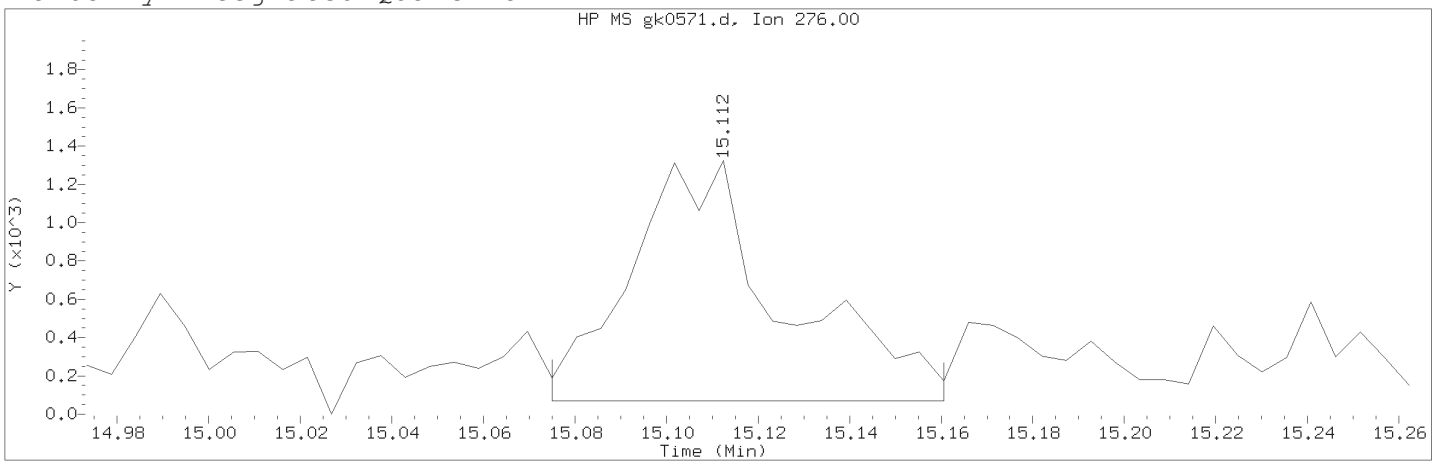
Compound Number	: 193
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2454
Retention Time (minutes)	: 15.112
Relative Retention Time	: 0.00038
Quant Ion	: 276.00
Area (flag)	: 2938M
On-column Amount (ng/ul)	: 0.1663

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

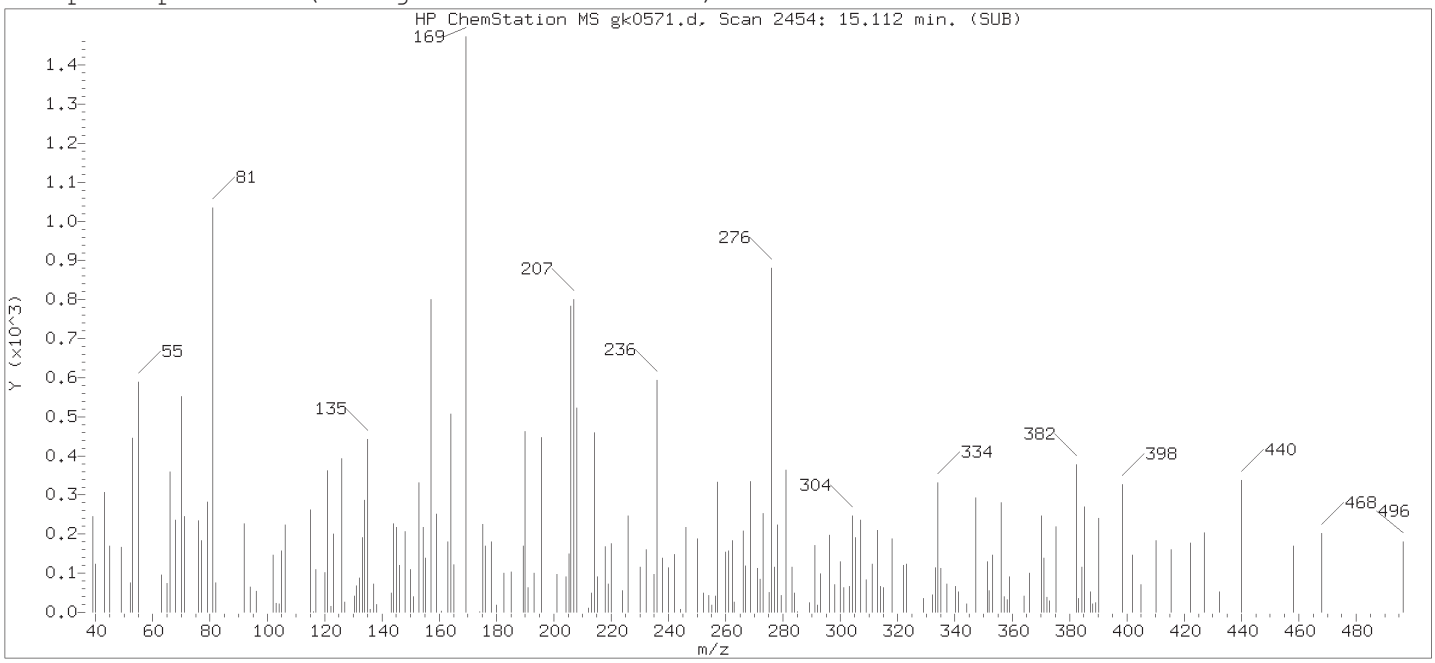
Compound Number : 193
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2454
Retention Time (minutes) : 15.112
Quant Ion : 276.00
Area (flag) : 2938M
On-column Amount (ng/ul) : 0.1663
Integration start scan : 2446 Integration stop scan: 2462
Y at integration start : 69 Y at integration end: 69

Reason for manual integration: improper integration

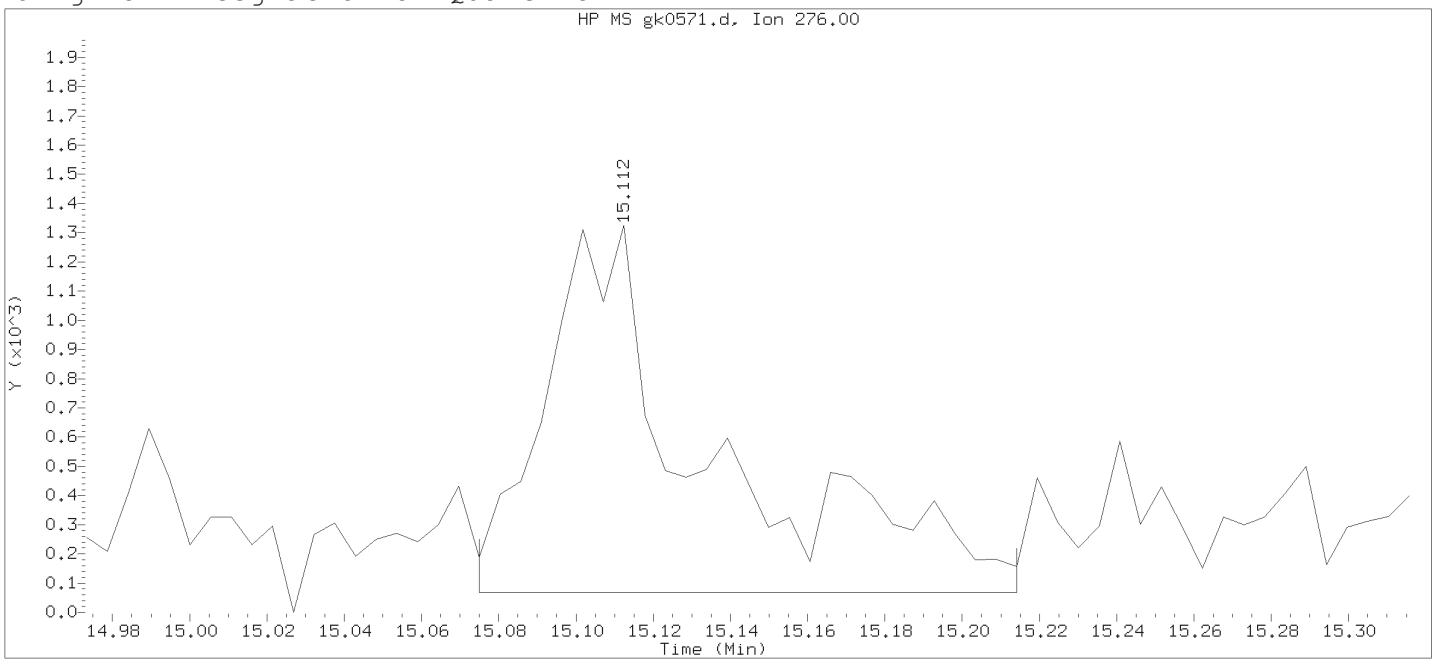
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

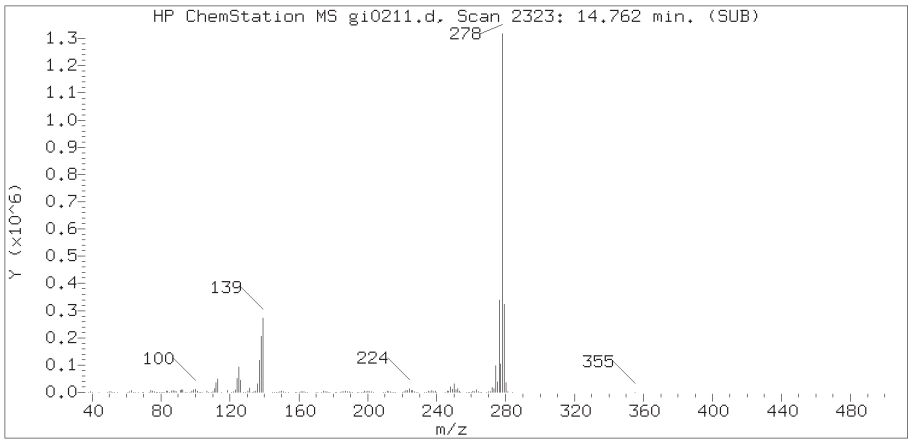
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

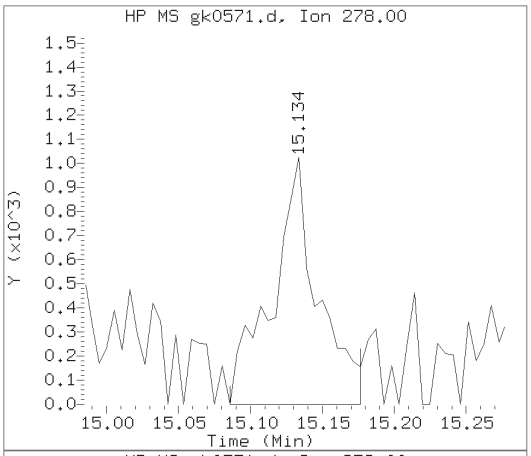
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	:	193
Compound Name	:	Indeno(1,2,3-cd)pyrene
Scan Number	:	2454
Retention Time (minutes)	:	15.112
Quant Ion	:	276.00
Area	:	3677
On-column Amount (ng/ul)	:	0.2081
Integration start scan	:	2446 Integration stop scan: 2472
Y at integration start	:	69 Y at integration end: 69

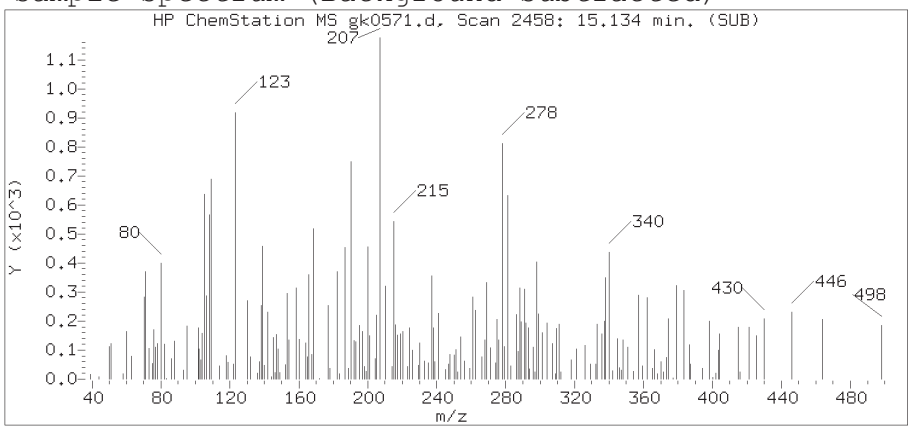
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

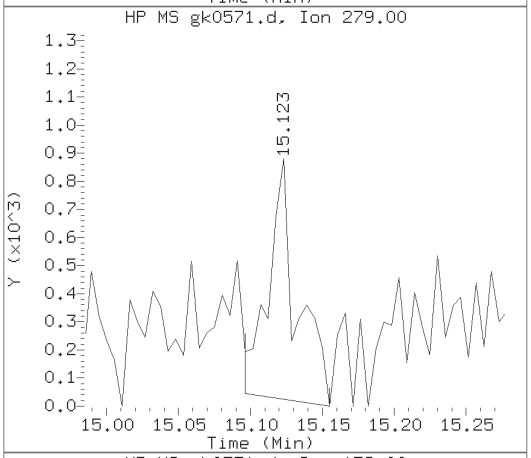
Reference Standard Spectrum for Dibenz(a,h)anthracene



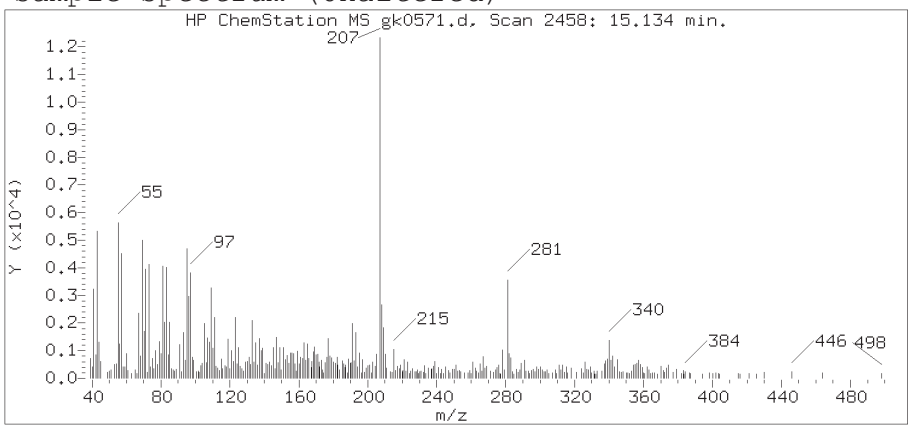


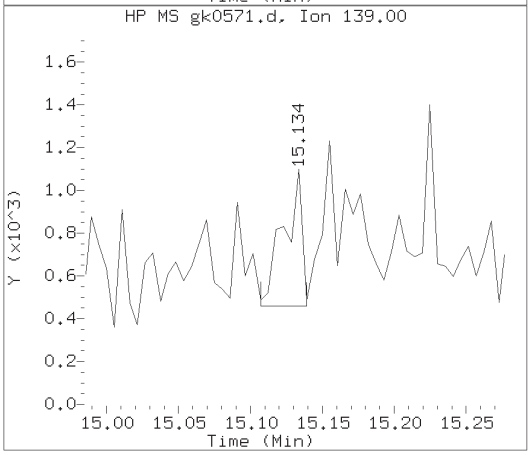
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

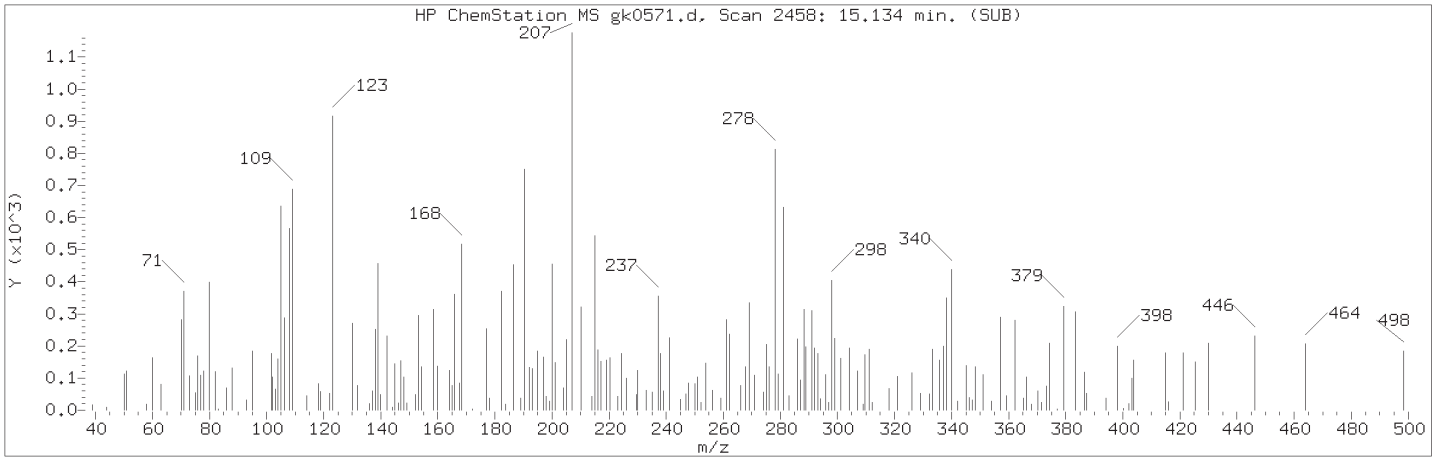
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

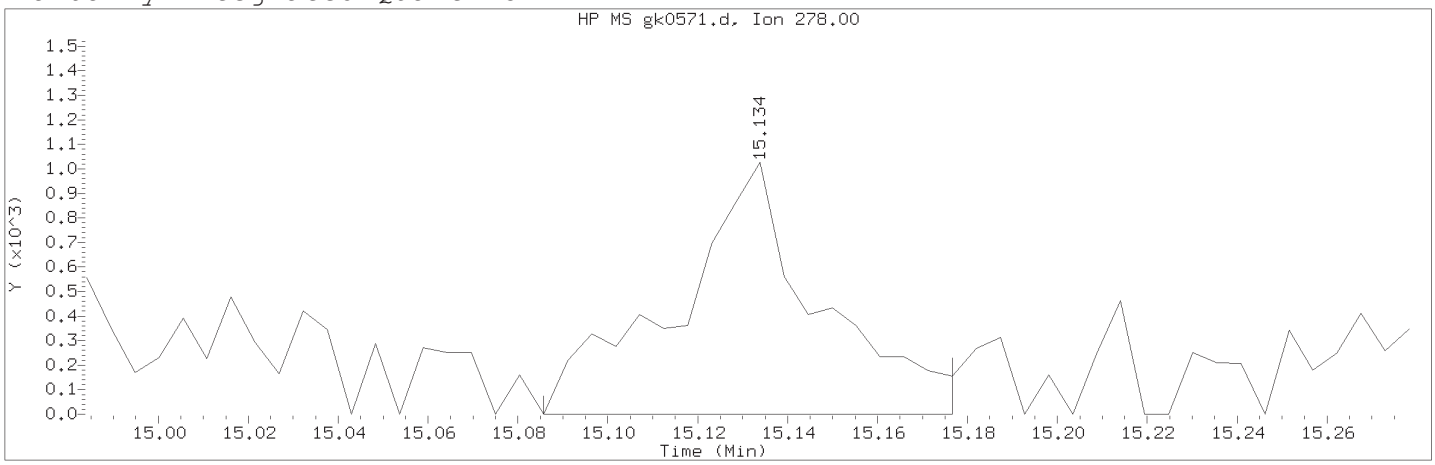
Compound Number	: 194
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2458
Retention Time (minutes)	: 15.134
Relative Retention Time	: 0.00038
Quant Ion	: 278.00
Area (flag)	: 2273M
On-column Amount (ng/ul)	: 0.1550

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

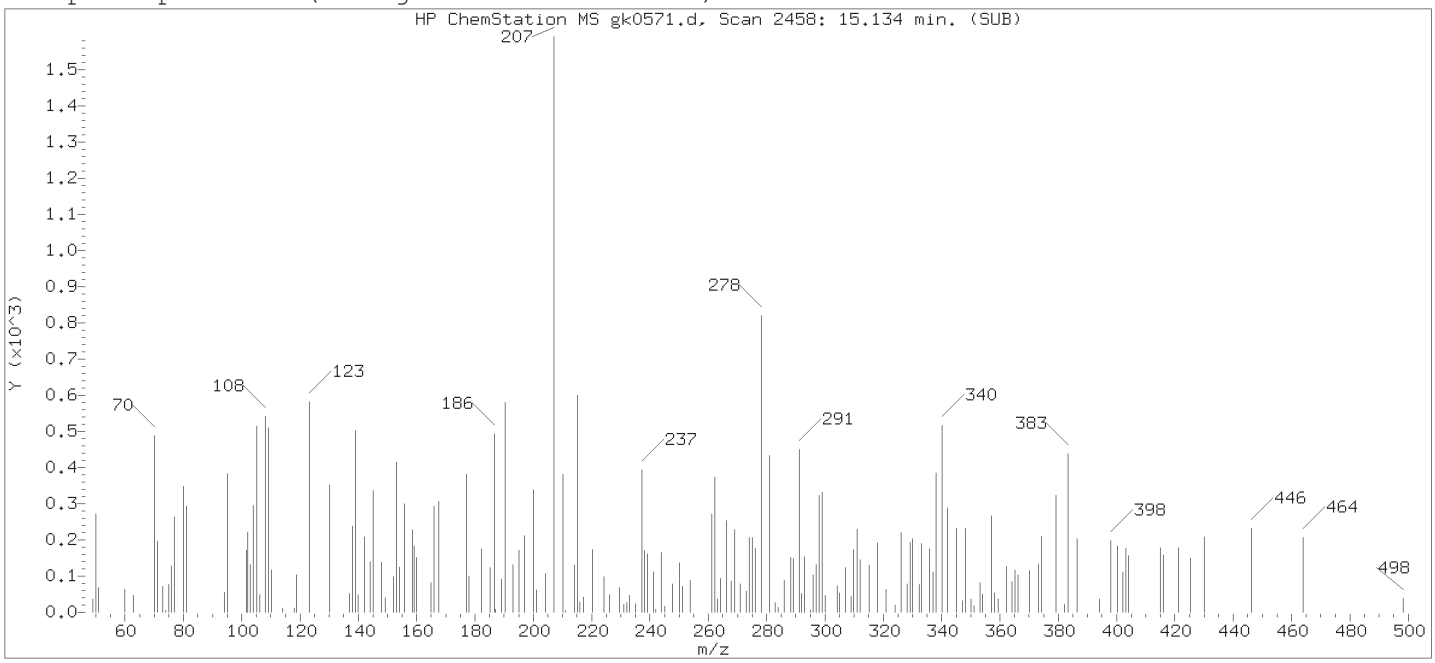
Compound Number : 194
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2458
Retention Time (minutes) : 15.134
Quant Ion : 278.00
Area (flag) : 2273M
On-column Amount (ng/ul) : 0.1550
Integration start scan : 2448 Integration stop scan: 2465
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

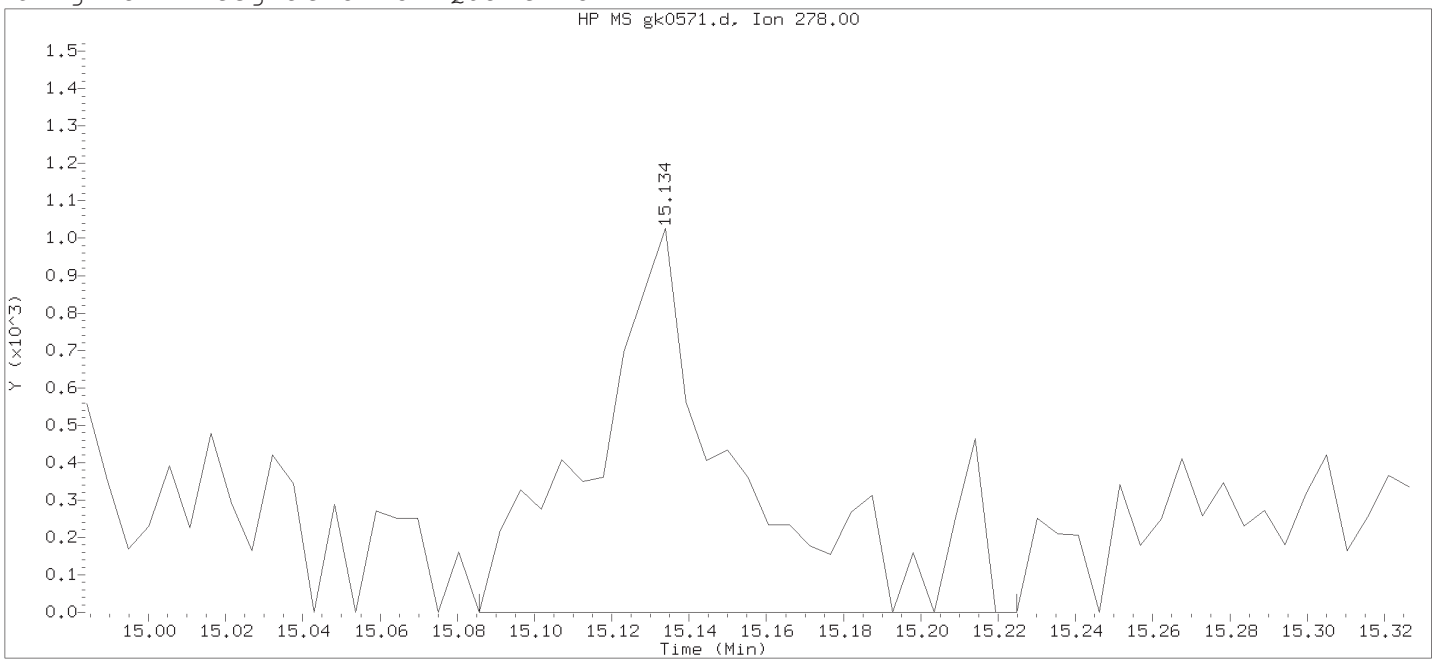
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

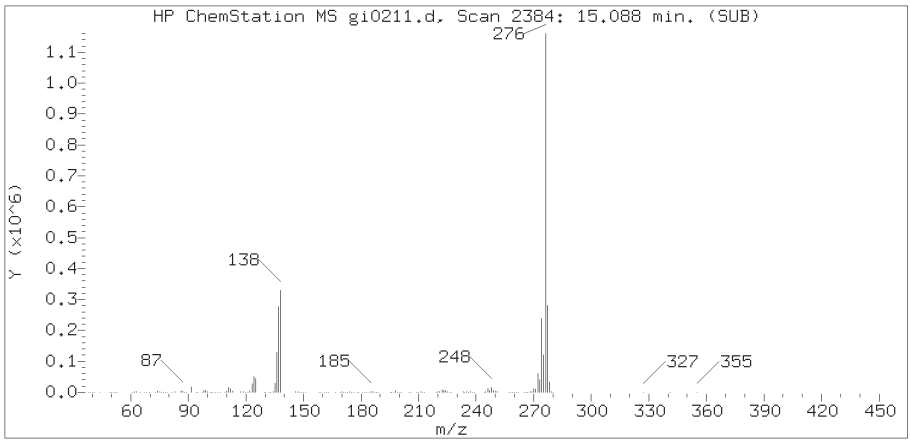
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

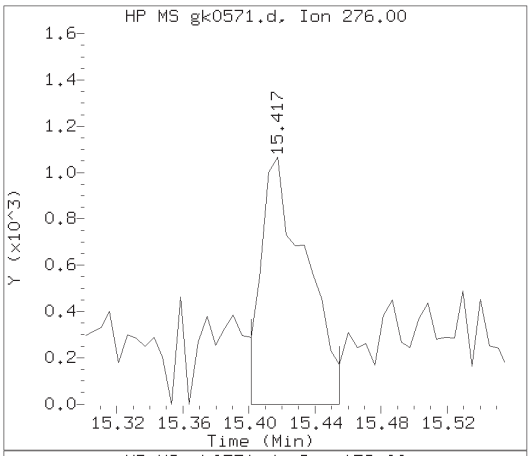
Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	: 194		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2458		
Retention Time (minutes)	: 15.134		
Quant Ion	: 278.00		
Area	: 2738		
On-column Amount (ng/ul)	: 0.1867		
Integration start scan	: 2448	Integration stop scan:	2474
Y at integration start	: 0	Y at integration end:	0

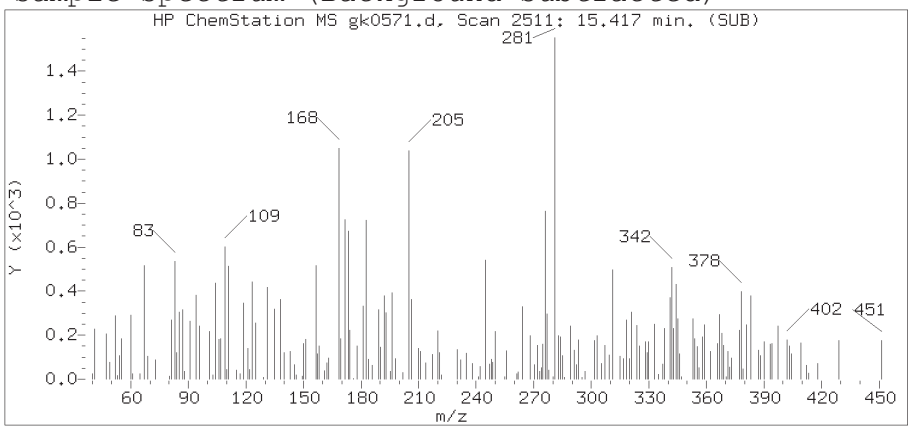
Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature used: Bkg00522

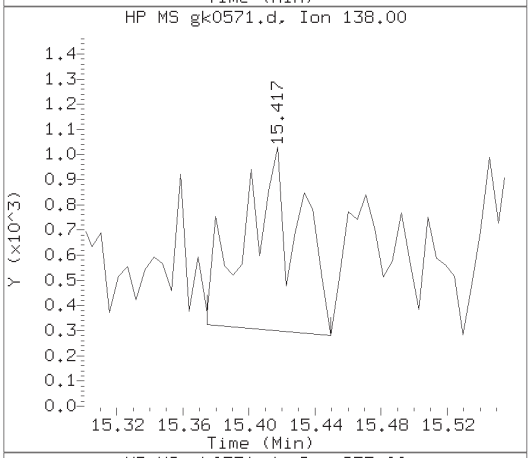
Reference Standard Spectrum for Benzo(g,h,i)perylene



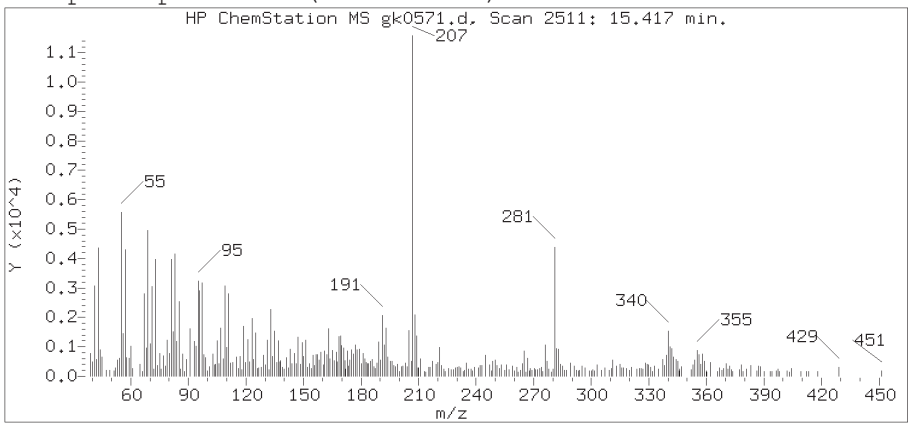


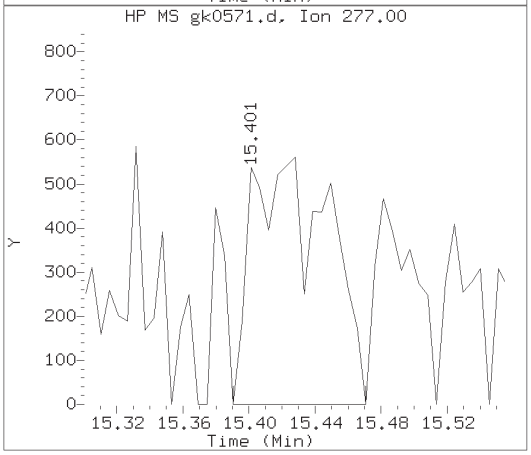
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

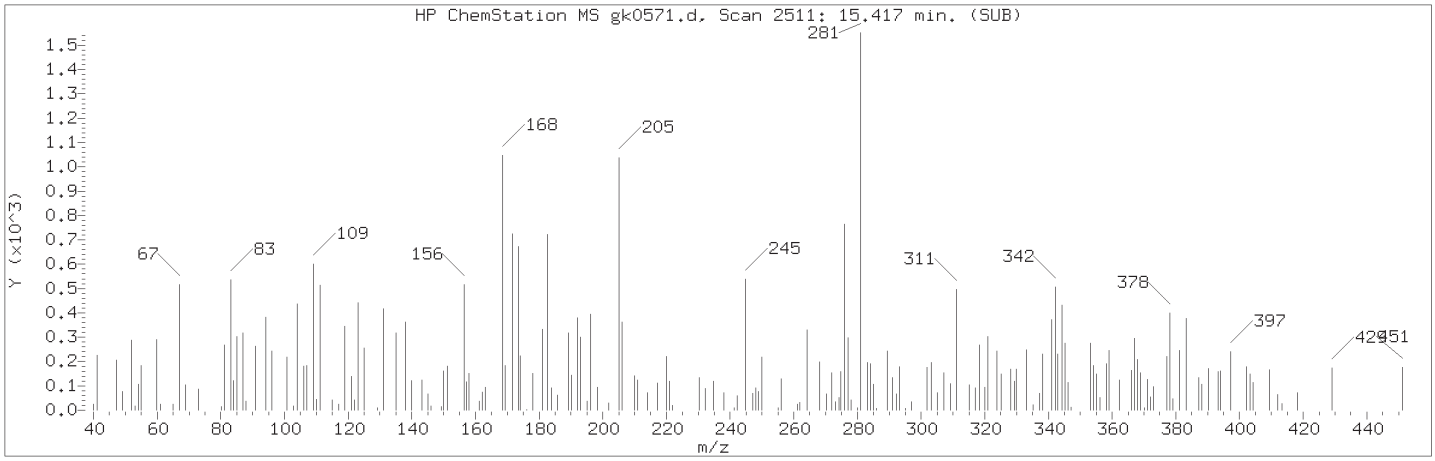
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

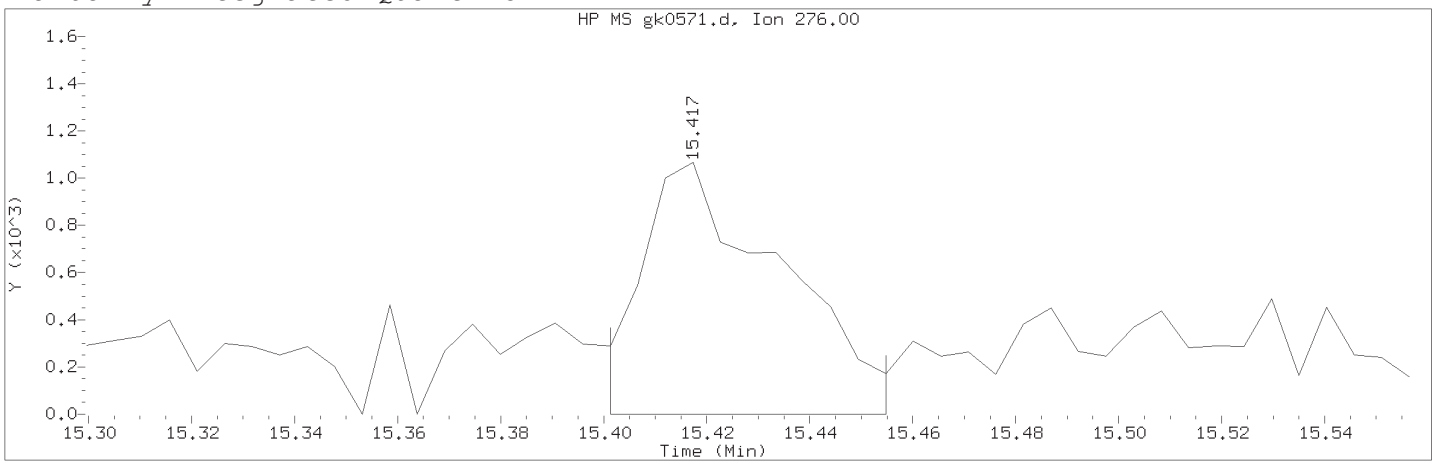
Compound Number	: 196
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2511
Retention Time (minutes)	: 15.417
Relative Retention Time	: 0.00115
Quant Ion	: 276.00
Area (flag)	: 2064M
On-column Amount (ng/ul)	: 0.1386

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

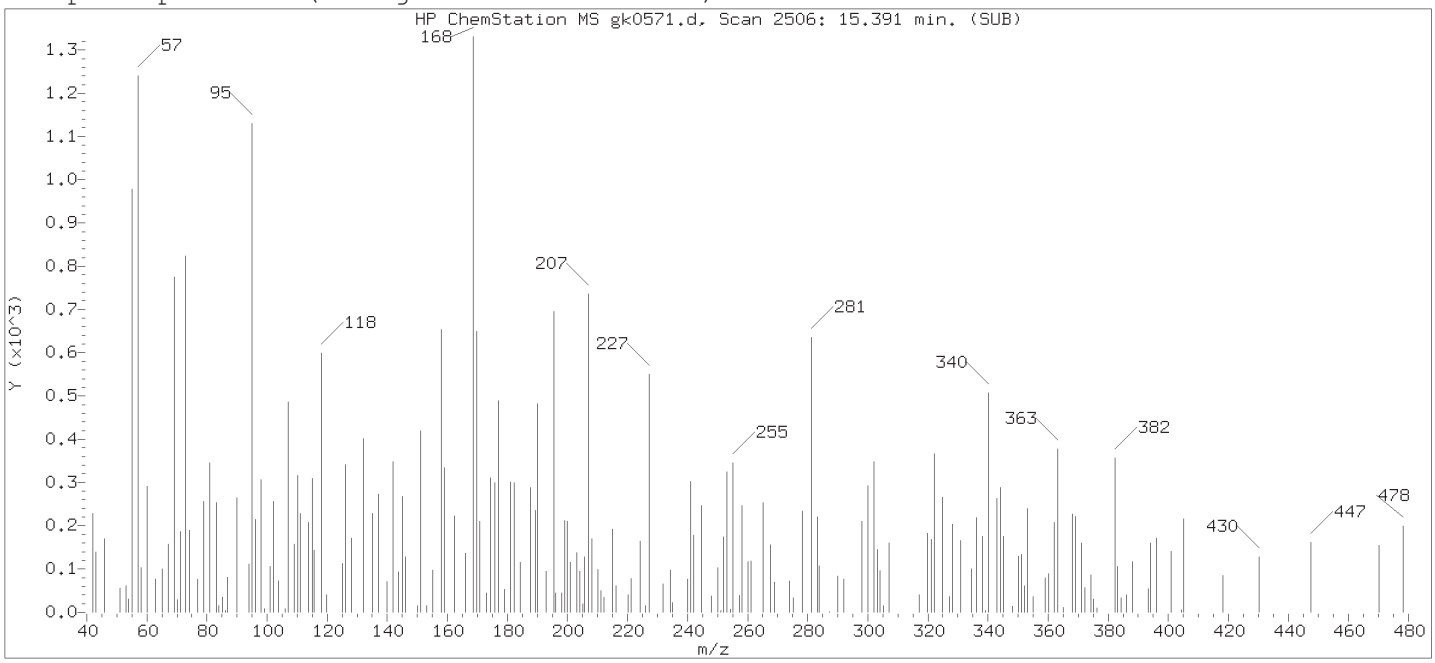
Compound Number : 196
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2511
Retention Time (minutes) : 15.417
Quant Ion : 276.00
Area (flag) : 2064M
On-column Amount (ng/ul) : 0.1386
Integration start scan : 2507 Integration stop scan: 2517
Y at integration start : -1 Y at integration end: -1

Reason for manual integration: improper integration

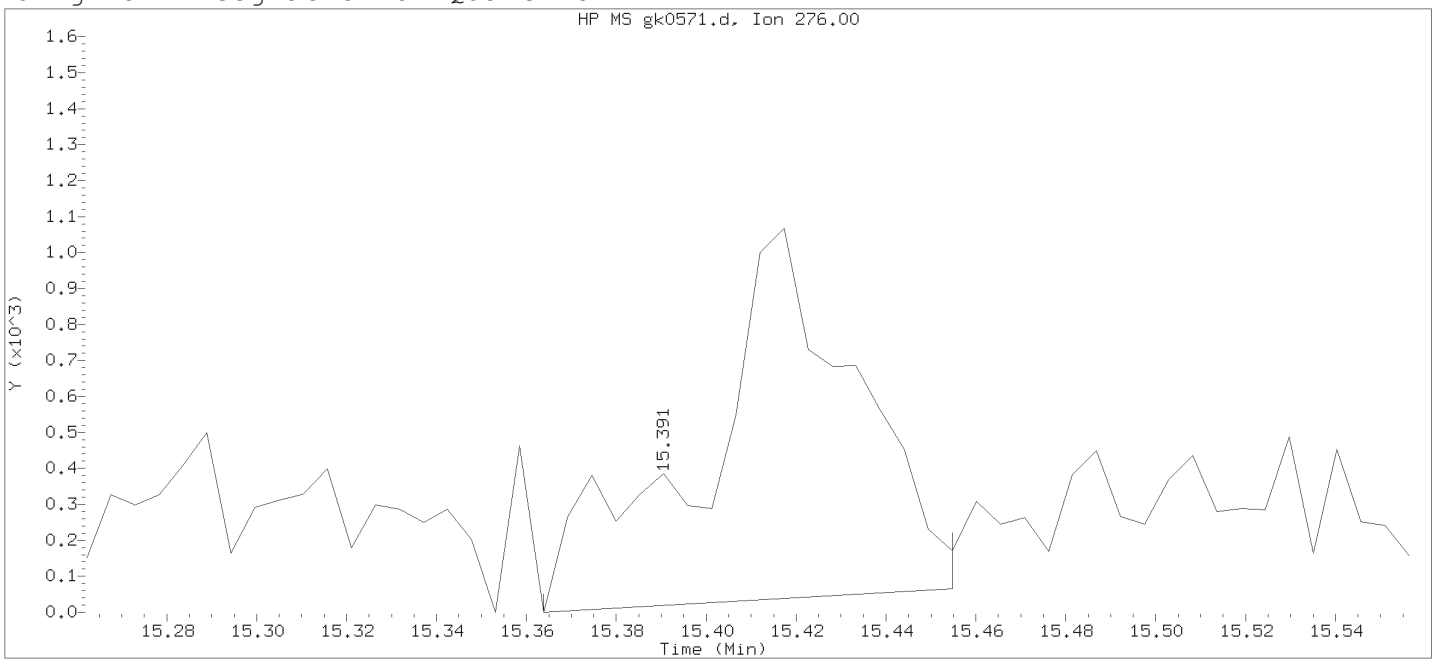
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 14:23.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:21 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Compound Number	:	196
Compound Name	:	Benzo(g,h,i)perylene
Scan Number	:	2506
Retention Time (minutes)	:	15.391
Quant Ion	:	276.00
Area	:	2466
On-column Amount (ng/ul)	:	0.1656
Integration start scan	:	2500 Integration stop scan: 2517
Y at integration start	:	0 Y at integration end: 66

Digitally signed by Brian K. Graham on 11/15/2013 at 01:52.
Target 3.5 esignature user ID: bkg00522

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

XHERC

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 7263053

Sample wt/vol: 30.2 (g/mL) g Lab File ID: gk0571.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: 44 Decanted: (Y/N) Date Extracted: 11/11/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/14/13

Injection Volume: 1 (uL) Dilution Factor: 20

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 5 (mg/L or mg/Kg) mg/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.378	6.1	J
2.		Unknown	10.063	24	J
3.		Unknown	12.133	66	J
4.		Unknown	14.144	4.7	J
5.		Unknown	14.578	4.9	J
6.					
7.	SVOCTIC	Total SVOC TICs		100	J
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
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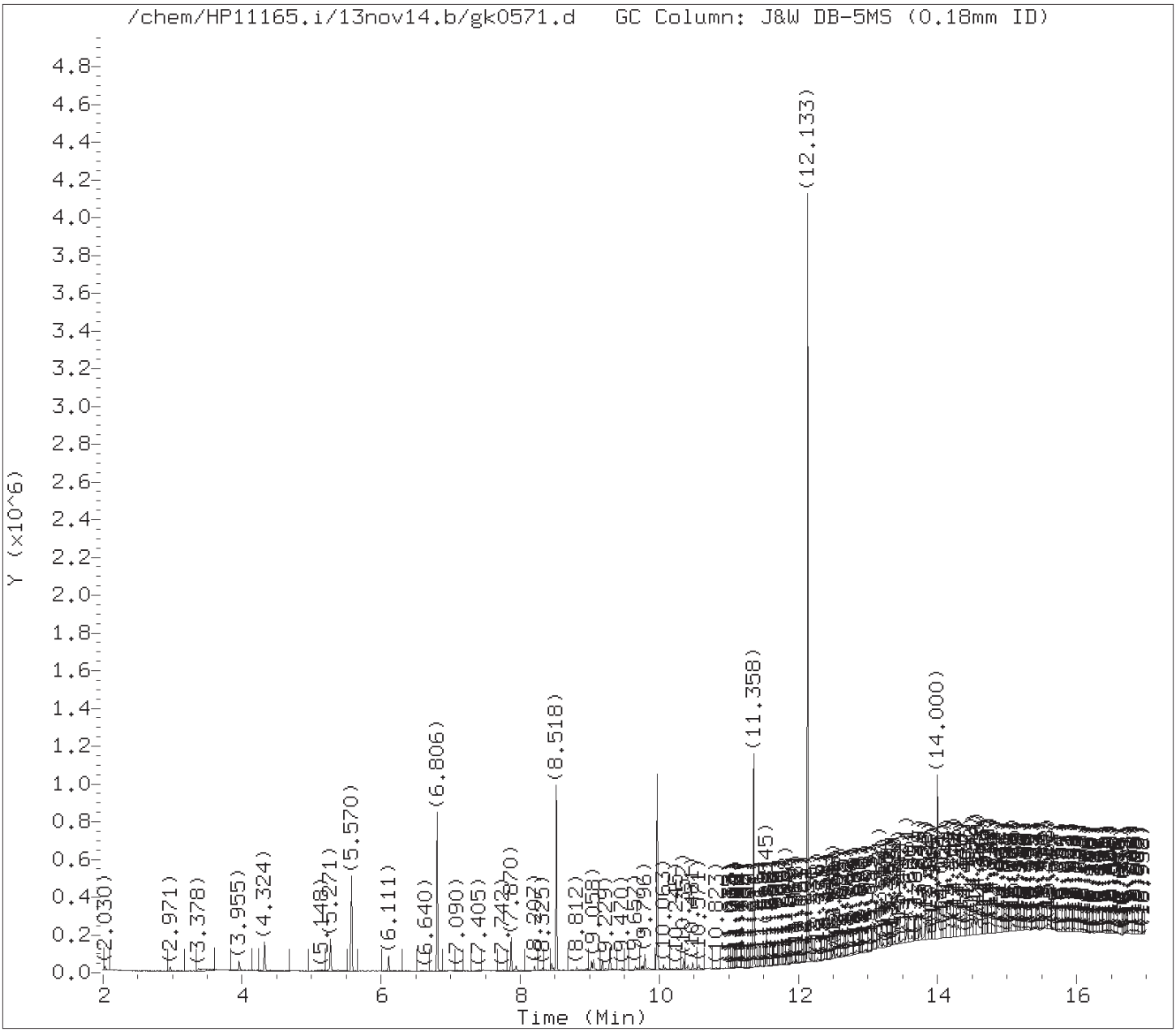
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

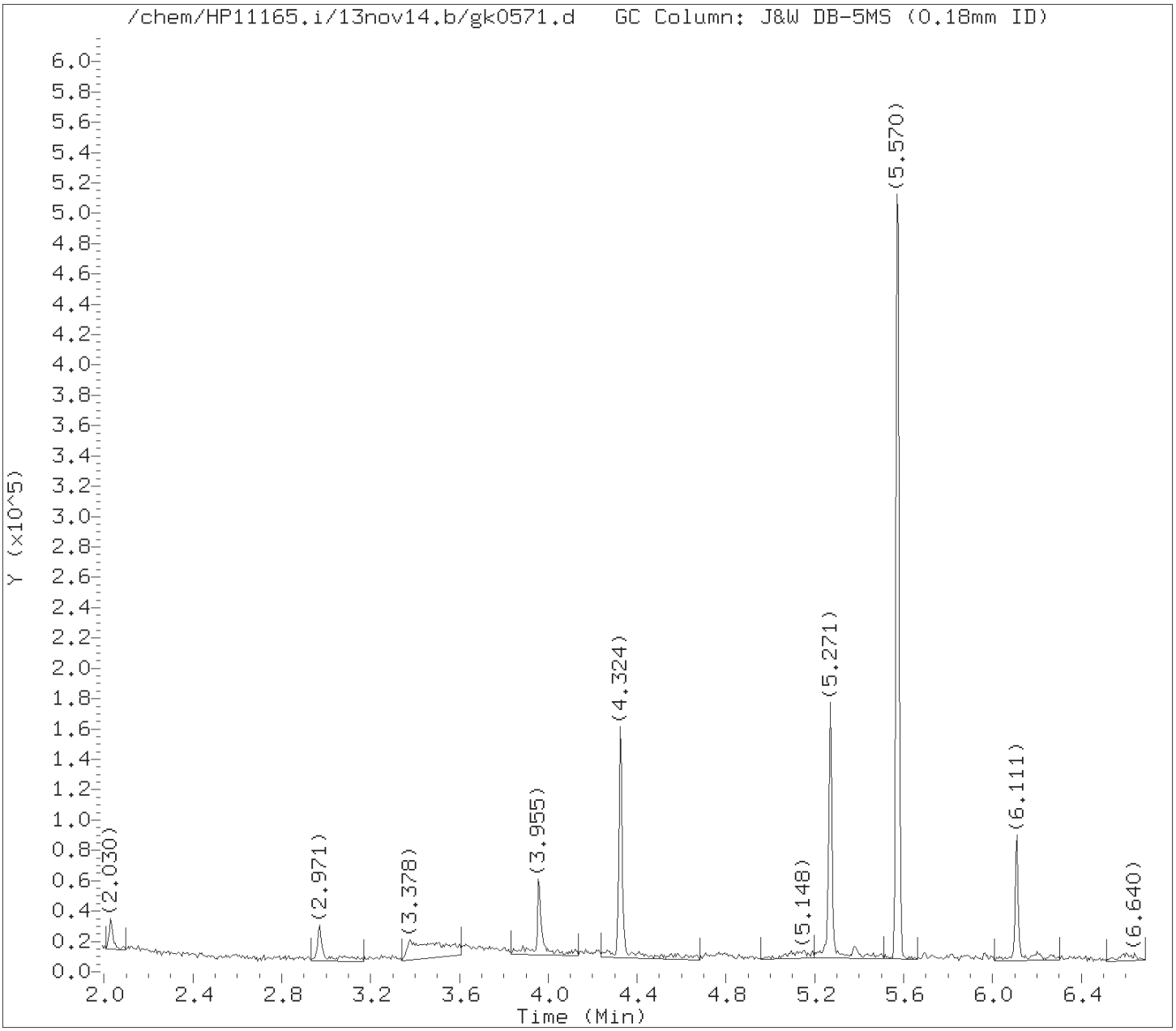
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Chromatogram Start Time (min.): 1.992
Chromatogram End Time (min.): 17.001

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

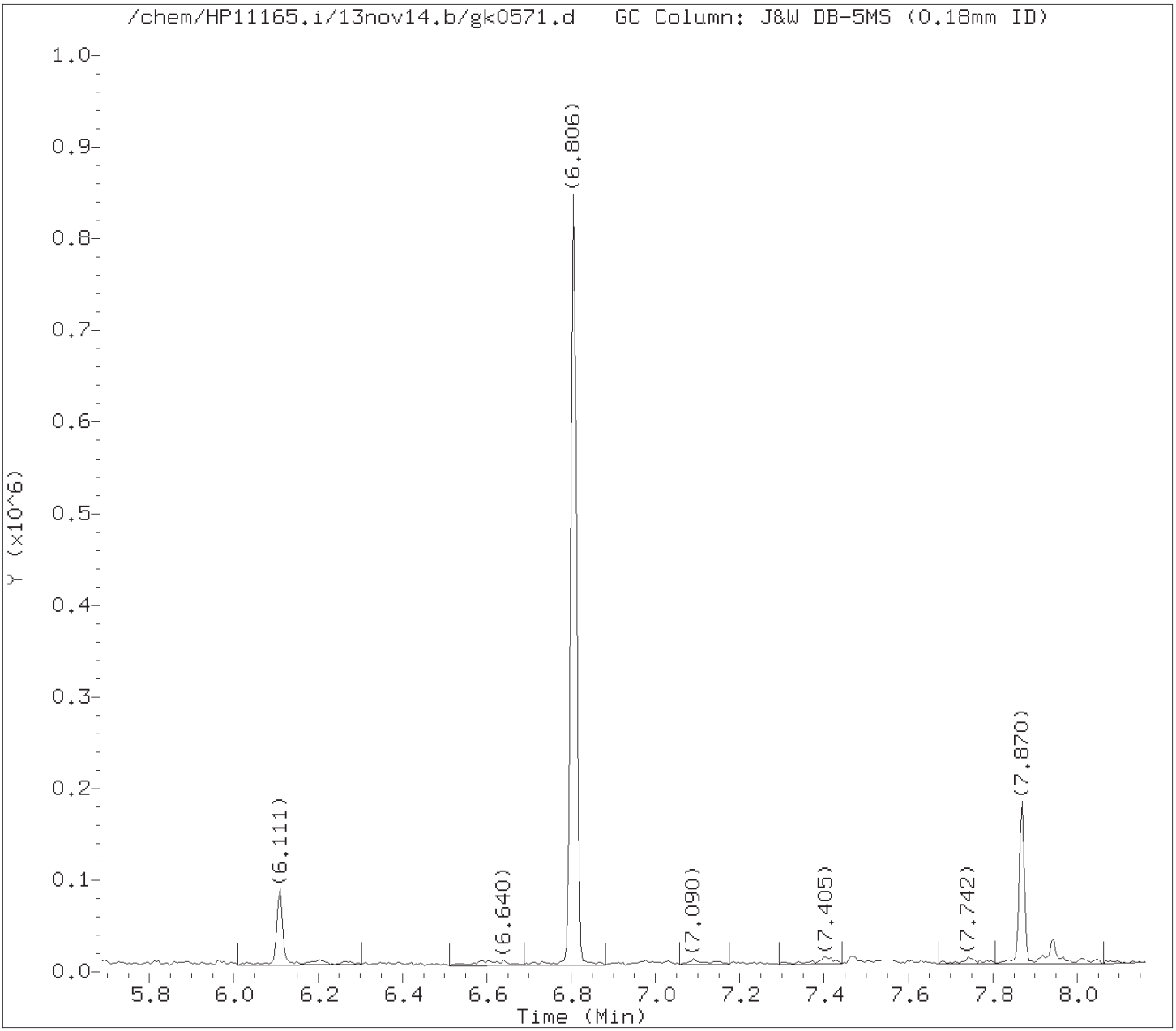
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.570 minutes
Chromatogram Start Time (min.): 1.992
Chromatogram End Time (min.): 6.188

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

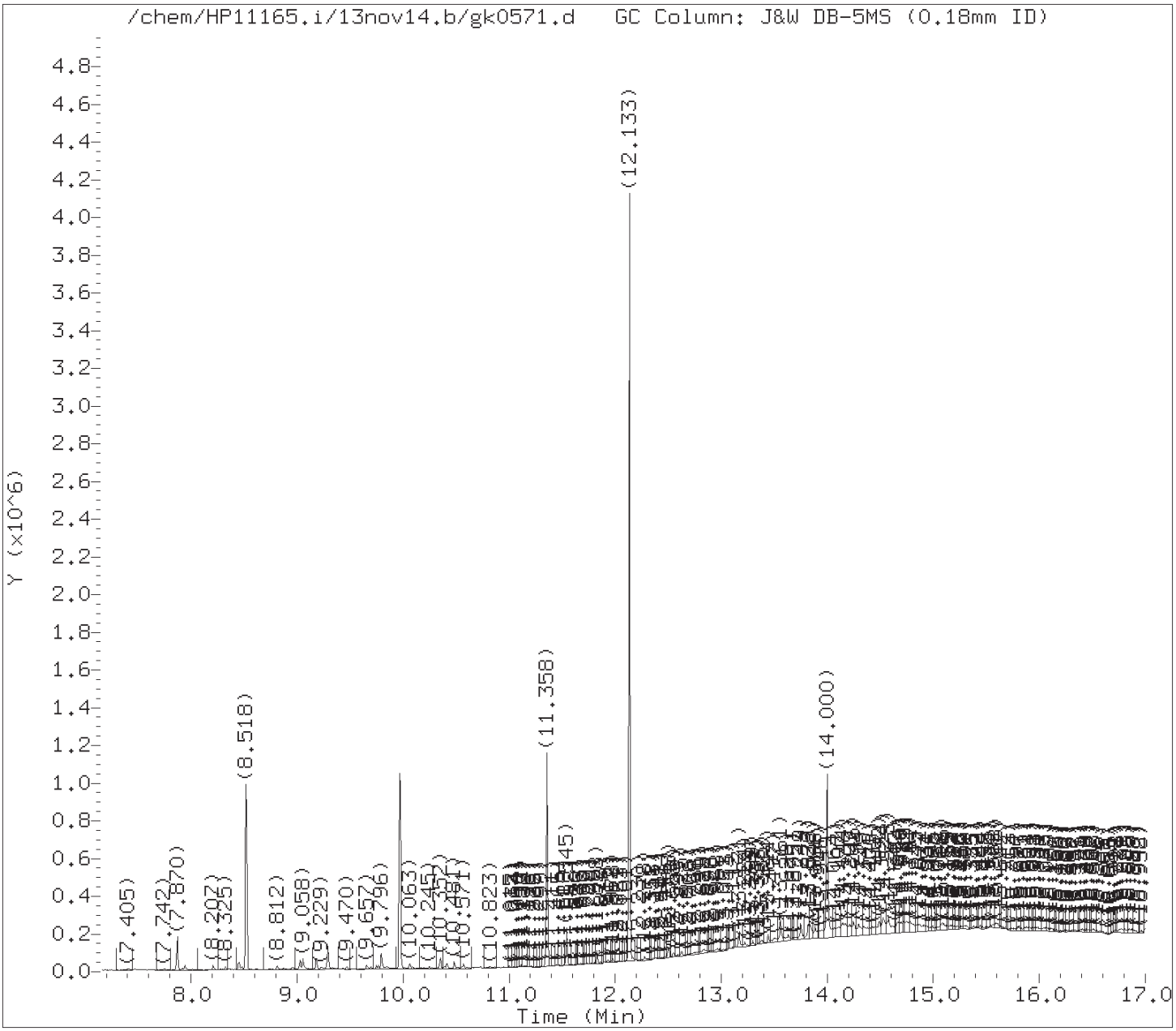
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: Naphthalene-d8 at 6.806 minutes
Chromatogram Start Time (min.): 6.188
Chromatogram End Time (min.): 7.662

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

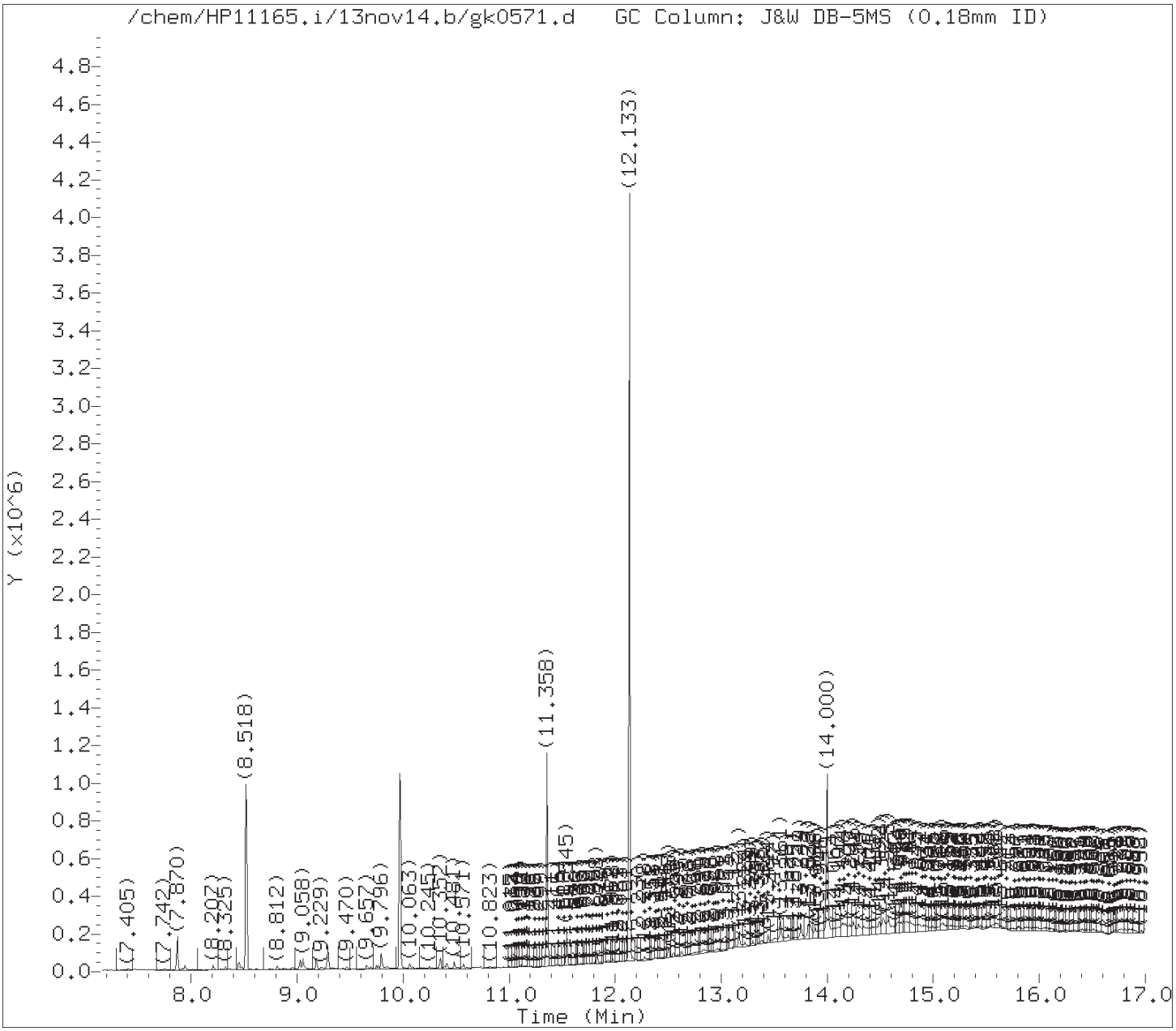
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: Acenaphthene-d10 at 8.518 minutes
Chromatogram Start Time (min.): 7.662
Chromatogram End Time (min.): 9.242

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

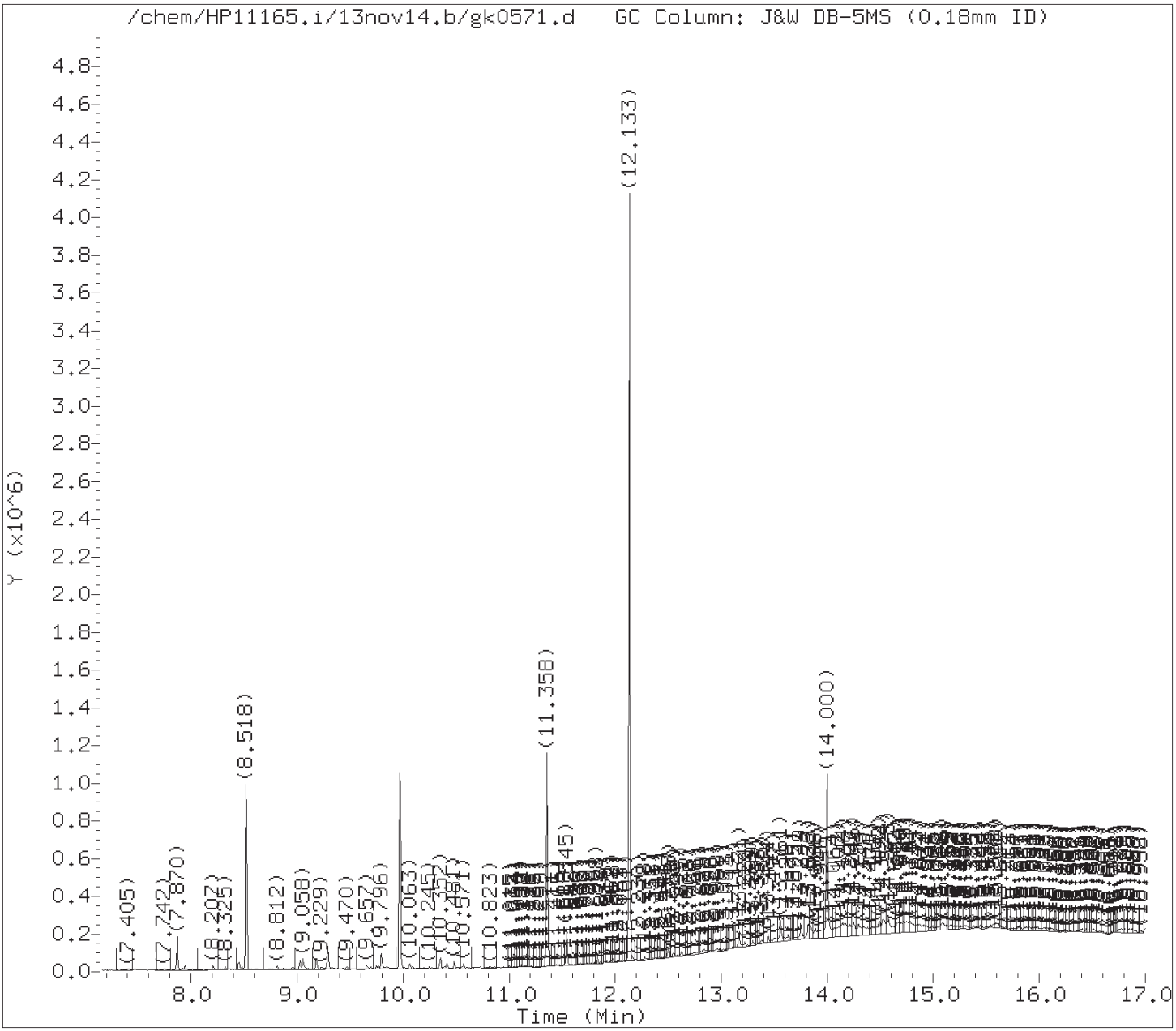
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: Phenanthrene-d10 at 9.967 minutes
Chromatogram Start Time (min.): 9.242
Chromatogram End Time (min.): 10.662

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

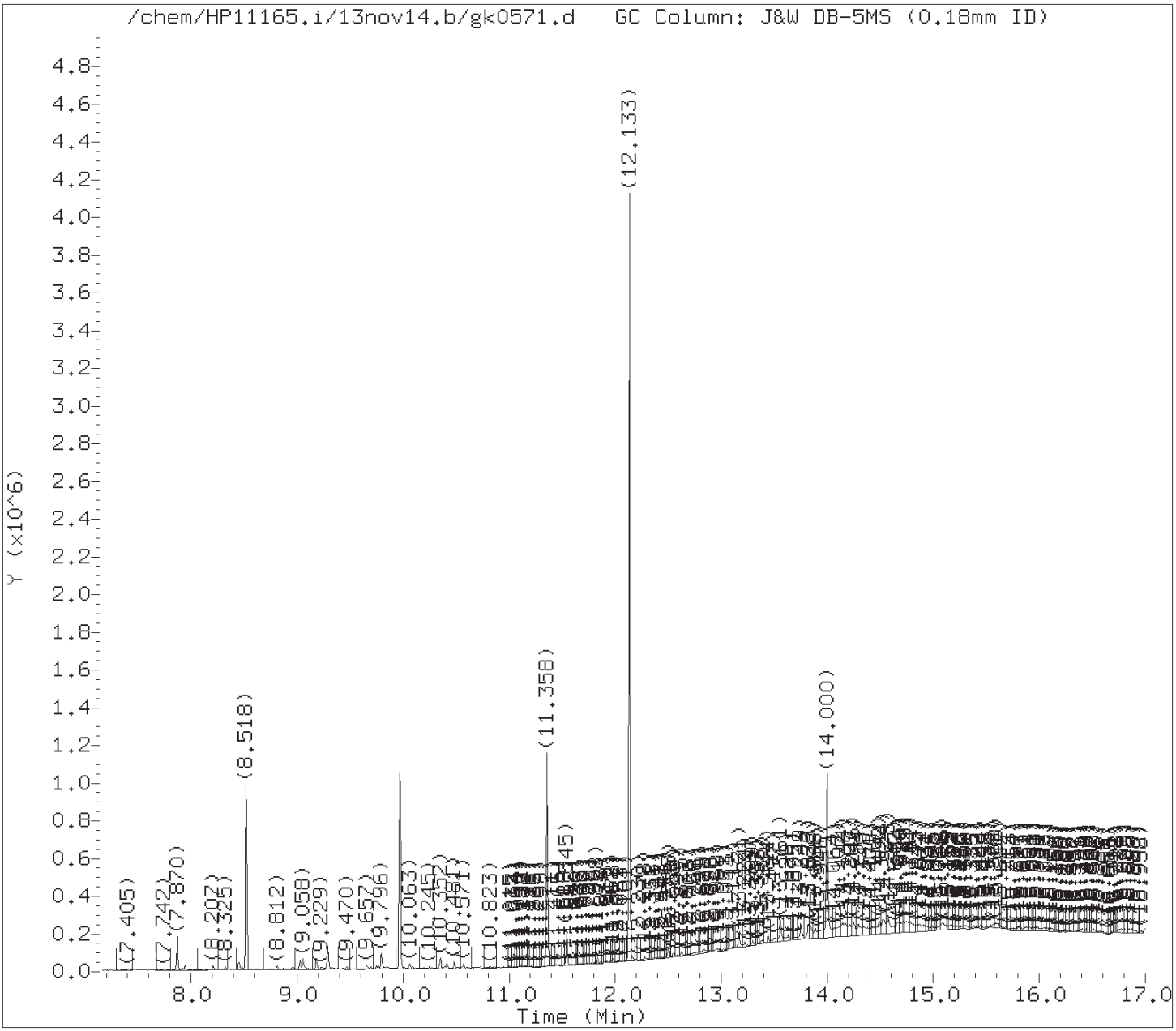
Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: Pyrene-d10 at 11.358 minutes
Chromatogram Start Time (min.): 10.662
Chromatogram End Time (min.): 12.679

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0571.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 10:30 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: SL1847mic
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 15-Nov-2013 01:30 bkg00522

Sample Name: XHERC Lab Sample ID: 7263053

Internal Standard referenced: Perylene-d12 at 14.000 minutes
Chromatogram Start Time (min.): 12.679
Chromatogram End Time (min.): 17.001

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Lancaster Labs

Data file : /chem/HP11165.i/13nov14.b/gk0571.d
Lab Smp Id: 7263053 Client Smp ID: XHERC
Inj Date : 14-NOV-2013 10:30
Operator : bkg00522 Inst ID: HP11165.i
Smp Info : XHERC;7263053;2;0;SAMPLE;;;
Misc Info : 13313SLC;1847.sub;30.2;;1000;0;gk0517;10727;
Comment : Max. number of TICs to report is 20, 5 TICs were found initially.
Method : /chem/HP11165.i/13nov14.b/mnew8270.m
Meth Date : 14-Nov-2013 03:02 bkg00522 Quant Type: ISTD
Cal Date : 09-NOV-2013 22:09 Cal File: gk0325.d
Als bottle: 28
Dil Factor: 20.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50
Processing Host: d26cs02

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	20.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	30.20000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 25 1,4-Dichlorobenzene-d4	5.570	501811	20.000
* 164 Pyrene-d10	11.358	1092294	20.000
* 188 Perylene-d12	14.000	1129886	20.000

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.378	128597	5.12531888	3394.25091	0		0	25
Unknown				CAS #:			
10.063	1098866	20.1203265	13324.71952	0		0	164
Unknown				CAS #:			
12.133	3061477	56.0558696	37123.09242	0		0	164
Unknown				CAS #:			
14.144	226236	4.00457594	2652.03704	0		0	188
Unknown				CAS #:			
14.578	235487	4.16833578	2760.48726	0		0	188

Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0571.d

Date : 14-NOV-2013 10:30

Client ID: XHERC

Instrument: HP11165.i

Sample Info: XHERC;7263053;2;0;SAMPLE;;;

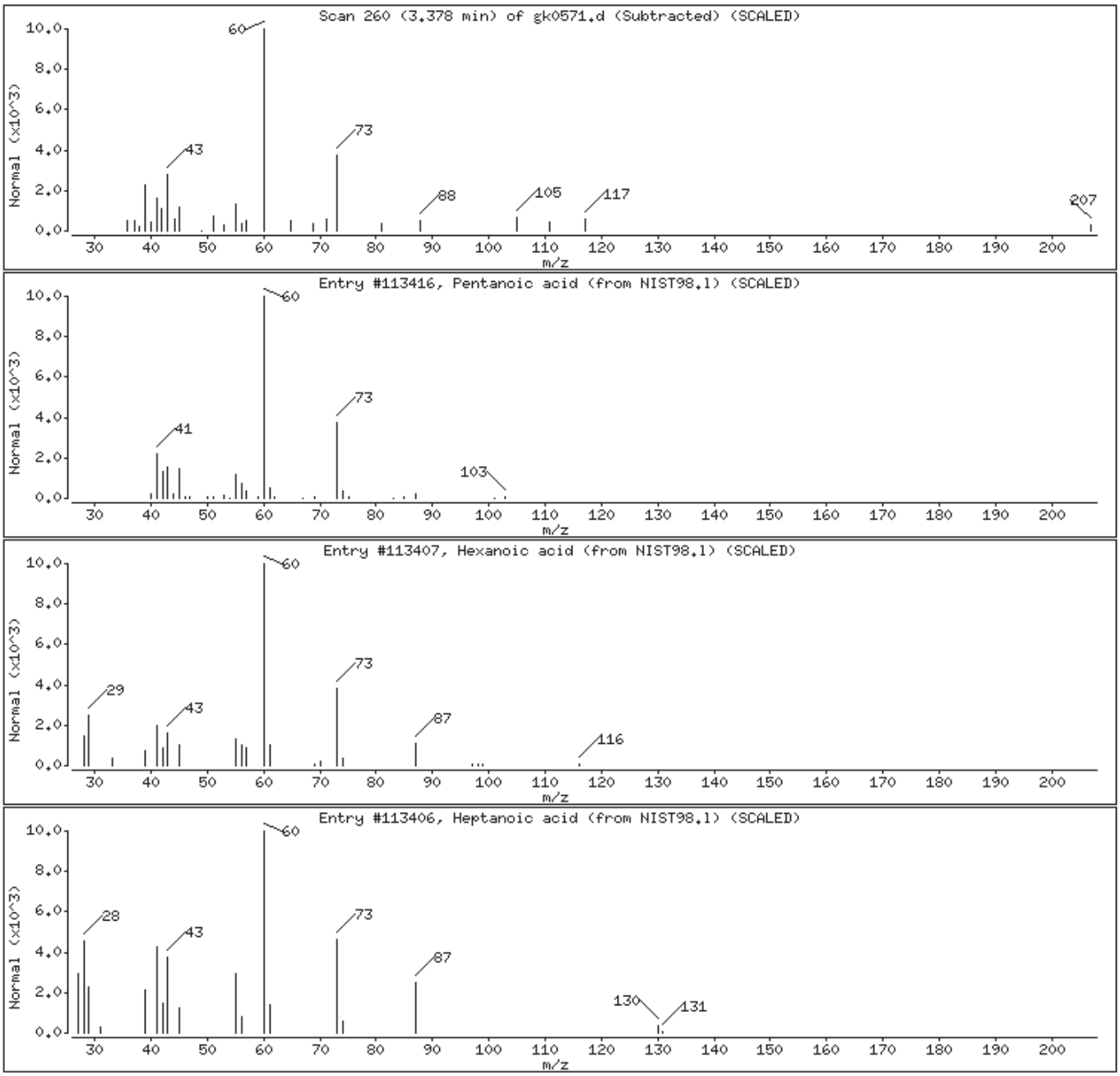
Volume Injected (uL): 1.0

Operator: bkg00522

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pentanoic acid	109-52-4	NIST98.1	113416	72	C5H10O2	102
Hexanoic acid	142-62-1	NIST98.1	113407	39	C6H12O2	116
Heptanoic acid	111-14-8	NIST98.1	113406	39	C7H14O2	130



Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0571.d

Date : 14-NOV-2013 10:30

Client ID: XHERC

Instrument: HP11165.i

Sample Info: XHERC;7263053;2;0;SAMPLE;;;

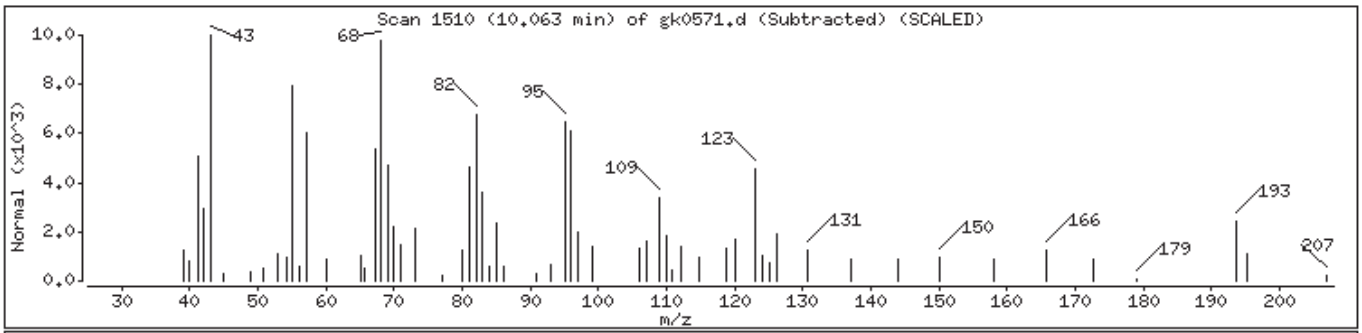
Volume Injected (uL): 1.0

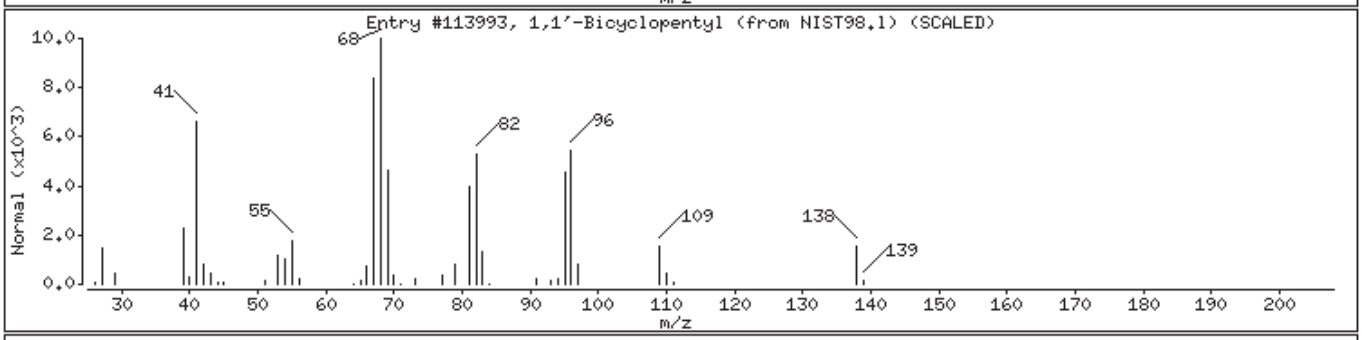
Operator: bkg00522

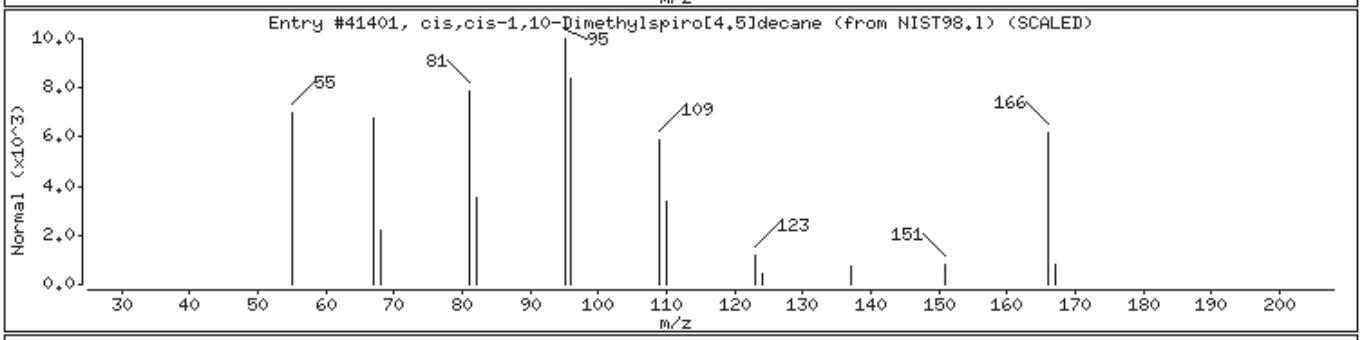
Column phase: J&W DB-5MS

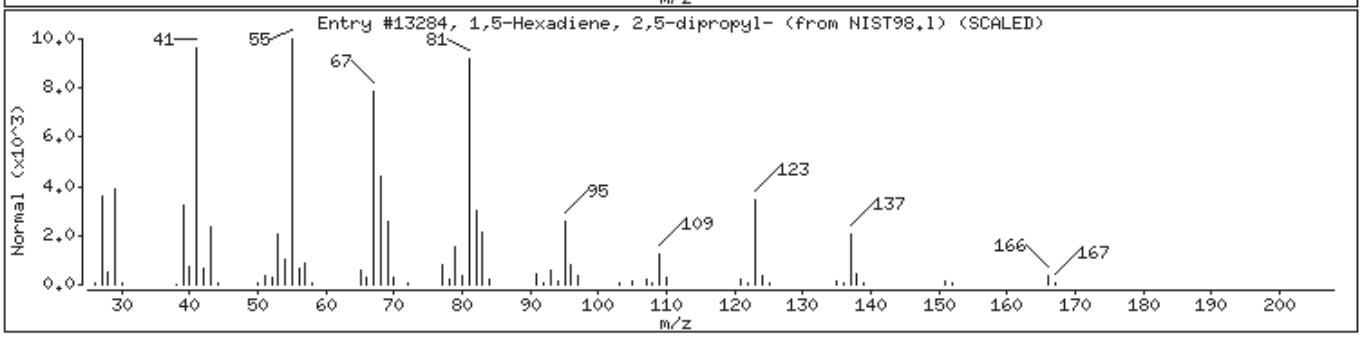
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,1'-Bicyclopentyl	1636-39-1	NIST98.l	113993	47	C10H18	138
cis,cis-1,10-Dimethylspiro[4.5]decane	1000111-72-4	NIST98.l	41401	42	C12H22	166
1,5-Hexadiene, 2,5-dipropyl-	1000158-33-4	NIST98.l	13284	38	C12H22	166









Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0571.d

Date : 14-NOV-2013 10:30

Client ID: XHERC

Instrument: HP11165.i

Sample Info: XHERC;7263053;2;0;SAMPLE;;;

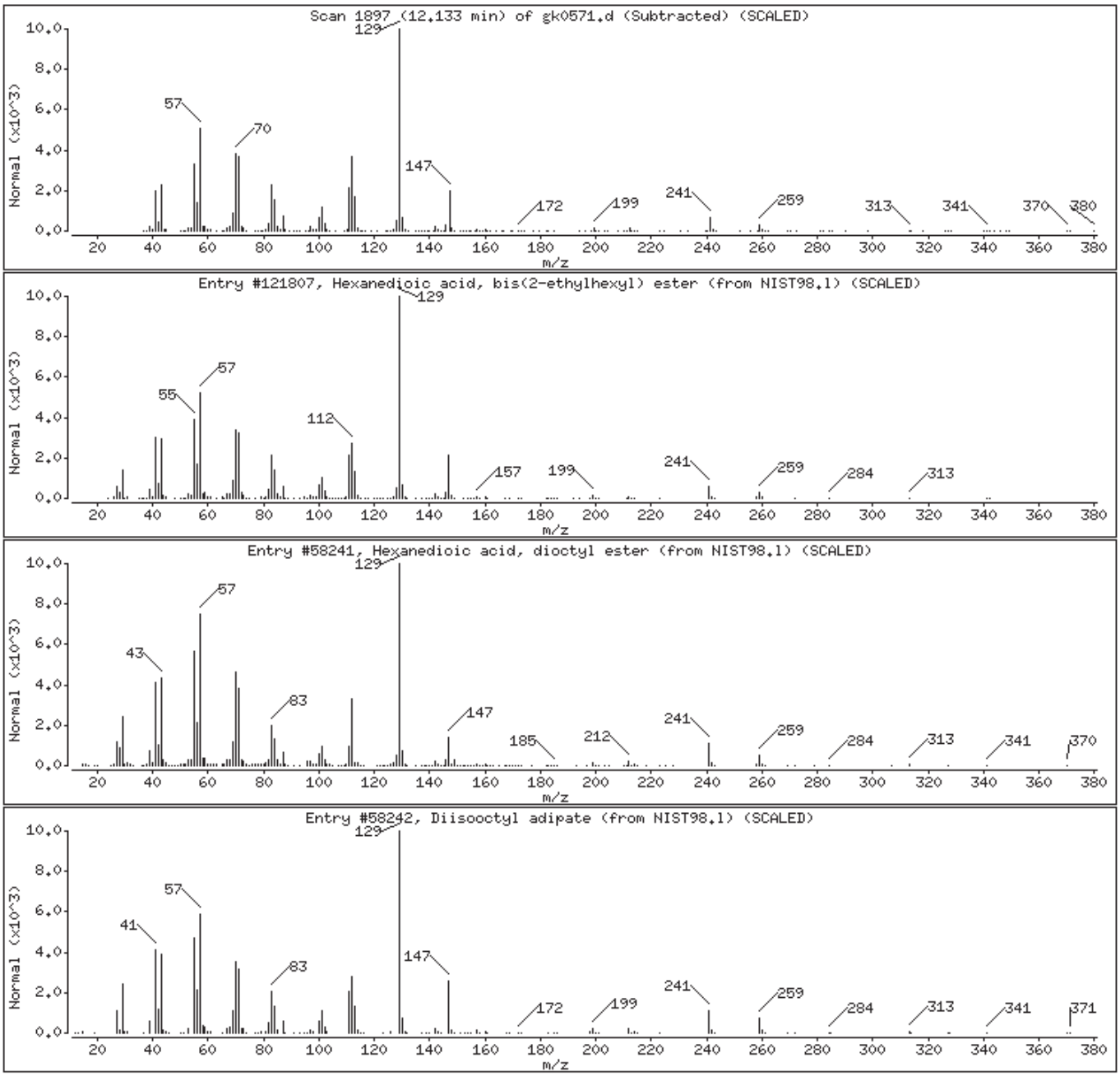
Volume Injected (uL): 1.0

Operator: bkg00522

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexanedioic acid, bis(2-ethylhexyl) este	103-23-1	NIST98.1	121807	94	C22H4204	370
Hexanedioic acid, dioctyl ester	123-79-5	NIST98.1	58241	80	C22H4204	370
Diisooctyl adipate	1330-86-5	NIST98.1	58242	72	C22H4204	370



Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0571.d

Date : 14-NOV-2013 10:30

Client ID: XHERC

Instrument: HP11165.i

Sample Info: XHERC;7263053;2;0;SAMPLE;;;

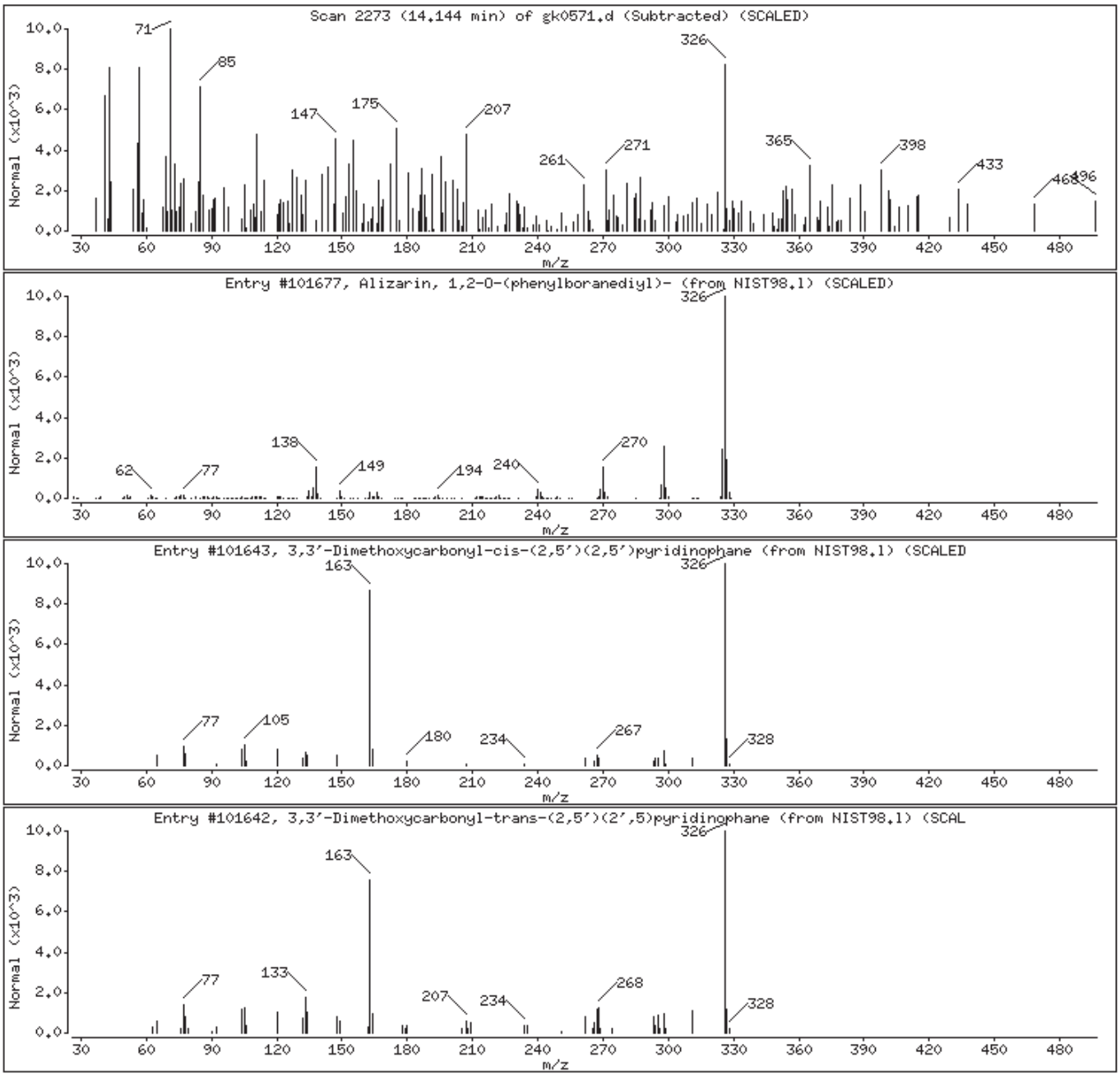
Volume Injected (uL): 1.0

Operator: bkg00522

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Alizarin, 1,2-O-(phenylboranediyl)-	1000161-74-3	NIST98.1	101677	30	C20H11BO4	326
3,3'-Dimethoxycarbonyl-cis-(2,5')(2,5')p	1000148-86-9	NIST98.1	101643	30	C18H18N2O4	326
3,3'-Dimethoxycarbonyl-trans-(2,5')(2',5	1000148-86-8	NIST98.1	101642	30	C18H18N2O4	326



Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0571.d

Date : 14-NOV-2013 10:30

Client ID: XHERC

Instrument: HP11165.i

Sample Info: XHERC;7263053;2;0;SAMPLE;;;

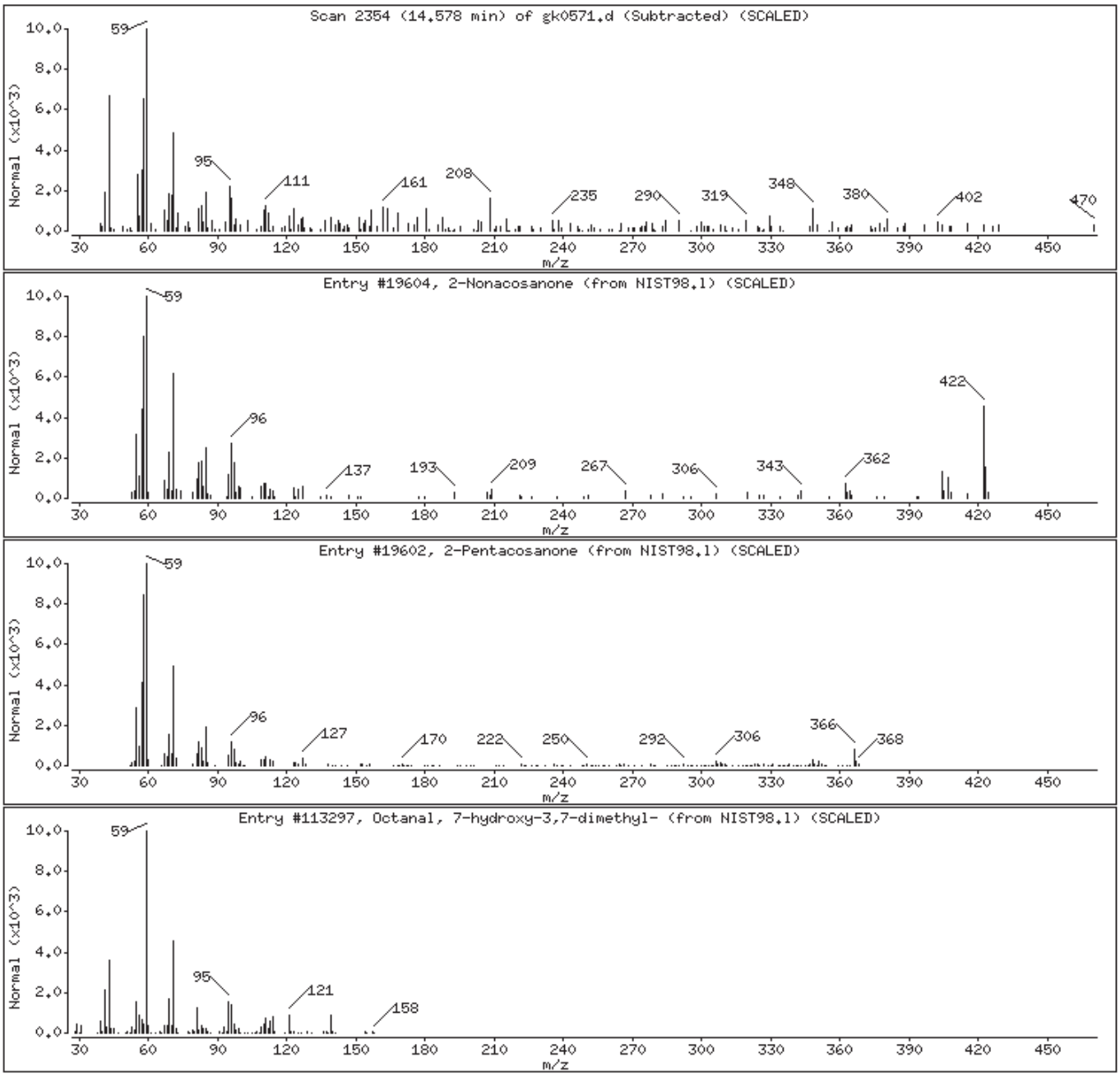
Volume Injected (uL): 1.0

Operator: bkg00522

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Nonacosanone	17600-99-6	NIST98.1	19604	59	C29H58O	422
2-Pentacosanone	75207-54-4	NIST98.1	19602	59	C25H50O	366
Octanal, 7-hydroxy-3,7-dimethyl-	107-75-5	NIST98.1	113297	47	C10H20O2	172



Digitally signed by Brian K. Graham on 11/15/2013 at 01:49.
Target 3.5 esignature user ID: bkg00522

PHERC

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263054

Data file: /chem/HP10623.i/13nov13a.b/ck0484.d
Data file Sample Info. Line: PHERC;7263054;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Injection date and time: **13-NOV-2013 18:15**
Instrument ID: **HP10623.i** Batch: **13310SLF**

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1
Final Extract Volume (Vt): 1000 ul
GpcCleanup (No = 0, Yes = 1): 0
Volume Injected (Vi): 1 ul
Unit Correction Factor (Uf): 1
Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201	(0.000)	540	152	135704	(14)	20.00	
52) Naphthalene-d8	6.437	(0.000)	741	136	615207	(8)	20.00	
98) Acenaphthene-d10	8.152	(-0.006)	1020	164	364026	(0)	20.00	
135) Phenanthrene-d10	9.591	(0.000)	1254	188	647452	(-6)	20.00	
167) Pyrene-d10	10.975	(0.000)	1479	212	744662	(-12)	20.00	
175) Perylene-d12	13.582	(-0.006)	1903	264	562679	(-20)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742	(0.000)	82	1136527	85.746	86%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513	(0.000)	172	2264771	98.946	99%		69 - 120
156) Terphenyl-d14	(5)	11.177	(-0.001)	244	2632869	98.903	99%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)				Not Detected					0.1
70) 2-Methylnaphthalene	(2)				Not Detected					0.1
71) 1-Methylnaphthalene	(2)				Not Detected					0.1
95) Acenaphthylene	(3)				Not Detected					0.1
99) Acenaphthene	(3)				Not Detected					0.1
111) Fluorene	(3)				Not Detected					0.1
137) Phenanthrene	(4)	9.616	(-0.000)	178	8301	0.220	44.10			0.1
138) Anthracene	(4)				Not Detected					0.1
147) Fluoranthene	(4)	10.772	(-0.000)	202	22019	0.523	104.62			0.1
154) Pyrene	(5)	10.987	(0.000)	202	12765	0.309	61.74			0.1
166) Benzo(a)anthracene	(5)				Not Detected					0.1
168) Chrysene	(5)	12.198	(0.000)	228	10127	0.275	55.08			0.1
172) Benzo(b)fluoranthene	(6)	13.219	(0.000)	252	8375M	0.244	48.75			0.1
173) Benzo(k)fluoranthene	(6)	13.231	(0.001)	252	3809M	0.109	21.73			0.1
174) Benzo(a)pyrene	(6)	13.520	(0.000)	252	3412M	0.102	20.35			0.1
177) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.866	(0.000)	276	3523M	0.116	23.18			0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov13a.b/ck0484.d Injection date and time: **13-NOV-2013 18:15**
Data file Sample Info. Line: PHERC;7263054;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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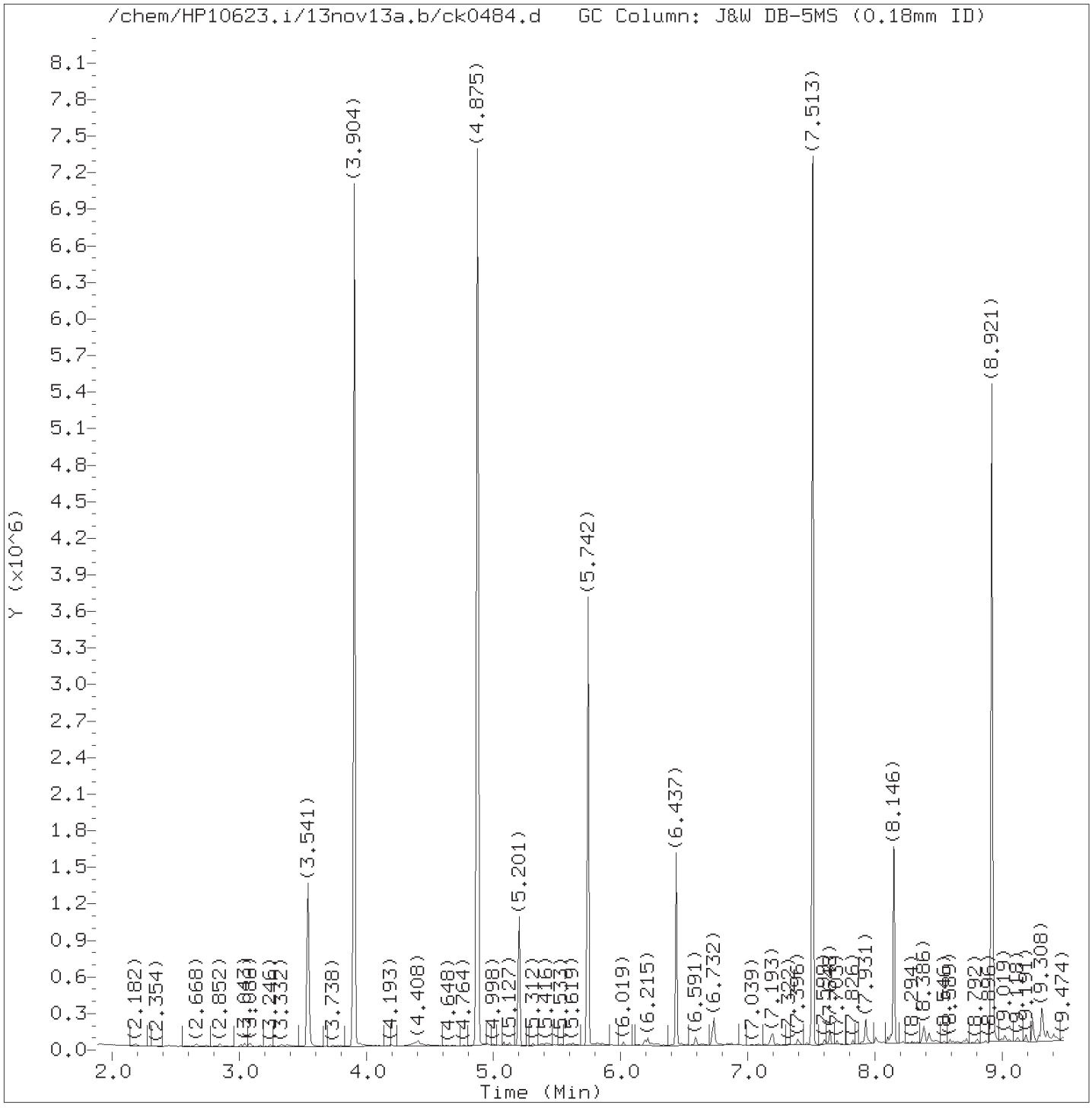
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:29. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

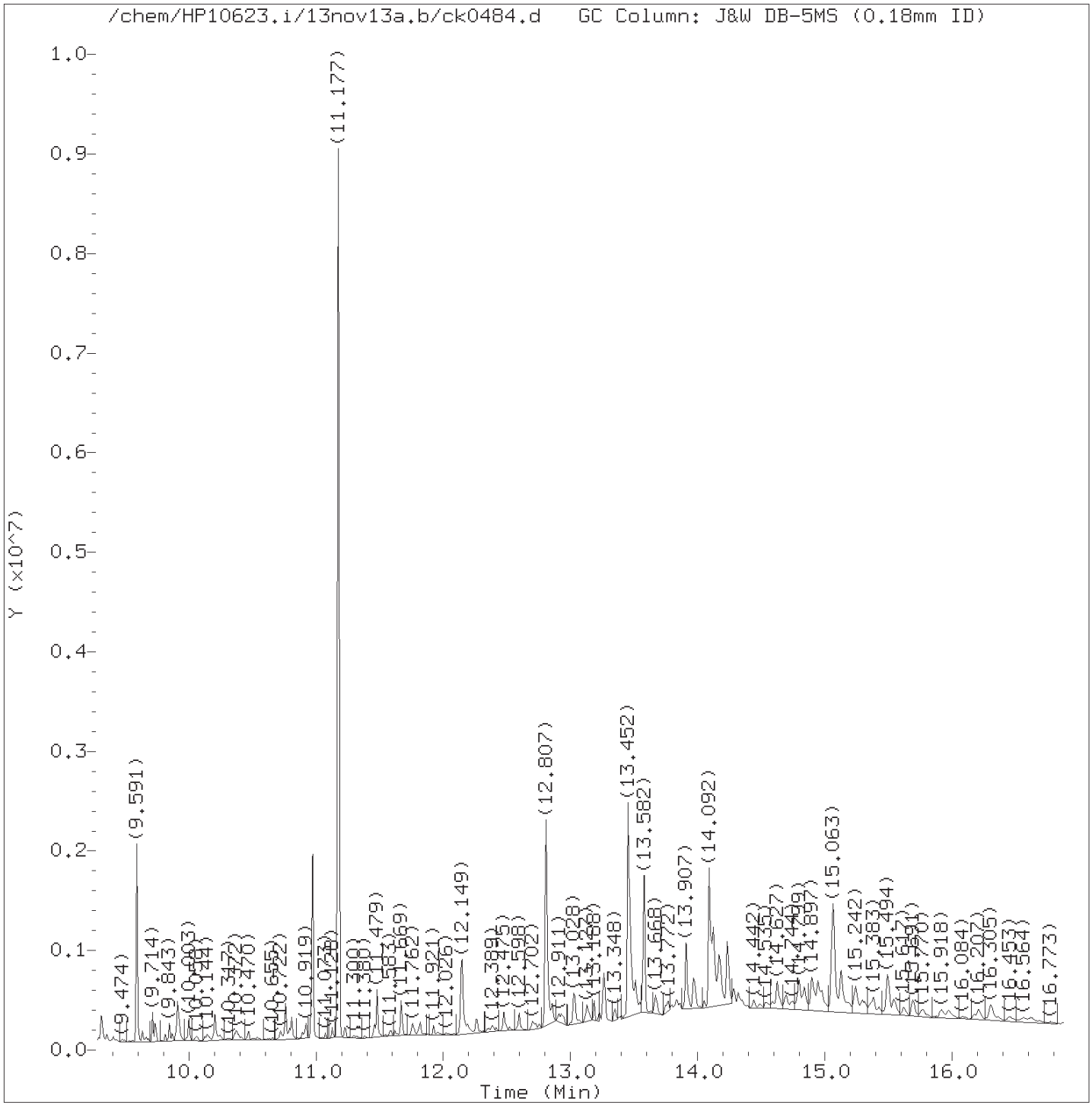
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

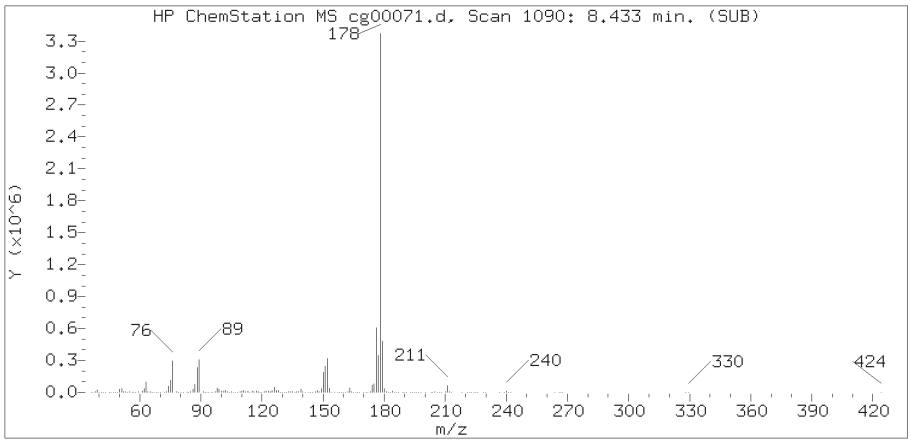
Sample Name: PHERC Lab Sample ID: 7263054

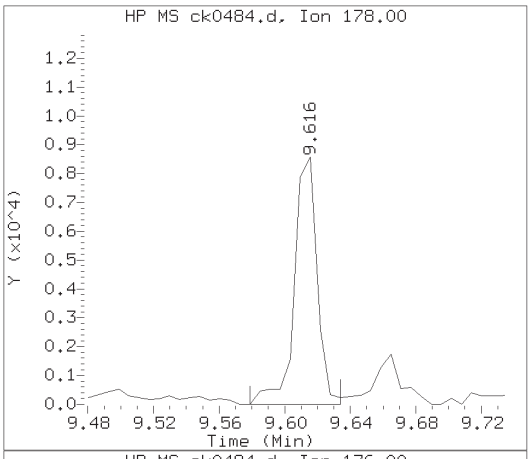
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	135704	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	1136527	85.746
52)*Naphthalene-d8	(2)	6.437	136	615207	20.000
78)$2-Fluorobiphenyl	(3)	7.513	172	2264771	98.946
98)*Acenaphthene-d10	(3)	8.152	164	364026	20.000
135)*Phenanthrene-d10	(4)	9.591	188	647452	20.000
137) Phenanthrene	(4)	9.616	178	8301	0.220
147) Fluoranthene	(4)	10.772	202	22019	0.523
167)*Pyrene-d10	(5)	10.975	212	744662	20.000
154) Pyrene	(5)	10.987	202	12765	0.309
156)$Terphenyl-d14	(5)	11.177	244	2632869	98.903
168) Chrysene	(5)	12.198	228	10127	0.275
172) Benzo(b)fluoranthene	(6)	13.219	252	8375M	0.244
173) Benzo(k)fluoranthene	(6)	13.231	252	3809M	0.109
174) Benzo(a)pyrene	(6)	13.520	252	3412M	0.102
175)*Perylene-d12	(6)	13.582	264	562679	20.000
179) Benzo(g,h,i)perylene	(6)	14.867	276	3523M	0.116

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

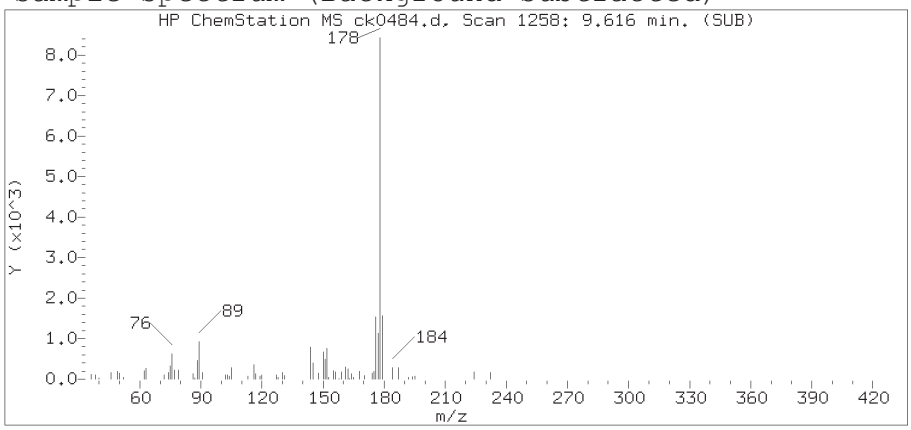
Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

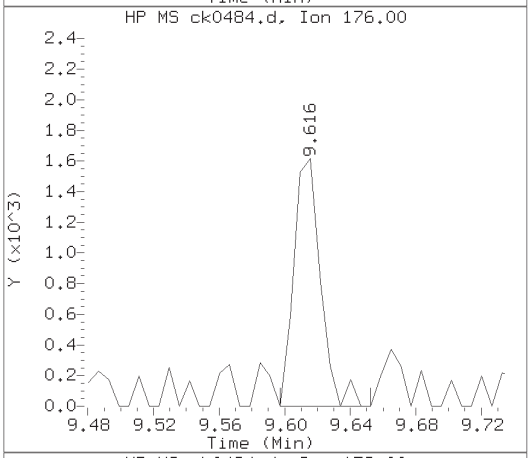
Reference Standard Spectrum for Phenanthrene



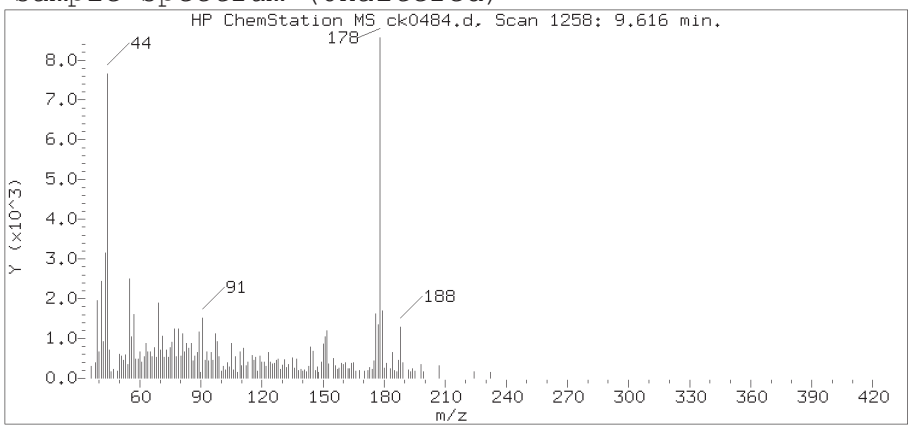


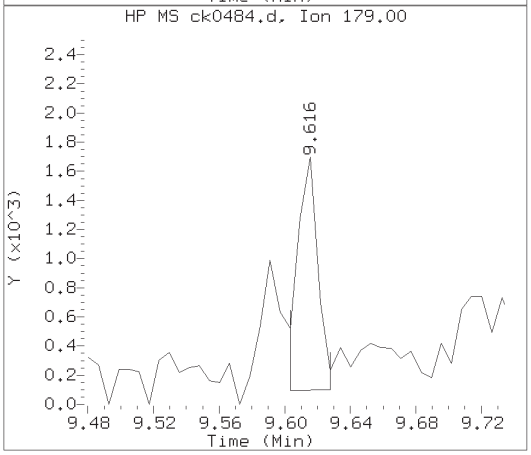
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

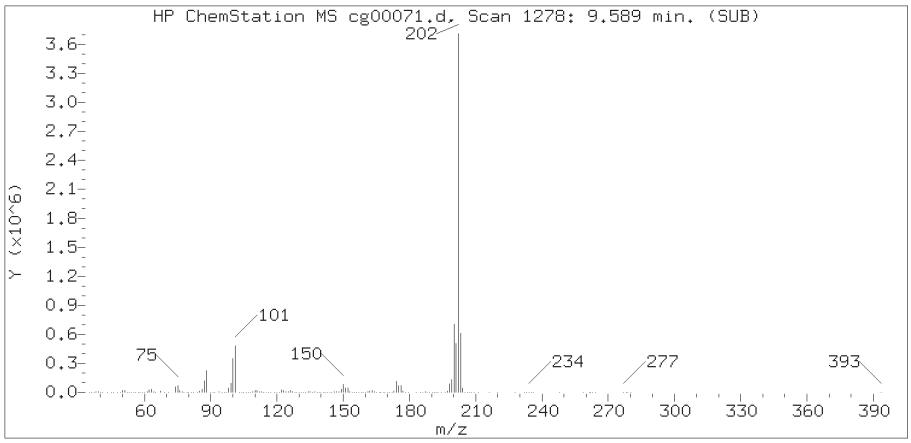
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

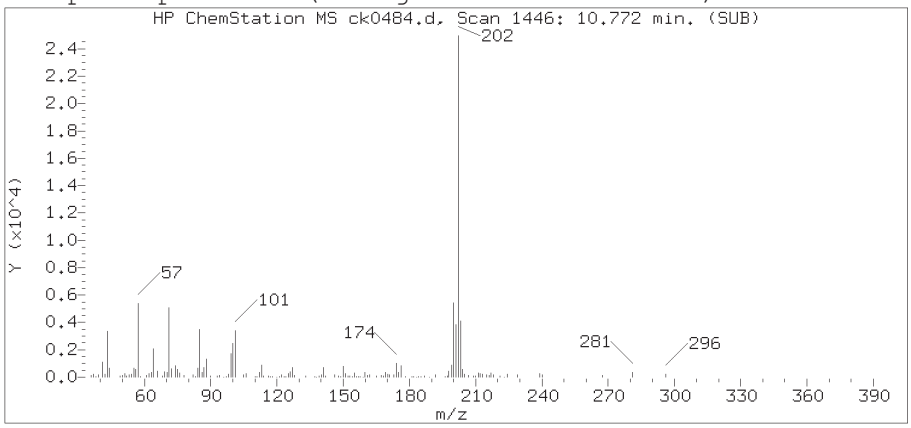
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 8301
On-column Amount (ng/ul) : 0.2205

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

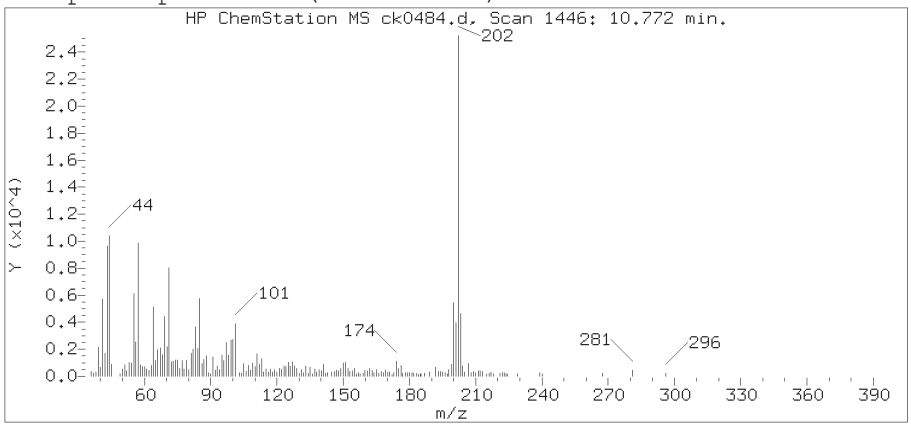
Reference Standard Spectrum for Fluoranthene

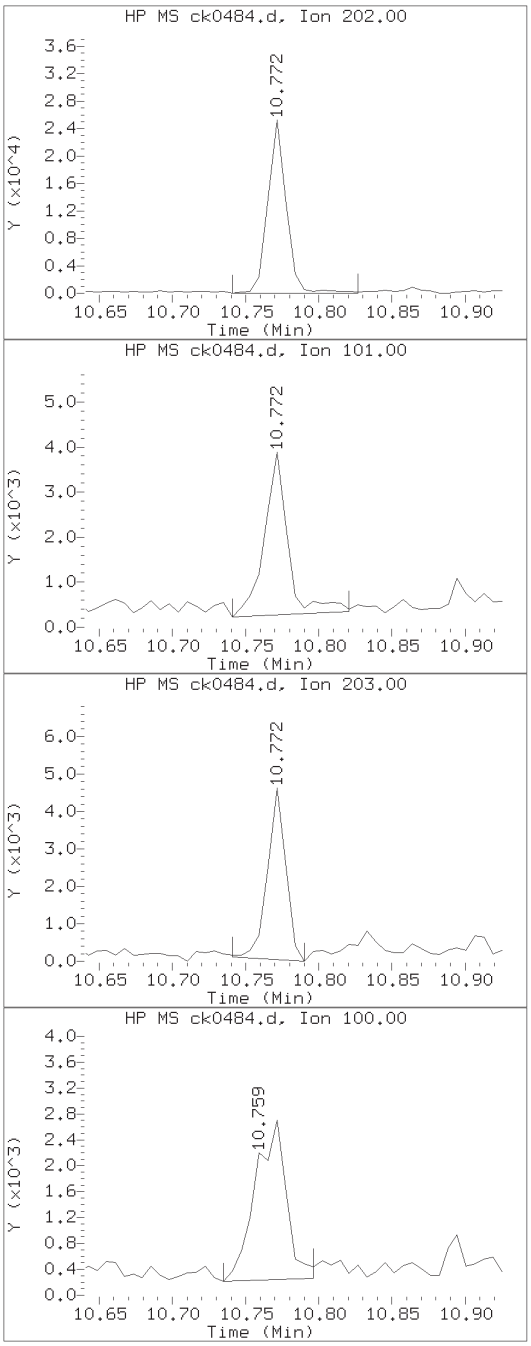


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

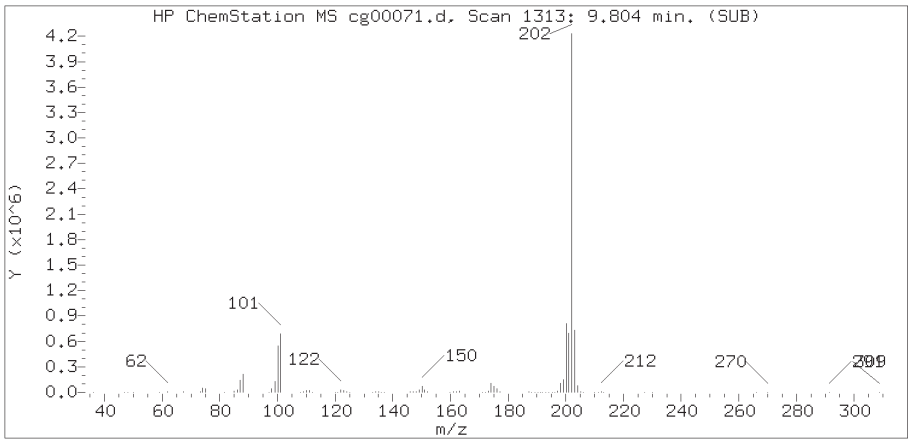
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

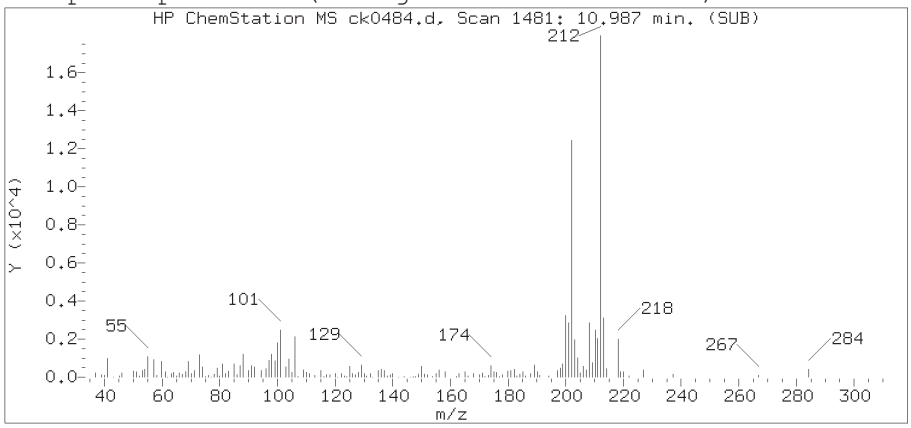
Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1446
Retention Time (minutes)	: 10.772
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 22019
On-column Amount (ng/ul)	: 0.5231

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature was ID: mac00013

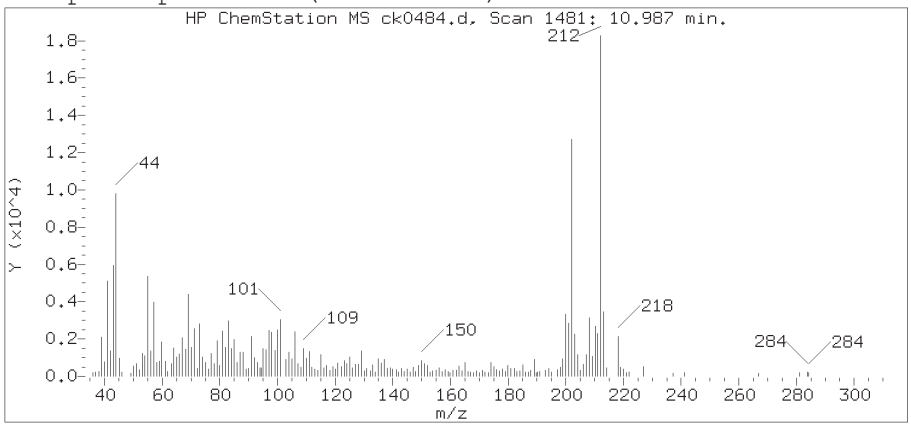
Reference Standard Spectrum for Pyrene

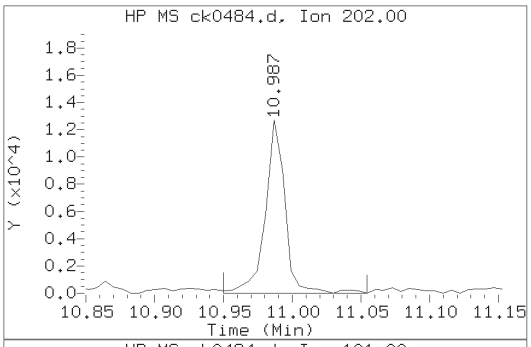


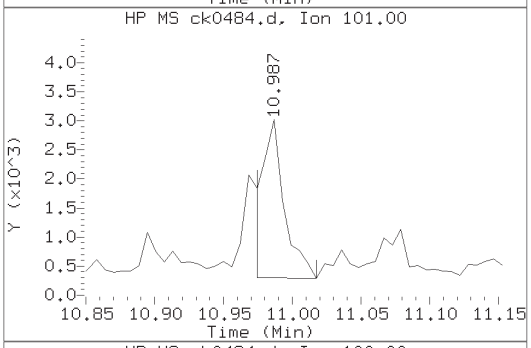
Sample Spectrum (Background Subtracted)

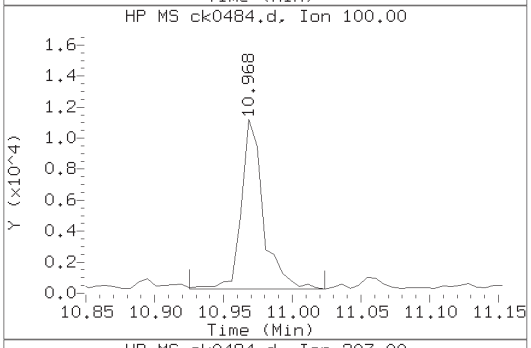


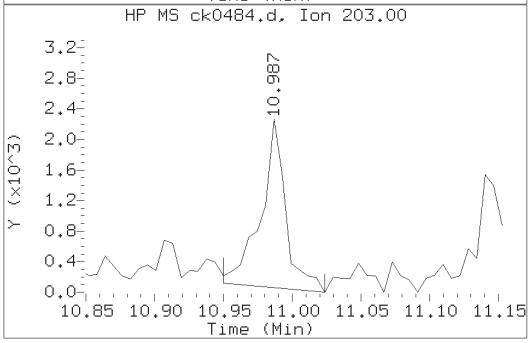
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

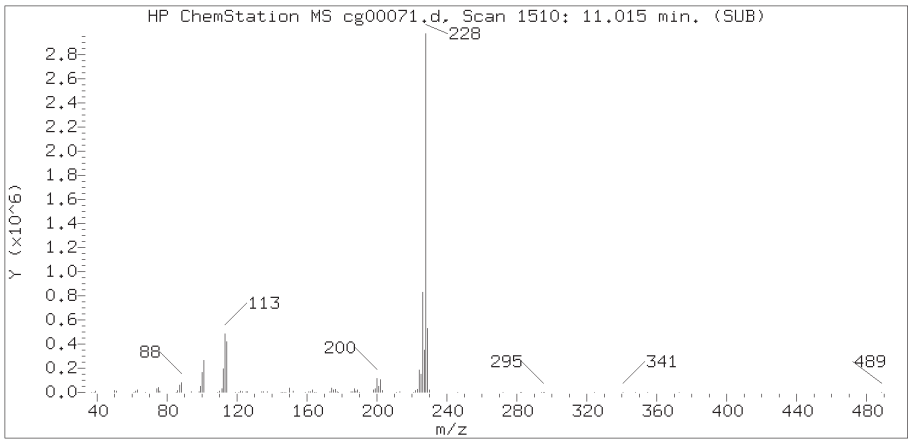
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

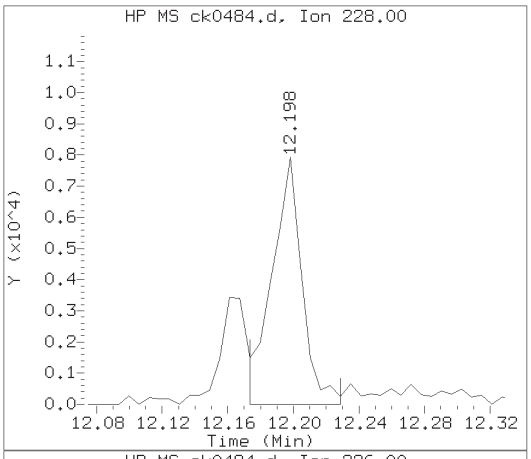
Sample Name: PHERC Lab Sample ID: 7263054

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1481
Retention Time (minutes)	: 10.987
Relative Retention Time	: 0.00056
Quant Ion	: 202.00
Area (flag)	: 12765
On-column Amount (ng/ul)	: 0.3087

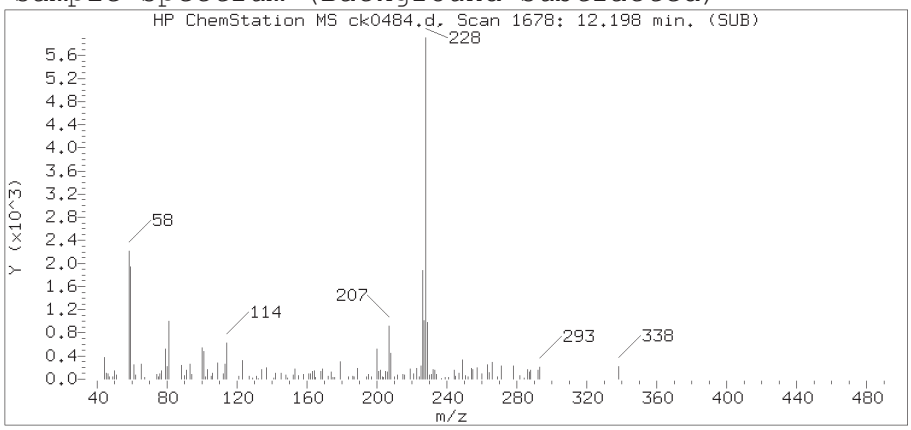
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

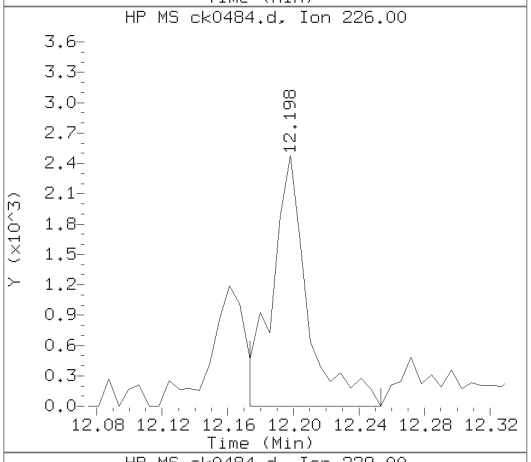
Reference Standard Spectrum for Chrysene



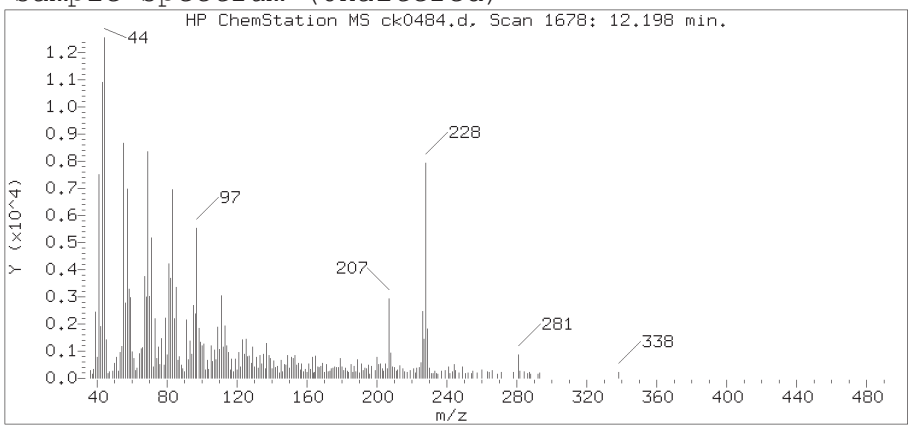


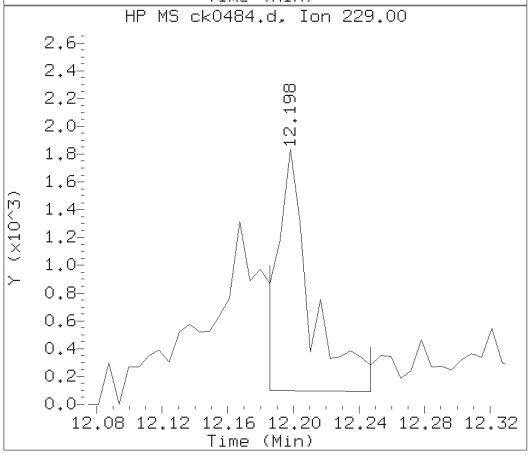
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

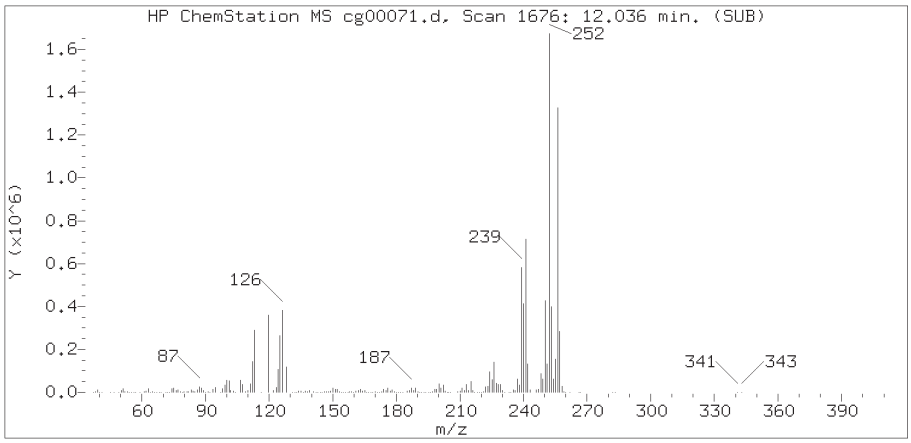
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

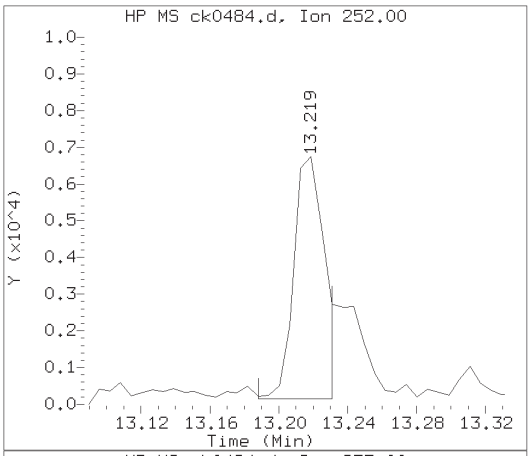
Sample Name: PHERC Lab Sample ID: 7263054

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1678
Retention Time (minutes)	: 12.198
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 10127
On-column Amount (ng/ul)	: 0.2754

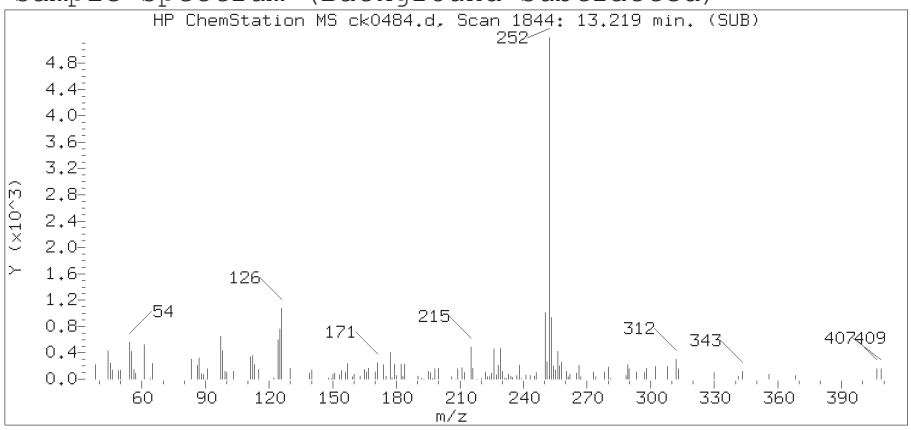
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

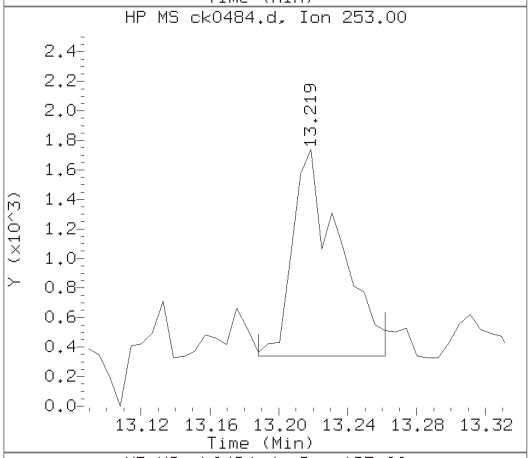
Reference Standard Spectrum for Benzo(b)fluoranthene



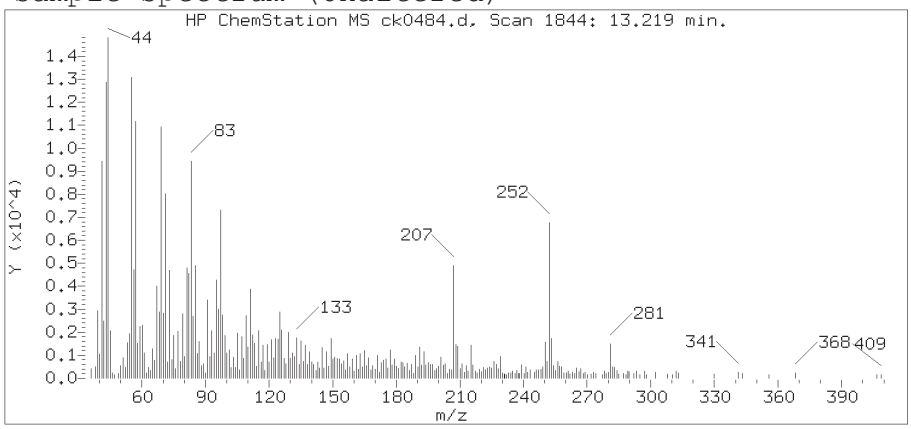


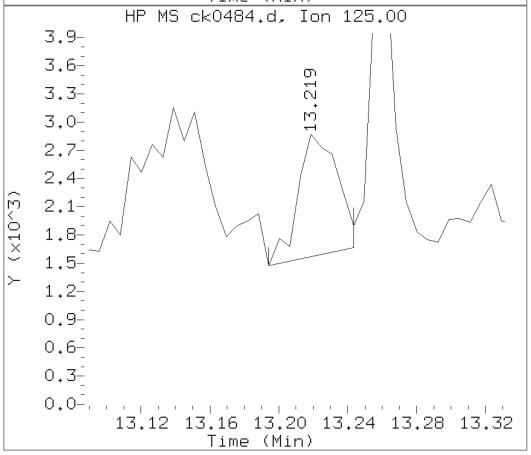
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

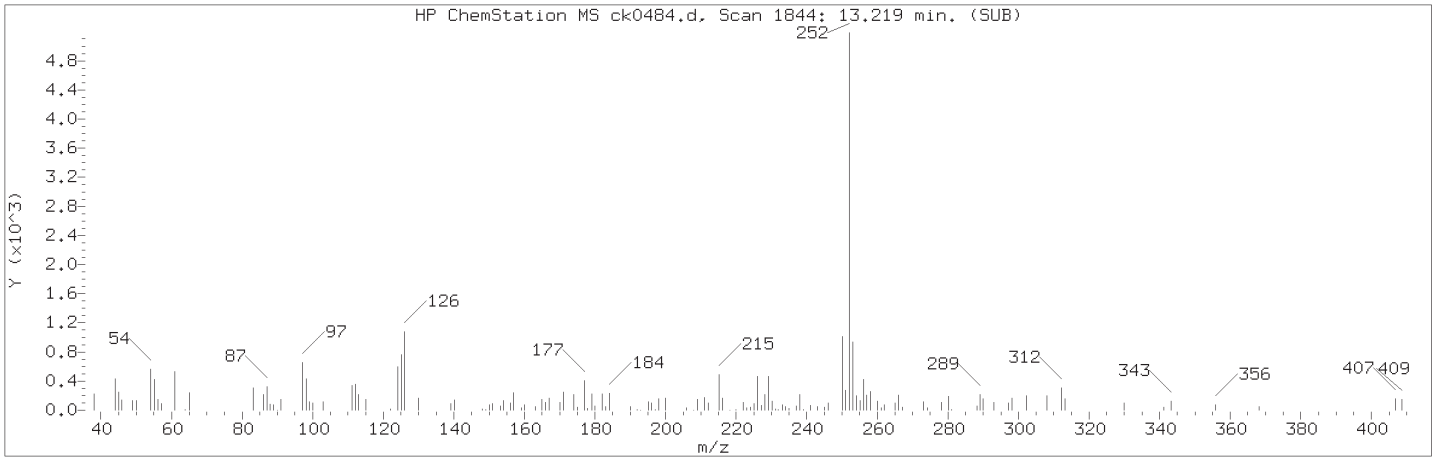
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

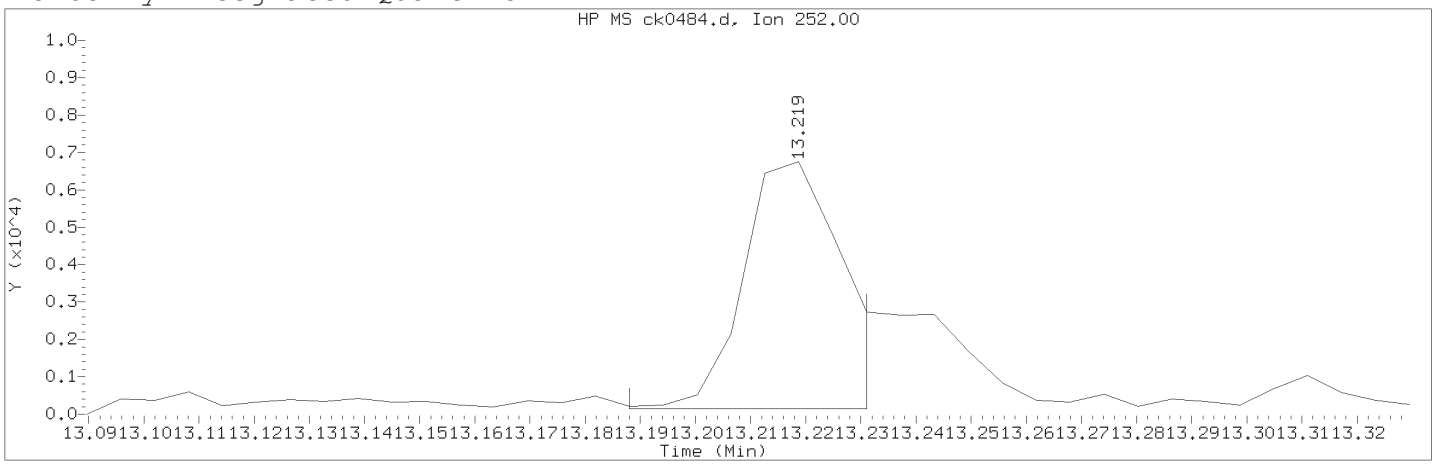
Compound Number	: 172
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1844
Retention Time (minutes)	: 13.219
Relative Retention Time	: 0.00044
Quant Ion	: 252.00
Area (flag)	: 8375M
On-column Amount (ng/ul)	: 0.2438

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

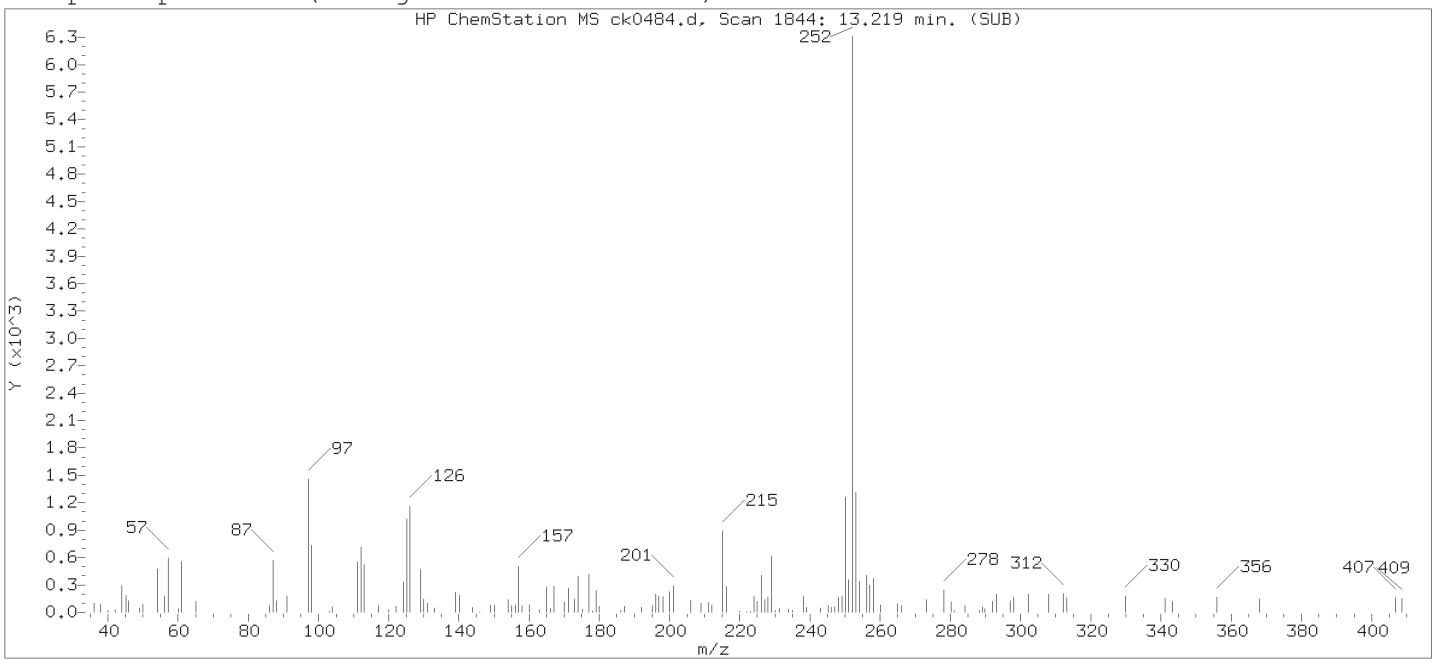
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area (flag) : 8375M
On-column Amount (ng/ul) : 0.2438
Integration start scan : 1838 Integration stop scan: 1845
Y at integration start : 142 Y at integration end: 142

Reason for manual integration: improper integration

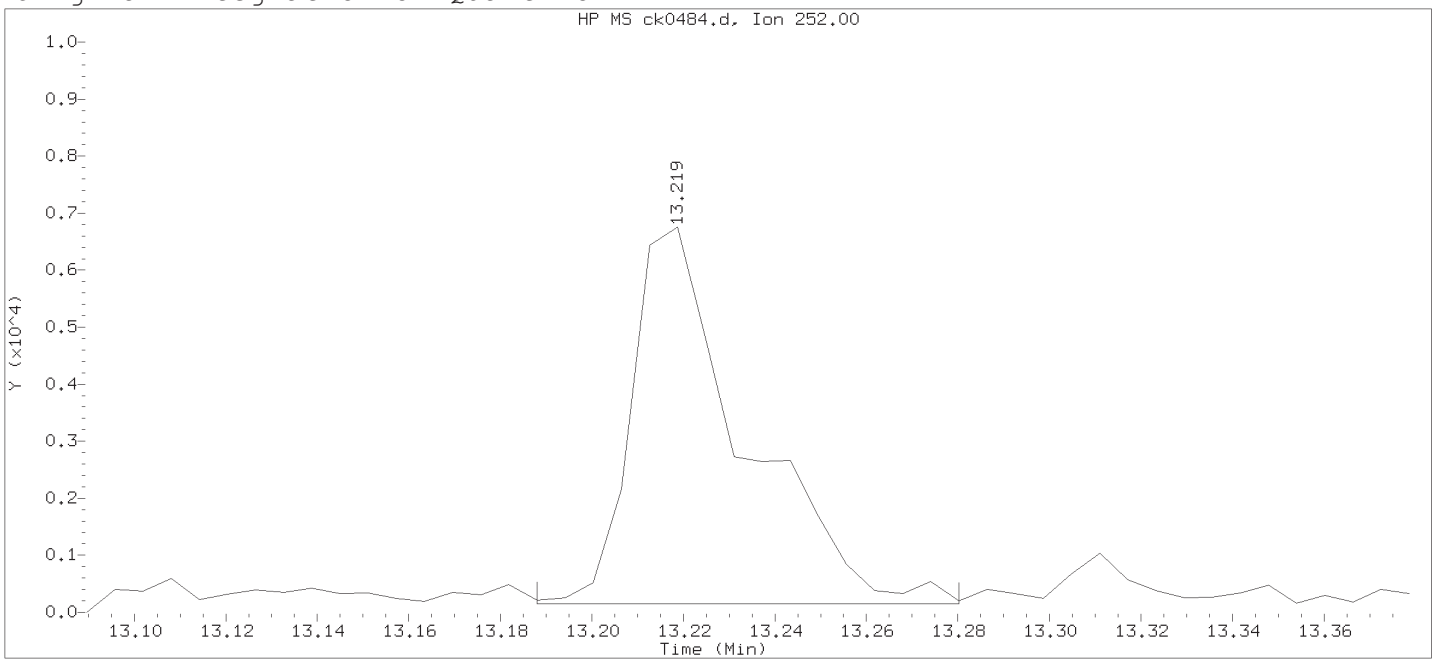
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

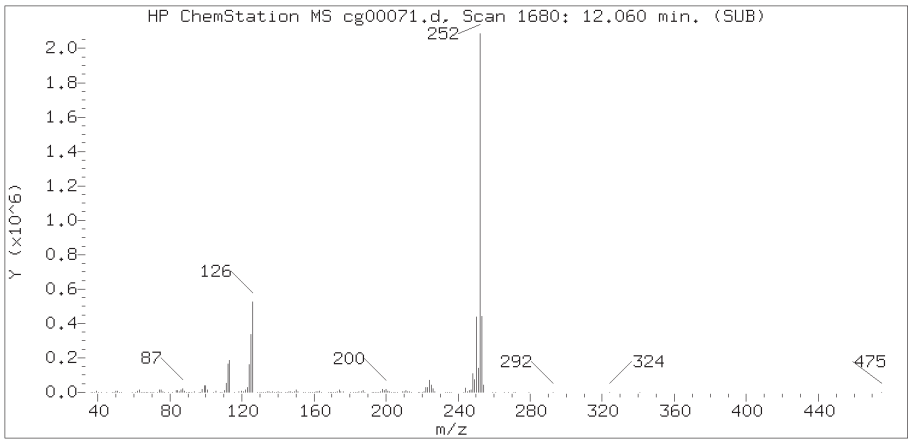
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 18:41 Automation

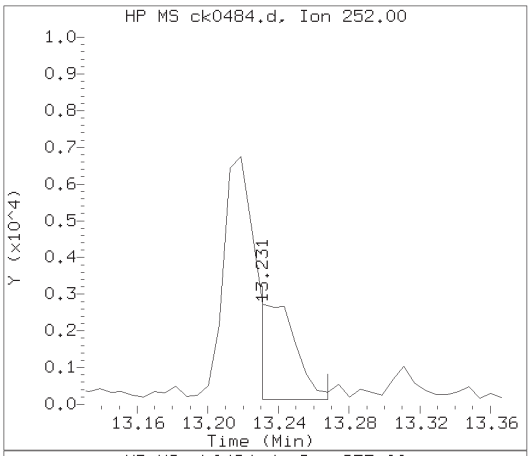
Sample Name: PHERC Lab Sample ID: 7263054

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area : 11307
On-column Amount (ng/ul) : 0.3291
Integration start scan : 1838 Integration stop scan: 1853
Y at integration start : 151 Y at integration end: 151

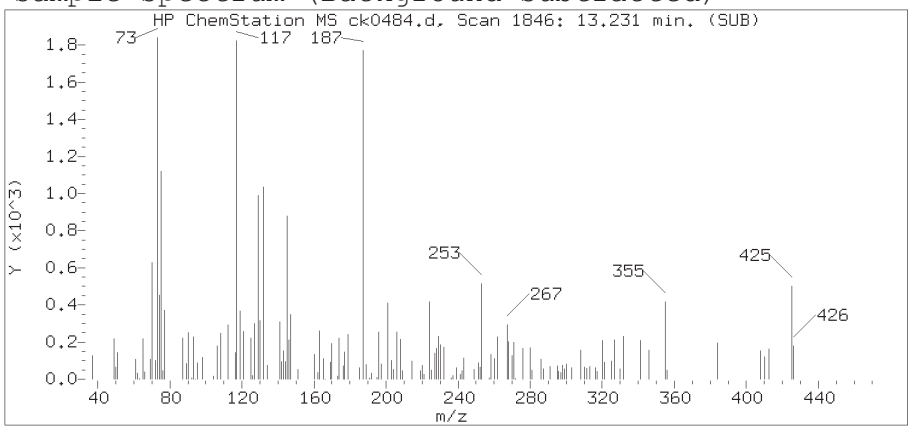
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

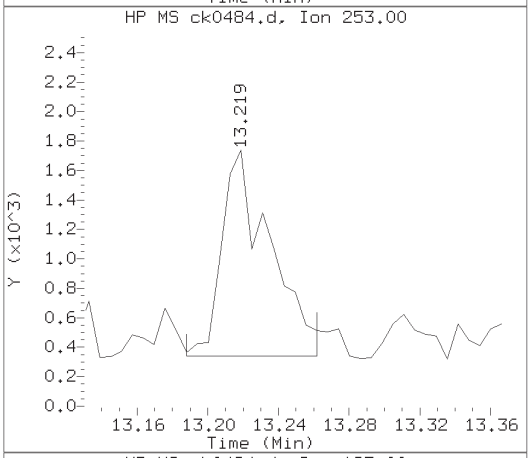
Reference Standard Spectrum for Benzo(k)fluoranthene



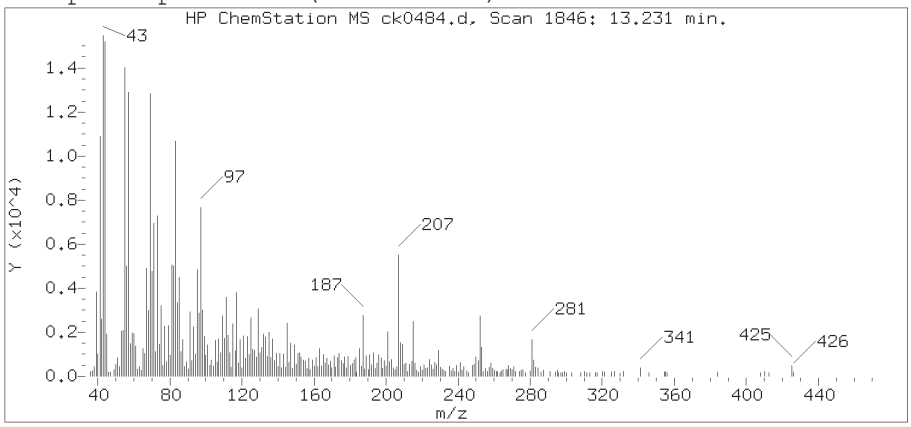


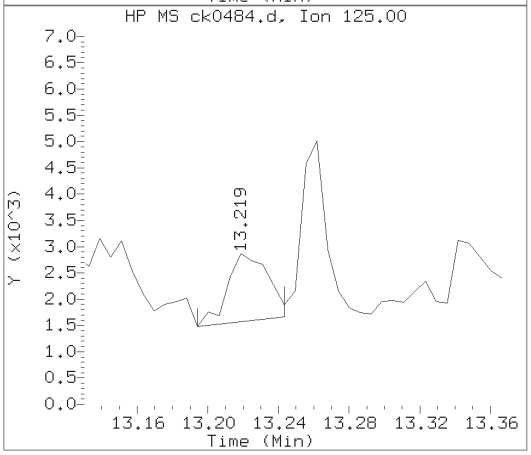
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

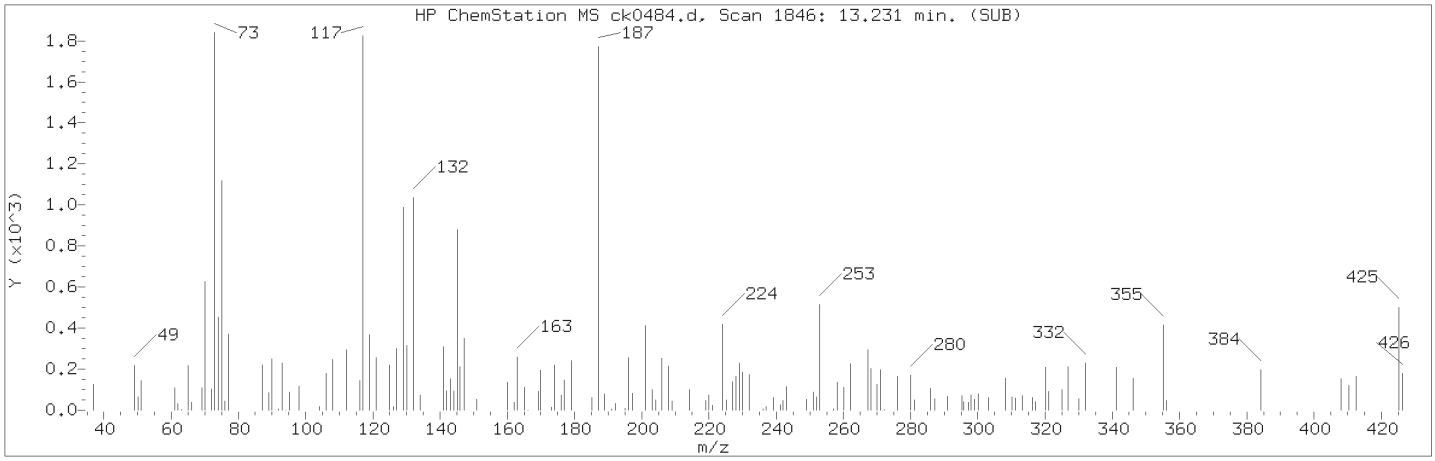
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

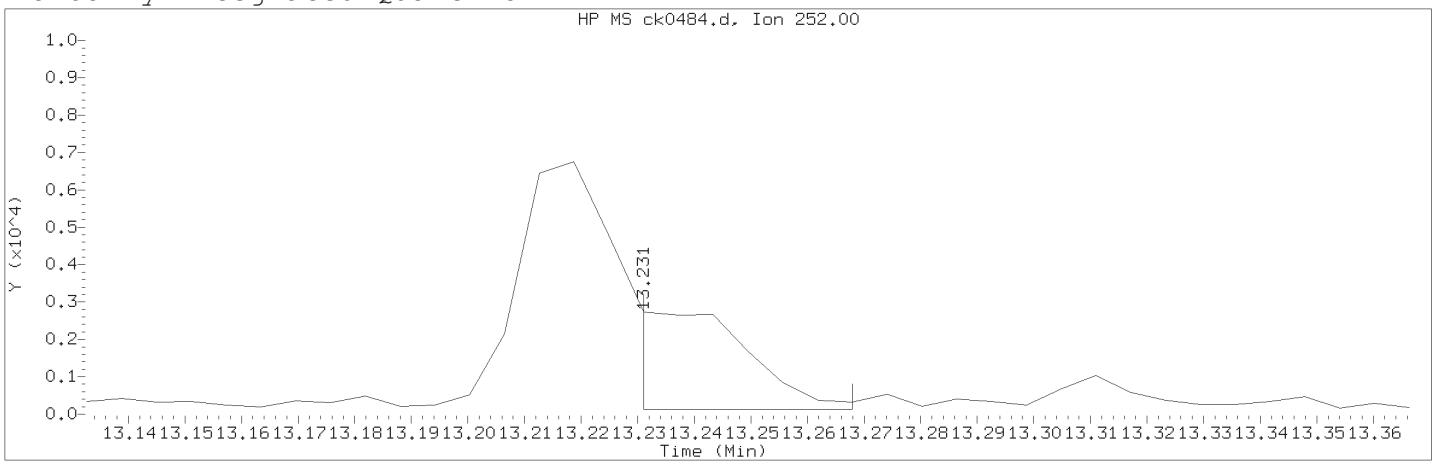
Compound Number	: 173
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1846
Retention Time (minutes)	: 13.231
Relative Retention Time	: 0.00180
Quant Ion	: 252.00
Area (flag)	: 3809M
On-column Amount (ng/ul)	: 0.1087

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

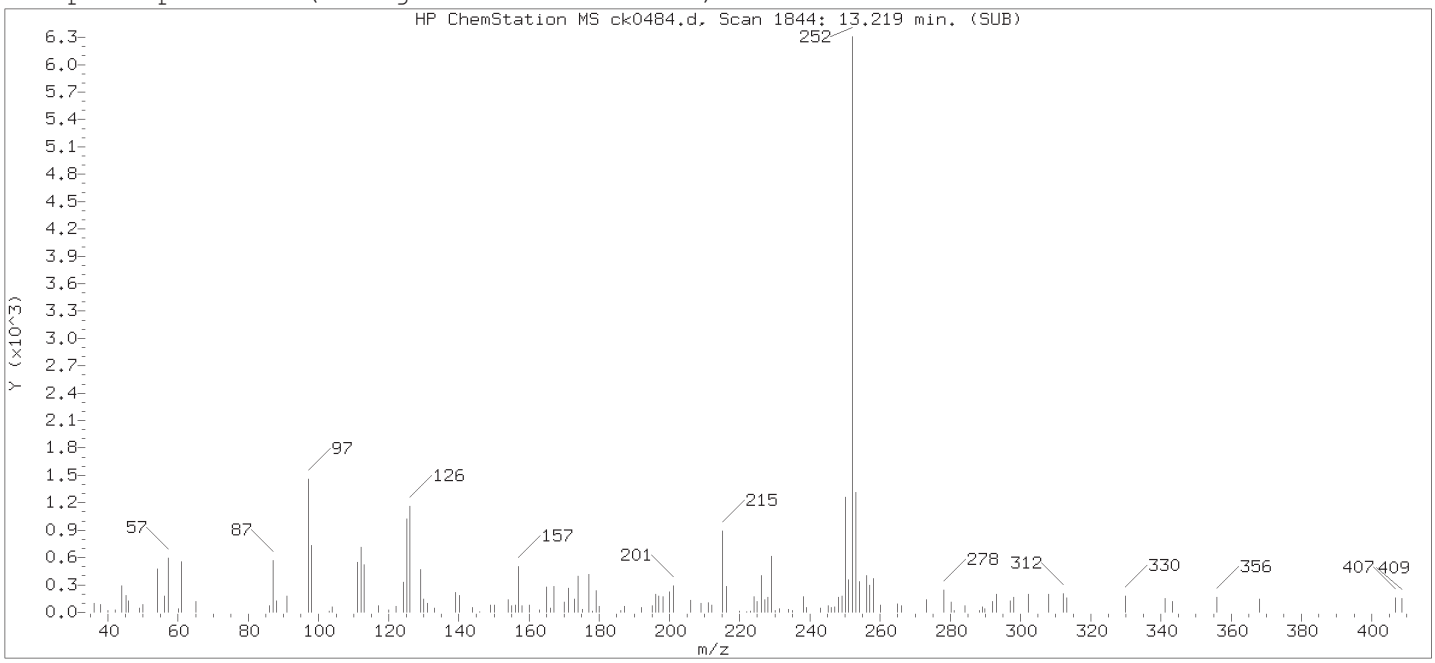
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1846
Retention Time (minutes) : 13.231
Quant Ion : 252.00
Area (flag) : 3809M
On-column Amount (ng/ul) : 0.1087
Integration start scan : 1845 Integration stop scan: 1851
Y at integration start : 135 Y at integration end: 135

Reason for manual integration: improper integration

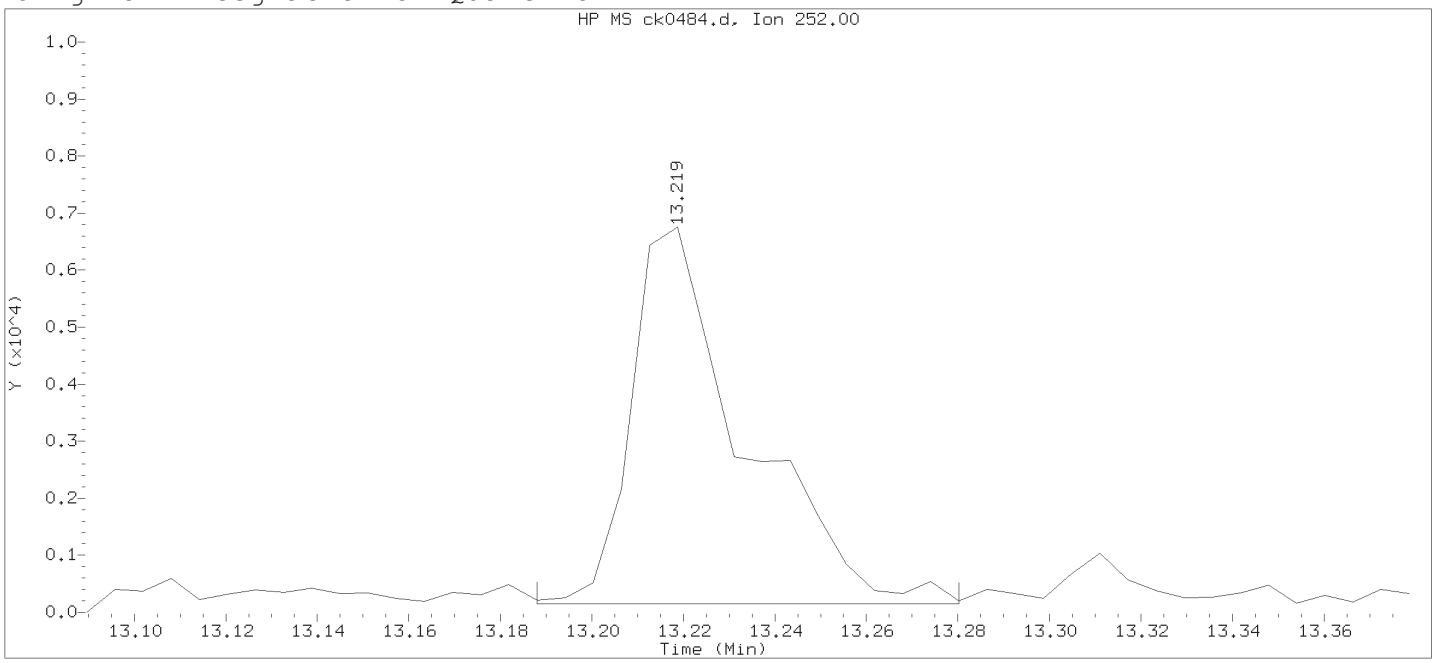
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

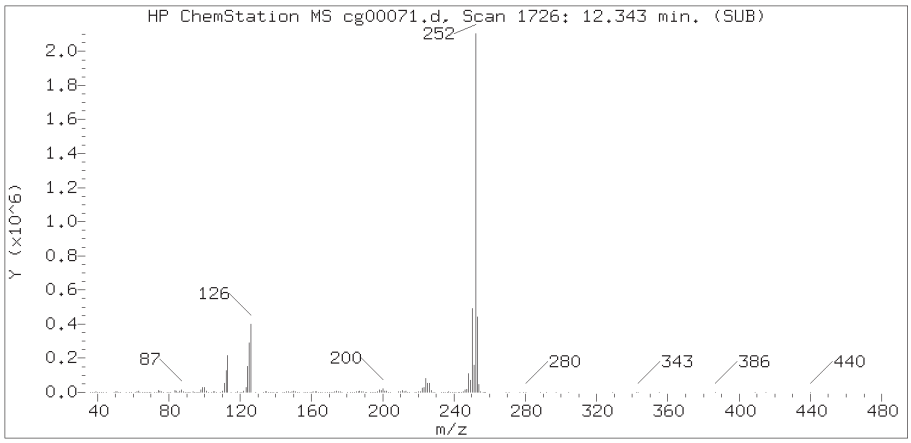
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 18:41 Automation

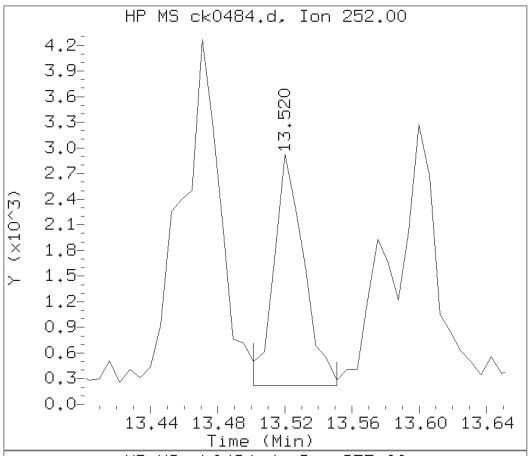
Sample Name: PHERC Lab Sample ID: 7263054

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1844		
Retention Time (minutes)	: 13.219		
Quant Ion	: 252.00		
Area	: 11307		
On-column Amount (ng/ul)	: 0.3226		
Integration start scan	: 1838	Integration stop scan:	1853
Y at integration start	: 151	Y at integration end:	151

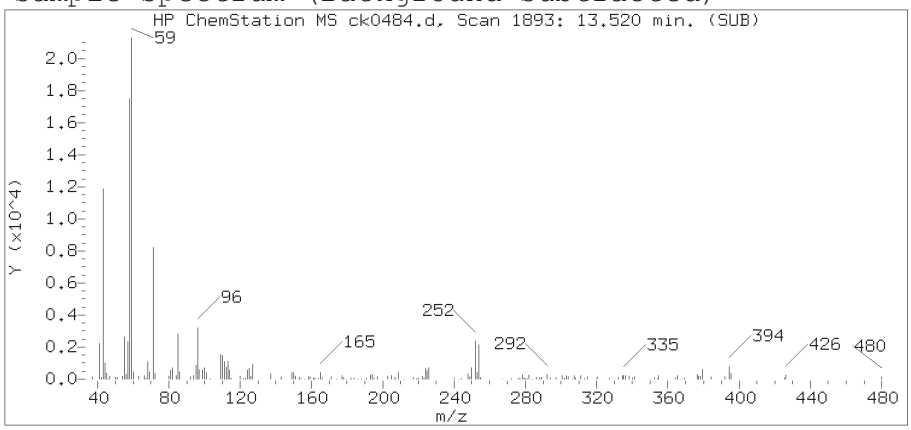
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user: Mark A. Clark

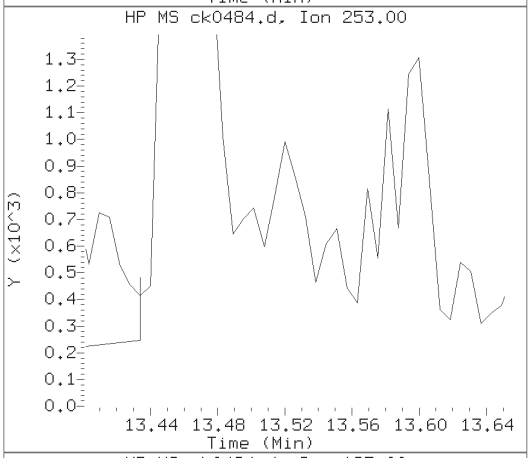
Reference Standard Spectrum for Benzo(a)pyrene



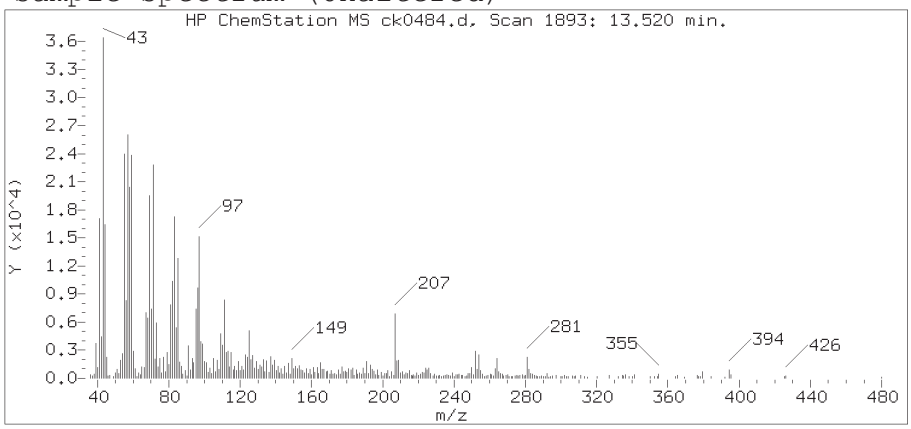


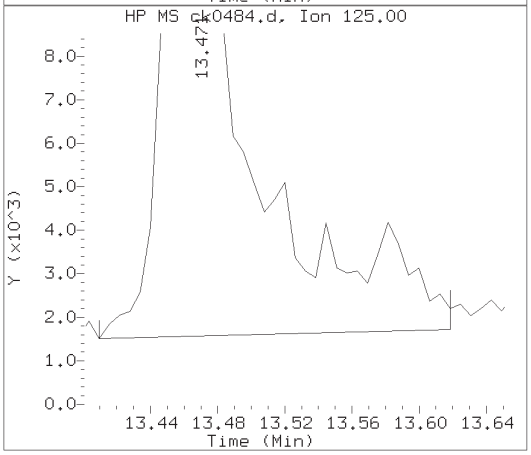
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

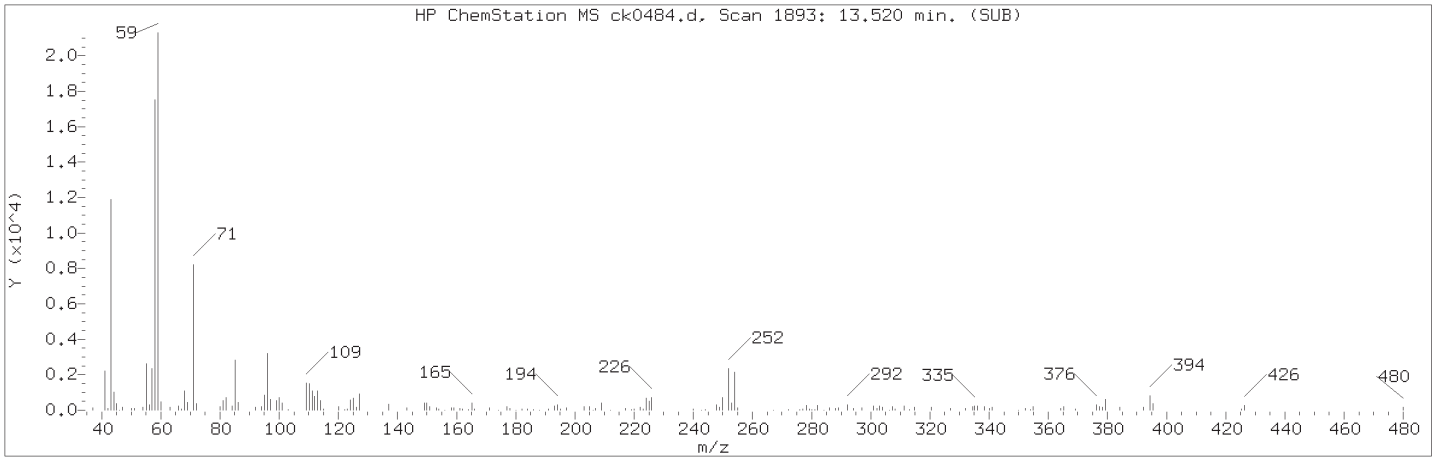
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

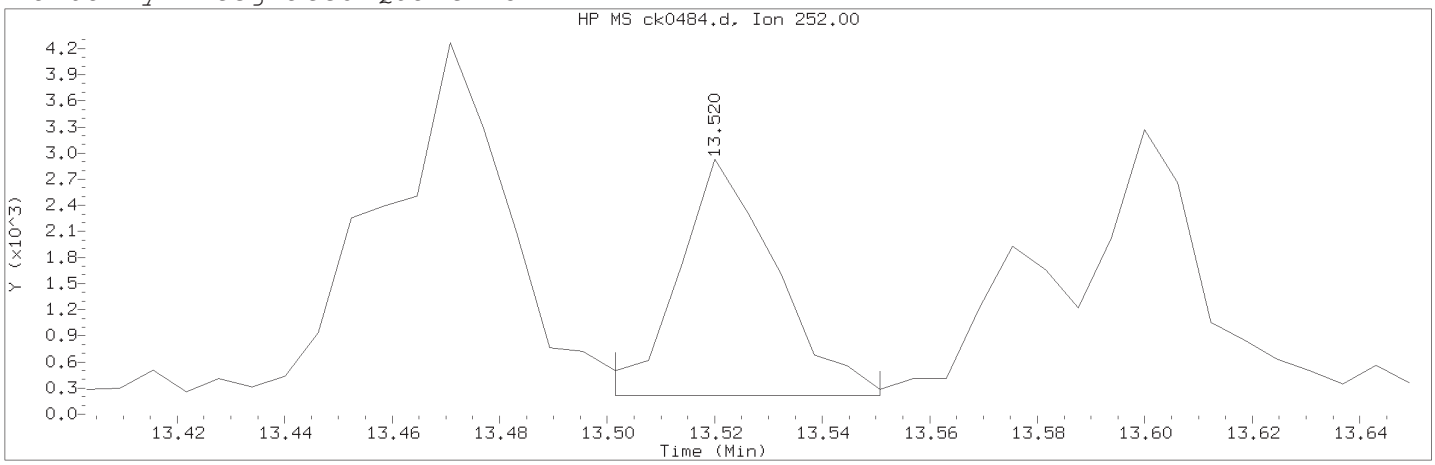
Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1893
Retention Time (minutes)	: 13.520
Relative Retention Time	: 0.00090
Quant Ion	: 252.00
Area (flag)	: 3412M
On-column Amount (ng/ul)	: 0.1018

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

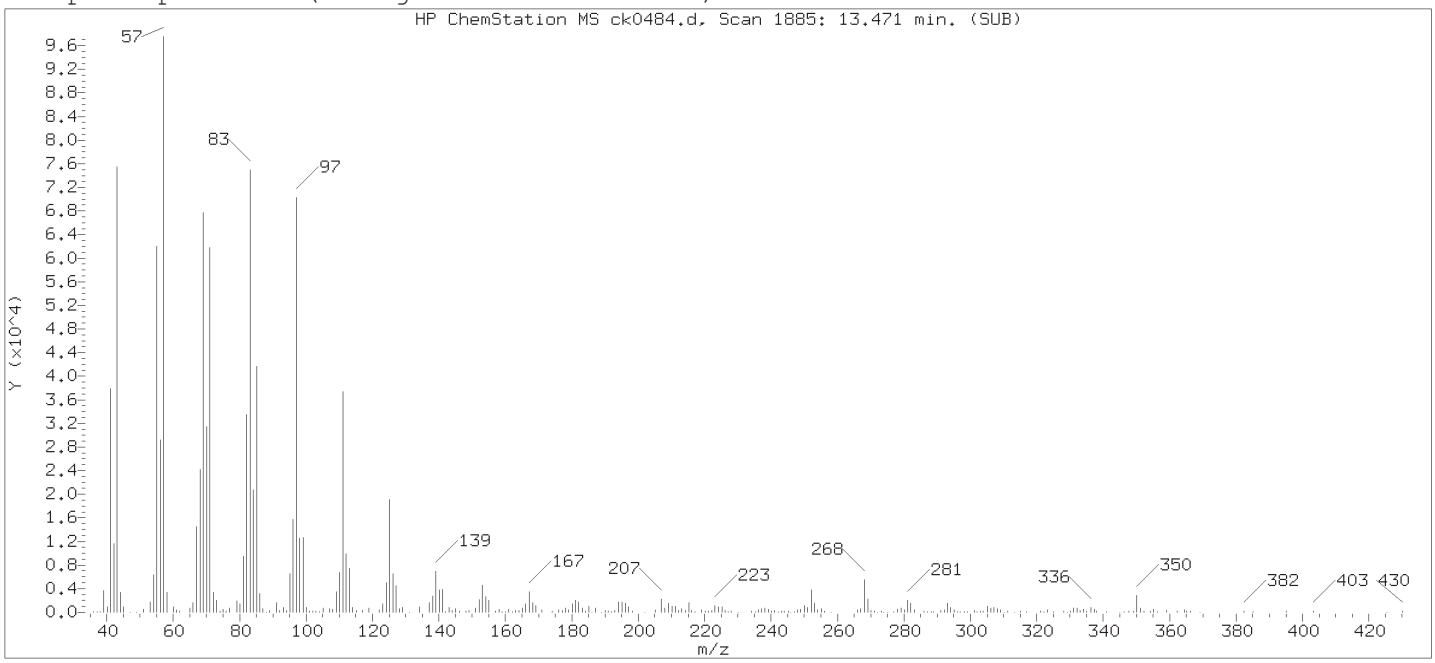
Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1893		
Retention Time (minutes)	: 13.520		
Quant Ion	: 252.00		
Area (flag)	: 3412M		
On-column Amount (ng/ul)	: 0.1018		
Integration start scan	: 1889	Integration stop scan:	1897
Y at integration start	: 217	Y at integration end:	217

Reason for manual integration: improper integration

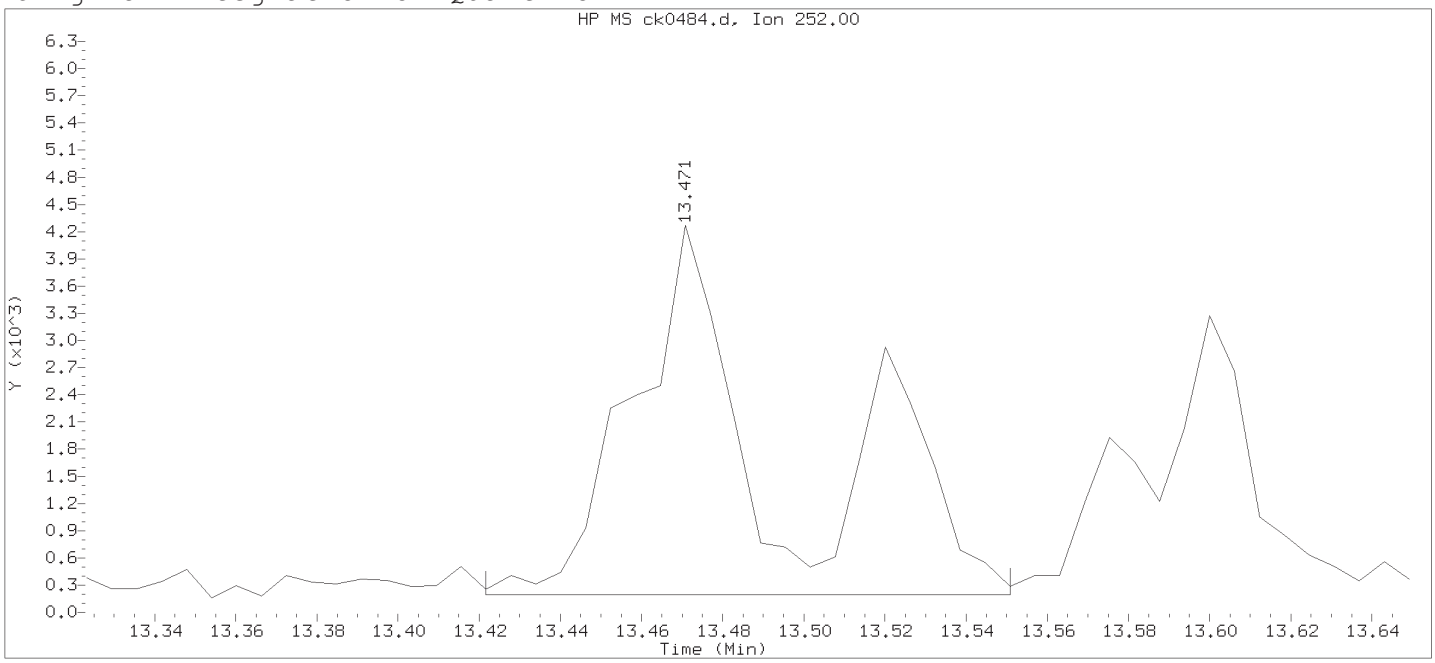
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

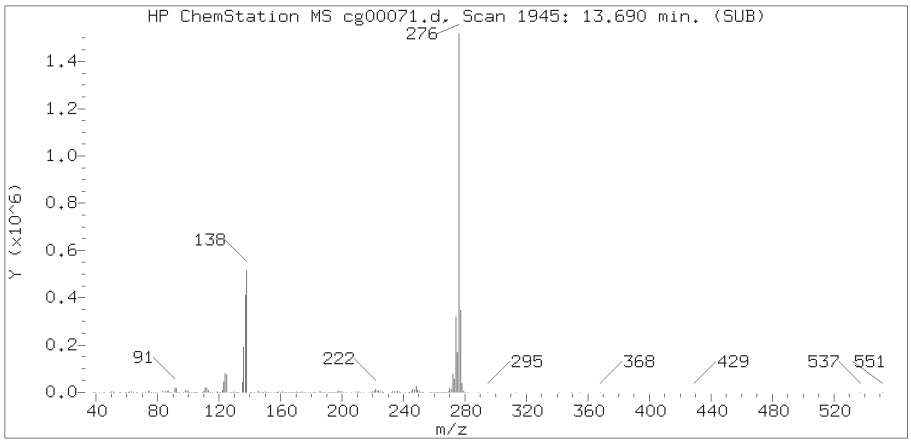
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 18:41 Automation

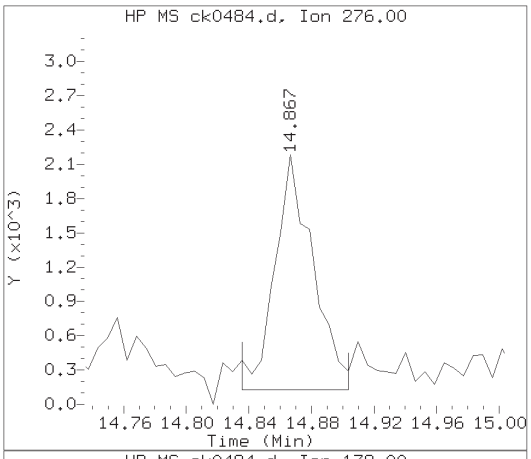
Sample Name: PHERC Lab Sample ID: 7263054

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1885
Retention Time (minutes) : 13.471
Quant Ion : 252.00
Area : 10151
On-column Amount (ng/ul) : 0.3027
Integration start scan : 1876 Integration stop scan: 1897
Y at integration start : 193 Y at integration end: 193

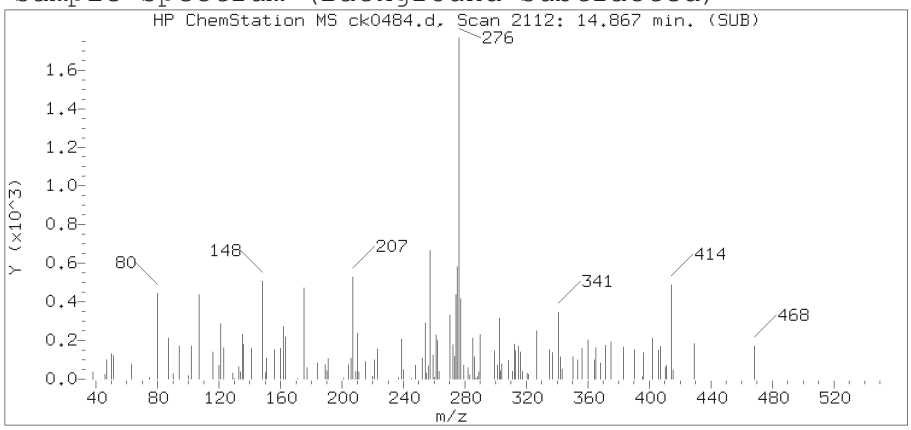
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

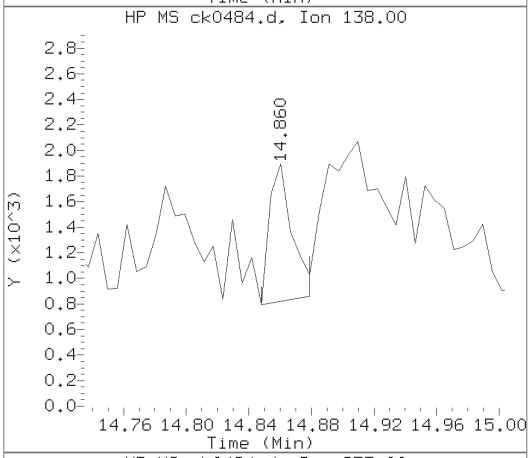
Reference Standard Spectrum for Benzo(g,h,i)perylene



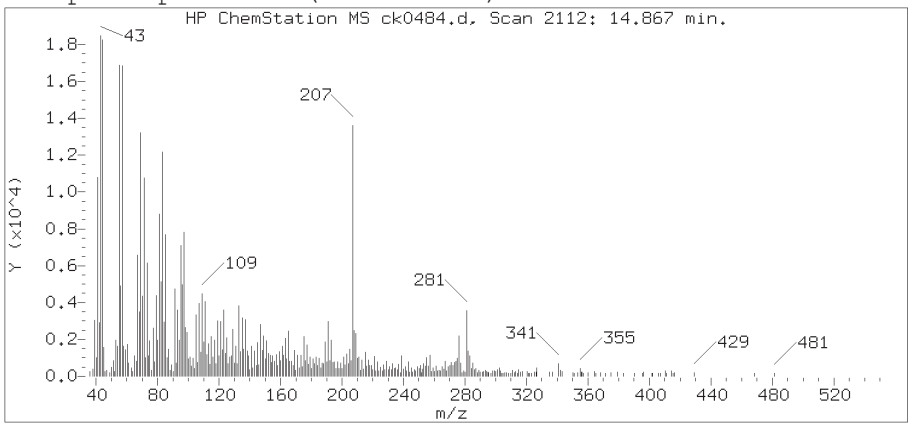


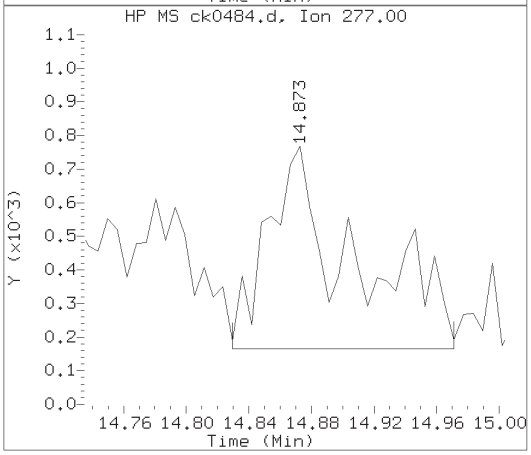
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

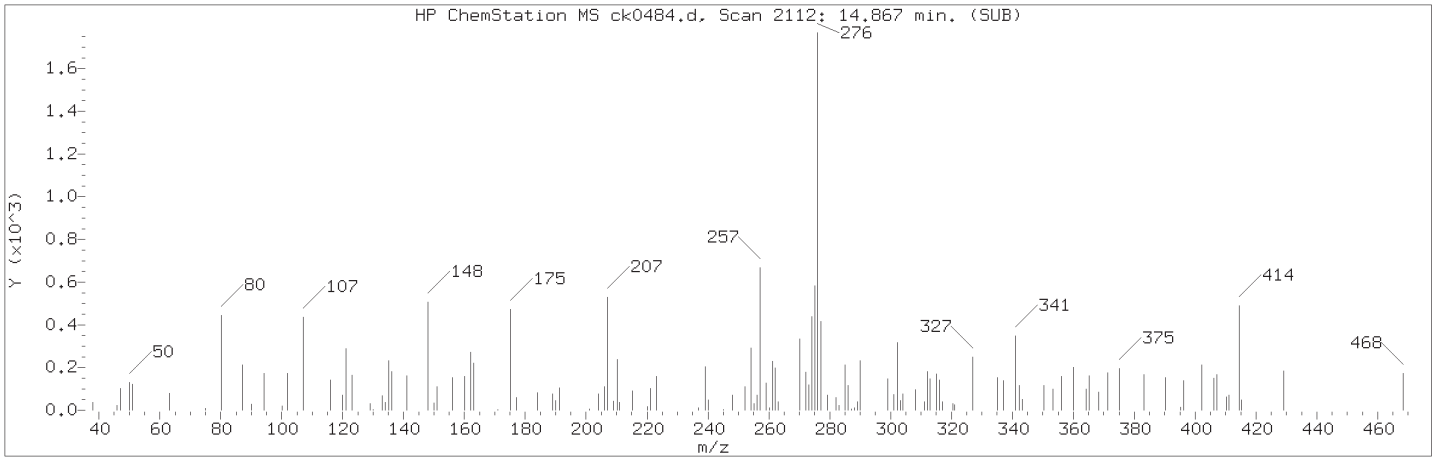
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

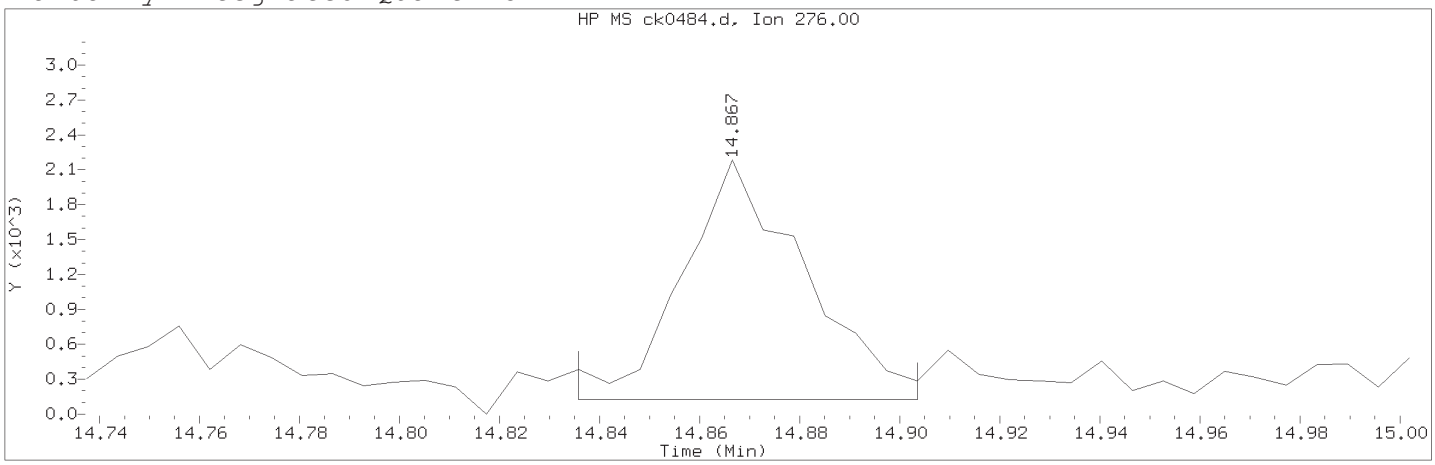
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2112
Retention Time (minutes)	: 14.867
Relative Retention Time	: 0.00095
Quant Ion	: 276.00
Area (flag)	: 3523M
On-column Amount (ng/ul)	: 0.1159

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:49 mac00013

Sample Name: PHERC Lab Sample ID: 7263054

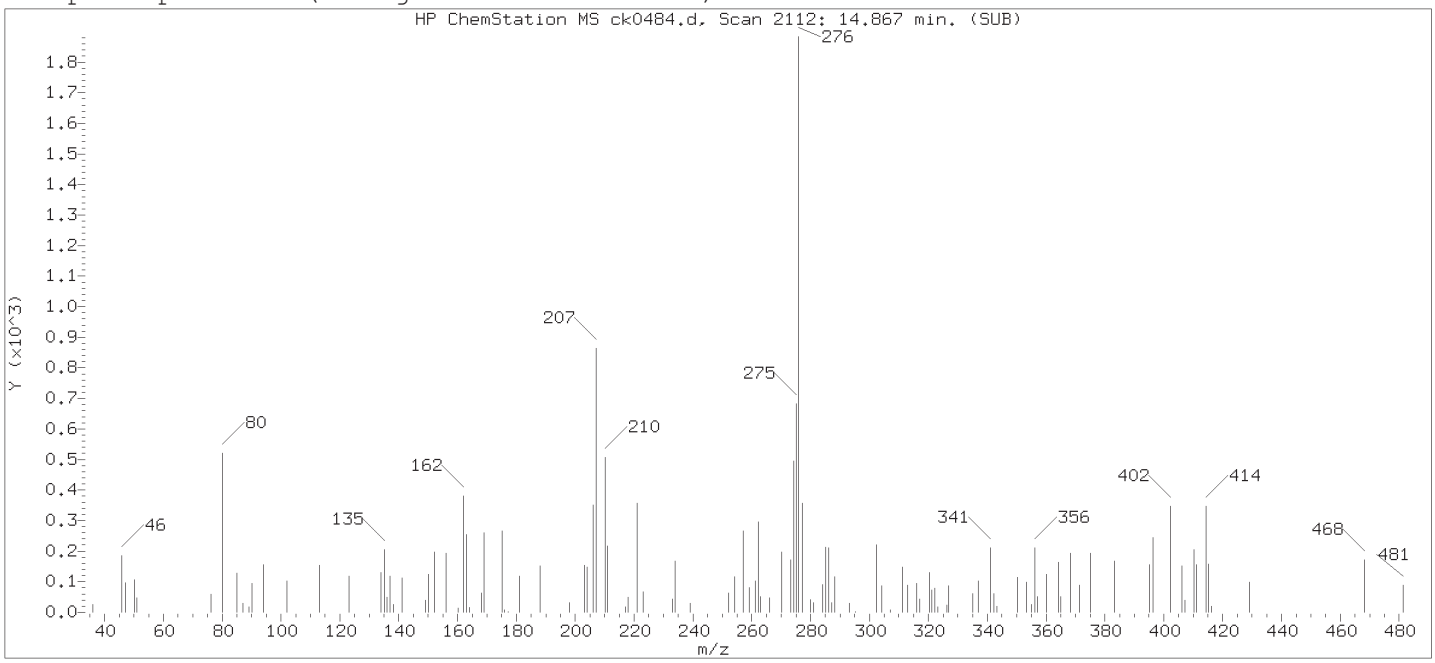
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Quant Ion : 276.00
Area (flag) : 3523M
On-column Amount (ng/ul) : 0.1159
Integration start scan : 2106 Integration stop scan: 2117
Y at integration start : 127 Y at integration end: 127

Reason for manual integration: improper integration

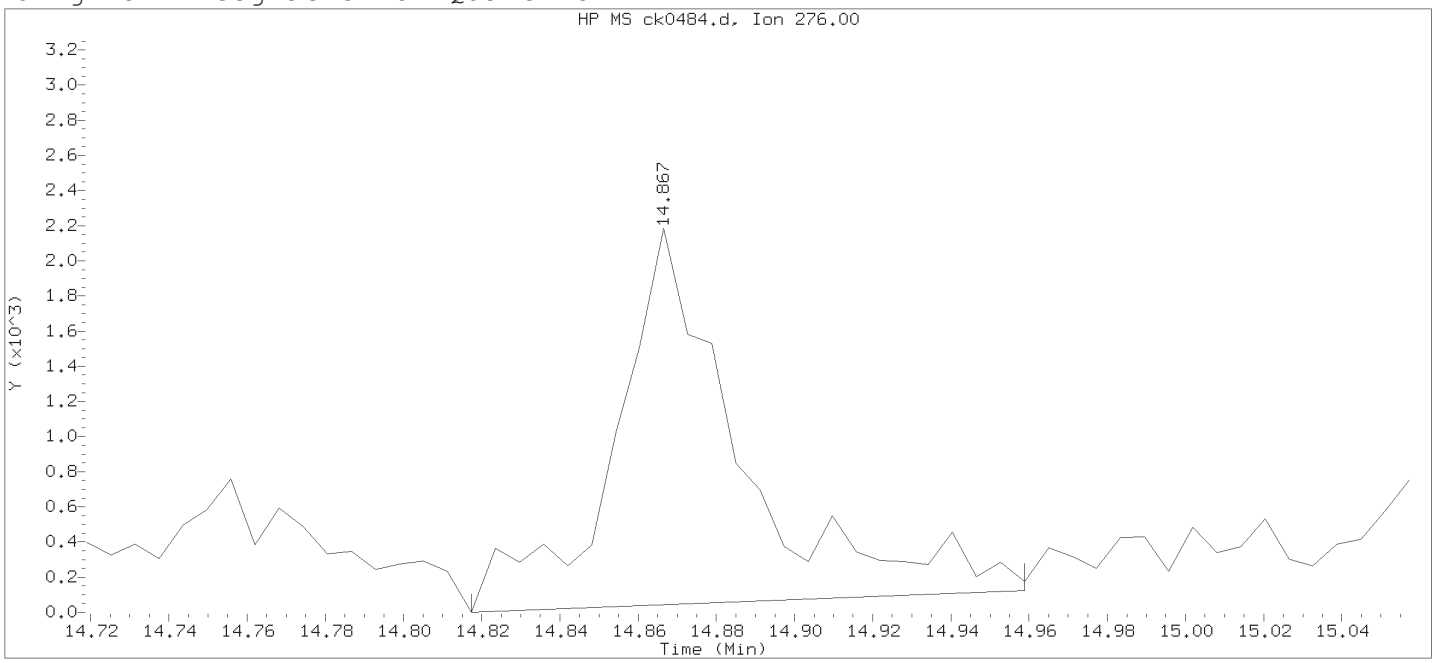
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0484.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:15 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 18:41 Automation

Sample Name: PHERC Lab Sample ID: 7263054

Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Quant Ion : 276.00
Area : 4830
On-column Amount (ng/ul) : 0.1589
Integration start scan : 2103 Integration stop scan: 2126
Y at integration start : 0 Y at integration end: 122

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

OHERC

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263055

Data file: /chem/HP10623.i/13nov13a.b/ck0485.d
Data file Sample Info. Line: OHERC;7263055;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Injection date and time: **13-NOV-2013 18:40**
Instrument ID: **HP10623.i** Batch: **13310SLF**

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201	(0.000)	540	152	139978	(18)	20.00	
52) Naphthalene-d8	6.437	(0.000)	741	136	636301	(12)	20.00	
98) Acenaphthene-d10	8.152	(-0.006)	1020	164	381609	(5)	20.00	
135) Phenanthrene-d10	9.591	(0.000)	1254	188	648178	(-6)	20.00	
167) Pyrene-d10	10.974	(0.000)	1479	212	737970	(-13)	20.00	
175) Perylene-d12	13.581	(-0.006)	1903	264	559637	(-20)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742	(0.000)	82	1194946	87.165	87%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513	(0.000)	172	2297559	95.754	96%		69 - 120
156) Terphenyl-d14	(5)	11.177	(-0.001)	244	2590207	98.182	98%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.461	(-0.000)	128	5629	0.167	33.35			0.1
70) 2-Methylnaphthalene	(2)	7.138	(-0.000)	142	2892	0.121	24.14			0.1
71) 1-Methylnaphthalene	(2)	7.230	(-0.000)	142	2504	0.114	22.84			0.1
95) Acenaphthylene	(3)				Not Detected					0.1
99) Acenaphthene	(3)				Not Detected					0.1
111) Fluorene	(3)	8.706	(-0.001)	166	5568	0.203	40.61			0.1
137) Phenanthrene	(4)	9.616	(-0.000)	178	13905	0.369	73.79			0.1
138) Anthracene	(4)				Not Detected					0.1
147) Fluoranthene	(4)	10.772	(-0.000)	202	25340	0.601	120.26			0.1
154) Pyrene	(5)	10.987	(0.000)	202	15548	0.379	75.88			0.1
166) Benzo(a)anthracene	(5)	12.167	(0.000)	228	6077	0.161	32.15			0.1
168) Chrysene	(5)	12.198	(0.000)	228	12765	0.350	70.05			0.1
172) Benzo(b)fluoranthene	(6)	13.219	(0.000)	252	13319M	0.390	77.96			0.1
173) Benzo(k)fluoranthene	(6)	13.243	(0.000)	252	4930M	0.141	28.28			0.1
174) Benzo(a)pyrene	(6)	13.526	(0.000)	252	5745	0.172	34.45			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.590	(0.000)	276	5063M	0.143	28.54			0.1
178) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.866	(0.000)	276	4704M	0.156	31.12			0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov13a.b/ck0485.d Injection date and time: **13-NOV-2013 18:40**
Data file Sample Info. Line: OHERC;7263055;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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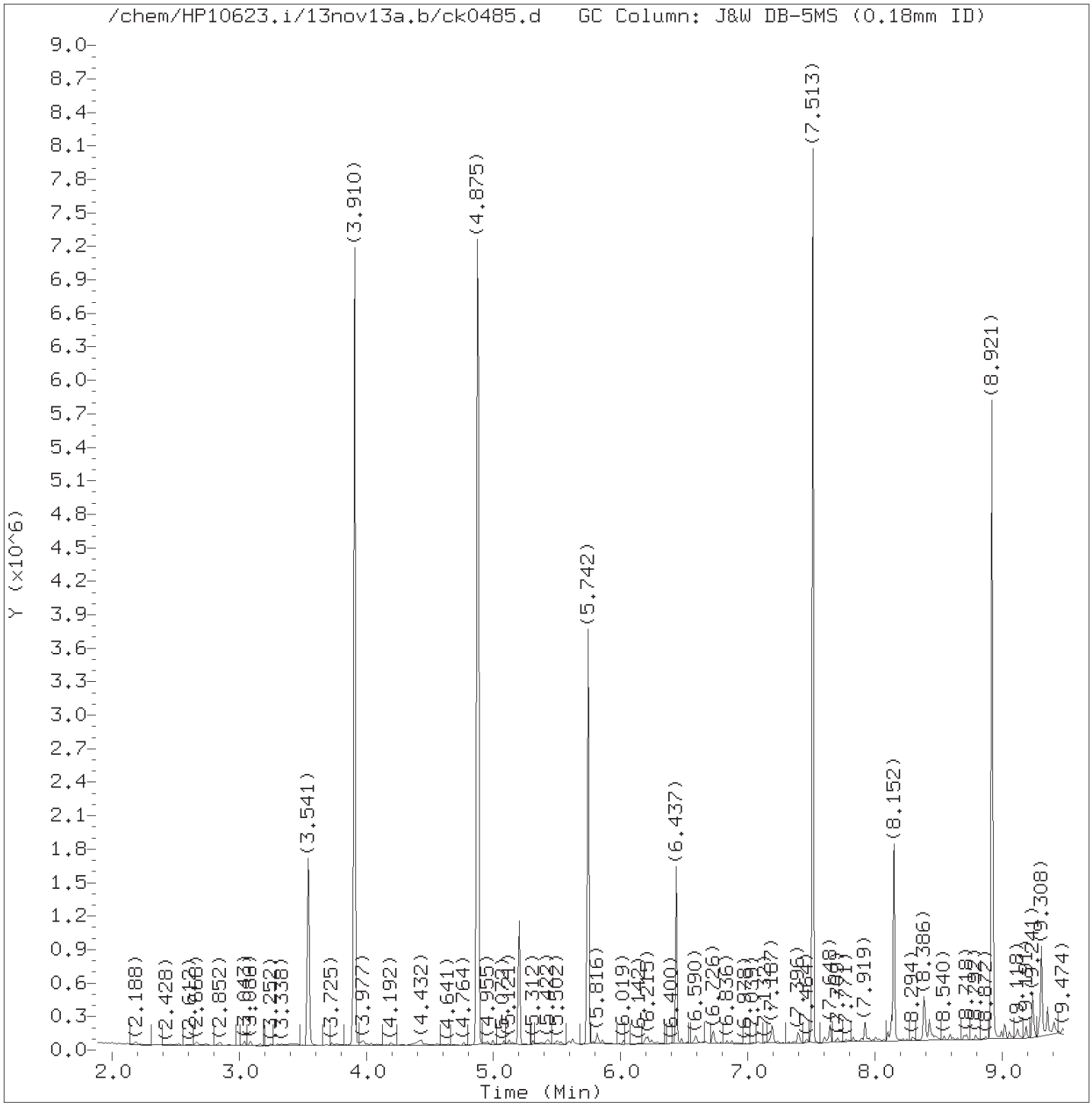
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:30. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

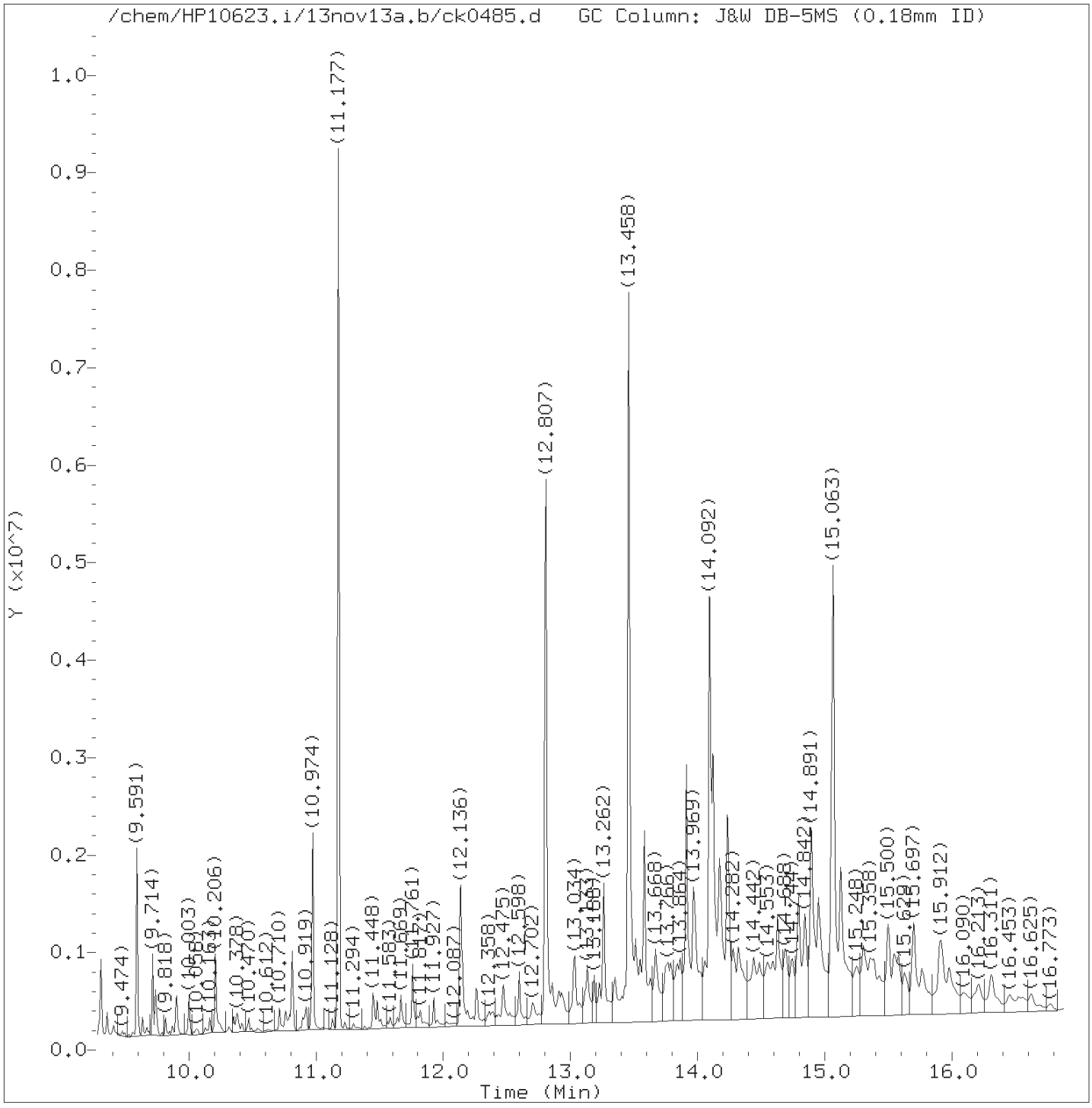
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

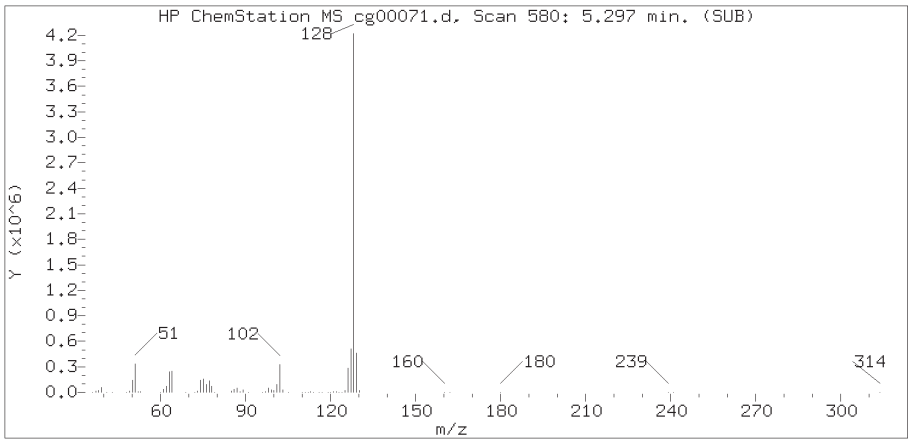
Sample Name: OHERC Lab Sample ID: 7263055

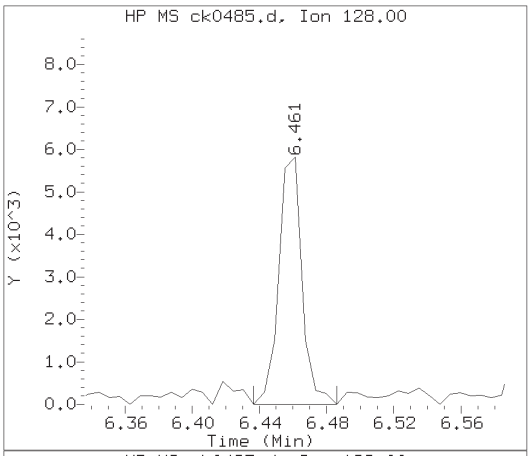
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	139978	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	1194946	87.165
52)*Naphthalene-d8	(2)	6.437	136	636301	20.000
53) Naphthalene	(2)	6.461	128	5629	0.167
70) 2-Methylnaphthalene	(2)	7.138	142	2892	0.121
71) 1-Methylnaphthalene	(2)	7.230	142	2504	0.114
78)$2-Fluorobiphenyl	(3)	7.513	172	2297559	95.754
98)*Acenaphthene-d10	(3)	8.152	164	381609	20.000
111) Fluorene	(3)	8.706	166	5568	0.203
135)*Phenanthrene-d10	(4)	9.591	188	648178	20.000
137) Phenanthrene	(4)	9.616	178	13905	0.369
147) Fluoranthene	(4)	10.772	202	25340	0.601
167)*Pyrene-d10	(5)	10.974	212	737970	20.000
154) Pyrene	(5)	10.987	202	15548	0.379
156)$Terphenyl-d14	(5)	11.177	244	2590207	98.182
166) Benzo(a)anthracene	(5)	12.167	228	6077	0.161
168) Chrysene	(5)	12.198	228	12765	0.350
172) Benzo(b)fluoranthene	(6)	13.219	252	13319M	0.390
173) Benzo(k)fluoranthene	(6)	13.243	252	4930M	0.141
174) Benzo(a)pyrene	(6)	13.526	252	5745	0.172
175)*Perylene-d12	(6)	13.581	264	559637	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.590	276	5063M	0.143
179) Benzo(g,h,i)perylene	(6)	14.867	276	4704M	0.156

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

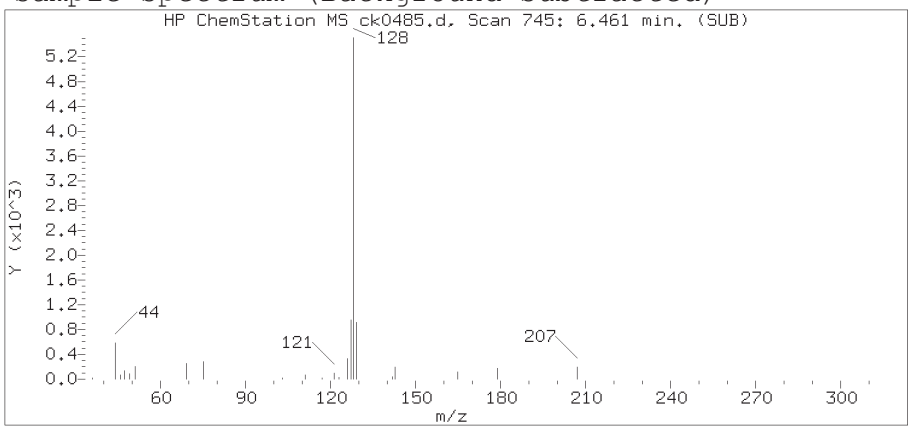
Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

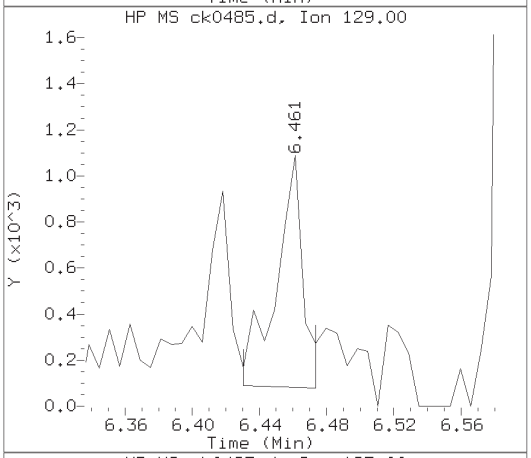
Reference Standard Spectrum for Naphthalene



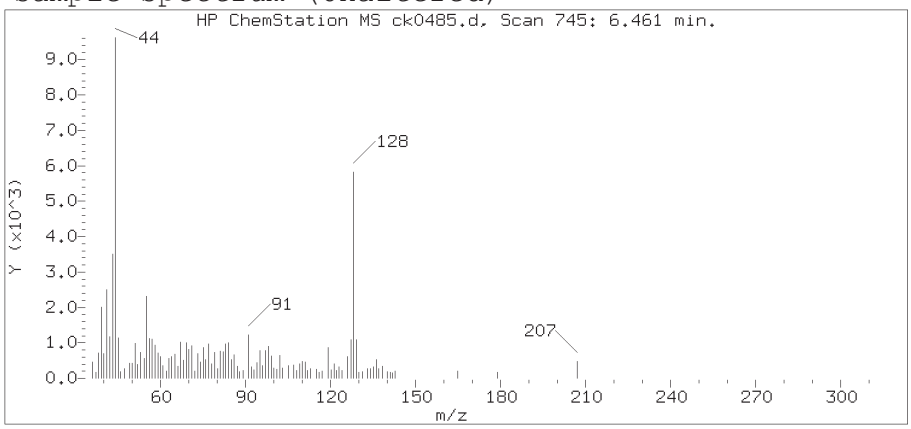


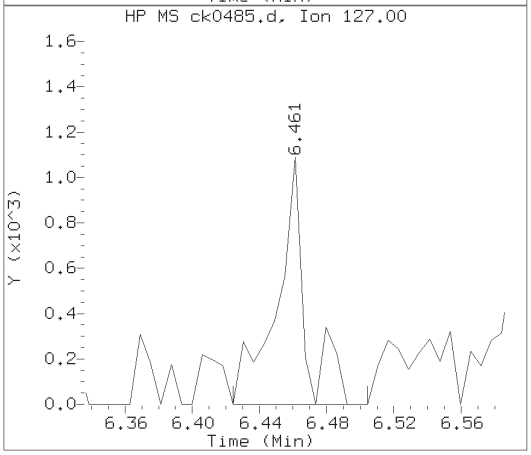
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 53
Compound Name	: Naphthalene
Scan Number	: 745
Retention Time (minutes)	: 6.461
Relative Retention Time	:-0.00000
Quant Ion	: 128.00
Area (flag)	: 5629
On-column Amount (ng/ul)	: 0.1667

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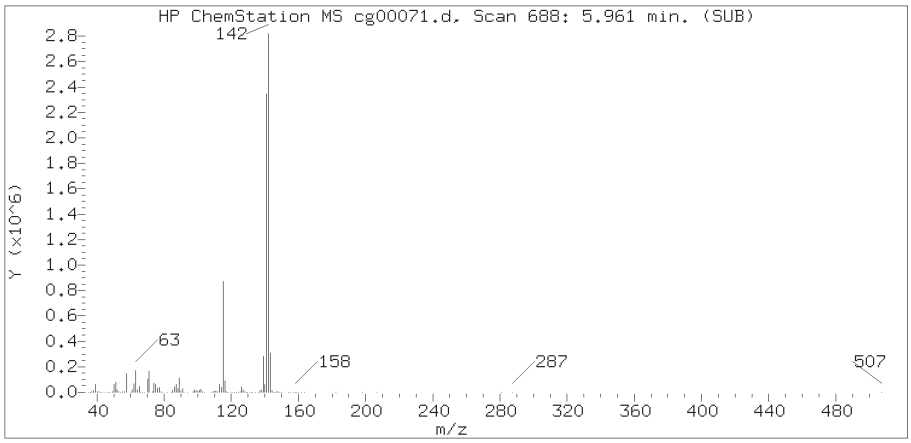
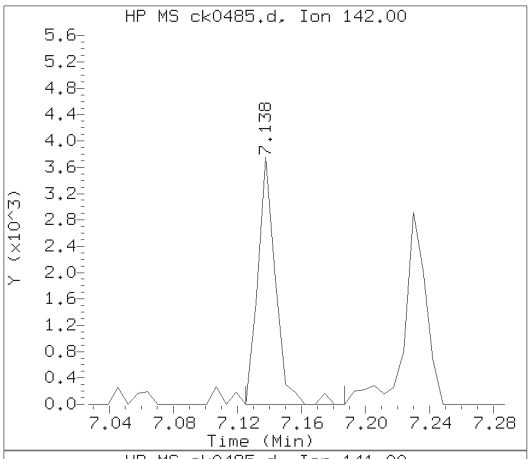
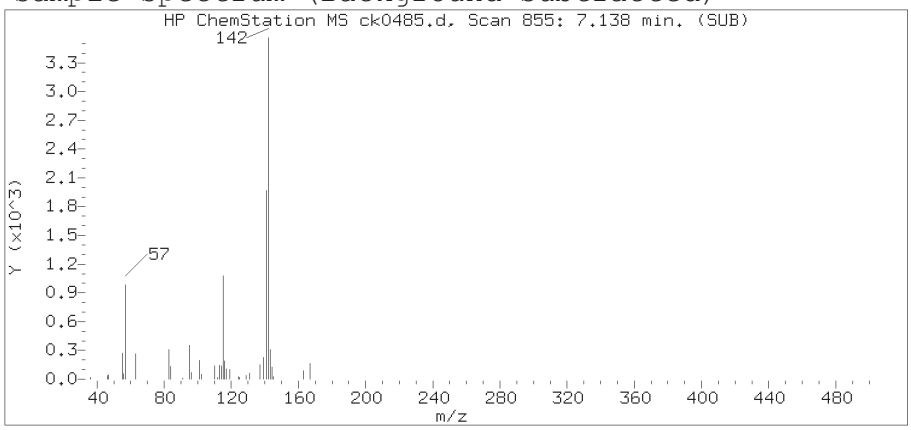
Target 3.5 esignature ID: mac00013

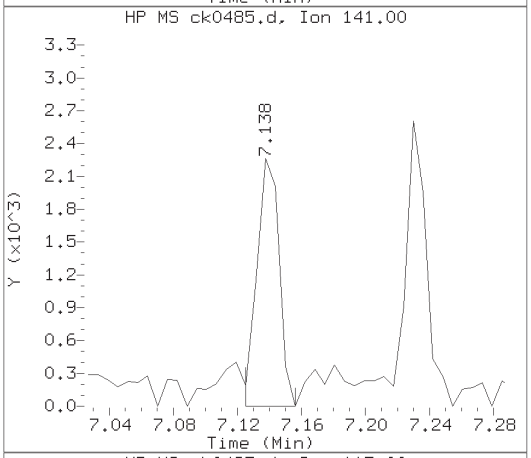
Reference Standard Spectrum for 2-Methylnaphthalene



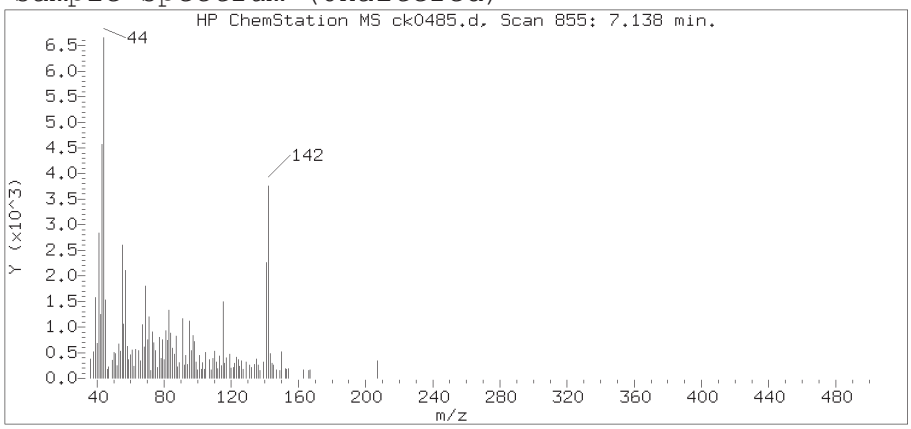


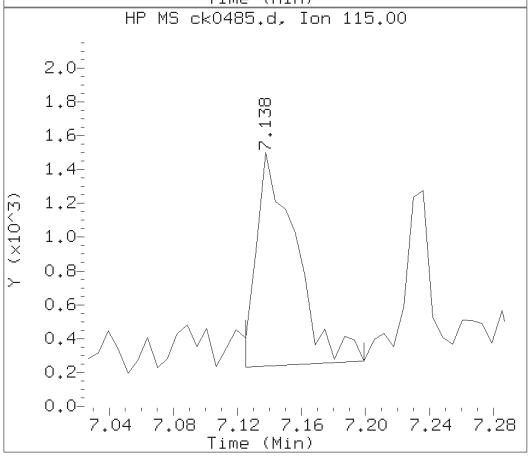
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 70
Compound Name	: 2-Methylnaphthalene
Scan Number	: 855
Retention Time (minutes)	: 7.138
Relative Retention Time	:-0.00000
Quant Ion	: 142.00
Area (flag)	: 2892
On-column Amount (ng/ul)	: 0.1207

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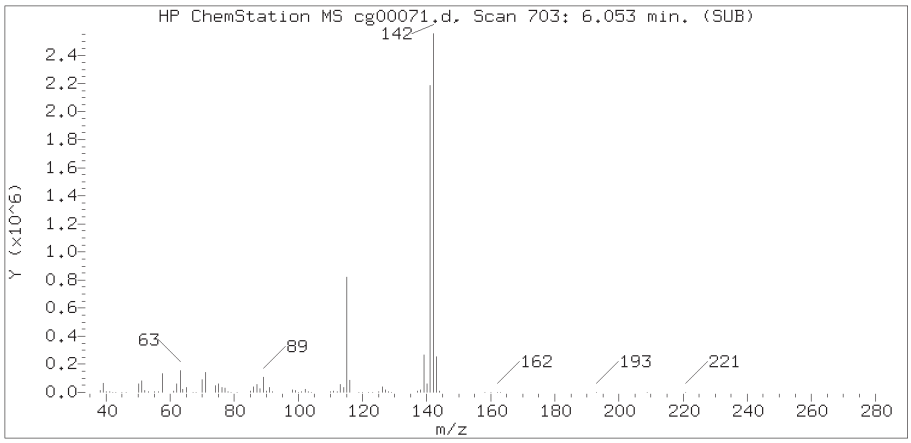
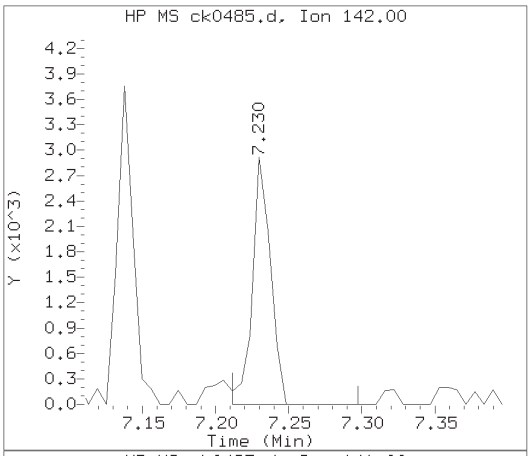
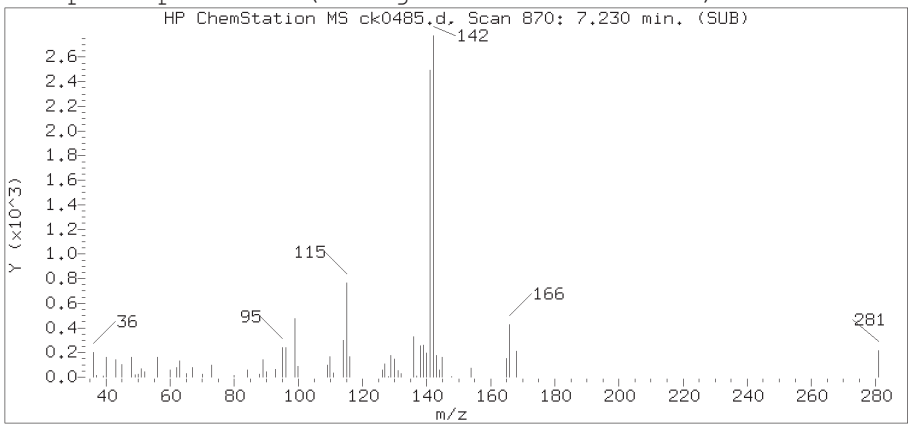
Target 3.5 esignature ID: mac00013

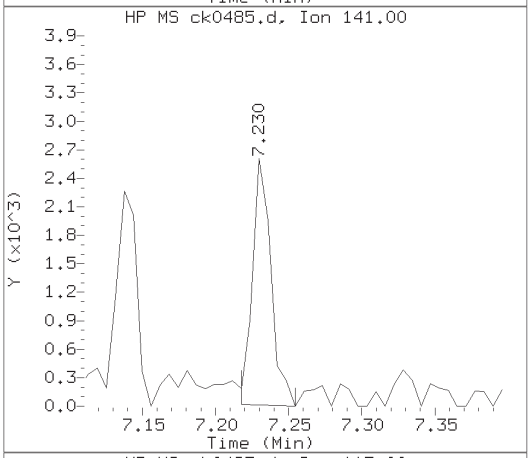
Reference Standard Spectrum for 1-Methylnaphthalene



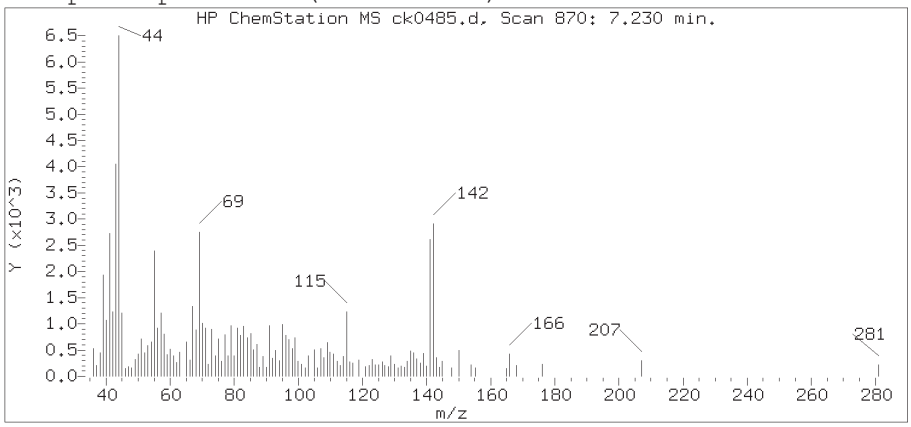


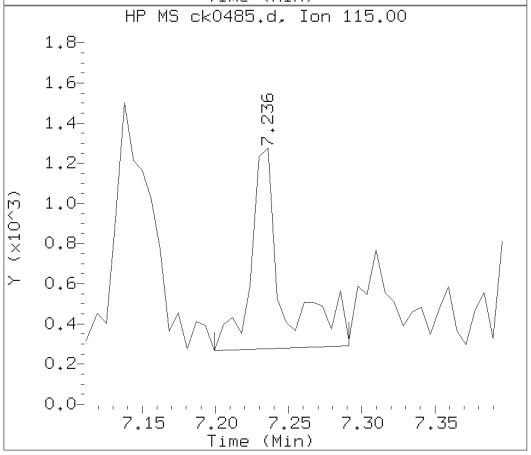
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 870
Retention Time (minutes)	: 7.230
Relative Retention Time	:-0.00000
Quant Ion	: 142.00
Area (flag)	: 2504
On-column Amount (ng/ul)	: 0.1142

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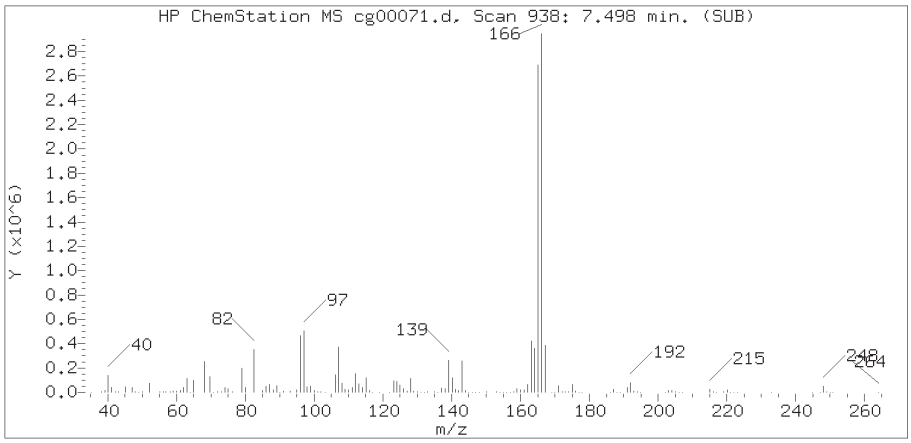
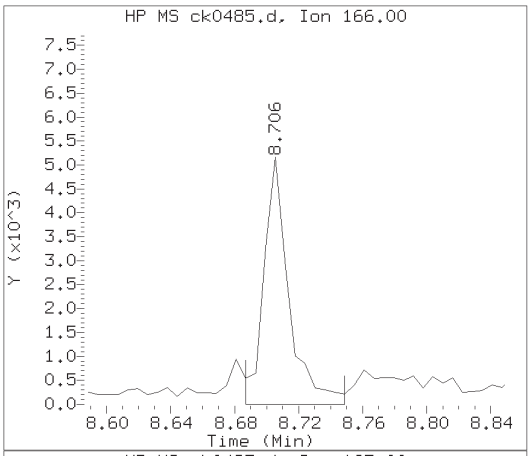
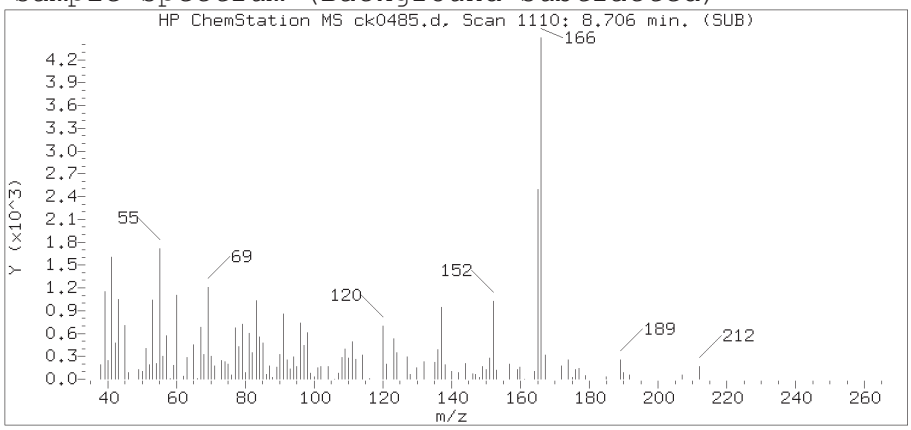
Target 3.5 esignature ID: mac00013

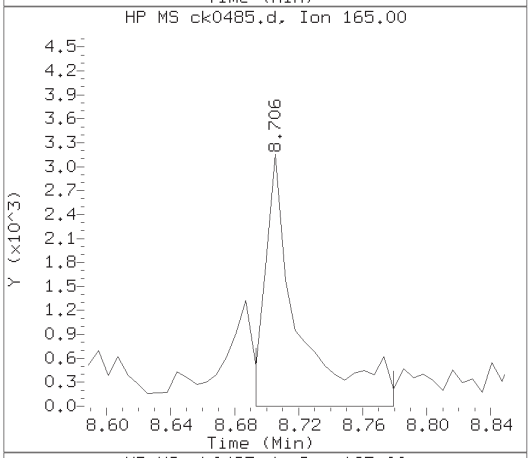
Reference Standard Spectrum for Fluorene



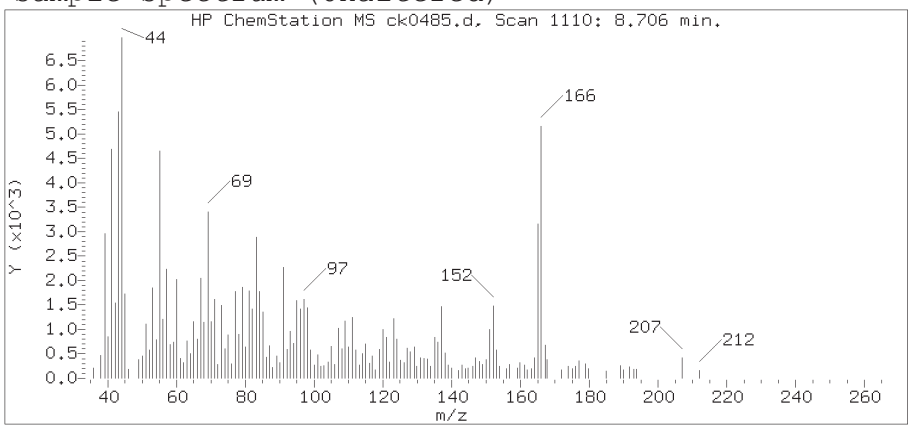


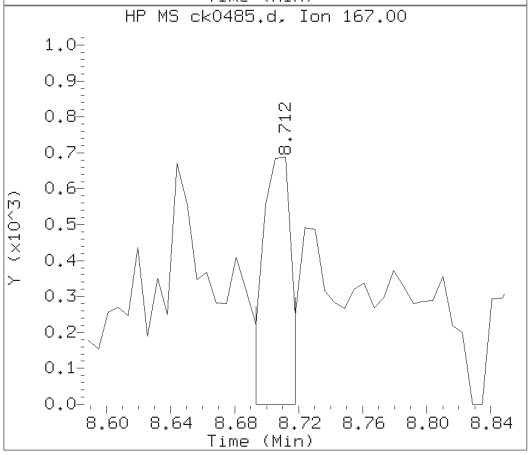
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 111
Compound Name	: Fluorene
Scan Number	: 1110
Retention Time (minutes)	: 8.706
Relative Retention Time	:-0.00146
Quant Ion	: 166.00
Area (flag)	: 5568
On-column Amount (ng/ul)	: 0.2030

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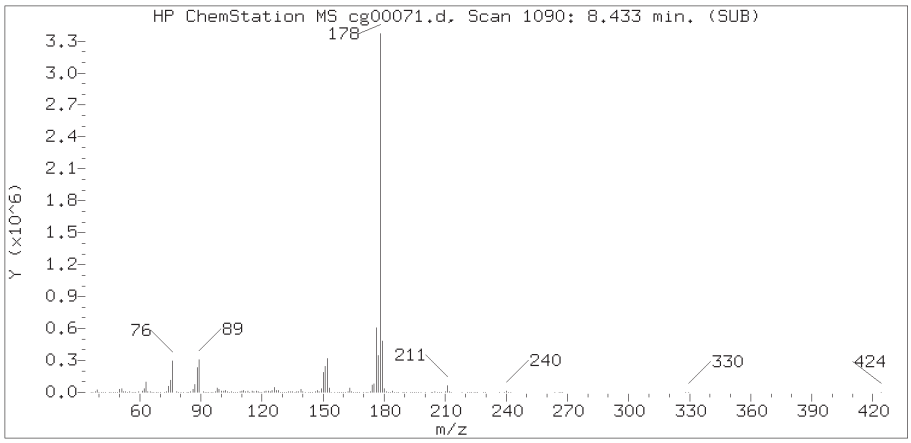
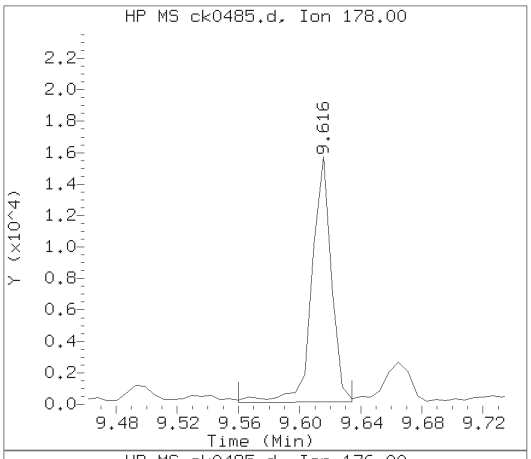
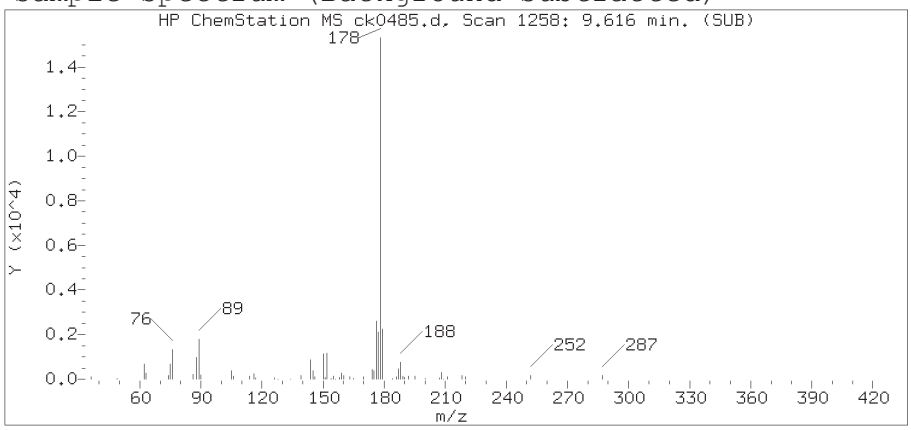
Target 3.5 esignature ID: mac00013

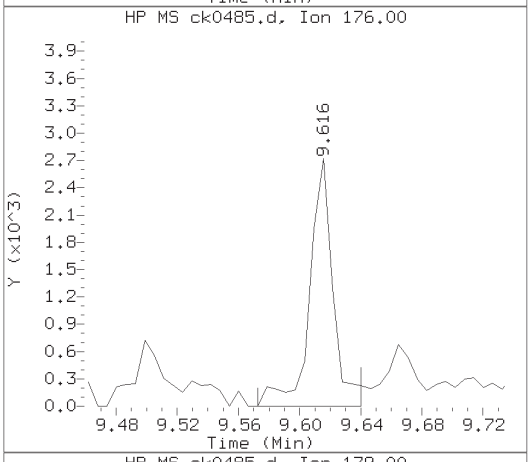
Reference Standard Spectrum for Phenanthrene



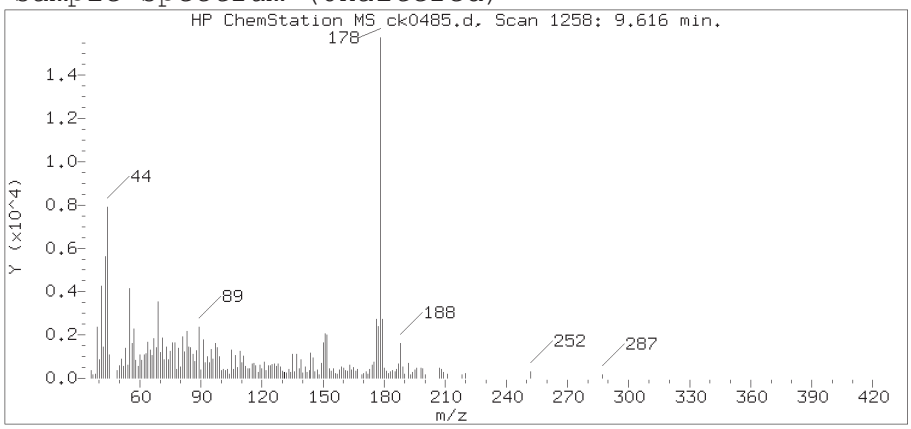


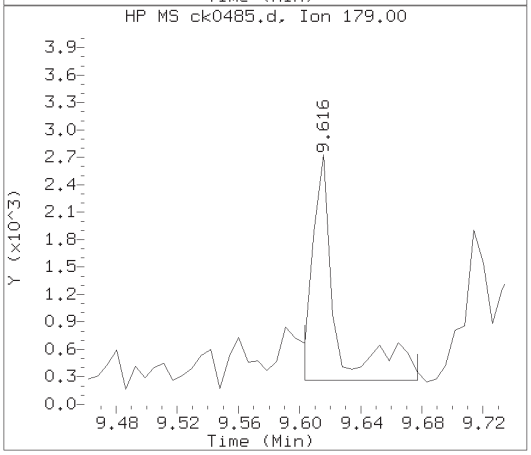
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1258
Retention Time (minutes)	: 9.616
Relative Retention Time	:-0.00000
Quant Ion	: 178.00
Area (flag)	: 13905
On-column Amount (ng/ul)	: 0.3689

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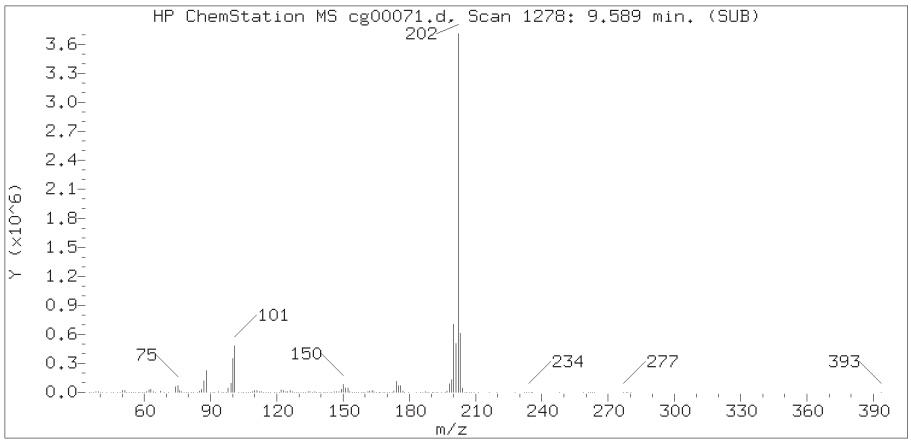
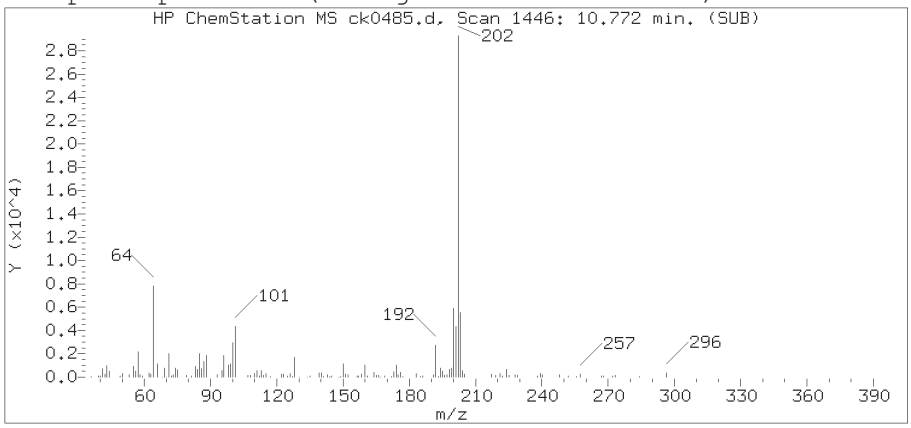
Target 3.5 esignature was ID: mac00013

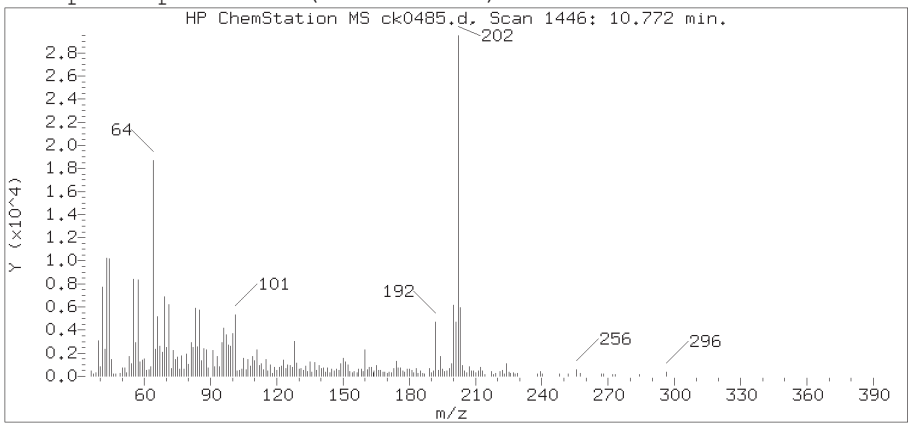
Reference Standard Spectrum for Fluoranthene

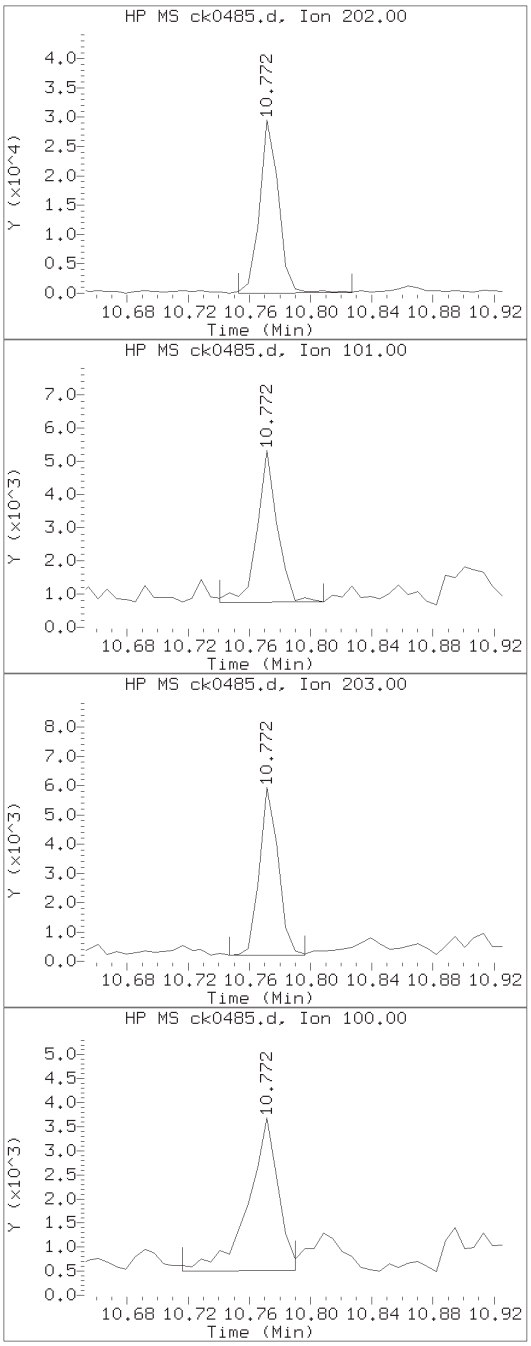


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1446
Retention Time (minutes)	: 10.772
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 25340
On-column Amount (ng/ul)	: 0.6013

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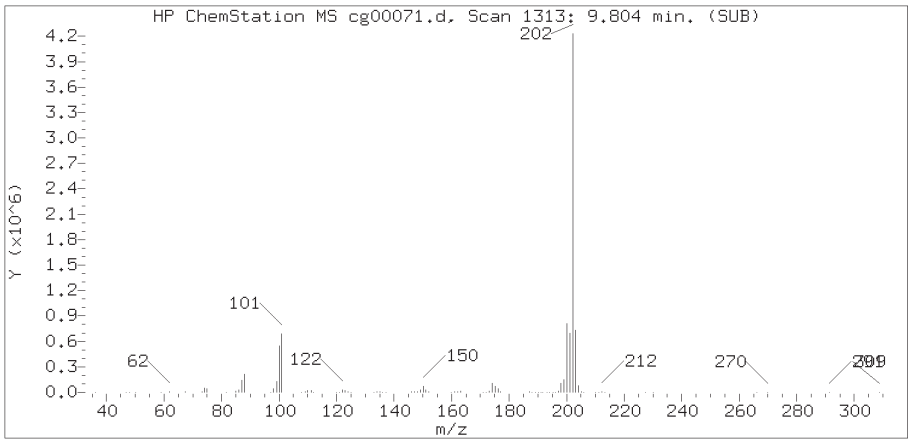
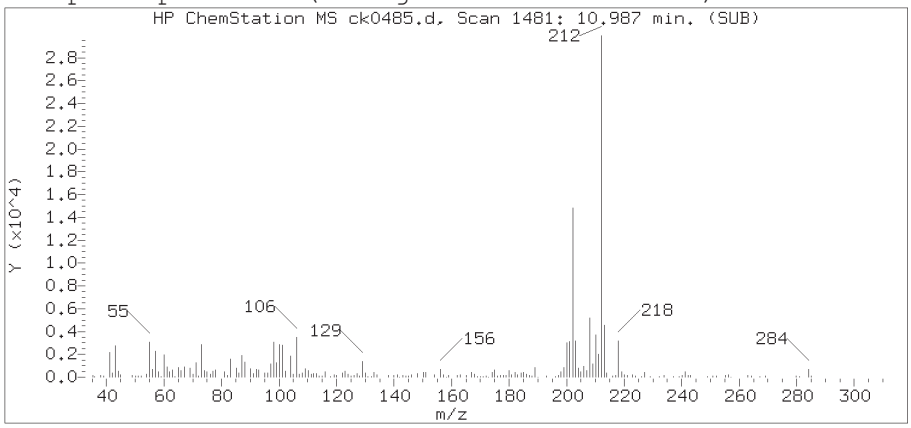
Target 3.5 esignature was ID: mac00013

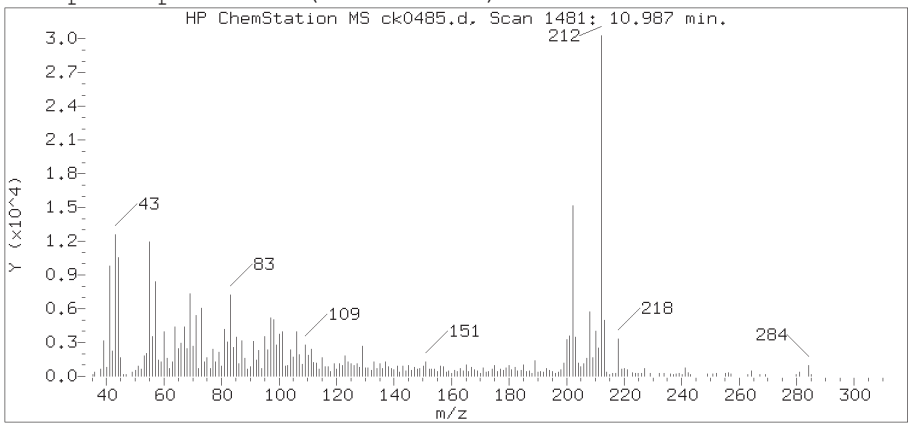
Reference Standard Spectrum for Pyrene

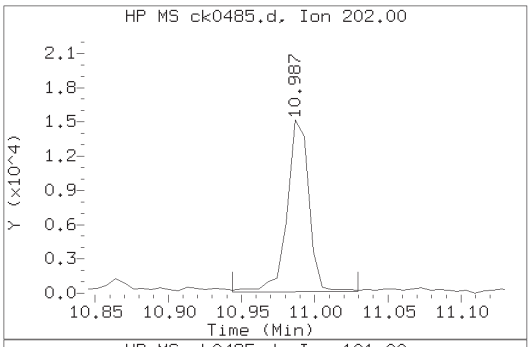


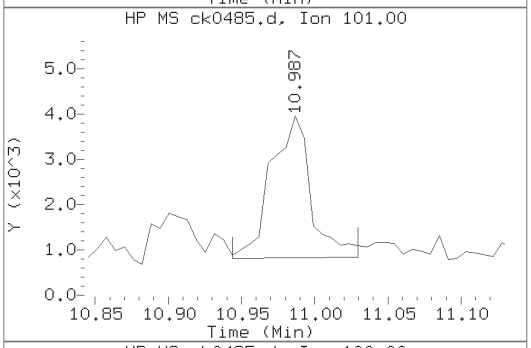
Sample Spectrum (Background Subtracted)

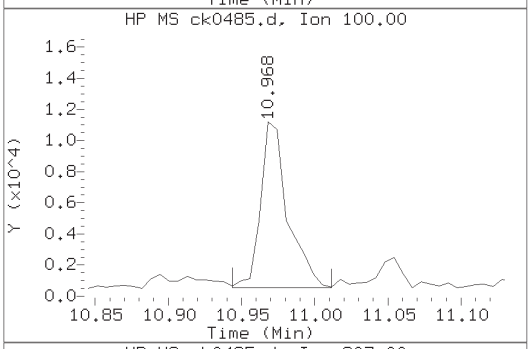


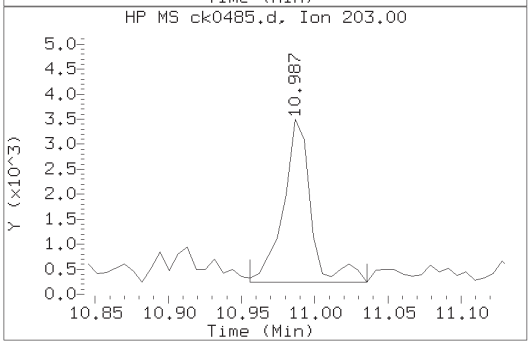
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1481
Retention Time (minutes)	: 10.987
Relative Retention Time	: 0.00056
Quant Ion	: 202.00
Area (flag)	: 15548
On-column Amount (ng/ul)	: 0.3794

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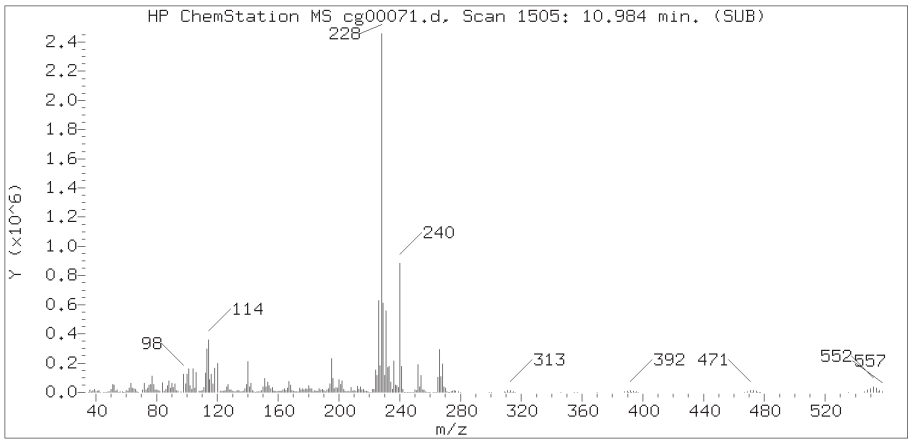
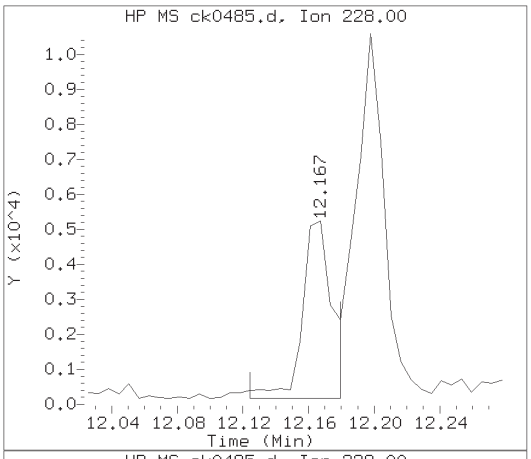
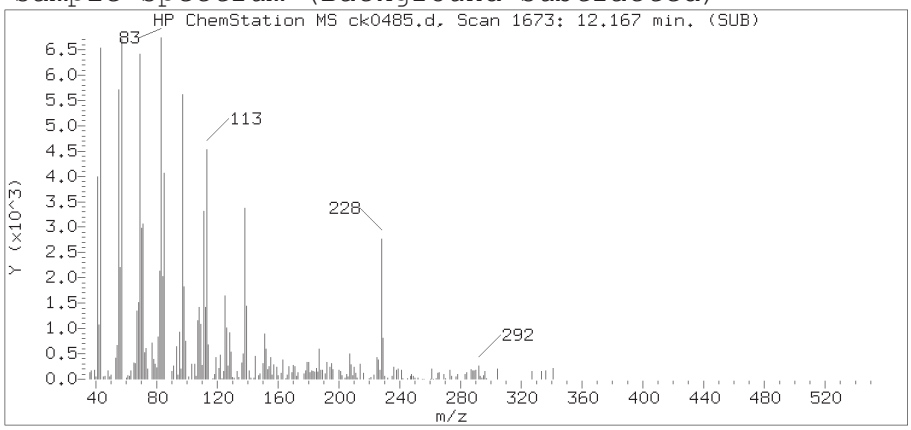
Target 3.5 esignature ID: mac00013

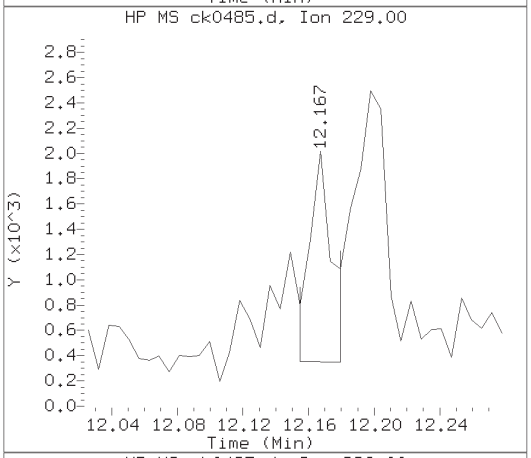
Reference Standard Spectrum for Benzo(a)anthracene



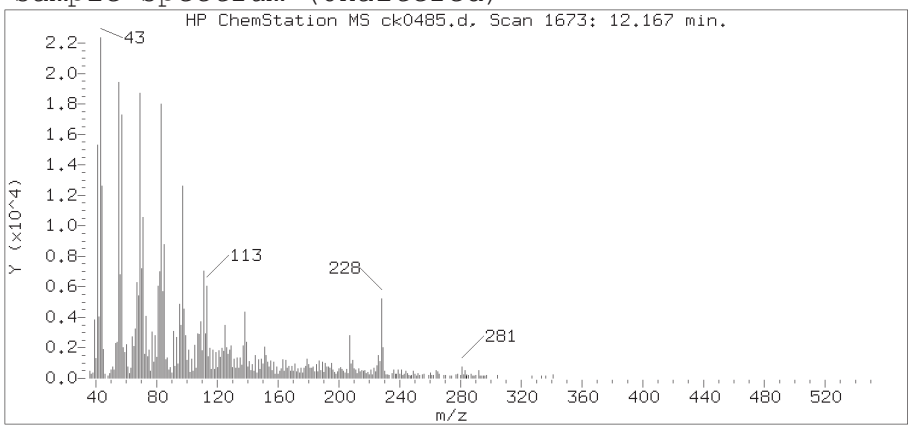


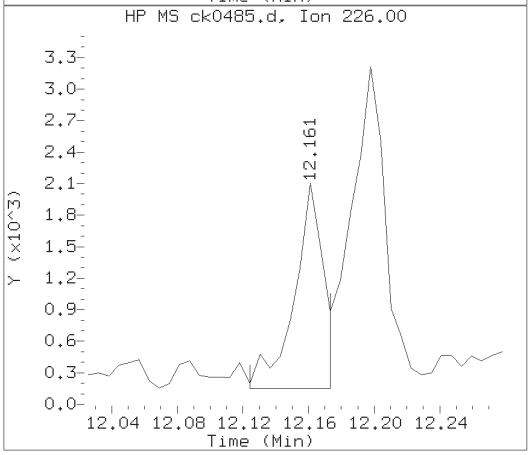
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

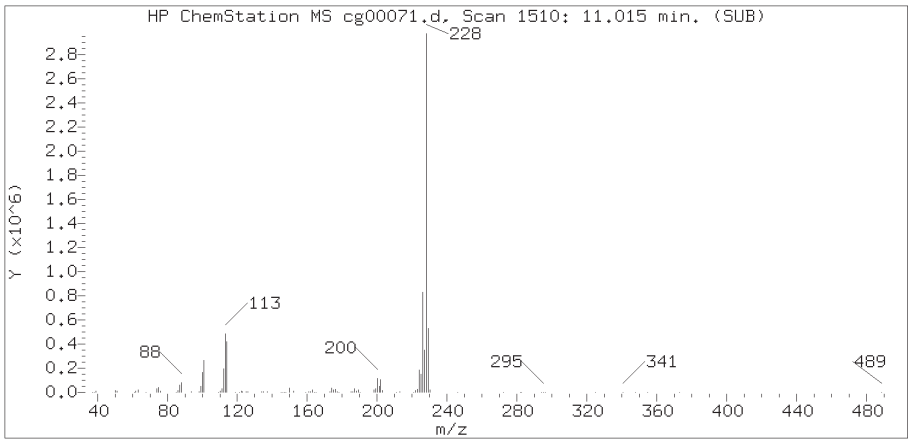
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

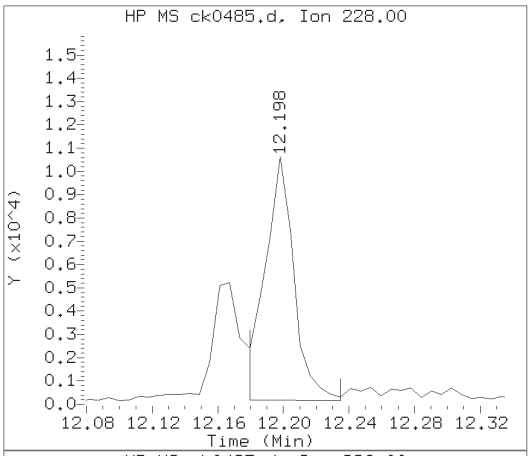
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1673
Retention Time (minutes)	: 12.167
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 6077
On-column Amount (ng/ul)	: 0.1608

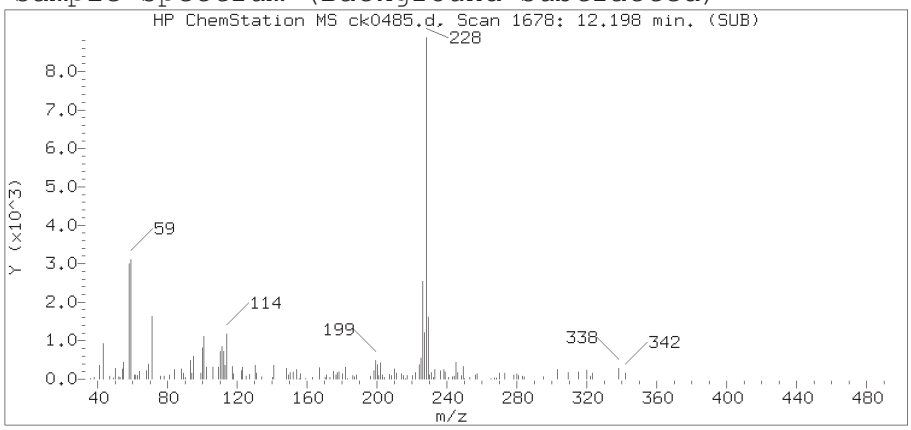
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac10013

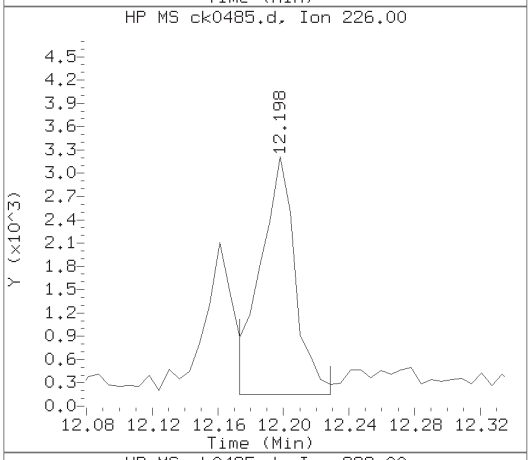
Reference Standard Spectrum for Chrysene



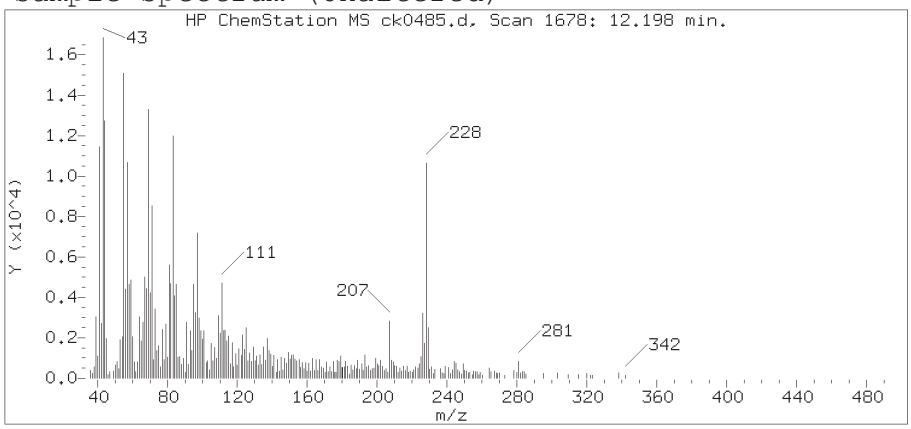


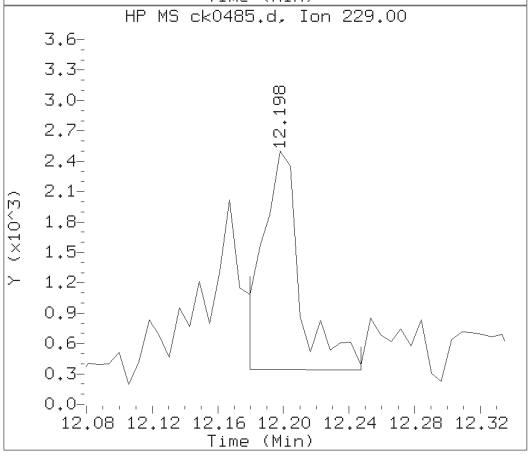
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

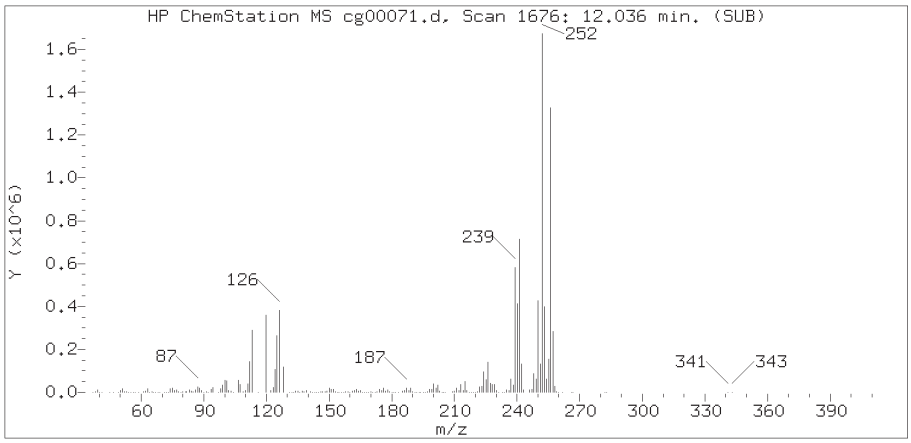
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

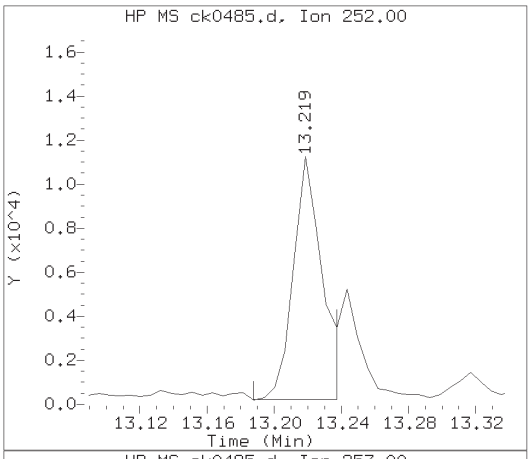
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1678
Retention Time (minutes)	: 12.198
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 12765
On-column Amount (ng/ul)	: 0.3503

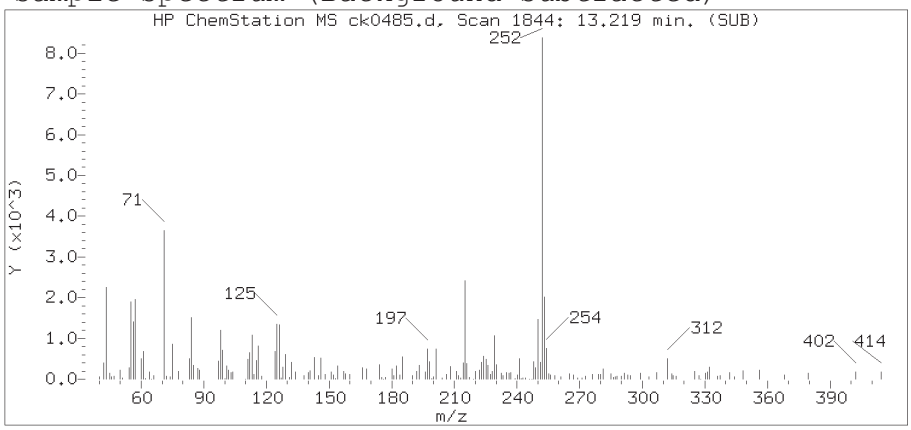
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

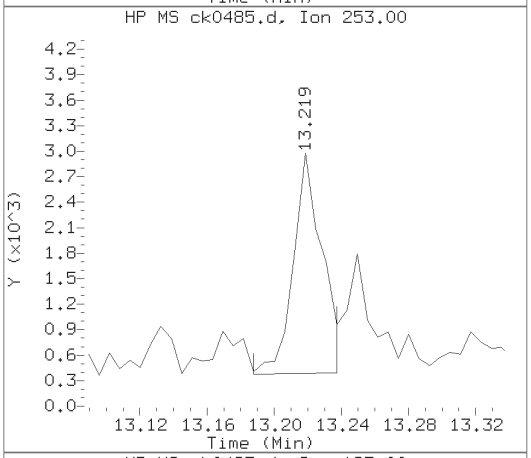
Reference Standard Spectrum for Benzo(b)fluoranthene



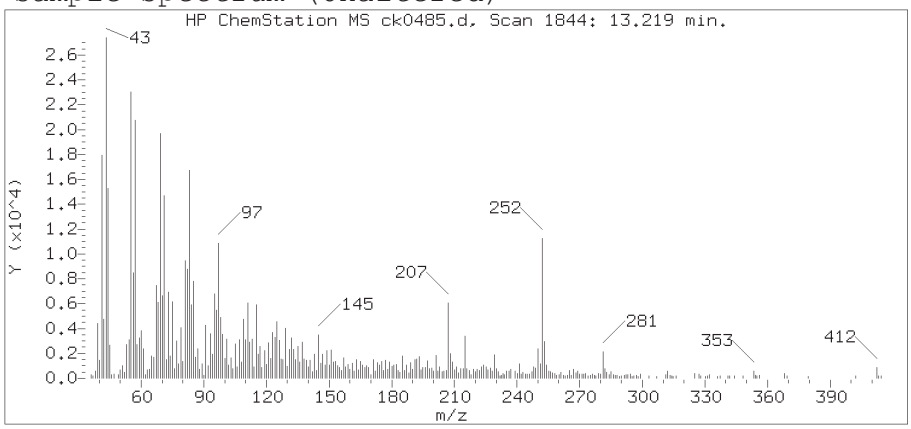


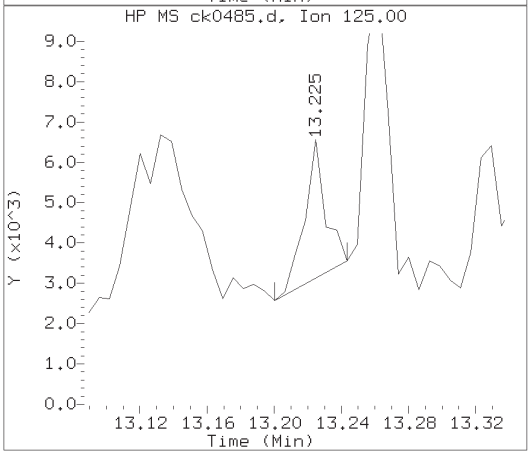
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

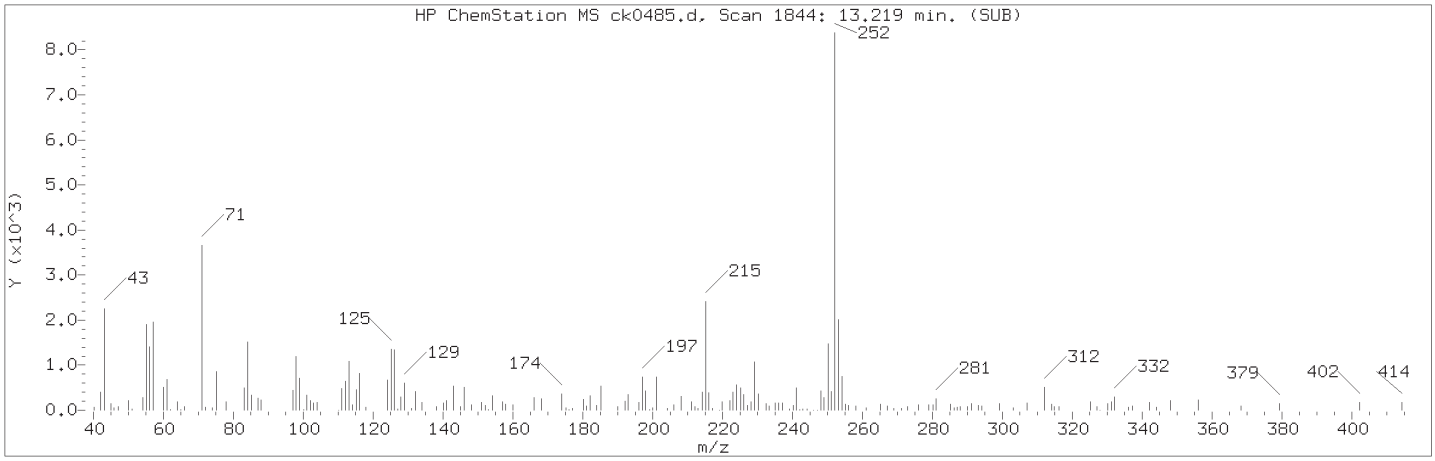
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

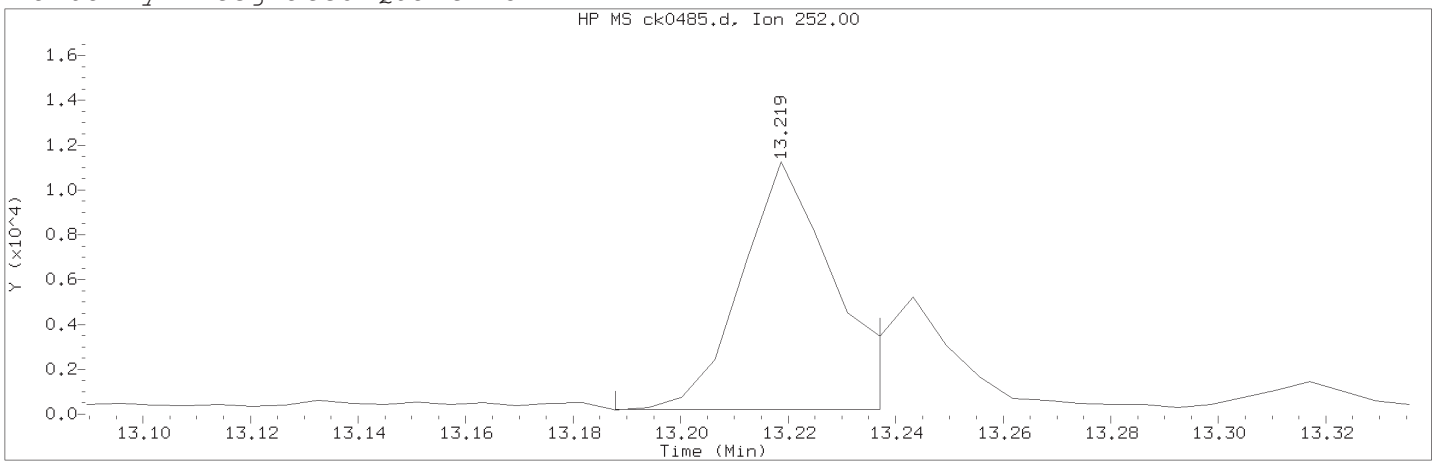
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Relative Retention Time : 0.00044
Quant Ion : 252.00
Area (flag) : 13319M
On-column Amount (ng/ul) : 0.3898

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature use ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

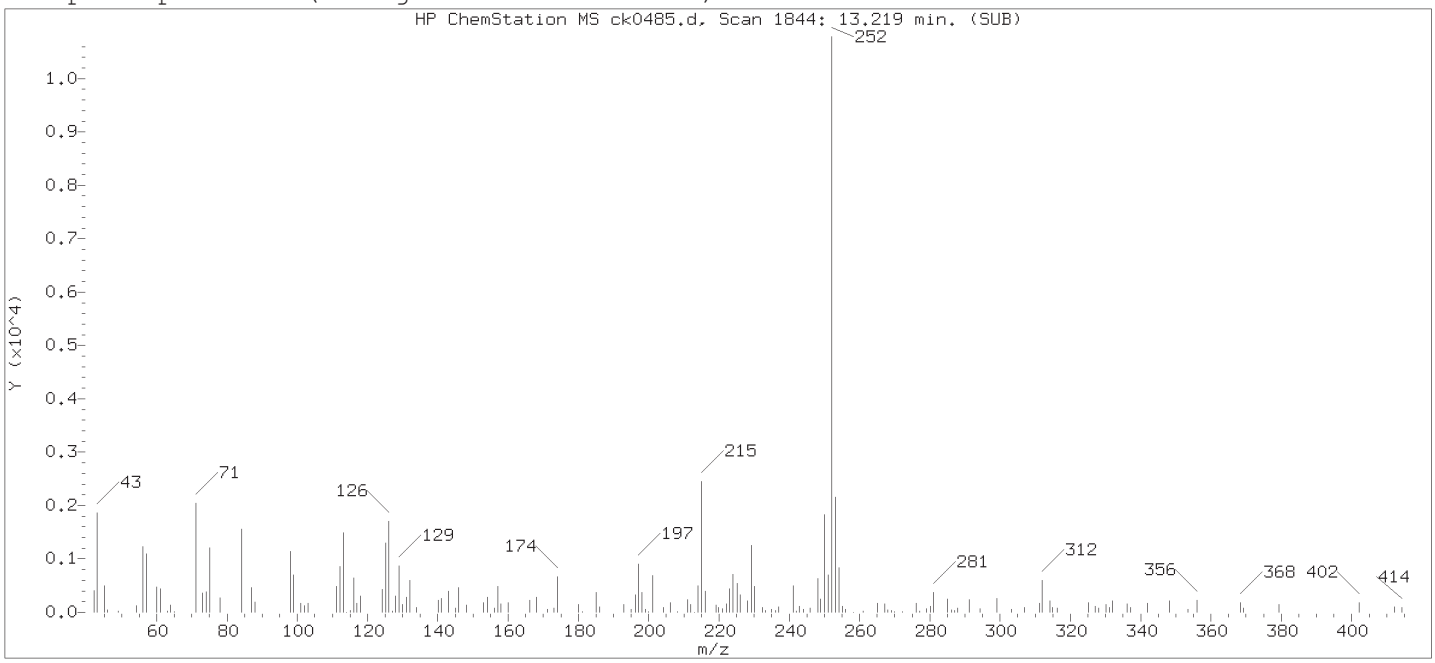
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area (flag) : 13319M
On-column Amount (ng/ul) : 0.3898
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : 223 Y at integration end: 223

Reason for manual integration: improper integration

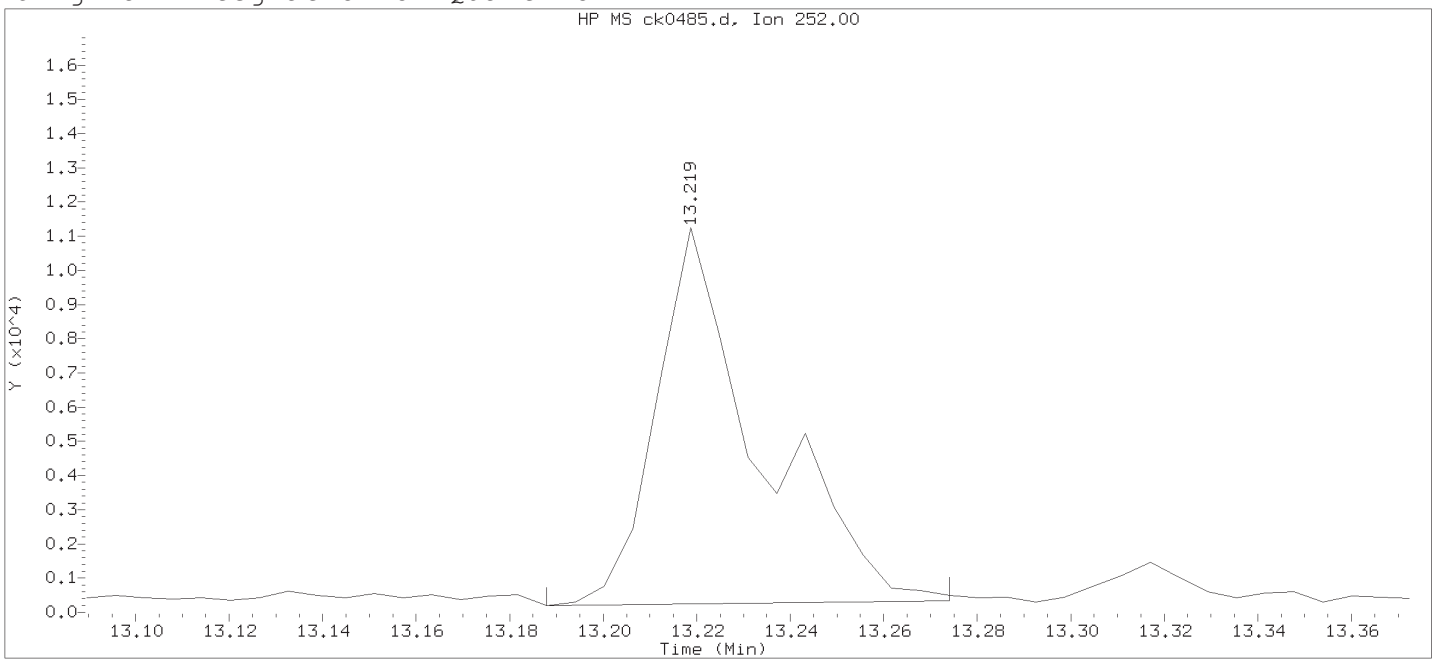
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

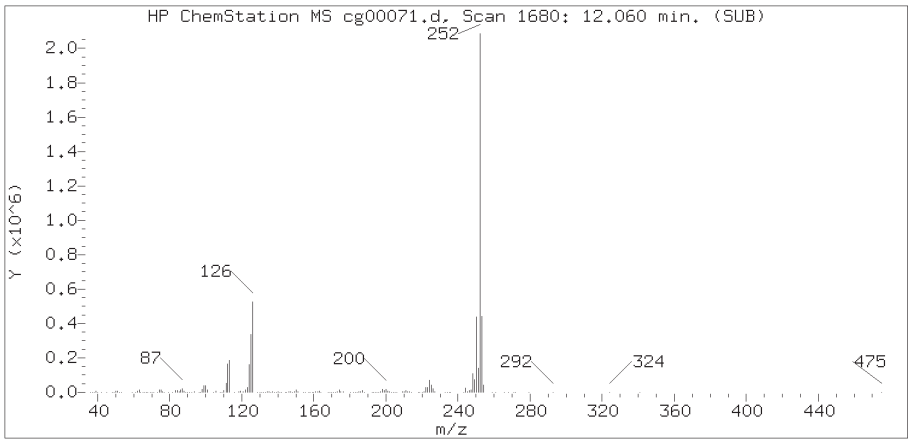
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:06 Automation

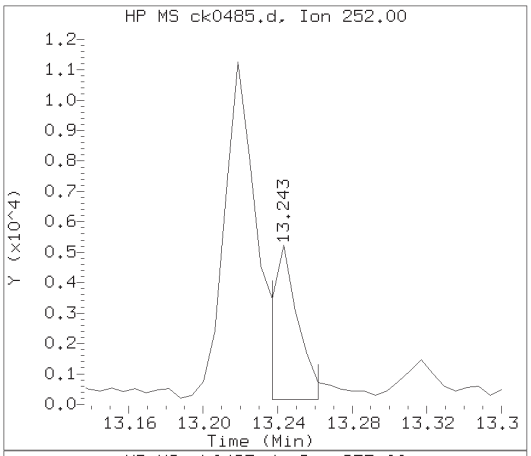
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	:	172
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1844
Retention Time (minutes)	:	13.219
Quant Ion	:	252.00
Area	:	16953
On-column Amount (ng/ul)	:	0.4961
Integration start scan	:	1838 Integration stop scan: 1852
Y at integration start	:	190 Y at integration end: 328

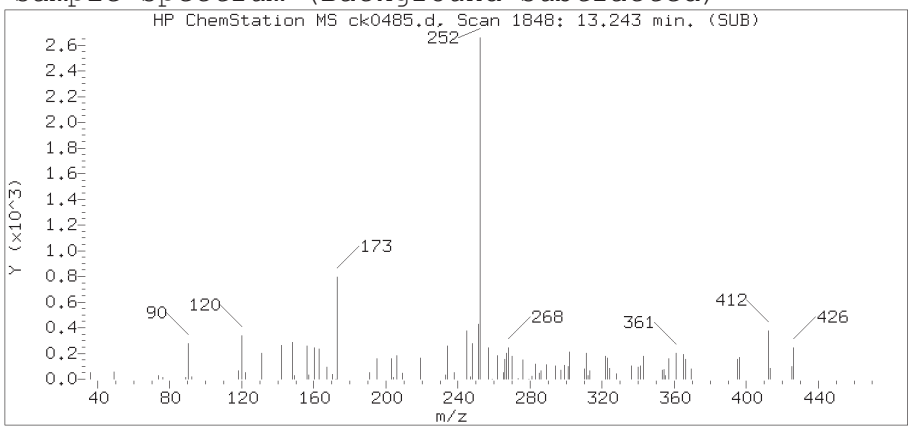
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

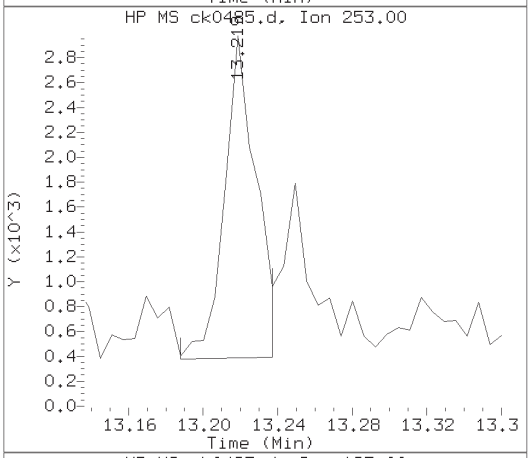
Reference Standard Spectrum for Benzo(k)fluoranthene



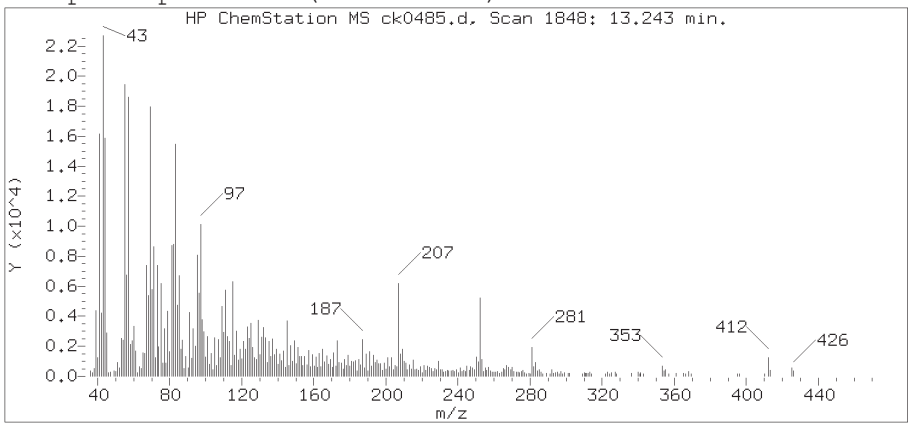


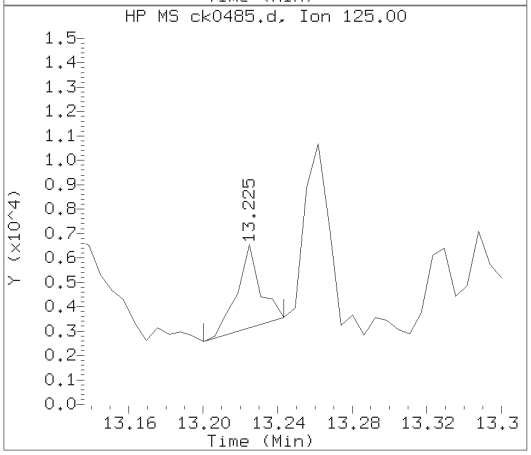
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

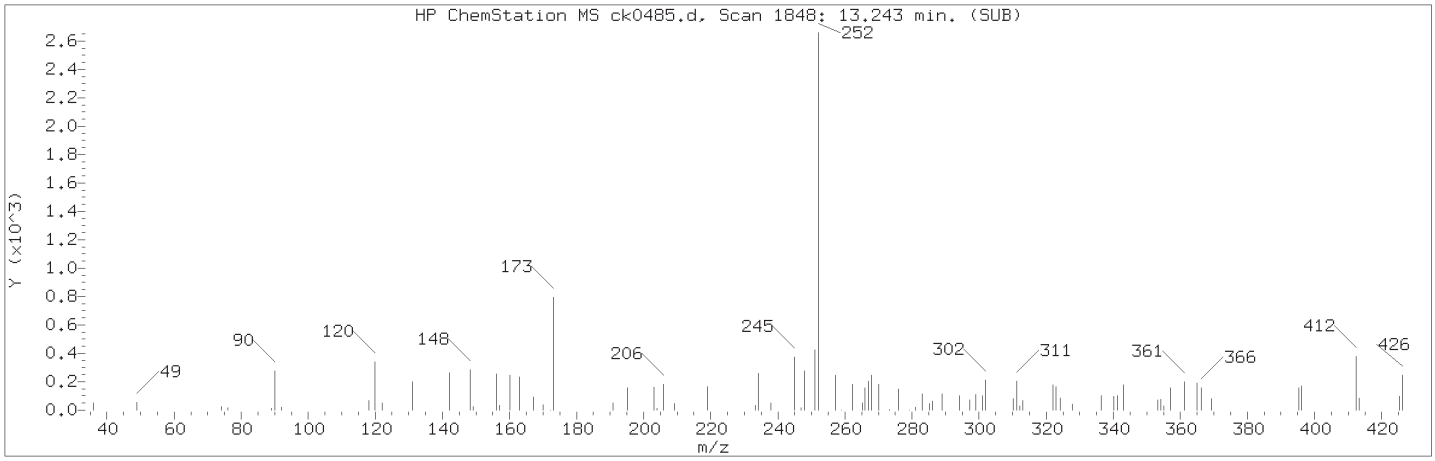
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

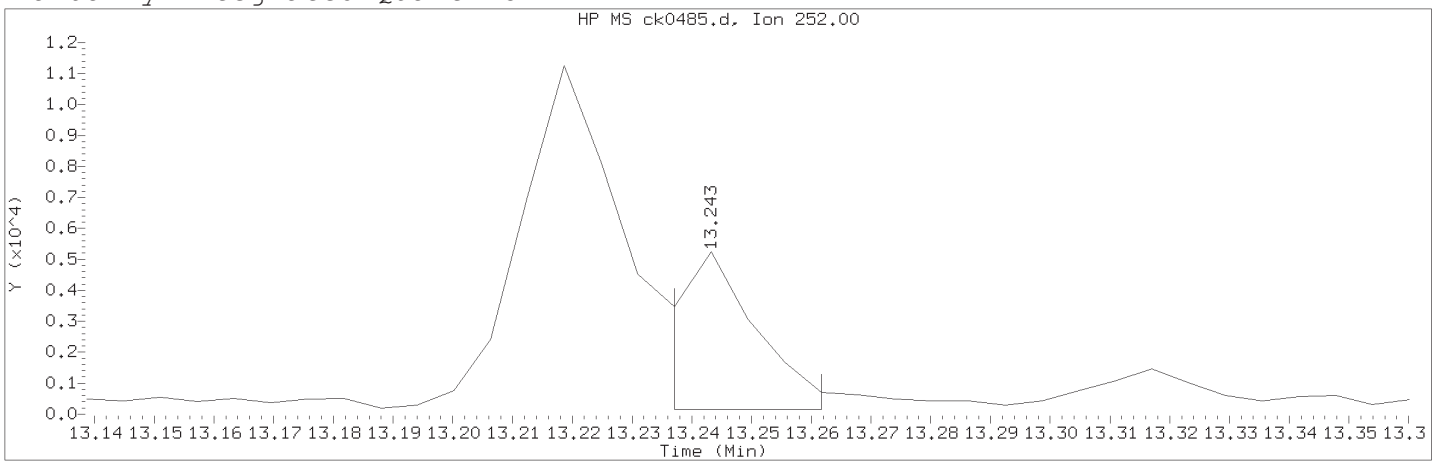
Compound Number	: 173
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1848
Retention Time (minutes)	: 13.243
Relative Retention Time	: 0.00089
Quant Ion	: 252.00
Area (flag)	: 4930M
On-column Amount (ng/ul)	: 0.1414

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

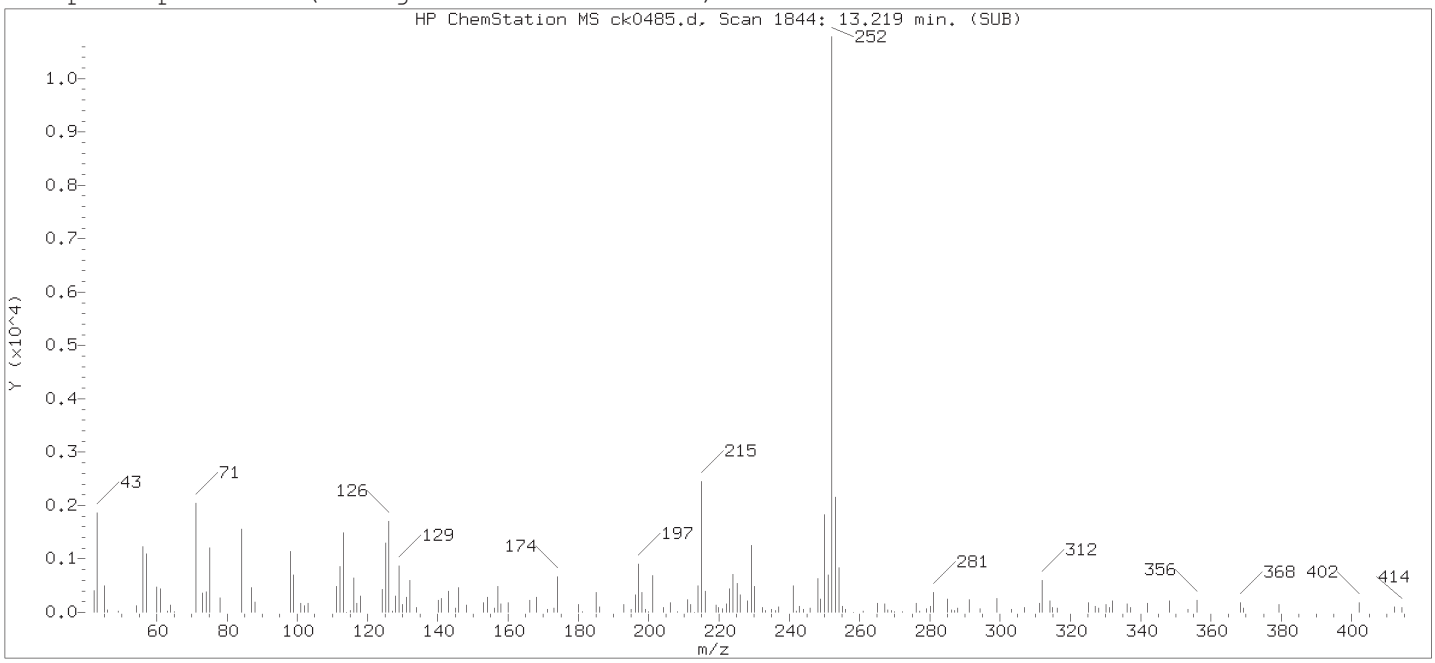
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1848
Retention Time (minutes) : 13.243
Quant Ion : 252.00
Area (flag) : 4930M
On-column Amount (ng/ul) : 0.1414
Integration start scan : 1846 Integration stop scan: 1850
Y at integration start : 160 Y at integration end: 160

Reason for manual integration: improper integration

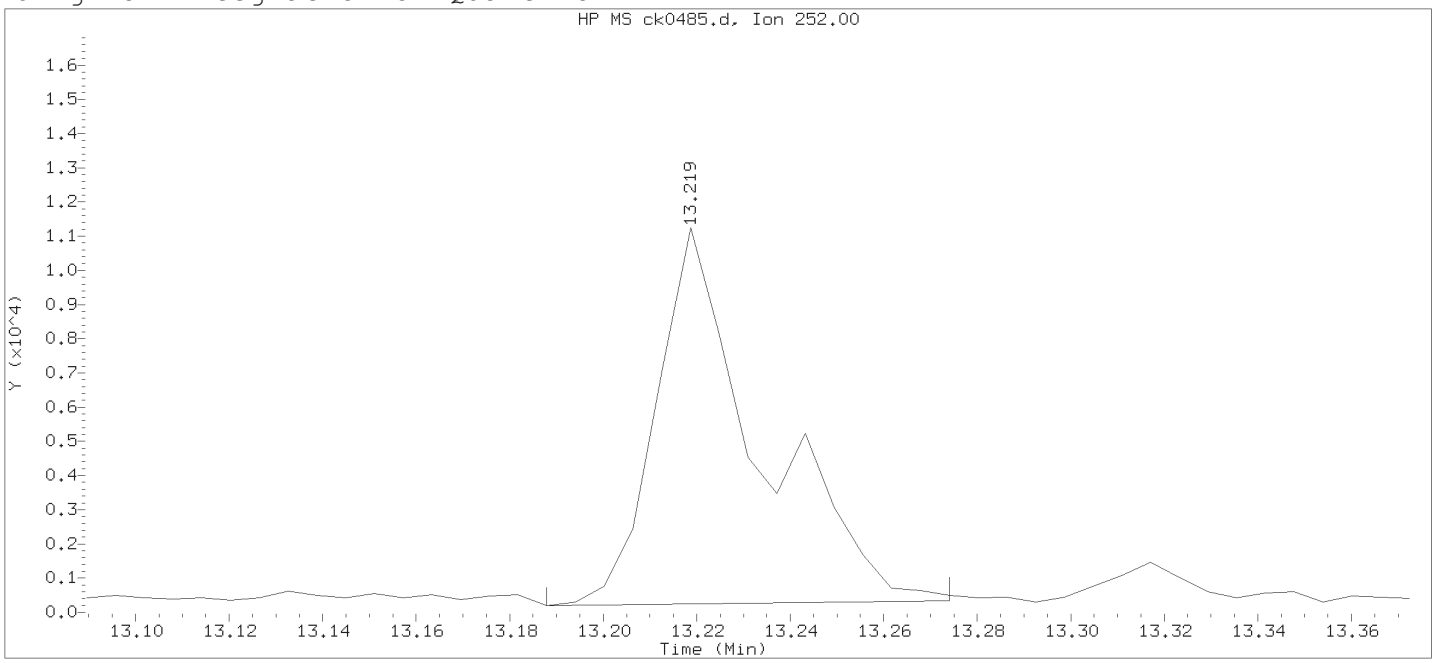
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

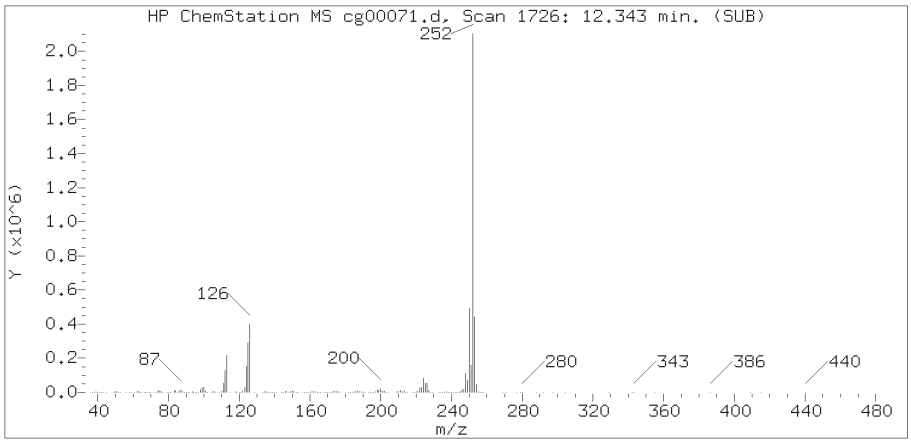
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:06 Automation

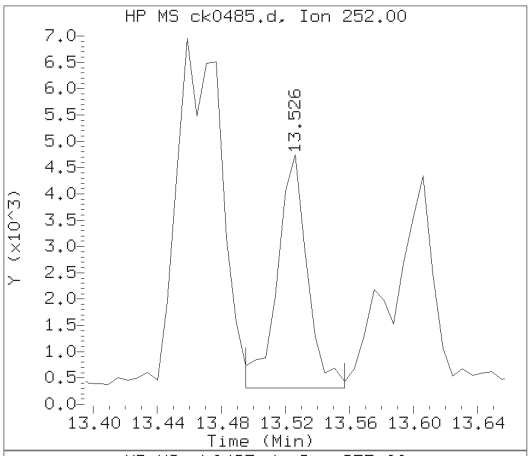
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1844		
Retention Time (minutes)	: 13.219		
Quant Ion	: 252.00		
Area	: 16953		
On-column Amount (ng/ul)	: 0.4863		
Integration start scan	: 1838	Integration stop scan:	1852
Y at integration start	: 190	Y at integration end:	328

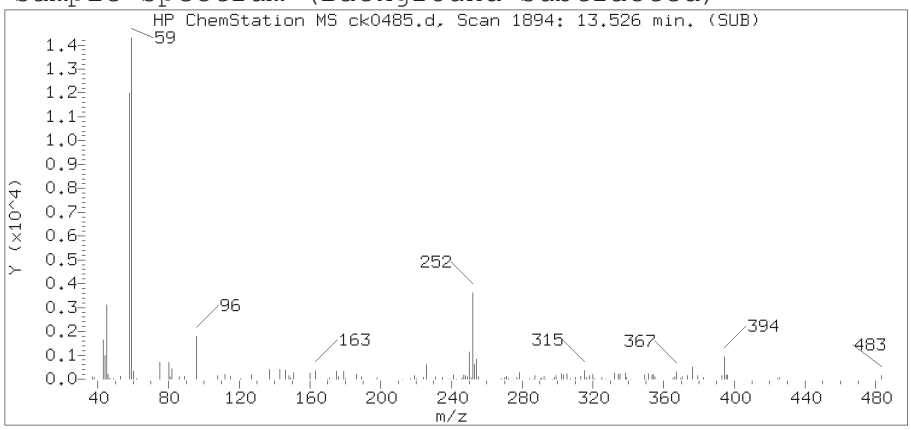
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user: Mark A. Clark

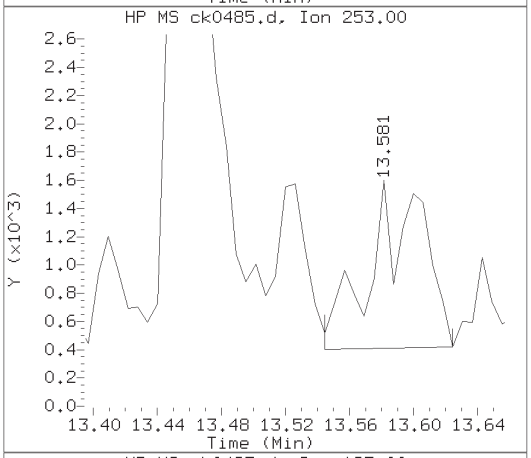
Reference Standard Spectrum for Benzo(a)pyrene



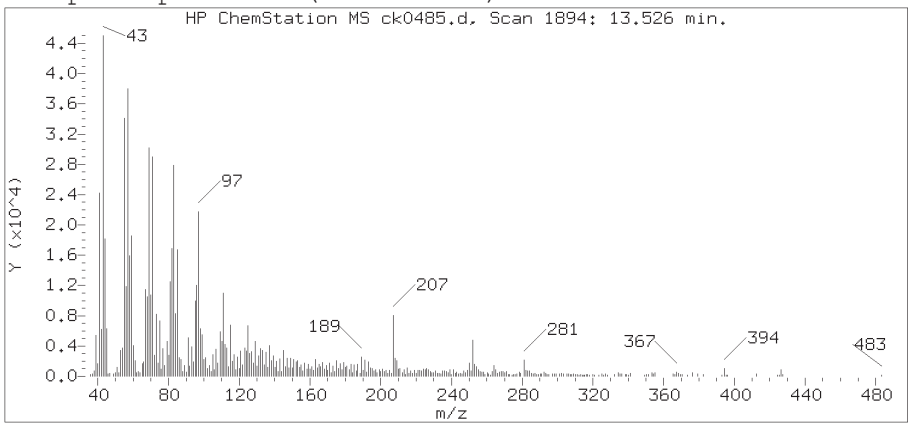


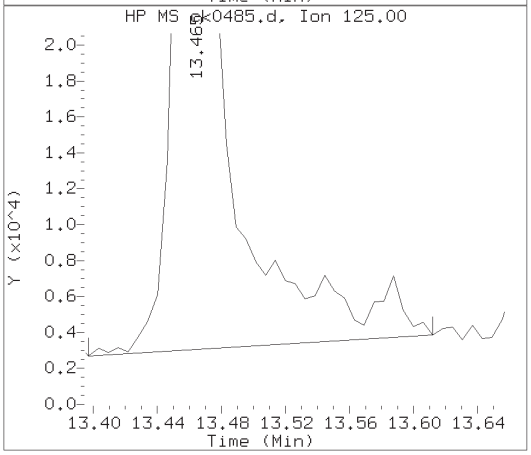
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

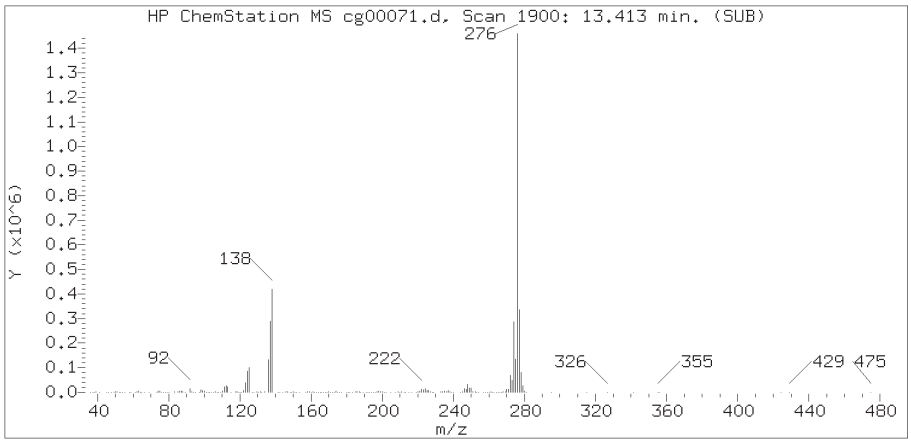
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

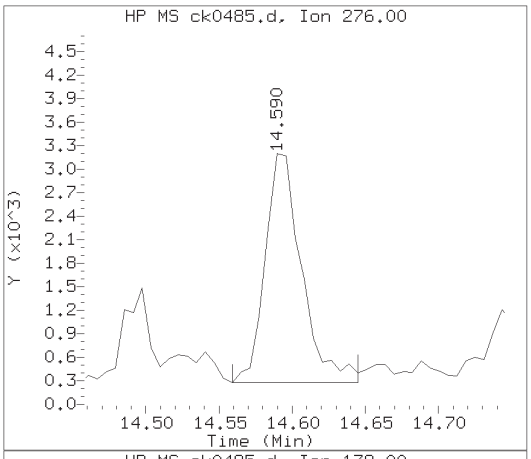
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1894
Retention Time (minutes)	: 13.526
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 5745
On-column Amount (ng/ul)	: 0.1723

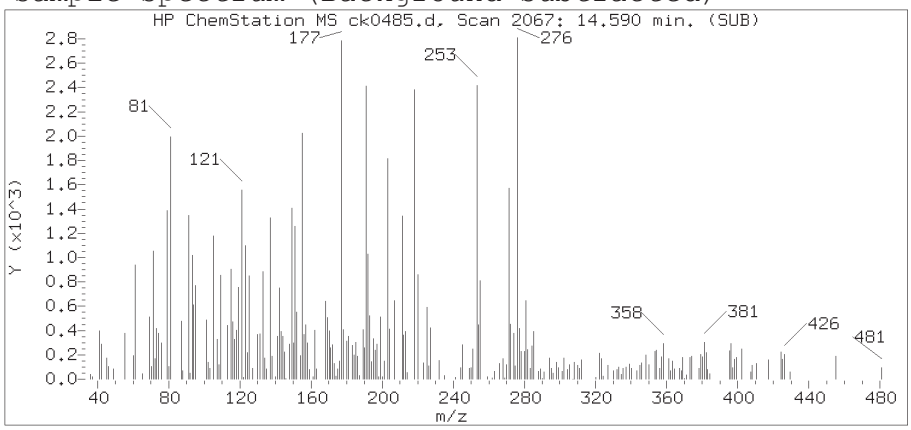
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature [illegible] mac00013

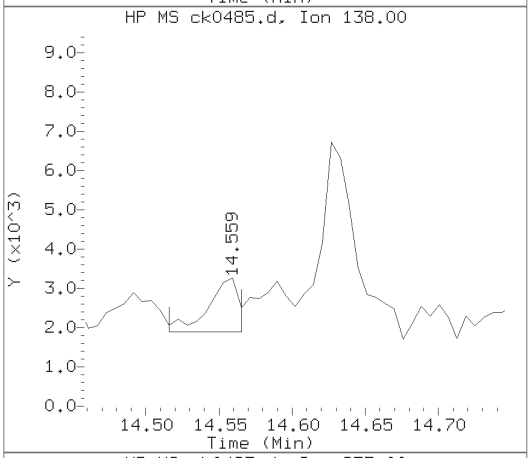
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



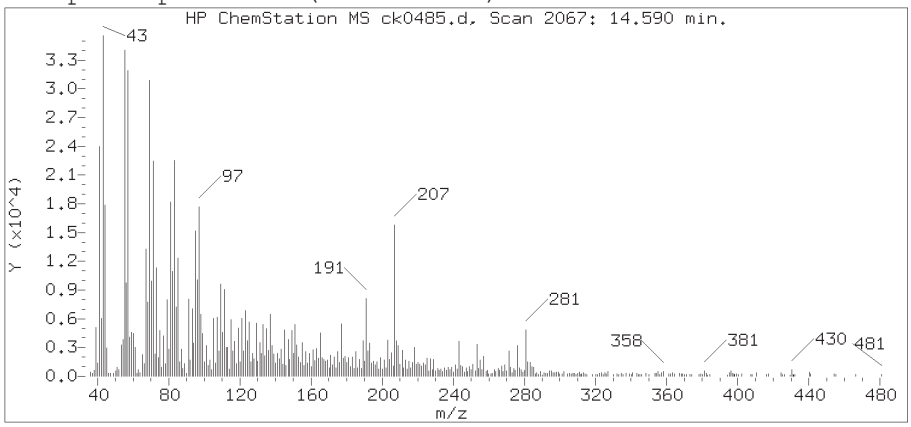


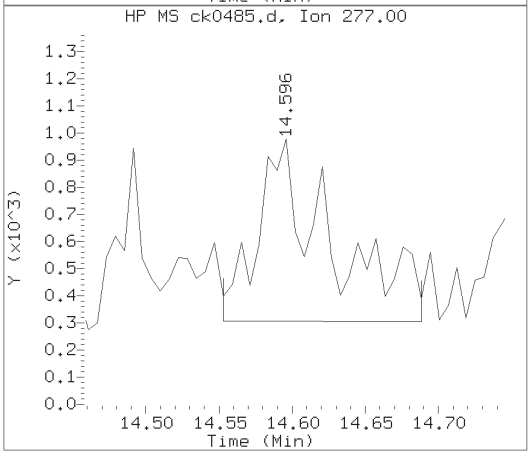
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

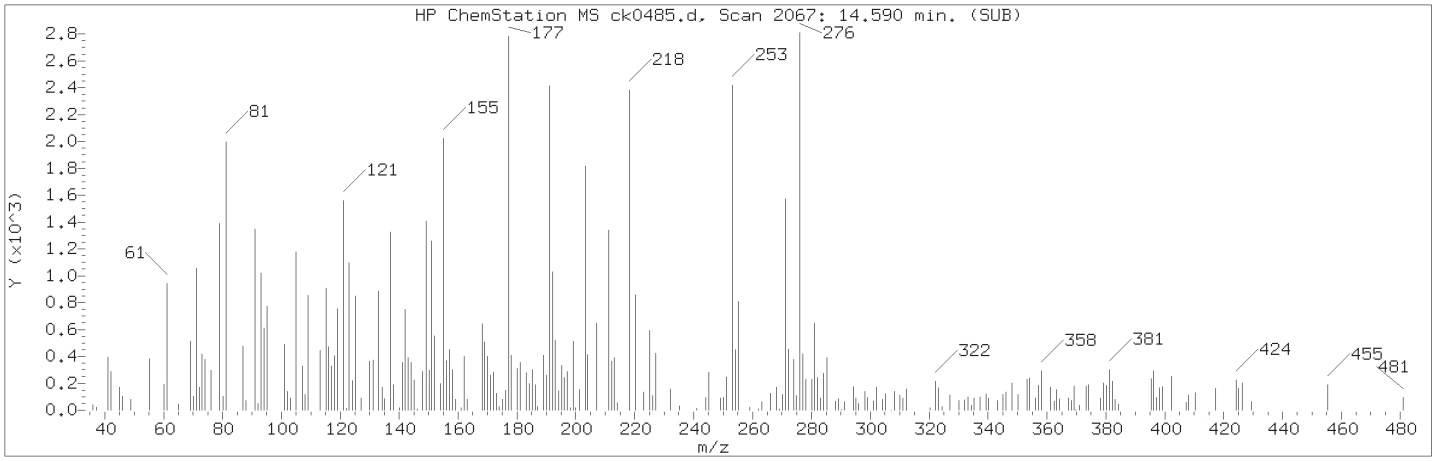
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

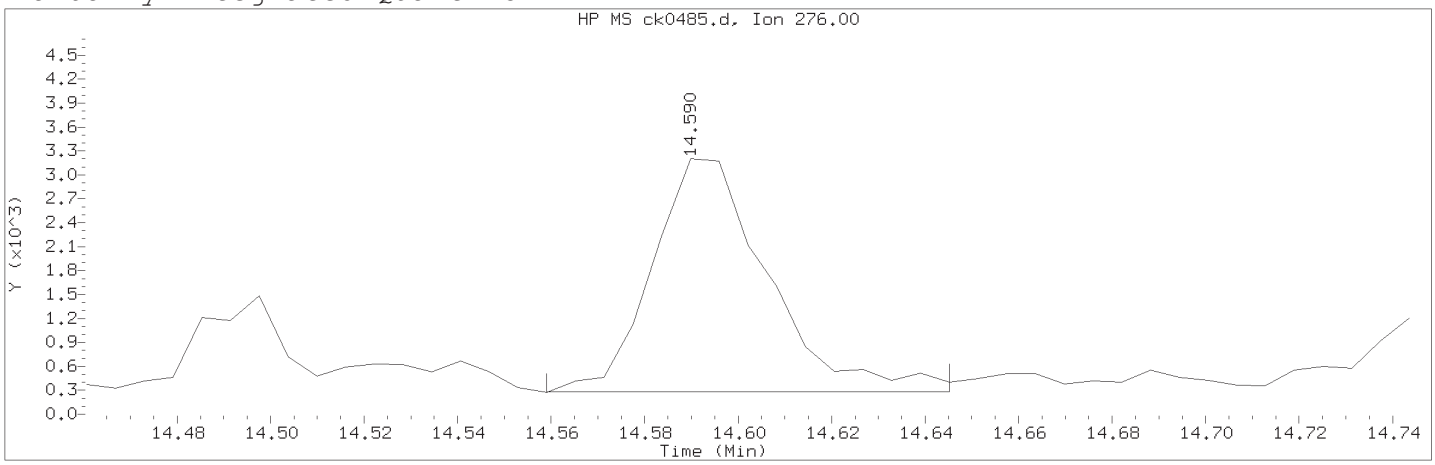
Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2067
Retention Time (minutes)	: 14.590
Relative Retention Time	: 0.00094
Quant Ion	: 276.00
Area (flag)	: 5063M
On-column Amount (ng/ul)	: 0.1427

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

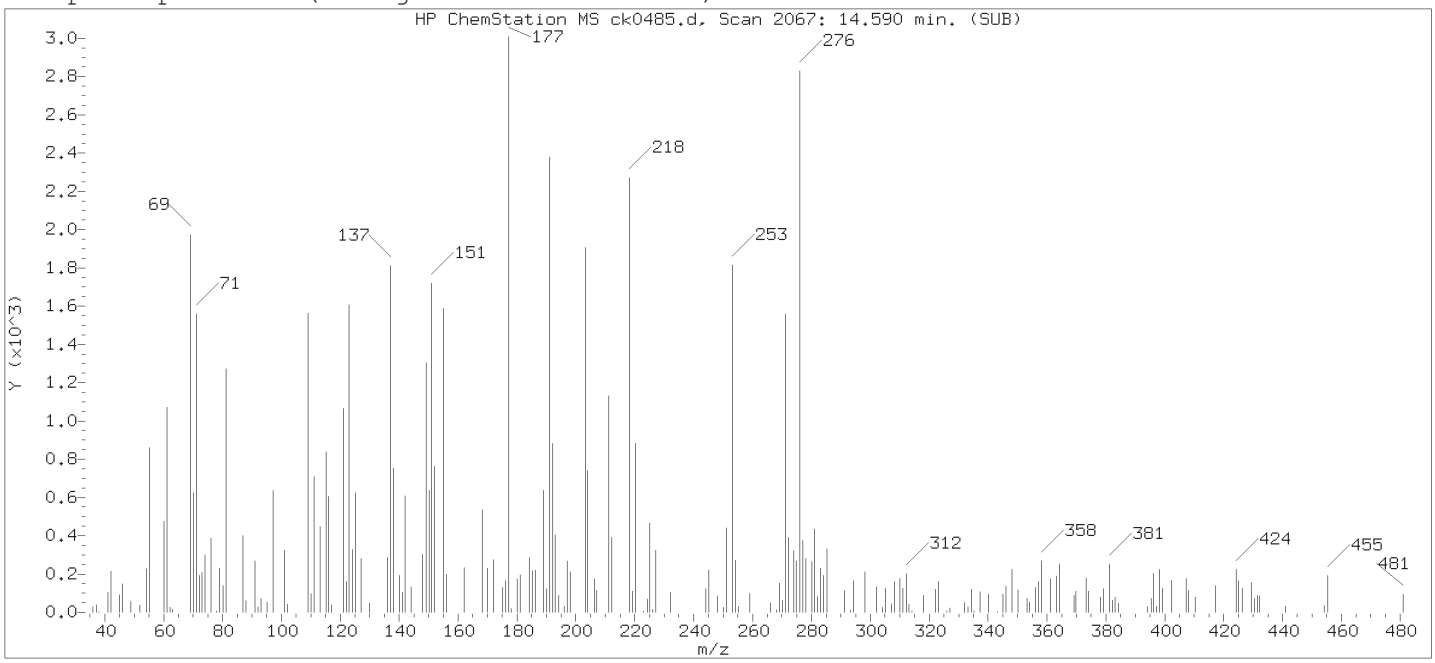
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2067
Retention Time (minutes) : 14.590
Quant Ion : 276.00
Area (flag) : 5063M
On-column Amount (ng/ul) : 0.1427
Integration start scan : 2061 Integration stop scan: 2075
Y at integration start : 278 Y at integration end: 278

Reason for manual integration: improper integration

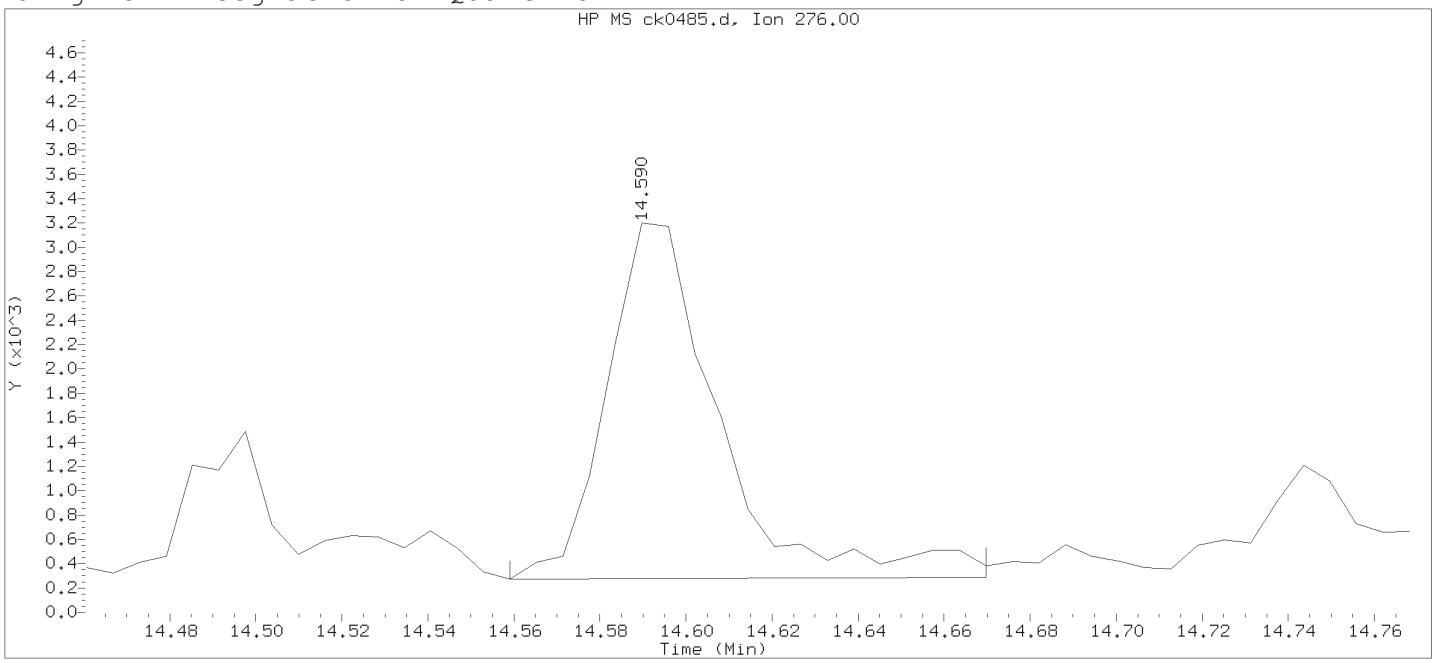
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

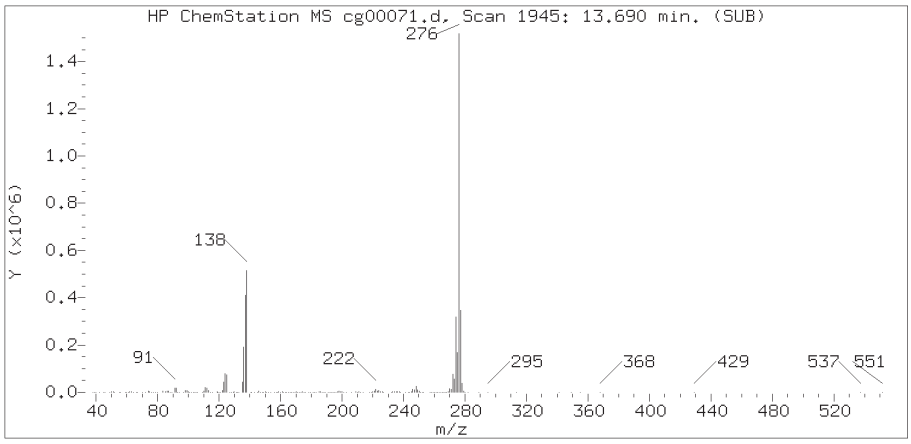
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:06 Automation

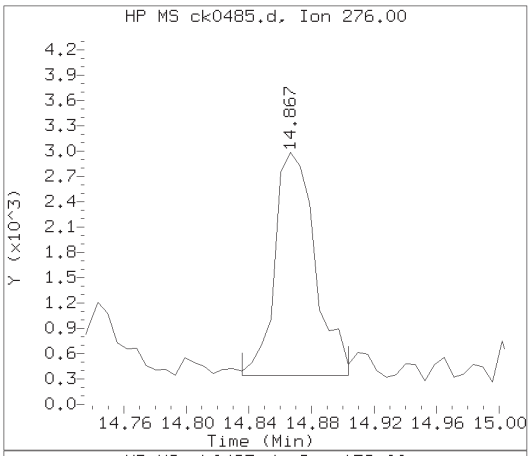
Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2067		
Retention Time (minutes)	: 14.590		
Quant Ion	: 276.00		
Area	: 5297		
On-column Amount (ng/ul)	: 0.1493		
Integration start scan	: 2061	Integration stop scan:	2079
Y at integration start	: 274	Y at integration end:	288

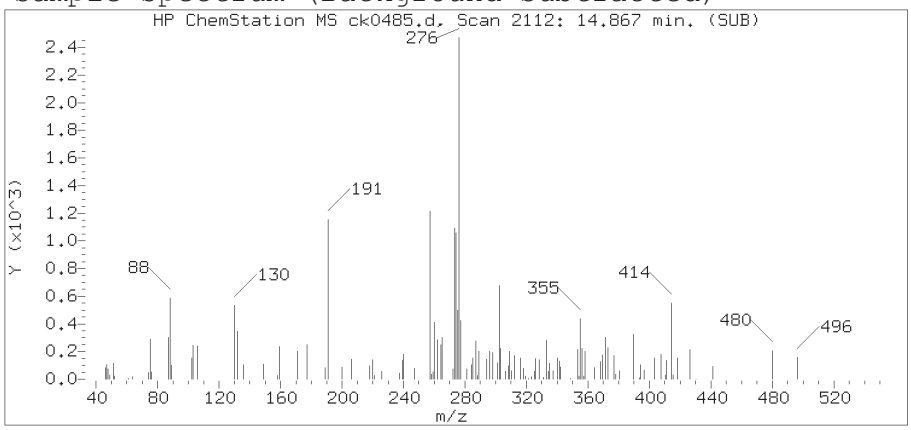
Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user: Mark A. Clark

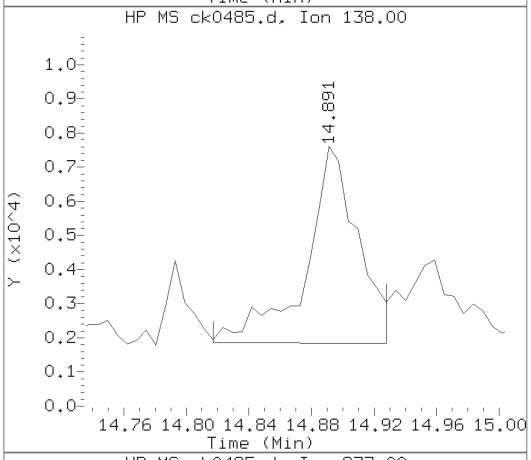
Reference Standard Spectrum for Benzo(g,h,i)perylene



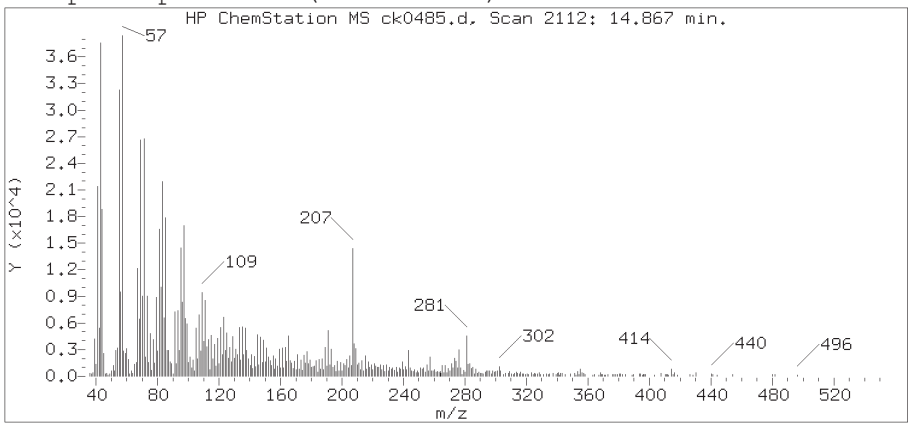


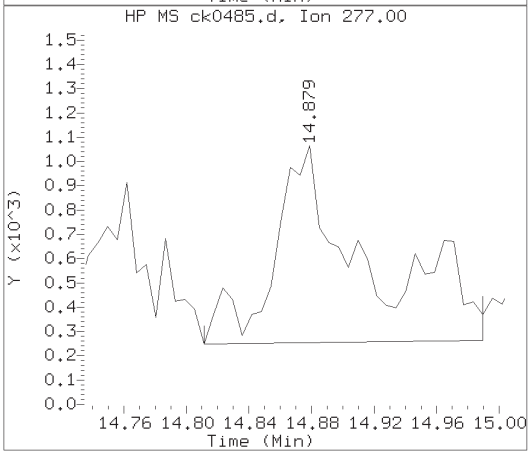
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

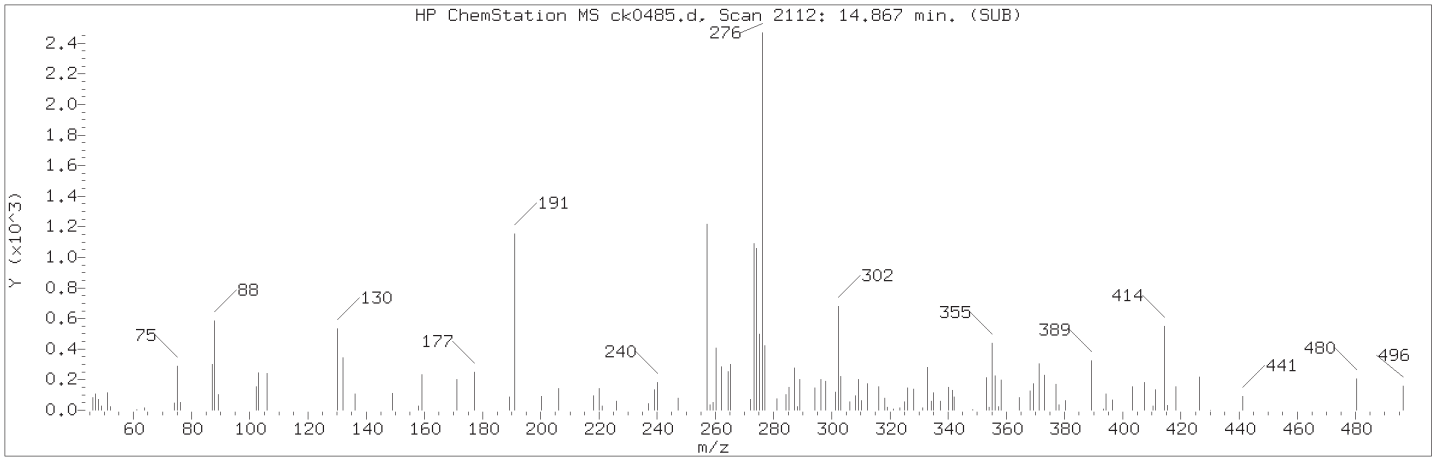
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

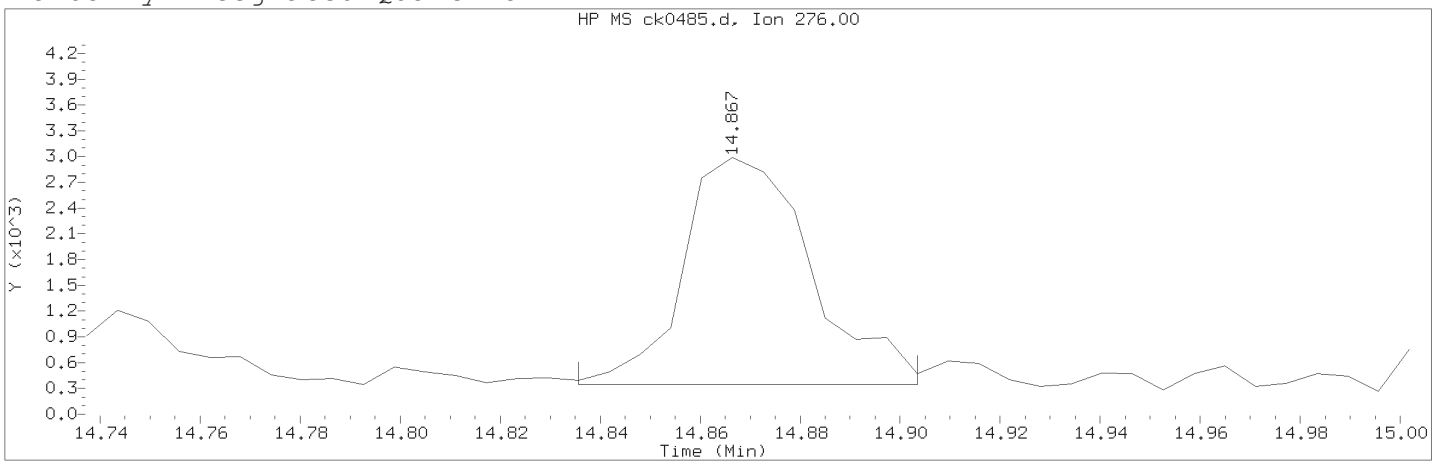
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2112
Retention Time (minutes)	: 14.867
Relative Retention Time	: 0.00095
Quant Ion	: 276.00
Area (flag)	: 4704M
On-column Amount (ng/ul)	: 0.1556

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:51 mac00013

Sample Name: OHERC Lab Sample ID: 7263055

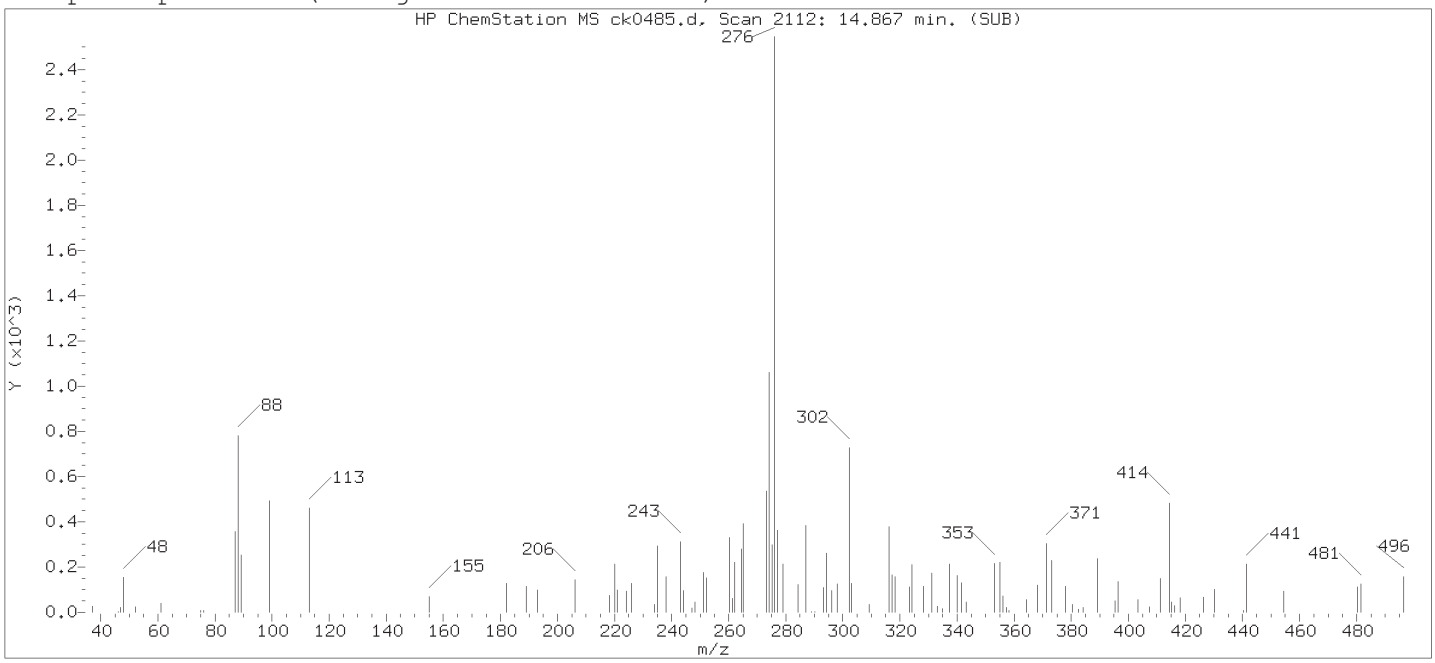
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Quant Ion : 276.00
Area (flag) : 4704M
On-column Amount (ng/ul) : 0.1556
Integration start scan : 2106 Integration stop scan: 2117
Y at integration start : 344 Y at integration end: 344

Reason for manual integration: improper integration

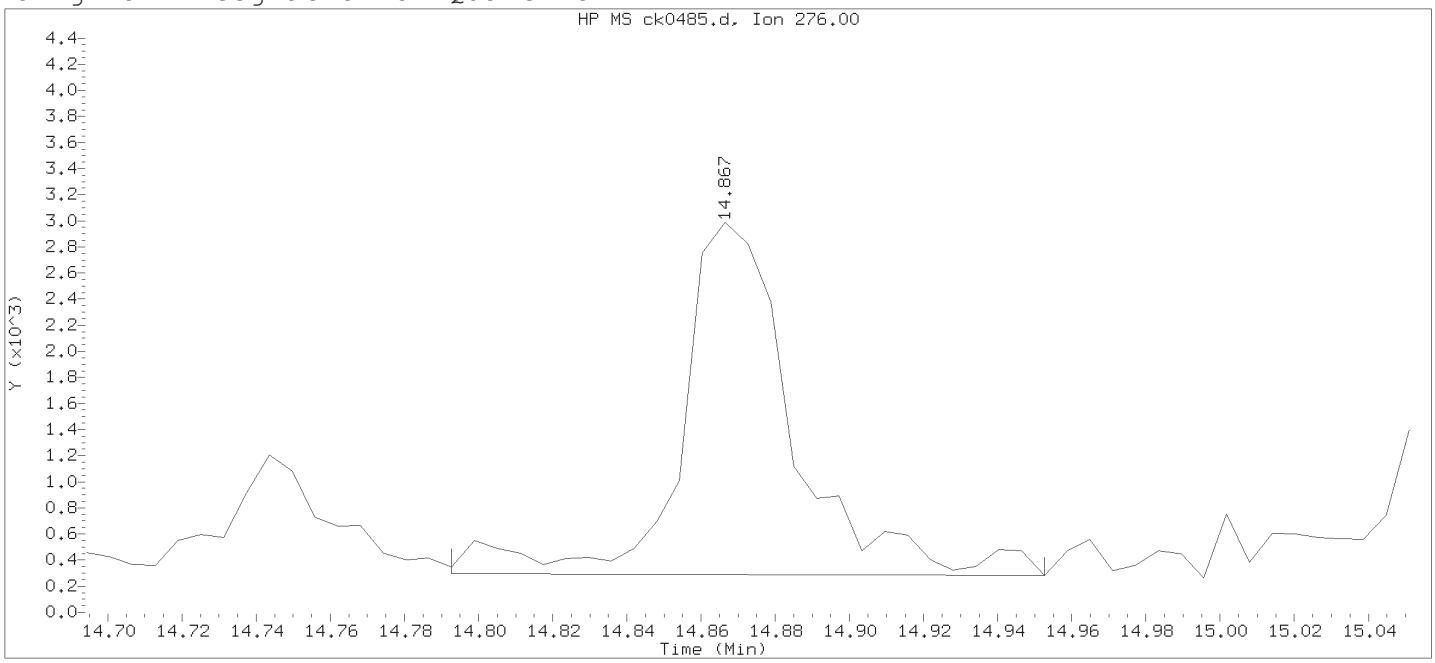
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0485.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 18:40 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:06 Automation

Sample Name: OHERC Lab Sample ID: 7263055

Compound Number	:	179
Compound Name	:	Benzo(g,h,i)perylene
Scan Number	:	2112
Retention Time (minutes)	:	14.867
Quant Ion	:	276.00
Area	:	5757
On-column Amount (ng/ul)	:	0.1905
Integration start scan	:	2099 Integration stop scan: 2125
Y at integration start	:	297 Y at integration end: 281

Digitally signed by Mark A. Clark on 11/14/2013 at 00:20.
Target 3.5 esignature user ID: mac00013

DDHER

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263056

Data file: /chem/HP18831.i/13nov08.b/hk0265.d
Data file Sample Info. Line: DDHER;7263056;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 09-Nov-2013 05:18 jmg00346

Injection date and time: **08-NOV-2013 12:22**
Instrument ID: **HP18831.i** Batch: **13310WAG**

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745(0.006)	782	152	71870 (-30)	5.00	
48) Naphthalene-d8	8.680(0.000)	1114	136	277225 (-30)	5.00	
83) Acenaphthene-d10	11.466(0.006)	1592	164	169712 (-33)	5.00	
120) Phenanthrene-d10	13.354(0.006)	1916	188	290986 (-34)	5.00	
134) Pyrene-d10	15.307(0.006)	2251	212	355295 (-36)	5.00	
158) Perylene-d12	19.766(0.006)	3016	264	274643 (-35)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874(-0.001)	112	658147	32.977	66%		10 - 107
13) Phenol-d6	(1)	6.244(-0.001)	99	621093	22.627	45%		10 - 83
36) Nitrobenzene-d5	(2)	7.578(0.001)	82	515855	19.929	80%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.423(0.000)	172	917773	22.091	88%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515(-0.001)	330	209197	48.514	97%		22 - 150
137) Terphenyl-d14	(5)	15.622(0.000)	244	1213253	25.724	103%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
18) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) 4-Methylphenol	(1)			Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
39) Isophorone	(2)			Not Detected					0.1
40) 2-Nitrophenol	(2)			Not Detected					0.1
41) 2,4-Dimethylphenol	(2)			Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
46) 2,4-Dichlorophenol	(2)			Not Detected					0.1
49) Naphthalene	(2)			Not Detected					0.03
50) 4-Chloroaniline	(2)			Not Detected					0.1
53) Hexachlorobutadiene	(2)			Not Detected					0.1
55) Caprolactam	(2)			Not Detected					1
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:34. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/13nov08.b/hk0265.d Injection date and time: **08-NOV-2013 12:22**
Data file Sample Info. Line: DDHER;7263056;1;0;SAMPLE;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 09-Nov-2013 05:18 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

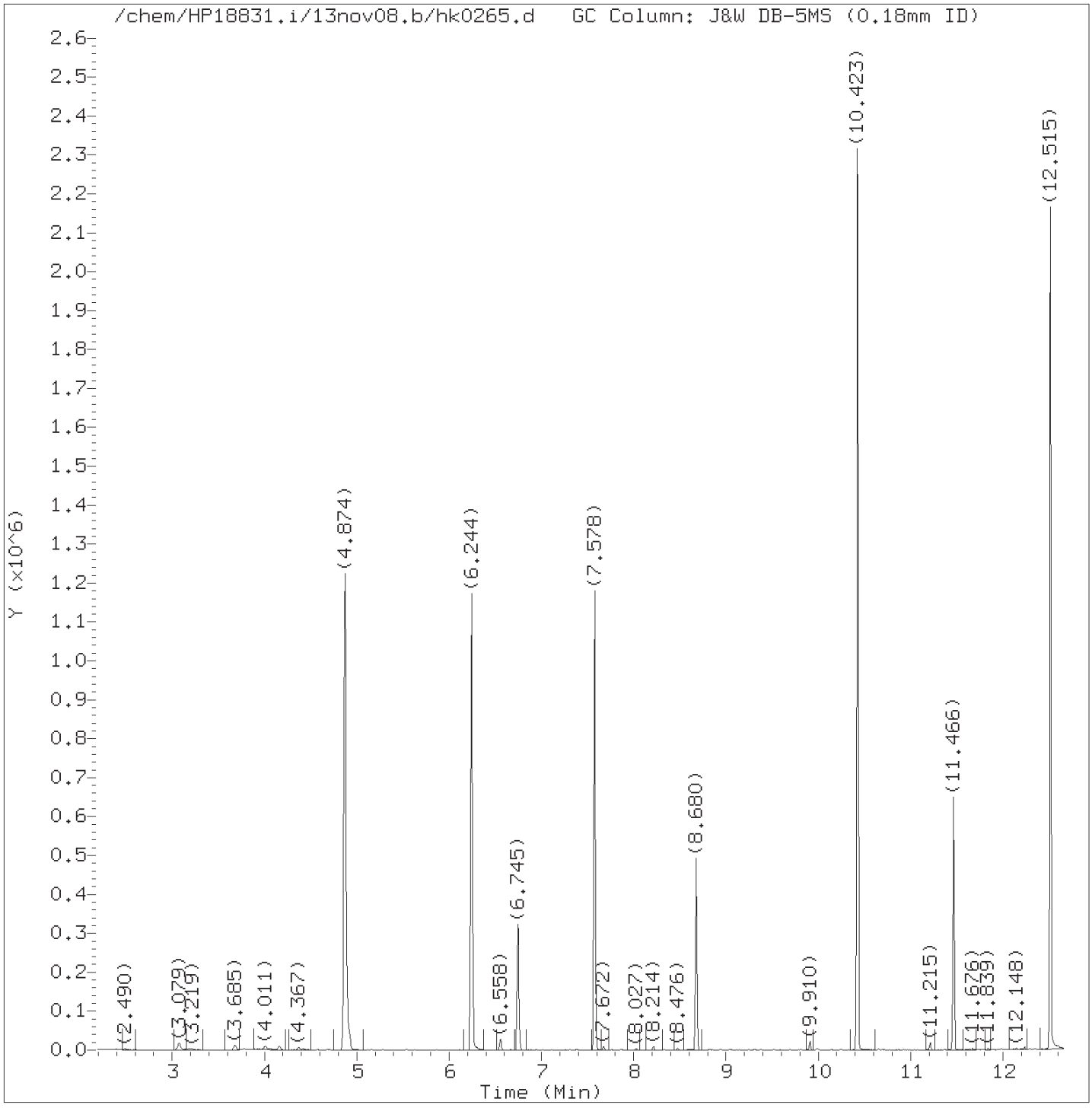
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:34. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

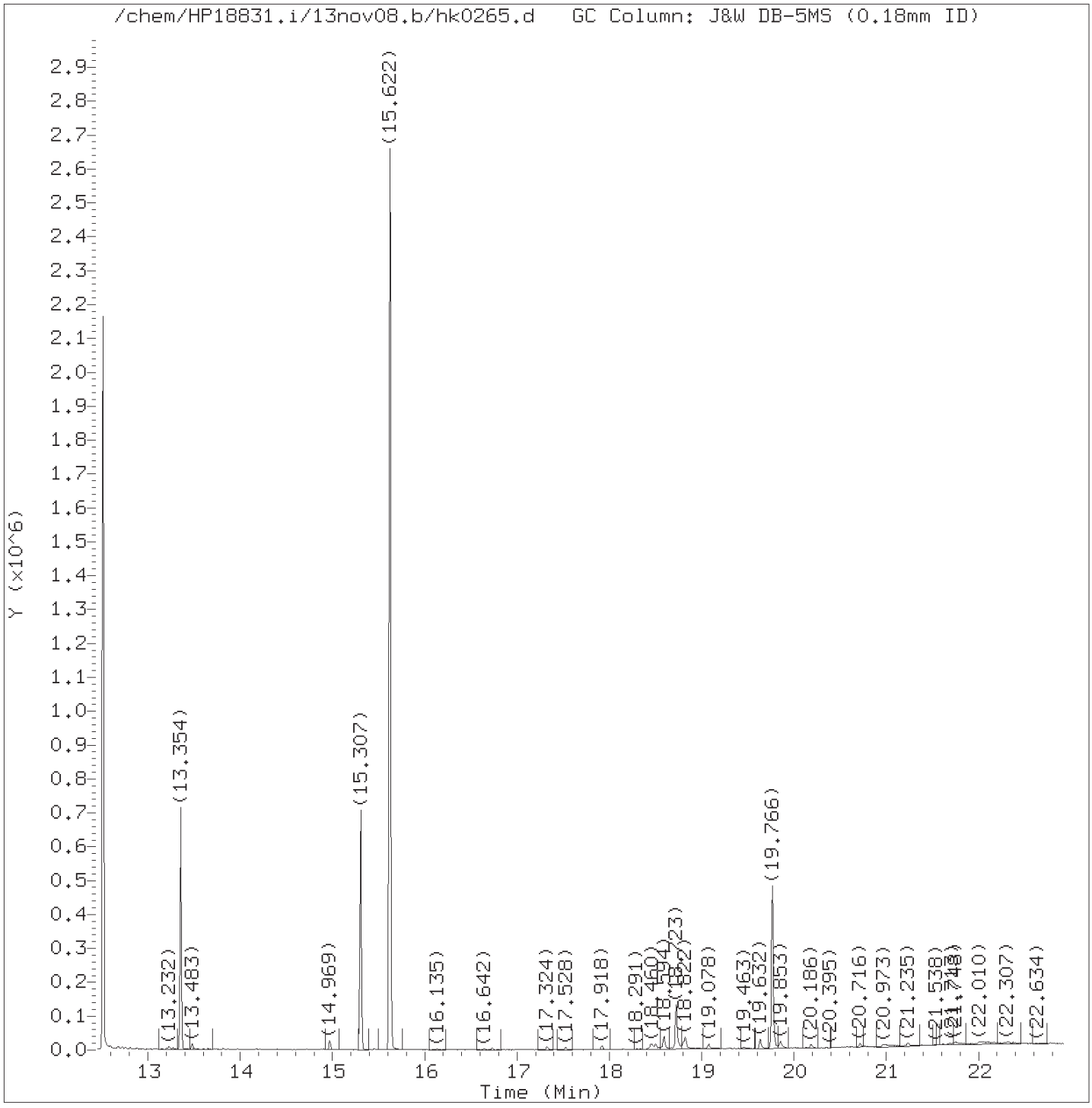
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:18 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:18 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:18 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	658147	32.977
13)$Phenol-d6	(1)	6.244	99	621093	22.627
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	71870	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	515855	19.929
48)*Naphthalene-d8	(2)	8.680	136	277225	5.000
68)$2-Fluorobiphenyl	(3)	10.423	172	917773	22.091
83)*Acenaphthene-d10	(3)	11.466	164	169712	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	209197	48.514
120)*Phenanthrene-d10	(4)	13.354	188	290986	5.000
134)*Pyrene-d10	(5)	15.307	212	355295	5.000
137)$Terphenyl-d14	(5)	15.622	244	1213253	25.724
158)*Perylene-d12	(6)	19.766	264	274643	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:34.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

DDHER

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7263056

Sample wt/vol: 249 (g/mL) mL Lab File ID: hk0265.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

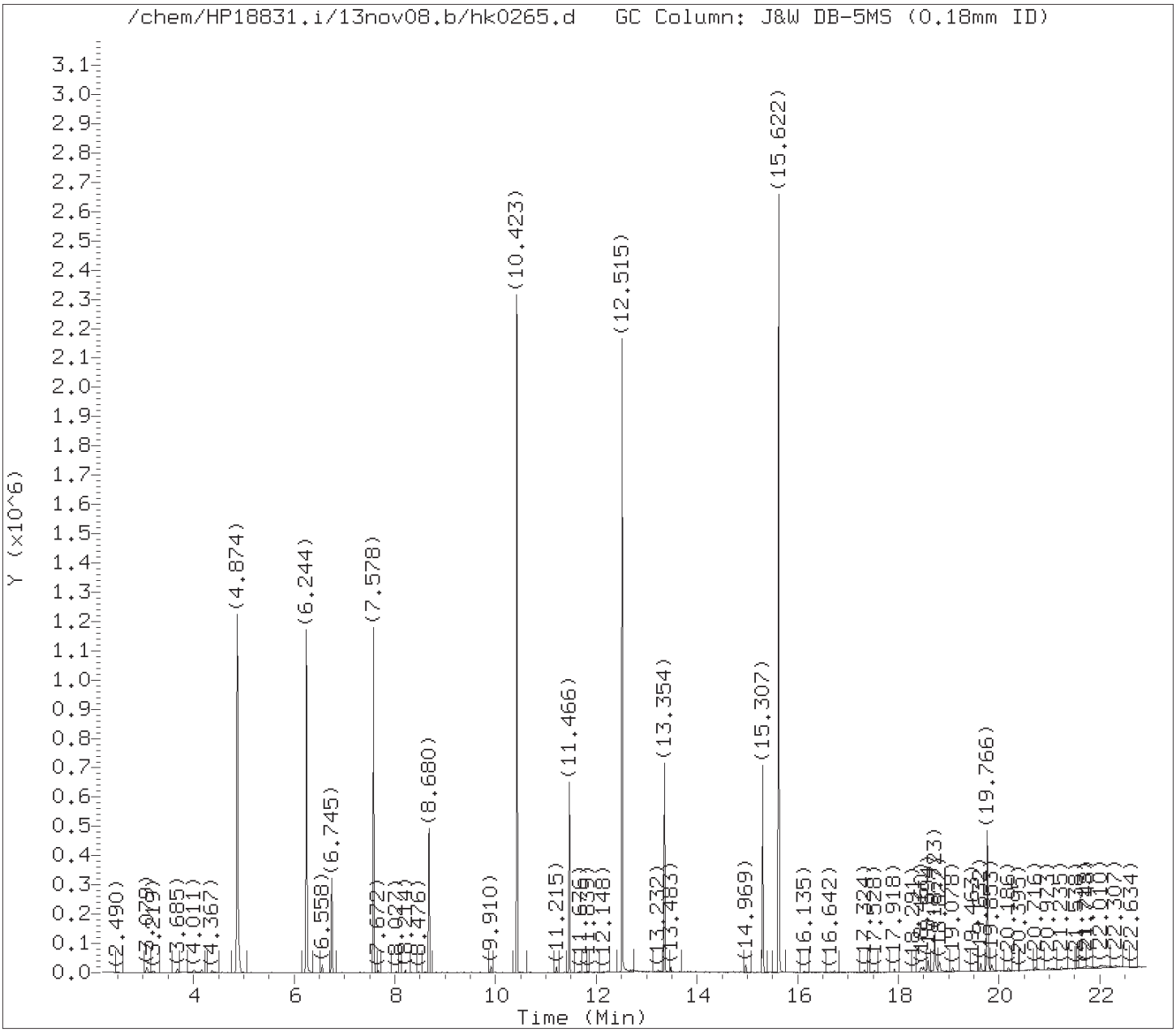
Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.723	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

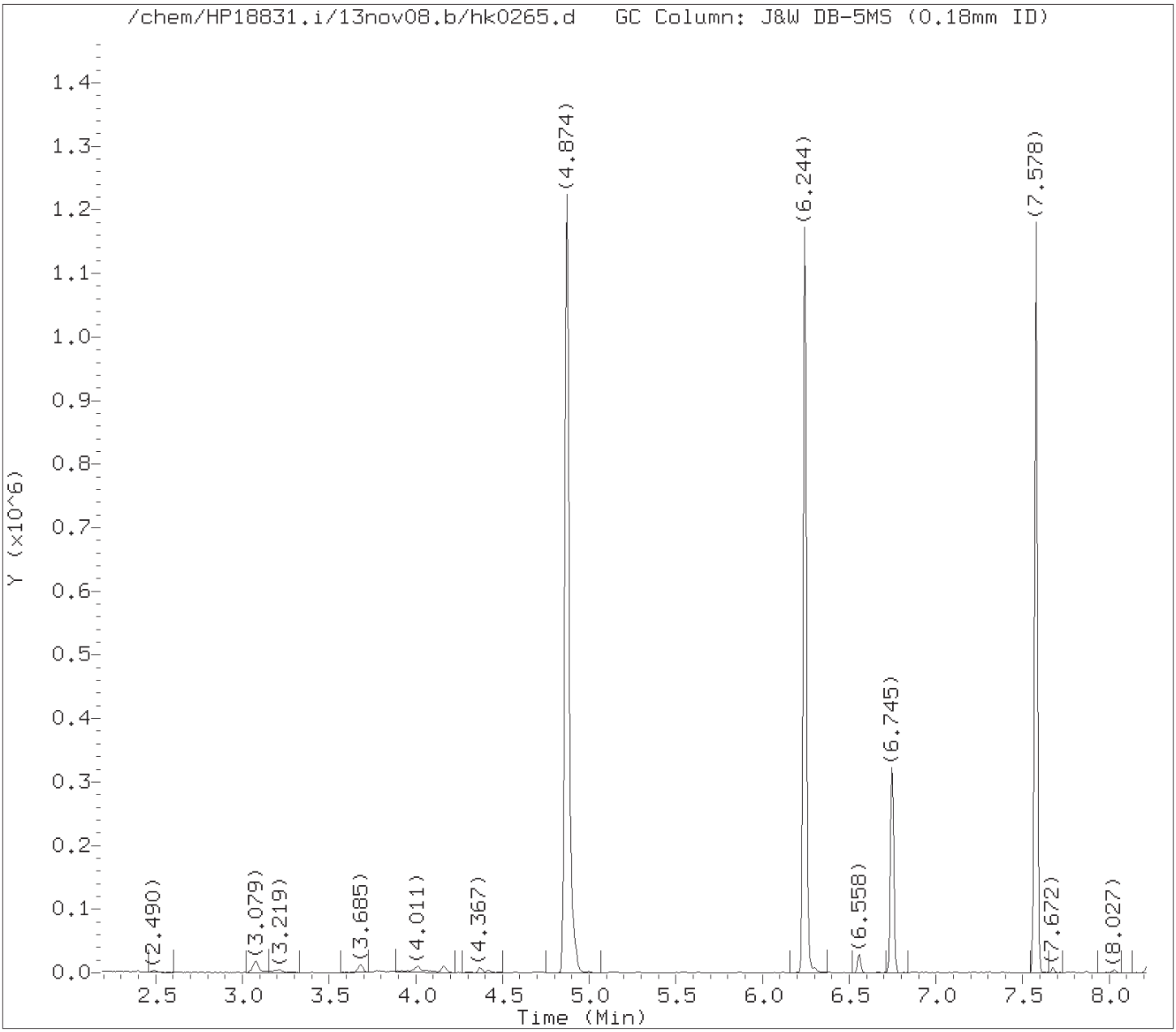
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

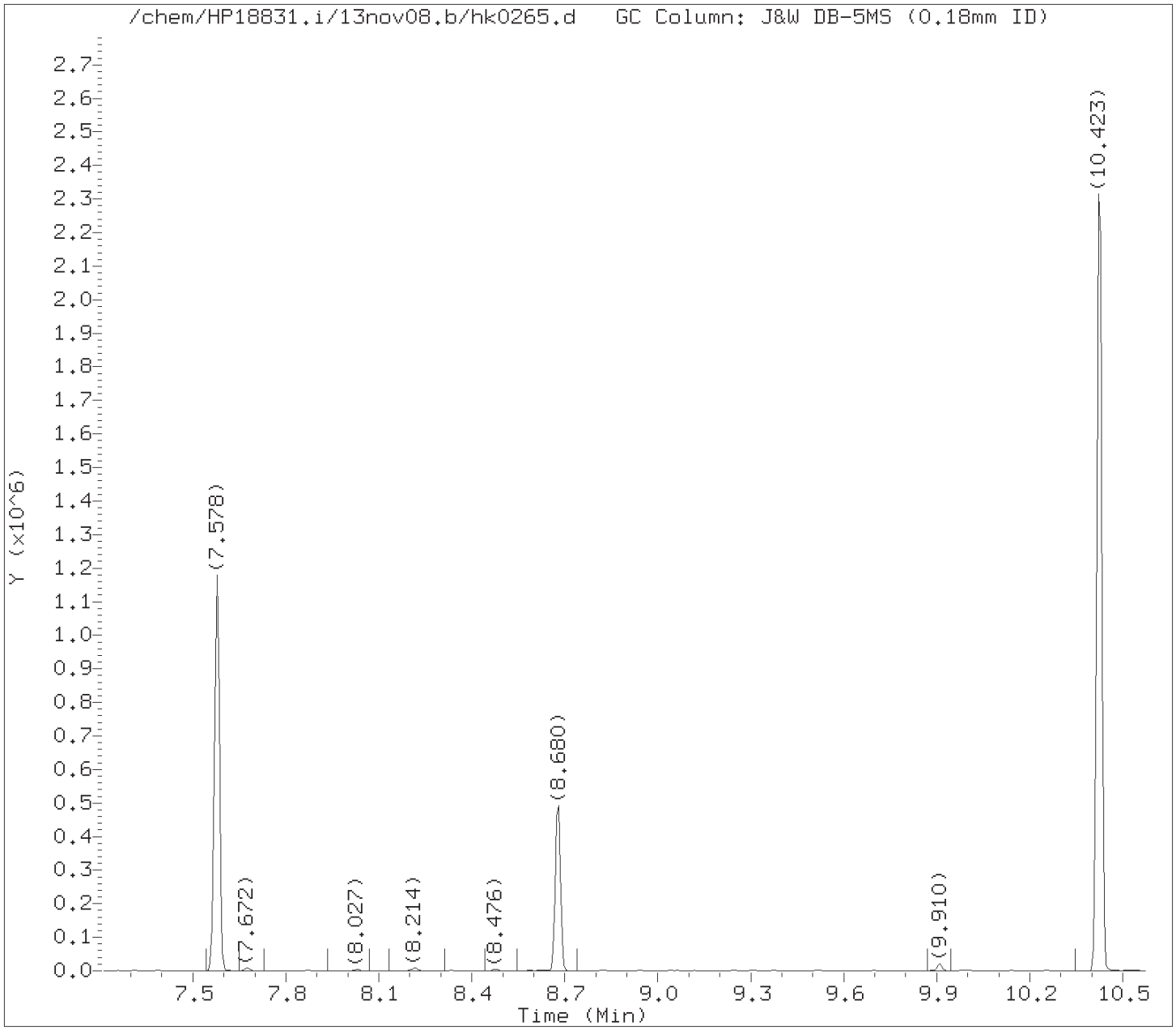
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

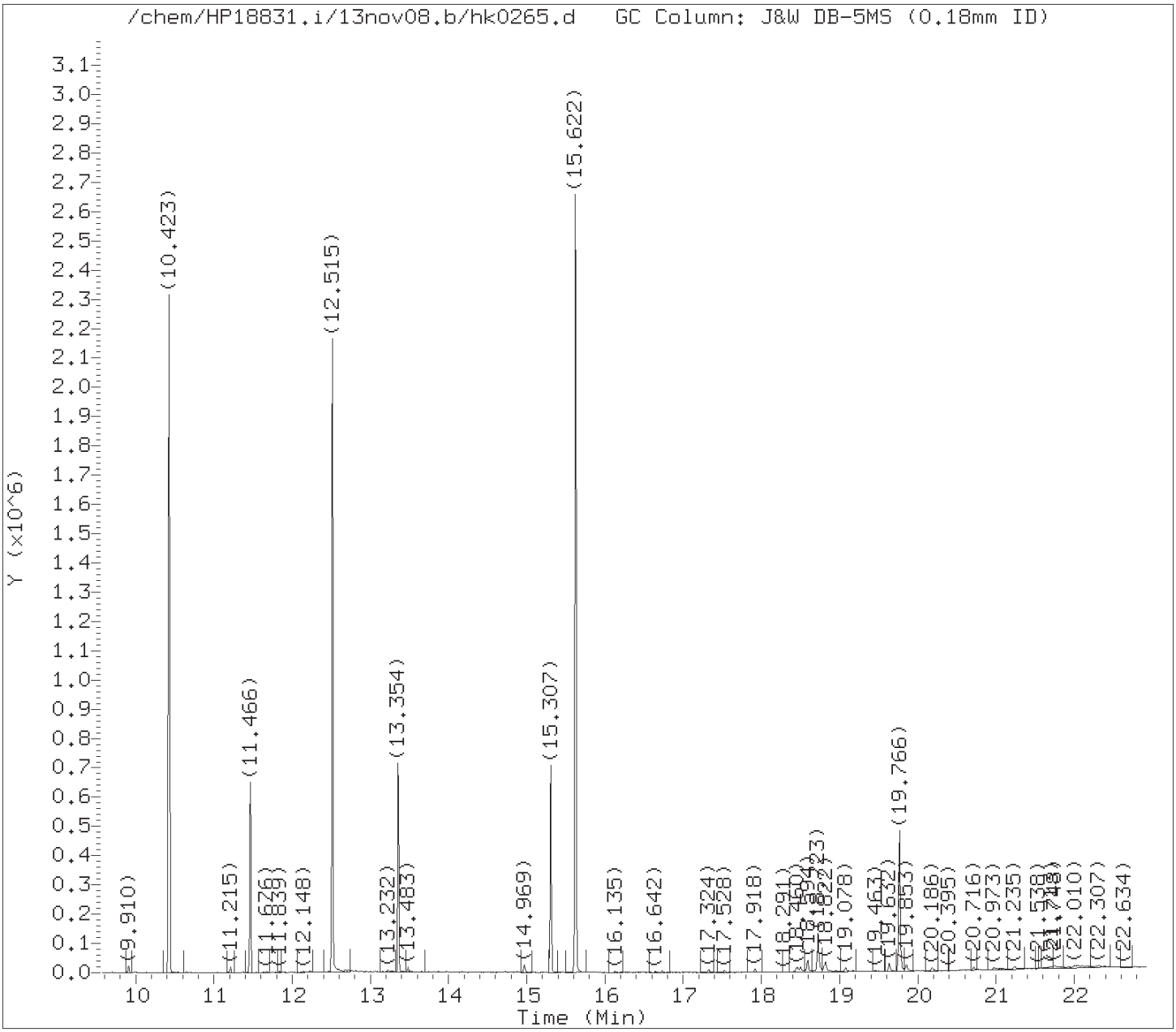
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

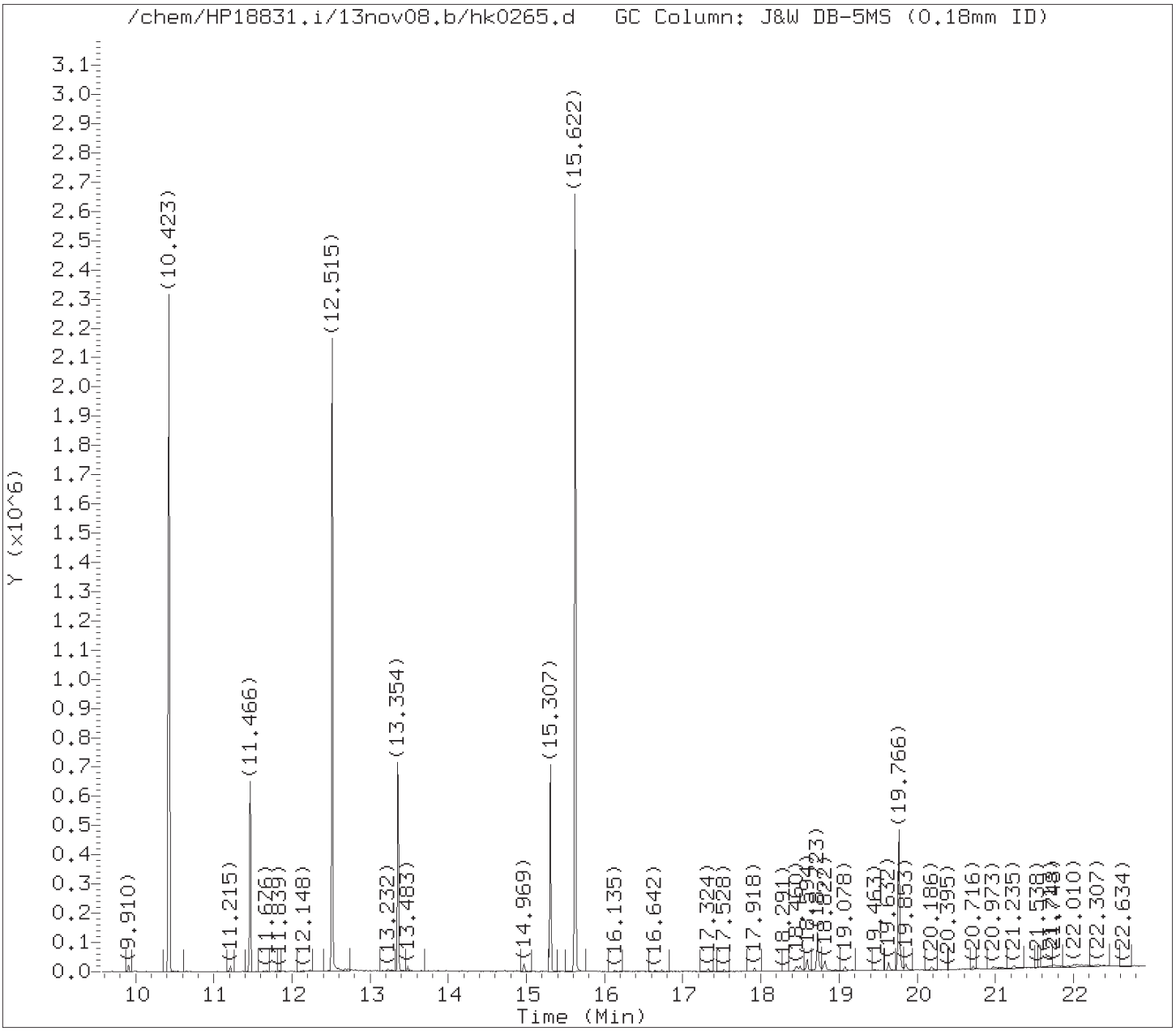
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

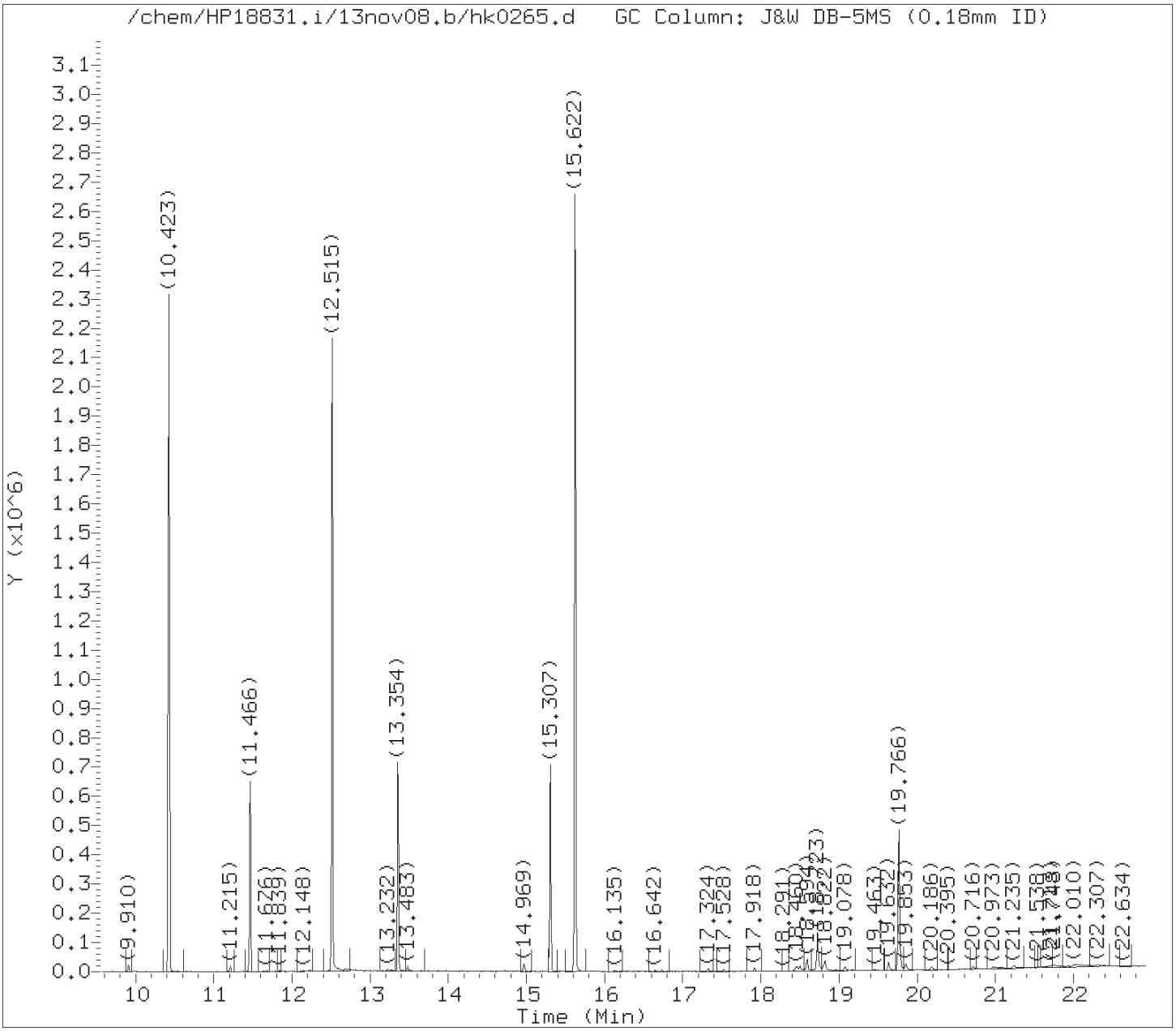
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: Phenanthrene-d10 at 13.354 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

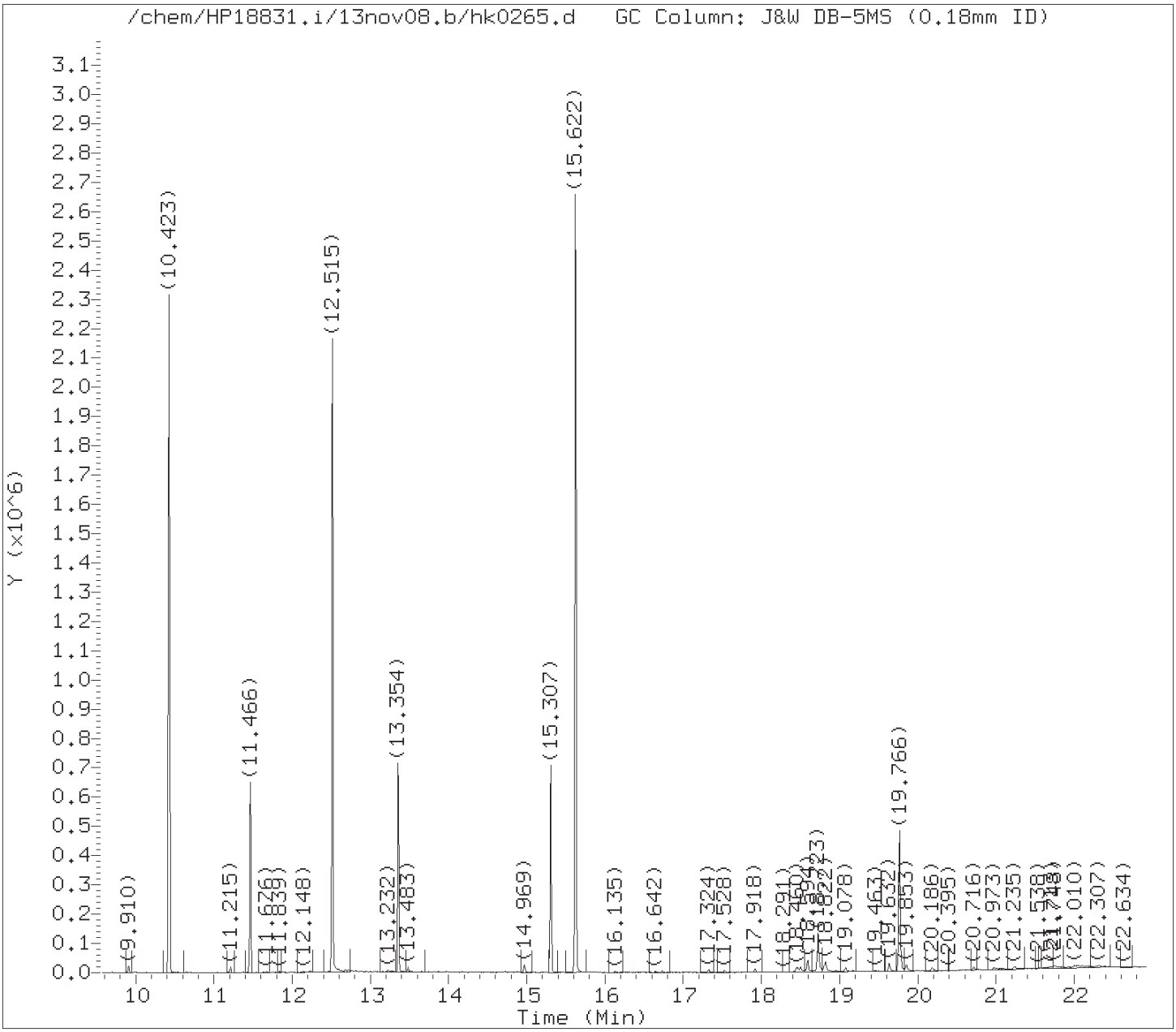
Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.537

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0265.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:22 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:22 jmg00346

Sample Name: DDHER Lab Sample ID: 7263056

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.537
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0265.d
Lab Smp Id: 7263056 Client Smp ID: DDHER
Inj Date : 08-NOV-2013 12:22
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : DDHER;7263056;1;0;SAMPLE;;;
Misc Info : 13310WAG;newall1;;249;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 1 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	249.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 158 Perylene-d12	19.766	719305	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
18.723	235429	1.63650261	6.57229	0		0	158

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0265.d

Date : 08-NOV-2013 12:22

Client ID: DDHER

Instrument: HP18831.i

Sample Info: DDHER;7263056;1;0;SAMPLE;;;

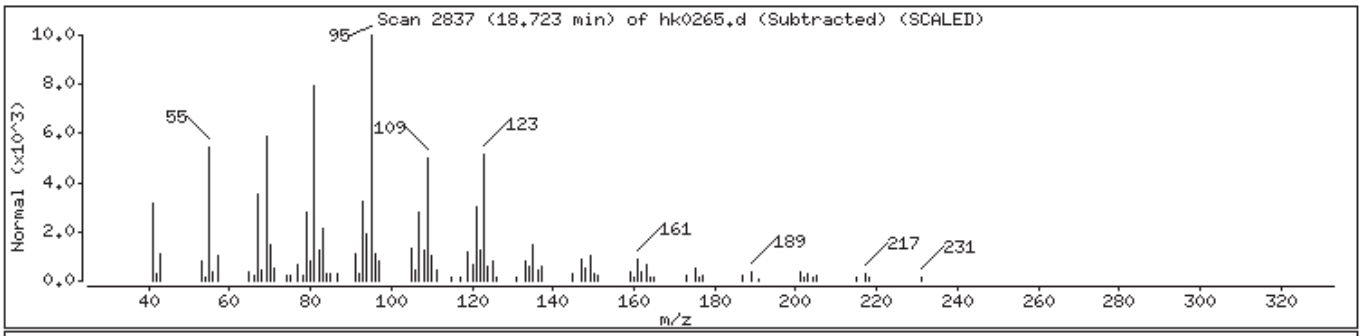
Volume Injected (uL): 0.5

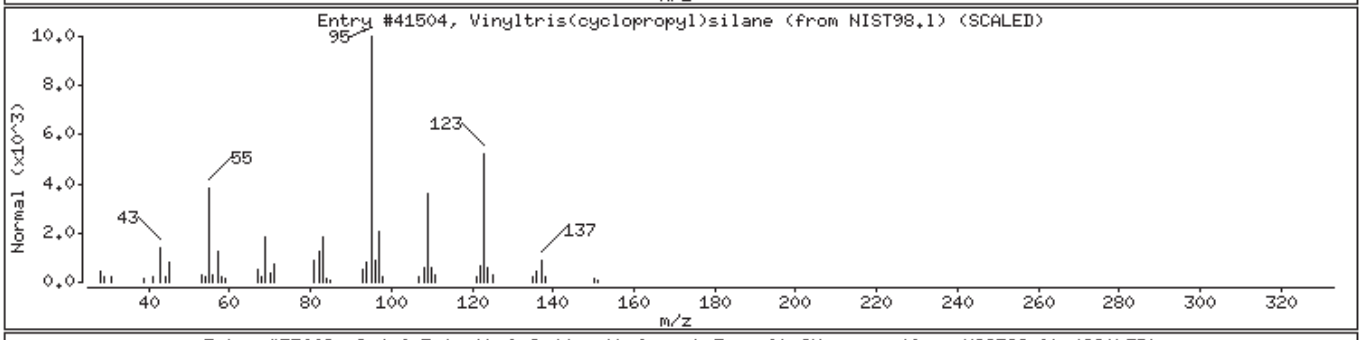
Operator: jmg00346

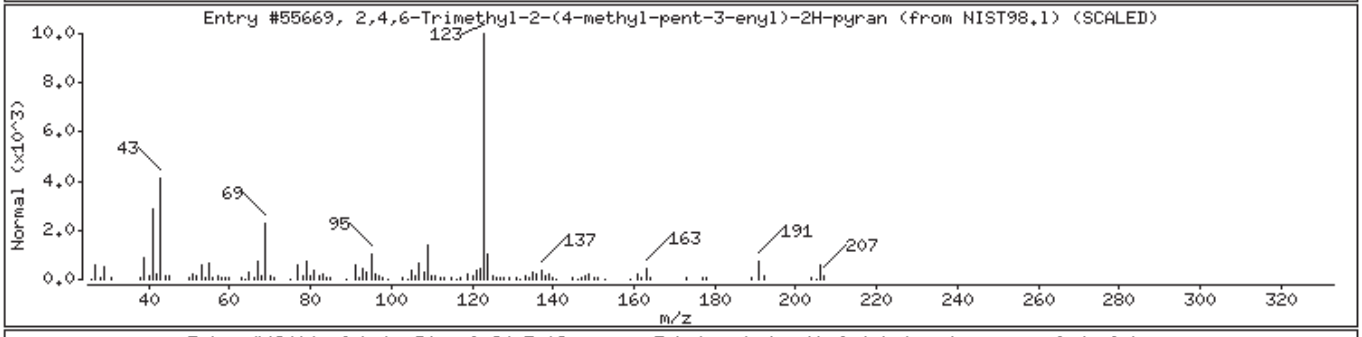
Column phase: J&W DB-5MS

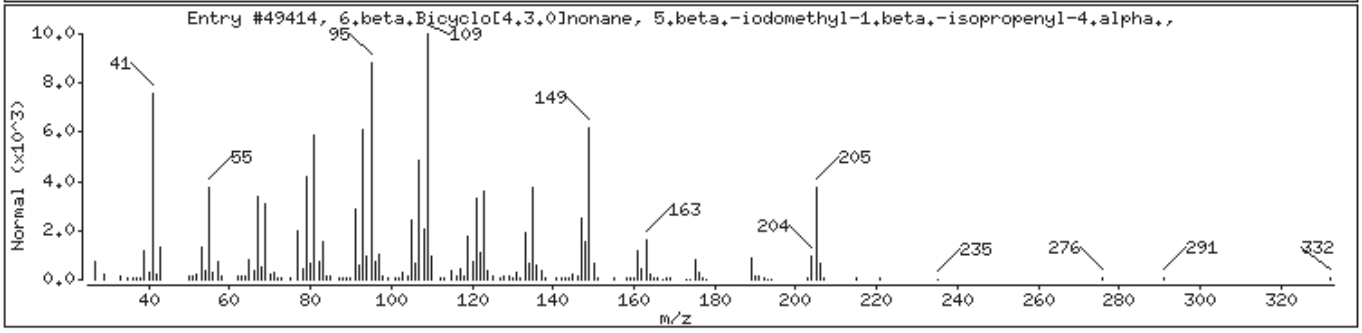
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Vinyltris(cyclopropyl)silane	1000109-97-3	NIST98.1	41504	43	C11H18Si	178
2,4,6-Trimethyl-2-(4-methyl-pent-3-enyl)	1000193-58-6	NIST98.1	55669	43	C14H22O	206
6.beta.Bicyclo[4.3.0]nonane, 5.beta.-iod	1000195-85-9	NIST98.1	49414	35	C15H25I	332









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Target 3.5 esignature user ID: jmg00346

EEHER

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263057

Data file: /chem/HP18831.i/13nov08.b/hk0266.d
Data file Sample Info. Line: EEHER;7263057;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 09-Nov-2013 05:19 jmg00346

Injection date and time: **08-NOV-2013 12:51**
Instrument ID: **HP18831.i** Batch: **13310WAG**

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745(0.006)	782	152	70937 (-30)	5.00	
48) Naphthalene-d8	8.680(0.000)	1114	136	274573 (-31)	5.00	
83) Acenaphthene-d10	11.466(0.006)	1592	164	168234 (-33)	5.00	
120) Phenanthrene-d10	13.354(0.006)	1916	188	288404 (-34)	5.00	
134) Pyrene-d10	15.307(0.006)	2251	212	357031 (-35)	5.00	
158) Perylene-d12	19.766(0.006)	3016	264	271457 (-36)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874(-0.001)	112	663337	33.674	67%		10 - 107
13) Phenol-d6	(1)	6.243(-0.001)	99	642379	23.711	47%		10 - 83
36) Nitrobenzene-d5	(2)	7.578(0.001)	82	533007	20.790	83%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.428(0.000)	172	952450	23.127	93%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515(-0.001)	330	206243	48.249	96%		22 - 150
137) Terphenyl-d14	(5)	15.622(0.000)	244	1233821	26.033	104%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
18) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) 4-Methylphenol	(1)			Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
39) Isophorone	(2)			Not Detected					0.1
40) 2-Nitrophenol	(2)			Not Detected					0.1
41) 2,4-Dimethylphenol	(2)			Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
46) 2,4-Dichlorophenol	(2)			Not Detected					0.1
49) Naphthalene	(2)			Not Detected					0.03
50) 4-Chloroaniline	(2)			Not Detected					0.1
53) Hexachlorobutadiene	(2)			Not Detected					0.1
55) Caprolactam	(2)			Not Detected					1
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/13nov08.b/hk0266.d Injection date and time: **08-NOV-2013 12:51**
Data file Sample Info. Line: EEHER;7263057;1;0;SAMPLE;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 09-Nov-2013 05:19 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

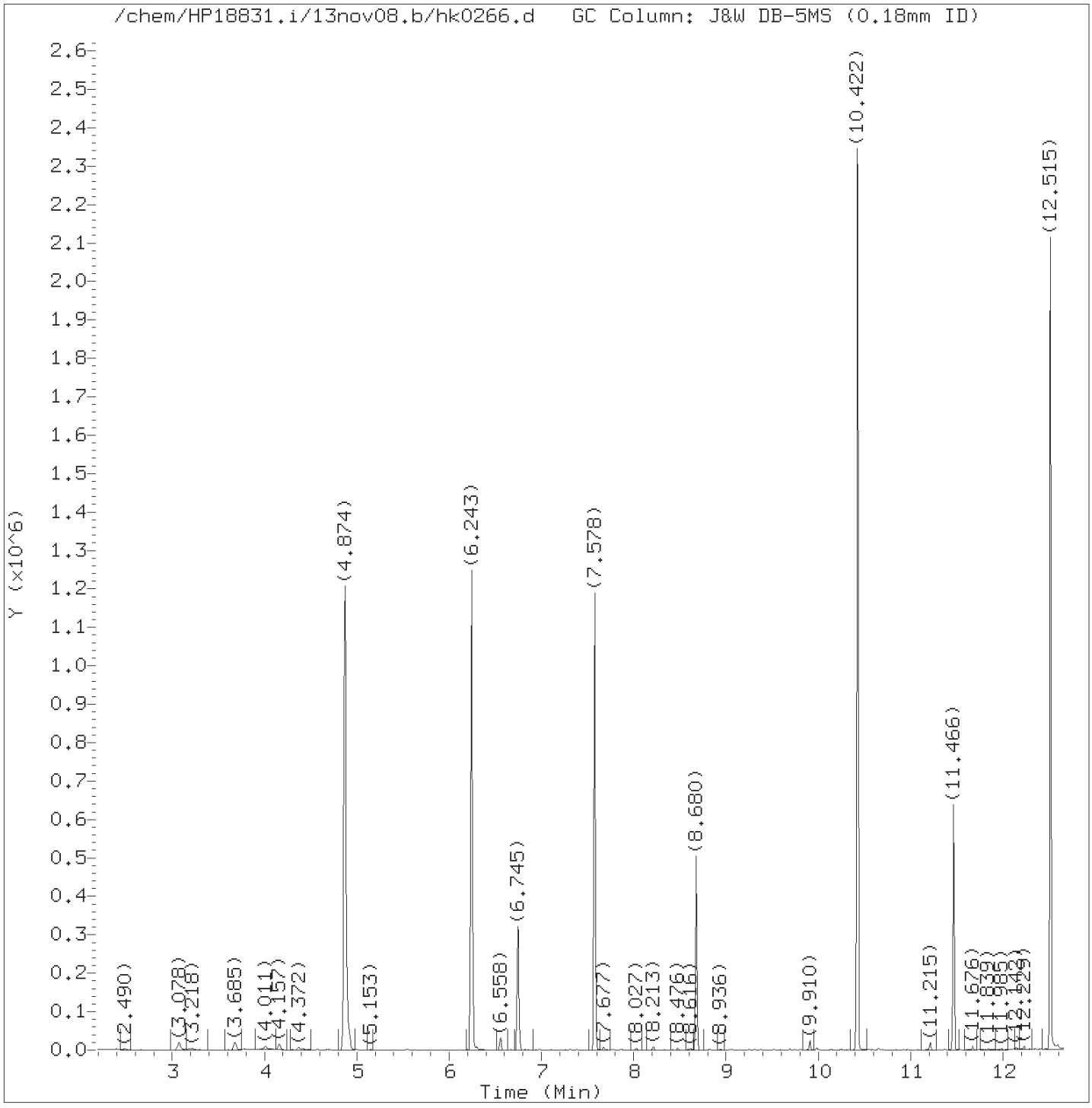
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

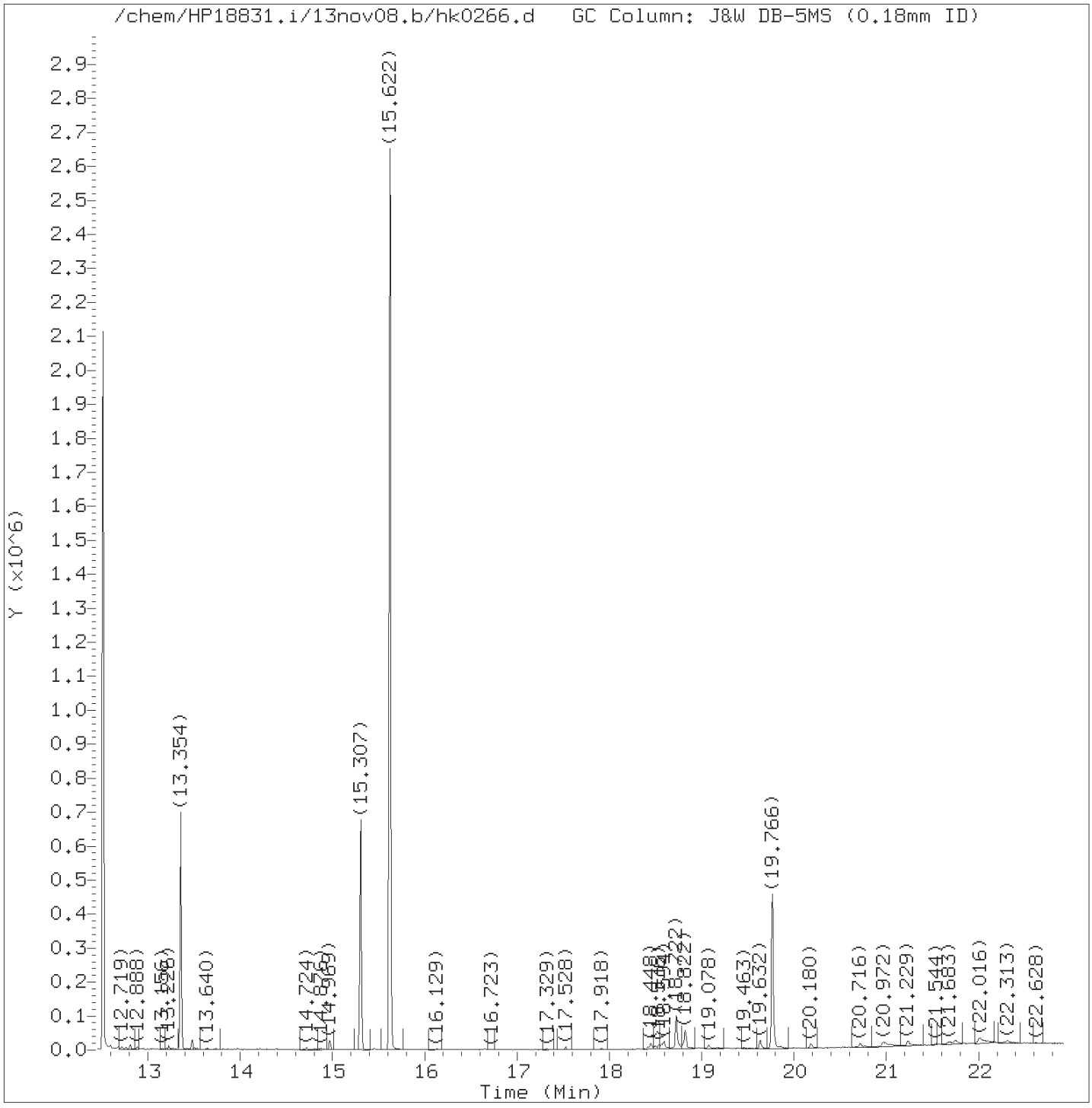
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:19 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:19 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:19 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	663337	33.674
13)$Phenol-d6	(1)	6.243	99	642379	23.711
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	70937	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	533007	20.790
48)*Naphthalene-d8	(2)	8.680	136	274573	5.000
68)$2-Fluorobiphenyl	(3)	10.428	172	952450	23.127
83)*Acenaphthene-d10	(3)	11.466	164	168234	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	206243	48.249
120)*Phenanthrene-d10	(4)	13.354	188	288404	5.000
134)*Pyrene-d10	(5)	15.307	212	357031	5.000
137)$Terphenyl-d14	(5)	15.622	244	1233821	26.033
158)*Perylene-d12	(6)	19.766	264	271457	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

EEHER

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7263057

Sample wt/vol: 244 (g/mL) mL Lab File ID: hk0266.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	18.722	5	J
2.					
3.	SVOCTIC	Total SVOC TICs		5	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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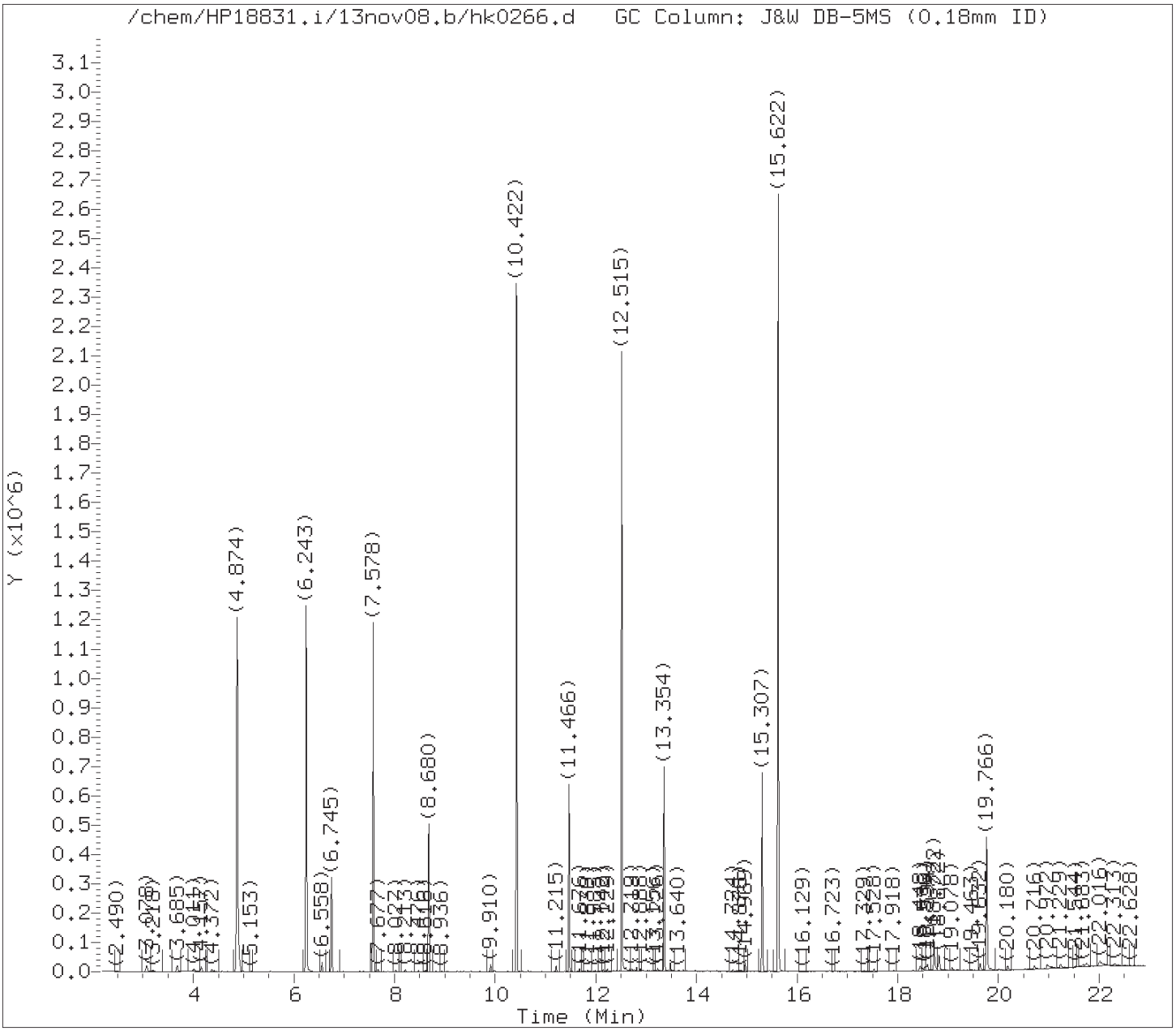
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

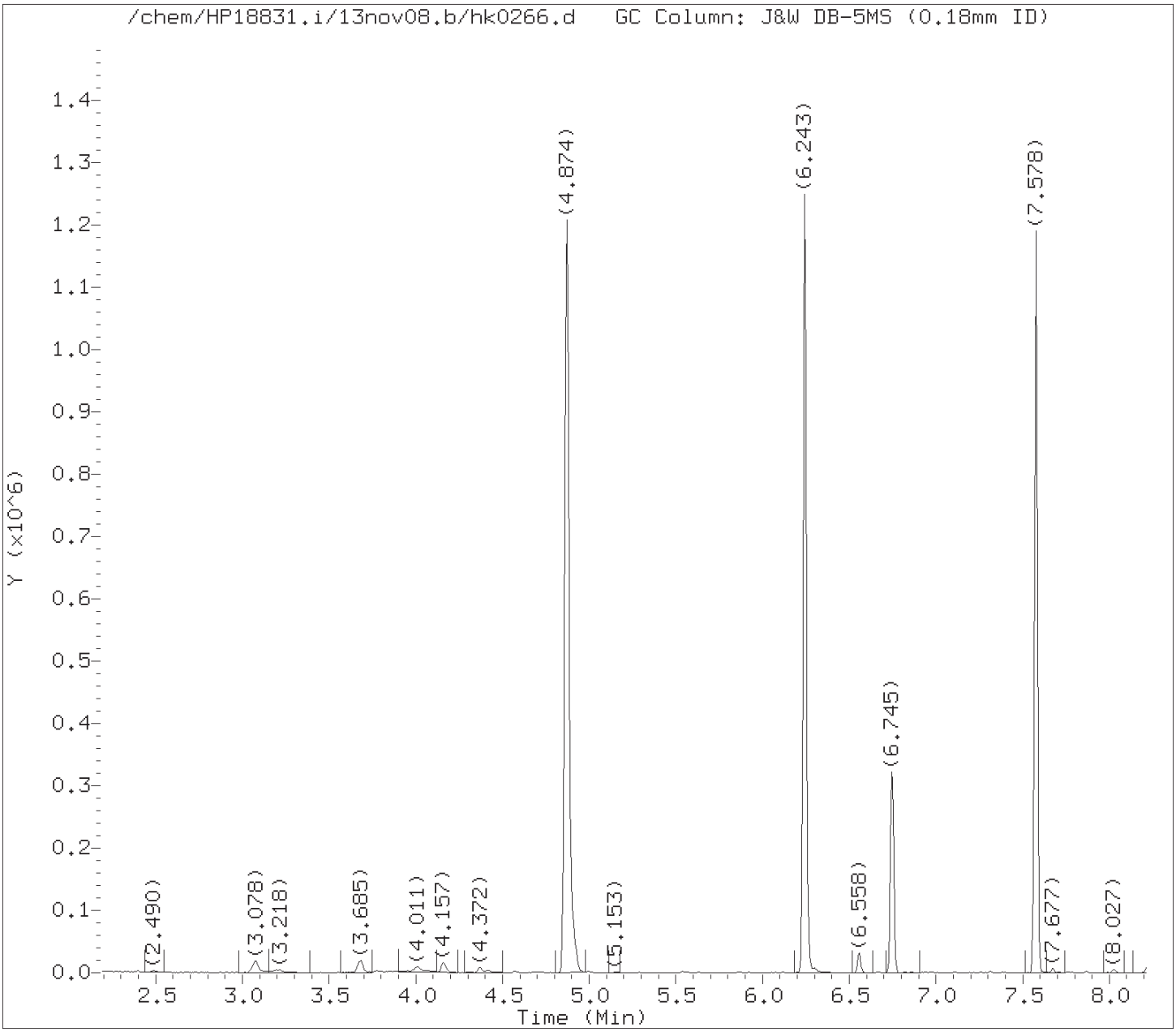
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Chromatogram Start Time (min.): 2.192
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

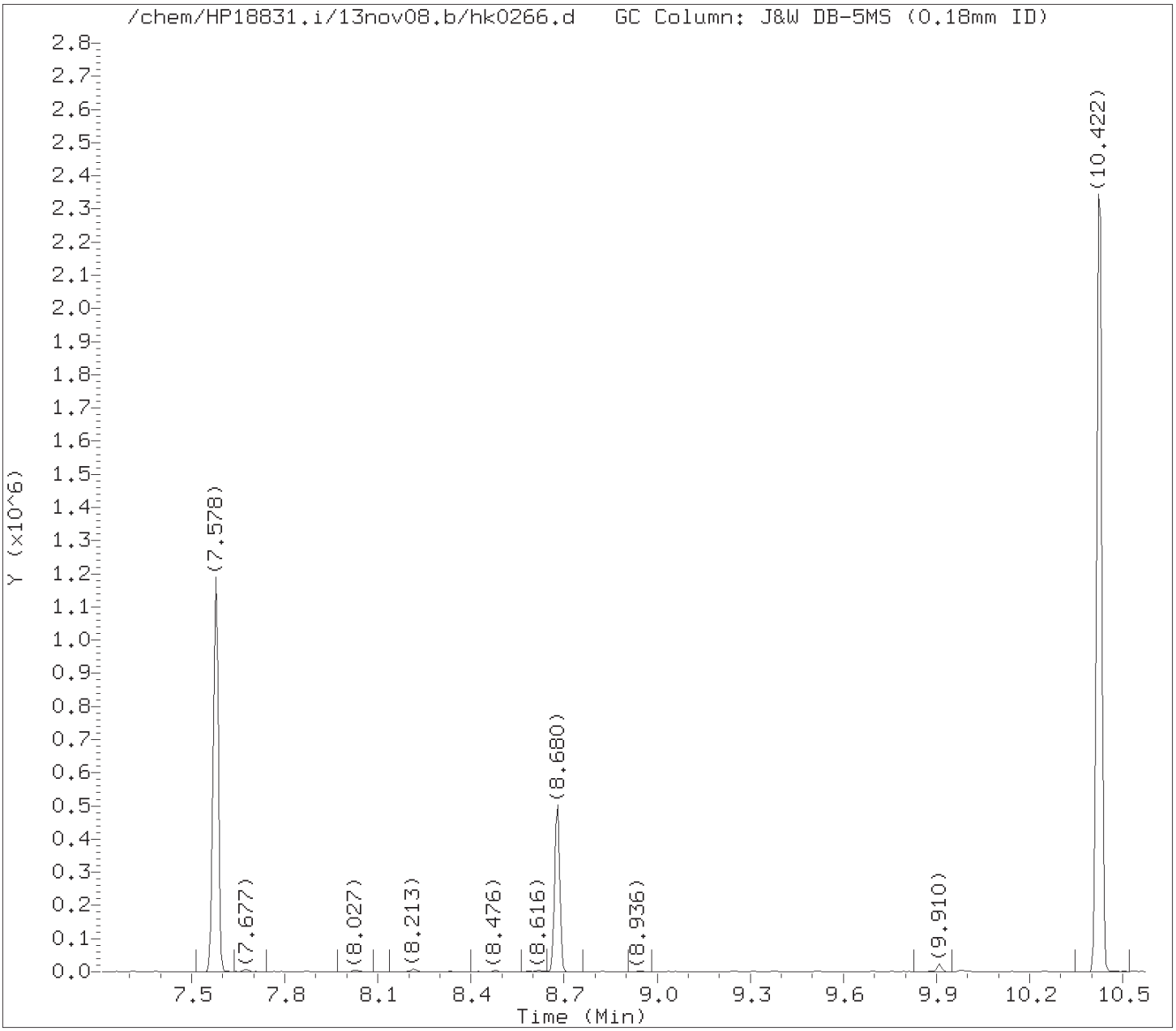
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.192
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

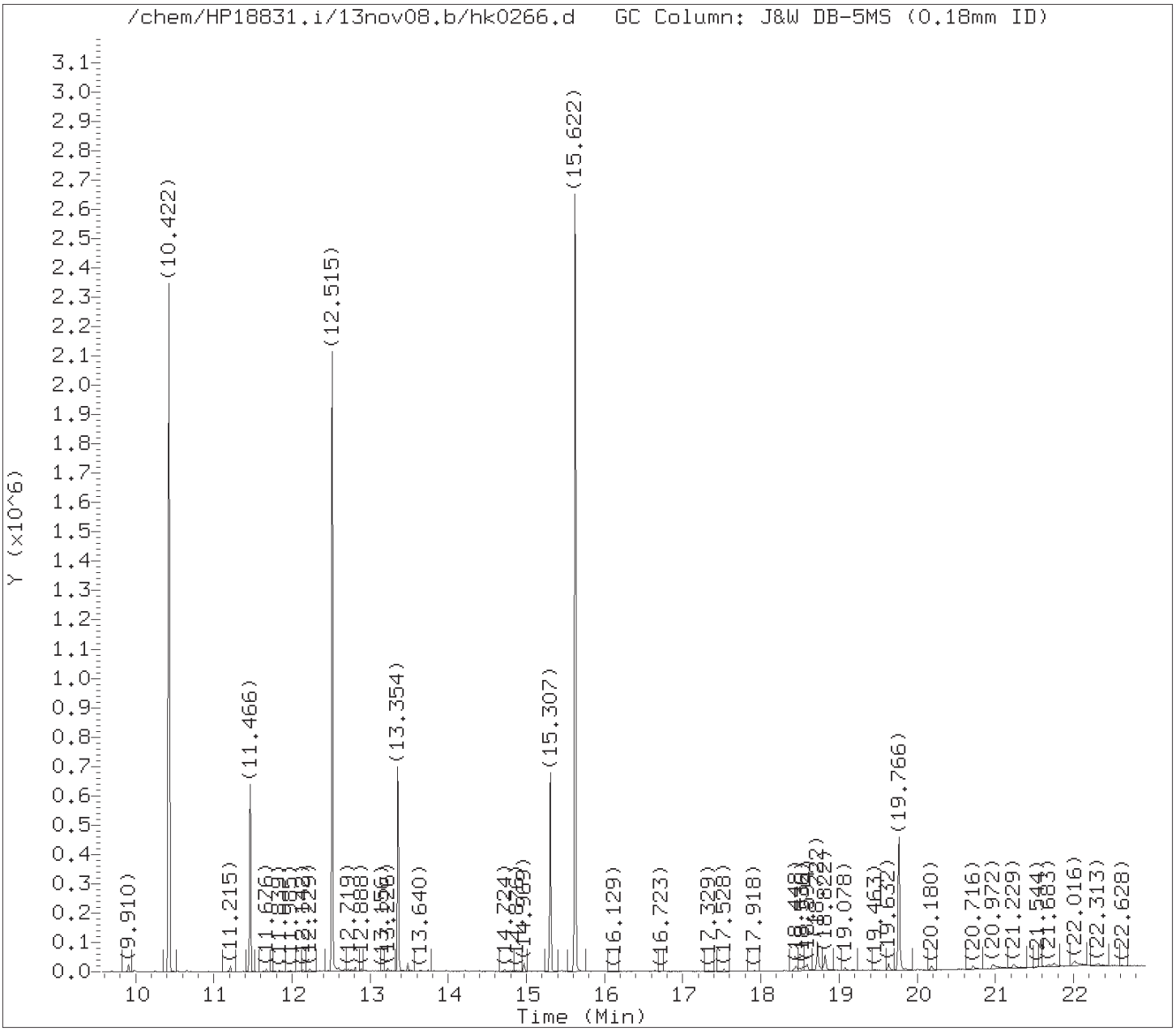
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

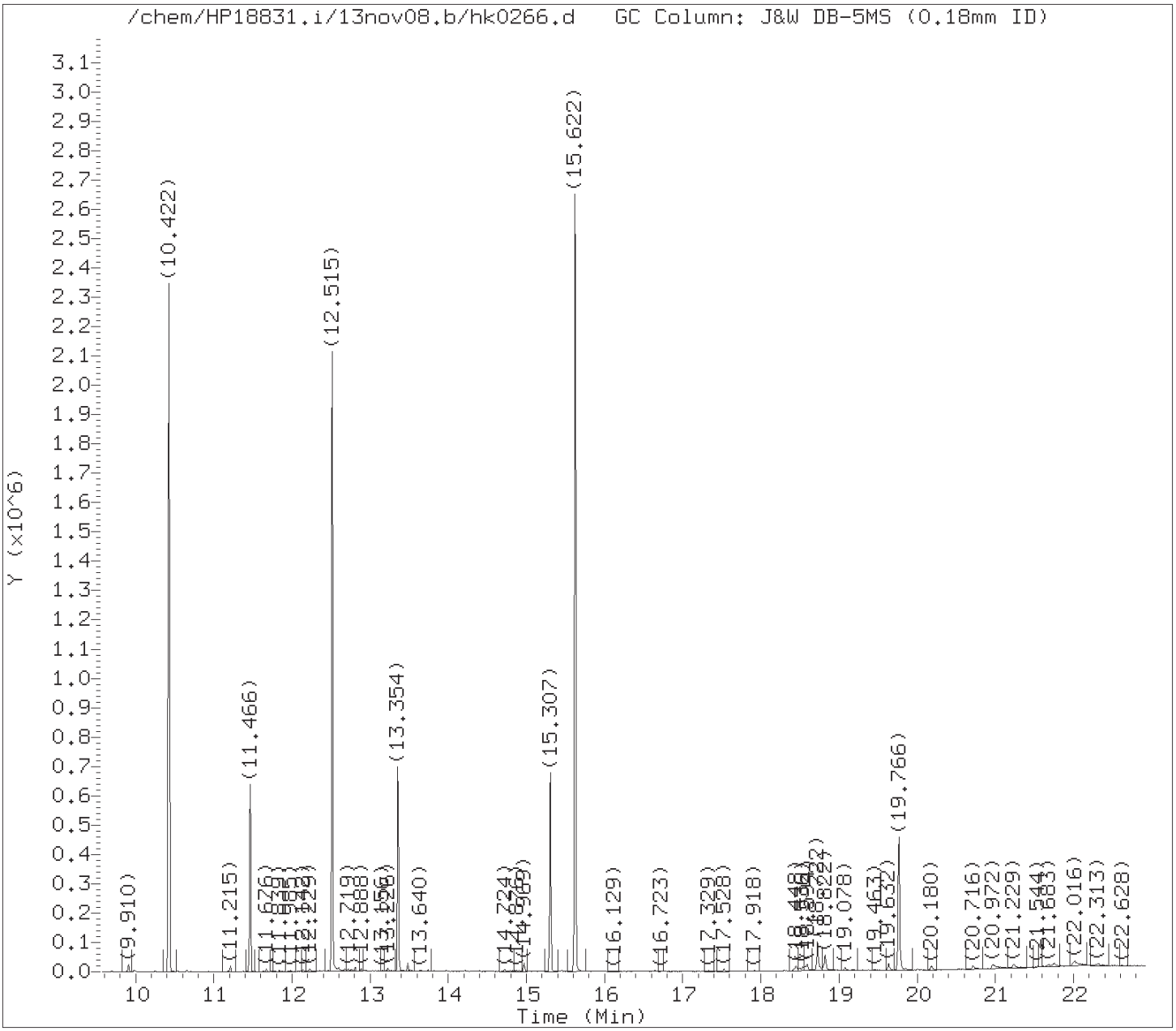
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

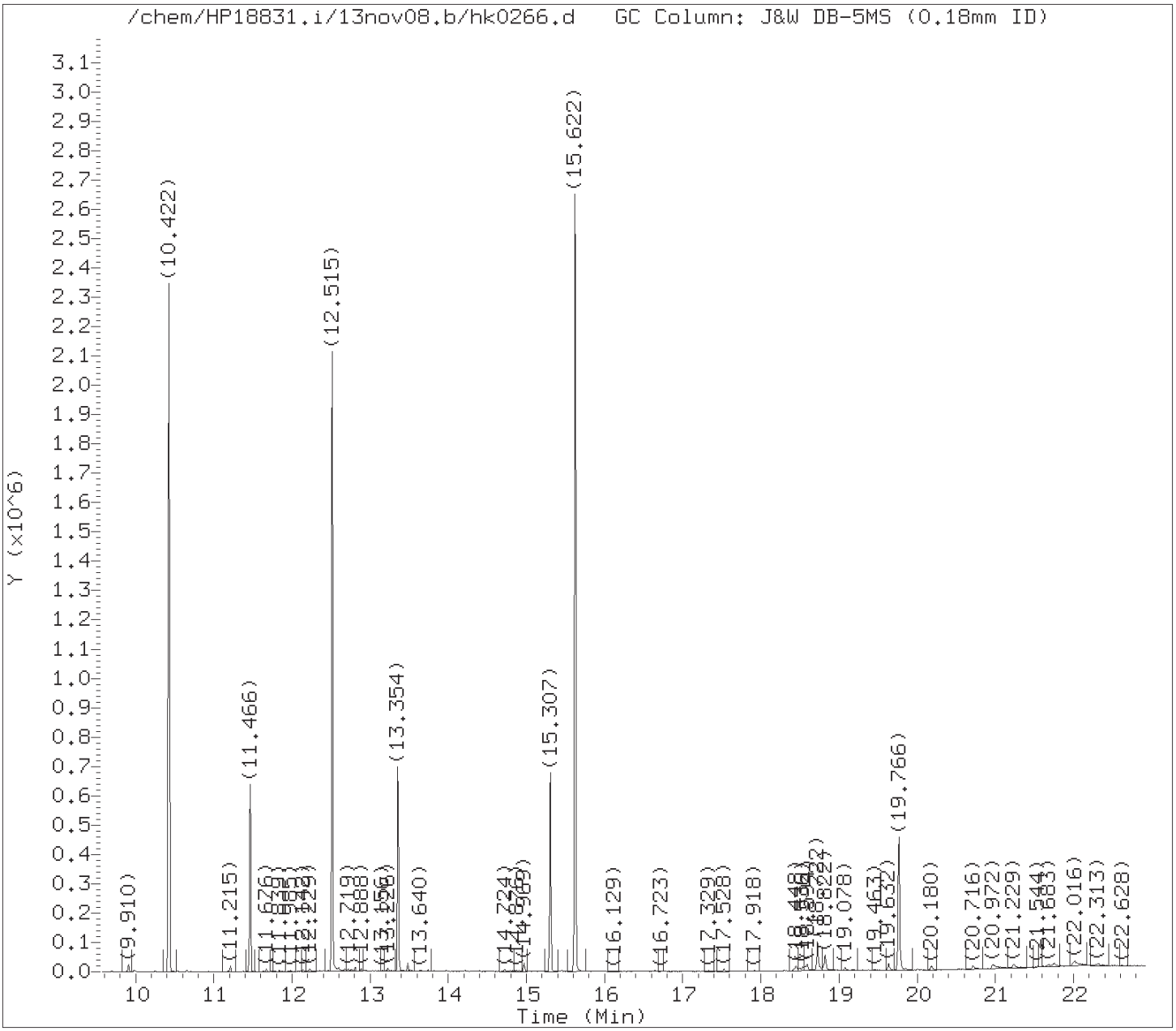
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: Phenanthrene-d10 at 13.354 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

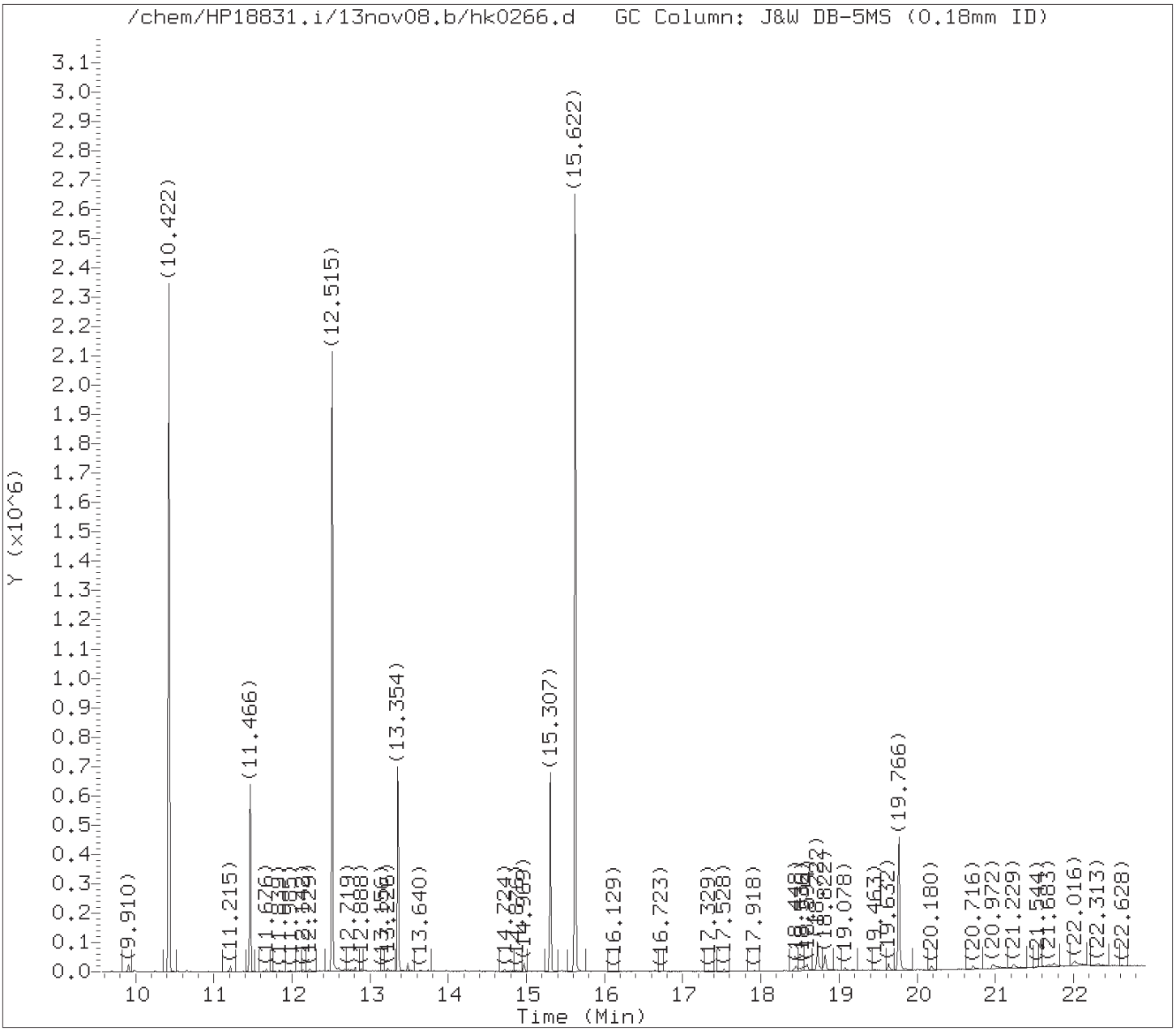
Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.536

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0266.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 12:51 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:23 jmg00346

Sample Name: EEHER Lab Sample ID: 7263057

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.536
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0266.d
Lab Smp Id: 7263057 Client Smp ID: EEHER
Inj Date : 08-NOV-2013 12:51
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : EEHER;7263057;1;0;SAMPLE;;;
Misc Info : 13310WAG;newall1;;244;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 1 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	244.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 158 Perylene-d12	19.766	735526	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
18.722	172603	1.17332806	4.80872	0		0	158

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0266.d

Date : 08-NOV-2013 12:51

Client ID: EEHER

Instrument: HP18831.i

Sample Info: EEHER;7263057;1;0;SAMPLE;;;

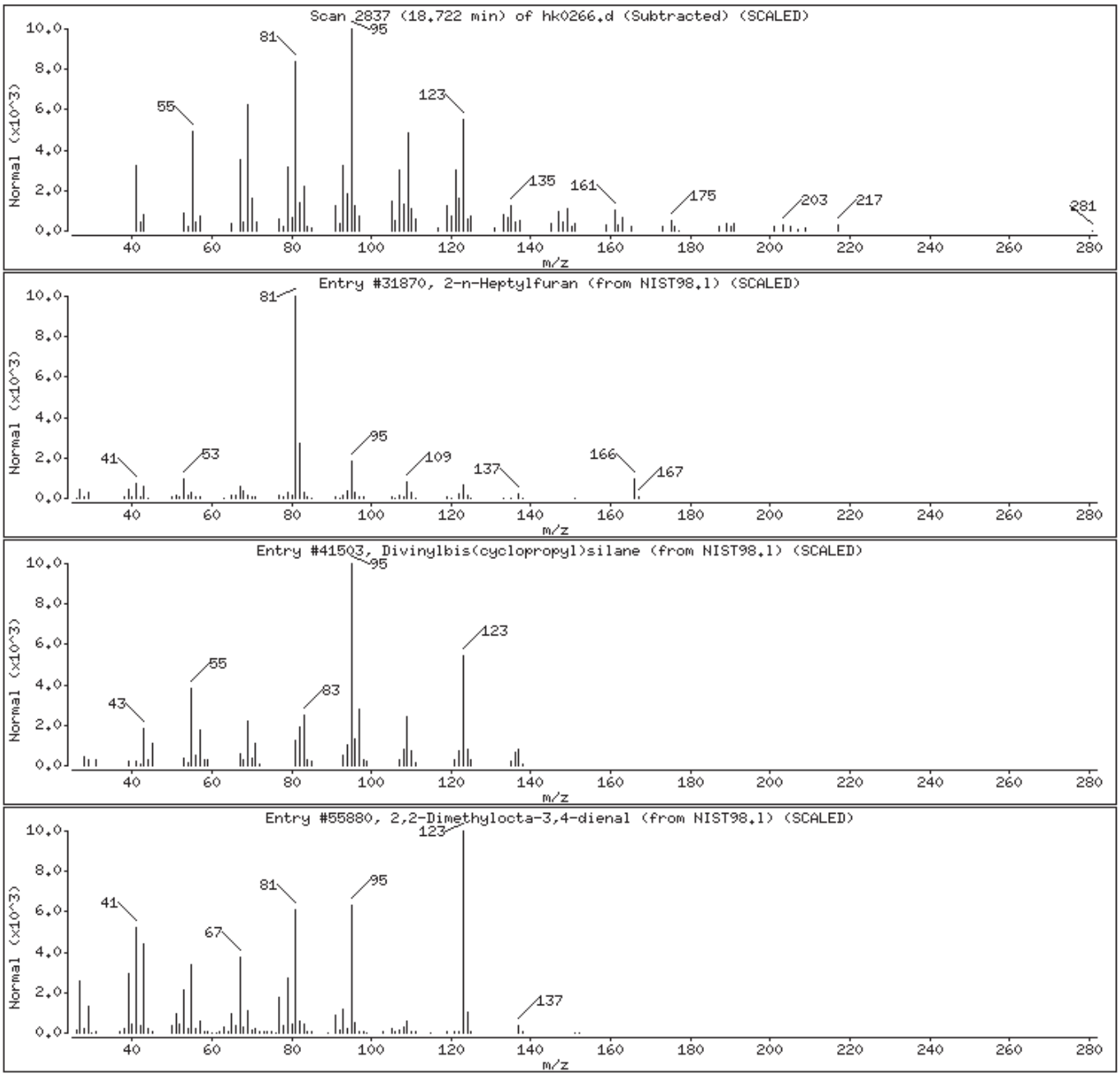
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-n-Heptylfuran	3777-71-7	NIST98.1	31870	43	C11H18O	166
Divinylbis(cyclopropyl)silane	1000109-95-2	NIST98.1	41503	38	C10H16Si	164
2,2-Dimethylocta-3,4-dienal	590-71-6	NIST98.1	55880	38	C10H16O	152



Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

F1HER

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263058

Data file: /chem/HP18831.i/13nov08.b/hk0267.d
Data file Sample Info. Line: F1HER;7263058;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

Injection date and time: **08-NOV-2013 13:21**
Instrument ID: **HP18831.i** Batch: **13310WAG**

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745(0.006)	782	152	71283 (-30)	5.00	
48) Naphthalene-d8	8.680(0.000)	1114	136	280379 (-29)	5.00	
83) Acenaphthene-d10	11.466(0.006)	1592	164	170714 (-32)	5.00	
120) Phenanthrene-d10	13.355(0.006)	1916	188	293645 (-33)	5.00	
134) Pyrene-d10	15.307(0.006)	2251	212	356843 (-35)	5.00	
158) Perylene-d12	19.766(0.006)	3016	264	272646 (-35)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874(-0.001)	112	627303	31.690	63%		10 - 107
13) Phenol-d6	(1)	6.244(-0.001)	99	608966	22.368	45%		10 - 83
36) Nitrobenzene-d5	(2)	7.578(0.001)	82	519958	19.861	79%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.423(0.000)	172	940645	22.509	90%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515(-0.001)	330	209348	48.264	97%		22 - 150
137) Terphenyl-d14	(5)	15.622(0.000)	244	1127502	23.803	95%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
18) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) 4-Methylphenol	(1)			Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
39) Isophorone	(2)			Not Detected					0.1
40) 2-Nitrophenol	(2)			Not Detected					0.1
41) 2,4-Dimethylphenol	(2)			Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
46) 2,4-Dichlorophenol	(2)			Not Detected					0.1
49) Naphthalene	(2)			Not Detected					0.03
50) 4-Chloroaniline	(2)			Not Detected					0.1
53) Hexachlorobutadiene	(2)			Not Detected					0.1
55) Caprolactam	(2)			Not Detected					1
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/13nov08.b/hk0267.d Injection date and time: **08-NOV-2013 13:21**
Data file Sample Info. Line: F1HER;7263058;1;0;SAMPLE;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

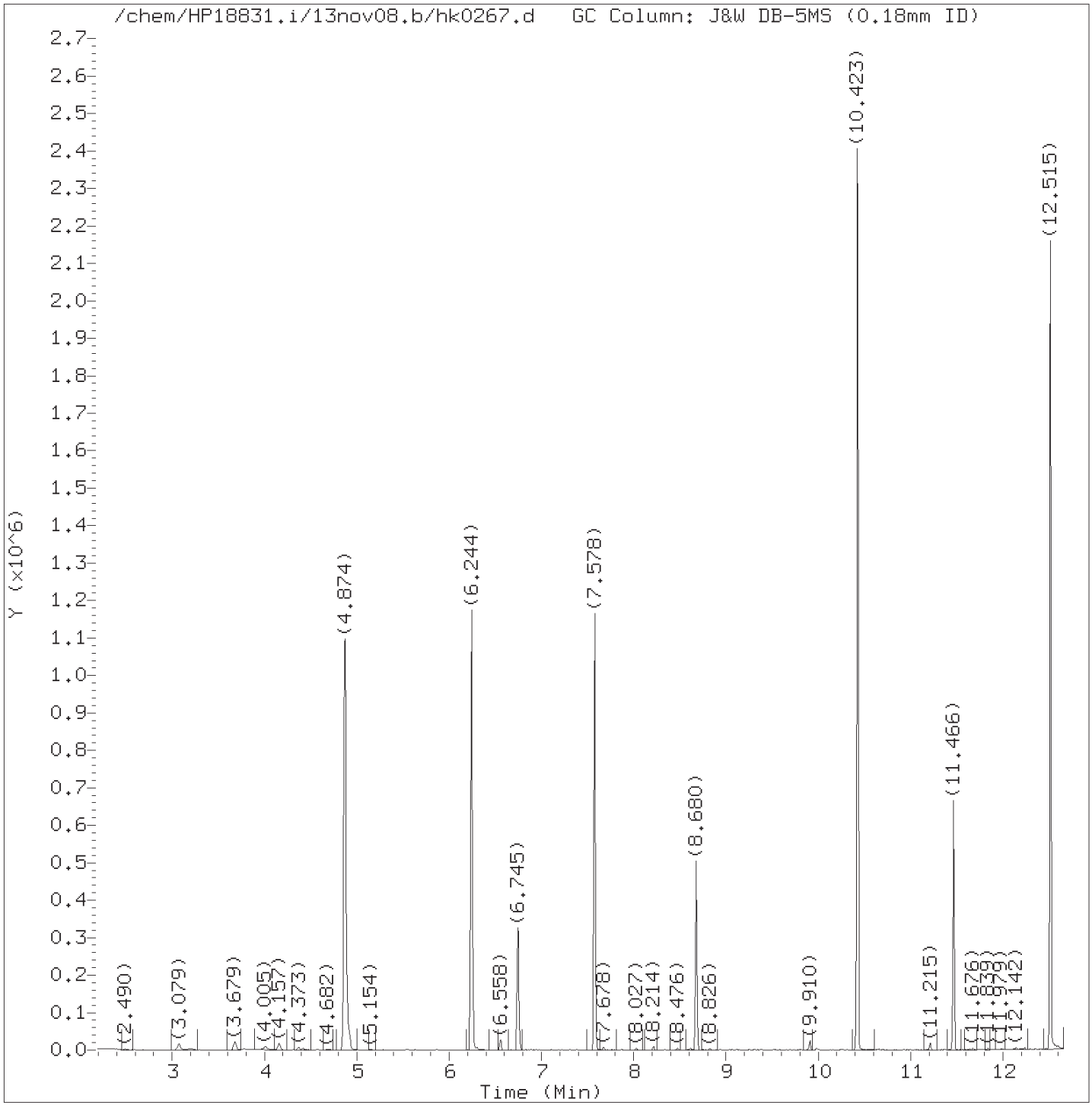
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)	17.528(-0.000)	149	125438	2.997	12.23	8.066	B	0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

B = Compound detected in referenced method blank.

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

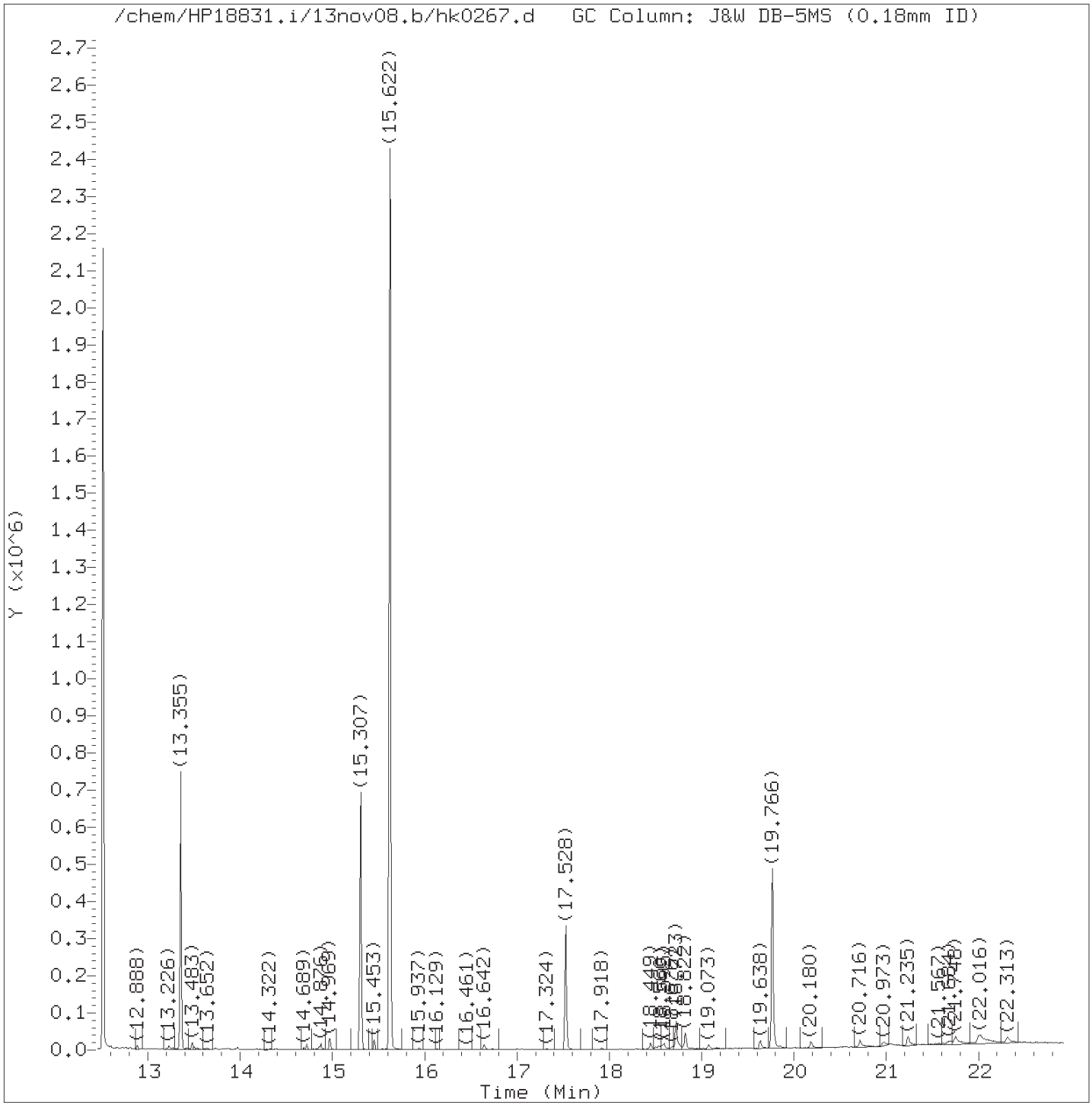
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

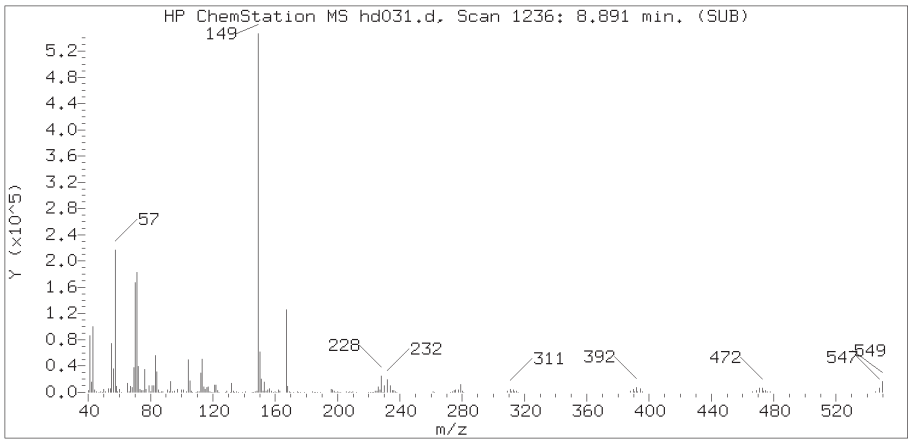
Sample Name: F1HER Lab Sample ID: 7263058

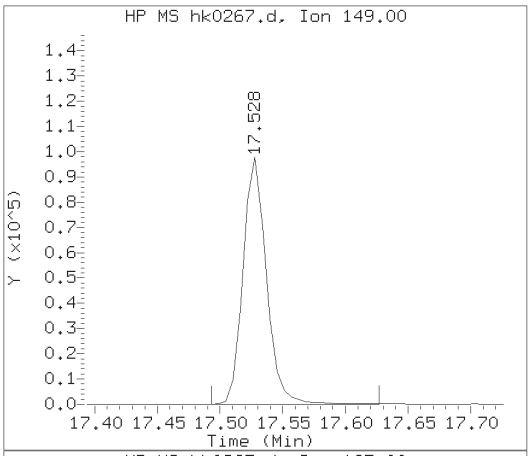
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	627303	31.690
13)$Phenol-d6	(1)	6.244	99	608966	22.368
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	71283	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	519958	19.861
48)*Naphthalene-d8	(2)	8.680	136	280379	5.000
68)$2-Fluorobiphenyl	(3)	10.423	172	940645	22.509
83)*Acenaphthene-d10	(3)	11.466	164	170714	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	209348	48.264
120)*Phenanthrene-d10	(4)	13.355	188	293645	5.000
134)*Pyrene-d10	(5)	15.307	212	356843	5.000
137)$Terphenyl-d14	(5)	15.622	244	1127502	23.803
151) bis(2-Ethylhexyl)phthalate	(5)	17.528	149	125438	2.997
158)*Perylene-d12	(6)	19.766	264	272646	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

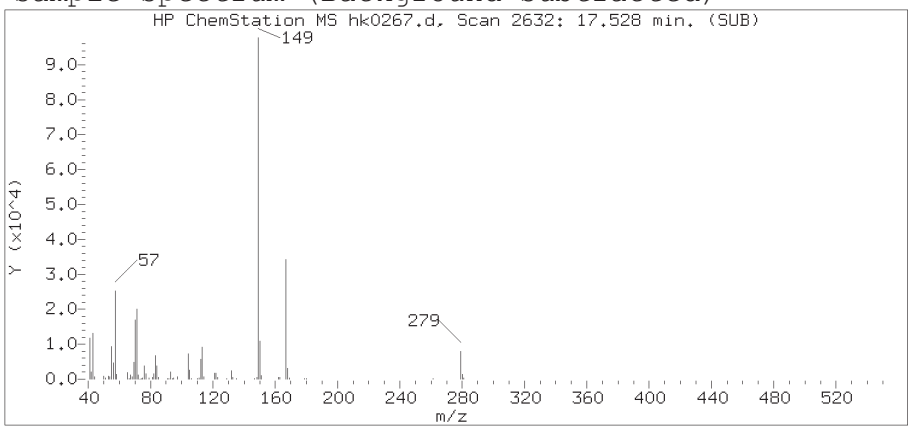
Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

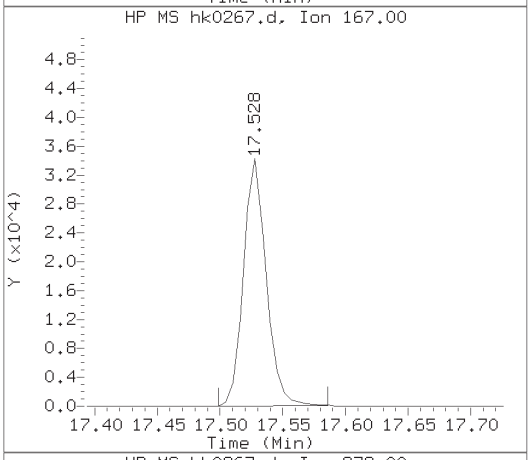
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



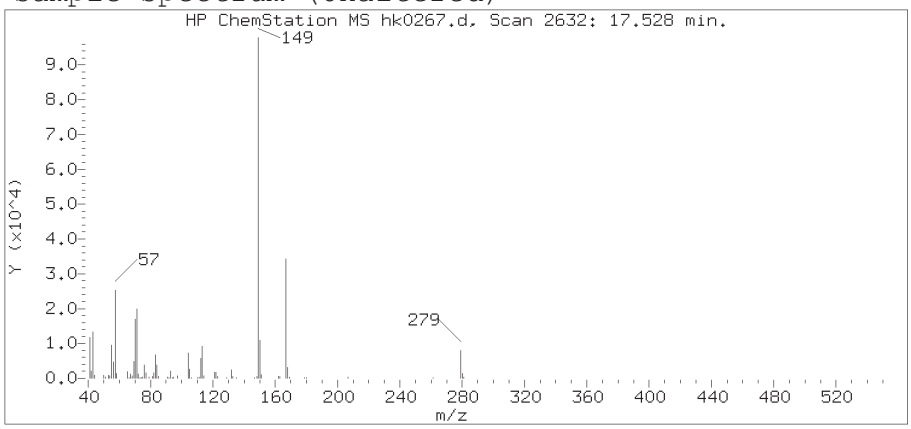


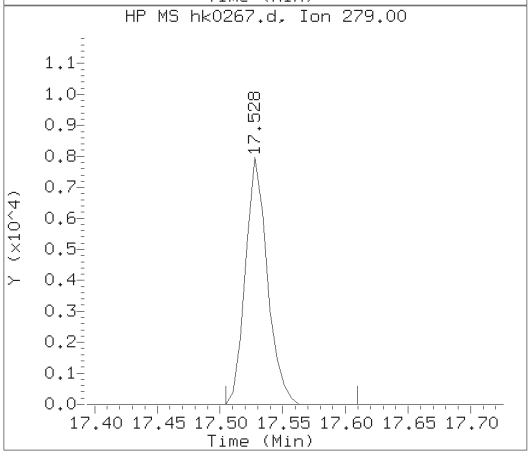
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:21 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Compound Number	: 151
Compound Name	: bis(2-Ethylhexyl)phthalate
Scan Number	: 2632
Retention Time (minutes)	: 17.528
Relative Retention Time	:-0.00005
Quant Ion	: 149.00
Area (flag)	: 125438
On-column Amount (ng/ul)	: 2.9970

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:35.
Target 3.5 esignature ID: jmg00346

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

F1HER

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7263058

Sample wt/vol: 245 (g/mL) mL Lab File ID: hk0267.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	22.016	5	J
2.					
3.	SVOCTIC	Total SVOC TICs		5	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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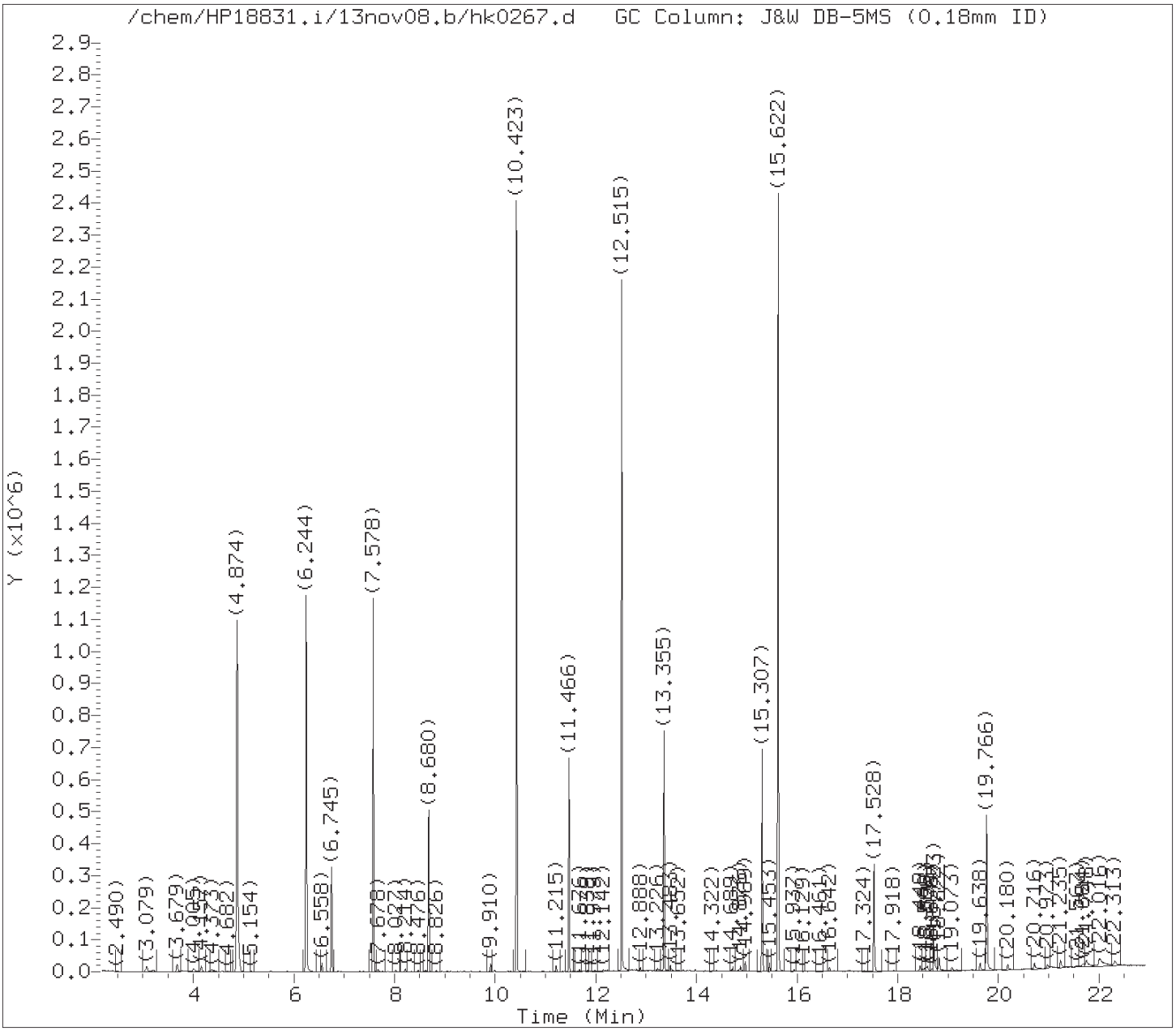
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

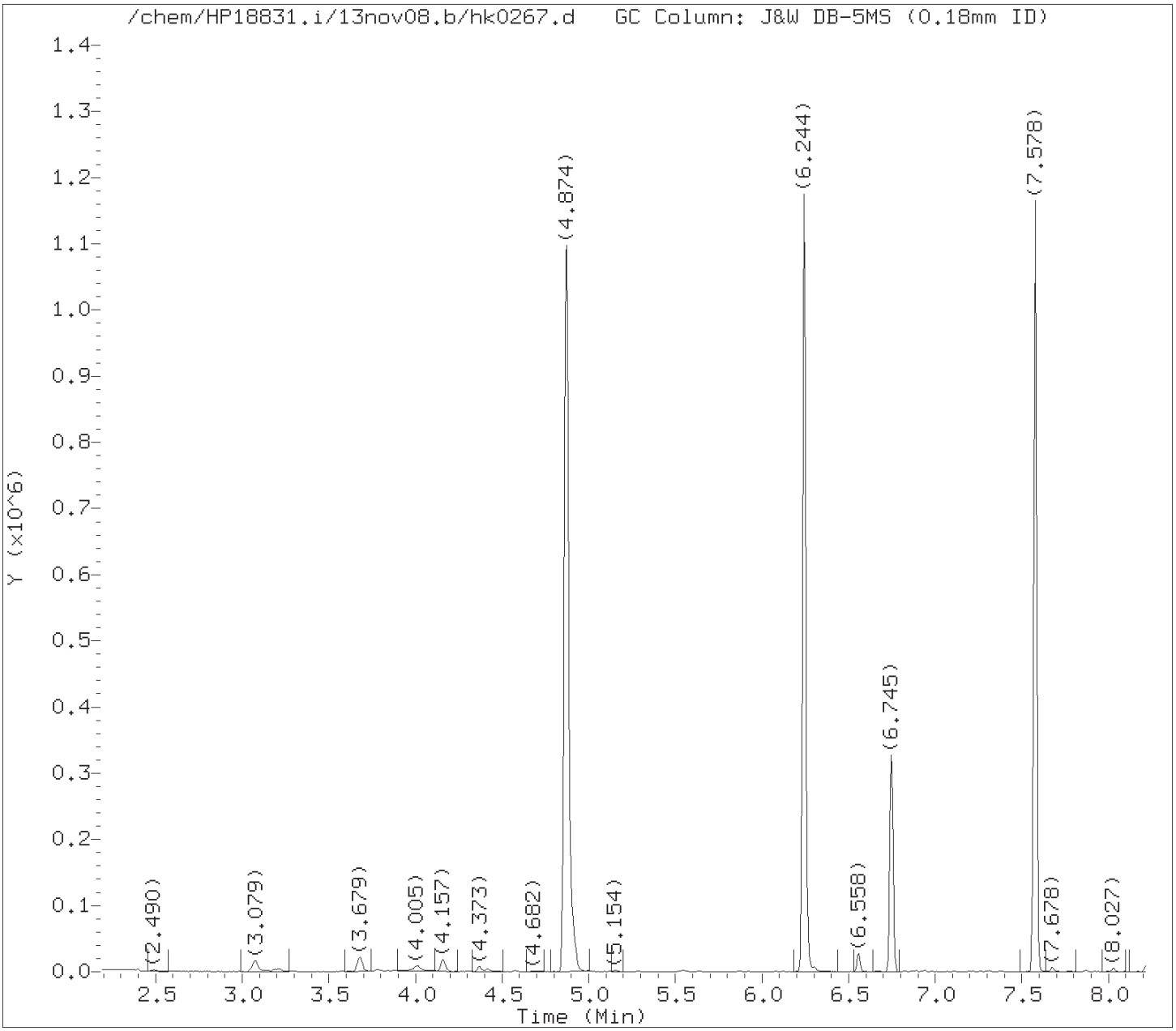
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

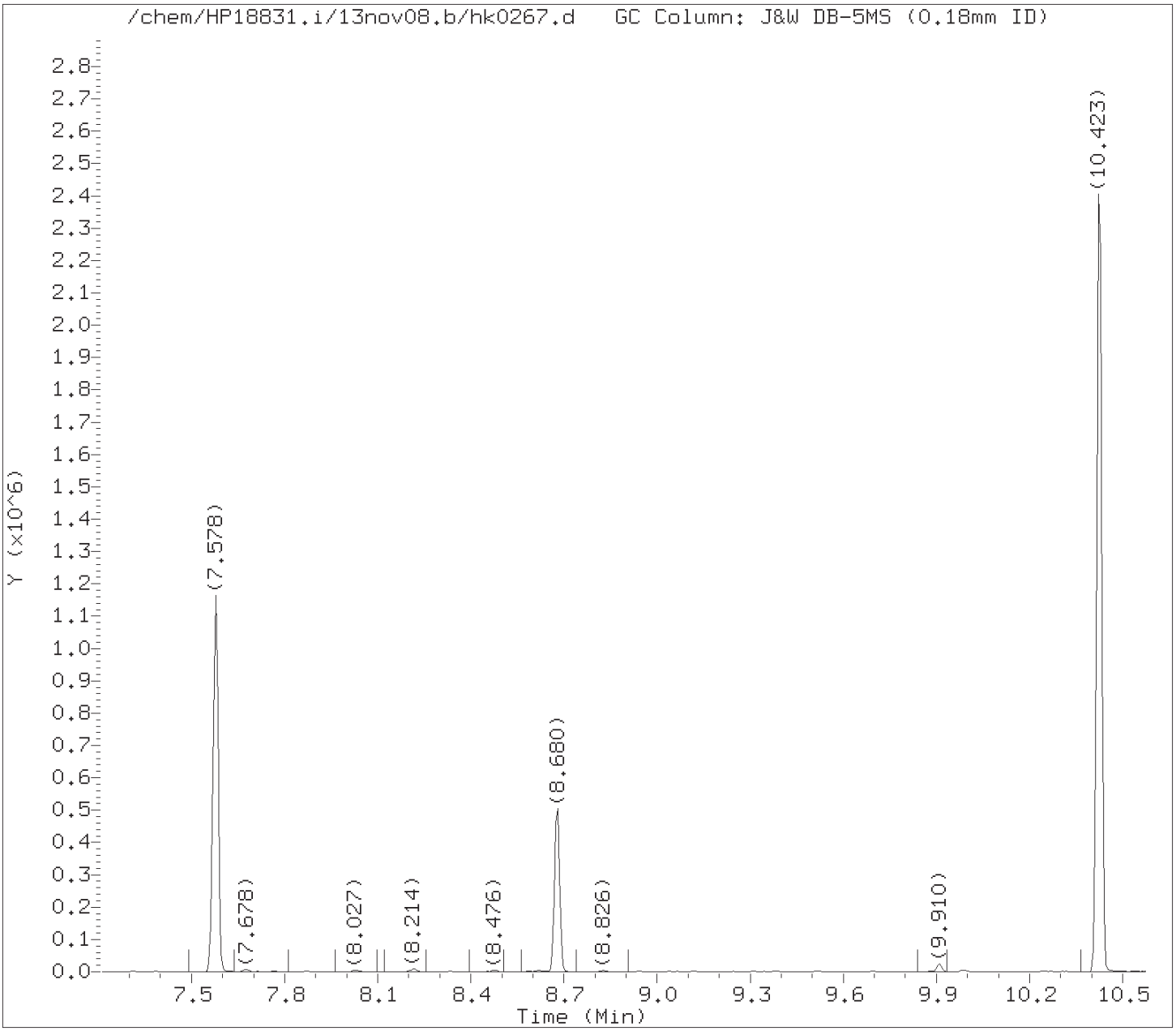
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

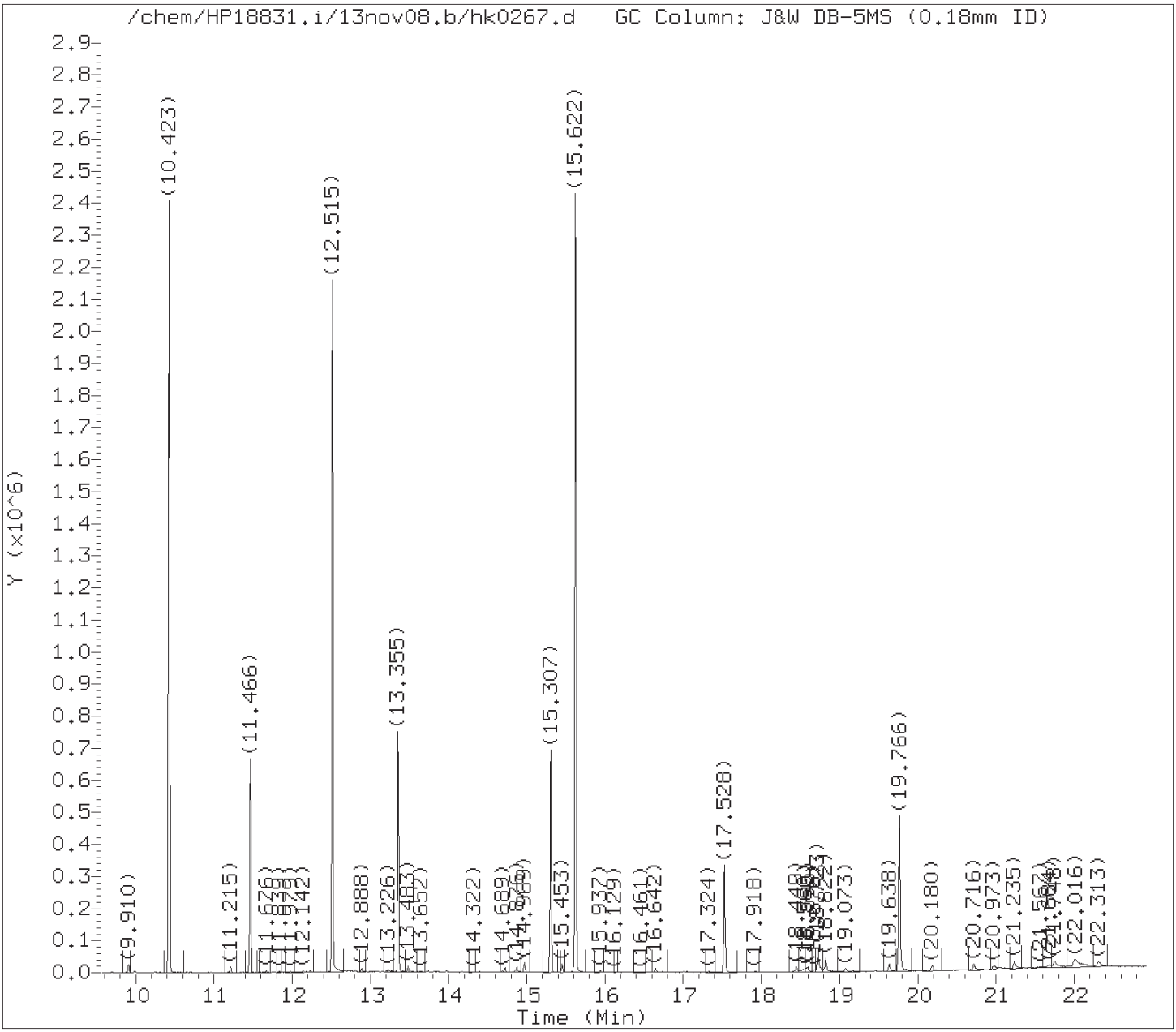
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

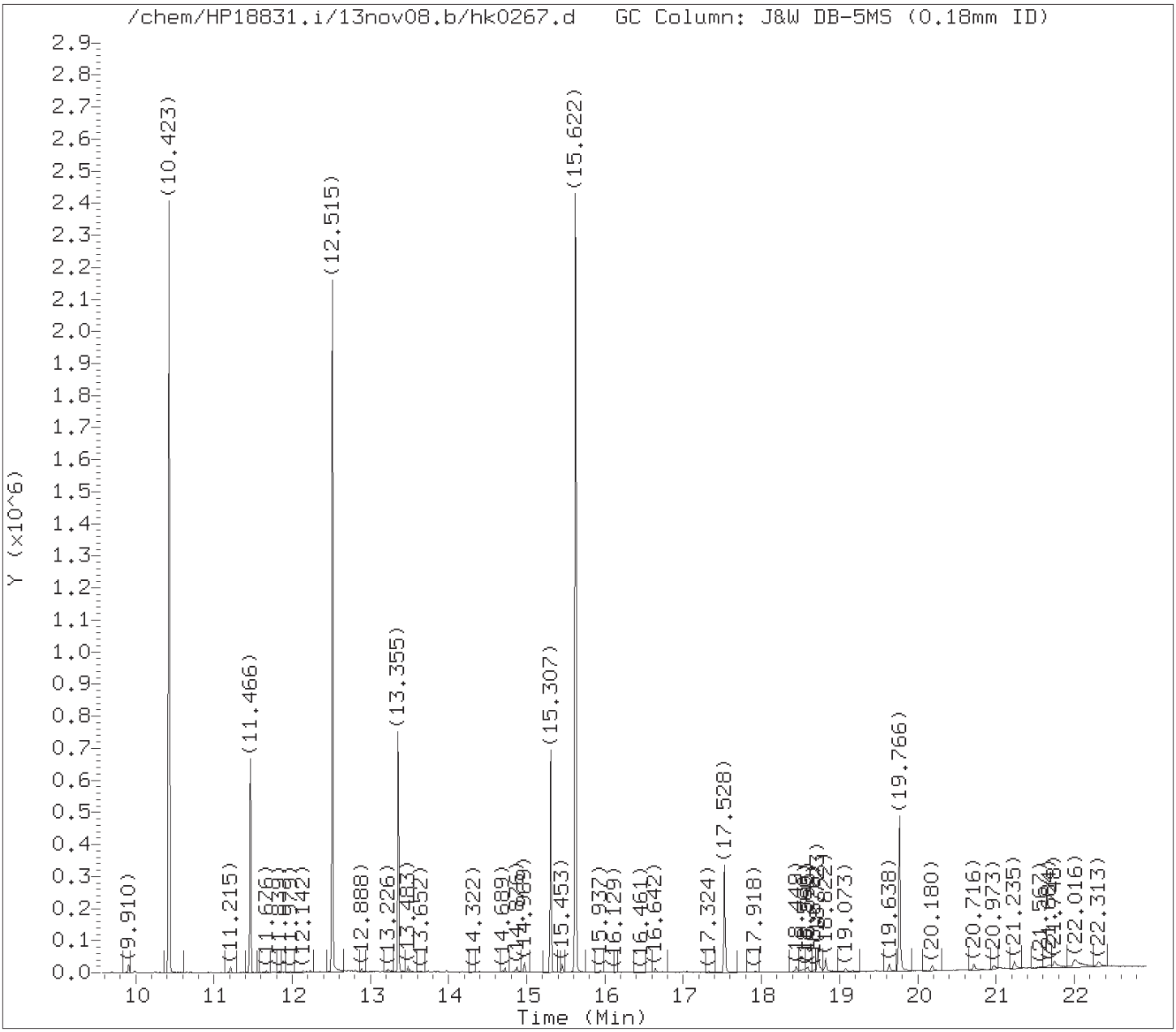
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

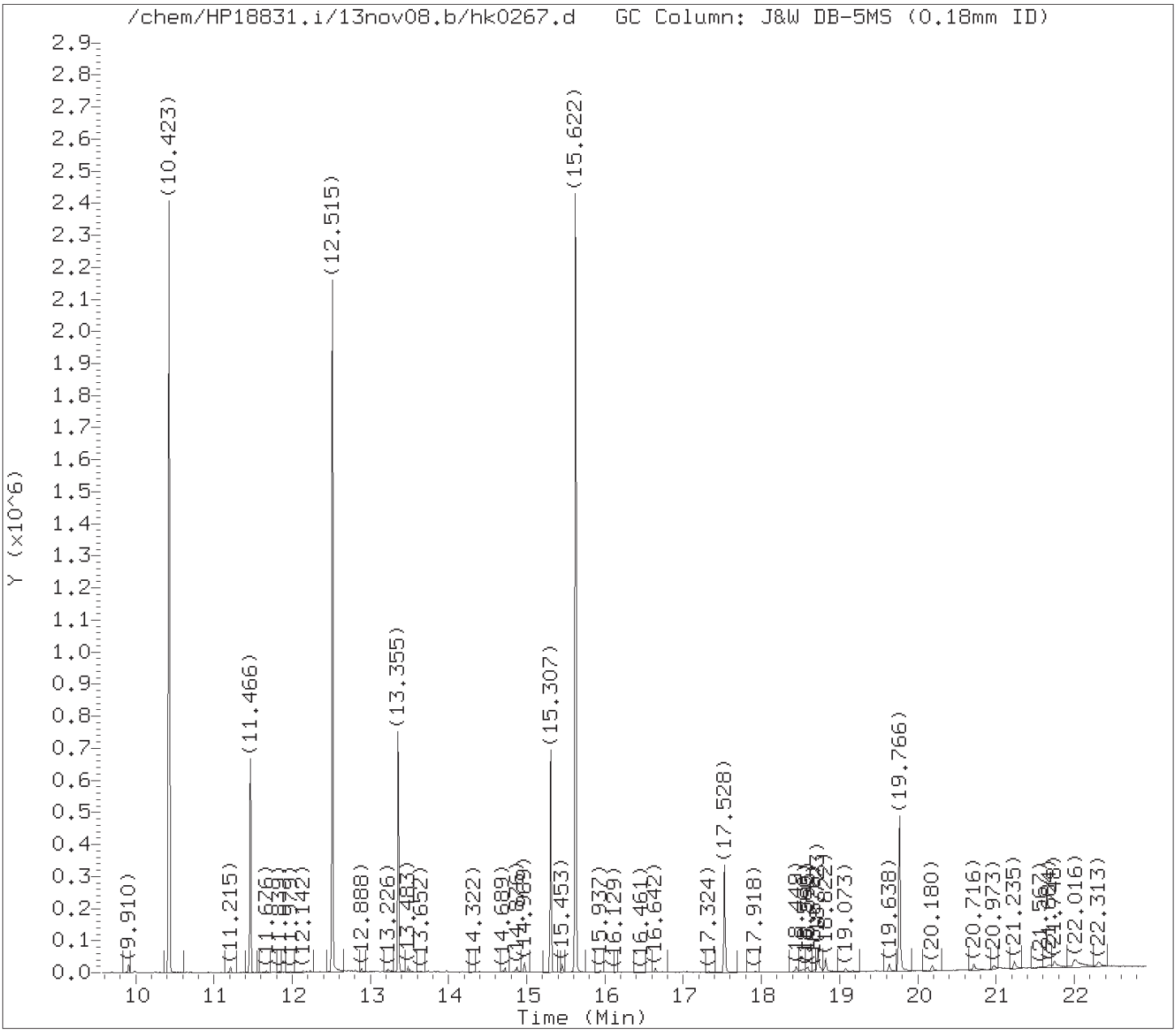
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: Phenanthrene-d10 at 13.355 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

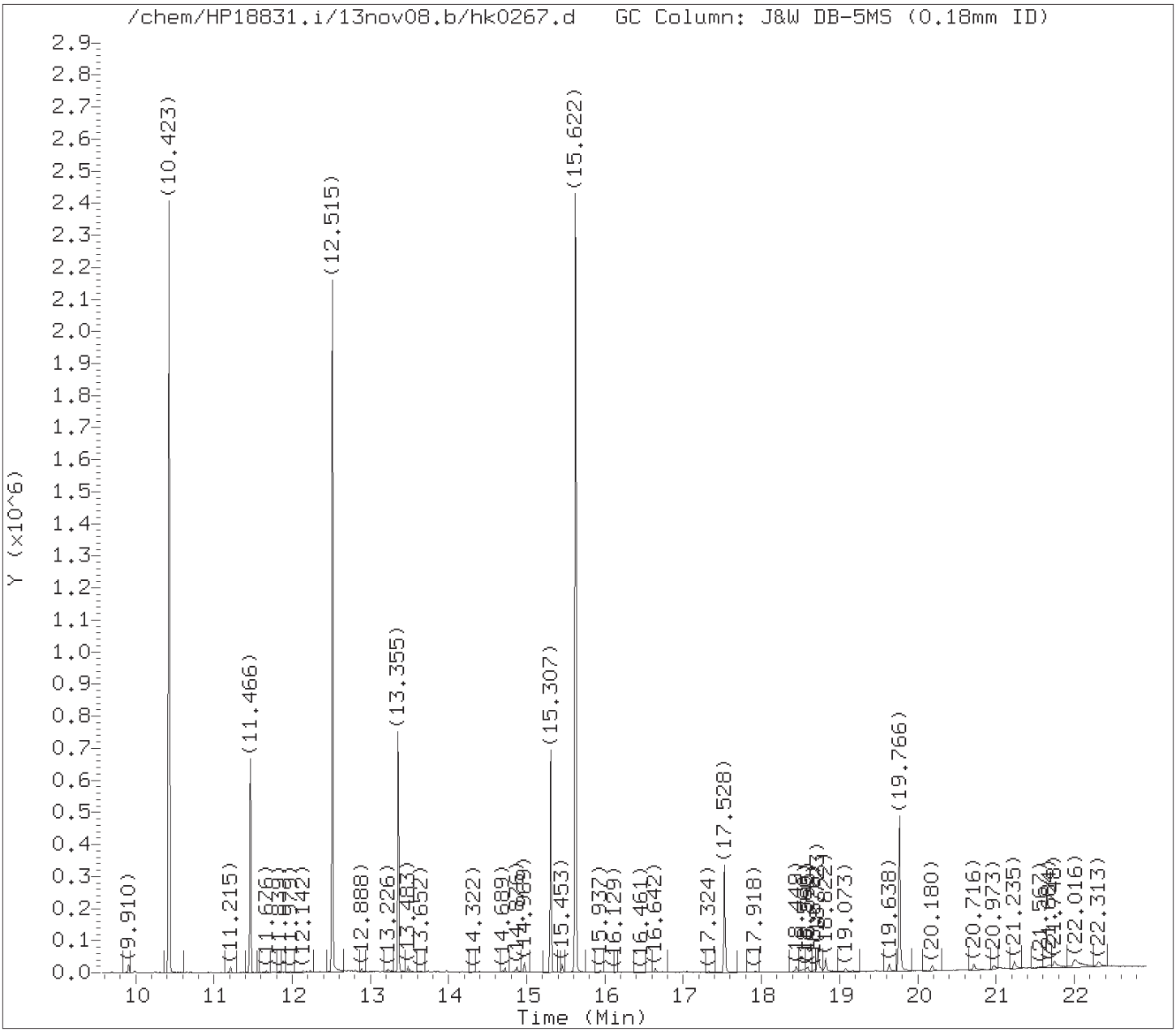
Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.537

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0267.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:21 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:24 jmg00346

Sample Name: F1HER Lab Sample ID: 7263058

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.537
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0267.d
Lab Smp Id: 7263058 Client Smp ID: F1HER
Inj Date : 08-NOV-2013 13:21
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : F1HER;7263058;1;0;SAMPLE;;;
Misc Info : 13310WAG;newall1;;245;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 1 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	245.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 158 Perylene-d12	19.766	738173	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
22.016	197031	1.33458079	5.44726	0		0	158

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0267.d

Date : 08-NOV-2013 13:21

Client ID: F1HER

Instrument: HP18831.i

Sample Info: F1HER;7263058;1;0;SAMPLE;;;

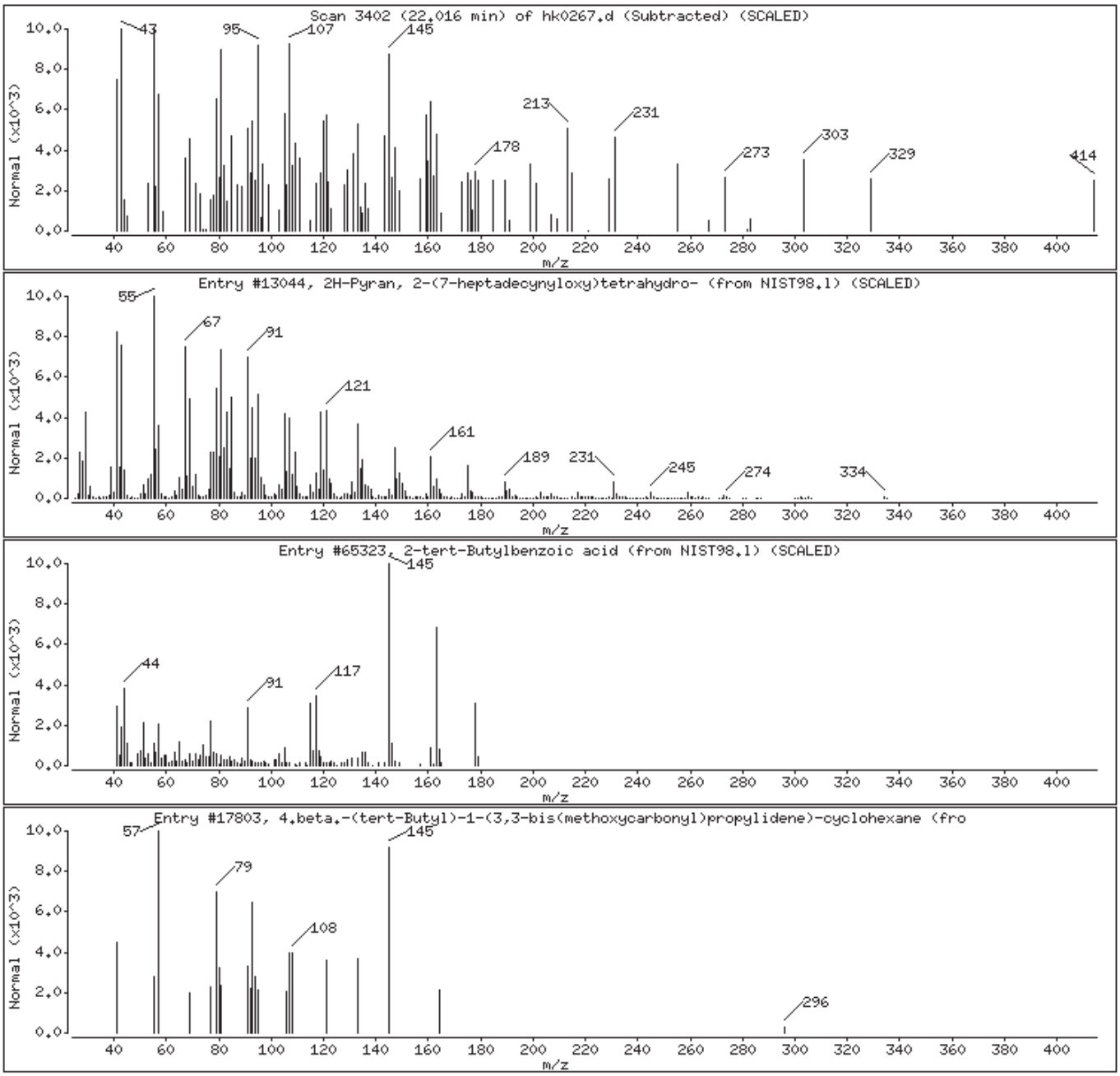
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2H-Pyran, 2-(7-heptadecynyloxy)tetrahydr	56599-50-9	NIST98.1	13044	14	C22H4002	336
2-tert-Butylbenzoic acid	1077-58-3	NIST98.1	65323	11	C11H1402	178
4.beta.-(tert-Butyl)-1-(3,3-bis(methoxyc	1000143-92-9	NIST98.1	17803	10	C17H2804	296



Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

F1HERRE

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263058RE

Data file: /chem/HP19760.i/13nov14b.b/dk0518.d
Data file Sample Info. Line: F1HERRE;7263058RE;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

Injection date and time: **15-NOV-2013 00:29**
Instrument ID: **HP19760.i** Batch: **13316WAK**

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.854	(0.000)	775	152	81905	(-15)	5.00	
52) Naphthalene-d8	7.818	(0.000)	1112	136	317310	(-15)	5.00	
92) Acenaphthene-d10	10.616	(0.006)	1592	164	180934	(-18)	5.00	
130) Phenanthrene-d10	12.528	(0.006)	1920	188	298355	(-17)	5.00	
145) Pyrene-d10	14.451	(0.006)	2250	212	366022	(-20)	5.00	
172) Perylene-d12	18.893	(0.006)	3012	264	245364	(-25)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.884	(0.001)	112	796101	32.735	65%		10 - 107
13) Phenol-d6	(1)	5.329	(0.001)	99	797173	23.868	48%		10 - 83
36) Nitrobenzene-d5	(2)	6.705	(0.001)	82	719129	24.626	99%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.578	(0.000)	172	1044798	23.124	92%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.700	(0.000)	330	228760	48.138	96%		22 - 150
149) Terphenyl-d14	(5)	14.772	(0.000)	244	1092715	23.939	96%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)				Not Detected					0.3
14) Phenol	(1)				Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
17) 2-Chlorophenol	(1)				Not Detected					0.1
26) 2-Methylphenol	(1)				Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.1
30) Acetophenone	(1)				Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
33) 4-Methylphenol	(1)				Not Detected					0.1
35) Hexachloroethane	(1)				Not Detected					0.3
37) Nitrobenzene	(2)				Not Detected					0.1
40) Isophorone	(2)				Not Detected					0.1
42) 2-Nitrophenol	(2)				Not Detected					0.1
45) 2,4-Dimethylphenol	(2)				Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
49) 2,4-Dichlorophenol	(2)				Not Detected					0.1
53) Naphthalene	(2)				Not Detected					0.03
55) 4-Chloroaniline	(2)				Not Detected					0.1
58) Hexachlorobutadiene	(2)				Not Detected					0.1
61) Caprolactam	(2)				Not Detected					1
63) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
65) 2-Methylnaphthalene	(2)				Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)				Not Detected					1
70) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
75) 1,1'-Biphenyl	(3)				Not Detected					0.1
76) 2-Chloronaphthalene	(3)				Not Detected					0.1

Digitally signed by Catherine E. Bachman on 11/15/2013 at 17:52. Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov14b.b/dk0518.d Injection date and time: **15-NOV-2013 00:29**
Data file Sample Info. Line: F1HERRE;7263058RE;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

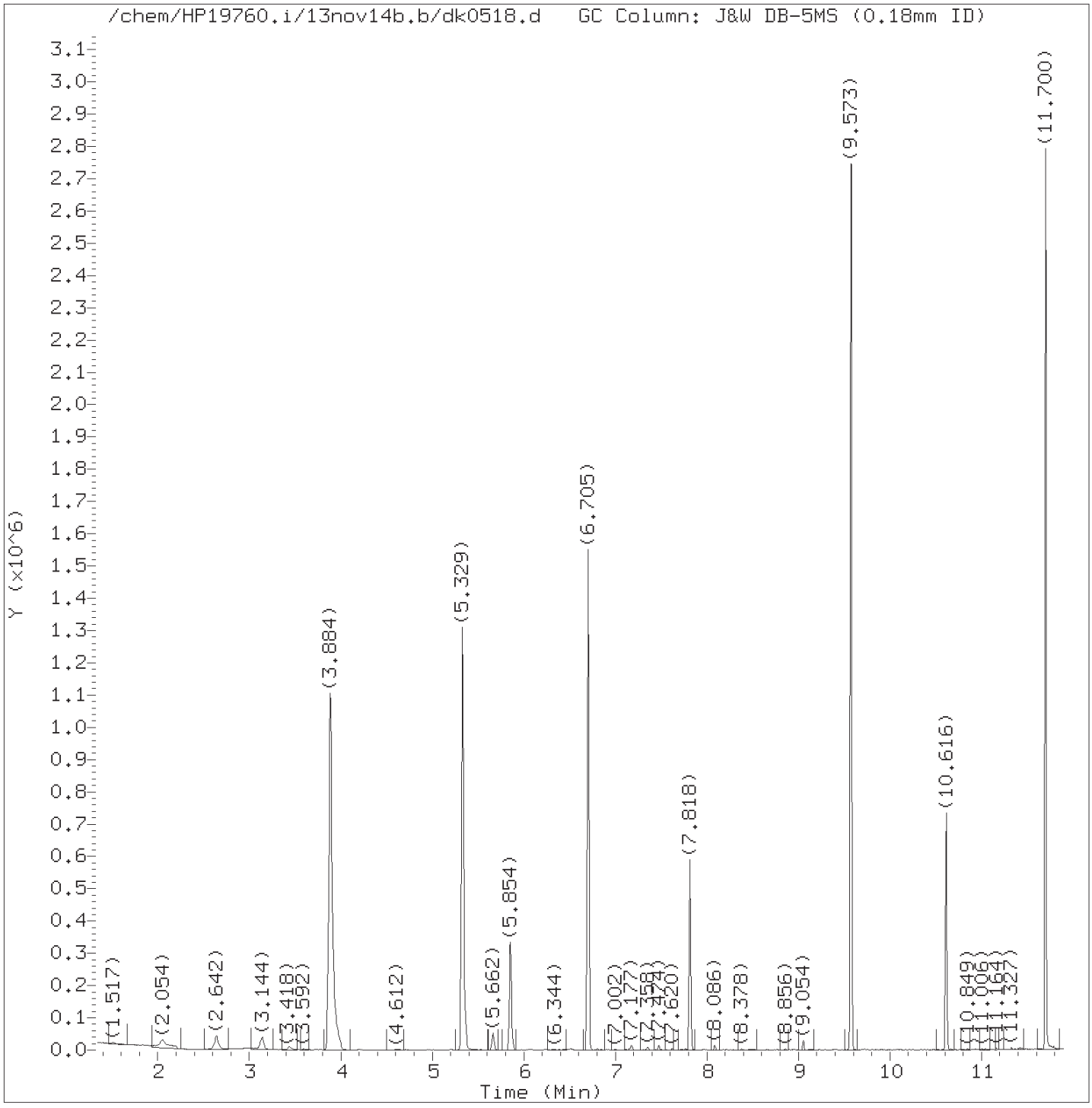
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)	14.474(0.000)	202	2066	0.027	0.11			0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/15/2013 at 17:52. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:48. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

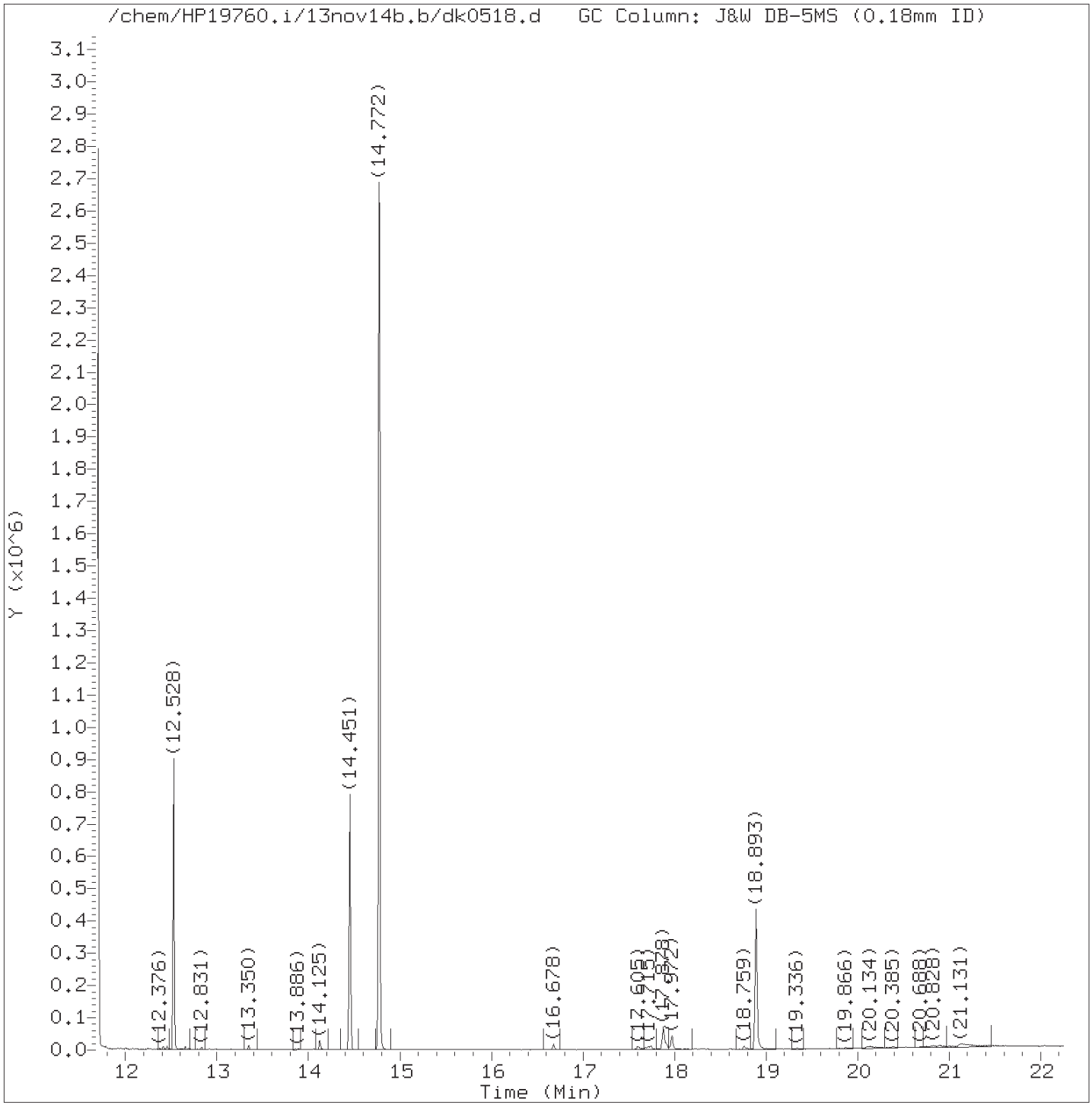
Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0518.d Instrument ID: HP19760.i
Injection date and time: 15-NOV-2013 00:29 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

Sample Name: F1HERRE Lab Sample ID: 7263058RE

Digitally signed by Catherine E. Bachman
on 11/15/2013 at 17:52.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0518.d Instrument ID: HP19760.i
Injection date and time: 15-NOV-2013 00:29 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

Sample Name: F1HERRE Lab Sample ID: 7263058RE

Digitally signed by Catherine E. Bachman
on 11/15/2013 at 17:52.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0518.d Instrument ID: HP19760.i
Injection date and time: 15-NOV-2013 00:29 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

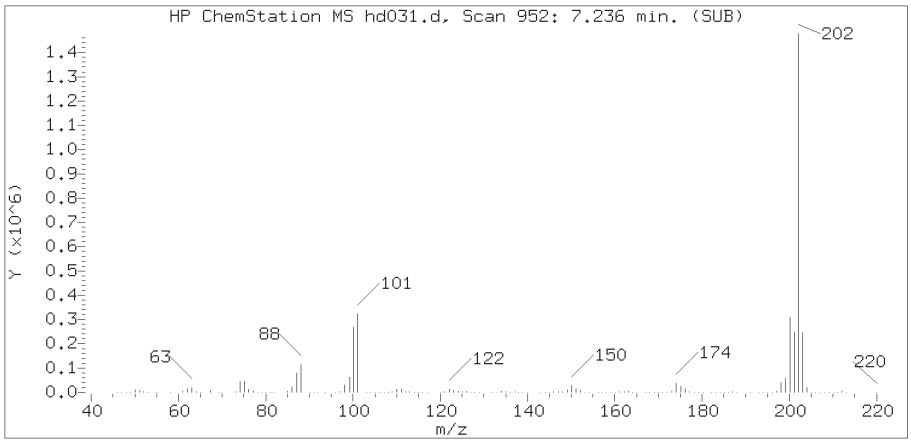
Sample Name: F1HERRE Lab Sample ID: 7263058RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.884	112	796101	32.735
13)$Phenol-d6	(1)	5.329	99	797173	23.868
19)*1,4-Dichlorobenzene-d4	(1)	5.854	152	81905	5.000
36)$Nitrobenzene-d5	(2)	6.705	82	719129	24.626
52)*Naphthalene-d8	(2)	7.818	136	317310	5.000
72)$2-Fluorobiphenyl	(3)	9.578	172	1044798	23.124
92)*Acenaphthene-d10	(3)	10.616	164	180934	5.000
112)$2,4,6-Tribromophenol	(3)	11.700	330	228760	48.138
130)*Phenanthrene-d10	(4)	12.528	188	298355	5.000
145)*Pyrene-d10	(5)	14.451	212	366022	5.000
146) Pyrene	(5)	14.475	202	2066	0.027
149)$Terphenyl-d14	(5)	14.772	244	1092715	23.939
172)*Perylene-d12	(6)	18.893	264	245364	5.000

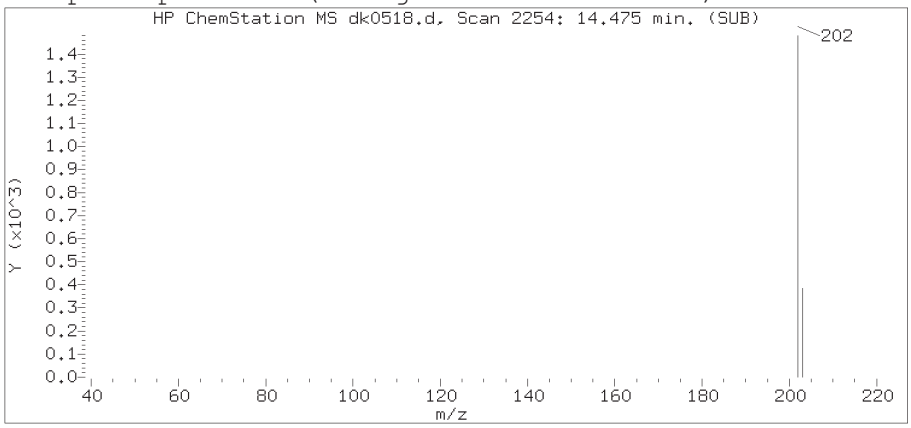
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/15/2013 at 17:52.
Target 3.5 esignature user ID: ceb05247

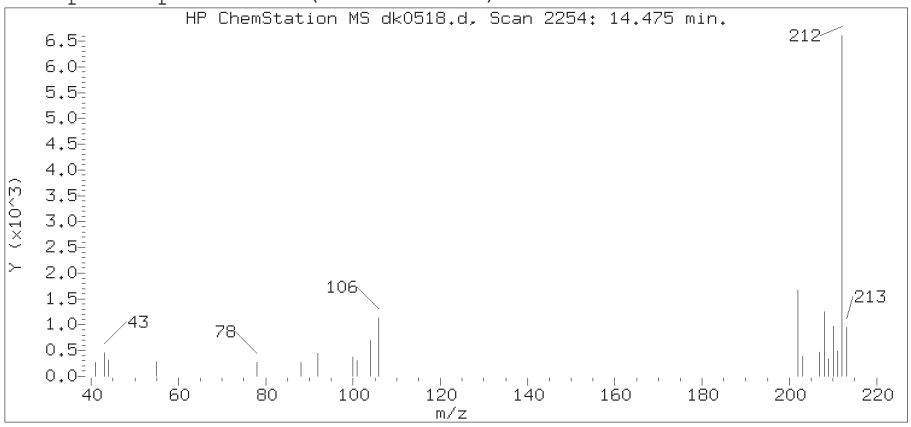
Reference Standard Spectrum for Pyrene

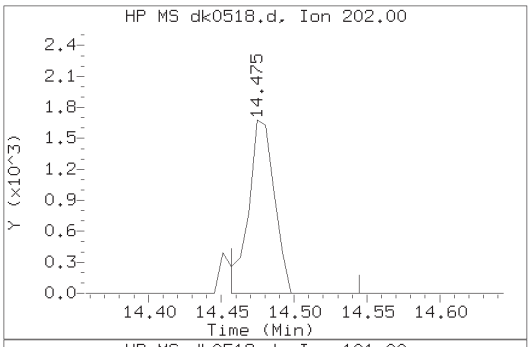


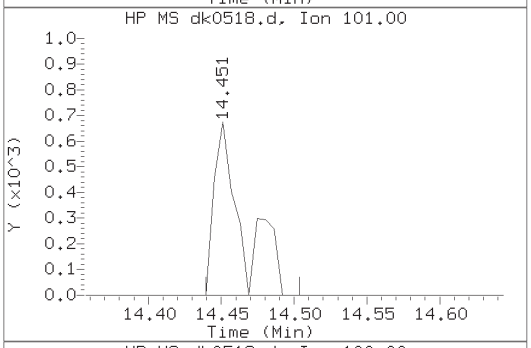
Sample Spectrum (Background Subtracted)

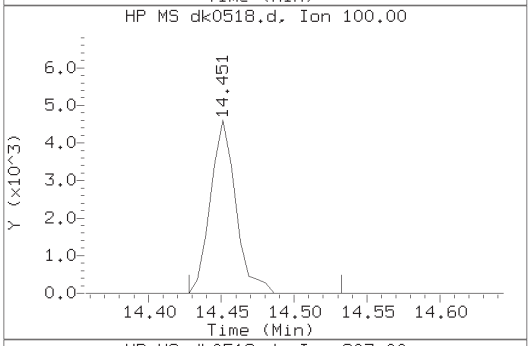


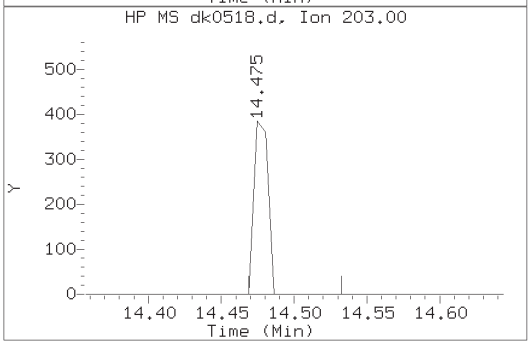
Sample Spectrum (Unaltered)











Data File: /chem/HP19760.i/13nov14b.b/dk0518.d Instrument ID: HP19760.i
Injection date and time: 15-NOV-2013 00:29 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 10:41 ceb05247

Sample Name: F1HERRE Lab Sample ID: 7263058RE

Compound Number	: 146
Compound Name	: Pyrene
Scan Number	: 2254
Retention Time (minutes)	: 14.475
Relative Retention Time	: 0.00040
Quant Ion	: 202.00
Area (flag)	: 2066
On-column Amount (ng/ul)	: 0.0266

Digitally signed by Catherine E. Bachman on 11/15/2013 at 17:52.
Target 3.5 esignature ID: ceb05247

FB2HE

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

7263060

Data file: /chem/HP18831.i/13nov08.b/hk0268.d
Data file Sample Info. Line: FB2HE;7263060;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 09-Nov-2013 05:22 jmg00346

Injection date and time: **08-NOV-2013 13:50**
Instrument ID: **HP18831.i** Batch: **13310WAG**

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745(0.006)	782	152	72170 (-29)	5.00	
48) Naphthalene-d8	8.680(0.000)	1114	136	276327 (-30)	5.00	
83) Acenaphthene-d10	11.466(0.006)	1592	164	167986 (-33)	5.00	
120) Phenanthrene-d10	13.354(0.006)	1916	188	286367 (-35)	5.00	
134) Pyrene-d10	15.307(0.006)	2251	212	347440 (-37)	5.00	
158) Perylene-d12	19.766(0.006)	3016	264	260769 (-38)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874(-0.001)	112	708317	35.343	71%		10 - 107
13) Phenol-d6	(1)	6.244(-0.001)	99	702575	25.490	51%		10 - 83
36) Nitrobenzene-d5	(2)	7.578(0.001)	82	524114	20.314	81%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.428(0.000)	172	947751	23.047	92%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515(-0.001)	330	206052	48.275	97%		22 - 150
137) Terphenyl-d14	(5)	15.622(0.000)	244	1227275	26.610	106%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
18) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) 4-Methylphenol	(1)			Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
39) Isophorone	(2)			Not Detected					0.1
40) 2-Nitrophenol	(2)			Not Detected					0.1
41) 2,4-Dimethylphenol	(2)			Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
46) 2,4-Dichlorophenol	(2)			Not Detected					0.1
49) Naphthalene	(2)			Not Detected					0.03
50) 4-Chloroaniline	(2)			Not Detected					0.1
53) Hexachlorobutadiene	(2)			Not Detected					0.1
55) Caprolactam	(2)			Not Detected					1
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:36. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP18831.i/13nov08.b/hk0268.d Injection date and time: **08-NOV-2013 13:50**
Data file Sample Info. Line: FB2HE;7263060;1;0;SAMPLE;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 09-Nov-2013 05:22 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

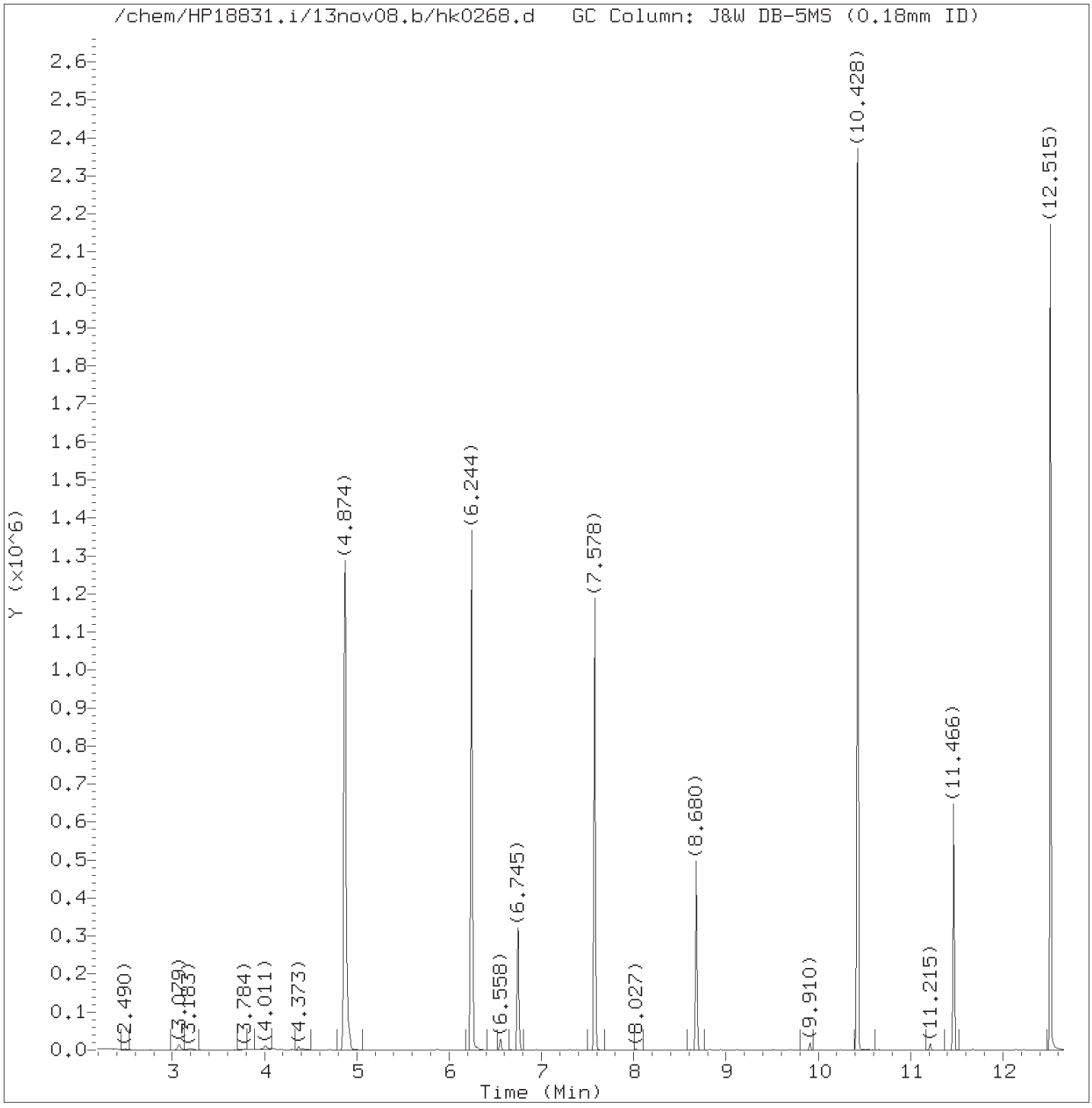
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/09/2013 at 05:36. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

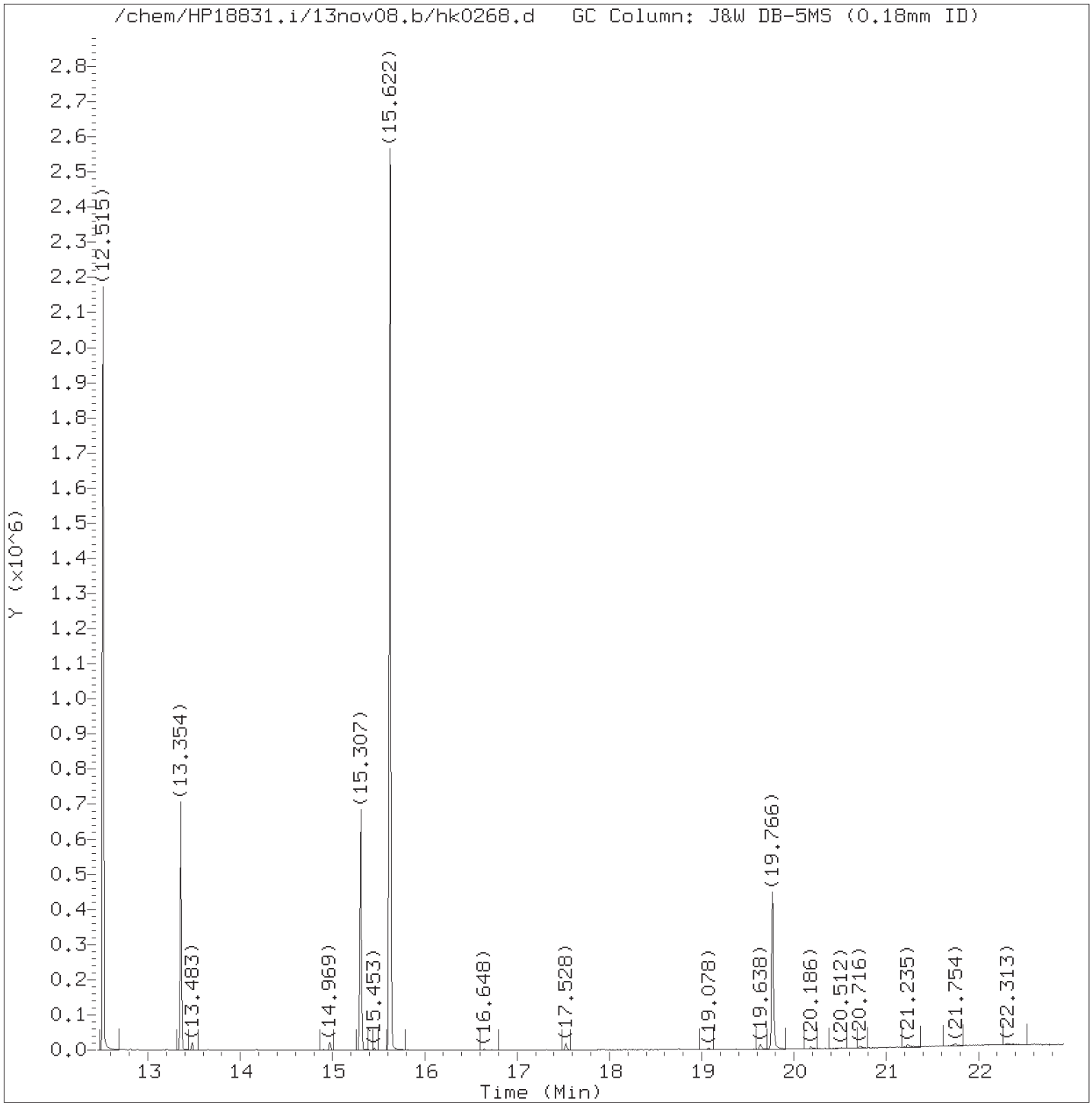
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:22 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:36.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:22 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:36.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 09-Nov-2013 05:22 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	708317	35.343
13)$Phenol-d6	(1)	6.244	99	702575	25.490
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	72170	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	524114	20.314
48)*Naphthalene-d8	(2)	8.680	136	276327	5.000
68)$2-Fluorobiphenyl	(3)	10.428	172	947751	23.047
83)*Acenaphthene-d10	(3)	11.466	164	167986	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	206052	48.275
120)*Phenanthrene-d10	(4)	13.354	188	286367	5.000
134)*Pyrene-d10	(5)	15.307	212	347440	5.000
137)$Terphenyl-d14	(5)	15.622	244	1227275	26.610
158)*Perylene-d12	(6)	19.766	264	260769	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/09/2013 at 05:36.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

FB2HE

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7263060

Sample wt/vol: 240 (g/mL) mL Lab File ID: hk0268.d

Level: (low/med) LOW Date Received: 11/04/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/07/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/08/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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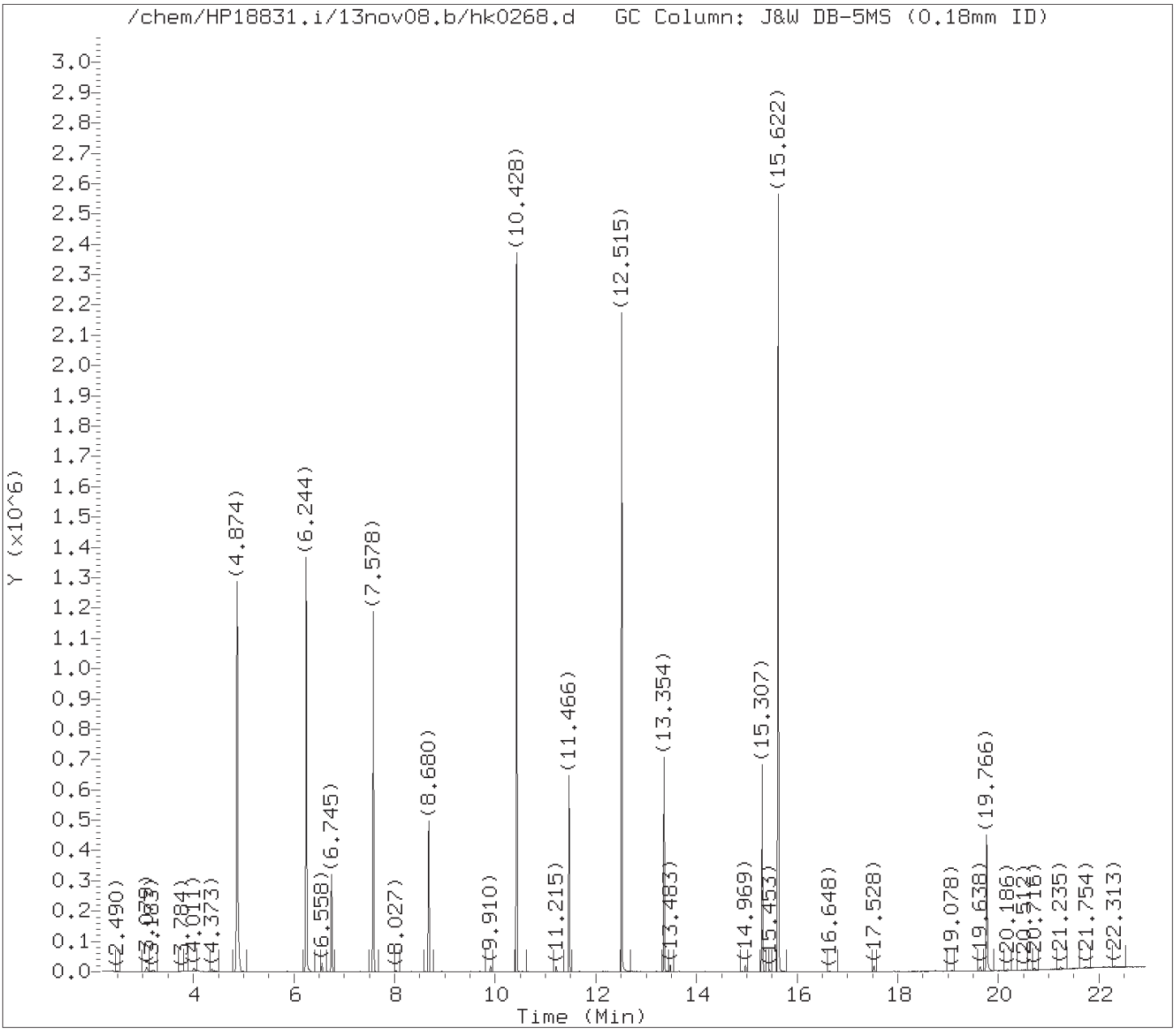
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

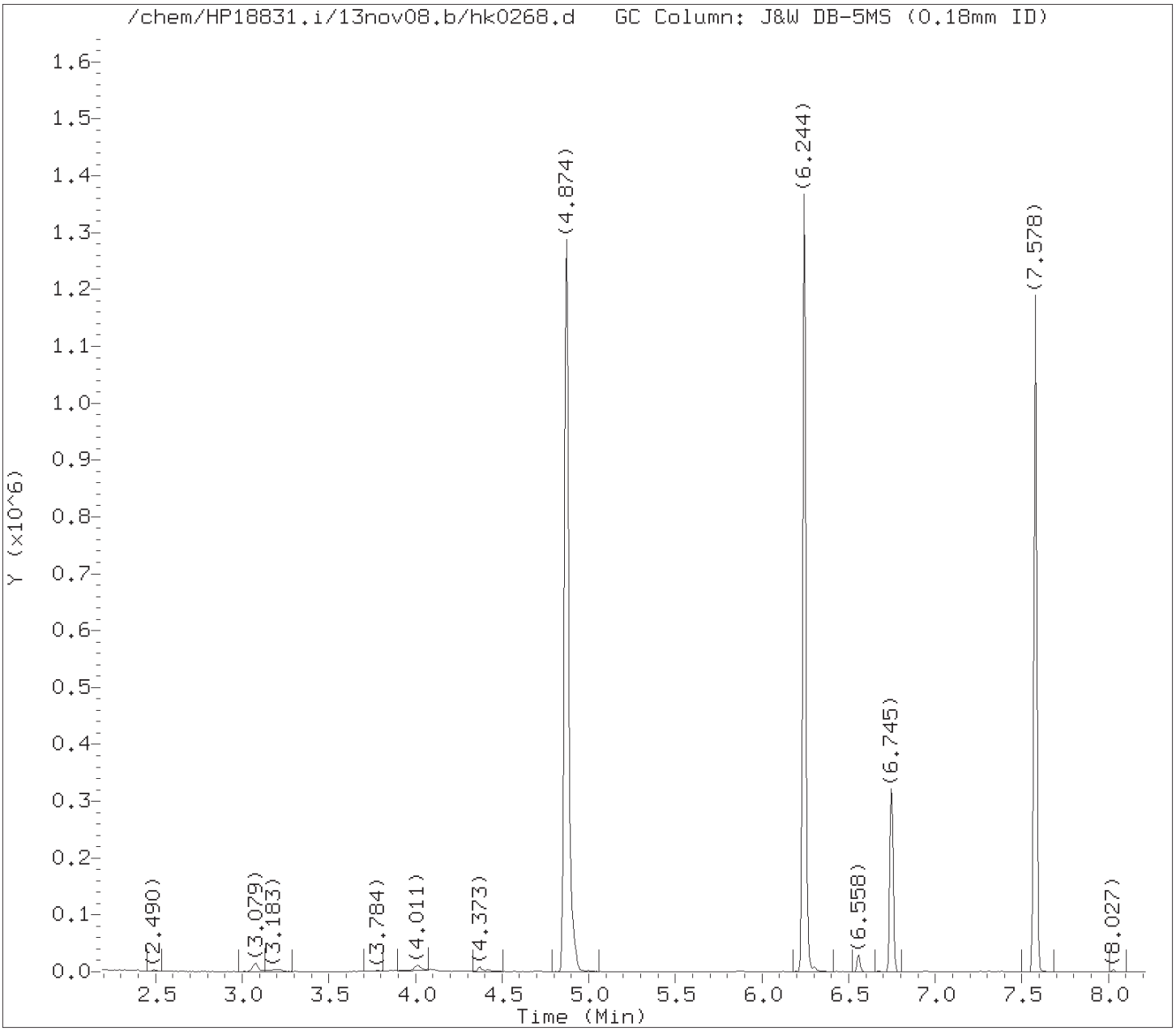
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

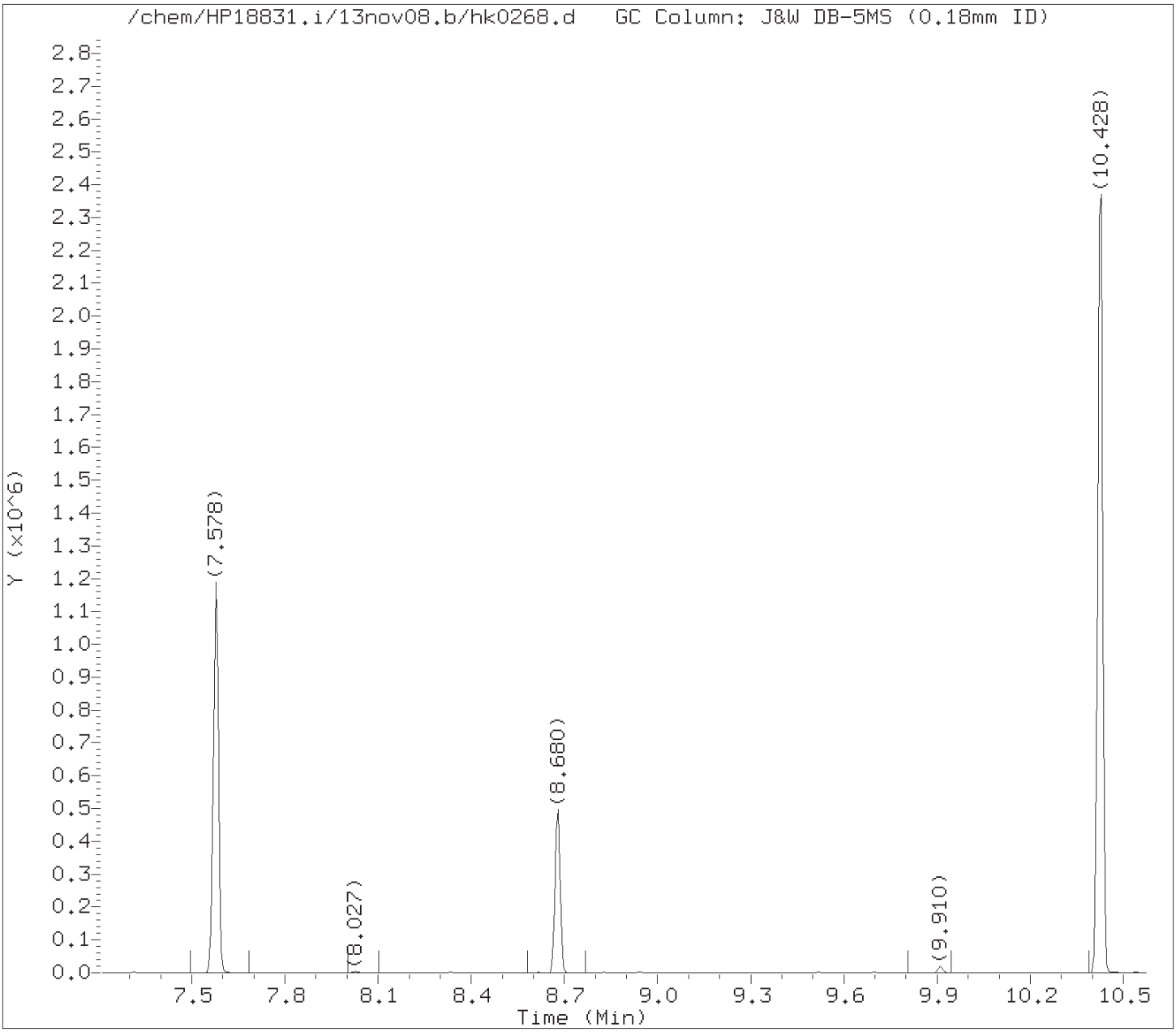
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

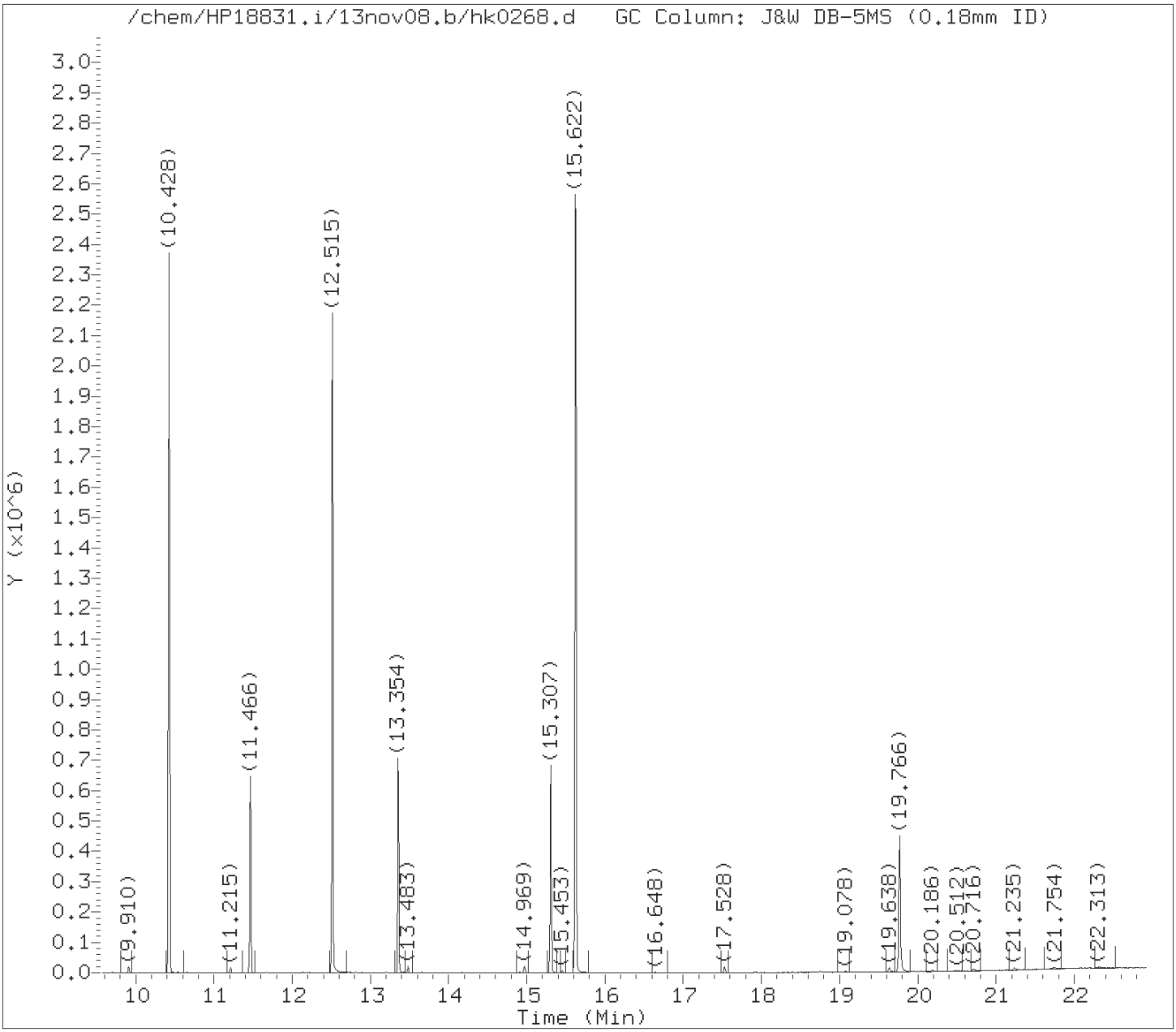
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

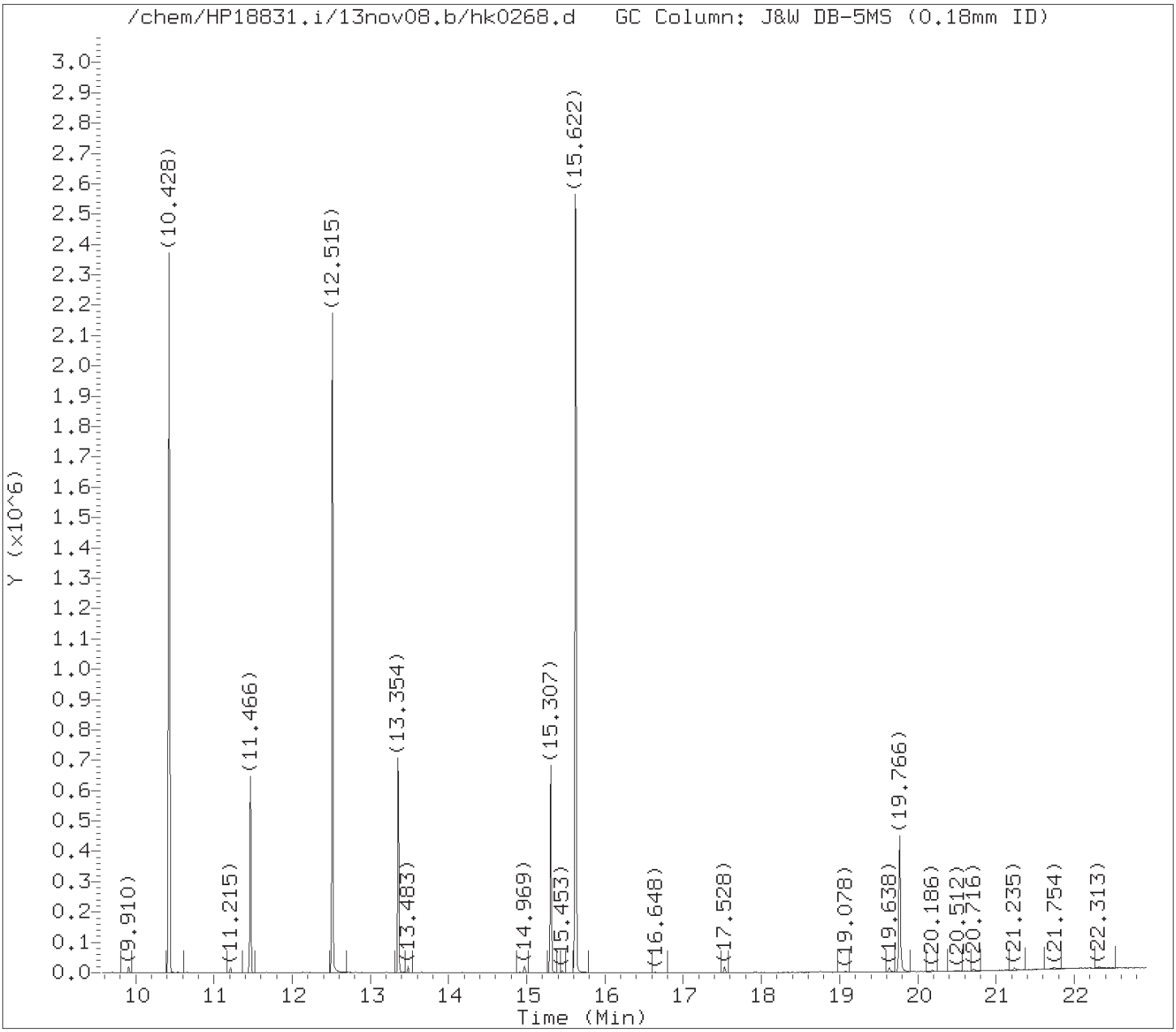
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

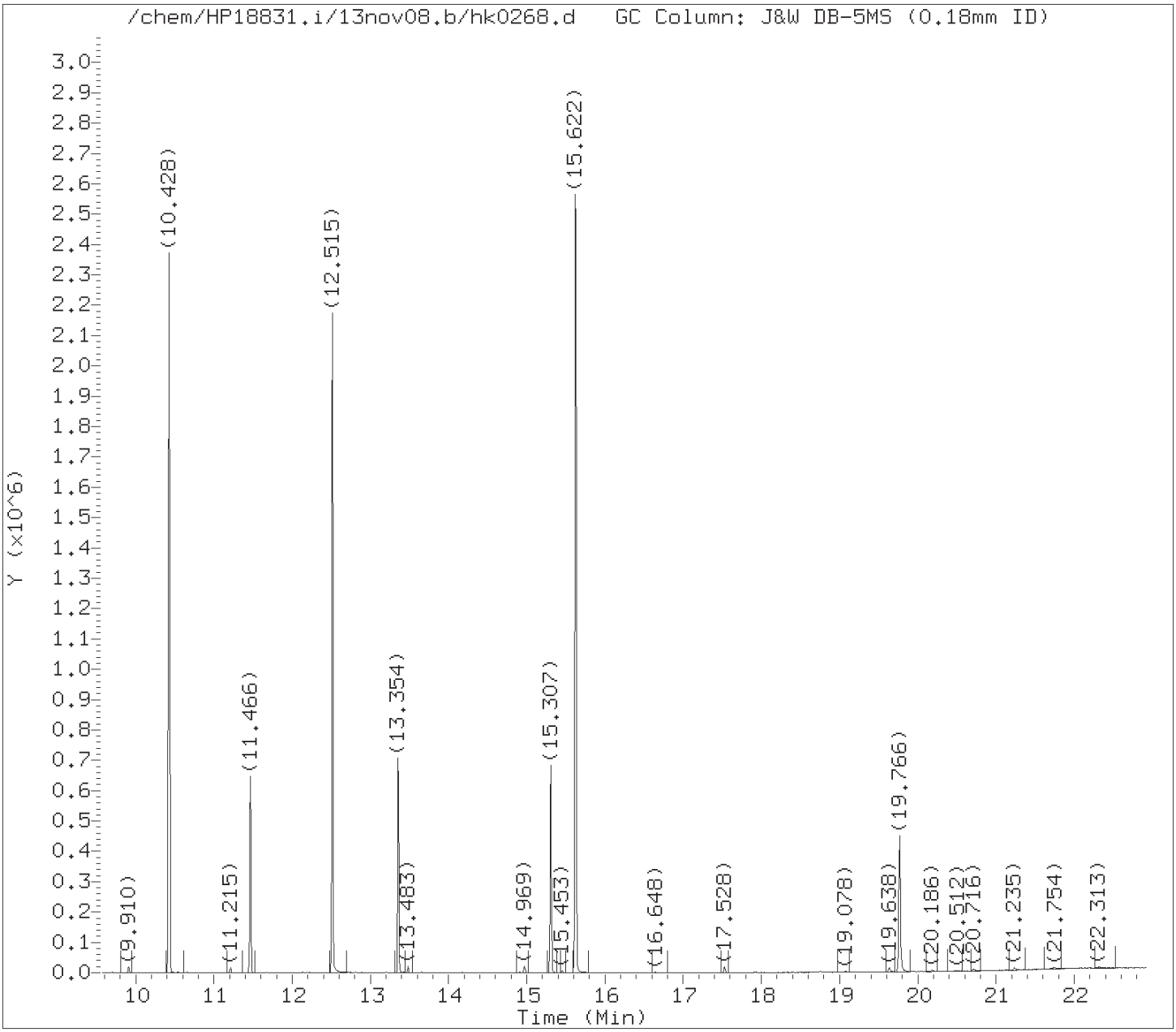
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: Phenanthrene-d10 at 13.354 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

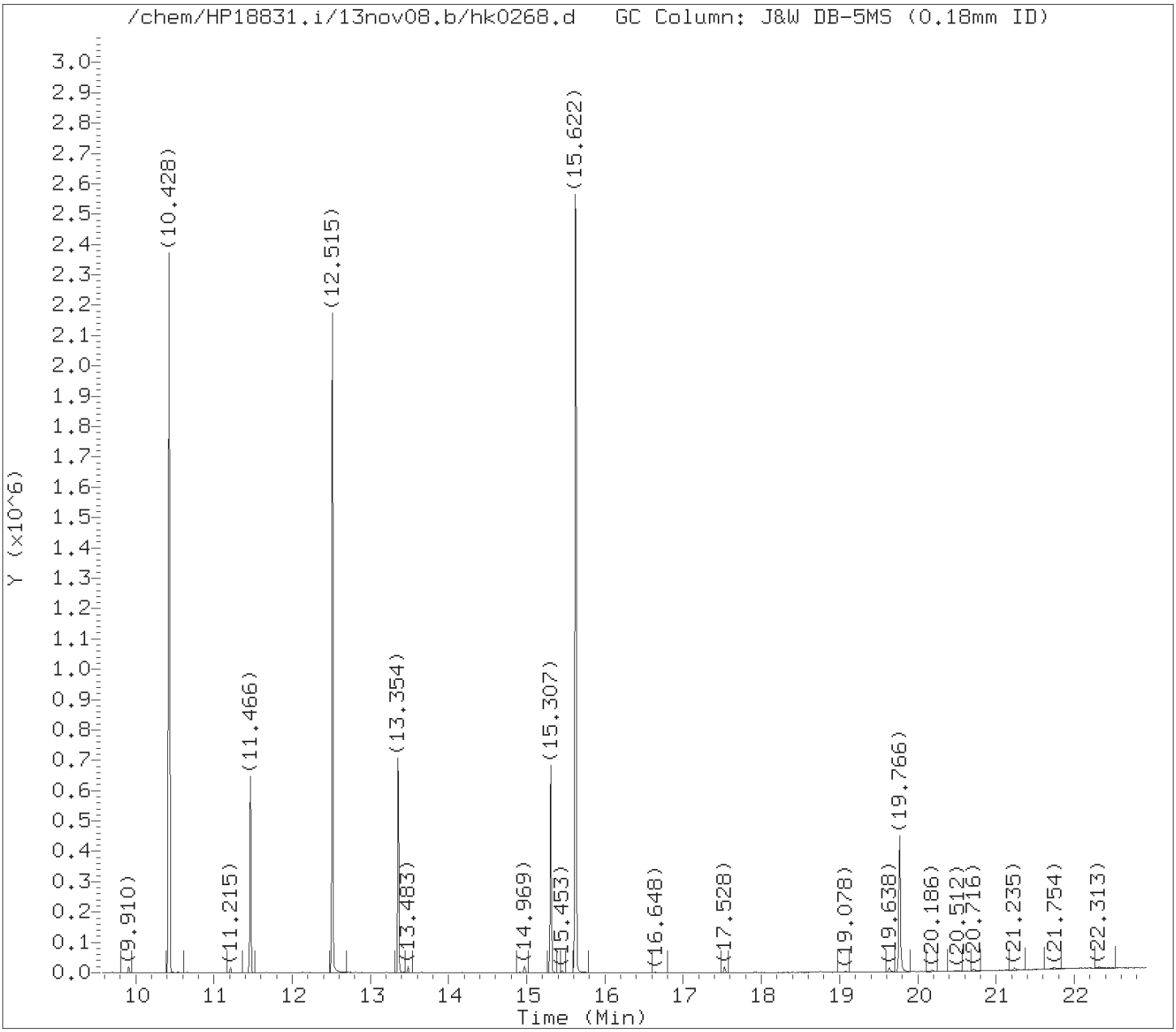
Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.537

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0268.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 13:50 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 20-Nov-2013 10:26 jmg00346

Sample Name: FB2HE Lab Sample ID: 7263060

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.537
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0268.d
Lab Smp Id: 7263060 Client Smp ID: FB2HE
Inj Date : 08-NOV-2013 13:50
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : FB2HE;7263060;1;0;SAMPLE;;;
Misc Info : 13310WAG;newall1;;240;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 0 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/20/2013 at 10:27.
Target 3.5 esignature user ID: jmg00346

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: mr 13 *** Shift #2 Analyst: *

Comment Code:
R = Reinjection necessary
S = Surrogate problem
NU = Not used
MR = Meets requirements
Cz = Confirms z, (z = I or X)
X = Sample sent to be reextracted
I = Internal Standard problem
F = Further dilution required
IUO = Internal use only
T = Injected outside valid tune period

Other problems or comments are as follows:

*
*
*
*

Data Directory Path is - C:\msdchem\1\DATA\13nov12a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	ck0400.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:20			nu
1	ck0400z.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:43			nu
1	ck0400y.D	50 NG/UL	DFTPP2843	12 Nov 2013	09:23			mr
2	ck0401.D	SSTD030	STD3083	12 Nov 2013	09:38			mr
3	ck0402.D	SSTD0.50	STD3083	12 Nov 2013	10:10			mr
9	ck0403.D	SSTD001	STD3083	12 Nov 2013	10:35			mr
4	ck0404.D	SSTD120	STD3083	12 Nov 2013	10:59			mr
5	ck0405.D	SSTD080	STD3083	12 Nov 2013	11:24			mr
6	ck0406.D	SSTD050	STD3083	12 Nov 2013	11:49			mr
7	ck0407.D	SSTD015	STD3083	12 Nov 2013	12:13			mr
8	ck0408.D	SSTD005	STD3083	12 Nov 2013	12:38			mr
3	ck0409.D	SSTD0.50	8270MDL3083	12 Nov 2013	13:03			mr
10	ck0410.D	SSTD0.10	PAHMDL3083	12 Nov 2013	13:27			mr
11	ck0411.D	SSTD050	8270ICV2463	12 Nov 2013	13:52			mr
12	ck0412.D	SSTD050	BASICV2463	12 Nov 2013	14:17			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: MC 13 *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

*

*

*

*

Data Directory Path is - C:\msdchem\1\data\13nov13a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0460.D	DFTPP	DFTPP	13 Nov 2013	08:29			mr
2	CK0461.D	SSTD3083	SSTD030	13 Nov 2013	08:44			mr
3	CK0462.D	SBLKWA3163	SBLKWA316	13 Nov 2013	09:13	13316WAA		mr
4	CK0463.D	316WALCS3	316WALCS	13 Nov 2013	09:37	13316WAA		mr
5	CK0464.D	316WALCSD3	316WALCSD	13 Nov 2013	10:02	13316WAA		mr
6	CK0465.D	11067	7272361	13 Nov 2013	10:26	13316WAA		nu
7	CK0466.D	11012	7272362	13 Nov 2013	10:51	13316WAA		nu
8	CK0467.D	11024	7272363	13 Nov 2013	11:16	13316WAA		nu
9	CK0468.D	S1111	7273602	13 Nov 2013	11:40	13316WAA		mr
6	CK0465a.D	11067	7272361	13 Nov 2013	12:05	13316WAA	100	mr
7	CK0466a.D	11012	7272362	13 Nov 2013	12:30	13316WAA	50	mr
8	CK0467a.D	11024	7272363	13 Nov 2013	12:55	13316WAA	20	mr
10	CK0469.D	SBLKLF3103	SBLKLF310	13 Nov 2013	13:20	13310SLF		mr
11	CK0470.D	310LFLCS3	310LFLCS	13 Nov 2013	13:44	13310SLF		mr
15	CK0474.D	GAAV1	7262294	13 Nov 2013	14:09	13310SLF		mr
16	CK0475.D	GAAV1MS	7262294	13 Nov 2013	14:34	13310SLF		mr
17	CK0476.D	GAAV1MSD	7262294	13 Nov 2013	14:58	13310SLF		mr
18	CK0477.D	GAAV2	7262296	13 Nov 2013	15:23	13310SLF		mr
19	CK0478.D	GAAV3	7262298	13 Nov 2013	15:48	13310SLF		mr
20	CK0479.D	GAAV4	7262300	13 Nov 2013	16:12	13310SLF		mr
21	CK0480.D	GAAV5	7262302	13 Nov 2013	16:37	13310SLF		mr
22	CK0481.D	GAAV6	7262304	13 Nov 2013	17:02	13310SLF		mr
23	CK0482.D	GAAV7	7262306	13 Nov 2013	17:26	13310SLF	5	mr
24	CK0483.D	GAAV8	7262308	13 Nov 2013	17:51	13310SLF		mr
25	CK0484.D	PHERC	7263054	13 Nov 2013	18:15	13310SLF		mr
26	CK0485.D	OHERC	7263055	13 Nov 2013	18:40	13310SLF		mr
27	CK0486.D	R2041	7265225	13 Nov 2013	19:04	13310SLF	5	mr
28	CK0487.D	R2042	7265226	13 Nov 2013	19:29	13310SLF	5	nu
29	CK0488.D	R2043	7265227	13 Nov 2013	19:54	13310SLF		mr
30	CK0489.D	R2E16	7265234	13 Nov 2013	20:18	13310SLF		mr
31	CK0490.D	2F142	7265241	13 Nov 2013	20:43	13310SLF		t,nu
32	CK0491.D	R2121	7265242	13 Nov 2013	21:08	13310SLF	5	
33	CK0492.D	R2123	7265244	13 Nov 2013	21:32	13310SLF		
34	CK0493.D	2D141	7265245	13 Nov 2013	21:56	13310SLF		
35	CK0494.D	DUPX1	7265246	13 Nov 2013	22:21	13310SLF		

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: BC *** Shift #2 Analyst: _____

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = 1 or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

Data Directory Path is - C:\msdchem\1\data\13oct29\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DJ1150.D	DFTPP12.5	DFTPP1863	29 Oct 2013	07:25			nu
2	DJ1151.D	SSTD7.5	STD2813	29 Oct 2013	07:41			nu
3	DJ1152.D	SSTD0.125	STD2813	29 Oct 2013	08:13			nu
4	DJ1153.D	SSTD30	STD2813	29 Oct 2013	08:40			nu
5	DJ1154.D	SSTD0.25	STD2813	29 Oct 2013	09:06			nu
1	DJ1180.D	DFTPP12.5	DFTPP1863	29 Oct 2013	11:14			mr
2	DJ1181.D	SSTD7.5	STD2813	29 Oct 2013	11:28			mr
3	DJ1182.D	SSTD0.125	STD2813	29 Oct 2013	11:55			mr
4	DJ1183.D	SSTD30	STD2813	29 Oct 2013	12:21			mr
5	DJ1184.D	SSTD0.25	STD2813	29 Oct 2013	12:48			mr
6	DJ1185.D	SSTD1.25	STD2813	29 Oct 2013	13:15			mr
7	DJ1186.D	SSTD3.75	STD2813	29 Oct 2013	13:42			mr
8	DJ1187.D	SSTD12.5	STD2813	29 Oct 2013	14:08			mr
9	DJ1188.D	SSTD20	STD2813	29 Oct 2013	14:35			mr
3	DJ1189.D	SSTD0.125	MDL2813	29 Oct 2013	15:02			mr
10	DJ1190.D	SSTD0.025	PAH2813	29 Oct 2013	15:28			mr
11	DJ1191.D	SSTD12.5	ICV2463	29 Oct 2013	15:55			mr
12	DJ1192.D	SSTD12.5	BASICV2463	29 Oct 2013	16:22			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst:_____ *** Shift #2 Analyst: CBS247

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____
_____
_____
_____

Data Directory Path is - C:\msdchem\1\data\13nov14b\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DK0510.D	DFTPP50	DFTPP2843	14 Nov 2013	19:30			nu
1	DK0510a.D	DFTPP50	DFTPP2843	14 Nov 2013	19:43			nu
1	DK0510b.D	DFTPP50	DFTPP2843	14 Nov 2013	20:11			mr
2	DK0511.D	SSTD12.5	STD2813	14 Nov 2013	20:25			mr
2	DK0512.D	SSTD12.5	STD2813	14 Nov 2013	21:01			mr
3	DK0513.D	SBLKWK3164	SBLKWK316	14 Nov 2013	22:15	13316WAK		mr
4	DK0514.D	316WKLCS4	316WKLCS	14 Nov 2013	22:42	13316WAK		mr
5	DK0515.D	OB-1R	7270420	14 Nov 2013	23:08	13316WAK		mr
6	DK0516.D	OB-1RMS	7270421	14 Nov 2013	23:35	13316WAK		mr
7	DK0517.D	OB-1RMSD	7270422	15 Nov 2013	00:02	13316WAK		mr
8	DK0518.D	F1HERRE	7263058RE	15 Nov 2013	00:29	13316WAK		mr
9	DK0519.D	115B8RE	7263093RE	15 Nov 2013	00:55	13316WAK		mr
10	DK0520.D	F1141RE	7263094RE	15 Nov 2013	01:22	13316WAK		mr
11	DK0521.D	4-9R-	7267302	15 Nov 2013	01:49	13316WAK		mr
12	DK0522.D	4-10R	7267303	15 Nov 2013	02:16	13316WAK		mr
13	DK0523.D	T-1--	7268209	15 Nov 2013	02:42	13316WAK		mr
14	DK0524.D	-INT-	7268211	15 Nov 2013	03:09	13316WAK		mr
15	DK0525.D	3881X	7268551	15 Nov 2013	03:36	13316WAK		mr
16	DK0527.D	F1178	7268555	15 Nov 2013	04:03	13316WAK		mr
17	DK0528.D	3861X	7268560	15 Nov 2013	04:29	13316WAK		mr
18	DK0529.D	322A9	7268620	15 Nov 2013	04:56	13316WAK		mr
19	DK0530.D	F117i	7268621	15 Nov 2013	05:23	13316WAK		mr
20	DK0531.D	SW723	7269118	15 Nov 2013	05:49	13316WAK		mr
21	DK0532.D	EW-1R	7270419	15 Nov 2013	06:16	13316WAK		mr
22	DK0533.D	OBD1R	7270424	15 Nov 2013	06:43	13316WAK		mr
23	DK0534.D	FD738	7270839	15 Nov 2013	07:10	13316WAK		mr
24	DK0535.D	FD739	7270841	15 Nov 2013	07:37	13316WAK		mr
25	DK0526.D	3871X	7268554	15 Nov 2013	08:03	13316WAK	10	mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP11165 **HP #07**

*** Shift #1 Analyst: mm198 *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov09a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	GK0310.D	DFTPP	DFTPP2843	09 Nov 2013	17:46			NU
2	GK0311.D	SSTD030	STD3083	09 Nov 2013	18:04			NU
3	GK0312.D	SSTD050	PDA2843	09 Nov 2013	18:32			NU
1	GK0320.D	DFTPP	DFTPP2843	09 Nov 2013	19:07			NU
1	GK0320Z.D	DFTPP	DFTPP2843	09 Nov 2013	19:35			NU
1	GK0320Y.D	DFTPP	DFTPP2843	09 Nov 2013	19:53			MR
2	GK0321.D	SSTD030	STD3083	09 Nov 2013	20:09			MR
3	GK0322.D	SSTD0.5	STD3083	09 Nov 2013	20:49			MR
4	GK0323.D	SSTD120	STD3083	09 Nov 2013	21:16			MR
5	GK0324.D	SSTD080	STD3083	09 Nov 2013	21:42			MR
6	GK0325.D	SSTD050	STD3083	09 Nov 2013	22:09			MR
7	GK0326.D	SSTD015	STD3083	09 Nov 2013	22:35			MR
8	GK0327.D	SSTD005	STD3083	09 Nov 2013	23:01			MR
9	GK0328.D	SSTD001	STD3083	09 Nov 2013	23:27			MR
3	GK0329.D	SSTD0.5	8270MDL3083	09 Nov 2013	23:54			MR
10	GK0330.D	SSTD0.1	PAHMDL3083	10 Nov 2013	00:20			MR
11	GK0331.D	SSTD050	ICV2463	10 Nov 2013	00:47			MR
13	GK0333.D	SSTD050	BAS2813	10 Nov 2013	01:13			MR
14	GK0334.D	SSTD120	BAS2813	10 Nov 2013	01:39			MR
15	GK0335.D	SSTD080	BAS2813	10 Nov 2013	02:05			MR
16	GK0336.D	SSTD030	BAS2813	10 Nov 2013	02:31			MR
17	GK0337.D	SSTD015	BAS2813	10 Nov 2013	02:57			MR
18	GK0338.D	SSTD005	BAS2813	10 Nov 2013	03:23			MR
19	GK0339.D	SSTD001	BASMDL2813	10 Nov 2013	03:51			MR
12	GK0332.D	SSTD050	BASICV2463	10 Nov 2013	04:19			MR

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP11165 **HP #07**

*** Shift #1 Analyst: CAM *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov11a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	GK0390.D	DFTPP	DFTPP2843	11 Nov 2013	10:40			mr
2	GK0391.D	SSTD030	STD3083	11 Nov 2013	10:57			mr
3	GK0392.D	SSTD050	PDA2843	11 Nov 2013	11:33			mr
4	GK0393.D	SSTD050	BAS3153	11 Nov 2013	12:11			mr
5	GK0394.D	SSTD005	BAS3153	11 Nov 2013	12:37			mr
6	GK0395.D	SSTD015	BAS3153	11 Nov 2013	13:03			mr
7	GK0396.D	SSTD030	BAS3153	11 Nov 2013	13:32			mr
8	GK0397.D	SSTD080	BAS3153	11 Nov 2013	13:59			mr
9	GK0398.D	SSTD120	BAS3153	11 Nov 2013	14:26			mr
10	GK0399.D	SSTD050	BASICV2463	11 Nov 2013	14:52			nu
100	GK0399a.D	SSTD050	BASICV2463	11 Nov 2013	15:19			mr
11	GK0400.D	SBLKLD3087	SBLKLD308	11 Nov 2013	15:47	13308SLD		mr
12	GK0401.D	308LDLCS7	308LDLCS	11 Nov 2013	16:14	13308SLD		mr
32	GK0421.D	I15--	7261462	11 Nov 2013	16:40	13306SLF	10	mr
13	GK0402.D	182--	7257840	11 Nov 2013	17:07	13308SLD		mr
14	GK0403.D	182--MS	7257840	11 Nov 2013	17:33	13308SLD		mr
15	GK0404.D	182--MSD	7257840	11 Nov 2013	17:59	13308SLD		mr
16	GK0405.D	183B2	7257841	11 Nov 2013	18:25	13308SLD	10	mr
17	GK0406.D	183B5	7257842	11 Nov 2013	18:51	13308SLD		mr
18	GK0407.D	185B2	7257843	11 Nov 2013	19:18	13308SLD		mr
19	GK0408.D	185B5	7257844	11 Nov 2013	19:44	13308SLD		mr
20	GK0409.D	SB200	7257845	11 Nov 2013	20:10	13308SLD	10	mr
21	GK0410.D	SB201	7257846	11 Nov 2013	20:36	13308SLD		mr
22	GK0411.D	SB202	7257847	11 Nov 2013	21:03	13308SLD	10	mr
23	GK0412.D	SB203	7257848	11 Nov 2013	21:30	13308SLD		mr
24	GK0413.D	SB204	7257849	11 Nov 2013	21:57	13308SLD		mr
25	GK0414.D	BLT01	7259482	11 Nov 2013	22:23	13308SLD		t
26	GK0415.D	BLT03	7259483	11 Nov 2013	22:49	13308SLD		t
27	GK0416.D	BLT05	7259484	11 Nov 2013	23:15	13308SLD		t
28	GK0417.D	BLT07	7259485	11 Nov 2013	23:41	13308SLD		t
29	GK0418.D	BLT06	7259486	12 Nov 2013	00:15	13308SLD		t
30	GK0419.D	BLT04	7259487	12 Nov 2013	00:42	13308SLD		t

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP11165 **HP #07**

*** Shift #1 Analyst: RSC *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov13a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	GK0510.D	DFTPP050	DFTPP2843	13 Nov 2013	11:38			NU
1	GK0510z.D	DFTPP050	DFTPP2843	13 Nov 2013	11:50			MR
2	GK0511.D	SSTD030	STD3083	13 Nov 2013	12:09			MR
3	GK0512.D	SSTD050	PDA2843	13 Nov 2013	12:44			MR
4	GK0513.D	SSTD030	BAS3153	13 Nov 2013	13:10			MR
3	GK0514.D	SBLKWD3137	SBLKWD313	13 Nov 2013	13:49	13313WAD		MR
4	GK0515.D	313WDLCS7	313WDLCS	13 Nov 2013	14:15	13313WAD		MR
5	GK0516.D	313WDLCSD7	313WDLCSD	13 Nov 2013	14:42	13313WAD		MR
6	GK0517.D	SBLKLC3137	SBLKLC313	13 Nov 2013	15:08	13313SLC		MR
7	GK0518.D	313LCLCS7	313LCLCS	13 Nov 2013	15:37	13313SLC		MR
8	GK0519.D	SBLKLG3107	SBLKLG310	13 Nov 2013	16:04	13310SLG		MR
9	GK0520.D	310LGLCS7	310LGLCS	13 Nov 2013	16:31	13310SLG		MR
10	GK0521.D	004G3	7263082	13 Nov 2013	16:58	13313SLC		MR
11	GK0522.D	004G3MS	7263083	13 Nov 2013	17:24	13313SLC		MR
12	GK0523.D	004G3MSD	7263084	13 Nov 2013	17:50	13313SLC		MR
13	GK0524.D	UTSSP	7262714	13 Nov 2013	18:16	13310SLG		MR
14	GK0525.D	UTSSPMS	7262714	13 Nov 2013	18:43	13310SLG		MR
15	GK0526.D	UTSSPMSD	7262714	13 Nov 2013	19:09	13310SLG		MR
16	GK0527.D	70323	7269574	13 Nov 2013	19:35	13313WAD		MR
17	GK0528.D	70324	7269575	13 Nov 2013	20:01	13313WAD		MR
18	GK0529.D	194AS	7267406	13 Nov 2013	20:30	13313SLC		MR
19	GK0530.D	195AS	7267408	13 Nov 2013	20:56	13313SLC		MR
20	GK0531.D	196AS	7267410	13 Nov 2013	21:22	13313SLC		MR
21	GK0532.D	197AS	7267412	13 Nov 2013	21:48	13313SLC		MR
22	GK0533.D	198AS	7267414	13 Nov 2013	22:15	13313SLC		MR
23	GK0534.D	199AS	7267416	13 Nov 2013	22:41	13313SLC		MR
24	GK0535.D	200AS	7267418	13 Nov 2013	23:07	13313SLC		MR
25	GK0536.D	201AS	7267420	13 Nov 2013	23:33	13313SLC		MR

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP11165 **HP #07**

*** Shift #1 Analyst: RBL *** Shift #2 Analyst: *

Comment Code:

R = Reinjection necessary		X =	Sample sent to be reextracted
S = Surrogate problem		I =	Internal Standard problem
NU = Not used		F =	Further dilution required
MR = Meets requirements		IUO =	Internal use only
Cz = Confirms z, (z = I or X)		T =	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov14\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	GK0550.D	DFTPP	DFTPP2843	14 Nov 2013	00:50			MR
2	GK0551.D	SSTD030	STD3083	14 Nov 2013	01:14			MR
3	GK0552.D	SSTD030	BAS3153	14 Nov 2013	01:40			MR
4	GK0553.D	SSTD030	PDA2843	14 Nov 2013	02:08			MR
5	GK0553A.D	SSTD050	AAP2033	14 Nov 2013	02:35			MR
11	GK0554.D	SBLKLF3167	SBLKLF316	14 Nov 2013	03:02	13316SLF		MR
12	GK0555.D	316LFLCS7	316LFLCS	14 Nov 2013	03:29	13316SLF		MR
13	GK0556.D	316LFLCSD7	316LFLCSD	14 Nov 2013	03:55	13316SLF		MR
14	GK0557.D	SBLKLB3147	SBLKLB314	14 Nov 2013	04:21	13314SLB		MR
15	GK0558.D	314LBLCS7	314LBLCS	14 Nov 2013	04:47	13314SLB		MR
16	GK0559.D	SBLKWJ3167	SBLKWJ316	14 Nov 2013	05:13	13316WAJ		MR
17	GK0560.D	316WJLCS7	316WJLCS	14 Nov 2013	05:39	13316WAJ		MR
18	GK0561.D	503B1RE	7249990RE	14 Nov 2013	06:05	13316WAJ		MR
19	GK0562.D	503B1REMS	7249991RE	14 Nov 2013	06:31	13316WAJ		MR
20	GK0563.D	503B1REMSD	7249992RE	14 Nov 2013	06:57	13316WAJ		MR
21	GK0564.D	115B1RE	7246099RE	14 Nov 2013	07:23	13316WAJ		MR
22	GK0565.D	W510ARE	7249986RE	14 Nov 2013	07:50	13316WAJ		MR
23	GK0566.D	W503ARE	7249989RE	14 Nov 2013	08:16	13316WAJ		MR
24	GK0567.D	503B2RE	7249993RE	14 Nov 2013	08:42	13316WAJ		MR
25	GK0568.D	W509ARE	7249994RE	14 Nov 2013	09:08	13316WAJ		MR
26	GK0569.D	203AS	7267423	14 Nov 2013	09:37	13313SLC		MR
27	GK0570.D	WHERC	7263052	14 Nov 2013	10:04	13313SLC	20	MR
28	GK0571.D	XHERC	7263053	14 Nov 2013	10:30	13313SLC	20	MR
29	GK0572.D	002B1	7263076	14 Nov 2013	10:58	13313SLC		MR
30	GK0573.D	002H1	7263077	14 Nov 2013	11:25	13313SLC		MR
31	GK0574.D	003B3	7263078	14 Nov 2013	11:52	13313SLC		MR
32	GK0575.D	003H1	7263079	14 Nov 2013	12:18	13313SLC		MR
33	GK0576.D	004C3	7263080	14 Nov 2013	12:45	13313SLC		MR
34	GK0577.D	D1112	7263081	14 Nov 2013	13:11	13313SLC		T
35	GK0578.D	005B3	7263086	14 Nov 2013	13:38	13313SLC		T
36	GK0579.D	005G3	7263087	14 Nov 2013	14:04	13313SLC		T
37	GK0580.D	G05G5	7268612	14 Nov 2013	14:30	13316SLF	10	T
38	GK0581.D	E14--	7268561	14 Nov 2013	14:56	13314SLB	10	T
39	GK0582.D	E14--MS	7268561	14 Nov 2013	15:22	13314SLB	10	T
40	GK0583.D	E14--MSD	7268561	14 Nov 2013	15:51	13314SLB	10	T
41	GK0584.D	2069-	7261465	14 Nov 2013	16:18	13314SLB	10	T
42	GK0585.D	COMP6	7270417	14 Nov 2013	16:45	13314SLB	10	T

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP18831 **HP #08**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

Data Directory Path is - C:\msdchem\1\data\13oct28b\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	HJ1360.D	DFTPP	DFTPP1863	28 Oct 2013	23:00			mr
2	HJ1361.D	SSTD7.5	STD2813	28 Oct 2013	23:13			mr
3	HJ1362.D	SSTD030	STD2813	29 Oct 2013	00:07			mr
4	HJ1363.D	SSTD020	STD2813	29 Oct 2013	00:36			mr
5	HJ1364.D	SSTD12.5	STD2813	29 Oct 2013	01:05			mr
6	HJ1365.D	SSTD3.75	STD2813	29 Oct 2013	01:34			mr
7	HJ1366.D	SSTD1.25	STD2813	29 Oct 2013	02:03			mr
8	HJ1367.D	SSTD0.25	STD2813	29 Oct 2013	02:32			mr
9	HJ1368.D	SSTD.125	STD2553	29 Oct 2013	03:02			mr
9	HJ1369.D	SSTD.125	STDMDL2553	29 Oct 2013	03:31			mr
10	HJ1370.D	SSTD.025	STDPAH2813	29 Oct 2013	03:59			mr
11	HJ1371.D	SSTD12.5	ICV2463	29 Oct 2013	04:28			mr
12	HJ1372.D	SSTD12.5	BASICV2463	29 Oct 2013	04:57			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP18831 **HP #08**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____

Comment Code:

R = Reinjection necessary	X = Sample sent to be reextracted
S = Surrogate problem	I = Internal Standard problem
NU = Not used	F = Further dilution required
MR = Meets requirements	IUO = Internal use only
Cz = Confirms z, (z = T or X)	T = Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov08\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	HK0250.D	DFTPP12.5	DFTPP1863	08 Nov 2013	04:18			mr
2	HK0251.D	SSTD7.5	STD2813	08 Nov 2013	04:33			mr
3	HK0252.D	SBLKWG3108	SBLKWG310	08 Nov 2013	05:05	13310WAG		mr
4	HK0253.D	310WGLCS8	310WGLCS	08 Nov 2013	05:34	13310WAG		mr
5	HK0254.D	310WGLCSD8	310WGLCSD	08 Nov 2013	06:03	13310WAG		mr
6	HK0255.D	1560TRE	7252510RE	08 Nov 2013	06:32	13310WAG		mr
7	HK0256.D	3-304RE	7259172RE	08 Nov 2013	07:02	13310WAG		mr
24	HK0273.D	1029E	7265270	08 Nov 2013	07:31	13310WAG		mr
2	HK0251a.D	SECC7.5	STD2813	08 Nov 2013	08:00			mr
8	HK0257.D	PAB3S	7263022	08 Nov 2013	08:29	13310WAG		runasd10
9	HK0258.D	PAB3I	7263023	08 Nov 2013	08:58	13310WAG		
10	HK0259.D	PAB3D	7263024	08 Nov 2013	09:27	13310WAG		
11	HK0260.D	PAB4S	7263025	08 Nov 2013	09:57	13310WAG		
12	HK0261.D	PAB4I	7263026	08 Nov 2013	10:26	13310WAG		
13	HK0262.D	PAB4D	7263027	08 Nov 2013	10:55	13310WAG		
14	HK0263.D	PABEB	7263028	08 Nov 2013	11:24	13310WAG		mr
15	HK0264.D	FFHEC	7263051	08 Nov 2013	11:53	13310WAG		mr
16	HK0265.D	DDHER	7263056	08 Nov 2013	12:22	13310WAG		mr
17	HK0266.D	EEHER	7263057	08 Nov 2013	12:51	13310WAG		mr
18	HK0267.D	F1HER	7263058	08 Nov 2013	13:21	13310WAG		mr
19	HK0268.D	FB2HE	7263060	08 Nov 2013	13:50	13310WAG		mr
20	HK0269.D	F1112	7263075	08 Nov 2013	14:19	13310WAG		mr
21	HK0270.D	114C4	7263092	08 Nov 2013	14:48	13310WAG		mr
22	HK0271.D	115B8	7263093	08 Nov 2013	15:17	13310WAG		mr
23	HK0272.D	F1141	7263094	08 Nov 2013	15:47	13310WAG		mr

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

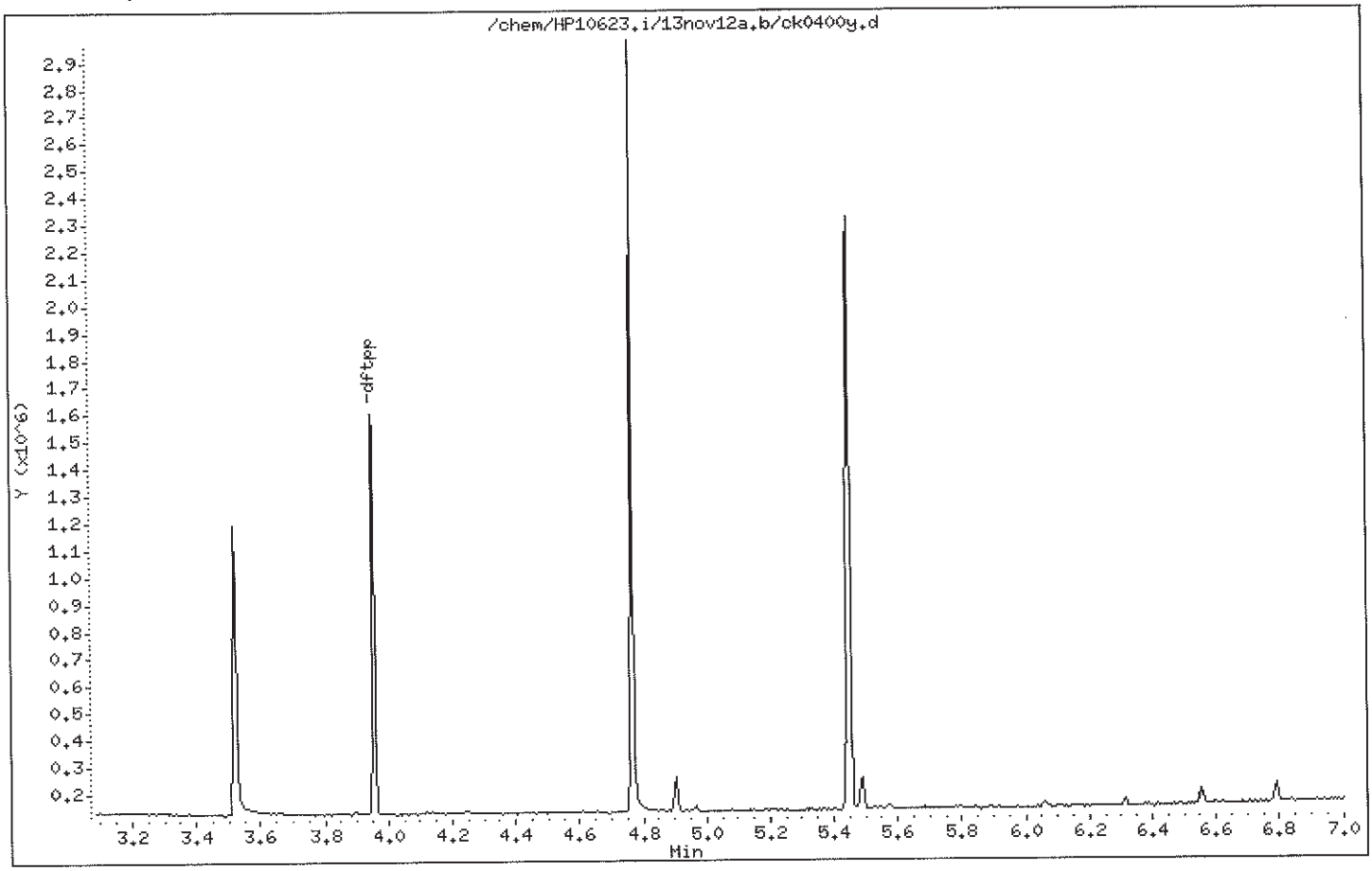
Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

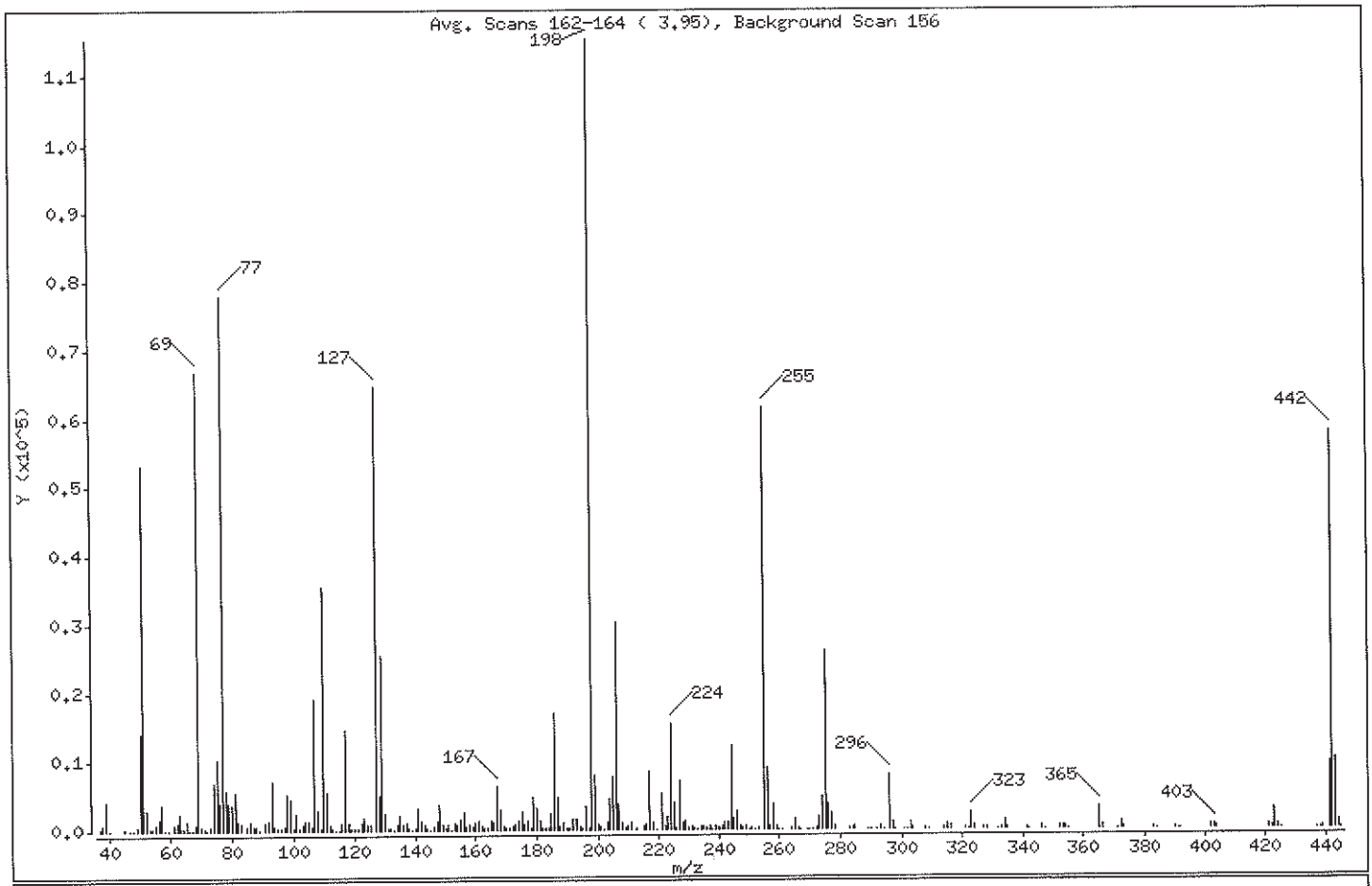
Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.32
68	Less than 2.00% of mass 69	0.74 (1.28)
69	Mass 69 relative abundance	57.87
70	Less than 2.00% of mass 69	0.39 (0.67)
127	40.00 - 60.00% of mass 198	56.14
197	Less than 1.00% of mass 198	0.33
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 30.00% of mass 198	22.54
365	Greater than 1.00% of mass 198	2.68
441	Present, but less than mass 443	8.26
442	40.00 - 99.99% of mass 198	50.09
443	17.00 - 23.00% of mass 442	8.79 (17.55)

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	204	118.00	1151	192.00	1652	272.00	203
38.00	685	119.00	337	193.00	1487	273.00	1806
39.00	4172	120.00	241	194.00	438	274.00	4671
40.00	132	121.00	307	195.00	245	275.00	25984
45.00	181	122.00	1112	196.00	3564	276.00	3732
47.00	56	123.00	1983	197.00	375	277.00	2413
48.00	50	124.00	901	198.00	115312	278.00	435
49.00	408	125.00	689	199.00	7904	283.00	228
50.00	13963	127.00	64744	200.00	689	284.00	341
51.00	53408	128.00	4920	201.00	589	285.00	432
52.00	2813	129.00	25328	202.00	57	289.00	54
53.00	293	130.00	2263	203.00	1014	290.00	59
54.00	259	131.00	268	204.00	4472	292.00	130
55.00	757	132.00	394	205.00	7568	293.00	491
56.00	1608	133.00	70	206.00	30232	294.00	102
57.00	3836	134.00	781	207.00	3702	296.00	7873
58.00	100	135.00	2031	208.00	1052	297.00	1131
59.00	79	136.00	772	209.00	158	298.00	62
61.00	779	137.00	1071	210.00	520	301.00	68
62.00	970	138.00	294	211.00	1171	302.00	96
63.00	2461	139.00	82	213.00	177	303.00	964
64.00	274	140.00	233	215.00	432	304.00	218
65.00	1399	141.00	3155	216.00	702	308.00	181
66.00	23	142.00	1224	217.00	8582	309.00	123
67.00	47	143.00	772	218.00	950	314.00	375
68.00	852	144.00	345	219.00	73	315.00	726
69.00	66728	145.00	73	221.00	5321	316.00	541
70.00	447	146.00	558	222.00	598	321.00	252
71.00	140	147.00	1279	223.00	1881	322.00	99
72.00	13	148.00	3579	224.00	15456	323.00	2338
73.00	436	149.00	696	225.00	3977	324.00	448
74.00	6819	150.00	212	226.00	386	327.00	373
75.00	10255	151.00	904	227.00	7080	328.00	257
76.00	4062	152.00	56	228.00	1185	332.00	125
77.00	77960	153.00	1062	229.00	1423	333.00	264

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	5704	154.00	675	230.00	273	334.00	1348
79.00	3956	155.00	1615	231.00	577	335.00	344
80.00	3581	156.00	2608	232.00	152	341.00	224
81.00	5489	157.00	458	233.00	106	342.00	76
82.00	1282	158.00	740	234.00	434	346.00	423
83.00	1057	159.00	580	235.00	590	347.00	53
85.00	530	160.00	1122	236.00	297	352.00	631
86.00	1229	161.00	1407	237.00	568	353.00	541
87.00	531	162.00	617	238.00	60	354.00	504
88.00	452	163.00	250	239.00	447	355.00	96
89.00	132	164.00	154	240.00	207	365.00	3089
91.00	998	165.00	1375	241.00	469	366.00	400
92.00	1456	166.00	1022	242.00	937	371.00	102
93.00	7115	167.00	6282	243.00	1111	372.00	1159
94.00	509	168.00	2856	244.00	12309	373.00	239
95.00	363	169.00	579	245.00	1710	383.00	200
96.00	234	170.00	185	246.00	2534	384.00	52
97.00	427	171.00	244	247.00	498	390.00	144
98.00	5329	172.00	626	248.00	161	391.00	62
99.00	4578	173.00	787	249.00	409	392.00	93
100.00	362	174.00	1250	250.00	50	402.00	488
101.00	2462	175.00	2582	251.00	146	403.00	658
102.00	360	176.00	794	252.00	60	404.00	187
103.00	853	177.00	1274	253.00	285	421.00	409
104.00	1354	178.00	361	255.00	61496	422.00	317
105.00	1323	179.00	4731	256.00	9058	423.00	2842
106.00	435	180.00	3075	257.00	598	424.00	556
107.00	19216	181.00	1448	258.00	3756	425.00	63
108.00	2961	182.00	293	259.00	495	437.00	53
109.00	195	183.00	281	260.00	75	438.00	121
110.00	35624	184.00	213	261.00	128	439.00	178
111.00	5599	185.00	2334	264.00	201	441.00	9525
112.00	743	186.00	16984	265.00	1539	442.00	57760
113.00	221	187.00	4756	266.00	315	443.00	10138
114.00	30	188.00	593	267.00	73	444.00	942

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

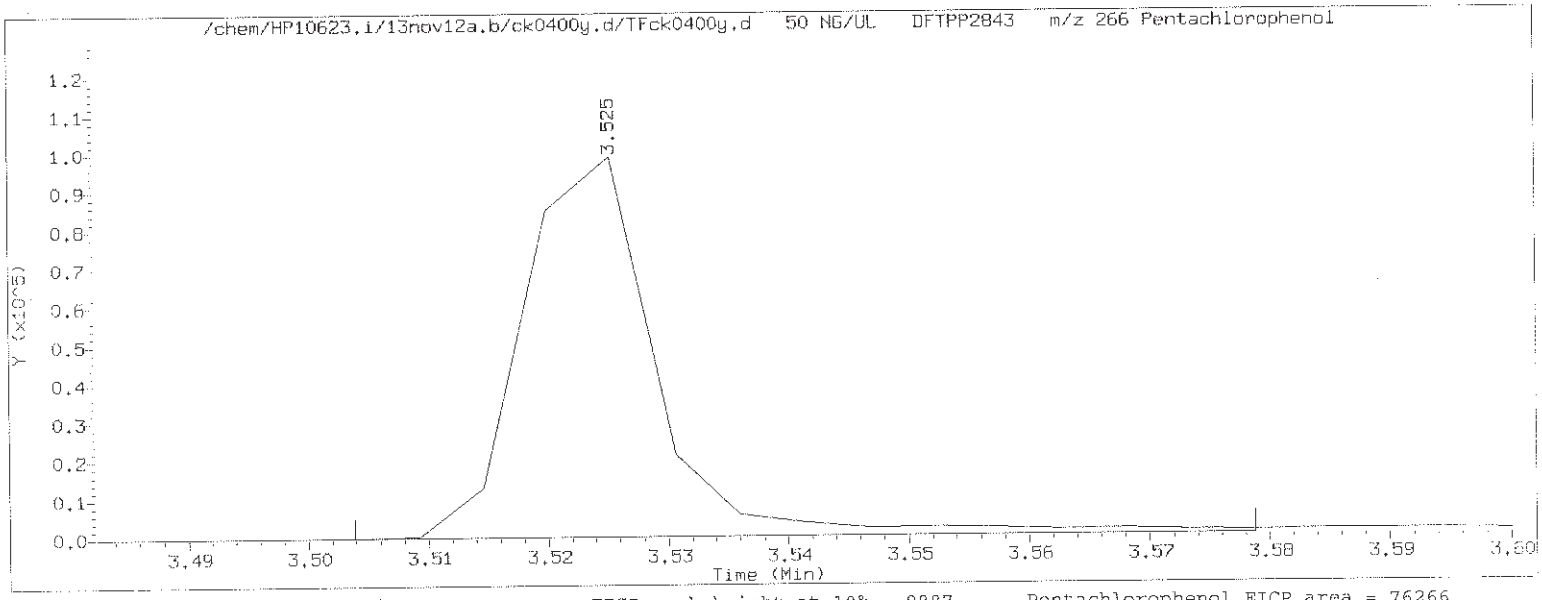
Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	50	189.00	1162	269.00	57	445.00	70
116.00	1125	190.00	284	270.00	66		
117.00	14669	191.00	349	271.00	57		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346

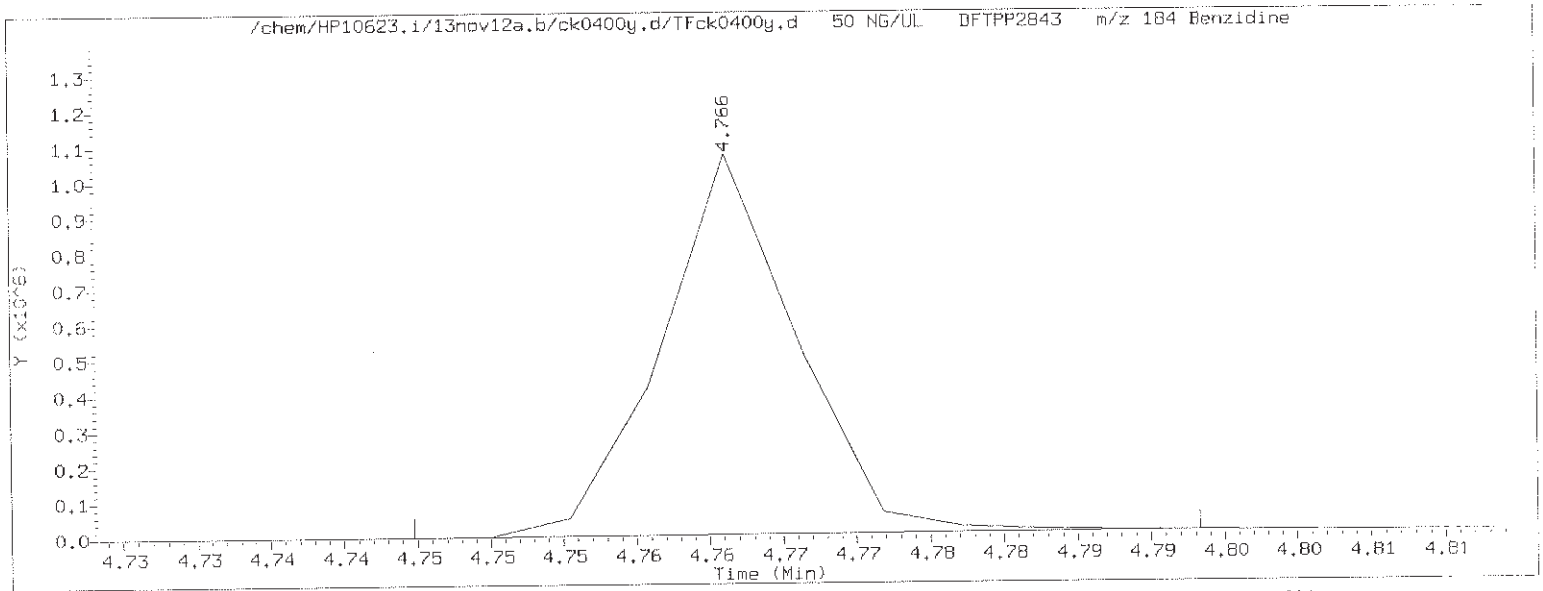


Pentachlorophenol EICP peak height = 98872 EICP peak height at 10% = 9887 Pentachlorophenol EICP area = 76266

Pentachlorophenol EICP peak apex (min.) = 3.525
RT at 10% of front half of EICP (min.) = 3.513
RT at 10% of back half of EICP (min.) = 3.534

'Front' peak width (min.) = 0.0118500000
'Tailing' peak width (min.) = 0.0091500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0091500000}{0.0118500000} = 0.772$$



Benzidine EICP peak height = 1069531 EICP peak height at 10% = 106953 Benzidine EICP area = 682611

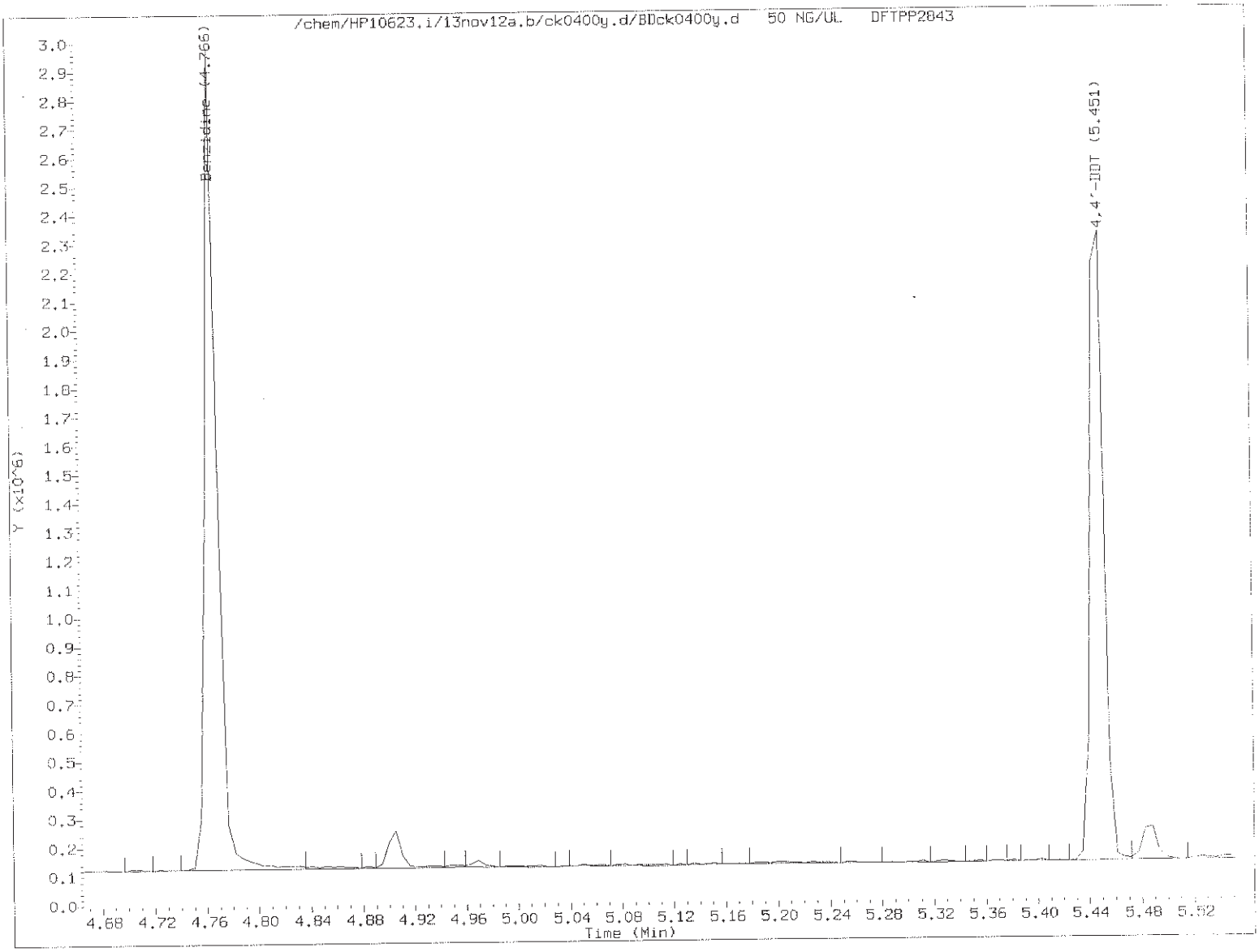
Benzidine EICP peak apex (min.) = 4.766
RT at 10% of front half of EICP (min.) = 4.756
RT at 10% of back half of EICP (min.) = 4.776

'Front' peak width (min.) = 0.0098333333
'Tailing' peak width (min.) = 0.0101166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0101166667}{0.0098333333} = 1.029$$

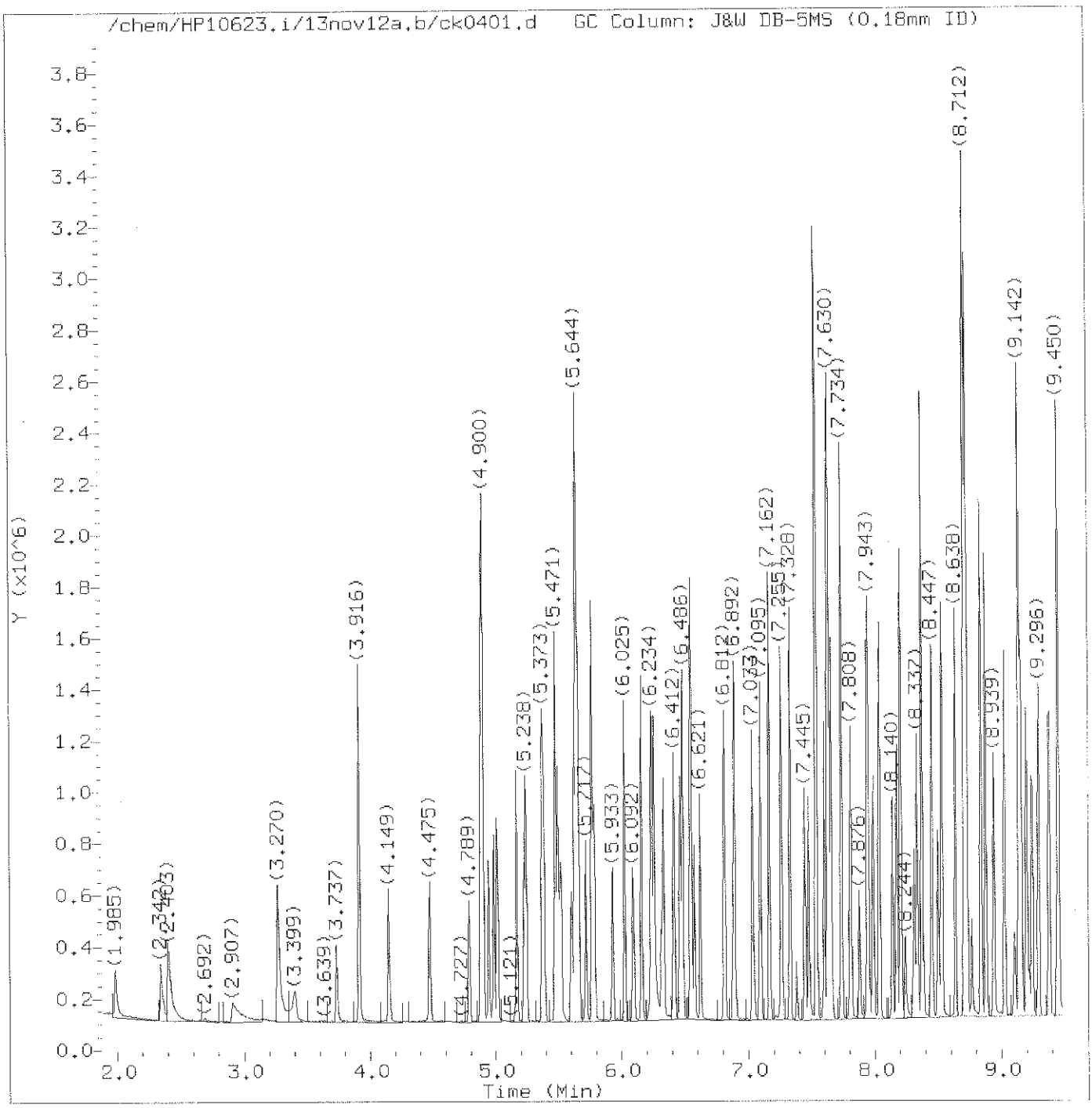
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 0}{0 + 0 + 1650105} \times 100 = 0.0$$



Total Ion Chromatogram (TIC)

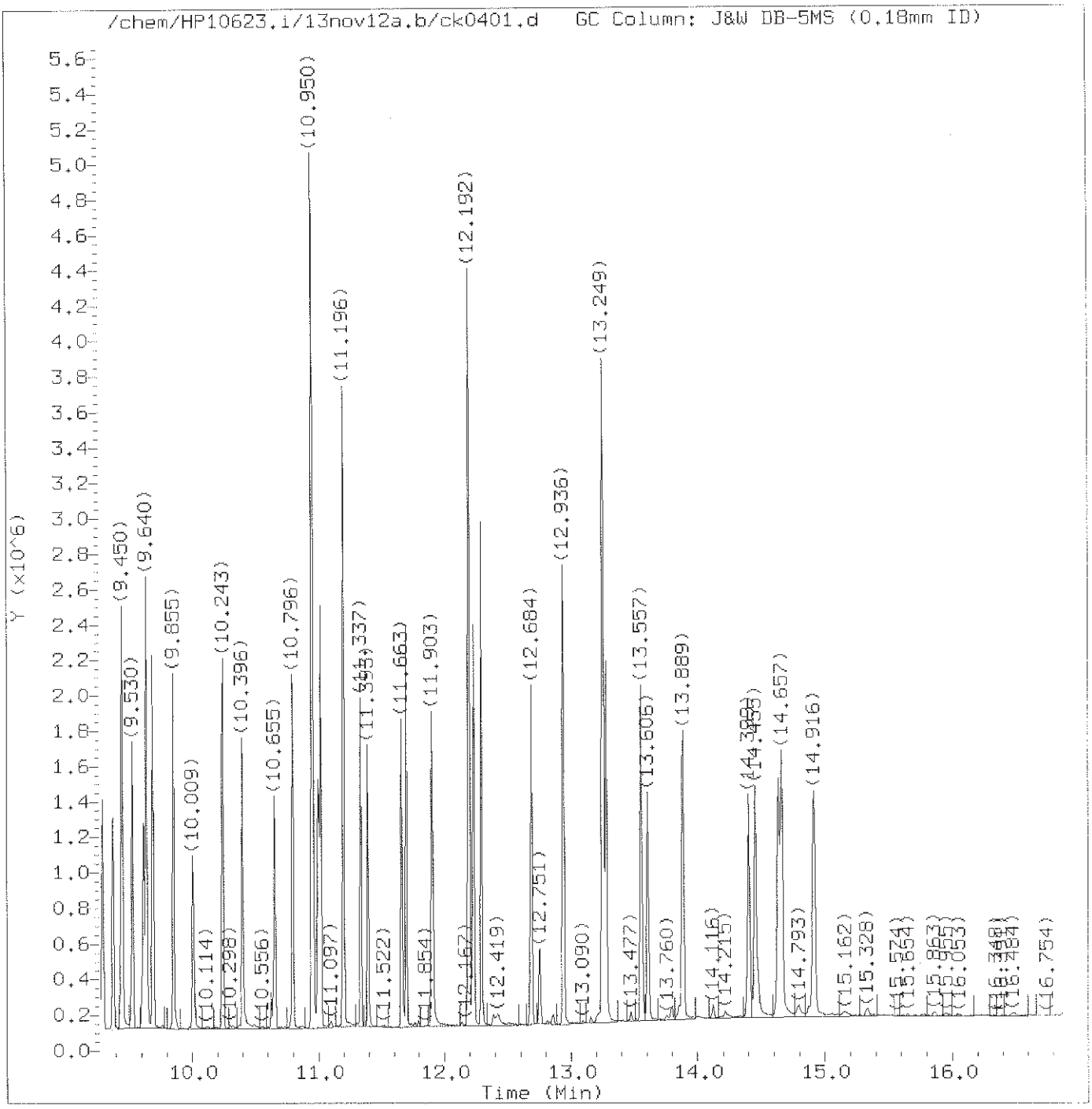
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	81893	32.323
2) N-Nitrosodimethylamine	(1)	2.342	74	156704	33.408
3) Pyridine	(1)	2.397	79	252093	34.667
5) 2-Picoline	(1)	3.270	93	238578	32.151
6) N-Nitrosomethylethylamine	(1)	3.399	88	115272	32.494
7) Methyl methanesulfonate	(1)	3.737	80	115913	32.497
9)$2-Fluorophenol	(1)	3.916	112	354062	30.548
10) N-Nitrosodiethylamine	(1)	4.149	102	111325	31.589
11) Ethyl methanesulfonate	(1)	4.475	109	98844	30.799
12) Benzaldehyde	(1)	4.789	77	99877	27.326
15)$Phenol-d6	(1)	4.887	99	538352	31.566
14)$Phenol-d5	(1)	4.887	99	538352	31.566
16) Phenol	(1)	4.900	94	314309	31.593
13) Aniline	(1)	4.900	93	372438	31.569
18) bis(2-Chloroethyl)ether	(1)	4.986	93	224247	31.750
19) 2-Chlorophenol	(1)	5.010	128	182131	29.347
20) 1,3-Dichlorobenzene	(1)	5.164	146	185926	29.688
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	77457	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	186718	29.215
24) Benzyl alcohol	(1)	5.373	108	155485	32.043
25) 1,2-Dichlorobenzene	(1)	5.385	146	178351	29.730
206) Indene	(1)	5.471	115	415413	31.000
26) 2-Methylphenol	(1)	5.496	108	203749	30.858
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	293836	33.808
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	293836	33.722
29) N-Nitrosopyrrolidine	(1)	5.601	100	126878	32.102
30) Acetophenone	(1)	5.625	105	298124	30.284
31) N-Nitroso-di-n-propylamine	(1)	5.644	70	205034	32.539
32) N-Nitrosomorpholine	(1)	5.644	56	149858	33.377
33) 4-Methylphenol	(1)	5.644	108	238518	30.519
34) o-Toluidine	(1)	5.656	106	349240	30.970
37) Hexachloroethane	(1)	5.717	117	73084	30.045
38)$Nitrobenzene-d5	(2)	5.767	82	505210	32.460
39) Nitrobenzene	(2)	5.785	77	267336	32.387
40) N-Nitrosopiperidine	(2)	5.933	114	112699	30.776
41) Isophorone	(2)	6.025	82	482496	32.191
42) 2-Nitrophenol	(2)	6.092	139	88042	30.681
44) 2,4-Dimethylphenol	(2)	6.160	107	227178	30.801
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	90355	29.381
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	270857	29.741

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d
Injection date and time: 12-NOV-2013 09:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:09
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.265	105	209906	43.907
49) 2,4-Dichlorophenol	(2)	6.332	162	148284	29.562
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	153077	28.973
52)*Naphthalene-d8	(2)	6.461	136	361204	20.000
53) Naphthalene	(2)	6.486	128	569014	29.691
56) 4-Chloroaniline	(2)	6.547	127	248002	29.696
57) 2,6-Dichlorophenol	(2)	6.554	162	141915	30.038
58) Hexachloropropene	(2)	6.578	213	86091	28.812
60) Hexachlorobutadiene	(2)	6.621	225	73712	27.816
194) Quinoline	(2)	6.812	129	397153	30.065
63) Caprolactam	(2)	6.886	113	85885	30.908
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	245265M	31.525
68) 4-Chloro-3-methylphenol	(2)	7.033	107	201458	31.414
69) Safrole	(2)	7.095	162	150150	29.578
70) 2-Methylnaphthalene	(2)	7.162	142	406905	29.918
71) 1-Methylnaphthalene	(2)	7.255	142	370806	29.795
72) Hexachlorocyclopentadiene	(3)	7.328	237	66120	28.828
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	148933	28.060
74) cis-Isosafrole	(3)	7.377	162	28054	3.292
75) 2,4,6-Trichlorophenol	(3)	7.445	196	99135	28.625
77) 2,4,5-Trichlorophenol	(3)	7.476	196	110011	29.134
78)$2-Fluorobiphenyl	(3)	7.531	172	827422	29.569
79) trans-Isosafrole	(3)	7.599	162	161733	26.811
80) Isosafrole	(3)	7.599	162	161733	30.124
83) 1,1'-Biphenyl	(3)	7.623	154	489134	28.372
84) 2-Chloronaphthalene	(3)	7.636	162	335653	26.729
85) 1-Chloronaphthalene	(3)	7.654	162	372212	30.117
88) Diphenyl ether	(3)	7.734	170	252217	29.368
89) 2-Nitroaniline	(3)	7.740	138	124694	30.438
90) 1,4-Naphthoquinone	(3)	7.808	158	160289	30.331
91) 1,4-Dinitrobenzene	(3)	7.876	168	44413	26.844
92) Dimethylphthalate	(3)	7.943	163	444697	29.761
93) 1,3-Dinitrobenzene	(3)	7.949	168	60984	27.087
94) 2,6-Dinitrotoluene	(3)	7.986	165	91316	29.342
95) Acenaphthylene	(3)	8.035	152	584873	29.833
97) 3-Nitroaniline	(3)	8.140	138	113917	29.975
98)*Acenaphthene-d10	(3)	8.177	164	222517	20.000
99) Acenaphthene	(3)	8.208	153	402167	29.641
100) 2,4-Dinitrophenol	(3)	8.244	184	35950	35.967
103) 4-Nitrophenol	(3)	8.312	109	71787	30.492

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d
Injection date and time: 12-NOV-2013 09:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:09
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	130256	28.399
104) Dibenzofuran	(3)	8.374	168	544349	29.288
105) 2,4-Dinitrotoluene	(3)	8.374	165	116516	28.973
106) 1-Naphthylamine	(3)	8.454	143	470452	30.804
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	77227	29.035
108) 2-Naphthylamine	(3)	8.527	143	483276	30.928
109) Diethylphthalate	(3)	8.638	149	467647	30.298
110) Thionazin	(3)	8.712	107	103874	30.514
111) Fluorene	(3)	8.712	166	471552	29.487
113) 5-Nitro-o-toluidine	(3)	8.724	152	130131	30.820
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	202981	28.532
114) 4-Nitroaniline	(3)	8.730	138	131607	30.795
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	40678	26.346
117) N-Nitrosodiphenylamine	(4)	8.841	169	405279	29.915
202) NDPA as diphenylamine	(4)	8.841	169	405279	29.844
118) 1,2-Diphenylhydrazine	(4)	8.878	77	637989	32.876
119)$2,4,6-Tribromophenol	(3)	8.945	330	76050	28.297
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	89301	32.286
121) 1,3,5-Trinitrobenzene	(4)	9.105	213	25810	24.916
122) Diallate (peak 1)	(4)	9.136	86	240722	24.241
123) Phorate	(4)	9.142	75	394362	32.983
124) Phenacetin	(4)	9.154	108	297458	31.771
125) 4-Bromophenyl-phenylether	(4)	9.204	248	107171	28.711
126) Diallate (peak 2)	(4)	9.222	86	33778	7.833
127) Hexachlorobenzene	(4)	9.247	284	100817	27.355
128) Dimethoate	(4)	9.296	87	245700	33.605
130) Atrazine	(4)	9.382	200	121986	28.105
131) Pentachlorophenol	(4)	9.437	266	57290	28.028
133) 4-Aminobiphenyl	(4)	9.450	169	452732	30.905
132) Pentachloronitrobenzene	(4)	9.456	237	45875	28.674
134) Pronamide	(4)	9.530	173	215987	30.588
135)*Phenanthrene-d10	(4)	9.622	188	404202	20.000
136) Dinoseb	(4)	9.640	211	54552	25.446
137) Phenanthrene	(4)	9.640	178	690619	29.385
138) Anthracene	(4)	9.689	178	720725	29.791
140) Carbazole	(4)	9.855	167	705956	29.903
141) Methyl parathion	(4)	10.009	109	136840	29.343
142) Di-n-butylphthalate	(4)	10.243	149	854793	30.688
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	43626	26.308
143) Parathion	(4)	10.403	109	100032	29.542

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	76584	28.834
147) Fluoranthene	(4)	10.802	202	773711	29.441
152) Benzidine	(5)	10.950	184	1891880	91.825
167)*Pyrene-d10	(5)	10.999	212	503289	20.000
154) Pyrene	(5)	11.017	202	810442	28.997
156)$Terphenyl-d14	(5)	11.196	244	1033822	28.730
158) p-Dimethylaminoazobenzene	(5)	11.337	225	163625	30.040
159) Chlorobenzilate	(5)	11.393	139	265463	31.330
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	526908	30.588
161) Butylbenzylphthalate	(5)	11.700	149	407296	30.537
162) 2-Acetylaminofluorene	(5)	11.903	181	381478	31.581
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	290307	29.872
166) Benzo(a)anthracene	(5)	12.192	228	757839	29.397
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	143791	30.288
168) Chrysene	(5)	12.229	228	715548	28.789
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	569996	30.802
189) 6-Methylchrysene	(5)	12.684	242	548565	29.912
170) Di-n-octylphthalate	(6)	12.936	149	1032709	31.791
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.249	256	370208	30.316
172) Benzo(b)fluoranthene	(6)	13.249	252	757915	28.840
173) Benzo(k)fluoranthene	(6)	13.280	252	818853	30.542
174) Benzo(a)pyrene	(6)	13.557	252	754869	29.431
175)*Perylene-d12	(6)	13.606	264	430377	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	384586	29.914
190) Dibenz(a,h)acridine	(6)	14.399	279	574141	30.813
191) Dibenz(a,j)acridine	(6)	14.455	279	632132	29.502
177) Indeno(1,2,3-cd)pyrene	(6)	14.633	276	819116	30.016
178) Dibenz(a,h)anthracene	(6)	14.657	278	695362	30.463
179) Benzo(g,h,i)perylene	(6)	14.916	276	690215	29.690
129) Diallate TRANS/CIS	(4)			274500	32.196

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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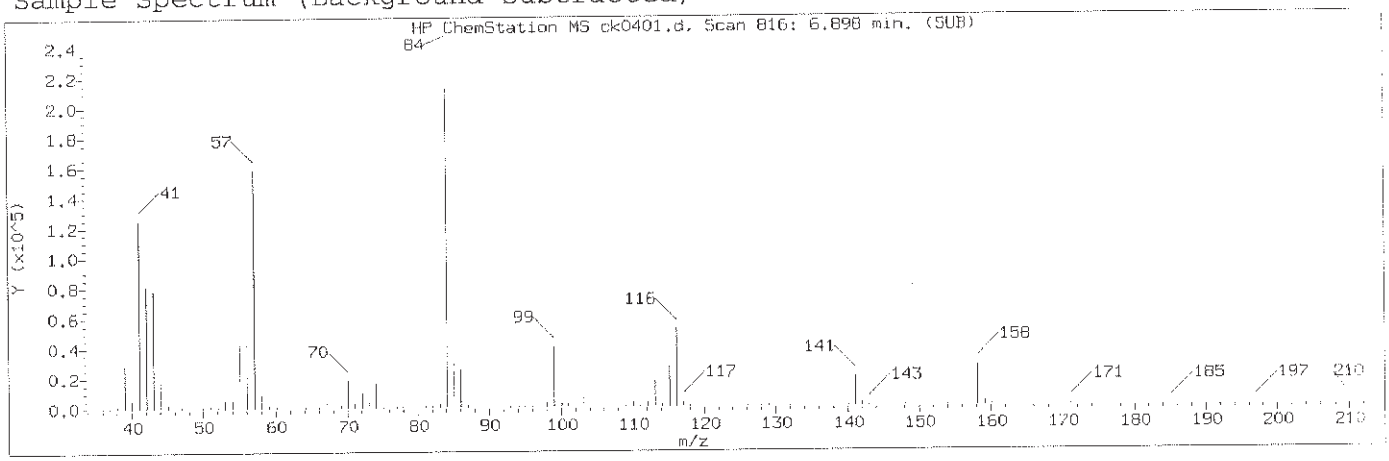
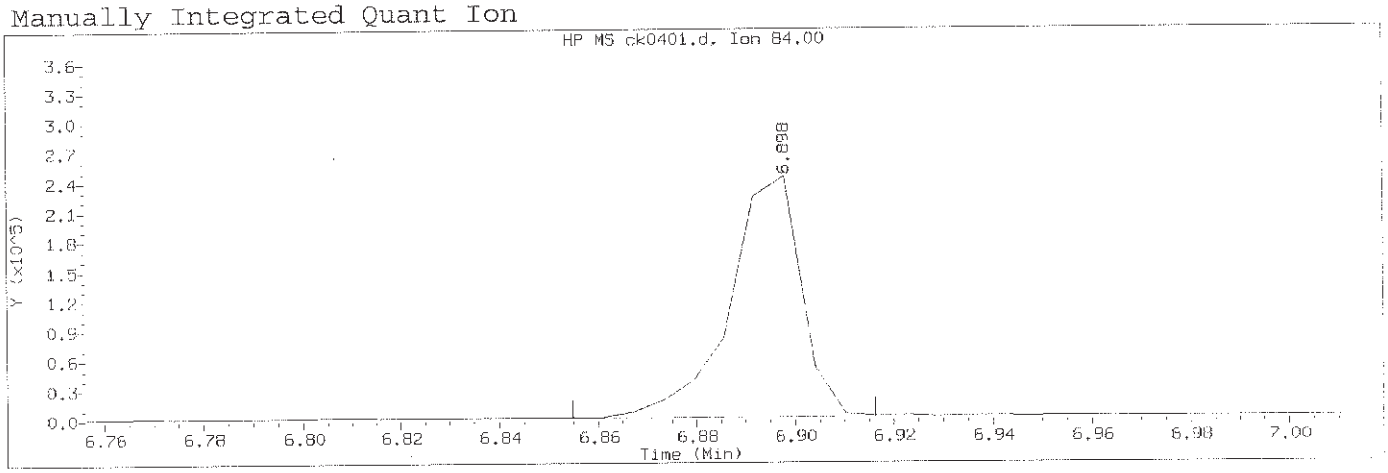
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area (flag)	: 245265M		
On-Column Amount (ng/ul)	: 31.5253		
Integration start scan	: 808	Integration stop scan:	818
Y at integration start	: 1124	Y at integration end:	1124

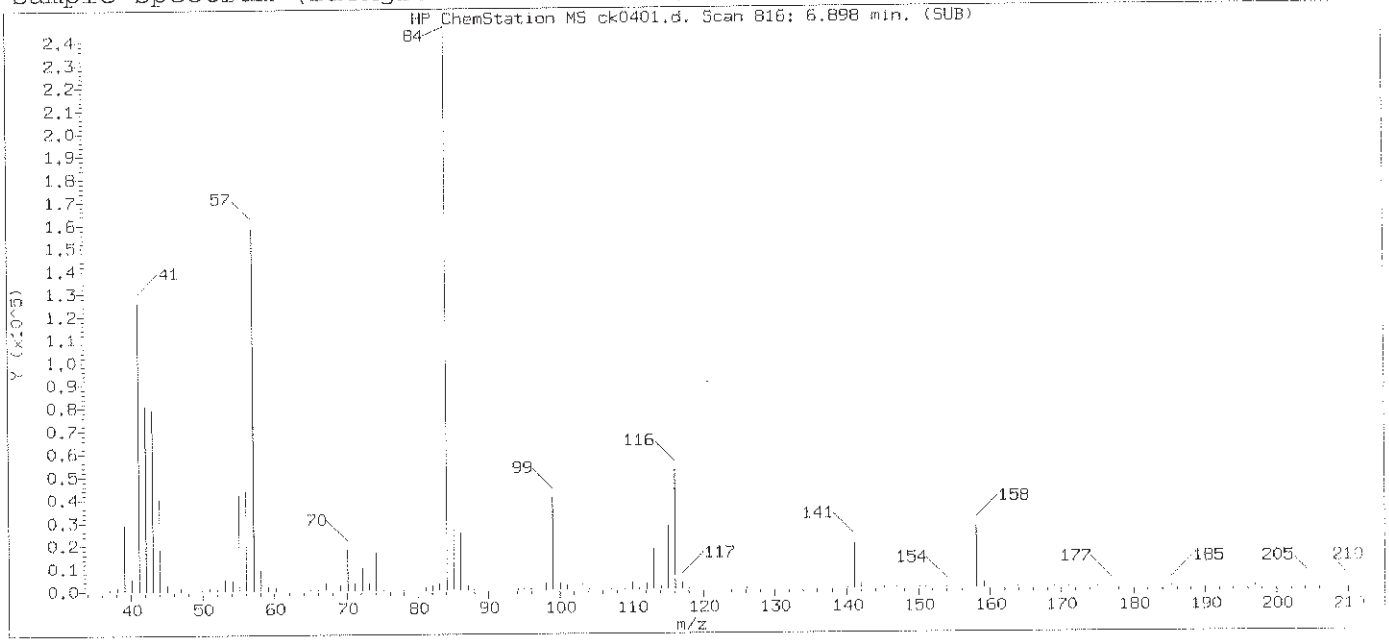
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

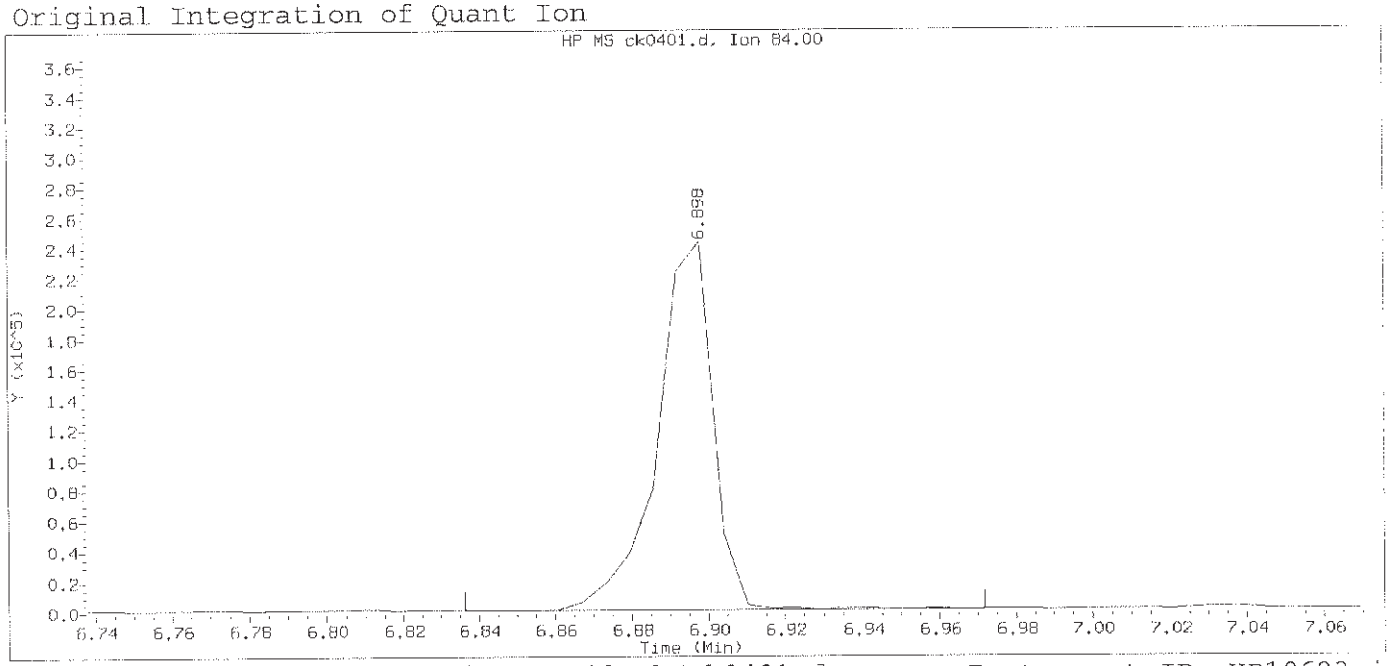
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:41
Date, time and analyst ID of latest file update: 12-Nov-2013 10:41 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area	: 245989		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 805	Integration stop scan:	827
Y at integration start	: 1527	Y at integration end:	1527

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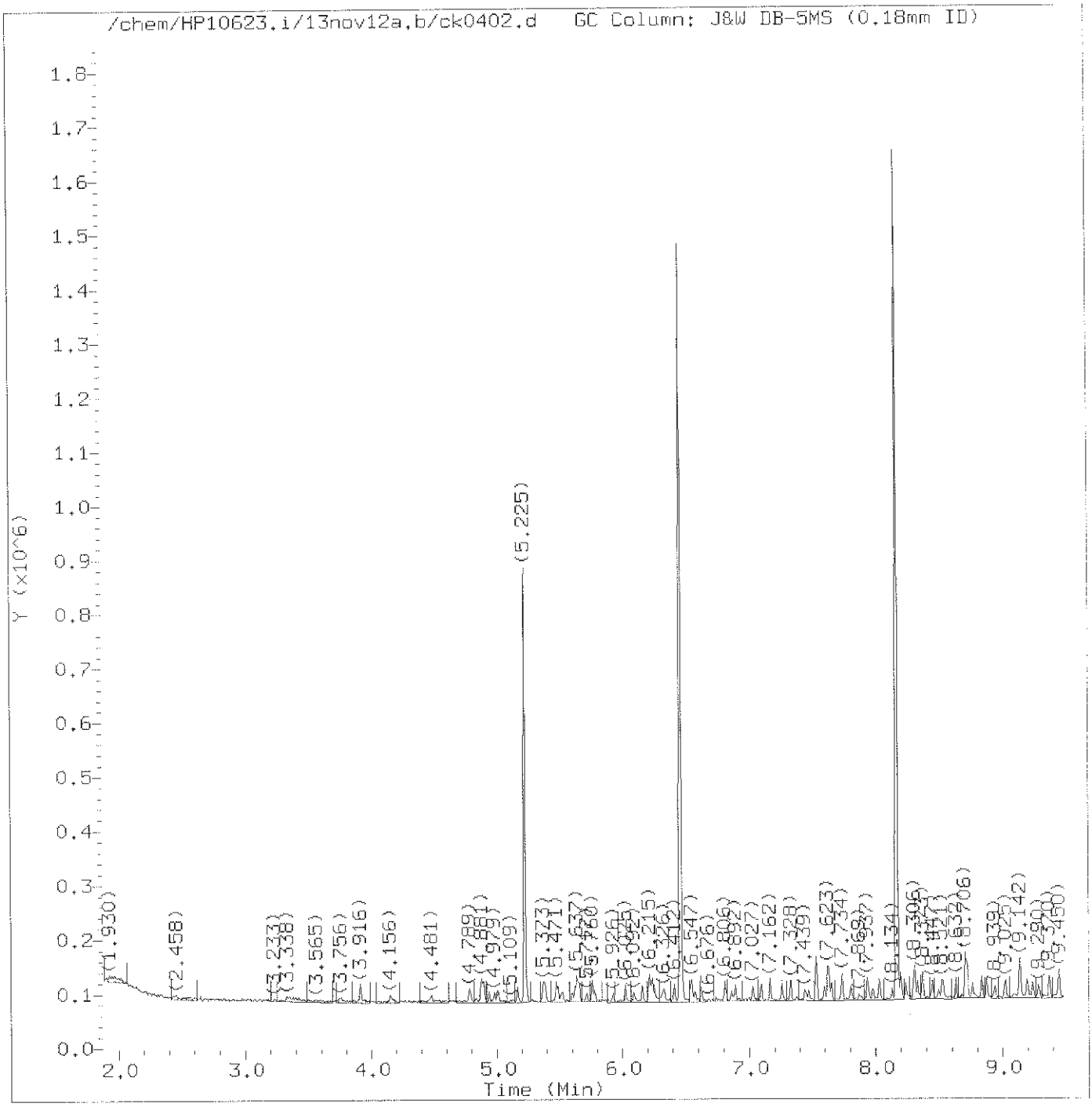
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

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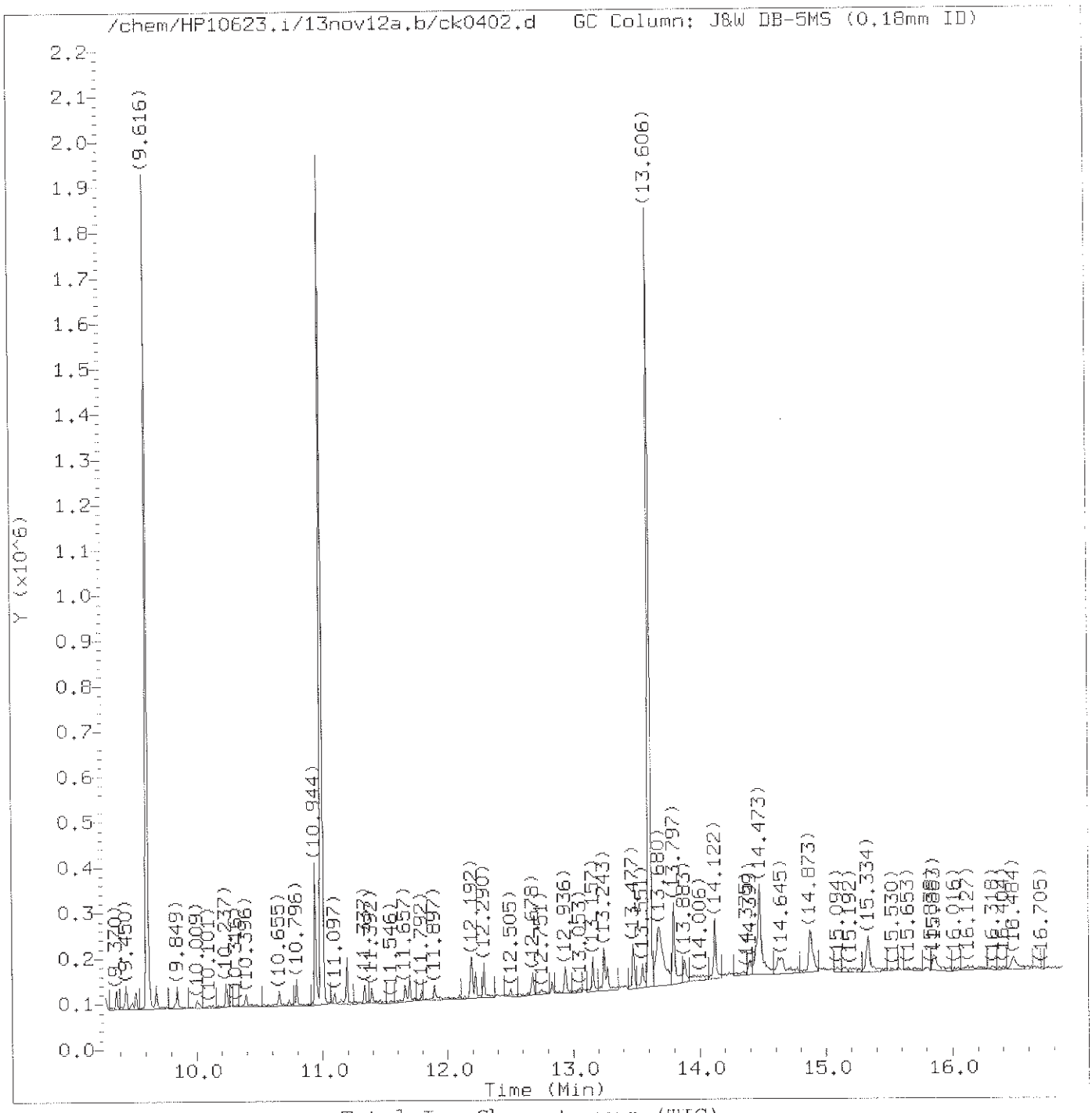
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.016	88	2502M	0.668
2) N-Nitrosodimethylamine	(1)	2.477	74	4899M	0.706
3) Pyridine	(1)	2.557	79	9243M	0.860
5) 2-Picoline	(1)	3.338	93	6292M	0.574
6) N-Nitrosomethylethylamine	(1)	3.430	88	7327	1.397
7) Methyl methanesulfonate	(1)	3.750	80	2840	0.539
9)$2-Fluorophenol	(1)	3.916	112	8559	0.500
10) N-Nitrosodiethylamine	(1)	4.156	102	2939	0.564
11) Ethyl methanesulfonate	(1)	4.481	109	2371	0.500
12) Benzaldehyde	(1)	4.789	77	5539	0.786
14)$Phenol-d5	(1)	4.881	99	12834	0.509
15)$Phenol-d6	(1)	4.881	99	12834	0.509
16) Phenol	(1)	4.893	94	7584	0.516
13) Aniline	(1)	4.899	93	9703	0.556
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6089	0.583
19) 2-Chlorophenol	(1)	5.010	128	5413	0.590
20) 1,3-Dichlorobenzene	(1)	5.164	146	4814	0.520
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	114510	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	4855	0.514
24) Benzyl alcohol	(1)	5.367	108	5339	0.744
25) 1,2-Dichlorobenzene	(1)	5.385	146	4782	0.539
206) Indene	(1)	5.471	115	9695	0.489
26) 2-Methylphenol	(1)	5.484	108	6800	0.697
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	10033	0.781
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10033	0.779
29) N-Nitrosopyrrolidine	(1)	5.600	100	3531	0.604
30) Acetophenone	(1)	5.619	105	7972	0.548
31) N-Nitroso-di-n-propylamine	(1)	5.631	70	5626	0.604
32) N-Nitrosomorpholine	(1)	5.643	56	9410	1.418
33) 4-Methylphenol	(1)	5.643	108	6760	0.585
34) o-Toluidine	(1)	5.656	106	8493	0.509
37) Hexachloroethane	(1)	5.717	117	2402	0.668
38)$Nitrobenzene-d5	(2)	5.760	82	11914	0.538
39) Nitrobenzene	(2)	5.779	77	6271	0.534
40) N-Nitrosopiperidine	(2)	5.926	114	2892	0.556
41) Isophorone	(2)	6.025	82	11651	0.547
42) 2-Nitrophenol	(2)	6.092	139	3089	0.757
44) 2,4-Dimethylphenol	(2)	6.154	107	5843	0.557
47) Benzoic acid	(2)	6.215	105	21525	3.167
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2406	0.550

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d
Injection date and time: 12-NOV-2013 10:10
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7084	0.547
49) 2,4-Dichlorophenol	(2)	6.332	162	3426	0.480
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	3762	0.501
52)*Naphthalene-d8	(2)	6.461	136	513472	20.000
53) Naphthalene	(2)	6.480	128	14248	0.523
56) 4-Chloroaniline	(2)	6.541	127	6400	0.539
57) 2,6-Dichlorophenol	(2)	6.547	162	3467	0.516
58) Hexachloropropene	(2)	6.578	213	2141	0.504
60) Hexachlorobutadiene	(2)	6.621	225	1846	0.490
194) Quinoline	(2)	6.806	129	10871	0.579
63) Caprolactam	(2)	6.861	113	2351	0.595
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4989	0.517
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5578	0.612
69) Safrole	(2)	7.095	162	3910	0.542
70) 2-Methylnaphthalene	(2)	7.162	142	9511	0.492
71) 1-Methylnaphthalene	(2)	7.254	142	8965	0.507
72) Hexachlorocyclopentadiene	(3)	7.322	237	1328	0.415
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3696	0.499
74) cis-Isosafrole	(3)	7.377	162	937	0.079
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2161	0.447
77) 2,4,5-Trichlorophenol	(3)	7.470	196	2786	0.529
78)$2-Fluorobiphenyl	(3)	7.531	172	19427	0.498
79) trans-Isosafrole	(3)	7.599	162	3814	0.453
80) Isosafrole	(3)	7.599	162	3814	0.509
83) 1,1'-Biphenyl	(3)	7.623	154	12551	0.522
84) 2-Chloronaphthalene	(3)	7.630	162	9196M	0.525
85) 1-Chloronaphthalene	(3)	7.648	162	9244M	0.536
88) Diphenyl ether	(3)	7.734	170	6275	0.524
89) 2-Nitroaniline	(3)	7.734	138	3528	0.617
90) 1,4-Naphthoquinone	(3)	7.802	158	3486	0.473
91) 1,4-Dinitrobenzene	(3)	7.869	168	1124M	0.506
92) Dimethylphthalate	(3)	7.937	163	11333	0.544
93) 1,3-Dinitrobenzene	(3)	7.943	168	1011	0.335
94) 2,6-Dinitrotoluene	(3)	7.980	165	2520	0.580
95) Acenaphthylene	(3)	8.029	152	14446	0.528
97) 3-Nitroaniline	(3)	8.134	138	2436	0.459
98)*Acenaphthene-d10	(3)	8.171	164	310493	20.000
99) Acenaphthene	(3)	8.201	153	9481	0.501
100) 2,4-Dinitrophenol	(3)	8.238	184	3333	2.363
103) 4-Nitrophenol	(3)	8.306	109	7791	2.372

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	3152	0.492
105) 2,4-Dinitrotoluene	(3)	8.367	165	2878	0.513
104) Dibenzofuran	(3)	8.373	168	13586	0.524
106) 1-Naphthylamine	(3)	8.447	143	10096	0.474
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	1716	0.462
108) 2-Naphthylamine	(3)	8.527	143	11544	0.529
109) Diethylphthalate	(3)	8.632	149	11743	0.545
110) Thionazin	(3)	8.706	107	3537	0.745
111) Fluorene	(3)	8.706	166	11352	0.509
113) 5-Nitro-o-toluidine	(3)	8.718	152	2664	0.452
114) 4-Nitroaniline	(3)	8.718	138	3036	0.509
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	4955	0.499
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	3100	1.406
117) N-Nitrosodiphenylamine	(4)	8.835	169	9561	0.499
202) NDPA as diphenylamine	(4)	8.835	169	9561	0.498
118) 1,2-Diphenylhydrazine	(4)	8.878	77	14940	0.545
119)$2,4,6-Tribromophenol	(3)	8.939	330	1588	0.423
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3188	0.816
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	728M	0.502
122) Diallate (peak 1)	(4)	9.136	86	5379	0.383
124) Phenacetin	(4)	9.142	108	6266	0.474
123) Phorate	(4)	9.142	75	7915	0.468
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2742	0.520
126) Diallate (peak 2)	(4)	9.216	86	1405M	0.231
127) Hexachlorobenzene	(4)	9.240	284	2828	0.543
128) Dimethoate	(4)	9.290	87	5568	0.539
130) Atrazine	(4)	9.376	200	3843	0.627
131) Pentachlorophenol	(4)	9.437	266	886	0.307
133) 4-Aminobiphenyl	(4)	9.443	169	10935	0.528
132) Pentachloronitrobenzene	(4)	9.450	237	895M	0.396
134) Pronamide	(4)	9.529	173	4751	0.476
135)*Phenanthrene-d10	(4)	9.616	188	571166	20.000
136) Dinoseb	(4)	9.640	211	706M	0.237
137) Phenanthrene	(4)	9.640	178	17539	0.528
138) Anthracene	(4)	9.689	178	17770	0.520
140) Carbazole	(4)	9.849	167	17049	0.511
141) Methyl parathion	(4)	10.009	109	2488	0.402
142) Di-n-butylphthalate	(4)	10.237	149	19749	0.502
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	505M	0.224
143) Parathion	(4)	10.396	109	1848	0.406

M = Compound was manually integrated.
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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	2126	0.566
147) Fluoranthene	(4)	10.796	202	17969	0.484
152) Benzidine	(5)	10.944	184	112842	3.924
167)*Pyrene-d10	(5)	10.999	212	702415	20.000
154) Pyrene	(5)	11.011	202	20471	0.525
156)$Terphenyl-d14	(5)	11.196	244	24851	0.495
158) p-Dimethylaminoazobenzene	(5)	11.337	225	3730	0.491
159) Chlorobenzilate	(5)	11.392	139	5584	0.472
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	12285	0.511
161) Butylbenzylphthalate	(5)	11.694	149	9239	0.496
162) 2-Acetylaminofluorene	(5)	11.897	181	6778	0.402
164) 3,3'-Dichlorobenzidine	(5)	12.179	252	6353	0.468
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	2765	0.417
166) Benzo(a)anthracene	(5)	12.192	228	17291	0.481
168) Chrysene	(5)	12.223	228	17453	0.503
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	15494	0.600
189) 6-Methylchrysene	(5)	12.678	242	12618	0.493
170) Di-n-octylphthalate	(6)	12.936	149	21571	0.454
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7301	0.408
172) Benzo(b)fluoranthene	(6)	13.243	252	17114	0.445
173) Benzo(k)fluoranthene	(6)	13.268	252	19921	0.508
174) Benzo(a)pyrene	(6)	13.551	252	20650	0.550
175)*Perylene-d12	(6)	13.606	264	629898	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	8691	0.462
190) Dibenz(a,h)acridine	(6)	14.399	279	12323	0.452
191) Dibenz(a,j)acridine	(6)	14.442	279	14068	0.449
177) Indeno(1,2,3-cd)pyrene	(6)	14.620	276	19278	0.483
178) Dibenz(a,h)anthracene	(6)	14.651	278	15572	0.466
179) Benzo(g,h,i)perylene	(6)	14.903	276	16966	0.499
129) Diallate TRANS/CIS	(4)			6784	0.563

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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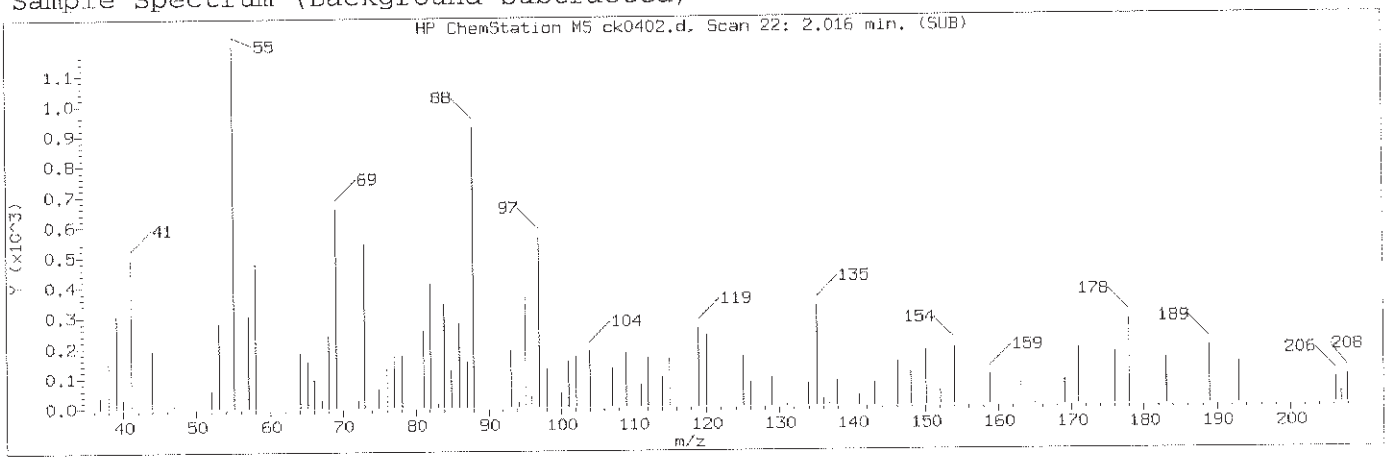
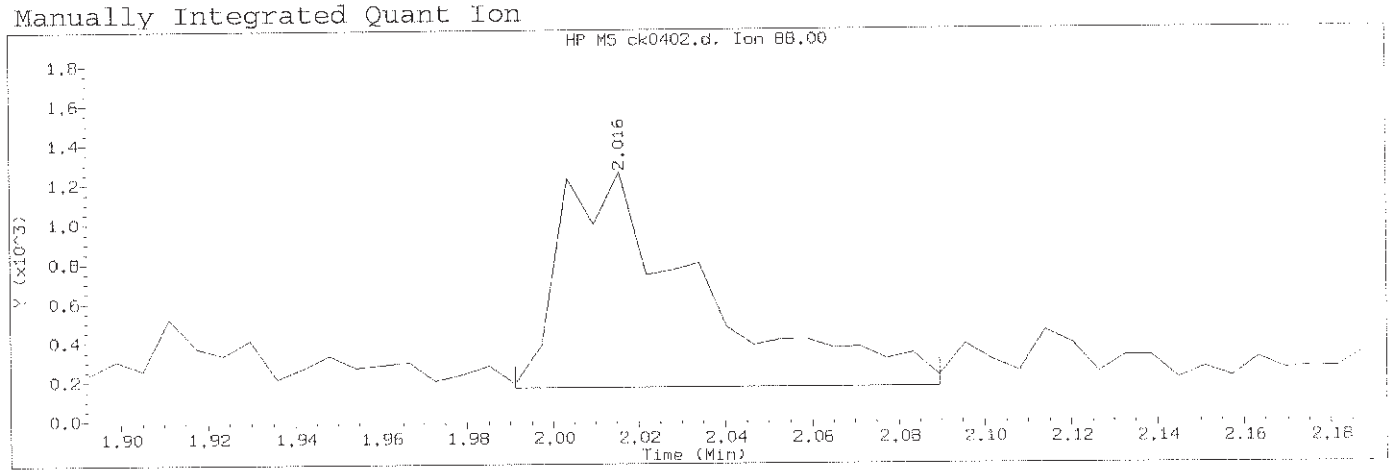
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 22		
Retention Time (minutes)	: 2.016		
Quant Ion	: 88.00		
Area (flag)	: 2502M		
On-Column Amount (ng/ul)	: 0.6680		
Integration start scan	: 17	Integration stop scan:	33
Y at integration start	: 164	Y at integration end:	164

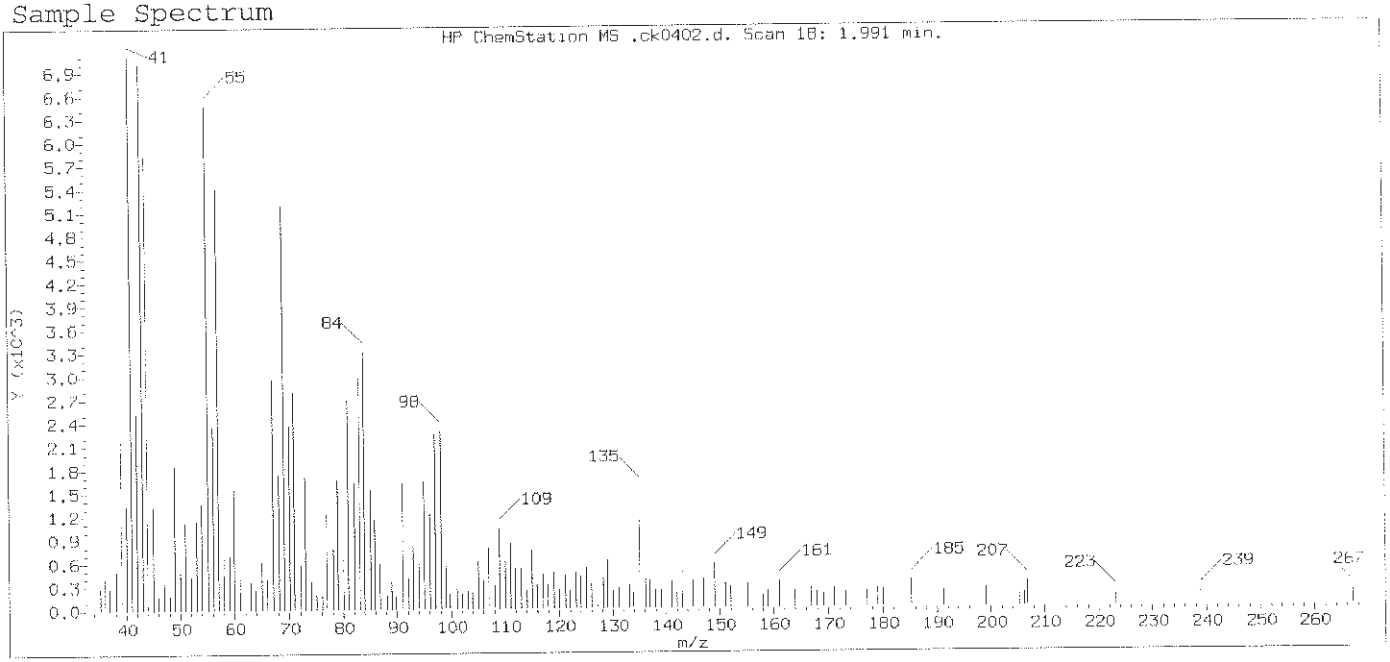
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

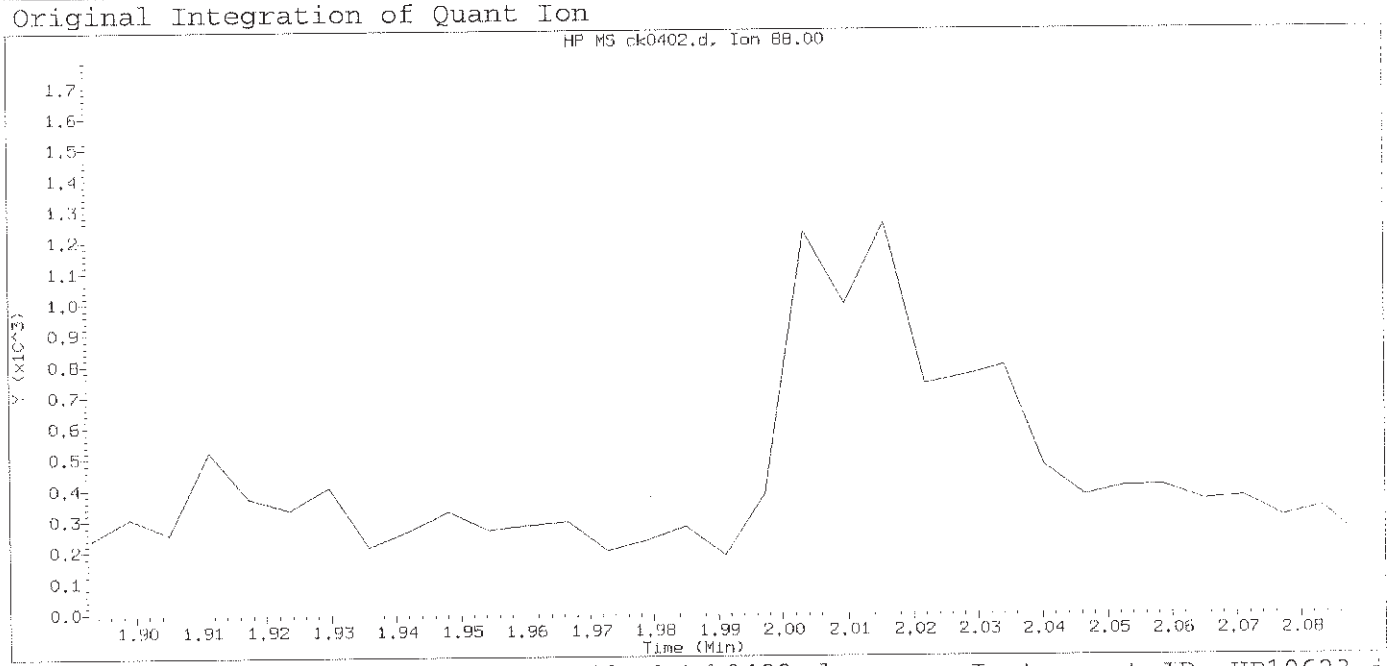
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.991
Quant Ion : 88.00

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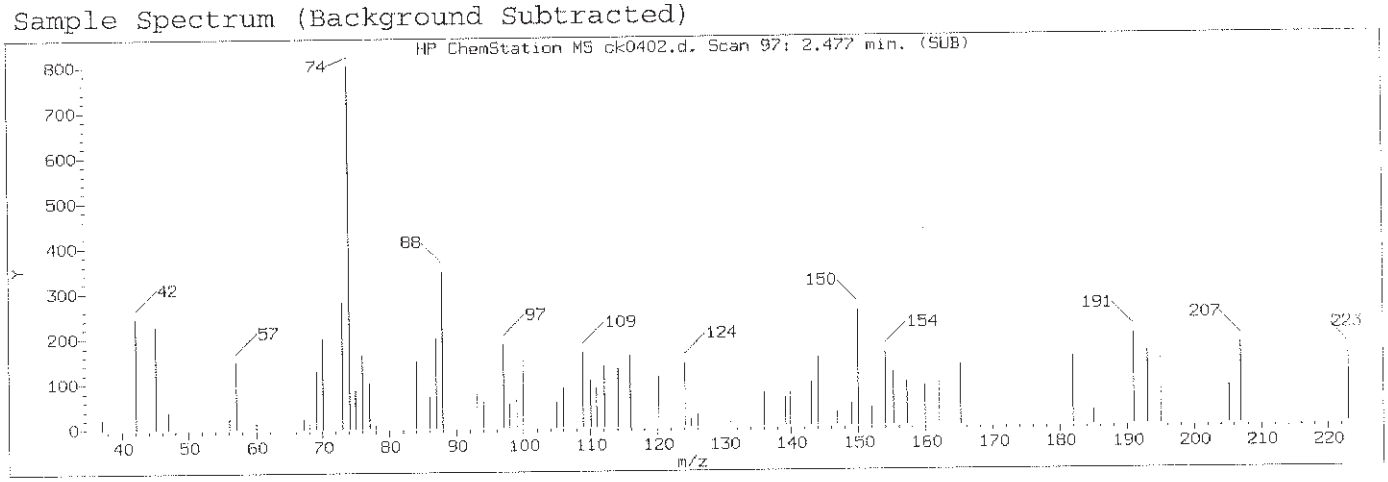
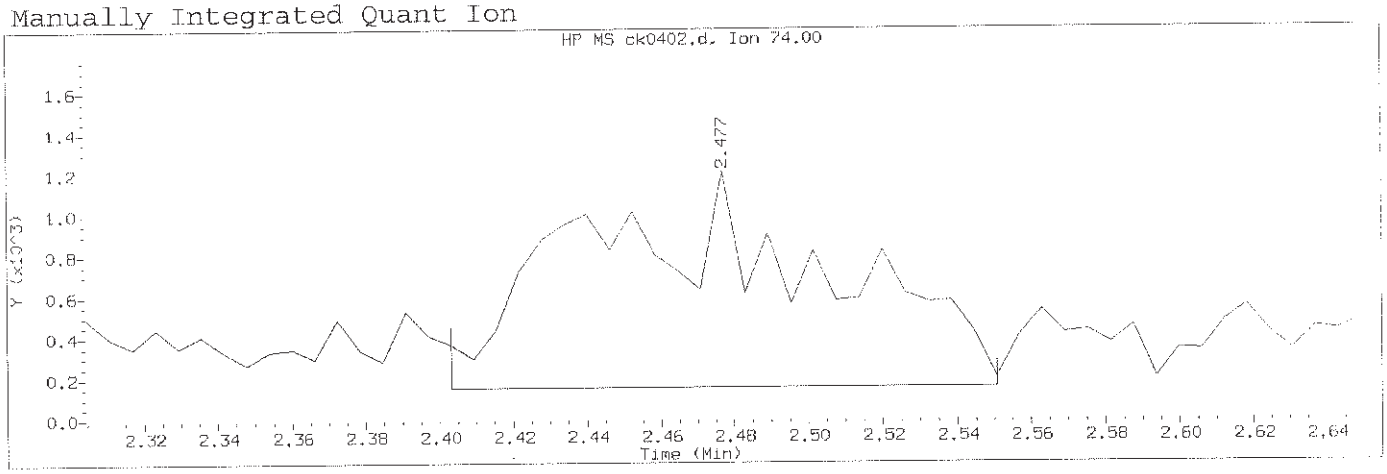
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

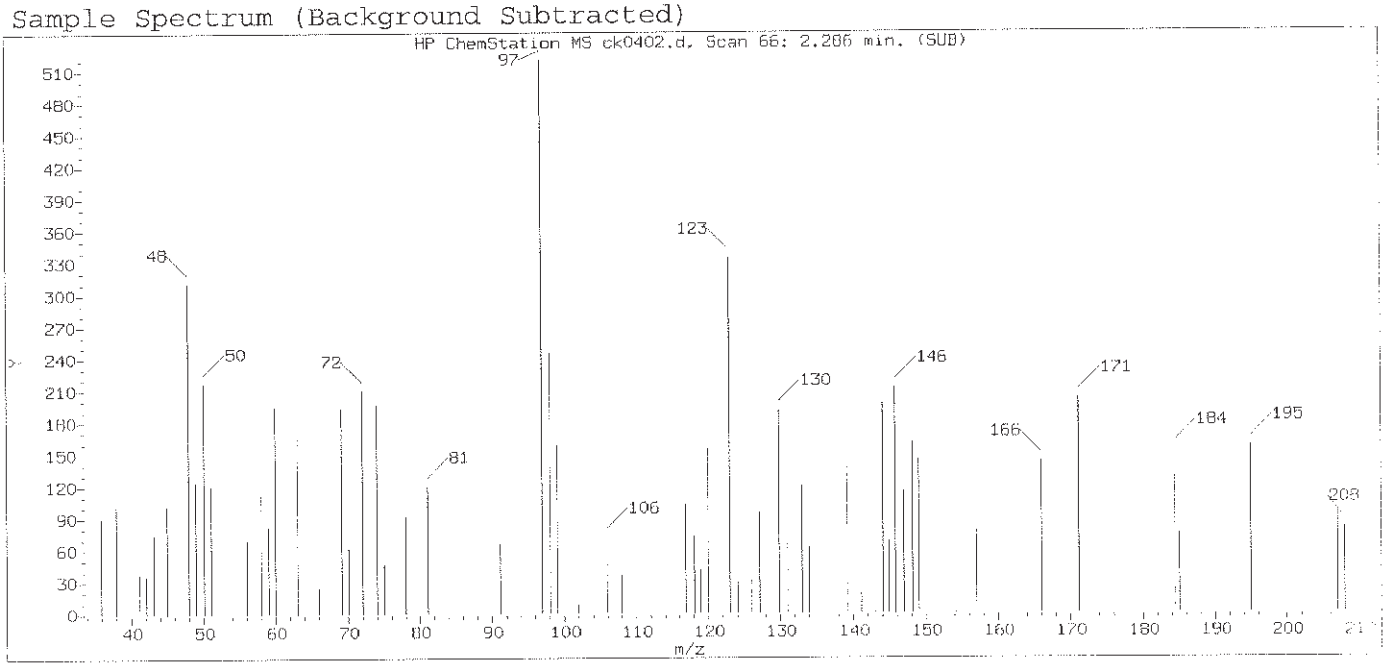
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 97		
Retention Time (minutes)	: 2.477		
Quant Ion	: 74.00		
Area (flag)	: 4899M		
On-Column Amount (ng/ul)	: 0.7065		
Integration start scan	: 84	Integration stop scan:	108
Y at integration start	: 152	Y at integration end:	152

Reason for manual integration: improper integration

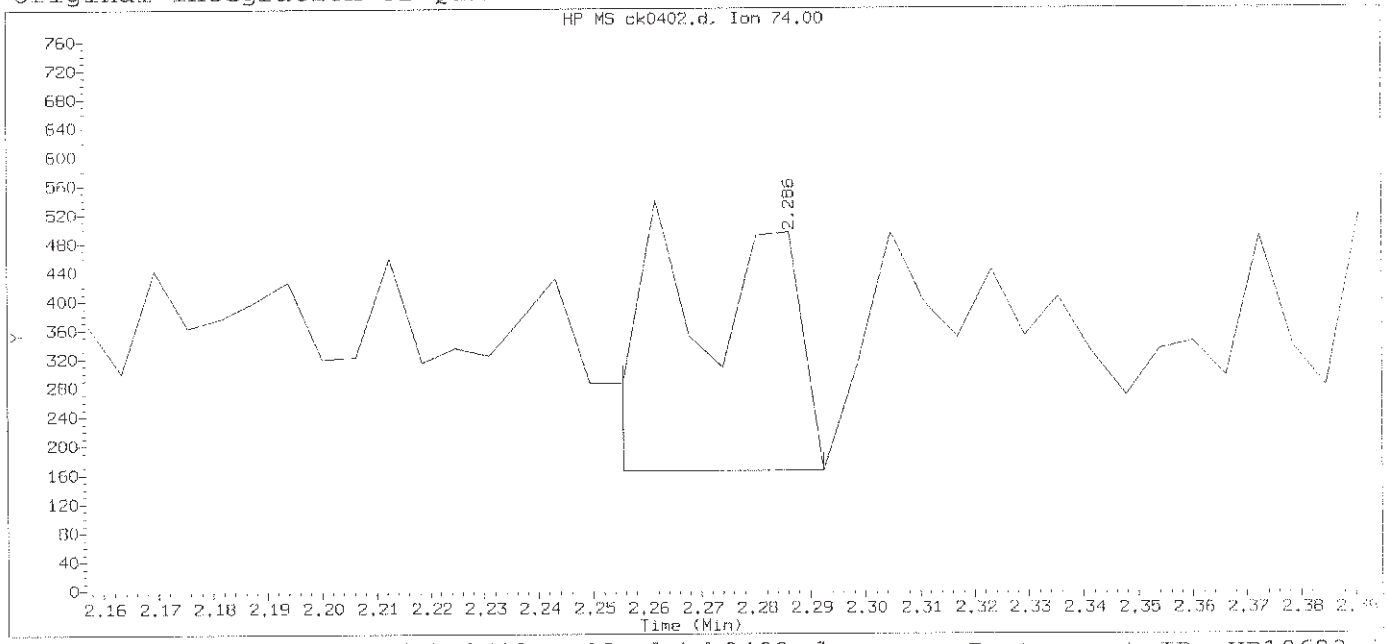
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 66		
Retention Time (minutes)	: 2.286		
Quant Ion	: 74.00		
Area	: 522		
On-column Amount (ng/ul)	: 0.0676		
Integration start scan	: 60	Integration stop scan:	66
Y at integration start	: 165	Y at integration end:	165

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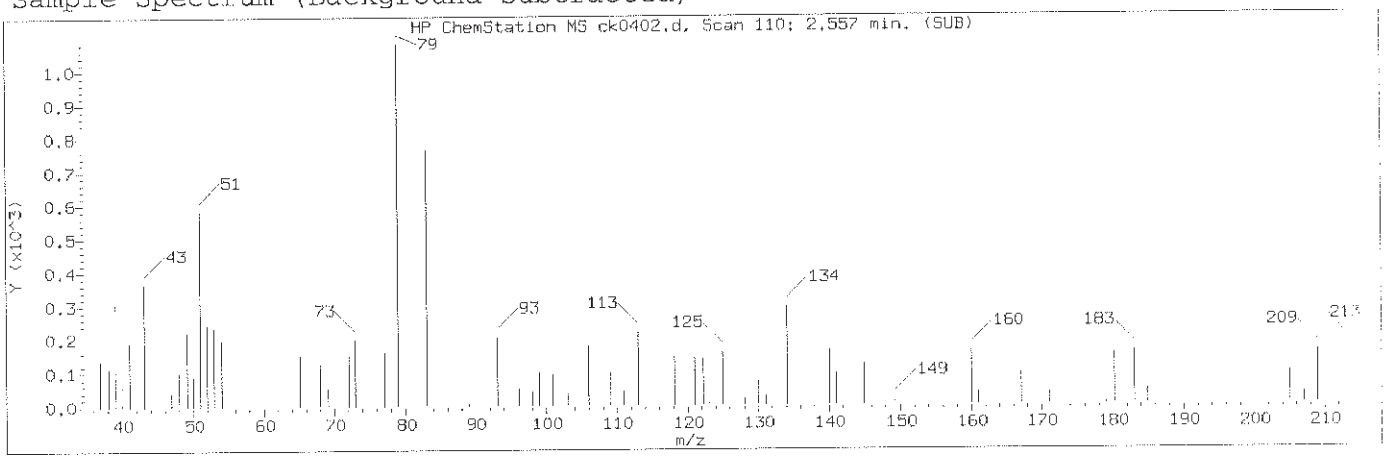
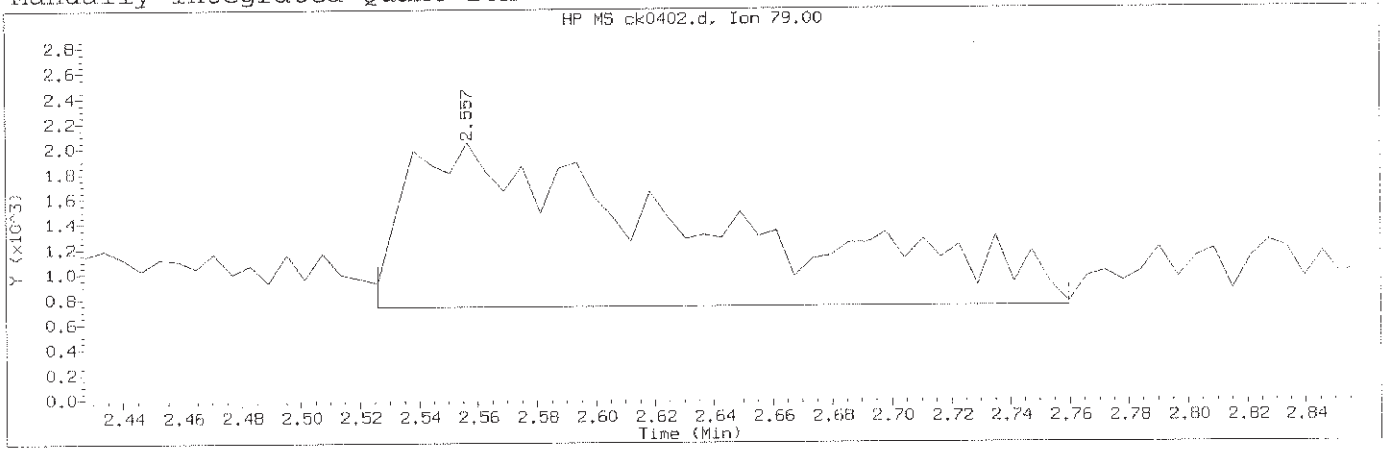
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 9243M		
On-Column Amount (ng/ul)	: 0.8598		
Integration start scan	: 104	Integration stop scan:	142
Y at integration start	: 732	Y at integration end:	732

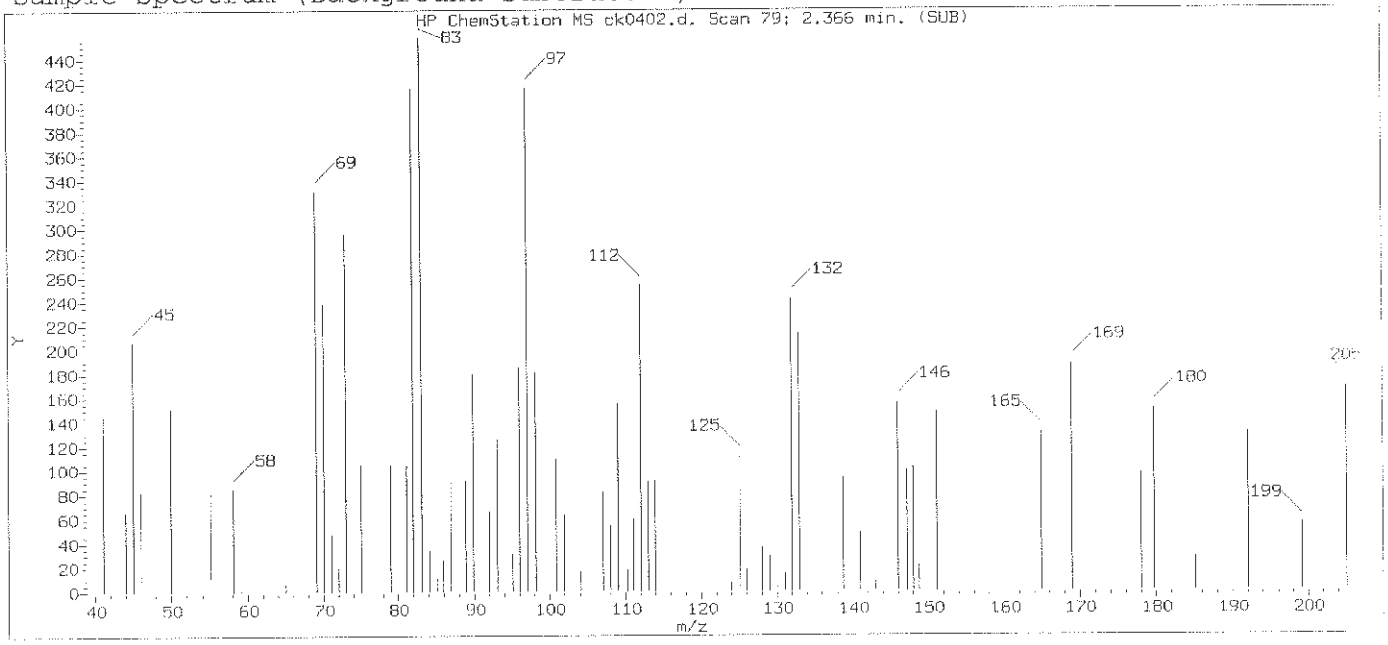
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

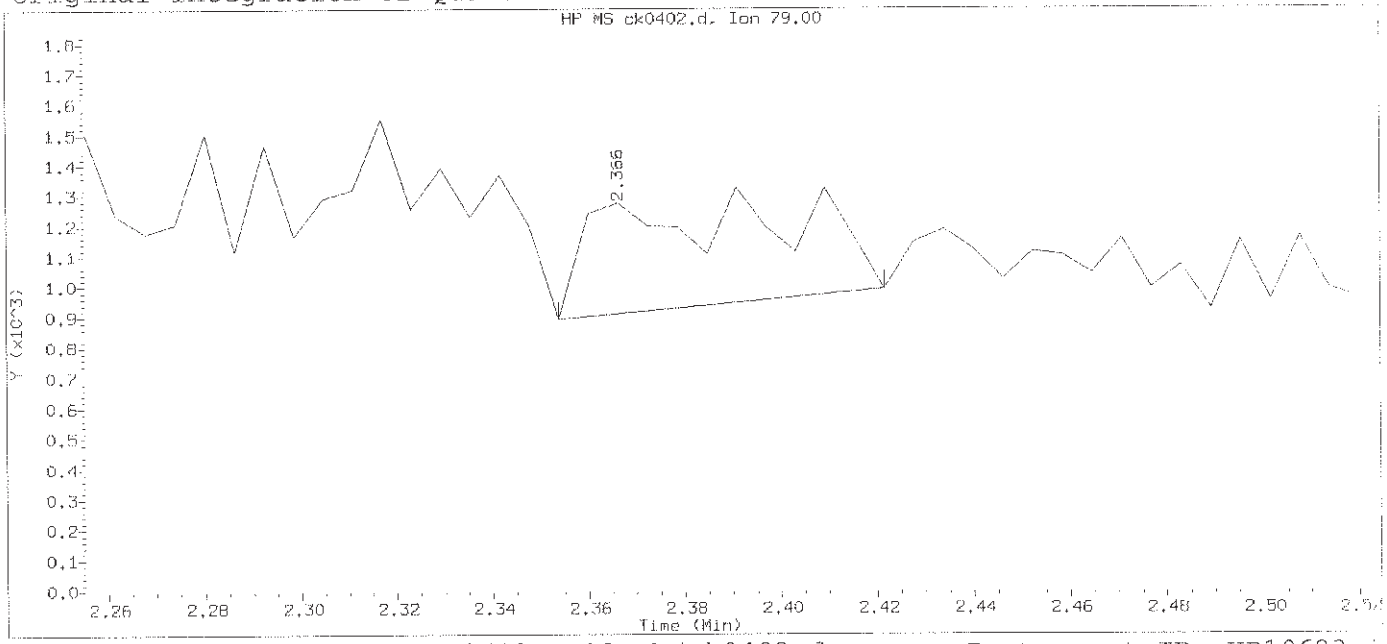
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval:_____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 79.00		
Area	: 996		
On-column Amount (ng/ul)	: 0.0802		
Integration start scan	: 76	Integration stop scan:	87
Y at integration start	: 893	Y at integration end:	991

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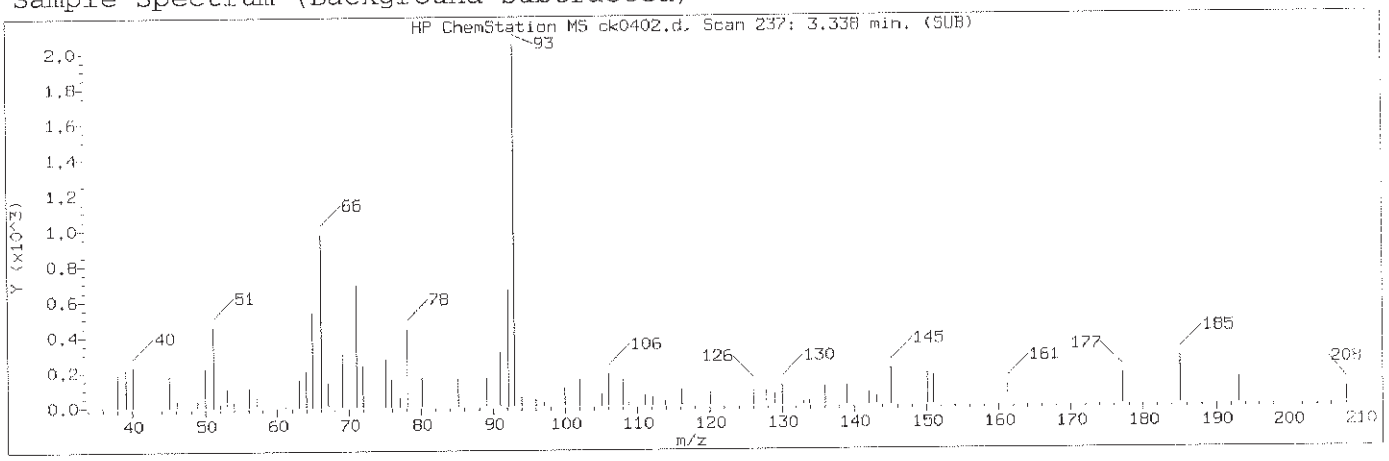
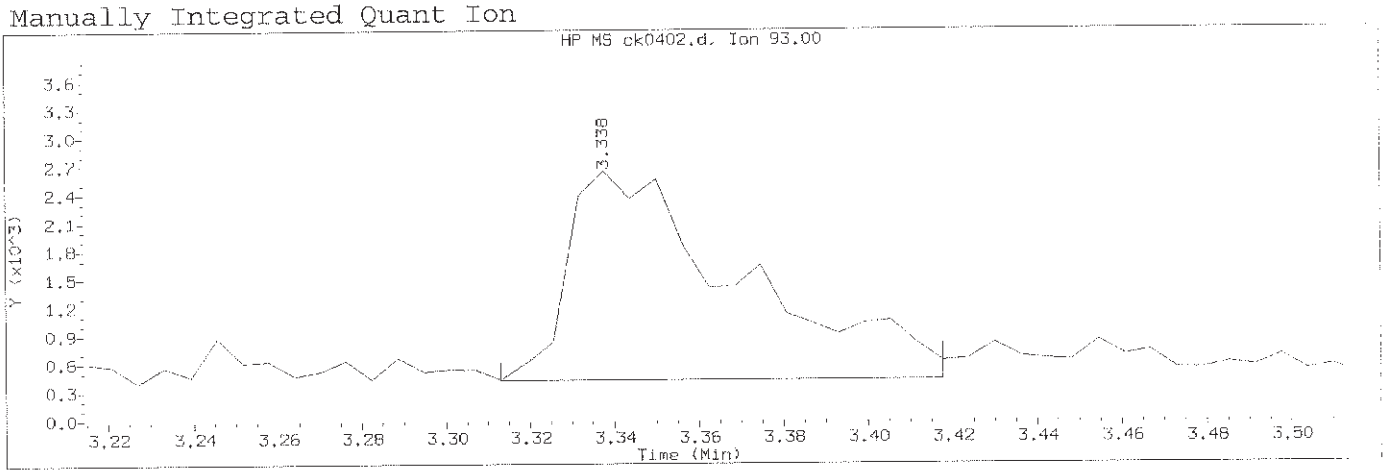
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6292M		
On-Column Amount (ng/ul)	: 0.5736		
Integration start scan	: 232	Integration stop scan:	249
Y at integration start	: 417	Y at integration end:	417

Reason for manual integration: improper integration

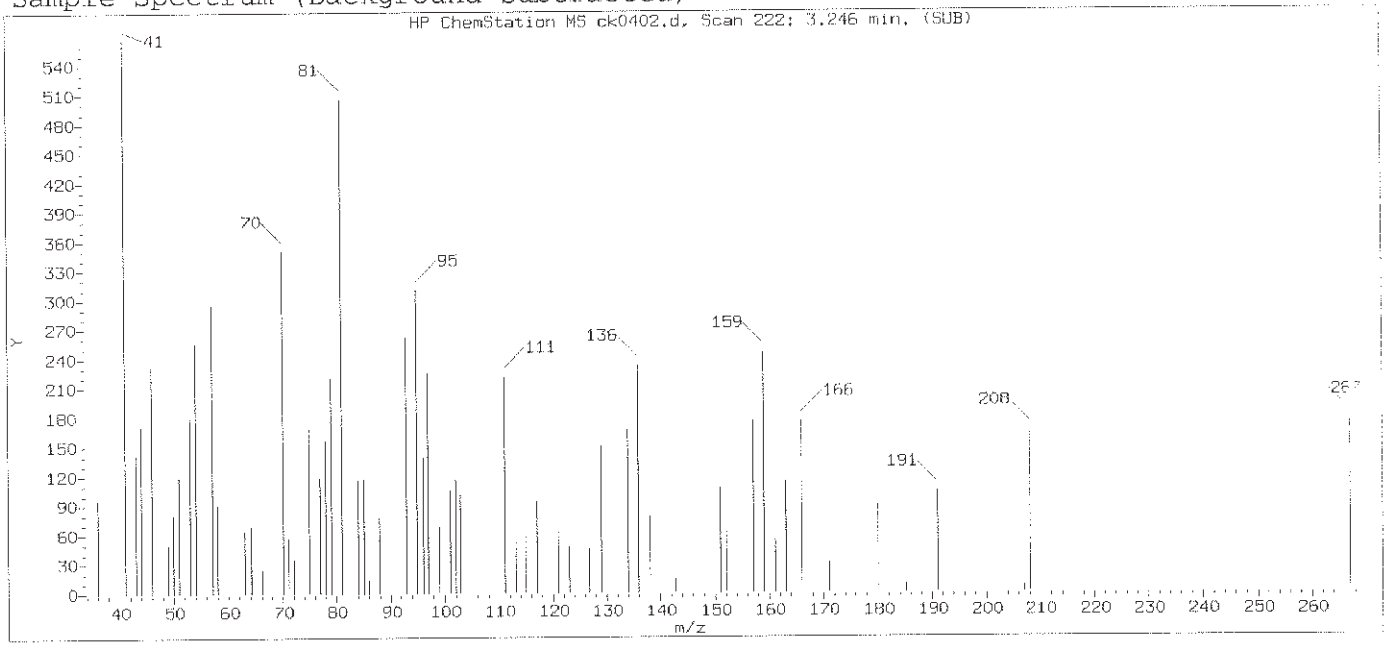
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

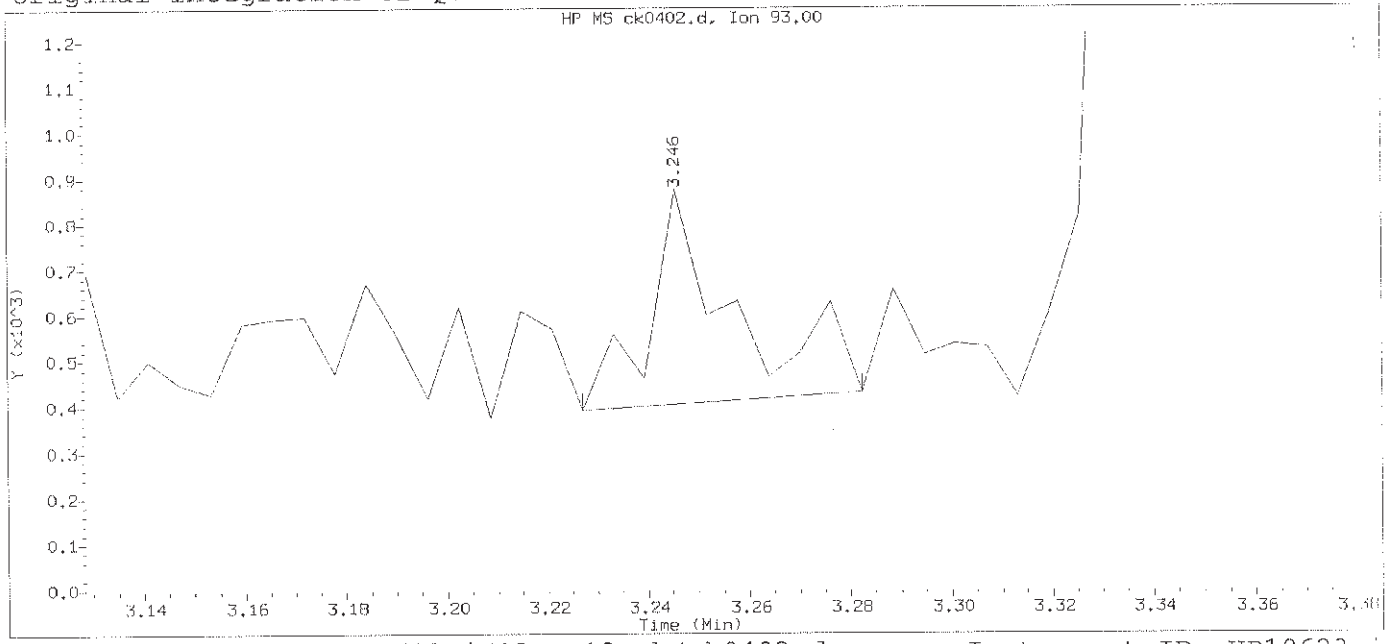
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 222		
Retention Time (minutes)	: 3.246		
Quant Ion	: 93.00		
Area	: 532		
On-column Amount (ng/ul)	: 0.0453		
Integration start scan	: 218	Integration stop scan:	227
Y at integration start	: 391	Y at integration end:	431

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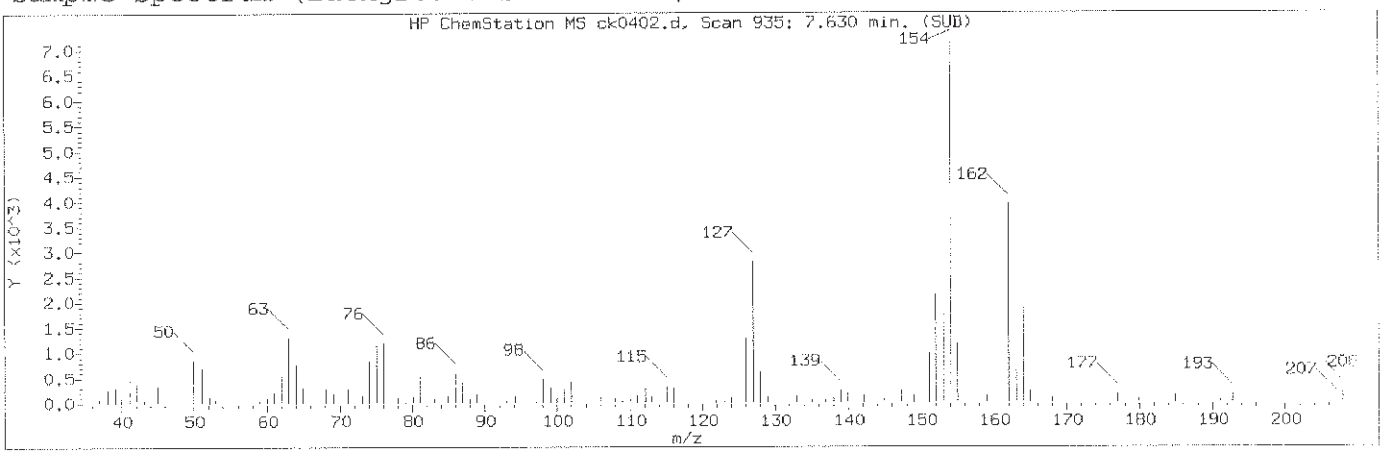
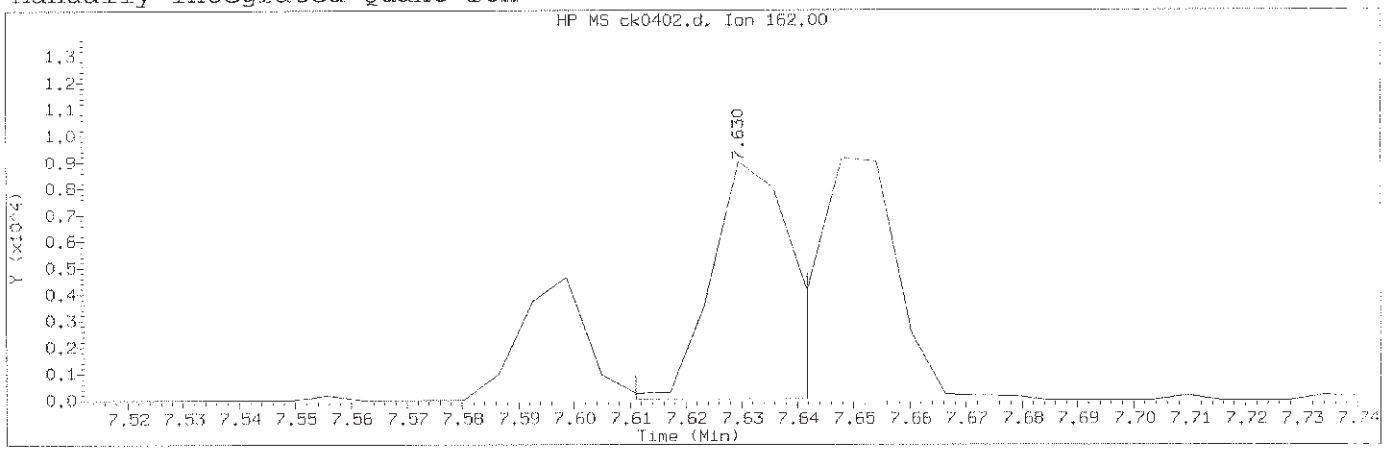
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 9196M		
On-Column Amount (ng/ul)	: 0.5248		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 47	Y at integration end:	54

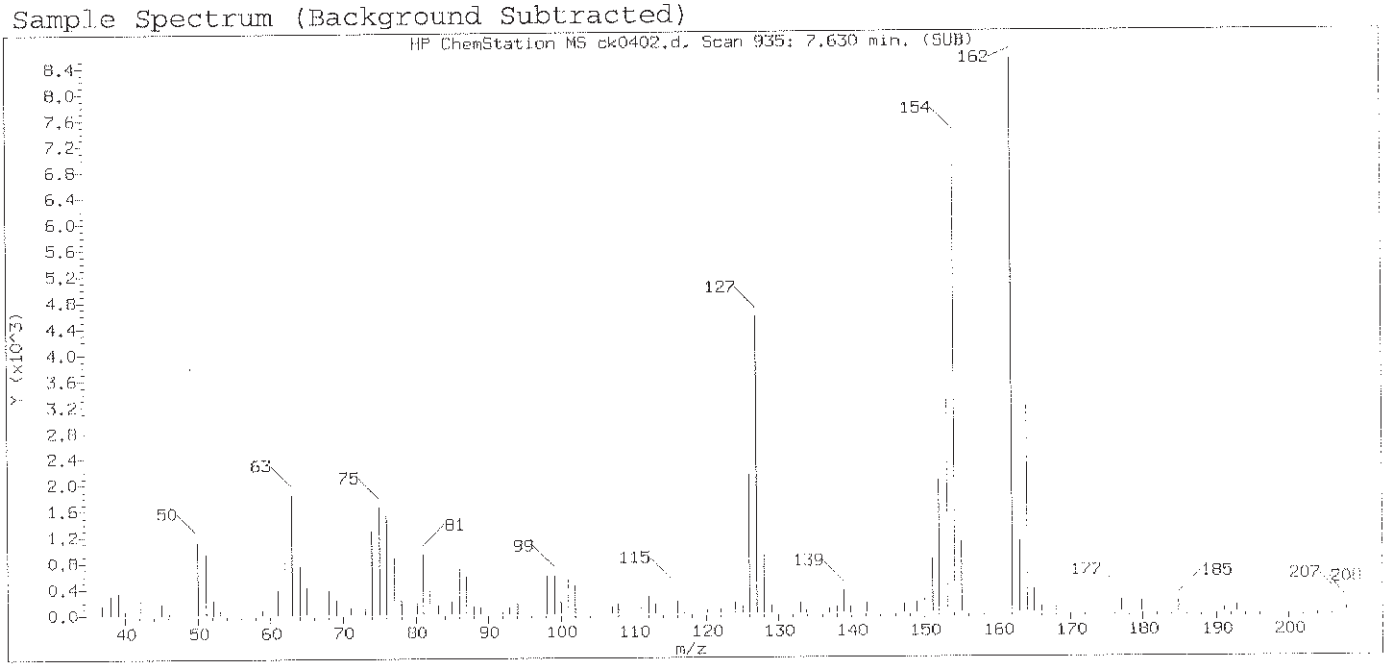
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

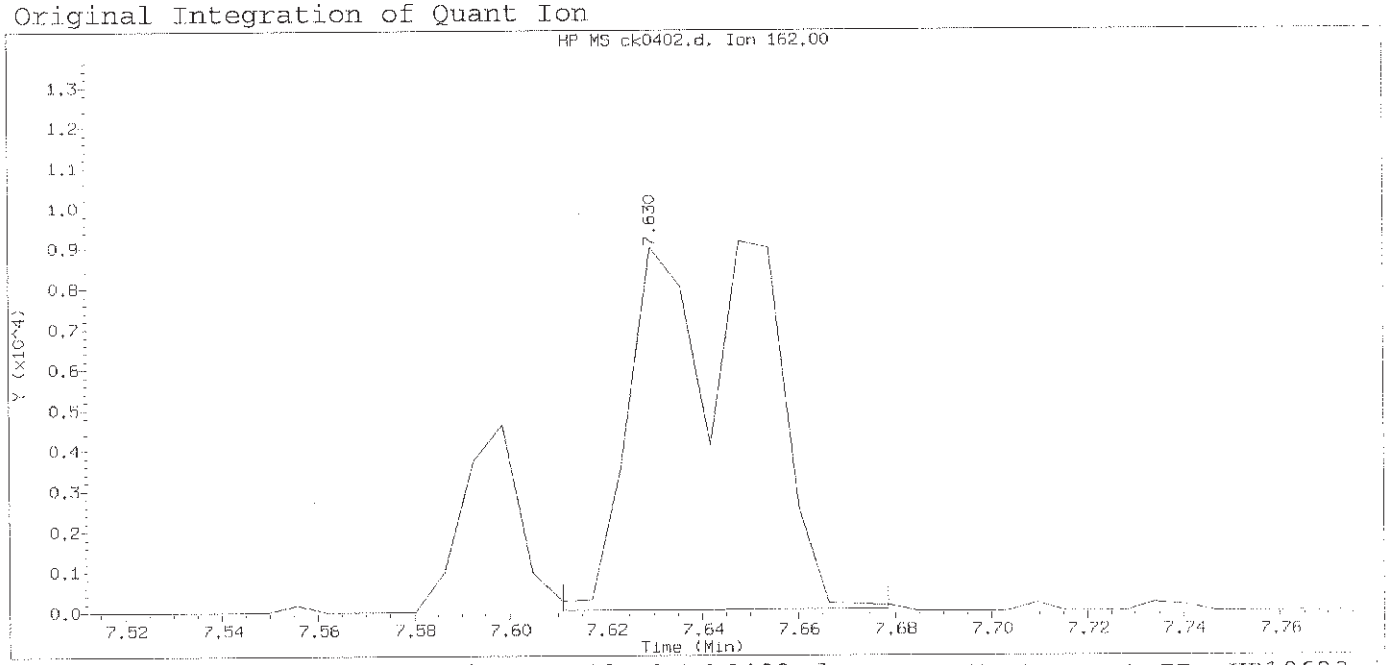
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

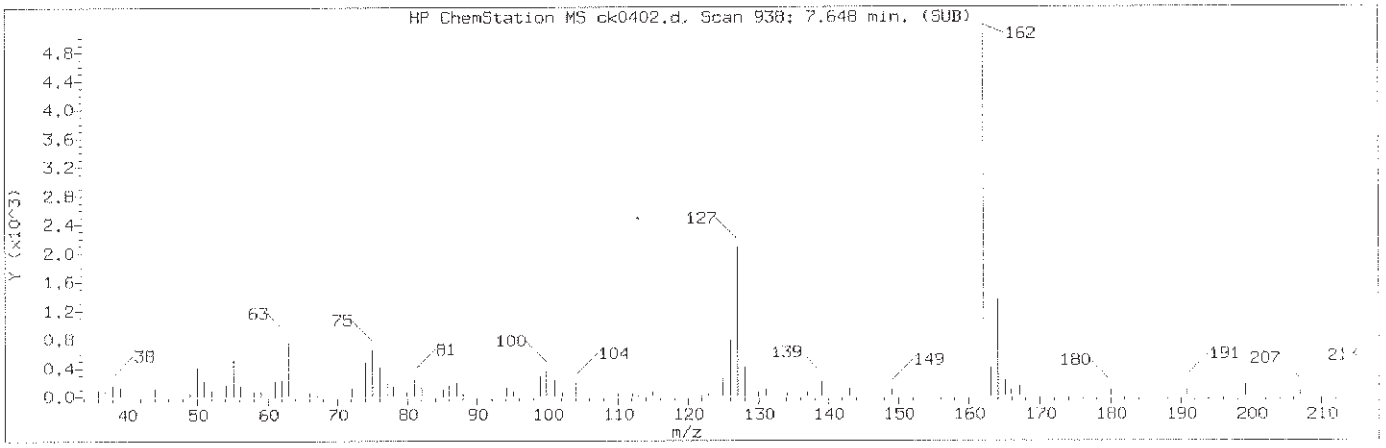
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

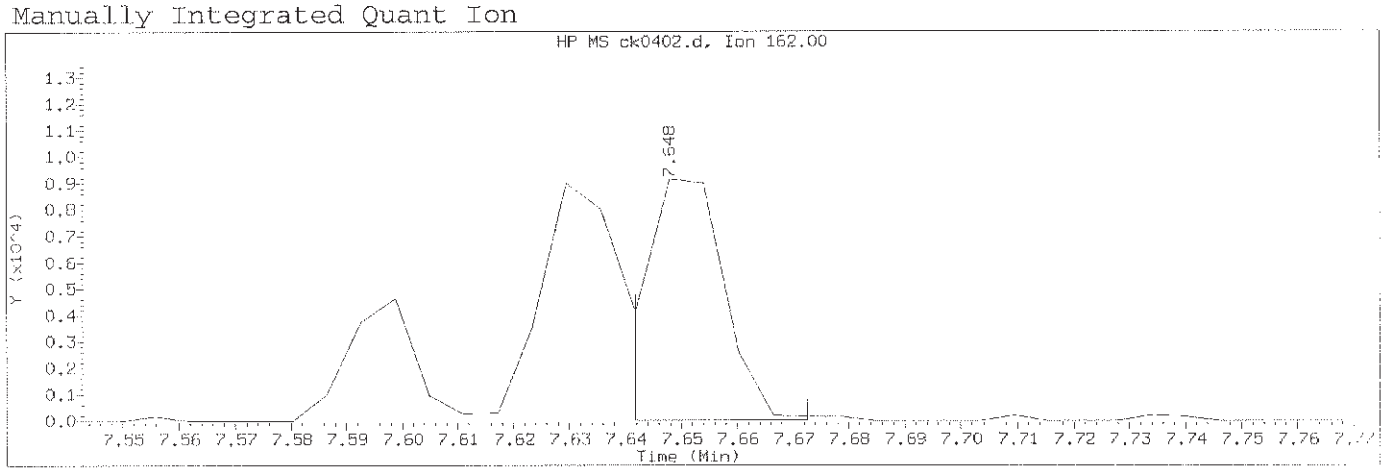
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16846		
On-column Amount (ng/ul)	: 1.0791		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 47	Y at integration end:	63

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 938		
Retention Time (minutes)	: 7.648		
Quant Ion	: 162.00		
Area (flag)	: 9244M		
On-Column Amount (ng/ul)	: 0.5360		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 26	Y at integration end:	26

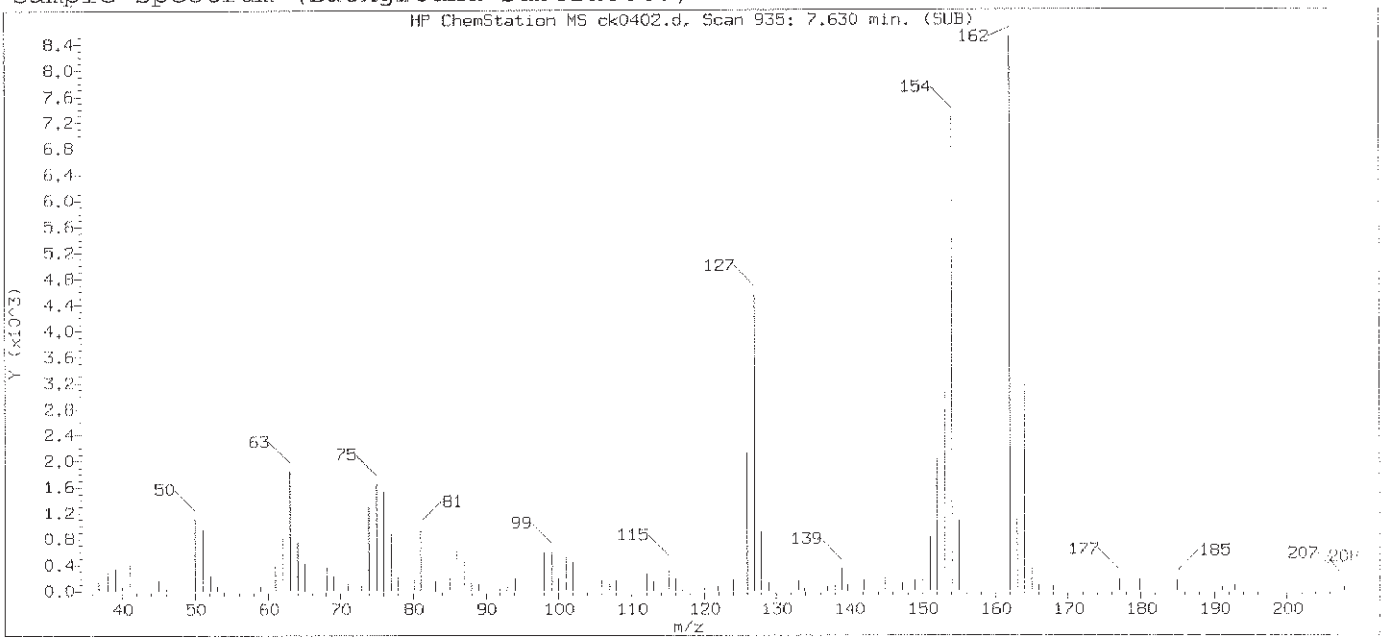
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

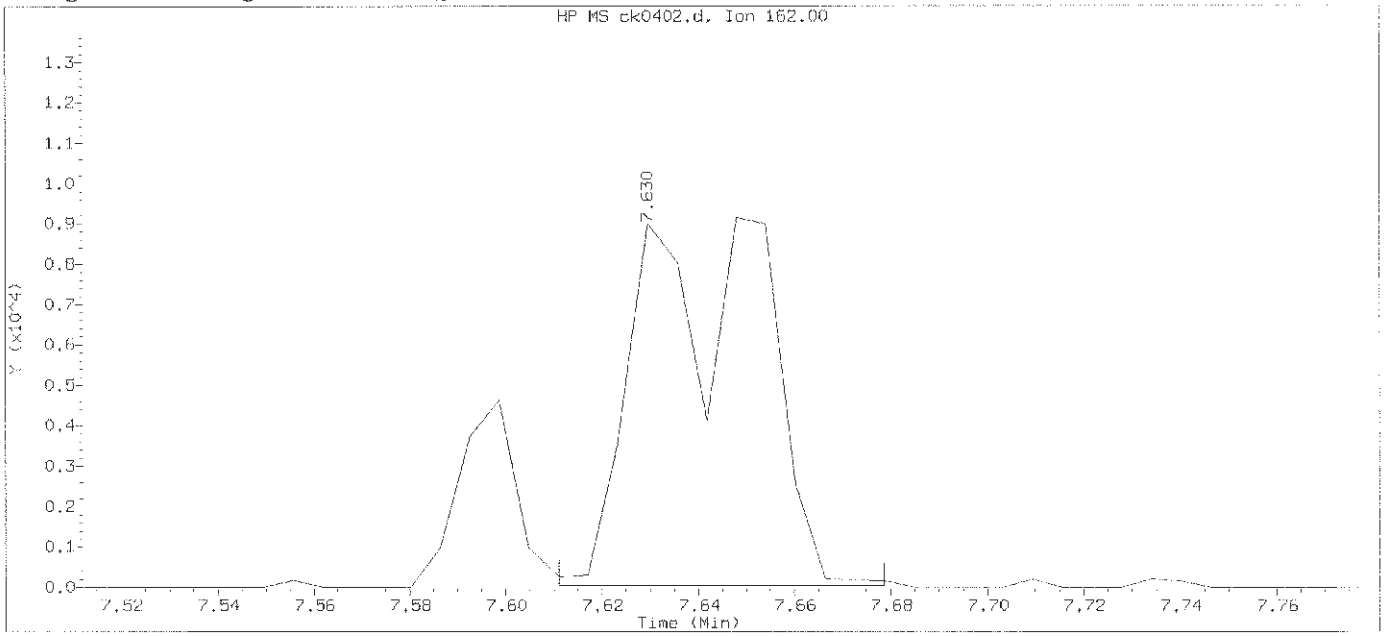
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

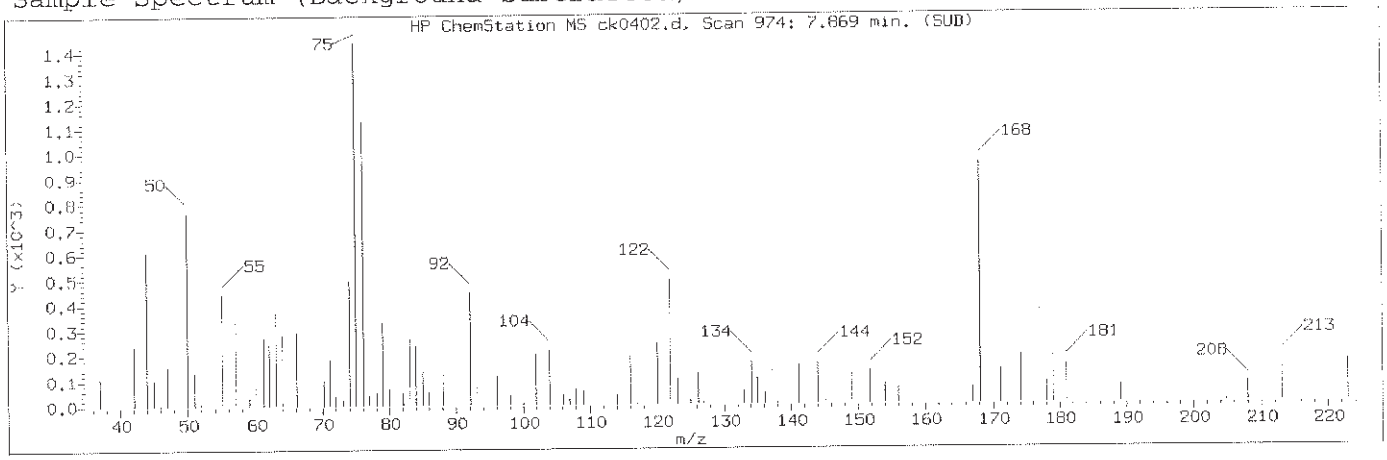
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

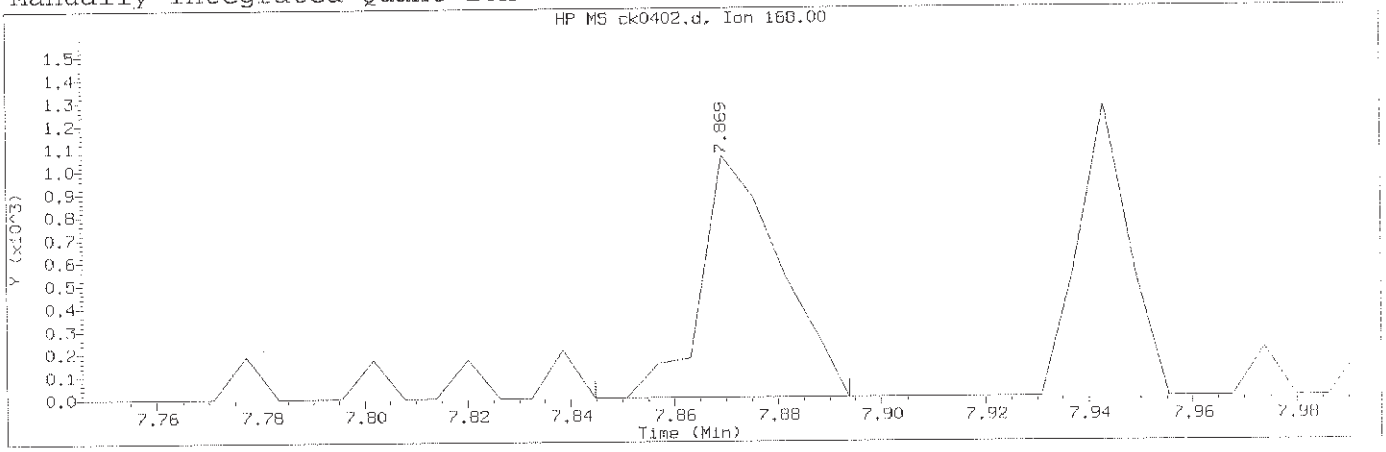
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16903		
On-column Amount (ng/ul)	: 0.9764		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 41	Y at integration end:	41

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 974		
Retention Time (minutes)	: 7.869		
Quant Ion	: 168.00		
Area (flag)	: 1124M		
On-Column Amount (ng/ul)	: 0.5059		
Integration start scan	: 969	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

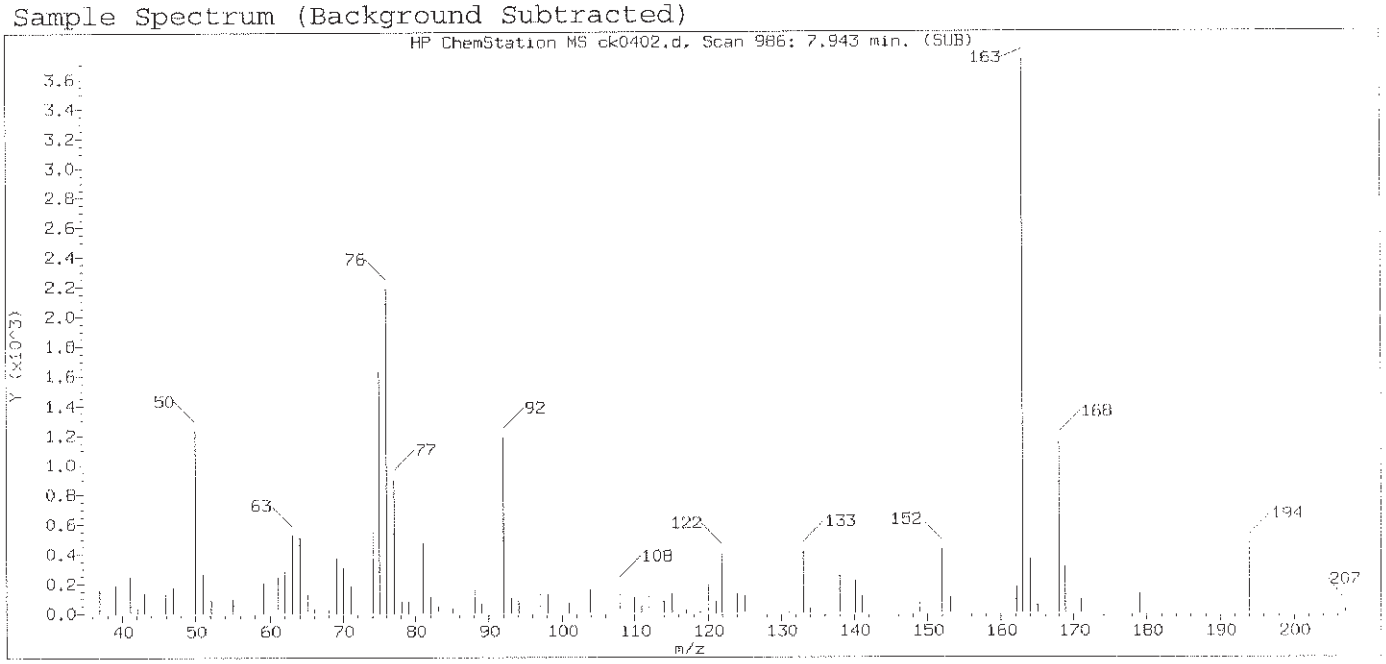
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.0 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

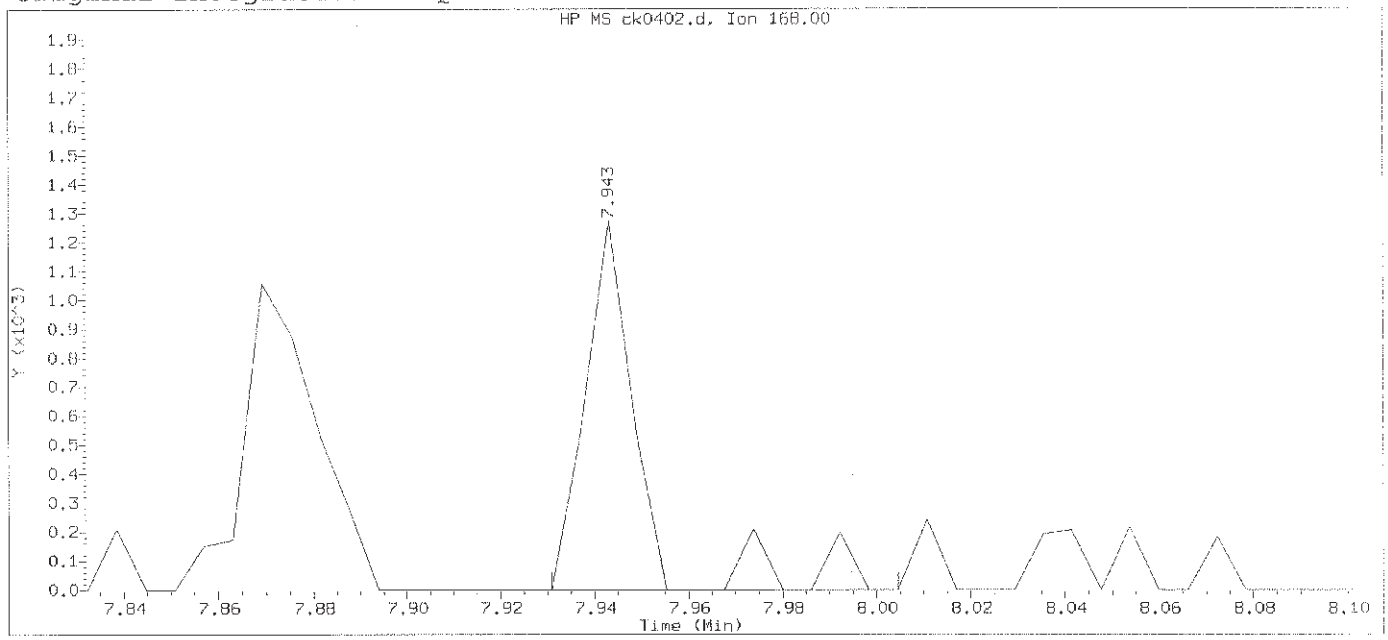
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

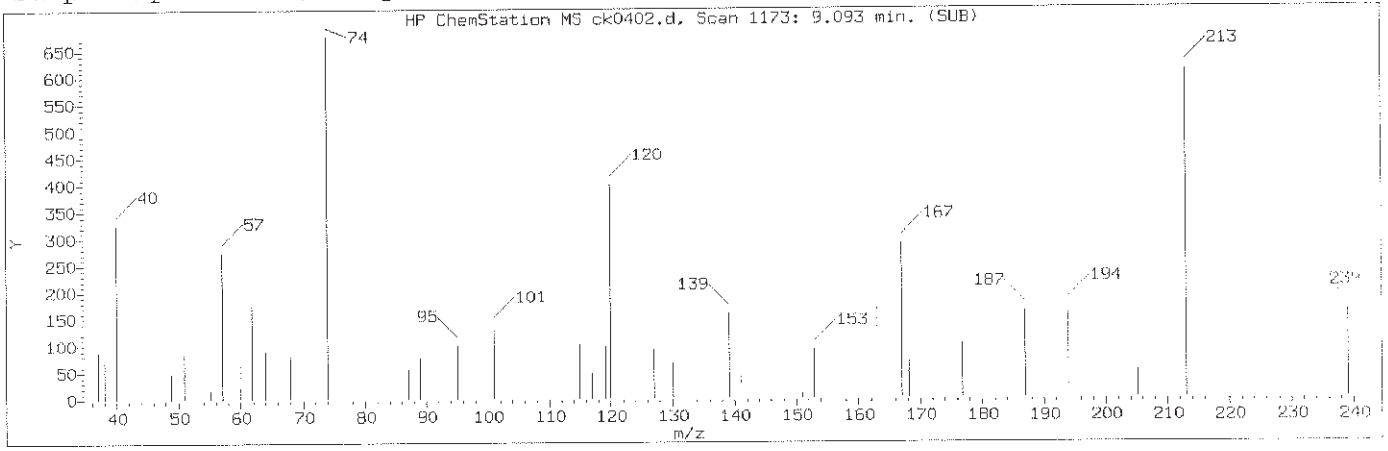
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

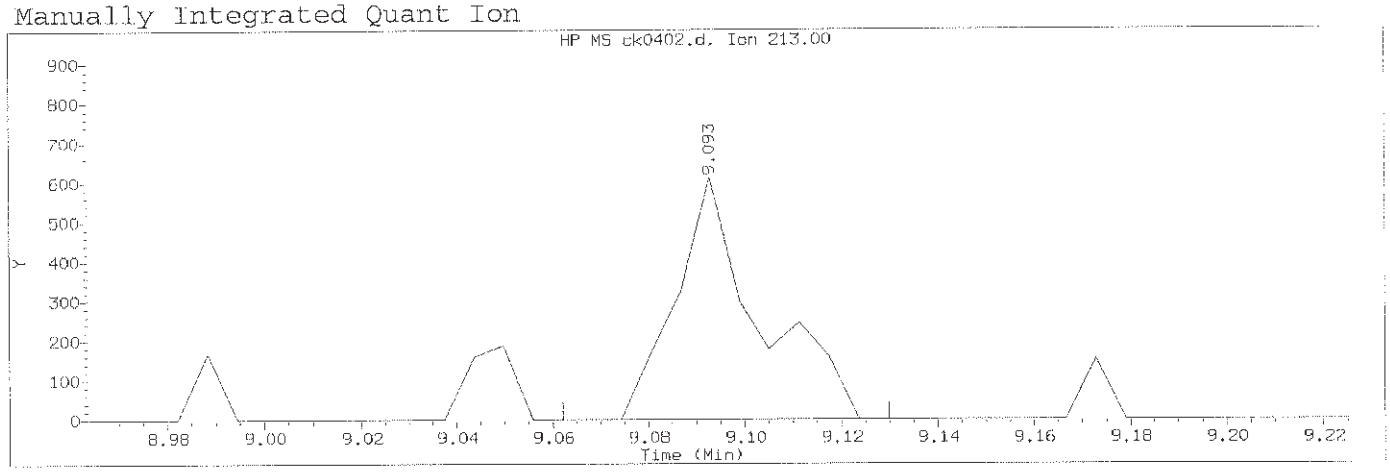
Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area	: 1011		
On-column Amount (ng/ul)	: 0.4897		
Integration start scan	: 983	Integration stop scan:	995
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

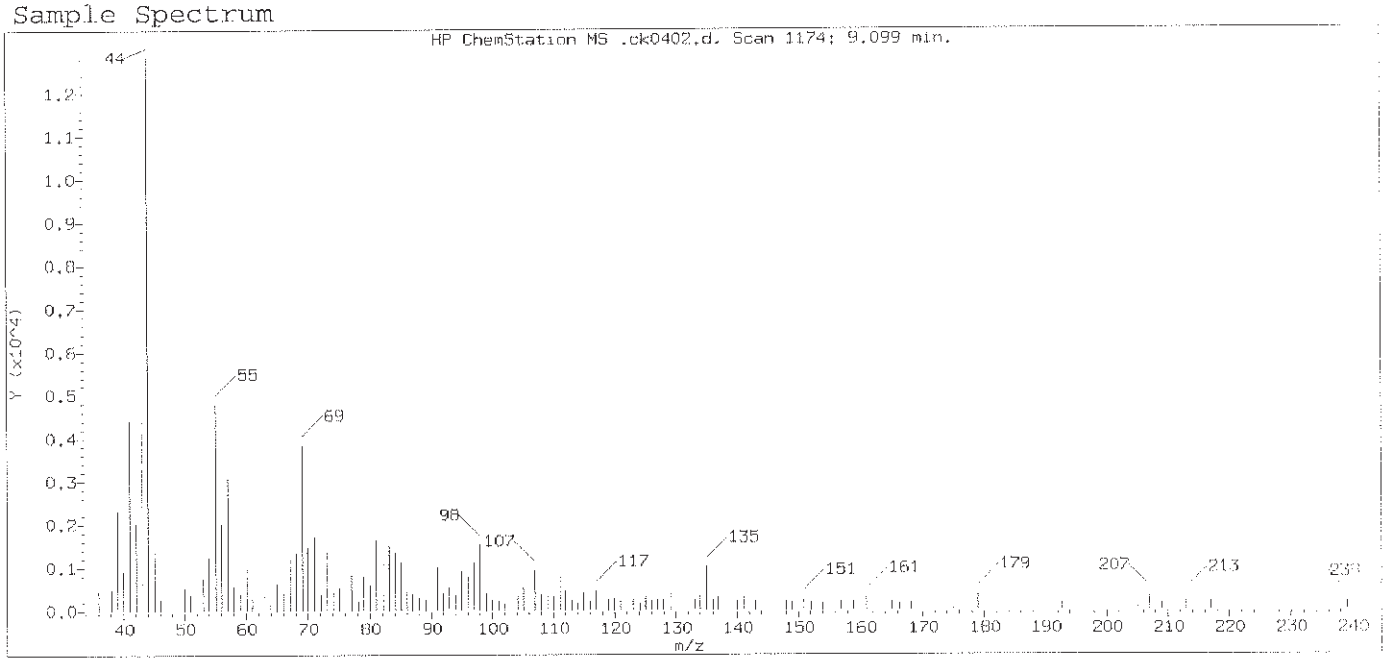
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 728M		
On-Column Amount (ng/ul)	: 0.5016		
Integration start scan	: 1167	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

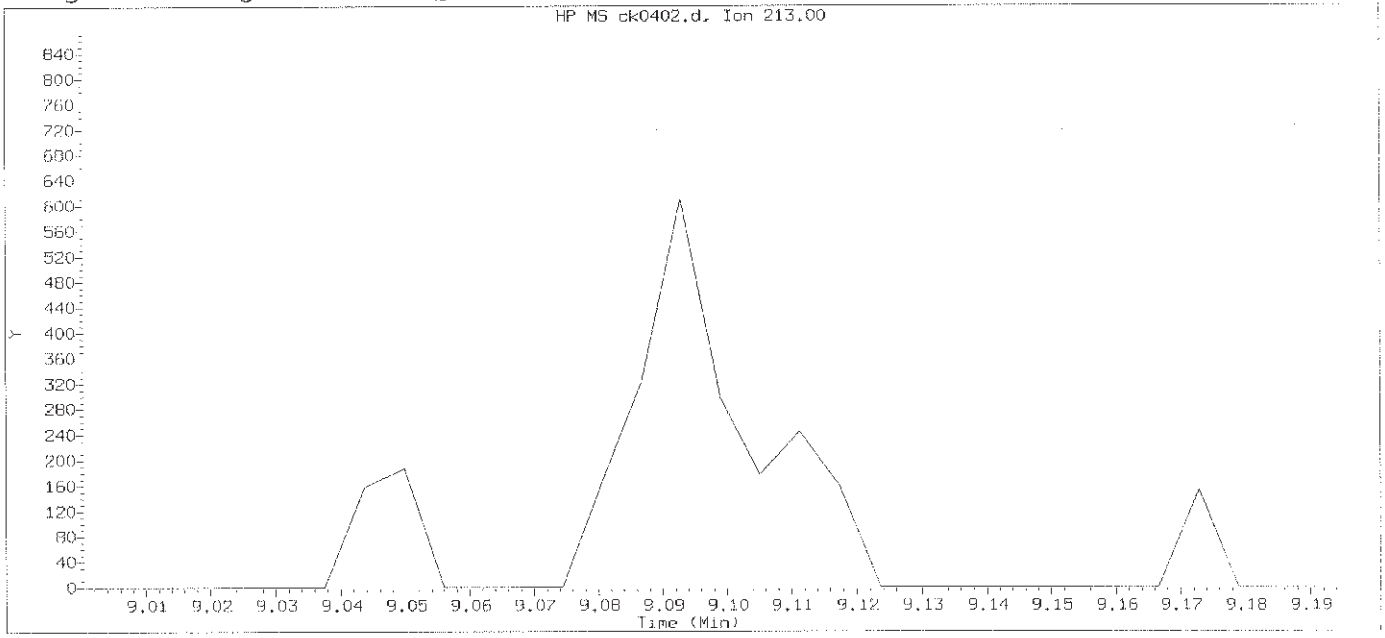
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

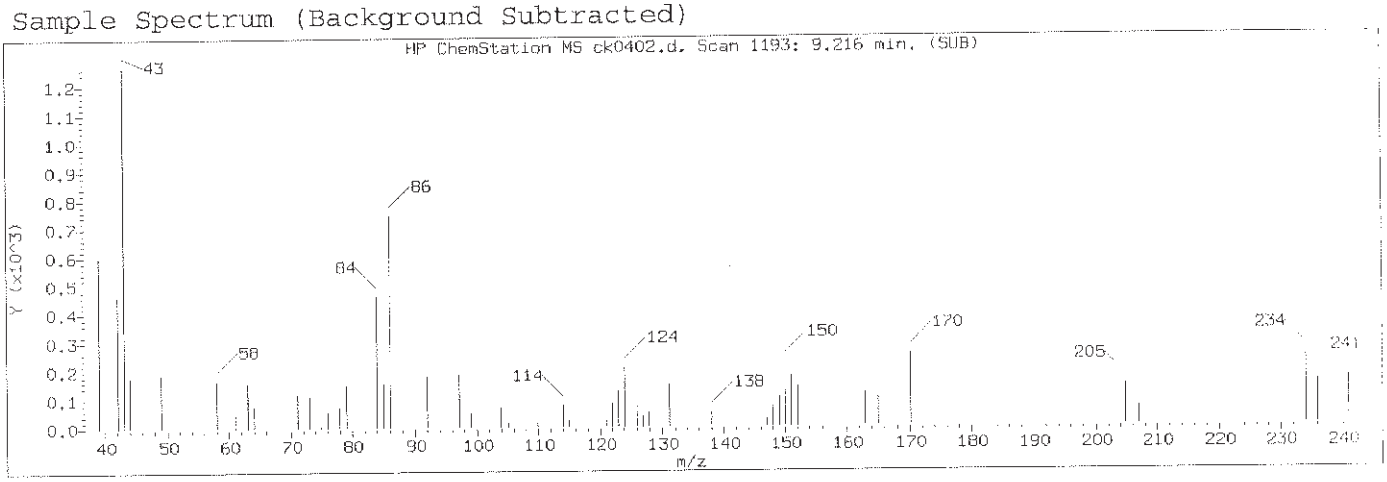
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

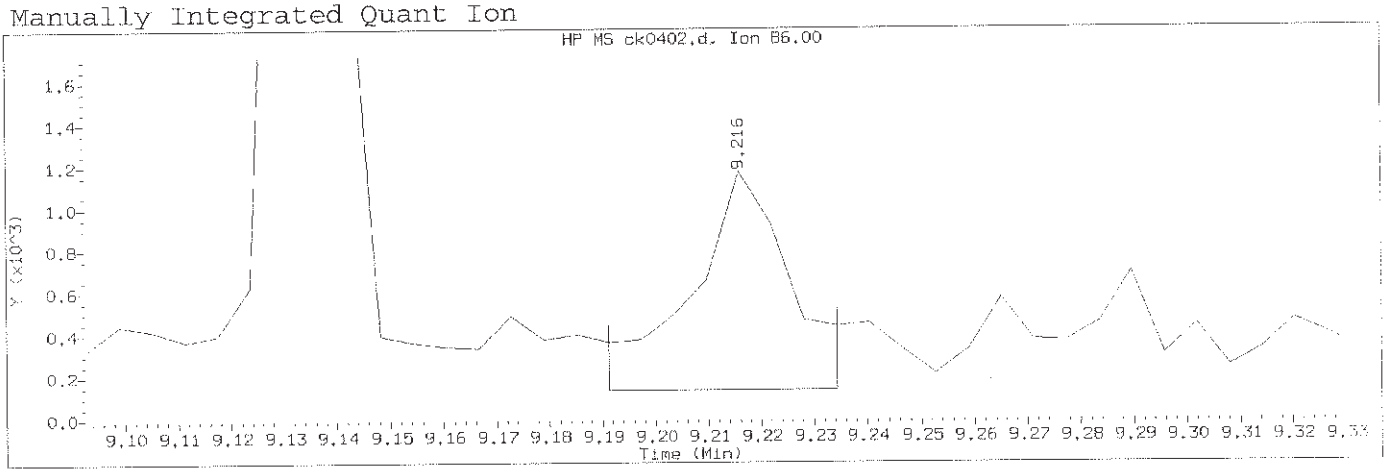
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1193		
Retention Time (minutes)	: 9.216		
Quant Ion	: 86.00		
Area (flag)	: 1405M		
On-Column Amount (ng/ul)	: 0.2306		
Integration start scan	: 1188	Integration stop scan:	1195
Y at integration start	: 134	Y at integration end:	134

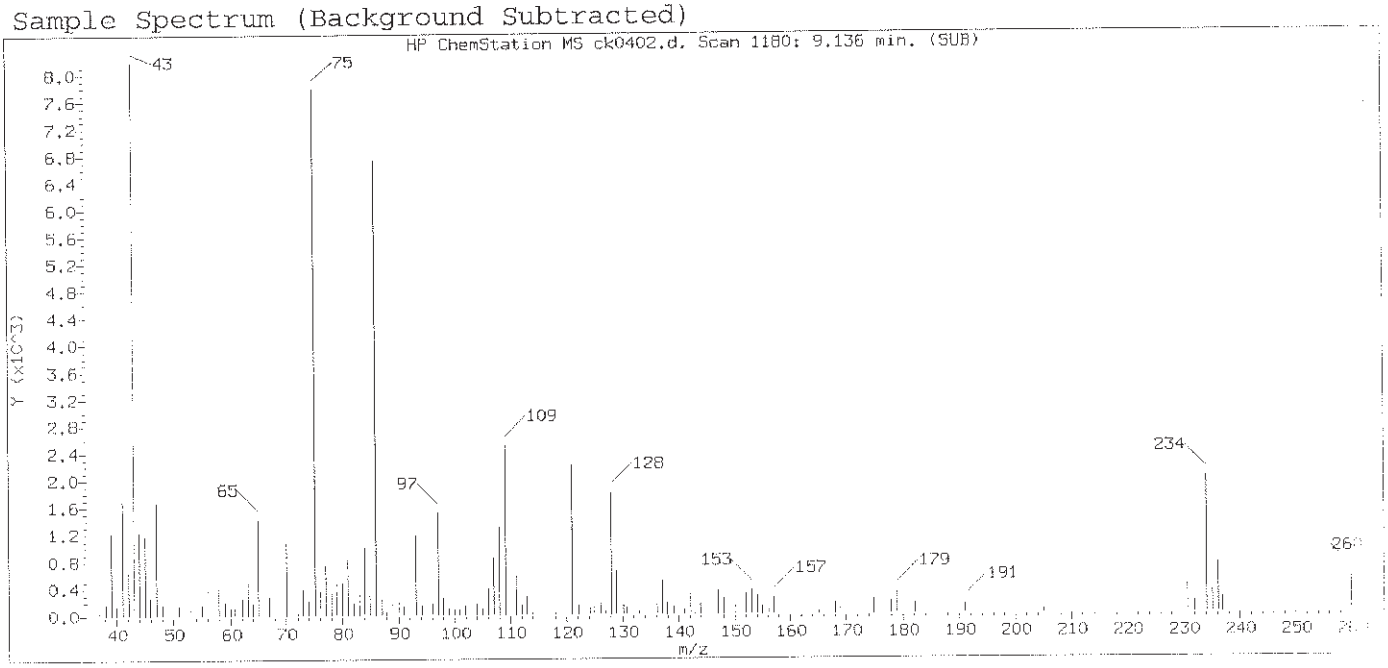
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

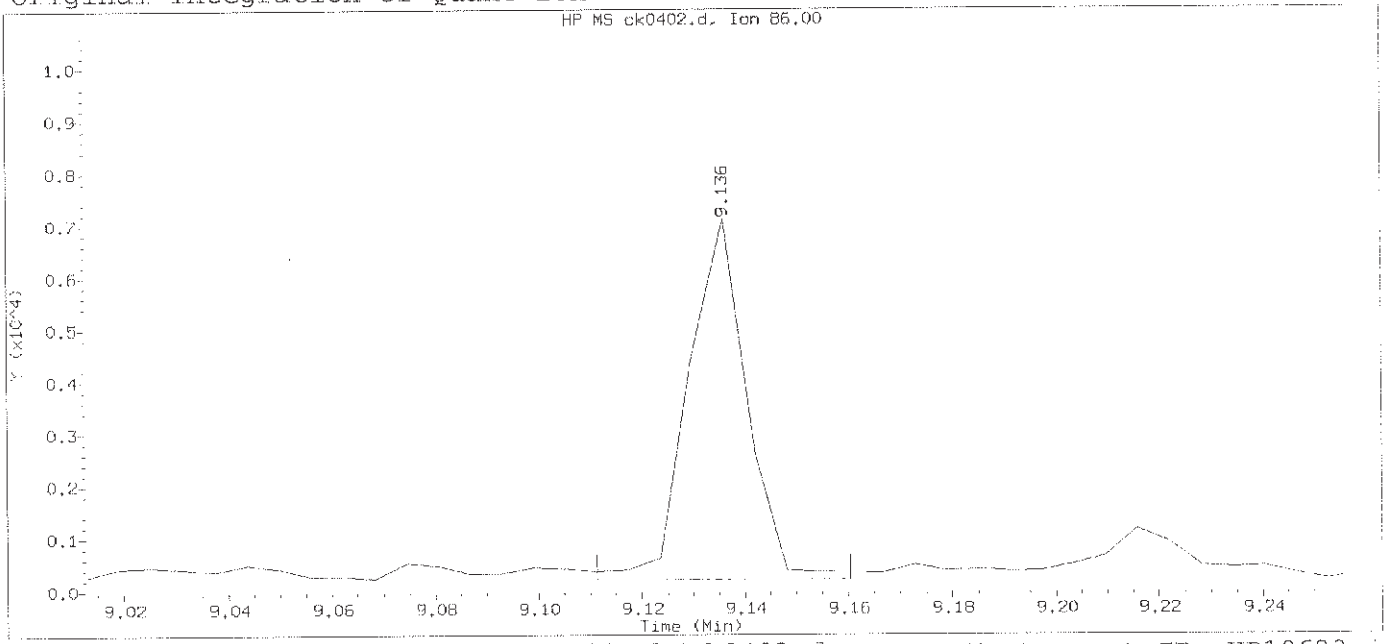
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

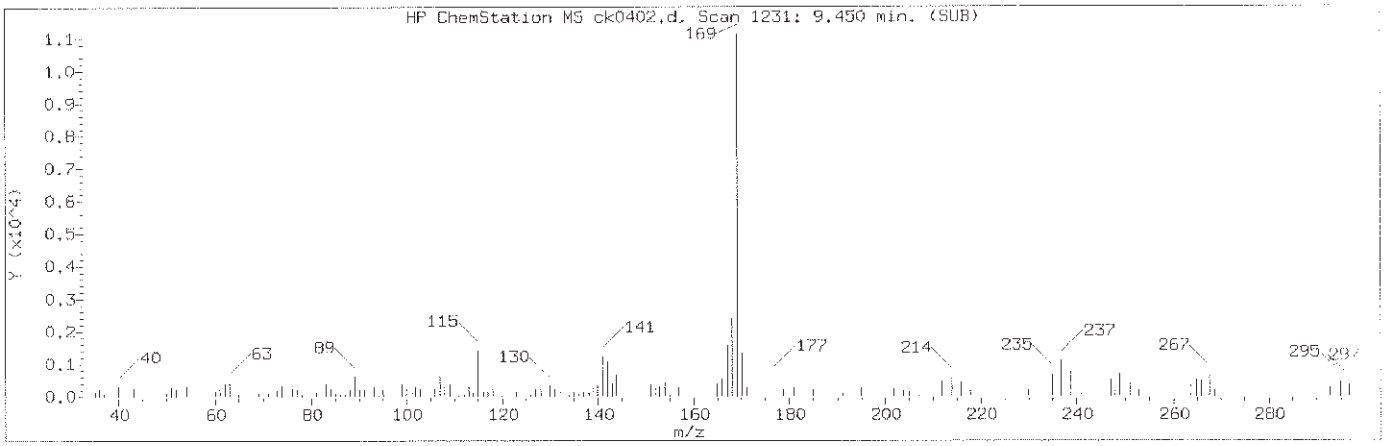
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

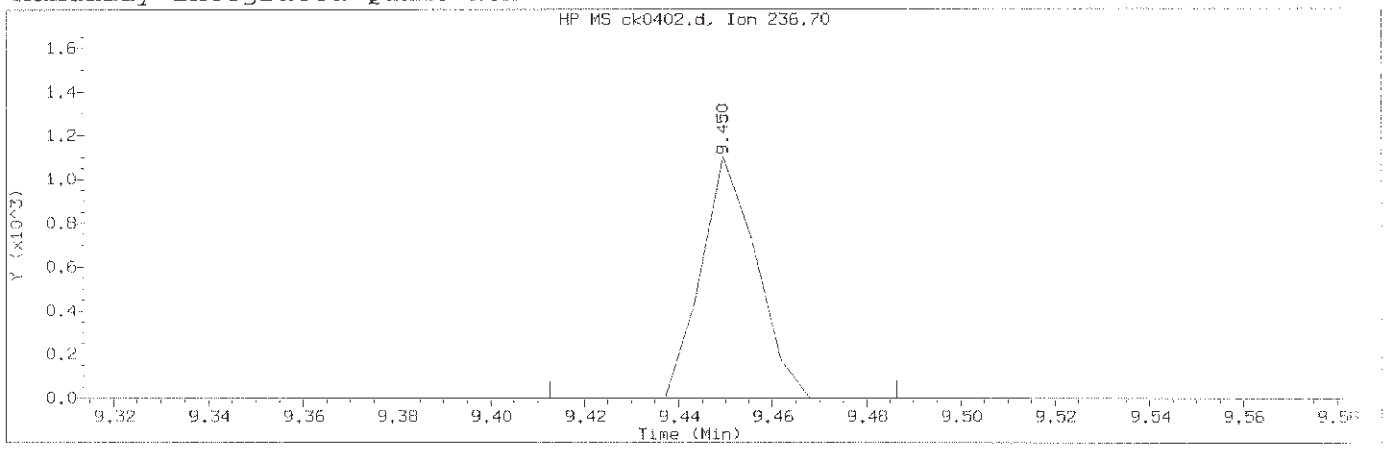
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5379		
On-column Amount (ng/ul)	: 0.8453		
Integration start scan	: 1175	Integration stop scan:	1183
Y at integration start	: 213	Y at integration end:	213

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 132		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1231		
Retention Time (minutes)	: 9.450		
Quant Ion	: 237.00		
Area (flag)	: 895M		
On-Column Amount (ng/ul)	: 0.3959		
Integration start scan	: 1224	Integration stop scan:	1236
Y at integration start	: 0	Y at integration end:	0

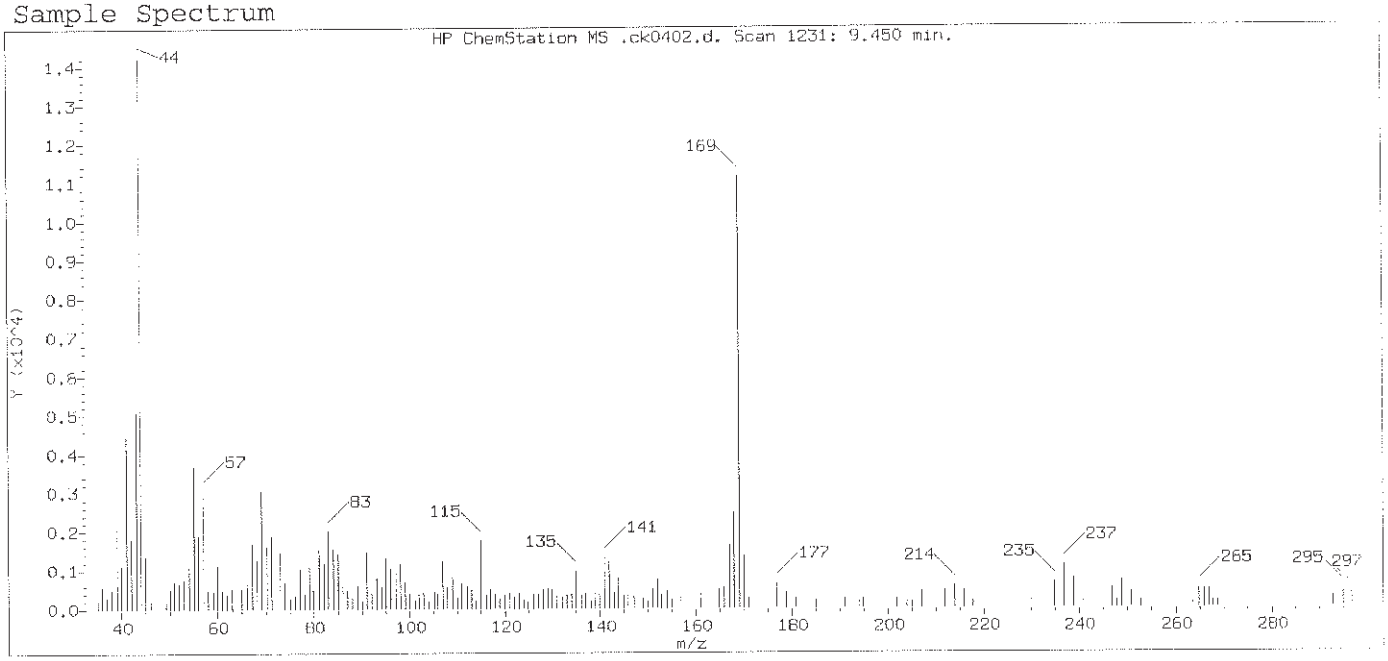
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

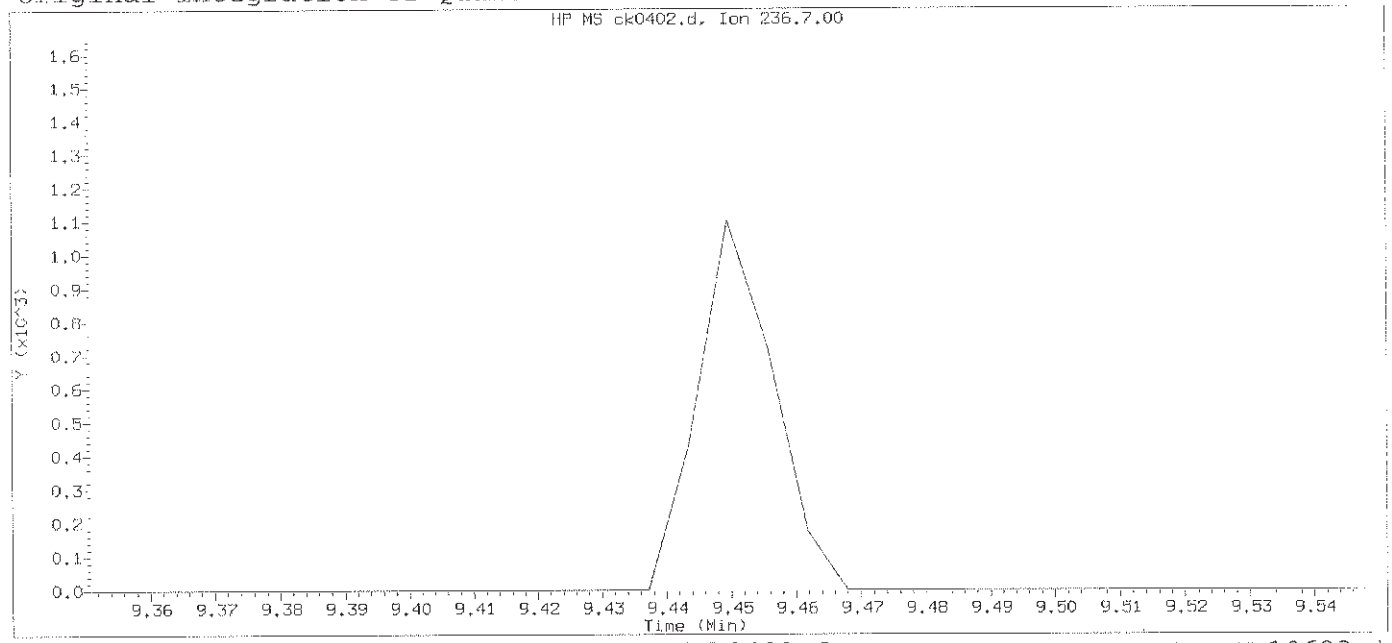
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

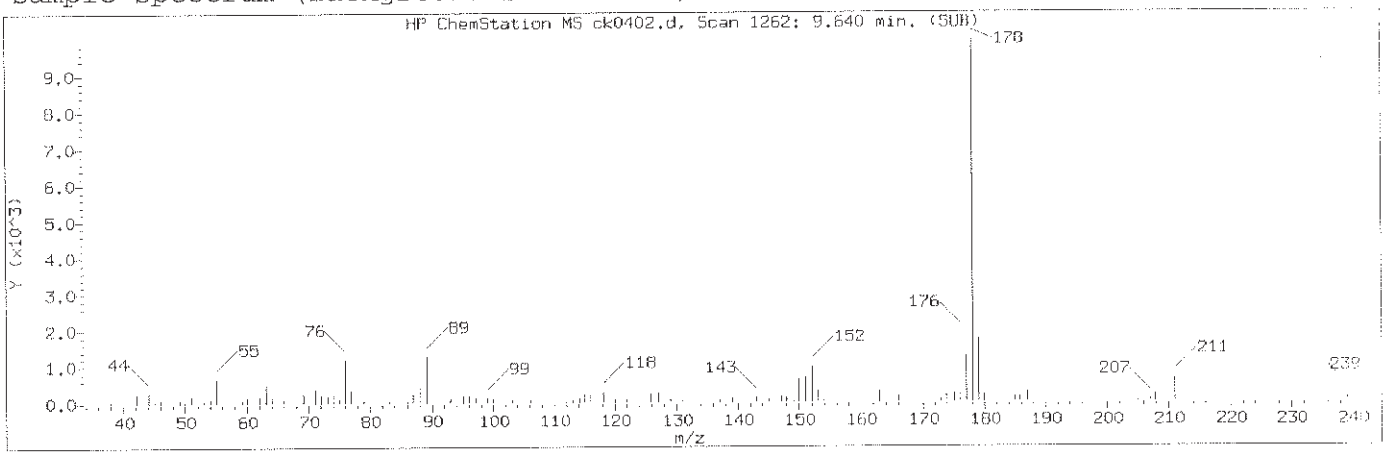
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

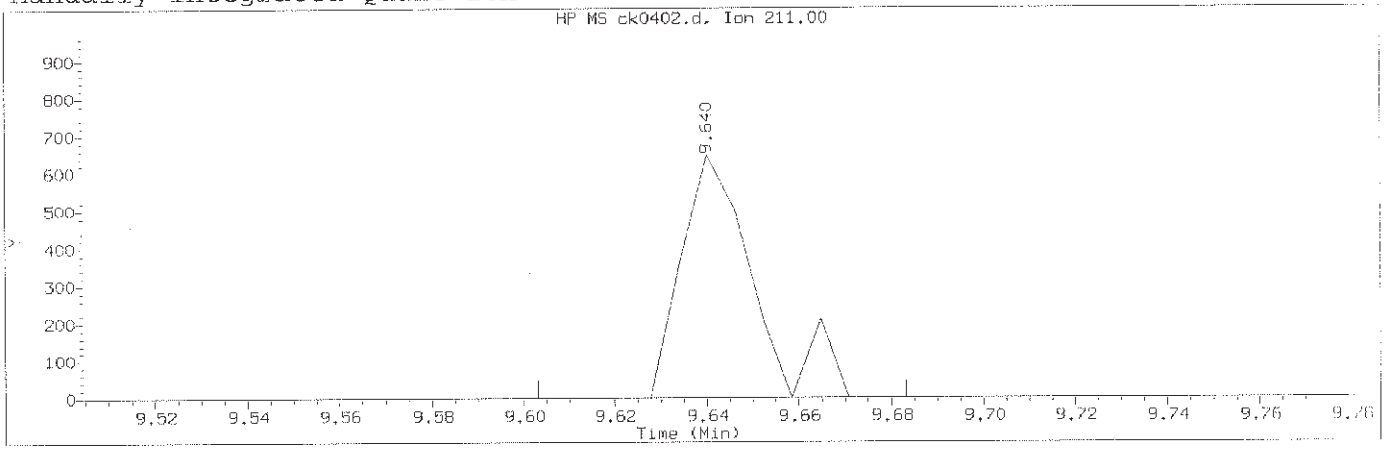
Compound Number : 132
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.450
Quant Ion : 237.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

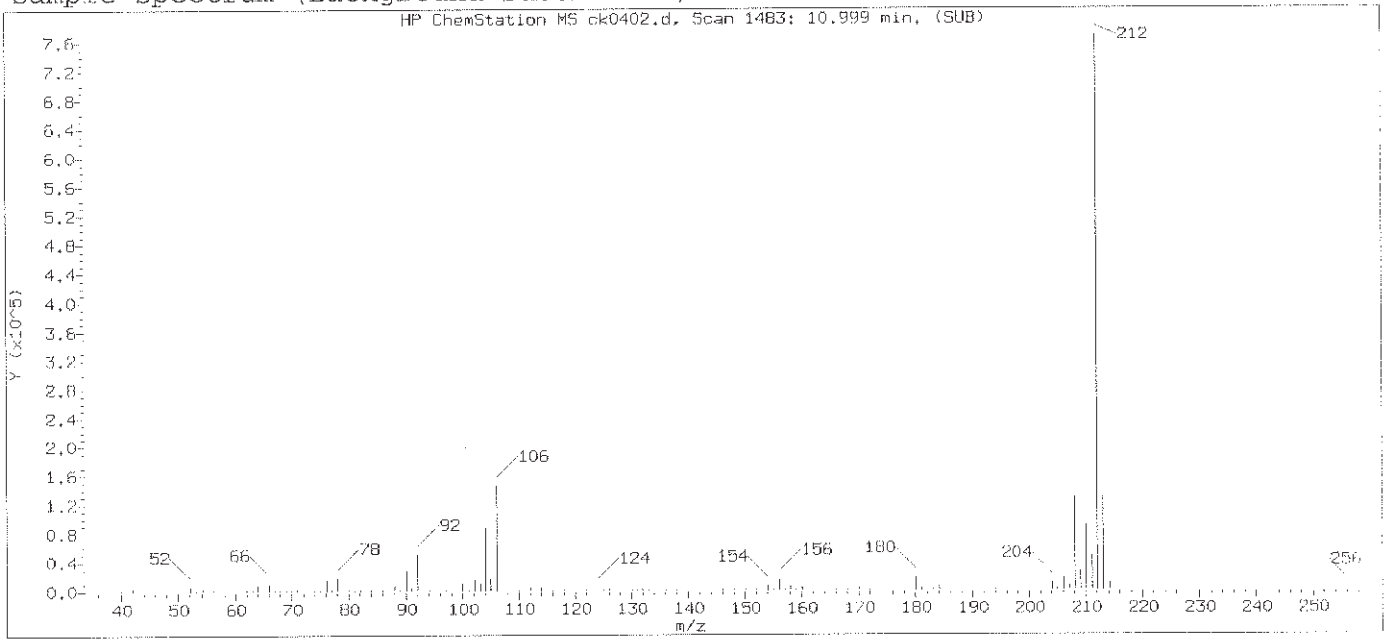
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 706M		
On-Column Amount (ng/ul)	: 0.2371		
Integration start scan	: 1255	Integration stop scan:	1268
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

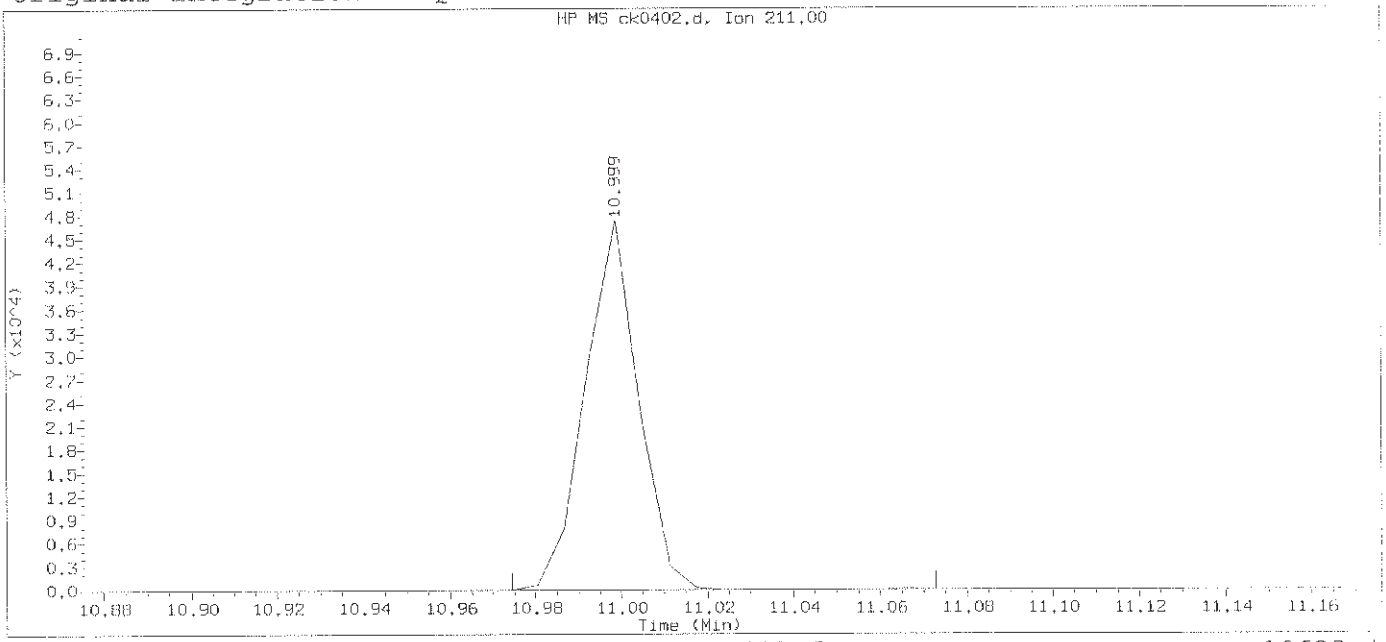
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

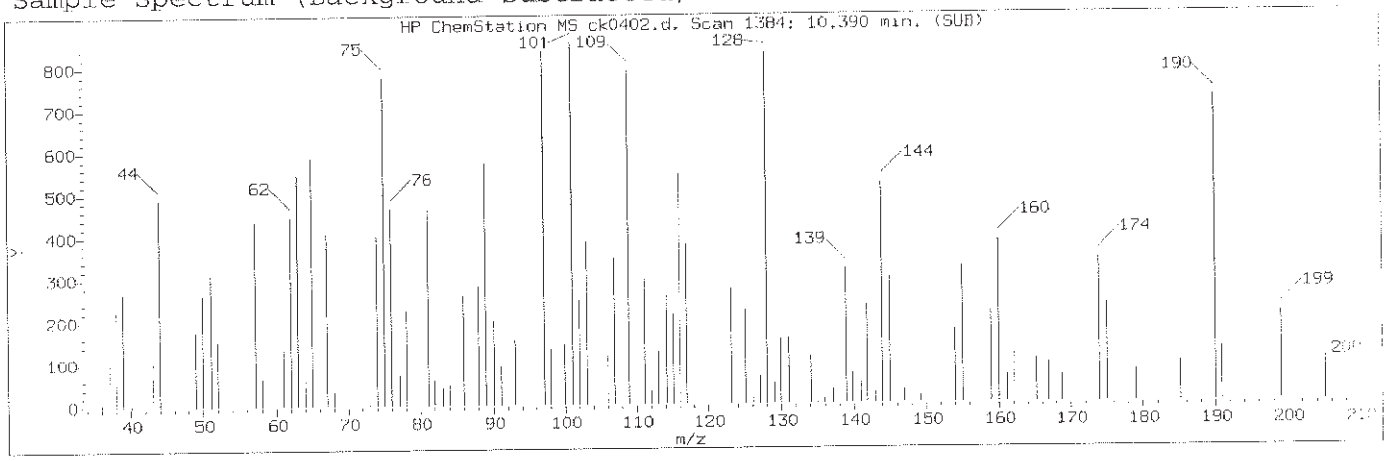
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

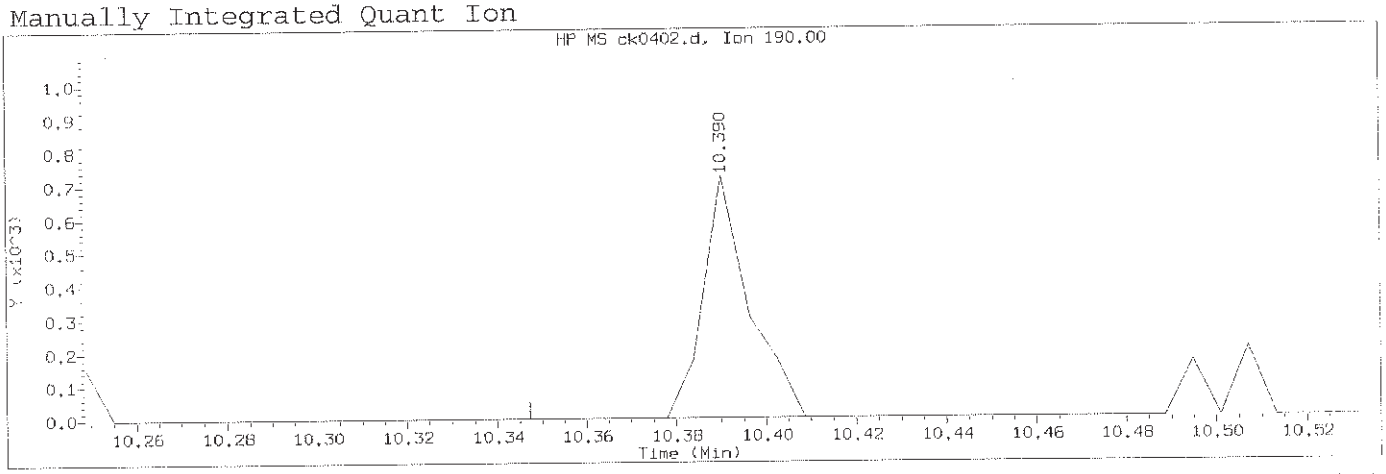
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 40792		
On-column Amount (ng/ul)	: 15.8756		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 144		
Compound Name	: 4-Nitroquinoline-1-oxide		
Scan Number	: 1384		
Retention Time (minutes)	: 10.390		
Quant Ion	: 190.00		
Area (flag)	: 505M		
On-Column Amount (ng/ul)	: 0.2244		
Integration start scan	: 1376	Integration stop scan:	1390
Y at integration start	: 0	Y at integration end:	0

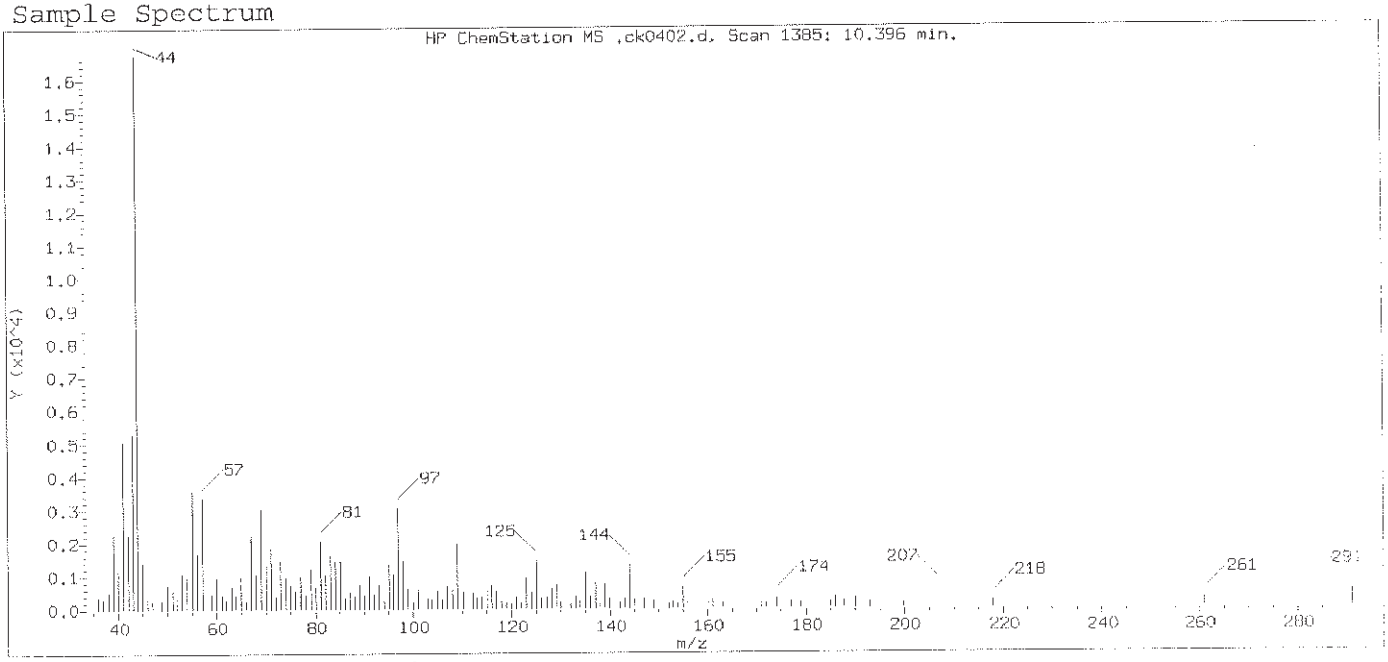
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

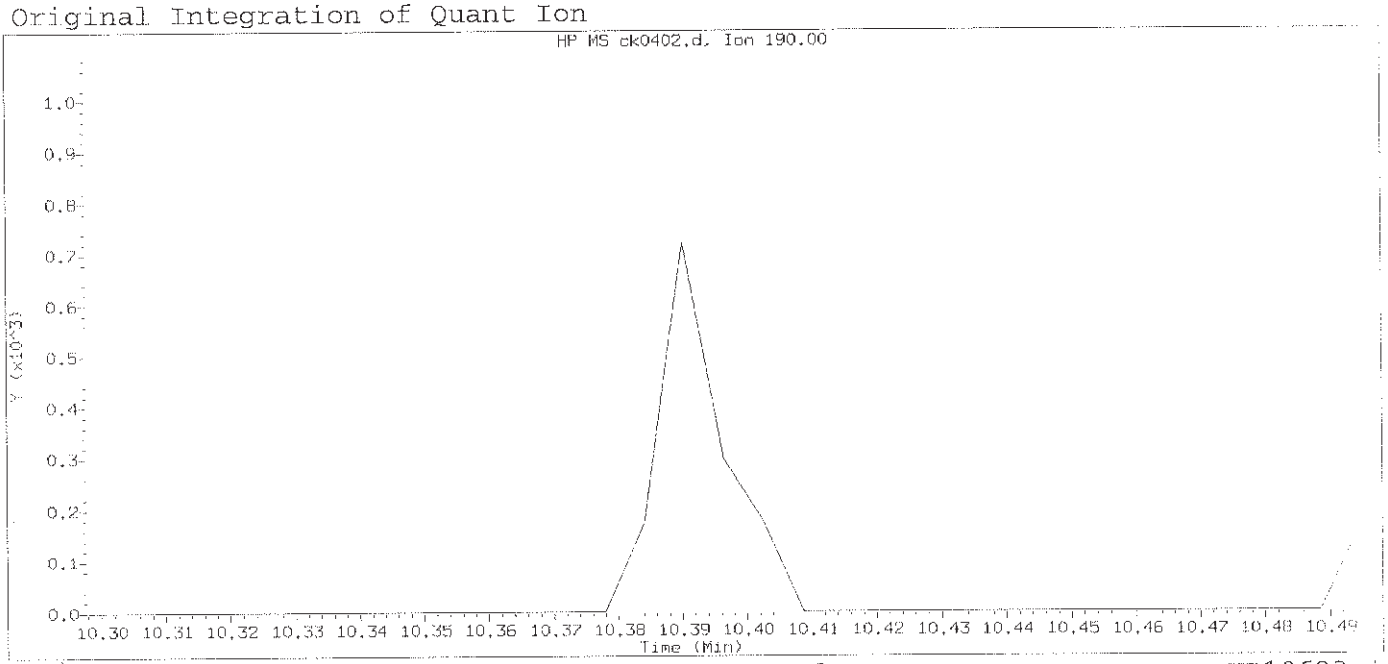
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



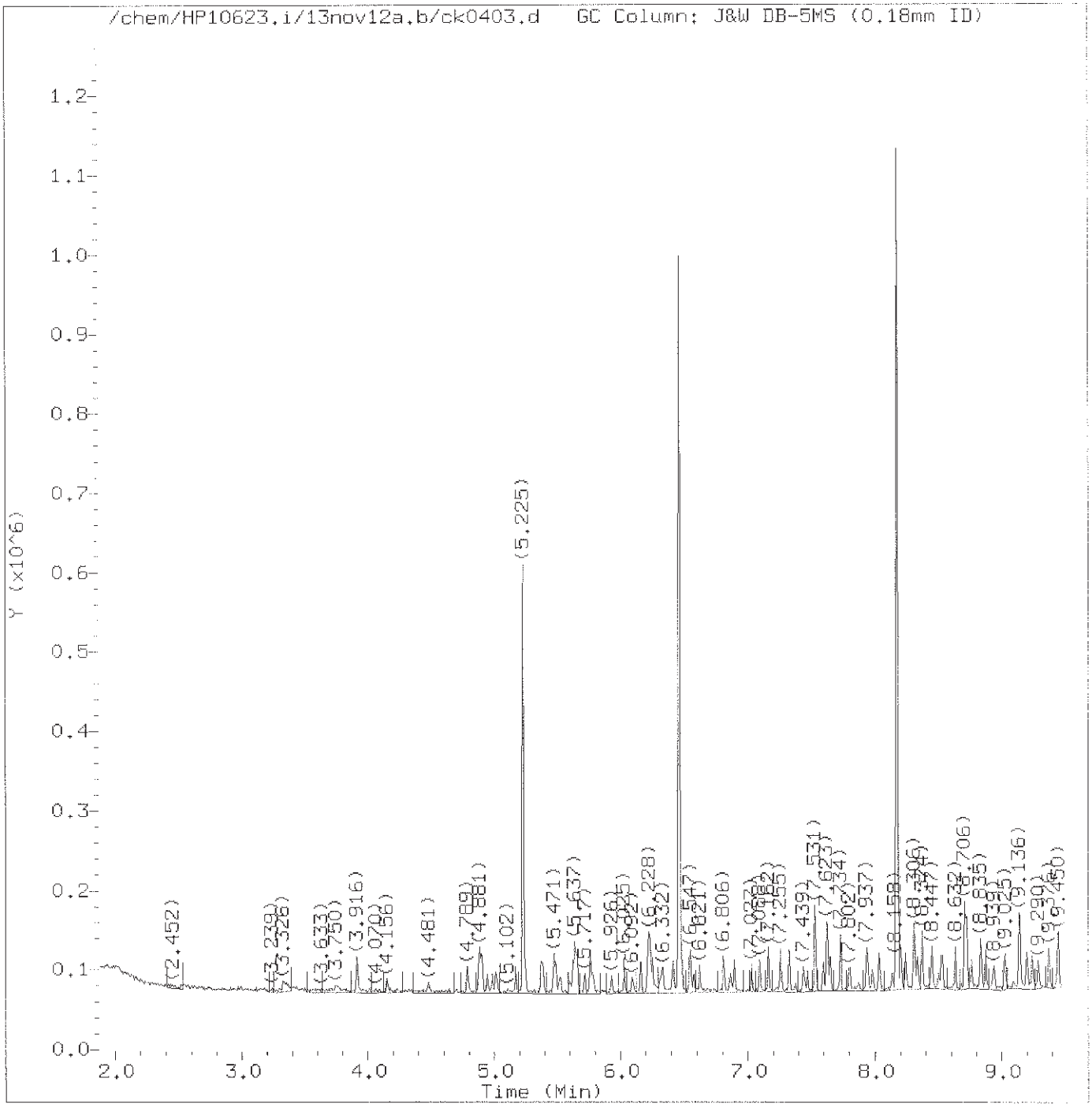
Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number : 144
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 10.397
Quant Ion : 190.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

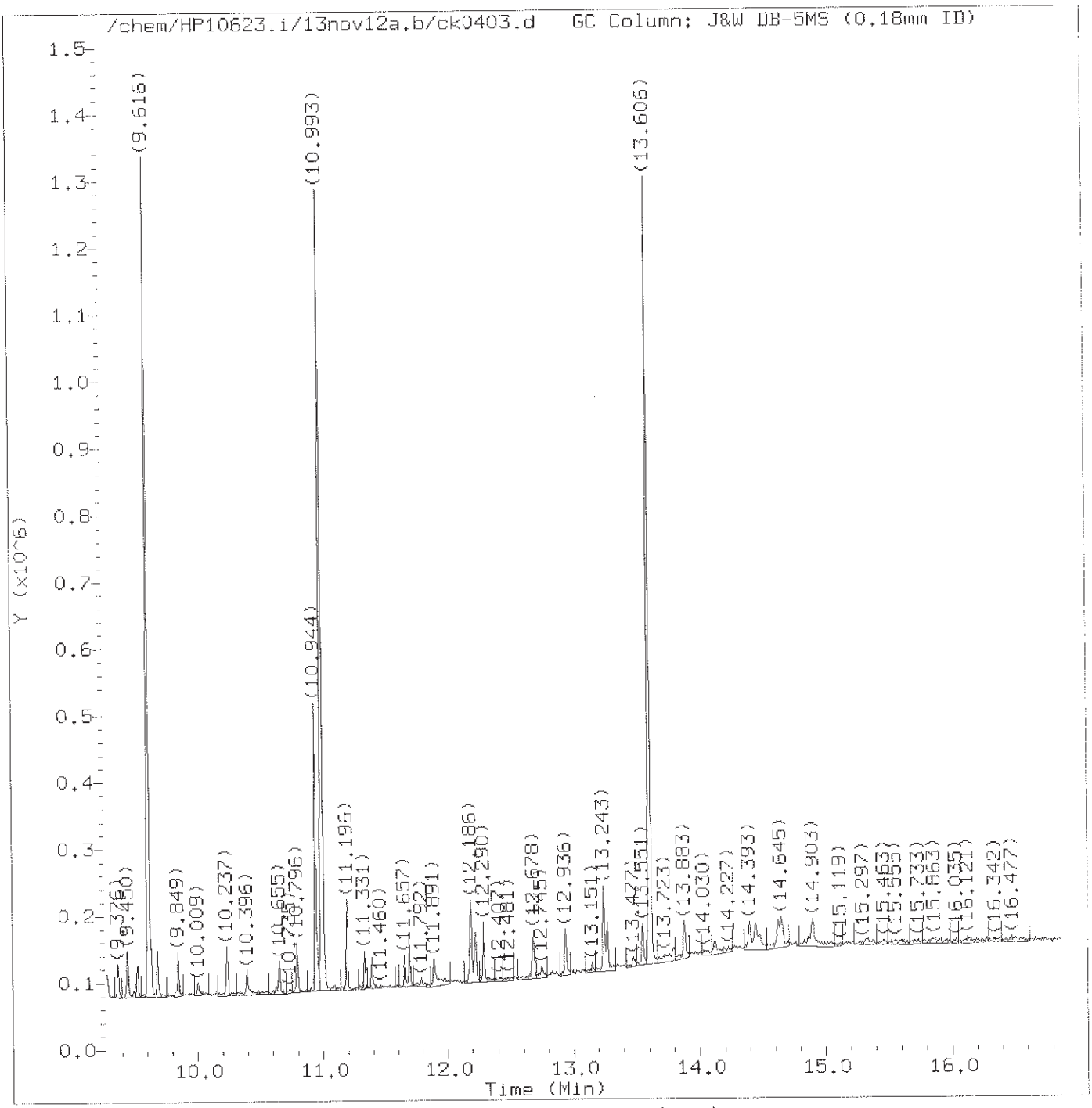
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.004	88	3656	1.484
2) N-Nitrosodimethylamine	(1)	2.428	74	4954M	1.086
3) Pyridine	(1)	2.526	79	8126M	1.149
5) 2-Picoline	(1)	3.332	93	7640	1.059
6) N-Nitrosomethylethylamine	(1)	3.424	88	7635	2.214
7) Methyl methanesulfonate	(1)	3.750	80	3852	1.111
9)$2-Fluorophenol	(1)	3.916	112	12694	1.127
10) N-Nitrosodiethylamine	(1)	4.156	102	3955	1.154
11) Ethyl methanesulfonate	(1)	4.481	109	2987	0.957
12) Benzaldehyde	(1)	4.789	77	6633	1.431
14)$Phenol-d5	(1)	4.881	99	15789	0.952
15)$Phenol-d6	(1)	4.881	99	15789	0.952
16) Phenol	(1)	4.893	94	10188	1.053
13) Aniline	(1)	4.900	93	12292	1.072
18) bis(2-Chloroethyl)ether	(1)	4.980	93	6952	1.012
19) 2-Chlorophenol	(1)	5.010	128	7207	1.195
20) 1,3-Dichlorobenzene	(1)	5.164	146	6641	1.091
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	75301	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	6717	1.081
24) Benzyl alcohol	(1)	5.373	108	6021	1.276
25) 1,2-Dichlorobenzene	(1)	5.385	146	6077	1.042
206) Indene	(1)	5.471	115	13120	1.007
26) 2-Methylphenol	(1)	5.484	108	6918	1.078
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9861M	1.167
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10012M	1.182
29) N-Nitrosopyrrolidine	(1)	5.601	100	3958	1.030
30) Acetophenone	(1)	5.619	105	10169	1.063
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	6861	1.120
32) N-Nitrosomorpholine	(1)	5.644	56	5177	1.186
33) 4-Methylphenol	(1)	5.644	108	8140	1.071
34) o-Toluidine	(1)	5.656	106	11366	1.037
37) Hexachloroethane	(1)	5.711	117	3199	1.353
38)$Nitrobenzene-d5	(2)	5.760	82	15692	1.071
39) Nitrobenzene	(2)	5.779	77	8363	1.077
40) N-Nitrosopiperidine	(2)	5.926	114	3798	1.102
41) Isophorone	(2)	6.025	82	15814	1.121
42) 2-Nitrophenol	(2)	6.092	139	2659	0.985
44) 2,4-Dimethylphenol	(2)	6.160	107	7745	1.116
47) Benzoic acid	(2)	6.222	105	32094	7.134
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	3309	1.144

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	9764	1.139
49) 2,4-Dichlorophenol	(2)	6.332	162	4737	1.004
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	5420	1.090
52)*Naphthalene-d8	(2)	6.461	136	339882	20.000
53) Naphthalene	(2)	6.480	128	18386	1.020
56) 4-Chloroaniline	(2)	6.541	127	8745	1.113
57) 2,6-Dichlorophenol	(2)	6.547	162	4344	0.977
58) Hexachloropropene	(2)	6.578	213	2925	1.040
60) Hexachlorobutadiene	(2)	6.621	225	2683	1.076
194) Quinoline	(2)	6.806	129	13942	1.122
63) Caprolactam	(2)	6.861	113	2649	1.013
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	5919	0.927
68) 4-Chloro-3-methylphenol	(2)	7.027	107	6165	1.022
69) Safrole	(2)	7.095	162	5041	1.055
70) 2-Methylnaphthalene	(2)	7.162	142	13163	1.029
71) 1-Methylnaphthalene	(2)	7.255	142	12007	1.025
72) Hexachlorocyclopentadiene	(3)	7.322	237	2059	0.963
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	5139	1.038
74) cis-Isosafrole	(3)	7.377	162	1098	0.138
75) 2,4,6-Trichlorophenol	(3)	7.439	196	3272	1.013
77) 2,4,5-Trichlorophenol	(3)	7.470	196	3558	1.011
78)$2-Fluorobiphenyl	(3)	7.531	172	26857	1.029
79) trans-Isosafrole	(3)	7.599	162	5680	1.010
80) Isosafrole	(3)	7.599	162	5680	1.135
83) 1,1'-Biphenyl	(3)	7.623	154	17917	1.115
84) 2-Chloronaphthalene	(3)	7.630	162	13366M	1.141
85) 1-Chloronaphthalene	(3)	7.654	162	12335M	1.070
88) Diphenyl ether	(3)	7.734	170	8053	1.006
89) 2-Nitroaniline	(3)	7.734	138	3871	1.013
90) 1,4-Naphthoquinone	(3)	7.808	158	4795	0.973
91) 1,4-Dinitrobenzene	(3)	7.876	168	1149	0.774
92) Dimethylphthalate	(3)	7.937	163	15290	1.097
93) 1,3-Dinitrobenzene	(3)	7.943	168	1225	0.607
94) 2,6-Dinitrotoluene	(3)	7.980	165	2652	0.914
95) Acenaphthylene	(3)	8.029	152	18627	1.019
97) 3-Nitroaniline	(3)	8.134	138	3342	0.943
98)*Acenaphthene-d10	(3)	8.171	164	207488	20.000
99) Acenaphthene	(3)	8.201	153	13284	1.050
100) 2,4-Dinitrophenol	(3)	8.238	184	4350	4.615
103) 4-Nitrophenol	(3)	8.306	109	8684	3.956

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	4307	1.007
105) 2,4-Dinitrotoluene	(3)	8.367	165	3285	0.876
104) Dibenzofuran	(3)	8.374	168	18759	1.082
106) 1-Naphthylamine	(3)	8.447	143	15016	1.054
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	2214	0.893
108) 2-Naphthylamine	(3)	8.527	143	15652	1.074
109) Diethylphthalate	(3)	8.632	149	16824	1.169
110) Thionazin	(3)	8.706	107	2832	0.892
111) Fluorene	(3)	8.706	166	15496	1.039
113) 5-Nitro-o-toluidine	(3)	8.718	152	3513	0.892
114) 4-Nitroaniline	(3)	8.718	138	4353	1.092
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	7174	1.081
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	4114	2.776
117) N-Nitrosodiphenylamine	(4)	8.835	169	12684	0.986
202) NDPA as diphenylamine	(4)	8.835	169	12684	0.983
118) 1,2-Diphenylhydrazine	(4)	8.872	77	18230	0.989
119)$2,4,6-Tribromophenol	(3)	8.939	330	2017	0.805
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3197	1.217
121) 1,3,5-Trinitrobenzene	(4)	9.087	213	512M	0.525
123) Phorate	(4)	9.136	75	11365	1.001
122) Diallate (peak 1)	(4)	9.136	86	7650	0.811
124) Phenacetin	(4)	9.142	108	9315	1.047
125) 4-Bromophenyl-phenylether	(4)	9.197	248	3336	0.941
126) Diallate (peak 2)	(4)	9.222	86	1656	0.404
127) Hexachlorobenzene	(4)	9.241	284	3671	1.049
128) Dimethoate	(4)	9.290	87	6609	0.952
130) Atrazine	(4)	9.376	200	4785	1.161
131) Pentachlorophenol	(4)	9.437	266	1189	0.612
133) 4-Aminobiphenyl	(4)	9.443	169	15759	1.133
132) Pentachloronitrobenzene	(4)	9.450	237	956	0.629
134) Pronamide	(4)	9.530	173	6820	1.017
135)*Phenanthrene-d10	(4)	9.616	188	383931	20.000
136) Dinoseb	(4)	9.640	211	1087M	0.543
137) Phenanthrene	(4)	9.640	178	22522	1.009
138) Anthracene	(4)	9.689	178	22698	0.988
140) Carbazole	(4)	9.849	167	22923	1.022
141) Methyl parathion	(4)	10.009	109	2378	0.571
142) Di-n-butylphthalate	(4)	10.237	149	28115	1.063
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	837	0.553
143) Parathion	(4)	10.396	109	2107	0.688

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d
Injection date and time: 12-NOV-2013 10:35
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	3084	1.222
147) Fluoranthene	(4)	10.796	202	24924	0.998
152) Benzidine	(5)	10.944	184	158131	8.161
167)*Pyrene-d10	(5)	10.999	212	473300	20.000
154) Pyrene	(5)	11.011	202	26424	1.005
156)$Terphenyl-d14	(5)	11.196	244	34221	1.011
158) p-Dimethylaminoazobenzene	(5)	11.331	225	4727	0.923
159) Chlorobenzilate	(5)	11.393	139	7491	0.940
160) 3,3'-Dimethylbenzidine	(5)	11.657	212	17197	1.062
161) Butylbenzylphthalate	(5)	11.694	149	13493	1.076
162) 2-Acetylaminofluorene	(5)	11.897	181	9317	0.820
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	9716	1.063
166) Benzo(a)anthracene	(5)	12.186	228	24335	1.004
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3999	0.896
168) Chrysene	(5)	12.223	228	24509	1.049
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	19101	1.098
189) 6-Methylchrysene	(5)	12.678	242	17250	1.000
170) Di-n-octylphthalate	(6)	12.936	149	28737	0.886
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	10787	0.885
172) Benzo(b)fluoranthene	(6)	13.243	252	25419	0.969
173) Benzo(k)fluoranthene	(6)	13.268	252	26389	0.986
174) Benzo(a)pyrene	(6)	13.551	252	26499	1.035
175)*Perylene-d12	(6)	13.606	264	429576	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	12858	1.002
190) Dibenz(a,h)acridine	(6)	14.393	279	15789	0.849
191) Dibenz(a,j)acridine	(6)	14.442	279	18629	0.871
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	27040	0.993
178) Dibenz(a,h)anthracene	(6)	14.645	278	22302	0.979
179) Benzo(g,h,i)perylene	(6)	14.897	276	24406	1.052
129) Diallate TRANS/CIS	(4)			9306	1.149

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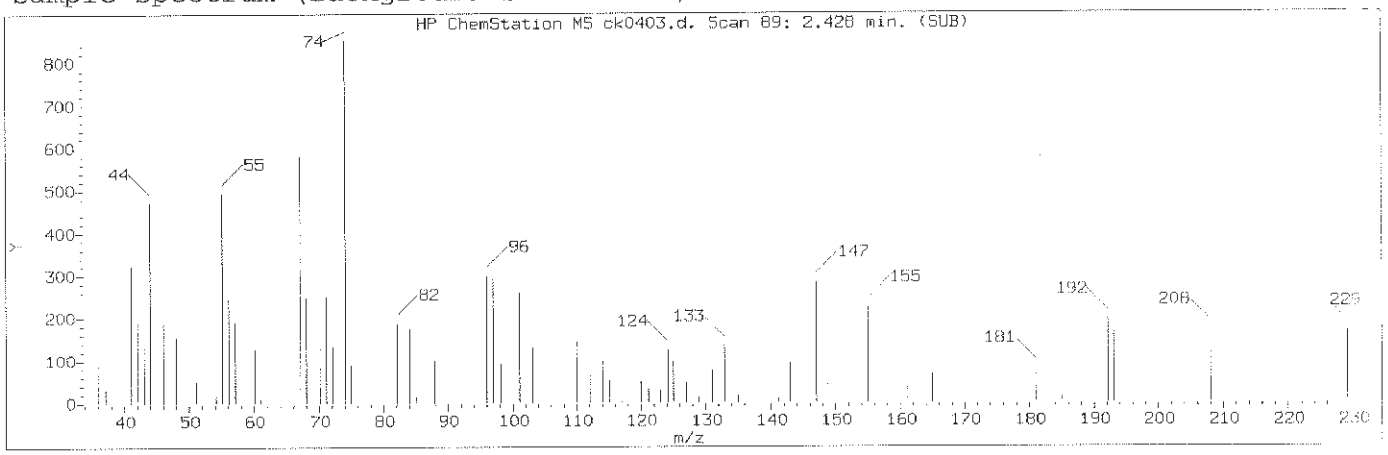
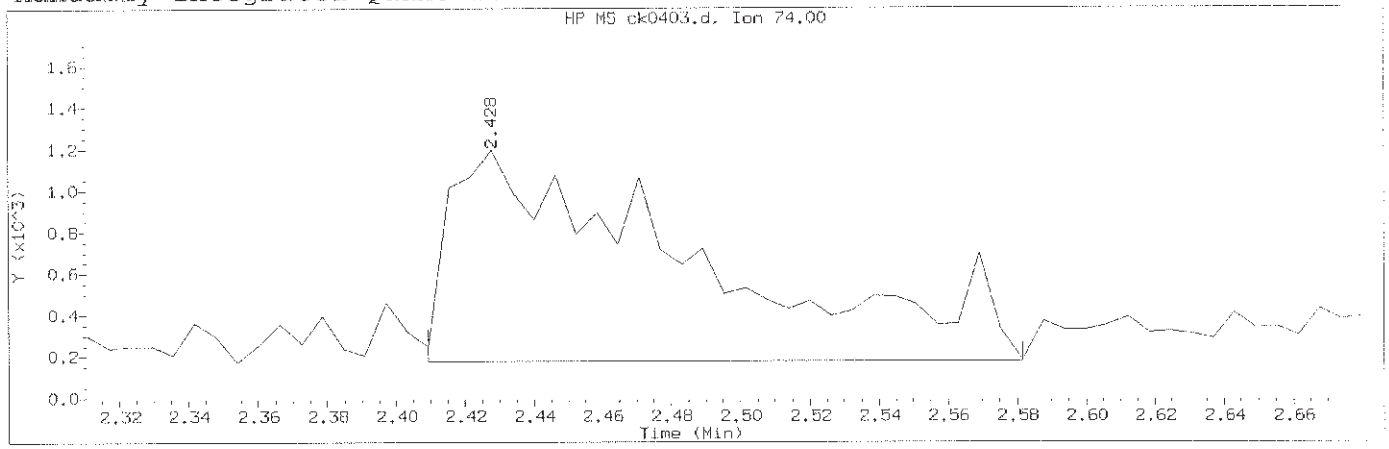
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area (flag)	: 4954M		
On-Column Amount (ng/ul)	: 1.0864		
Integration start scan	: 85	Integration stop scan:	113
Y at integration start	: 176	Y at integration end:	176

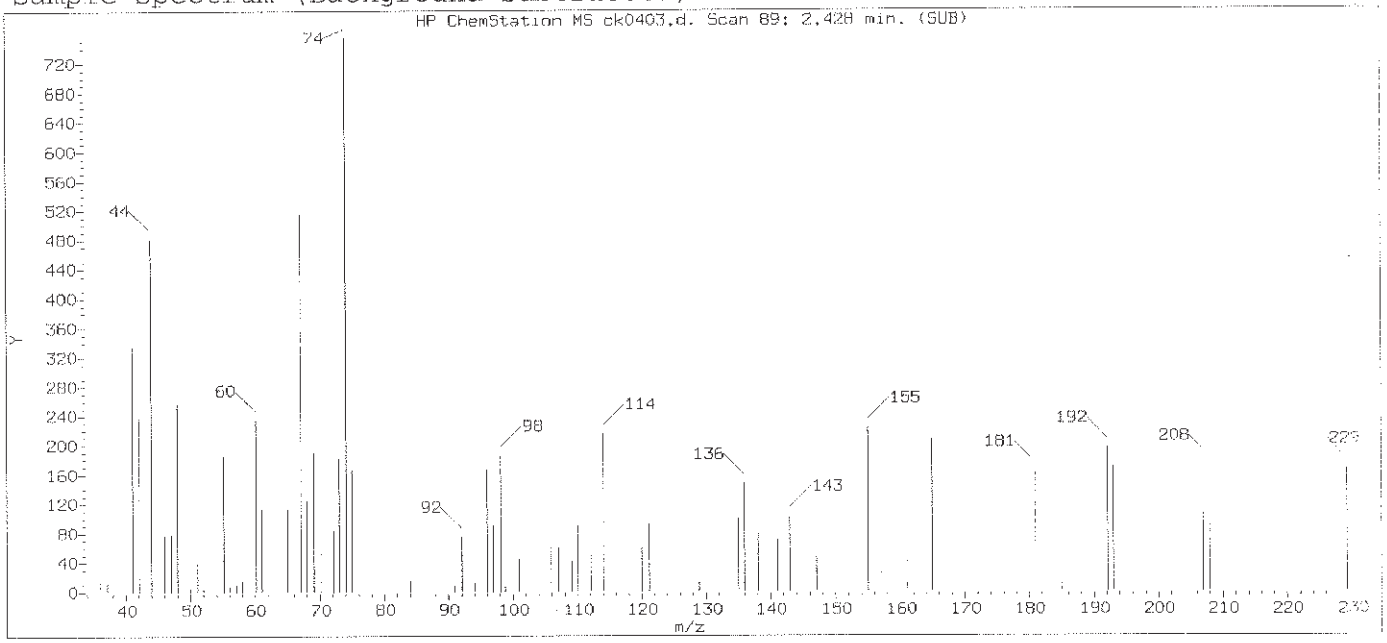
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

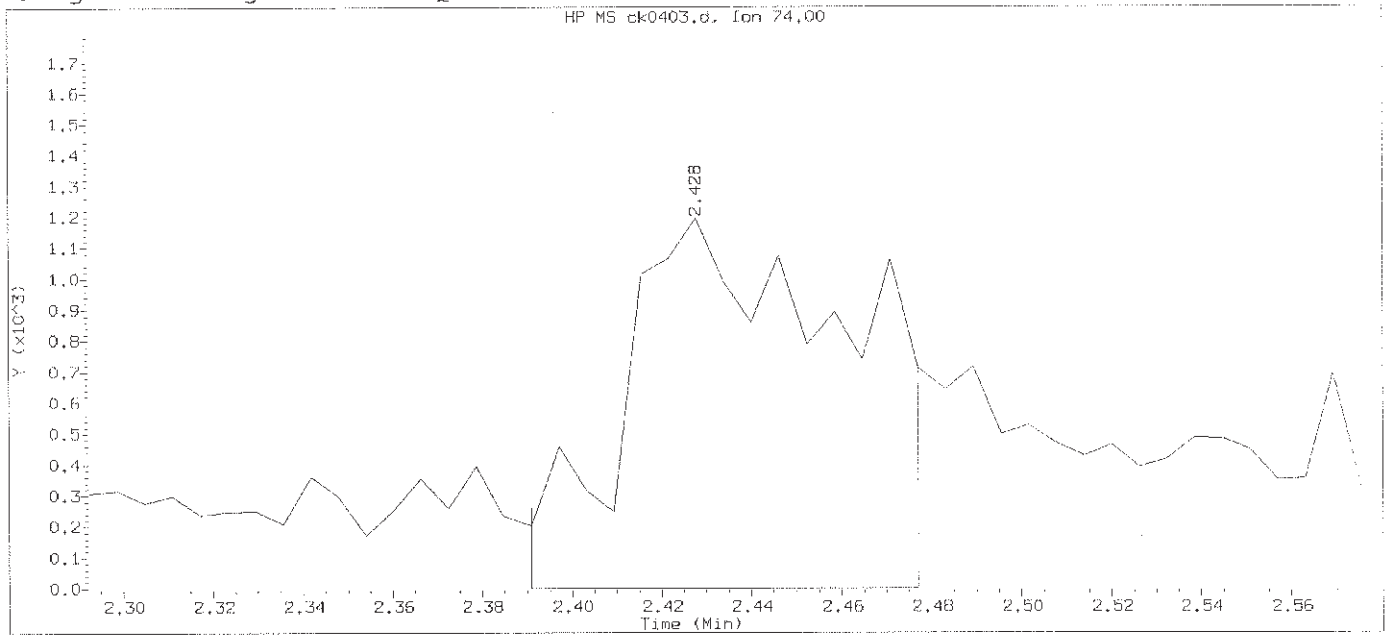
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area	: 4113		
On-column Amount (ng/ul)	: 0.8101		
Integration start scan	: 82	Integration stop scan:	96
Y at integration start	: 0	Y at integration end:	0

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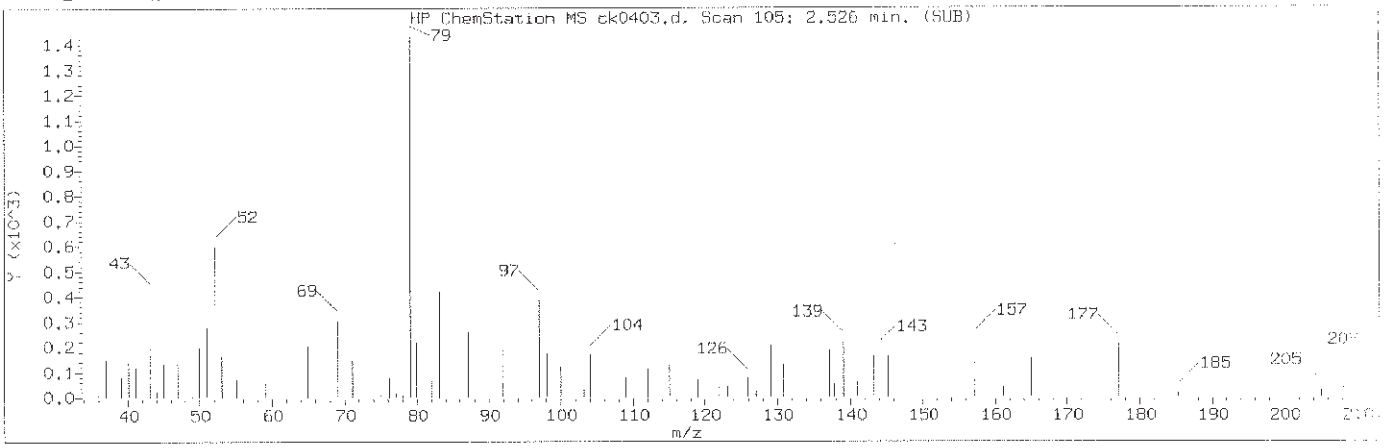
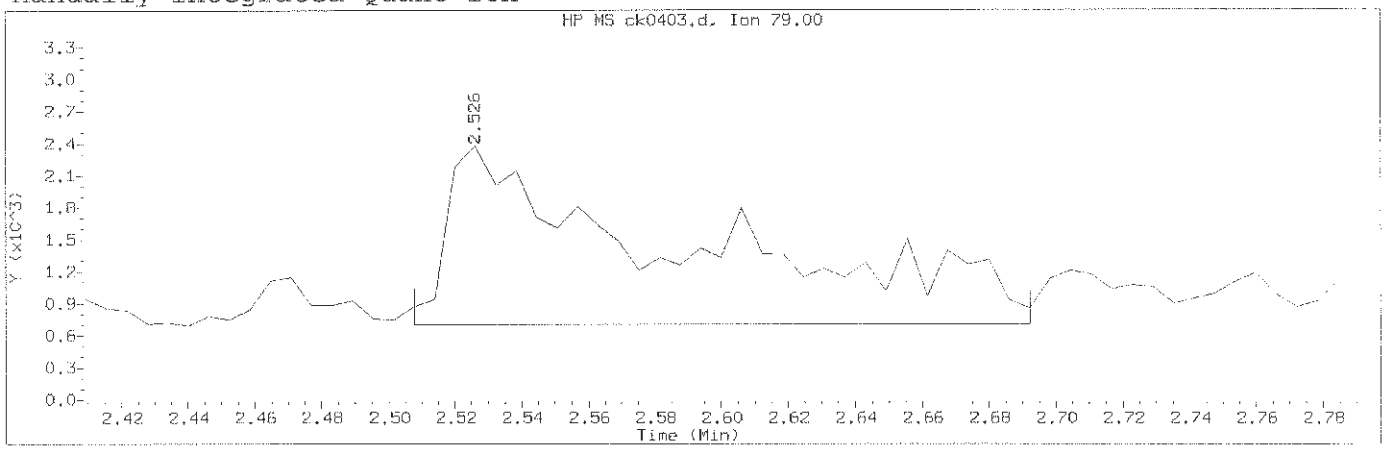
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area (flag)	: 8126M		
On-Column Amount (ng/ul)	: 1.1494		
Integration start scan	: 101	Integration stop scan:	131
Y at integration start	: 703	Y at integration end:	703

Reason for manual integration: improper integration

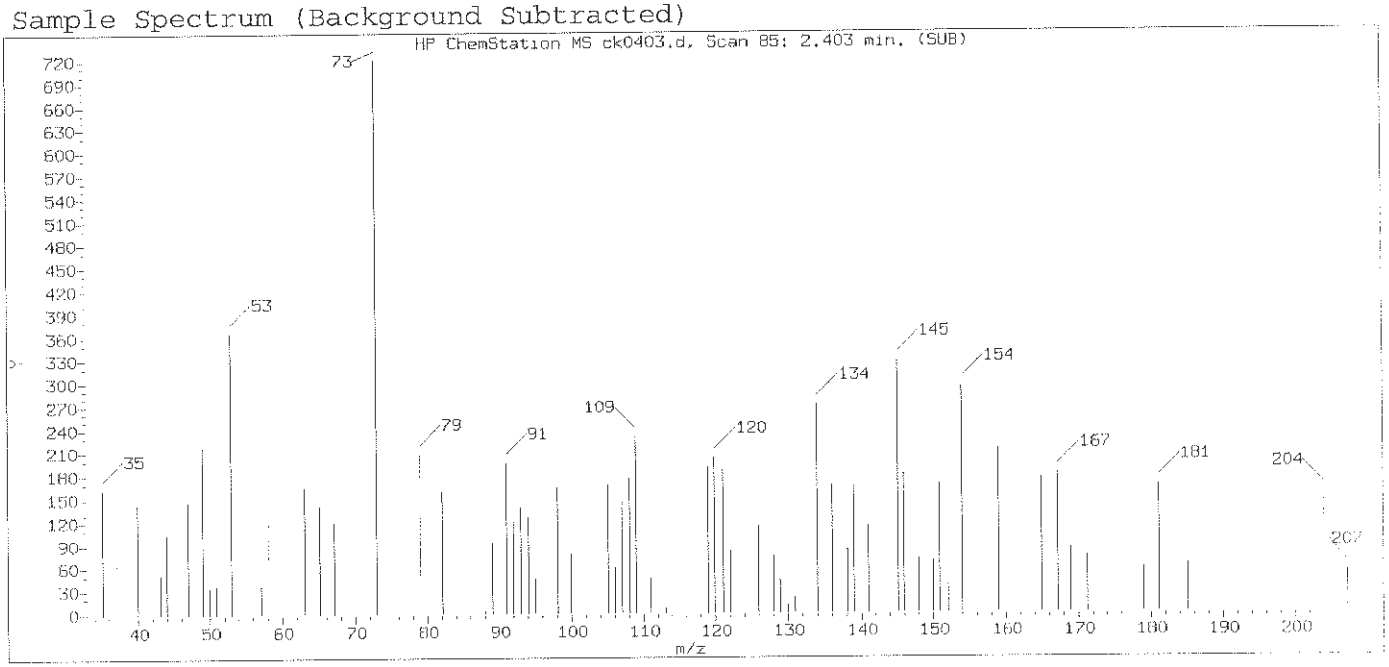
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 es[illegible]e user ID: mac00013

Mark A. Ratcliff
Senior Specialist

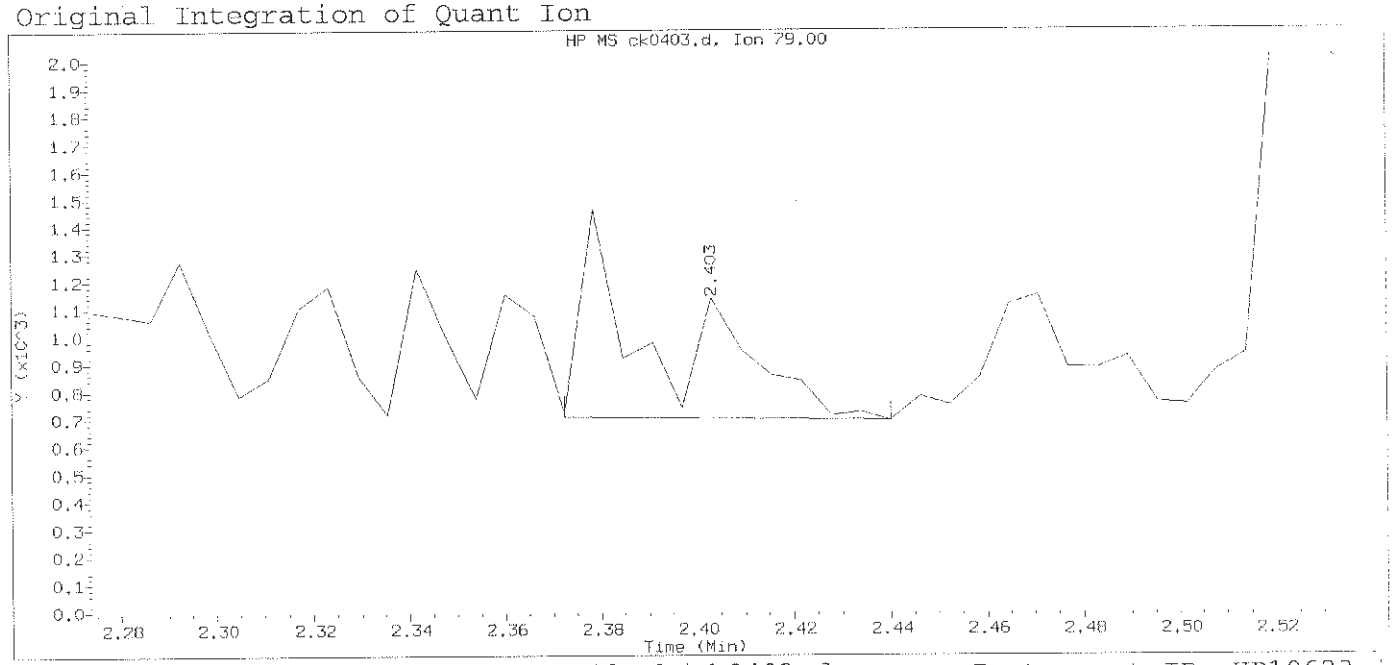
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

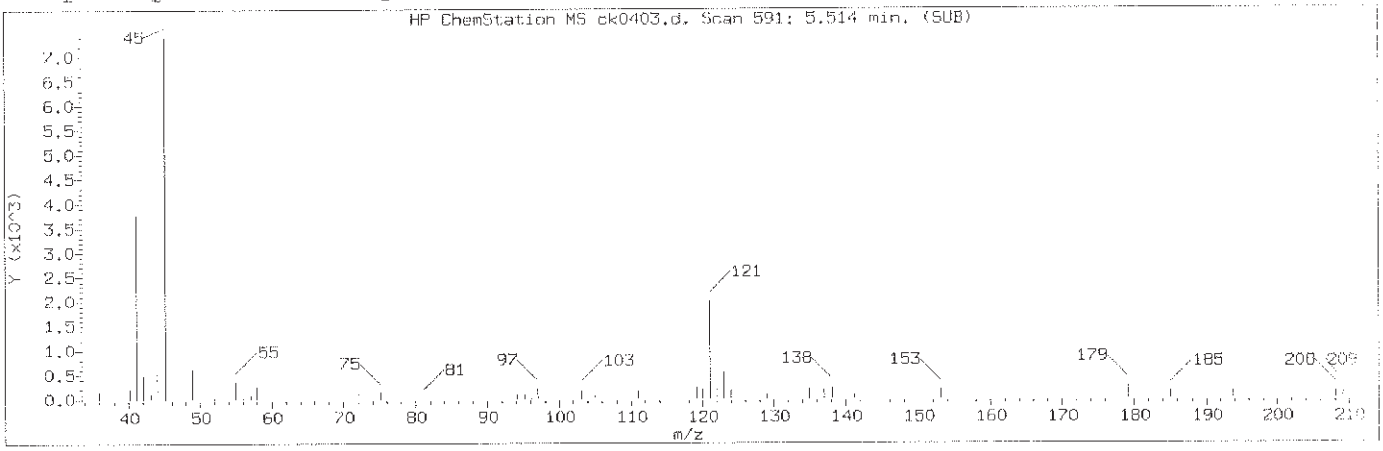
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

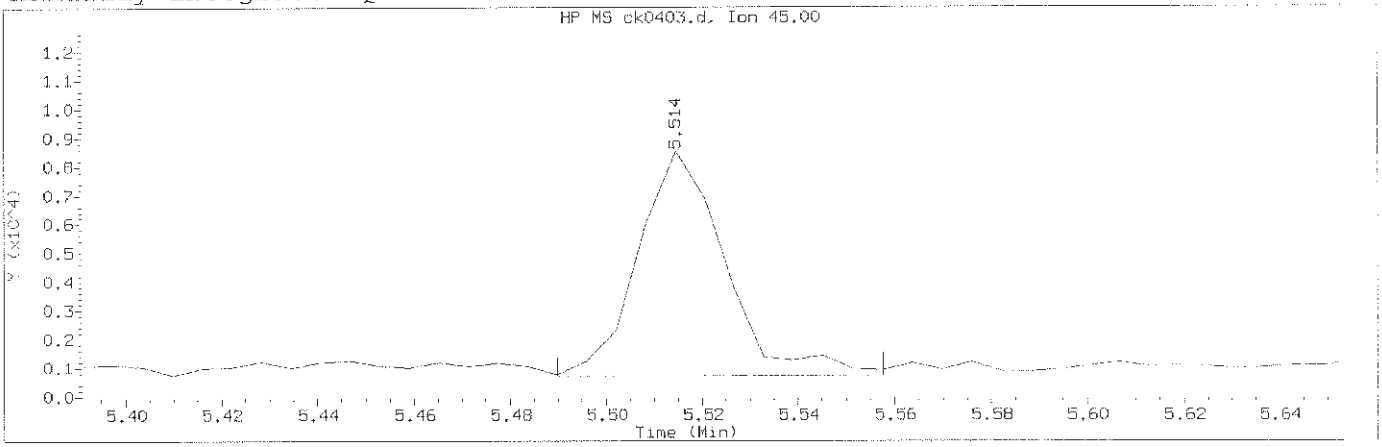
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 85		
Retention Time (minutes)	: 2.403		
Quant Ion	: 79.00		
Area	: 852		
On-column Amount (ng/ul)	: 0.1043		
Integration start scan	: 79	Integration stop scan:	90
Y at integration start	: 706	Y at integration end:	694

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 9861M		
On-Column Amount (ng/ul)	: 1.1671		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 723	Y at integration end:	723

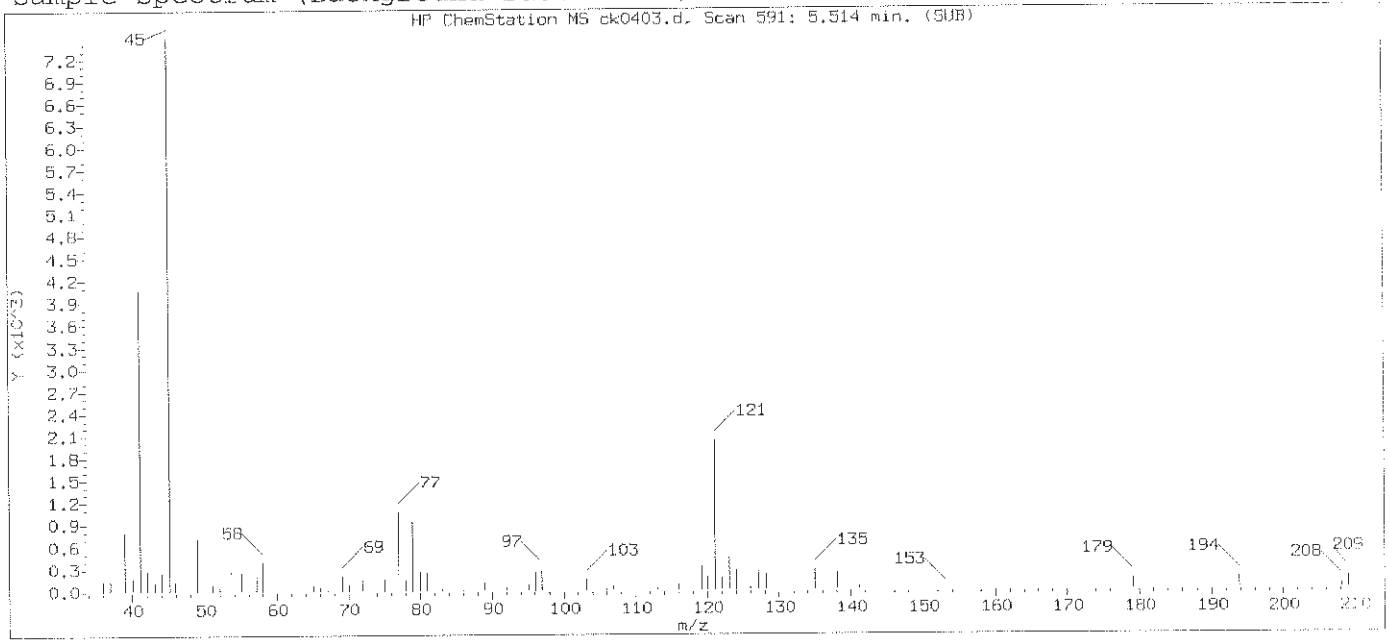
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

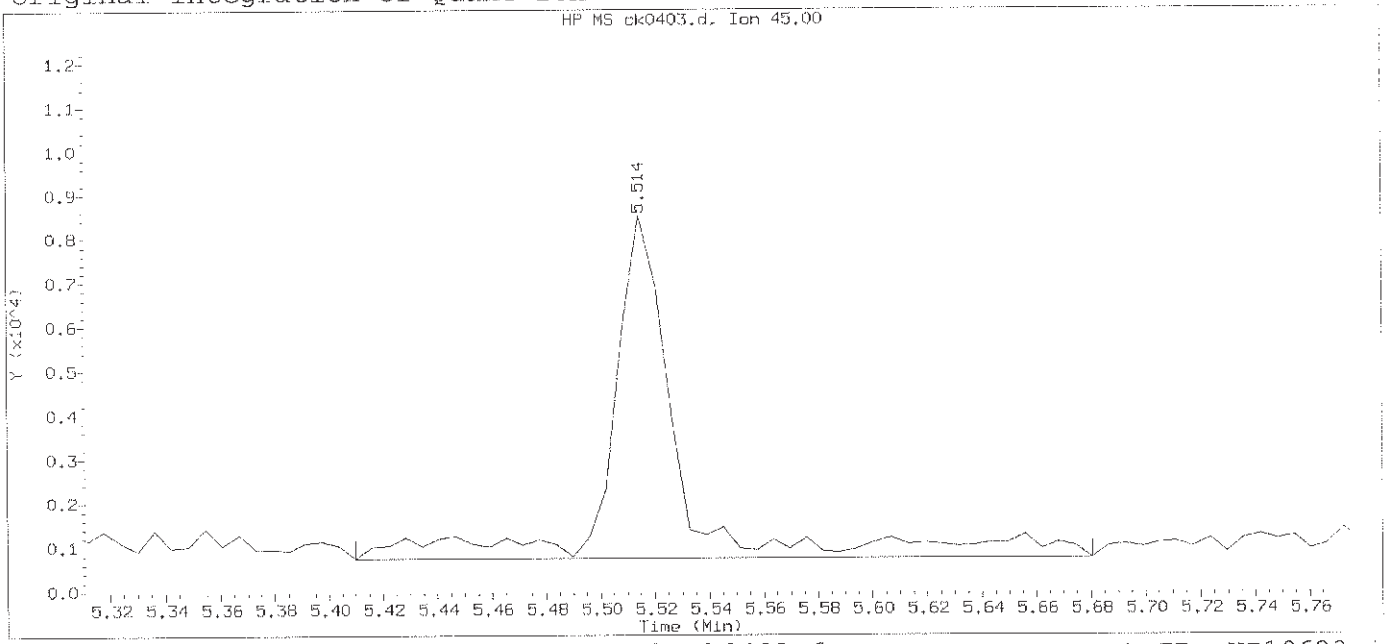
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

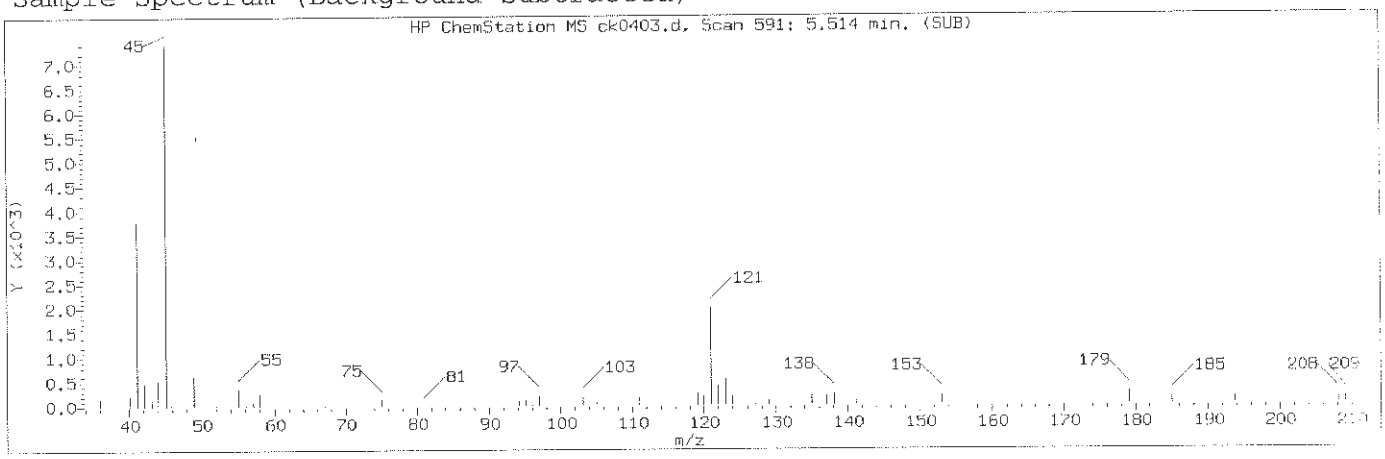
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

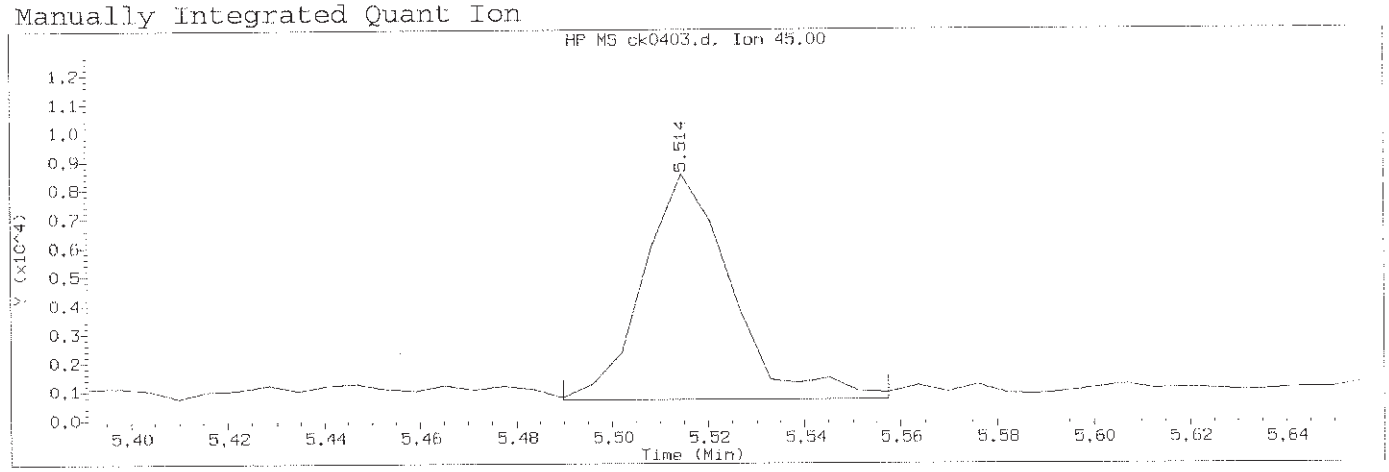
Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 10012M		
On-Column Amount (ng/ul)	: 1.1819		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 689	Y at integration end:	689

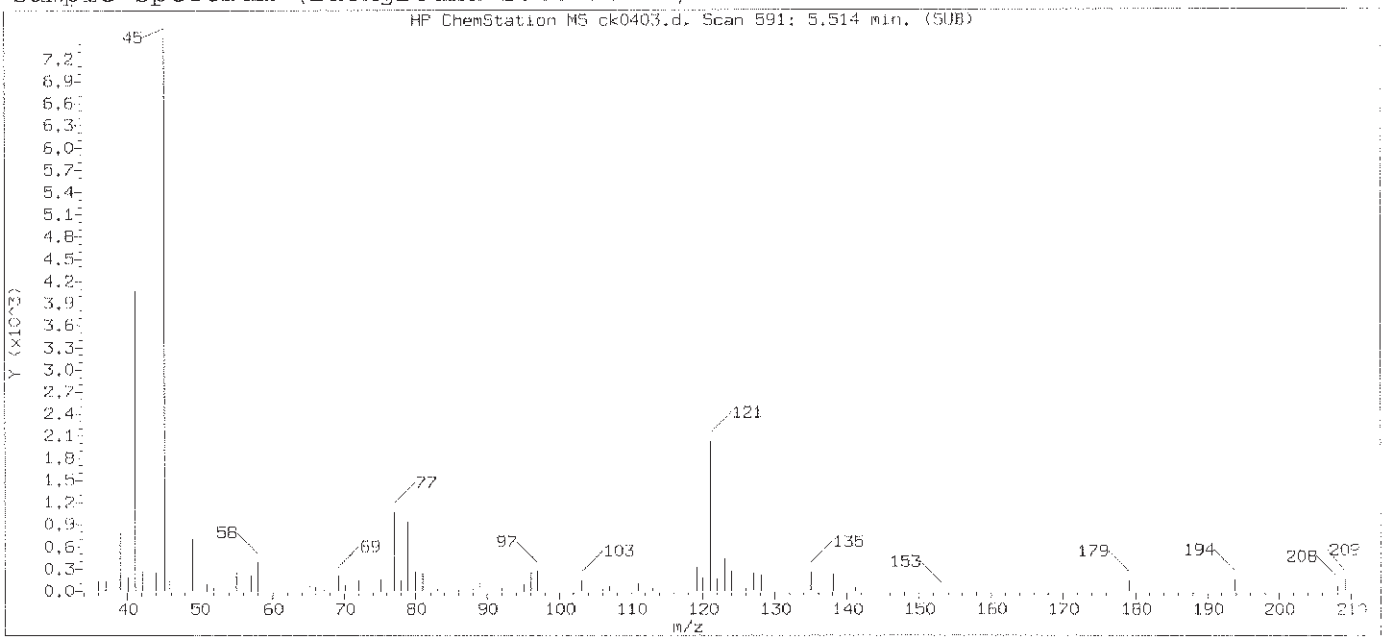
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

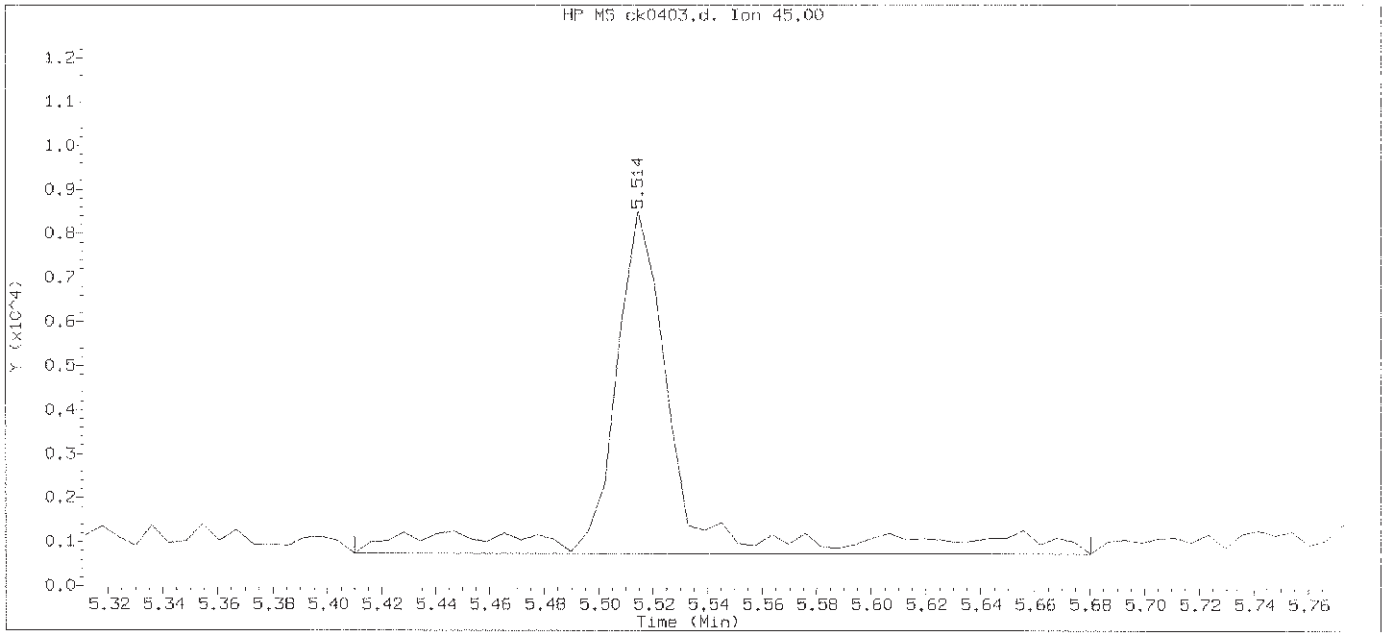
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

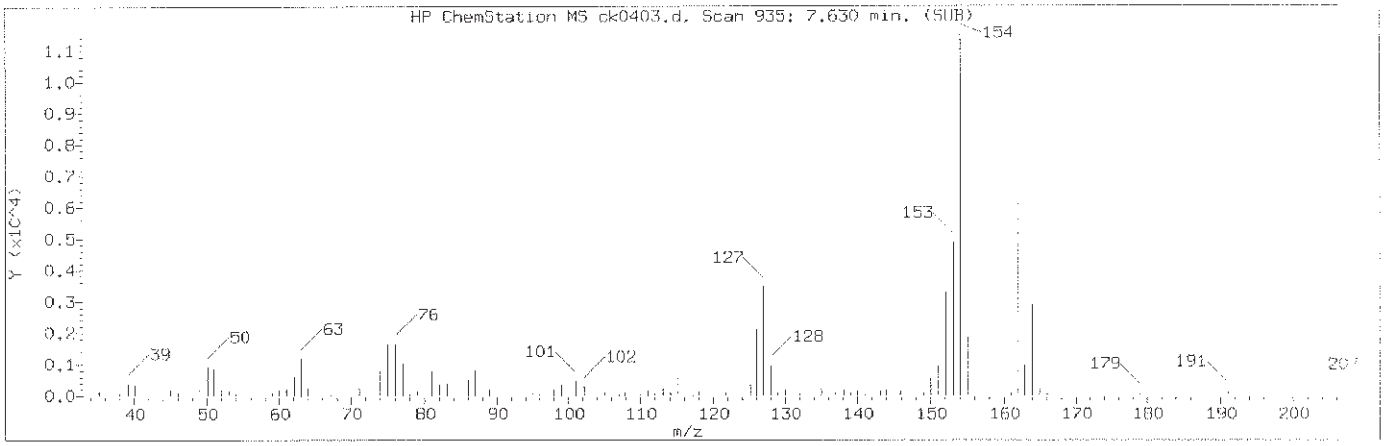
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

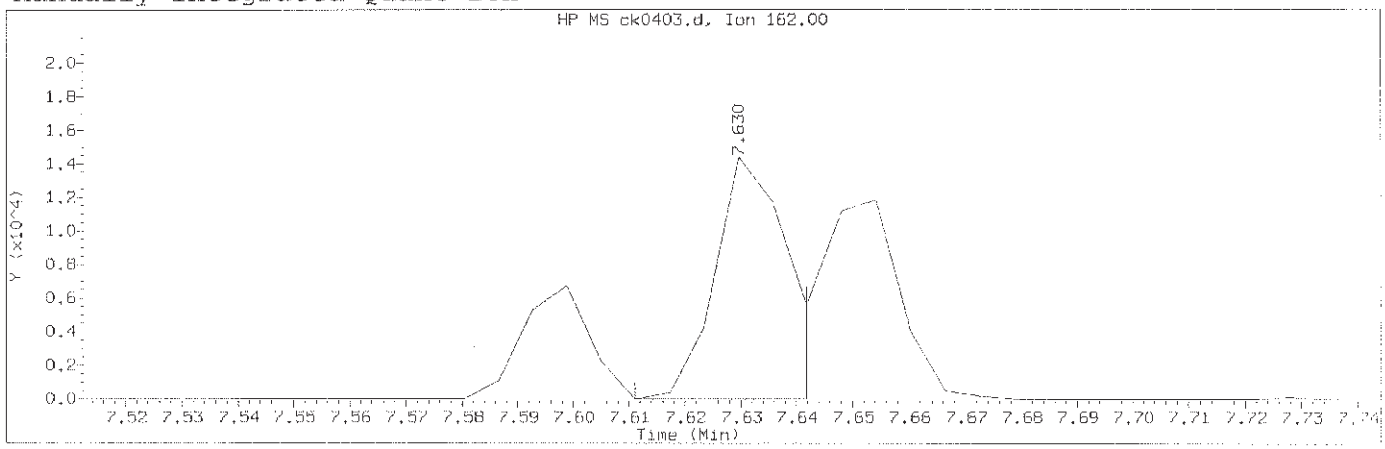
Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 13366M		
On-Column Amount (ng/ul)	: 1.1415		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 0	Y at integration end:	0

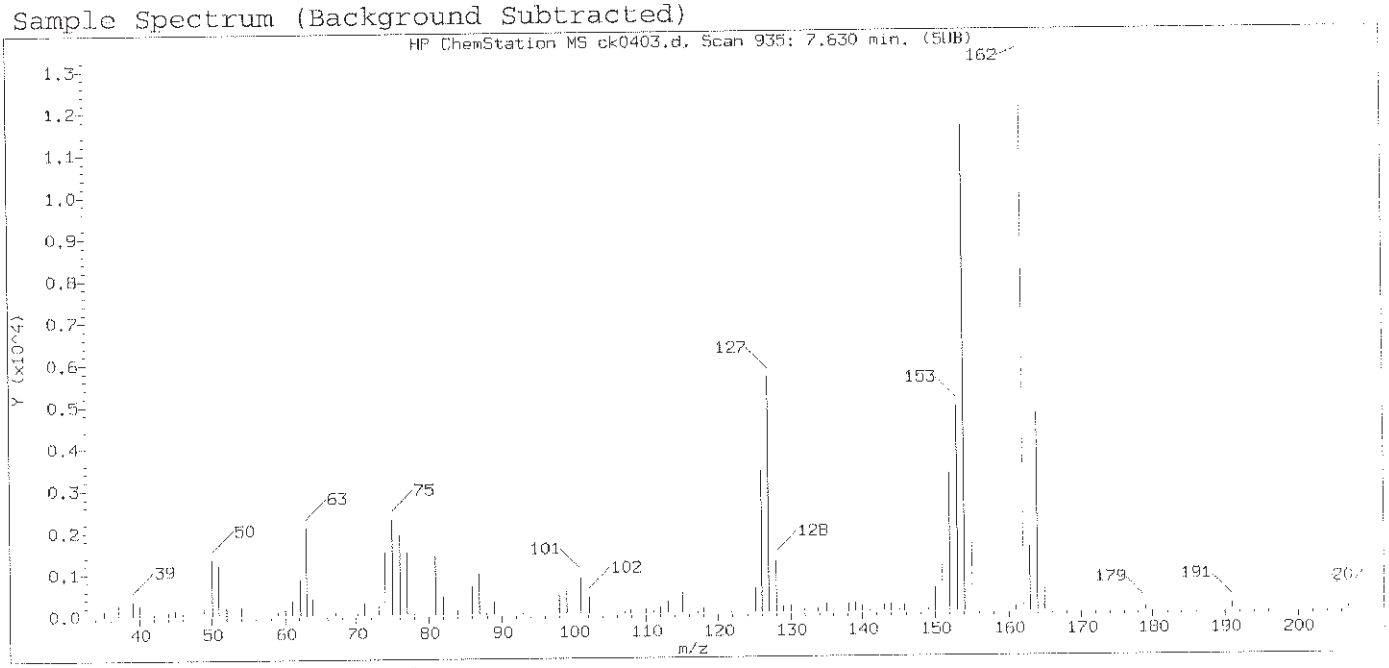
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

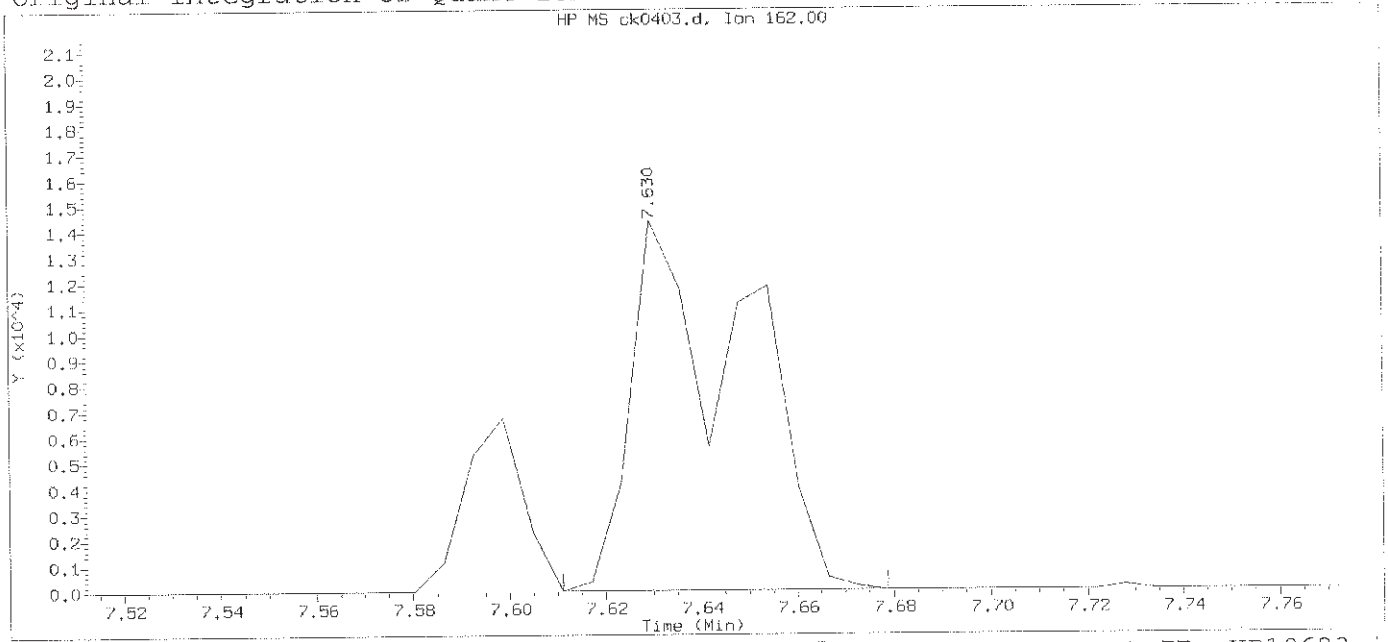
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

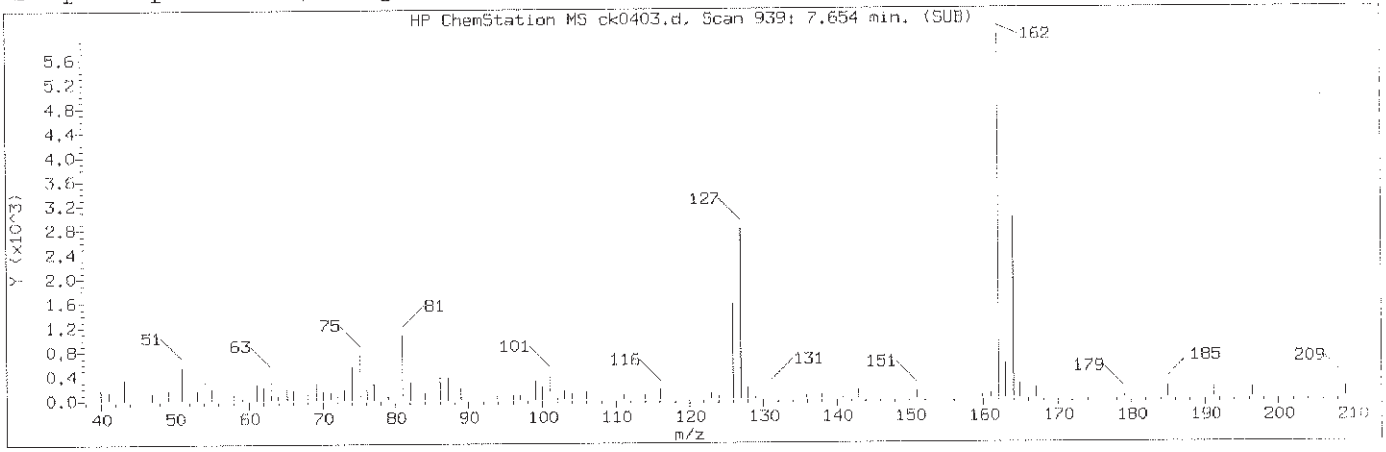
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

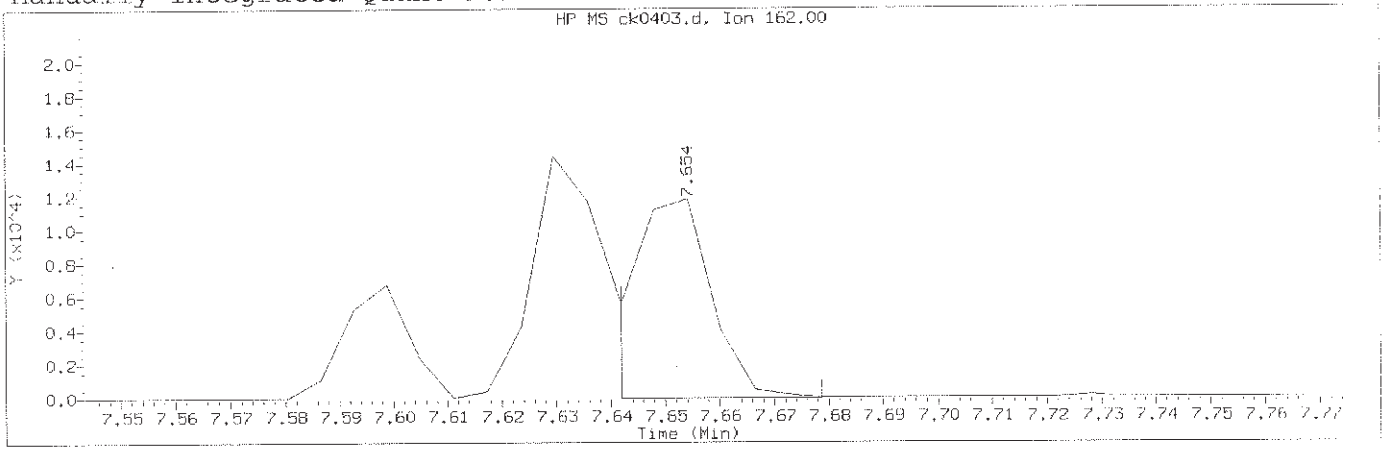
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3862		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 12335M		
On-Column Amount (ng/ul)	: 1.0704		
Integration start scan	: 936	Integration stop scan:	942
Y at integration start	: -29	Y at integration end:	-29

Reason for manual integration: improper integration

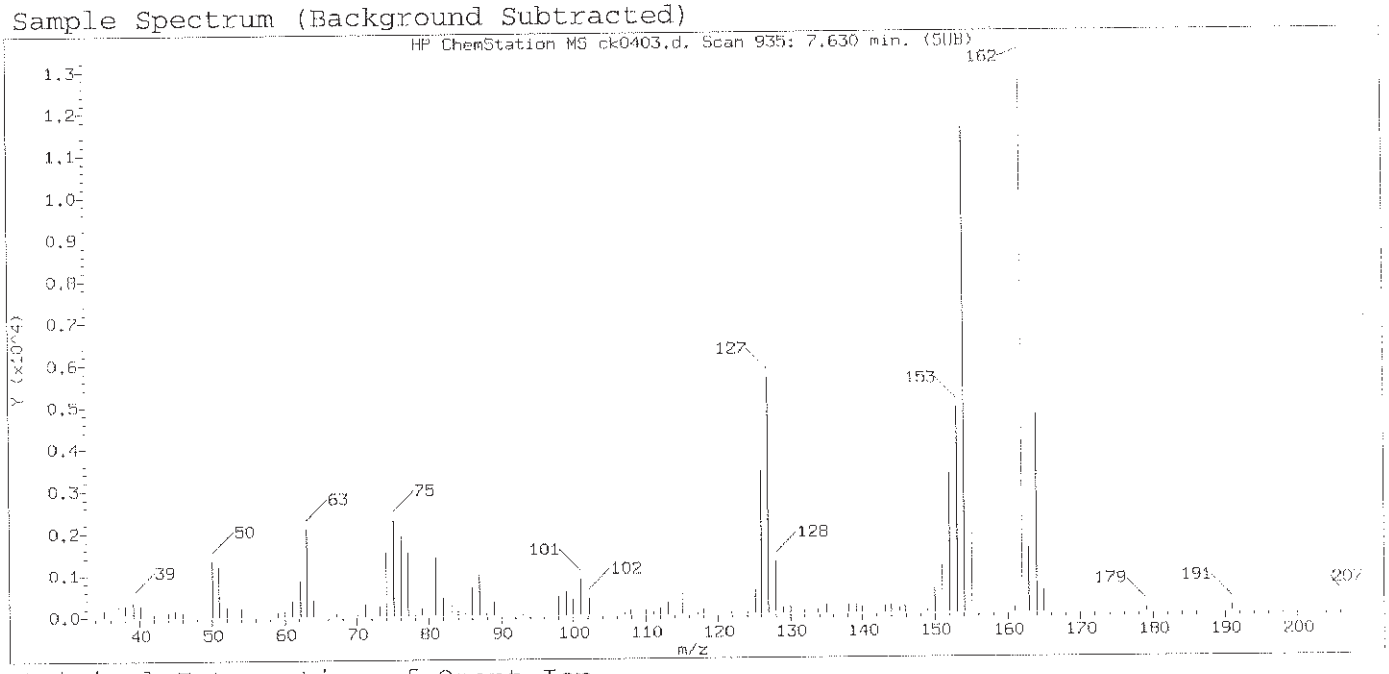
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

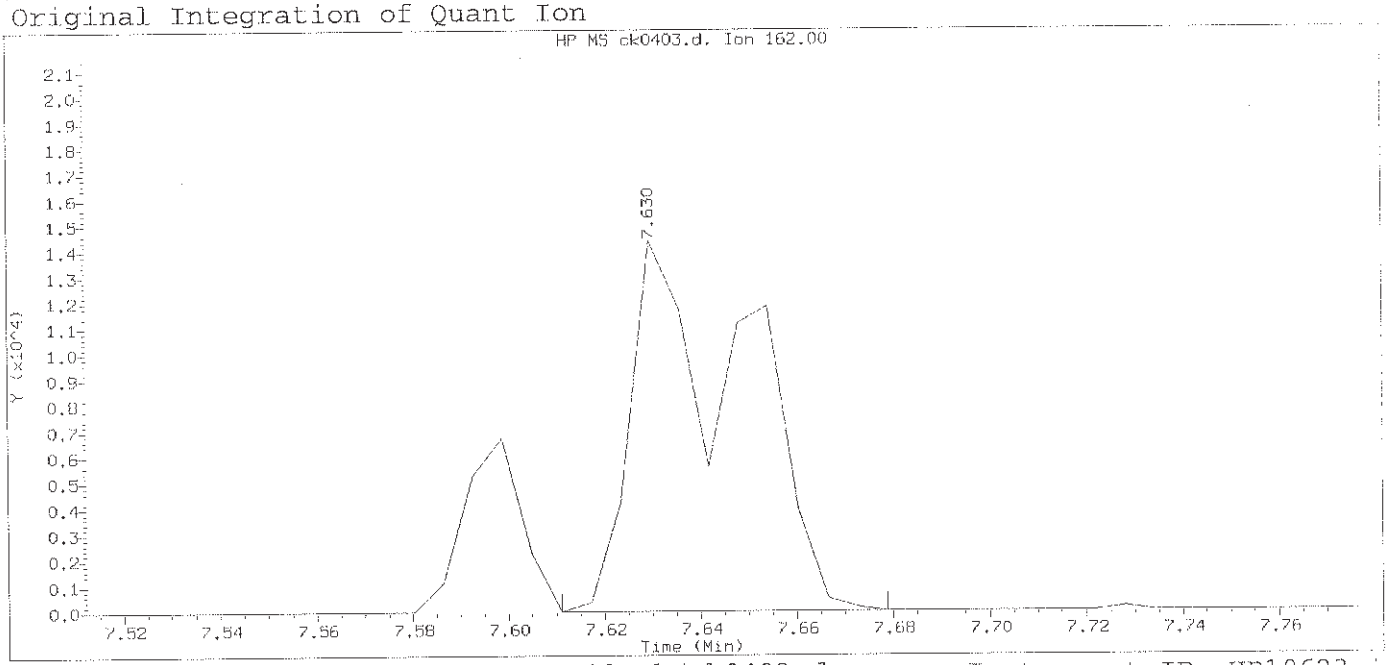
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

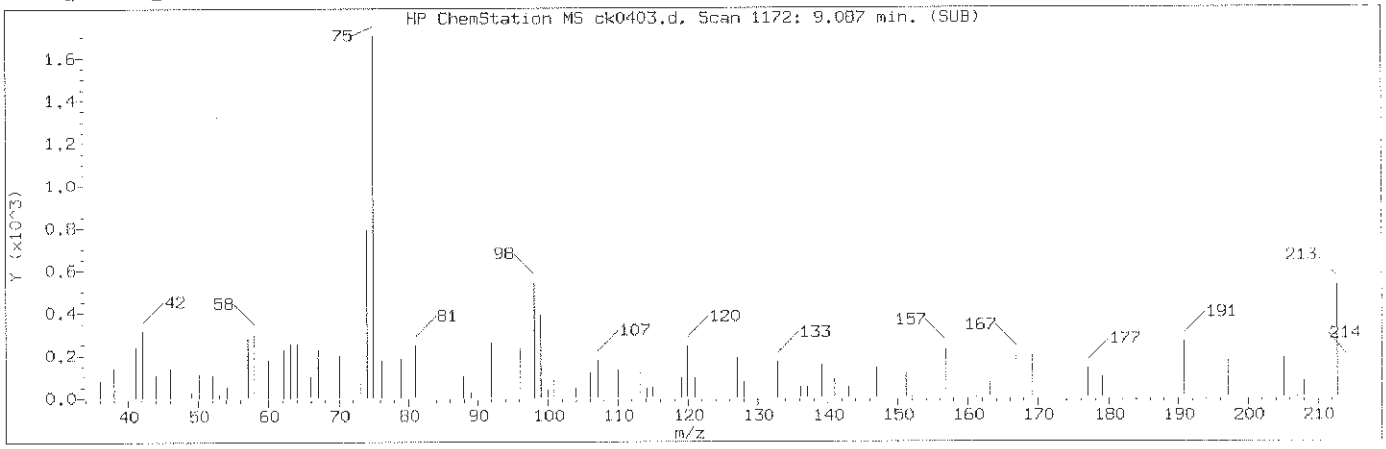
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

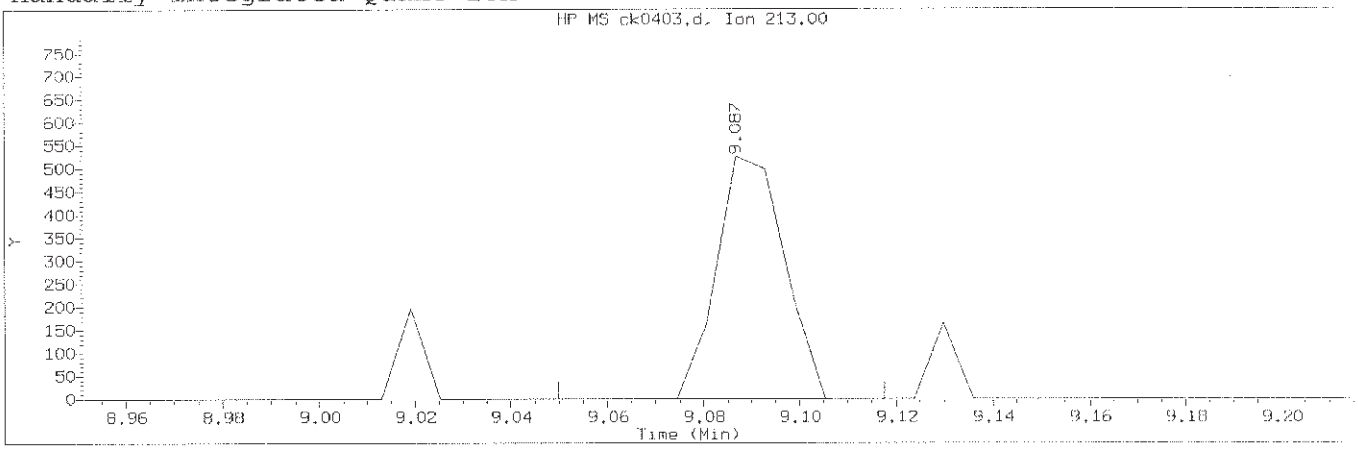
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3414		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1172		
Retention Time (minutes)	: 9.087		
Quant Ion	: 213.00		
Area (flag)	: 512M		
On-Column Amount (ng/ul)	: 0.5249		
Integration start scan	: 1165	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

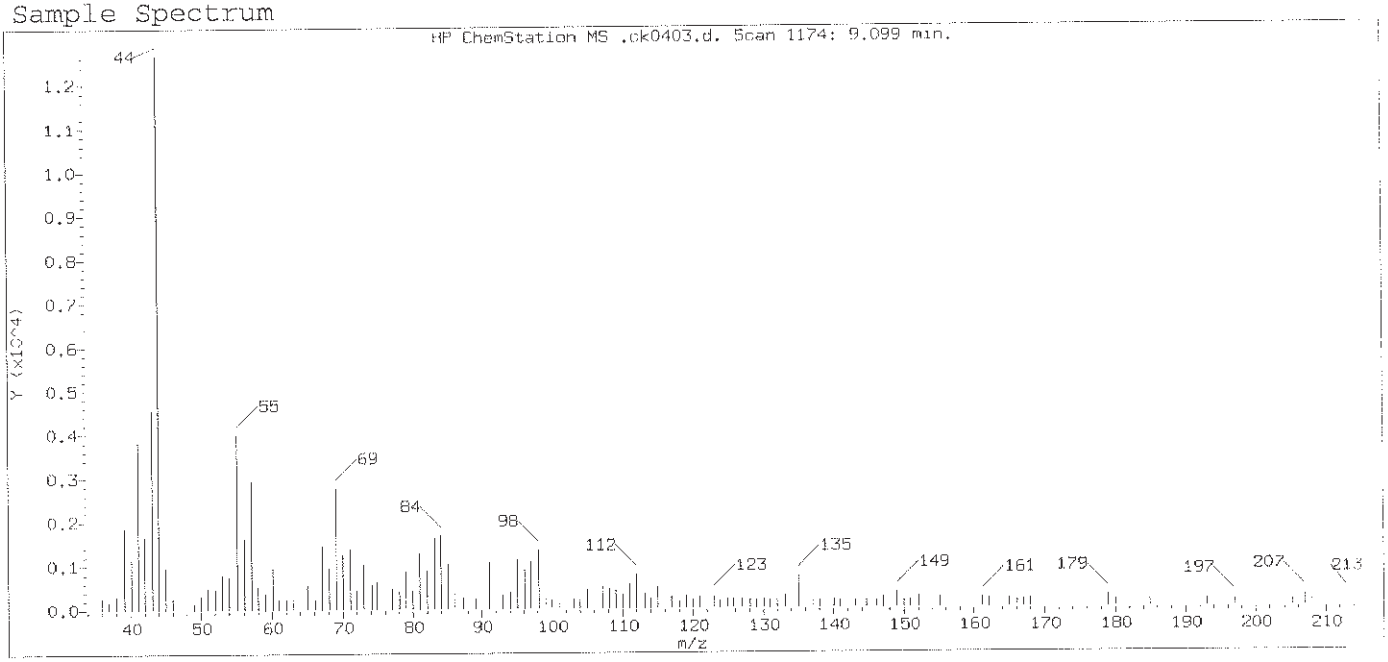
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

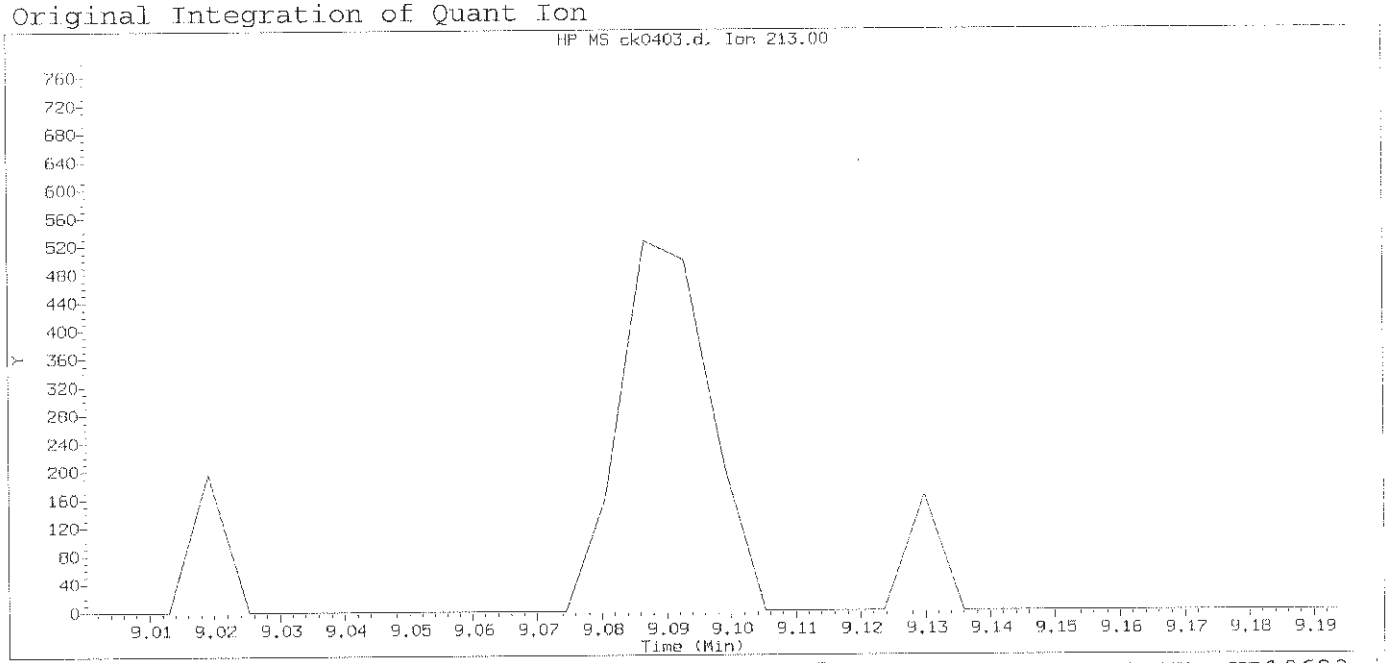
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

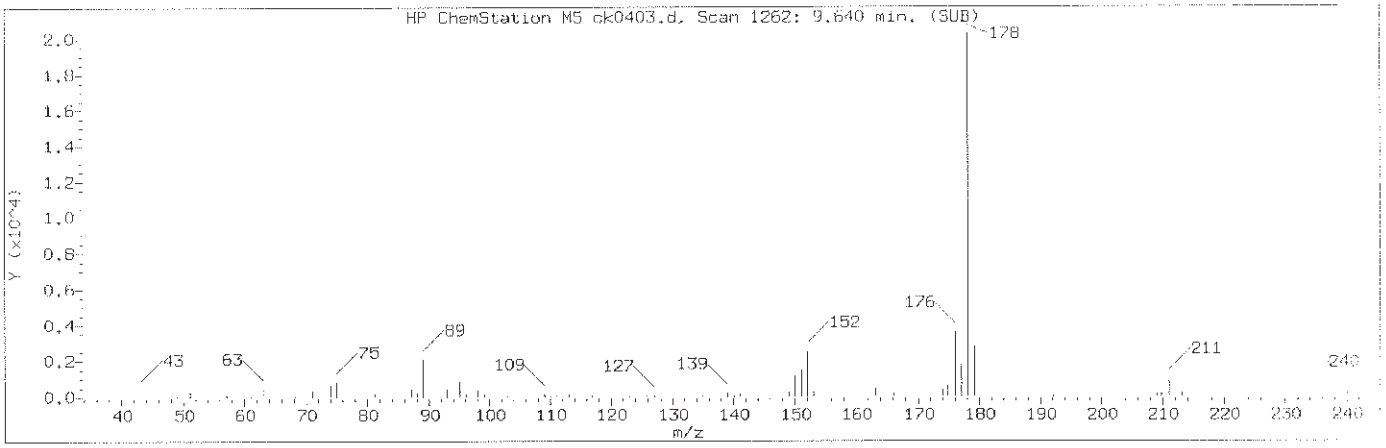
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

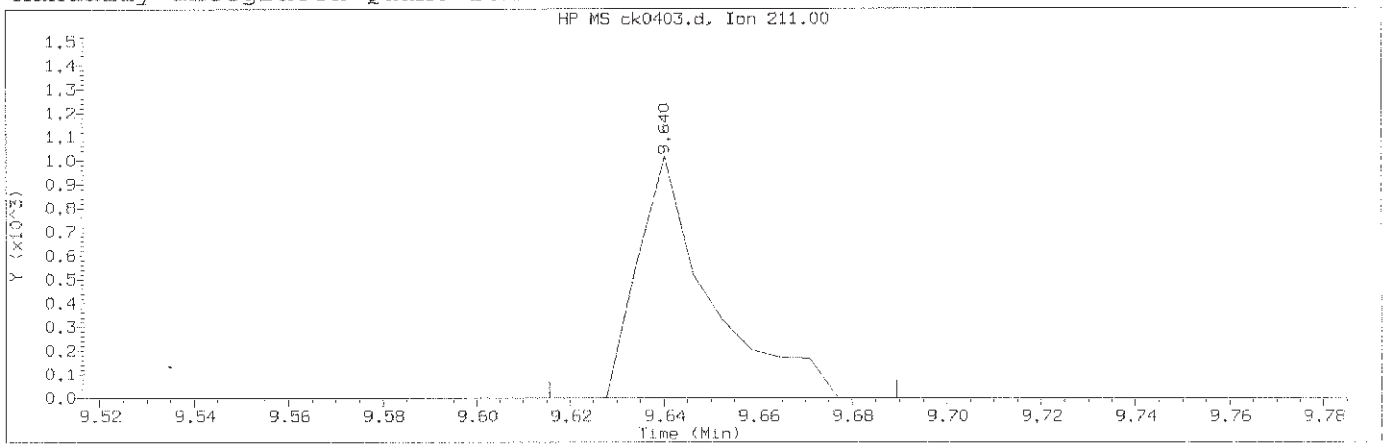
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 1087M		
On-Column Amount (ng/ul)	: 0.5430		
Integration start scan	: 1257	Integration stop scan:	1269
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

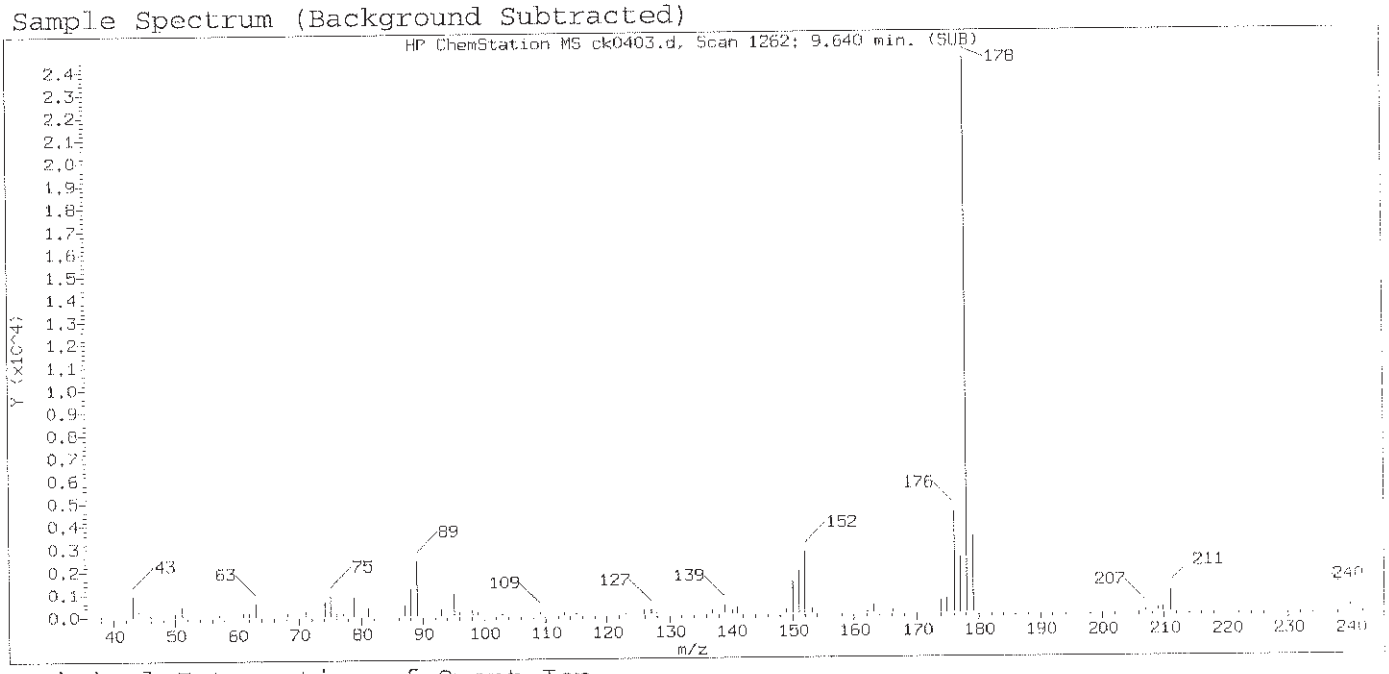
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

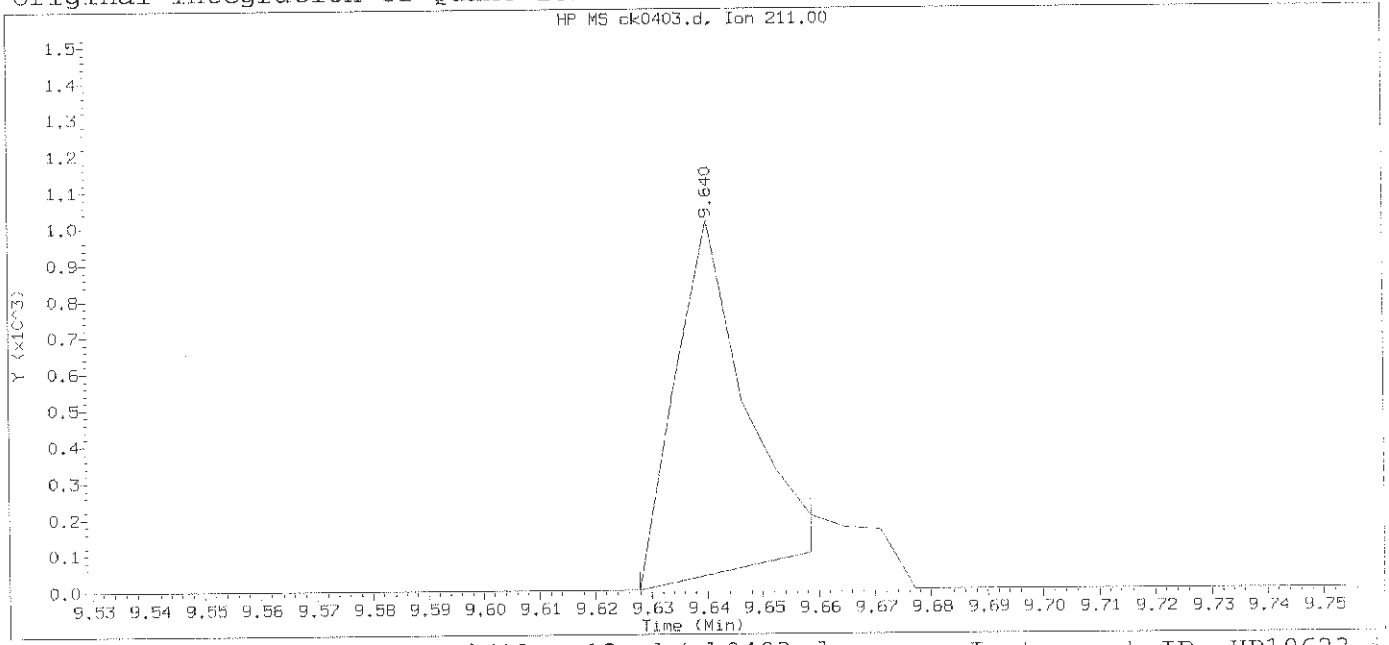
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



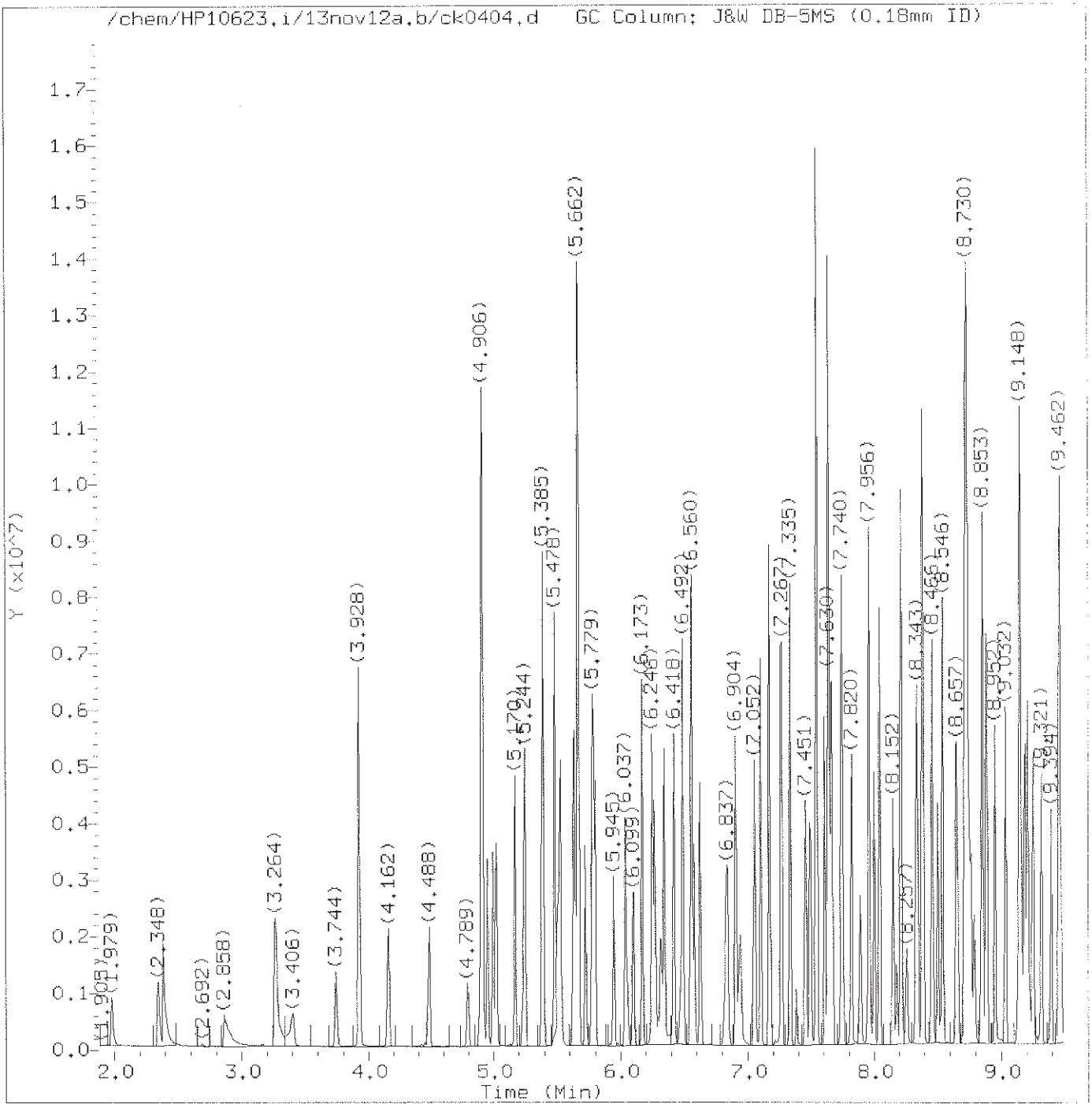
Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area	: 832		
On-column Amount (ng/ul)	: 0.4821		
Integration start scan	: 1259	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	101

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

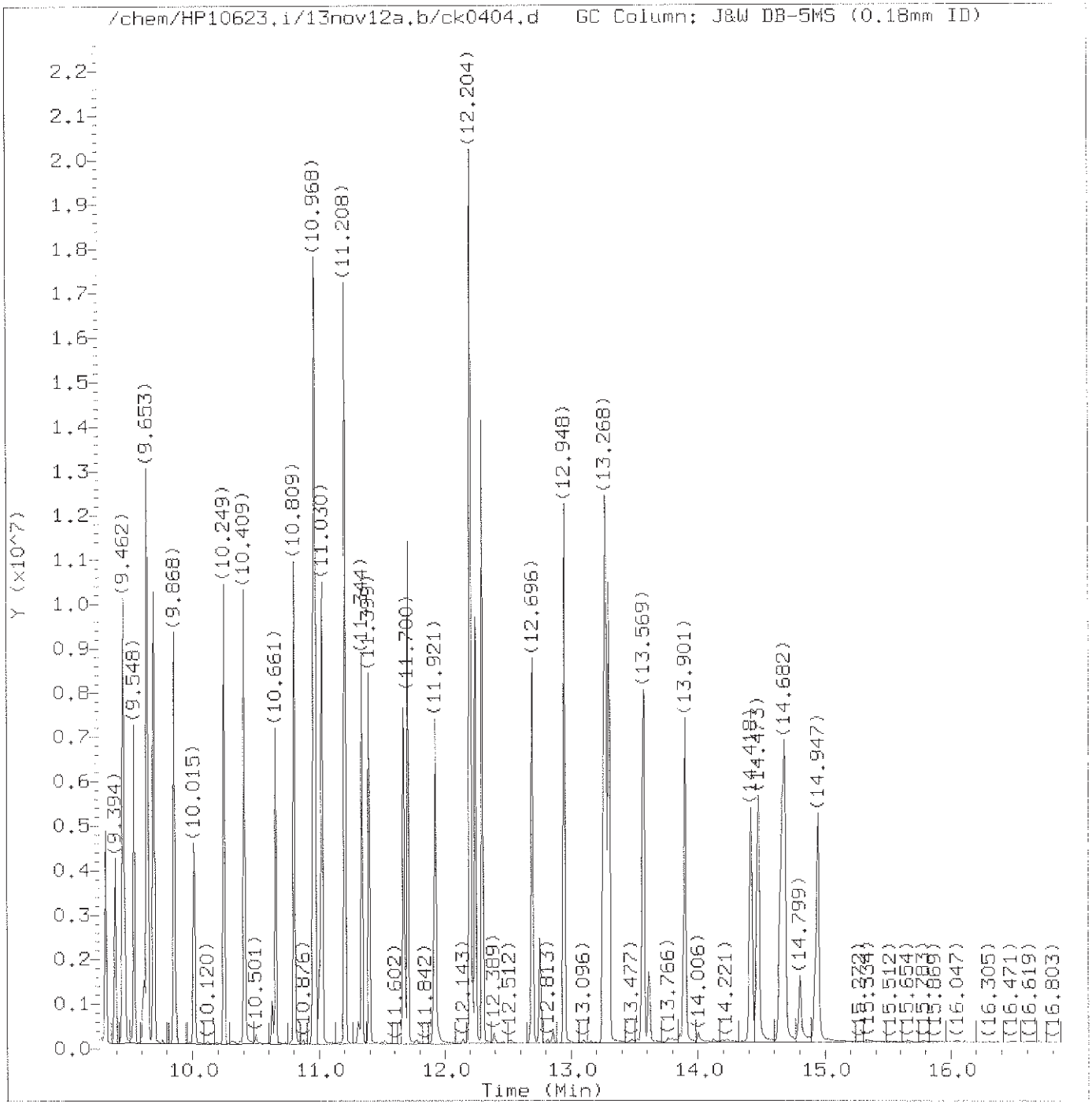
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	Qlon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	398795	117.270
2) N-Nitrosodimethylamine	(1)	2.348	74	742151	117.879
3) Pyridine	(1)	2.385	79	1204327	123.386
5) 2-Picoline	(1)	3.264	93	1191173	119.596
6) N-Nitrosomethylethylamine	(1)	3.406	88	553358	116.214
7) Methyl methanesulfonate	(1)	3.744	80	573067	119.700
9)$2-Fluorophenol	(1)	3.928	112	1869127	120.150
10) N-Nitrosodiethylamine	(1)	4.162	102	549404	116.145
11) Ethyl methanesulfonate	(1)	4.488	109	512186	118.903
12) Benzaldehyde	(1)	4.789	77	239575	50.173
15)$Phenol-d6	(1)	4.906	99	2814946	122.971
14)$Phenol-d5	(1)	4.906	99	2814946	122.971
13) Aniline	(1)	4.906	93	1936631	122.301
16) Phenol	(1)	4.912	94	1636135	122.526
18) bis(2-Chloroethyl)ether	(1)	4.992	93	1125526	118.726
19) 2-Chlorophenol	(1)	5.017	128	965818	115.945
20) 1,3-Dichlorobenzene	(1)	5.170	146	979337	116.504
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	103965	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	1003756	117.008
24) Benzyl alcohol	(1)	5.379	108	744719	114.342
25) 1,2-Dichlorobenzene	(1)	5.385	146	957351	118.894
206) Indene	(1)	5.478	115	2096143	116.540
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	1312918	112.545
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	1312918	112.259
26) 2-Methylphenol	(1)	5.527	108	1044241M	117.826
29) N-Nitrosopyrrolidine	(1)	5.631	100	644621	121.514
30) Acetophenone	(1)	5.638	105	1475769	111.687
33) 4-Methylphenol	(1)	5.662	108	1284338	122.433
32) N-Nitrosomorpholine	(1)	5.668	56	720241A	119.512
31) N-Nitroso-di-n-propylamine	(1)	5.668	70	1024425A	121.124
34) o-Toluidine	(1)	5.668	106	1846486	121.995
37) Hexachloroethane	(1)	5.718	117	389777	119.382
38)$Nitrobenzene-d5	(2)	5.779	82	2571559	122.450
39) Nitrobenzene	(2)	5.797	77	1329643	119.380
40) N-Nitrosopiperidine	(2)	5.945	114	572219	115.811
41) Isophorone	(2)	6.037	82	2356719	116.530
42) 2-Nitrophenol	(2)	6.105	139	488710	126.219
44) 2,4-Dimethylphenol	(2)	6.173	107	1186883	119.260
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	485104	116.907
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	1542458M	125.519

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on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.320	105	815004	126.346
49) 2,4-Dichlorophenol	(2)	6.345	162	822674	121.550
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	838364	117.598
52)*Naphthalene-d8	(2)	6.468	136	487375	20.000
53) Naphthalene	(2)	6.492	128	3076572	118.976
56) 4-Chloroaniline	(2)	6.554	127	1317377	116.907
57) 2,6-Dichlorophenol	(2)	6.560	162	772662	121.206
58) Hexachloropropene	(2)	6.578	213	495686	122.943
60) Hexachlorobutadiene	(2)	6.628	225	404428	113.108
194) Quinoline	(2)	6.843	129	2093475	117.451
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	1182208MA	121.485
63) Caprolactam	(2)	6.941	113	419377	111.854
68) 4-Chloro-3-methylphenol	(2)	7.052	107	1037587	119.911
69) Safrole	(2)	7.101	162	820159	119.736
70) 2-Methylnaphthalene	(2)	7.169	142	2202637	120.024
71) 1-Methylnaphthalene	(2)	7.267	142	1979369	117.874
72) Hexachlorocyclopentadiene	(3)	7.328	237	387341	126.858
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	832075	117.760
74) cis-Isosafrole	(3)	7.384	162	148091	13.055
75) 2,4,6-Trichlorophenol	(3)	7.458	196	560652	121.606
77) 2,4,5-Trichlorophenol	(3)	7.488	196	617685	122.880
78)$2-Fluorobiphenyl	(3)	7.544	172	4460940	119.752
79) trans-Isosafrole	(3)	7.605	162	853051	106.225
80) Isosafrole	(3)	7.605	162	853051	119.353
83) 1,1'-Biphenyl	(3)	7.636	154	2561525	111.609
84) 2-Chloronaphthalene	(3)	7.642	162	2036153	121.799
85) 1-Chloronaphthalene	(3)	7.667	162	1786834A	108.606
88) Diphenyl ether	(3)	7.740	170	1367218	119.588
89) 2-Nitroaniline	(3)	7.753	138	682699	125.182
90) 1,4-Naphthoquinone	(3)	7.820	158	844413	120.029
91) 1,4-Dinitrobenzene	(3)	7.888	168	292208	119.047
92) Dimethylphthalate	(3)	7.956	163	2337797	117.527
93) 1,3-Dinitrobenzene	(3)	7.962	168	390232	119.251
94) 2,6-Dinitrotoluene	(3)	7.999	165	526860	127.170
95) Acenaphthylene	(3)	8.042	152	3112269	119.250
97) 3-Nitroaniline	(3)	8.152	138	634912	125.496
98)*Acenaphthene-d10	(3)	8.177	164	296224	20.000
99) Acenaphthene	(3)	8.214	153	2143285	118.659
100) 2,4-Dinitrophenol	(3)	8.257	184	192454	118.038
103) 4-Nitrophenol	(3)	8.337	109	390890	124.719

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Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sublist used: newall1

Sample Name: SSTD120

Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	714495	117.017
104) Dibenzofuran	(3)	8.386	168	2914224	117.782
105) 2,4-Dinitrotoluene	(3)	8.392	165	700406	130.826
106) 1-Naphthylamine	(3)	8.466	143	2449421	120.476
107) 2,3,4,6-Tetrachlorophenol	(3)	8.509	232	451305	127.459
108) 2-Naphthylamine	(3)	8.546	143	2484193	119.421
109) Diethylphthalate	(3)	8.657	149	2415462	117.553
111) Fluorene	(3)	8.718	166	2540103	119.317
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	1110543	117.262
110) Thionazin	(3)	8.730	107	563773	124.406
113) 5-Nitro-o-toluidine	(3)	8.743	152	727951	129.509
114) 4-Nitroaniline	(3)	8.767	138	675934A	118.809
115) 4,6-Dinitro-2-methylphenol	(4)	8.792	198	299221	119.723
117) N-Nitrosodiphenylamine	(4)	8.853	169	2179897	122.698
202) NDPA as diphenylamine	(4)	8.853	169	2179897	122.406
118) 1,2-Diphenylhydrazine	(4)	8.884	77	3206144	125.982
119)$2,4,6-Tribromophenol	(3)	8.958	330	437175	122.193
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	447330	123.325
121) 1,3,5-Trinitrobenzene	(4)	9.136	213	212276	120.478
122) Diallate (peak 1)	(4)	9.148	86	1219924	93.676
123) Phorate	(4)	9.155	75	2188290M	139.560
124) Phenacetin	(4)	9.191	108	1508041	122.823
125) 4-Bromophenyl-phenylether	(4)	9.210	248	588059	120.129
126) Diallate (peak 2)	(4)	9.222	86	169919	30.045
127) Hexachlorobenzene	(4)	9.253	284	563038	116.493
128) Dimethoate	(4)	9.321	87	1137920	118.679
130) Atrazine	(4)	9.394	200	402424	70.700
131) Pentachlorophenol	(4)	9.450	266	351994	131.315
132) Pentachloronitrobenzene	(4)	9.462	237	266829	127.175
133) 4-Aminobiphenyl	(4)	9.462	169	1949097	101.456
134) Pronamide	(4)	9.548	173	1133279	122.383
135)*Phenanthrene-d10	(4)	9.628	188	530074	20.000
136) Dinoseb	(4)	9.646	211	439035	121.124
137) Phenanthrene	(4)	9.653	178	3706857	120.269
138) Anthracene	(4)	9.702	178	3894297	122.746
140) Carbazole	(4)	9.868	167	3745874	120.992
141) Methyl parathion	(4)	10.015	109	780017	119.613
142) Di-n-butylphthalate	(4)	10.249	149	4397140	120.377
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	332474	121.168
143) Parathion	(4)	10.409	109	581918	120.922

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	400372	114.947
147) Fluoranthene	(4)	10.809	202	4230747	122.761
152) Benzidine	(5)	10.975	184	9270730	344.486
167)*Pyrene-d10	(5)	11.005	212	657394	20.000
154) Pyrene	(5)	11.030	202	4426836	121.259
156)$Terphenyl-d14	(5)	11.208	244	5735835	122.034
158) p-Dimethylaminoazobenzene	(5)	11.344	225	887349	124.722
159) Chlorobenzilate	(5)	11.399	139	1395656	126.103
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2663290	118.366
161) Butylbenzylphthalate	(5)	11.706	149	2108453	121.025
162) 2-Acetylaminofluorene	(5)	11.921	181	2021224	128.105
164) 3,3'-Dichlorobenzidine	(5)	12.198	252	1498983	118.085
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	758170	122.263
166) Benzo(a)anthracene	(5)	12.204	228	4122074	122.416
168) Chrysene	(5)	12.247	228	3839201	118.255
169) bis(2-Ethylhexyl)phthalate	(5)	12.297	149	2944340	121.810
189) 6-Methylchrysene	(5)	12.696	242	2843627	118.707
170) Di-n-octylphthalate	(6)	12.948	149	5277690	129.610
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.268	256	1997972	130.520
172) Benzo(b)fluoranthene	(6)	13.274	252	4507467	136.831
173) Benzo(k)fluoranthene	(6)	13.299	252	3864269A	114.981
174) Benzo(a)pyrene	(6)	13.575	252	3882269	120.749
175)*Perylene-d12	(6)	13.612	264	539486	20.000
176) 3-Methylcholanthrene	(6)	13.901	268	1945486	120.720
190) Dibenz(a,h)acridine	(6)	14.418	279	2928415	125.375
191) Dibenz(a,j)acridine	(6)	14.473	279	3121340	116.211
177) Indeno(1,2,3-cd)pyrene	(6)	14.658	276	4123361	120.541
178) Dibenz(a,h)anthracene	(6)	14.682	278	3480308	121.633
179) Benzo(g,h,i)perylene	(6)	14.947	276	3410301	117.026
129) Diallate TRANS/CIS	(4)			1389843	124.304

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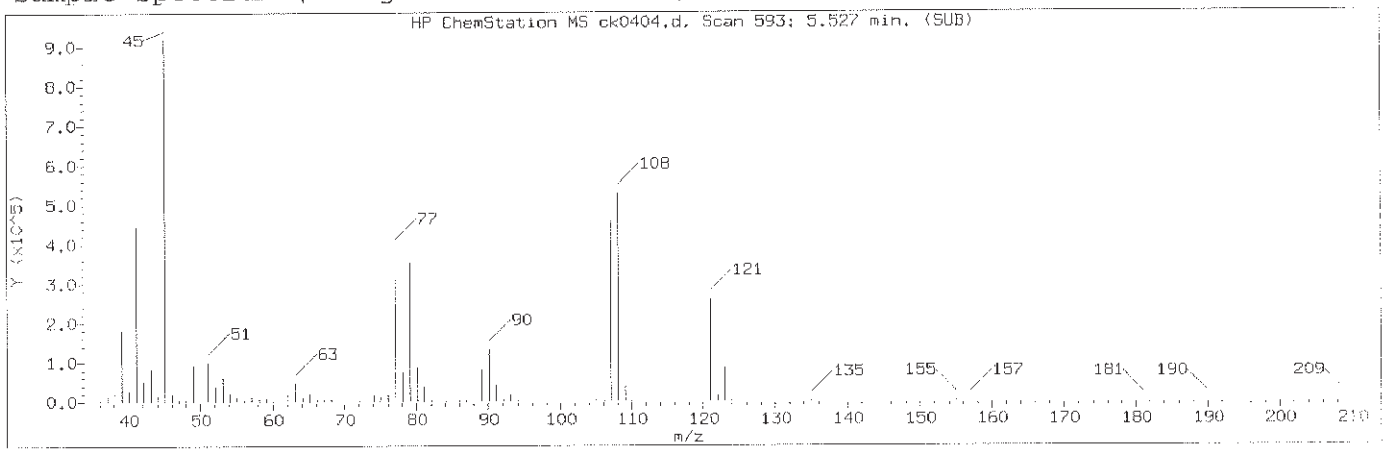
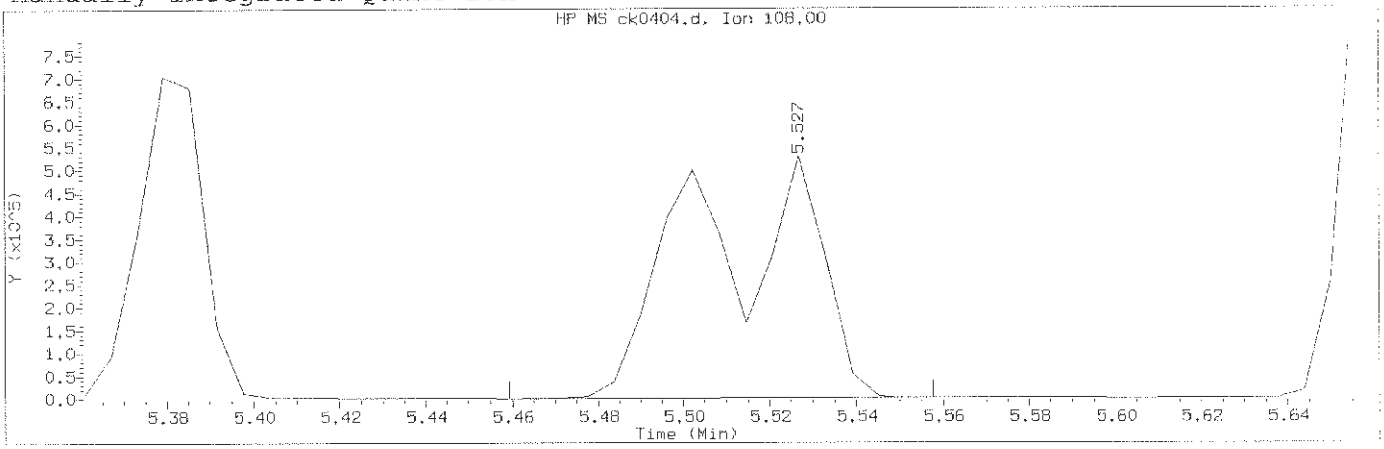
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

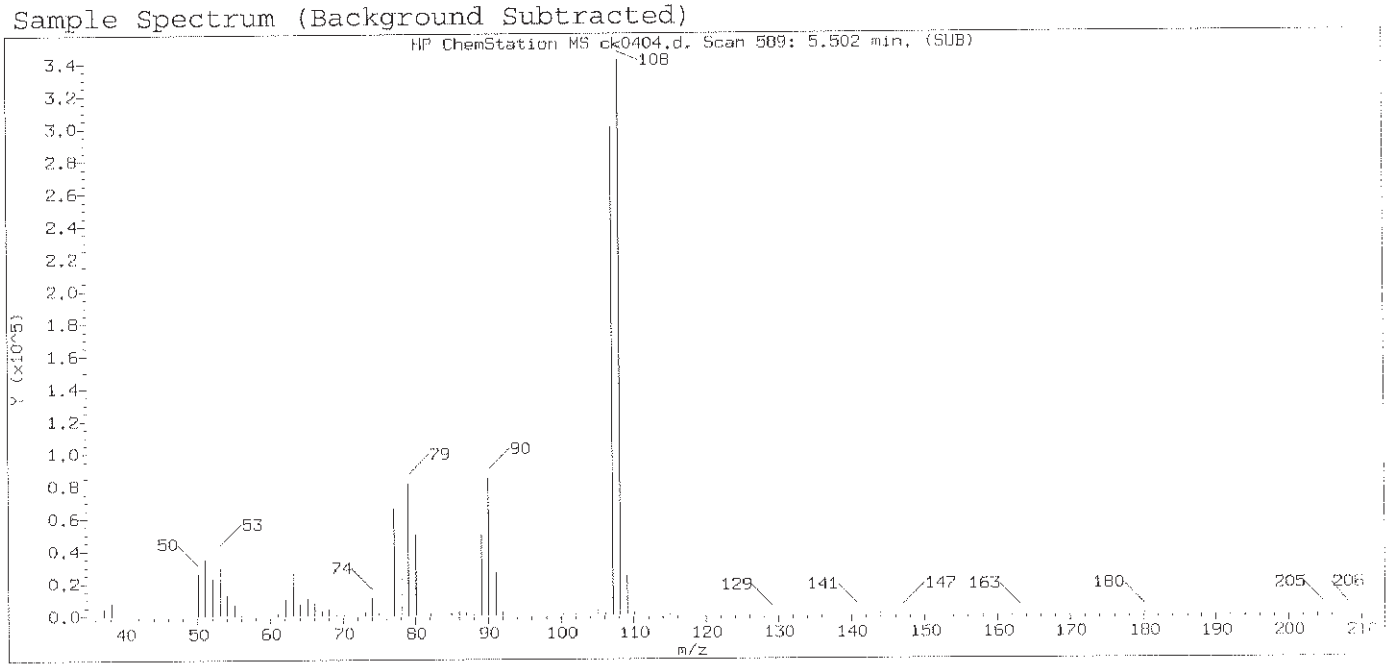
Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 593		
Retention Time (minutes)	: 5.527		
Quant Ion	: 108.00		
Area (flag)	: 1044241M		
On-Column Amount (ng/ul)	: 117.8262		
Integration start scan	: 581	Integration stop scan:	597
Y at integration start	: 544	Y at integration end:	1666

Reason for manual integration: improper integration

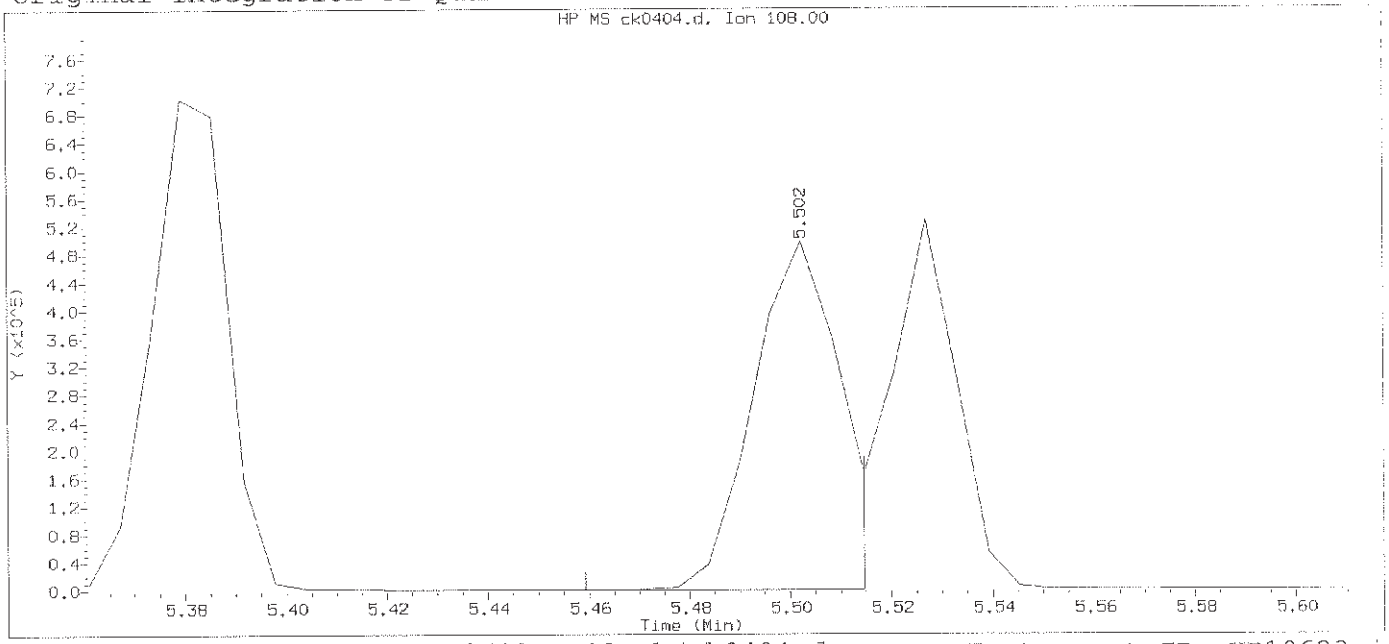
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 589		
Retention Time (minutes)	: 5.502		
Quant Ion	: 108.00		
Area	: 575903		
On-column Amount (ng/ul)	: 73.6240		
Integration start scan	: 581	Integration stop scan:	590
Y at integration start	: 0	Y at integration end:	0

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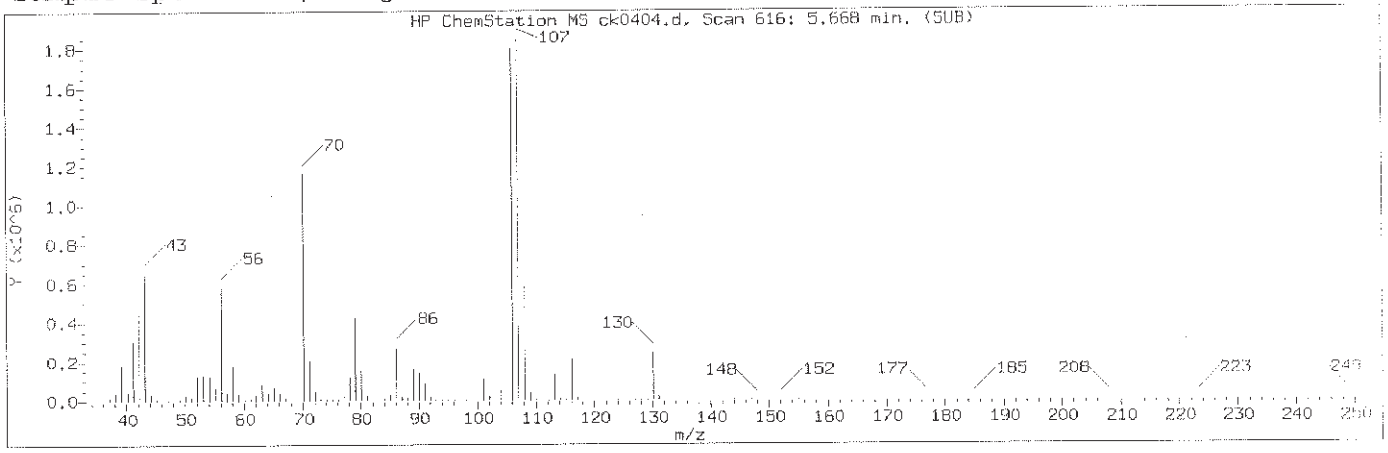
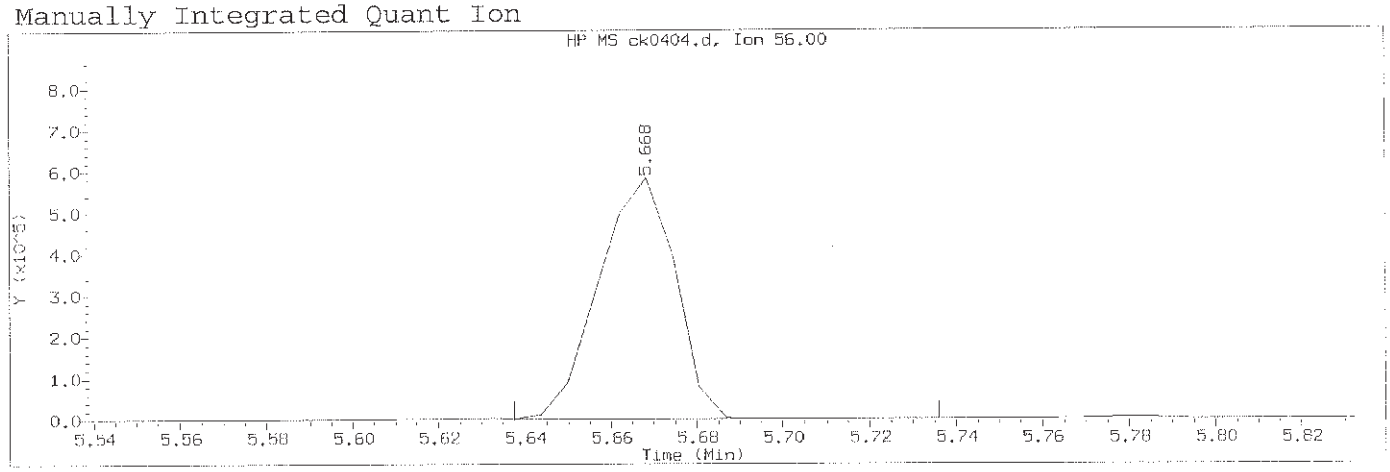
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 56.00		
Area (flag)	: 720241A		
On-Column Amount (ng/ul)	: 119.5124		
Integration start scan	: 610	Integration stop scan:	626
Y at integration start	: 1307	Y at integration end:	1307

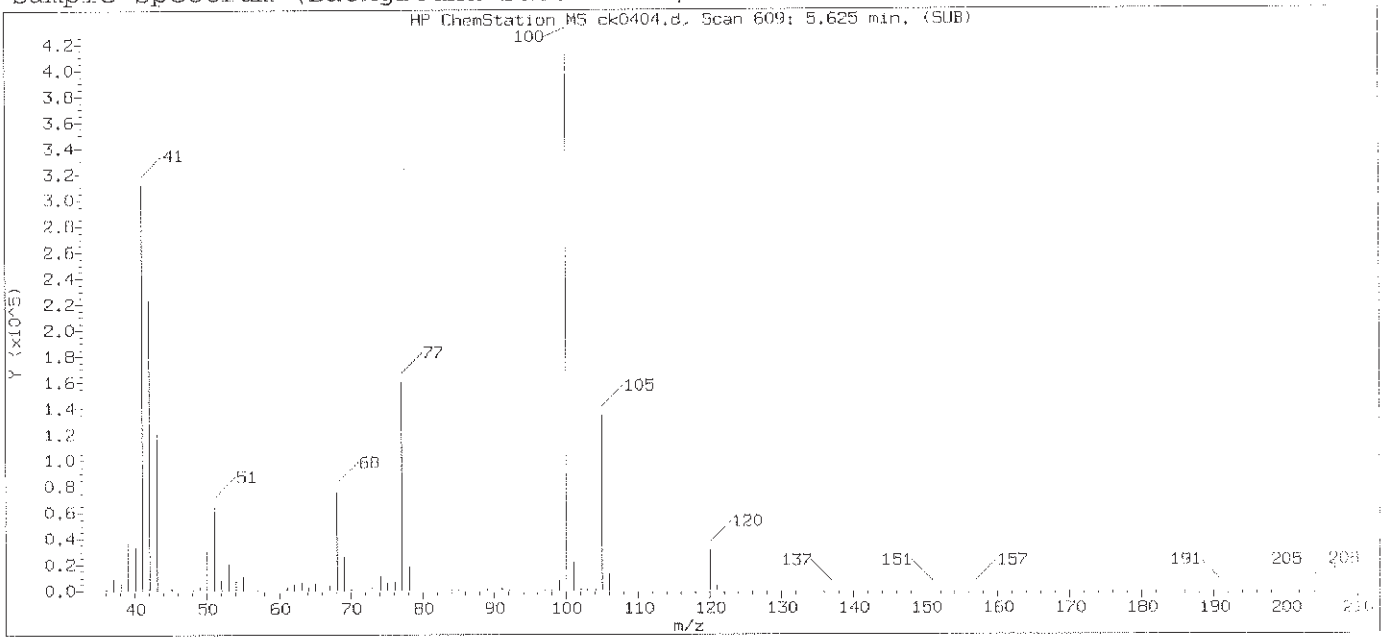
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

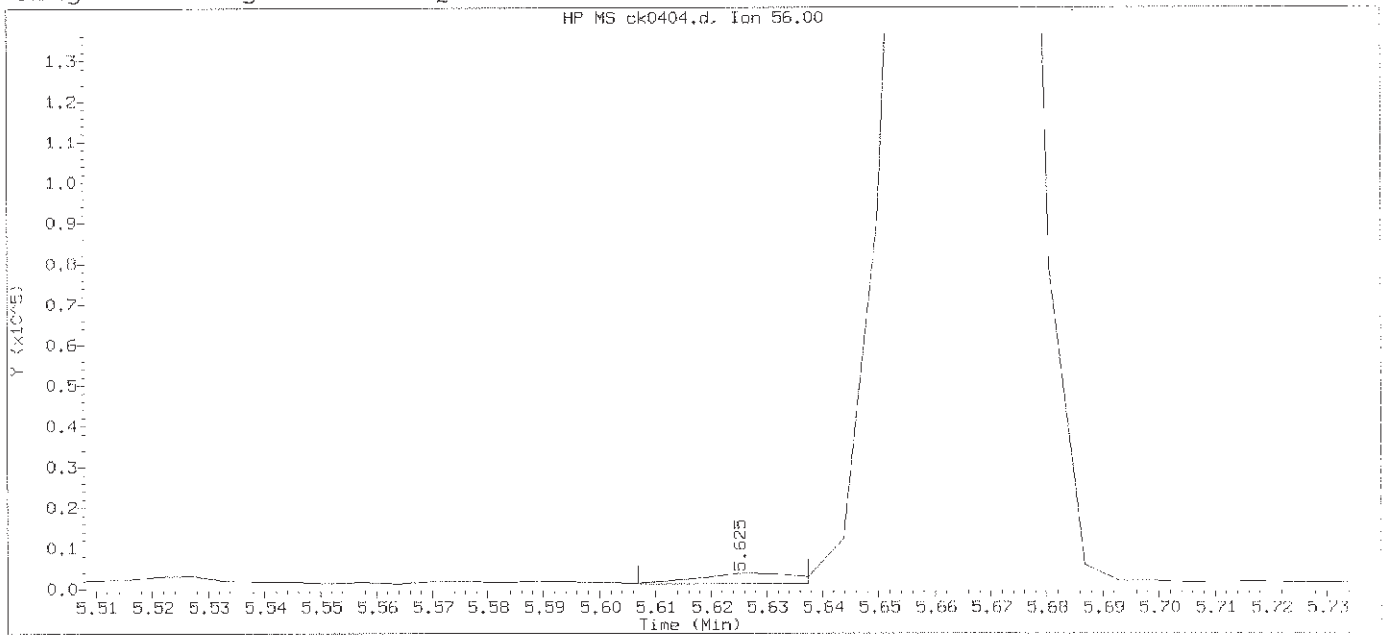
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

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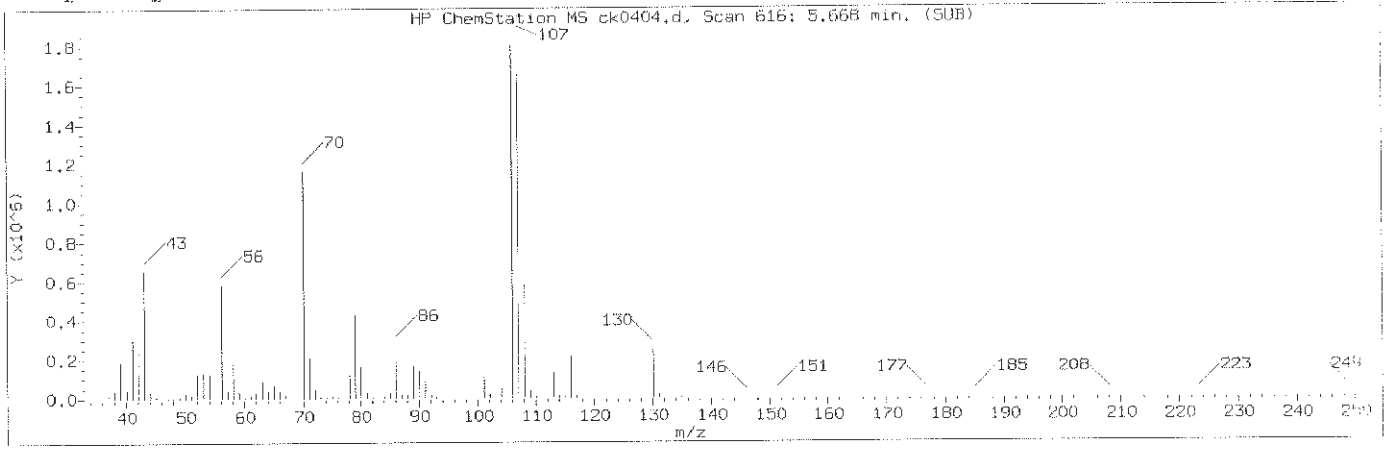
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

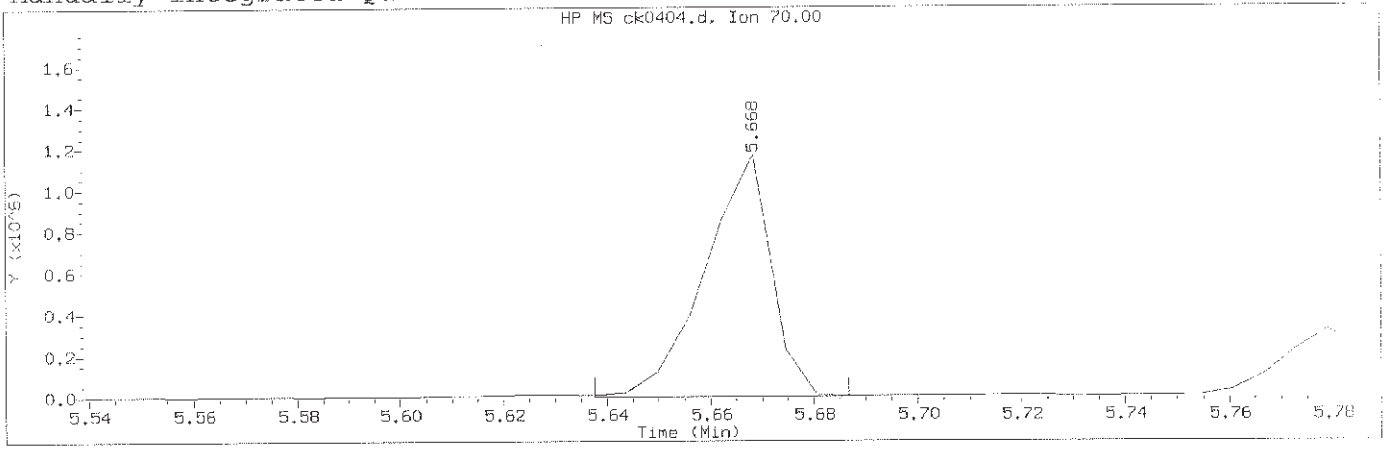
Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 609		
Retention Time (minutes)	: 5.625		
Quant Ion	: 56.00		
Area	: 3067		
On-column Amount (ng/ul)	: 0.9114		
Integration start scan	: 605	Integration stop scan:	610
Y at integration start	: 1307	Y at integration end:	1307

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 70.00		
Area (flag)	: 1024425A		
On-Column Amount (ng/ul)	: 121.1237		
Integration start scan	: 610	Integration stop scan:	618
Y at integration start	: 1062	Y at integration end:	1062

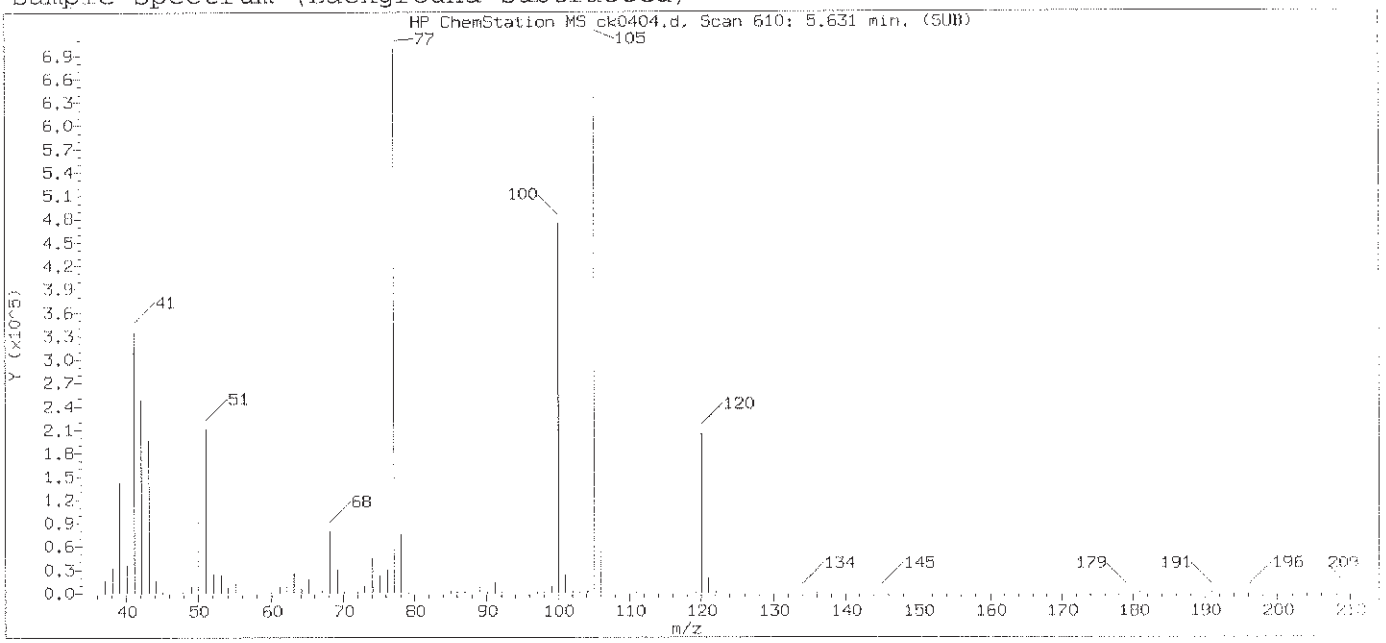
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

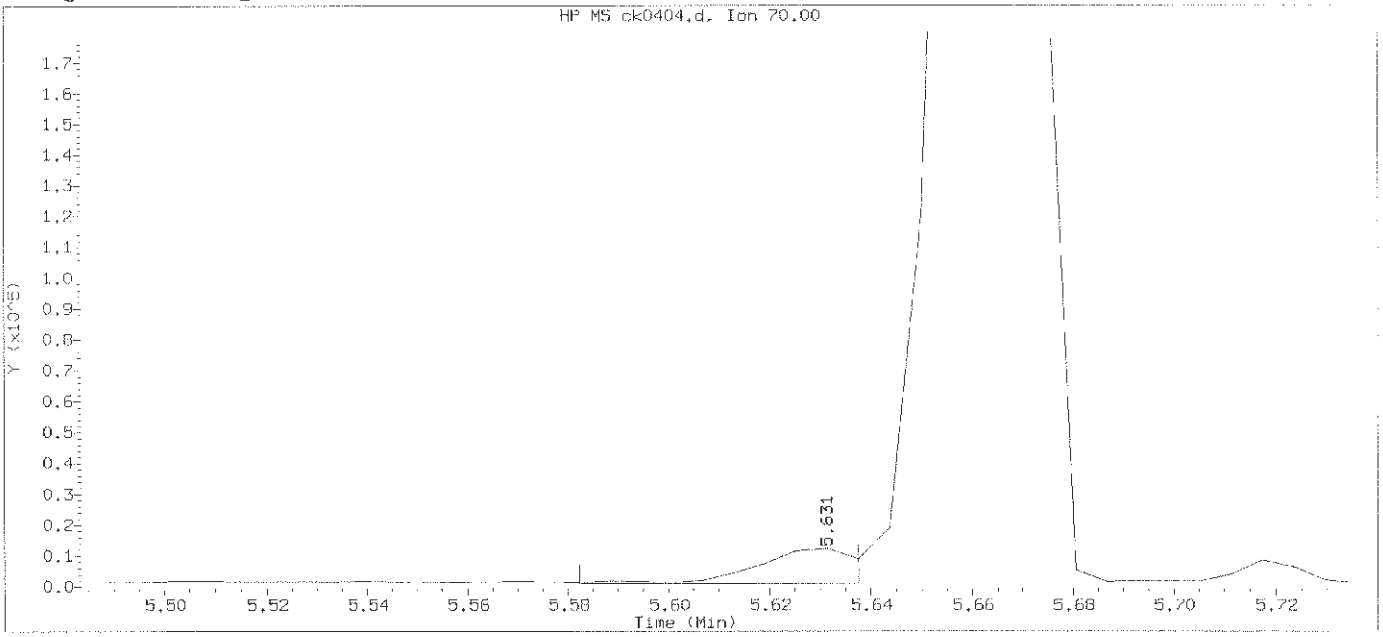
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

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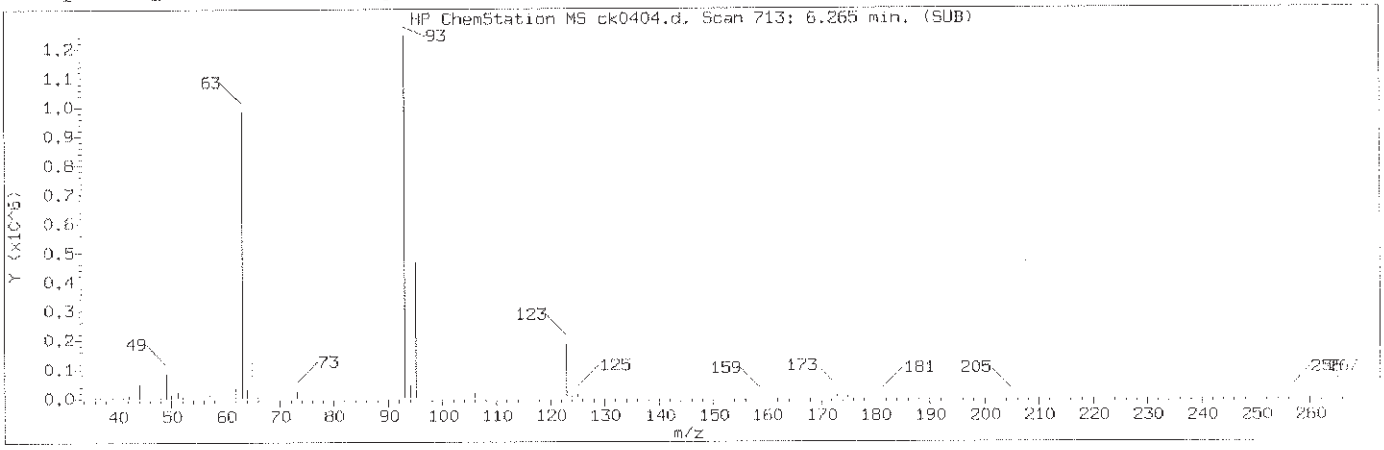
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

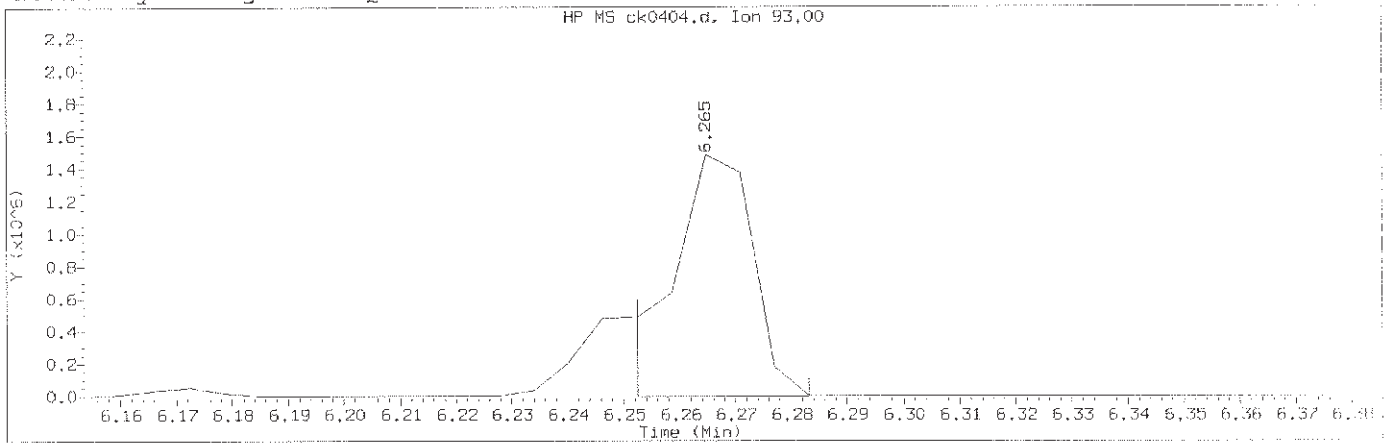
Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 610		
Retention Time (minutes)	: 5.631		
Quant Ion	: 70.00		
Area	: 14177		
On-column Amount (ng/ul)	: 2.2666		
Integration start scan	: 601	Integration stop scan:	610
Y at integration start	: 1062	Y at integration end:	1062

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area (flag)	: 1542458M		
On-Column Amount (ng/ul)	: 125.5195		
Integration start scan	: 710	Integration stop scan:	715
Y at integration start	: -2375	Y at integration end:	-2375

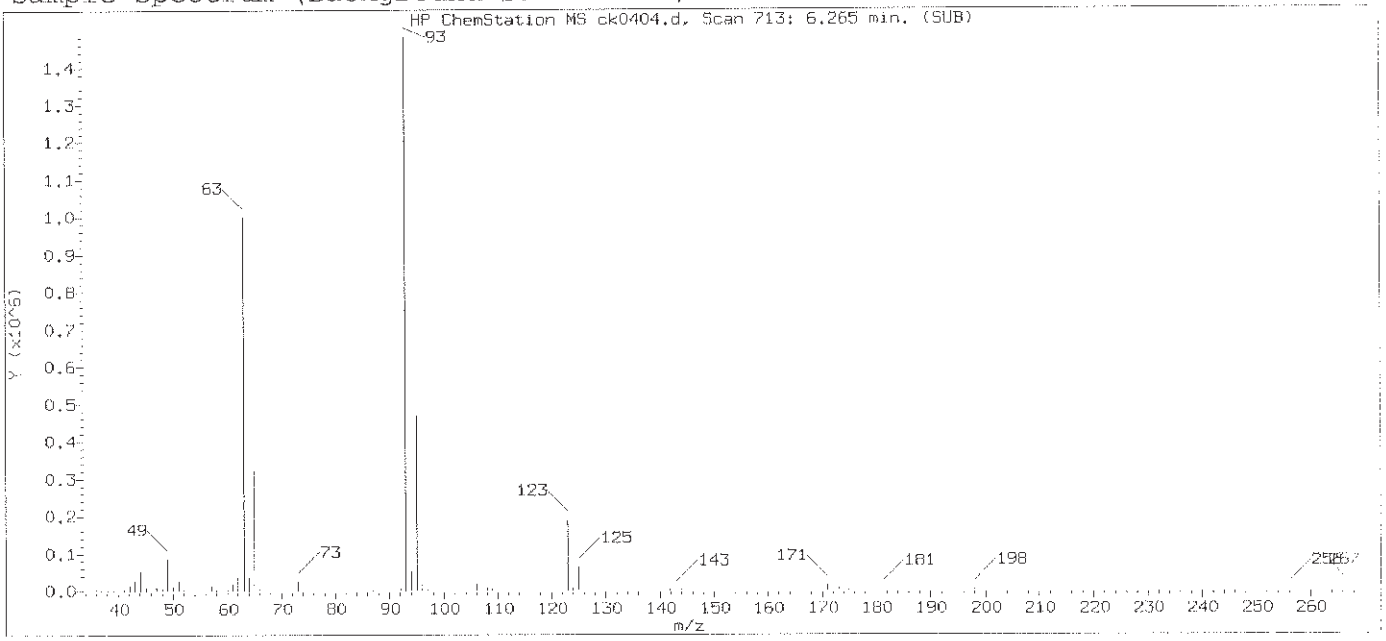
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

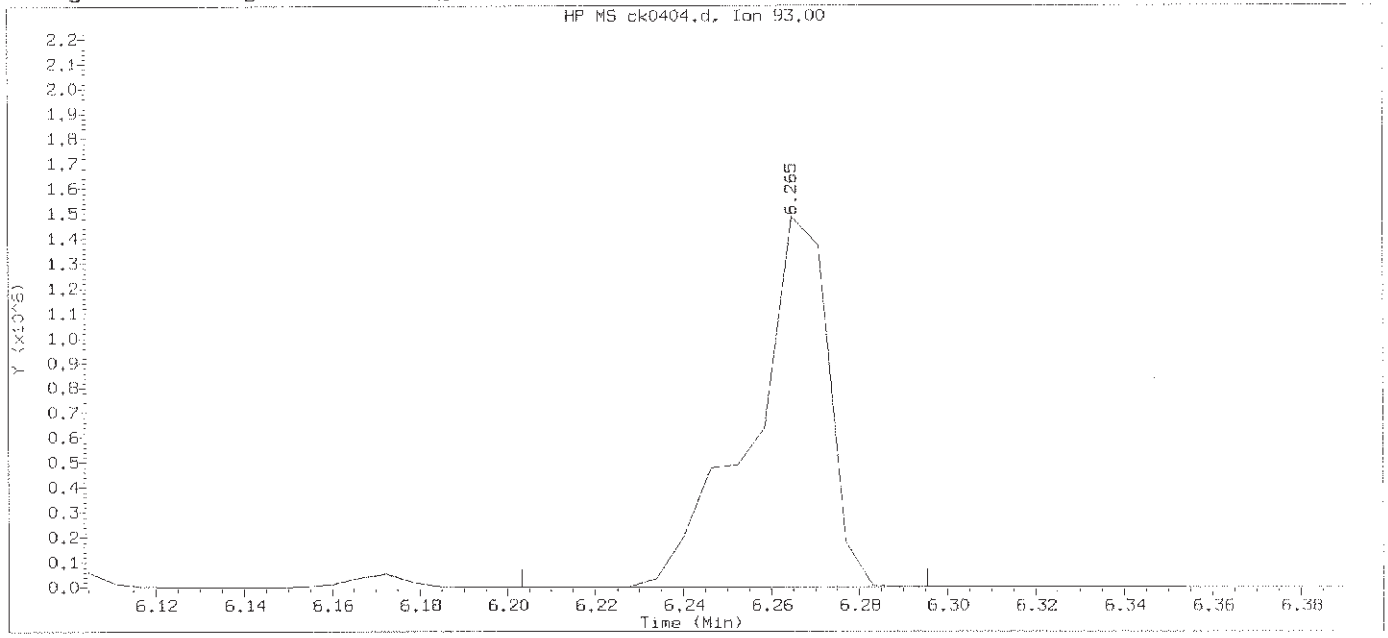
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

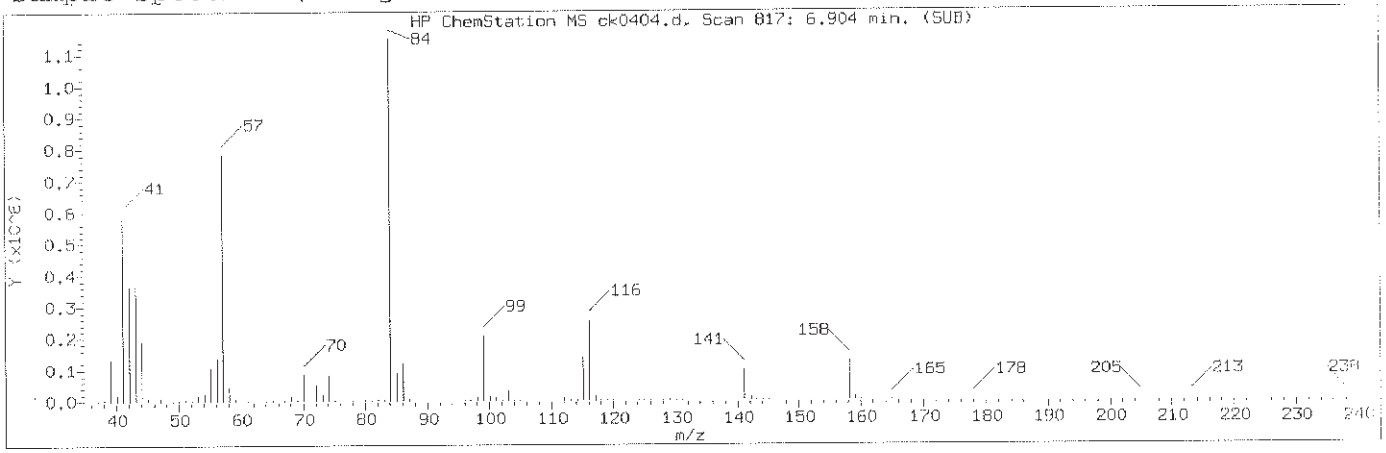
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

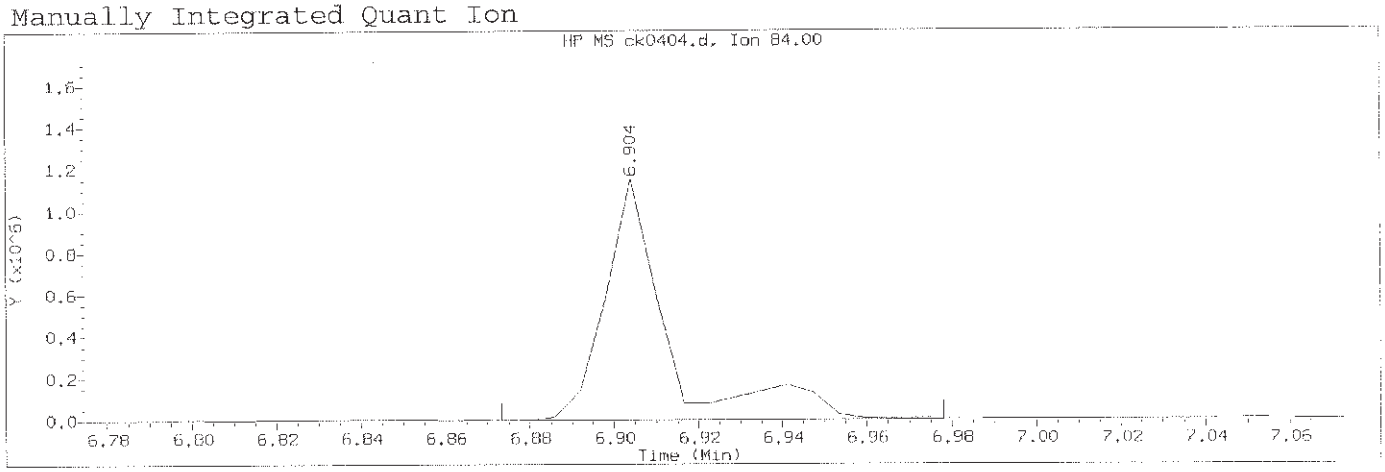
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area	: 1804476		
On-column Amount (ng/ul)	: 131.3277		
Integration start scan	: 702	Integration stop scan:	717
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 1182208MA		
On-Column Amount (ng/ul)	: 121.4847		
Integration start scan	: 811	Integration stop scan:	828
Y at integration start	: 866	Y at integration end:	866

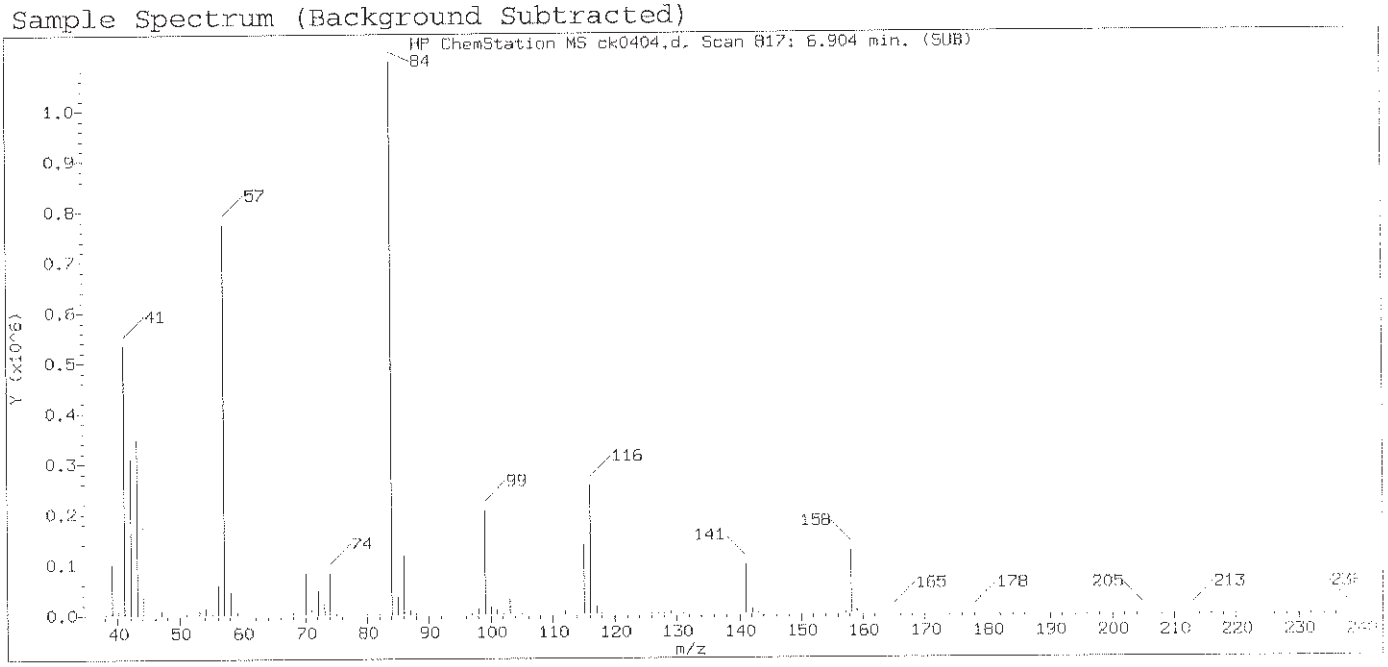
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

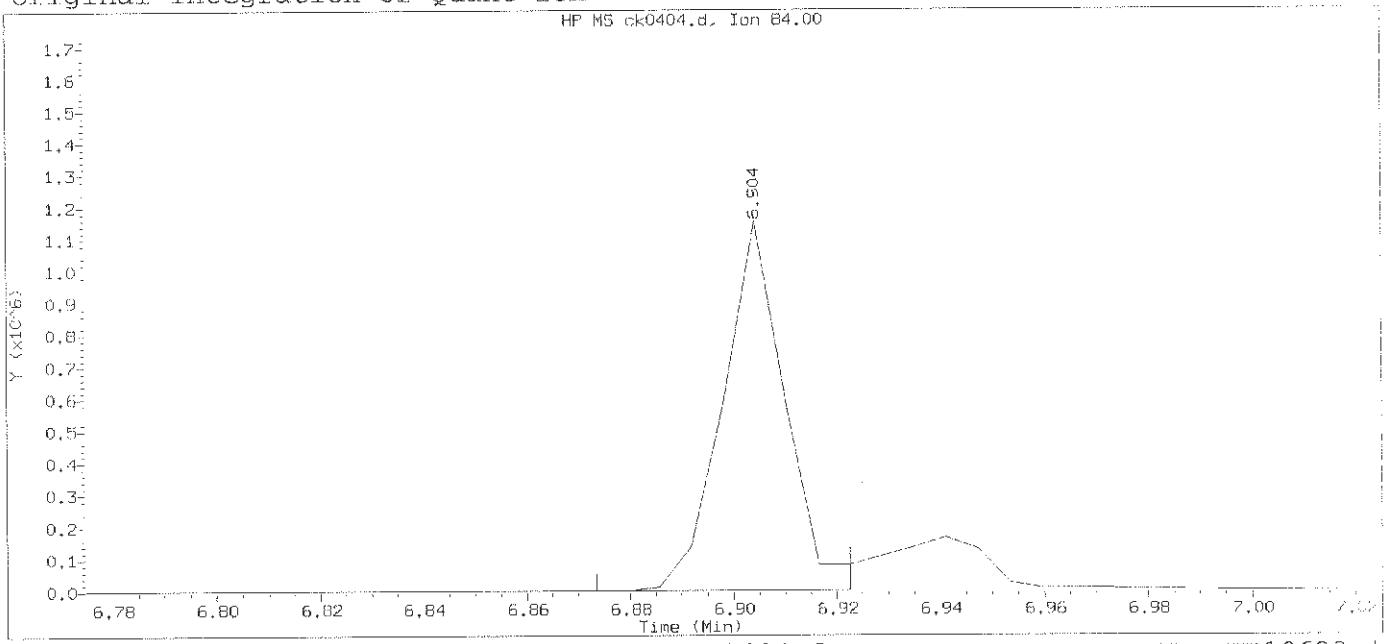
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

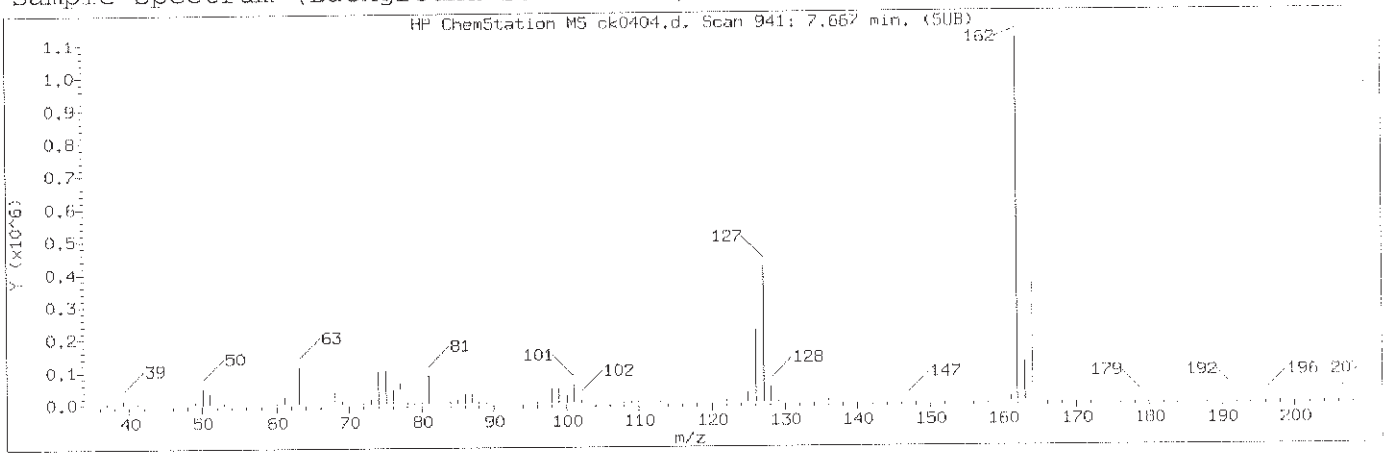
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

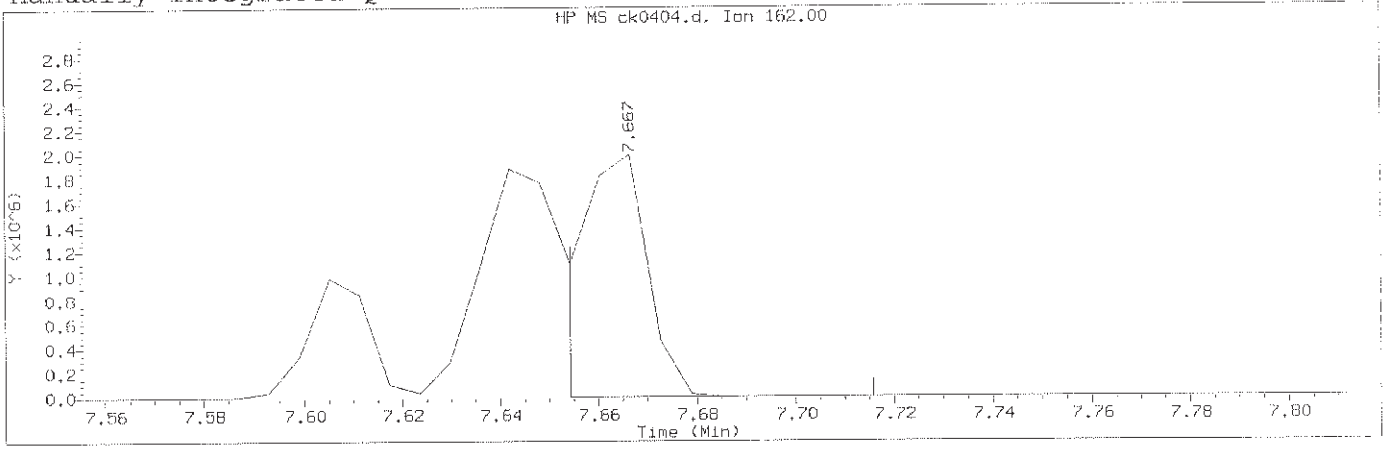
Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 948721		
On-column Amount (ng/ul)	: 100.0241		
Integration start scan	: 811	Integration stop scan:	819
Y at integration start	: 1061	Y at integration end:	1061

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 941		
Retention Time (minutes)	: 7.667		
Quant Ion	: 162.00		
Area (flag)	: 1786834A		
On-Column Amount (ng/ul)	: 108.6062		
Integration start scan	: 938	Integration stop scan:	948
Y at integration start	: 489	Y at integration end:	460

Reason for manual integration: improper integration

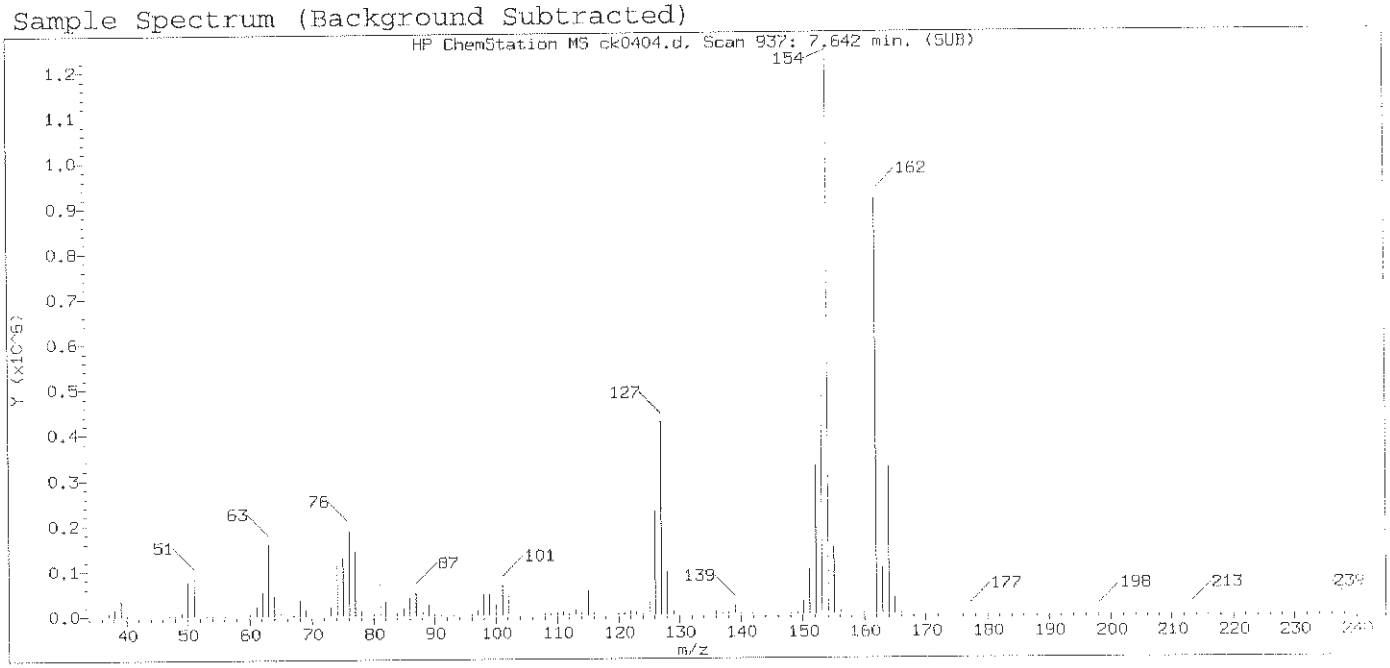
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 2.5 Signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

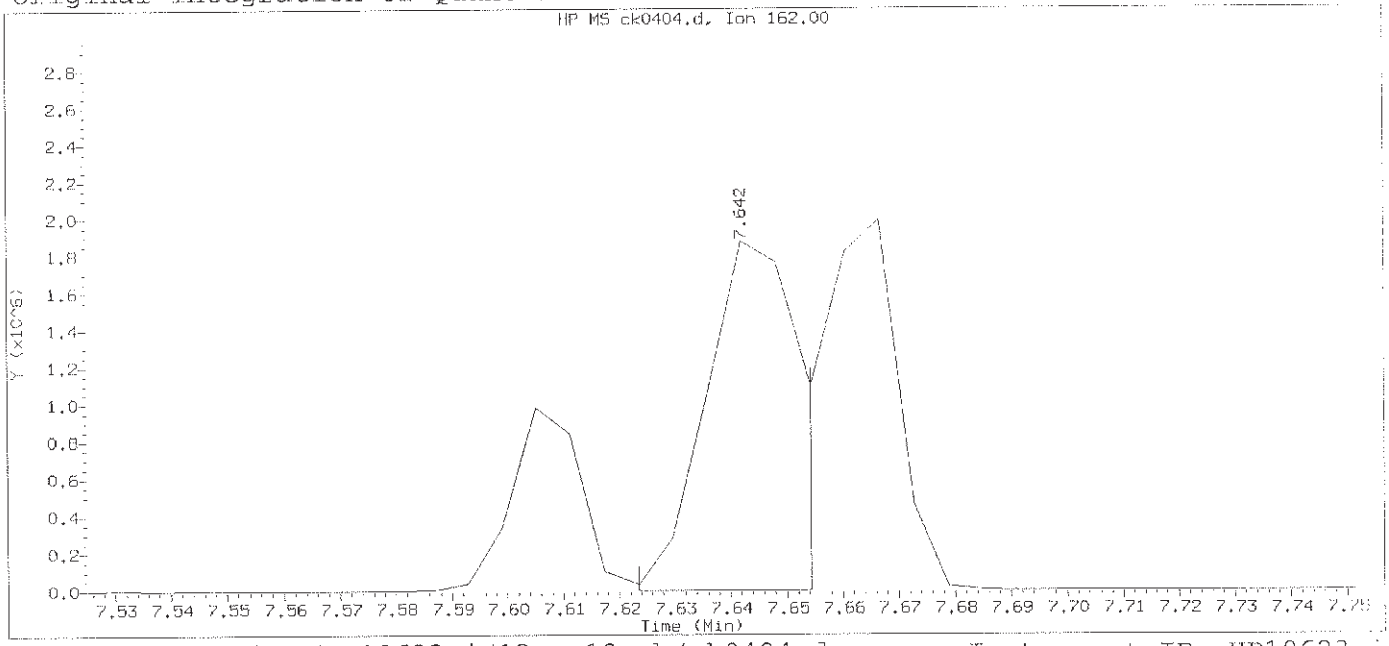
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

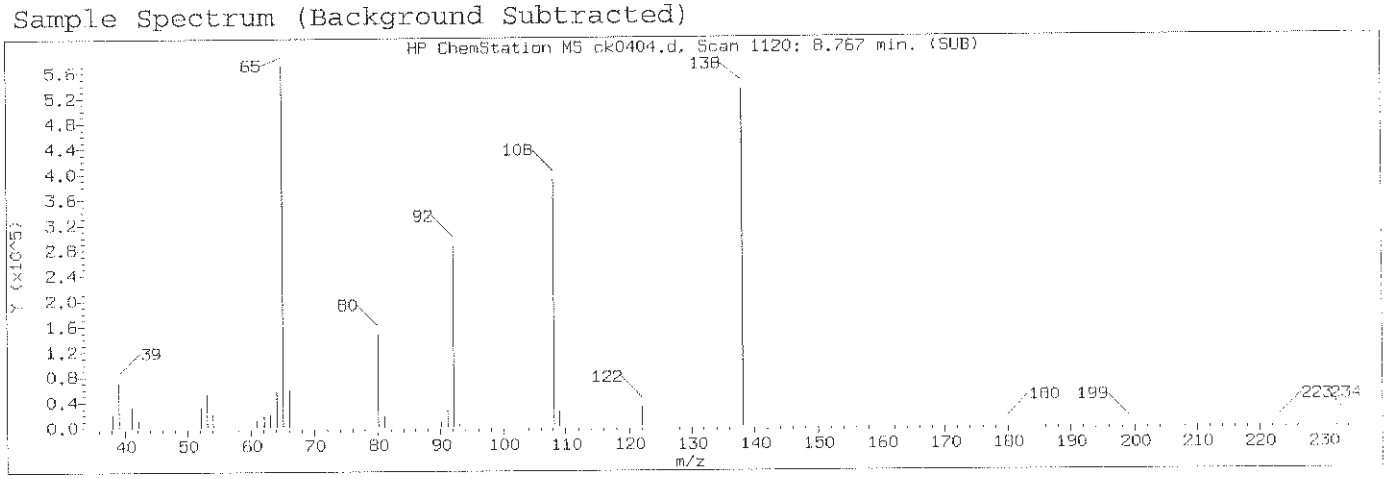
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

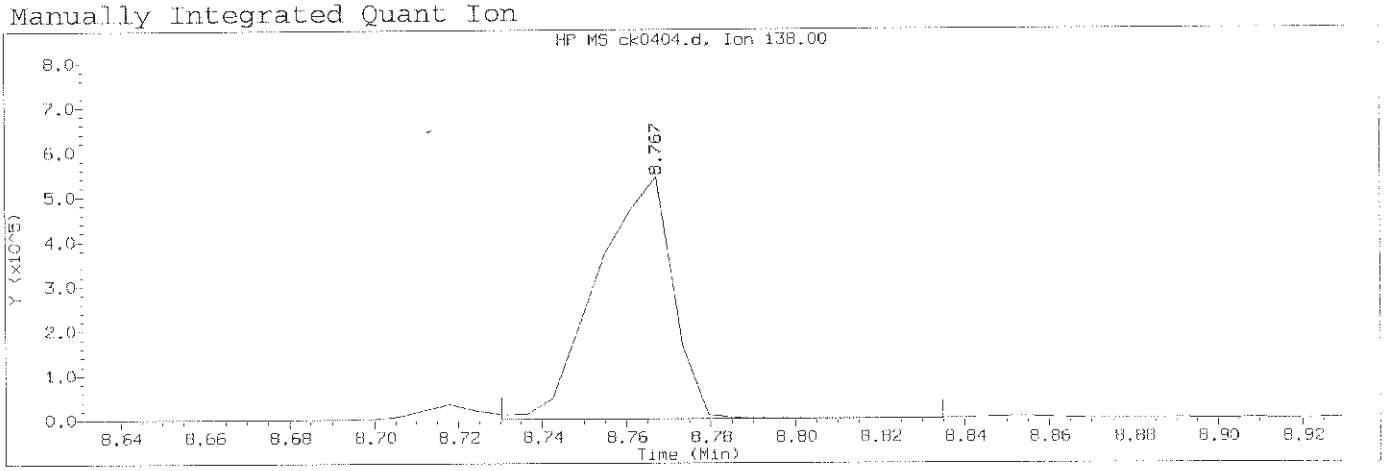
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 937		
Retention Time (minutes)	: 7.642		
Quant Ion	: 162.00		
Area	: 2036430		
On-column Amount (ng/ul)	: 119.5617		
Integration start scan	: 933	Integration stop scan:	938
Y at integration start	: 515	Y at integration end:	489

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1120		
Retention Time (minutes)	: 8.767		
Quant Ion	: 138.00		
Area (flag)	: 675934A		
On-Column Amount (ng/ul)	: 118.8095		
Integration start scan	: 1113	Integration stop scan:	1130
Y at integration start	: 267	Y at integration end:	362

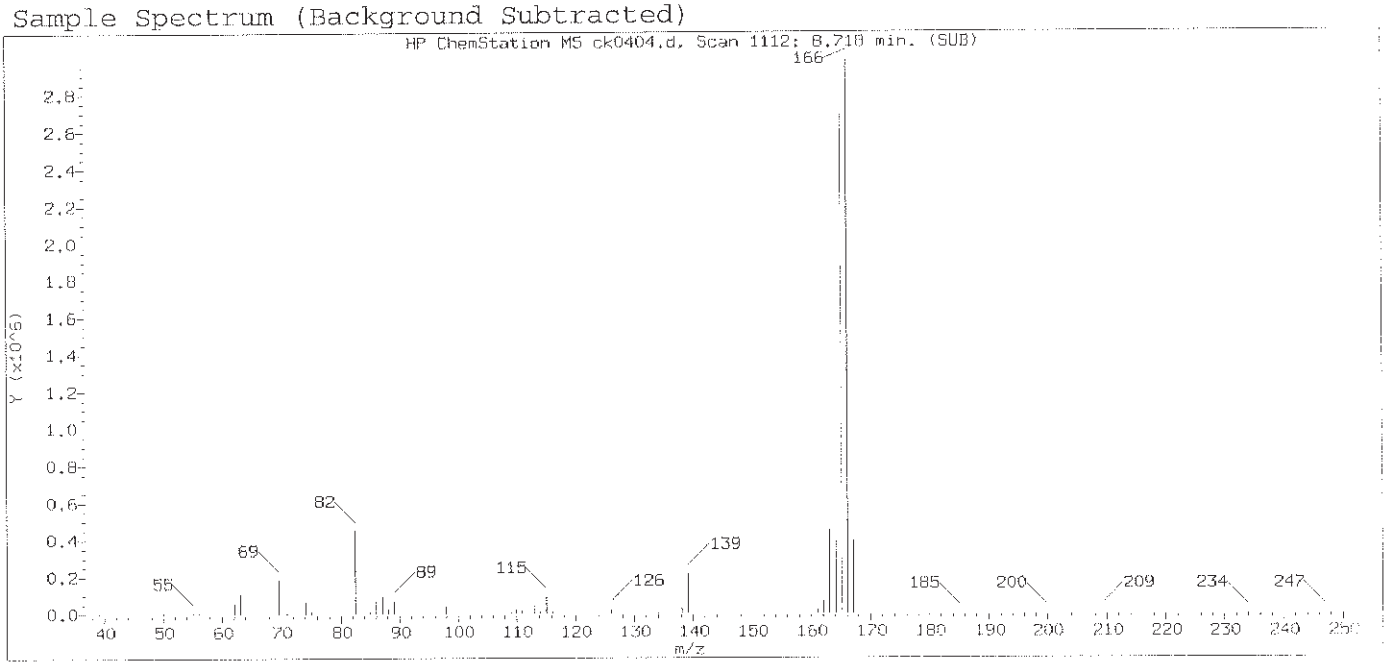
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

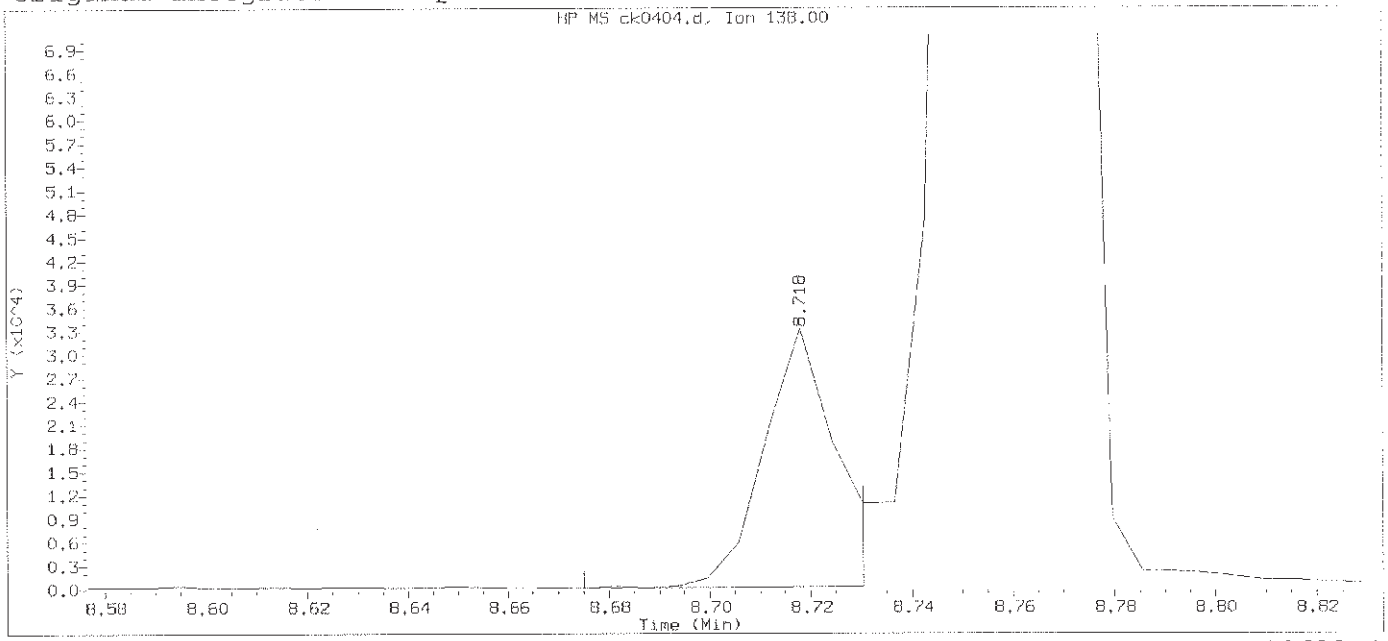
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

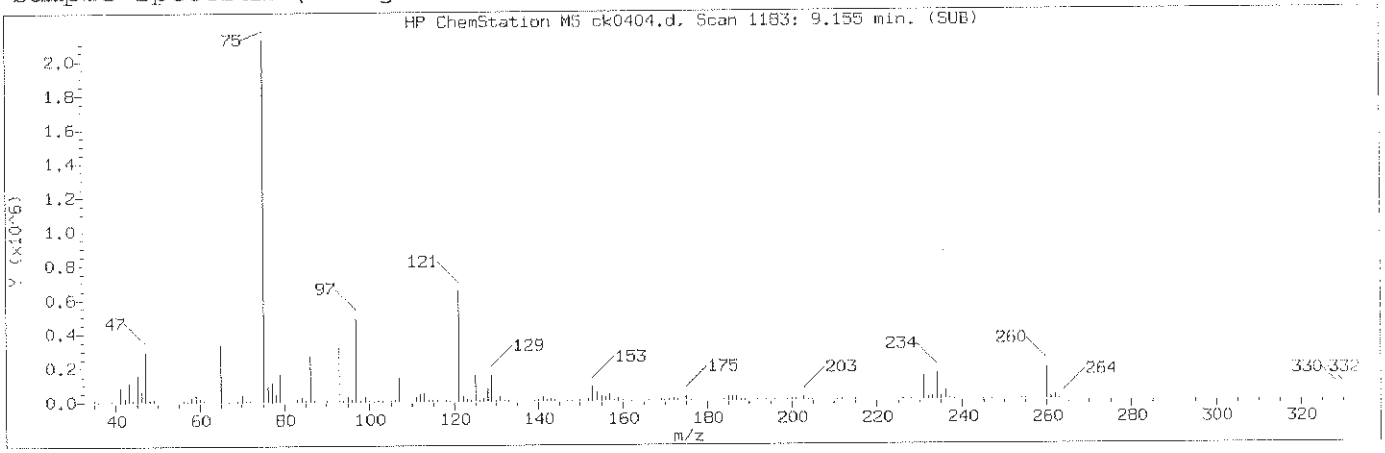
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

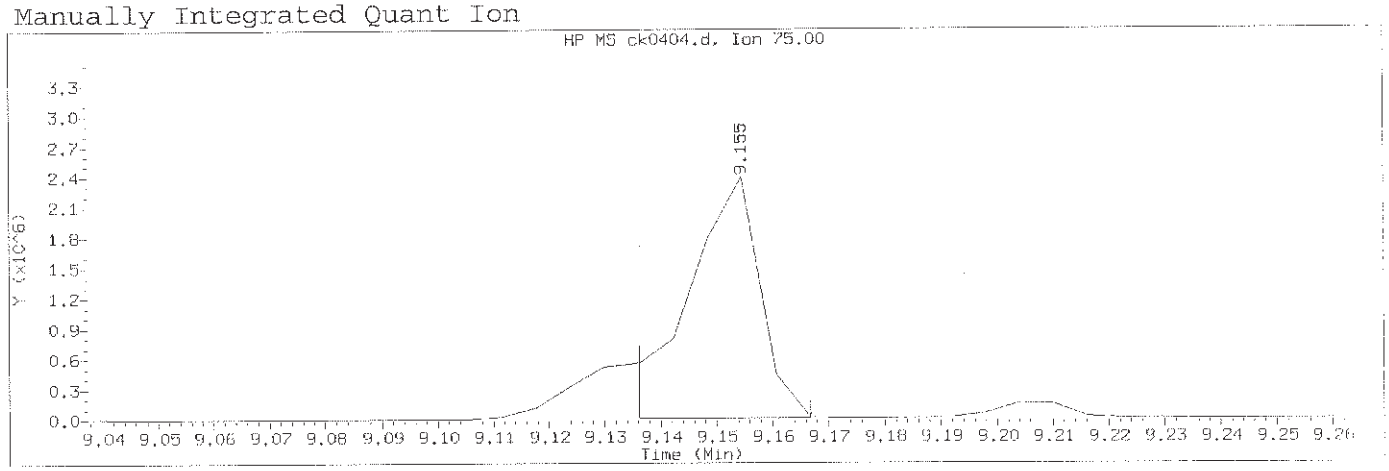
Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 31386		
On-column Amount (ng/ul)	: 7.6452		
Integration start scan	: 1104	Integration stop scan:	1113
Y at integration start	: 168	Y at integration end:	267

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area (flag)	: 2188290M		
On-Column Amount (ng/ul)	: 139.5603		
Integration start scan	: 1179	Integration stop scan:	1184
Y at integration start	: 4307	Y at integration end:	4307

Reason for manual integration: improper integration

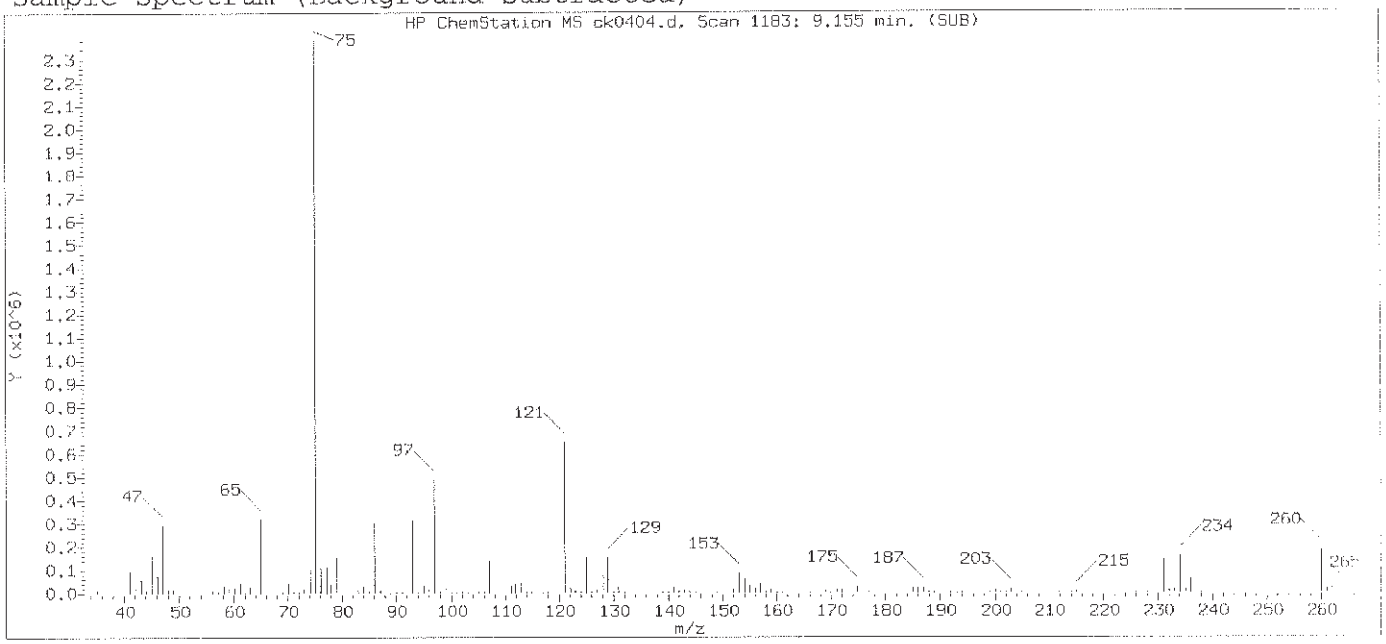
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

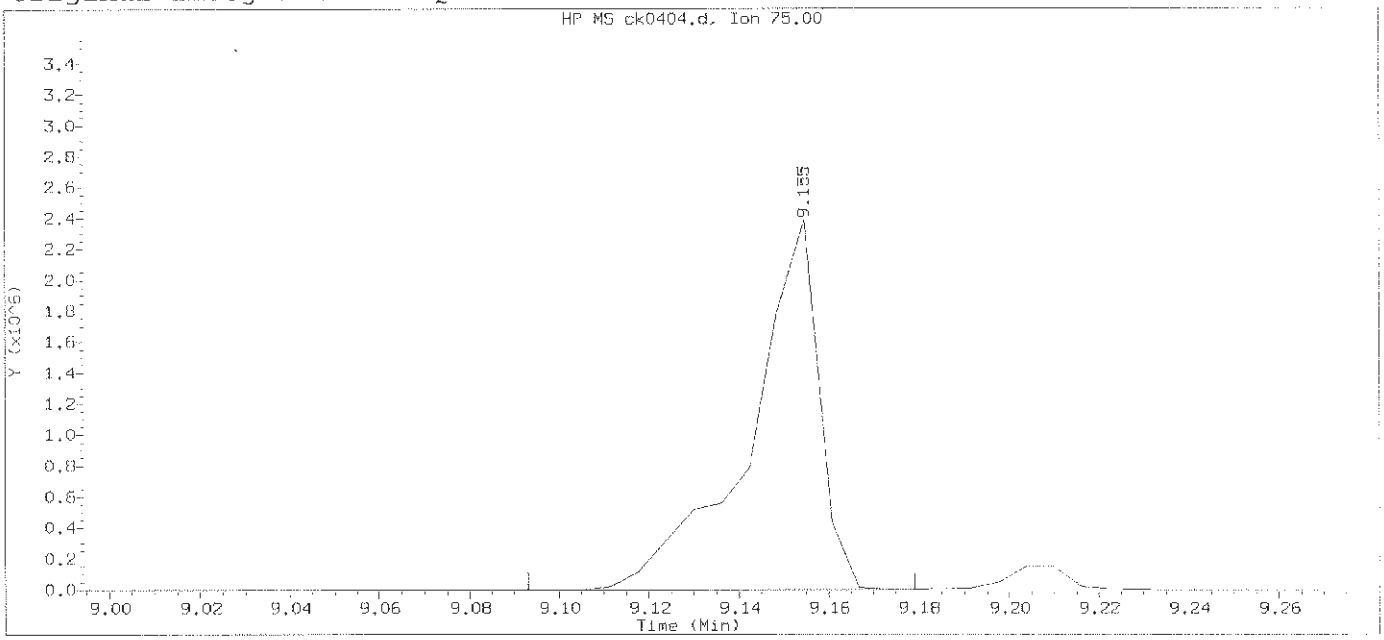
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

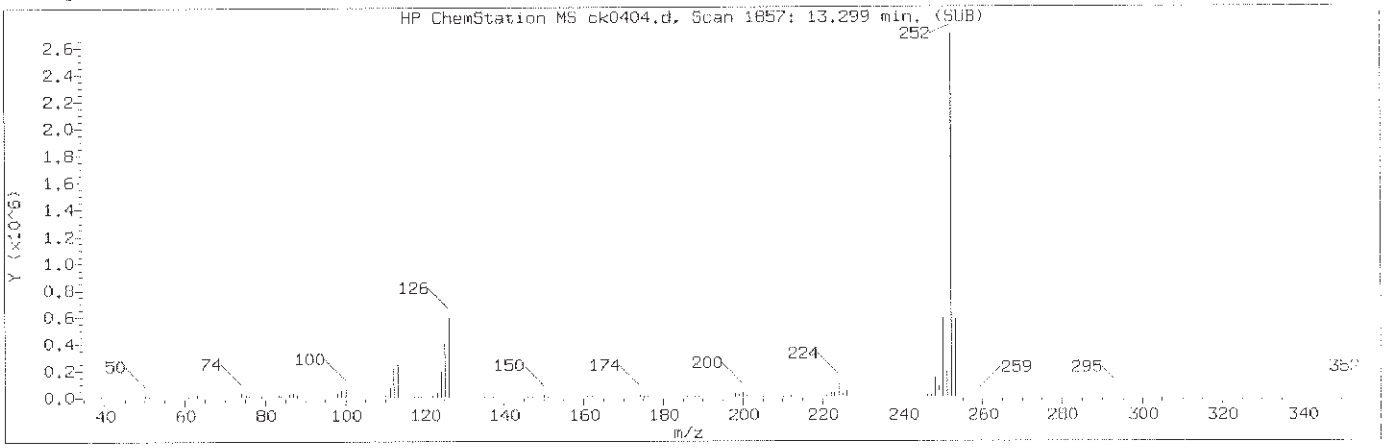
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

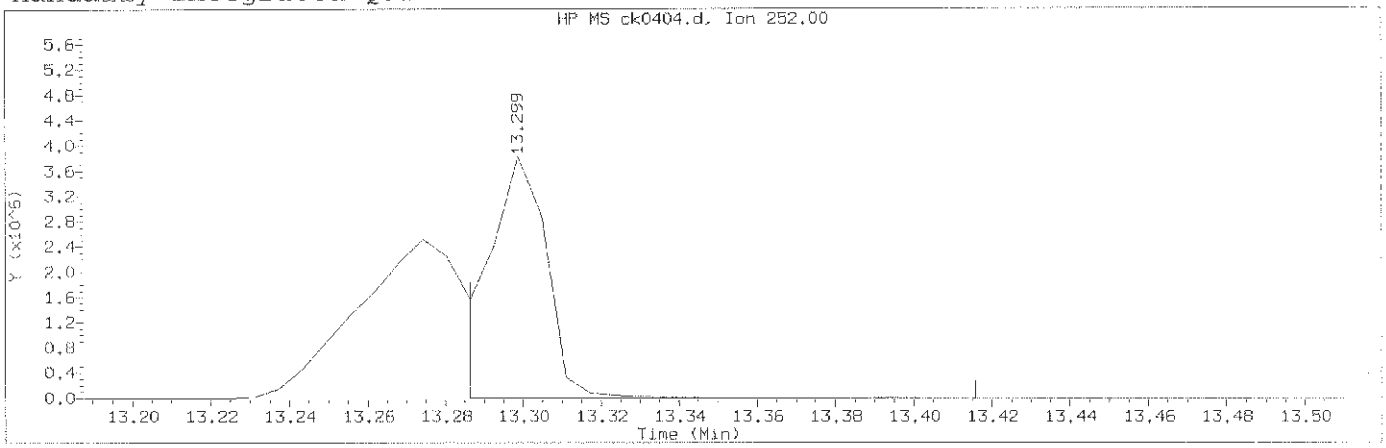
Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area	: 2560723		
On-column Amount (ng/ul)	: 141.5560		
Integration start scan	: 1172	Integration stop scan:	1186
Y at integration start	: 303	Y at integration end:	371

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1857		
Retention Time (minutes)	: 13.299		
Quant Ion	: 252.00		
Area (flag)	: 3864269A		
On-Column Amount (ng/ul)	: 114.9812		
Integration start scan	: 1854	Integration stop scan:	1875
Y at integration start	: 1274	Y at integration end:	1343

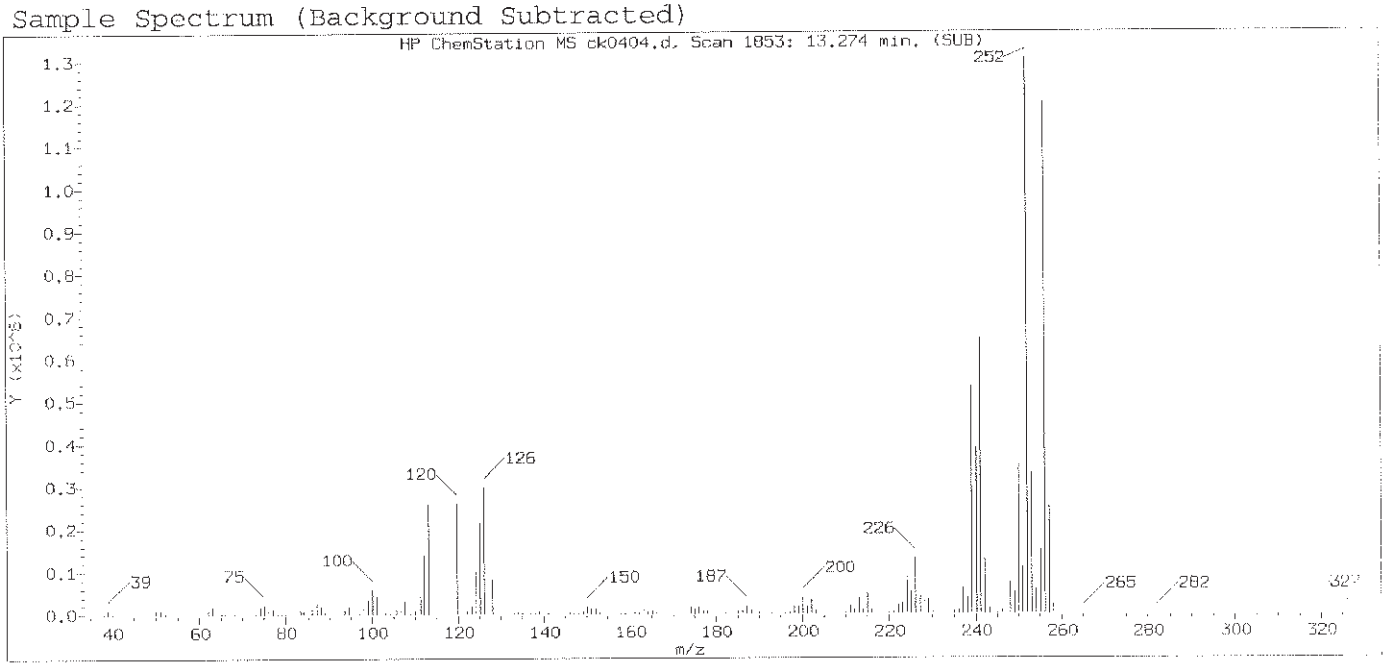
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

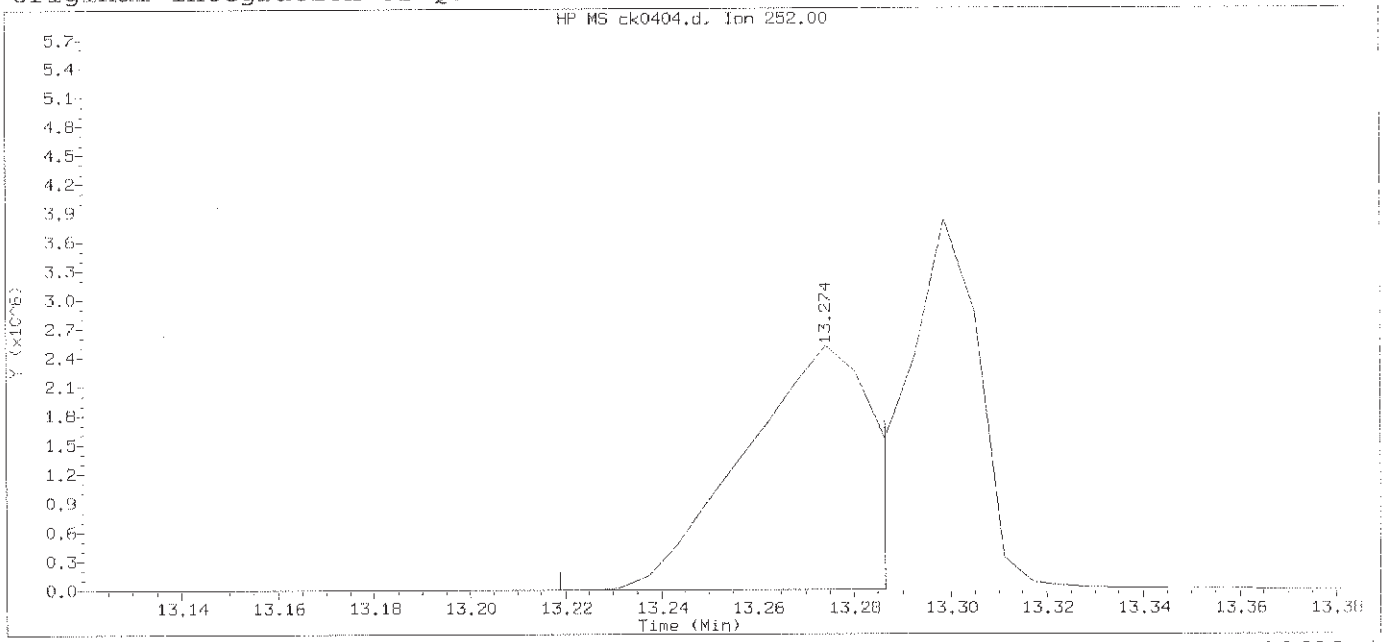
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



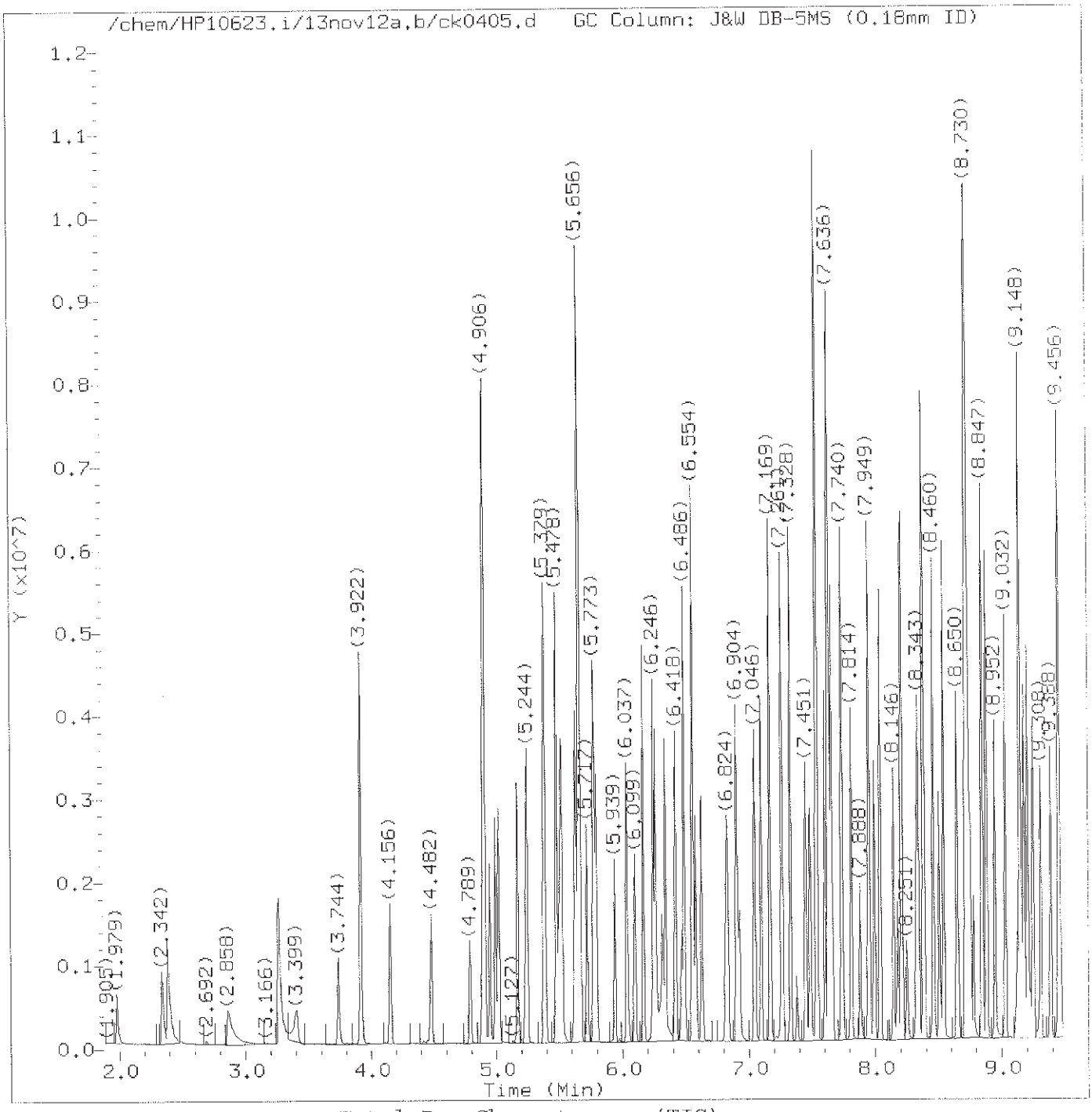
Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1853		
Retention Time (minutes)	: 13.274		
Quant Ion	: 252.00		
Area	: 4507467		
On-column Amount (ng/ul)	: 129.6726		
Integration start scan	: 1843	Integration stop scan:	1854
Y at integration start	: 180	Y at integration end:	1274

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24

Instrument ID: HP10623.i
Analyst ID: jmg00346

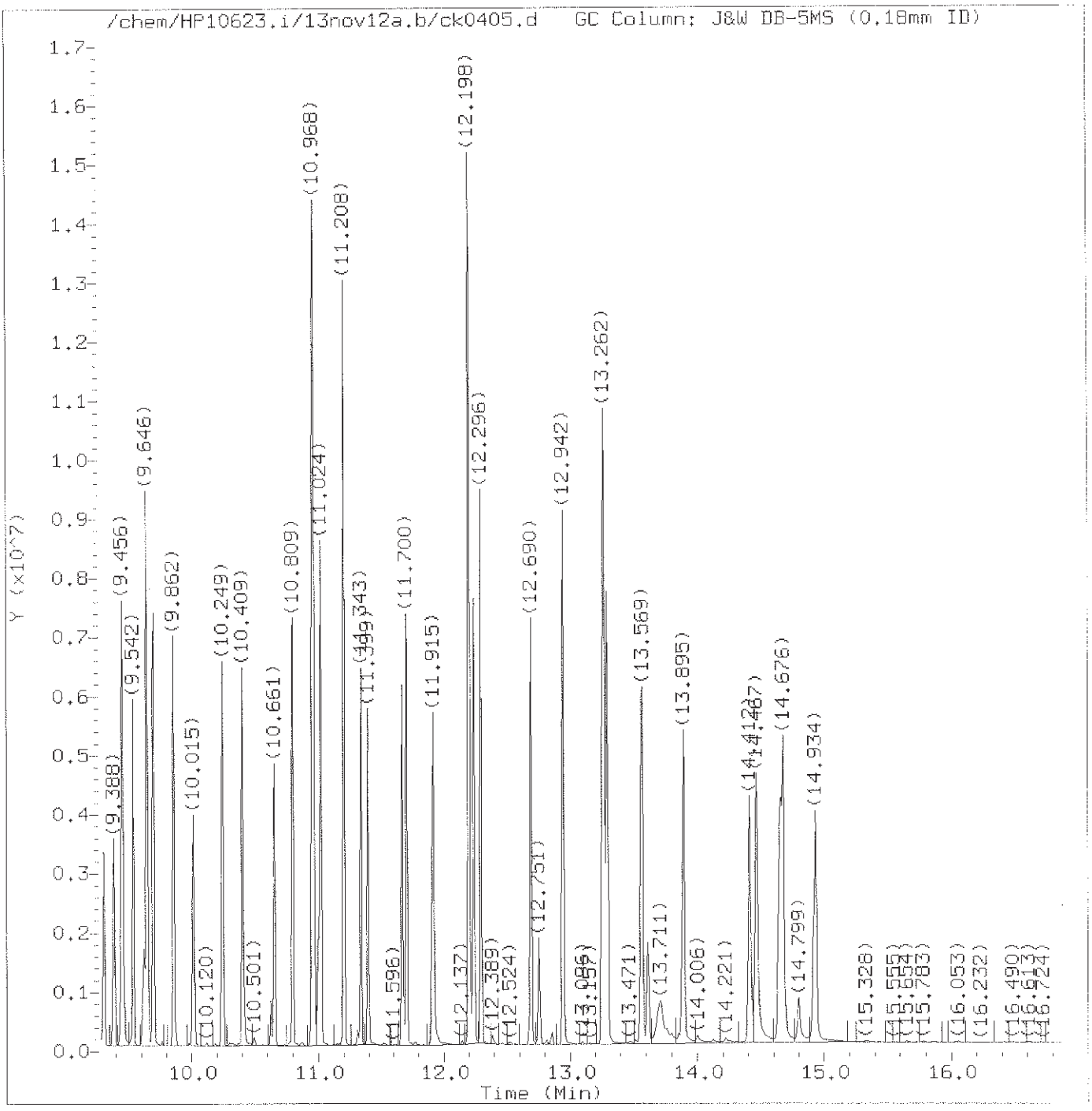
Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sublist used: newall1

Sample Name: SSTD080

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	281181	76.529
2) N-Nitrosodimethylamine	(1)	2.342	74	526263	77.366
3) Pyridine	(1)	2.385	79	792242	75.125
5) 2-Picoline	(1)	3.264	93	846134	78.629
6) N-Nitrosomethylethylamine	(1)	3.406	88	392457	76.286
7) Methyl methanesulfonate	(1)	3.744	80	408117	78.900
9)$2-Fluorophenol	(1)	3.922	112	1326311	78.910
10) N-Nitrosodiethylamine	(1)	4.156	102	397609	77.798
11) Ethyl methanesulfonate	(1)	4.482	109	366459	78.740
12) Benzaldehyde	(1)	4.789	77	253926	49.188
15)$Phenol-d6	(1)	4.900	99	1980143	80.063
14)$Phenol-d5	(1)	4.900	99	1980143	80.063
13) Aniline	(1)	4.906	93	1337258	78.163
16) Phenol	(1)	4.912	94	1155237	80.072
18) bis(2-Chloroethyl)ether	(1)	4.992	93	807504	78.839
19) 2-Chlorophenol	(1)	5.016	128	690304	76.701
20) 1,3-Dichlorobenzene	(1)	5.170	146	699316	76.999
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	112327	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	722232	77.924
24) Benzyl alcohol	(1)	5.379	108	549362	78.068
25) 1,2-Dichlorobenzene	(1)	5.385	146	686313	78.889
206) Indene	(1)	5.478	115	1507198	77.558
26) 2-Methylphenol	(1)	5.496	108	746061	77.915
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	922722	73.209
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	922722	73.022
29) N-Nitrosopyrrolidine	(1)	5.619	100	456887	79.714
30) Acetophenone	(1)	5.631	105	1091072	76.426
31) N-Nitroso-di-n-propylamine	(1)	5.656	70	710750	77.780
33) 4-Methylphenol	(1)	5.656	108	897917	79.224
32) N-Nitrosomorpholine	(1)	5.662	56	505445	77.627
34) o-Toluidine	(1)	5.668	106	1294141	79.137
37) Hexachloroethane	(1)	5.717	117	280321	79.466
38)$Nitrobenzene-d5	(2)	5.773	82	1806874	80.618
39) Nitrobenzene	(2)	5.791	77	933654	78.546
40) N-Nitrosopiperidine	(2)	5.939	114	410601	77.866
41) Isophorone	(2)	6.037	82	1658048	76.819
42) 2-Nitrophenol	(2)	6.099	139	346841	83.935
44) 2,4-Dimethylphenol	(2)	6.166	107	825621	77.734
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	344888	77.880
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	956471	72.931

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.314	105	599358	87.062
49) 2,4-Dichlorophenol	(2)	6.338	162	575693	79.700
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	603920	79.376
52)*Naphthalene-d8	(2)	6.468	136	520142	20.000
53) Naphthalene	(2)	6.486	128	2159412	78.247
56) 4-Chloroaniline	(2)	6.554	127	924260	76.854
57) 2,6-Dichlorophenol	(2)	6.560	162	546772	80.368
58) Hexachloropropene	(2)	6.578	213	351856	81.772
60) Hexachlorobutadiene	(2)	6.627	225	293503	76.914
194) Quinoline	(2)	6.824	129	1485361	78.084
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	840875M	77.759
63) Caprolactam	(2)	6.929	113	309471	77.340
68) 4-Chloro-3-methylphenol	(2)	7.046	107	723316	78.326
69) Safrole	(2)	7.101	162	583874	79.870
70) 2-Methylnaphthalene	(2)	7.169	142	1544243	78.847
71) 1-Methylnaphthalene	(2)	7.261	142	1403778	78.330
72) Hexachlorocyclopentadiene	(3)	7.328	237	273349	84.525
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	594507	79.439
74) cis-Isosafrole	(3)	7.378	162	104845	8.726
75) 2,4,6-Trichlorophenol	(3)	7.451	196	398034	81.513
77) 2,4,5-Trichlorophenol	(3)	7.488	196	432400	81.216
78)$2-Fluorobiphenyl	(3)	7.537	172	3151873	79.886
79) trans-Isosafrole	(3)	7.605	162	602210	70.801
80) Isosafrole	(3)	7.605	162	602210	79.552
83) 1,1'-Biphenyl	(3)	7.630	154	1889884	77.746
84) 2-Chloronaphthalene	(3)	7.642	162	1272028	71.841
85) 1-Chloronaphthalene	(3)	7.660	162	1438178	82.533
88) Diphenyl ether	(3)	7.740	170	968050	79.945
89) 2-Nitroaniline	(3)	7.747	138	486166	84.166
90) 1,4-Naphthoquinone	(3)	7.814	158	602381	80.843
91) 1,4-Dinitrobenzene	(3)	7.888	168	208338	81.268
92) Dimethylphthalate	(3)	7.949	163	1640838	77.883
93) 1,3-Dinitrobenzene	(3)	7.956	168	276083	80.612
94) 2,6-Dinitrotoluene	(3)	7.992	165	382521	87.174
95) Acenaphthylene	(3)	8.042	152	2185431	79.061
97) 3-Nitroaniline	(3)	8.146	138	450027	83.985
98)*Acenaphthene-d10	(3)	8.177	164	313745	20.000
99) Acenaphthene	(3)	8.214	153	1519712	79.438
100) 2,4-Dinitrophenol	(3)	8.251	184	139143	83.369
103) 4-Nitrophenol	(3)	8.324	109	277003	83.446

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	510240	78.899
104) Dibenzofuran	(3)	8.380	168	2048915	78.185
105) 2,4-Dinitrotoluene	(3)	8.386	165	493436	87.020
106) 1-Naphthylamine	(3)	8.460	143	1717735	79.770
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	315577	84.149
108) 2-Naphthylamine	(3)	8.540	143	1756792	79.737
109) Diethylphthalate	(3)	8.650	149	1713932	78.754
111) Fluorene	(3)	8.718	166	1805820	80.088
110) Thionazin	(3)	8.724	107	394432	82.178
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	774921	77.254
113) 5-Nitro-o-toluidine	(3)	8.736	152	512412	86.072
114) 4-Nitroaniline	(3)	8.755	138	480197A	79.691
115) 4,6-Dinitro-2-methylphenol	(4)	8.779	198	212223	81.017
117) N-Nitrosodiphenylamine	(4)	8.847	169	1545231	80.860
202) NDPA as diphenylamine	(4)	8.847	169	1545231	80.668
118) 1,2-Diphenylhydrazine	(4)	8.884	77	2214620	80.902
119)$2,4,6-Tribromophenol	(3)	8.952	330	305668	80.665
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	311247	79.775
121) 1,3,5-Trinitrobenzene	(4)	9.124	213	148089	80.524
122) Diallate (peak 1)	(4)	9.142	86	838932	59.891
123) Phorate	(4)	9.148	75	1320107	78.272
124) Phenacetin	(4)	9.179	108	1059132	80.196
125) 4-Bromophenyl-phenylether	(4)	9.204	248	415056	78.826
126) Diallate (peak 2)	(4)	9.222	86	120701	19.842
127) Hexachlorobenzene	(4)	9.247	284	399087	76.766
128) Dimethoate	(4)	9.308	87	811304	78.666
130) Atrazine	(4)	9.388	200	337054	55.052
131) Pentachlorophenol	(4)	9.444	266	250563	86.903
133) 4-Aminobiphenyl	(4)	9.456	169	1441837	69.775
132) Pentachloronitrobenzene	(4)	9.462	237	186794	82.769
134) Pronamide	(4)	9.542	173	799280	80.245
135)*Phenanthrene-d10	(4)	9.622	188	570162	20.000
136) Dinoseb	(4)	9.646	211	300325	79.513
137) Phenanthrene	(4)	9.646	178	2639762	79.625
138) Anthracene	(4)	9.702	178	2768162	81.116
140) Carbazole	(4)	9.862	167	2667080M	80.090
141) Methyl parathion	(4)	10.015	109	551286	79.407
142) Di-n-butylphthalate	(4)	10.249	149	3117913	79.355
143) Parathion	(4)	10.403	109	399671	78.277
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	226513	79.164

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	289534	77.281
147) Fluoranthene	(4)	10.809	202	3034613	81.862
152) Benzidine	(5)	10.968	184	6860438	233.099
167)*Pyrene-d10	(5)	11.005	212	718943	20.000
154) Pyrene	(5)	11.024	202	3164835	79.269
156)$Terphenyl-d14	(5)	11.208	244	4103351	79.827
158) p-Dimethylaminoazobenzene	(5)	11.343	225	627493	80.647
159) Chlorobenzilate	(5)	11.399	139	983807	81.281
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	1904833	77.410
161) Butylbenzylphthalate	(5)	11.700	149	1505314	79.008
162) 2-Acetylaminofluorene	(5)	11.915	181	1436051	83.225
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	1085409	78.185
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	552444	81.460
166) Benzo(a)anthracene	(5)	12.204	228	2979223	80.902
168) Chrysene	(5)	12.241	228	2792548	78.652
169) bis(2-Ethylhexyl)phthalate	(5)	12.296	149	2103634	79.578
189) 6-Methylchrysene	(5)	12.690	242	2073310	79.141
170) Di-n-octylphthalate	(6)	12.942	149	3723181	82.851
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.262	256	1431376	84.729
172) Benzo(b)fluoranthene	(6)	13.268	252	3241098	89.152
173) Benzo(k)fluoranthene	(6)	13.293	252	2795956	75.384
174) Benzo(a)pyrene	(6)	13.569	252	2808536	79.153
175)*Perylene-d12	(6)	13.612	264	595376	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	1423346	80.030
190) Dibenz(a,h)acridine	(6)	14.412	279	2095938	81.310
191) Dibenz(a,j)acridine	(6)	14.467	279	2321827	78.329
177) Indeno(1,2,3-cd)pyrene	(6)	14.651	276	3001656	79.512
178) Dibenz(a,h)anthracene	(6)	14.676	278	2512295	79.560
179) Benzo(g,h,i)perylene	(6)	14.934	276	2483886	77.234
129) Diallate TRANS/CIS	(4)			959633	79.793

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$ = Compound is a surrogate standard.

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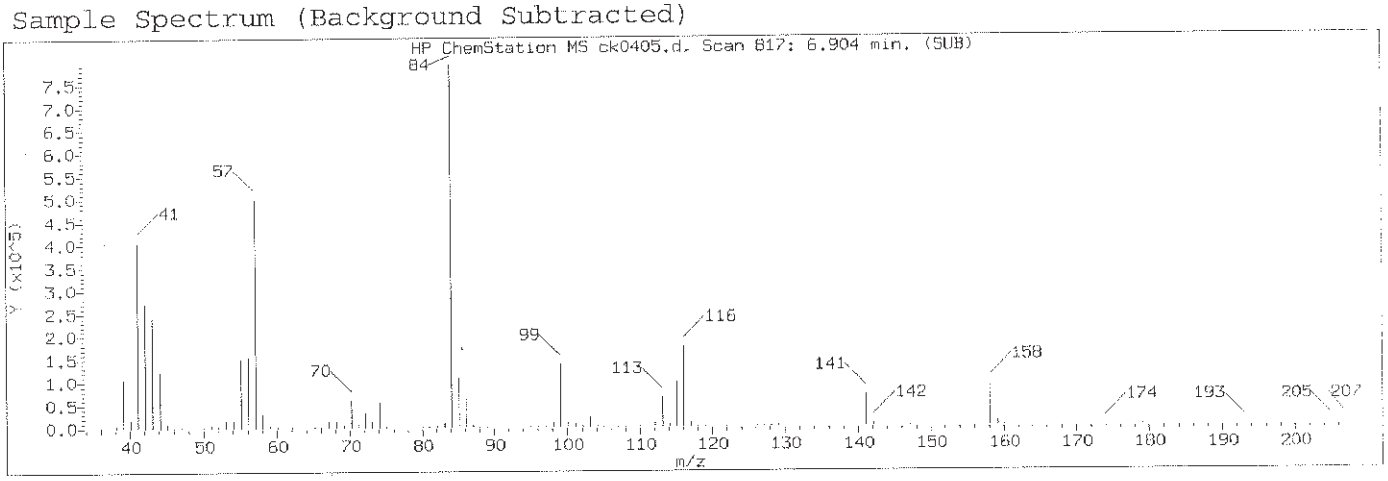
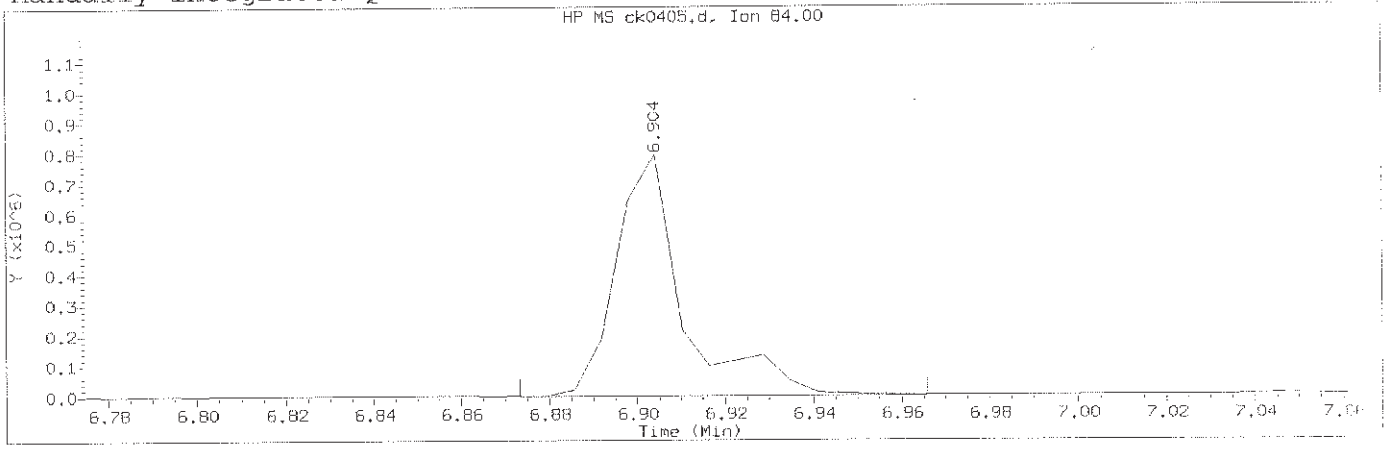
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 840875M		
On-Column Amount (ng/ul)	: 77.7594		
Integration start scan	: 811	Integration stop scan:	826
Y at integration start	: 845	Y at integration end:	845

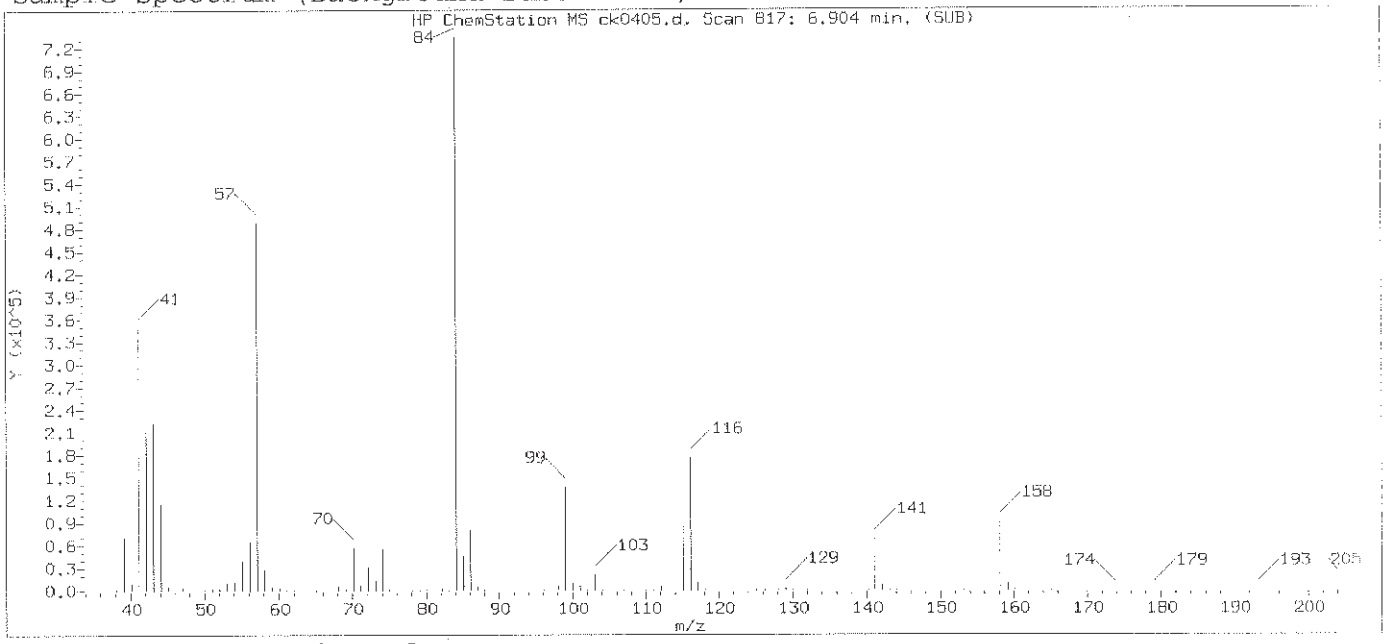
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

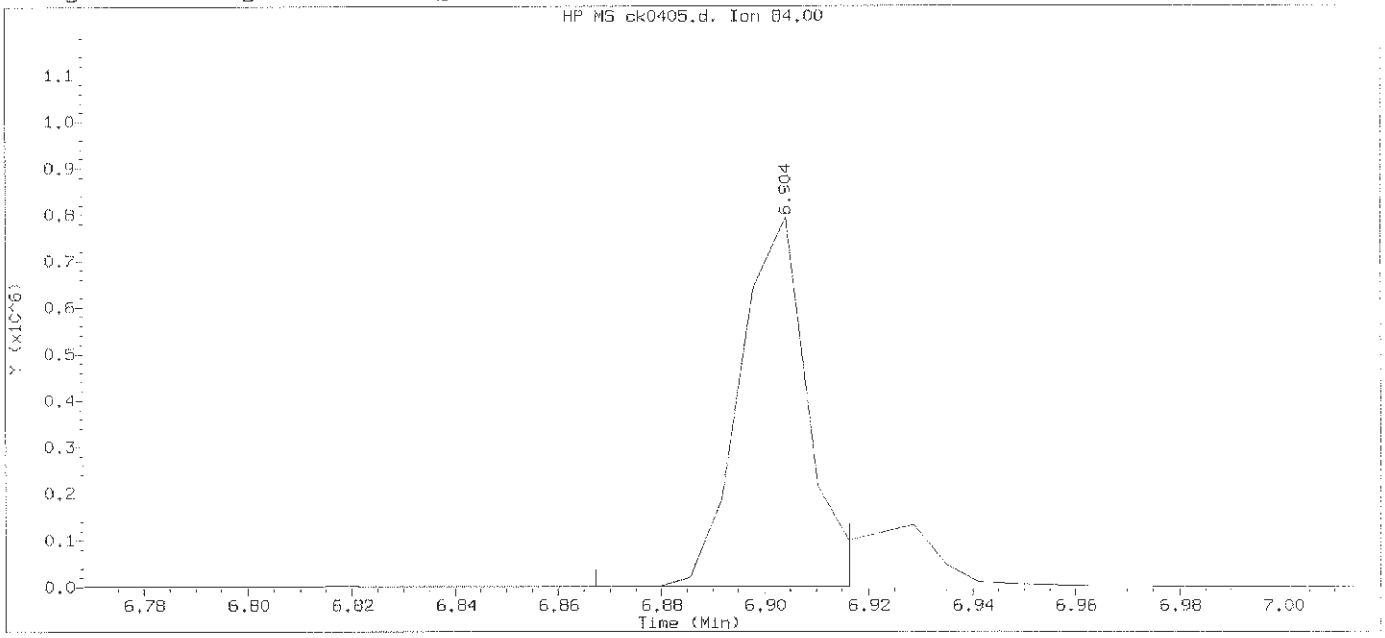
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

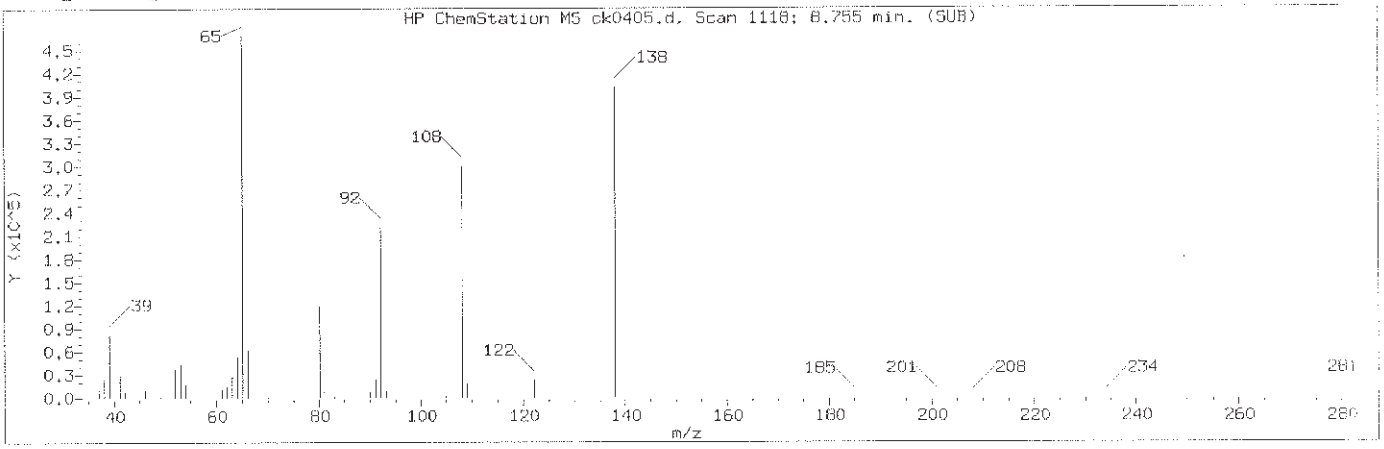
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

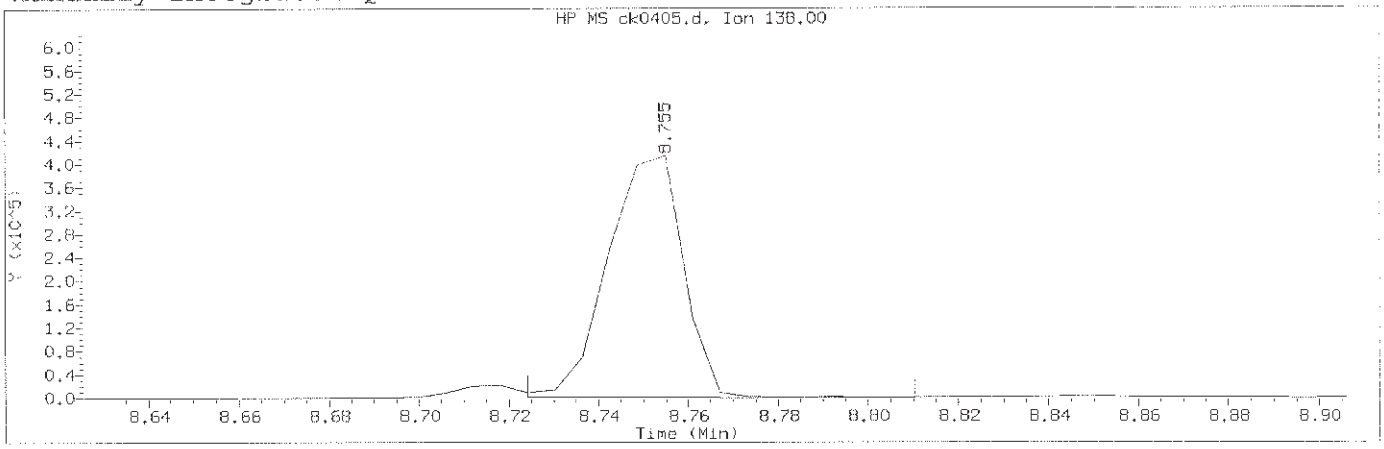
Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 703670		
On-column Amount (ng/ul)	: 72.6904		
Integration start scan	: 810	Integration stop scan:	818
Y at integration start	: 854	Y at integration end:	854

Digitally signed by Mark A. Clark on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1118		
Retention Time (minutes)	: 8.755		
Quant Ion	: 138.00		
Area (flag)	: 480197A		
On-Column Amount (ng/ul)	: 79.6911		
Integration start scan	: 1112	Integration stop scan:	1126
Y at integration start	: 499	Y at integration end:	477

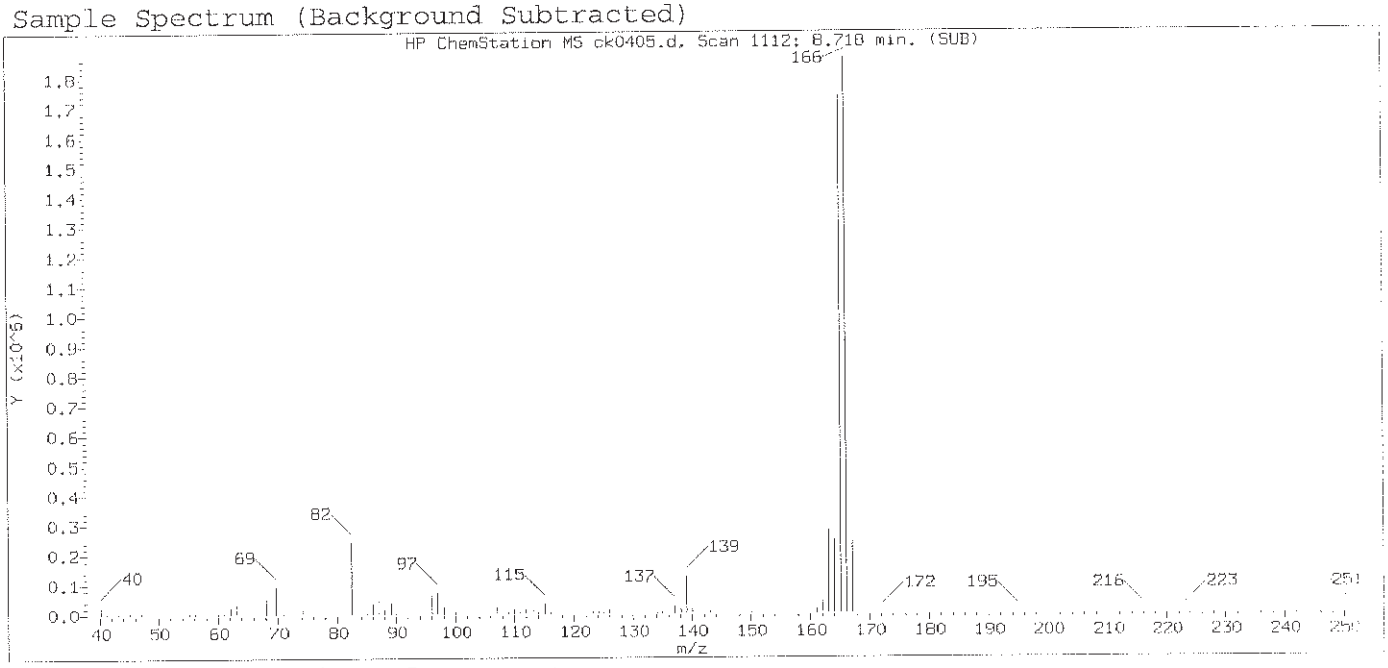
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 signature user ID: mac00013

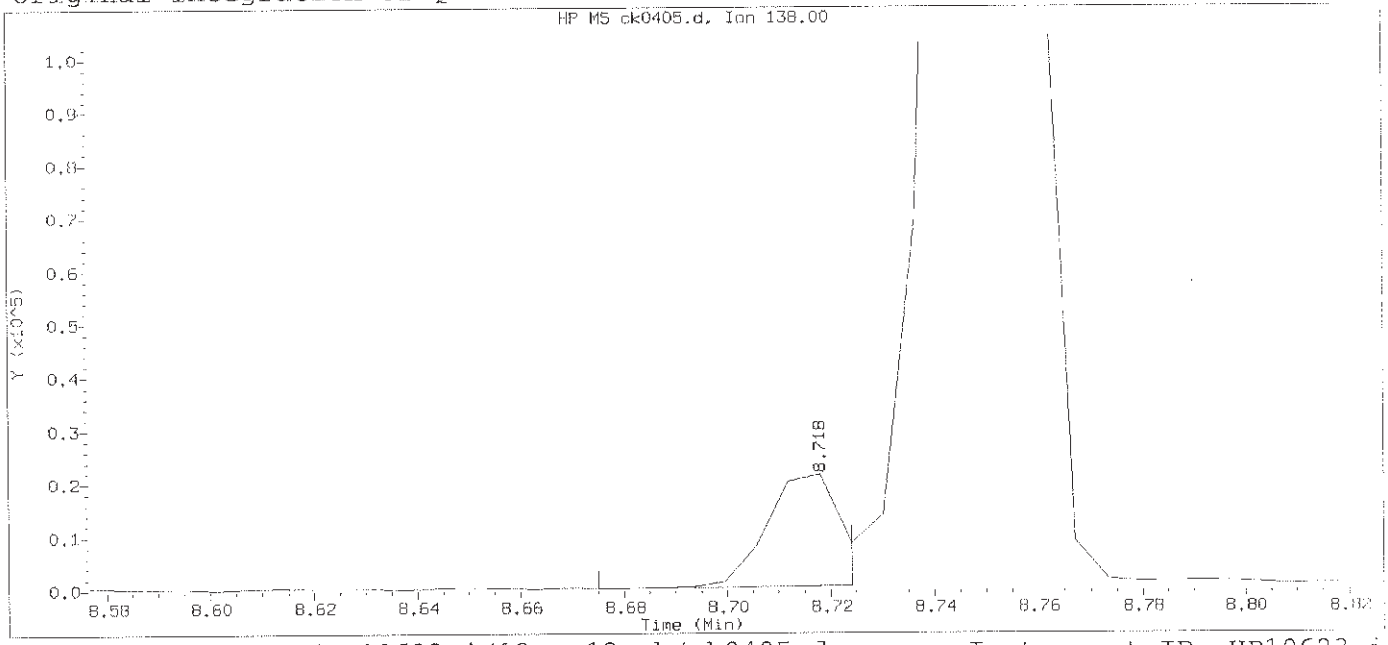
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

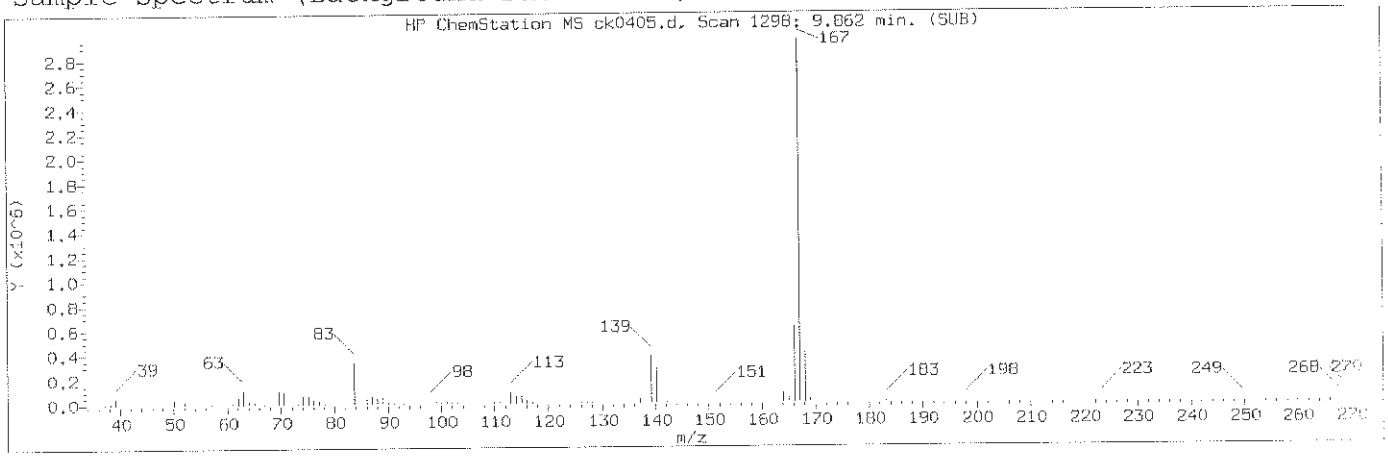
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

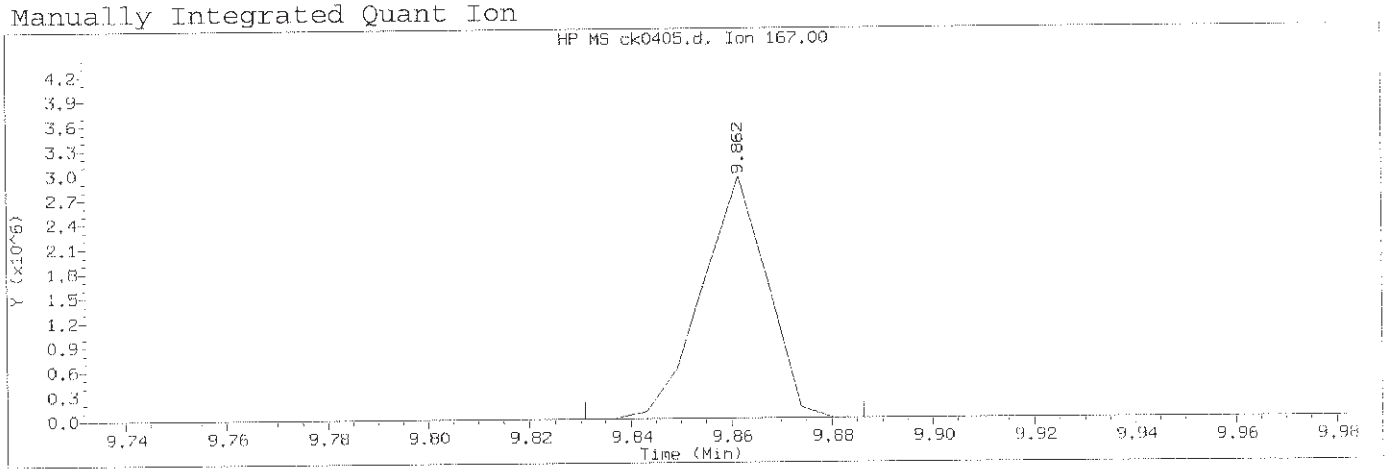
Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 19974		
On-column Amount (ng/ul)	: 6.0101		
Integration start scan	: 1104	Integration stop scan:	1112
Y at integration start	: 161	Y at integration end:	499

Digitally signed by Mark A. Clark on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area (flag)	: 2667080M		
On-Column Amount (ng/ul)	: 80.0900		
Integration start scan	: 1292	Integration stop scan:	1301
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

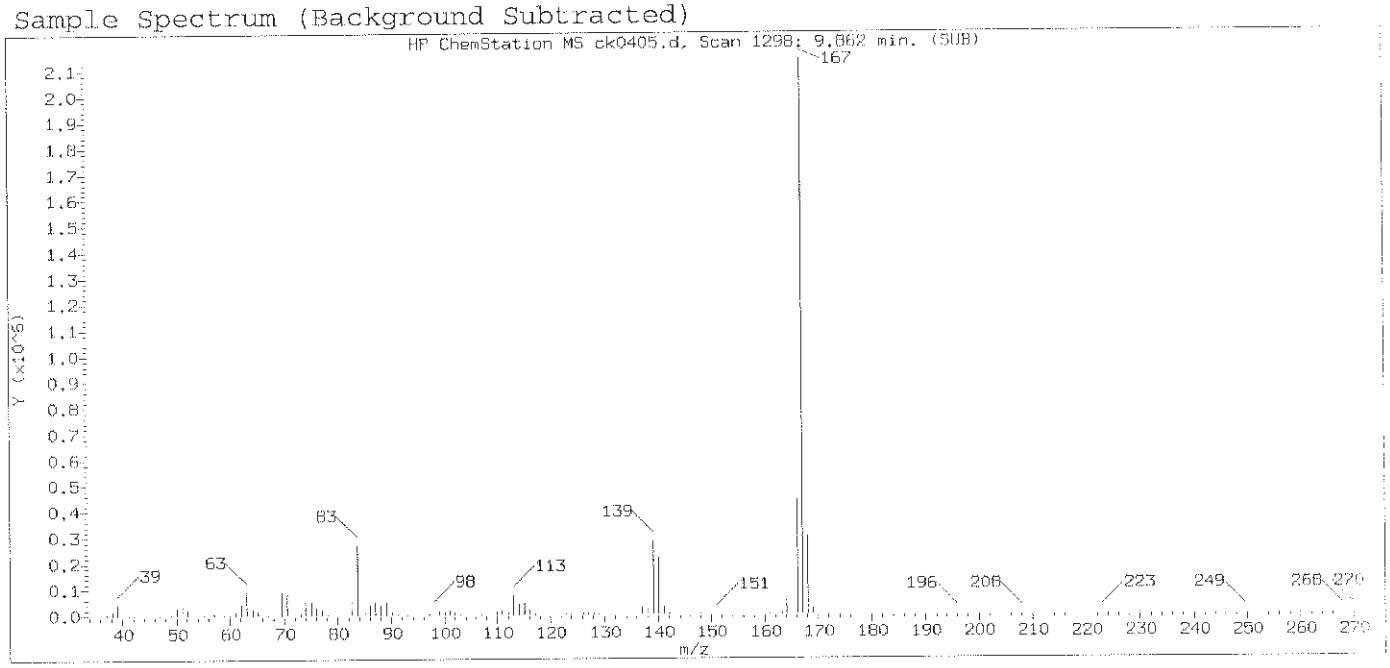
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

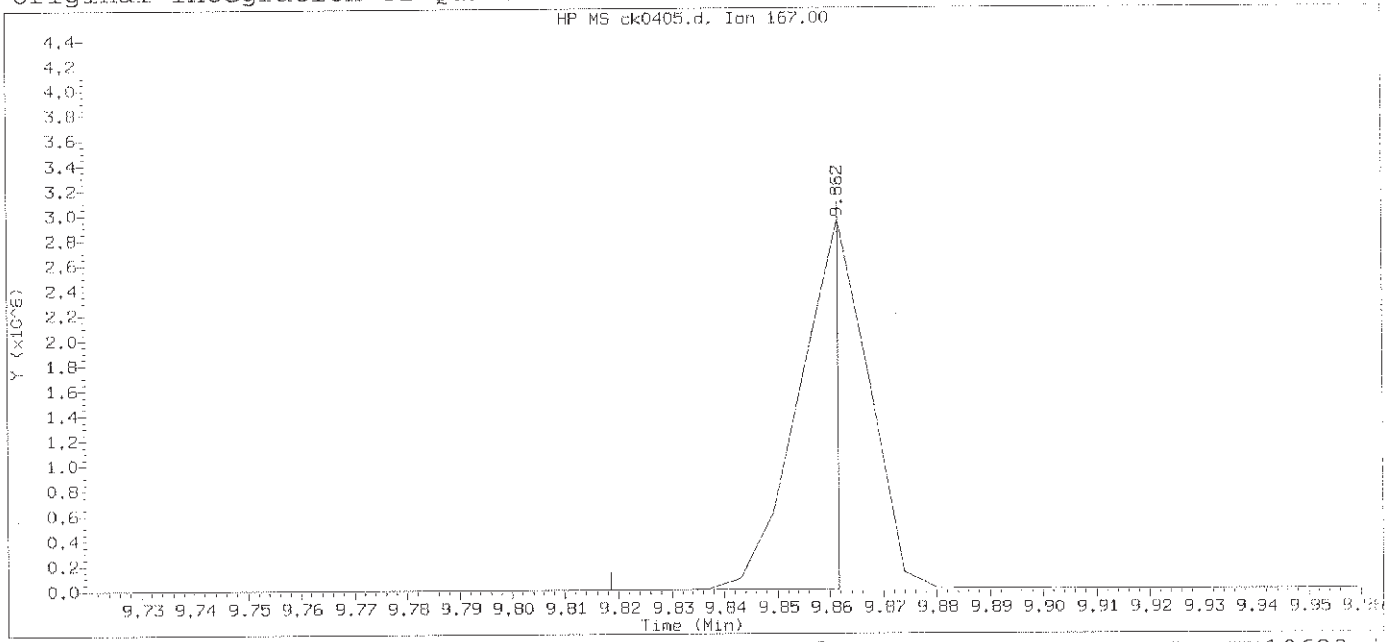
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area	: 1465822		
On-column Amount (ng/ul)	: 49.2155		
Integration start scan	: 1290	Integration stop scan:	1297
Y at integration start	: 272	Y at integration end:	255

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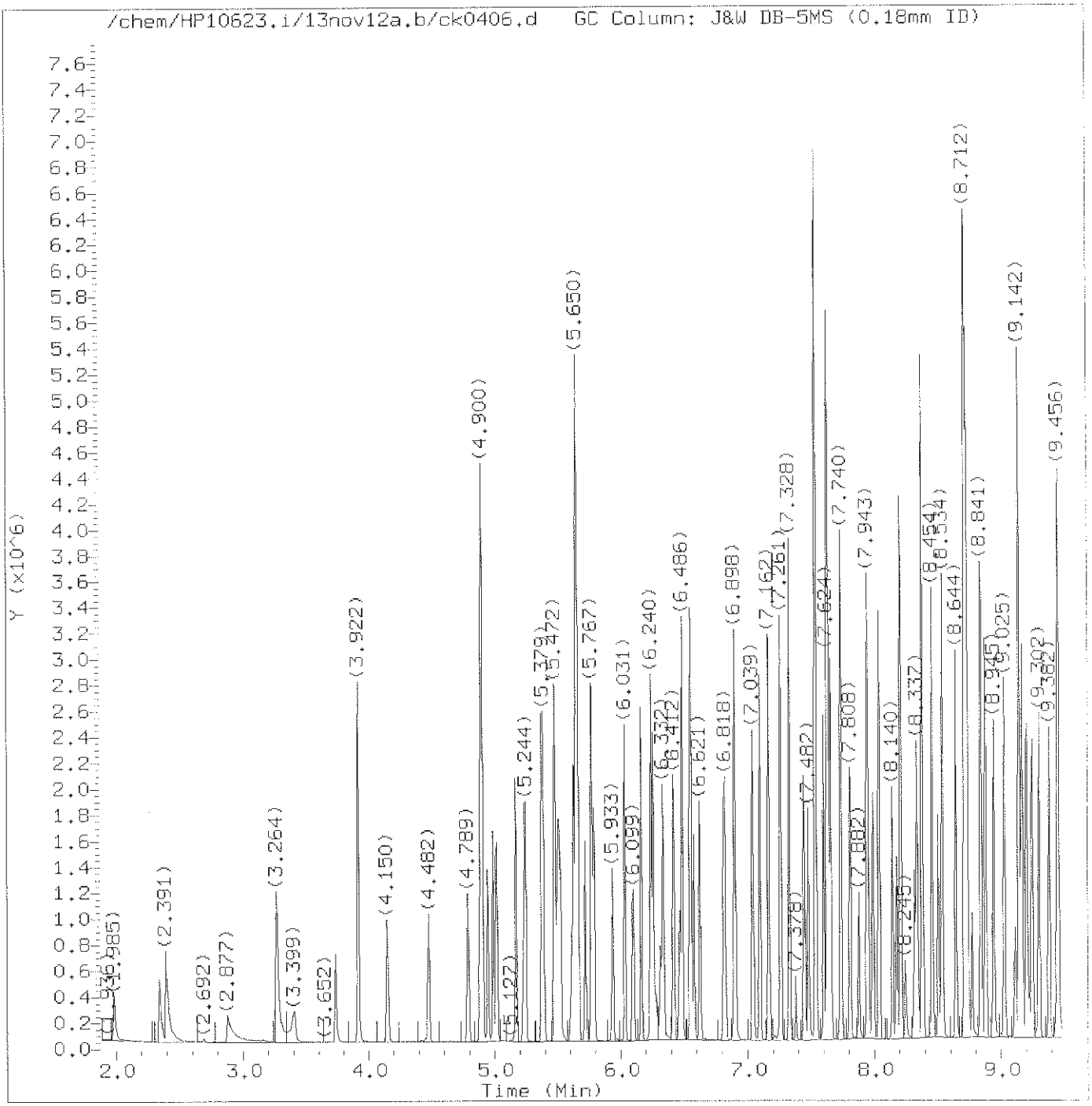
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

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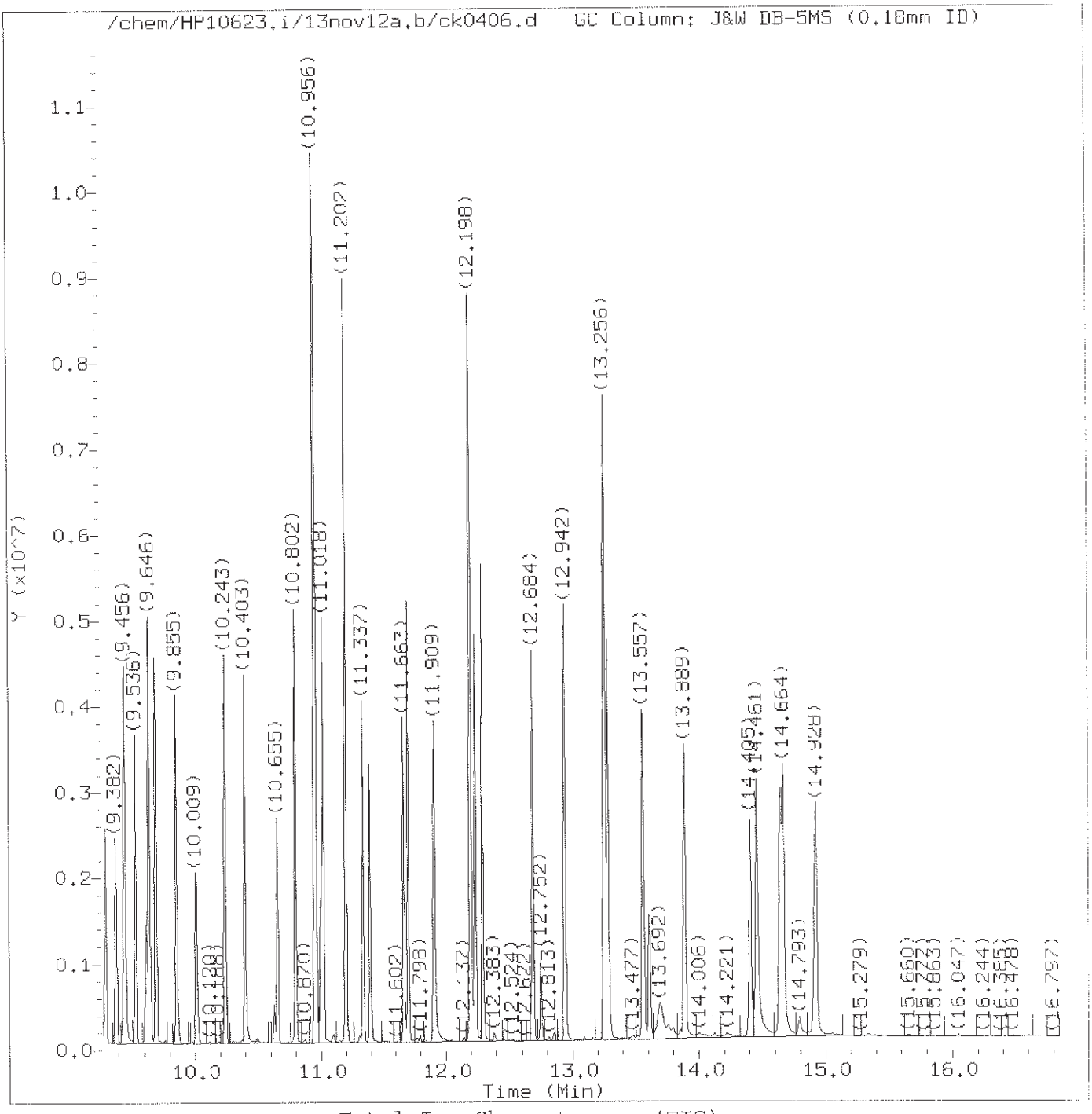
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	166551	52.372
2) N-Nitrosodimethylamine	(1)	2.342	74	307336	52.200
3) Pyridine	(1)	2.391	79	452230	49.545
5) 2-Picoline	(1)	3.264	93	489961	52.604
6) N-Nitrosomethylethylamine	(1)	3.406	88	227025	50.985
7) Methyl methanesulfonate	(1)	3.738	80	236107	52.737
9)$2-Fluorophenol	(1)	3.922	112	764649	52.560
10) N-Nitrosodiethylamine	(1)	4.150	102	227481	51.424
11) Ethyl methanesulfonate	(1)	4.482	109	211788	52.575
12) Benzaldehyde	(1)	4.789	77	228131	38.119
15)$Phenol-d6	(1)	4.894	99	1127988	52.693
14)$Phenol-d5	(1)	4.894	99	1127988	52.693
13) Aniline	(1)	4.900	93	764549	51.630
16) Phenol	(1)	4.906	94	659733	52.831
18) bis(2-Chloroethyl)ether	(1)	4.986	93	451188	50.894
19) 2-Chlorophenol	(1)	5.017	128	399173	51.243
20) 1,3-Dichlorobenzene	(1)	5.164	146	412147	52.429
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	97224	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	418970	52.226
24) Benzyl alcohol	(1)	5.373	108	314851	51.693
25) 1,2-Dichlorobenzene	(1)	5.385	146	396306	52.630
206) Indene	(1)	5.478	115	854997	50.831
26) 2-Methylphenol	(1)	5.502	108	433232	52.273
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	536609	49.188
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	536609	49.063
29) N-Nitrosopyrrolidine	(1)	5.607	100	261876	52.787
30) Acetophenone	(1)	5.631	105	628772	50.885
31) N-Nitroso-di-n-propylamine	(1)	5.650	70	400514	50.638
32) N-Nitrosomorpholine	(1)	5.650	56	288826	51.249
33) 4-Methylphenol	(1)	5.650	108	515642	52.563
34) o-Toluidine	(1)	5.662	106	736166	52.010
37) Hexachloroethane	(1)	5.717	117	159722	52.312
38)$Nitrobenzene-d5	(2)	5.767	82	1021292	52.453
39) Nitrobenzene	(2)	5.785	77	535338	51.842
40) N-Nitrosopiperidine	(2)	5.933	114	237648	51.878
41) Isophorone	(2)	6.031	82	956779	51.027
42) 2-Nitrophenol	(2)	6.099	139	194388	54.151
44) 2,4-Dimethylphenol	(2)	6.160	107	475375	51.521
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	204800	53.235
46) bis(2-Chloroethoxy)methane	(2)	6.259	93	583002	51.172

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d
Injection date and time: 12-NOV-2013 11:49
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.277	105	282383	47.217
49) 2,4-Dichlorophenol	(2)	6.332	162	335715	53.501
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	353203	53.438
52)*Naphthalene-d8	(2)	6.468	136	451858	20.000
53) Naphthalene	(2)	6.486	128	1256553	52.412
56) 4-Chloroaniline	(2)	6.548	127	540774	51.761
57) 2,6-Dichlorophenol	(2)	6.554	162	316418	53.538
58) Hexachloropropene	(2)	6.578	213	201839	53.996
60) Hexachlorobutadiene	(2)	6.621	225	175136	52.831
194) Quinoline	(2)	6.818	129	870592	52.682
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	486968	57.388
63) Caprolactam	(2)	6.904	113	177327	51.013
68) 4-Chloro-3-methylphenol	(2)	7.039	107	419009	52.230
69) Safrole	(2)	7.095	162	337185	53.095
70) 2-Methylnaphthalene	(2)	7.169	142	888217	52.204
71) 1-Methylnaphthalene	(2)	7.261	142	819117	52.614
72) Hexachlorocyclopentadiene	(3)	7.328	237	155608	54.704
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	350871	53.302
74) cis-Isosafrole	(3)	7.378	162	61911	5.858
75) 2,4,6-Trichlorophenol	(3)	7.445	196	231921	53.996
77) 2,4,5-Trichlorophenol	(3)	7.482	196	258422	55.183
78)$2-Fluorobiphenyl	(3)	7.537	172	1845614	53.181
79) trans-Isosafrole	(3)	7.599	162	352507	47.117
80) Isosafrole	(3)	7.599	162	352507	52.940
83) 1,1'-Biphenyl	(3)	7.630	154	1086550	50.817
84) 2-Chloronaphthalene	(3)	7.636	162	931809M	59.830
85) 1-Chloronaphthalene	(3)	7.654	162	805433M	52.548
88) Diphenyl ether	(3)	7.734	170	558321	52.420
89) 2-Nitroaniline	(3)	7.740	138	277946	54.706
90) 1,4-Naphthoquinone	(3)	7.814	158	356818	54.442
91) 1,4-Dinitrobenzene	(3)	7.882	168	113783	57.616
92) Dimethylphthalate	(3)	7.943	163	983548	53.075
93) 1,3-Dinitrobenzene	(3)	7.956	168	154084	57.427
94) 2,6-Dinitrotoluene	(3)	7.992	165	216706	56.146
95) Acenaphthylene	(3)	8.036	152	1280224	52.653
97) 3-Nitroaniline	(3)	8.140	138	261109	55.399
98)*Acenaphthene-d10	(3)	8.177	164	275969	20.000
99) Acenaphthene	(3)	8.208	153	883671	52.514
100) 2,4-Dinitrophenol	(3)	8.245	184	70482	56.220
103) 4-Nitrophenol	(3)	8.318	109	157933	54.089

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	303223	53.306
104) Dibenzofuran	(3)	8.380	168	1208907	52.446
105) 2,4-Dinitrotoluene	(3)	8.380	165	285537	57.249
106) 1-Naphthylamine	(3)	8.454	143	1018825	53.790
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	186330	56.486
108) 2-Naphthylamine	(3)	8.534	143	1043725	53.857
109) Diethylphthalate	(3)	8.644	149	1013871	52.964
111) Fluorene	(3)	8.712	166	1039866	52.431
110) Thionazin	(3)	8.718	107	225224	53.347
113) 5-Nitro-o-toluidine	(3)	8.730	152	295058	56.346
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	462012	52.364
114) 4-Nitroaniline	(3)	8.743	138	284674	53.710
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	112544	56.805
117) N-Nitrosodiphenylamine	(4)	8.841	169	906257	52.676
202) NDPA as diphenylamine	(4)	8.841	169	906257	52.551
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1257134	51.011
119)$2,4,6-Tribromophenol	(3)	8.945	330	180919	54.279
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	180609	51.418
121) 1,3,5-Trinitrobenzene	(4)	9.112	213	77561M	59.469
123) Phorate	(4)	9.142	75	771823	50.831
122) Diallate (peak 1)	(4)	9.142	86	483754	38.360
124) Phenacetin	(4)	9.167	108	621689M	52.287
125) 4-Bromophenyl-phenylether	(4)	9.204	248	249245	52.579
126) Diallate (peak 2)	(4)	9.222	86	69225	12.640
127) Hexachlorobenzene	(4)	9.247	284	243532	52.033
128) Dimethoate	(4)	9.302	87	489471	52.717
130) Atrazine	(4)	9.382	200	239182	43.393
131) Pentachlorophenol	(4)	9.444	266	142341	54.836
133) 4-Aminobiphenyl	(4)	9.450	169	934558	50.235
132) Pentachloronitrobenzene	(4)	9.456	237	111513	54.885
134) Pronamide	(4)	9.536	173	474436	52.908
135)*Phenanthrene-d10	(4)	9.622	188	513309	20.000
136) Dinoseb	(4)	9.640	211	158765	59.322
137) Phenanthrene	(4)	9.646	178	1550869	51.961
138) Anthracene	(4)	9.696	178	1589210	51.727
140) Carbazole	(4)	9.855	167	1578178	52.640
141) Methyl parathion	(4)	10.009	109	322196	57.907
142) Di-n-butylphthalate	(4)	10.243	149	1857139	52.502
144) 4-Nitroquinoline-1-oxide	(4)	10.403	190	121482	60.066
143) Parathion	(4)	10.403	109	228279	55.769

M = Compound was manually integrated.
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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	168172	49.859
147) Fluoranthene	(4)	10.802	202	1771554	53.083
152) Benzidine	(5)	10.956	184	4346444	166.273
167)*Pyrene-d10	(5)	10.999	212	638551	20.000
154) Pyrene	(5)	11.018	202	1868816	52.701
156)$Terphenyl-d14	(5)	11.202	244	2420246	53.012
158) p-Dimethylaminoazobenzene	(5)	11.337	225	379097	54.856
159) Chlorobenzilate	(5)	11.393	139	580654	54.013
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	1212405	55.474
161) Butylbenzylphthalate	(5)	11.700	149	902651	53.341
162) 2-Acetylaminofluorene	(5)	11.909	181	866954	56.569
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	675754	54.805
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	335934	55.771
166) Benzo(a)anthracene	(5)	12.198	228	1802816	55.119
168) Chrysene	(5)	12.235	228	1669436	52.939
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1249305	53.210
189) 6-Methylchrysene	(5)	12.684	242	1257306	54.035
170) Di-n-octylphthalate	(6)	12.942	149	2235566	52.110
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.256	256	876942	54.375
172) Benzo(b)fluoranthene	(6)	13.256	252	1777088	51.204
173) Benzo(k)fluoranthene	(6)	13.286	252	1977438	55.848
174) Benzo(a)pyrene	(6)	13.563	252	1763999	52.076
175)*Perylene-d12	(6)	13.612	264	568380	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	903147	53.193
190) Dibenz(a,h)acridine	(6)	14.412	279	1319896	53.636
191) Dibenz(a,j)acridine	(6)	14.461	279	1519832	53.709
177) Indeno(1,2,3-cd)pyrene	(6)	14.645	276	1933504	53.650
178) Dibenz(a,h)anthracene	(6)	14.670	278	1649351	54.713
179) Benzo(g,h,i)perylene	(6)	14.928	276	1623605	52.883
129) Diallate TRANS/CIS	(4)			552979	51.072

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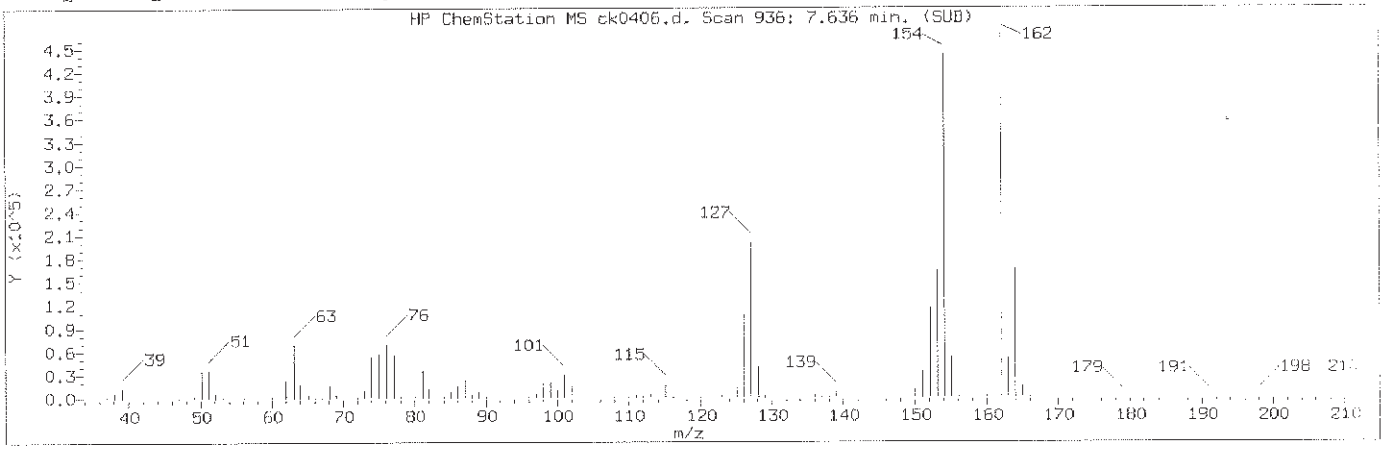
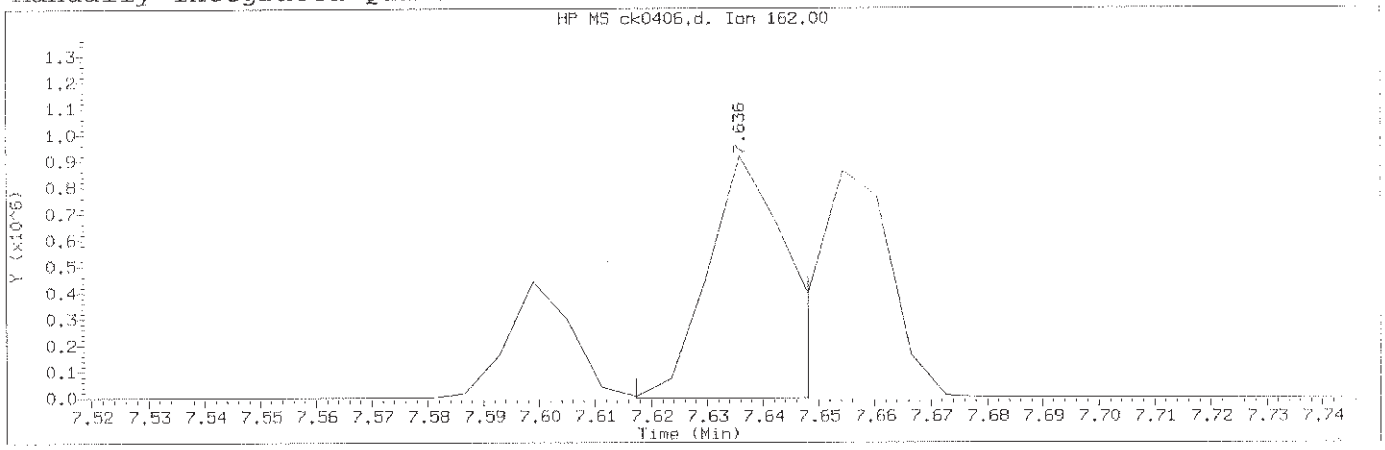
Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 931809M		
On-Column Amount (ng/ul)	: 59.8304		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -1729	Y at integration end:	-1729

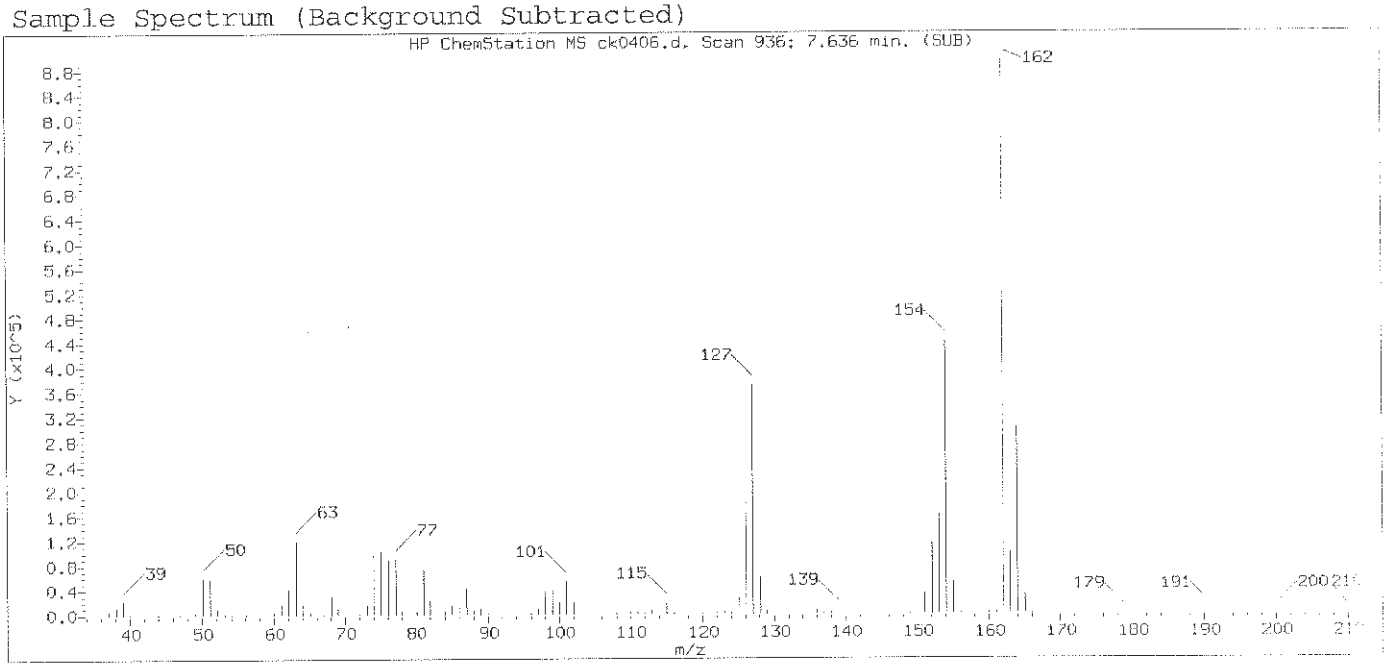
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

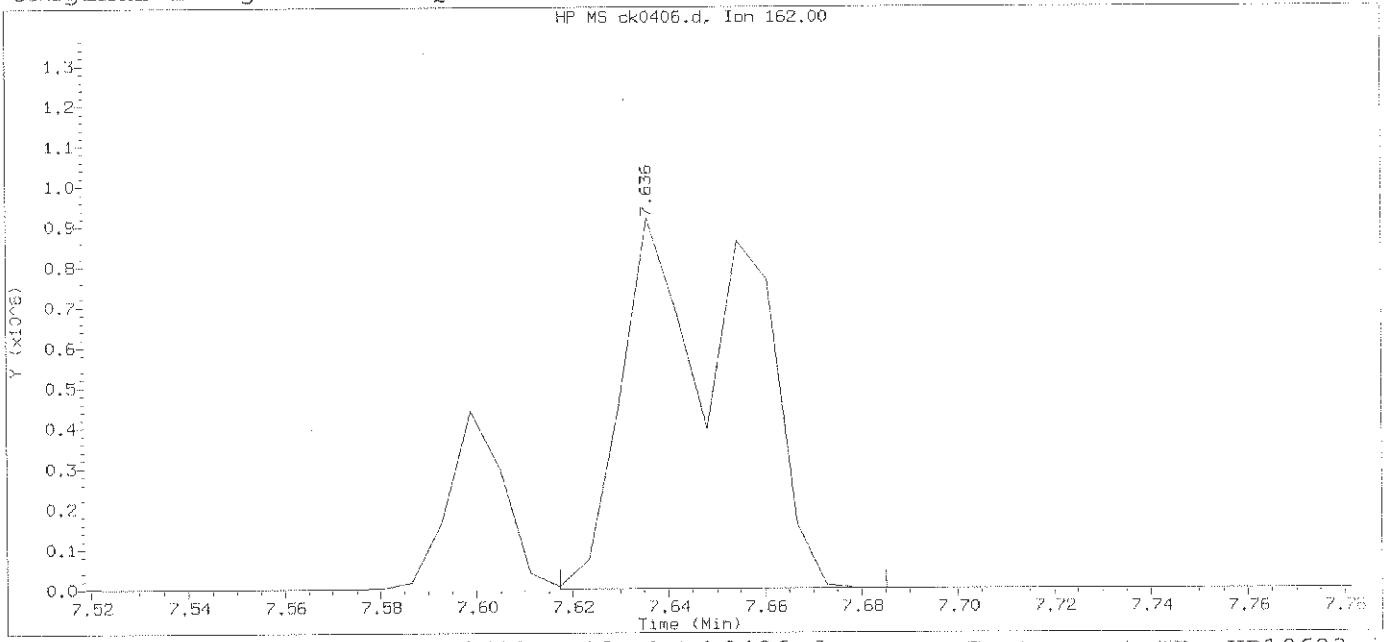
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1588916		
On-column Amount (ng/ul)	: 85.2189		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 431	Y at integration end:	459

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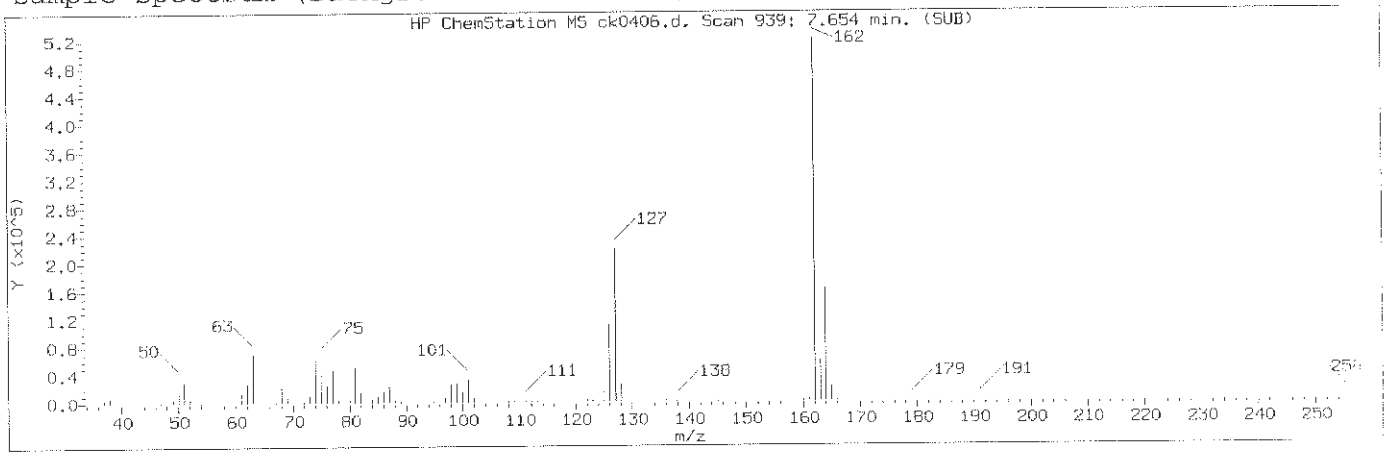
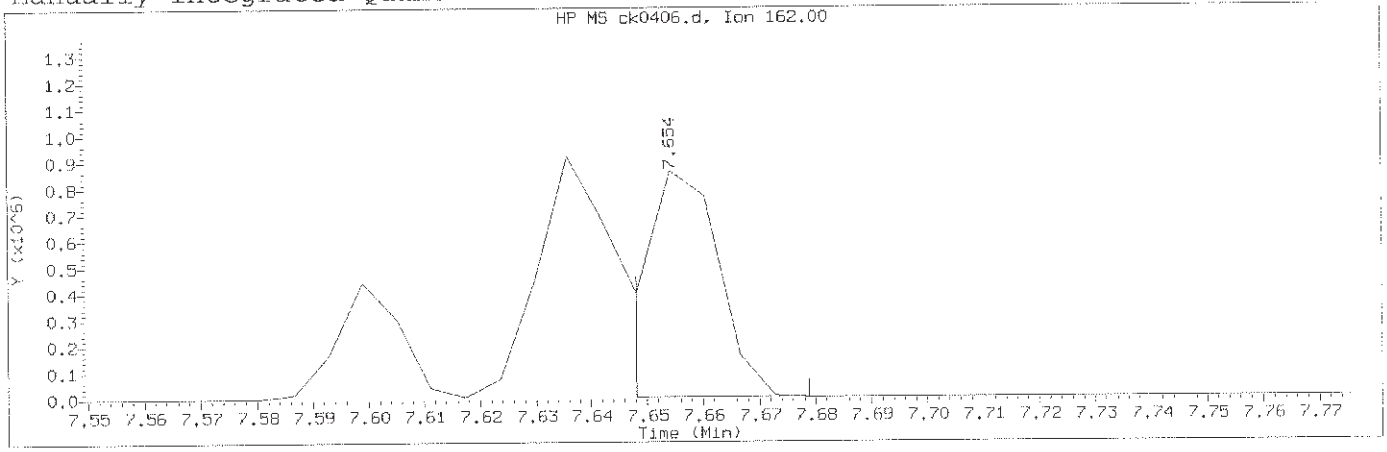
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 805433M		
On-Column Amount (ng/ul)	: 52.5484		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: 1902	Y at integration end:	1902

Reason for manual integration: improper integration

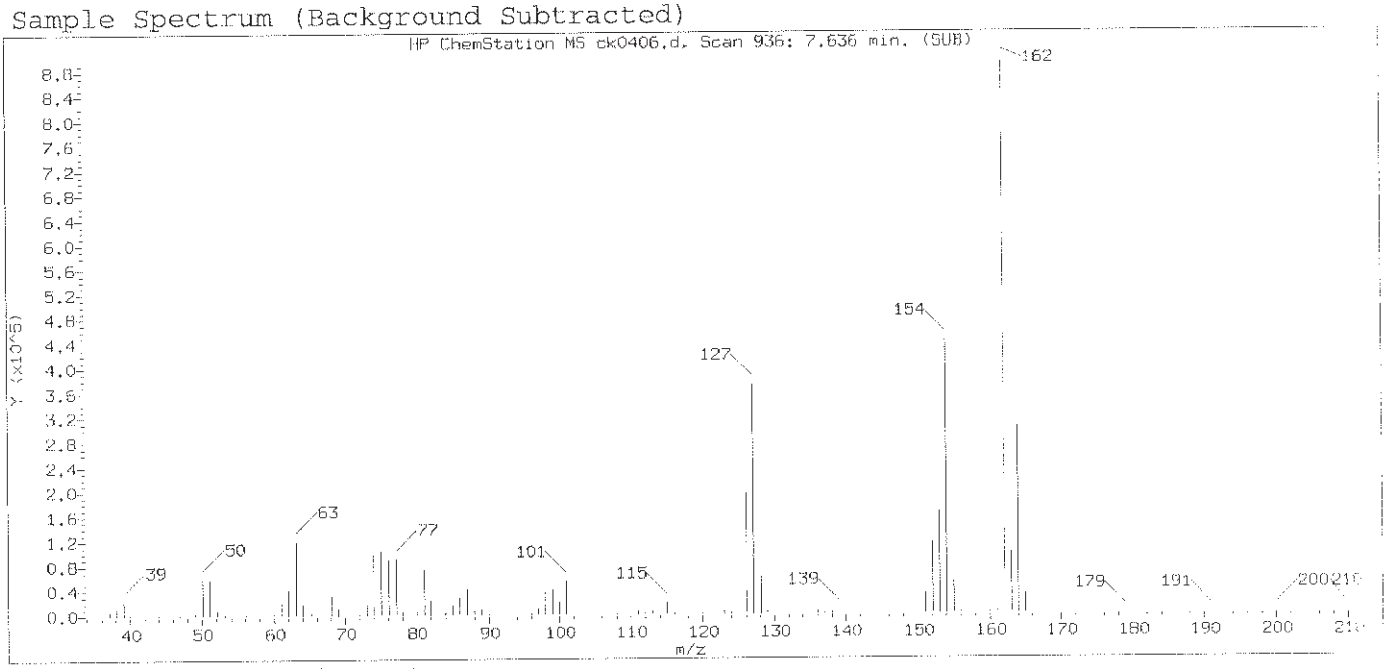
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

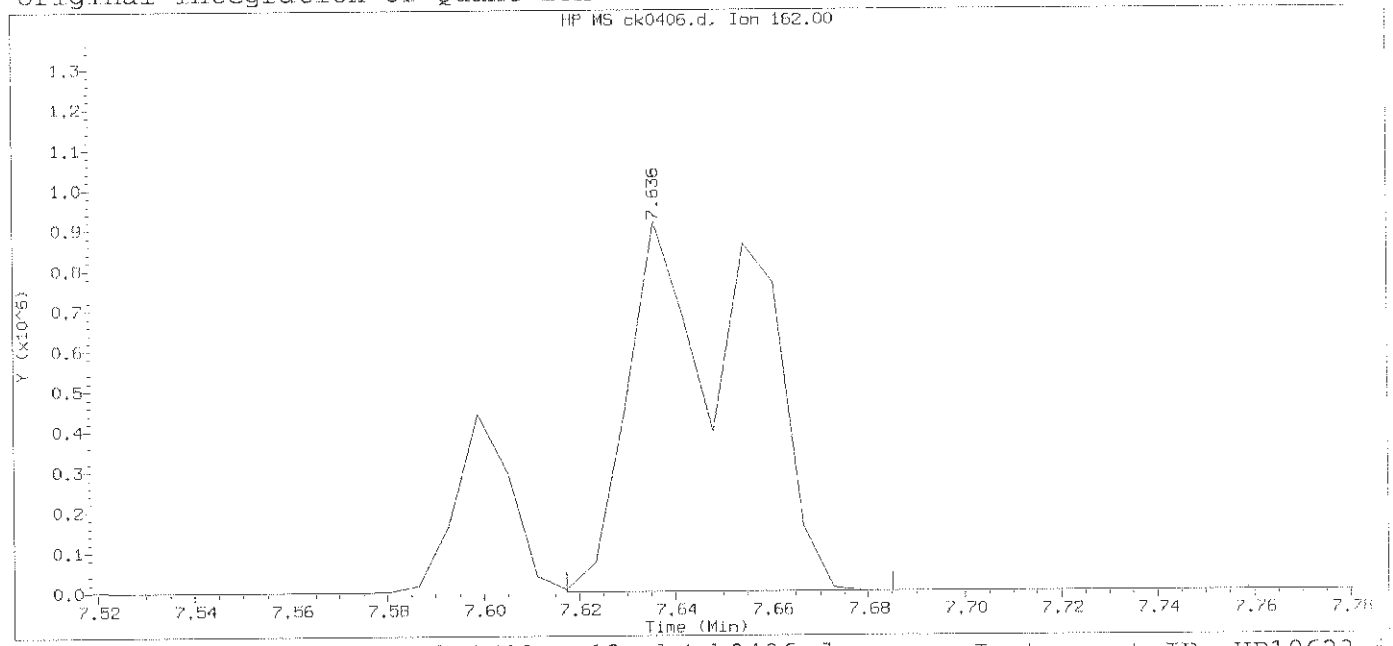
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1589583		
On-column Amount (ng/ul)	: 83.4795		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 292	Y at integration end:	271

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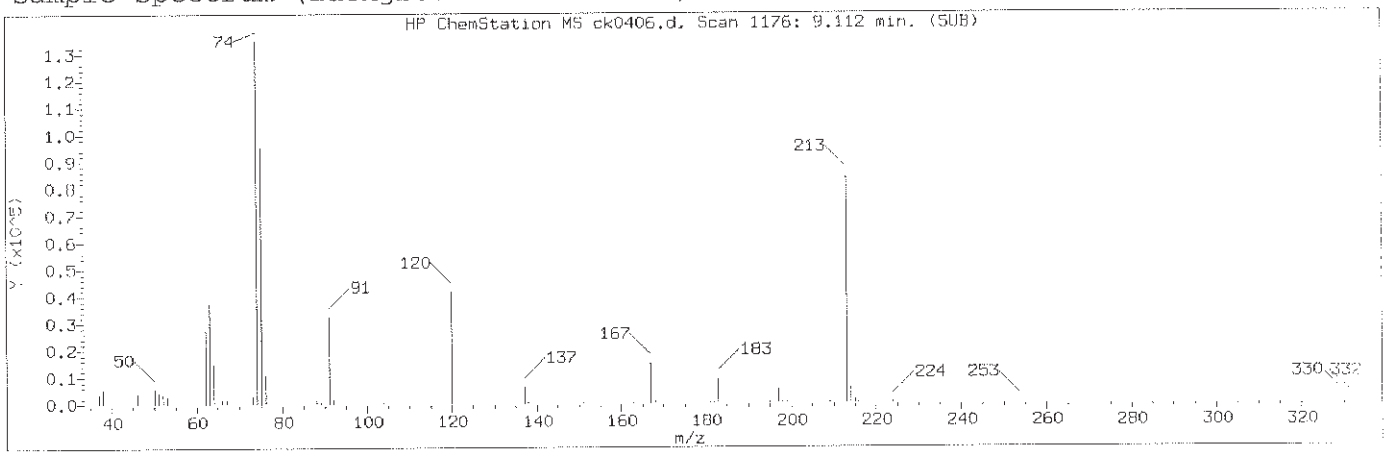
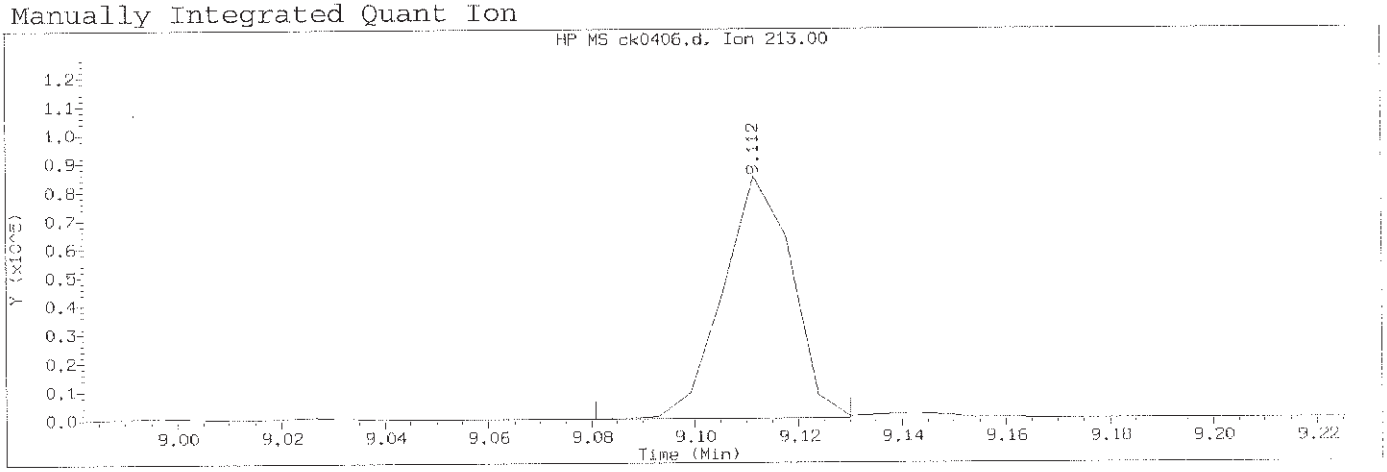
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area (flag)	: 77561M		
On-Column Amount (ng/ul)	: 59.4685		
Integration start scan	: 1170	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

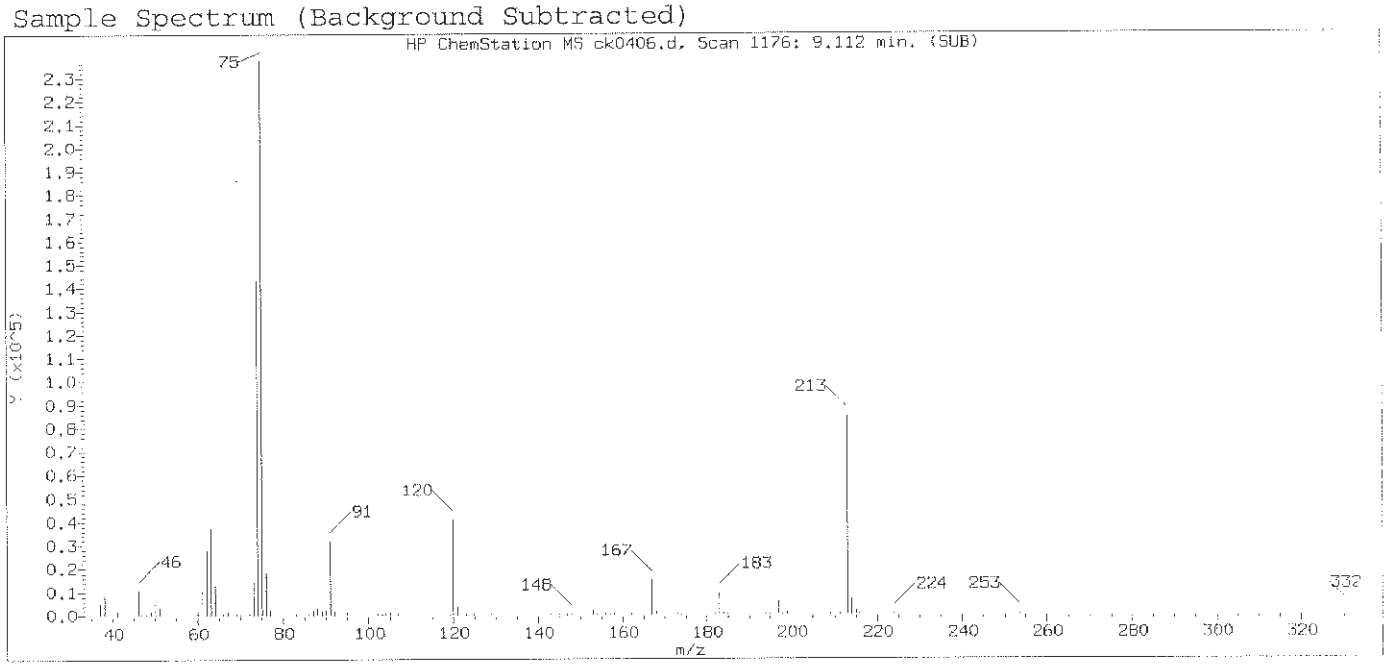
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

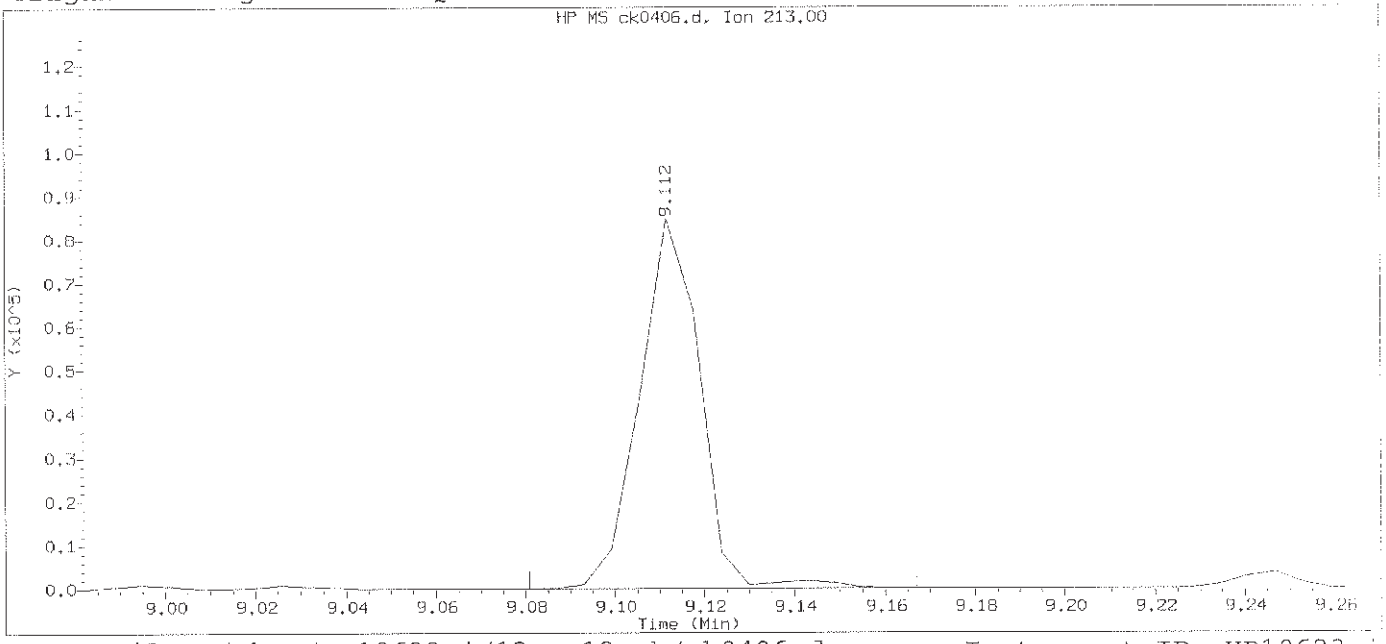
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area	: 79311		
On-column Amount (ng/ul)	: 52.3649		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

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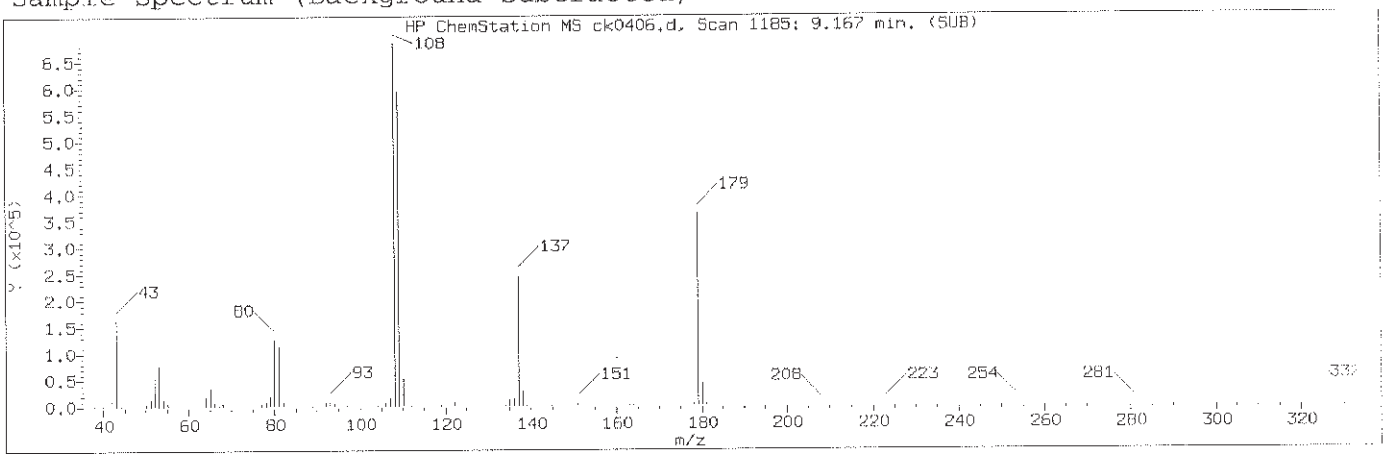
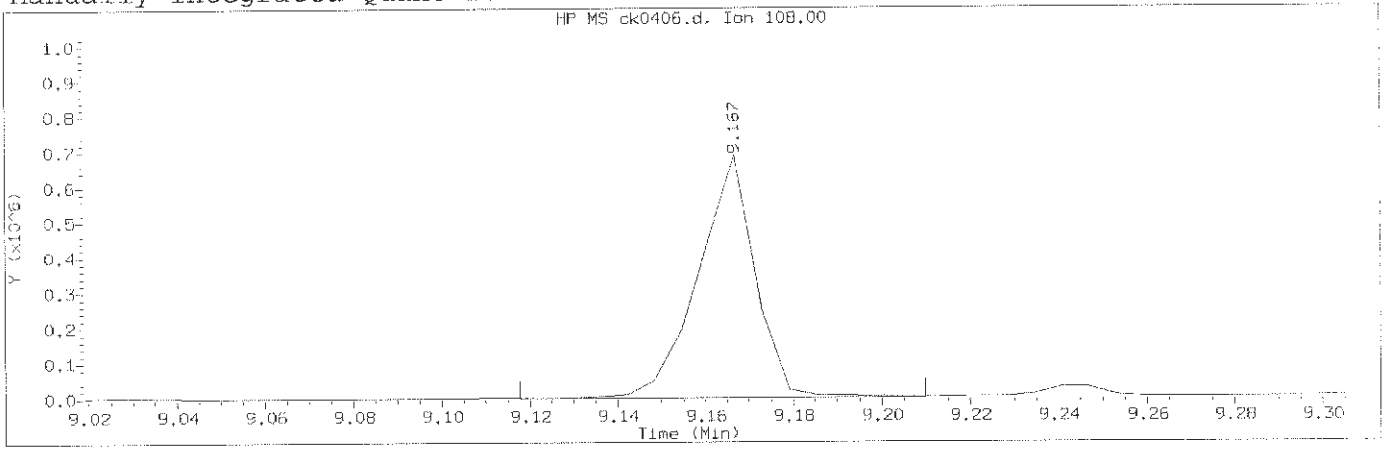
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area (flag)	: 621689M		
On-Column Amount (ng/ul)	: 52.2875		
Integration start scan	: 1176	Integration stop scan:	1191
Y at integration start	: 167	Y at integration end:	167

Reason for manual integration: improper integration

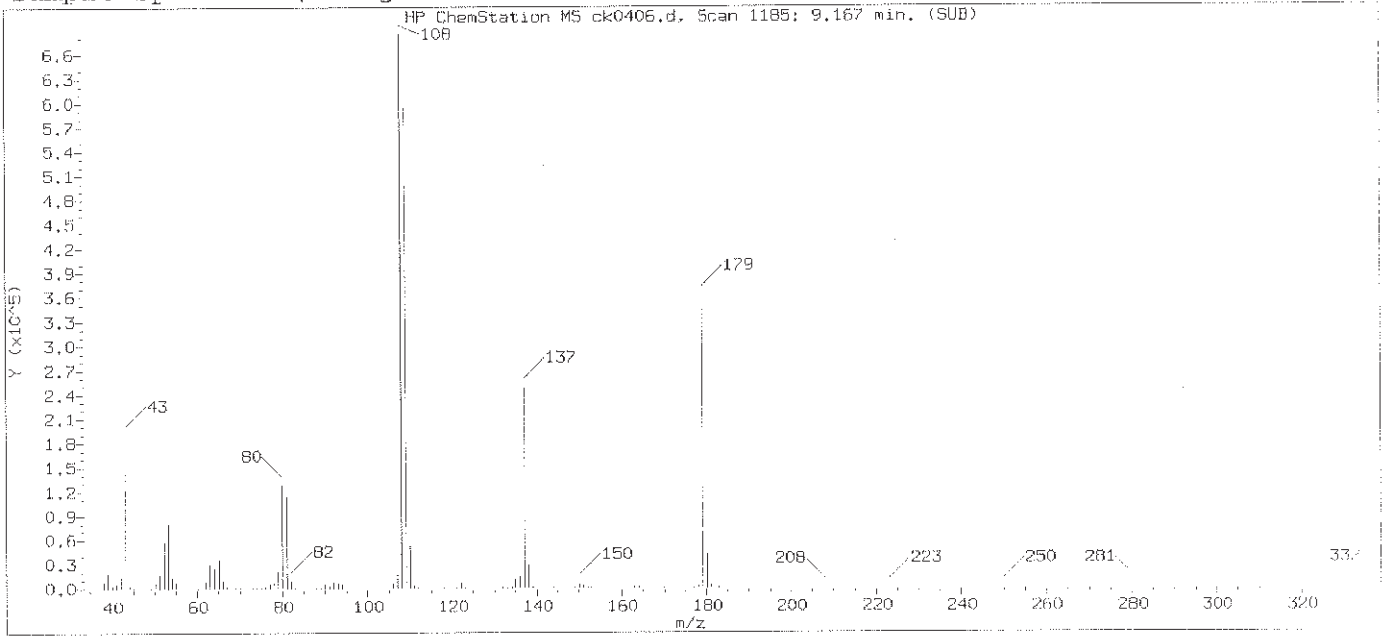
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 Signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

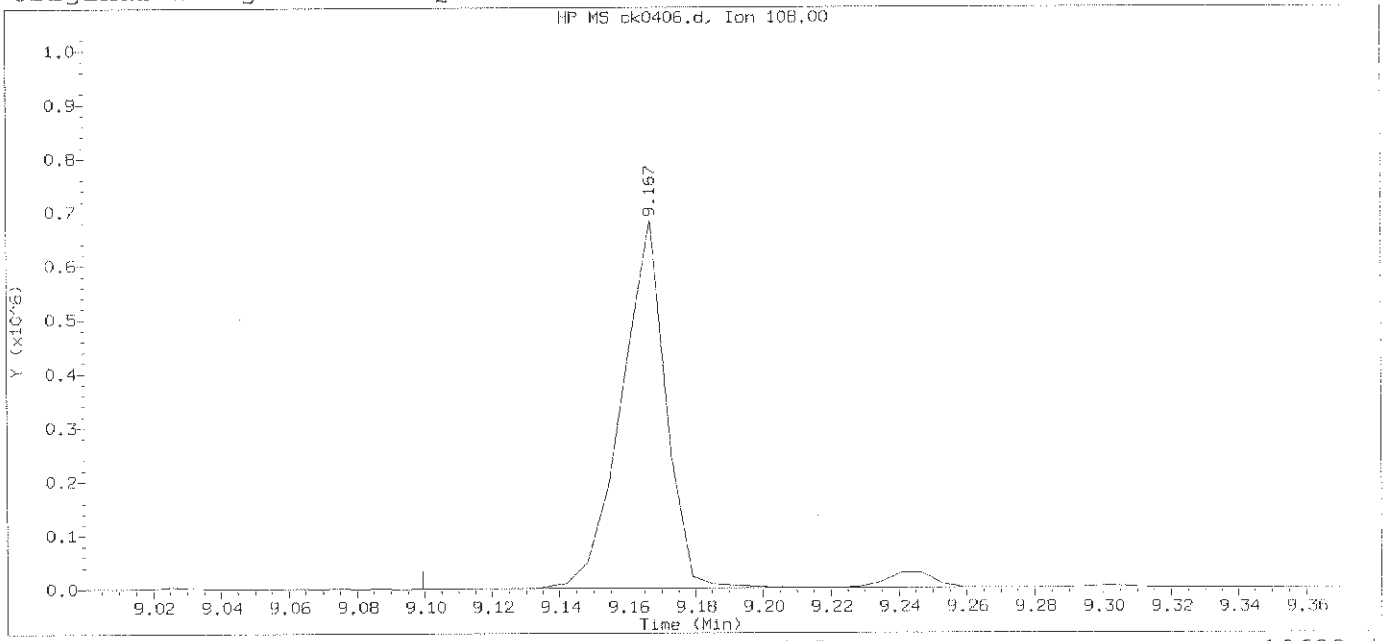
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area	: 650370		
On-column Amount (ng/ul)	: 52.3296		
Integration start scan	: 1173	Integration stop scan:	1202
Y at integration start	: 604	Y at integration end:	607

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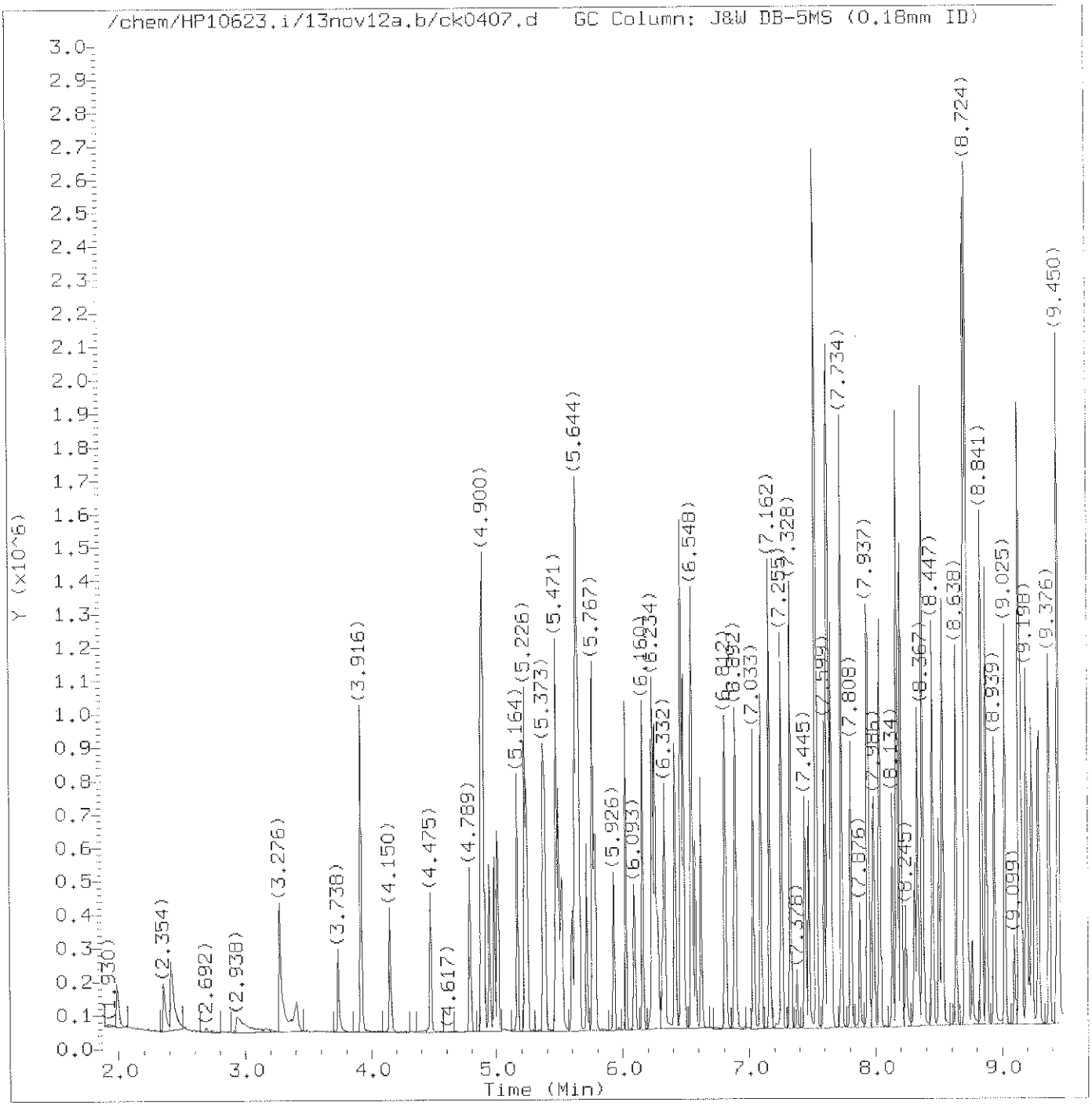
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d
Injection date and time: 12-NOV-2013 12:13

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

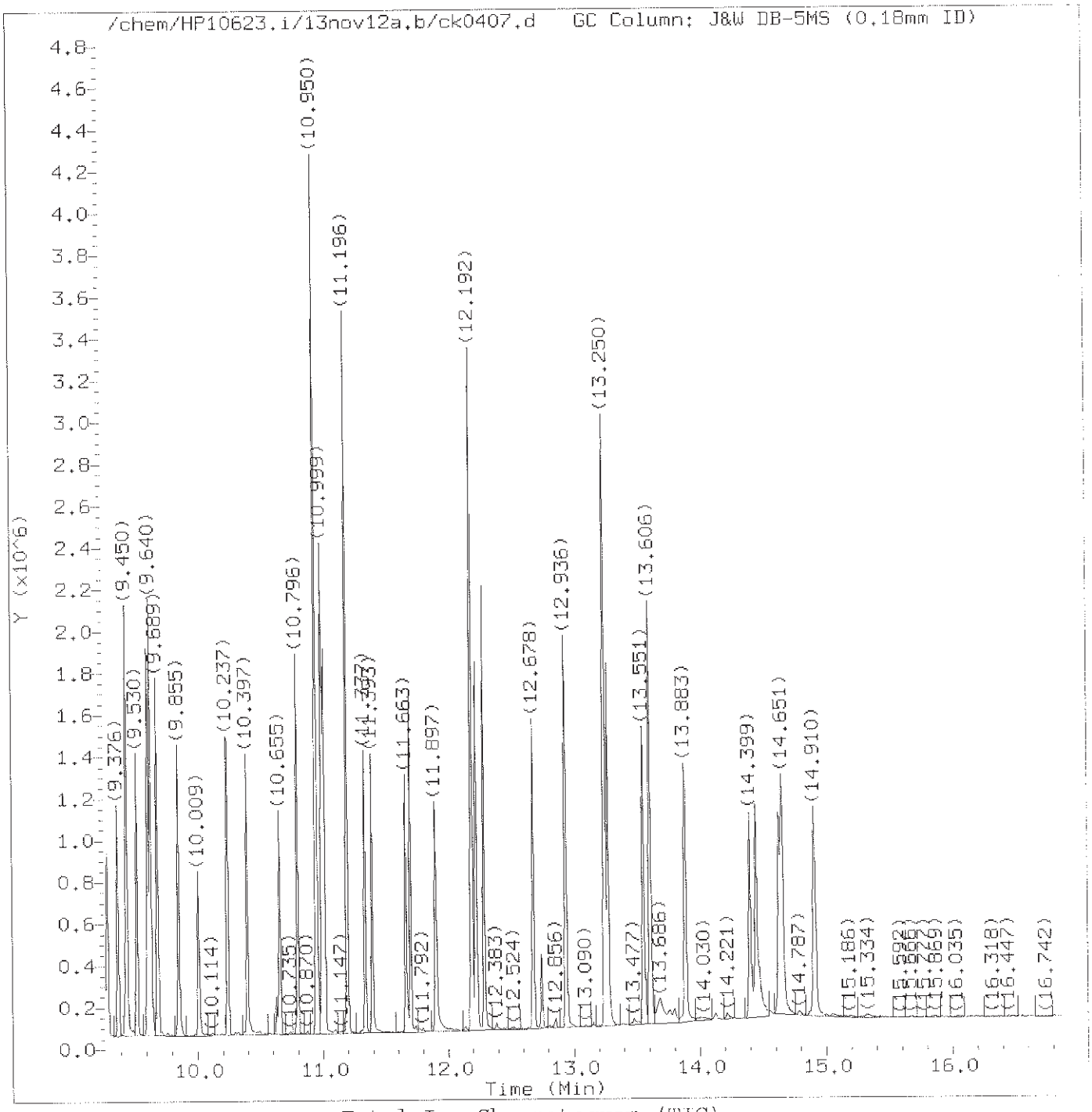
Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	60386	14.057
2) N-Nitrosodimethylamine	(1)	2.354	74	110728	13.922
3) Pyridine	(1)	2.409	79	174459	14.149
5) 2-Picoline	(1)	3.276	93	182617	14.514
6) N-Nitrosomethylethylamine	(1)	3.406	88	83985	13.962
7) Methyl methanesulfonate	(1)	3.738	80	84839	14.028
9)$2-Fluorophenol	(1)	3.916	112	284340	14.469
10) N-Nitrosodiethylamine	(1)	4.150	102	83415	13.959
11) Ethyl methanesulfonate	(1)	4.475	109	79082	14.533
12) Benzaldehyde	(1)	4.789	77	96858	11.981
15)$Phenol-d6	(1)	4.887	99	411349	14.225
14)$Phenol-d5	(1)	4.887	99	411349	14.225
16) Phenol	(1)	4.900	94	235200	13.943
13) Aniline	(1)	4.900	93	274323	13.714
18) bis(2-Chloroethyl)ether	(1)	4.986	93	171912	14.355
19) 2-Chlorophenol	(1)	5.010	128	147106	13.980
20) 1,3-Dichlorobenzene	(1)	5.164	146	152416	14.353
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	131335	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	158365	14.614
24) Benzyl alcohol	(1)	5.373	108	118150	14.360
25) 1,2-Dichlorobenzene	(1)	5.385	146	149992	14.746
206) Indene	(1)	5.471	115	331182	14.576
26) 2-Methylphenol	(1)	5.496	108	160811	14.364
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	202658	13.752
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	202658	13.717
29) N-Nitrosopyrrolidine	(1)	5.601	100	93901	14.012
30) Acetophenone	(1)	5.625	105	245309	14.696
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	145613	13.629
33) 4-Methylphenol	(1)	5.644	108	184742	13.941
32) N-Nitrosomorpholine	(1)	5.644	56	108509	14.253
34) o-Toluidine	(1)	5.656	106	273318	14.295
37) Hexachloroethane	(1)	5.717	117	58842	14.267
38)$Nitrobenzene-d5	(2)	5.767	82	365666	14.069
39) Nitrobenzene	(2)	5.785	77	190480	13.818
40) N-Nitrosopiperidine	(2)	5.926	114	88689	14.503
41) Isophorone	(2)	6.025	82	353281	14.114
42) 2-Nitrophenol	(2)	6.093	139	69222	14.445
44) 2,4-Dimethylphenol	(2)	6.160	107	173258	14.067
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	77504	15.092
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	212904M	13.999

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d
Injection date and time: 12-NOV-2013 12:13
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newal11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.271	105	243332	30.480
49) 2,4-Dichlorophenol	(2)	6.332	162	123828	14.783
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	133120	15.088
52)*Naphthalene-d8	(2)	6.461	136	603190	20.000
53) Naphthalene	(2)	6.486	128	463994	14.498
56) 4-Chloroaniline	(2)	6.548	127	200978	14.411
57) 2,6-Dichlorophenol	(2)	6.554	162	116590	14.778
58) Hexachloropropene	(2)	6.578	213	73210	14.672
60) Hexachlorobutadiene	(2)	6.621	225	67324	15.214
194) Quinoline	(2)	6.812	129	329699	14.946
63) Caprolactam	(2)	6.886	113	68406	14.742
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	181266	16.002
68) 4-Chloro-3-methylphenol	(2)	7.033	107	155931	14.560
69) Safrole	(2)	7.095	162	126976	14.978
70) 2-Methylnaphthalene	(2)	7.162	142	337708	14.869
71) 1-Methylnaphthalene	(2)	7.255	142	308537	14.846
72) Hexachlorocyclopentadiene	(3)	7.328	237	55206	14.193
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	133674	14.851
74) cis-Isosafrole	(3)	7.378	162	22739	1.574
75) 2,4,6-Trichlorophenol	(3)	7.445	196	86695	14.761
77) 2,4,5-Trichlorophenol	(3)	7.476	196	94239	14.717
78)$2-Fluorobiphenyl	(3)	7.531	172	693040	14.605
79) trans-Isosafrole	(3)	7.599	162	133212	13.022
80) Isosafrole	(3)	7.599	162	133212	14.631
83) 1,1'-Biphenyl	(3)	7.624	154	421690	14.423
84) 2-Chloronaphthalene	(3)	7.636	162	290061	13.621
85) 1-Chloronaphthalene	(3)	7.654	162	312929	14.931
88) Diphenyl ether	(3)	7.734	170	213924	14.689
89) 2-Nitroaniline	(3)	7.734	138	97477	14.031
90) 1,4-Naphthoquinone	(3)	7.808	158	132145	14.745
91) 1,4-Dinitrobenzene	(3)	7.876	168	35808	13.261
92) Dimethylphthalate	(3)	7.937	163	379705	14.985
93) 1,3-Dinitrobenzene	(3)	7.949	168	51287	13.979
94) 2,6-Dinitrotoluene	(3)	7.986	165	79007	14.970
95) Acenaphthylene	(3)	8.035	152	476611	14.336
97) 3-Nitroaniline	(3)	8.134	138	93677	14.535
98)*Acenaphthene-d10	(3)	8.177	164	377352	20.000
99) Acenaphthene	(3)	8.208	153	336320	14.617
100) 2,4-Dinitrophenol	(3)	8.245	184	45951	26.805
103) 4-Nitrophenol	(3)	8.312	109	56612	14.179

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	116006	14.914
104) Dibenzofuran	(3)	8.374	168	455060	14.438
105) 2,4-Dinitrotoluene	(3)	8.374	165	95329	13.978
106) 1-Naphthylamine	(3)	8.447	143	374843	14.473
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	66945	14.842
108) 2-Naphthylamine	(3)	8.527	143	386440	14.583
109) Diethylphthalate	(3)	8.638	149	385196	14.716
110) Thionazin	(3)	8.712	107	80154	13.885
111) Fluorene	(3)	8.712	166	390143	14.386
113) 5-Nitro-o-toluidine	(3)	8.724	152	102444M	14.307
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	176515	14.631
114) 4-Nitroaniline	(3)	8.730	138	105014	14.490
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	34312	12.792
117) N-Nitrosodiphenylamine	(4)	8.841	169	339604	14.580
202) NDPA as diphenylamine	(4)	8.841	169	339604	14.545
118) 1,2-Diphenylhydrazine	(4)	8.878	77	469238	14.064
119)$2,4,6-Tribromophenol	(3)	8.939	330	66980	14.696
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	67409	14.175
121) 1,3,5-Trinitrobenzene	(4)	9.099	213	21439M	12.141
122) Diallate (peak 1)	(4)	9.136	86	178786	10.471
123) Phorate	(4)	9.142	75	276369	13.444
124) Phenacetin	(4)	9.155	108	226163	14.050
125) 4-Bromophenyl-phenylether	(4)	9.198	248	95436	14.870
126) Diallate (peak 2)	(4)	9.222	86	25408	3.427
127) Hexachlorobenzene	(4)	9.241	284	94811	14.962
128) Dimethoate	(4)	9.296	87	182731	14.536
130) Atrazine	(4)	9.376	200	108004	14.473
131) Pentachlorophenol	(4)	9.437	266	49533	14.095
132) Pentachloronitrobenzene	(4)	9.450	237	40106	14.580
133) 4-Aminobiphenyl	(4)	9.450	169	424726	16.863
134) Pronamide	(4)	9.530	173	175408	14.448
135)*Phenanthrene-d10	(4)	9.622	188	694958	20.000
136) Dinoseb	(4)	9.640	211	44303	12.227
137) Phenanthrene	(4)	9.640	178	579231	14.334
138) Anthracene	(4)	9.689	178	604600	14.535
140) Carbazole	(4)	9.855	167	585146	14.416
141) Methyl parathion	(4)	10.009	109	102092	13.553
142) Di-n-butylphthalate	(4)	10.243	149	703330	14.686
144) 4-Nitroquinoline-1-oxide	(4)	10.397	190	32398	11.832
143) Parathion	(4)	10.397	109	75199	13.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	64903	14.213
147) Fluoranthene	(4)	10.796	202	665469	14.728
152) Benzidine	(5)	10.950	184	1501696	42.888
167)*Pyrene-d10	(5)	10.999	212	855313	20.000
154) Pyrene	(5)	11.018	202	691340	14.555
156)$Terphenyl-d14	(5)	11.196	244	900593	14.727
158) p-Dimethylaminoazobenzene	(5)	11.337	225	141149	15.248
159) Chlorobenzilate	(5)	11.393	139	212205	14.737
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	423523	14.467
161) Butylbenzylphthalate	(5)	11.700	149	332223	14.657
162) 2-Acetylaminofluorene	(5)	11.897	181	281617	13.719
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	242669	14.693
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	114914	14.243
166) Benzo(a)anthracene	(5)	12.192	228	642478	14.665
168) Chrysene	(5)	12.229	228	614897	14.557
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	452030	14.373
189) 6-Methylchrysene	(5)	12.678	242	458222	14.702
170) Di-n-octylphthalate	(6)	12.936	149	779461	14.070
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.250	256	302098	14.505
172) Benzo(b)fluoranthene	(6)	13.250	252	670144	14.953
173) Benzo(k)fluoranthene	(6)	13.274	252	667961	14.609
174) Benzo(a)pyrene	(6)	13.551	252	624750	14.282
175)*Perylene-d12	(6)	13.606	264	733981	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	324181	14.785
190) Dibenz(a,h)acridine	(6)	14.399	279	455469	14.333
191) Dibenz(a,j)acridine	(6)	14.448	279	546393	14.952
177) Indeno(1,2,3-cd)pyrene	(6)	14.627	276	693395	14.899
178) Dibenz(a,h)anthracene	(6)	14.651	278	584759	15.021
179) Benzo(g,h,i)perylene	(6)	14.910	276	576874	14.550
129) Diallate TRANS/CIS	(4)			204194	13.930

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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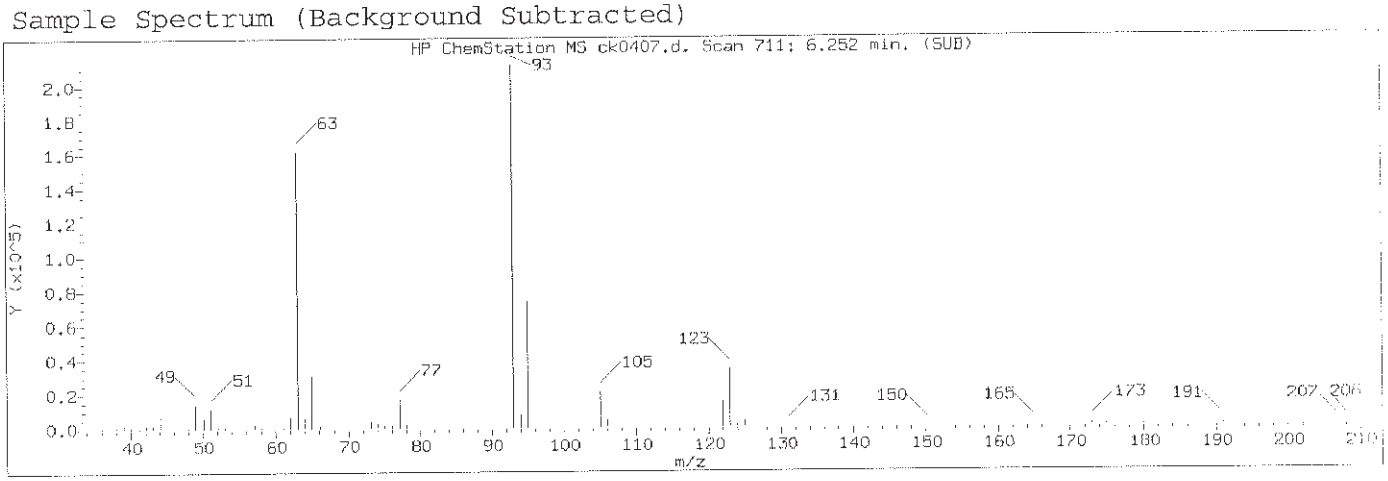
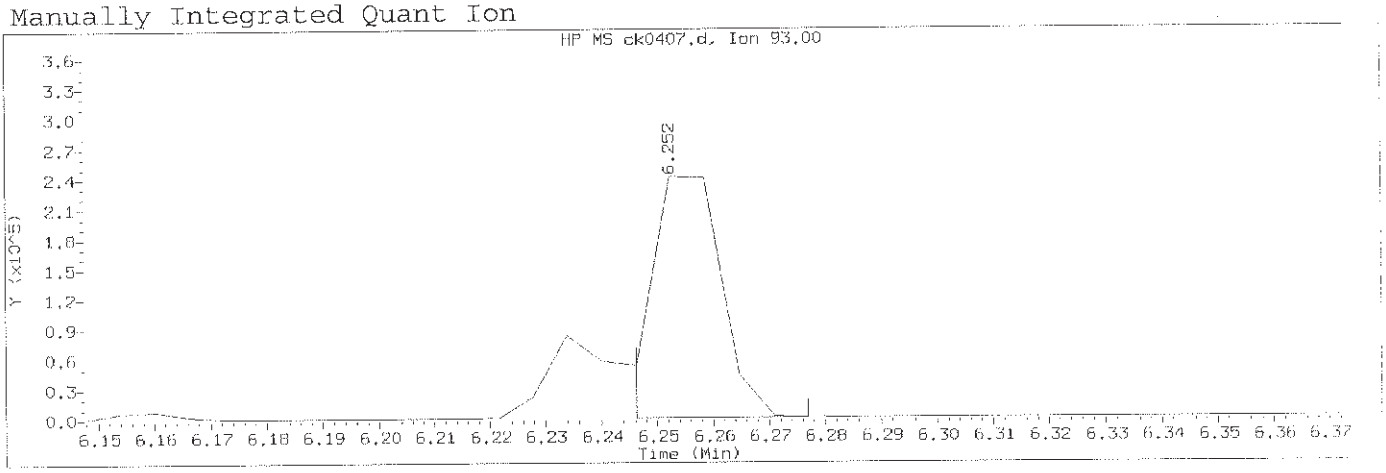
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 212904M		
On-Column Amount (ng/ul)	: 13.9988		
Integration start scan	: 709	Integration stop scan:	714
Y at integration start	: 545	Y at integration end:	545

Reason for manual integration: improper integration

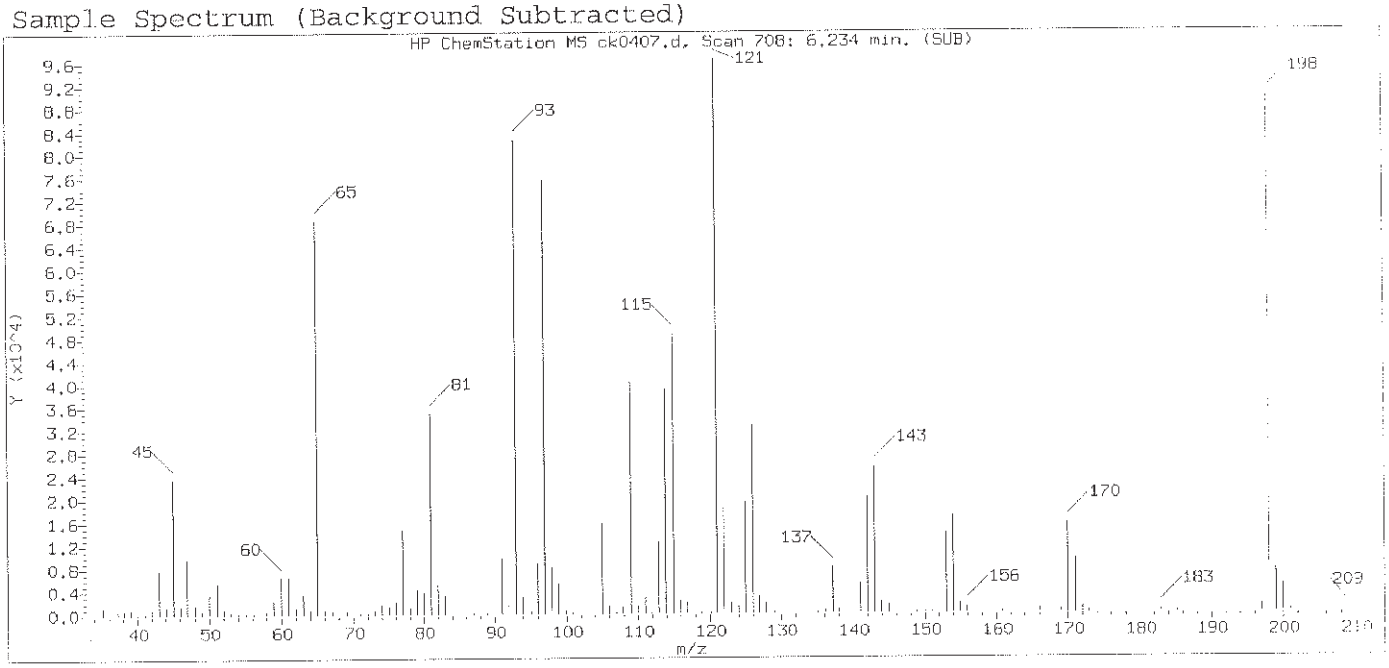
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

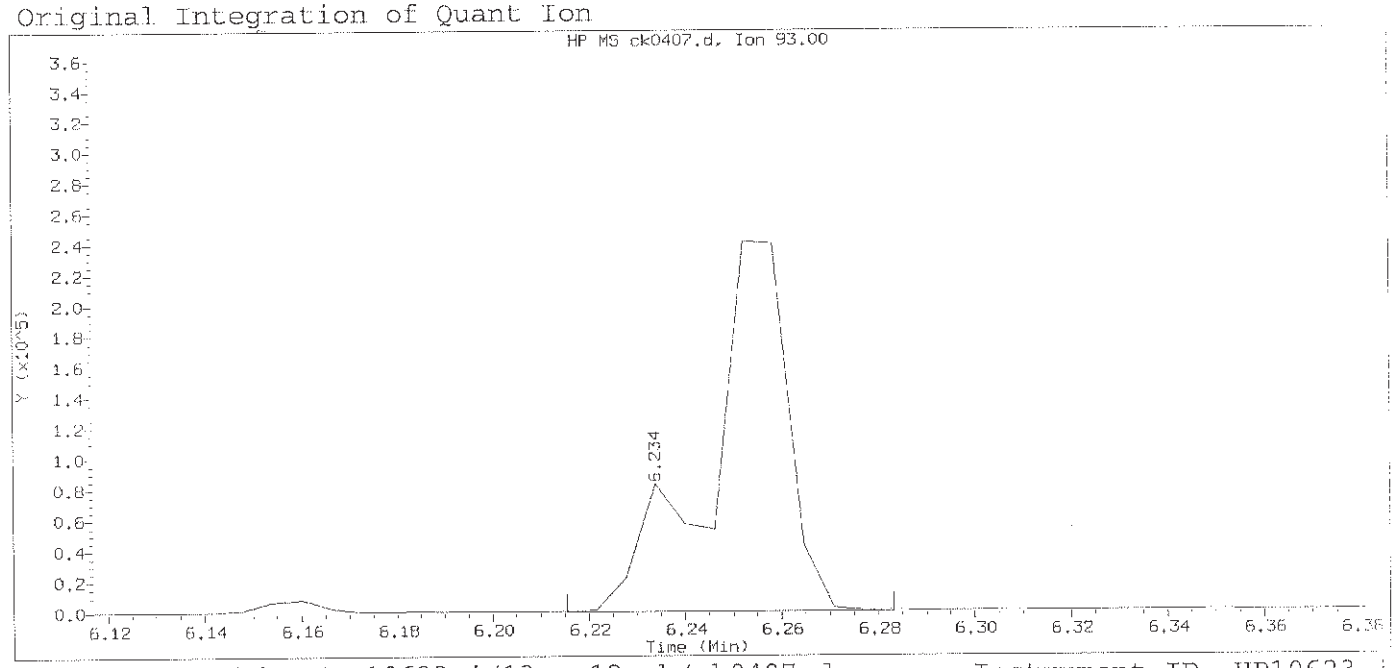
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 274471		
On-column Amount (ng/ul)	: 16.6778		
Integration start scan	: 704	Integration stop scan:	715
Y at integration start	: 0	Y at integration end:	0

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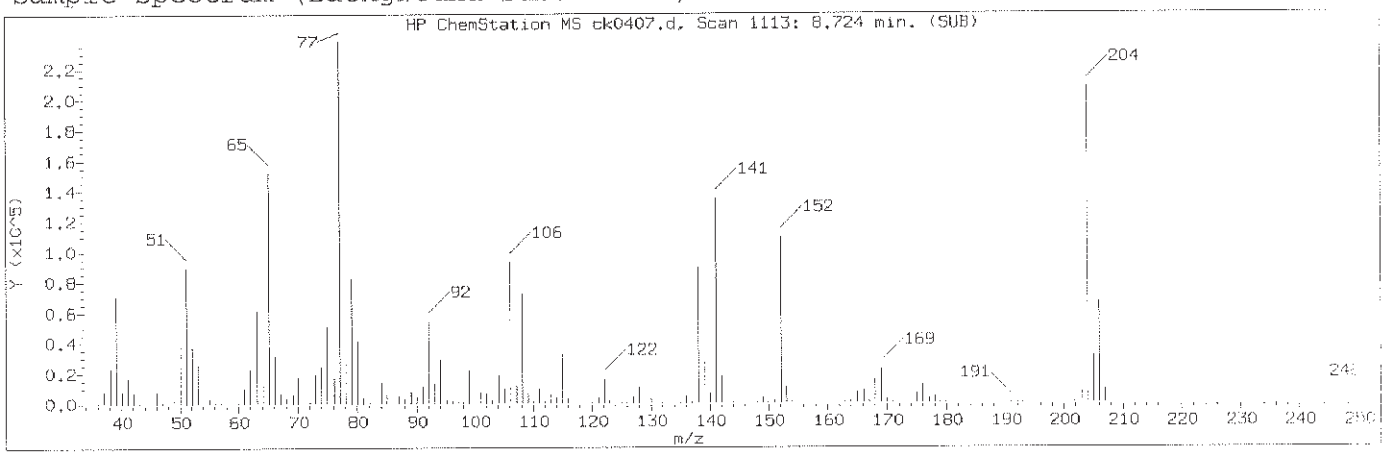
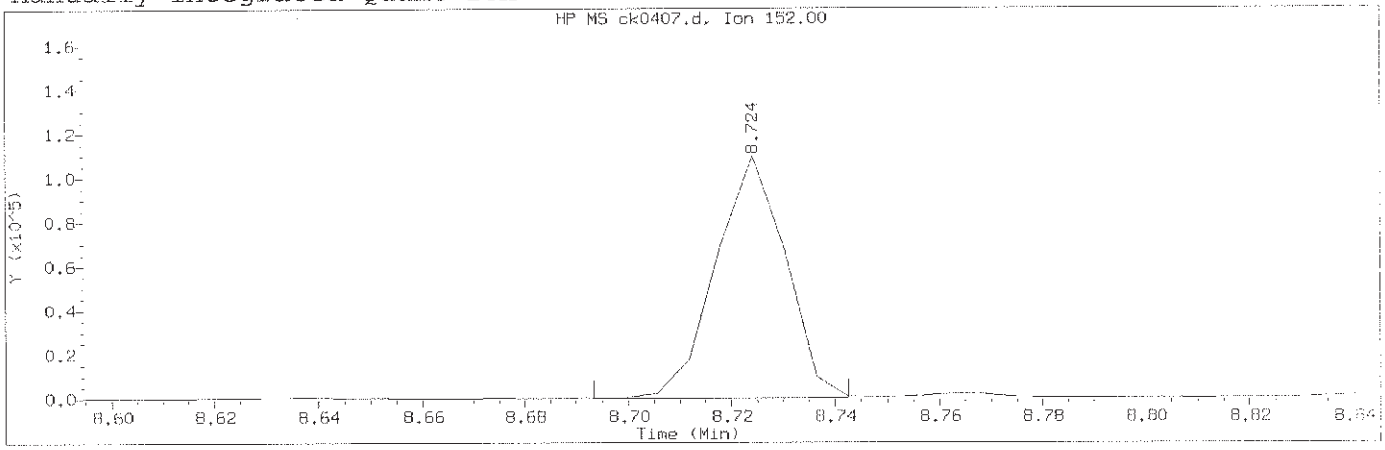
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1113		
Retention Time (minutes)	: 8.724		
Quant Ion	: 152.00		
Area (flag)	: 102444M		
On-Column Amount (ng/ul)	: 14.3073		
Integration start scan	: 1107	Integration stop scan:	1115
Y at integration start	: 0	Y at integration end:	0

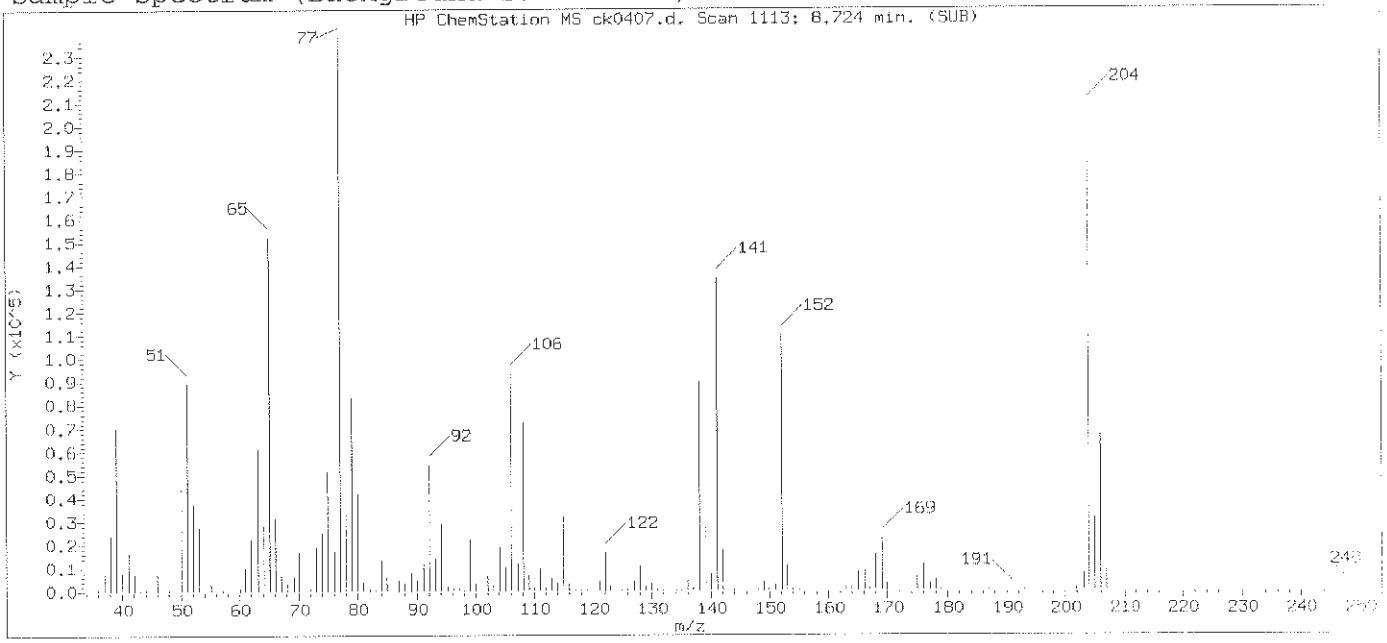
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

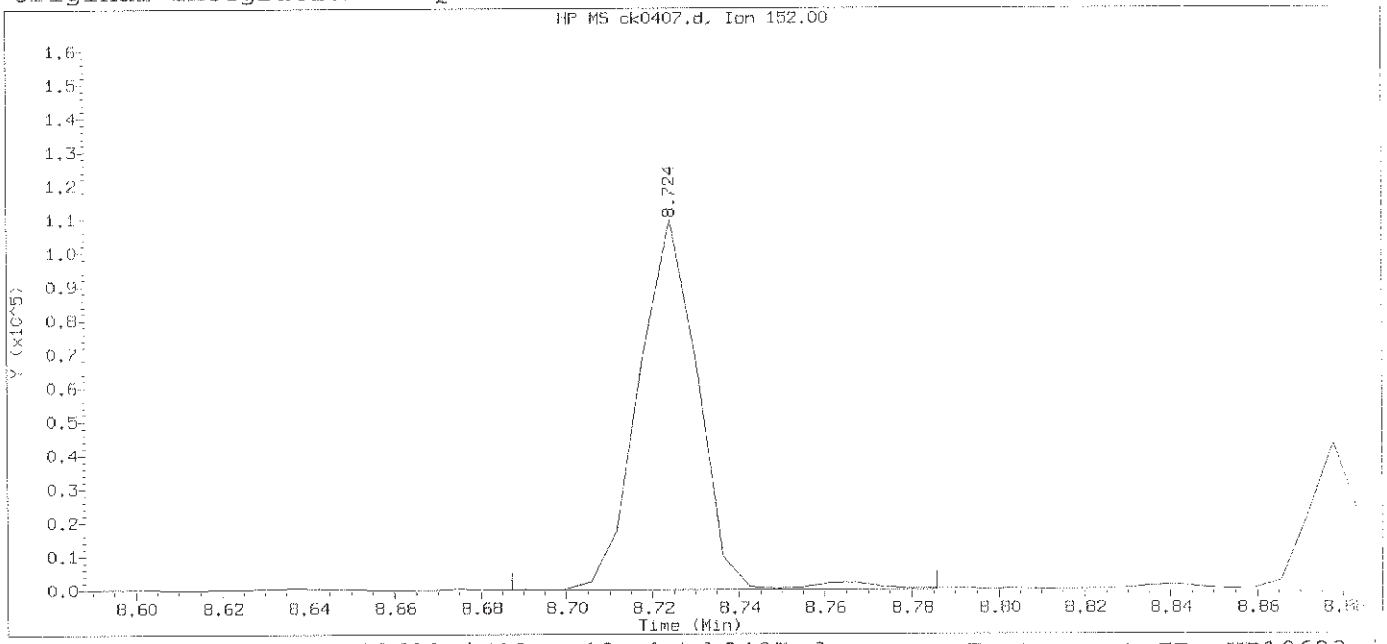
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1113		
Retention Time (minutes)	: 8.724		
Quant Ion	: 152.00		
Area	: 104834		
On-column Amount (ng/ul)	: 14.2198		
Integration start scan	: 1106	Integration stop scan:	1122
Y at integration start	: 0	Y at integration end:	0

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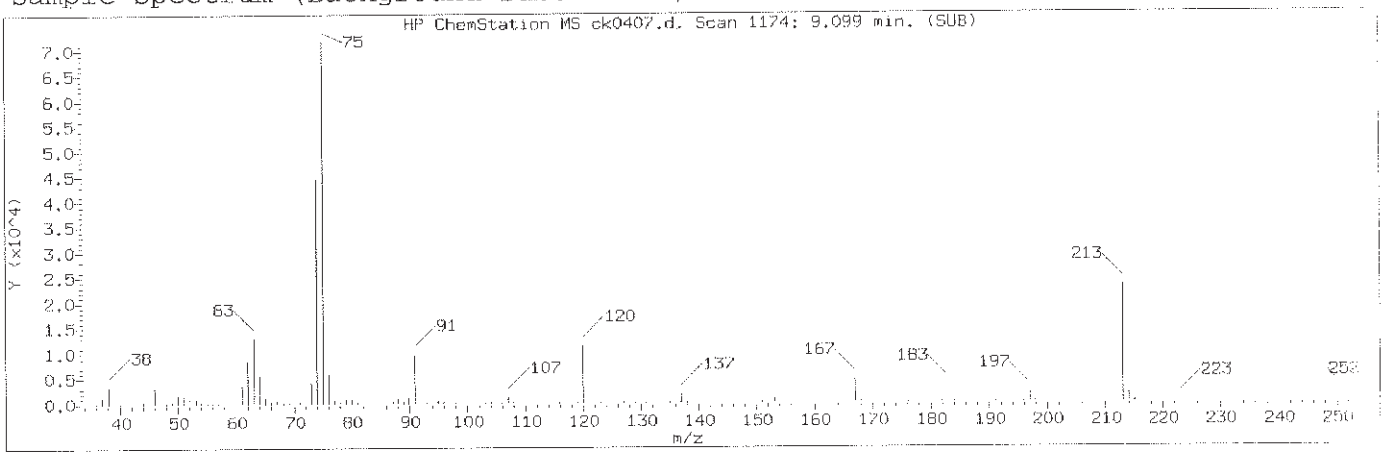
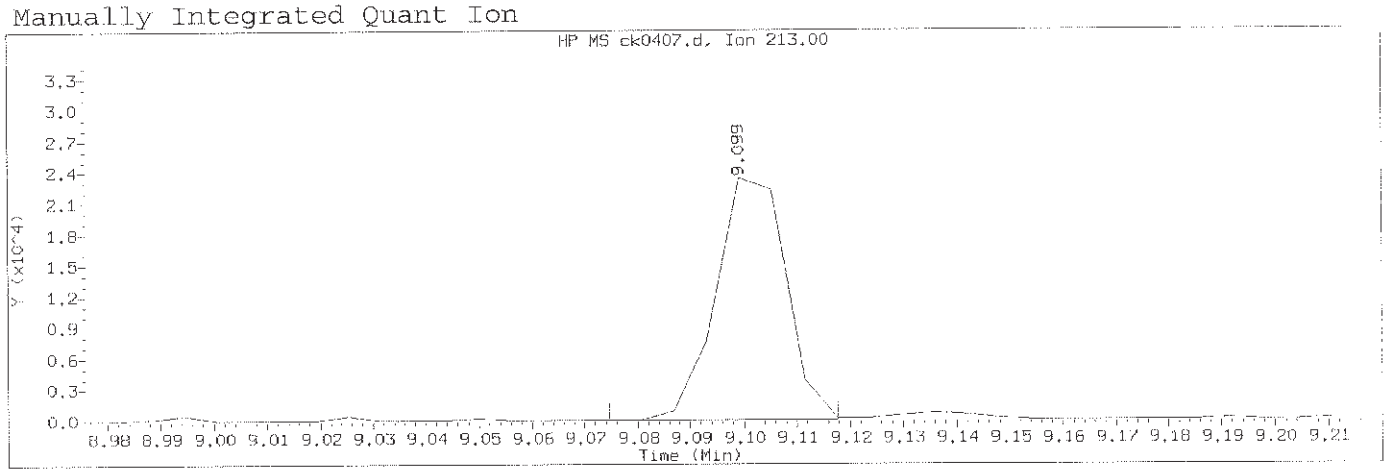
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

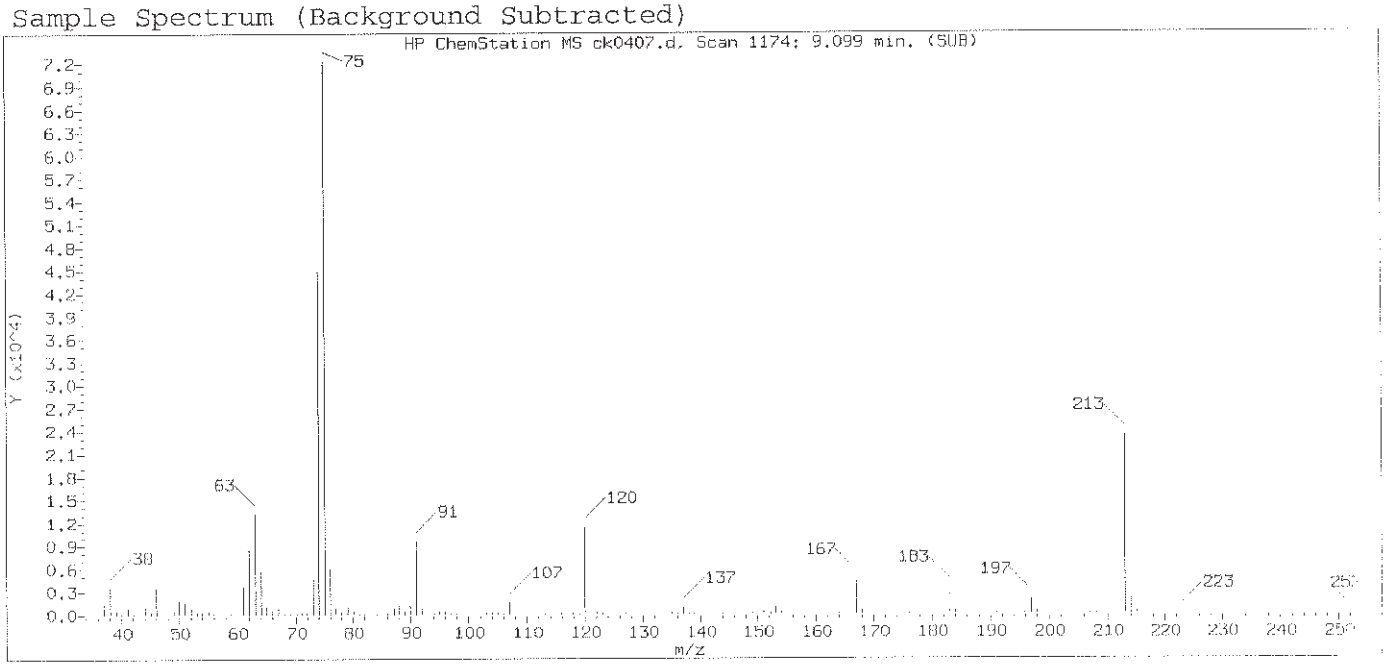
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area (flag)	: 21439M		
On-Column Amount (ng/ul)	: 12.1414		
Integration start scan	: 1169	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

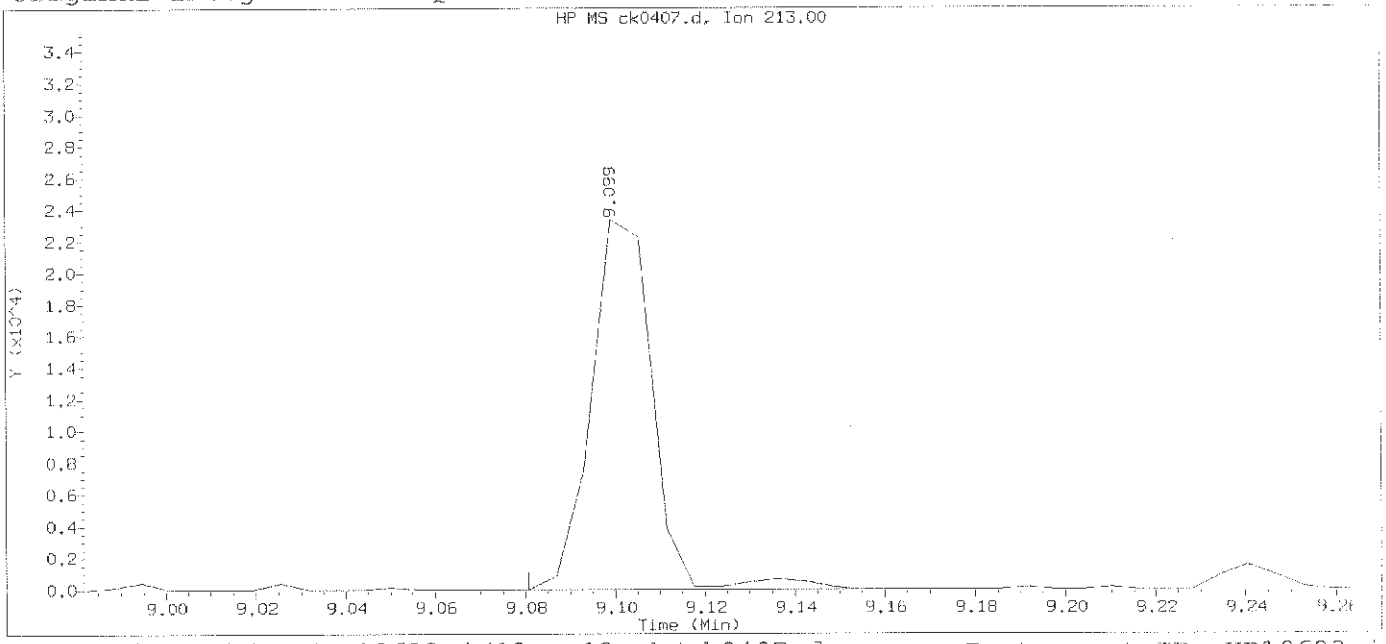
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area	: 22164		
On-column Amount (ng/ul)	: 11.4486		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

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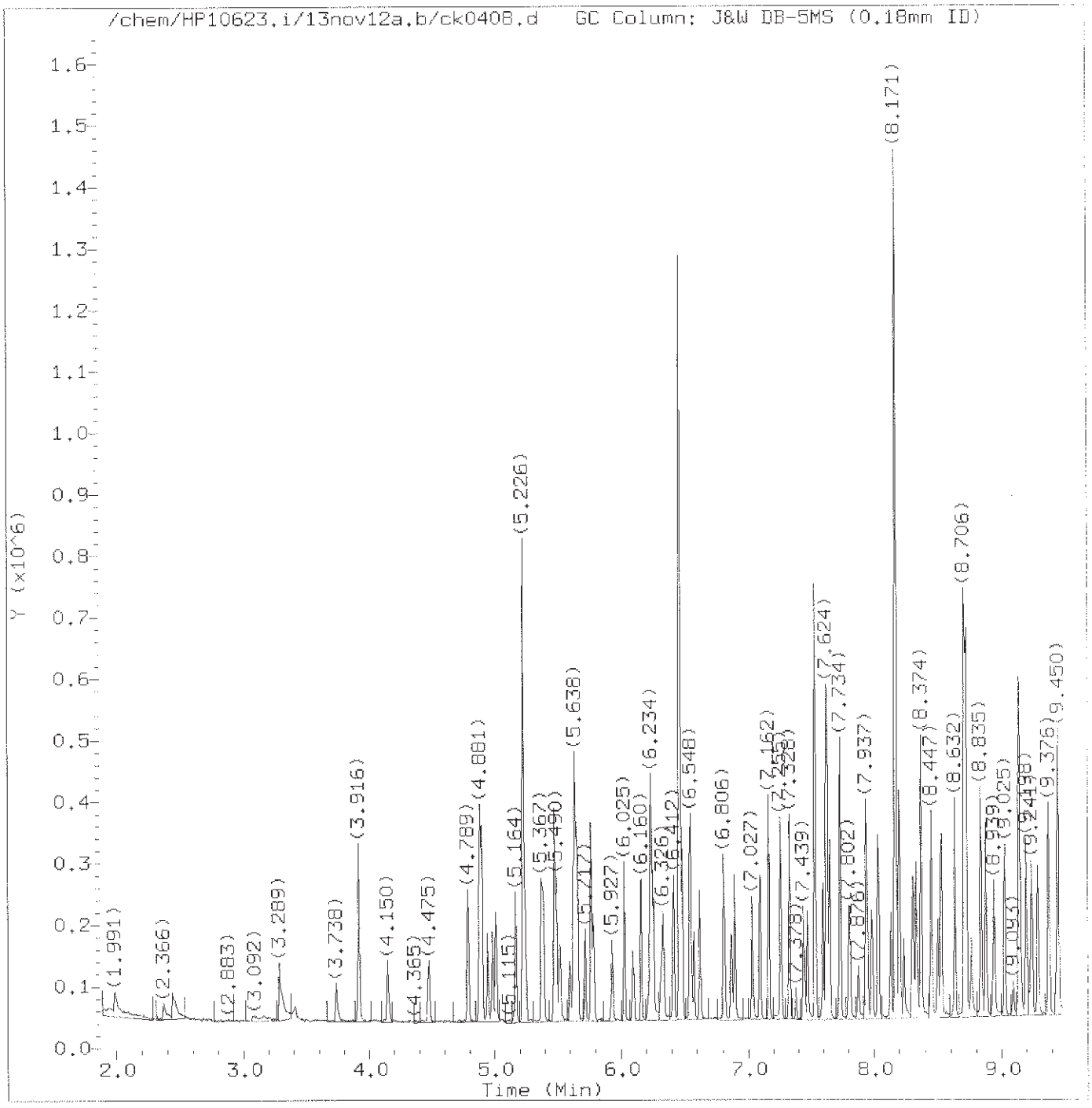
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

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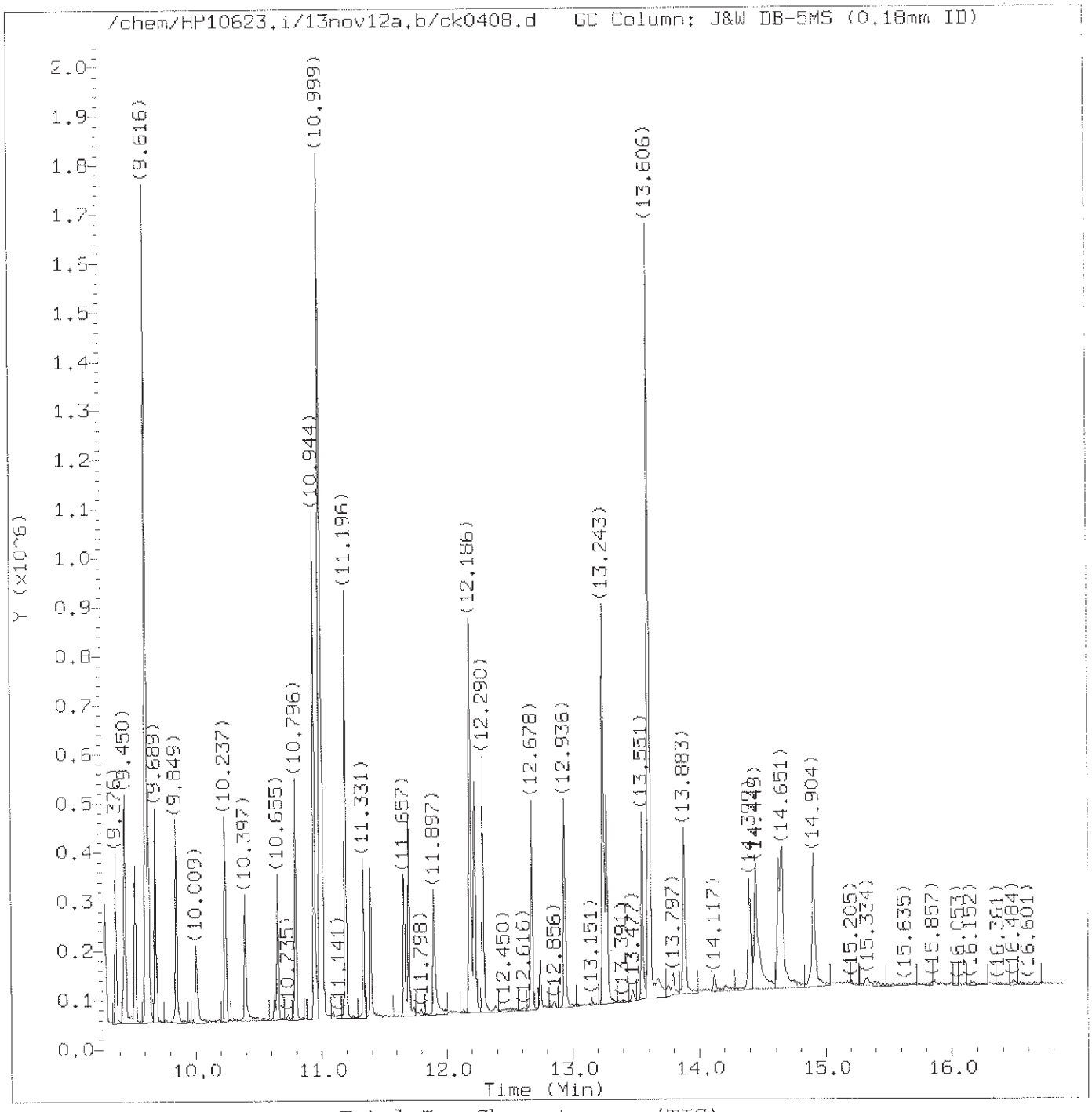
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	17313M	5.021
2) N-Nitrosodimethylamine	(1)	2.366	74	30798M	4.824
3) Pyridine	(1)	2.440	79	46666M	4.715
5) 2-Picoline	(1)	3.289	93	46917M	4.646
6) N-Nitrosomethylethylamine	(1)	3.412	88	25211	5.222
7) Methyl methanesulfonate	(1)	3.738	80	22891	4.715
9)$2-Fluorophenol	(1)	3.916	112	77161	4.892
10) N-Nitrosodiethylamine	(1)	4.150	102	21422	4.466
11) Ethyl methanesulfonate	(1)	4.475	109	22287	5.102
12) Benzaldehyde	(1)	4.789	77	42492	6.548
14)$Phenol-d5	(1)	4.881	99	106780	4.600
15)$Phenol-d6	(1)	4.881	99	106780	4.600
16) Phenol	(1)	4.894	94	59944	4.427
13) Aniline	(1)	4.900	93	74895	4.664
18) bis(2-Chloroethyl)ether	(1)	4.980	93	47075	4.897
19) 2-Chlorophenol	(1)	5.010	128	39928	4.727
20) 1,3-Dichlorobenzene	(1)	5.164	146	41802	4.904
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	105420	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	42503	4.886
24) Benzyl alcohol	(1)	5.367	108	33418	5.060
25) 1,2-Dichlorobenzene	(1)	5.385	146	38965	4.772
206) Indene	(1)	5.472	115	94629	5.188
26) 2-Methylphenol	(1)	5.490	108	42005	4.674
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	56333	4.762
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	56333	4.750
29) N-Nitrosopyrrolidine	(1)	5.594	100	24231	4.505
30) Acetophenone	(1)	5.619	105	69973	5.223
32) N-Nitrosomorpholine	(1)	5.638	56	28904	4.730
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	38266	4.462
33) 4-Methylphenol	(1)	5.644	108	48938	4.601
34) o-Toluidine	(1)	5.656	106	71509	4.659
37) Hexachloroethane	(1)	5.717	117	16768	5.065
38)$Nitrobenzene-d5	(2)	5.761	82	94228	4.514
39) Nitrobenzene	(2)	5.779	77	50315	4.545
40) N-Nitrosopiperidine	(2)	5.927	114	22811	4.645
41) Isophorone	(2)	6.025	82	91749	4.564
42) 2-Nitrophenol	(2)	6.093	139	16269	4.228
44) 2,4-Dimethylphenol	(2)	6.160	107	45682	4.618
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	20664	5.010
47) Benzoic acid	(2)	6.240	105	77016	12.013

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46)	bis(2-Chloroethoxy)methane	(2)	6.252	93	58319A	4.775
49)	2,4-Dichlorophenol	(2)	6.332	162	31829	4.732
50)	1,2,4-Trichlorobenzene	(2)	6.412	180	34984	4.937
52)	*Naphthalene-d8	(2)	6.461	136	484406	20.000
53)	Naphthalene	(2)	6.480	128	123417	4.802
56)	4-Chloroaniline	(2)	6.541	127	54123	4.832
57)	2,6-Dichlorophenol	(2)	6.548	162	30127	4.755
58)	Hexachloropropene	(2)	6.578	213	18732	4.675
60)	Hexachlorobutadiene	(2)	6.621	225	18159	5.110
194)	Quinoline	(2)	6.806	129	87960	4.965
63)	Caprolactam	(2)	6.867	113	19896	5.339
64)	N-Nitrosodi-n-butylamine	(2)	6.892	84	36945	4.061
68)	4-Chloro-3-methylphenol	(2)	7.027	107	40317	4.688
69)	Safrole	(2)	7.095	162	32592	4.787
70)	2-Methylnaphthalene	(2)	7.162	142	88393	4.846
71)	1-Methylnaphthalene	(2)	7.255	142	80497	4.823
72)	Hexachlorocyclopentadiene	(3)	7.328	237	13538	4.425
73)	1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	35253	4.980
74)	cis-Isosafrole	(3)	7.378	162	6270	0.552
75)	2,4,6-Trichlorophenol	(3)	7.439	196	21626	4.682
77)	2,4,5-Trichlorophenol	(3)	7.470	196	22522	4.472
78)	$2-Fluorobiphenyl	(3)	7.531	172	182995	4.903
79)	trans-Isosafrole	(3)	7.599	162	34826	4.328
80)	Isosafrole	(3)	7.599	162	34826	4.863
83)	1,1'-Biphenyl	(3)	7.624	154	121870	5.300
84)	2-Chloronaphthalene	(3)	7.630	162	79553	4.750
85)	1-Chloronaphthalene	(3)	7.654	162	77693	4.713
88)	Diphenyl ether	(3)	7.734	170	56812	4.960
89)	2-Nitroaniline	(3)	7.734	138	23149	4.236
90)	1,4-Naphthoquinone	(3)	7.808	158	31942	4.532
91)	1,4-Dinitrobenzene	(3)	7.876	168	7702	3.626
92)	Dimethylphthalate	(3)	7.937	163	99107	4.973
93)	1,3-Dinitrobenzene	(3)	7.943	168	10380	3.597
94)	2,6-Dinitrotoluene	(3)	7.980	165	17386	4.188
95)	Acenaphthylene	(3)	8.029	152	122862	4.698
97)	3-Nitroaniline	(3)	8.134	138	22434	4.426
98)	*Acenaphthene-d10	(3)	8.171	164	296800	20.000
99)	Acenaphthene	(3)	8.202	153	86320	4.770
100)	2,4-Dinitrophenol	(3)	8.238	184	13772	10.214
103)	4-Nitrophenol	(3)	8.306	109	27450	8.741

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	31339	5.123
105) 2,4-Dinitrotoluene	(3)	8.368	165	20905	3.897
104) Dibenzofuran	(3)	8.374	168	120366	4.855
106) 1-Naphthylamine	(3)	8.447	143	94870	4.657
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	16075	4.531
108) 2-Naphthylamine	(3)	8.527	143	96695	4.639
109) Diethylphthalate	(3)	8.632	149	101468	4.929
110) Thionazin	(3)	8.706	107	21030M	4.632
111) Fluorene	(3)	8.706	166	102097	4.787
113) 5-Nitro-o-toluidine	(3)	8.718	152	23780	4.222
114) 4-Nitroaniline	(3)	8.724	138	24361	4.274
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	47537	5.010
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	15173	7.178
202) NDPA as diphenylamine	(4)	8.841	169	87965	4.781
117) N-Nitrosodiphenylamine	(4)	8.841	169	87965	4.792
118) 1,2-Diphenylhydrazine	(4)	8.878	77	117833	4.481
119)$2,4,6-Tribromophenol	(3)	8.939	330	17293	4.824
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	17344	4.628
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	3982	2.861
122) Diallate (peak 1)	(4)	9.136	86	46921	3.487
123) Phorate	(4)	9.142	75	68496	4.228
124) Phenacetin	(4)	9.148	108	56146	4.426
125) 4-Bromophenyl-phenylether	(4)	9.198	248	25635	5.068
126) Diallate (peak 2)	(4)	9.222	86	7575	1.296
127) Hexachlorobenzene	(4)	9.241	284	24595	4.925
128) Dimethoate	(4)	9.290	87	43793	4.420
130) Atrazine	(4)	9.376	200	31458	5.349
131) Pentachlorophenol	(4)	9.437	266	11754M	4.244
132) Pentachloronitrobenzene	(4)	9.450	237	9540	4.401
133) 4-Aminobiphenyl	(4)	9.450	169	98332	4.954
134) Pronamide	(4)	9.530	173	43979	4.596
135)*Phenanthrene-d10	(4)	9.616	188	547696	20.000
136) Dinoseb	(4)	9.634	211	7839M	2.745
137) Phenanthrene	(4)	9.640	178	153342	4.815
138) Anthracene	(4)	9.689	178	153942	4.696
140) Carbazole	(4)	9.849	167	153179	4.789
141) Methyl parathion	(4)	10.009	109	19323	3.255
142) Di-n-butylphthalate	(4)	10.237	149	179816	4.764
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	5501	2.549
143) Parathion	(4)	10.397	109	15274	3.497

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d
Injection date and time: 12-NOV-2013 12:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:11
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	17055	4.739
147) Fluoranthene	(4)	10.796	202	171379	4.813
152) Benzidine	(5)	10.944	184	413305	14.850
167)*Pyrene-d10	(5)	10.999	212	679864	20.000
154) Pyrene	(5)	11.011	202	179871	4.764
156)$Terphenyl-d14	(5)	11.196	244	239522	4.928
158) p-Dimethylaminoazobenzene	(5)	11.337	225	33651	4.574
159) Chlorobenzilate	(5)	11.393	139	50704	4.430
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	110813	4.762
161) Butylbenzylphthalate	(5)	11.694	149	84862	4.710
162) 2-Acetylaminofluorene	(5)	11.897	181	64736	3.967
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	63493	4.836
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	28485	4.442
166) Benzo(a)anthracene	(5)	12.192	228	164309	4.718
168) Chrysene	(5)	12.223	228	165805	4.938
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	117619	4.705
189) 6-Methylchrysene	(5)	12.678	242	119363	4.818
170) Di-n-octylphthalate	(6)	12.936	149	191440	4.222
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	76981	4.516
172) Benzo(b)fluoranthene	(6)	13.243	252	165832	4.521
173) Benzo(k)fluoranthene	(6)	13.268	252	185097	4.946
174) Benzo(a)pyrene	(6)	13.551	252	160113M	4.472
175)*Perylene-d12	(6)	13.606	264	600759	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	84791	4.725
190) Dibenz(a,h)acridine	(6)	14.399	279	114899	4.417
191) Dibenz(a,j)acridine	(6)	14.449	279	149262	4.990
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	186027	4.884
178) Dibenz(a,h)anthracene	(6)	14.651	278	154487	4.848
179) Benzo(g,h,i)perylene	(6)	14.904	276	161117	4.965
129) Diallate TRANS/CIS	(4)			54496	4.717

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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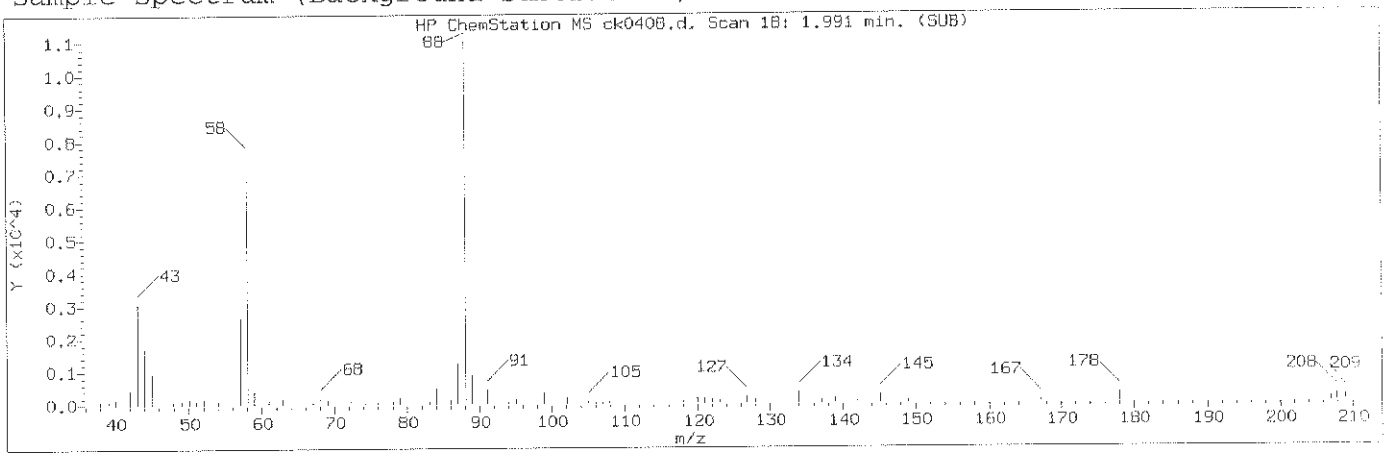
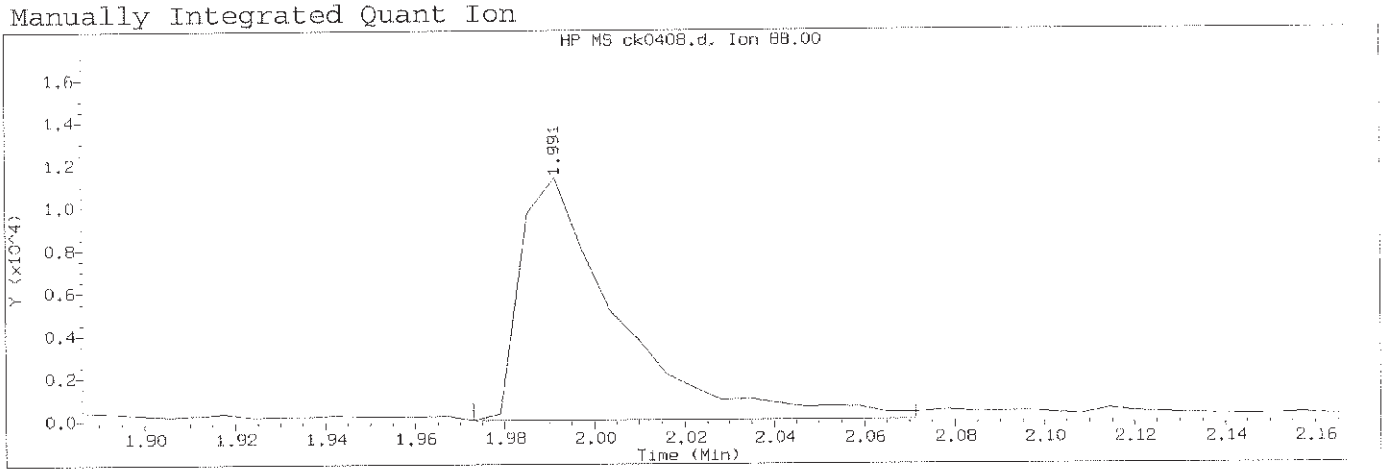
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area (flag)	: 17313M		
On-Column Amount (ng/ul)	: 5.0208		
Integration start scan	: 14	Integration stop scan:	30
Y at integration start	: 0	Y at integration end:	0

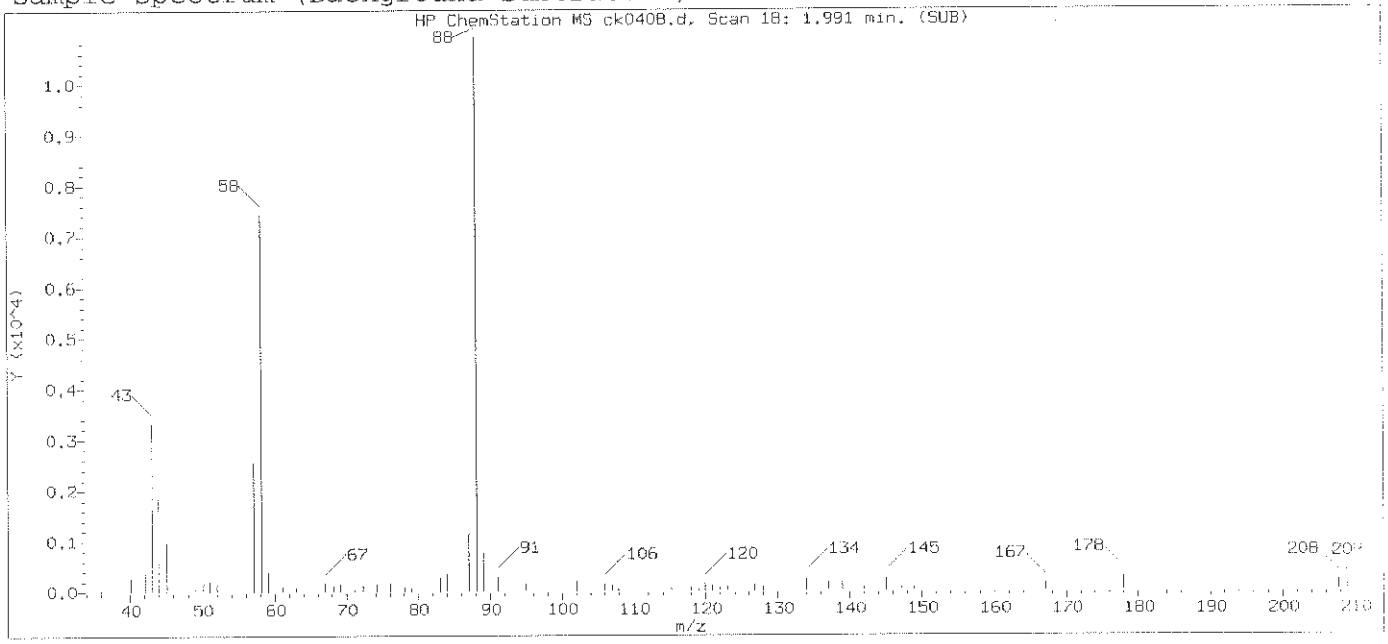
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

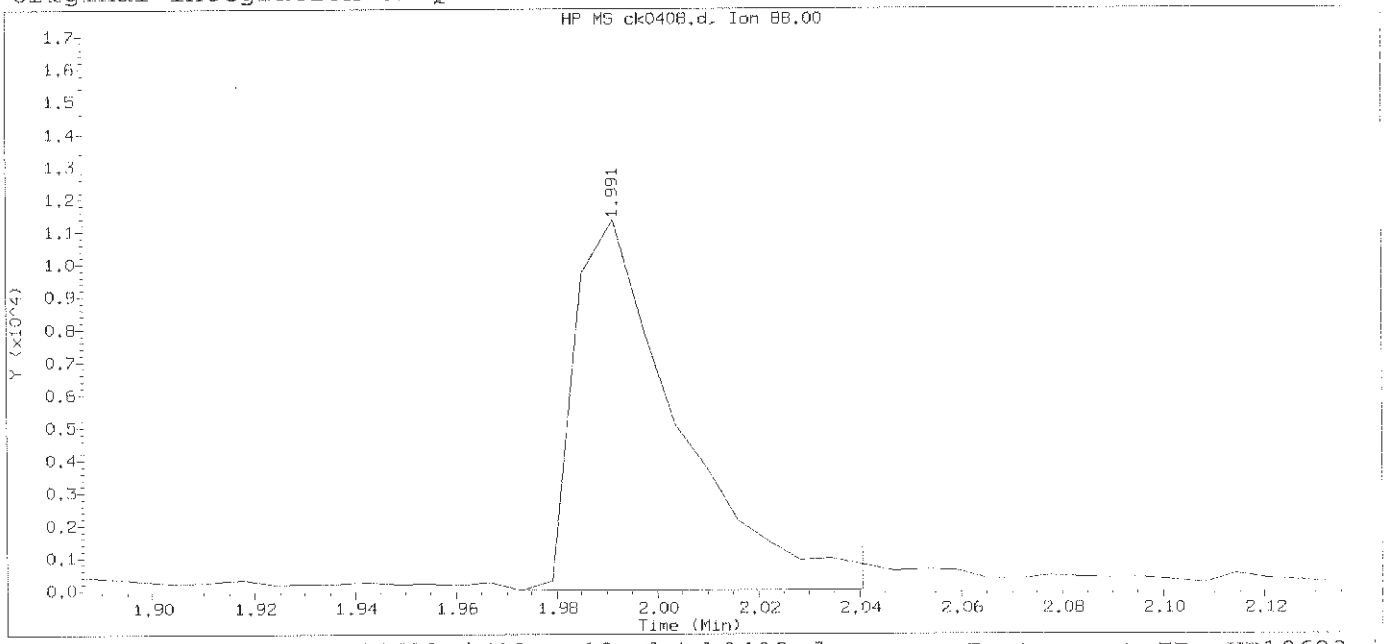
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area	: 16256		
On-column Amount (ng/ul)	: 4.7631		
Integration start scan	: 14	Integration stop scan:	25
Y at integration start	: 0	Y at integration end:	0

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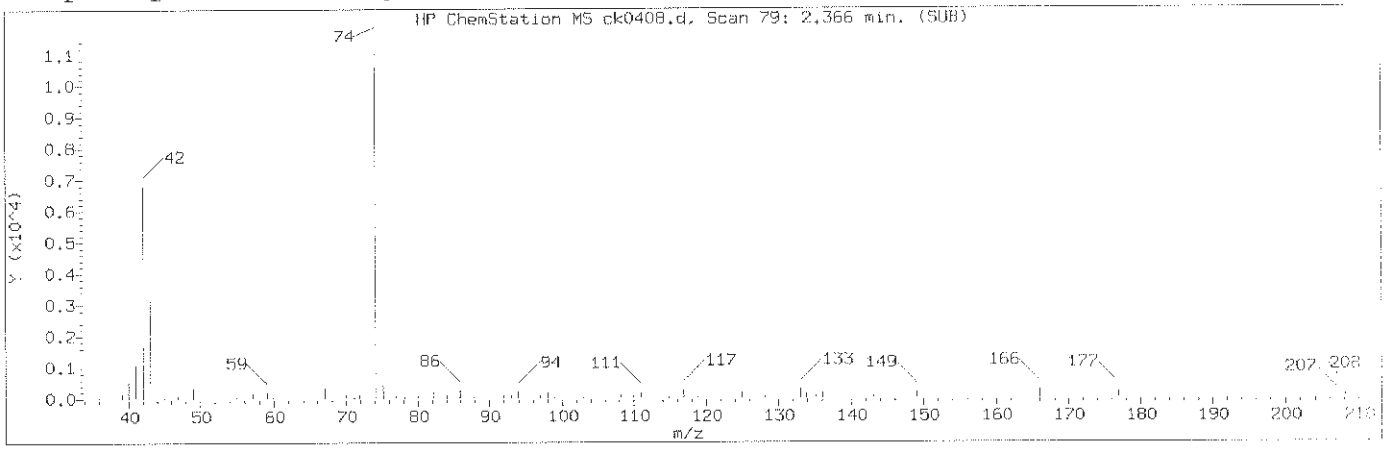
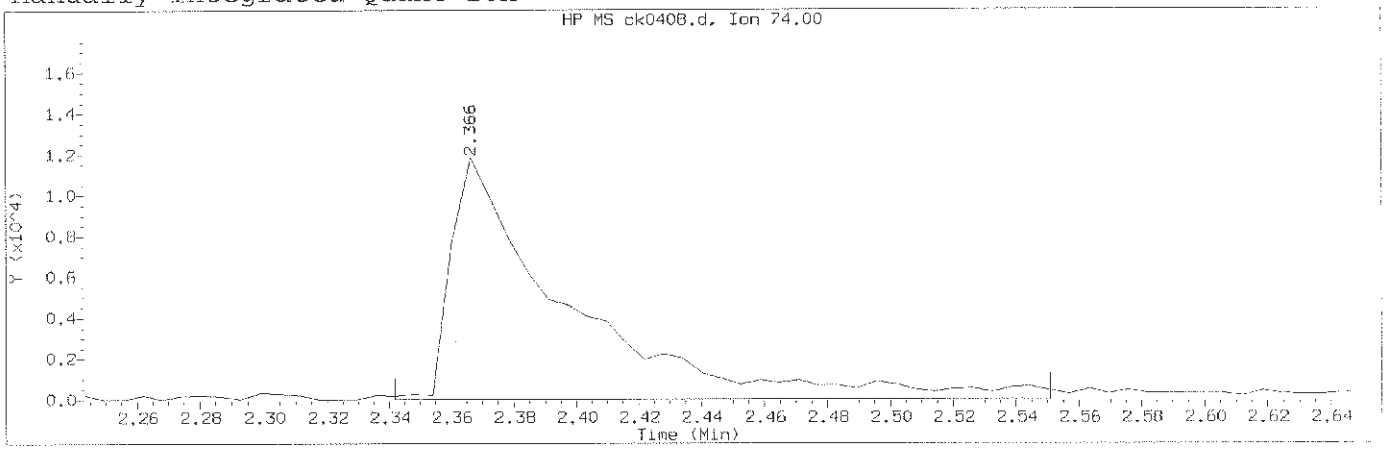
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

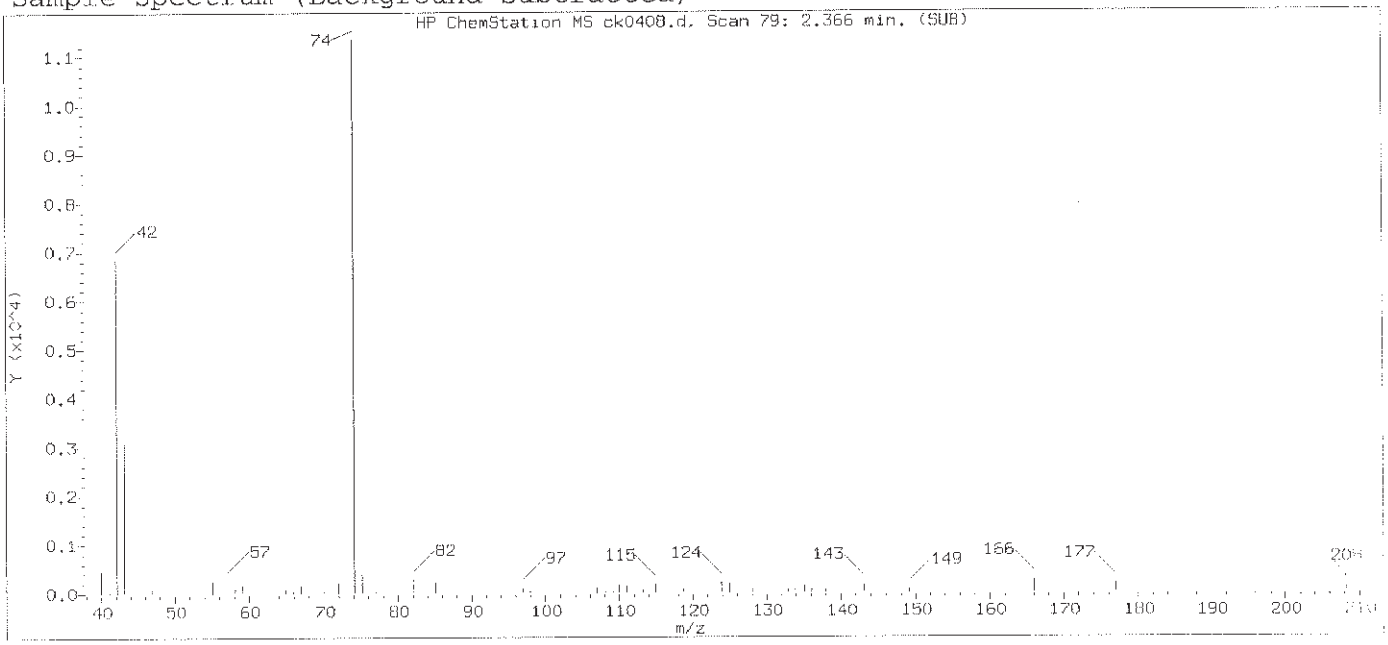
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area (flag)	: 30798M		
On-Column Amount (ng/ul)	: 4.8243		
Integration start scan	: 74	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

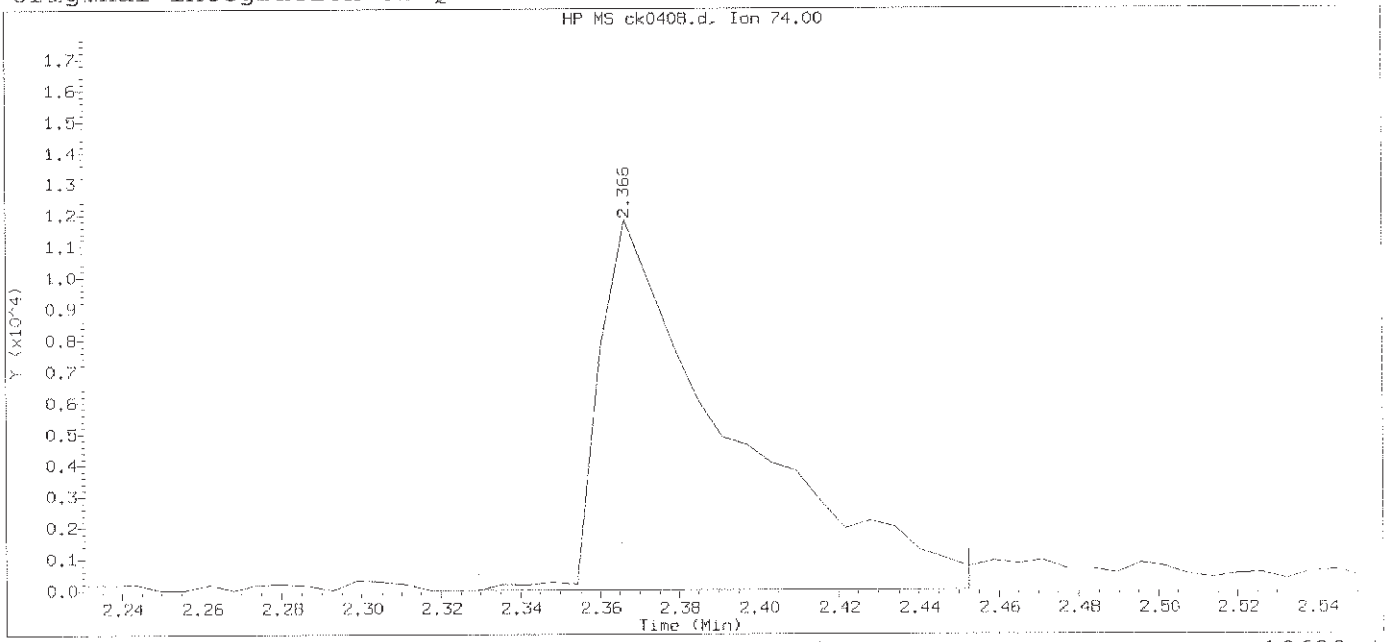
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area	: 27002		
On-column Amount (ng/ul)	: 4.3153		
Integration start scan	: 72	Integration stop scan:	92
Y at integration start	: 0	Y at integration end:	0

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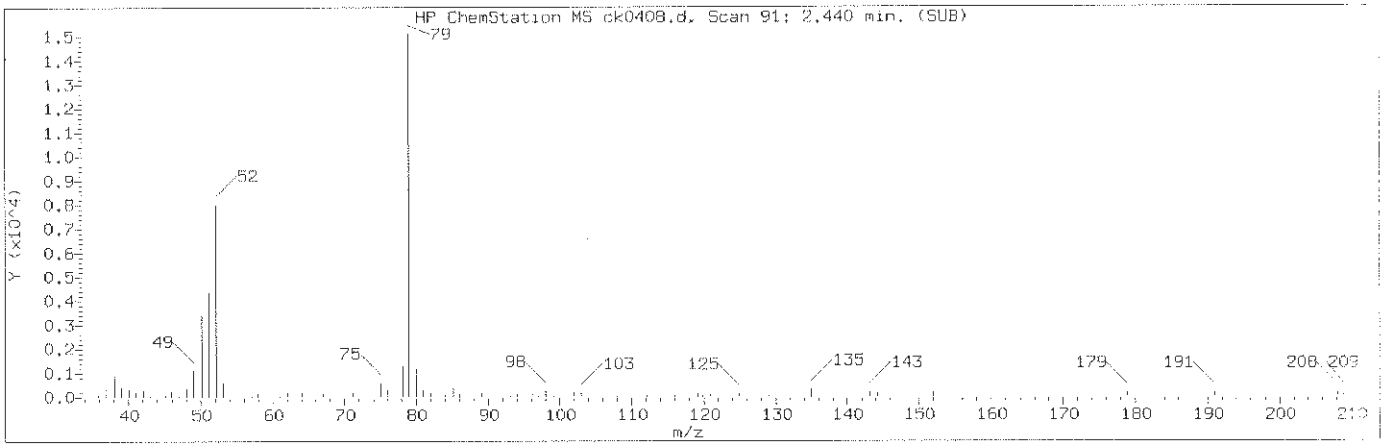
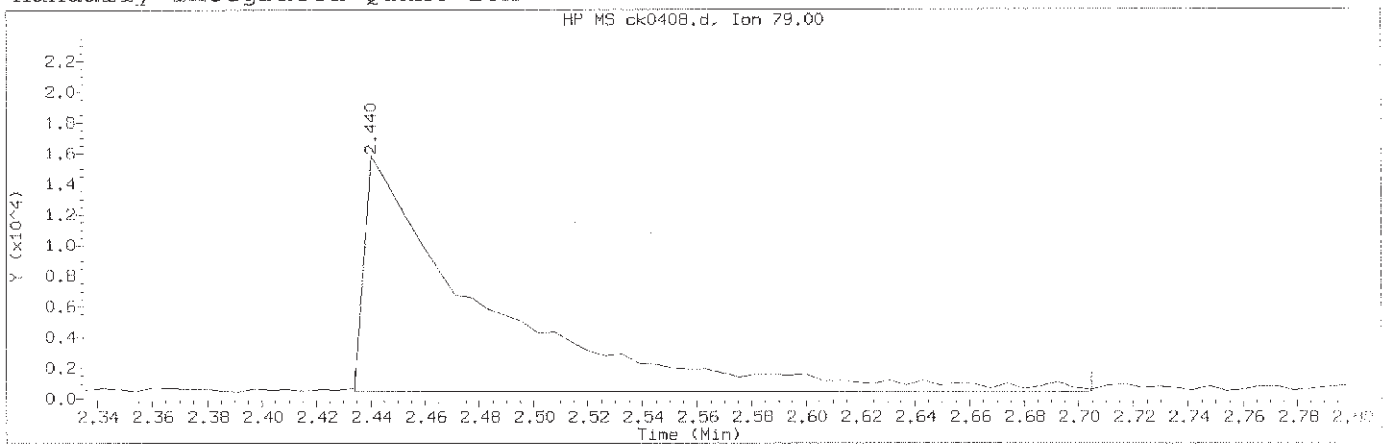
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area (flag)	: 46666M		
On-Column Amount (ng/ul)	: 4.7151		
Integration start scan	: 89	Integration stop scan:	133
Y at integration start	: 470	Y at integration end:	470

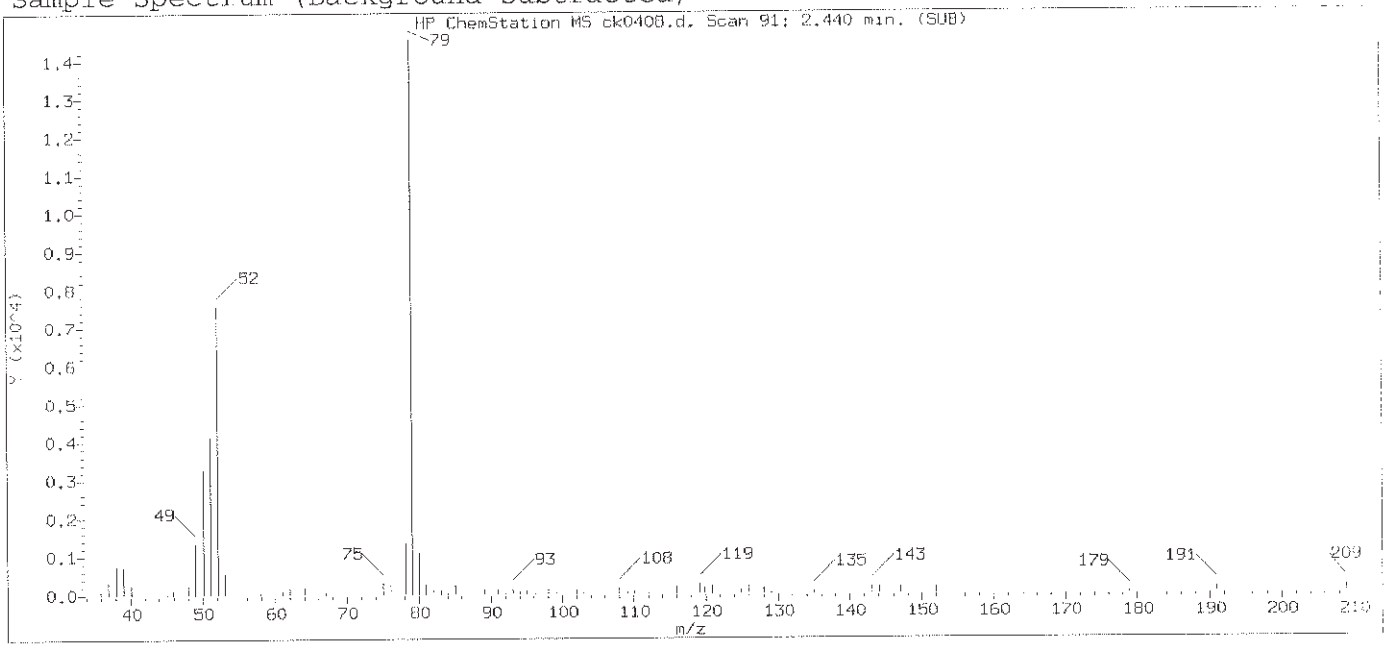
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

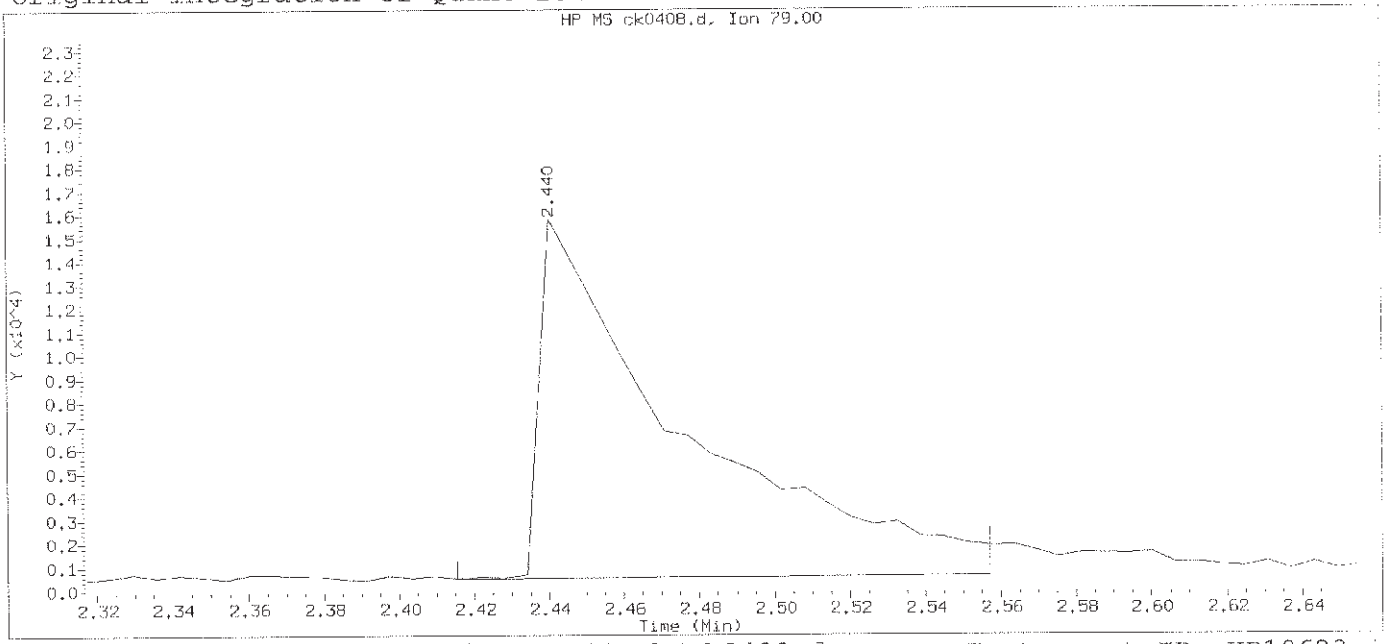
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

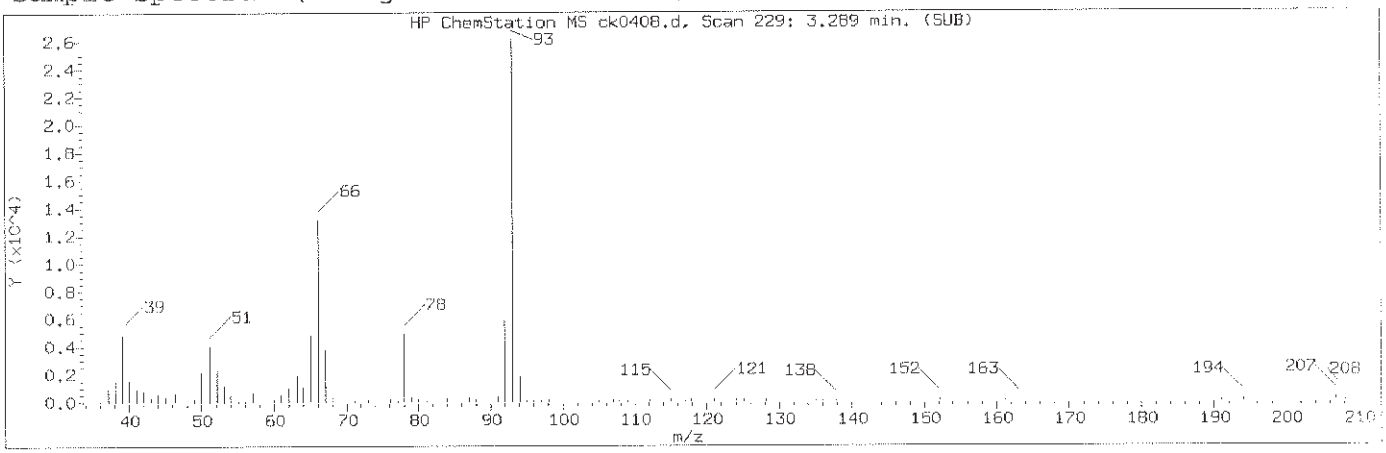
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

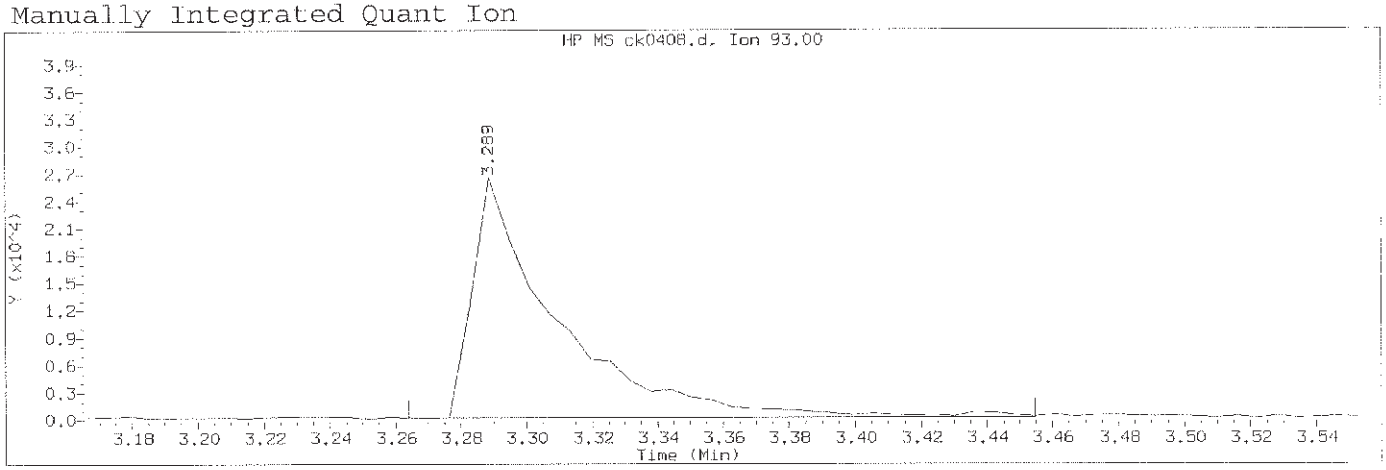
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area	: 39804		
On-column Amount (ng/ul)	: 4.1169		
Integration start scan	: 86	Integration stop scan:	109
Y at integration start	: 509	Y at integration end:	615

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area (flag)	: 46917M		
On-Column Amount (ng/ul)	: 4.6455		
Integration start scan	: 224	Integration stop scan:	255
Y at integration start	: 257	Y at integration end:	257

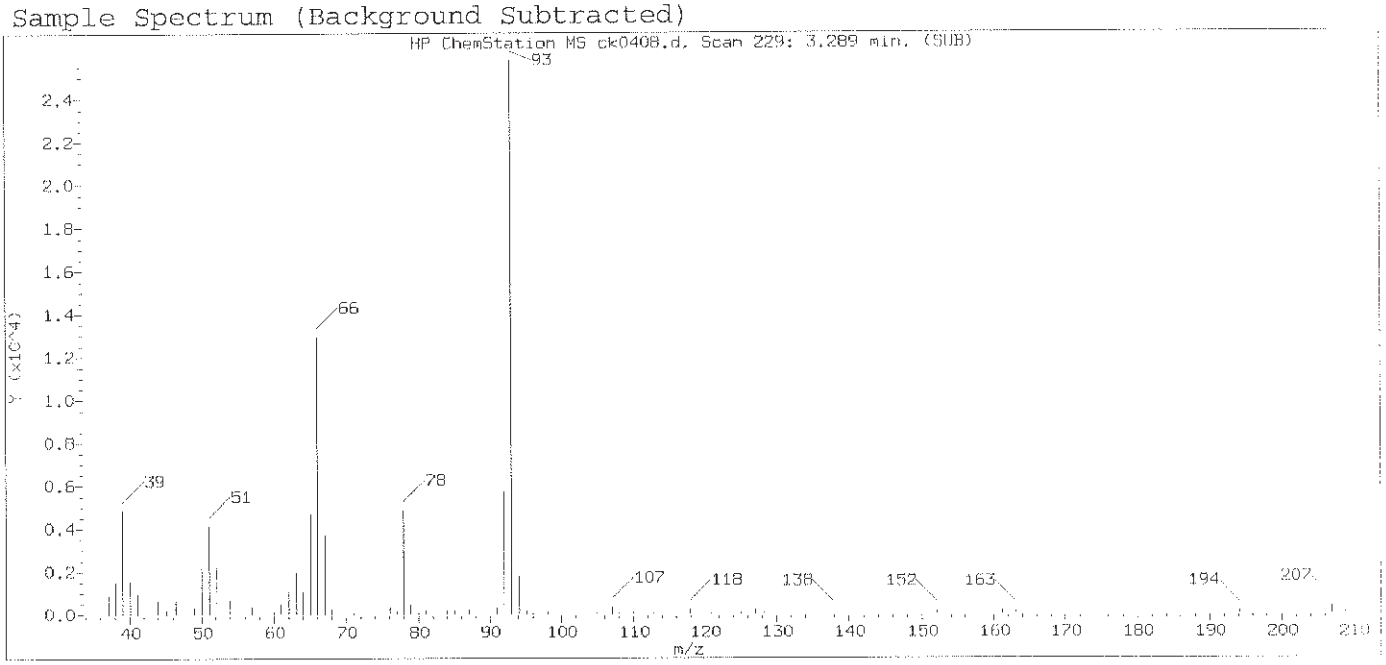
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

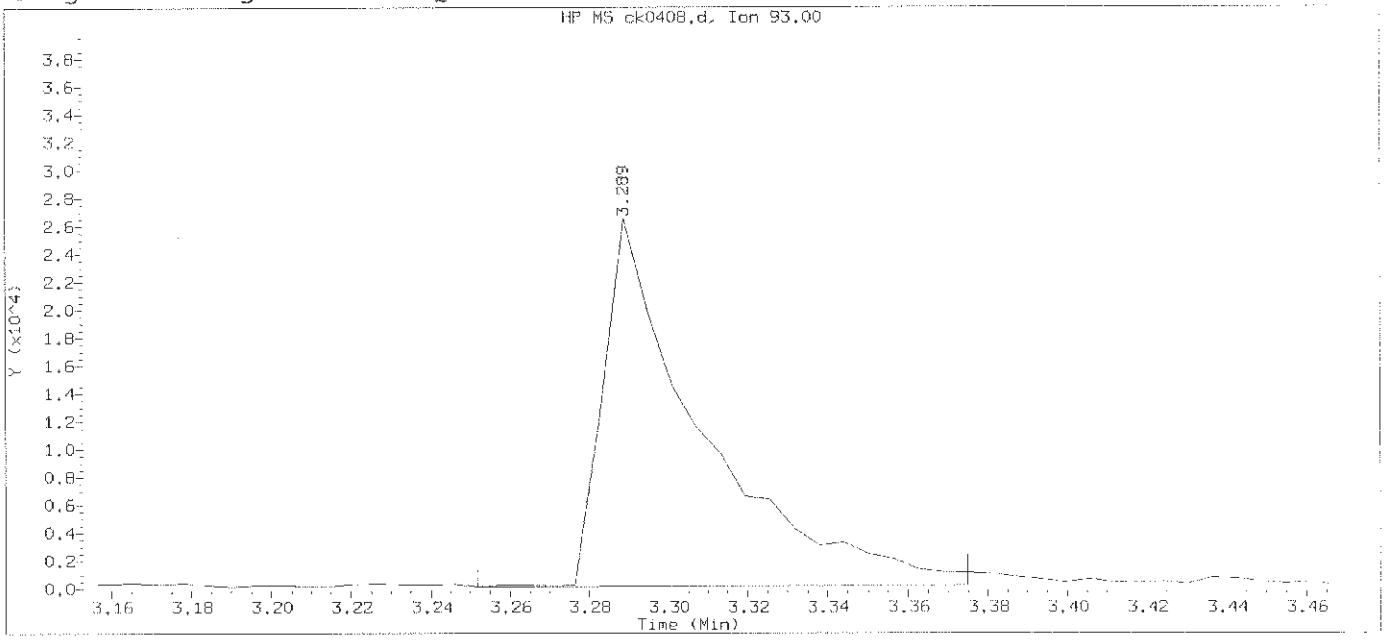
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

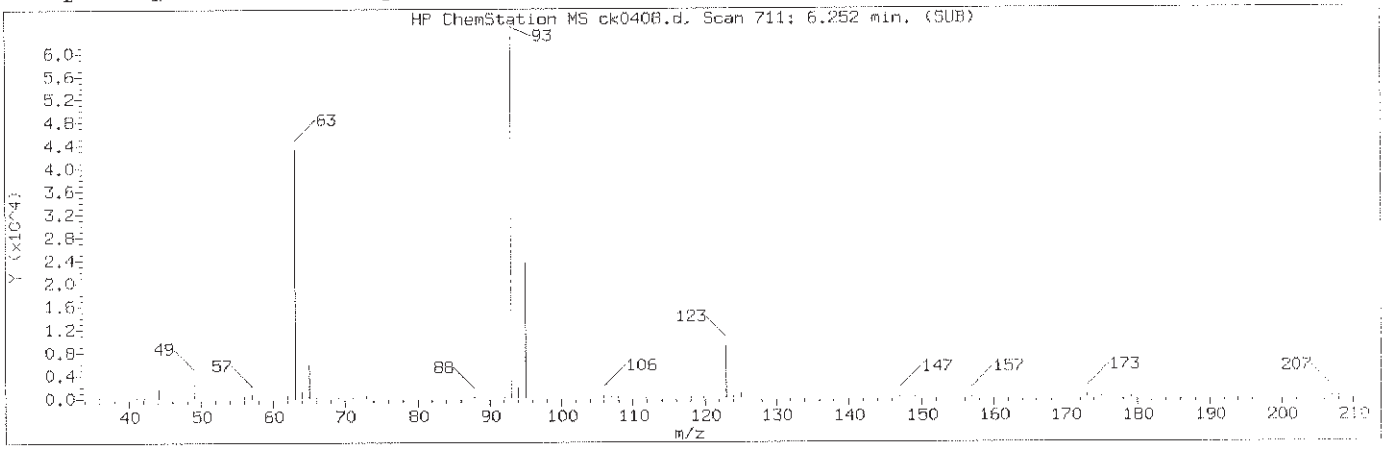
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

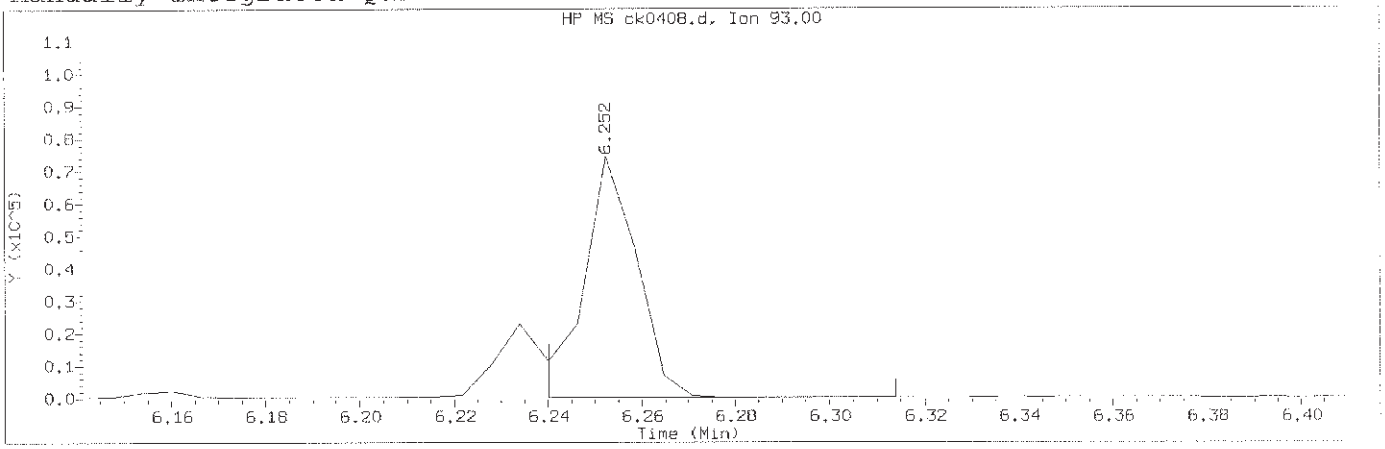
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area	: 45357		
On-column Amount (ng/ul)	: 4.5144		
Integration start scan	: 222	Integration stop scan:	242
Y at integration start	: 158	Y at integration end:	242

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 58319A		
On-Column Amount (ng/ul)	: 4.7749		
Integration start scan	: 708	Integration stop scan:	720
Y at integration start	: 168	Y at integration end:	168

Reason for manual integration: improper integration

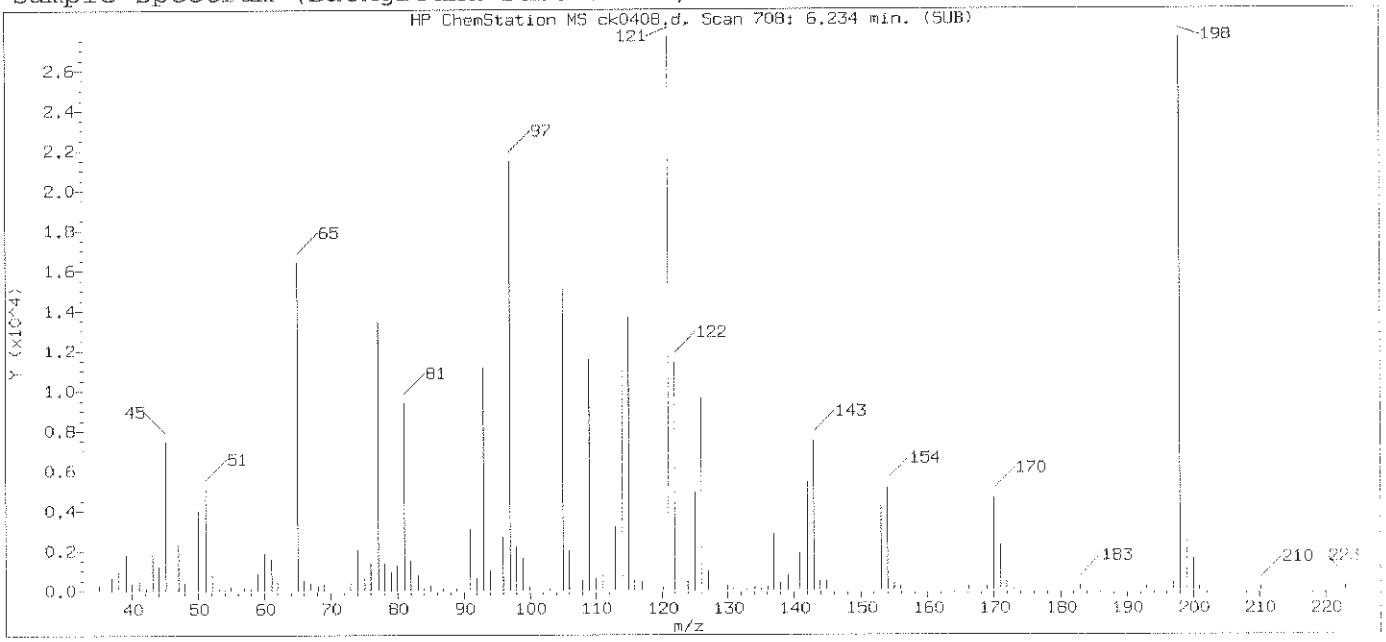
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.1 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

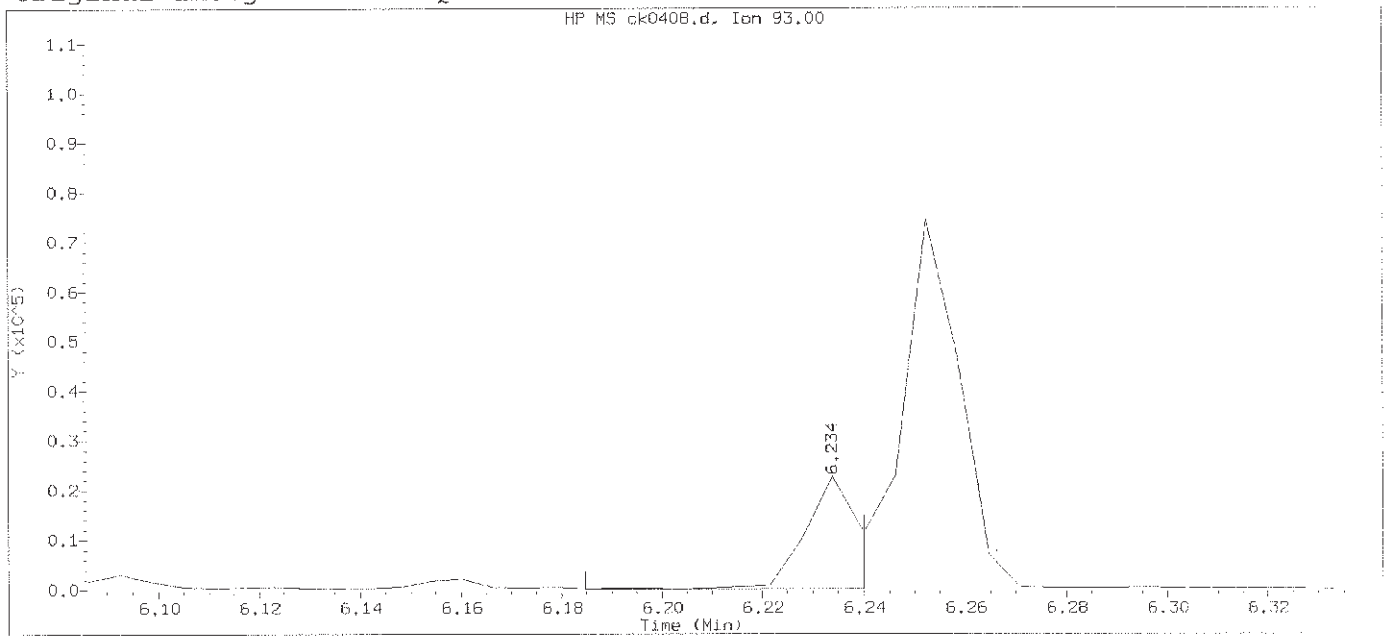
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

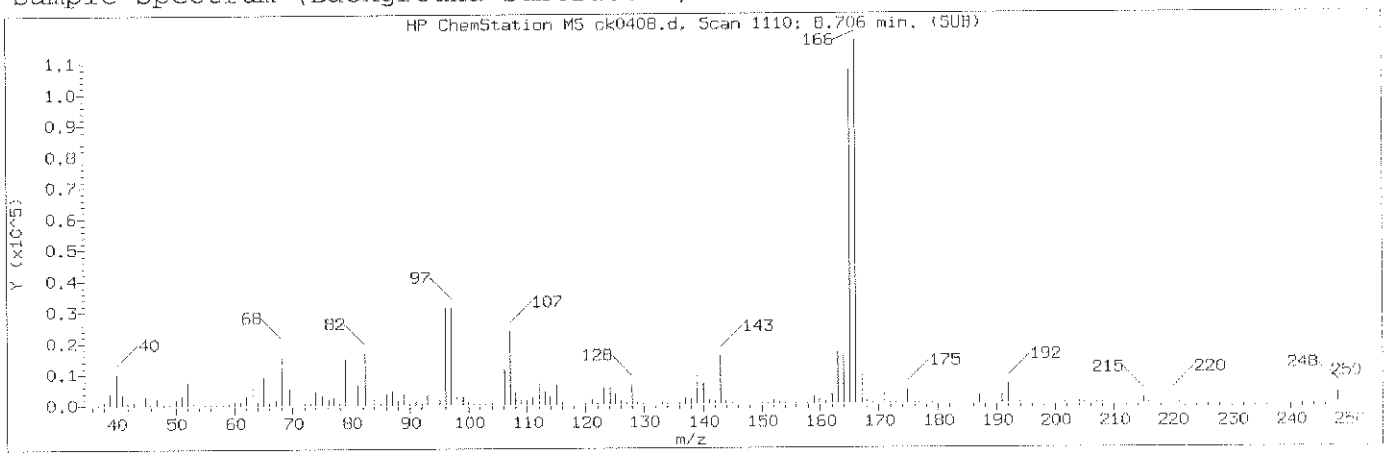
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

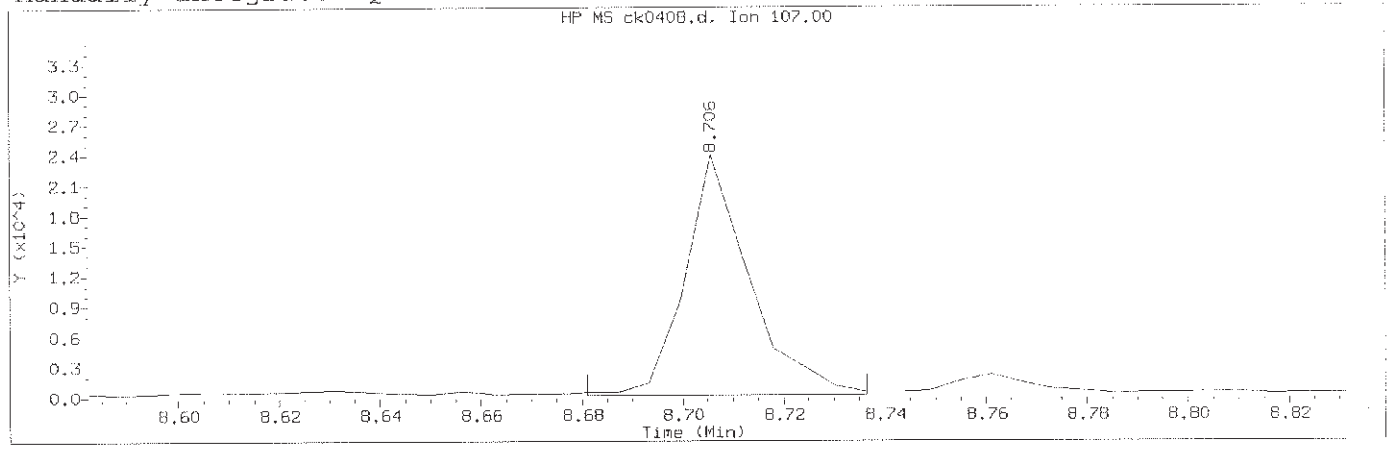
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 14835		
On-column Amount (ng/ul)	: 1.2624		
Integration start scan	: 699	Integration stop scan:	708
Y at integration start	: 168	Y at integration end:	168

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area (flag)	: 21030M		
On-Column Amount (ng/ul)	: 4.6316		
Integration start scan	: 1105	Integration stop scan:	1114
Y at integration start	: 198	Y at integration end:	198

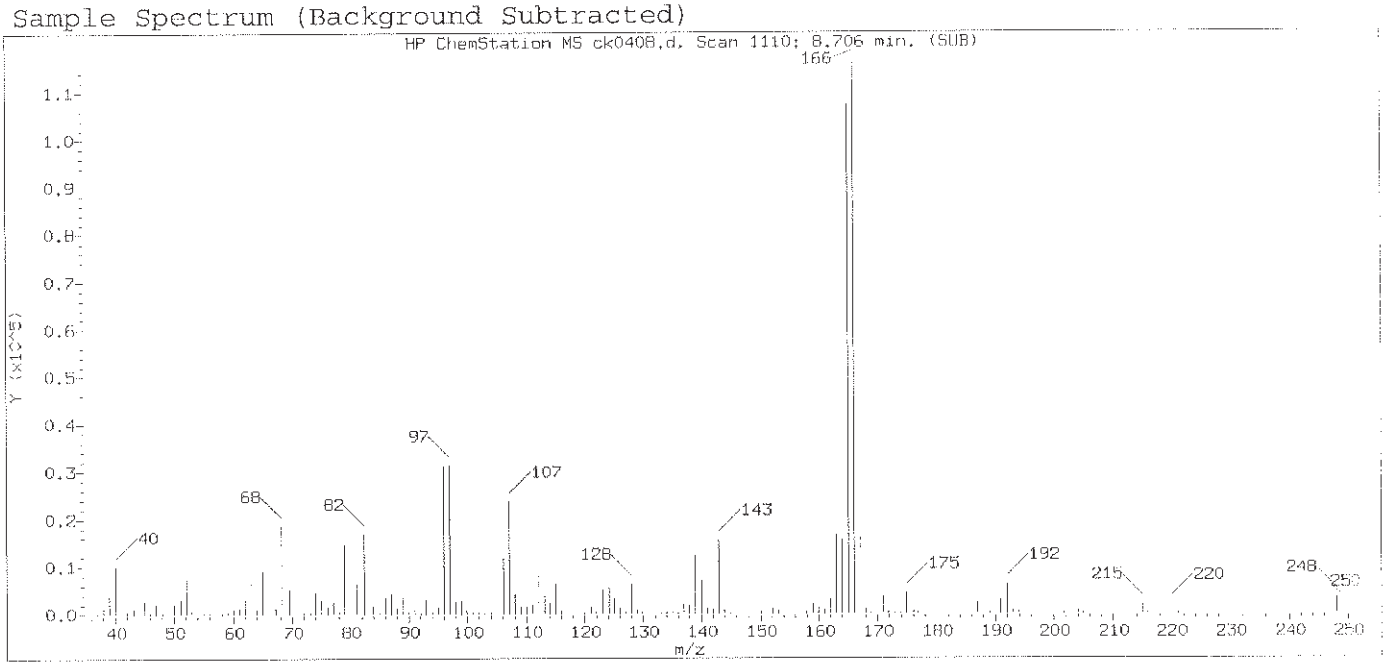
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

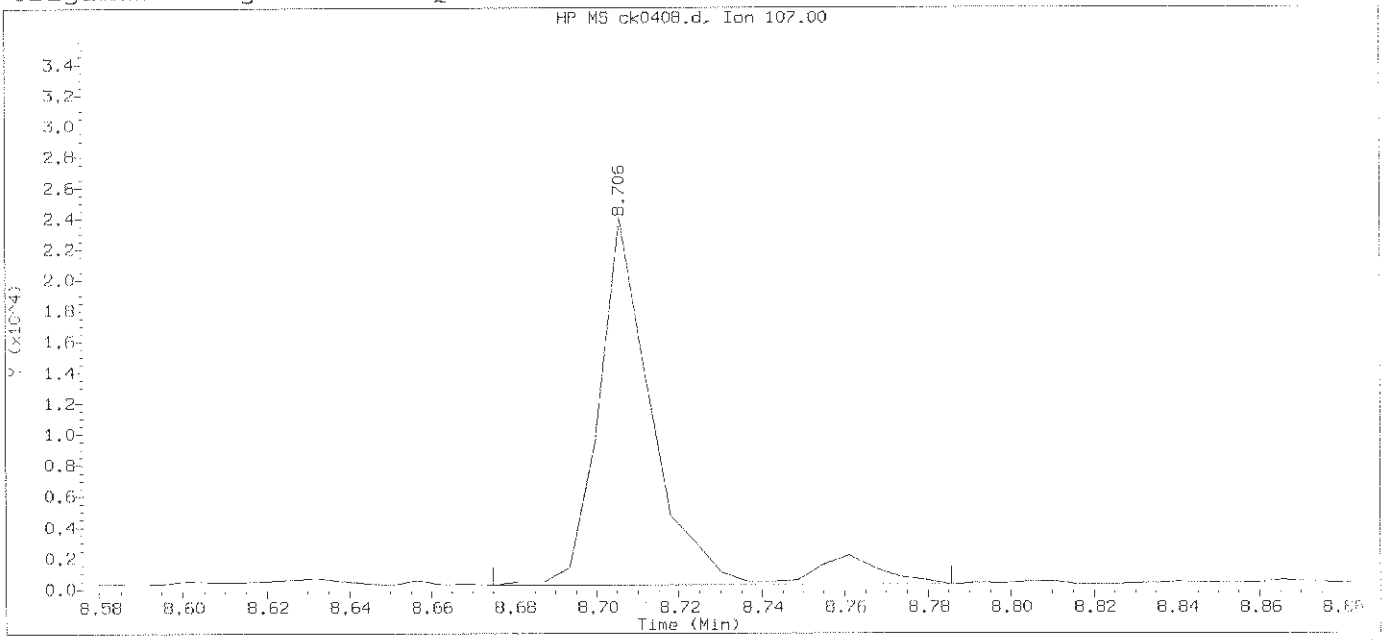
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

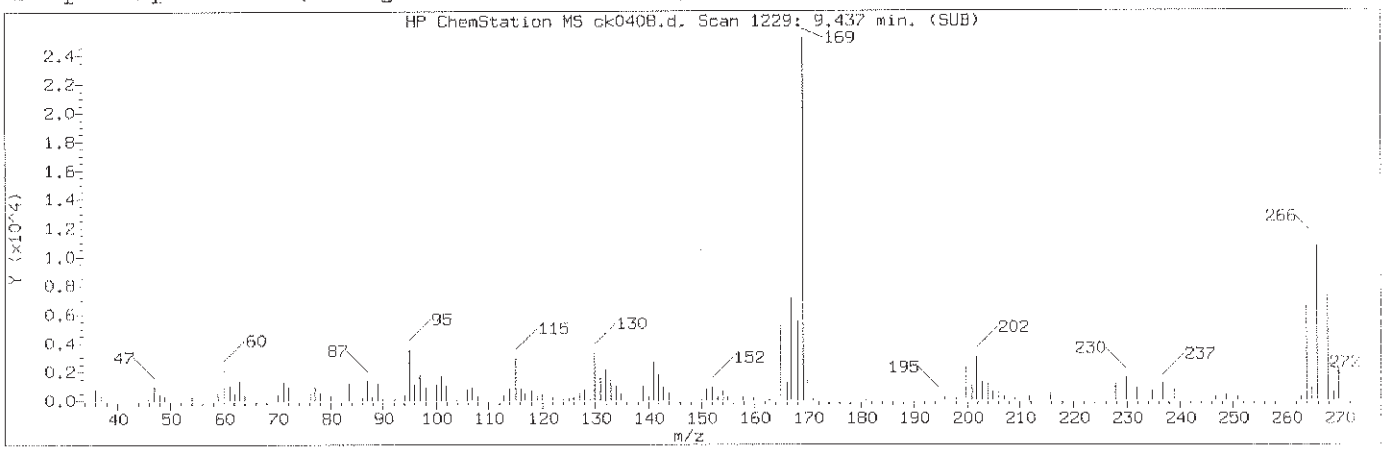
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

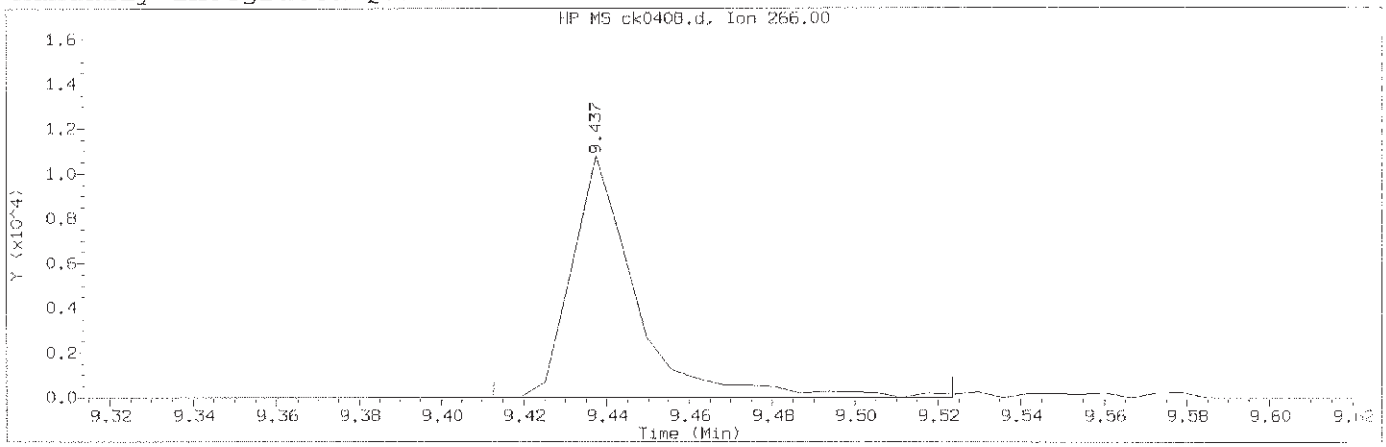
Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area	: 22717		
On-column Amount (ng/ul)	: 4.9421		
Integration start scan	: 1104	Integration stop scan:	1122
Y at integration start	: 274	Y at integration end:	311

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

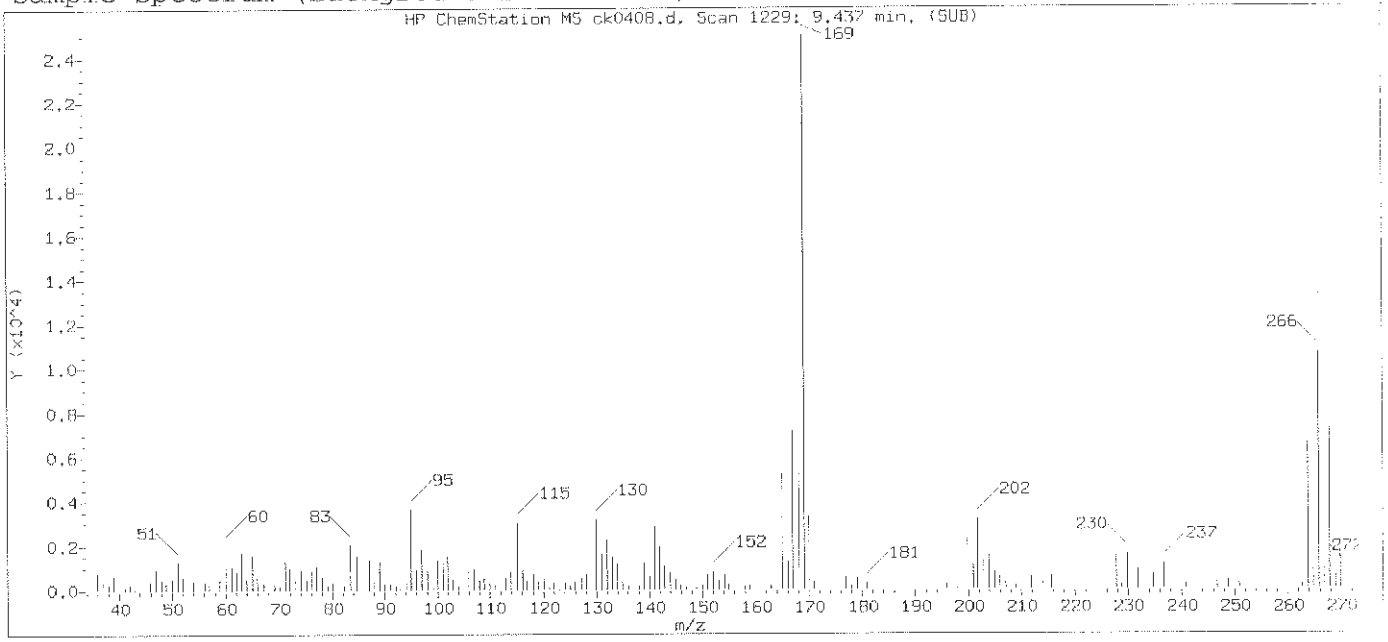
Compound Number	: 131		
Compound Name	: Pentachlorophenol		
Scan Number	: 1229		
Retention Time (minutes)	: 9.437		
Quant Ion	: 266.00		
Area (flag)	: 11754M		
On-Column Amount (ng/ul)	: 4.2439		
Integration start scan	: 1224	Integration stop scan:	1242
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

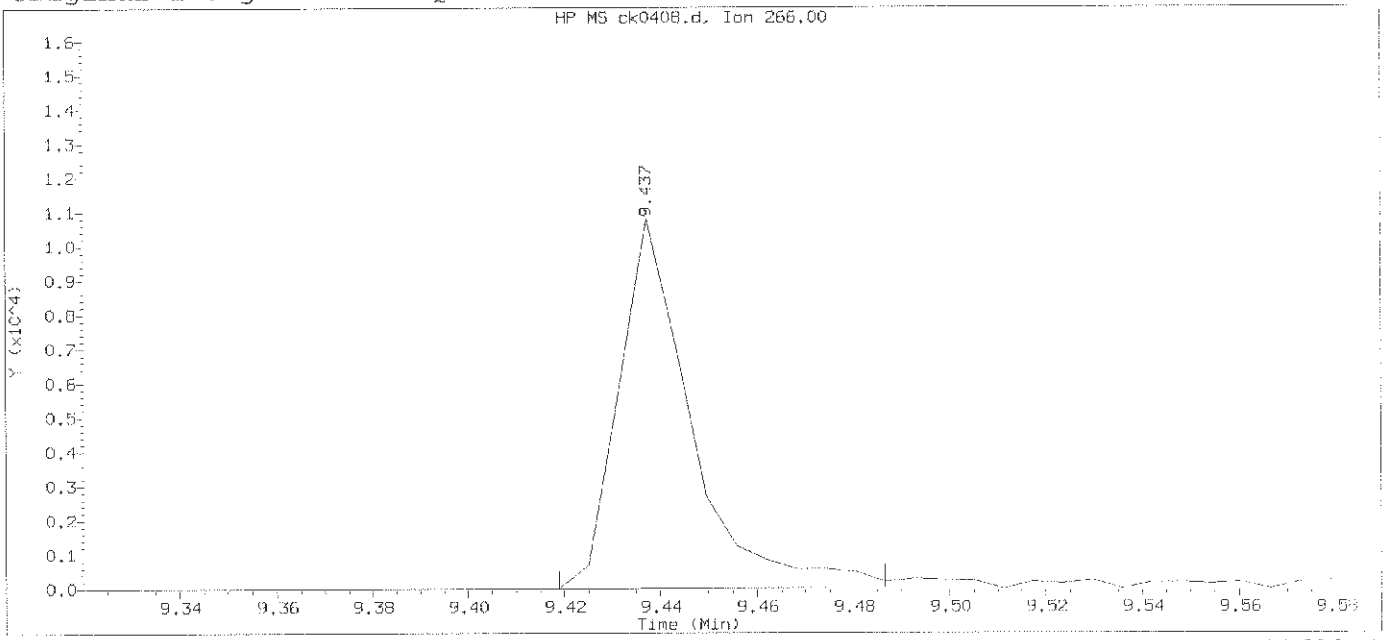
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

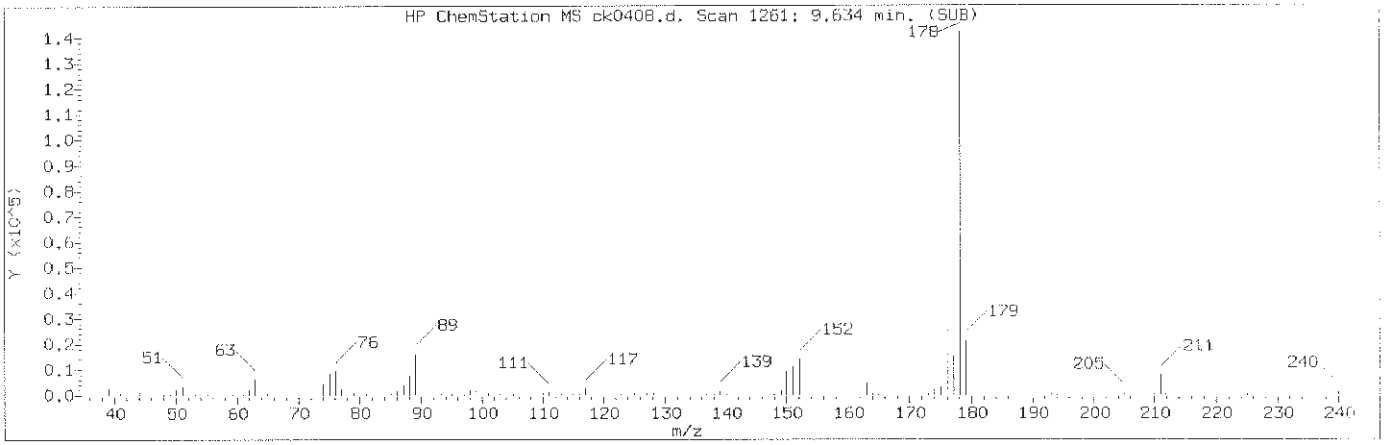
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

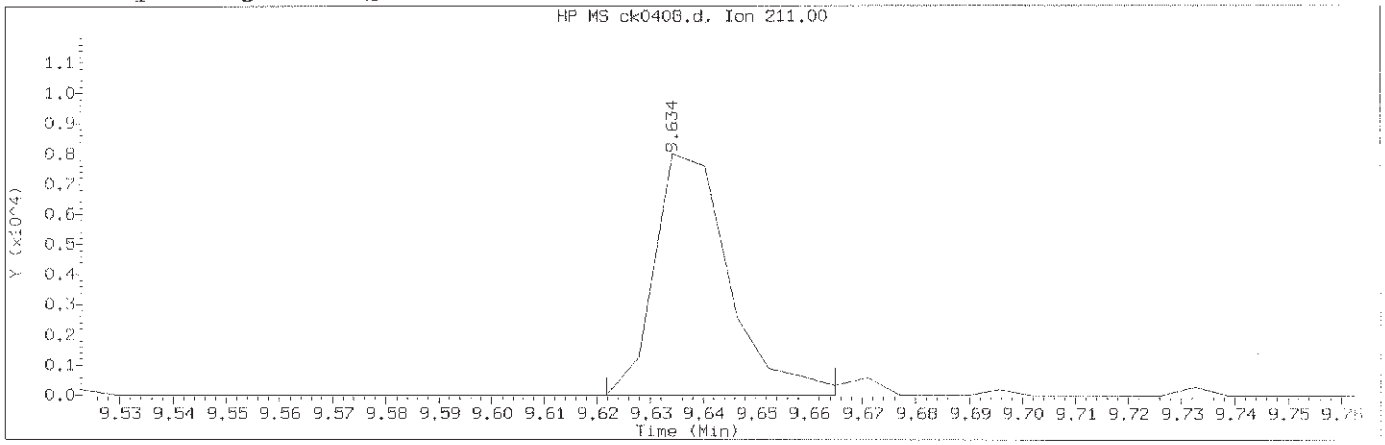
Compound Number	: 131		
Compound Name	: Pentachlorophenol		
Scan Number	: 1229		
Retention Time (minutes)	: 9.437		
Quant Ion	: 266.00		
Area	: 11208		
On-column Amount (ng/ul)	: 4.0737		
Integration start scan	: 1225	Integration stop scan:	1236
Y at integration start	: 0	Y at integration end:	42

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 7839M		
On-Column Amount (ng/ul)	: 2.7451		
Integration start scan	: 1258	Integration stop scan:	1265
Y at integration start	: 3	Y at integration end:	3

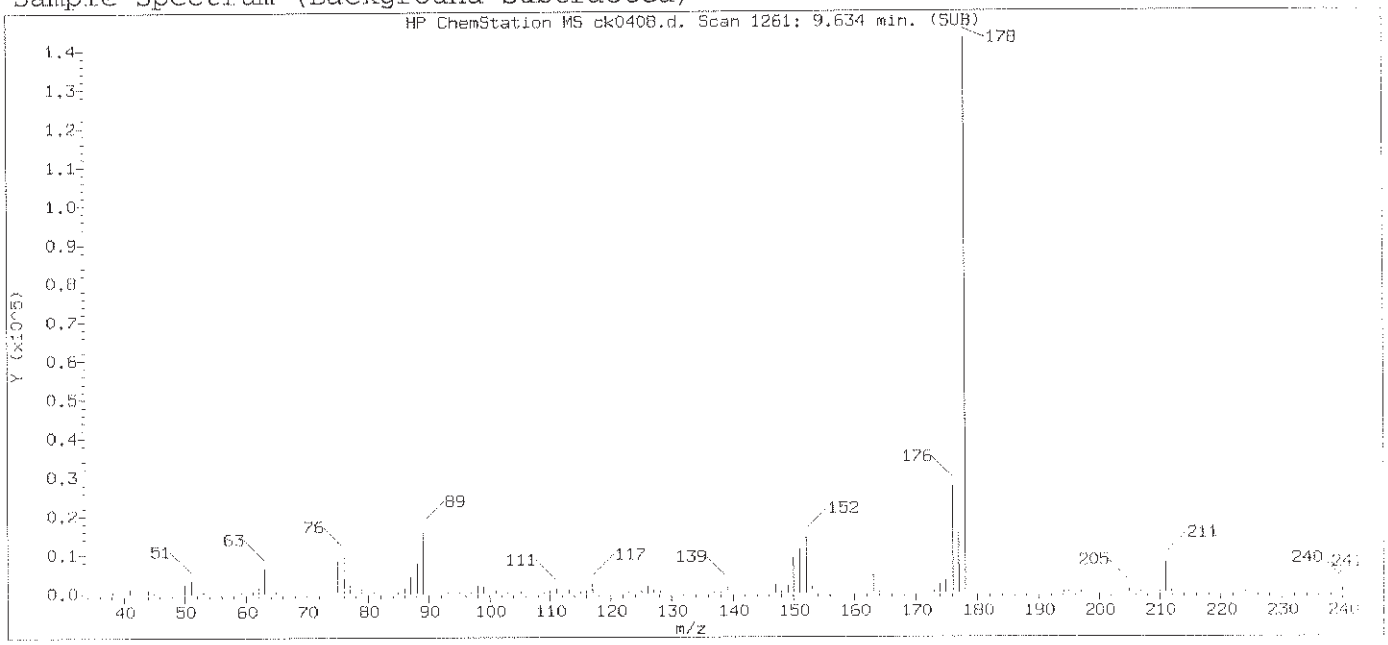
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

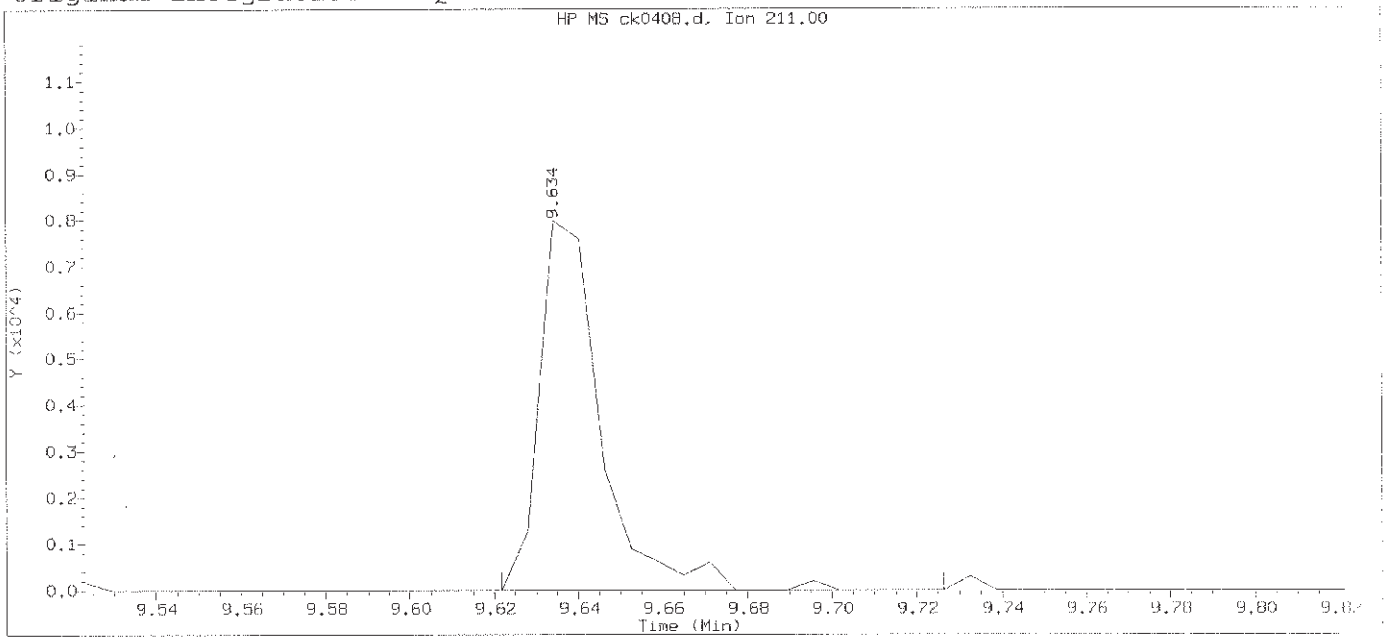
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

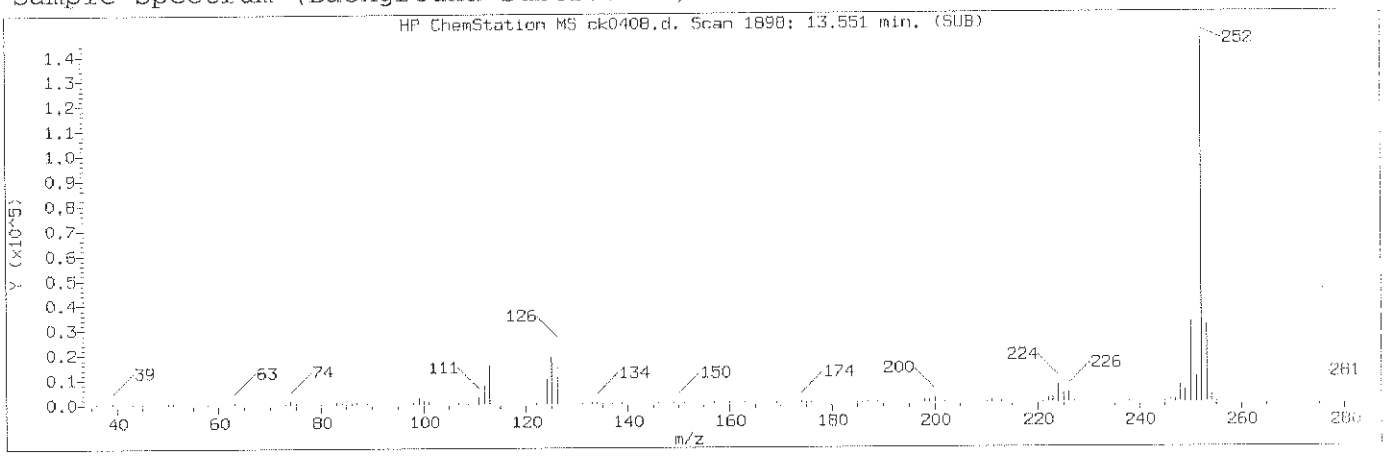
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

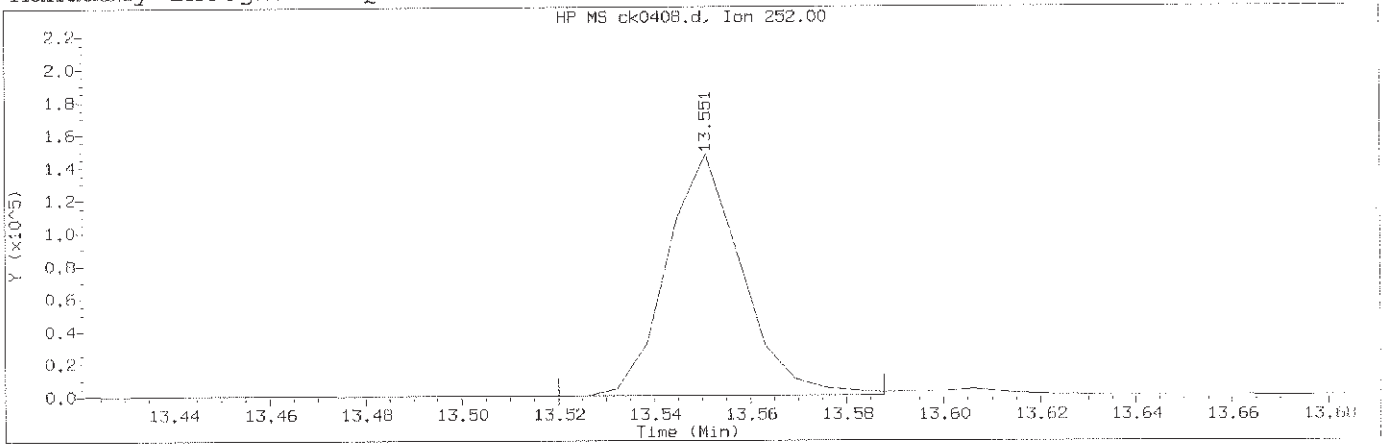
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area	: 8140		
On-column Amount (ng/ul)	: 2.8408		
Integration start scan	: 1258	Integration stop scan:	1275
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area (flag)	: 160113M		
On-Column Amount (ng/ul)	: 4.4720		
Integration start scan	: 1892	Integration stop scan:	1903
Y at integration start	: 180	Y at integration end:	180

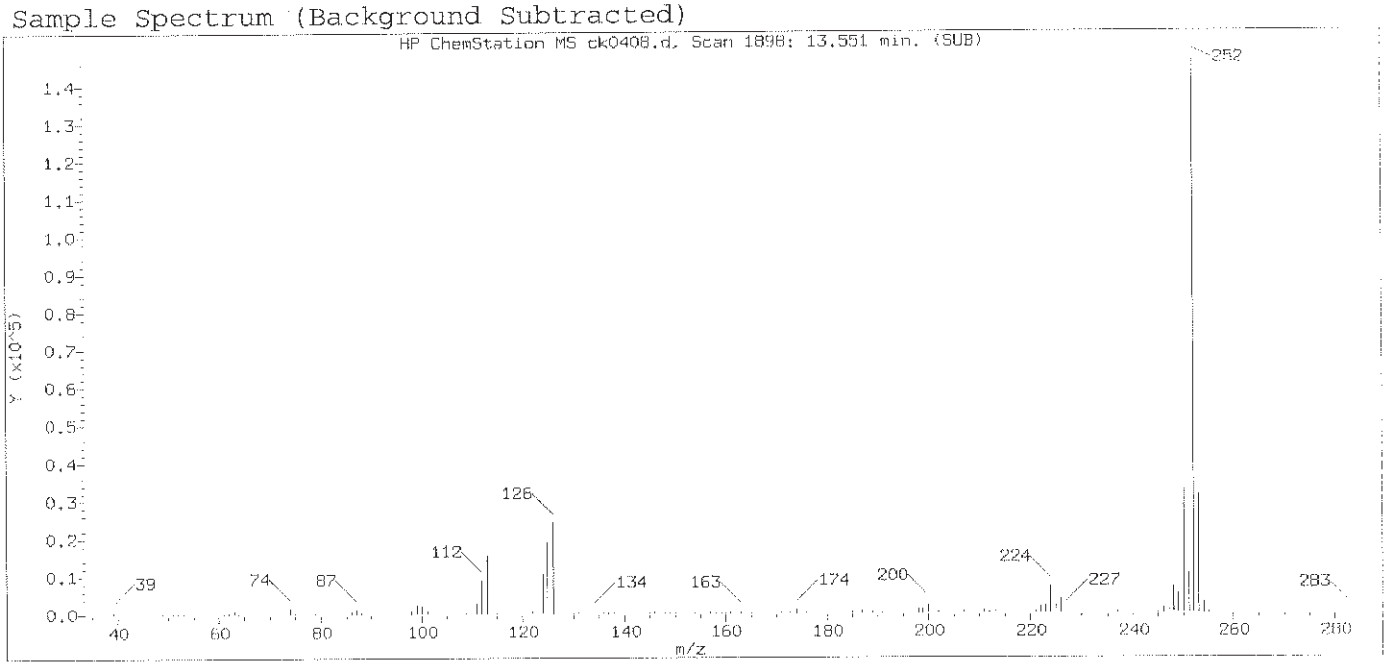
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

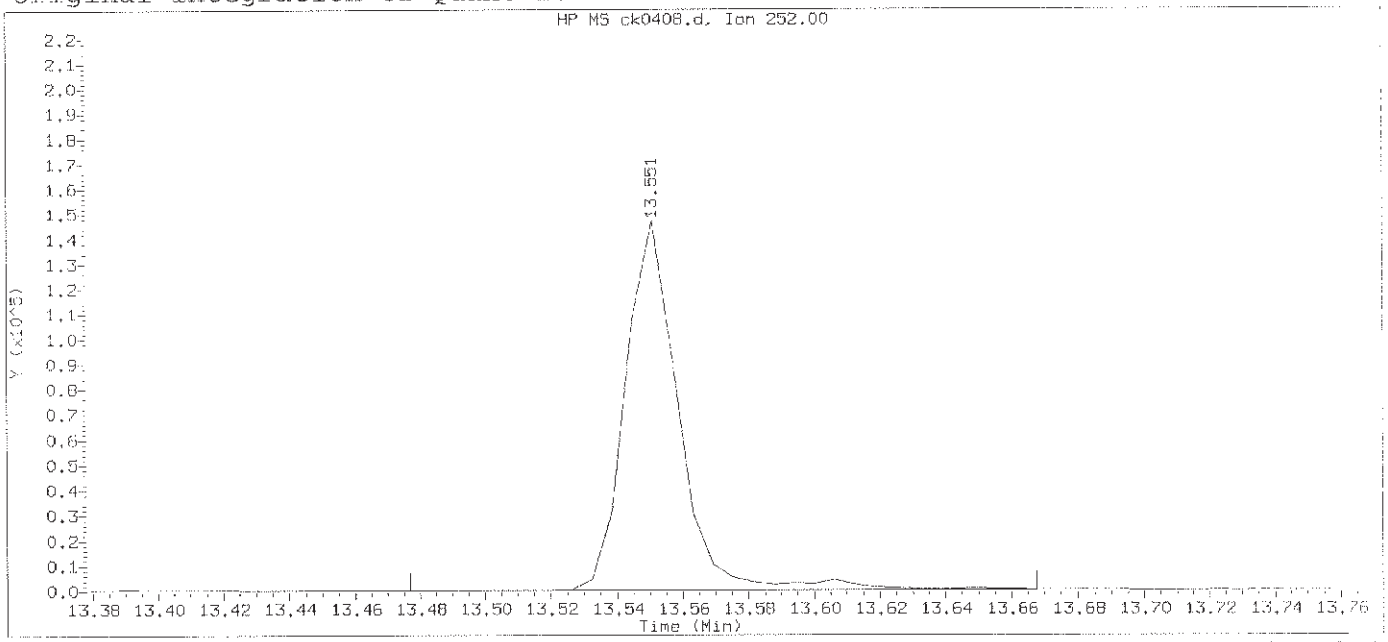
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



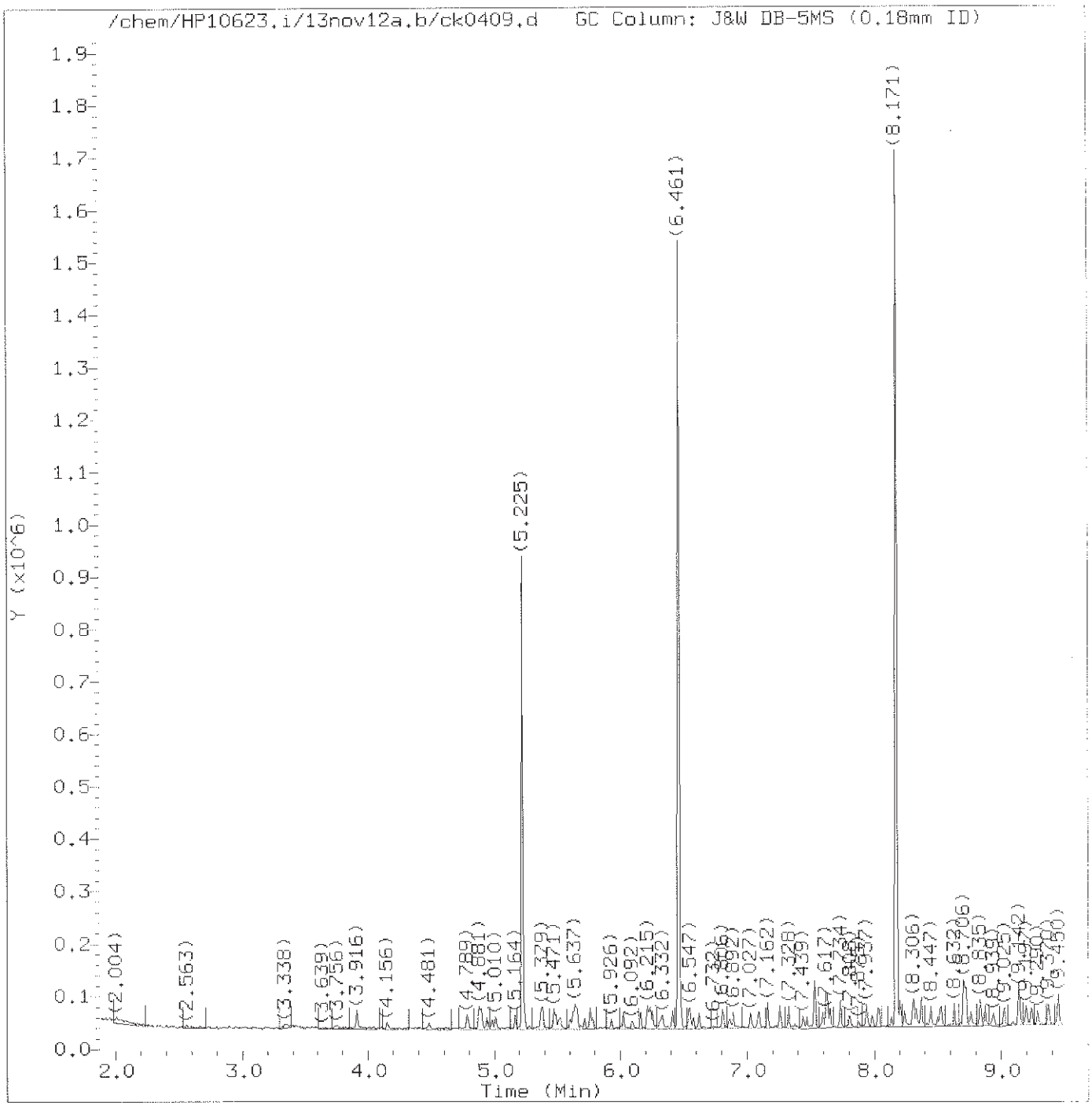
Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area	: 166771		
On-column Amount (ng/ul)	: 4.6365		
Integration start scan	: 1885	Integration stop scan:	1916
Y at integration start	: 155	Y at integration end:	191

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

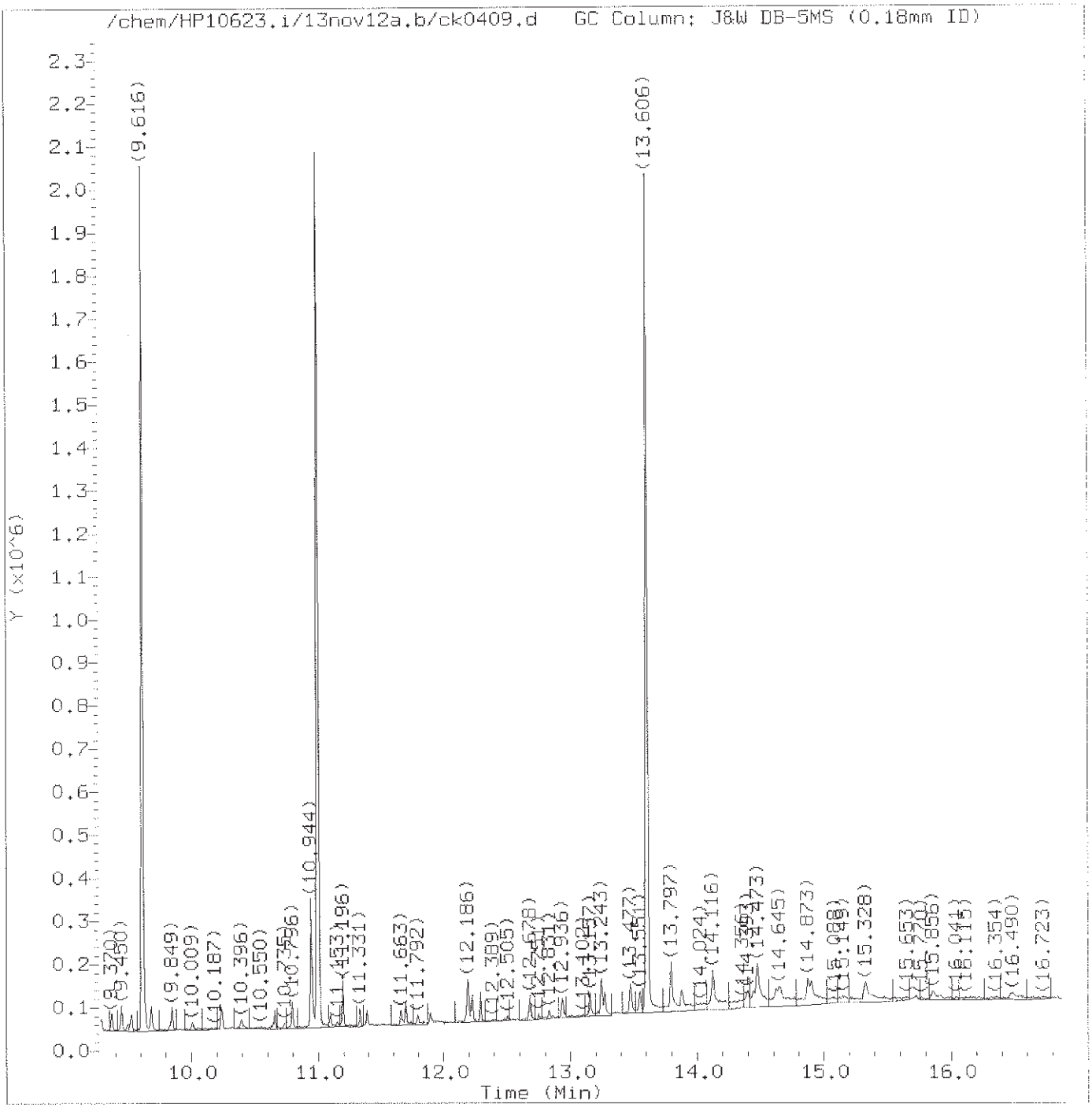
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.010	88	1286	0.308
2) N-Nitrosodimethylamine	(1)	2.446	74	4782M	0.618
3) Pyridine	(1)	2.557	79	5630M	0.470
5) 2-Picoline	(1)	3.338	93	6732A	0.550
6) N-Nitrosomethylethylamine	(1)	3.424	88	4056	0.693
7) Methyl methanesulfonate	(1)	3.756	80	2702	0.459
9)$2-Fluorophenol	(1)	3.916	112	10172	0.532
10) N-Nitrosodiethylamine	(1)	4.156	102	2563	0.441
11) Ethyl methanesulfonate	(1)	4.481	109	2419	0.457
12) Benzaldehyde	(1)	4.789	77	5939M	0.000
14)$Phenol-d5	(1)	4.881	99	13505	0.480
15)$Phenol-d6	(1)	4.881	99	13505	0.480
16) Phenol	(1)	4.893	94	8425	0.514
13) Aniline	(1)	4.900	93	9956	0.512
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6701	0.575
19) 2-Chlorophenol	(1)	5.010	128	5106	0.499
20) 1,3-Dichlorobenzene	(1)	5.164	146	4881	0.473
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	127703	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	5492	0.521
24) Benzyl alcohol	(1)	5.373	108	4451	0.556
25) 1,2-Dichlorobenzene	(1)	5.385	146	5170	0.523
206) Indene	(1)	5.471	115	10254	0.464
26) 2-Methylphenol	(1)	5.490	108	5233	0.481
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9102	0.635
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	9102	0.634
29) N-Nitrosopyrrolidine	(1)	5.600	100	3220	0.494
30) Acetophenone	(1)	5.619	105	8327	0.513
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	4625	0.445
33) 4-Methylphenol	(1)	5.644	108	6317	0.490
32) N-Nitrosomorpholine	(1)	5.644	56	3651	0.493
34) o-Toluidine	(1)	5.656	106	9310	0.501
37) Hexachloroethane	(1)	5.717	117	2626	0.655
38)$Nitrobenzene-d5	(2)	5.760	82	12102	0.495
39) Nitrobenzene	(2)	5.779	77	6666	0.514
40) N-Nitrosopiperidine	(2)	5.926	114	2731	0.475
41) Isophorone	(2)	6.025	82	11831	0.502
42) 2-Nitrophenol	(2)	6.092	139	2047	0.454
44) 2,4-Dimethylphenol	(2)	6.160	107	6006	0.518
47) Benzoic acid	(2)	6.215	105	20488	2.728
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2442	0.505

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7322	0.512
49) 2,4-Dichlorophenol	(2)	6.332	162	3323	0.422
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	4308	0.519
52)*Naphthalene-d8	(2)	6.461	136	567410	20.000
56) 4-Chloroaniline	(2)	6.541	127	6227	0.475
57) 2,6-Dichlorophenol	(2)	6.547	162	3605	0.486
58) Hexachloropropene	(2)	6.578	213	2052	0.437
60) Hexachlorobutadiene	(2)	6.621	225	2327	0.559
194) Quinoline	(2)	6.806	129	11376	0.548
63) Caprolactam	(2)	6.861	113	1948	0.446
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4624	0.408
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5237	0.520
69) Safrole	(2)	7.095	162	4121	0.517
72) Hexachlorocyclopentadiene	(3)	7.328	237	1445	0.402
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3979	0.479
74) cis-Isosafrole	(3)	7.377	162	742	0.056
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2744	0.506
77) 2,4,5-Trichlorophenol	(3)	7.476	196	3145	0.532
78)$2-Fluorobiphenyl	(3)	7.531	172	22300	0.509
80) Isosafrole	(3)	7.599	162	4225	0.502
79) trans-Isosafrole	(3)	7.599	162	4225	0.447
83) 1,1'-Biphenyl	(3)	7.623	154	13762	0.510
84) 2-Chloronaphthalene	(3)	7.630	162	10411M	0.529
85) 1-Chloronaphthalene	(3)	7.654	162	9618M	0.497
88) Diphenyl ether	(3)	7.734	170	6818	0.507
89) 2-Nitroaniline	(3)	7.734	138	2739	0.427
90) 1,4-Naphthoquinone	(3)	7.808	158	3343	0.404
91) 1,4-Dinitrobenzene	(3)	7.875	168	873	3.749
92) Dimethylphthalate	(3)	7.937	163	11760	0.502
93) 1,3-Dinitrobenzene	(3)	7.943	168	1068M	3.147
94) 2,6-Dinitrotoluene	(3)	7.980	165	1780	0.365
97) 3-Nitroaniline	(3)	8.134	138	2352	0.395
98)*Acenaphthene-d10	(3)	8.171	164	348585	20.000
100) 2,4-Dinitrophenol	(3)	8.238	184	3378	10.432
103) 4-Nitrophenol	(3)	8.306	109	8114	2.200
101) Pentachlorobenzene	(3)	8.337	250	4002	0.557
105) 2,4-Dinitrotoluene	(3)	8.367	165	2067	0.328
104) Dibenzofuran	(3)	8.374	168	14343	0.493
106) 1-Naphthylamine	(3)	8.447	143	10944	0.457
107) 2,3,4,6-Tetrachlorophenol	(3)	8.496	232	1724	0.414

M = Compound was manually integrated.
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on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
108) 2-Naphthylamine	(3)	8.527	143	11175	0.457
109) Diethylphthalate	(3)	8.632	149	12675	0.524
110) Thionazin	(3)	8.706	107	2594	0.486
113) 5-Nitro-o-toluidine	(3)	8.718	152	2987	0.452
114) 4-Nitroaniline	(3)	8.718	138	2902	0.433
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	5937	0.533
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	2752	6.937
202) NDPA as diphenylamine	(4)	8.835	169	10468	0.478
117) N-Nitrosodiphenylamine	(4)	8.835	169	10468	0.479
118) 1,2-Diphenylhydrazine	(4)	8.872	77	13465	0.430
119)$2,4,6-Tribromophenol	(3)	8.939	330	1702	0.404
120) Tetraethyldithiopyrophosphate	(4)	9.019	97	2082	0.466
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	470M	6.992
122) Diallate (peak 1)	(4)	9.136	86	5989	0.374
123) Phorate	(4)	9.142	75	8029	0.416
124) Phenacetin	(4)	9.142	108	6574	0.435
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2949	0.490
126) Diallate (peak 2)	(4)	9.216	86	1113M	0.160
128) Dimethoate	(4)	9.290	87	5411	0.459
130) Atrazine	(4)	9.376	200	3859	0.551
131) Pentachlorophenol	(4)	9.443	266	1259	0.382
132) Pentachloronitrobenzene	(4)	9.450	237	988	0.383
133) 4-Aminobiphenyl	(4)	9.450	169	11704	0.495
134) Pronamide	(4)	9.529	173	5041	0.442
135)*Phenanthrene-d10	(4)	9.616	188	652252	20.000
136) Dinoseb	(4)	9.634	211	673M	6.963
140) Carbazole	(4)	9.849	167	18309	0.481
141) Methyl parathion	(4)	10.009	109	2207	2.640
142) Di-n-butylphthalate	(4)	10.237	149	21063	0.469
143) Parathion	(4)	10.396	109	1300M	3.162
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	574	6.753
146) Isodrin	(4)	10.655	193	2330	0.544
152) Benzidine	(5)	10.944	184	116323	3.532
167)*Pyrene-d10	(5)	10.999	212	804495	20.000
156)$Terphenyl-d14	(5)	11.196	244	27844	0.484
158) p-Dimethylaminoazobenzene	(5)	11.331	225	3798	0.436
159) Chlorobenzilate	(5)	11.393	139	5487	0.405
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	11604	0.421
161) Butylbenzylphthalate	(5)	11.694	149	9560	0.448
162) 2-Acetylaminofluorene	(5)	11.897	181	6080	0.315

M = Compound was manually integrated.
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on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

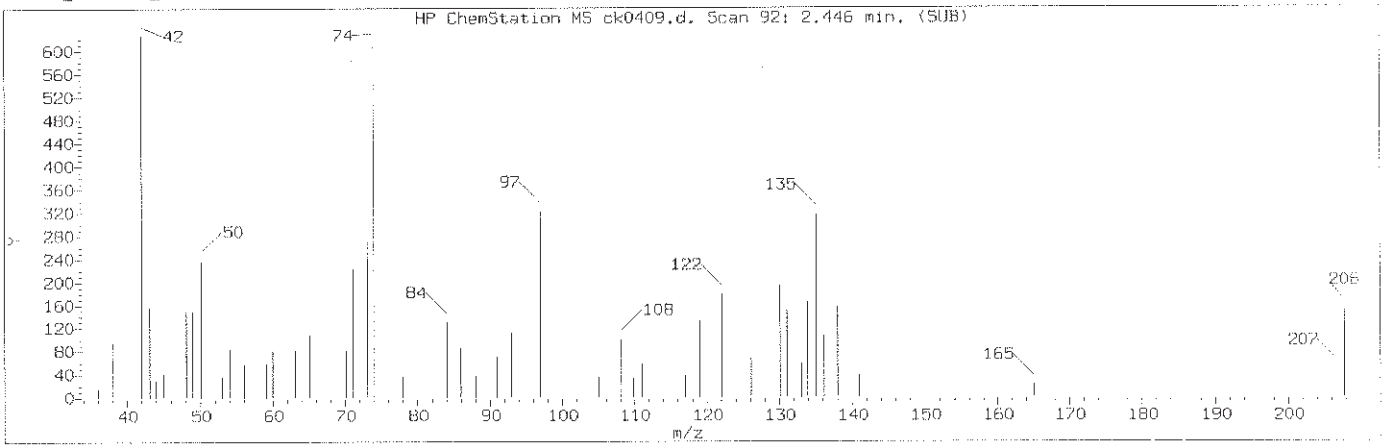
Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	7076	0.455
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3337	0.440
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	16083	0.544
189) 6-Methylchrysene	(5)	12.678	242	14148	0.483
170) Di-n-octylphthalate	(6)	12.936	149	20342	0.363
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7422	0.352
175)*Perylene-d12	(6)	13.606	264	742890	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	10230	0.461
190) Dibenz(a,h)acridine	(6)	14.393	279	11353	0.353
191) Dibenz(a,j)acridine	(6)	14.448	279	11301	0.306
129) Diallate TRANS/CIS	(4)			7102	0.534

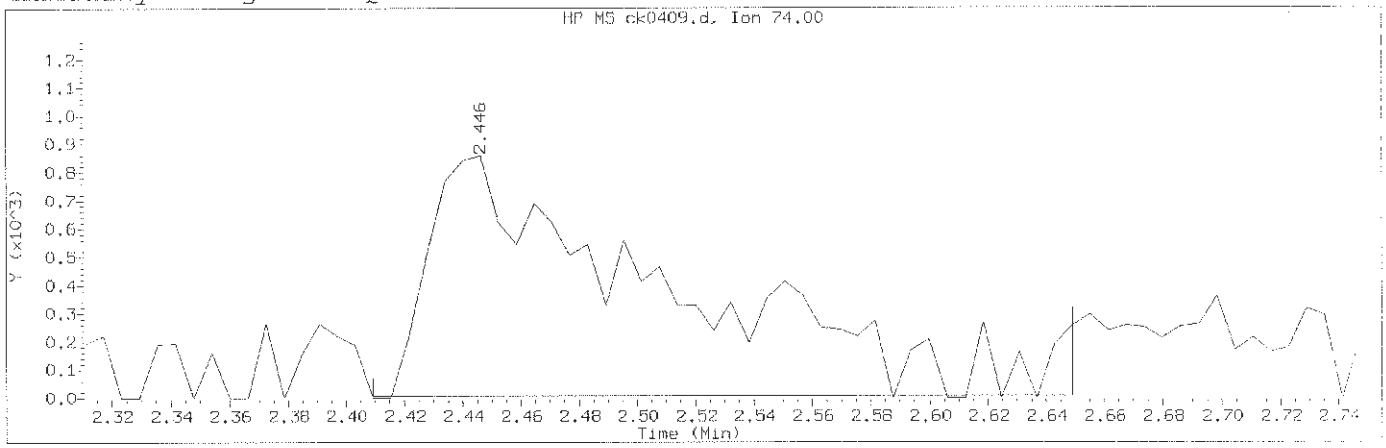
* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 92		
Retention Time (minutes)	: 2.446		
Quant Ion	: 74.00		
Area (flag)	: 4782M		
On-Column Amount (ng/ul)	: 0.6184		
Integration start scan	: 85	Integration stop scan:	124
Y at integration start	: 8	Y at integration end:	8

Reason for manual integration: improper integration

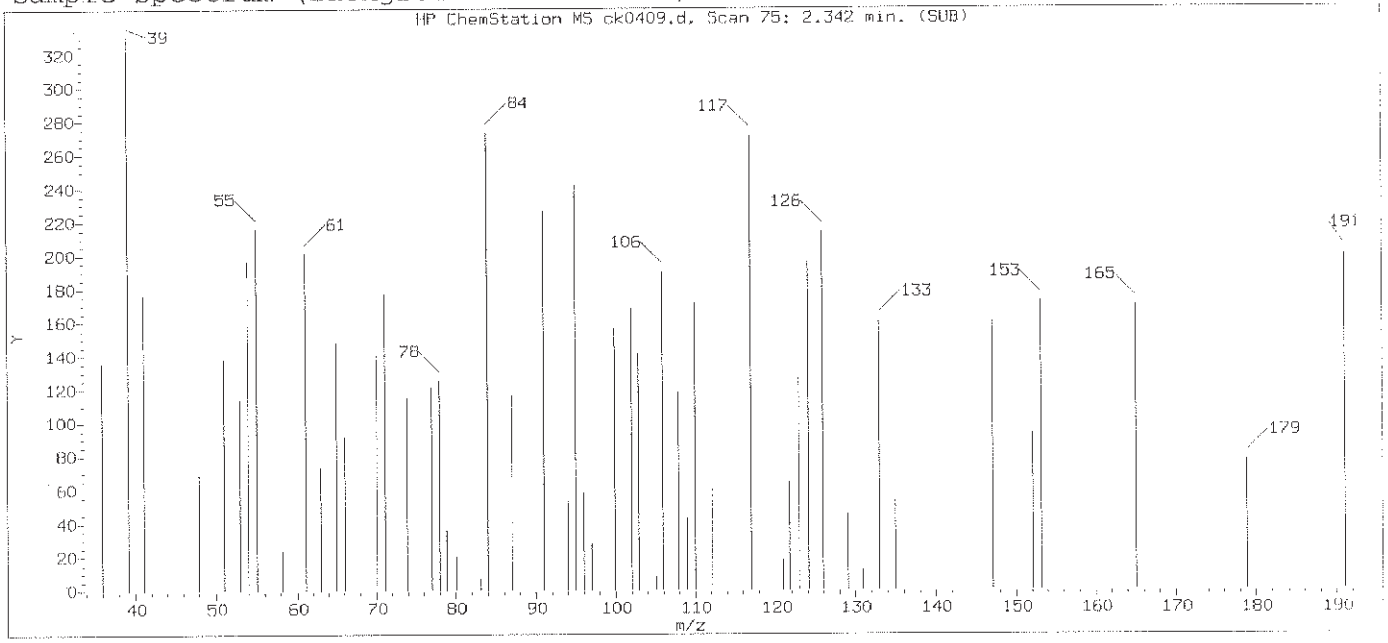
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval:

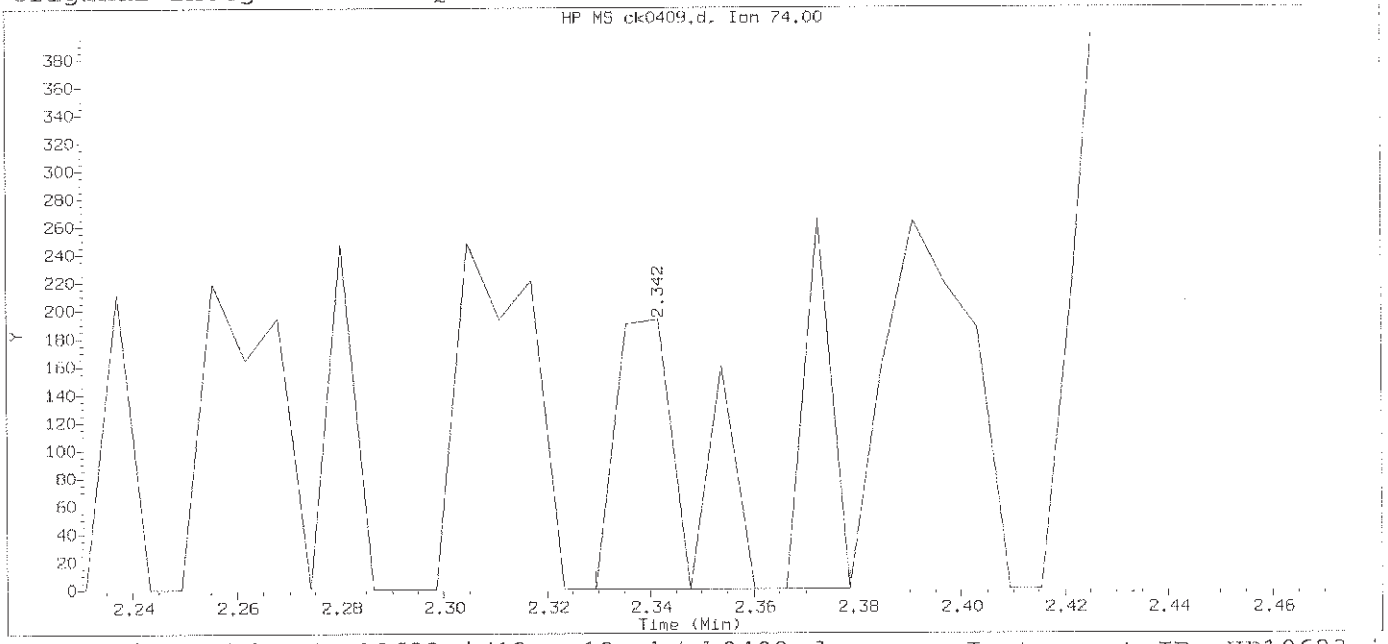
Mark A. Ratcliff
Senior Specialist

NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 75		
Retention Time (minutes)	: 2.342		
Quant Ion	: 74.00		
Area	: 298		
On-column Amount (ng/ul)	: 0.0385		
Integration start scan	: 72	Integration stop scan:	80
Y at integration start	: 0	Y at integration end:	0

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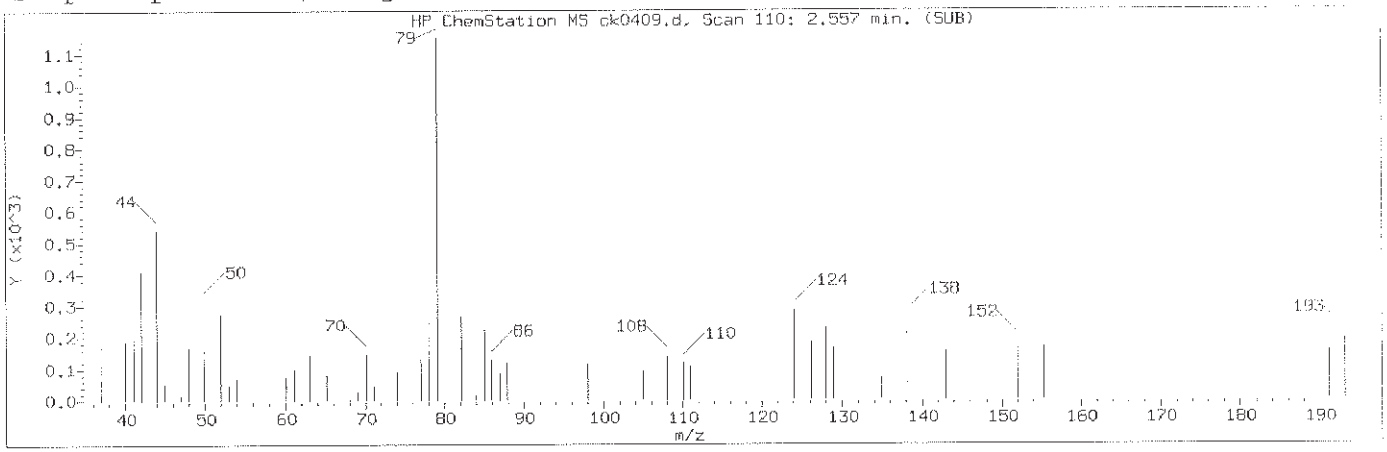
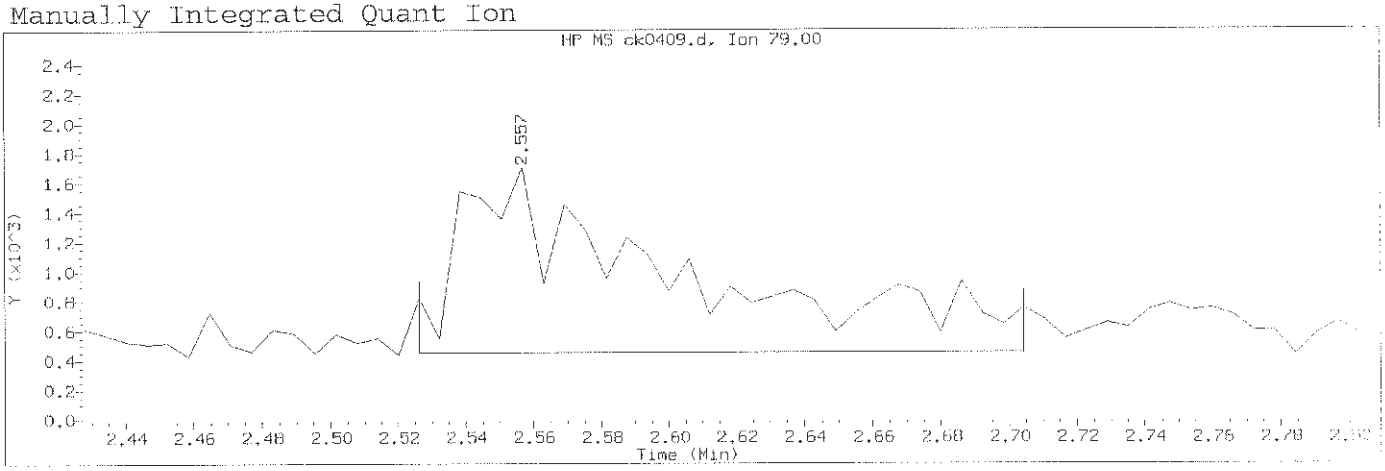
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 5630M		
On-Column Amount (ng/ul)	: 0.4697		
Integration start scan	: 104	Integration stop scan:	133
Y at integration start	: 449	Y at integration end:	449

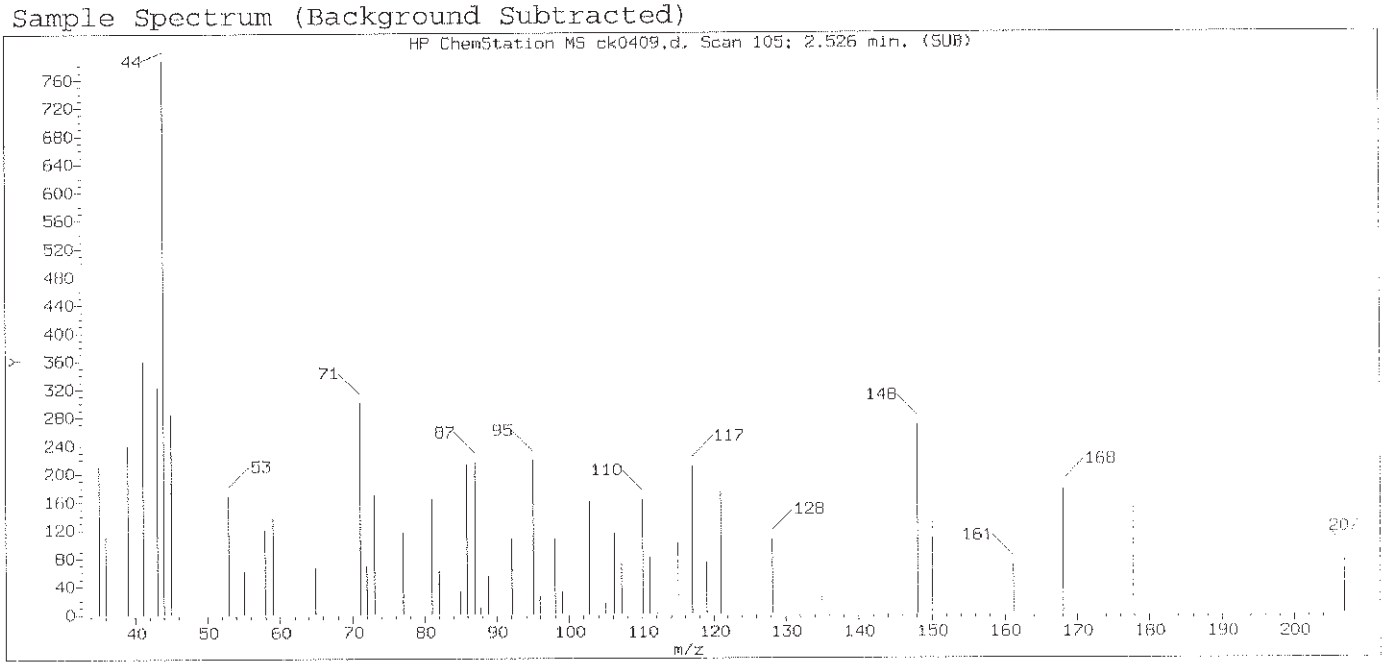
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 signature user ID: mac00013

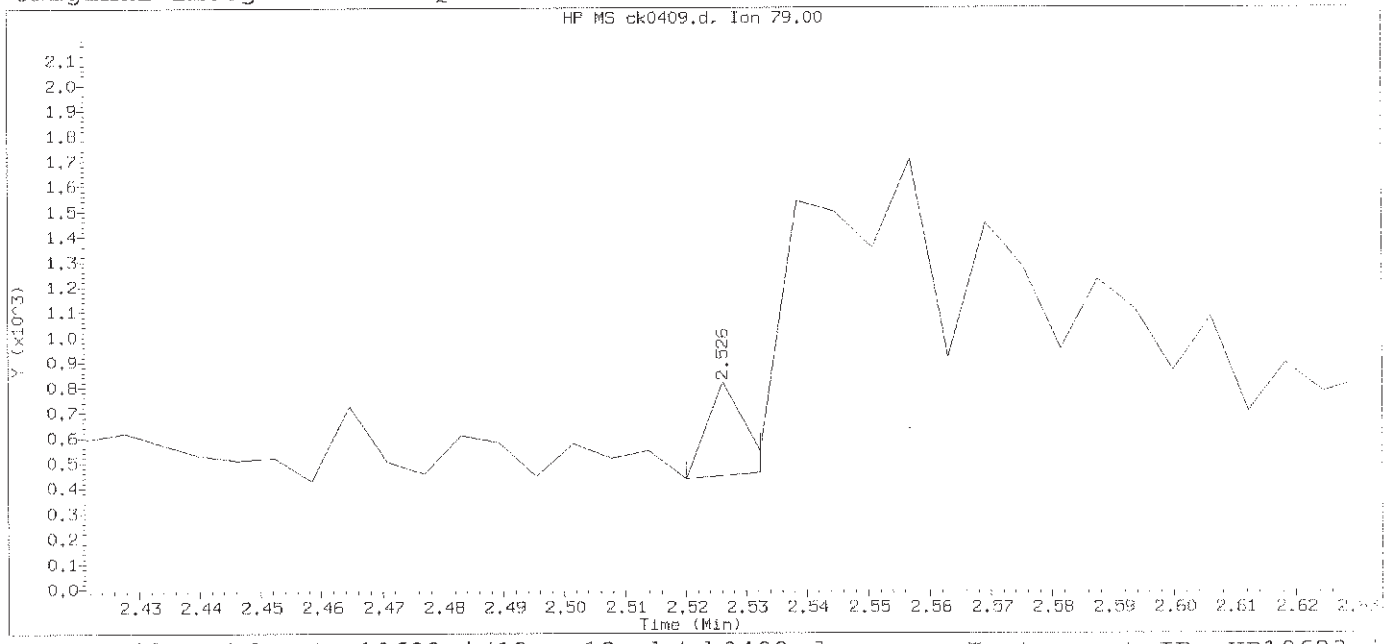
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

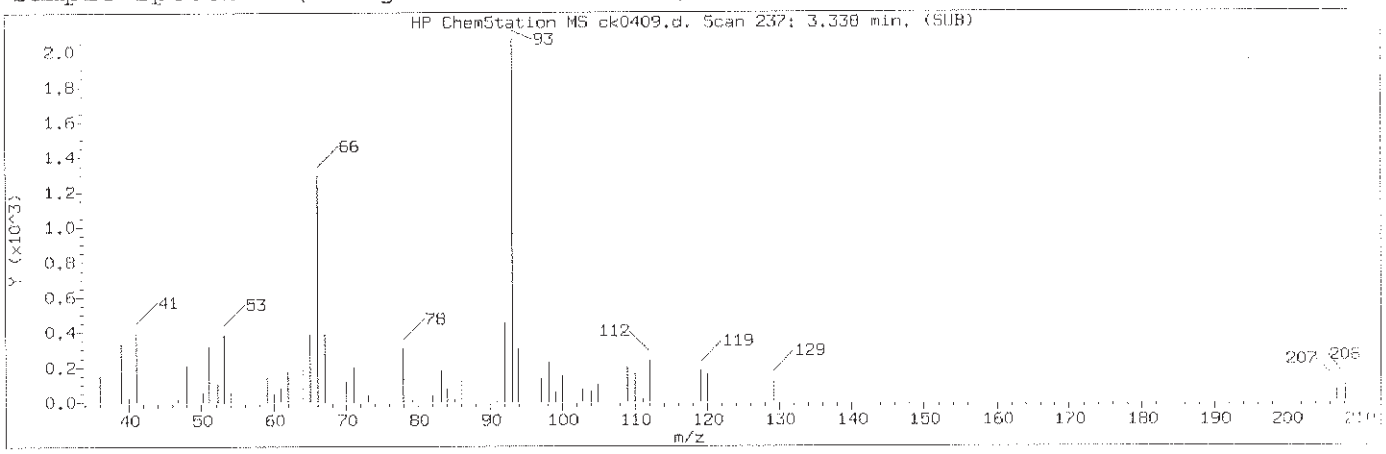
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

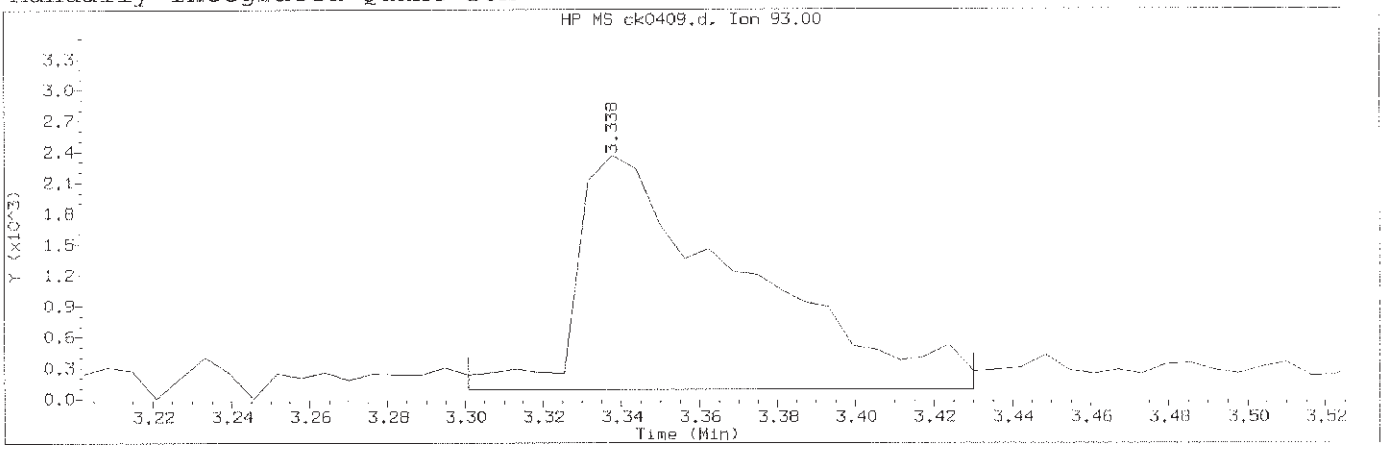
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area	: 152		
On-column Amount (ng/ul)	: 0.0127		
Integration start scan	: 103	Integration stop scan:	105
Y at integration start	: 435	Y at integration end:	461

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6732A		
On-Column Amount (ng/ul)	: 0.5503		
Integration start scan	: 230	Integration stop scan:	251
Y at integration start	: 88	Y at integration end:	88

Reason for manual integration: improper integration

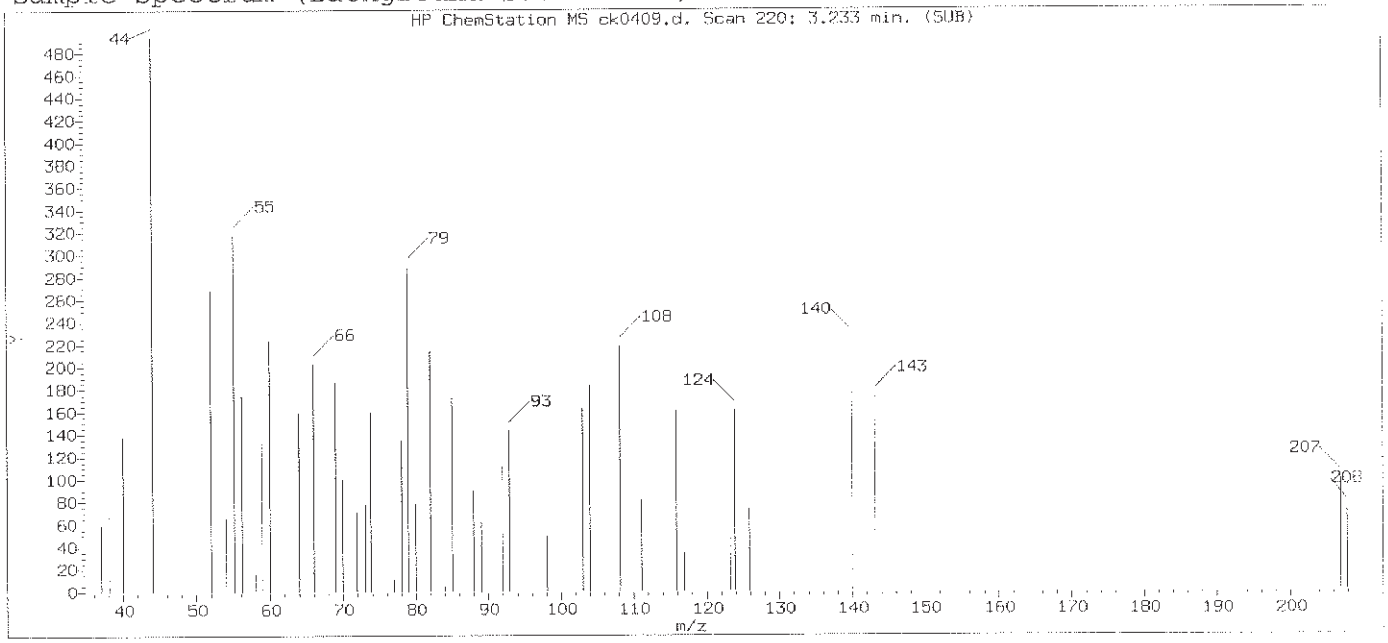
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.05 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

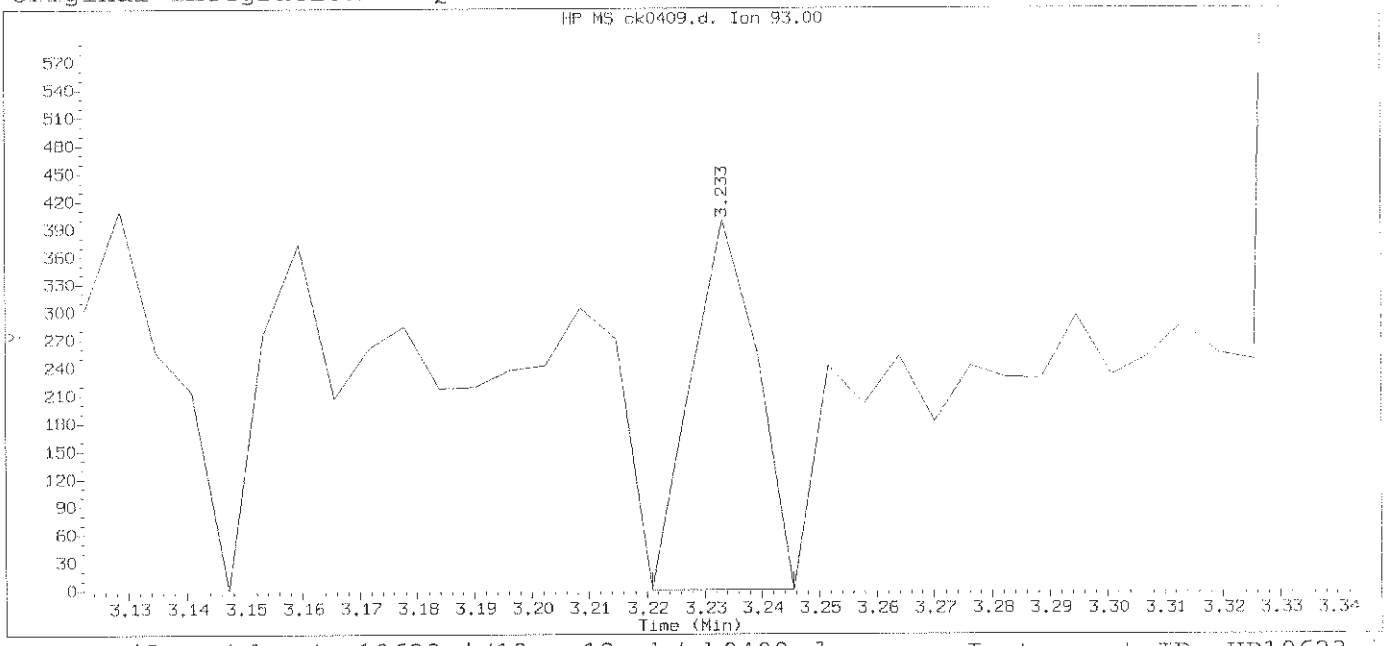
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

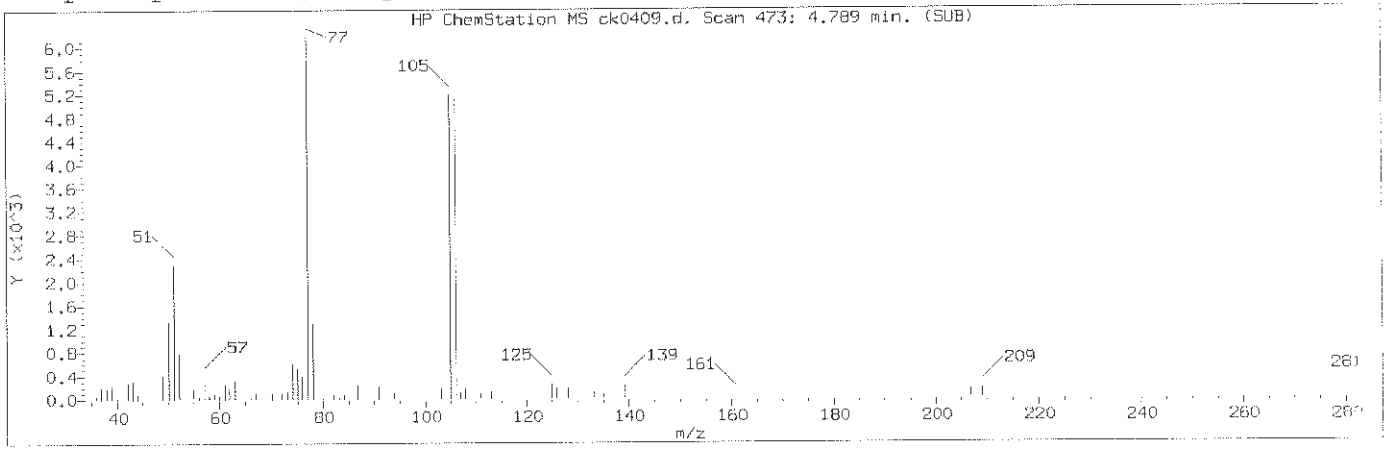
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

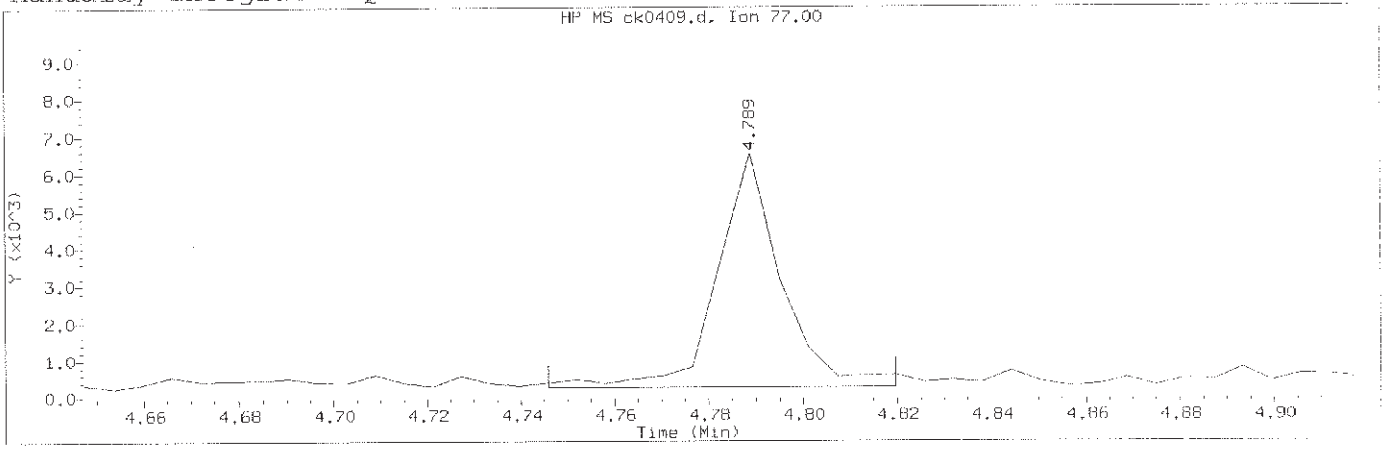
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 220		
Retention Time (minutes)	: 3.233		
Quant Ion	: 93.00		
Area	: 316		
On-column Amount (ng/ul)	: 0.0259		
Integration start scan	: 217	Integration stop scan:	221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 473		
Retention Time (minutes)	: 4.789		
Quant Ion	: 77.00		
Area (flag)	: 5939M		
On-Column Amount (ng/ul)	: 0.0000		
Integration start scan	: 465	Integration stop scan:	477
Y at integration start	: 265	Y at integration end:	265

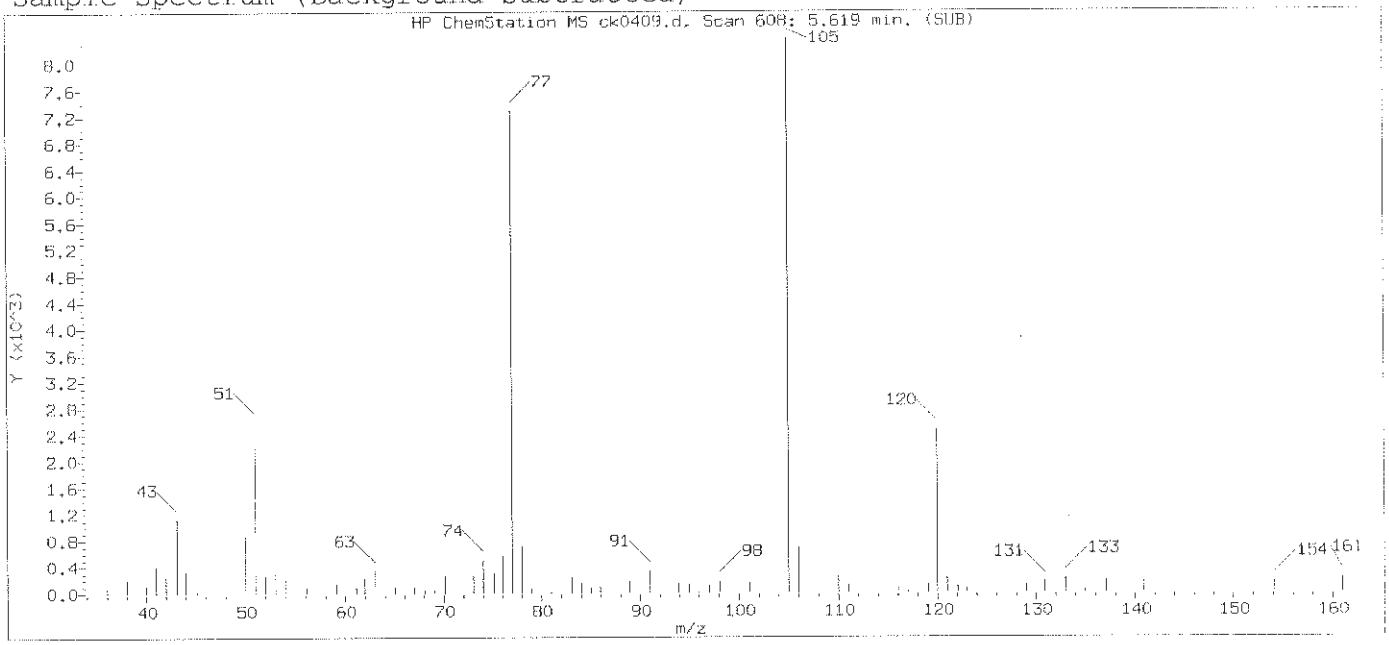
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

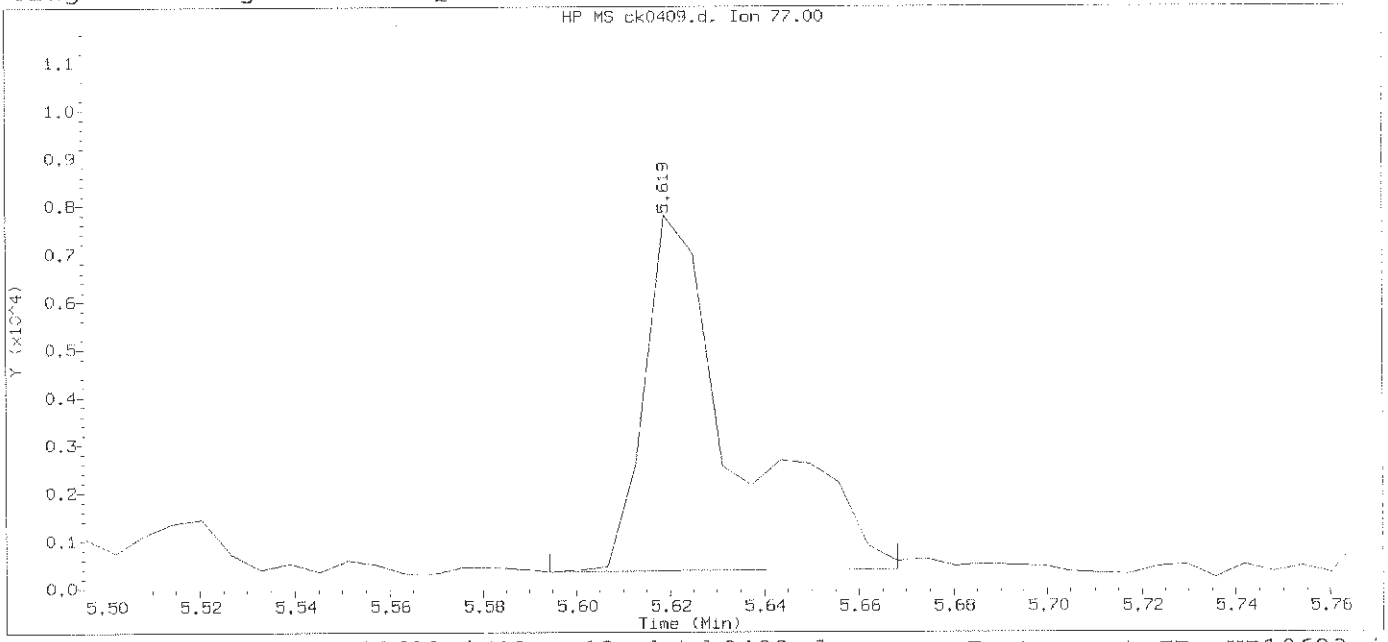
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

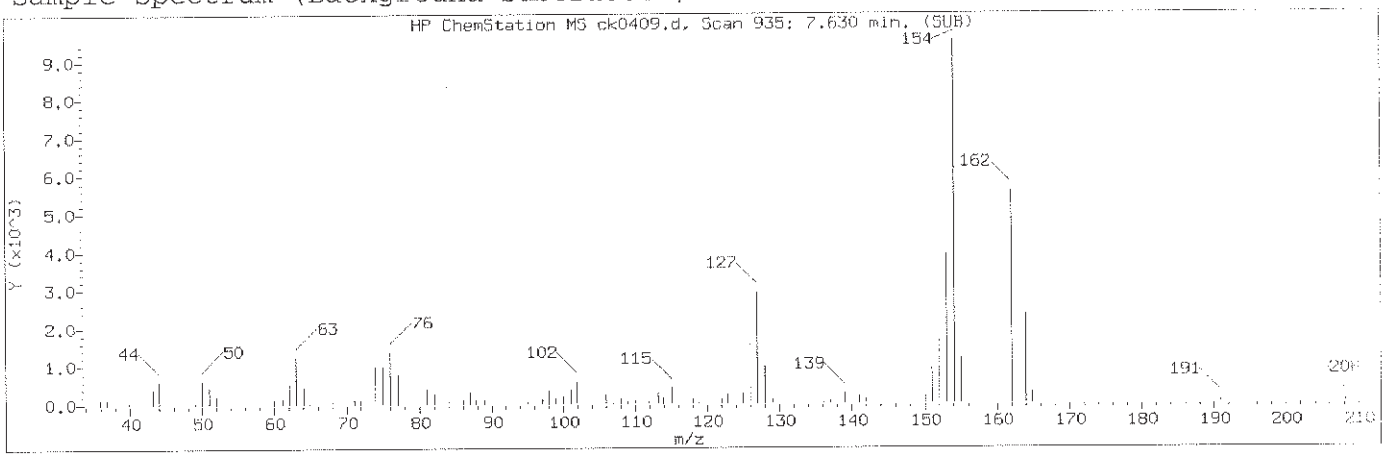
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

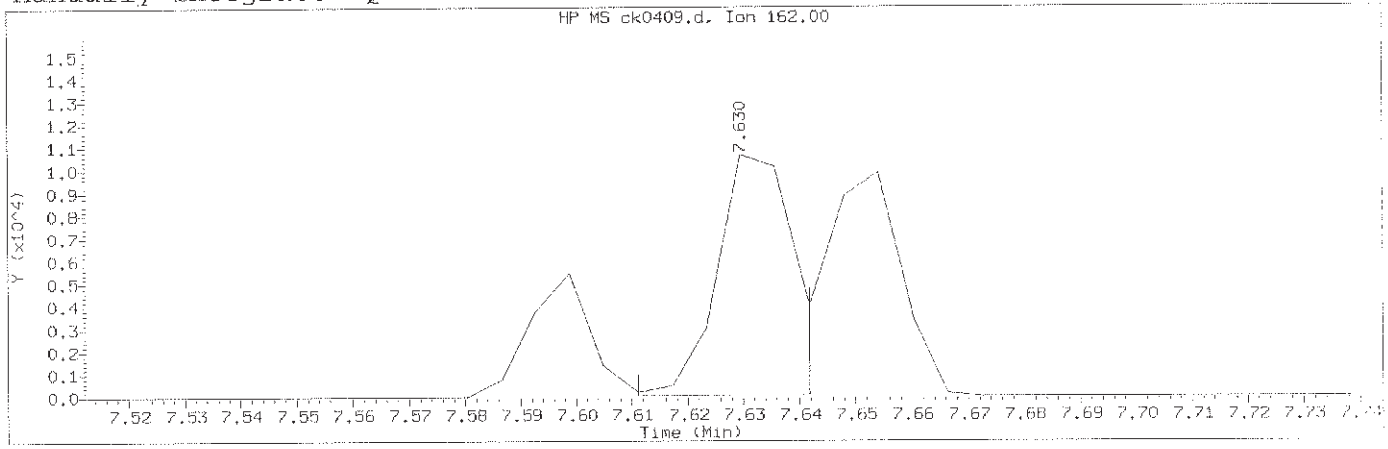
Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 608		
Retention Time (minutes)	: 5.619		
Quant Ion	: 77.00		
Area	: 10098		
On-column Amount (ng/ul)	: 0.0786		
Integration start scan	: 603	Integration stop scan:	615
Y at integration start	: 339	Y at integration end:	385

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

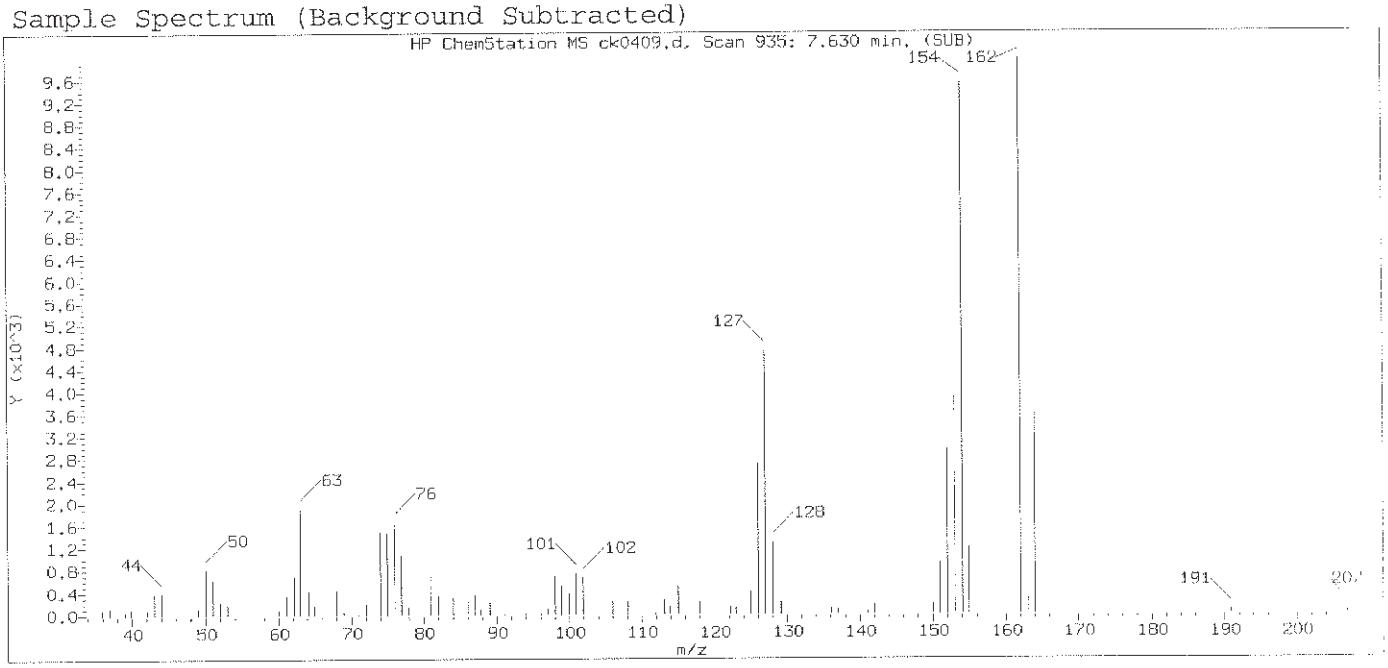
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 10411M		
On-Column Amount (ng/ul)	: 0.5293		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 43	Y at integration end:	43

Reason for manual integration: improper integration

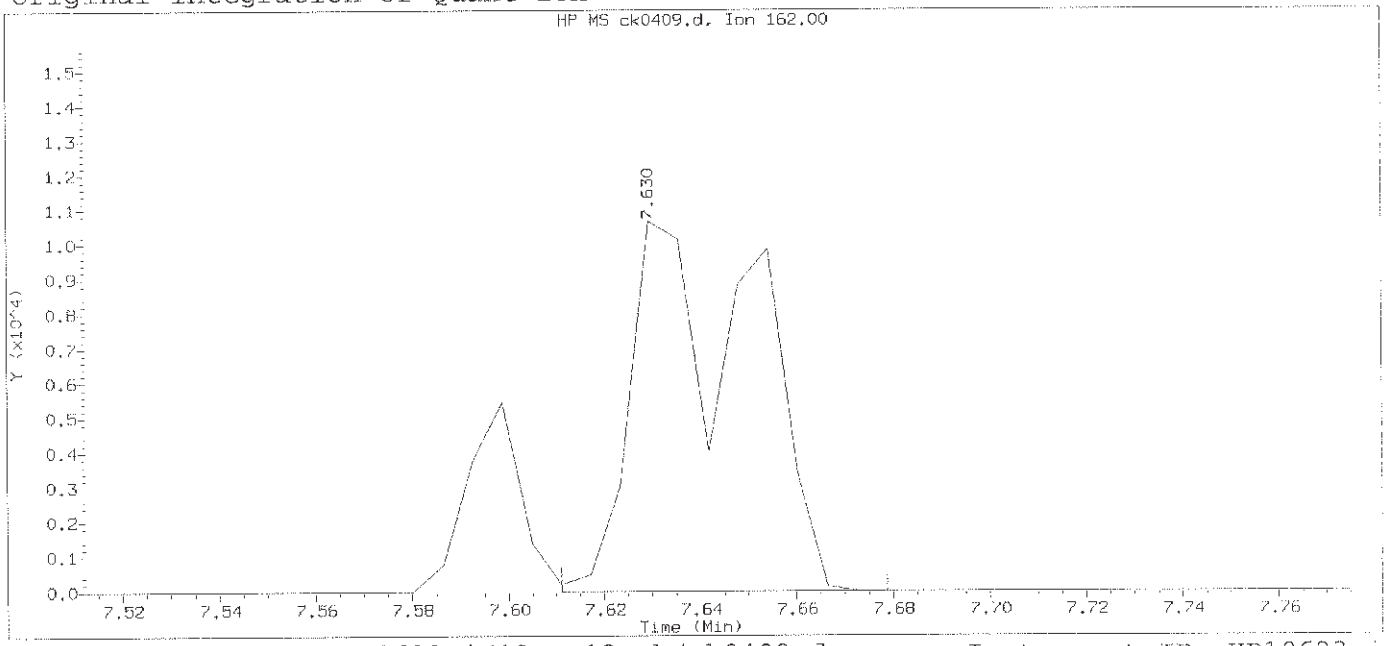
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

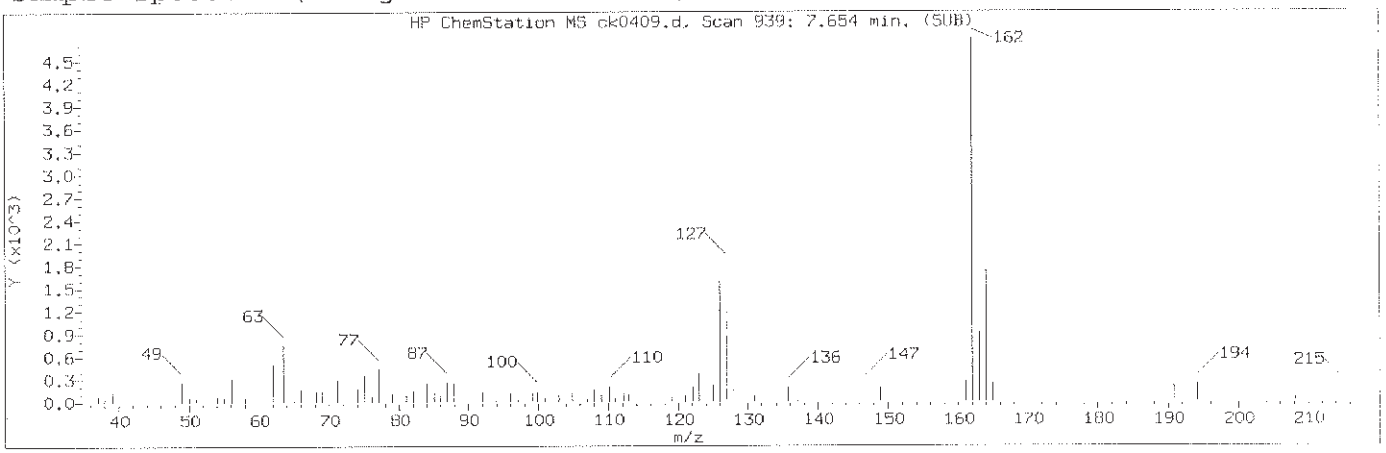
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

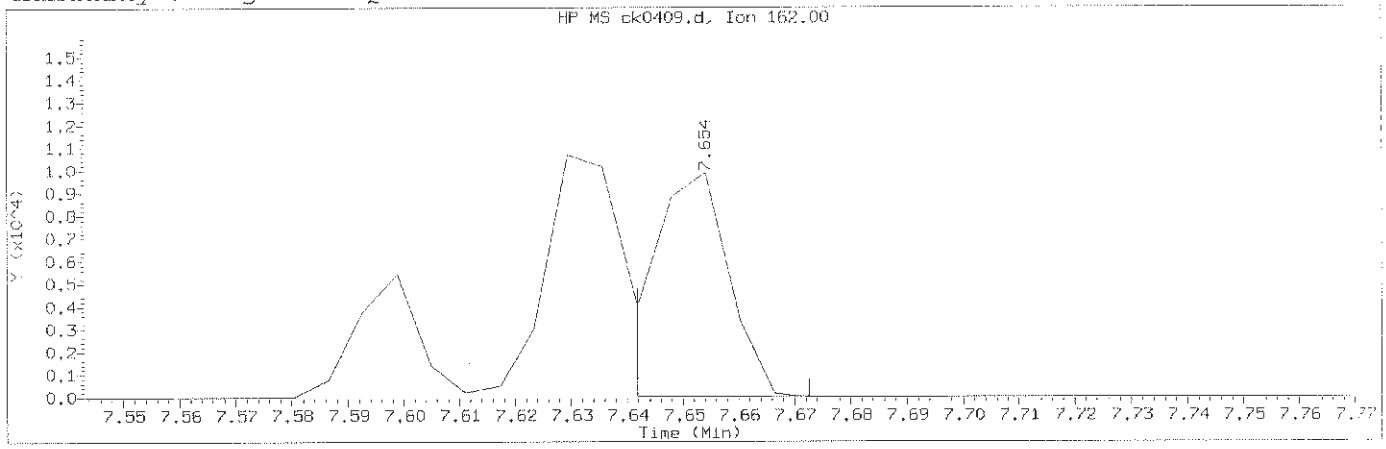
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9492		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 9618M		
On-Column Amount (ng/ul)	: 0.4968		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 28	Y at integration end:	28

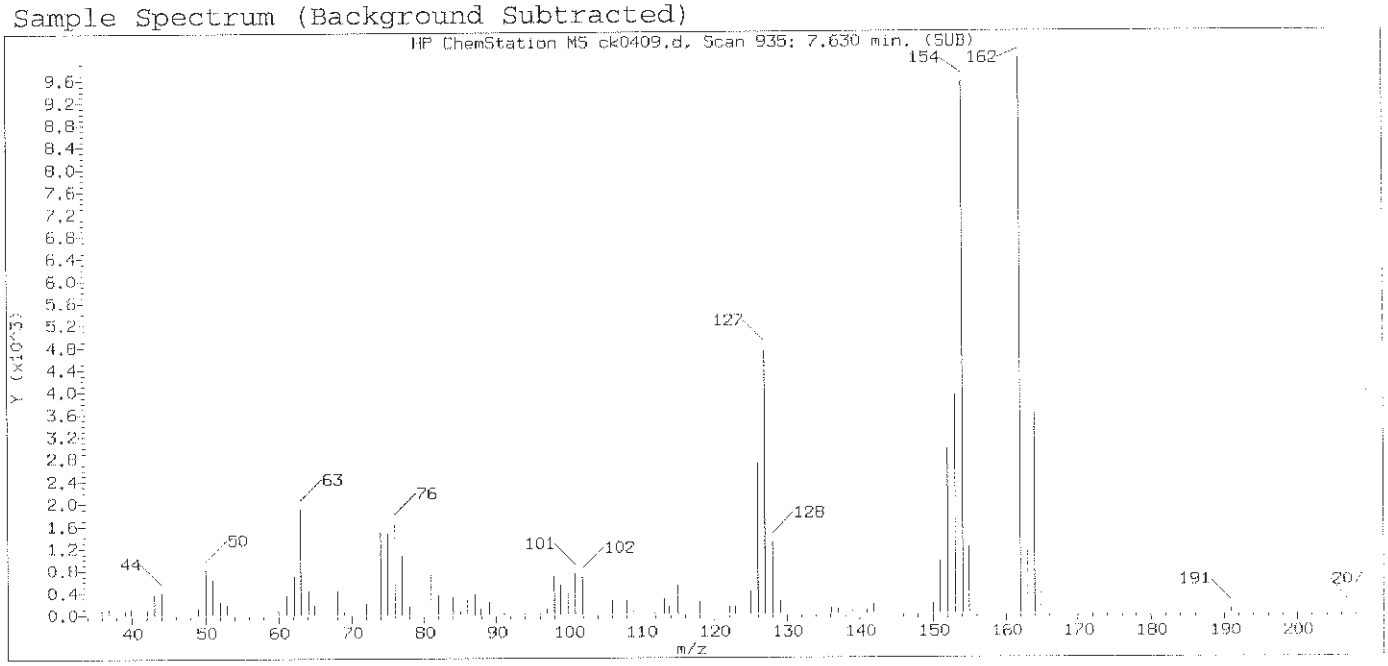
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

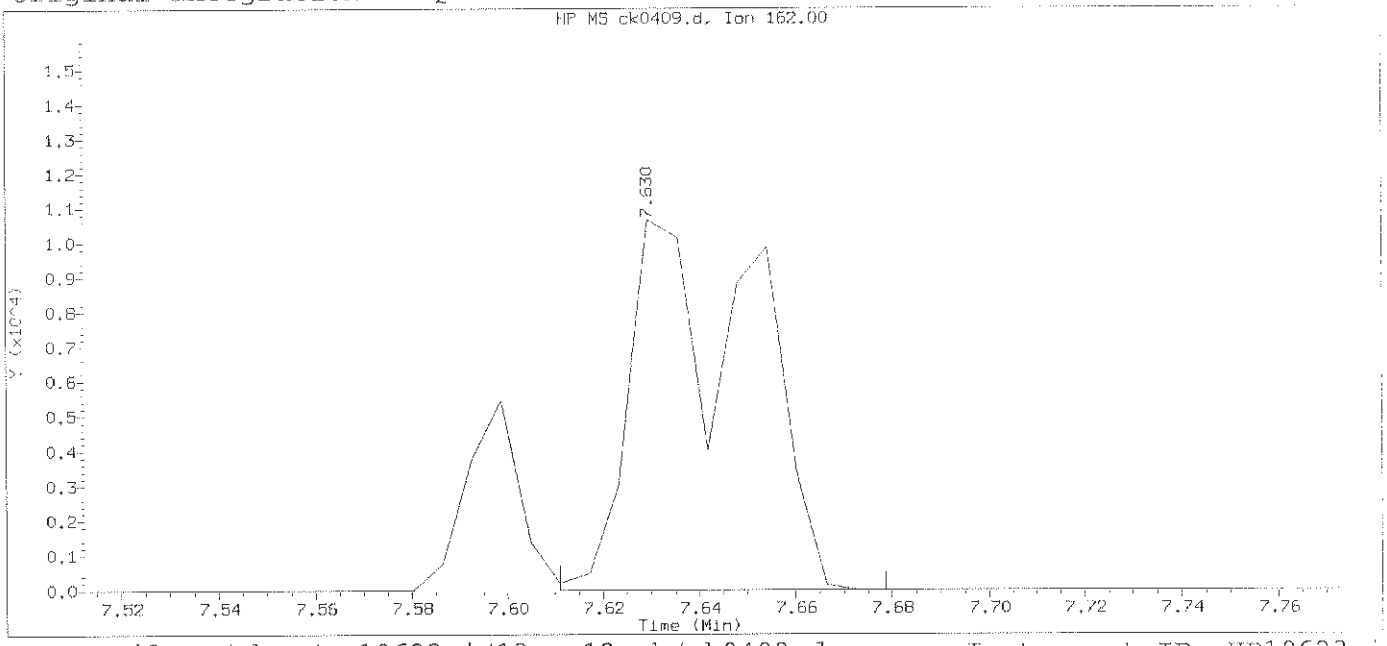
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

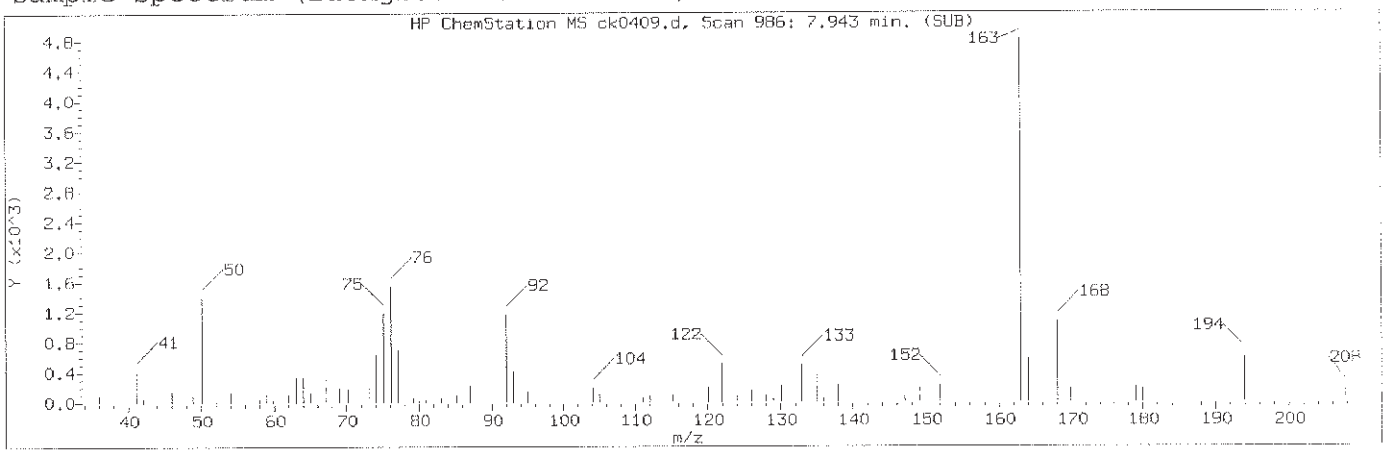
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

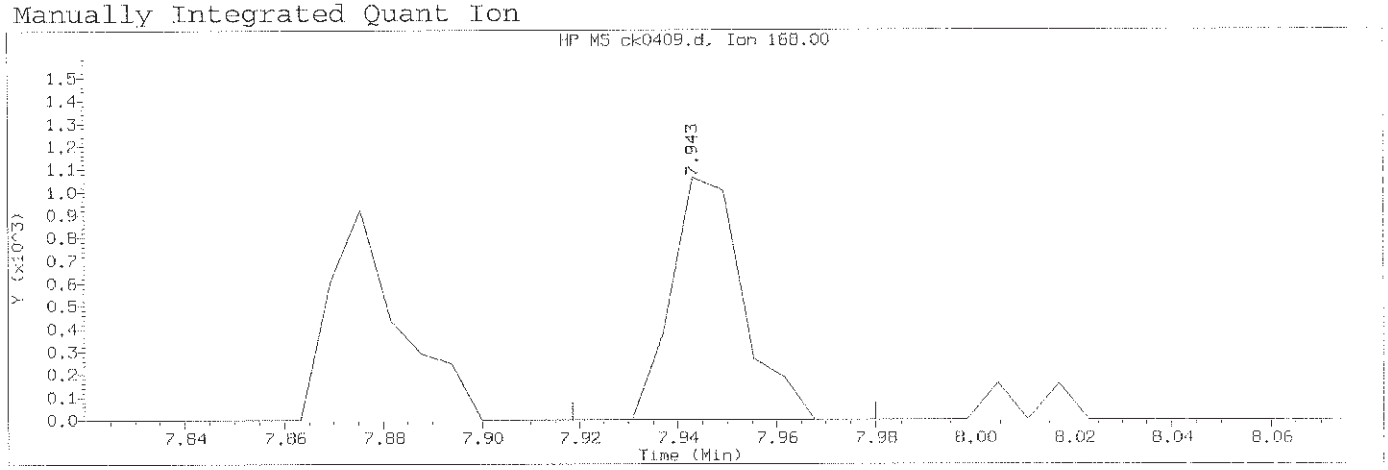
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9644		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area (flag)	: 1068M		
On-Column Amount (ng/ul)	: 3.1474		
Integration start scan	: 981	Integration stop scan:	991
Y at integration start	: 0	Y at integration end:	0

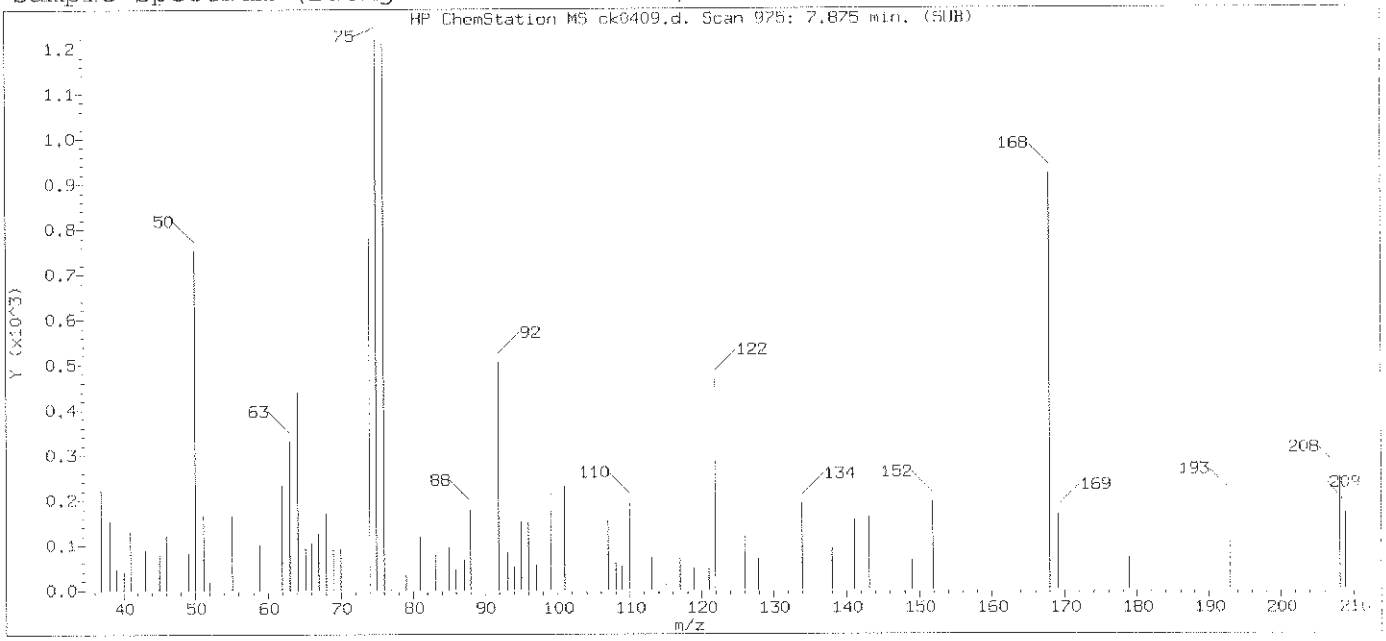
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

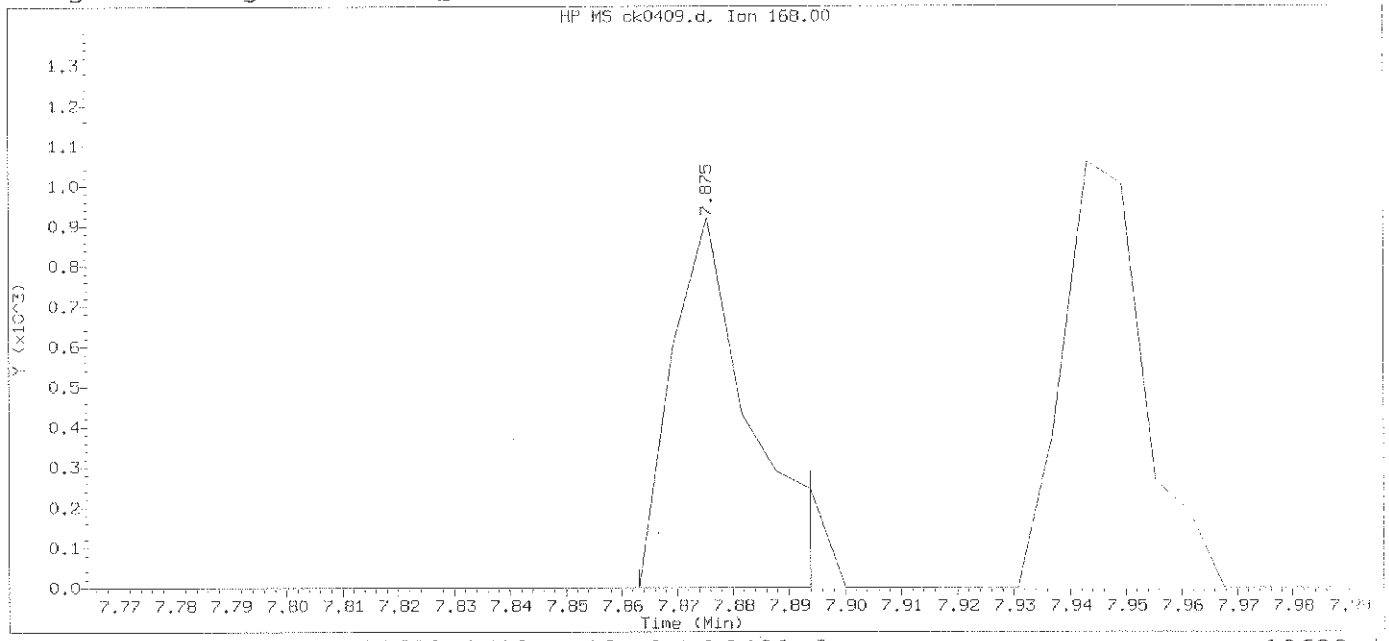
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

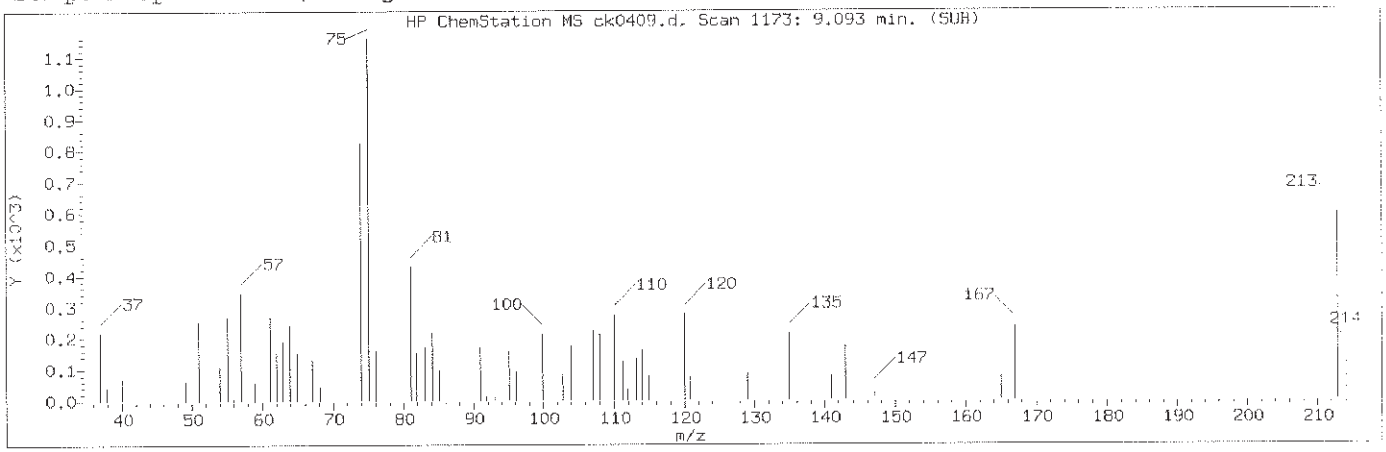
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

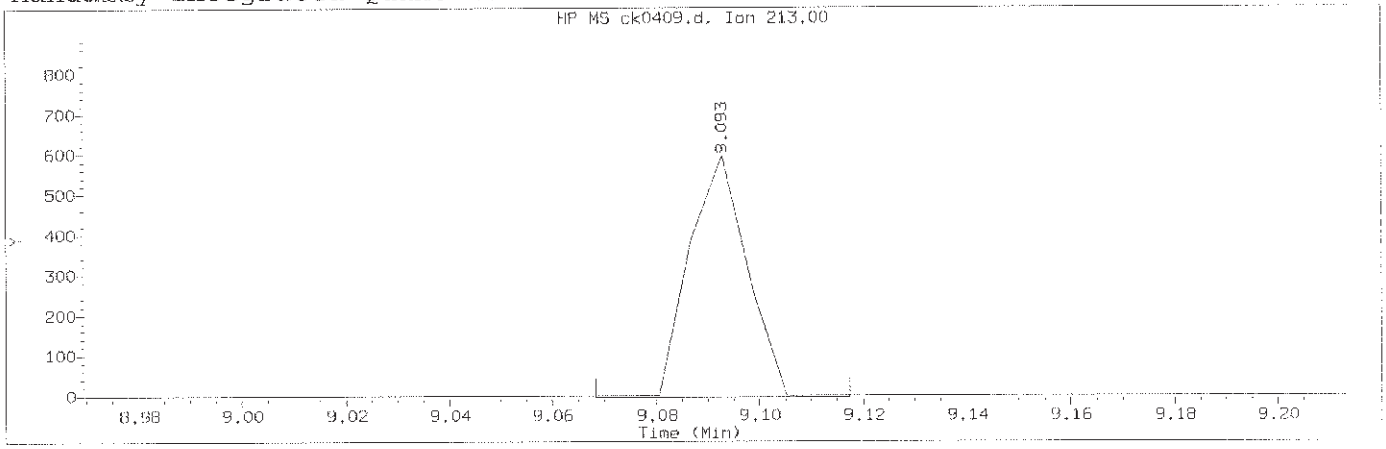
Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 975		
Retention Time (minutes)	: 7.875		
Quant Ion	: 168.00		
Area	: 873		
On-column Amount (ng/ul)	: 3.0982		
Integration start scan	: 972	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 470M		
On-Column Amount (ng/ul)	: 6.9925		
Integration start scan	: 1168	Integration stop scan:	1176
Y at integration start	: -5	Y at integration end:	-5

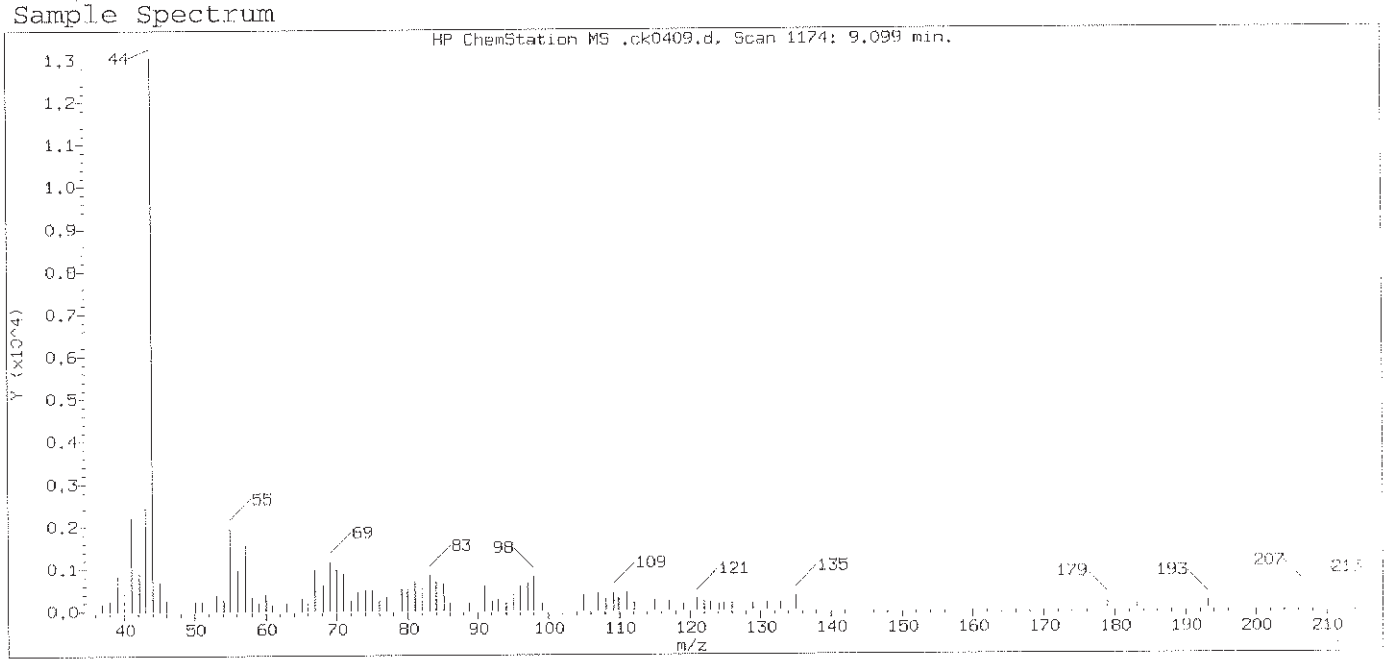
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

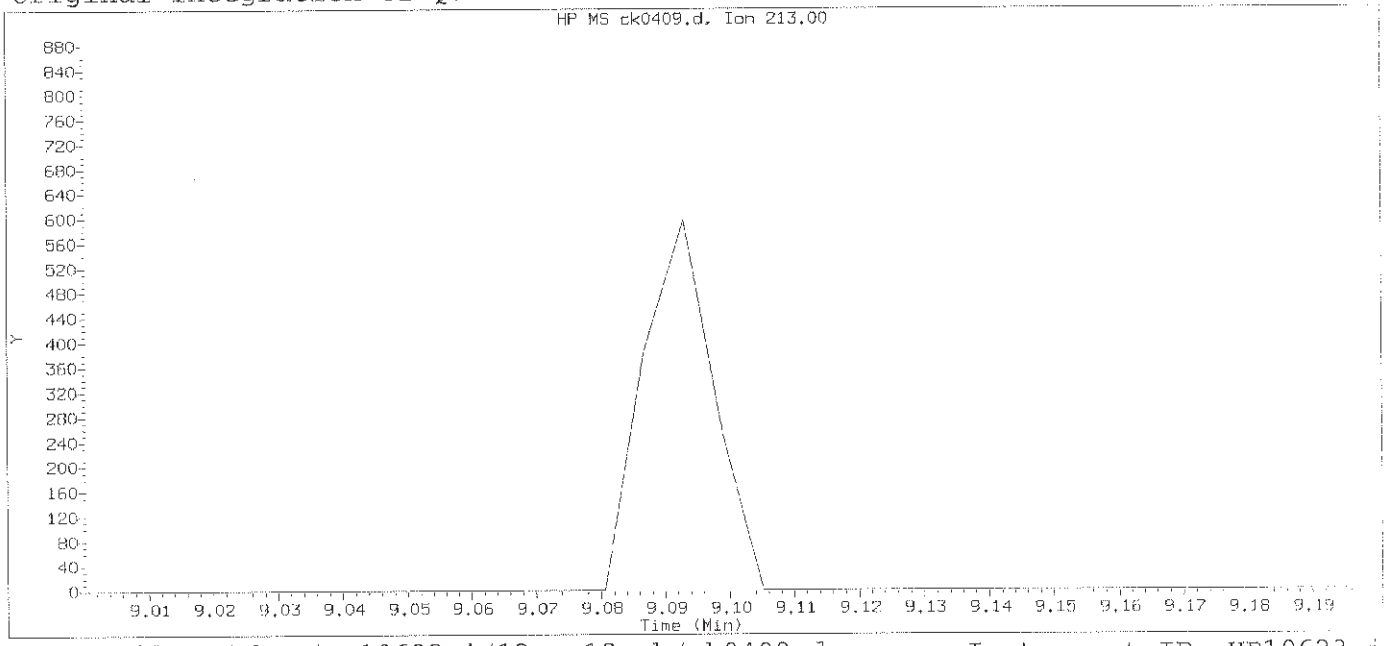
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

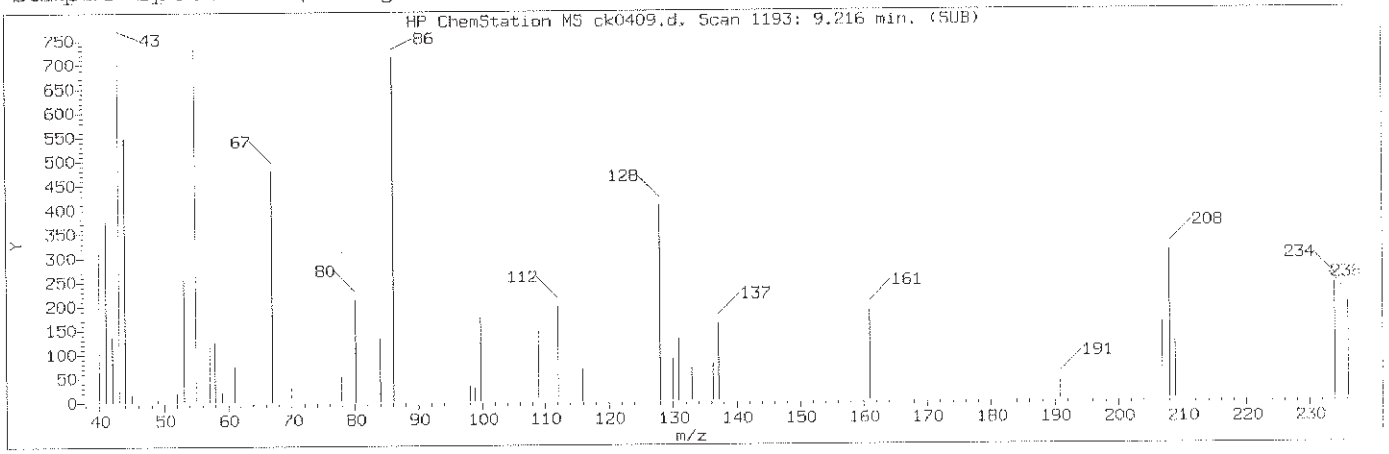
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11.l
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

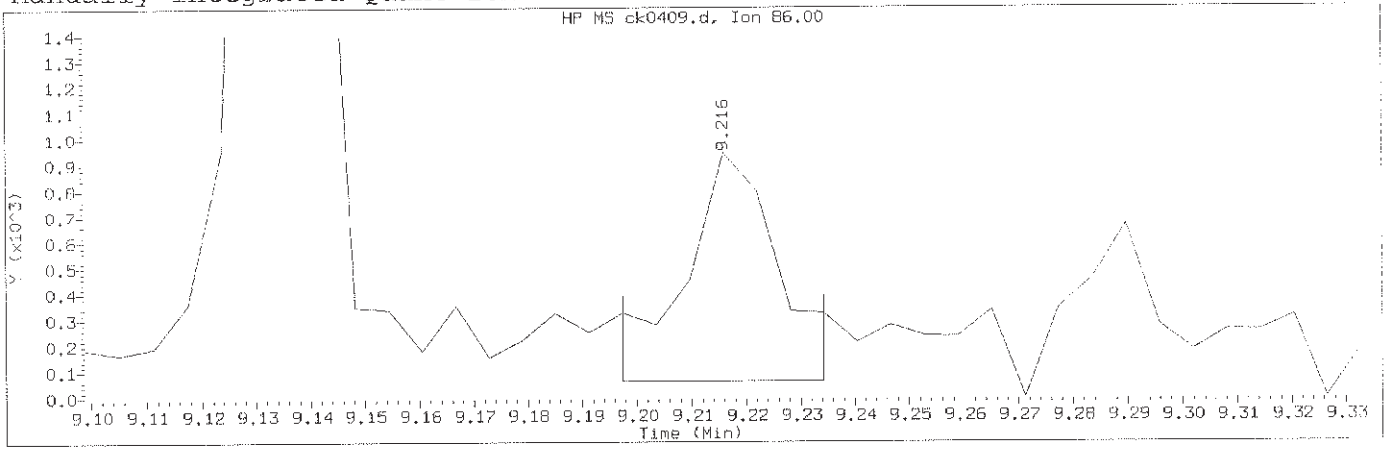
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1193		
Retention Time (minutes)	: 9.216		
Quant Ion	: 86.00		
Area (flag)	: 1113M		
On-Column Amount (ng/ul)	: 0.1600		
Integration start scan	: 1189	Integration stop scan:	1195
Y at integration start	: 62	Y at integration end:	62

Reason for manual integration: improper integration

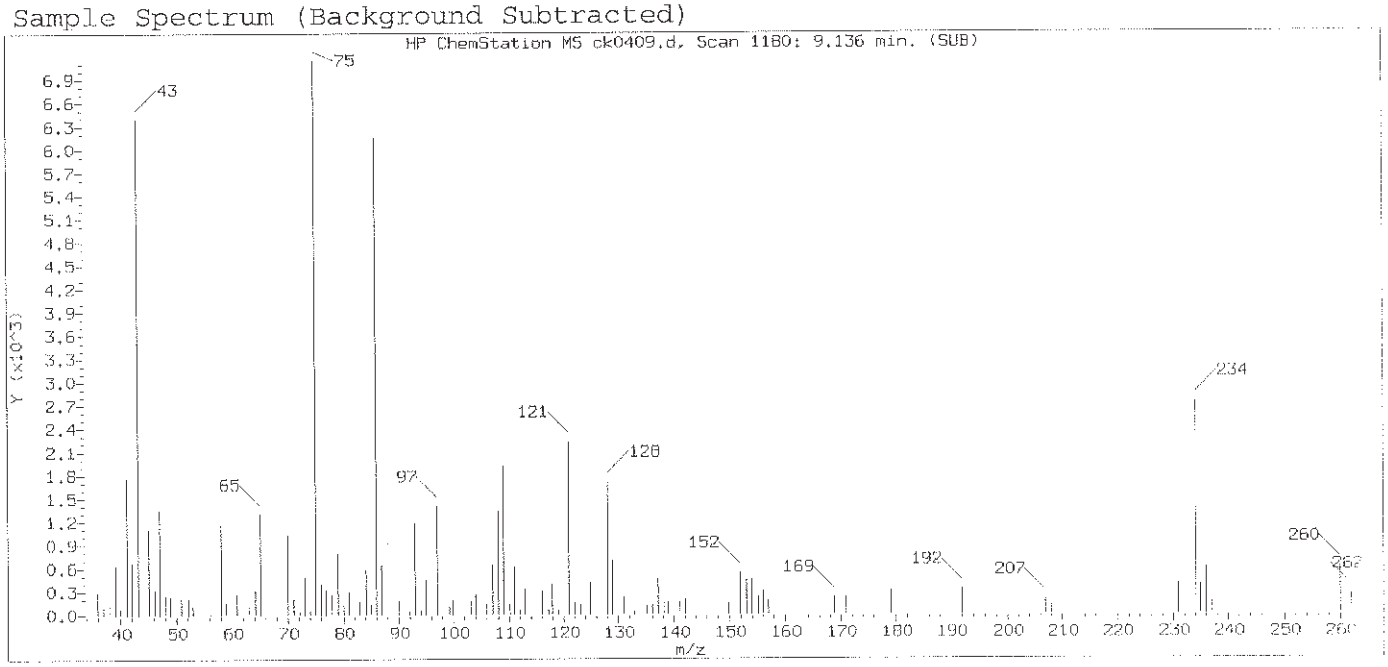
Analyst responsible for change: Digitally signed by Mark A. Clark on 11/13/2013 at 01:48. Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

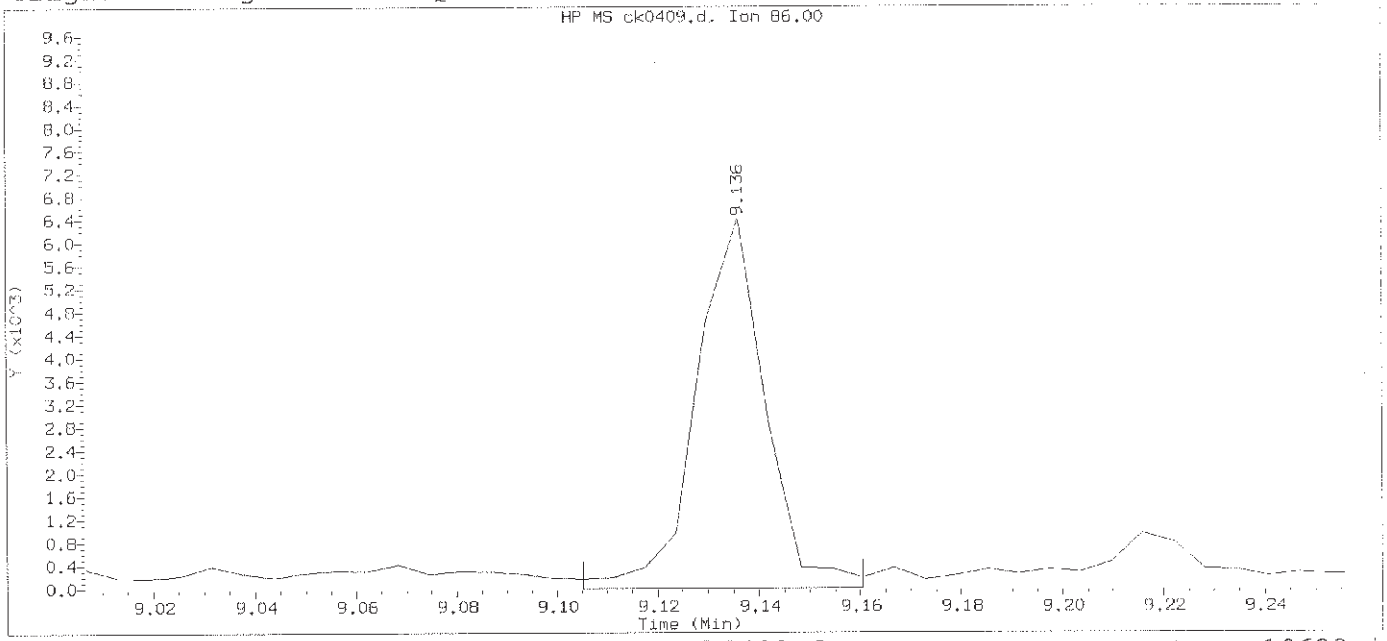
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

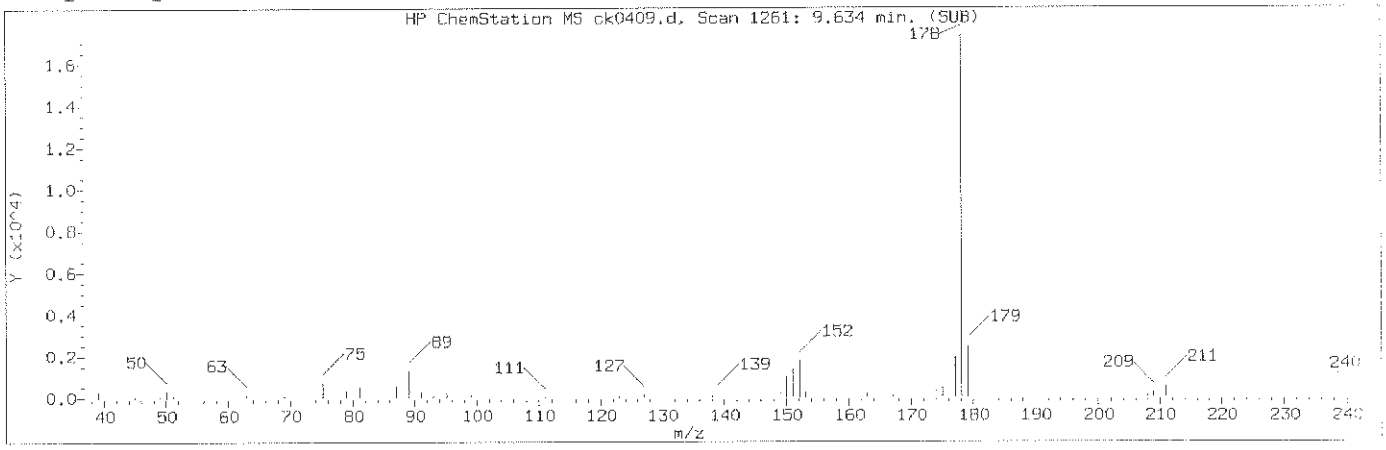
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

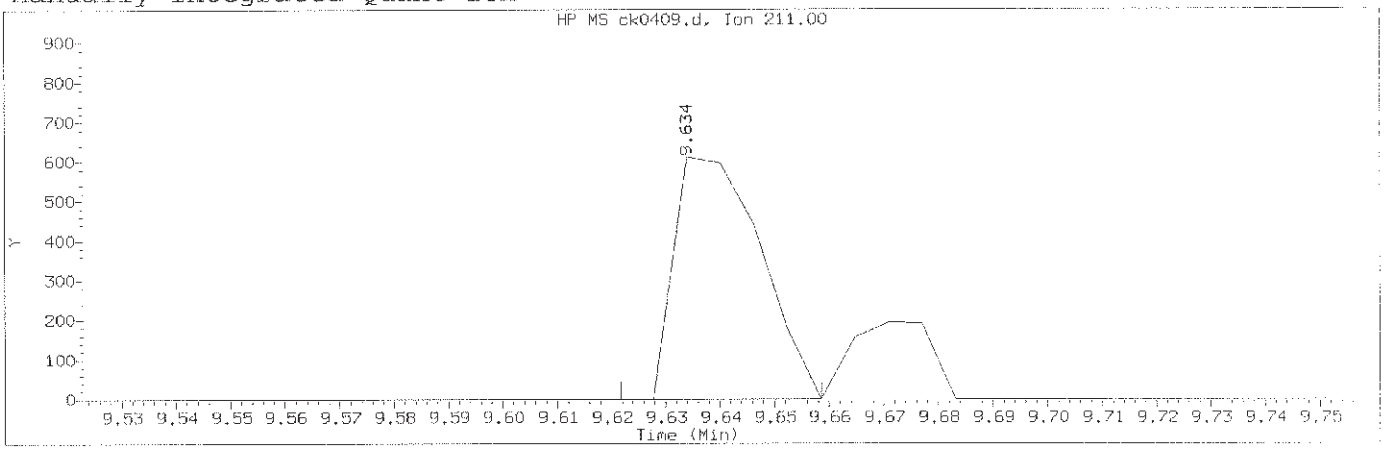
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5989		
On-column Amount (ng/ul)	: 0.8607		
Integration start scan	: 1174	Integration stop scan:	1183
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 673M		
On-Column Amount (ng/ul)	: 6.9625		
Integration start scan	: 1258	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

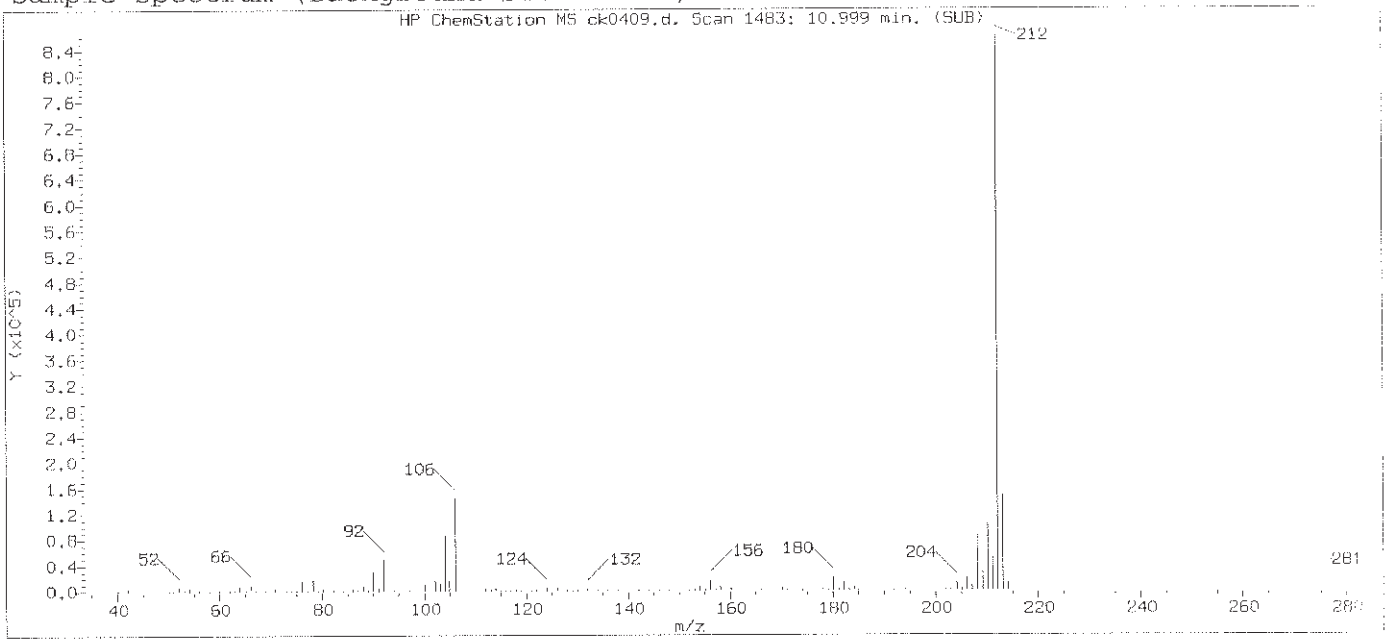
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 0.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

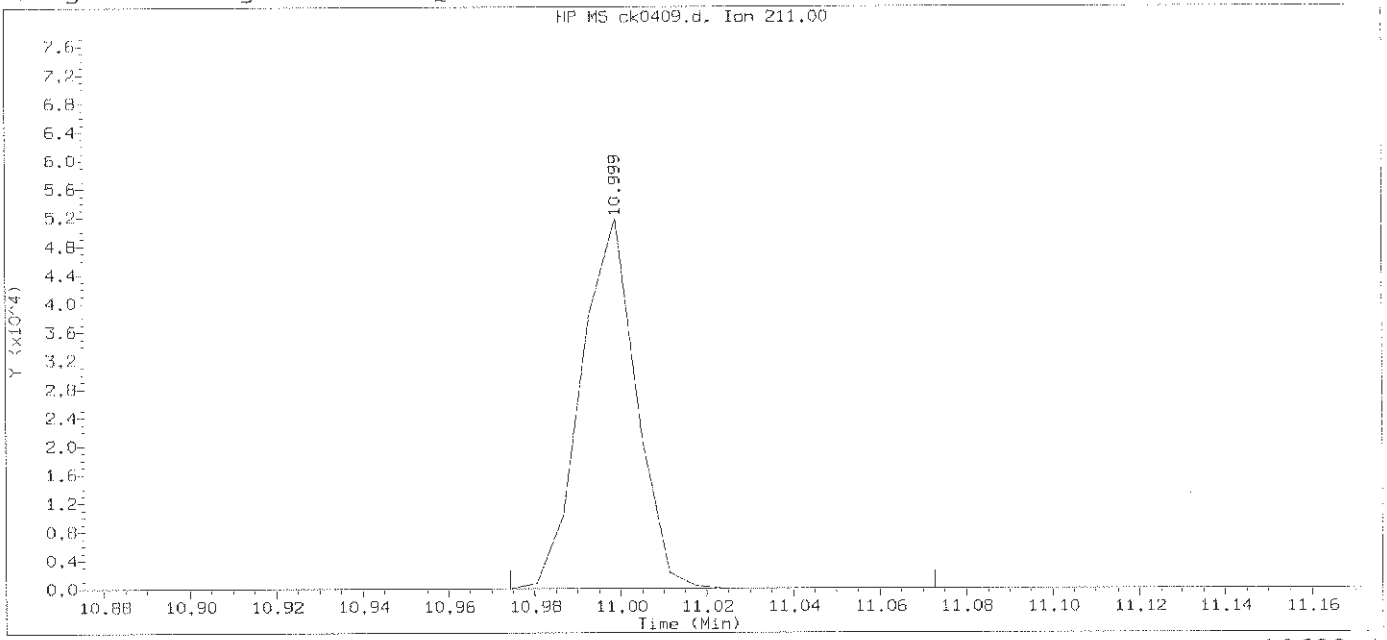
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

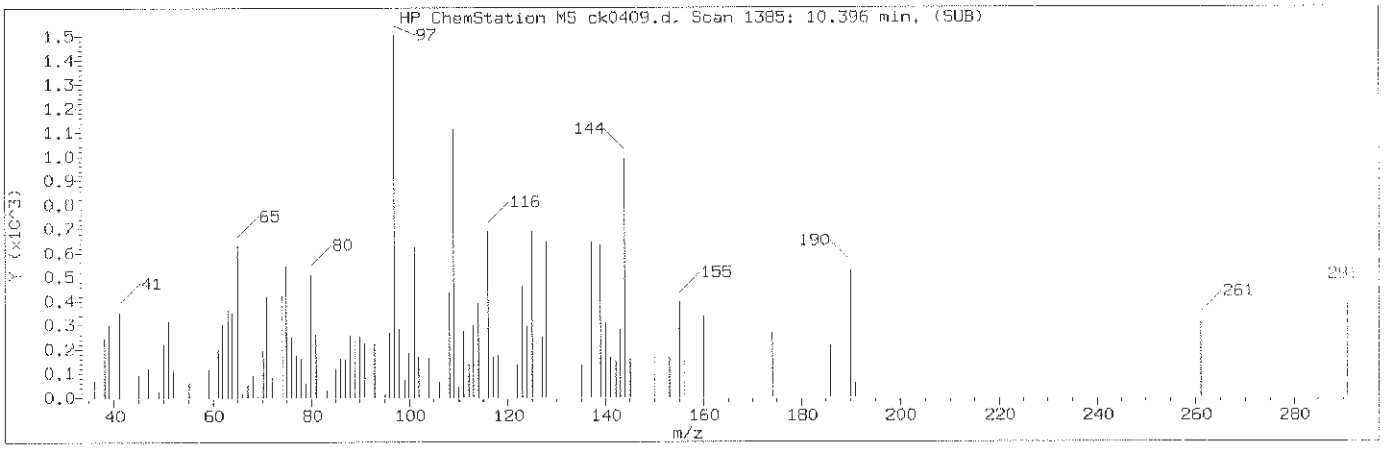
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

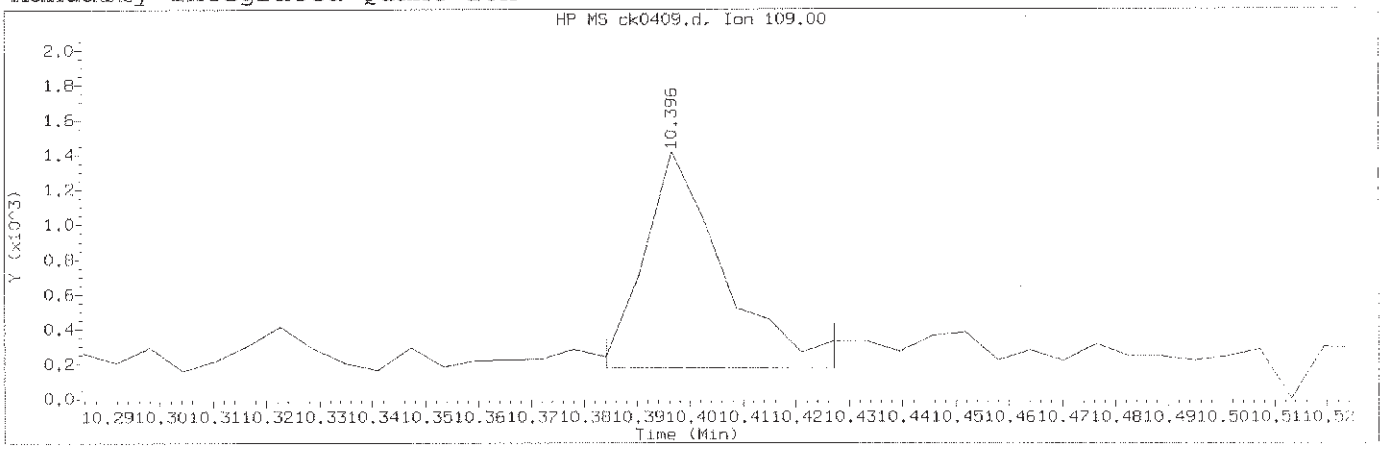
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 45885		
On-column Amount (ng/ul)	: 16.5287		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1385		
Retention Time (minutes)	: 10.396		
Quant Ion	: 109.00		
Area (flag)	: 1300M		
On-Column Amount (ng/ul)	: 3.1615		
Integration start scan	: 1382	Integration stop scan:	1389
Y at integration start	: 178	Y at integration end:	178

Reason for manual integration: improper integration

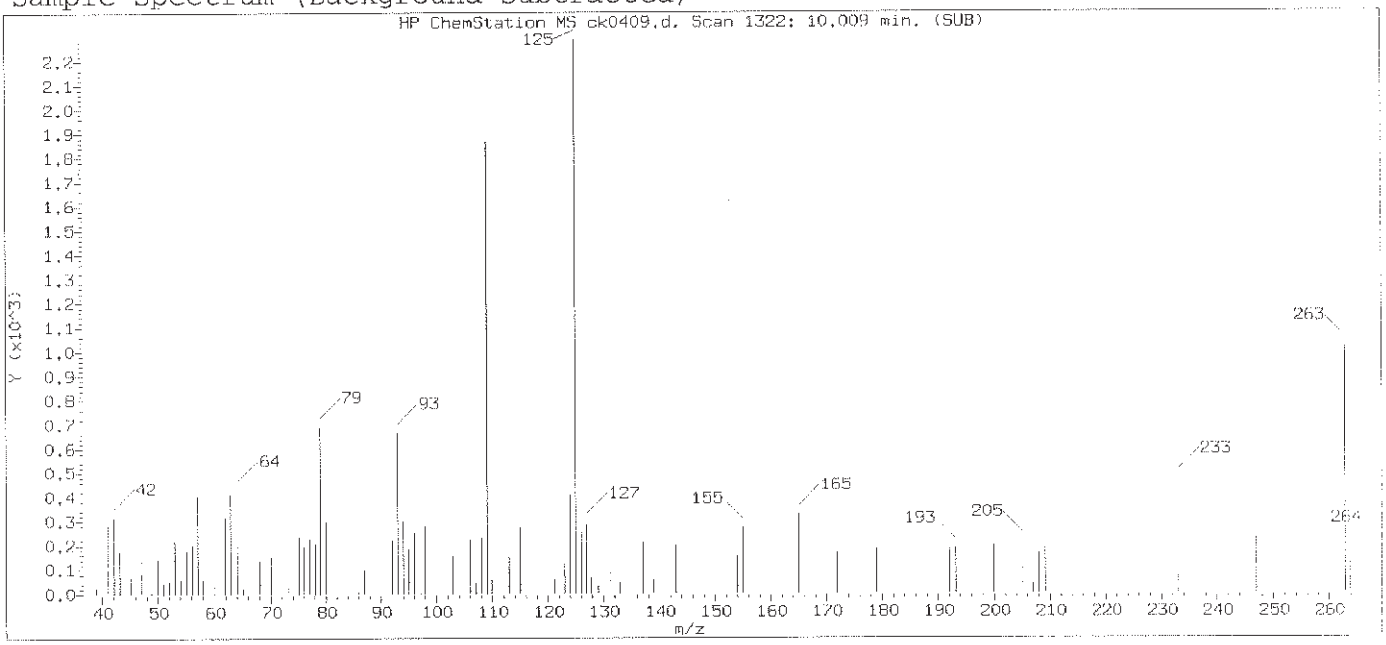
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.0 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

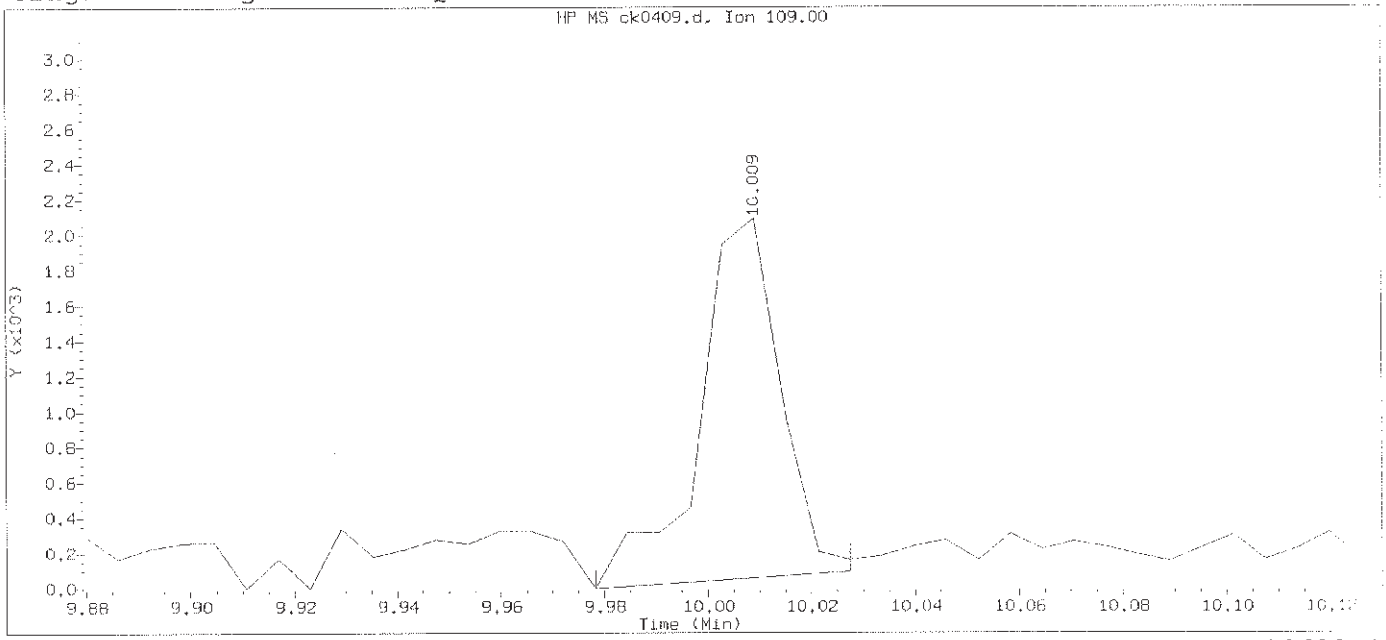
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1322		
Retention Time (minutes)	: 10.009		
Quant Ion	: 109.00		
Area	: 2207		
On-column Amount (ng/ul)	: 3.3110		
Integration start scan	: 1316	Integration stop scan:	1324
Y at integration start	: 0	Y at integration end:	95

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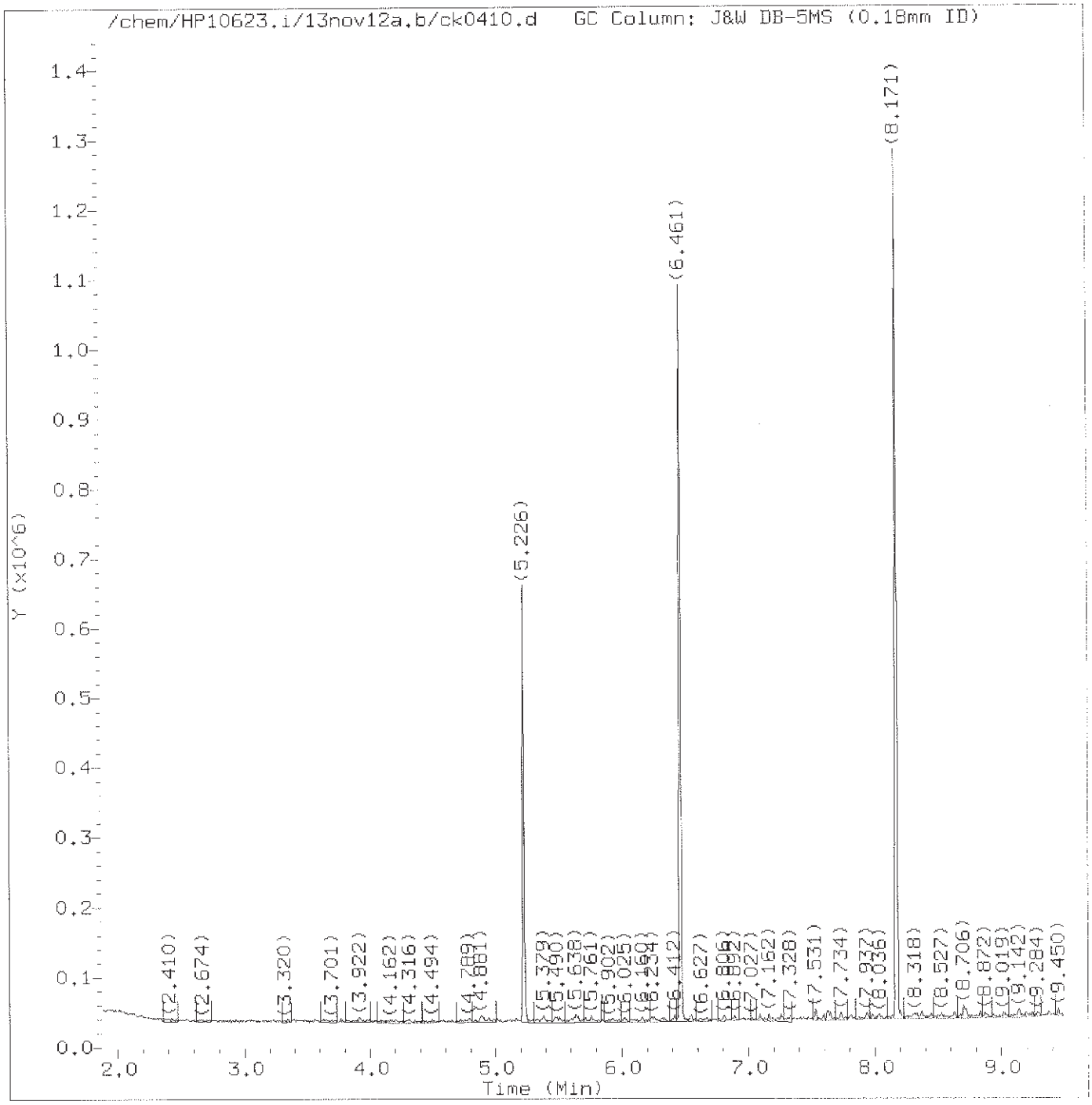
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

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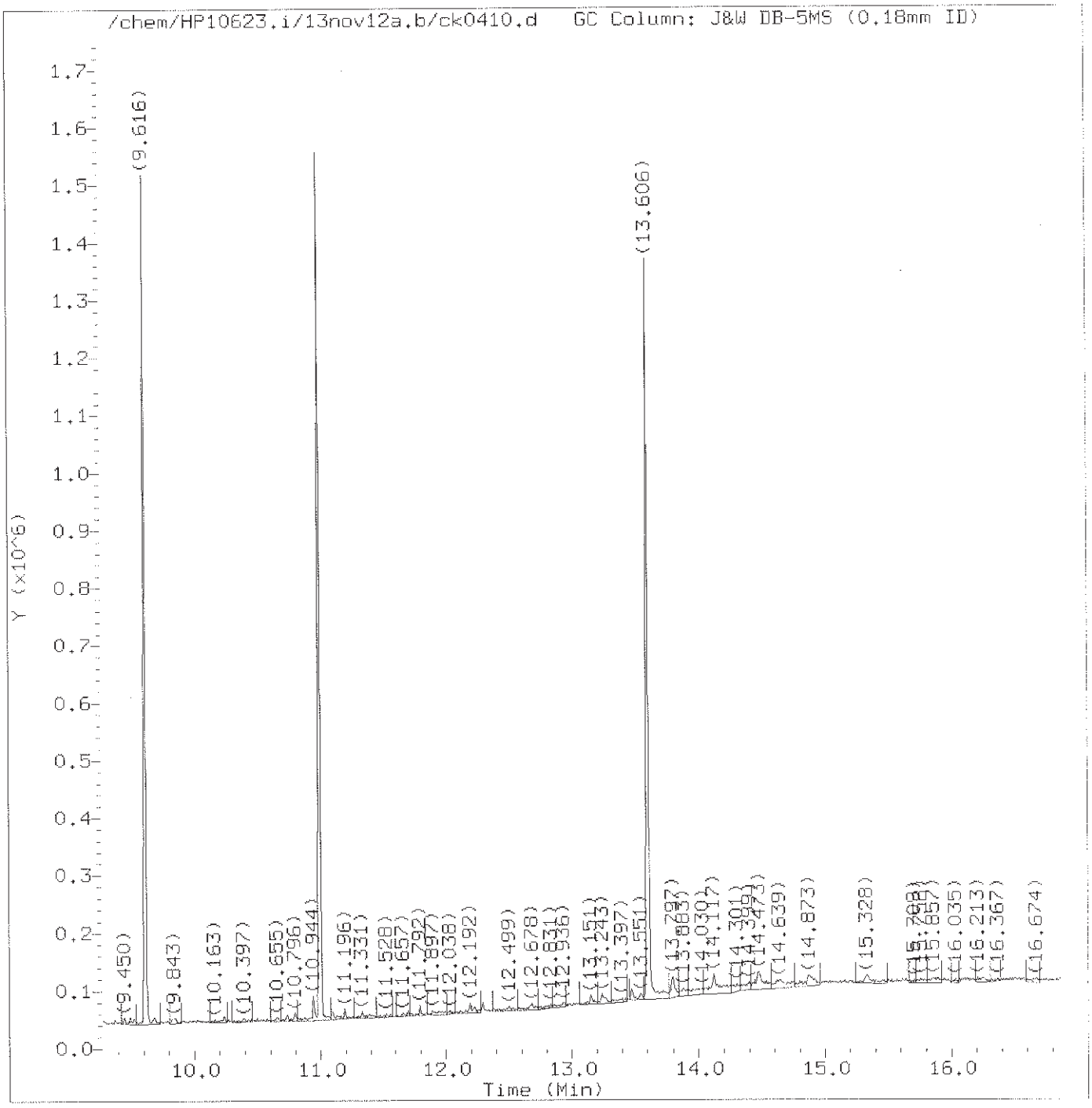
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d
Injection date and time: 12-NOV-2013 13:27
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Sublist used: 0.1mdla111
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10
Lab Sample ID: PAHMDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.916	112	2454	0.175
14)$Phenol-d5	(1)	4.881	99	2646	0.129
15)$Phenol-d6	(1)	4.881	99	2646	0.129
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93509	20.000
38)$Nitrobenzene-d5	(2)	5.761	82	1933	0.109
52)*Naphthalene-d8	(2)	6.461	136	412282	20.000
53) Naphthalene	(2)	6.480	128	2590	0.118
70) 2-Methylnaphthalene	(2)	7.162	142	1857	0.120
71) 1-Methylnaphthalene	(2)	7.255	142	1549	0.109
78)$2-Fluorobiphenyl	(3)	7.531	172	3592	0.113
95) Acenaphthylene	(3)	8.029	152	2641	0.118
98)*Acenaphthene-d10	(3)	8.171	164	253744	20.000
99) Acenaphthene	(3)	8.202	153	1735	0.112
111) Fluorene	(3)	8.706	166	2120	0.116
119)$2,4,6-Tribromophenol	(3)	8.939	330	293	0.096
127) Hexachlorobenzene	(4)	9.241	284	533	0.126
135)*Phenanthrene-d10	(4)	9.616	188	463222	20.000
137) Phenanthrene	(4)	9.634	178	3119	0.116
138) Anthracene	(4)	9.690	178	2896	0.104
147) Fluoranthene	(4)	10.796	202	3405	0.113
167)*Pyrene-d10	(5)	10.993	212	576214	20.000
154) Pyrene	(5)	11.011	202	3890	0.122
156)$Terphenyl-d14	(5)	11.196	244	4477	0.109
166) Benzo(a)anthracene	(5)	12.192	228	2810	0.095
168) Chrysene	(5)	12.223	228	2914	0.102
172) Benzo(b)fluoranthene	(6)	13.243	252	2820	0.090
173) Benzo(k)fluoranthene	(6)	13.268	252	3104	0.097
174) Benzo(a)pyrene	(6)	13.551	252	4571	0.149
175)*Perylene-d12	(6)	13.606	264	513658	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	2845	0.087
178) Dibenz(a,h)anthracene	(6)	14.645	278	2454	0.090
179) Benzo(g,h,i)perylene	(6)	14.904	276	2648	0.095

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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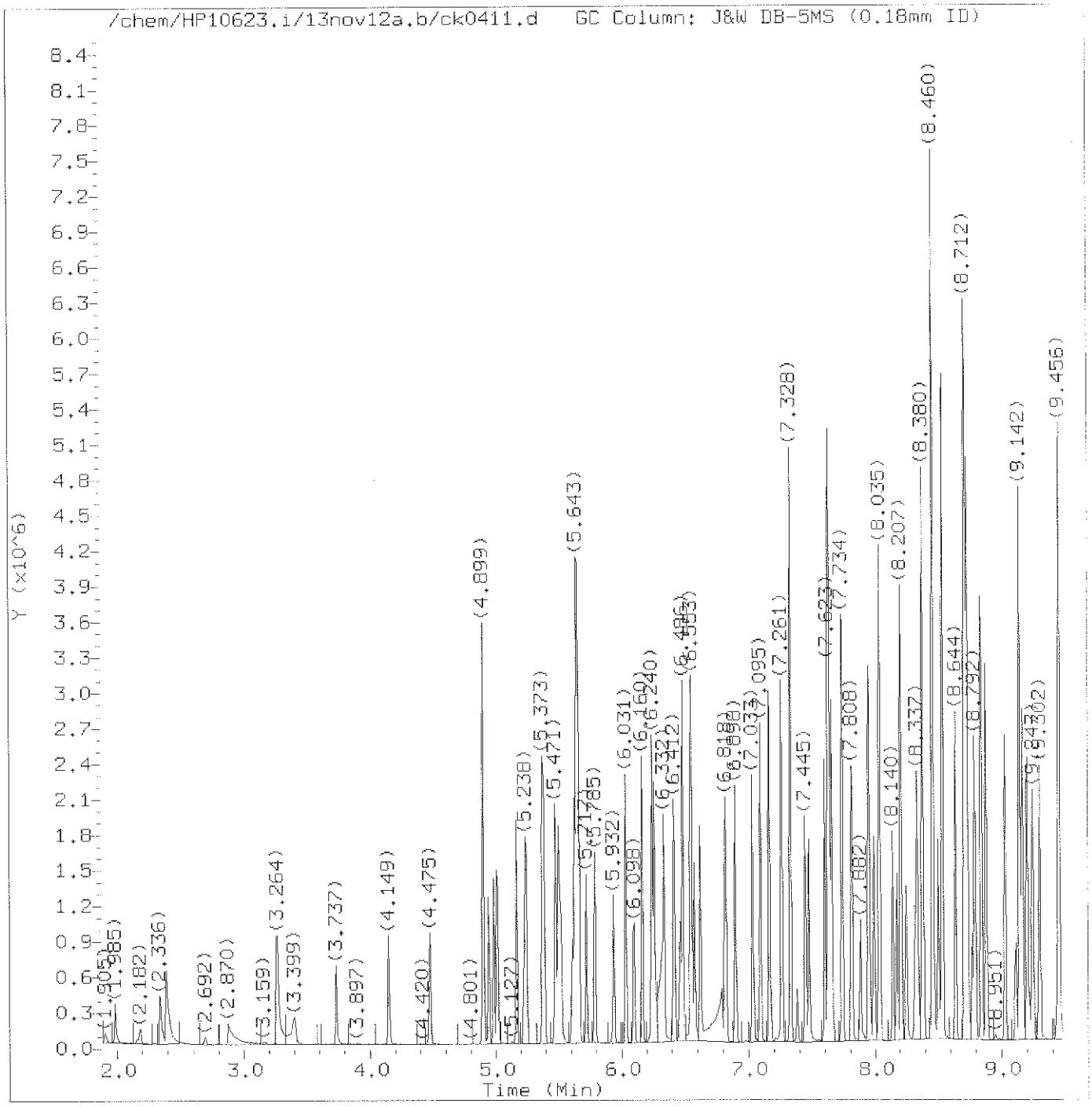
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

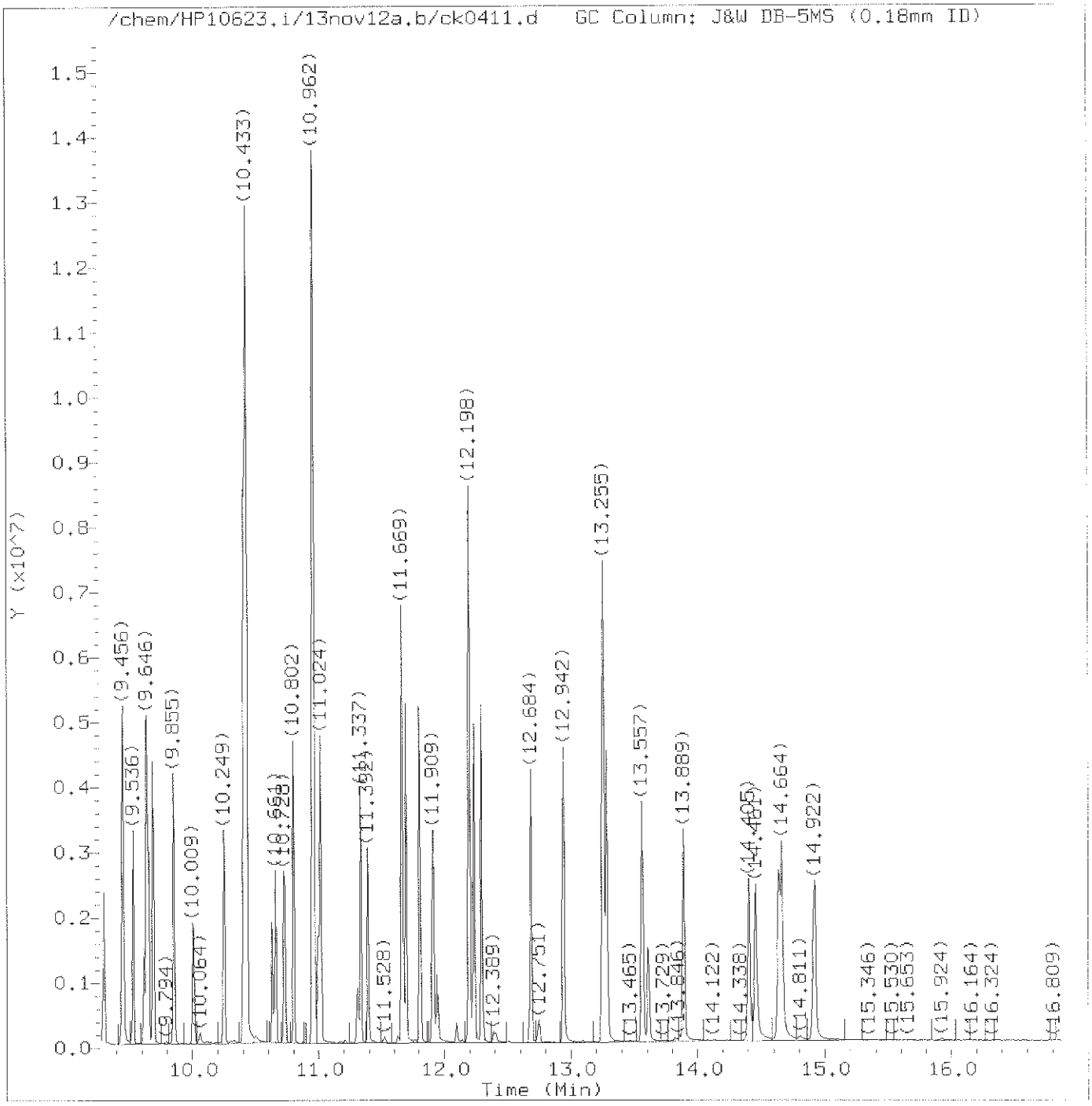
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	149311	47.957
2) N-Nitrosodimethylamine	(1)	2.342	74	252012	43.720
3) Pyridine	(1)	2.391	79	424785	47.535
5) 2-Picoline	(1)	3.264	93	431571	47.327
6) N-Nitrosomethylethylamine	(1)	3.399	88	206692	47.413
7) Methyl methanesulfonate	(1)	3.737	80	237169	54.109
9)$2-Fluorophenol	(1)	3.922	112	547	0.038
10) N-Nitrosodiethylamine	(1)	4.149	102	207816	47.985
11) Ethyl methanesulfonate	(1)	4.475	109	201755	51.157
15)$Phenol-d6	(1)	4.844	99	463	0.022
14)$Phenol-d5	(1)	4.844	99	463	0.022
13) Aniline	(1)	4.899	93	710385	49.000
16) Phenol	(1)	4.899	94	587646	48.067
18) bis(2-Chloroethyl)ether	(1)	4.986	93	418906	48.264
19) 2-Chlorophenol	(1)	5.010	128	371941	48.770
20) 1,3-Dichlorobenzene	(1)	5.164	146	387005	50.286
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	95185	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	394824	50.270
24) Benzyl alcohol	(1)	5.373	108	294737	49.427
25) 1,2-Dichlorobenzene	(1)	5.385	146	374976	50.864
206) Indene	(1)	5.471	115	599486	36.404
26) 2-Methylphenol	(1)	5.502	108	397816	49.028
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	470664	43.955
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	470664	44.068
29) N-Nitrosopyrrolidine	(1)	5.607	100	241796	49.784
30) Acetophenone	(1)	5.625	105	583217	48.210
31) N-Nitroso-di-n-propylamine	(1)	5.643	70	355052	45.852
33) 4-Methylphenol	(1)	5.650	108	469056	48.838
32) N-Nitrosomorpholine	(1)	5.650	56	262456	47.568
34) o-Toluidine	(1)	5.662	106	675835	48.770
38)$Nitrobenzene-d5	(2)	5.717	82	41086	2.154
37) Hexachloroethane	(1)	5.717	117	147419	49.317
39) Nitrobenzene	(2)	5.785	77	451476	44.623
40) N-Nitrosopiperidine	(2)	5.932	114	223398	49.773
41) Isophorone	(2)	6.031	82	891527	48.528
42) 2-Nitrophenol	(2)	6.098	139	173636	49.367
44) 2,4-Dimethylphenol	(2)	6.160	107	436233	48.254
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	191261	50.741
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	527676	47.271
47) Benzoic acid	(2)	6.314	105	586189	100.038

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	6.332	162	316817	51.530
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	347358	53.638
52)*Naphthalene-d8	(2)	6.461	136	442728	20.000
53) Naphthalene	(2)	6.486	128	1172491	49.915
56) 4-Chloroaniline	(2)	6.547	127	529549	51.732
57) 2,6-Dichlorophenol	(2)	6.553	162	300451	51.884
58) Hexachloropropene	(2)	6.578	213	190399	51.986
60) Hexachlorobutadiene	(2)	6.621	225	167513	51.574
194) Quinoline	(2)	6.818	129	818901	50.576
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	337694	38.170
68) 4-Chloro-3-methylphenol	(2)	7.033	107	396928	50.498
69) Safrole	(2)	7.095	162	320659	51.534
70) 2-Methylnaphthalene	(2)	7.162	142	821412	49.274
71) 1-Methylnaphthalene	(2)	7.261	142	775772	50.857
72) Hexachlorocyclopentadiene	(3)	7.328	237	324007	114.668
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	325095	49.717
74) cis-Isosafrole	(3)	7.377	162	59569	5.674
78)$2-Fluorobiphenyl	(3)	7.445	172	746	0.022
75) 2,4,6-Trichlorophenol	(3)	7.445	196	216899	50.837
77) 2,4,5-Trichlorophenol	(3)	7.476	196	247588	53.224
80) Isosafrole	(3)	7.599	162	341611	51.648
79) trans-Isosafrole	(3)	7.599	162	341611	45.967
83) 1,1'-Biphenyl	(3)	7.629	154	1002793	47.214
84) 2-Chloronaphthalene	(3)	7.636	162	909334M	58.779
85) 1-Chloronaphthalene	(3)	7.654	162	751847M	49.381
88) Diphenyl ether	(3)	7.734	170	533977	50.470
89) 2-Nitroaniline	(3)	7.740	138	257838	51.088
90) 1,4-Naphthoquinone	(3)	7.814	158	407751	62.631
91) 1,4-Dinitrobenzene	(3)	7.882	168	101153	46.695
92) Dimethylphthalate	(3)	7.943	163	940559	51.095
93) 1,3-Dinitrobenzene	(3)	7.955	168	139577	47.856
94) 2,6-Dinitrotoluene	(3)	7.992	165	208212	54.307
95) Acenaphthylene	(3)	8.035	152	1297511	53.722
97) 3-Nitroaniline	(3)	8.140	138	253015	54.041
98)*Acenaphthene-d10	(3)	8.177	164	274130	20.000
99) Acenaphthene	(3)	8.207	153	830165	49.665
100) 2,4-Dinitrophenol	(3)	8.251	184	147734	99.414
103) 4-Nitrophenol	(3)	8.318	109	152004	52.408
101) Pentachlorobenzene	(3)	8.337	250	293115	51.874
104) Dibenzofuran	(3)	8.380	168	1131103	49.399

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 2,4-Dinitrotoluene	(3)	8.380	165	273983	55.301
106) 1-Naphthylamine	(3)	8.460	143	1980480	105.262
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	192007	58.598
108) 2-Naphthylamine	(3)	8.539	143	1976694	102.683
109) Diethylphthalate	(3)	8.644	149	968057	50.909
111) Fluorene	(3)	8.712	166	1007496	51.140
110) Thionazin	(3)	8.718	107	199292	47.522
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	440587	50.271
113) 5-Nitro-o-toluidine	(3)	8.730	152	289839	55.721
114) 4-Nitroaniline	(3)	8.742	138	280640	53.304
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	111806	49.870
117) N-Nitrosodiphenylamine	(4)	8.841	169	878764	51.002
202) NDPA as diphenylamine	(4)	8.841	169	878764	50.881
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1180053	47.812
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	162188	46.106
121) 1,3,5-Trinitrobenzene	(4)	9.111	213	75929	48.720
122) Diallate (peak 1)	(4)	9.136	86	429247	33.987
123) Phorate	(4)	9.142	75	679865	44.709
124) Phenacetin	(4)	9.167	108	601455	50.511
125) 4-Bromophenyl-phenylether	(4)	9.204	248	243781	51.350
126) Diallate (peak 2)	(4)	9.222	86	62012	11.306
127) Hexachlorobenzene	(4)	9.247	284	236757	50.510
128) Dimethoate	(4)	9.302	87	445676	47.929
131) Pentachlorophenol	(4)	9.443	266	139666	53.726
133) 4-Aminobiphenyl	(4)	9.456	169	1247866	66.977
132) Pentachloronitrobenzene	(4)	9.456	237	105666	51.930
134) Pronamide	(4)	9.536	173	442161	49.235
135)*Phenanthrene-d10	(4)	9.622	188	514071	20.000
136) Dinoseb	(4)	9.640	211	155709	48.621
137) Phenanthrene	(4)	9.646	178	1490821	49.875
138) Anthracene	(4)	9.695	178	1578759	51.311
140) Carbazole	(4)	9.855	167	1562784	52.049
141) Methyl parathion	(4)	10.009	109	299763	48.830
142) Di-n-butylphthalate	(4)	10.249	149	1787952	50.471
143) Parathion	(4)	10.409	109	232212	51.490
144) 4-Nitroquinoline-1-oxide	(4)	10.433	190	2149290	770.330
156)$Terphenyl-d14	(5)	10.661	244	591	0.012
146) Isodrin	(4)	10.661	193	162361	48.065
147) Fluoranthene	(4)	10.802	202	1770588	52.975
152) Benzidine	(5)	10.968	184	6726223	246.851

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167)*Pyrene-d10	(5)	10.999	212	665610	20.000
154) Pyrene	(5)	11.024	202	1848877	50.019
158) p-Dimethylaminoazobenzene	(5)	11.337	225	382230	53.061
159) Chlorobenzilate	(5)	11.392	139	533173	47.580
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2334265	102.463
161) Butylbenzylphthalate	(5)	11.700	149	867538	49.182
162) 2-Acetylaminofluorene	(5)	11.909	181	825122	51.651
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	639098	49.725
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	309955	49.366
166) Benzo(a)anthracene	(5)	12.198	228	1778344	52.161
168) Chrysene	(5)	12.235	228	1660733	50.522
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1190472	48.643
189) 6-Methylchrysene	(5)	12.684	242	1204991	49.681
170) Di-n-octylphthalate	(6)	12.942	149	2087276	49.022
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.255	256	857518	53.573
172) Benzo(b)fluoranthene	(6)	13.255	252	1719775	49.927
173) Benzo(k)fluoranthene	(6)	13.286	252	1926453	54.819
174) Benzo(a)pyrene	(6)	13.563	252	1699768	50.559
175)*Perylene-d12	(6)	13.612	264	564114	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	850664	50.480
190) Dibenz(a,h)acridine	(6)	14.405	279	1220081	49.955
191) Dibenz(a,j)acridine	(6)	14.461	279	1426475	50.791
177) Indeno(1,2,3-cd)pyrene	(6)	14.639	276	1856821	51.912
178) Dibenz(a,h)anthracene	(6)	14.664	278	1566073	52.343
179) Benzo(g,h,i)perylene	(6)	14.922	276	1561134	51.232
129) Diallate TRANS/CIS	(4)	23.156	86	491259	45.305

* = Compound is an internal standard.

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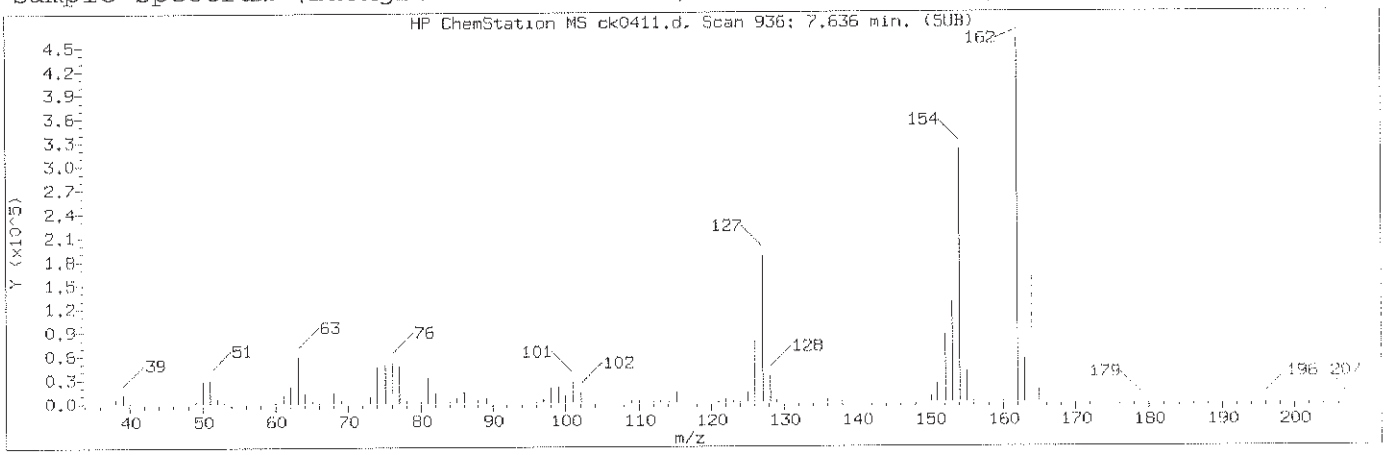
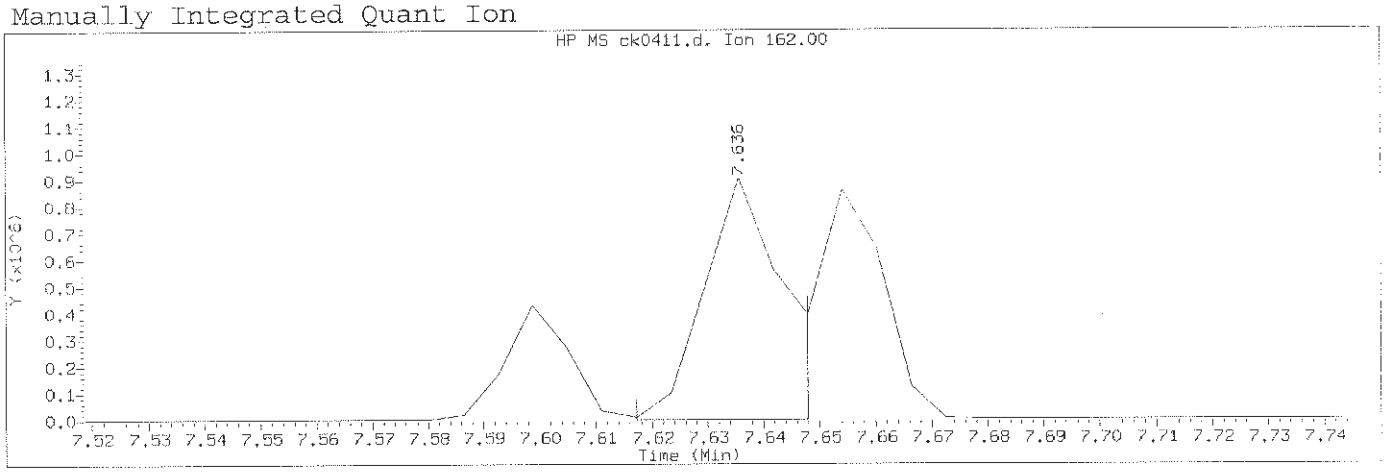
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 909334M		
On-Column Amount (ng/ul)	: 58.7790		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -854	Y at integration end:	-854

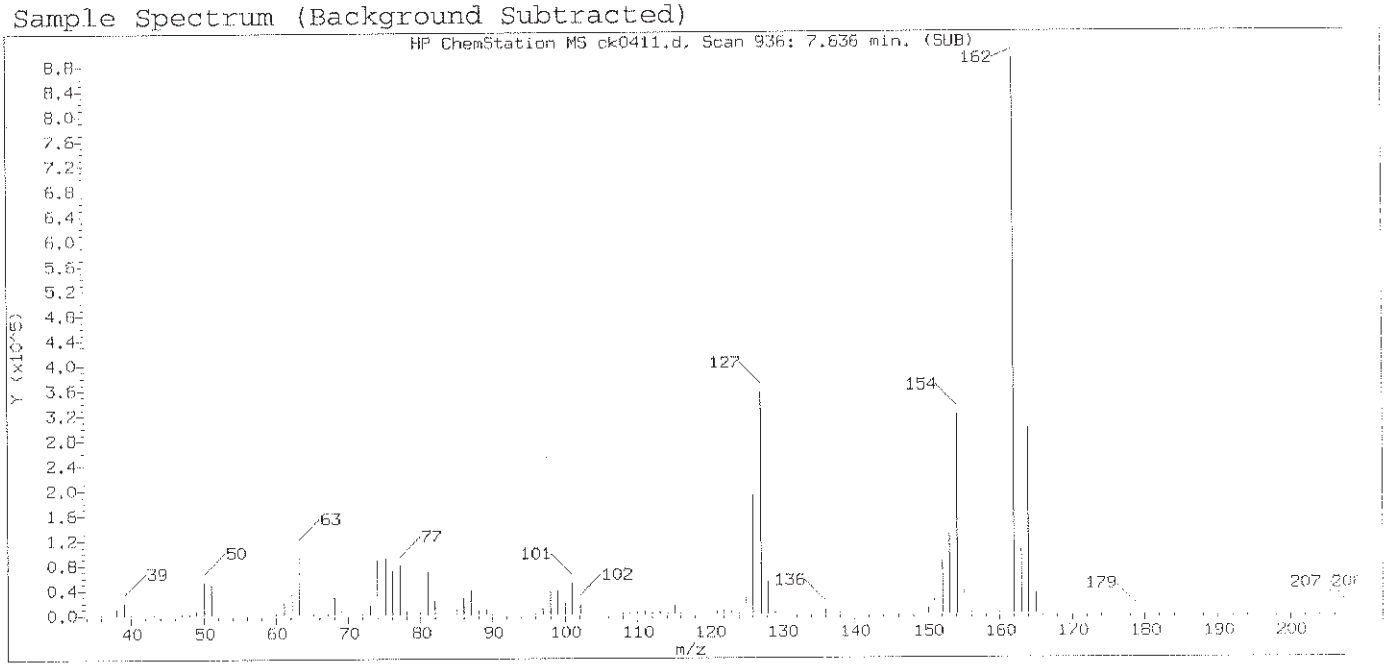
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

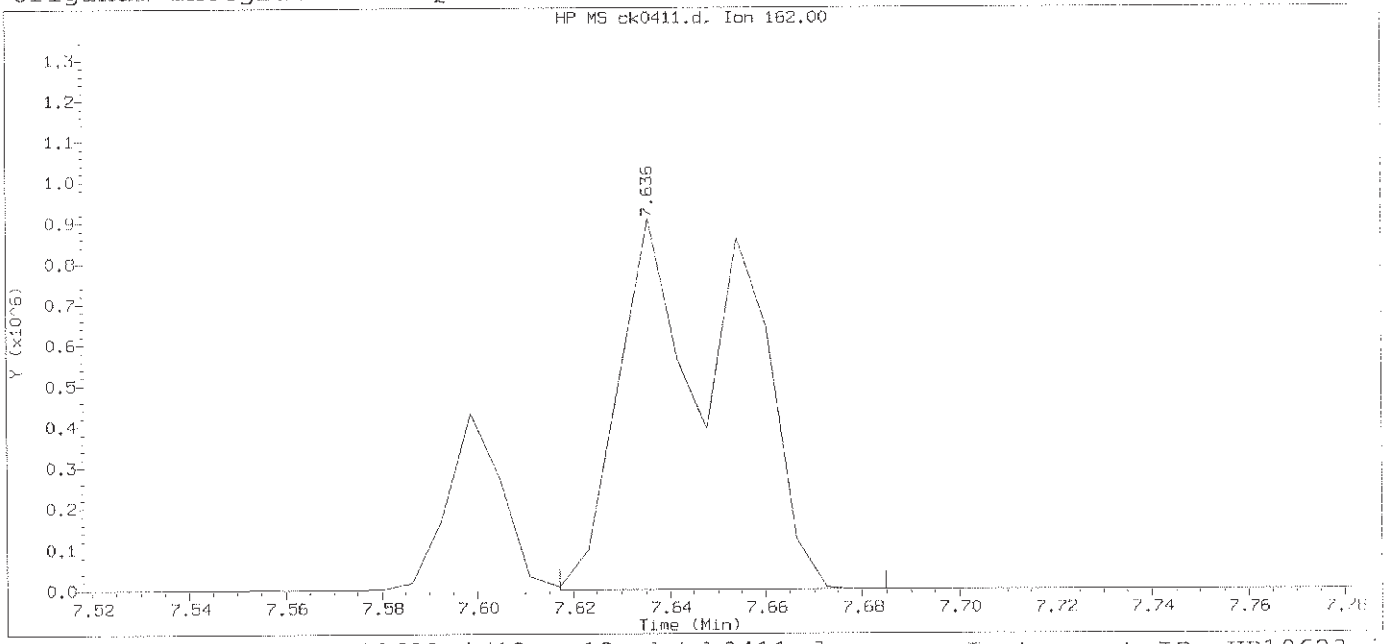
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507324		
On-column Amount (ng/ul)	: 97.4326		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 304	Y at integration end:	322

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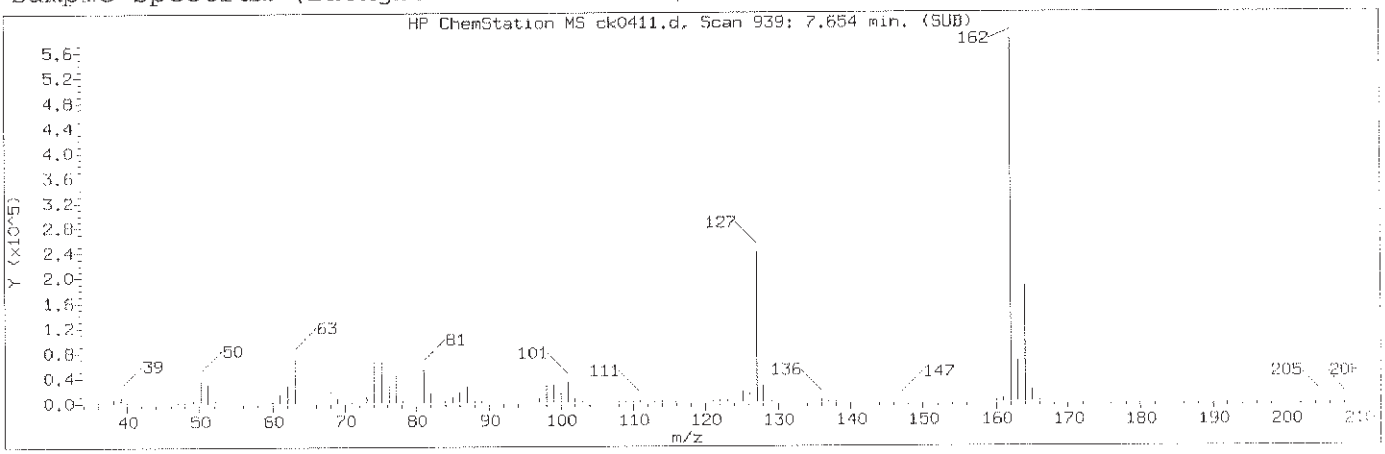
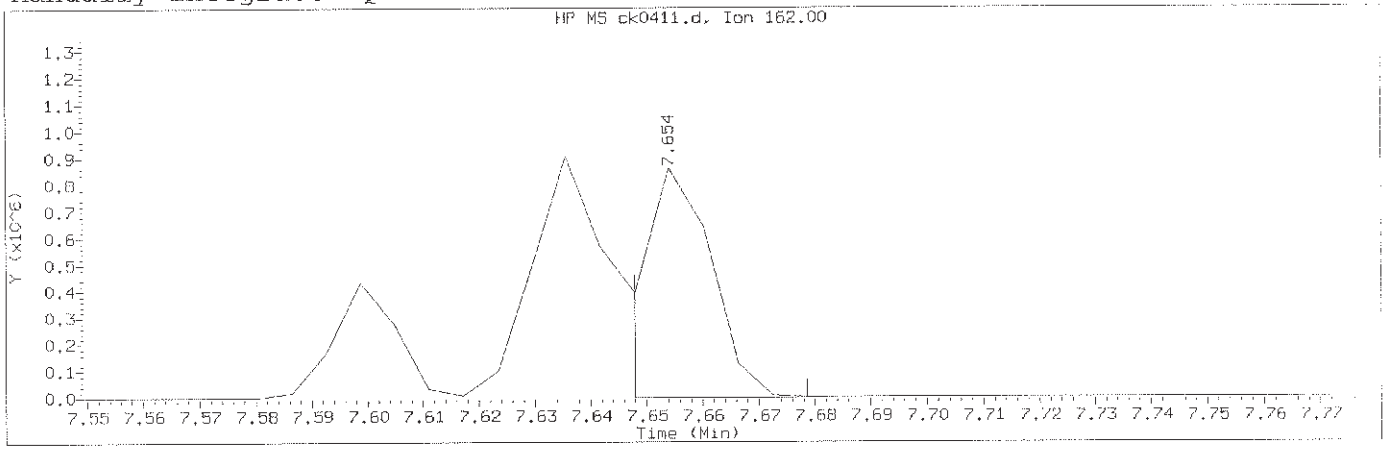
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 751847M		
On-Column Amount (ng/ul)	: 49.3814		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: -2049	Y at integration end:	-2049

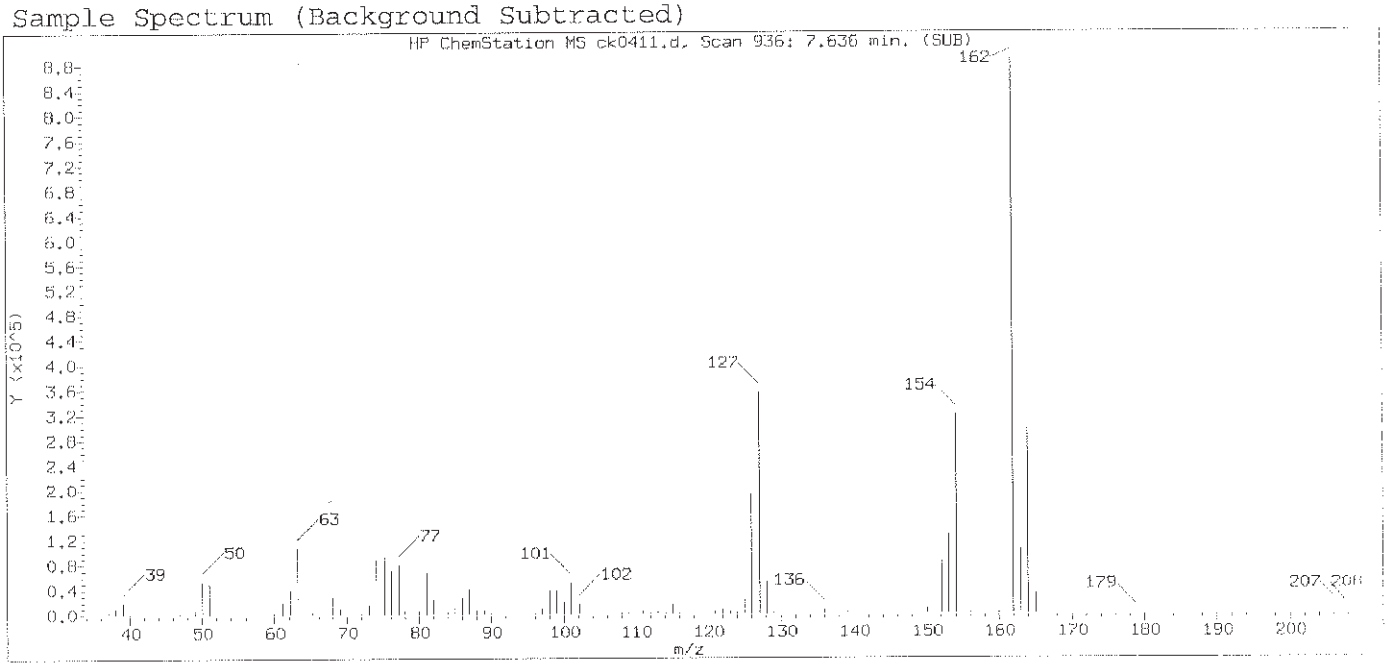
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

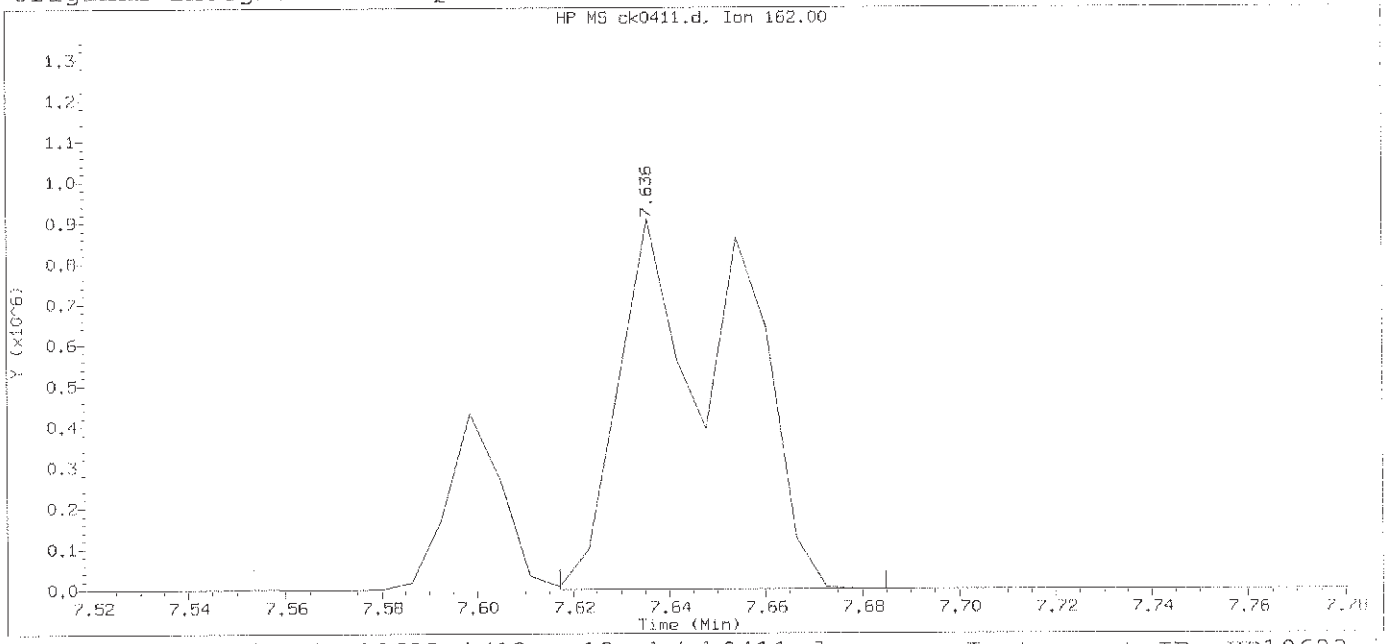
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507885		
On-column Amount (ng/ul)	: 99.0379		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 186	Y at integration end:	165

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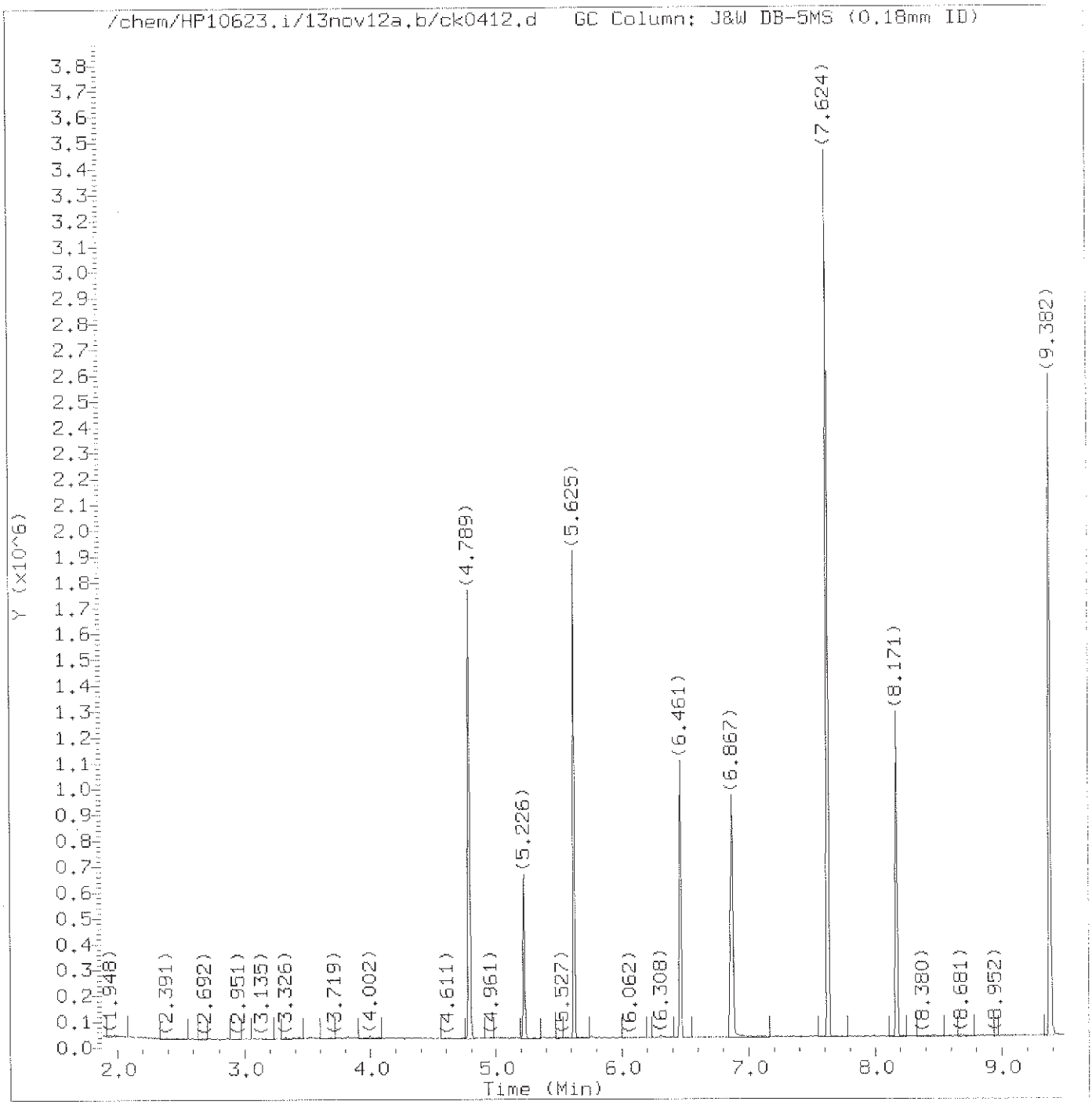
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sublist used: basicval11

Sample Name: SSTD050

Lab Sample ID: BASICV2463

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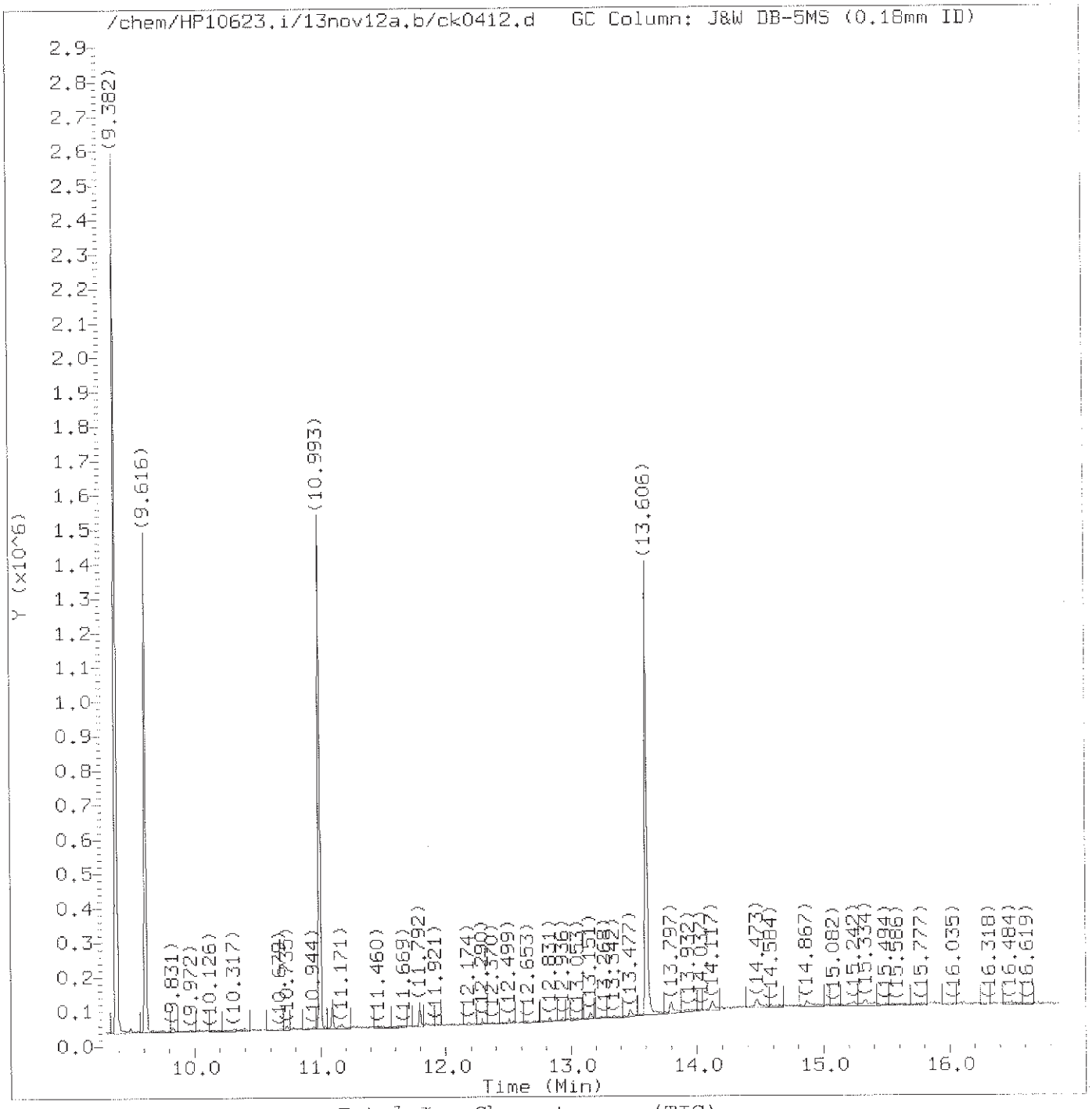
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: basicvall1

Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sublist used: basicval11

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12) Benzaldehyde	(1)	4.789	77	339099	79.821
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93637	20.000
52)*Naphthalene-d8	(2)	6.461	136	418471	20.000
63) Caprolactam	(2)	6.867	113	155639	48.346
98)*Acenaphthene-d10	(3)	8.171	164	254539	20.000
130) Atrazine	(4)	9.382	200	266151	52.717
135)*Phenanthrene-d10	(4)	9.616	188	470167	20.000
167)*Pyrene-d10	(5)	10.993	212	587857	20.000
175)*Perylene-d12	(6)	13.606	264	527879	20.000

* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov13a.b/ck0460.d

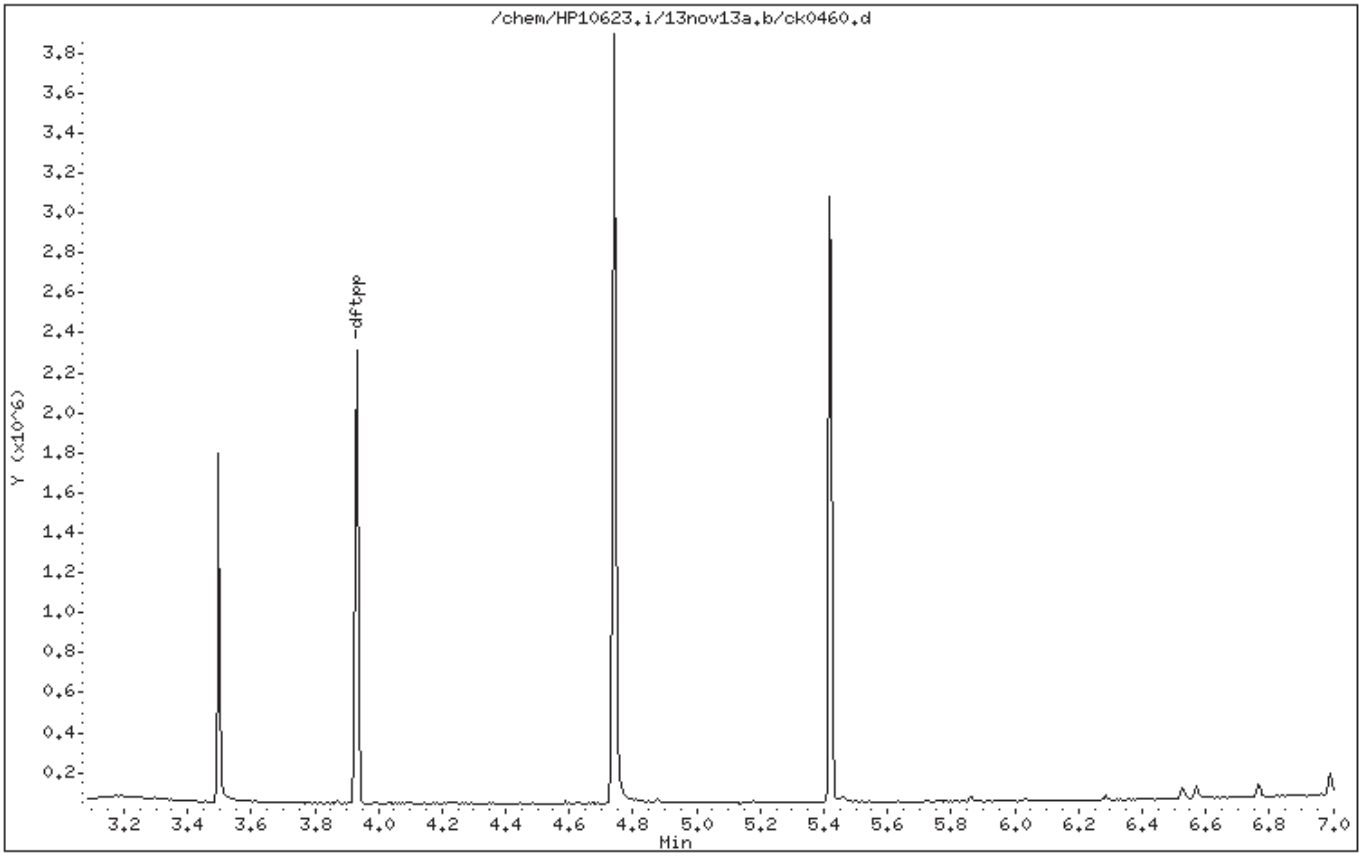
Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/13nov13a.b/ck0460.d

Date : 13-NOV-2013 08:29

Client ID: DFTPP

Instrument: HP10623.i

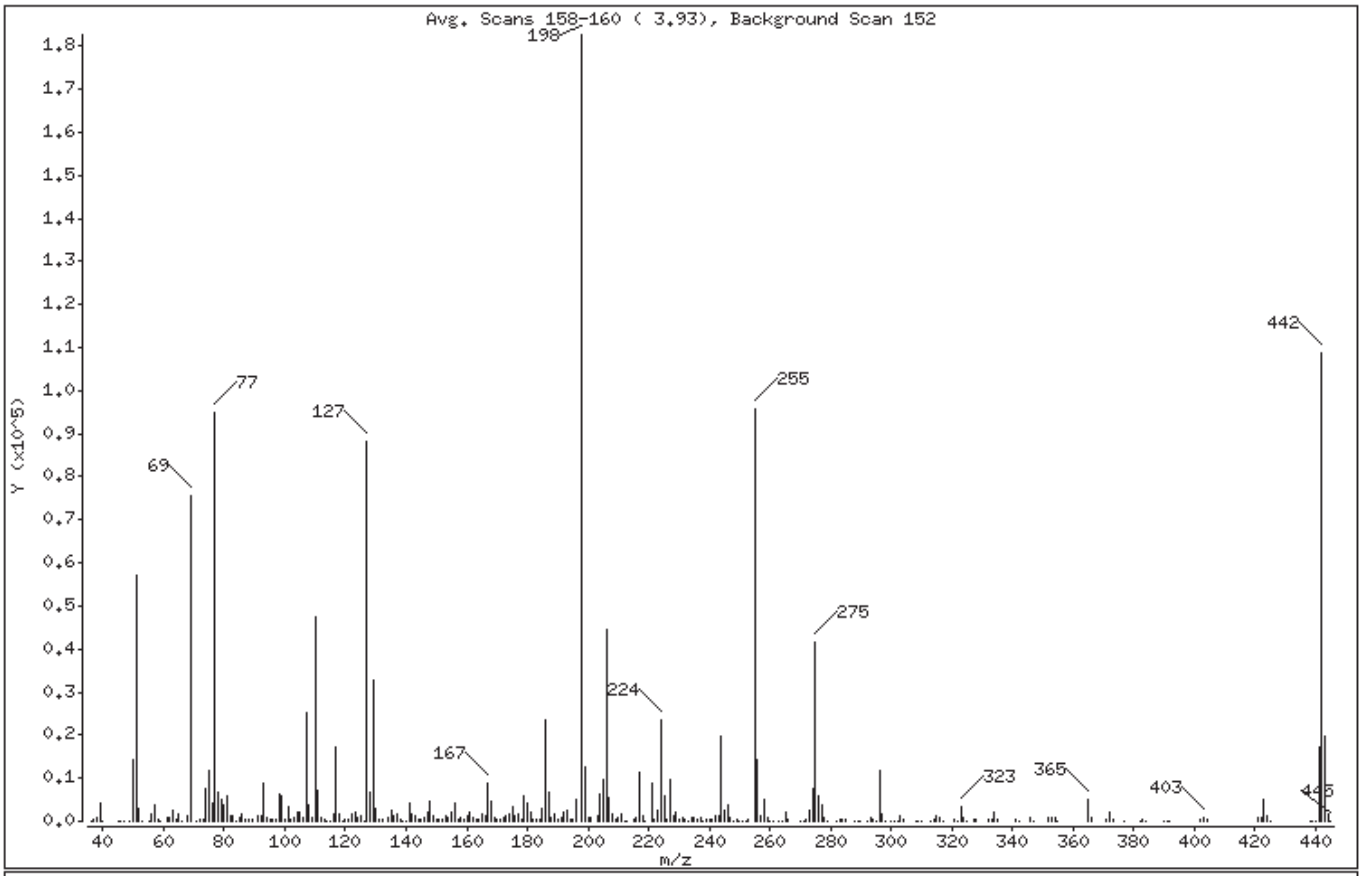
Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.19
68	Less than 2.00% of mass 69	0.60 (1.46)
69	Mass 69 relative abundance	41.33
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	48.16
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.93
275	10.00 - 30.00% of mass 198	22.67
365	Greater than 1.00% of mass 198	2.76
441	Present, but less than mass 443	9.51
442	40.00 - 99.99% of mass 198	59.58
443	17.00 - 23.00% of mass 442	10.89 (18.27)

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	113	121.00	332	198.00	182656	283.00	426
37.00	331	122.00	1595	199.00	12656	284.00	292
38.00	794	123.00	2276	200.00	903	285.00	545
39.00	4205	124.00	973	201.00	987	288.00	51
40.00	142	125.00	1082	203.00	1153	289.00	139
45.00	32	126.00	161	204.00	6301	290.00	125
46.00	69	127.00	87976	205.00	9811	292.00	136
47.00	69	128.00	6529	206.00	44528	293.00	925
49.00	174	129.00	32824	207.00	5645	294.00	298
50.00	14301	130.00	2981	208.00	1589	295.00	160
51.00	56968	131.00	565	209.00	501	296.00	11921
52.00	3063	132.00	357	210.00	825	297.00	1523
53.00	117	134.00	1033	211.00	1513	298.00	58
55.00	17	135.00	2394	212.00	57	300.00	58
56.00	1559	136.00	1163	213.00	98	301.00	112
57.00	3853	137.00	1601	215.00	596	302.00	91
58.00	293	138.00	236	216.00	1028	303.00	1289
59.00	169	139.00	15	217.00	11295	304.00	423
61.00	639	140.00	170	218.00	1453	308.00	59
62.00	980	141.00	4310	219.00	151	309.00	51
63.00	2516	142.00	1529	221.00	8825	310.00	117
64.00	378	143.00	1146	222.00	241	313.00	118
65.00	1569	144.00	327	223.00	2574	314.00	557
66.00	78	145.00	442	224.00	23328	315.00	1337
68.00	1100	146.00	883	225.00	6079	316.00	663
69.00	75496	147.00	2168	226.00	623	317.00	107
71.00	110	148.00	4533	227.00	9504	321.00	299
72.00	210	149.00	1094	228.00	1366	322.00	141
73.00	569	150.00	408	229.00	1981	323.00	3456
74.00	7487	151.00	533	230.00	503	324.00	780
75.00	11896	152.00	592	231.00	933	325.00	57
76.00	4358	153.00	1117	232.00	267	327.00	565
77.00	94944	154.00	971	233.00	197	328.00	511
78.00	6563	155.00	2306	234.00	658	332.00	276
79.00	5218	156.00	4205	235.00	815	333.00	361

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3964	157.00	499	236.00	575	334.00	2283
81.00	6066	158.00	695	237.00	784	335.00	581
82.00	1315	159.00	546	238.00	137	341.00	230
83.00	1379	160.00	1315	239.00	454	342.00	89
84.00	163	161.00	1970	240.00	325	346.00	804
85.00	802	162.00	775	241.00	469	347.00	66
86.00	1682	163.00	298	242.00	1213	352.00	848
87.00	624	164.00	297	243.00	1444	353.00	752
88.00	344	165.00	1510	244.00	19736	354.00	988
89.00	243	166.00	1432	245.00	2643	355.00	139
91.00	1108	167.00	8675	246.00	3804	365.00	5034
92.00	1193	168.00	4433	247.00	810	366.00	802
93.00	8909	169.00	783	248.00	173	371.00	245
94.00	743	170.00	349	249.00	603	372.00	1904
95.00	416	171.00	435	250.00	188	373.00	479
96.00	301	172.00	725	251.00	120	377.00	56
97.00	339	173.00	1164	252.00	152	382.00	63
98.00	6104	174.00	1753	253.00	494	383.00	376
99.00	5852	175.00	3361	255.00	95632	384.00	57
100.00	499	176.00	1144	256.00	14124	390.00	179
101.00	3488	177.00	1536	257.00	1222	391.00	131
102.00	316	178.00	594	258.00	5219	392.00	57
103.00	1029	179.00	5811	259.00	978	402.00	552
104.00	1926	180.00	4000	260.00	199	403.00	880
105.00	2021	181.00	1934	261.00	79	404.00	370
106.00	766	182.00	347	263.00	59	421.00	728
107.00	25160	183.00	285	264.00	79	422.00	881
108.00	3718	184.00	559	265.00	2141	423.00	4880
109.00	842	185.00	2876	266.00	281	424.00	1138
110.00	47384	186.00	23368	270.00	200	425.00	79
111.00	6983	187.00	6927	271.00	176	438.00	87
112.00	657	188.00	845	272.00	353	439.00	88
113.00	254	189.00	1692	273.00	2578	440.00	94
114.00	71	190.00	399	274.00	7460	441.00	17368
115.00	195	191.00	810	275.00	41416	442.00	108840

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Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	1523	192.00	2006	276.00	5689	443.00	19880
117.00	17104	193.00	2441	277.00	3813	444.00	1714
118.00	1491	194.00	626	278.00	643	445.00	77
119.00	191	195.00	363	279.00	155		
120.00	491	196.00	5198	282.00	74		

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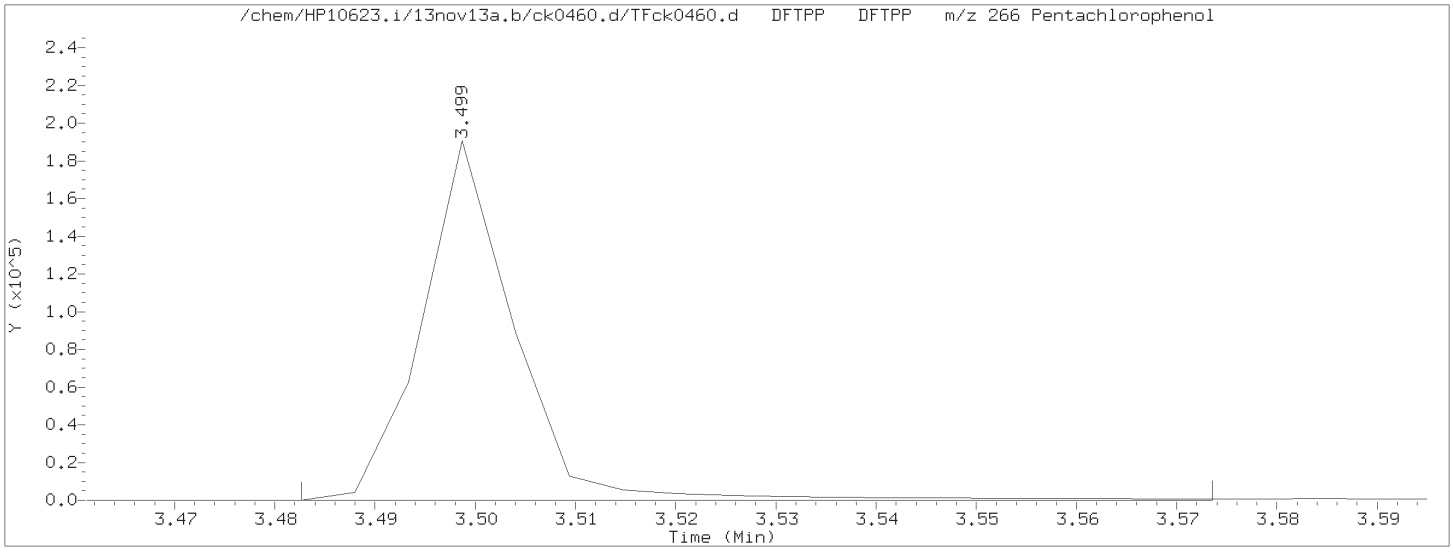
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

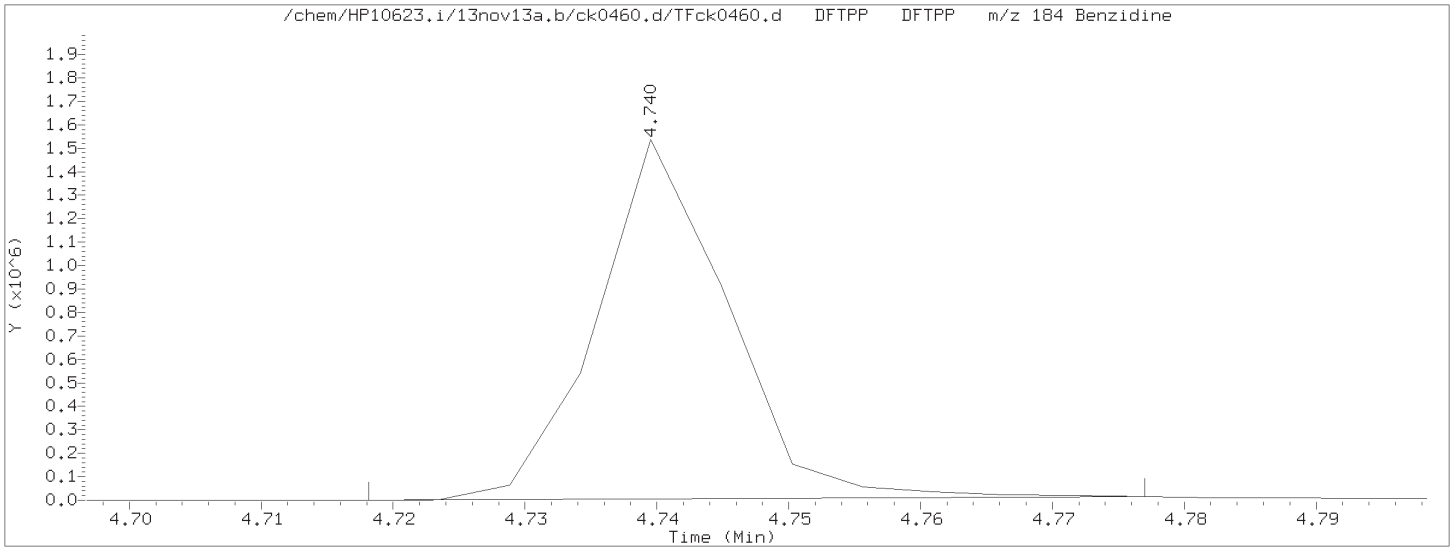
Instrument ID: HP10623.i Injection Date: 13-NOV-2013 08:29 Operator: jmg00346



Pentachlorophenol EICP peak height = 190784 EICP peak height at 10% = 19078 Pentachlorophenol EICP area = 122280

Pentachlorophenol EICP peak apex (min.) = 3.499
RT at 10% of front half of EICP (min.) = 3.489 'Front' peak width (min.) = 0.0093333333
RT at 10% of back half of EICP (min.) = 3.509 'Tailing' peak width (min.) = 0.0102500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0102500000}{0.0093333333} = 1.098$



Benzidine EICP peak height = 1533055 EICP peak height at 10% = 153306 Benzidine EICP area = 1050403

Benzidine EICP peak apex (min.) = 4.740
RT at 10% of front half of EICP (min.) = 4.730 'Front' peak width (min.) = 0.0096333333
RT at 10% of back half of EICP (min.) = 4.750 'Tailing' peak width (min.) = 0.0106500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106500000}{0.0096333333} = 1.106$

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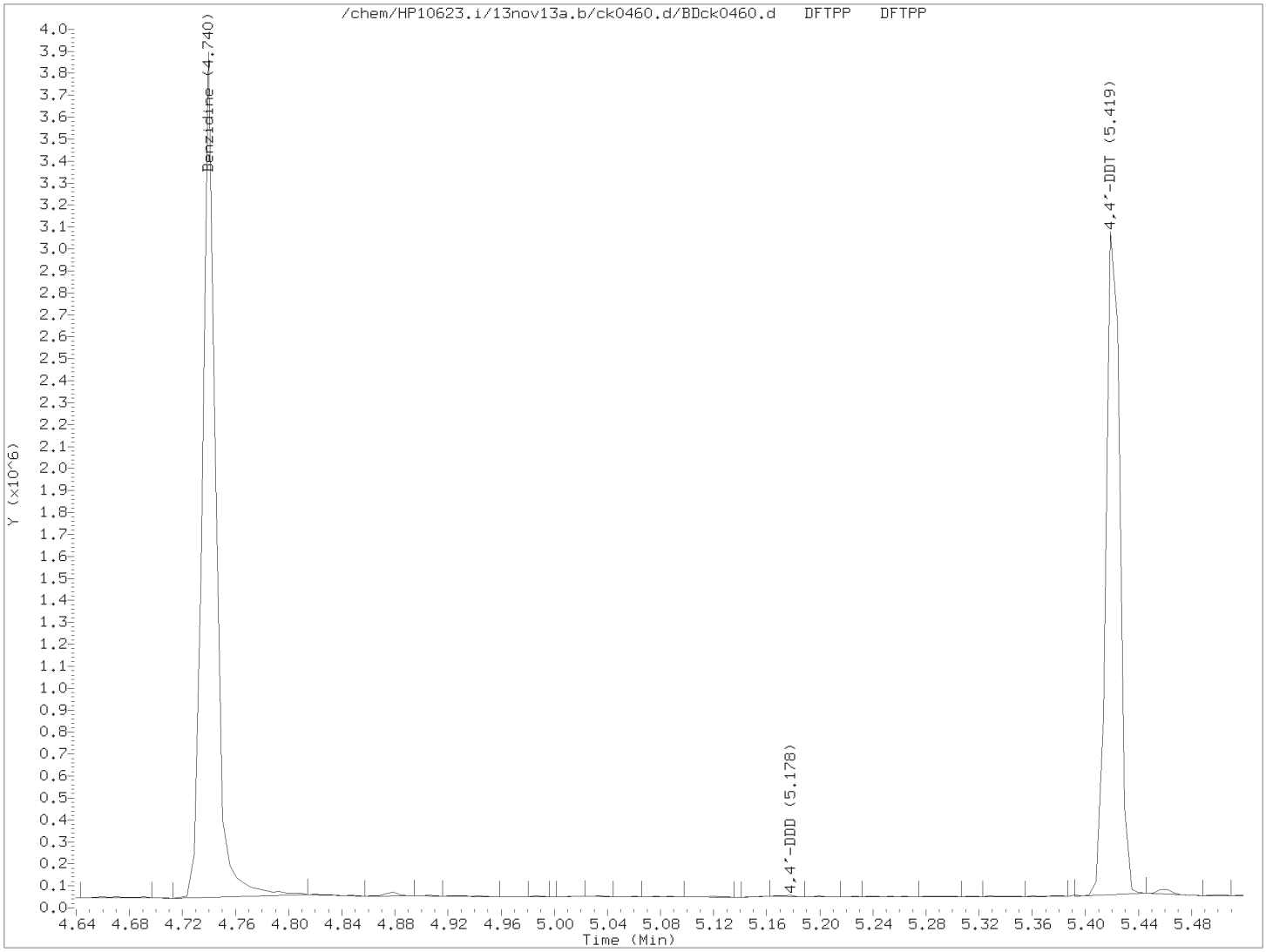
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 13-NOV-2013 08:29 Operator: jmg00346



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 4720}{0 + 4720 + 2215088} \times 100 = 0.2$$

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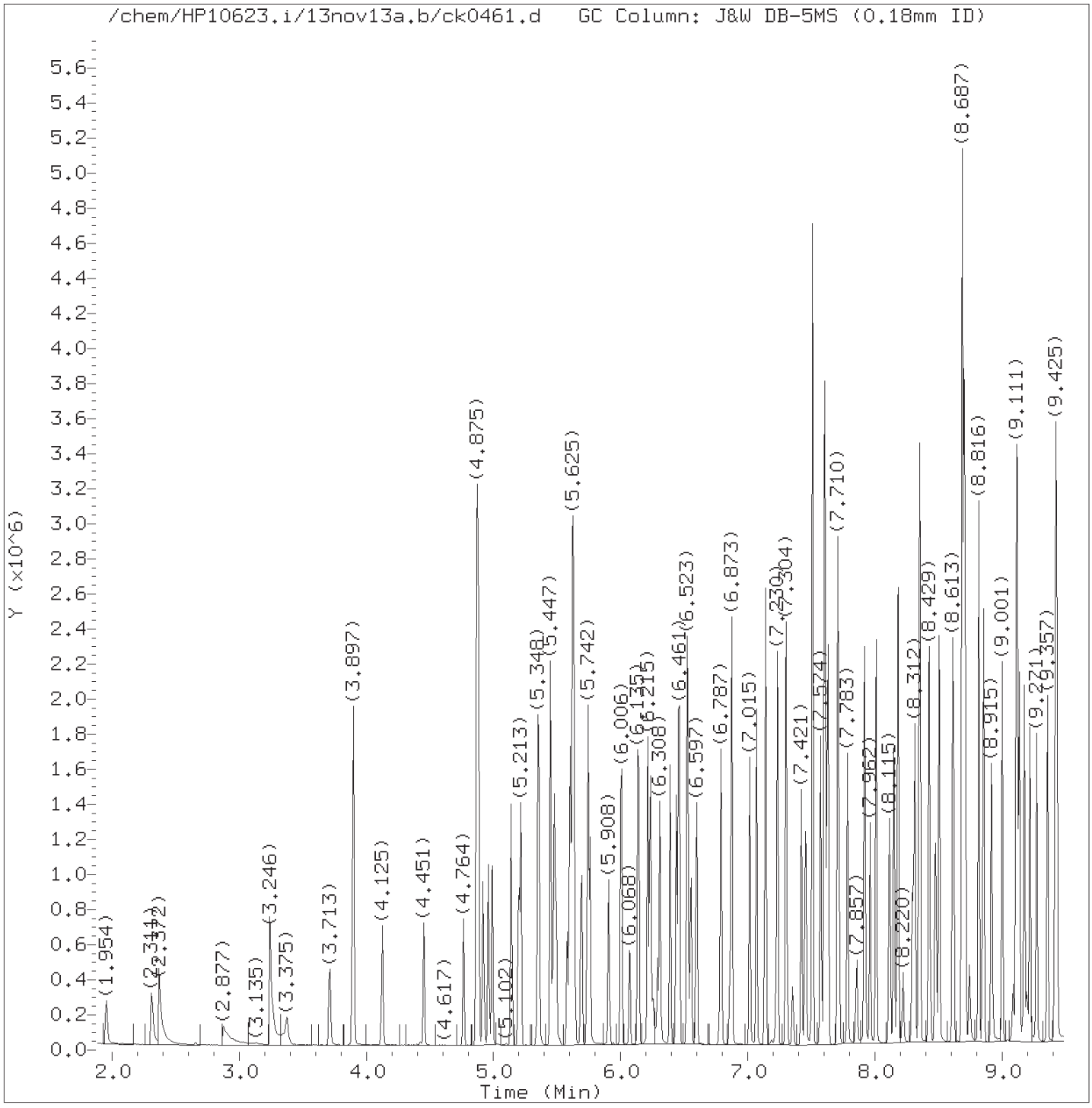
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

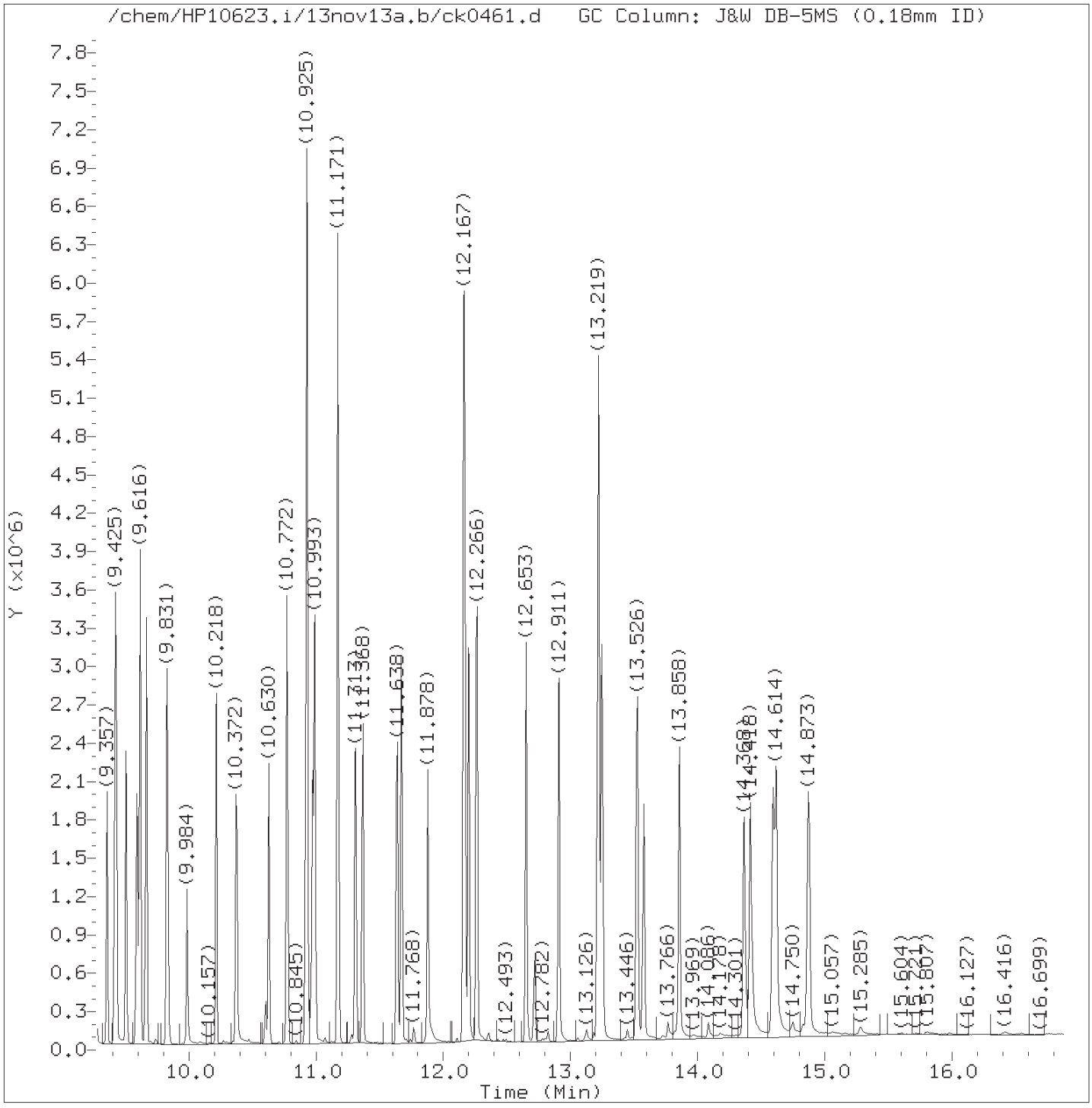
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.954	88	109394	28.082
2) N-Nitrosodimethylamine	(1)	2.311	74	193844	26.877
3) Pyridine	(1)	2.366	79	314530	28.130
5) 2-Picoline	(1)	3.239	93	328831	28.821
6) N-Nitrosomethylethylamine	(1)	3.375	88	149361	27.383
7) Methyl methanesulfonate	(1)	3.713	80	157455	28.710
9)$2-Fluorophenol	(1)	3.897	112	514879	57.784
10) N-Nitrosodiethylamine	(1)	4.125	102	152788	28.196
11) Ethyl methanesulfonate	(1)	4.451	109	146687	29.727
12) Benzaldehyde	(1)	4.764	77	139806	24.724
15)$Phenol-d6	(1)	4.869	99	759725	57.944
14)$Phenol-d5	(1)	4.869	99	759725	57.944
13) Aniline	(1)	4.875	93	516599	28.479
16) Phenol	(1)	4.881	94	429721	28.092
18) bis(2-Chloroethyl)ether	(1)	4.961	93	307272	28.295
19) 2-Chlorophenol	(1)	4.992	128	274760	28.794
20) 1,3-Dichlorobenzene	(1)	5.139	146	283379	29.428
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	119096	20.000
22) 1,4-Dichlorobenzene	(1)	5.213	146	286696	29.174
24) Benzyl alcohol	(1)	5.348	108	219748	29.453
25) 1,2-Dichlorobenzene	(1)	5.361	146	274117	29.718
206) Indene	(1)	5.447	115	609058	29.560
26) 2-Methylphenol	(1)	5.478	108	293135	28.873
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.490	45	354901	26.557
28) bis(2-Chloroisopropyl)ether	(1)	5.490	45	354901	26.490
29) N-Nitrosopyrrolidine	(1)	5.582	100	179987	29.618
30) Acetophenone	(1)	5.601	105	439382	29.028
31) N-Nitroso-di-n-propylamine	(1)	5.619	70	260534	26.891
33) 4-Methylphenol	(1)	5.625	108	342887	28.534
32) N-Nitrosomorpholine	(1)	5.625	56	195191	28.274
34) o-Toluidine	(1)	5.637	106	511430	29.497
37) Hexachloroethane	(1)	5.693	117	107584	28.765
38)$Nitrobenzene-d5	(2)	5.742	82	577229	47.239
39) Nitrobenzene	(2)	5.760	77	317699	24.512
40) N-Nitrosopiperidine	(2)	5.908	114	168881	29.372
41) Isophorone	(2)	6.006	82	655919	27.870
42) 2-Nitrophenol	(2)	6.074	139	95012	21.087
44) 2,4-Dimethylphenol	(2)	6.135	107	326068	28.155
45) O,O,O-triethylphosphorothioate	(2)	6.215	198	145070	30.043
46) bis(2-Chloroethoxy)methane	(2)	6.234	93	381511	26.679

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.252	105	207989	27.708
49) 2,4-Dichlorophenol	(2)	6.308	162	235787	29.937
50) 1,2,4-Trichlorobenzene	(2)	6.388	180	246508	29.714
52)*Naphthalene-d8	(2)	6.437	136	567152	20.000
53) Naphthalene	(2)	6.461	128	873228	29.019
56) 4-Chloroaniline	(2)	6.523	127	388272	29.609
57) 2,6-Dichlorophenol	(2)	6.529	162	226832	30.578
58) Hexachloropropene	(2)	6.554	213	138943	29.614
60) Hexachlorobutadiene	(2)	6.597	225	124422	29.903
194) Quinoline	(2)	6.787	129	626204	30.190
64) N-Nitrosodi-n-butylamine	(2)	6.873	84	331253	29.228
63) Caprolactam	(2)	6.873	113	132192	30.298
68) 4-Chloro-3-methylphenol	(2)	7.015	107	289287	28.729
69) Safrole	(2)	7.070	162	236193	29.632
70) 2-Methylnaphthalene	(2)	7.138	142	628769	29.443
71) 1-Methylnaphthalene	(2)	7.230	142	578356	29.597
72) Hexachlorocyclopentadiene	(3)	7.304	237	107270	28.668
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.304	216	252546	29.165
74) cis-Isosafrole	(3)	7.353	162	44313	3.188
75) 2,4,6-Trichlorophenol	(3)	7.421	196	169099	29.929
77) 2,4,5-Trichlorophenol	(3)	7.451	196	181016	29.384
78)$2-Fluorobiphenyl	(3)	7.507	172	1315602	57.637
79) trans-Isosafrole	(3)	7.574	162	255238	25.935
80) Isosafrole	(3)	7.574	162	255238	29.140
83) 1,1'-Biphenyl	(3)	7.599	154	788123	28.021
84) 2-Chloronaphthalene	(3)	7.611	162	543120	26.511
85) 1-Chloronaphthalene	(3)	7.630	162	607226	30.117
88) Diphenyl ether	(3)	7.710	170	412069	29.411
89) 2-Nitroaniline	(3)	7.716	138	152340	22.794
90) 1,4-Naphthoquinone	(3)	7.783	158	255751	29.664
91) 1,4-Dinitrobenzene	(3)	7.857	168	48901	19.240
92) Dimethylphthalate	(3)	7.919	163	729796	29.938
93) 1,3-Dinitrobenzene	(3)	7.925	168	69530	19.796
94) 2,6-Dinitrotoluene	(3)	7.962	165	122824	24.191
95) Acenaphthylene	(3)	8.011	152	926353	28.963
97) 3-Nitroaniline	(3)	8.115	138	160714	25.921
98)*Acenaphthene-d10	(3)	8.146	164	363022	20.000
99) Acenaphthene	(3)	8.183	153	636257	28.744
100) 2,4-Dinitrophenol	(3)	8.220	184	43058	28.745
103) 4-Nitrophenol	(3)	8.294	109	101510	26.429

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$ = Compound is a surrogate standard.

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on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.312	250	231046	30.877
104) Dibenzofuran	(3)	8.349	168	879122	28.993
105) 2,4-Dinitrotoluene	(3)	8.349	165	144357	22.002
106) 1-Naphthylamine	(3)	8.429	143	745264	29.911
107) 2,3,4,6-Tetrachlorophenol	(3)	8.478	232	131805	30.375
108) 2-Naphthylamine	(3)	8.503	143	758187	29.741
109) Diethylphthalate	(3)	8.613	149	746846	29.659
111) Fluorene	(3)	8.687	166	748072	28.674
110) Thionazin	(3)	8.687	107	151297	27.243
112) 4-Chlorophenyl-phenylether	(3)	8.699	204	347646	29.953
113) 5-Nitro-o-toluidine	(3)	8.706	152	179213	26.017
114) 4-Nitroaniline	(3)	8.712	138	199879	28.668
115) 4,6-Dinitro-2-methylphenol	(4)	8.742	198	52912	21.517
117) N-Nitrosodiphenylamine	(4)	8.816	169	668285	28.883
202) NDPA as diphenylamine	(4)	8.816	169	668285	28.815
118) 1,2-Diphenylhydrazine	(4)	8.853	77	867593	26.177
119)$2,4,6-Tribromophenol	(3)	8.921	330	140561	64.117
120) Tetraethyldithiopyrophosphate	(4)	9.001	97	124130	26.277
121) 1,3,5-Trinitrobenzene	(4)	9.087	213	28632	18.563
122) Diallate (peak 1)	(4)	9.111	86	334004	19.694
123) Phorate	(4)	9.118	75	513806	25.162
124) Phenacetin	(4)	9.136	108	418278	26.159
125) 4-Bromophenyl-phenylether	(4)	9.173	248	192056	30.126
126) Diallate (peak 2)	(4)	9.191	86	48402	6.572
127) Hexachlorobenzene	(4)	9.216	284	189995	30.185
128) Dimethoate	(4)	9.271	87	328650	26.320
130) Atrazine	(4)	9.357	200	197885	26.695
131) Pentachlorophenol	(4)	9.413	266	102405	29.335
133) 4-Aminobiphenyl	(4)	9.425	169	716304	28.630
132) Pentachloronitrobenzene	(4)	9.431	237	72922	26.688
134) Pronamide	(4)	9.505	173	343300	28.467
135)*Phenanthrene-d10	(4)	9.591	188	690322	20.000
137) Phenanthrene	(4)	9.616	178	1146713	28.568
136) Dinoseb	(4)	9.616	211	65312	19.877
138) Anthracene	(4)	9.665	178	1183150	28.635
140) Carbazole	(4)	9.831	167	1147796	28.468
141) Methyl parathion	(4)	9.984	109	149855	19.666
142) Di-n-butylphthalate	(4)	10.218	149	1323182	27.815
144) 4-Nitroquinoline-1-oxide	(4)	10.372	190	48760	19.495
143) Parathion	(4)	10.372	109	113064	20.548

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Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.630	193	125746	27.721
147) Fluoranthene	(4)	10.772	202	1287657	28.690
152) Benzidine	(5)	10.925	184	2950998	85.061
167)*Pyrene-d10	(5)	10.974	212	847467	20.000
154) Pyrene	(5)	10.993	202	1346856	28.618
156)$Terphenyl-d14	(5)	11.171	244	1772139	58.494
158) p-Dimethylaminoazobenzene	(5)	11.313	225	270125	29.452
159) Chlorobenzilate	(5)	11.368	139	396170	27.767
160) 3,3'-Dimethylbenzidine	(5)	11.638	212	823463	28.389
161) Butylbenzylphthalate	(5)	11.669	149	626542	27.897
162) 2-Acetylaminofluorene	(5)	11.878	181	501444	24.653
164) 3,3'-Dichlorobenzidine	(5)	12.161	252	472911	28.899
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.167	231	227026	28.399
166) Benzo(a)anthracene	(5)	12.167	228	1246847	28.724
168) Chrysene	(5)	12.204	228	1174382	28.060
169) bis(2-Ethylhexyl)phthalate	(5)	12.266	149	857249	27.511
189) 6-Methylchrysene	(5)	12.653	242	884830	28.653
170) Di-n-octylphthalate	(6)	12.911	149	1448539	27.412
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.219	256	604289	30.419
172) Benzo(b)fluoranthene	(6)	13.219	252	1326608	31.032
173) Benzo(k)fluoranthene	(6)	13.249	252	1227163	28.137
174) Benzo(a)pyrene	(6)	13.526	252	1196217	28.670
175)*Perylene-d12	(6)	13.575	264	700104	20.000
176) 3-Methylcholanthrene	(6)	13.858	268	606617	29.006
190) Dibenz(a,h)acridine	(6)	14.368	279	882715	29.122
191) Dibenz(a,j)acridine	(6)	14.418	279	1035648	29.712
177) Indeno(1,2,3-cd)pyrene	(6)	14.596	276	1306700	29.436
178) Dibenz(a,h)anthracene	(6)	14.621	278	1105570	29.774
179) Benzo(g,h,i)perylene	(6)	14.873	276	1099626	29.077
196) 2,4_2,6-Dinitrotoluenes	(3)			267181	0.000
129) Diallate TRANS/CIS	(4)			382406	26.262

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$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

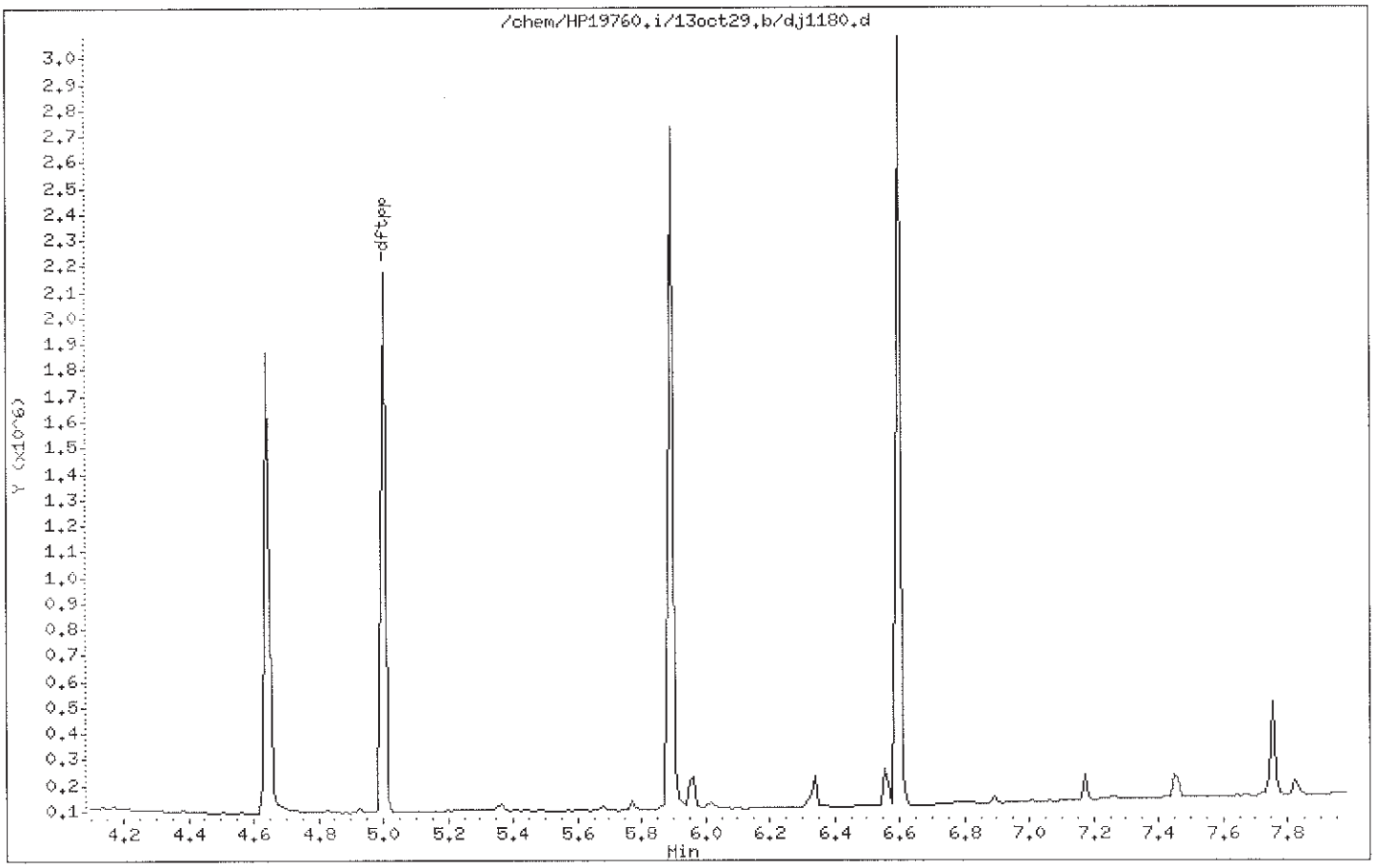
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

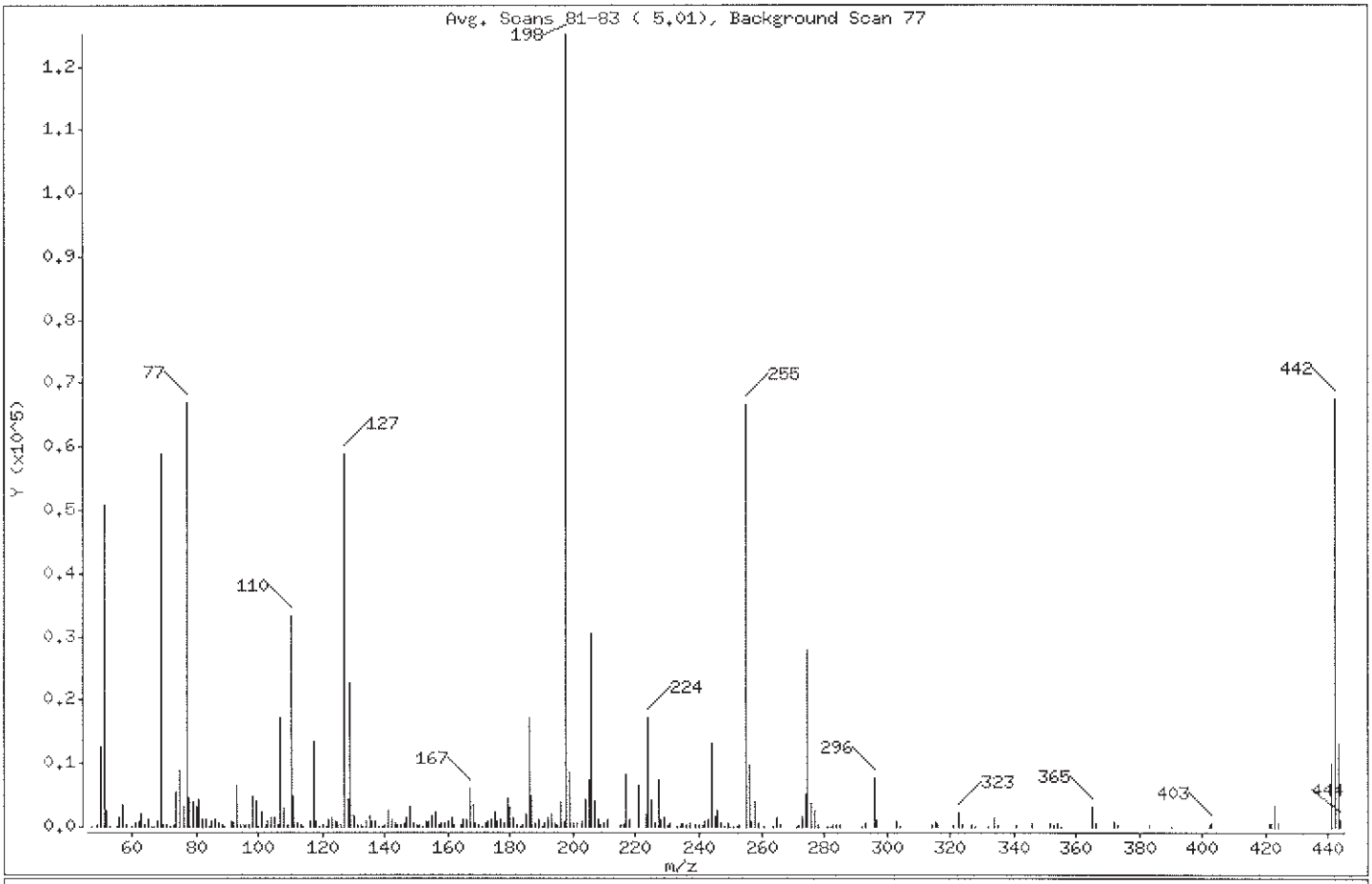
Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.63
68	Less than 2.00% of mass 69	0.61 (1.30)
69	Mass 69 relative abundance	47.07
70	Less than 2.00% of mass 69	0.22 (0.47)
127	40.00 - 60.00% of mass 198	47.20
197	Less than 1.00% of mass 198	0.62
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	7.96
442	40.00 - 99.99% of mass 198	53.99
443	17.00 - 23.00% of mass 442	10.46 (19.38)

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d
Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	13	116.00	929	181.00	1462	255.00	66776
49.00	261	117.00	13587	182.00	291	256.00	9856
50.00	12707	118.00	891	183.00	143	257.00	787
51.00	50792	119.00	70	184.00	364	258.00	3960
52.00	2525	120.00	147	185.00	2083	259.00	515
53.00	20	121.00	36	186.00	17232	261.00	89
55.00	76	122.00	1155	187.00	4804	264.00	110
56.00	1295	123.00	1560	188.00	488	265.00	1556
57.00	3551	124.00	721	189.00	1028	266.00	224
58.00	186	125.00	778	190.00	135	271.00	107
60.00	129	126.00	172	191.00	434	272.00	152
61.00	662	127.00	59016	192.00	1400	273.00	1837
62.00	792	128.00	4334	193.00	1907	274.00	5128
63.00	2094	129.00	22576	194.00	447	275.00	27968
64.00	251	130.00	1821	195.00	243	276.00	3801
65.00	1088	131.00	408	196.00	3990	277.00	2556
66.00	43	132.00	329	197.00	771	278.00	336
67.00	9	133.00	2	198.00	125032	281.00	79
68.00	765	134.00	785	199.00	8488	282.00	108
69.00	58856	135.00	1720	200.00	703	283.00	234
70.00	276	136.00	896	201.00	580	284.00	166
71.00	205	137.00	852	203.00	834	285.00	364
72.00	37	138.00	108	204.00	4361	292.00	83
73.00	162	139.00	59	205.00	7410	293.00	500
74.00	5521	140.00	378	206.00	30336	296.00	7902
75.00	8878	141.00	2631	207.00	3917	297.00	1170
76.00	3208	142.00	1009	208.00	1033	303.00	767
77.00	66928	143.00	510	209.00	258	304.00	143
78.00	4517	144.00	245	210.00	495	314.00	331
79.00	3900	145.00	408	211.00	1226	315.00	774
80.00	3044	146.00	599	215.00	391	316.00	434
81.00	4425	147.00	1398	216.00	685	321.00	177
82.00	1038	148.00	3200	217.00	8299	323.00	2340
83.00	1074	149.00	650	218.00	1128	324.00	382
84.00	117	150.00	311	221.00	6661	327.00	385

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d

Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77

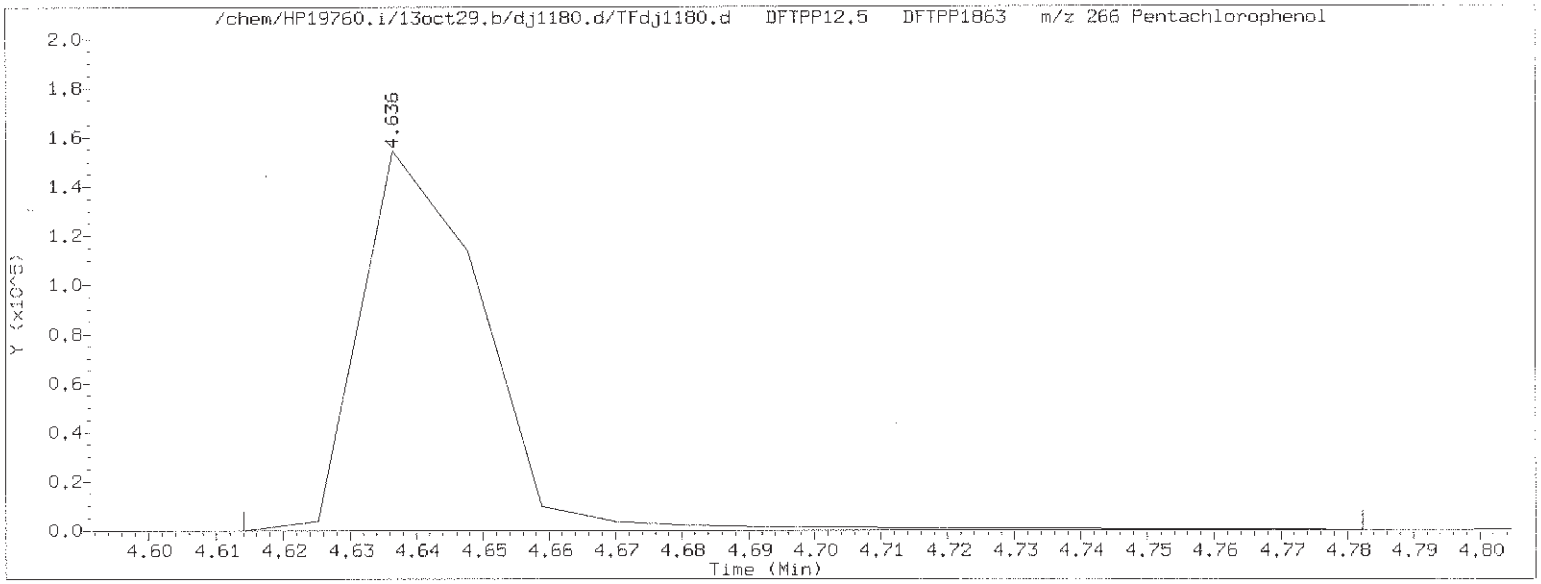
Location of Maximum: 198.00

Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	730	151.00	347	223.00	1931	328.00	105
86.00	1136	152.00	115	224.00	17384	332.00	94
87.00	504	153.00	923	225.00	4444	334.00	1395
88.00	348	154.00	792	226.00	485	335.00	344
89.00	140	155.00	1648	227.00	7391	341.00	240
91.00	953	156.00	2400	228.00	1081	346.00	451
92.00	900	157.00	250	229.00	1546	352.00	610
93.00	6479	158.00	576	230.00	169	353.00	425
94.00	405	159.00	492	231.00	629	354.00	617
95.00	146	160.00	1004	233.00	116	355.00	124
96.00	229	161.00	1421	234.00	480	365.00	3246
97.00	183	162.00	391	235.00	560	366.00	459
98.00	4747	164.00	233	236.00	276	372.00	946
99.00	3999	165.00	1040	237.00	642	373.00	170
100.00	126	166.00	1180	239.00	257	383.00	169
101.00	2341	167.00	5965	240.00	184	390.00	105
102.00	187	168.00	3512	241.00	370	402.00	369
103.00	775	169.00	567	242.00	924	403.00	500
104.00	1455	170.00	169	243.00	1252	421.00	444
105.00	1370	171.00	41	244.00	13079	422.00	479
106.00	380	172.00	563	245.00	1740	423.00	3350
107.00	17112	173.00	735	246.00	2568	424.00	517
108.00	2756	174.00	1279	247.00	557	441.00	9954
109.00	396	175.00	2300	248.00	115	442.00	67496
110.00	33216	176.00	754	249.00	484	443.00	13079
111.00	4816	177.00	1124	250.00	91	444.00	1189
112.00	615	178.00	434	251.00	86		
113.00	205	179.00	4545	252.00	112		
114.00	16	180.00	3086	253.00	238		

Assessment of GC Column Performance and Injection Port Inertness for

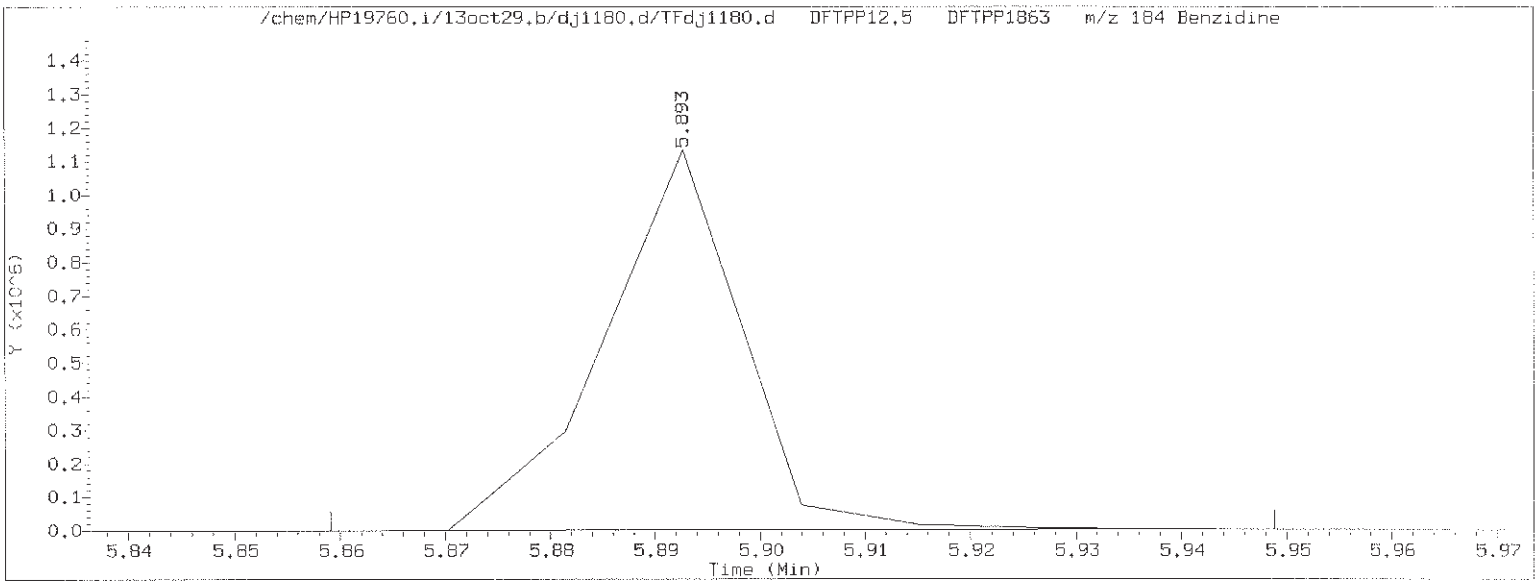
Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 154624 EICP peak height at 10% = 15462 Pentachlorophenol EICP area = 198857

Pentachlorophenol EICP peak apex (min.) = 4.636
RT at 10% of front half of EICP (min.) = 4.626 'Front' peak width (min.) = 0.0103333333
RT at 10% of back half of EICP (min.) = 4.658 'Tailing' peak width (min.) = 0.0218166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0218166667}{0.0103333333} = 2.111$$



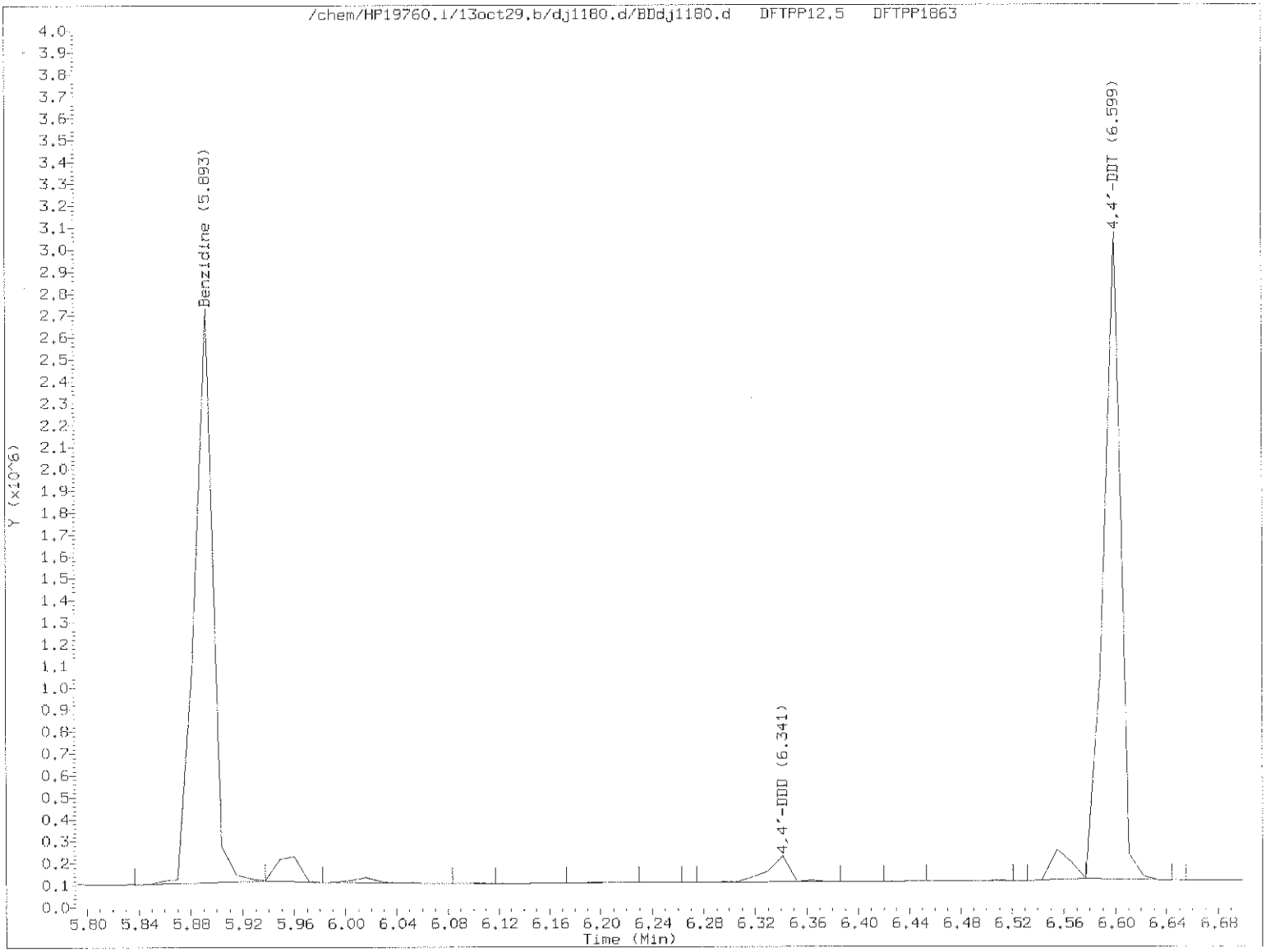
Benzidine EICP peak height = 1133040 EICP peak height at 10% = 113304 Benzidine EICP area = 1026461

Benzidine EICP peak apex (min.) = 5.893
RT at 5% of front half of EICP (min.) = 5.872 'Front' peak width (min.) = 0.0202666667
RT at 5% of back half of EICP (min.) = 5.907 'Tailing' peak width (min.) = 0.0146166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0146166667}{0.0202666667} = 0.721$$

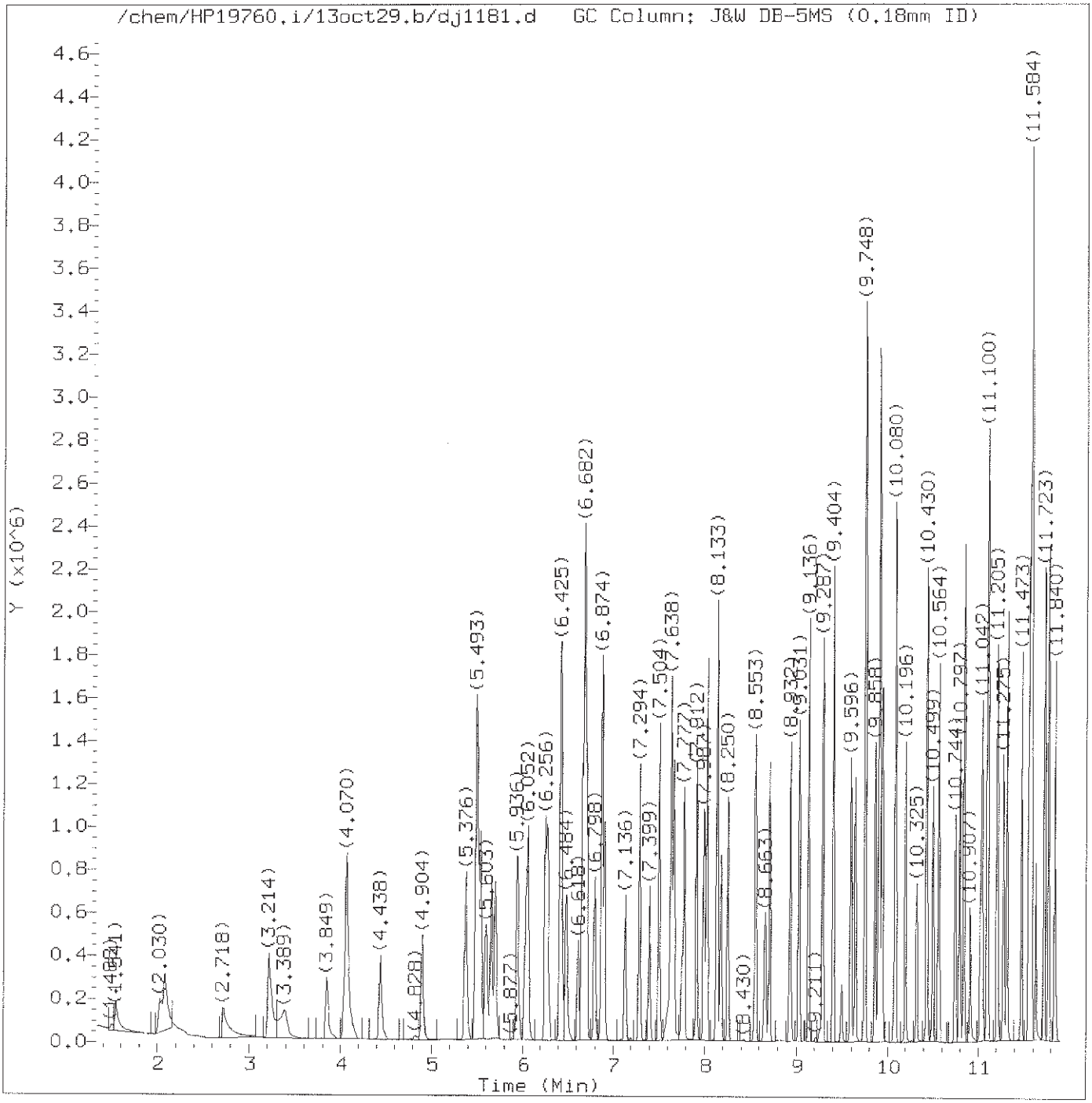
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 147644}{0 + 147644 + 2694927} \times 100 = 5.2$$



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d
Injection date and time: 29-OCT-2013 11:28

Instrument ID: HP19760.i
Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m
Calibration date and time: 29-OCT-2013 21:49

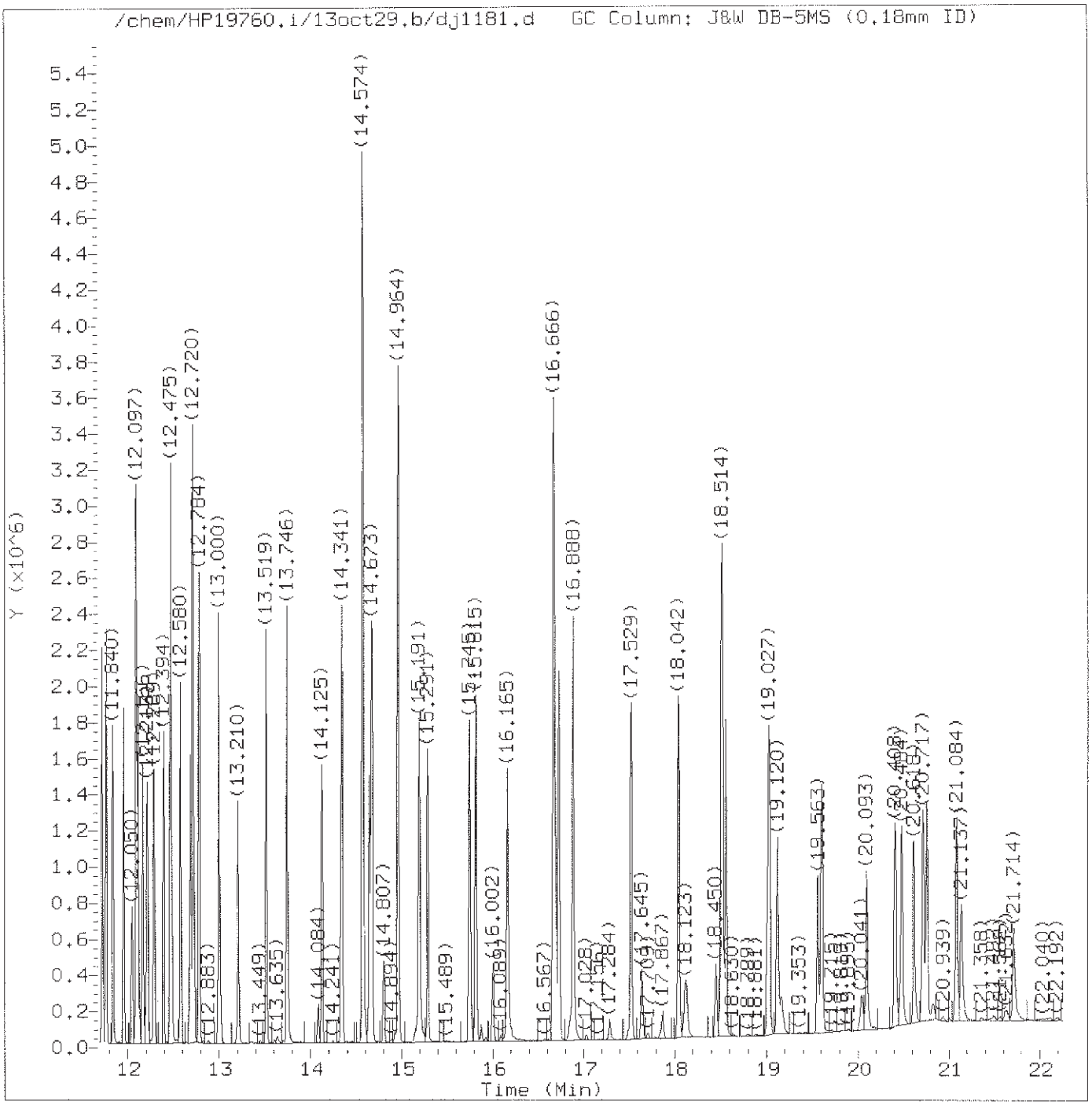
Sublist used: newall1

Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5

Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	137767	7.500
2) N-Nitrosodimethylamine	(1)	2.030	74	268516	7.500
3) Pyridine	(1)	2.083	79	432268	7.500
4) 2-Picoline	(1)	3.214	93	459785	7.500
5) N-Nitrosomethylethylamine	(1)	3.389	88	208027	7.500
6) Methyl methanesulfonate	(1)	3.849	80	233954	7.500
7)$2-Fluorophenol	(1)	4.070	112	709277	15.000
8) N-Nitrosodiethylamine	(1)	4.444	102	197319	7.500
10) Ethyl methanesulfonate	(1)	4.904	109	186082	7.500
11) Benzaldehyde	(1)	5.376	77	349278	7.500
12)$Phenol-d5	(1)	5.487	99	975454	15.000
13)$Phenol-d6	(1)	5.487	99	975454	15.000
14) Phenol	(1)	5.510	94	556847	7.500
15) Aniline	(1)	5.539	93	690455	7.500
16) bis(2-Chloroethyl)ether	(1)	5.656	93	436390	7.500
17) 2-Chlorophenol	(1)	5.702	128	351189	7.500
18) 1,3-Dichlorobenzene	(1)	5.941	146	363080	7.500
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	151909	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	364571	7.500
23) Benzyl alcohol	(1)	6.250	108	239760	7.500
24) 1,2-Dichlorobenzene	(1)	6.280	146	342428	7.500
25) Indene	(1)	6.419	115	702500	9.000
26) 2-Methylphenol	(1)	6.431	108	348956	7.500
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	541494	7.500
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	541494	7.500
29) N-Nitrosopyrrolidine	(1)	6.618	100	206158	7.500
30) Acetophenone	(1)	6.658	105	512562	7.500
33) 4-Methylphenol	(1)	6.682	108	394695	7.500
31) N-Nitroso-di-n-propylamine	(1)	6.682	70	319187	7.500
32) N-Nitrosomorpholine	(1)	6.688	56	245653	7.500
34) o-Toluidine	(1)	6.705	106	598993	7.500
35) Hexachloroethane	(1)	6.798	117	157145	7.500
36)$Nitrobenzene-d5	(2)	6.874	82	873687	15.000
37) Nitrobenzene	(2)	6.903	77	459440	7.500
39) N-Nitrosopiperidine	(2)	7.136	114	190894	7.500
40) Isophorone	(2)	7.294	82	797440	7.500
42) 2-Nitrophenol	(2)	7.399	139	175236	7.500
45) 2,4-Dimethylphenol	(2)	7.504	107	386388	7.500
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	164859	7.500
47) Benzoic acid	(2)	7.655	105	357390	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	501971M	7.500
49) 2,4-Dichlorophenol	(2)	7.777	162	272381	7.500
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	288881	7.500
52)*Naphthalene-d8	(2)	7.987	136	608104	5.000
53) Naphthalene	(2)	8.022	128	975519	7.500
55) 4-Chloroaniline	(2)	8.127	127	418617	7.500
56) 2,6-Dichlorophenol	(2)	8.139	162	261060	7.500
57) Hexachloropropene	(2)	8.174	213	192094	7.500
58) Hexachlorobutadiene	(2)	8.255	225	166743	7.500
60) Quinoline	(2)	8.553	129	657223	7.500
61) Caprolactam	(2)	8.663	113	122649	7.500
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	291446	7.500
63) 4-Chloro-3-methylphenol	(2)	8.932	107	337960	7.500
64) Safrole	(2)	9.031	162	255020	7.500
65) 2-Methylnaphthalene	(2)	9.136	142	661678	7.500
66) 1-Methylnaphthalene	(2)	9.287	142	601705	7.500
67) Hexachlorocyclopentadiene	(3)	9.404	237	149375	7.500
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	295528	7.500
69) cis-Isosafrole	(3)	9.497	162	46662	7.500
70) 2,4,6-Trichlorophenol	(3)	9.596	196	203516	7.500
71) 2,4,5-Trichlorophenol	(3)	9.643	196	211849	7.500
72)$2-Fluorobiphenyl	(3)	9.748	172	1291899	15.000
74) Isosafrole	(3)	9.858	162	260550	7.500
73) trans-Isosafrole	(3)	9.858	162	260550	7.500
75) 1,1'-Biphenyl	(3)	9.899	154	731309	7.500
76) 2-Chloronaphthalene	(3)	9.905	162	587363	7.500
77) 1-Chloronaphthalene	(3)	9.940	162	566223	7.500
82) Diphenyl ether	(3)	10.080	170	422807	7.500
83) 2-Nitroaniline	(3)	10.086	138	206464	7.500
84) 1,4-Naphthoquinone	(3)	10.196	158	268566	7.500
85) 1,4-Dinitrobenzene	(3)	10.325	168	107464	7.500
86) Dimethylphthalate	(3)	10.430	163	671240	7.500
87) 1,3-Dinitrobenzene	(3)	10.435	168	125634	7.500
88) 2,6-Dinitrotoluene	(3)	10.499	165	161578	7.500
90) Acenaphthylene	(3)	10.564	152	909644	7.500
91) 3-Nitroaniline	(3)	10.744	138	186158	7.500
92)*Acenaphthene-d10	(3)	10.797	164	340173	5.000
93) Acenaphthene	(3)	10.843	153	609286	7.500
94) 2,4-Dinitrophenol	(3)	10.913	184	99795	10.000
96) 4-Nitrophenol	(3)	11.030	109	118092	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	237796	7.500
97) Dibenzofuran	(3)	11.100	168	865450	7.500
98) 2,4-Dinitrotoluene	(3)	11.106	165	200480	7.500
99) 1-Naphthylamine	(3)	11.205	143	632752	7.500
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	166684	7.500
101) 2-Naphthylamine	(3)	11.315	143	653595	7.500
102) Diethylphthalate	(3)	11.473	149	661064	7.500
103) Fluorene	(3)	11.554	166	710098	7.500
104) Thionazin	(3)	11.566	107	145158	7.500
106) 5-Nitro-o-toluidine	(3)	11.578	152	196066	7.500
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	338065	7.500
107) 4-Nitroaniline	(3)	11.584	138	177952	7.500
108) 4,6-Dinitro-2-methylphenol	(4)	11.630	198	108493	7.500
109) N-Nitrosodiphenylamine	(4)	11.729	169	561532	7.500
110) NDPA as diphenylamine	(4)	11.729	169	561532	7.500
111) 1,2-Diphenylhydrazine	(4)	11.770	77	905405	7.500
112)$2,4,6-Tribromophenol	(3)	11.840	330	143815	15.000
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	132618	7.500
116) 1,3,5-Trinitrobenzene	(4)	12.050	213	80876	7.500
117) Diallate (peak 1)	(4)	12.091	86	342542	5.625
118) Phorate	(4)	12.097	75	547268	7.500
119) Phenacetin	(4)	12.114	108	408525	7.500
120) 4-Bromophenyl-phenylether	(4)	12.166	248	174573	7.500
121) Diallate (peak 2)	(4)	12.196	86	49019	1.875
122) Hexachlorobenzene	(4)	12.213	284	169395	7.500
123) Dimethoate	(4)	12.289	87	373493	7.500
124) Atrazine	(4)	12.394	200	180156	7.500
125) Pentachlorophenol	(4)	12.464	266	128448	7.500
126) Pentachloronitrobenzene	(4)	12.475	237	84108	7.500
127) 4-Aminobiphenyl	(4)	12.475	169	721220	7.500
129) Pronamide	(4)	12.580	173	318096	7.500
130)*Phenanthrene-d10	(4)	12.691	188	574655	5.000
131) Phenanthrene	(4)	12.720	178	962778	7.500
133) Dinoseb	(4)	12.720	211	158315	7.500
134) Anthracene	(4)	12.784	178	1008447	7.500
135) Carbazole	(4)	13.000	167	986634	7.500
136) Methyl parathion	(4)	13.204	109	269786	7.500
137) Di-n-butylphthalate	(4)	13.519	149	1215775	7.500
138) Parathion	(4)	13.746	109	172642	7.500
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	87192	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	122402	7.500
142) Fluoranthene	(4)	14.341	202	1145853	7.500
144) Benzidine	(5)	14.574	184	2350030	22.500
145)*Pyrene-d10	(5)	14.649	212	743541	5.000
146) Pyrene	(5)	14.679	202	1179015	7.500
149)$Terphenyl-d14	(5)	14.964	244	1432906	15.000
150) p-Dimethylaminoazobenzene	(5)	15.197	225	245246	7.500
151) Chlorobenzilate	(5)	15.291	139	368575	7.500
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	805018	7.500
153) Butylbenzylphthalate	(5)	15.815	149	555530	7.500
156) 2-Acetylaminofluorene	(5)	16.165	181	483665	7.500
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	388403	7.500
158) Benzo(a)anthracene	(5)	16.666	228	1087387	7.500
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	209240	7.500
161) Chrysene	(5)	16.730	228	1019141	7.500
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	760232	7.500
165) 6-Methylchrysene	(5)	17.529	242	745309	7.500
166) Di-n-octylphthalate	(6)	18.042	149	1259155	7.500
168) Benzo(b)fluoranthene	(6)	18.508	252	957737	7.500
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.514	256	391427	7.500
170) Benzo(k)fluoranthene	(6)	18.555	252	953456	7.500
171) Benzo(a)pyrene	(6)	19.027	252	891430	7.500
172)*Perylene-d12	(6)	19.120	264	528760	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	434800	7.500
174) Dibenz(a,h)acridine	(6)	20.408	279	608478	7.500
175) Dibenz(a,j)acridine	(6)	20.484	279	626394	7.500
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	822323	7.500
177) Dibenz(a,h)anthracene	(6)	20.764	278	692510	7.500
178) Benzo(g,h,i)perylene	(6)	21.084	276	667334	7.500
179) Diallate TRANS/CIS	(4)			391561	7.500
182) 2,4_2,6-Dinitrotoluenes	(3)			362058	15.000

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$ = Compound is a surrogate standard.

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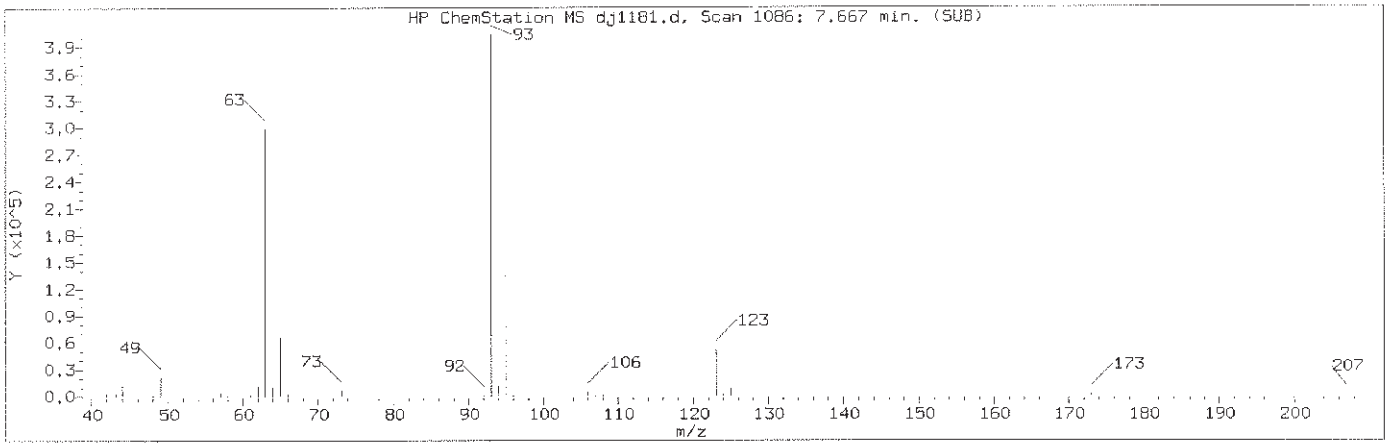
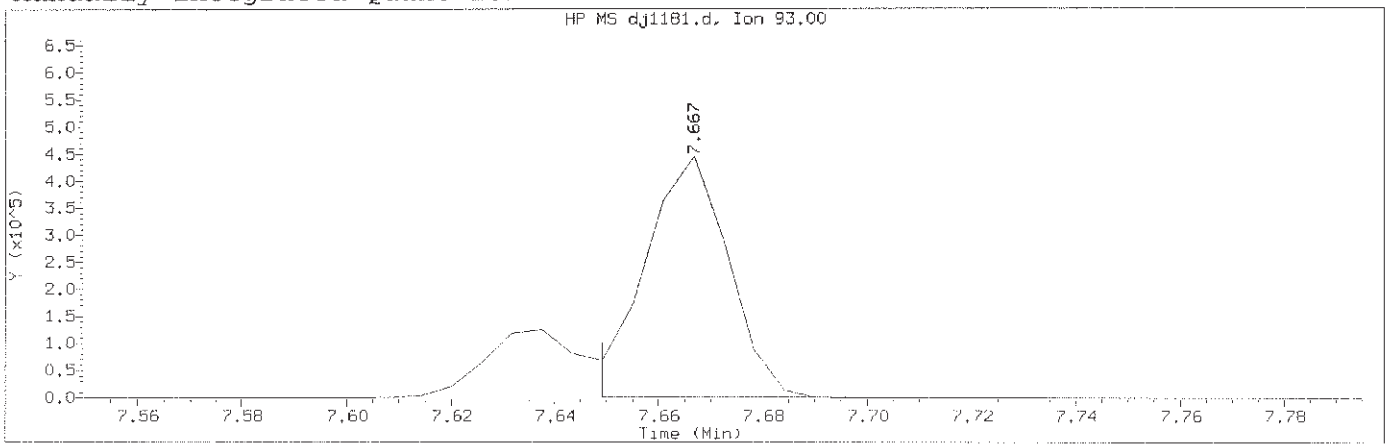
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 501971M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 584	Y at integration end:	584

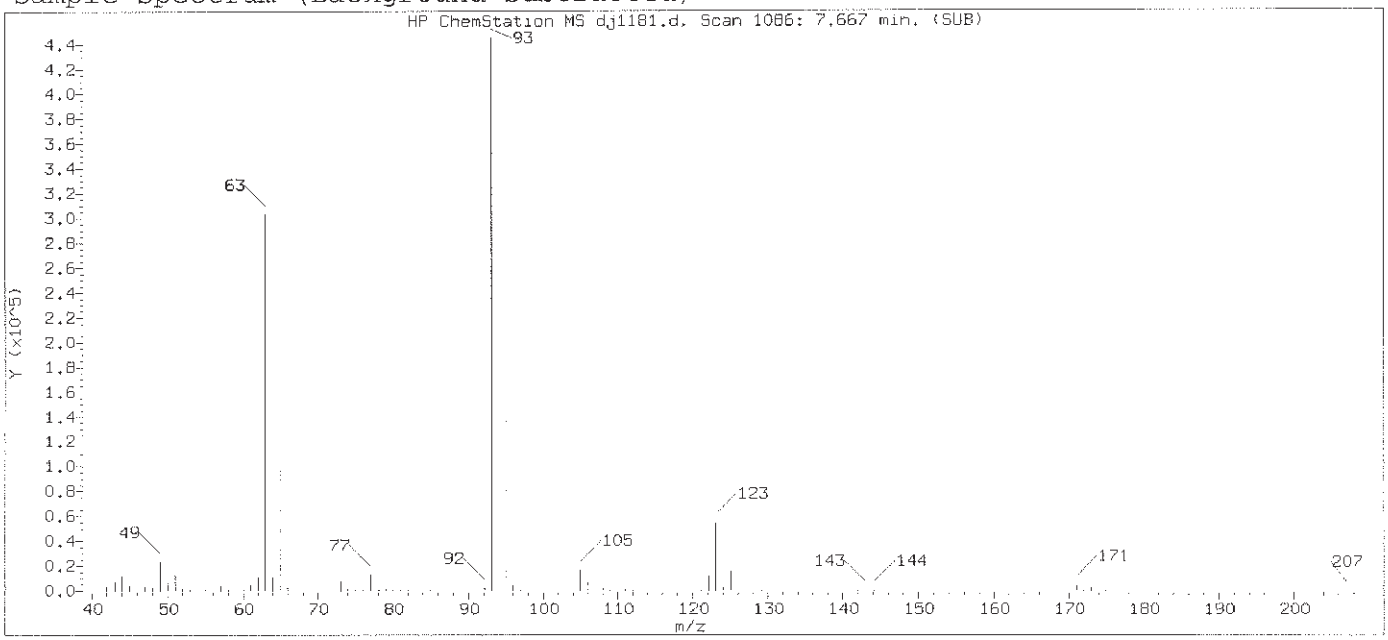
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

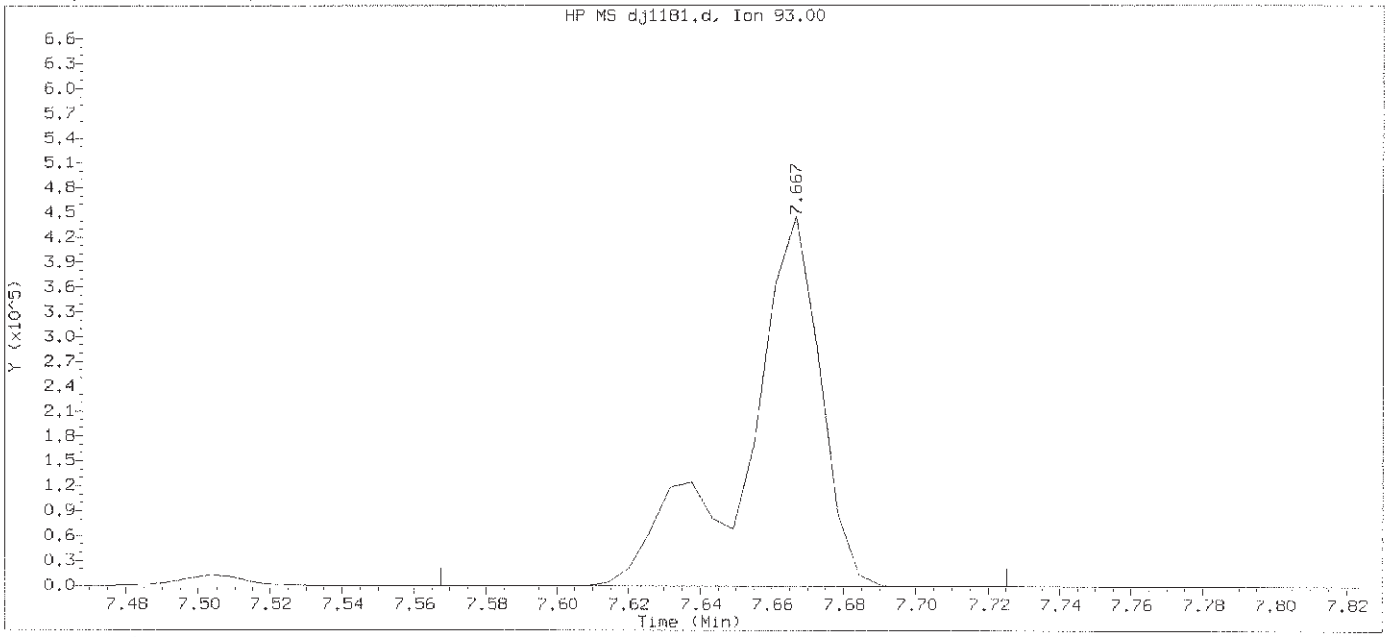
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:37
Date, time and analyst ID of latest file update: 29-Oct-2013 21:37 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area	: 649915		
On-column Amount (ng/ul)	: 8.8624		
Integration start scan	: 1068	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	0

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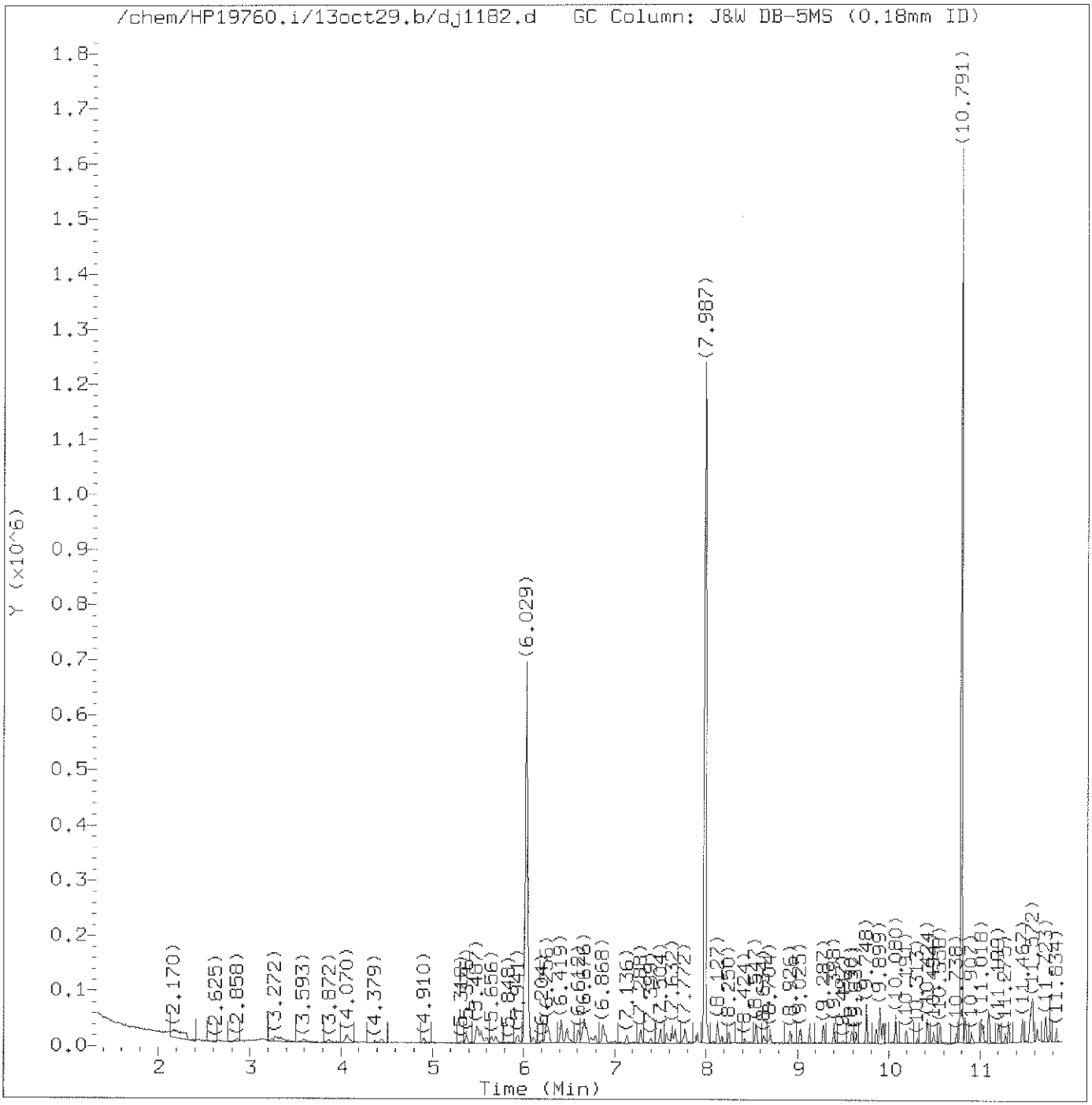
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d
Injection date and time: 29-OCT-2013 11:55

Instrument ID: HP19760.i
Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m
Calibration date and time: 29-OCT-2013 21:49

Sublist used: newall1

Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125

Lab Sample ID: STD2813

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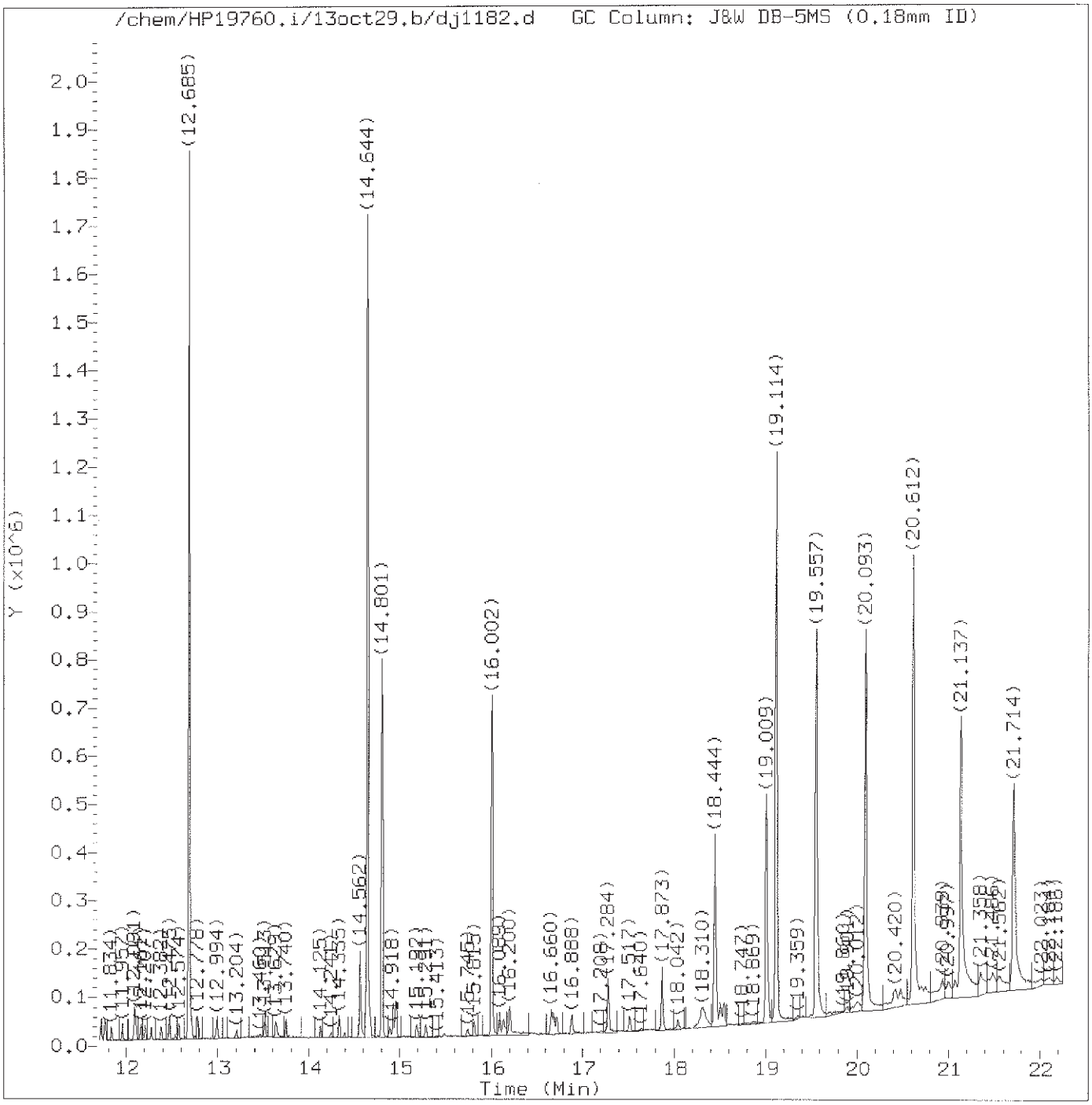
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.089	74	1978	0.049
3) Pyridine	(1)	2.159	79	4040	0.062
4) 2-Picoline	(1)	3.278	93	5887	0.085
5) N-Nitrosomethylethylamine	(1)	3.412	88	2434	0.077
6) Methyl methanesulfonate	(1)	3.866	80	3178	0.090
7)$2-Fluorophenol	(1)	4.065	112	11592	0.216
8) N-Nitrosodiethylamine	(1)	4.449	102	2906	0.097
10) Ethyl methanesulfonate	(1)	4.910	109	2854	0.101
11) Benzaldehyde	(1)	5.376	77	6602	0.125
12)$Phenol-d5	(1)	5.487	99	16847	0.228
13)$Phenol-d6	(1)	5.487	99	16847	0.228
14) Phenol	(1)	5.504	94	10250	0.122
15) Aniline	(1)	5.539	93	13009	0.124
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6855	0.104
17) 2-Chlorophenol	(1)	5.697	128	5496	0.103
18) 1,3-Dichlorobenzene	(1)	5.941	146	5342	0.097
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	172486	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5727	0.104
23) Benzyl alcohol	(1)	6.250	108	5087	0.140
24) 1,2-Dichlorobenzene	(1)	6.280	146	5122	0.099
25) Indene	(1)	6.414	115	13592	0.153
26) 2-Methylphenol	(1)	6.431	108	6249	0.118
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	11271	0.137
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	11271	0.137
29) N-Nitrosopyrrolidine	(1)	6.612	100	3637	0.117
30) Acetophenone	(1)	6.653	105	9151	0.118
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	6438	0.133
33) 4-Methylphenol	(1)	6.676	108	7465	0.125
32) N-Nitrosomorpholine	(1)	6.682	56	5072	0.136
34) o-Toluidine	(1)	6.699	106	10505	0.116
35) Hexachloroethane	(1)	6.792	117	2399	0.101
36)$Nitrobenzene-d5	(2)	6.868	82	14956	0.231
37) Nitrobenzene	(2)	6.897	77	8544	0.126
39) N-Nitrosopiperidine	(2)	7.136	114	3210	0.114
40) Isophorone	(2)	7.288	82	14776	0.125
42) 2-Nitrophenol	(2)	7.399	139	2257	0.087
45) 2,4-Dimethylphenol	(2)	7.504	107	6641	0.116
47) Benzoic acid	(2)	7.568	105	9965	0.251
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3021	0.124
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	9510	0.128

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	7.772	162	4415	0.109
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4887	0.114
52)*Naphthalene-d8	(2)	7.987	136	675195	5.000
53) Naphthalene	(2)	8.022	128	17062	0.121
55) 4-Chloroaniline	(2)	8.127	127	8283	0.134
56) 2,6-Dichlorophenol	(2)	8.133	162	4277	0.111
57) Hexachloropropene	(2)	8.174	213	2448	0.086
58) Hexachlorobutadiene	(2)	8.250	225	2766	0.112
60) Quinoline	(2)	8.547	129	14809	0.152
61) Caprolactam	(2)	8.634	113	2282	0.126
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	5553	0.129
63) 4-Chloro-3-methylphenol	(2)	8.926	107	5929	0.119
64) Safrole	(2)	9.025	162	4340	0.115
65) 2-Methylnaphthalene	(2)	9.130	142	11868	0.123
66) 1-Methylnaphthalene	(2)	9.287	142	10863	0.123
67) Hexachlorocyclopentadiene	(3)	9.398	237	1612	0.071
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.398	216	5395	0.120
69) cis-Isosafrole	(3)	9.497	162	787	0.111
70) 2,4,6-Trichlorophenol	(3)	9.590	196	3352	0.109
71) 2,4,5-Trichlorophenol	(3)	9.637	196	3643	0.113
72)$2-Fluorobiphenyl	(3)	9.748	172	26357	0.269
74) Isosafrole	(3)	9.858	162	4585	0.116
73) trans-Isosafrole	(3)	9.858	162	4585	0.116
75) 1,1'-Biphenyl	(3)	9.893	154	13490	0.122
76) 2-Chloronaphthalene	(3)	9.899	162	11235	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12712	0.148
82) Diphenyl ether	(3)	10.080	170	8236	0.128
83) 2-Nitroaniline	(3)	10.080	138	3138	0.100
84) 1,4-Naphthoquinone	(3)	10.191	158	3989	0.098
85) 1,4-Dinitrobenzene	(3)	10.319	168	1125	0.069
86) Dimethylphthalate	(3)	10.424	163	13121	0.129
87) 1,3-Dinitrobenzene	(3)	10.430	168	1495	0.078
88) 2,6-Dinitrotoluene	(3)	10.494	165	2253	0.092
90) Acenaphthylene	(3)	10.558	152	16378	0.122
91) 3-Nitroaniline	(3)	10.738	138	2678	0.095
92)*Acenaphthene-d10	(3)	10.791	164	386904	5.000
93) Acenaphthene	(3)	10.838	153	11840	0.127
94) 2,4-Dinitrophenol	(3)	10.907	184	2929	0.258
96) 4-Nitrophenol	(3)	11.018	109	6470	0.361
95) Pentachlorobenzene	(3)	11.036	250	4685	0.130

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
97) Dibenzofuran	(3)	11.094	168	16311	0.124
98) 2,4-Dinitrotoluene	(3)	11.100	165	2709	0.089
99) 1-Naphthylamine	(3)	11.199	143	11145	0.116
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2308	0.091
101) 2-Naphthylamine	(3)	11.310	143	12227	0.123
102) Diethylphthalate	(3)	11.467	149	12664	0.126
103) Fluorene	(3)	11.549	166	13013	0.123
104) Thionazin	(3)	11.560	107	3060	0.139
106) 5-Nitro-o-toluidine	(3)	11.572	152	3031	0.102
107) 4-Nitroaniline	(3)	11.572	138	2893	0.107
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6859	0.134
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	3453	0.207
109) N-Nitrosodiphenylamine	(4)	11.723	169	11124	0.129
110) NDPA as diphenylamine	(4)	11.723	169	11124	0.129
111) 1,2-Diphenylhydrazine	(4)	11.764	77	16987	0.122
112)$2,4,6-Tribromophenol	(3)	11.840	330	2419	0.222
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	2806	0.138
117) Diallate (peak 1)	(4)	12.085	86	6127	0.087
118) Phorate	(4)	12.091	75	10537	0.125
119) Phenacetin	(4)	12.102	108	6376	0.102
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3210	0.120
121) Diallate (peak 2)	(4)	12.190	86	769	0.026
122) Hexachlorobenzene	(4)	12.207	284	3315	0.126
123) Dimethoate	(4)	12.277	87	6002	0.105
124) Atrazine	(4)	12.388	200	2898	0.105
125) Pentachlorophenol	(4)	12.458	266	1375	0.070
126) Pentachloronitrobenzene	(4)	12.470	237	1266	0.098
127) 4-Aminobiphenyl	(4)	12.475	169	12135	0.109
129) Pronamide	(4)	12.574	173	5209	0.107
130)*Phenanthrene-d10	(4)	12.685	188	662675	5.000
131) Phenanthrene	(4)	12.714	178	19587	0.129
134) Anthracene	(4)	12.778	178	18511	0.122
135) Carbazole	(4)	12.994	167	18175	0.120
136) Methyl parathion	(4)	13.204	109	3103	0.075
137) Di-n-butylphthalate	(4)	13.513	149	21722	0.116
138) Parathion	(4)	13.740	109	2270	0.086
140) Isodrin	(4)	14.125	193	2777	0.148
142) Fluoranthene	(4)	14.335	202	20363	0.120
144) Benzidine	(5)	14.562	184	88772	0.761
145)*Pyrene-d10	(5)	14.644	212	830589	5.000

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

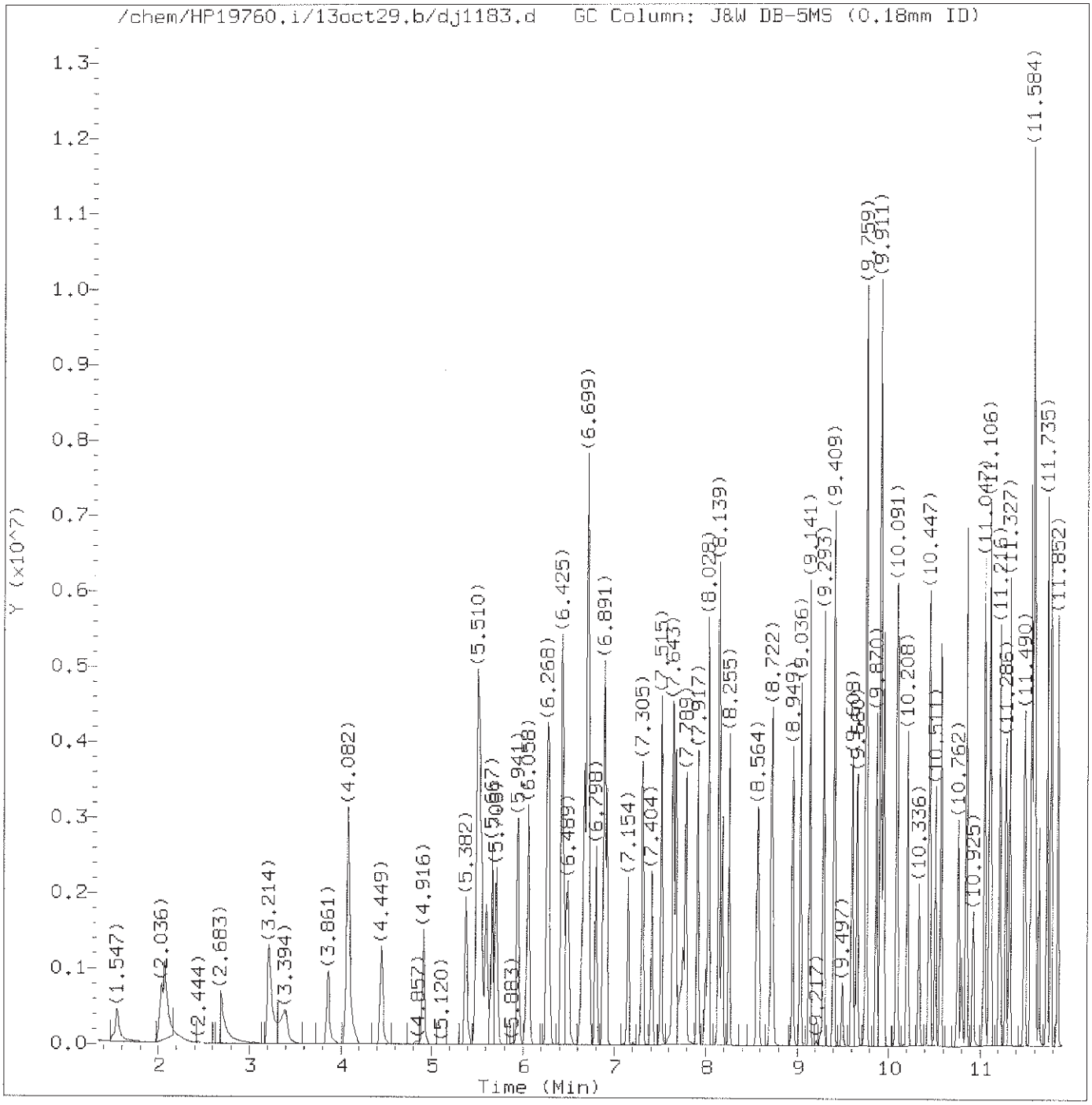
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Pyrene	(5)	14.673	202	24159	0.131
149)$Terphenyl-d14	(5)	14.958	244	28150	0.264
150) p-Dimethylaminoazobenzene	(5)	15.192	225	2695	0.074
151) Chlorobenzilate	(5)	15.291	139	6067	0.111
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	8981	0.075
153) Butylbenzylphthalate	(5)	15.815	149	7839	0.095
156) 2-Acetylaminofluorene	(5)	16.153	181	3961	0.055
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	5296	0.092
158) Benzo(a)anthracene	(5)	16.660	228	17959	0.118
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	2581	0.083
161) Chrysene	(5)	16.719	228	18348	0.123
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	13020	0.115
165) 6-Methylchrysene	(5)	17.517	242	14196	0.128
166) Di-n-octylphthalate	(6)	18.042	149	13839	0.074
168) Benzo(b)fluoranthene	(6)	18.502	252	16394	0.120
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	5521	0.095
170) Benzo(k)fluoranthene	(6)	18.543	252	17604	0.124
171) Benzo(a)pyrene	(6)	19.021	252	15464	0.121
172)*Perylene-d12	(6)	19.114	264	590527	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	7441	0.115
174) Dibenz(a,h)acridine	(6)	20.402	279	8282	0.091
175) Dibenz(a,j)acridine	(6)	20.472	279	9481	0.102
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	11904	0.109
177) Dibenz(a,h)anthracene	(6)	20.752	278	10127	0.110
178) Benzo(g,h,i)perylene	(6)	21.073	276	10674	0.116
179) Diallate TRANS/CIS	(4)			6896	0.115
182) 2,4_2,6-Dinitrotoluenes	(3)			4962	0.181

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

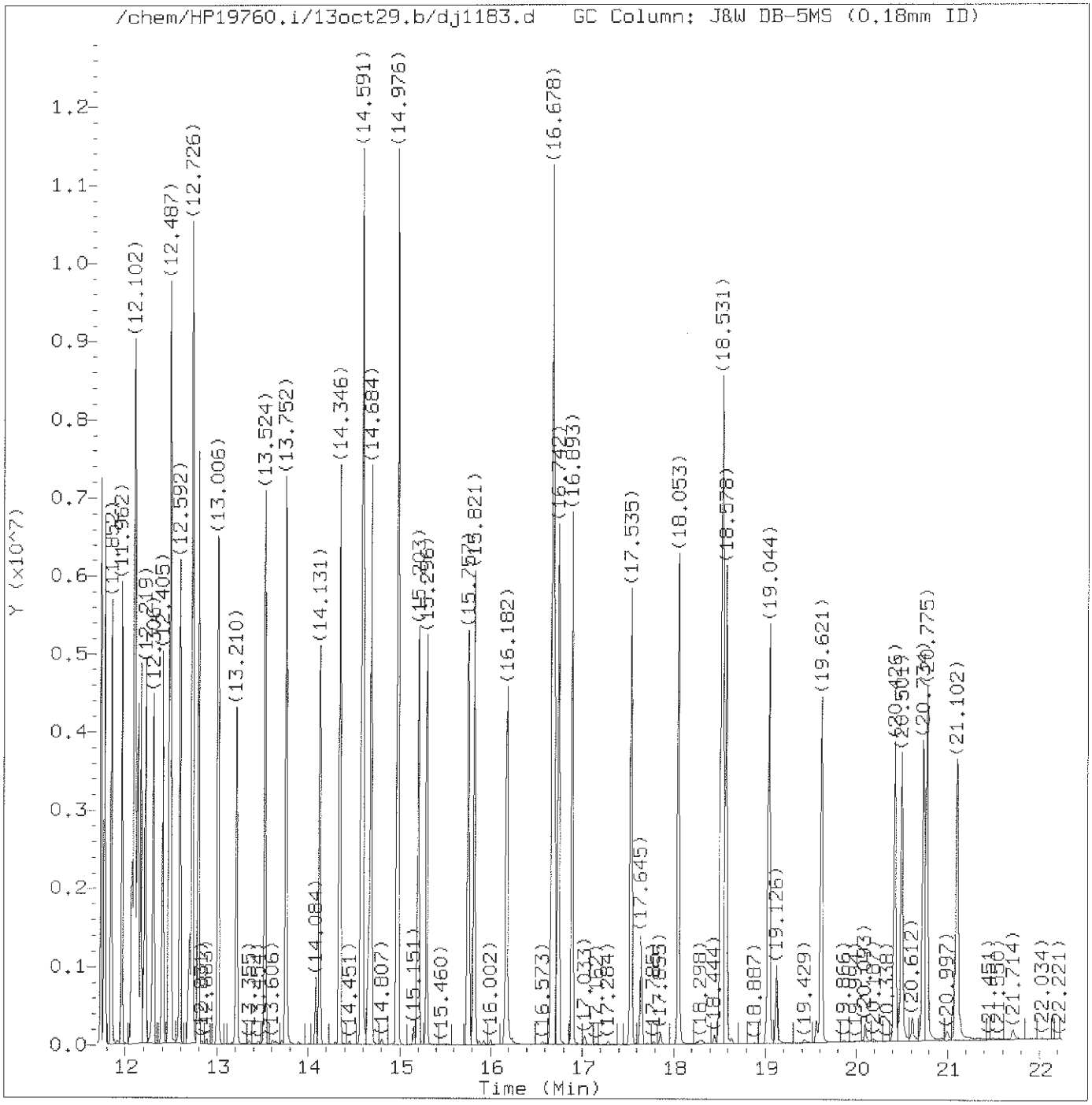
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	533811M	31.085
2) N-Nitrosodimethylamine	(1)	2.030	74	962330	29.915
3) Pyridine	(1)	2.071	79	1618210	30.569
4) 2-Picoline	(1)	3.214	93	1649187	29.927
5) N-Nitrosomethylethylamine	(1)	3.394	88	732071	29.641
6) Methyl methanesulfonate	(1)	3.861	80	814086	29.472
7)$2-Fluorophenol	(1)	4.082	112	2413564	58.275
8) N-Nitrosodiethylamine	(1)	4.449	102	690447	29.556
10) Ethyl methanesulfonate	(1)	4.916	109	648760	29.501
11) Benzaldehyde	(1)	5.382	77	936320	25.592
12)$Phenol-d5	(1)	5.510	99	3225817	57.419
13)$Phenol-d6	(1)	5.510	99	3225817	57.419
14) Phenol	(1)	5.528	94	1839299	28.692
15) Aniline	(1)	5.545	93	2320471	28.951
16) bis(2-Chloroethyl)ether	(1)	5.667	93	1475312	29.040
17) 2-Chlorophenol	(1)	5.714	128	1188155	29.051
18) 1,3-Dichlorobenzene	(1)	5.941	146	1241476	29.210
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	136880	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	1240683	29.139
23) Benzyl alcohol	(1)	6.262	108	859919	29.926
24) 1,2-Dichlorobenzene	(1)	6.279	146	1143792	28.859
25) Indene	(1)	6.419	115	2285068	34.155
26) 2-Methylphenol	(1)	6.437	108	1169803	28.913
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1784369	28.656
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1784369	28.656
29) N-Nitrosopyrrolidine	(1)	6.641	100	704808	29.208
30) Acetophenone	(1)	6.670	105	1840492	29.944
33) 4-Methylphenol	(1)	6.699	108	1237807	27.916
31) N-Nitroso-di-n-propylamine	(1)	6.705	70	983097	27.647
32) N-Nitrosomorpholine	(1)	6.711	56	764484	27.801
34) o-Toluidine	(1)	6.722	106	1930813	28.327
35) Hexachloroethane	(1)	6.798	117	530896	29.030
36)$Nitrobenzene-d5	(2)	6.891	82	2871559	57.502
37) Nitrobenzene	(2)	6.921	77	1522252	28.871
39) N-Nitrosopiperidine	(2)	7.154	114	641771	29.090
40) Isophorone	(2)	7.305	82	2655803	28.949
42) 2-Nitrophenol	(2)	7.410	139	586205	29.015
45) 2,4-Dimethylphenol	(2)	7.515	107	1286581	28.946
46) O,O,O-triethylphosphorothioate	(2)	7.649	198	568840	29.479
48) bis(2-Chloroethoxy)methane	(2)	7.678	93	1689288M	29.105

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.737	105	1076787	31.759
49) 2,4-Dichlorophenol	(2)	7.789	162	921015	29.176
51) 1,2,4-Trichlorobenzene	(2)	7.917	180	976302	29.168
52)*Naphthalene-d8	(2)	7.993	136	543087	5.000
53) Naphthalene	(2)	8.028	128	3205184	28.894
55) 4-Chloroaniline	(2)	8.139	127	1344813	28.409
56) 2,6-Dichlorophenol	(2)	8.145	162	860749	28.798
57) Hexachloropropene	(2)	8.180	213	695357	30.198
58) Hexachlorobutadiene	(2)	8.255	225	583889	29.701
60) Quinoline	(2)	8.564	129	2197862	29.010
62) N-Nitrosodi-n-butylamine	(2)	8.722	84	1227168	32.460
61) Caprolactam	(2)	8.733	113	420909	29.398
63) 4-Chloro-3-methylphenol	(2)	8.949	107	1126249	28.958
64) Safrole	(2)	9.036	162	859283	29.123
65) 2-Methylnaphthalene	(2)	9.141	142	2132185	28.274
66) 1-Methylnaphthalene	(2)	9.293	142	1948789	28.310
67) Hexachlorocyclopentadiene	(3)	9.404	237	551060	30.214
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.409	216	1025079	29.290
69) cis-Isosafrole	(3)	9.497	162	164912	29.571
70) 2,4,6-Trichlorophenol	(3)	9.608	196	701260	29.191
71) 2,4,5-Trichlorophenol	(3)	9.660	196	712383	28.825
72)$2-Fluorobiphenyl	(3)	9.759	172	4163177	56.376
74) Isosafrole	(3)	9.870	162	872242	28.758
73) trans-Isosafrole	(3)	9.870	162	872242	28.758
75) 1,1'-Biphenyl	(3)	9.911	154	2438245	28.697
76) 2-Chloronaphthalene	(3)	9.917	162	1792144	27.373
77) 1-Chloronaphthalene	(3)	9.946	162	1935636	29.072
82) Diphenyl ether	(3)	10.086	170	1385610	28.439
83) 2-Nitroaniline	(3)	10.097	138	664121	28.161
84) 1,4-Naphthoquinone	(3)	10.208	158	893735	28.669
85) 1,4-Dinitrobenzene	(3)	10.336	168	366530	29.038
86) Dimethylphthalate	(3)	10.447	163	2156829	28.145
87) 1,3-Dinitrobenzene	(3)	10.453	168	415458	28.575
88) 2,6-Dinitrotoluene	(3)	10.511	165	526071	28.342
90) Acenaphthylene	(3)	10.569	152	2971115	28.382
91) 3-Nitroaniline	(3)	10.762	138	629662	28.913
92)*Acenaphthene-d10	(3)	10.797	164	309287	5.000
93) Acenaphthene	(3)	10.849	153	1954037	27.302
94) 2,4-Dinitrophenol	(3)	10.925	184	319330	32.390
96) 4-Nitrophenol	(3)	11.047	109	403476	29.063

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$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.047	250	814606	29.103
97) Dibenzofuran	(3)	11.106	168	2777166	28.125
98) 2,4-Dinitrotoluene	(3)	11.123	165	702019	29.432
99) 1-Naphthylamine	(3)	11.216	143	2152834	29.001
100) 2,3,4,6-Tetrachlorophenol	(3)	11.286	232	580597	29.353
101) 2-Naphthylamine	(3)	11.327	143	2168398	28.623
102) Diethylphthalate	(3)	11.490	149	2257543	29.056
103) Fluorene	(3)	11.560	166	2225368	27.419
104) Thionazin	(3)	11.584	107	448938	27.575
105) 4-Chlorophenyl-phenylether	(3)	11.589	204	1132180	28.764
106) 5-Nitro-o-toluidine	(3)	11.595	152	657947	28.794
107) 4-Nitroaniline	(3)	11.607	138	618137A	29.311
108) 4,6-Dinitro-2-methylphenol	(4)	11.648	198	443113	31.440
110) NDPA as diphenylamine	(4)	11.735	169	1837235	28.117
109) N-Nitrosodiphenylamine	(4)	11.735	169	1837235	28.117
111) 1,2-Diphenylhydrazine	(4)	11.776	77	2839842	27.487
112)$2,4,6-Tribromophenol	(3)	11.852	330	545042	61.237
115) Tetraethyldithiopyrophosphate	(4)	11.962	97	443512	28.444
116) 1,3,5-Trinitrobenzene	(4)	12.073	213	329707	31.413
117) Diallate (peak 1)	(4)	12.096	86	1078550	20.658
118) Phorate	(4)	12.102	75	1716065	25.356
119) Phenacetin	(4)	12.137	108	1401644	28.828
120) 4-Bromophenyl-phenylether	(4)	12.172	248	609610	29.092
121) Diallate (peak 2)	(4)	12.196	86	171573	7.282
122) Hexachlorobenzene	(4)	12.219	284	597745	28.828
123) Dimethoate	(4)	12.306	87	1223135	28.131
124) Atrazine	(4)	12.405	200	591090	28.159
125) Pentachlorophenol	(4)	12.469	266	490292	30.426
127) 4-Aminobiphenyl	(4)	12.487	169	2373398	28.203
126) Pentachloronitrobenzene	(4)	12.487	237	298768	29.348
129) Pronamide	(4)	12.592	173	1088998	28.795
130)*Phenanthrene-d10	(4)	12.697	188	533001	5.000
131) Phenanthrene	(4)	12.726	178	3186893	27.213
133) Dinoseb	(4)	12.726	211	657031	31.680
134) Anthracene	(4)	12.796	178	3353888	28.293
135) Carbazole	(4)	13.012	167	3247508	28.207
136) Methyl parathion	(4)	13.210	109	911392	28.595
137) Di-n-butylphthalate	(4)	13.524	149	3923710	27.913
138) Parathion	(4)	13.752	109	577302	28.443
139) 4-Nitroquinoline-1-oxide	(4)	13.758	190	414372	33.695

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.131	193	429506	29.164
142) Fluoranthene	(4)	14.346	202	3926948	29.187
144) Benzidine	(5)	14.591	184	7555861	84.169
145)*Pyrene-d10	(5)	14.649	212	680467	5.000
146) Pyrene	(5)	14.684	202	3955299	27.338
149)$Terphenyl-d14	(5)	14.976	244	4971452	58.391
150) p-Dimethylaminoazobenzene	(5)	15.203	225	881982	29.734
151) Chlorobenzilate	(5)	15.296	139	1231178	28.627
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2630050	28.295
153) Butylbenzylphthalate	(5)	15.821	149	1808532	28.242
156) 2-Acetylaminofluorene	(5)	16.182	181	1719429	29.561
159) 3,3'-Dichlorobenzidine	(5)	16.678	252	1398429	29.751
158) Benzo(a)anthracene	(5)	16.678	228	3820231	30.341
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.695	231	736186	29.405
161) Chrysene	(5)	16.742	228	3459397	28.834
162) bis(2-Ethylhexyl)phthalate	(5)	16.893	149	2465418	28.185
165) 6-Methylchrysene	(5)	17.540	242	2639356	29.503
166) Di-n-octylphthalate	(6)	18.053	149	4322950	28.917
168) Benzo(b)fluoranthene	(6)	18.525	252	3518347	30.734
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.537	256	1691748	32.365
170) Benzo(k)fluoranthene	(6)	18.578	252	3417738	29.501
171) Benzo(a)pyrene	(6)	19.044	252	3191333	30.085
172)*Perylene-d12	(6)	19.126	264	487829	5.000
173) 3-Methylcholanthrene	(6)	19.621	268	1637077	30.301
174) Dibenz(a,h)acridine	(6)	20.426	279	2334375	30.582
175) Dibenz(a,j)acridine	(6)	20.501	279	2348896	30.240
176) Indeno(1,2,3-cd)pyrene	(6)	20.734	276	3014289	32.261
177) Dibenz(a,h)anthracene	(6)	20.775	278	2583344	32.532
178) Benzo(g,h,i)perylene	(6)	21.108	276	2403123	30.977
179) Diallate TRANS/CIS	(4)			1250123	27.751
182) 2,4_2,6-Dinitrotoluenes	(3)			1228090	57.774

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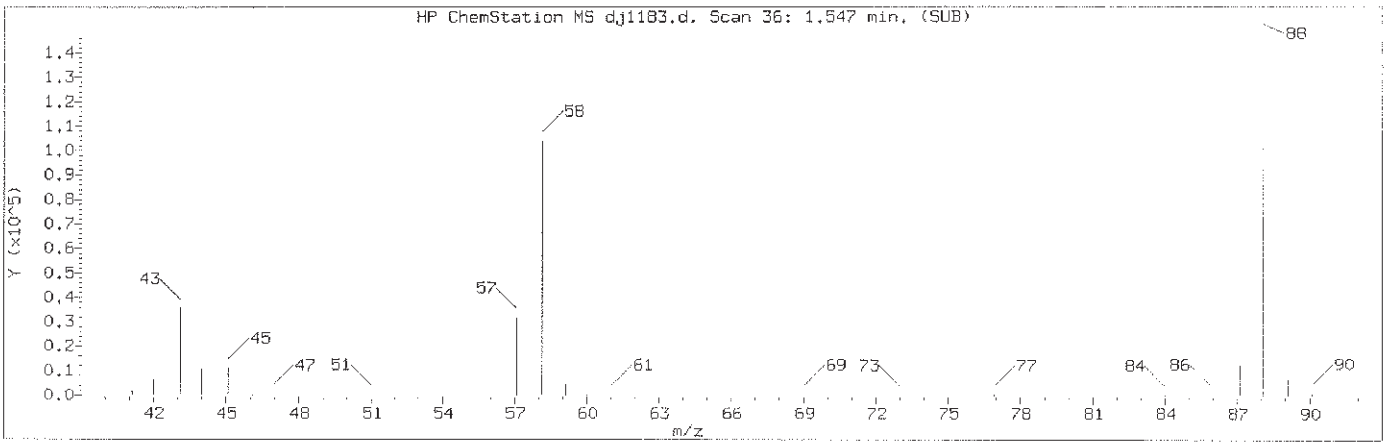
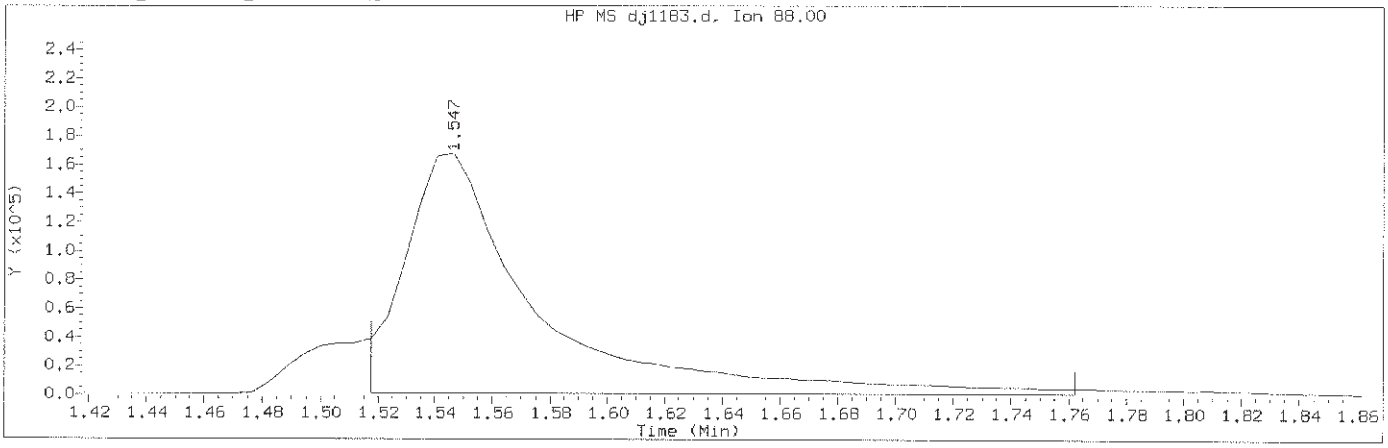
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area (flag)	: 533811M		
On-Column Amount (ng/ul)	: 31.0849		
Integration start scan	: 30	Integration stop scan:	72
Y at integration start	: 1385	Y at integration end:	1385

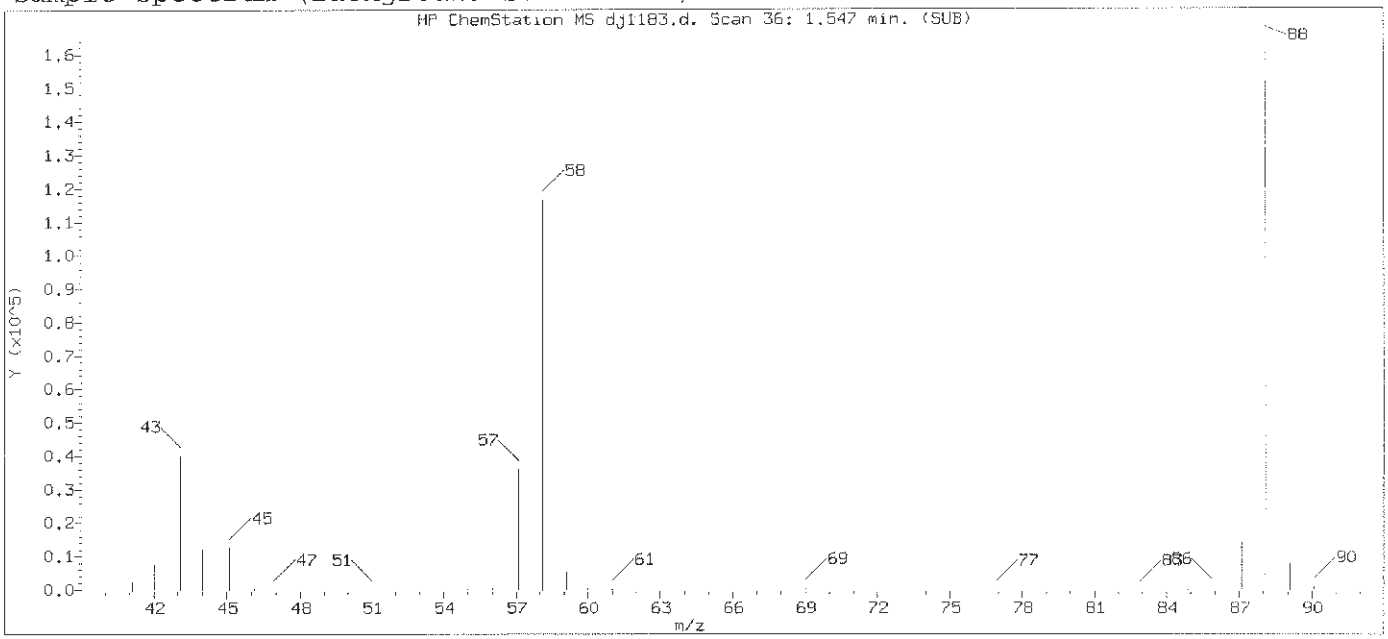
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

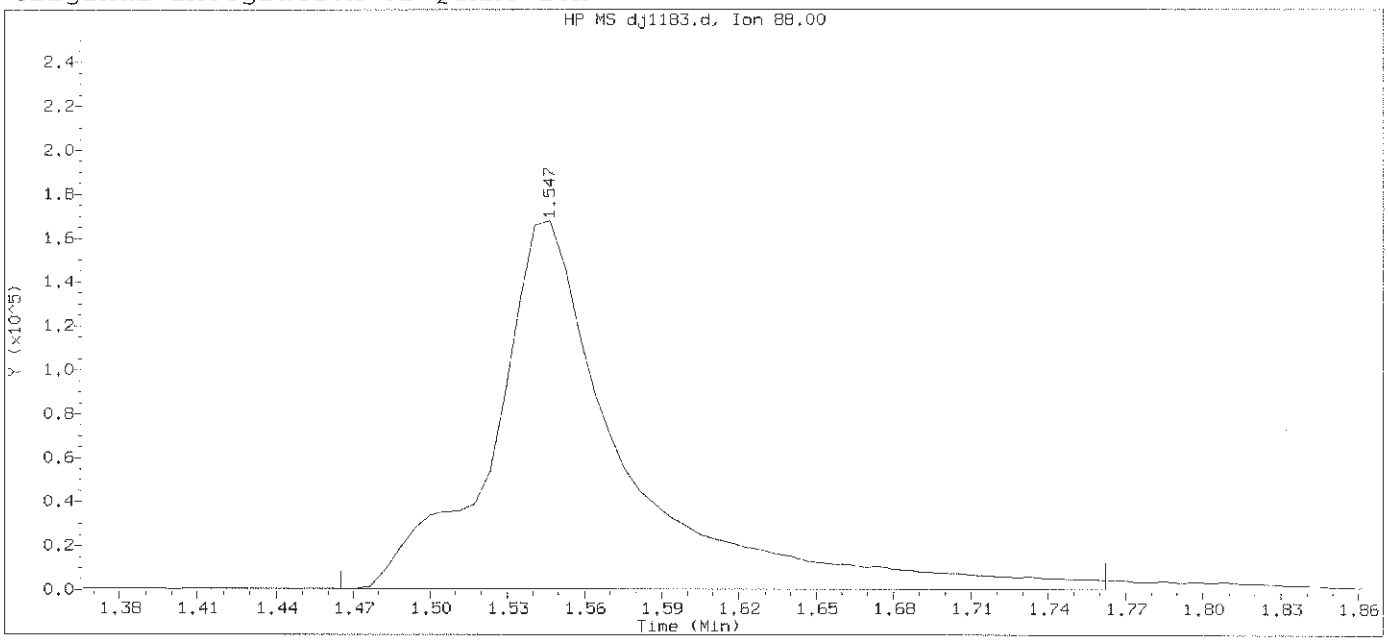
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

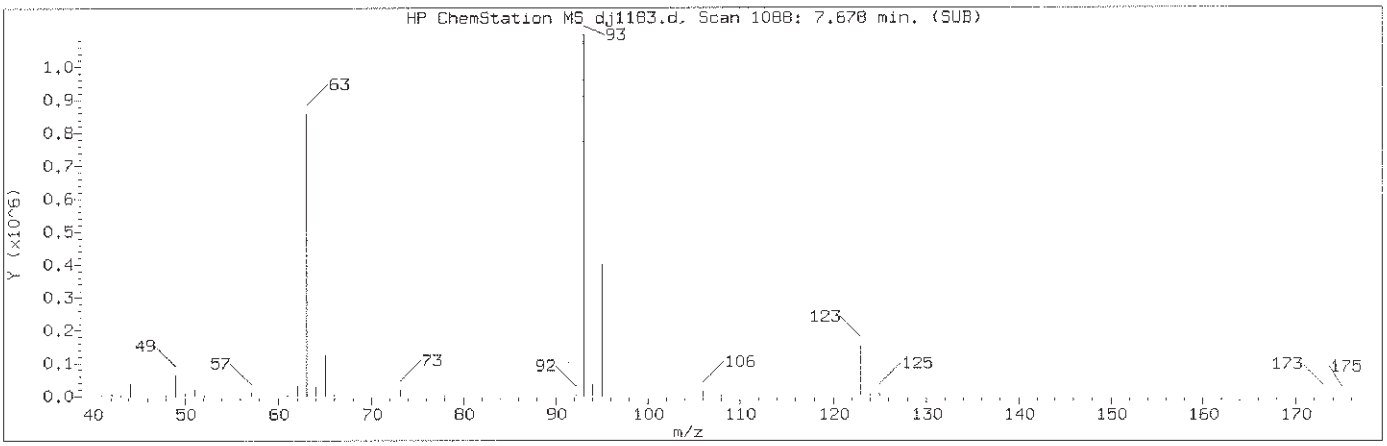
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

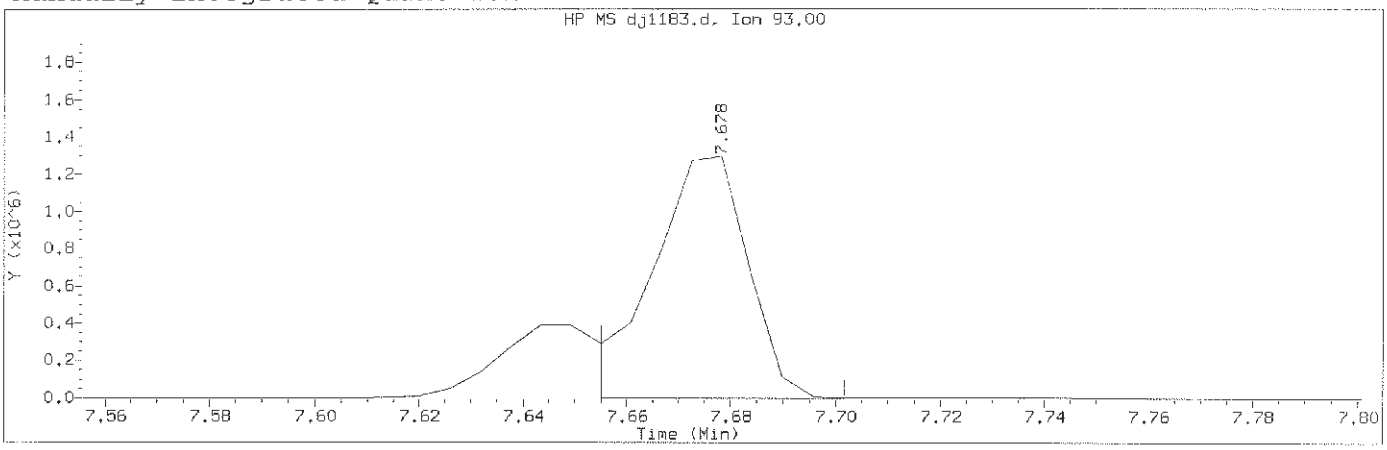
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 36
Retention Time (minutes)	: 1.547
Quant Ion	: 88.00
Area	: 600995
On-column Amount (ng/ul)	: 35.2969
Integration start scan	: 21 Integration stop scan: 72
Y at integration start	: 576 Y at integration end: 576

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area (flag)	: 1689288M		
On-Column Amount (ng/ul)	: 29.1048		
Integration start scan	: 1083	Integration stop scan:	1091
Y at integration start	: -679	Y at integration end:	-679

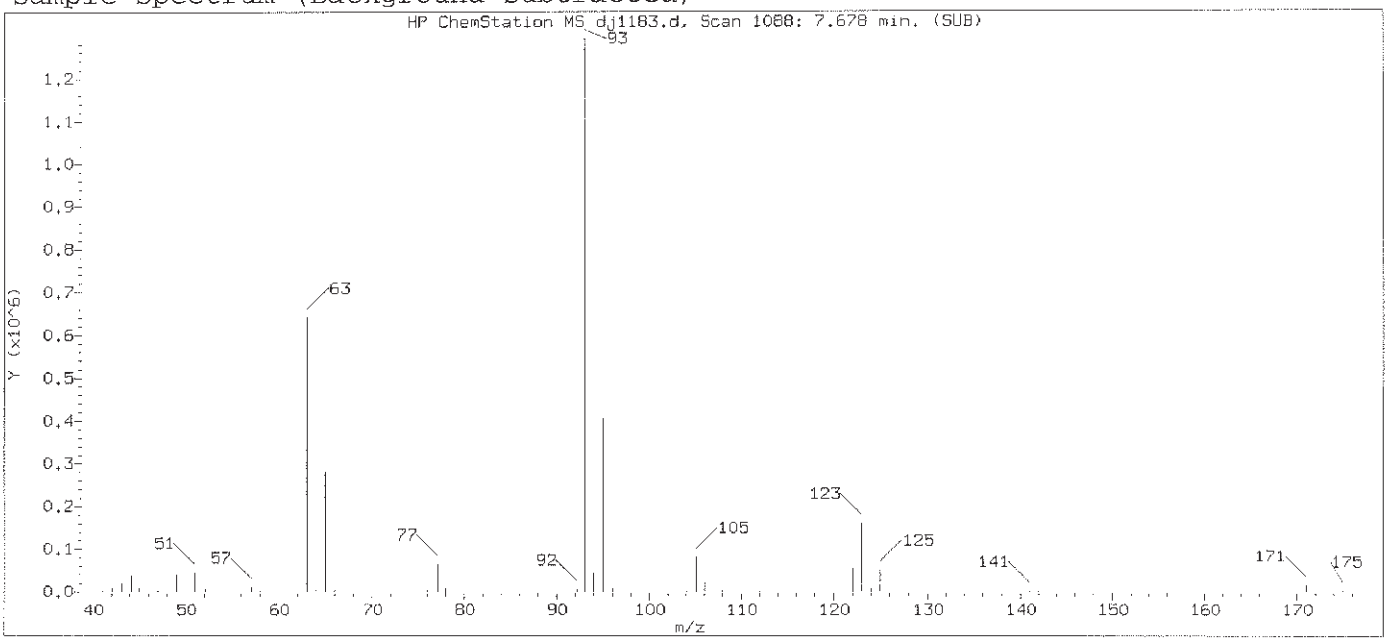
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

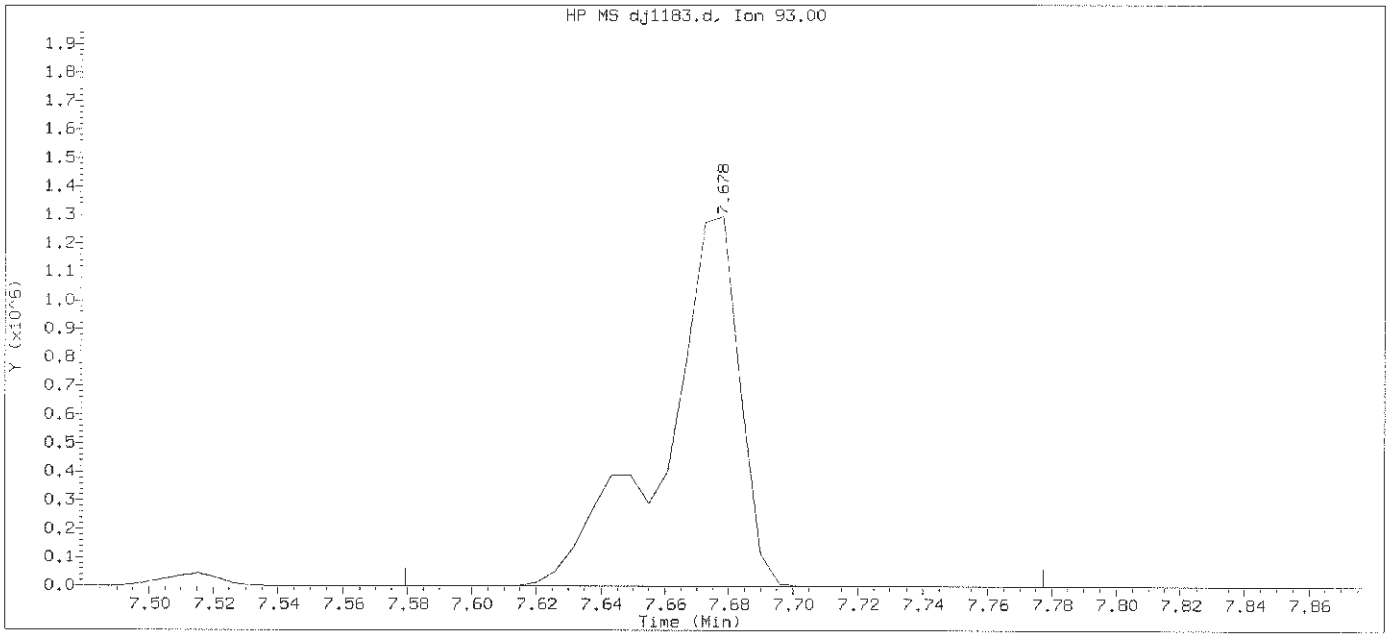
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area	: 2128683		
On-column Amount (ng/ul)	: 32.5033		
Integration start scan	: 1070	Integration stop scan:	1104
Y at integration start	: 0	Y at integration end:	63

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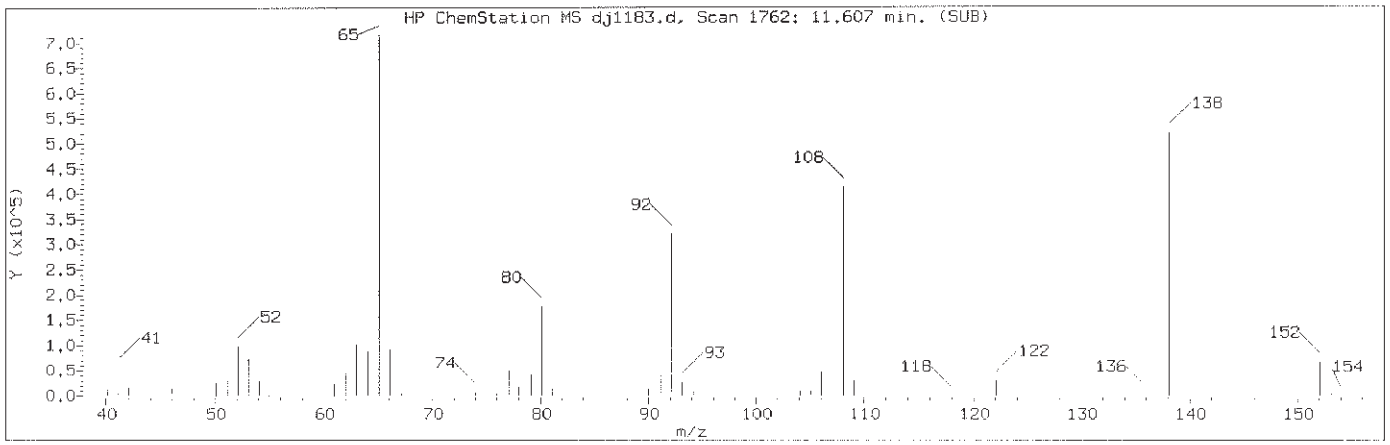
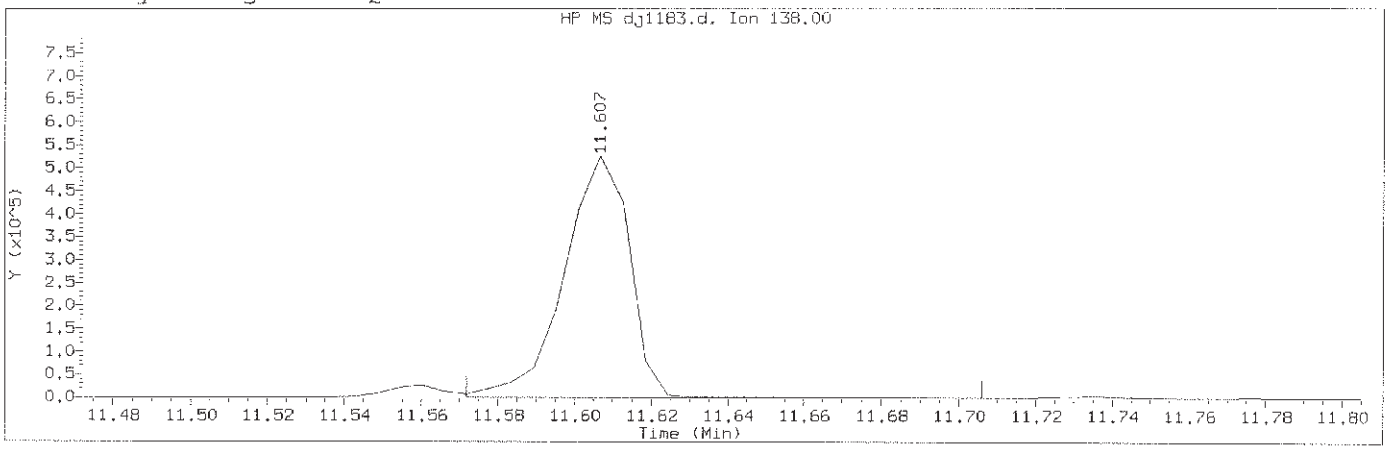
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1762		
Retention Time (minutes)	: 11.607		
Quant Ion	: 138.00		
Area (flag)	: 618137A		
On-Column Amount (ng/ul)	: 29.3114		
Integration start scan	: 1755	Integration stop scan:	1778
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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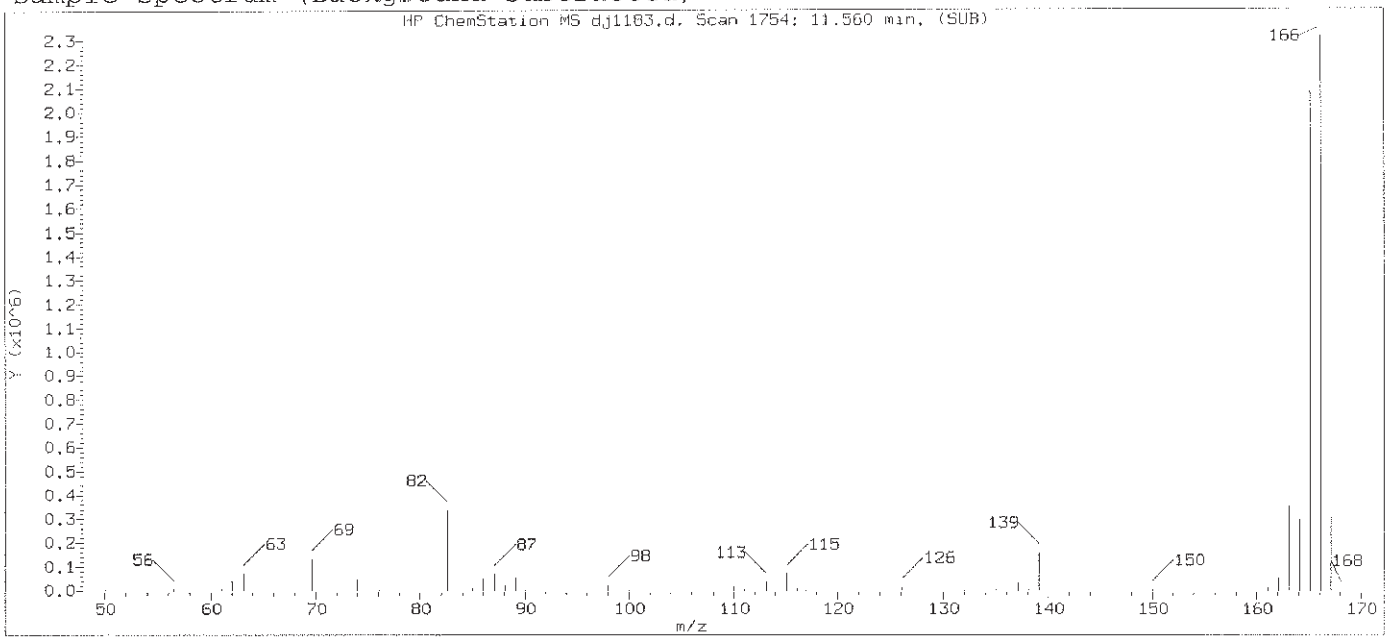
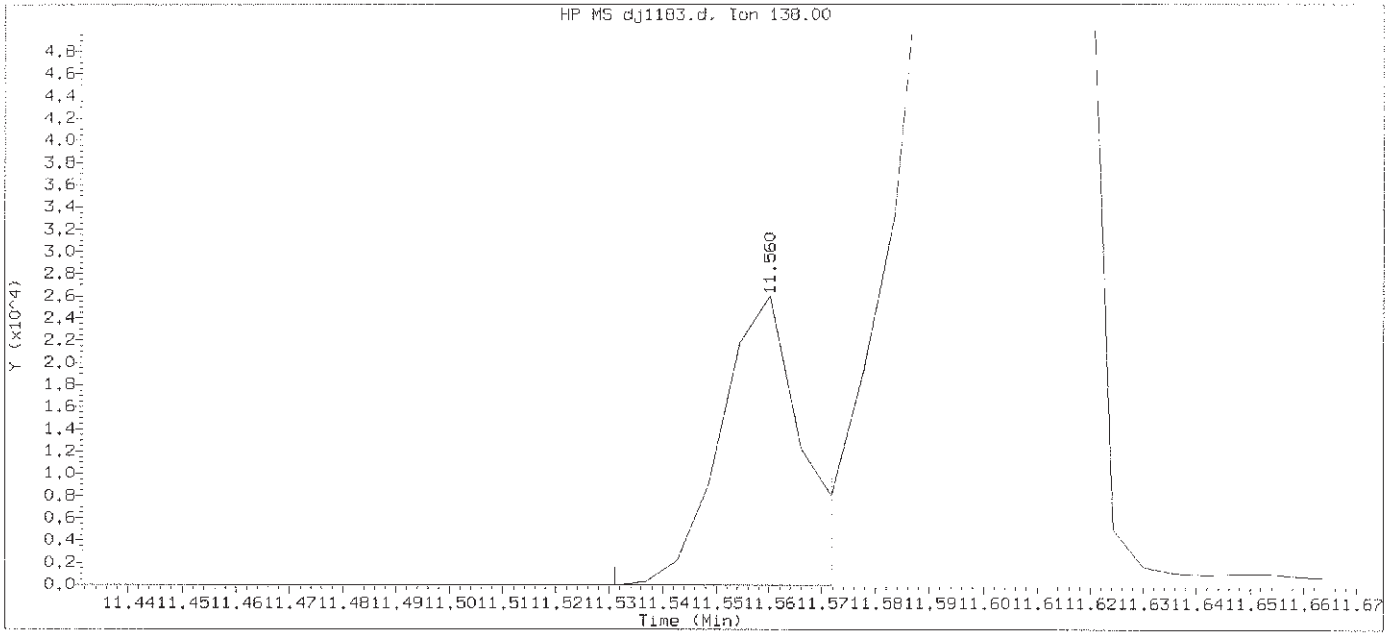
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1754		
Retention Time (minutes)	: 11.560		
Quant Ion	: 138.00		
Area	: 26465		
On-column Amount (ng/ul)	: 1.5063		
Integration start scan	: 1748	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

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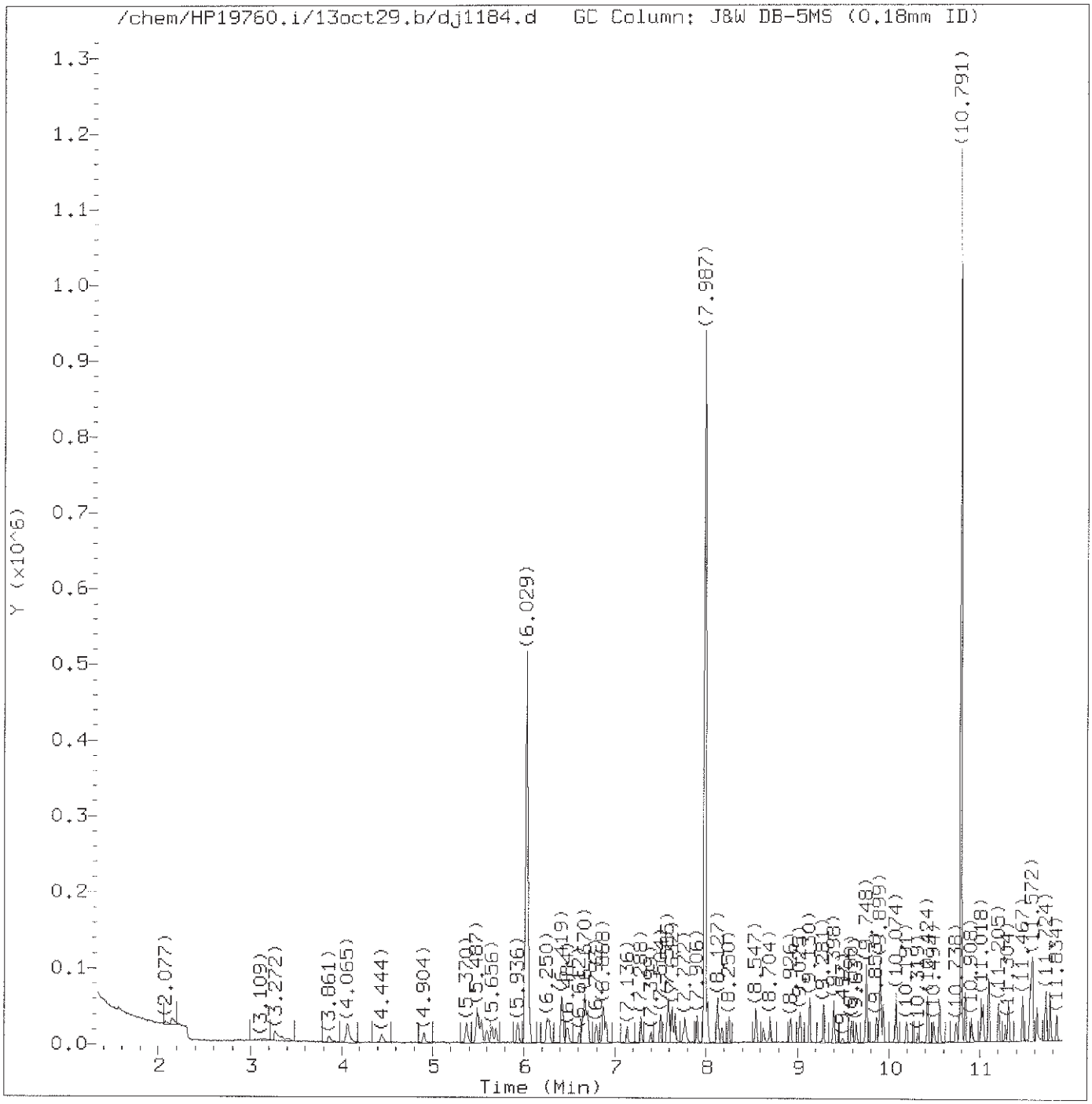
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

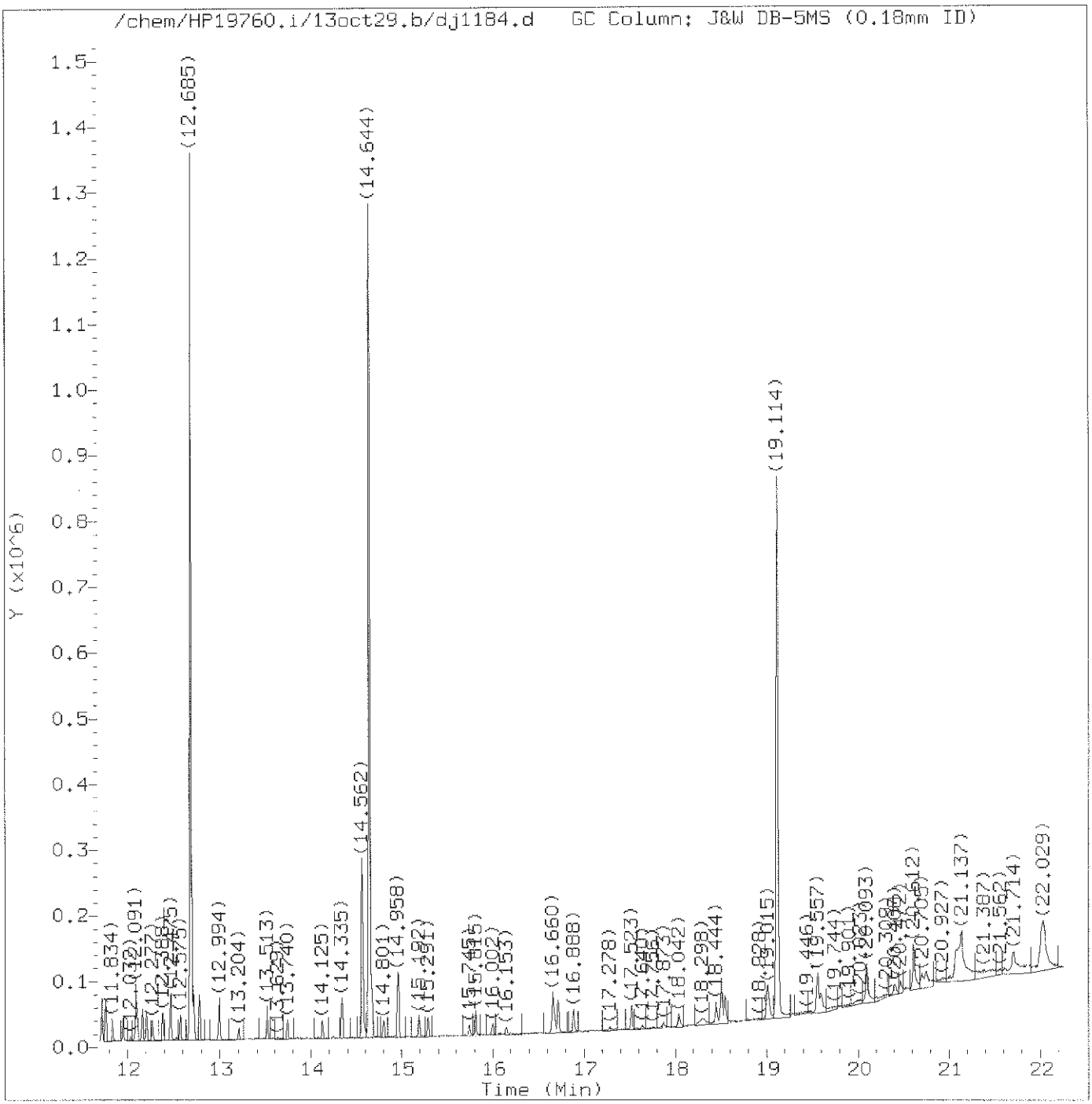
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.564	88	3696M	0.232
2) N-Nitrosodimethylamine	(1)	2.077	74	6220M	0.221
3) Pyridine	(1)	2.147	79	17293M	0.352
4) 2-Picoline	(1)	3.266	93	13682M	0.262
5) N-Nitrosomethylethylamine	(1)	3.418	88	5080	0.231
6) Methyl methanesulfonate	(1)	3.861	80	6376M	0.249
7)$2-Fluorophenol	(1)	4.065	112	19200	0.500
8) N-Nitrosodiethylamine	(1)	4.444	102	5285M	0.246
10) Ethyl methanesulfonate	(1)	4.904	109	5358M	0.258
11) Benzaldehyde	(1)	5.376	77	11103	0.327
12)$Phenol-d5	(1)	5.487	99	26913	0.511
13)$Phenol-d6	(1)	5.487	99	26913	0.511
14) Phenol	(1)	5.504	94	16178	0.264
15) Aniline	(1)	5.539	93	19481	0.258
16) bis(2-Chloroethyl)ether	(1)	5.656	93	12791	0.264
17) 2-Chlorophenol	(1)	5.703	128	9542	0.251
18) 1,3-Dichlorobenzene	(1)	5.936	146	10610	0.263
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	126889	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	11036	0.269
23) Benzyl alcohol	(1)	6.250	108	6796	0.255
24) 1,2-Dichlorobenzene	(1)	6.280	146	10030	0.265
25) Indene	(1)	6.414	115	21122	0.326
26) 2-Methylphenol	(1)	6.425	108	9745	0.256
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	16394	0.272
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	16394	0.272
29) N-Nitrosopyrrolidine	(1)	6.612	100	5168	0.237
30) Acetophenone	(1)	6.653	105	15413	0.263
33) 4-Methylphenol	(1)	6.670	108	11034	0.262
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	9090	0.267
32) N-Nitrosomorpholine	(1)	6.682	56	7524	0.278
34) o-Toluidine	(1)	6.699	106	17422	0.267
35) Hexachloroethane	(1)	6.793	117	4580	0.263
36)$Nitrobenzene-d5	(2)	6.868	82	23926	0.516
37) Nitrobenzene	(2)	6.897	77	12719	0.259
39) N-Nitrosopiperidine	(2)	7.136	114	5015	0.249
40) Isophorone	(2)	7.288	82	21125	0.252
42) 2-Nitrophenol	(2)	7.399	139	3541	0.208
45) 2,4-Dimethylphenol	(2)	7.504	107	10359	0.254
47) Benzoic acid	(2)	7.585	105	30416	0.983
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	4669	0.260

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	14395	0.264
49) 2,4-Dichlorophenol	(2)	7.772	162	7102	0.248
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	8785	0.274
52)*Naphthalene-d8	(2)	7.987	136	495519	5.000
53) Naphthalene	(2)	8.022	128	30041	0.284
55) 4-Chloroaniline	(2)	8.127	127	11979	0.268
56) 2,6-Dichlorophenol	(2)	8.133	162	6778	0.249
57) Hexachloropropene	(2)	8.174	213	4815	0.236
58) Hexachlorobutadiene	(2)	8.250	225	4973	0.268
60) Quinoline	(2)	8.547	129	19114	0.267
61) Caprolactam	(2)	8.629	113	3083	0.236
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	7870	0.228
63) 4-Chloro-3-methylphenol	(2)	8.926	107	8404	0.241
64) Safrole	(2)	9.025	162	6608	0.247
65) 2-Methylnaphthalene	(2)	9.130	142	18878	0.268
66) 1-Methylnaphthalene	(2)	9.281	142	16987	0.265
67) Hexachlorocyclopentadiene	(3)	9.398	237	2826	0.169
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	8849	0.267
69) cis-Isosafrole	(3)	9.497	162	1141	0.232
70) 2,4,6-Trichlorophenol	(3)	9.590	196	4697	0.225
71) 2,4,5-Trichlorophenol	(3)	9.637	196	5103	0.233
72)$2-Fluorobiphenyl	(3)	9.748	172	39741	0.556
74) Isosafrole	(3)	9.853	162	6499	0.239
73) trans-Isosafrole	(3)	9.853	162	6499	0.239
75) 1,1'-Biphenyl	(3)	9.893	154	22904	0.278
76) 2-Chloronaphthalene	(3)	9.899	162	17748	0.279
77) 1-Chloronaphthalene	(3)	9.934	162	16994	0.269
82) Diphenyl ether	(3)	10.080	170	11939	0.262
83) 2-Nitroaniline	(3)	10.080	138	4042	0.204
84) 1,4-Naphthoquinone	(3)	10.191	158	4974	0.174
85) 1,4-Dinitrobenzene	(3)	10.319	168	1574	0.136
86) Dimethylphthalate	(3)	10.424	163	19473	0.278
87) 1,3-Dinitrobenzene	(3)	10.430	168	1962	0.148
88) 2,6-Dinitrotoluene	(3)	10.494	165	3241	0.207
90) Acenaphthylene	(3)	10.558	152	24150	0.252
91) 3-Nitroaniline	(3)	10.738	138	3561	0.198
92)*Acenaphthene-d10	(3)	10.791	164	282862	5.000
93) Acenaphthene	(3)	10.838	153	17930	0.268
94) 2,4-Dinitrophenol	(3)	10.908	184	5476	0.607
96) 4-Nitrophenol	(3)	11.018	109	9085	0.716

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	7421	0.275
97) Dibenzofuran	(3)	11.094	168	25697	0.272
98) 2,4-Dinitrotoluene	(3)	11.100	165	4206	0.209
99) 1-Naphthylamine	(3)	11.205	143	17020	0.250
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	3868	0.225
101) 2-Naphthylamine	(3)	11.310	143	17627	0.253
102) Diethylphthalate	(3)	11.467	149	18398	0.259
103) Fluorene	(3)	11.549	166	19968	0.264
104) Thionazin	(3)	11.566	107	3976	0.261
106) 5-Nitro-o-toluidine	(3)	11.572	152	4559	0.228
107) 4-Nitroaniline	(3)	11.572	138	4144	0.225
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	10239	0.272
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	6064	0.472
109) N-Nitrosodiphenylamine	(4)	11.724	169	15725	0.259
110) NDPA as diphenylamine	(4)	11.724	169	15725	0.259
111) 1,2-Diphenylhydrazine	(4)	11.764	77	25065	0.260
112)$2,4,6-Tribromophenol	(3)	11.840	330	3128	0.416
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	3448	0.245
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	656	0.069
117) Diallate (peak 1)	(4)	12.085	86	9067	0.189
118) Phorate	(4)	12.091	75	13349	0.232
119) Phenacetin	(4)	12.102	108	8021	0.199
120) 4-Bromophenyl-phenylether	(4)	12.161	248	4904	0.254
121) Diallate (peak 2)	(4)	12.190	86	1191	0.058
122) Hexachlorobenzene	(4)	12.207	284	5132	0.266
123) Dimethoate	(4)	12.277	87	7175	0.181
124) Atrazine	(4)	12.388	200	4752	0.249
125) Pentachlorophenol	(4)	12.458	266	1535	0.104
126) Pentachloronitrobenzene	(4)	12.470	237	1737	0.204
127) 4-Aminobiphenyl	(4)	12.475	169	18057	0.240
129) Pronamide	(4)	12.575	173	6404	0.203
130)*Phenanthrene-d10	(4)	12.685	188	486096	5.000
131) Phenanthrene	(4)	12.714	178	30082	0.273
133) Dinoseb	(4)	12.720	211	1071	0.057
134) Anthracene	(4)	12.778	178	26925	0.249
135) Carbazole	(4)	12.994	167	26389	0.251
136) Methyl parathion	(4)	13.204	109	3458	0.119
137) Di-n-butylphthalate	(4)	13.513	149	27530	0.215
138) Parathion	(4)	13.740	109	2408	0.130
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	417	0.037

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	3050	0.234
142) Fluoranthene	(4)	14.335	202	29686	0.244
144) Benzidine	(5)	14.562	184	137965	1.720
145)*Pyrene-d10	(5)	14.644	212	607939	5.000
146) Pyrene	(5)	14.673	202	35149	0.266
149)$Terphenyl-d14	(5)	14.958	244	39291	0.511
150) p-Dimethylaminoazobenzene	(5)	15.192	225	3822	0.168
151) Chlorobenzilate	(5)	15.291	139	7130	0.186
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	10857	0.131
153) Butylbenzylphthalate	(5)	15.815	149	10632	0.186
156) 2-Acetylaminofluorene	(5)	16.153	181	4634	0.089
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	7120M	0.170
158) Benzo(a)anthracene	(5)	16.660	228	23780	0.220
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	3484	0.156
161) Chrysene	(5)	16.719	228	26853	0.250
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	12026	0.154
165) 6-Methylchrysene	(5)	17.517	242	16847	0.222
166) Di-n-octylphthalate	(6)	18.042	149	14018	0.112
168) Benzo(b)fluoranthene	(6)	18.496	252	23703	0.247
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	8832	0.215
170) Benzo(k)fluoranthene	(6)	18.543	252	24057	0.248
171) Benzo(a)pyrene	(6)	19.021	252	22451	0.252
172)*Perylene-d12	(6)	19.114	264	409698	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	8857	0.211
174) Dibenz(a,h)acridine	(6)	20.402	279	9846M	0.154
175) Dibenz(a,j)acridine	(6)	20.472	279	11208M	0.172
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	15702	0.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	12821	0.204
178) Benzo(g,h,i)perylene	(6)	21.073	276	15545	0.241
179) Diallate TRANS/CIS	(4)			10258	0.250
182) 2,4_2,6-Dinitrotoluenes	(3)			7447	0.416

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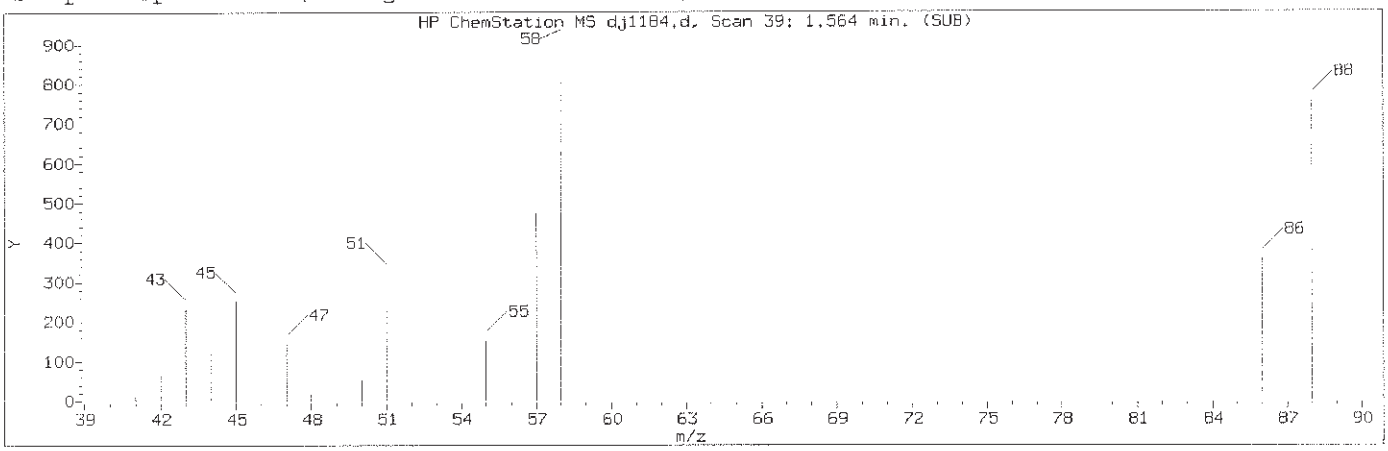
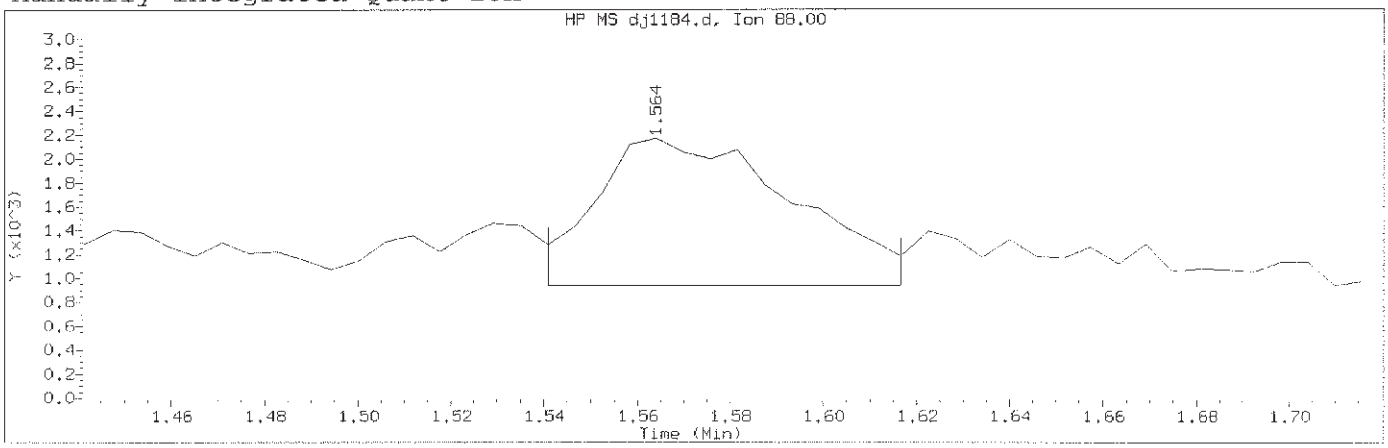
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 39		
Retention Time (minutes)	: 1.564		
Quant Ion	: 88.00		
Area (flag)	: 3696M		
On-Column Amount (ng/ul)	: 0.2322		
Integration start scan	: 34	Integration stop scan:	47
Y at integration start	: 939	Y at integration end:	939

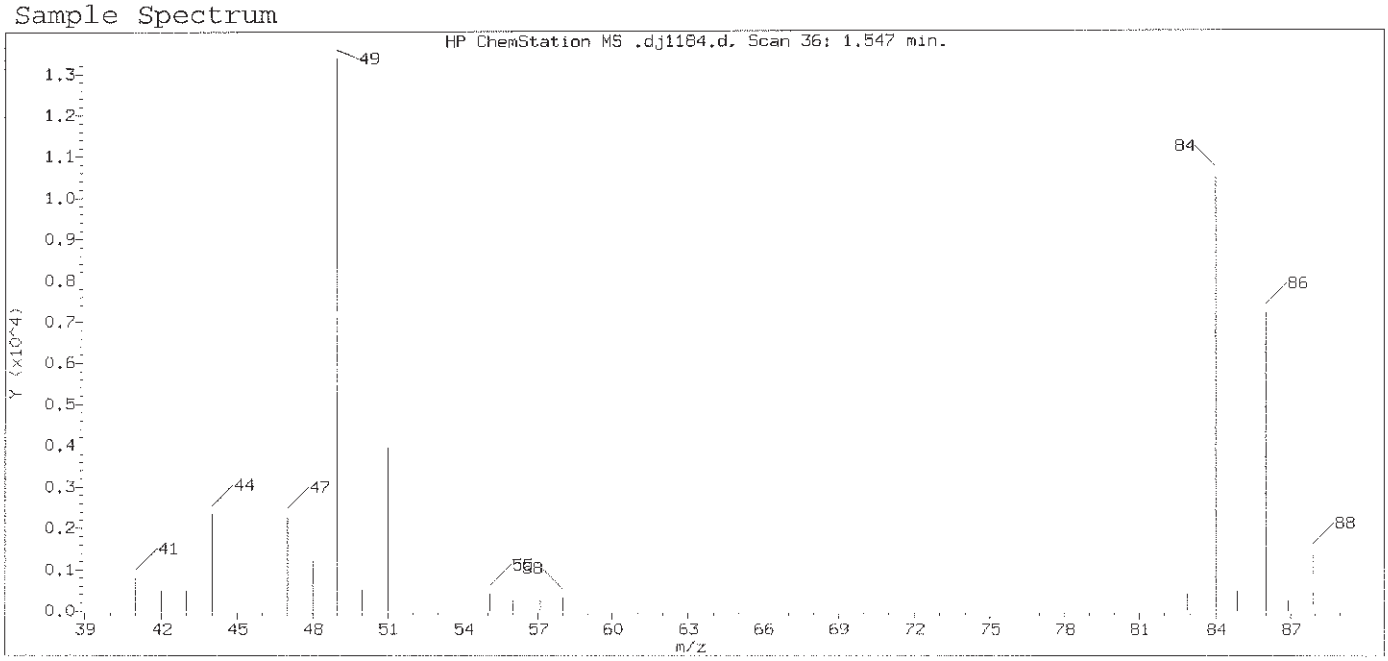
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

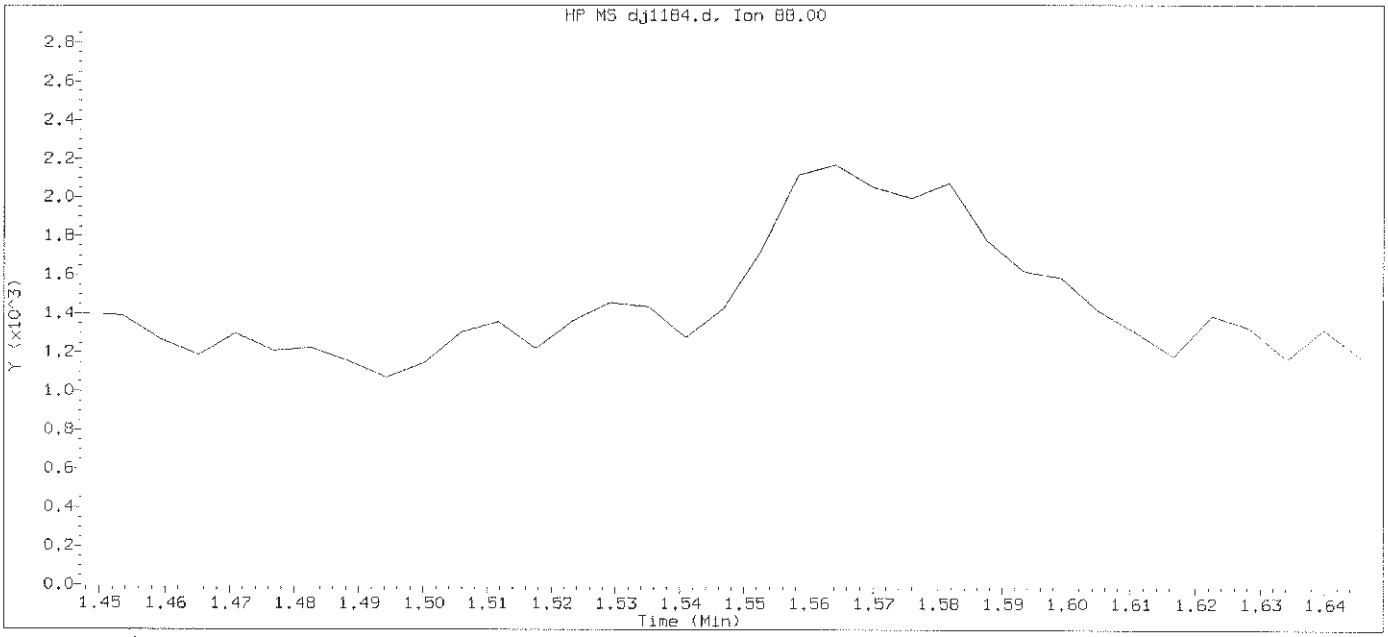
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

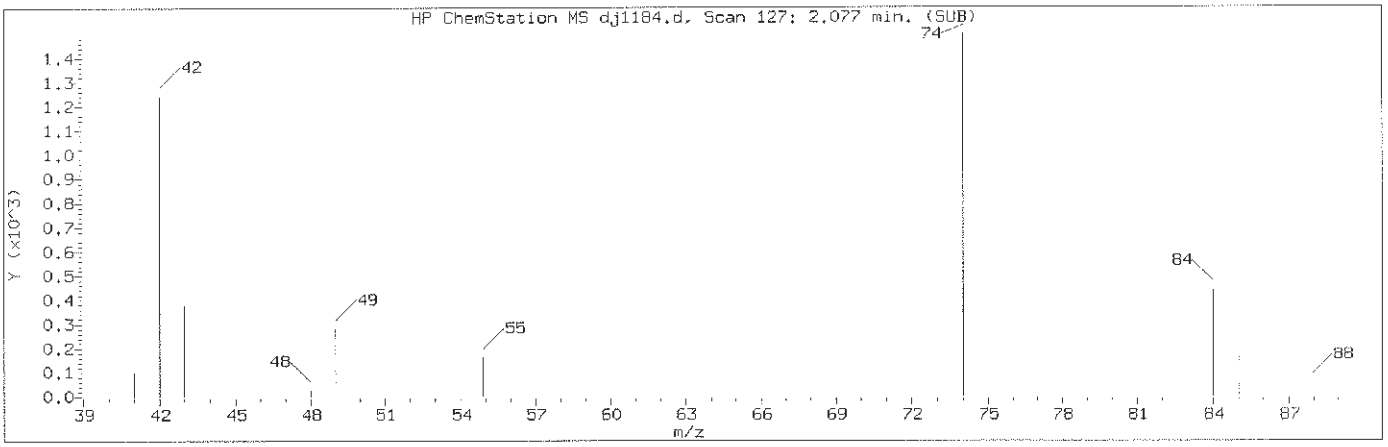
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

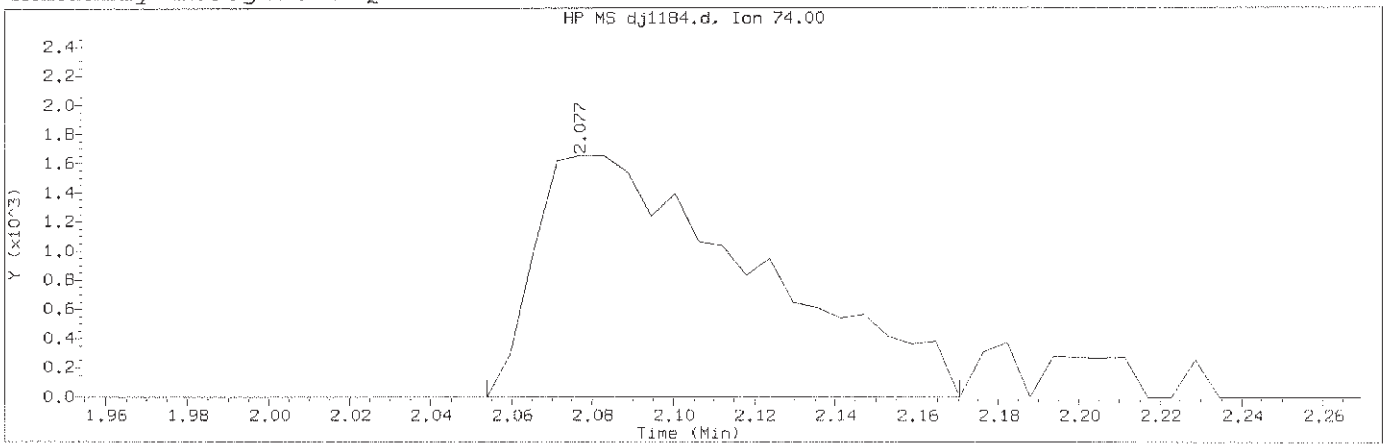
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area (flag)	: 6220M		
On-Column Amount (ng/ul)	: 0.2208		
Integration start scan	: 122	Integration stop scan:	142
Y at integration start	: -1	Y at integration end:	-1

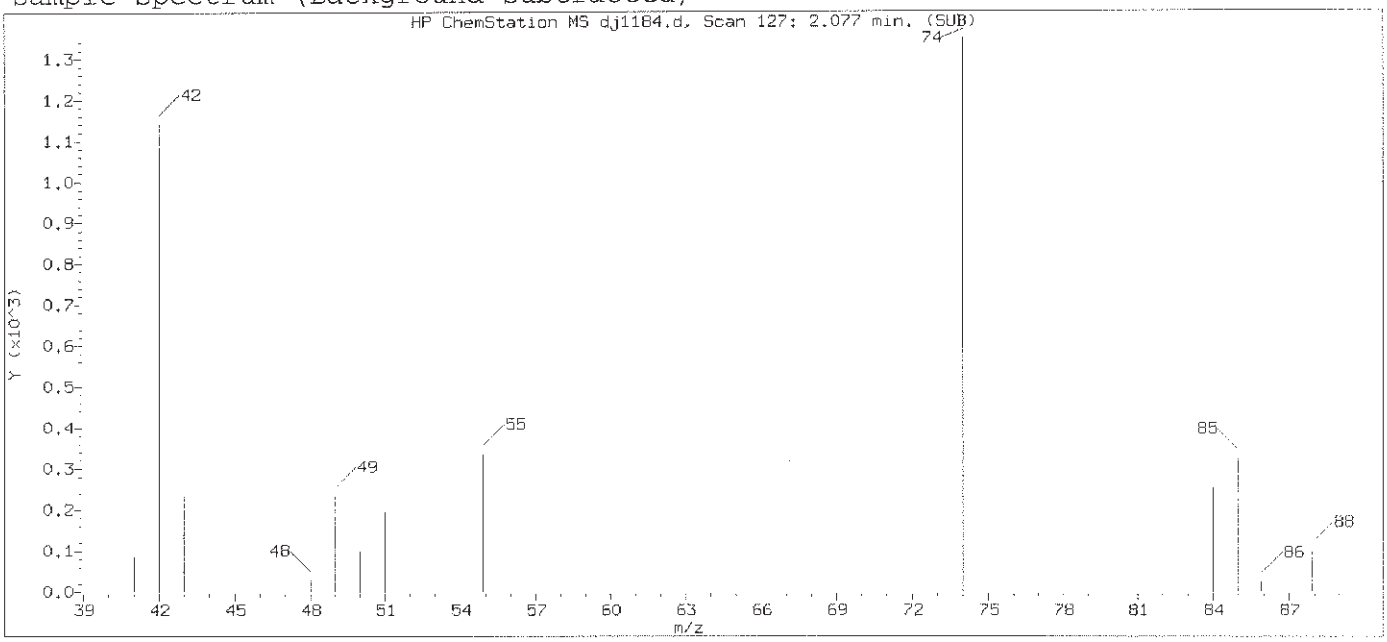
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

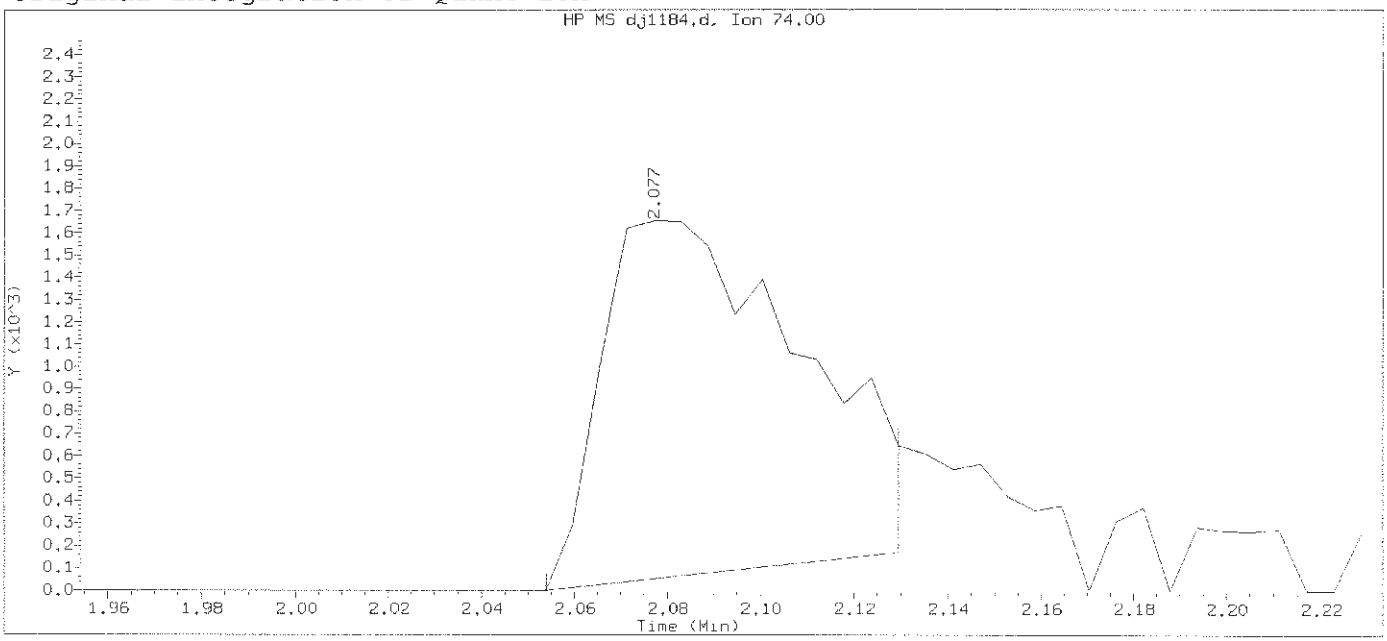
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

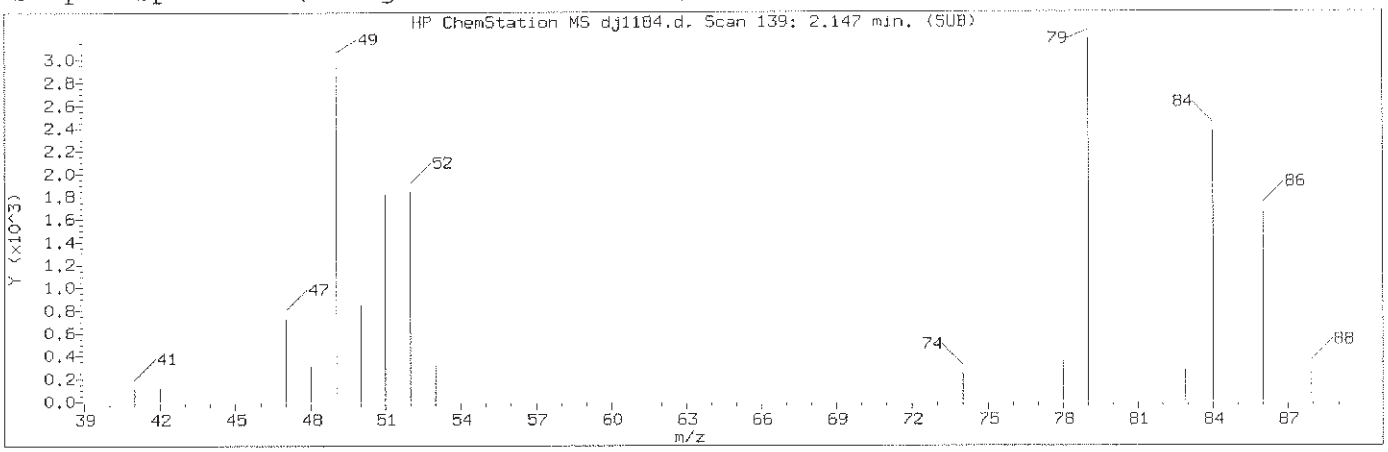
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

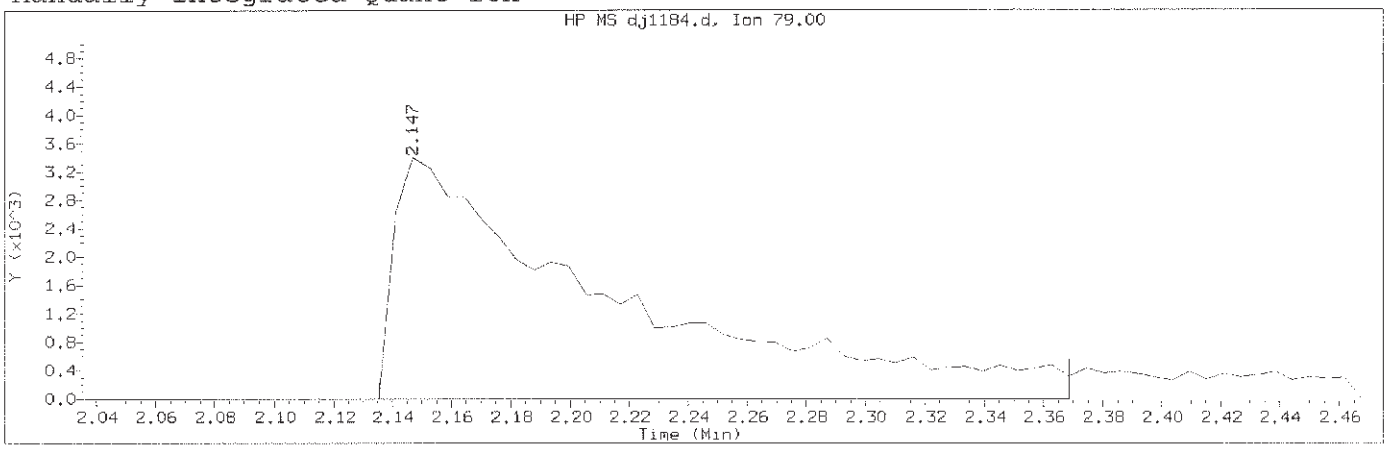
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area	: 4711		
On-column Amount (ng/ul)	: 0.1787		
Integration start scan	: 122	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	170

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area (flag)	: 17293M		
On-Column Amount (ng/ul)	: 0.3524		
Integration start scan	: 136	Integration stop scan:	176
Y at integration start	: -3	Y at integration end:	-3

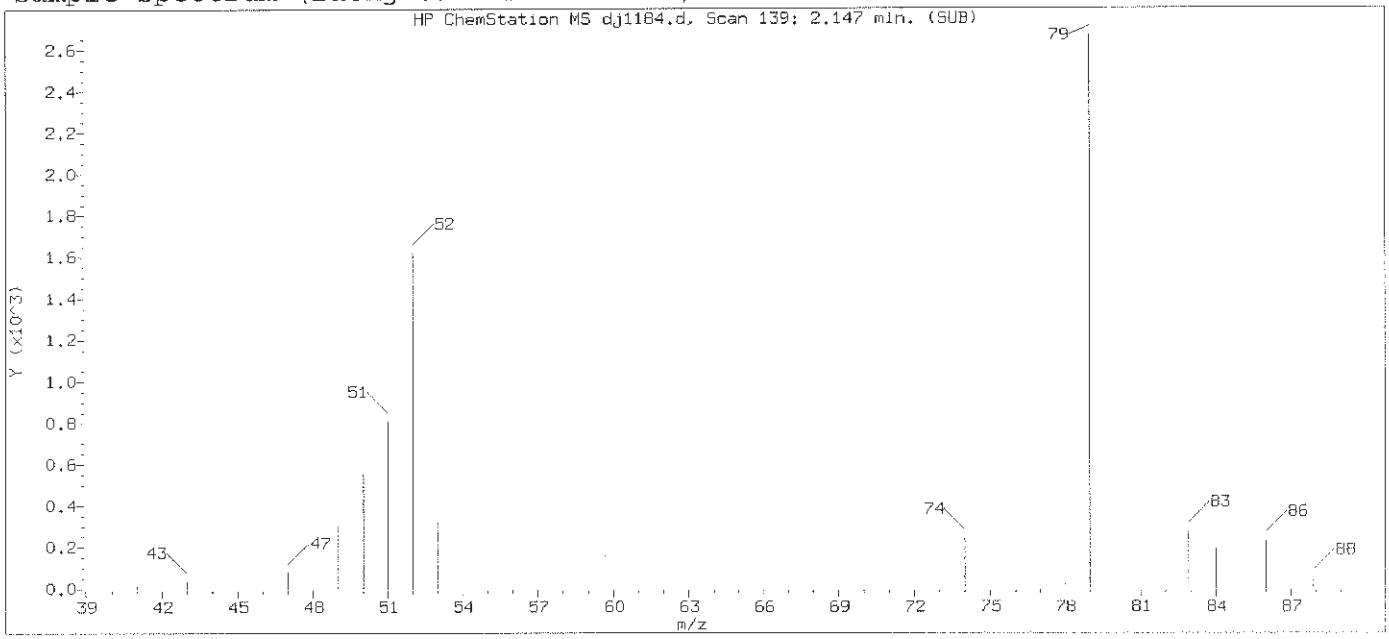
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

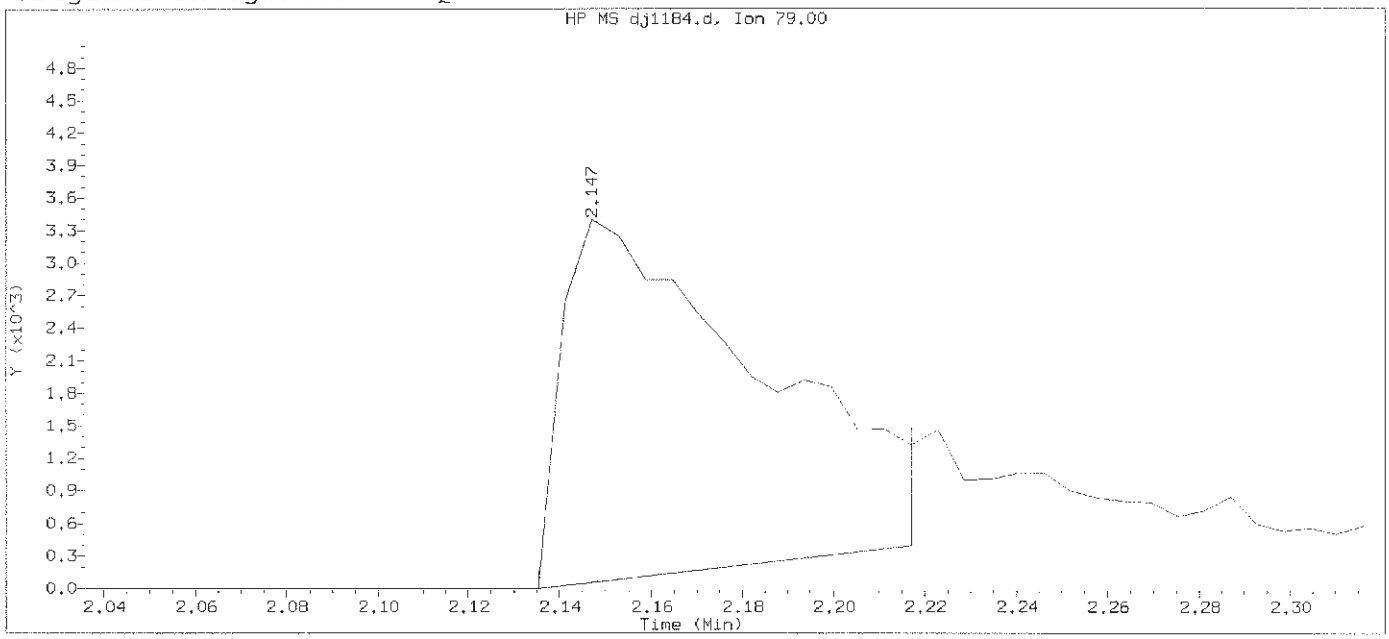
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

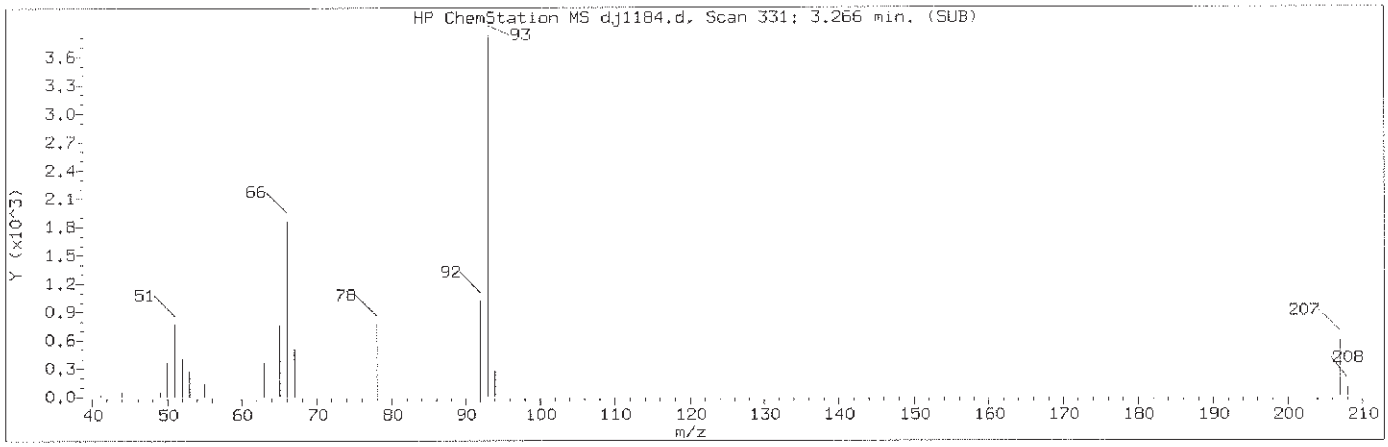
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

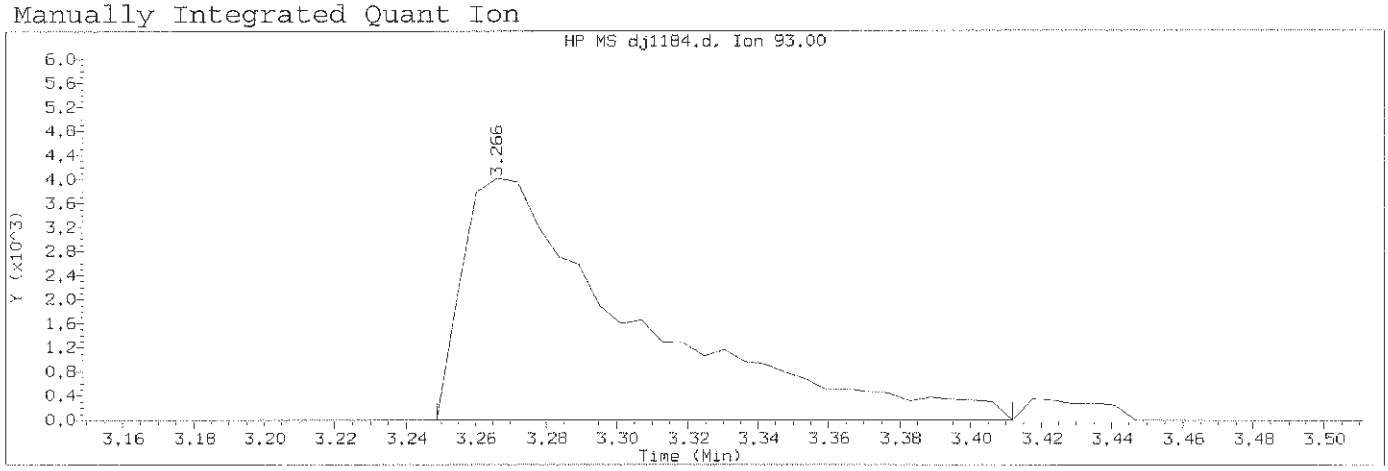
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area	: 9841		
On-column Amount (ng/ul)	: 0.2168		
Integration start scan	: 136	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	397

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area (flag)	: 13682M		
On-Column Amount (ng/ul)	: 0.2616		
Integration start scan	: 327	Integration stop scan:	355
Y at integration start	: 2	Y at integration end:	2

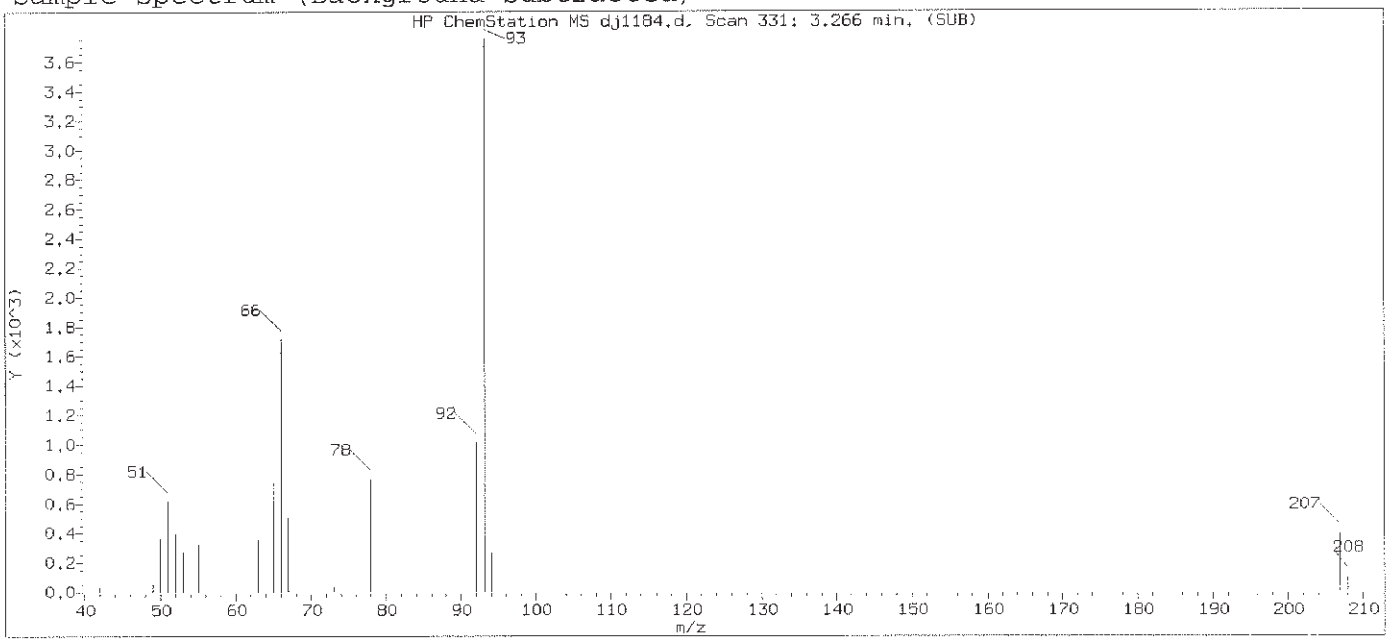
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

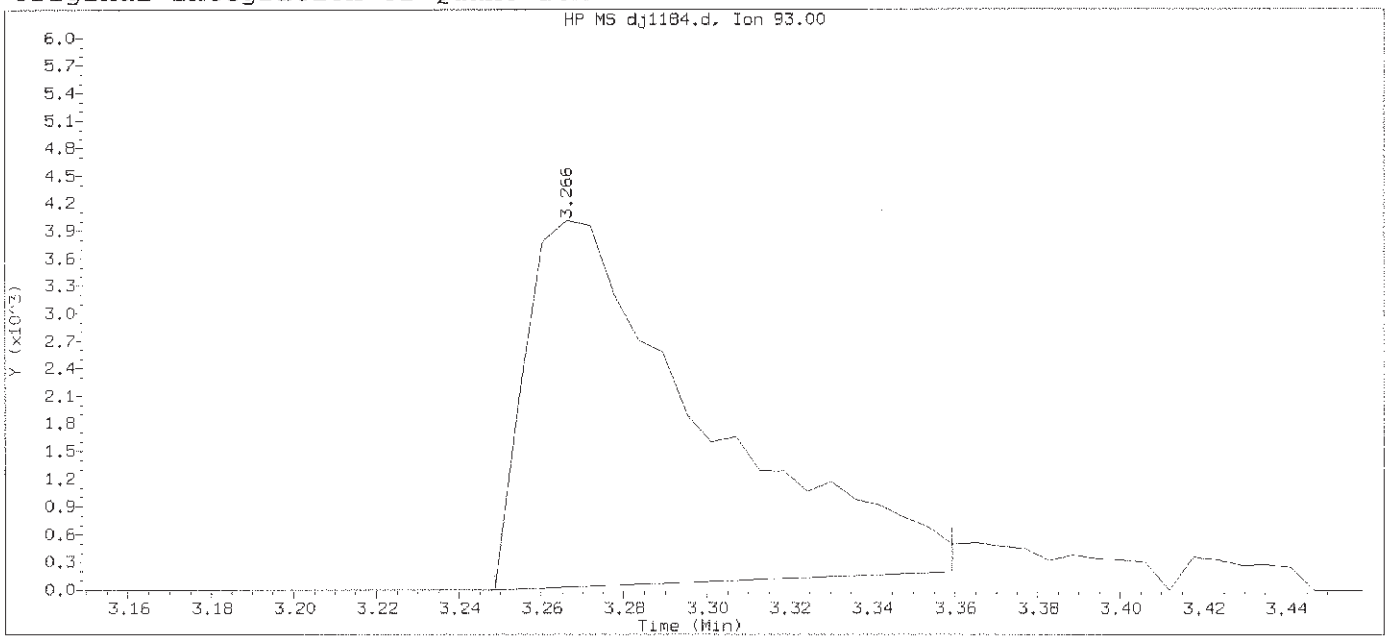
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

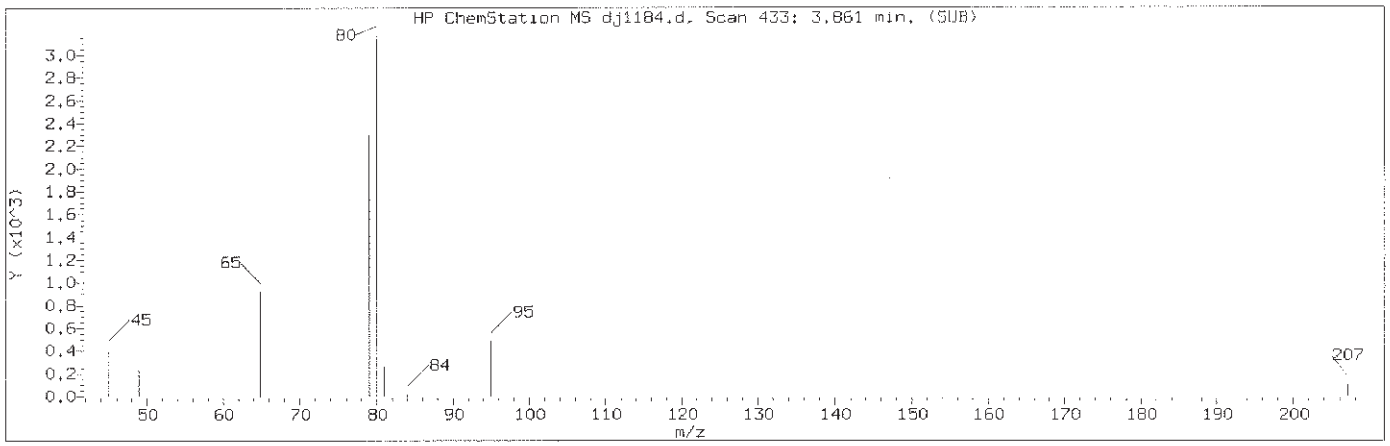
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

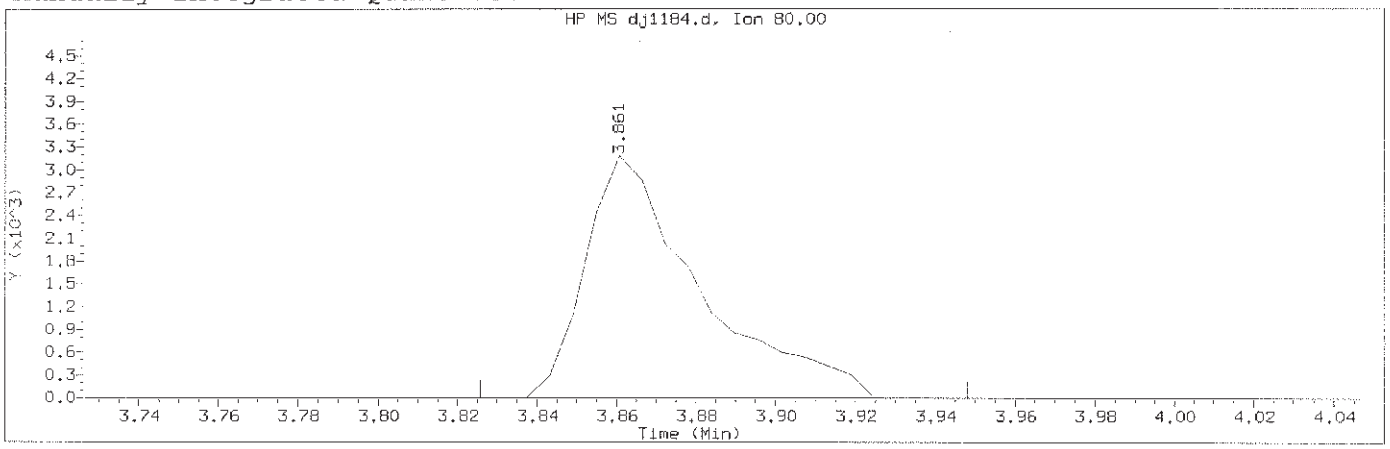
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area	: 11889		
On-column Amount (ng/ul)	: 0.2395		
Integration start scan	: 327	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	193

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area (flag)	: 6376M		
On-Column Amount (ng/ul)	: 0.2493		
Integration start scan	: 426	Integration stop scan:	447
Y at integration start	: 0	Y at integration end:	0

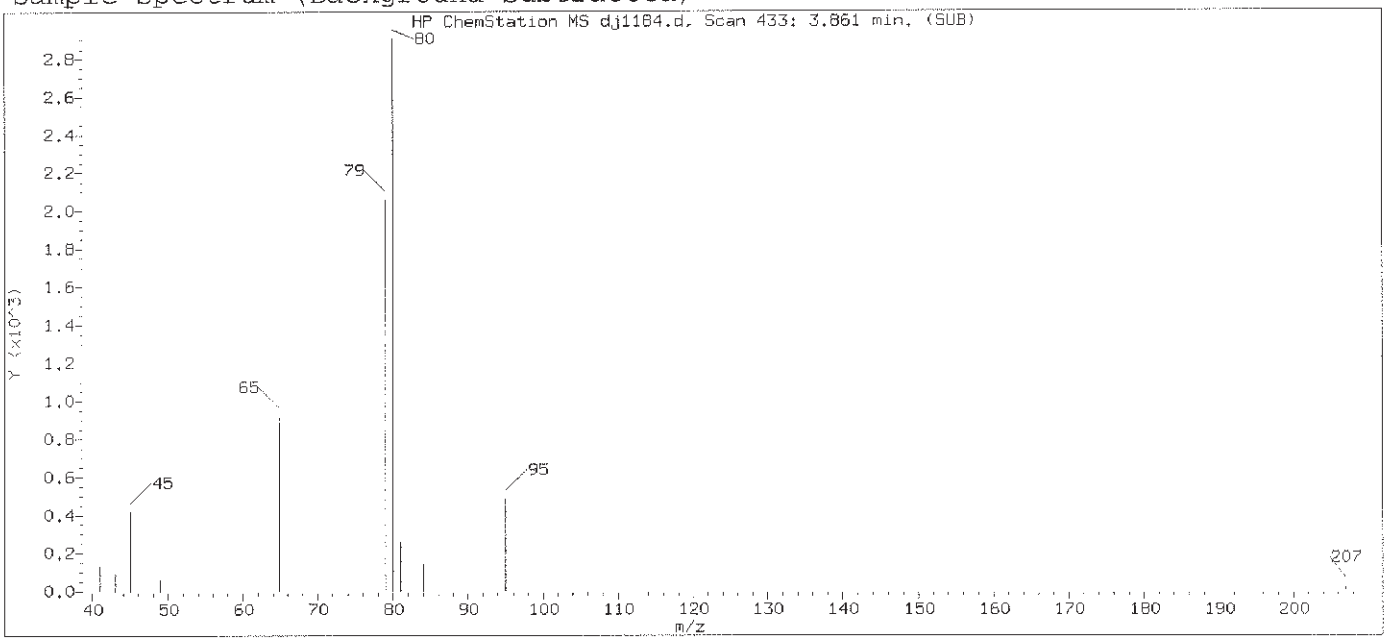
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

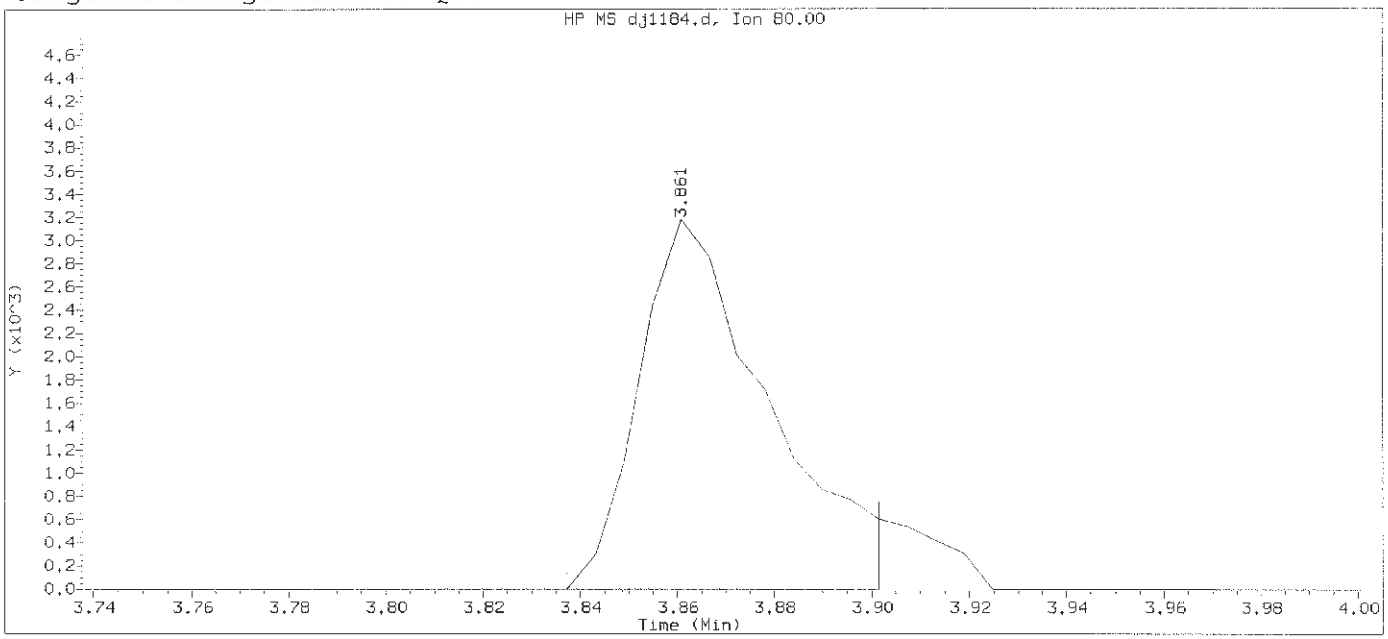
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

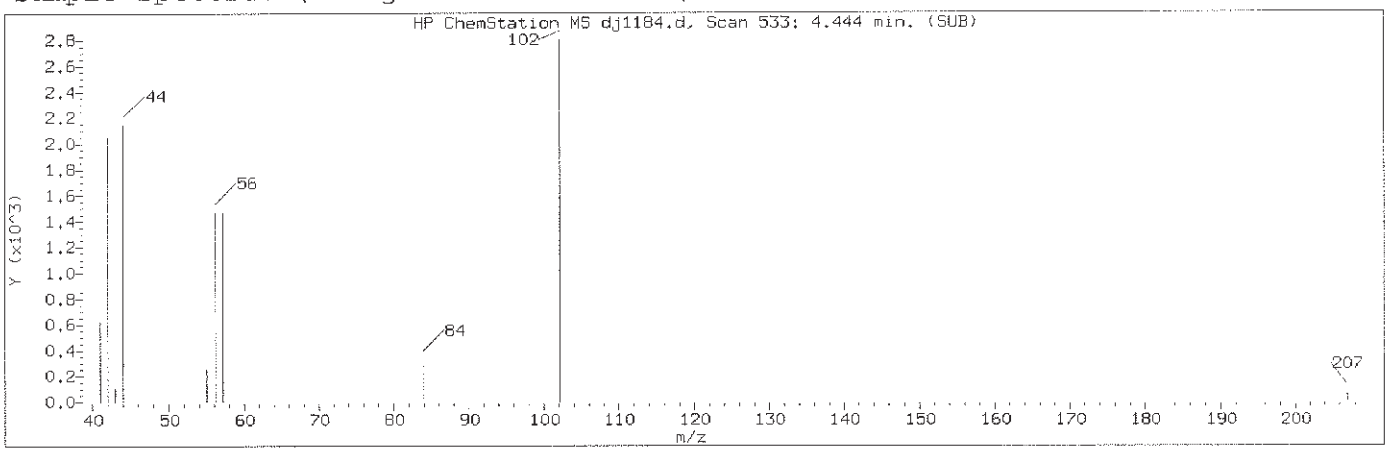
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

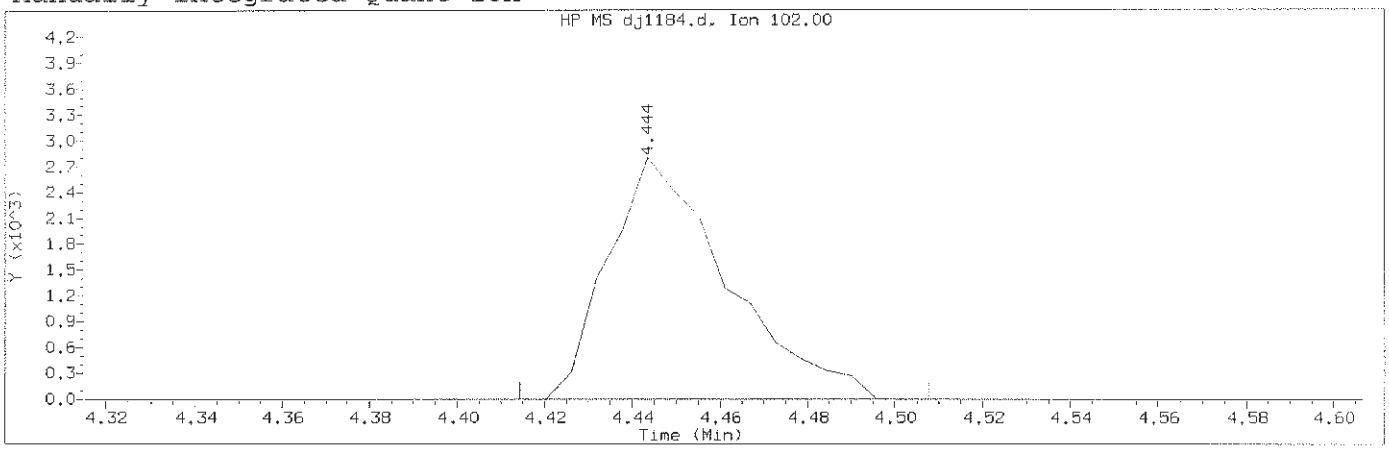
Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area	: 5828		
On-column Amount (ng/ul)	: 0.2371		
Integration start scan	: 428	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area (flag)	: 5285M		
On-Column Amount (ng/ul)	: 0.2460		
Integration start scan	: 527	Integration stop scan:	543
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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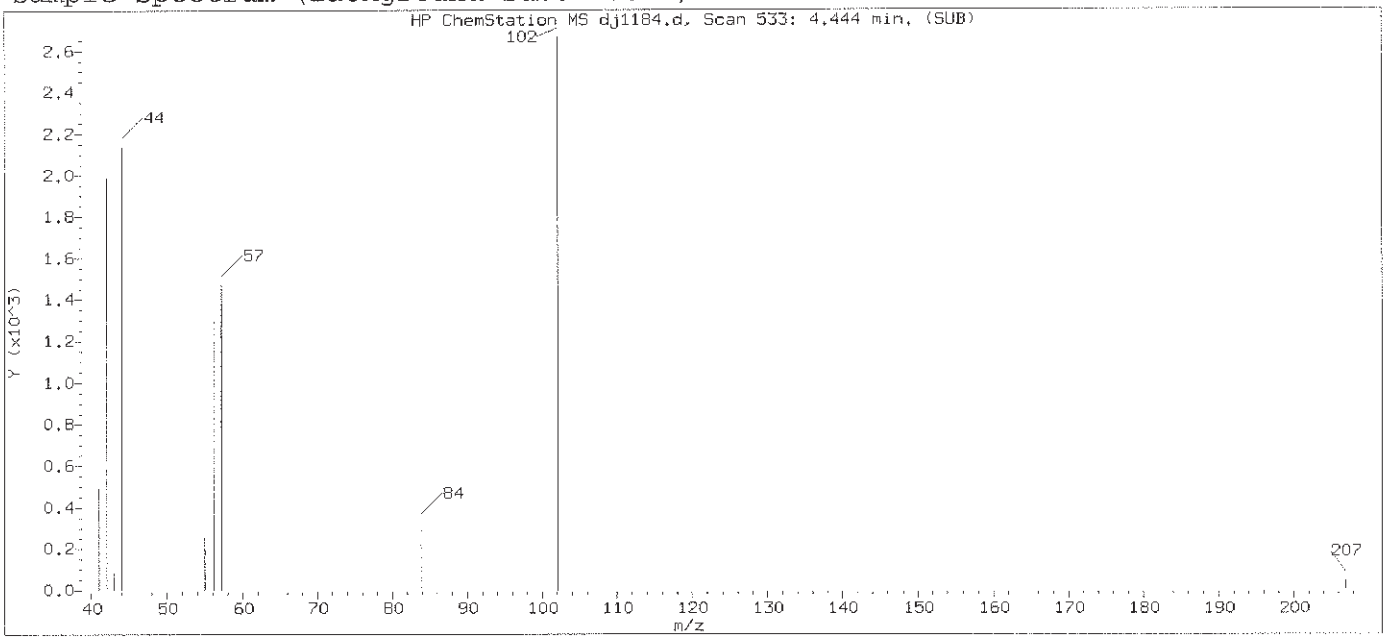
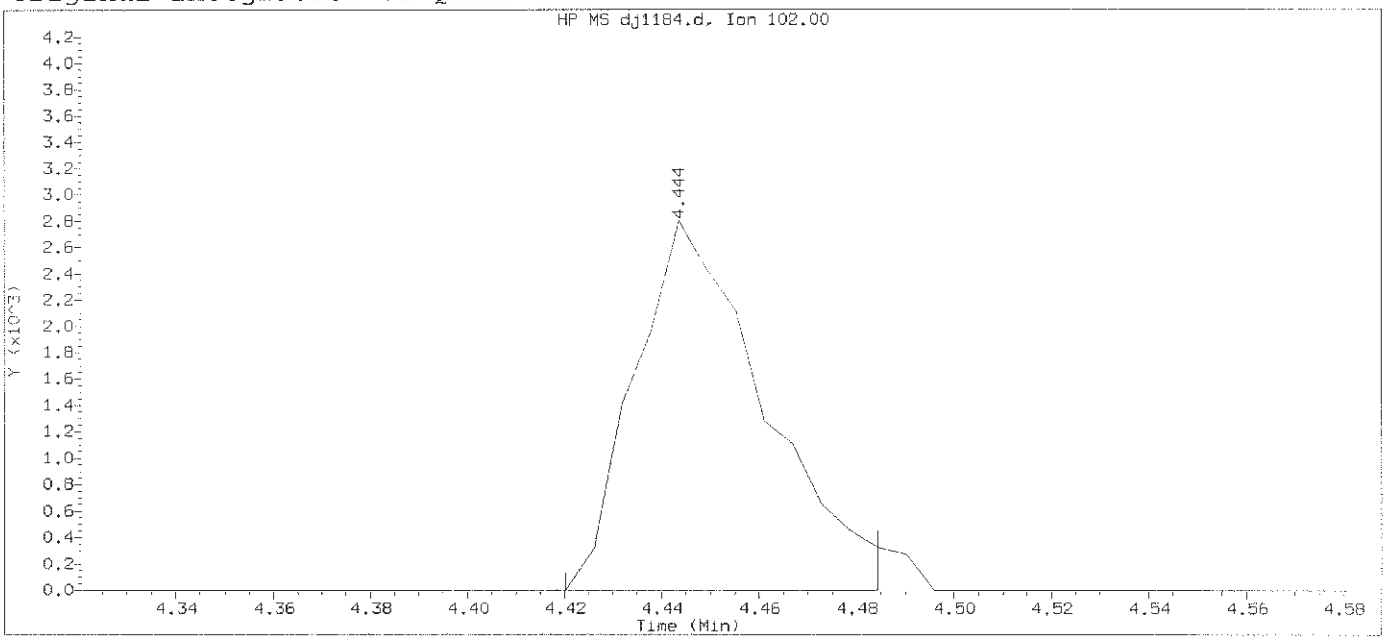
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

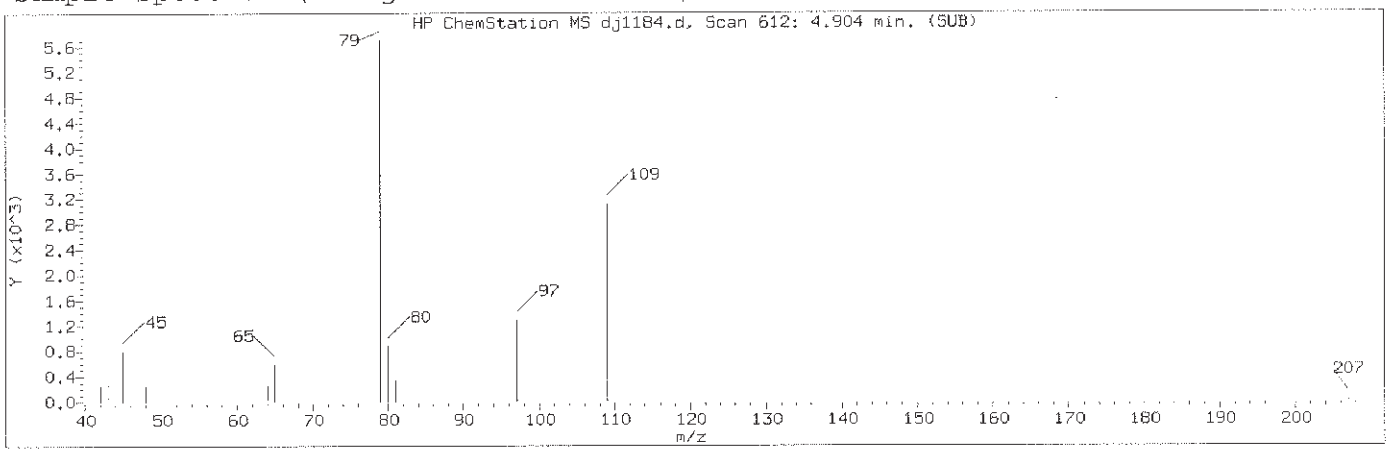
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

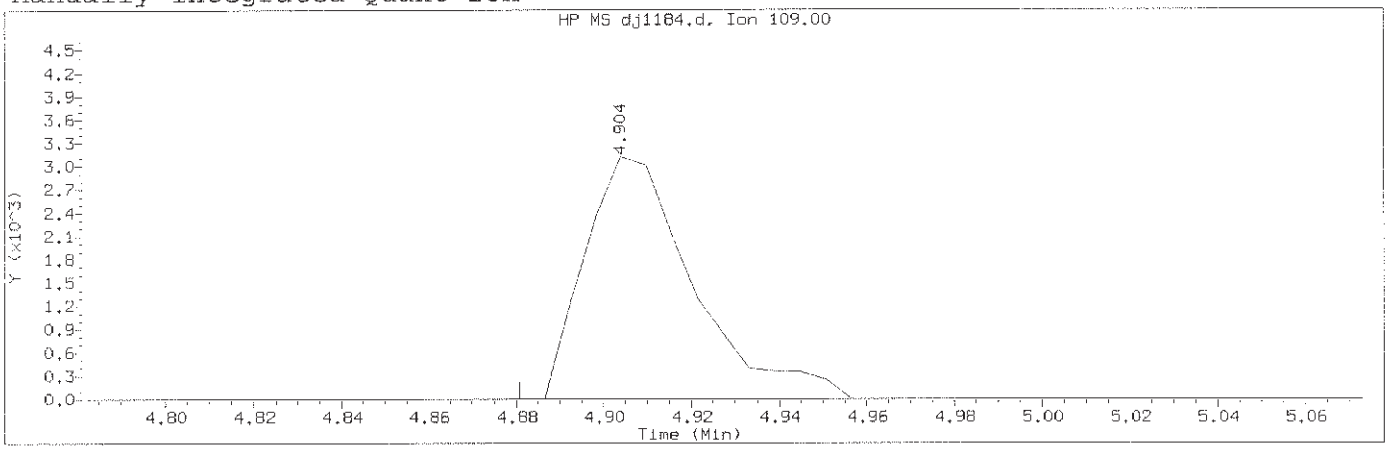
Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area	: 5133		
On-column Amount (ng/ul)	: 0.2465		
Integration start scan	: 528	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area (flag)	: 5358M		
On-Column Amount (ng/ul)	: 0.2584		
Integration start scan	: 607	Integration stop scan:	623
Y at integration start	: 0	Y at integration end:	0

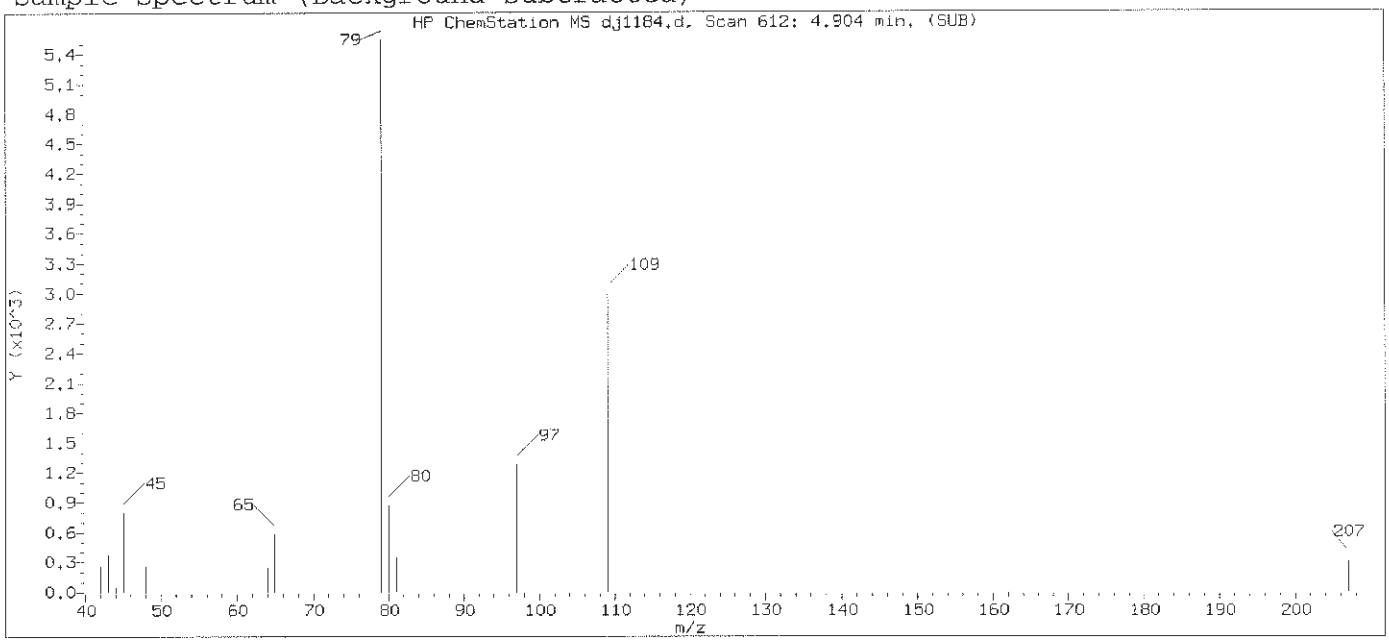
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

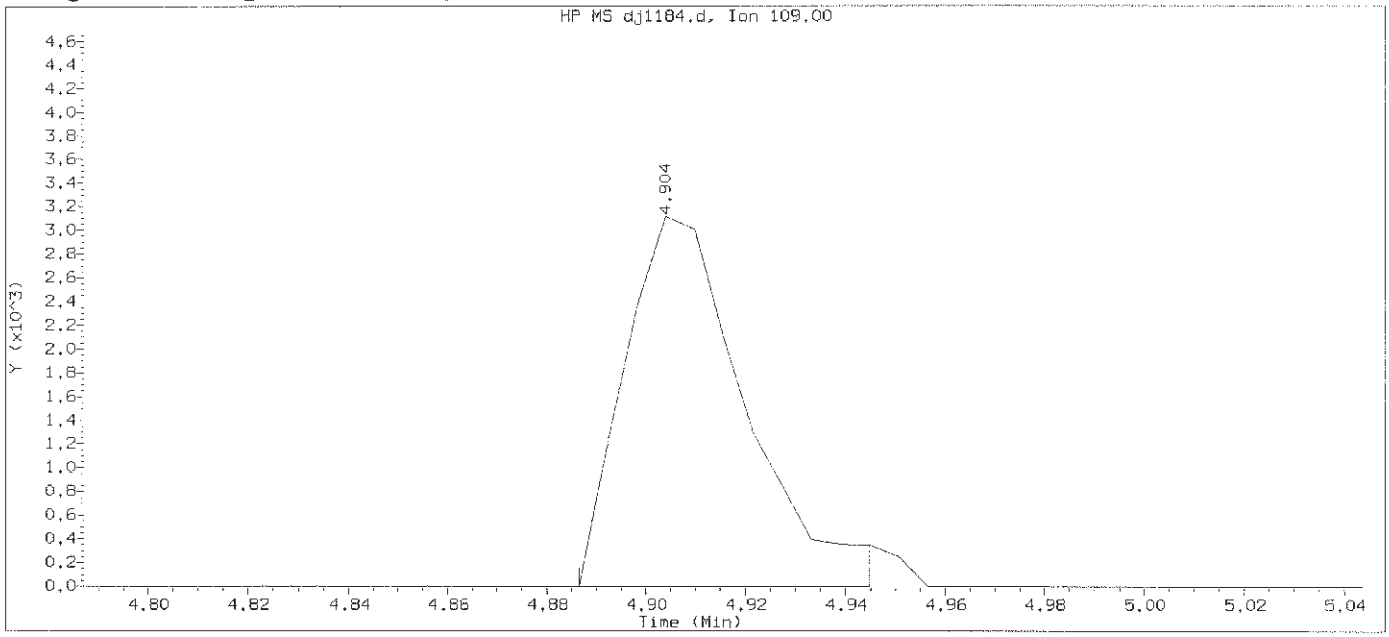
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

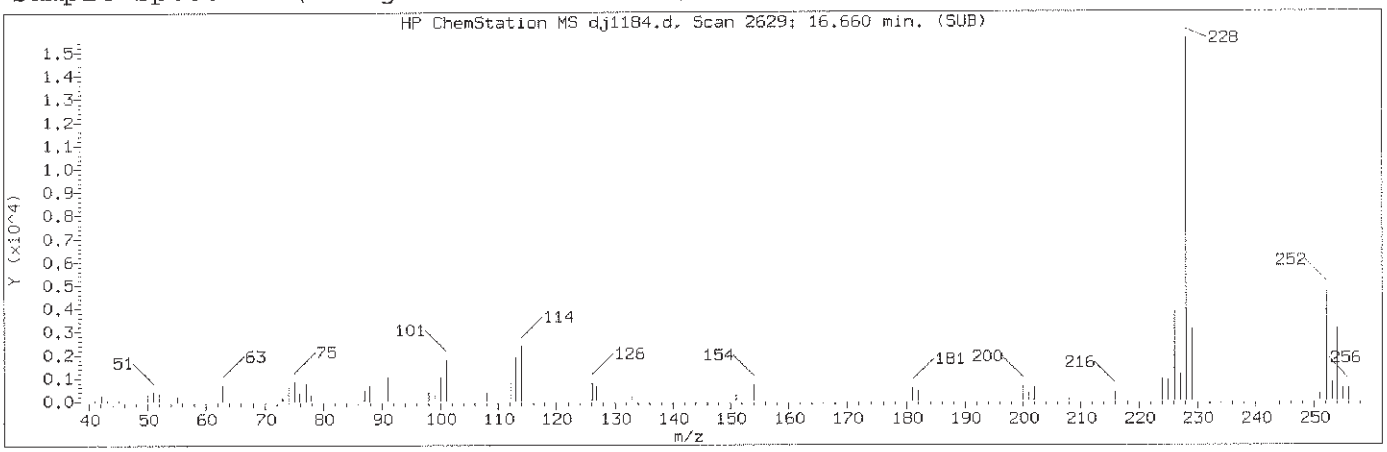
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

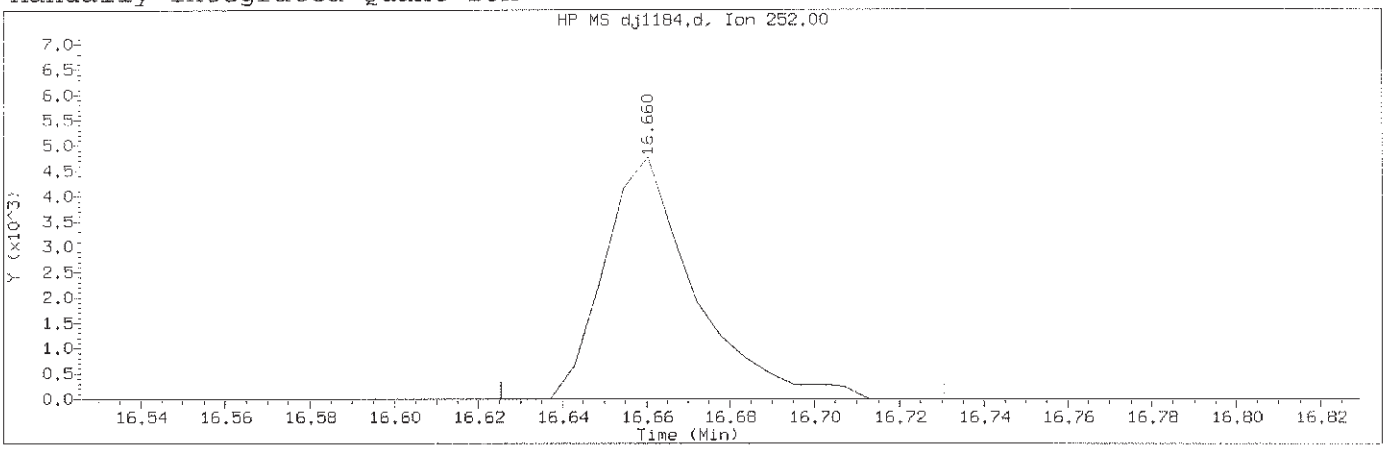
Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area	: 5209		
On-column Amount (ng/ul)	: 0.2594		
Integration start scan	: 608	Integration stop scan:	618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 159		
Compound Name	: 3,3'-Dichlorobenzidine		
Scan Number	: 2629		
Retention Time (minutes)	: 16.660		
Quant Ion	: 252.00		
Area (flag)	: 7120M		
On-Column Amount (ng/ul)	: 0.1695		
Integration start scan	: 2622	Integration stop scan:	2640
Y at integration start	: 0	Y at integration end:	0

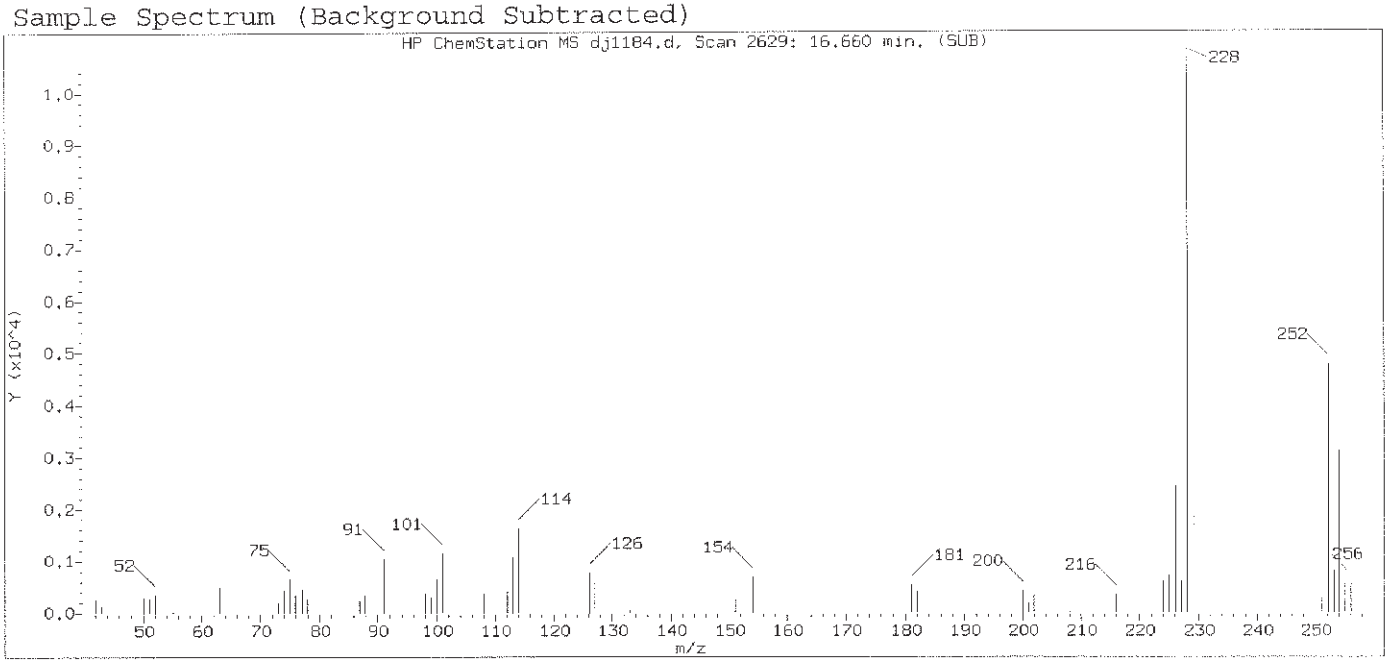
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

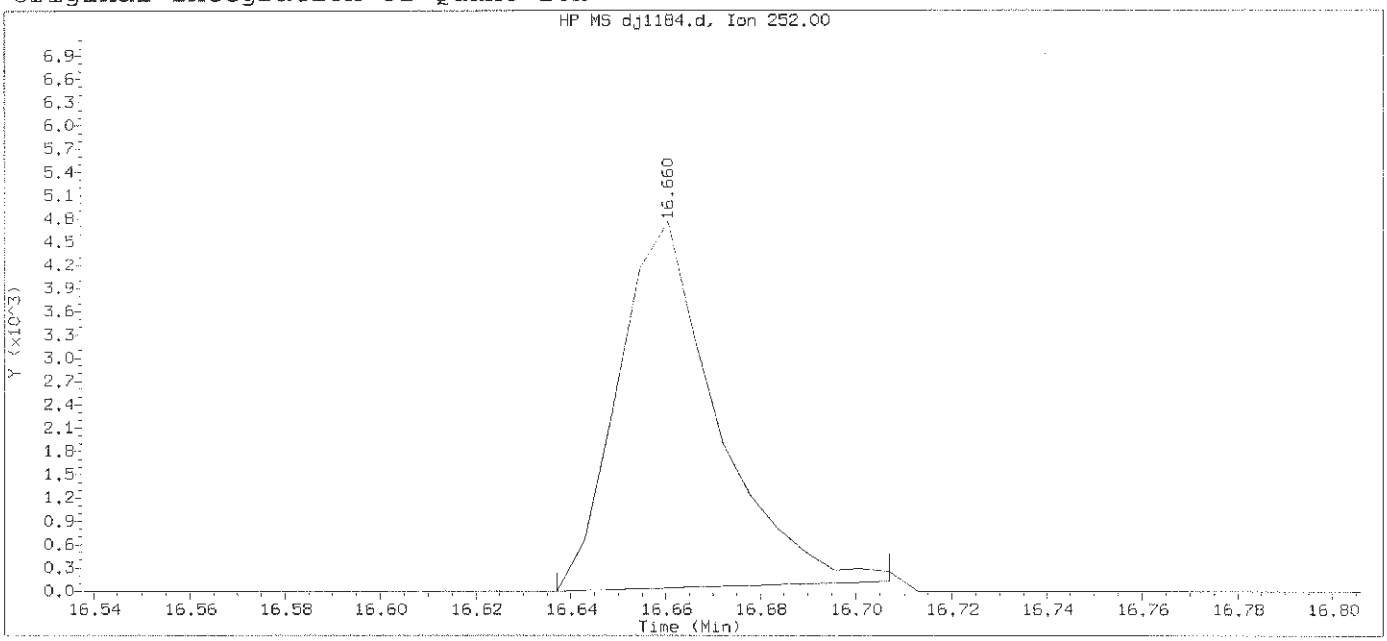
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 159
Compound Name	: 3,3'-Dichlorobenzidine
Scan Number	: 2629
Retention Time (minutes)	: 16.660
Quant Ion	: 252.00
Area	: 6810
On-column Amount (ng/ul)	: 0.1722
Integration start scan	: 2624 Integration stop scan: 2636
Y at integration start	: 0 Y at integration end: 127

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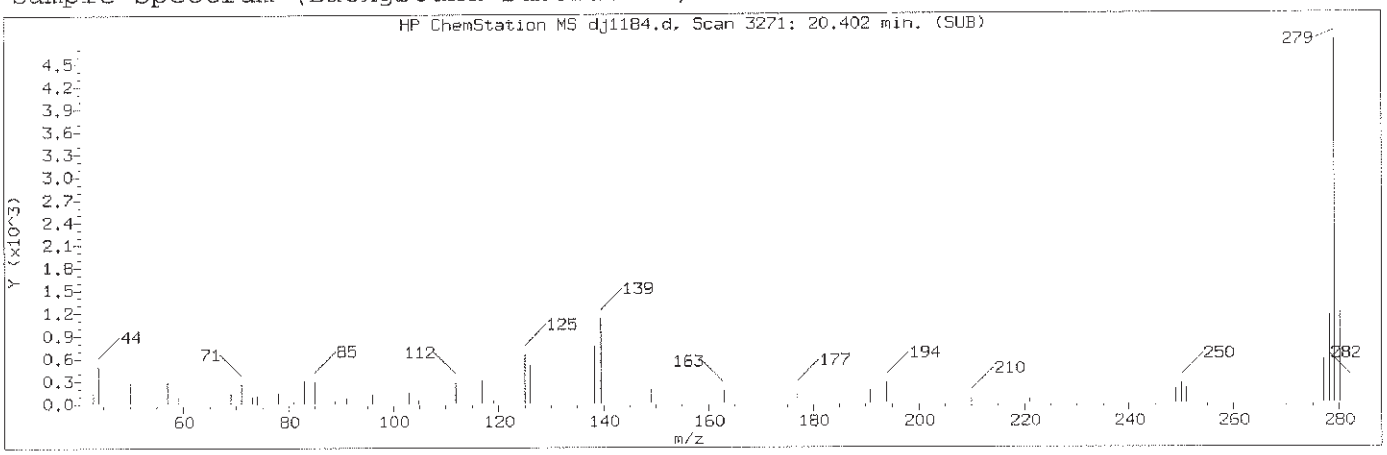
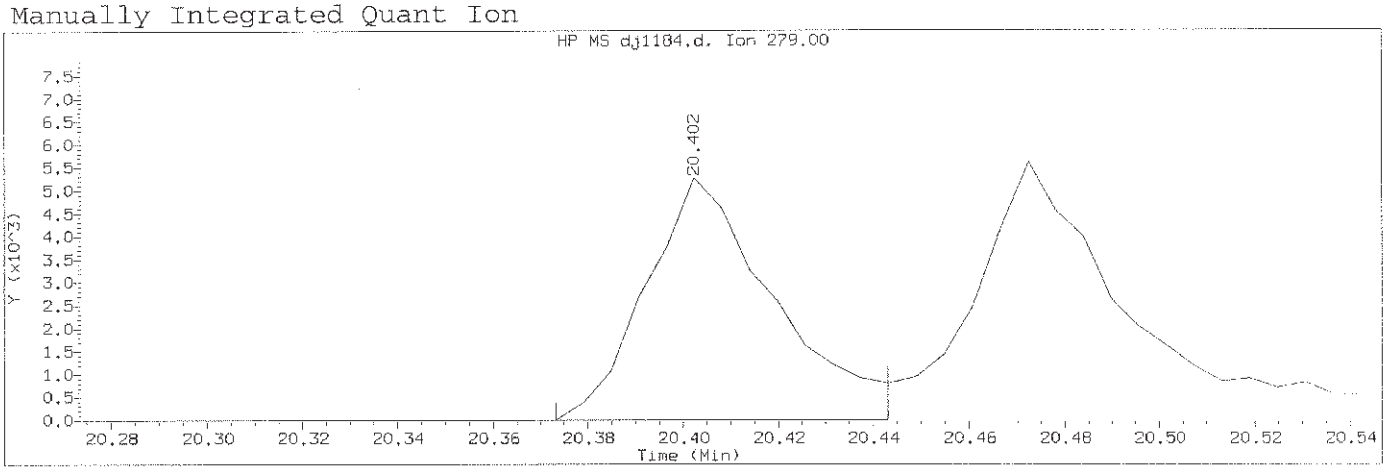
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area (flag)	: 9846M		
On-Column Amount (ng/ul)	: 0.1536		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 1	Y at integration end:	1

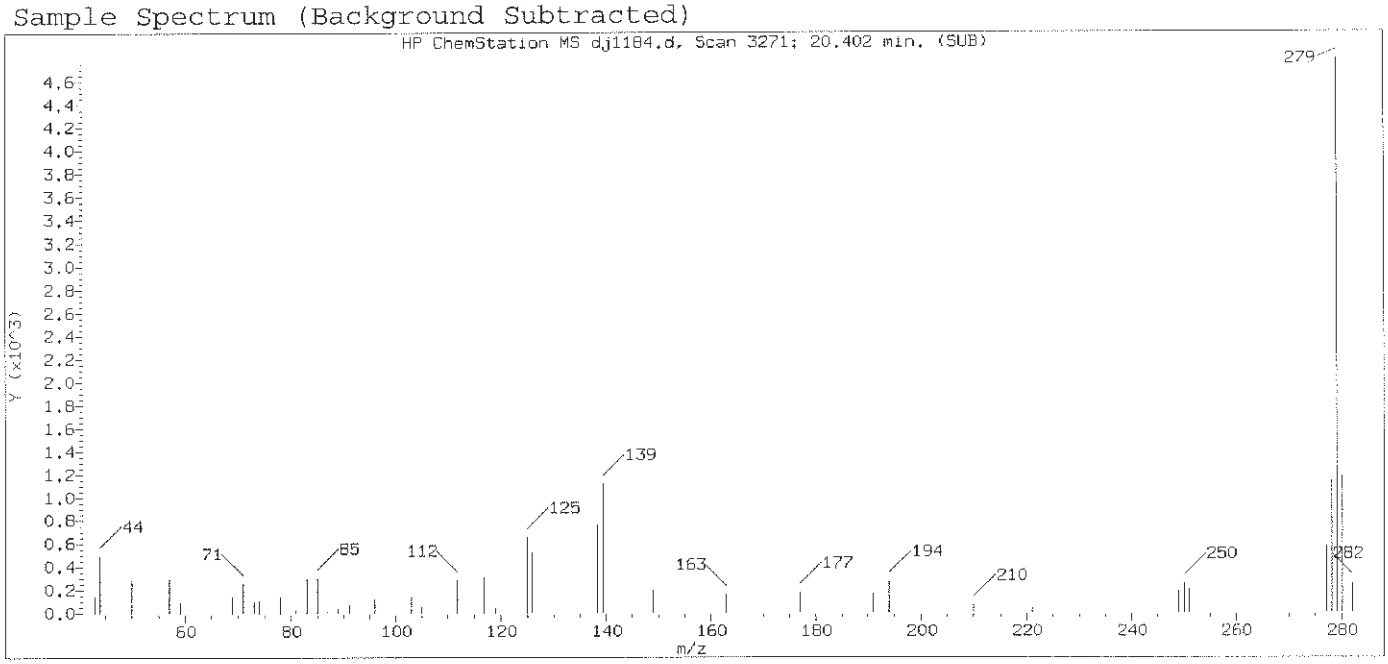
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

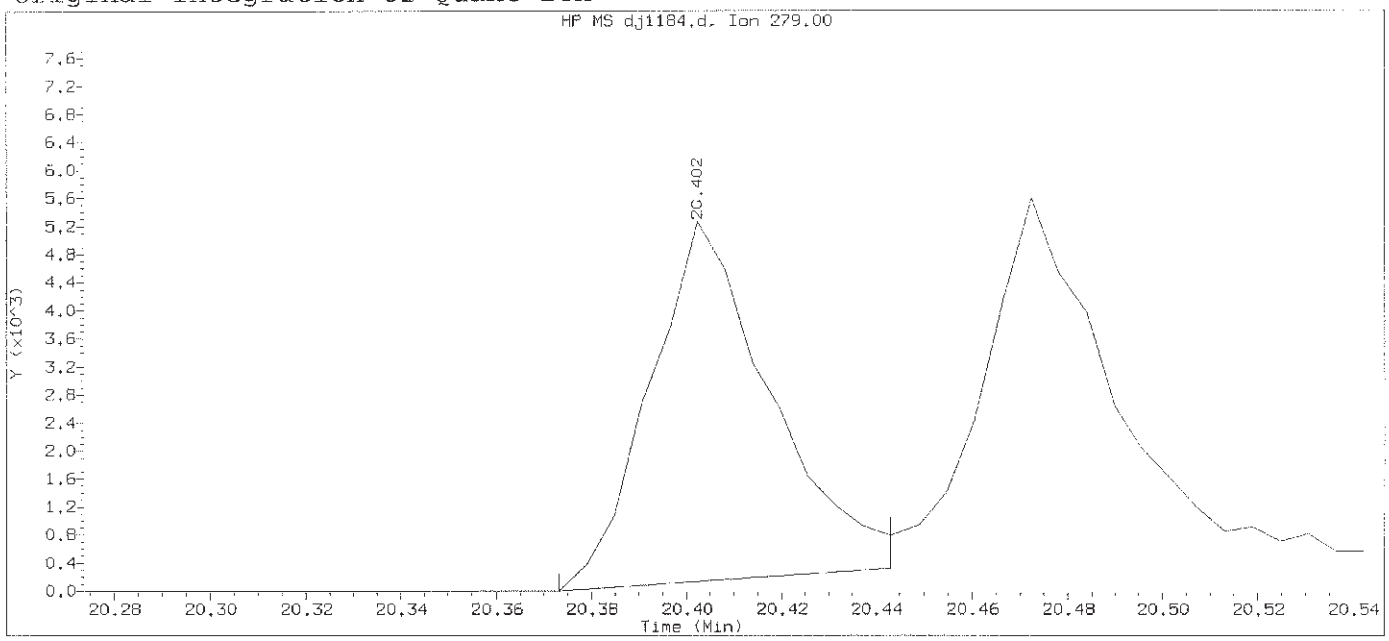
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area	: 9028		
On-column Amount (ng/ul)	: 0.1541		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 0	Y at integration end:	326

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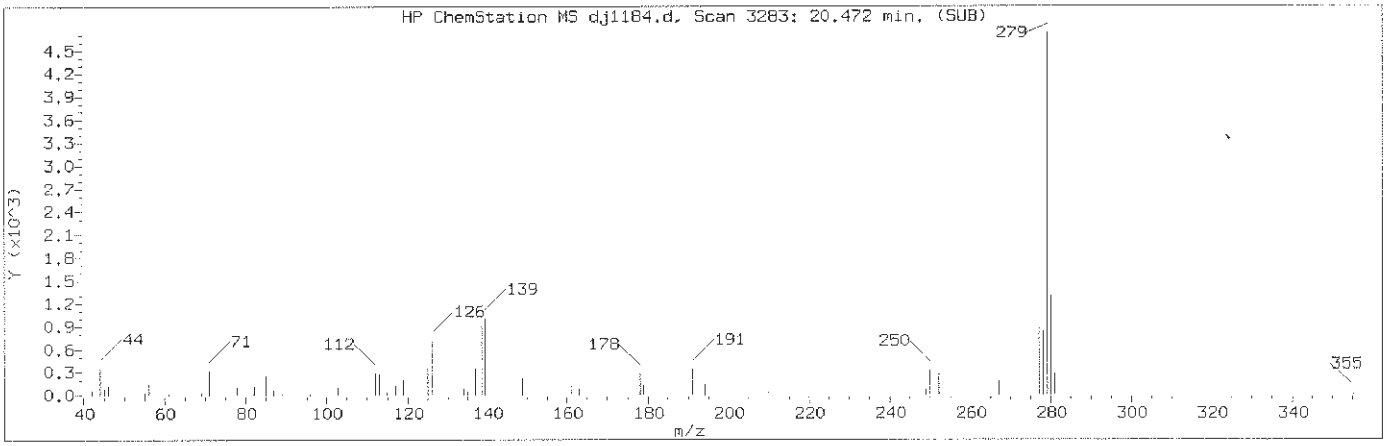
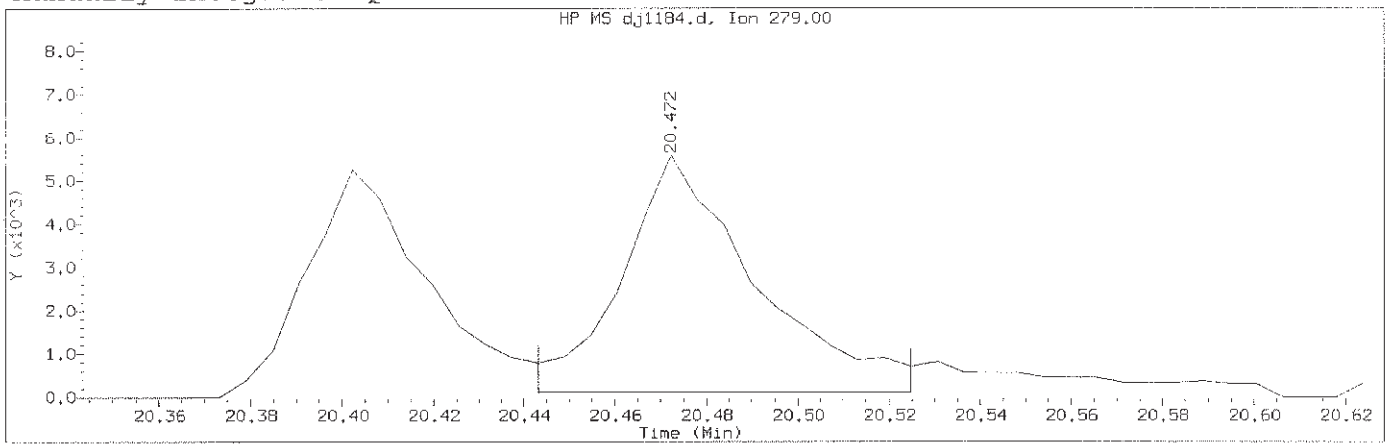
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area (flag)	: 11208M		
On-Column Amount (ng/ul)	: 0.1718		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 119	Y at integration end:	119

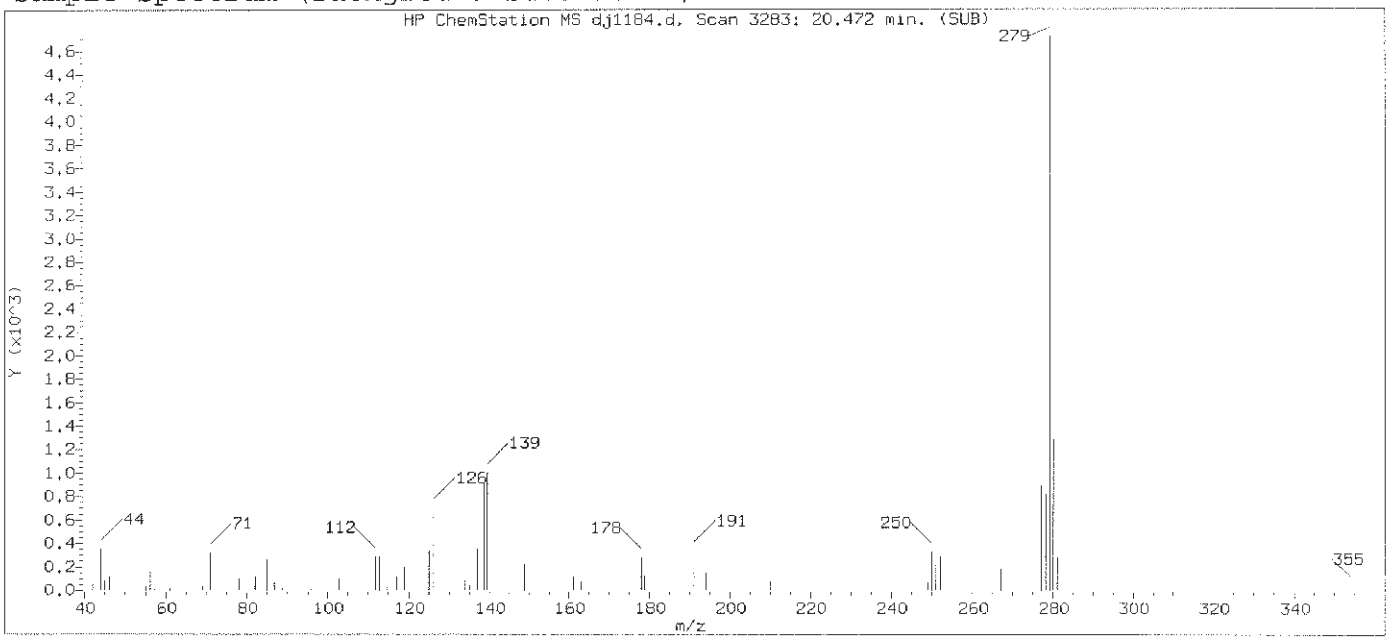
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

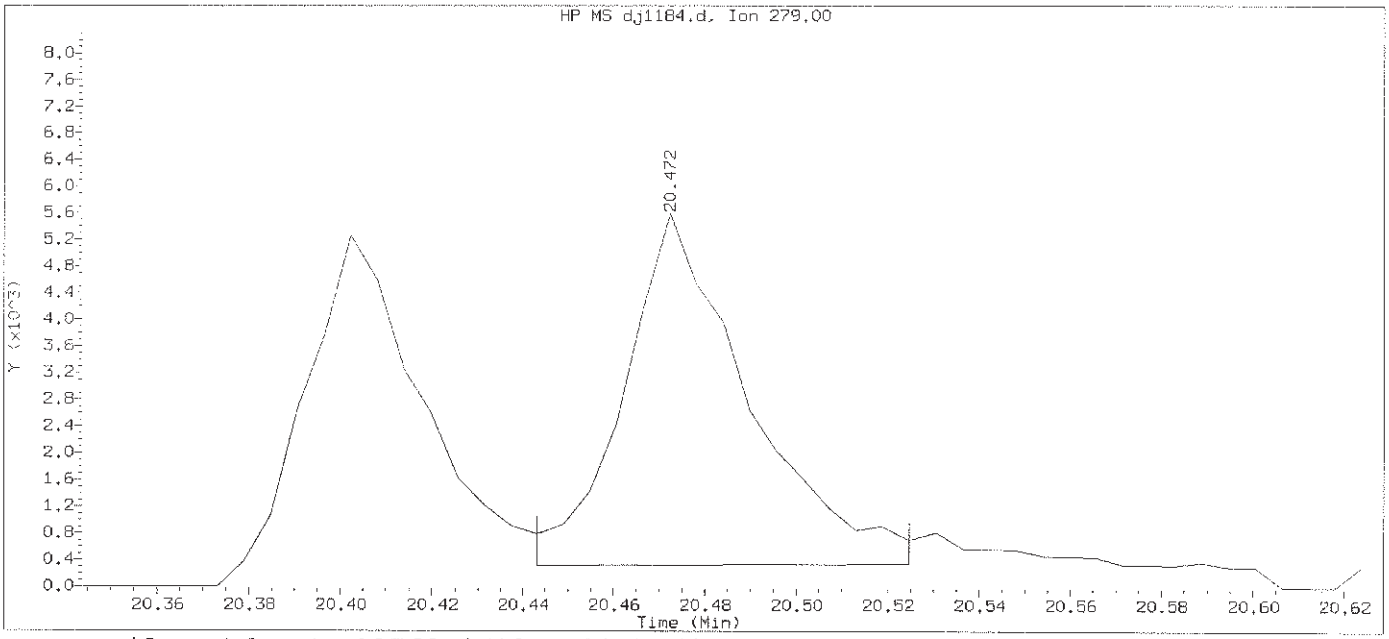
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Technical Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



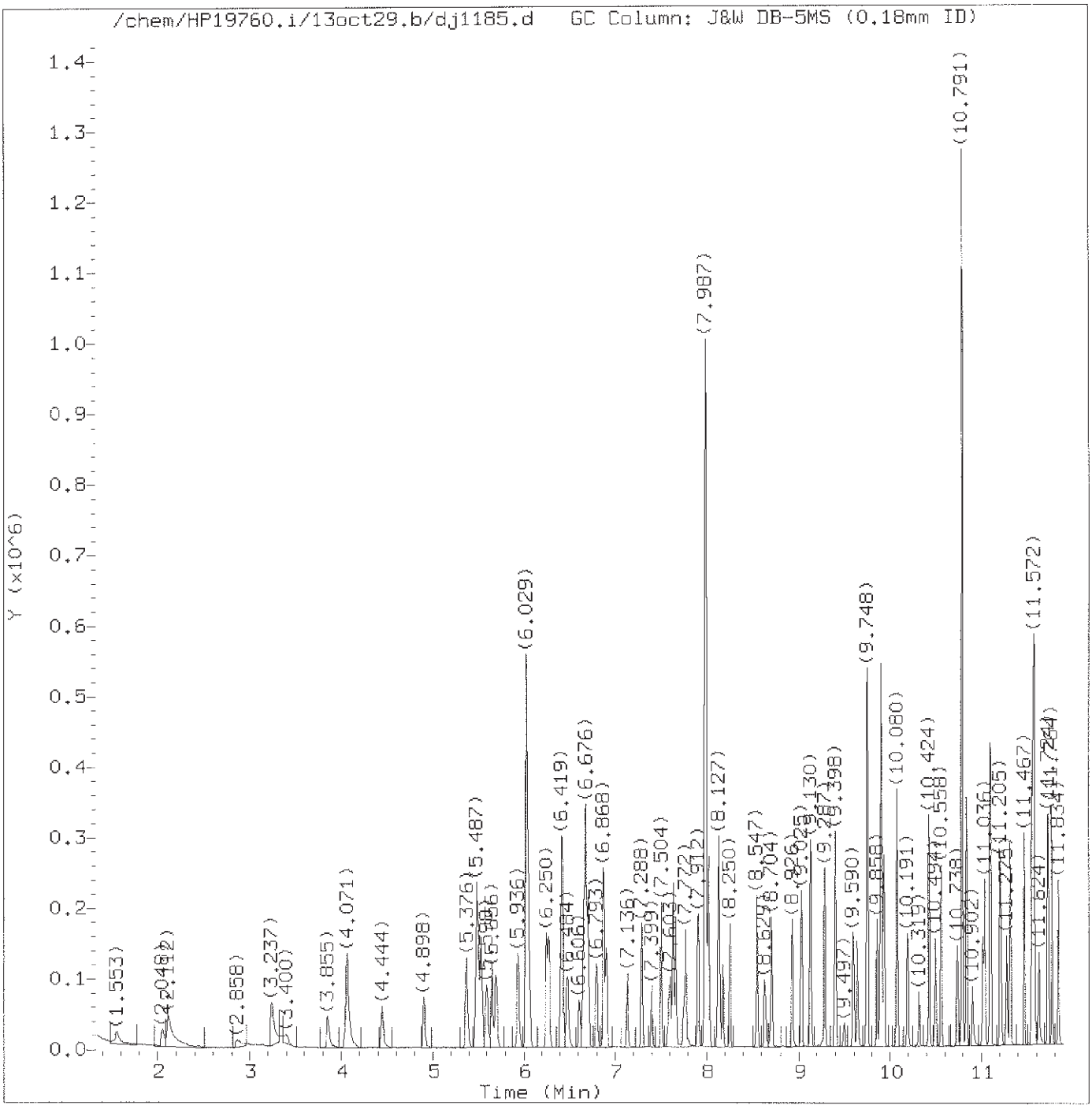
Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area	: 9925		
On-column Amount (ng/ul)	: 0.1579		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 326	Y at integration end:	346

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

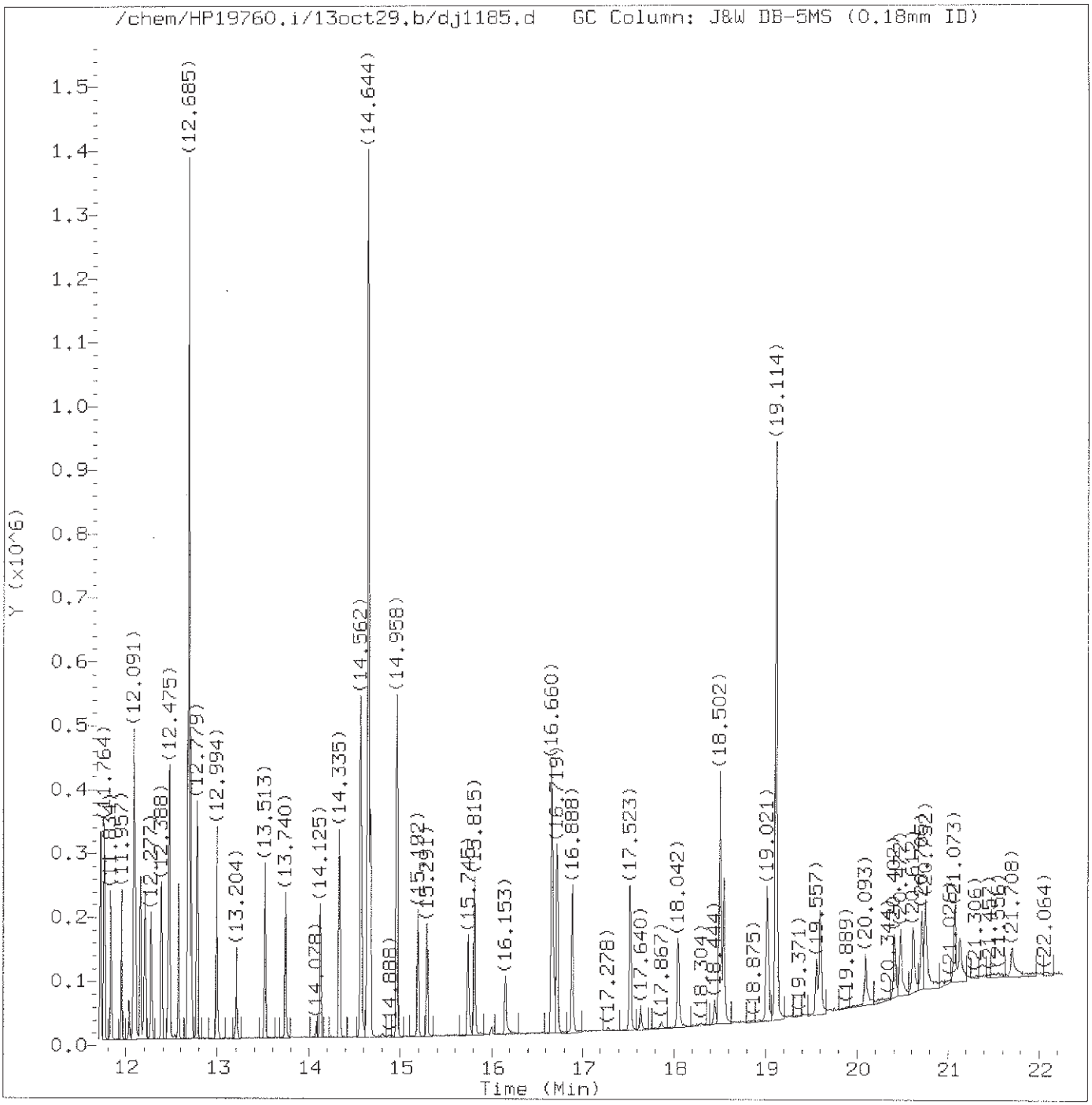
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	22269M	1.272
2) N-Nitrosodimethylamine	(1)	2.048	74	38547M	1.254
3) Pyridine	(1)	2.112	79	67472M	1.257
4) 2-Picoline	(1)	3.237	93	65872	1.178
5) N-Nitrosomethylethylamine	(1)	3.400	88	28658	1.207
6) Methyl methanesulfonate	(1)	3.855	80	32575	1.188
7)$2-Fluorophenol	(1)	4.071	112	101248	2.439
8) N-Nitrosodiethylamine	(1)	4.444	102	26770	1.168
10) Ethyl methanesulfonate	(1)	4.904	109	26410	1.188
11) Benzaldehyde	(1)	5.376	77	55036	1.399
12)$Phenol-d5	(1)	5.487	99	141190	2.469
13)$Phenol-d6	(1)	5.487	99	141190	2.469
14) Phenol	(1)	5.504	94	82122	1.236
15) Aniline	(1)	5.534	93	99089	1.215
16) bis(2-Chloroethyl)ether	(1)	5.656	93	63620	1.216
17) 2-Chlorophenol	(1)	5.697	128	48543	1.190
18) 1,3-Dichlorobenzene	(1)	5.936	146	54943	1.248
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	138331	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	55272	1.239
23) Benzyl alcohol	(1)	6.250	108	35118	1.223
24) 1,2-Dichlorobenzene	(1)	6.280	146	52982	1.275
25) Indene	(1)	6.414	115	106311	1.503
26) 2-Methylphenol	(1)	6.431	108	49448	1.207
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	81508	1.242
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	81508	1.242
29) N-Nitrosopyrrolidine	(1)	6.612	100	26480	1.145
30) Acetophenone	(1)	6.653	105	80822	1.262
33) 4-Methylphenol	(1)	6.670	108	57251	1.248
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	46619	1.253
32) N-Nitrosomorpholine	(1)	6.682	56	37671	1.271
34) o-Toluidine	(1)	6.705	106	87593	1.235
35) Hexachloroethane	(1)	6.793	117	23051	1.223
36)$Nitrobenzene-d5	(2)	6.868	82	122397	2.459
37) Nitrobenzene	(2)	6.897	77	66124	1.249
39) N-Nitrosopiperidine	(2)	7.136	114	25981	1.209
40) Isophorone	(2)	7.288	82	109011	1.213
42) 2-Nitrophenol	(2)	7.399	139	19527	1.104
45) 2,4-Dimethylphenol	(2)	7.504	107	53050	1.214
47) Benzoic acid	(2)	7.603	105	64759	1.938
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	23748	1.230

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	74668M	1.264
49) 2,4-Dichlorophenol	(2)	7.772	162	36329	1.191
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	43959	1.264
52)*Naphthalene-d8	(2)	7.987	136	535285	5.000
53) Naphthalene	(2)	8.022	128	147464	1.281
55) 4-Chloroaniline	(2)	8.127	127	58769	1.224
56) 2,6-Dichlorophenol	(2)	8.133	162	36624	1.247
57) Hexachloropropene	(2)	8.174	213	23865	1.119
58) Hexachlorobutadiene	(2)	8.250	225	25385	1.261
60) Quinoline	(2)	8.553	129	94155	1.226
61) Caprolactam	(2)	8.634	113	15728	1.156
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	39725	1.121
63) 4-Chloro-3-methylphenol	(2)	8.926	107	42929	1.166
64) Safrole	(2)	9.025	162	36262	1.253
65) 2-Methylnaphthalene	(2)	9.130	142	98282	1.282
66) 1-Methylnaphthalene	(2)	9.287	142	87553	1.262
67) Hexachlorocyclopentadiene	(3)	9.398	237	17375	1.048
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	45128	1.263
69) cis-Isosafrole	(3)	9.497	162	6014	1.163
70) 2,4,6-Trichlorophenol	(3)	9.596	196	25634	1.166
71) 2,4,5-Trichlorophenol	(3)	9.637	196	25547	1.124
72)$2-Fluorobiphenyl	(3)	9.748	172	198287	2.560
74) Isosafrole	(3)	9.858	162	34926	1.210
73) trans-Isosafrole	(3)	9.858	162	34926	1.210
75) 1,1'-Biphenyl	(3)	9.893	154	117078	1.304
76) 2-Chloronaphthalene	(3)	9.899	162	88989	1.289
77) 1-Chloronaphthalene	(3)	9.934	162	87532	1.278
82) Diphenyl ether	(3)	10.080	170	63424	1.282
83) 2-Nitroaniline	(3)	10.080	138	23140	1.125
84) 1,4-Naphthoquinone	(3)	10.196	158	30951	1.079
85) 1,4-Dinitrobenzene	(3)	10.319	168	9236	0.861
86) Dimethylphthalate	(3)	10.424	163	100272	1.303
87) 1,3-Dinitrobenzene	(3)	10.430	168	13847	1.048
88) 2,6-Dinitrotoluene	(3)	10.494	165	19733	1.192
90) Acenaphthylene	(3)	10.558	152	128664	1.248
91) 3-Nitroaniline	(3)	10.738	138	22330	1.176
92)*Acenaphthene-d10	(3)	10.791	164	303956	5.000
93) Acenaphthene	(3)	10.838	153	89771	1.247
94) 2,4-Dinitrophenol	(3)	10.908	184	13659	1.410
96) 4-Nitrophenol	(3)	11.018	109	24040	1.954

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	34962	1.217
97) Dibenzofuran	(3)	11.094	168	130135	1.274
98) 2,4-Dinitrotoluene	(3)	11.100	165	24532	1.160
99) 1-Naphthylamine	(3)	11.205	143	91867	1.256
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	19751	1.108
101) 2-Naphthylamine	(3)	11.310	143	95744	1.271
102) Diethylphthalate	(3)	11.467	149	95093	1.247
103) Fluorene	(3)	11.549	166	104201	1.275
104) Thionazin	(3)	11.566	107	20809	1.266
106) 5-Nitro-o-toluidine	(3)	11.572	152	27432	1.269
107) 4-Nitroaniline	(3)	11.572	138	24616	1.247
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	52803	1.291
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	17872	1.319
109) N-Nitrosodiphenylamine	(4)	11.724	169	82130	1.275
110) NDPA as diphenylamine	(4)	11.724	169	82130	1.275
111) 1,2-Diphenylhydrazine	(4)	11.764	77	132180	1.289
112)$2,4,6-Tribromophenol	(3)	11.840	330	18163	2.308
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	17130	1.177
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	5451	0.666
117) Diallate (peak 1)	(4)	12.085	86	48822	0.960
118) Phorate	(4)	12.091	75	75299	1.244
119) Phenacetin	(4)	12.102	108	47845	1.156
120) 4-Bromophenyl-phenylether	(4)	12.161	248	25926	1.269
121) Diallate (peak 2)	(4)	12.190	86	6365	0.297
122) Hexachlorobenzene	(4)	12.207	284	25349	1.246
123) Dimethoate	(4)	12.277	87	41240	1.061
124) Atrazine	(4)	12.388	200	26935	1.315
125) Pentachlorophenol	(4)	12.458	266	12480	0.914
126) Pentachloronitrobenzene	(4)	12.475	237	10941	1.227
127) 4-Aminobiphenyl	(4)	12.475	169	98012	1.239
129) Pronamide	(4)	12.575	173	38417	1.178
130)*Phenanthrene-d10	(4)	12.685	188	512509	5.000
131) Phenanthrene	(4)	12.714	178	150220	1.284
133) Dinoseb	(4)	12.714	211	10055	0.629
134) Anthracene	(4)	12.779	178	145940	1.275
135) Carbazole	(4)	12.994	167	137397	1.242
136) Methyl parathion	(4)	13.204	109	23830	0.890
137) Di-n-butylphthalate	(4)	13.513	149	149836	1.152
138) Parathion	(4)	13.740	109	15893	0.921
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	3967	0.444

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	16317	1.203
142) Fluoranthene	(4)	14.335	202	156364	1.225
144) Benzidine	(5)	14.562	184	272209	3.347
145)*Pyrene-d10	(5)	14.644	212	649692	5.000
146) Pyrene	(5)	14.673	202	175362	1.244
149)$Terphenyl-d14	(5)	14.958	244	203163	2.479
150) p-Dimethylaminoazobenzene	(5)	15.192	225	25171	1.081
151) Chlorobenzilate	(5)	15.291	139	42880	1.105
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	74815	0.946
153) Butylbenzylphthalate	(5)	15.815	149	65483	1.125
156) 2-Acetylaminofluorene	(5)	16.153	181	33973	0.737
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	44223	1.060
158) Benzo(a)anthracene	(5)	16.660	228	139152	1.213
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	22477	1.025
161) Chrysene	(5)	16.719	228	147664	1.281
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	79864	1.038
165) 6-Methylchrysene	(5)	17.523	242	94127	1.183
166) Di-n-octylphthalate	(6)	18.042	149	107935	0.898
168) Benzo(b)fluoranthene	(6)	18.502	252	126011	1.213
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	54160	1.219
170) Benzo(k)fluoranthene	(6)	18.543	252	130476	1.235
171) Benzo(a)pyrene	(6)	19.021	252	115098	1.194
172)*Perylene-d12	(6)	19.114	264	447306	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	51034	1.143
174) Dibenz(a,h)acridine	(6)	20.402	279	59881	0.956
175) Dibenz(a,j)acridine	(6)	20.472	279	69441	1.052
176) Indeno(1,2,3-cd)pyrene	(6)	20.705	276	97855	1.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	82575	1.213
178) Benzo(g,h,i)perylene	(6)	21.073	276	83734	1.202
179) Diallate TRANS/CIS	(4)			55187	1.268
182) 2,4_2,6-Dinitrotoluenes	(3)			44265	2.352

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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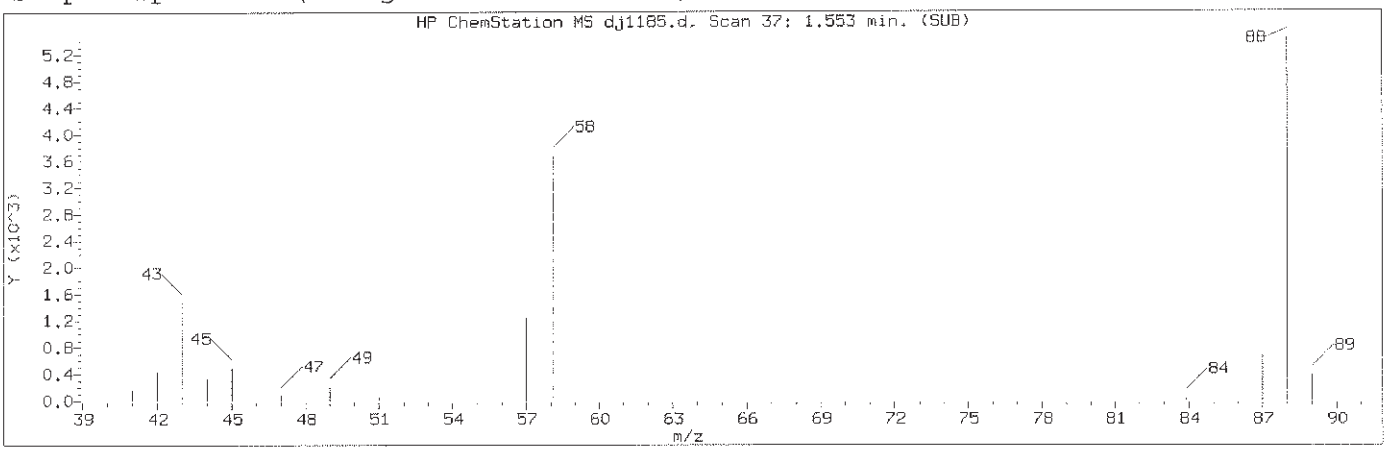
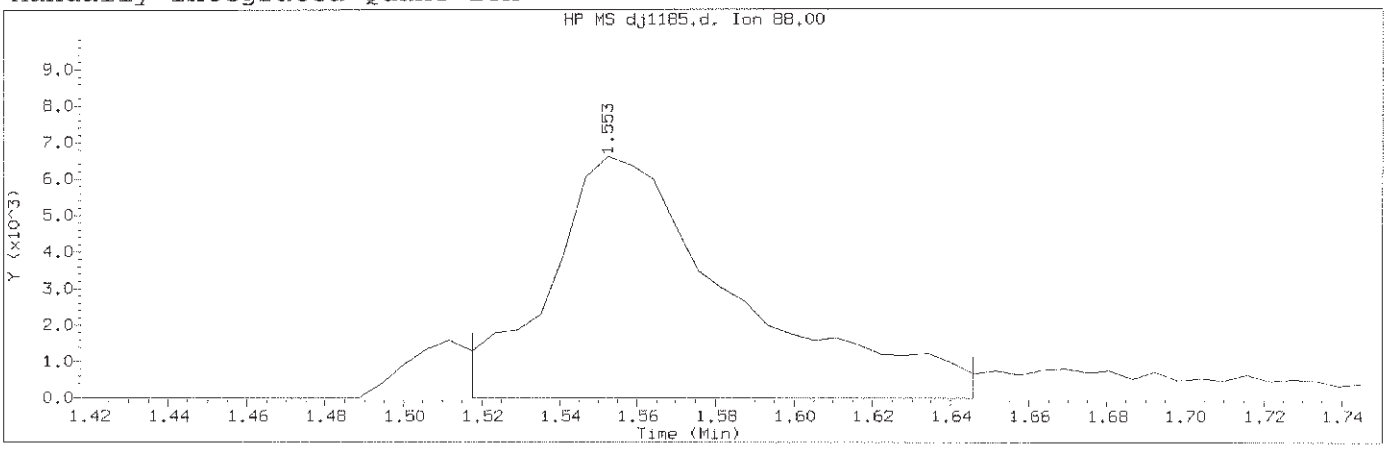
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 22269M		
On-Column Amount (ng/ul)	: 1.2719		
Integration start scan	: 30	Integration stop scan:	52
Y at integration start	: -1	Y at integration end:	-1

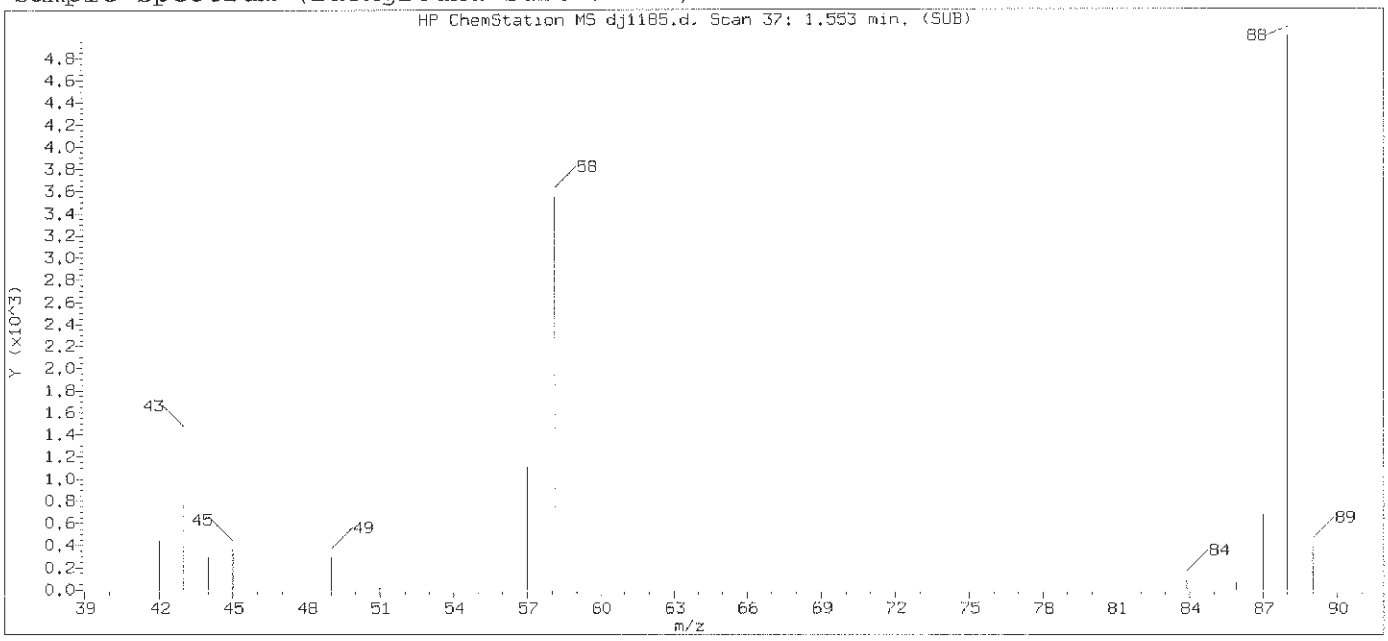
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

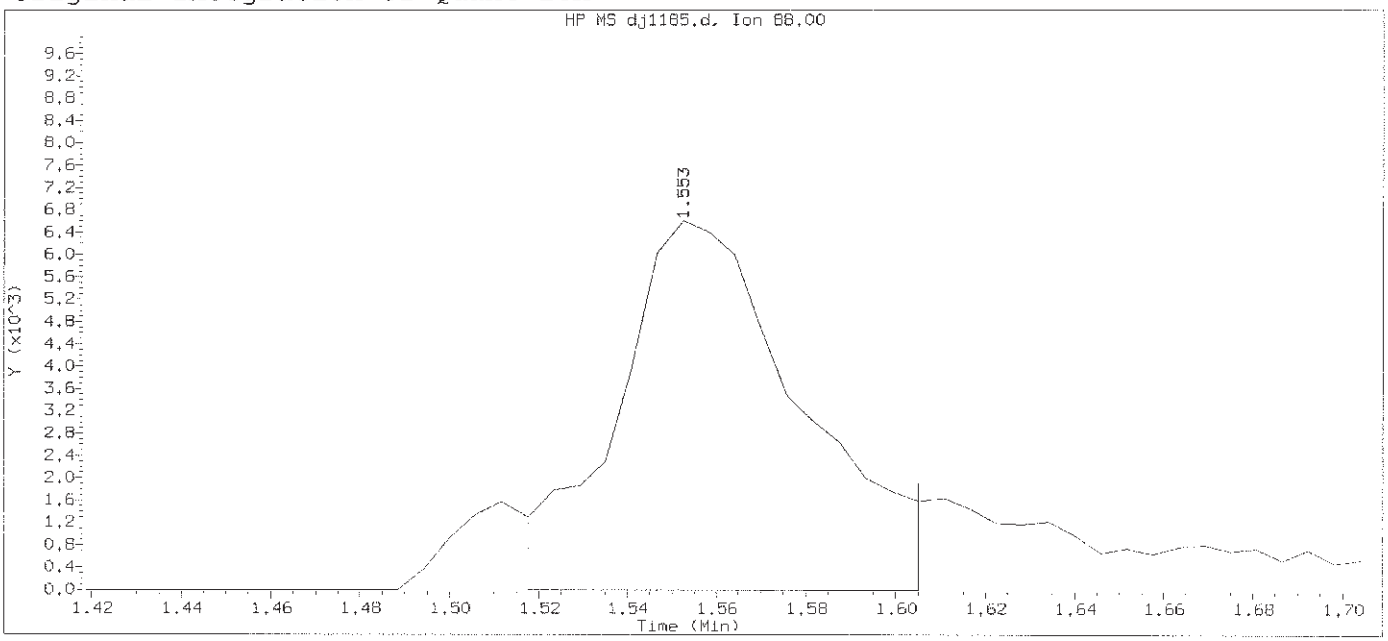
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 18846		
On-column Amount (ng/ul)	: 1.0953		
Integration start scan	: 30	Integration stop scan:	45
Y at integration start	: 0	Y at integration end:	0

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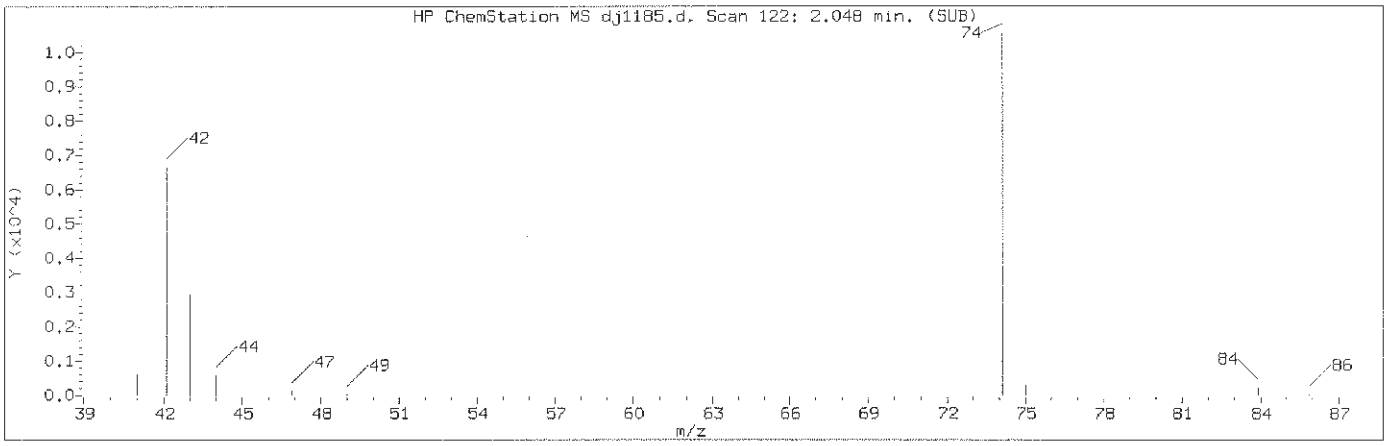
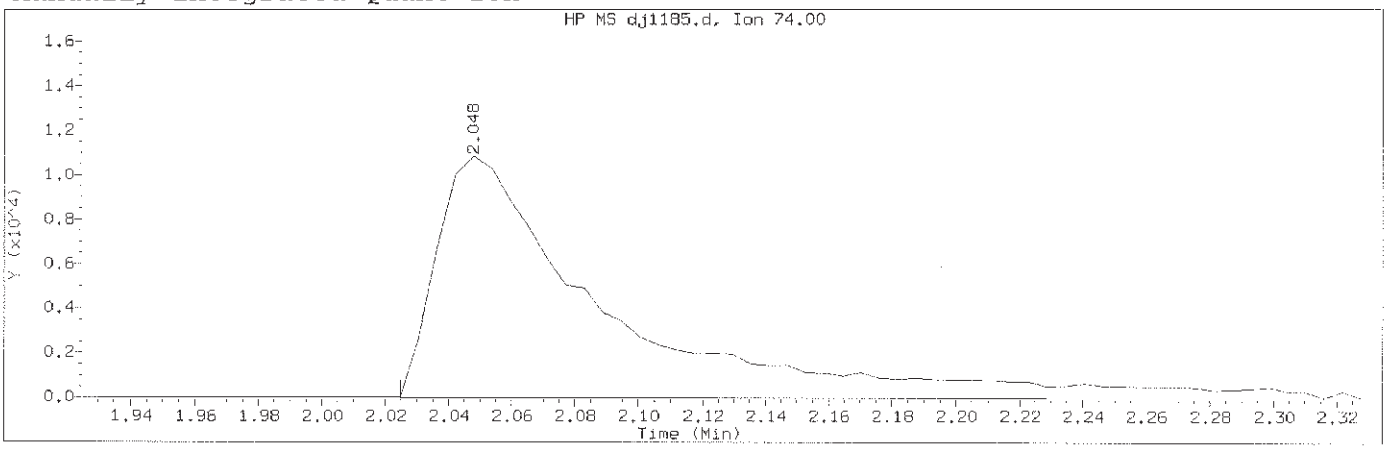
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area (flag)	: 38547M		
On-Column Amount (ng/ul)	: 1.2538		
Integration start scan	: 117	Integration stop scan:	152
Y at integration start	: -17	Y at integration end:	-17

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT. 3 0 2013

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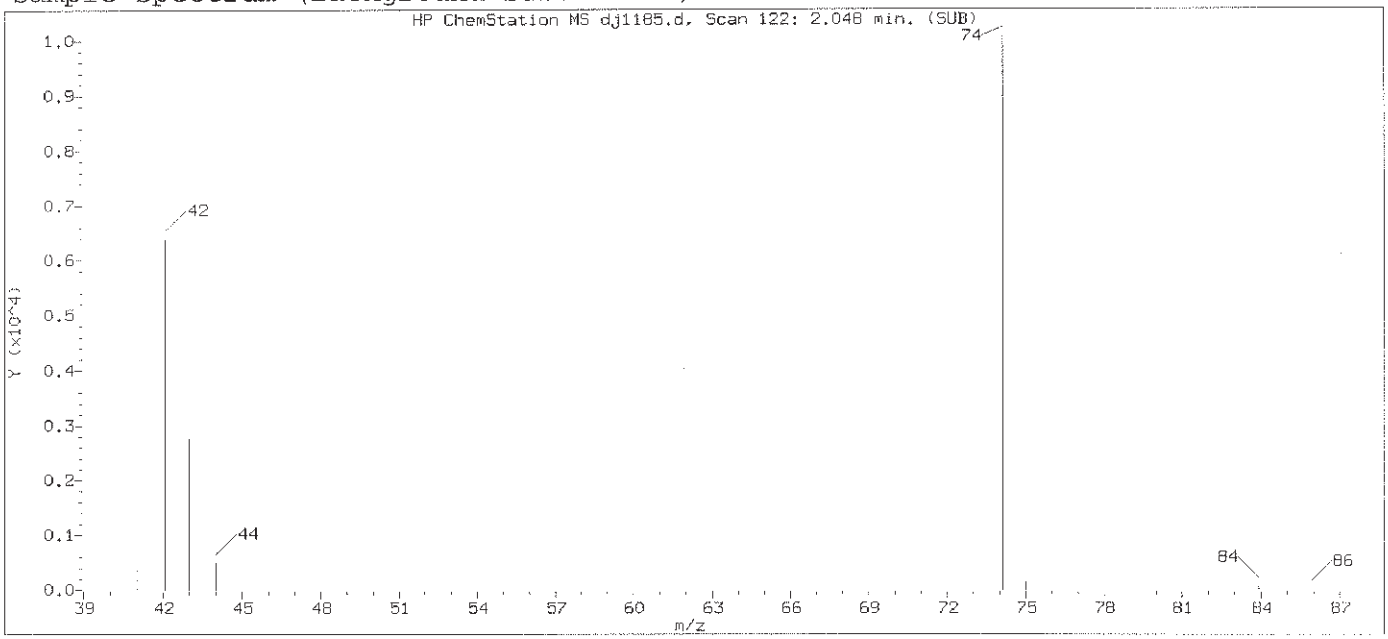
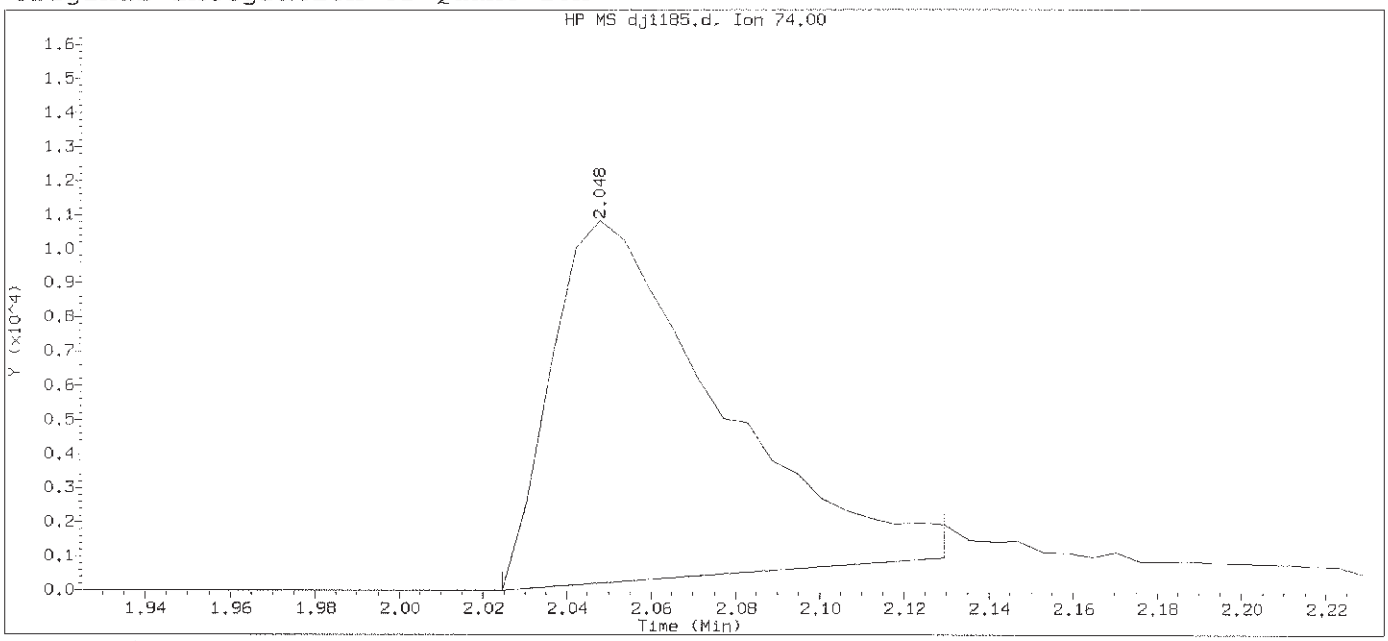
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area	: 29253		
On-column Amount (ng/ul)	: 1.0178		
Integration start scan	: 117	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	965

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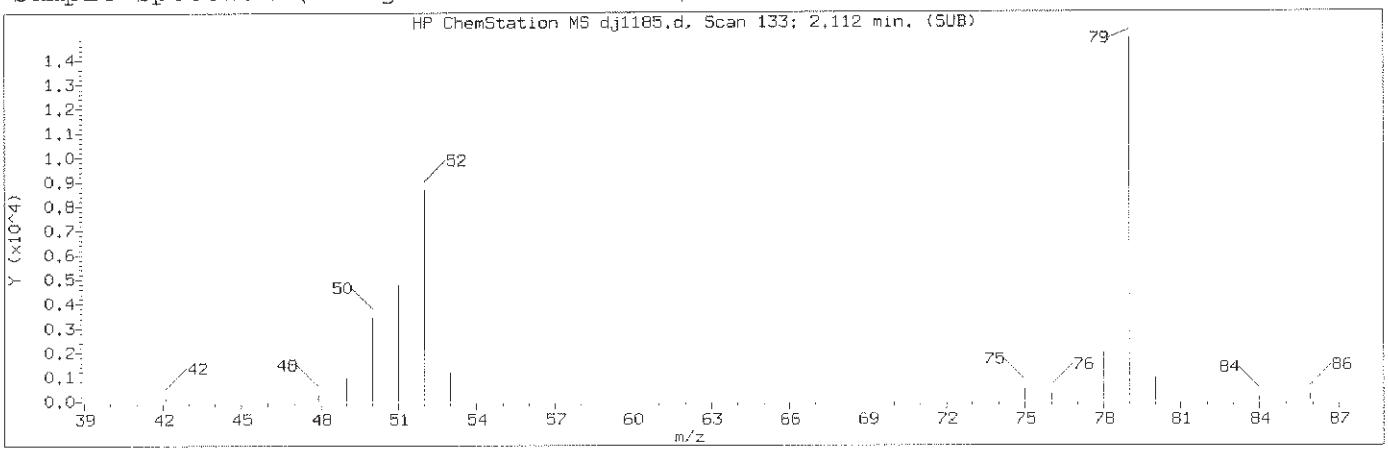
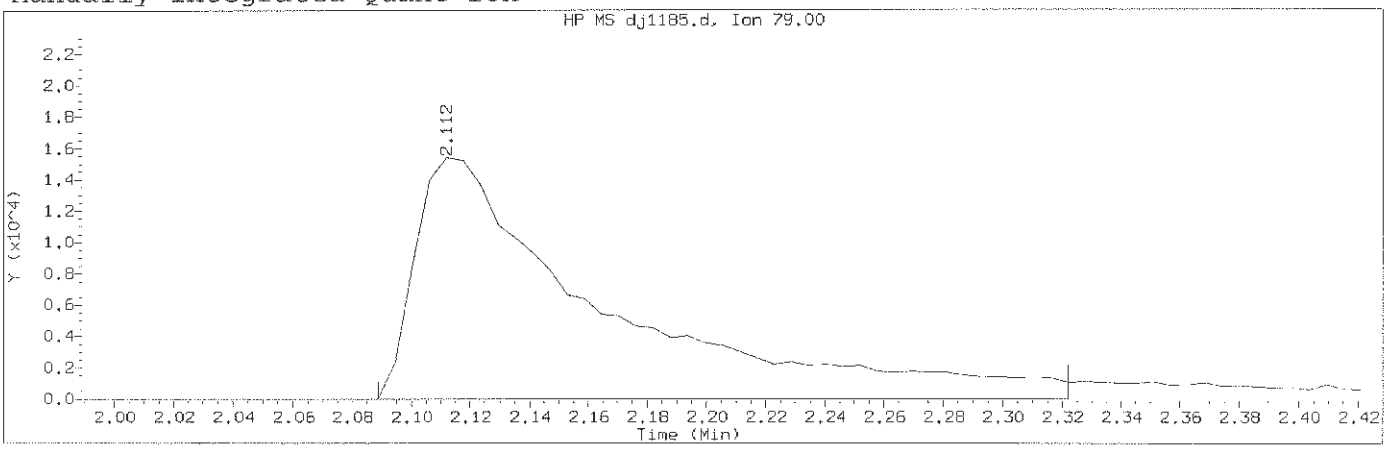
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area (flag)	: 67472M		
On-Column Amount (ng/ul)	: 1.2574		
Integration start scan	: 128	Integration stop scan:	168
Y at integration start	: -8	Y at integration end:	-8

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

GC/MS audit/management approval:_____

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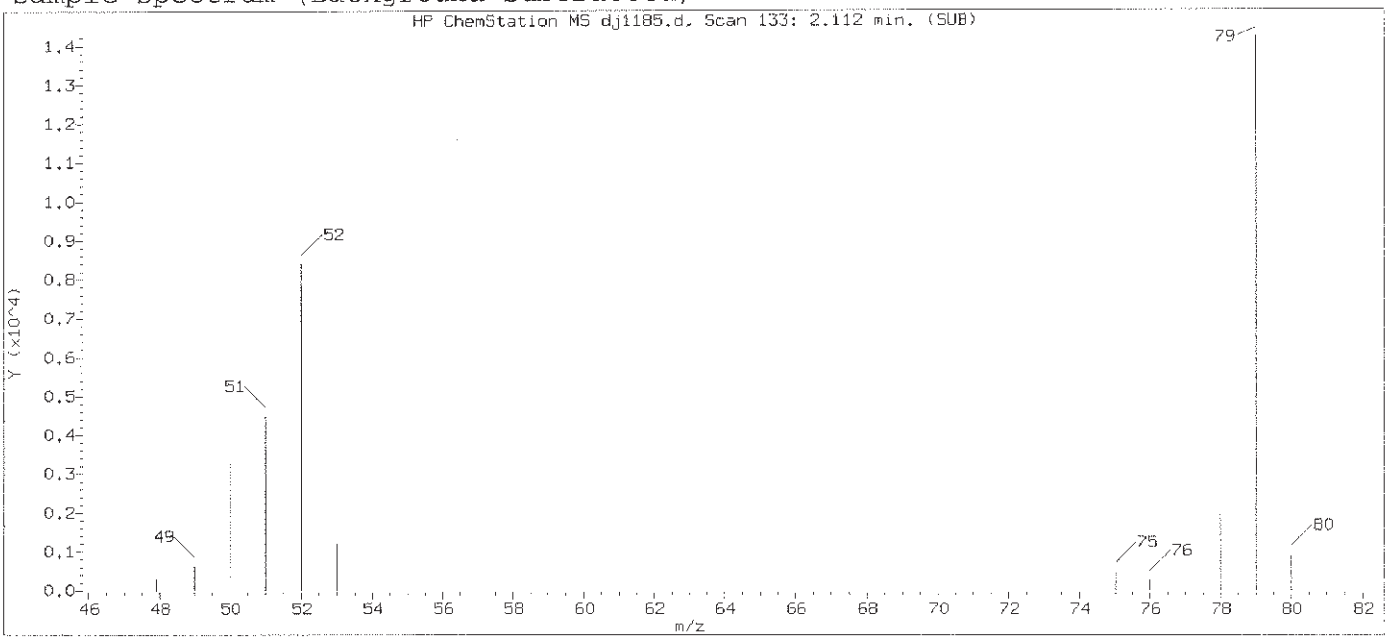
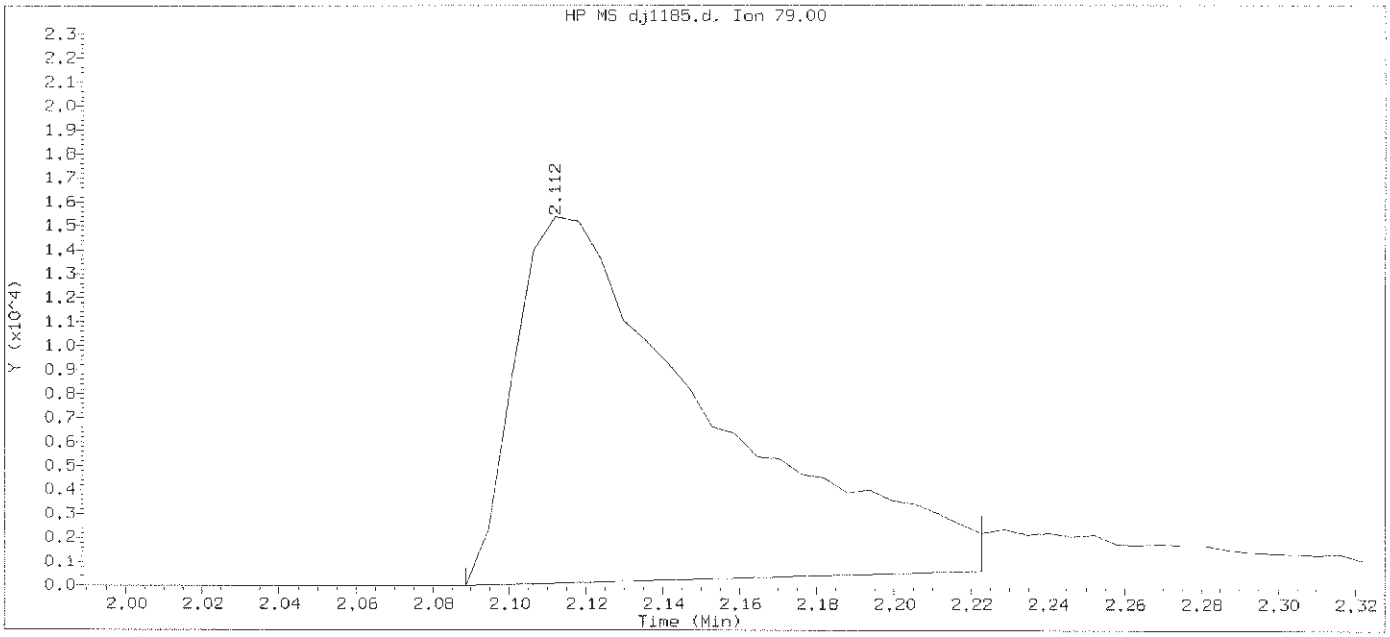
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area	: 54361		
On-column Amount (ng/ul)	: 1.0984		
Integration start scan	: 128	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	617

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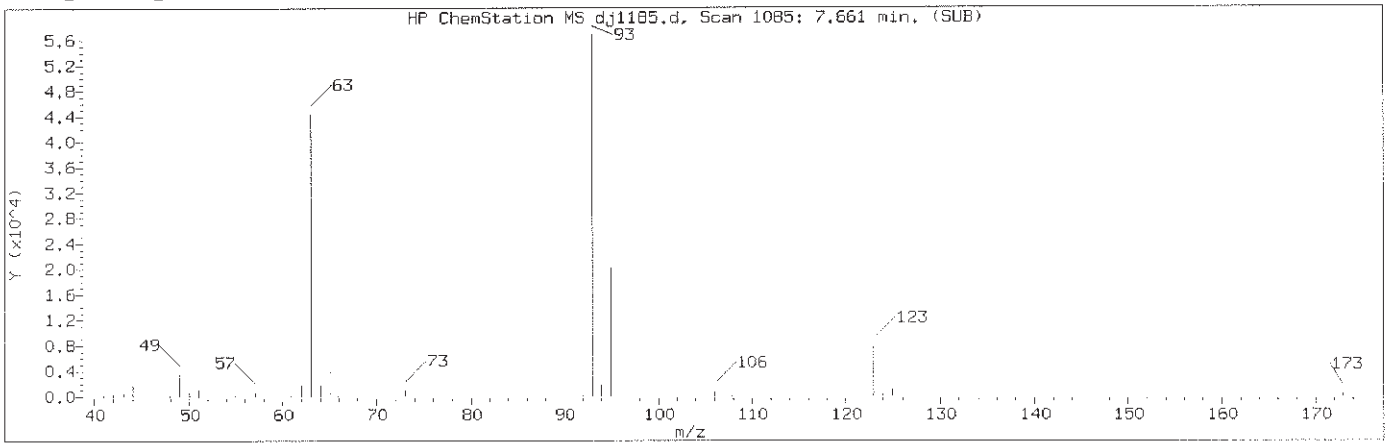
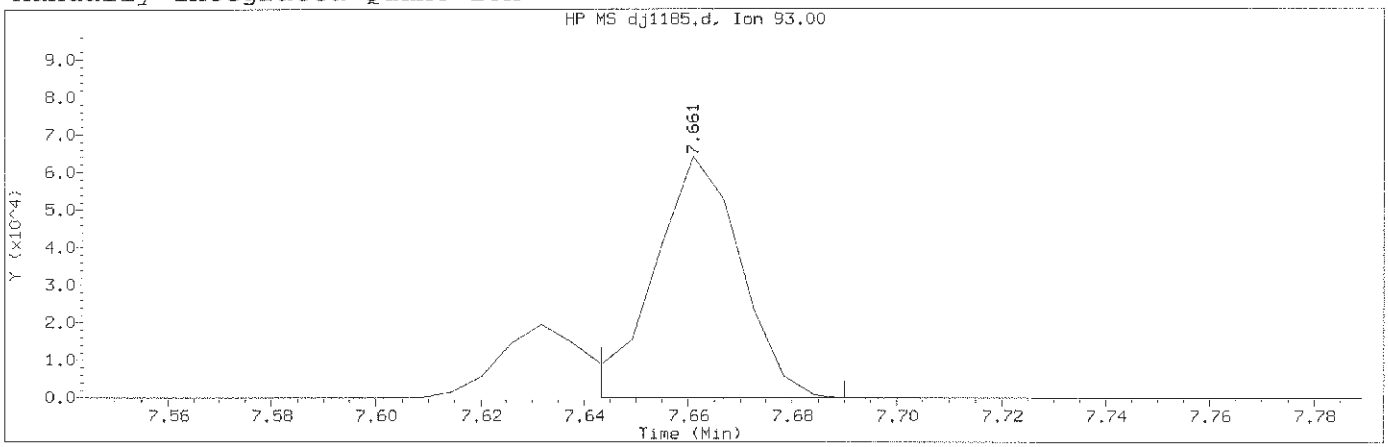
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1085		
Retention Time (minutes)	: 7.661		
Quant Ion	: 93.00		
Area (flag)	: 74668M		
On-Column Amount (ng/ul)	: 1.2637		
Integration start scan	: 1081	Integration stop scan:	1089
Y at integration start	: -3	Y at integration end:	-3

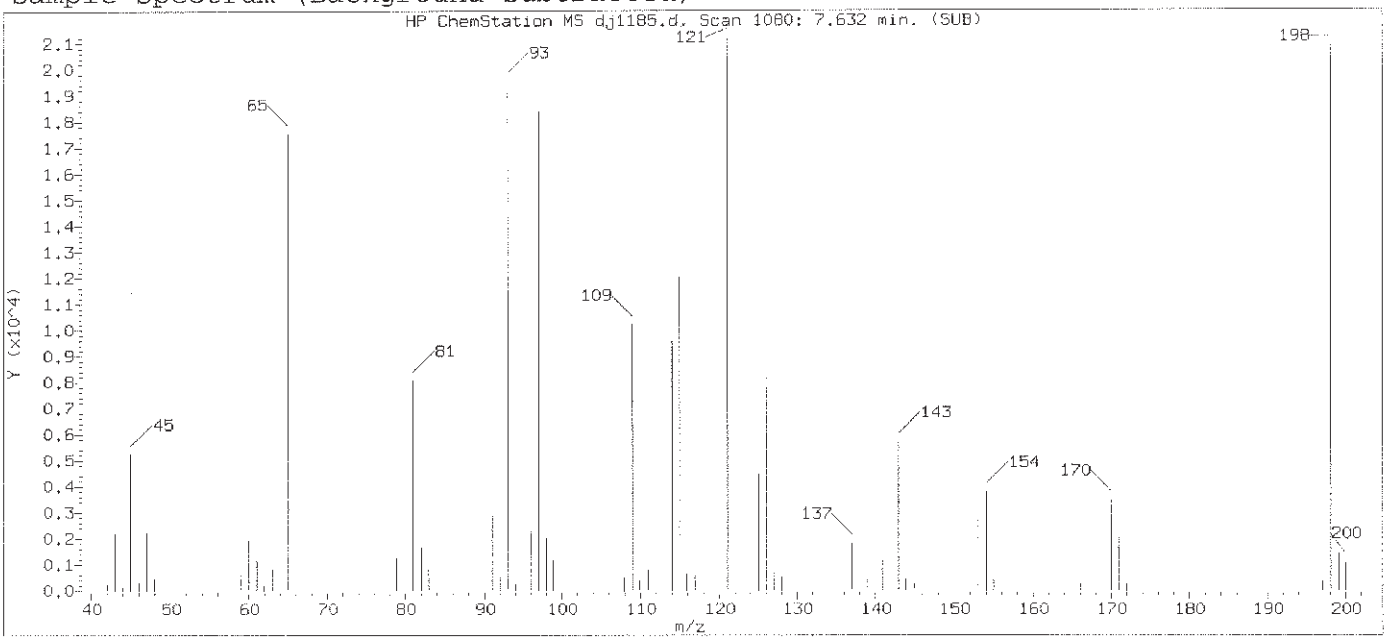
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

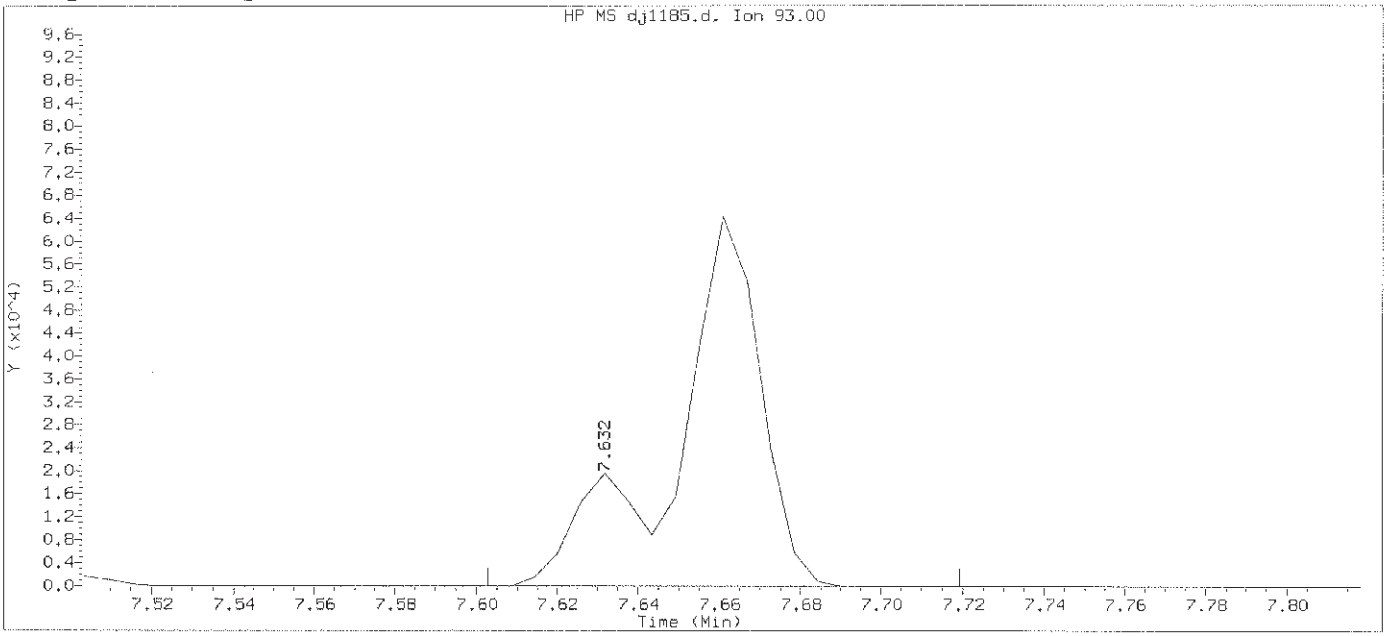
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



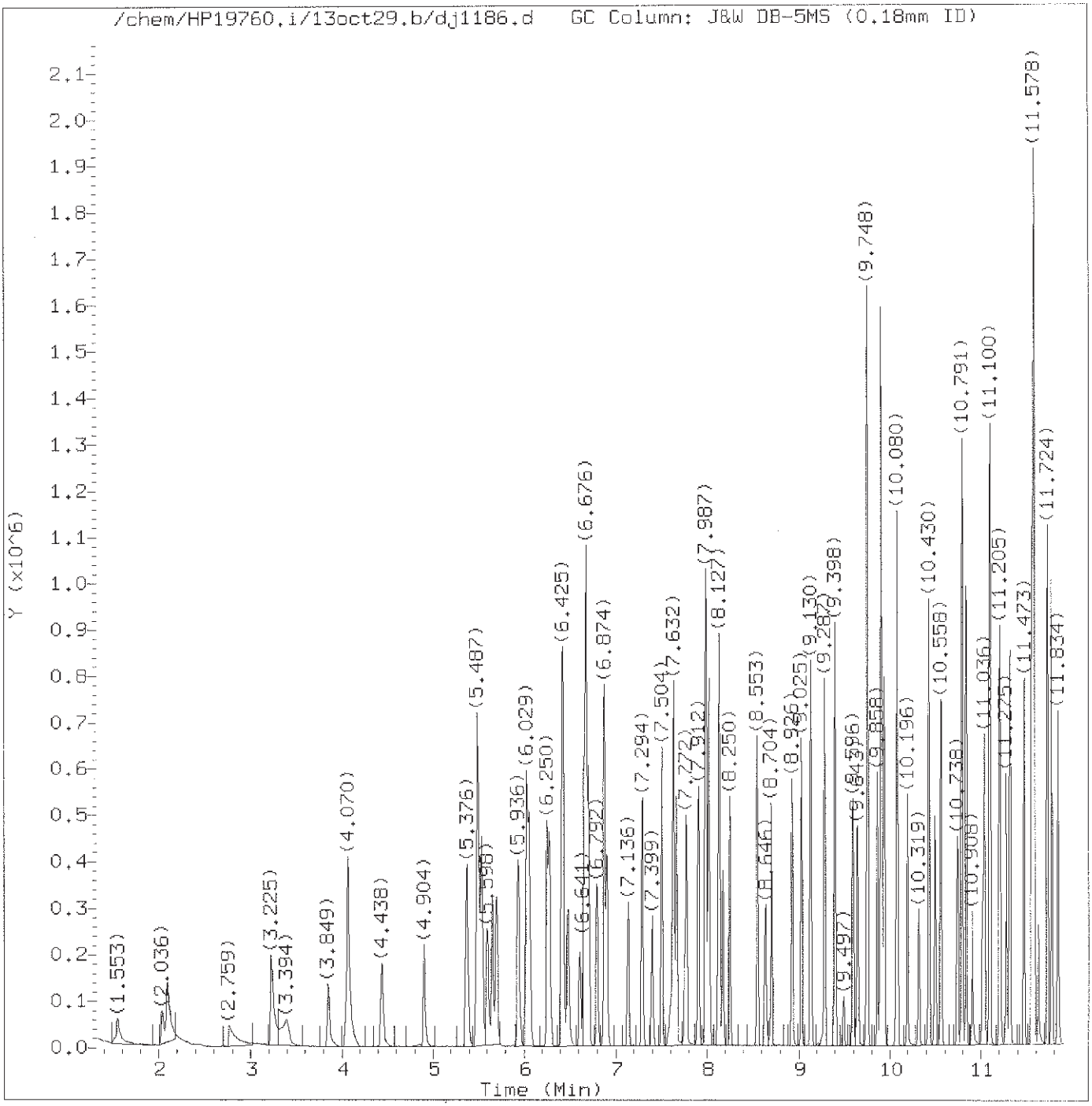
Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1080		
Retention Time (minutes)	: 7.632		
Quant Ion	: 93.00		
Area	: 94211		
On-column Amount (ng/ul)	: 1.4595		
Integration start scan	: 1074	Integration stop scan:	1094
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

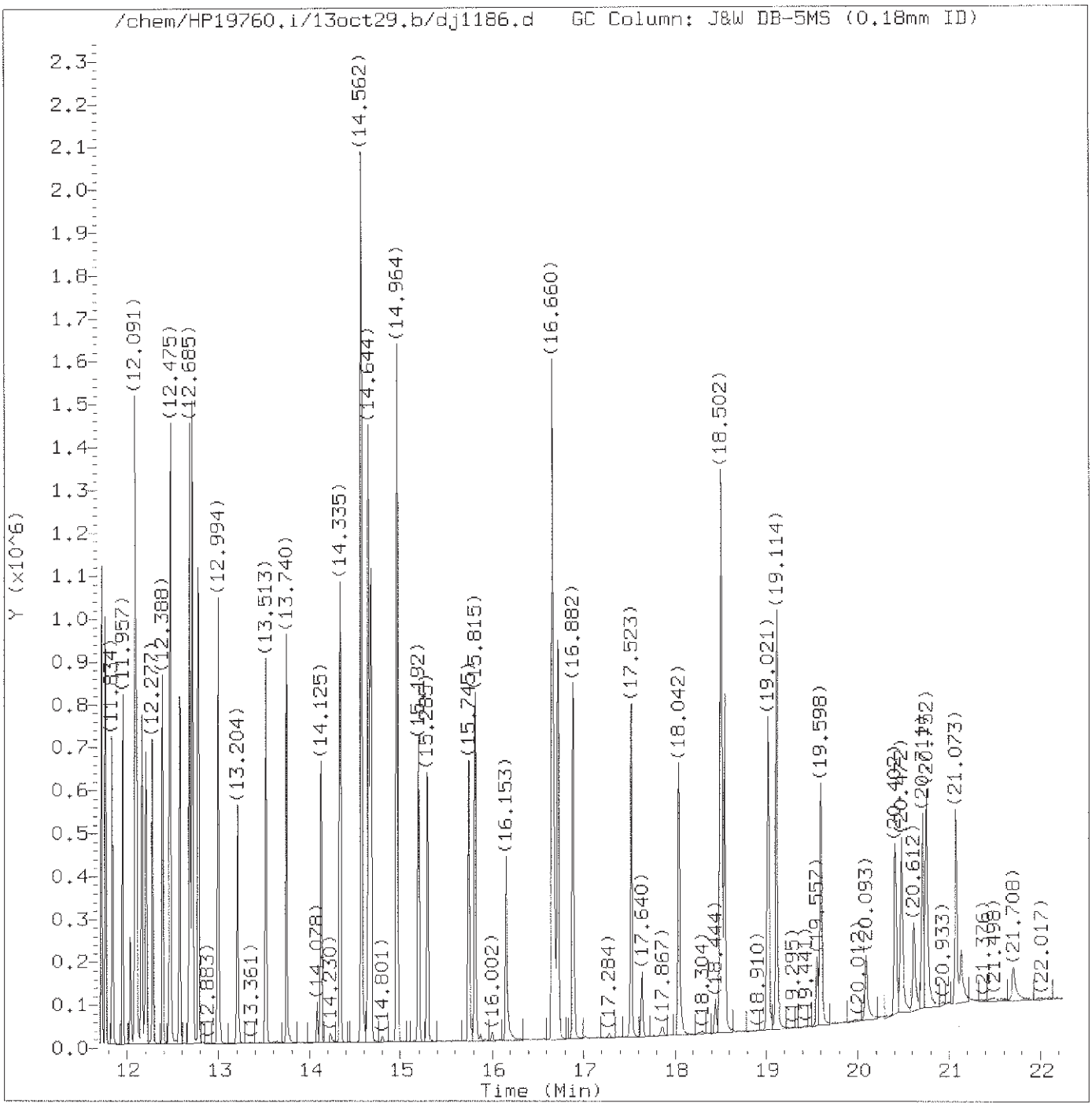
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	68392M	3.820
2) N-Nitrosodimethylamine	(1)	2.036	74	105553	3.447
3) Pyridine	(1)	2.095	79	177830	3.371
4) 2-Picoline	(1)	3.225	93	199277	3.552
5) N-Nitrosomethylethylamine	(1)	3.394	88	87323	3.644
6) Methyl methanesulfonate	(1)	3.849	80	99499	3.605
7)$2-Fluorophenol	(1)	4.070	112	301694	7.218
8) N-Nitrosodiethylamine	(1)	4.444	102	83412	3.614
10) Ethyl methanesulfonate	(1)	4.904	109	80657	3.604
11) Benzaldehyde	(1)	5.376	77	166226	4.049
12)$Phenol-d5	(1)	5.487	99	419689	7.277
13)$Phenol-d6	(1)	5.487	99	419689	7.277
14) Phenol	(1)	5.504	94	244417	3.645
15) Aniline	(1)	5.539	93	298601	3.632
16) bis(2-Chloroethyl)ether	(1)	5.656	93	192402	3.643
17) 2-Chlorophenol	(1)	5.703	128	148109	3.608
18) 1,3-Dichlorobenzene	(1)	5.936	146	163356	3.670
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	140563	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	164644	3.656
23) Benzyl alcohol	(1)	6.250	108	106806	3.682
24) 1,2-Dichlorobenzene	(1)	6.280	146	154923	3.685
25) Indene	(1)	6.414	115	305774	4.302
26) 2-Methylphenol	(1)	6.431	108	151928	3.670
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	241778	3.649
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	241778	3.649
29) N-Nitrosopyrrolidine	(1)	6.612	100	86112	3.682
30) Acetophenone	(1)	6.653	105	240525	3.708
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	139013	3.692
33) 4-Methylphenol	(1)	6.676	108	171824	3.698
32) N-Nitrosomorpholine	(1)	6.682	56	109527	3.660
34) o-Toluidine	(1)	6.705	106	263721	3.676
35) Hexachloroethane	(1)	6.792	117	69243	3.642
36)$Nitrobenzene-d5	(2)	6.874	82	374112	7.321
37) Nitrobenzene	(2)	6.903	77	198687	3.656
39) N-Nitrosopiperidine	(2)	7.136	114	81540	3.689
40) Isophorone	(2)	7.294	82	334673	3.635
42) 2-Nitrophenol	(2)	7.399	139	64142	3.557
45) 2,4-Dimethylphenol	(2)	7.504	107	165705	3.687
47) Benzoic acid	(2)	7.626	105	151594M	5.096
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	74096	3.723

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	222735	3.670
49) 2,4-Dichlorophenol	(2)	7.772	162	117512	3.735
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	129391	3.631
52)*Naphthalene-d8	(2)	7.987	136	552831	5.000
53) Naphthalene	(2)	8.022	128	439891	3.707
55) 4-Chloroaniline	(2)	8.127	127	178930	3.635
56) 2,6-Dichlorophenol	(2)	8.133	162	114671	3.774
57) Hexachloropropene	(2)	8.174	213	80240	3.665
58) Hexachlorobutadiene	(2)	8.250	225	75787	3.665
60) Quinoline	(2)	8.553	129	284083	3.613
61) Caprolactam	(2)	8.646	113	52556	3.743
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	124480	3.482
63) 4-Chloro-3-methylphenol	(2)	8.926	107	138946	3.672
64) Safrole	(2)	9.025	162	110360	3.705
65) 2-Methylnaphthalene	(2)	9.130	142	293792	3.718
66) 1-Methylnaphthalene	(2)	9.287	142	266959	3.729
67) Hexachlorocyclopentadiene	(3)	9.404	237	58106	3.459
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	135309	3.665
69) cis-Isosafrole	(3)	9.497	162	19222	3.611
70) 2,4,6-Trichlorophenol	(3)	9.596	196	83953	3.690
71) 2,4,5-Trichlorophenol	(3)	9.643	196	85454	3.642
72)$2-Fluorobiphenyl	(3)	9.748	172	593259	7.395
74) Isosafrole	(3)	9.858	162	112492	3.749
73) trans-Isosafrole	(3)	9.858	162	112492	3.749
75) 1,1'-Biphenyl	(3)	9.899	154	351719	3.766
76) 2-Chloronaphthalene	(3)	9.905	162	255632	3.599
77) 1-Chloronaphthalene	(3)	9.934	162	264305	3.721
82) Diphenyl ether	(3)	10.080	170	189965	3.707
83) 2-Nitroaniline	(3)	10.080	138	80534	3.765
84) 1,4-Naphthoquinone	(3)	10.196	158	108951	3.679
85) 1,4-Dinitrobenzene	(3)	10.319	168	35691	3.322
86) Dimethylphthalate	(3)	10.424	163	307320	3.819
87) 1,3-Dinitrobenzene	(3)	10.430	168	47338	3.517
88) 2,6-Dinitrotoluene	(3)	10.494	165	66555	3.845
90) Acenaphthylene	(3)	10.564	152	400060	3.737
91) 3-Nitroaniline	(3)	10.738	138	76037	3.831
92)*Acenaphthene-d10	(3)	10.791	164	315878	5.000
93) Acenaphthene	(3)	10.838	153	273437	3.671
94) 2,4-Dinitrophenol	(3)	10.908	184	44952	5.161
96) 4-Nitrophenol	(3)	11.018	109	45497	3.605

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	107060	3.618
97) Dibenzofuran	(3)	11.100	168	393706	3.717
98) 2,4-Dinitrotoluene	(3)	11.100	165	85005	3.844
99) 1-Naphthylamine	(3)	11.205	143	287654	3.778
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	70651	3.801
101) 2-Naphthylamine	(3)	11.316	143	298380	3.800
102) Diethylphthalate	(3)	11.473	149	289267	3.674
103) Fluorene	(3)	11.549	166	318814	3.754
104) Thionazin	(3)	11.566	107	64912	3.790
106) 5-Nitro-o-toluidine	(3)	11.572	152	87345	3.860
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	157117	3.707
107) 4-Nitroaniline	(3)	11.578	138	79776	3.860
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	34788	2.763
109) N-Nitrosodiphenylamine	(4)	11.724	169	255381	3.766
110) NDPA as diphenylamine	(4)	11.724	169	255381	3.766
111) 1,2-Diphenylhydrazine	(4)	11.764	77	405355	3.758
112)$2,4,6-Tribromophenol	(3)	11.840	330	60726	7.439
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	57370	3.748
116) 1,3,5-Trinitrobenzene	(4)	12.044	213	25031	3.082
117) Diallate (peak 1)	(4)	12.085	86	152285	2.840
118) Phorate	(4)	12.091	75	239579	3.760
119) Phenacetin	(4)	12.108	108	163548	3.755
120) 4-Bromophenyl-phenylether	(4)	12.161	248	78686	3.680
121) Diallate (peak 2)	(4)	12.190	86	20804	0.926
122) Hexachlorobenzene	(4)	12.207	284	76769	3.614
123) Dimethoate	(4)	12.277	87	148445	3.661
124) Atrazine	(4)	12.388	200	87367	3.990
125) Pentachlorophenol	(4)	12.458	266	47912	3.431
126) Pentachloronitrobenzene	(4)	12.475	237	37712	3.966
127) 4-Aminobiphenyl	(4)	12.475	169	316816	3.797
129) Pronamide	(4)	12.574	173	133638	3.866
130)*Phenanthrene-d10	(4)	12.685	188	538913	5.000
131) Phenanthrene	(4)	12.714	178	448337	3.662
133) Dinoseb	(4)	12.714	211	49773	3.127
134) Anthracene	(4)	12.778	178	453512	3.765
135) Carbazole	(4)	12.994	167	437915	3.761
136) Methyl parathion	(4)	13.204	109	96338	3.497
137) Di-n-butylphthalate	(4)	13.513	149	508920	3.728
138) Parathion	(4)	13.740	109	65531	3.646
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	21592	2.543

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	53847	3.771
142) Fluoranthene	(4)	14.335	202	510943	3.796
144) Benzidine	(5)	14.568	184	1018403	11.585
145)*Pyrene-d10	(5)	14.644	212	695223	5.000
146) Pyrene	(5)	14.673	202	539258	3.602
149)$Terphenyl-d14	(5)	14.964	244	640393	7.341
150) p-Dimethylaminoazobenzene	(5)	15.192	225	95700	3.823
151) Chlorobenzilate	(5)	15.285	139	148617	3.620
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	308612	3.671
153) Butylbenzylphthalate	(5)	15.815	149	230740	3.715
156) 2-Acetylaminofluorene	(5)	16.153	181	151546	3.218
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	160393	3.631
158) Benzo(a)anthracene	(5)	16.660	228	471516	3.825
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	84756	3.645
161) Chrysene	(5)	16.719	228	466993	3.779
162) bis(2-Ethylhexyl)phthalate	(5)	16.882	149	293533	3.608
165) 6-Methylchrysene	(5)	17.523	242	319217	3.750
166) Di-n-octylphthalate	(6)	18.042	149	445353	3.485
168) Benzo(b)fluoranthene	(6)	18.502	252	425715	3.764
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	192572	3.933
170) Benzo(k)fluoranthene	(6)	18.549	252	437867	3.799
171) Benzo(a)pyrene	(6)	19.021	252	376795	3.617
172)*Perylene-d12	(6)	19.114	264	486848	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	181235	3.734
174) Dibenz(a,h)acridine	(6)	20.402	279	232723	3.492
175) Dibenz(a,j)acridine	(6)	20.472	279	268607	3.742
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	350010	3.941
177) Dibenz(a,h)anthracene	(6)	20.752	278	293379	3.922
178) Benzo(g,h,i)perylene	(6)	21.073	276	286798	3.777
179) Diallate TRANS/CIS	(4)			173089	3.777
182) 2,4_2,6-Dinitrotoluenes	(3)			151560	7.689

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$ = Compound is a surrogate standard.

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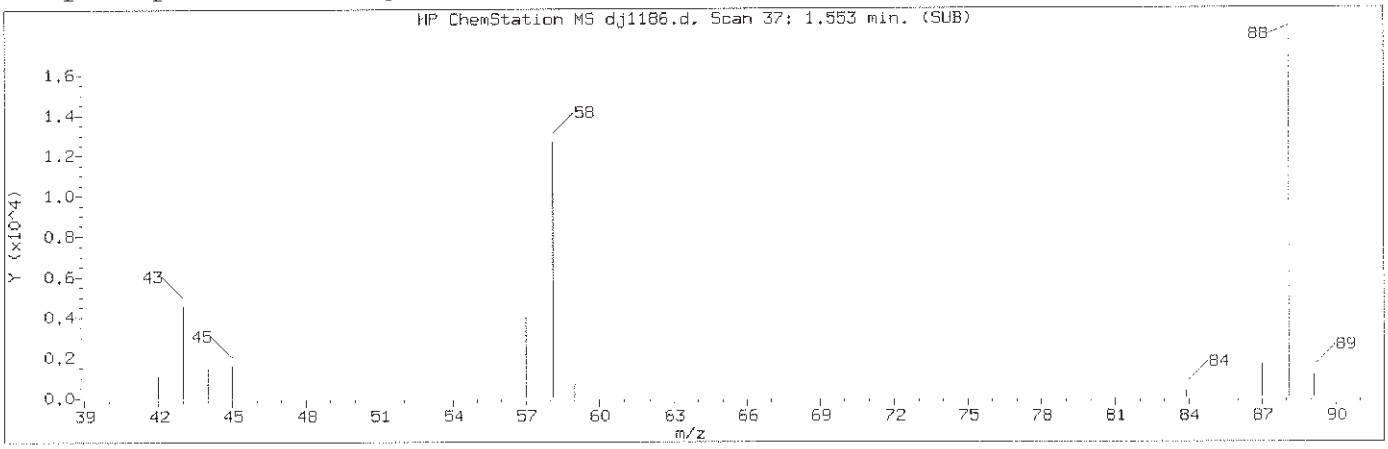
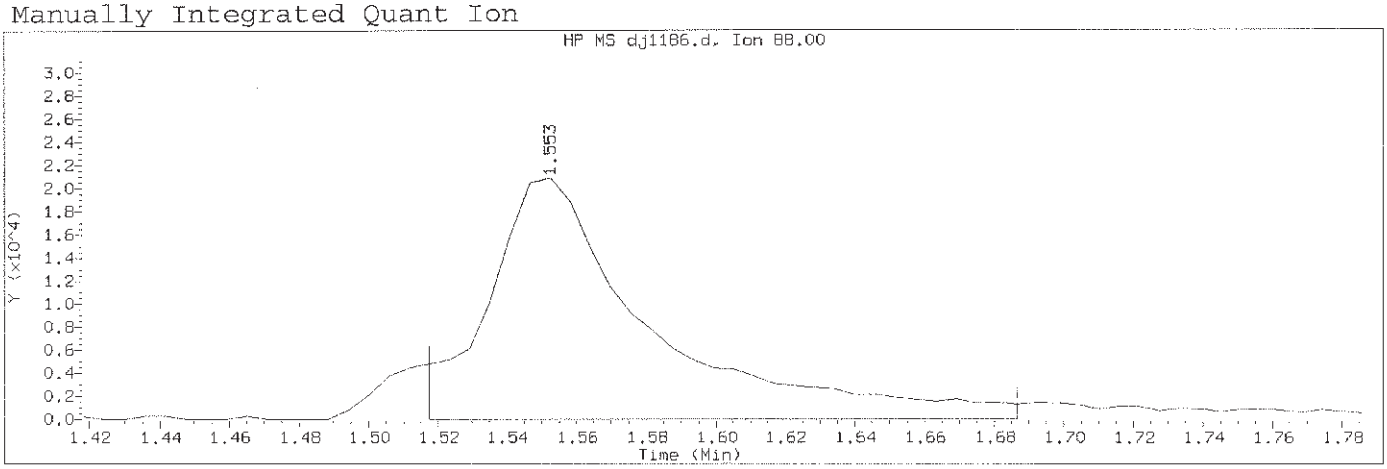
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 68392M		
On-Column Amount (ng/ul)	: 3.8203		
Integration start scan	: 30	Integration stop scan:	59
Y at integration start	: 3	Y at integration end:	3

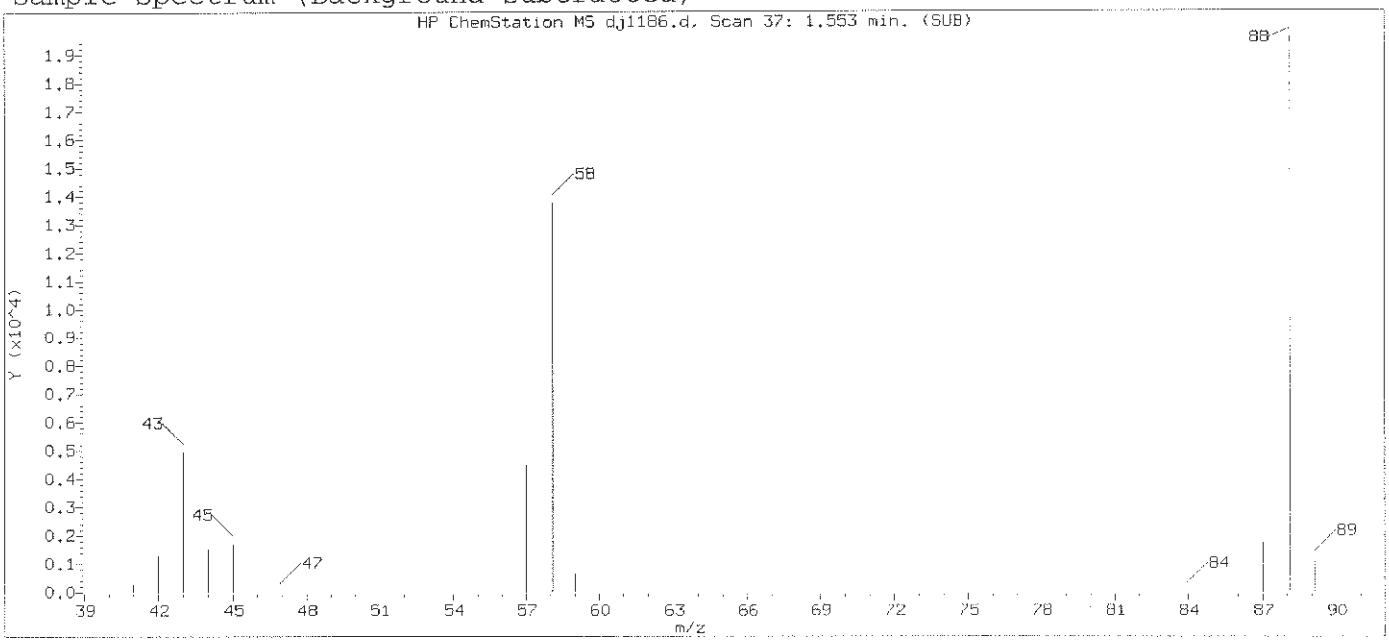
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

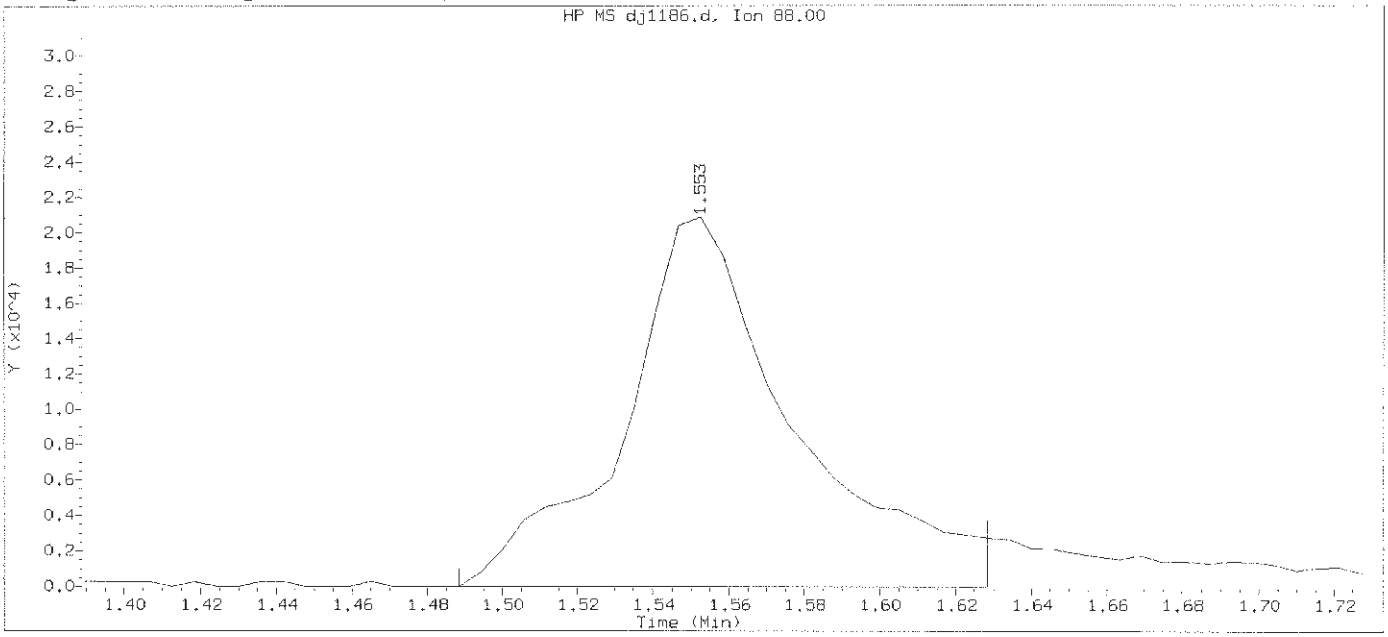
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

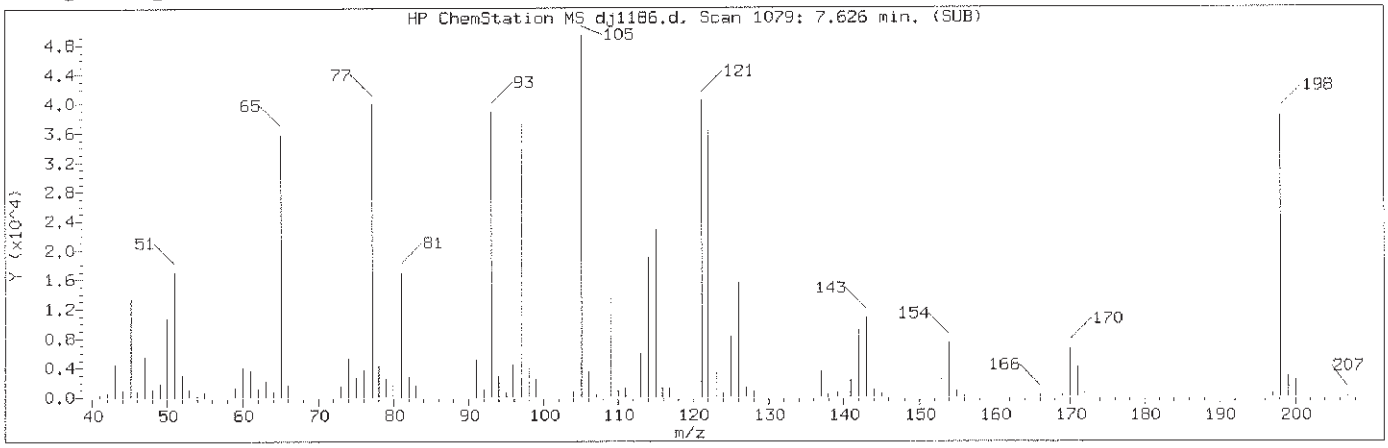
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

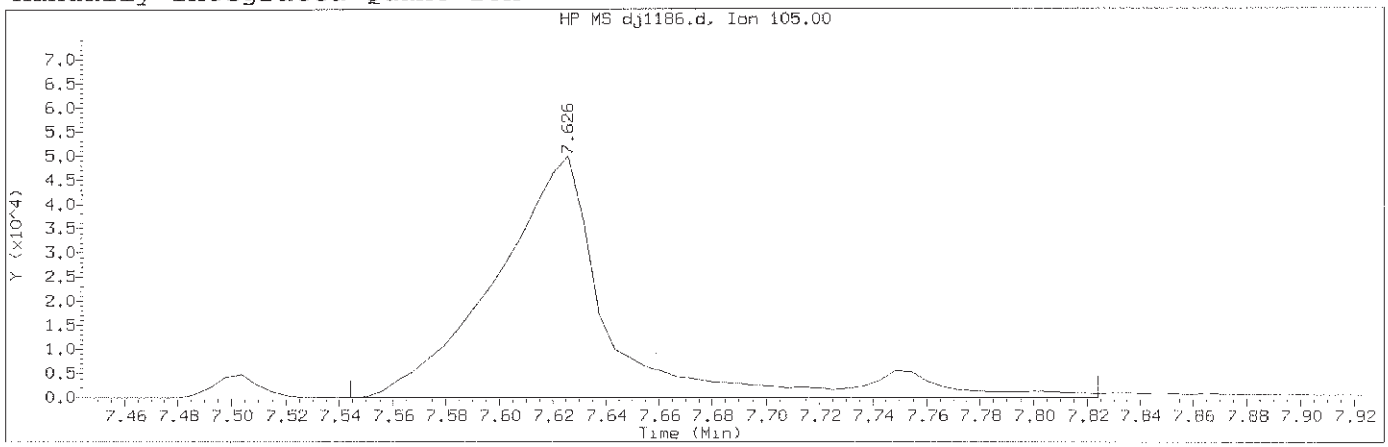
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 65518		
On-column Amount (ng/ul)	: 3.7471		
Integration start scan	: 25	Integration stop scan:	49
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area (flag)	: 151594M		
On-Column Amount (ng/ul)	: 5.0962		
Integration start scan	: 1064	Integration stop scan:	1112
Y at integration start	: 26	Y at integration end:	26

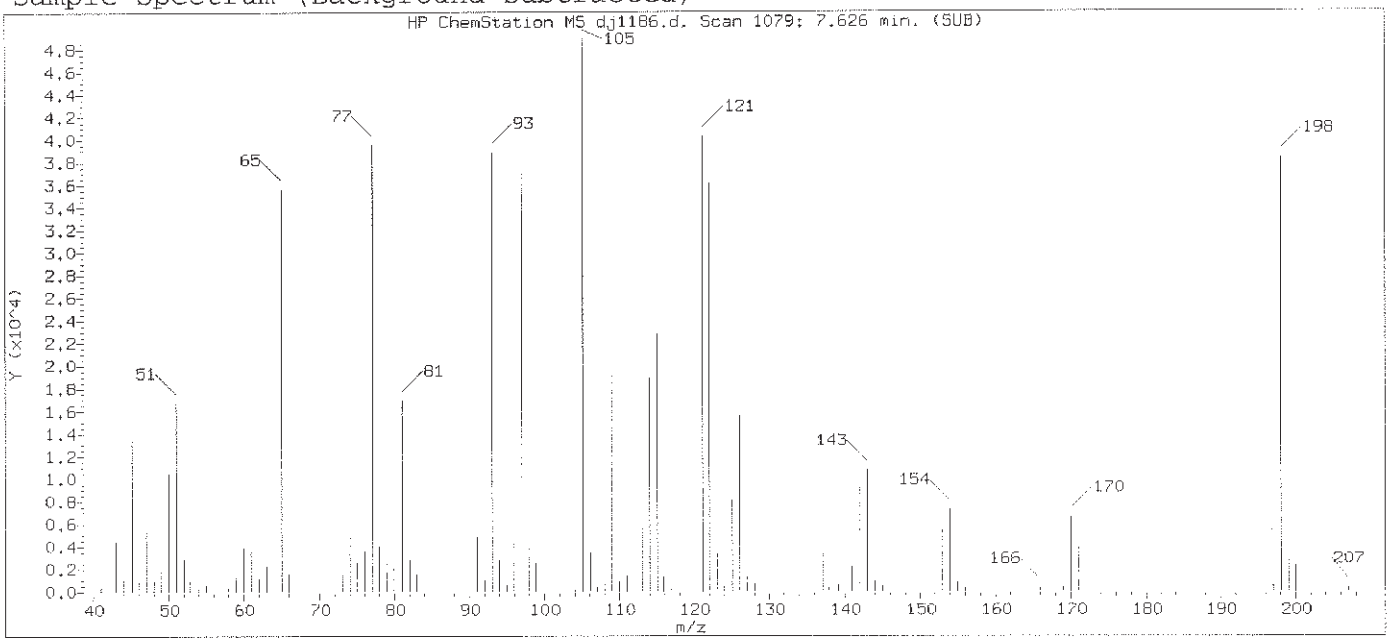
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

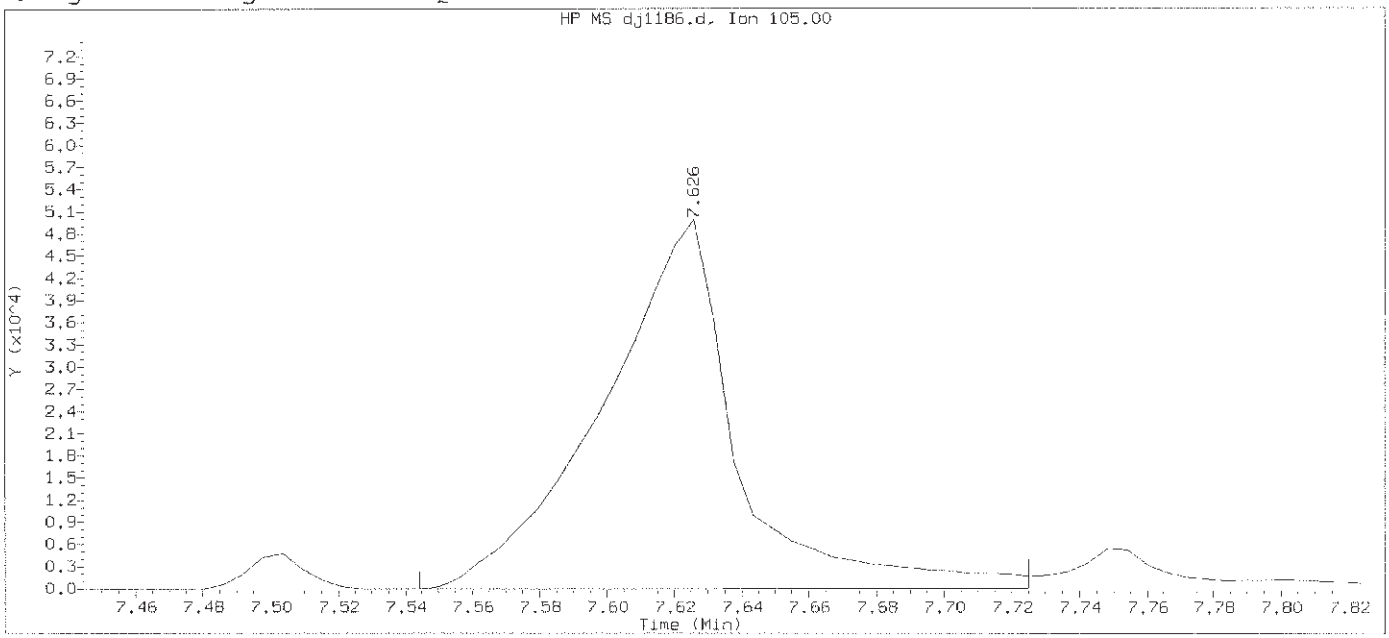
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



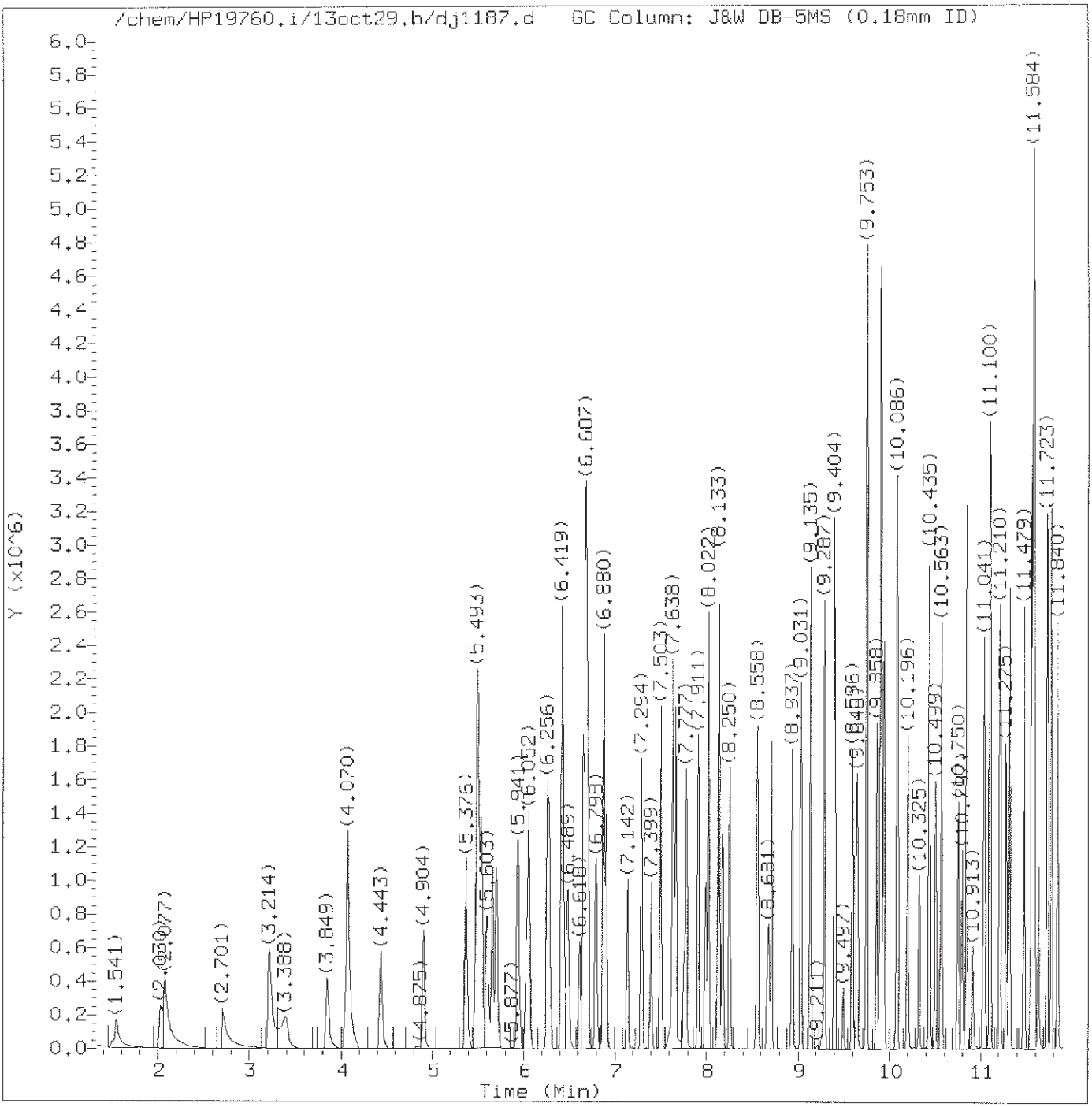
Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area	: 138684		
On-column Amount (ng/ul)	: 4.6933		
Integration start scan	: 1064	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	64

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

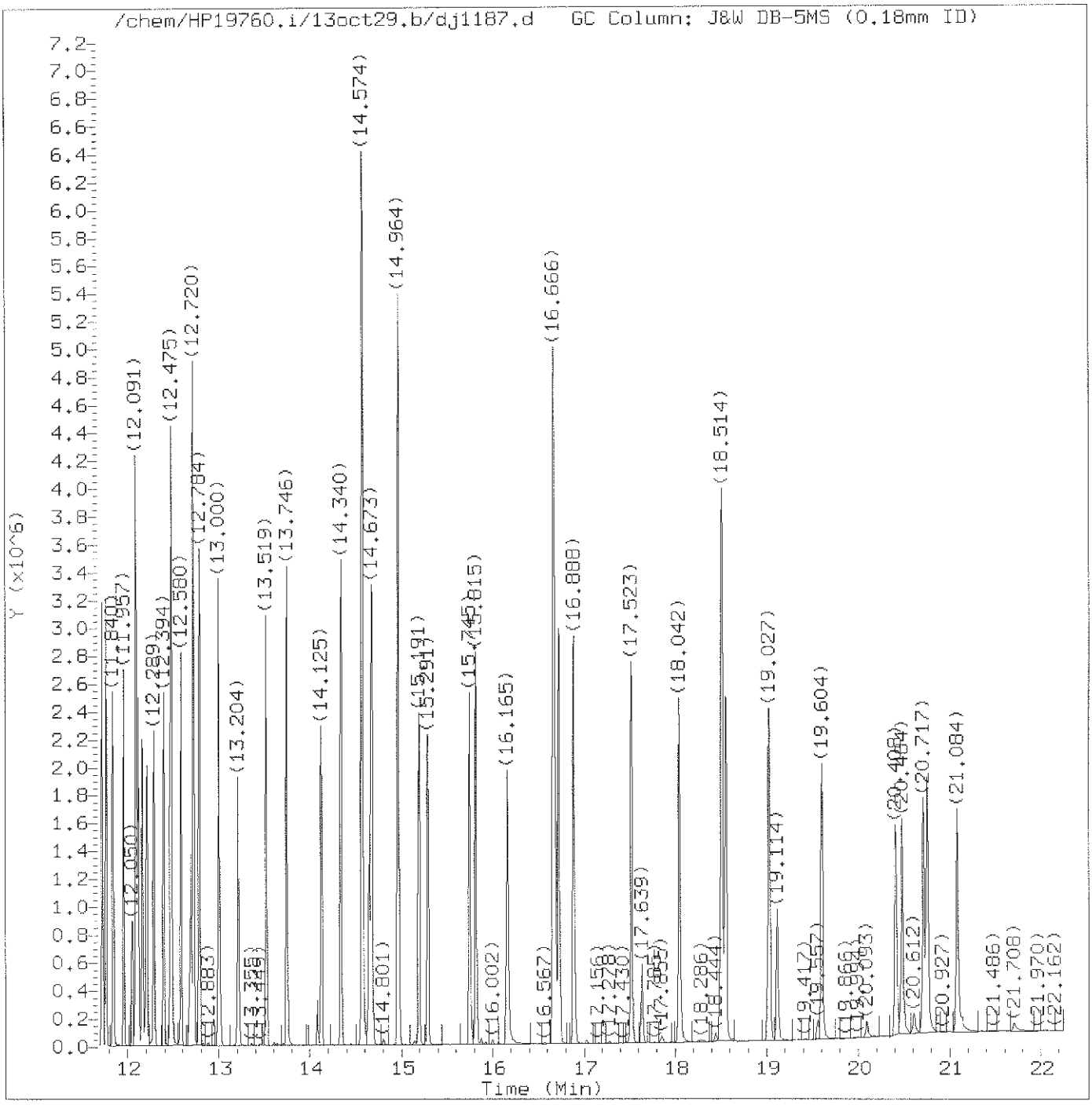
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.541	88	217441	12.323
2) N-Nitrosodimethylamine	(1)	2.030	74	406062	13.246
3) Pyridine	(1)	2.077	79	678751M	12.904
4) 2-Picoline	(1)	3.214	93	698067	12.567
5) N-Nitrosomethylethylamine	(1)	3.388	88	302408	12.715
6) Methyl methanesulfonate	(1)	3.849	80	339392	12.444
7)$2-Fluorophenol	(1)	4.070	112	1027222	24.873
8) N-Nitrosodiethylamine	(1)	4.443	102	288293	12.607
10) Ethyl methanesulfonate	(1)	4.904	109	273542	12.382
11) Benzaldehyde	(1)	5.376	77	498842	12.327
12)$Phenol-d5	(1)	5.493	99	1402775	24.658
13)$Phenol-d6	(1)	5.493	99	1402775	24.658
14) Phenol	(1)	5.510	94	804262	12.186
15) Aniline	(1)	5.539	93	997877	12.307
16) bis(2-Chloroethyl)ether	(1)	5.656	93	638471	12.268
17) 2-Chlorophenol	(1)	5.702	128	505845	12.466
18) 1,3-Dichlorobenzene	(1)	5.941	146	536362	12.235
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	139035	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	541731	12.216
23) Benzyl alcohol	(1)	6.256	108	359714	12.528
24) 1,2-Dichlorobenzene	(1)	6.279	146	510656	12.315
25) Indene	(1)	6.419	115	1031733	14.729
26) 2-Methylphenol	(1)	6.431	108	503066	12.321
28) bis(2-Chloroisopropyl)ether	(1)	6.483	45	774924	11.932
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.483	45	774924	11.932
29) N-Nitrosopyrrolidine	(1)	6.618	100	294760	12.700
30) Acetophenone	(1)	6.658	105	778913	12.197
33) 4-Methylphenol	(1)	6.682	108	562542	12.283
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	448321	12.112
32) N-Nitrosomorpholine	(1)	6.693	56	345597	11.804
34) o-Toluidine	(1)	6.711	106	865552	12.246
35) Hexachloroethane	(1)	6.798	117	228903	12.226
36)$Nitrobenzene-d5	(2)	6.880	82	1240362	24.944
37) Nitrobenzene	(2)	6.909	77	655195	12.403
39) N-Nitrosopiperidine	(2)	7.142	114	272572	12.640
40) Isophorone	(2)	7.294	82	1133725	12.623
42) 2-Nitrophenol	(2)	7.399	139	239011	13.414
45) 2,4-Dimethylphenol	(2)	7.503	107	557475	12.699
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	247315	12.721
47) Benzoic acid	(2)	7.667	105	346411	12.092

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	704841	12.020
49) 2,4-Dichlorophenol	(2)	7.777	162	399960	12.961
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	431091	12.439
52)*Naphthalene-d8	(2)	7.993	136	538194	5.000
53) Naphthalene	(2)	8.022	128	1432666	12.416
55) 4-Chloroaniline	(2)	8.133	127	593011	12.396
56) 2,6-Dichlorophenol	(2)	8.139	162	379233	12.765
57) Hexachloropropene	(2)	8.174	213	284301	13.190
58) Hexachlorobutadiene	(2)	8.255	225	253018	12.556
60) Quinoline	(2)	8.558	129	937990	12.296
61) Caprolactam	(2)	8.681	113	176749	12.843
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	409804	11.914
63) 4-Chloro-3-methylphenol	(2)	8.937	107	474792	12.822
64) Safrole	(2)	9.031	162	374498	12.843
65) 2-Methylnaphthalene	(2)	9.135	142	957535	12.456
66) 1-Methylnaphthalene	(2)	9.287	142	868136	12.462
67) Hexachlorocyclopentadiene	(3)	9.404	237	218343	13.052
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	441807	12.206
69) cis-Isosafrole	(3)	9.497	162	67577	12.824
70) 2,4,6-Trichlorophenol	(3)	9.596	196	294243	13.023
71) 2,4,5-Trichlorophenol	(3)	9.648	196	303624	13.029
72)$2-Fluorobiphenyl	(3)	9.753	172	1884573	24.036
74) Isosafrole	(3)	9.858	162	376749	12.707
73) trans-Isosafrole	(3)	9.858	162	376749	12.707
75) 1,1'-Biphenyl	(3)	9.899	154	1091015	11.963
76) 2-Chloronaphthalene	(3)	9.905	162	835373	12.031
77) 1-Chloronaphthalene	(3)	9.940	162	833324	12.006
82) Diphenyl ether	(3)	10.080	170	611099	12.171
83) 2-Nitroaniline	(3)	10.086	138	285422	13.363
84) 1,4-Naphthoquinone	(3)	10.196	158	389887	13.184
85) 1,4-Dinitrobenzene	(3)	10.325	168	143389	13.326
86) Dimethylphthalate	(3)	10.429	163	969956	12.291
87) 1,3-Dinitrobenzene	(3)	10.435	168	172282	12.895
88) 2,6-Dinitrotoluene	(3)	10.499	165	226524	13.150
90) Acenaphthylene	(3)	10.563	152	1309652	12.434
91) 3-Nitroaniline	(3)	10.750	138	260480	13.181
92)*Acenaphthene-d10	(3)	10.797	164	311099	5.000
93) Acenaphthene	(3)	10.843	153	871740	11.967
94) 2,4-Dinitrophenol	(3)	10.913	184	94123	11.318
96) 4-Nitrophenol	(3)	11.030	109	164665	13.091

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.041	250	351717	12.139
97) Dibenzofuran	(3)	11.100	168	1252587	12.086
98) 2,4-Dinitrotoluene	(3)	11.111	165	289819	13.165
99) 1-Naphthylamine	(3)	11.210	143	927610	12.390
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	235067	12.782
101) 2-Naphthylamine	(3)	11.315	143	938106	12.190
102) Diethylphthalate	(3)	11.479	149	950623	12.308
103) Fluorene	(3)	11.554	166	1025190	12.292
104) Thionazin	(3)	11.572	107	206142	12.268
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	494846	11.957
106) 5-Nitro-o-toluidine	(3)	11.584	152	275986	12.403
107) 4-Nitroaniline	(3)	11.589	138	262921	12.847
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	155613	12.691
109) N-Nitrosodiphenylamine	(4)	11.729	169	806574	12.314
110) NDPA as diphenylamine	(4)	11.729	169	806574	12.314
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1276195	12.259
112)$2,4,6-Tribromophenol	(3)	11.840	330	205883	25.506
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	188239	12.662
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	115384	14.175
117) Diallate (peak 1)	(4)	12.091	86	478759	9.243
118) Phorate	(4)	12.096	75	760126	12.352
119) Phenacetin	(4)	12.120	108	577166	13.468
120) 4-Bromophenyl-phenylether	(4)	12.166	248	256706	12.410
121) Diallate (peak 2)	(4)	12.190	86	69285	3.172
122) Hexachlorobenzene	(4)	12.213	284	247689	12.101
123) Dimethoate	(4)	12.289	87	513340	12.950
124) Atrazine	(4)	12.394	200	266901	12.569
125) Pentachlorophenol	(4)	12.464	266	187965	13.591
126) Pentachloronitrobenzene	(4)	12.475	237	127220	13.572
127) 4-Aminobiphenyl	(4)	12.481	169	1049406	12.900
129) Pronamide	(4)	12.580	173	462653	13.578
130)*Phenanthrene-d10	(4)	12.691	188	522070	5.000
131) Phenanthrene	(4)	12.720	178	1401469	11.910
133) Dinoseb	(4)	12.720	211	231968	14.455
134) Anthracene	(4)	12.784	178	1458971	12.503
135) Carbazole	(4)	13.000	167	1415513	12.541
136) Methyl parathion	(4)	13.204	109	368685	13.531
137) Di-n-butylphthalate	(4)	13.519	149	1710230	12.844
138) Parathion	(4)	13.746	109	238421	13.437
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	124164	14.493

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	179675	12.905
142) Fluoranthene	(4)	14.340	202	1677613	12.813
144) Benzidine	(5)	14.574	184	3386718	39.510
145)*Pyrene-d10	(5)	14.644	212	668822	5.000
146) Pyrene	(5)	14.679	202	1733287	12.100
149)$Terphenyl-d14	(5)	14.964	244	2065792	24.678
150) p-Dimethylaminoazobenzene	(5)	15.197	225	356781	14.372
151) Chlorobenzilate	(5)	15.291	139	514982	12.928
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	1162212	13.953
153) Butylbenzylphthalate	(5)	15.815	149	786237	13.021
156) 2-Acetylaminofluorene	(5)	16.165	181	643223	13.823
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	576125	13.333
158) Benzo(a)anthracene	(5)	16.666	228	1595523	13.310
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	307206	13.469
161) Chrysene	(5)	16.730	228	1497033	12.578
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1043912	13.163
165) 6-Methylchrysene	(5)	17.523	242	1098857	13.257
166) Di-n-octylphthalate	(6)	18.042	149	1716460	13.846
168) Benzo(b)fluoranthene	(6)	18.508	252	1396180	12.990
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	654651	13.855
170) Benzo(k)fluoranthene	(6)	18.560	252	1416406	12.941
171) Benzo(a)pyrene	(6)	19.027	252	1296417	13.081
172)*Perylene-d12	(6)	19.114	264	459604	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	634593	13.604
174) Dibenz(a,h)acridine	(6)	20.408	279	876116	13.616
175) Dibenz(a,j)acridine	(6)	20.484	279	946076	13.642
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1208834	14.108
177) Dibenz(a,h)anthracene	(6)	20.758	278	1044758	14.417
178) Benzo(g,h,i)perylene	(6)	21.084	276	987567	13.580
179) Diallate TRANS/CIS	(4)			548044	12.369
182) 2,4_2,6-Dinitrotoluenes	(3)			516343	26.315

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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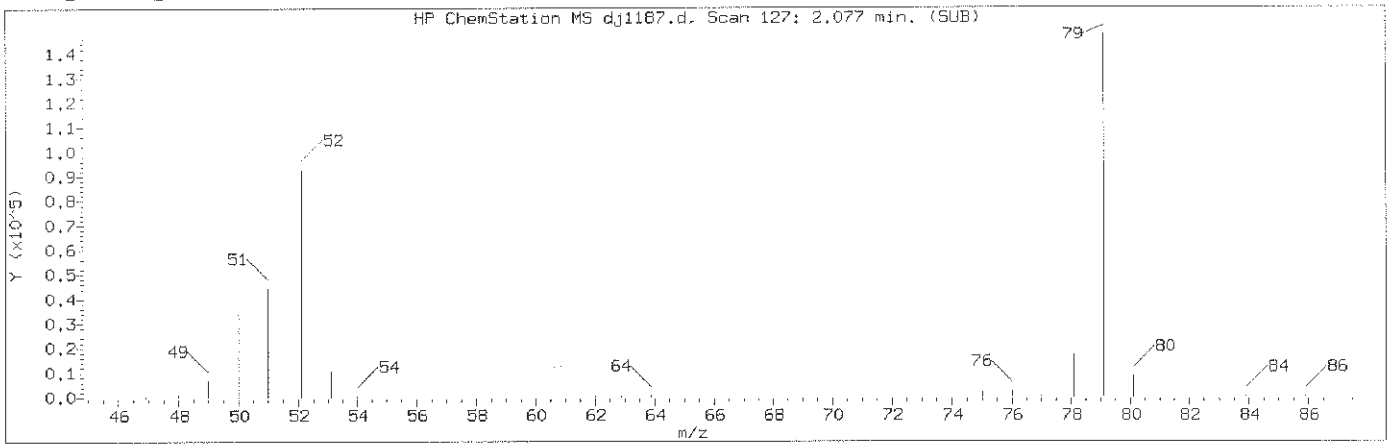
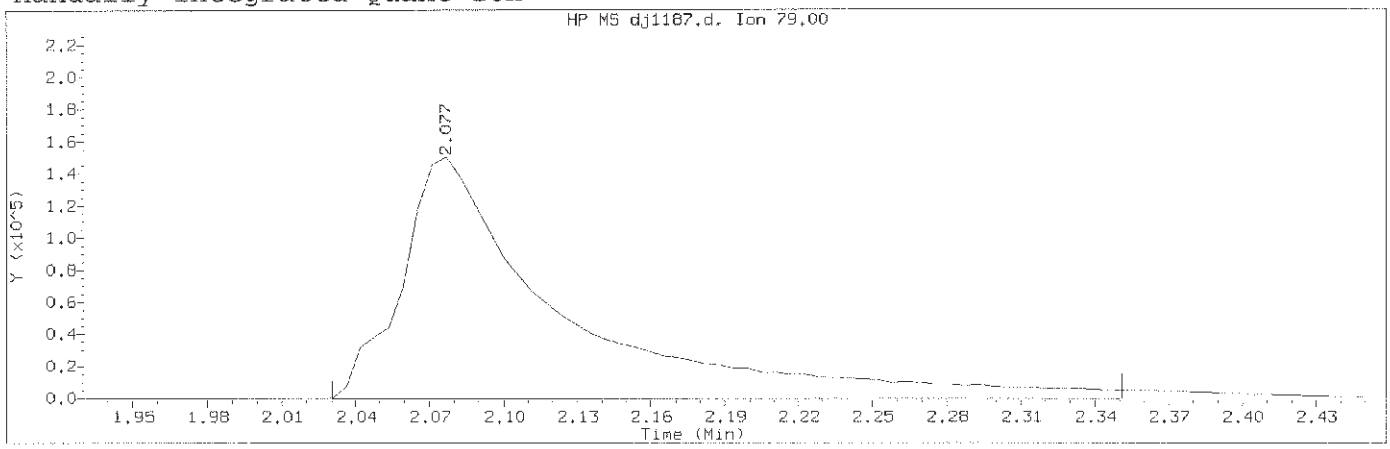
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area (flag)	: 678751M		
On-Column Amount (ng/ul)	: 12.9041		
Integration start scan	: 118	Integration stop scan:	173
Y at integration start	: -236	Y at integration end:	-236

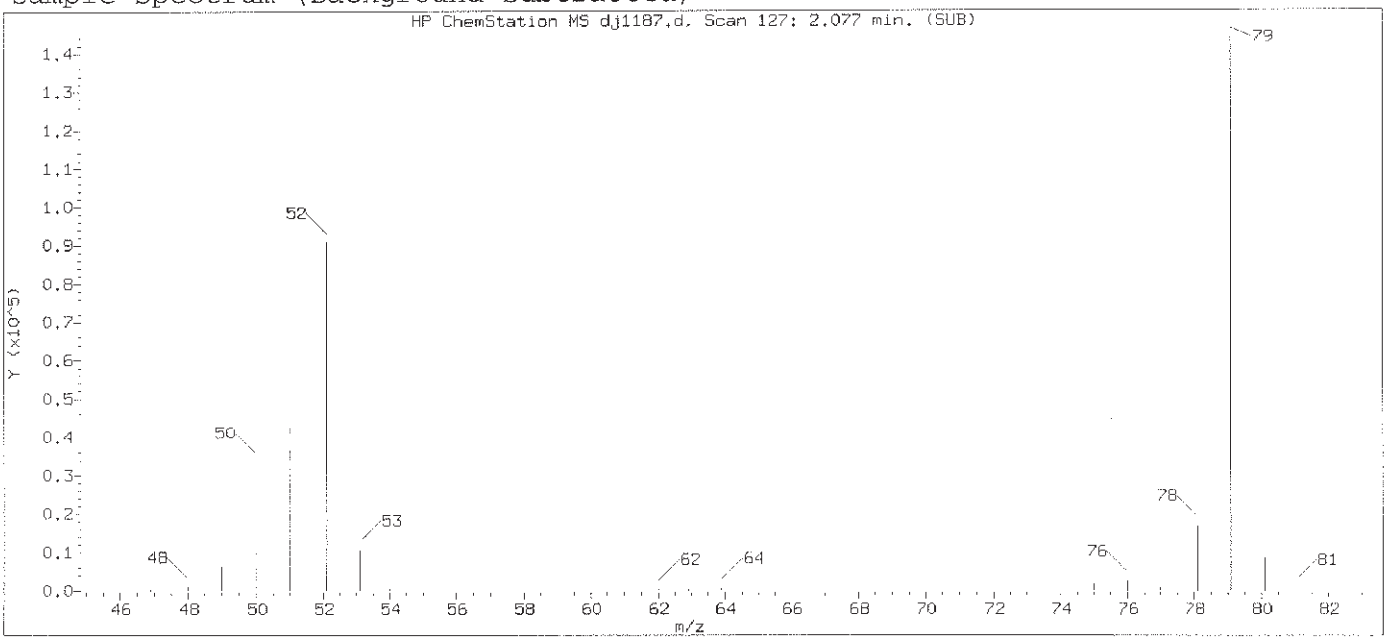
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

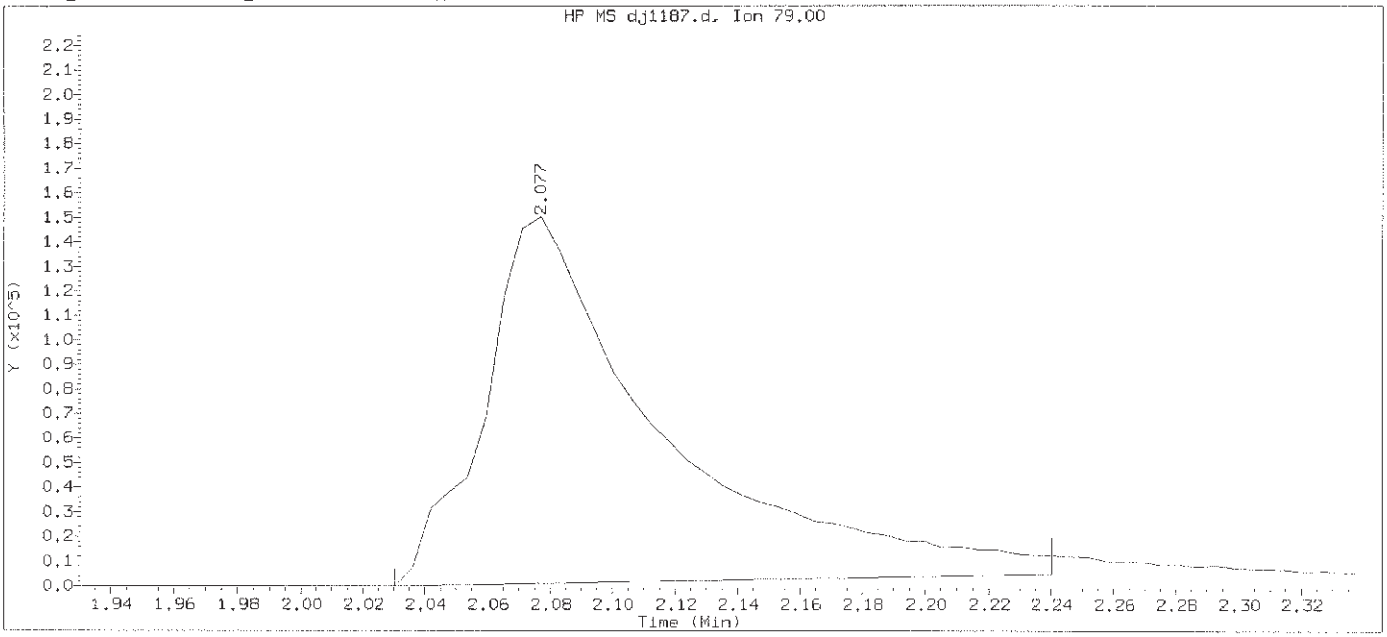
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area	: 588658		
On-column Amount (ng/ul)	: 11.8341		
Integration start scan	: 118	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	4950

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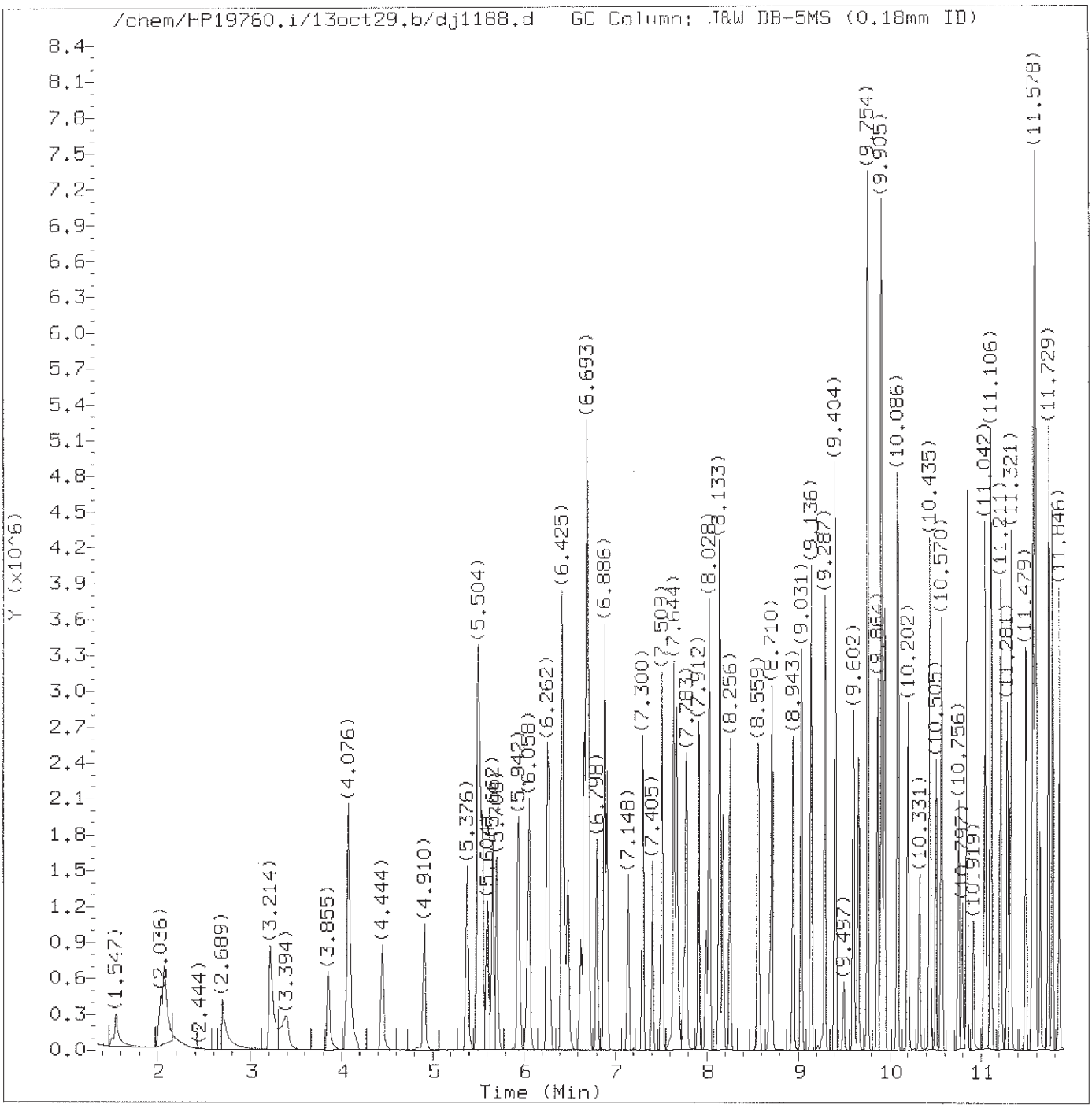
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

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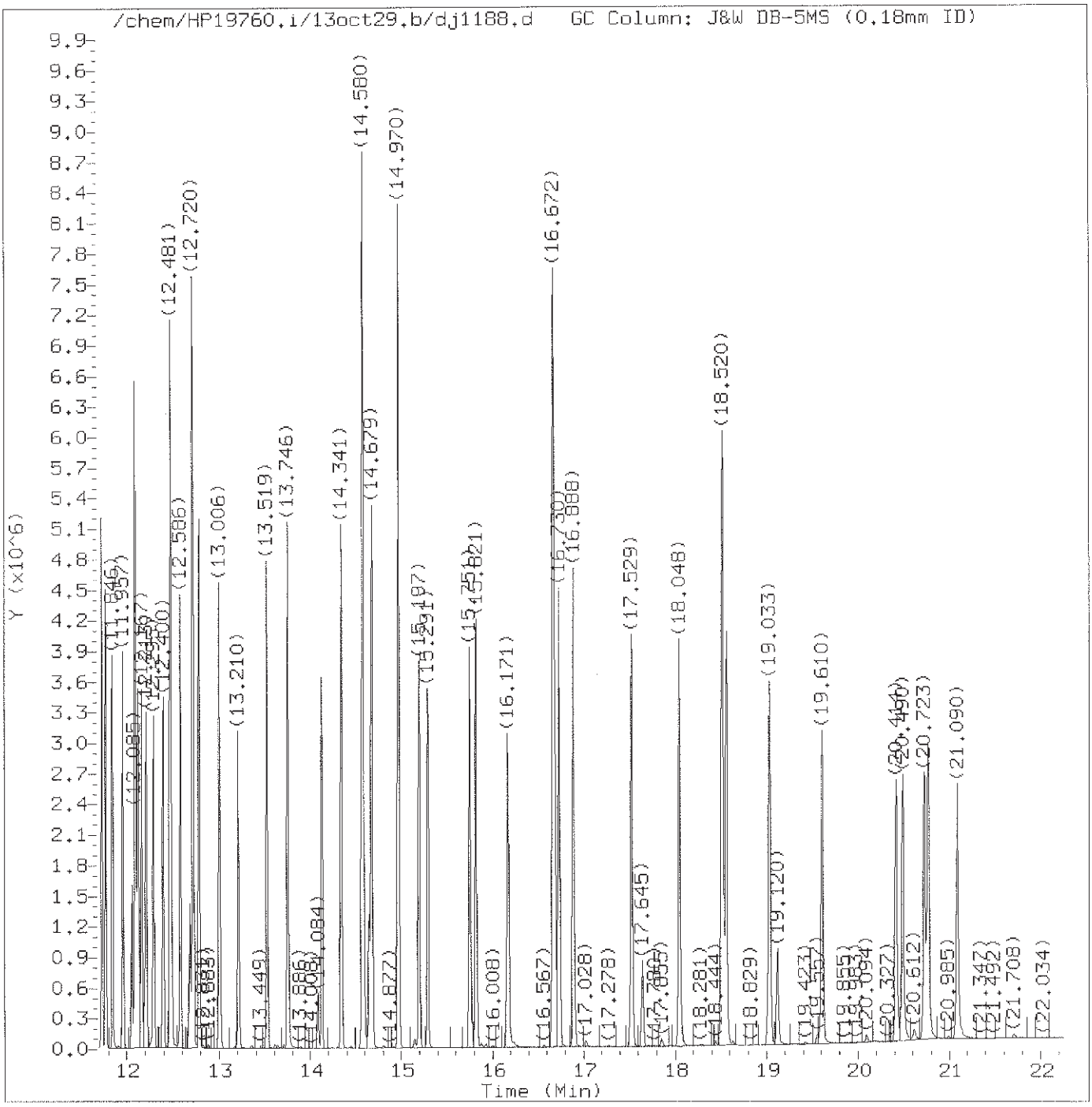
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	325165	19.174
2) N-Nitrosodimethylamine	(1)	2.031	74	627522	20.956
3) Pyridine	(1)	2.077	79	1031077	20.191
4) 2-Picoline	(1)	3.214	93	1071191	19.915
5) N-Nitrosomethylethylamine	(1)	3.394	88	470743	20.363
6) Methyl methanesulfonate	(1)	3.855	80	528331	19.992
7)$2-Fluorophenol	(1)	4.076	112	1596153	39.901
8) N-Nitrosodiethylamine	(1)	4.444	102	449166	20.231
10) Ethyl methanesulfonate	(1)	4.910	109	428518	20.015
11) Benzaldehyde	(1)	5.376	77	690695	17.972
12)$Phenol-d5	(1)	5.499	99	2152609	39.182
13)$Phenol-d6	(1)	5.499	99	2152609	39.182
14) Phenol	(1)	5.516	94	1229979	19.339
15) Aniline	(1)	5.545	93	1536784	19.622
16) bis(2-Chloroethyl)ether	(1)	5.662	93	973912	19.408
17) 2-Chlorophenol	(1)	5.708	128	789062	20.057
18) 1,3-Dichlorobenzene	(1)	5.942	146	826580	19.535
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	134726	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	835743	19.526
23) Benzyl alcohol	(1)	6.256	108	556643	20.006
24) 1,2-Dichlorobenzene	(1)	6.280	146	782771	19.554
25) Indene	(1)	6.420	115	1589371	23.497
26) 2-Methylphenol	(1)	6.437	108	779210	19.738
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1168228	18.756
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1168228	18.756
29) N-Nitrosopyrrolidine	(1)	6.629	100	461572	20.447
30) Acetophenone	(1)	6.664	105	1216572	19.708
33) 4-Methylphenol	(1)	6.688	108	849471	19.259
31) N-Nitroso-di-n-propylamine	(1)	6.693	70	670115	18.860
32) N-Nitrosomorpholine	(1)	6.699	56	518122	18.492
34) o-Toluidine	(1)	6.711	106	1311142	19.262
35) Hexachloroethane	(1)	6.798	117	355620	19.657
36)$Nitrobenzene-d5	(2)	6.886	82	1908801	39.052
37) Nitrobenzene	(2)	6.909	77	1007734	19.424
39) N-Nitrosopiperidine	(2)	7.148	114	423710	19.923
40) Isophorone	(2)	7.300	82	1743328	19.716
42) 2-Nitrophenol	(2)	7.405	139	382136	21.467
45) 2,4-Dimethylphenol	(2)	7.509	107	857500	19.823
46) O,O,O-triethylphosphorothioate	(2)	7.644	198	382048	19.925
48) bis(2-Chloroethoxy)methane	(2)	7.673	93	1134237M	19.656

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.702	105	610398	21.253
49) 2,4-Dichlorophenol	(2)	7.783	162	617339	20.233
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	667875	19.594
52)*Naphthalene-d8	(2)	7.993	136	531119	5.000
53) Naphthalene	(2)	8.028	128	2175665	19.213
55) 4-Chloroaniline	(2)	8.133	127	903717	19.261
56) 2,6-Dichlorophenol	(2)	8.139	162	583652	19.921
57) Hexachloropropene	(2)	8.180	213	459184	21.345
58) Hexachlorobutadiene	(2)	8.256	225	395446	19.902
60) Quinoline	(2)	8.564	129	1468344	19.573
61) Caprolactam	(2)	8.704	113	275391	20.230
62) N-Nitrosodi-n-butylamine	(2)	8.716	84	811695	23.158
63) 4-Chloro-3-methylphenol	(2)	8.943	107	744211	20.312
64) Safrole	(2)	9.031	162	581470	20.176
65) 2-Methylnaphthalene	(2)	9.136	142	1452939	19.254
66) 1-Methylnaphthalene	(2)	9.287	142	1332939	19.464
67) Hexachlorocyclopentadiene	(3)	9.404	237	358846	21.689
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	684824	19.535
69) cis-Isosafrole	(3)	9.497	162	105700	20.538
70) 2,4,6-Trichlorophenol	(3)	9.602	196	460428	20.816
71) 2,4,5-Trichlorophenol	(3)	9.654	196	480784	21.037
72)$2-Fluorobiphenyl	(3)	9.754	172	2853736	37.780
74) Isosafrole	(3)	9.864	162	585504	20.266
73) trans-Isosafrole	(3)	9.864	162	585504	20.266
75) 1,1'-Biphenyl	(3)	9.905	154	1656069	18.854
76) 2-Chloronaphthalene	(3)	9.911	162	1331601	19.763
77) 1-Chloronaphthalene	(3)	9.940	162	1202300	18.098
82) Diphenyl ether	(3)	10.086	170	945913	19.464
83) 2-Nitroaniline	(3)	10.092	138	446033	21.253
84) 1,4-Naphthoquinone	(3)	10.202	158	604466	20.845
85) 1,4-Dinitrobenzene	(3)	10.331	168	232734	21.837
86) Dimethylphthalate	(3)	10.435	163	1471328	19.309
87) 1,3-Dinitrobenzene	(3)	10.441	168	270524	20.683
88) 2,6-Dinitrotoluene	(3)	10.505	165	354207	20.976
90) Acenaphthylene	(3)	10.570	152	2027003	19.818
91) 3-Nitroaniline	(3)	10.756	138	407986	21.048
92)*Acenaphthene-d10	(3)	10.797	164	302476	5.000
93) Acenaphthene	(3)	10.849	153	1342436	19.079
94) 2,4-Dinitrophenol	(3)	10.919	184	186536	22.382
96) 4-Nitrophenol	(3)	11.036	109	260505	21.072

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	551450	19.635
97) Dibenzofuran	(3)	11.100	168	1915807	19.147
98) 2,4-Dinitrotoluene	(3)	11.112	165	461073	21.307
99) 1-Naphthylamine	(3)	11.211	143	1447962	19.908
100) 2,3,4,6-Tetrachlorophenol	(3)	11.281	232	380803	21.102
101) 2-Naphthylamine	(3)	11.321	143	1470056	19.696
102) Diethylphthalate	(3)	11.485	149	1499545	19.974
103) Fluorene	(3)	11.555	166	1534105	19.047
104) Thionazin	(3)	11.572	107	311254	19.181
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	763380	19.112
106) 5-Nitro-o-toluidine	(3)	11.590	152	434452	20.070
107) 4-Nitroaniline	(3)	11.595	138	403432	20.235
108) 4,6-Dinitro-2-methylphenol	(4)	11.642	198	279696	22.060
109) N-Nitrosodiphenylamine	(4)	11.729	169	1247929	19.060
110) NDPA as diphenylamine	(4)	11.729	169	1247929	19.060
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1926138	18.583
112)$2,4,6-Tribromophenol	(3)	11.846	330	340856	42.905
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	295865	19.789
116) 1,3,5-Trinitrobenzene	(4)	12.062	213	208612	24.335
117) Diallate (peak 1)	(4)	12.091	86	727862	14.089
118) Phorate	(4)	12.097	75	1149741	18.772
119) Phenacetin	(4)	12.126	108	922599	21.163
120) 4-Bromophenyl-phenylether	(4)	12.167	248	404863	19.508
121) Diallate (peak 2)	(4)	12.190	86	111193	5.046
122) Hexachlorobenzene	(4)	12.213	284	396121	19.305
123) Dimethoate	(4)	12.295	87	805609	20.144
124) Atrazine	(4)	12.400	200	417230	19.573
125) Pentachlorophenol	(4)	12.464	266	315705	22.167
127) 4-Aminobiphenyl	(4)	12.481	169	1632793	19.934
126) Pentachloronitrobenzene	(4)	12.481	237	201829	21.165
129) Pronamide	(4)	12.586	173	732209	21.129
130)*Phenanthrene-d10	(4)	12.691	188	525961	5.000
133) Dinoseb	(4)	12.720	211	415493	24.534
131) Phenanthrene	(4)	12.726	178	2172274	18.518
134) Anthracene	(4)	12.790	178	2256094	19.289
135) Carbazole	(4)	13.006	167	2201249	19.447
136) Methyl parathion	(4)	13.210	109	601743	21.575
137) Di-n-butylphthalate	(4)	13.519	149	2672851	19.937
138) Parathion	(4)	13.746	109	383066	21.178
139) 4-Nitroquinoline-1-oxide	(4)	13.752	190	247472	26.740

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	286795	20.382
142) Fluoranthene	(4)	14.341	202	2645406	20.048
144) Benzidine	(5)	14.585	184	5251006	60.369
145)*Pyrene-d10	(5)	14.650	212	677846	5.000
146) Pyrene	(5)	14.679	202	2701111	18.769
149)$Terphenyl-d14	(5)	14.970	244	3307867	39.131
150) p-Dimethylaminoazobenzene	(5)	15.197	225	579528	22.545
151) Chlorobenzilate	(5)	15.291	139	823625	20.332
152) 3,3'-Dimethylbenzidine	(5)	15.751	212	1809397	21.180
153) Butylbenzylphthalate	(5)	15.821	149	1230558	20.091
156) 2-Acetylaminofluorene	(5)	16.171	181	1075711	22.288
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	913090	20.703
158) Benzo(a)anthracene	(5)	16.672	228	2529133	20.712
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.690	231	483244	20.748
161) Chrysene	(5)	16.736	228	2326892	19.377
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1630232	20.234
165) 6-Methylchrysene	(5)	17.529	242	1737541	20.583
166) Di-n-octylphthalate	(6)	18.048	149	2760949	21.546
168) Benzo(b)fluoranthene	(6)	18.514	252	2314973	21.011
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.526	256	1076337	22.009
170) Benzo(k)fluoranthene	(6)	18.566	252	2184746	19.661
171) Benzo(a)pyrene	(6)	19.033	252	2061113	20.380
172)*Perylene-d12	(6)	19.120	264	467732	5.000
173) 3-Methylcholanthrene	(6)	19.610	268	1040881	21.628
174) Dibenz(a,h)acridine	(6)	20.414	279	1479580	22.116
175) Dibenz(a,j)acridine	(6)	20.490	279	1551213	21.623
176) Indeno(1,2,3-cd)pyrene	(6)	20.729	276	1985177	22.379
177) Dibenz(a,h)anthracene	(6)	20.770	278	1694542	22.557
178) Benzo(g,h,i)perylene	(6)	21.090	276	1602998	21.437
179) Diallate TRANS/CIS	(4)			839055	18.960
182) 2,4_2,6-Dinitrotoluenes	(3)			815280	42.283

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$ = Compound is a surrogate standard.

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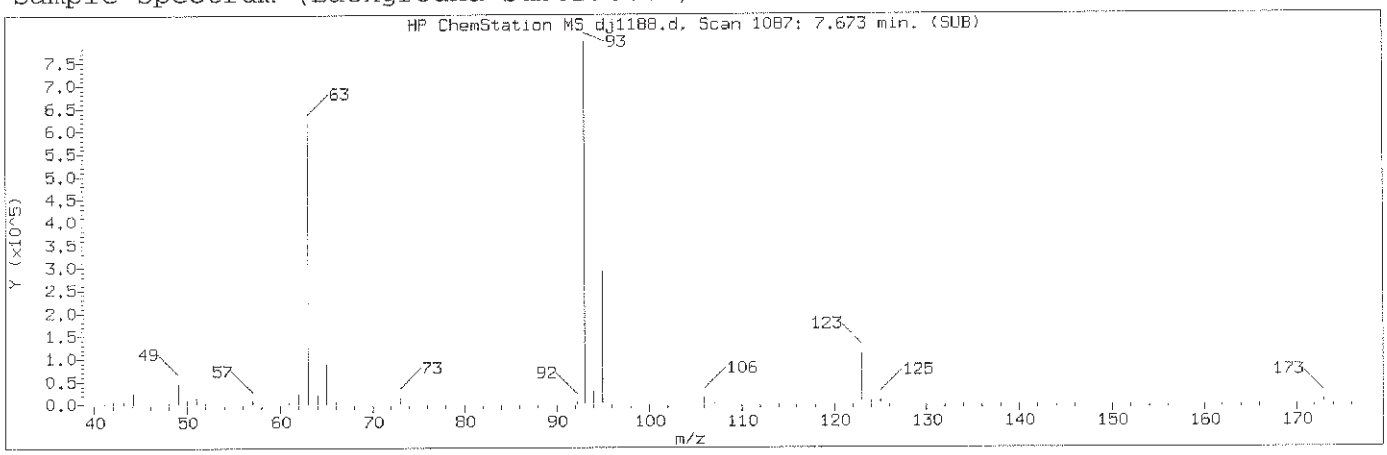
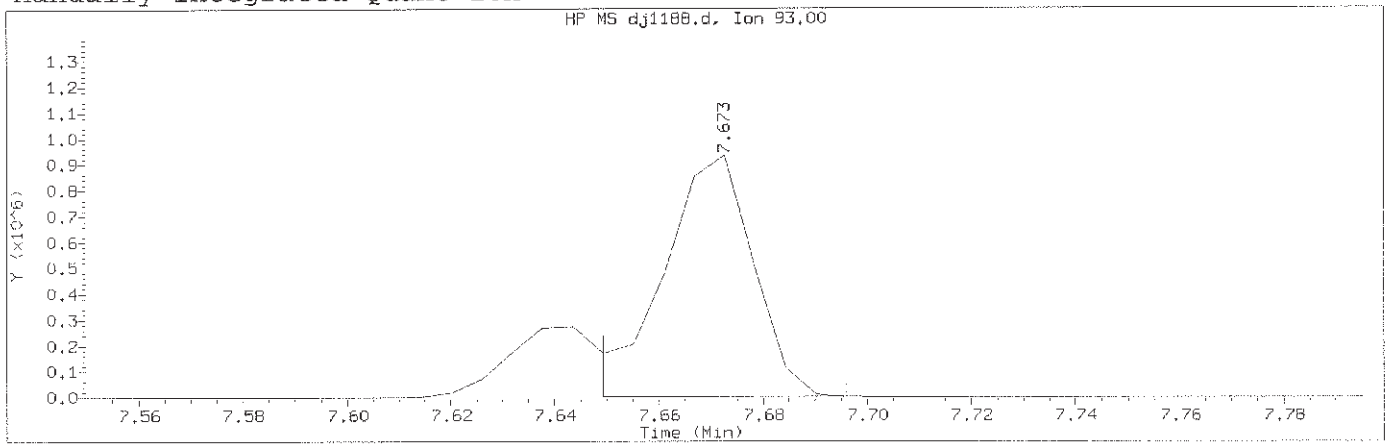
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area (flag)	: 1134237M		
On-Column Amount (ng/ul)	: 19.6559		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 1173	Y at integration end:	1173

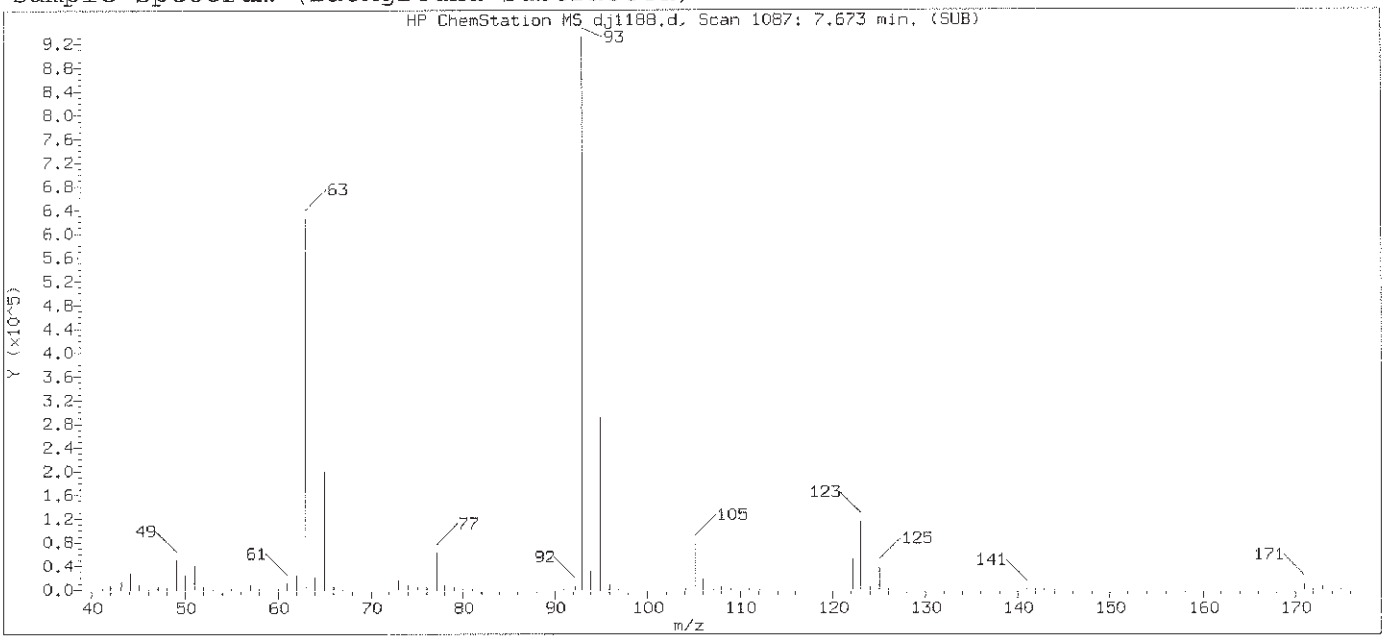
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

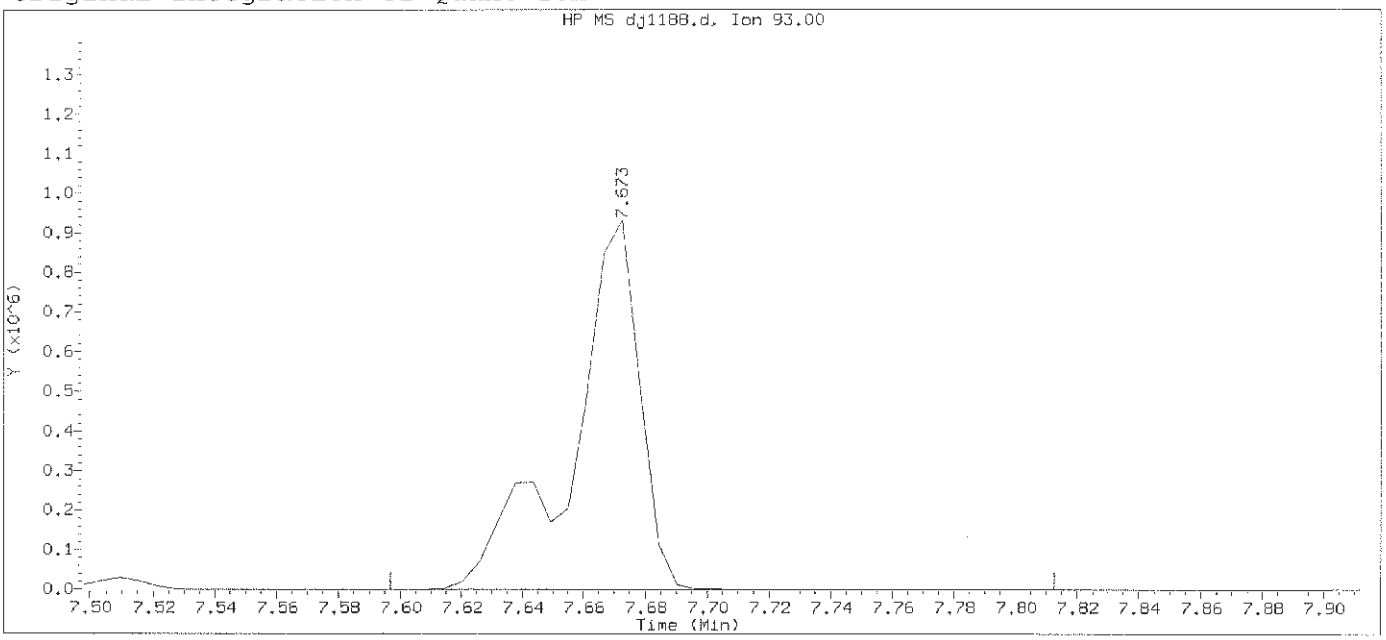
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area	: 1421968		
On-column Amount (ng/ul)	: 22.2016		
Integration start scan	: 1073	Integration stop scan:	1110
Y at integration start	: 0	Y at integration end:	0

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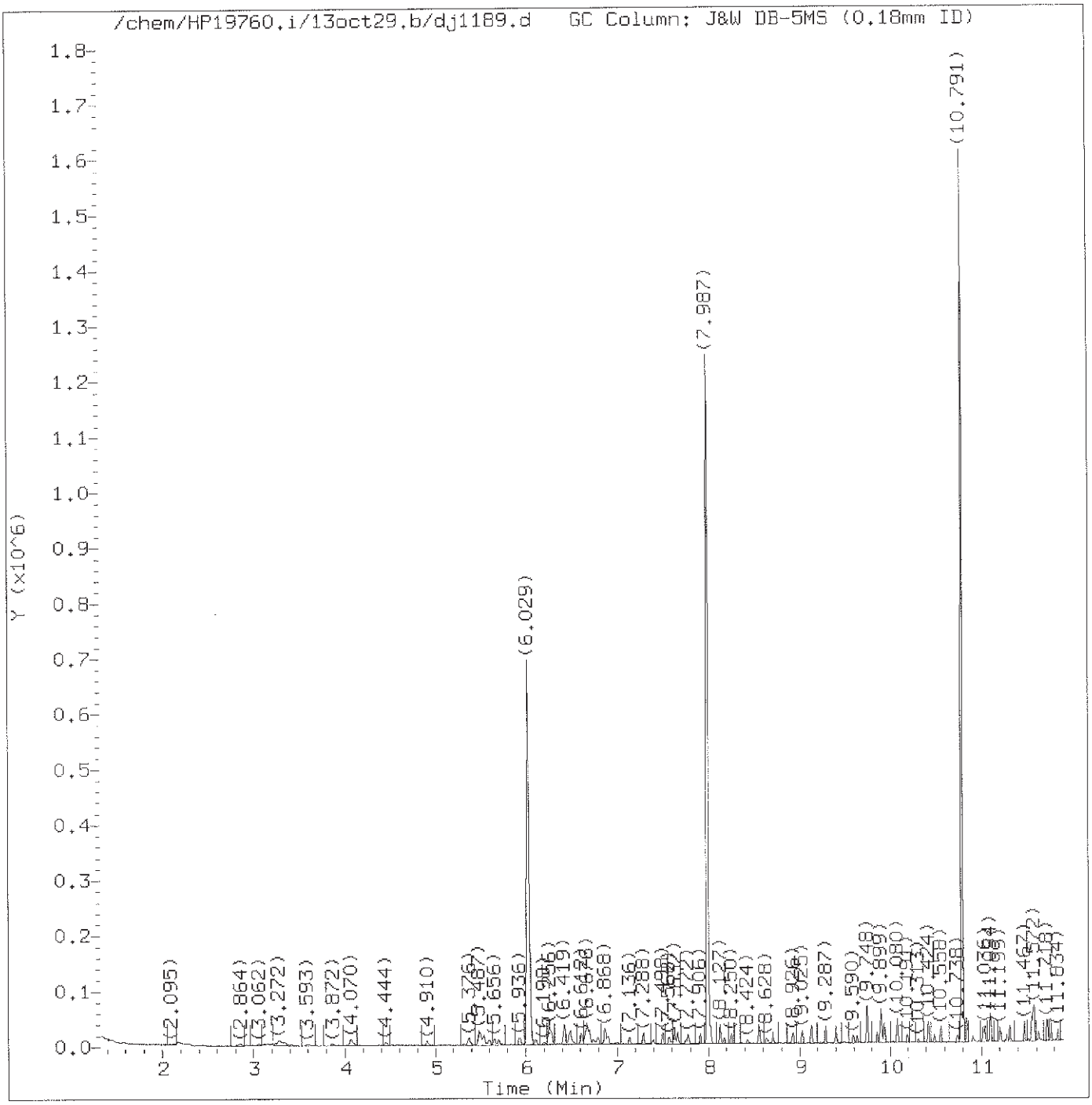
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

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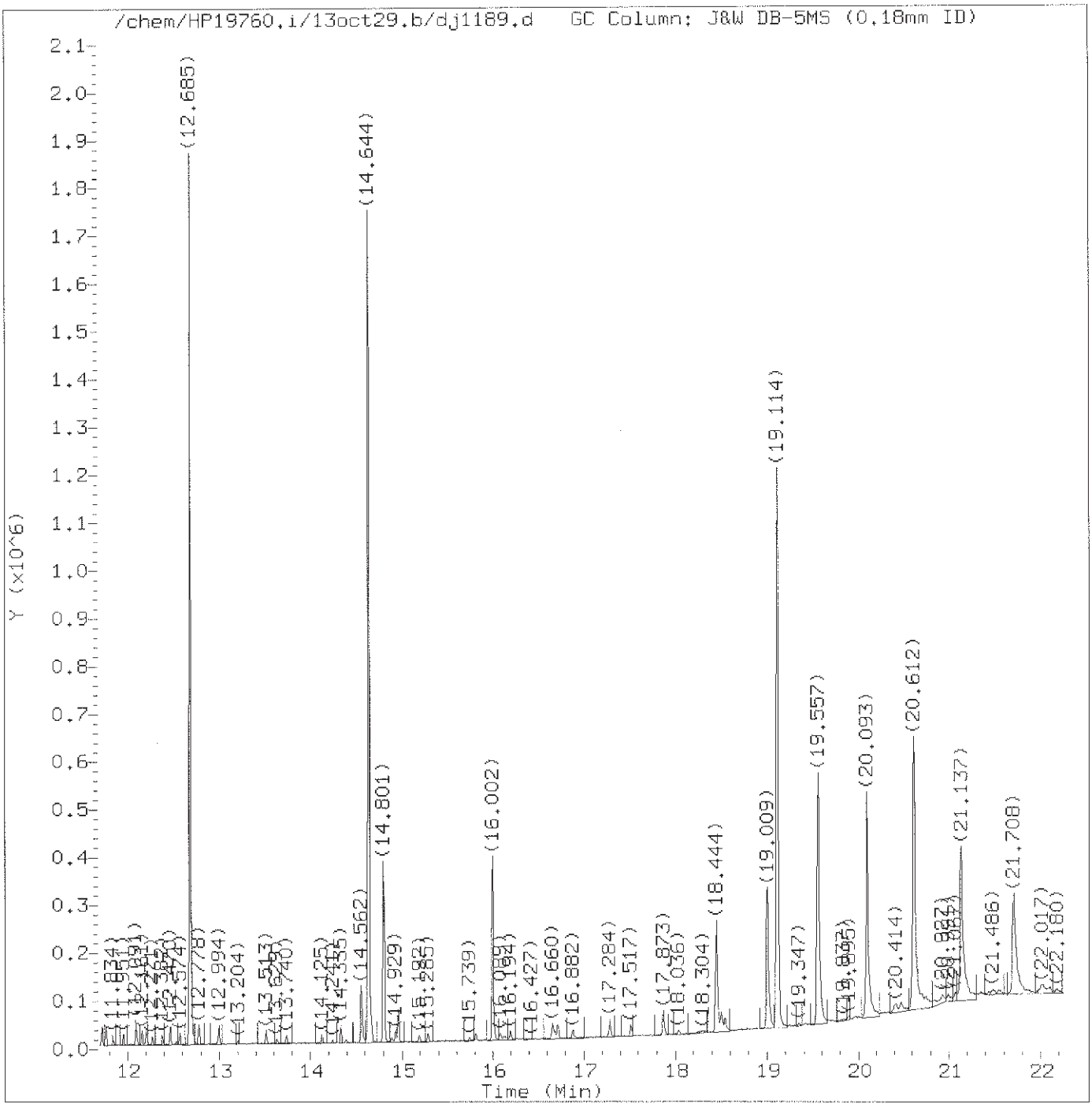
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.570	88	3666M	0.167
2) N-Nitrosodimethylamine	(1)	2.089	74	2809	0.072
3) Pyridine	(1)	2.165	79	10875M	0.164
5) N-Nitrosomethylethylamine	(1)	3.249	88	2617	0.087
4) 2-Picoline	(1)	3.278	93	6815	0.098
6) Methyl methanesulfonate	(1)	3.866	80	2981	0.087
7)$2-Fluorophenol	(1)	4.070	112	9940	0.192
8) N-Nitrosodiethylamine	(1)	4.444	102	1982	0.069
10) Ethyl methanesulfonate	(1)	4.910	109	2866	0.103
11) Benzaldehyde	(1)	5.370	77	5773	0.116
12)$Phenol-d5	(1)	5.487	99	15683	0.220
13)$Phenol-d6	(1)	5.487	99	15683	0.220
14) Phenol	(1)	5.504	94	8874	0.108
15) Aniline	(1)	5.539	93	12406	0.122
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6585	0.101
17) 2-Chlorophenol	(1)	5.702	128	4849	0.095
18) 1,3-Dichlorobenzene	(1)	5.936	146	5661	0.103
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	174606	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5964	0.108
23) Benzyl alcohol	(1)	6.250	108	4655	0.129
24) 1,2-Dichlorobenzene	(1)	6.280	146	5468	0.105
25) Indene	(1)	6.414	115	12134	0.138
26) 2-Methylphenol	(1)	6.431	108	5252	0.103
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	8860	0.110
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	8860	0.110
29) N-Nitrosopyrrolidine	(1)	6.612	100	2905	0.099
30) Acetophenone	(1)	6.653	105	8474	0.106
33) 4-Methylphenol	(1)	6.670	108	6702	0.117
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	5592	0.121
32) N-Nitrosomorpholine	(1)	6.682	56	4914	0.135
34) o-Toluidine	(1)	6.705	106	10085	0.114
35) Hexachloroethane	(1)	6.792	117	2232	0.095
36)$Nitrobenzene-d5	(2)	6.868	82	12836	0.206
37) Nitrobenzene	(2)	6.897	77	6906	0.105
39) N-Nitrosopiperidine	(2)	7.136	114	2867	0.106
40) Isophorone	(2)	7.294	82	12860	0.114
42) 2-Nitrophenol	(2)	7.399	139	1731	0.076
45) 2,4-Dimethylphenol	(2)	7.504	107	5945	0.108
47) Benzoic acid	(2)	7.574	105	6762	3.541
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3063	0.125

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	8784	0.120
49) 2,4-Dichlorophenol	(2)	7.772	162	3993	0.103
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4610	0.106
52)*Naphthalene-d8	(2)	7.987	136	676323	5.000
55) 4-Chloroaniline	(2)	8.127	127	7548	0.126
56) 2,6-Dichlorophenol	(2)	8.133	162	4009	0.107
57) Hexachloropropene	(2)	8.174	213	2326	0.085
58) Hexachlorobutadiene	(2)	8.250	225	2637	0.104
60) Quinoline	(2)	8.547	129	14427	0.151
61) Caprolactam	(2)	8.634	113	1802	0.104
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	4368	0.098
63) 4-Chloro-3-methylphenol	(2)	8.926	107	4803	0.103
64) Safrole	(2)	9.025	162	3942	0.107
67) Hexachlorocyclopentadiene	(3)	9.398	237	1492	0.070
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	5668	0.125
69) cis-Isosafrole	(3)	9.491	162	530M	0.080
70) 2,4,6-Trichlorophenol	(3)	9.590	196	2714	0.095
71) 2,4,5-Trichlorophenol	(3)	9.643	196	3036	0.103
72)$2-Fluorobiphenyl	(3)	9.748	172	26016	0.267
74) Isosafrole	(3)	9.858	162	3898	0.105
73) trans-Isosafrole	(3)	9.858	162	3898	0.105
75) 1,1'-Biphenyl	(3)	9.893	154	13250	0.117
76) 2-Chloronaphthalene	(3)	9.899	162	10941	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12390	0.145
83) 2-Nitroaniline	(3)	10.074	138	2125	0.079
82) Diphenyl ether	(3)	10.080	170	8115	0.130
84) 1,4-Naphthoquinone	(3)	10.196	158	2996	0.080
85) 1,4-Dinitrobenzene	(3)	10.319	168	740M	0.583
86) Dimethylphthalate	(3)	10.424	163	12446	0.127
87) 1,3-Dinitrobenzene	(3)	10.430	168	1007M	0.060
88) 2,6-Dinitrotoluene	(3)	10.494	165	1765	0.081
91) 3-Nitroaniline	(3)	10.738	138	1951	0.078
92)*Acenaphthene-d10	(3)	10.791	164	389992	5.000
94) 2,4-Dinitrophenol	(3)	10.907	184	2068	3.927
96) 4-Nitrophenol	(3)	11.018	109	4568	0.287
95) Pentachlorobenzene	(3)	11.036	250	4705	0.130
97) Dibenzofuran	(3)	11.094	168	16519	0.128
98) 2,4-Dinitrotoluene	(3)	11.100	165	2005	0.072
99) 1-Naphthylamine	(3)	11.199	143	9497	0.101
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2016	0.087

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) 2-Naphthylamine	(3)	11.310	143	10595	0.110
102) Diethylphthalate	(3)	11.467	149	11373	0.117
104) Thionazin	(3)	11.560	107	2606	0.125
106) 5-Nitro-o-toluidine	(3)	11.572	152	2160	0.077
107) 4-Nitroaniline	(3)	11.572	138	2057	0.080
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6692	0.130
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	2423	1.691
109) N-Nitrosodiphenylamine	(4)	11.723	169	10283	0.122
110) NDPA as diphenylamine	(4)	11.723	169	10283	0.122
111) 1,2-Diphenylhydrazine	(4)	11.764	77	14760	0.111
112)$2,4,6-Tribromophenol	(3)	11.840	330	1914	0.187
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	2108	0.110
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	316M	1.317
117) Diallate (peak 1)	(4)	12.085	86	5354	0.081
118) Phorate	(4)	12.091	75	8810	0.112
119) Phenacetin	(4)	12.102	108	4220	0.075
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3113	0.117
121) Diallate (peak 2)	(4)	12.190	86	674M	0.024
123) Dimethoate	(4)	12.271	87	4204	0.082
124) Atrazine	(4)	12.382	200	2307	0.084
125) Pentachlorophenol	(4)	12.458	266	986	0.712
126) Pentachloronitrobenzene	(4)	12.470	237	1094M	0.089
127) 4-Aminobiphenyl	(4)	12.475	169	10255	0.097
129) Pronamide	(4)	12.574	173	3949	0.089
130)*Phenanthrene-d10	(4)	12.685	188	676898	5.000
133) Dinoseb	(4)	12.720	211	414M	1.336
135) Carbazole	(4)	12.994	167	15785	0.108
136) Methyl parathion	(4)	13.204	109	1786	0.273
137) Di-n-butylphthalate	(4)	13.513	149	14623	0.085
138) Parathion	(4)	13.740	109	1235M	0.112
140) Isodrin	(4)	14.125	193	2512	0.139
144) Benzidine	(5)	14.562	184	64682	0.595
145)*Pyrene-d10	(5)	14.644	212	846618	5.000
149)$Terphenyl-d14	(5)	14.958	244	27173	0.257
150) p-Dimethylaminoazobenzene	(5)	15.192	225	1978	0.320
151) Chlorobenzilate	(5)	15.291	139	4391	0.087
152) 3,3'-Dimethylbenzidine	(5)	15.739	212	4629	0.043
153) Butylbenzylphthalate	(5)	15.815	149	5061	0.066
156) 2-Acetylaminofluorene	(5)	16.147	181	2175	0.847
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	3586	0.065

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	1582M	0.054
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	6775	0.067
165) 6-Methylchrysene	(5)	17.517	242	11409	0.108
166) Di-n-octylphthalate	(6)	18.042	149	6684	0.280
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	4971	0.081
172)*Perylene-d12	(6)	19.114	264	585884	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	6441	0.107
174) Dibenz(a,h)acridine	(6)	20.402	279	5356	0.064
175) Dibenz(a,j)acridine	(6)	20.472	279	5840	0.065
179) Diallate TRANS/CIS	(4)			6028	0.104

M = Compound was manually integrated.
* = Compound is an internal standard.

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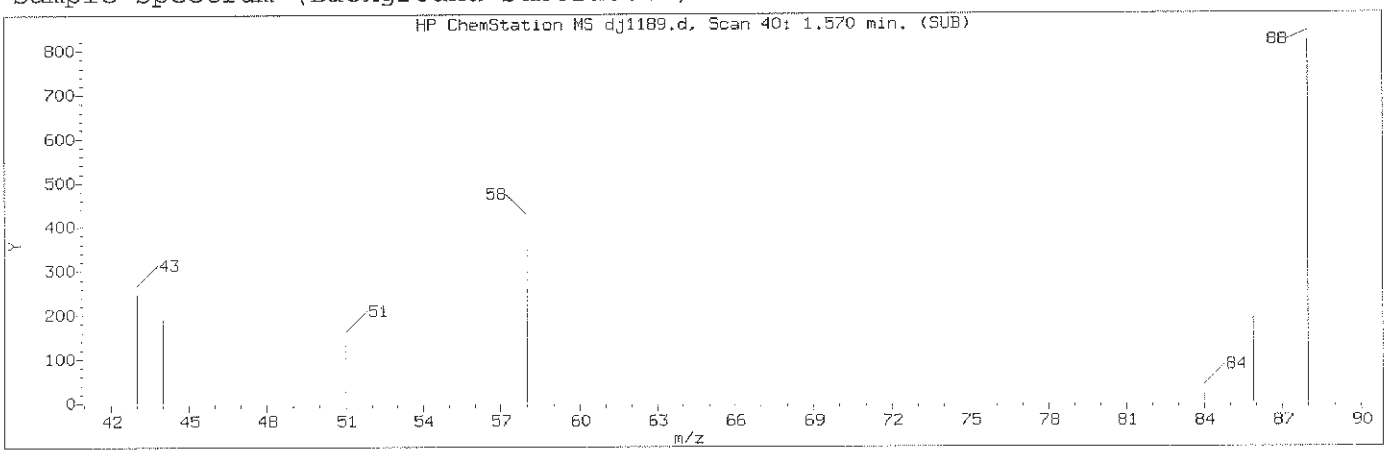
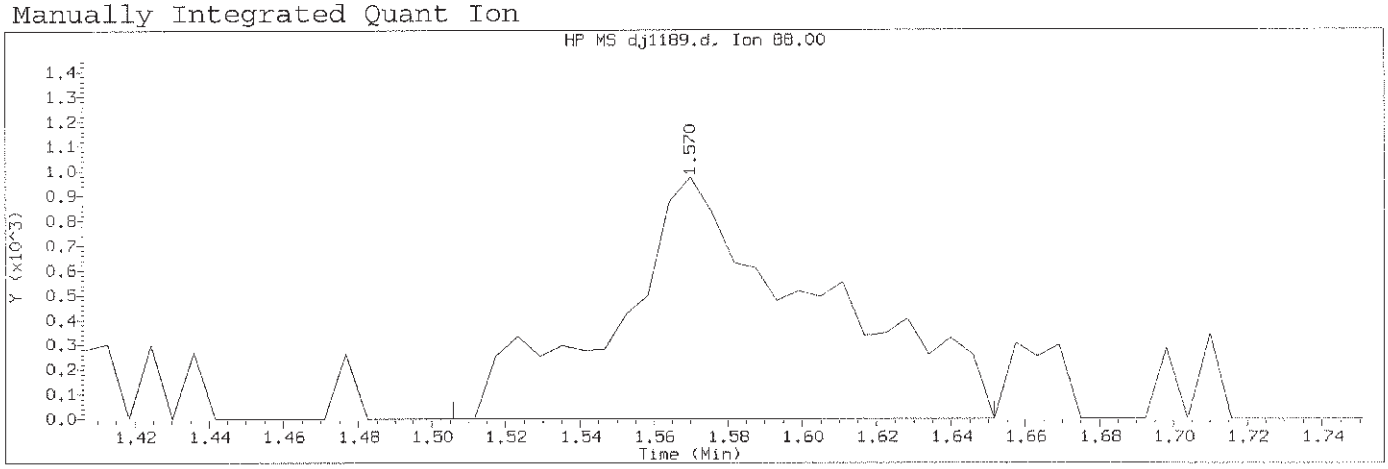
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 40		
Retention Time (minutes)	: 1.570		
Quant Ion	: 88.00		
Area (flag)	: 3666M		
On-Column Amount (ng/ul)	: 0.1668		
Integration start scan	: 28	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

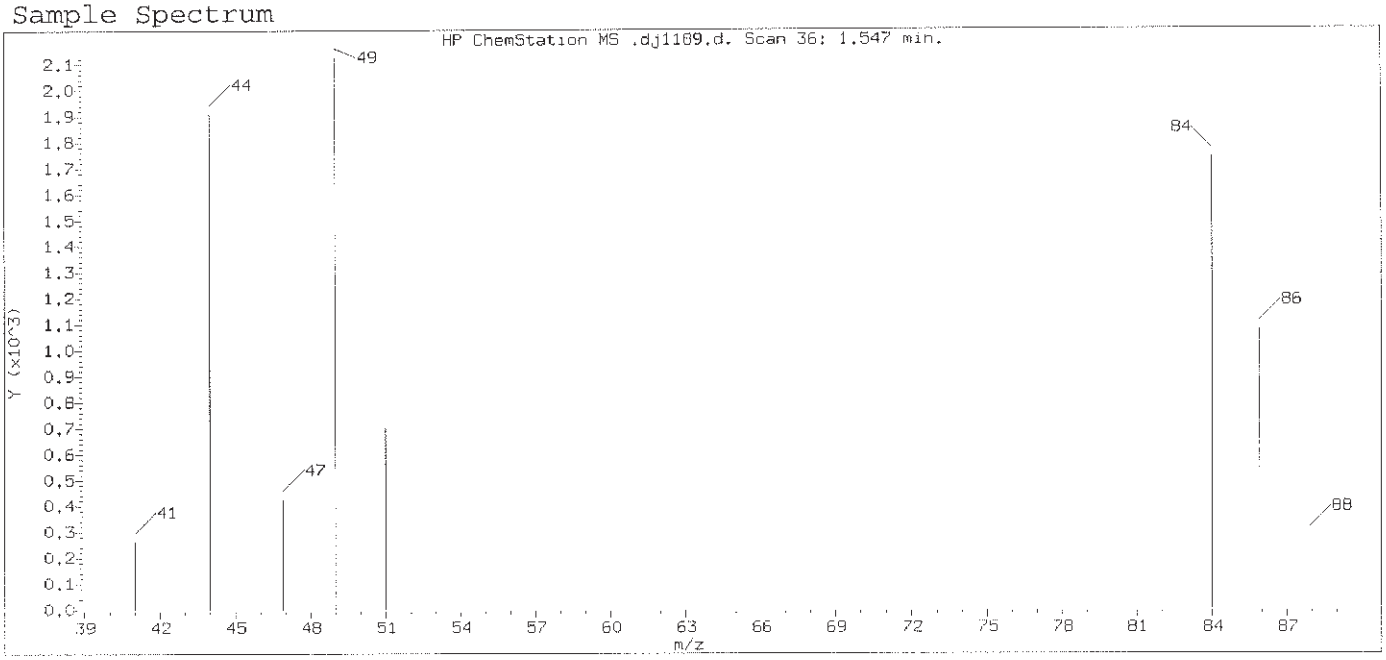
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: _____

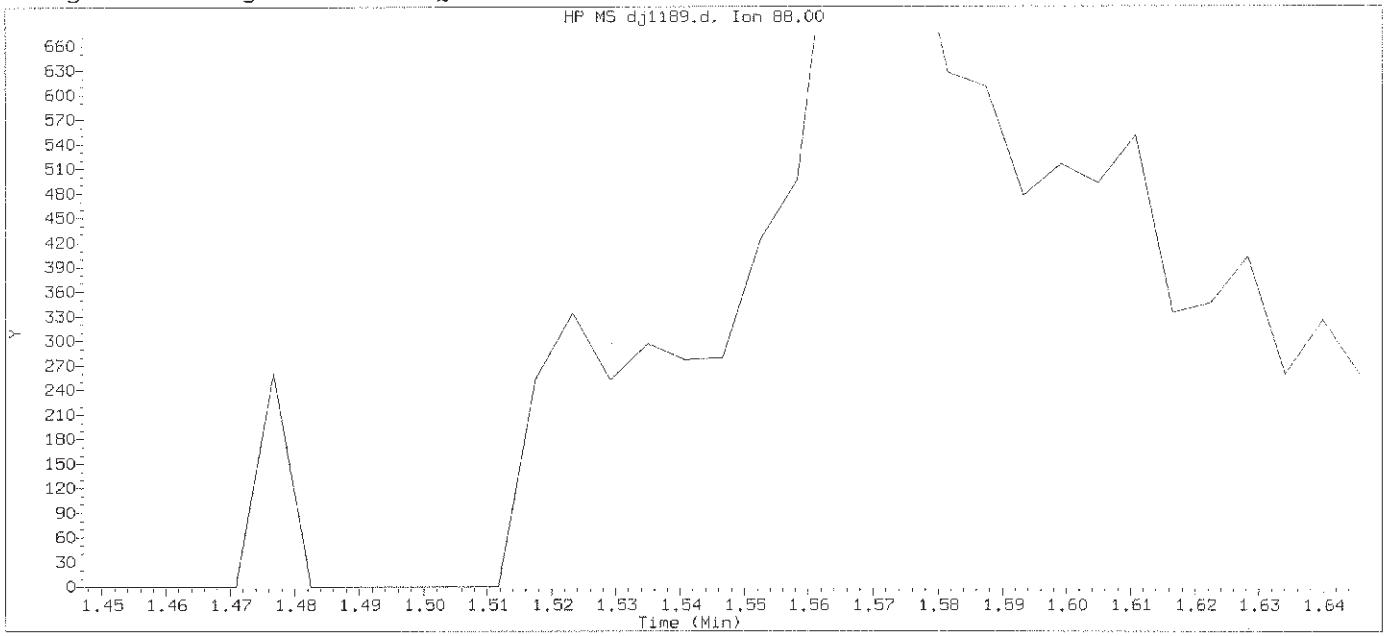
OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

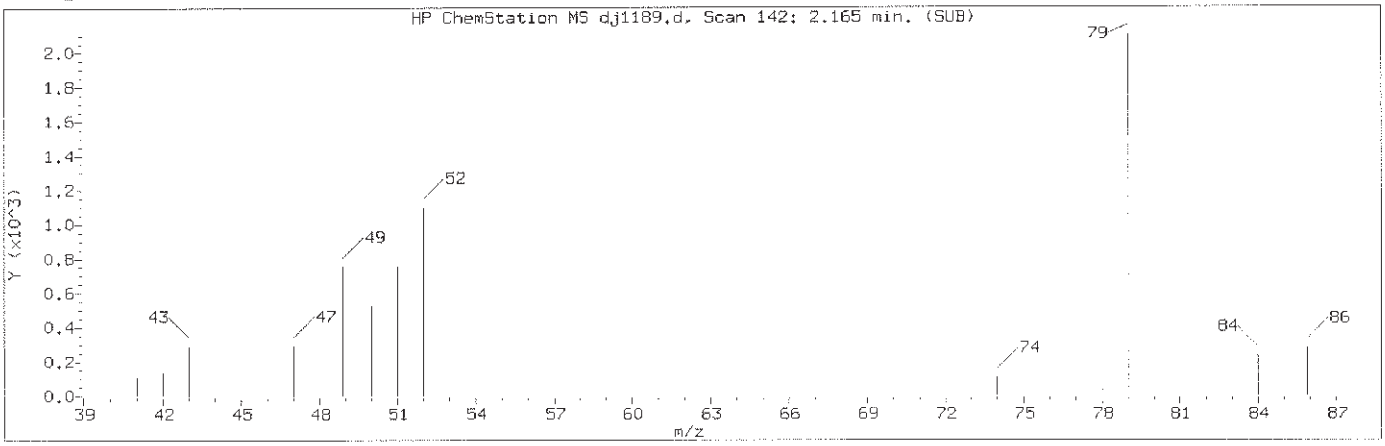
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

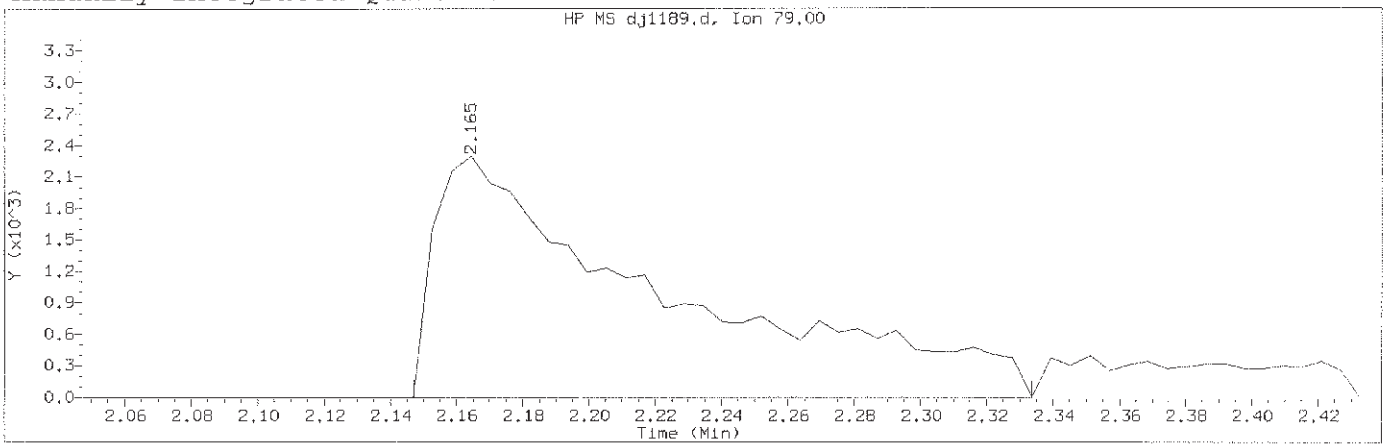
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area (flag)	: 10875M		
On-Column Amount (ng/ul)	: 0.1643		
Integration start scan	: 138	Integration stop scan:	170
Y at integration start	: 0	Y at integration end:	0

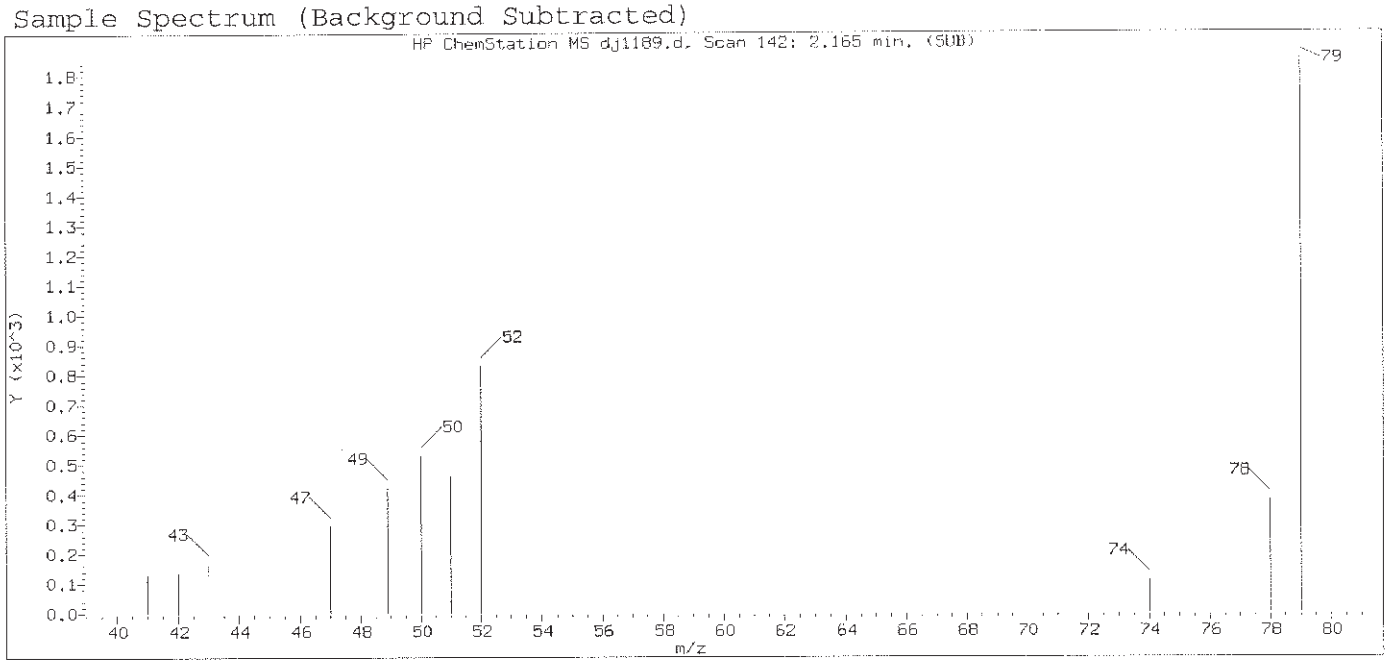
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

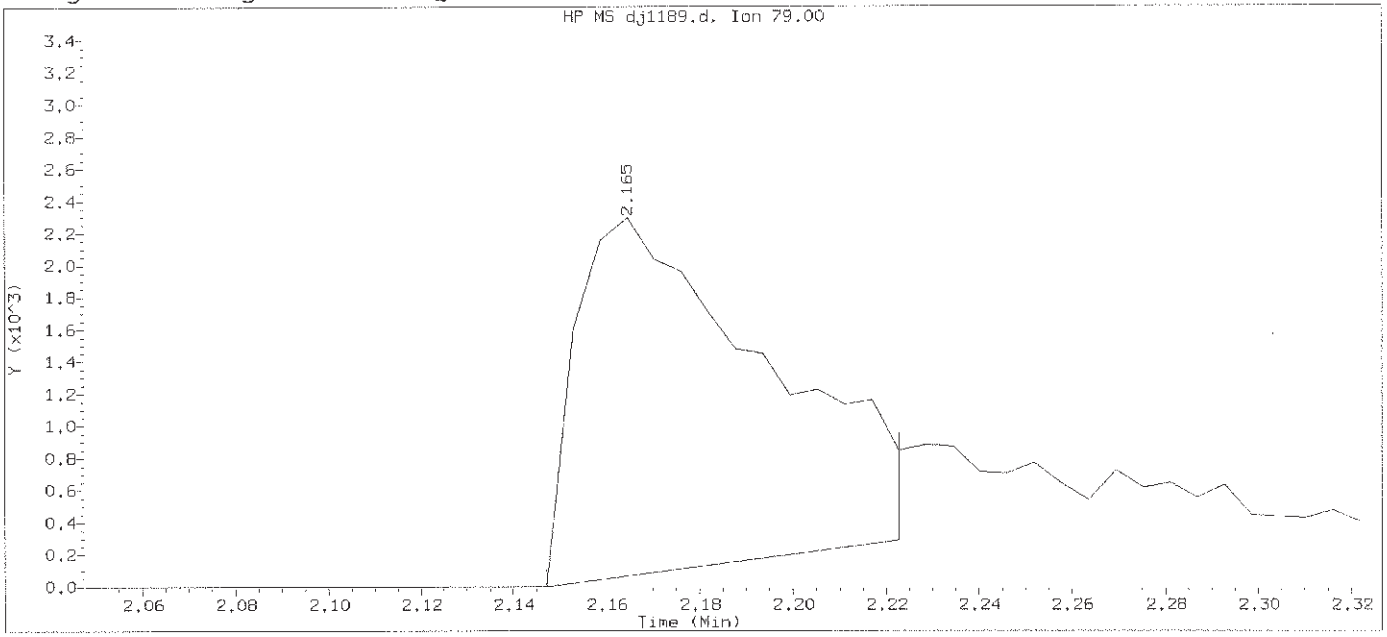
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area	: 6269		
On-column Amount (ng/ul)	: 0.0947		
Integration start scan	: 138	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	288

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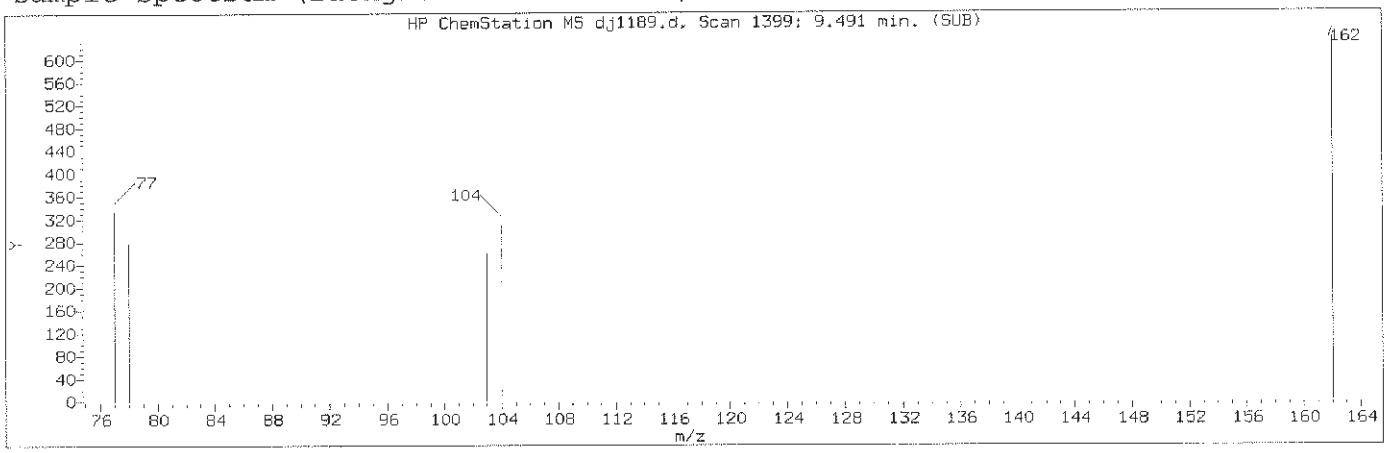
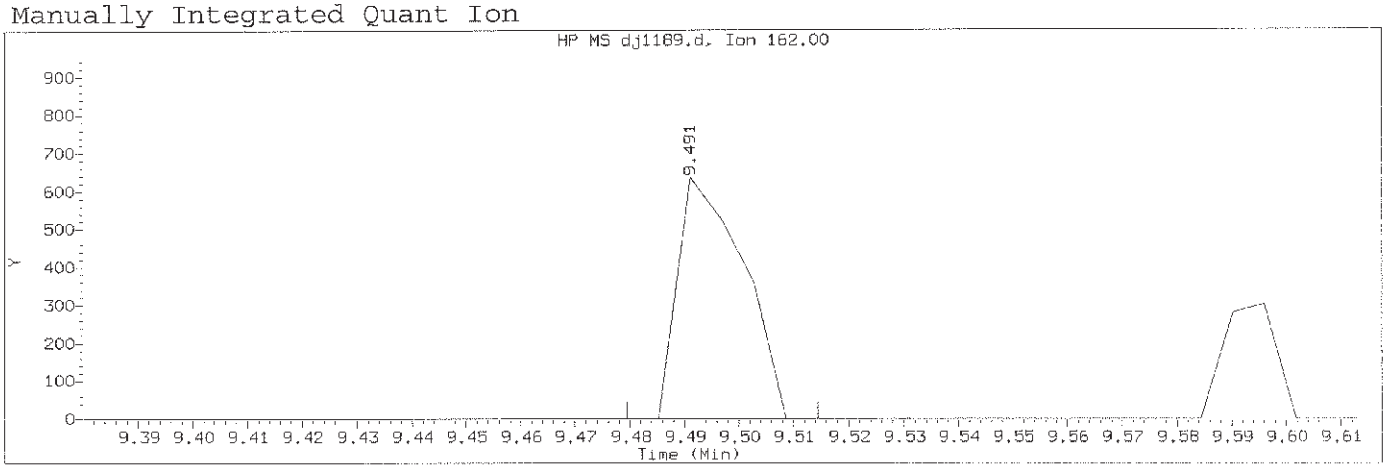
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1399		
Retention Time (minutes)	: 9.491		
Quant Ion	: 162.00		
Area (flag)	: 530M		
On-Column Amount (ng/ul)	: 0.0799		
Integration start scan	: 1396	Integration stop scan:	1402
Y at integration start	: 0	Y at integration end:	0

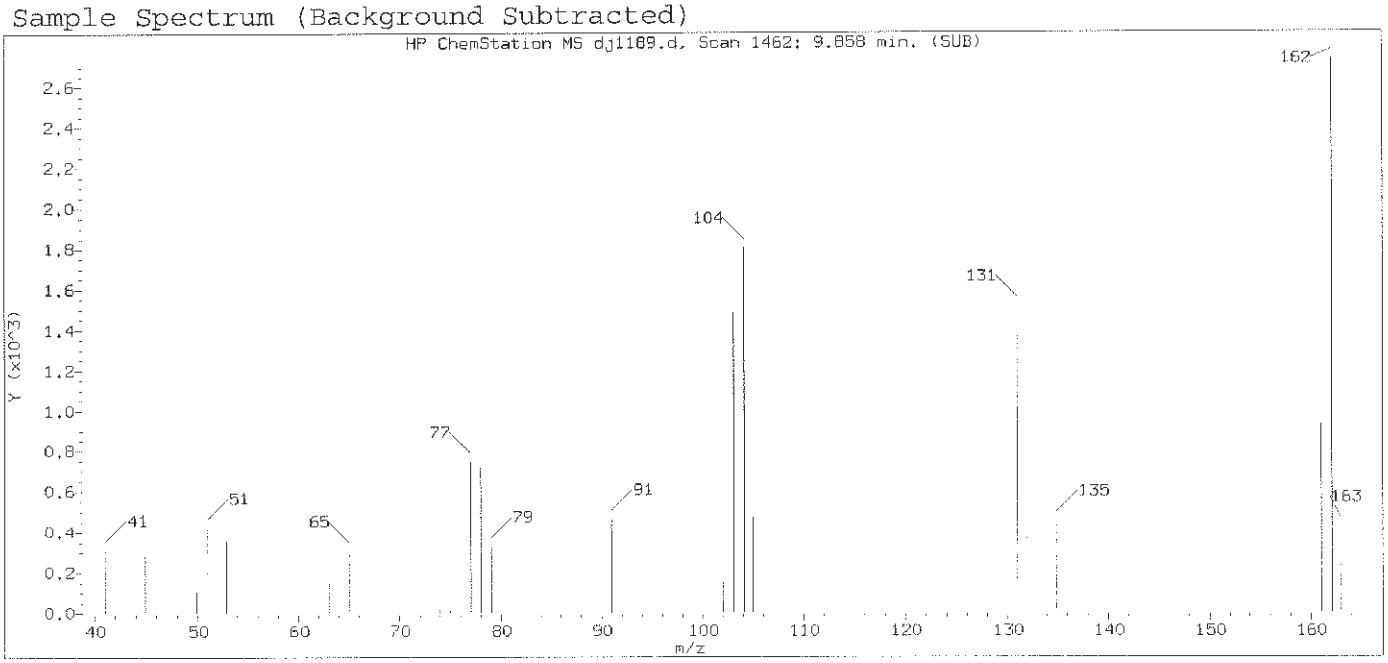
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

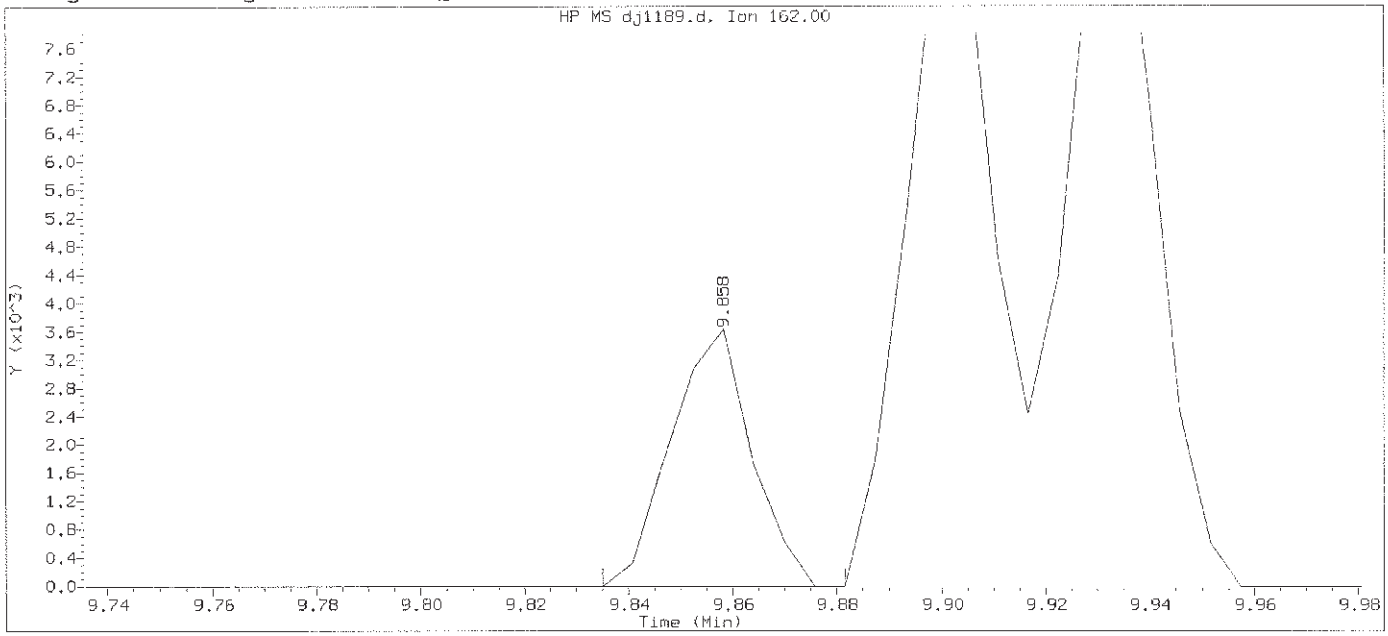
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

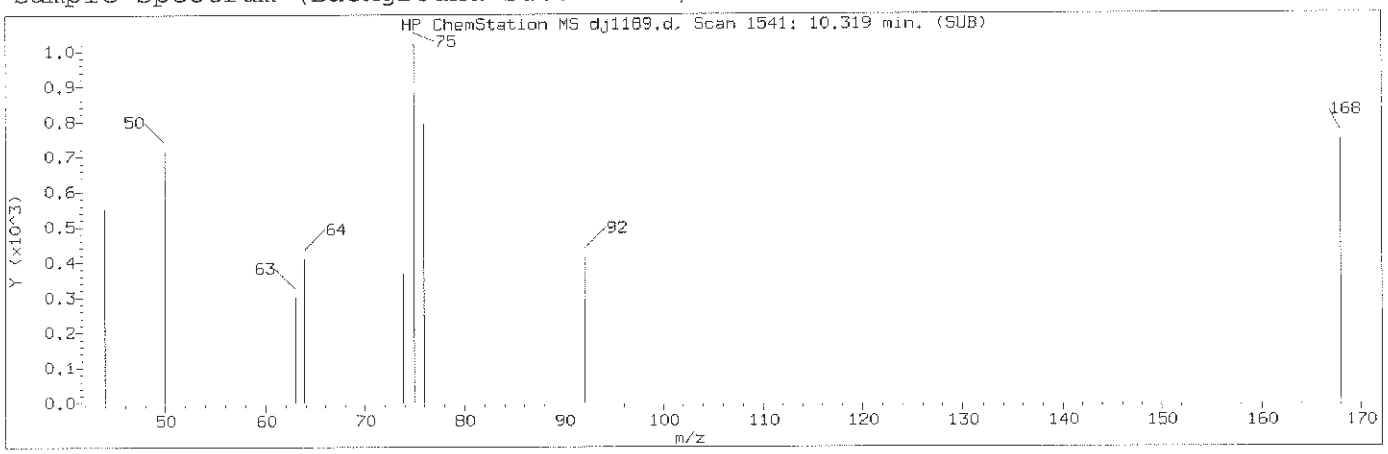
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

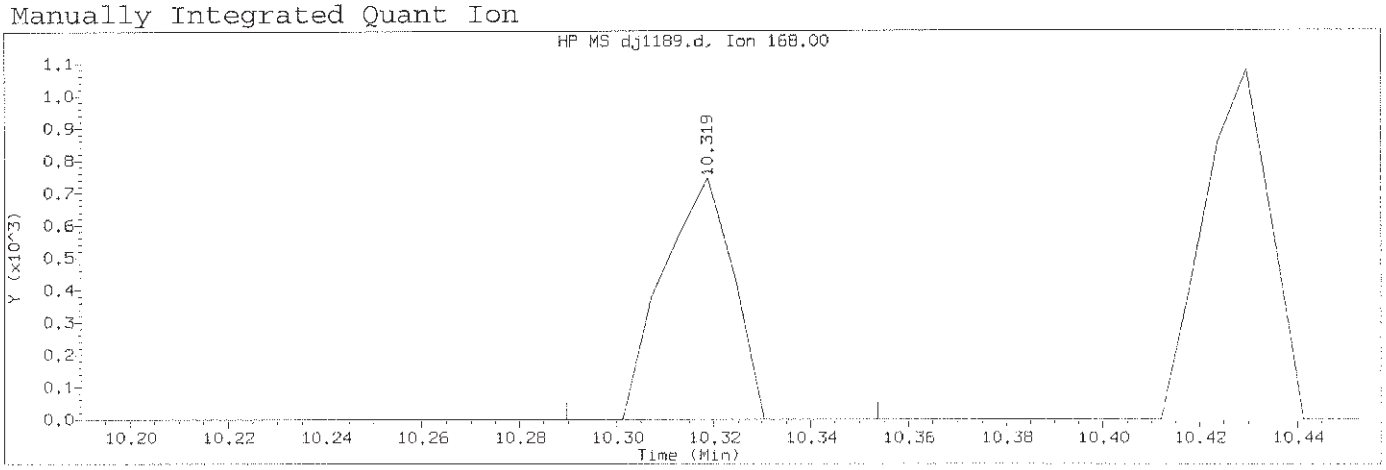
Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1462		
Retention Time (minutes)	: 9.858		
Quant Ion	: 162.00		
Area	: 3898		
On-column Amount (ng/ul)	: 0.5875		
Integration start scan	: 1457	Integration stop scan:	1465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 85		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1541		
Retention Time (minutes)	: 10.319		
Quant Ion	: 168.00		
Area (flag)	: 740M		
On-Column Amount (ng/ul)	: 0.5829		
Integration start scan	: 1535	Integration stop scan:	1546
Y at integration start	: 0	Y at integration end:	0

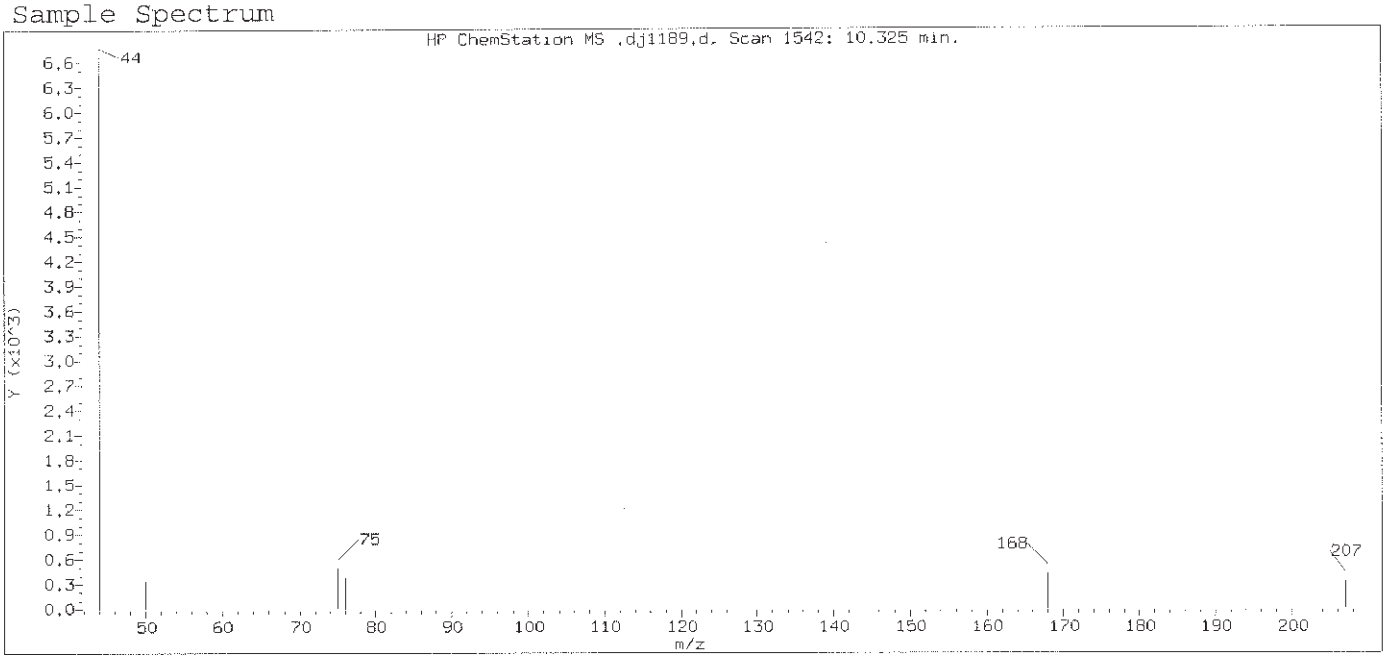
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

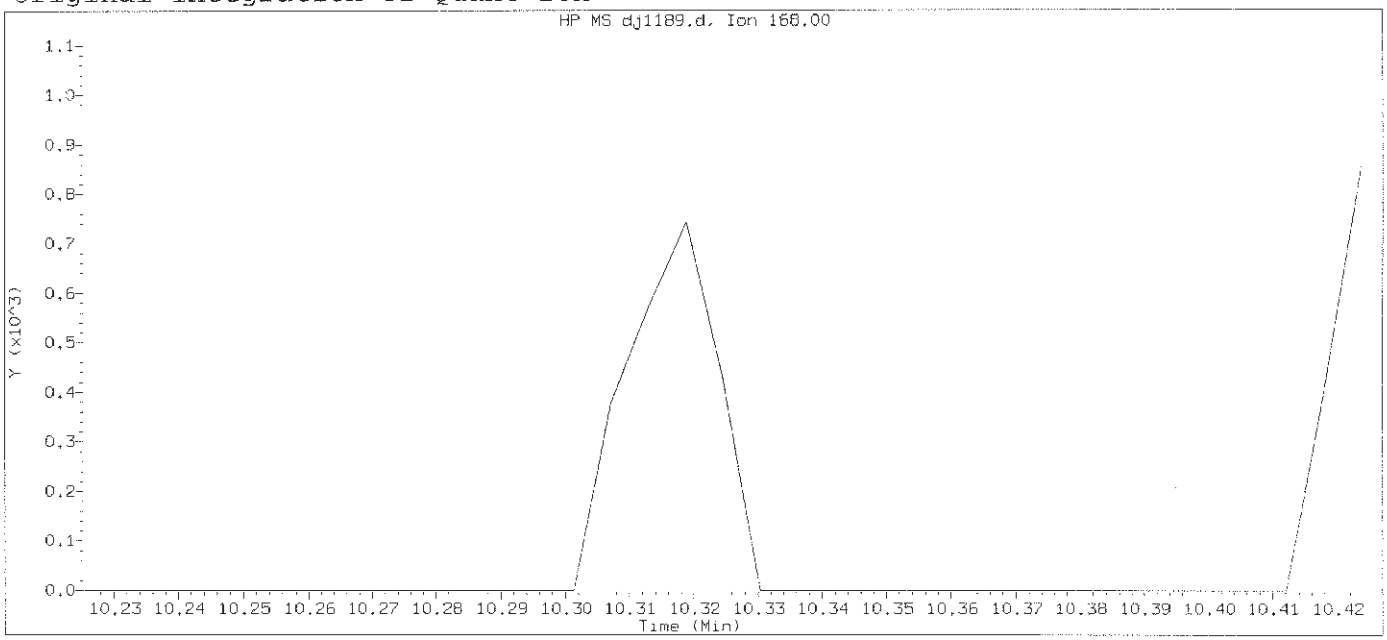
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

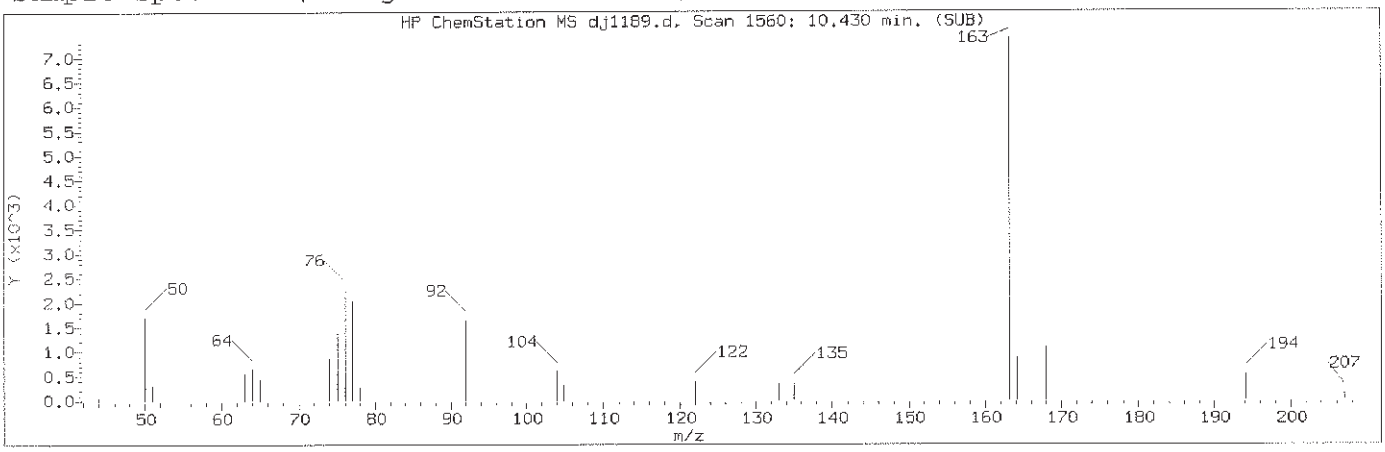
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

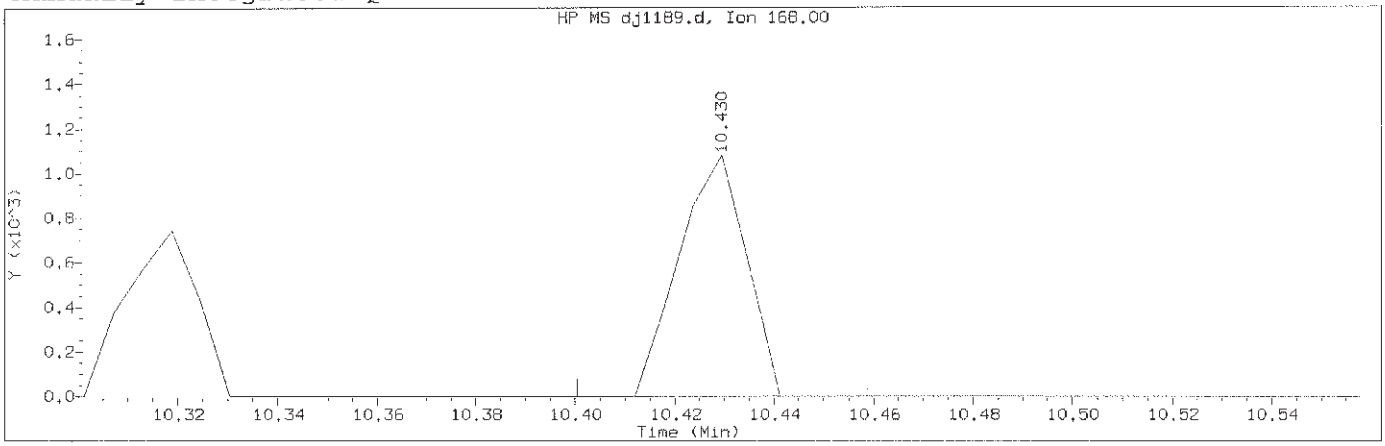
Compound Number : 85
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 10.325
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 87		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1560		
Retention Time (minutes)	: 10.430		
Quant Ion	: 168.00		
Area (flag)	: 1007M		
On-Column Amount (ng/ul)	: 0.0598		
Integration start scan	: 1554	Integration stop scan:	1564
Y at integration start	: 0	Y at integration end:	0

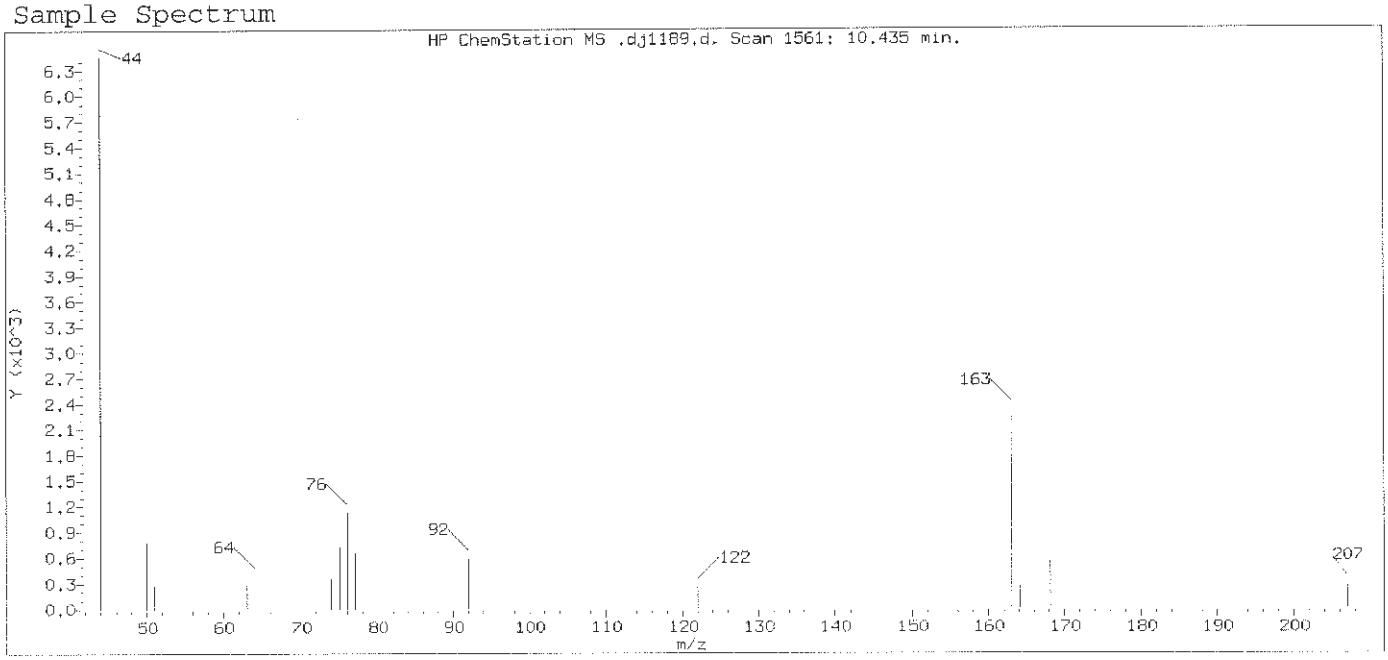
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

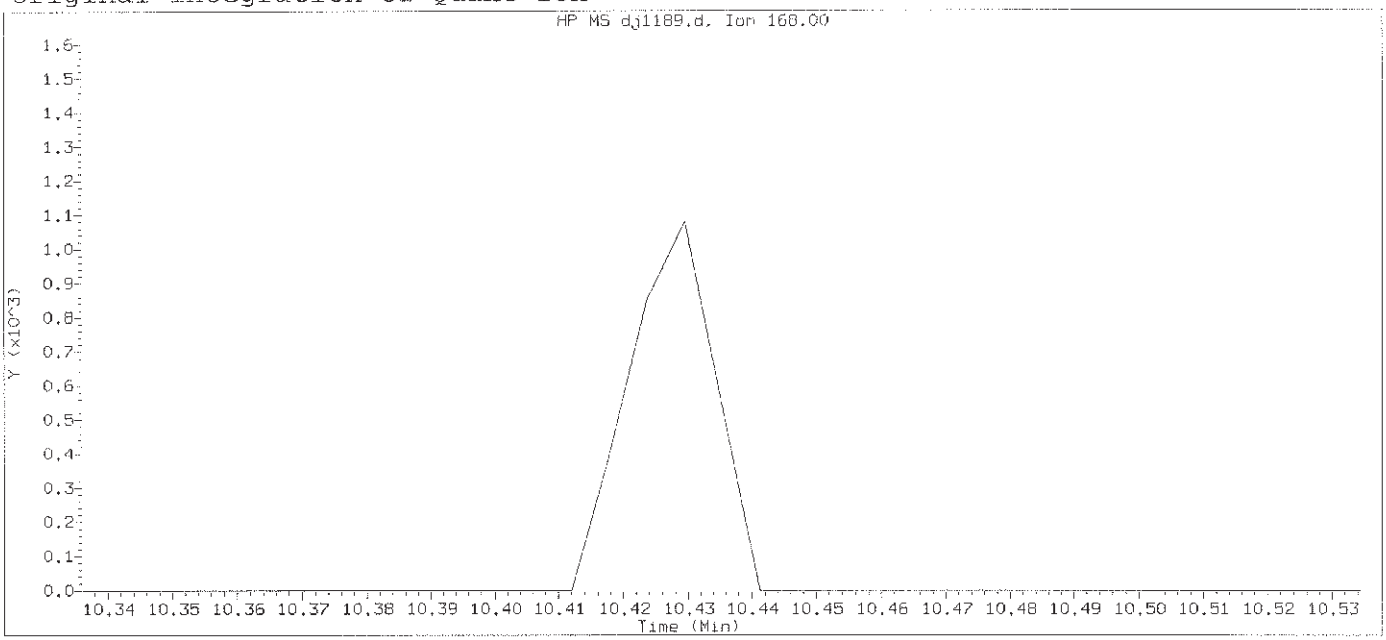
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

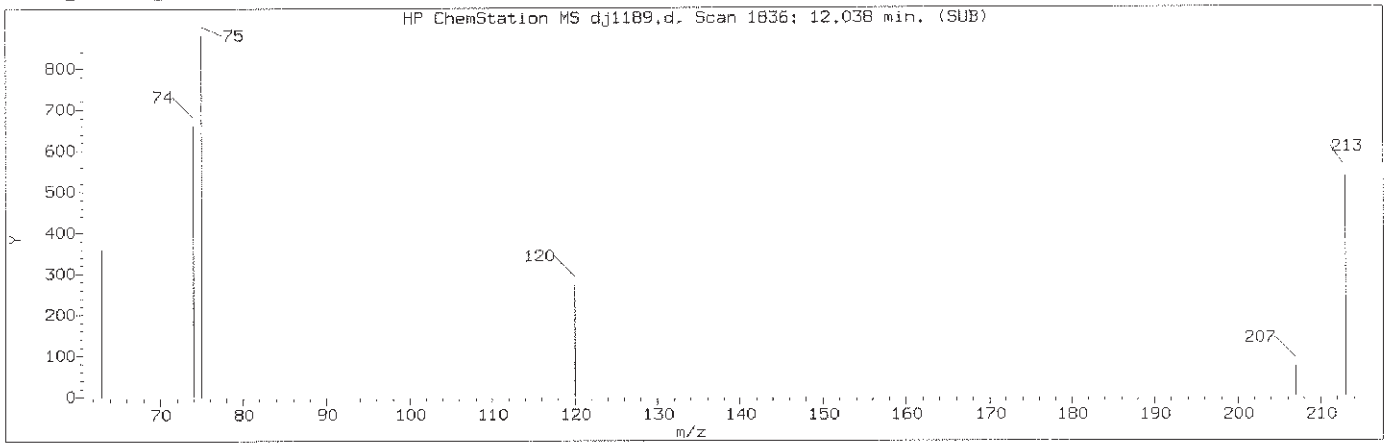
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

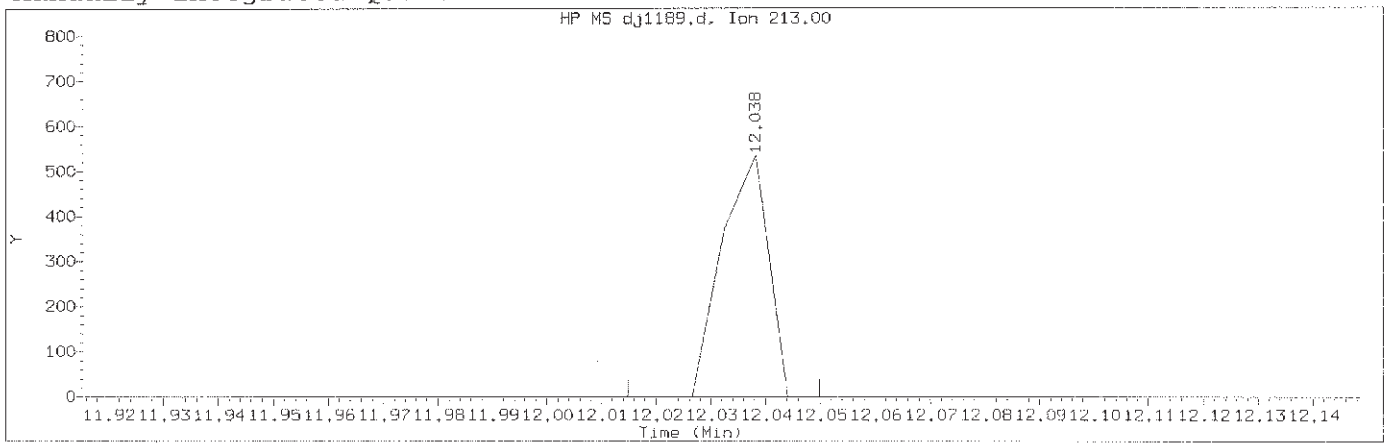
Compound Number : 87
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 10.435
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 116		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1836		
Retention Time (minutes)	: 12.038		
Quant Ion	: 213.00		
Area (flag)	: 316M		
On-Column Amount (ng/ul)	: 1.3173		
Integration start scan	: 1831	Integration stop scan:	1837
Y at integration start	: 0	Y at integration end:	0

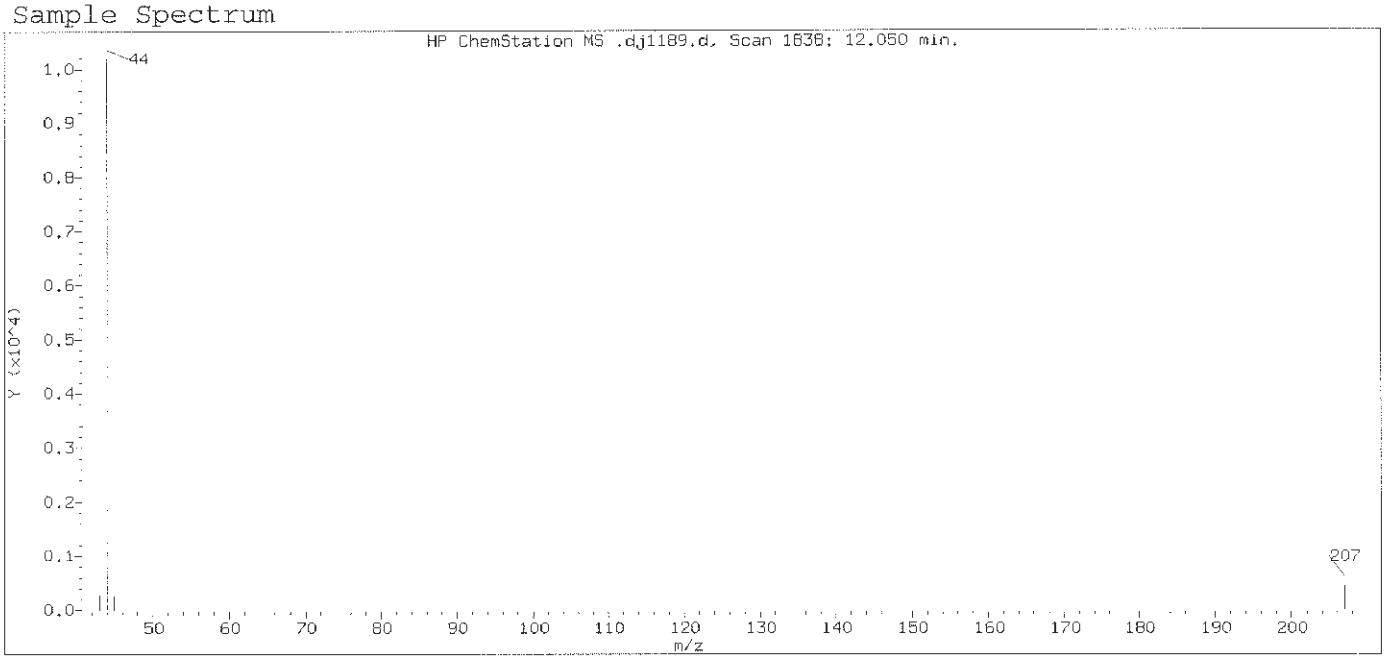
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

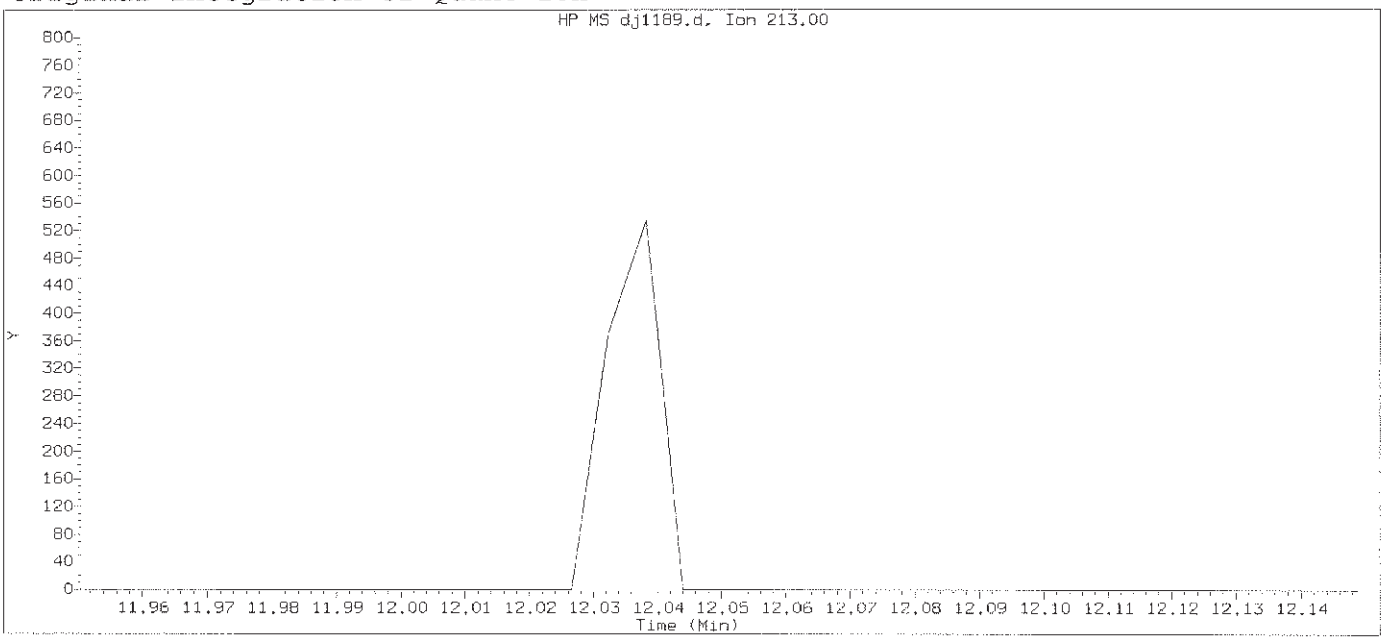
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

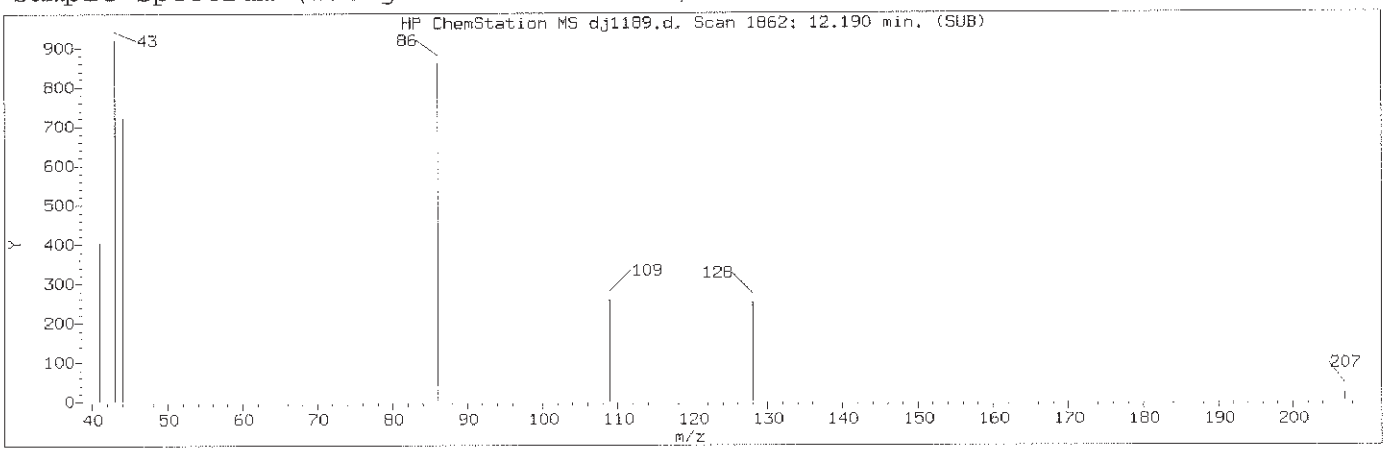
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

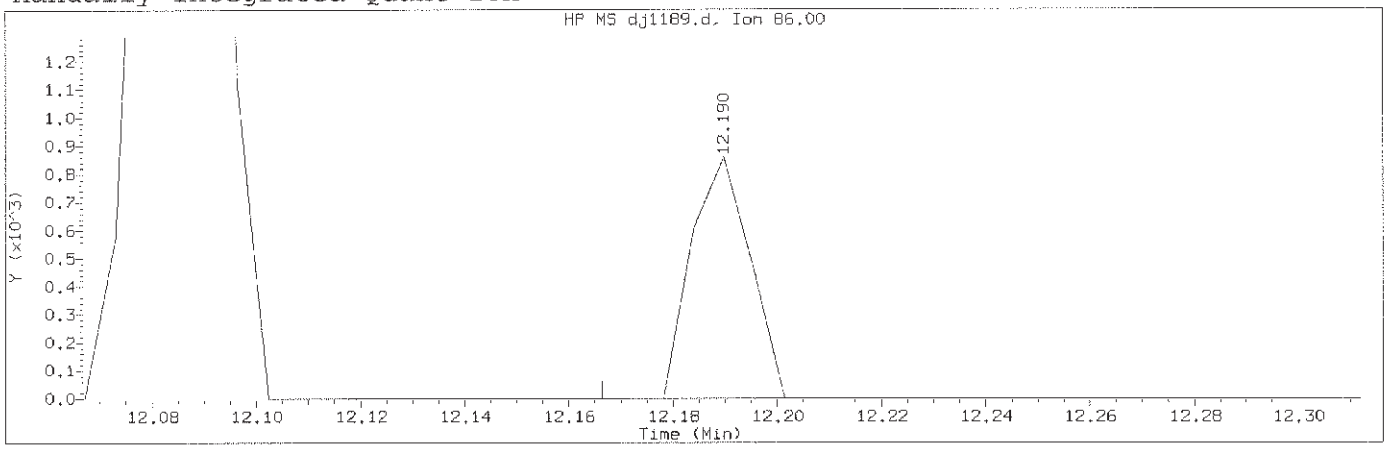
Compound Number : 116
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.050
Quant Ion : 213.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5md1a111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1862		
Retention Time (minutes)	: 12.190		
Quant Ion	: 86.00		
Area (flag)	: 674M		
On-Column Amount (ng/ul)	: 0.0238		
Integration start scan	: 1857	Integration stop scan:	1865
Y at integration start	: 0	Y at integration end:	0

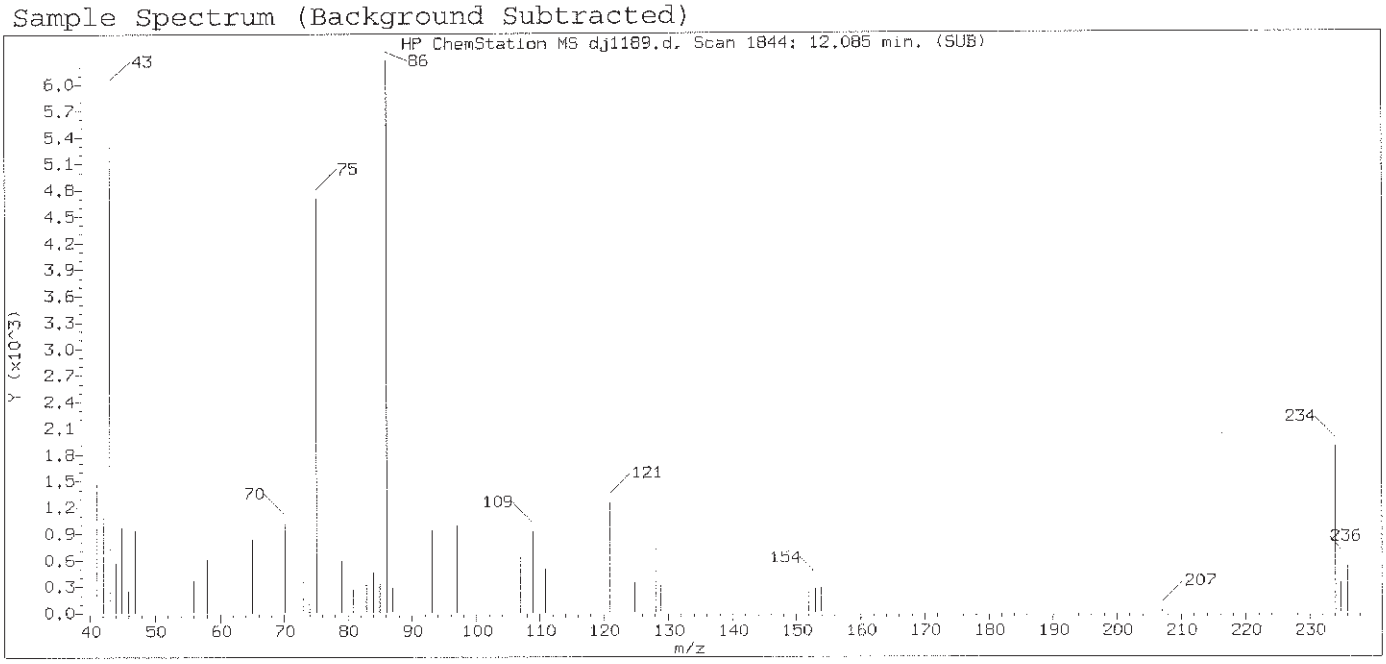
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

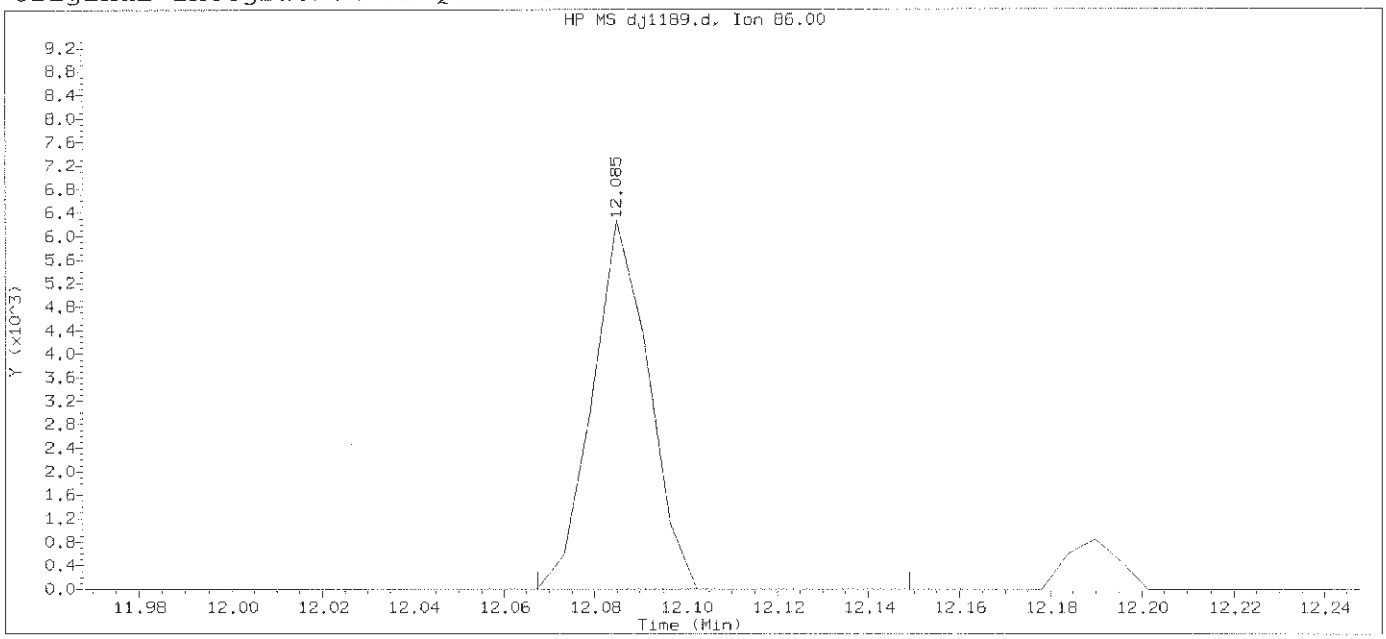
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

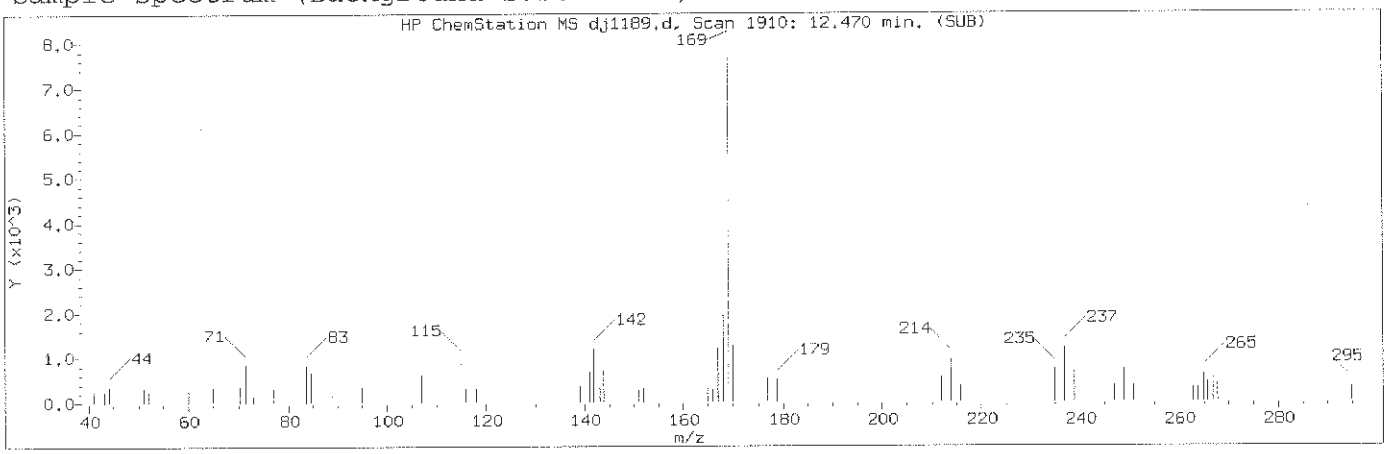
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

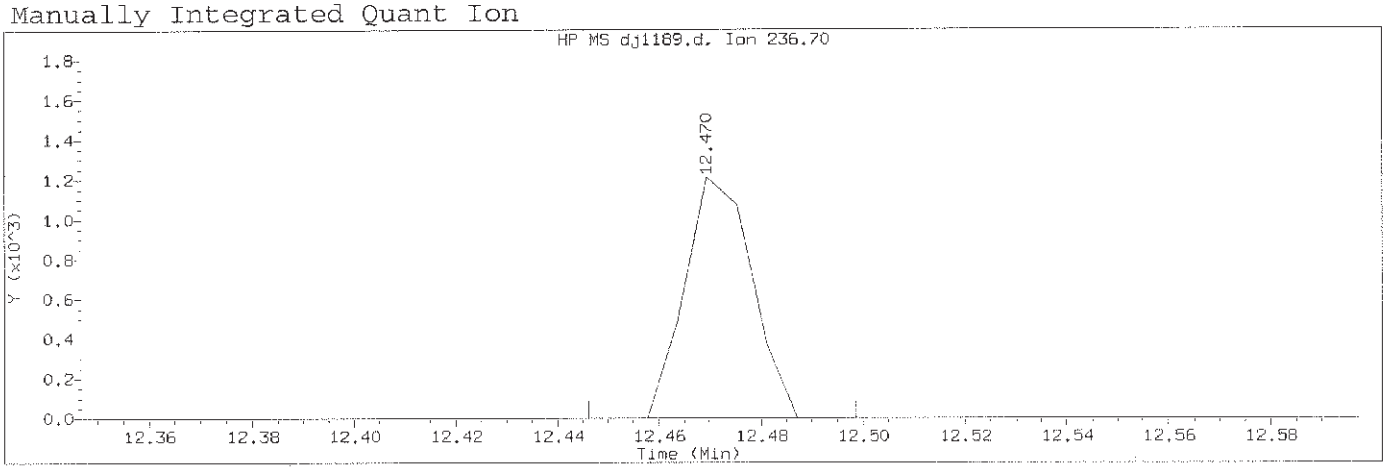
Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1844		
Retention Time (minutes)	: 12.085		
Quant Ion	: 86.00		
Area	: 5354		
On-column Amount (ng/ul)	: 0.1888		
Integration start scan	: 1840	Integration stop scan:	1854
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 126		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1910		
Retention Time (minutes)	: 12.470		
Quant Ion	: 237.00		
Area (flag)	: 1094M		
On-Column Amount (ng/ul)	: 0.0892		
Integration start scan	: 1905	Integration stop scan:	1914
Y at integration start	: 0	Y at integration end:	0

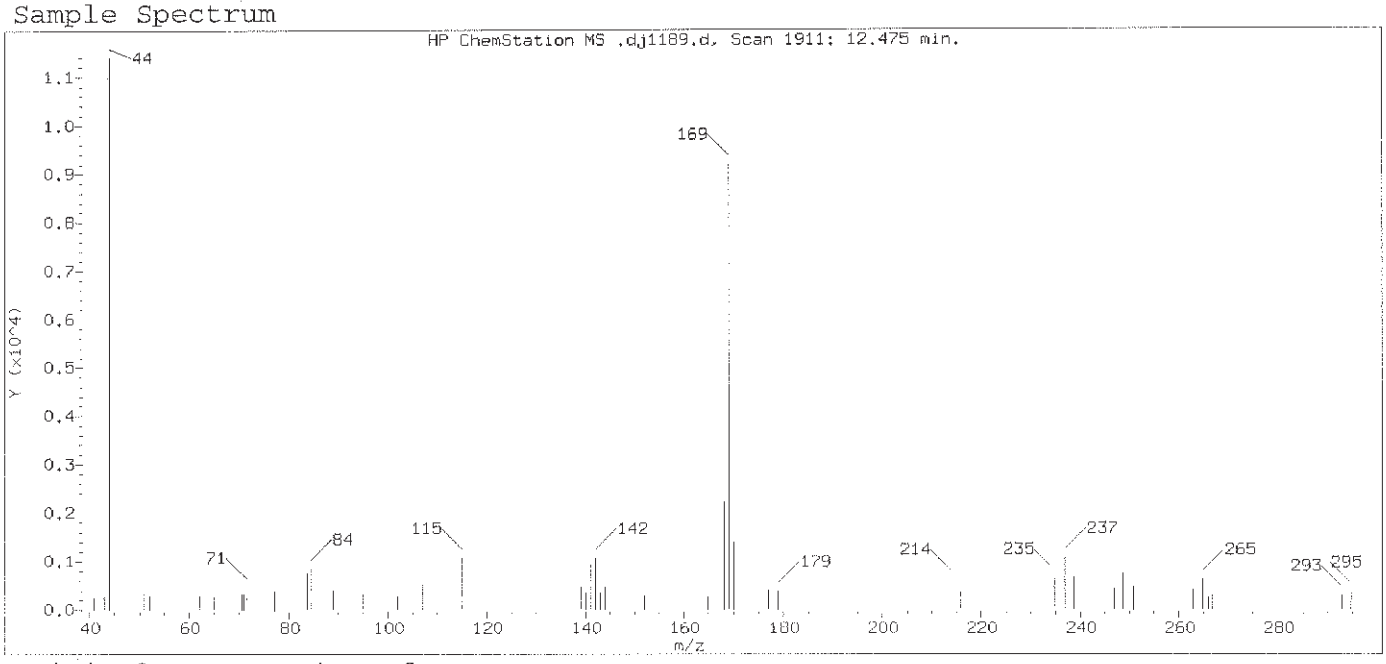
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

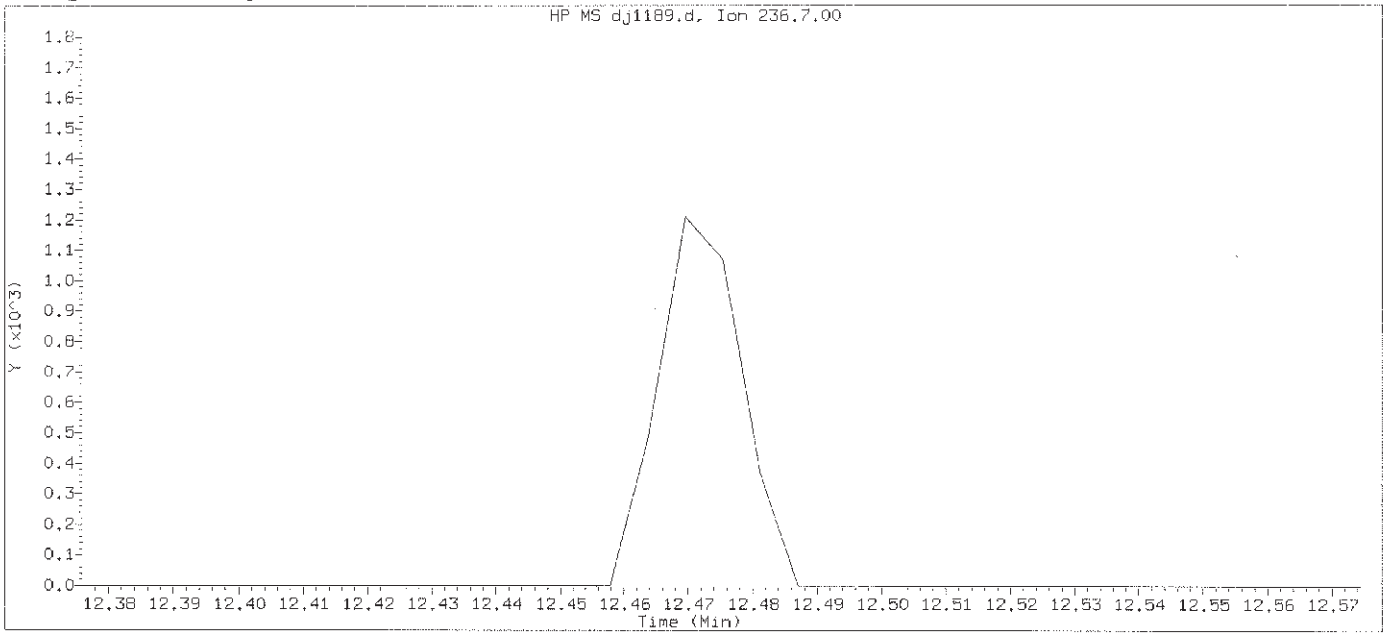
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

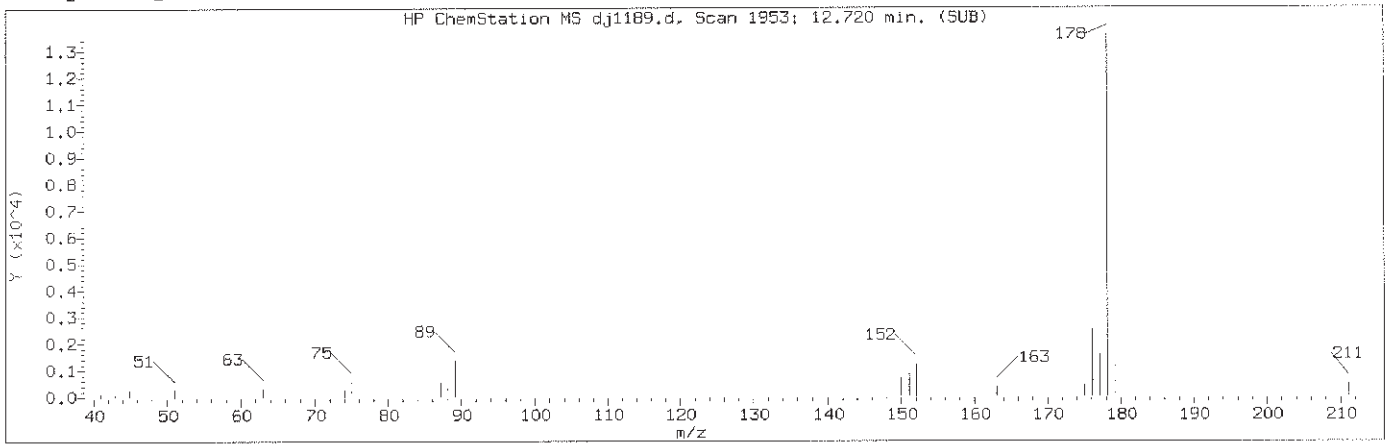
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

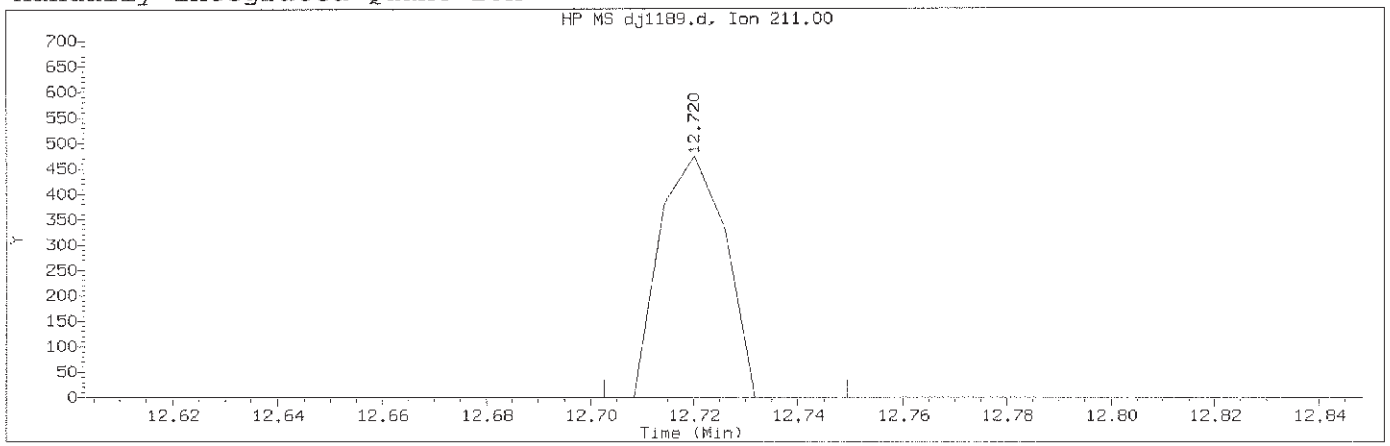
Compound Number : 126
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 12.475
Quant Ion : 237.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 133		
Compound Name	: Dinoseb		
Scan Number	: 1953		
Retention Time (minutes)	: 12.720		
Quant Ion	: 211.00		
Area (flag)	: 414M		
On-Column Amount (ng/ul)	: 1.3360		
Integration start scan	: 1949	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

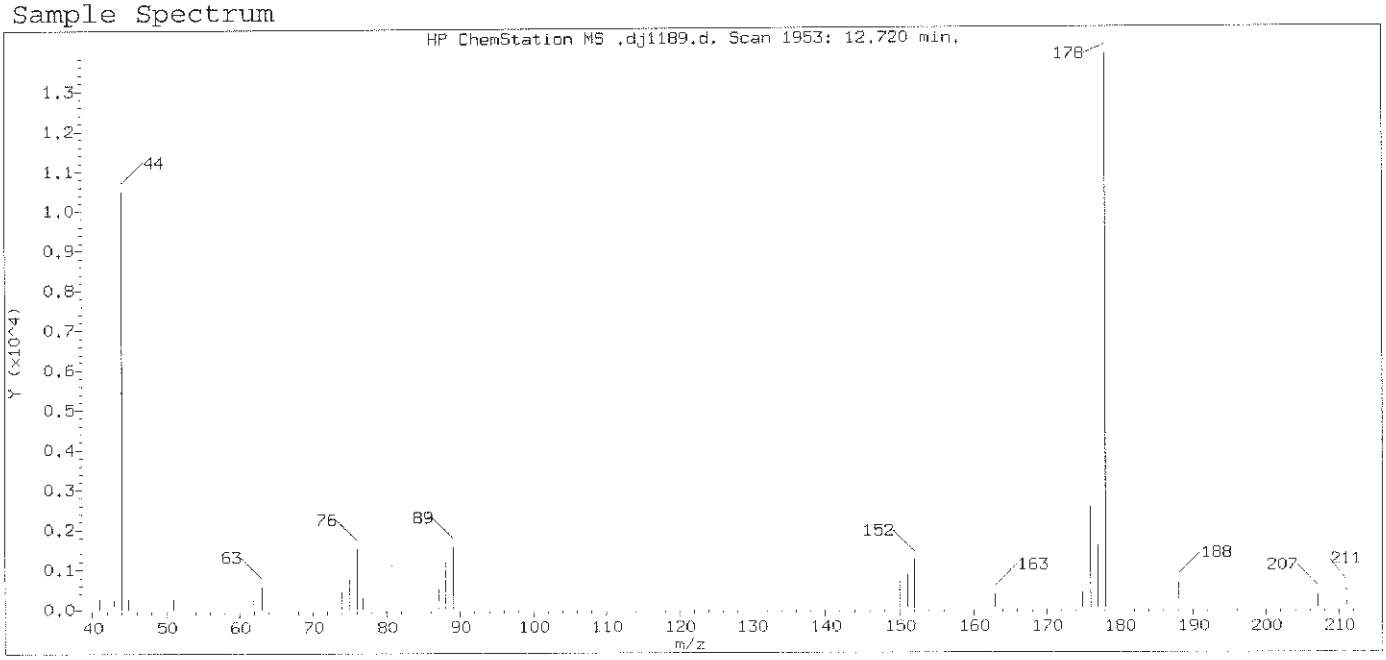
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

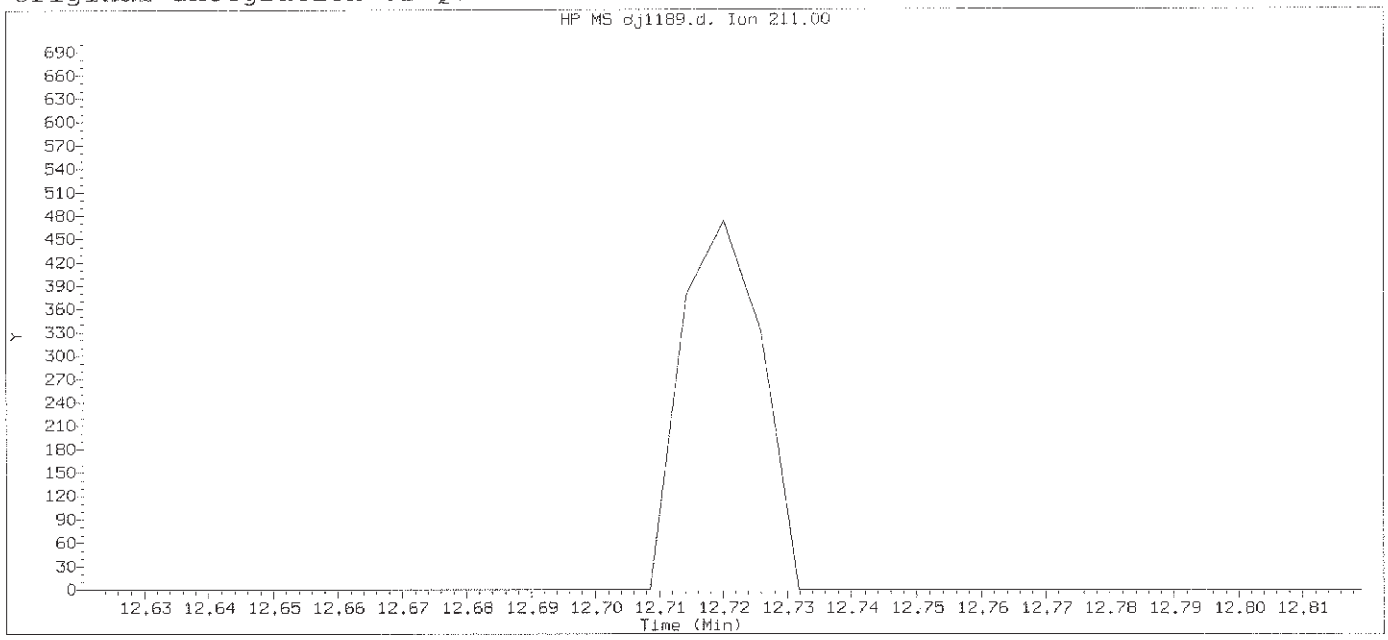
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

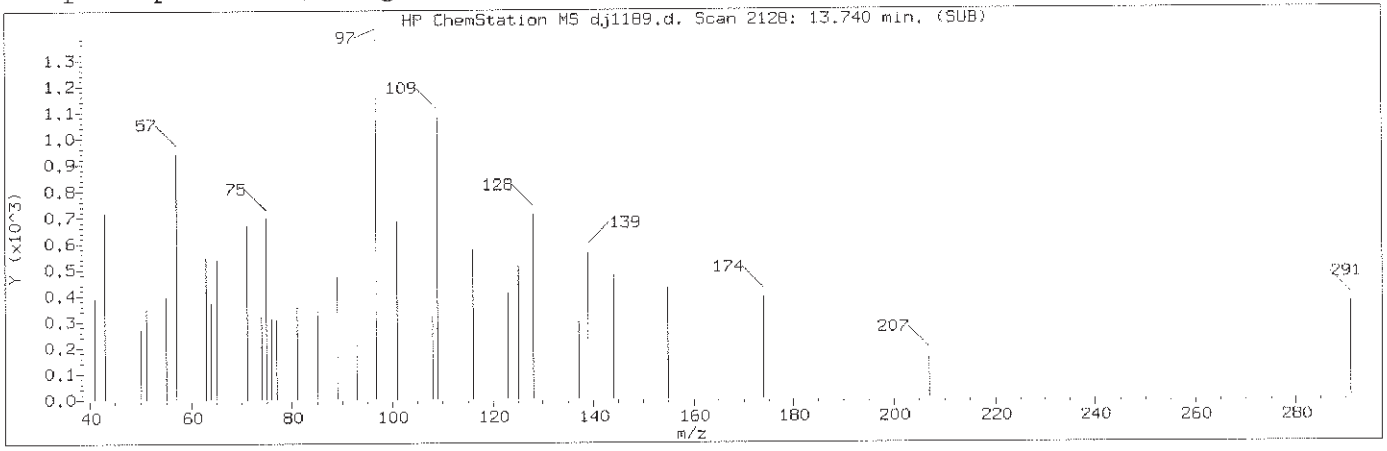
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

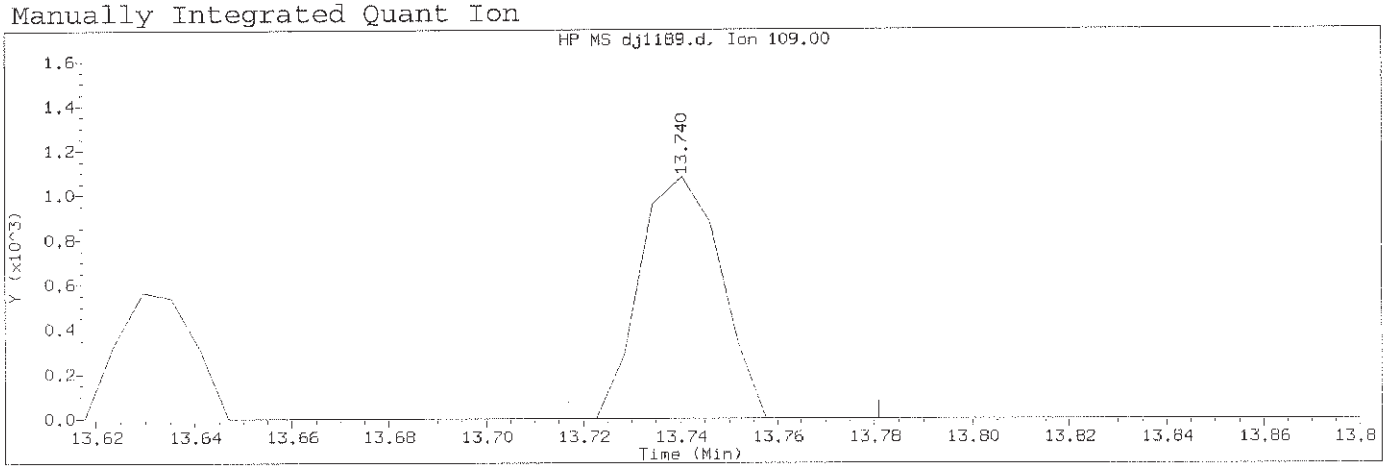
Compound Number : 133
Compound Name : Dinoseb
Expected RT (minutes) : 12.720
Quant Ion : 211.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2128		
Retention Time (minutes)	: 13.740		
Quant Ion	: 109.00		
Area (flag)	: 1235M		
On-Column Amount (ng/ul)	: 0.1123		
Integration start scan	: 2123	Integration stop scan:	2134
Y at integration start	: 0	Y at integration end:	0

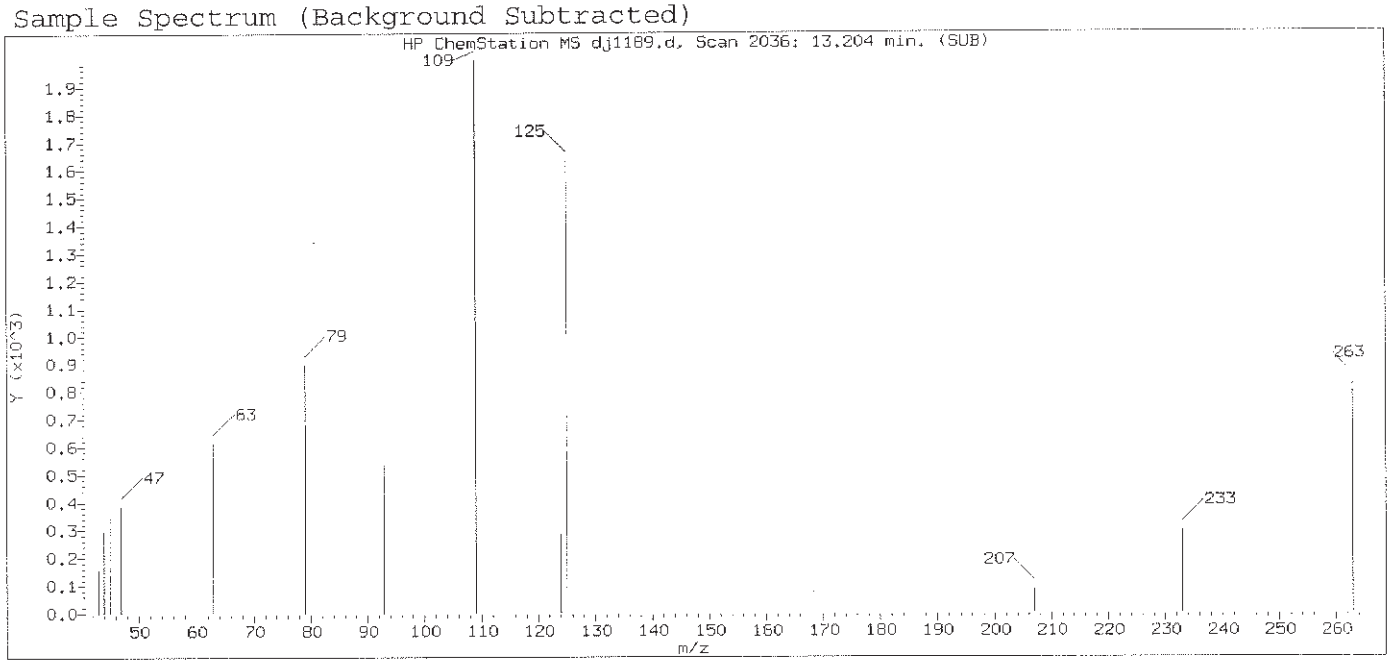
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

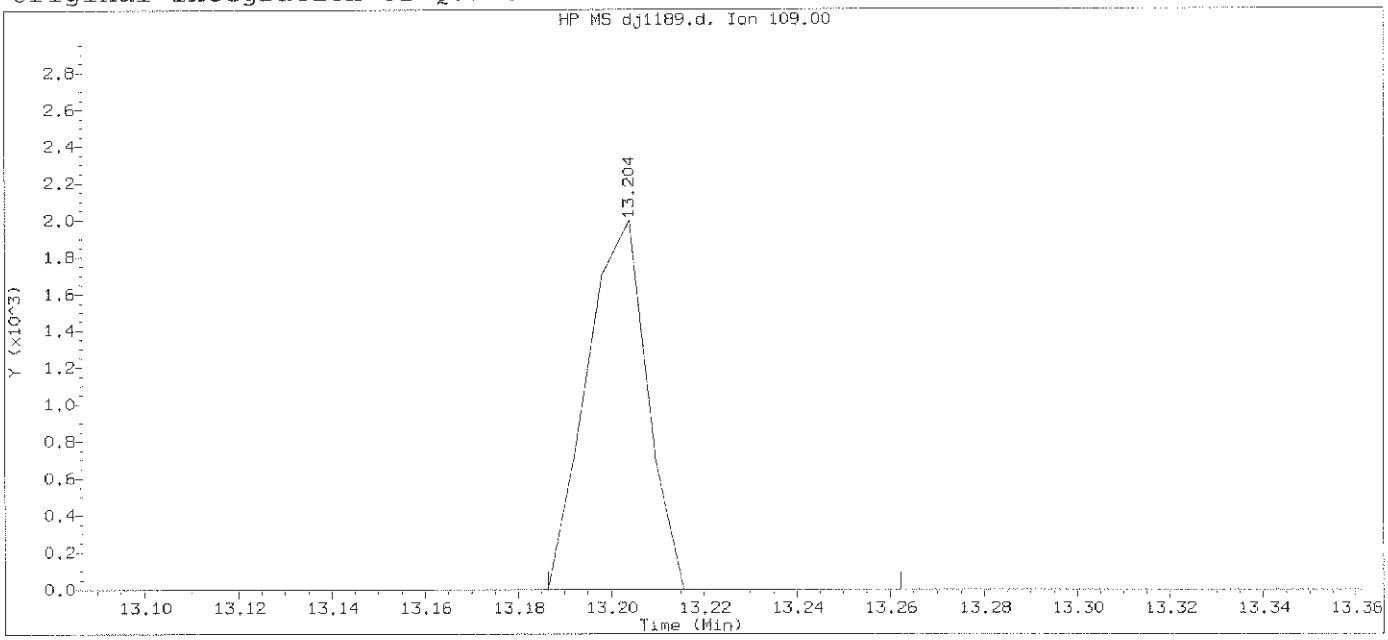
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

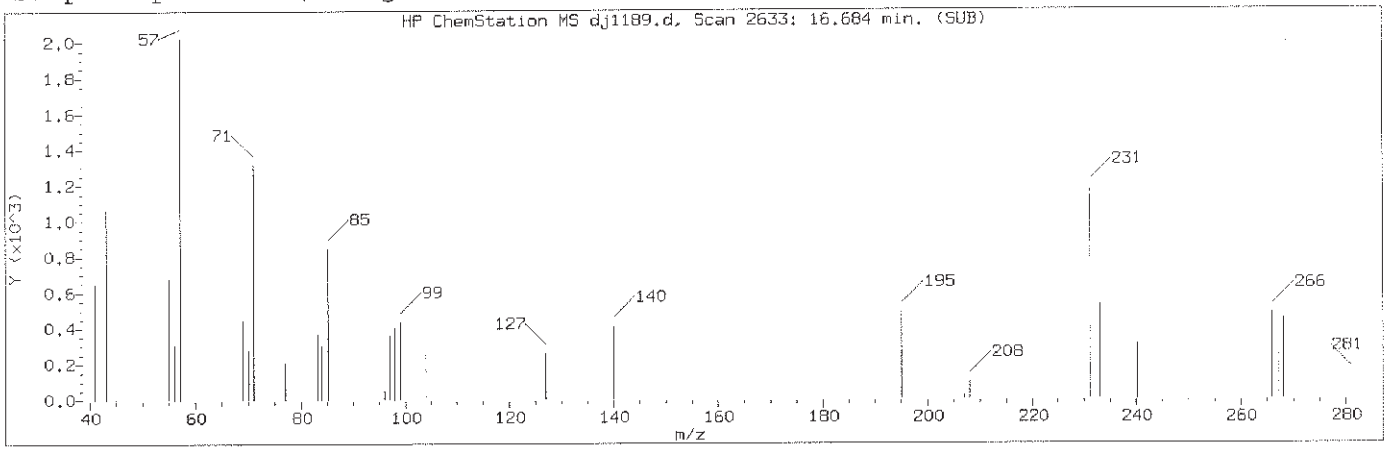
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

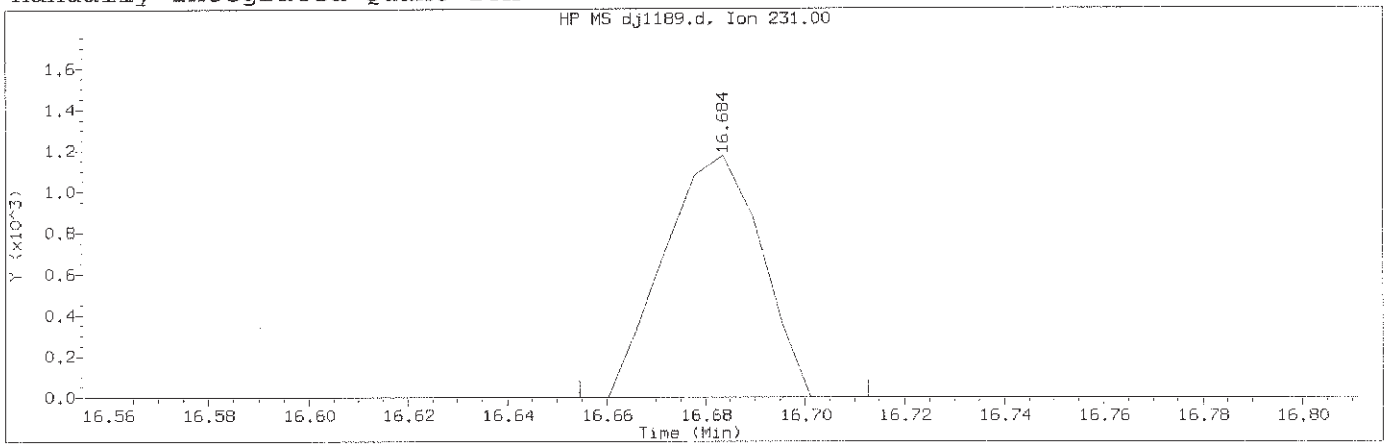
Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2036		
Retention Time (minutes)	: 13.204		
Quant Ion	: 109.00		
Area	: 1786		
On-column Amount (ng/ul)	: 0.1346		
Integration start scan	: 2032	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 160		
Compound Name	: 4,4'-Methylenebis(2-Chloroanil		
Scan Number	: 2633		
Retention Time (minutes)	: 16.684		
Quant Ion	: 231.00		
Area (flag)	: 1582M		
On-Column Amount (ng/ul)	: 0.0544		
Integration start scan	: 2627	Integration stop scan:	2637
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

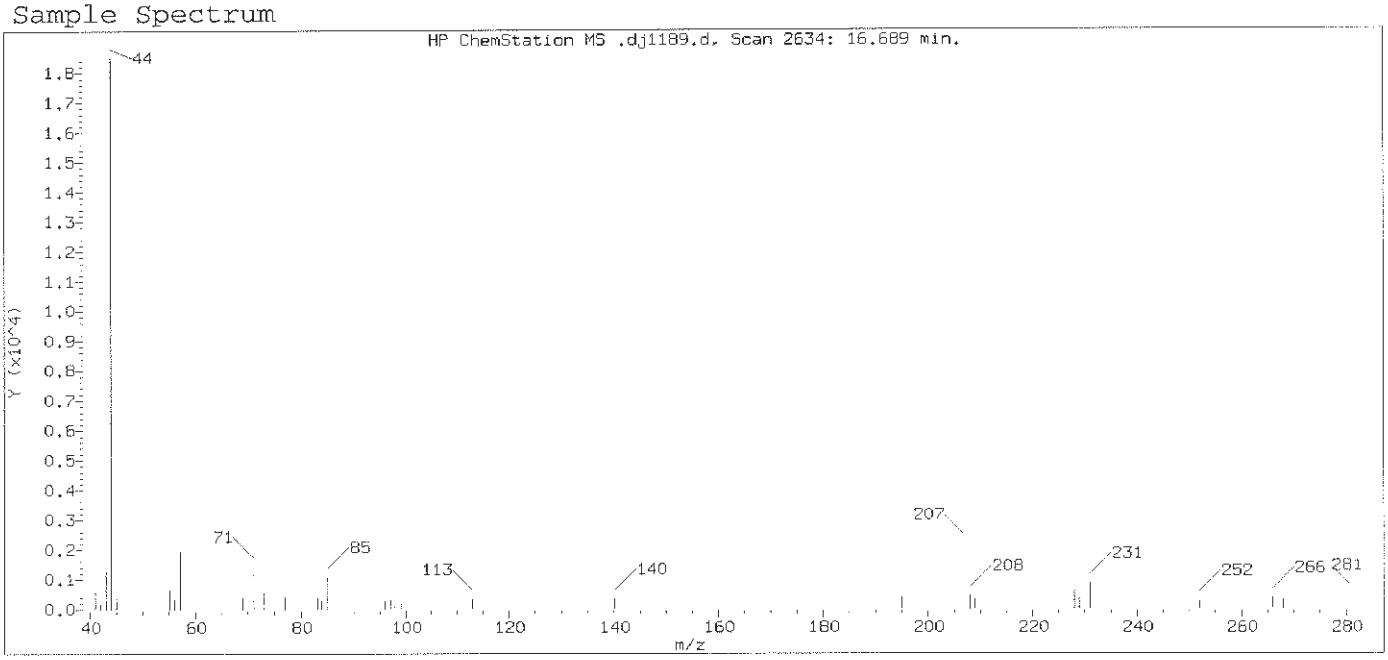
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

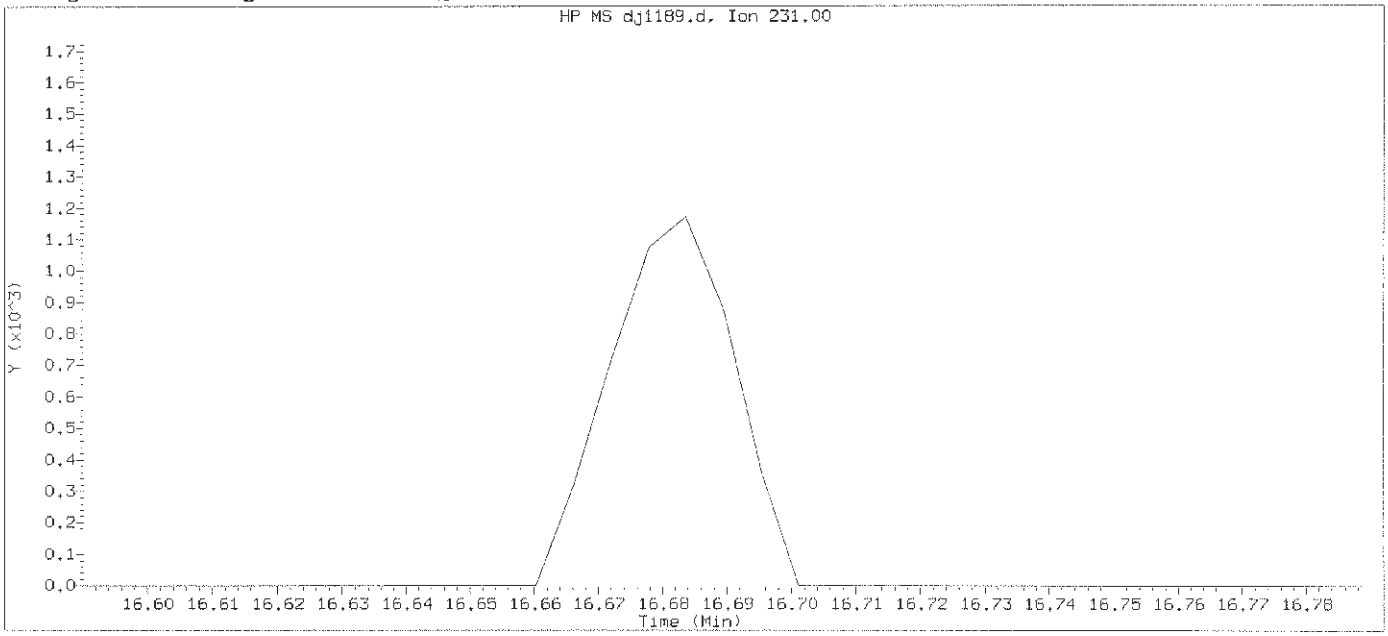
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



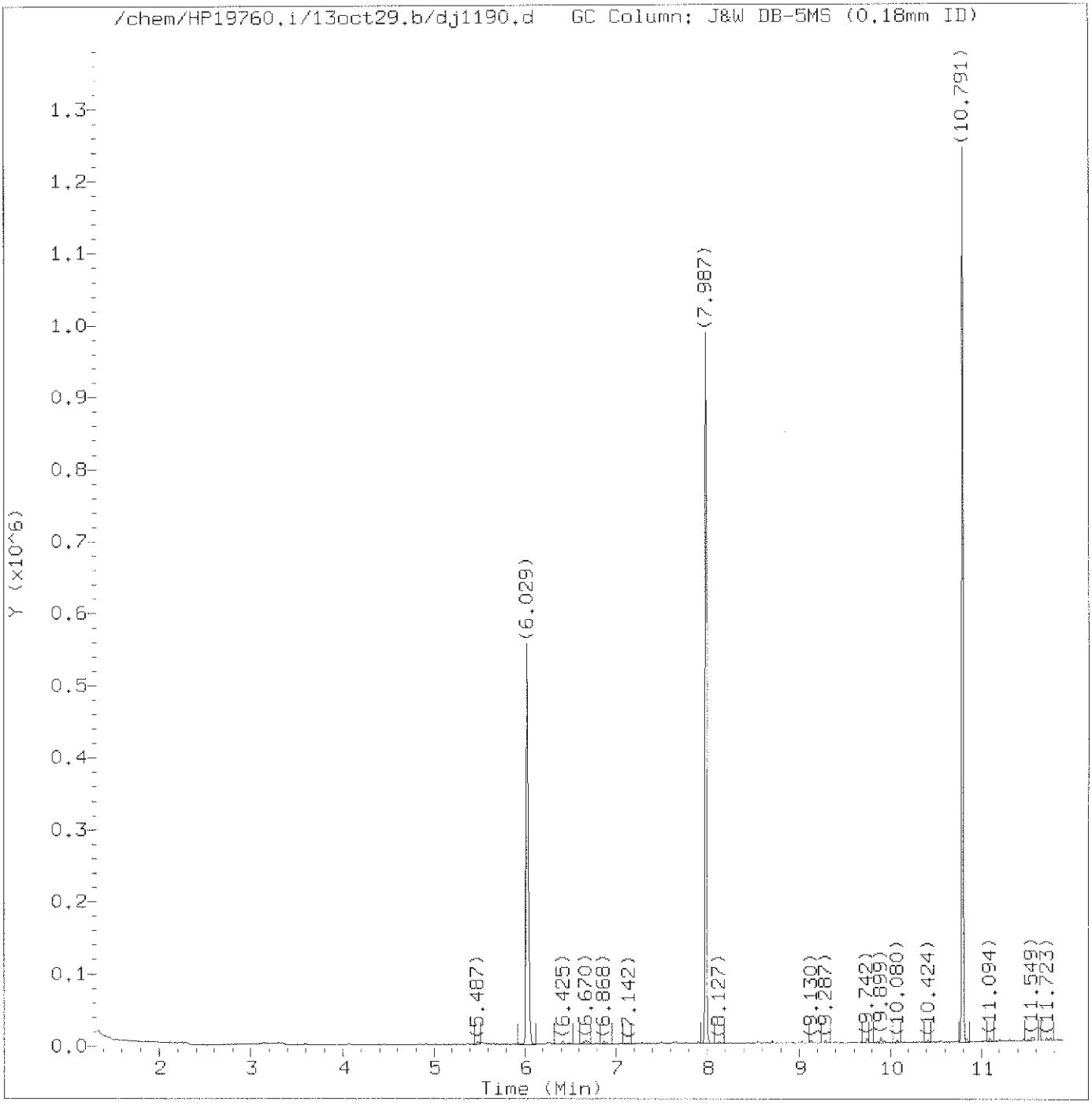
Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number : 160
Compound Name : 4,4'-Methylenebis(2-Chloroanil
Expected RT (minutes) : 16.689
Quant Ion : 231.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

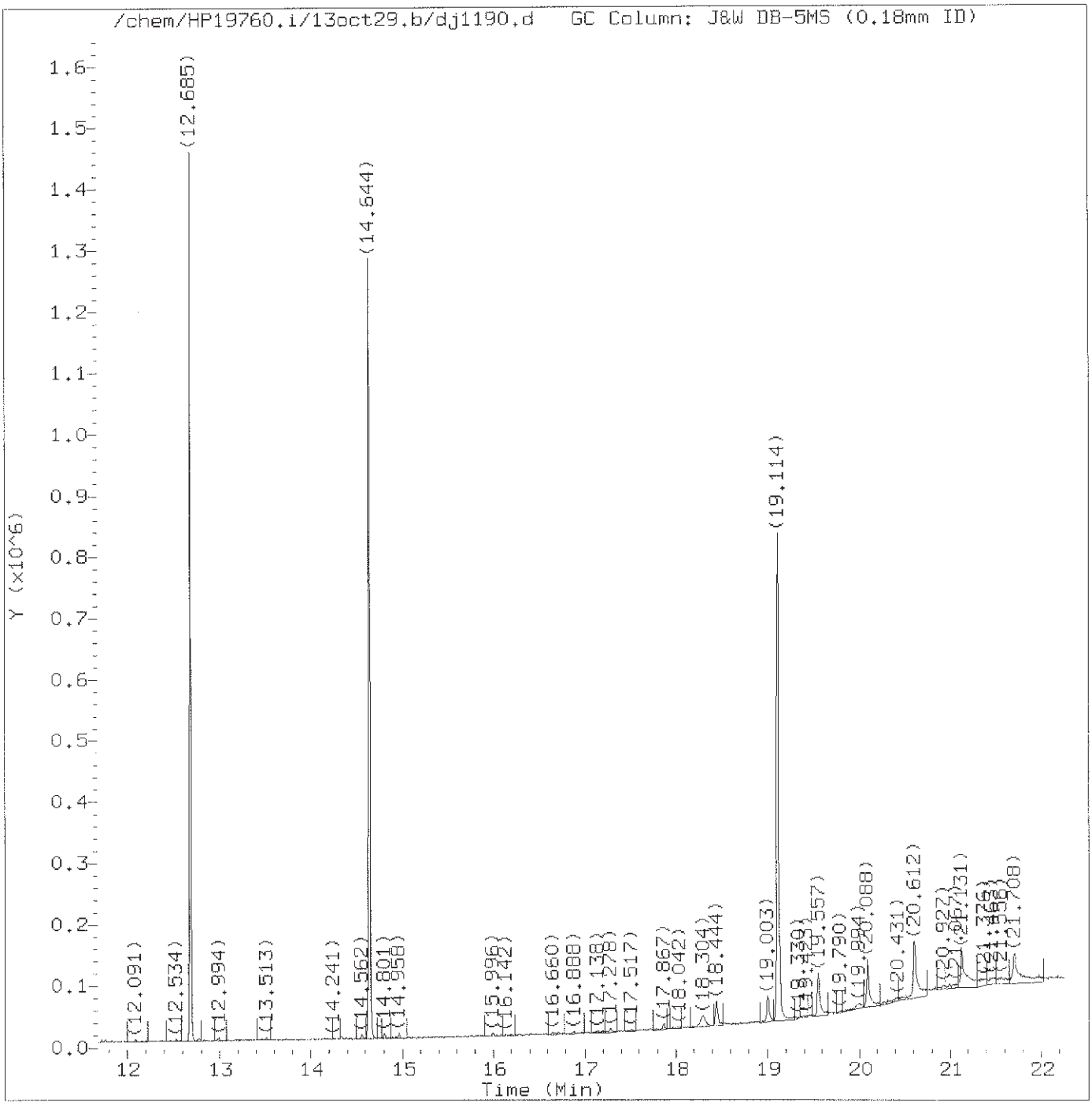
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.065	112	1215	0.030
12)$Phenol-d5	(1)	5.487	99	2471	0.044
13)$Phenol-d6	(1)	5.487	99	2471	0.044
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	137980	5.000
36)$Nitrobenzene-d5	(2)	6.868	82	1959	0.040
52)*Naphthalene-d8	(2)	7.987	136	529711	5.000
53) Naphthalene	(2)	8.022	128	3010	0.027
65) 2-Methylnaphthalene	(2)	9.130	142	1743	0.023
66) 1-Methylnaphthalene	(2)	9.287	142	1683	0.025
72)$2-Fluorobiphenyl	(3)	9.742	172	3786	0.051
90) Acenaphthylene	(3)	10.558	152	1902	0.019
92)*Acenaphthene-d10	(3)	10.791	164	297690	5.000
93) Acenaphthene	(3)	10.838	153	1795	0.026
103) Fluorene	(3)	11.549	166	1636	0.021
112)$2,4,6-Tribromophenol	(3)	11.840	330	122	0.016
122) Hexachlorobenzene	(4)	12.207	284	556	0.028
130)*Phenanthrene-d10	(4)	12.685	188	507726	5.000
131) Phenanthrene	(4)	12.714	178	3004	0.027
134) Anthracene	(4)	12.778	178	2321	0.021
142) Fluoranthene	(4)	14.335	202	2459	0.019
145)*Pyrene-d10	(5)	14.644	212	618065	5.000
146) Pyrene	(5)	14.667	202	4157	0.032
149)$Terphenyl-d14	(5)	14.958	244	4822	0.063
158) Benzo(a)anthracene	(5)	16.660	228	1516	0.014
161) Chrysene	(5)	16.719	228	2198	0.020
168) Benzo(b)fluoranthene	(6)	18.502	252	1711	0.018
170) Benzo(k)fluoranthene	(6)	18.549	252	2204	0.023
171) Benzo(a)pyrene	(6)	19.021	252	2994	0.034
172)*Perylene-d12	(6)	19.114	264	408848	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.700	276	333M	0.004
177) Dibenz(a,h)anthracene	(6)	20.746	278	250M	0.004
178) Benzo(g,h,i)perylene	(6)	21.073	276	449	0.007

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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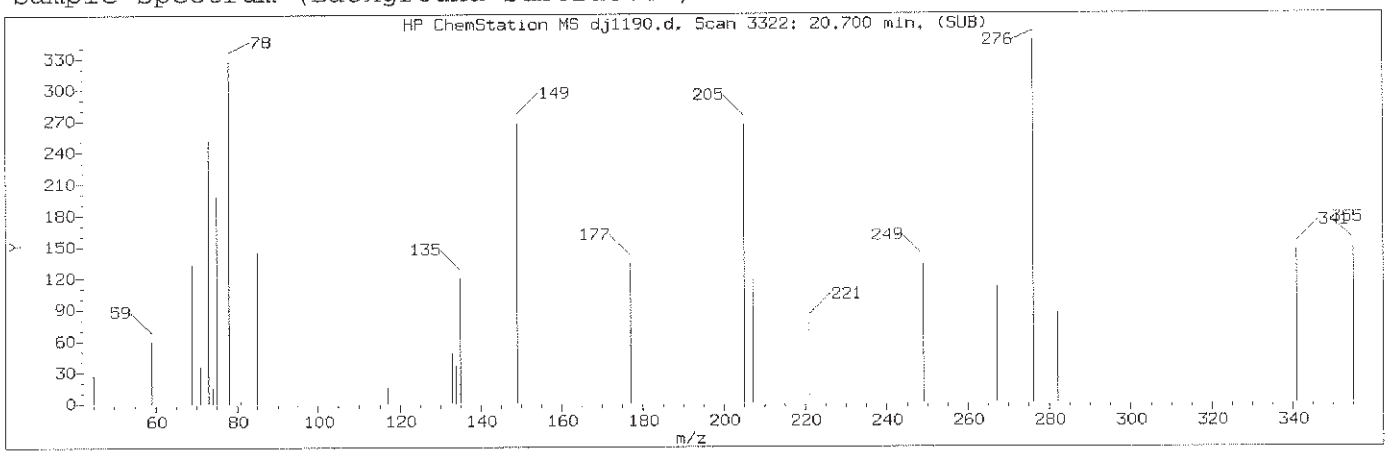
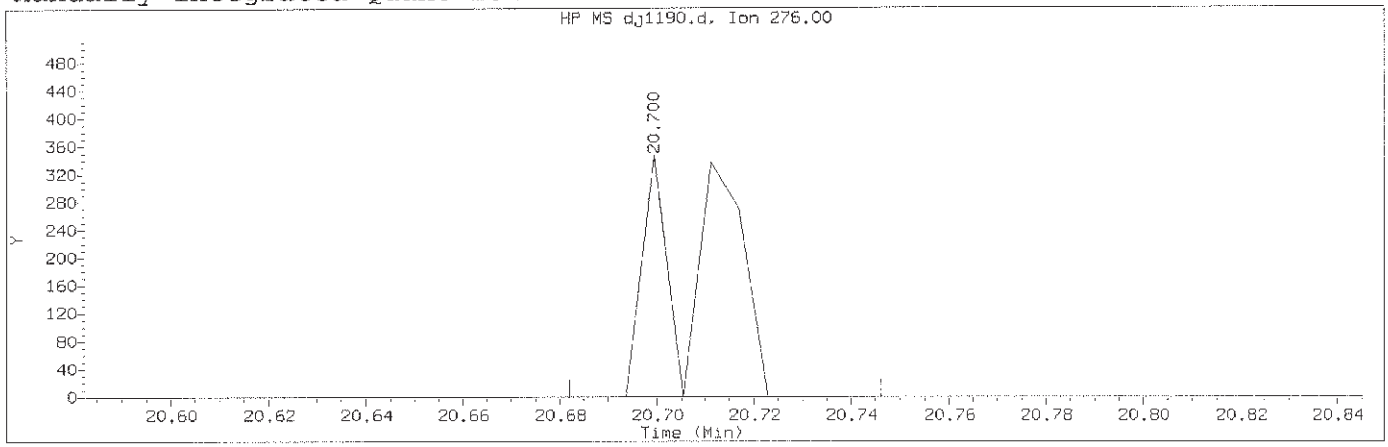
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3322		
Retention Time (minutes)	: 20.700		
Quant Ion	: 276.00		
Area (flag)	: 333M		
On-Column Amount (ng/ul)	: 0.0043		
Integration start scan	: 3318	Integration stop scan:	3329
Y at integration start	: 0	Y at integration end:	0

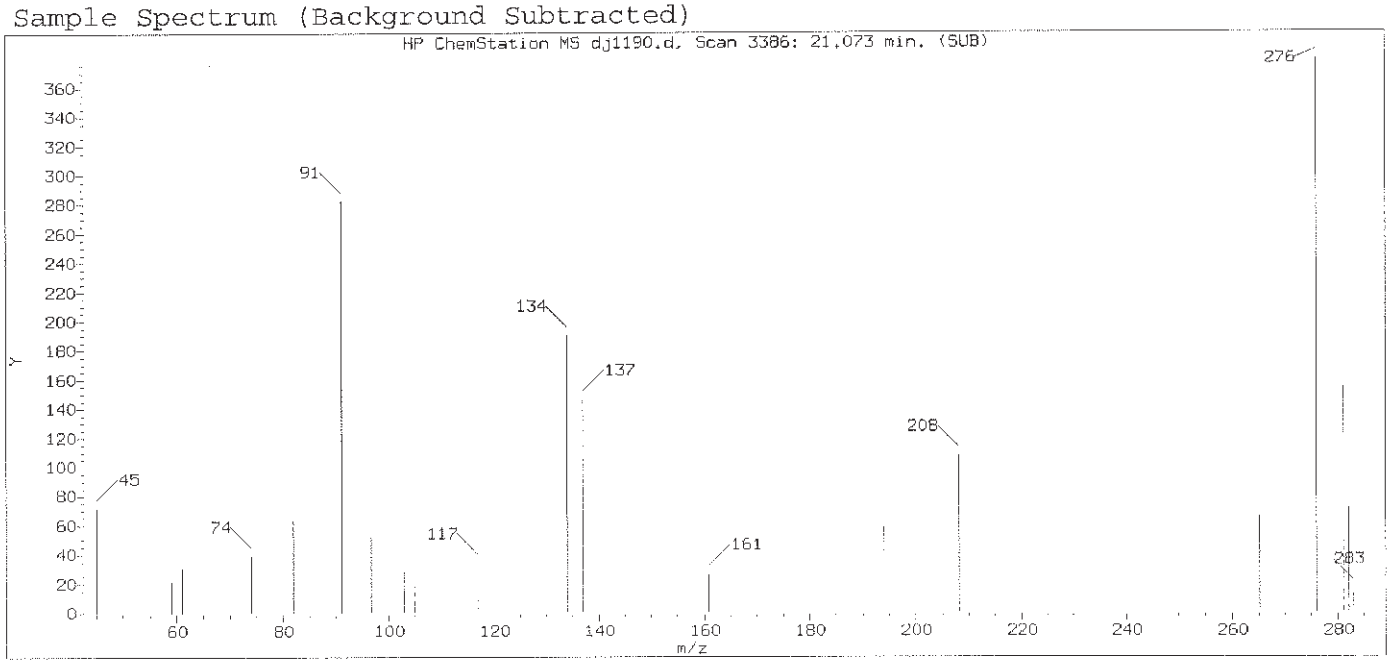
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

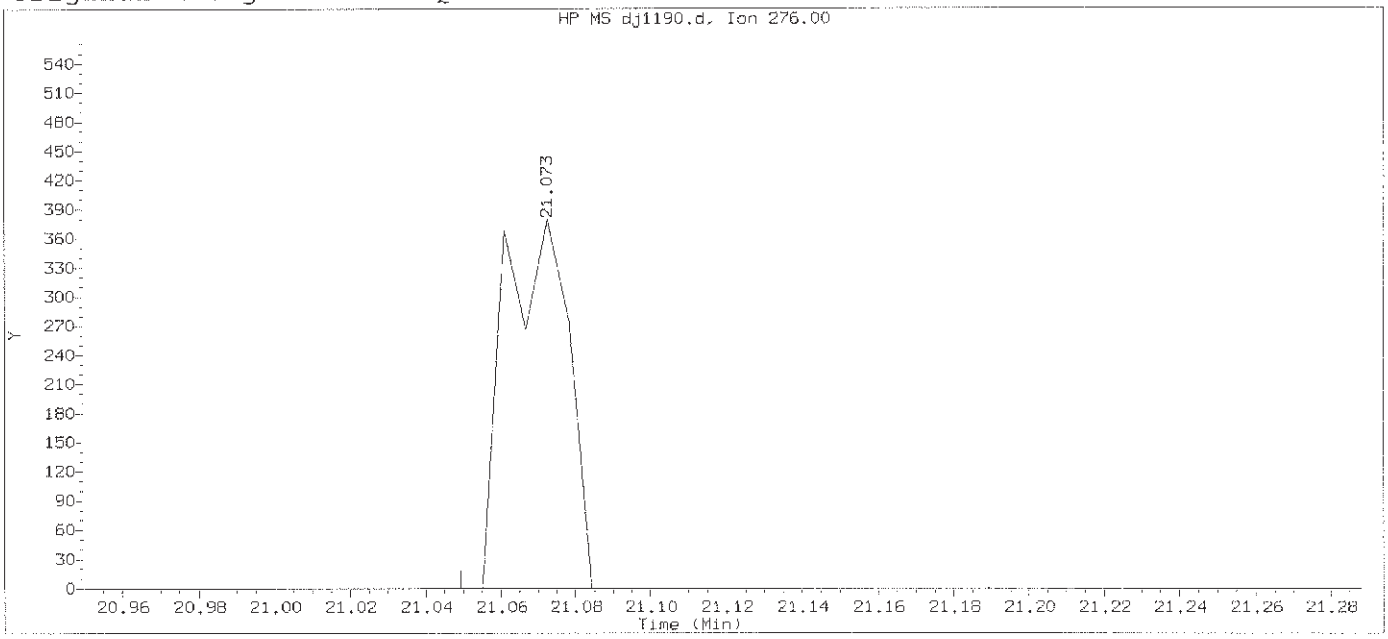
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

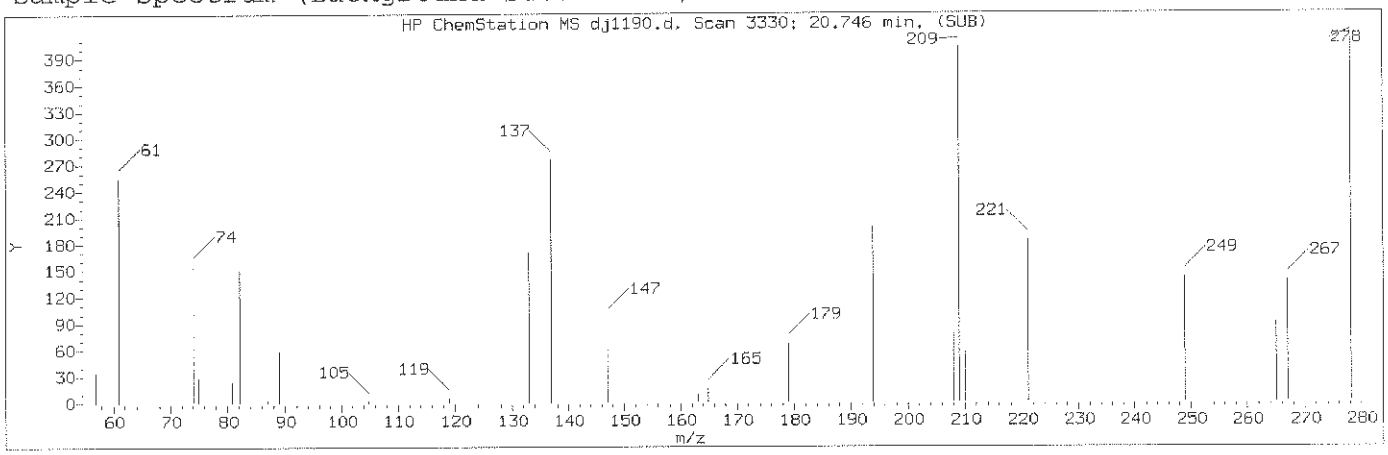
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

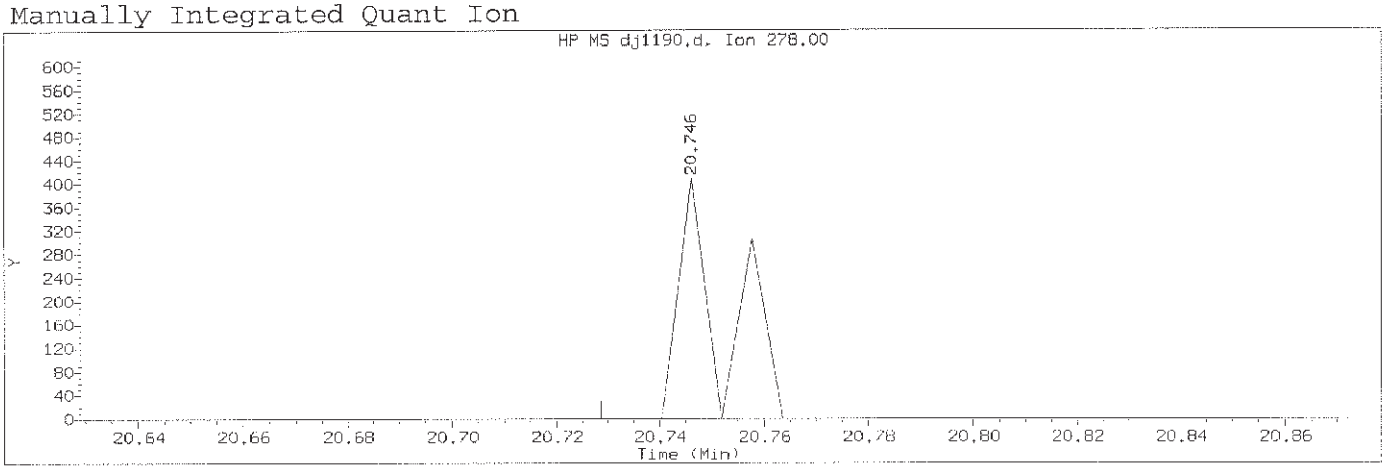
Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3386		
Retention Time (minutes)	: 21.073		
Quant Ion	: 276.00		
Area	: 449		
On-column Amount (ng/ul)	: 0.0058		
Integration start scan	: 3381	Integration stop scan:	3405
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 177		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3330		
Retention Time (minutes)	: 20.746		
Quant Ion	: 278.00		
Area (flag)	: 250M		
On-Column Amount (ng/ul)	: 0.0038		
Integration start scan	: 3326	Integration stop scan:	3334
Y at integration start	: 0	Y at integration end:	0

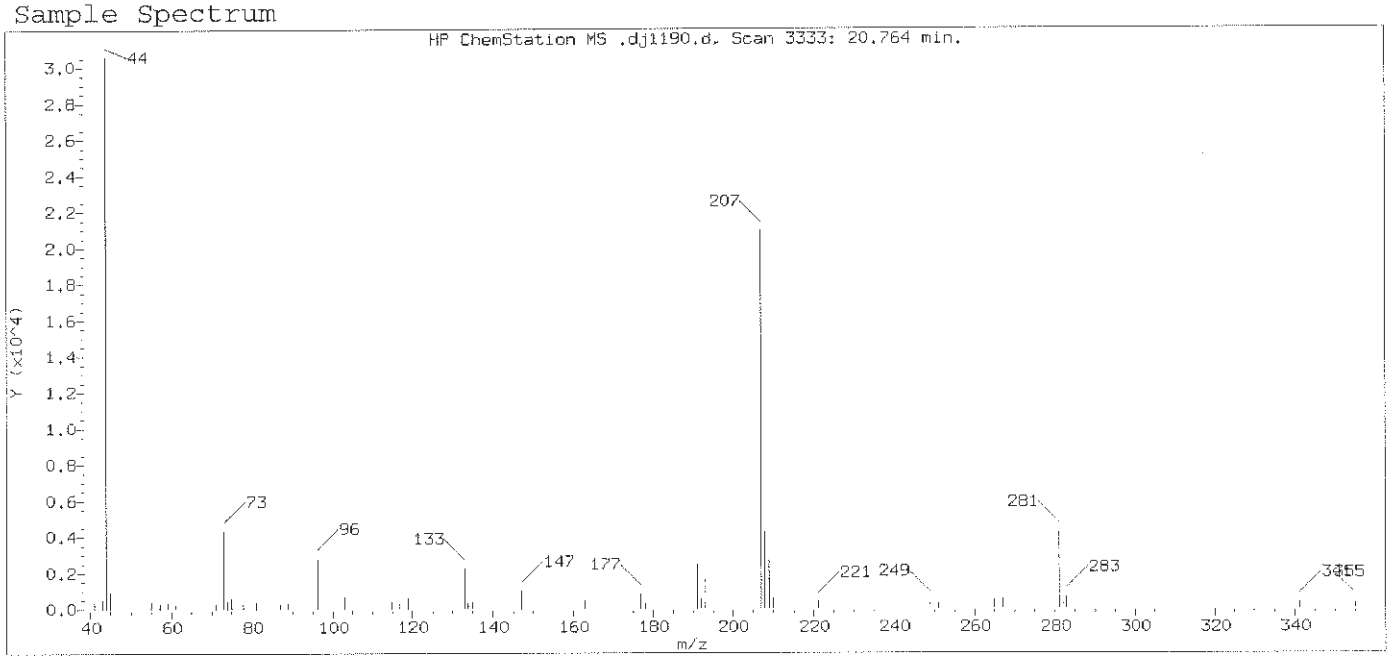
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

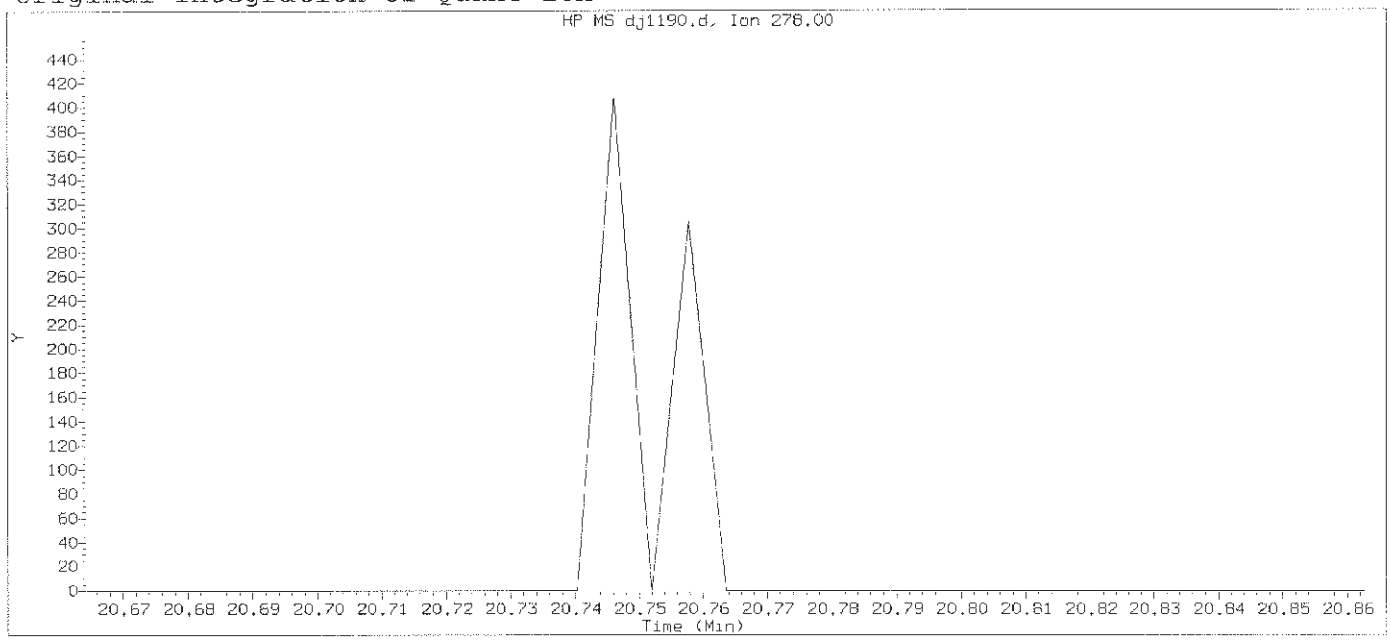
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



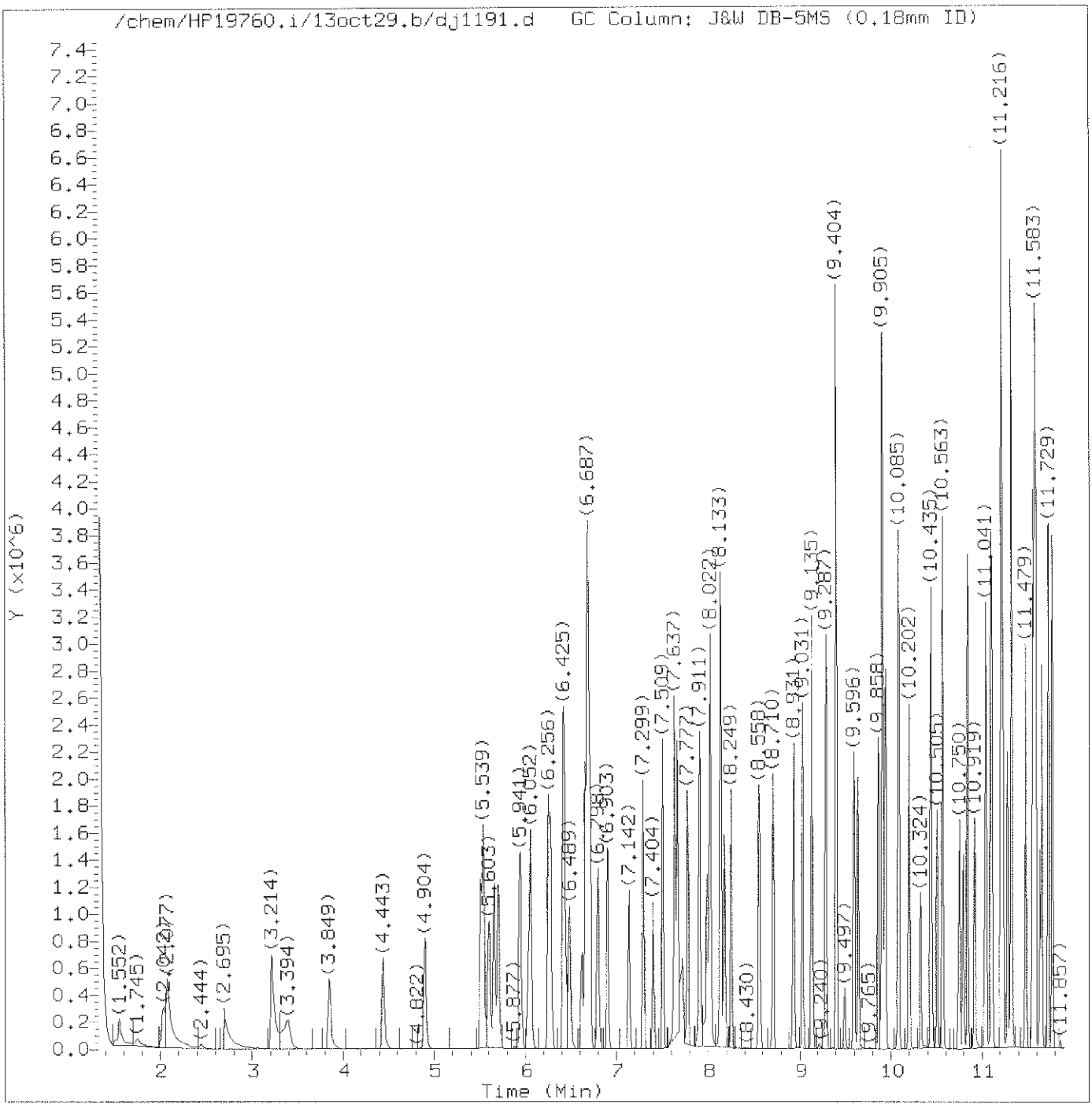
Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number : 177
Compound Name : Dibenz(a,h)anthracene
Expected RT (minutes) : 20.764
Quant Ion : 278.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

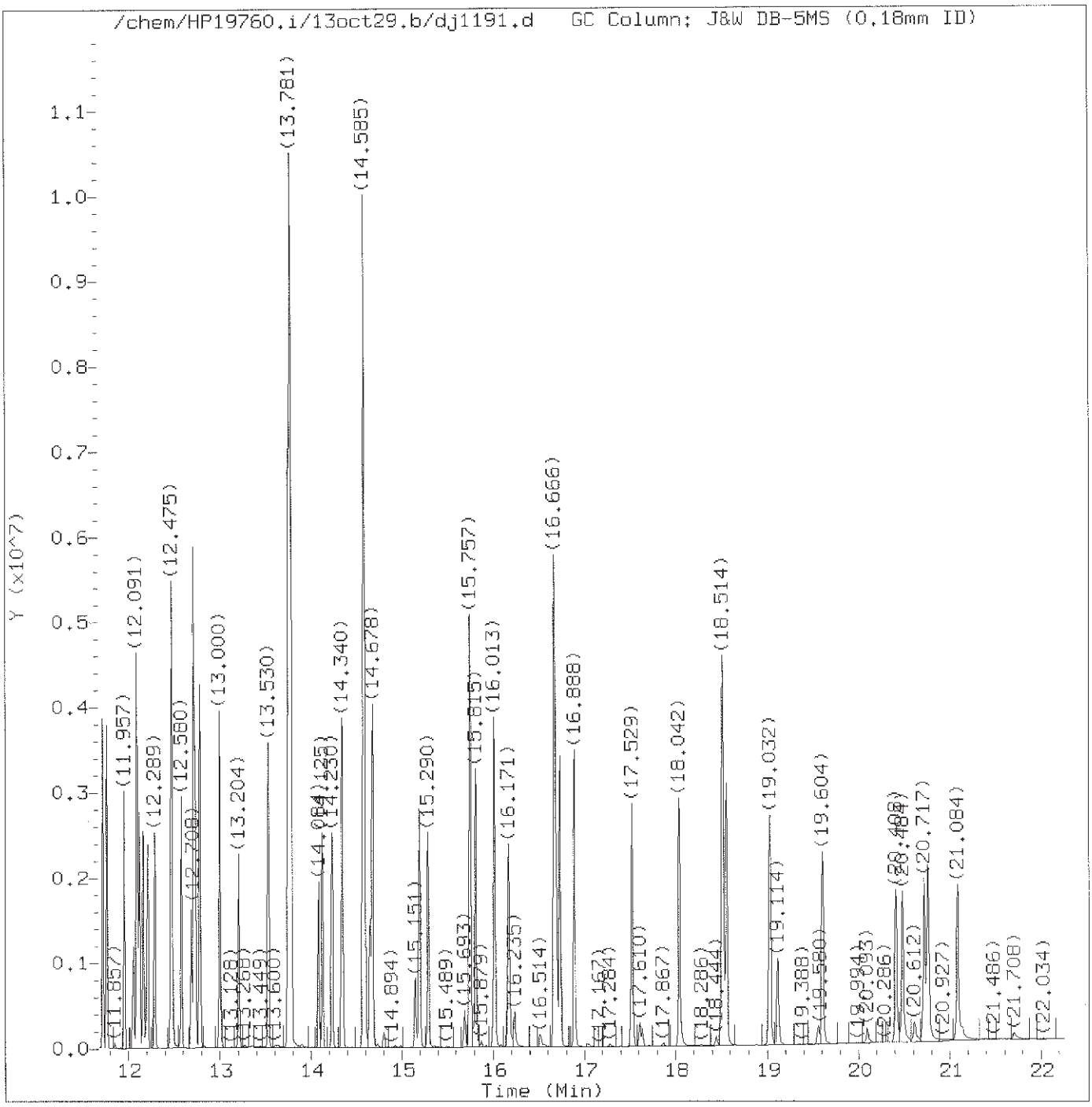
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.552	88	252866	12.813
2) N-Nitrosodimethylamine	(1)	2.030	74	458178	13.148
3) Pyridine	(1)	2.077	79	706933	11.895
4) 2-Picoline	(1)	3.214	93	787682	12.583
5) N-Nitrosomethylethylamine	(1)	3.394	88	348814	12.966
6) Methyl methanesulfonate	(1)	3.849	80	419860	13.652
8) N-Nitrosodiethylamine	(1)	4.443	102	332186	12.856
10) Ethyl methanesulfonate	(1)	4.904	109	325219	13.053
14) Phenol	(1)	5.510	94	934654	12.628
15) Aniline	(1)	5.539	93	1179304	12.939
16) bis(2-Chloroethyl)ether	(1)	5.662	93	731156	12.520
17) 2-Chlorophenol	(1)	5.702	128	593017	12.953
18) 1,3-Dichlorobenzene	(1)	5.941	146	627361	12.740
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	156790	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	633986	12.728
23) Benzyl alcohol	(1)	6.256	108	422533	13.049
24) 1,2-Dichlorobenzene	(1)	6.279	146	590009	12.665
25) Indene	(1)	6.419	115	936311	11.894
26) 2-Methylphenol	(1)	6.431	108	581856	12.664
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	859230	11.854
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	859230	11.854
29) N-Nitrosopyrrolidine	(1)	6.623	100	345261	13.142
30) Acetophenone	(1)	6.658	105	889098	12.376
33) 4-Methylphenol	(1)	6.682	108	645718	12.580
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	514957	12.454
32) N-Nitrosomorpholine	(1)	6.693	56	402202	12.335
34) o-Toluidine	(1)	6.711	106	984993	12.434
35) Hexachloroethane	(1)	6.798	117	266754	12.670
37) Nitrobenzene	(2)	6.903	77	736958	12.456
39) N-Nitrosopiperidine	(2)	7.142	114	323608	13.343
40) Isophorone	(2)	7.299	82	1329192	13.182
42) 2-Nitrophenol	(2)	7.404	139	274990	13.546
45) 2,4-Dimethylphenol	(2)	7.509	107	638586	12.945
46) O,O,O-triethylphosphorothioate	(2)	7.637	198	280555	12.830
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	841486M	12.787
47) Benzoic acid	(2)	7.725	105	835582	22.138
49) 2,4-Dichlorophenol	(2)	7.777	162	468581	13.467
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	515870	13.271
52)*Naphthalene-d8	(2)	7.993	136	605686	5.000
53) Naphthalene	(2)	8.022	128	1638400	12.688

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 4-Chloroaniline	(2)	8.133	127	706302	13.200
56) 2,6-Dichlorophenol	(2)	8.139	162	448488	13.423
57) Hexachloropropene	(2)	8.174	213	348607	14.210
58) Hexachlorobutadiene	(2)	8.255	225	295415	13.037
60) Quinoline	(2)	8.558	129	1084667	12.679
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	479758	12.002
63) 4-Chloro-3-methylphenol	(2)	8.931	107	554160	13.263
64) Safrole	(2)	9.031	162	441137	13.422
65) 2-Methylnaphthalene	(2)	9.135	142	1080755	12.558
66) 1-Methylnaphthalene	(2)	9.287	142	1020104	13.062
67) Hexachlorocyclopentadiene	(3)	9.404	237	624773	32.204
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	514999	12.529
70) 2,4,6-Trichlorophenol	(3)	9.596	196	341304	13.159
71) 2,4,5-Trichlorophenol	(3)	9.643	196	353683	13.198
74) Isosafrole	(3)	9.858	162	452952	13.371
75) 1,1'-Biphenyl	(3)	9.899	154	1259926	12.233
76) 2-Chloronaphthalene	(3)	9.911	162	970718	12.286
77) 1-Chloronaphthalene	(3)	9.940	162	947406	12.162
82) Diphenyl ether	(3)	10.080	170	714778	12.543
83) 2-Nitroaniline	(3)	10.091	138	330184	13.417
84) 1,4-Naphthoquinone	(3)	10.202	158	541572	15.927
85) 1,4-Dinitrobenzene	(3)	10.324	168	169392	12.462
86) Dimethylphthalate	(3)	10.435	163	1123197	12.570
87) 1,3-Dinitrobenzene	(3)	10.441	168	202814	13.224
88) 2,6-Dinitrotoluene	(3)	10.505	165	267388	13.504
90) Acenaphthylene	(3)	10.563	152	1624852	13.548
91) 3-Nitroaniline	(3)	10.750	138	308367	13.567
92)*Acenaphthene-d10	(3)	10.797	164	354681	5.000
93) Acenaphthene	(3)	10.843	153	1017034	12.327
94) 2,4-Dinitrophenol	(3)	10.919	184	282939	24.188
96) 4-Nitrophenol	(3)	11.036	109	193631	13.358
95) Pentachlorobenzene	(3)	11.041	250	417252	12.670
97) Dibenzofuran	(3)	11.100	168	1464807	12.485
98) 2,4-Dinitrotoluene	(3)	11.117	165	346555	13.658
99) 1-Naphthylamine	(3)	11.216	143	2099655	24.619
100) 2,3,4,6-Tetrachlorophenol	(3)	11.280	232	295053	13.943
101) 2-Naphthylamine	(3)	11.321	143	2101605	24.013
102) Diethylphthalate	(3)	11.479	149	1123150	12.758
103) Fluorene	(3)	11.554	166	1192153	12.623
104) Thionazin	(3)	11.572	107	227564	11.960

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 4-Chlorophenyl-phenylether	(3)	11.583	204	580969	12.404
106) 5-Nitro-o-toluidine	(3)	11.583	152	335108	13.202
107) 4-Nitroaniline	(3)	11.595	138	301384	12.891
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	198072	12.864
109) N-Nitrosodiphenylamine	(4)	11.729	169	998356	13.286
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1479946	12.441
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	214106	12.478
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	147739	12.769
117) Diallate (peak 1)	(4)	12.091	86	543072	9.160
118) Phorate	(4)	12.096	75	853757	12.146
119) Phenacetin	(4)	12.120	108	688586	13.762
120) 4-Bromophenyl-phenylether	(4)	12.166	248	302404	12.696
121) Diallate (peak 2)	(4)	12.190	86	78461	3.102
122) Hexachlorobenzene	(4)	12.213	284	294976	12.526
123) Dimethoate	(4)	12.289	87	597488	13.017
125) Pentachlorophenol	(4)	12.464	266	224311	12.568
126) Pentachloronitrobenzene	(4)	12.475	237	150953	13.793
127) 4-Aminobiphenyl	(4)	12.481	169	1350394	14.365
129) Pronamide	(4)	12.580	173	514382	12.933
130) *Phenanthrene-d10	(4)	12.691	188	603640	5.000
131) Phenanthrene	(4)	12.720	178	1652485	12.274
133) Dinoseb	(4)	12.720	211	302962	13.114
134) Anthracene	(4)	12.784	178	1731054	12.896
135) Carbazole	(4)	13.000	167	1699126	13.079
136) Methyl parathion	(4)	13.204	109	450225	13.135
137) Di-n-butylphthalate	(4)	13.530	149	2016342	13.105
138) Parathion	(4)	13.752	109	272718	12.452
139) 4-Nitroquinoline-1-oxide	(4)	13.781	190	2735978	168.753
140) Isodrin	(4)	14.125	193	202515	12.540
142) Fluoranthene	(4)	14.340	202	2006181	13.247
144) Benzidine	(5)	14.585	184	6002081	60.477
145) *Pyrene-d10	(5)	14.649	212	773413	5.000
146) Pyrene	(5)	14.678	202	2032565	12.378
150) p-Dimethylaminoazobenzene	(5)	15.197	225	441084	13.357
151) Chlorobenzilate	(5)	15.290	139	571680	12.369
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2527546	25.931
153) Butylbenzylphthalate	(5)	15.815	149	922592	13.201
156) 2-Acetylaminofluorene	(5)	16.171	181	779791	12.604
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	645378	12.825
158) Benzo(a)anthracene	(5)	16.666	228	1876414	13.468

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

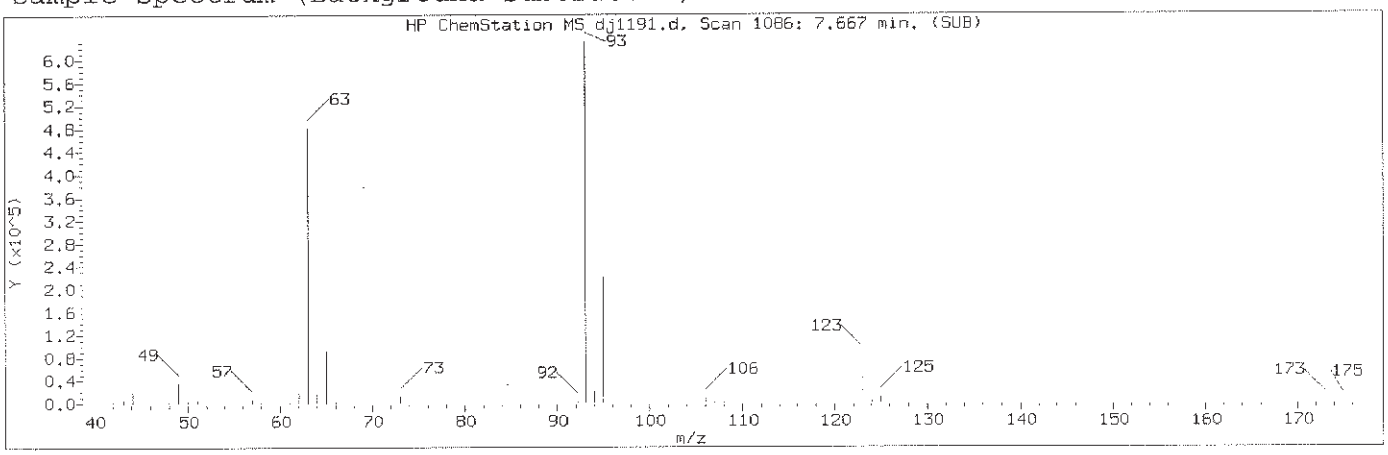
Sample Name: SSTD12.5 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160)	4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	338249	12.728
161)	Chrysene	(5)	16.730	228	1762571	12.864
162)	bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1217515	13.245
165)	6-Methylchrysene	(5)	17.529	242	1204416	12.505
166)	Di-n-octylphthalate	(6)	18.042	149	2020727	13.147
168)	Benzo(b)fluoranthene	(6)	18.508	252	1664477	13.521
169)	7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	746135	13.655
170)	Benzo(k)fluoranthene	(6)	18.560	252	1630979	13.136
171)	Benzo(a)pyrene	(6)	19.032	252	1533395	13.570
172)	*Perylene-d12	(6)	19.114	264	522609	5.000
173)	3-Methylcholanthrene	(6)	19.604	268	743613	13.829
174)	Dibenz(a,h)acridine	(6)	20.408	279	1002205	13.408
175)	Dibenz(a,j)acridine	(6)	20.484	279	1062543	13.256
176)	Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1427155	14.399
177)	Dibenz(a,h)anthracene	(6)	20.764	278	1212103	14.441
178)	Benzo(g,h,i)perylene	(6)	21.084	276	1163357	13.924
179)	Diallate TRANS/CIS	(4)	23.156	86	621533	12.237

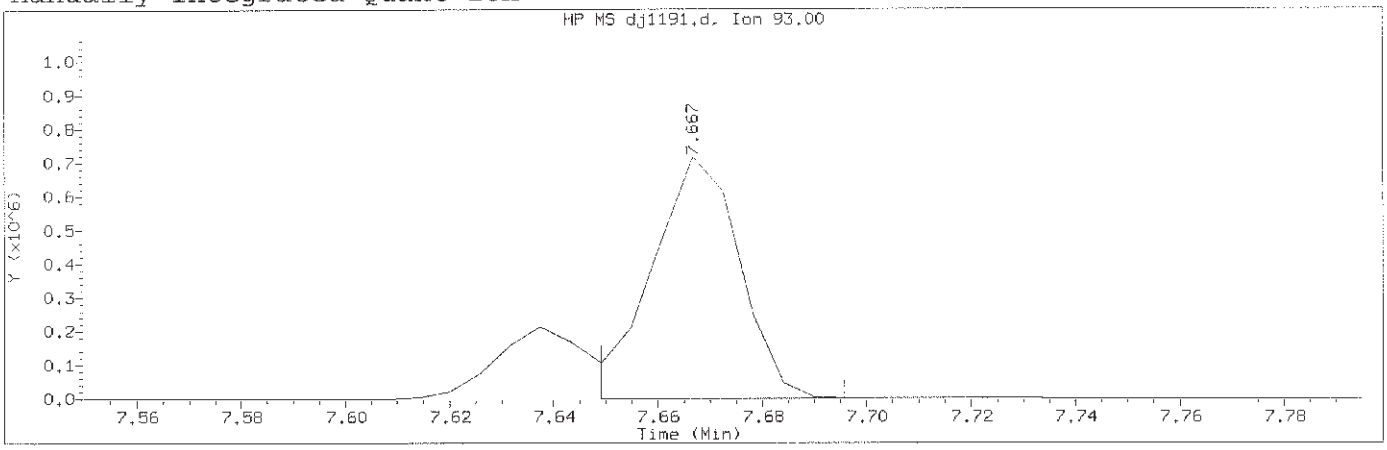
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 841486M		
On-Column Amount (ng/ul)	: 12.7873		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 675	Y at integration end:	675

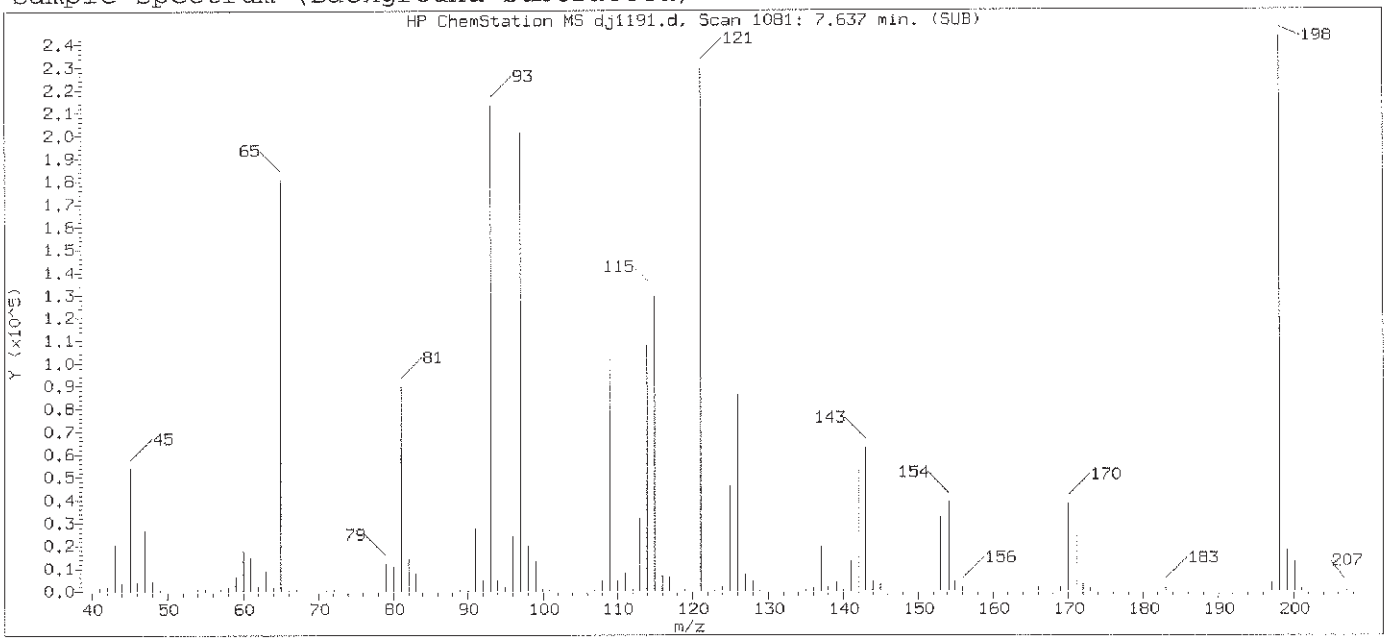
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

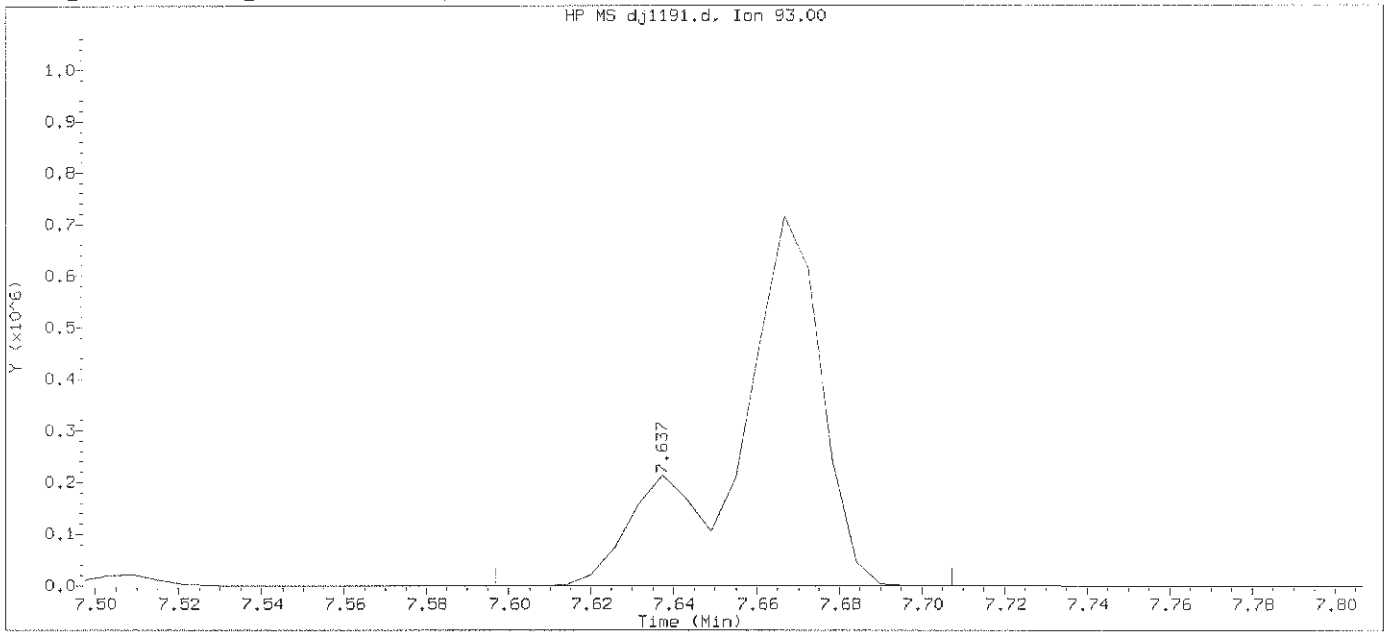
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



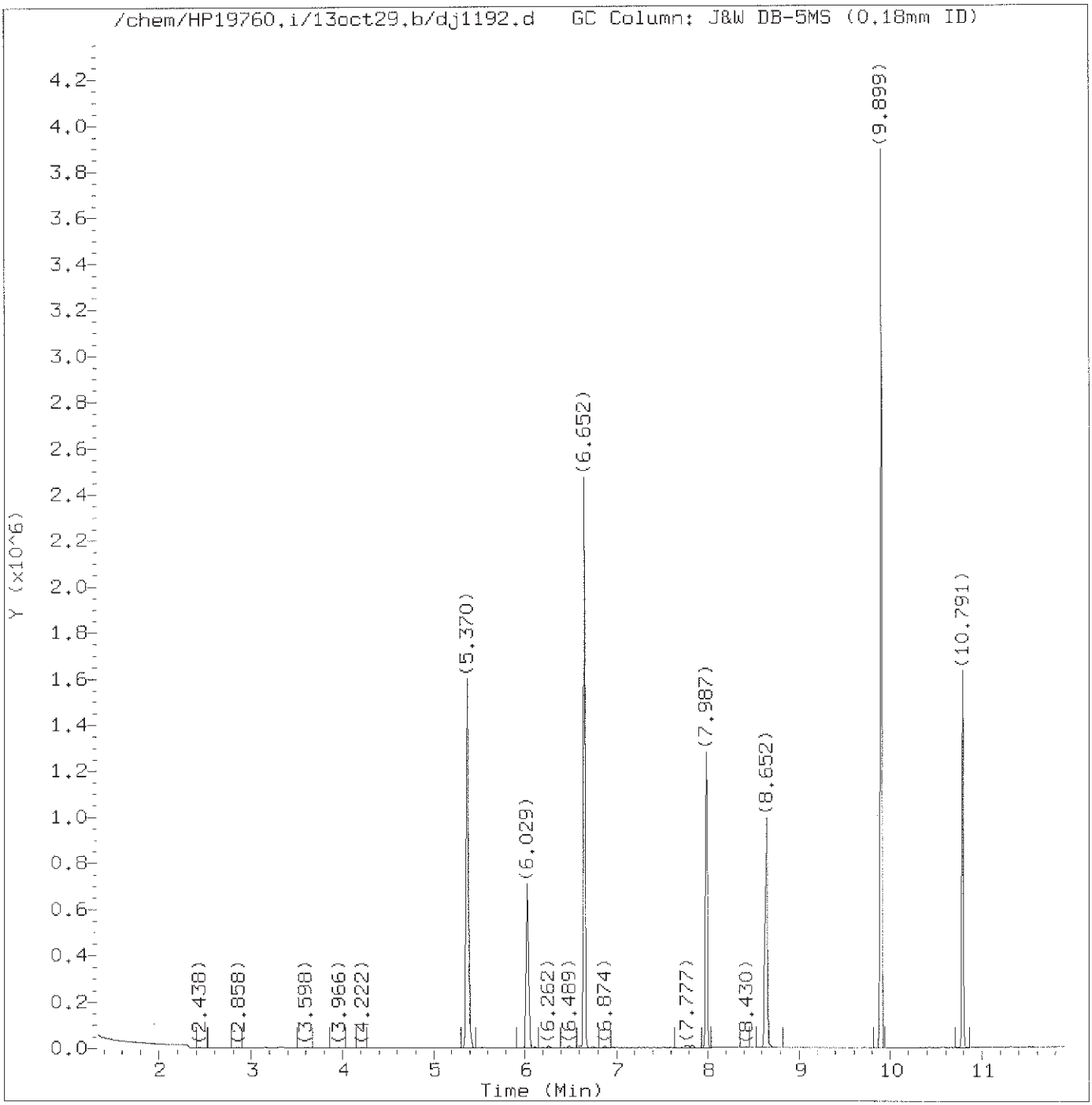
Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1081		
Retention Time (minutes)	: 7.637		
Quant Ion	: 93.00		
Area	: 1066922		
On-column Amount (ng/ul)	: 16.2131		
Integration start scan	: 1073	Integration stop scan:	1092
Y at integration start	: 0	Y at integration end:	133

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

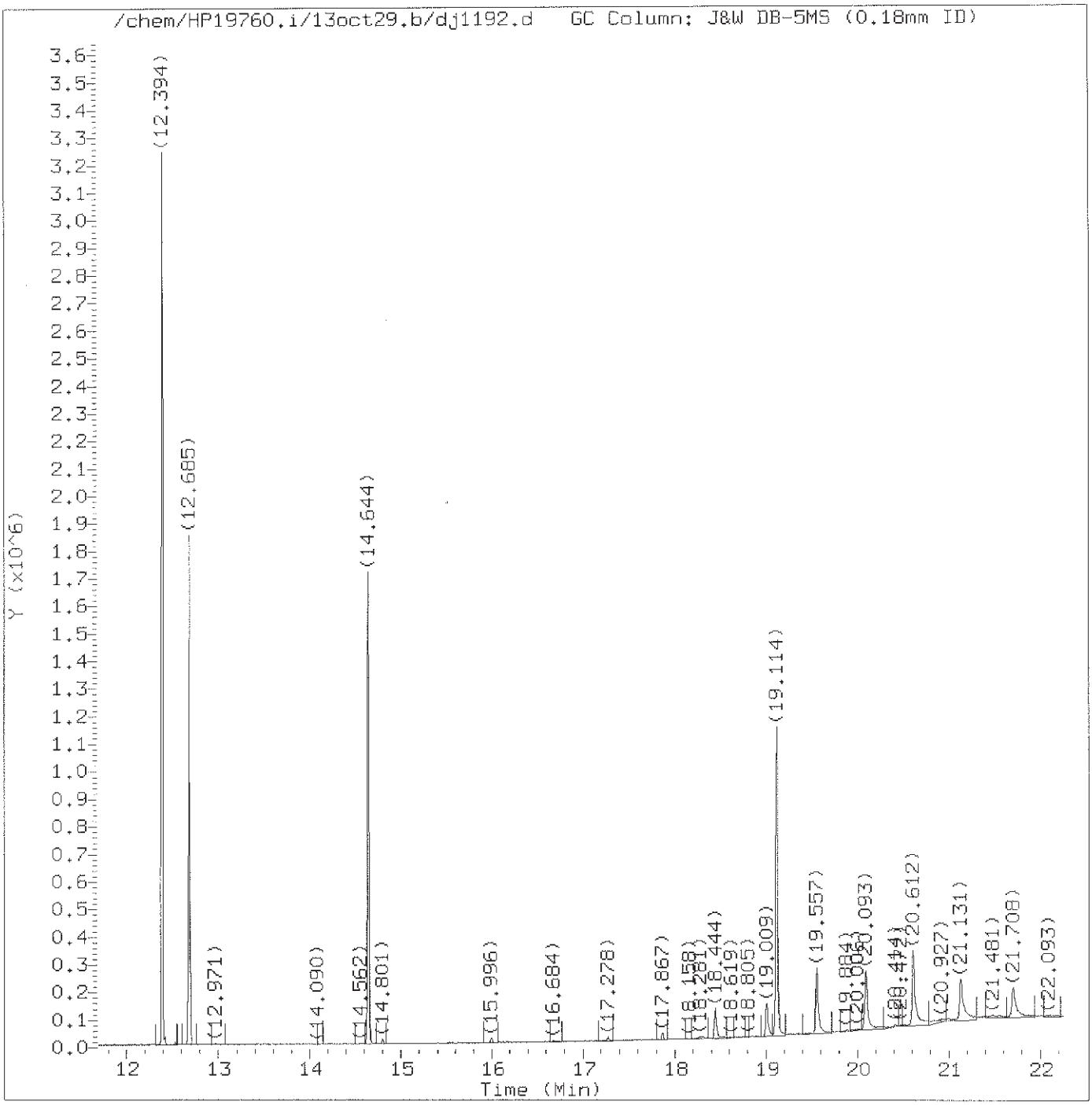
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11) Benzaldehyde	(1)	5.370	77	673572	13.169
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	179297	5.000
52)*Naphthalene-d8	(2)	7.987	136	685192	5.000
61) Caprolactam	(2)	8.652	113	230343	13.116
92)*Acenaphthene-d10	(3)	10.791	164	386805	5.000
124) Atrazine	(4)	12.394	200	366396	13.461
130)*Phenanthrene-d10	(4)	12.685	188	671597	5.000
145)*Pyrene-d10	(5)	14.644	212	826855	5.000
172)*Perylene-d12	(6)	19.114	264	563593	5.000

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP19760.i/13nov14b.b/dk0510b.d

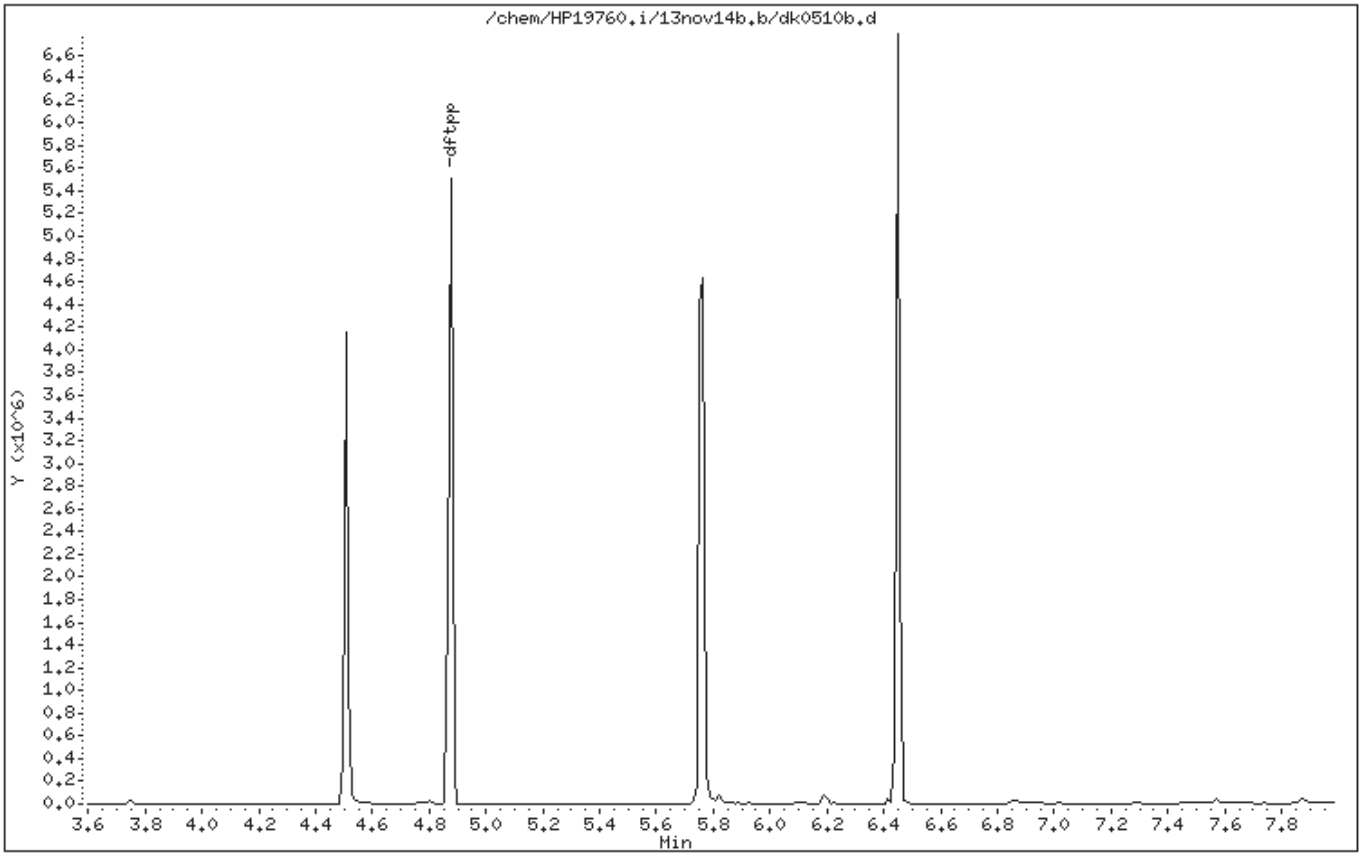
Date : 14-NOV-2013 20:11

Client ID: DFTPP50 Instrument: HP19760.i

Sample Info: DFTPP50;DFTPP2843;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18



Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:44.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov14b.b/dk0510b.d

Date : 14-NOV-2013 20:11

Client ID: DFTPP50

Instrument: HP19760.i

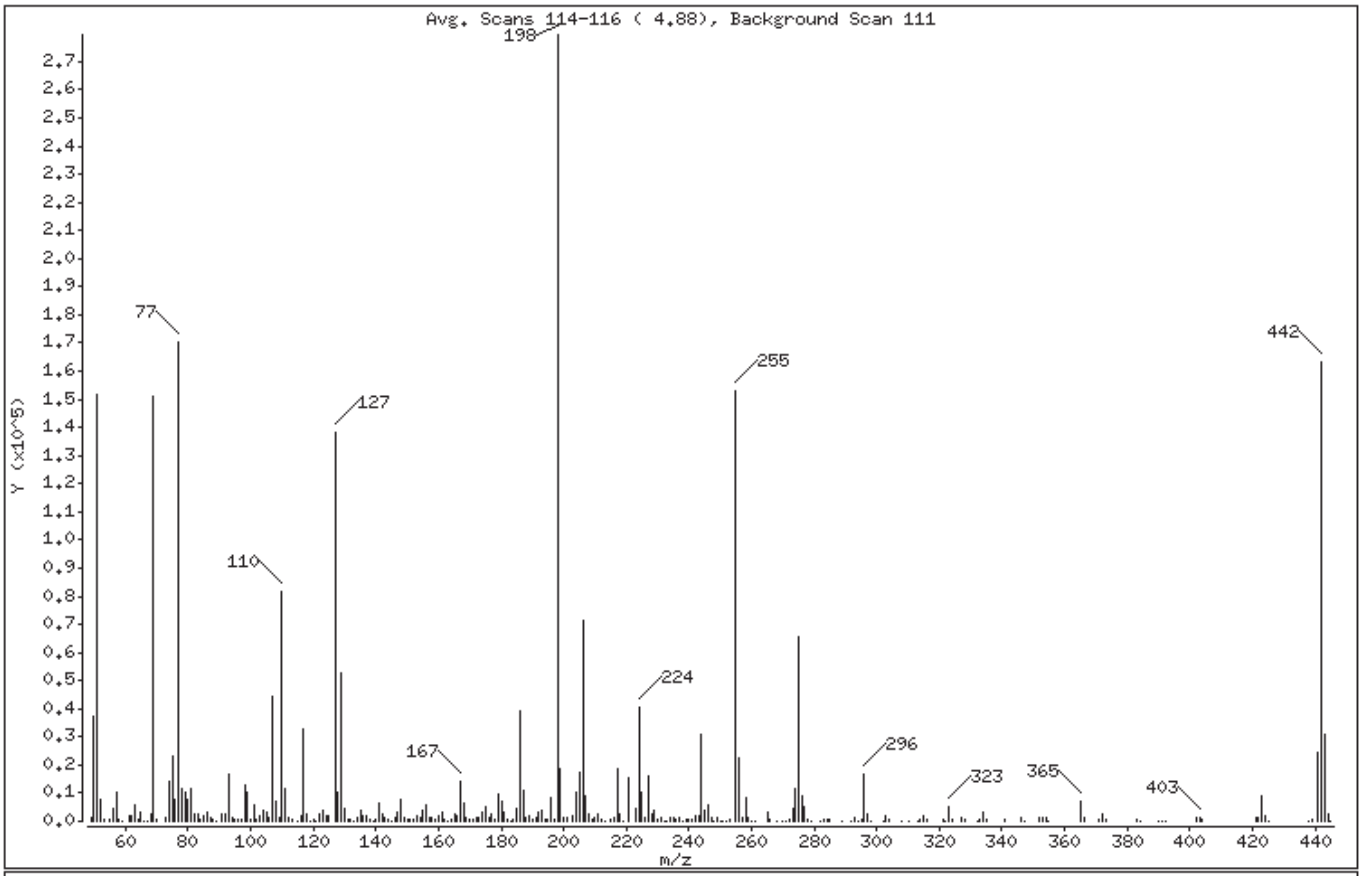
Sample Info: DFTPP50;DFTPP2843;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	54.35
68	Less than 2.00% of mass 69	0.84 (1.56)
69	Mass 69 relative abundance	53.95
70	Less than 2.00% of mass 69	0.31 (0.57)
127	40.00 - 60.00% of mass 198	49.44
197	Less than 1.00% of mass 198	0.15
199	5.00 - 9.00% of mass 198	6.66
275	10.00 - 30.00% of mass 198	23.47
365	Greater than 1.00% of mass 198	2.44
441	Present, but less than mass 443	8.78
442	40.00 - 99.99% of mass 198	58.43
443	17.00 - 23.00% of mass 442	11.13 (19.05)

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:44.
Target 3.5 esignature user ID: ceb05247

Date : 14-NOV-2013 20:11

Client ID: DFTPP50 Instrument: HP19760.i

Sample Info: DFTPP50;DFTPP2843;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0510b.d
Spectrum: Avg. Scans 114-116 (4.88), Background Scan 111
Location of Maximum: 198.00
Number of points: 277

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	994	125.00	1763	196.00	8164	276.00	8809
50.00	37472	127.00	138176	197.00	433	277.00	5372
51.00	151936	128.00	10412	198.00	279552	278.00	698
52.00	7562	129.00	52608	199.00	18608	279.00	156
53.00	345	130.00	4292	200.00	1552	282.00	91
55.00	581	131.00	919	201.00	1242	283.00	551
56.00	4461	132.00	453	203.00	1956	284.00	385
57.00	10438	133.00	160	204.00	10391	285.00	856
58.00	524	134.00	1379	205.00	17256	289.00	116
59.00	90	135.00	4118	206.00	71416	292.00	215
61.00	1862	136.00	1671	207.00	9314	293.00	1150
62.00	2102	137.00	2149	208.00	2281	294.00	220
63.00	5970	138.00	406	209.00	709	295.00	333
64.00	904	139.00	293	210.00	1042	296.00	16936
65.00	2920	140.00	614	211.00	2715	297.00	2361
66.00	259	141.00	6742	212.00	488	298.00	86
67.00	217	142.00	2285	213.00	146	302.00	262
68.00	2351	143.00	1443	215.00	816	303.00	1962
69.00	150784	144.00	414	216.00	1558	304.00	372
70.00	861	145.00	262	217.00	18920	308.00	144
73.00	1180	146.00	1100	218.00	2478	310.00	181
74.00	14264	147.00	3315	219.00	174	313.00	188
75.00	23032	148.00	7697	221.00	15120	314.00	731
76.00	7878	149.00	1524	223.00	4192	315.00	1780
77.00	170496	150.00	447	224.00	40568	316.00	894
78.00	11471	151.00	851	225.00	10285	321.00	457
79.00	10177	152.00	467	226.00	1025	322.00	261
80.00	7741	153.00	2149	227.00	16350	323.00	5147
81.00	11357	154.00	1557	228.00	2267	324.00	786
82.00	2819	155.00	3719	229.00	3536	327.00	976
83.00	2622	156.00	5506	230.00	474	328.00	343
84.00	372	157.00	989	231.00	1413	332.00	284
85.00	1786	158.00	1146	232.00	207	333.00	458
86.00	3164	159.00	870	233.00	275	334.00	3344
87.00	1481	160.00	2008	234.00	993	335.00	734

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:44.
Target 3.5 esignature user ID: ceb05247

Date : 14-NOV-2013 20:11

Client ID: DFTPP50 Instrument: HP19760.i

Sample Info: DFTPP50;DFTPP2843;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0510b.d
Spectrum: Avg. Scans 114-116 (4.88), Background Scan 111
Location of Maximum: 198.00
Number of points: 277

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	580	161.00	3272	235.00	1164	341.00	500
89.00	247	162.00	900	236.00	721	346.00	1073
91.00	2378	163.00	178	237.00	1291	347.00	118
92.00	2577	164.00	388	238.00	145	352.00	1423
93.00	16424	165.00	2559	239.00	523	353.00	1014
94.00	1200	166.00	2055	240.00	383	354.00	1550
95.00	349	167.00	13839	241.00	883	355.00	285
96.00	797	168.00	6519	242.00	2028	365.00	6835
97.00	377	169.00	1114	243.00	2075	366.00	1022
98.00	12648	170.00	411	244.00	30832	371.00	335
99.00	10178	171.00	552	245.00	3928	372.00	2398
100.00	922	172.00	1185	246.00	5956	373.00	632
101.00	5565	173.00	1516	247.00	1101	383.00	538
102.00	369	174.00	3004	248.00	216	384.00	155
103.00	1911	175.00	5146	249.00	1037	390.00	303
104.00	3558	176.00	1397	250.00	185	391.00	158
105.00	3439	177.00	2373	251.00	220	392.00	135
106.00	1107	178.00	864	252.00	261	402.00	1003
107.00	44408	179.00	9767	253.00	673	403.00	1465
108.00	6960	180.00	6820	255.00	153024	404.00	552
109.00	1194	181.00	3287	256.00	22200	421.00	1226
110.00	81856	182.00	535	257.00	1598	422.00	1125
111.00	11734	183.00	198	258.00	8587	423.00	9243
112.00	1534	184.00	789	259.00	1284	424.00	1788
113.00	505	185.00	4725	260.00	202	425.00	157
115.00	93	186.00	39208	261.00	97	438.00	162
116.00	2174	187.00	11137	265.00	3446	439.00	332
117.00	32864	188.00	1102	266.00	410	441.00	24552
118.00	2326	189.00	2131	268.00	89	442.00	163328
119.00	317	190.00	458	270.00	149	443.00	31112
120.00	537	191.00	1129	271.00	225	444.00	2684
121.00	134	192.00	3218	272.00	372	445.00	115
122.00	2591	193.00	3573	273.00	4350		
123.00	3966	194.00	782	274.00	11753		
124.00	1729	195.00	352	275.00	65624		

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:44.
Target 3.5 esignature user ID: ceb05247

Date : 14-NOV-2013 20:11

Client ID: DFTPP50 Instrument: HP19760.i

Sample Info: DFTPP50;DFTPP2843;1;3;DFTPP;

Operator: ceb05247

Column phase: DB-5MS Column diameter: 0.18

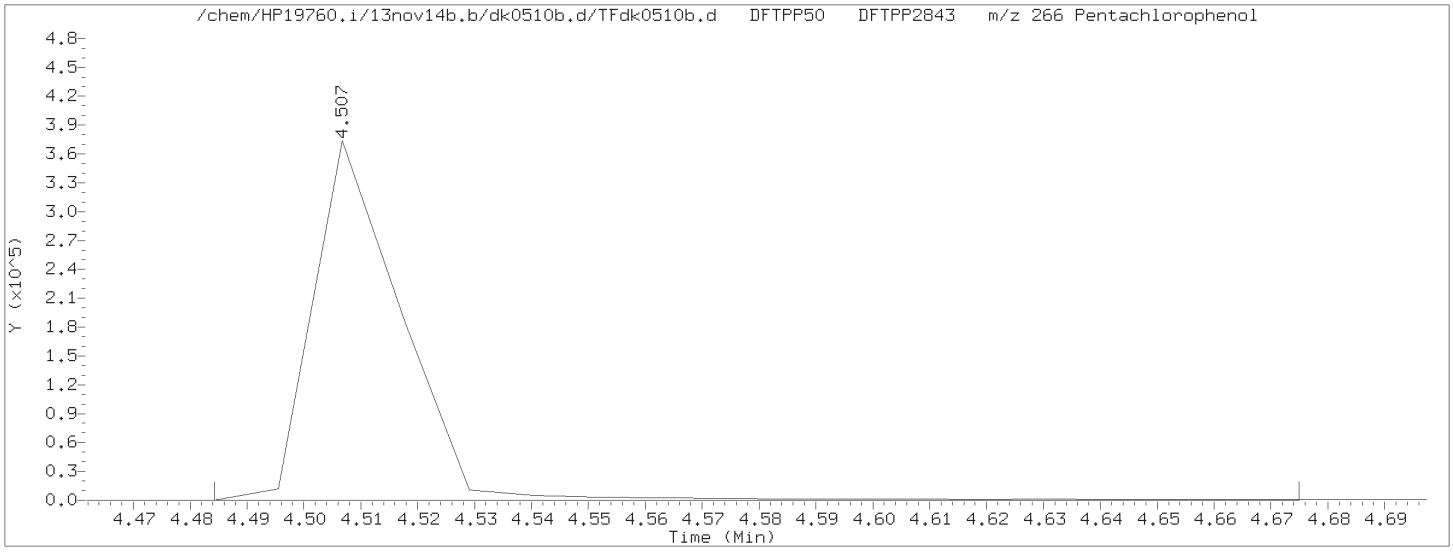
Data File: dk0510b.d
Spectrum: Avg. Scans 114-116 (4.88), Background Scan 111
Location of Maximum: 198.00
Number of points: 277

m/z	Y	m/z	Y	m/z	Y	m/z	Y

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:44.
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

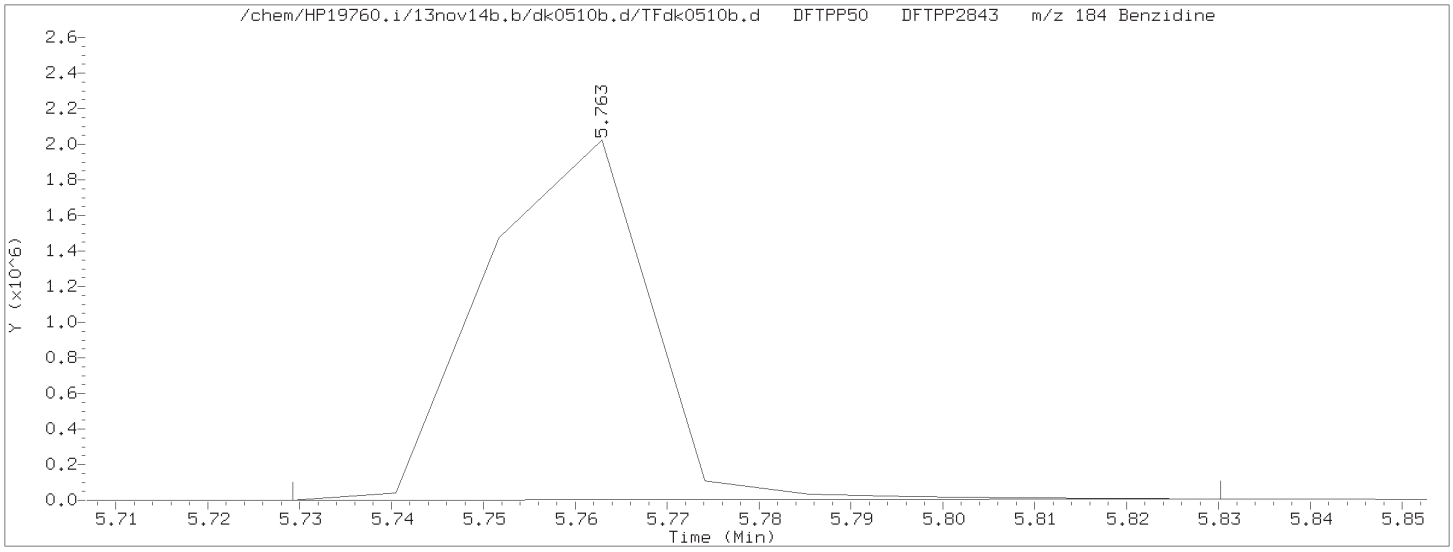
Instrument ID: HP19760.i Injection Date: 14-NOV-2013 20:11 Operator: ceb05247



Pentachlorophenol EICP peak height = 373952 EICP peak height at 10% = 37395 Pentachlorophenol EICP area = 402725

Pentachlorophenol EICP peak apex (min.) = 4.507
RT at 10% of front half of EICP (min.) = 4.496 'Front' peak width (min.) = 0.0104166667
RT at 10% of back half of EICP (min.) = 4.527 'Tailing' peak width (min.) = 0.0206500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0206500000}{0.0104166667} = 1.982$



Benzidine EICP peak height = 2021028 EICP peak height at 10% = 202103 Benzidine EICP area = 2487148

Benzidine EICP peak apex (min.) = 5.763
RT at 5% of front half of EICP (min.) = 5.741 'Front' peak width (min.) = 0.0219333333
RT at 5% of back half of EICP (min.) = 5.775 'Tailing' peak width (min.) = 0.0121666667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0121666667}{0.0219333333} = 0.555$

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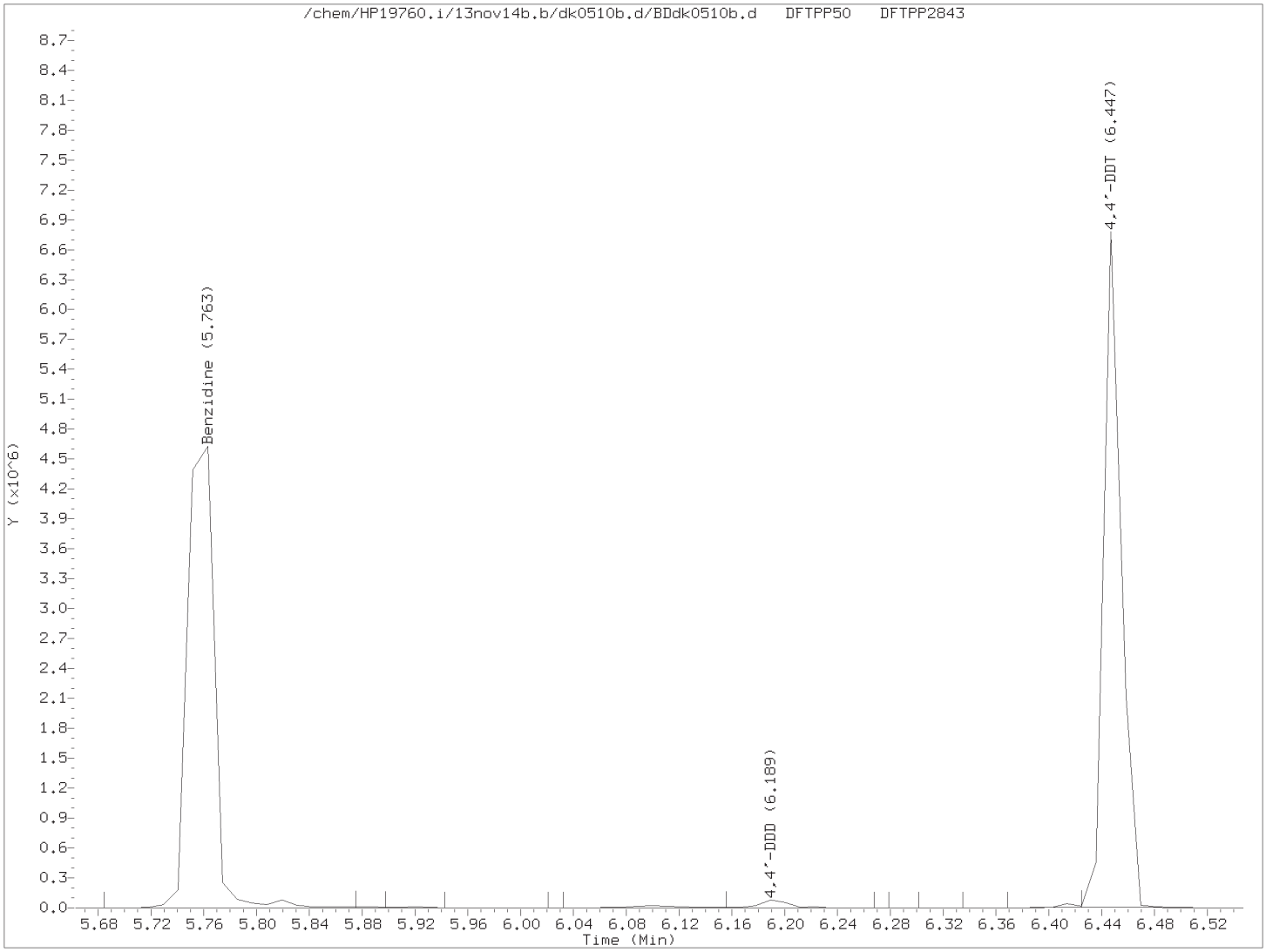
Target 3.5 esignature user ID: ceb05247

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 14-NOV-2013 20:11 Operator: ceb05247



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 111116}{0 + 111116 + 6317932} \times 100 = 1.7$$

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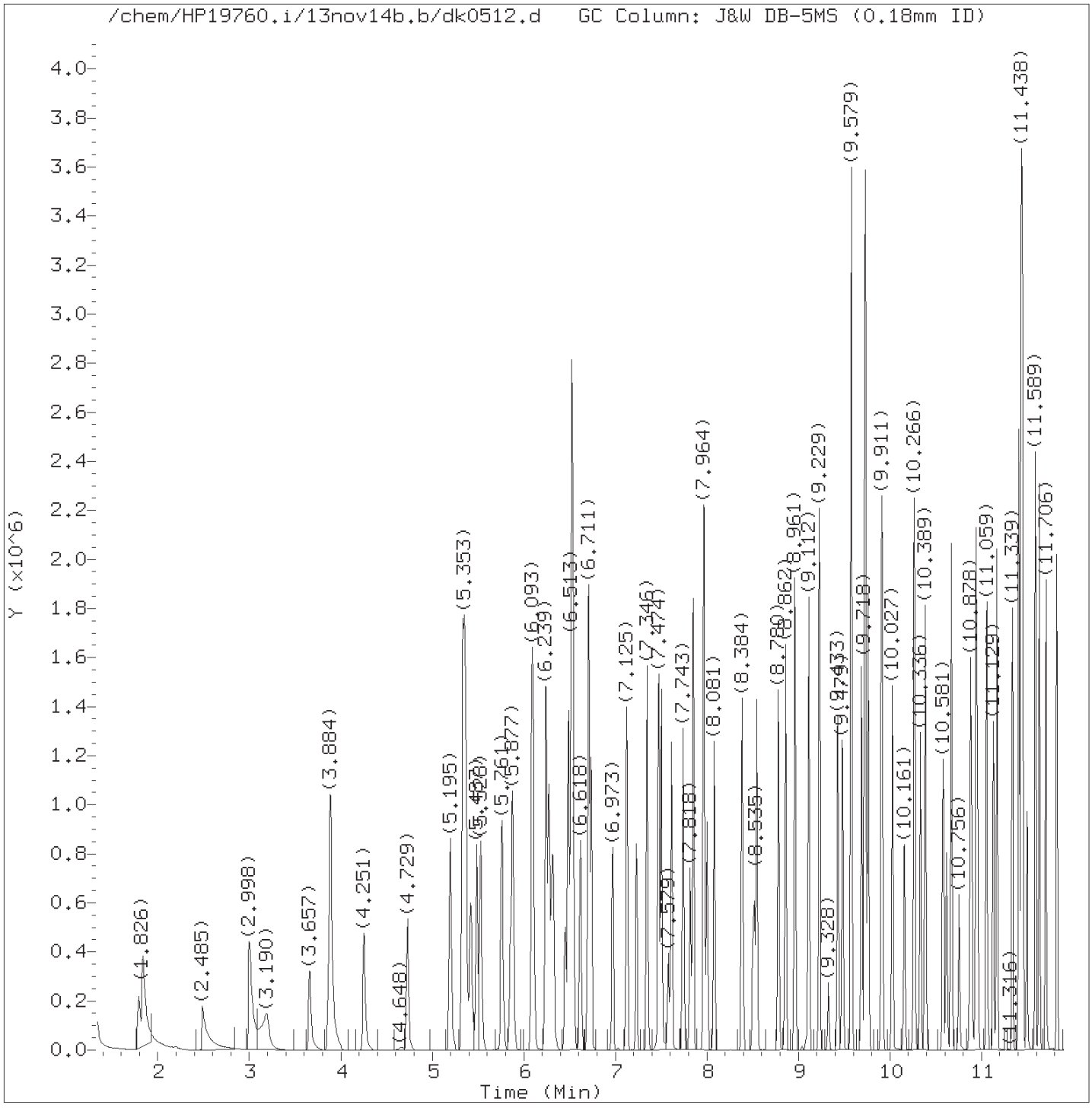
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

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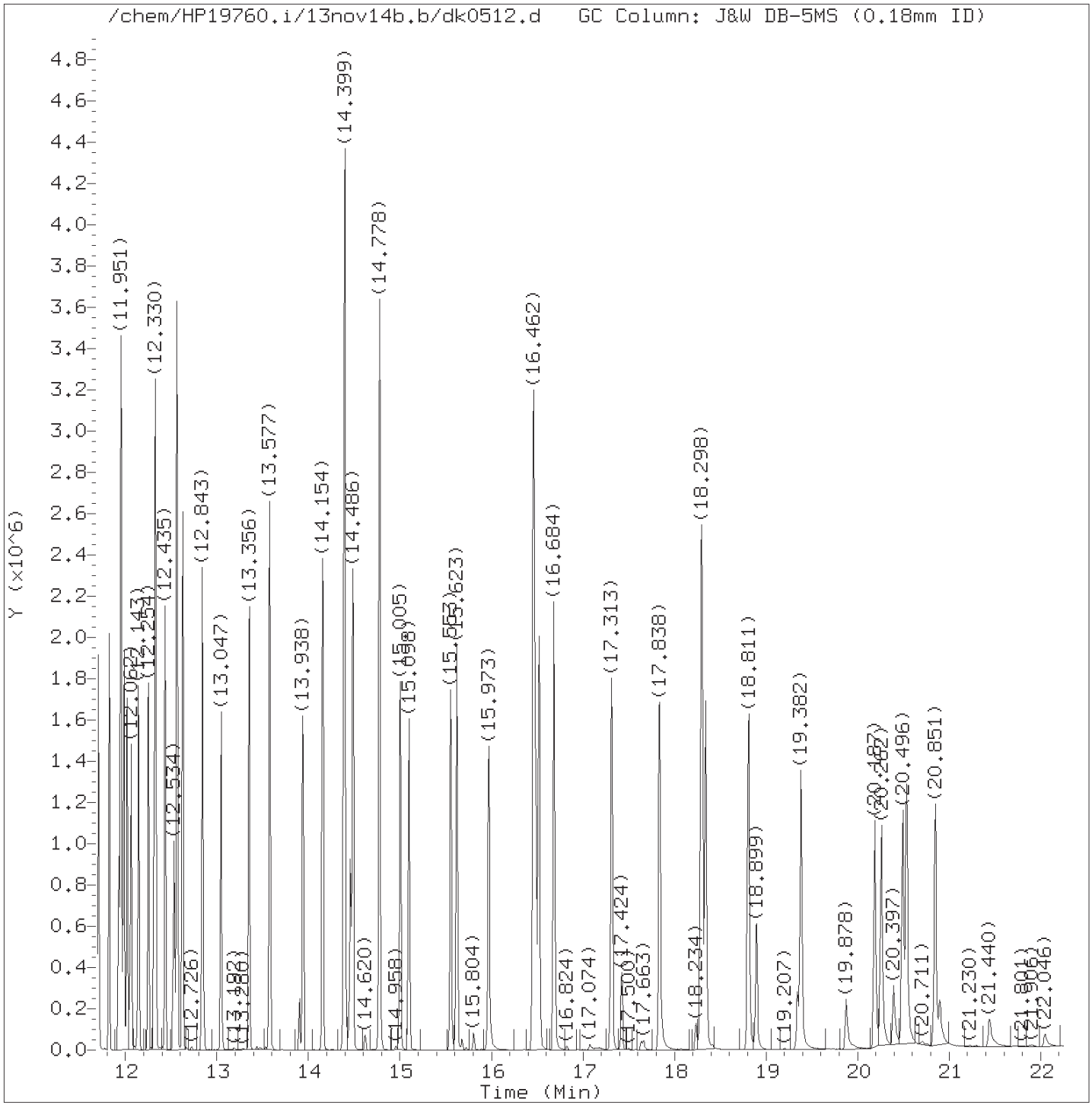
on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Catherine E. Bachman
on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	1.792	74	292309M	13.697
3) Pyridine	(1)	1.838	79	470145M	12.918
4) 2-Picoline	(1)	2.998	93	471409	12.297
5) N-Nitrosomethylethylamine	(1)	3.185	88	213285	12.946
6) Methyl methanesulfonate	(1)	3.657	80	253175	13.442
7)$2-Fluorophenol	(1)	3.890	112	714771	25.071
8) N-Nitrosodiethylamine	(1)	4.251	102	195328	12.344
10) Ethyl methanesulfonate	(1)	4.729	109	198550	13.012
11) Benzaldehyde	(1)	5.195	77	363112	13.257
12)$Phenol-d5	(1)	5.335	99	1004008	25.643
13)$Phenol-d6	(1)	5.335	99	1004008	25.643
14) Phenol	(1)	5.353	94	582811	12.858
15) Aniline	(1)	5.364	93	677189	12.132
16) bis(2-Chloroethyl)ether	(1)	5.487	93	445443	12.455
17) 2-Chlorophenol	(1)	5.528	128	352517	12.573
18) 1,3-Dichlorobenzene	(1)	5.761	146	367383	12.183
19)*1,4-Dichlorobenzene-d4	(1)	5.854	152	96017	5.000
20) 1,4-Dichlorobenzene	(1)	5.877	146	371370	12.174
23) Benzyl alcohol	(1)	6.087	108	255423	12.881
24) 1,2-Dichlorobenzene	(1)	6.099	146	346488	12.145
25) Indene	(1)	6.239	115	706923	14.664
26) 2-Methylphenol	(1)	6.274	108	370591	13.172
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.320	45	700950	15.791
28) bis(2-Chloroisopropyl)ether	(1)	6.320	45	700950	15.791
29) N-Nitrosopyrrolidine	(1)	6.454	100	203601	12.655
30) Acetophenone	(1)	6.489	105	567419	12.898
31) N-Nitroso-di-n-propylamine	(1)	6.519	70	333203	13.158
33) 4-Methylphenol	(1)	6.524	108	397996	12.661
32) N-Nitrosomorpholine	(1)	6.524	56	313335	15.692
34) o-Toluidine	(1)	6.542	106	609031	12.554
35) Hexachloroethane	(1)	6.618	117	163961	12.717
36)$Nitrobenzene-d5	(2)	6.711	82	928664	27.073
37) Nitrobenzene	(2)	6.734	77	507806	13.948
39) N-Nitrosopiperidine	(2)	6.973	114	187359	12.554
40) Isophorone	(2)	7.125	82	854816	13.776
42) 2-Nitrophenol	(2)	7.230	139	177175	14.183
45) 2,4-Dimethylphenol	(2)	7.346	107	409290	13.483
46) O,O,O-triethylphosphorothioate	(2)	7.474	198	163581	12.157
48) bis(2-Chloroethoxy)methane	(2)	7.504	93	514766M	12.712
47) Benzoic acid	(2)	7.515	105	152900M	8.976

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	7.614	162	277295	12.950
51) 1,2,4-Trichlorobenzene	(2)	7.743	180	309216	12.927
52)*Naphthalene-d8	(2)	7.818	136	372726	5.000
53) Naphthalene	(2)	7.853	128	962191	12.108
55) 4-Chloroaniline	(2)	7.964	127	413220	12.549
56) 2,6-Dichlorophenol	(2)	7.970	162	261779	12.732
57) Hexachloropropene	(2)	7.999	213	201139	13.323
58) Hexachlorobutadiene	(2)	8.081	225	172681	12.384
60) Quinoline	(2)	8.384	129	645680	12.265
61) Caprolactam	(2)	8.518	113	125551	13.142
62) N-Nitrosodi-n-butylamine	(2)	8.547	84	320337	13.023
63) 4-Chloro-3-methylphenol	(2)	8.780	107	353017	13.730
64) Safrole	(2)	8.862	162	256576	12.686
65) 2-Methylnaphthalene	(2)	8.961	142	656221	12.391
66) 1-Methylnaphthalene	(2)	9.112	142	598525	12.454
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.229	216	291221	11.438
67) Hexachlorocyclopentadiene	(3)	9.229	237	135855	11.306
69) cis-Isosafrole	(3)	9.328	162	46132	12.342
70) 2,4,6-Trichlorophenol	(3)	9.433	196	206374	12.847
71) 2,4,5-Trichlorophenol	(3)	9.485	196	215324	12.972
72)$2-Fluorobiphenyl	(3)	9.579	172	1304205	23.774
74) Isosafrole	(3)	9.689	162	261736	12.474
73) trans-Isosafrole	(3)	9.689	162	261736	12.474
75) 1,1'-Biphenyl	(3)	9.730	154	746270	11.698
76) 2-Chloronaphthalene	(3)	9.736	162	590830	12.074
77) 1-Chloronaphthalene	(3)	9.765	162	596901	12.371
82) Diphenyl ether	(3)	9.911	170	425678	12.060
83) 2-Nitroaniline	(3)	9.922	138	207377	13.606
84) 1,4-Naphthoquinone	(3)	10.027	158	259820	12.337
85) 1,4-Dinitrobenzene	(3)	10.161	168	111977	13.264
86) Dimethylphthalate	(3)	10.266	163	689204	12.453
87) 1,3-Dinitrobenzene	(3)	10.272	168	126085	13.273
88) 2,6-Dinitrotoluene	(3)	10.336	165	168433	13.734
90) Acenaphthylene	(3)	10.389	152	910470	12.257
91) 3-Nitroaniline	(3)	10.581	138	186236	13.229
92)*Acenaphthene-d10	(3)	10.622	164	219681	5.000
93) Acenaphthene	(3)	10.674	153	603288	11.805
94) 2,4-Dinitrophenol	(3)	10.756	184	85186	13.706
95) Pentachlorobenzene	(3)	10.878	250	239379	11.736
96) 4-Nitrophenol	(3)	10.896	109	132854	14.797

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
97) Dibenzofuran	(3)	10.942	168	829326	11.412
98) 2,4-Dinitrotoluene	(3)	10.960	165	217755	13.855
99) 1-Naphthylamine	(3)	11.059	143	638443	12.086
100) 2,3,4,6-Tetrachlorophenol	(3)	11.129	232	155815	11.888
101) 2-Naphthylamine	(3)	11.170	143	645645	11.911
102) Diethylphthalate	(3)	11.339	149	653040	11.977
103) Fluorene	(3)	11.409	166	688880	11.776
104) Thionazin	(3)	11.432	107	147809	12.542
105) 4-Chlorophenyl-phenylether	(3)	11.444	204	326591	11.258
106) 5-Nitro-o-toluidine	(3)	11.444	152	192810	12.264
107) 4-Nitroaniline	(3)	11.455	138	179932	12.426
108) 4,6-Dinitro-2-methylphenol	(4)	11.502	198	124301	13.472
110) NDPA as diphenylamine	(4)	11.589	169	540436	12.077
109) N-Nitrosodiphenylamine	(4)	11.589	169	540436	12.077
111) 1,2-Diphenylhydrazine	(4)	11.630	77	988216	13.950
112)$2,4,6-Tribromophenol	(3)	11.706	330	148191	25.684
115) Tetraethyldithiopyrophosphate	(4)	11.823	97	144838	14.175
116) 1,3,5-Trinitrobenzene	(4)	11.928	213	93945	13.547
117) Diallate (peak 1)	(4)	11.951	86	356974	10.111
118) Phorate	(4)	11.957	75	597439	14.272
119) Phenacetin	(4)	11.986	108	447404	15.016
120) 4-Bromophenyl-phenylether	(4)	12.021	248	177787	12.534
121) Diallate (peak 2)	(4)	12.044	86	52481	3.485
122) Hexachlorobenzene	(4)	12.067	284	172509	12.301
123) Dimethoate	(4)	12.143	87	393628	14.401
124) Atrazine	(4)	12.254	200	194637	13.360
125) Pentachlorophenol	(4)	12.312	266	107457	10.240
127) 4-Aminobiphenyl	(4)	12.330	169	685047	12.237
126) Pentachloronitrobenzene	(4)	12.330	237	85515	13.121
129) Pronamide	(4)	12.435	173	325521	13.744
130)*Phenanthrene-d10	(4)	12.534	188	359468	5.000
131) Phenanthrene	(4)	12.563	178	937385	11.692
133) Dinoseb	(4)	12.569	211	161905	11.905
134) Anthracene	(4)	12.627	178	980158	12.262
135) Carbazole	(4)	12.843	167	950595	12.288
136) Methyl parathion	(4)	13.047	109	295492	14.453
137) Di-n-butylphthalate	(4)	13.356	149	1182428	12.905
138) Parathion	(4)	13.577	109	187073	14.334
139) 4-Nitroquinoline-1-oxide	(4)	13.577	190	89884	11.367
140) Isodrin	(4)	13.938	193	124436	12.939

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

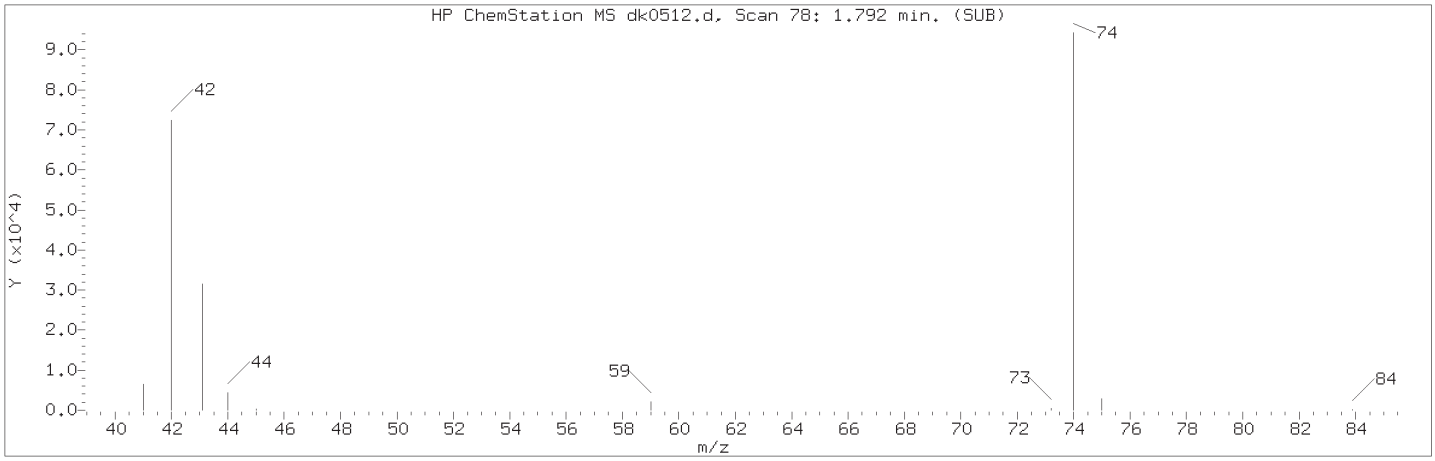
Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
142) Fluoranthene	(4)	14.154	202	1149435	12.746
144) Benzidine	(5)	14.399	184	2275925	38.600
145)*Pyrene-d10	(5)	14.457	212	459485	5.000
146) Pyrene	(5)	14.486	202	1161070	11.902
149)$Terphenyl-d14	(5)	14.778	244	1429845	24.953
150) p-Dimethylaminoazobenzene	(5)	15.005	225	236337	12.073
151) Chlorobenzilate	(5)	15.098	139	372007	13.548
152) 3,3'-Dimethylbenzidine	(5)	15.553	212	778353	13.441
153) Butylbenzylphthalate	(5)	15.623	149	533940	12.860
156) 2-Acetylaminofluorene	(5)	15.973	181	481571	13.069
158) Benzo(a)anthracene	(5)	16.456	228	1039168	12.554
159) 3,3'-Dichlorobenzidine	(5)	16.462	252	386229	12.919
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.485	231	200357	12.690
161) Chrysene	(5)	16.520	228	1010065	12.408
162) bis(2-Ethylhexyl)phthalate	(5)	16.684	149	713437	13.063
165) 6-Methylchrysene	(5)	17.313	242	746571	13.047
166) Di-n-octylphthalate	(6)	17.838	149	1204401	12.488
168) Benzo(b)fluoranthene	(6)	18.292	252	976442	12.628
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.304	256	439607	12.809
170) Benzo(k)fluoranthene	(6)	18.345	252	1024485	13.137
171) Benzo(a)pyrene	(6)	18.811	252	944923	13.313
172)*Perylene-d12	(6)	18.899	264	328252	5.000
173) 3-Methylcholanthrene	(6)	19.382	268	457369	13.542
174) Dibenz(a,h)acridine	(6)	20.187	279	620306	13.212
175) Dibenz(a,j)acridine	(6)	20.262	279	749739	14.891
176) Indeno(1,2,3-cd)pyrene	(6)	20.496	276	934270M	15.007
177) Dibenz(a,h)anthracene	(6)	20.536	278	779350	14.783
178) Benzo(g,h,i)perylene	(6)	20.851	276	787810	15.012
179) Diallate TRANS/CIS	(4)			409455	13.538
182) 2,4_2,6-Dinitrotoluenes	(3)			386188	27.589

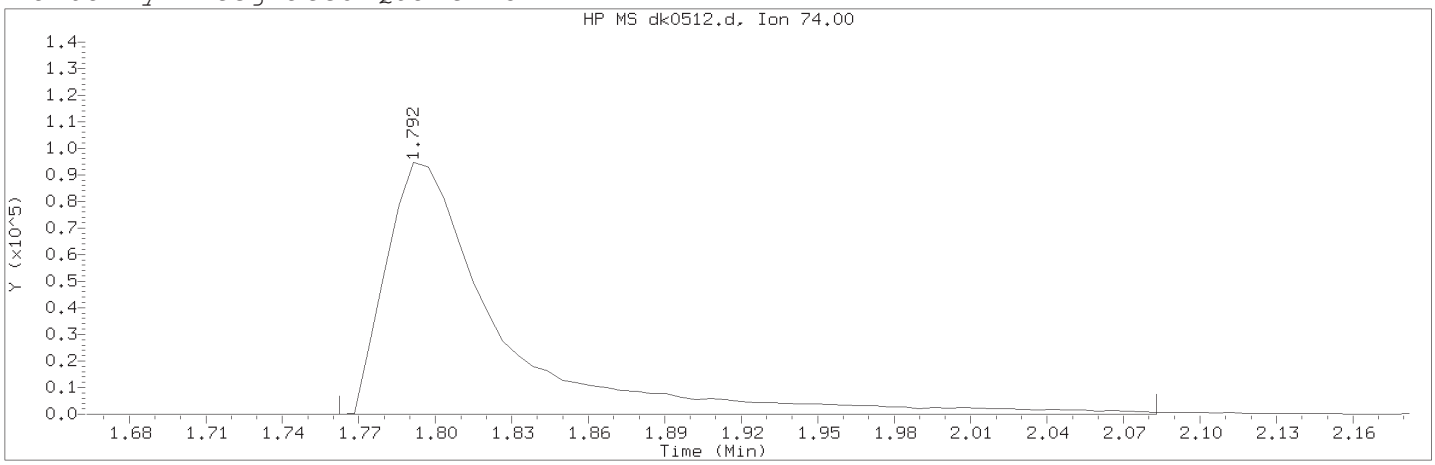
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

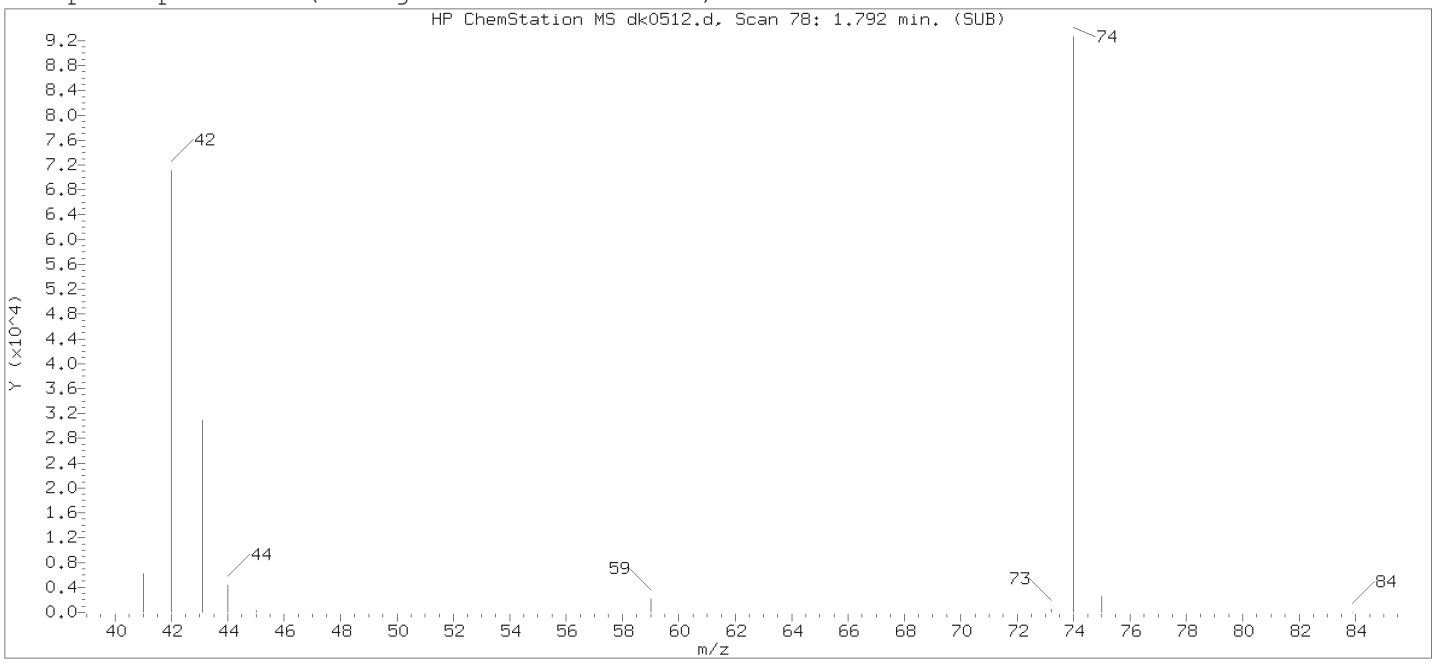
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 78		
Retention Time (minutes)	: 1.792		
Quant Ion	: 74.00		
Area (flag)	: 292309M		
On-Column Amount (ng/ul)	: 13.6973		
Integration start scan	: 72	Integration stop scan:	127
Y at integration start	: 35	Y at integration end:	35

Reason for manual integration: improper integration

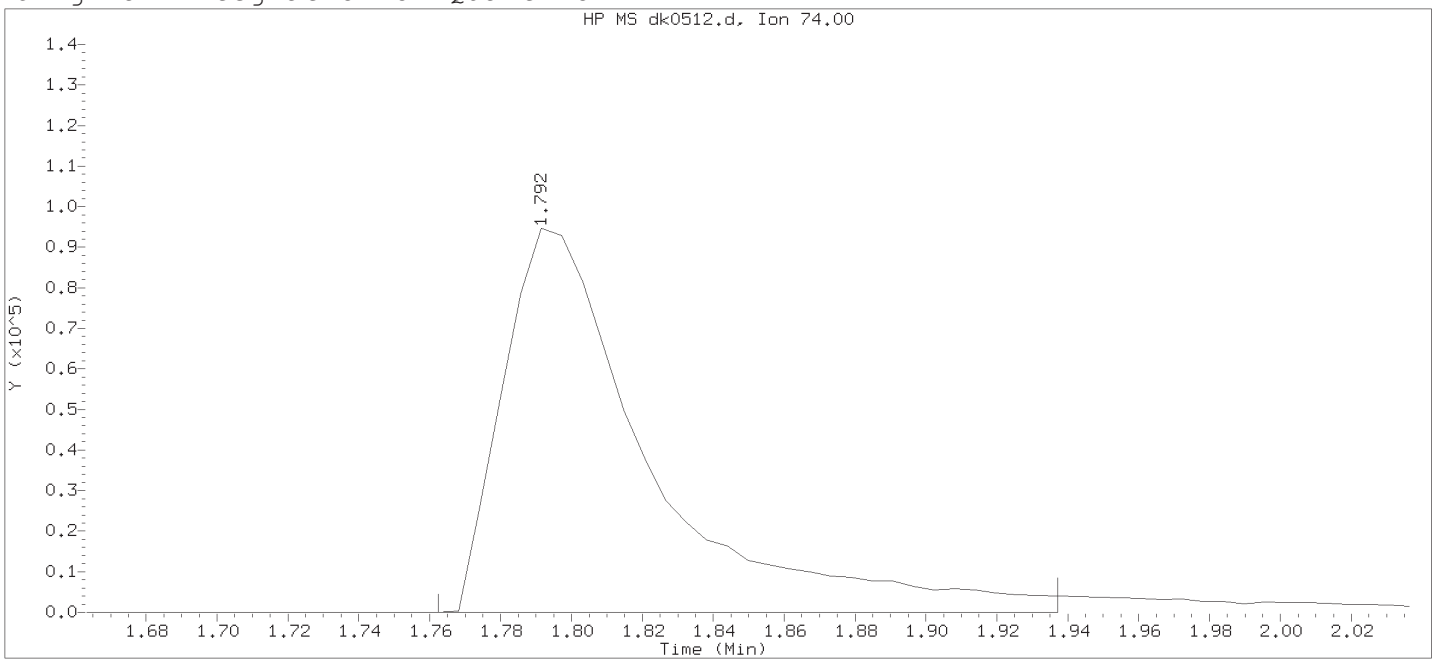
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

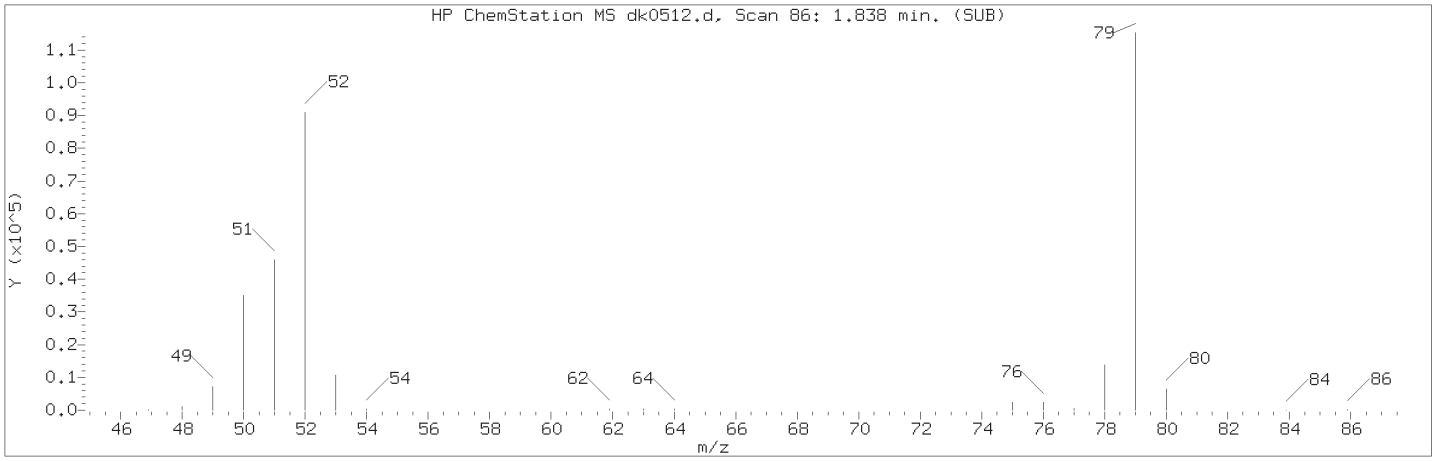
Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:33
Date, time and analyst ID of latest file update: 14-Nov-2013 21:33 Automation

Sample Name: SSTD12.5 Lab Sample ID: STD2813

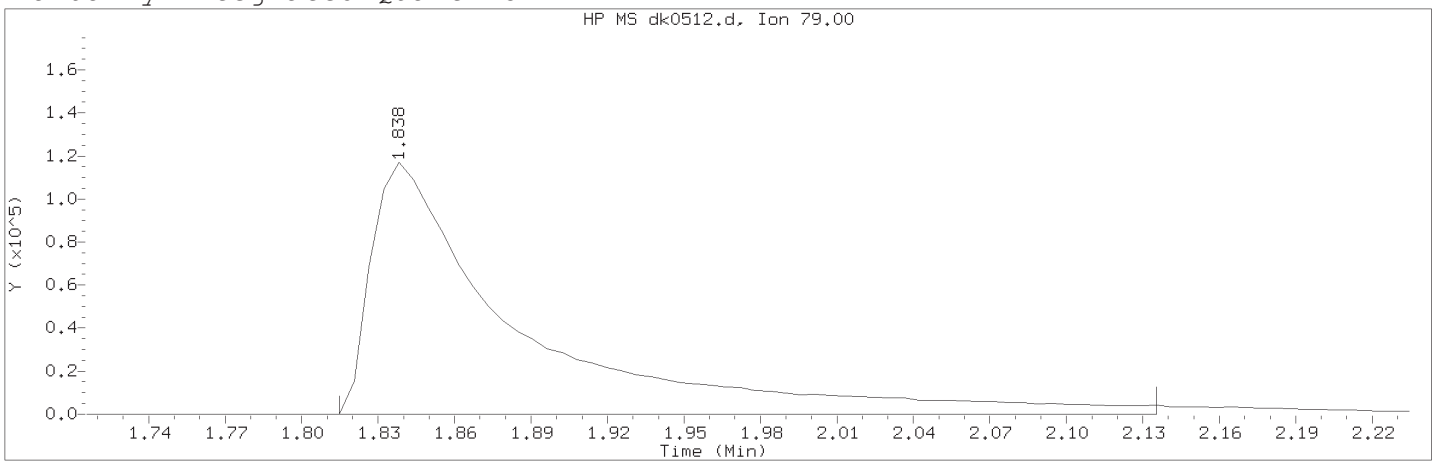
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 78		
Retention Time (minutes)	: 1.792		
Quant Ion	: 74.00		
Area	: 272806		
On-column Amount (ng/ul)	: 12.7833		
Integration start scan	: 72	Integration stop scan:	102
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

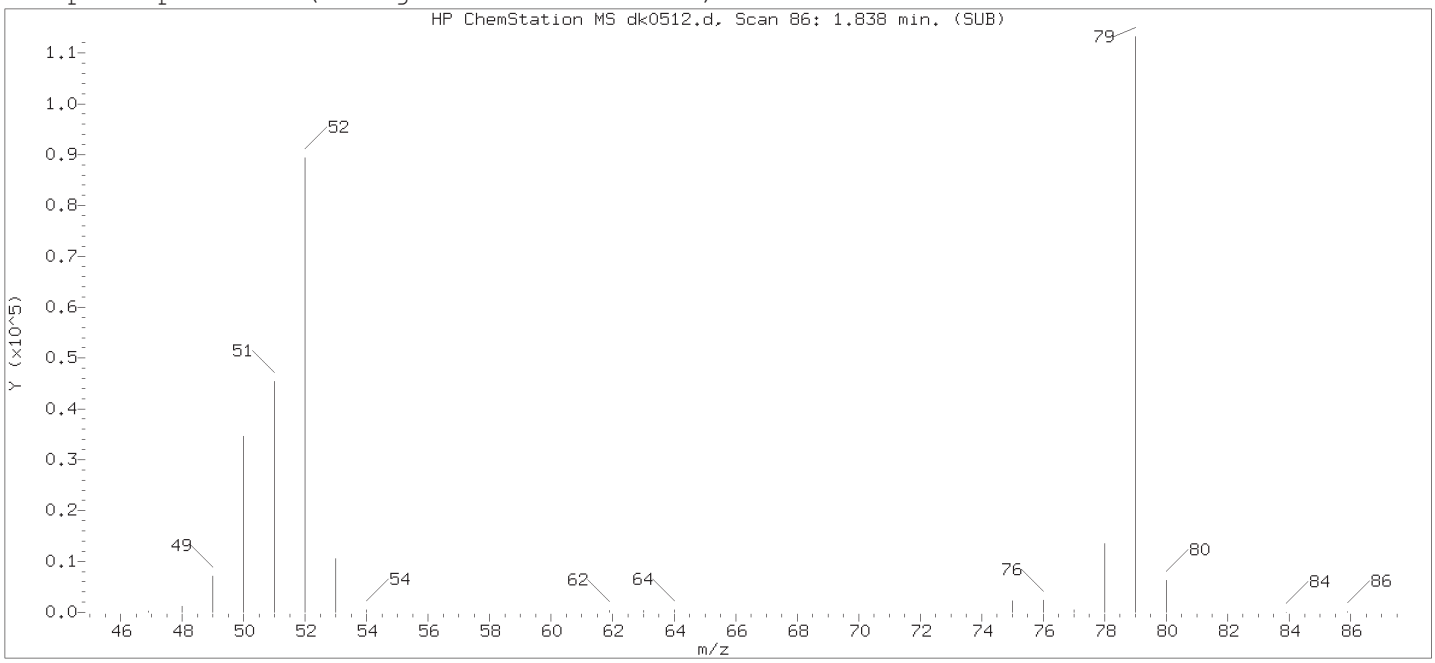
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 86		
Retention Time (minutes)	: 1.838		
Quant Ion	: 79.00		
Area (flag)	: 470145M		
On-Column Amount (ng/ul)	: 12.9180		
Integration start scan	: 81	Integration stop scan:	136
Y at integration start	: -55	Y at integration end:	-55

Reason for manual integration: improper integration

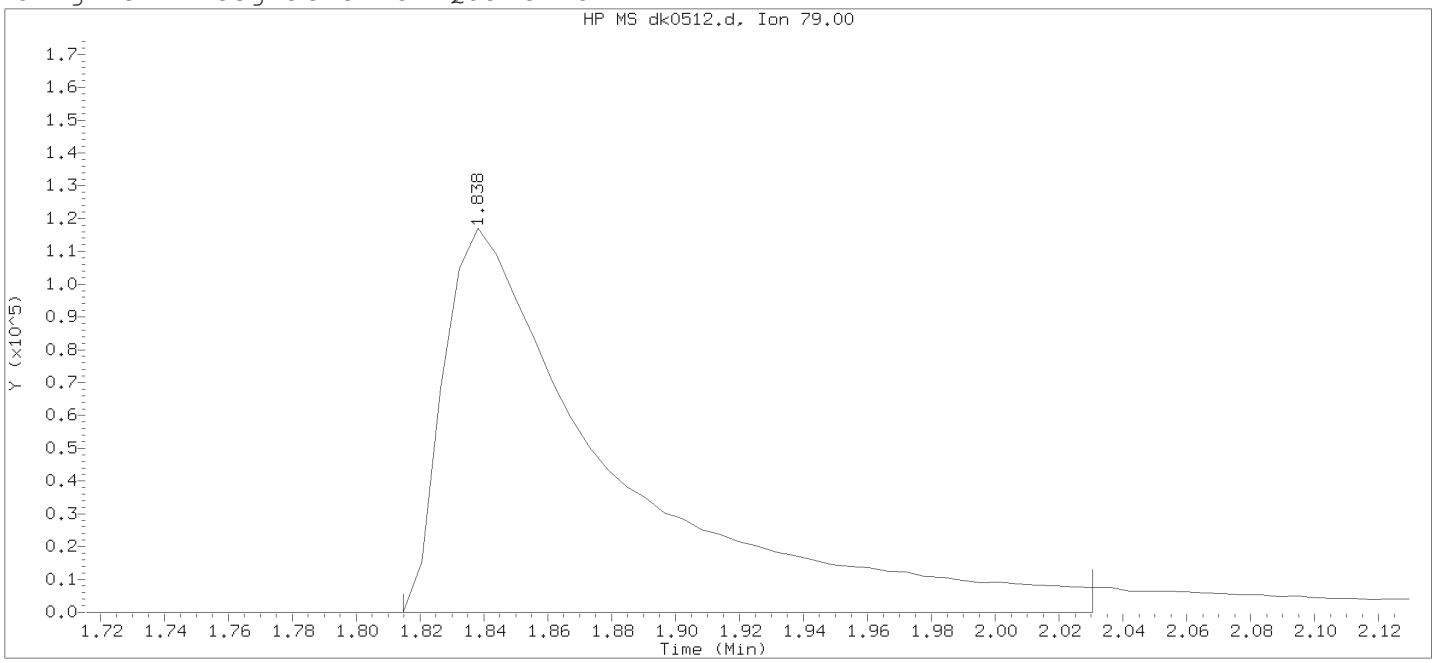
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

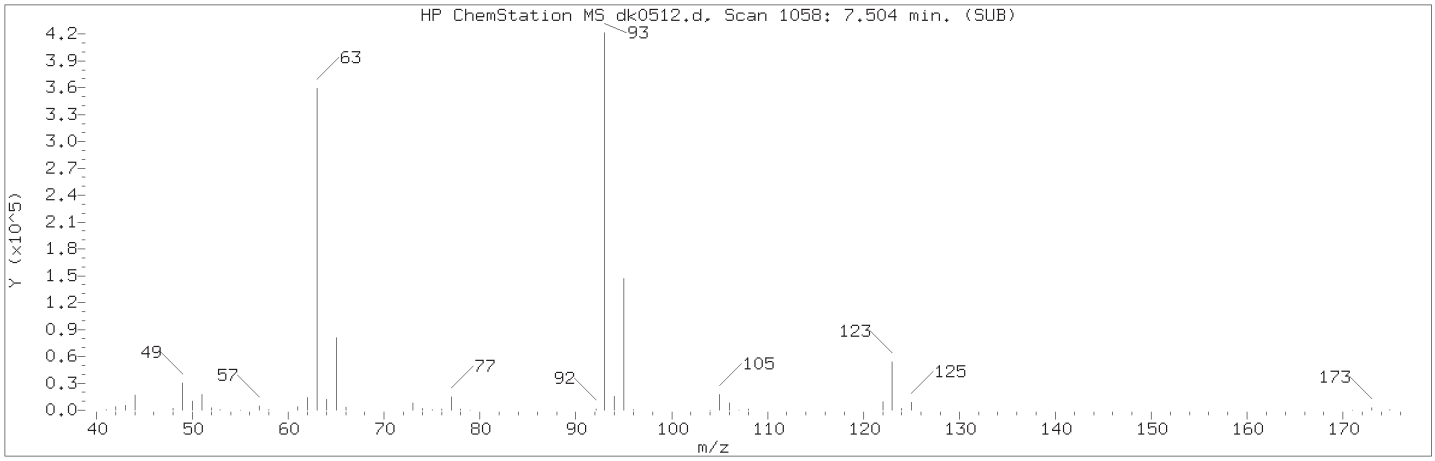
Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:33
Date, time and analyst ID of latest file update: 14-Nov-2013 21:33 Automation

Sample Name: SSTD12.5 Lab Sample ID: STD2813

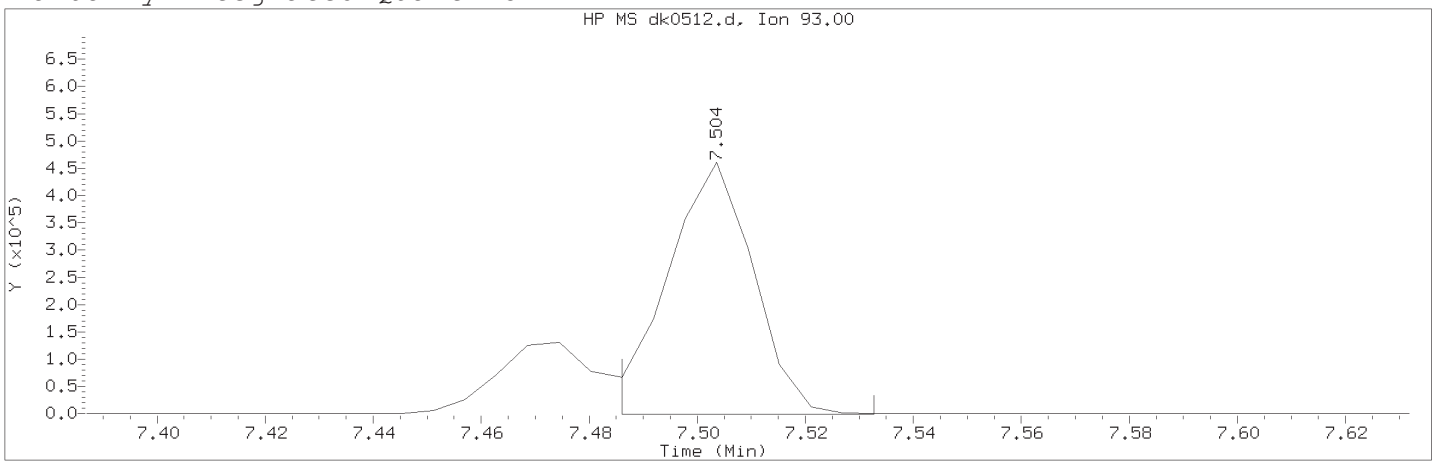
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 86		
Retention Time (minutes)	: 1.838		
Quant Ion	: 79.00		
Area	: 434940		
On-column Amount (ng/ul)	: 11.9506		
Integration start scan	: 81	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

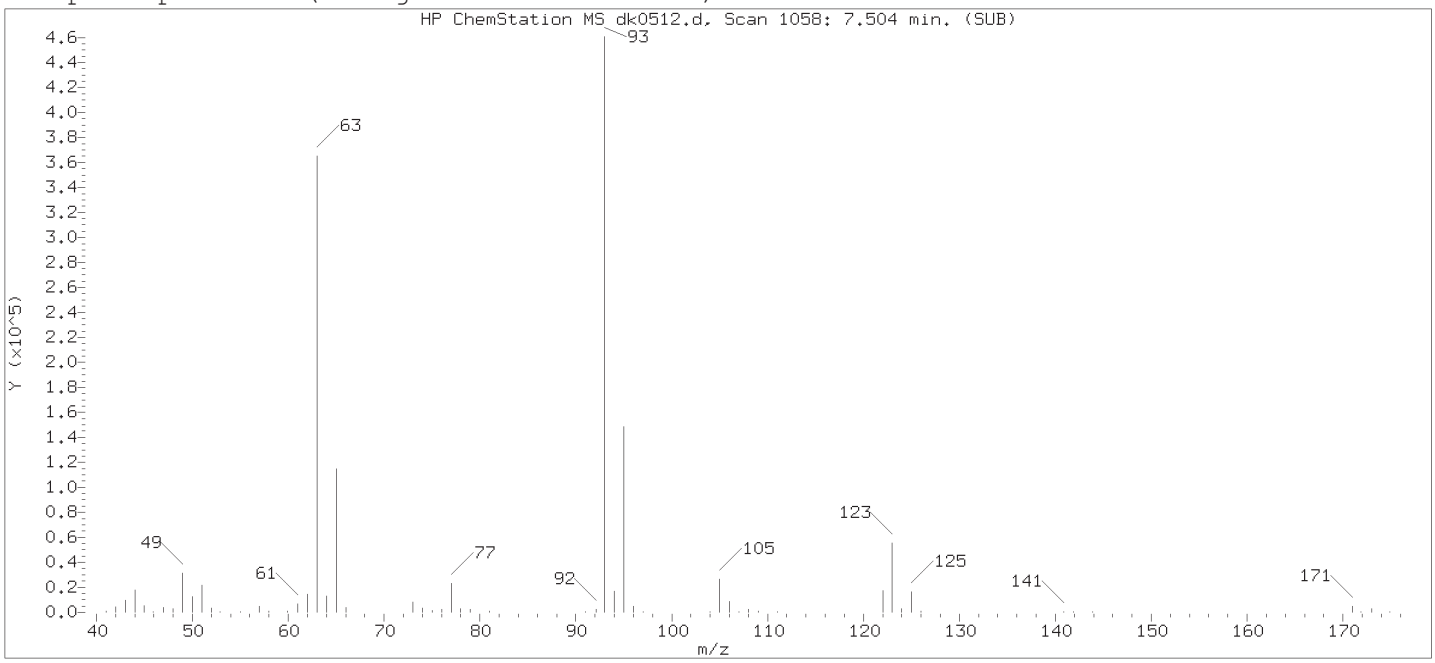
Compound Number : 48
Compound Name : bis(2-Chloroethoxy)methane
Scan Number : 1058
Retention Time (minutes) : 7.504
Quant Ion : 93.00
Area (flag) : 514766M
On-Column Amount (ng/ul) : 12.7116
Integration start scan : 1054 Integration stop scan: 1062
Y at integration start : -825 Y at integration end: -825

Reason for manual integration: improper integration

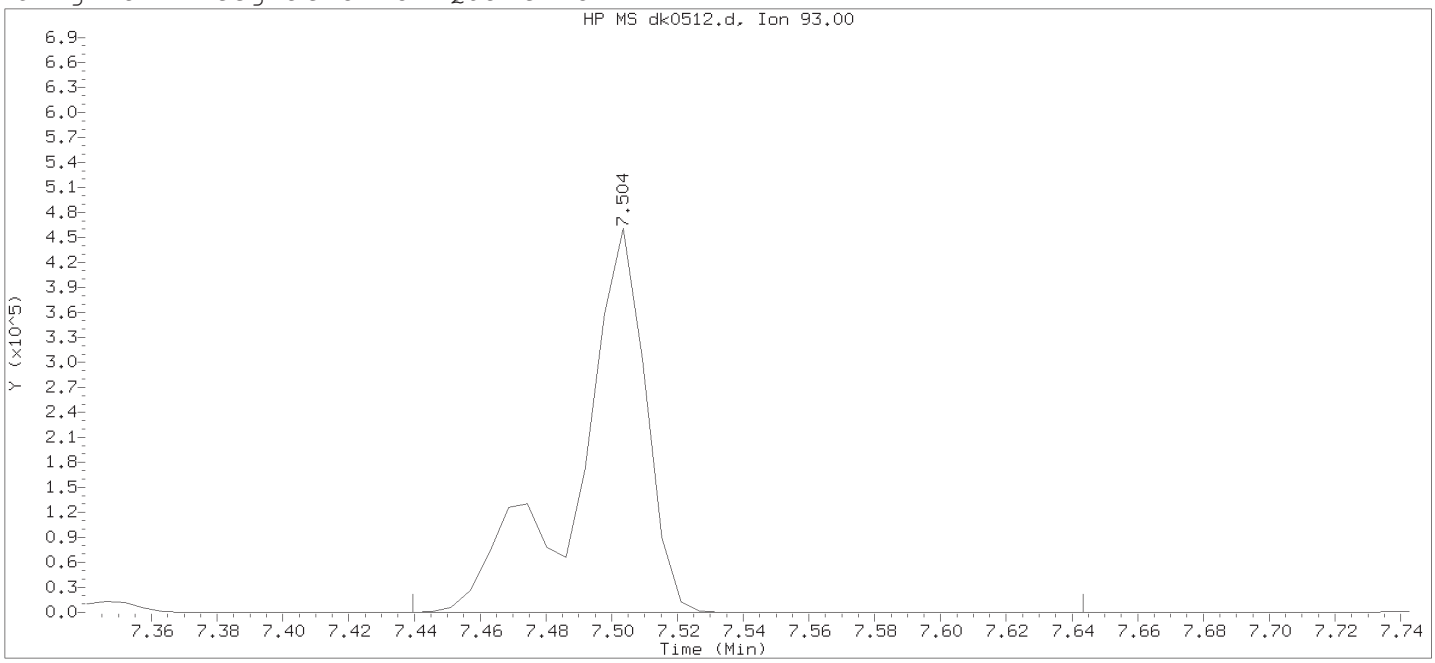
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

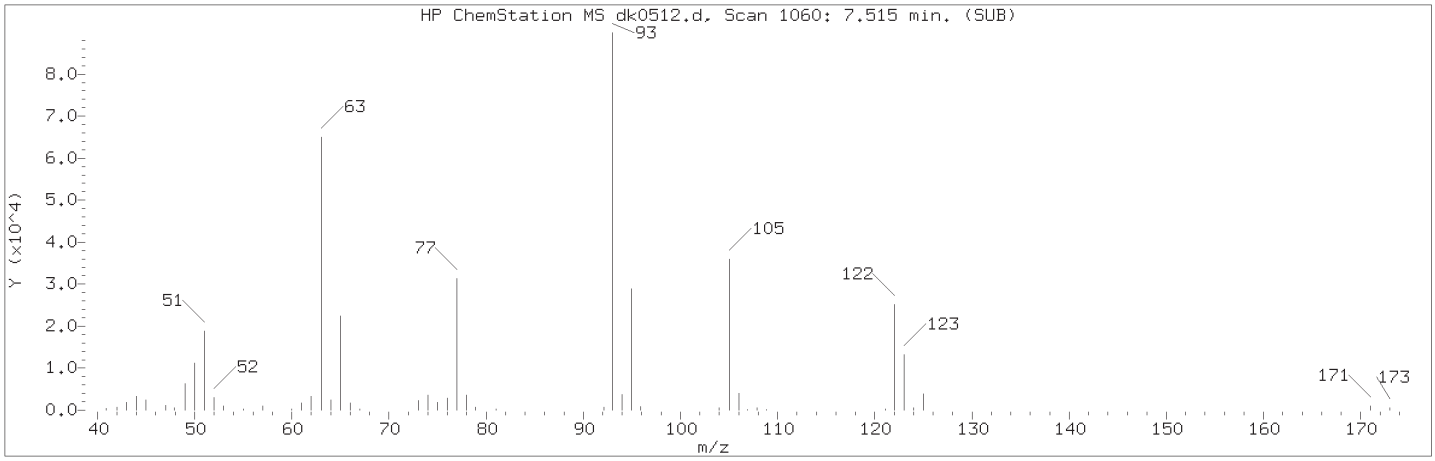
Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:33
Date, time and analyst ID of latest file update: 14-Nov-2013 21:33 Automation

Sample Name: SSTD12.5 Lab Sample ID: STD2813

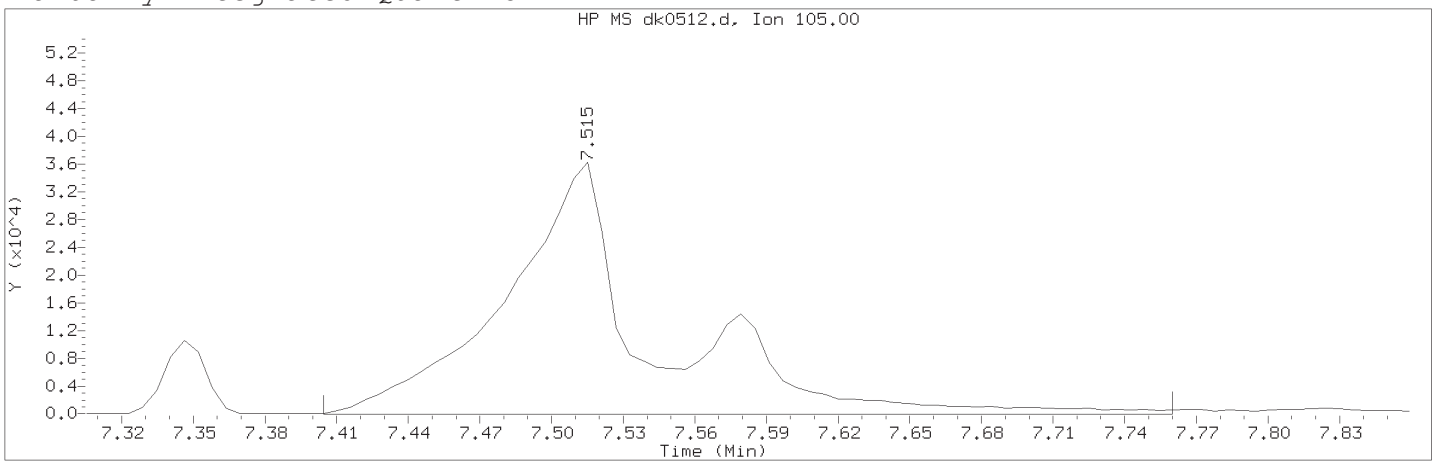
Compound Number	: 48	
Compound Name	: bis(2-Chloroethoxy)methane	
Scan Number	: 1058	
Retention Time (minutes)	: 7.504	
Quant Ion	: 93.00	
Area	: 665656	
On-column Amount (ng/ul)	: 16.4377	
Integration start scan	: 1046	Integration stop scan: 1081
Y at integration start	: 0	Y at integration end: 0

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

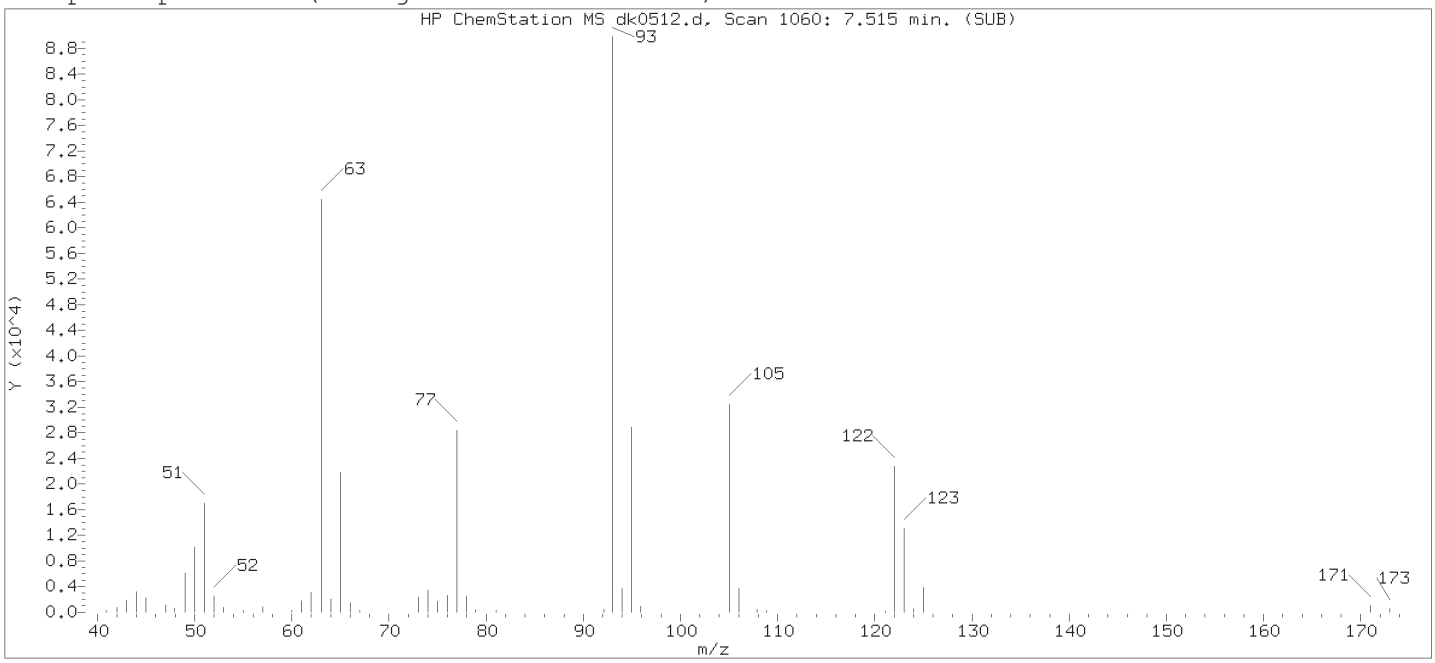
Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1060		
Retention Time (minutes)	: 7.515		
Quant Ion	: 105.00		
Area (flag)	: 152900M		
On-Column Amount (ng/ul)	: 8.9756		
Integration start scan	: 1040	Integration stop scan:	1101
Y at integration start	: -44	Y at integration end:	-44

Reason for manual integration: improper integration

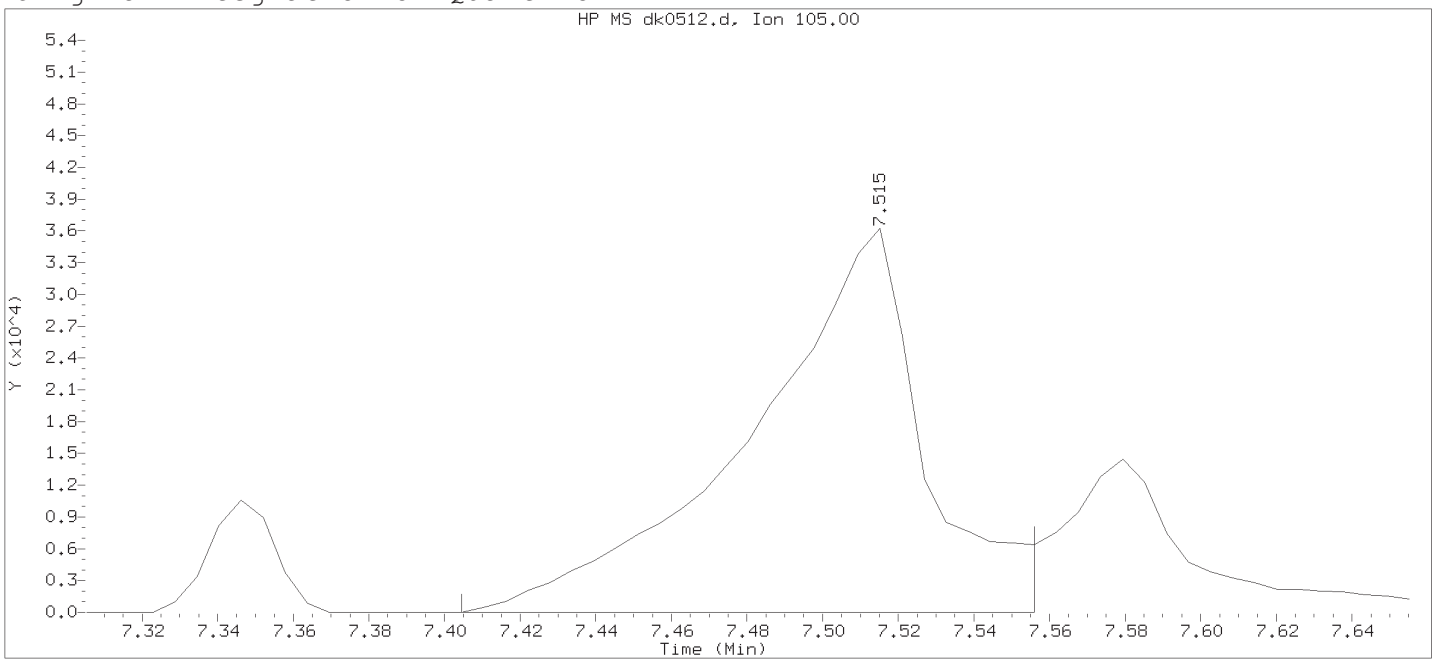
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

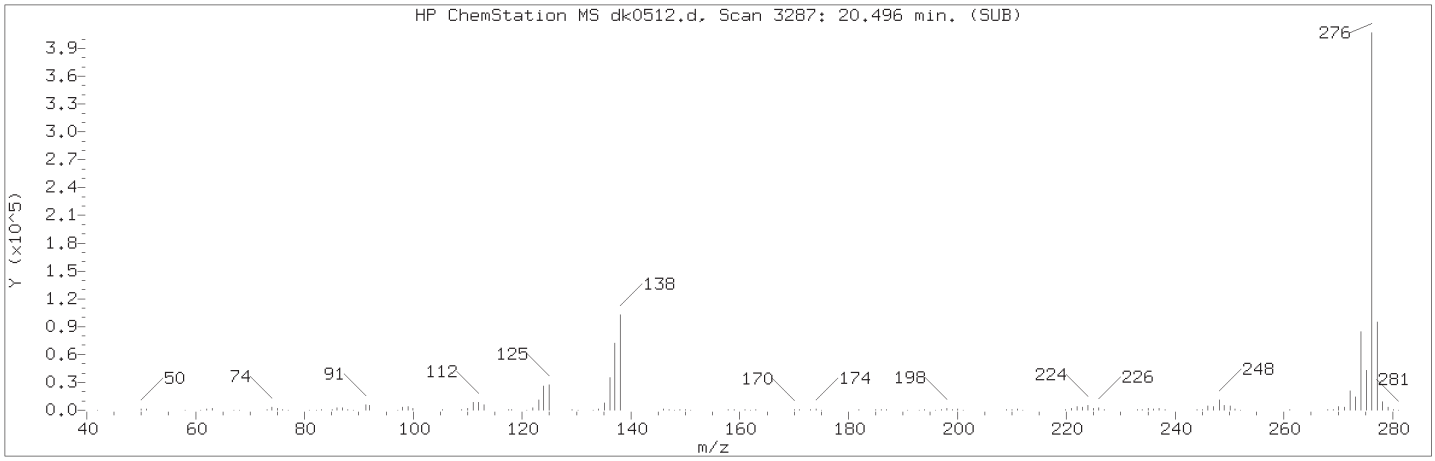
Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:33
Date, time and analyst ID of latest file update: 14-Nov-2013 21:33 Automation

Sample Name: SSTD12.5 Lab Sample ID: STD2813

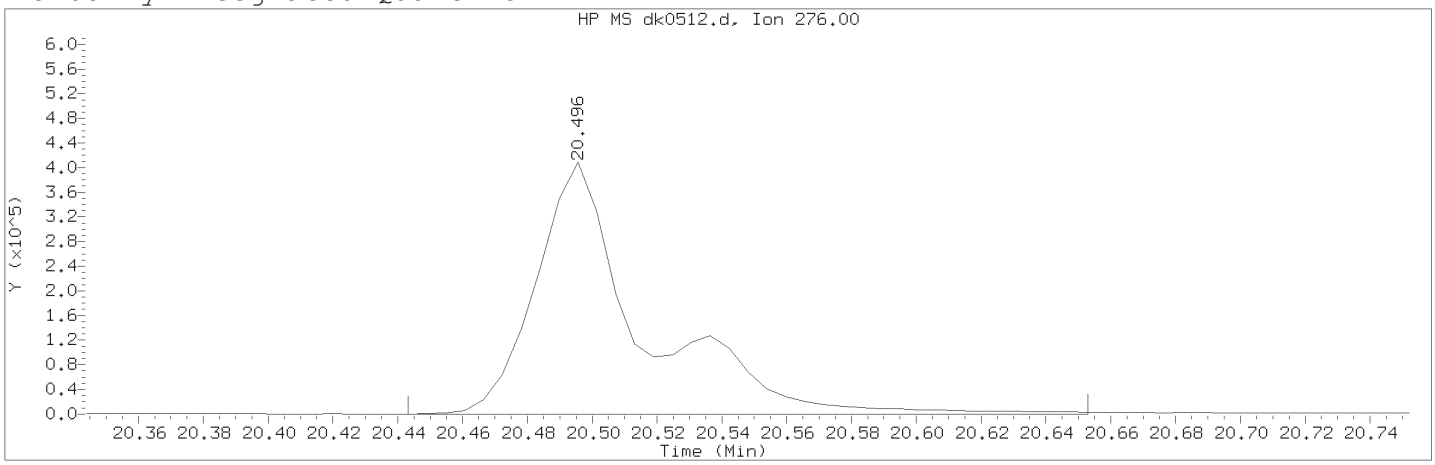
Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1060		
Retention Time (minutes)	: 7.515		
Quant Ion	: 105.00		
Area	: 113760		
On-column Amount (ng/ul)	: 7.5496		
Integration start scan	: 1040	Integration stop scan:	1066
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:35
Date, time and analyst ID of latest file update: 14-Nov-2013 21:35 ceb05247

Sample Name: SSTD12.5 Lab Sample ID: STD2813

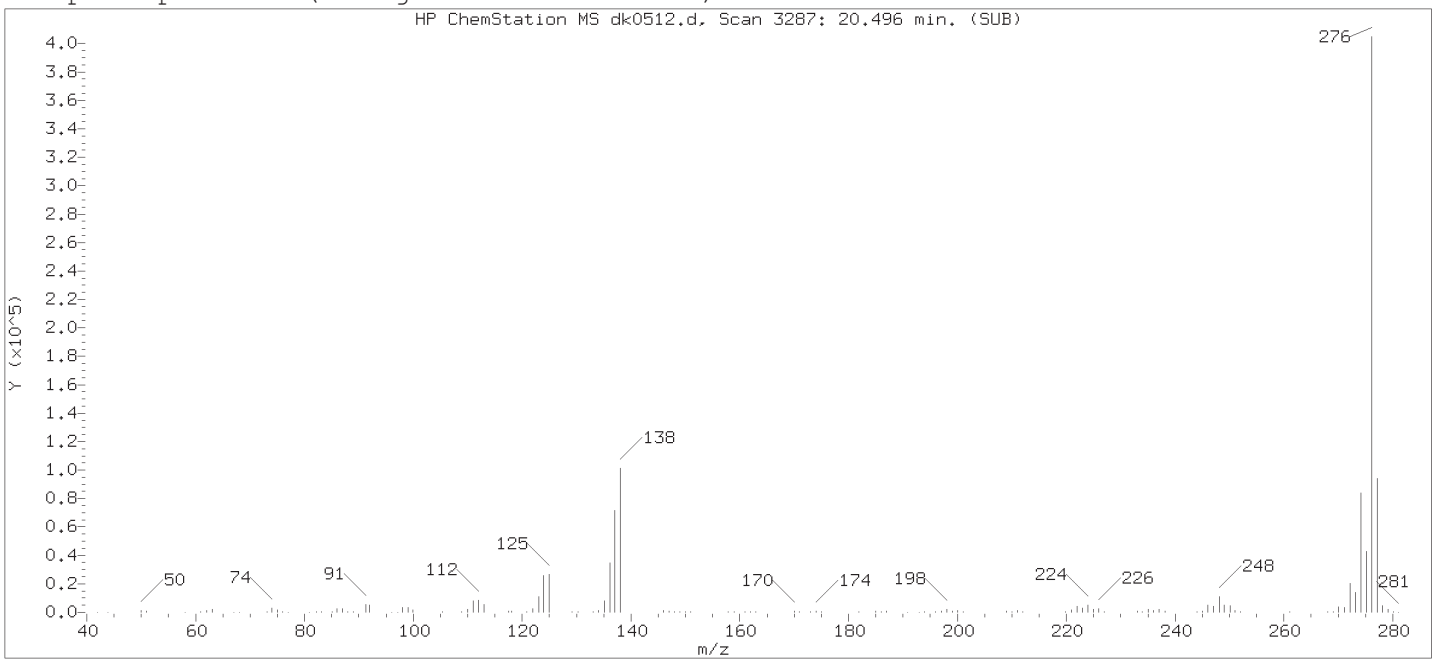
Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3287
Retention Time (minutes) : 20.496
Quant Ion : 276.00
Area (flag) : 934270M
On-Column Amount (ng/ul) : 15.0072
Integration start scan : 3277 Integration stop scan: 3313
Y at integration start : -230 Y at integration end: -230

Reason for manual integration: improper integration

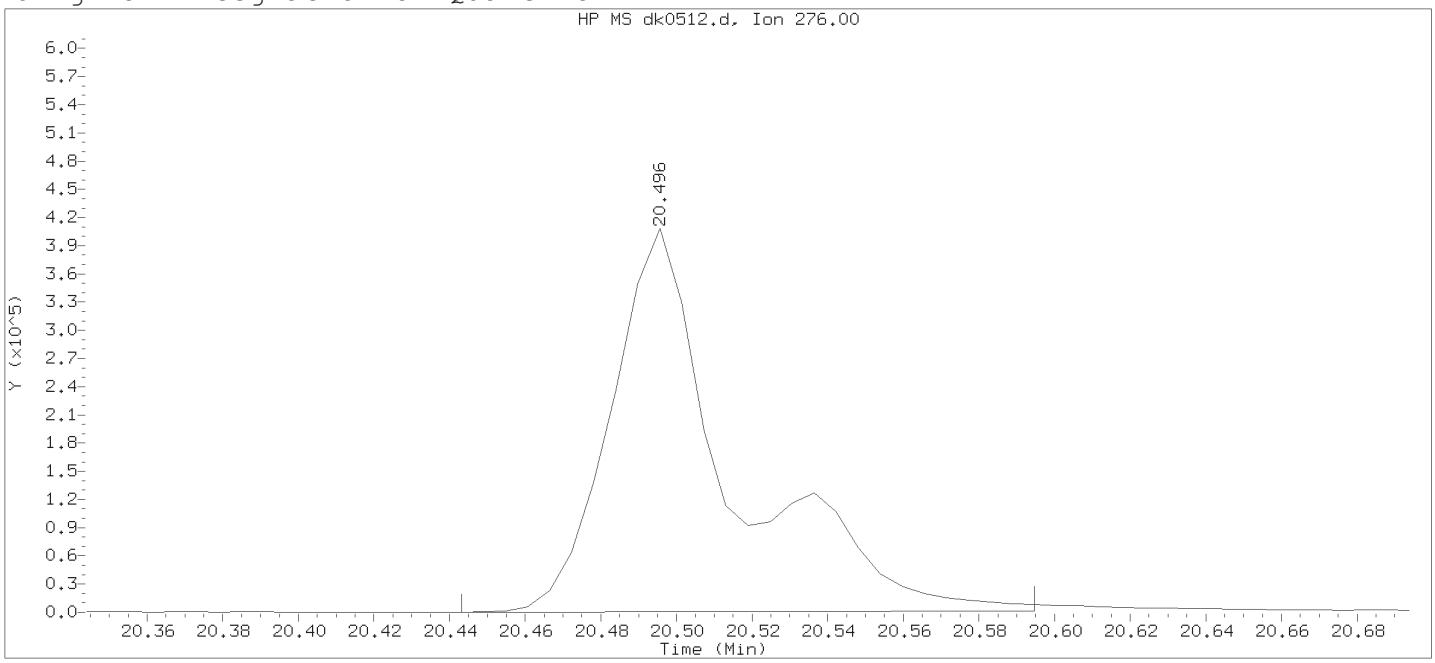
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov14b.b/dk0512.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 21:01 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 21:33
Date, time and analyst ID of latest file update: 14-Nov-2013 21:33 Automation

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3287		
Retention Time (minutes)	: 20.496		
Quant Ion	: 276.00		
Area	: 907121		
On-column Amount (ng/ul)	: 14.5711		
Integration start scan	: 3277	Integration stop scan:	3303
Y at integration start	: 0	Y at integration end:	1336

Digitally signed by Catherine E. Bachman on 11/14/2013 at 21:46.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP11165.i/13nov09a.b/gk0320y.d

Date : 09-NOV-2013 19:53

Client ID: DFTPP

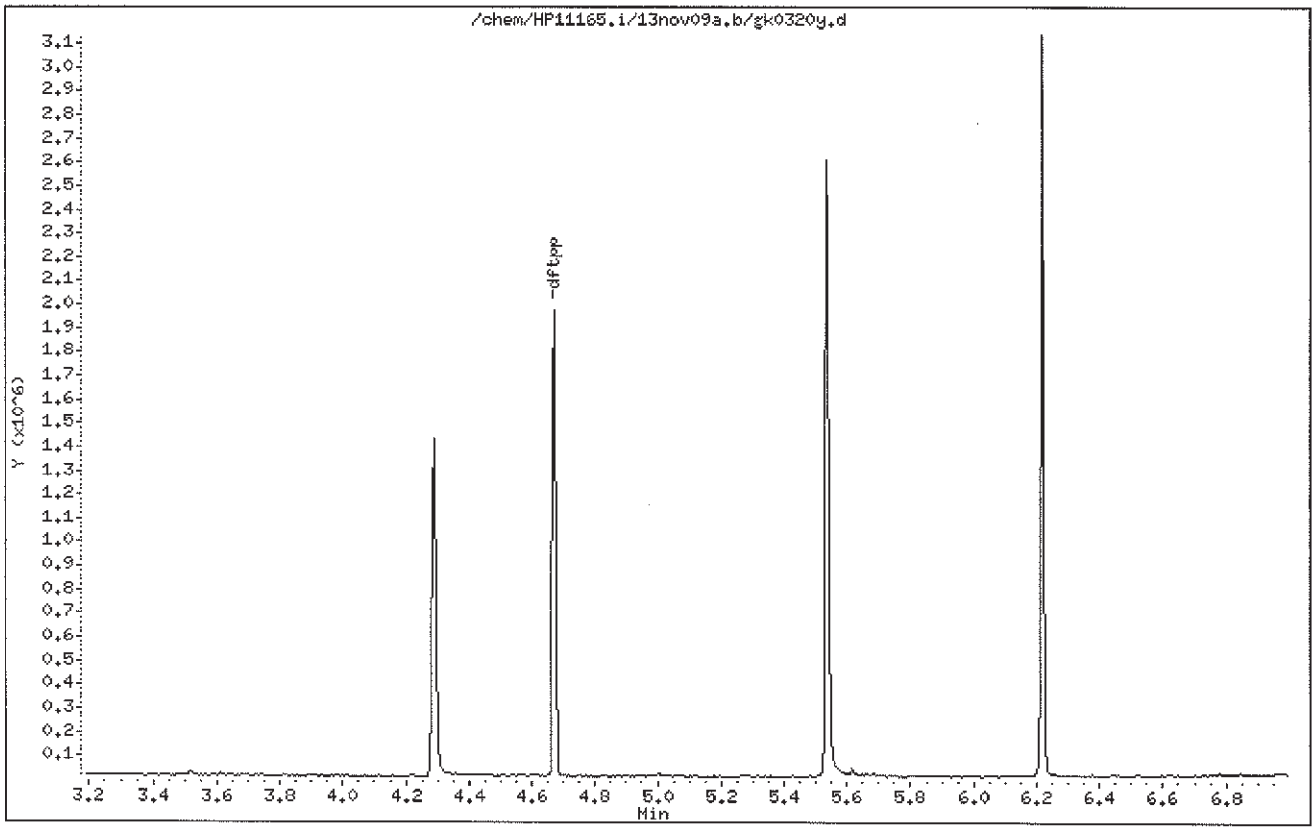
Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:39.
Target 3.5 esignature user ID: lmh00956

Data File: /chem/HP11165.i/13nov09a.b/gk0320y.d

Date : 09-NOV-2013 19:53

Client ID: DFTPP

Instrument: HP11165.i

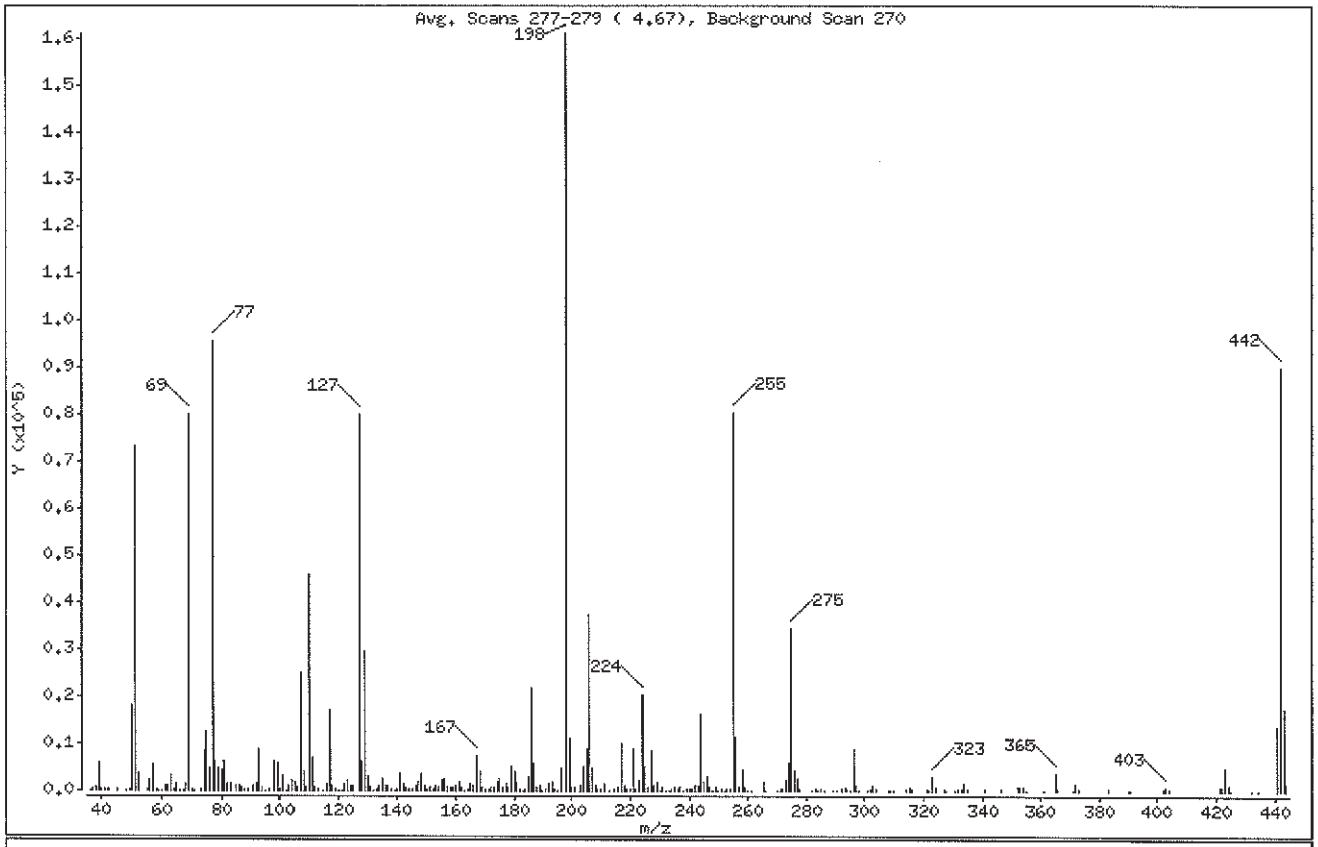
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	45.63
68	Less than 2.00% of mass 69	0.81 (1.63)
69	Mass 69 relative abundance	49.74
70	Less than 2.00% of mass 69	0.30 (0.60)
127	40.00 - 60.00% of mass 198	49.56
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 30.00% of mass 198	21.32
365	Greater than 1.00% of mass 198	2.36
441	Present, but less than mass 443	8.51
442	40.00 - 99.99% of mass 198	55.80
443	17.00 - 23.00% of mass 442	10.79 (19.33)

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:39.
Target 3.5 esignature user ID: lmh00956

Date : 09-NOV-2013 19:53

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0320y.d
Spectrum: Avg. Scans 277-279 (4.67), Background Scan 270
Location of Maximum: 198.00
Number of points: 285

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	138	119.00	315	192.00	1659	274.00	5834
37.00	239	120.00	170	193.00	1846	275.00	34320
38.00	822	121.00	159	194.00	373	276.00	4389
39.00	5790	122.00	1373	195.00	112	277.00	2535
40.00	448	123.00	2093	196.00	4948	278.00	523
41.00	421	124.00	1037	198.00	160960	282.00	77
42.00	269	125.00	973	199.00	10972	283.00	434
45.00	258	127.00	79776	200.00	904	284.00	167
48.00	75	128.00	6443	201.00	818	285.00	437
49.00	218	129.00	29560	203.00	1101	286.00	63
50.00	18136	130.00	3014	204.00	5120	289.00	171
51.00	73440	131.00	660	205.00	8896	290.00	89
52.00	3815	132.00	171	206.00	37344	292.00	219
55.00	378	133.00	221	207.00	4694	293.00	708
56.00	2247	134.00	1063	208.00	1292	294.00	197
57.00	5630	135.00	2624	209.00	363	295.00	53
58.00	296	136.00	1120	210.00	511	296.00	8728
59.00	53	137.00	1197	211.00	1524	297.00	1218
60.00	53	138.00	239	213.00	150	298.00	58
61.00	1088	139.00	130	215.00	352	301.00	126
62.00	1068	140.00	387	216.00	768	302.00	304
63.00	3197	141.00	3632	217.00	9959	303.00	1027
64.00	488	142.00	1400	218.00	1091	304.00	252
65.00	1529	143.00	884	219.00	199	308.00	162
66.00	148	144.00	215	220.00	286	309.00	51
67.00	145	145.00	212	221.00	8800	310.00	111
68.00	1306	146.00	983	222.00	421	314.00	416
69.00	80056	147.00	1987	223.00	2184	315.00	903
70.00	481	148.00	3717	224.00	20384	316.00	527
71.00	44	149.00	1093	225.00	5179	321.00	386
73.00	553	150.00	545	226.00	839	322.00	113
74.00	8409	151.00	774	227.00	8370	323.00	2833
75.00	12646	152.00	296	228.00	1249	324.00	782
76.00	4661	153.00	1100	229.00	1764	327.00	467
77.00	95304	154.00	880	230.00	139	328.00	154

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:39.
Target 3.5 esignature user ID: lmh00956

Date : 09-NOV-2013 19:53

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0320y.d
Spectrum: Avg. Scans 277-279 (4.67), Background Scan 270
Location of Maximum: 198.00
Number of points: 285

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	6374	155.00	2266	231.00	834	331.00	51
79.00	4904	156.00	2738	232.00	66	332.00	187
80.00	4589	157.00	565	233.00	95	333.00	212
81.00	6122	158.00	648	234.00	535	334.00	1380
82.00	1641	159.00	727	235.00	613	335.00	388
83.00	1527	160.00	1109	236.00	353	341.00	254
85.00	1054	161.00	1934	237.00	728	346.00	456
86.00	1272	162.00	580	238.00	55	352.00	907
87.00	742	163.00	138	239.00	369	353.00	862
88.00	240	164.00	192	240.00	282	354.00	871
89.00	224	165.00	1310	241.00	443	355.00	167
91.00	1144	166.00	1063	242.00	1108	361.00	60
92.00	1645	167.00	7238	243.00	965	365.00	3795
93.00	8829	168.00	4071	244.00	16259	366.00	430
94.00	694	169.00	759	245.00	2014	371.00	154
95.00	71	170.00	336	246.00	3098	372.00	1438
96.00	530	171.00	396	247.00	677	373.00	254
98.00	6416	172.00	578	248.00	57	383.00	364
99.00	5979	173.00	709	249.00	821	390.00	129
100.00	475	174.00	1686	250.00	147	391.00	53
101.00	3395	175.00	2739	251.00	283	402.00	527
102.00	52	176.00	892	252.00	176	403.00	606
103.00	945	177.00	1522	253.00	424	404.00	263
104.00	2333	178.00	679	254.00	438	421.00	652
105.00	1694	179.00	5175	255.00	80376	422.00	667
106.00	716	180.00	4063	256.00	11289	423.00	4974
107.00	25328	181.00	1675	257.00	826	424.00	1069
108.00	4108	182.00	260	258.00	4587	425.00	60
109.00	740	183.00	151	259.00	659	432.00	90
110.00	45880	184.00	543	260.00	106	434.00	71
111.00	7177	185.00	2853	261.00	72	441.00	13694
112.00	800	186.00	21848	265.00	1809	442.00	89824
113.00	308	187.00	5795	266.00	34	443.00	17360
115.00	114	188.00	830	270.00	52	444.00	1480
116.00	1544	189.00	1260	271.00	346		

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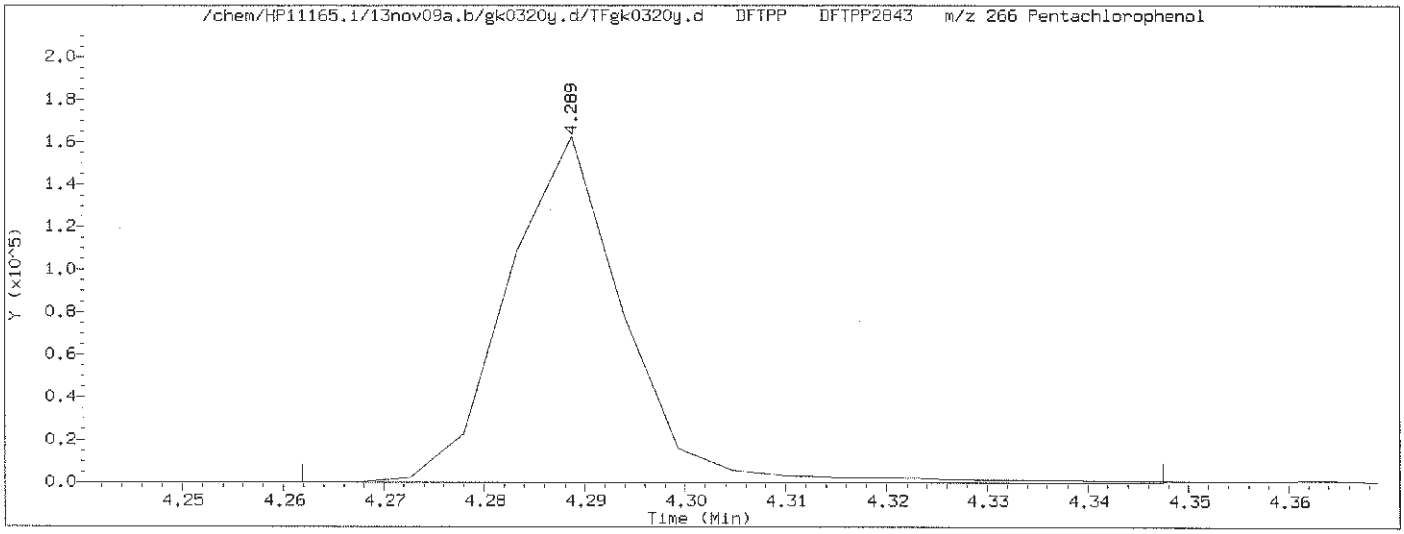
Target 3.5 esignature user ID: lmh00956

Assessment of GC Column Performance and Injection Port Inertness for

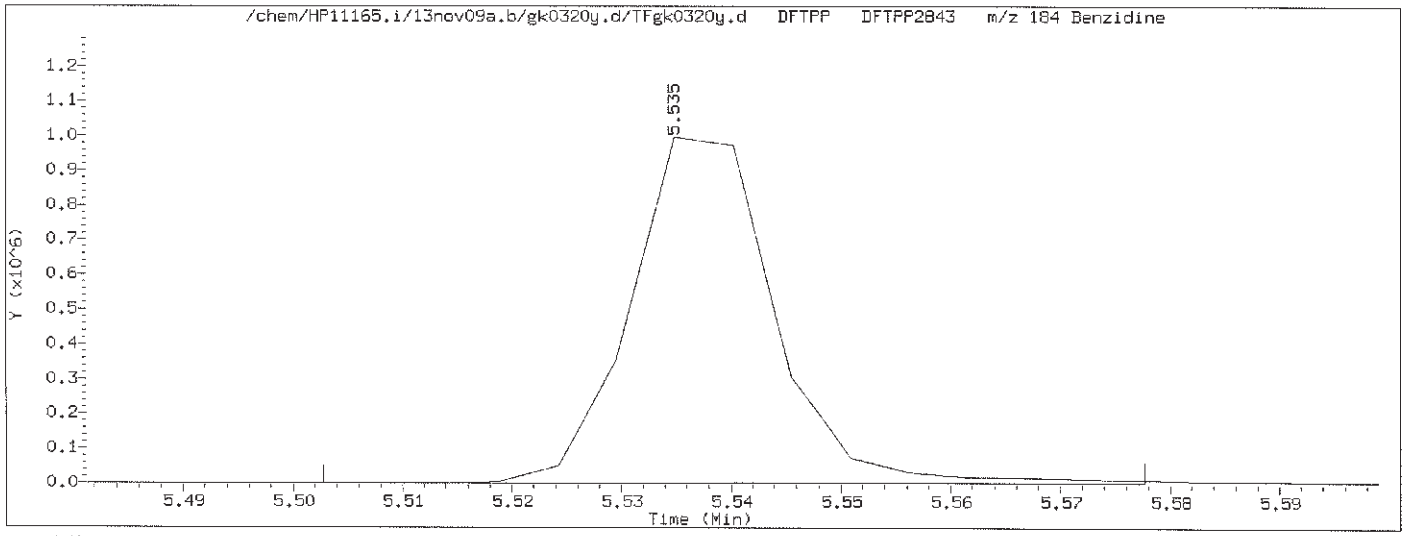
Instrument ID: HP11165.i Injection Date: 09-NOV-2013 19:53 Operator: hb01996



Pentachlorophenol EICP peak height = 162752 EICP peak height at 10% = 16275 Pentachlorophenol EICP area = 131509

Pentachlorophenol EICP peak apex (min.) = 4.289
RT at 10% of front half of EICP (min.) = 4.276 'Front' peak width (min.) = 0.0123166667
RT at 10% of back half of EICP (min.) = 4.299 'Tailing' peak width (min.) = 0.0106500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106500000}{0.0123166667} = 0.865$



Benzidine EICP peak height = 997144 EICP peak height at 10% = 99714 Benzidine EICP area = 910798

Benzidine EICP peak apex (min.) = 5.535
RT at 10% of front half of EICP (min.) = 5.525 'Front' peak width (min.) = 0.0097500000
RT at 10% of back half of EICP (min.) = 5.550 'Tailing' peak width (min.) = 0.0153500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0153500000}{0.0097500000} = 1.574$

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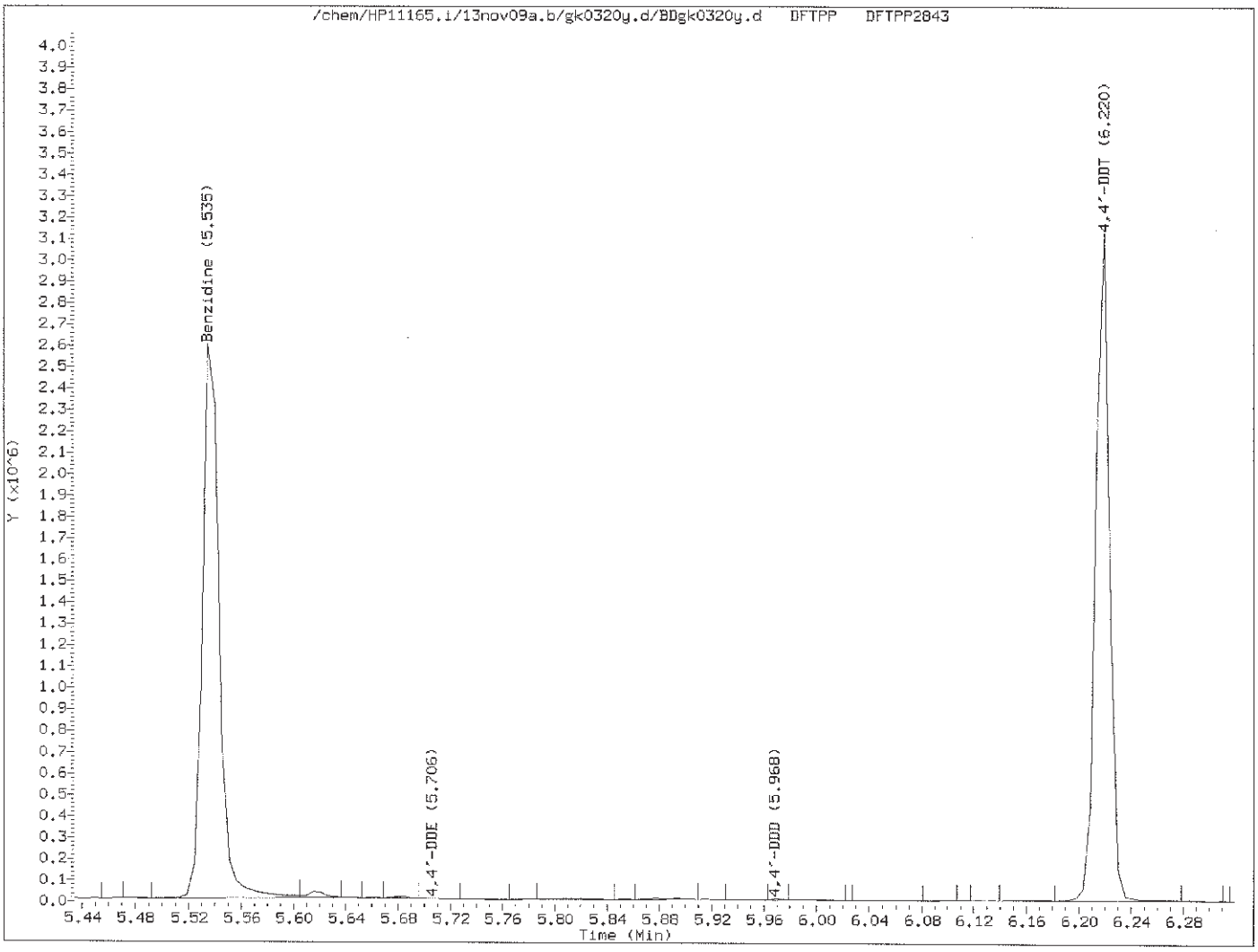
Target 3.5 esignature user ID: lmh00956

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP11165.i Injection Date: 09-NOV-2013 19:53 Operator: hb01996



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{1108 + 3916}{1108 + 3916 + 2322577} \times 100 = 0.2$$

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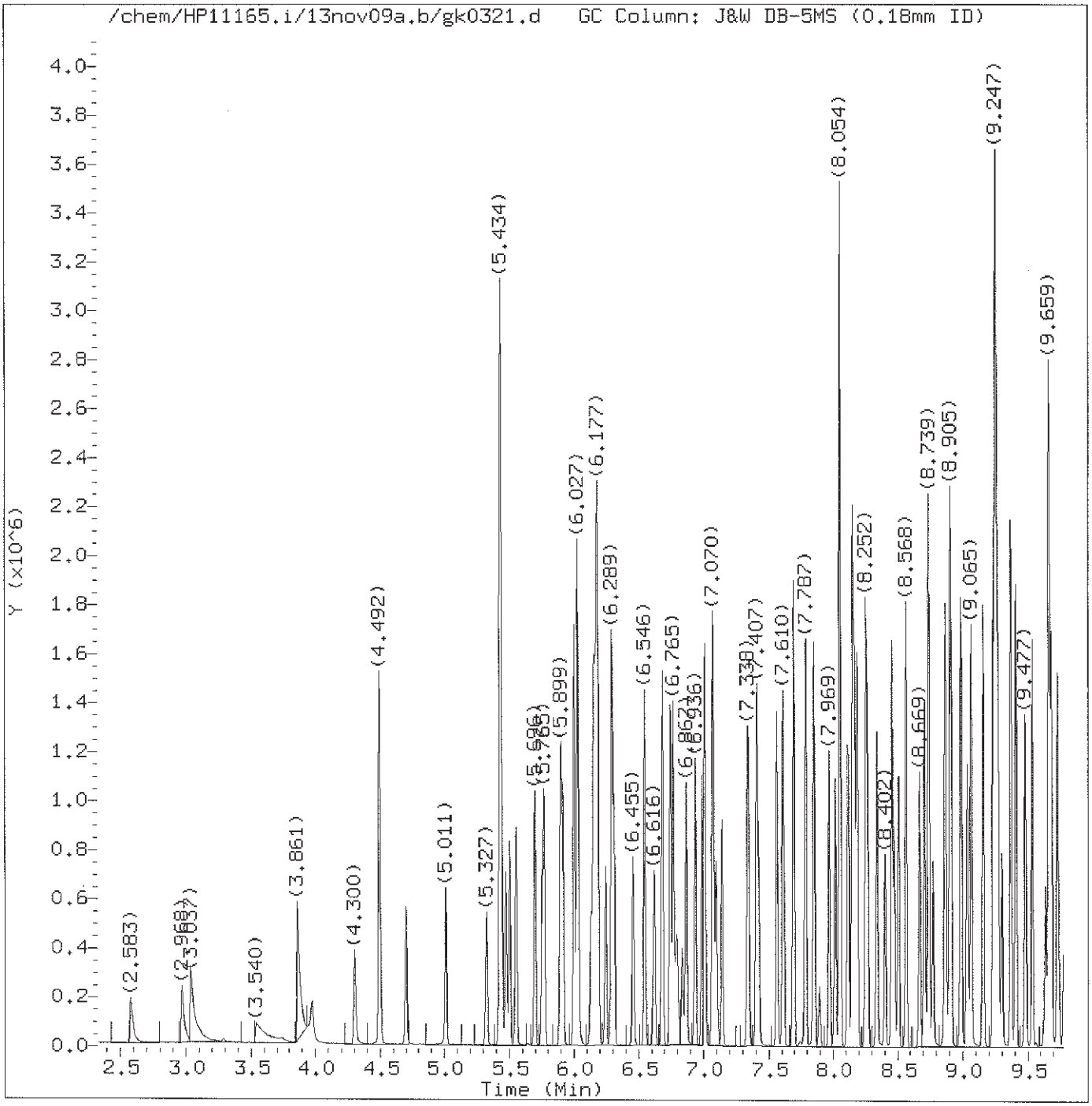
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

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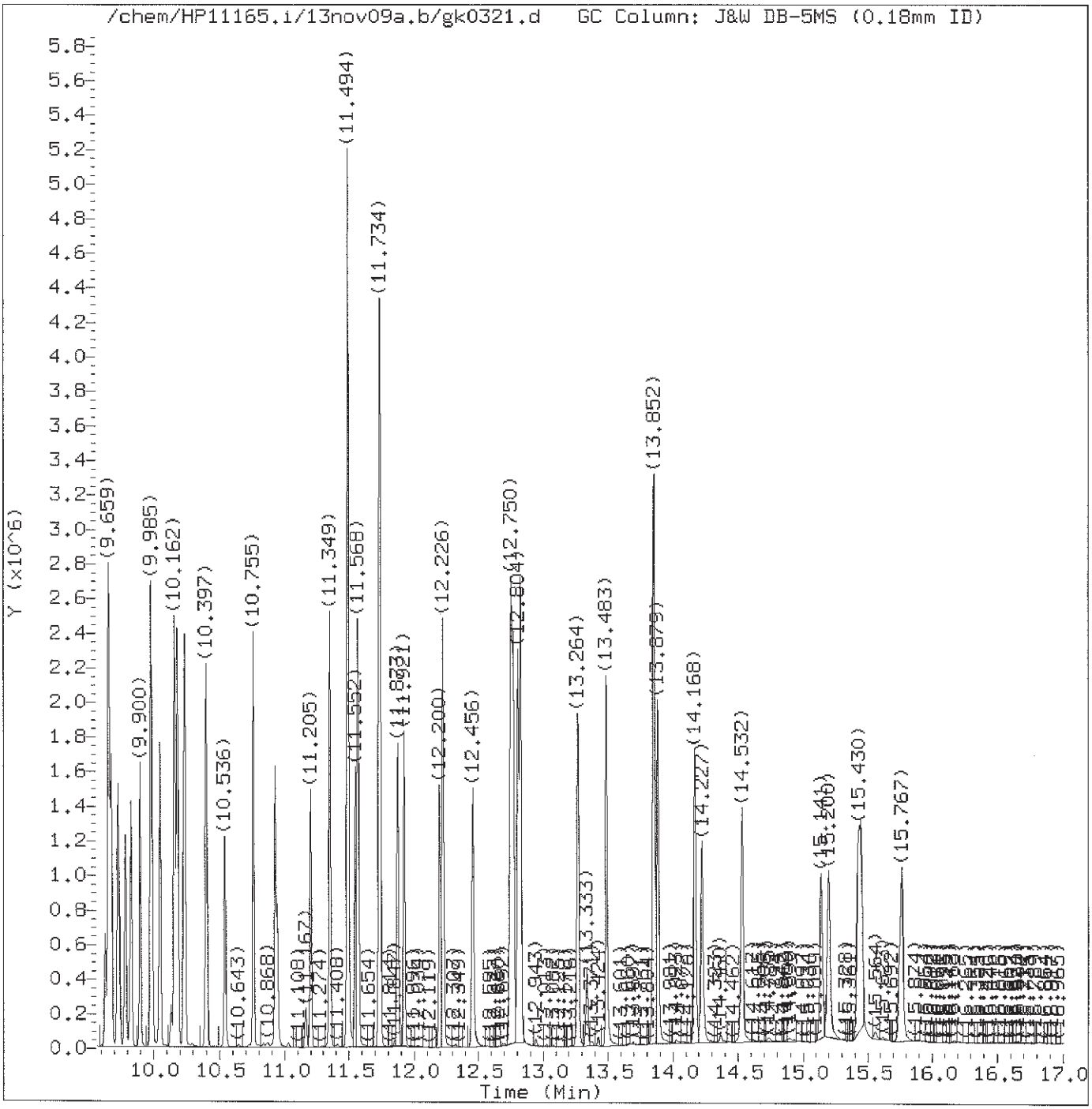
on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.583	88	102393	29.709
3) N-Nitrosodimethylamine	(1)	2.968	74	177621	29.384
4) Pyridine	(1)	3.032	79	292526M	29.851
7) 2-Picoline	(1)	3.861	93	294602	29.240
8) N-Nitrosomethylethylamine	(1)	3.979	88	148379	28.703
9) Methyl methanesulfonate	(1)	4.300	80	146395	29.949
10)$2-Fluorophenol	(1)	4.492	112	458723	58.937
11) N-Nitrosodiethylamine	(1)	4.695	102	140440	30.057
14) Ethyl methanesulfonate	(1)	5.011	109	139068	29.537
17)$Phenol-d6	(1)	5.428	99	686359	58.610
16)$Phenol-d5	(1)	5.428	99	686359	58.610
19) Aniline	(1)	5.434	93	451593	29.210
18) Phenol	(1)	5.444	94	399575	28.698
20) bis(2-Chloroethyl)ether	(1)	5.503	93	287456	28.929
21) 2-Chlorophenol	(1)	5.557	128	232760	29.679
24) 1,3-Dichlorobenzene	(1)	5.696	146	228429	29.090
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	98225	20.000
26) 1,4-Dichlorobenzene	(1)	5.770	146	232365	29.245
27) Benzyl alcohol	(1)	5.894	108	192852	29.824
28) 1,2-Dichlorobenzene	(1)	5.915	146	226600	29.037
29) Indene	(1)	6.000	115	507958	35.539
30) 2-Methylphenol	(1)	6.027	108	260808	29.566
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	399077	29.949
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	399077	29.949
34) N-Nitrosopyrrolidine	(1)	6.129	100	160863	28.526
35) Acetophenone	(1)	6.145	105	401078	28.772
37) N-Nitroso-di-n-propylamine	(1)	6.156	70	249599	30.042
38) N-Nitrosomorpholine	(1)	6.166	56	191485	29.956
36) 4-Methylphenol	(1)	6.172	108	312193	29.706
39) o-Toluidine	(1)	6.182	106	455106	29.879
40) Hexachloroethane	(1)	6.241	117	90333	29.089
41)$Nitrobenzene-d5	(2)	6.289	82	625978	59.858
42) Nitrobenzene	(2)	6.311	77	329972	29.544
44) N-Nitrosopiperidine	(2)	6.455	114	148606	29.976
45) Isophorone	(2)	6.546	82	612700	30.078
48) 2-Nitrophenol	(2)	6.621	139	129625	29.873
52) 2,4-Dimethylphenol	(2)	6.680	107	293713	30.601
53) O,O,O-triethylphosphorothioate	(2)	6.744	198	120334	30.467
55) bis(2-Chloroethoxy)methane	(2)	6.765	93	376267	30.269
54) Benzoic acid	(2)	6.792	105	309881	37.188

M = Compound was manually integrated.
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on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.867	162	198543	30.314
62) 1,2,4-Trichlorobenzene	(2)	6.936	180	201482	29.459
63)*Naphthalene-d8	(2)	6.990	136	474393	20.000
64) Naphthalene	(2)	7.011	128	736024	29.449
65) 4-Chloroaniline	(2)	7.070	127	324199	30.814
66) 2,6-Dichlorophenol	(2)	7.076	162	195853	30.079
67) Hexachloropropene	(2)	7.097	213	107077	29.458
69) Hexachlorobutadiene	(2)	7.140	225	97901	30.333
70) Quinoline	(2)	7.338	129	528192	29.560
73) N-Nitrosodi-n-butylamine	(2)	7.402	84	307836	29.141
74) Caprolactam	(2)	7.418	113	117369	28.893
75) 4-Chloro-3-methylphenol	(2)	7.562	107	268689	29.641
76) Safrole	(2)	7.610	162	198830	30.412
77) 2-Methylnaphthalene	(2)	7.691	142	525867	29.877
78) 1-Methylnaphthalene	(2)	7.787	142	483036	30.343
79) Hexachlorocyclopentadiene	(3)	7.846	237	83541	29.712
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	204866	29.991
81) cis-Isosafrole	(3)	7.894	162	35225	3.306
82) 2,4,6-Trichlorophenol	(3)	7.969	196	155647	30.825
83) 2,4,5-Trichlorophenol	(3)	8.017	196	159715	30.363
84)$2-Fluorobiphenyl	(3)	8.054	172	1056020	59.705
86) Isosafrole	(3)	8.119	162	201337	29.521
85) trans-Isosafrole	(3)	8.119	162	201337	26.273
87) 1,1'-Biphenyl	(3)	8.151	154	657621	29.187
88) 2-Chloronaphthalene	(3)	8.167	162	570281M	33.476
89) 1-Chloronaphthalene	(3)	8.183	162	462147M	29.605
90) Diphenyl ether	(3)	8.252	170	336562	29.994
91) 2-Nitroaniline	(3)	8.268	138	178325	29.744
92) 1,4-Naphthoquinone	(3)	8.338	158	216042	30.738
93) 1,4-Dinitrobenzene	(3)	8.402	168	86994	28.784
94) Dimethylphthalate	(3)	8.456	163	588515	30.042
95) 1,3-Dinitrobenzene	(3)	8.472	168	108963	29.645
97) 2,6-Dinitrotoluene	(3)	8.509	165	137515	31.359
99) Acenaphthylene	(3)	8.568	152	744303	30.410
100) 3-Nitroaniline	(3)	8.669	138	167472	30.367
101)*Acenaphthene-d10	(3)	8.707	164	290403	20.000
102) Acenaphthene	(3)	8.739	153	516135	29.382
103) 2,4-Dinitrophenol	(3)	8.771	184	97764	37.044
104) 4-Nitrophenol	(3)	8.862	109	101830	30.690
105) Pentachlorobenzene	(3)	8.867	250	178178	29.023

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on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.899	165	183877	29.858
107) Dibenzofuran	(3)	8.910	168	707105	29.418
108) 1-Naphthylamine	(3)	8.985	143	594402	30.059
109) 2,3,4,6-Tetrachlorophenol	(3)	9.033	232	126907	29.798
110) 2-Naphthylamine	(3)	9.065	143	609969	30.864
111) Diethylphthalate	(3)	9.151	149	591545	29.635
112) Thionazin	(3)	9.231	107	118075	29.483
113) Fluorene	(3)	9.247	166	597396	29.775
114) 4-Chlorophenyl-phenylether	(3)	9.252	204	271945	29.647
115) 5-Nitro-o-toluidine	(3)	9.258	152	181022	29.037
116) 4-Nitroaniline	(3)	9.268	138	180573	30.384
117) 4,6-Dinitro-2-methylphenol	(4)	9.295	198	104035	27.977
119) NDPA as diphenylamine	(4)	9.365	169	533522	29.691
118) N-Nitrosodiphenylamine	(4)	9.365	169	533522	29.817
120) 1,2-Diphenylhydrazine	(4)	9.408	77	789056	30.327
121)$2,4,6-Tribromophenol	(3)	9.482	330	115070	59.301
122) Tetraethyldithiopyrophosphate	(4)	9.536	97	108317	29.688
123) 1,3,5-Trinitrobenzene	(4)	9.632	213	66302	27.702
124) Diallate (peak 1)	(4)	9.654	86	310916	22.198
125) Phorate	(4)	9.664	75	667685M	30.916
126) Phenacetin	(4)	9.680	108	368101	30.165
127) 4-Bromophenyl-phenylether	(4)	9.728	248	147894	29.156
128) Diallate (peak 2)	(4)	9.739	86	46844	7.270
129) Hexachlorobenzene	(4)	9.782	284	141659	29.616
130) Dimethoate	(4)	9.825	87	316666	30.335
132) Atrazine	(4)	9.900	200	150687	26.265
135) 4-Aminobiphenyl	(4)	9.980	169	523838	30.410
133) Pentachlorophenol	(4)	9.980	266	97932	29.804
134) Pentachloronitrobenzene	(4)	9.991	237	58727	28.416
138) Pronamide	(4)	10.049	173	256965	30.872
140)*Phenanthrene-d10	(4)	10.162	188	538113	20.000
142) Dinoseb	(4)	10.167	211	137261	27.136
143) Phenanthrene	(4)	10.183	178	923655	29.026
144) Anthracene	(4)	10.237	178	938233	29.994
146) Carbazole	(4)	10.397	167	869769	29.679
148) Methyl parathion	(4)	10.536	109	217000	30.451
149) Di-n-butylphthalate	(4)	10.755	149	1051591	29.937
151) Parathion	(4)	10.927	109	136562	29.482
152) 4-Nitroquinoline-1-oxide	(4)	10.943	190	65109	27.680
156) Isodrin	(4)	11.205	193	97470	30.756

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Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.349	202	971598	29.812
162) Benzidine	(5)	11.494	184	2085602	90.873
164)*Pyrene-d10	(5)	11.552	212	603267	20.000
165) Pyrene	(5)	11.574	202	996909	28.889
166)$Terphenyl-d14	(5)	11.734	244	1280078	59.489
168) p-Dimethylaminoazobenzene	(5)	11.873	225	190591	30.819
171) Chlorobenzilate	(5)	11.921	139	304813	31.290
172) 3,3'-Dimethylbenzidine	(5)	12.205	212	540413	30.122
173) Butylbenzylphthalate	(5)	12.226	149	467811	30.147
174) 2-Acetylaminofluorene	(5)	12.456	181	387392	30.017
175) 3,3'-Dichlorobenzidine	(5)	12.745	252	322051	30.411
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.750	231	153566	30.727
177) Benzo(a)anthracene	(5)	12.767	228	874361	30.167
178) Chrysene	(5)	12.804	228	863459	30.515
179) bis(2-Ethylhexyl)phthalate	(5)	12.825	149	639503	30.178
181) 6-Methylchrysene	(5)	13.264	242	604026	30.005
183) Di-n-octylphthalate	(6)	13.489	149	1035421	29.178
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.847	256	396084	30.457
185) Benzo(b)fluoranthene	(6)	13.852	252	900867M	31.325
186) Benzo(k)fluoranthene	(6)	13.879	252	901891M	29.590
187) Benzo(a)pyrene	(6)	14.168	252	787508	30.710
188)*Perylene-d12	(6)	14.227	264	475964	20.000
190) 3-Methylcholanthrene	(6)	14.532	268	371754	30.304
191) Dibenz(a,h)acridine	(6)	15.141	279	531573	29.521
192) Dibenz(a,j)acridine	(6)	15.200	279	622916	30.778
193) Indeno(1,2,3-cd)pyrene	(6)	15.425	276	798197	30.687
194) Dibenz(a,h)anthracene	(6)	15.446	278	660267	30.579
196) Benzo(g,h,i)perylene	(6)	15.767	276	670686	30.589
203) 2,4_2,6-Dinitrotoluenes	(3)			321392	29.845
204) Diallate TRANS/CIS	(4)			357760	29.528

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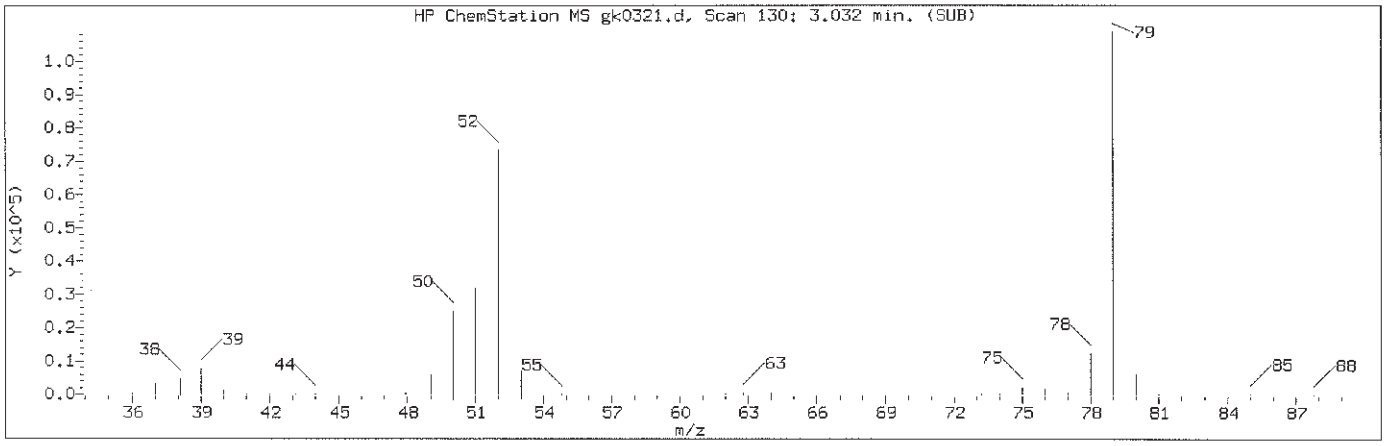
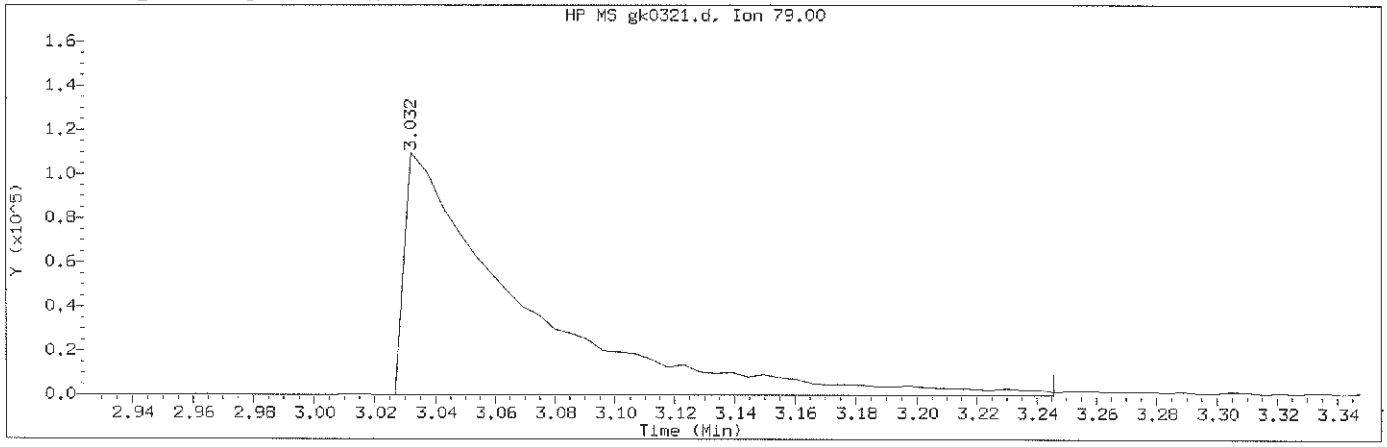
on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 130		
Retention Time (minutes)	: 3.032		
Quant Ion	: 79.00		
Area (flag)	: 292526M		
On-Column Amount (ng/ul)	: 29.8508		
Integration start scan	: 128	Integration stop scan:	169
Y at integration start	: -76	Y at integration end:	-76

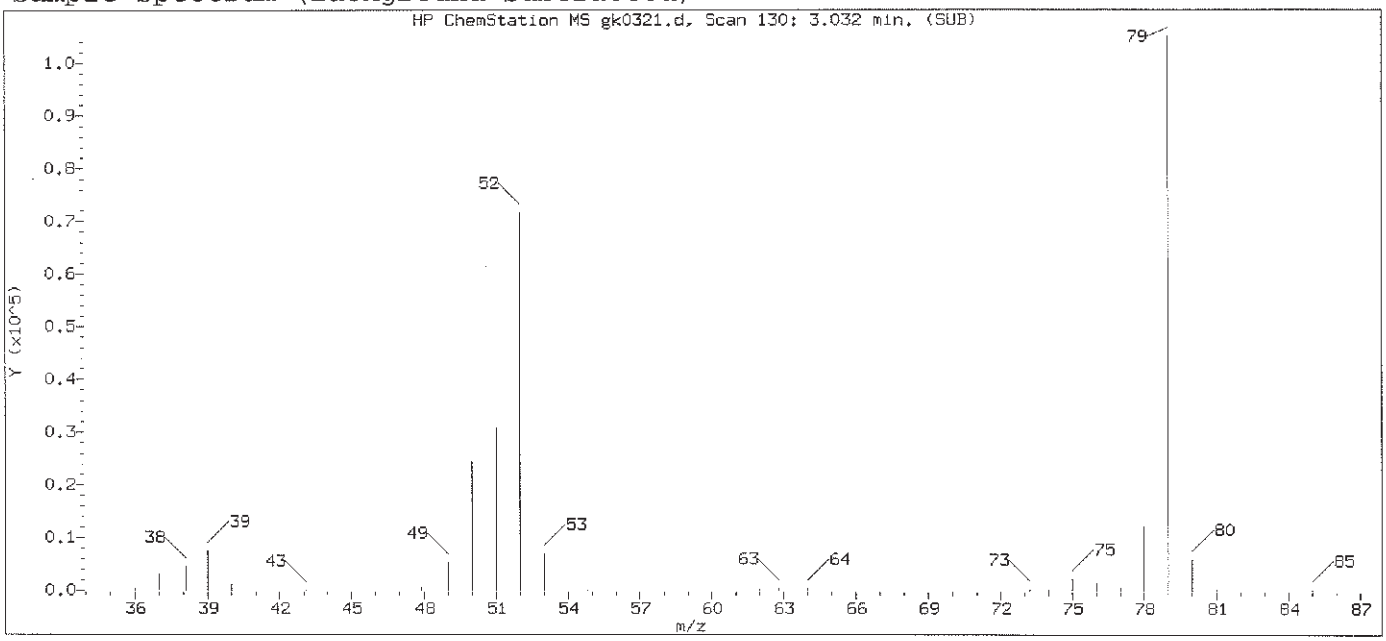
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 signature user ID: lmh00956

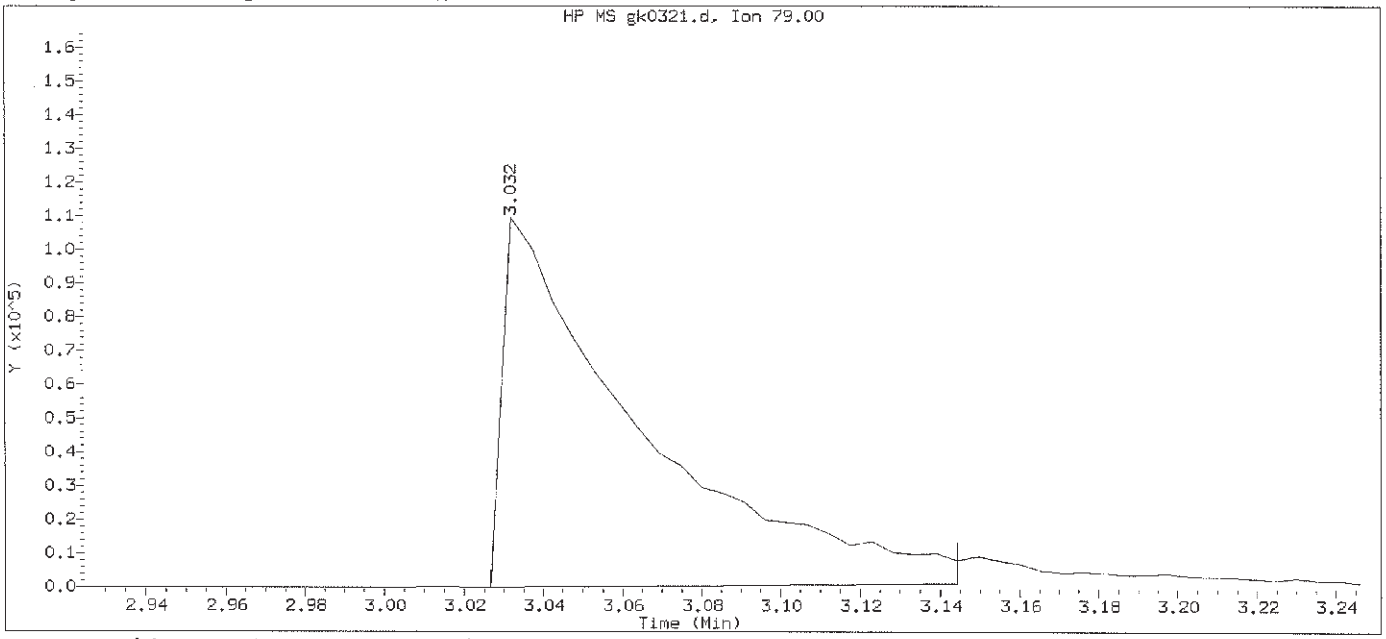
NOV 11 2013

GC/MS audit/management approval: _____
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 130		
Retention Time (minutes)	: 3.032		
Quant Ion	: 79.00		
Area	: 261037		
On-column Amount (ng/ul)	: 29.3465		
Integration start scan	: 128	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	1176

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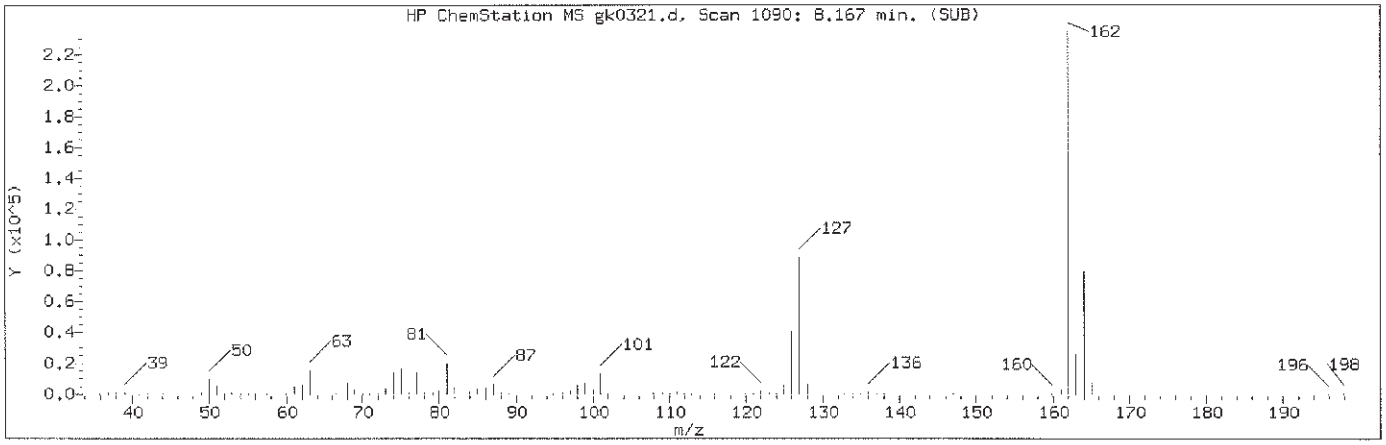
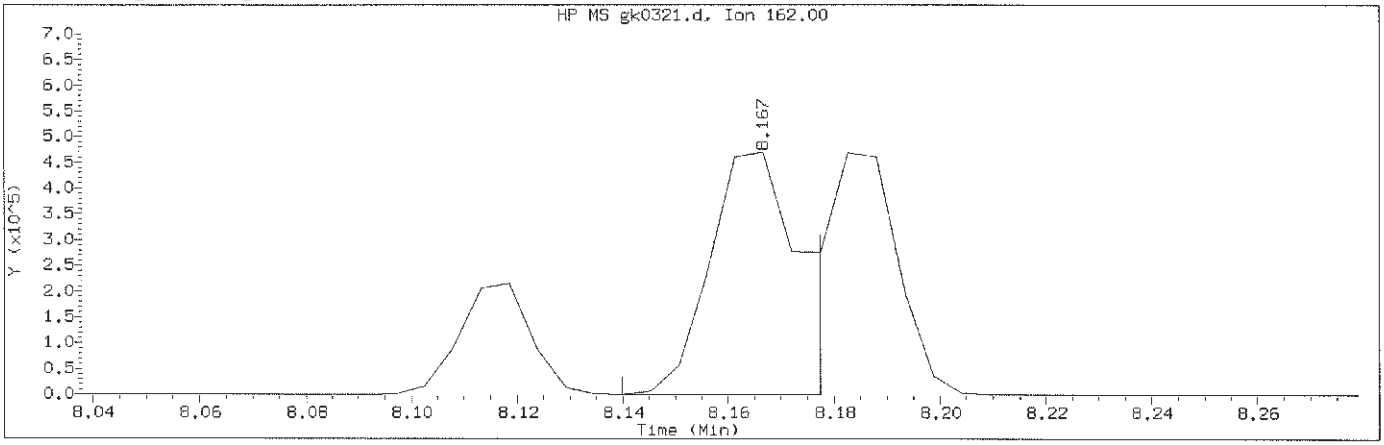
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1090		
Retention Time (minutes)	: 8.167		
Quant Ion	: 162.00		
Area (flag)	: 570281M		
On-Column Amount (ng/ul)	: 33.4757		
Integration start scan	: 1084	Integration stop scan:	1091
Y at integration start	: 81	Y at integration end:	70

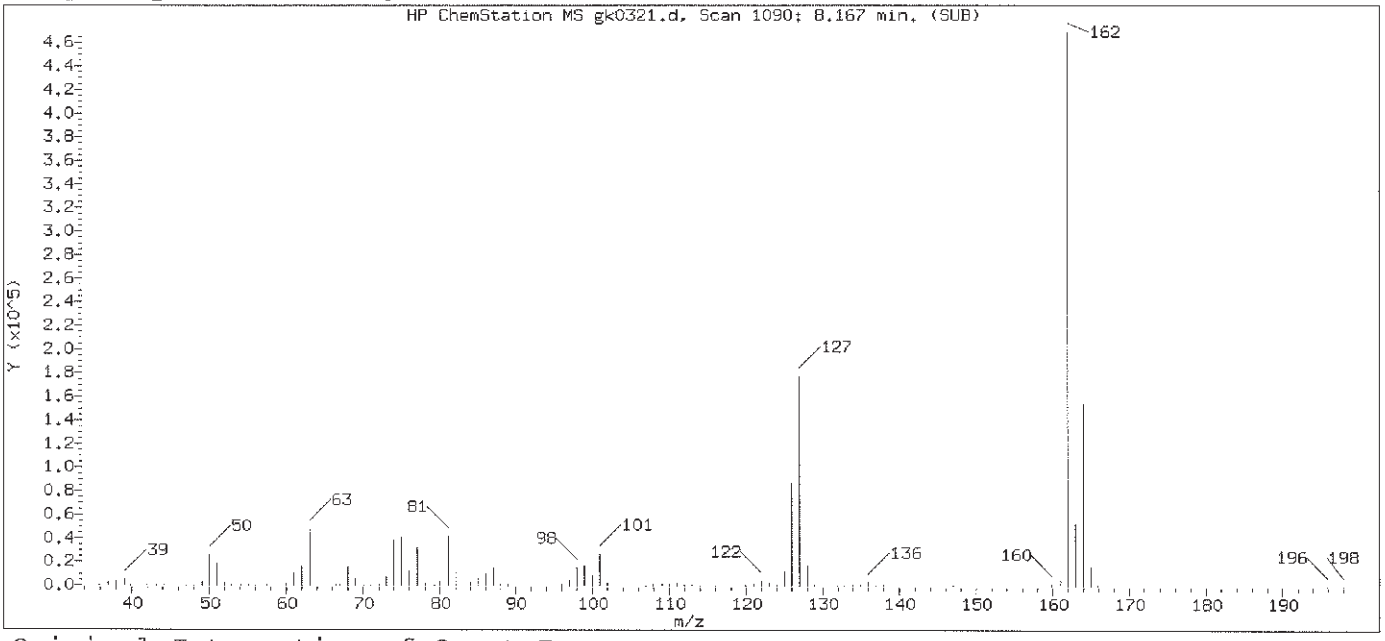
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 esignature user ID: lmh00956

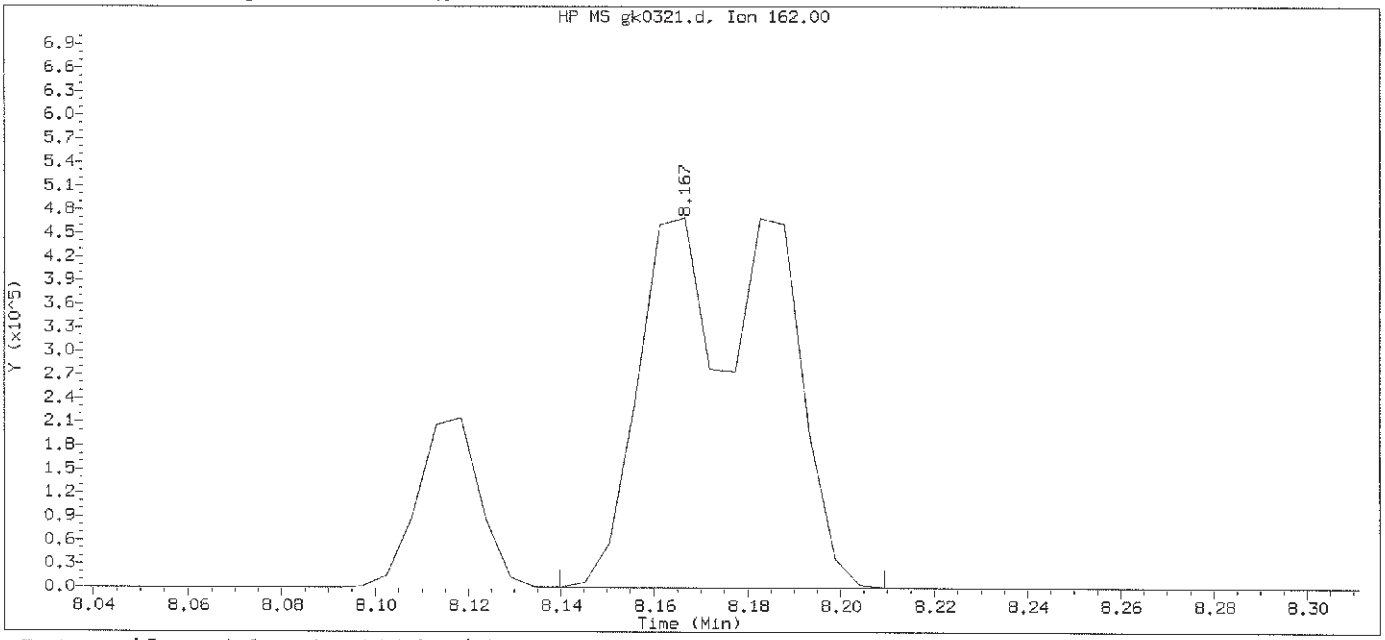
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1090		
Retention Time (minutes)	: 8.167		
Quant Ion	: 162.00		
Area	: 944041		
On-column Amount (ng/ul)	: 56.1077		
Integration start scan	: 1084	Integration stop scan:	1097
Y at integration start	: 81	Y at integration end:	60

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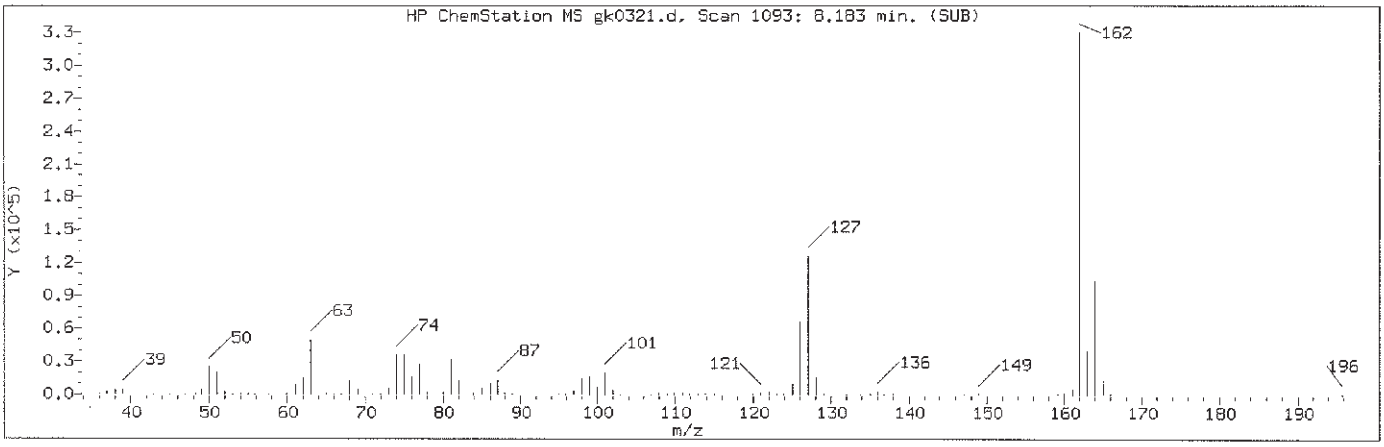
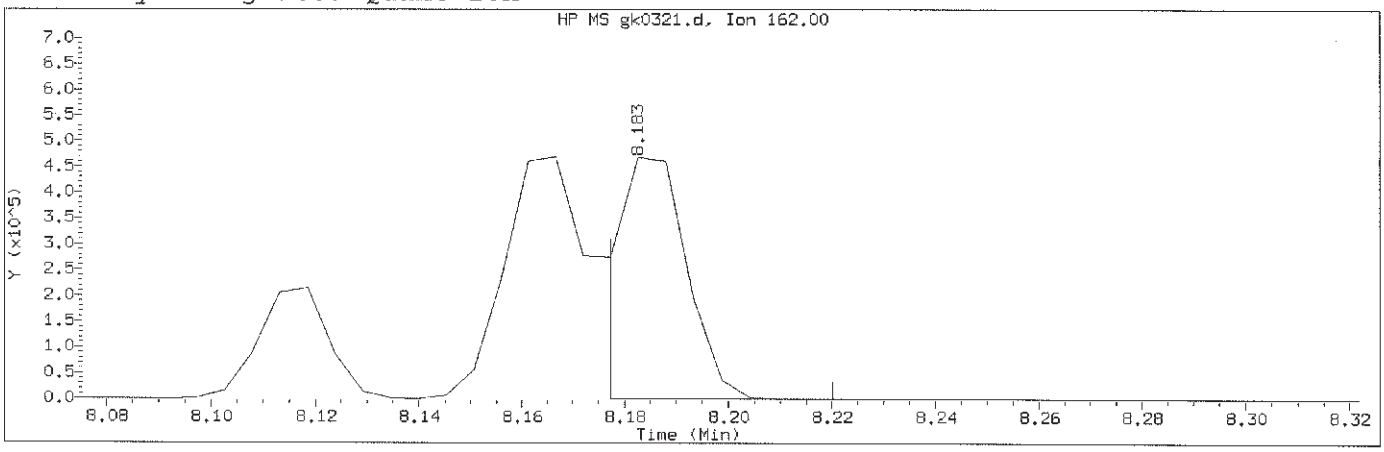
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1093		
Retention Time (minutes)	: 8.183		
Quant Ion	: 162.00		
Area (flag)	: 462147M		
On-Column Amount (ng/ul)	: 29.6047		
Integration start scan	: 1091	Integration stop scan:	1099
Y at integration start	: 0	Y at integration end:	0

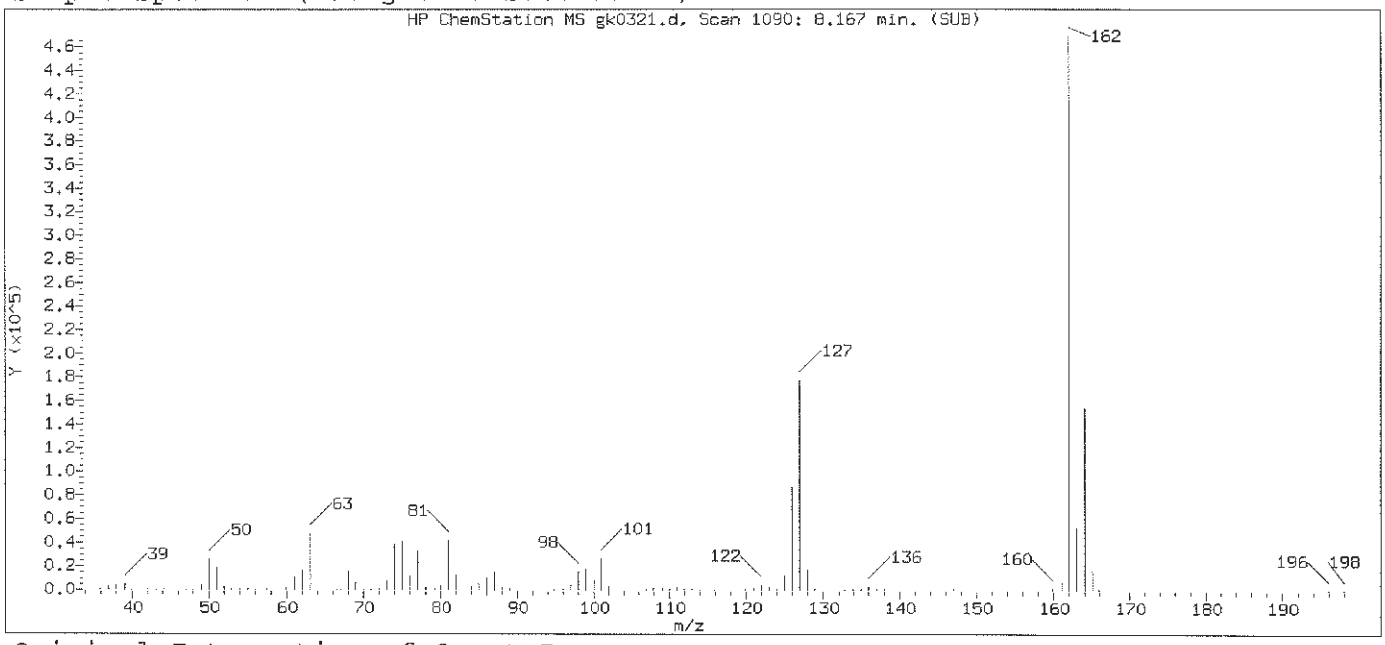
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 esignature user ID: lmh00956

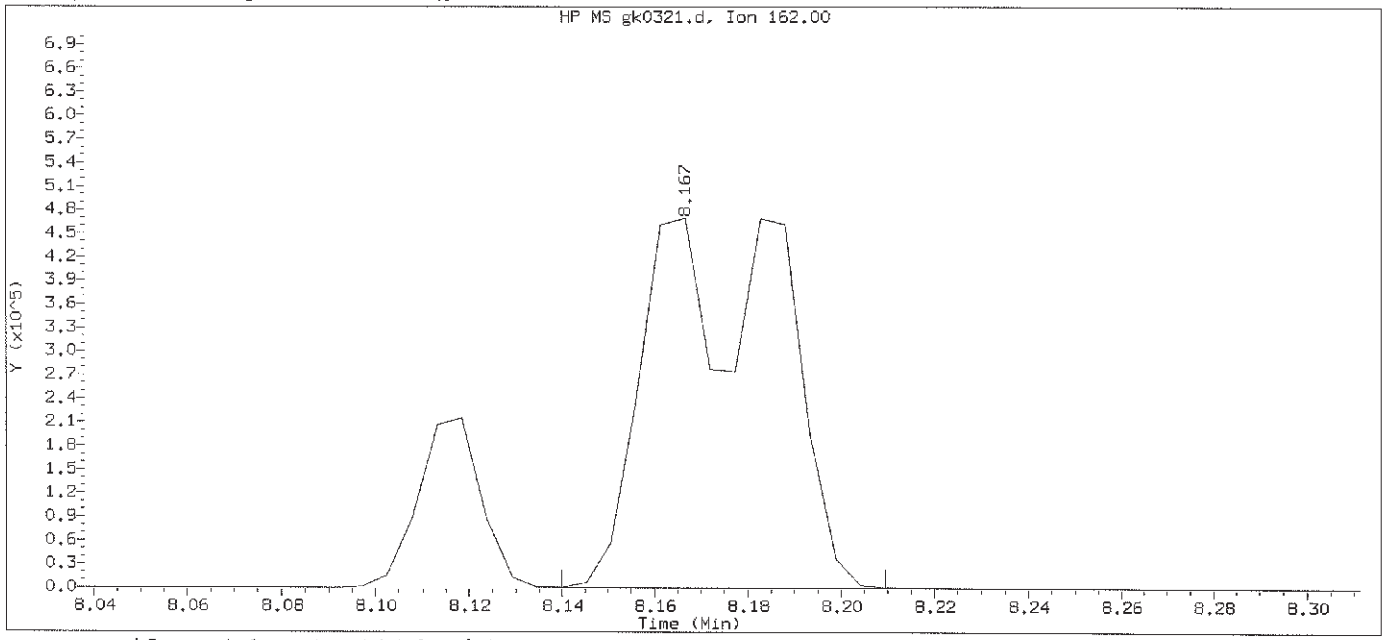
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1090		
Retention Time (minutes)	: 8.167		
Quant Ion	: 162.00		
Area	: 943917		
On-column Amount (ng/ul)	: 52.3412		
Integration start scan	: 1084	Integration stop scan:	1097
Y at integration start	: 112	Y at integration end:	88

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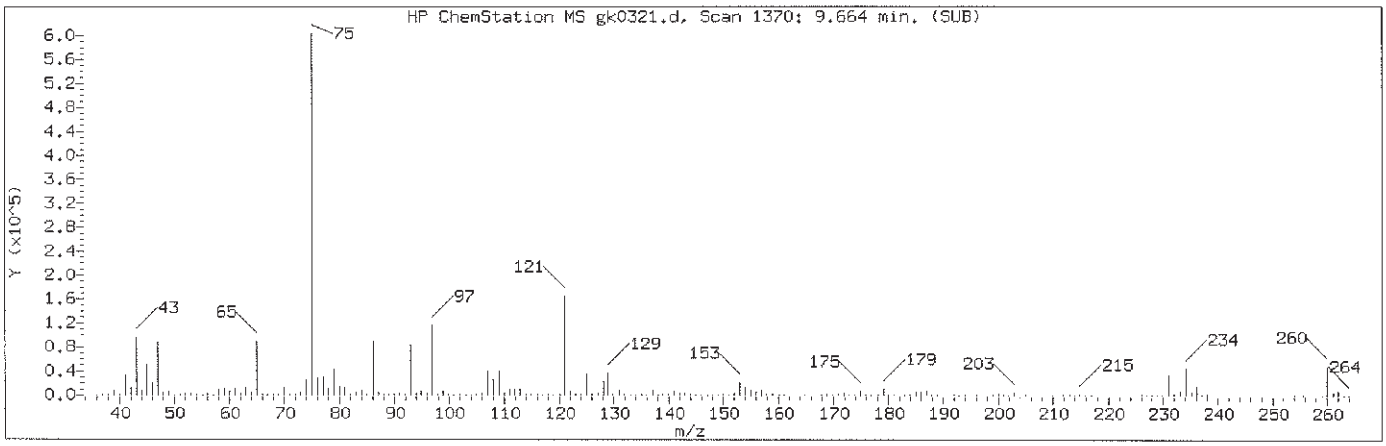
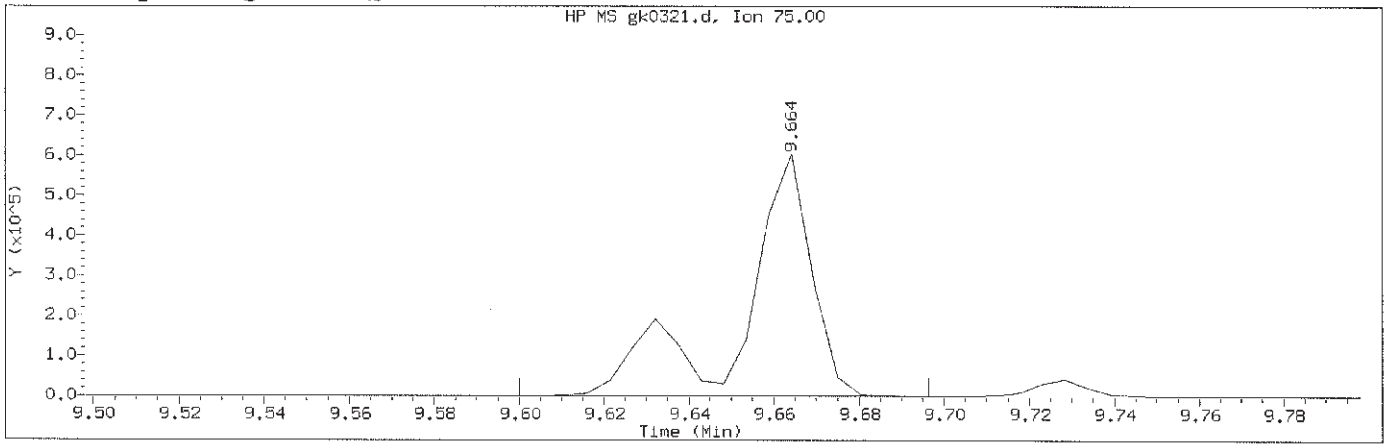
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area (flag)	: 667685M		
On-Column Amount (ng/ul)	: 30.9165		
Integration start scan	: 1357	Integration stop scan:	1375
Y at integration start	: 0	Y at integration end:	538

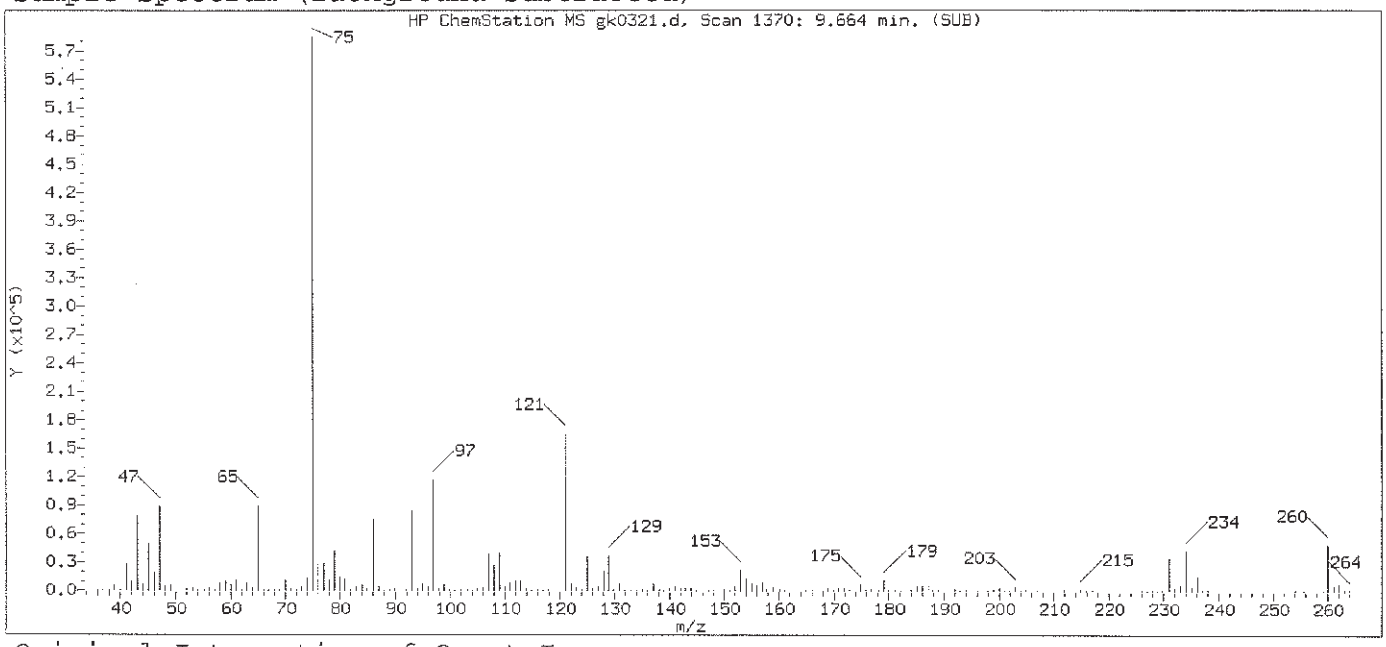
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 esignature user ID: lmh00956

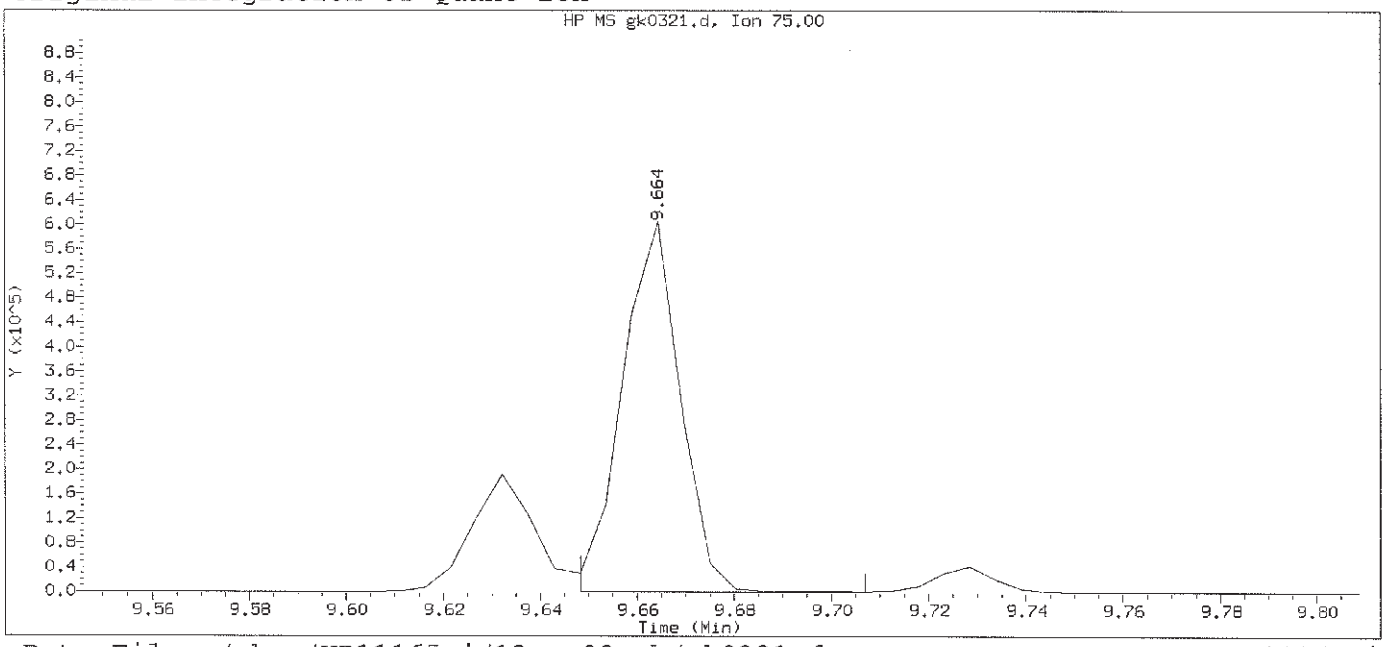
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

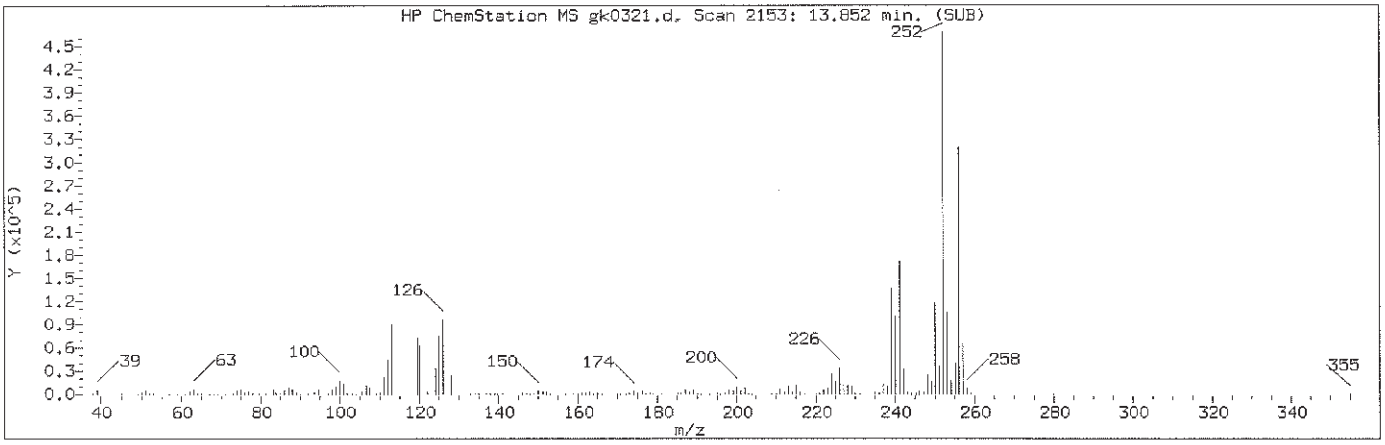
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

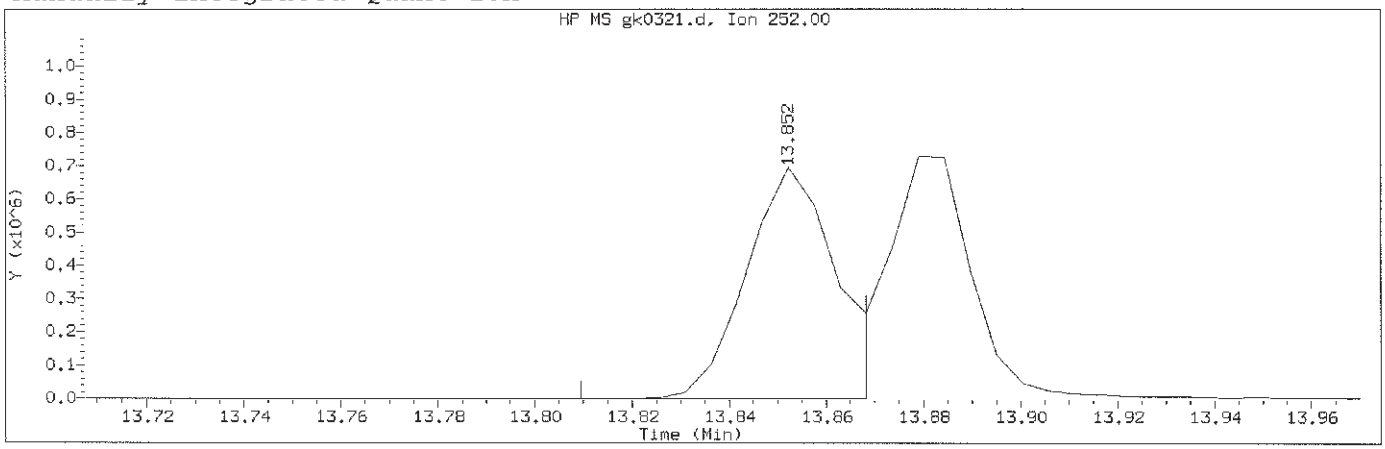
Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area	: 495457		
On-column Amount (ng/ul)	: 25.6777		
Integration start scan	: 1366	Integration stop scan:	1377
Y at integration start	: 127	Y at integration end:	131

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2153		
Retention Time (minutes)	: 13.852		
Quant Ion	: 252.00		
Area (flag)	: 900867M		
On-Column Amount (ng/ul)	: 31.3251		
Integration start scan	: 2144	Integration stop scan:	2155
Y at integration start	: 0	Y at integration end:	520

Reason for manual integration: improper integration

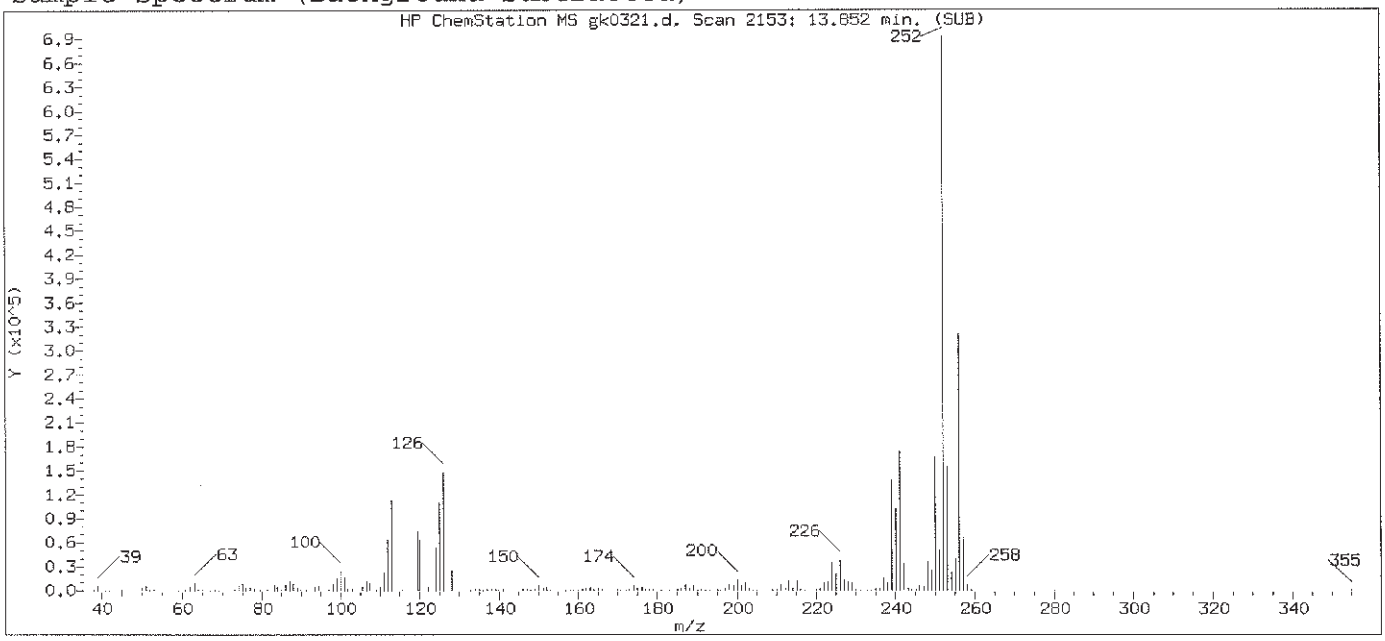
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

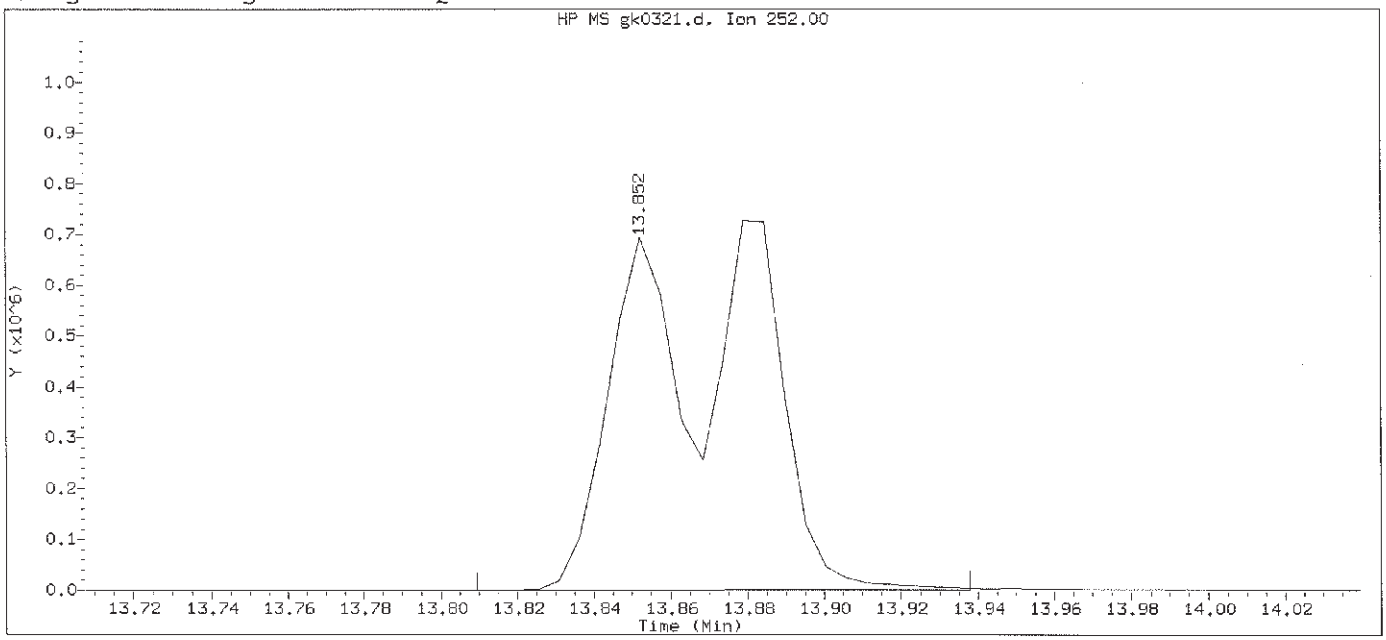
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

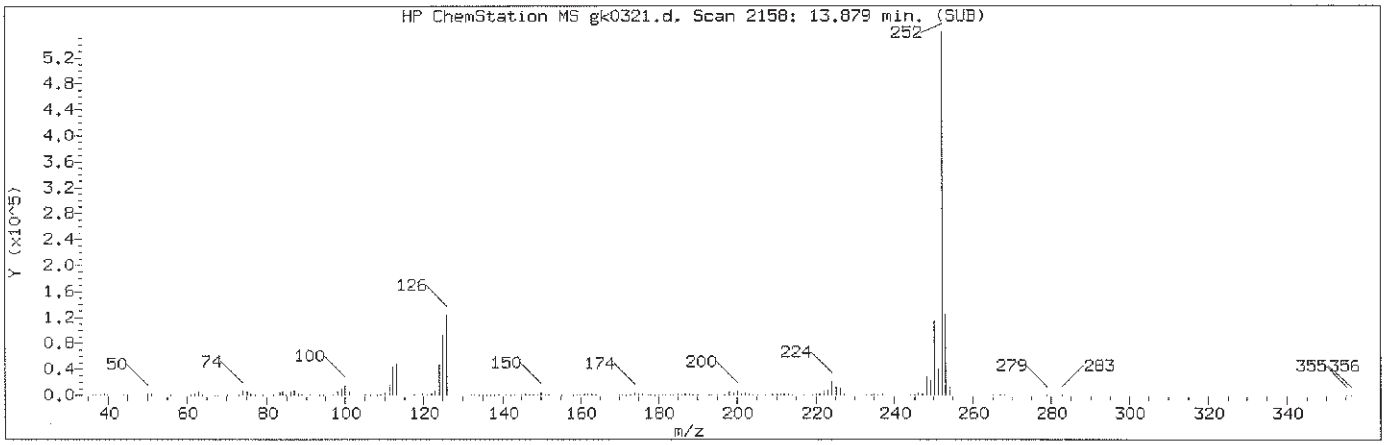
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

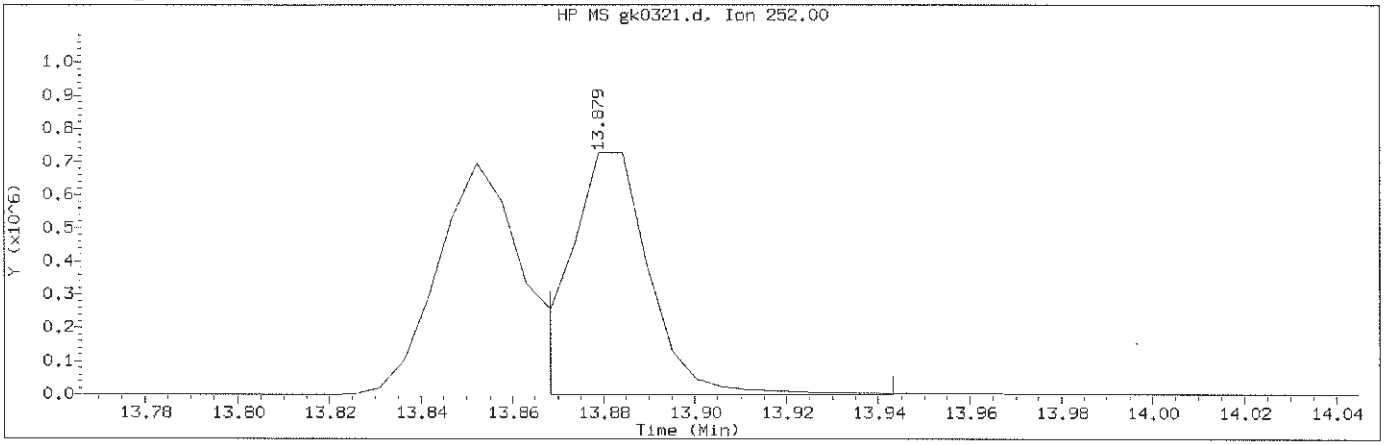
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2153		
Retention Time (minutes)	: 13.852		
Quant Ion	: 252.00		
Area	: 1715068		
On-column Amount (ng/ul)	: 54.1607		
Integration start scan	: 2144	Integration stop scan:	2168
Y at integration start	: 0	Y at integration end:	1136

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:21 lmh00956

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2158		
Retention Time (minutes)	: 13.879		
Quant Ion	: 252.00		
Area (flag)	: 901891M		
On-Column Amount (ng/ul)	: 29.5896		
Integration start scan	: 2155	Integration stop scan:	2169
Y at integration start	: 0	Y at integration end:	0

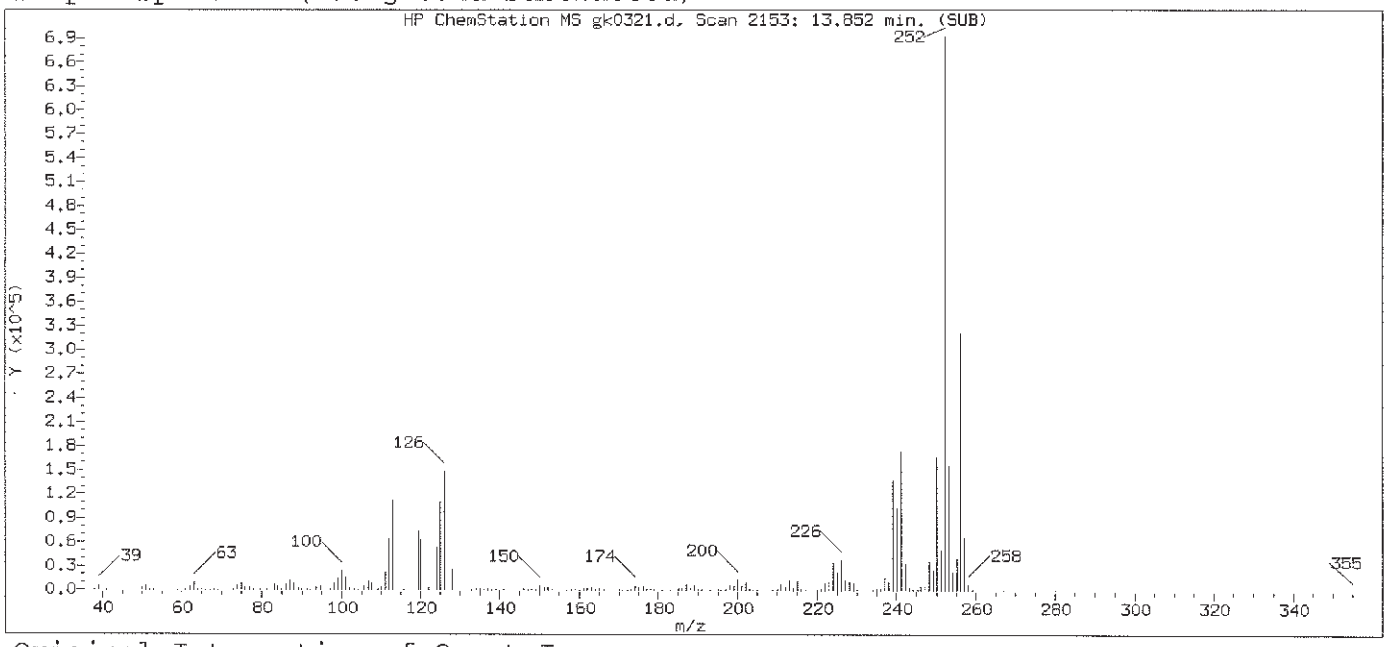
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40. Target 3.5 esignature user ID: lmh00956

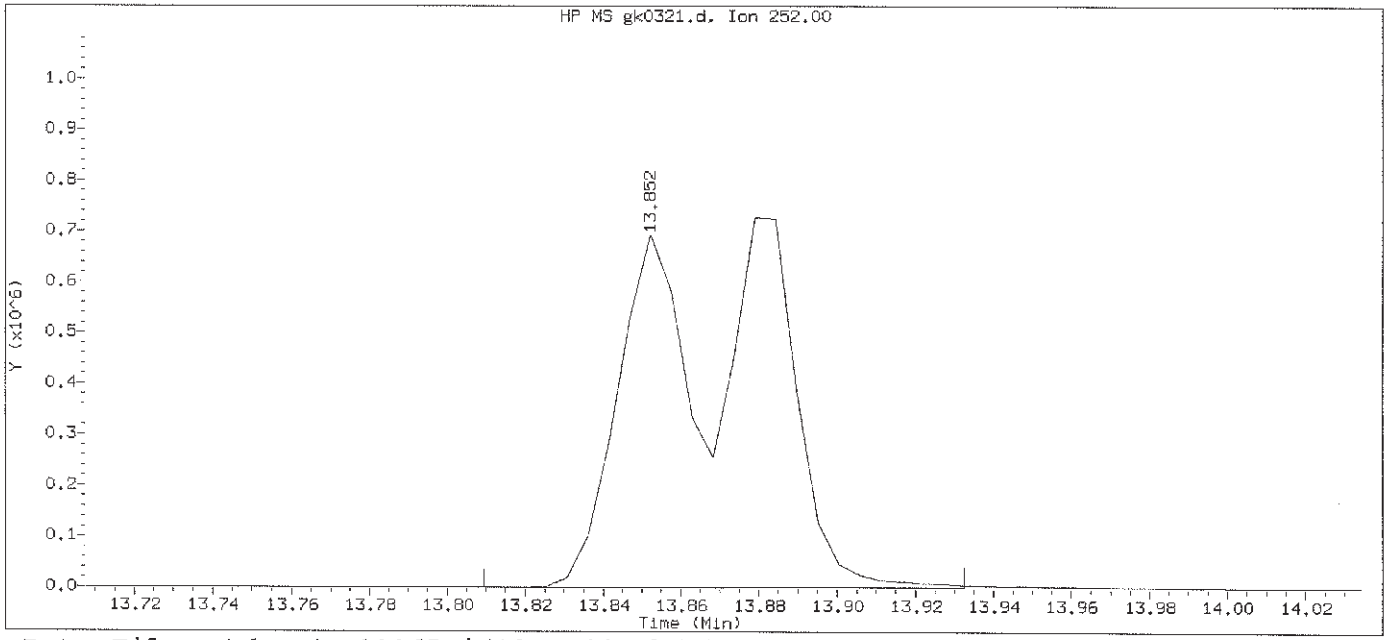
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Data Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



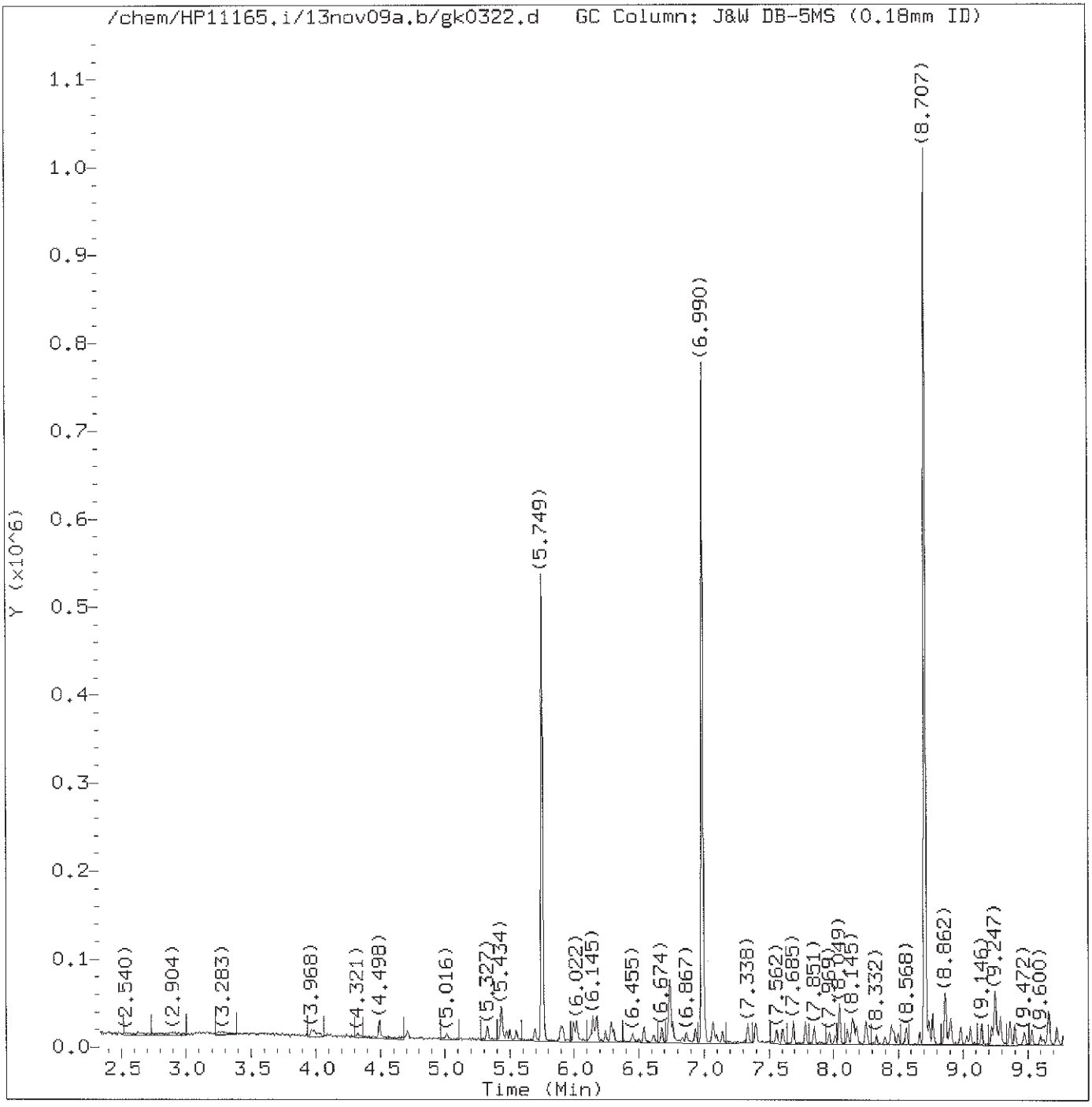
Data File: /chem/HP11165.i/13nov09a.b/gk0321.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 20:32
Date, time and analyst ID of latest file update: 09-Nov-2013 20:32 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2153		
Retention Time (minutes)	: 13.852		
Quant Ion	: 252.00		
Area	: 1712829		
On-column Amount (ng/ul)	: 53.6831		
Integration start scan	: 2144	Integration stop scan:	2167
Y at integration start	: 0	Y at integration end:	1324

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:40.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

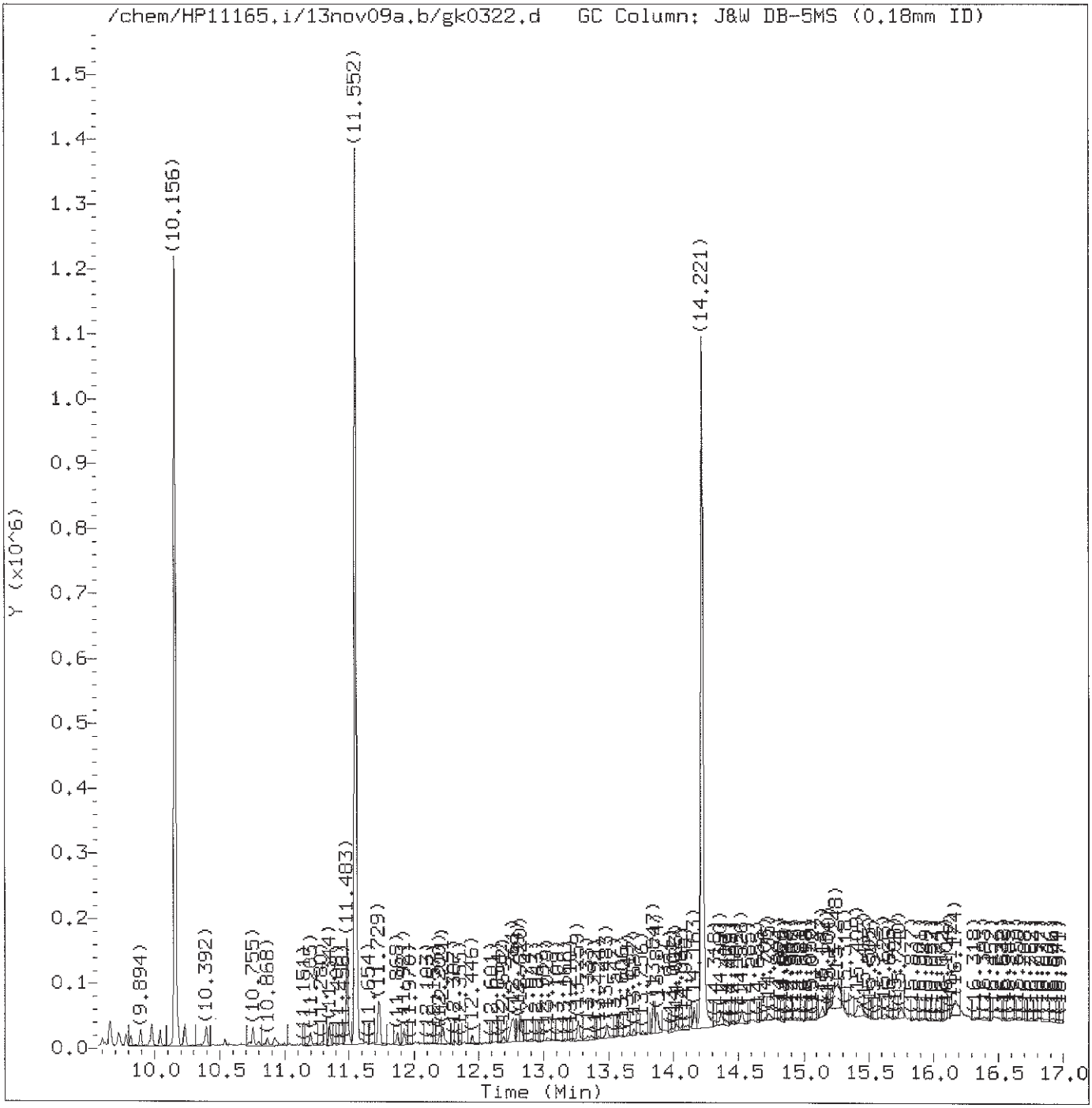
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:41.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
3) N-Nitrosodimethylamine	(1)	3.096	74	255	0.054
4) Pyridine	(1)	3.241	79	1276	0.166
7) 2-Picoline	(1)	3.968	93	2805	0.356
8) N-Nitrosomethylethylamine	(1)	4.005	88	6948	1.717
10)$2-Fluorophenol	(1)	4.492	112	5442	0.893
11) N-Nitrosodiethylamine	(1)	4.706	102	1722	0.471
14) Ethyl methanesulfonate	(1)	5.022	109	1447	0.393
17)$Phenol-d6	(1)	5.434	99	7490	0.817
16)$Phenol-d5	(1)	5.434	99	7490	0.817
19) Aniline	(1)	5.439	93	6159	0.509
18) Phenol	(1)	5.444	94	5005	0.459
20) bis(2-Chloroethyl)ether	(1)	5.503	93	3907	0.502
21) 2-Chlorophenol	(1)	5.557	128	2756	0.449
24) 1,3-Dichlorobenzene	(1)	5.696	146	3153	0.513
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	76893	20.000
26) 1,4-Dichlorobenzene	(1)	5.765	146	3017	0.485
27) Benzyl alcohol	(1)	5.899	108	2352	0.465
28) 1,2-Dichlorobenzene	(1)	5.915	146	2971	0.486
29) Indene	(1)	6.000	115	5912	0.528
30) 2-Methylphenol	(1)	6.022	108	3089	0.447
32) bis(2-Chloroisopropyl)ether	(1)	6.022	45	5649	0.542
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.022	45	5649	0.542
34) N-Nitrosopyrrolidine	(1)	6.129	100	1770	0.401
35) Acetophenone	(1)	6.145	105	5354	0.491
37) N-Nitroso-di-n-propylamine	(1)	6.150	70	2803	0.431
38) N-Nitrosomorpholine	(1)	6.166	56	2624	0.524
36) 4-Methylphenol	(1)	6.172	108	3748	0.456
39) o-Toluidine	(1)	6.177	106	5617	0.471
40) Hexachloroethane	(1)	6.241	117	1286	0.529
41)$Nitrobenzene-d5	(2)	6.284	82	7535	0.968
42) Nitrobenzene	(2)	6.305	77	4456	0.536
44) N-Nitrosopiperidine	(2)	6.455	114	1841	0.499
45) Isophorone	(2)	6.541	82	6854	0.452
48) 2-Nitrophenol	(2)	6.616	139	1052	0.326
52) 2,4-Dimethylphenol	(2)	6.674	107	3017	0.422
53) O,O,O-triethylphosphorothioate	(2)	6.739	198	1502	0.511
54) Benzoic acid	(2)	6.739	105	21957	3.541
55) bis(2-Chloroethoxy)methane	(2)	6.760	93	4704	0.509
60) 2,4-Dichlorophenol	(2)	6.862	162	1957	0.402
62) 1,2,4-Trichlorobenzene	(2)	6.931	180	2595	0.510

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
63) *Naphthalene-d8	(2)	6.990	136	352998	20.000
64) Naphthalene	(2)	7.006	128	9573	0.515
65) 4-Chloroaniline	(2)	7.065	127	3537	0.452
66) 2,6-Dichlorophenol	(2)	7.076	162	2554	0.527
67) Hexachloropropene	(2)	7.097	213	991	0.366
69) Hexachlorobutadiene	(2)	7.140	225	1389	0.578
70) Quinoline	(2)	7.338	129	6699	0.504
74) Caprolactam	(2)	7.396	113	1602	0.530
73) N-Nitrosodi-n-butylamine	(2)	7.402	84	3998	0.509
75) 4-Chloro-3-methylphenol	(2)	7.557	107	3244	0.481
76) Safrole	(2)	7.610	162	2403	0.494
77) 2-Methylnaphthalene	(2)	7.685	142	6175	0.471
78) 1-Methylnaphthalene	(2)	7.782	142	5687	0.480
79) Hexachlorocyclopentadiene	(3)	7.851	237	456	0.214
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	2445	0.473
82) 2,4,6-Trichlorophenol	(3)	7.969	196	1567	0.410
83) 2,4,5-Trichlorophenol	(3)	8.012	196	1685	0.423
84) $2-Fluorobiphenyl	(3)	8.049	172	13496	1.008
81) cis-Isosafrole	(3)	8.113	162	2501	0.310
86) Isosafrole	(3)	8.113	162	2501	0.485
85) trans-Isosafrole	(3)	8.113	162	2501	0.431
87) 1,1'-Biphenyl	(3)	8.145	154	8846	0.519
88) 2-Chloronaphthalene	(3)	8.161	162	5694	0.442
89) 1-Chloronaphthalene	(3)	8.183	162	5307	0.449
90) Diphenyl ether	(3)	8.252	170	3895	0.459
91) 2-Nitroaniline	(3)	8.263	138	1627	0.359
92) 1,4-Naphthoquinone	(3)	8.338	158	1646	0.309
94) Dimethylphthalate	(3)	8.450	163	7311	0.493
97) 2,6-Dinitrotoluene	(3)	8.504	165	1147	0.346
99) Acenaphthylene	(3)	8.568	152	8590	0.464
100) 3-Nitroaniline	(3)	8.659	138	1253	0.300
101) *Acenaphthene-d10	(3)	8.707	164	219769	20.000
102) Acenaphthene	(3)	8.734	153	6983	0.525
103) 2,4-Dinitrophenol	(3)	8.766	184	3811	1.903
105) Pentachlorobenzene	(3)	8.867	250	2040	0.439
104) 4-Nitrophenol	(3)	8.867	109	4856	1.934
106) 2,4-Dinitrotoluene	(3)	8.894	165	1749	0.375
107) Dibenzofuran	(3)	8.905	168	9718	0.534
95) 1,3-Dinitrobenzene	(3)	8.905	168	9718	3.494
108) 1-Naphthylamine	(3)	8.980	143	6973	0.466

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$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
110) 2-Naphthylamine	(3)	9.060	143	6709	0.449
111) Diethylphthalate	(3)	9.146	149	7838	0.519
122) Tetraethyldithiopyrophosphate	(4)	9.220	97	1834	0.594
112) Thionazin	(3)	9.220	107	1617	0.534
113) Fluorene	(3)	9.242	166	7630	0.503
114) 4-Chlorophenyl-phenylether	(3)	9.247	204	3807	0.548
115) 5-Nitro-o-toluidine	(3)	9.252	152	1919	0.407
116) 4-Nitroaniline	(3)	9.258	138	1863	0.414
117) 4,6-Dinitro-2-methylphenol	(4)	9.290	198	3235	1.029
118) N-Nitrosodiphenylamine	(4)	9.365	169	6700	0.443
119) NDPA as diphenylamine	(4)	9.365	169	6700	0.441
120) 1,2-Diphenylhydrazine	(4)	9.402	77	9319	0.423
121)$2,4,6-Tribromophenol	(3)	9.472	330	1374	0.936
128) Diallate (peak 2)	(4)	9.654	86	4617	0.847
124) Diallate (peak 1)	(4)	9.654	86	4617	0.390
125) Phorate	(4)	9.659	75	6381M	0.349
126) Phenacetin	(4)	9.664	108	3690	0.357
127) 4-Bromophenyl-phenylether	(4)	9.729	248	1828	0.426
129) Hexachlorobenzene	(4)	9.782	284	2094	0.518
130) Dimethoate	(4)	9.819	87	3315	0.375
132) Atrazine	(4)	9.894	200	2511	0.517
135) 4-Aminobiphenyl	(4)	9.980	169	7108	0.488
133) Pentachlorophenol	(4)	9.980	266	906	0.326
138) Pronamide	(4)	10.044	173	2374	0.337
140)*Phenanthrene-d10	(4)	10.156	188	455156	20.000
143) Phenanthrene	(4)	10.183	178	13924	0.517
144) Anthracene	(4)	10.231	178	11642	0.440
146) Carbazole	(4)	10.392	167	11448	0.462
148) Methyl parathion	(4)	10.536	109	1713	0.284
149) Di-n-butylphthalate	(4)	10.755	149	12782	0.430
151) Parathion	(4)	10.921	109	1212	0.309
156) Isodrin	(4)	11.205	193	1723	0.643
157) Fluoranthene	(4)	11.344	202	13563	0.492
162) Benzidine	(5)	11.483	184	64287	3.066
164)*Pyrene-d10	(5)	11.552	212	551156	20.000
142) Dinoseb	(4)	11.552	211	33995	8.274
165) Pyrene	(5)	11.568	202	16869	0.535
166)$Terphenyl-d14	(5)	11.734	244	19314	0.982
168) p-Dimethylaminoazobenzene	(5)	11.868	225	1876	0.332
171) Chlorobenzilate	(5)	11.921	139	3076	0.346

M = Compound was manually integrated.
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on 11/10/2013 at 08:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
172)	3,3'-Dimethylbenzidine	(5)	12.200	212	6652	0.406
173)	Butylbenzylphthalate	(5)	12.221	149	5192	0.366
174)	2-Acetylaminofluorene	(5)	12.446	181	2658	0.225
175)	3,3'-Dichlorobenzidine	(5)	12.745	252	3927	0.406
176)	4,4'-Methylenebis(2-Chloroanil	(5)	12.750	231	1612	0.353
177)	Benzo(a)anthracene	(5)	12.761	228	13187	0.498
178)	Chrysene	(5)	12.799	228	12144	0.470
179)	bis(2-Ethylhexyl)phthalate	(5)	12.820	149	8080	0.417
181)	6-Methylchrysene	(5)	13.264	242	8710	0.474
183)	Di-n-octylphthalate	(6)	13.483	149	9789	0.287
184)	7,12-Dimethylbenz[a]anthracene	(6)	13.842	256	4960	0.397
185)	Benzo(b)fluoranthene	(6)	13.847	252	12859M	0.466
186)	Benzo(k)fluoranthene	(6)	13.874	252	13466M	0.460
187)	Benzo(a)pyrene	(6)	14.163	252	10862	0.441
188)*	Perylene-d12	(6)	14.221	264	457057	20.000
190)	3-Methylcholanthrene	(6)	14.526	268	4647	0.394
191)	Dibenz(a,h)acridine	(6)	15.125	279	6304	0.365
192)	Dibenz(a,j)acridine	(6)	15.189	279	8116	0.418
193)	Indeno(1,2,3-cd)pyrene	(6)	15.409	276	12145	0.486
194)	Dibenz(a,h)anthracene	(6)	15.435	278	10151	0.490
196)	Benzo(g,h,i)perylene	(6)	15.756	276	9843	0.467
203)	2,4_2,6-Dinitrotoluenes	(3)			2896	0.355
204)	Diallate TRANS/CIS	(4)			9234	0.901

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* = Compound is an internal standard.

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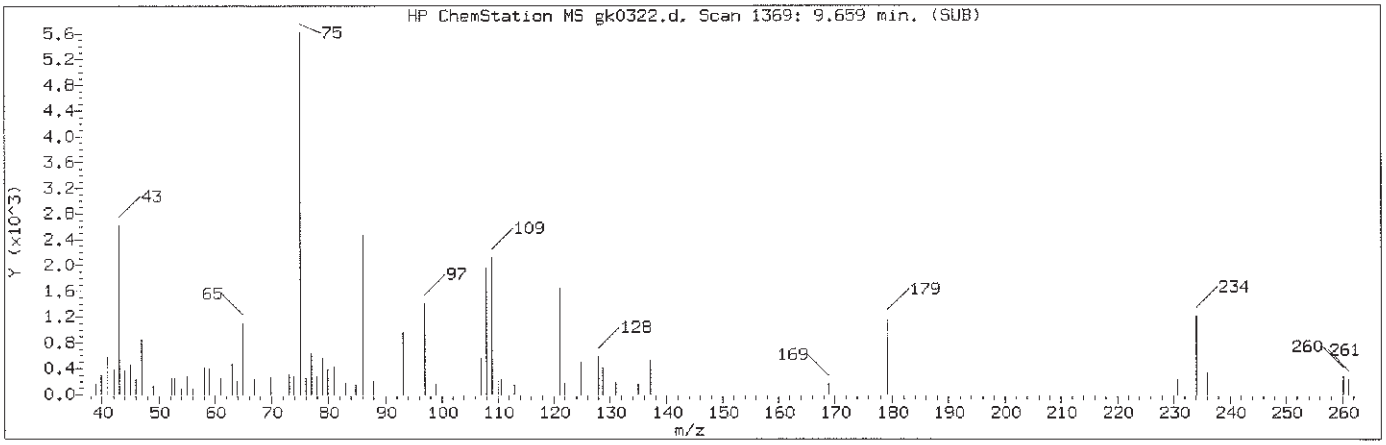
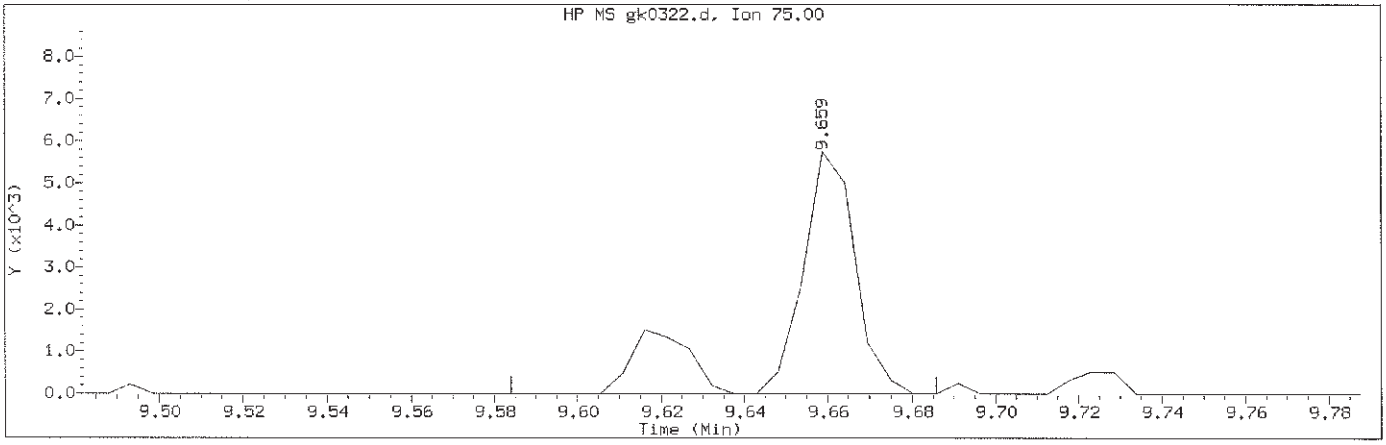
on 11/10/2013 at 08:42.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area (flag)	: 6381M		
On-Column Amount (ng/ul)	: 0.3493		
Integration start scan	: 1354	Integration stop scan:	1373
Y at integration start	: 0	Y at integration end:	0

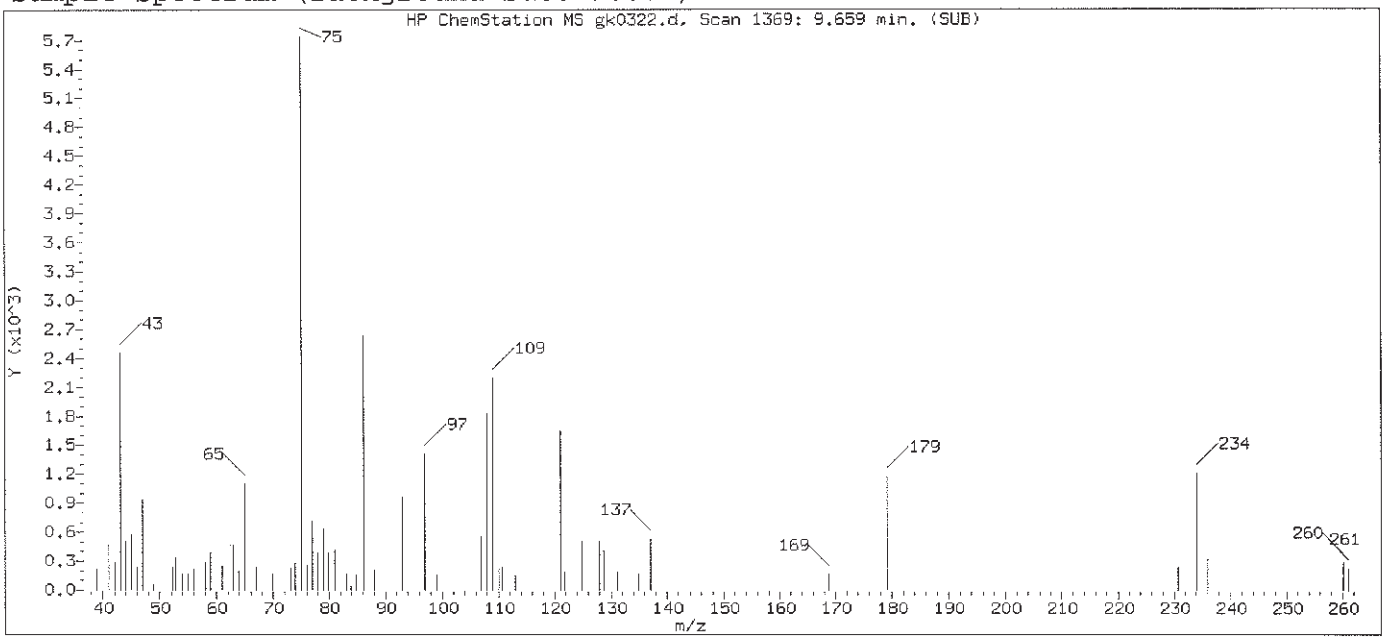
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:42. Target 3.5 esignature user ID: lmh00956

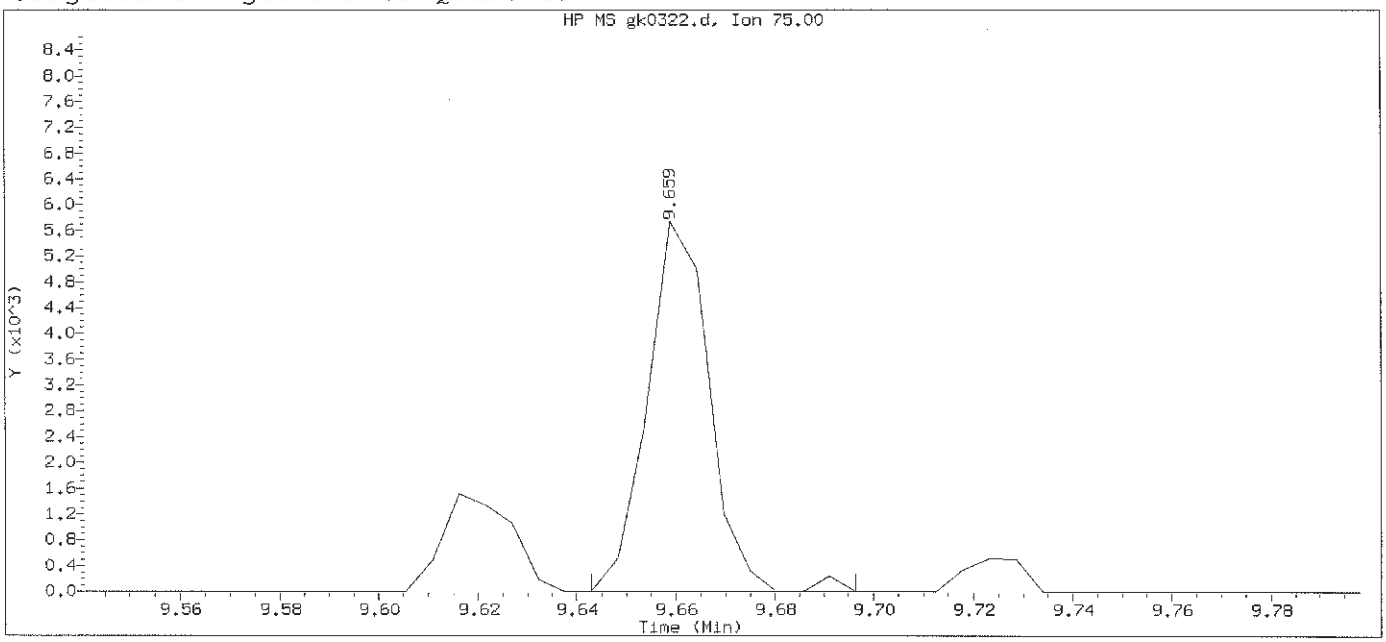
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:13
Date, time and analyst ID of latest file update: 09-Nov-2013 21:13 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area	: 4986		
On-column Amount (ng/ul)	: 0.3055		
Integration start scan	: 1365	Integration stop scan:	1375
Y at integration start	: 0	Y at integration end:	0

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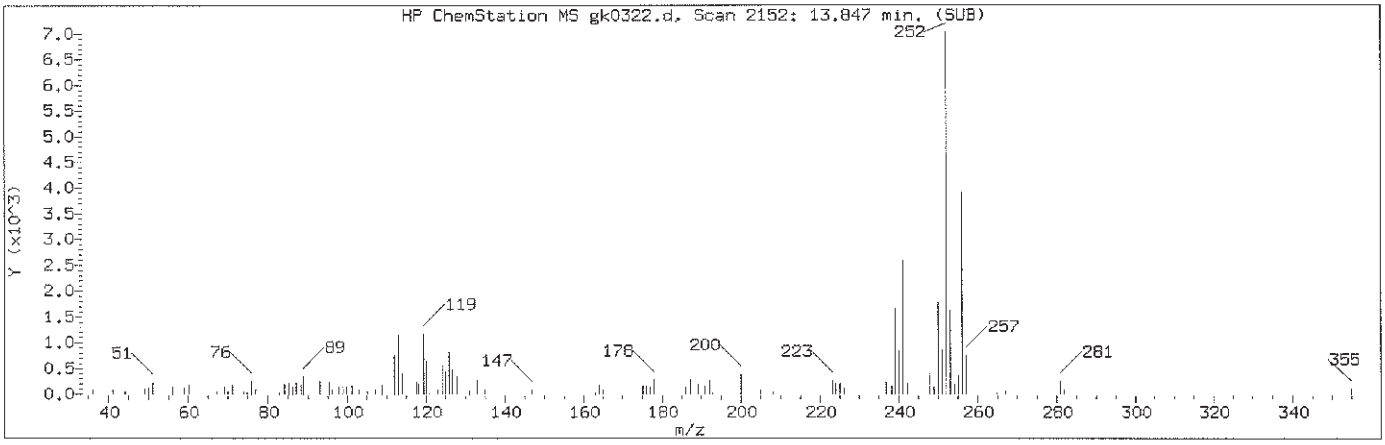
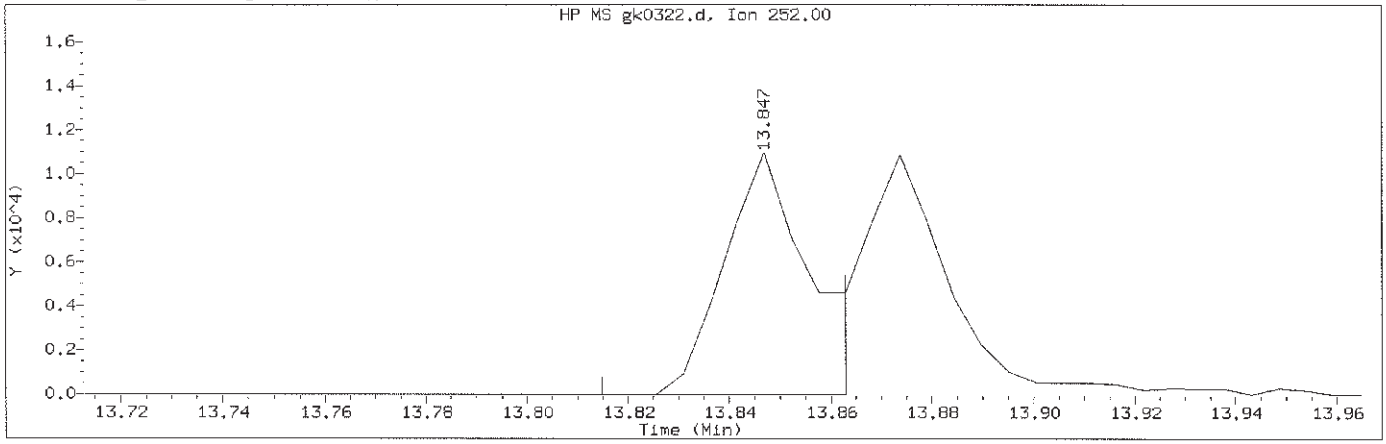
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area (flag)	: 12859M		
On-Column Amount (ng/ul)	: 0.4656		
Integration start scan	: 2145	Integration stop scan:	2154
Y at integration start	: 0	Y at integration end:	0

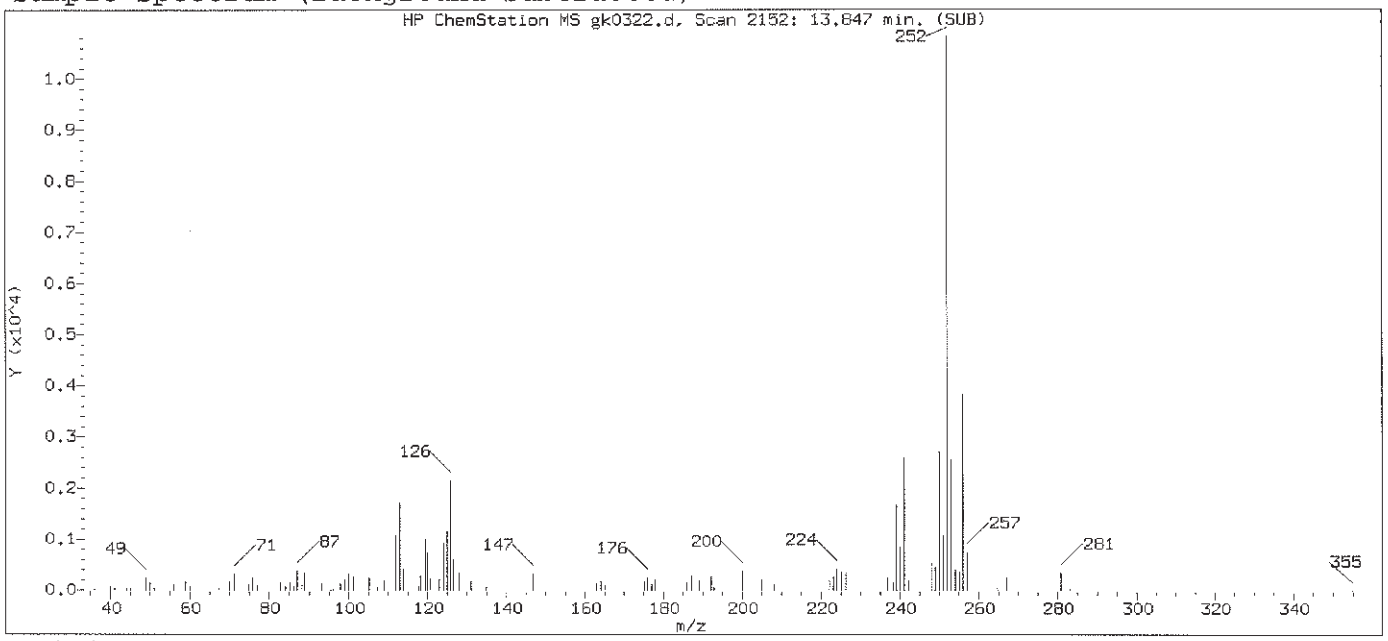
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:42. Target 3.5 esignature user ID: lmh00956

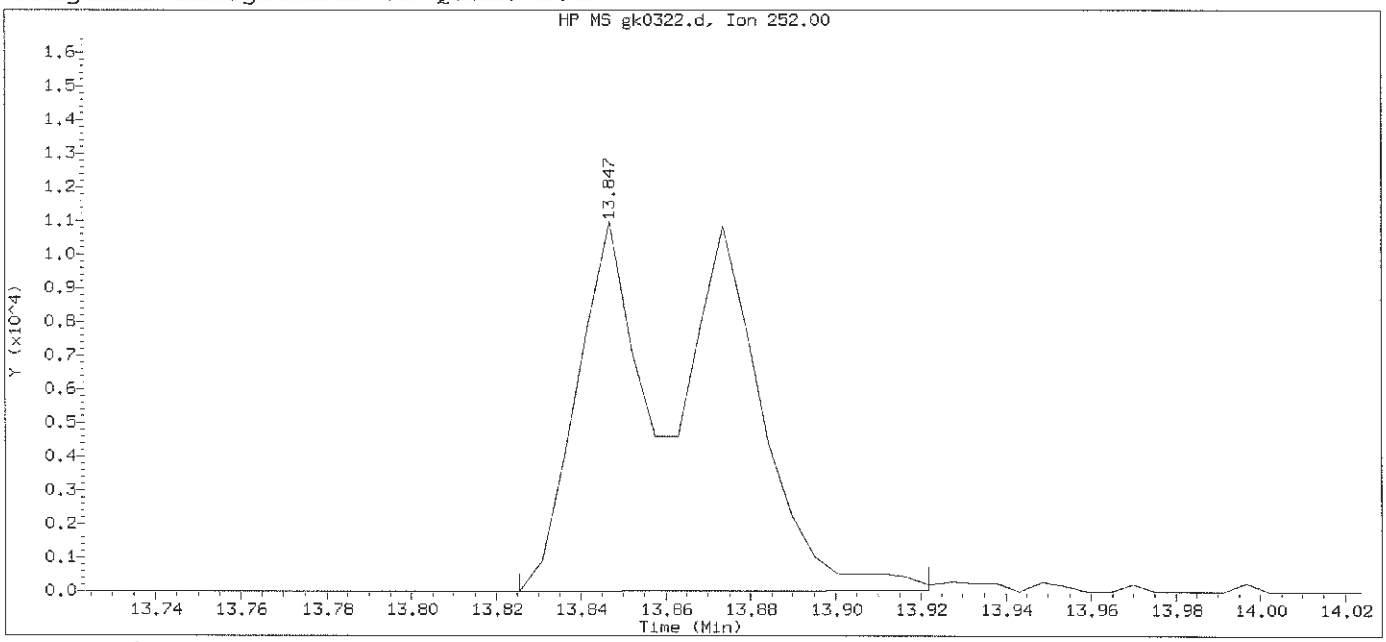
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:13
Date, time and analyst ID of latest file update: 09-Nov-2013 21:13 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area	: 24445		
On-column Amount (ng/ul)	: 0.7410		
Integration start scan	: 2147	Integration stop scan:	2165
Y at integration start	: 0	Y at integration end:	38

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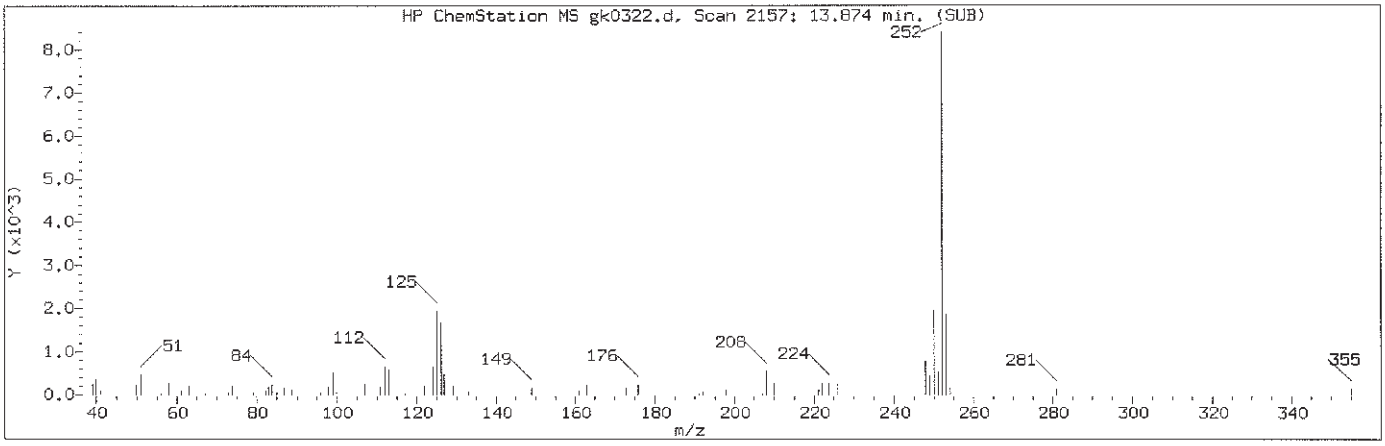
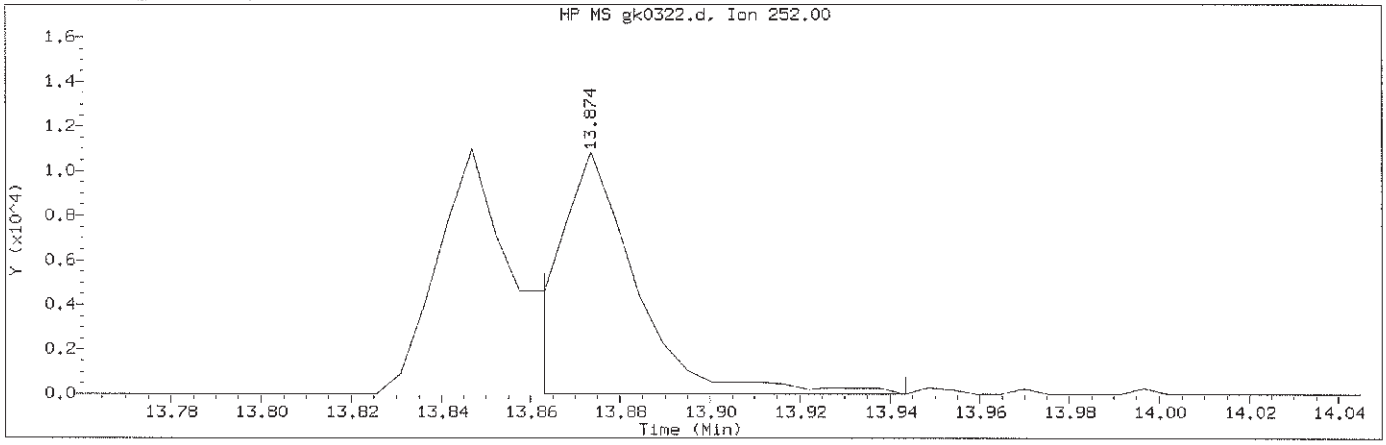
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area (flag)	: 13466M		
On-Column Amount (ng/ul)	: 0.4601		
Integration start scan	: 2154	Integration stop scan:	2169
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

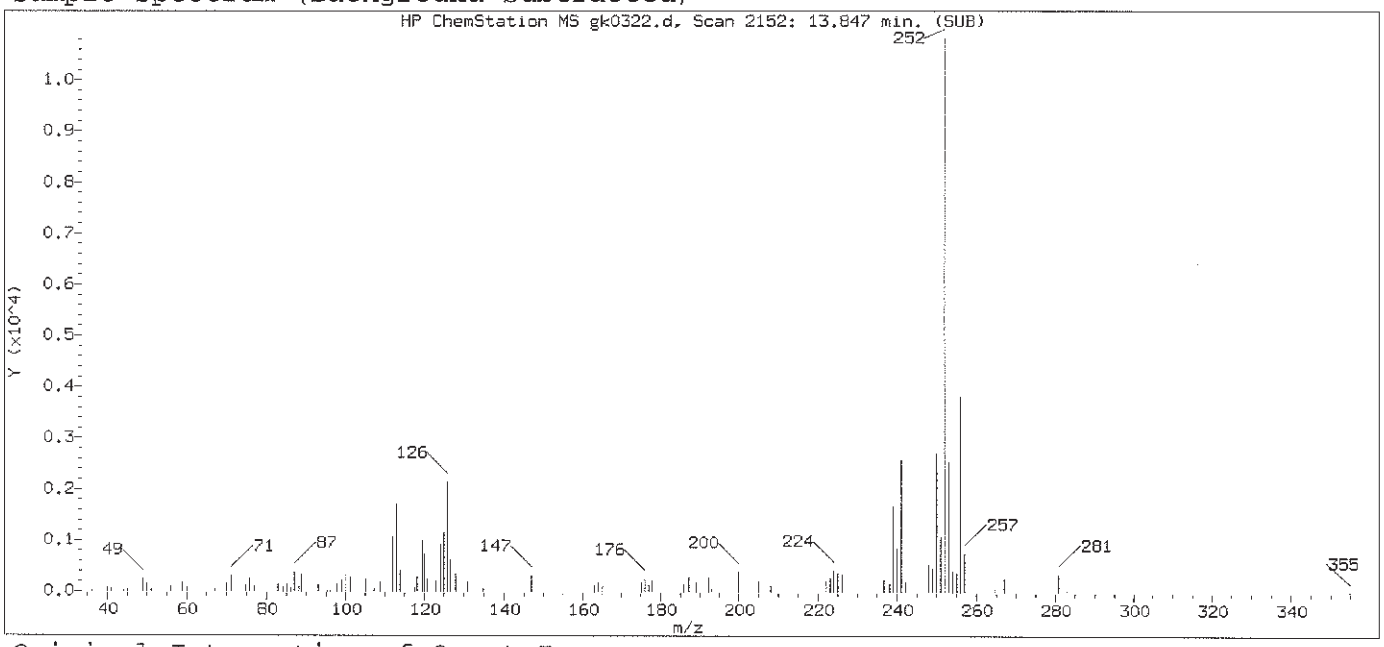
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:42. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

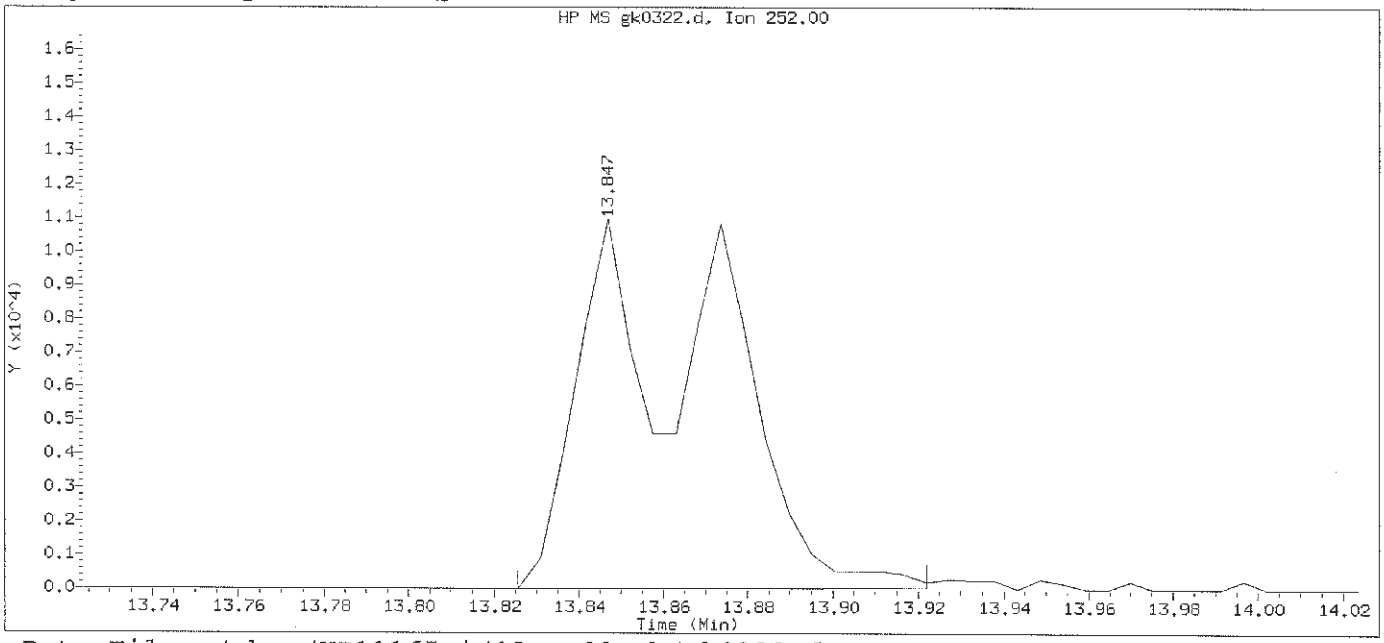
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0322.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 20:49 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:13
Date, time and analyst ID of latest file update: 09-Nov-2013 21:13 Automation

Sample Name: SSTD0.5 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area	: 24445		
On-column Amount (ng/ul)	: 0.7364		
Integration start scan	: 2147	Integration stop scan:	2165
Y at integration start	: 0	Y at integration end:	38

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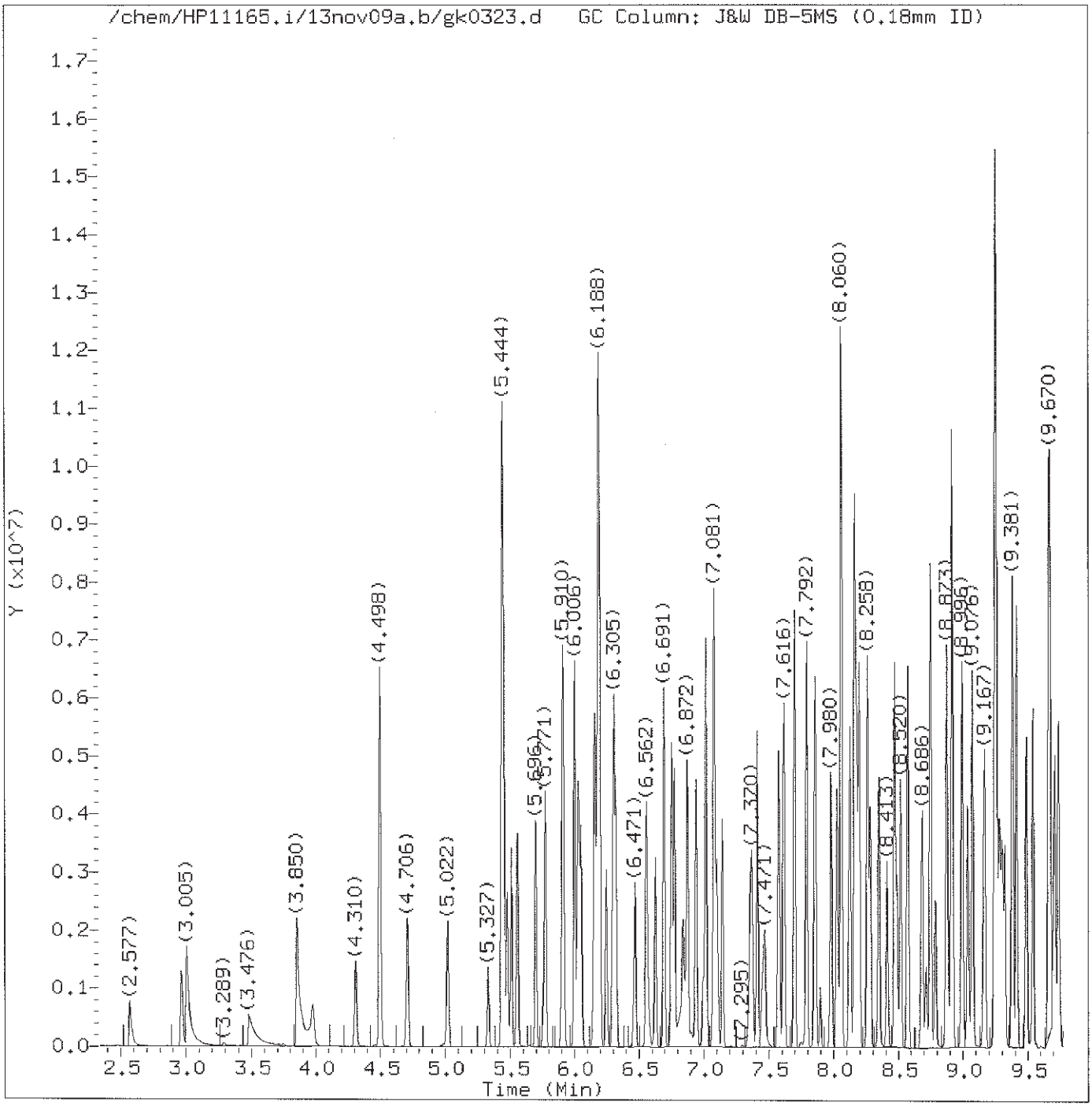
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

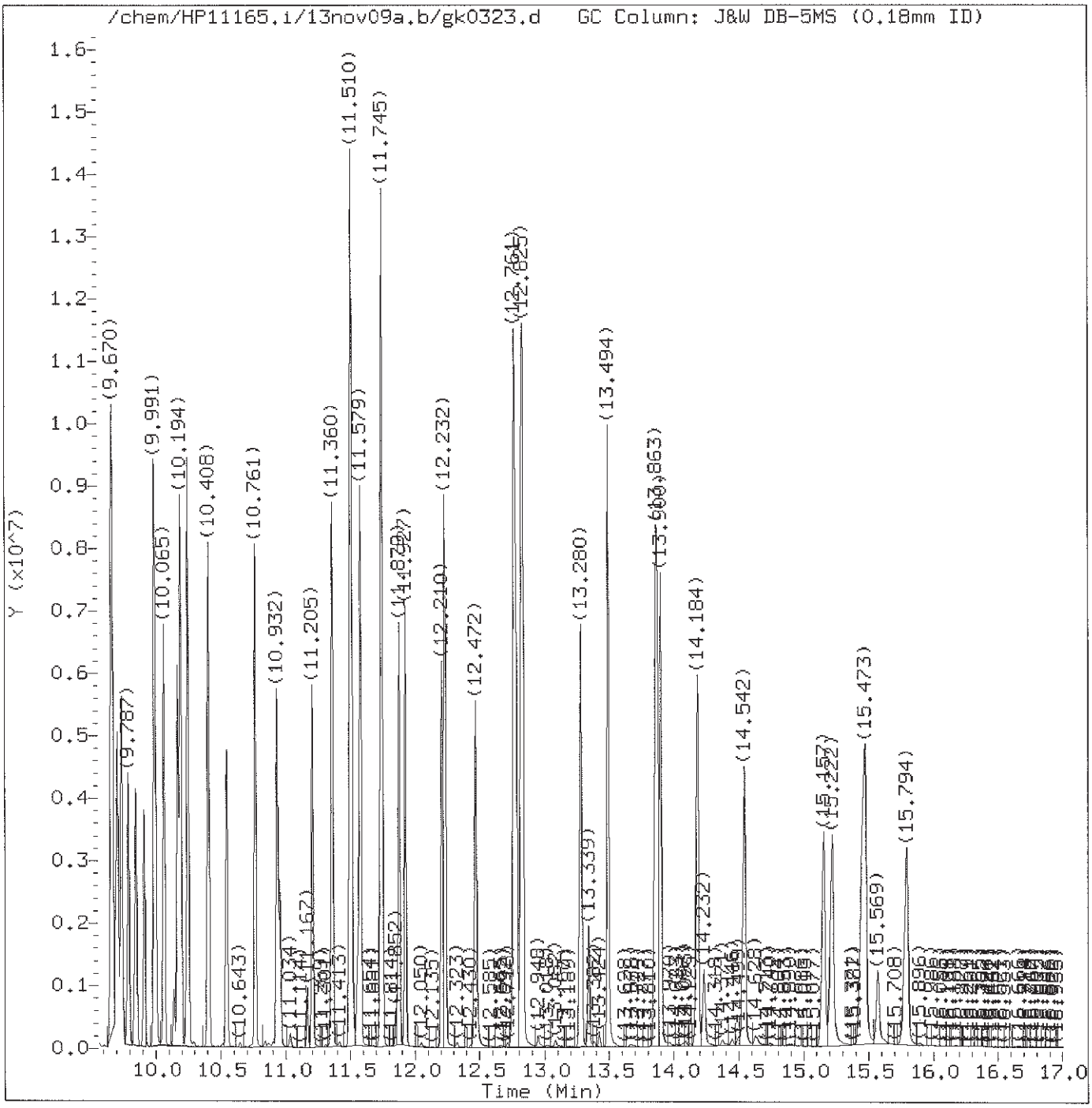
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.577	88	418038	113.847
3) N-Nitrosodimethylamine	(1)	2.962	74	779845	121.092
4) Pyridine	(1)	3.005	79	1261291	120.808
7) 2-Picoline	(1)	3.850	93	1261648	117.538
8) N-Nitrosomethylethylamine	(1)	3.979	88	601797	109.270
9) Methyl methanesulfonate	(1)	4.310	80	620159	119.082
10)$2-Fluorophenol	(1)	4.498	112	1964985	236.965
11) N-Nitrosodiethylamine	(1)	4.706	102	604187	121.370
14) Ethyl methanesulfonate	(1)	5.022	109	581213	115.867
19) Aniline	(1)	5.439	93	1895824	115.099
16)$Phenol-d5	(1)	5.444	99	2914951	233.637
17)$Phenol-d6	(1)	5.444	99	2914951	233.637
18) Phenol	(1)	5.455	94	1763337	118.871
20) bis(2-Chloroethyl)ether	(1)	5.514	93	1219350	115.180
21) 2-Chlorophenol	(1)	5.562	128	1015163	121.497
24) 1,3-Dichlorobenzene	(1)	5.701	146	960998	114.869
25)*1,4-Dichlorobenzene-d4	(1)	5.754	152	104648	20.000
26) 1,4-Dichlorobenzene	(1)	5.771	146	989325	116.874
27) Benzyl alcohol	(1)	5.910	108	775858	112.619
28) 1,2-Dichlorobenzene	(1)	5.915	146	933533	112.282
29) Indene	(1)	6.006	115	2111350	138.651
32) bis(2-Chloroisopropyl)ether	(1)	6.033	45	1646460	115.975
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.033	45	1646460	115.975
30) 2-Methylphenol	(1)	6.054	108	1141792M	121.492
35) Acetophenone	(1)	6.156	105	1592804	107.251
34) N-Nitrosopyrrolidine	(1)	6.156	100	695966	115.842
37) N-Nitroso-di-n-propylamine	(1)	6.182	70	998066	112.755
36) 4-Methylphenol	(1)	6.188	108	1275255	113.896
39) o-Toluidine	(1)	6.193	106	1856995	114.435
38) N-Nitrosomorpholine	(1)	6.193	56	747112	109.704
40) Hexachloroethane	(1)	6.247	117	387912	117.250
41)$Nitrobenzene-d5	(2)	6.305	82	2731008	237.158
42) Nitrobenzene	(2)	6.321	77	1422077	115.628
44) N-Nitrosopiperidine	(2)	6.471	114	636358	116.571
45) Isophorone	(2)	6.562	82	2628410	117.179
48) 2-Nitrophenol	(2)	6.626	139	591509	123.796
52) 2,4-Dimethylphenol	(2)	6.691	107	1244179	117.717
53) O,O,O-triethylphosphorothioate	(2)	6.755	198	494133	113.614
55) bis(2-Chloroethoxy)methane	(2)	6.776	93	1545329	112.896
54) Benzoic acid	(2)	6.856	105	1106065	120.542

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.872	162	852999	118.271
62) 1,2,4-Trichlorobenzene	(2)	6.942	180	874816	116.158
63)*Naphthalene-d8	(2)	6.995	136	522383	20.000
64) Naphthalene	(2)	7.017	128	3173230	115.300
65) 4-Chloroaniline	(2)	7.081	127	1361409	117.509
66) 2,6-Dichlorophenol	(2)	7.086	162	822616	114.730
67) Hexachloropropene	(2)	7.102	213	480108	119.948
69) Hexachlorobutadiene	(2)	7.140	225	413769	116.422
70) Quinoline	(2)	7.370	129	2264266	115.078
73) N-Nitrosodi-n-butylamine	(2)	7.413	84	1303170M	112.030
74) Caprolactam	(2)	7.471	113	469965A	105.063
75) 4-Chloro-3-methylphenol	(2)	7.578	107	1167044	116.919
76) Safrole	(2)	7.616	162	840859	116.796
77) 2-Methylnaphthalene	(2)	7.696	142	2238575	115.501
78) 1-Methylnaphthalene	(2)	7.792	142	2046014	116.719
79) Hexachlorocyclopentadiene	(3)	7.851	237	390295	130.370
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.856	216	857704	117.929
81) cis-Isosafrole	(3)	7.894	162	151851	13.387
82) 2,4,6-Trichlorophenol	(3)	7.980	196	675286	125.603
83) 2,4,5-Trichlorophenol	(3)	8.028	196	693089	123.749
84)$2-Fluorobiphenyl	(3)	8.060	172	4415073	234.441
86) Isosafrole	(3)	8.124	162	881416	121.378
85) trans-Isosafrole	(3)	8.124	162	881416	108.027
87) 1,1'-Biphenyl	(3)	8.156	154	2566831	106.994
88) 2-Chloronaphthalene	(3)	8.172	162	1985713	109.475
89) 1-Chloronaphthalene	(3)	8.193	162	1973121	118.711
90) Diphenyl ether	(3)	8.258	170	1405404	117.633
91) 2-Nitroaniline	(3)	8.279	138	799479	125.244
92) 1,4-Naphthoquinone	(3)	8.349	158	888605	118.743
93) 1,4-Dinitrobenzene	(3)	8.413	168	408979	127.092
94) Dimethylphthalate	(3)	8.472	163	2397856	114.963
95) 1,3-Dinitrobenzene	(3)	8.488	168	477273	121.955
97) 2,6-Dinitrotoluene	(3)	8.520	165	582919	124.848
99) Acenaphthylene	(3)	8.579	152	3205080	122.988
100) 3-Nitroaniline	(3)	8.686	138	705675	120.177
101)*Acenaphthene-d10	(3)	8.712	164	309204	20.000
102) Acenaphthene	(3)	8.744	153	2149476	114.922
103) 2,4-Dinitrophenol	(3)	8.787	184	391740	139.049
105) Pentachlorobenzene	(3)	8.873	250	733777	112.255
104) 4-Nitrophenol	(3)	8.878	109	424137	120.057

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
107) Dibenzofuran	(3)	8.916	168	2885261	112.736
106) 2,4-Dinitrotoluene	(3)	8.916	165	760437	115.972
108) 1-Naphthylamine	(3)	8.996	143	2459279	116.802
109) 2,3,4,6-Tetrachlorophenol	(3)	9.044	232	552205	121.773
110) 2-Naphthylamine	(3)	9.081	143	2440972	116.003
111) Diethylphthalate	(3)	9.167	149	2461861	115.834
112) Thionazin	(3)	9.242	107	463325	108.657
113) Fluorene	(3)	9.252	166	2351489	110.075
114) 4-Chlorophenyl-phenylether	(3)	9.258	204	1047411	107.246
115) 5-Nitro-o-toluidine	(3)	9.279	152	757402	114.105
116) 4-Nitroaniline	(3)	9.301	138	717463A	113.384
117) 4,6-Dinitro-2-methylphenol	(4)	9.322	198	498557	133.594
118) N-Nitrosodiphenylamine	(4)	9.381	169	2199177	122.469
119) NDPA as diphenylamine	(4)	9.381	169	2199177	121.950
120) 1,2-Diphenylhydrazine	(4)	9.413	77	3245917	124.311
121)$2,4,6-Tribromophenol	(3)	9.493	330	479887	232.272
122) Tetraethyldithiopyrophosphate	(4)	9.541	97	438722	119.819
123) 1,3,5-Trinitrobenzene	(4)	9.664	213	316007	139.074
124) Diallate (peak 1)	(4)	9.664	86	1244689	88.547
125) Phorate	(4)	9.675	75	2796333	129.020
126) Phenacetin	(4)	9.712	108	1525770	124.587
127) 4-Bromophenyl-phenylether	(4)	9.739	248	618087	121.418
128) Diallate (peak 2)	(4)	9.745	86	187283	28.960
129) Hexachlorobenzene	(4)	9.793	284	574869	119.758
130) Dimethoate	(4)	9.846	87	1204875	115.009
132) Atrazine	(4)	9.916	200	428759	74.468
133) Pentachlorophenol	(4)	9.991	266	430805	130.641
135) 4-Aminobiphenyl	(4)	9.996	169	1776870	102.783
134) Pentachloronitrobenzene	(4)	10.001	237	249945	120.508
138) Pronamide	(4)	10.065	173	1062094	127.145
140)*Phenanthrene-d10	(4)	10.167	188	540036	20.000
142) Dinoseb	(4)	10.172	211	698880	143.361
143) Phenanthrene	(4)	10.194	178	3763431	117.845
144) Anthracene	(4)	10.247	178	3911414	124.598
146) Carbazole	(4)	10.408	167	3570900	121.414
148) Methyl parathion	(4)	10.547	109	861088	120.404
149) Di-n-butylphthalate	(4)	10.761	149	4356969	123.594
151) Parathion	(4)	10.932	109	602220	129.550
152) 4-Nitroquinoline-1-oxide	(4)	10.953	190	322096	132.041
156) Isodrin	(4)	11.205	193	392078	123.277

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.360	202	3977265	121.603
162) Benzidine	(5)	11.510	184	8022761	344.279
164)*Pyrene-d10	(5)	11.558	212	612531	20.000
165) Pyrene	(5)	11.579	202	4013950	114.561
166)$Terphenyl-d14	(5)	11.745	244	5043074	230.821
168) p-Dimethylaminoazobenzene	(5)	11.879	225	811987	129.315
171) Chlorobenzilate	(5)	11.927	139	1227046	124.054
172) 3,3'-Dimethylbenzidine	(5)	12.210	212	2215427	121.619
173) Butylbenzylphthalate	(5)	12.232	149	1881525	119.416
174) 2-Acetylaminofluorene	(5)	12.472	181	1689199	128.909
175) 3,3'-Dichlorobenzidine	(5)	12.756	252	1247354	116.006
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.761	231	599271	118.095
177) Benzo(a)anthracene	(5)	12.777	228	3458951	117.536
178) Chrysene	(5)	12.815	228	3319928	115.554
179) bis(2-Ethylhexyl)phthalate	(5)	12.831	149	2577955	119.814
181) 6-Methylchrysene	(5)	13.280	242	2439326	119.341
183) Di-n-octylphthalate	(6)	13.494	149	4502143	132.572
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.863	256	1521844	122.282
185) Benzo(b)fluoranthene	(6)	13.874	252	3466663M	125.962
186) Benzo(k)fluoranthene	(6)	13.900	252	3547115M	121.607
187) Benzo(a)pyrene	(6)	14.184	252	3088955	125.872
188)*Perylene-d12	(6)	14.232	264	455487	20.000
190) 3-Methylcholanthrene	(6)	14.548	268	1438152	122.504
191) Dibenz(a,h)acridine	(6)	15.157	279	2129613	123.583
192) Dibenz(a,j)acridine	(6)	15.222	279	2323931	119.985
193) Indeno(1,2,3-cd)pyrene	(6)	15.452	276	2963315	119.048
194) Dibenz(a,h)anthracene	(6)	15.473	278	2452758	118.702
196) Benzo(g,h,i)perylene	(6)	15.794	276	2490776	118.706
203) 2,4_2,6-Dinitrotoluenes	(3)			1343356	117.160
204) Diallate TRANS/CIS	(4)			1431972	117.767

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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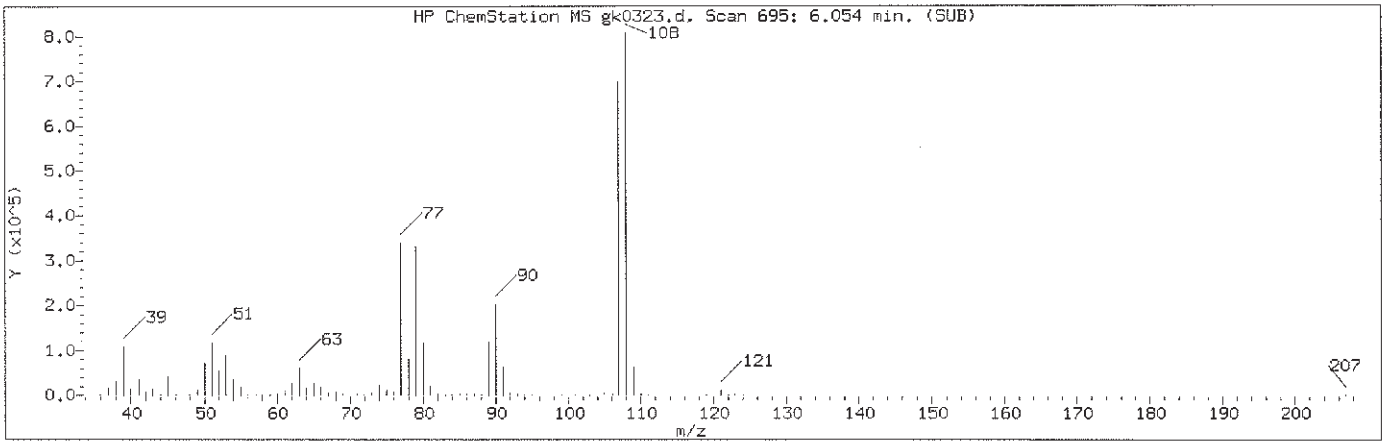
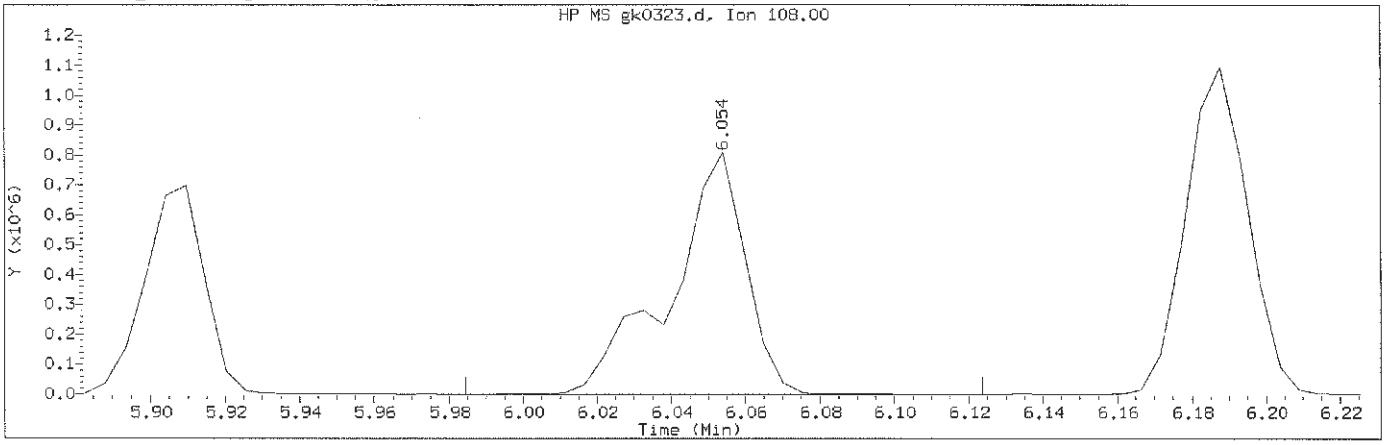
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 30		
Compound Name	: 2-Methylphenol		
Scan Number	: 695		
Retention Time (minutes)	: 6.054		
Quant Ion	: 108.00		
Area (flag)	: 1141792M		
On-Column Amount (ng/ul)	: 121.4922		
Integration start scan	: 681	Integration stop scan:	707
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

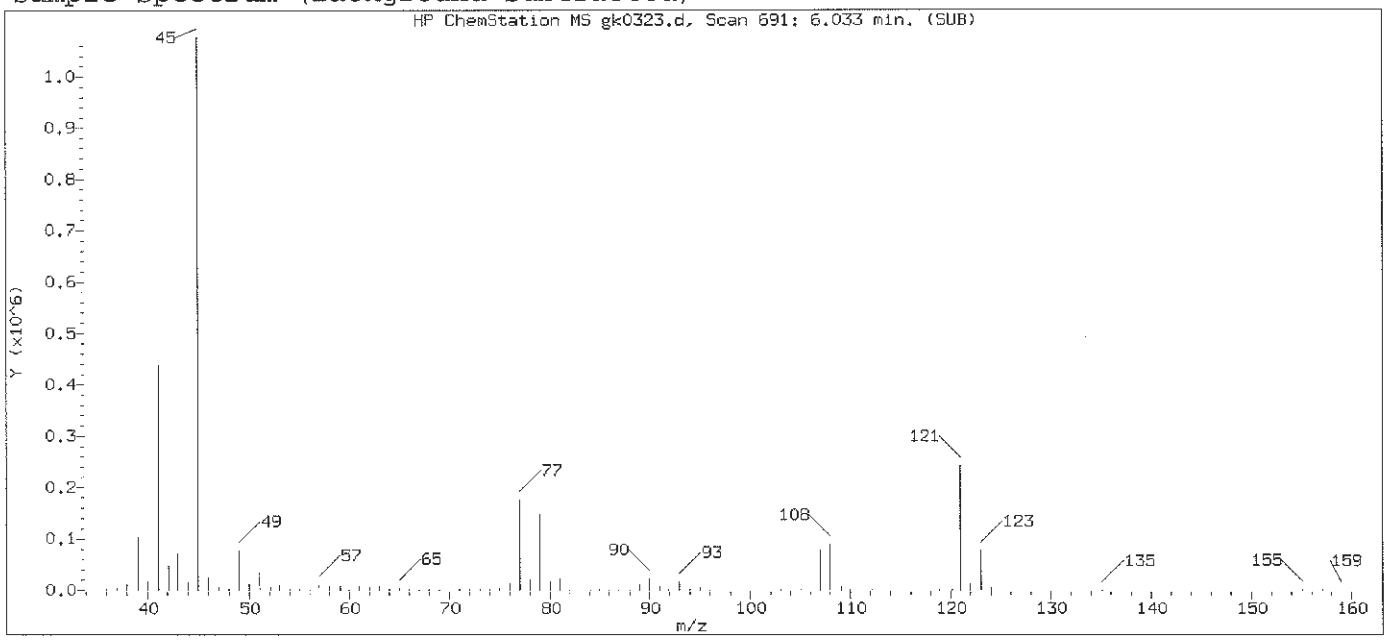
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

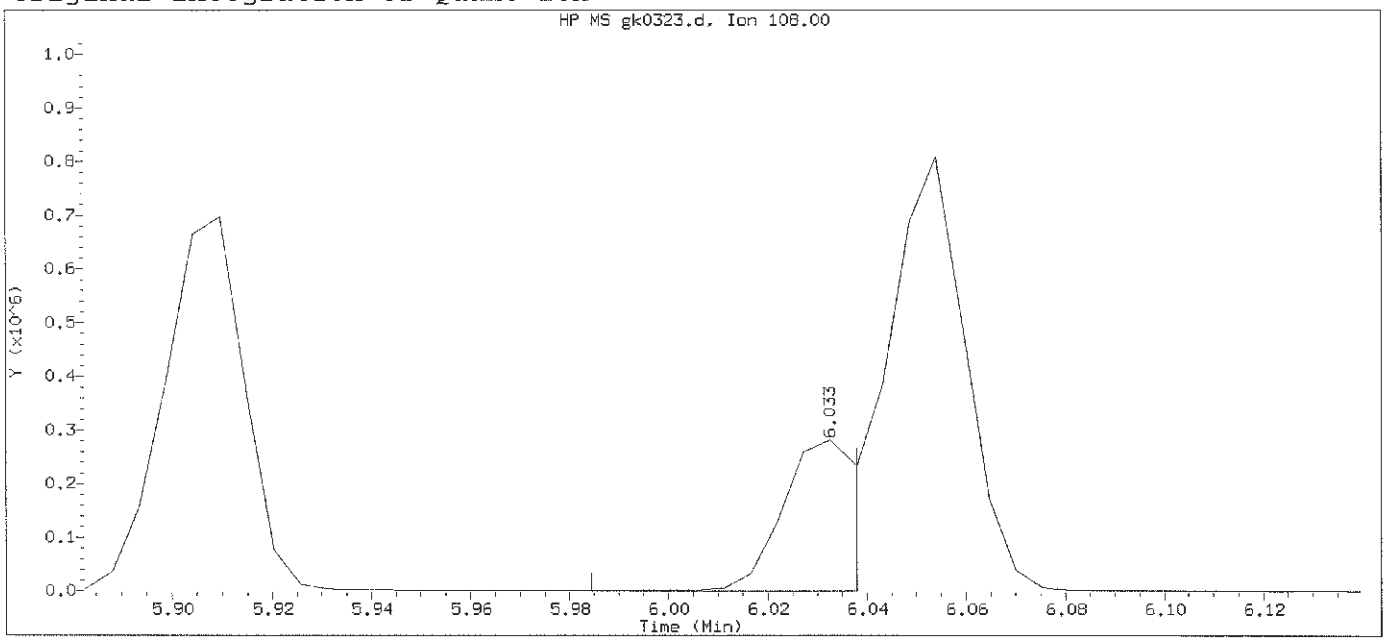
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

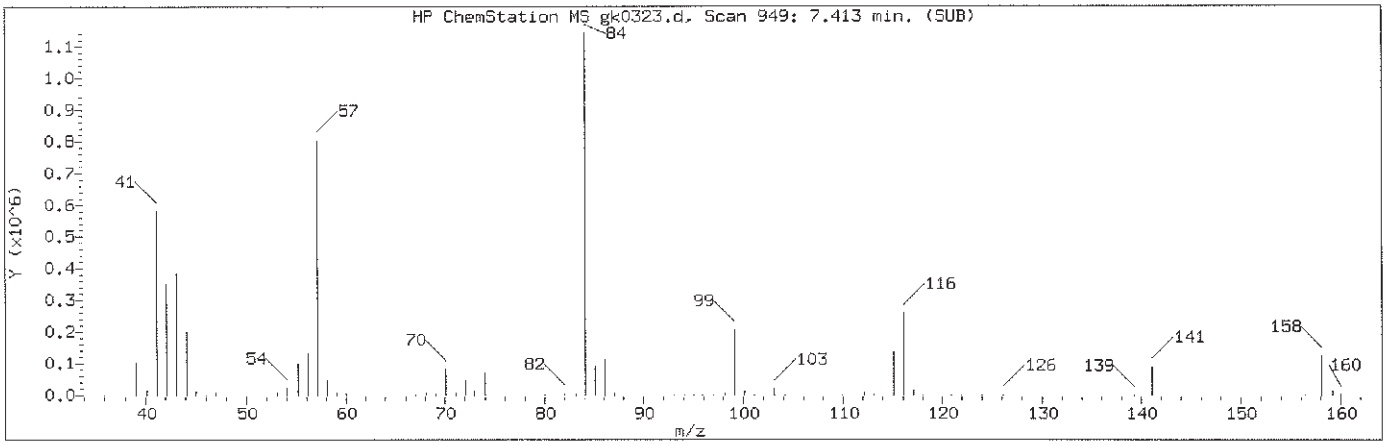
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

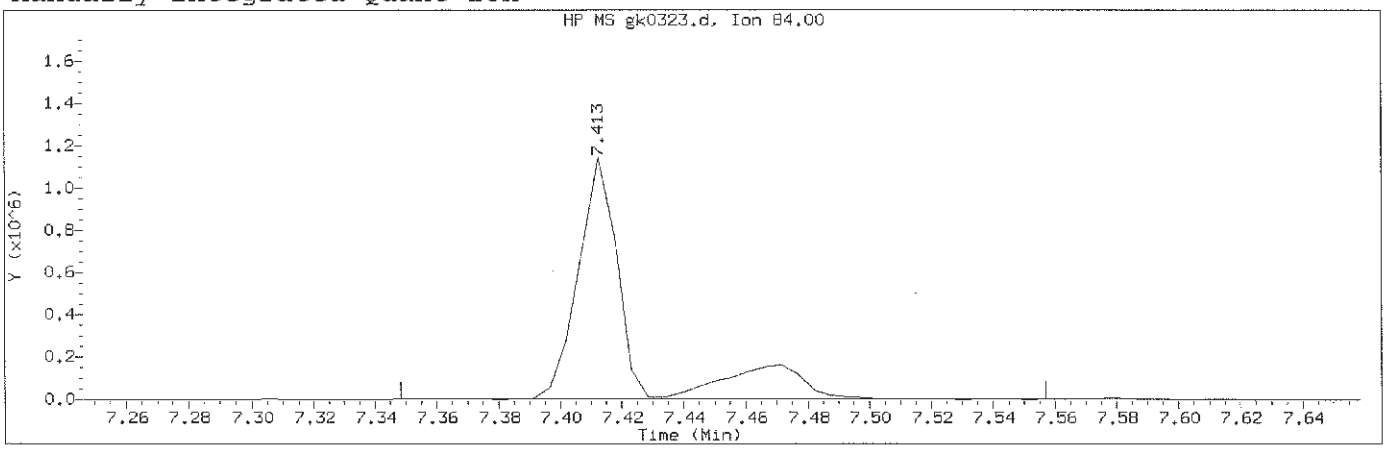
Compound Number	: 30		
Compound Name	: 2-Methylphenol		
Scan Number	: 691		
Retention Time (minutes)	: 6.033		
Quant Ion	: 108.00		
Area	: 266659		
On-column Amount (ng/ul)	: 34.0351		
Integration start scan	: 681	Integration stop scan:	691
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number : 73
Compound Name : N-Nitrosodi-n-butylamine
Scan Number : 949
Retention Time (minutes) : 7.413
Quant Ion : 84.00
Area (flag) : 1303170M
On-Column Amount (ng/ul) : 112.0297
Integration start scan : 936 Integration stop scan: 975
Y at integration start : 1393 Y at integration end: 1375

Reason for manual integration: improper integration

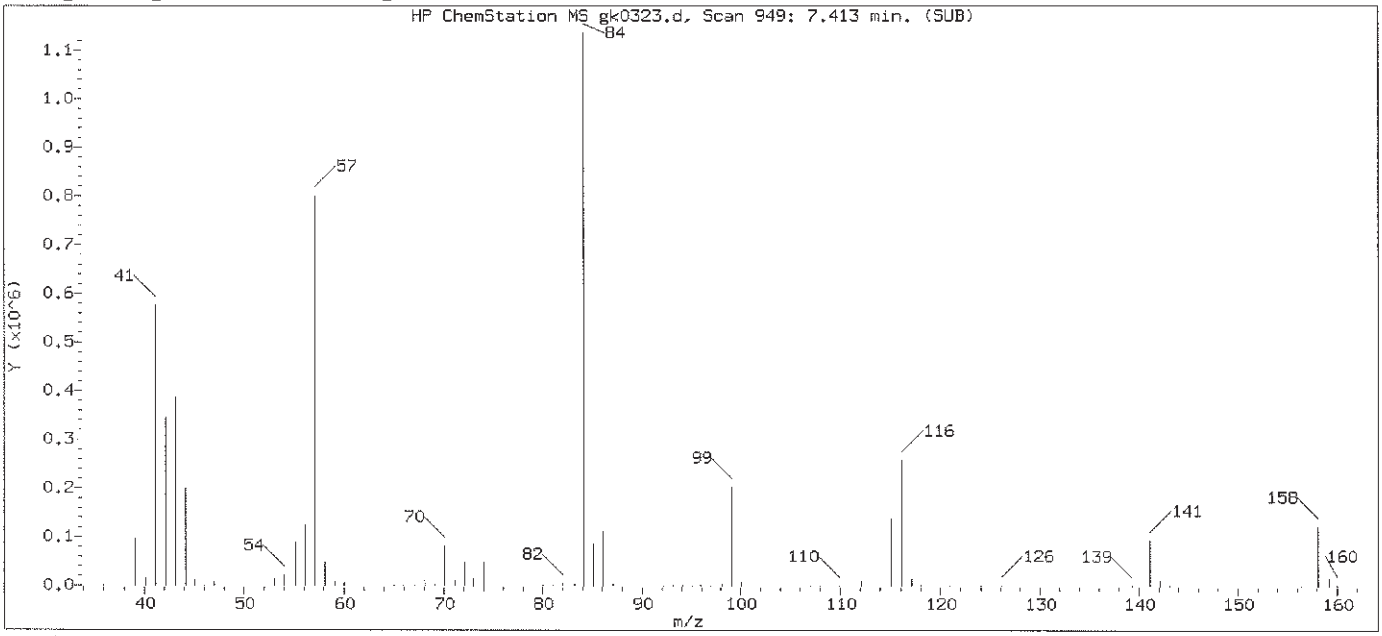
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

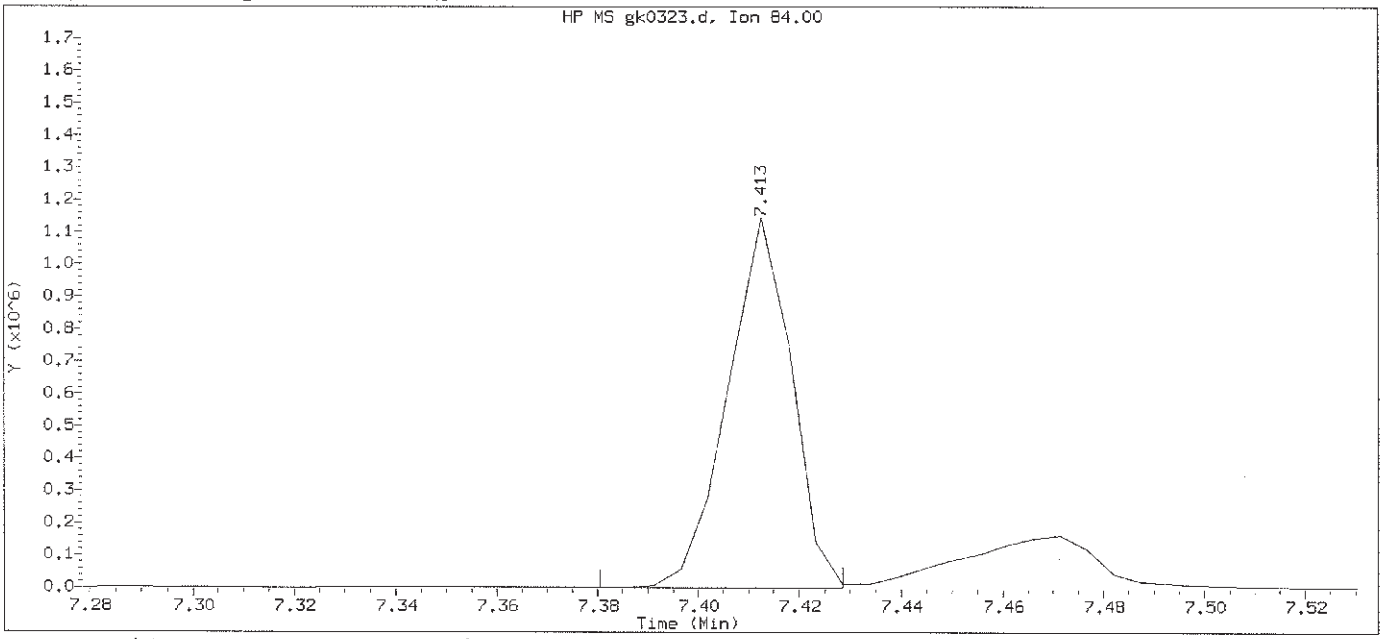
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

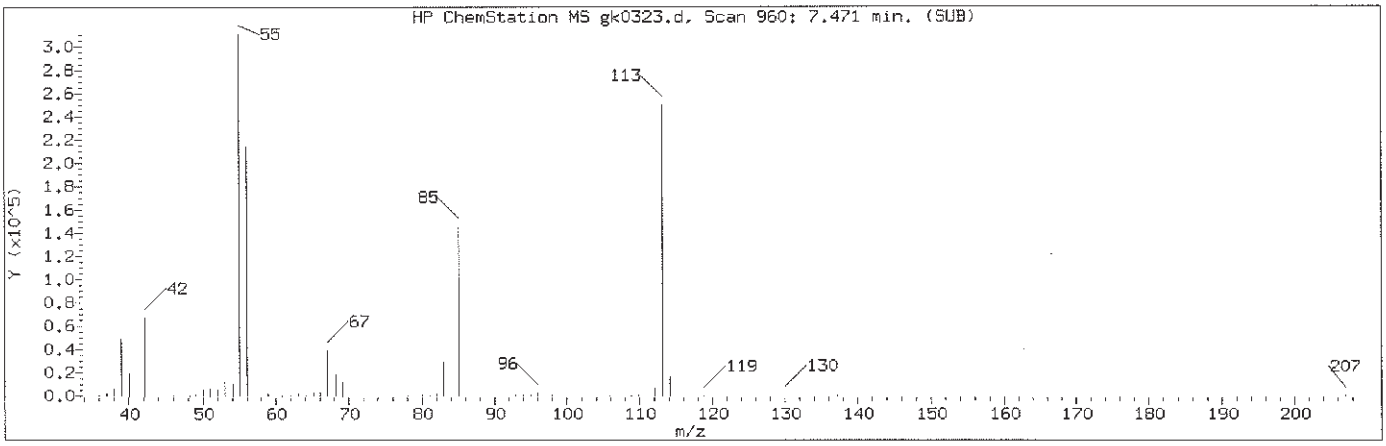
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

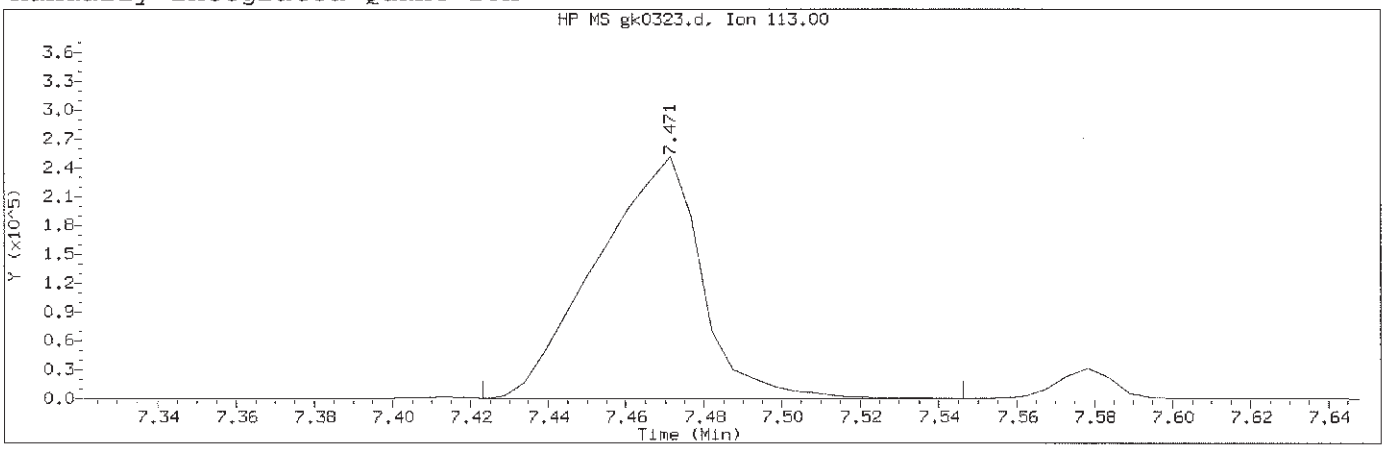
Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 949		
Retention Time (minutes)	: 7.413		
Quant Ion	: 84.00		
Area	: 999313		
On-column Amount (ng/ul)	: 92.9786		
Integration start scan	: 942	Integration stop scan:	951
Y at integration start	: 537	Y at integration end:	537

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 960		
Retention Time (minutes)	: 7.471		
Quant Ion	: 113.00		
Area (flag)	: 469965A		
On-Column Amount (ng/ul)	: 105.0629		
Integration start scan	: 950	Integration stop scan:	973
Y at integration start	: 49	Y at integration end:	85

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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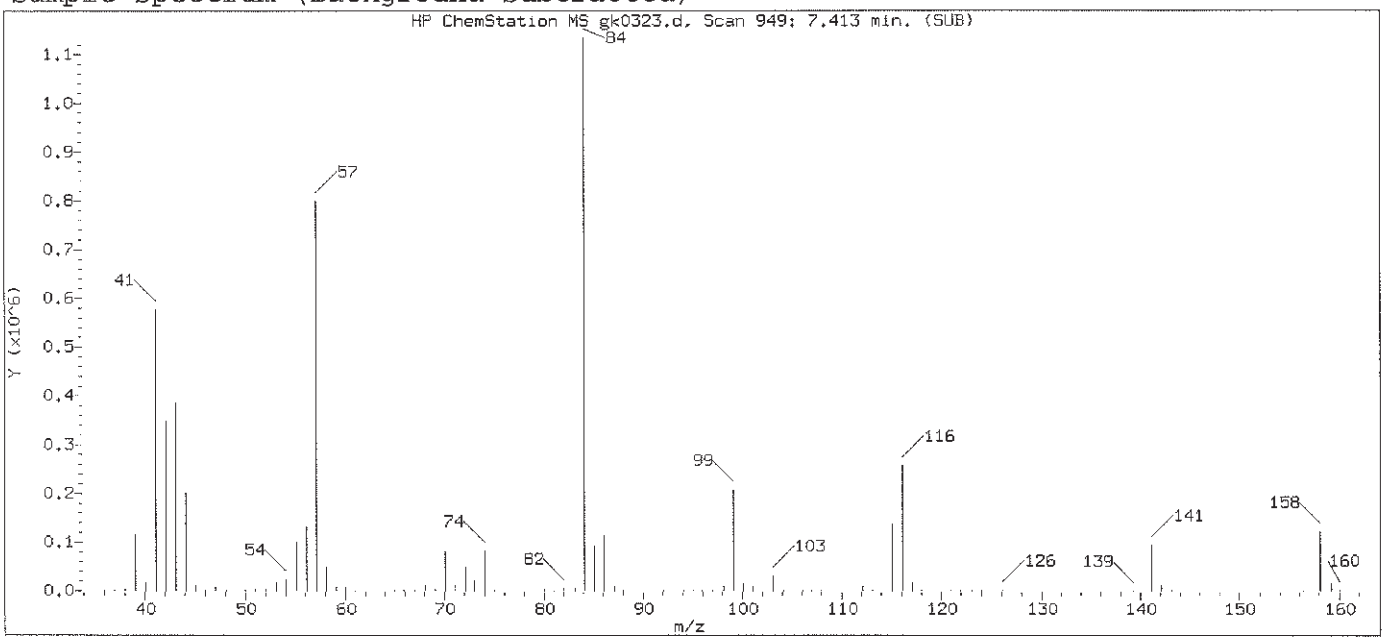
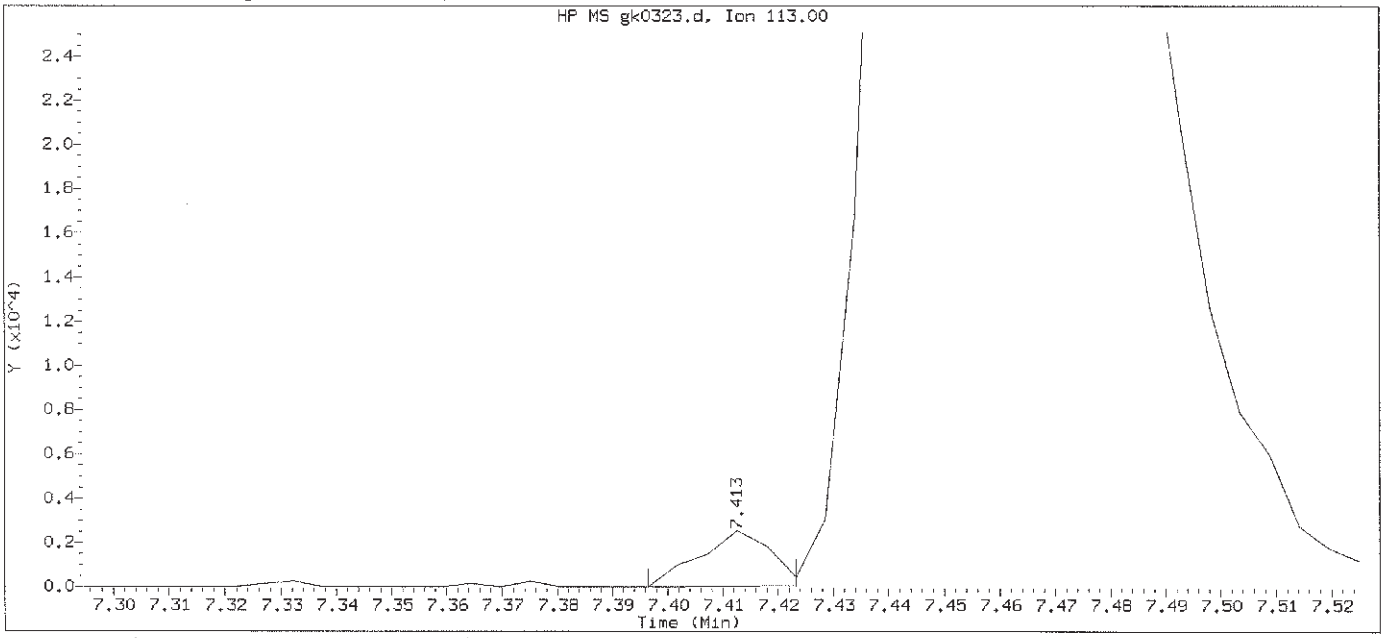
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 949		
Retention Time (minutes)	: 7.413		
Quant Ion	: 113.00		
Area	: 2234		
On-column Amount (ng/ul)	: 0.6429		
Integration start scan	: 945	Integration stop scan:	950
Y at integration start	: 0	Y at integration end:	49

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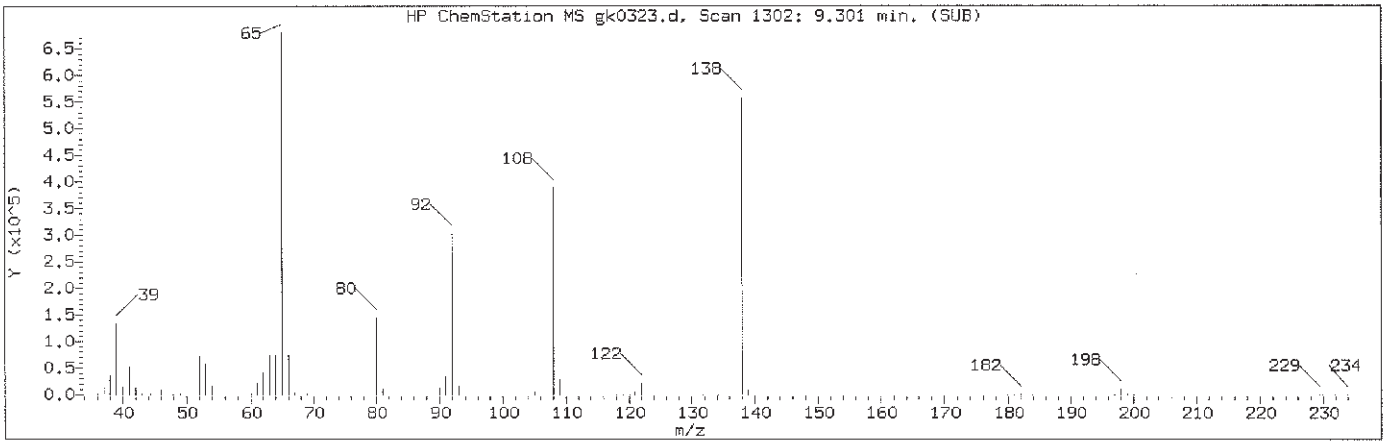
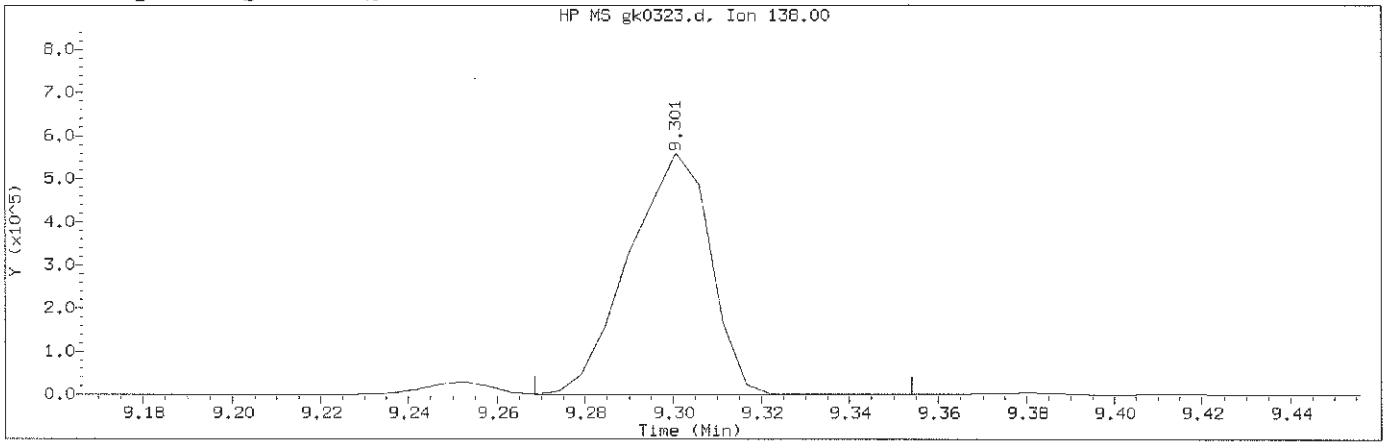
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 116		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1302		
Retention Time (minutes)	: 9.301		
Quant Ion	: 138.00		
Area (flag)	: 717463A		
On-Column Amount (ng/ul)	: 113.3840		
Integration start scan	: 1295	Integration stop scan:	1311
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43. Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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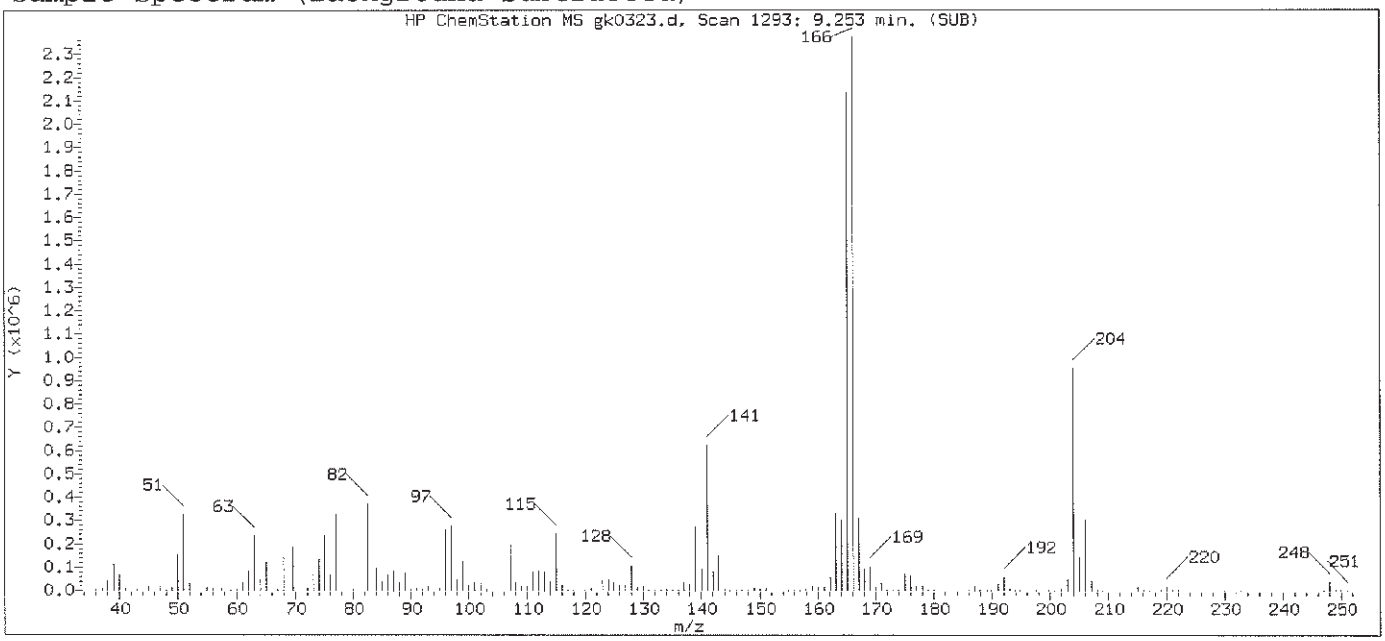
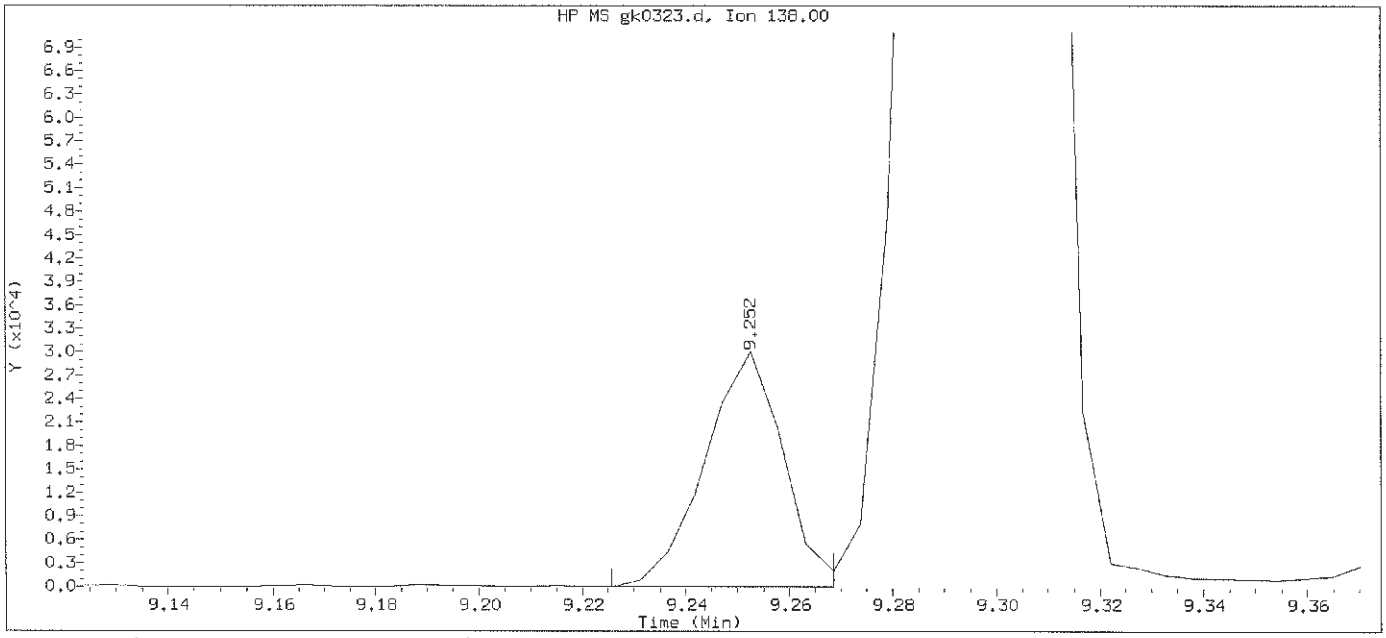
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

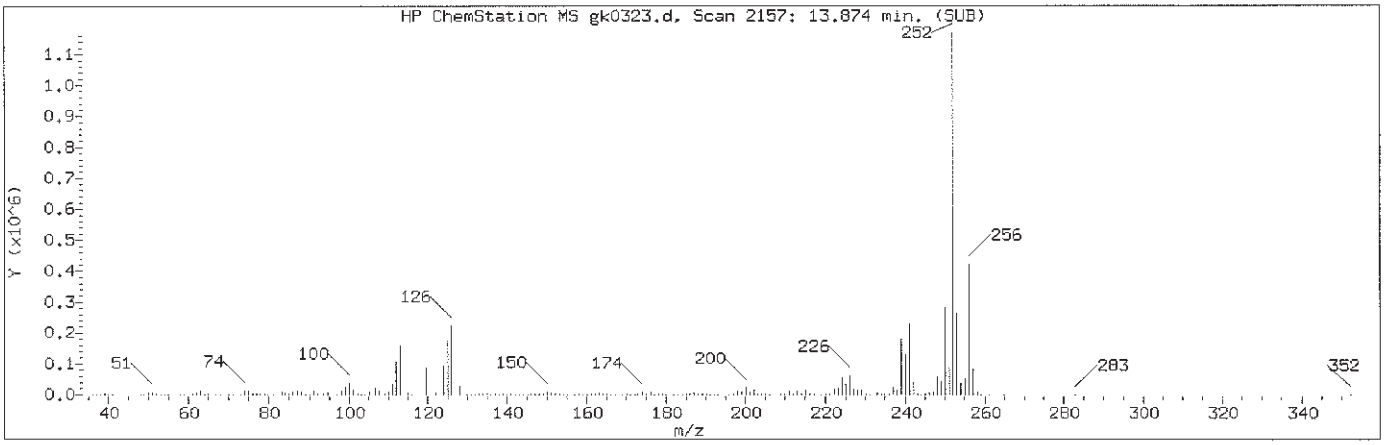
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

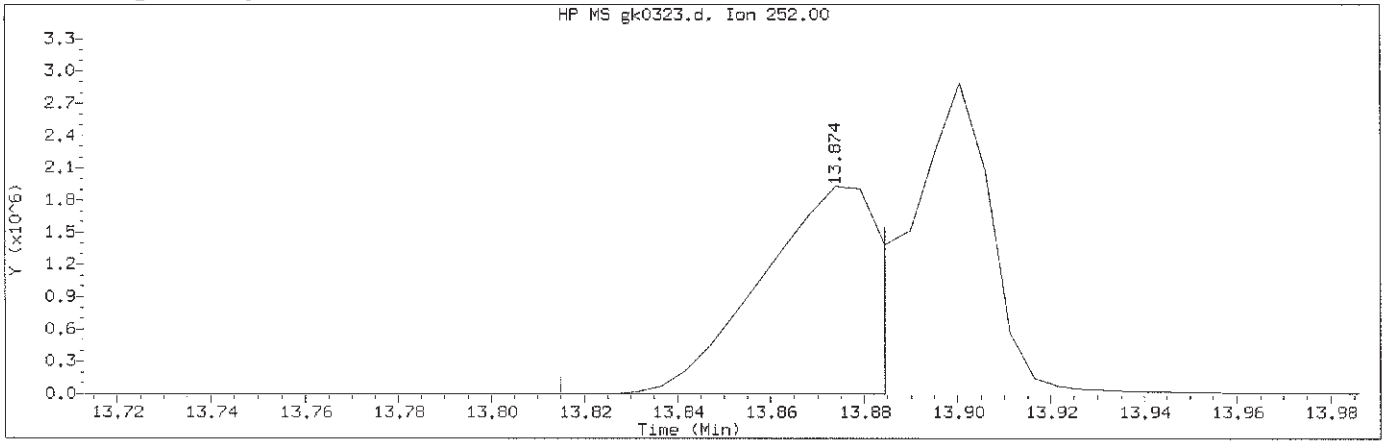
Compound Number	: 116		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1293		
Retention Time (minutes)	: 9.252		
Quant Ion	: 138.00		
Area	: 31305		
On-column Amount (ng/ul)	: 6.2889		
Integration start scan	: 1287	Integration stop scan:	1295
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area (flag)	: 3466663M		
On-Column Amount (ng/ul)	: 125.9624		
Integration start scan	: 2145	Integration stop scan:	2158
Y at integration start	: 0	Y at integration end:	1414

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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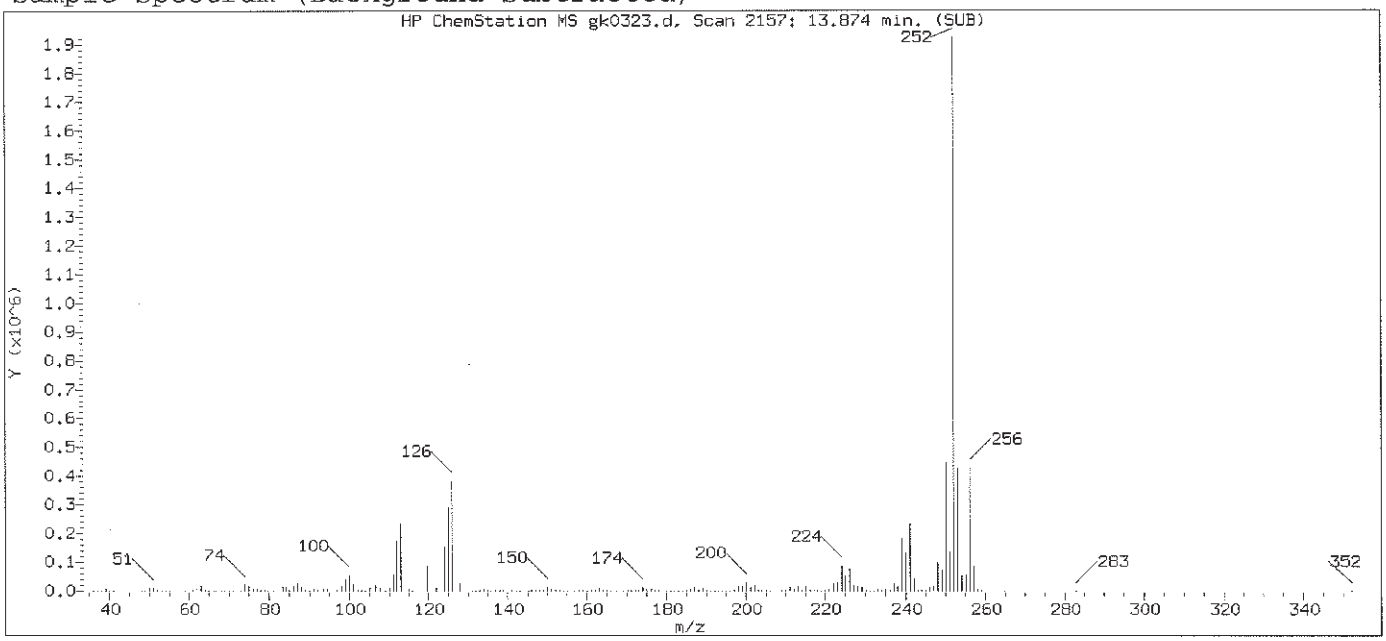
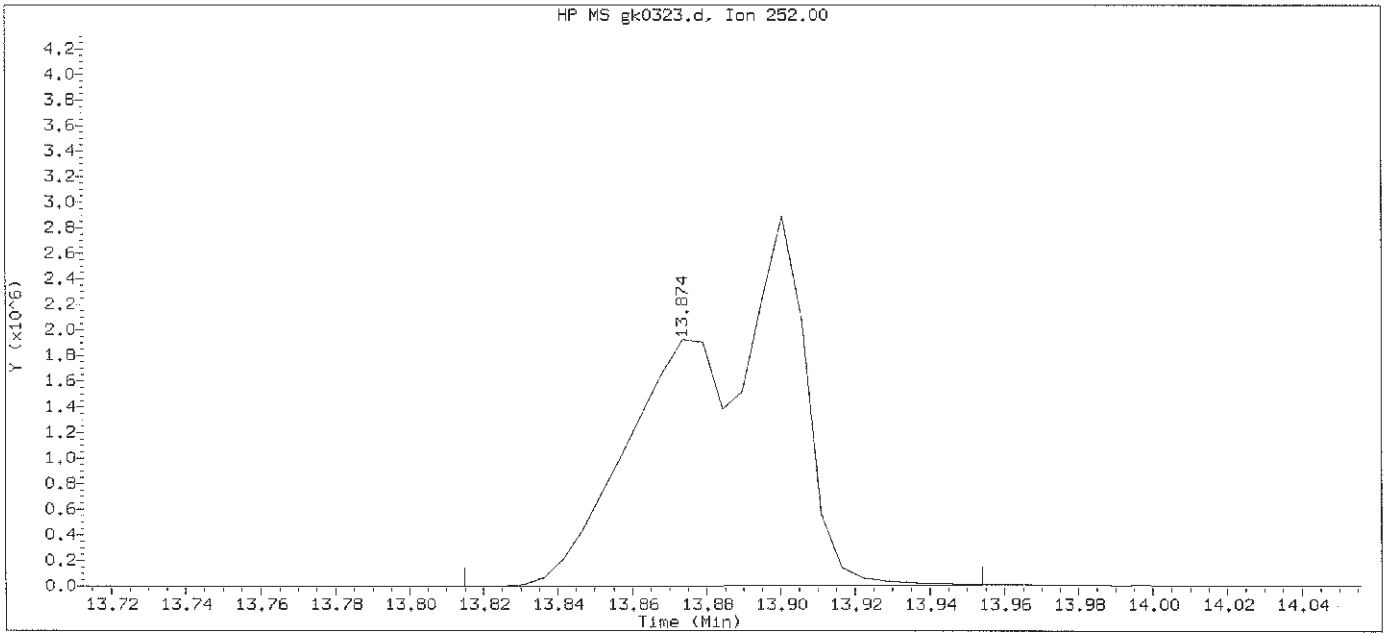
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

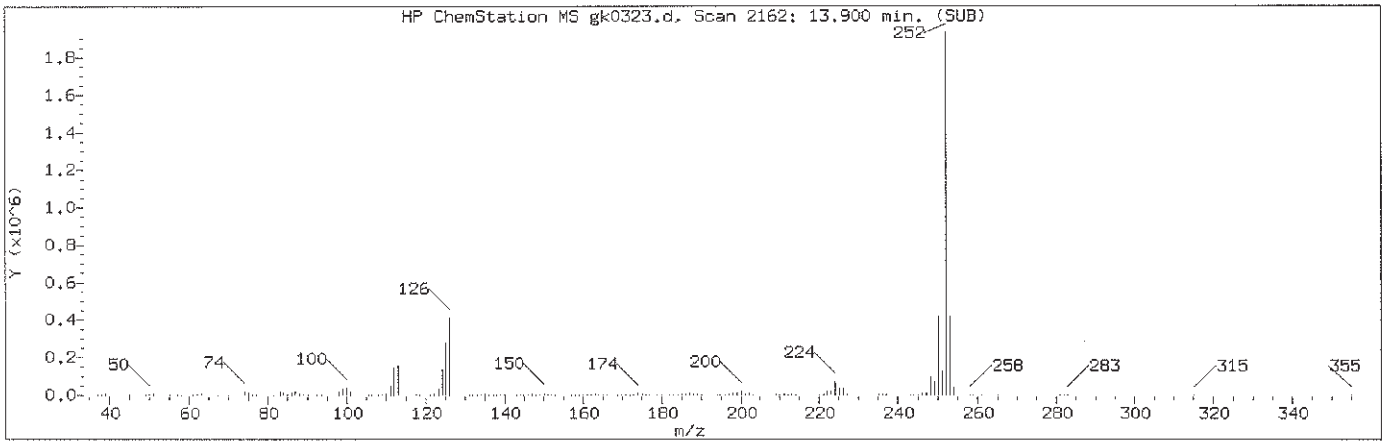
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

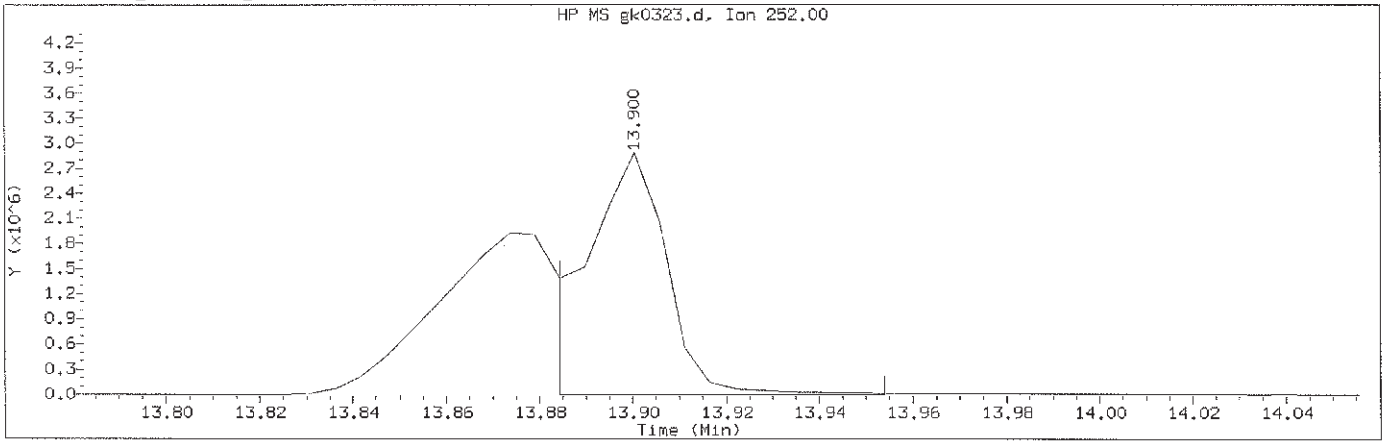
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area	: 6558153		
On-column Amount (ng/ul)	: 200.5901		
Integration start scan	: 2145	Integration stop scan:	2171
Y at integration start	: 0	Y at integration end:	2828

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:15
Date, time and analyst ID of latest file update: 10-Nov-2013 08:15 lmh00956

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2162		
Retention Time (minutes)	: 13.900		
Quant Ion	: 252.00		
Area (flag)	: 3547115M		
On-Column Amount (ng/ul)	: 121.6070		
Integration start scan	: 2158	Integration stop scan:	2171
Y at integration start	: 0	Y at integration end:	0

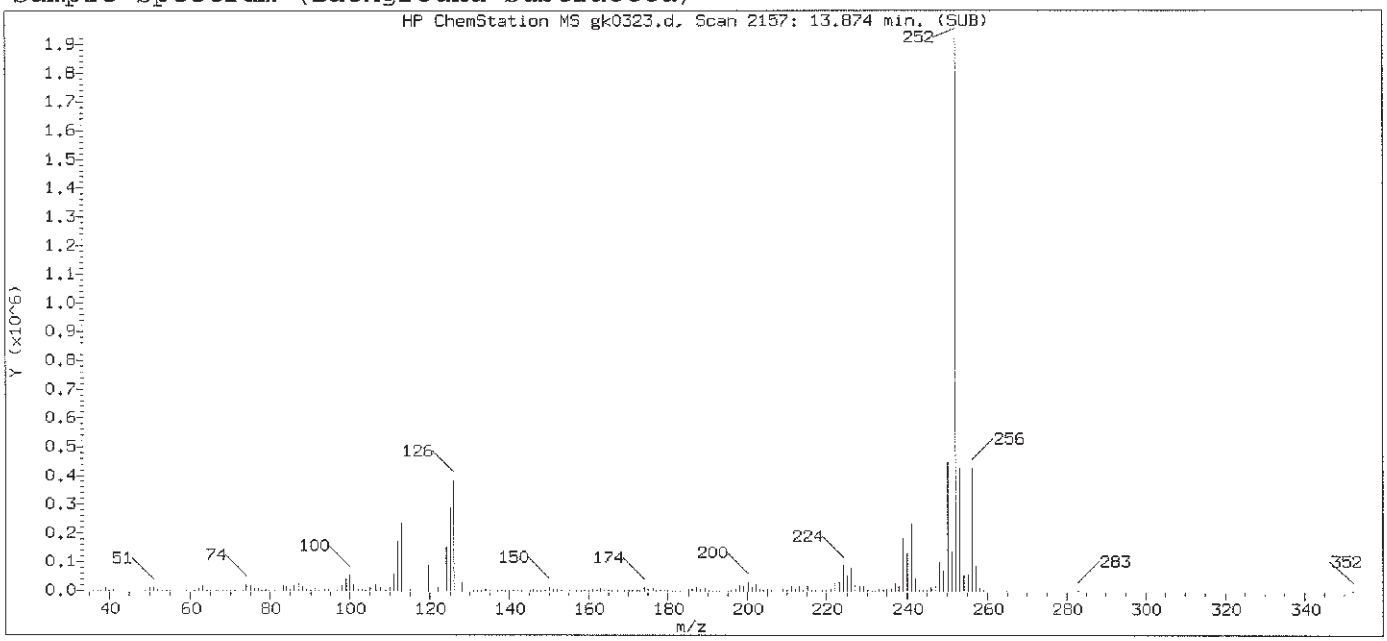
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956

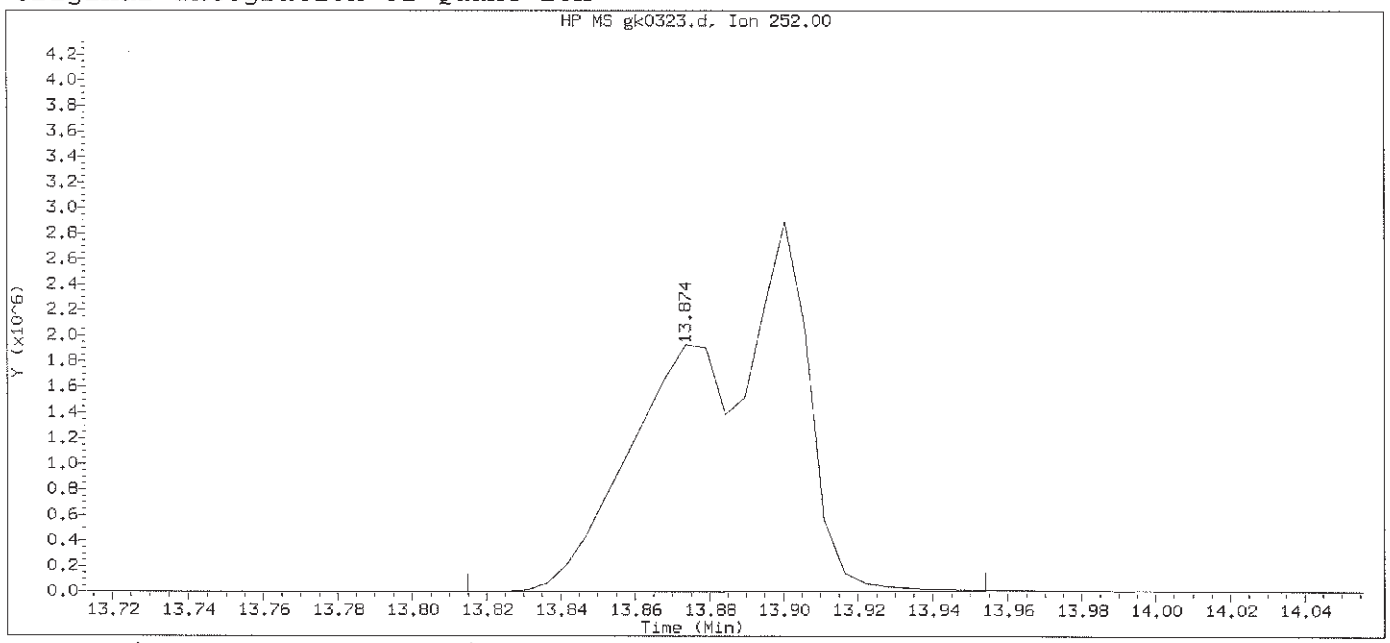
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



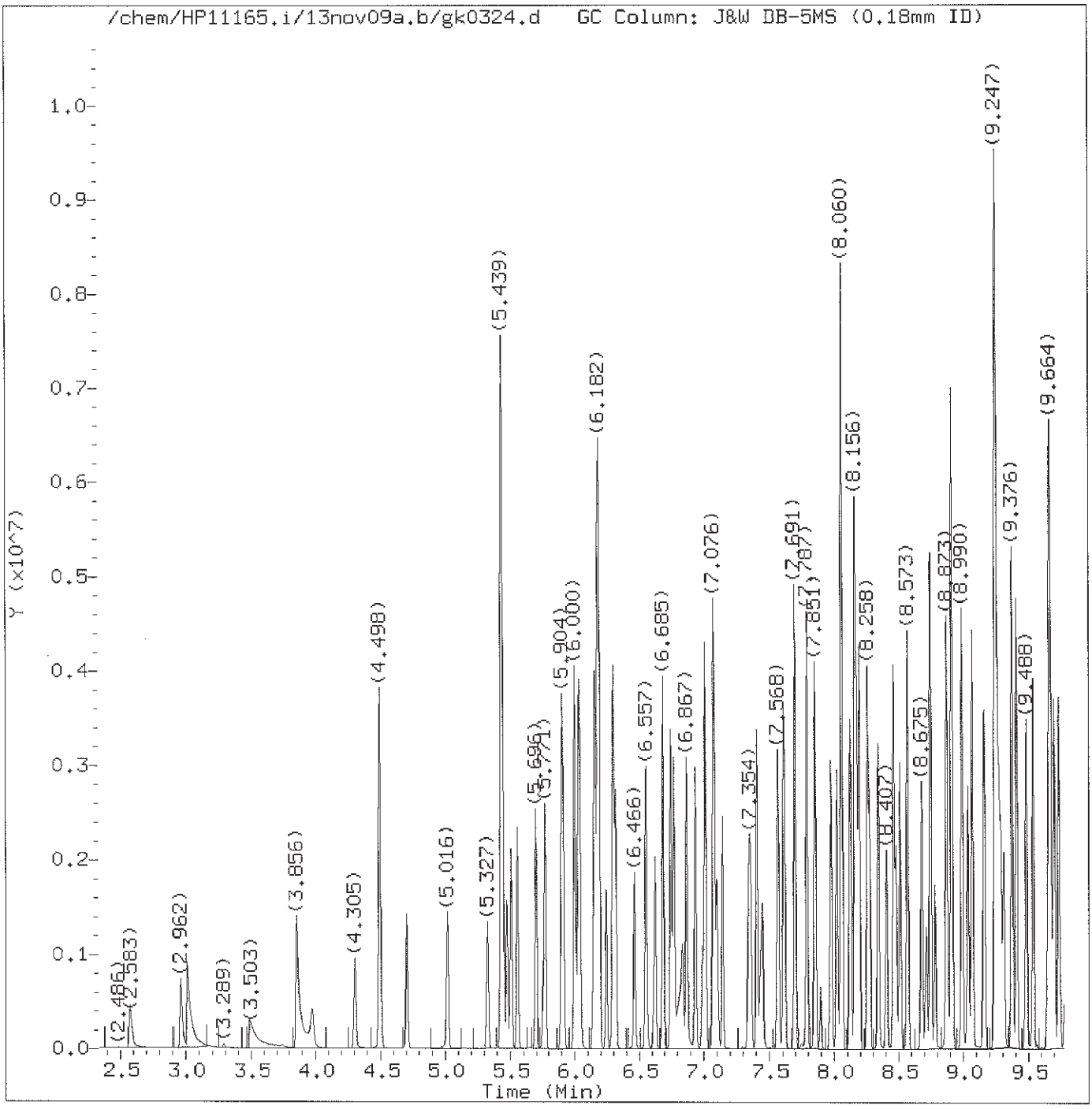
Data File: /chem/HP11165.i/13nov09a.b/gk0323.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:16 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 21:39
Date, time and analyst ID of latest file update: 09-Nov-2013 21:39 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area	: 6558153		
On-column Amount (ng/ul)	: 198.7119		
Integration start scan	: 2145	Integration stop scan:	2171
Y at integration start	: 0	Y at integration end:	2828

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:43.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

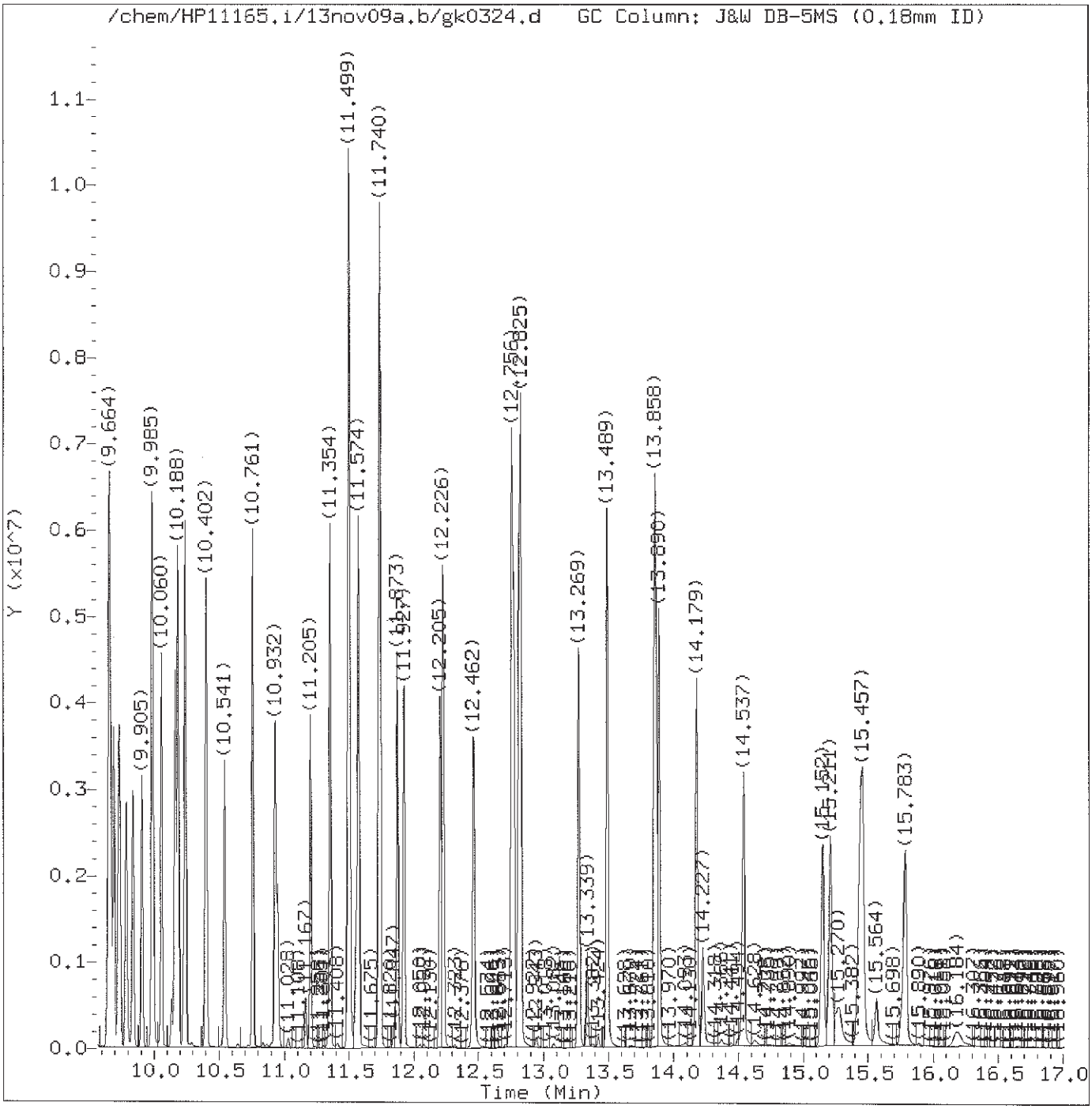
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.577	88	242395	77.913
3) N-Nitrosodimethylamine	(1)	2.962	74	456954	83.745
4) Pyridine	(1)	3.011	79	706146	79.828
7) 2-Picoline	(1)	3.856	93	745744	81.999
8) N-Nitrosomethylethylamine	(1)	3.973	88	358813	76.895
9) Methyl methanesulfonate	(1)	4.305	80	364398	82.584
10)$2-Fluorophenol	(1)	4.498	112	1159907	165.093
11) N-Nitrosodiethylamine	(1)	4.701	102	358601	85.022
14) Ethyl methanesulfonate	(1)	5.016	109	353602	83.199
17)$Phenol-d6	(1)	5.434	99	1780215	168.408
16)$Phenol-d5	(1)	5.434	99	1780215	168.408
19) Aniline	(1)	5.439	93	1138108	81.552
18) Phenol	(1)	5.450	94	1064264	84.677
20) bis(2-Chloroethyl)ether	(1)	5.508	93	727216	81.076
21) 2-Chlorophenol	(1)	5.557	128	601294	84.937
24) 1,3-Dichlorobenzene	(1)	5.696	146	576033	81.266
25)*1,4-Dichlorobenzene-d4	(1)	5.754	152	88665	20.000
26) 1,4-Dichlorobenzene	(1)	5.771	146	585228	81.599
27) Benzyl alcohol	(1)	5.904	108	493866	84.609
28) 1,2-Dichlorobenzene	(1)	5.915	146	565321	80.252
29) Indene	(1)	6.000	115	1264018	97.970
32) bis(2-Chloroisopropyl)ether	(1)	6.033	45	969228	80.578
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.033	45	969228	80.578
30) 2-Methylphenol	(1)	6.038	108	680489	85.460
34) N-Nitrosopyrrolidine	(1)	6.145	100	438219	86.089
35) Acetophenone	(1)	6.150	105	1003846	79.778
37) N-Nitroso-di-n-propylamine	(1)	6.172	70	621793	82.909
36) 4-Methylphenol	(1)	6.182	108	800162	84.347
38) N-Nitrosomorpholine	(1)	6.182	56	469149	81.306
39) o-Toluidine	(1)	6.188	106	1141056	82.992
40) Hexachloroethane	(1)	6.241	117	229930	82.026
41)$Nitrobenzene-d5	(2)	6.300	82	1644574	159.953
42) Nitrobenzene	(2)	6.316	77	857825	78.120
44) N-Nitrosopiperidine	(2)	6.466	114	387164	79.434
45) Isophorone	(2)	6.557	82	1605396	80.161
48) 2-Nitrophenol	(2)	6.621	139	360056	84.399
52) 2,4-Dimethylphenol	(2)	6.685	107	770317	81.630
53) O,O,O-triethylphosphorothioate	(2)	6.749	198	303077	78.048
55) bis(2-Chloroethoxy)methane	(2)	6.771	93	948185	77.584
54) Benzoic acid	(2)	6.824	105	690514	84.286

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.867	162	528850	82.127
62) 1,2,4-Trichlorobenzene	(2)	6.937	180	522291	77.672
63)*Naphthalene-d8	(2)	6.990	136	466409	20.000
64) Naphthalene	(2)	7.011	128	1901088	77.366
65) 4-Chloroaniline	(2)	7.076	127	828476	80.091
66) 2,6-Dichlorophenol	(2)	7.081	162	510689	79.773
67) Hexachloropropene	(2)	7.102	213	287656	80.492
69) Hexachlorobutadiene	(2)	7.140	225	247965	78.143
70) Quinoline	(2)	7.354	129	1396670	79.502
73) N-Nitrosodi-n-butylamine	(2)	7.407	84	809411M	77.933
74) Caprolactam	(2)	7.450	113	312167	78.162
75) 4-Chloro-3-methylphenol	(2)	7.568	107	725121	81.363
76) Safrole	(2)	7.610	162	512693	79.760
77) 2-Methylnaphthalene	(2)	7.691	142	1370222	79.182
78) 1-Methylnaphthalene	(2)	7.787	142	1253603	80.097
79) Hexachlorocyclopentadiene	(3)	7.846	237	234708	83.813
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.856	216	527656	77.559
81) cis-Isosafrole	(3)	7.894	162	96192	9.066
82) 2,4,6-Trichlorophenol	(3)	7.974	196	418797	83.275
83) 2,4,5-Trichlorophenol	(3)	8.022	196	435689	83.162
84)$2-Fluorobiphenyl	(3)	8.060	172	2738124	155.434
86) Isosafrole	(3)	8.119	162	542273	79.832
85) trans-Isosafrole	(3)	8.119	162	542273	71.050
87) 1,1'-Biphenyl	(3)	8.151	154	1669254	74.385
88) 2-Chloronaphthalene	(3)	8.167	162	1198051	70.611
89) 1-Chloronaphthalene	(3)	8.188	162	1259488	81.008
90) Diphenyl ether	(3)	8.258	170	864159	77.325
91) 2-Nitroaniline	(3)	8.274	138	499772	83.699
92) 1,4-Naphthoquinone	(3)	8.343	158	564517	80.644
93) 1,4-Dinitrobenzene	(3)	8.407	168	257523	85.552
94) Dimethylphthalate	(3)	8.461	163	1523945	78.109
95) 1,3-Dinitrobenzene	(3)	8.482	168	300896	82.196
97) 2,6-Dinitrotoluene	(3)	8.514	165	366002	83.802
99) Acenaphthylene	(3)	8.573	152	1994967	81.839
100) 3-Nitroaniline	(3)	8.675	138	448278	81.614
101)*Acenaphthene-d10	(3)	8.707	164	289232	20.000
102) Acenaphthene	(3)	8.744	153	1348527	77.078
103) 2,4-Dinitrophenol	(3)	8.776	184	237083	89.964
104) 4-Nitrophenol	(3)	8.867	109	268376	81.212
105) Pentachlorobenzene	(3)	8.873	250	468398	76.604

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
107) Dibenzofuran	(3)	8.910	168	1821185	76.073
106) 2,4-Dinitrotoluene	(3)	8.910	165	488468	79.639
108) 1-Naphthylamine	(3)	8.990	143	1552058	78.804
109) 2,3,4,6-Tetrachlorophenol	(3)	9.039	232	343146	80.896
110) 2-Naphthylamine	(3)	9.071	143	1537289	78.102
111) Diethylphthalate	(3)	9.162	149	1552064	78.069
112) Thionazin	(3)	9.236	107	305061	76.481
113) Fluorene	(3)	9.247	166	1519991	76.065
114) 4-Chlorophenyl-phenylether	(3)	9.252	204	687753	75.282
115) 5-Nitro-o-toluidine	(3)	9.269	152	489546	78.844
116) 4-Nitroaniline	(3)	9.285	138	457520	77.297
117) 4,6-Dinitro-2-methylphenol	(4)	9.311	198	314136	86.856
119) NDPA as diphenylamine	(4)	9.376	169	1377723	78.830
118) N-Nitrosodiphenylamine	(4)	9.376	169	1377723	79.165
120) 1,2-Diphenylhydrazine	(4)	9.408	77	2049237	80.979
121)$2,4,6-Tribromophenol	(3)	9.488	330	308442	159.599
122) Tetraethyldithiopyrophosphate	(4)	9.541	97	285490	80.452
123) 1,3,5-Trinitrobenzene	(4)	9.648	213	202685	92.041
124) Diallate (peak 1)	(4)	9.659	86	811283	59.552
125) Phorate	(4)	9.670	75	1800892M	85.737
126) Phenacetin	(4)	9.696	108	972675	81.952
127) 4-Bromophenyl-phenylether	(4)	9.734	248	389065	78.861
128) Diallate (peak 2)	(4)	9.745	86	120638	19.249
129) Hexachlorobenzene	(4)	9.787	284	367187	78.928
130) Dimethoate	(4)	9.835	87	793387	78.142
132) Atrazine	(4)	9.905	200	328997	58.960
135) 4-Aminobiphenyl	(4)	9.985	169	1189243	70.982
133) Pentachlorophenol	(4)	9.985	266	269027	84.179
134) Pentachloronitrobenzene	(4)	9.996	237	161865	80.525
138) Pronamide	(4)	10.060	173	672402	83.057
140)*Phenanthrene-d10	(4)	10.162	188	523376	20.000
142) Dinoseb	(4)	10.167	211	433398	91.732
143) Phenanthrene	(4)	10.188	178	2405246	77.713
144) Anthracene	(4)	10.242	178	2477289	81.426
146) Carbazole	(4)	10.402	167	2261934	79.356
148) Methyl parathion	(4)	10.541	109	572164	82.551
149) Di-n-butylphthalate	(4)	10.761	149	2754459	80.623
151) Parathion	(4)	10.927	109	375047	83.248
152) 4-Nitroquinoline-1-oxide	(4)	10.948	190	208488	88.189
156) Isodrin	(4)	11.205	193	248696	80.684

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Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.354	202	2541959	80.193
162) Benzidine	(5)	11.499	184	5285752	237.949
164)*Pyrene-d10	(5)	11.552	212	583899	20.000
165) Pyrene	(5)	11.574	202	2561587	76.694
166)$Terphenyl-d14	(5)	11.740	244	3281954	157.580
168) p-Dimethylaminoazobenzene	(5)	11.873	225	528208	88.246
171) Chlorobenzilate	(5)	11.921	139	790732	83.863
172) 3,3'-Dimethylbenzidine	(5)	12.205	212	1411112	81.264
173) Butylbenzylphthalate	(5)	12.232	149	1208186	80.441
174) 2-Acetylaminofluorene	(5)	12.462	181	1071993	85.819
175) 3,3'-Dichlorobenzidine	(5)	12.750	252	824972	80.486
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.756	231	399583	82.605
177) Benzo(a)anthracene	(5)	12.772	228	2223104	79.246
178) Chrysene	(5)	12.809	228	2171464	79.287
179) bis(2-Ethylhexyl)phthalate	(5)	12.825	149	1679136	81.867
181) 6-Methylchrysene	(5)	13.275	242	1562347	80.184
183) Di-n-octylphthalate	(6)	13.489	149	2862756	87.515
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.858	256	997218	83.185
185) Benzo(b)fluoranthene	(6)	13.863	252	2333982M	88.042
186) Benzo(k)fluoranthene	(6)	13.890	252	2205696M	78.504
187) Benzo(a)pyrene	(6)	14.179	252	1969293	83.309
188)*Perylene-d12	(6)	14.227	264	438745	20.000
190) 3-Methylcholanthrene	(6)	14.537	268	941194	83.231
191) Dibenz(a,h)acridine	(6)	15.152	279	1384116	83.386
192) Dibenz(a,j)acridine	(6)	15.211	279	1511766	81.031
193) Indeno(1,2,3-cd)pyrene	(6)	15.435	276	1979876	82.574
194) Dibenz(a,h)anthracene	(6)	15.462	278	1628086	81.798
196) Benzo(g,h,i)perylene	(6)	15.783	276	1653384	81.804
203) 2,4_2,6-Dinitrotoluenes	(3)			854470	79.668
204) Diallate TRANS/CIS	(4)			931921	79.082

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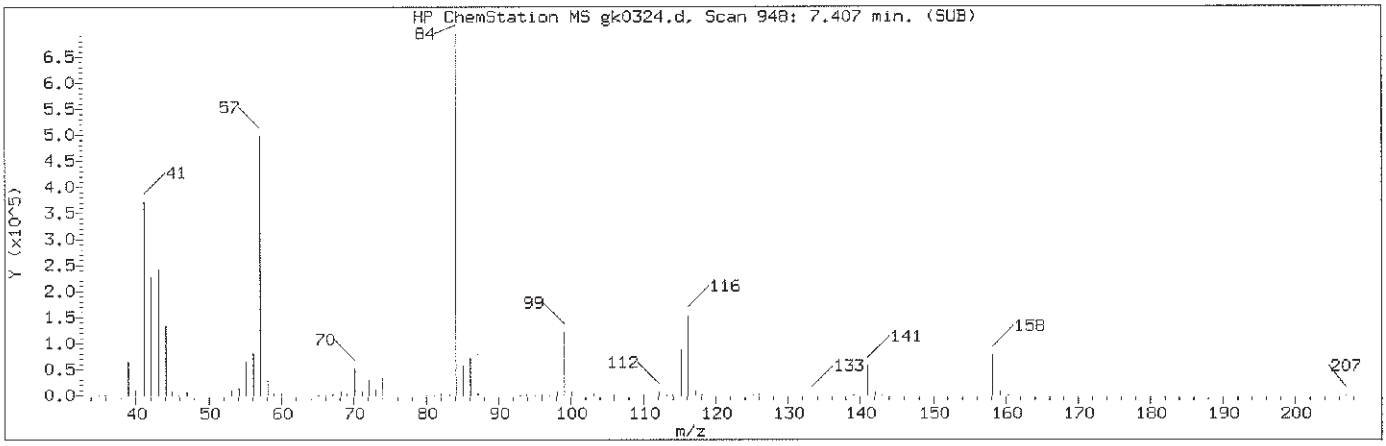
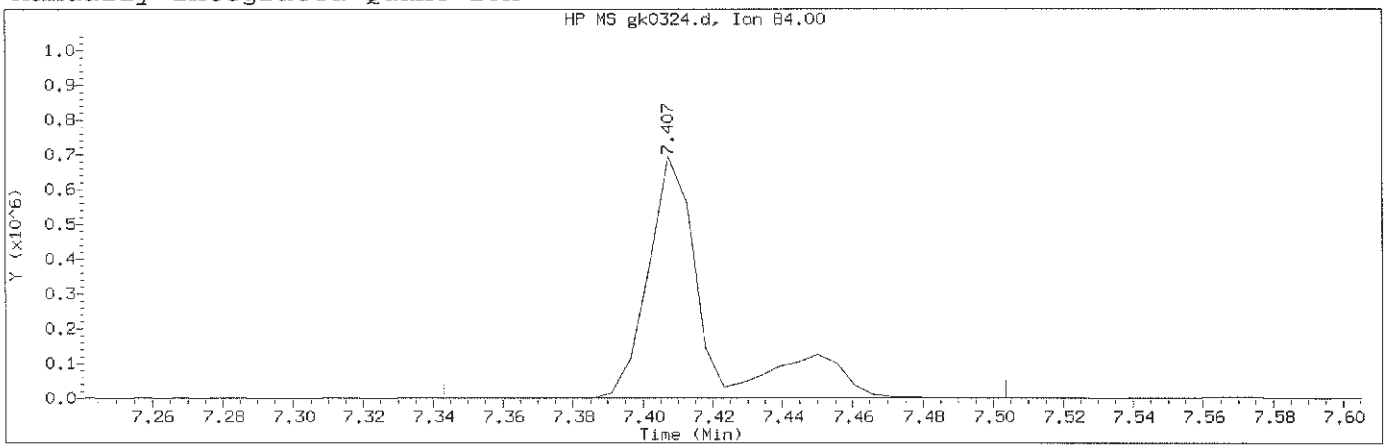
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 948		
Retention Time (minutes)	: 7.407		
Quant Ion	: 84.00		
Area (flag)	: 809411M		
On-Column Amount (ng/ul)	: 77.9334		
Integration start scan	: 935	Integration stop scan:	965
Y at integration start	: 1512	Y at integration end:	1386

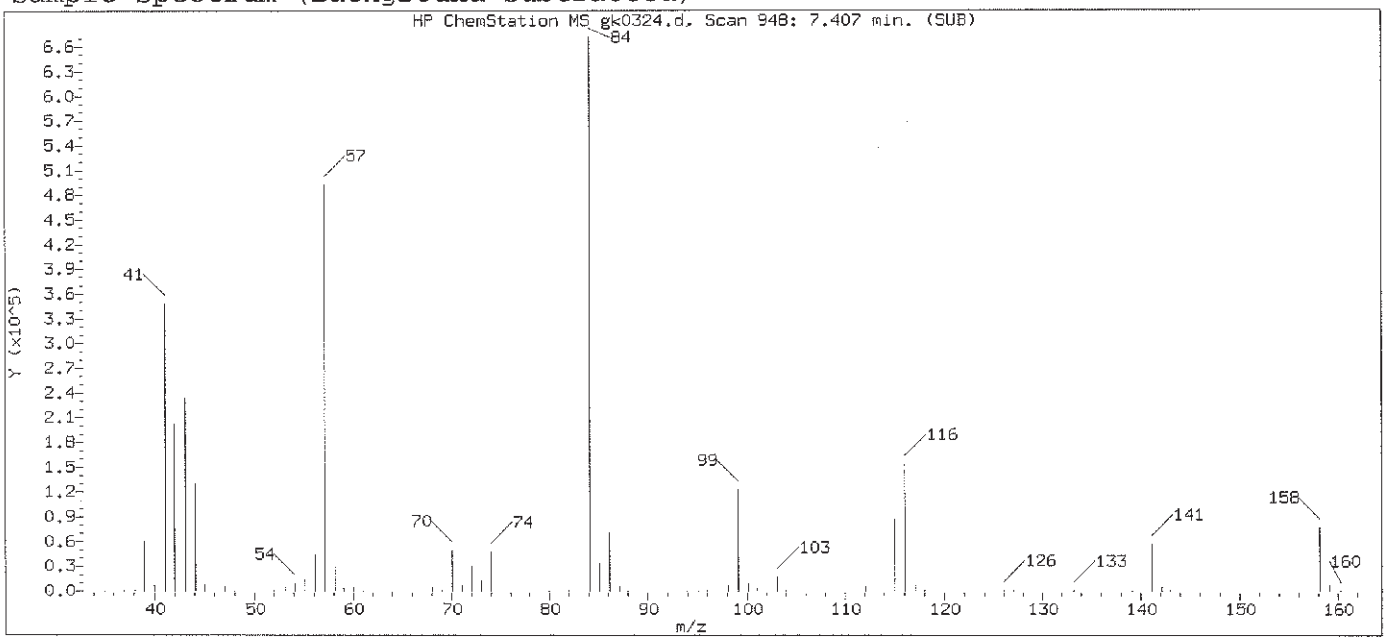
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

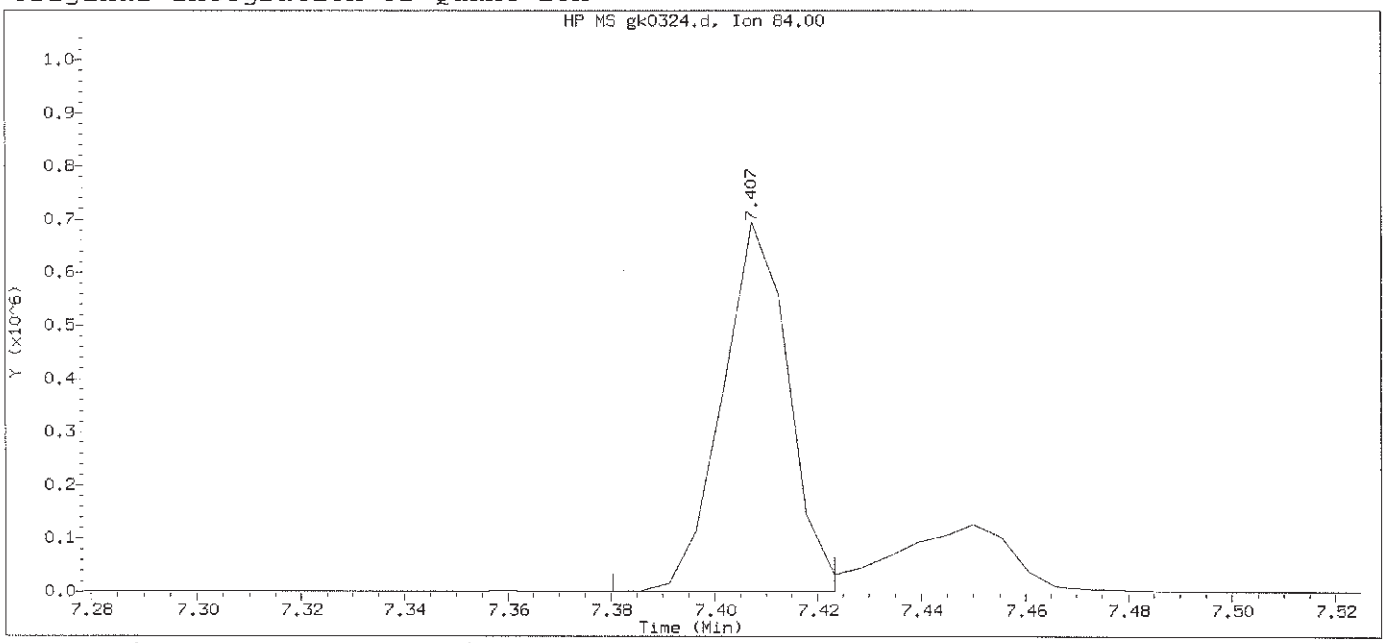
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:06
Date, time and analyst ID of latest file update: 09-Nov-2013 22:06 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 948		
Retention Time (minutes)	: 7.407		
Quant Ion	: 84.00		
Area	: 617677		
On-column Amount (ng/ul)	: 64.6237		
Integration start scan	: 942	Integration stop scan:	950
Y at integration start	: 669	Y at integration end:	669

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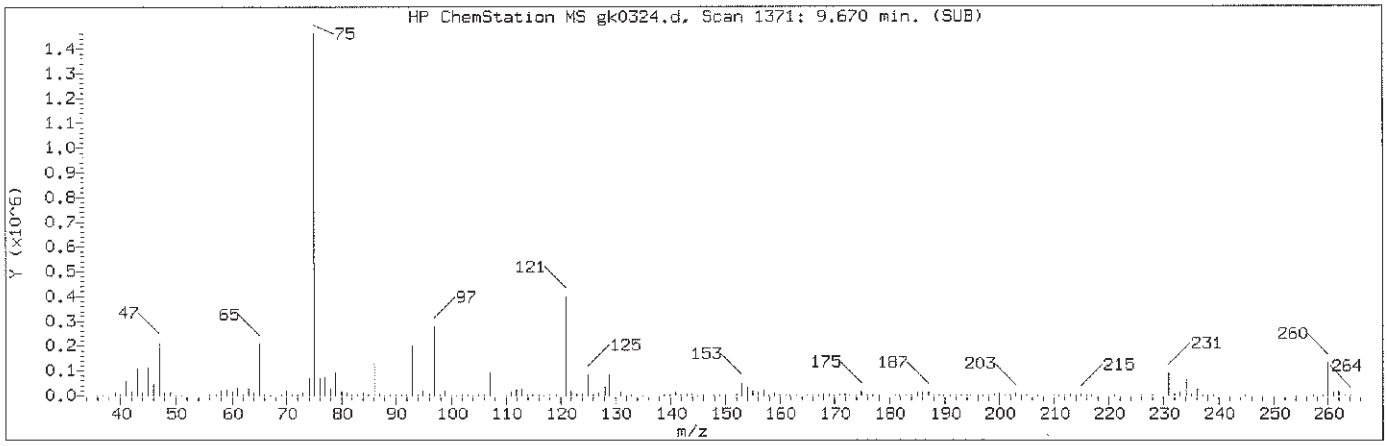
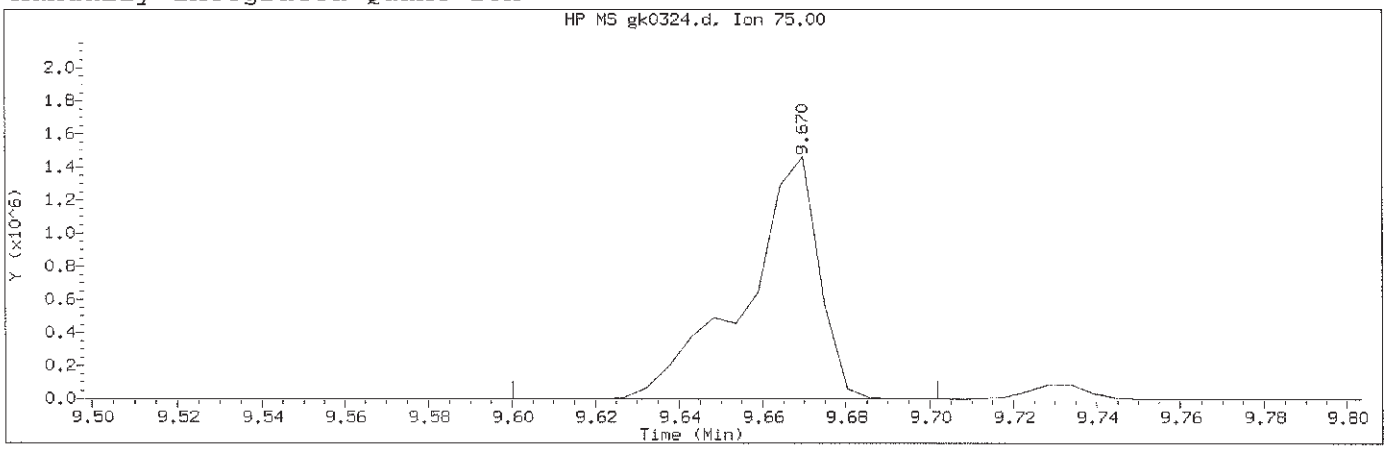
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1371		
Retention Time (minutes)	: 9.670		
Quant Ion	: 75.00		
Area (flag)	: 1800892M		
On-Column Amount (ng/ul)	: 85.7365		
Integration start scan	: 1357	Integration stop scan:	1376
Y at integration start	: 273	Y at integration end:	3109

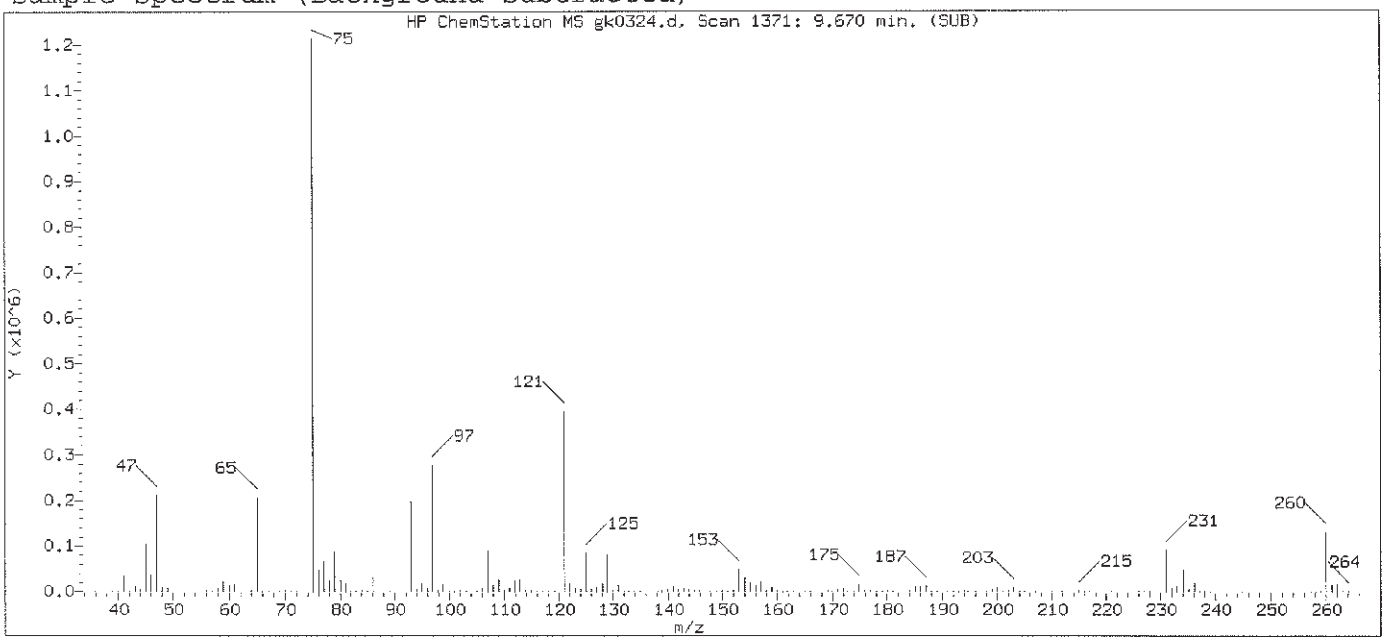
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

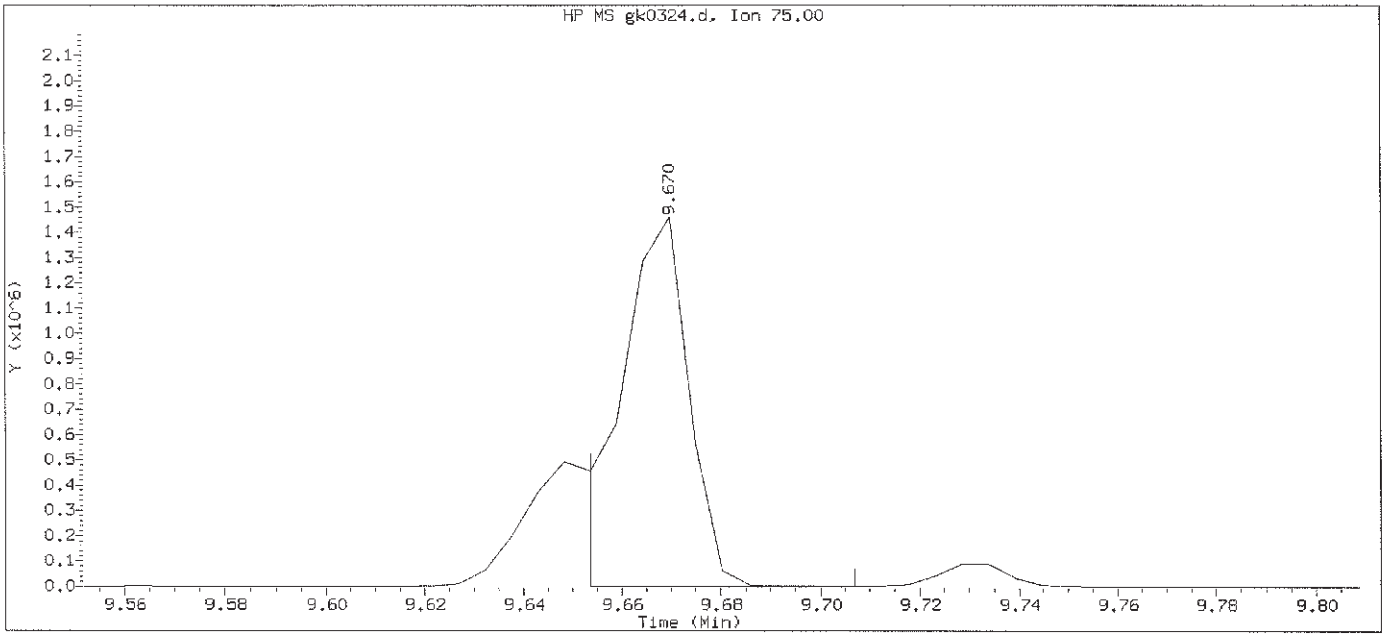
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:06
Date, time and analyst ID of latest file update: 09-Nov-2013 22:06 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1371		
Retention Time (minutes)	: 9.670		
Quant Ion	: 75.00		
Area	: 1369772		
On-column Amount (ng/ul)	: 71.7124		
Integration start scan	: 1367	Integration stop scan:	1377
Y at integration start	: 238	Y at integration end:	204

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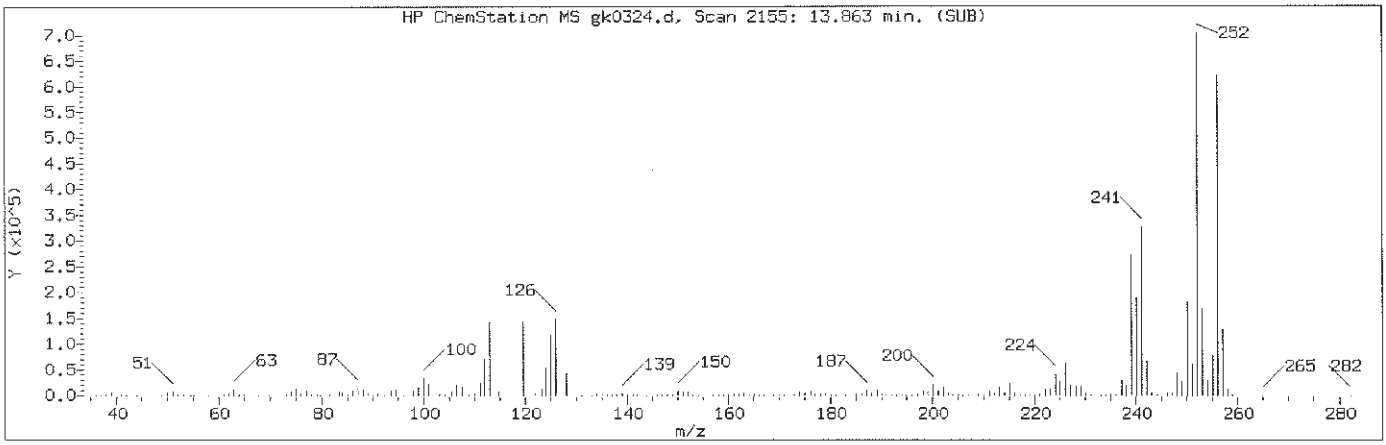
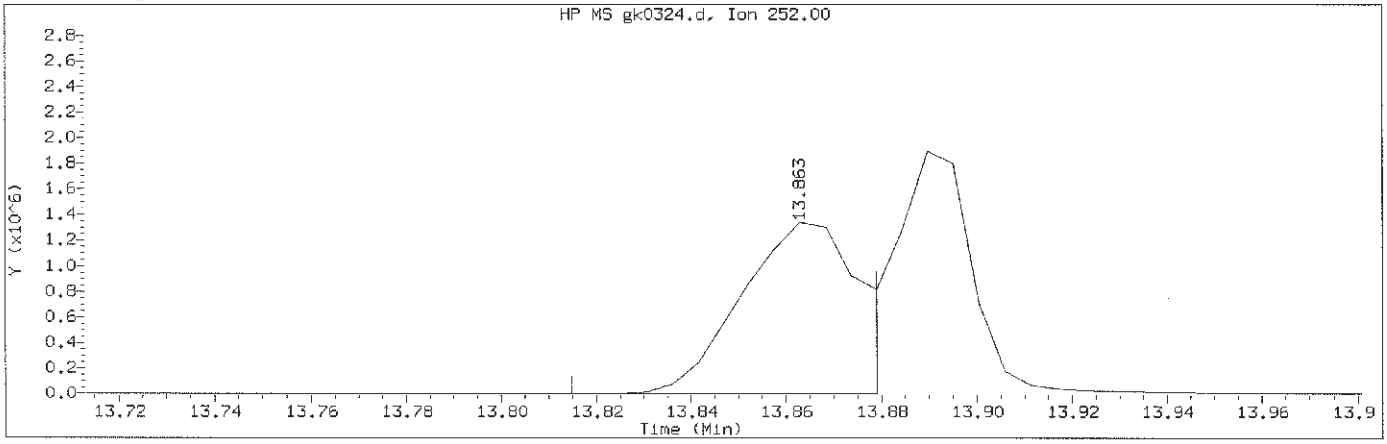
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2155		
Retention Time (minutes)	: 13.863		
Quant Ion	: 252.00		
Area (flag)	: 2333982M		
On-Column Amount (ng/ul)	: 88.0422		
Integration start scan	: 2145	Integration stop scan:	2157
Y at integration start	: 0	Y at integration end:	1215

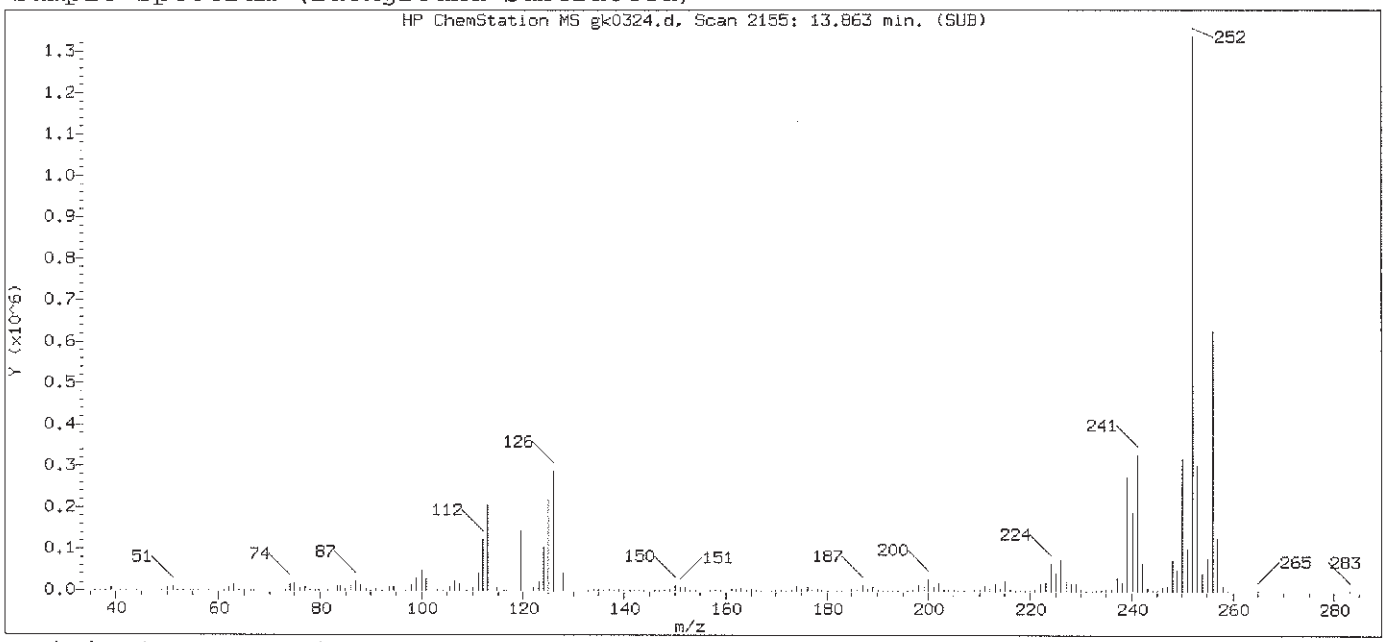
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:45. Target 3.5 esignature user ID: lmh00956

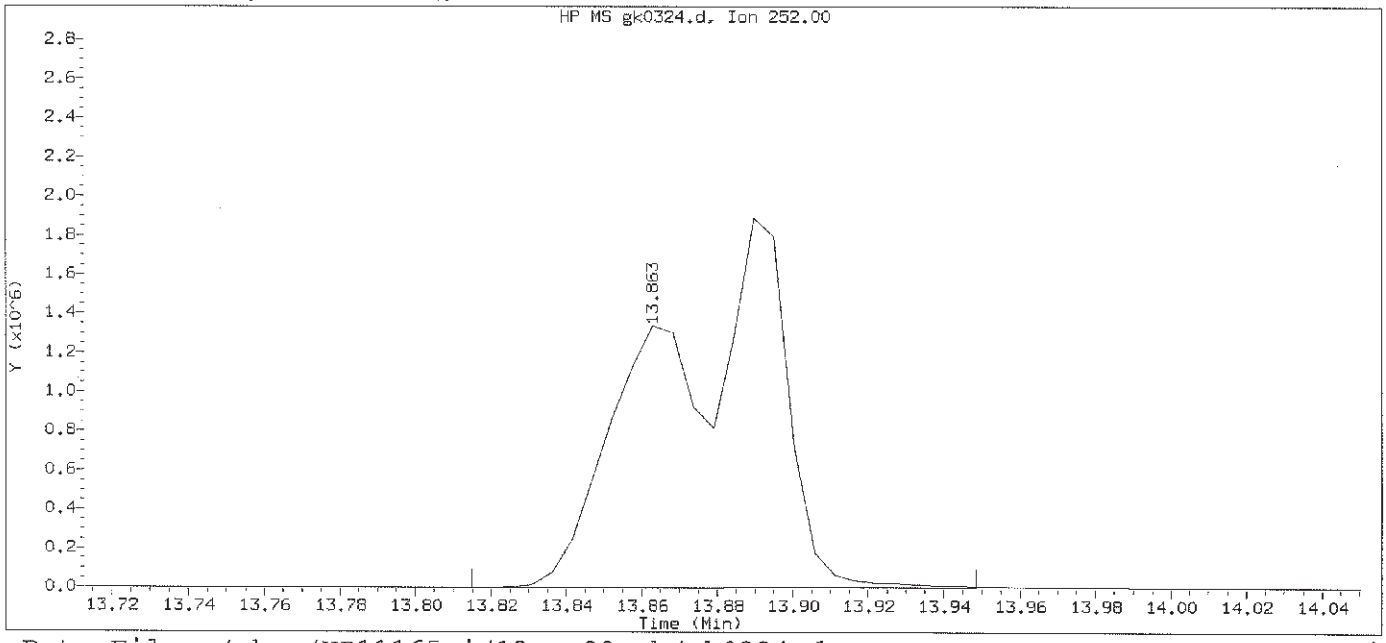
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

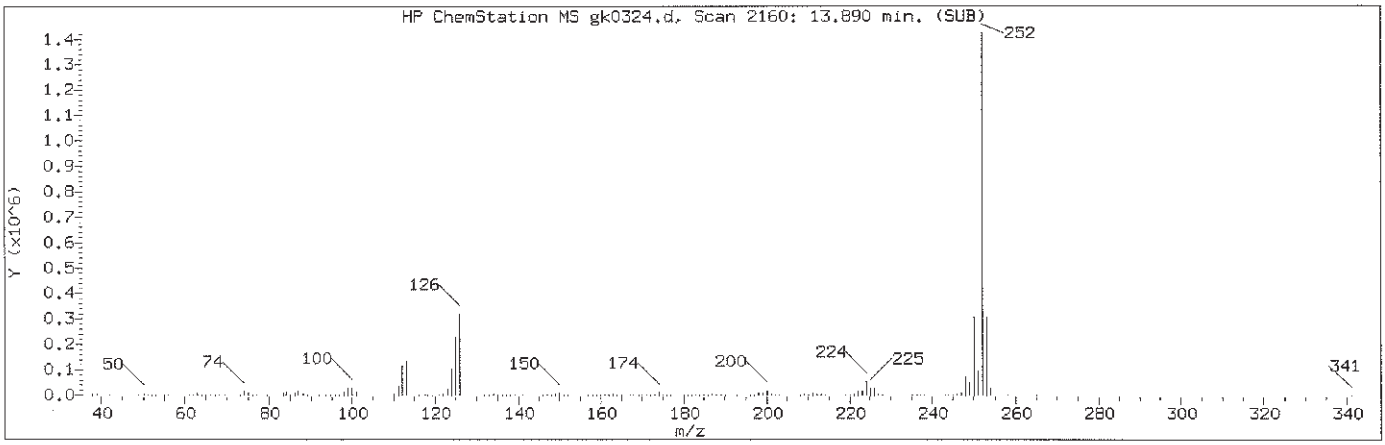
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:06
Date, time and analyst ID of latest file update: 09-Nov-2013 22:06 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

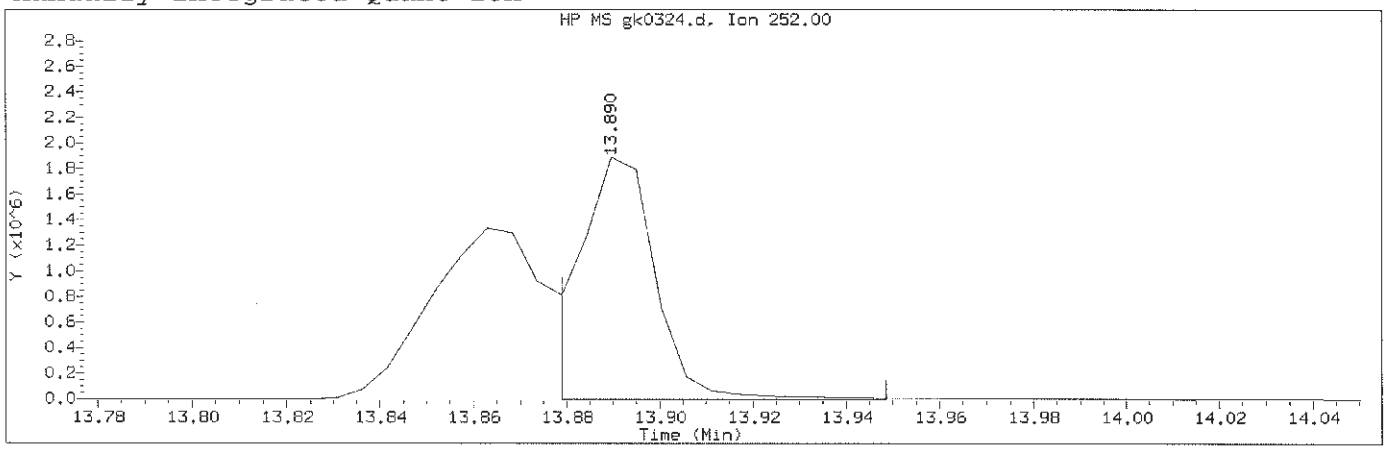
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2155		
Retention Time (minutes)	: 13.863		
Quant Ion	: 252.00		
Area	: 4268587		
On-column Amount (ng/ul)	: 136.4283		
Integration start scan	: 2145	Integration stop scan:	2170
Y at integration start	: 0	Y at integration end:	2533

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:45.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2160		
Retention Time (minutes)	: 13.890		
Quant Ion	: 252.00		
Area (flag)	: 2205696M		
On-Column Amount (ng/ul)	: 78.5041		
Integration start scan	: 2157	Integration stop scan:	2170
Y at integration start	: 0	Y at integration end:	0

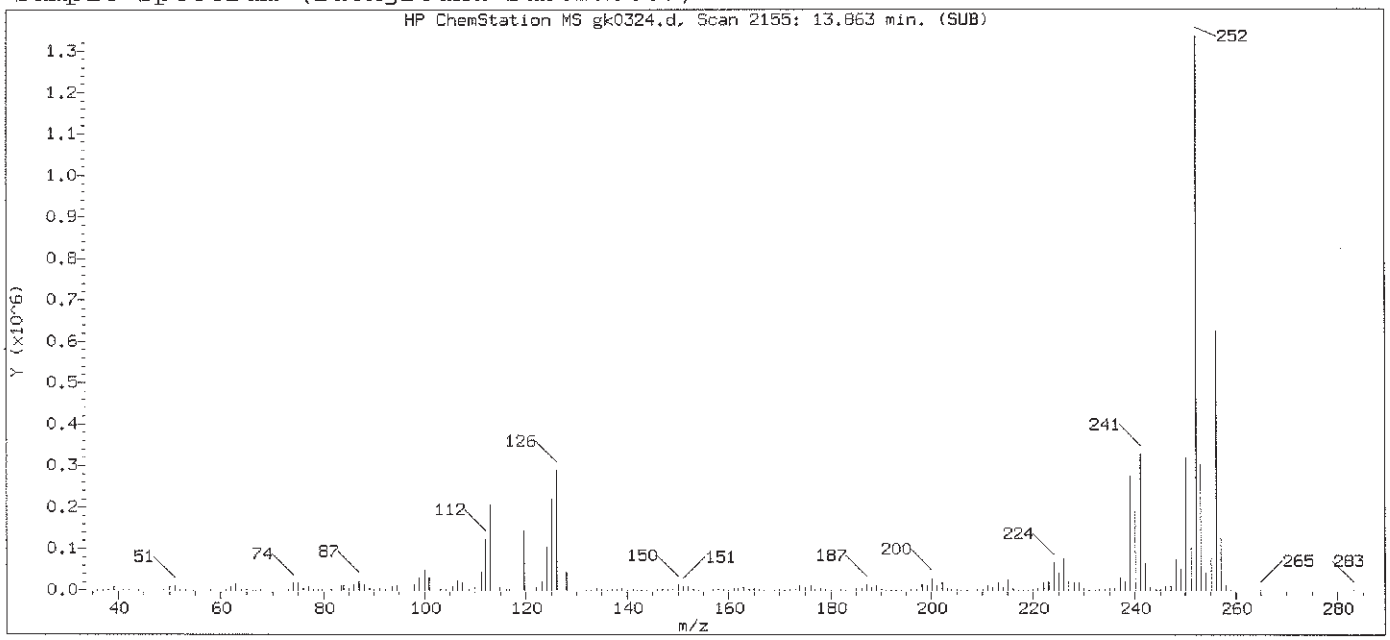
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:45. Target 3.5 esignature user ID: lmh00956

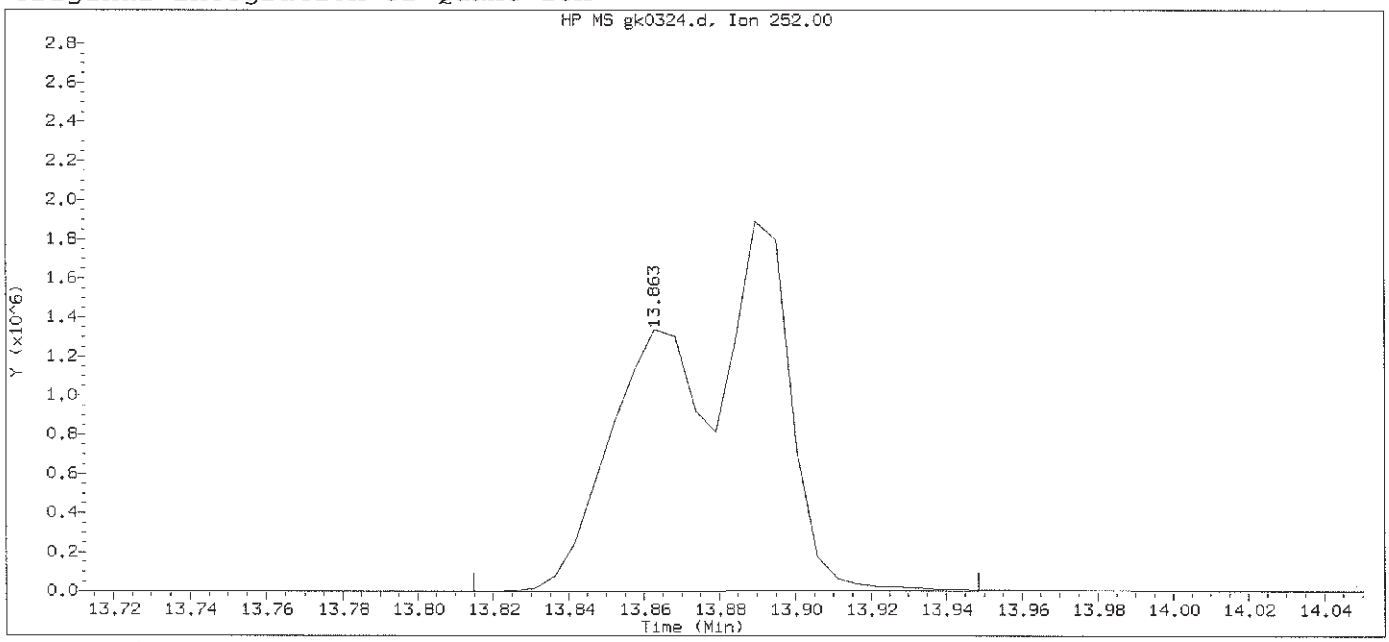
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0324.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 21:42 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:06
Date, time and analyst ID of latest file update: 09-Nov-2013 22:06 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2155		
Retention Time (minutes)	: 13.863		
Quant Ion	: 252.00		
Area	: 4268587		
On-column Amount (ng/ul)	: 134.8536		
Integration start scan	: 2145	Integration stop scan:	2170
Y at integration start	: 0	Y at integration end:	2533

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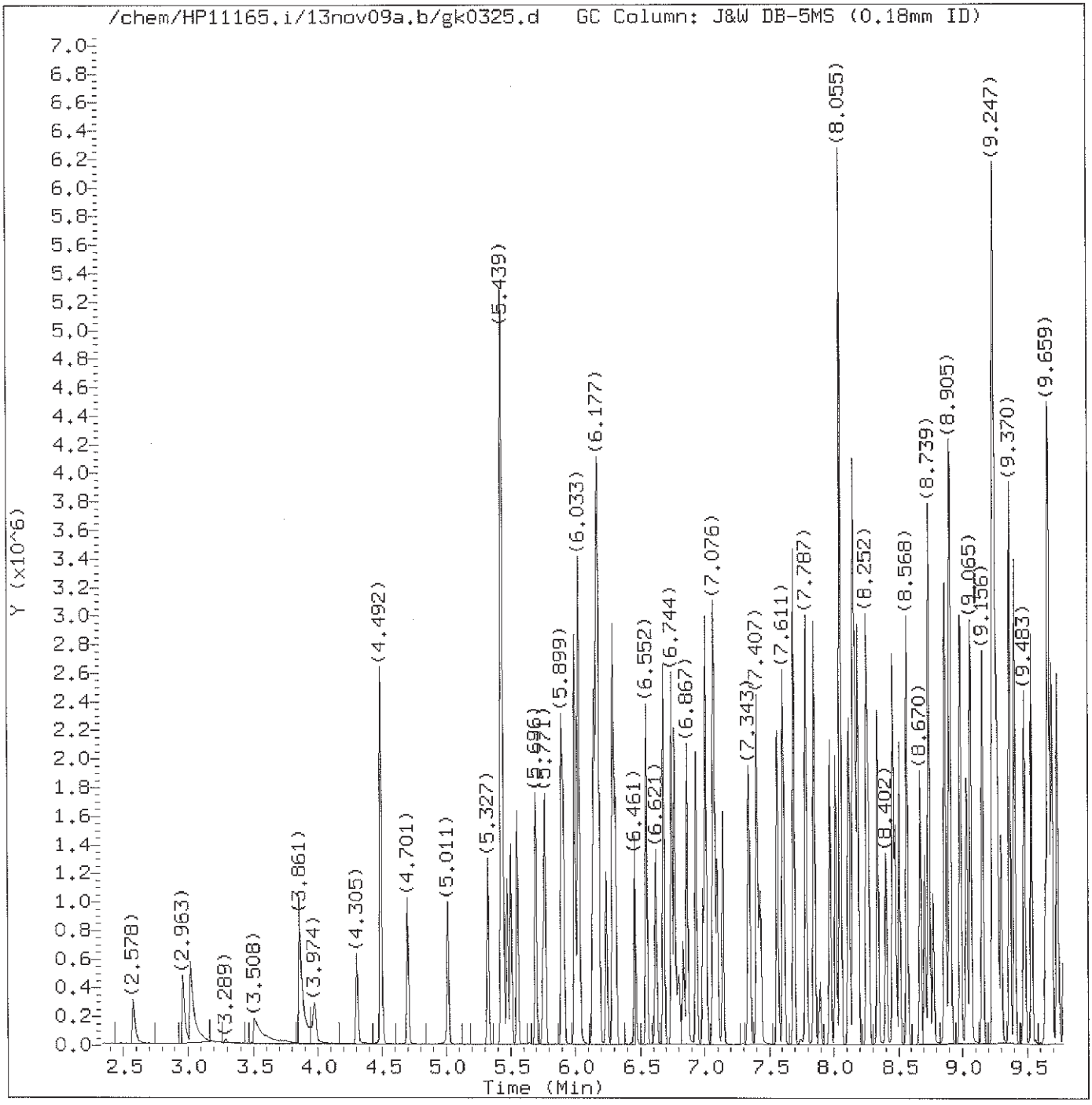
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

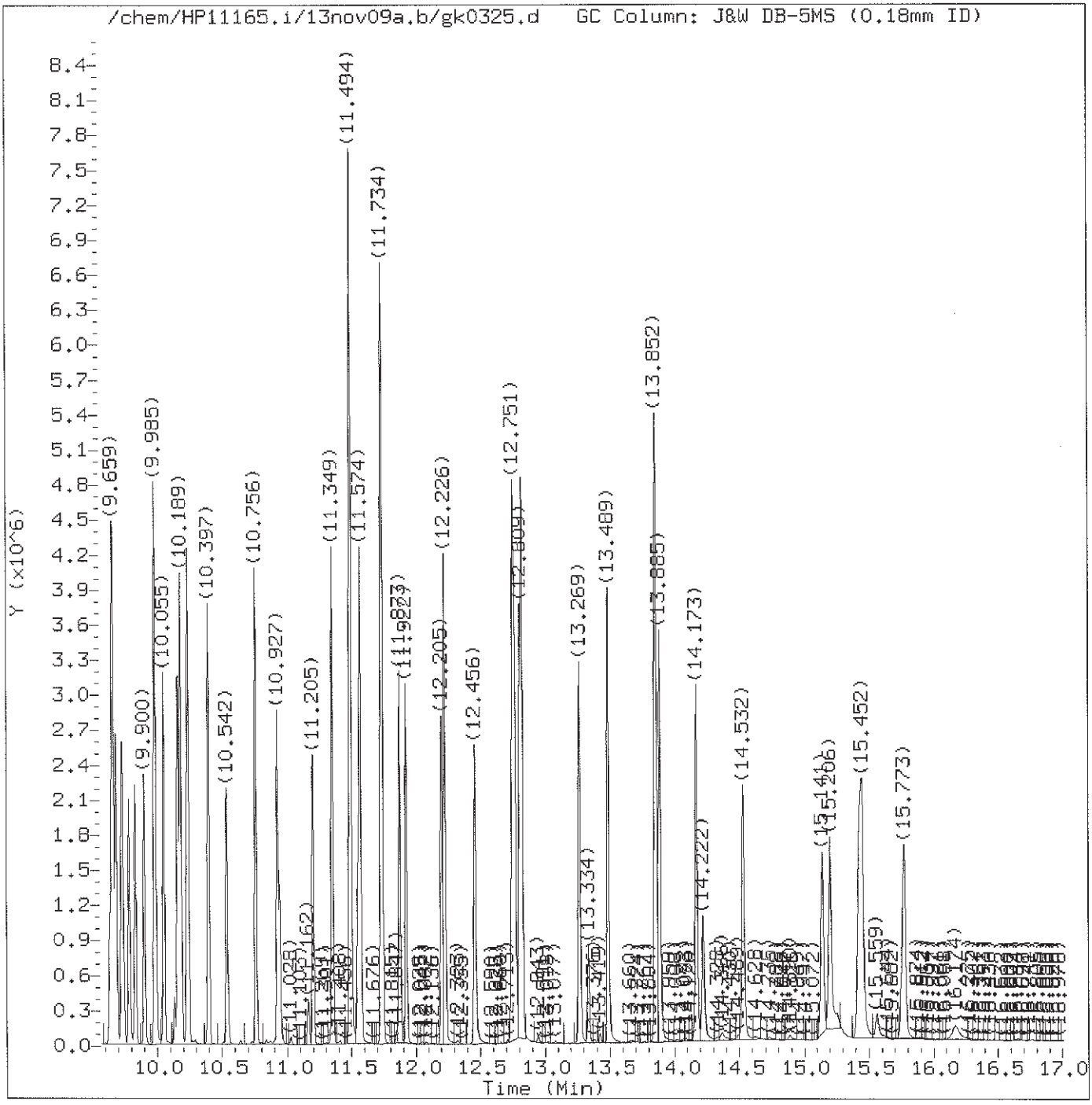
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.578	88	173035	53.152
3) N-Nitrosodimethylamine	(1)	2.963	74	316040	55.352
4) Pyridine	(1)	3.021	79	487541	52.671
7) 2-Picoline	(1)	3.856	93	509252	53.512
8) N-Nitrosomethylethylamine	(1)	3.979	88	249673	51.133
9) Methyl methanesulfonate	(1)	4.305	80	247542	53.613
10)$2-Fluorophenol	(1)	4.492	112	808342	109.952
11) N-Nitrosodiethylamine	(1)	4.701	102	248179	56.232
14) Ethyl methanesulfonate	(1)	5.016	109	241752	54.359
17)$Phenol-d6	(1)	5.434	99	1220474	110.337
16)$Phenol-d5	(1)	5.434	99	1220474	110.337
19) Aniline	(1)	5.439	93	802219	54.935
18) Phenol	(1)	5.444	94	709077	53.916
20) bis(2-Chloroethyl)ether	(1)	5.509	93	502299	53.517
21) 2-Chlorophenol	(1)	5.557	128	413852	55.867
24) 1,3-Dichlorobenzene	(1)	5.696	146	396030	53.394
25)*1,4-Dichlorobenzene-d4	(1)	5.755	152	92779	20.000
26) 1,4-Dichlorobenzene	(1)	5.771	146	400871	53.415
27) Benzyl alcohol	(1)	5.899	108	338002	55.339
28) 1,2-Dichlorobenzene	(1)	5.915	146	391851	53.160
29) Indene	(1)	6.001	115	866179	64.158
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	687863	54.651
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	687863	54.651
30) 2-Methylphenol	(1)	6.033	108	460831	55.308
34) N-Nitrosopyrrolidine	(1)	6.134	100	292315	54.880
35) Acetophenone	(1)	6.150	105	690930	52.475
37) N-Nitroso-di-n-propylamine	(1)	6.166	70	433218	55.203
38) N-Nitrosomorpholine	(1)	6.172	56	328010	54.325
36) 4-Methylphenol	(1)	6.177	108	551397	55.547
39) o-Toluidine	(1)	6.183	106	794589	55.230
40) Hexachloroethane	(1)	6.241	117	161209	54.960
41)$Nitrobenzene-d5	(2)	6.295	82	1117177	108.252
42) Nitrobenzene	(2)	6.311	77	592098	53.720
44) N-Nitrosopiperidine	(2)	6.461	114	262980	53.754
45) Isophorone	(2)	6.552	82	1082320	53.841
48) 2-Nitrophenol	(2)	6.621	139	245949	57.437
52) 2,4-Dimethylphenol	(2)	6.680	107	521761	55.084
53) O,O,O-triethylphosphorothioate	(2)	6.744	198	207690	53.285
55) bis(2-Chloroethoxy)methane	(2)	6.766	93	637221	51.946
54) Benzoic acid	(2)	6.803	105	404371	49.174

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.867	162	357775	55.353
62) 1,2,4-Trichlorobenzene	(2)	6.937	180	365214	54.110
63)*Naphthalene-d8	(2)	6.990	136	468154	20.000
64) Naphthalene	(2)	7.012	128	1297462	52.604
65) 4-Chloroaniline	(2)	7.070	127	567748	54.681
66) 2,6-Dichlorophenol	(2)	7.081	162	348817	54.285
67) Hexachloropropene	(2)	7.097	213	200907	56.008
69) Hexachlorobutadiene	(2)	7.140	225	169533	53.227
70) Quinoline	(2)	7.343	129	943620	53.513
73) N-Nitrosodi-n-butylamine	(2)	7.407	84	542468M	52.036
74) Caprolactam	(2)	7.434	113	205363	51.228
75) 4-Chloro-3-methylphenol	(2)	7.568	107	493183	55.132
76) Safrole	(2)	7.611	162	347115	53.800
77) 2-Methylnaphthalene	(2)	7.691	142	936924	53.941
78) 1-Methylnaphthalene	(2)	7.787	142	846342	53.874
79) Hexachlorocyclopentadiene	(3)	7.846	237	158060	56.981
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	358728	53.232
81) cis-Isosafrole	(3)	7.894	162	61620	5.863
82) 2,4,6-Trichlorophenol	(3)	7.974	196	274452	55.093
83) 2,4,5-Trichlorophenol	(3)	8.017	196	294067	56.665
84)$2-Fluorobiphenyl	(3)	8.055	172	1877212	107.579
86) Isosafrole	(3)	8.119	162	364967	54.242
85) trans-Isosafrole	(3)	8.119	162	364967	48.275
87) 1,1'-Biphenyl	(3)	8.151	154	1120251	50.396
88) 2-Chloronaphthalene	(3)	8.167	162	879440	52.327
89) 1-Chloronaphthalene	(3)	8.188	162	782391	50.802
90) Diphenyl ether	(3)	8.252	170	590438	53.336
91) 2-Nitroaniline	(3)	8.268	138	329328	55.680
92) 1,4-Naphthoquinone	(3)	8.338	158	382205	55.121
93) 1,4-Dinitrobenzene	(3)	8.408	168	168158	56.397
94) Dimethylphthalate	(3)	8.456	163	1027495	53.166
95) 1,3-Dinitrobenzene	(3)	8.477	168	199965	55.145
97) 2,6-Dinitrotoluene	(3)	8.509	165	247633	57.240
99) Acenaphthylene	(3)	8.568	152	1325350	54.888
100) 3-Nitroaniline	(3)	8.670	138	296325	54.464
101)*Acenaphthene-d10	(3)	8.707	164	286500	20.000
102) Acenaphthene	(3)	8.739	153	912052	52.627
103) 2,4-Dinitrophenol	(3)	8.777	184	146188	56.002
105) Pentachlorobenzene	(3)	8.868	250	315632	52.112
104) 4-Nitrophenol	(3)	8.868	109	168554	51.492

M = Compound was manually integrated.
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Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.905	165	325470	53.570
107) Dibenzofuran	(3)	8.910	168	1233789	52.028
108) 1-Naphthylamine	(3)	8.985	143	1047831	53.710
109) 2,3,4,6-Tetrachlorophenol	(3)	9.039	232	230506	54.860
110) 2-Naphthylamine	(3)	9.065	143	1042215	53.454
111) Diethylphthalate	(3)	9.156	149	1047911	53.213
112) Thionazin	(3)	9.231	107	209536	53.033
113) Fluorene	(3)	9.247	166	1044604	52.774
114) 4-Chlorophenyl-phenylether	(3)	9.253	204	471629	52.117
115) 5-Nitro-o-toluidine	(3)	9.263	152	318506	51.786
116) 4-Nitroaniline	(3)	9.274	138	305086	52.035
117) 4,6-Dinitro-2-methylphenol	(4)	9.301	198	202050	55.828
119) NDPA as diphenylamine	(4)	9.370	169	935658	53.500
118) N-Nitrosodiphenylamine	(4)	9.370	169	935658	53.728
120) 1,2-Diphenylhydrazine	(4)	9.408	77	1387397	54.789
121)$2,4,6-Tribromophenol	(3)	9.483	330	206487	107.863
122) Tetraethyldithiopyrophosphate	(4)	9.536	97	191180	53.839
123) 1,3,5-Trinitrobenzene	(4)	9.638	213	129712	58.864
124) Diallate (peak 1)	(4)	9.659	86	542514	39.796
125) Phorate	(4)	9.664	75	1200268M	57.104
126) Phenacetin	(4)	9.686	108	645670	54.364
127) 4-Bromophenyl-phenylether	(4)	9.729	248	266595	54.001
128) Diallate (peak 2)	(4)	9.739	86	79903	12.741
129) Hexachlorobenzene	(4)	9.782	284	250221	53.750
130) Dimethoate	(4)	9.830	87	546511	53.791
132) Atrazine	(4)	9.905	200	246130	44.080
135) 4-Aminobiphenyl	(4)	9.985	169	869967	51.891
133) Pentachlorophenol	(4)	9.985	266	172897	54.064
134) Pentachloronitrobenzene	(4)	9.991	237	108392	53.887
138) Pronamide	(4)	10.055	173	446171	55.075
140)*Phenanthrene-d10	(4)	10.162	188	523726	20.000
142) Dinoseb	(4)	10.167	211	274811	58.127
143) Phenanthrene	(4)	10.189	178	1618189	52.249
144) Anthracene	(4)	10.237	178	1675743	55.043
146) Carbazole	(4)	10.397	167	1509035	52.907
148) Methyl parathion	(4)	10.542	109	384900	55.496
149) Di-n-butylphthalate	(4)	10.756	149	1848185	54.060
151) Parathion	(4)	10.927	109	252684	56.050
152) 4-Nitroquinoline-1-oxide	(4)	10.943	190	134812	56.986
156) Isodrin	(4)	11.205	193	165919	53.793

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on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.349	202	1690910	53.309
162) Benzidine	(5)	11.499	184	3697317	164.761
164)*Pyrene-d10	(5)	11.553	212	589856	20.000
165) Pyrene	(5)	11.574	202	1726789	51.178
166)$Terphenyl-d14	(5)	11.734	244	2210127	105.046
168) p-Dimethylaminoazobenzene	(5)	11.873	225	352125	58.234
171) Chlorobenzilate	(5)	11.922	139	531889	55.841
172) 3,3'-Dimethylbenzidine	(5)	12.205	212	1001714	57.105
173) Butylbenzylphthalate	(5)	12.226	149	817056	53.850
174) 2-Acetylaminofluorene	(5)	12.456	181	703653	55.763
175) 3,3'-Dichlorobenzidine	(5)	12.745	252	564410	54.509
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.756	231	273169	55.901
177) Benzo(a)anthracene	(5)	12.767	228	1533569	54.114
178) Chrysene	(5)	12.804	228	1449431	52.389
179) bis(2-Ethylhexyl)phthalate	(5)	12.826	149	1120903	54.098
181) 6-Methylchrysene	(5)	13.269	242	1055818	53.640
183) Di-n-octylphthalate	(6)	13.489	149	1868724	55.839
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.852	256	682404	55.641
185) Benzo(b)fluoranthene	(6)	13.858	252	1436016M	52.948
186) Benzo(k)fluoranthene	(6)	13.885	252	1638011M	56.985
187) Benzo(a)pyrene	(6)	14.173	252	1363034	56.362
188)*Perylene-d12	(6)	14.227	264	448865	20.000
190) 3-Methylcholanthrene	(6)	14.532	268	640922	55.400
191) Dibenz(a,h)acridine	(6)	15.147	279	916699	53.982
192) Dibenz(a,j)acridine	(6)	15.206	279	1053704	55.205
193) Indeno(1,2,3-cd)pyrene	(6)	15.430	276	1348623	54.979
194) Dibenz(a,h)anthracene	(6)	15.452	278	1114489	54.732
196) Benzo(g,h,i)perylene	(6)	15.773	276	1120958	54.211
203) 2,4_2,6-Dinitrotoluenes	(3)			573103	53.944
204) Diallate TRANS/CIS	(4)			622417	52.782

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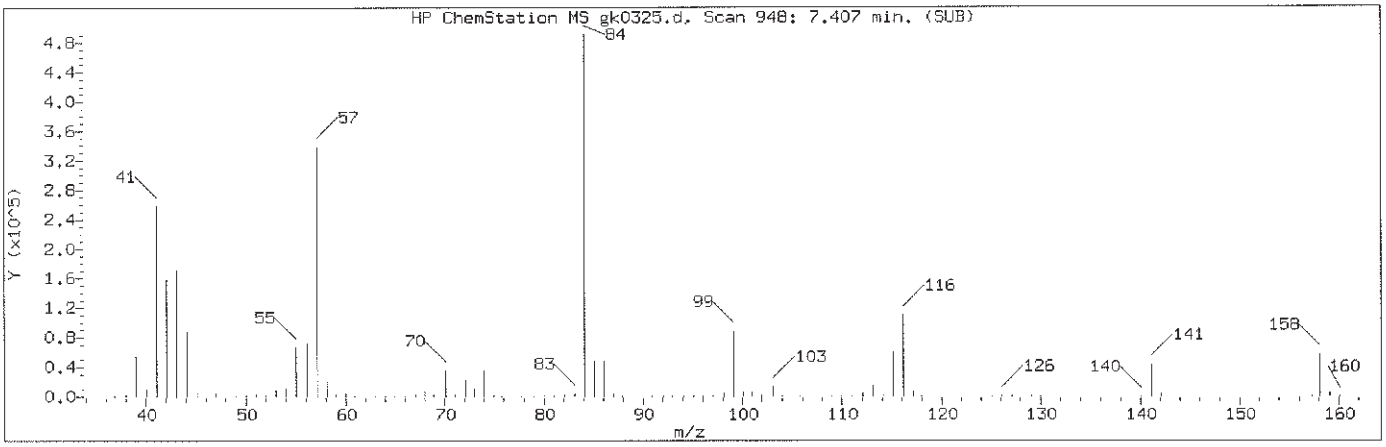
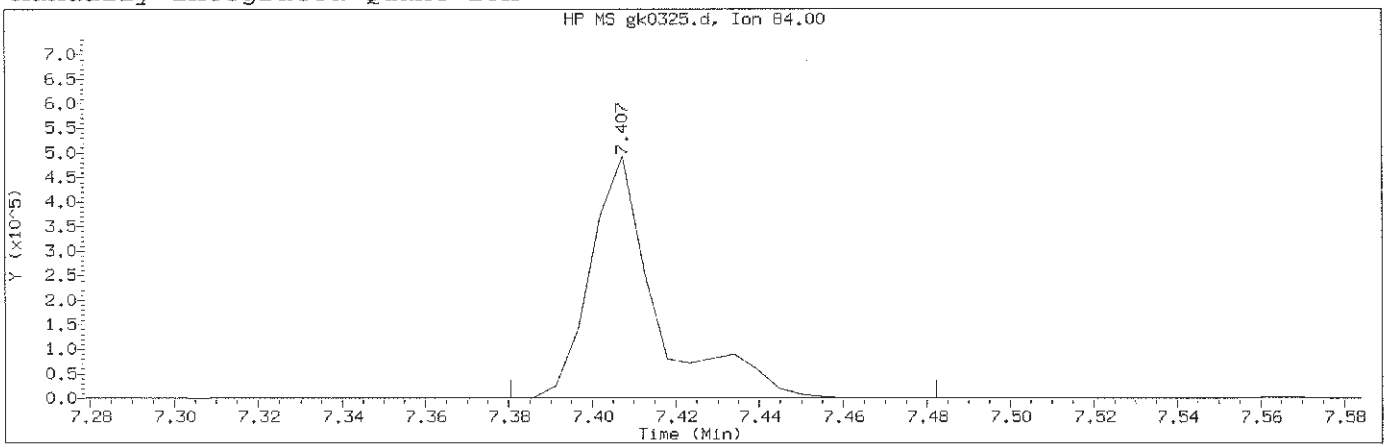
Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 948		
Retention Time (minutes)	: 7.407		
Quant Ion	: 84.00		
Area (flag)	: 542468M		
On-Column Amount (ng/ul)	: 52.0363		
Integration start scan	: 942	Integration stop scan:	961
Y at integration start	: 939	Y at integration end:	1355

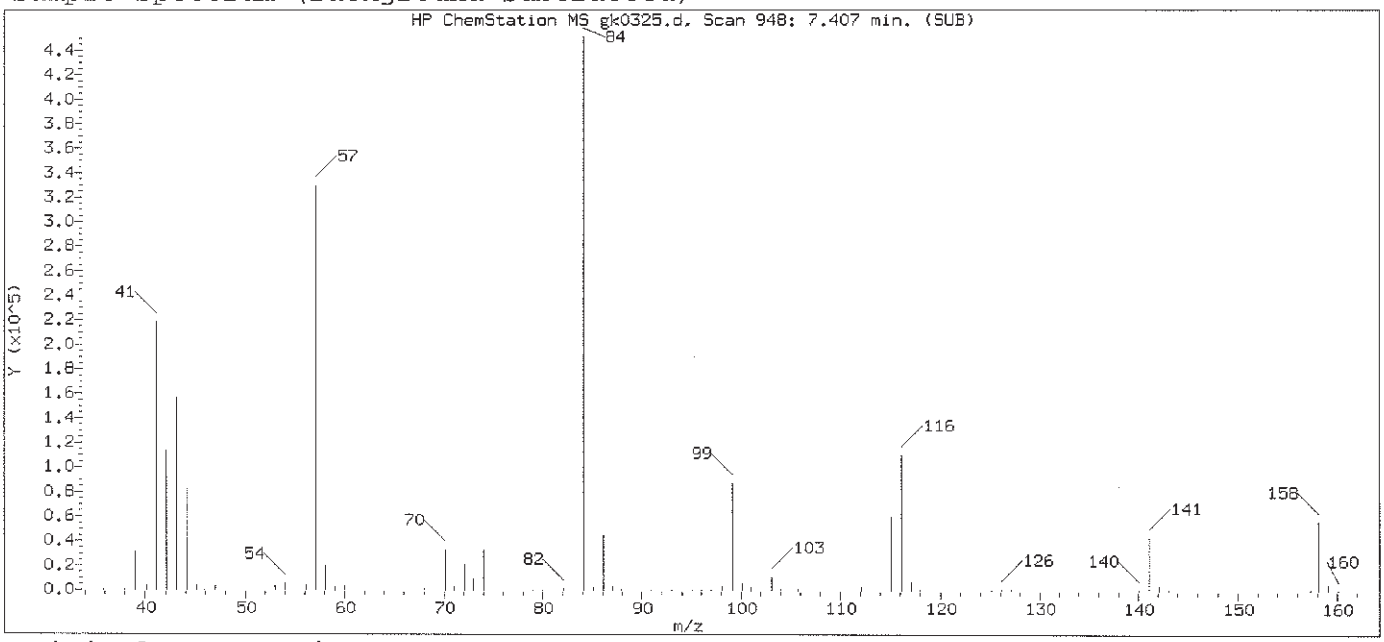
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46. Target 3.5 esignature user ID: lmh00956

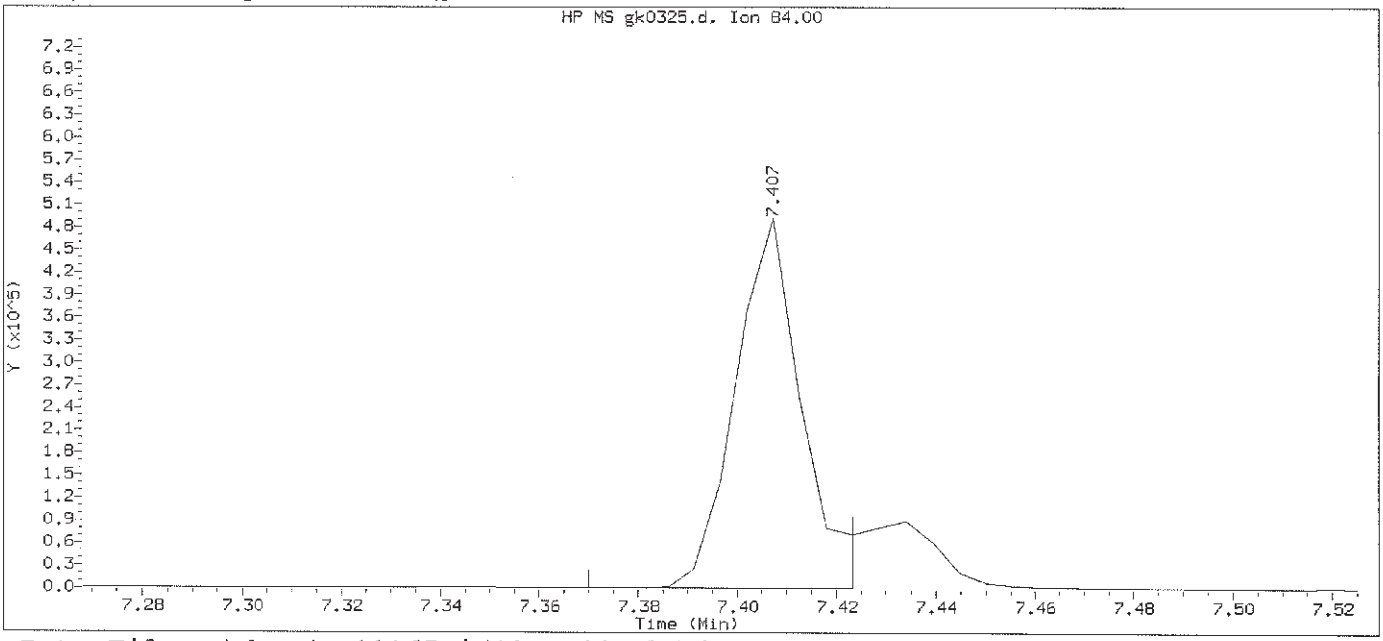
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

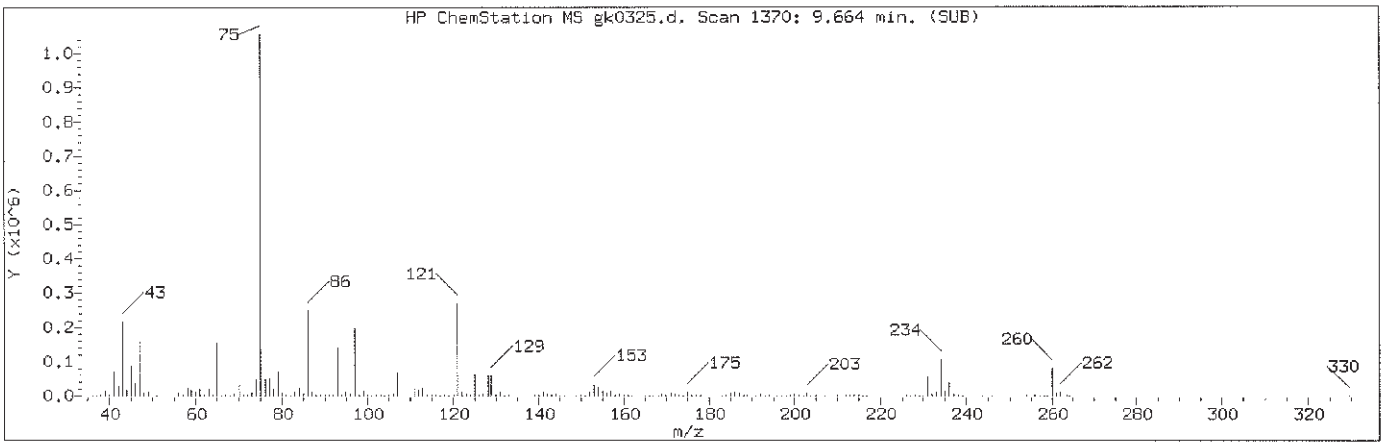
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:32
Date, time and analyst ID of latest file update: 09-Nov-2013 22:32 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

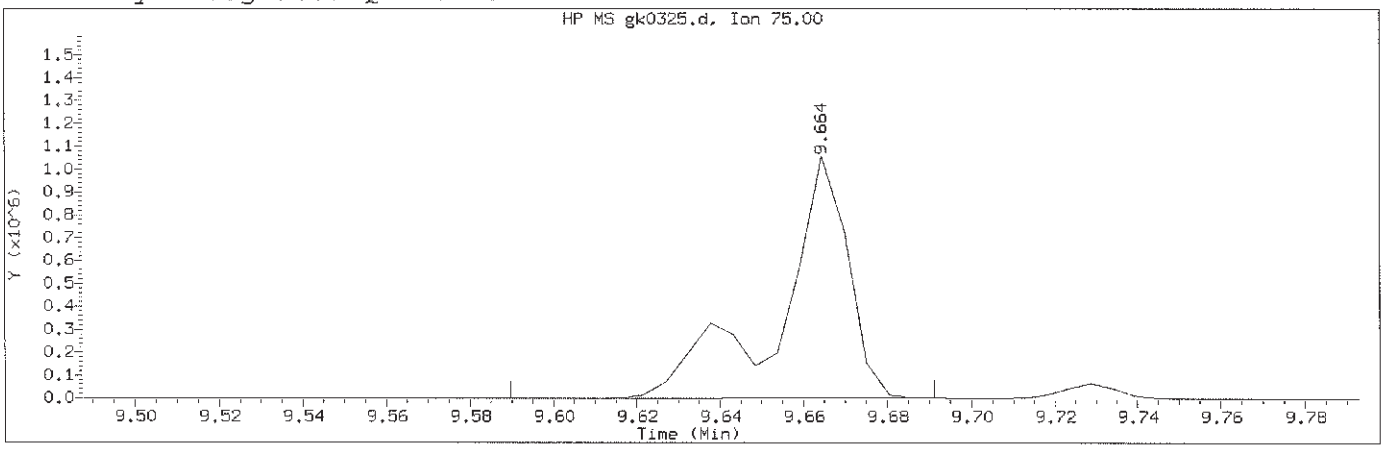
Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 948		
Retention Time (minutes)	: 7.407		
Quant Ion	: 84.00		
Area	: 448967		
On-column Amount (ng/ul)	: 46.9002		
Integration start scan	: 940	Integration stop scan:	950
Y at integration start	: 632	Y at integration end:	632

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area (flag)	: 1200268M		
On-Column Amount (ng/ul)	: 57.1039		
Integration start scan	: 1355	Integration stop scan:	1374
Y at integration start	: 0	Y at integration end:	2432

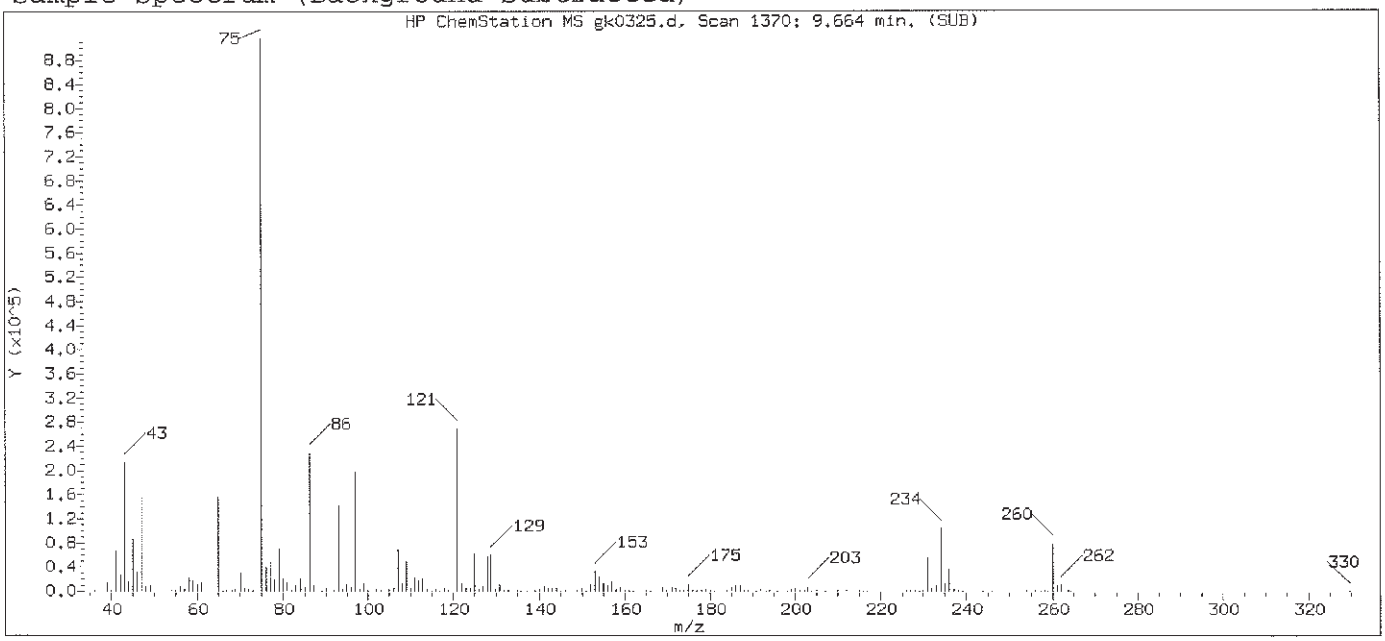
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

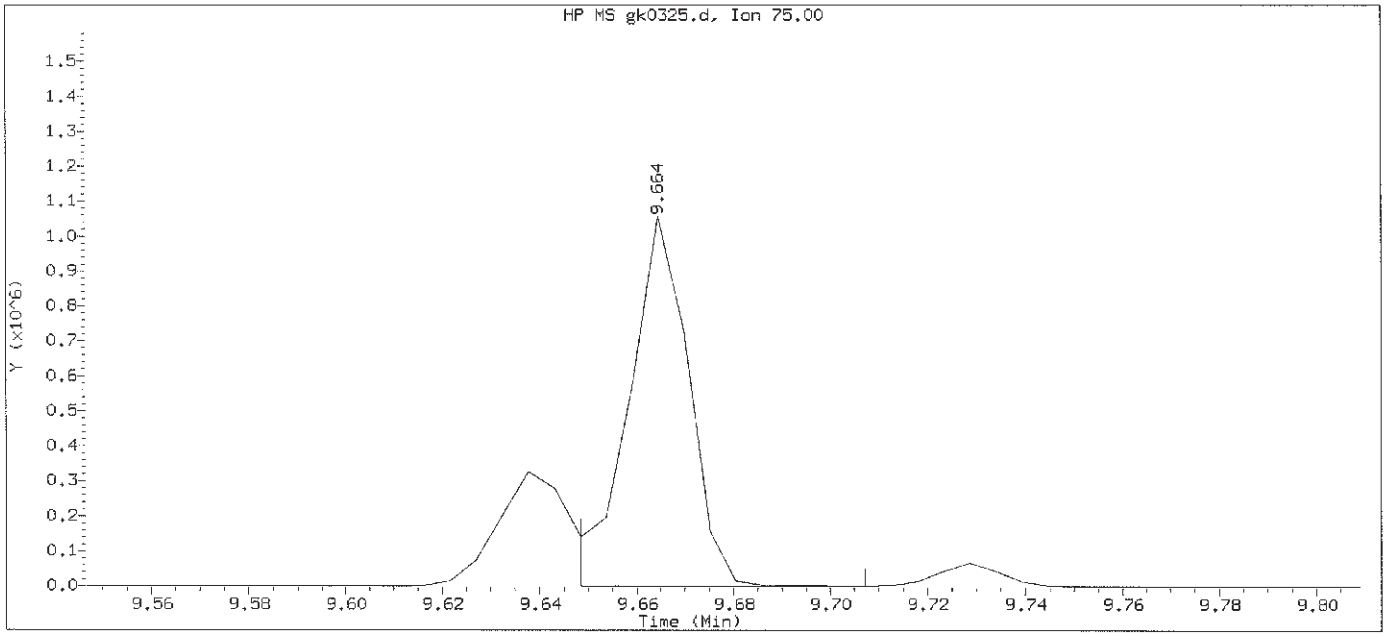
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

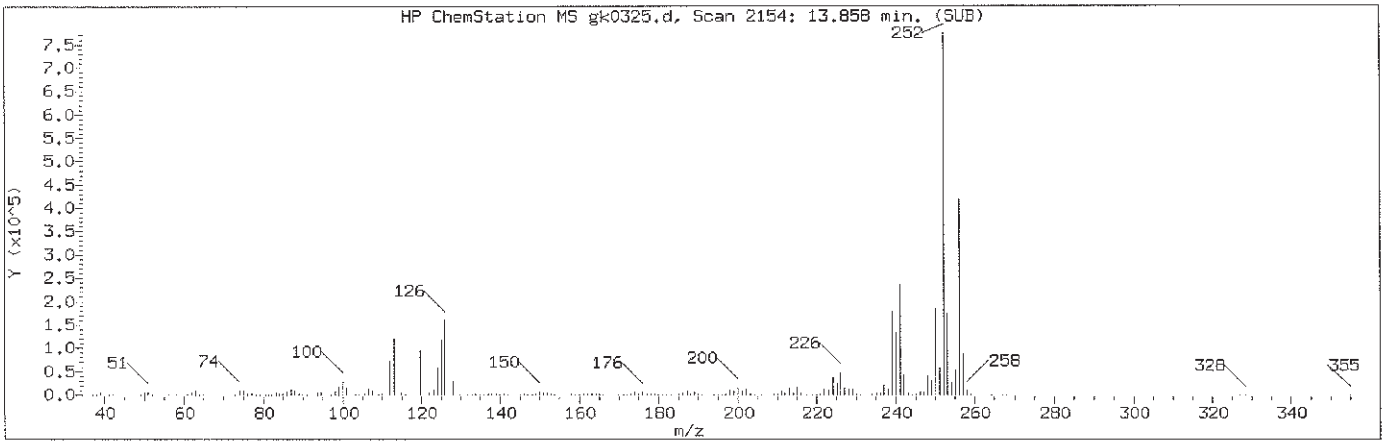
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:32
Date, time and analyst ID of latest file update: 09-Nov-2013 22:32 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

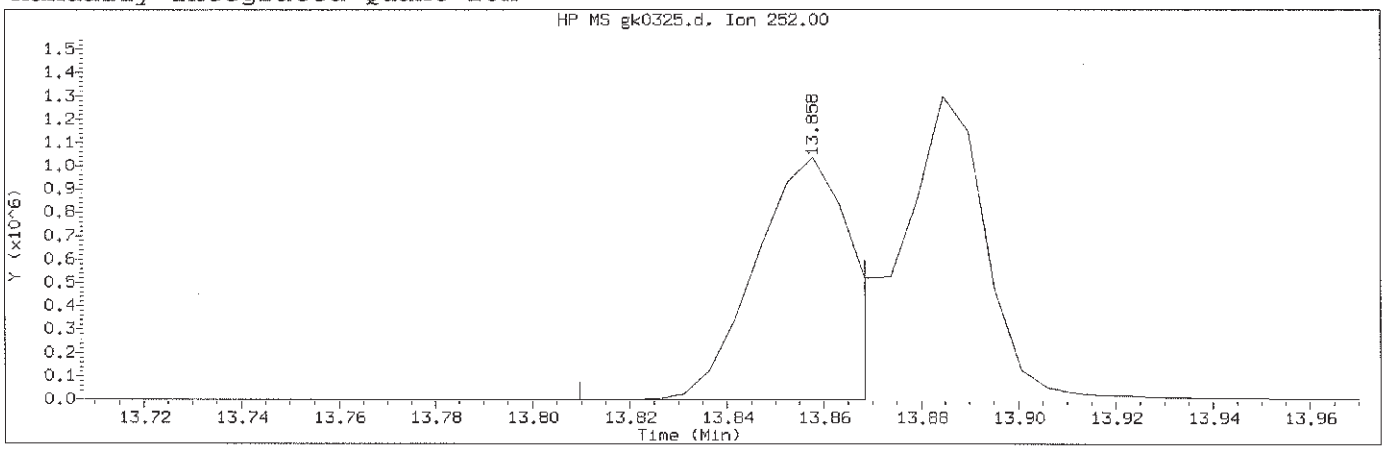
Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area	: 897880		
On-column Amount (ng/ul)	: 47.5792		
Integration start scan	: 1366	Integration stop scan:	1377
Y at integration start	: 291	Y at integration end:	347

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2154		
Retention Time (minutes)	: 13.858		
Quant Ion	: 252.00		
Area (flag)	: 1436016M		
On-Column Amount (ng/ul)	: 52.9479		
Integration start scan	: 2144	Integration stop scan:	2155
Y at integration start	: 0	Y at integration end:	610

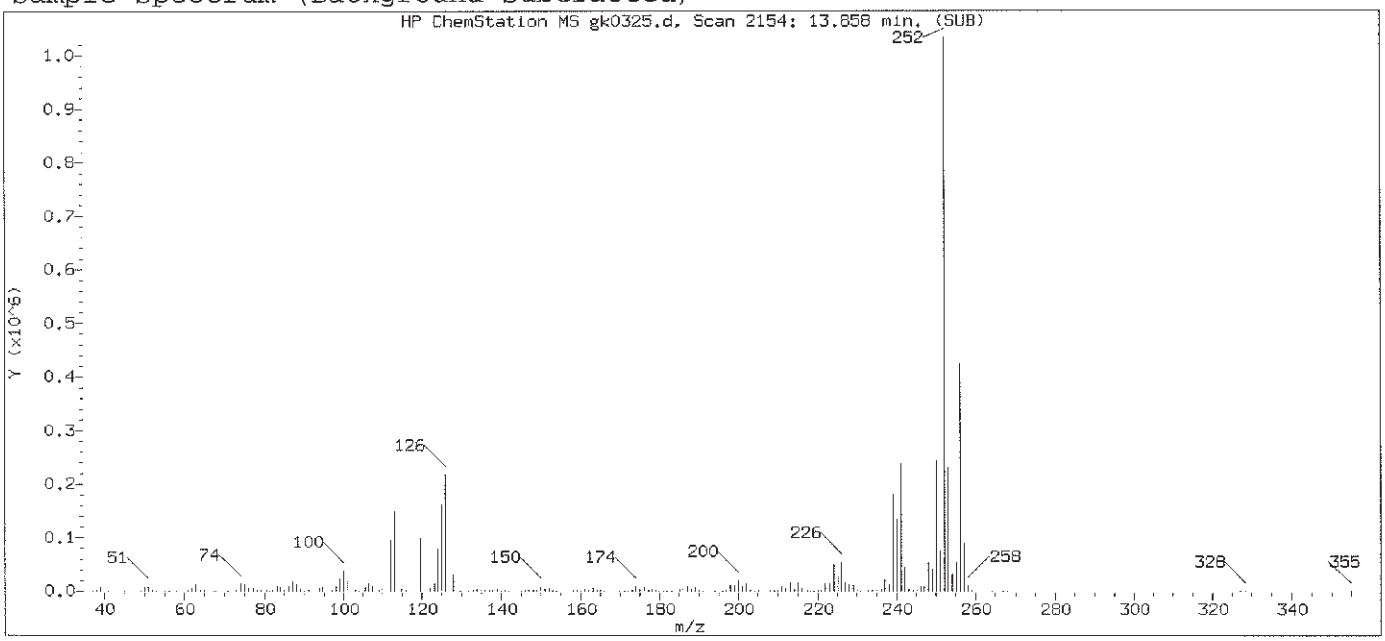
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46. Target 3.5 esignature user ID: lmh00956

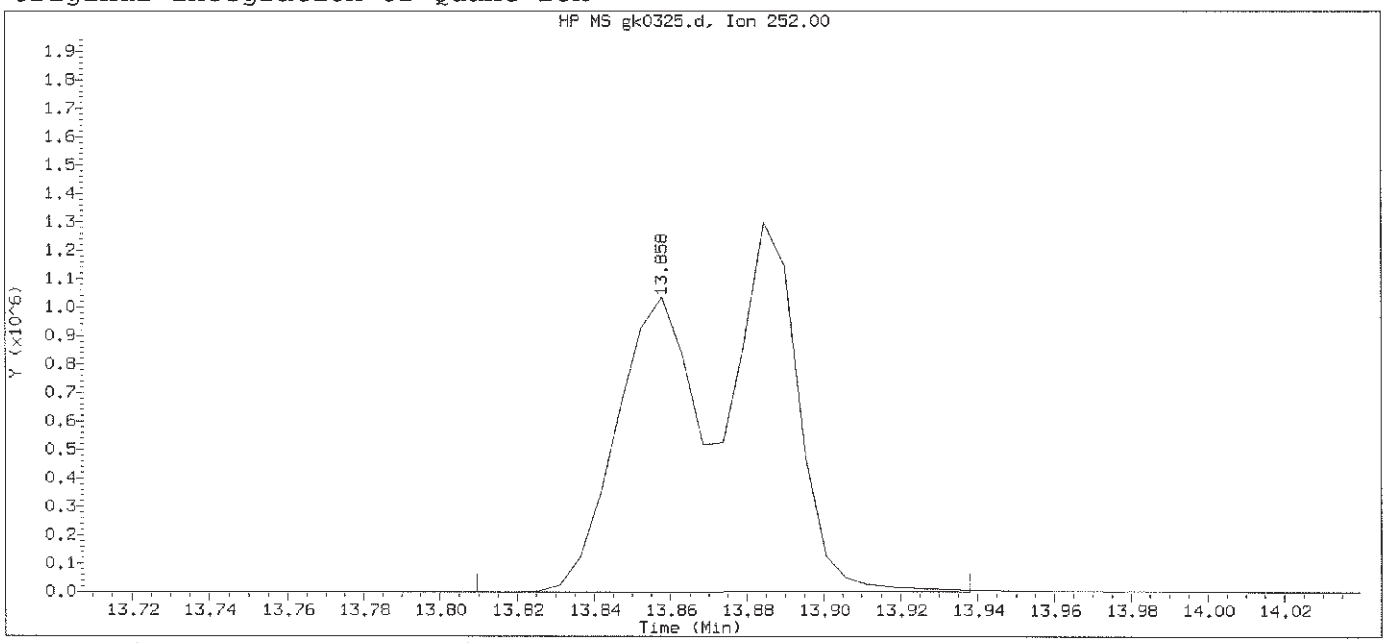
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

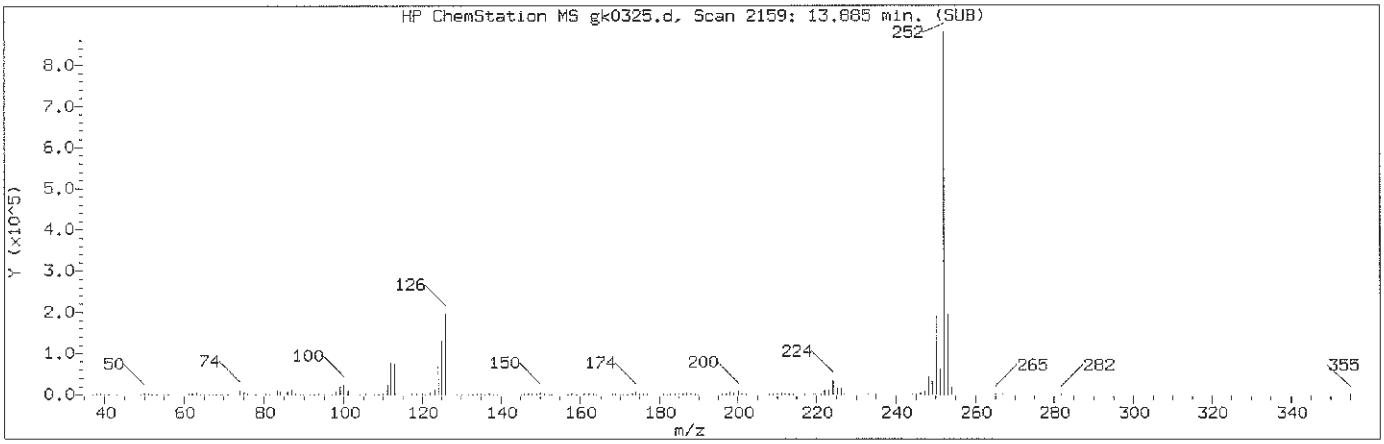
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:32
Date, time and analyst ID of latest file update: 09-Nov-2013 22:32 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

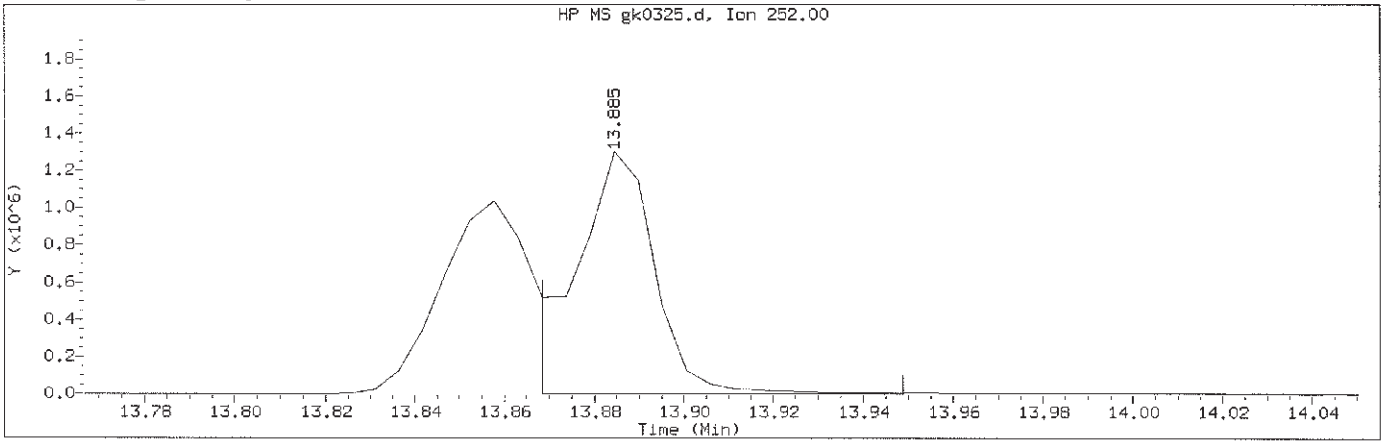
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2154		
Retention Time (minutes)	: 13.858		
Quant Ion	: 252.00		
Area	: 2897575		
On-column Amount (ng/ul)	: 81.4404		
Integration start scan	: 2144	Integration stop scan:	2168
Y at integration start	: 0	Y at integration end:	1333

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2159		
Retention Time (minutes)	: 13.885		
Quant Ion	: 252.00		
Area (flag)	: 1638011M		
On-Column Amount (ng/ul)	: 56.9850		
Integration start scan	: 2155	Integration stop scan:	2170
Y at integration start	: 0	Y at integration end:	0

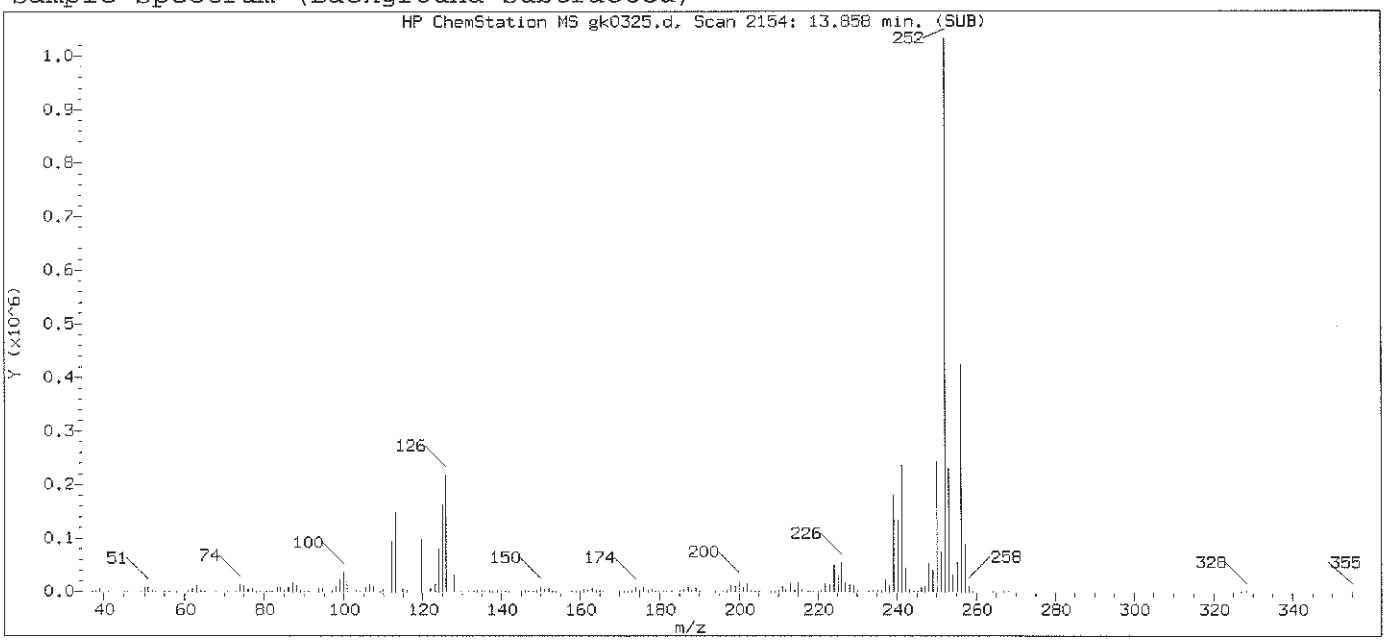
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46. Target 3.5 esignature user ID: lmh00956

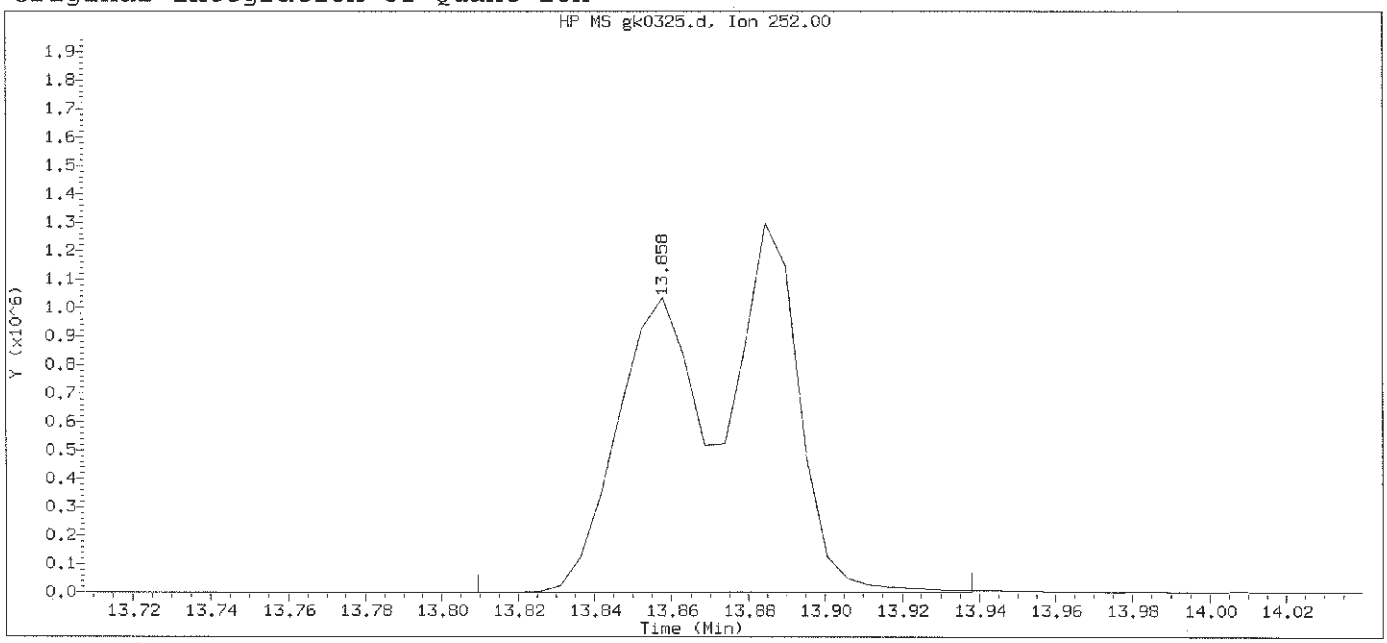
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



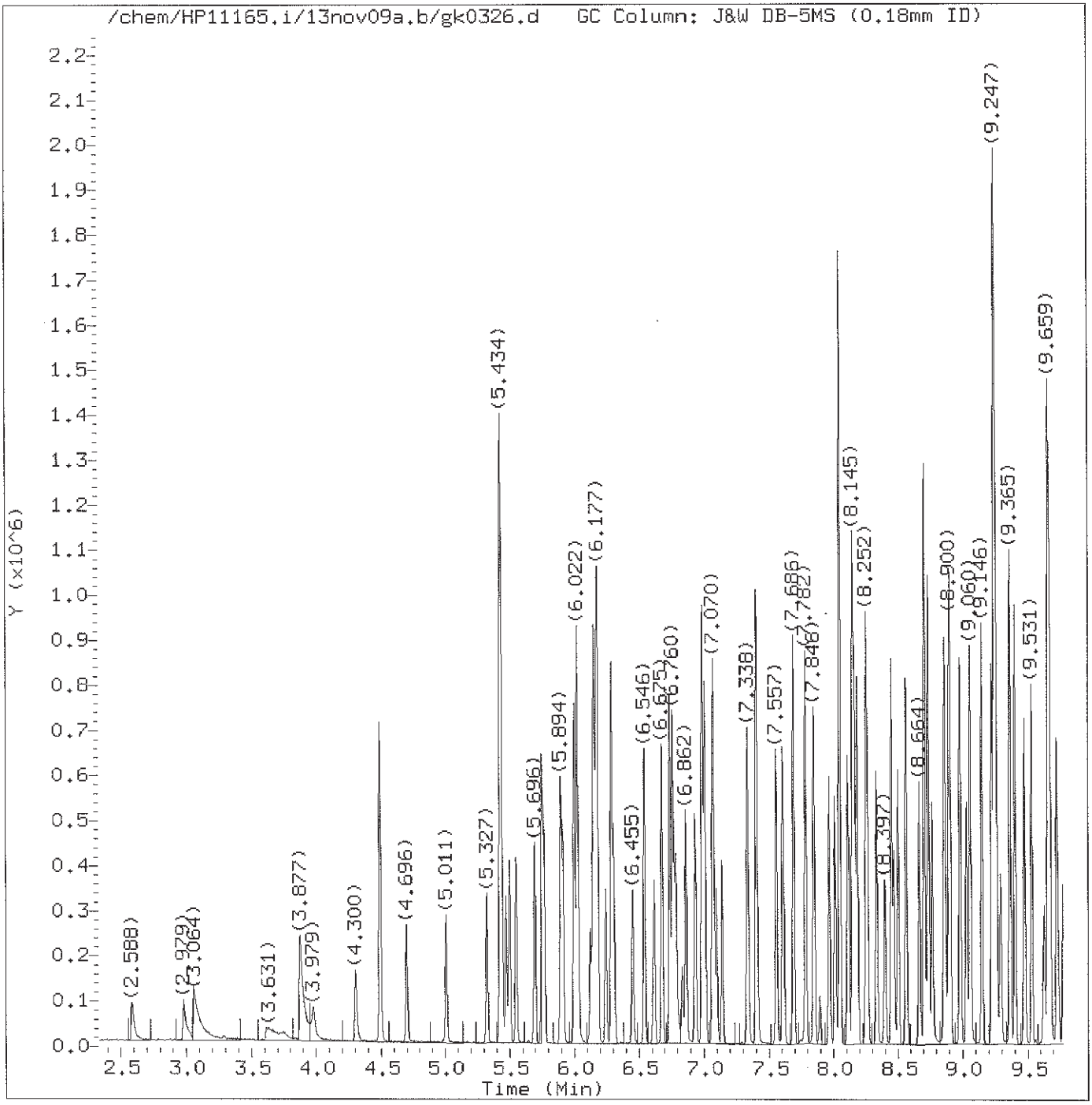
Data File: /chem/HP11165.i/13nov09a.b/gk0325.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:09 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:32
Date, time and analyst ID of latest file update: 09-Nov-2013 22:32 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2154		
Retention Time (minutes)	: 13.858		
Quant Ion	: 252.00		
Area	: 2897591		
On-column Amount (ng/ul)	: 80.7372		
Integration start scan	: 2144	Integration stop scan:	2168
Y at integration start	: 0	Y at integration end:	1333

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:46.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

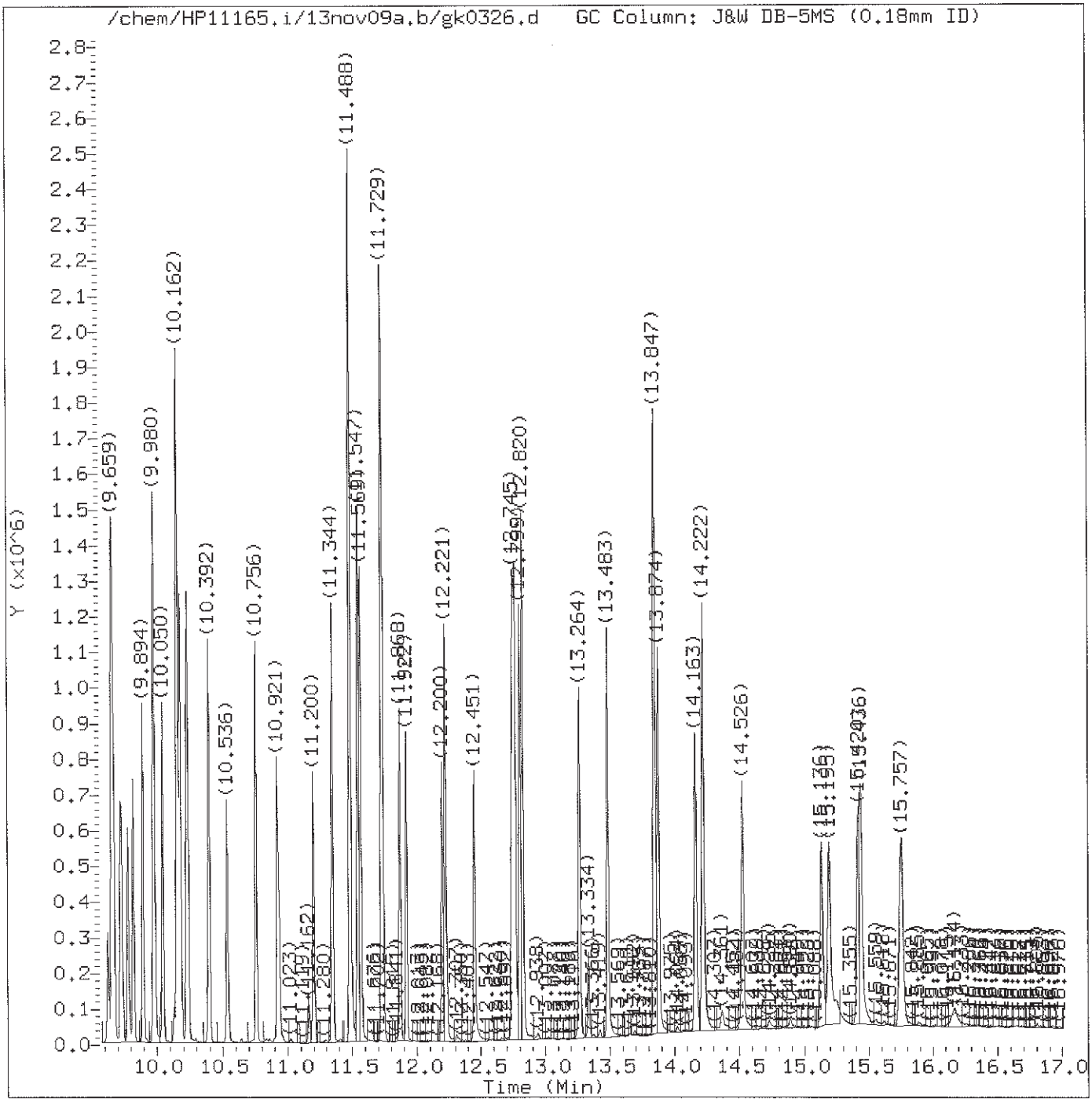
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.588	88	47099	14.523
3) N-Nitrosodimethylamine	(1)	2.979	74	77705	13.661
4) Pyridine	(1)	3.059	79	136298M	14.781
7) 2-Picoline	(1)	3.877	93	138107	14.568
8) N-Nitrosomethylethylamine	(1)	3.979	88	73414	15.093
9) Methyl methanesulfonate	(1)	4.300	80	64810	14.091
10)$2-Fluorophenol	(1)	4.492	112	210538	28.747
11) N-Nitrosodiethylamine	(1)	4.696	102	63103	14.353
14) Ethyl methanesulfonate	(1)	5.011	109	64579	14.577
17)$Phenol-d6	(1)	5.428	99	320440	29.080
16)$Phenol-d5	(1)	5.428	99	320440	29.080
19) Aniline	(1)	5.434	93	214548	14.748
18) Phenol	(1)	5.439	94	188554	14.392
20) bis(2-Chloroethyl)ether	(1)	5.503	93	135169	14.457
21) 2-Chlorophenol	(1)	5.557	128	107527	14.571
24) 1,3-Dichlorobenzene	(1)	5.696	146	107229	14.512
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	92425	20.000
26) 1,4-Dichlorobenzene	(1)	5.765	146	107153	14.333
27) Benzyl alcohol	(1)	5.894	108	90964	14.950
28) 1,2-Dichlorobenzene	(1)	5.910	146	105280	14.337
29) Indene	(1)	6.001	115	237031	17.624
30) 2-Methylphenol	(1)	6.022	108	122515	14.760
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	187028	14.916
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	187028	14.916
34) N-Nitrosopyrrolidine	(1)	6.124	100	77602	14.625
35) Acetophenone	(1)	6.145	105	193980	14.789
37) N-Nitroso-di-n-propylamine	(1)	6.150	70	116609	14.916
38) N-Nitrosomorpholine	(1)	6.161	56	91672	15.241
36) 4-Methylphenol	(1)	6.172	108	148725	15.040
39) o-Toluidine	(1)	6.177	106	211570	14.762
40) Hexachloroethane	(1)	6.241	117	42006	14.376
41)$Nitrobenzene-d5	(2)	6.290	82	294411	29.897
42) Nitrobenzene	(2)	6.306	77	152237	14.475
44) N-Nitrosopiperidine	(2)	6.455	114	70059	15.007
45) Isophorone	(2)	6.546	82	291390	15.191
48) 2-Nitrophenol	(2)	6.616	139	64028	15.670
52) 2,4-Dimethylphenol	(2)	6.680	107	138996	15.378
53) O,O,O-triethylphosphorothioate	(2)	6.739	198	56318	15.142
55) bis(2-Chloroethoxy)methane	(2)	6.760	93	173995	14.864
54) Benzoic acid	(2)	6.787	105	255436	32.553

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.862	162	94740	15.361
62) 1,2,4-Trichlorobenzene	(2)	6.931	180	97004	15.062
63)*Naphthalene-d8	(2)	6.990	136	446720	20.000
64) Naphthalene	(2)	7.006	128	343273	14.585
65) 4-Chloroaniline	(2)	7.065	127	152945	15.437
66) 2,6-Dichlorophenol	(2)	7.076	162	92461	15.080
67) Hexachloropropene	(2)	7.097	213	48201	14.082
69) Hexachlorobutadiene	(2)	7.140	225	44054	14.495
70) Quinoline	(2)	7.338	129	256823	15.263
73) N-Nitrosodi-n-butylamine	(2)	7.402	84	150502	15.130
74) Caprolactam	(2)	7.407	113	61469	16.069
75) 4-Chloro-3-methylphenol	(2)	7.557	107	134603	15.769
76) Safrole	(2)	7.605	162	92715	15.059
77) 2-Methylnaphthalene	(2)	7.686	142	251170	15.154
78) 1-Methylnaphthalene	(2)	7.782	142	231955	15.474
79) Hexachlorocyclopentadiene	(3)	7.846	237	37541	13.529
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	97484	14.461
81) cis-Isosafrole	(3)	7.894	162	16987	1.616
82) 2,4,6-Trichlorophenol	(3)	7.969	196	73717	14.793
83) 2,4,5-Trichlorophenol	(3)	8.012	196	77894	15.005
84)$2-Fluorobiphenyl	(3)	8.049	172	514193	29.457
86) Isosafrole	(3)	8.113	162	98136	14.580
85) trans-Isosafrole	(3)	8.113	162	98136	12.976
87) 1,1'-Biphenyl	(3)	8.145	154	331373	14.902
88) 2-Chloronaphthalene	(3)	8.162	162	237269	14.113
89) 1-Chloronaphthalene	(3)	8.183	162	220038	14.283
90) Diphenyl ether	(3)	8.252	170	159148	14.372
91) 2-Nitroaniline	(3)	8.263	138	90421	15.282
92) 1,4-Naphthoquinone	(3)	8.333	158	103754	14.958
93) 1,4-Dinitrobenzene	(3)	8.402	168	43042	14.431
94) Dimethylphthalate	(3)	8.450	163	291557	15.081
95) 1,3-Dinitrobenzene	(3)	8.472	168	53956	14.875
97) 2,6-Dinitrotoluene	(3)	8.504	165	68167	15.751
99) Acenaphthylene	(3)	8.568	152	360535	14.926
100) 3-Nitroaniline	(3)	8.664	138	82896	15.231
101)*Acenaphthene-d10	(3)	8.707	164	286597	20.000
102) Acenaphthene	(3)	8.734	153	255376	14.731
103) 2,4-Dinitrophenol	(3)	8.771	184	71669	27.446
104) 4-Nitrophenol	(3)	8.862	109	48278	14.744
105) Pentachlorobenzene	(3)	8.868	250	89454	14.764

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.894	165	93216	15.337
107) Dibenzofuran	(3)	8.905	168	347987	14.670
108) 1-Naphthylamine	(3)	8.980	143	296805	15.209
109) 2,3,4,6-Tetrachlorophenol	(3)	9.033	232	62990	14.986
110) 2-Naphthylamine	(3)	9.060	143	300509	15.408
111) Diethylphthalate	(3)	9.146	149	296800	15.066
112) Thionazin	(3)	9.221	107	59205	14.980
113) Fluorene	(3)	9.242	166	307421	15.526
114) 4-Chlorophenyl-phenylether	(3)	9.247	204	136545	15.084
115) 5-Nitro-o-toluidine	(3)	9.253	152	94017	15.281
116) 4-Nitroaniline	(3)	9.263	138	90058	15.355
117) 4,6-Dinitro-2-methylphenol	(4)	9.295	198	51060	13.561
118) N-Nitrosodiphenylamine	(4)	9.365	169	264372	14.592
119) NDPA as diphenylamine	(4)	9.365	169	264372	14.530
120) 1,2-Diphenylhydrazine	(4)	9.402	77	379542	14.407
121)$2,4,6-Tribromophenol	(3)	9.477	330	58627	30.615
122) Tetraethyldithiopyrophosphate	(4)	9.531	97	54342	14.710
123) 1,3,5-Trinitrobenzene	(4)	9.627	213	30653	13.371
124) Diallate (peak 1)	(4)	9.654	86	158585	11.182
125) Phorate	(4)	9.659	75	331331M	15.152
126) Phenacetin	(4)	9.670	108	186357	15.082
127) 4-Bromophenyl-phenylether	(4)	9.729	248	74720	14.548
128) Diallate (peak 2)	(4)	9.739	86	23997	3.678
129) Hexachlorobenzene	(4)	9.777	284	71253	14.712
130) Dimethoate	(4)	9.820	87	159716	15.110
132) Atrazine	(4)	9.894	200	87496	15.062
135) 4-Aminobiphenyl	(4)	9.980	169	308000	17.658
133) Pentachlorophenol	(4)	9.980	266	46077	13.849
134) Pentachloronitrobenzene	(4)	9.985	237	31798	15.195
138) Pronamide	(4)	10.050	173	131873	15.647
142) Dinoseb	(4)	10.162	211	66428	13.506
140)*Phenanthrene-d10	(4)	10.162	188	544867	20.000
143) Phenanthrene	(4)	10.183	178	476909	14.801
144) Anthracene	(4)	10.231	178	479987	15.154
146) Carbazole	(4)	10.392	167	444235	14.970
148) Methyl parathion	(4)	10.536	109	108555	15.044
149) Di-n-butylphthalate	(4)	10.756	149	523119	14.708
151) Parathion	(4)	10.921	109	70146	14.956
152) 4-Nitroquinoline-1-oxide	(4)	10.937	190	28231	11.470
156) Isodrin	(4)	11.200	193	47882	14.922

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.344	202	492878	14.936
162) Benzidine	(5)	11.488	184	1029254	43.075
164)*Pyrene-d10	(5)	11.547	212	628070	20.000
165) Pyrene	(5)	11.569	202	516172	14.367
166)$Terphenyl-d14	(5)	11.729	244	673469	30.062
168) p-Dimethylaminoazobenzene	(5)	11.868	225	95664	14.858
171) Chlorobenzilate	(5)	11.922	139	153236	15.109
172) 3,3'-Dimethylbenzidine	(5)	12.200	212	261699	14.011
173) Butylbenzylphthalate	(5)	12.226	149	240240	14.870
174) 2-Acetylaminofluorene	(5)	12.451	181	193900	14.431
175) 3,3'-Dichlorobenzidine	(5)	12.745	252	162055	14.698
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.751	231	78030	14.997
177) Benzo(a)anthracene	(5)	12.761	228	463998	15.377
178) Chrysene	(5)	12.799	228	439035	14.903
179) bis(2-Ethylhexyl)phthalate	(5)	12.820	149	328804	14.904
181) 6-Methylchrysene	(5)	13.264	242	310639	14.822
183) Di-n-octylphthalate	(6)	13.483	149	508123	13.750
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.842	256	204568	15.105
185) Benzo(b)fluoranthene	(6)	13.847	252	455224M	15.200
186) Benzo(k)fluoranthene	(6)	13.874	252	473791M	14.926
187) Benzo(a)pyrene	(6)	14.168	252	403955M	15.127
188)*Perylene-d12	(6)	14.222	264	495666	20.000
190) 3-Methylcholanthrene	(6)	14.526	268	187964	14.713
191) Dibenz(a,h)acridine	(6)	15.136	279	274951	14.662
192) Dibenz(a,j)acridine	(6)	15.195	279	311498	14.779
193) Indeno(1,2,3-cd)pyrene	(6)	15.414	276	407655	15.050
194) Dibenz(a,h)anthracene	(6)	15.441	278	351160	15.617
196) Benzo(g,h,i)perylene	(6)	15.757	276	338145	14.809
203) 2,4_2,6-Dinitrotoluenes	(3)			161383	15.185
204) Diallate TRANS/CIS	(4)			182582	14.883

M = Compound was manually integrated.
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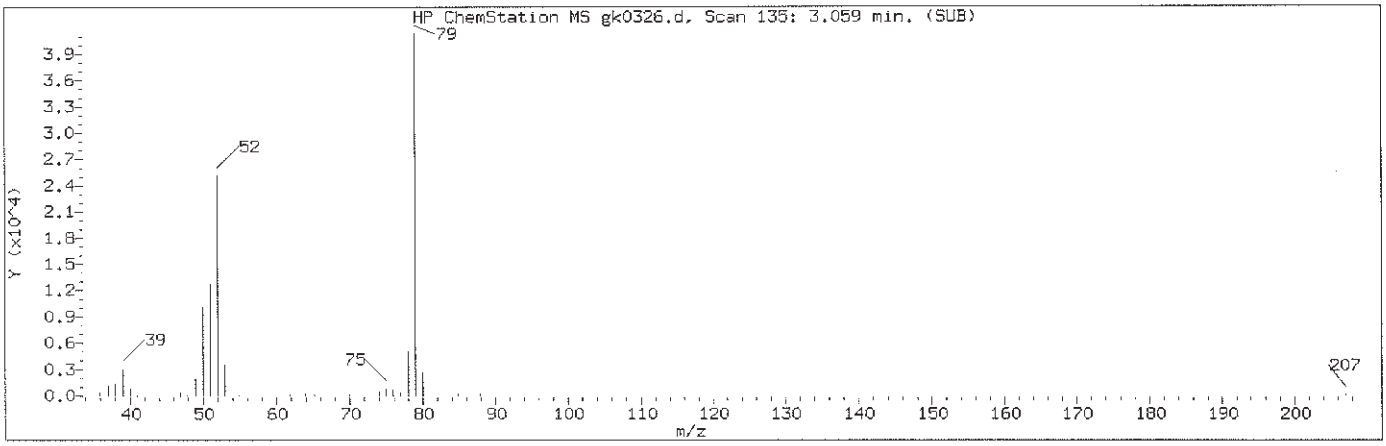
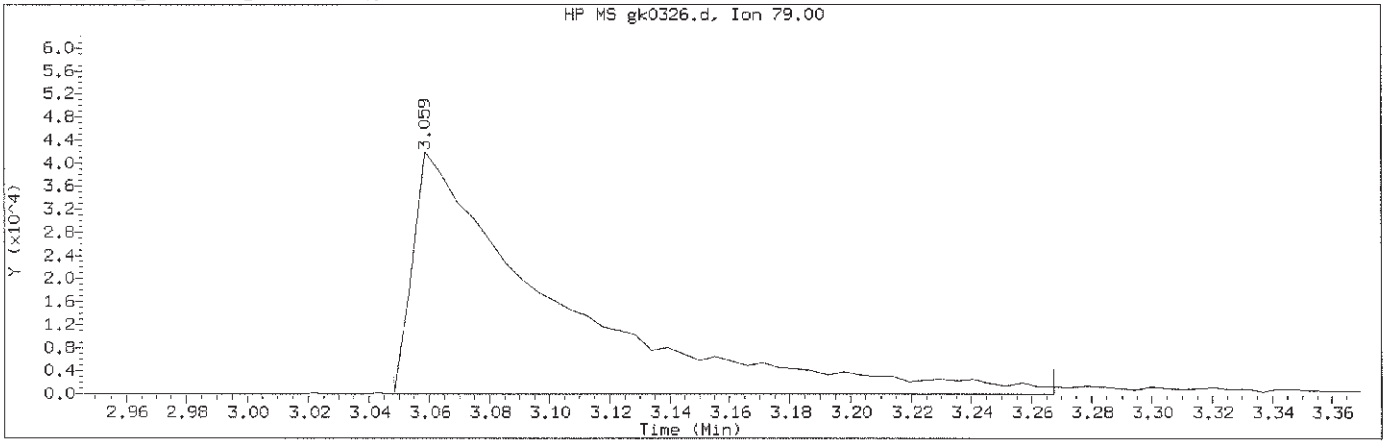
on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 135		
Retention Time (minutes)	: 3.059		
Quant Ion	: 79.00		
Area (flag)	: 136298M		
On-Column Amount (ng/ul)	: 14.7813		
Integration start scan	: 132	Integration stop scan:	173
Y at integration start	: 18	Y at integration end:	18

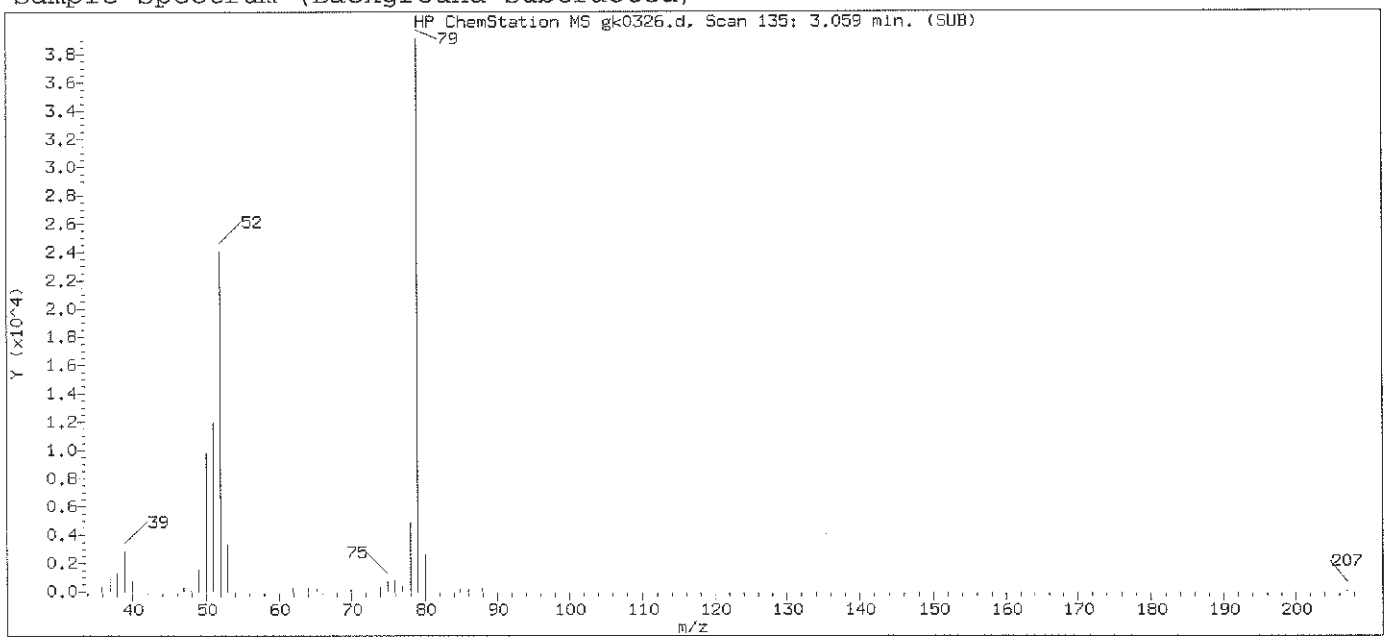
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47. Target 3.5 esignature user ID: lmh00956

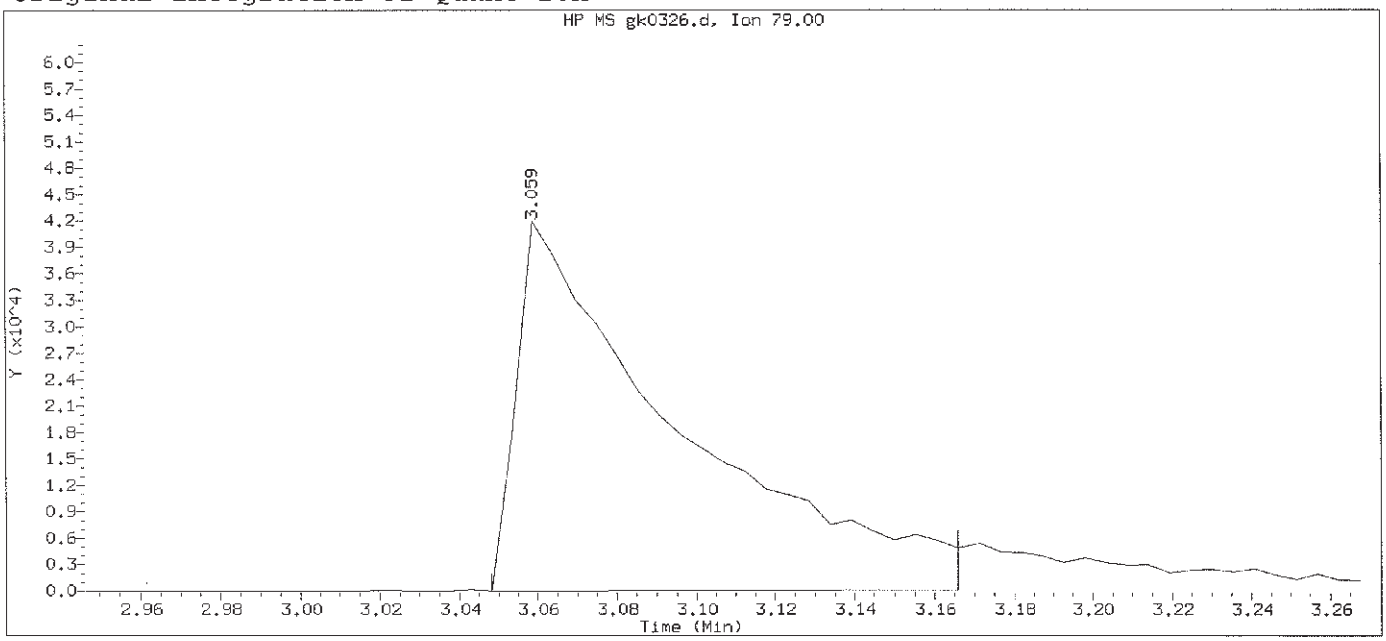
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:58
Date, time and analyst ID of latest file update: 09-Nov-2013 22:58 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 135		
Retention Time (minutes)	: 3.059		
Quant Ion	: 79.00		
Area	: 117904		
On-column Amount (ng/ul)	: 13.3238		
Integration start scan	: 132	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	108

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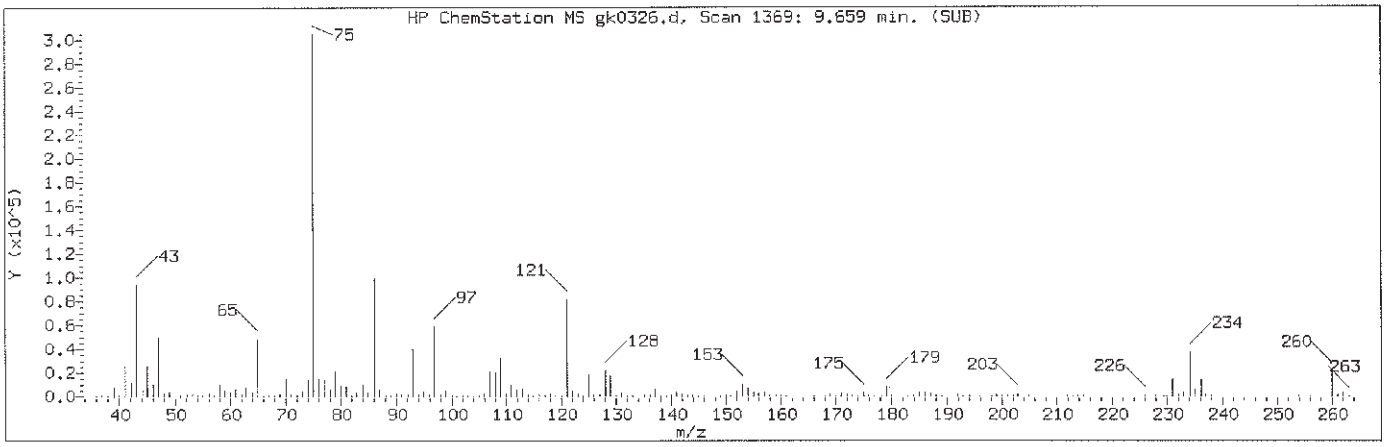
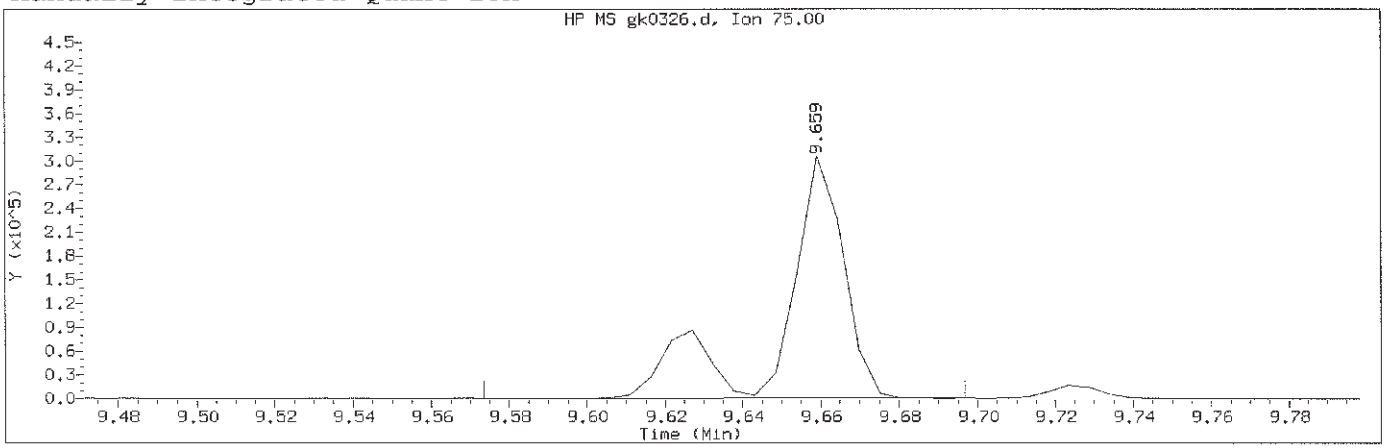
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area (flag)	: 331331M		
On-Column Amount (ng/ul)	: 15.1518		
Integration start scan	: 1352	Integration stop scan:	1375
Y at integration start	: 191	Y at integration end:	403

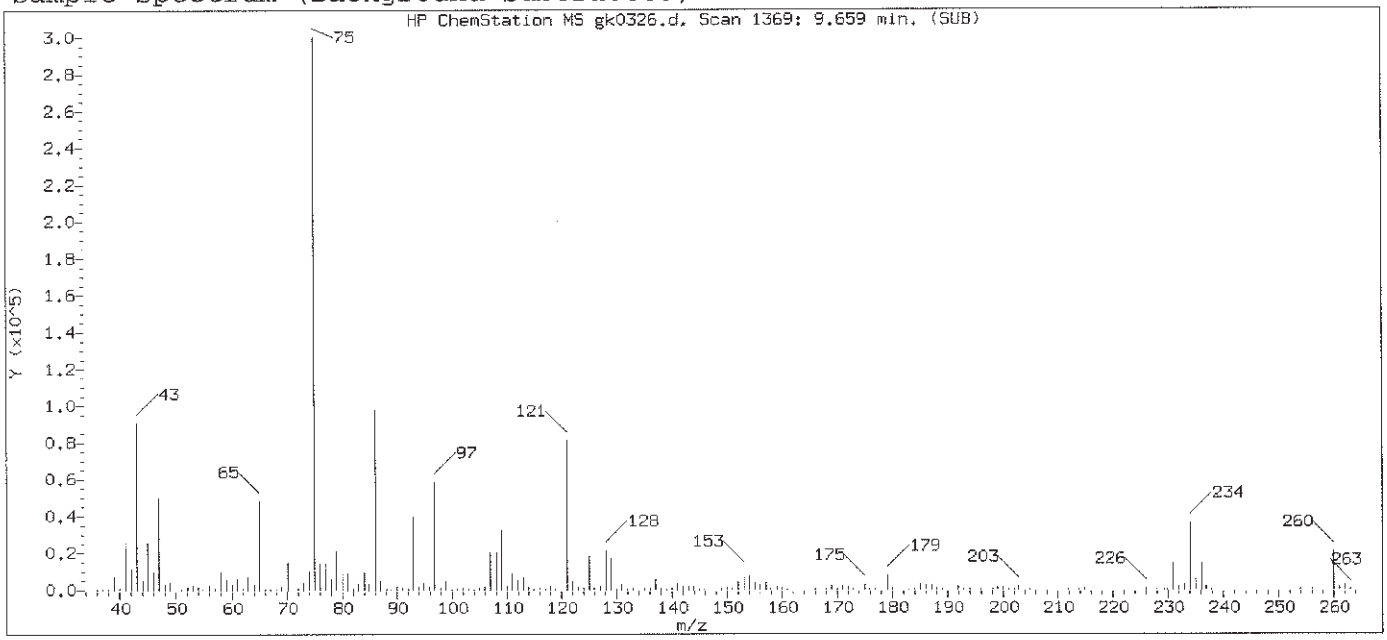
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47. Target 3.5 esignature user ID: lmh00956

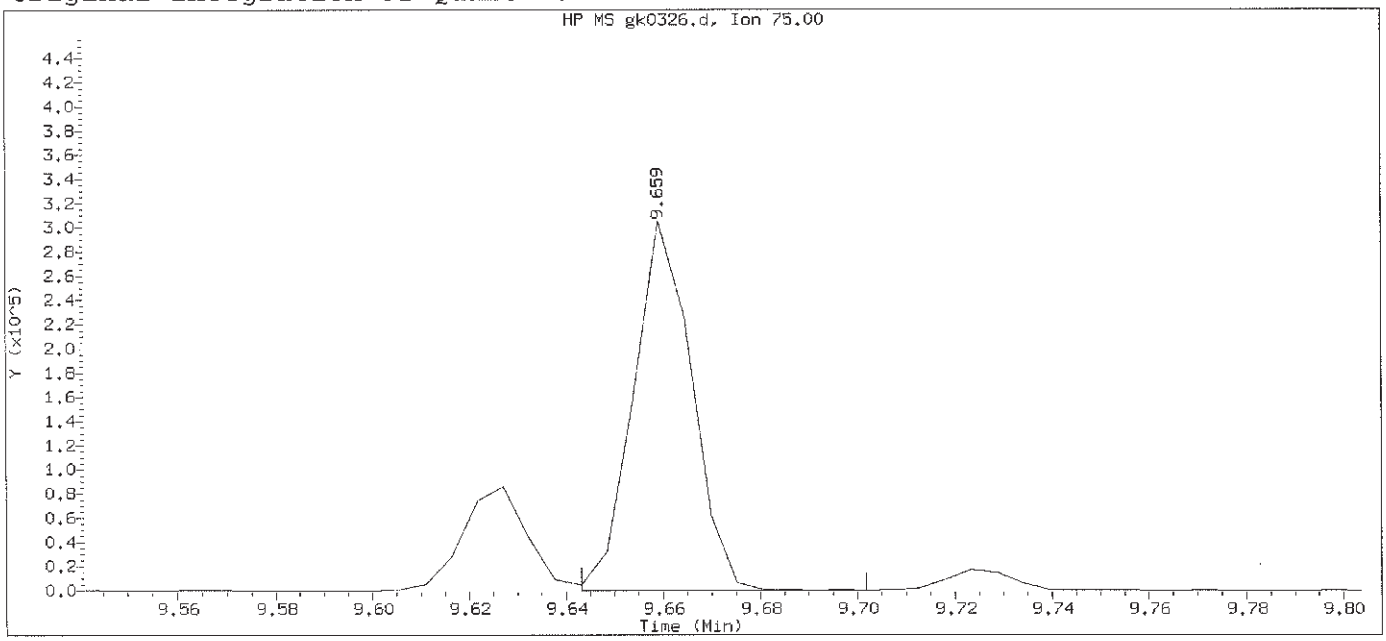
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:58
Date, time and analyst ID of latest file update: 09-Nov-2013 22:58 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area	: 253623		
On-column Amount (ng/ul)	: 13.5411		
Integration start scan	: 1365	Integration stop scan:	1376
Y at integration start	: 0	Y at integration end:	0

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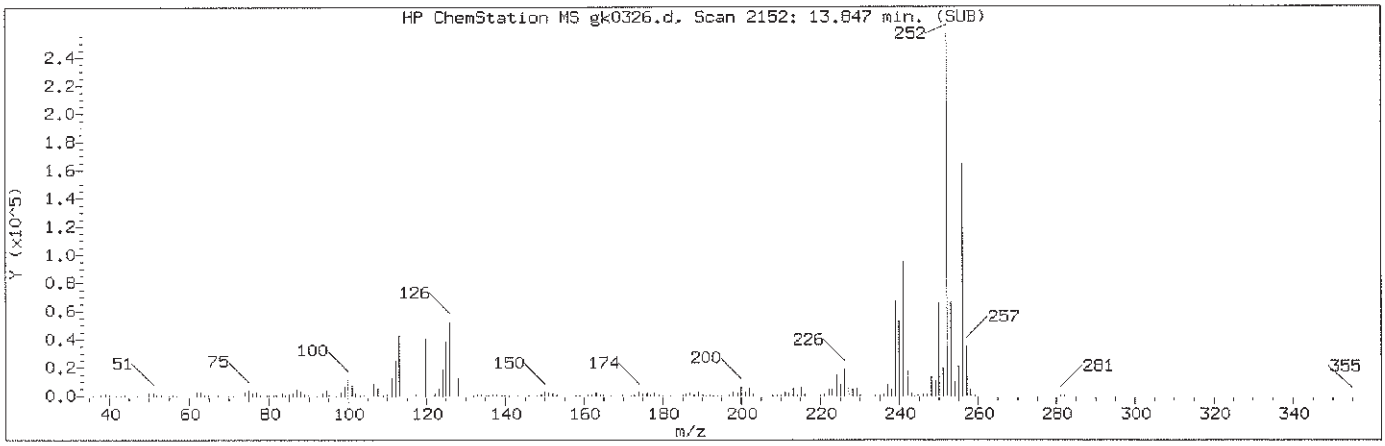
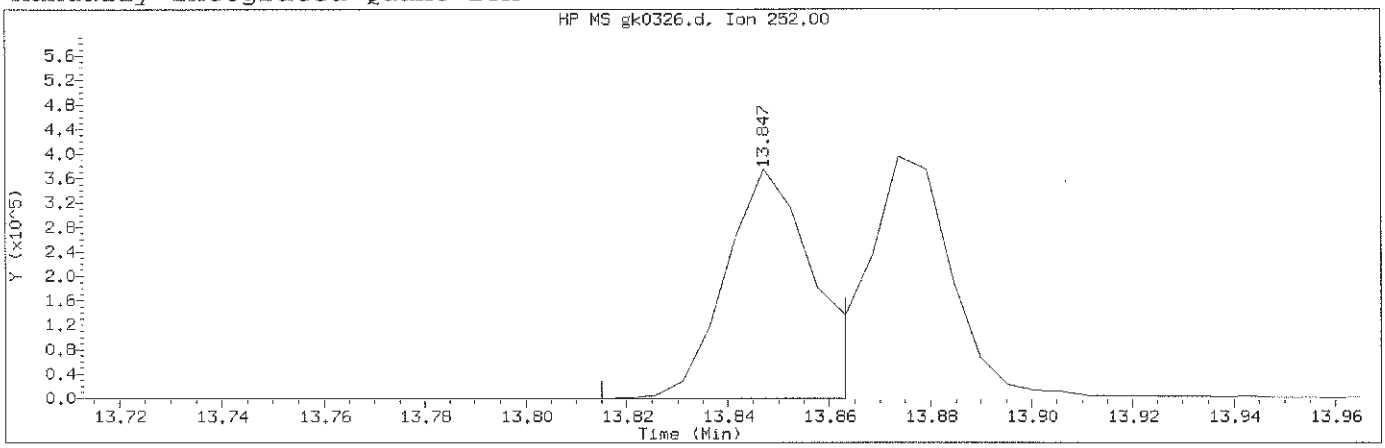
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area (flag)	: 455224M		
On-Column Amount (ng/ul)	: 15.1999		
Integration start scan	: 2145	Integration stop scan:	2154
Y at integration start	: 0	Y at integration end:	376

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47. Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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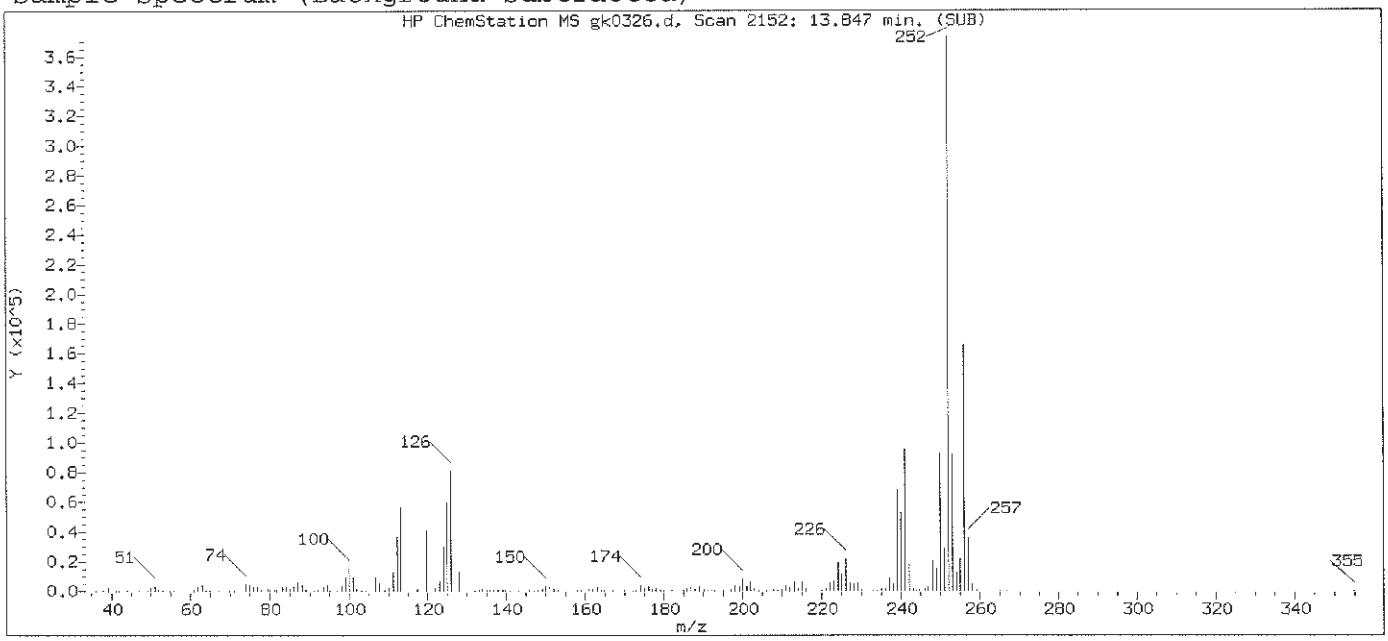
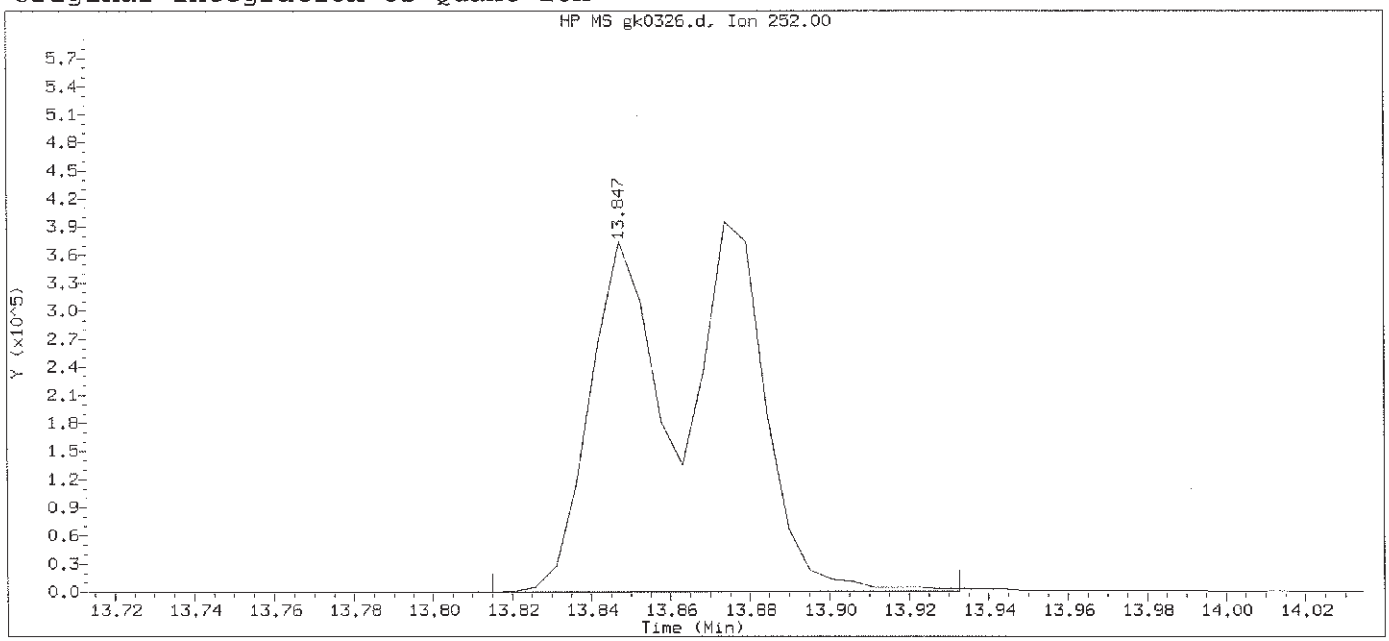
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:58
Date, time and analyst ID of latest file update: 09-Nov-2013 22:58 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area	: 879441		
On-column Amount (ng/ul)	: 24.6683		
Integration start scan	: 2145	Integration stop scan:	2167
Y at integration start	: 0	Y at integration end:	921

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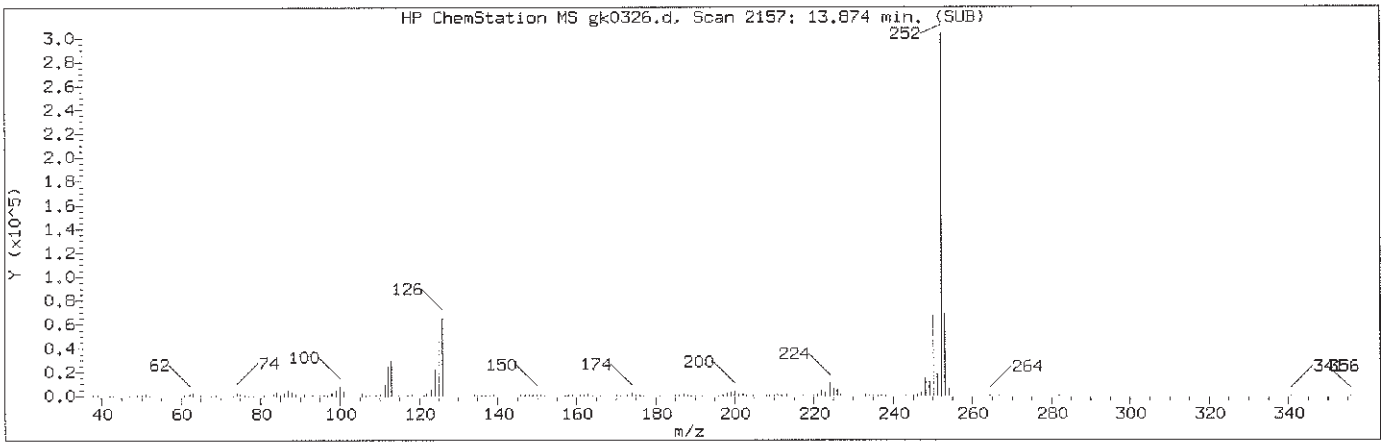
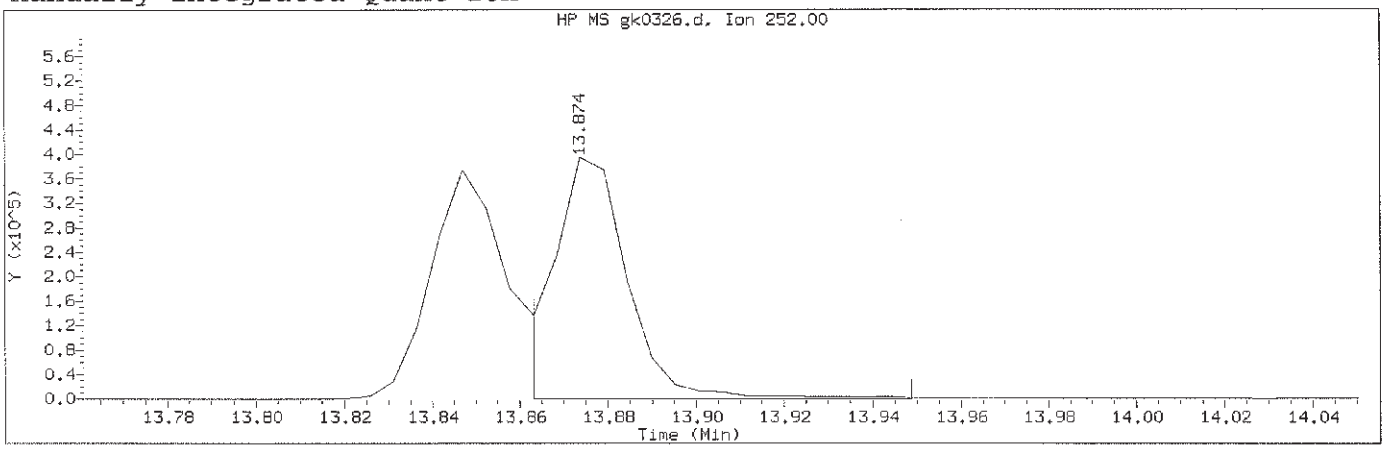
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area (flag)	: 473791M		
On-Column Amount (ng/ul)	: 14.9265		
Integration start scan	: 2154	Integration stop scan:	2170
Y at integration start	: 0	Y at integration end:	0

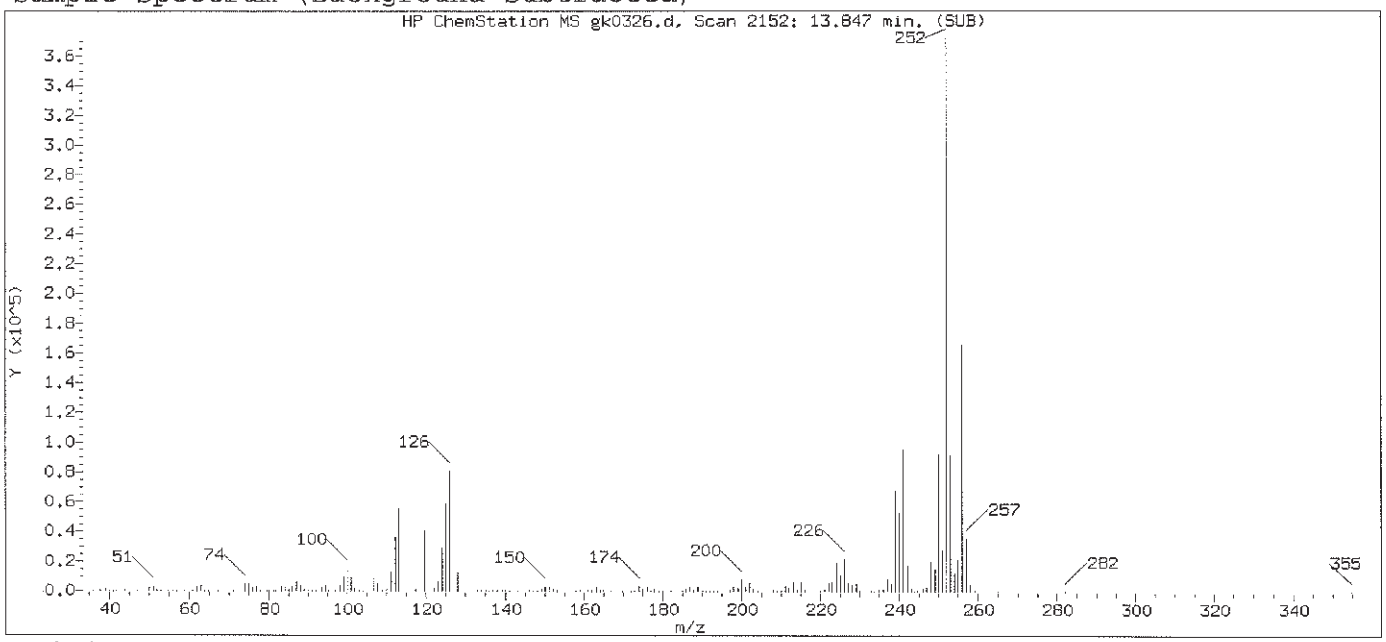
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47. Target 3.5 esignature user ID: lmh00956

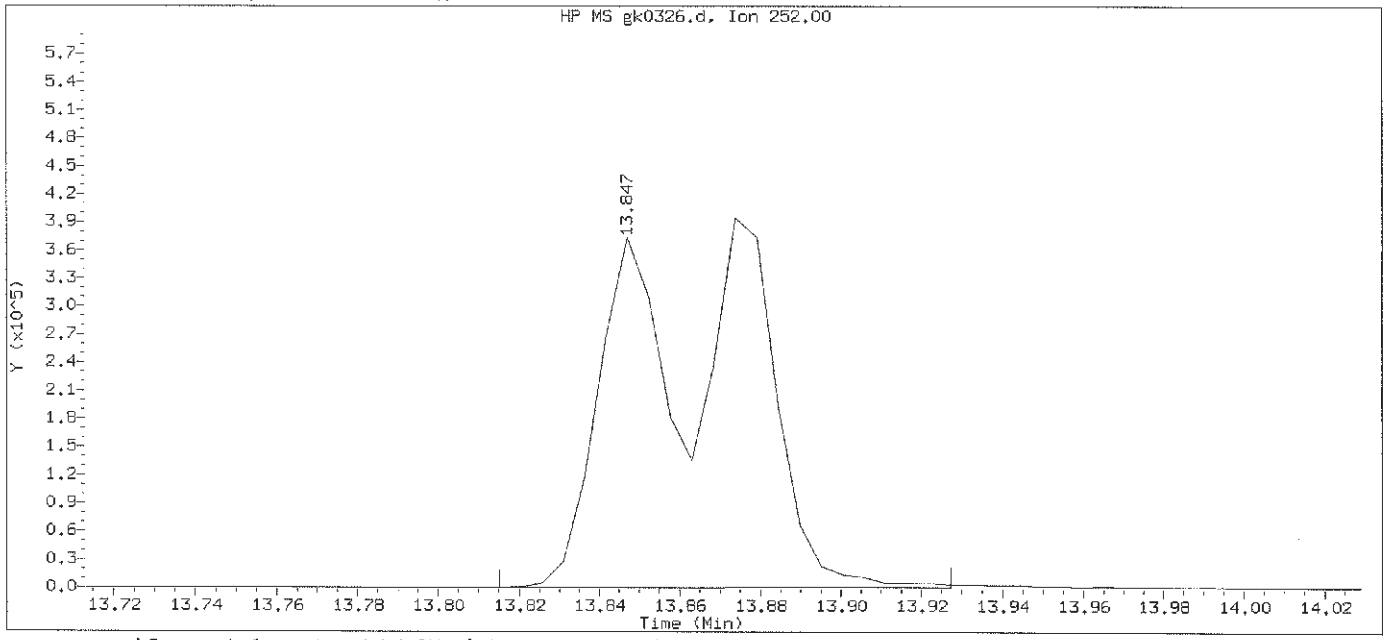
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

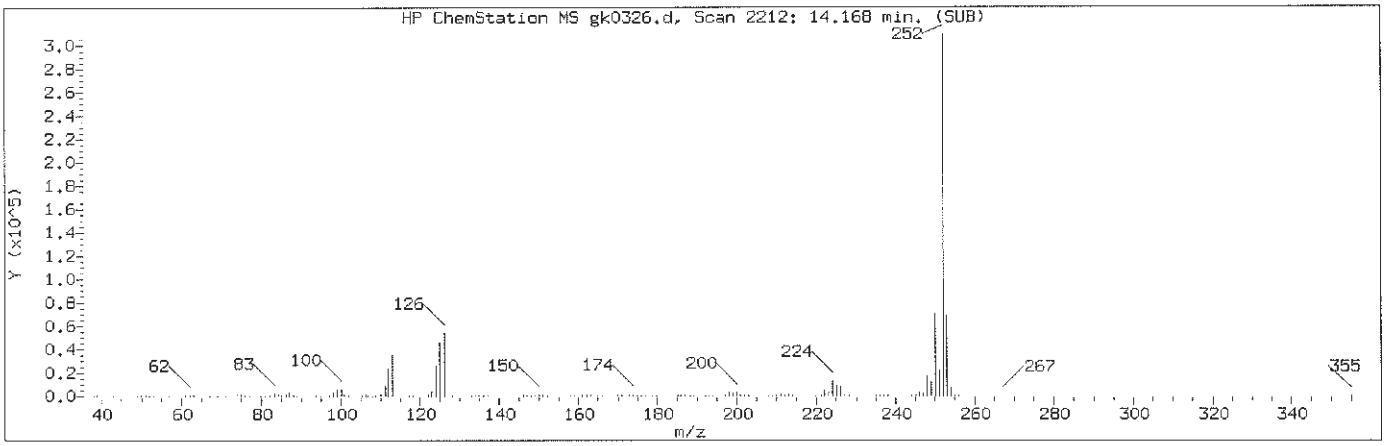
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:58
Date, time and analyst ID of latest file update: 09-Nov-2013 22:58 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

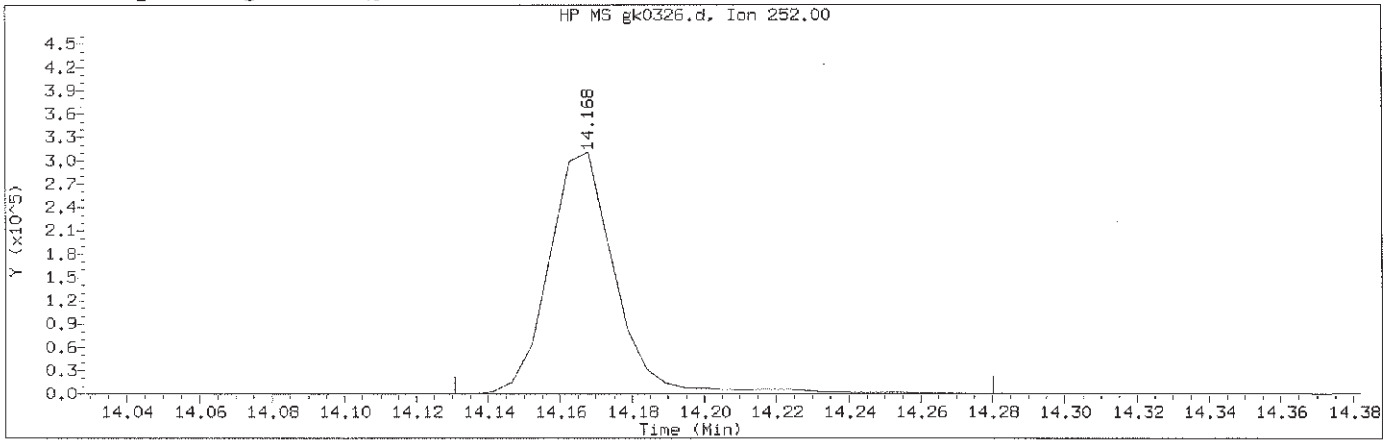
Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area	: 878582		
On-column Amount (ng/ul)	: 24.1173		
Integration start scan	: 2145	Integration stop scan:	2166
Y at integration start	: 0	Y at integration end:	857

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2212		
Retention Time (minutes)	: 14.168		
Quant Ion	: 252.00		
Area (flag)	: 403955M		
On-Column Amount (ng/ul)	: 15.1265		
Integration start scan	: 2204	Integration stop scan:	2232
Y at integration start	: 72	Y at integration end:	72

Reason for manual integration: improper integration

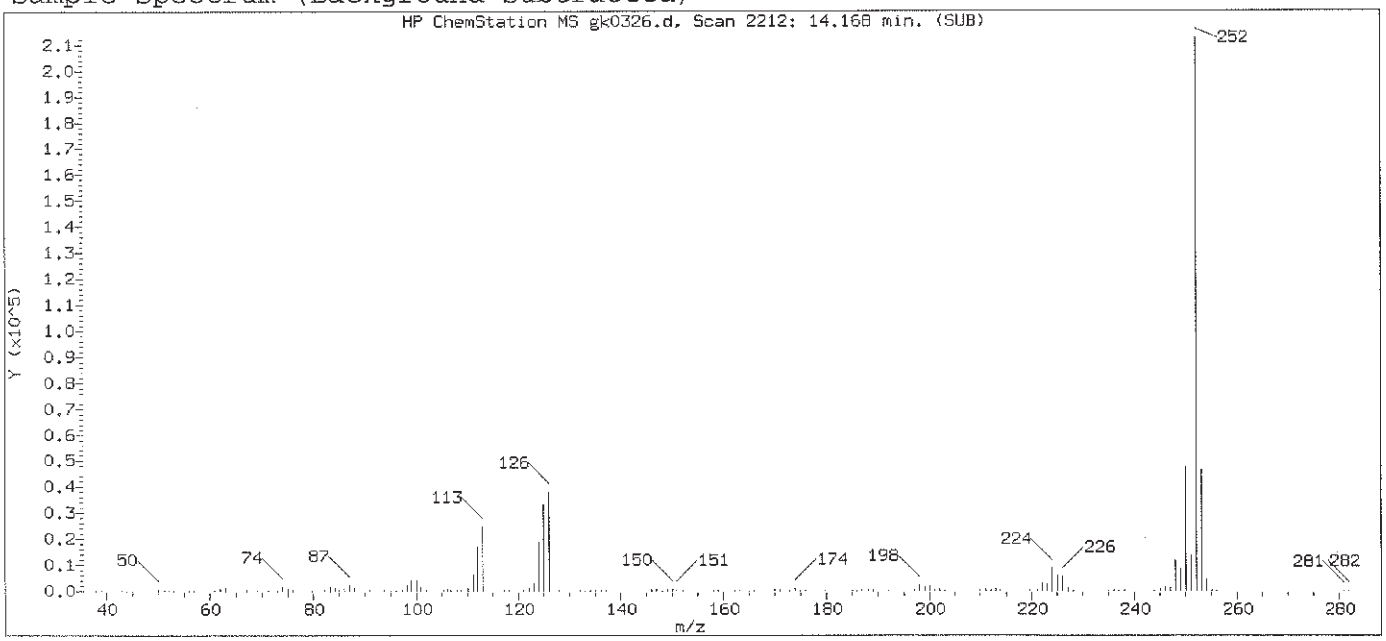
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

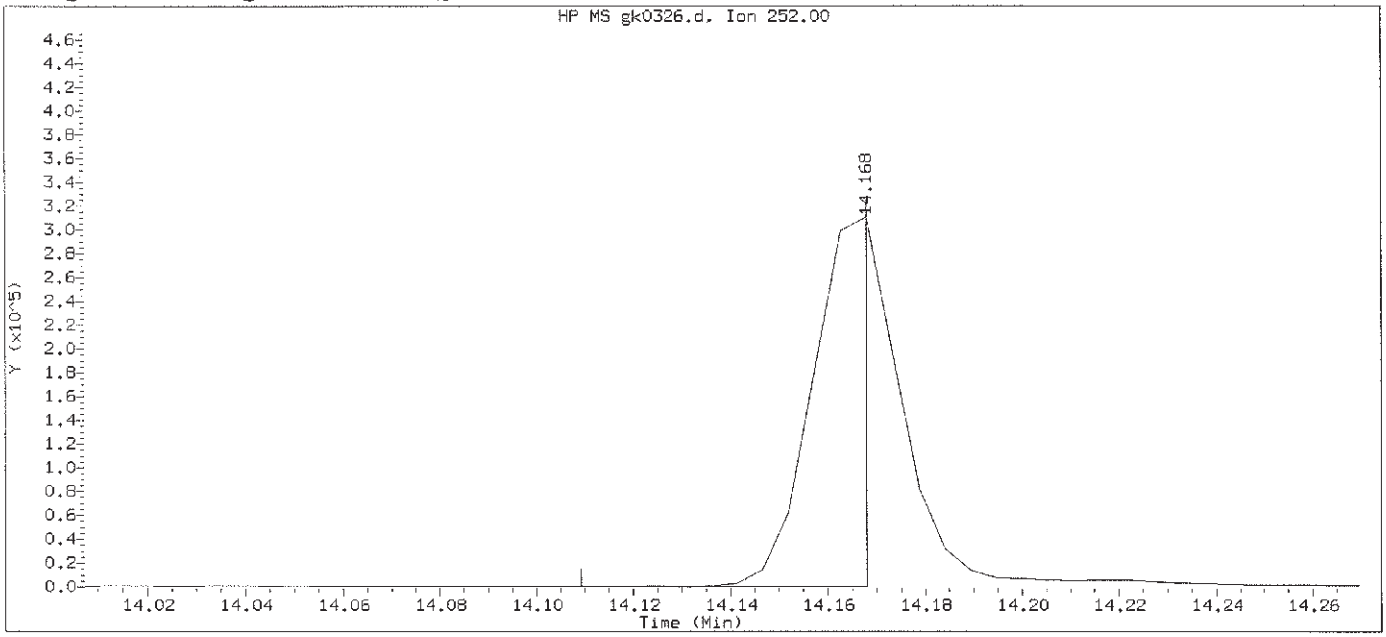
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



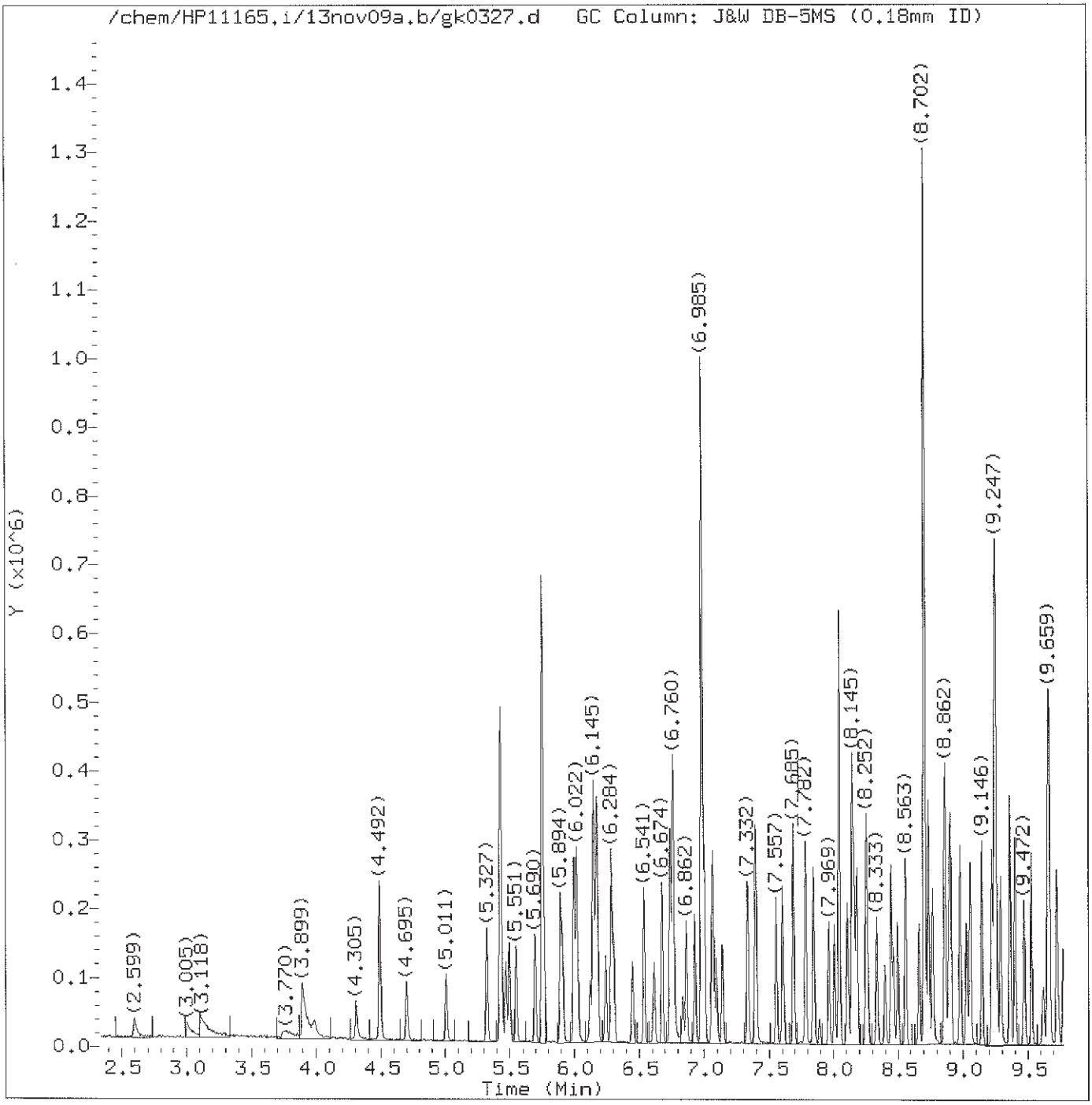
Data File: /chem/HP11165.i/13nov09a.b/gk0326.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 22:35 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 22:58
Date, time and analyst ID of latest file update: 09-Nov-2013 22:58 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 2212		
Retention Time (minutes)	: 14.168		
Quant Ion	: 252.00		
Area	: 230275		
On-column Amount (ng/ul)	: 9.0795		
Integration start scan	: 2200	Integration stop scan:	2211
Y at integration start	: 338	Y at integration end:	318

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:47.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

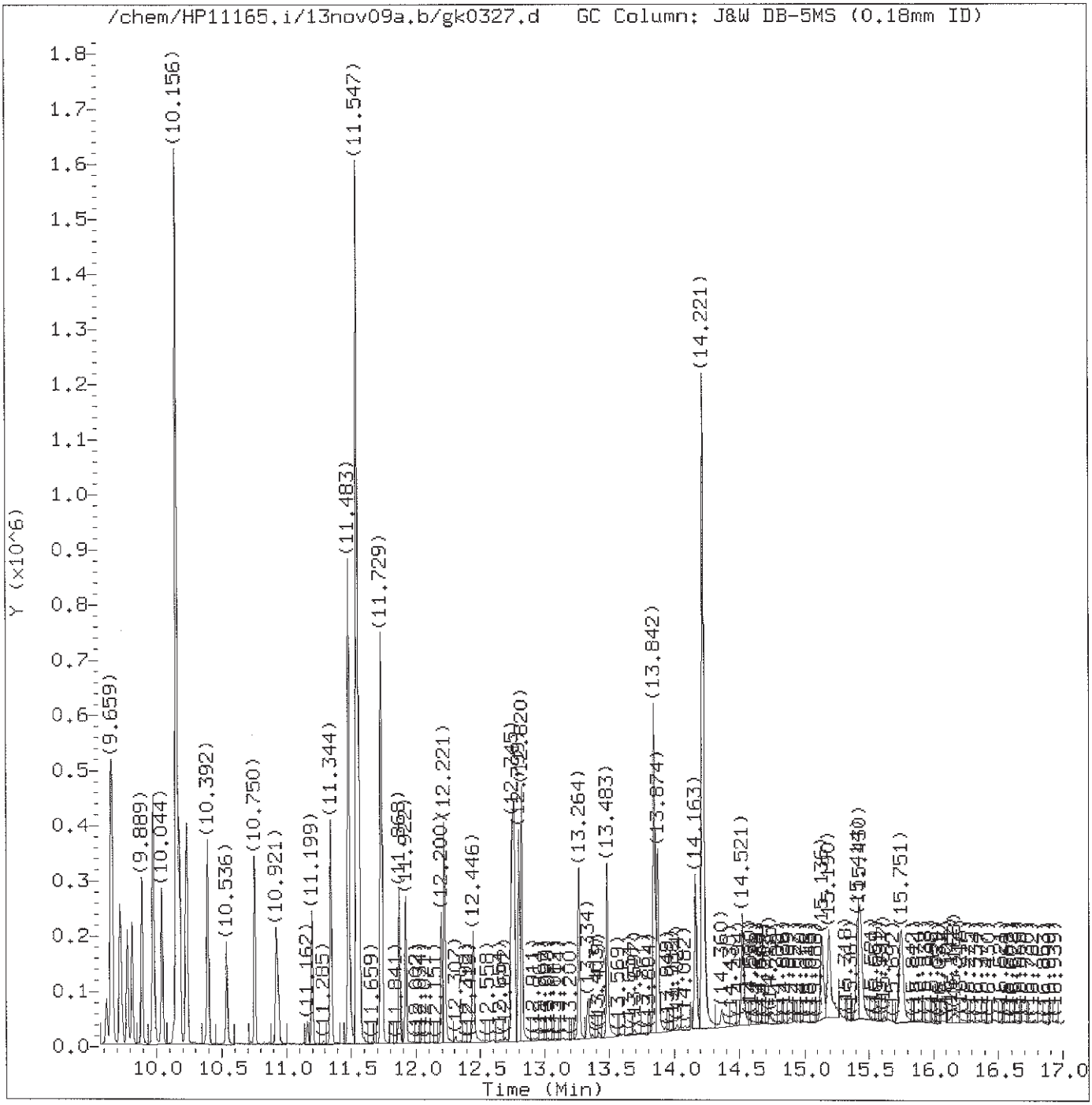
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.599	88	17823	5.279
3) N-Nitrosodimethylamine	(1)	3.011	74	28033M	4.734
4) Pyridine	(1)	3.102	79	46152M	4.808
7) 2-Picoline	(1)	3.893	93	48332M	4.897
8) N-Nitrosomethylethylamine	(1)	3.989	88	28930	5.713
9) Methyl methanesulfonate	(1)	4.305	80	23114	4.827
10)$2-Fluorophenol	(1)	4.492	112	71729	9.408
11) N-Nitrosodiethylamine	(1)	4.695	102	22197	4.850
14) Ethyl methanesulfonate	(1)	5.011	109	22208	4.815
17)$Phenol-d6	(1)	5.428	99	106046	9.244
16)$Phenol-d5	(1)	5.428	99	106046	9.244
19) Aniline	(1)	5.434	93	72800	4.807
18) Phenol	(1)	5.444	94	65427	4.797
20) bis(2-Chloroethyl)ether	(1)	5.503	93	47406	4.870
21) 2-Chlorophenol	(1)	5.551	128	36943	4.809
24) 1,3-Dichlorobenzene	(1)	5.690	146	38126	4.956
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	96220	20.000
26) 1,4-Dichlorobenzene	(1)	5.765	146	37951	4.876
27) Benzyl alcohol	(1)	5.894	108	32023	5.055
28) 1,2-Dichlorobenzene	(1)	5.910	146	36481	4.772
29) Indene	(1)	6.001	115	87098	6.221
30) 2-Methylphenol	(1)	6.017	108	40933	4.737
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	63401	4.857
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	63401	4.857
34) N-Nitrosopyrrolidine	(1)	6.118	100	25777	4.666
35) Acetophenone	(1)	6.145	105	70719	5.179
37) N-Nitroso-di-n-propylamine	(1)	6.150	70	38093	4.680
38) N-Nitrosomorpholine	(1)	6.161	56	30319	4.842
36) 4-Methylphenol	(1)	6.172	108	49423	4.801
39) o-Toluidine	(1)	6.177	106	71998	4.825
40) Hexachloroethane	(1)	6.241	117	14759	4.852
41)$Nitrobenzene-d5	(2)	6.284	82	95967	9.354
42) Nitrobenzene	(2)	6.305	77	52626	4.803
44) N-Nitrosopiperidine	(2)	6.450	114	24328	5.002
45) Isophorone	(2)	6.541	82	96239	4.816
48) 2-Nitrophenol	(2)	6.616	139	18991	4.461
52) 2,4-Dimethylphenol	(2)	6.674	107	45220	4.802
53) O,O,O-triethylphosphorothioate	(2)	6.739	198	19120	4.934
55) bis(2-Chloroethoxy)methane	(2)	6.760	93	60728	4.980
54) Benzoic acid	(2)	6.765	105	115706	14.154

M = Compound was manually integrated.
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on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.862	162	29709	4.624
62) 1,2,4-Trichlorobenzene	(2)	6.931	180	33308	4.964
63)*Naphthalene-d8	(2)	6.985	136	465396	20.000
64) Naphthalene	(2)	7.006	128	119462	4.872
65) 4-Chloroaniline	(2)	7.065	127	48652	4.714
66) 2,6-Dichlorophenol	(2)	7.076	162	31206	4.885
67) Hexachloropropene	(2)	7.097	213	16999	4.767
69) Hexachlorobutadiene	(2)	7.140	225	15493	4.893
70) Quinoline	(2)	7.332	129	85376	4.870
74) Caprolactam	(2)	7.391	113	21690	5.443
73) N-Nitrosodi-n-butylamine	(2)	7.402	84	51489	4.968
75) 4-Chloro-3-methylphenol	(2)	7.557	107	40443	4.548
76) Safrole	(2)	7.605	162	30018	4.680
77) 2-Methylnaphthalene	(2)	7.685	142	86879	5.031
78) 1-Methylnaphthalene	(2)	7.782	142	76788	4.917
79) Hexachlorocyclopentadiene	(3)	7.846	237	11408	4.170
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	33256	5.004
81) cis-Isosafrole	(3)	7.889	162	5180	0.500
82) 2,4,6-Trichlorophenol	(3)	7.969	196	23523	4.788
83) 2,4,5-Trichlorophenol	(3)	8.012	196	25476	4.978
84)$2-Fluorobiphenyl	(3)	8.049	172	171905	9.989
86) Isosafrole	(3)	8.113	162	31512	4.749
85) trans-Isosafrole	(3)	8.113	162	31512	4.226
87) 1,1'-Biphenyl	(3)	8.145	154	119335	5.443
88) 2-Chloronaphthalene	(3)	8.161	162	80762	4.872
89) 1-Chloronaphthalene	(3)	8.183	162	71659	4.718
90) Diphenyl ether	(3)	8.252	170	53994	4.946
91) 2-Nitroaniline	(3)	8.263	138	26019	4.460
92) 1,4-Naphthoquinone	(3)	8.333	158	30028	4.391
93) 1,4-Dinitrobenzene	(3)	8.397	168	12087	4.110
94) Dimethylphthalate	(3)	8.450	163	94870	4.977
95) 1,3-Dinitrobenzene	(3)	8.466	168	15620	4.368
97) 2,6-Dinitrotoluene	(3)	8.498	165	20910	4.901
99) Acenaphthylene	(3)	8.563	152	114544	4.810
100) 3-Nitroaniline	(3)	8.664	138	24897	4.640
101)*Acenaphthene-d10	(3)	8.702	164	282557	20.000
102) Acenaphthene	(3)	8.734	153	82992	4.856
103) 2,4-Dinitrophenol	(3)	8.766	184	29276	11.372
104) 4-Nitrophenol	(3)	8.857	109	30625	9.486
105) Pentachlorobenzene	(3)	8.867	250	29305	4.906

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$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.894	165	28430	4.745
107) Dibenzofuran	(3)	8.905	168	115600	4.943
108) 1-Naphthylamine	(3)	8.980	143	91541	4.758
109) 2,3,4,6-Tetrachlorophenol	(3)	9.033	232	18326	4.422
110) 2-Naphthylamine	(3)	9.060	143	89603	4.660
111) Diethylphthalate	(3)	9.146	149	97335	5.012
112) Thionazin	(3)	9.220	107	21362	5.482
113) Fluorene	(3)	9.242	166	99709	5.108
114) 4-Chlorophenyl-phenylether	(3)	9.247	204	44363	4.971
115) 5-Nitro-o-toluidine	(3)	9.253	152	30990	5.109
116) 4-Nitroaniline	(3)	9.258	138	29376	5.080
117) 4,6-Dinitro-2-methylphenol	(4)	9.290	198	31095	8.478
118) N-Nitrosodiphenylamine	(4)	9.360	169	85953	4.871
119) NDPA as diphenylamine	(4)	9.360	169	85953	4.850
120) 1,2-Diphenylhydrazine	(4)	9.402	77	122977	4.792
121)$2,4,6-Tribromophenol	(3)	9.477	330	17884	9.472
122) Tetraethyldithiopyrophosphate	(4)	9.531	97	17071	4.744
123) 1,3,5-Trinitrobenzene	(4)	9.622	213	7210	3.229
124) Diallate (peak 1)	(4)	9.654	86	50867	3.682
125) Phorate	(4)	9.659	75	95548M	4.486
126) Phenacetin	(4)	9.664	108	58367	4.850
127) 4-Bromophenyl-phenylether	(4)	9.729	248	24530	4.903
128) Diallate (peak 2)	(4)	9.739	86	8762	1.379
129) Hexachlorobenzene	(4)	9.777	284	23760	5.037
130) Dimethoate	(4)	9.814	87	49959	4.852
132) Atrazine	(4)	9.894	200	30584	5.405
133) Pentachlorophenol	(4)	9.975	266	13953	4.305
135) 4-Aminobiphenyl	(4)	9.980	169	90547	5.330
134) Pentachloronitrobenzene	(4)	9.985	237	9695	4.756
138) Pronamide	(4)	10.044	173	38778	4.724
140)*Phenanthrene-d10	(4)	10.156	188	530723	20.000
142) Dinoseb	(4)	10.162	211	15663	3.269
143) Phenanthrene	(4)	10.178	178	151608	4.831
144) Anthracene	(4)	10.231	178	151842	4.922
146) Carbazole	(4)	10.392	167	144854	5.012
148) Methyl parathion	(4)	10.536	109	29408	4.184
149) Di-n-butylphthalate	(4)	10.750	149	156357	4.513
151) Parathion	(4)	10.921	109	17794	3.895
152) 4-Nitroquinoline-1-oxide	(4)	10.937	190	5715	2.384
156) Isodrin	(4)	11.199	193	15630	5.001

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on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.344	202	153898	4.788
162) Benzidine	(5)	11.483	184	347814	14.803
164)*Pyrene-d10	(5)	11.547	212	617604	20.000
165) Pyrene	(5)	11.568	202	175375	4.964
166)$Terphenyl-d14	(5)	11.729	244	222358	10.094
168) p-Dimethylaminoazobenzene	(5)	11.868	225	28003	4.423
171) Chlorobenzilate	(5)	11.922	139	46653	4.678
172) 3,3'-Dimethylbenzidine	(5)	12.200	212	81776	4.452
173) Butylbenzylphthalate	(5)	12.221	149	73565	4.631
174) 2-Acetylaminofluorene	(5)	12.446	181	51206	3.876
175) 3,3'-Dichlorobenzidine	(5)	12.740	252	51142	4.717
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.751	231	21522	4.206
177) Benzo(a)anthracene	(5)	12.761	228	144357	4.865
178) Chrysene	(5)	12.799	228	148980	5.143
179) bis(2-Ethylhexyl)phthalate	(5)	12.820	149	97271	4.484
181) 6-Methylchrysene	(5)	13.264	242	97083	4.711
183) Di-n-octylphthalate	(6)	13.483	149	144781	3.976
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.842	256	63678	4.772
185) Benzo(b)fluoranthene	(6)	13.847	252	132632	4.495
186) Benzo(k)fluoranthene	(6)	13.874	252	154563	4.942
187) Benzo(a)pyrene	(6)	14.163	252	127041	4.828
188)*Perylene-d12	(6)	14.221	264	488351	20.000
190) 3-Methylcholanthrene	(6)	14.526	268	57834	4.595
191) Dibenz(a,h)acridine	(6)	15.131	279	81909M	4.433
192) Dibenz(a,j)acridine	(6)	15.190	279	90534	4.360
193) Indeno(1,2,3-cd)pyrene	(6)	15.409	276	127099	4.762
194) Dibenz(a,h)anthracene	(6)	15.436	278	107550	4.855
196) Benzo(g,h,i)perylene	(6)	15.751	276	109605	4.872
203) 2,4_2,6-Dinitrotoluenes	(3)			49340	4.709
204) Diallate TRANS/CIS	(4)			59629	4.990

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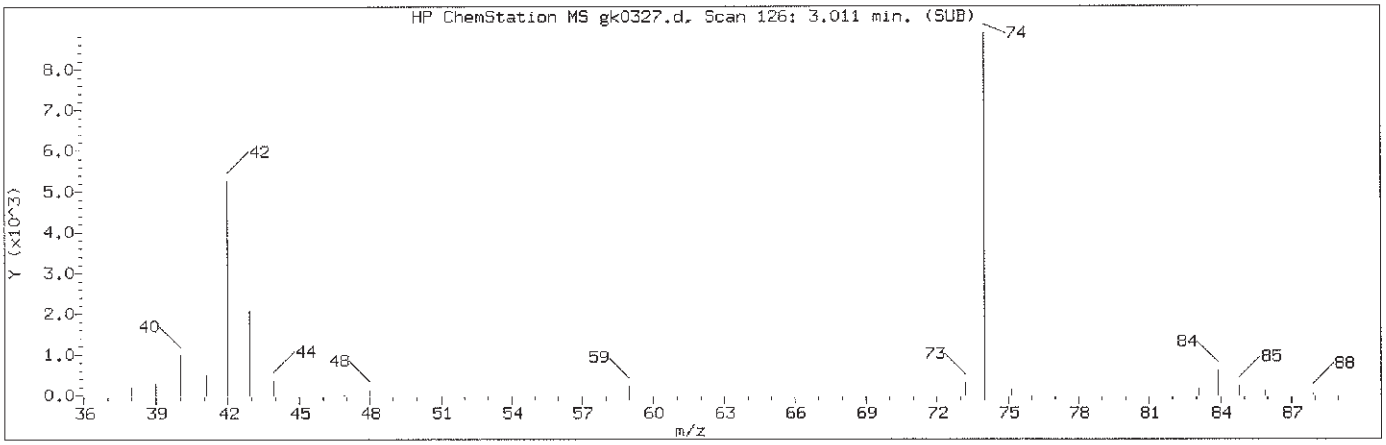
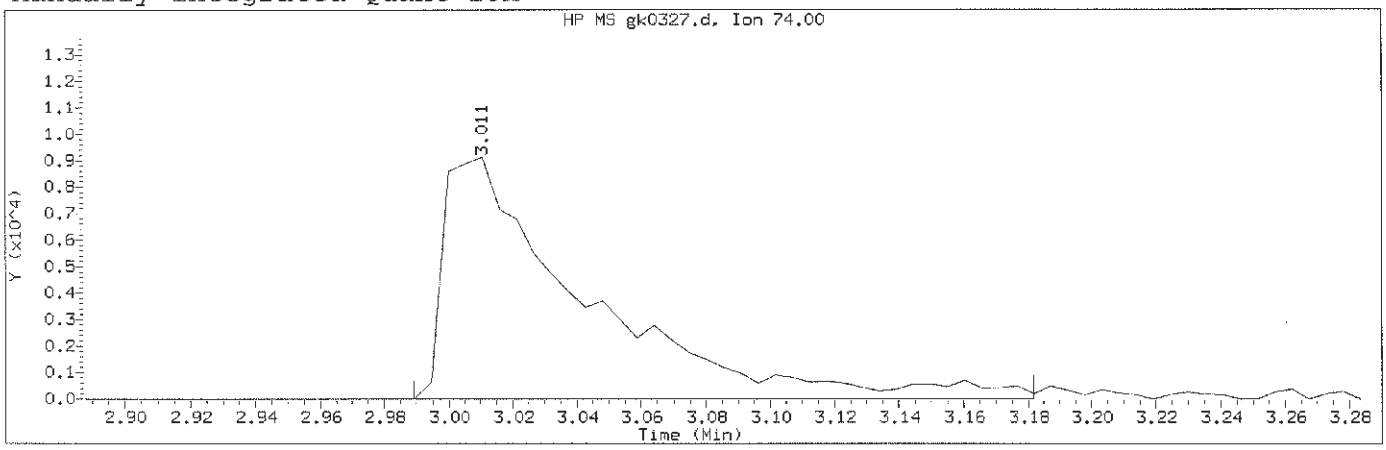
on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 126		
Retention Time (minutes)	: 3.011		
Quant Ion	: 74.00		
Area (flag)	: 28033M		
On-Column Amount (ng/ul)	: 4.7341		
Integration start scan	: 121	Integration stop scan:	157
Y at integration start	: -1	Y at integration end:	-1

Reason for manual integration: improper integration

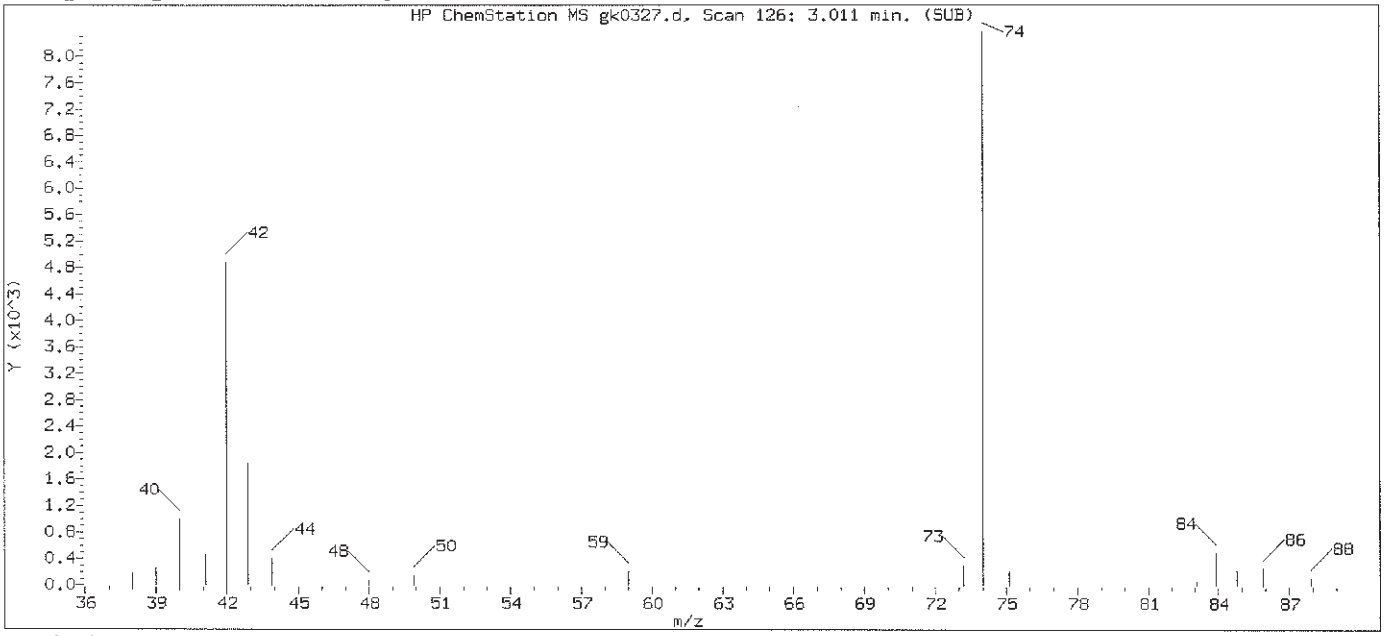
Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:48.
Target 3.5 signature user ID: lmh00956

NOV 11 2013

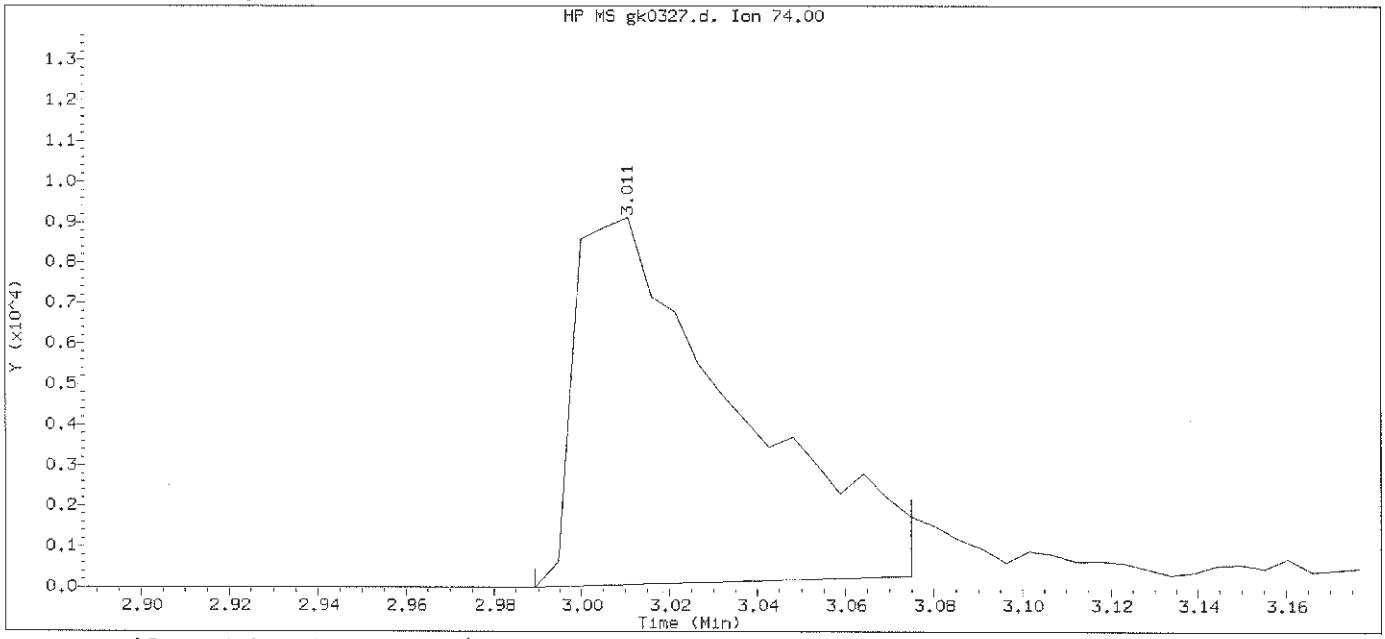
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

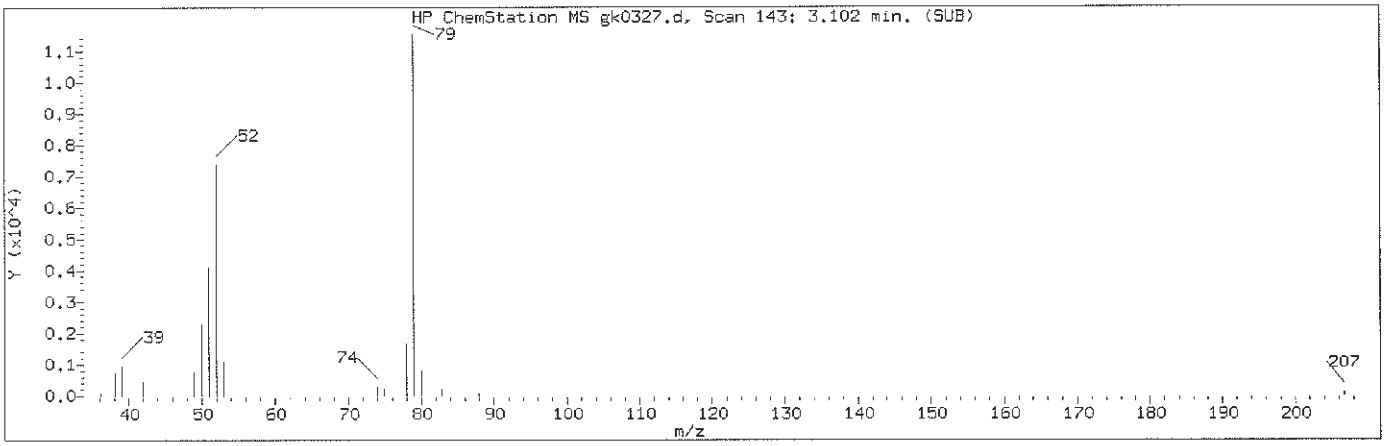
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:24
Date, time and analyst ID of latest file update: 09-Nov-2013 23:24 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

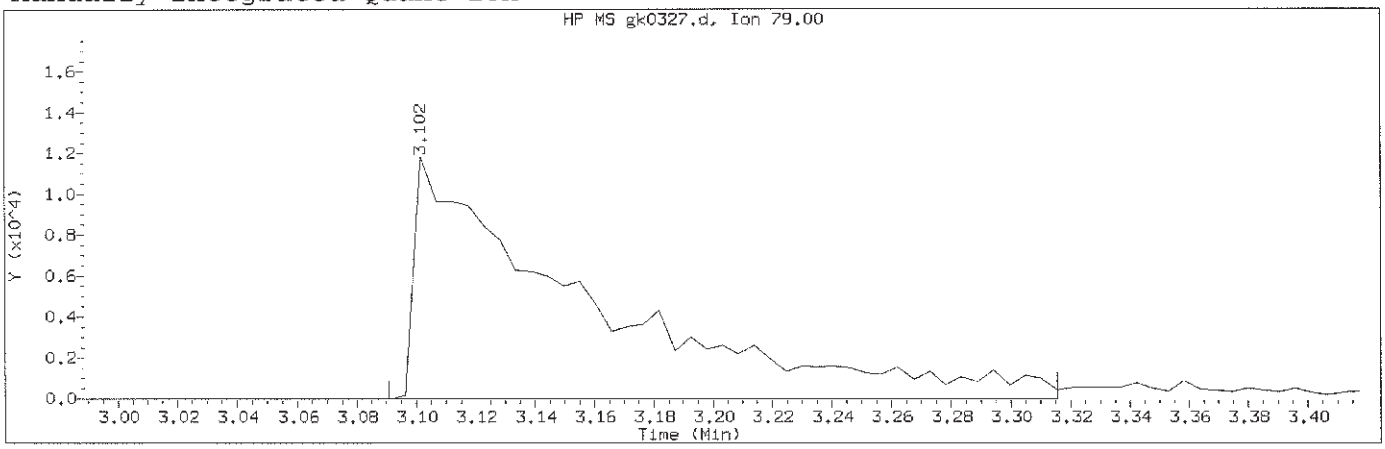
Compound Number	: 3		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 126		
Retention Time (minutes)	: 3.011		
Quant Ion	: 74.00		
Area	: 23002		
On-column Amount (ng/ul)	: 3.9978		
Integration start scan	: 121	Integration stop scan:	137
Y at integration start	: 0	Y at integration end:	271

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 143		
Retention Time (minutes)	: 3.102		
Quant Ion	: 79.00		
Area (flag)	: 46152M		
On-Column Amount (ng/ul)	: 4.8077		
Integration start scan	: 140	Integration stop scan:	182
Y at integration start	: 9	Y at integration end:	9

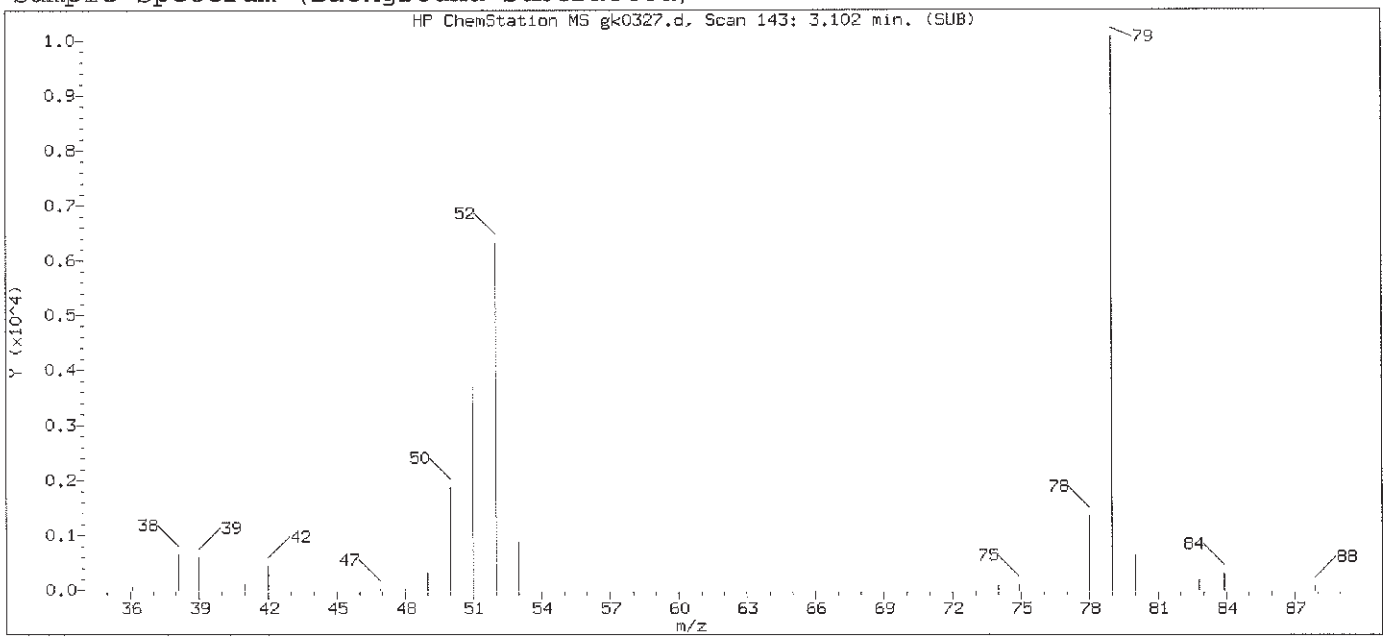
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:48. Target 3.5 esignature user ID: lmh00956

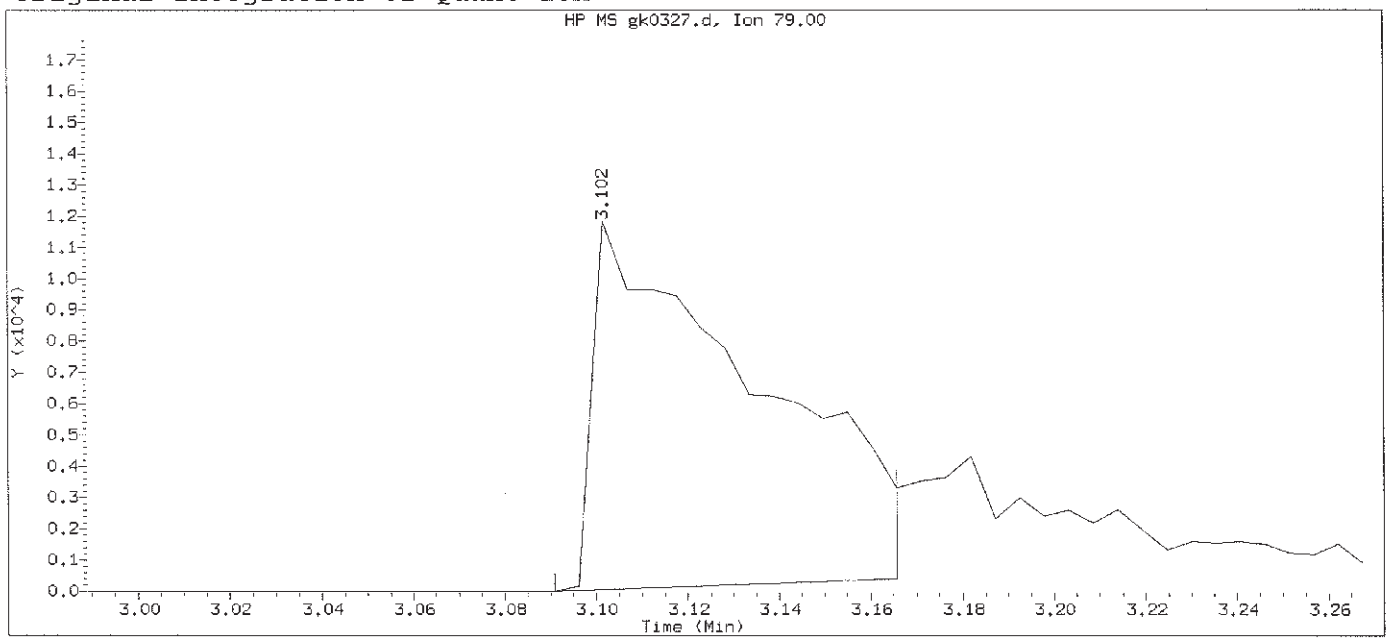
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:24
Date, time and analyst ID of latest file update: 09-Nov-2013 23:24 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 143		
Retention Time (minutes)	: 3.102		
Quant Ion	: 79.00		
Area	: 28893		
On-column Amount (ng/ul)	: 3.3440		
Integration start scan	: 140	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	412

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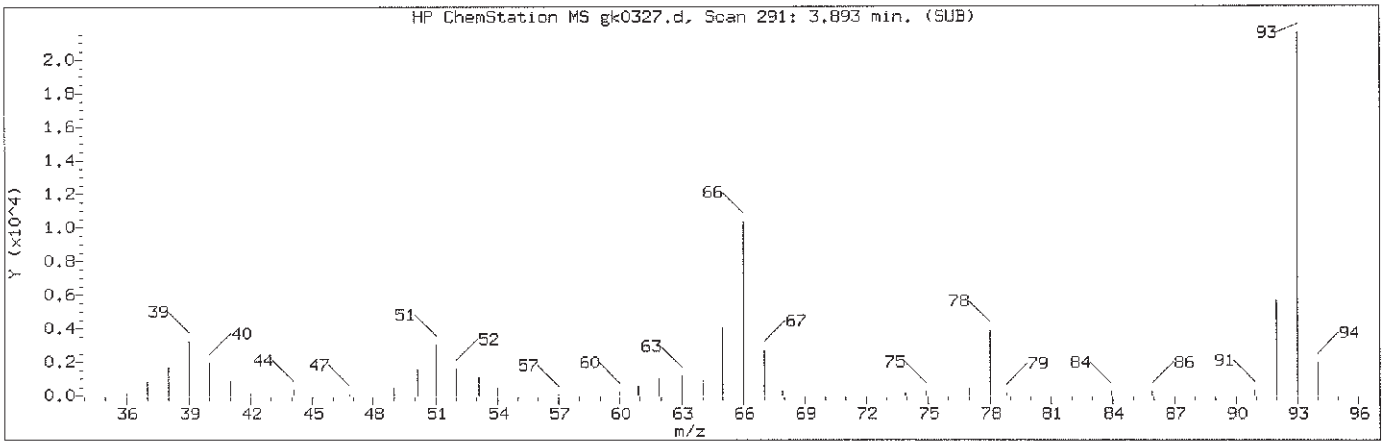
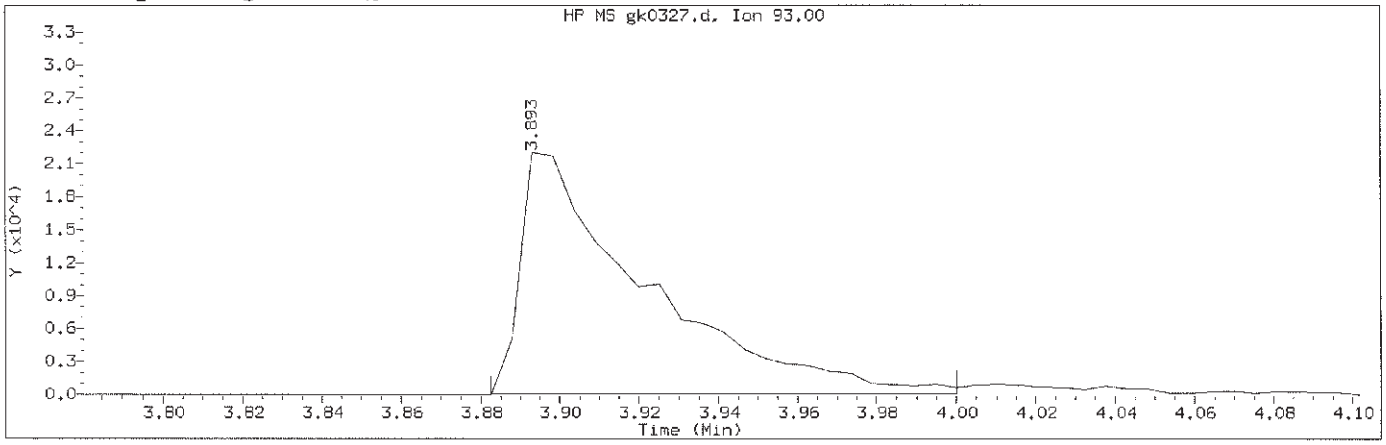
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 291		
Retention Time (minutes)	: 3.893		
Quant Ion	: 93.00		
Area (flag)	: 48332M		
On-Column Amount (ng/ul)	: 4.8971		
Integration start scan	: 288	Integration stop scan:	310
Y at integration start	: 28	Y at integration end:	28

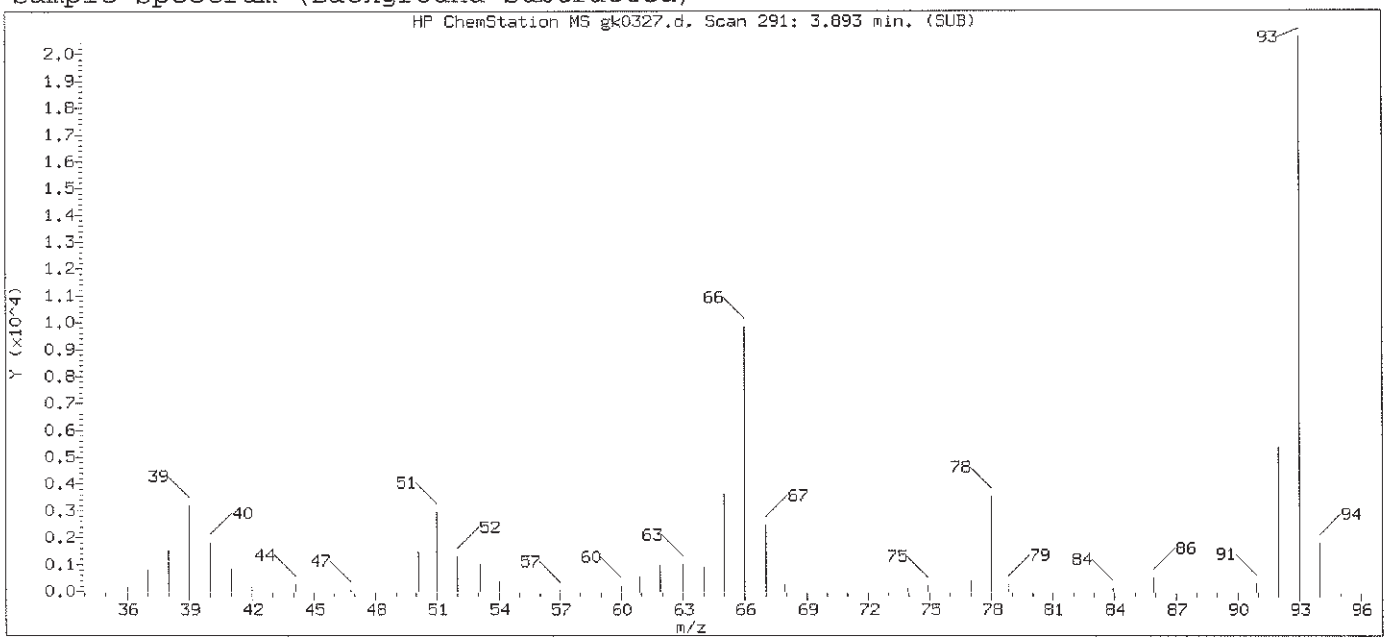
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:48.
Target 3.5 esignature user ID: lmh00956

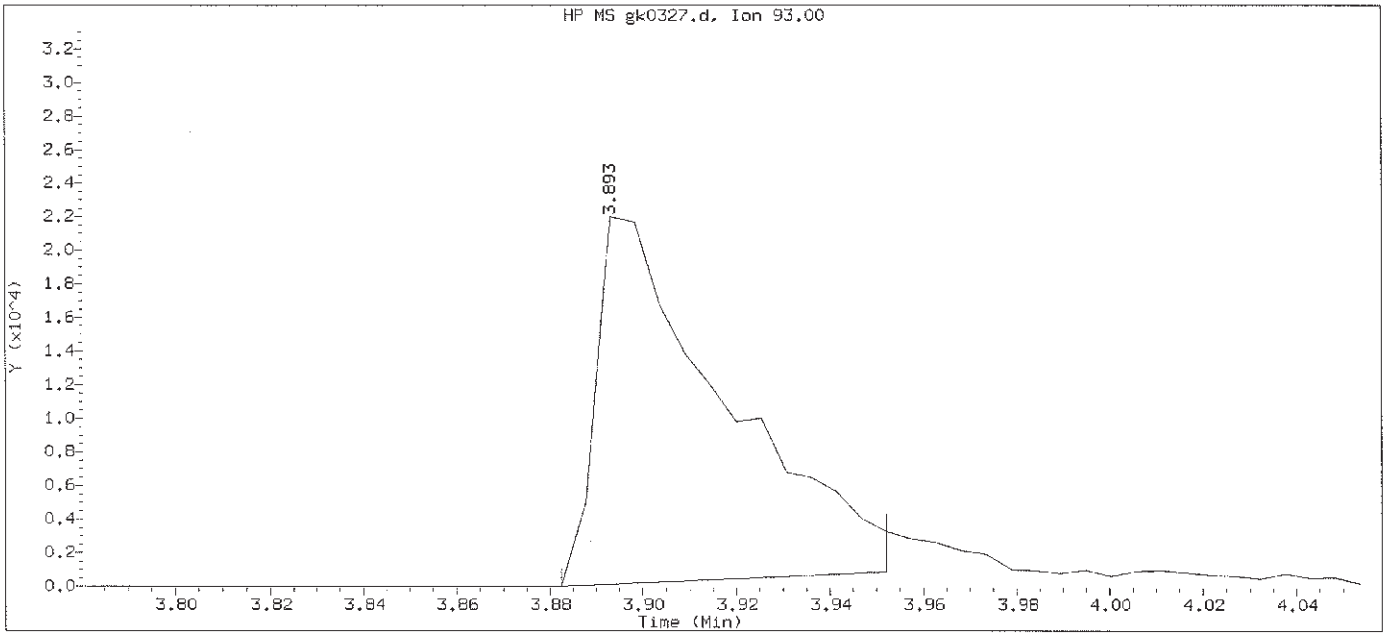
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:24
Date, time and analyst ID of latest file update: 09-Nov-2013 23:24 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 291		
Retention Time (minutes)	: 3.893		
Quant Ion	: 93.00		
Area	: 41752		
On-column Amount (ng/ul)	: 4.3266		
Integration start scan	: 288	Integration stop scan:	301
Y at integration start	: 0	Y at integration end:	873

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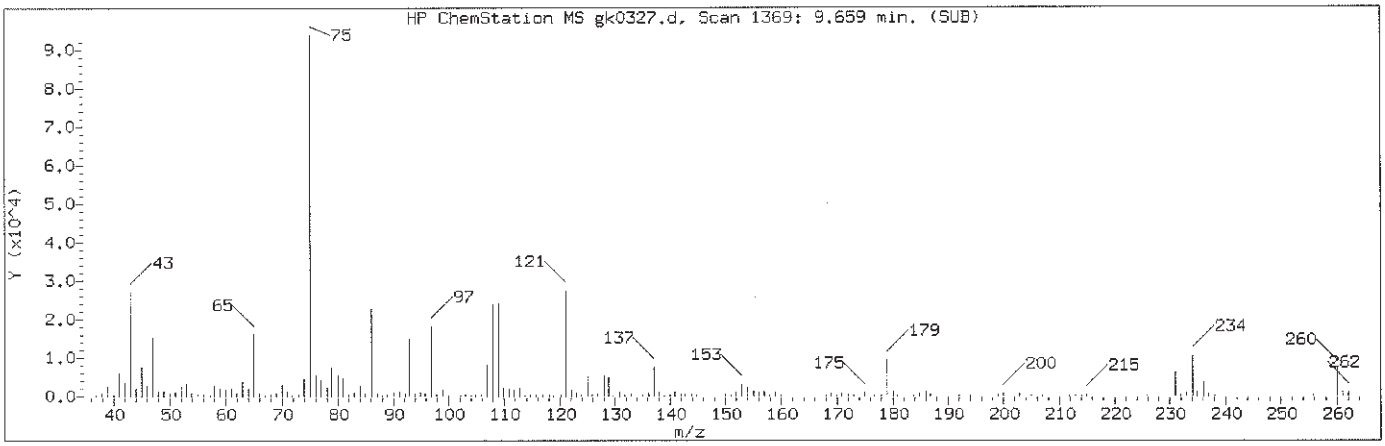
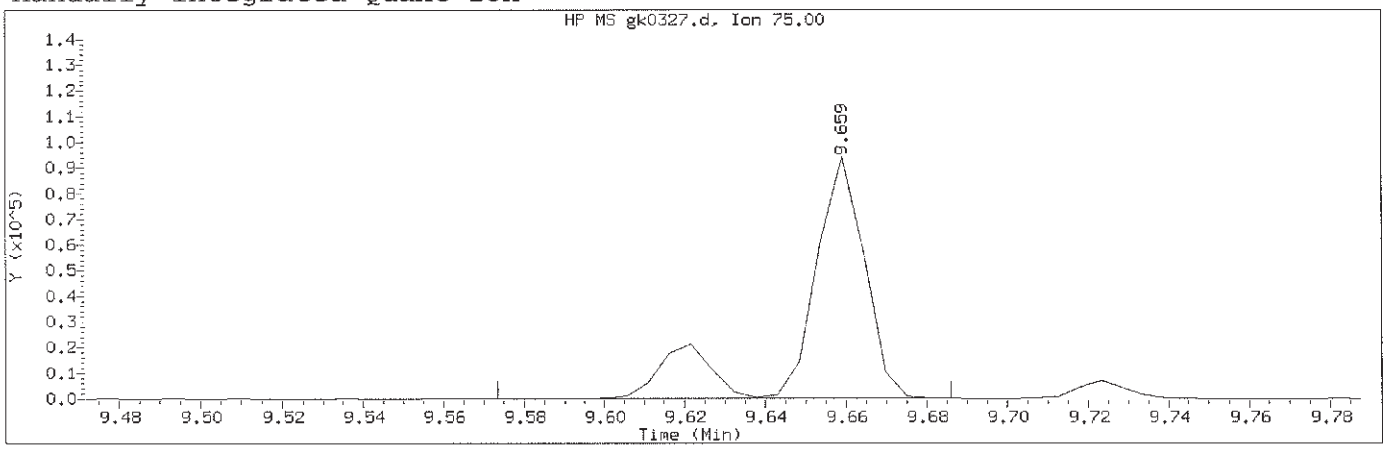
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area (flag)	: 95548M		
On-Column Amount (ng/ul)	: 4.4859		
Integration start scan	: 1352	Integration stop scan:	1373
Y at integration start	: 156	Y at integration end:	272

Reason for manual integration: improper integration

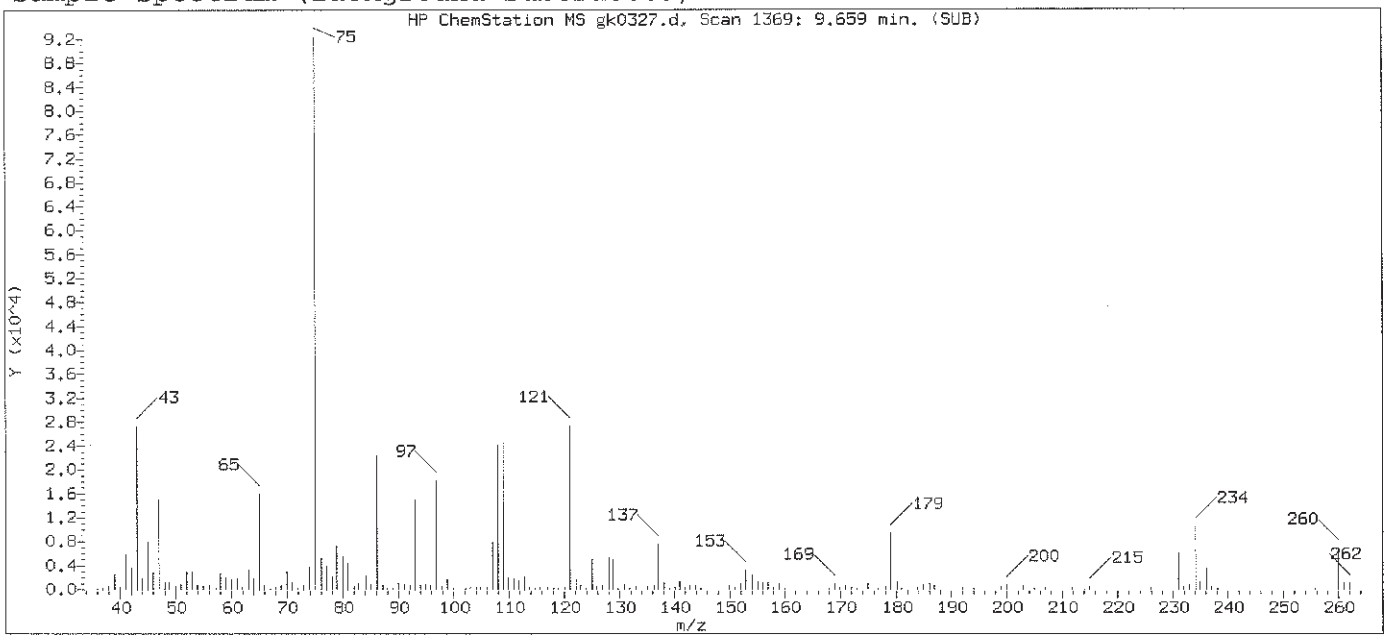
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:48. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

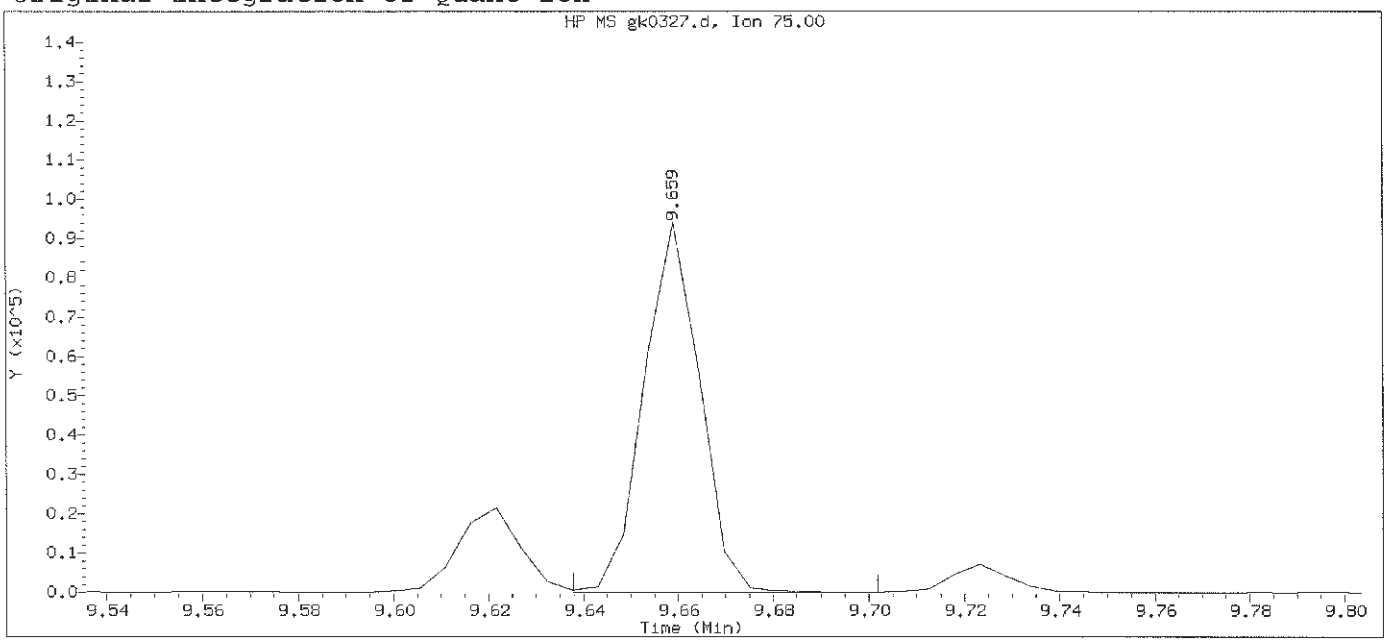
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:24
Date, time and analyst ID of latest file update: 09-Nov-2013 23:24 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area	: 77279		
On-column Amount (ng/ul)	: 4.3467		
Integration start scan	: 1364	Integration stop scan:	1376
Y at integration start	: 0	Y at integration end:	0

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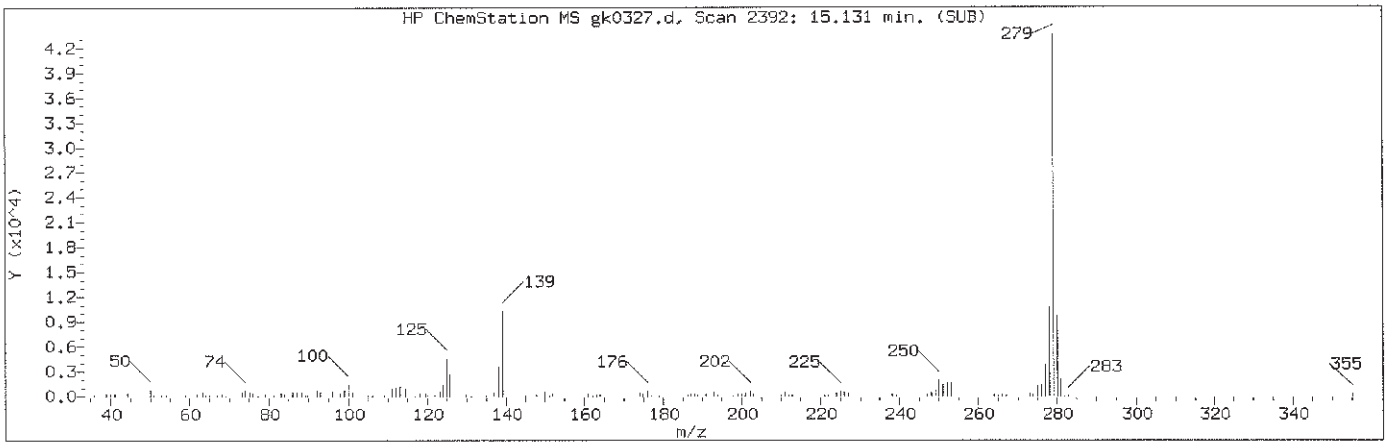
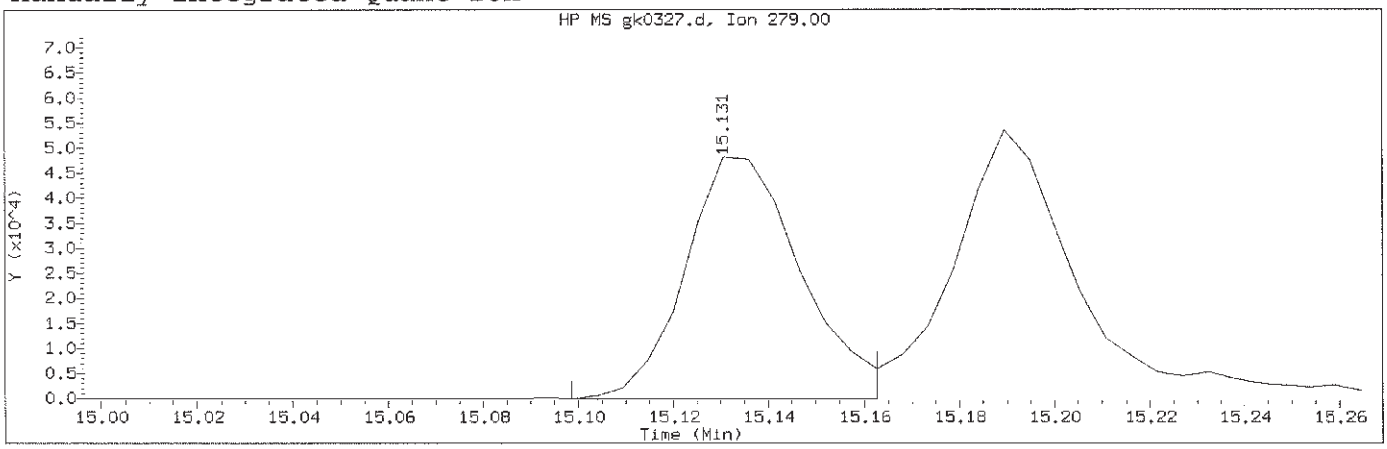
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:16
Date, time and analyst ID of latest file update: 10-Nov-2013 08:16 lmh00956

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 191		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 2392		
Retention Time (minutes)	: 15.131		
Quant Ion	: 279.00		
Area (flag)	: 81909M		
On-Column Amount (ng/ul)	: 4.4334		
Integration start scan	: 2385	Integration stop scan:	2397
Y at integration start	: -88	Y at integration end:	-88

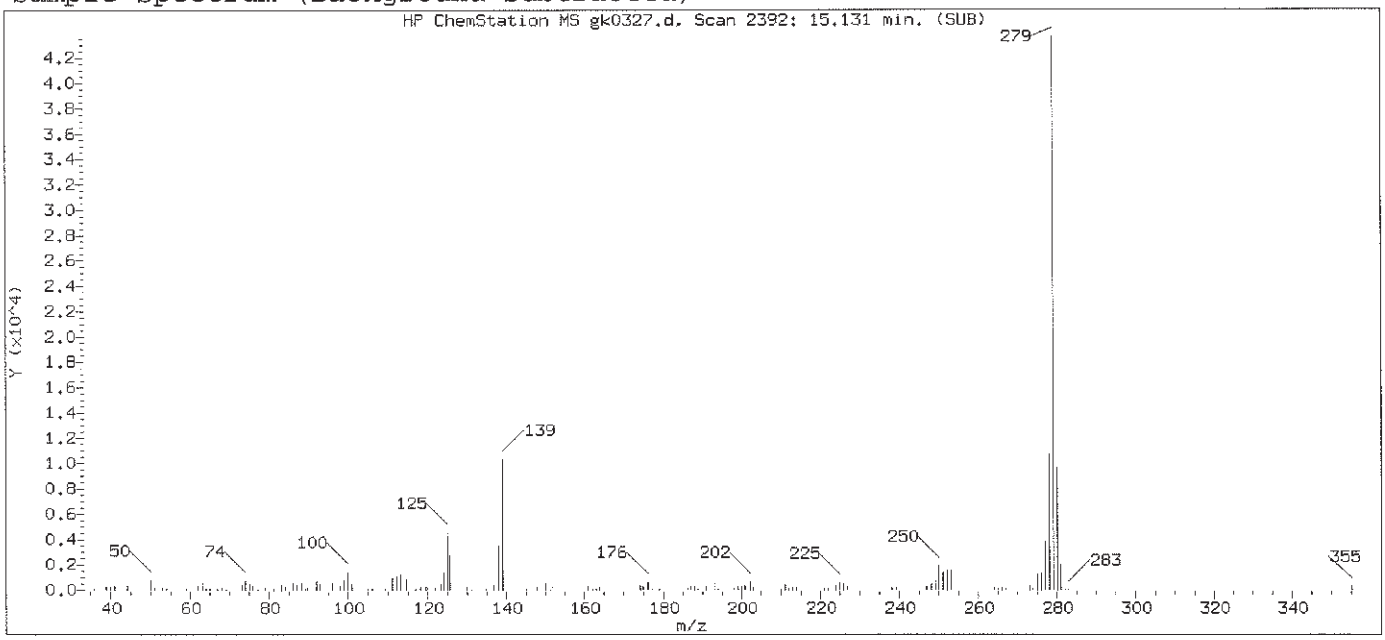
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:48. Target 3.5 esignature user ID: lmh00956

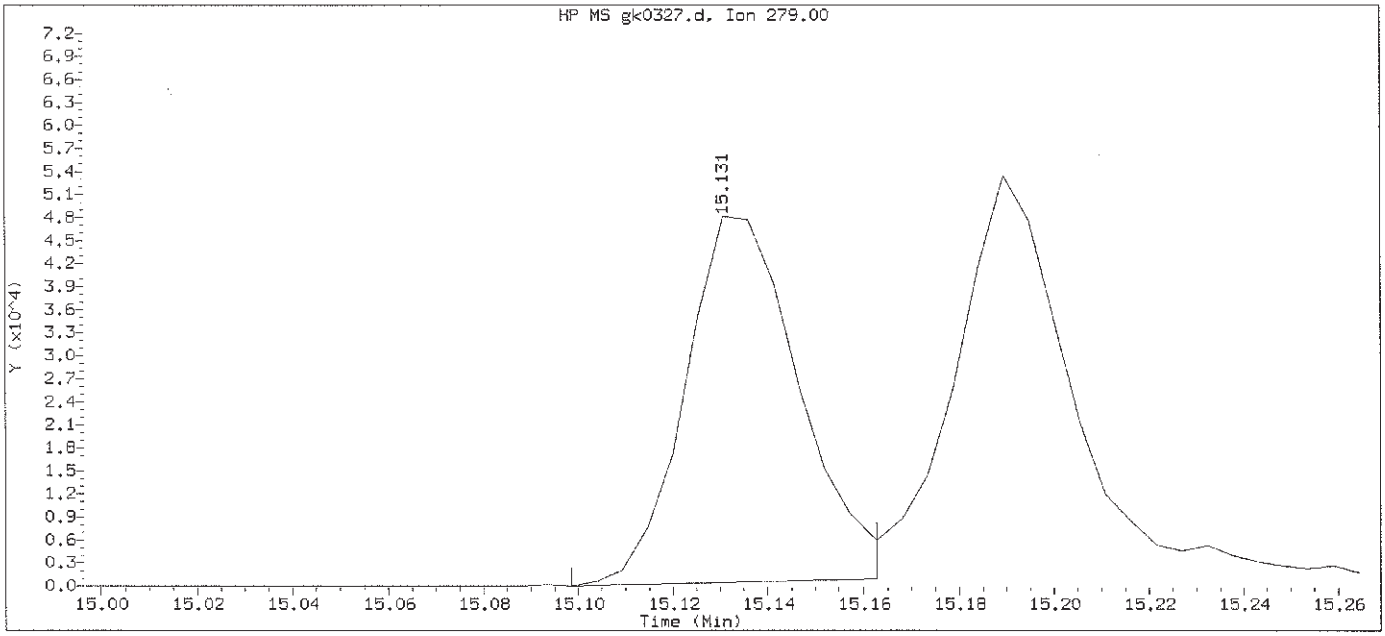
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0327.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:01 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:24
Date, time and analyst ID of latest file update: 09-Nov-2013 23:24 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 191		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 2392		
Retention Time (minutes)	: 15.131		
Quant Ion	: 279.00		
Area	: 78861		
On-column Amount (ng/ul)	: 4.2920		
Integration start scan	: 2385	Integration stop scan:	2397
Y at integration start	: 0	Y at integration end:	894

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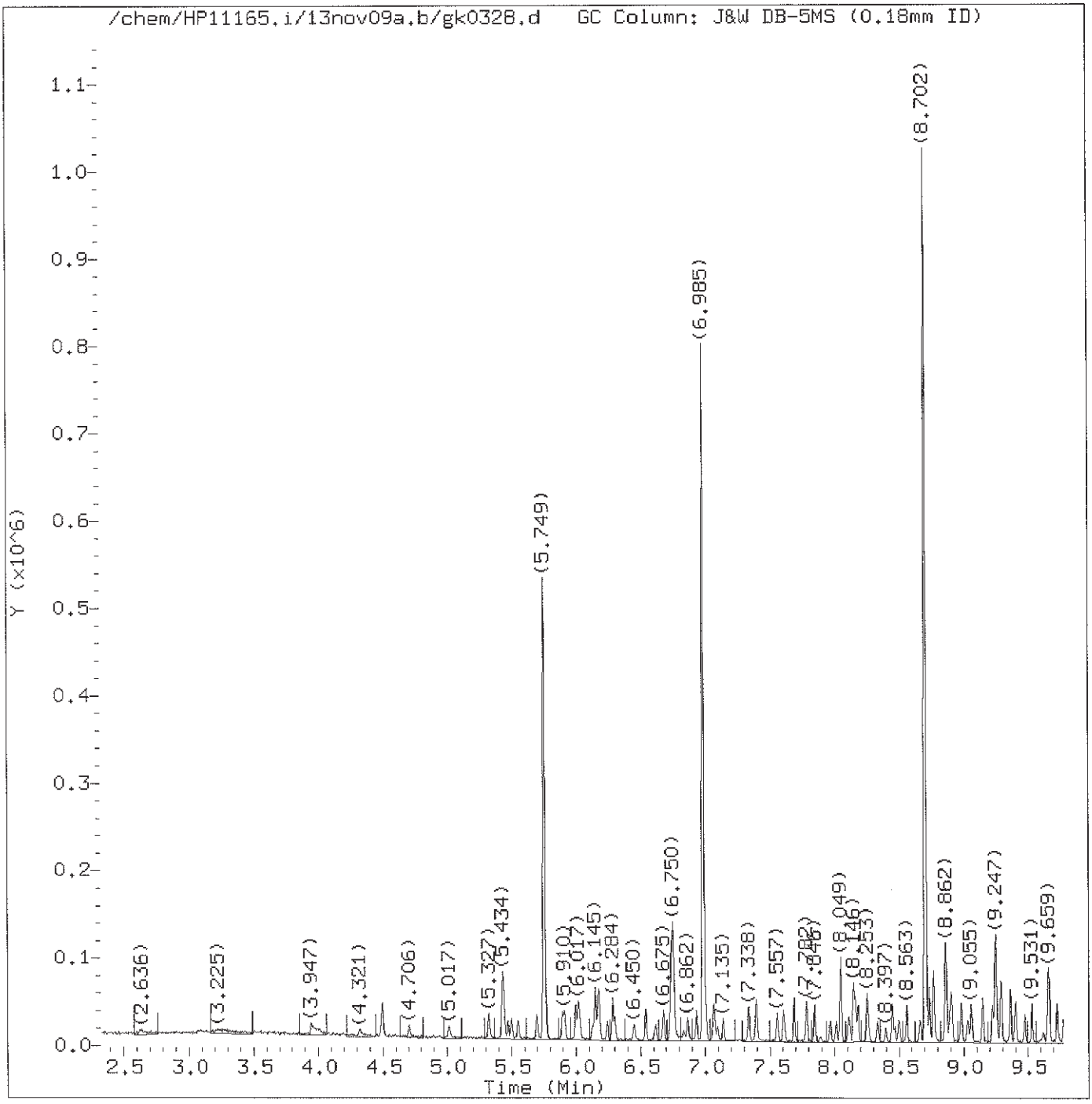
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

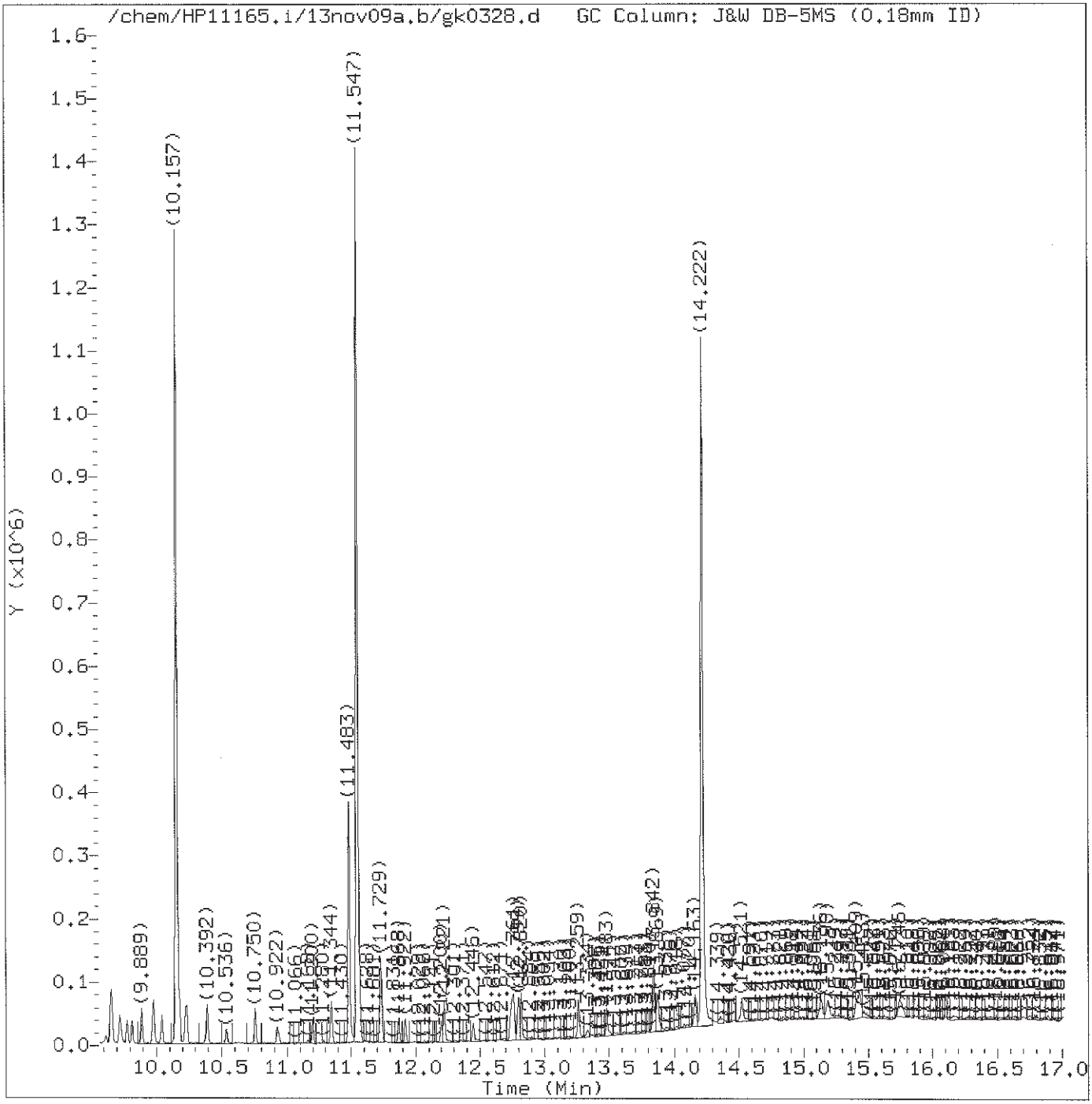
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.631	88	4548	1.739
3) N-Nitrosodimethylamine	(1)	3.080	74	4263M	0.930
4) Pyridine	(1)	3.246	79	6535M	0.879
8) N-Nitrosomethylethylamine	(1)	3.867	88	7911	2.017
7) 2-Picoline	(1)	3.952	93	8881M	1.162
9) Methyl methanesulfonate	(1)	4.316	80	3727	1.005
10)$2-Fluorophenol	(1)	4.498	112	11629	1.969
11) N-Nitrosodiethylamine	(1)	4.706	102	3093	0.873
14) Ethyl methanesulfonate	(1)	5.017	109	3529	0.988
17)$Phenol-d6	(1)	5.434	99	15490	1.743
16)$Phenol-d5	(1)	5.434	99	15490	1.743
19) Aniline	(1)	5.434	93	11782	1.004
18) Phenol	(1)	5.444	94	10534	0.997
20) bis(2-Chloroethyl)ether	(1)	5.503	93	7948	1.054
21) 2-Chlorophenol	(1)	5.551	128	5272	0.886
24) 1,3-Dichlorobenzene	(1)	5.691	146	6140	1.031
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	74521	20.000
26) 1,4-Dichlorobenzene	(1)	5.765	146	6222	1.032
27) Benzyl alcohol	(1)	5.894	108	4392	0.895
28) 1,2-Dichlorobenzene	(1)	5.910	146	6630	1.120
29) Indene	(1)	6.001	115	12287	1.133
30) 2-Methylphenol	(1)	6.017	108	5998	0.896
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	9798	0.969
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	9798	0.969
34) N-Nitrosopyrrolidine	(1)	6.124	100	4286	1.002
35) Acetophenone	(1)	6.140	105	11408	1.079
37) N-Nitroso-di-n-propylamine	(1)	6.145	70	6228	0.988
38) N-Nitrosomorpholine	(1)	6.161	56	5208	1.074
36) 4-Methylphenol	(1)	6.172	108	7436	0.933
39) o-Toluidine	(1)	6.177	106	11084	0.959
40) Hexachloroethane	(1)	6.241	117	2302	0.977
41)$Nitrobenzene-d5	(2)	6.284	82	14878	1.945
42) Nitrobenzene	(2)	6.300	77	8782	1.075
44) N-Nitrosopiperidine	(2)	6.450	114	3482	0.960
45) Isophorone	(2)	6.541	82	14393	0.966
48) 2-Nitrophenol	(2)	6.616	139	2640	0.832
52) 2,4-Dimethylphenol	(2)	6.675	107	6256	0.891
53) O,O,O-triethylphosphorothioate	(2)	6.739	198	3264	1.130
54) Benzoic acid	(2)	6.750	105	53891	8.843
55) bis(2-Chloroethoxy)methane	(2)	6.760	93	9587	1.055

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.862	162	4414	0.922
62) 1,2,4-Trichlorobenzene	(2)	6.931	180	5096	1.019
63)*Naphthalene-d8	(2)	6.985	136	346938	20.000
64) Naphthalene	(2)	7.006	128	19413	1.062
65) 4-Chloroaniline	(2)	7.065	127	7133	0.927
66) 2,6-Dichlorophenol	(2)	7.076	162	4648	0.976
67) Hexachloropropene	(2)	7.097	213	2771	1.042
69) Hexachlorobutadiene	(2)	7.135	225	2437	1.032
70) Quinoline	(2)	7.338	129	13216	1.011
74) Caprolactam	(2)	7.386	113	3180M	1.070
73) N-Nitrosodi-n-butylamine	(2)	7.397	84	8327	1.078
75) 4-Chloro-3-methylphenol	(2)	7.557	107	6345	0.957
76) Safrole	(2)	7.605	162	4359	0.912
77) 2-Methylnaphthalene	(2)	7.686	142	13045	1.013
78) 1-Methylnaphthalene	(2)	7.782	142	11200	0.962
79) Hexachlorocyclopentadiene	(3)	7.846	237	1212	0.579
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	5182	1.019
81) cis-Isosafrole	(3)	7.889	162	1107	0.140
82) 2,4,6-Trichlorophenol	(3)	7.964	196	3156	0.839
83) 2,4,5-Trichlorophenol	(3)	8.012	196	3087	0.788
84)$2-Fluorobiphenyl	(3)	8.049	172	27933	2.121
86) Isosafrole	(3)	8.113	162	5016	0.988
85) trans-Isosafrole	(3)	8.113	162	5016	0.879
87) 1,1'-Biphenyl	(3)	8.146	154	18720	1.116
88) 2-Chloronaphthalene	(3)	8.156	162	14303	1.127
89) 1-Chloronaphthalene	(3)	8.183	162	12783M	1.100
90) Diphenyl ether	(3)	8.253	170	8686	1.039
91) 2-Nitroaniline	(3)	8.263	138	3992	0.894
92) 1,4-Naphthoquinone	(3)	8.333	158	3543	0.677
93) 1,4-Dinitrobenzene	(3)	8.397	168	1706	0.758
94) Dimethylphthalate	(3)	8.450	163	15198	1.042
95) 1,3-Dinitrobenzene	(3)	8.472	168	2190	0.800
97) 2,6-Dinitrotoluene	(3)	8.499	165	2259	0.692
99) Acenaphthylene	(3)	8.563	152	17428	0.956
100) 3-Nitroaniline	(3)	8.659	138	3834	0.933
101)*Acenaphthene-d10	(3)	8.702	164	216277	20.000
102) Acenaphthene	(3)	8.734	153	13647	1.043
103) 2,4-Dinitrophenol	(3)	8.766	184	9813	4.980
104) 4-Nitrophenol	(3)	8.857	109	10364	4.194
105) Pentachlorobenzene	(3)	8.868	250	5175	1.132

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.894	165	3878	0.846
107) Dibenzofuran	(3)	8.905	168	20084	1.122
108) 1-Naphthylamine	(3)	8.980	143	13913	0.945
109) 2,3,4,6-Tetrachlorophenol	(3)	9.028	232	3211M	1.012
110) 2-Naphthylamine	(3)	9.055	143	14898	1.012
111) Diethylphthalate	(3)	9.140	149	15657	1.053
112) Thionazin	(3)	9.221	107	3648M	1.223
113) Fluorene	(3)	9.237	166	15276	1.022
114) 4-Chlorophenyl-phenylether	(3)	9.247	204	7753	1.135
115) 5-Nitro-o-toluidine	(3)	9.253	152	4733	1.019
116) 4-Nitroaniline	(3)	9.253	138	4407	0.996
117) 4,6-Dinitro-2-methylphenol	(4)	9.290	198	9384	3.109
118) N-Nitrosodiphenylamine	(4)	9.360	169	14151	0.974
119) NDPA as diphenylamine	(4)	9.360	169	14151	0.970
120) 1,2-Diphenylhydrazine	(4)	9.402	77	19558	0.926
121)$2,4,6-Tribromophenol	(3)	9.477	330	2395	1.657
122) Tetraethyldithiopyrophosphate	(4)	9.531	97	2580	0.871
123) 1,3,5-Trinitrobenzene	(4)	9.622	213	1080	0.588
124) Diallate (peak 1)	(4)	9.654	86	8379	0.737
125) Phorate	(4)	9.659	75	13552M	0.773
126) Phenacetin	(4)	9.665	108	8608	0.869
127) 4-Bromophenyl-phenylether	(4)	9.723	248	4146	1.007
128) Diallate (peak 2)	(4)	9.739	86	1897	0.363
129) Hexachlorobenzene	(4)	9.777	284	3610	0.930
130) Dimethoate	(4)	9.814	87	7073	0.835
132) Atrazine	(4)	9.889	200	5228	1.123
135) 4-Aminobiphenyl	(4)	9.975	169	13443	0.962
133) Pentachlorophenol	(4)	9.975	266	1778	0.667
138) Pronamide	(4)	10.044	173	5295	0.784
142) Dinoseb	(4)	10.157	211	1781	0.452
140)*Phenanthrene-d10	(4)	10.157	188	436717	20.000
143) Phenanthrene	(4)	10.178	178	27028	1.047
144) Anthracene	(4)	10.232	178	24587	0.969
146) Carbazole	(4)	10.392	167	22559	0.948
148) Methyl parathion	(4)	10.536	109	3362	0.581
149) Di-n-butylphthalate	(4)	10.750	149	24574	0.862
151) Parathion	(4)	10.922	109	2300	0.612
152) 4-Nitroquinoline-1-oxide	(4)	10.932	190	500M	0.253
156) Isodrin	(4)	11.200	193	2233	0.868
157) Fluoranthene	(4)	11.344	202	26104	0.987

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
162) Benzidine	(5)	11.483	184	145435	7.115
164)*Pyrene-d10	(5)	11.547	212	537317	20.000
165) Pyrene	(5)	11.563	202	33173	1.079
166)$Terphenyl-d14	(5)	11.729	244	39314	2.051
168) p-Dimethylaminoazobenzene	(5)	11.868	225	4143	0.752
171) Chlorobenzilate	(5)	11.922	139	7074	0.815
172) 3,3'-Dimethylbenzidine	(5)	12.200	212	12282	0.769
173) Butylbenzylphthalate	(5)	12.221	149	11454	0.829
174) 2-Acetylaminofluorene	(5)	12.446	181	6837	0.595
175) 3,3'-Dichlorobenzidine	(5)	12.740	252	7514	0.797
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.745	231	3531	0.793
177) Benzo(a)anthracene	(5)	12.761	228	24473	0.948
178) Chrysene	(5)	12.799	228	25691	1.019
179) bis(2-Ethylhexyl)phthalate	(5)	12.820	149	15196	0.805
181) 6-Methylchrysene	(5)	13.259	242	17613	0.982
183) Di-n-octylphthalate	(6)	13.483	149	21058	0.652
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.837	256	10087	0.852
185) Benzo(b)fluoranthene	(6)	13.847	252	23653	0.903
186) Benzo(k)fluoranthene	(6)	13.874	252	27081M	0.976
187) Benzo(a)pyrene	(6)	14.163	252	21077	0.902
188)*Perylene-d12	(6)	14.222	264	433474	20.000
190) 3-Methylcholanthrene	(6)	14.526	268	10287	0.921
191) Dibenz(a,h)acridine	(6)	15.131	279	13448	0.820
192) Dibenz(a,j)acridine	(6)	15.190	279	15364	0.834
193) Indeno(1,2,3-cd)pyrene	(6)	15.409	276	21913	0.925
194) Dibenz(a,h)anthracene	(6)	15.436	278	17368	0.883
196) Benzo(g,h,i)perylene	(6)	15.746	276	19724	0.988
203) 2,4_2,6-Dinitrotoluenes	(3)			6137	0.765
204) Diallate TRANS/CIS	(4)			10276	1.045

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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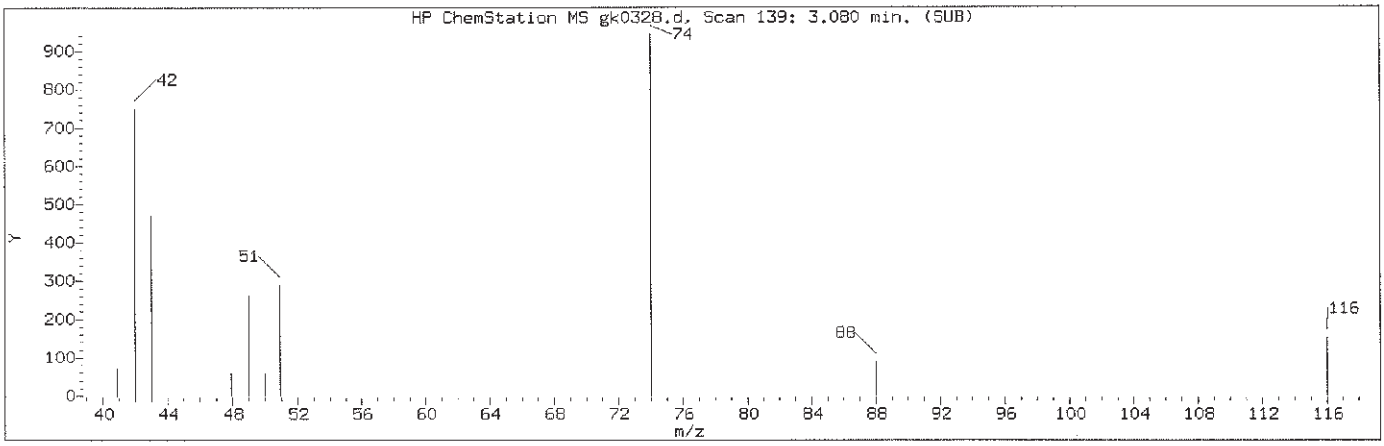
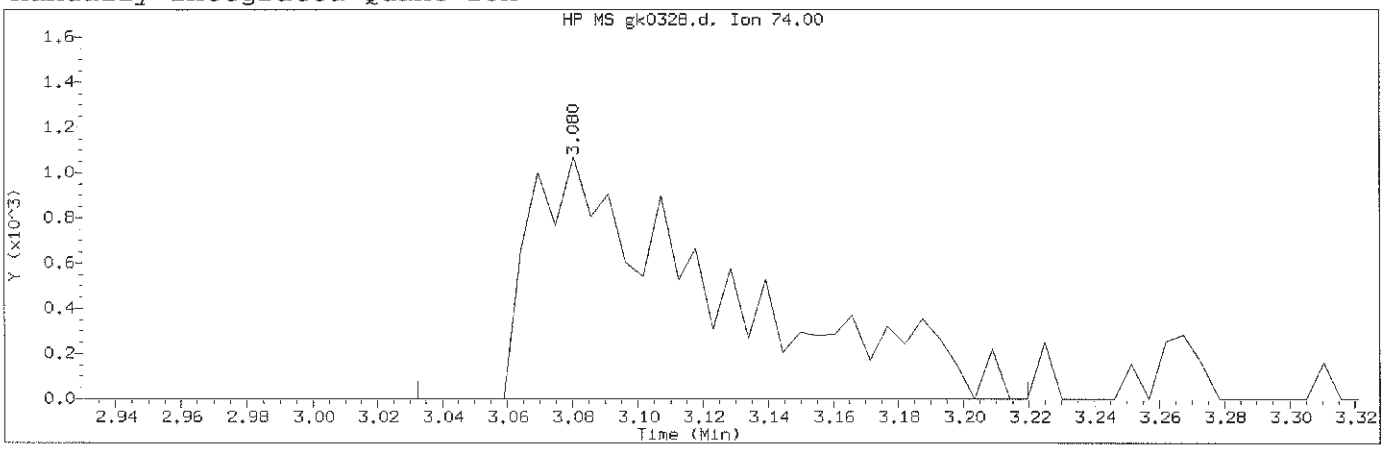
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 139		
Retention Time (minutes)	: 3.080		
Quant Ion	: 74.00		
Area (flag)	: 4263M		
On-Column Amount (ng/ul)	: 0.9296		
Integration start scan	: 129	Integration stop scan:	164
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

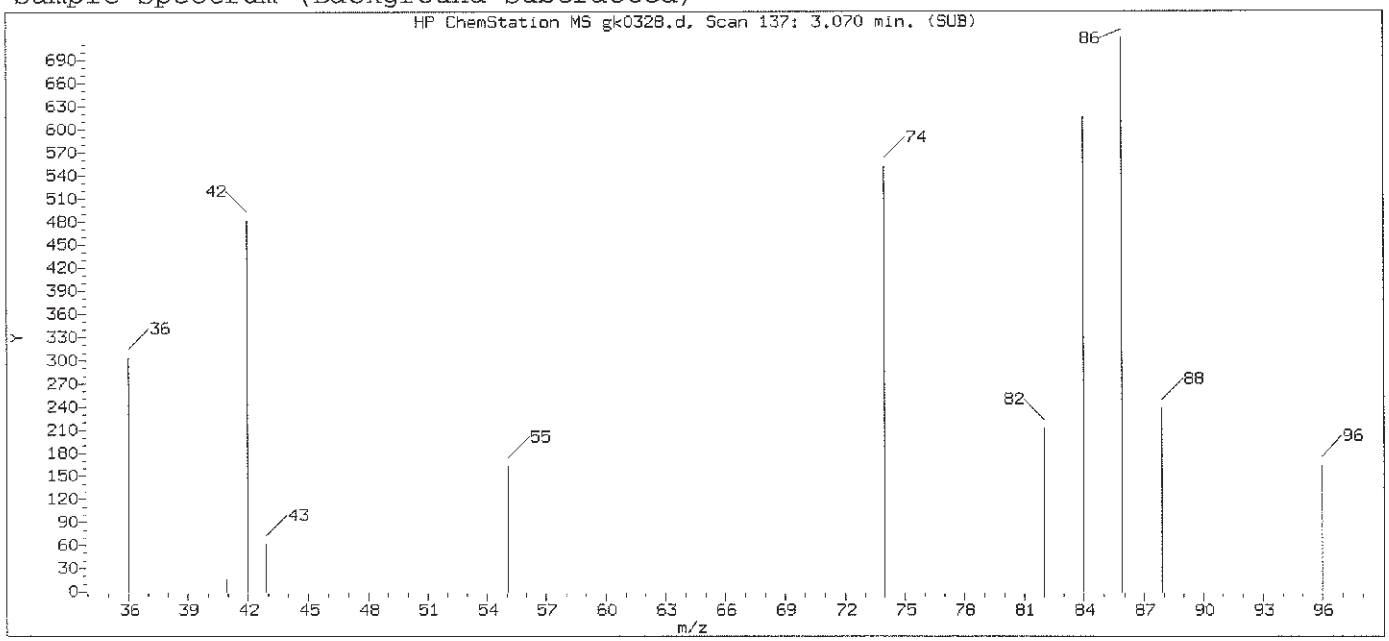
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

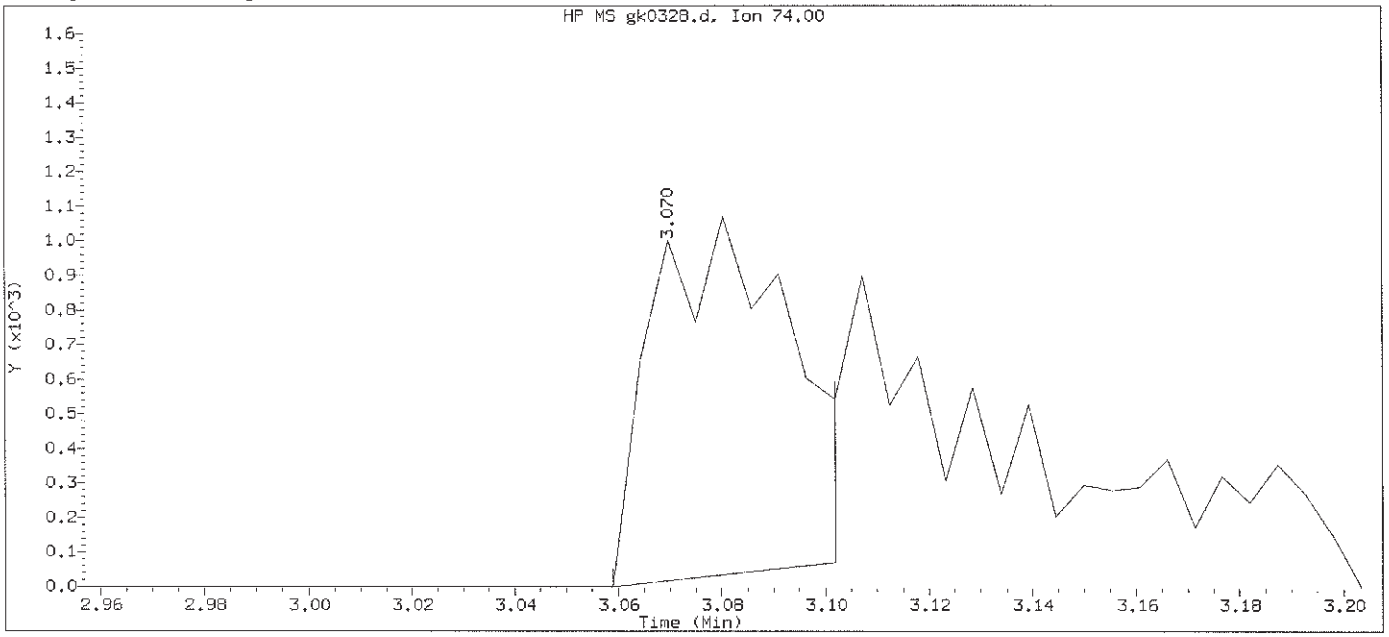
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 137		
Retention Time (minutes)	: 3.070		
Quant Ion	: 74.00		
Area	: 1858		
On-column Amount (ng/ul)	: 0.4170		
Integration start scan	: 134	Integration stop scan:	142
Y at integration start	: 0	Y at integration end:	71

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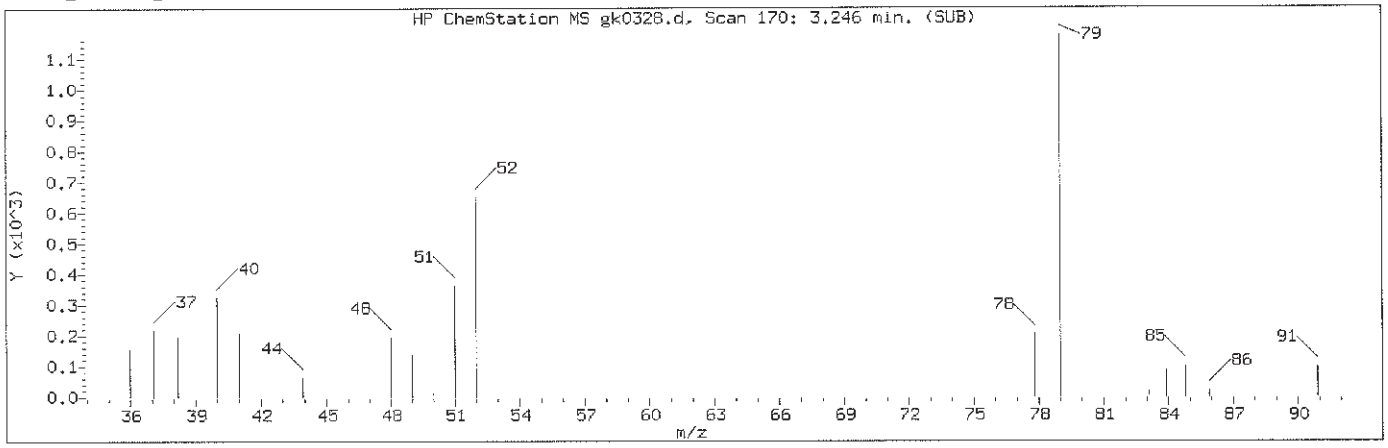
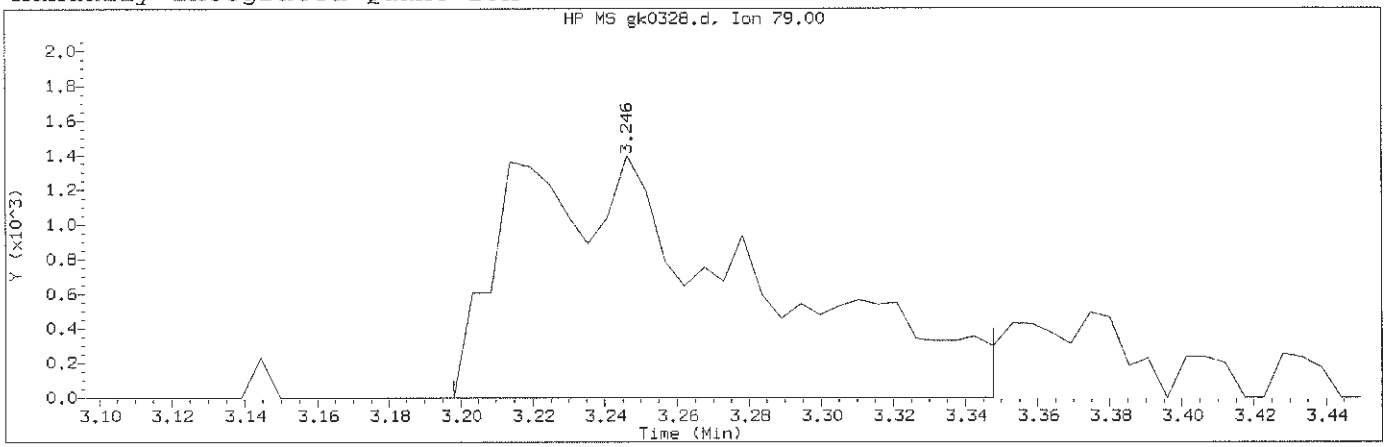
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 170		
Retention Time (minutes)	: 3.246		
Quant Ion	: 79.00		
Area (flag)	: 6535M		
On-Column Amount (ng/ul)	: 0.8790		
Integration start scan	: 160	Integration stop scan:	188
Y at integration start	: 1	Y at integration end:	1

Reason for manual integration: improper integration

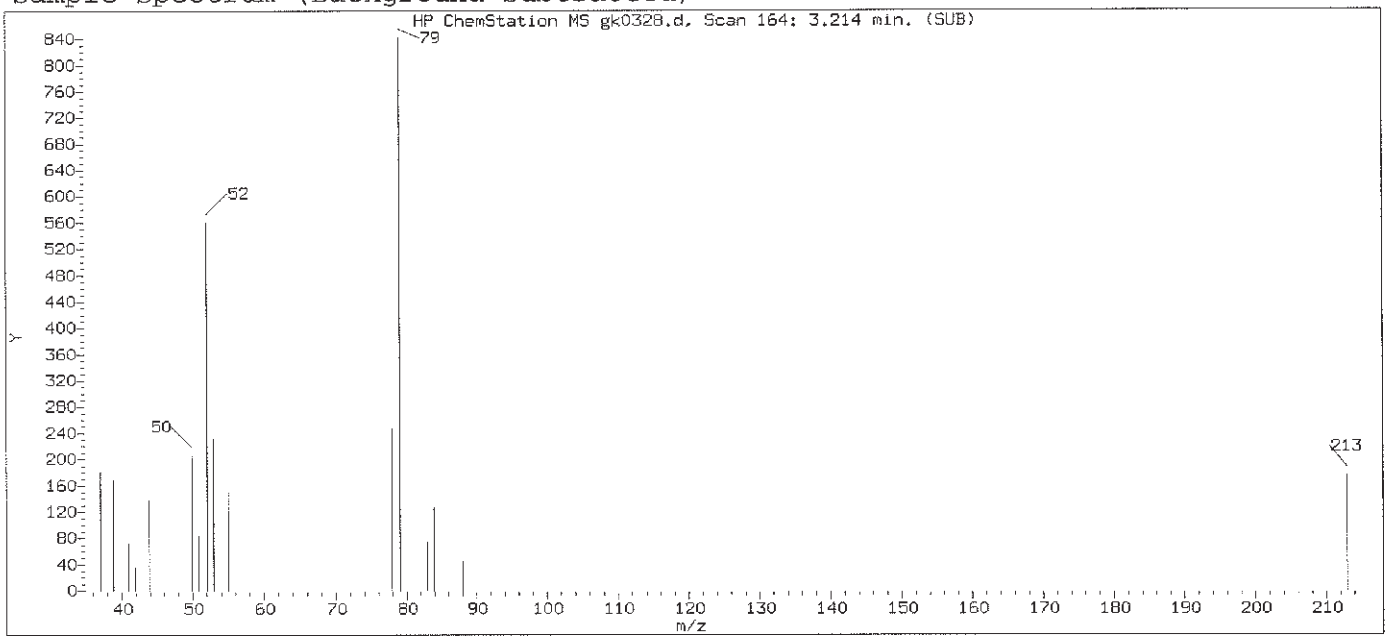
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

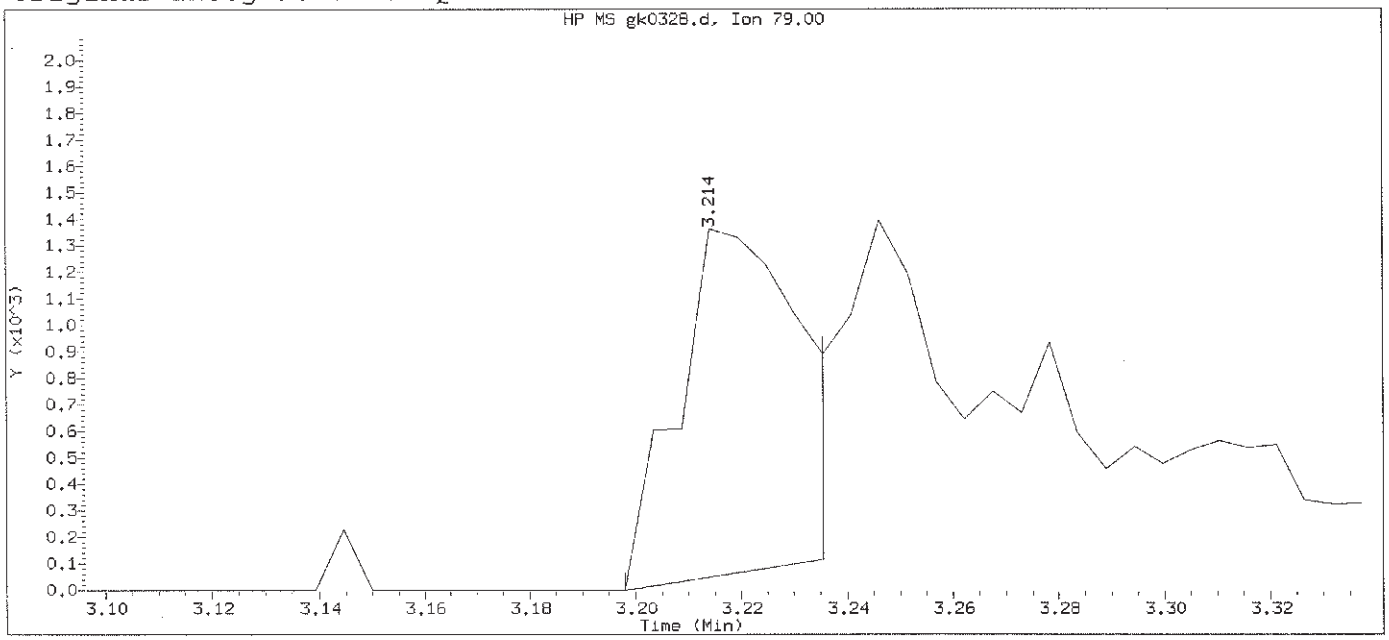
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 164		
Retention Time (minutes)	: 3.214		
Quant Ion	: 79.00		
Area	: 1994		
On-column Amount (ng/ul)	: 0.2981		
Integration start scan	: 160	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	117

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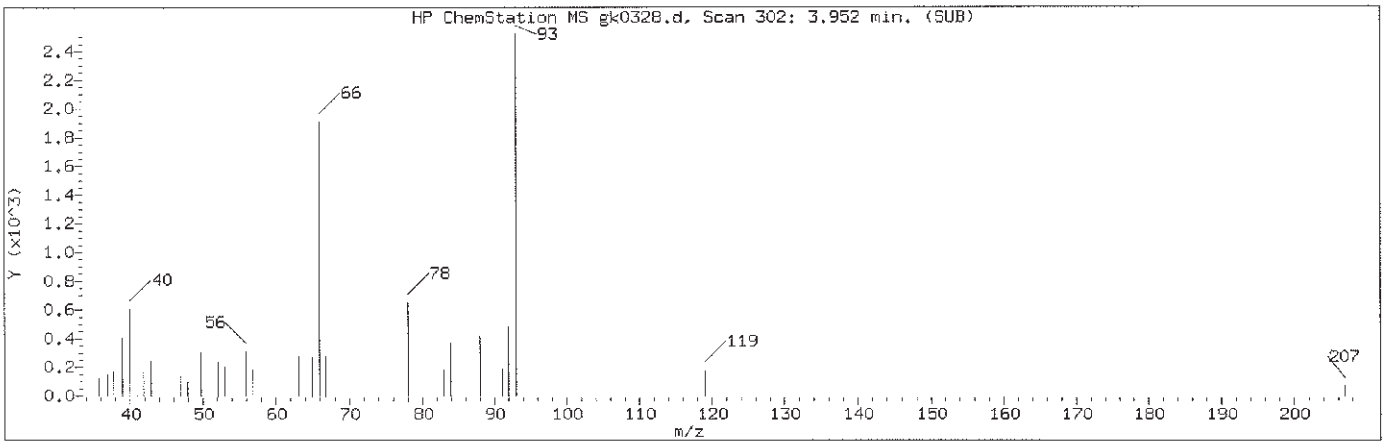
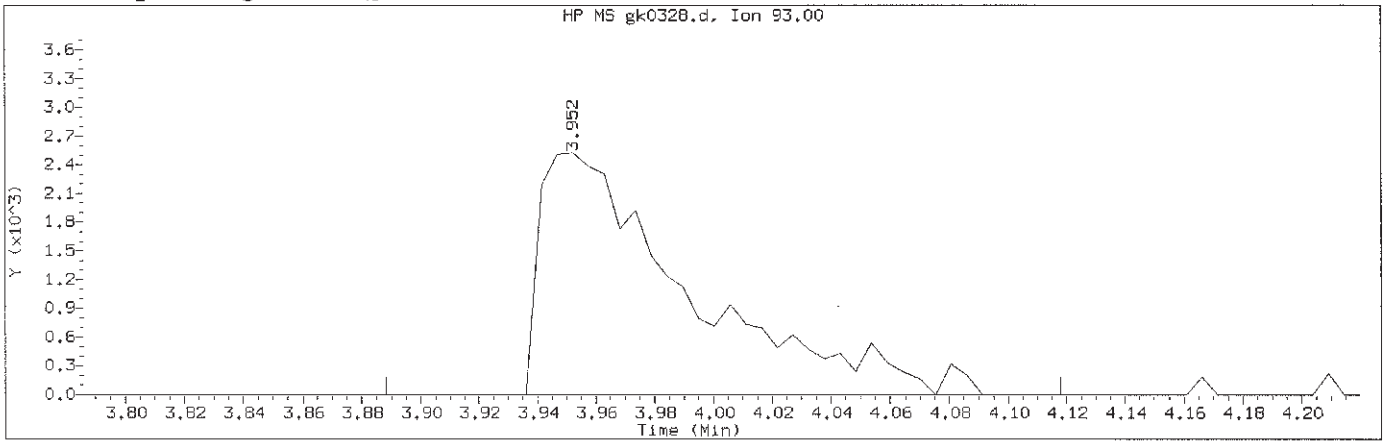
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 302		
Retention Time (minutes)	: 3.952		
Quant Ion	: 93.00		
Area (flag)	: 8881M		
On-Column Amount (ng/ul)	: 1.1619		
Integration start scan	: 289	Integration stop scan:	332
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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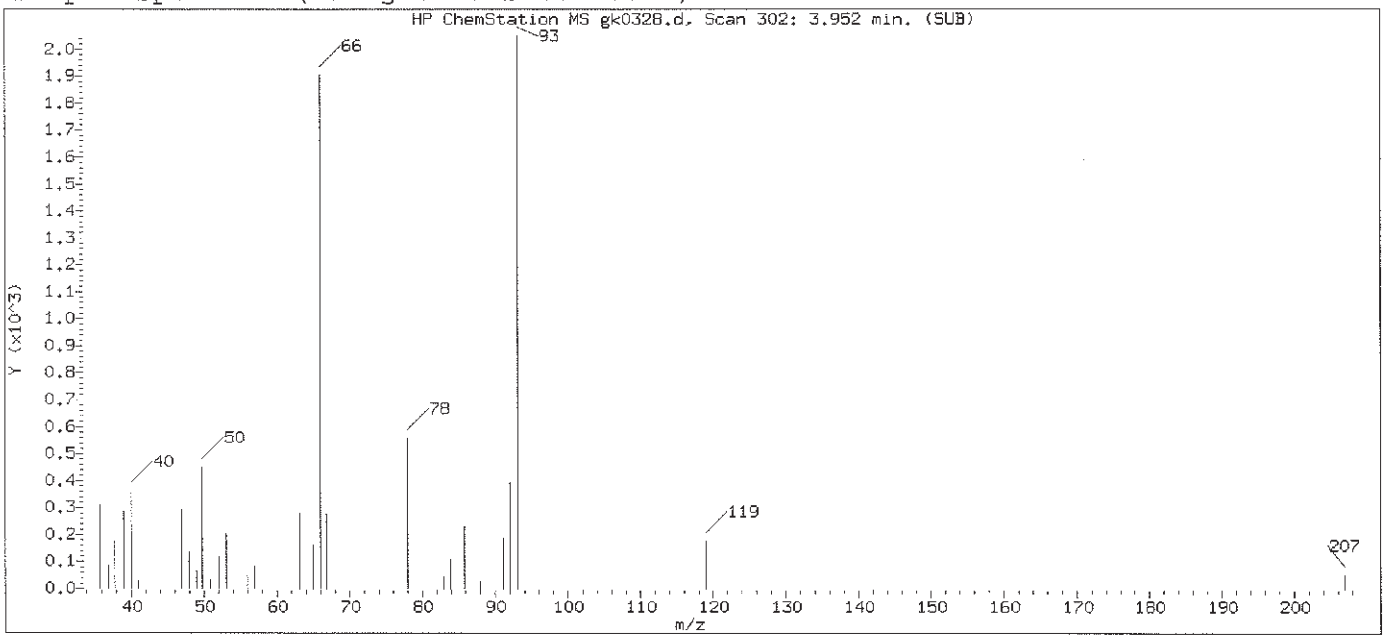
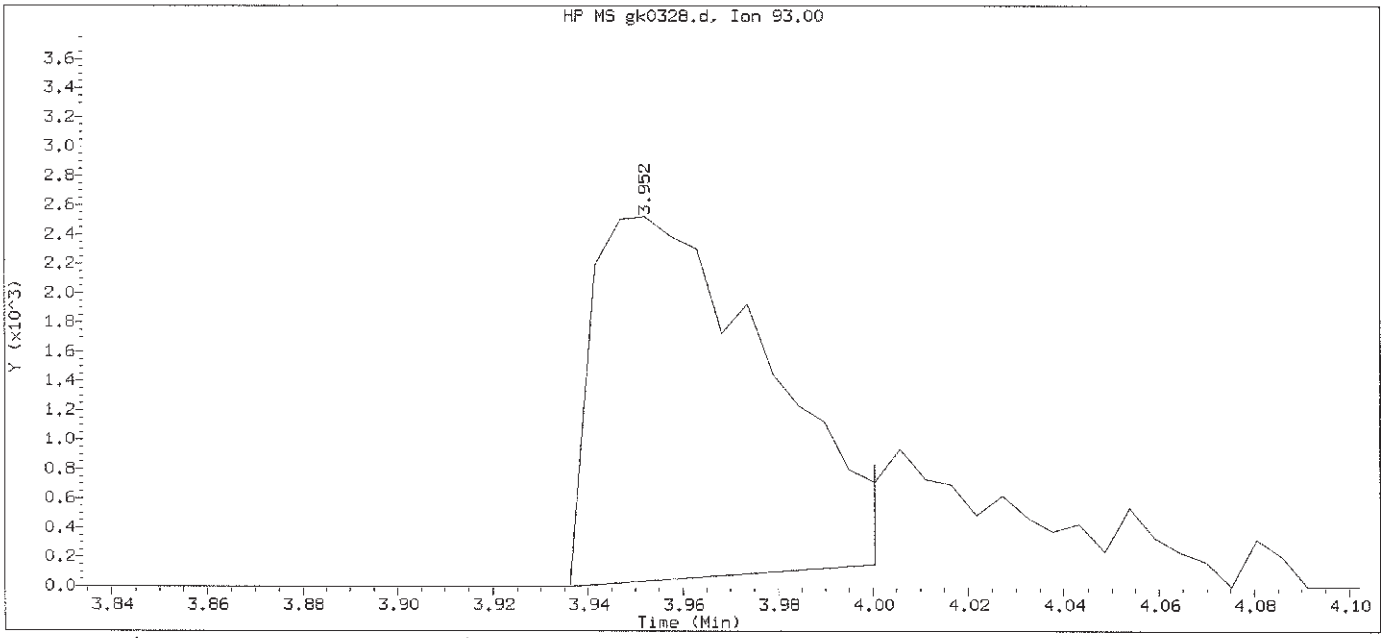
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 302		
Retention Time (minutes)	: 3.952		
Quant Ion	: 93.00		
Area	: 6298		
On-column Amount (ng/ul)	: 0.8428		
Integration start scan	: 298	Integration stop scan:	310
Y at integration start	: 0	Y at integration end:	152

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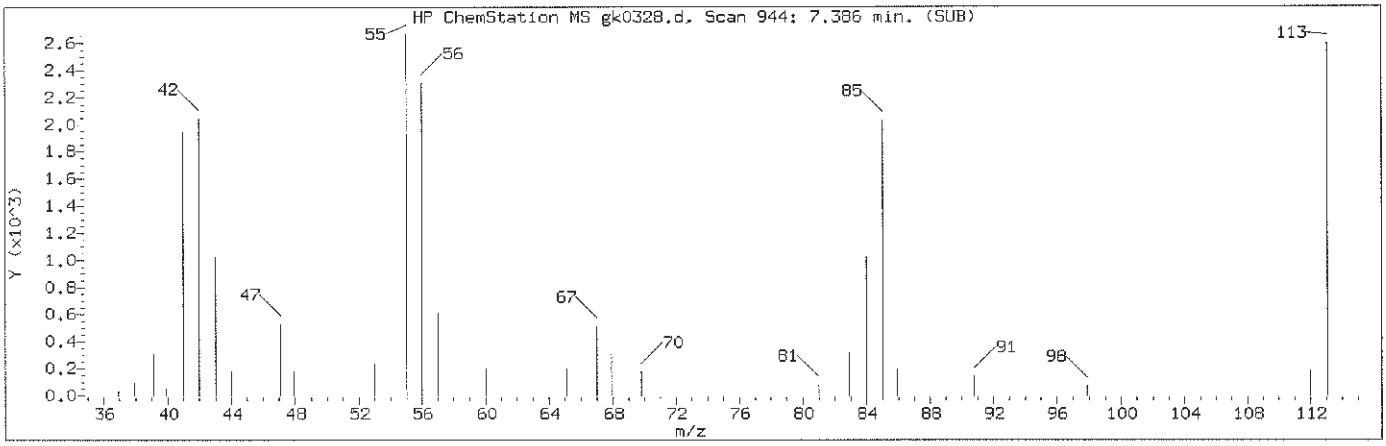
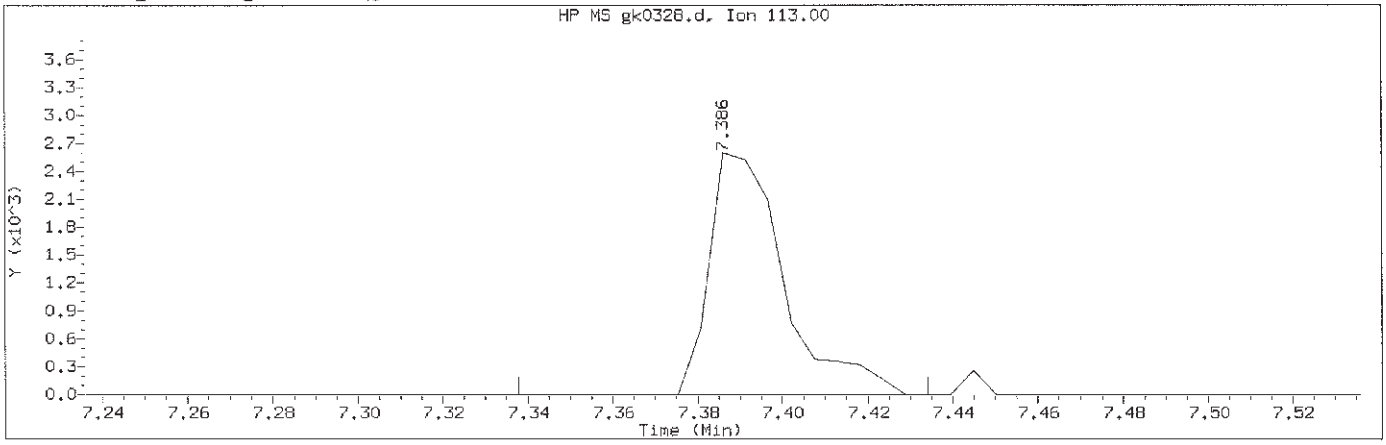
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 944		
Retention Time (minutes)	: 7.386		
Quant Ion	: 113.00		
Area (flag)	: 3180M		
On-Column Amount (ng/ul)	: 1.0704		
Integration start scan	: 934	Integration stop scan:	952
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

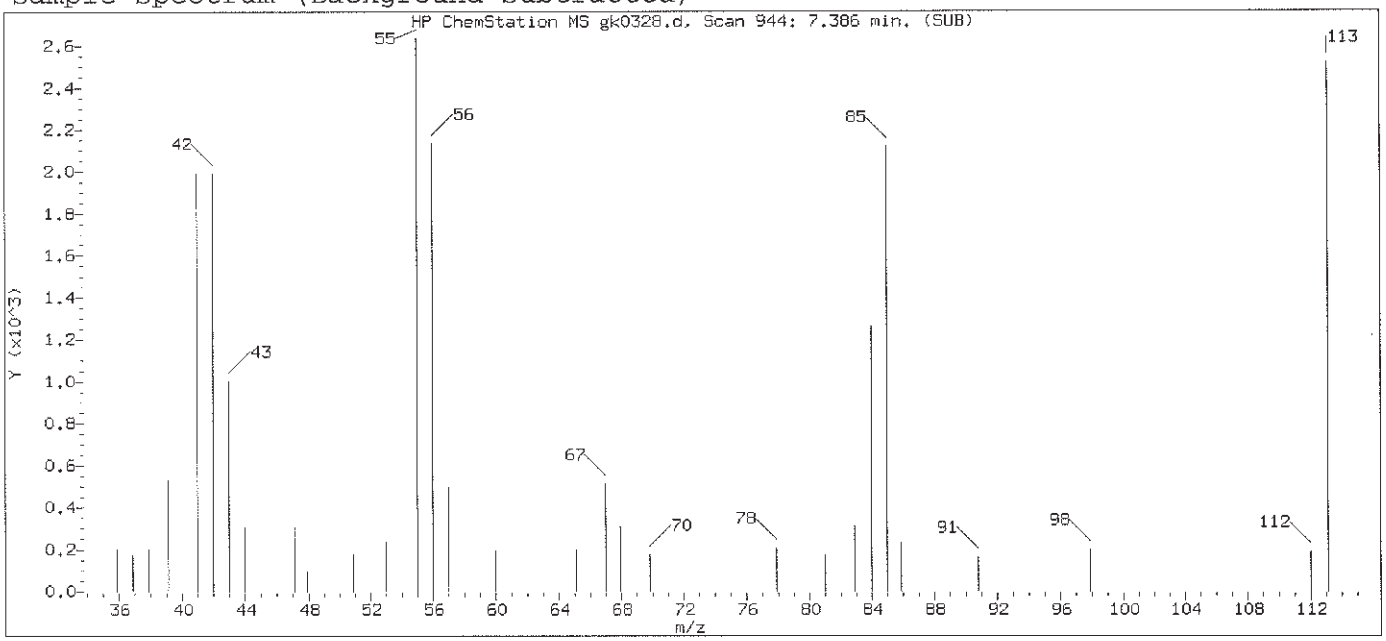
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

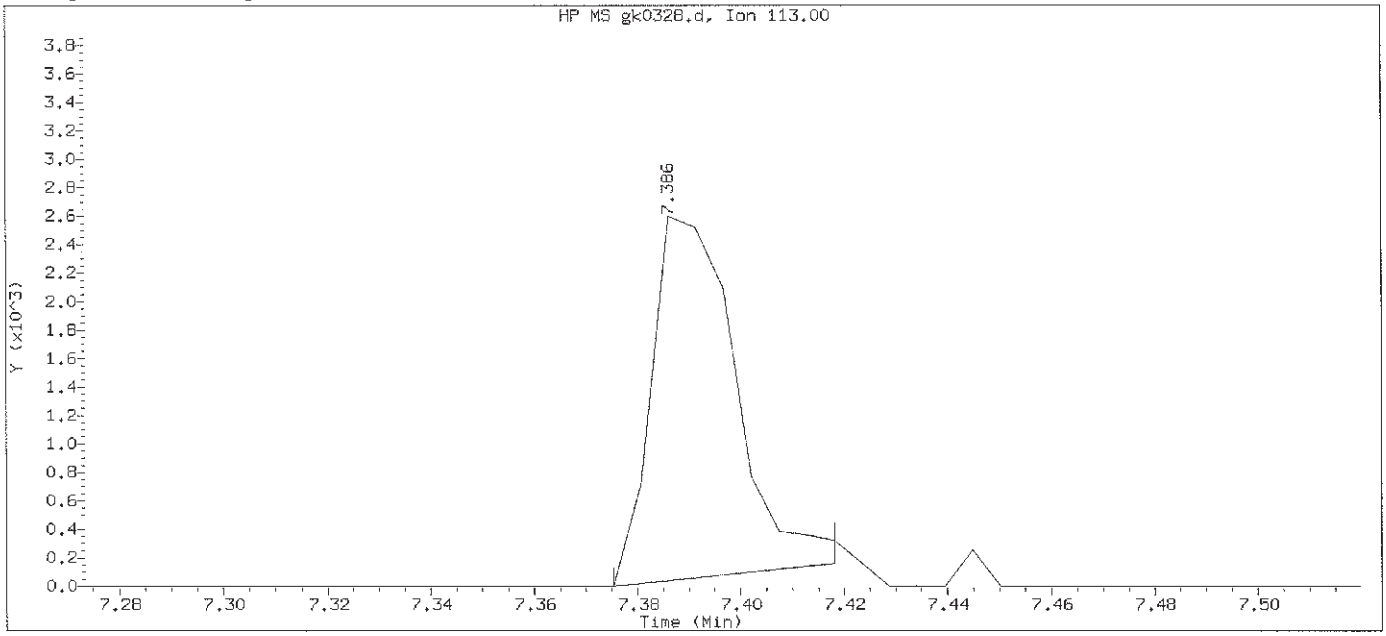
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

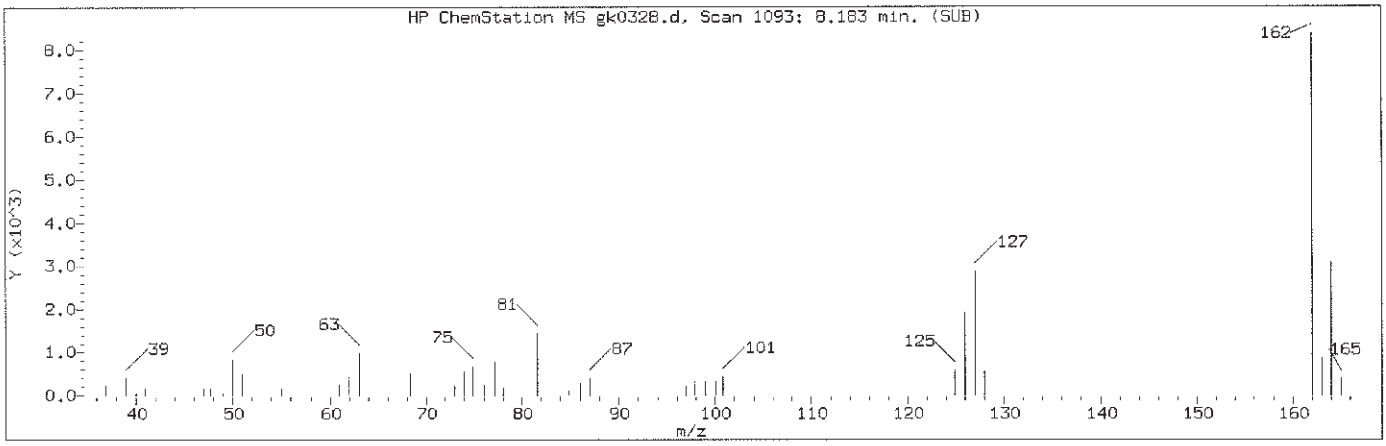
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

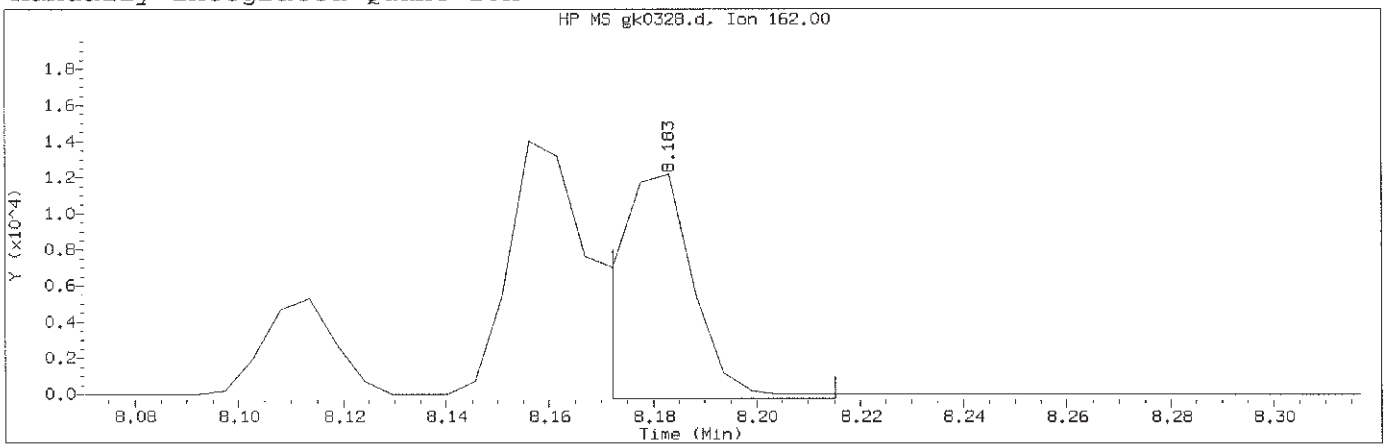
Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 944		
Retention Time (minutes)	: 7.386		
Quant Ion	: 113.00		
Area	: 2874		
On-column Amount (ng/ul)	: 0.9676		
Integration start scan	: 941	Integration stop scan:	949
Y at integration start	: 0	Y at integration end:	159

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1093		
Retention Time (minutes)	: 8.183		
Quant Ion	: 162.00		
Area (flag)	: 12783M		
On-Column Amount (ng/ul)	: 1.0995		
Integration start scan	: 1090	Integration stop scan:	1098
Y at integration start	: -210	Y at integration end:	-210

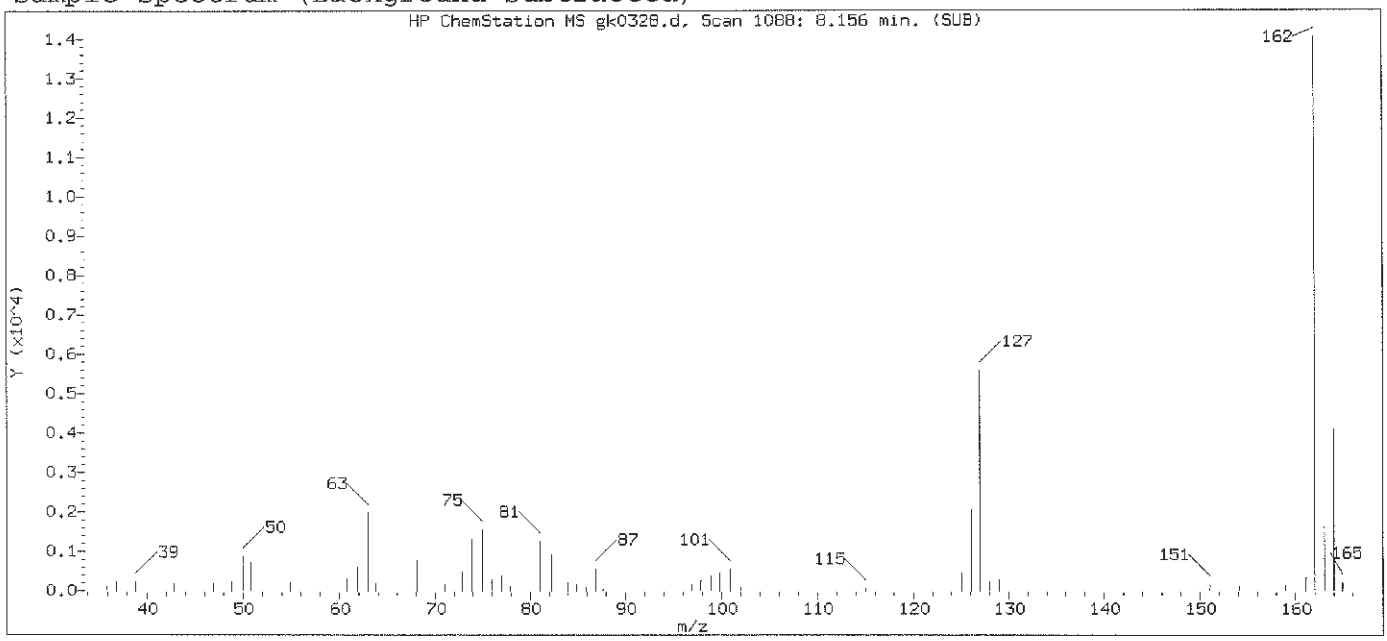
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

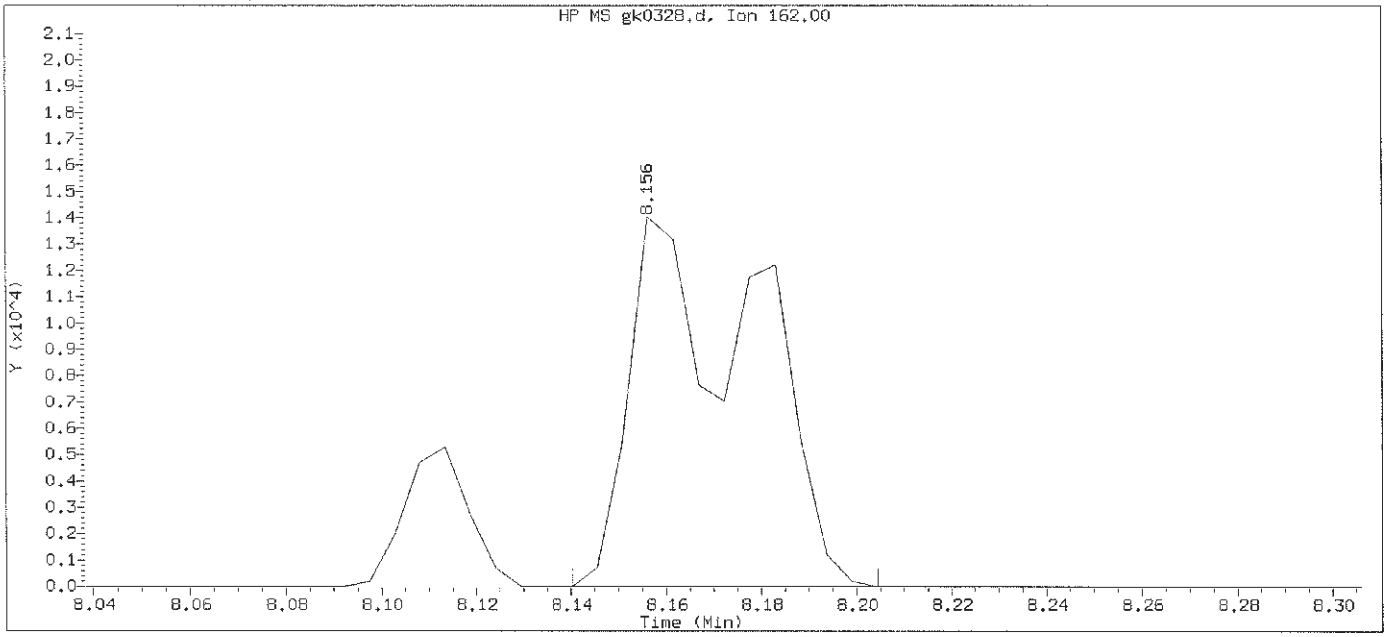
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

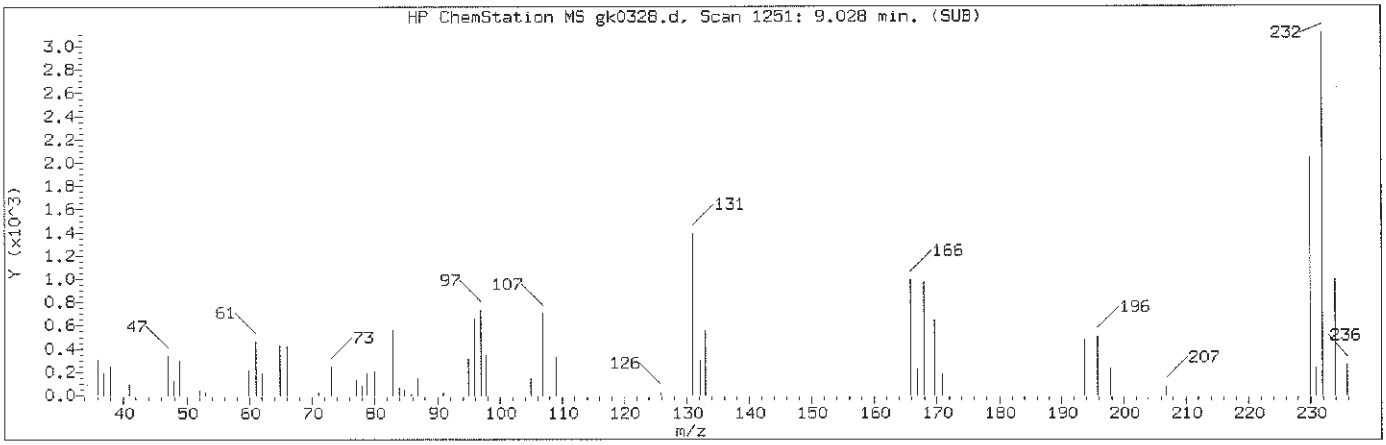
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

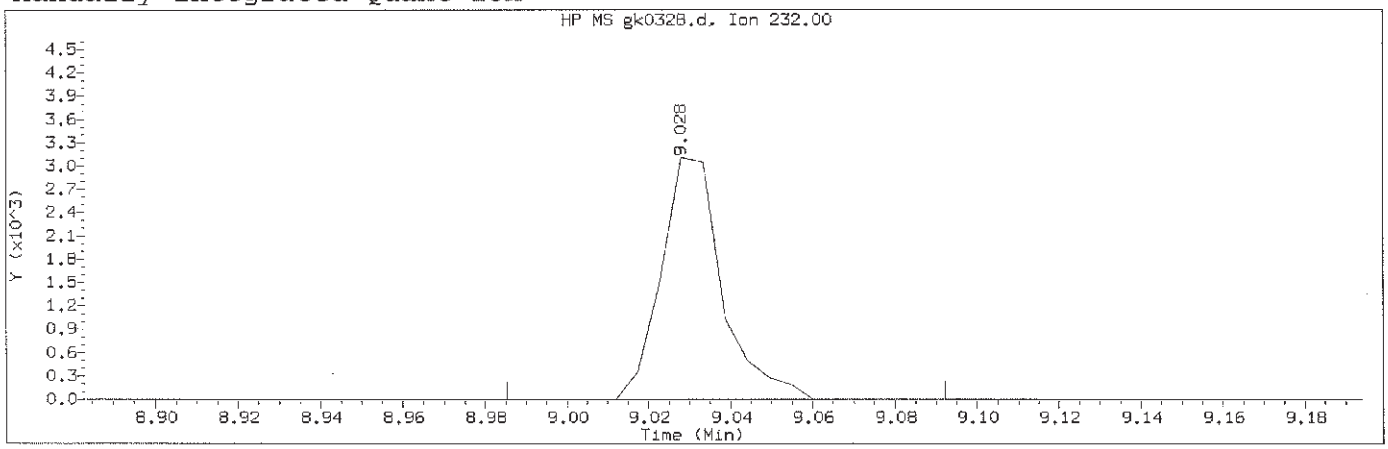
Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1088		
Retention Time (minutes)	: 8.156		
Quant Ion	: 162.00		
Area	: 25352		
On-column Amount (ng/ul)	: 1.8890		
Integration start scan	: 1084	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 109		
Compound Name	: 2,3,4,6-Tetrachlorophenol		
Scan Number	: 1251		
Retention Time (minutes)	: 9.028		
Quant Ion	: 232.00		
Area (flag)	: 3211M		
On-Column Amount (ng/ul)	: 1.0123		
Integration start scan	: 1242	Integration stop scan:	1262
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

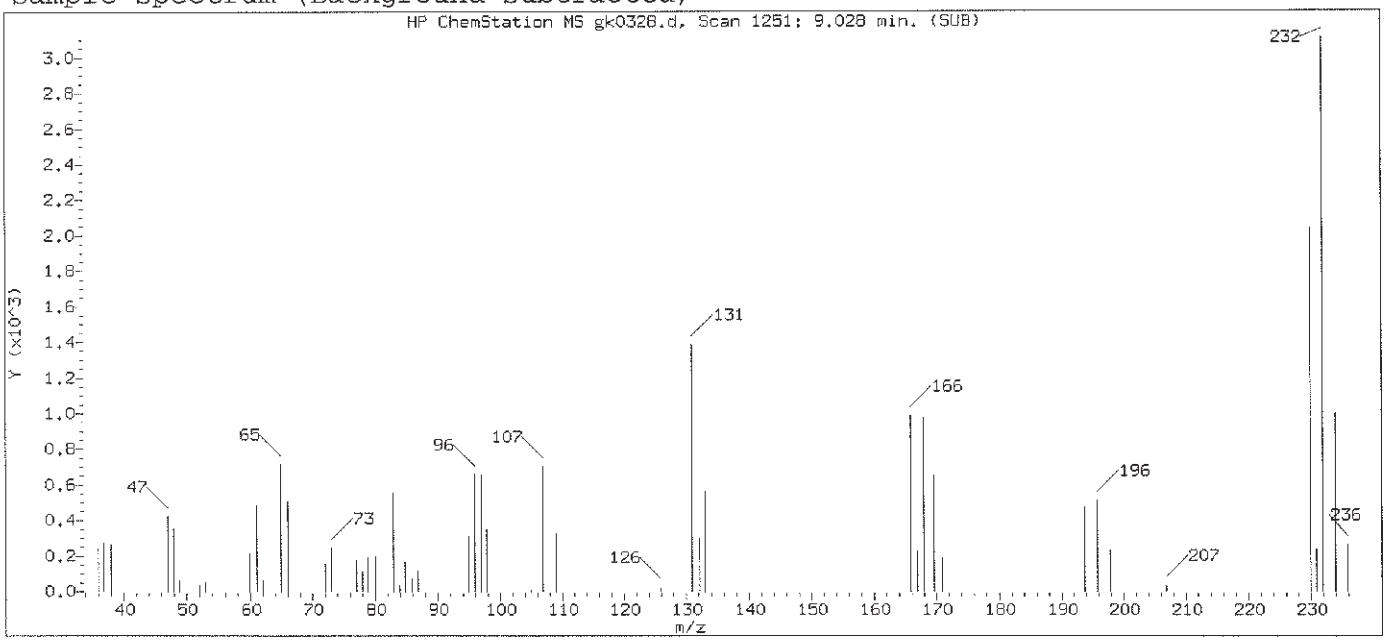
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

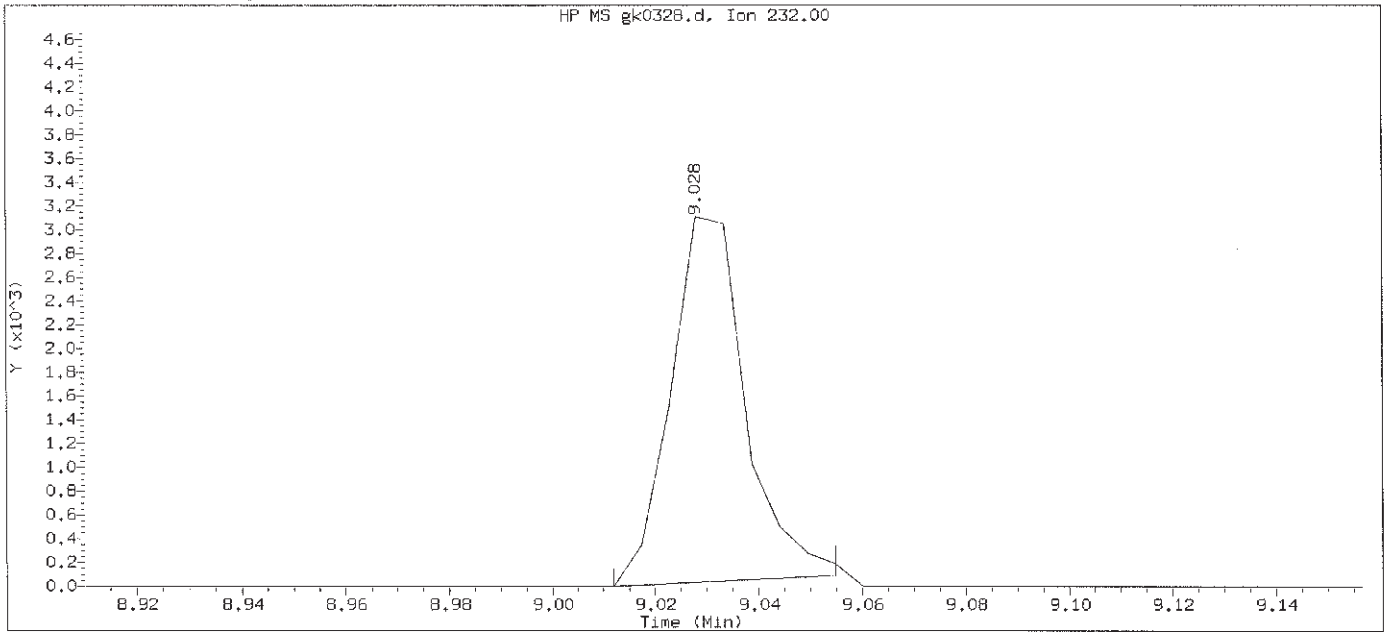
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 109		
Compound Name	: 2,3,4,6-Tetrachlorophenol		
Scan Number	: 1251		
Retention Time (minutes)	: 9.028		
Quant Ion	: 232.00		
Area	: 3058		
On-column Amount (ng/ul)	: 0.9643		
Integration start scan	: 1247	Integration stop scan:	1255
Y at integration start	: 0	Y at integration end:	95

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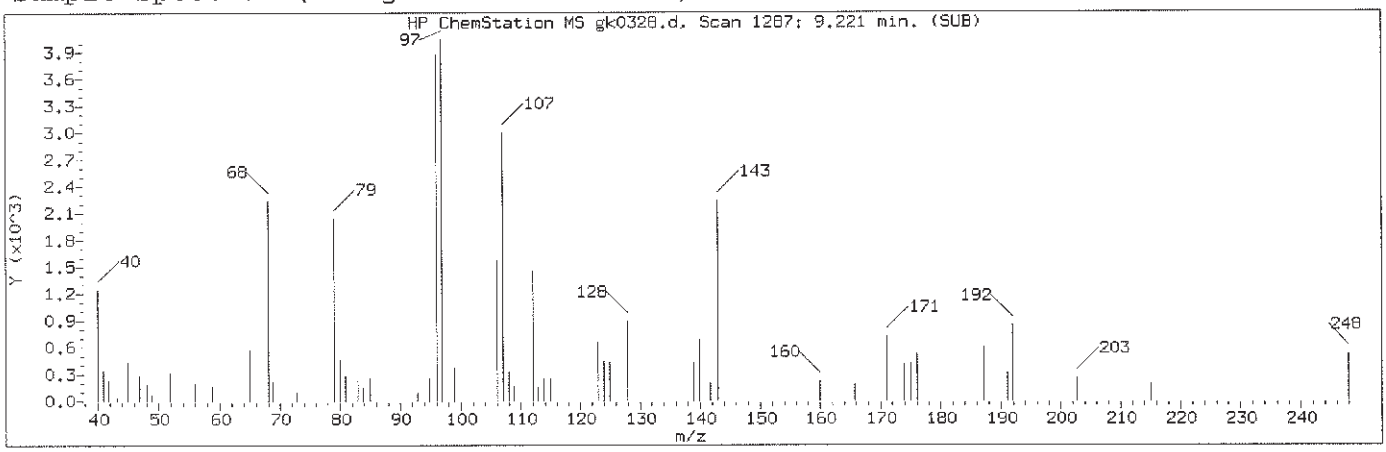
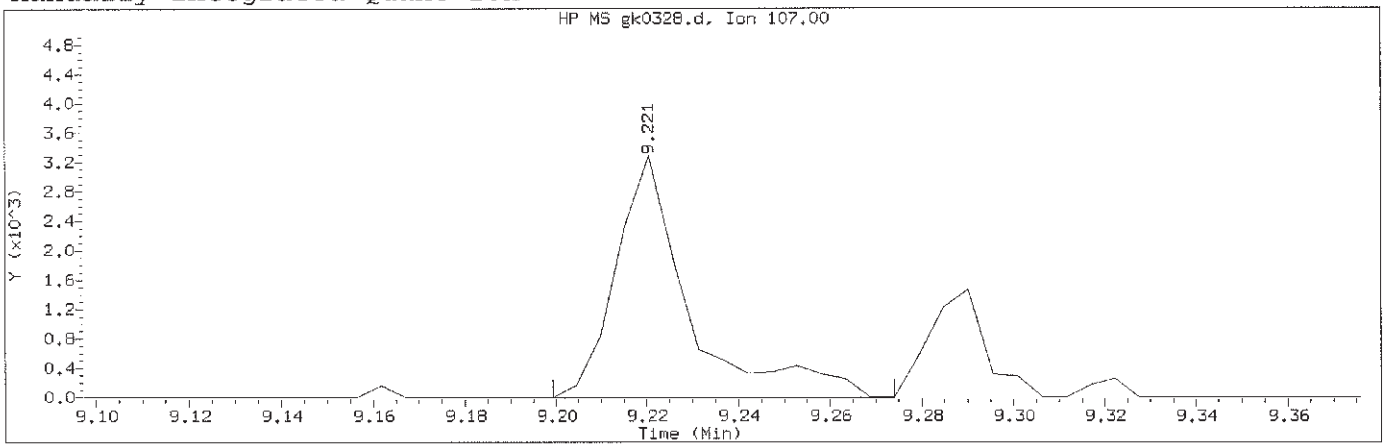
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 112		
Compound Name	: Thionazin		
Scan Number	: 1287		
Retention Time (minutes)	: 9.221		
Quant Ion	: 107.00		
Area (flag)	: 3648M		
On-Column Amount (ng/ul)	: 1.2231		
Integration start scan	: 1282	Integration stop scan:	1296
Y at integration start	: -5	Y at integration end:	-5

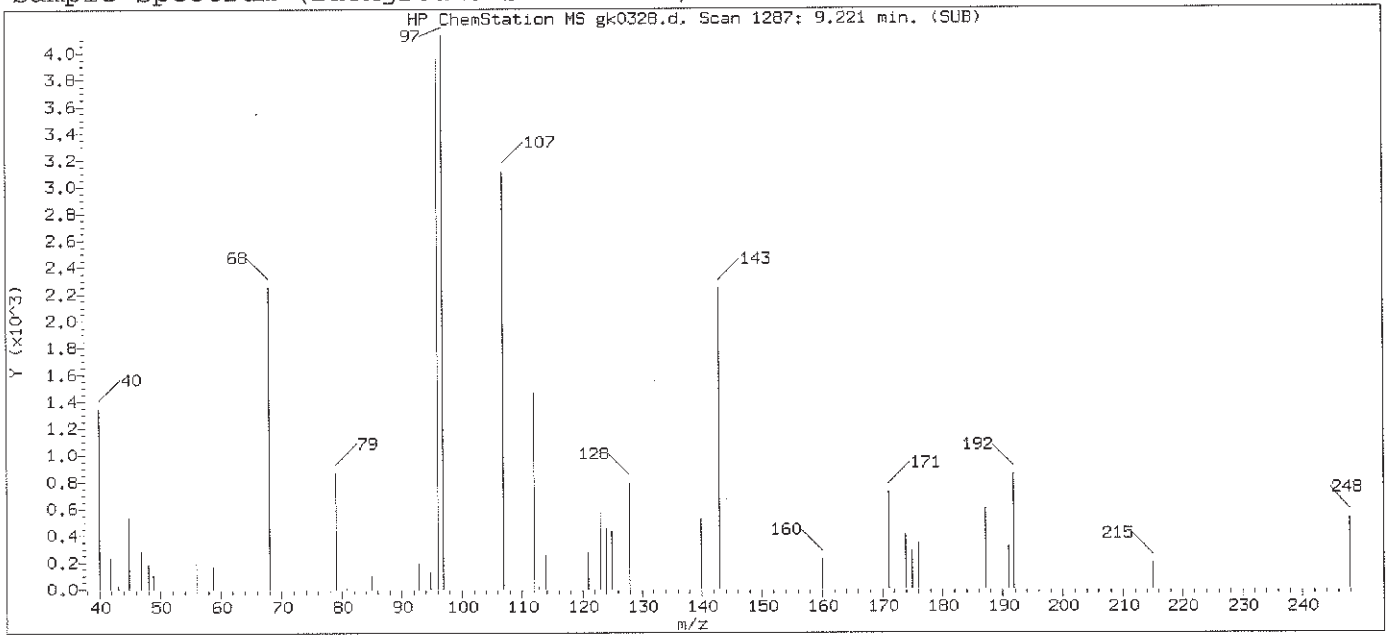
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

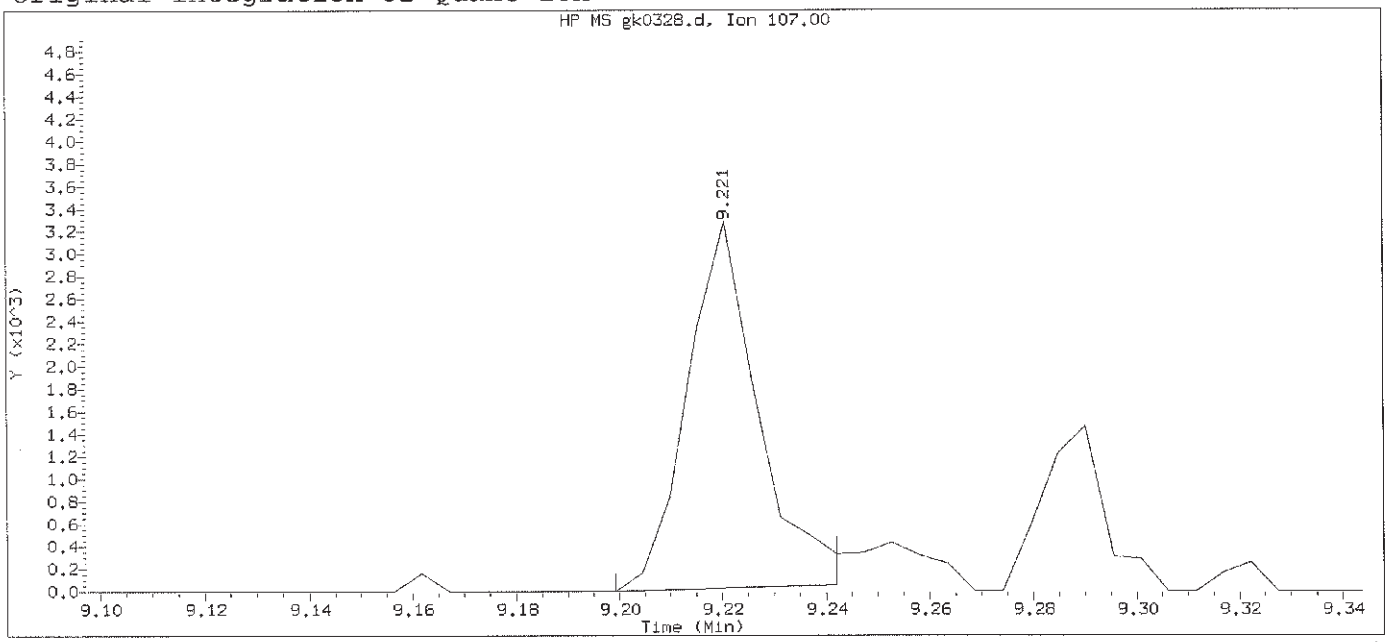
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 112		
Compound Name	: Thionazin		
Scan Number	: 1287		
Retention Time (minutes)	: 9.221		
Quant Ion	: 107.00		
Area	: 3067		
On-column Amount (ng/ul)	: 1.0285		
Integration start scan	: 1282	Integration stop scan:	1290
Y at integration start	: 0	Y at integration end:	57

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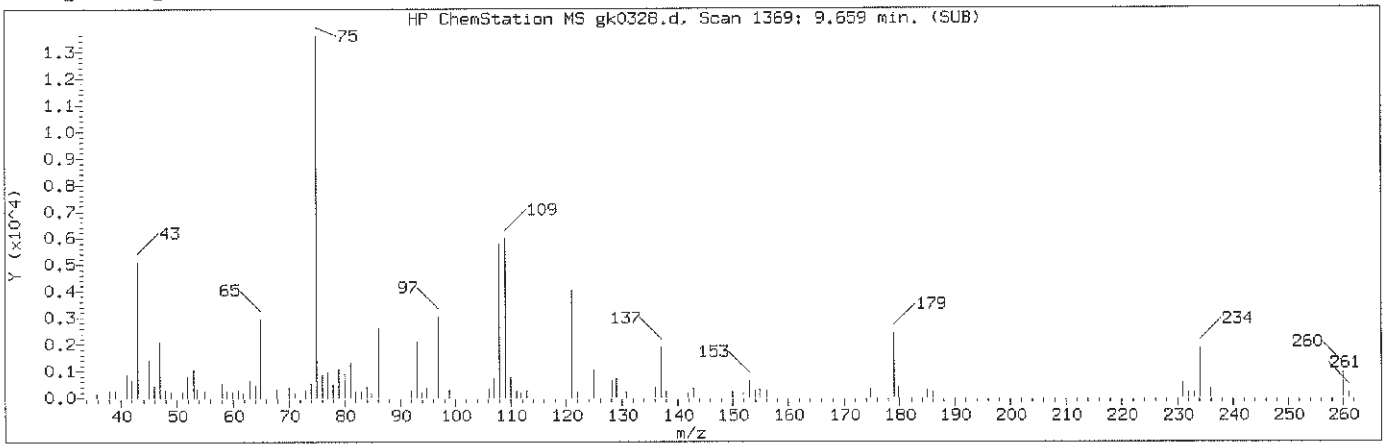
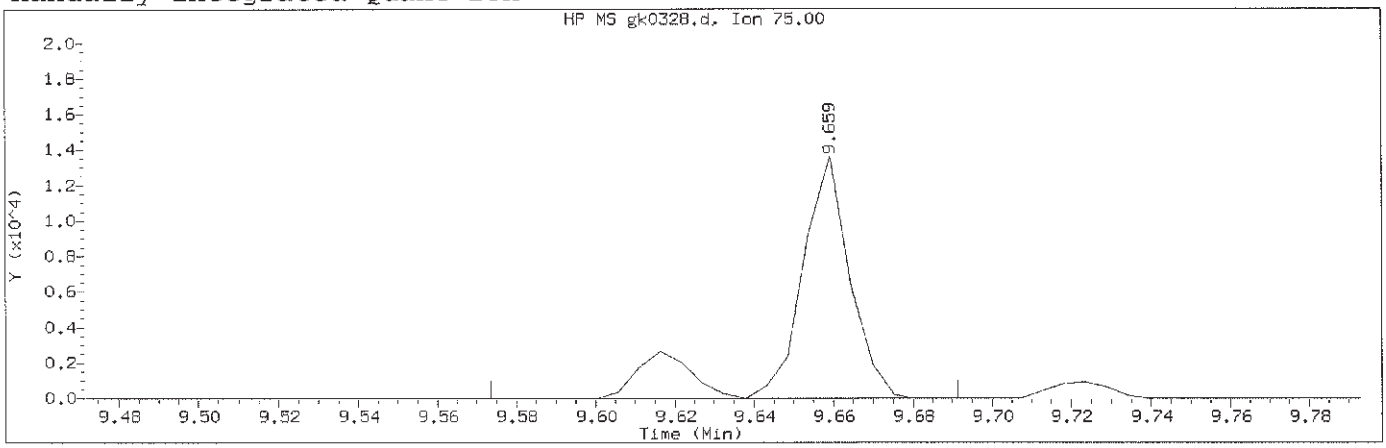
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area (flag)	: 13552M		
On-Column Amount (ng/ul)	: 0.7732		
Integration start scan	: 1352	Integration stop scan:	1374
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

GC/MS audit/management approval: NOV 11 2013

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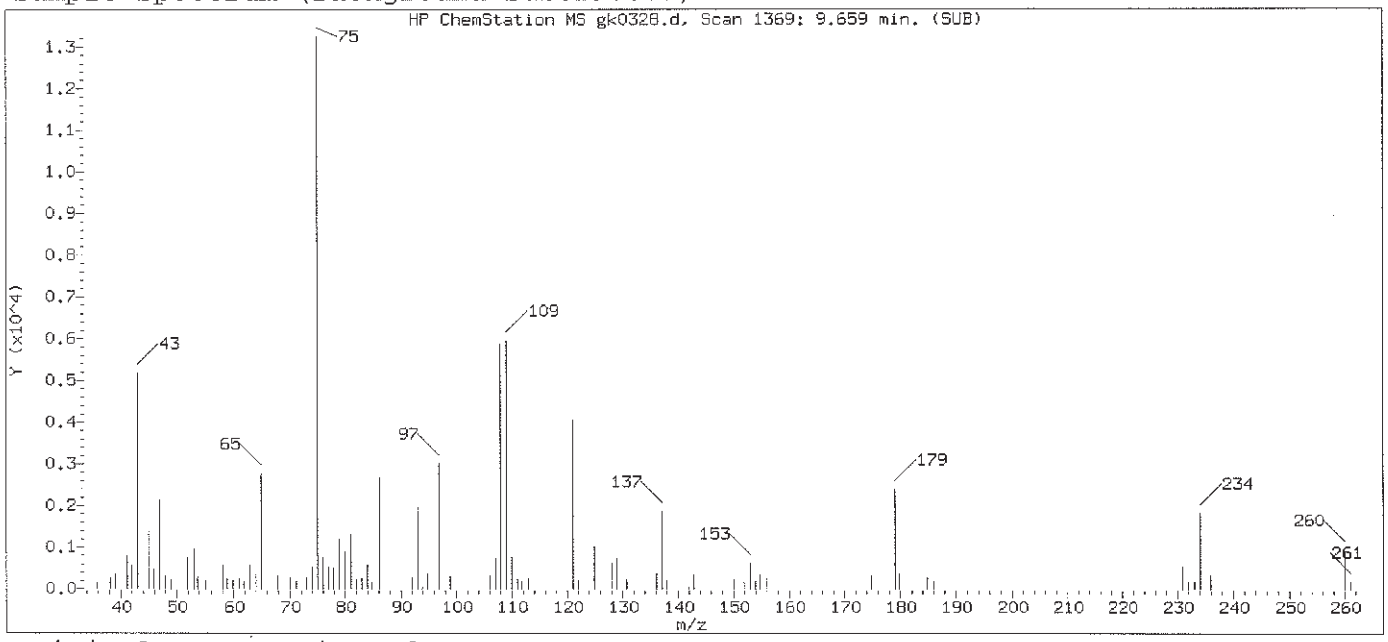
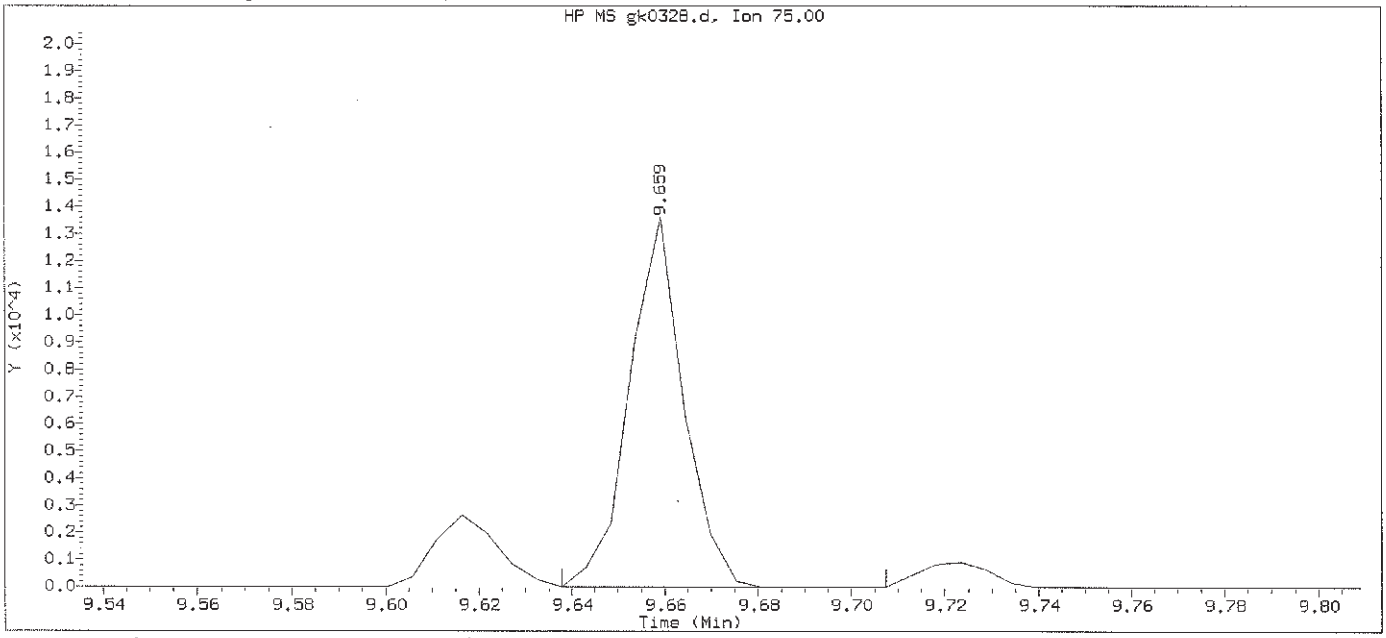
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

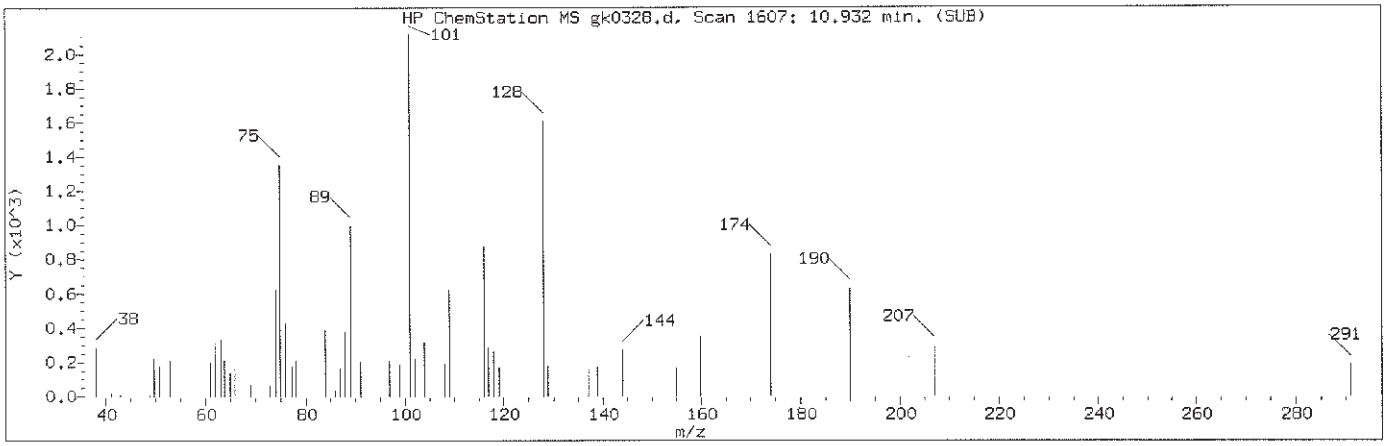
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

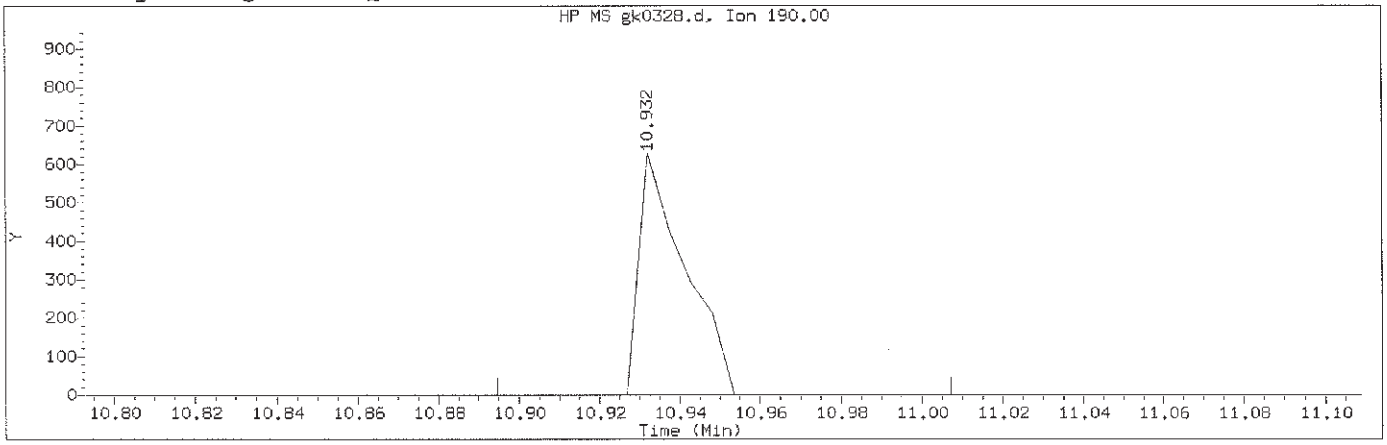
Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1369		
Retention Time (minutes)	: 9.659		
Quant Ion	: 75.00		
Area	: 11014		
On-column Amount (ng/ul)	: 0.7805		
Integration start scan	: 1364	Integration stop scan:	1377
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 152		
Compound Name	: 4-Nitroquinoline-1-oxide		
Scan Number	: 1607		
Retention Time (minutes)	: 10.932		
Quant Ion	: 190.00		
Area (flag)	: 500M		
On-Column Amount (ng/ul)	: 0.2535		
Integration start scan	: 1599	Integration stop scan:	1620
Y at integration start	: 0	Y at integration end:	0

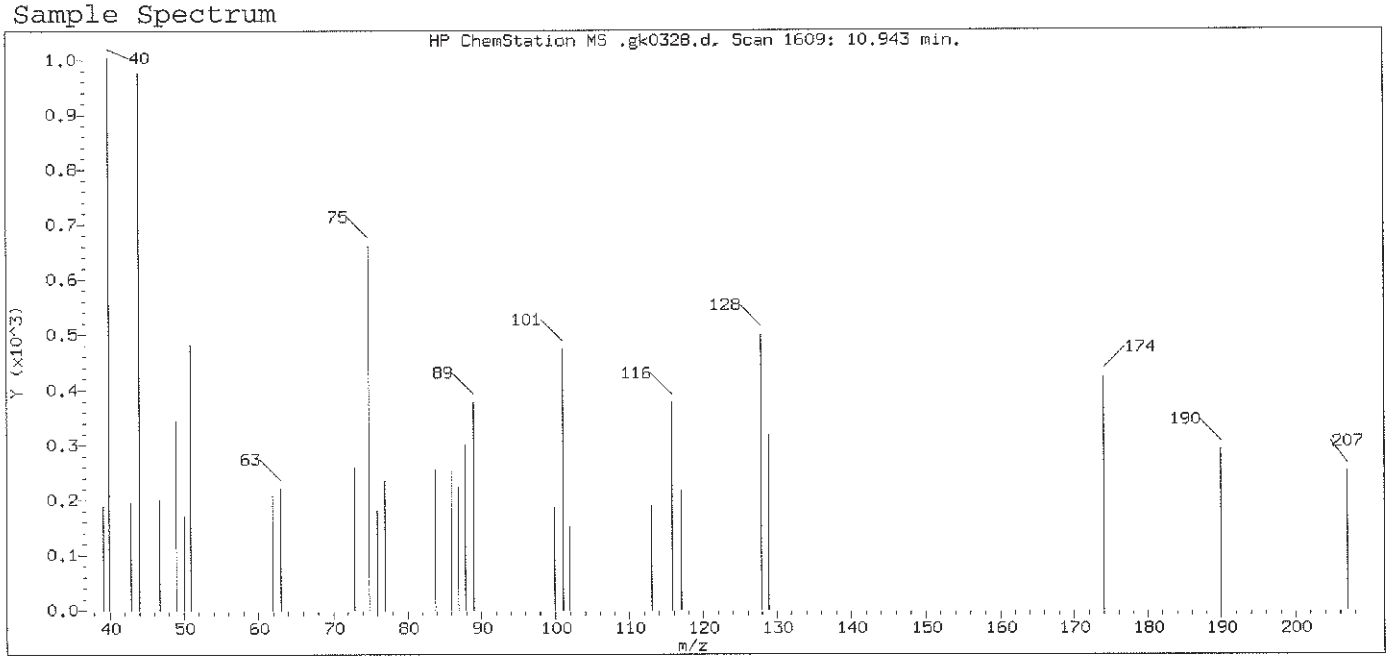
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

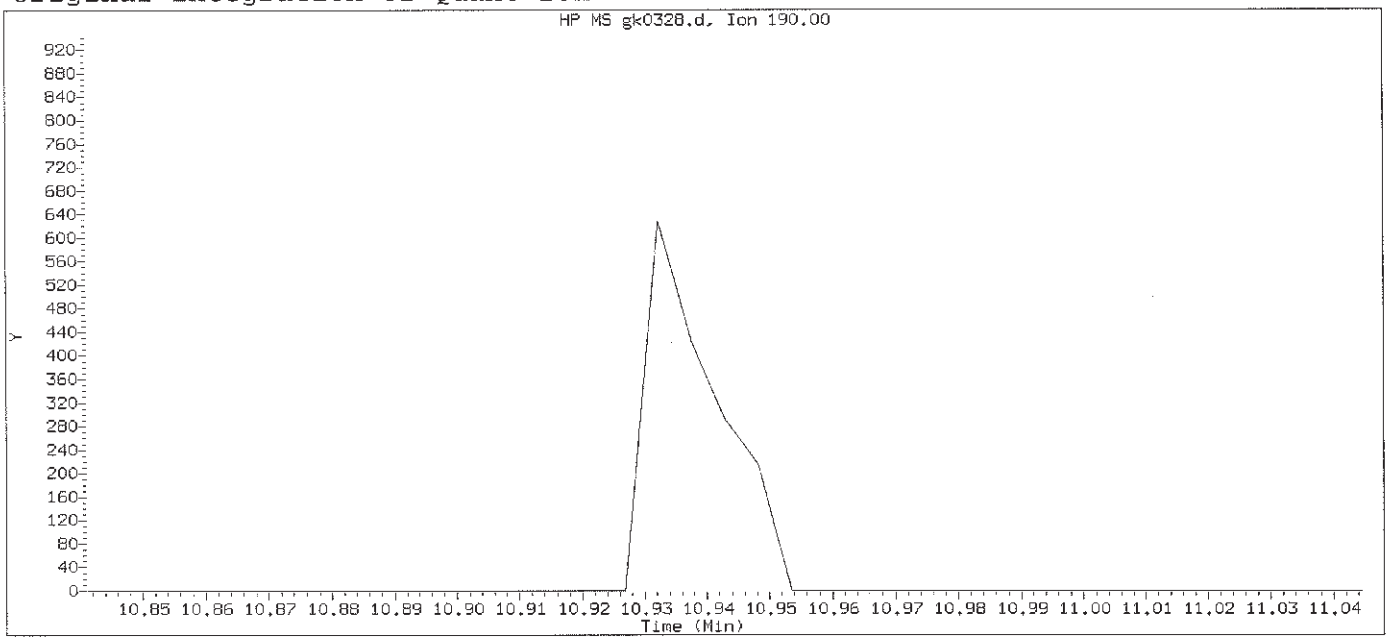
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

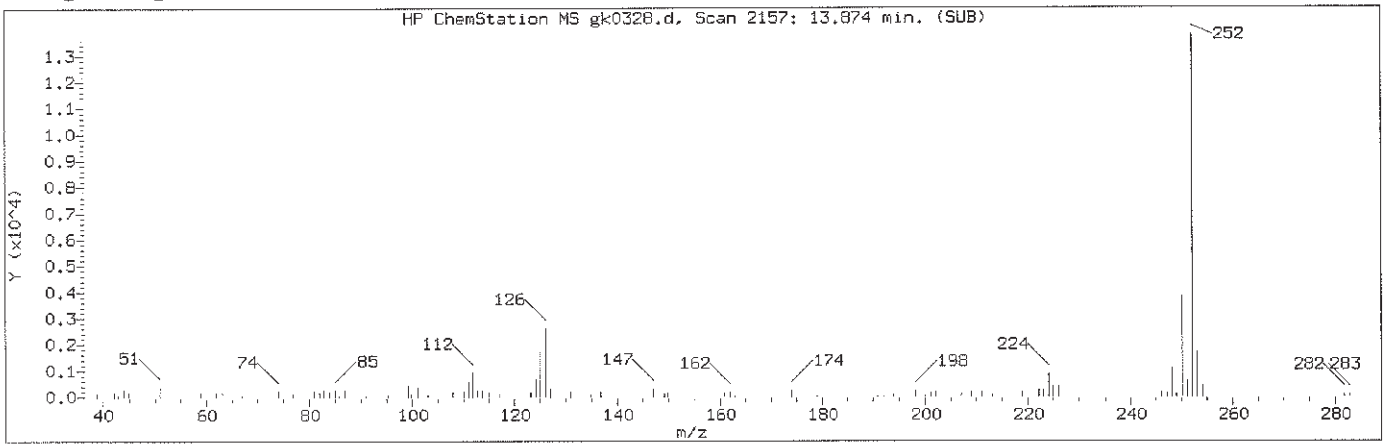
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

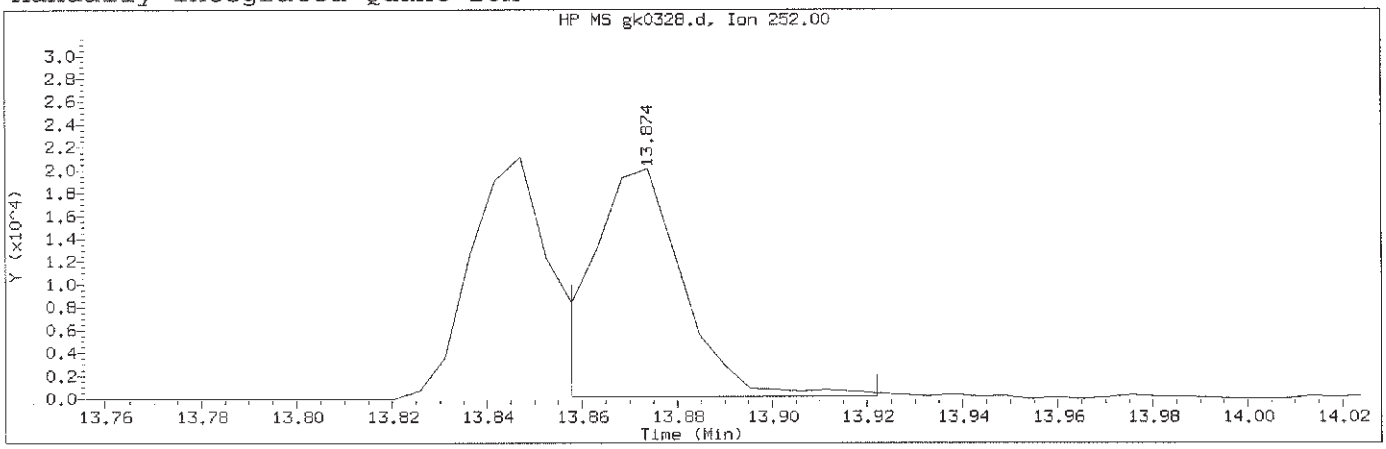
Compound Number : 152
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 10.943
Quant Ion : 190.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 10-NOV-2013 08:17
Date, time and analyst ID of latest file update: 10-Nov-2013 08:17 lmh00956

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area (flag)	: 27081M		
On-Column Amount (ng/ul)	: 0.9756		
Integration start scan	: 2153	Integration stop scan:	2165
Y at integration start	: 188	Y at integration end:	188

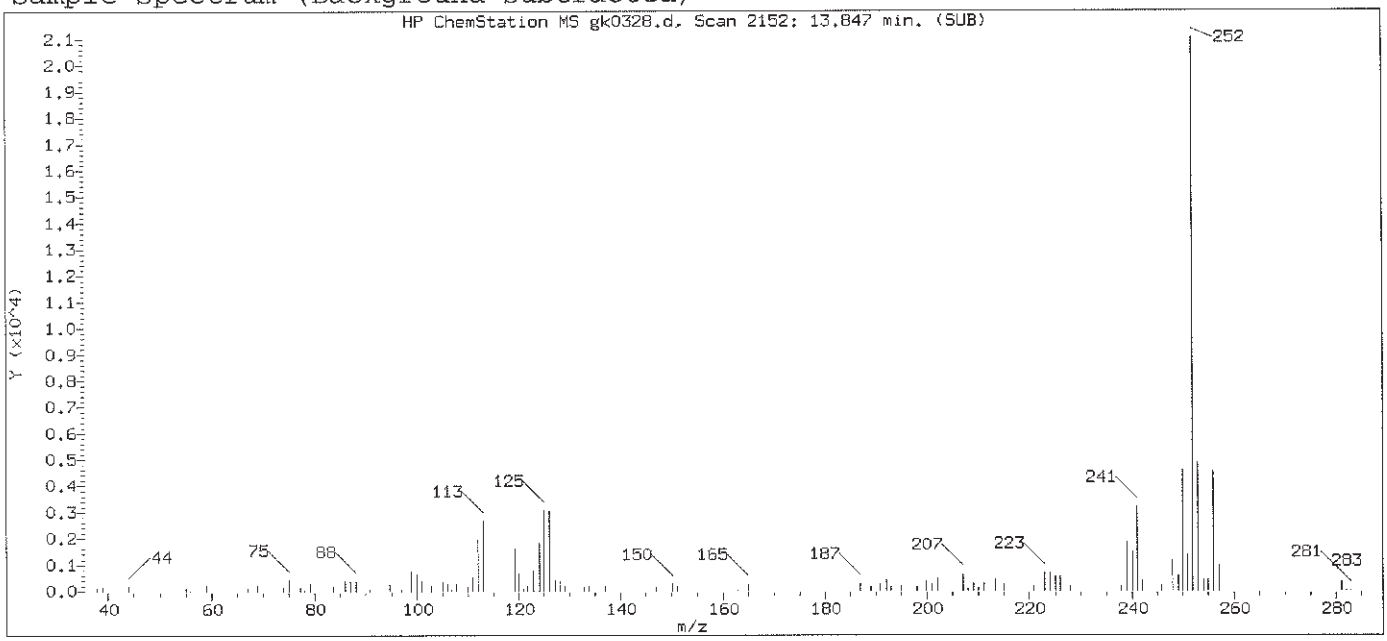
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49. Target 3.5 esignature user ID: lmh00956

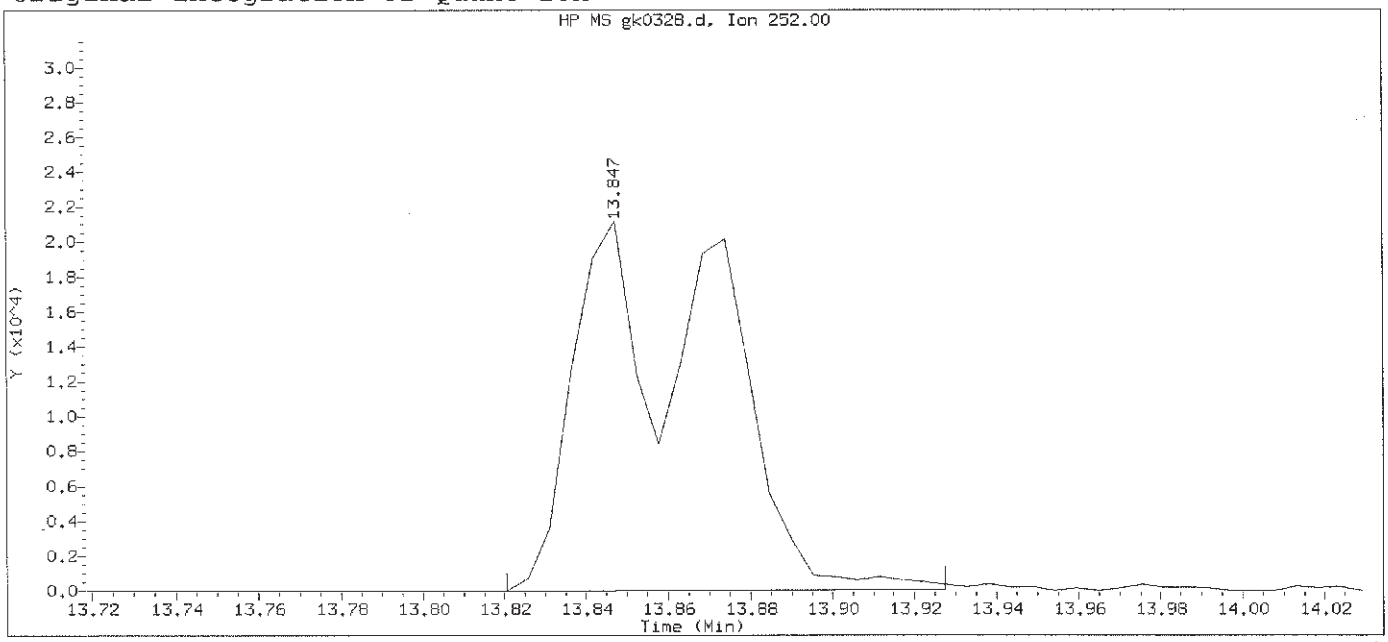
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



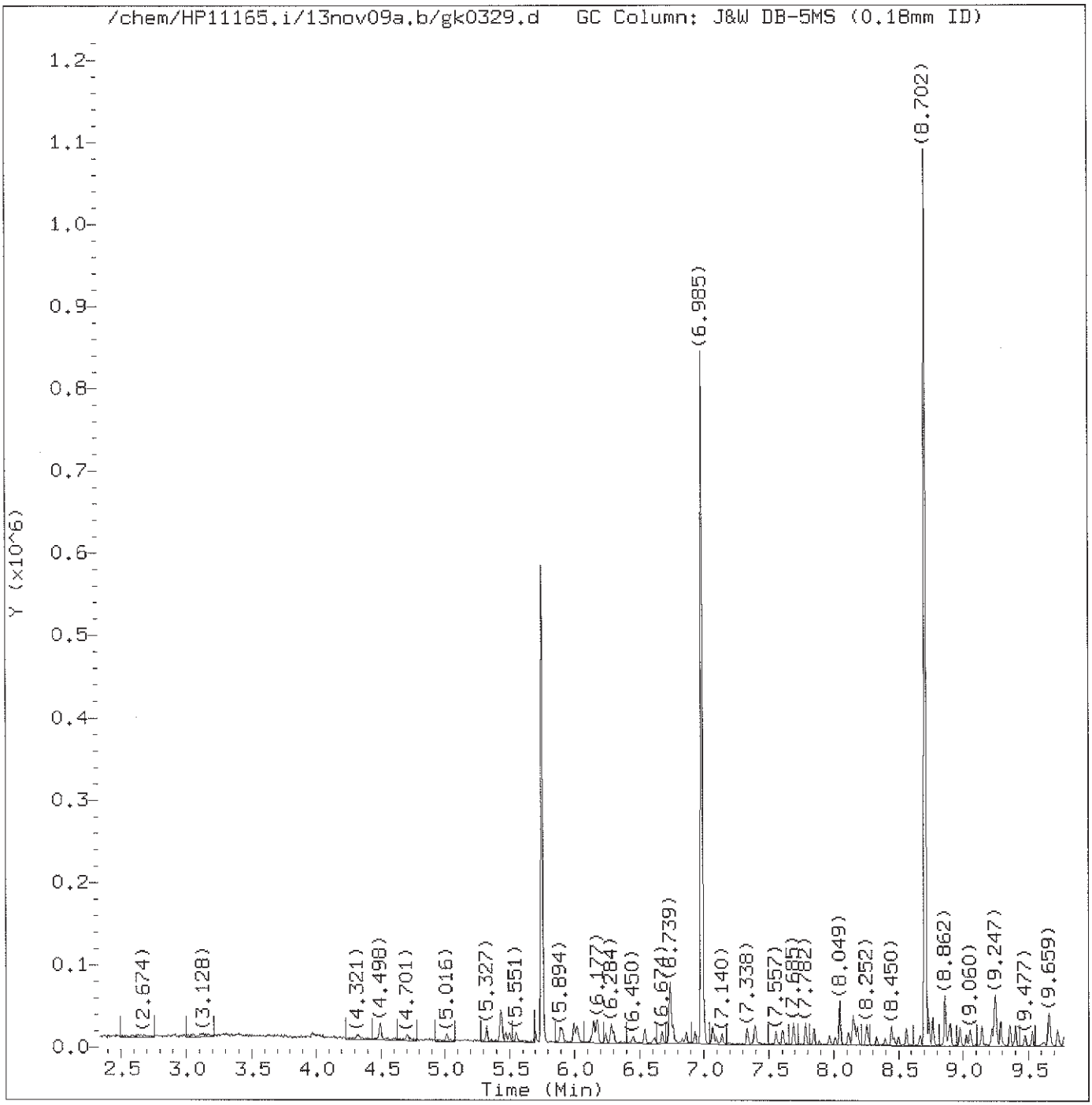
Data File: /chem/HP11165.i/13nov09a.b/gk0328.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:27 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 09-NOV-2013 23:51
Date, time and analyst ID of latest file update: 09-Nov-2013 23:51 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2152		
Retention Time (minutes)	: 13.847		
Quant Ion	: 252.00		
Area	: 50005		
On-column Amount (ng/ul)	: 1.6328		
Integration start scan	: 2146	Integration stop scan:	2166
Y at integration start	: 0	Y at integration end:	69

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:49.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

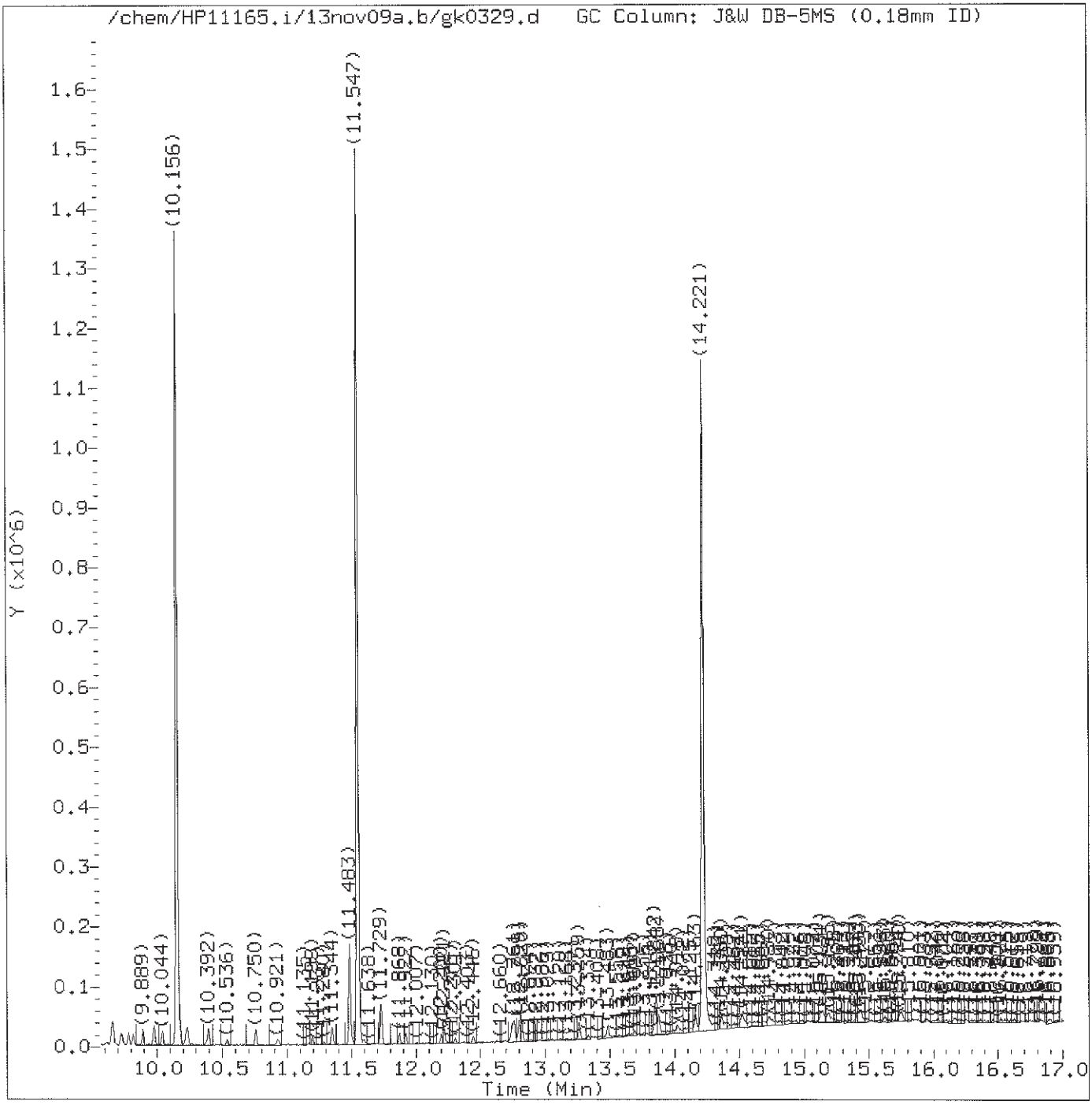
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5md1all1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5md1all1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.631	88	2796M	0.975
3) N-Nitrosodimethylamine	(1)	3.107	74	1346	0.268
4) Pyridine	(1)	3.257	79	2662M	0.326
7) 2-Picoline	(1)	3.973	93	4006M	0.478
8) N-Nitrosomethylethylamine	(1)	4.000	88	8082	1.879
9) Methyl methanesulfonate	(1)	4.321	80	1853	0.455
10)$2-Fluorophenol	(1)	4.492	112	5733	0.885
11) N-Nitrosodiethylamine	(1)	4.706	102	1927	0.496
14) Ethyl methanesulfonate	(1)	5.016	109	1626	0.415
17)$Phenol-d6	(1)	5.428	99	8686	0.891
16)$Phenol-d5	(1)	5.428	99	8686	0.891
19) Aniline	(1)	5.439	93	5401	0.420
18) Phenol	(1)	5.444	94	5067	0.437
20) bis(2-Chloroethyl)ether	(1)	5.503	93	3644	0.441
21) 2-Chlorophenol	(1)	5.551	128	2752	0.422
24) 1,3-Dichlorobenzene	(1)	5.690	146	2862	0.438
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	81747	20.000
26) 1,4-Dichlorobenzene	(1)	5.771	146	3591	0.543
27) Benzyl alcohol	(1)	5.899	108	2382	0.443
28) 1,2-Dichlorobenzene	(1)	5.910	146	3530	0.544
29) Indene	(1)	5.995	115	6502	0.547
32) bis(2-Chloroisopropyl)ether	(1)	6.022	45	5358	0.483
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.022	45	5358	0.483
30) 2-Methylphenol	(1)	6.022	108	3018	0.411
34) N-Nitrosopyrrolidine	(1)	6.129	100	1853	0.395
35) Acetophenone	(1)	6.140	105	5559	0.479
37) N-Nitroso-di-n-propylamine	(1)	6.150	70	2923	0.423
38) N-Nitrosomorpholine	(1)	6.161	56	2715M	0.510
36) 4-Methylphenol	(1)	6.166	108	3462	0.396
39) o-Toluidine	(1)	6.177	106	5429	0.428
40) Hexachloroethane	(1)	6.241	117	1385	0.536
41)$Nitrobenzene-d5	(2)	6.284	82	8025	0.947
42) Nitrobenzene	(2)	6.305	77	4388	0.485
44) N-Nitrosopiperidine	(2)	6.450	114	1636	0.407
45) Isophorone	(2)	6.546	82	6850	0.415
48) 2-Nitrophenol	(2)	6.610	139	1328	0.378
52) 2,4-Dimethylphenol	(2)	6.680	107	3341	0.430
53) O,O,O-triethylphosphorothioate	(2)	6.739	198	1505	0.470
54) Benzoic acid	(2)	6.739	105	22554	3.340
55) bis(2-Chloroethoxy)methane	(2)	6.760	93	4261	0.423

M = Compound was manually integrated.
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Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5md1a11-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.867	162	2340	0.441
62) 1,2,4-Trichlorobenzene	(2)	6.937	180	2876	0.519
63)*Naphthalene-d8	(2)	6.985	136	384445	20.000
65) 4-Chloroaniline	(2)	7.065	127	3642	0.427
66) 2,6-Dichlorophenol	(2)	7.076	162	2345	0.444
67) Hexachloropropene	(2)	7.097	213	1376	0.467
69) Hexachlorobutadiene	(2)	7.140	225	1137	0.435
70) Quinoline	(2)	7.332	129	7434	0.513
74) Caprolactam	(2)	7.391	113	1707M	0.519
73) N-Nitrosodi-n-butylamine	(2)	7.402	84	5040	0.589
75) 4-Chloro-3-methylphenol	(2)	7.557	107	3090	0.421
76) Safrole	(2)	7.605	162	2360	0.445
79) Hexachlorocyclopentadiene	(3)	7.840	237	773	0.337
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	2731	0.491
81) cis-Isosafrole	(3)	7.894	162	308	0.035
82) 2,4,6-Trichlorophenol	(3)	7.964	196	1494	0.363
83) 2,4,5-Trichlorophenol	(3)	8.012	196	1533	0.358
84)$2-Fluorobiphenyl	(3)	8.049	172	14947	1.037
86) Isosafrole	(3)	8.113	162	2971	0.535
85) trans-Isosafrole	(3)	8.113	162	2971	0.476
87) 1,1'-Biphenyl	(3)	8.145	154	9421	0.513
88) 2-Chloronaphthalene	(3)	8.161	162	7484M	0.539
89) 1-Chloronaphthalene	(3)	8.177	162	6514M	0.512
90) Diphenyl ether	(3)	8.252	170	4061	0.444
91) 2-Nitroaniline	(3)	8.263	138	1696	0.347
92) 1,4-Naphthoquinone	(3)	8.333	158	1718	0.300
93) 1,4-Dinitrobenzene	(3)	8.397	168	642M	0.261
94) Dimethylphthalate	(3)	8.450	163	7816	0.490
95) 1,3-Dinitrobenzene	(3)	8.466	168	793M	0.265
97) 2,6-Dinitrotoluene	(3)	8.504	165	1220	0.341
100) 3-Nitroaniline	(3)	8.664	138	1760	0.392
101)*Acenaphthene-d10	(3)	8.702	164	236644	20.000
103) 2,4-Dinitrophenol	(3)	8.766	184	4146	8.657
104) 4-Nitrophenol	(3)	8.862	109	4575	1.692
105) Pentachlorobenzene	(3)	8.867	250	2983	0.596
106) 2,4-Dinitrotoluene	(3)	8.889	165	2066	0.412
107) Dibenzofuran	(3)	8.905	168	9588	0.490
108) 1-Naphthylamine	(3)	8.980	143	6461	0.401
109) 2,3,4,6-Tetrachlorophenol	(3)	9.033	232	1093M	0.315
110) 2-Naphthylamine	(3)	9.060	143	7525	0.467

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on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
111) Diethylphthalate	(3)	9.140	149	7510	0.462
112) Thionazin	(3)	9.215	107	1584	0.485
114) 4-Chlorophenyl-phenylether	(3)	9.247	204	4150	0.555
115) 5-Nitro-o-toluidine	(3)	9.253	152	1873	0.369
116) 4-Nitroaniline	(3)	9.258	138	1874	0.387
117) 4,6-Dinitro-2-methylphenol	(4)	9.290	198	3724	1.133
119) NDPA as diphenylamine	(4)	9.365	169	6583	0.415
118) N-Nitrosodiphenylamine	(4)	9.365	169	6583	0.416
120) 1,2-Diphenylhydrazine	(4)	9.402	77	9728	0.423
121)$2,4,6-Tribromophenol	(3)	9.477	330	1231	0.779
122) Tetraethyldithiopyrophosphate	(4)	9.531	97	1249	0.387
123) 1,3,5-Trinitrobenzene	(4)	9.622	213	327M	3.377
124) Diallate (peak 1)	(4)	9.654	86	4628	0.374
125) Phorate	(4)	9.659	75	5489	0.288
126) Phenacetin	(4)	9.664	108	3841	0.356
127) 4-Bromophenyl-phenylether	(4)	9.723	248	2113	0.471
128) Diallate (peak 2)	(4)	9.734	86	954M	0.168
130) Dimethoate	(4)	9.814	87	3362	0.364
132) Atrazine	(4)	9.889	200	2557	0.504
133) Pentachlorophenol	(4)	9.975	266	826	0.284
135) 4-Aminobiphenyl	(4)	9.980	169	6999	0.460
134) Pentachloronitrobenzene	(4)	9.985	237	501M	0.275
138) Pronamide	(4)	10.044	173	2627	0.357
140)*Phenanthrene-d10	(4)	10.156	188	475514	20.000
142) Dinoseb	(4)	10.156	211	675M	4.286
146) Carbazole	(4)	10.392	167	11114	0.429
148) Methyl parathion	(4)	10.536	109	1659	0.263
149) Di-n-butylphthalate	(4)	10.750	149	11741	0.378
151) Parathion	(4)	10.921	109	992M	0.243
152) 4-Nitroquinoline-1-oxide	(4)	10.927	190	334M	4.708
156) Isodrin	(4)	11.205	193	1653	0.590
162) Benzidine	(5)	11.483	184	68057	3.106
164)*Pyrene-d10	(5)	11.547	212	575970	20.000
166)$Terphenyl-d14	(5)	11.729	244	19887	0.968
168) p-Dimethylaminoazobenzene	(5)	11.868	225	1707M	0.289
171) Chlorobenzilate	(5)	11.916	139	3558	0.383
172) 3,3'-Dimethylbenzidine	(5)	12.194	212	5841	0.341
173) Butylbenzylphthalate	(5)	12.221	149	4448	0.300
174) 2-Acetylaminofluorene	(5)	12.446	181	3092	0.251
175) 3,3'-Dichlorobenzidine	(5)	12.740	252	3645	0.361

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on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5md1al11-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176)	4,4'-Methylenebis(2-Chloroanil	(5)	12.751	231	1716	0.360
179)	bis(2-Ethylhexyl)phthalate	(5)	12.820	149	8333	0.412
181)	6-Methylchrysene	(5)	13.259	242	8143	0.424
183)	Di-n-octylphthalate	(6)	13.483	149	8197	0.235
184)	7,12-Dimethylbenz[a]anthracene	(6)	13.836	256	4814	0.377
188)*	Perylene-d12	(6)	14.221	264	467284	20.000
190)	3-Methylcholanthrene	(6)	14.526	268	5072	0.421
191)	Dibenz(a,h)acridine	(6)	15.131	279	6625	0.375
192)	Dibenz(a,j)acridine	(6)	15.190	279	7654	0.385
204)	Diallate TRANS/CIS	(4)			5582	0.541

* = Compound is an internal standard.

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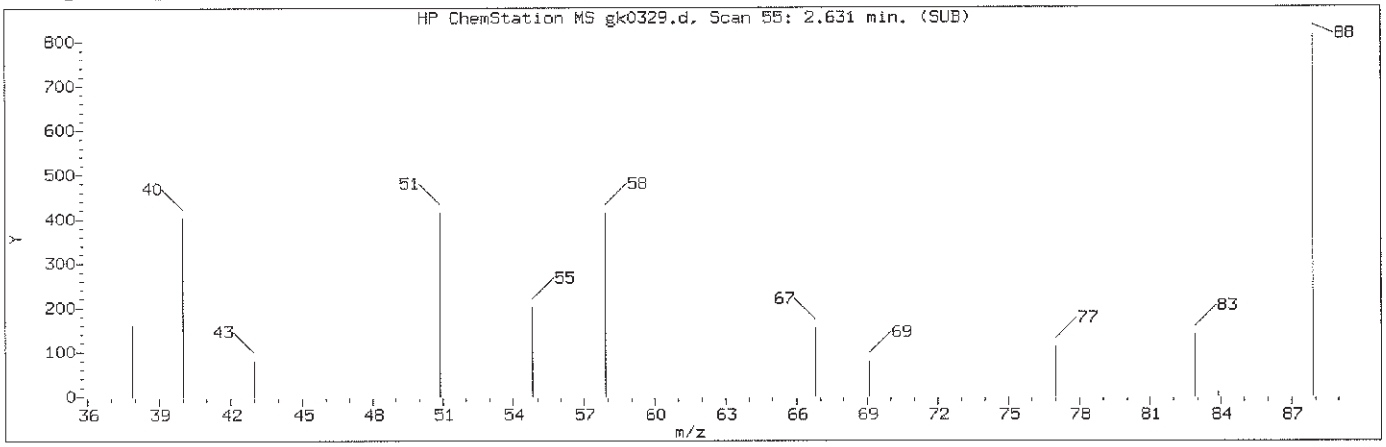
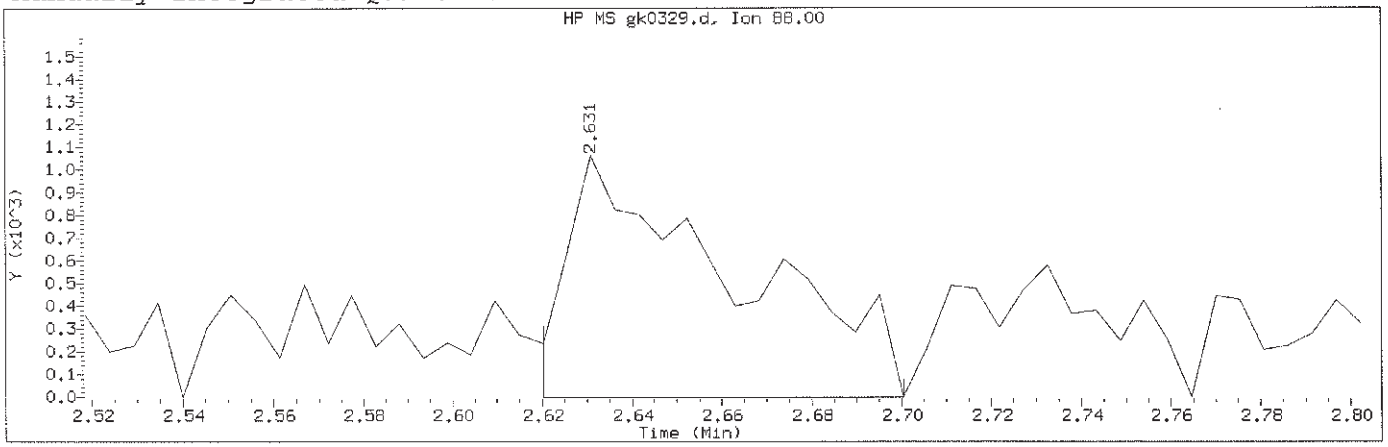
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 55		
Retention Time (minutes)	: 2.631		
Quant Ion	: 88.00		
Area (flag)	: 2796M		
On-Column Amount (ng/ul)	: 0.9749		
Integration start scan	: 52	Integration stop scan:	67
Y at integration start	: -3	Y at integration end:	-3

Reason for manual integration: missed peak

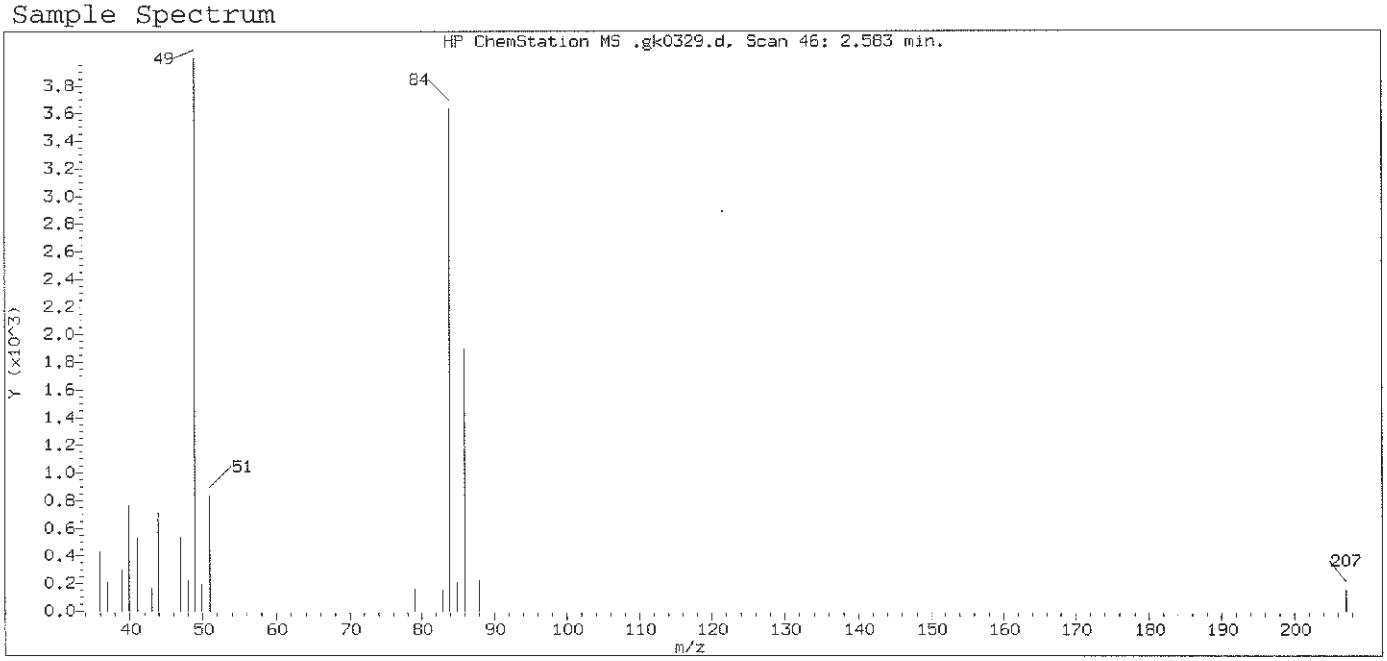
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

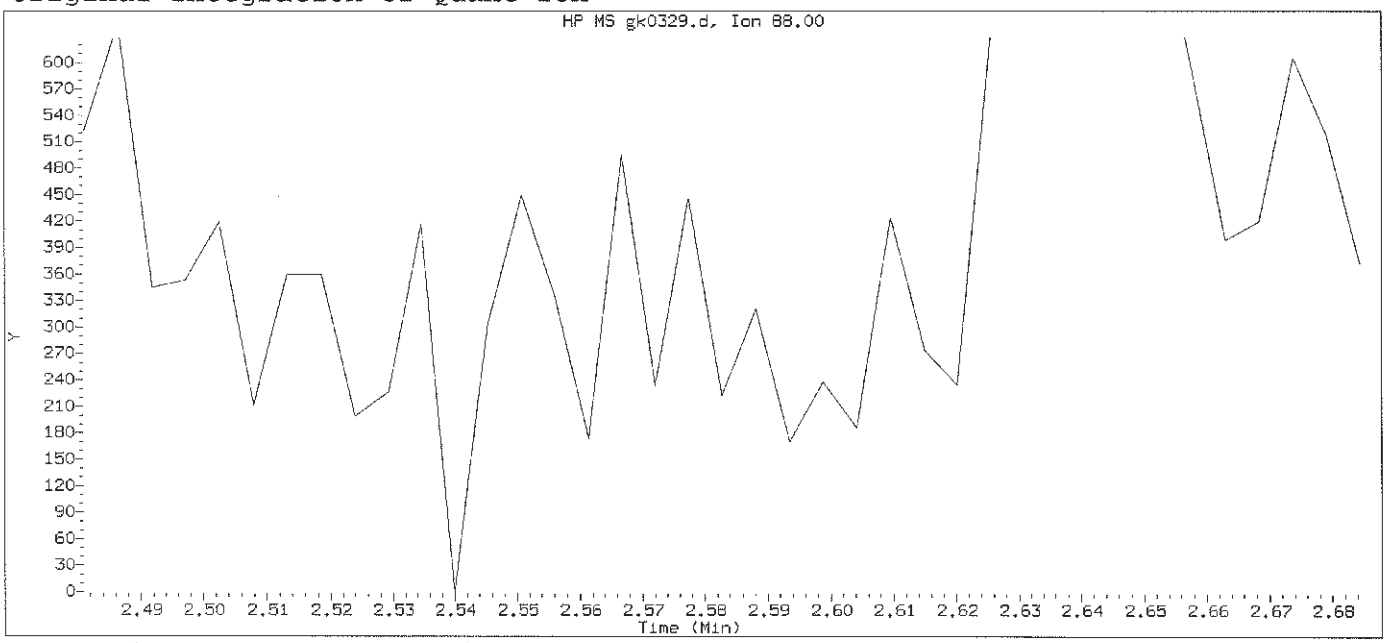
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.583
Quant Ion : 88.00

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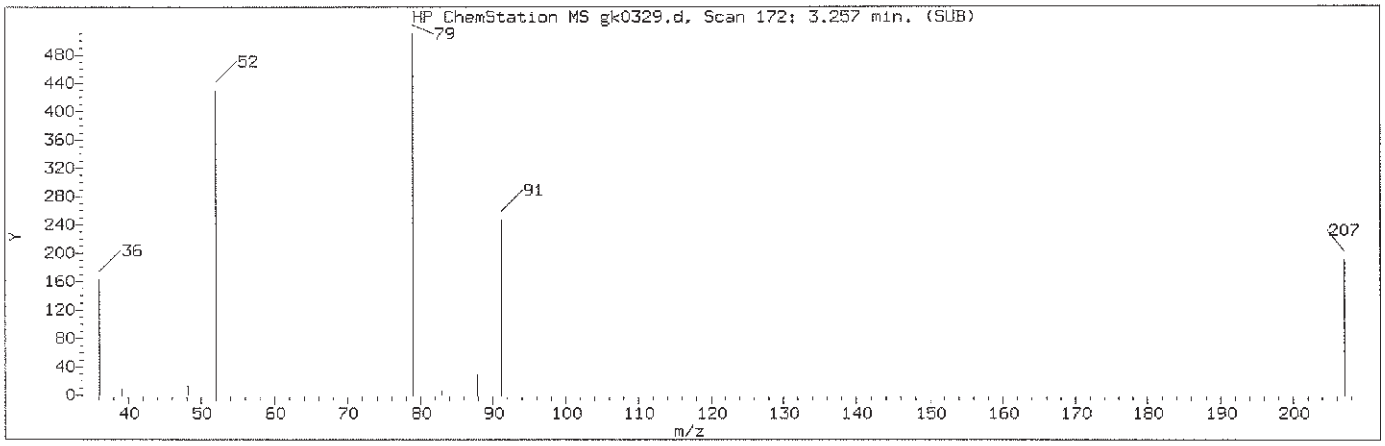
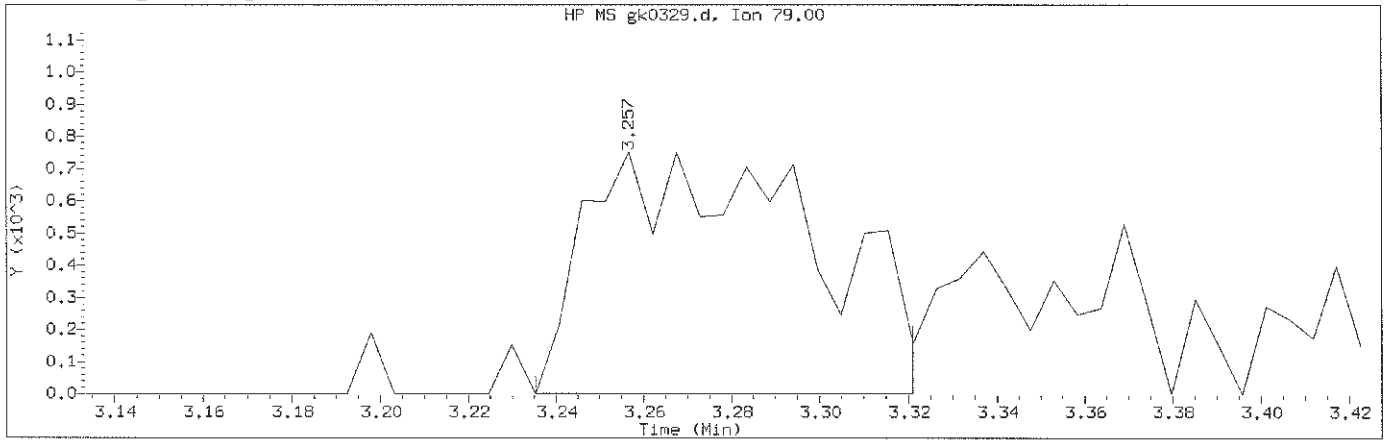
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 172		
Retention Time (minutes)	: 3.257		
Quant Ion	: 79.00		
Area (flag)	: 2662M		
On-Column Amount (ng/ul)	: 0.3264		
Integration start scan	: 167	Integration stop scan:	183
Y at integration start	: 2	Y at integration end:	2

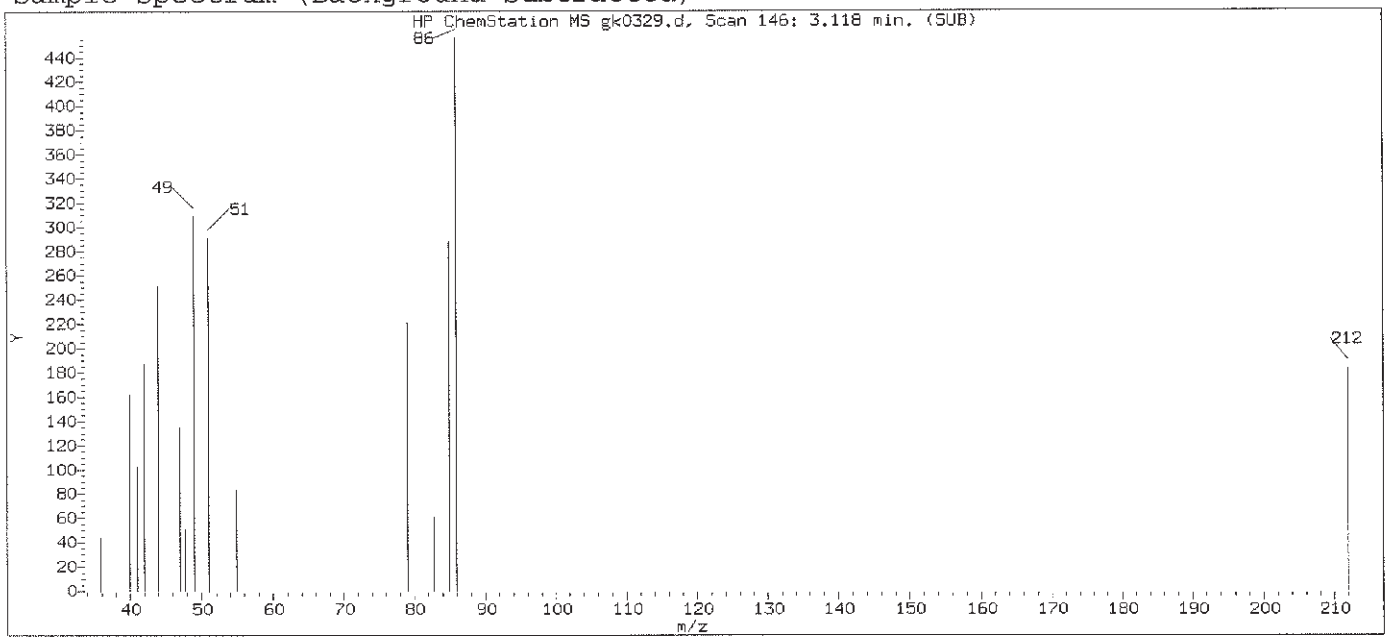
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

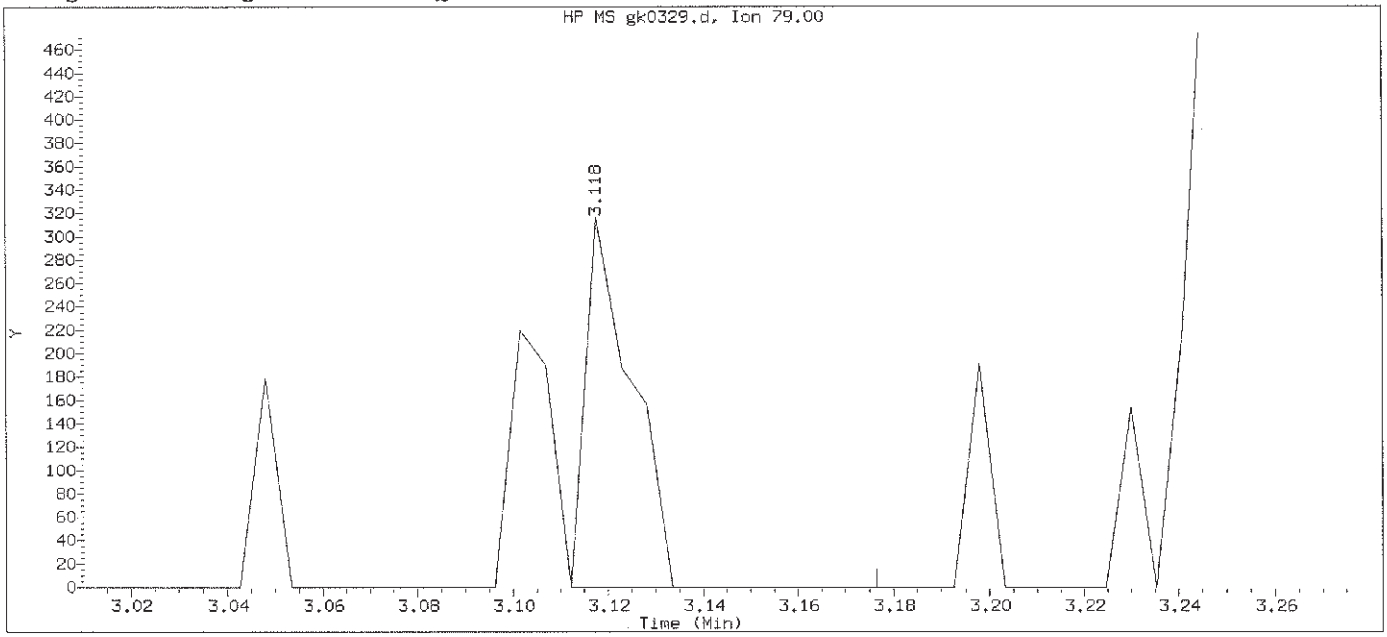
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 4		
Compound Name	: Pyridine		
Scan Number	: 146		
Retention Time (minutes)	: 3.118		
Quant Ion	: 79.00		
Area	: 211		
On-column Amount (ng/ul)	: 0.0260		
Integration start scan	: 144	Integration stop scan:	156
Y at integration start	: 0	Y at integration end:	0

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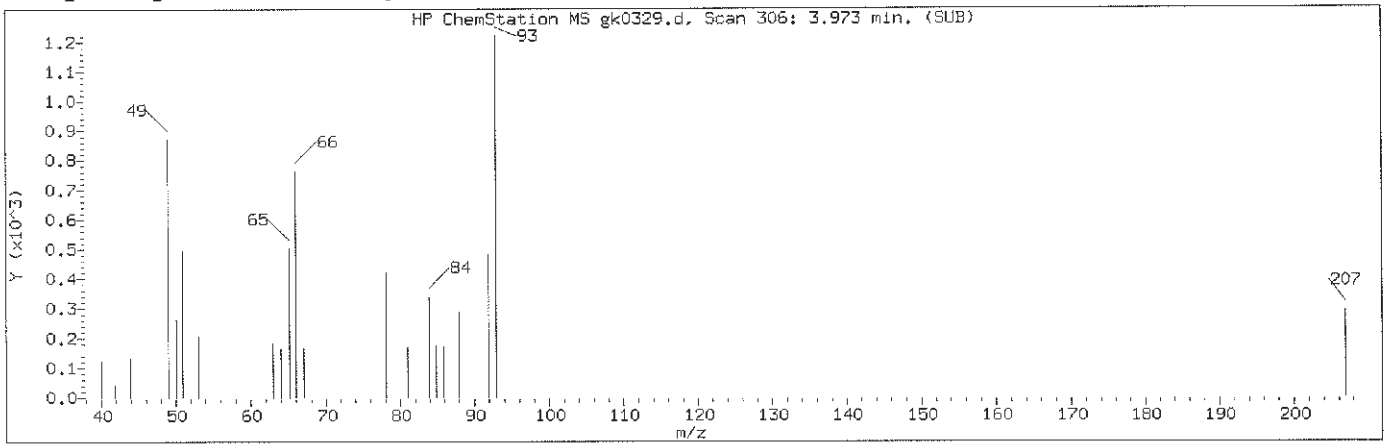
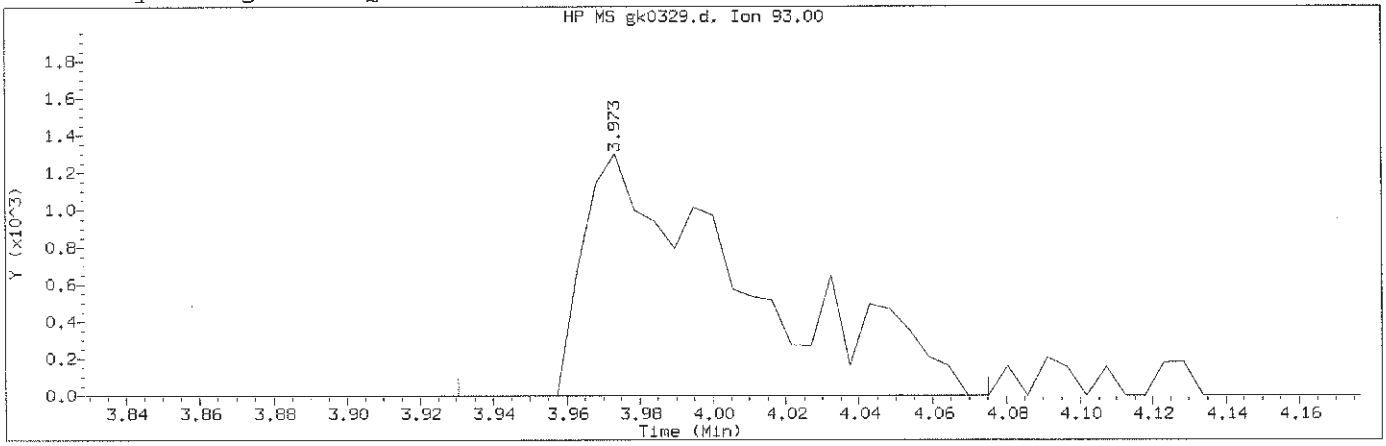
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 7		
Compound Name	: 2-Picoline		
Scan Number	: 306		
Retention Time (minutes)	: 3.973		
Quant Ion	: 93.00		
Area (flag)	: 4006M		
On-Column Amount (ng/ul)	: 0.4779		
Integration start scan	: 297	Integration stop scan:	324
Y at integration start	: 0	Y at integration end:	0

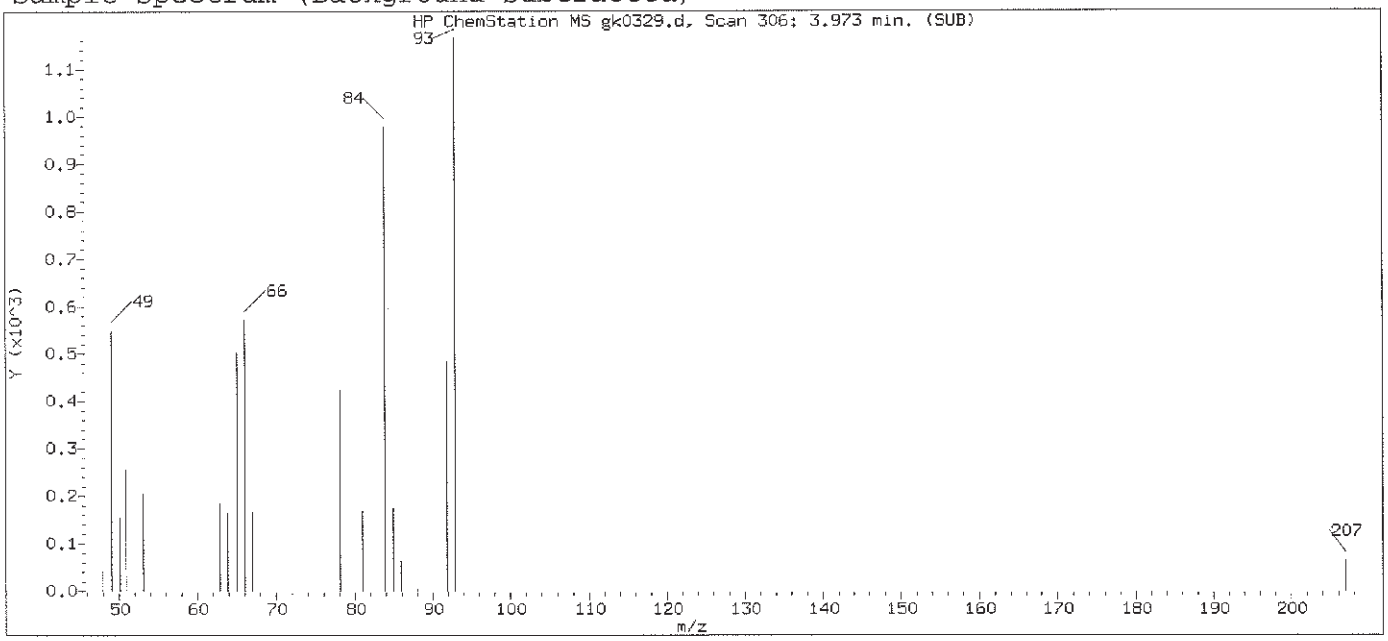
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

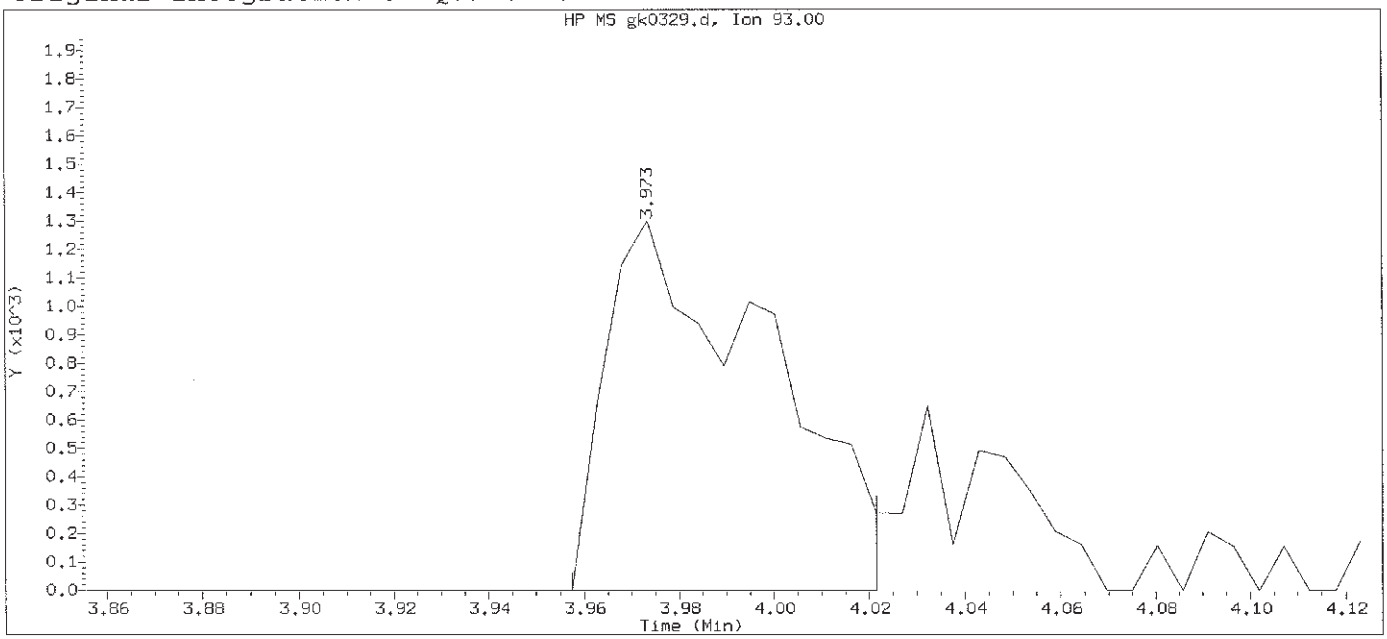
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

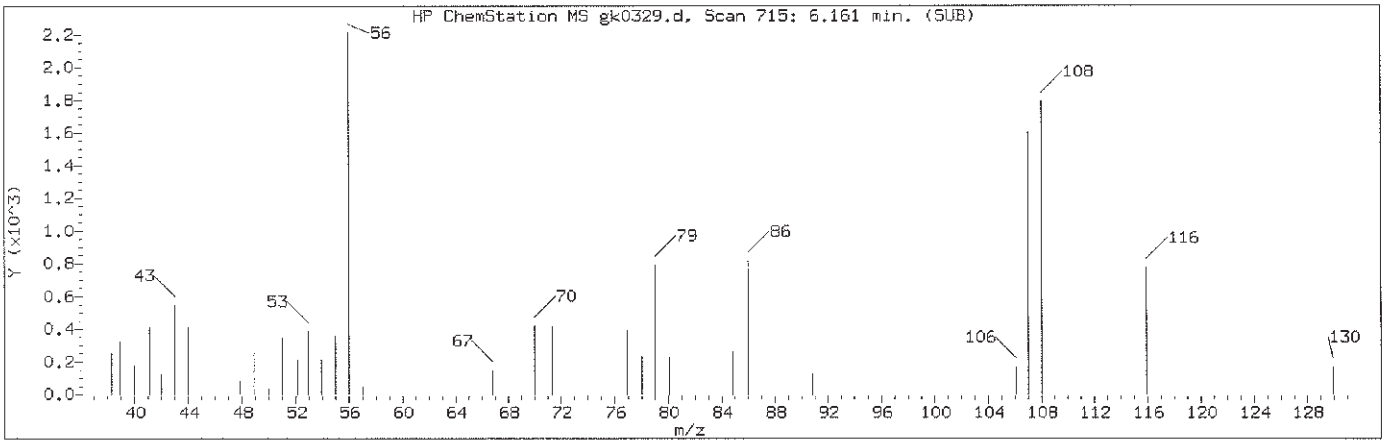
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

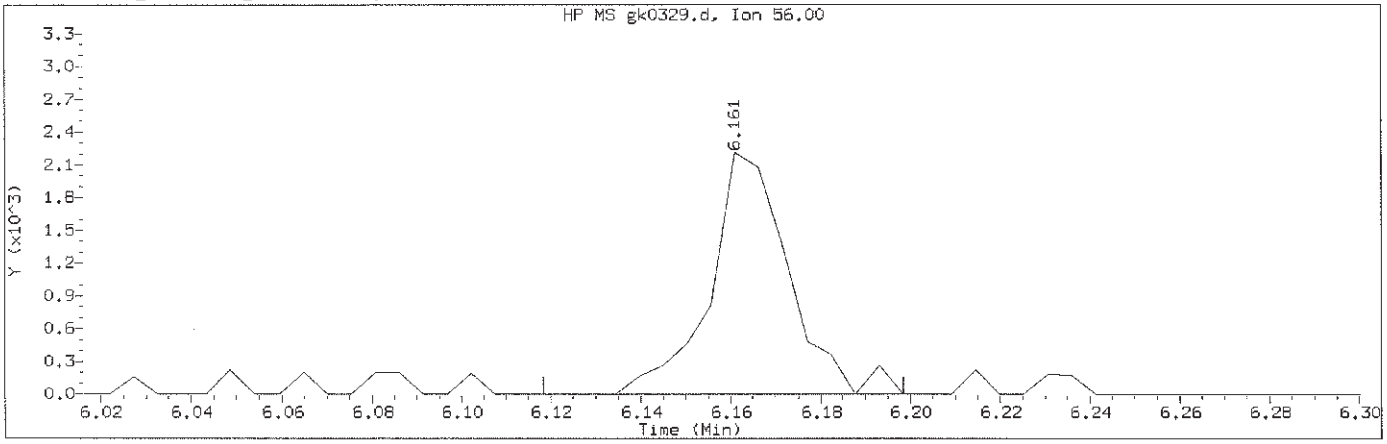
Compound Number	: 7
Compound Name	: 2-Picoline
Scan Number	: 306
Retention Time (minutes)	: 3.973
Quant Ion	: 93.00
Area	: 3076
On-column Amount (ng/ul)	: 0.3668
Integration start scan	: 302 Integration stop scan: 314
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5md1a111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 38		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 715		
Retention Time (minutes)	: 6.161		
Quant Ion	: 56.00		
Area (flag)	: 2715M		
On-Column Amount (ng/ul)	: 0.5104		
Integration start scan	: 706	Integration stop scan:	721
Y at integration start	: 0	Y at integration end:	0

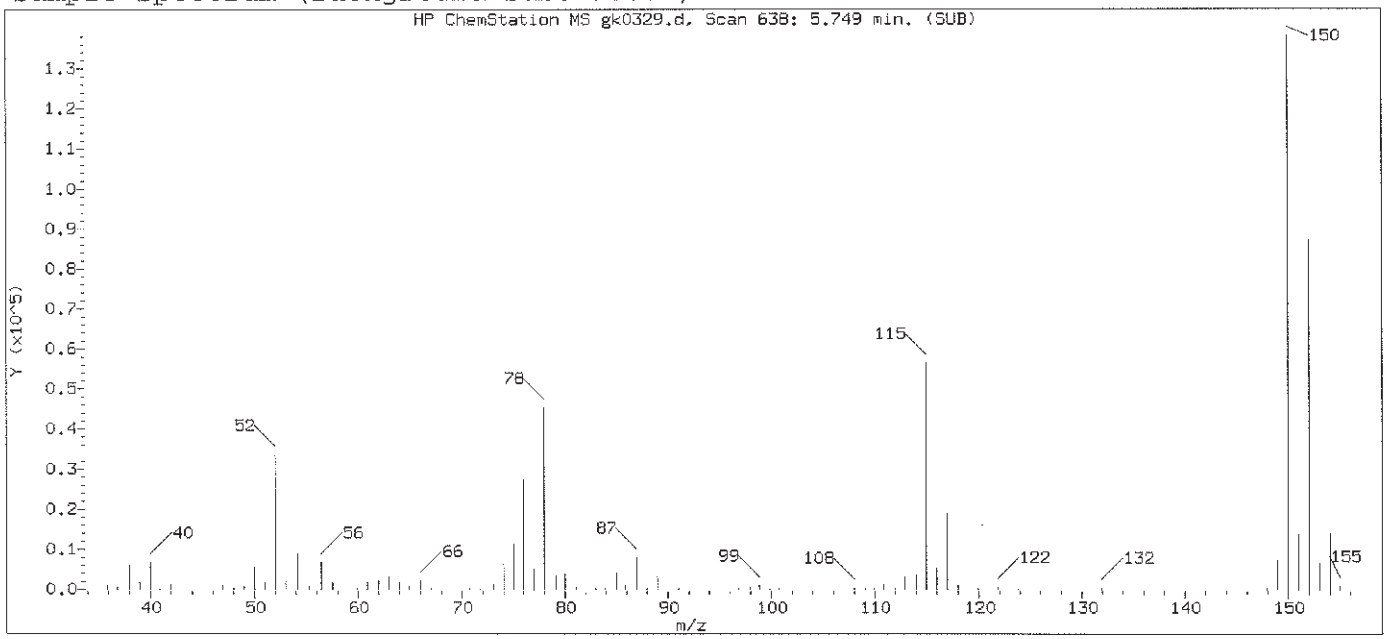
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

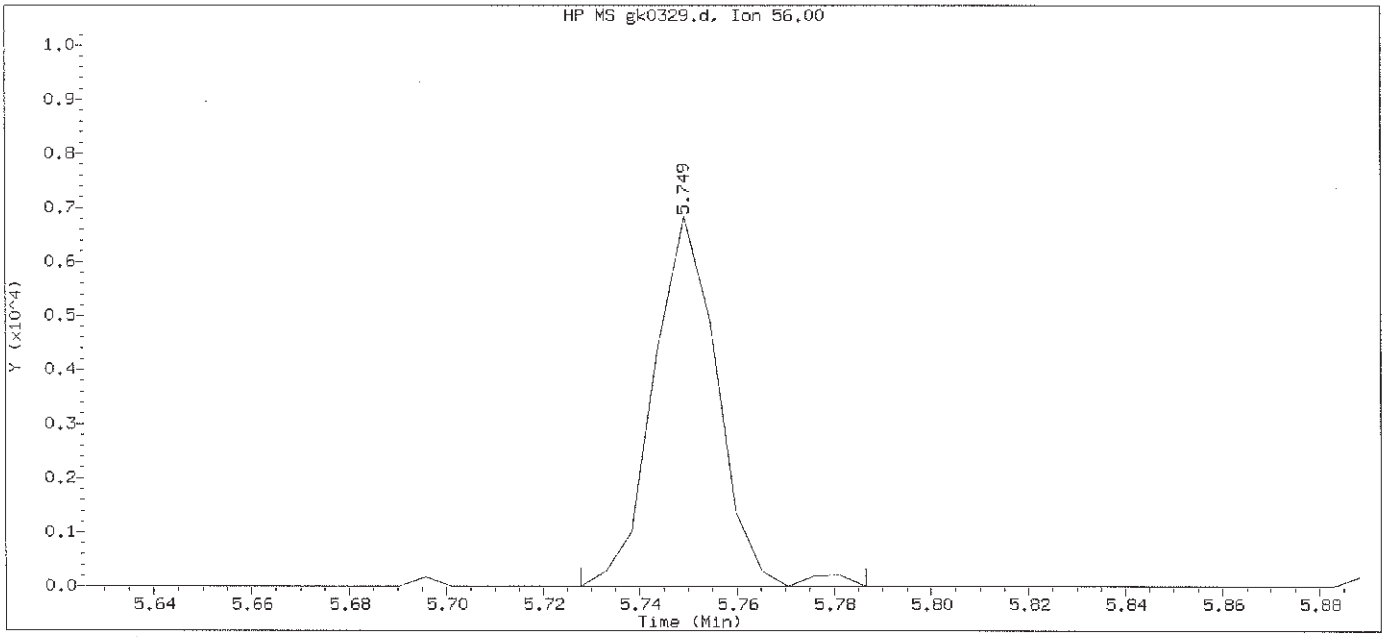
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

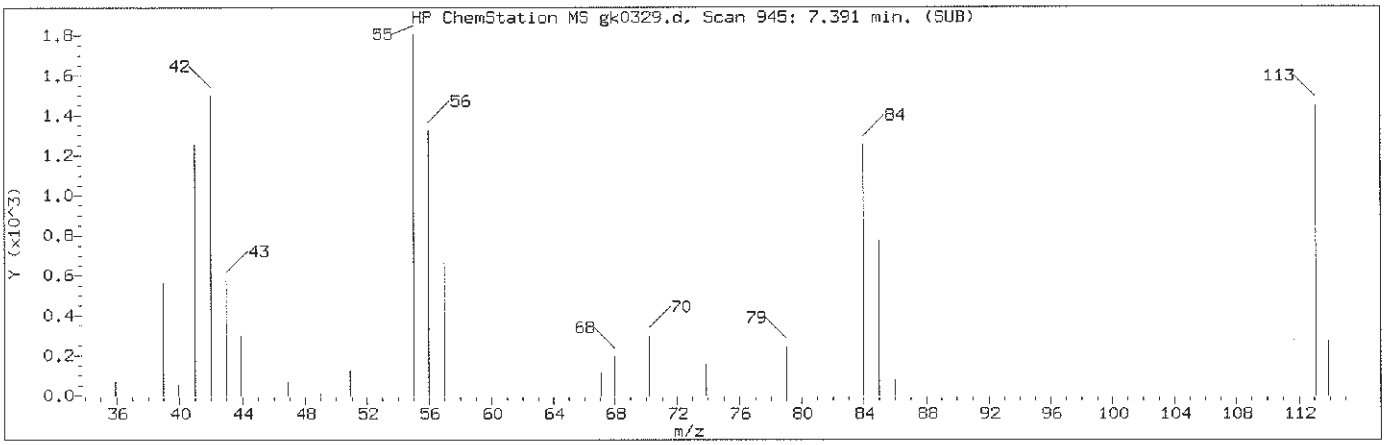
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

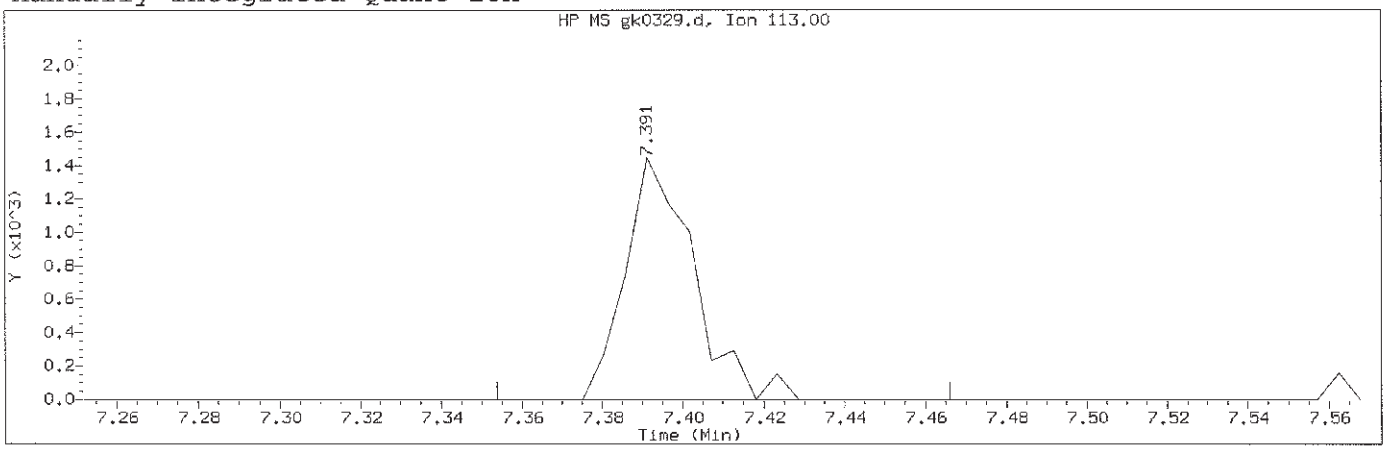
Compound Number	: 38		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 638		
Retention Time (minutes)	: 5.749		
Quant Ion	: 56.00		
Area	: 6264		
On-column Amount (ng/ul)	: 1.1776		
Integration start scan	: 633	Integration stop scan:	644
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 945		
Retention Time (minutes)	: 7.391		
Quant Ion	: 113.00		
Area (flag)	: 1707M		
On-Column Amount (ng/ul)	: 0.5186		
Integration start scan	: 937	Integration stop scan:	958
Y at integration start	: 0	Y at integration end:	0

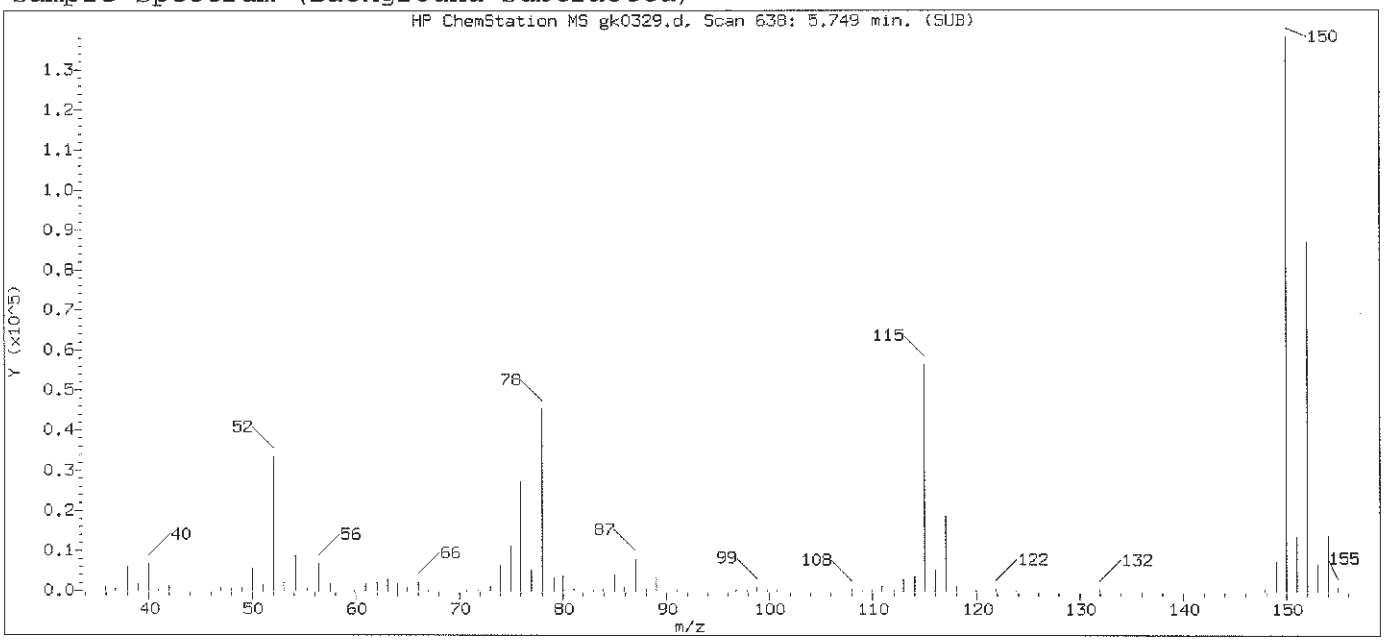
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

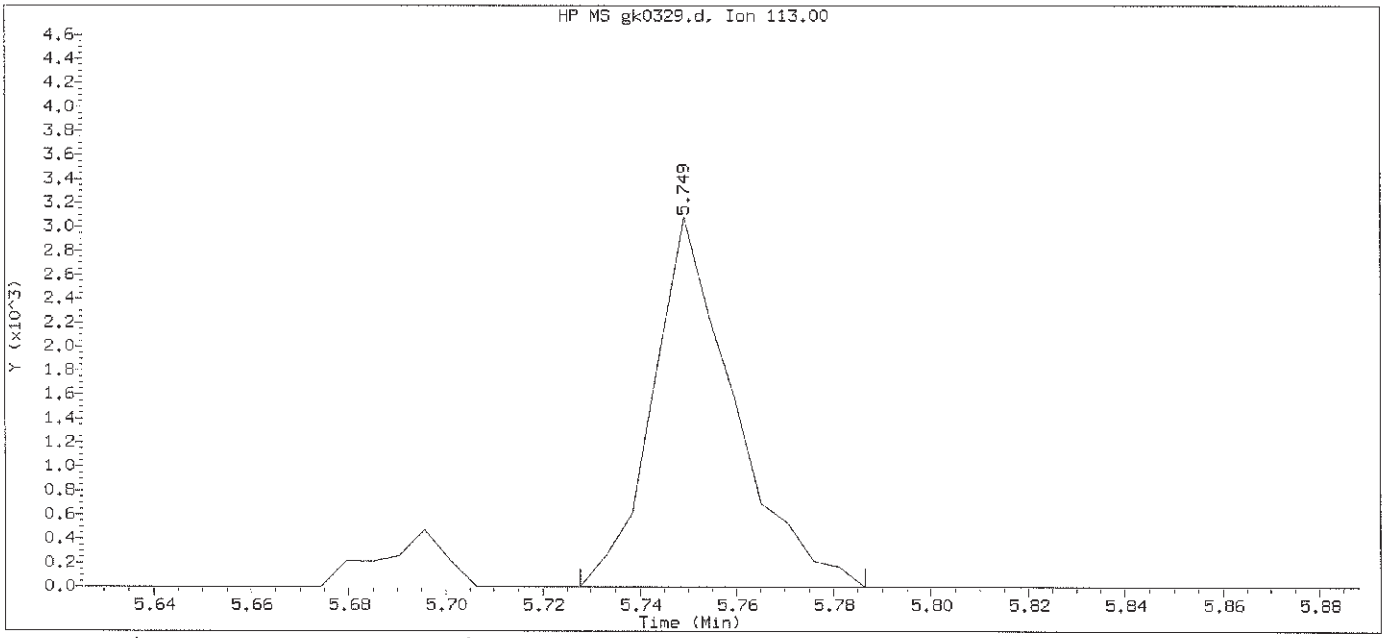
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

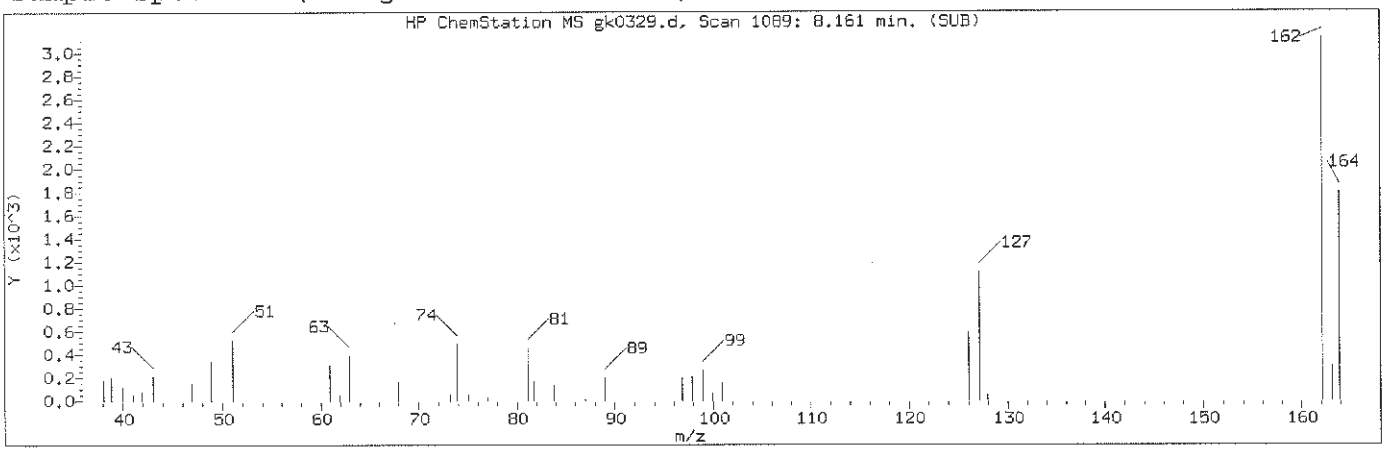
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

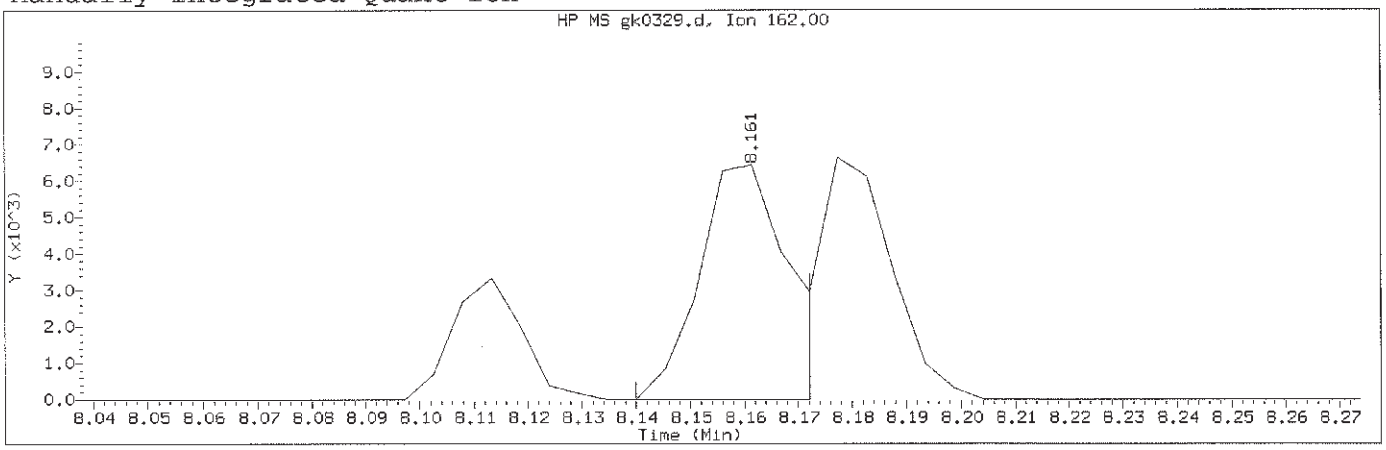
Compound Number	: 74		
Compound Name	: Caprolactam		
Scan Number	: 638		
Retention Time (minutes)	: 5.749		
Quant Ion	: 113.00		
Area	: 3604		
On-column Amount (ng/ul)	: 1.0949		
Integration start scan	: 633	Integration stop scan:	644
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1089		
Retention Time (minutes)	: 8.161		
Quant Ion	: 162.00		
Area (flag)	: 7484M		
On-Column Amount (ng/ul)	: 0.5391		
Integration start scan	: 1084	Integration stop scan:	1090
Y at integration start	: 0	Y at integration end:	0

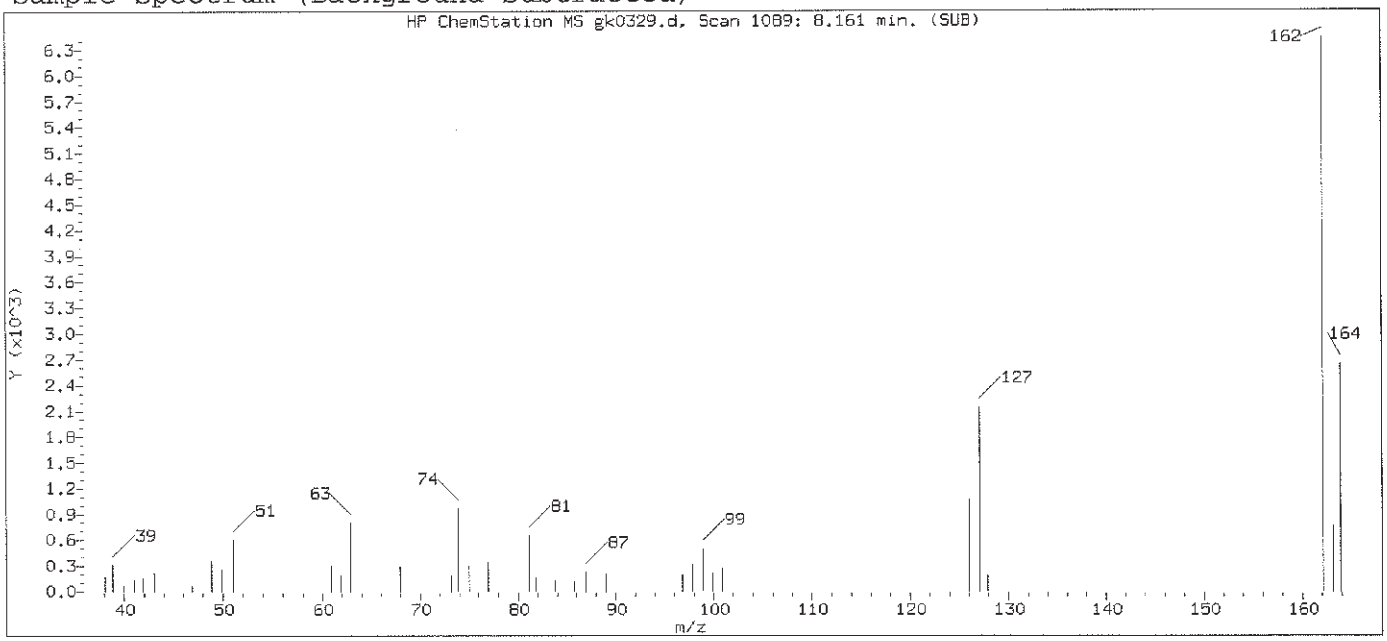
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

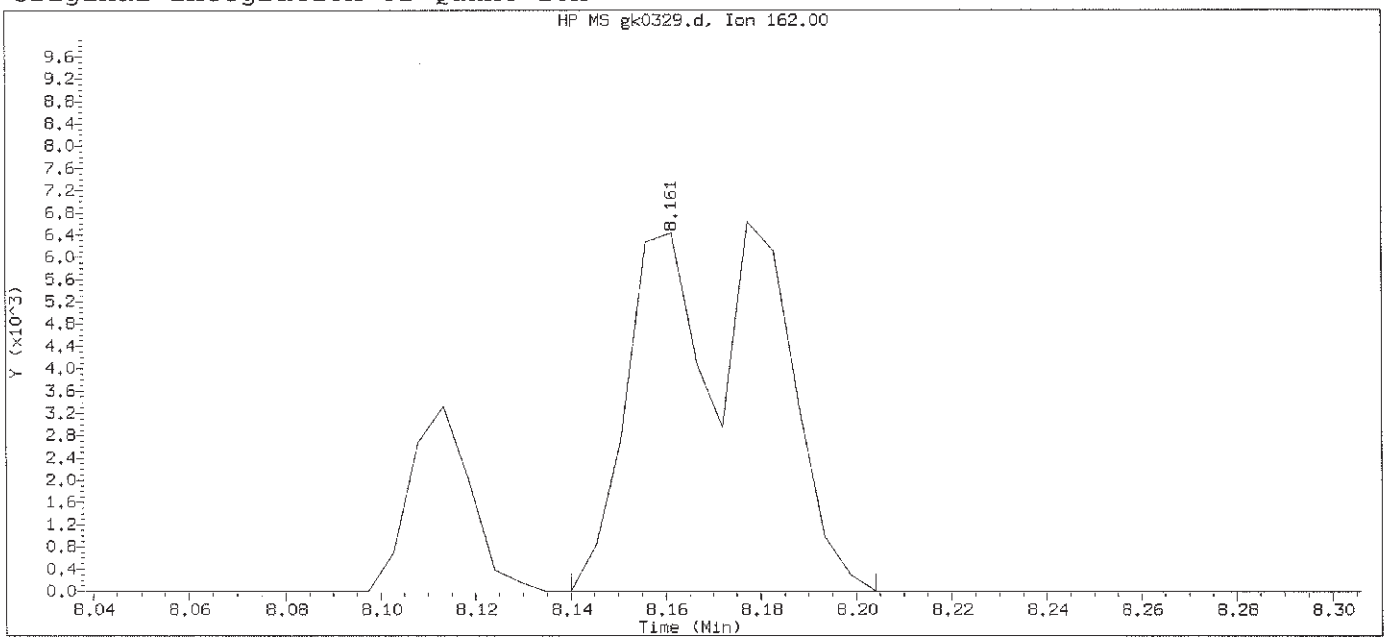
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Chemist Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

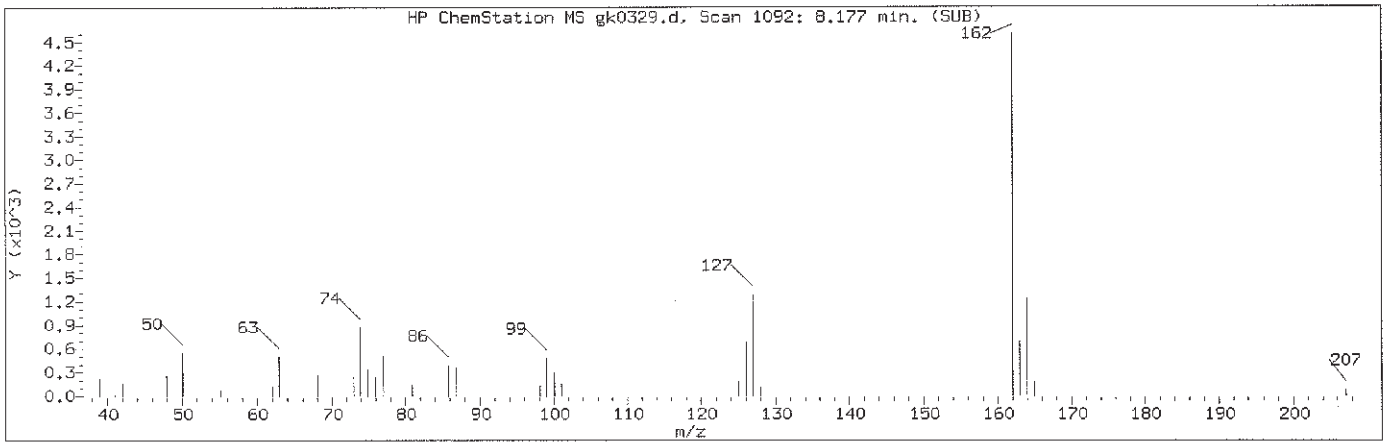
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

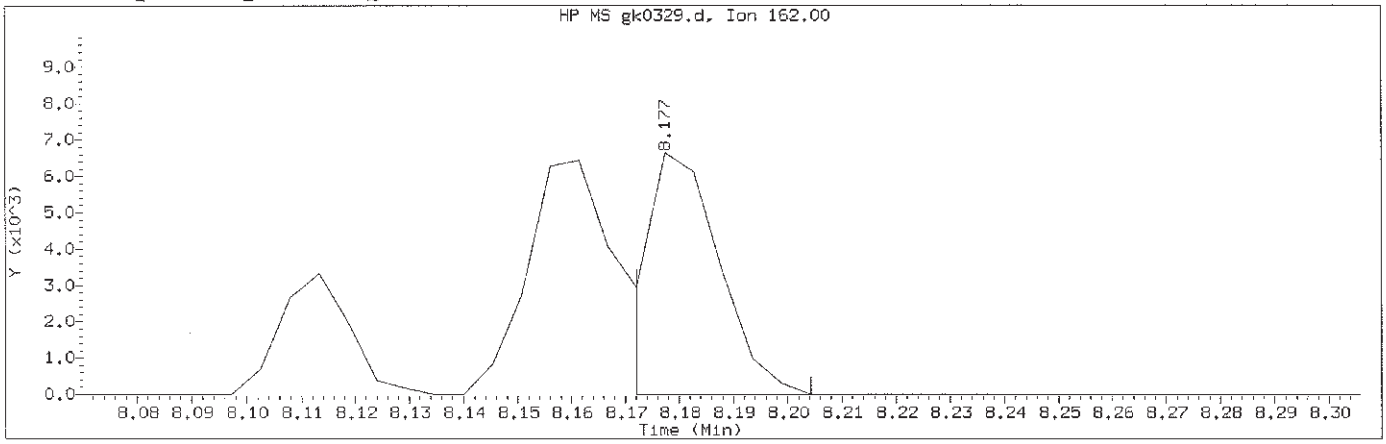
Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1089		
Retention Time (minutes)	: 8.161		
Quant Ion	: 162.00		
Area	: 13053		
On-column Amount (ng/ul)	: 0.9403		
Integration start scan	: 1084	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1092		
Retention Time (minutes)	: 8.177		
Quant Ion	: 162.00		
Area (flag)	: 6514M		
On-Column Amount (ng/ul)	: 0.5121		
Integration start scan	: 1090	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	0

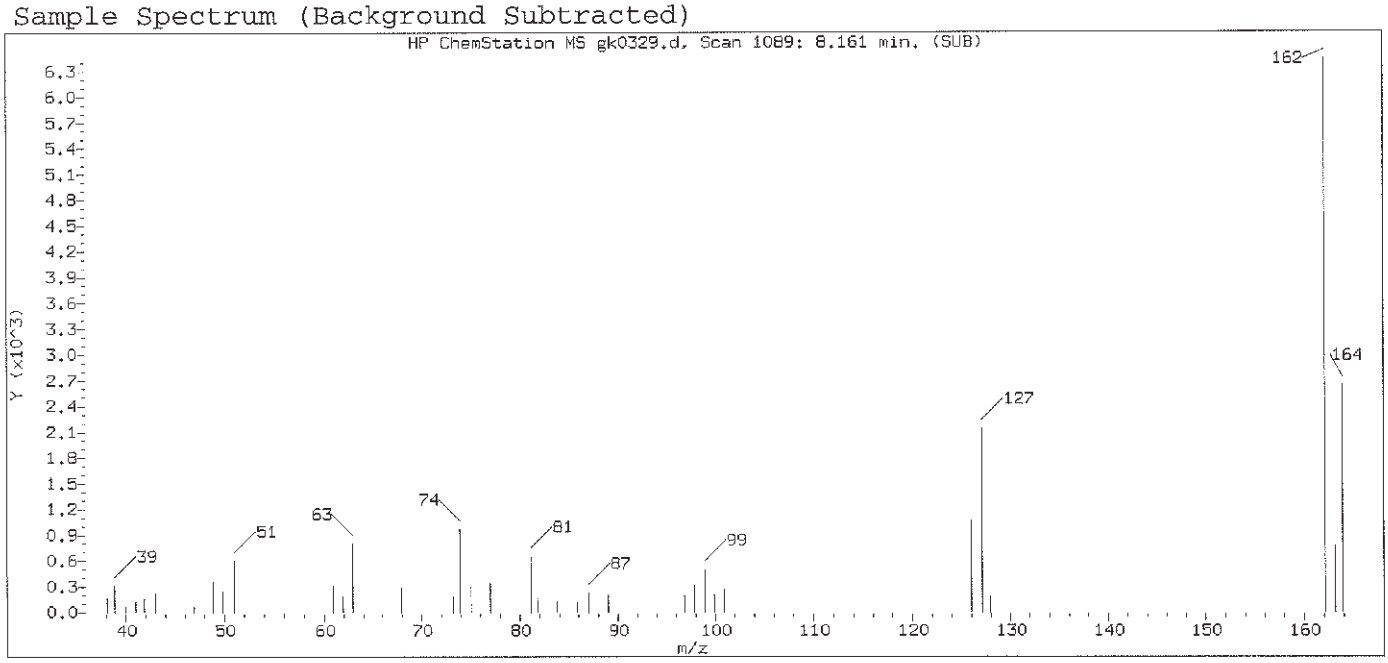
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

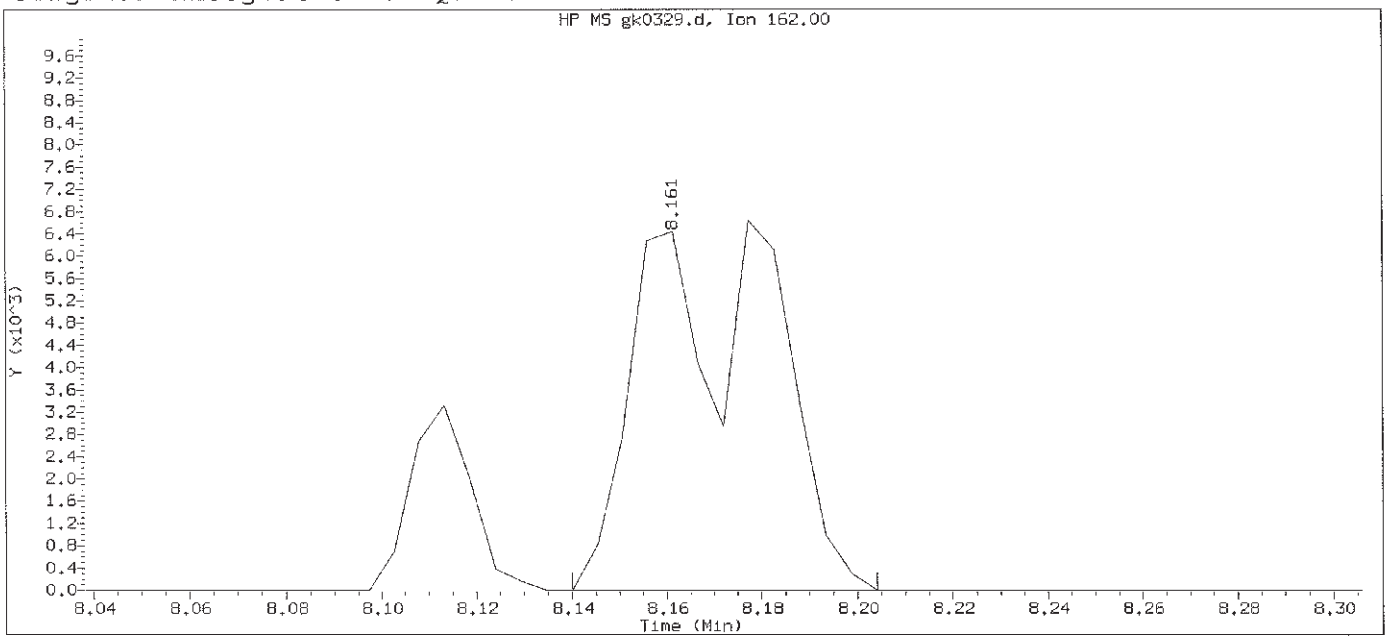
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

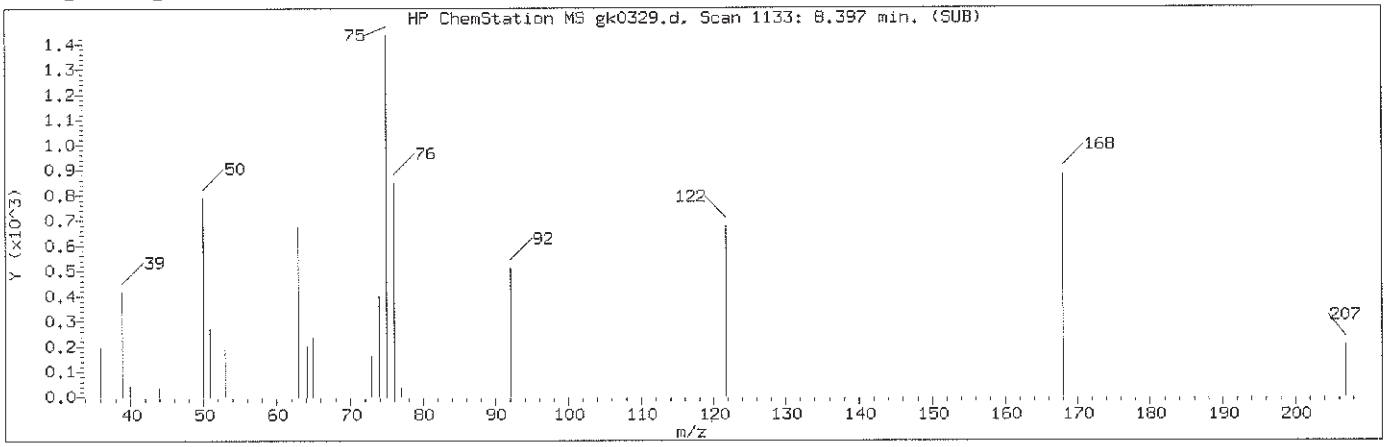
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

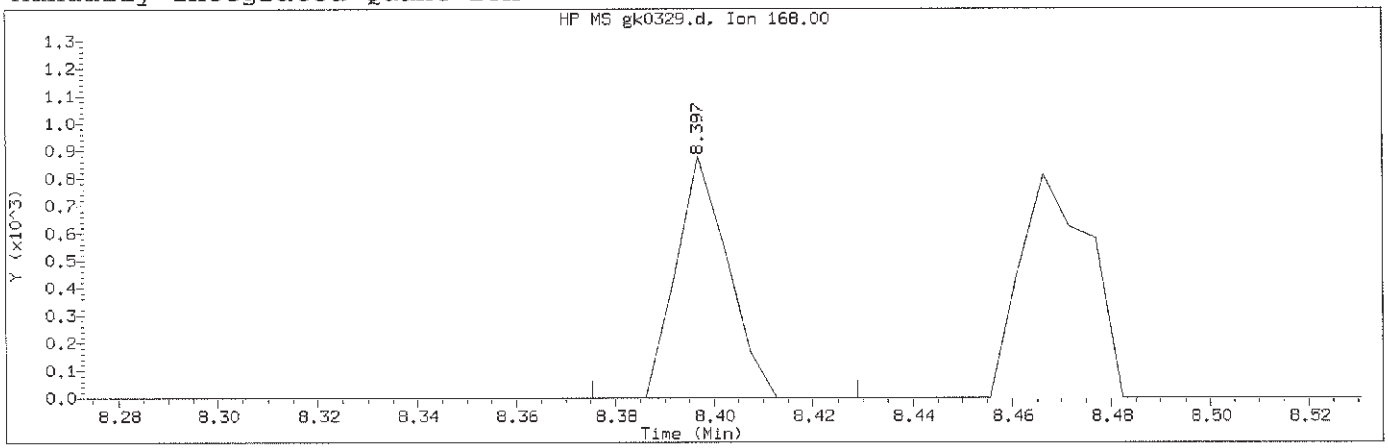
Compound Number	: 89		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 1089		
Retention Time (minutes)	: 8.161		
Quant Ion	: 162.00		
Area	: 13053		
On-column Amount (ng/ul)	: 1.0261		
Integration start scan	: 1084	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 93		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1133		
Retention Time (minutes)	: 8.397		
Quant Ion	: 168.00		
Area (flag)	: 642M		
On-Column Amount (ng/ul)	: 0.2609		
Integration start scan	: 1128	Integration stop scan:	1138
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

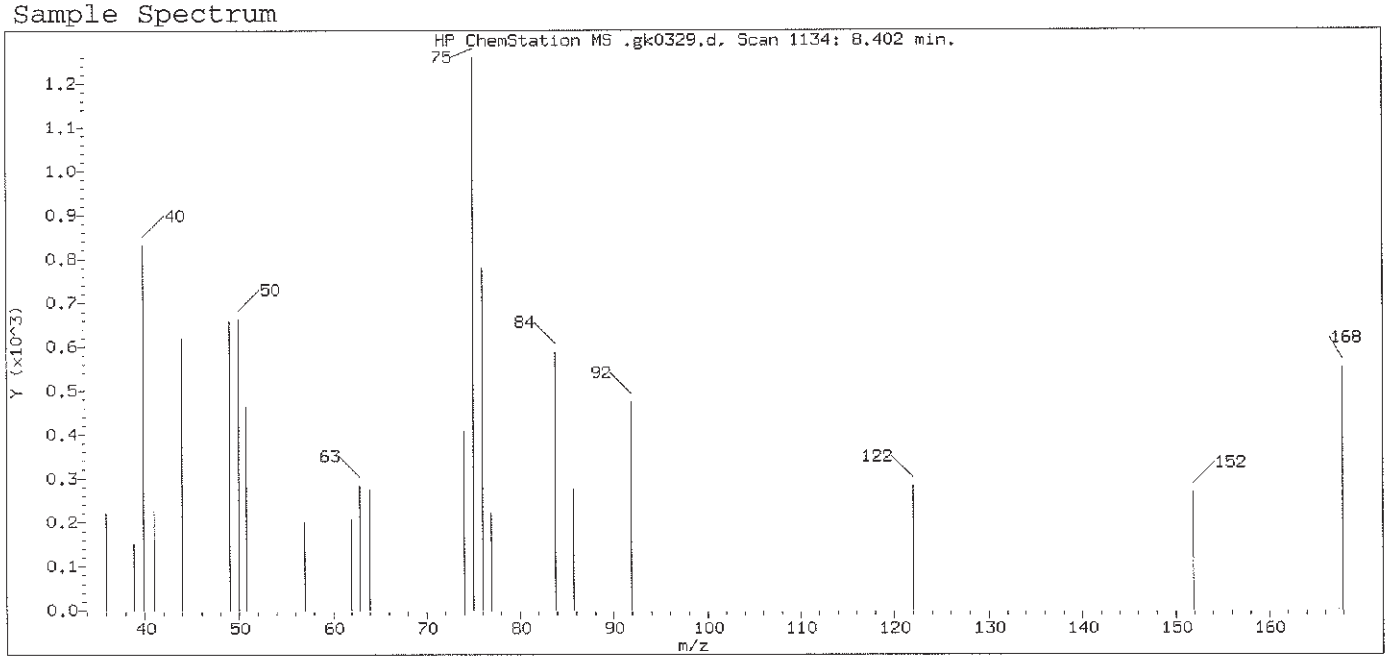
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

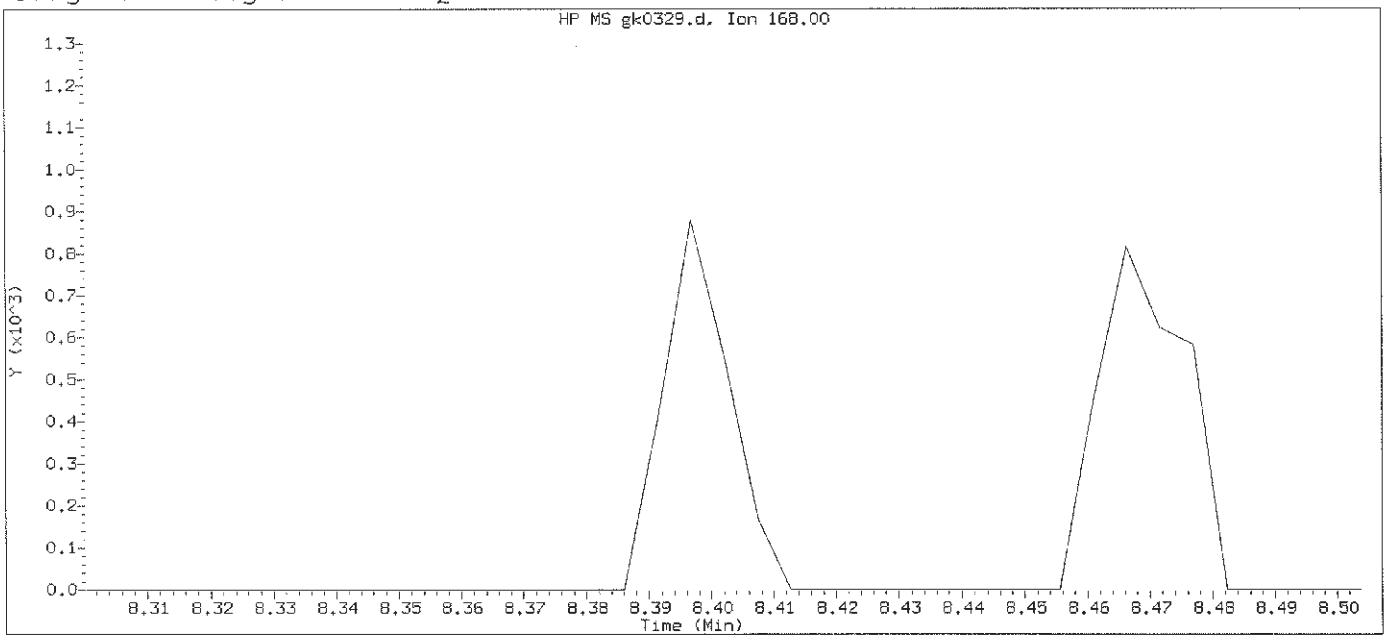
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

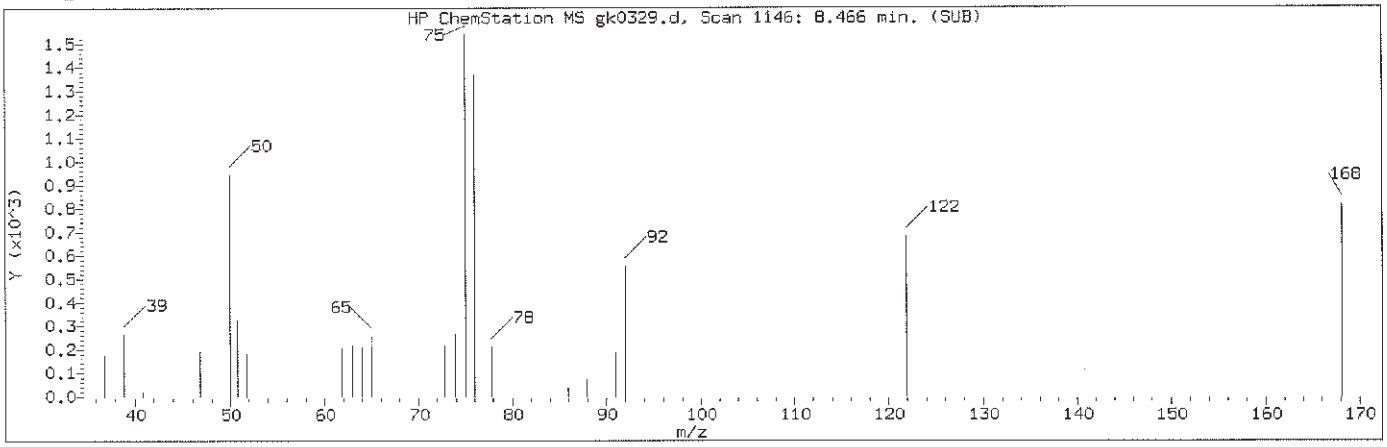
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5md1a111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

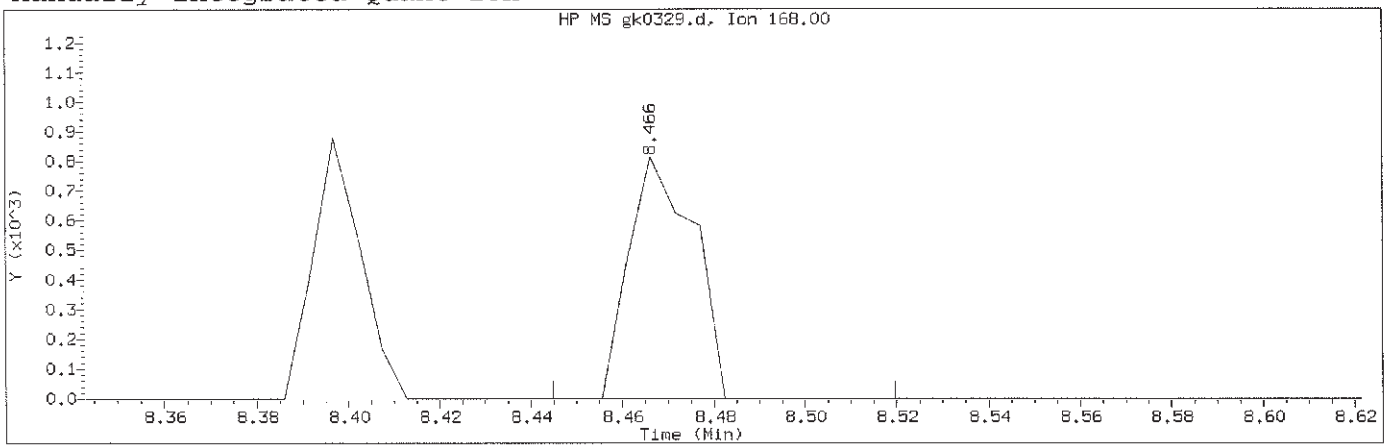
Compound Number : 93
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 8.402
Quant Ion : 168.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 95		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1146		
Retention Time (minutes)	: 8.466		
Quant Ion	: 168.00		
Area (flag)	: 793M		
On-Column Amount (ng/ul)	: 0.2649		
Integration start scan	: 1141	Integration stop scan:	1155
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

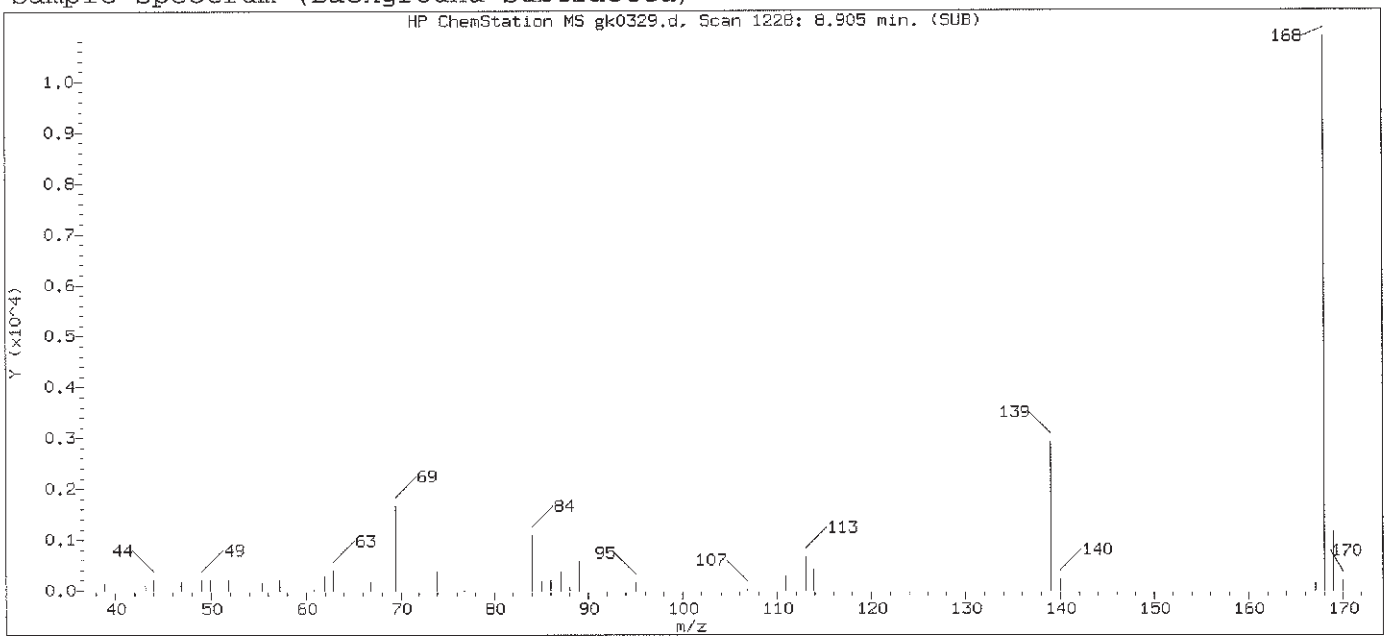
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

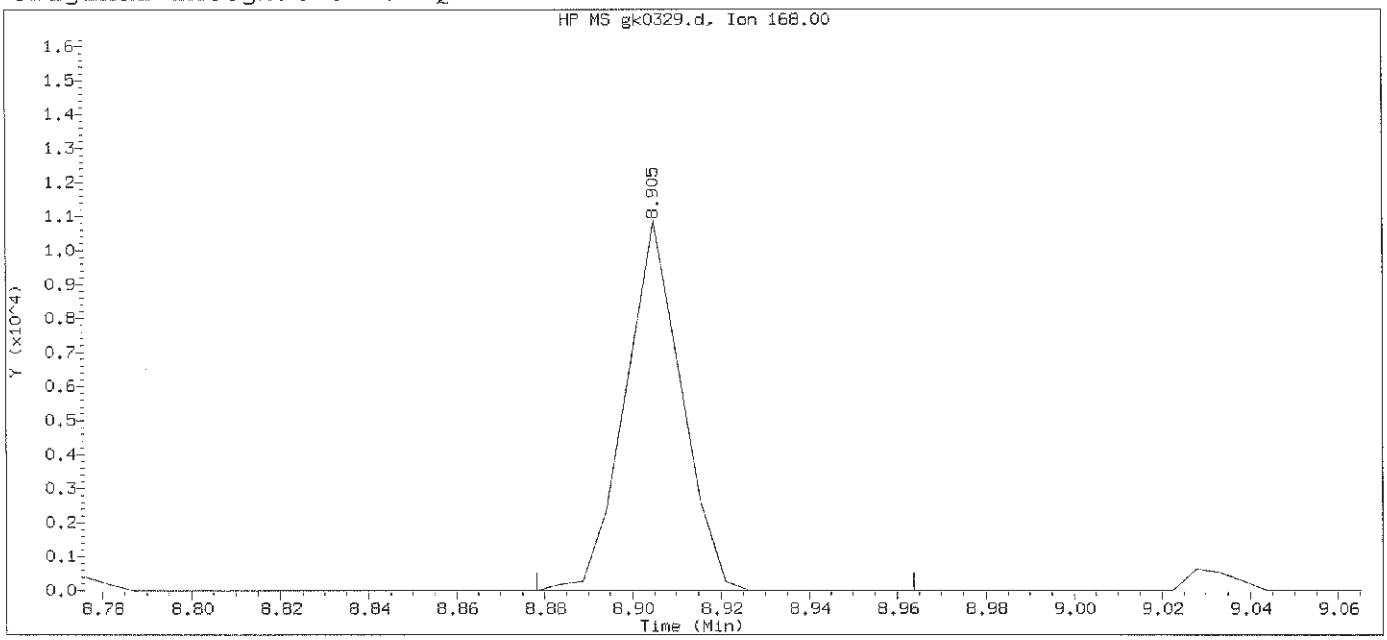
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

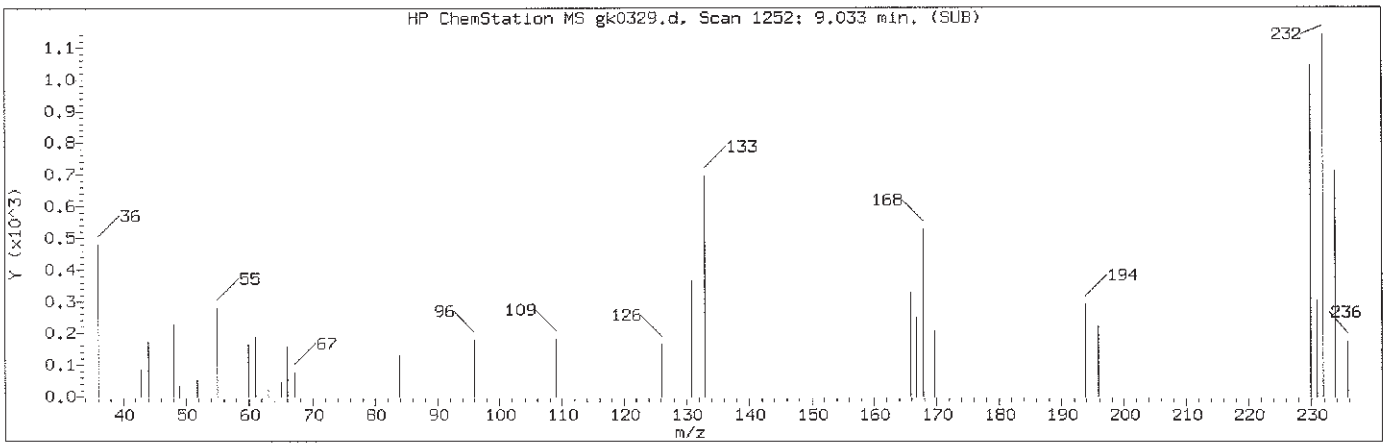
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

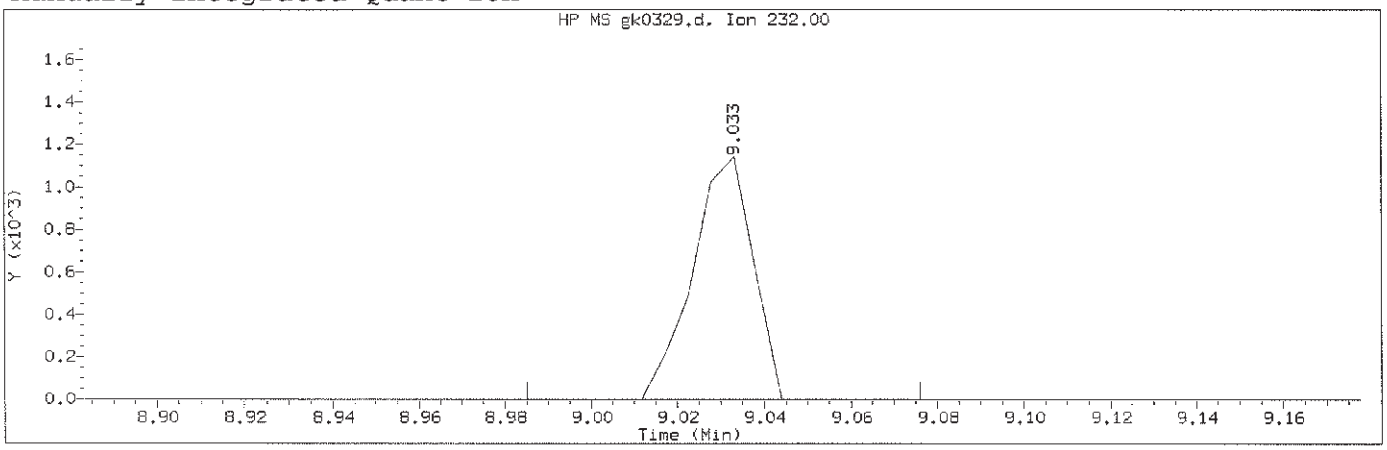
Compound Number	: 95		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1228		
Retention Time (minutes)	: 8.905		
Quant Ion	: 168.00		
Area	: 9588		
On-column Amount (ng/ul)	: 3.2013		
Integration start scan	: 1222	Integration stop scan:	1238
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 109
Compound Name : 2,3,4,6-Tetrachlorophenol
Scan Number : 1252
Retention Time (minutes) : 9.033
Quant Ion : 232.00
Area (flag) : 1093M
On-Column Amount (ng/ul) : 0.3151
Integration start scan : 1242 Integration stop scan: 1259
Y at integration start : 0 Y at integration end: 0

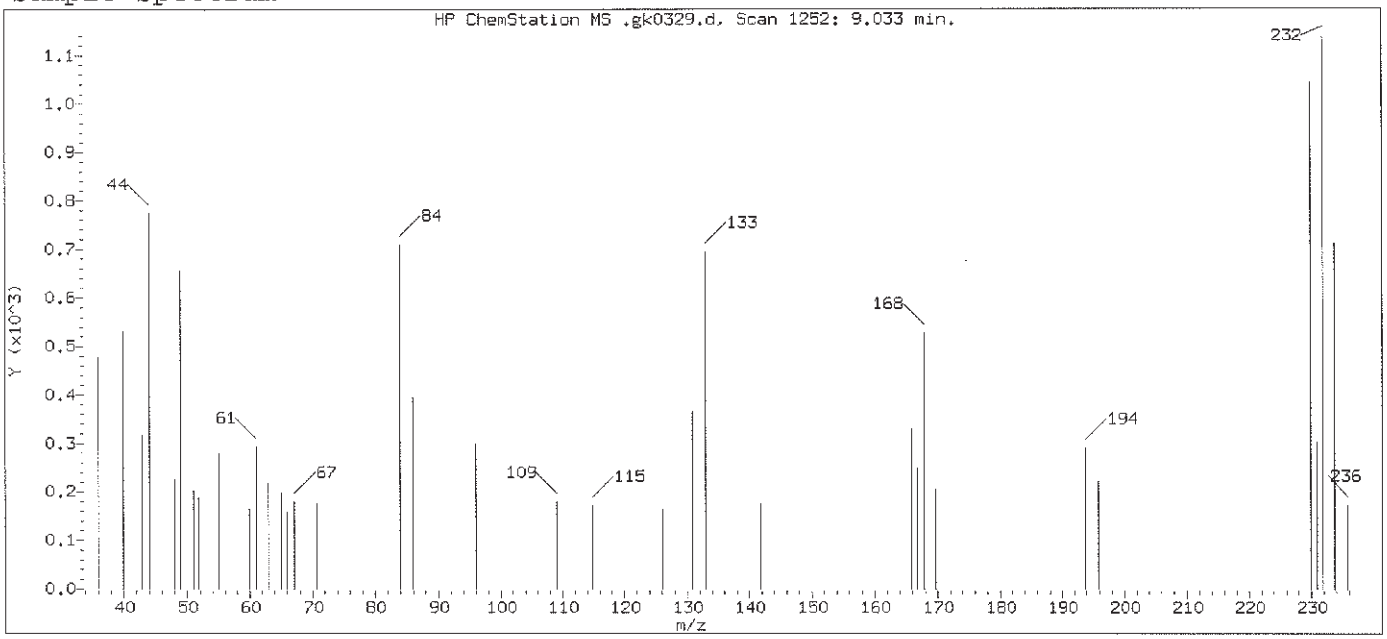
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

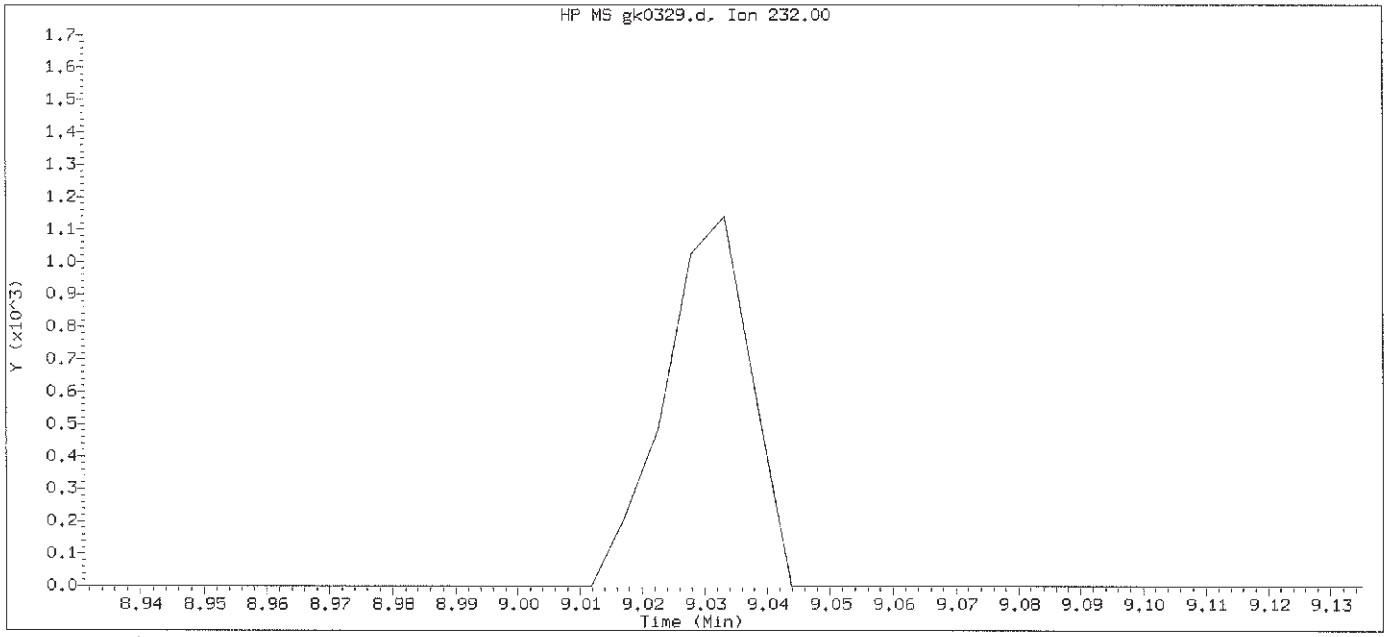
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

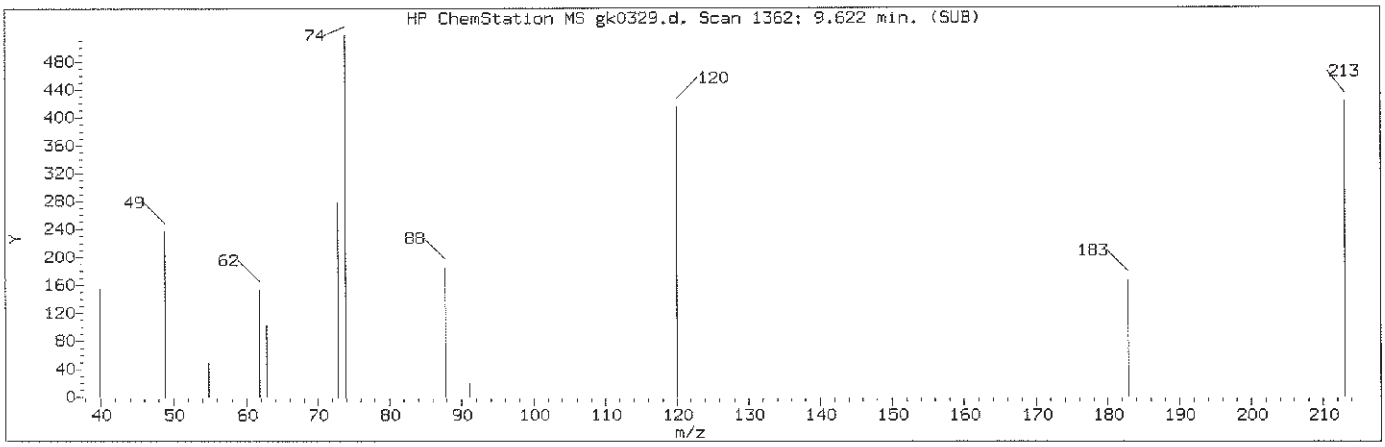
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

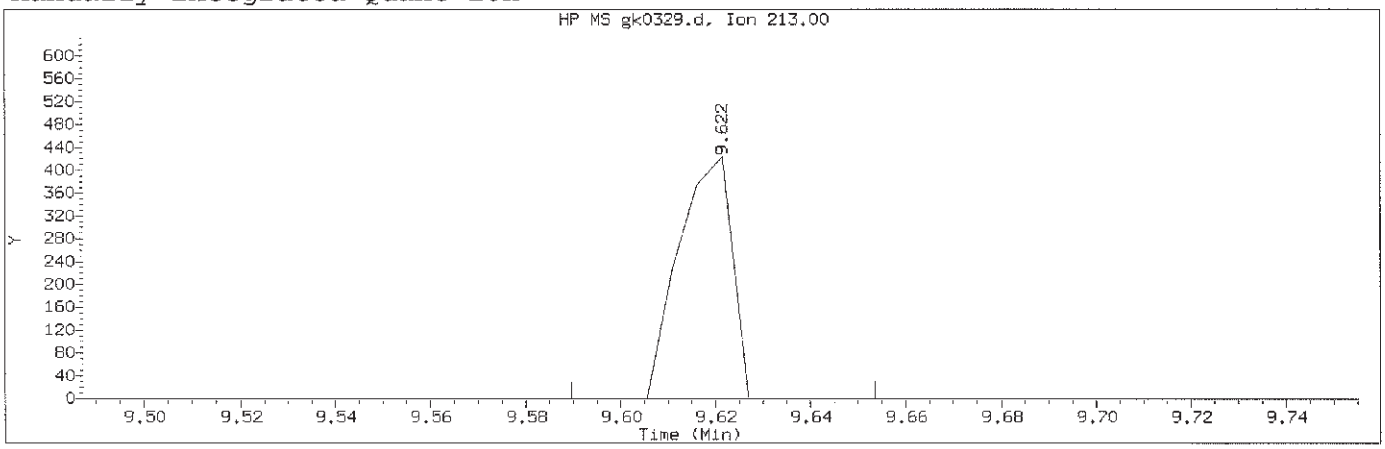
Compound Number : 109
Compound Name : 2,3,4,6-Tetrachlorophenol
Expected RT (minutes) : 9.033
Quant Ion : 232.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 123
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1362
Retention Time (minutes) : 9.622
Quant Ion : 213.00
Area (flag) : 327M
On-Column Amount (ng/ul) : 3.3765
Integration start scan : 1355 Integration stop scan: 1367
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

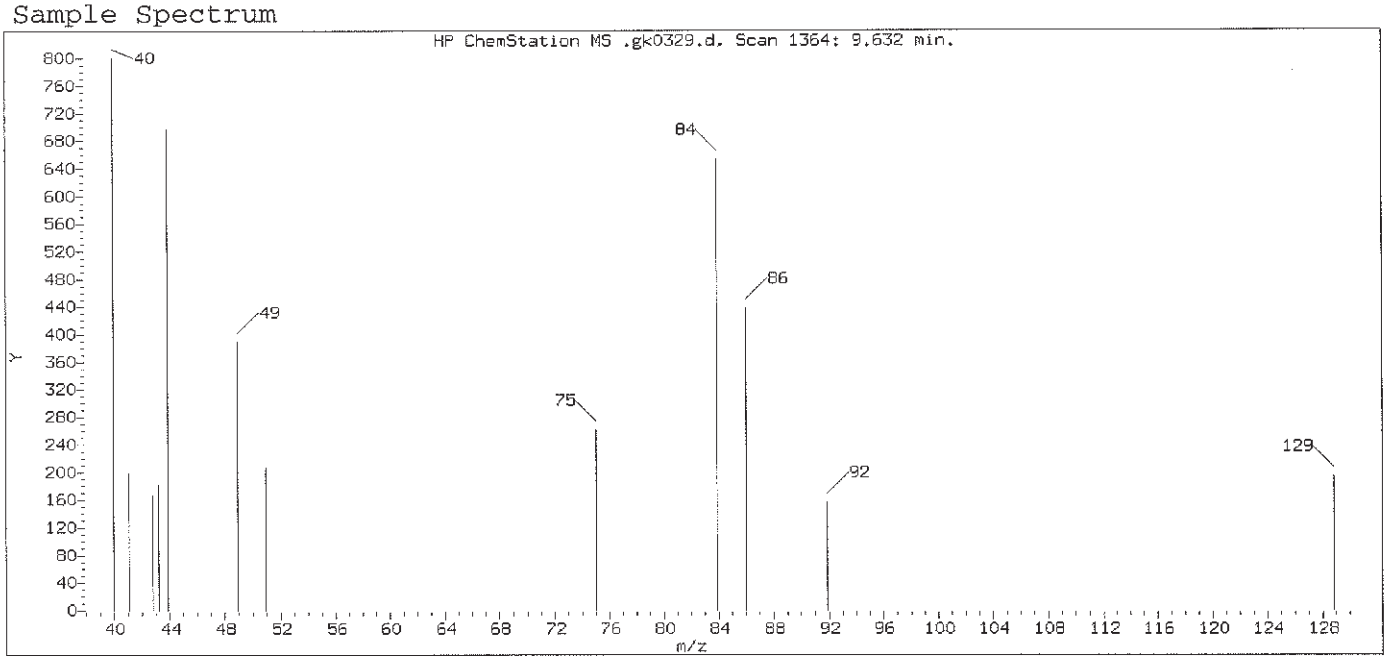
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

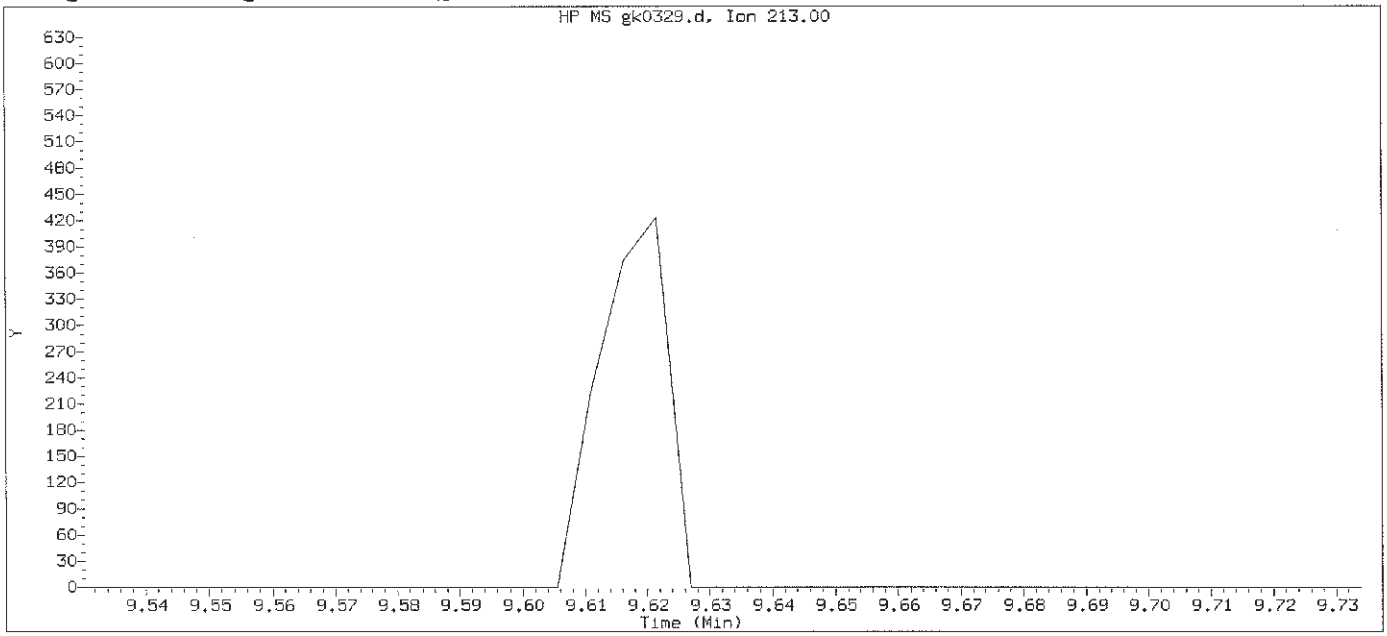
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

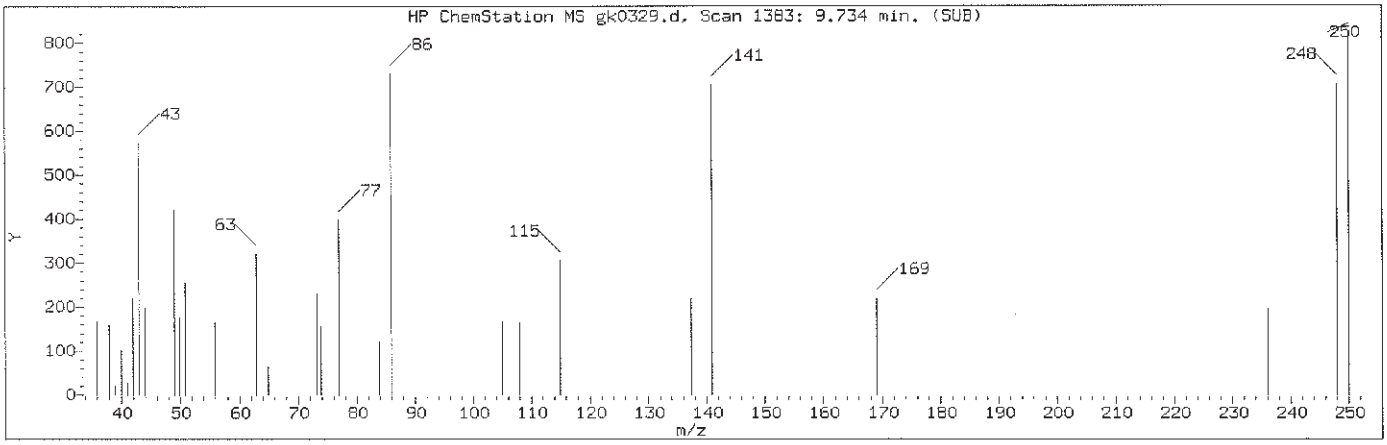
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

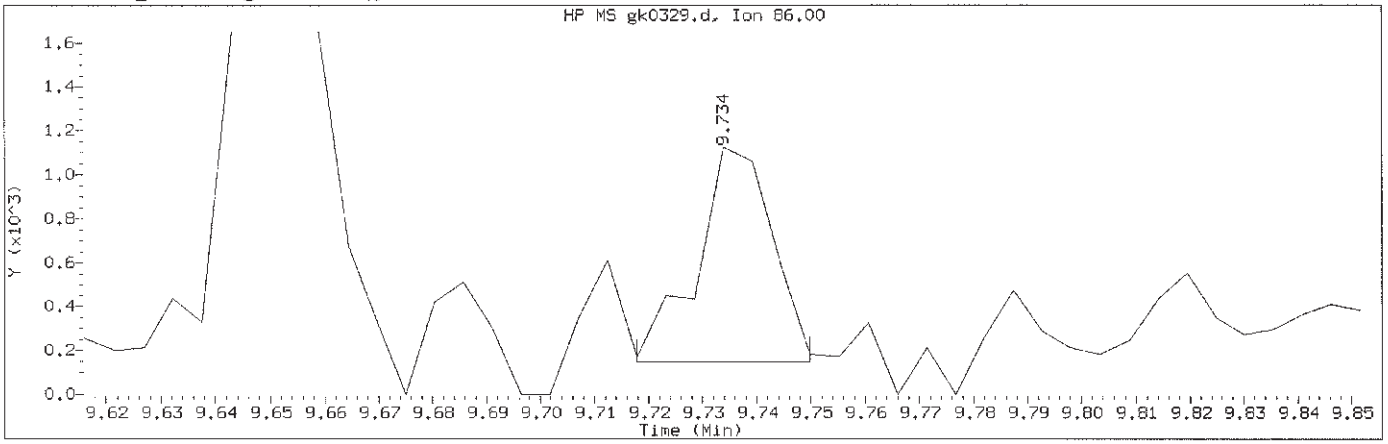
Compound Number : 123
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.632
Quant Ion : 213.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 128		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1383		
Retention Time (minutes)	: 9.734		
Quant Ion	: 86.00		
Area (flag)	: 954M		
On-Column Amount (ng/ul)	: 0.1676		
Integration start scan	: 1379	Integration stop scan:	1385
Y at integration start	: 147	Y at integration end:	147

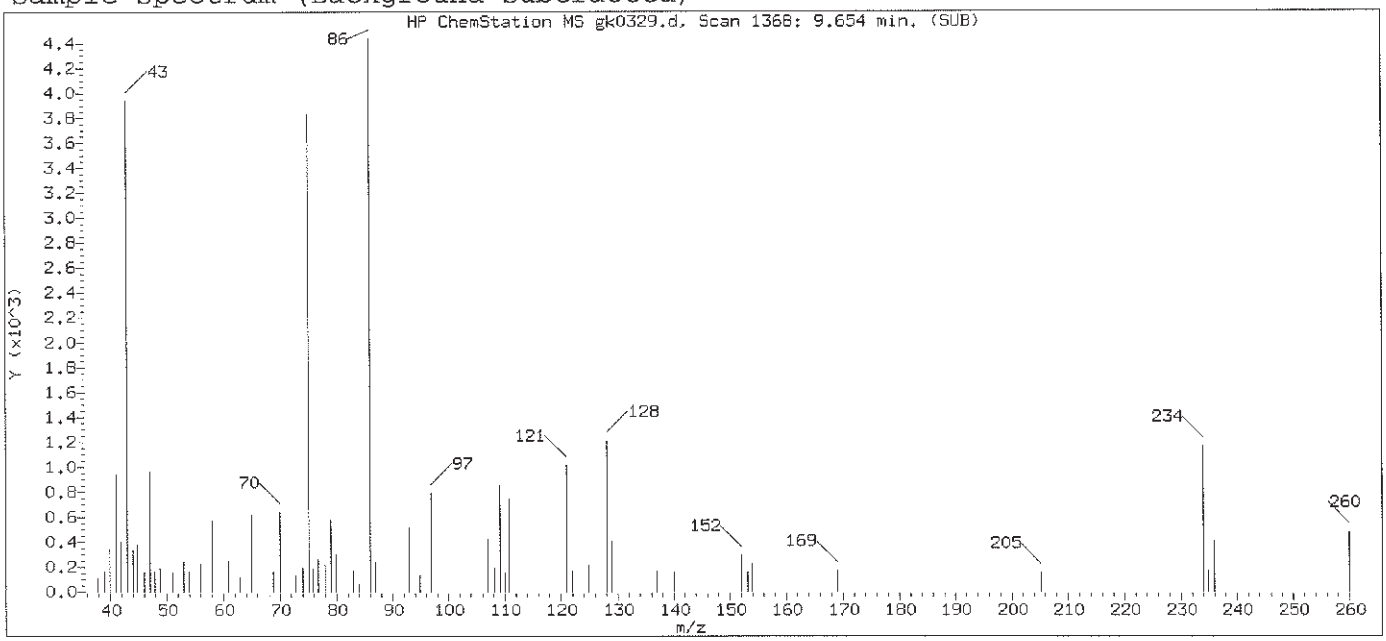
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

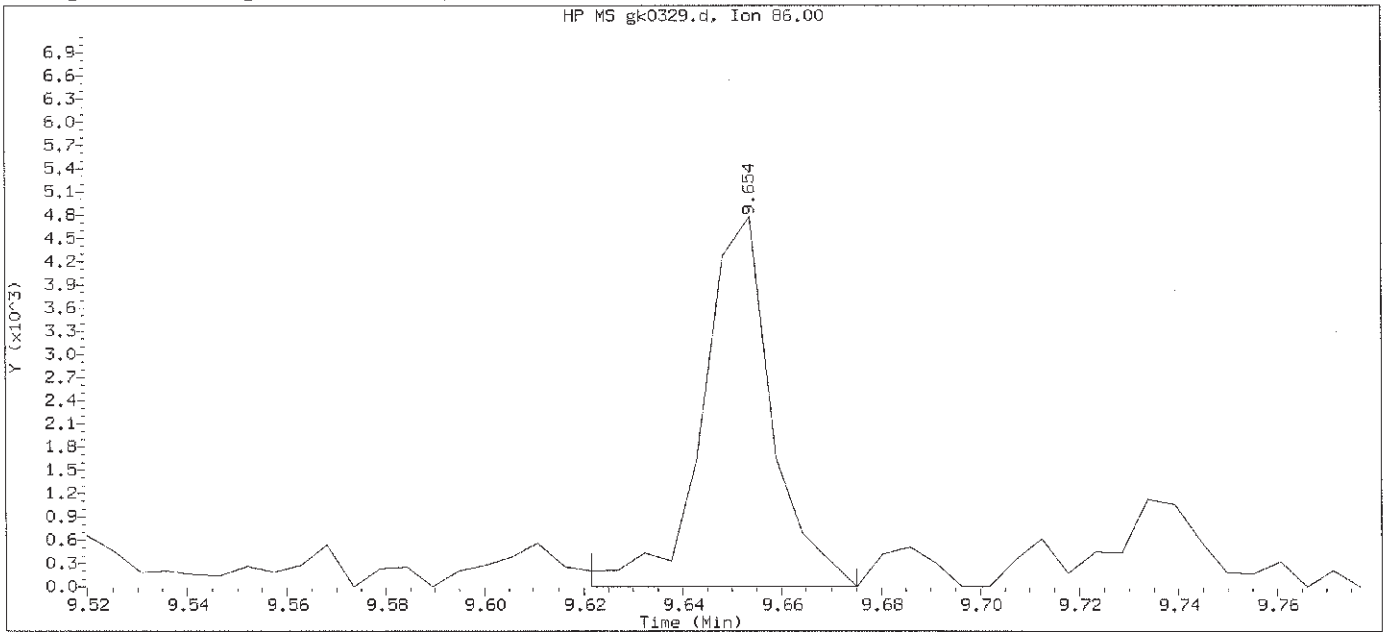
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

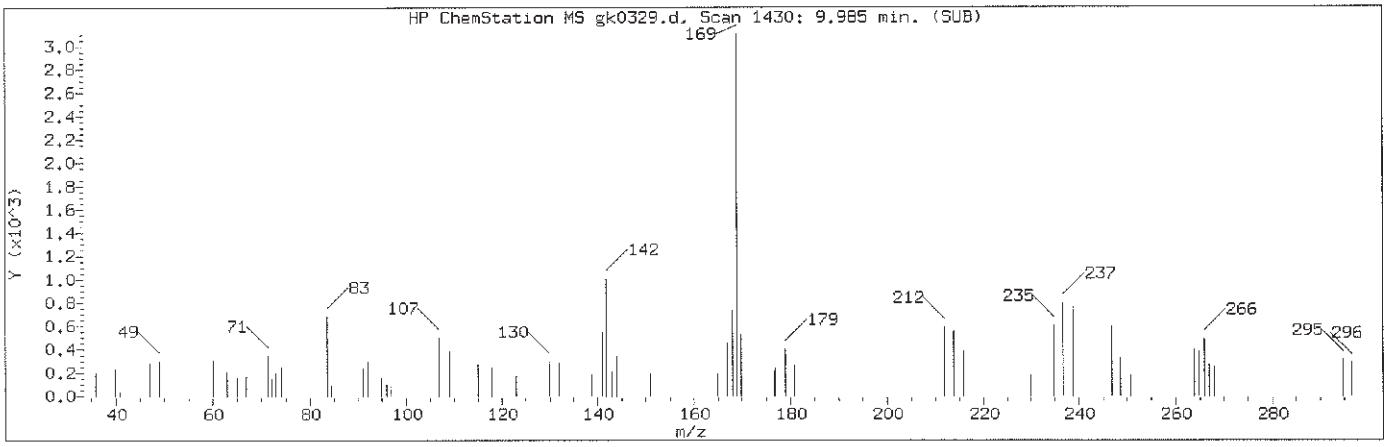
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

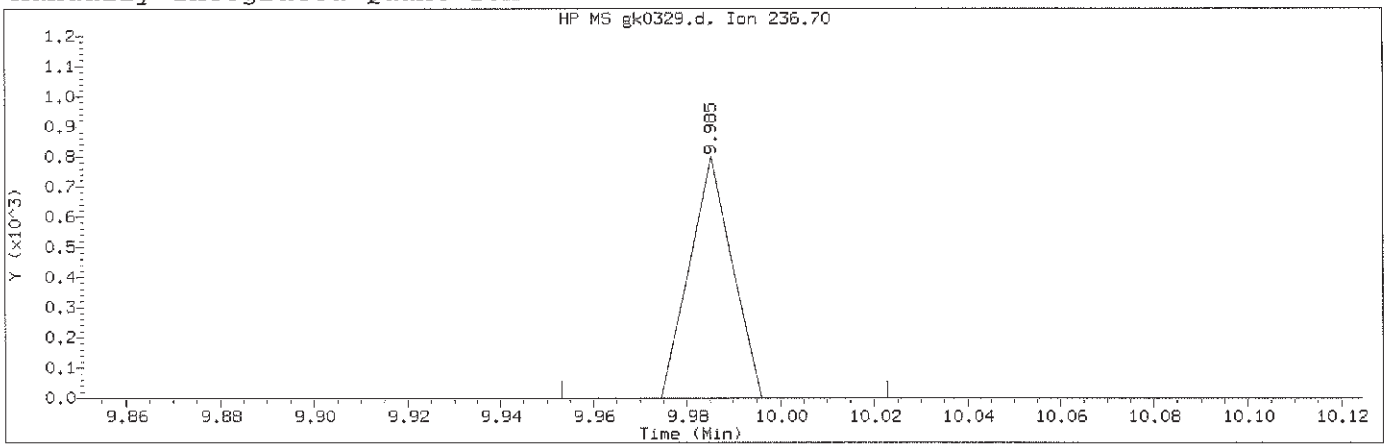
Compound Number	: 128		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1368		
Retention Time (minutes)	: 9.654		
Quant Ion	: 86.00		
Area	: 4628		
On-column Amount (ng/ul)	: 0.8128		
Integration start scan	: 1361	Integration stop scan:	1371
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 134
Compound Name : Pentachloronitrobenzene
Scan Number : 1430
Retention Time (minutes) : 9.985
Quant Ion : 237.00
Area (flag) : 501M
On-Column Amount (ng/ul) : 0.2747
Integration start scan : 1423 Integration stop scan: 1436
Y at integration start : 0 Y at integration end: 0

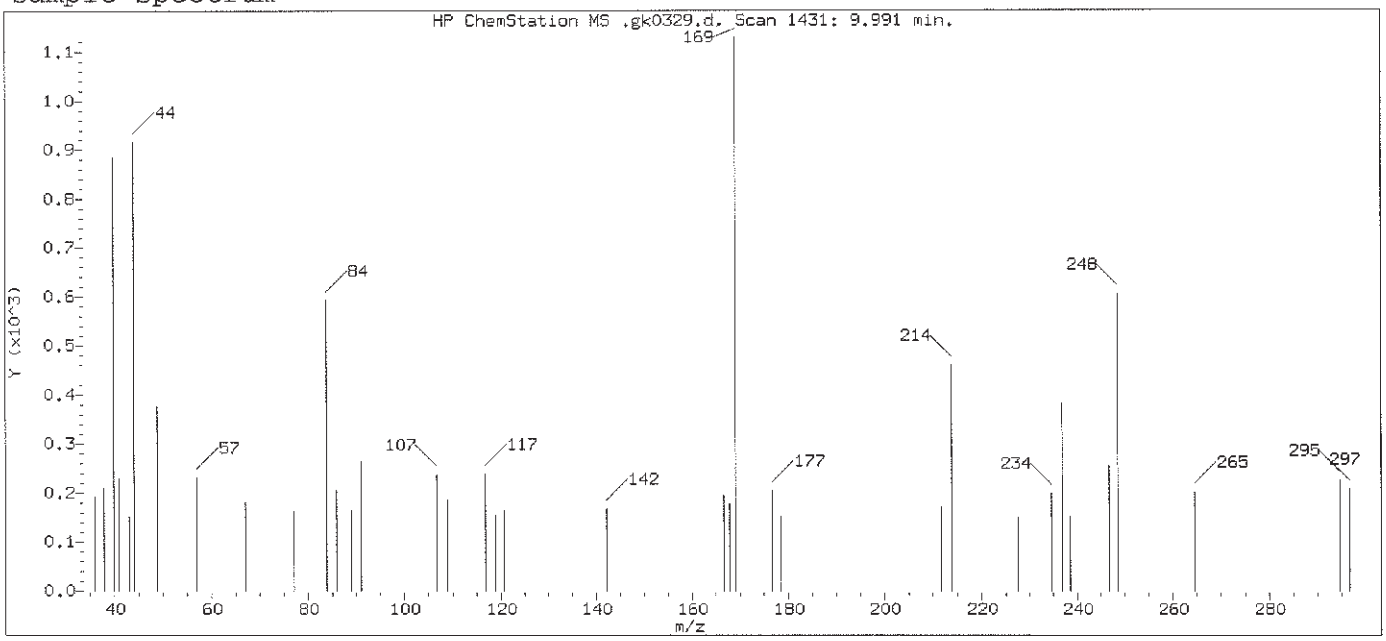
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

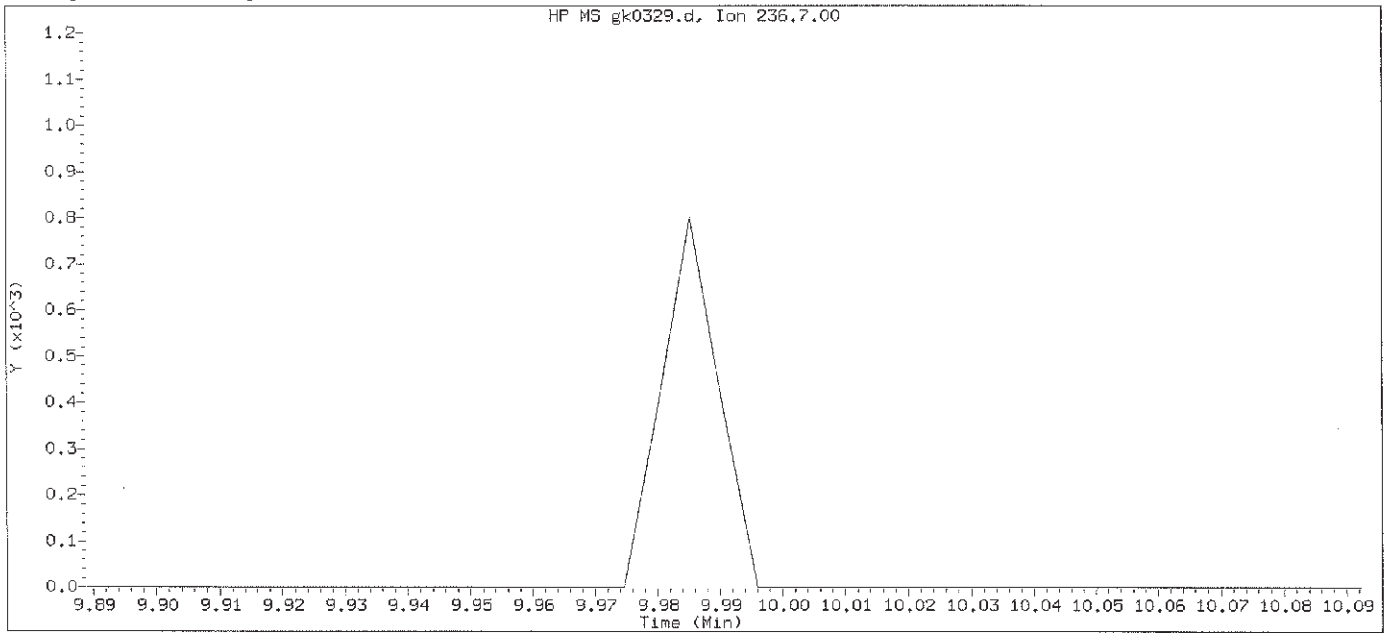
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

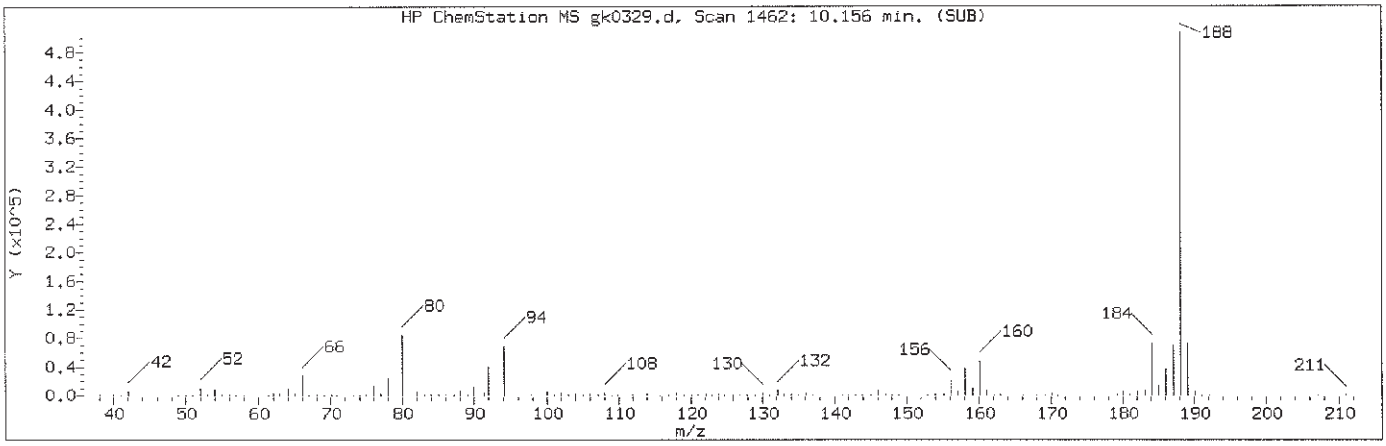
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

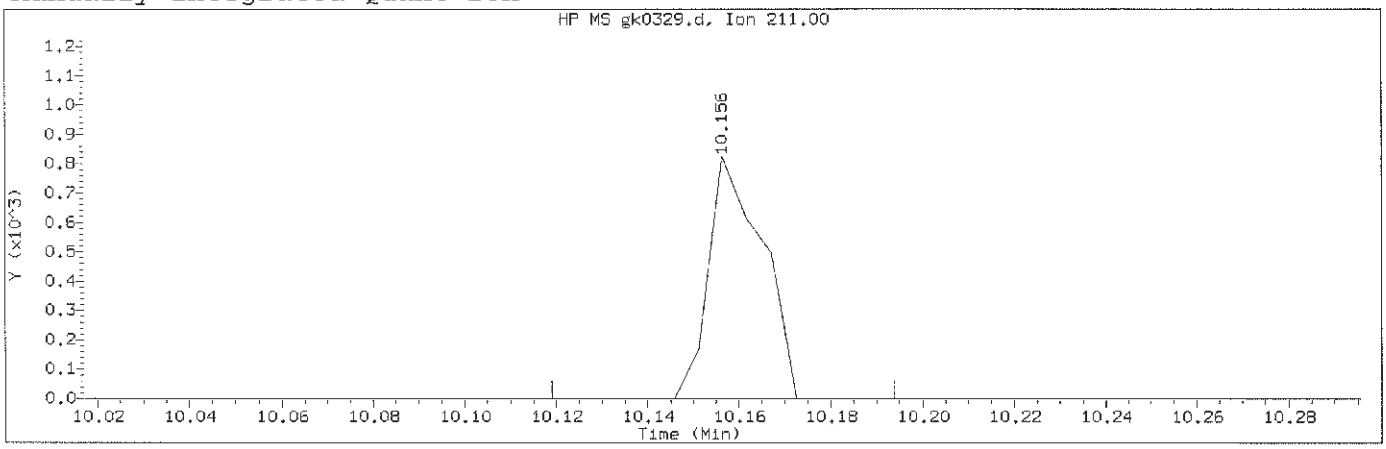
Compound Number : 134
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.991
Quant Ion : 237.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 142		
Compound Name	: Dinoseb		
Scan Number	: 1462		
Retention Time (minutes)	: 10.156		
Quant Ion	: 211.00		
Area (flag)	: 675M		
On-Column Amount (ng/ul)	: 4.2865		
Integration start scan	: 1454	Integration stop scan:	1468
Y at integration start	: 0	Y at integration end:	0

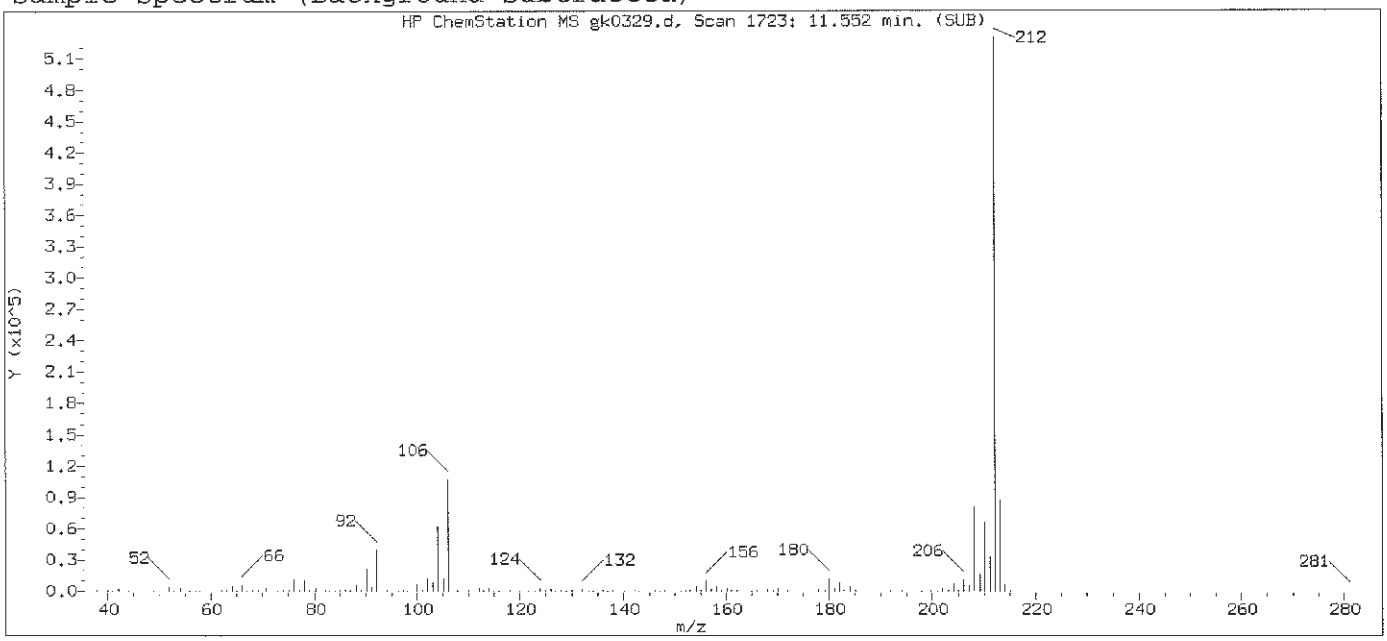
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

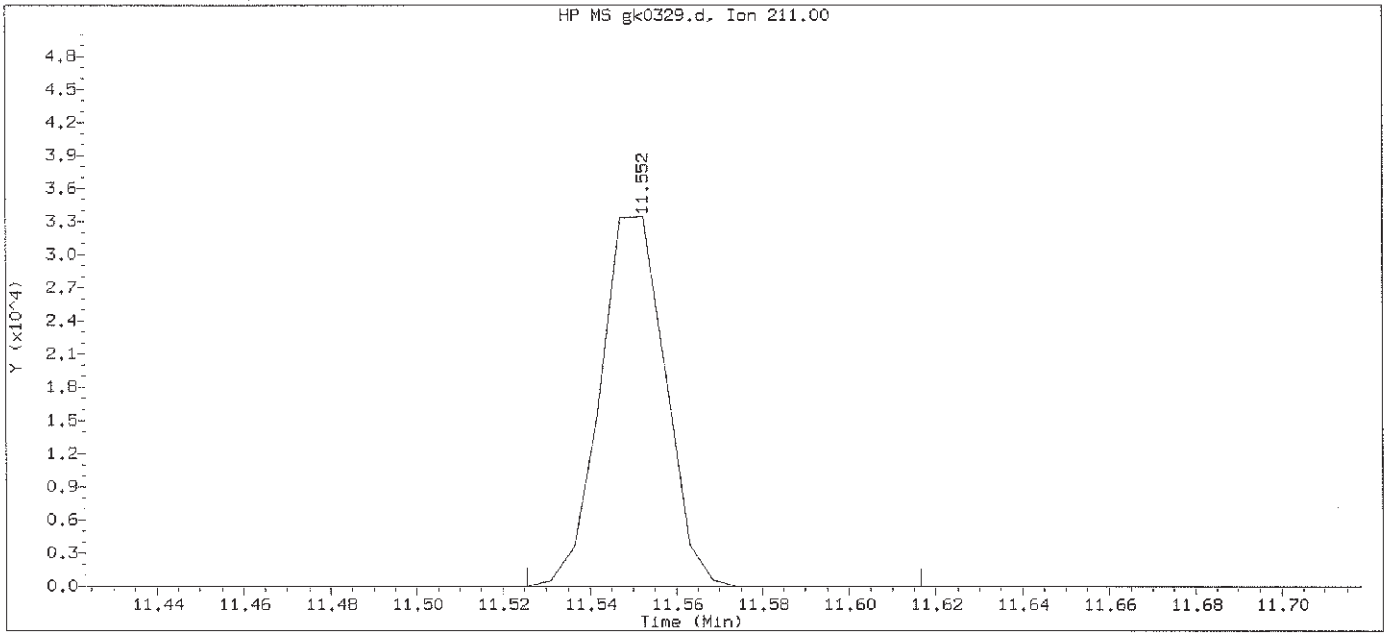
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

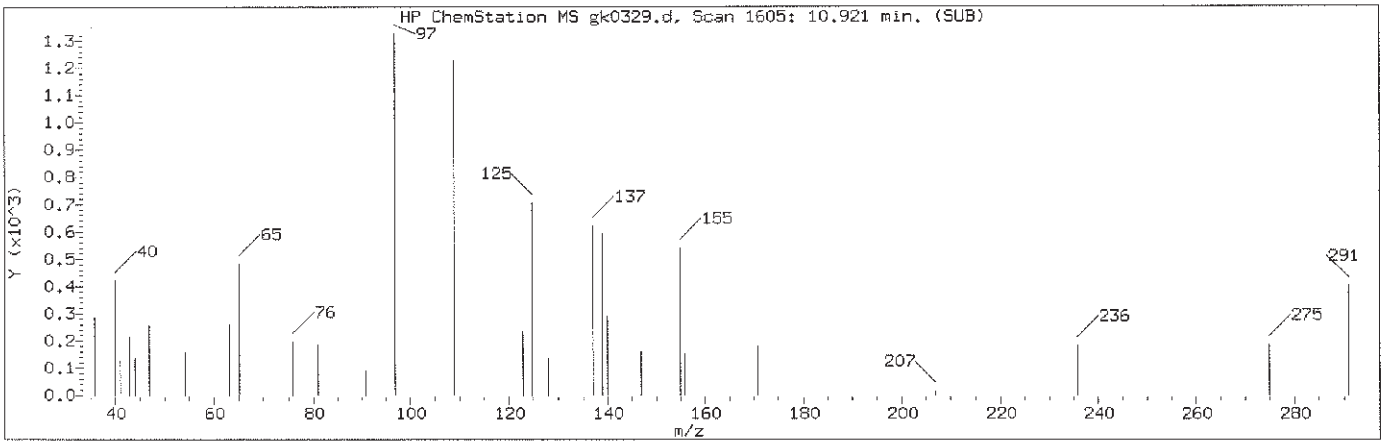
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla11-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

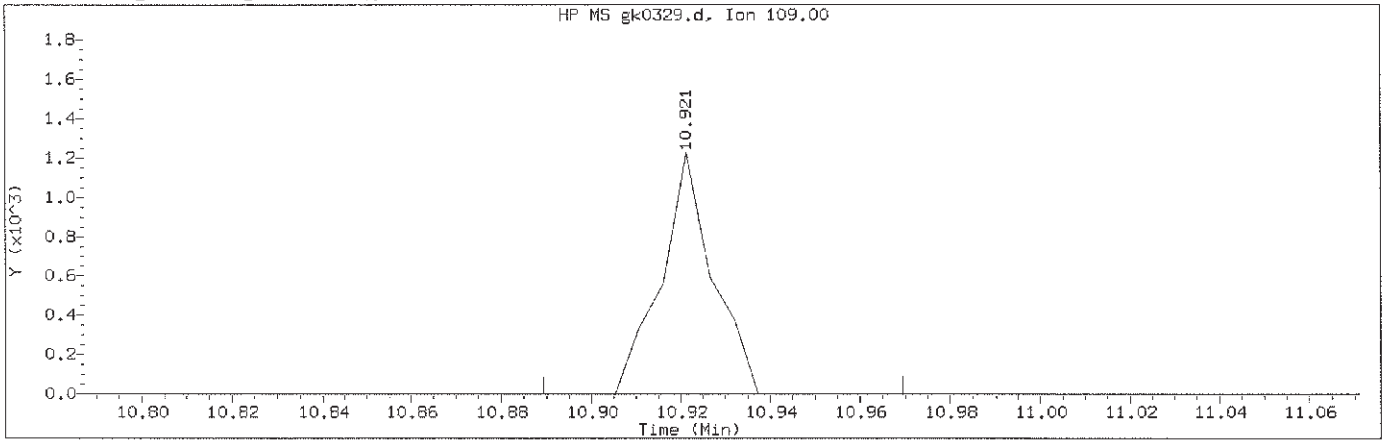
Compound Number	: 142		
Compound Name	: Dinoseb		
Scan Number	: 1723		
Retention Time (minutes)	: 11.552		
Quant Ion	: 211.00		
Area	: 35206		
On-column Amount (ng/ul)	: 10.8278		
Integration start scan	: 1717	Integration stop scan:	1734
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5md1all1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 151		
Compound Name	: Parathion		
Scan Number	: 1605		
Retention Time (minutes)	: 10.921		
Quant Ion	: 109.00		
Area (flag)	: 992M		
On-Column Amount (ng/ul)	: 0.2425		
Integration start scan	: 1598	Integration stop scan:	1613
Y at integration start	: 0	Y at integration end:	0

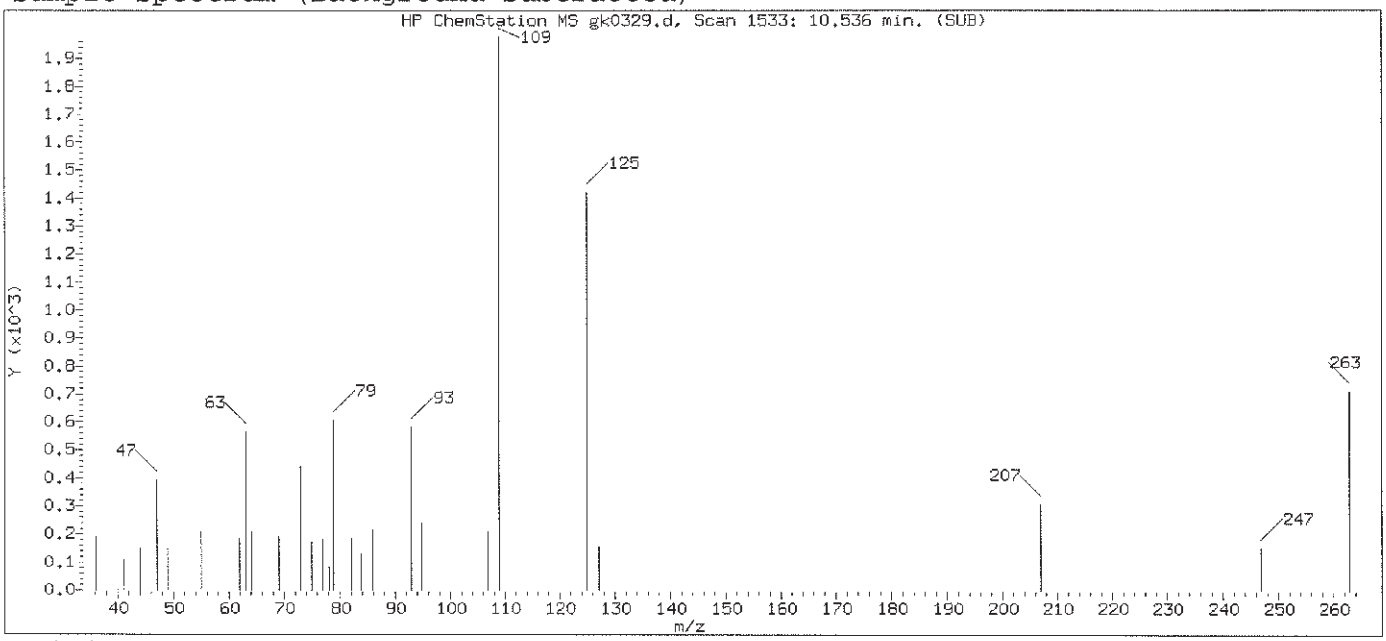
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

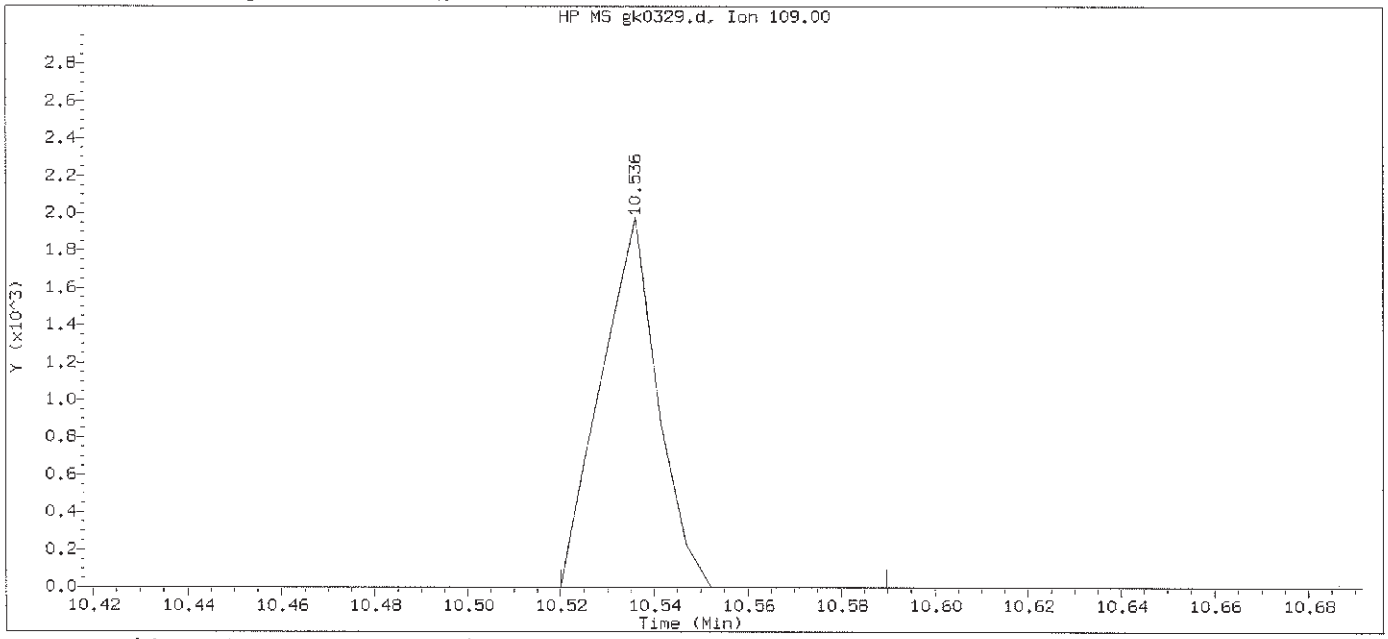
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

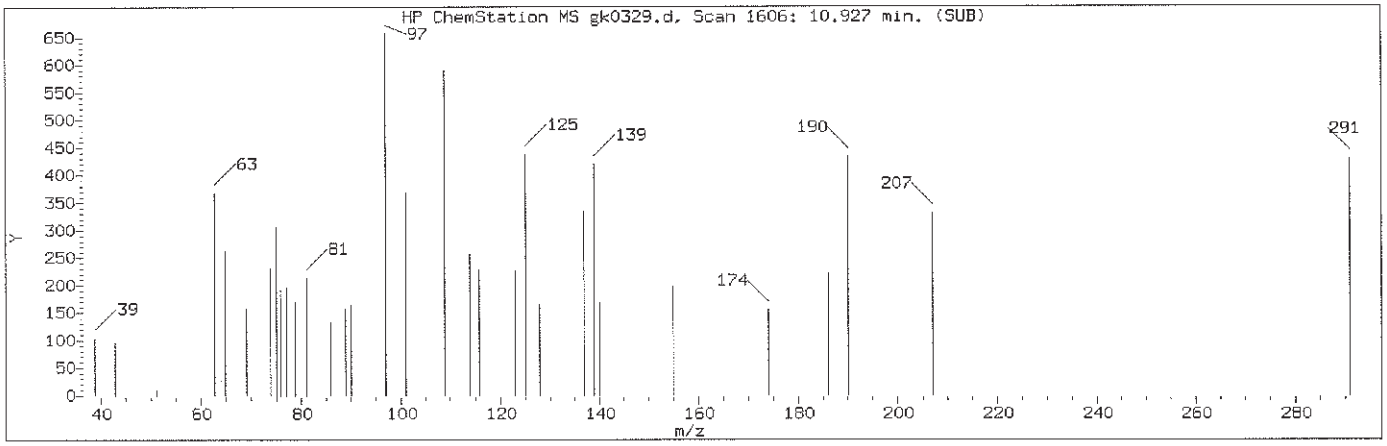
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

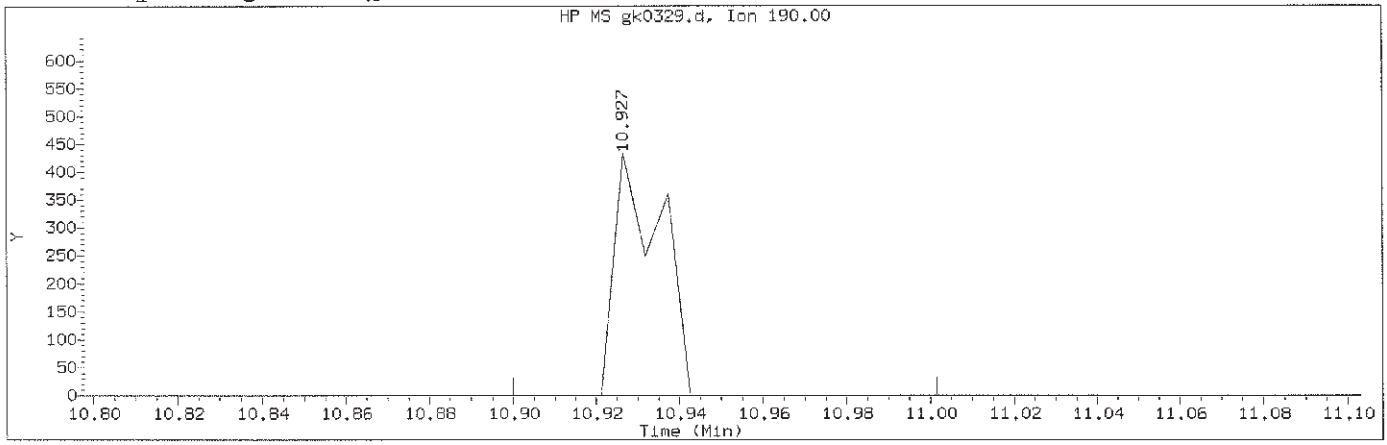
Compound Number	: 151		
Compound Name	: Parathion		
Scan Number	: 1533		
Retention Time (minutes)	: 10.536		
Quant Ion	: 109.00		
Area	: 1659		
On-column Amount (ng/ul)	: 0.4053		
Integration start scan	: 1529	Integration stop scan:	1542
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 152
Compound Name : 4-Nitroquinoline-1-oxide
Scan Number : 1606
Retention Time (minutes) : 10.927
Quant Ion : 190.00
Area (flag) : 334M
On-Column Amount (ng/ul) : 4.7076
Integration start scan : 1600 Integration stop scan: 1619
Y at integration start : 0 Y at integration end: 0

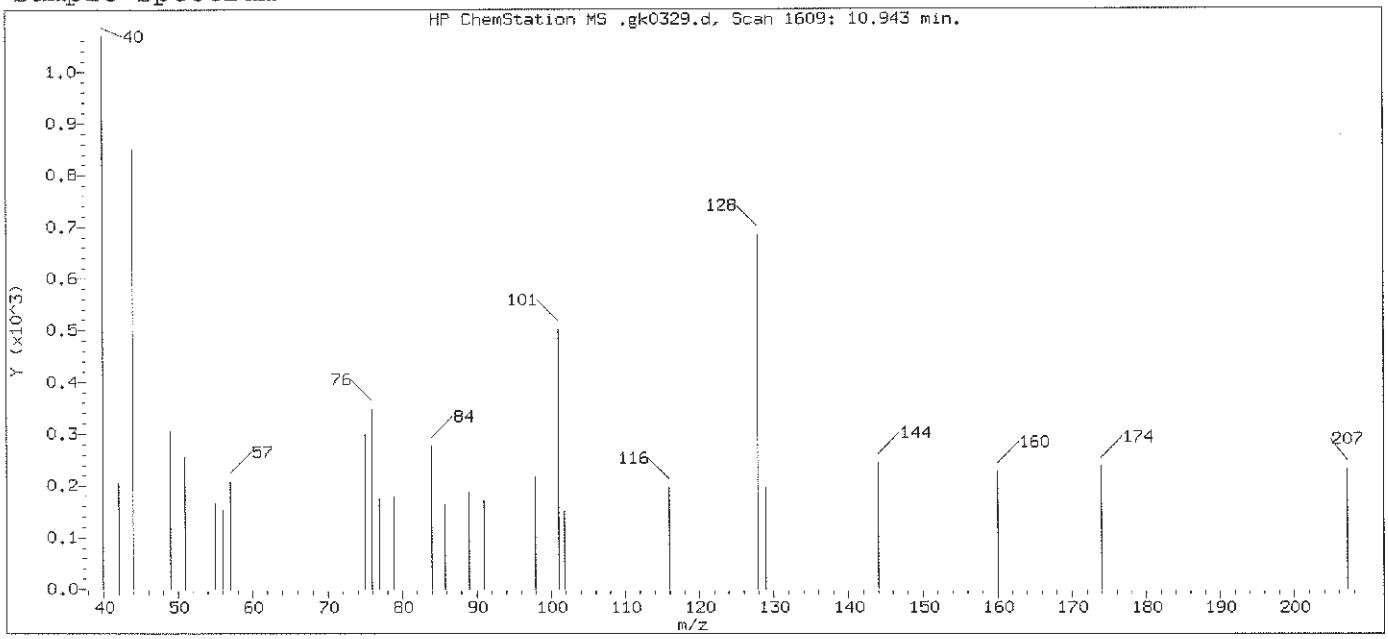
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

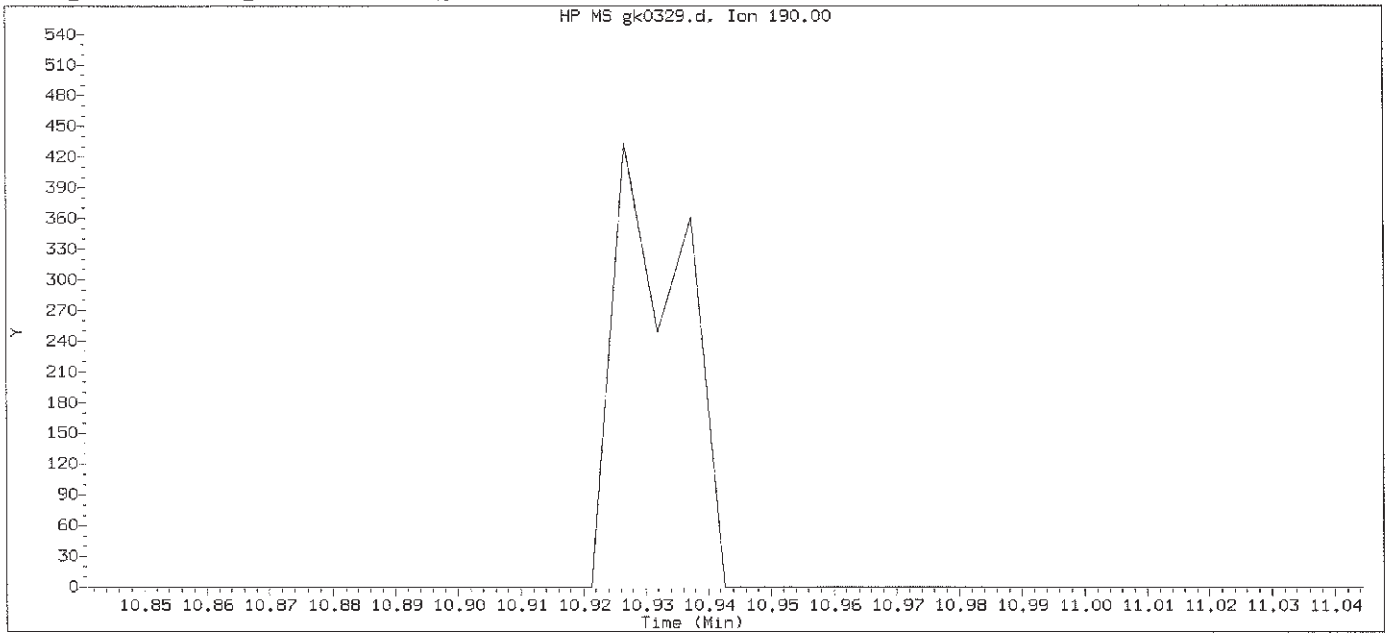
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

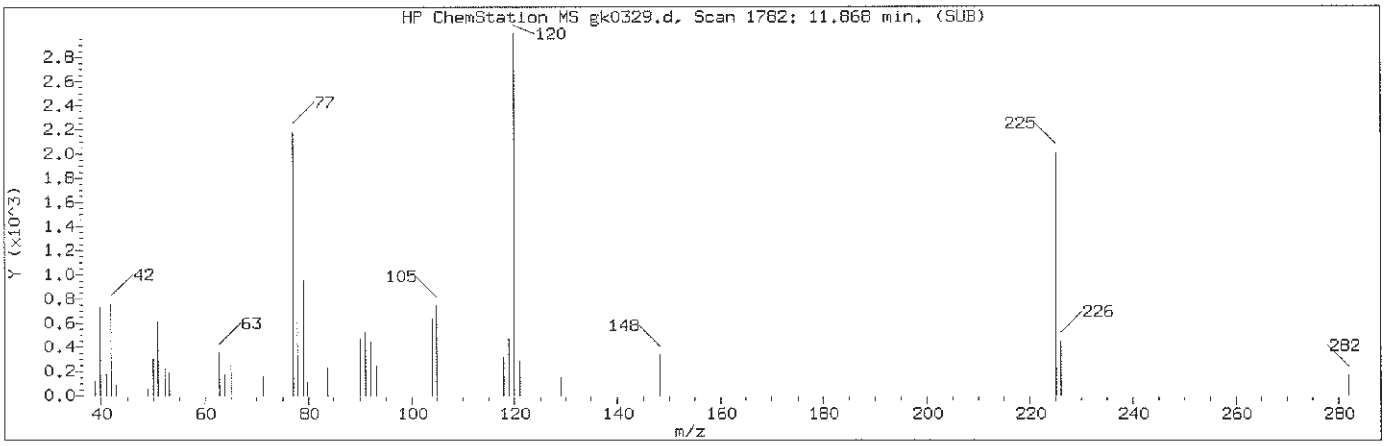
Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

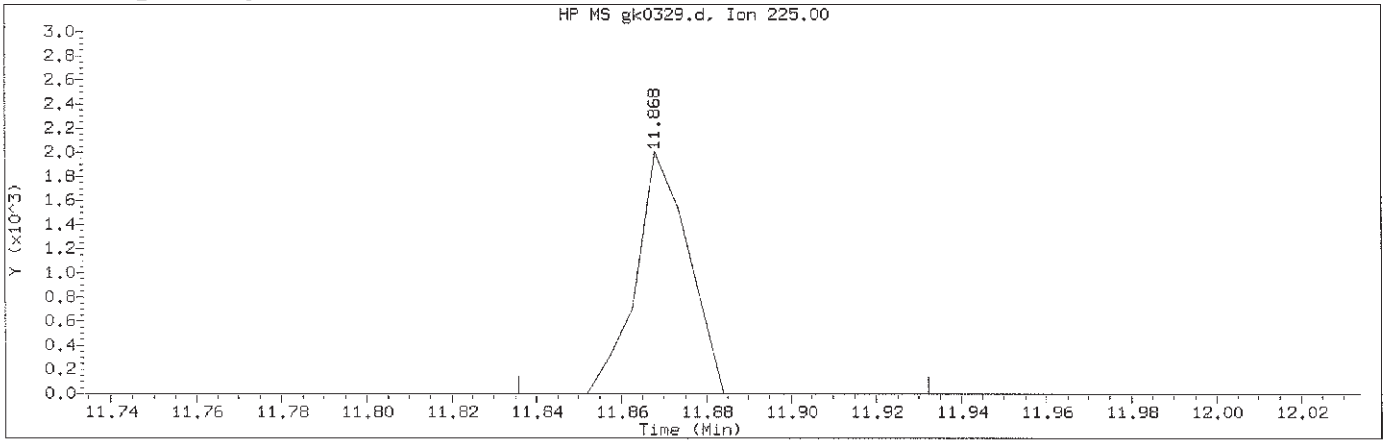
Compound Number : 152
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 10.943
Quant Ion : 190.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:32 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number	: 168		
Compound Name	: p-Dimethylaminoazobenzene		
Scan Number	: 1782		
Retention Time (minutes)	: 11.868		
Quant Ion	: 225.00		
Area (flag)	: 1707M		
On-Column Amount (ng/ul)	: 0.2892		
Integration start scan	: 1775	Integration stop scan:	1793
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

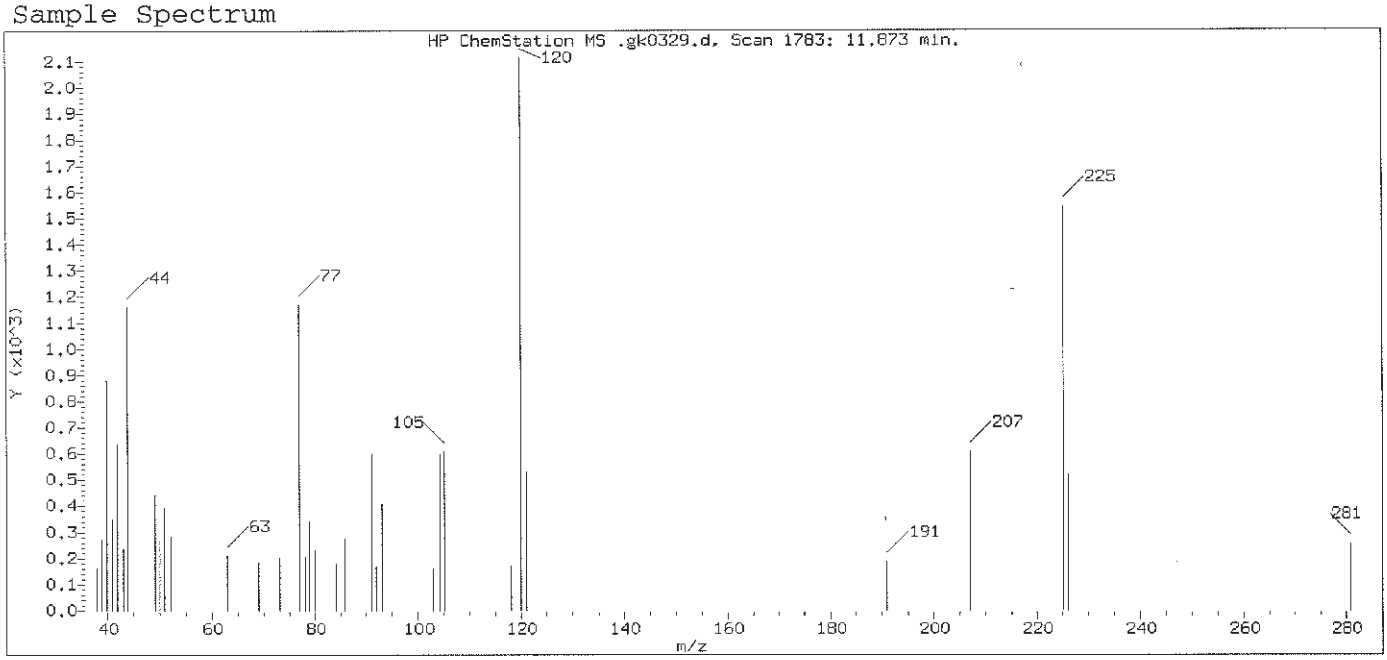
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

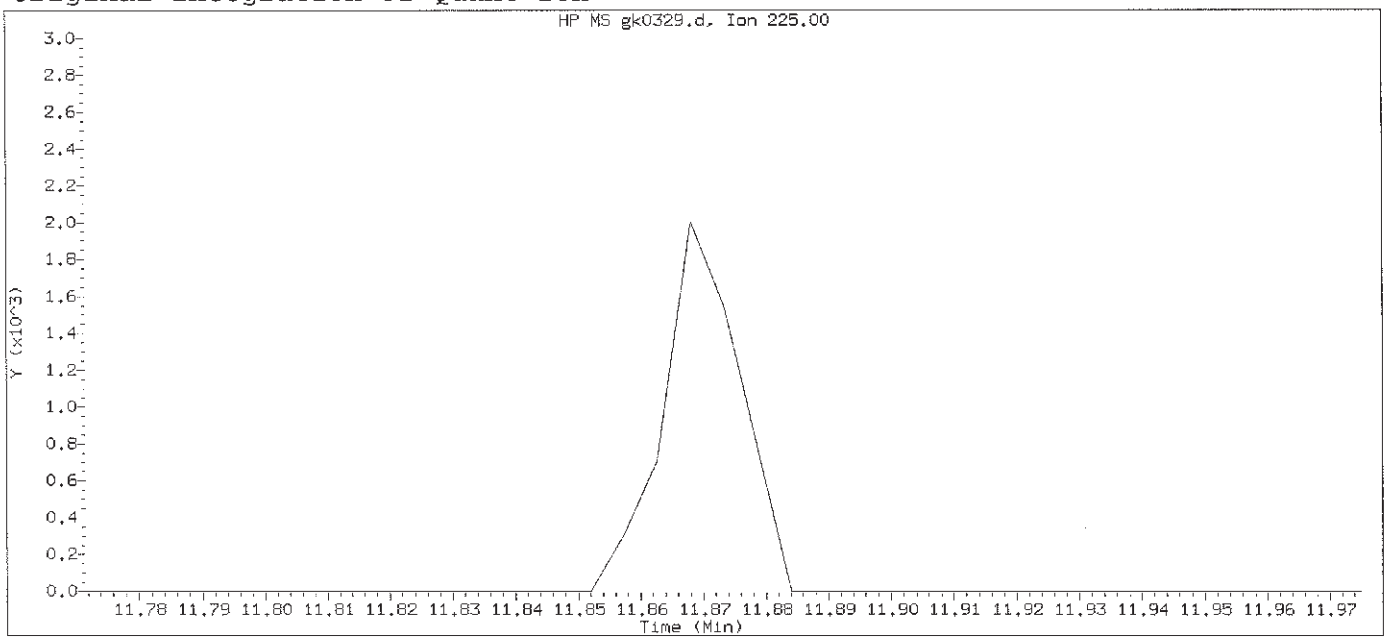
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



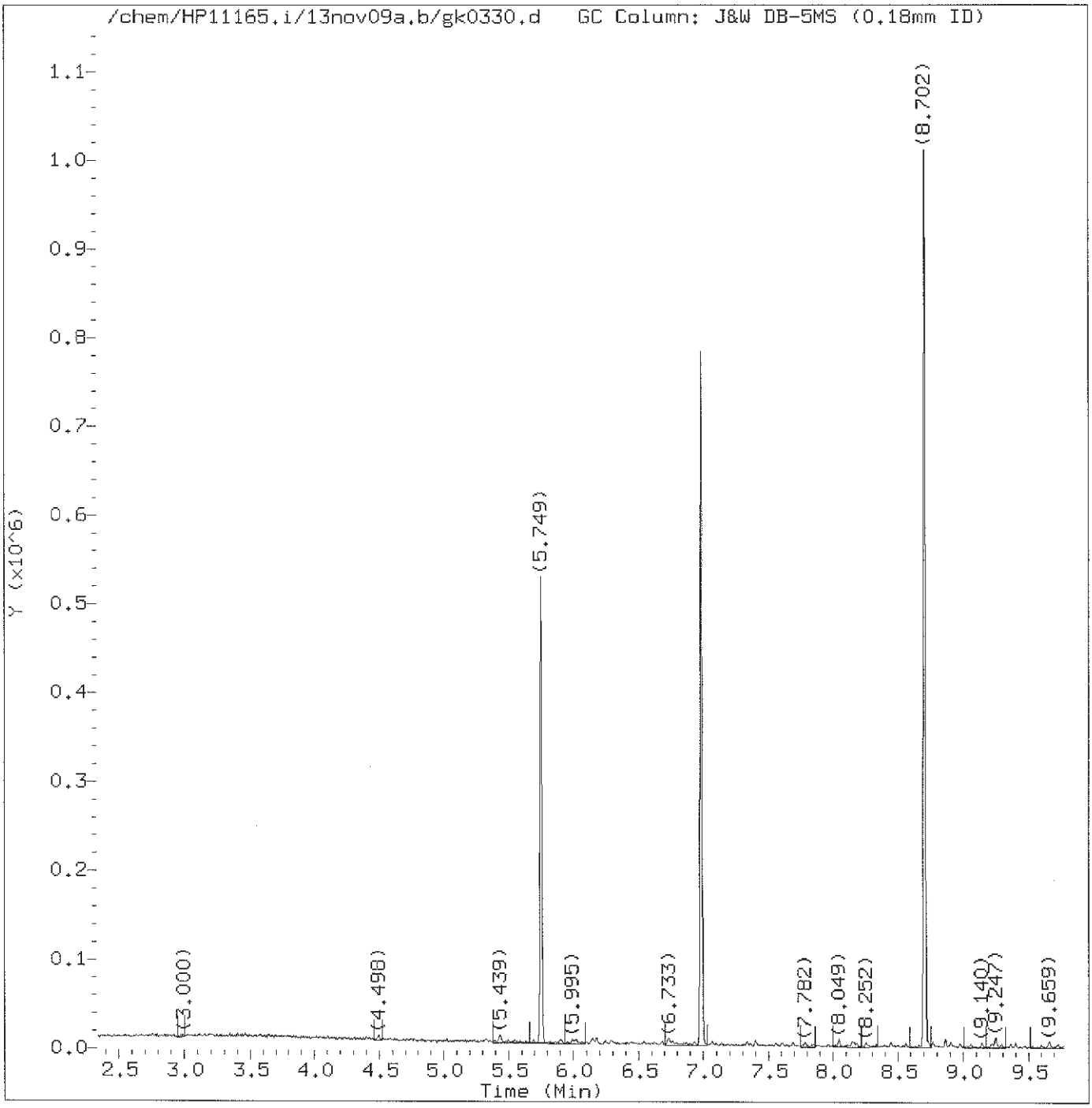
Data File: /chem/HP11165.i/13nov09a.b/gk0329.d Instrument ID: HP11165.i
Injection date and time: 09-NOV-2013 23:54 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:29 lmh00956

Sample Name: SSTD0.5 Lab Sample ID: 8270MDL3083

Compound Number : 168
Compound Name : p-Dimethylaminoazobenzene
Expected RT (minutes) : 11.873
Quant Ion : 225.00

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:51.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

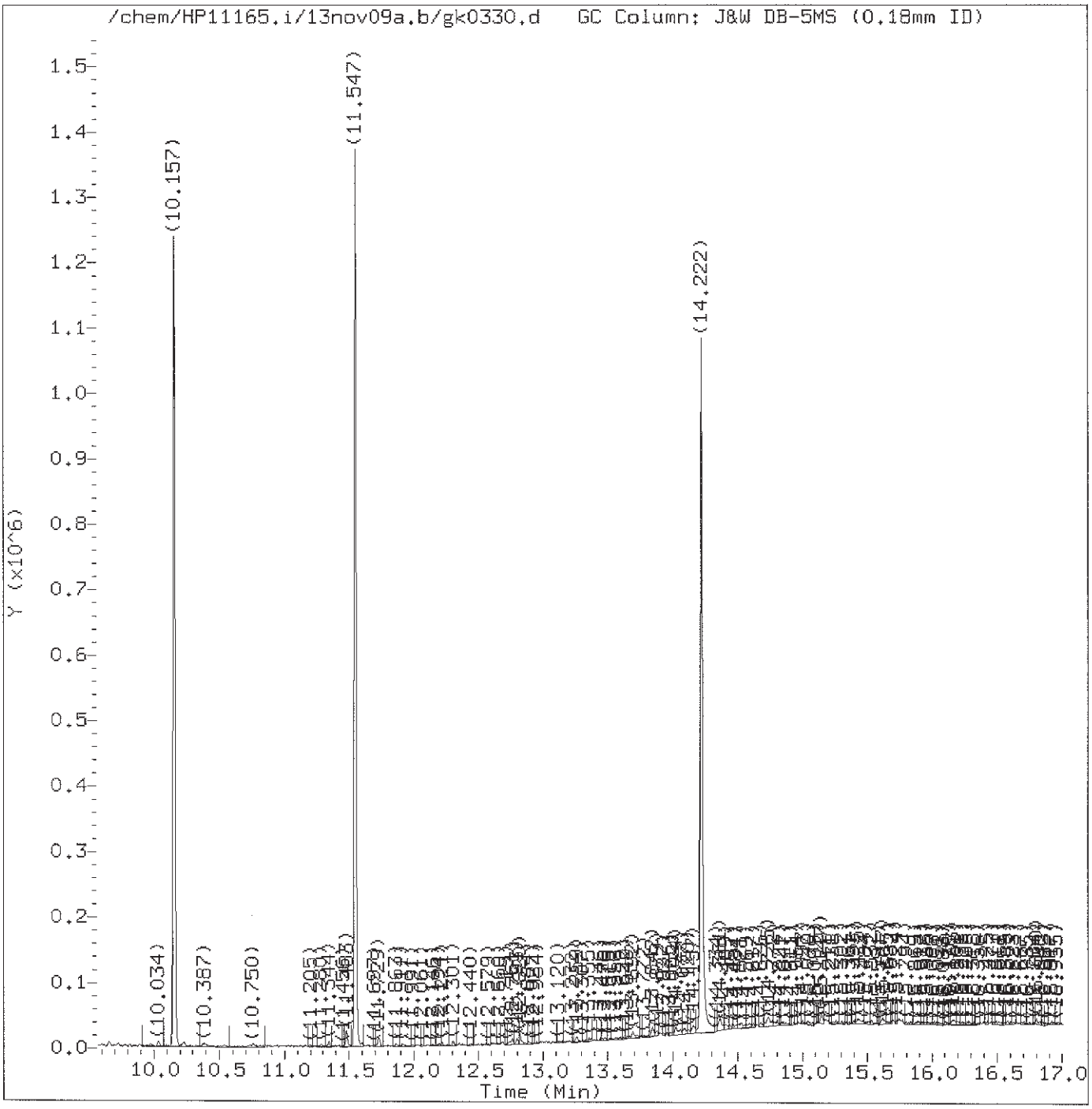
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:26 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:26 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:26 lmh00956

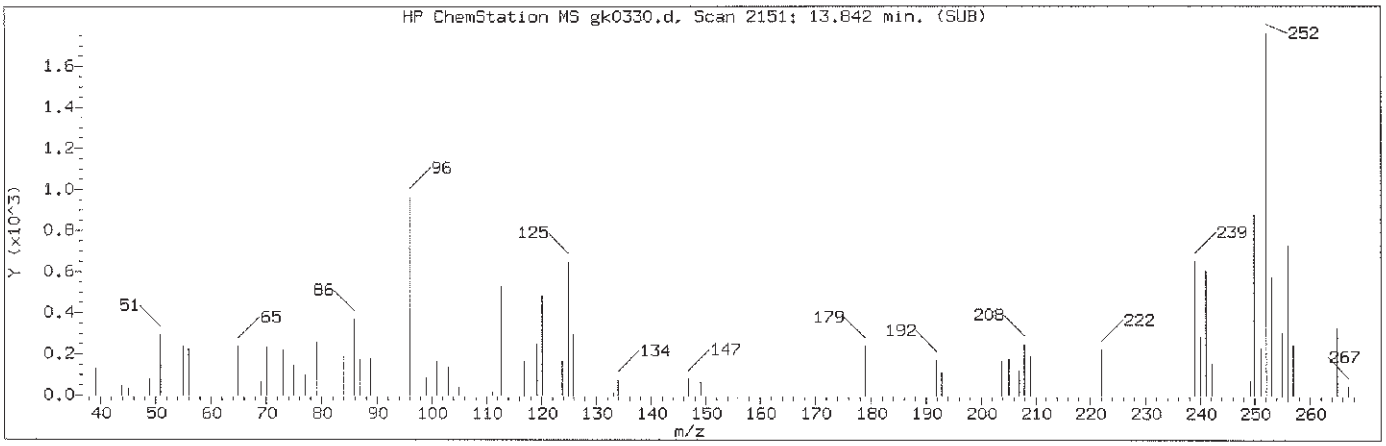
Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	79029	20.000
41)$Nitrobenzene-d5	(2)	6.284	82	1368	0.182
63)*Naphthalene-d8	(2)	6.985	136	340950	20.000
64) Naphthalene	(2)	7.006	128	1669	0.093
77) 2-Methylnaphthalene	(2)	7.685	142	1420	0.112
78) 1-Methylnaphthalene	(2)	7.782	142	1119	0.098
84)$2-Fluorobiphenyl	(3)	8.049	172	2550	0.196
99) Acenaphthylene	(3)	8.563	152	1678	0.093
101)*Acenaphthene-d10	(3)	8.702	164	213558	20.000
102) Acenaphthene	(3)	8.734	153	1348	0.104
113) Fluorene	(3)	9.242	166	1522	0.103
129) Hexachlorobenzene	(4)	9.771	284	370	0.096
140)*Phenanthrene-d10	(4)	10.157	188	431943	20.000
143) Phenanthrene	(4)	10.178	178	2955	0.116
144) Anthracene	(4)	10.226	178	2485	0.099
157) Fluoranthene	(4)	11.344	202	3106	0.119
164)*Pyrene-d10	(5)	11.547	212	518135	20.000
165) Pyrene	(5)	11.563	202	4347	0.147
166)$Terphenyl-d14	(5)	11.729	244	4303	0.233
177) Benzo(a)anthracene	(5)	12.761	228	2946	0.118
178) Chrysene	(5)	12.799	228	3019	0.124
185) Benzo(b)fluoranthene	(6)	13.842	252	3300M	0.126
186) Benzo(k)fluoranthene	(6)	13.874	252	2965M	0.107
187) Benzo(a)pyrene	(6)	14.157	252	2982	0.127
188)*Perylene-d12	(6)	14.222	264	434211	20.000
193) Indeno(1,2,3-cd)pyrene	(6)	15.409	276	2733	0.115
194) Dibenz(a,h)anthracene	(6)	15.430	278	2119	0.108
196) Benzo(g,h,i)perylene	(6)	15.751	276	2652	0.133

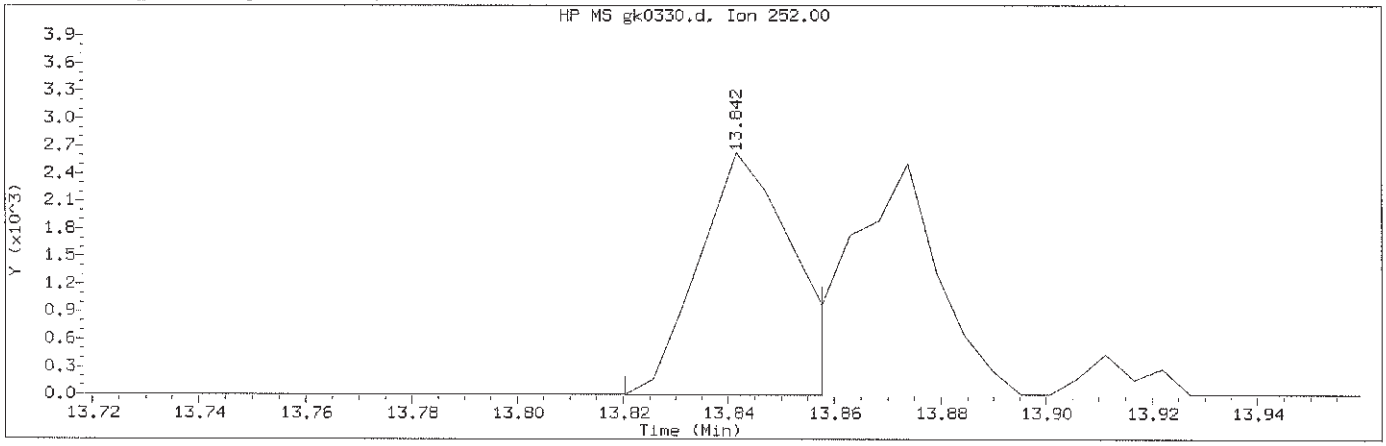
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:26 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2151		
Retention Time (minutes)	: 13.842		
Quant Ion	: 252.00		
Area (flag)	: 3300M		
On-Column Amount (ng/ul)	: 0.1258		
Integration start scan	: 2146	Integration stop scan:	2153
Y at integration start	: -6	Y at integration end:	-6

Reason for manual integration: improper integration

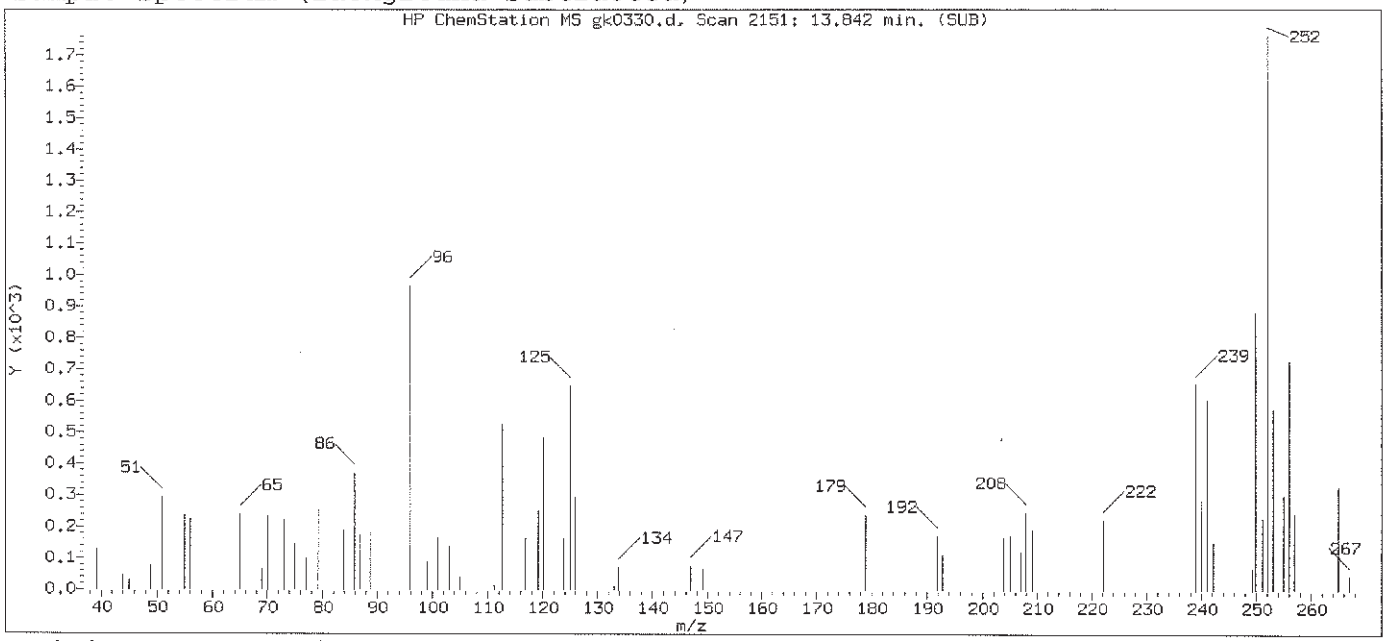
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:54. Target 3.5 esignature user ID: lmh00956

NOV 11 2013

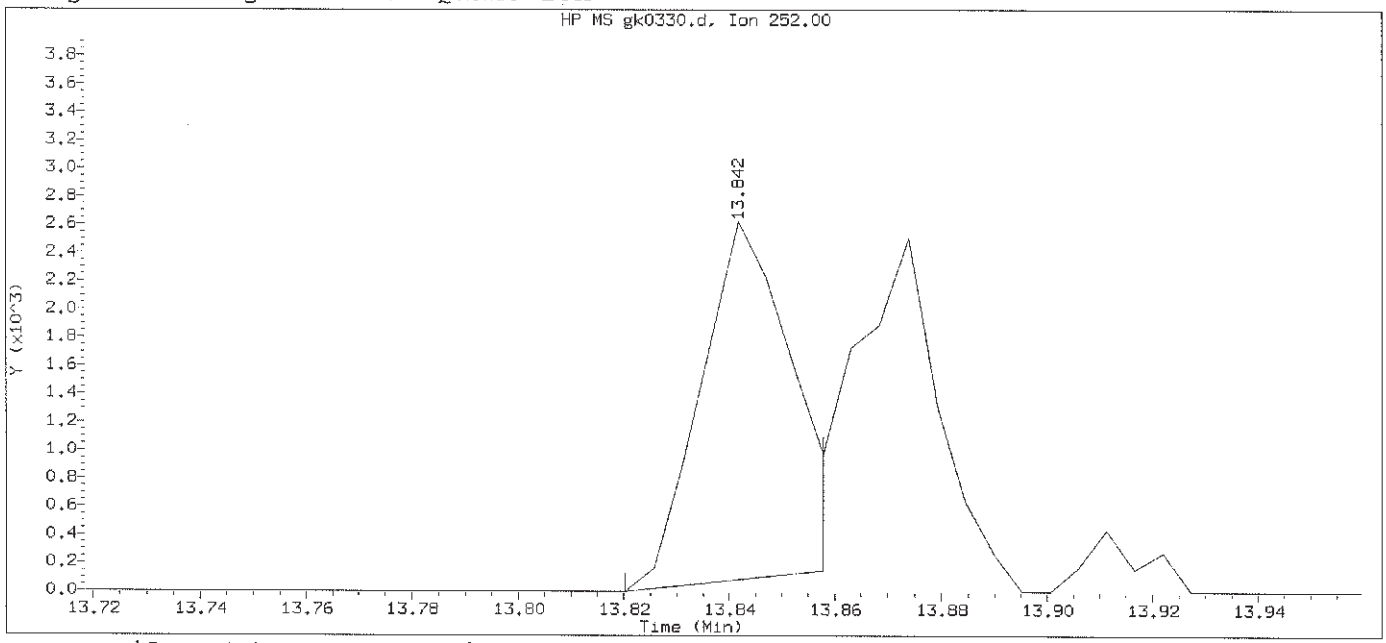
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:23 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2151		
Retention Time (minutes)	: 13.842		
Quant Ion	: 252.00		
Area	: 2960		
On-column Amount (ng/ul)	: 0.1129		
Integration start scan	: 2146	Integration stop scan:	2153
Y at integration start	: 0	Y at integration end:	150

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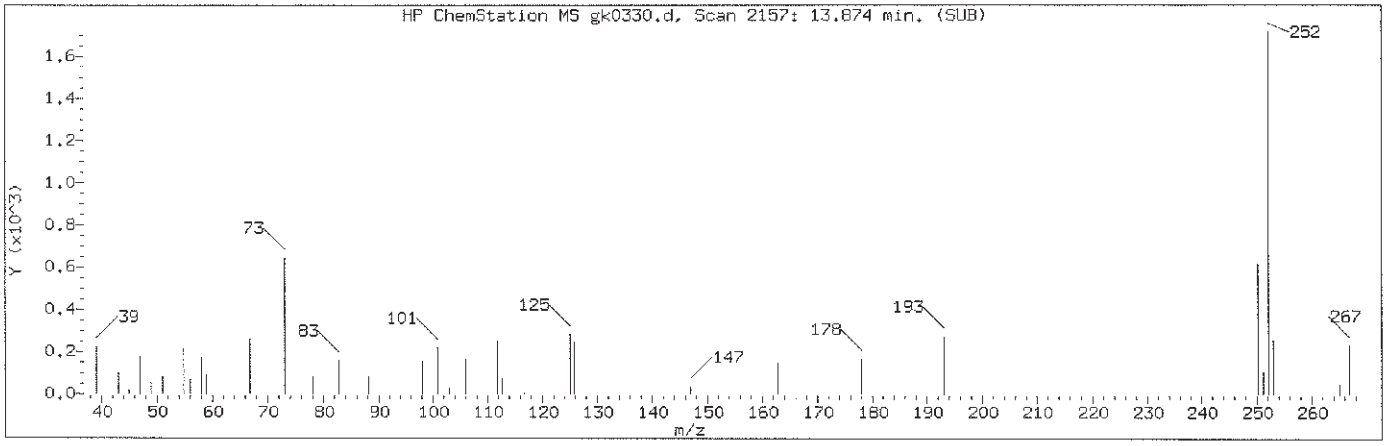
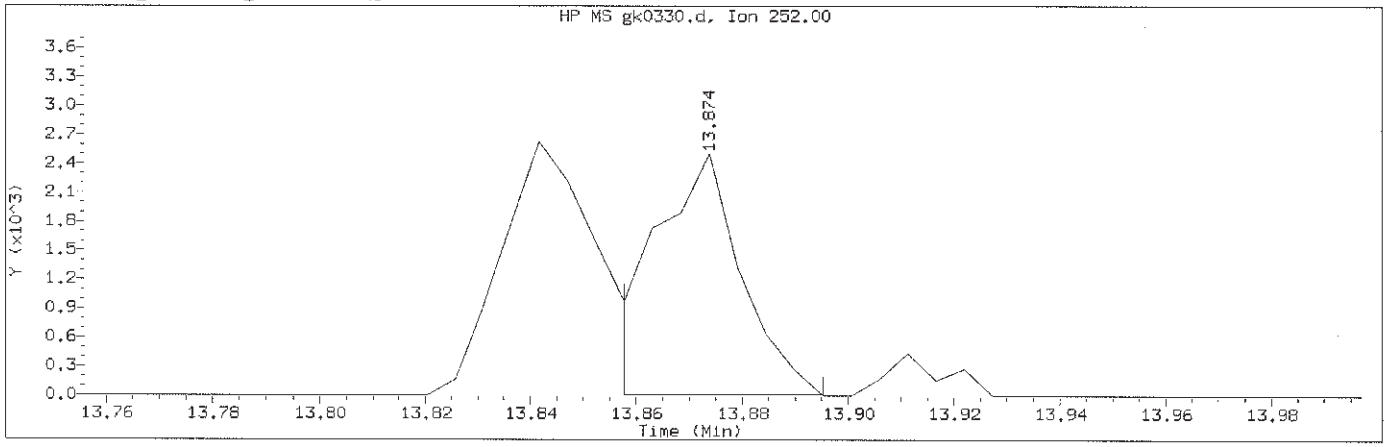
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:26 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2157		
Retention Time (minutes)	: 13.874		
Quant Ion	: 252.00		
Area (flag)	: 2965M		
On-Column Amount (ng/ul)	: 0.1067		
Integration start scan	: 2153	Integration stop scan:	2160
Y at integration start	: 10	Y at integration end:	10

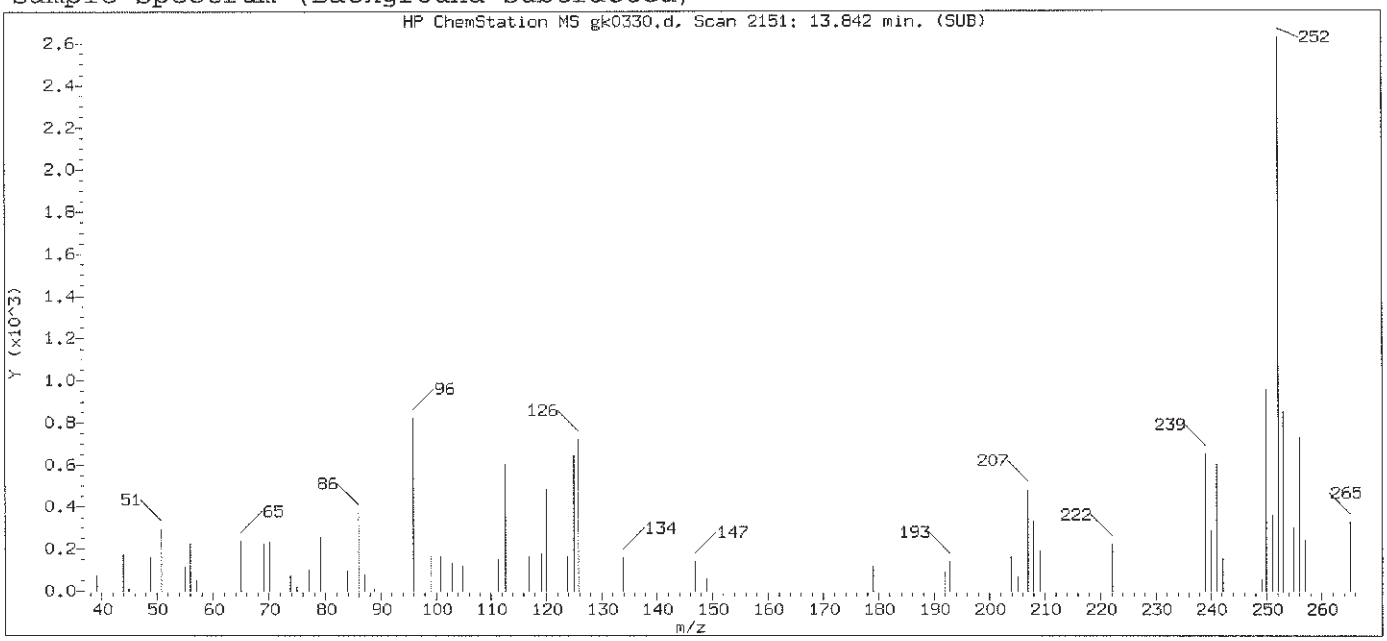
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:54. Target 3.5 esignature user ID: lmh00956

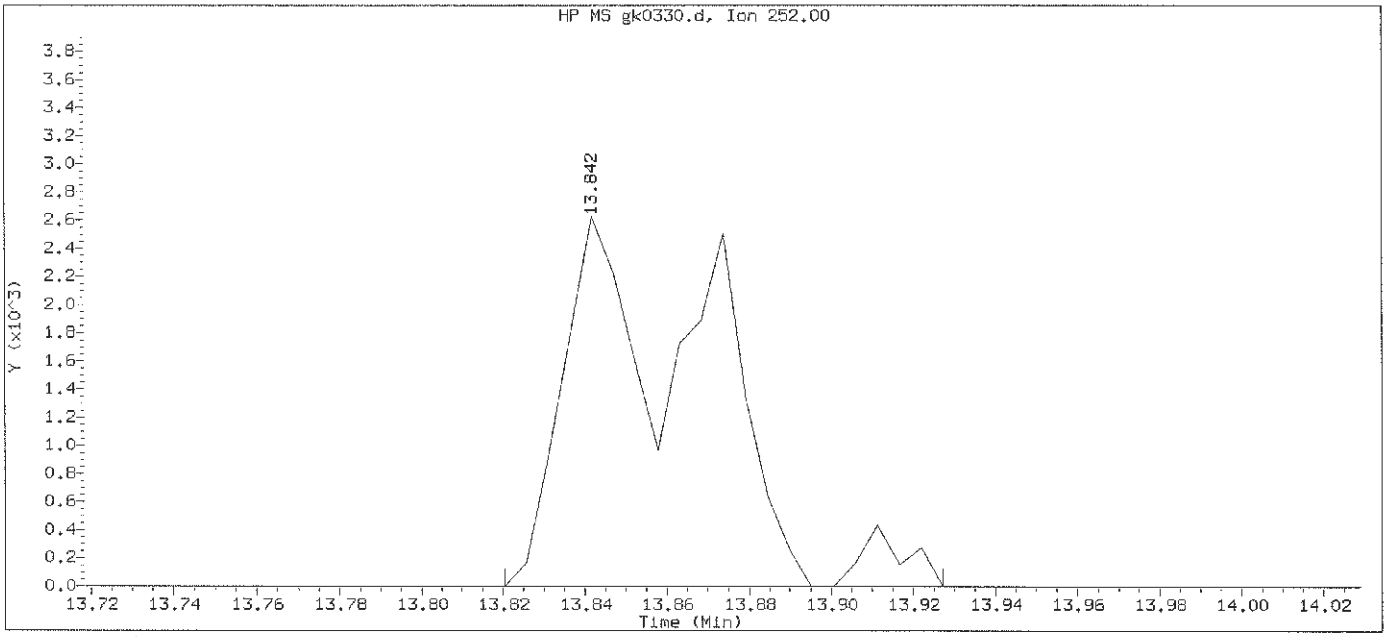
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



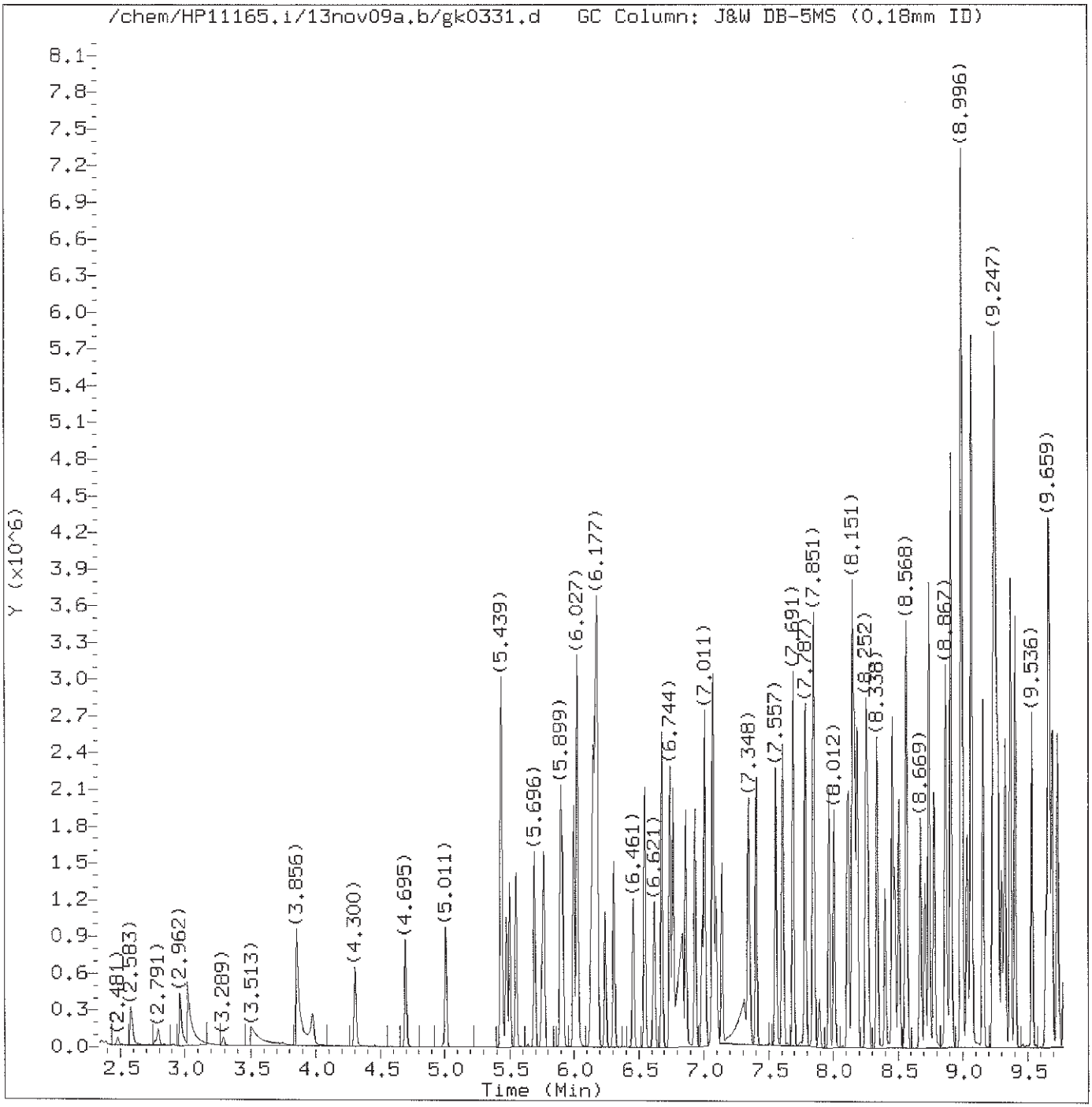
Data File: /chem/HP11165.i/13nov09a.b/gk0330.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:20 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 10-NOV-2013 08:21
Date, time and analyst ID of latest file update: 10-Nov-2013 08:23 lmh00956

Sample Name: SSTD0.1 Lab Sample ID: PAHMDL3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2151		
Retention Time (minutes)	: 13.842		
Quant Ion	: 252.00		
Area	: 6298		
On-column Amount (ng/ul)	: 0.2265		
Integration start scan	: 2146	Integration stop scan:	2166
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

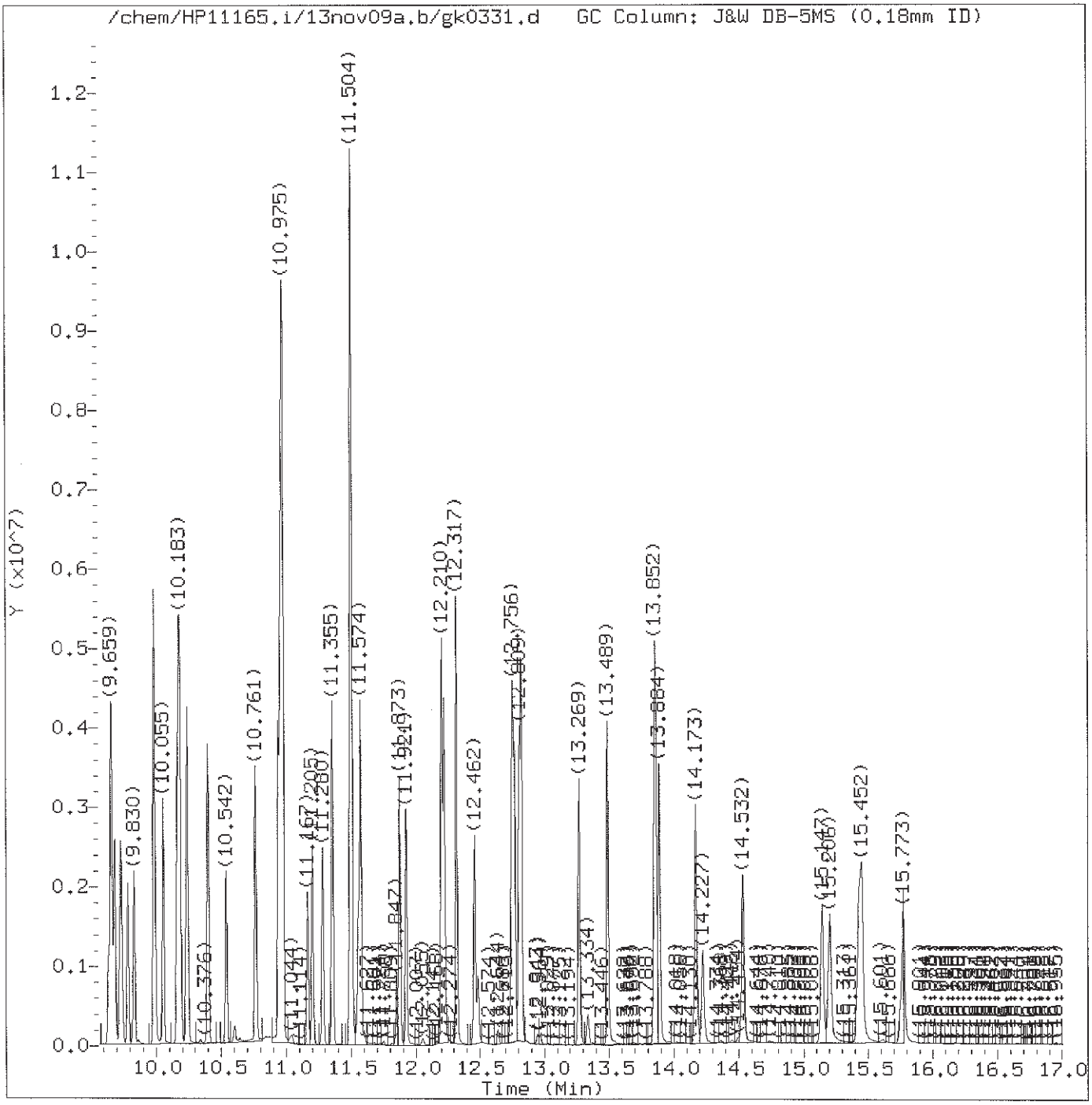
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.583	88	157796	49.357
3) N-Nitrosodimethylamine	(1)	2.962	74	272040	48.516
4) Pyridine	(1)	3.021	79	432451	47.573
7) 2-Picoline	(1)	3.856	93	451288	48.287
8) N-Nitrosomethylethylamine	(1)	3.973	88	221829	46.260
9) Methyl methanesulfonate	(1)	4.300	80	249953	55.124
11) N-Nitrosodiethylamine	(1)	4.701	102	223922	51.663
14) Ethyl methanesulfonate	(1)	5.011	109	226702	51.906
19) Aniline	(1)	5.434	93	750183	52.310
18) Phenol	(1)	5.444	94	652578	50.526
20) bis(2-Chloroethyl)ether	(1)	5.503	93	460063	49.912
21) 2-Chlorophenol	(1)	5.557	128	380694	52.329
24) 1,3-Dichlorobenzene	(1)	5.696	146	367049	50.390
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	91115	20.000
26) 1,4-Dichlorobenzene	(1)	5.771	146	377458	51.214
27) Benzyl alcohol	(1)	5.899	108	320036	53.354
28) 1,2-Dichlorobenzene	(1)	5.915	146	355697	49.136
29) Indene	(1)	6.001	115	594330	44.826
31) 2,2'-oxybis(1-Chloropropane)	(1)	6.027	45	593178	47.989
30) 2-Methylphenol	(1)	6.027	108	433895	53.026
32) bis(2-Chloroisopropyl)ether	(1)	6.027	45	593178	47.989
34) N-Nitrosopyrrolidine	(1)	6.134	100	278467	53.235
35) Acetophenone	(1)	6.145	105	632096	48.884
37) N-Nitroso-di-n-propylamine	(1)	6.161	70	392378	50.912
38) N-Nitrosomorpholine	(1)	6.172	56	303938	51.258
36) 4-Methylphenol	(1)	6.172	108	515438	52.872
39) o-Toluidine	(1)	6.182	106	731630	51.782
40) Hexachloroethane	(1)	6.241	117	143229	49.722
42) Nitrobenzene	(2)	6.311	77	525340	48.881
44) N-Nitrosopiperidine	(2)	6.461	114	245069	51.374
45) Isophorone	(2)	6.551	82	1028854	52.490
48) 2-Nitrophenol	(2)	6.621	139	222375	53.259
52) 2,4-Dimethylphenol	(2)	6.680	107	488749	52.918
53) O,O,O-triethylphosphorothioate	(2)	6.744	198	186052	48.953
55) bis(2-Chloroethoxy)methane	(2)	6.765	93	619454	51.788
54) Benzoic acid	(2)	6.840	105	773298	96.443
60) 2,4-Dichlorophenol	(2)	6.867	162	340782	54.072
62) 1,2,4-Trichlorobenzene	(2)	6.937	180	346580	52.662
63)*Naphthalene-d8	(2)	6.990	136	456485	20.000
64) Naphthalene	(2)	7.011	128	1219447	50.705

* = Compound is an internal standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicvall1
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
65)	4-Chloroaniline	(2)	7.070	127	558904	55.205
66)	2,6-Dichlorophenol	(2)	7.081	162	326551	52.119
67)	Hexachloropropene	(2)	7.097	213	179591	51.345
69)	Hexachlorobutadiene	(2)	7.140	225	154843	49.858
70)	Quinoline	(2)	7.348	129	902099	52.466
73)	N-Nitrosodi-n-butylamine	(2)	7.407	84	391186	38.484
75)	4-Chloro-3-methylphenol	(2)	7.557	107	467916	53.645
76)	Safrole	(2)	7.610	162	329124	52.315
77)	2-Methylnaphthalene	(2)	7.691	142	866030	51.134
78)	1-Methylnaphthalene	(2)	7.787	142	821584	53.635
79)	Hexachlorocyclopentadiene	(3)	7.846	237	326081	115.496
80)	1,2,4,5-Tetrachlorobenzene	(3)	7.851	216	336545	49.067
81)	cis-Isosafrole	(3)	7.894	162	58758	5.493
82)	2,4,6-Trichlorophenol	(3)	7.969	196	269213	53.097
83)	2,4,5-Trichlorophenol	(3)	8.012	196	283894	53.749
86)	Isosafrole	(3)	8.119	162	354565	51.774
85)	trans-Isosafrole	(3)	8.119	162	354565	46.079
87)	1,1'-Biphenyl	(3)	8.151	154	1076783	47.594
88)	2-Chloronaphthalene	(3)	8.167	162	883256	51.635
89)	1-Chloronaphthalene	(3)	8.188	162	719276	45.887
90)	Diphenyl ether	(3)	8.252	170	563062	49.974
91)	2-Nitroaniline	(3)	8.268	138	320004	53.157
92)	1,4-Naphthoquinone	(3)	8.338	158	444370	62.965
93)	1,4-Dinitrobenzene	(3)	8.402	168	163988	54.037
94)	Dimethylphthalate	(3)	8.461	163	1008016	51.246
95)	1,3-Dinitrobenzene	(3)	8.477	168	193924	52.544
97)	2,6-Dinitrotoluene	(3)	8.509	165	242897	55.164
99)	Acenaphthylene	(3)	8.568	152	1381809	56.225
100)	3-Nitroaniline	(3)	8.675	138	303330	54.776
101)	*Acenaphthene-d10	(3)	8.707	164	291599	20.000
102)	Acenaphthene	(3)	8.739	153	895488	50.768
103)	2,4-Dinitrophenol	(3)	8.782	184	311258	102.049
104)	4-Nitrophenol	(3)	8.867	109	176279	52.910
105)	Pentachlorobenzene	(3)	8.867	250	305468	49.552
106)	2,4-Dinitrotoluene	(3)	8.910	165	331080	53.540
107)	Dibenzofuran	(3)	8.910	168	1197240	49.604
108)	1-Naphthylamine	(3)	8.990	143	2092865	105.401
109)	2,3,4,6-Tetrachlorophenol	(3)	9.039	232	235351	55.033
110)	2-Naphthylamine	(3)	9.071	143	2086507	105.144
111)	Diethylphthalate	(3)	9.156	149	1044424	52.108

* = Compound is an internal standard.

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Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
112) Thionazin	(3)	9.231	107	200253	49.798
113) Fluorene	(3)	9.247	166	1058467	52.539
114) 4-Chlorophenyl-phenylether	(3)	9.252	204	462486	50.213
115) 5-Nitro-o-toluidine	(3)	9.263	152	325728	52.034
116) 4-Nitroaniline	(3)	9.279	138	314004	52.619
117) 4,6-Dinitro-2-methylphenol	(4)	9.306	198	205387	53.644
119) NDPA as diphenylamine	(4)	9.370	169	928439	50.183
118) N-Nitrosodiphenylamine	(4)	9.370	169	928439	50.396
120) 1,2-Diphenylhydrazine	(4)	9.408	77	1367014	51.030
122) Tetraethyldithiopyrophosphate	(4)	9.536	97	187608	49.942
123) 1,3,5-Trinitrobenzene	(4)	9.638	213	133367	51.031
124) Diallate (peak 1)	(4)	9.659	86	522929	36.260
125) Phorate	(4)	9.664	75	1160199M	52.177
126) Phenacetin	(4)	9.691	108	652035	51.896
127) 4-Bromophenyl-phenylether	(4)	9.729	248	266646	51.056
128) Diallate (peak 2)	(4)	9.739	86	79536	11.988
129) Hexachlorobenzene	(4)	9.782	284	244716	49.691
130) Dimethoate	(4)	9.830	87	511896	47.627
133) Pentachlorophenol	(4)	9.980	266	172780	51.071
135) 4-Aminobiphenyl	(4)	9.985	169	1168954	65.909
134) Pentachloronitrobenzene	(4)	9.991	237	107316	50.433
138) Pronamide	(4)	10.055	173	432654	50.484
140)*Phenanthrene-d10	(4)	10.162	188	554044	20.000
142) Dinoseb	(4)	10.167	211	275695	48.982
143) Phenanthrene	(4)	10.189	178	1613559	49.248
144) Anthracene	(4)	10.237	178	1686913	52.378
146) Carbazole	(4)	10.397	167	1566269	51.908
148) Methyl parathion	(4)	10.542	109	386043	52.615
149) Di-n-butylphthalate	(4)	10.761	149	1906943	52.727
151) Parathion	(4)	10.937	109	243783	51.117
152) 4-Nitroquinoline-1-oxide	(4)	10.975	190	2154778	747.294
156) Isodrin	(4)	11.205	193	162815	49.898
157) Fluoranthene	(4)	11.355	202	1735717	51.727
162) Benzidine	(5)	11.504	184	5600059	236.088
164)*Pyrene-d10	(5)	11.558	212	623495	20.000
165) Pyrene	(5)	11.574	202	1752316	49.133
168) p-Dimethylaminoazobenzene	(5)	11.873	225	366261	57.304
171) Chlorobenzilate	(5)	11.921	139	519412	51.589
172) 3,3'-Dimethylbenzidine	(5)	12.210	212	1920763	103.589
173) Butylbenzylphthalate	(5)	12.226	149	828695	51.670

M = Compound was manually integrated.
* = Compound is an internal standard.

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Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
174)	2-Acetylaminofluorene	(5)	12.462	181	722827	54.191
175)	3,3'-Dichlorobenzidine	(5)	12.751	252	536805	49.046
176)	4,4'-Methylenebis(2-Chloroanil	(5)	12.756	231	259178	50.177
177)	Benzo(a)anthracene	(5)	12.772	228	1557658	51.999
178)	Chrysene	(5)	12.809	228	1493837	51.081
179)	bis(2-Ethylhexyl)phthalate	(5)	12.825	149	1135928	51.866
181)	6-Methylchrysene	(5)	13.269	242	1035027	49.747
183)	Di-n-octylphthalate	(6)	13.489	149	1918899	54.014
184)	7,12-Dimethylbenz[a]anthracene	(6)	13.852	256	684350	52.564
185)	Benzo(b)fluoranthene	(6)	13.858	252	1564493M	54.340
186)	Benzo(k)fluoranthene	(6)	13.890	252	1526992M	50.042
187)	Benzo(a)pyrene	(6)	14.173	252	1385668	53.975
188)*	Perylene-d12	(6)	14.227	264	476494	20.000
190)	3-Methylcholanthrene	(6)	14.537	268	636684	51.843
191)	Dibenz(a,h)acridine	(6)	15.147	279	929613	51.568
192)	Dibenz(a,j)acridine	(6)	15.206	279	1029593	50.814
193)	Indeno(1,2,3-cd)pyrene	(6)	15.430	276	1375234	52.813
194)	Dibenz(a,h)anthracene	(6)	15.452	278	1151084	53.251
196)	Benzo(g,h,i)perylene	(6)	15.773	276	1143699	52.104
203)	2,4_2,6-Dinitrotoluenes	(3)	22.321	100	573977	53.081
204)	Diallate TRANS/CIS	(4)	23.156	86	602465	48.295

M = Compound was manually integrated.
* = Compound is an internal standard.

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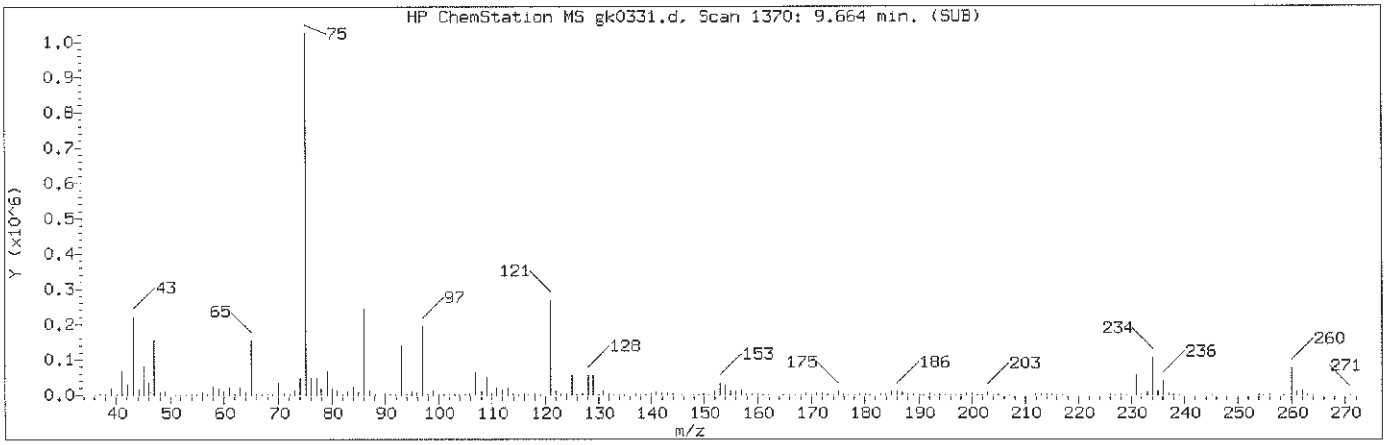
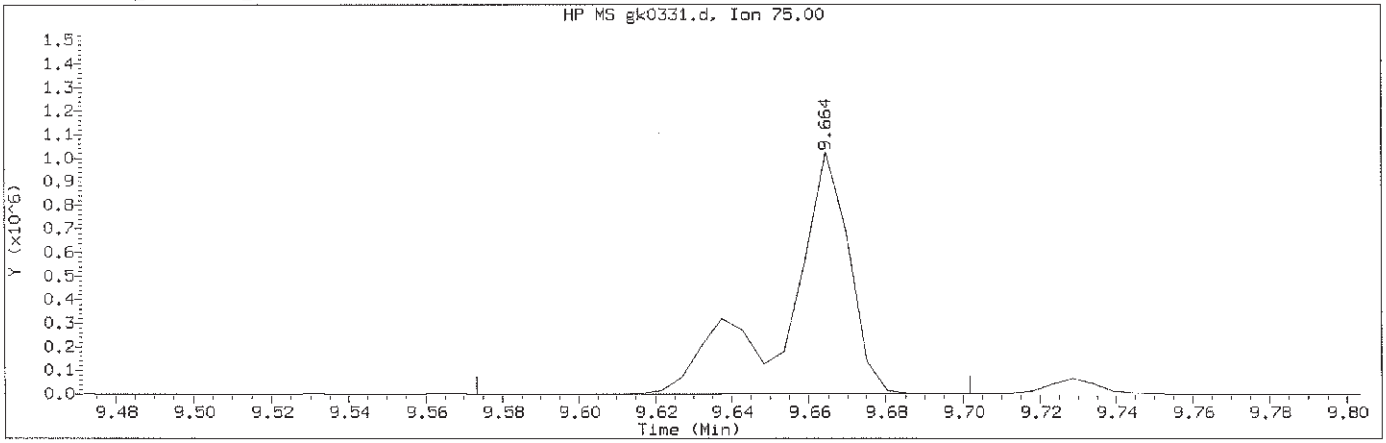
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area (flag)	: 1160199M		
On-Column Amount (ng/ul)	: 52.1771		
Integration start scan	: 1352	Integration stop scan:	1376
Y at integration start	: 755	Y at integration end:	1620

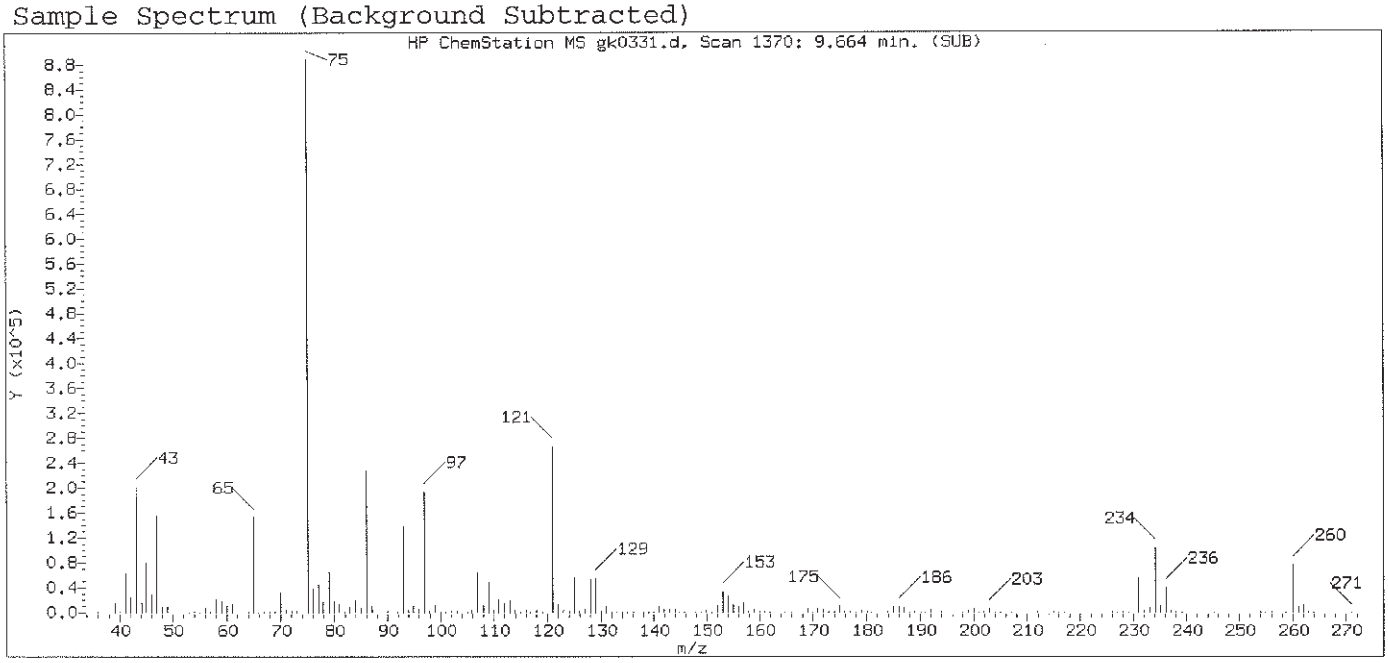
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:54. Target 3.5 esignature user ID: lmh00956

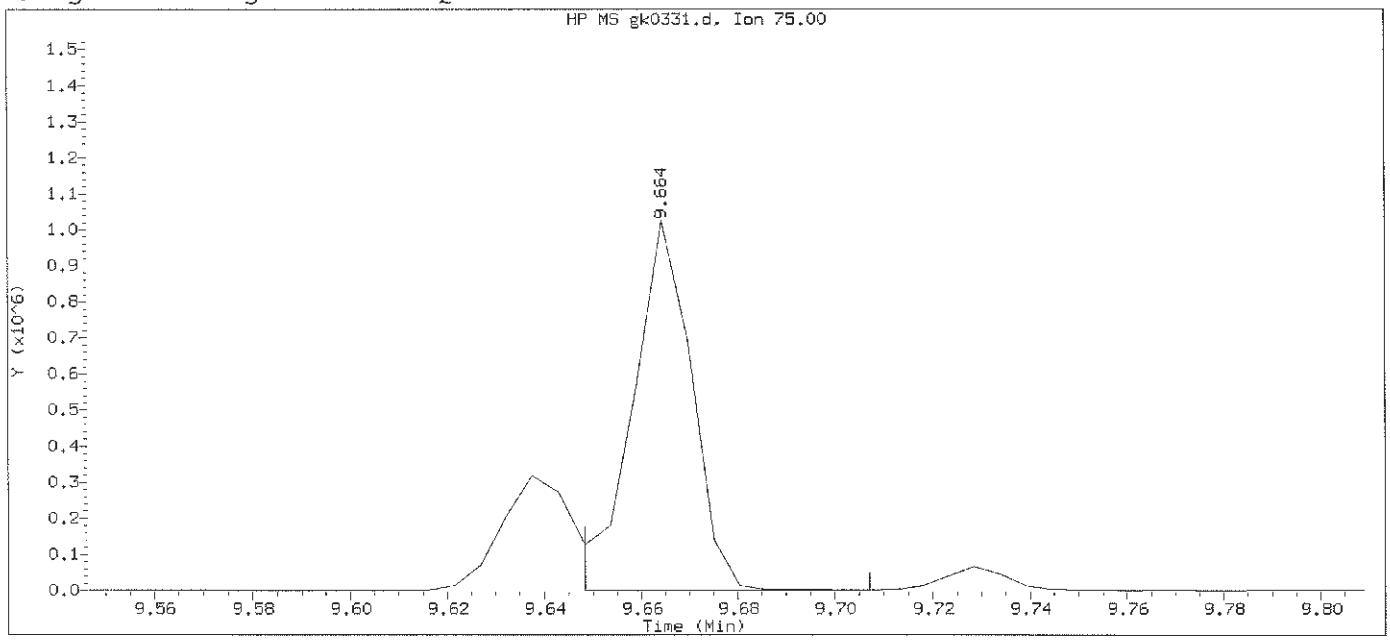
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:27 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	: 125		
Compound Name	: Phorate		
Scan Number	: 1370		
Retention Time (minutes)	: 9.664		
Quant Ion	: 75.00		
Area	: 861934		
On-column Amount (ng/ul)	: 38.7634		
Integration start scan	: 1366	Integration stop scan:	1377
Y at integration start	: 587	Y at integration end:	612

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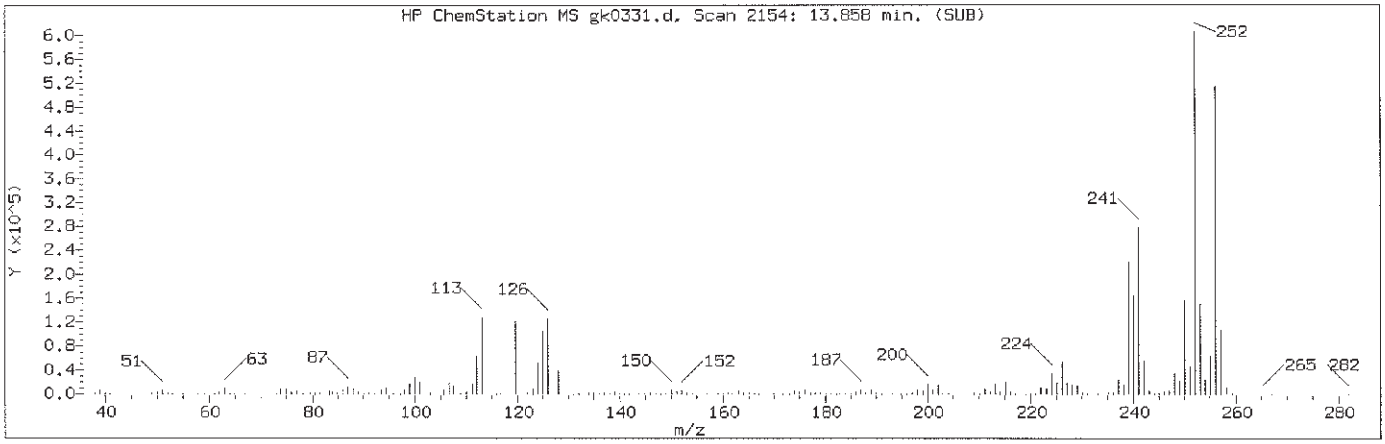
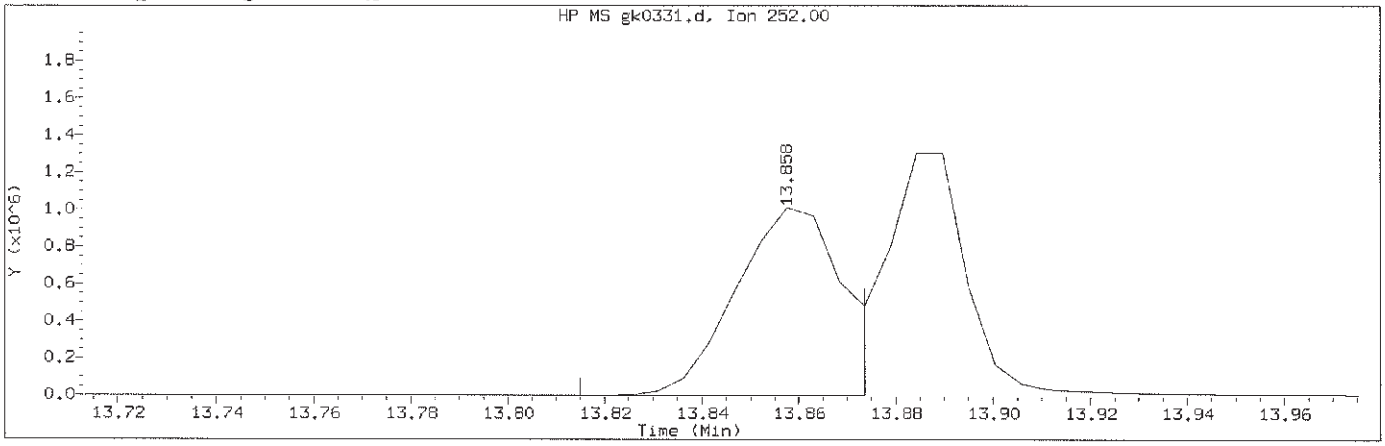
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2154		
Retention Time (minutes)	: 13.858		
Quant Ion	: 252.00		
Area (flag)	: 1564493M		
On-Column Amount (ng/ul)	: 54.3402		
Integration start scan	: 2145	Integration stop scan:	2156
Y at integration start	: 0	Y at integration end:	918

Reason for manual integration: improper integration

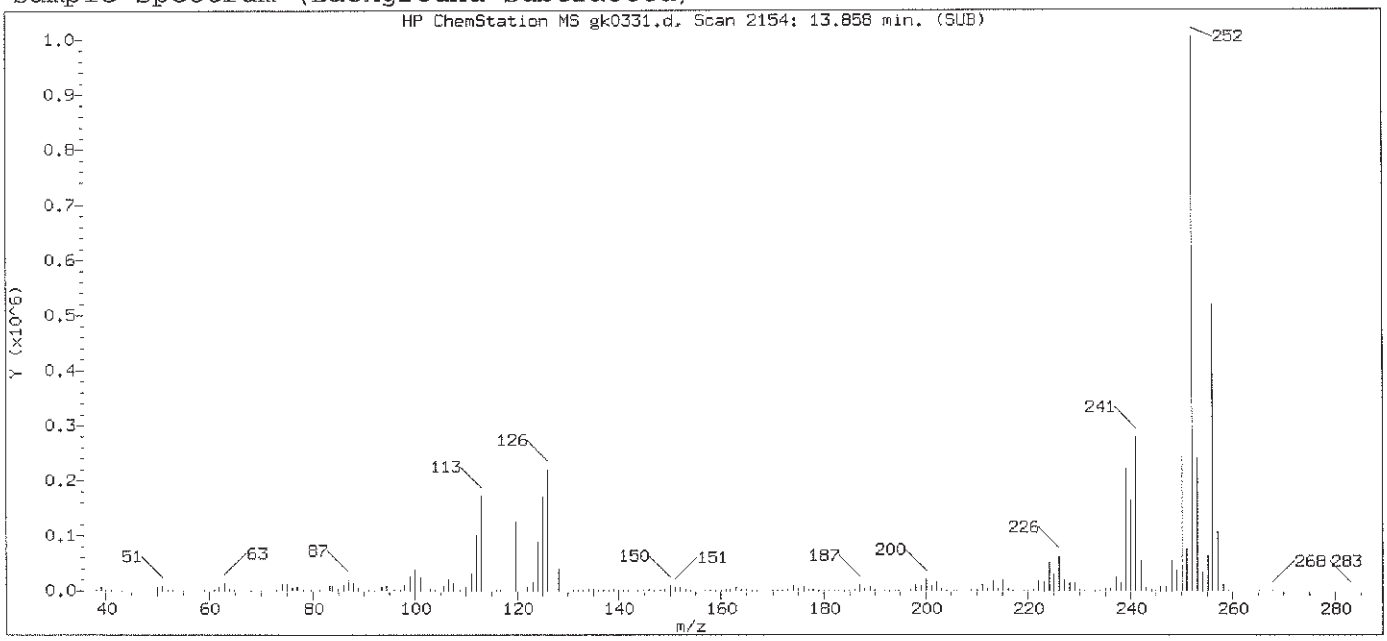
Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

NOV 11 2013

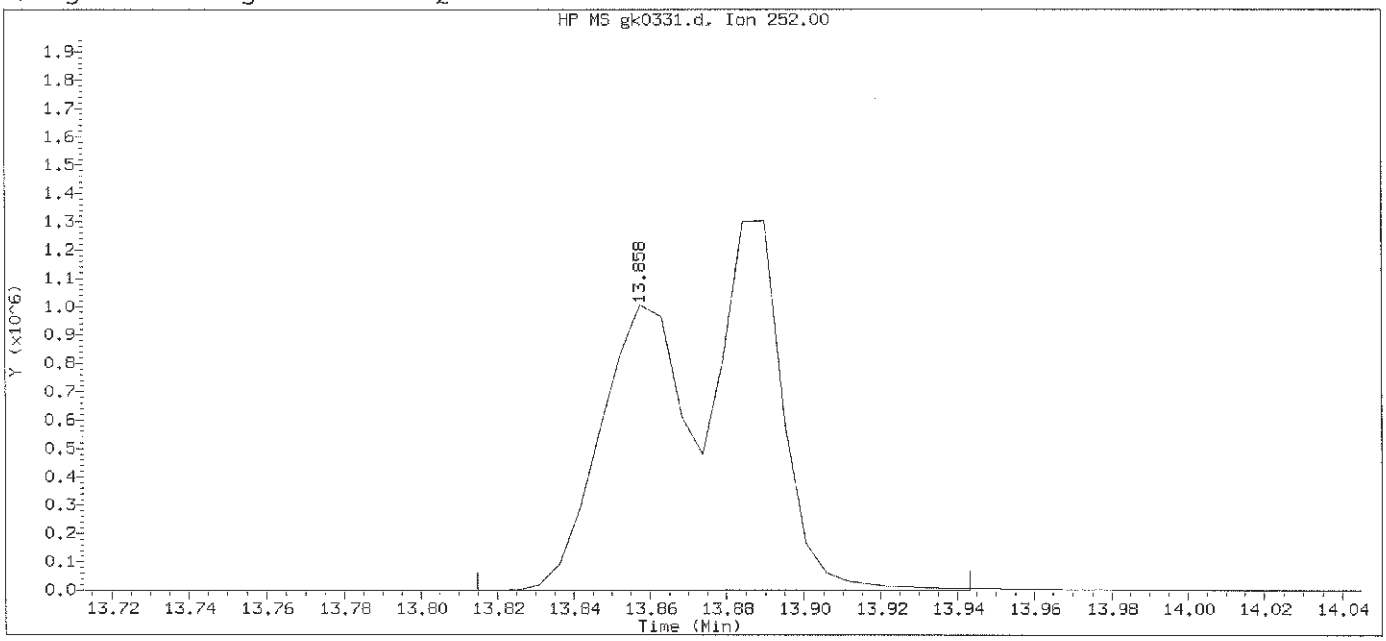
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicvall1
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:27 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	:	185
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	2154
Retention Time (minutes)	:	13.858
Quant Ion	:	252.00
Area	:	2950169
On-column Amount (ng/ul)	:	102.4694
Integration start scan	:	2145 Integration stop scan: 2169
Y at integration start	:	0 Y at integration end: 2004

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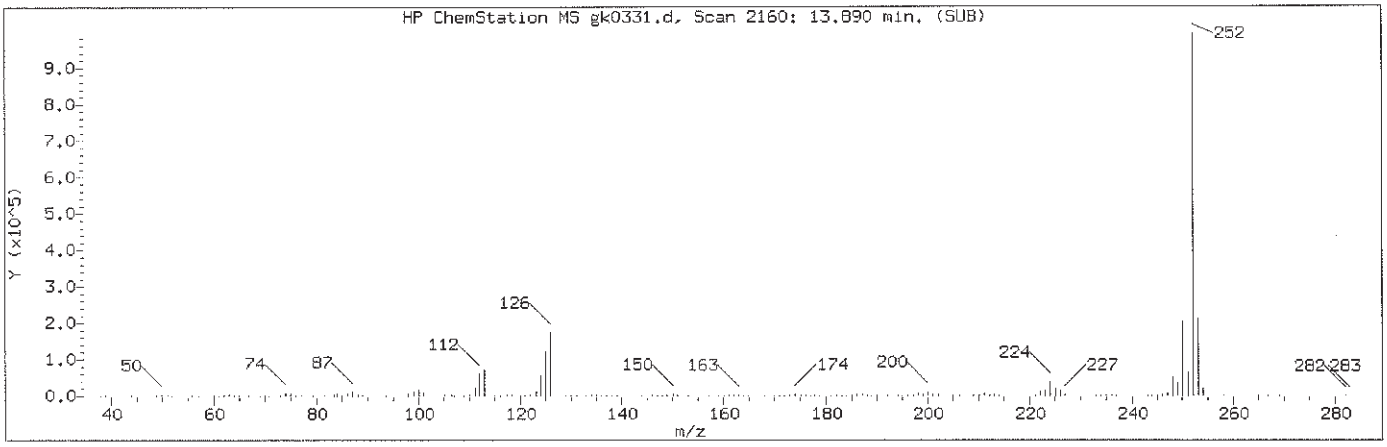
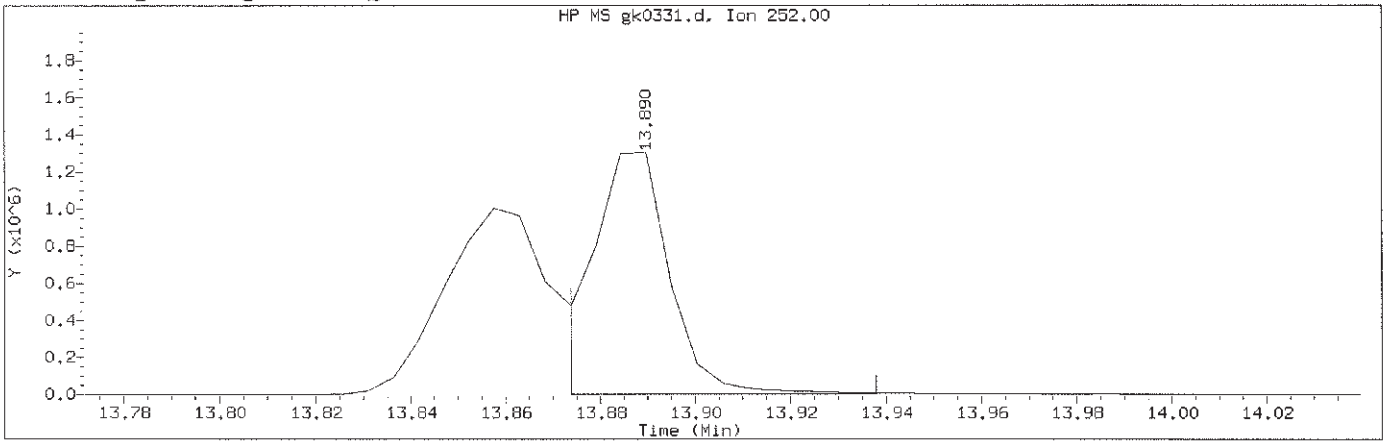
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:30 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2160		
Retention Time (minutes)	: 13.890		
Quant Ion	: 252.00		
Area (flag)	: 1526992M		
On-Column Amount (ng/ul)	: 50.0425		
Integration start scan	: 2156	Integration stop scan:	2168
Y at integration start	: 4212	Y at integration end:	4212

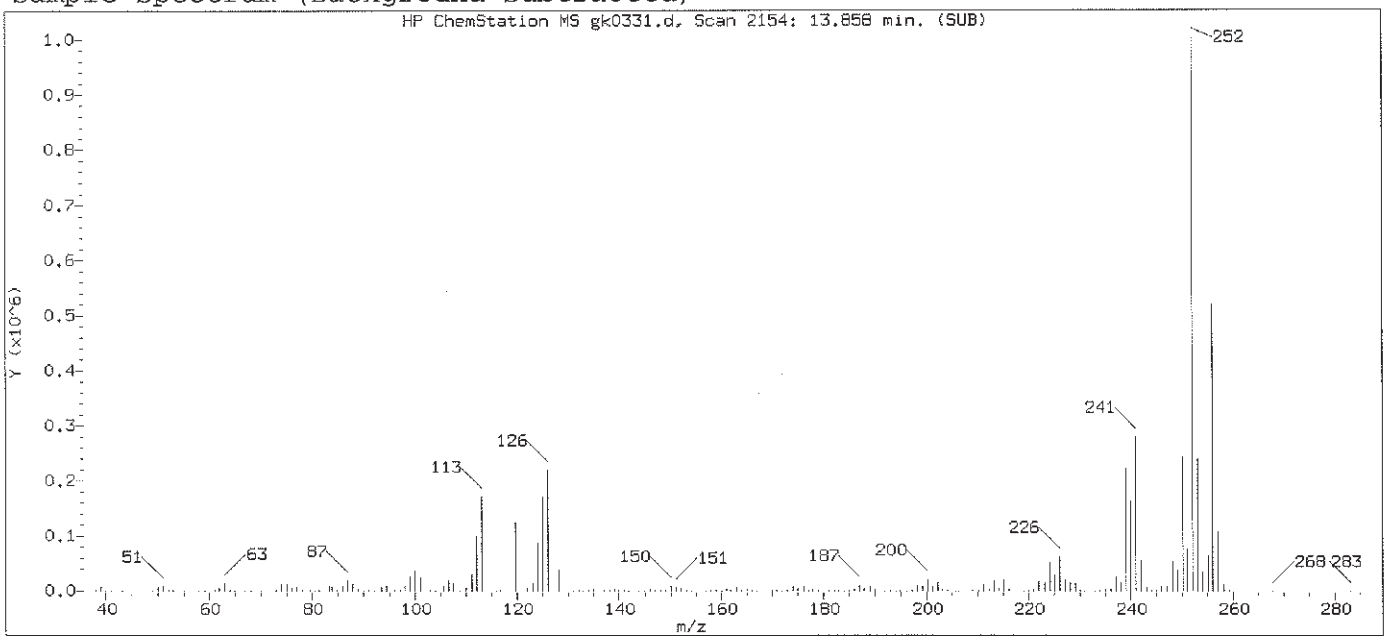
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956

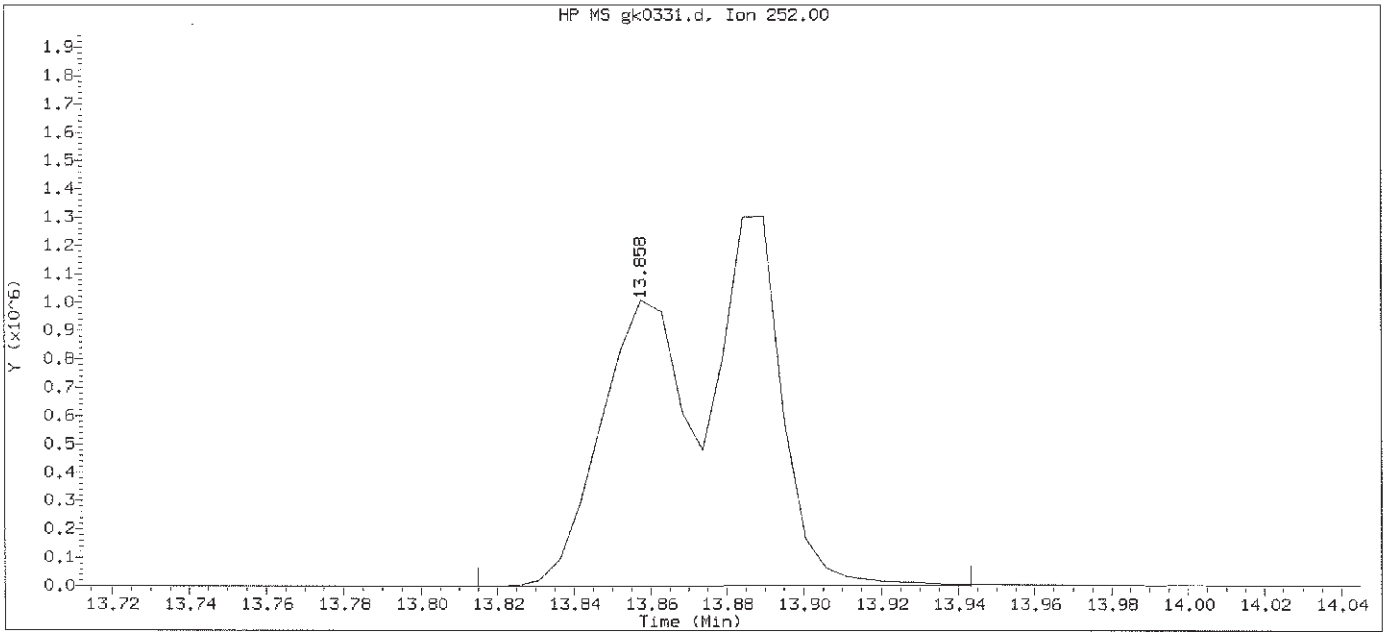
GC/MS audit/management approval: NOV 11 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



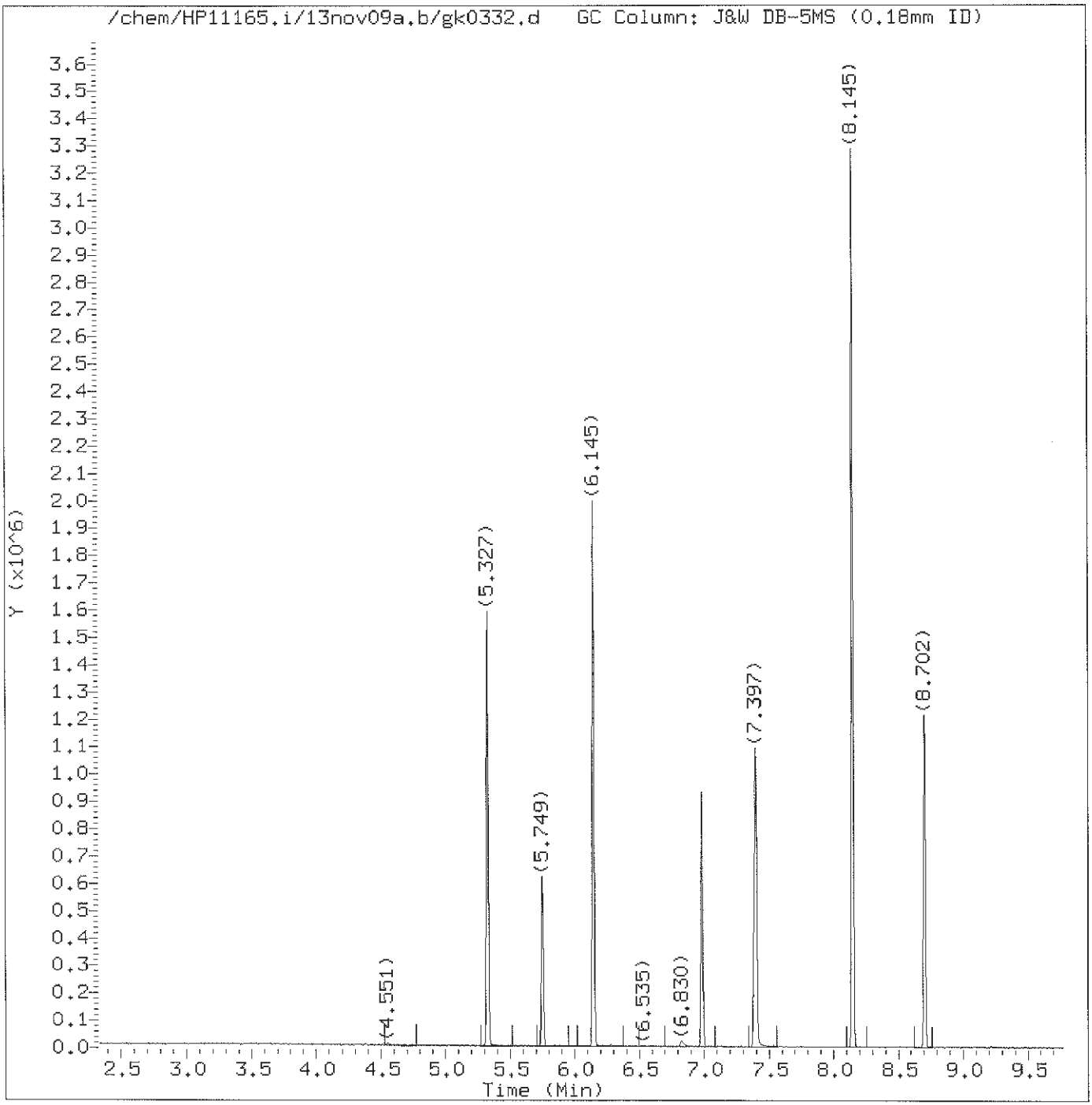
Data File: /chem/HP11165.i/13nov09a.b/gk0331.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 00:47 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: newicvall1
Calibration date and time: 10-NOV-2013 08:26
Date, time and analyst ID of latest file update: 10-Nov-2013 08:27 lmh00956

Sample Name: SSTD050 Lab Sample ID: ICV2463

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2154		
Retention Time (minutes)	: 13.858		
Quant Ion	: 252.00		
Area	: 2950186		
On-column Amount (ng/ul)	: 96.6831		
Integration start scan	: 2145	Integration stop scan:	2169
Y at integration start	: 0	Y at integration end:	2004

Digitally signed by Linda M. Hartenstine on 11/10/2013 at 08:54.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

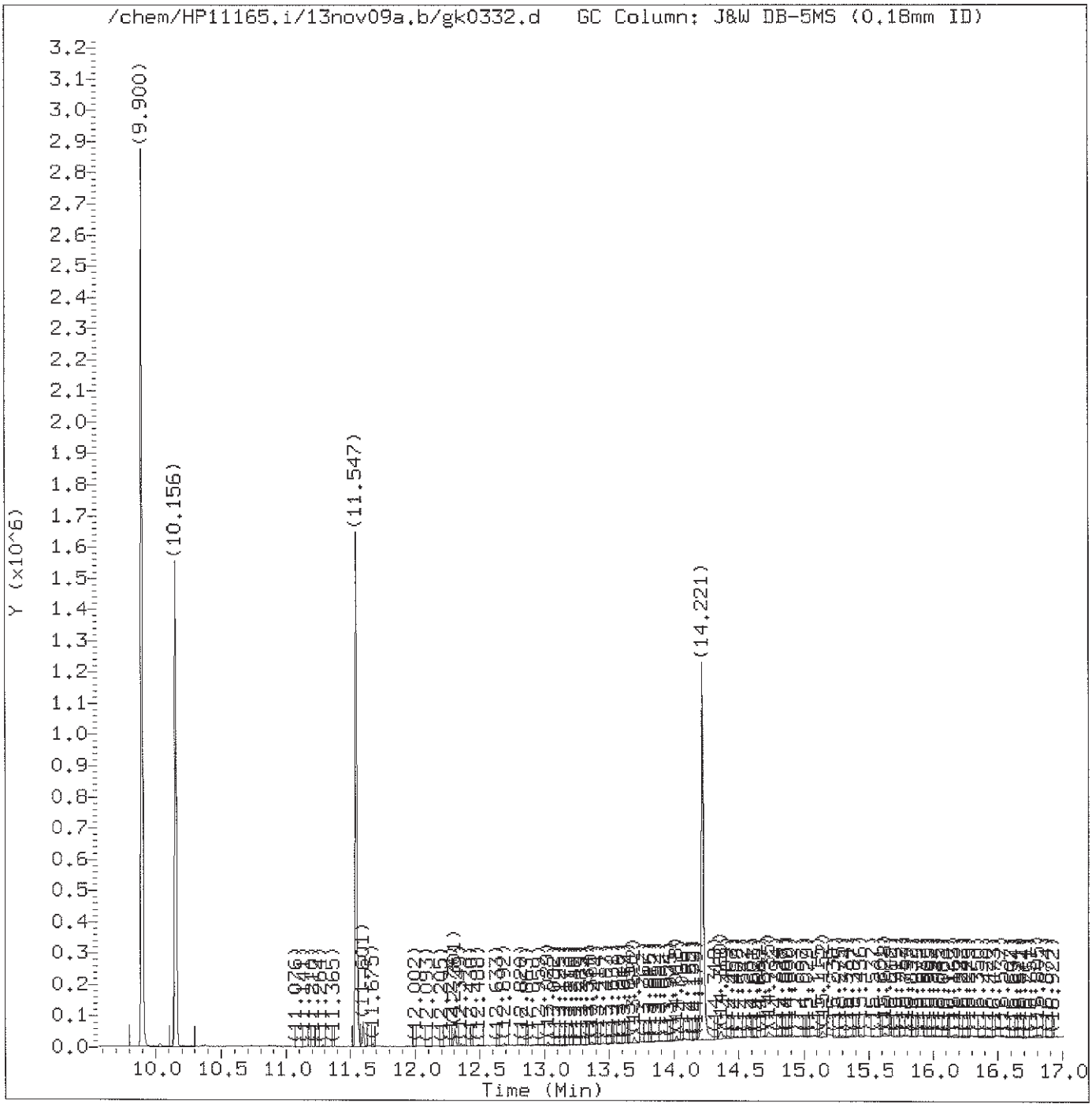
Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0332.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 04:19 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: basicval11
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:28 lmh00956

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:56.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0332.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 04:19 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: basicval11
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:28 lmh00956

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:56.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov09a.b/gk0332.d Instrument ID: HP11165.i
Injection date and time: 10-NOV-2013 04:19 Analyst ID: hb01996

Method used: /chem/HP11165.i/13nov09a.b/mnew8270.m Sublist used: basicvall1
Calibration date and time: 10-NOV-2013 08:28
Date, time and analyst ID of latest file update: 10-Nov-2013 08:28 lmh00956

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.327	77	369918	49.175
25)*1,4-Dichlorobenzene-d4	(1)	5.749	152	91265	20.000
63)*Naphthalene-d8	(2)	6.985	136	427381	20.000
74) Caprolactam	(2)	7.397	113	187925	51.350
101)*Acenaphthene-d10	(3)	8.702	164	266378	20.000
132) Atrazine	(4)	9.900	200	295138	51.148
140)*Phenanthrene-d10	(4)	10.156	188	541223	20.000
164)*Pyrene-d10	(5)	11.547	212	625692	20.000
188)*Perylene-d12	(6)	14.221	264	509905	20.000

* = Compound is an internal standard.

Digitally signed by Linda M. Hartenstine
on 11/10/2013 at 08:56.
Target 3.5 esignature user ID: lmh00956

Data File: /chem/HP11165.i/13nov11a.b/gk0390.d

Date : 11-NOV-2013 10:40

Client ID: DFTPP

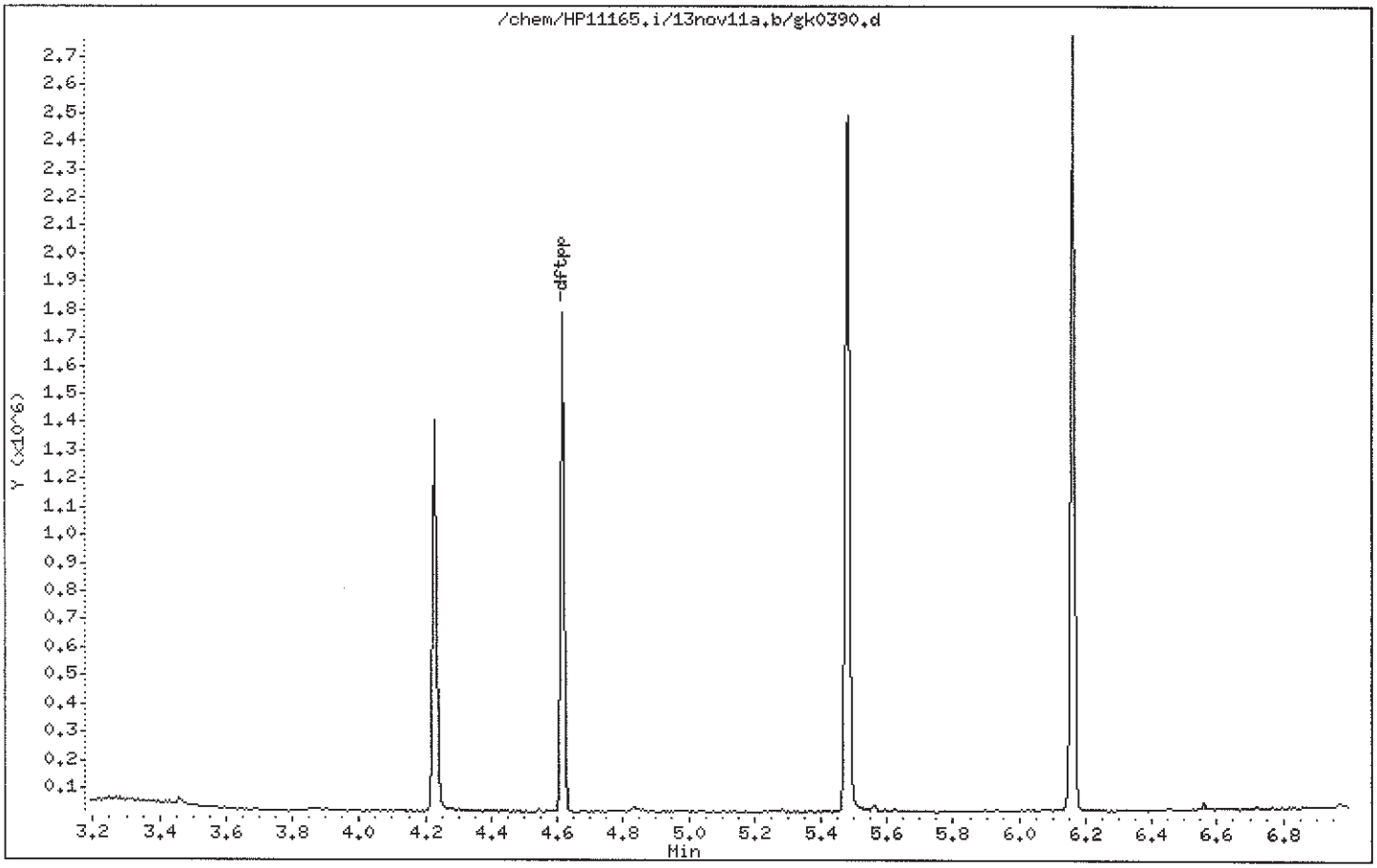
Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP11165.i/13nov11a.b/gk0390.d

Date : 11-NOV-2013 10:40

Client ID: DFTPP

Instrument: HP11165.i

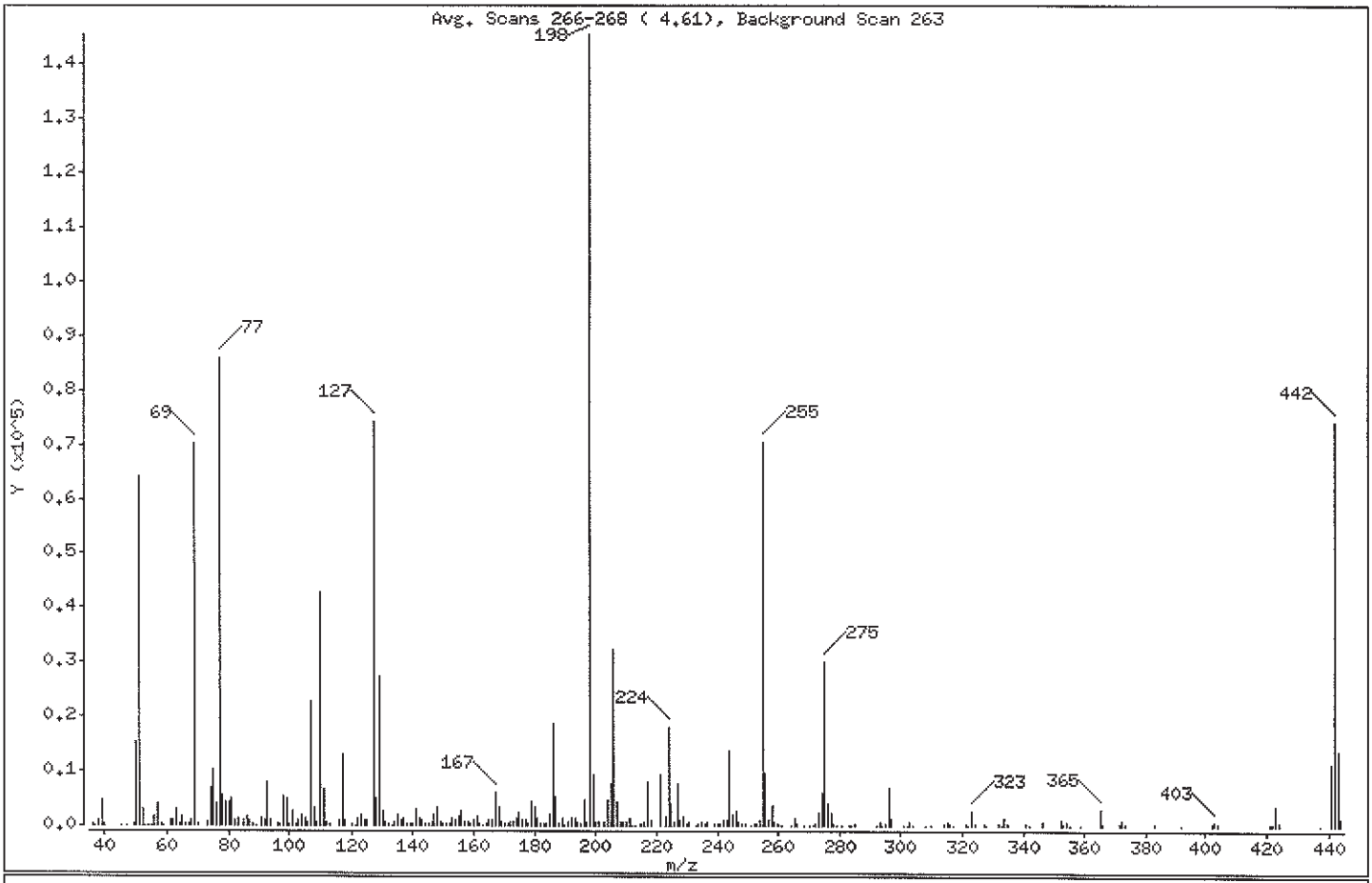
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	44.17
68	Less than 2.00% of mass 69	0.79 (1.64)
69	Mass 69 relative abundance	48.25
70	Less than 2.00% of mass 69	0.33 (0.67)
127	40.00 - 60.00% of mass 198	50.99
197	Less than 1.00% of mass 198	0.51
199	5.00 - 9.00% of mass 198	6.35
275	10.00 - 30.00% of mass 198	20.60
365	Greater than 1.00% of mass 198	2.16
441	Present, but less than mass 443	7.77
442	40.00 - 99.99% of mass 198	51.02
443	17.00 - 23.00% of mass 442	9.48 (18.57)

Data File: /chem/HP11165.i/13nov11a.b/gk0390.d

Date : 11-NOV-2013 10:40

Client ID: DFTPP

Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS

Column diameter: 0.18

Data File: gk0390.d
Spectrum: Avg. Scans 266-268 (4.61), Background Scan 263
Location of Maximum: 198.00
Number of points: 273

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	176	120.00	338	190.00	158	271.00	66
37.00	143	121.00	31	191.00	586	272.00	237
38.00	925	122.00	1305	192.00	1207	273.00	2269
39.00	4678	123.00	2089	193.00	1482	274.00	5855
40.00	228	124.00	1049	194.00	565	275.00	29968
45.00	162	125.00	1011	195.00	262	276.00	3865
47.00	150	127.00	74184	196.00	4815	277.00	2228
49.00	259	128.00	5172	197.00	742	278.00	387
50.00	15527	129.00	27256	198.00	145472	279.00	65
51.00	64272	130.00	2595	199.00	9235	281.00	123
52.00	2910	131.00	513	200.00	790	283.00	110
53.00	122	132.00	340	201.00	791	284.00	93
54.00	48	133.00	145	203.00	812	285.00	483
55.00	83	134.00	721	204.00	4560	292.00	81
56.00	1761	135.00	2136	205.00	7796	293.00	576
57.00	3943	136.00	1015	206.00	32568	294.00	103
58.00	246	137.00	1176	207.00	4211	295.00	186
59.00	61	138.00	263	208.00	797	296.00	7099
61.00	911	139.00	192	209.00	627	297.00	1173
62.00	1111	140.00	333	210.00	577	301.00	90
63.00	3014	141.00	3077	211.00	1380	302.00	120
64.00	343	142.00	1198	212.00	145	303.00	779
65.00	1721	143.00	883	213.00	64	304.00	157
66.00	205	144.00	296	215.00	229	308.00	57
67.00	363	145.00	380	216.00	583	310.00	135
68.00	1153	146.00	674	217.00	8005	314.00	308
69.00	70200	147.00	1844	218.00	941	315.00	650
70.00	473	148.00	3211	221.00	9263	316.00	423
73.00	576	149.00	697	223.00	1668	317.00	58
74.00	7147	150.00	303	224.00	18000	321.00	303
75.00	10514	151.00	446	225.00	4018	322.00	120
76.00	4175	152.00	487	226.00	616	323.00	2763
77.00	86000	153.00	1176	227.00	7603	324.00	426
78.00	5822	154.00	963	228.00	964	327.00	359
79.00	4325	155.00	1654	229.00	1777	328.00	164

Date : 11-NOV-2013 10:40

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

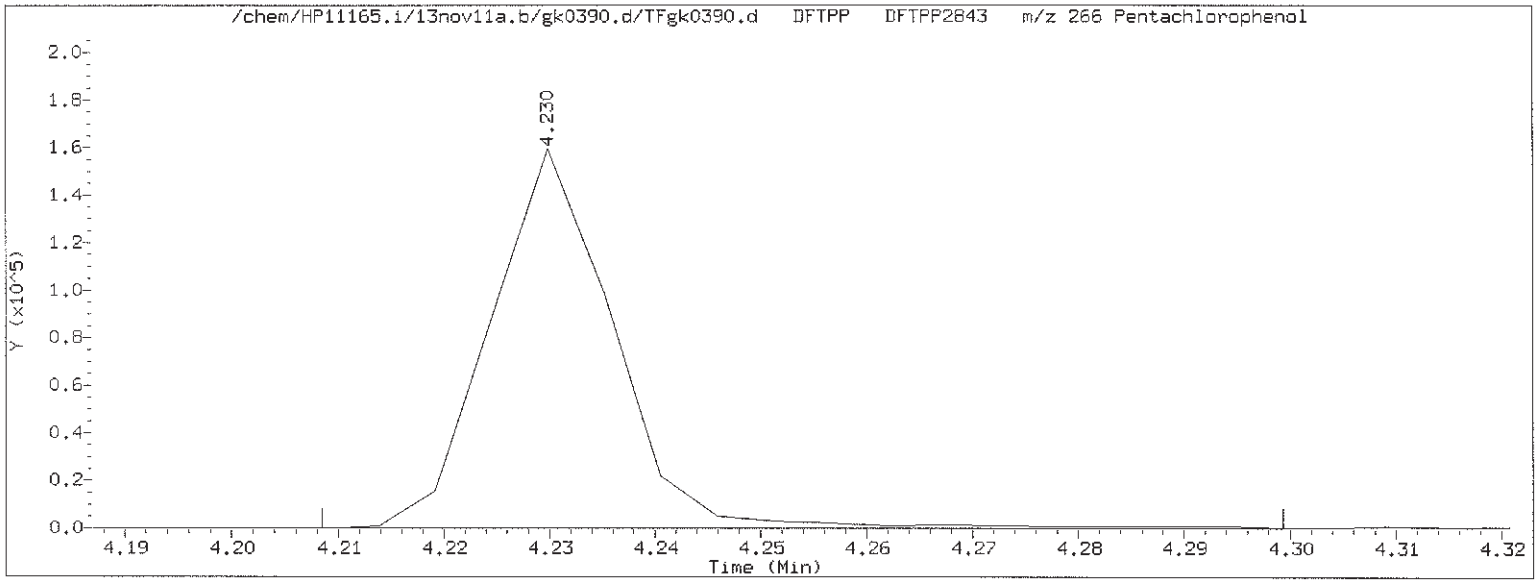
Column phase: DB-5MS Column diameter: 0.18

Data File: gk0390.d
Spectrum: Avg. Scans 266-268 (4.61), Background Scan 263
Location of Maximum: 198.00
Number of points: 273

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4244	156.00	2670	230.00	296	332.00	253
81.00	4902	157.00	811	231.00	652	333.00	132
82.00	1135	158.00	644	233.00	99	334.00	1498
83.00	1367	159.00	340	234.00	357	335.00	287
85.00	969	160.00	892	235.00	607	341.00	242
86.00	1517	161.00	1546	236.00	318	342.00	69
87.00	882	162.00	459	237.00	530	346.00	548
88.00	432	163.00	124	239.00	283	352.00	883
89.00	142	164.00	238	240.00	278	353.00	496
91.00	1279	165.00	1168	241.00	336	354.00	659
92.00	1082	166.00	1014	242.00	915	355.00	118
93.00	8165	167.00	5978	243.00	972	359.00	56
94.00	852	168.00	3349	244.00	13872	365.00	3138
96.00	260	169.00	667	245.00	1938	366.00	386
97.00	335	170.00	275	246.00	2568	371.00	186
98.00	5196	171.00	302	247.00	637	372.00	1116
99.00	4903	172.00	694	248.00	179	373.00	194
100.00	296	173.00	781	249.00	424	383.00	407
101.00	2788	174.00	1287	251.00	53	392.00	79
102.00	220	175.00	2374	252.00	230	402.00	296
103.00	943	176.00	1109	253.00	339	403.00	664
104.00	1906	177.00	1161	254.00	910	404.00	218
105.00	1467	178.00	430	255.00	70712	421.00	308
106.00	612	179.00	4478	256.00	9864	422.00	327
107.00	22800	180.00	3358	257.00	866	423.00	3747
108.00	3365	181.00	1245	258.00	3544	424.00	678
109.00	711	182.00	363	259.00	778	437.00	52
110.00	42776	183.00	268	260.00	180	441.00	11301
111.00	6531	184.00	402	261.00	55	442.00	74240
112.00	508	185.00	2110	264.00	105	443.00	13790
113.00	213	186.00	18776	265.00	1331	444.00	1346
116.00	1118	187.00	5504	266.00	324		
117.00	13199	188.00	500	268.00	63		
118.00	1080	189.00	1202	270.00	87		

Assessment of GC Column Performance and Injection Port Inertness for

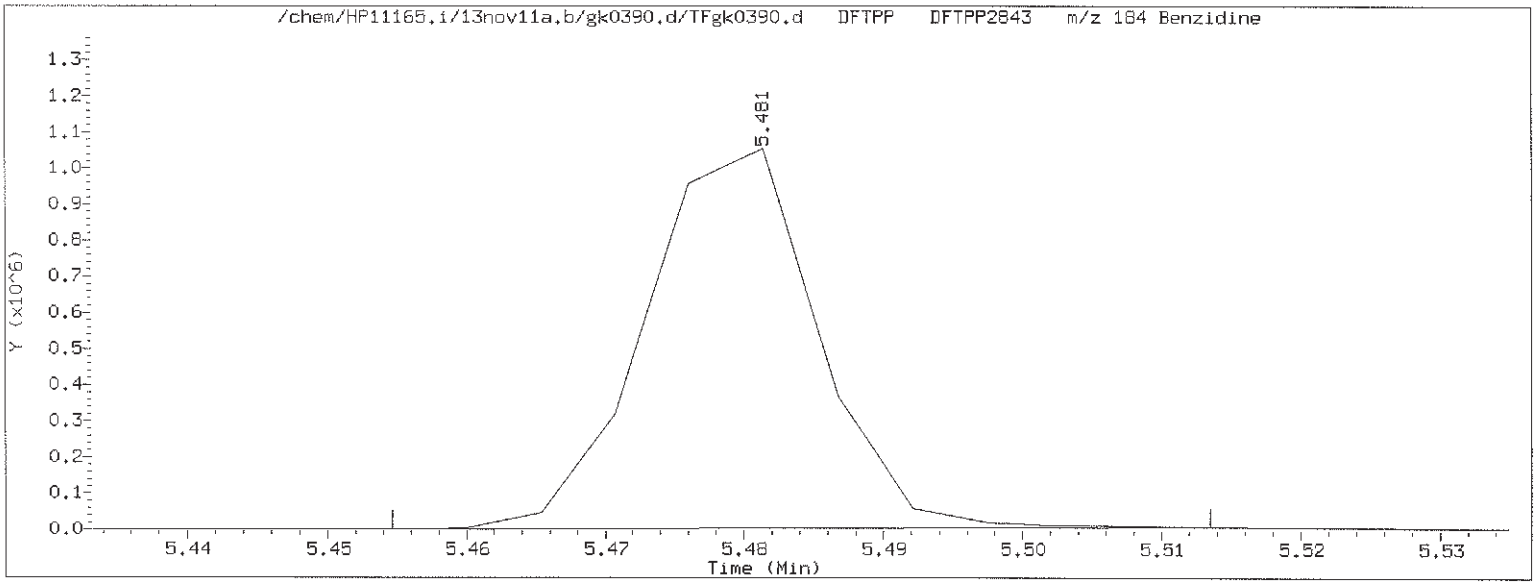
Instrument ID: HP11165.i Injection Date: 11-NOV-2013 10:40 Operator: CAM01237



Pentachlorophenol EICP peak height = 159616 EICP peak height at 10% = 15962 Pentachlorophenol EICP area = 128605

Pentachlorophenol EICP peak apex (min.) = 4.230
RT at 10% of front half of EICP (min.) = 4.219 'Front' peak width (min.) = 0.0106333333
RT at 10% of back half of EICP (min.) = 4.242 'Tailing' peak width (min.) = 0.0125666667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0125666667}{0.0106333333} = 1.182$



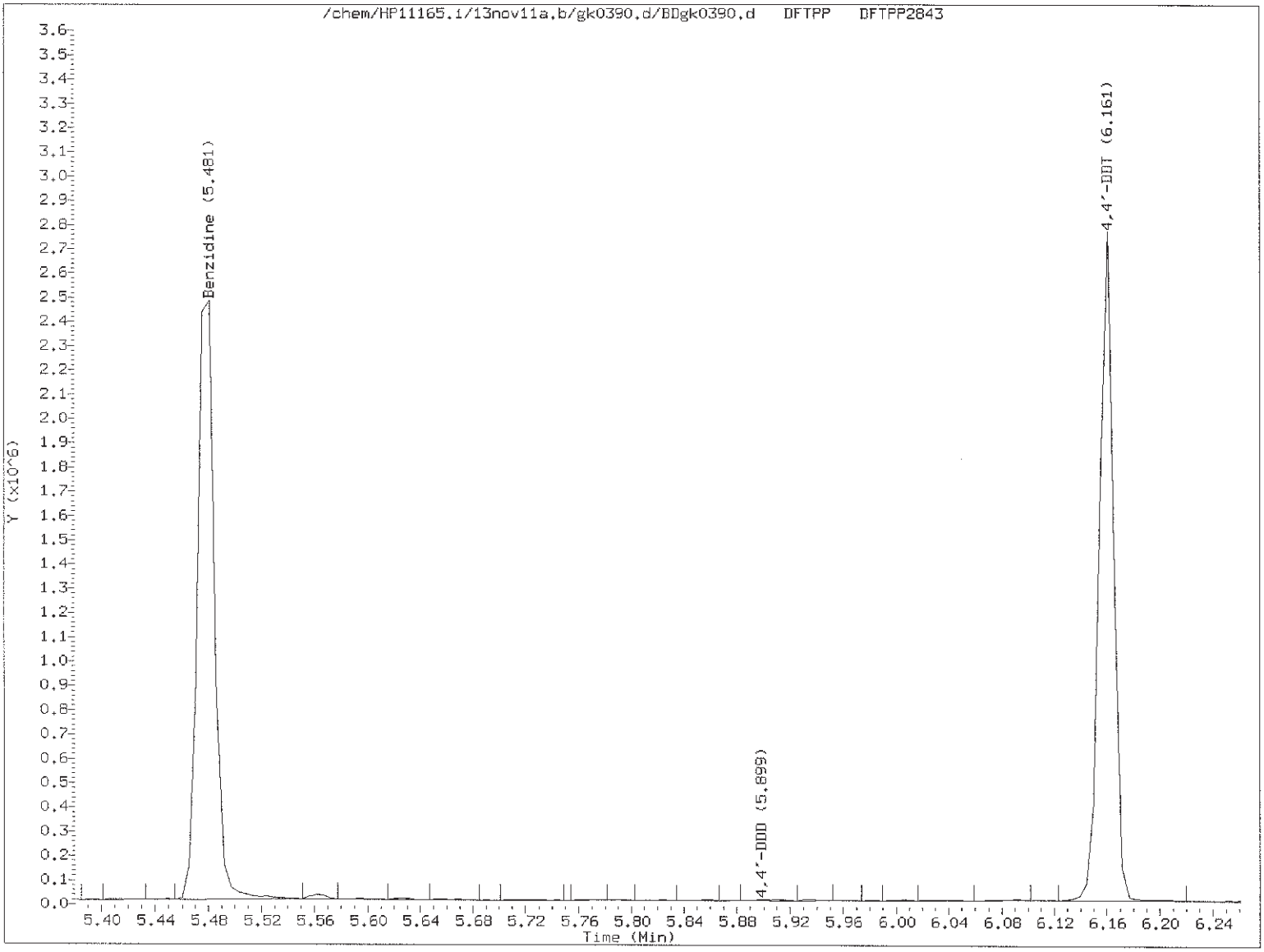
Benzidine EICP peak height = 1052064 EICP peak height at 10% = 105206 Benzidine EICP area = 902171

Benzidine EICP peak apex (min.) = 5.481
RT at 10% of front half of EICP (min.) = 5.467 'Front' peak width (min.) = 0.0148166667
RT at 10% of back half of EICP (min.) = 5.491 'Tailing' peak width (min.) = 0.0098166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0098166667}{0.0148166667} = 0.663$

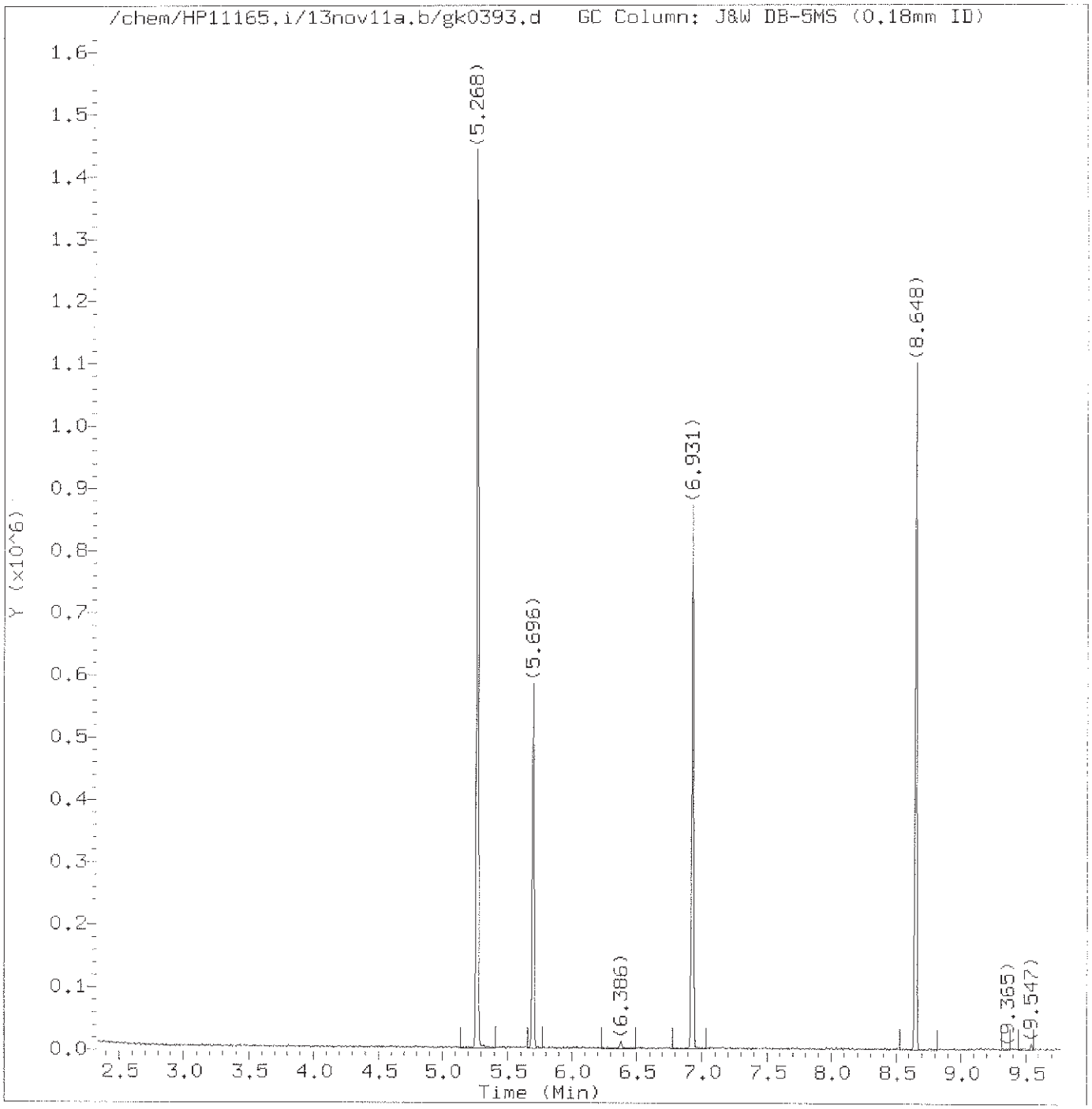
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP11165.i Injection Date: 11-NOV-2013 10:40 Operator: CAM01237



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 6661}{0 + 6661 + 2074124} \times 100 = 0.3$$



Total Ion Chromatogram (TIC)

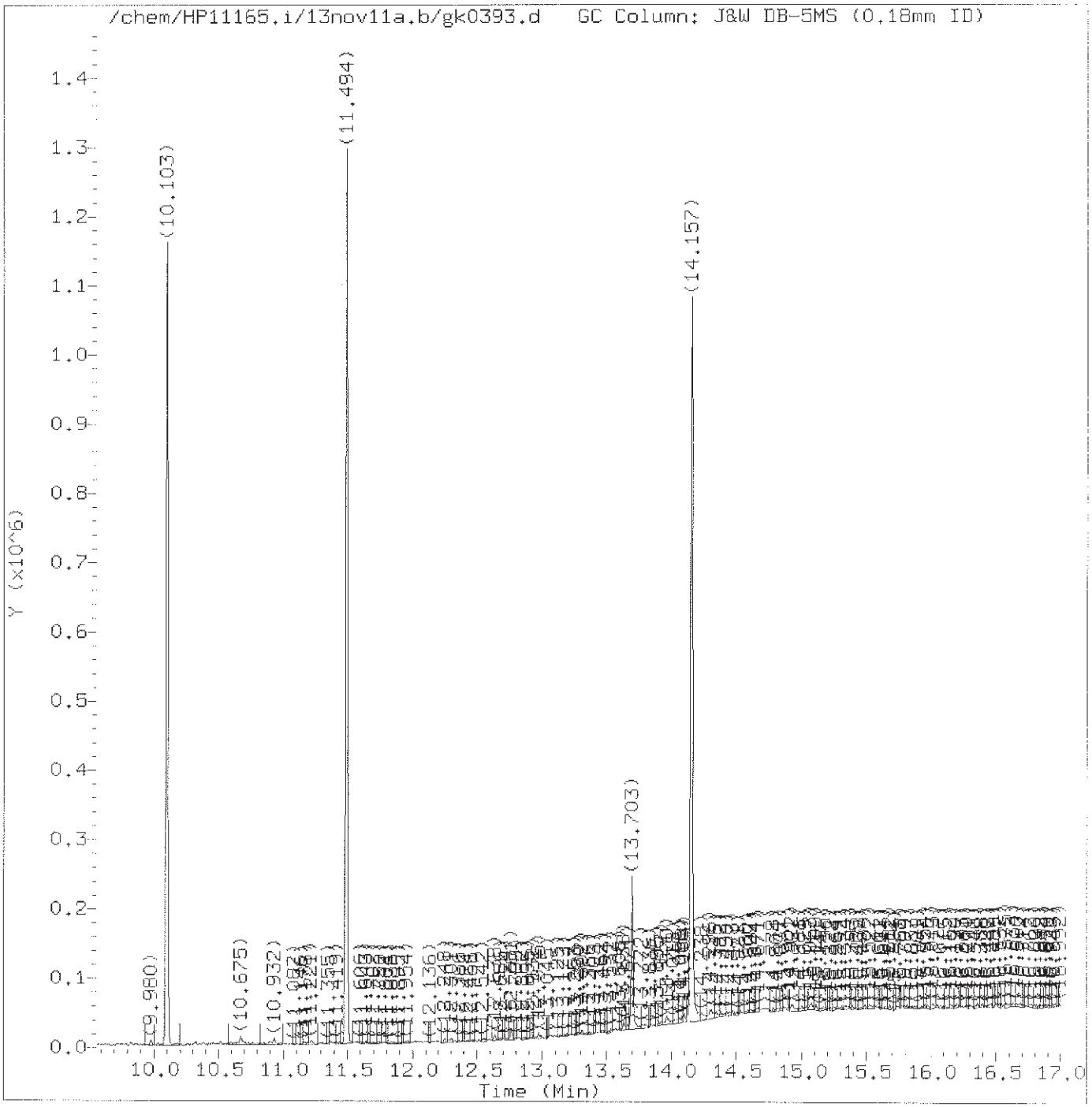
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0393.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:11 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 12:40
Date, time and analyst ID of latest file update: 11-Nov-2013 12:40 cam01237

Sample Name: SSTD050 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:01.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0393.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:11 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 12:40
Date, time and analyst ID of latest file update: 11-Nov-2013 12:40 cam01237

Sample Name: SSTD050 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:01.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0393.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:11 Analyst ID: CAM01237

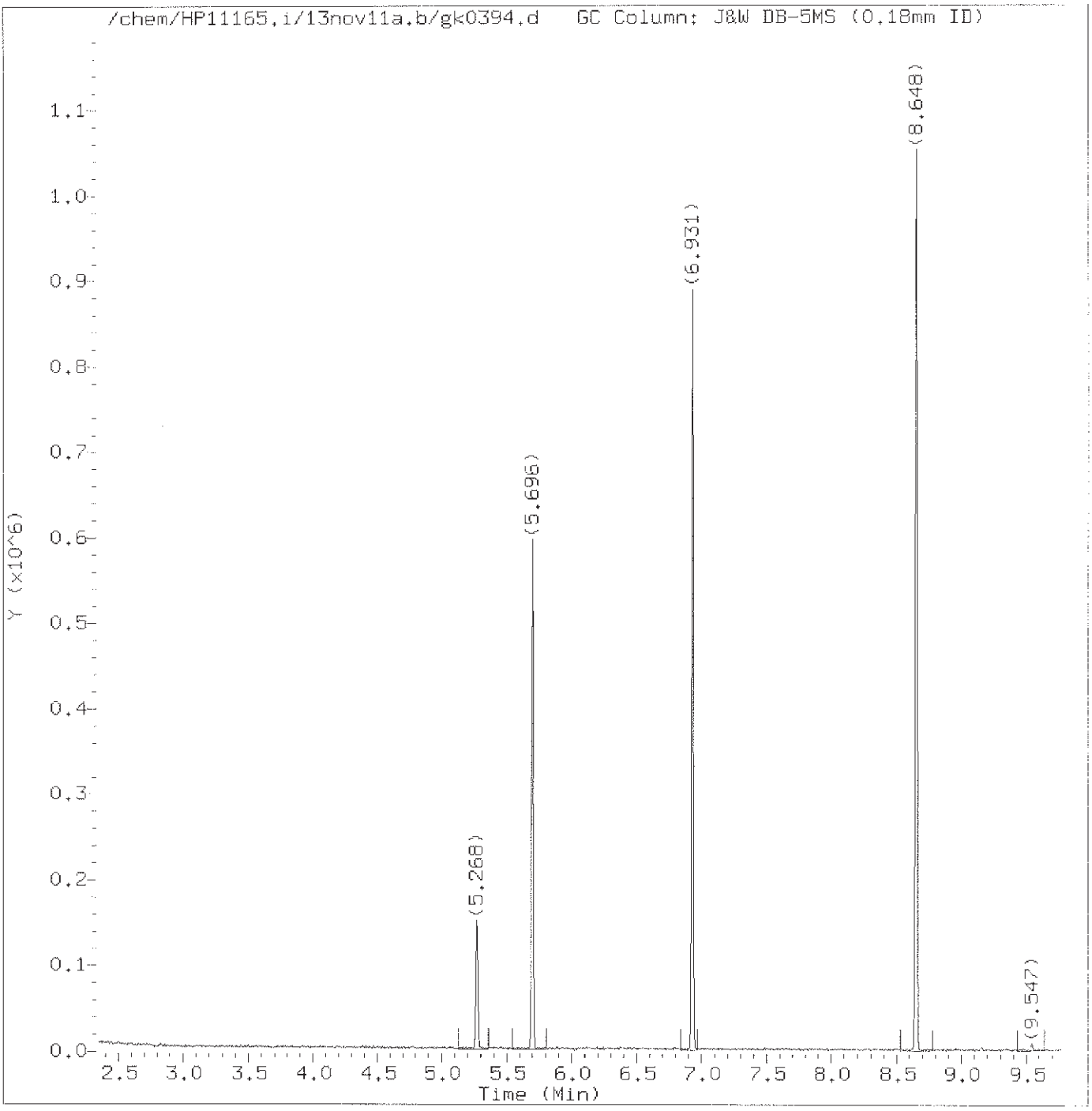
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 12:40
Date, time and analyst ID of latest file update: 11-Nov-2013 12:40 cam01237

Sample Name: SSTD050 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	323953	48.095
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	83444	20.000
63)*Naphthalene-d8	(2)	6.931	136	381088	20.000
101)*Acenaphthene-d10	(3)	8.648	164	227738	20.000
140)*Phenanthrene-d10	(4)	10.103	188	436195	20.000
164)*Pyrene-d10	(5)	11.494	212	509456	20.000
188)*Perylene-d12	(6)	14.157	264	425824	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:01.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

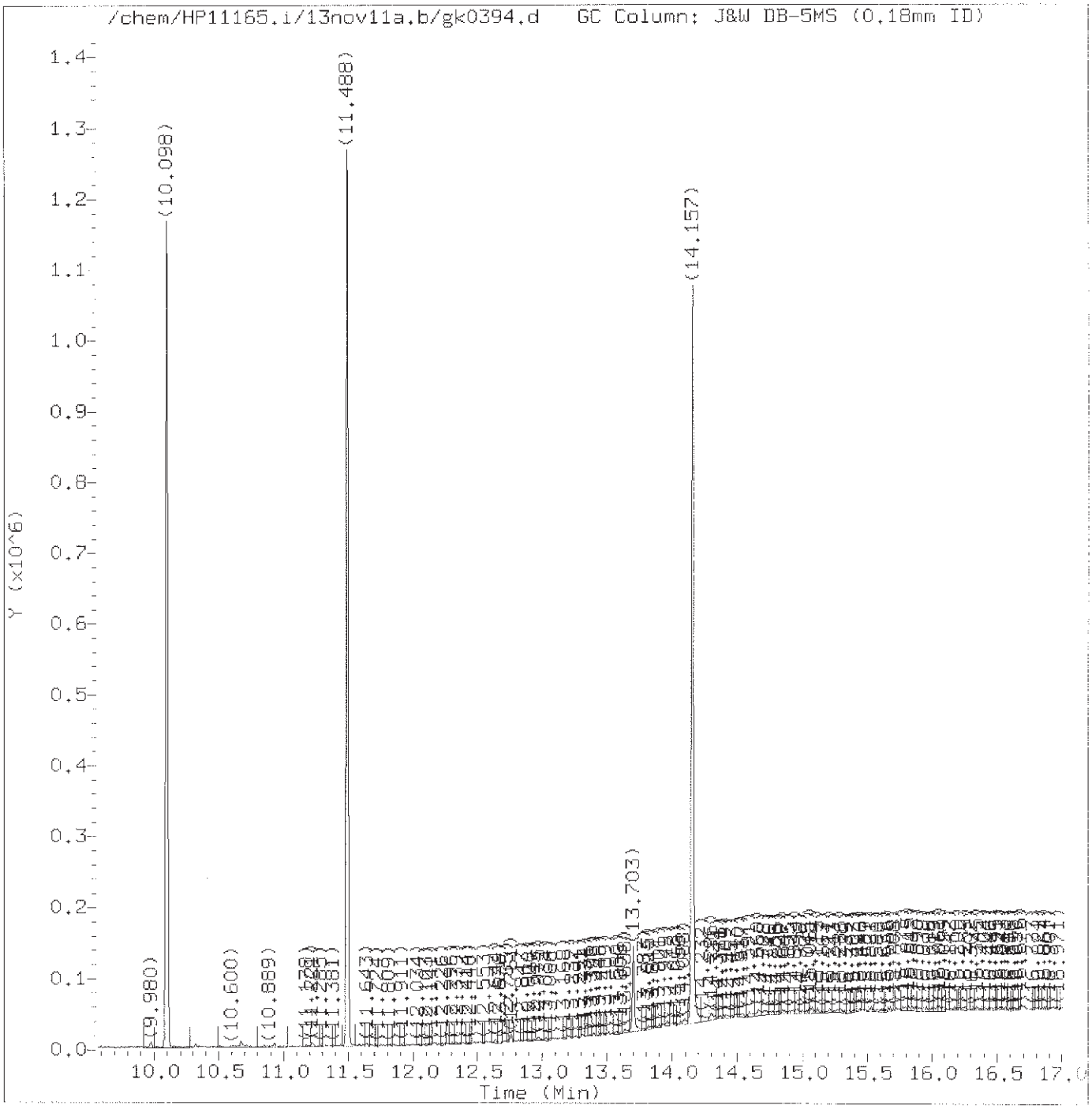
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0394.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:00
Date, time and analyst ID of latest file update: 11-Nov-2013 13:00 Automation

Sample Name: SSTD005 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0394.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:00
Date, time and analyst ID of latest file update: 11-Nov-2013 13:00 Automation

Sample Name: SSTD005 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0394.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: CAM01237

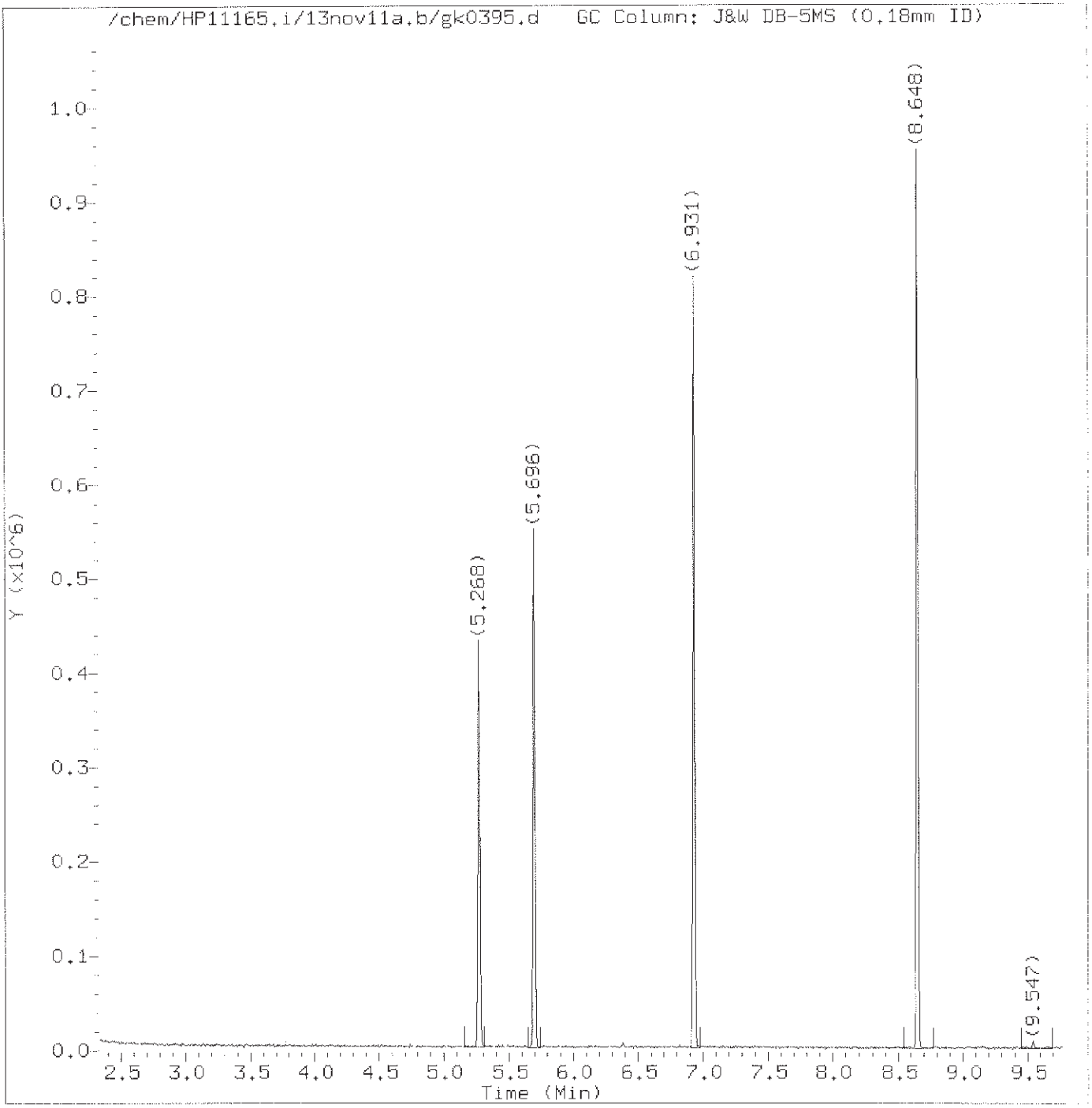
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:00
Date, time and analyst ID of latest file update: 11-Nov-2013 13:00 Automation

Sample Name: SSTD005 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	35024	5.003
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	87389	20.000
63)*Naphthalene-d8	(2)	6.931	136	380774	20.000
101)*Acenaphthene-d10	(3)	8.648	164	228378	20.000
140)*Phenanthrene-d10	(4)	10.098	188	430605	20.000
164)*Pyrene-d10	(5)	11.494	212	505860	20.000
188)*Perylene-d12	(6)	14.157	264	429959	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

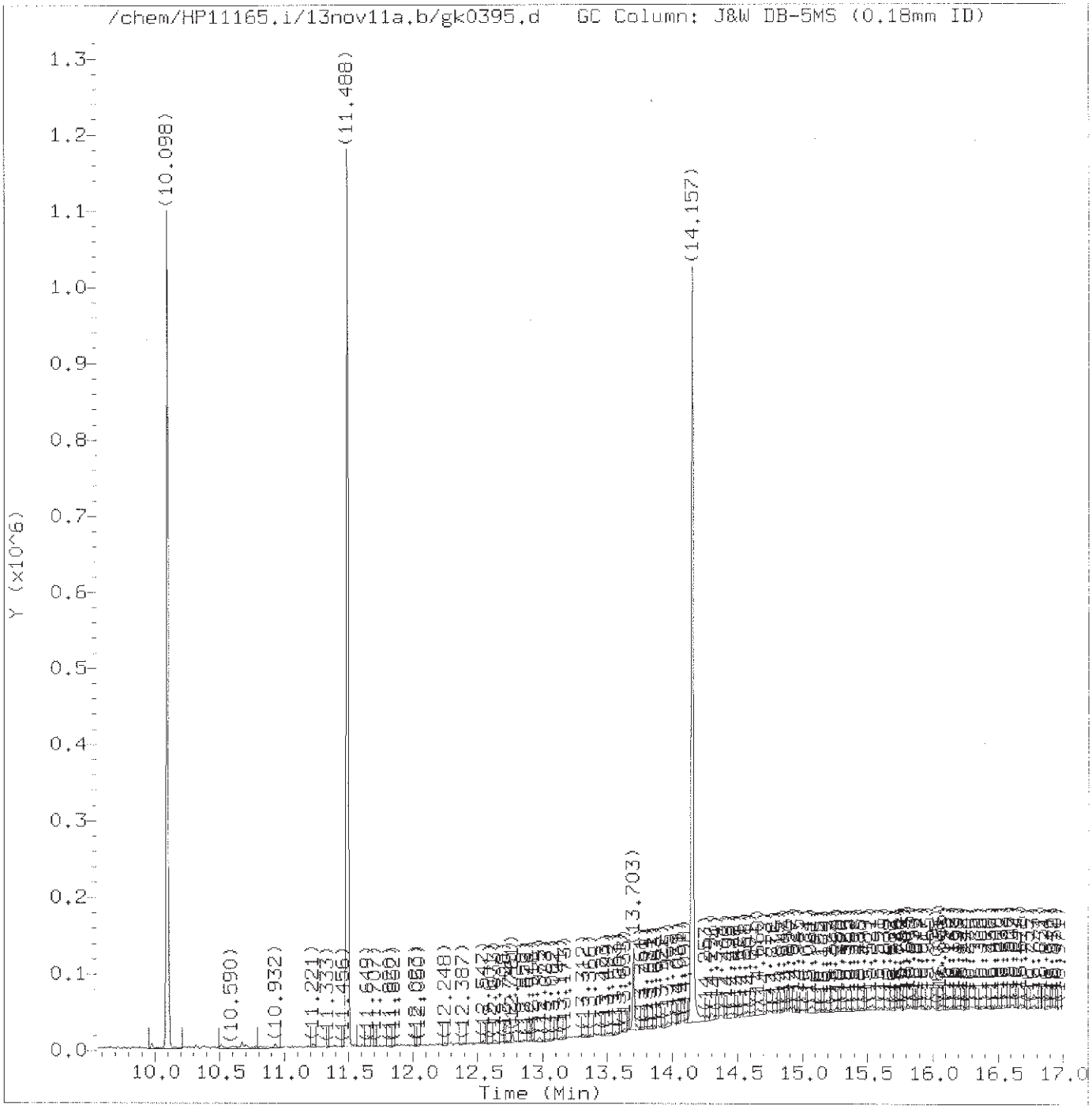
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0395.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:26
Date, time and analyst ID of latest file update: 11-Nov-2013 13:26 Automation

Sample Name: SSTD015 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0395.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:26
Date, time and analyst ID of latest file update: 11-Nov-2013 13:26 Automation

Sample Name: SSTD015 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0395.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: CAM01237

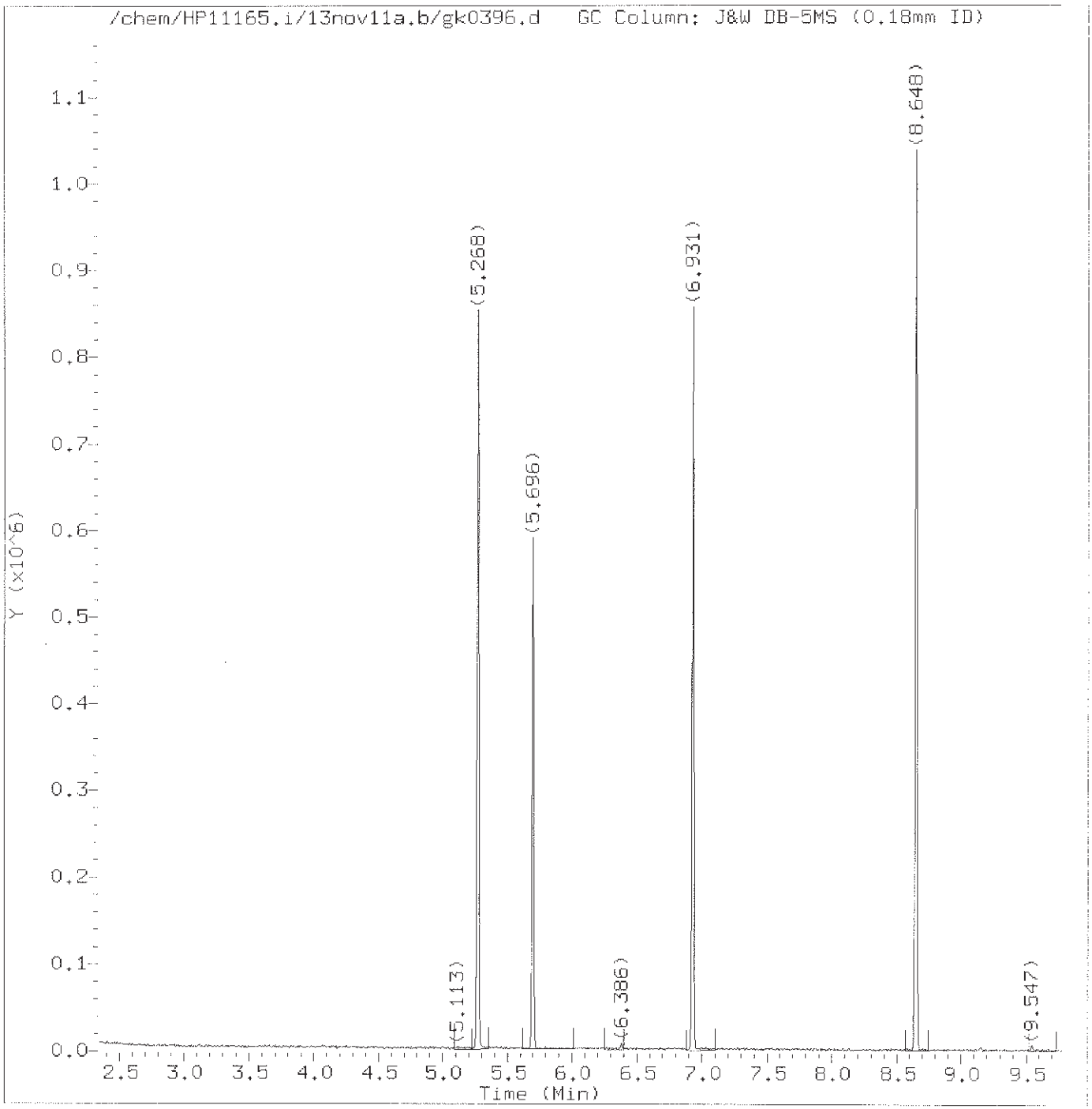
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:26
Date, time and analyst ID of latest file update: 11-Nov-2013 13:26 Automation

Sample Name: SSTD015 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	93777	15.058
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	79231	20.000
63)*Naphthalene-d8	(2)	6.931	136	359609	20.000
101)*Acenaphthene-d10	(3)	8.648	164	209948	20.000
140)*Phenanthrene-d10	(4)	10.098	188	400970	20.000
164)*Pyrene-d10	(5)	11.488	212	464518	20.000
188)*Perylene-d12	(6)	14.157	264	412615	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

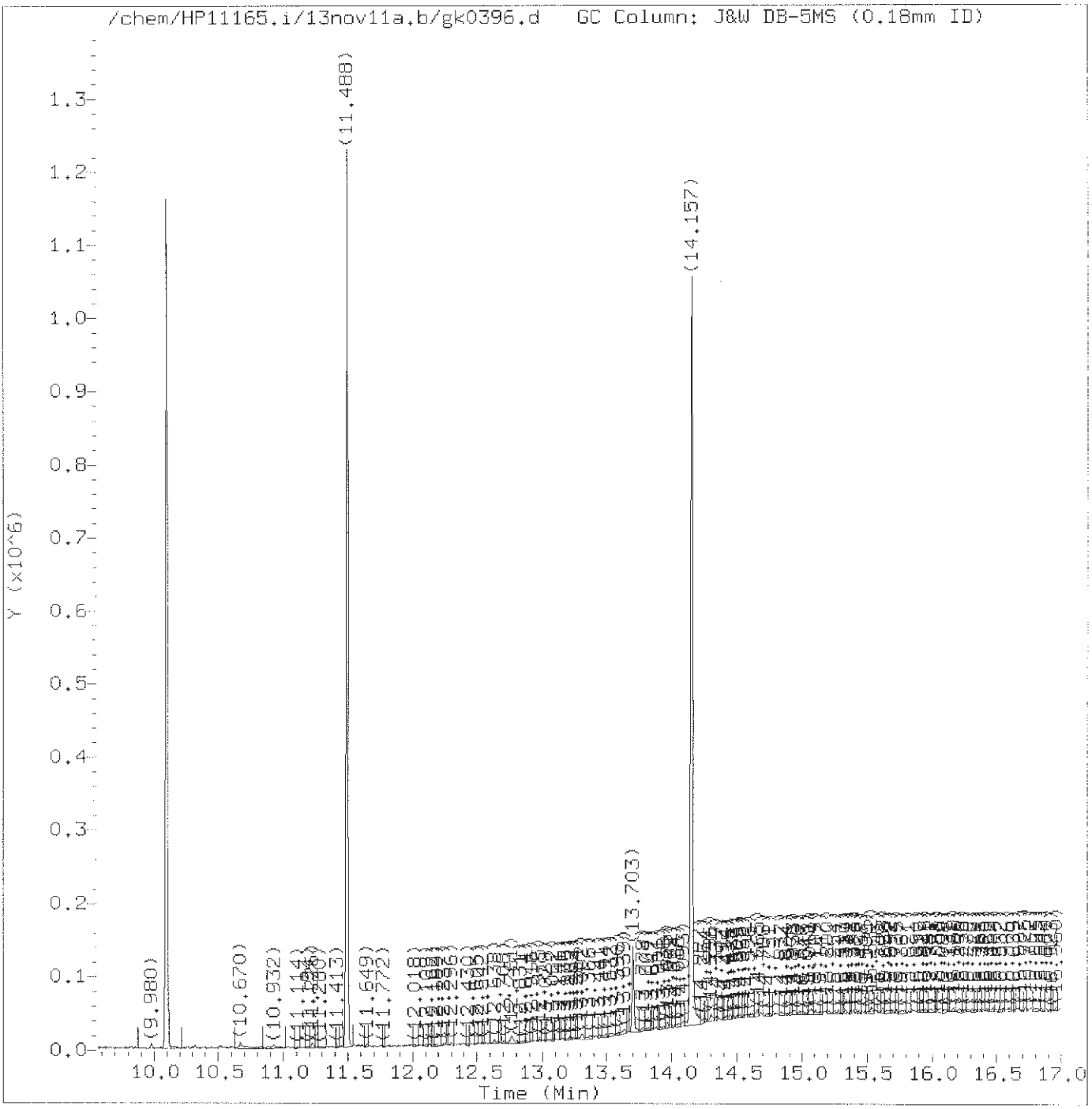
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0396.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:32 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:55
Date, time and analyst ID of latest file update: 11-Nov-2013 13:55 Automation

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0396.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:32 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:55
Date, time and analyst ID of latest file update: 11-Nov-2013 13:55 Automation

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0396.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:32 Analyst ID: CAM01237

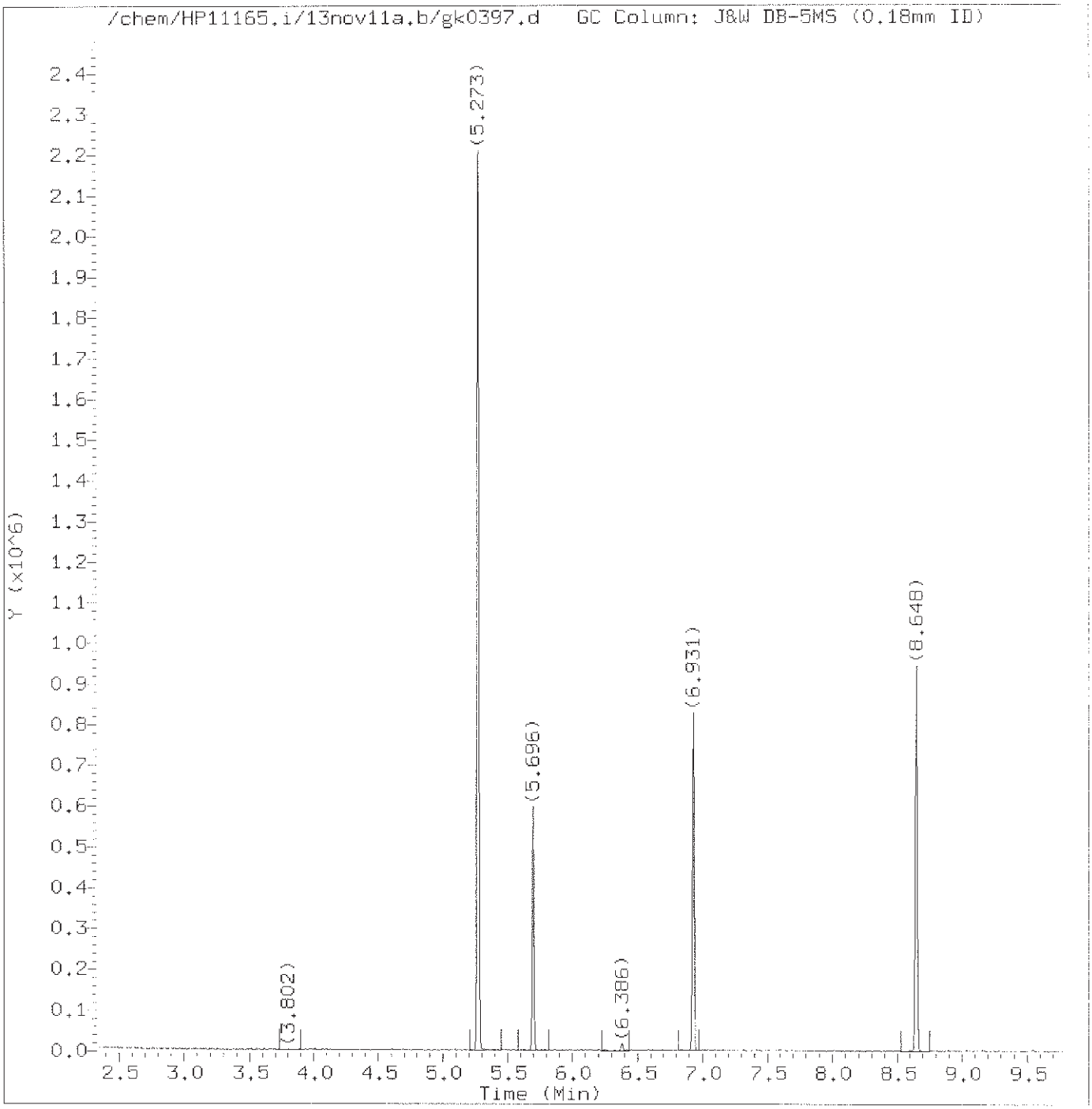
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 13:55
Date, time and analyst ID of latest file update: 11-Nov-2013 13:55 Automation

Sample Name: SSTD030 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	188641	29.395
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	83166	20.000
63)*Naphthalene-d8	(2)	6.931	136	374064	20.000
101)*Acenaphthene-d10	(3)	8.648	164	222689	20.000
140)*Phenanthrene-d10	(4)	10.098	188	429470	20.000
164)*Pyrene-d10	(5)	11.488	212	481905	20.000
188)*Perylene-d12	(6)	14.157	264	410367	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

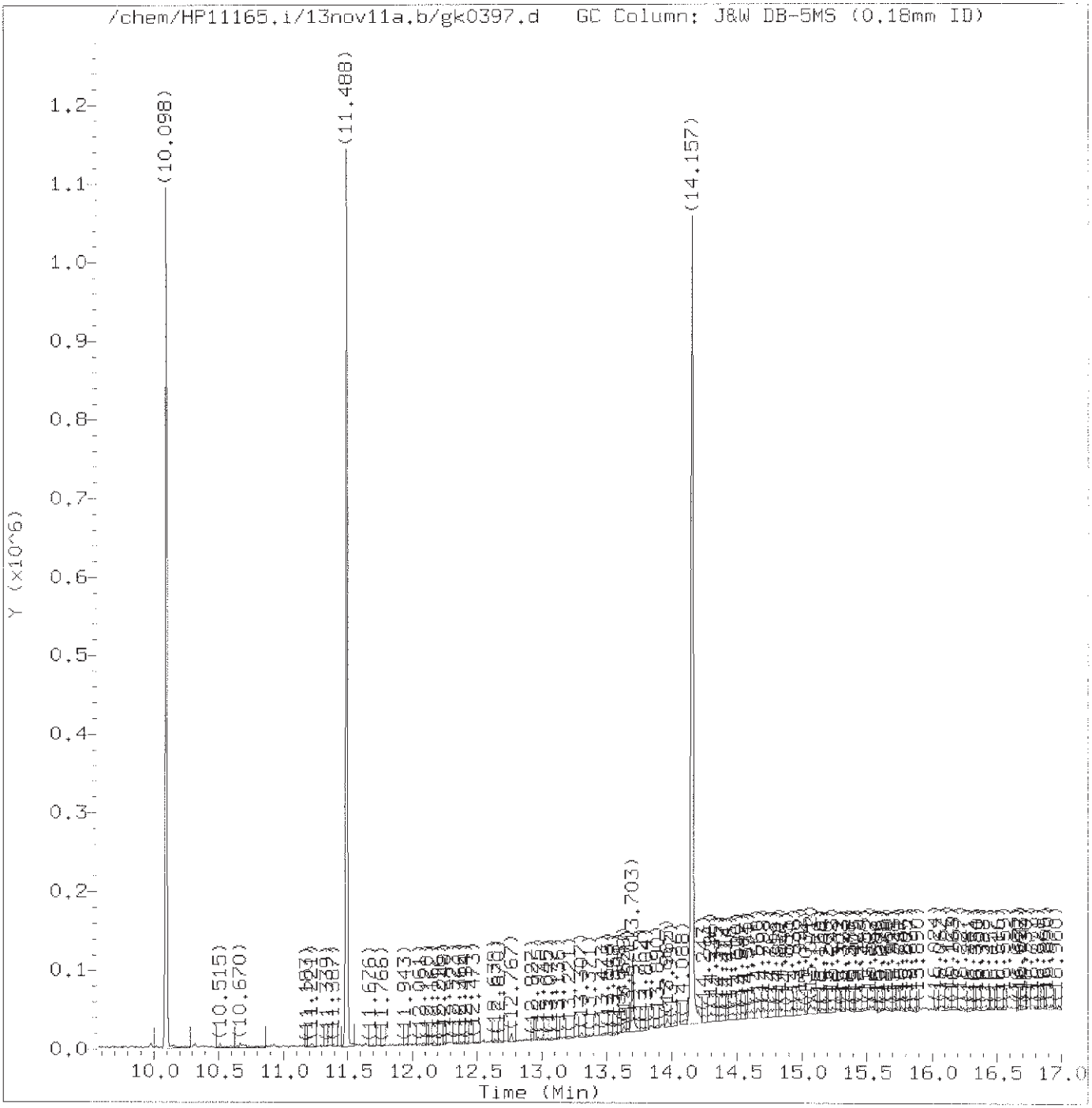
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0397.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:59 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 11-Nov-2013 14:22 Automation

Sample Name: SSTD080 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0397.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:59 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 11-Nov-2013 14:22 Automation

Sample Name: SSTD080 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0397.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 13:59 Analyst ID: CAM01237

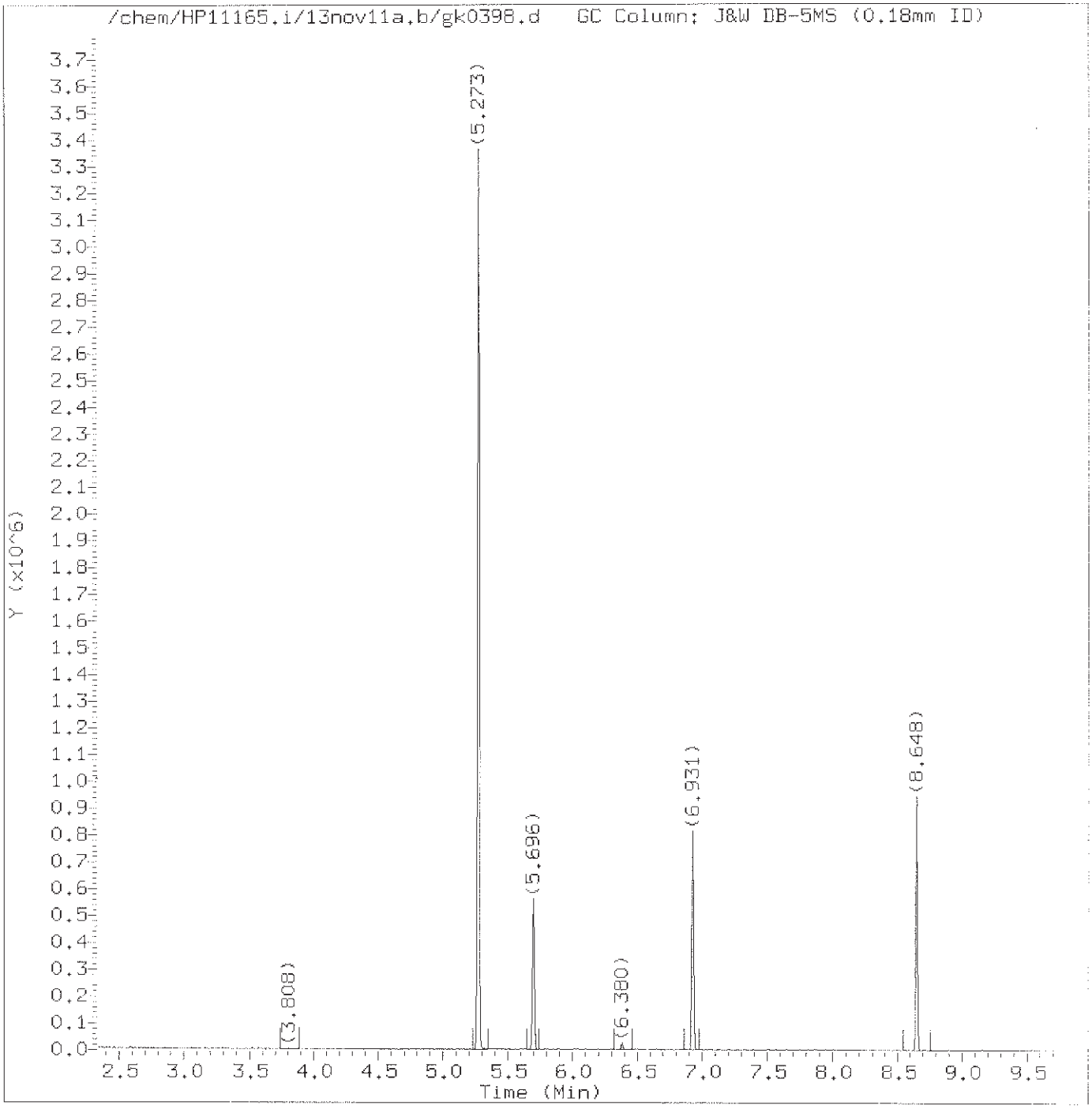
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 11-Nov-2013 14:22 Automation

Sample Name: SSTD080 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.273	77	535713	79.764
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	88247	20.000
63)*Naphthalene-d8	(2)	6.931	136	367506	20.000
101)*Acenaphthene-d10	(3)	8.648	164	209187	20.000
140)*Phenanthrene-d10	(4)	10.098	188	386783	20.000
164)*Pyrene-d10	(5)	11.488	212	447893	20.000
188)*Perylene-d12	(6)	14.157	264	418007	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:02.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

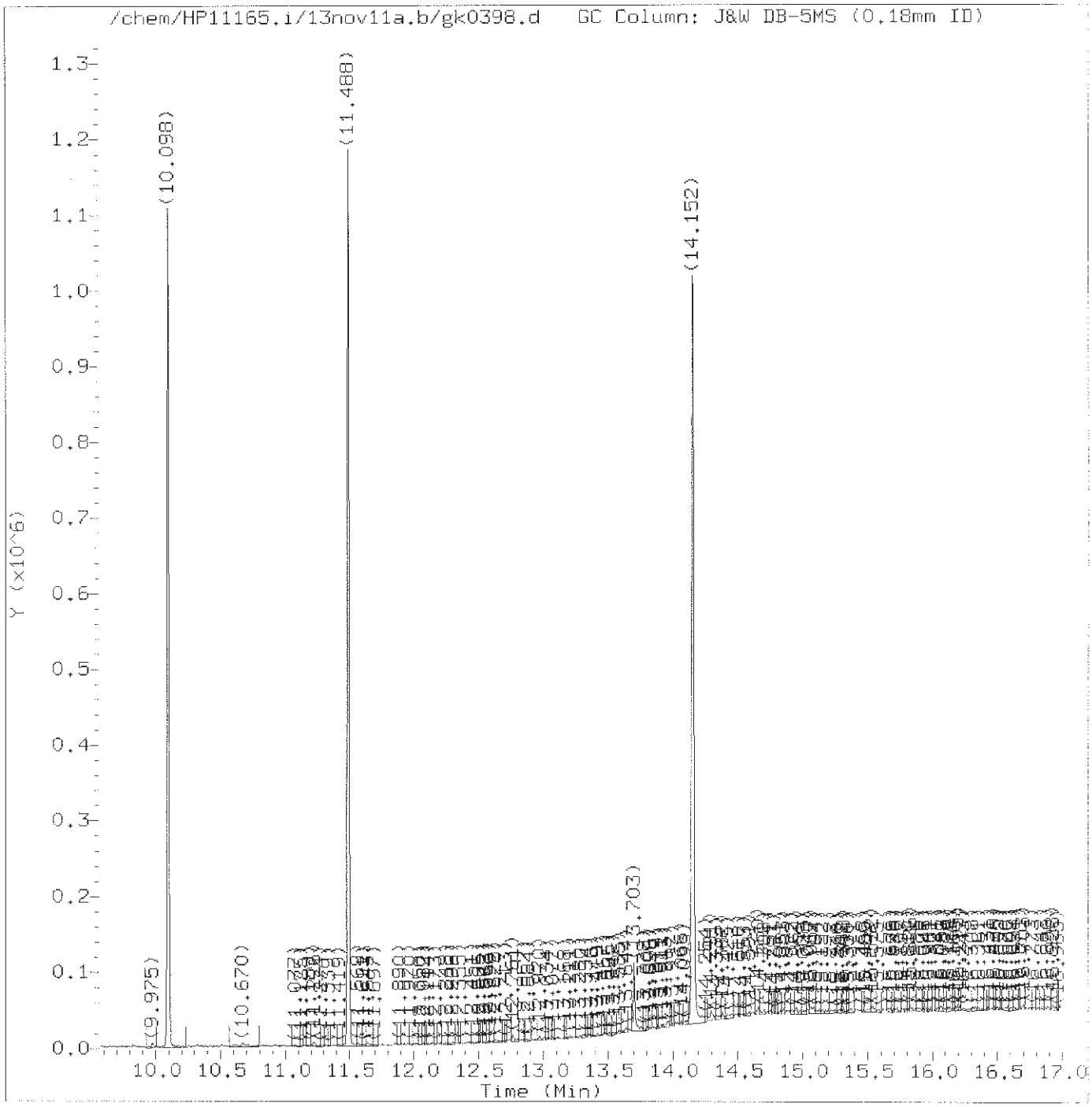
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0398.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:26 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:50
Date, time and analyst ID of latest file update: 11-Nov-2013 14:50 Automation

Sample Name: SSTD120 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0398.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:26 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:50
Date, time and analyst ID of latest file update: 11-Nov-2013 14:50 Automation

Sample Name: SSTD120 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0398.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:26 Analyst ID: CAM01237

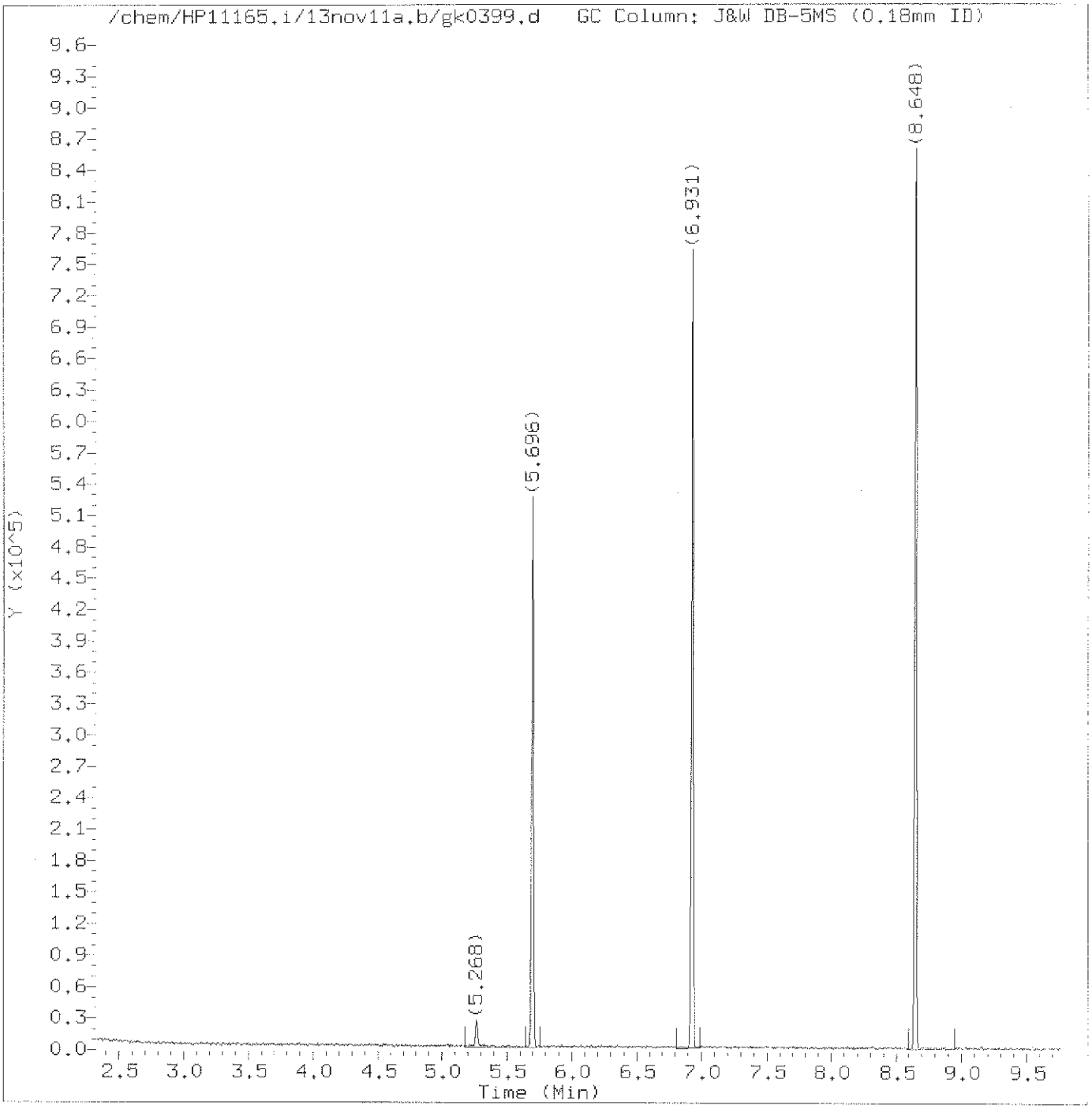
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:50
Date, time and analyst ID of latest file update: 11-Nov-2013 14:50 Automation

Sample Name: SSTD120 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.273	77	780884	120.435
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	83451	20.000
63)*Naphthalene-d8	(2)	6.931	136	360062	20.000
101)*Acenaphthene-d10	(3)	8.648	164	208580	20.000
140)*Phenanthrene-d10	(4)	10.098	188	394581	20.000
164)*Pyrene-d10	(5)	11.488	212	459543	20.000
188)*Perylene-d12	(6)	14.157	264	427645	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

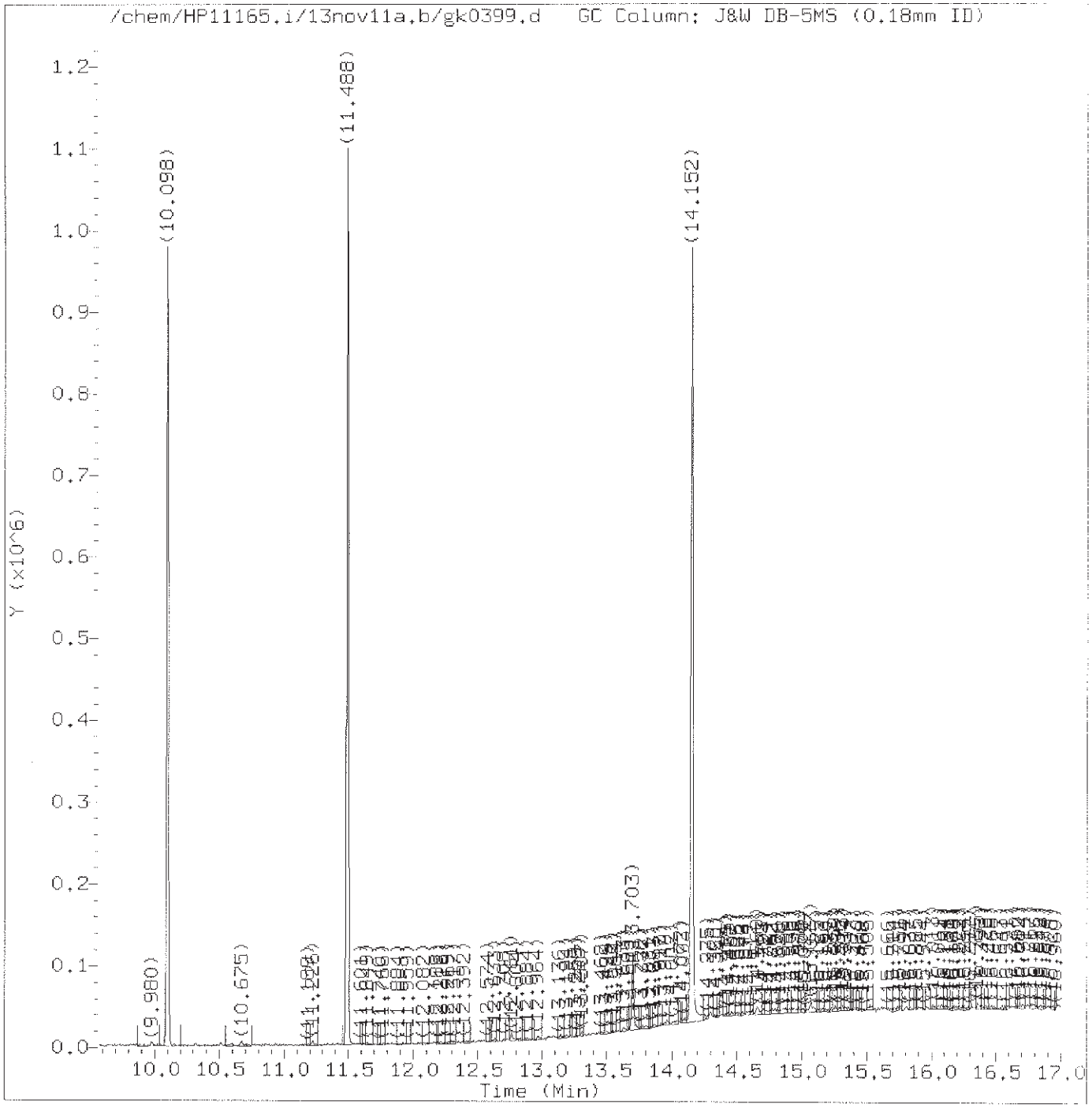
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:52 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:00 cam01237

Sample Name: SSTD001 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:52 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:00 cam01237

Sample Name: SSTD001 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 14:52 Analyst ID: CAM01237

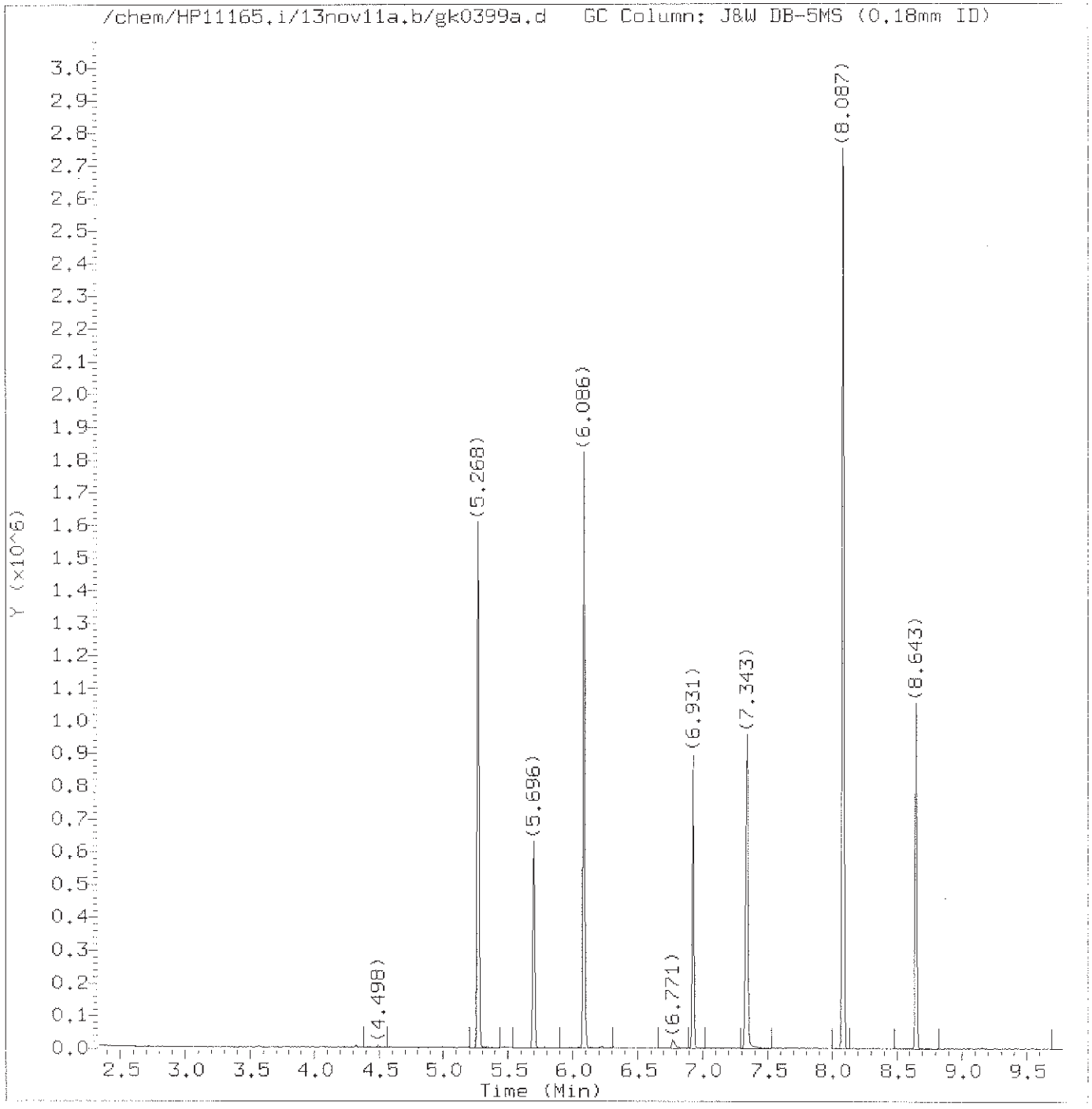
Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: bas
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:00 cam01237

Sample Name: SSTD001 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	6481	1.101
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	75794	20.000
63)*Naphthalene-d8	(2)	6.931	136	331334	20.000
101)*Acenaphthene-d10	(3)	8.648	164	190938	20.000
140)*Phenanthrene-d10	(4)	10.098	188	356785	20.000
164)*Pyrene-d10	(5)	11.488	212	422982	20.000
188)*Perylene-d12	(6)	14.152	264	386594	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:03.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

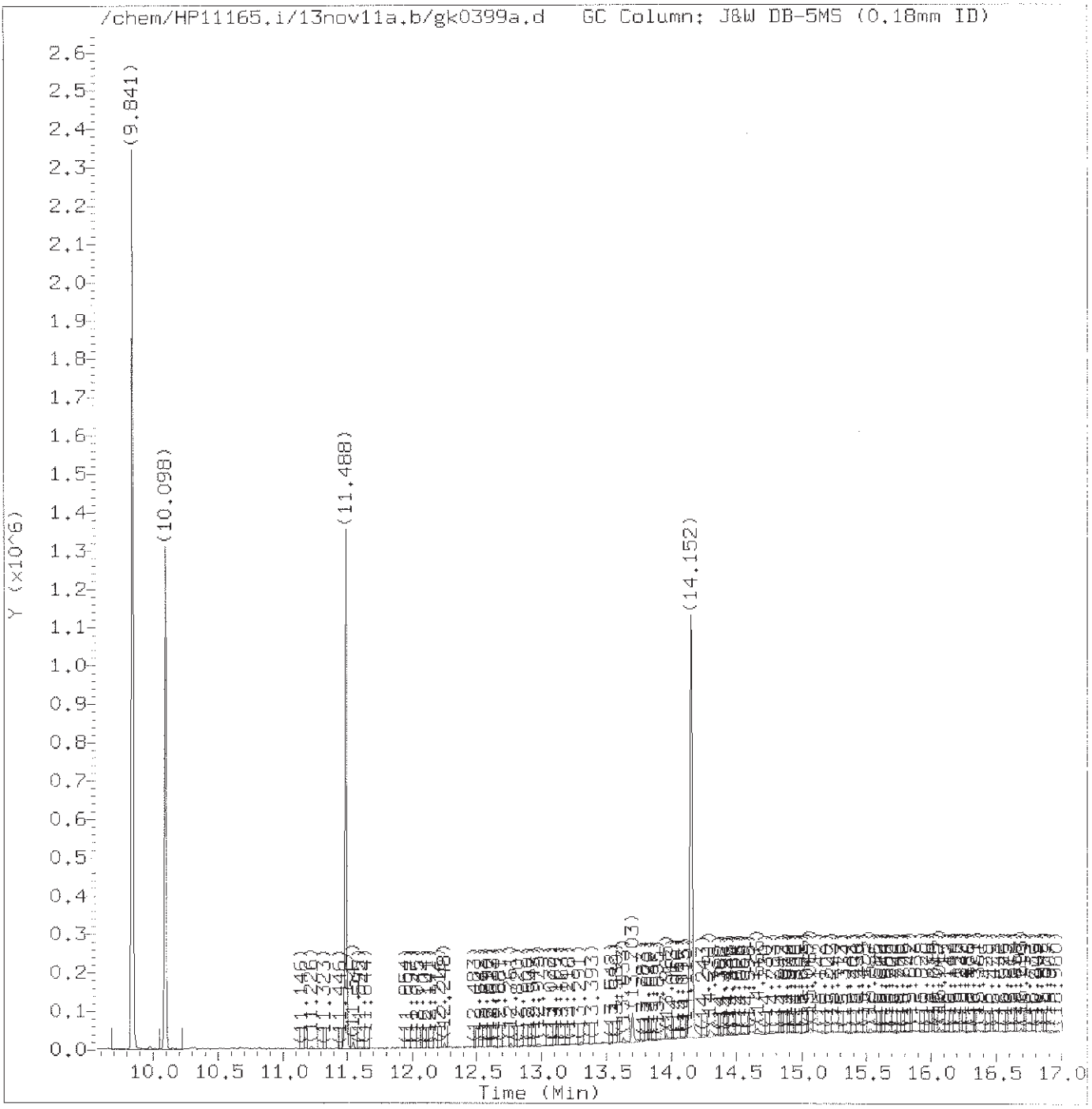
Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399a.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 15:19 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: basicv
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:01 cam01237

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:04.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399a.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 15:19 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: basicv
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:01 cam01237

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:04.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov11a.b/gk0399a.d Instrument ID: HP11165.i
Injection date and time: 11-NOV-2013 15:19 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov11a.b/mnew8270.m Sublist used: basicv
Calibration date and time: 11-NOV-2013 14:53
Date, time and analyst ID of latest file update: 11-Nov-2013 16:01 cam01237

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.268	77	359469	49.869
25)*1,4-Dichlorobenzene-d4	(1)	5.696	152	92775	20.000
63)*Naphthalene-d8	(2)	6.931	136	406392	20.000
101)*Acenaphthene-d10	(3)	8.643	164	235465	20.000
140)*Phenanthrene-d10	(4)	10.098	188	450871	20.000
164)*Pyrene-d10	(5)	11.488	212	512254	20.000
188)*Perylene-d12	(6)	14.152	264	460658	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/11/2013 at 16:04.
Target 3.5 esignature user ID: cam01237

Data File: /chem/HP11165.i/13nov13a.b/gk0510z.d

Date : 13-NOV-2013 11:50

Client ID: DFTPP050

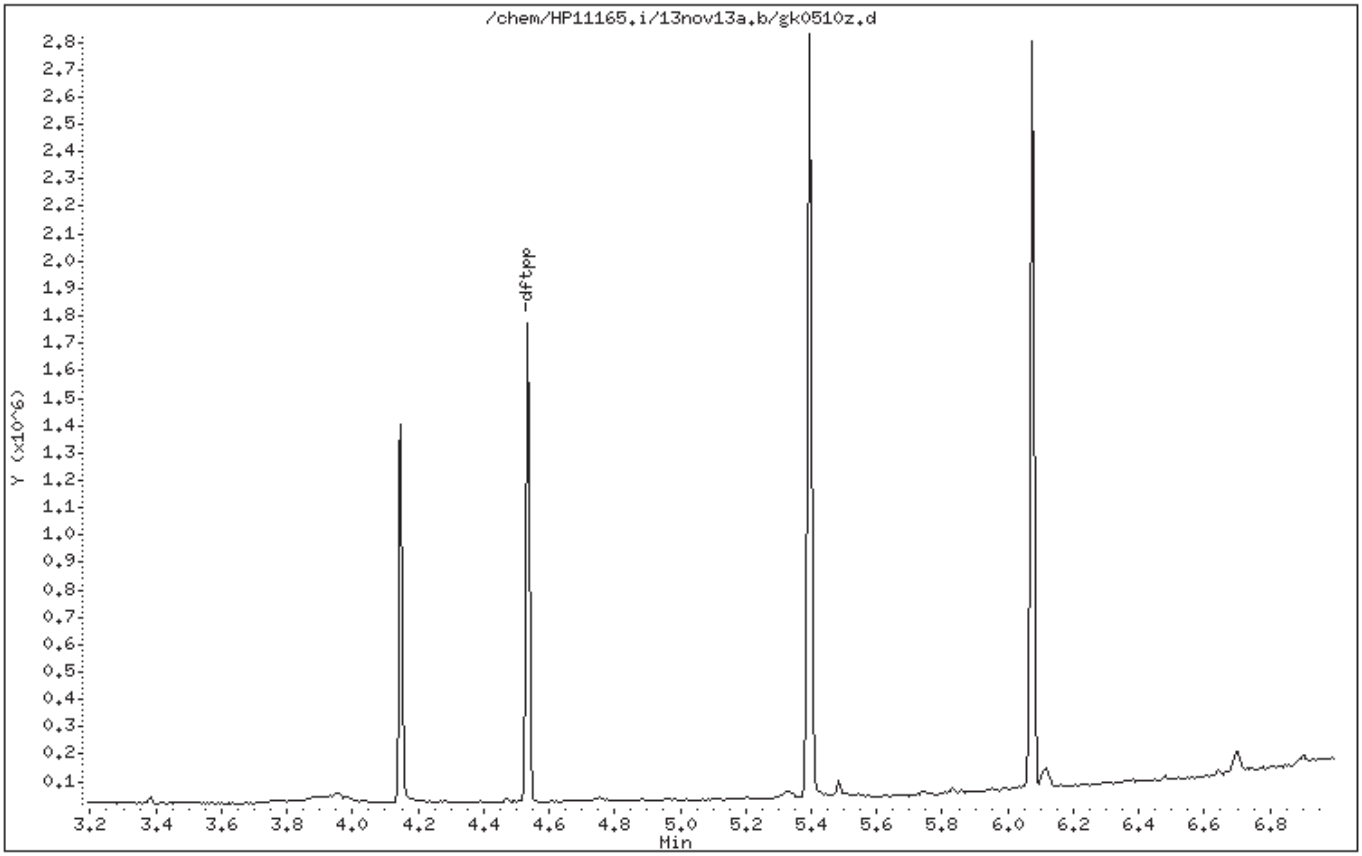
Instrument: HP11165.i

Sample Info: DFTPP050;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Chad A. Moline on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Data File: /chem/HP11165.i/13nov13a.b/gk0510z.d

Date : 13-NOV-2013 11:50

Client ID: DFTPP050

Instrument: HP11165.i

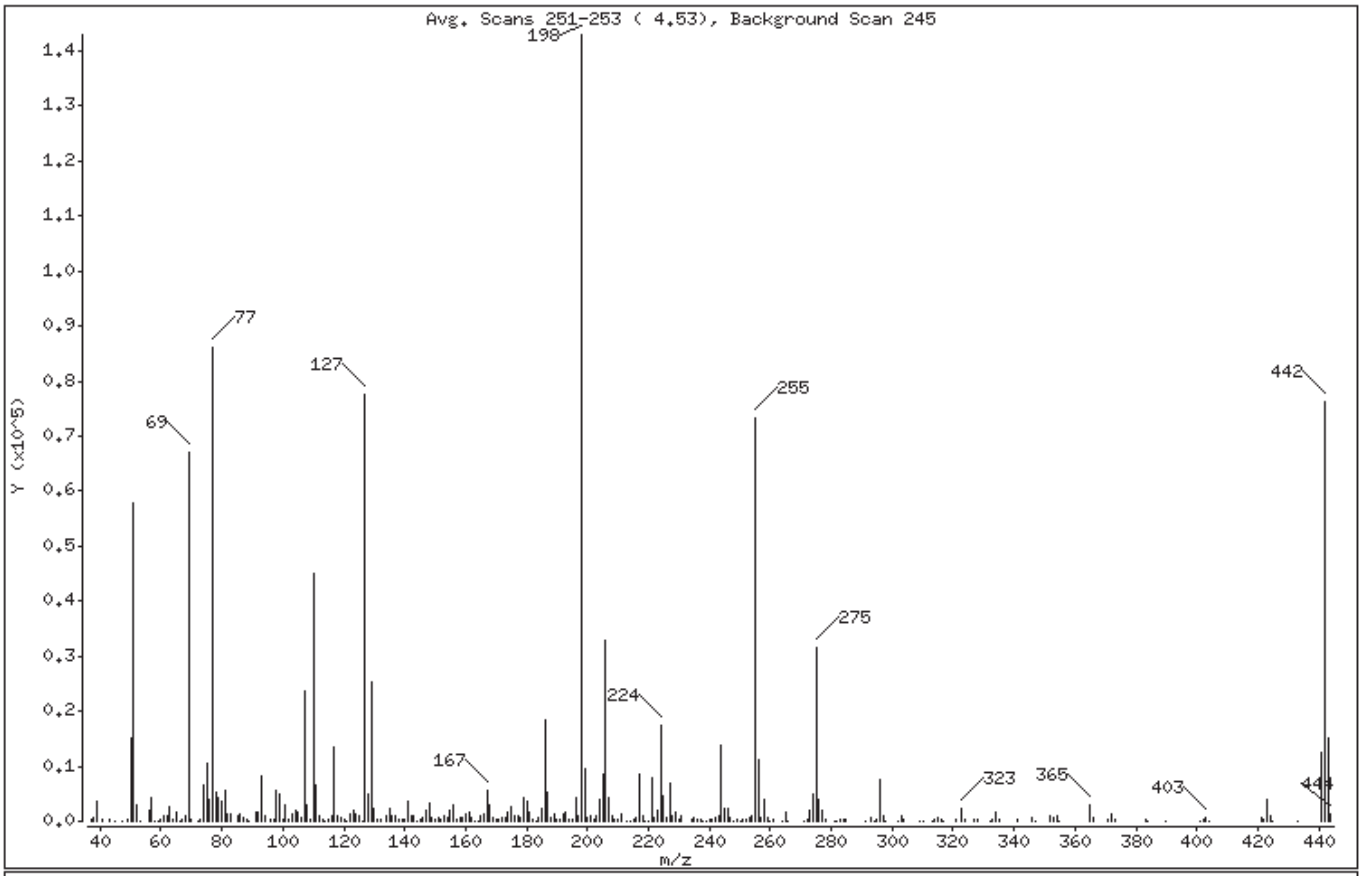
Sample Info: DFTPP050;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.43
68	Less than 2.00% of mass 69	0.68 (1.45)
69	Mass 69 relative abundance	46.83
70	Less than 2.00% of mass 69	0.23 (0.49)
127	40.00 - 60.00% of mass 198	54.23
197	Less than 1.00% of mass 198	0.63
199	5.00 - 9.00% of mass 198	6.59
275	10.00 - 30.00% of mass 198	22.10
365	Greater than 1.00% of mass 198	2.03
441	Present, but less than mass 443	8.76
442	40.00 - 99.99% of mass 198	53.27
443	17.00 - 23.00% of mass 442	10.57 (19.83)

Digitally signed by Chad A. Moline on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Date : 13-NOV-2013 11:50

Client ID: DFTPP050 Instrument: HP11165.i

Sample Info: DFTPP050;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0510z.d
Spectrum: Avg. Scans 251-253 (4.53), Background Scan 245
Location of Maximum: 198.00
Number of points: 281

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	310	119.00	563	191.00	288	271.00	145
38.00	714	120.00	198	192.00	1445	272.00	396
39.00	3775	121.00	86	193.00	1668	273.00	2026
41.00	362	122.00	1356	194.00	370	274.00	4967
43.00	304	123.00	1974	195.00	467	275.00	31608
45.00	68	124.00	1193	196.00	4390	276.00	3974
47.00	31	125.00	1056	197.00	894	277.00	2049
49.00	296	126.00	116	198.00	142976	278.00	341
50.00	14957	127.00	77544	199.00	9425	281.00	116
51.00	57816	128.00	4786	200.00	744	282.00	125
52.00	3116	129.00	25392	201.00	1035	283.00	234
53.00	94	130.00	2324	202.00	281	284.00	170
56.00	2035	131.00	308	203.00	1032	285.00	425
57.00	4271	132.00	374	204.00	4081	291.00	133
58.00	135	134.00	870	205.00	8399	293.00	647
59.00	135	135.00	2249	206.00	32712	294.00	116
60.00	208	136.00	981	207.00	4112	295.00	174
61.00	917	137.00	1054	208.00	953	296.00	7654
62.00	949	138.00	403	209.00	479	297.00	1023
63.00	2559	139.00	277	210.00	337	298.00	124
64.00	469	140.00	458	211.00	1434	302.00	91
65.00	1545	141.00	3632	213.00	120	303.00	938
66.00	156	142.00	1149	214.00	66	304.00	254
67.00	269	143.00	912	215.00	227	309.00	55
68.00	972	144.00	150	216.00	689	310.00	135
69.00	66968	145.00	266	217.00	8474	313.00	59
70.00	328	146.00	574	218.00	1096	314.00	365
72.00	117	147.00	1836	219.00	133	315.00	744
73.00	419	148.00	3267	220.00	164	316.00	468
74.00	6520	149.00	596	221.00	8012	317.00	110
75.00	10676	150.00	360	222.00	543	321.00	233
76.00	4074	151.00	771	223.00	1918	323.00	2288
77.00	85976	152.00	289	224.00	17400	324.00	462
78.00	5205	153.00	1129	225.00	4673	327.00	420
79.00	4256	154.00	773	226.00	630	328.00	276

Digitally signed by Chad A. Moline on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Date : 13-NOV-2013 11:50

Client ID: DFTPP050 Instrument: HP11165.i

Sample Info: DFTPP050;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0510z.d
Spectrum: Avg. Scans 251-253 (4.53), Background Scan 245
Location of Maximum: 198.00
Number of points: 281

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3712	155.00	2043	227.00	6776	332.00	152
81.00	5522	156.00	2882	228.00	911	333.00	197
82.00	1163	157.00	441	229.00	1556	334.00	1730
83.00	1329	158.00	695	230.00	351	335.00	440
85.00	836	159.00	541	231.00	827	341.00	220
86.00	1311	160.00	1219	234.00	491	346.00	590
87.00	592	161.00	1527	235.00	618	347.00	144
88.00	383	162.00	609	236.00	326	352.00	853
89.00	124	163.00	24	237.00	440	353.00	551
91.00	1628	164.00	150	238.00	72	354.00	830
92.00	1501	165.00	842	239.00	99	355.00	92
93.00	8188	166.00	1168	240.00	190	365.00	2903
94.00	883	167.00	5726	241.00	243	366.00	656
96.00	213	168.00	2997	242.00	763	371.00	209
97.00	356	169.00	604	243.00	1022	372.00	1314
98.00	5618	170.00	289	244.00	13821	373.00	429
99.00	4899	171.00	379	245.00	2220	383.00	352
100.00	471	172.00	705	246.00	2315	384.00	67
101.00	3044	173.00	760	247.00	506	390.00	98
102.00	188	174.00	1648	248.00	62	401.00	116
103.00	1385	175.00	2649	249.00	438	402.00	381
104.00	1969	176.00	1046	250.00	130	403.00	711
105.00	1549	177.00	1149	251.00	354	404.00	127
106.00	776	178.00	551	252.00	173	421.00	513
107.00	23576	179.00	4407	253.00	517	422.00	381
108.00	3071	180.00	3519	254.00	862	423.00	4023
109.00	479	181.00	1599	255.00	73256	424.00	855
110.00	45056	182.00	313	256.00	11096	425.00	101
111.00	6522	183.00	164	257.00	734	433.00	57
112.00	877	184.00	607	258.00	3890	441.00	12532
113.00	360	185.00	2339	259.00	498	442.00	76176
114.00	134	186.00	18344	260.00	80	443.00	15109
115.00	271	187.00	5295	261.00	261	444.00	1456
116.00	1144	188.00	643	264.00	128		
117.00	13431	189.00	1273	265.00	1555		

Digitally signed by Chad A. Moline on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Date : 13-NOV-2013 11:50

Client ID: DFTPP050 Instrument: HP11165.i

Sample Info: DFTPP050;DFTPP2843;1;3;DFTPP;

Operator: CAM01237

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0510z.d
Spectrum: Avg. Scans 251-253 (4.53), Background Scan 245
Location of Maximum: 198.00
Number of points: 281

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1072	190.00	202	266.00	86		

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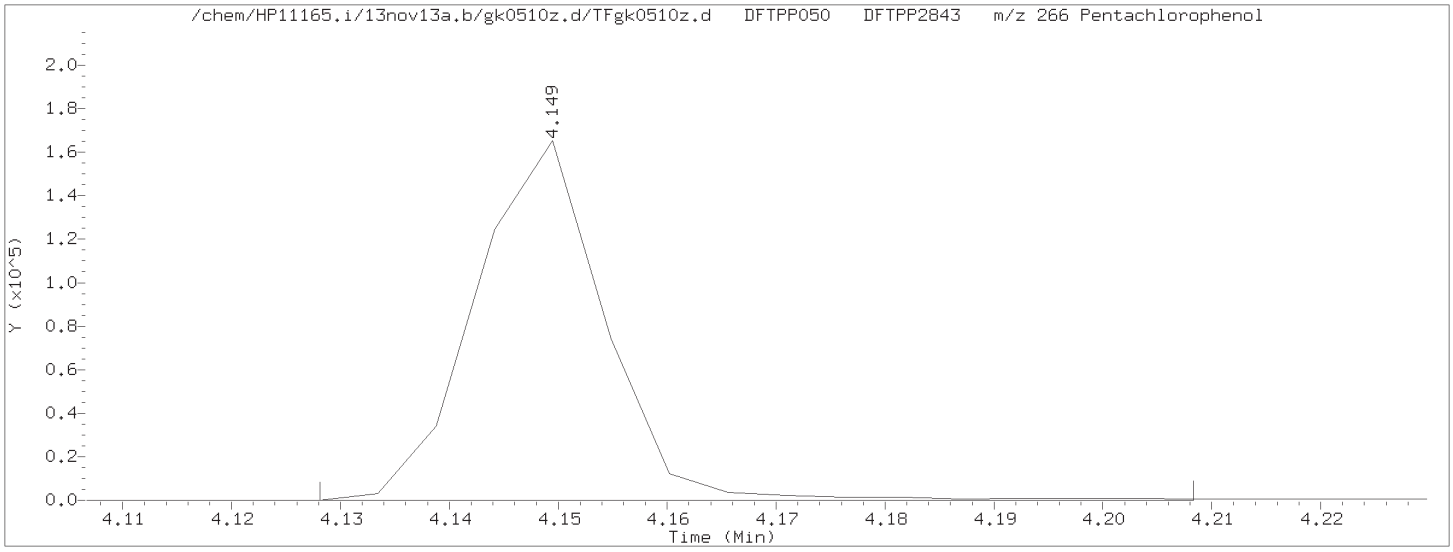
Target 3.5 esignature user ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

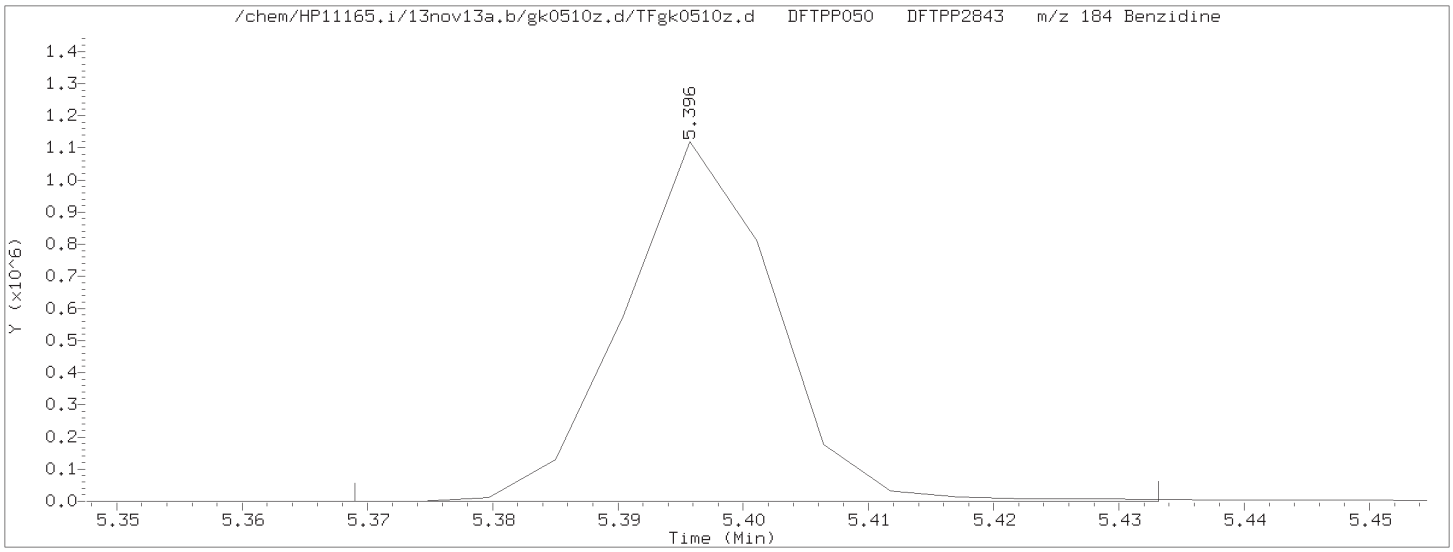
Instrument ID: HP11165.i Injection Date: 13-NOV-2013 11:50 Operator: CAM01237



Pentachlorophenol EICP peak height = 165376 EICP peak height at 10% = 16538 Pentachlorophenol EICP area = 136659

Pentachlorophenol EICP peak apex (min.) = 4.149
RT at 10% of front half of EICP (min.) = 4.136 'Front' peak width (min.) = 0.0137000000
RT at 10% of back half of EICP (min.) = 4.160 'Tailing' peak width (min.) = 0.0103166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0103166667}{0.0137000000} = 0.753$



Benzidine EICP peak height = 1119744 EICP peak height at 10% = 111974 Benzidine EICP area = 926012

Benzidine EICP peak apex (min.) = 5.396
RT at 10% of front half of EICP (min.) = 5.384 'Front' peak width (min.) = 0.0114000000
RT at 10% of back half of EICP (min.) = 5.409 'Tailing' peak width (min.) = 0.0129833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0129833333}{0.0114000000} = 1.139$

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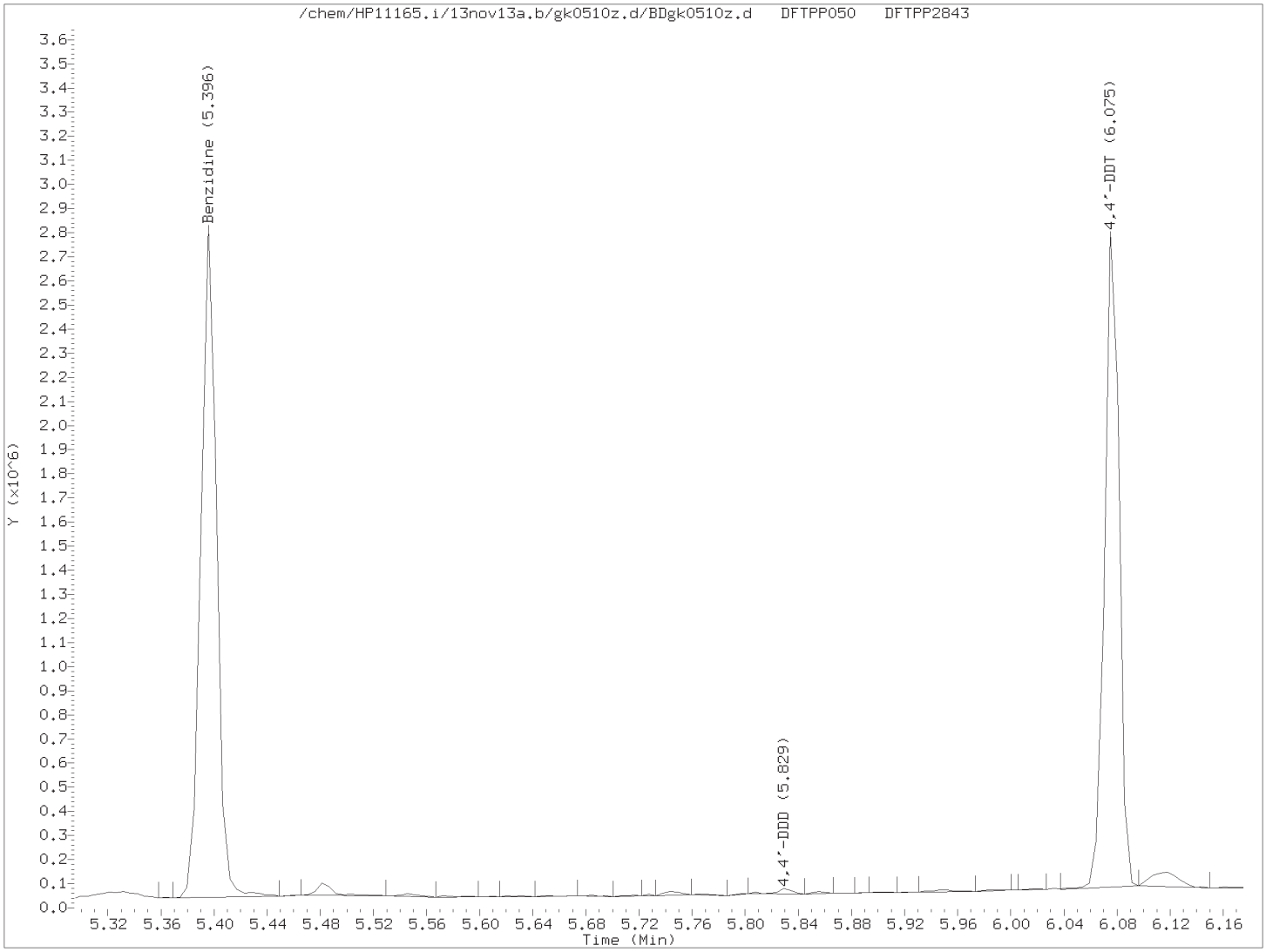
Target 3.5 esignature user ID: cam01237

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP11165.i Injection Date: 13-NOV-2013 11:50 Operator: CAM01237



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 18447}{0 + 18447 + 2076232} \times 100 = 0.9$$

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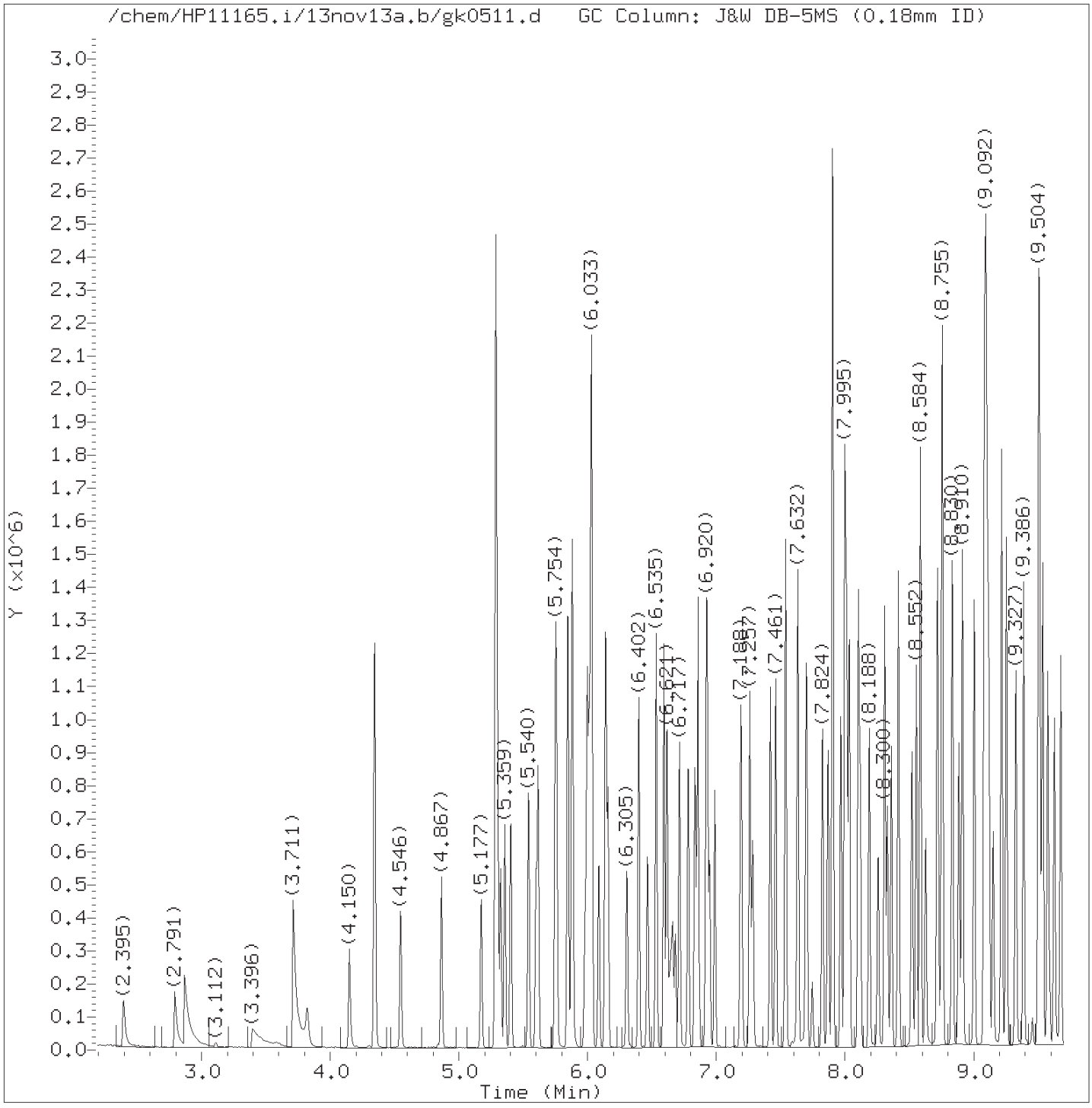
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

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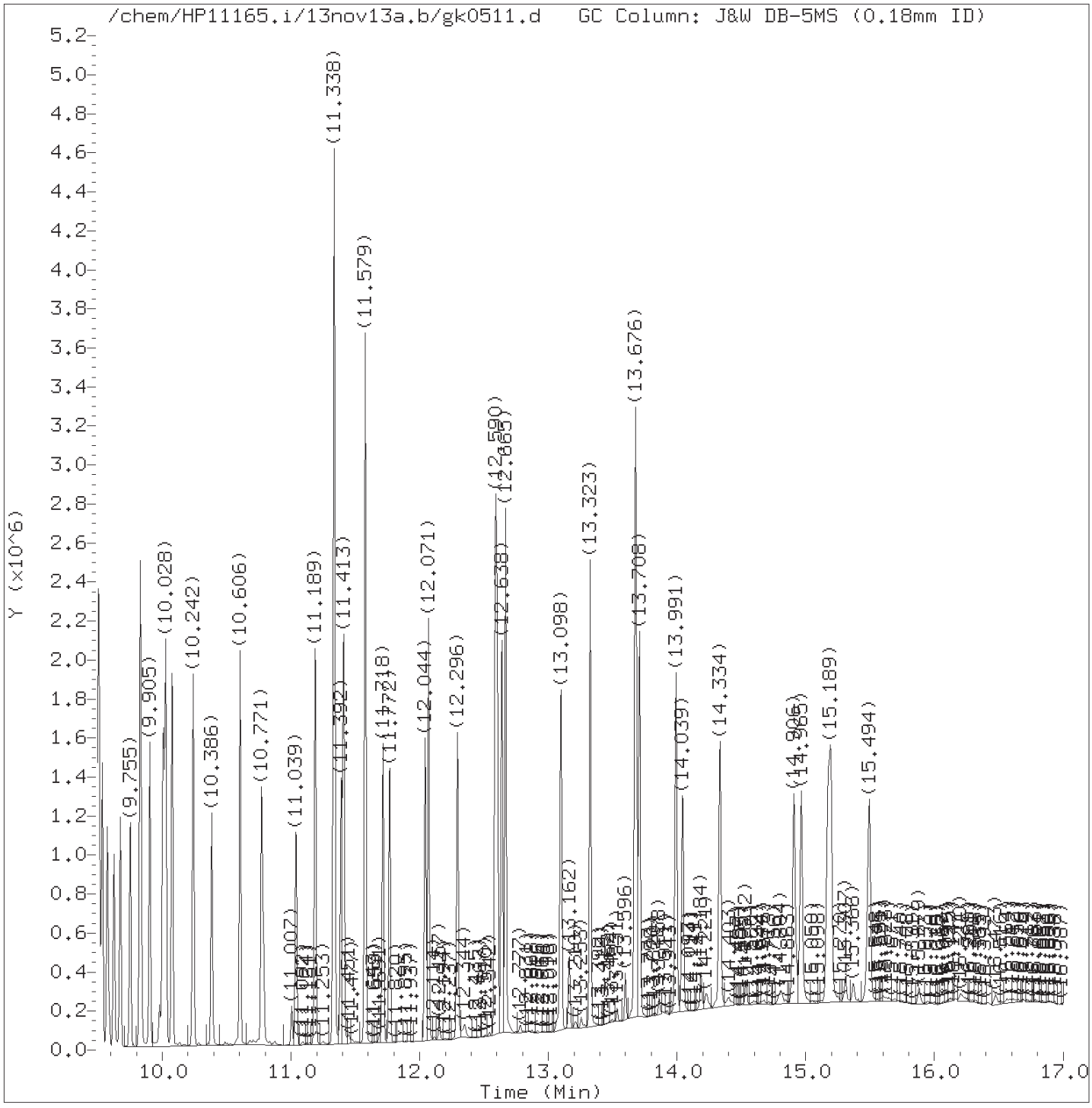
on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.395	88	88190	32.386
3) N-Nitrosodimethylamine	(1)	2.791	74	137511	28.793
4) Pyridine	(1)	2.866	79	229819	29.683
7) 2-Picoline	(1)	3.711	93	253749	31.877
8) N-Nitrosomethylethylamine	(1)	3.818	88	120721	29.558
9) Methyl methanesulfonate	(1)	4.150	80	108038	27.974
10)$2-Fluorophenol	(1)	4.348	112	398359	64.779
11) N-Nitrosodiethylamine	(1)	4.551	102	117144	31.732
14) Ethyl methanesulfonate	(1)	4.867	109	115781	31.124
17)$Phenol-d6	(1)	5.289	99	599051	64.746
16)$Phenol-d5	(1)	5.289	99	599051	64.746
19) Aniline	(1)	5.289	93	398082	32.590
18) Phenol	(1)	5.300	94	356584	32.414
20) bis(2-Chloroethyl)ether	(1)	5.359	93	243272	30.987
21) 2-Chlorophenol	(1)	5.407	128	186720	30.134
24) 1,3-Dichlorobenzene	(1)	5.546	146	180560	29.103
25)*1,4-Dichlorobenzene-d4	(1)	5.599	152	77606	20.000
26) 1,4-Dichlorobenzene	(1)	5.615	146	185864	29.608
27) Benzyl alcohol	(1)	5.749	108	166424	32.575
28) 1,2-Dichlorobenzene	(1)	5.760	146	175849	28.521
29) Indene	(1)	5.851	115	428023	37.902
30) 2-Methylphenol	(1)	5.883	108	222094	31.866
32) bis(2-Chloroisopropyl)ether	(1)	5.883	45	274303	26.054
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.883	45	274303	26.054
34) N-Nitrosopyrrolidine	(1)	5.984	100	140398	31.512
35) Acetophenone	(1)	6.000	105	330344	29.994
37) N-Nitroso-di-n-propylamine	(1)	6.011	70	175634	26.756
38) N-Nitrosomorpholine	(1)	6.022	56	132832	26.301
39) o-Toluidine	(1)	6.033	106	381555	31.706
36) 4-Methylphenol	(1)	6.033	108	263172	31.695
40) Hexachloroethane	(1)	6.086	117	74292	30.280
41)$Nitrobenzene-d5	(2)	6.140	82	496183	60.182
42) Nitrobenzene	(2)	6.161	77	249471	28.331
44) N-Nitrosopiperidine	(2)	6.311	114	124853	31.944
45) Isophorone	(2)	6.402	82	482815	30.064
48) 2-Nitrophenol	(2)	6.471	139	110735	32.370
52) 2,4-Dimethylphenol	(2)	6.535	107	247268	32.676
53) O,O,O-triethylphosphorothioate	(2)	6.594	198	96436	30.969
55) bis(2-Chloroethoxy)methane	(2)	6.621	93	310282	31.661
54) Benzoic acid	(2)	6.664	105	283194	43.107

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.717	162	162748	31.518
62) 1,2,4-Trichlorobenzene	(2)	6.787	180	164963	30.593
63)*Naphthalene-d8	(2)	6.835	136	374010	20.000
64) Naphthalene	(2)	6.856	128	576216	29.243
65) 4-Chloroaniline	(2)	6.920	127	266686	32.150
66) 2,6-Dichlorophenol	(2)	6.926	162	159571	31.084
67) Hexachloropropene	(2)	6.947	213	88208	30.780
69) Hexachlorobutadiene	(2)	6.985	225	78082	30.686
70) Quinoline	(2)	7.188	129	415763	29.513
73) N-Nitrosodi-n-butylamine	(2)	7.257	84	208967M	25.091
74) Caprolactam	(2)	7.279	113	102868	32.120
75) 4-Chloro-3-methylphenol	(2)	7.418	107	235814	32.997
76) Safrole	(2)	7.461	162	158699	30.788
77) 2-Methylnaphthalene	(2)	7.536	142	416716	30.030
78) 1-Methylnaphthalene	(2)	7.632	142	376596	30.007
79) Hexachlorocyclopentadiene	(3)	7.691	237	61488	27.384
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.701	216	165277	30.298
81) cis-Isosafrole	(3)	7.744	162	28850	3.391
82) 2,4,6-Trichlorophenol	(3)	7.824	196	129361	32.080
83) 2,4,5-Trichlorophenol	(3)	7.867	196	136285	32.443
84)$2-Fluorobiphenyl	(3)	7.899	172	839455	59.431
86) Isosafrole	(3)	7.969	162	158033	29.016
85) trans-Isosafrole	(3)	7.969	162	158033	25.824
87) 1,1'-Biphenyl	(3)	7.995	154	513504	28.538
88) 2-Chloronaphthalene	(3)	8.012	162	403774	29.680
89) 1-Chloronaphthalene	(3)	8.033	162	343617	27.564
90) Diphenyl ether	(3)	8.102	170	266210	29.708
91) 2-Nitroaniline	(3)	8.119	138	154451	32.260
92) 1,4-Naphthoquinone	(3)	8.188	158	165298	29.450
93) 1,4-Dinitrobenzene	(3)	8.258	168	76186	31.566
94) Dimethylphthalate	(3)	8.306	163	466227	29.803
95) 1,3-Dinitrobenzene	(3)	8.327	168	91759	31.261
97) 2,6-Dinitrotoluene	(3)	8.359	165	114464	32.686
99) Acenaphthylene	(3)	8.413	152	595407	30.462
100) 3-Nitroaniline	(3)	8.520	138	137400	31.198
101)*Acenaphthene-d10	(3)	8.552	164	231911	20.000
102) Acenaphthene	(3)	8.584	153	410369	29.253
103) 2,4-Dinitrophenol	(3)	8.627	184	98011	44.692
105) Pentachlorobenzene	(3)	8.718	250	146094	29.799
104) 4-Nitrophenol	(3)	8.723	109	82803	31.250

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
107) Dibenzofuran	(3)	8.755	168	558196	29.080
106) 2,4-Dinitrotoluene	(3)	8.755	165	156315	31.784
108) 1-Naphthylamine	(3)	8.830	143	478377	30.293
109) 2,3,4,6-Tetrachlorophenol	(3)	8.883	232	106572	31.334
110) 2-Naphthylamine	(3)	8.910	143	490030	31.049
111) Diethylphthalate	(3)	9.001	149	478179	29.998
112) Thionazin	(3)	9.081	107	100758	31.505
113) Fluorene	(3)	9.087	166	486379	30.356
114) 4-Chlorophenyl-phenylether	(3)	9.097	204	216845	29.603
115) 5-Nitro-o-toluidine	(3)	9.108	152	152040	30.539
116) 4-Nitroaniline	(3)	9.119	138	144662	30.481
117) 4,6-Dinitro-2-methylphenol	(4)	9.151	198	94616	31.360
119) NDPA as diphenylamine	(4)	9.215	169	429955	29.491
118) N-Nitrosodiphenylamine	(4)	9.215	169	429955	29.616
120) 1,2-Diphenylhydrazine	(4)	9.252	77	589237	27.913
121)$2,4,6-Tribromophenol	(3)	9.327	330	103125	66.550
122) Tetraethyldithiopyrophosphate	(4)	9.386	97	90093	30.435
123) 1,3,5-Trinitrobenzene	(4)	9.504	213	61456	31.186
124) Diallate (peak 1)	(4)	9.504	86	253496	22.306
125) Phorate	(4)	9.509	75	522144	29.799
126) Phenacetin	(4)	9.536	108	317469	32.065
127) 4-Bromophenyl-phenylether	(4)	9.573	248	122855	29.851
128) Diallate (peak 2)	(4)	9.589	86	35942	6.875
129) Hexachlorobenzene	(4)	9.627	284	115708	29.815
130) Dimethoate	(4)	9.675	87	277525	32.767
132) Atrazine	(4)	9.755	200	123304	26.489
135) 4-Aminobiphenyl	(4)	9.830	169	437665	31.315
133) Pentachlorophenol	(4)	9.830	266	83284	31.239
134) Pentachloronitrobenzene	(4)	9.835	237	49519	29.531
138) Pronamide	(4)	9.905	173	216422	32.046
140)*Phenanthrene-d10	(4)	10.007	188	436601	20.000
142) Dinoseb	(4)	10.017	211	131001	31.186
143) Phenanthrene	(4)	10.028	178	745174	28.862
144) Anthracene	(4)	10.076	178	761864	30.019
146) Carbazole	(4)	10.242	167	720654	30.308
148) Methyl parathion	(4)	10.386	109	203200	35.144
149) Di-n-butylphthalate	(4)	10.606	149	869418	30.506
151) Parathion	(4)	10.771	109	127829	34.013
152) 4-Nitroquinoline-1-oxide	(4)	10.787	190	57693	29.808
156) Isodrin	(4)	11.044	193	76850	29.888

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$ = Compound is a surrogate standard.

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.189	202	814026	30.785
162) Benzidine	(5)	11.338	184	1835826	93.198
164)*Pyrene-d10	(5)	11.392	212	517775	20.000
165) Pyrene	(5)	11.413	202	827509	27.940
166)$Terphenyl-d14	(5)	11.579	244	1078797	58.413
168) p-Dimethylaminoazobenzene	(5)	11.718	225	171013	32.219
171) Chlorobenzilate	(5)	11.766	139	256662	30.697
172) 3,3'-Dimethylbenzidine	(5)	12.044	212	518944	33.702
173) Butylbenzylphthalate	(5)	12.071	149	400758	30.090
174) 2-Acetylaminofluorene	(5)	12.296	181	396103	35.760
175) 3,3'-Dichlorobenzidine	(5)	12.585	252	302858	33.321
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.590	231	145694	33.965
177) Benzo(a)anthracene	(5)	12.601	228	771481	31.013
178) Chrysene	(5)	12.638	228	742758	30.584
179) bis(2-Ethylhexyl)phthalate	(5)	12.665	149	576853	31.716
181) 6-Methylchrysene	(5)	13.098	242	553120	32.013
183) Di-n-octylphthalate	(6)	13.323	149	992150	30.143
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.676	256	363050	30.098
185) Benzo(b)fluoranthene	(6)	13.681	252	755864	28.337
186) Benzo(k)fluoranthene	(6)	13.708	252	802416	28.383
187) Benzo(a)pyrene	(6)	13.991	252	737948	31.026
188)*Perylene-d12	(6)	14.045	264	441467	20.000
190) 3-Methylcholanthrene	(6)	14.334	268	366472	32.208
191) Dibenz(a,h)acridine	(6)	14.906	279	543980	32.570
192) Dibenz(a,j)acridine	(6)	14.965	279	571524	30.445
193) Indeno(1,2,3-cd)pyrene	(6)	15.173	276	764682	31.696
194) Dibenz(a,h)anthracene	(6)	15.195	278	630044	31.459
196) Benzo(g,h,i)perylene	(6)	15.494	276	632007	31.077
203) 2,4_2,6-Dinitrotoluenes	(3)			270779	31.487
204) Diallate TRANS/CIS	(4)			289438	29.443

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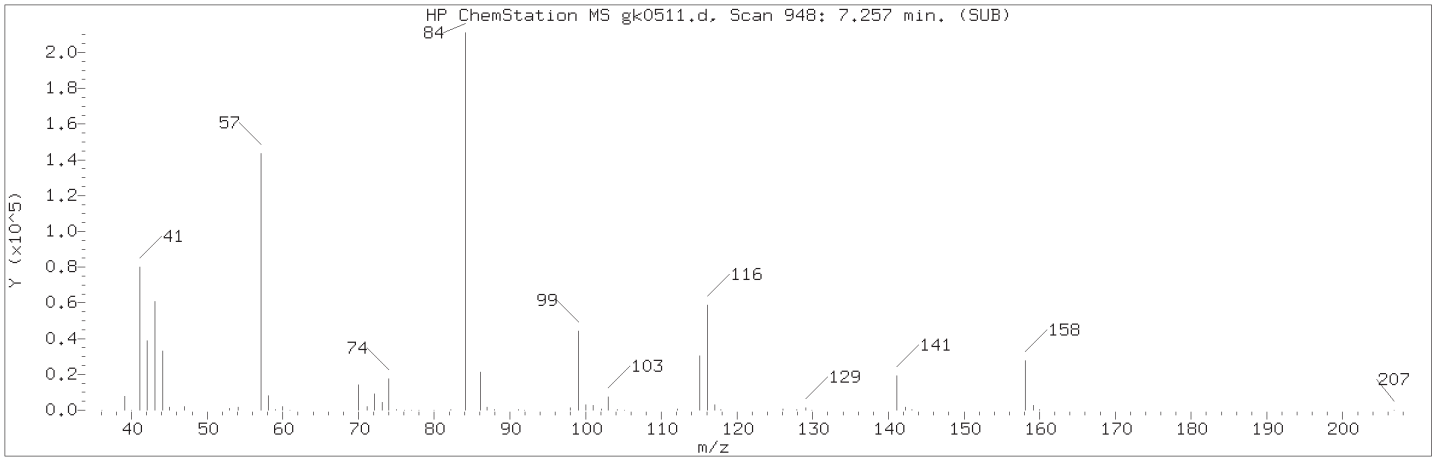
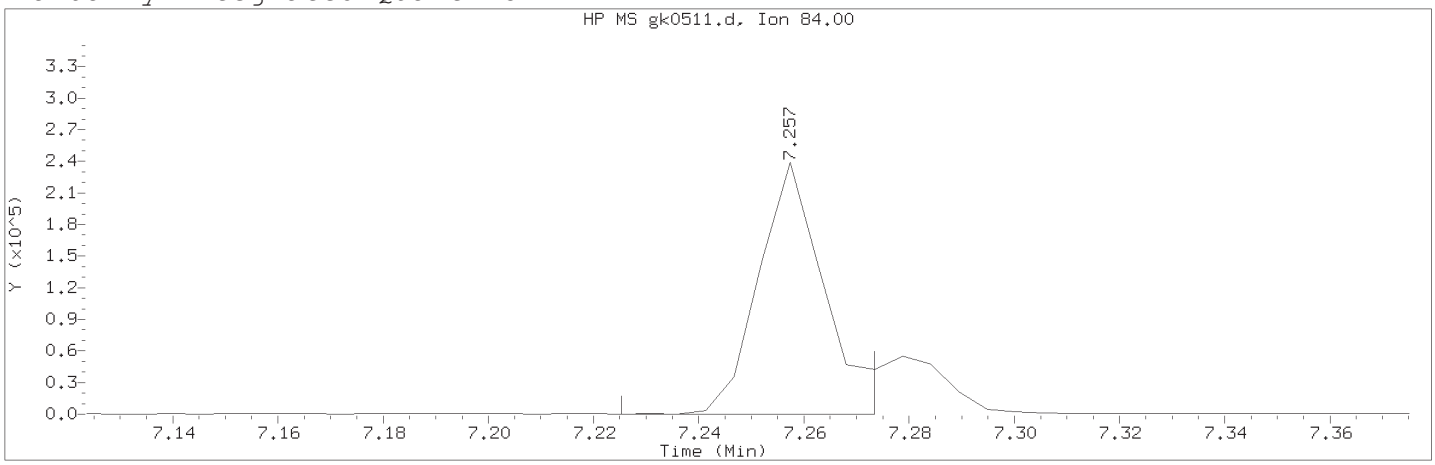
$ = Compound is a surrogate standard.

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

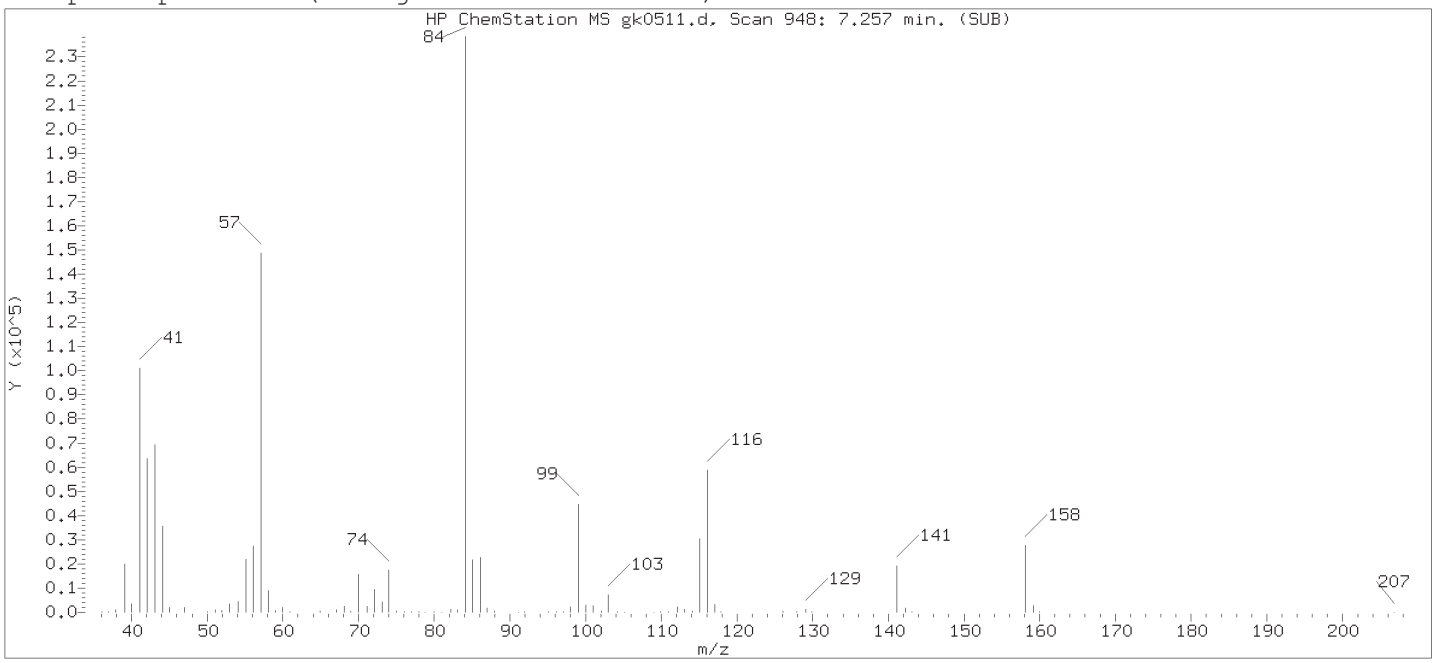
Compound Number : 73
Compound Name : N-Nitrosodi-n-butylamine
Scan Number : 948
Retention Time (minutes) : 7.257
Quant Ion : 84.00
Area (flag) : 208967M
On-Column Amount (ng/ul) : 25.0909
Integration start scan : 941 Integration stop scan: 950
Y at integration start : 199 Y at integration end: 199

Reason for manual integration: improper integration

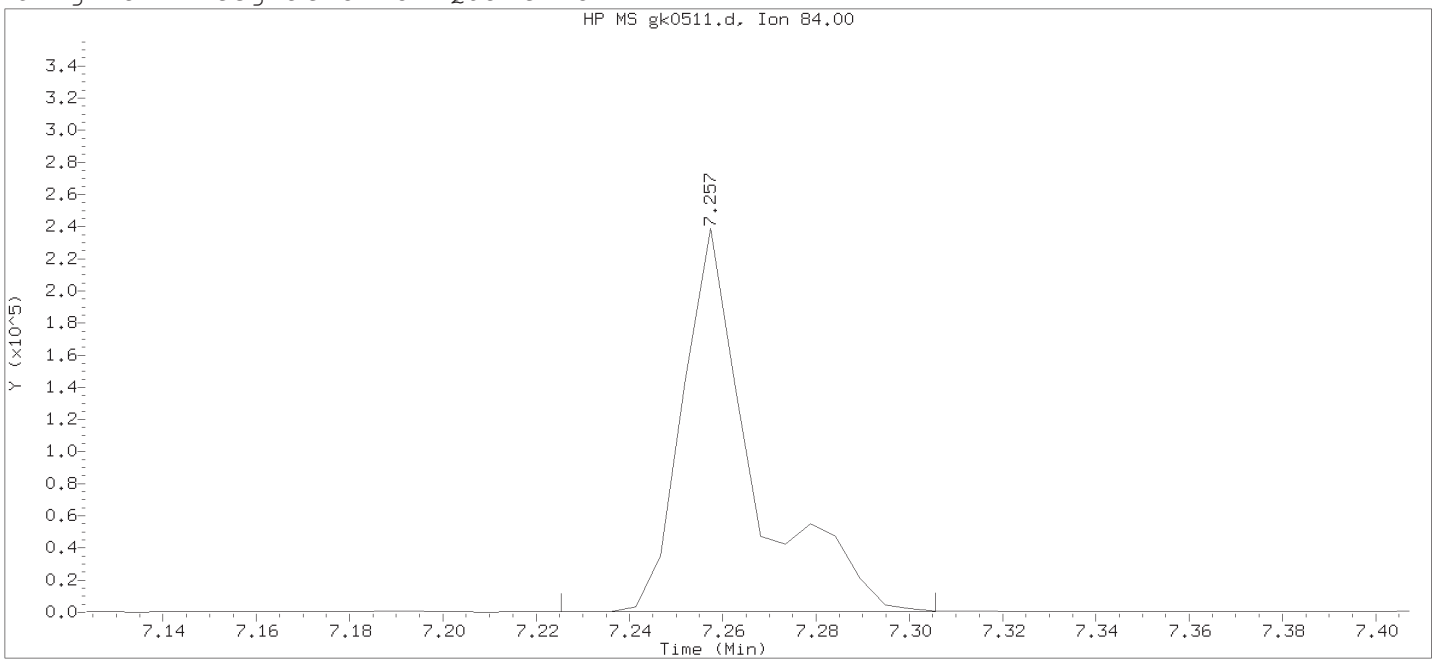
Analyst responsible for change: Digitally signed by Chad A. Moline
on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:45.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



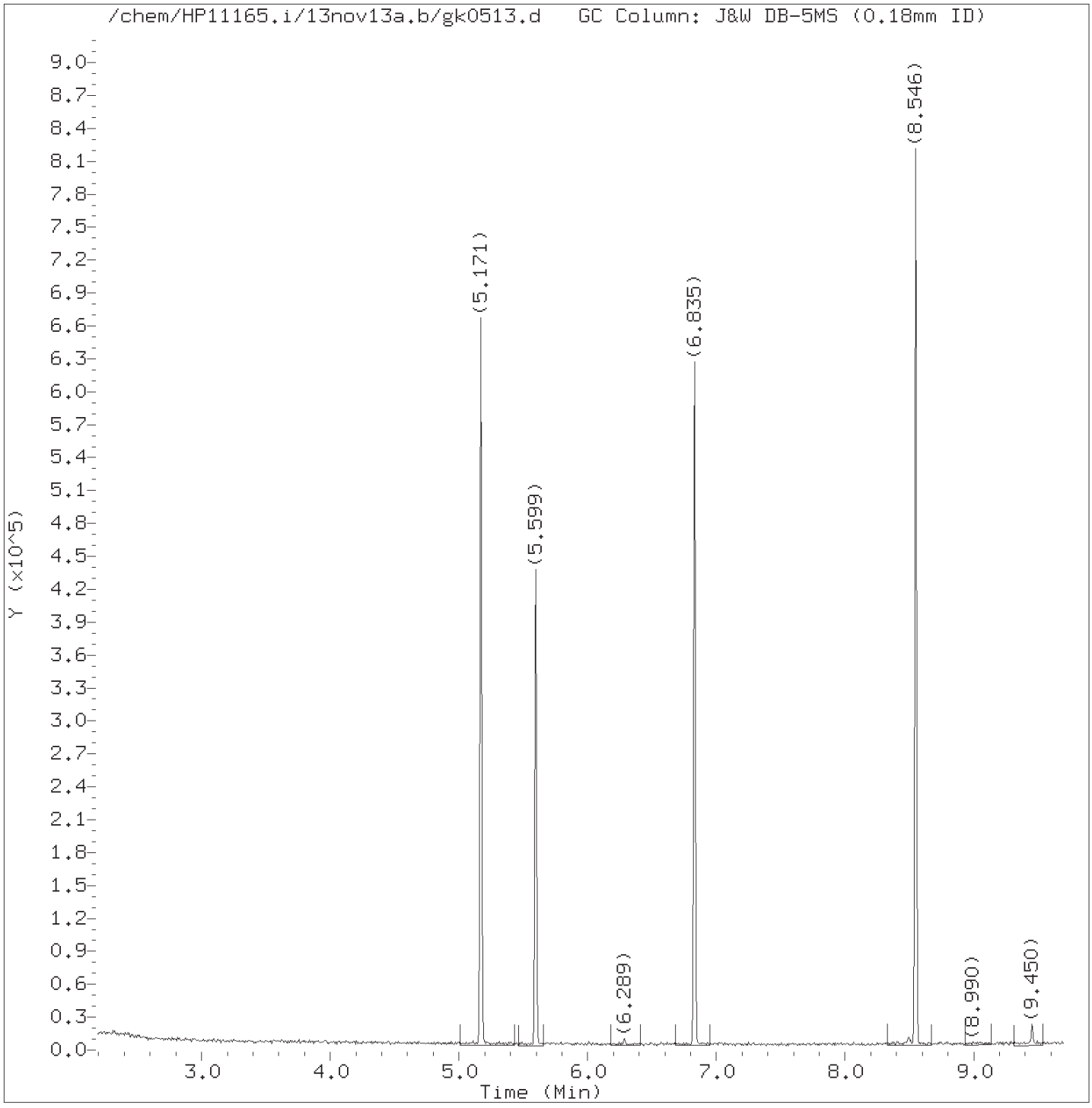
Data File: /chem/HP11165.i/13nov13a.b/gk0511.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 12:09 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 12:40
Date, time and analyst ID of latest file update: 13-Nov-2013 12:40 cam01237

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 73		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 948		
Retention Time (minutes)	: 7.257		
Quant Ion	: 84.00		
Area	: 250569		
On-column Amount (ng/ul)	: 30.0861		
Integration start scan	: 941	Integration stop scan:	956
Y at integration start	: 199	Y at integration end:	199

Digitally signed by Chad A. Moline on 11/13/2013 at 13:36.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

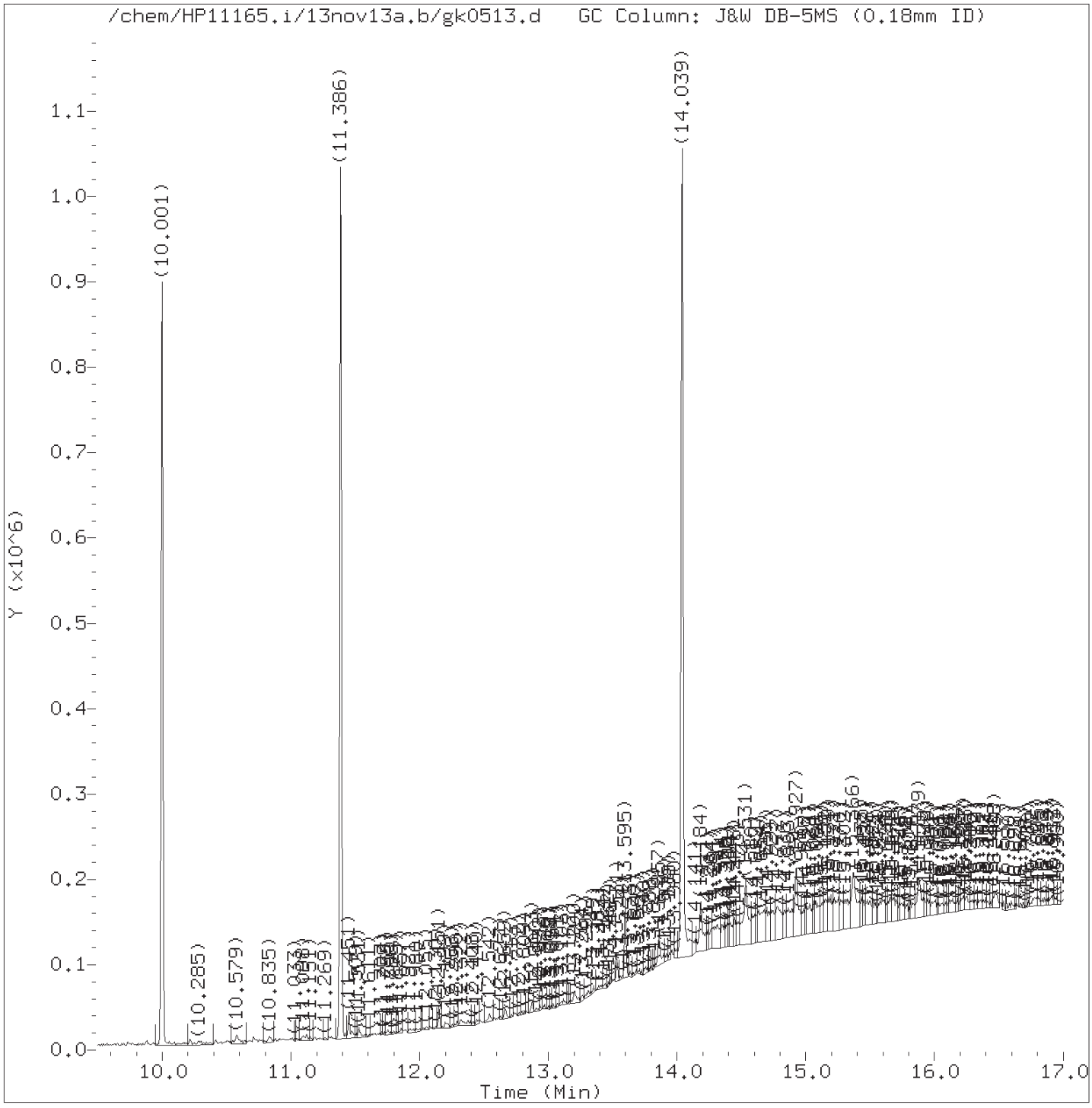
Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0513.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 13:10 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: bas
Calibration date and time: 13-NOV-2013 13:35
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:37.
Target 3.5 esignature user ID: cam01237



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0513.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 13:10 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: bas
Calibration date and time: 13-NOV-2013 13:35
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:37.
Target 3.5 esignature user ID: cam01237

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0513.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 13:10 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: bas
Calibration date and time: 13-NOV-2013 13:35
Date, time and analyst ID of latest file update: 13-Nov-2013 13:35 cam01237

Sample Name: SSTD030 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.171	77	138687	28.235
25)*1,4-Dichlorobenzene-d4	(1)	5.599	152	63218	20.000
63)*Naphthalene-d8	(2)	6.835	136	276194	20.000
101)*Acenaphthene-d10	(3)	8.546	164	165228	20.000
140)*Phenanthrene-d10	(4)	10.001	188	325911	20.000
164)*Pyrene-d10	(5)	11.386	212	391150	20.000
188)*Perylene-d12	(6)	14.039	264	375926	20.000

* = Compound is an internal standard.

Digitally signed by Chad A. Moline
on 11/13/2013 at 13:37.
Target 3.5 esignature user ID: cam01237

Data File: /chem/HP11165.i/13nov14.b/gk0550.d

Date : 14-NOV-2013 00:50

Client ID: DFTPP

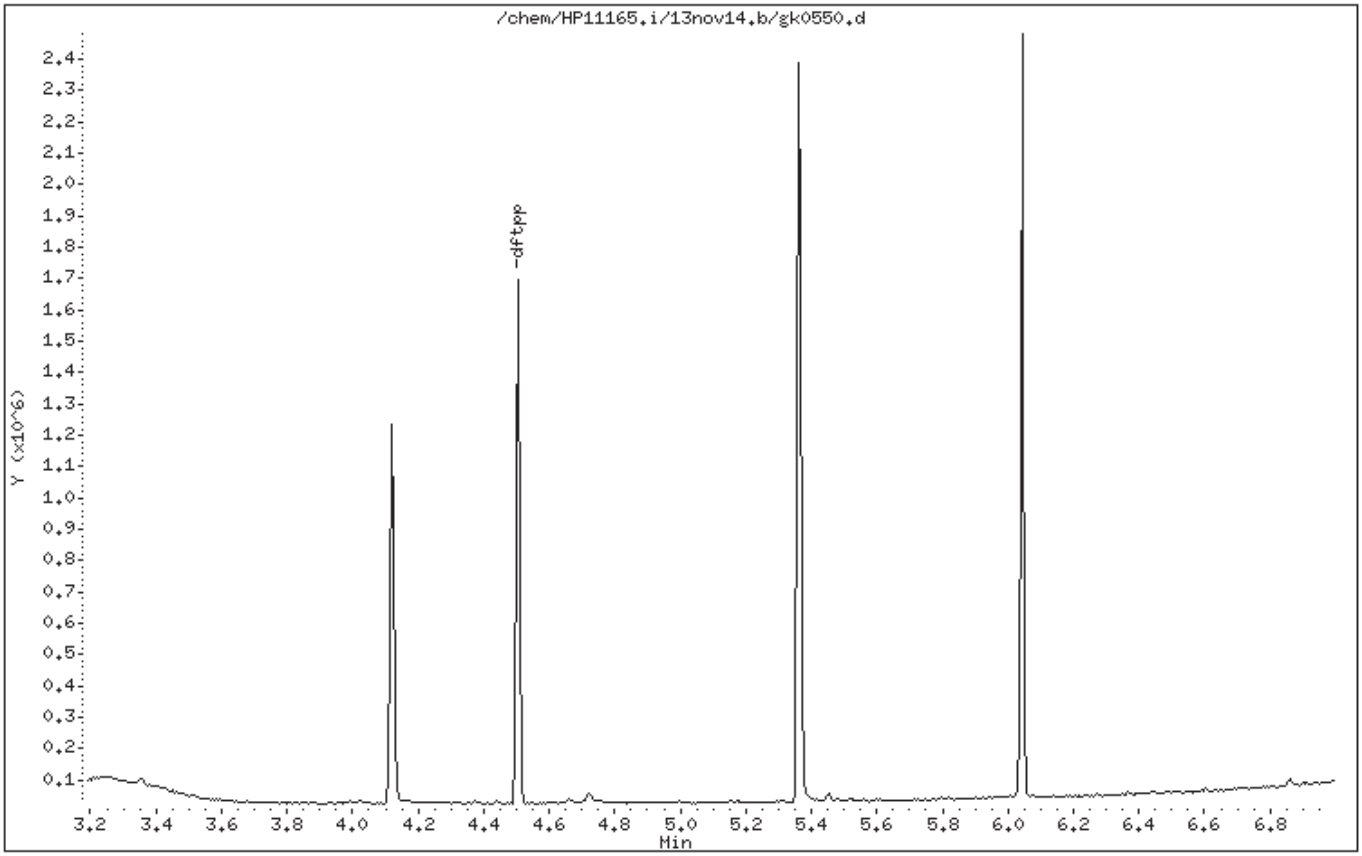
Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov14.b/gk0550.d

Date : 14-NOV-2013 00:50

Client ID: DFTPP

Instrument: HP11165.i

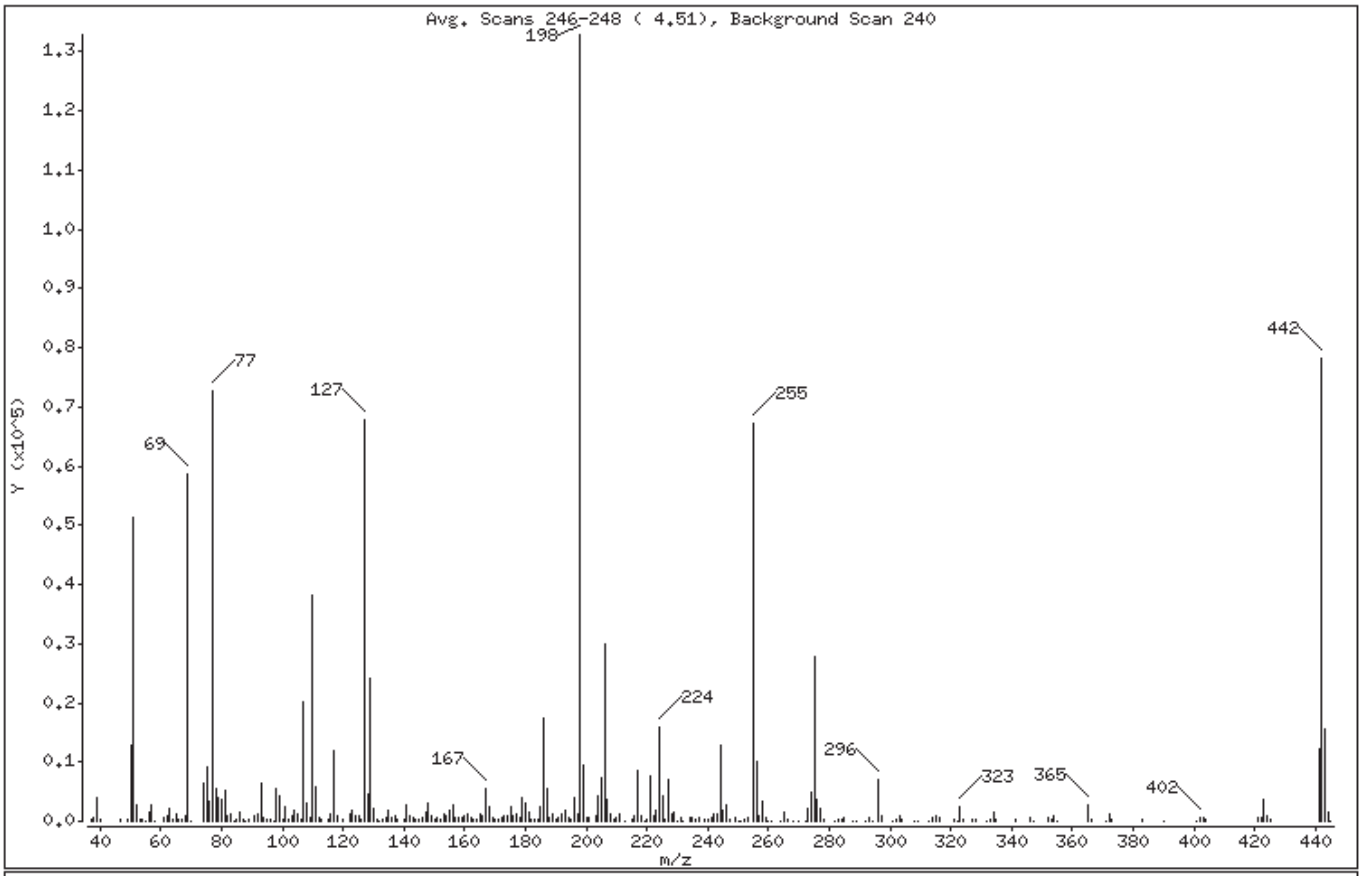
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	38.59
68	Less than 2.00% of mass 69	0.60 (1.37)
69	Mass 69 relative abundance	44.15
70	Less than 2.00% of mass 69	0.04 (0.10)
127	40.00 - 60.00% of mass 198	51.06
197	Less than 1.00% of mass 198	0.84
199	5.00 - 9.00% of mass 198	7.12
275	10.00 - 30.00% of mass 198	20.96
365	Greater than 1.00% of mass 198	2.08
441	Present, but less than mass 443	9.09
442	40.00 - 99.99% of mass 198	58.90
443	17.00 - 23.00% of mass 442	11.65 (19.77)

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Date : 14-NOV-2013 00:50

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS Column diameter: 0.18

Data File: gk0550.d
Spectrum: Avg. Scans 246-248 (4.51), Background Scan 240
Location of Maximum: 198.00
Number of points: 272

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	262	122.00	1291	192.00	1352	273.00	2051
38.00	704	123.00	1955	193.00	1790	274.00	4746
39.00	4104	124.00	859	194.00	516	275.00	27848
40.00	303	125.00	873	195.00	437	276.00	3787
47.00	270	126.00	331	196.00	3946	277.00	2285
49.00	316	127.00	67856	197.00	1122	278.00	407
50.00	12817	128.00	4610	198.00	132864	282.00	51
51.00	51280	129.00	24008	199.00	9463	283.00	273
52.00	2825	130.00	2096	200.00	761	284.00	205
53.00	348	131.00	291	201.00	722	285.00	487
54.00	200	132.00	125	203.00	989	288.00	55
55.00	40	133.00	216	204.00	4386	289.00	80
56.00	1631	134.00	627	205.00	7358	292.00	64
57.00	2808	135.00	1843	206.00	30080	293.00	593
58.00	143	136.00	760	207.00	3714	294.00	117
61.00	459	137.00	1051	208.00	1303	296.00	6936
62.00	879	138.00	255	209.00	357	297.00	974
63.00	2219	140.00	363	210.00	714	301.00	75
64.00	442	141.00	2844	211.00	1226	302.00	154
65.00	1249	142.00	1059	213.00	78	303.00	1061
66.00	347	143.00	666	215.00	294	304.00	214
67.00	223	144.00	267	216.00	780	308.00	83
68.00	804	145.00	312	217.00	8586	309.00	59
69.00	58664	146.00	619	218.00	935	313.00	80
70.00	56	147.00	1383	219.00	127	314.00	460
74.00	6301	148.00	3033	220.00	226	315.00	888
75.00	9151	149.00	786	221.00	7632	316.00	465
76.00	3306	150.00	215	222.00	1055	321.00	321
77.00	72760	151.00	695	223.00	1884	322.00	149
78.00	5402	152.00	227	224.00	15861	323.00	2515
79.00	3833	153.00	1116	225.00	4341	324.00	429
80.00	3644	154.00	843	226.00	425	327.00	441
81.00	5314	155.00	1713	227.00	6879	328.00	241
82.00	878	156.00	2658	228.00	1177	332.00	66
83.00	1106	157.00	735	229.00	1400	333.00	188

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Date : 14-NOV-2013 00:50

Client ID: DFTPP Instrument: HP11165.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS Column diameter: 0.18

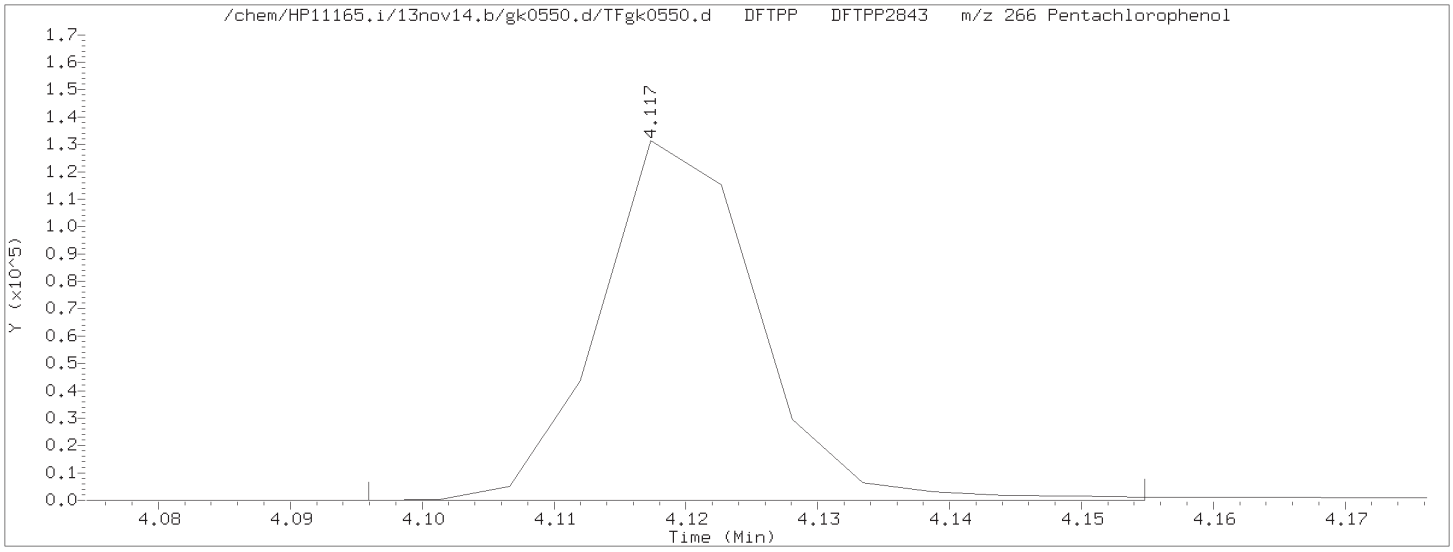
Data File: gk0550.d
Spectrum: Avg. Scans 246-248 (4.51), Background Scan 240
Location of Maximum: 198.00
Number of points: 272

m/z	Y	m/z	Y	m/z	Y	m/z	Y
84.00	95	158.00	567	230.00	76	334.00	1464
85.00	319	159.00	521	231.00	501	335.00	251
86.00	1464	160.00	951	232.00	57	341.00	180
87.00	329	161.00	1356	234.00	482	346.00	516
88.00	32	162.00	646	235.00	554	347.00	110
89.00	171	163.00	234	236.00	300	352.00	576
91.00	825	164.00	169	237.00	478	353.00	454
92.00	1320	165.00	1082	239.00	379	354.00	803
93.00	6368	166.00	886	240.00	153	355.00	66
94.00	624	167.00	5521	241.00	510	365.00	2763
95.00	162	168.00	2583	242.00	1084	366.00	309
96.00	267	169.00	632	243.00	1101	371.00	125
97.00	15	170.00	190	244.00	12893	372.00	1110
98.00	5458	171.00	190	245.00	1821	373.00	329
99.00	4381	172.00	628	246.00	2804	383.00	327
100.00	389	173.00	902	247.00	427	390.00	135
101.00	2350	174.00	966	249.00	484	401.00	77
102.00	237	175.00	2397	250.00	73	402.00	673
103.00	1025	176.00	799	251.00	61	403.00	660
104.00	1695	177.00	1240	252.00	181	404.00	238
105.00	1325	178.00	506	253.00	581	421.00	753
106.00	248	179.00	4085	255.00	67136	422.00	552
107.00	20176	180.00	3170	256.00	9971	423.00	3625
108.00	2968	181.00	1385	257.00	780	424.00	946
109.00	641	182.00	158	258.00	3460	425.00	168
110.00	38320	183.00	192	259.00	616	441.00	12074
111.00	5908	184.00	455	260.00	60	442.00	78272
112.00	743	185.00	2360	261.00	59	443.00	15476
113.00	175	186.00	17320	264.00	139	444.00	1500
115.00	290	187.00	5456	265.00	1405	445.00	50
116.00	1177	188.00	560	266.00	353		
117.00	11995	189.00	1154	268.00	53		
118.00	992	190.00	179	270.00	73		
120.00	430	191.00	641	272.00	114		

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Assessment of GC Column Performance and Injection Port Inertness for

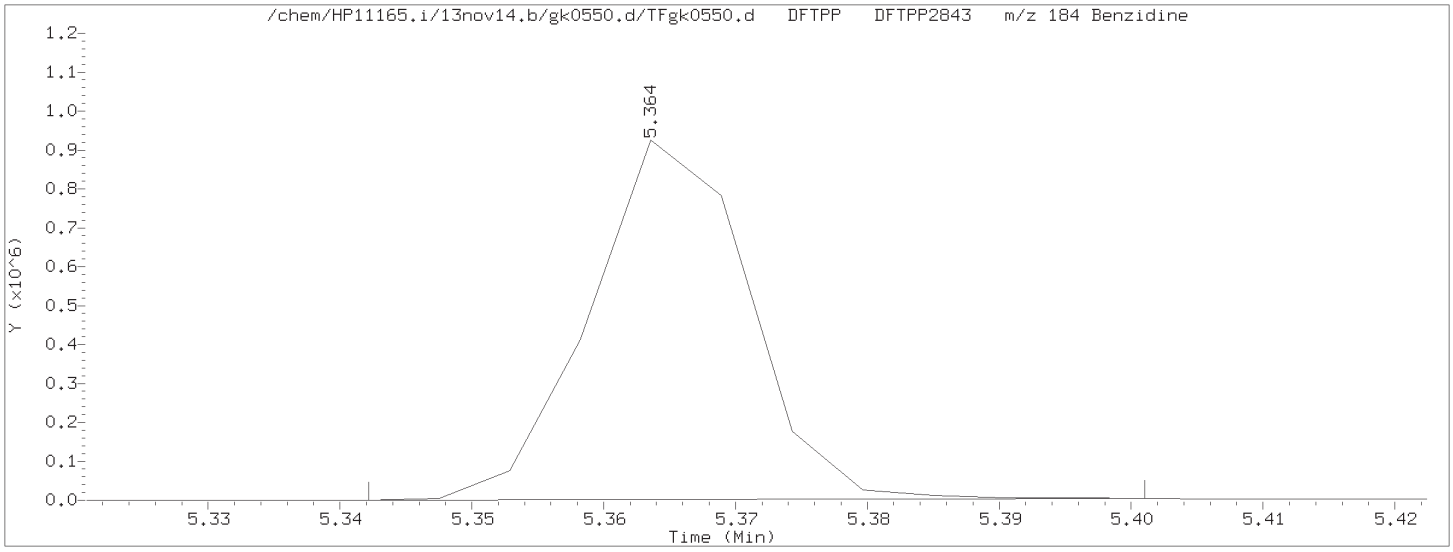
Instrument ID: HP11165.i Injection Date: 14-NOV-2013 00:50 Operator: bkg00522



Pentachlorophenol EICP peak height = 131392 EICP peak height at 10% = 13139 Pentachlorophenol EICP area = 108680

Pentachlorophenol EICP peak apex (min.) = 4.117
RT at 10% of front half of EICP (min.) = 4.108 'Front' peak width (min.) = 0.0095333333
RT at 10% of back half of EICP (min.) = 4.132 'Tailing' peak width (min.) = 0.0143833333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0143833333}{0.0095333333} = 1.509$



Benzidine EICP peak height = 924325 EICP peak height at 10% = 92432 Benzidine EICP area = 773221

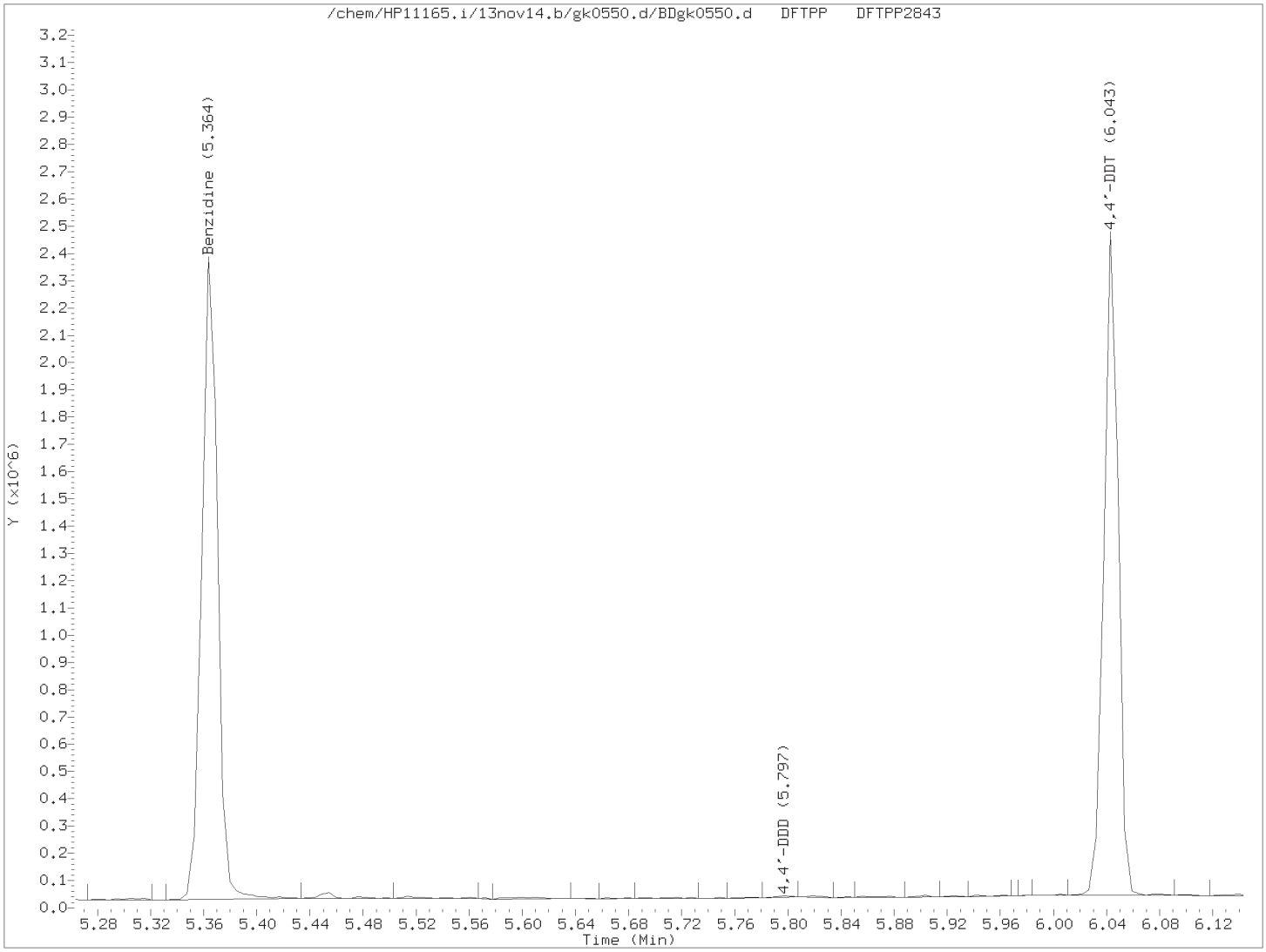
Benzidine EICP peak apex (min.) = 5.364
RT at 10% of front half of EICP (min.) = 5.353 'Front' peak width (min.) = 0.0104166667
RT at 10% of back half of EICP (min.) = 5.377 'Tailing' peak width (min.) = 0.0136333333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0136333333}{0.0104166667} = 1.309$

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Assessment of GC Column Performance and Injection Port Inertness for

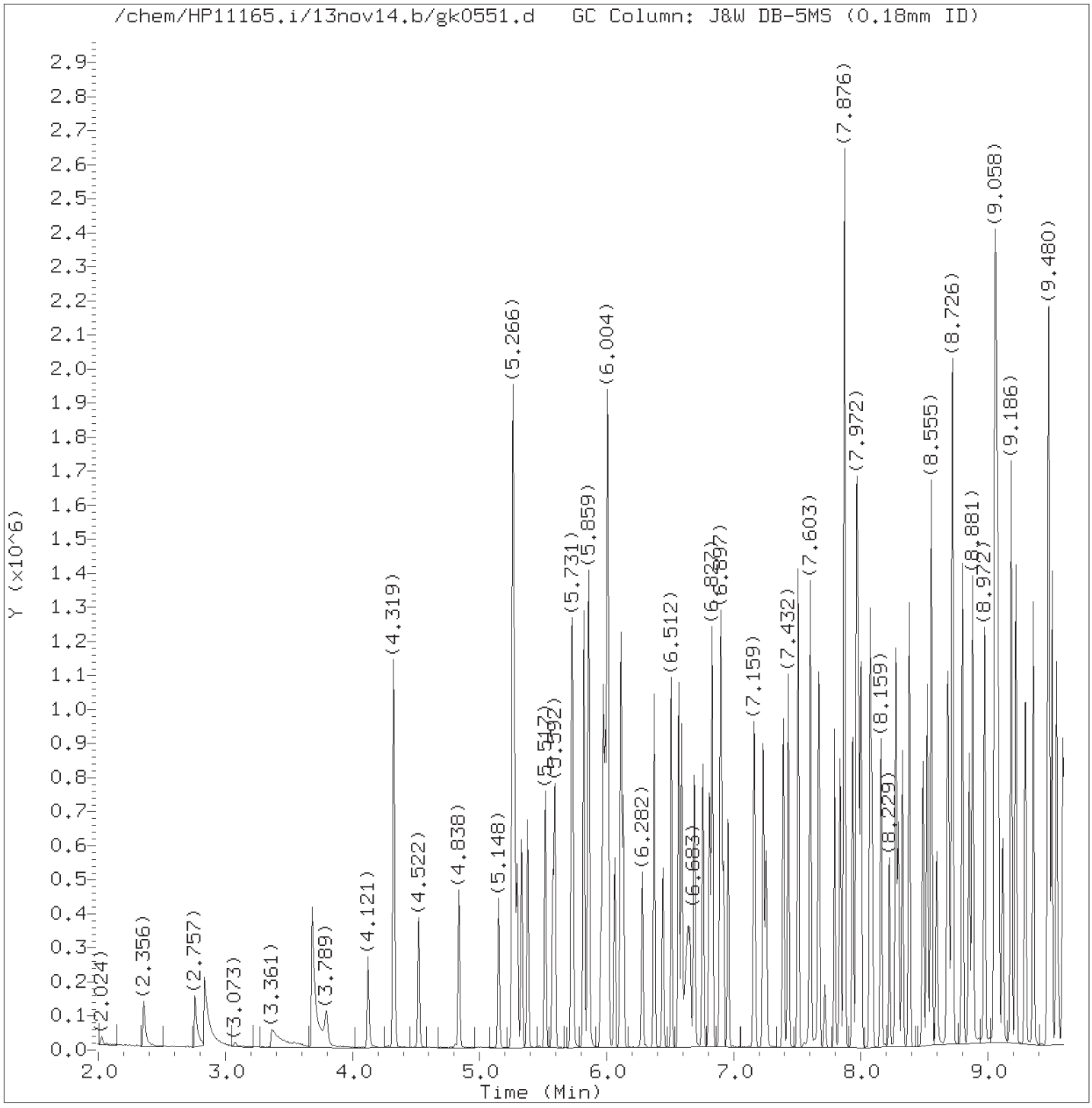
Instrument ID: HP11165.i Injection Date: 14-NOV-2013 00:50 Operator: bkg00522



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 3799}{0 + 3799 + 1831610} \times 100 = 0.2$$

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

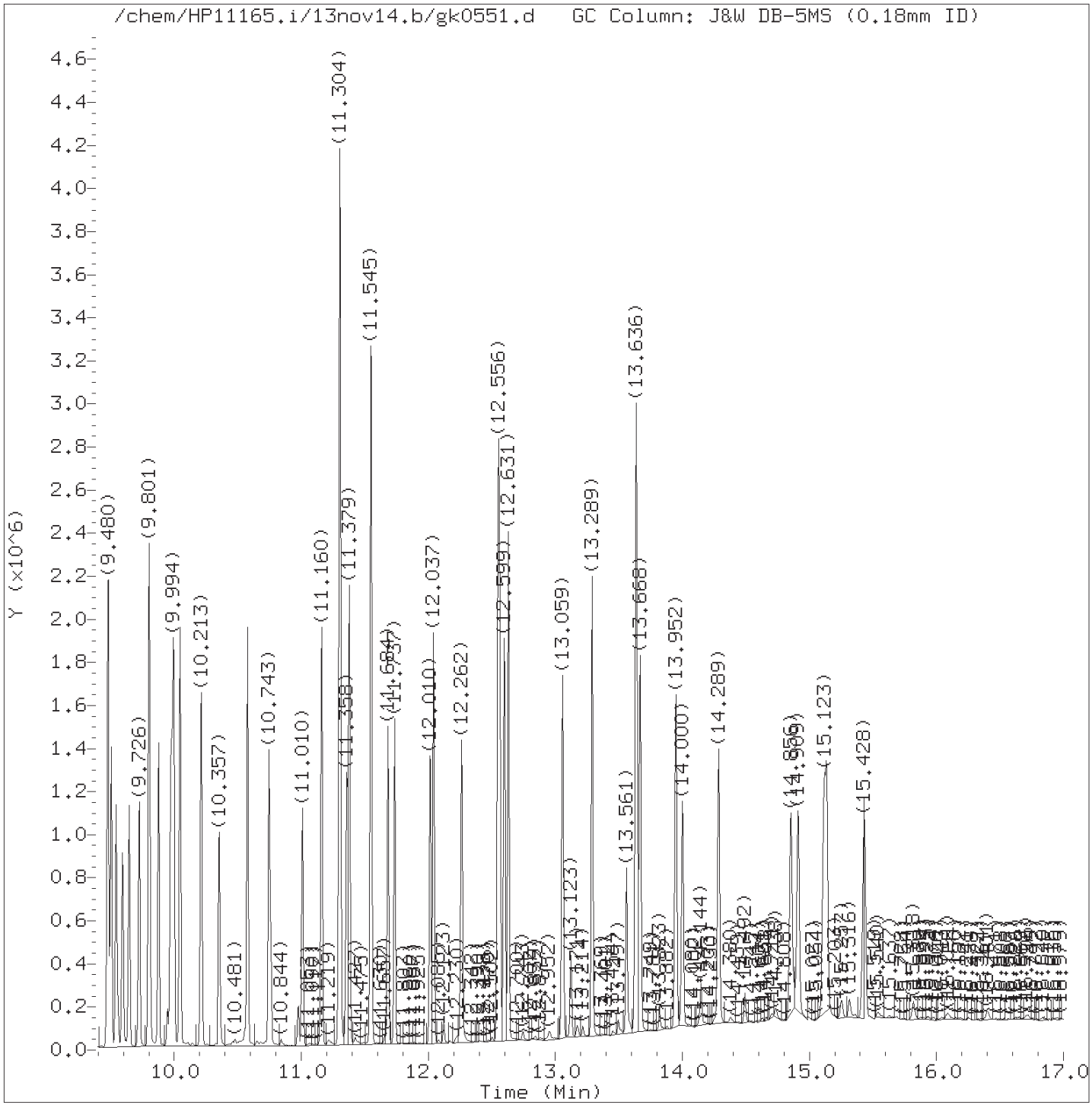
Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.356	88	80707	31.068
3) N-Nitrosodimethylamine	(1)	2.757	74	124559	27.338
4) Pyridine	(1)	2.832	79	197698	26.765
7) 2-Picoline	(1)	3.682	93	237785	31.312
8) N-Nitrosomethylethylamine	(1)	3.795	88	110929	28.470
9) Methyl methanesulfonate	(1)	4.121	80	97174	26.374
10)$2-Fluorophenol	(1)	4.319	112	367896	62.710
11) N-Nitrosodiethylamine	(1)	4.522	102	110008	31.236
14) Ethyl methanesulfonate	(1)	4.838	109	105656	29.772
19) Aniline	(1)	5.260	93	360520	30.938
17)$Phenol-d6	(1)	5.266	99	545969	61.854
16)$Phenol-d5	(1)	5.266	99	545969	61.854
18) Phenol	(1)	5.276	94	325000	30.968
20) bis(2-Chloroethyl)ether	(1)	5.330	93	224221	29.937
21) 2-Chlorophenol	(1)	5.378	128	172340	29.154
24) 1,3-Dichlorobenzene	(1)	5.517	146	175178	29.597
25)*1,4-Dichlorobenzene-d4	(1)	5.576	152	74036	20.000
26) 1,4-Dichlorobenzene	(1)	5.592	146	180999	30.223
27) Benzyl alcohol	(1)	5.726	108	154135	31.624
28) 1,2-Dichlorobenzene	(1)	5.736	146	169445	28.807
29) Indene	(1)	5.822	115	393143	36.492
32) bis(2-Chloroisopropyl)ether	(1)	5.854	45	244413M	24.335
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.854	45	244167M	24.310
30) 2-Methylphenol	(1)	5.859	108	205355	30.886
34) N-Nitrosopyrrolidine	(1)	5.956	100	127354	29.963
35) Acetophenone	(1)	5.972	105	303194	28.857
37) N-Nitroso-di-n-propylamine	(1)	5.988	70	162406	25.934
38) N-Nitrosomorpholine	(1)	5.993	56	118489	24.592
39) o-Toluidine	(1)	6.004	106	351920	30.654
36) 4-Methylphenol	(1)	6.009	108	241334	30.466
40) Hexachloroethane	(1)	6.063	117	74046	31.635
41)$Nitrobenzene-d5	(2)	6.116	82	448878	59.371
42) Nitrobenzene	(2)	6.132	77	230043	28.489
44) N-Nitrosopiperidine	(2)	6.282	114	115090	32.111
45) Isophorone	(2)	6.373	82	441703	29.993
48) 2-Nitrophenol	(2)	6.442	139	100772	32.123
52) 2,4-Dimethylphenol	(2)	6.512	107	224368	32.333
53) O,O,O-triethylphosphorothioate	(2)	6.571	198	89673	31.404
55) bis(2-Chloroethoxy)methane	(2)	6.592	93	289444	32.207
54) Benzoic acid	(2)	6.640	105	263536	43.745

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
60) 2,4-Dichlorophenol	(2)	6.694	162	151082	31.906
62) 1,2,4-Trichlorobenzene	(2)	6.758	180	154308	31.207
63)*Naphthalene-d8	(2)	6.806	136	342972	20.000
64) Naphthalene	(2)	6.827	128	527366	29.186
65) 4-Chloroaniline	(2)	6.892	127	247110	32.486
66) 2,6-Dichlorophenol	(2)	6.902	162	146021	31.019
67) Hexachloropropene	(2)	6.918	213	83705	31.852
69) Hexachlorobutadiene	(2)	6.961	225	74290	31.837
70) Quinoline	(2)	7.159	129	384474	29.762
73) N-Nitrosodi-n-butylamine	(2)	7.229	84	179566	23.512
74) Caprolactam	(2)	7.255	113	93654	31.889
75) 4-Chloro-3-methylphenol	(2)	7.394	107	214845	32.783
76) Safrole	(2)	7.432	162	142943	30.241
77) 2-Methylnaphthalene	(2)	7.507	142	382565	30.064
78) 1-Methylnaphthalene	(2)	7.603	142	354348	30.789
79) Hexachlorocyclopentadiene	(3)	7.667	237	54700	25.853
80) 1,2,4,5-Tetrachlorobenzene	(3)	7.673	216	150630	29.304
81) cis-Isosafrole	(3)	7.715	162	27215	3.395
82) 2,4,6-Trichlorophenol	(3)	7.796	196	118322	31.139
83) 2,4,5-Trichlorophenol	(3)	7.838	196	124845	31.539
84)$2-Fluorobiphenyl	(3)	7.876	172	780686	58.655
86) Isosafrole	(3)	7.940	162	153927	29.992
85) trans-Isosafrole	(3)	7.940	162	153927	26.693
87) 1,1'-Biphenyl	(3)	7.967	154	483740	28.530
88) 2-Chloronaphthalene	(3)	7.983	162	367172	28.642
89) 1-Chloronaphthalene	(3)	8.004	162	322084	27.418
90) Diphenyl ether	(3)	8.074	170	247769	29.343
91) 2-Nitroaniline	(3)	8.090	138	141023	31.259
92) 1,4-Naphthoquinone	(3)	8.159	158	155368	29.376
93) 1,4-Dinitrobenzene	(3)	8.229	168	74136	32.597
94) Dimethylphthalate	(3)	8.277	163	436896	29.638
95) 1,3-Dinitrobenzene	(3)	8.298	168	83732	30.273
97) 2,6-Dinitrotoluene	(3)	8.330	165	106586	32.300
99) Acenaphthylene	(3)	8.384	152	552272	29.985
100) 3-Nitroaniline	(3)	8.491	138	129511	31.207
101)*Acenaphthene-d10	(3)	8.523	164	218531	20.000
102) Acenaphthene	(3)	8.555	153	380047	28.750
103) 2,4-Dinitrophenol	(3)	8.598	184	87637	42.771
105) Pentachlorobenzene	(3)	8.683	250	141105	30.543
104) 4-Nitrophenol	(3)	8.694	109	75656	30.301

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
106) 2,4-Dinitrotoluene	(3)	8.721	165	147490	31.826
107) Dibenzofuran	(3)	8.726	168	526147	29.088
108) 1-Naphthylamine	(3)	8.801	143	450579	30.279
109) 2,3,4,6-Tetrachlorophenol	(3)	8.855	232	101184	31.571
110) 2-Naphthylamine	(3)	8.881	143	457746	30.780
111) Diethylphthalate	(3)	8.978	149	451061	30.029
112) Thionazin	(3)	9.052	107	98243	32.599
113) Fluorene	(3)	9.058	166	451909	29.931
114) 4-Chlorophenyl-phenylether	(3)	9.068	204	210347	30.474
115) 5-Nitro-o-toluidine	(3)	9.079	152	143226	30.530
116) 4-Nitroaniline	(3)	9.090	138	131922	29.499
117) 4,6-Dinitro-2-methylphenol	(4)	9.122	198	88631	30.829
119) NDPA as diphenylamine	(4)	9.186	169	400339	28.817
118) N-Nitrosodiphenylamine	(4)	9.186	169	400339	28.939
120) 1,2-Diphenylhydrazine	(4)	9.224	77	543490	27.019
121)$2,4,6-Tribromophenol	(3)	9.298	330	98930	67.751
122) Tetraethyldithiopyrophosphate	(4)	9.357	97	83125	29.469
123) 1,3,5-Trinitrobenzene	(4)	9.470	213	57057	30.468
124) Diallate (peak 1)	(4)	9.475	86	242196	22.365
125) Phorate	(4)	9.480	75	488068	29.231
126) Phenacetin	(4)	9.507	108	301727	31.981
127) 4-Bromophenyl-phenylether	(4)	9.545	248	115356	29.415
128) Diallate (peak 2)	(4)	9.561	86	35799	7.186
129) Hexachlorobenzene	(4)	9.593	284	109274	29.549
130) Dimethoate	(4)	9.646	87	260128	32.231
132) Atrazine	(4)	9.726	200	123373	27.815
135) 4-Aminobiphenyl	(4)	9.801	169	418489	31.423
133) Pentachlorophenol	(4)	9.801	266	71592	28.181
134) Pentachloronitrobenzene	(4)	9.807	237	48290	30.222
138) Pronamide	(4)	9.876	173	203968	31.695
140)*Phenanthrene-d10	(4)	9.972	188	416030	20.000
142) Dinoseb	(4)	9.983	211	121819	30.535
143) Phenanthrene	(4)	9.999	178	713816	29.014
144) Anthracene	(4)	10.047	178	729724	30.174
146) Carbazole	(4)	10.213	167	680986	30.056
148) Methyl parathion	(4)	10.357	109	188281	34.174
149) Di-n-butylphthalate	(4)	10.577	149	832129	30.641
151) Parathion	(4)	10.743	109	120671	33.696
152) 4-Nitroquinoline-1-oxide	(4)	10.759	190	51554	28.238
156) Isodrin	(4)	11.010	193	74173	30.273

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

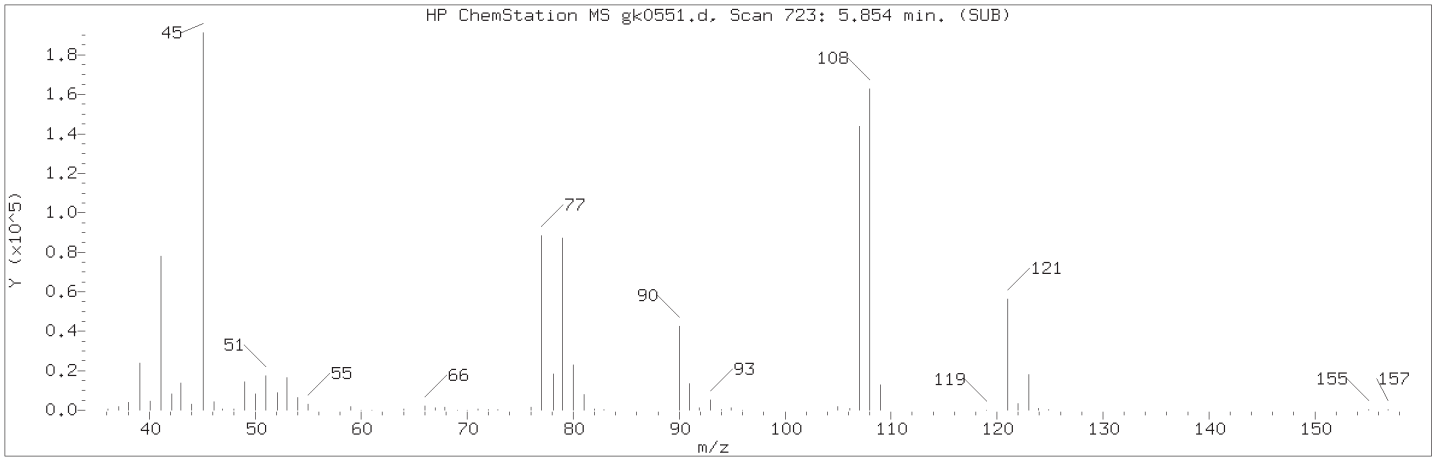
Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
157) Fluoranthene	(4)	11.160	202	771937	30.637
162) Benzidine	(5)	11.304	184	1707212	92.556
164)*Pyrene-d10	(5)	11.358	212	484837	20.000
165) Pyrene	(5)	11.379	202	811456	29.259
166)$Terphenyl-d14	(5)	11.550	244	1047842	60.591
168) p-Dimethylaminoazobenzene	(5)	11.684	225	160751	32.343
171) Chlorobenzilate	(5)	11.737	139	241727	30.875
172) 3,3'-Dimethylbenzidine	(5)	12.016	212	480656	33.336
173) Butylbenzylphthalate	(5)	12.037	149	375922	30.143
174) 2-Acetylaminofluorene	(5)	12.262	181	363423	35.039
175) 3,3'-Dichlorobenzidine	(5)	12.550	252	276772	32.519
176) 4,4'-Methylenebis(2-Chloroanil	(5)	12.556	231	134282	33.432
177) Benzo(a)anthracene	(5)	12.566	228	727943	31.250
178) Chrysene	(5)	12.599	228	682126	29.995
179) bis(2-Ethylhexyl)phthalate	(5)	12.631	149	534000	31.355
181) 6-Methylchrysene	(5)	13.059	242	501738	31.012
183) Di-n-octylphthalate	(6)	13.289	149	914234	30.335
184) 7,12-Dimethylbenz[a]anthracene	(6)	13.636	256	335938	30.416
185) Benzo(b)fluoranthene	(6)	13.642	252	727772M	29.797
186) Benzo(k)fluoranthene	(6)	13.668	252	735853M	28.426
187) Benzo(a)pyrene	(6)	13.952	252	658597	30.240
188)*Perylene-d12	(6)	14.000	264	404229	20.000
190) 3-Methylcholanthrene	(6)	14.289	268	327088	31.395
191) Dibenz(a,h)acridine	(6)	14.856	279	493676	32.281
192) Dibenz(a,j)acridine	(6)	14.915	279	517237	30.091
193) Indeno(1,2,3-cd)pyrene	(6)	15.118	276	684773	30.998
194) Dibenz(a,h)anthracene	(6)	15.139	278	577141	31.473
196) Benzo(g,h,i)perylene	(6)	15.433	276	566264	30.409
203) 2,4_2,6-Dinitrotoluenes	(3)			254076	31.353
204) Diallate TRANS/CIS	(4)			277995	29.677

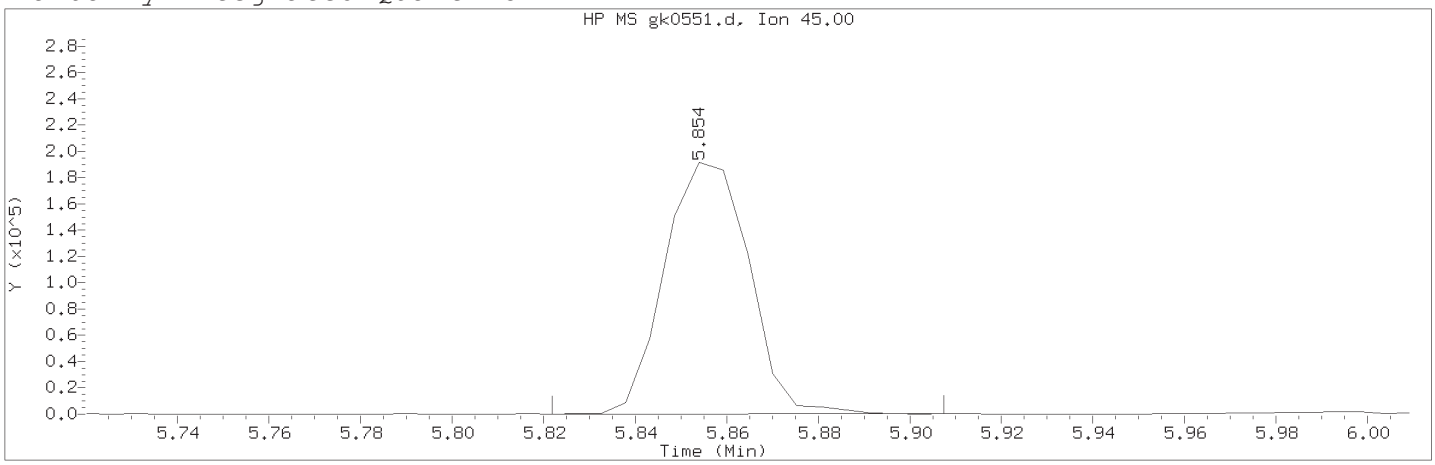
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

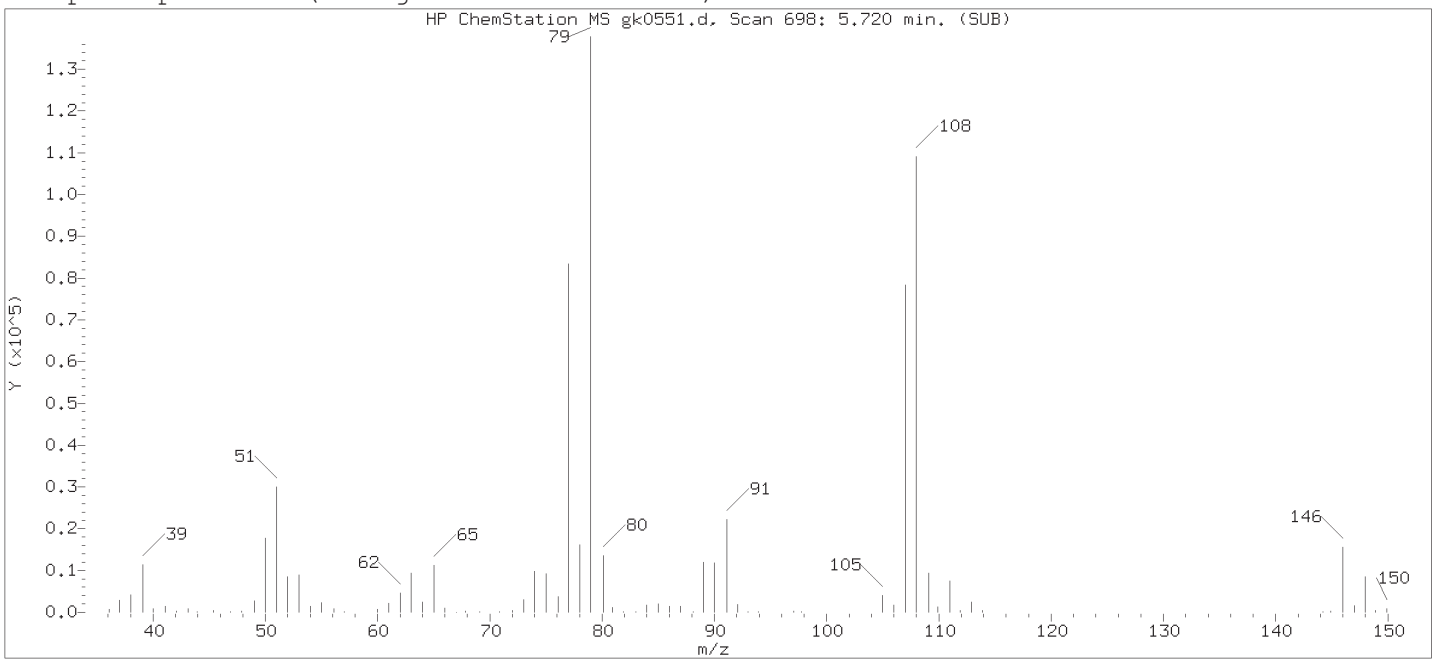
Compound Number	: 32		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 723		
Retention Time (minutes)	: 5.854		
Quant Ion	: 45.00		
Area (flag)	: 244413M		
On-Column Amount (ng/ul)	: 24.3346		
Integration start scan	: 716	Integration stop scan:	732
Y at integration start	: 0	Y at integration end:	278

Reason for manual integration: improper integration

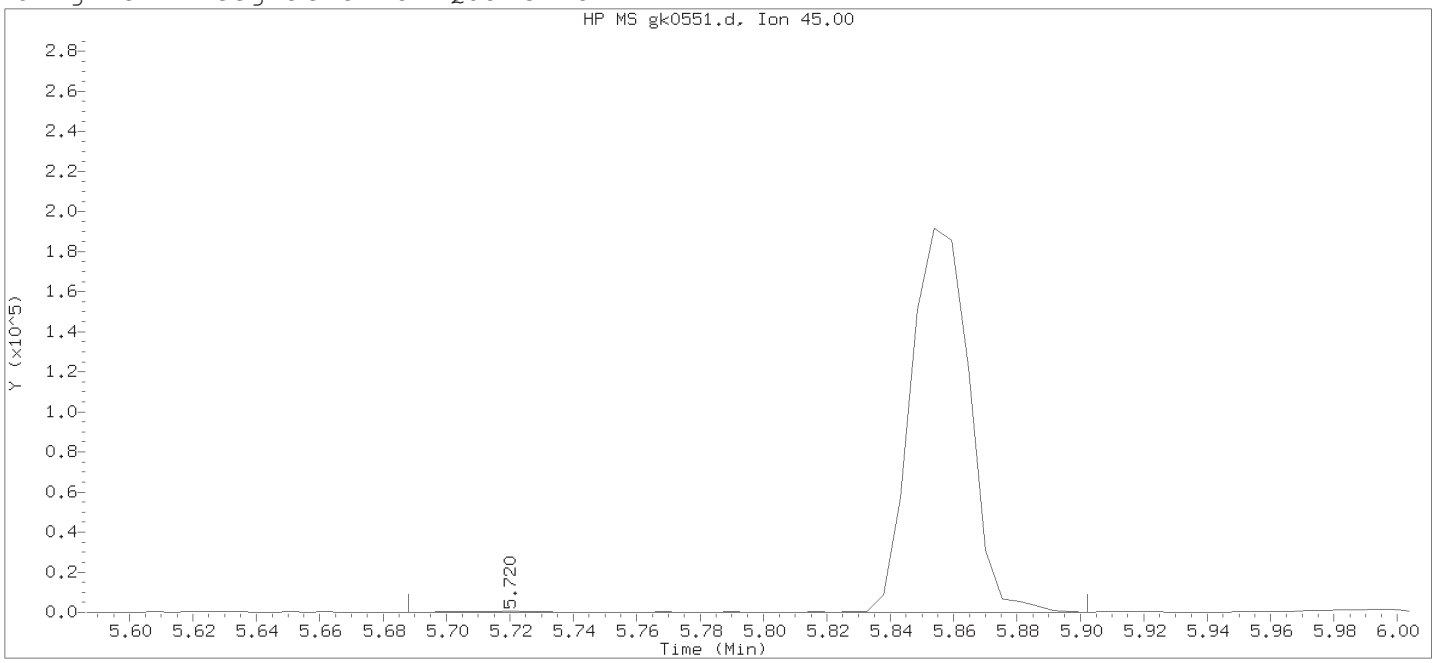
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:47.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

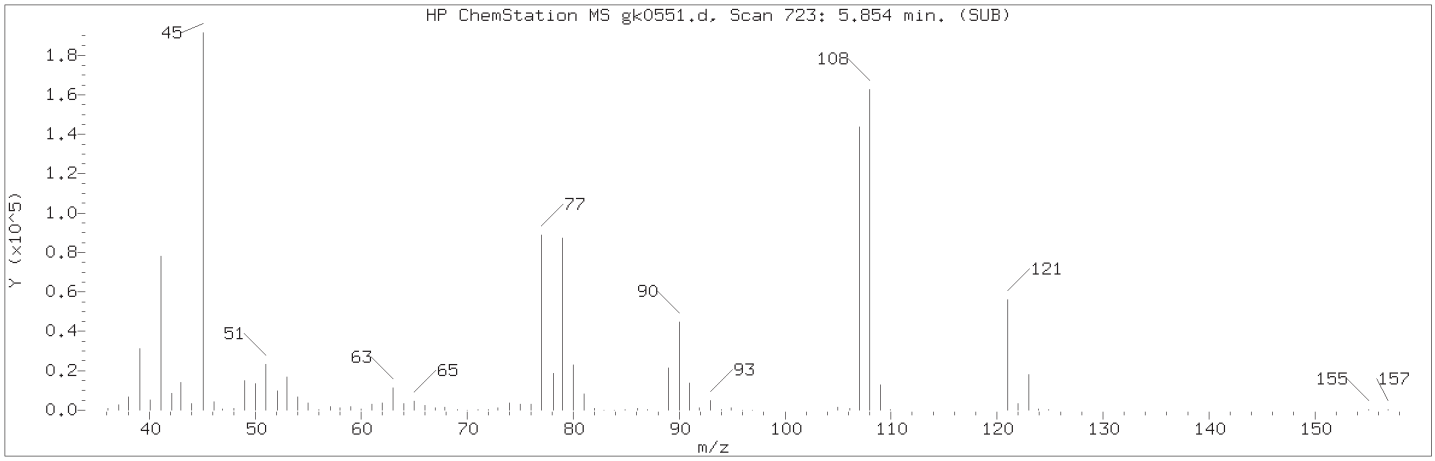
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 02:00
Date, time and analyst ID of latest file update: 14-Nov-2013 02:00 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

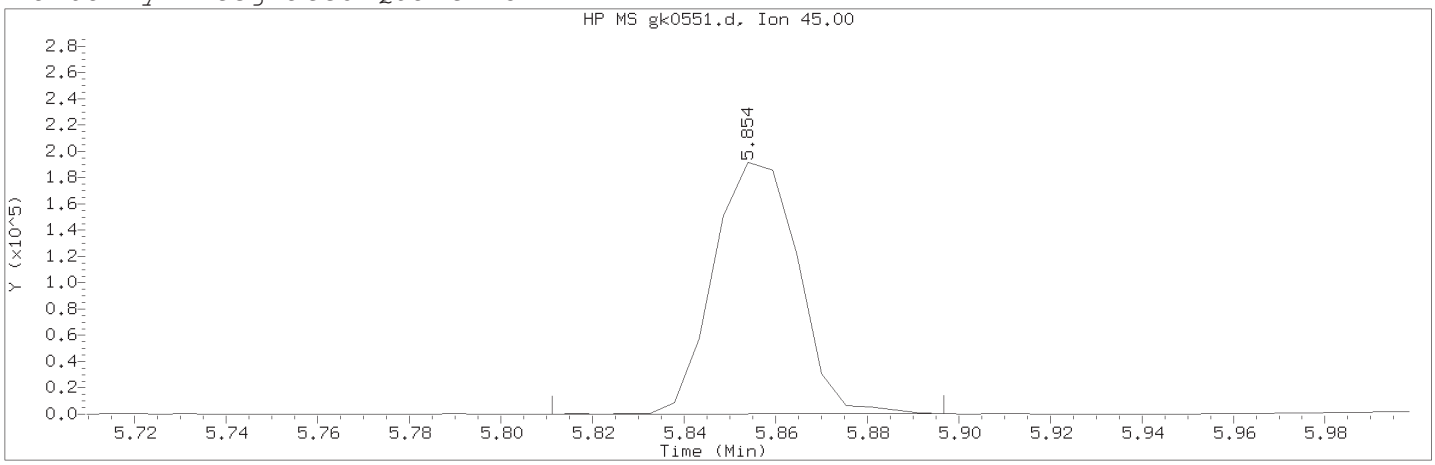
Compound Number : 32
Compound Name : bis(2-Chloroisopropyl)ether
Scan Number : 698
Retention Time (minutes) : 5.720
Quant Ion : 45.00
Area : 246004
On-column Amount (ng/ul) : 24.4929
Integration start scan : 691 Integration stop scan: 731
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

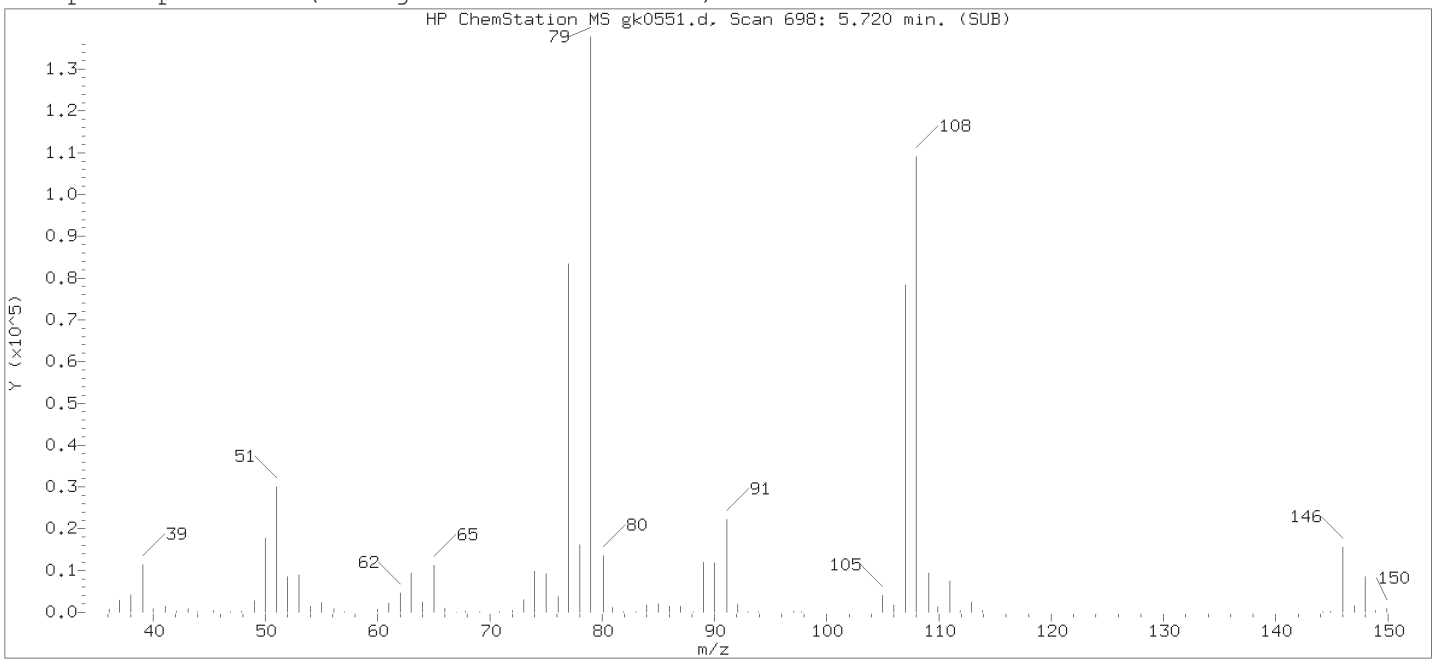
Compound Number	: 31		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 723		
Retention Time (minutes)	: 5.854		
Quant Ion	: 45.00		
Area (flag)	: 244167M		
On-Column Amount (ng/ul)	: 24.3102		
Integration start scan	: 714	Integration stop scan:	730
Y at integration start	: 0	Y at integration end:	376

Reason for manual integration: improper integration

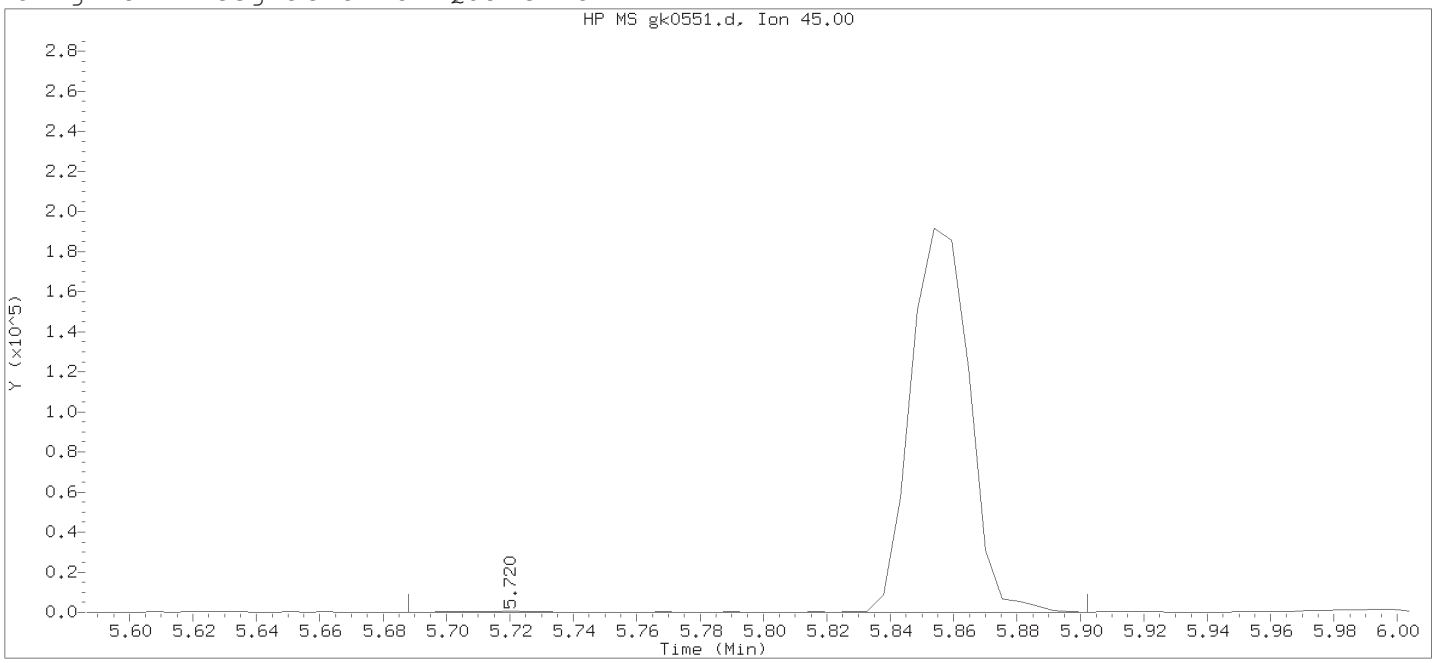
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:47.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

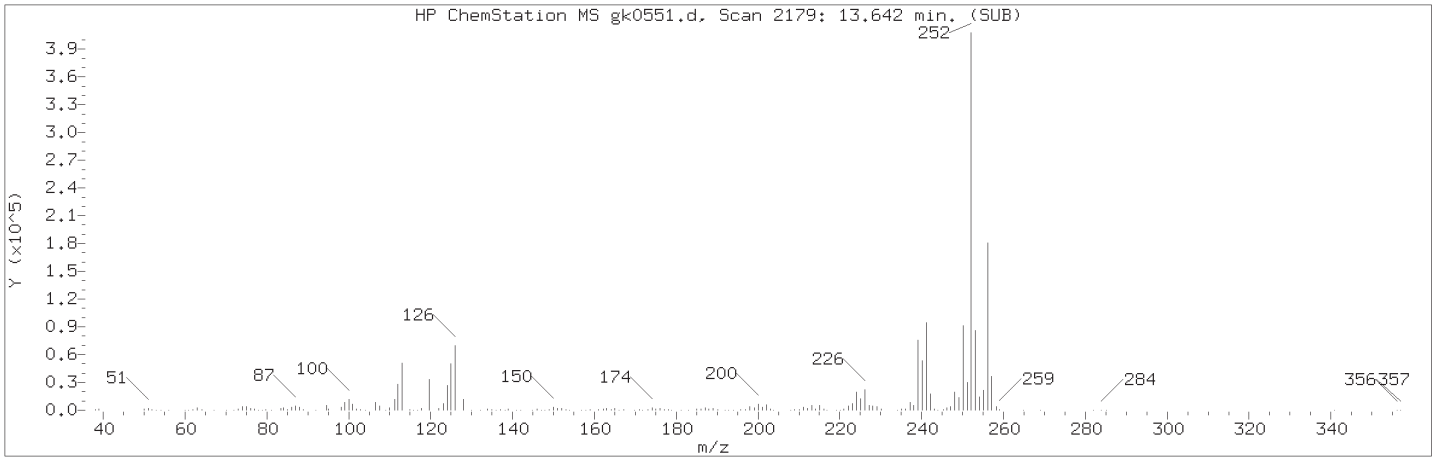
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 02:00
Date, time and analyst ID of latest file update: 14-Nov-2013 02:00 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

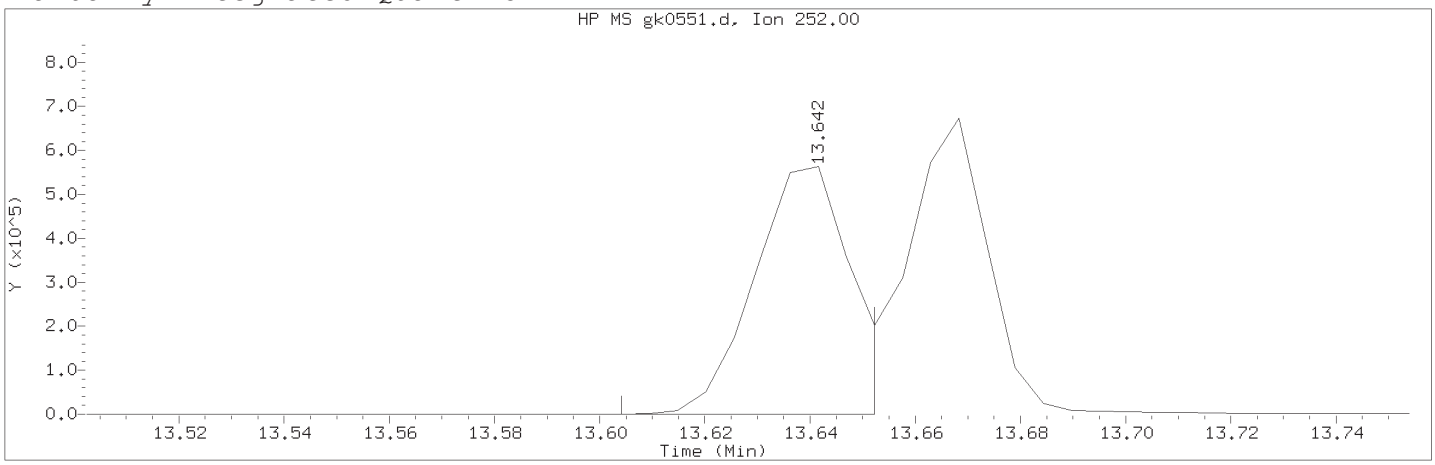
Compound Number : 31
Compound Name : 2,2'-oxybis(1-Chloropropane)
Scan Number : 698
Retention Time (minutes) : 5.720
Quant Ion : 45.00
Area : 246004
On-column Amount (ng/ul) : 24.4929
Integration start scan : 691 Integration stop scan: 731
Y at integration start : 0 Y at integration end: 0

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

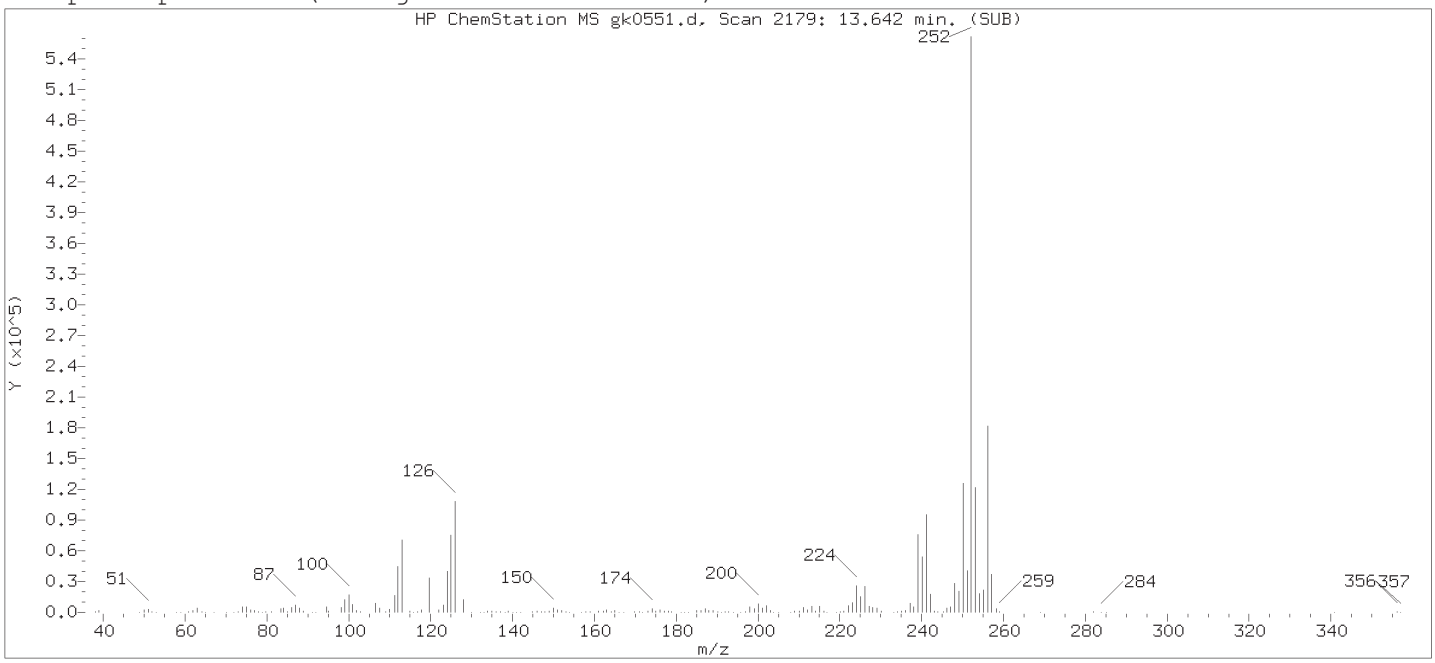
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2179		
Retention Time (minutes)	: 13.642		
Quant Ion	: 252.00		
Area (flag)	: 727772M		
On-Column Amount (ng/ul)	: 29.7970		
Integration start scan	: 2171	Integration stop scan:	2180
Y at integration start	: 0	Y at integration end:	239

Reason for manual integration: improper integration

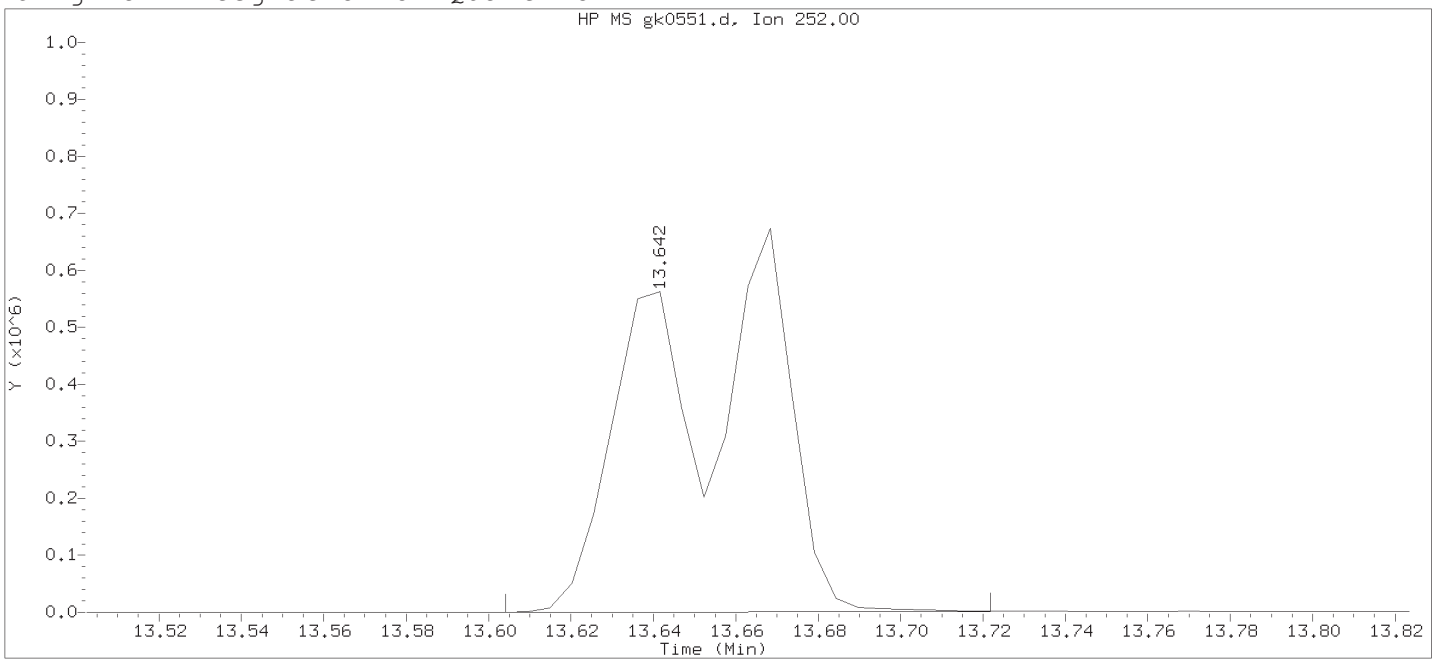
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:47.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

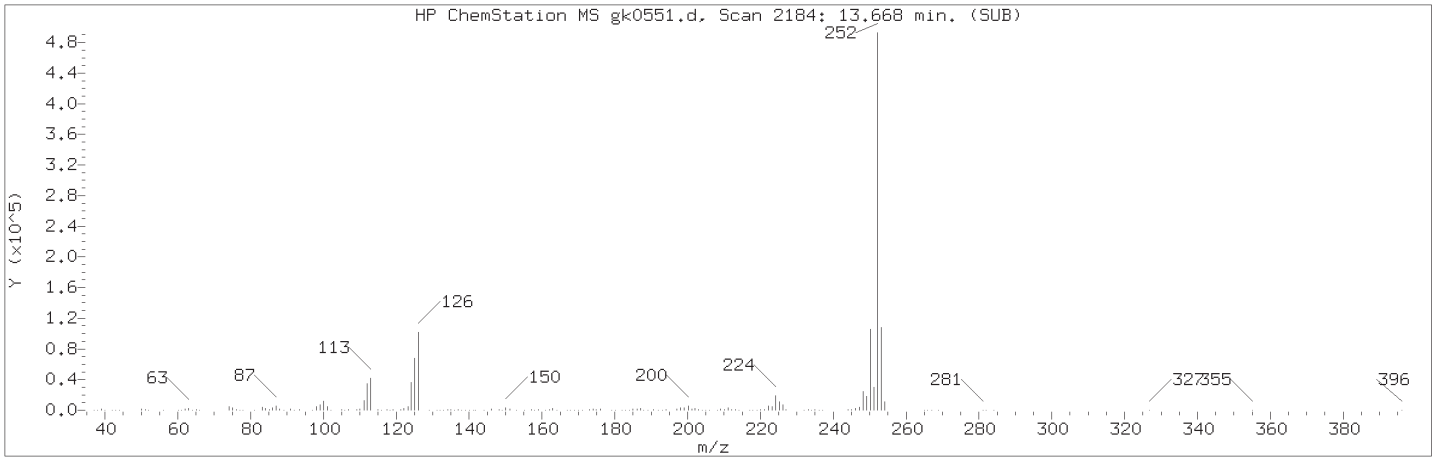
Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 02:00
Date, time and analyst ID of latest file update: 14-Nov-2013 02:00 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

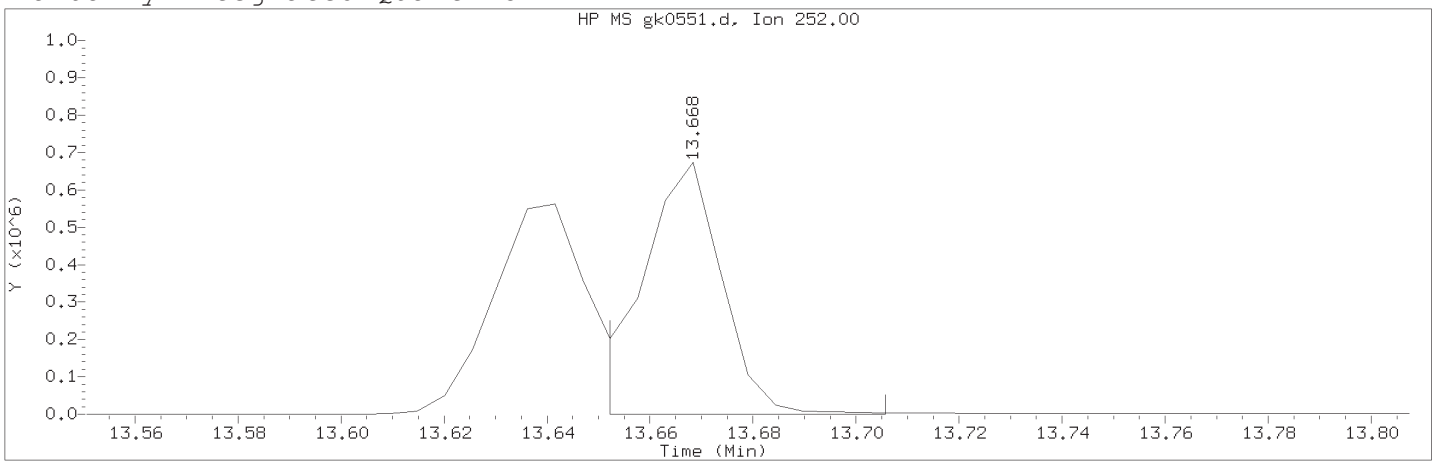
Compound Number	: 185		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2179		
Retention Time (minutes)	: 13.642		
Quant Ion	: 252.00		
Area	: 1400100		
On-column Amount (ng/ul)	: 57.3240		
Integration start scan	: 2171	Integration stop scan:	2193
Y at integration start	: 0	Y at integration end:	586

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 03:02
Date, time and analyst ID of latest file update: 14-Nov-2013 03:02 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

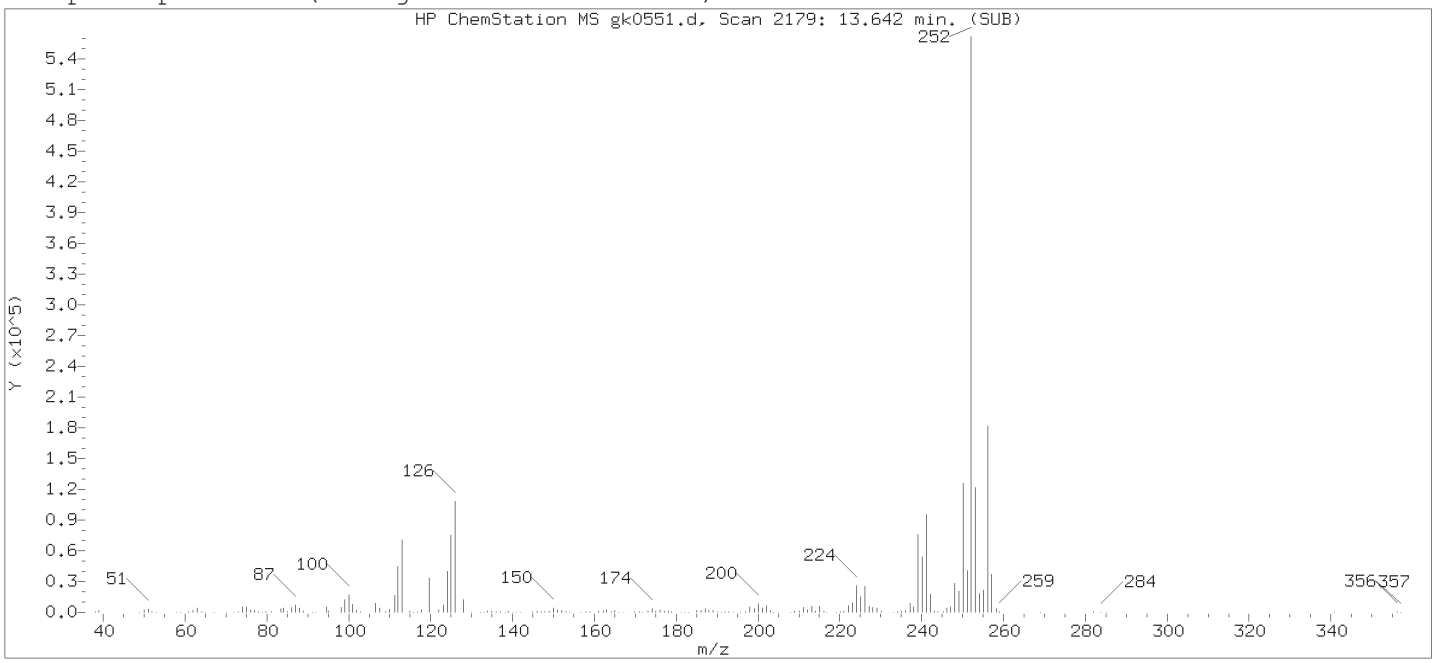
Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2184		
Retention Time (minutes)	: 13.668		
Quant Ion	: 252.00		
Area (flag)	: 735853M		
On-Column Amount (ng/ul)	: 28.4265		
Integration start scan	: 2180	Integration stop scan:	2190
Y at integration start	: 212	Y at integration end:	212

Reason for manual integration: improper integration

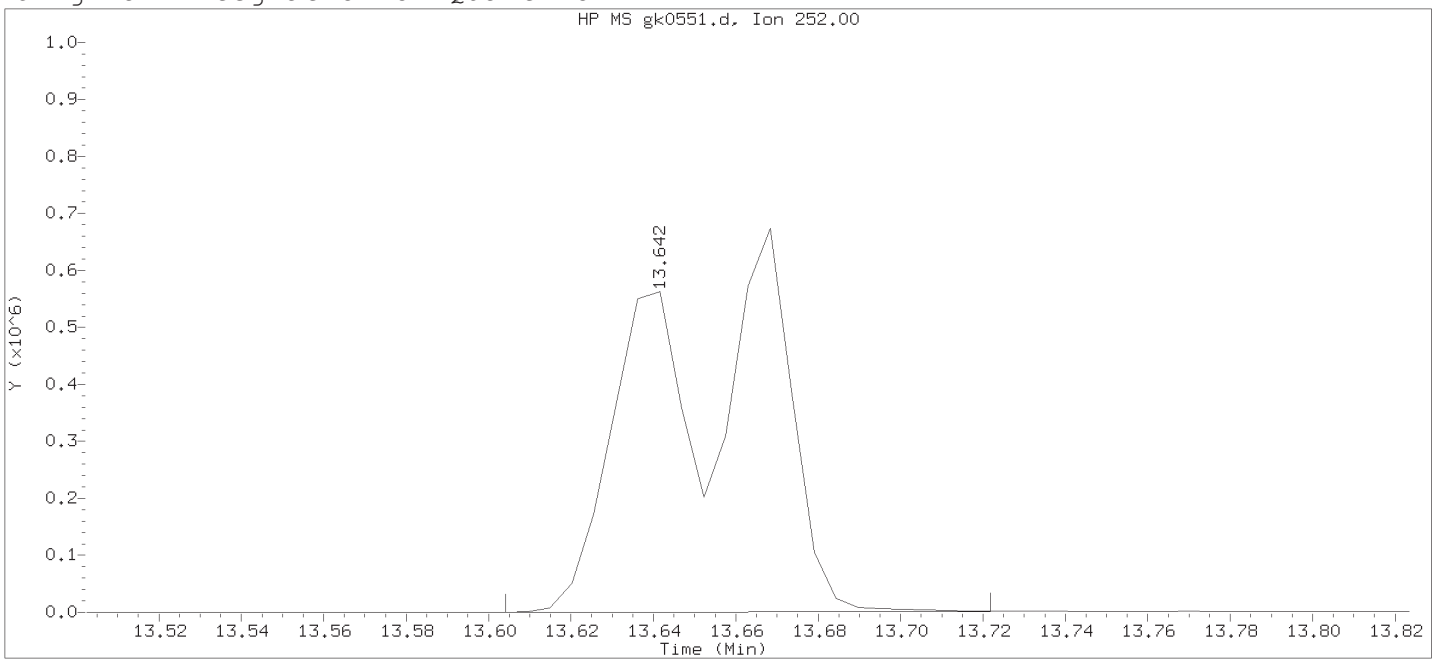
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:47.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



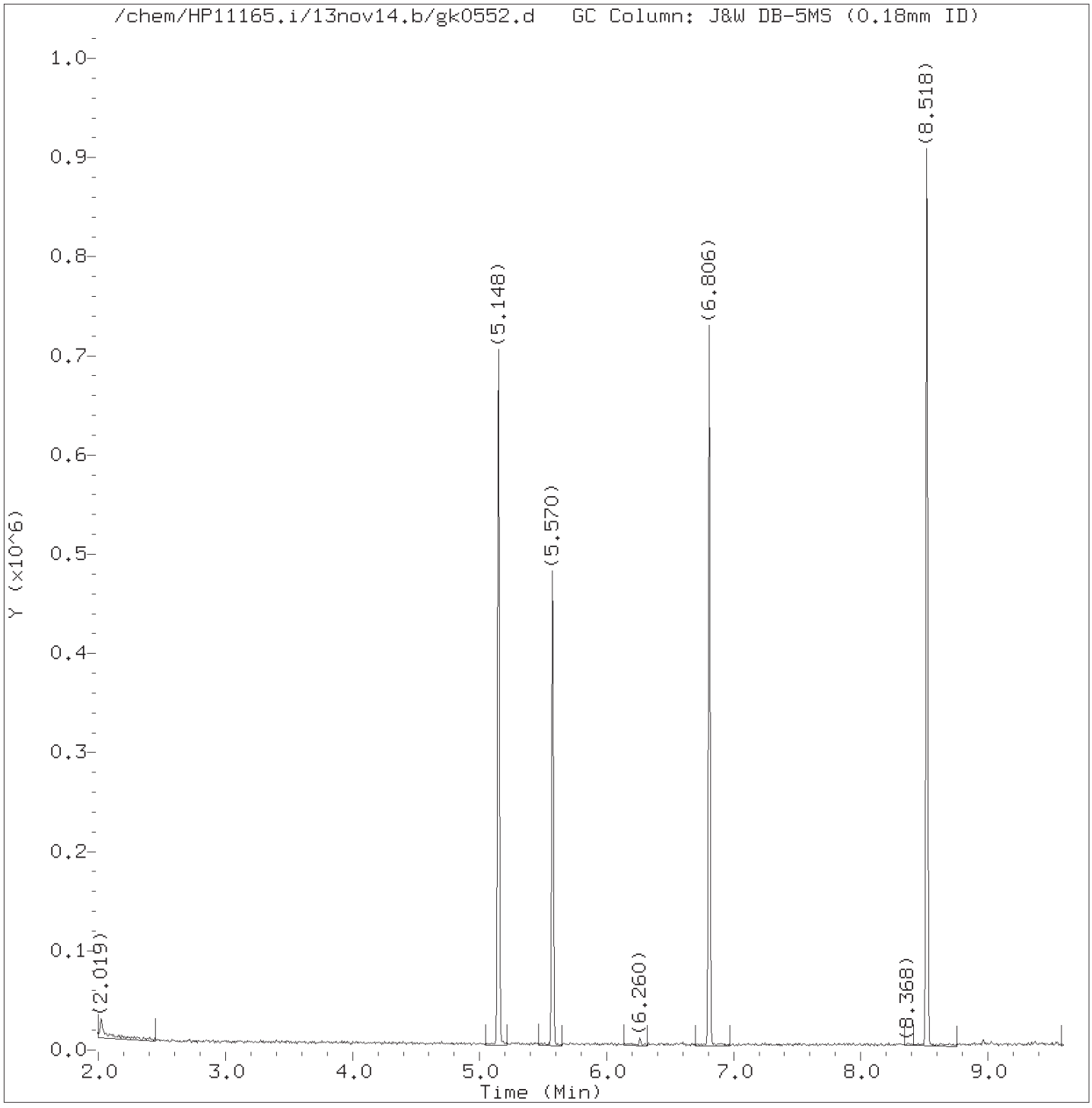
Data File: /chem/HP11165.i/13nov14.b/gk0551.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:14 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 14-NOV-2013 02:00
Date, time and analyst ID of latest file update: 14-Nov-2013 02:00 bkg00522

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2179		
Retention Time (minutes)	: 13.642		
Quant Ion	: 252.00		
Area	: 1400100		
On-column Amount (ng/ul)	: 54.0867		
Integration start scan	: 2171	Integration stop scan:	2193
Y at integration start	: 0	Y at integration end:	586

Digitally signed by Brian K. Graham on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

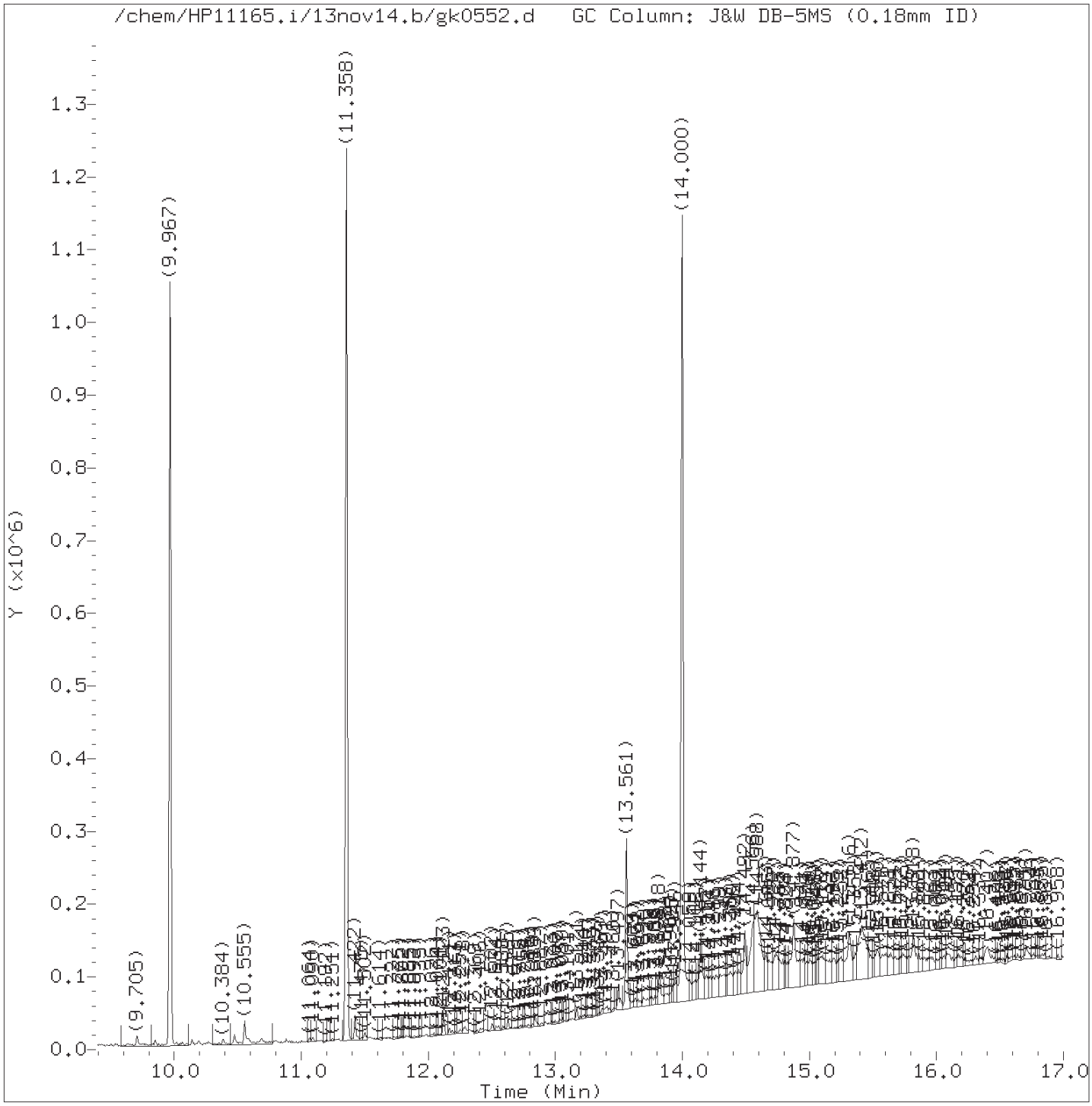
Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:40 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: bas
Calibration date and time: 14-NOV-2013 02:09
Date, time and analyst ID of latest file update: 14-Nov-2013 02:09 bkg00522

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:40 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: bas
Calibration date and time: 14-NOV-2013 02:09
Date, time and analyst ID of latest file update: 14-Nov-2013 02:09 bkg00522

Sample Name: SSTD030 Lab Sample ID: BAS3153

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature used ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov14.b/gk0552.d Instrument ID: HP11165.i
Injection date and time: 14-NOV-2013 01:40 Analyst ID: bkg00522

Method used: /chem/HP11165.i/13nov14.b/mnew8270.m Sublist used: bas
Calibration date and time: 14-NOV-2013 02:09
Date, time and analyst ID of latest file update: 14-Nov-2013 02:09 bkg00522

Sample Name: SSTD030 Lab Sample ID: BAS3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
15) Benzaldehyde	(1)	5.148	77	156127	27.955
25)*1,4-Dichlorobenzene-d4	(1)	5.570	152	71881	20.000
63)*Naphthalene-d8	(2)	6.806	136	308663	20.000
101)*Acenaphthene-d10	(3)	8.518	164	193833	20.000
140)*Phenanthrene-d10	(4)	9.967	188	382549	20.000
164)*Pyrene-d10	(5)	11.358	212	461922	20.000
188)*Perylene-d12	(6)	14.000	264	410244	20.000

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 11/14/2013 at 03:03.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP18831.i/13oct28b.b/hj1360.d

Date : 28-OCT-2013 23:00

Client ID: DFTPP

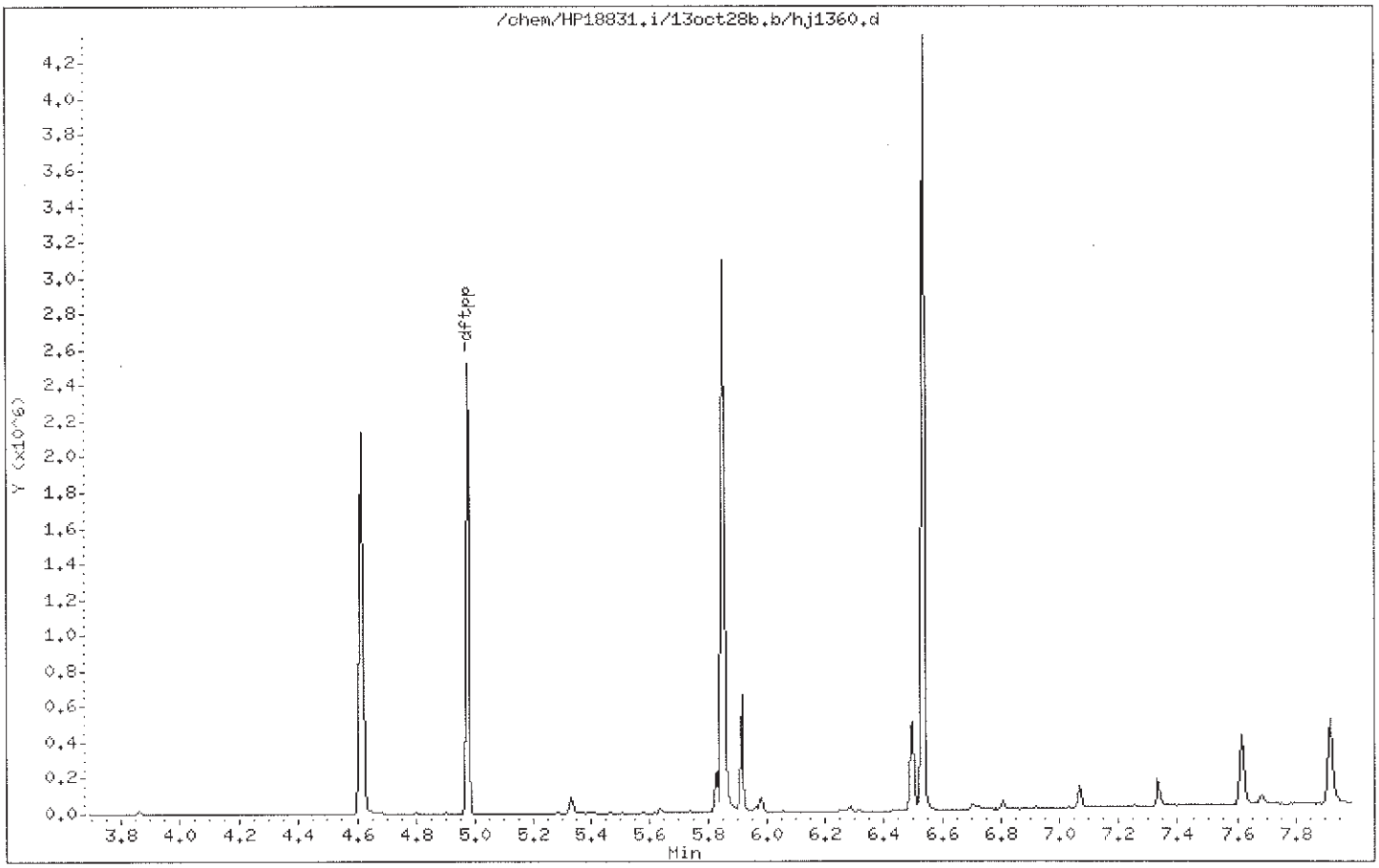
Instrument: HP18831.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP18831.i/13oct28b.b/hj1360.d

Date : 28-OCT-2013 23:00

Client ID: DFTPP

Instrument: HP18831.i

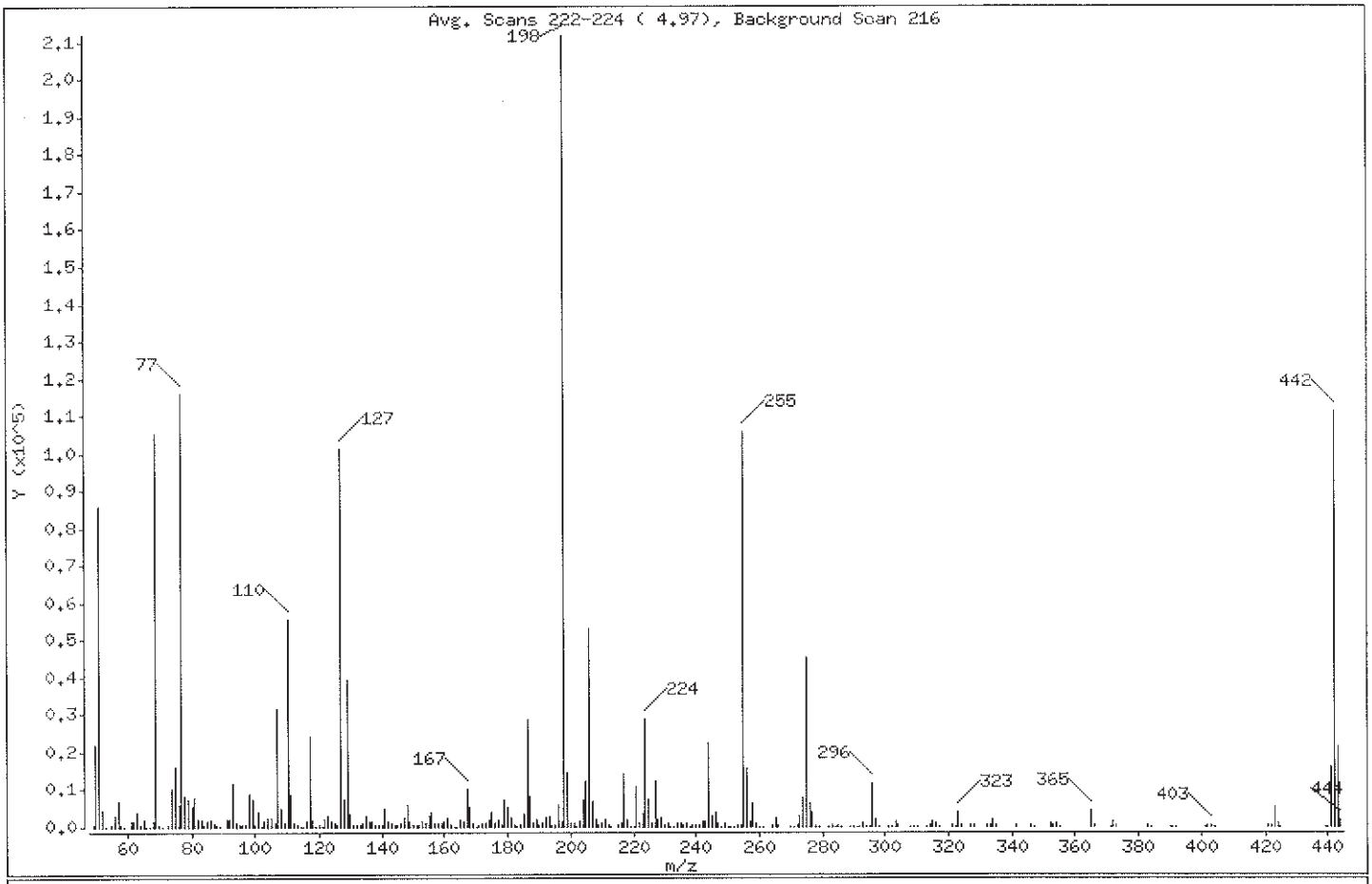
Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.47
68	Less than 2.00% of mass 69	0.77 (1.54)
69	Mass 69 relative abundance	49.74
70	Less than 2.00% of mass 69	0.26 (0.53)
127	40.00 - 60.00% of mass 198	47.90
197	Less than 1.00% of mass 198	0.64
199	5.00 - 9.00% of mass 198	6.82
275	10.00 - 30.00% of mass 198	21.28
365	Greater than 1.00% of mass 198	2.06
441	Present, but less than mass 443	7.53
442	40.00 - 99.99% of mass 198	52.47
443	17.00 - 23.00% of mass 442	10.21 (19.46)

Data File: /chem/HP18831.i/13oct28b.b/hj1360.d

Date : 28-OCT-2013 23:00

Client ID: DFTPP

Instrument: HP18831.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18

Data File: hj1360.d
Spectrum: Avg. Scans 222-224 (4.97), Background Scan 216
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	578	126.00	507	199.00	14444	278.00	485
50.00	21904	127.00	101480	200.00	1106	279.00	145
51.00	85736	128.00	7438	201.00	984	282.00	57
52.00	4445	129.00	39440	202.00	174	283.00	430
53.00	194	130.00	3315	203.00	1464	284.00	208
55.00	444	131.00	712	204.00	7202	285.00	675
56.00	2817	132.00	323	205.00	12205	286.00	68
57.00	6602	133.00	244	206.00	52840	289.00	170
58.00	332	134.00	980	207.00	6811	290.00	80
59.00	53	135.00	3056	208.00	1838	291.00	53
61.00	1268	136.00	1326	209.00	567	292.00	167
62.00	1319	137.00	1482	210.00	927	293.00	769
63.00	3812	138.00	348	211.00	2053	294.00	182
64.00	619	139.00	247	212.00	269	295.00	242
65.00	2087	140.00	328	213.00	134	296.00	11848
66.00	92	141.00	4955	215.00	534	297.00	1712
67.00	214	142.00	1621	216.00	1184	298.00	57
68.00	1622	143.00	1118	217.00	13988	301.00	116
69.00	105384	144.00	370	218.00	1743	302.00	180
70.00	556	145.00	295	219.00	143	303.00	1357
71.00	55	146.00	925	220.00	225	304.00	391
73.00	710	147.00	2497	221.00	10947	308.00	168
74.00	9992	148.00	5893	222.00	918	309.00	76
75.00	16071	149.00	1274	223.00	3190	310.00	109
76.00	5648	150.00	363	224.00	28784	313.00	62
77.00	115784	151.00	645	225.00	7290	314.00	655
78.00	8152	152.00	262	226.00	762	315.00	1360
79.00	7505	153.00	1651	227.00	11988	316.00	780
80.00	5510	154.00	1060	228.00	1810	317.00	99
81.00	7633	155.00	2841	229.00	2609	321.00	438
82.00	2077	156.00	4125	230.00	397	322.00	164
83.00	1772	157.00	922	231.00	954	323.00	4029
84.00	315	158.00	975	232.00	173	324.00	715
85.00	1374	159.00	745	233.00	137	327.00	572
86.00	2164	160.00	1604	234.00	731	328.00	277

Data File: /chem/HP18831.i/13oct28b.b/hj1360.d

Date : 28-OCT-2013 23:00

Client ID: DFTPP

Instrument: HP18831.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

Column diameter: 0.18

Data File: hj1360.d
Spectrum: Avg. Scans 222-224 (4.97), Background Scan 216
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
87.00	1032	161.00	2365	235.00	832	332.00	267
88.00	407	162.00	664	236.00	426	333.00	331
89.00	167	163.00	198	237.00	986	334.00	2151
91.00	1752	164.00	192	238.00	123	335.00	531
92.00	1994	165.00	1852	239.00	432	341.00	375
93.00	11905	166.00	1363	240.00	376	346.00	605
94.00	820	167.00	10238	241.00	561	347.00	137
95.00	361	168.00	5192	242.00	1472	352.00	1016
96.00	617	169.00	992	243.00	1463	353.00	696
97.00	310	170.00	157	244.00	22408	354.00	939
98.00	8940	171.00	508	245.00	2711	355.00	160
99.00	7489	172.00	805	246.00	4022	365.00	4366
100.00	618	173.00	1196	247.00	973	366.00	467
101.00	3961	174.00	2149	248.00	152	371.00	213
102.00	193	175.00	3891	249.00	920	372.00	1518
103.00	1426	176.00	1157	250.00	126	373.00	320
104.00	2409	177.00	1897	251.00	171	383.00	383
105.00	2571	178.00	578	252.00	181	384.00	147
106.00	780	179.00	7343	253.00	331	390.00	163
107.00	31800	180.00	5415	254.00	375	391.00	91
108.00	4660	181.00	2513	255.00	105592	392.00	69
109.00	888	182.00	431	256.00	15823	401.00	54
110.00	55344	183.00	66	257.00	1276	402.00	546
111.00	8636	184.00	592	258.00	6363	403.00	629
112.00	1170	185.00	3587	259.00	1050	404.00	215
113.00	319	186.00	28616	260.00	109	421.00	660
114.00	76	187.00	8267	261.00	155	422.00	570
115.00	146	188.00	829	264.00	313	423.00	5326
116.00	1613	189.00	1863	265.00	2386	424.00	974
117.00	24192	190.00	244	266.00	460	425.00	73
118.00	1963	191.00	812	270.00	161	439.00	99
119.00	235	192.00	2429	271.00	157	440.00	235
120.00	369	193.00	2807	272.00	275	441.00	15962
121.00	139	194.00	516	273.00	3035	442.00	111160
122.00	1898	195.00	343	274.00	7888	443.00	21632

Data File: /chem/HP18831.i/13oct28b.b/hj1360.d

Date : 28-OCT-2013 23:00

Client ID: DFTPP

Instrument: HP18831.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: bkg00522

Column phase: DB-5MS

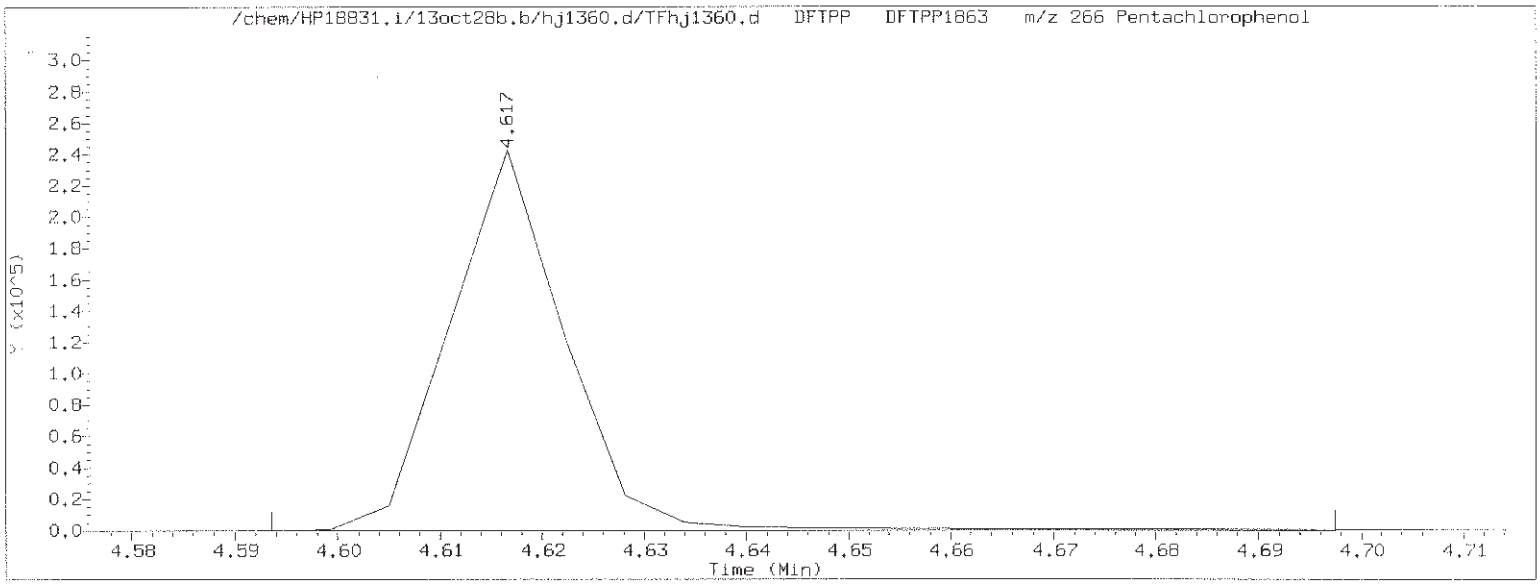
Column diameter: 0.18

Data File: hj1360.d
Spectrum: Avg. Scans 222-224 (4.97), Background Scan 216
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
123.00	3091	196.00	6008	275.00	45080	444.00	1984
124.00	1422	197.00	1356	276.00	6177		
125.00	1201	198.00	211840	277.00	3661		

Assessment of GC Column Performance and Injection Port Inertness for

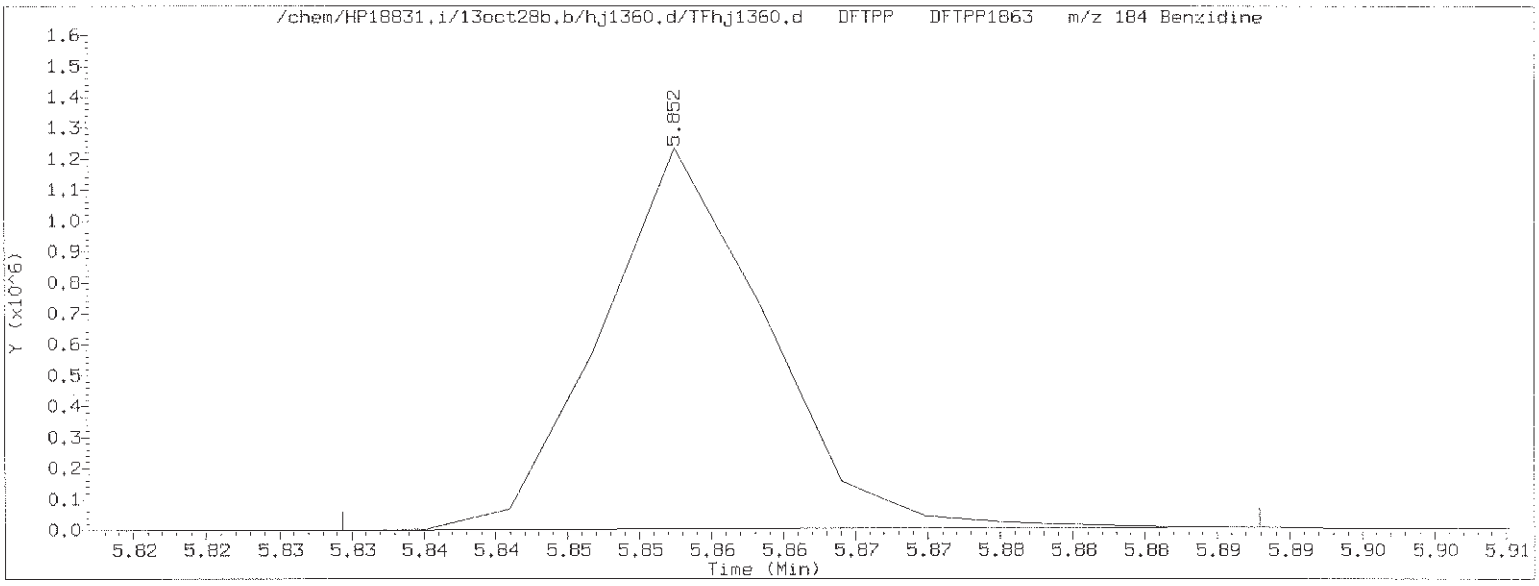
Instrument ID: HP18831.i Injection Date: 28-OCT-2013 23:00 Operator: bkg00522



Pentachlorophenol EICP peak height = 242496 EICP peak height at 10% = 24250 Pentachlorophenol EICP area = 190202

Pentachlorophenol EICP peak apex (min.) = 4.617
RT at 10% of front half of EICP (min.) = 4.605 'Front' peak width (min.) = 0.0111166667
RT at 10% of back half of EICP (min.) = 4.628 'Tailing' peak width (min.) = 0.0114166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0114166667}{0.0111166667} = 1.027$



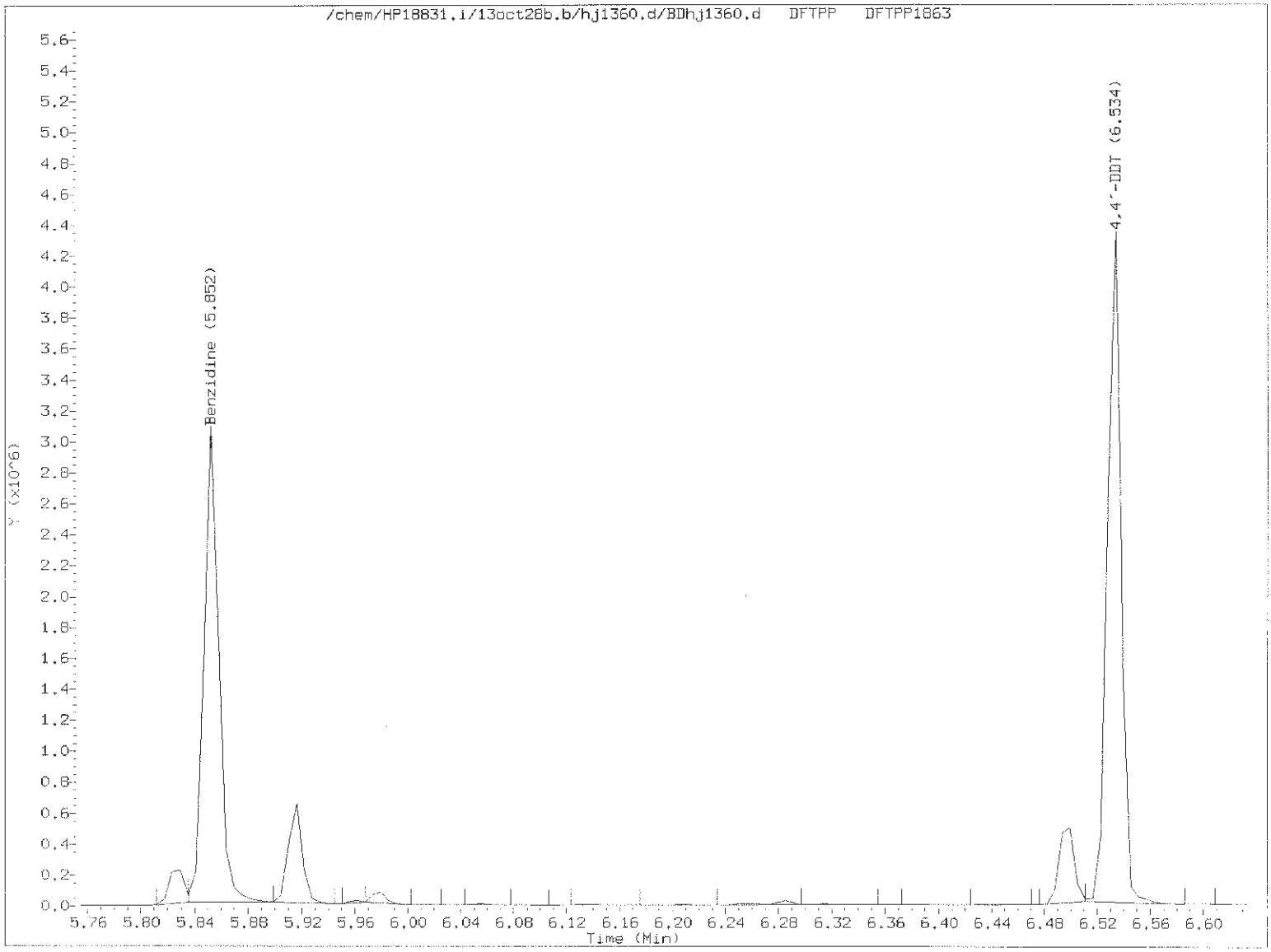
Benzidine EICP peak height = 1230960 EICP peak height at 10% = 123096 Benzidine EICP area = 978065

Benzidine EICP peak apex (min.) = 5.852
RT at 10% of front half of EICP (min.) = 5.842 'Front' peak width (min.) = 0.0108833333
RT at 10% of back half of EICP (min.) = 5.866 'Tailing' peak width (min.) = 0.0130833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0130833333}{0.0108833333} = 1.202$

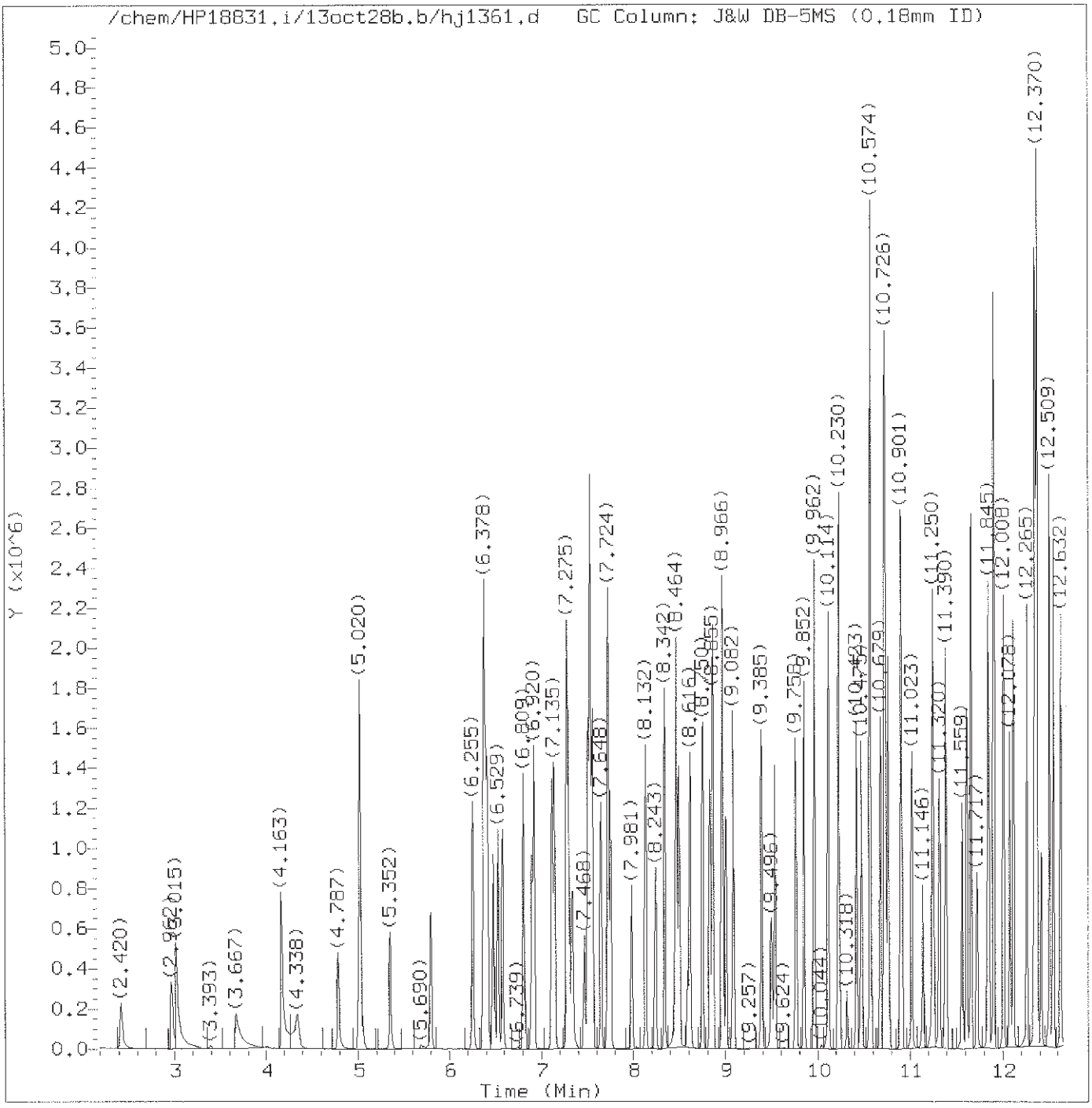
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP18831.i Injection Date: 28-OCT-2013 23:00 Operator: bkg00522



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 0}{0 + 0 + 3138742} \times 100 = 0.0$$



Total Ion Chromatogram (TIC)

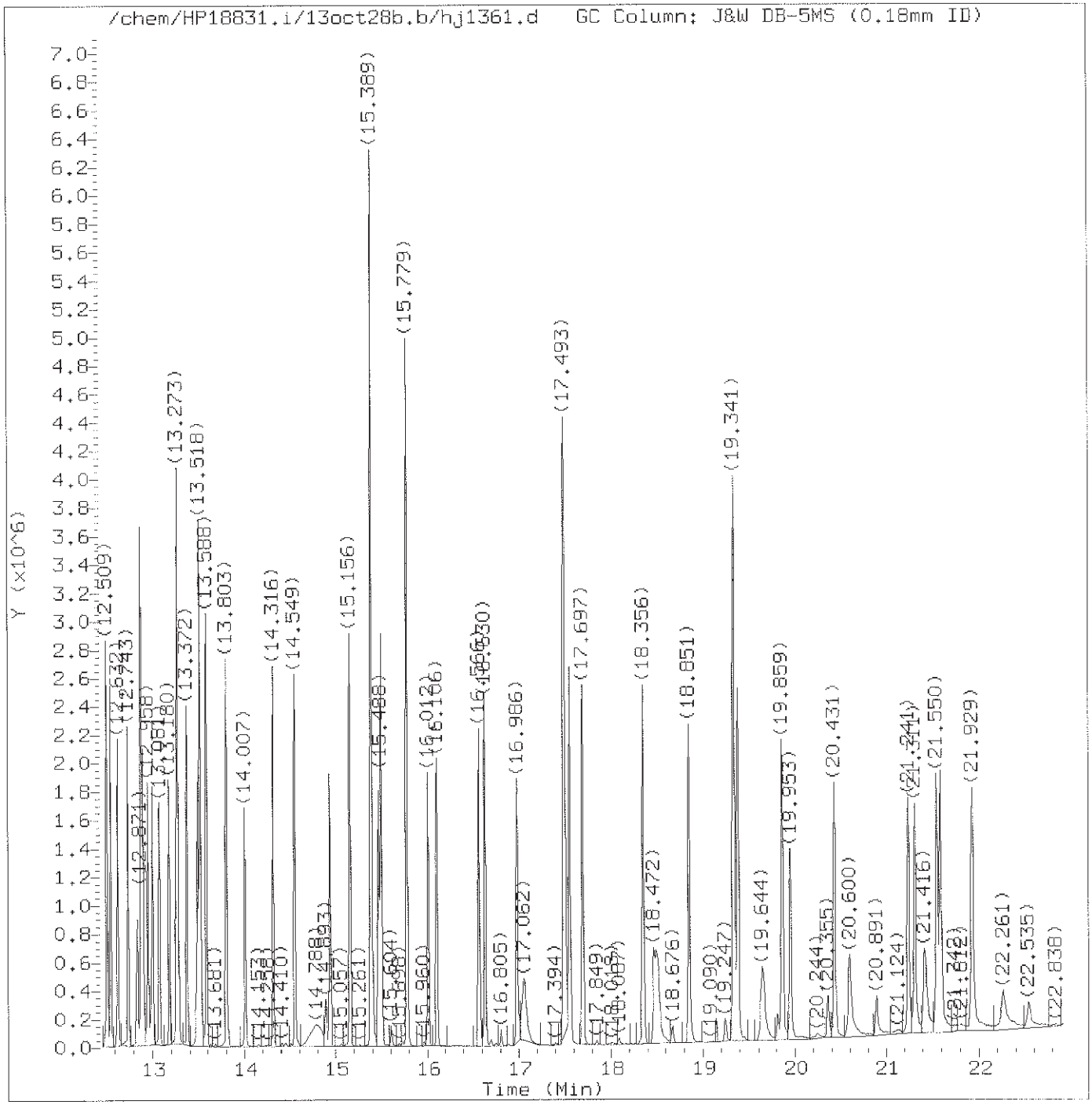
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:32.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:32.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.420	88	178831	7.500
2) N-Nitrosodimethylamine	(1)	2.962	74	304071	7.500
3) Pyridine	(1)	3.015	79	476904	7.500
5) 2-Picoline	(1)	4.163	93	499358	7.500
6) N-Nitrosomethylethylamine	(1)	4.344	88	222516	7.500
7) Methyl methanesulfonate	(1)	4.787	80	278621	7.500
8)$2-Fluorophenol	(1)	5.020	112	795144	15.000
9) N-Nitrosodiethylamine	(1)	5.352	102	206263	7.500
10) Ethyl methanesulfonate	(1)	5.801	109	205843	7.500
11) Benzaldehyde	(1)	6.255	77	400024	7.500
12)$Phenol-d5	(1)	6.378	99	1113508	15.000
13)$Phenol-d6	(1)	6.378	99	1113508	15.000
14) Phenol	(1)	6.395	94	638601	7.500
16) Aniline	(1)	6.413	93	736813	7.500
17) bis(2-Chloroethyl)ether	(1)	6.529	93	471271	7.500
18) 2-Chlorophenol	(1)	6.582	128	395195	7.500
19) 1,3-Dichlorobenzene	(1)	6.809	146	443028	7.500
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	187821	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	447876	7.500
22) Benzyl alcohol	(1)	7.112	108	256009	7.500
23) 1,2-Dichlorobenzene	(1)	7.141	146	423006	7.500
25) Indene	(1)	7.275	115	813242	9.000
26) 2-Methylphenol	(1)	7.293	108	380375	7.500
28) bis(2-Chloroisopropyl)ether	(1)	7.334	45	549793	7.500
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.334	45	549793	7.500
29) N-Nitrosopyrrolidine	(1)	7.468	100	204729	7.500
30) Acetophenone	(1)	7.508	105	583920	7.500
32) N-Nitroso-di-n-propylamine	(1)	7.526	70	377019	7.500
31) 4-Methylphenol	(1)	7.532	108	439551	7.500
33) N-Nitrosomorpholine	(1)	7.538	56	267724	7.500
34) o-Toluidine	(1)	7.555	106	683342	7.500
35) Hexachloroethane	(1)	7.648	117	180952	7.500
36)$Nitrobenzene-d5	(2)	7.724	82	1047499	15.000
37) Nitrobenzene	(2)	7.753	77	534361	7.500
38) N-Nitrosopiperidine	(2)	7.981	114	205752	7.500
39) Isophorone	(2)	8.132	82	932305	7.500
40) 2-Nitrophenol	(2)	8.243	139	199219	7.500
41) 2,4-Dimethylphenol	(2)	8.342	107	456923	7.500
42) O,O,O-triethylphosphorothioate	(2)	8.464	198	224188	7.500
43) Benzoic acid	(2)	8.482	105	231212	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:32.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.499	93	549567	7.500
46) 2,4-Dichlorophenol	(2)	8.616	162	334934	7.500
47) 1,2,4-Trichlorobenzene	(2)	8.750	180	392144	7.500
48)*Naphthalene-d8	(2)	8.826	136	721826	5.000
49) Naphthalene	(2)	8.861	128	1110813	7.500
50) 4-Chloroaniline	(2)	8.966	127	472661	7.500
51) 2,6-Dichlorophenol	(2)	8.971	162	327387	7.500
52) Hexachloropropene	(2)	9.012	213	253359	7.500
53) Hexachlorobutadiene	(2)	9.082	225	232717	7.500
54) Quinoline	(2)	9.385	129	722086	7.500
55) Caprolactam	(2)	9.496	113	127850	7.500
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	331295	7.500
58) 4-Chloro-3-methylphenol	(2)	9.758	107	384293	7.500
60) Safrole	(2)	9.852	162	307947	7.500
61) 2-Methylnaphthalene	(2)	9.962	142	794391	7.500
62) 1-Methylnaphthalene	(2)	10.114	142	721696	7.500
63) Hexachlorocyclopentadiene	(3)	10.225	237	181651	7.500
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	397627	7.500
65) cis-Isosafrole	(3)	10.318	162	53492	7.500
66) 2,4,6-Trichlorophenol	(3)	10.423	196	267960	7.500
67) 2,4,5-Trichlorophenol	(3)	10.475	196	278390	7.500
68)$2-Fluorobiphenyl	(3)	10.574	172	1686618	15.000
70) Isosafrole	(3)	10.679	162	314810	7.500
69) trans-Isosafrole	(3)	10.679	162	314810	7.500
71) 1,1'-Biphenyl	(3)	10.720	154	919308	7.500
72) 2-Chloronaphthalene	(3)	10.732	162	774561	7.500
73) 1-Chloronaphthalene	(3)	10.767	162	699594	7.500
74) Diphenyl ether	(3)	10.901	170	533292	7.500
75) 2-Nitroaniline	(3)	10.907	138	229772	7.500
76) 1,4-Naphthoquinone	(3)	11.023	158	308169	7.500
77) 1,4-Dinitrobenzene	(3)	11.146	168	124576	7.500
78) Dimethylphthalate	(3)	11.245	163	846251	7.500
79) 1,3-Dinitrobenzene	(3)	11.256	168	154368	7.500
80) 2,6-Dinitrotoluene	(3)	11.320	165	206579	7.500
81) Acenaphthylene	(3)	11.390	152	1067020	7.500
82) 3-Nitroaniline	(3)	11.559	138	209854	7.500
83)*Acenaphthene-d10	(3)	11.606	164	452920	5.000
84) Acenaphthene	(3)	11.658	153	754347	7.500
85) 2,4-Dinitrophenol	(3)	11.717	184	131050	10.000
86) 4-Nitrophenol	(3)	11.839	109	149347	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:32.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.845	250	324647	7.500
88) Dibenzofuran	(3)	11.903	168	1087991	7.500
89) 2,4-Dinitrotoluene	(3)	11.909	165	263067	7.500
90) 1-Naphthylamine	(3)	12.008	143	748276	7.500
91) 2,3,4,6-Tetrachlorophenol	(3)	12.078	232	217913	7.500
92) 2-Naphthylamine	(3)	12.113	143	755778	7.500
93) Diethylphthalate	(3)	12.265	149	782688	7.500
94) Fluorene	(3)	12.346	166	890093	7.500
95) Thionazin	(3)	12.352	107	173368	7.500
97) 5-Nitro-o-toluidine	(3)	12.370	152	237986	7.500
96) 4-Chlorophenyl-phenylether	(3)	12.370	204	453938	7.500
98) 4-Nitroaniline	(3)	12.375	138	206464	7.500
99) 4,6-Dinitro-2-methylphenol	(4)	12.422	198	152708	7.500
102) NDPA as diphenylamine	(4)	12.509	169	716325	7.500
101) N-Nitrosodiphenylamine	(4)	12.509	169	716325	7.500
103) 1,2-Diphenylhydrazine	(4)	12.556	77	1051661	7.500
104)$2,4,6-Tribromophenol	(3)	12.632	330	184611	15.000
105) Tetraethyldithiopyrophosphate	(4)	12.743	97	159878	7.500
106) 1,3,5-Trinitrobenzene	(4)	12.842	213	103921	7.500
107) Diallate (peak 1)	(4)	12.877	86	384604	5.625
108) Phorate	(4)	12.883	75	631801	7.500
109) Phenacetin	(4)	12.906	108	457831	7.500
110) 4-Bromophenyl-phenylether	(4)	12.958	248	247920	7.500
111) Diallate (peak 2)	(4)	12.982	86	53944	1.875
112) Hexachlorobenzene	(4)	13.005	284	237727	7.500
113) Dimethoate	(4)	13.081	87	398433	7.500
114) Atrazine	(4)	13.186	200	239665	7.500
115) Pentachlorophenol	(4)	13.261	266	155242	7.500
117) 4-Aminobiphenyl	(4)	13.273	169	922093	7.500
116) Pentachloronitrobenzene	(4)	13.273	237	117029	7.500
118) Pronamide	(4)	13.372	173	395666	7.500
120)*Phenanthrene-d10	(4)	13.489	188	790436	5.000
119) Dinoseb	(4)	13.512	211	209542	7.500
121) Phenanthrene	(4)	13.524	178	1302303	7.500
122) Anthracene	(4)	13.588	178	1319214	7.500
124) Carbazole	(4)	13.803	167	1228044	7.500
125) Methyl parathion	(4)	14.007	109	291081	7.500
126) Di-n-butylphthalate	(4)	14.316	149	1440456	7.500
127) Parathion	(4)	14.549	109	190805	7.500
128) 4-Nitroquinoline-1-oxide	(4)	14.555	190	103772	7.500

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1361.d Instrument ID: HP18831.i
Injection date and time: 28-OCT-2013 23:13 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:22
Date, time and analyst ID of latest file update: 29-Oct-2013 04:22 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	157264	7.500
131) Fluoranthene	(4)	15.156	202	1490114	7.500
132) Benzidine	(5)	15.389	184	3098689	22.500
134)*Pyrene-d10	(5)	15.465	212	974611	5.000
133) Pyrene	(5)	15.494	202	1522523	7.500
137)$Terphenyl-d14	(5)	15.779	244	1982438	15.000
140) p-Dimethylaminoazobenzene	(5)	16.012	225	314267	7.500
141) Chlorobenzilate	(5)	16.106	139	450449	7.500
142) 3,3'-Dimethylbenzidine	(5)	16.566	212	1039091	7.500
144) Butylbenzylphthalate	(5)	16.630	149	661672	7.500
146) 2-Acetylaminofluorene	(5)	16.986	181	601234	7.500
148) 3,3'-Dichlorobenzidine	(5)	17.487	252	547583	7.500
147) Benzo(a)anthracene	(5)	17.493	228	1463578	7.500
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.505	231	270939	7.500
150) Chrysene	(5)	17.557	228	1371533	7.500
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	883806	7.500
152) 6-Methylchrysene	(5)	18.356	242	1025861	7.500
153) Di-n-octylphthalate	(6)	18.851	149	1525075	7.500
154) Benzo(b)fluoranthene	(6)	19.341	252	1404720	7.500
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.346	256	621803	7.500
156) Benzo(k)fluoranthene	(6)	19.387	252	1379075	7.500
157) Benzo(a)pyrene	(6)	19.859	252	1296356	7.500
158)*Perylene-d12	(6)	19.953	264	732405	5.000
159) 3-Methylcholanthrene	(6)	20.436	268	653526	7.500
160) Dibenz(a,h)acridine	(6)	21.241	279	968975	7.500
161) Dibenz(a,j)acridine	(6)	21.311	279	1016422	7.500
162) Indeno(1,2,3-cd)pyrene	(6)	21.550	276	1315369	7.500
163) Dibenz(a,h)anthracene	(6)	21.590	278	1130152	7.500
164) Benzo(g,h,i)perylene	(6)	21.929	276	1144307	7.500
165) Diallate TRANS/CIS	(4)			438548	7.500

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$ = Compound is a surrogate standard.

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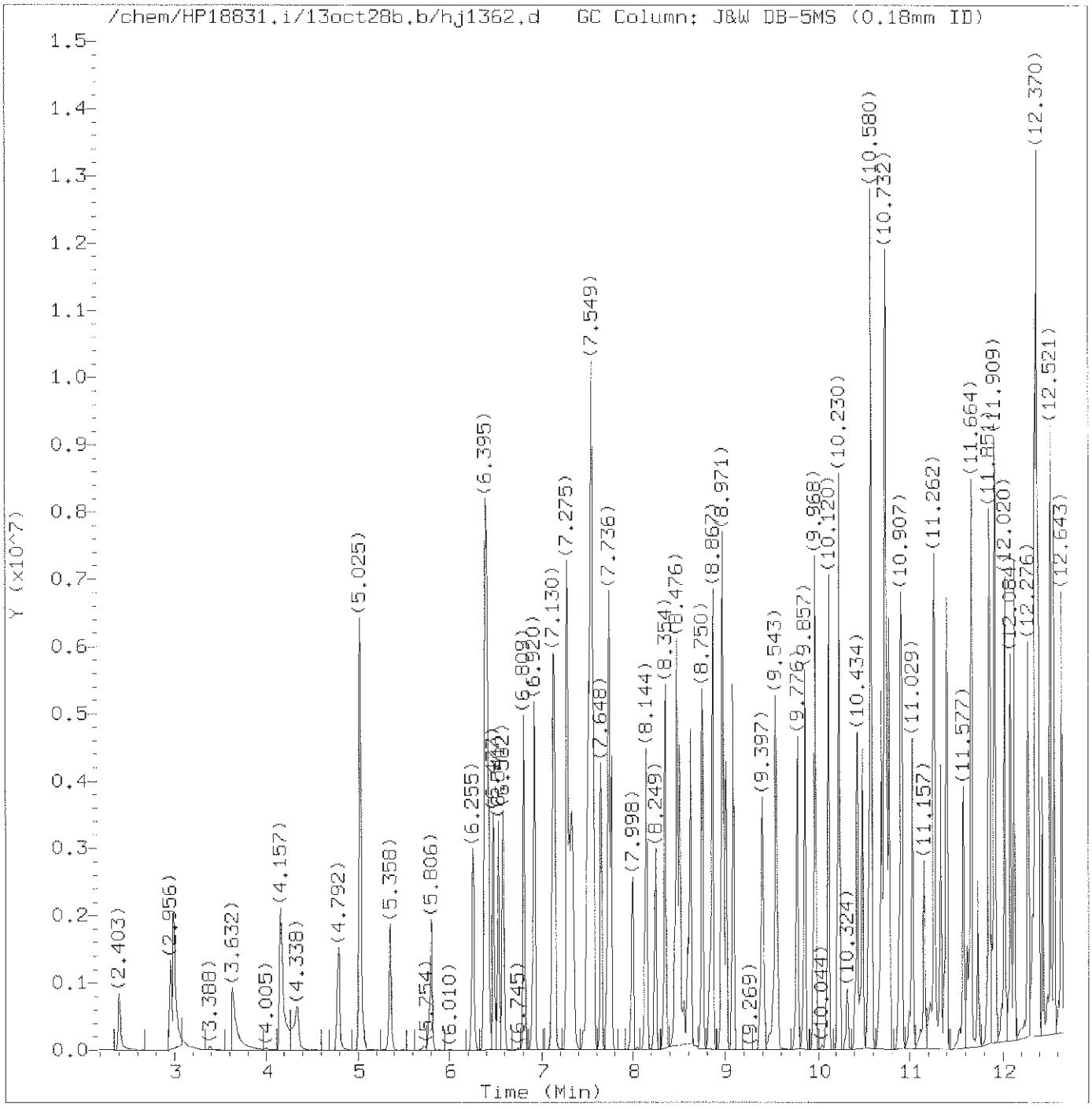
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

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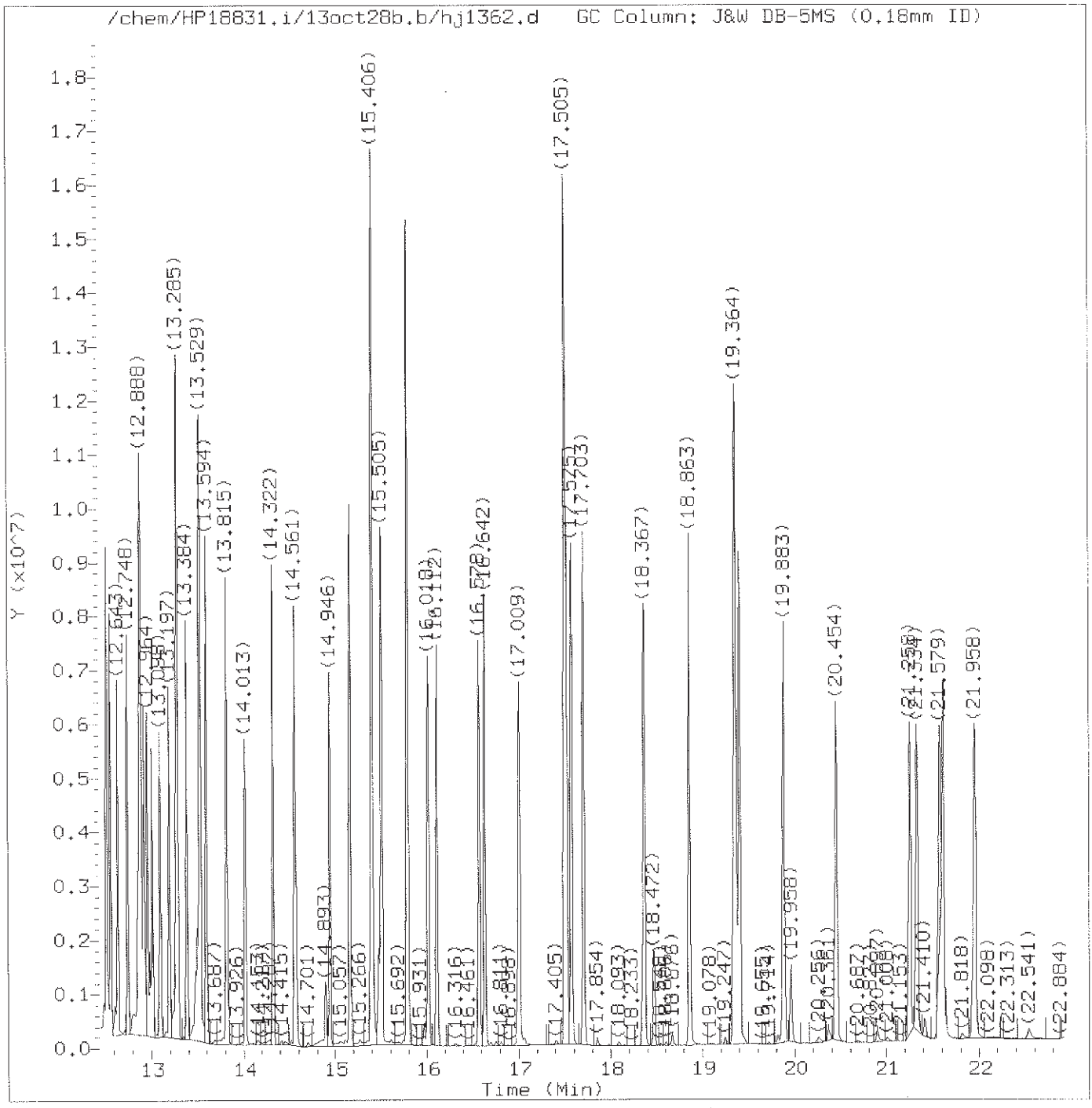
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

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on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.403	88	698759	29.832
2) N-Nitrosodimethylamine	(1)	2.956	74	1243854	30.520
3) Pyridine	(1)	2.991	79	1995365	30.858
5) 2-Picoline	(1)	4.157	93	1930239	29.671
6) N-Nitrosomethylethylamine	(1)	4.338	88	876465	29.953
7) Methyl methanesulfonate	(1)	4.792	80	1080049	29.713
8)$2-Fluorophenol	(1)	5.025	112	3074758	59.353
9) N-Nitrosodiethylamine	(1)	5.358	102	827871	30.235
10) Ethyl methanesulfonate	(1)	5.806	109	828439	30.276
11) Benzaldehyde	(1)	6.255	77	1201750	25.915
13)$Phenol-d6	(1)	6.395	99	4245233	58.927
12)$Phenol-d5	(1)	6.395	99	4245233	58.927
14) Phenol	(1)	6.413	94	2393274	29.207
16) Aniline	(1)	6.418	93	2813930	29.490
17) bis(2-Chloroethyl)ether	(1)	6.541	93	1800243	29.493
18) 2-Chlorophenol	(1)	6.582	128	1520912	29.605
19) 1,3-Dichlorobenzene	(1)	6.809	146	1706983	29.622
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	185533	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	1725070	29.617
22) Benzyl alcohol	(1)	7.124	108	1095770	31.199
23) 1,2-Dichlorobenzene	(1)	7.141	146	1604424	29.387
25) Indene	(1)	7.275	115	3035937	34.978
26) 2-Methylphenol	(1)	7.299	108	1470131	29.669
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.339	45	2036099	29.029
28) bis(2-Chloroisopropyl)ether	(1)	7.339	45	2036099	29.029
29) N-Nitrosopyrrolidine	(1)	7.497	100	813944M	30.092
30) Acetophenone	(1)	7.520	105	2407241	30.636
31) 4-Methylphenol	(1)	7.543	108	1657946	29.303
32) N-Nitroso-di-n-propylamine	(1)	7.549	70	1421195	29.294
33) N-Nitrosomorpholine	(1)	7.555	56	1013947	29.364
34) o-Toluidine	(1)	7.567	106	2597562	29.420
35) Hexachloroethane	(1)	7.648	117	694034	29.554
36)$Nitrobenzene-d5	(2)	7.736	82	4010545	58.941
37) Nitrobenzene	(2)	7.765	77	2060635	29.578
38) N-Nitrosopiperidine	(2)	7.998	114	807310	29.838
39) Isophorone	(2)	8.144	82	3654197	29.822
40) 2-Nitrophenol	(2)	8.249	139	814978	30.464
41) 2,4-Dimethylphenol	(2)	8.354	107	1746241	29.443
42) O,O,O-triethylphosphorothioate	(2)	8.476	198	870570	29.682
44) bis(2-Chloroethoxy)methane	(2)	8.505	93	1737207	26.610

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
43) Benzoic acid	(2)	8.552	105	985584M	35.339
46) 2,4-Dichlorophenol	(2)	8.628	162	1295286	29.621
47) 1,2,4-Trichlorobenzene	(2)	8.750	180	1484192	29.297
48)*Naphthalene-d8	(2)	8.832	136	715749	5.000
49) Naphthalene	(2)	8.867	128	4227747	29.381
50) 4-Chloroaniline	(2)	8.971	127	1830302	29.640
51) 2,6-Dichlorophenol	(2)	8.977	162	1236925	29.271
52) Hexachloropropene	(2)	9.012	213	1031483	30.392
53) Hexachlorobutadiene	(2)	9.082	225	887069	29.404
54) Quinoline	(2)	9.397	129	2776778	29.536
56) N-Nitrosodi-n-butylamine	(2)	9.543	84	1675471	33.627
55) Caprolactam	(2)	9.560	113	470107A	28.864
58) 4-Chloro-3-methylphenol	(2)	9.776	107	1506287	29.822
60) Safrole	(2)	9.857	162	1201966	29.759
61) 2-Methylnaphthalene	(2)	9.968	142	3021921	29.374
62) 1-Methylnaphthalene	(2)	10.120	142	2765473	29.483
63) Hexachlorocyclopentadiene	(3)	10.230	237	779141	31.262
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.236	216	1499223	29.329
65) cis-Isosafrole	(3)	10.324	162	208094	29.798
66) 2,4,6-Trichlorophenol	(3)	10.434	196	1076536	30.281
67) 2,4,5-Trichlorophenol	(3)	10.487	196	1015581	28.834
68)$2-Fluorobiphenyl	(3)	10.580	172	6358600	58.654
70) Isosafrole	(3)	10.691	162	1234912	29.922
69) trans-Isosafrole	(3)	10.691	162	1234912	29.922
71) 1,1'-Biphenyl	(3)	10.732	154	3672365	30.195
72) 2-Chloronaphthalene	(3)	10.743	162	3114353	30.293
73) 1-Chloronaphthalene	(3)	10.772	162	2368353	27.717
74) Diphenyl ether	(3)	10.907	170	2006556	29.297
75) 2-Nitroaniline	(3)	10.924	138	907581	30.026
76) 1,4-Naphthoquinone	(3)	11.029	158	1053462	27.862
77) 1,4-Dinitrobenzene	(3)	11.157	168	476363	29.540
78) Dimethylphthalate	(3)	11.262	163	2602587	26.291
79) 1,3-Dinitrobenzene	(3)	11.274	168	534792	28.061
80) 2,6-Dinitrotoluene	(3)	11.332	165	692376	27.568
81) Acenaphthylene	(3)	11.396	152	4039474	29.389
82) 3-Nitroaniline	(3)	11.577	138	856032	30.509
83)*Acenaphthene-d10	(3)	11.612	164	446471	5.000
84) Acenaphthene	(3)	11.664	153	2845184	29.334
85) 2,4-Dinitrophenol	(3)	11.734	184	452090	32.306
87) Pentachlorobenzene	(3)	11.851	250	1217572	29.249

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) 4-Nitrophenol	(3)	11.857	109	569917	29.509
88) Dibenzofuran	(3)	11.909	168	3377602	26.430
89) 2,4-Dinitrotoluene	(3)	11.921	165	922933	28.250
90) 1-Naphthylamine	(3)	12.020	143	2617328	28.205
91) 2,3,4,6-Tetrachlorophenol	(3)	12.084	232	755976	28.082
92) 2-Naphthylamine	(3)	12.125	143	2587790	27.886
93) Diethylphthalate	(3)	12.276	149	2634813	27.633
94) Fluorene	(3)	12.352	166	2742698	26.320
95) Thionazin	(3)	12.370	107	550438	26.763
96) 4-Chlorophenyl-phenylether	(3)	12.375	204	1319793	25.465
97) 5-Nitro-o-toluidine	(3)	12.387	152	801327	27.636
98) 4-Nitroaniline	(3)	12.399	138	752167	28.814
99) 4,6-Dinitro-2-methylphenol	(4)	12.434	198	618908	32.260
101) N-Nitrosodiphenylamine	(4)	12.521	169	2311688	28.847
102) NDPA as diphenylamine	(4)	12.521	169	2311688	28.847
103) 1,2-Diphenylhydrazine	(4)	12.562	77	3281825	28.345
104)$2,4,6-Tribromophenol	(3)	12.643	330	637669	56.034
105) Tetraethyldithiopyrophosphate	(4)	12.748	97	535336	29.400
106) 1,3,5-Trinitrobenzene	(4)	12.865	213	474833	34.038
107) Diallate (peak 1)	(4)	12.882	86	1253729	21.749
108) Phorate	(4)	12.894	75	2113844	29.388
109) Phenacetin	(4)	12.929	108	1707877	31.020
110) 4-Bromophenyl-phenylether	(4)	12.964	248	812342	29.075
111) Diallate (peak 2)	(4)	12.987	86	182164	7.382
112) Hexachlorobenzene	(4)	13.017	284	793505	29.353
113) Dimethoate	(4)	13.098	87	1449463	30.644
114) Atrazine	(4)	13.197	200	807460	29.493
115) Pentachlorophenol	(4)	13.232	266	665546	33.096
116) Pentachloronitrobenzene	(4)	13.285	237	393843	29.476
117) 4-Aminobiphenyl	(4)	13.285	169	3094748	29.435
118) Pronamide	(4)	13.384	173	1400208	30.230
120)*Phenanthrene-d10	(4)	13.500	188	688670	5.000
119) Dinoseb	(4)	13.524	211	862272	32.487
121) Phenanthrene	(4)	13.529	178	4724530	30.602
122) Anthracene	(4)	13.594	178	4471630	29.584
124) Carbazole	(4)	13.815	167	4323819	30.154
125) Methyl parathion	(4)	14.013	109	1109523	31.343
126) Di-n-butylphthalate	(4)	14.322	149	5126794	30.316
127) Parathion	(4)	14.555	109	743896	31.681
128) 4-Nitroquinoline-1-oxide	(4)	14.573	190	567690	36.651

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.946	193	567097	30.512
131) Fluoranthene	(4)	15.167	202	5536247	30.960
132) Benzidine	(5)	15.406	184	10820392	85.963
134)*Pyrene-d10	(5)	15.476	212	930720	5.000
133) Pyrene	(5)	15.511	202	5599117	29.430
137)$Terphenyl-d14	(5)	15.797	244	7050559	57.858
140) p-Dimethylaminoazobenzene	(5)	16.018	225	1240764	30.495
141) Chlorobenzilate	(5)	16.112	139	1698289	29.804
142) 3,3'-Dimethylbenzidine	(5)	16.578	212	3786699	29.294
144) Butylbenzylphthalate	(5)	16.642	149	2515659	29.930
146) 2-Acetylaminofluorene	(5)	17.009	181	2508764	31.324
148) 3,3'-Dichlorobenzidine	(5)	17.505	252	2030033	29.551
147) Benzo(a)anthracene	(5)	17.510	228	5495477	29.742
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.522	231	1042822	30.114
150) Chrysene	(5)	17.575	228	5174578	29.814
151) bis(2-Ethylhexyl)phthalate	(5)	17.703	149	3369878	29.973
152) 6-Methylchrysene	(5)	18.373	242	3943594	30.095
153) Di-n-octylphthalate	(6)	18.863	149	6061677	29.460
154) Benzo(b)fluoranthene	(6)	19.364	252	5544674	29.356
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.370	256	2457416	29.375
156) Benzo(k)fluoranthene	(6)	19.411	252	5186178	28.631
157) Benzo(a)pyrene	(6)	19.883	252	5135871	29.411
158)*Perylene-d12	(6)	19.958	264	754442	5.000
159) 3-Methylcholanthrene	(6)	20.454	268	2623082	29.607
160) Dibenz(a,h)acridine	(6)	21.258	279	3933087	29.775
161) Dibenz(a,j)acridine	(6)	21.334	279	4069991	29.571
162) Indeno(1,2,3-cd)pyrene	(6)	21.579	276	5227728M	29.459
163) Dibenz(a,h)anthracene	(6)	21.620	278	4365009	29.030
164) Benzo(g,h,i)perylene	(6)	21.963	276	4367535	28.852
165) Diallate TRANS/CIS	(4)			1435893	29.064

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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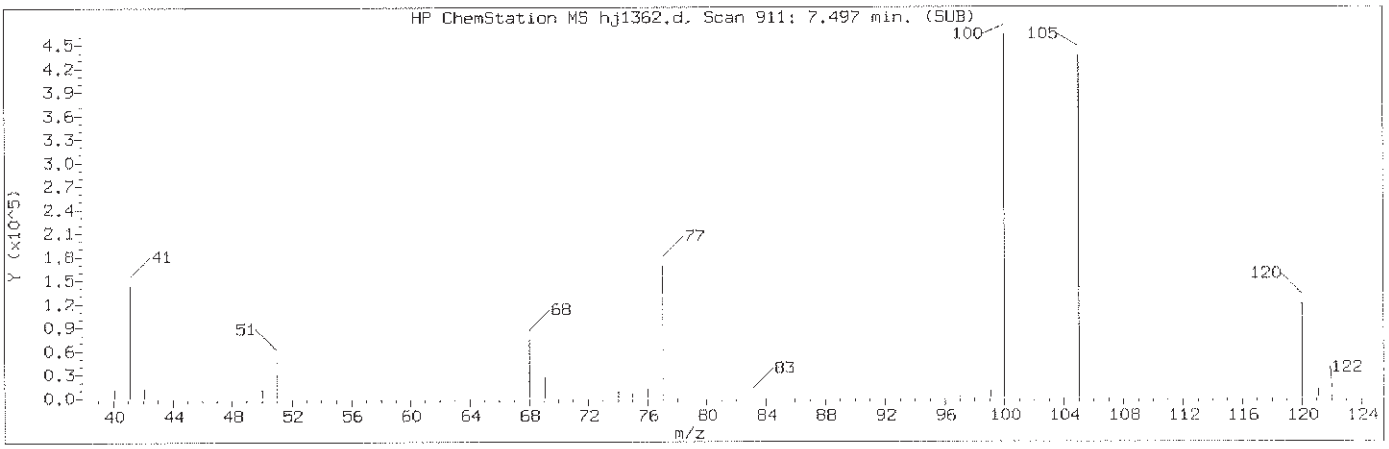
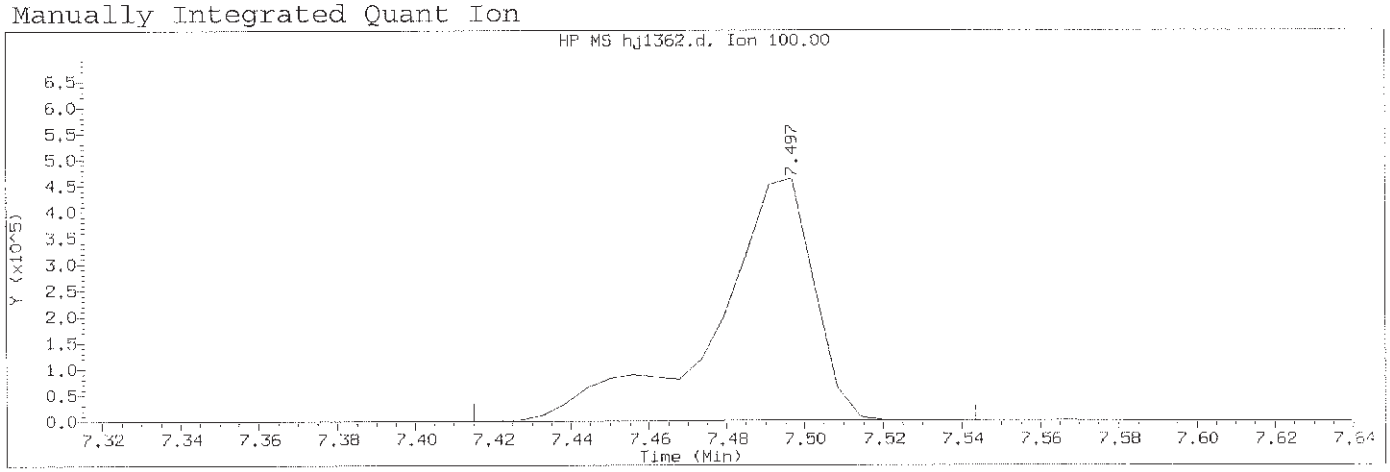
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 29		
Compound Name	: N-Nitrosopyrrolidine		
Scan Number	: 911		
Retention Time (minutes)	: 7.497		
Quant Ion	: 100.00		
Area (flag)	: 813944M		
On-Column Amount (ng/ul)	: 30.0925		
Integration start scan	: 896	Integration stop scan:	918
Y at integration start	: 0	Y at integration end:	1012

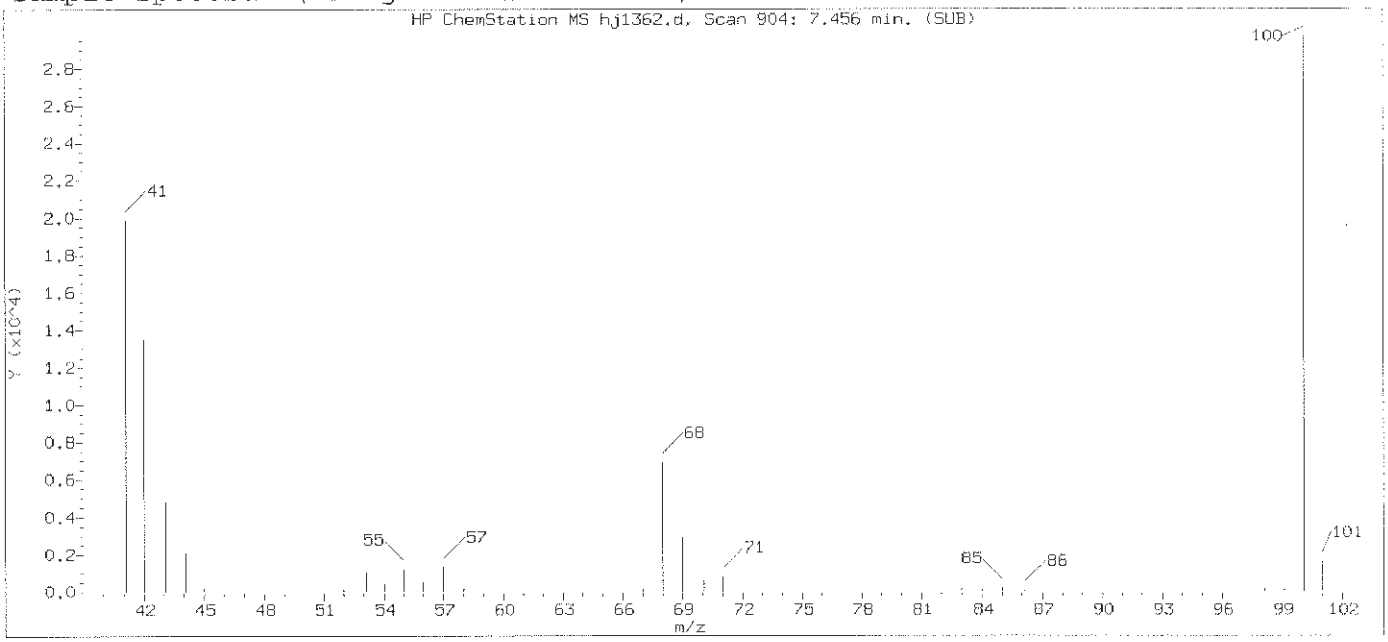
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

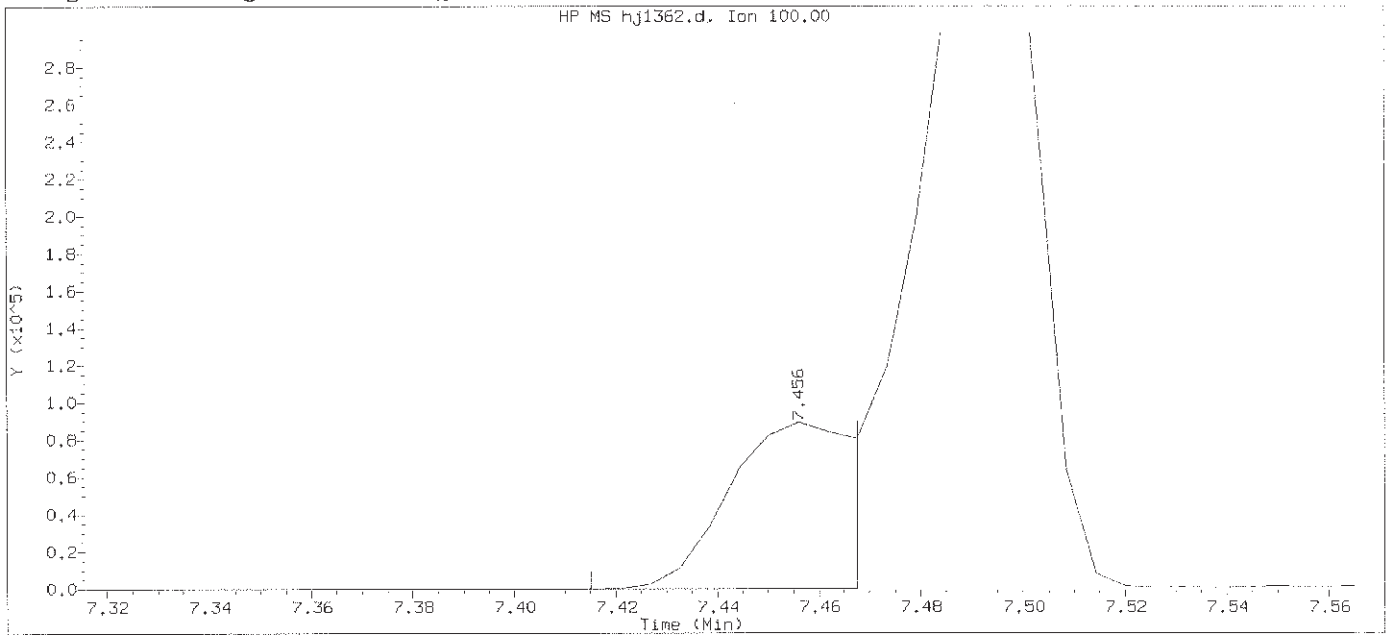
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 00:39
Date, time and analyst ID of latest file update: 29-Oct-2013 00:39 Automation

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 29		
Compound Name	: N-Nitrosopyrrolidine		
Scan Number	: 904		
Retention Time (minutes)	: 7.456		
Quant Ion	: 100.00		
Area	: 143095		
On-column Amount (ng/ul)	: 5.4306		
Integration start scan	: 896	Integration stop scan:	905
Y at integration start	: 0	Y at integration end:	0

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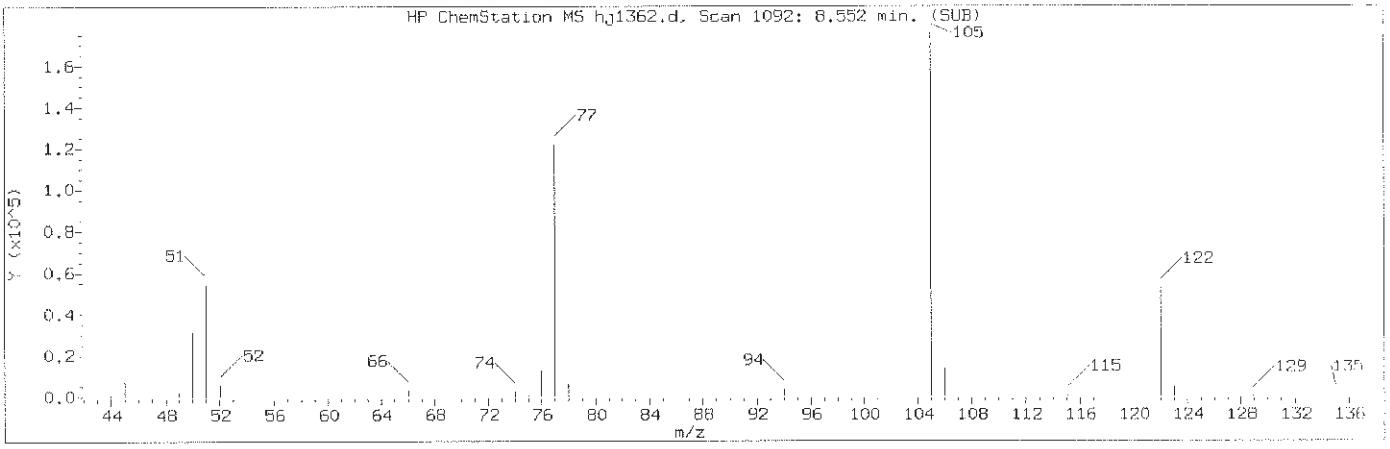
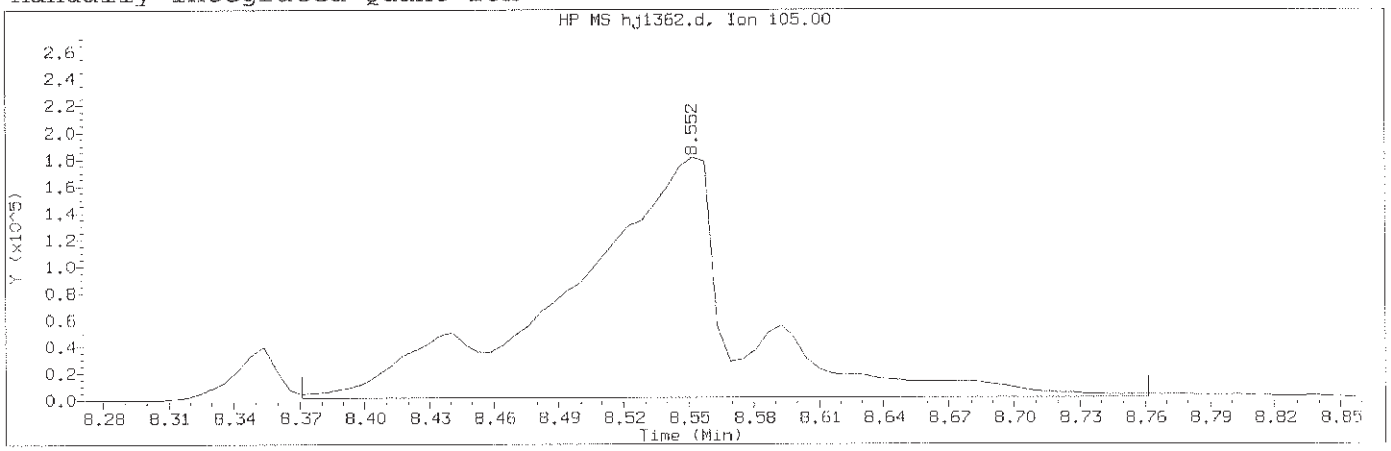
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 43		
Compound Name	: Benzoic acid		
Scan Number	: 1092		
Retention Time (minutes)	: 8.552		
Quant Ion	: 105.00		
Area (flag)	: 985584M		
On-Column Amount (ng/ul)	: 35.3387		
Integration start scan	: 1060	Integration stop scan:	1127
Y at integration start	: 1656	Y at integration end:	1656

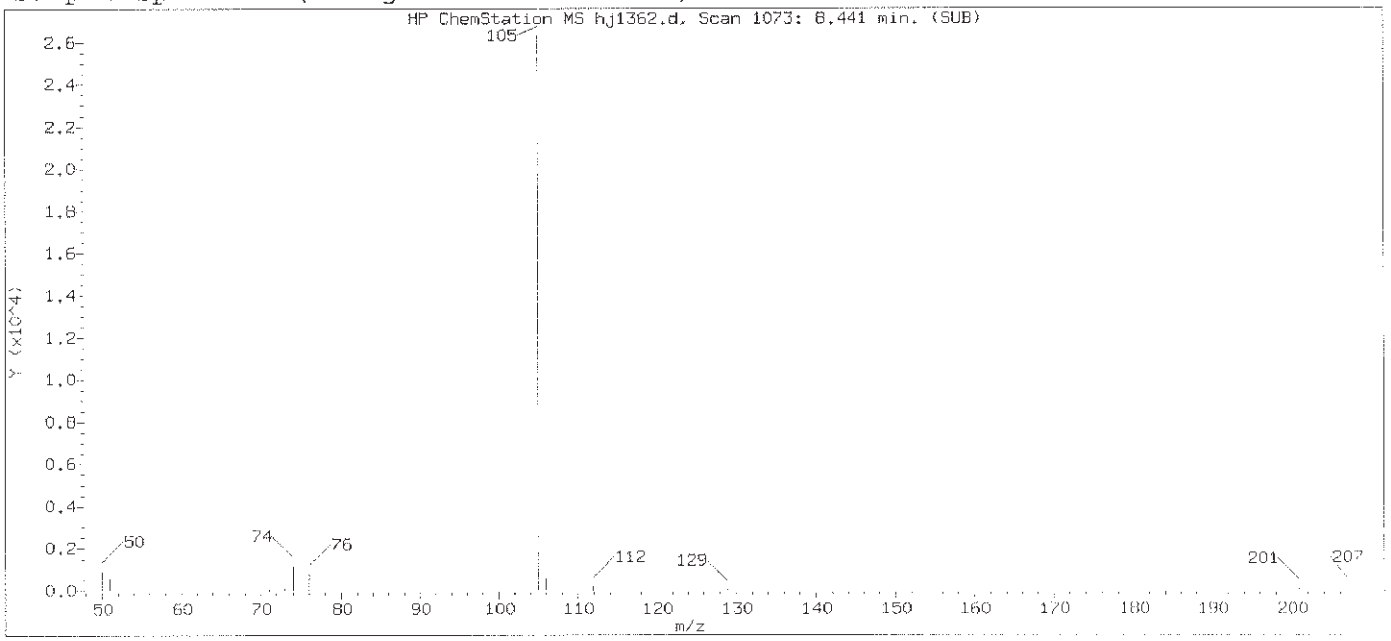
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

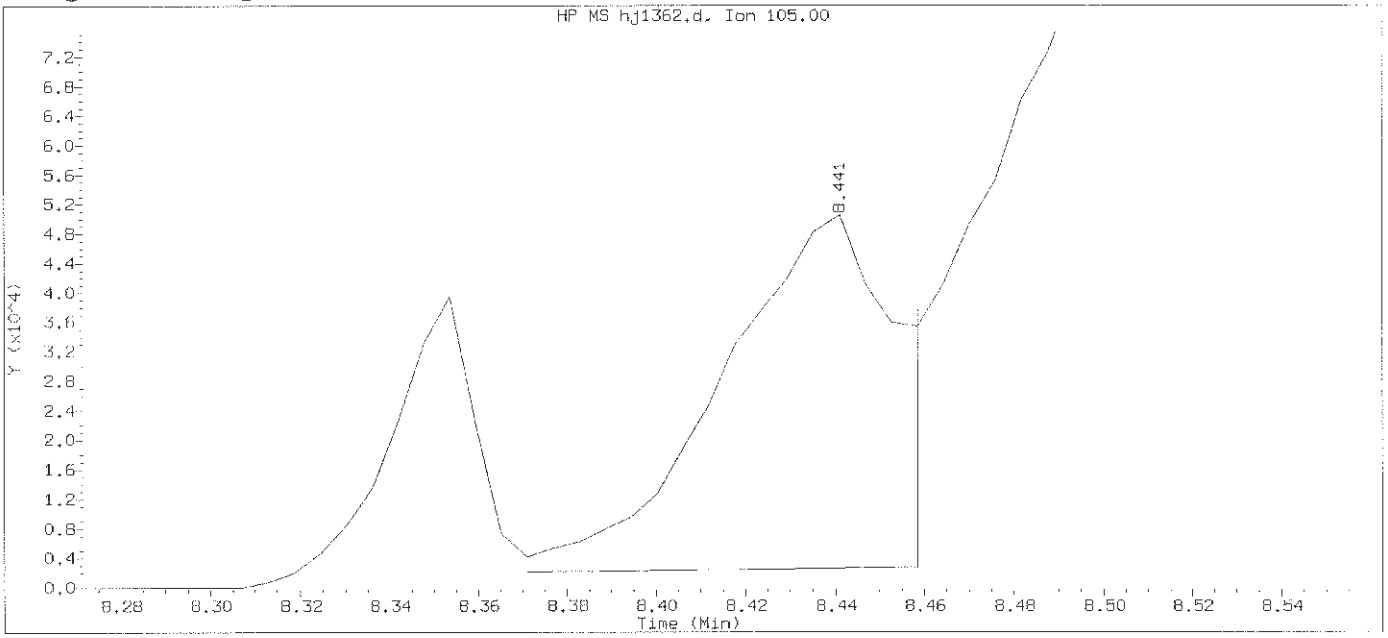
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 00:39
Date, time and analyst ID of latest file update: 29-Oct-2013 00:39 Automation

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 43		
Compound Name	: Benzoic acid		
Scan Number	: 1073		
Retention Time (minutes)	: 8.441		
Quant Ion	: 105.00		
Area	: 124821		
On-column Amount (ng/ul)	: 6.3150		
Integration start scan	: 1060	Integration stop scan:	1075
Y at integration start	: 2138	Y at integration end:	2723

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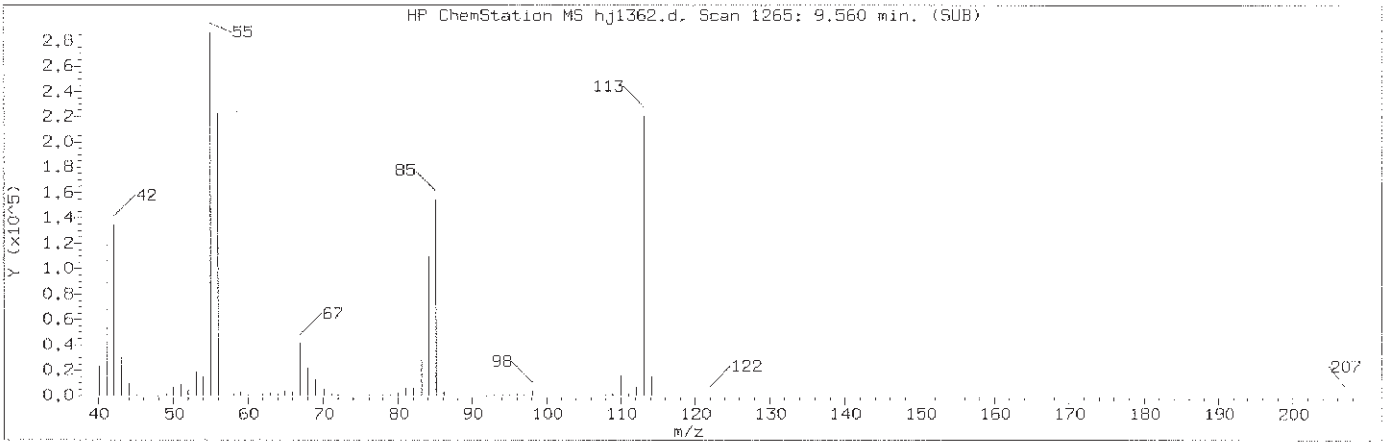
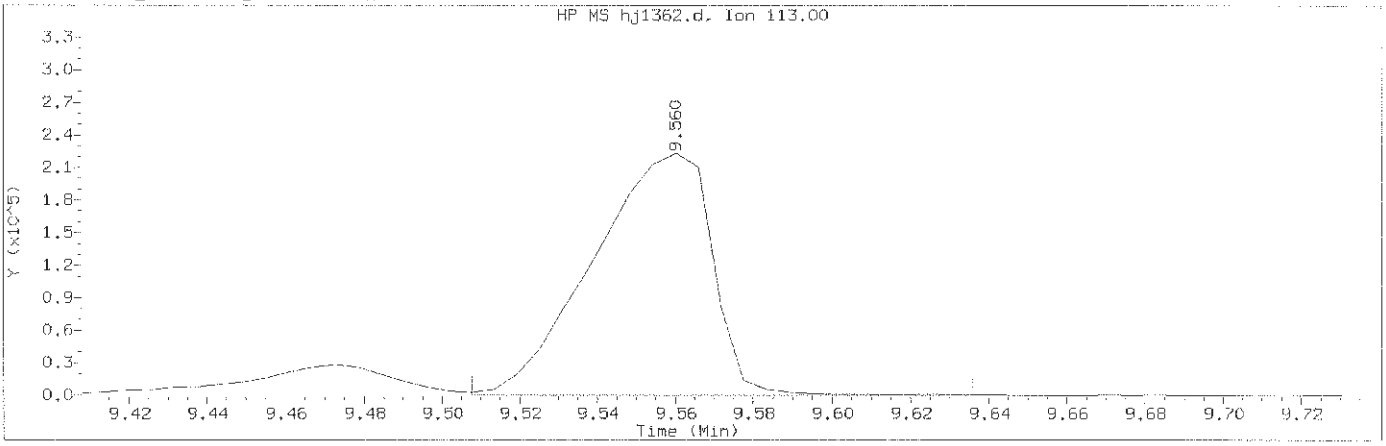
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 55		
Compound Name	: Caprolactam		
Scan Number	: 1265		
Retention Time (minutes)	: 9.560		
Quant Ion	: 113.00		
Area (flag)	: 470107A		
On-Column Amount (ng/ul)	: 28.8645		
Integration start scan	: 1255	Integration stop scan:	1277
Y at integration start	: 191	Y at integration end:	220

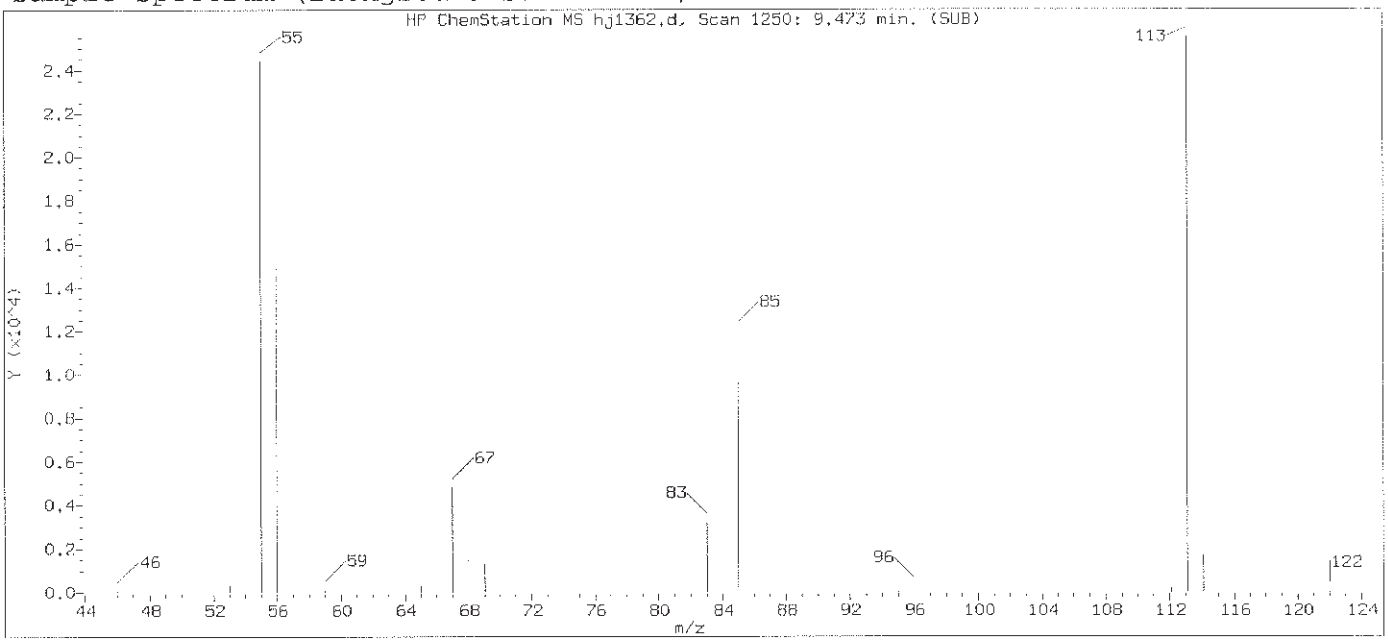
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

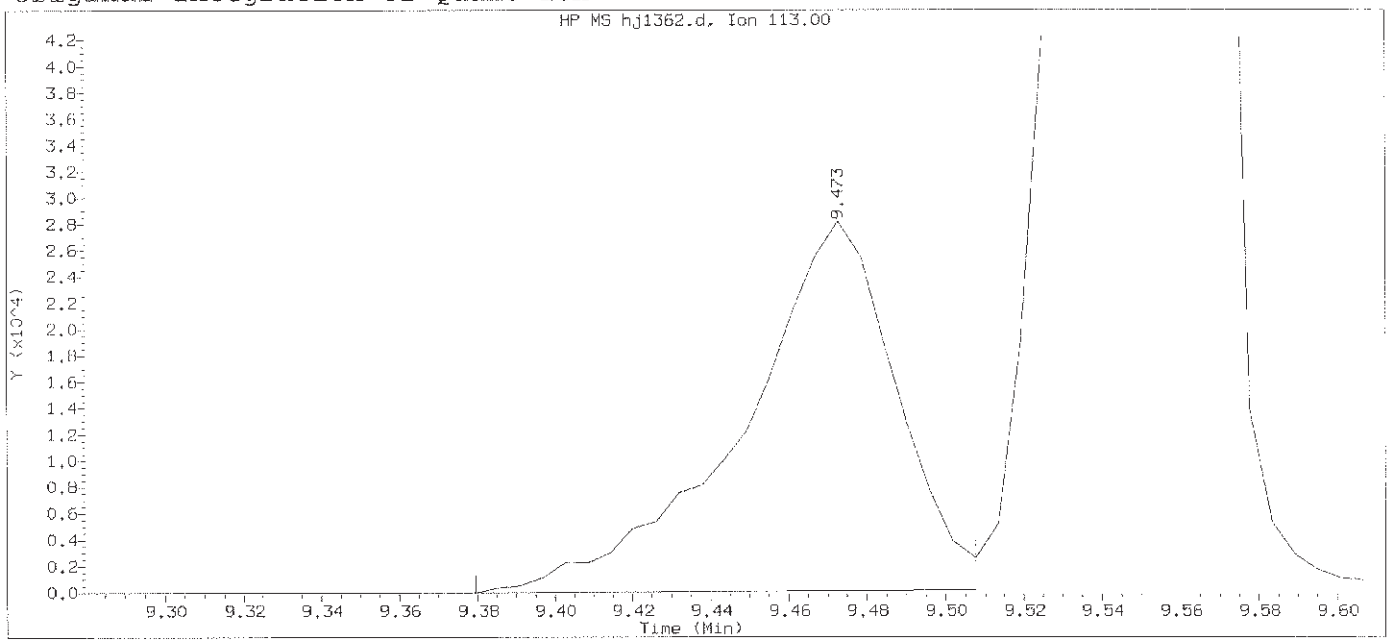
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

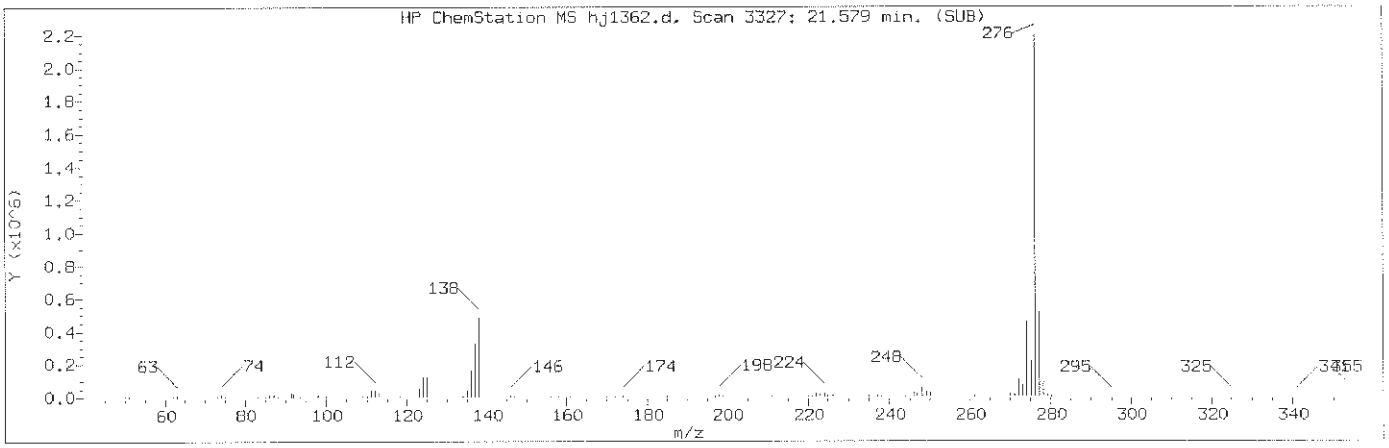
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 00:39
Date, time and analyst ID of latest file update: 29-Oct-2013 00:39 Automation

Sample Name: SSTD030 Lab Sample ID: STD2813

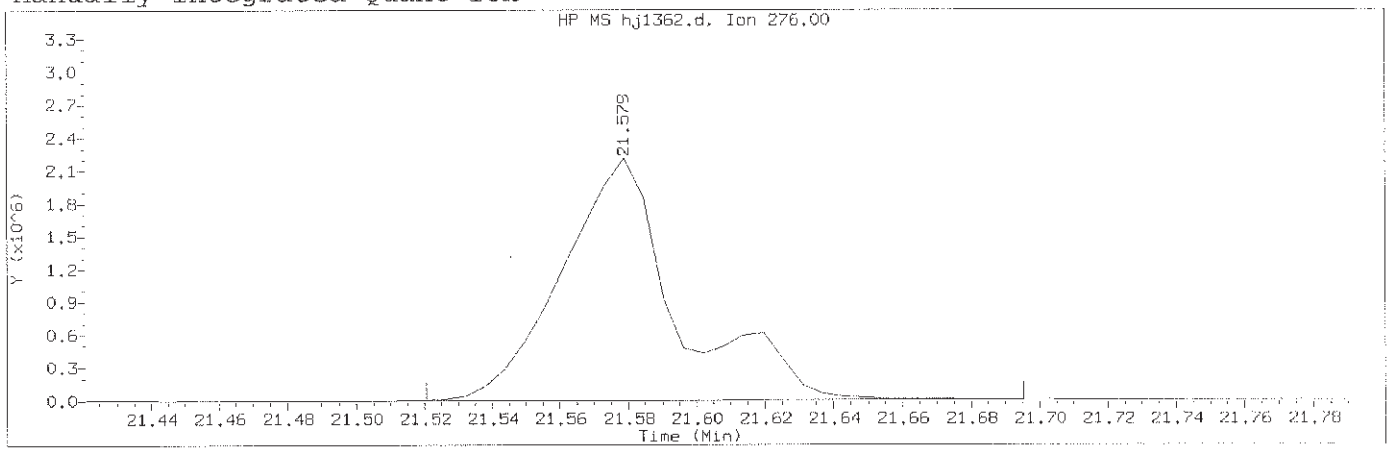
Compound Number	: 55		
Compound Name	: Caprolactam		
Scan Number	: 1250		
Retention Time (minutes)	: 9.473		
Quant Ion	: 113.00		
Area	: 76108		
On-column Amount (ng/ul)	: 4.9819		
Integration start scan	: 1233	Integration stop scan:	1255
Y at integration start	: 0	Y at integration end:	191

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 162		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3327		
Retention Time (minutes)	: 21.579		
Quant Ion	: 276.00		
Area (flag)	: 5227728M		
On-Column Amount (ng/ul)	: 29.4589		
Integration start scan	: 3316	Integration stop scan:	3346
Y at integration start	: -2090	Y at integration end:	1858

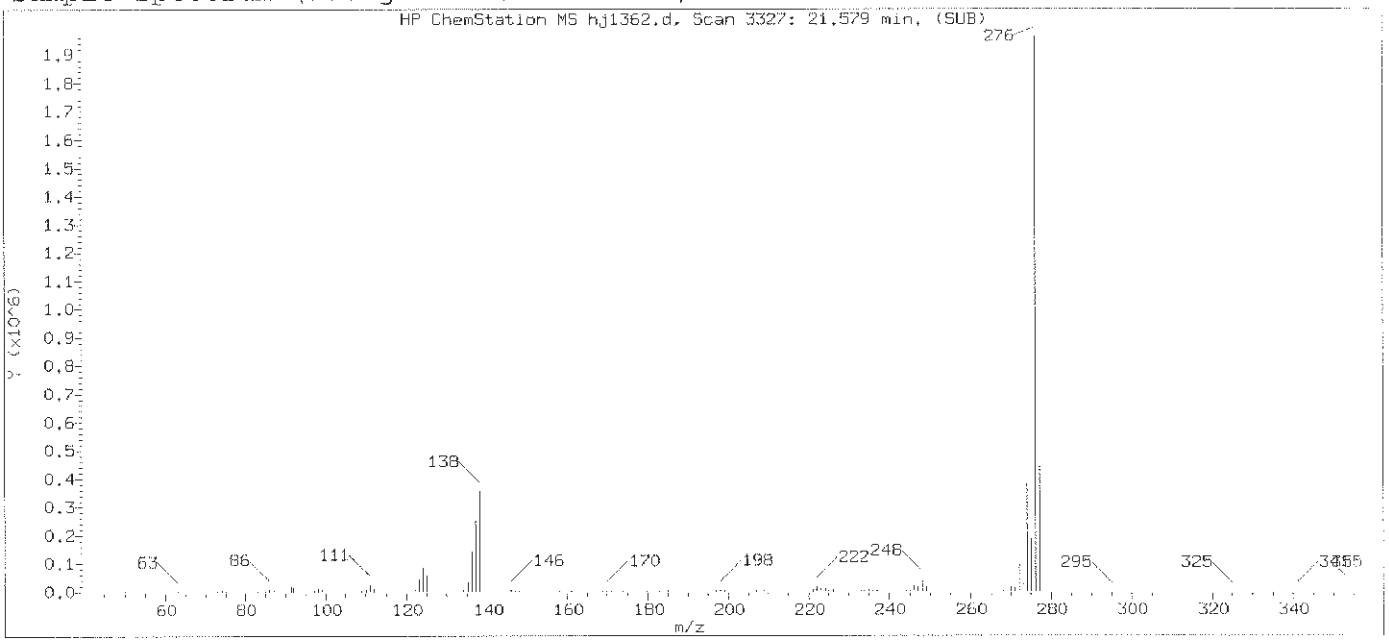
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

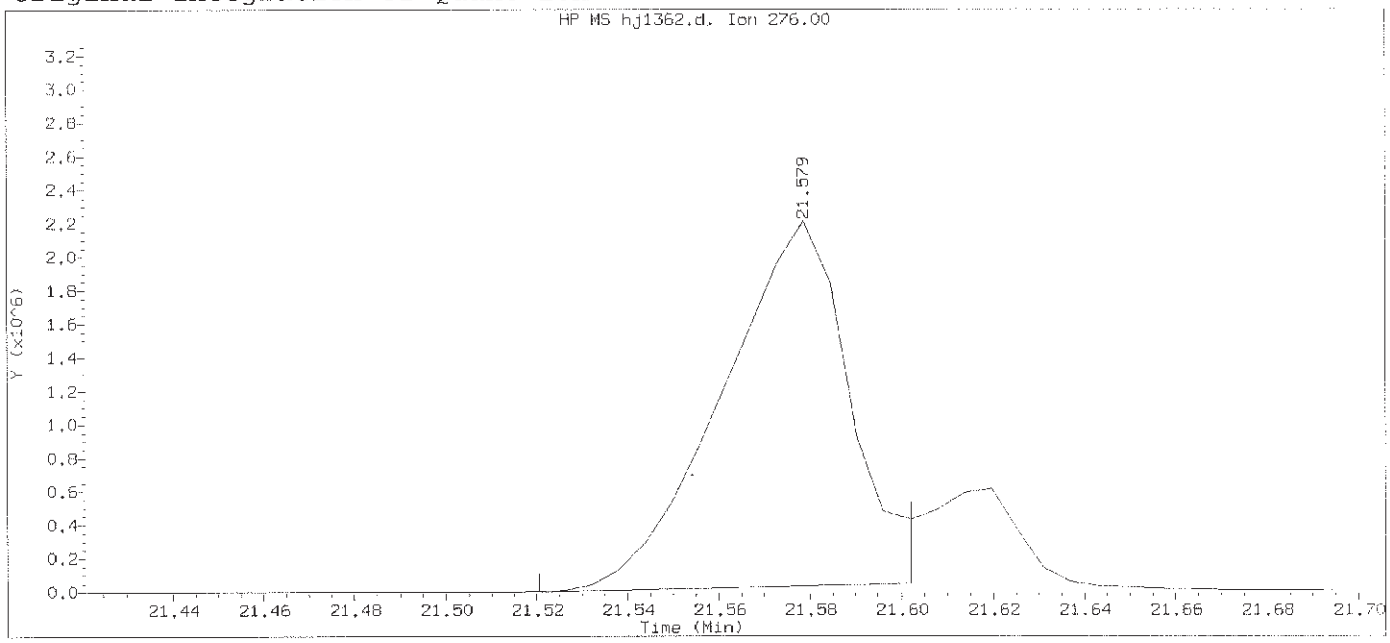
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Data Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



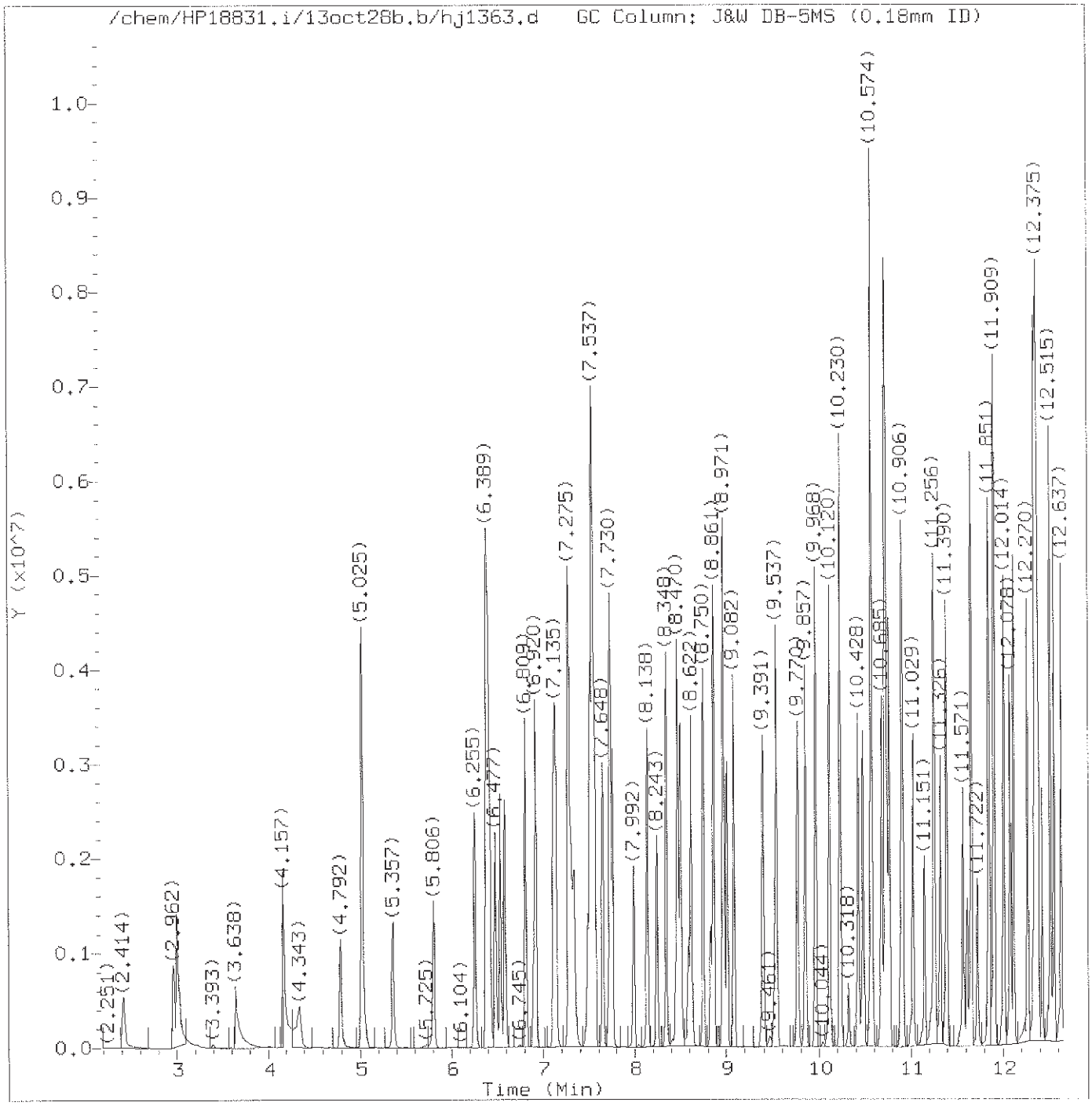
Data File: /chem/HP18831.i/13oct28b.b/hj1362.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:07 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 00:39
Date, time and analyst ID of latest file update: 29-Oct-2013 00:39 Automation

Sample Name: SSTD030 Lab Sample ID: STD2813

Compound Number	: 162		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3327		
Retention Time (minutes)	: 21.579		
Quant Ion	: 276.00		
Area	: 4182711		
On-column Amount (ng/ul)	: 24.1477		
Integration start scan	: 3316	Integration stop scan:	3330
Y at integration start	: 277	Y at integration end:	49393

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

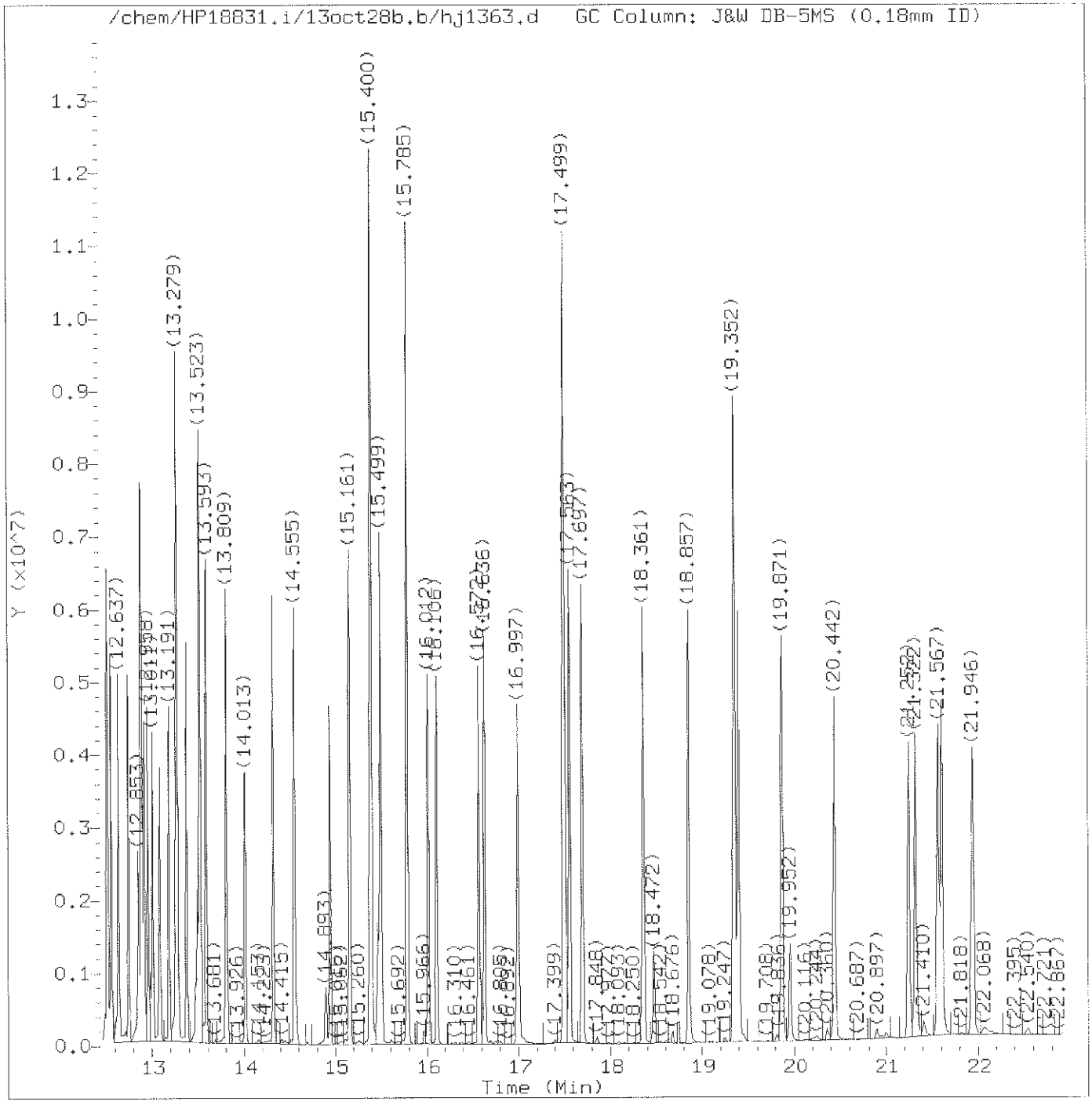
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.414	88	473931	20.436
2) N-Nitrosodimethylamine	(1)	2.962	74	812330	20.234
3) Pyridine	(1)	2.997	79	1326984	20.627
5) 2-Picoline	(1)	4.163	93	1271407	19.971
6) N-Nitrosomethylethylamine	(1)	4.343	88	573020	19.998
7) Methyl methanesulfonate	(1)	4.792	80	703806	19.847
8)$2-Fluorophenol	(1)	5.025	112	2040118	40.141
9) N-Nitrosodiethylamine	(1)	5.357	102	543014	20.166
10) Ethyl methanesulfonate	(1)	5.806	109	545037	20.225
11) Benzaldehyde	(1)	6.255	77	895392	19.810
12)$Phenol-d5	(1)	6.389	99	2820120	39.982
13)$Phenol-d6	(1)	6.389	99	2820120	39.982
14) Phenol	(1)	6.407	94	1606937	20.016
16) Aniline	(1)	6.418	93	1874419	20.039
17) bis(2-Chloroethyl)ether	(1)	6.535	93	1193454	19.977
18) 2-Chlorophenol	(1)	6.582	128	1004267	19.974
19) 1,3-Dichlorobenzene	(1)	6.809	146	1132422	20.044
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	181696	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	1147353	20.076
22) Benzyl alcohol	(1)	7.118	108	703860	20.307
23) 1,2-Dichlorobenzene	(1)	7.141	146	1077687	20.104
25) Indene	(1)	7.275	115	2086929	24.365
26) 2-Methylphenol	(1)	7.298	108	978854	20.114
28) bis(2-Chloroisopropyl)ether	(1)	7.339	45	1377319	20.034
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.339	45	1377319	20.034
29) N-Nitrosopyrrolidine	(1)	7.485	100	537392	20.191
30) Acetophenone	(1)	7.514	105	1570440	20.271
32) N-Nitroso-di-n-propylamine	(1)	7.537	70	937505	19.821
31) 4-Methylphenol	(1)	7.537	108	1108849	20.008
33) N-Nitrosomorpholine	(1)	7.549	56	668771	19.851
34) o-Toluidine	(1)	7.561	106	1717956	19.912
35) Hexachloroethane	(1)	7.648	117	461207	20.036
36)$Nitrobenzene-d5	(2)	7.730	82	2672136	40.186
37) Nitrobenzene	(2)	7.759	77	1368944	20.102
38) N-Nitrosopiperidine	(2)	7.992	114	532664	20.128
39) Isophorone	(2)	8.138	82	2391655	20.013
40) 2-Nitrophenol	(2)	8.243	139	536436	20.374
41) 2,4-Dimethylphenol	(2)	8.348	107	1153083	19.961
42) O,O,O-triethylphosphorothioate	(2)	8.470	198	573442	20.036
44) bis(2-Chloroethoxy)methane	(2)	8.505	93	1360183M	20.893

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
43) Benzoic acid	(2)	8.522	105	624066M	21.875
46) 2,4-Dichlorophenol	(2)	8.622	162	853316	20.010
47) 1,2,4-Trichlorobenzene	(2)	8.750	180	1003217	20.207
48)*Naphthalene-d8	(2)	8.831	136	697833	5.000
49) Naphthalene	(2)	8.861	128	2798658	19.966
50) 4-Chloroaniline	(2)	8.965	127	1208710	20.051
51) 2,6-Dichlorophenol	(2)	8.977	162	819304	19.924
52) Hexachloropropene	(2)	9.012	213	686588	20.493
53) Hexachlorobutadiene	(2)	9.082	225	597627	20.211
54) Quinoline	(2)	9.391	129	1853568	20.148
55) Caprolactam	(2)	9.537	113	320529	20.123
56) N-Nitrosodi-n-butylamine	(2)	9.537	84	1065507	21.249
58) 4-Chloro-3-methylphenol	(2)	9.770	107	980514	19.941
60) Safrole	(2)	9.857	162	796443	20.150
61) 2-Methylnaphthalene	(2)	9.968	142	2007753	20.011
62) 1-Methylnaphthalene	(2)	10.120	142	1817618	19.917
63) Hexachlorocyclopentadiene	(3)	10.230	237	513849	20.687
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	1003444	20.027
65) cis-Isosafrole	(3)	10.318	162	138740	20.187
66) 2,4,6-Trichlorophenol	(3)	10.428	196	686655	19.811
67) 2,4,5-Trichlorophenol	(3)	10.481	196	696944	20.133
68)$2-Fluorobiphenyl	(3)	10.574	172	4225527	39.861
70) Isosafrole	(3)	10.685	162	796840	19.806
69) trans-Isosafrole	(3)	10.685	162	796840	19.806
71) 1,1'-Biphenyl	(3)	10.726	154	2429669	20.261
72) 2-Chloronaphthalene	(3)	10.737	162	2077316	20.414
73) 1-Chloronaphthalene	(3)	10.766	162	1583875	19.269
74) Diphenyl ether	(3)	10.906	170	1333661	19.919
75) 2-Nitroaniline	(3)	10.918	138	593239	20.024
76) 1,4-Naphthoquinone	(3)	11.029	158	797380	20.994
77) 1,4-Dinitrobenzene	(3)	11.151	168	352088	21.470
78) Dimethylphthalate	(3)	11.256	163	1888772	19.650
79) 1,3-Dinitrobenzene	(3)	11.268	168	380029	20.237
80) 2,6-Dinitrotoluene	(3)	11.326	165	519623	20.734
81) Acenaphthylene	(3)	11.390	152	2679905	19.937
82) 3-Nitroaniline	(3)	11.571	138	557436	20.187
83)*Acenaphthene-d10	(3)	11.612	164	437336	5.000
84) Acenaphthene	(3)	11.658	153	1894568	19.961
85) 2,4-Dinitrophenol	(3)	11.728	184	309421	21.645
86) 4-Nitrophenol	(3)	11.845	109	374919	19.878

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on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.851	250	811610	19.936
88) Dibenzofuran	(3)	11.909	168	2672849	20.882
89) 2,4-Dinitrotoluene	(3)	11.915	165	646133	20.127
90) 1-Naphthylamine	(3)	12.014	143	1939904	20.875
91) 2,3,4,6-Tetrachlorophenol	(3)	12.078	232	576950	21.215
92) 2-Naphthylamine	(3)	12.119	143	1965091	21.051
93) Diethylphthalate	(3)	12.270	149	1862580	19.961
94) Fluorene	(3)	12.346	166	2155363	20.730
95) Thionazin	(3)	12.364	107	393678	19.692
96) 4-Chlorophenyl-phenylether	(3)	12.375	204	1079649	20.827
97) 5-Nitro-o-toluidine	(3)	12.381	152	557654	19.755
98) 4-Nitroaniline	(3)	12.387	138	509564	19.952
99) 4,6-Dinitro-2-methylphenol	(4)	12.428	198	414543	20.508
102) NDPA as diphenylamine	(4)	12.515	169	1634721	19.738
101) N-Nitrosodiphenylamine	(4)	12.515	169	1634721	19.738
103) 1,2-Diphenylhydrazine	(4)	12.556	77	2554322	20.789
104)$2,4,6-Tribromophenol	(3)	12.637	330	446119	40.014
105) Tetraethyldithiopyrophosphate	(4)	12.742	97	369421	19.666
106) 1,3,5-Trinitrobenzene	(4)	12.853	213	310473	20.909
107) Diallate (peak 1)	(4)	12.882	86	903050	15.039
108) Phorate	(4)	12.888	75	1512917	20.146
109) Phenacetin	(4)	12.917	108	1157011	20.134
110) 4-Bromophenyl-phenylether	(4)	12.958	248	562138	19.556
111) Diallate (peak 2)	(4)	12.981	86	129710	5.035
112) Hexachlorobenzene	(4)	13.011	284	603426	20.949
113) Dimethoate	(4)	13.086	87	989863	20.078
114) Atrazine	(4)	13.191	200	570293	20.016
115) Pentachlorophenol	(4)	13.267	266	433590	20.479
117) 4-Aminobiphenyl	(4)	13.279	169	2194770	20.045
116) Pentachloronitrobenzene	(4)	13.279	237	298496	20.960
118) Pronamide	(4)	13.378	173	968393	20.065
120)*Phenanthrene-d10	(4)	13.494	188	716407	5.000
119) Dinoseb	(4)	13.518	211	583720	20.746
121) Phenanthrene	(4)	13.523	178	3092005	19.495
122) Anthracene	(4)	13.593	178	3152436	20.032
124) Carbazole	(4)	13.809	167	2962108	19.905
125) Methyl parathion	(4)	14.007	109	751548	20.271
126) Di-n-butylphthalate	(4)	14.322	149	3568931	20.190
127) Parathion	(4)	14.555	109	499826	20.306
128) 4-Nitroquinoline-1-oxide	(4)	14.561	190	355773	21.340

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	392083	20.185
131) Fluoranthene	(4)	15.161	202	3750044	20.106
132) Benzidine	(5)	15.400	184	7505561	59.982
134)*Pyrene-d10	(5)	15.470	212	925376	5.000
133) Pyrene	(5)	15.499	202	3751865	19.889
137)$Terphenyl-d14	(5)	15.785	244	4837500	39.951
140) p-Dimethylaminoazobenzene	(5)	16.012	225	815600	20.107
141) Chlorobenzilate	(5)	16.106	139	1139311	20.073
142) 3,3'-Dimethylbenzidine	(5)	16.572	212	2522312	19.749
144) Butylbenzylphthalate	(5)	16.636	149	1661443	19.920
146) 2-Acetylaminofluorene	(5)	16.997	181	1605354	20.106
148) 3,3'-Dichlorobenzidine	(5)	17.493	252	1373438	20.072
147) Benzo(a)anthracene	(5)	17.499	228	3690613	20.060
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.510	231	691756	20.061
150) Chrysene	(5)	17.563	228	3440372	19.958
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	2255547	20.118
152) 6-Methylchrysene	(5)	18.361	242	2551850	19.723
153) Di-n-octylphthalate	(6)	18.857	149	3960542	20.056
154) Benzo(b)fluoranthene	(6)	19.352	252	3595391	19.908
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.358	256	1610871	20.061
156) Benzo(k)fluoranthene	(6)	19.405	252	3475347	20.012
157) Benzo(a)pyrene	(6)	19.871	252	3368395	20.084
158)*Perylene-d12	(6)	19.952	264	723059	5.000
159) 3-Methylcholanthrene	(6)	20.442	268	1726295	20.219
160) Dibenz(a,h)acridine	(6)	21.252	279	2597551	20.342
161) Dibenz(a,j)acridine	(6)	21.322	279	2681006	20.215
162) Indeno(1,2,3-cd)pyrene	(6)	21.567	276	3457479	20.218
163) Dibenz(a,h)anthracene	(6)	21.608	278	2943395	20.281
164) Benzo(g,h,i)perylene	(6)	21.946	276	2944437	20.196
165) Diallate TRANS/CIS	(4)			1032760	20.063

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$ = Compound is a surrogate standard.

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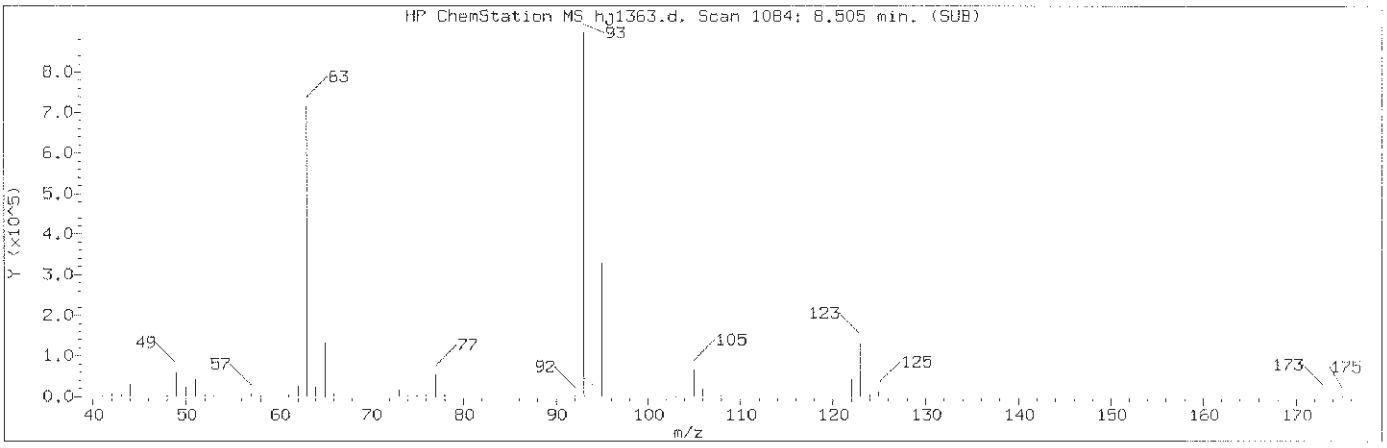
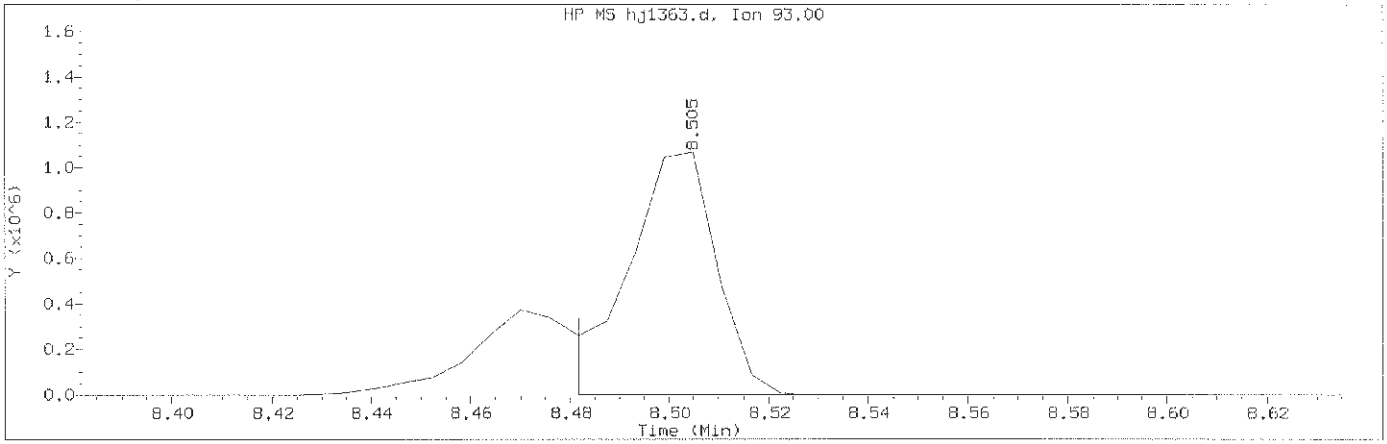
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compound Number	: 44		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1084		
Retention Time (minutes)	: 8.505		
Quant Ion	: 93.00		
Area (flag)	: 1360183M		
On-Column Amount (ng/ul)	: 20.8930		
Integration start scan	: 1079	Integration stop scan:	1089
Y at integration start	: -264	Y at integration end:	-264

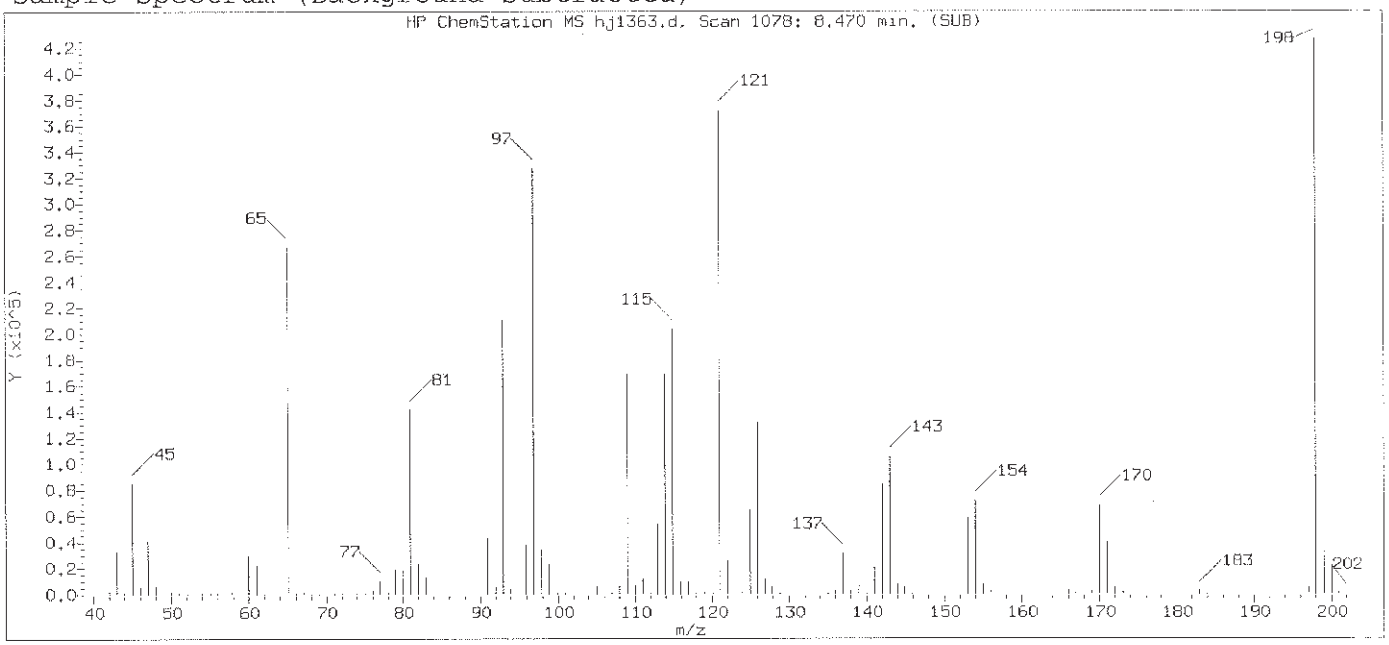
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

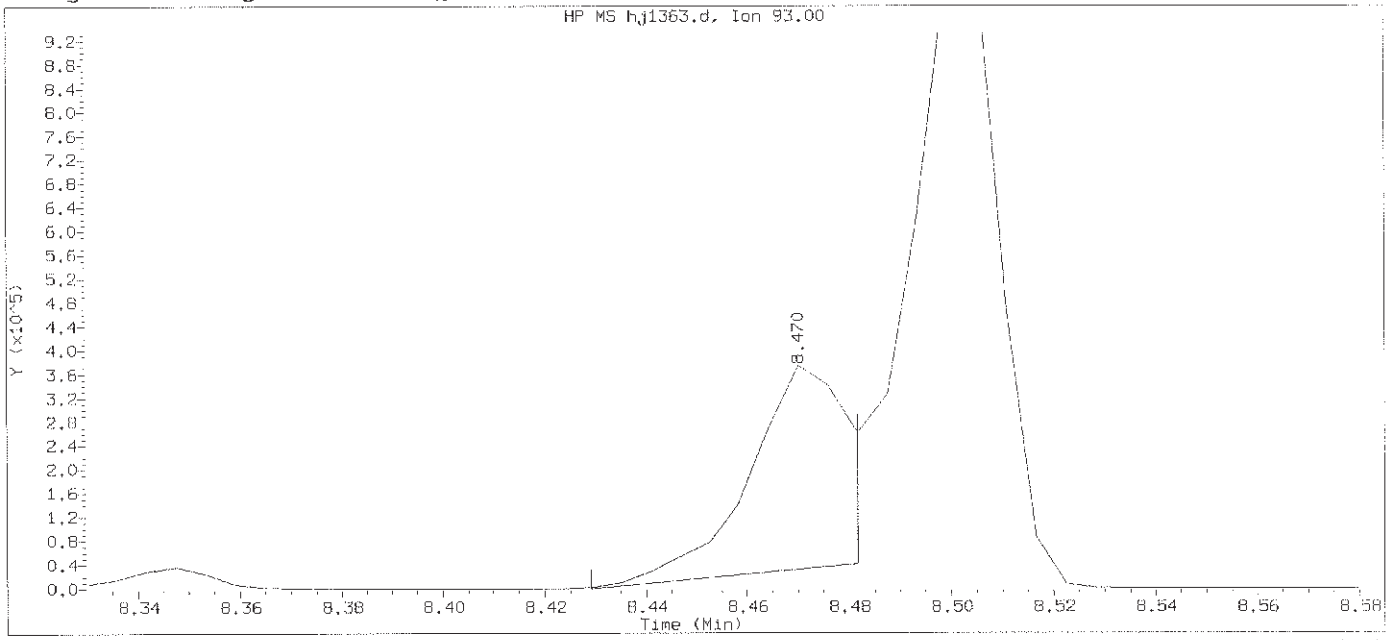
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 01:08
Date, time and analyst ID of latest file update: 29-Oct-2013 01:08 Automation

Sample Name: SSTD020 Lab Sample ID: STD2813

Compound Number	: 44		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1078		
Retention Time (minutes)	: 8.470		
Quant Ion	: 93.00		
Area	: 433506		
On-column Amount (ng/ul)	: 8.7299		
Integration start scan	: 1070	Integration stop scan:	1079
Y at integration start	: 0	Y at integration end:	40635

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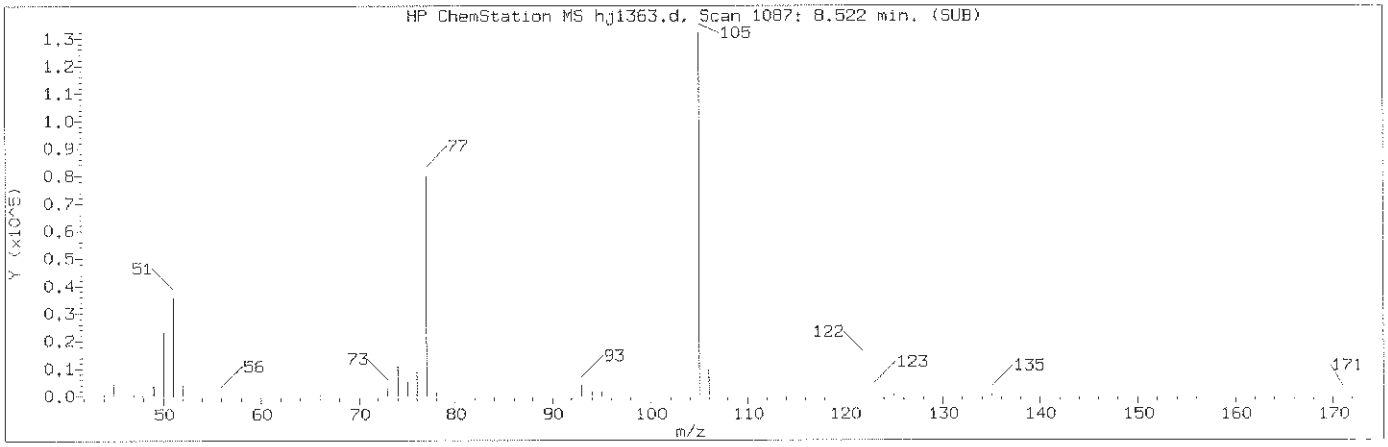
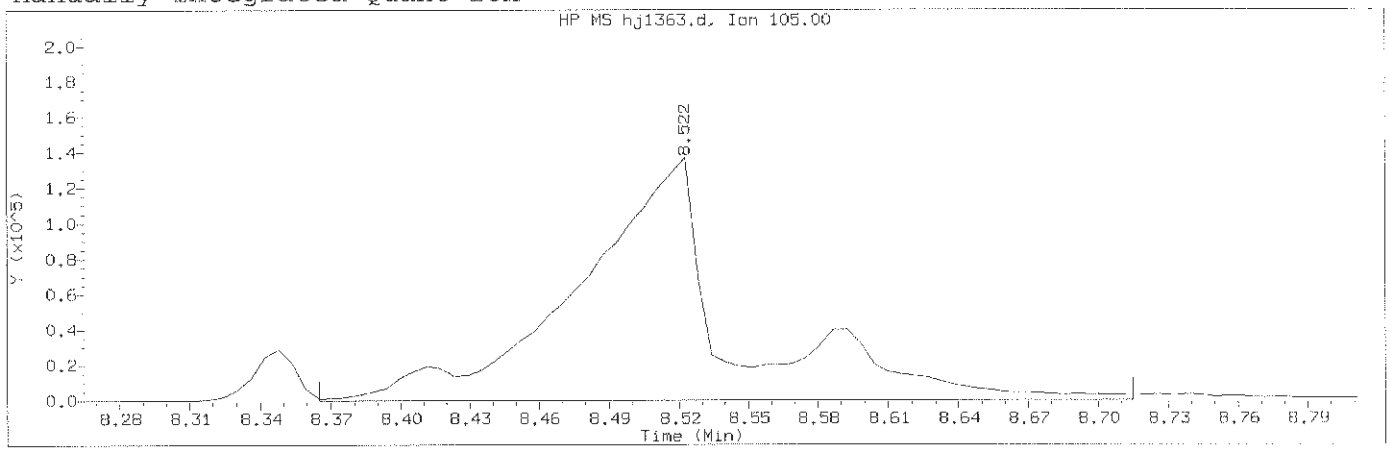
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD020 Lab Sample ID: STD2813

Compound Number	: 43		
Compound Name	: Benzoic acid		
Scan Number	: 1087		
Retention Time (minutes)	: 8.522		
Quant Ion	: 105.00		
Area (flag)	: 624066M		
On-Column Amount (ng/ul)	: 21.8749		
Integration start scan	: 1059	Integration stop scan:	1119
Y at integration start	: 43	Y at integration end:	43

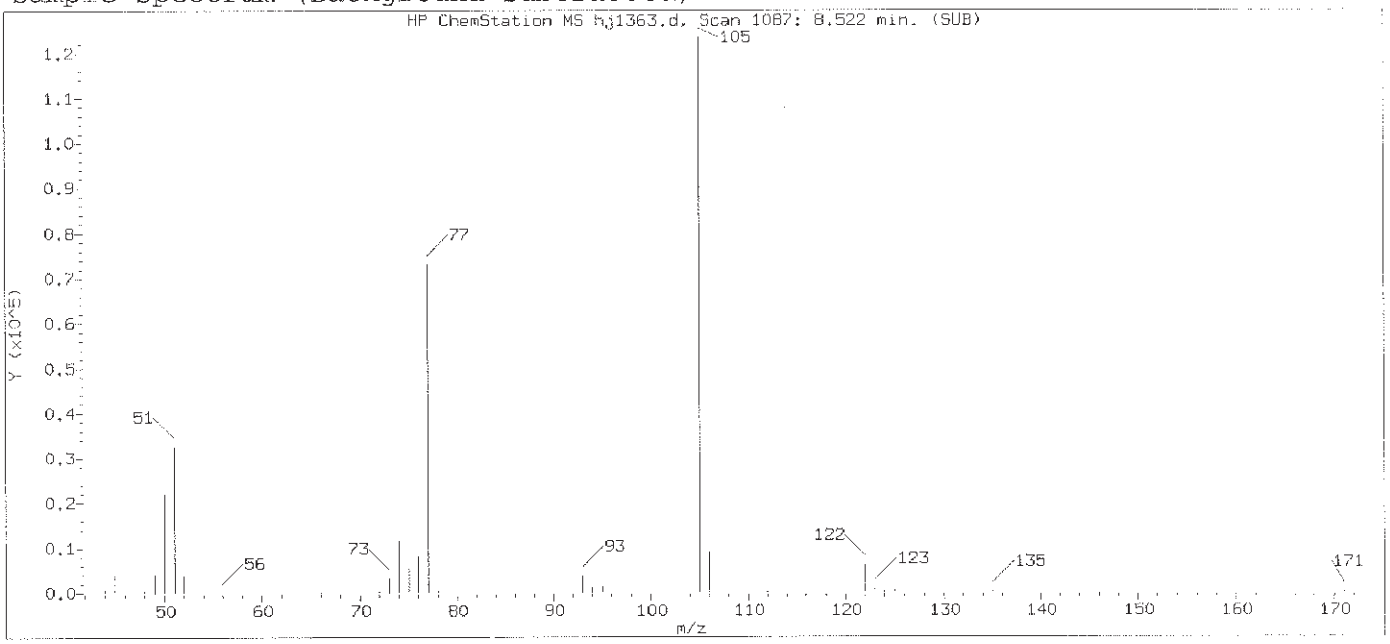
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:33.
Target 3.5 esignature user ID: jmg00346

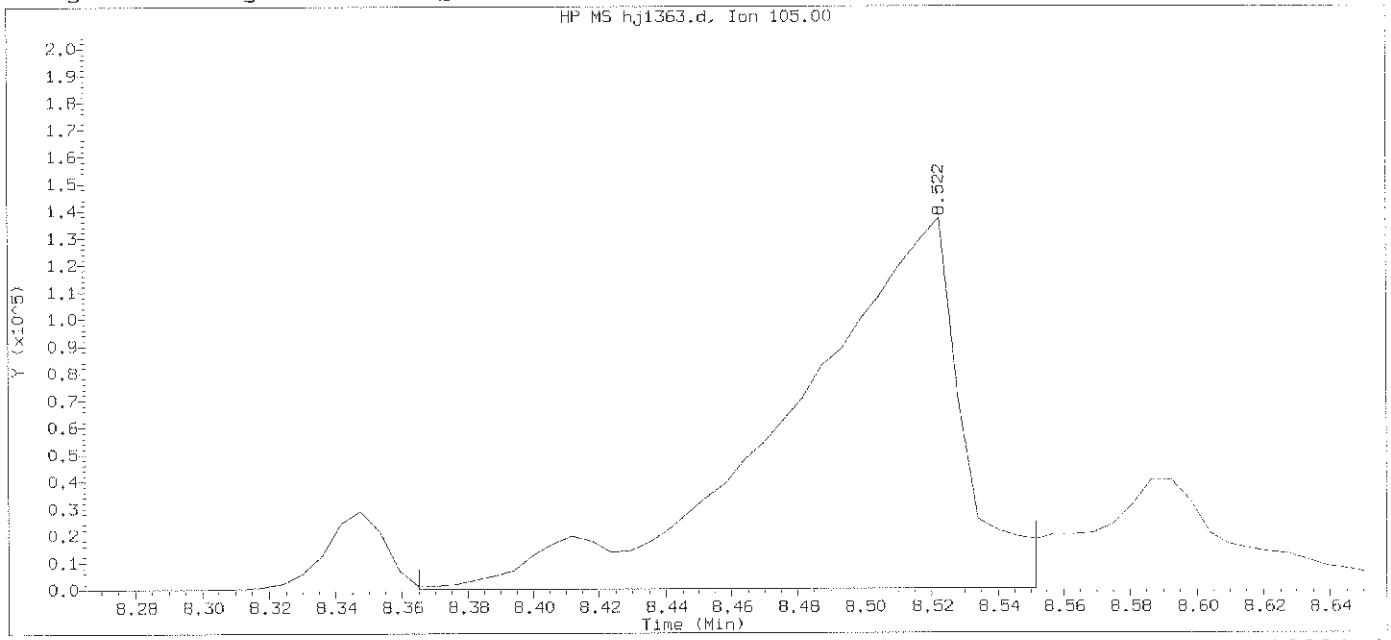
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1363.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 00:36 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 01:08
Date, time and analyst ID of latest file update: 29-Oct-2013 01:08 Automation

Sample Name: SSTD020 Lab Sample ID: STD2813

Compound Number	: 43		
Compound Name	: Benzoic acid		
Scan Number	: 1087		
Retention Time (minutes)	: 8.522		
Quant Ion	: 105.00		
Area	: 489266		
On-column Amount (ng/ul)	: 18.6159		
Integration start scan	: 1059	Integration stop scan:	1091
Y at integration start	: 0	Y at integration end:	0

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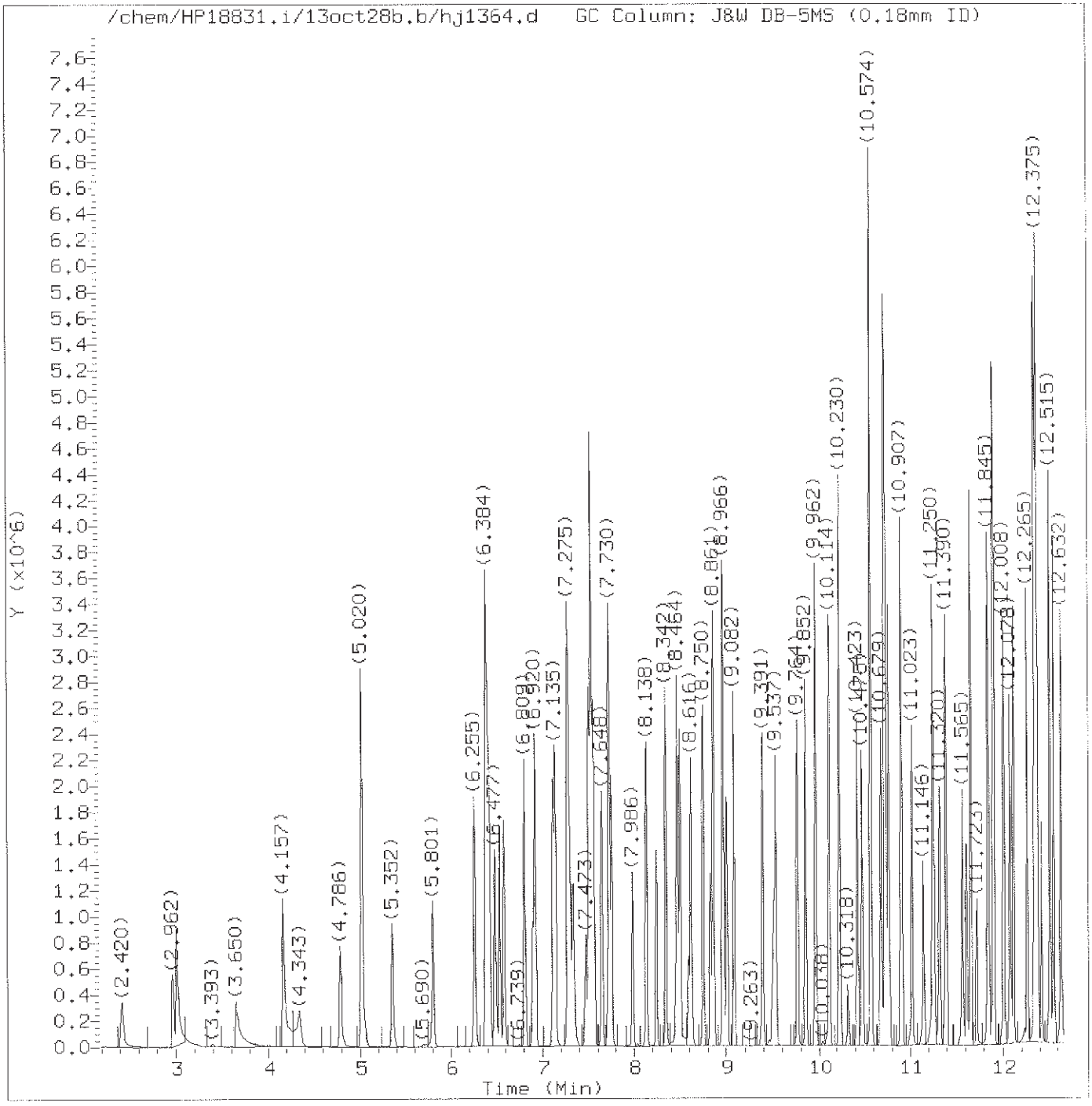
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

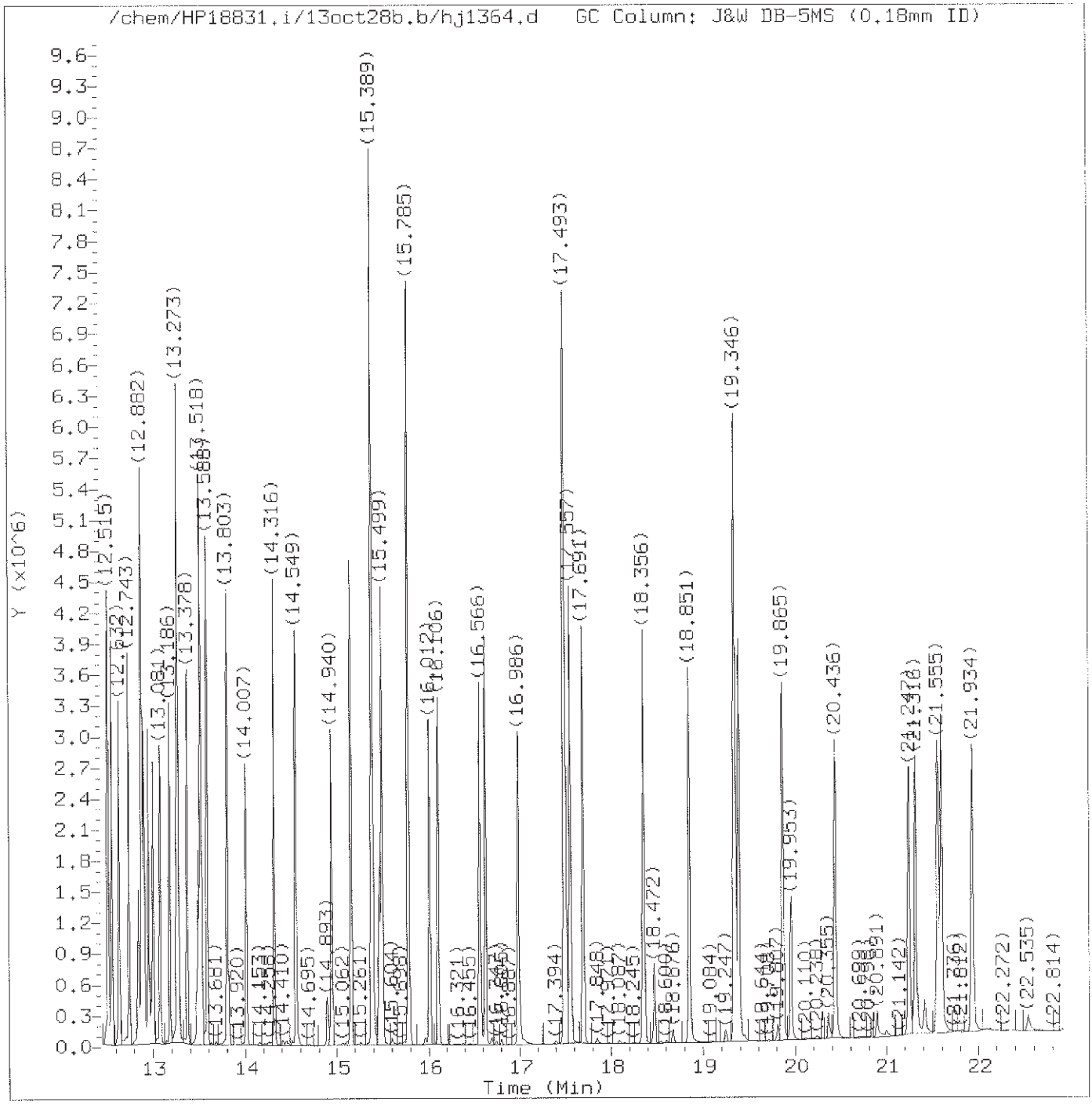
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:34.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.420	88	295788	12.566
2) N-Nitrosodimethylamine	(1)	2.962	74	503510	12.408
3) Pyridine	(1)	3.003	79	826605	12.636
5) 2-Picoline	(1)	4.163	93	808851	12.530
6) N-Nitrosomethylethylamine	(1)	4.343	88	364176	12.533
7) Methyl methanesulfonate	(1)	4.786	80	450655	12.532
8)$2-Fluorophenol	(1)	5.020	112	1298697	25.165
9) N-Nitrosodiethylamine	(1)	5.352	102	342171	12.531
10) Ethyl methanesulfonate	(1)	5.801	109	340168	12.469
11) Benzaldehyde	(1)	6.255	77	646914	13.681
12)$Phenol-d5	(1)	6.384	99	1792626	25.063
13)$Phenol-d6	(1)	6.384	99	1792626	25.063
14) Phenol	(1)	6.401	94	1029079	12.613
16) Aniline	(1)	6.418	93	1204786	12.659
17) bis(2-Chloroethyl)ether	(1)	6.529	93	771682	12.686
18) 2-Chlorophenol	(1)	6.582	128	644202	12.609
19) 1,3-Dichlorobenzene	(1)	6.809	146	726427	12.642
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	184094	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	739663	12.704
22) Benzyl alcohol	(1)	7.112	108	447298	12.677
23) 1,2-Dichlorobenzene	(1)	7.141	146	690059	12.653
25) Indene	(1)	7.275	115	1338399	15.315
26) 2-Methylphenol	(1)	7.299	108	629861	12.704
28) bis(2-Chloroisopropyl)ether	(1)	7.339	45	872579	12.520
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.339	45	872579	12.520
29) N-Nitrosopyrrolidine	(1)	7.473	100	338428	12.537
30) Acetophenone	(1)	7.508	105	996042	12.641
32) N-Nitroso-di-n-propylamine	(1)	7.532	70	606534	12.617
31) 4-Methylphenol	(1)	7.532	108	720523	12.747
33) N-Nitrosomorpholine	(1)	7.543	56	431453	12.604
34) o-Toluidine	(1)	7.561	106	1110105	12.649
35) Hexachloroethane	(1)	7.648	117	297446	12.689
36)$Nitrobenzene-d5	(2)	7.730	82	1707210	25.057
37) Nitrobenzene	(2)	7.753	77	881432	12.606
38) N-Nitrosopiperidine	(2)	7.986	114	342073	12.593
39) Isophorone	(2)	8.138	82	1522284	12.456
40) 2-Nitrophenol	(2)	8.243	139	338480	12.542
41) 2,4-Dimethylphenol	(2)	8.342	107	735123	12.447
42) O,O,O-triethylphosphorothioate	(2)	8.470	198	373423	12.681
43) Benzoic acid	(2)	8.493	105	353706	12.205

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:34.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.499	93	855372	12.748
46) 2,4-Dichlorophenol	(2)	8.622	162	552240	12.611
47) 1,2,4-Trichlorobenzene	(2)	8.750	180	639633	12.562
48)*Naphthalene-d8	(2)	8.826	136	714487	5.000
49) Naphthalene	(2)	8.861	128	1815333	12.611
50) 4-Chloroaniline	(2)	8.966	127	774485	12.536
51) 2,6-Dichlorophenol	(2)	8.971	162	529619	12.559
52) Hexachloropropene	(2)	9.012	213	431801	12.566
53) Hexachlorobutadiene	(2)	9.082	225	383934	12.636
54) Quinoline	(2)	9.391	129	1193177	12.625
55) Caprolactam	(2)	9.513	113	219950	13.226
56) N-Nitrosodi-n-butylamine	(2)	9.537	84	691004	13.206
58) 4-Chloro-3-methylphenol	(2)	9.764	107	630460	12.517
60) Safrole	(2)	9.852	162	511321	12.601
61) 2-Methylnaphthalene	(2)	9.962	142	1290495	12.547
62) 1-Methylnaphthalene	(2)	10.114	142	1174903	12.555
63) Hexachlorocyclopentadiene	(3)	10.230	237	318902	12.505
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	649303	12.593
65) cis-Isosafrole	(3)	10.318	162	88333	12.515
66) 2,4,6-Trichlorophenol	(3)	10.423	196	441719	12.436
67) 2,4,5-Trichlorophenol	(3)	10.475	196	448243	12.585
68)$2-Fluorobiphenyl	(3)	10.574	172	2702262	24.874
70) Isosafrole	(3)	10.685	162	506303	12.319
69) trans-Isosafrole	(3)	10.685	162	506303	12.319
71) 1,1'-Biphenyl	(3)	10.726	154	1550797	12.573
72) 2-Chloronaphthalene	(3)	10.738	162	1231972	11.963
73) 1-Chloronaphthalene	(3)	10.767	162	1154470	13.366
74) Diphenyl ether	(3)	10.901	170	860249	12.512
75) 2-Nitroaniline	(3)	10.912	138	385660	12.635
76) 1,4-Naphthoquinone	(3)	11.023	158	515024	13.025
77) 1,4-Dinitrobenzene	(3)	11.146	168	220019	12.923
78) Dimethylphthalate	(3)	11.250	163	1341759	13.306
79) 1,3-Dinitrobenzene	(3)	11.262	168	255795	13.068
80) 2,6-Dinitrotoluene	(3)	11.320	165	335981	12.915
81) Acenaphthylene	(3)	11.390	152	1732710	12.543
82) 3-Nitroaniline	(3)	11.565	138	346220	12.284
83)*Acenaphthene-d10	(3)	11.606	164	448939	5.000
84) Acenaphthene	(3)	11.658	153	1212055	12.455
85) 2,4-Dinitrophenol	(3)	11.723	184	174108	12.017
86) 4-Nitrophenol	(3)	11.845	109	245401	12.631

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.851	250	521541	12.485
88) Dibenzofuran	(3)	11.903	168	1732317	13.006
89) 2,4-Dinitrotoluene	(3)	11.909	165	449762	13.341
90) 1-Naphthylamine	(3)	12.008	143	1229618	12.790
91) 2,3,4,6-Tetrachlorophenol	(3)	12.078	232	362157	12.851
92) 2-Naphthylamine	(3)	12.119	143	1246900	12.880
93) Diethylphthalate	(3)	12.265	149	1253019	12.931
94) Fluorene	(3)	12.346	166	1412404	13.042
95) Thionazin	(3)	12.358	107	264666	12.795
96) 4-Chlorophenyl-phenylether	(3)	12.370	204	695748	12.926
97) 5-Nitro-o-toluidine	(3)	12.375	152	385555	13.094
98) 4-Nitroaniline	(3)	12.381	138	329867	12.561
99) 4,6-Dinitro-2-methylphenol	(4)	12.422	198	258829	11.992
102) NDPA as diphenylamine	(4)	12.515	169	1149362	12.741
101) N-Nitrosodiphenylamine	(4)	12.515	169	1149362	12.741
103) 1,2-Diphenylhydrazine	(4)	12.556	77	1670508	12.547
104)$2,4,6-Tribromophenol	(3)	12.638	330	306836	26.333
105) Tetraethyldithiopyrophosphate	(4)	12.743	97	251038	12.386
106) 1,3,5-Trinitrobenzene	(4)	12.847	213	189400	11.957
107) Diallate (peak 1)	(4)	12.877	86	606971	9.349
108) Phorate	(4)	12.888	75	1018350	12.523
109) Phenacetin	(4)	12.912	108	733676	11.965
110) 4-Bromophenyl-phenylether	(4)	12.958	248	396400	12.681
111) Diallate (peak 2)	(4)	12.982	86	84109	3.043
112) Hexachlorobenzene	(4)	13.011	284	382386	12.324
113) Dimethoate	(4)	13.081	87	652416	12.295
114) Atrazine	(4)	13.186	200	386198	12.519
115) Pentachlorophenol	(4)	13.261	266	262509	11.701
117) 4-Aminobiphenyl	(4)	13.273	169	1483304	12.513
116) Pentachloronitrobenzene	(4)	13.279	237	188524	12.298
118) Pronamide	(4)	13.378	173	645480	12.393
120)*Phenanthrene-d10	(4)	13.494	188	775306	5.000
119) Dinoseb	(4)	13.512	211	361874	12.033
121) Phenanthrene	(4)	13.524	178	2012846	11.911
122) Anthracene	(4)	13.588	178	2071869	12.248
124) Carbazole	(4)	13.803	167	1954515	12.225
125) Methyl parathion	(4)	14.007	109	488145	12.248
126) Di-n-butylphthalate	(4)	14.316	149	2334284	12.275
127) Parathion	(4)	14.549	109	316128	12.019
128) 4-Nitroquinoline-1-oxide	(4)	14.561	190	200329	11.422

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1364.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:05 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	253217	12.156
131) Fluoranthene	(4)	15.156	202	2440056	12.189
132) Benzidine	(5)	15.389	184	4845252	37.523
134)*Pyrene-d10	(5)	15.465	212	954733	5.000
133) Pyrene	(5)	15.499	202	2442917	12.539
137)$Terphenyl-d14	(5)	15.785	244	3164737	25.249
140) p-Dimethylaminoazobenzene	(5)	16.012	225	520589	12.455
141) Chlorobenzilate	(5)	16.106	139	723990	12.397
142) 3,3'-Dimethylbenzidine	(5)	16.566	212	1646357	12.495
144) Butylbenzylphthalate	(5)	16.630	149	1067954	12.433
146) 2-Acetylaminofluorene	(5)	16.986	181	1018158	12.395
148) 3,3'-Dichlorobenzidine	(5)	17.487	252	887423	12.553
147) Benzo(a)anthracene	(5)	17.493	228	2387471	12.558
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.510	231	446736	12.543
150) Chrysene	(5)	17.557	228	2216392	12.472
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	1453005	12.546
152) 6-Methylchrysene	(5)	18.356	242	1665332	12.481
153) Di-n-octylphthalate	(6)	18.851	149	2500849	12.494
154) Benzo(b)fluoranthene	(6)	19.341	252	2251650	12.348
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.346	256	1014035	12.467
156) Benzo(k)fluoranthene	(6)	19.393	252	2245089	12.688
157) Benzo(a)pyrene	(6)	19.865	252	2143429	12.580
158)*Perylene-d12	(6)	19.953	264	733022	5.000
159) 3-Methylcholanthrene	(6)	20.436	268	1087720	12.550
160) Dibenz(a,h)acridine	(6)	21.247	279	1631876	12.579
161) Dibenz(a,j)acridine	(6)	21.316	279	1730721	12.777
162) Indeno(1,2,3-cd)pyrene	(6)	21.555	276	2216799	12.714
163) Dibenz(a,h)anthracene	(6)	21.596	278	1892624	12.771
164) Benzo(g,h,i)perylene	(6)	21.934	276	1882284	12.676
165) Diallate TRANS/CIS	(4)			691080	12.429

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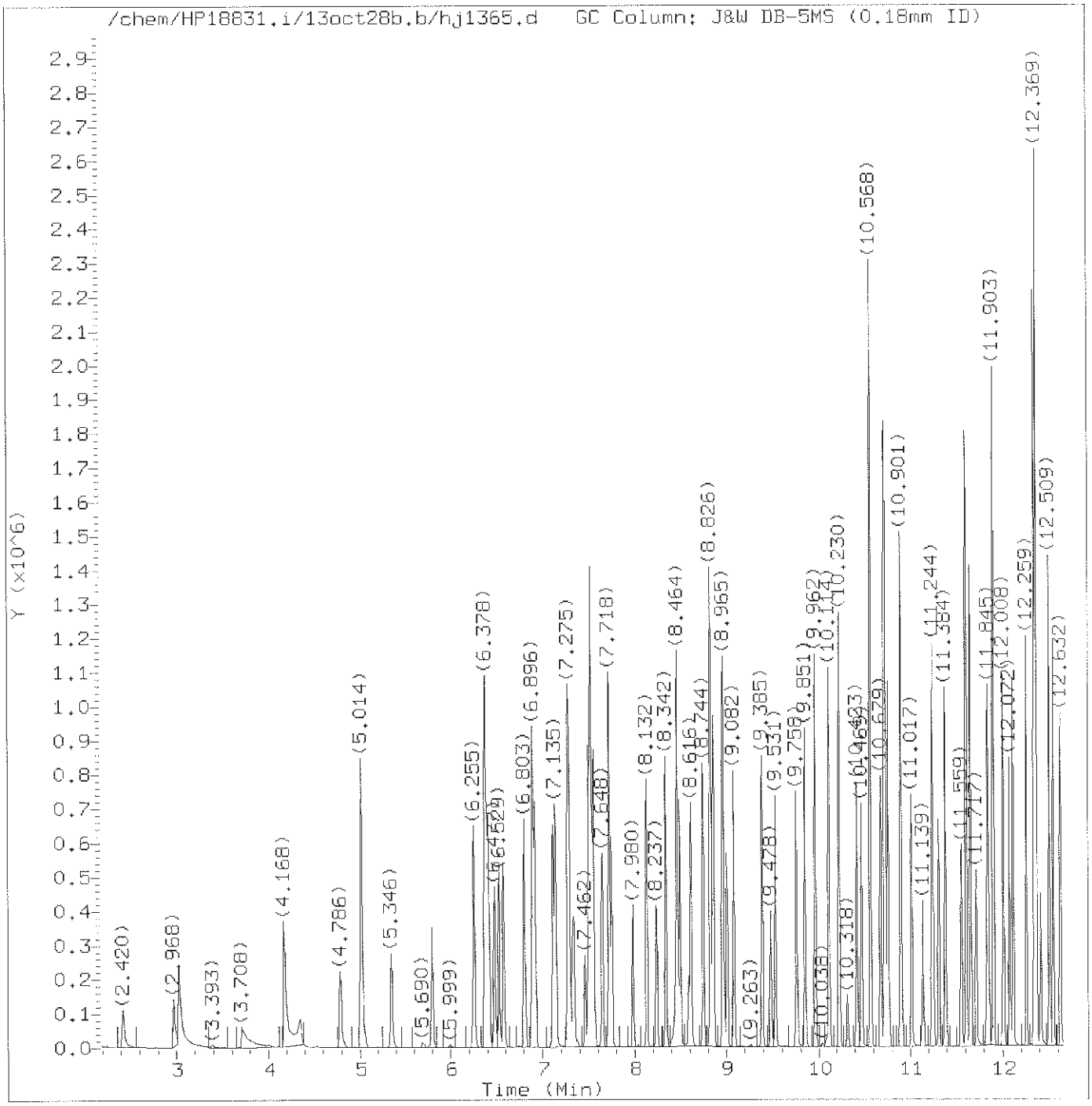
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

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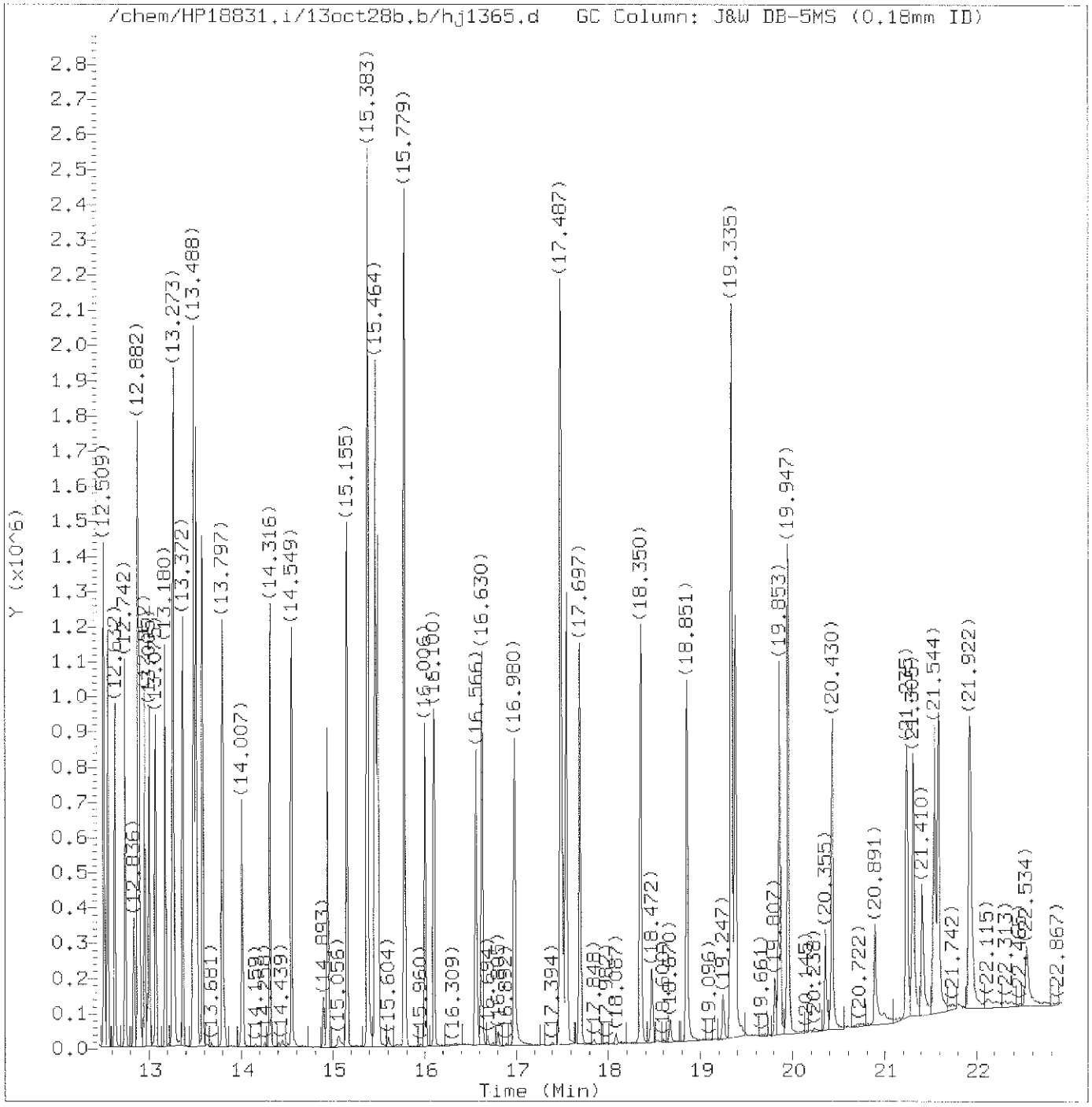
on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

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on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.420	88	84845	3.544
2) N-Nitrosodimethylamine	(1)	2.968	74	134135	3.302
3) Pyridine	(1)	3.026	79	217844	3.322
5) 2-Picoline	(1)	4.168	93	240512	3.640
6) N-Nitrosomethylethylamine	(1)	4.343	88	107878	3.629
7) Methyl methanesulfonate	(1)	4.786	80	131940	3.595
8)$2-Fluorophenol	(1)	5.014	112	382722	7.251
9) N-Nitrosodiethylamine	(1)	5.352	102	99447	3.574
10) Ethyl methanesulfonate	(1)	5.795	109	98720	3.555
11) Benzaldehyde	(1)	6.255	77	208988	4.167
12)$Phenol-d5	(1)	6.372	99	534040	7.291
13)$Phenol-d6	(1)	6.372	99	534040	7.291
14) Phenol	(1)	6.395	94	307673	3.675
16) Aniline	(1)	6.412	93	353487	3.631
17) bis(2-Chloroethyl)ether	(1)	6.529	93	228696	3.666
18) 2-Chlorophenol	(1)	6.576	128	191135	3.652
19) 1,3-Dichlorobenzene	(1)	6.803	146	217118	3.681
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	189830	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	219275	3.672
22) Benzyl alcohol	(1)	7.112	108	134225	3.701
23) 1,2-Dichlorobenzene	(1)	7.135	146	207715	3.705
25) Indene	(1)	7.275	115	386835	4.333
26) 2-Methylphenol	(1)	7.293	108	187831	3.689
28) bis(2-Chloroisopropyl)ether	(1)	7.333	45	268620	3.740
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.333	45	268620	3.740
29) N-Nitrosopyrrolidine	(1)	7.462	100	96367	3.516
30) Acetophenone	(1)	7.502	105	304166	3.745
32) N-Nitroso-di-n-propylamine	(1)	7.520	70	180552	3.663
31) 4-Methylphenol	(1)	7.526	108	215670	3.710
33) N-Nitrosomorpholine	(1)	7.532	56	129521	3.685
34) o-Toluidine	(1)	7.555	106	332327	3.687
35) Hexachloroethane	(1)	7.648	117	88087	3.665
36)$Nitrobenzene-d5	(2)	7.718	82	502227	7.321
37) Nitrobenzene	(2)	7.747	77	262190	3.712
38) N-Nitrosopiperidine	(2)	7.980	114	98437	3.611
39) Isophorone	(2)	8.132	82	448253	3.646
40) 2-Nitrophenol	(2)	8.243	139	92160	3.441
41) 2,4-Dimethylphenol	(2)	8.342	107	219131	3.680
43) Benzoic acid	(2)	8.464	105	160099	5.769
42) O,O,O-triethylphosphorothioate	(2)	8.464	198	112307	3.762

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.493	93	264578	3.864
46) 2,4-Dichlorophenol	(2)	8.616	162	162312	3.677
47) 1,2,4-Trichlorobenzene	(2)	8.744	180	192050	3.729
48)*Naphthalene-d8	(2)	8.826	136	723682	5.000
49) Naphthalene	(2)	8.860	128	537376	3.698
50) 4-Chloroaniline	(2)	8.960	127	229748	3.687
51) 2,6-Dichlorophenol	(2)	8.971	162	156480	3.681
52) Hexachloropropene	(2)	9.006	213	120635	3.519
53) Hexachlorobutadiene	(2)	9.082	225	115294	3.747
54) Quinoline	(2)	9.385	129	348501	3.662
55) Caprolactam	(2)	9.478	113	68927	4.019
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	160100	3.143
58) 4-Chloro-3-methylphenol	(2)	9.758	107	181728	3.598
60) Safrole	(2)	9.851	162	150020	3.670
61) 2-Methylnaphthalene	(2)	9.962	142	385045	3.707
62) 1-Methylnaphthalene	(2)	10.114	142	351001	3.713
63) Hexachlorocyclopentadiene	(3)	10.224	237	82446	3.273
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	196545	3.742
65) cis-Isosafrole	(3)	10.318	162	26185	3.661
66) 2,4,6-Trichlorophenol	(3)	10.423	196	124966	3.507
67) 2,4,5-Trichlorophenol	(3)	10.469	196	129717	3.607
68)$2-Fluorobiphenyl	(3)	10.568	172	824123	7.454
70) Isosafrole	(3)	10.679	162	145460	3.524
69) trans-Isosafrole	(3)	10.679	162	145460	3.524
71) 1,1'-Biphenyl	(3)	10.720	154	480173	3.805
75) 2-Nitroaniline	(3)	10.726	138	110481	3.589
72) 2-Chloronaphthalene	(3)	10.732	162	357612	3.470
73) 1-Chloronaphthalene	(3)	10.761	162	370116	4.104
74) Diphenyl ether	(3)	10.901	170	258112	3.696
76) 1,4-Naphthoquinone	(3)	11.017	158	145185	3.631
77) 1,4-Dinitrobenzene	(3)	11.139	168	57330	3.384
78) Dimethylphthalate	(3)	11.244	163	417033	3.992
79) 1,3-Dinitrobenzene	(3)	11.250	168	73152	3.683
80) 2,6-Dinitrotoluene	(3)	11.314	165	101484	3.811
81) Acenaphthylene	(3)	11.384	152	508981	3.641
82) 3-Nitroaniline	(3)	11.559	138	99880	3.528
83)*Acenaphthene-d10	(3)	11.606	164	457622	5.000
84) Acenaphthene	(3)	11.652	153	368785	3.724
85) 2,4-Dinitrophenol	(3)	11.717	184	78664	5.654
86) 4-Nitrophenol	(3)	11.833	109	66368	3.424

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.845	250	157662	3.712
88) Dibenzofuran	(3)	11.903	168	530499	3.875
89) 2,4-Dinitrotoluene	(3)	11.903	165	127909	3.728
90) 1-Naphthylamine	(3)	12.008	143	362039	3.705
91) 2,3,4,6-Tetrachlorophenol	(3)	12.072	232	103984	3.645
92) 2-Naphthylamine	(3)	12.113	143	355594	3.632
93) Diethylphthalate	(3)	12.259	149	388590	3.896
94) Fluorene	(3)	12.346	166	435206	3.902
95) Thionazin	(3)	12.352	107	81466	3.840
98) 4-Nitroaniline	(3)	12.369	138	104012	3.858
97) 5-Nitro-o-toluidine	(3)	12.369	152	114765	3.809
96) 4-Chlorophenyl-phenylether	(3)	12.369	204	217339	3.917
99) 4,6-Dinitro-2-methylphenol	(4)	12.416	198	60524	2.916
102) NDPA as diphenylamine	(4)	12.509	169	347763	3.789
101) N-Nitrosodiphenylamine	(4)	12.509	169	347763	3.789
103) 1,2-Diphenylhydrazine	(4)	12.556	77	510133	3.770
104)$2,4,6-Tribromophenol	(3)	12.632	330	90700	7.609
105) Tetraethyldithiopyrophosphate	(4)	12.742	97	77028	3.746
106) 1,3,5-Trinitrobenzene	(4)	12.836	213	42797	2.826
107) Diallate (peak 1)	(4)	12.876	86	191276	2.884
108) Phorate	(4)	12.882	75	316760	3.820
109) Phenacetin	(4)	12.900	108	222528	3.609
110) 4-Bromophenyl-phenylether	(4)	12.958	248	121340	3.809
111) Diallate (peak 2)	(4)	12.981	86	27053	0.959
112) Hexachlorobenzene	(4)	13.005	284	117115	3.725
113) Dimethoate	(4)	13.075	87	195597	3.655
114) Atrazine	(4)	13.180	200	128899	4.038
115) Pentachlorophenol	(4)	13.255	266	65358	3.012
117) 4-Aminobiphenyl	(4)	13.273	169	427916	3.594
116) Pentachloronitrobenzene	(4)	13.273	237	54099	3.528
118) Pronamide	(4)	13.372	173	187651	3.588
120)*Phenanthrene-d10	(4)	13.488	188	786881	5.000
119) Dinoseb	(4)	13.512	211	78234	2.736
121) Phenanthrene	(4)	13.518	178	622367	3.652
122) Anthracene	(4)	13.582	178	635973	3.713
124) Carbazole	(4)	13.797	167	589906	3.658
125) Methyl parathion	(4)	14.001	109	134099	3.394
126) Di-n-butylphthalate	(4)	14.316	149	691549	3.615
127) Parathion	(4)	14.543	109	87645	3.367
128) 4-Nitroquinoline-1-oxide	(4)	14.555	190	37042	2.284

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1365.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 01:34 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	75724	3.614
131) Fluoranthene	(4)	15.155	202	721148	3.588
132) Benzidine	(5)	15.383	184	1251737	9.747
134)*Pyrene-d10	(5)	15.464	212	981200	5.000
133) Pyrene	(5)	15.493	202	749151	3.743
137)$Terphenyl-d14	(5)	15.779	244	986373	7.625
140) p-Dimethylaminoazobenzene	(5)	16.006	225	146008	3.464
141) Chlorobenzilate	(5)	16.100	139	217845	3.653
142) 3,3'-Dimethylbenzidine	(5)	16.566	212	425540	3.248
144) Butylbenzylphthalate	(5)	16.630	149	316424	3.616
146) 2-Acetylaminofluorene	(5)	16.980	181	262921	3.224
147) Benzo(a)anthracene	(5)	17.487	228	710923	3.660
148) 3,3'-Dichlorobenzidine	(5)	17.487	252	248145	3.477
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.504	231	128458	3.555
150) Chrysene	(5)	17.551	228	671009	3.689
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	417313	3.552
152) 6-Methylchrysene	(5)	18.350	242	489042	3.602
153) Di-n-octylphthalate	(6)	18.851	149	677081	3.387
154) Benzo(b)fluoranthene	(6)	19.335	252	687634	3.699
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.340	256	294869	3.584
156) Benzo(k)fluoranthene	(6)	19.381	252	684457	3.775
157) Benzo(a)pyrene	(6)	19.853	252	623049	3.609
158)*Perylene-d12	(6)	19.947	264	749778	5.000
159) 3-Methylcholanthrene	(6)	20.430	268	313358	3.576
160) Dibenz(a,h)acridine	(6)	21.235	279	451675	3.468
161) Dibenz(a,j)acridine	(6)	21.305	279	493538	3.598
162) Indeno(1,2,3-cd)pyrene	(6)	21.544	276	637249	3.607
163) Dibenz(a,h)anthracene	(6)	21.590	278	546044	3.631
164) Benzo(g,h,i)perylene	(6)	21.922	276	547430	3.632
165) Diallate TRANS/CIS	(4)			218329	3.845

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$ = Compound is a surrogate standard.

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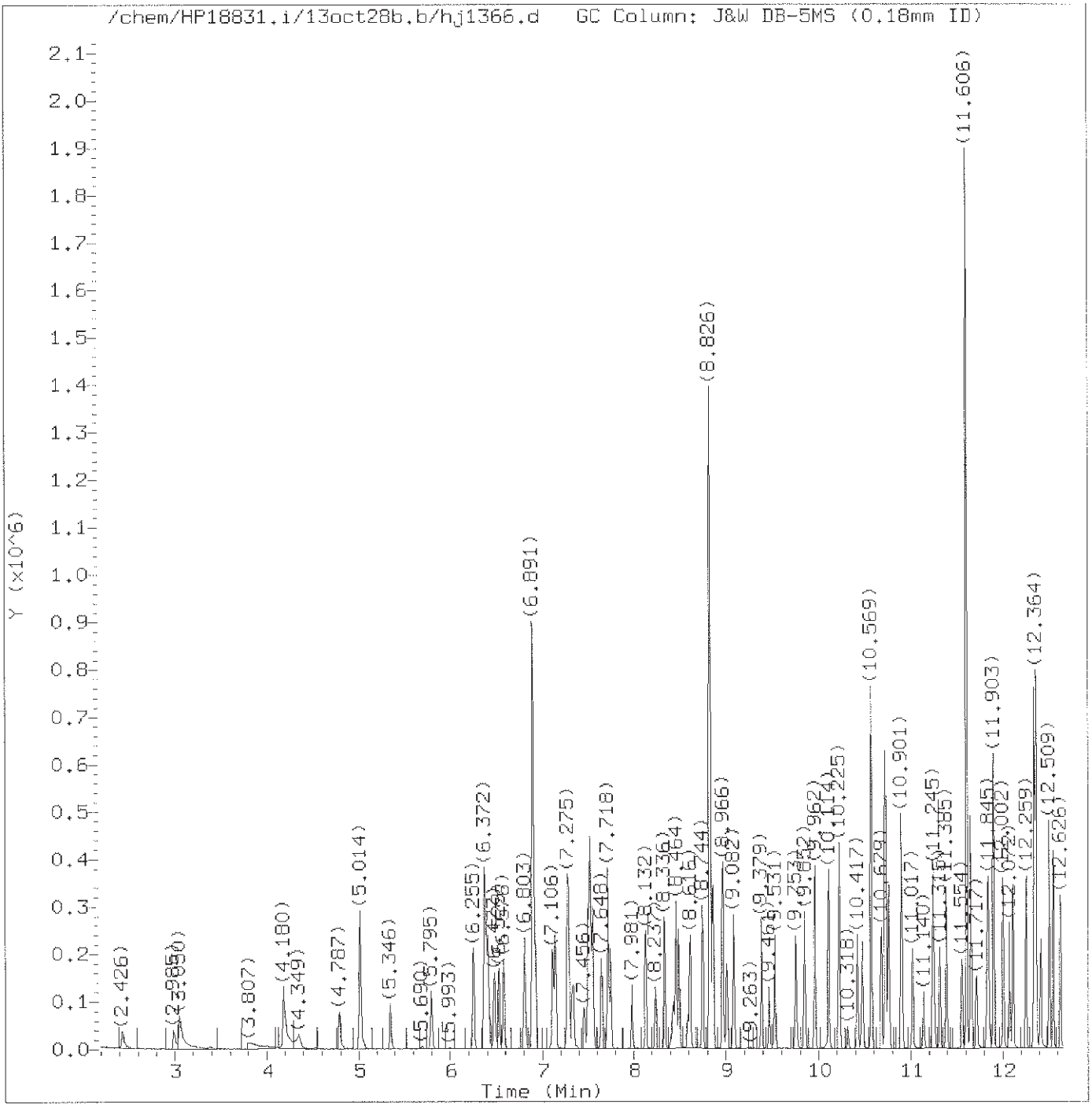
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

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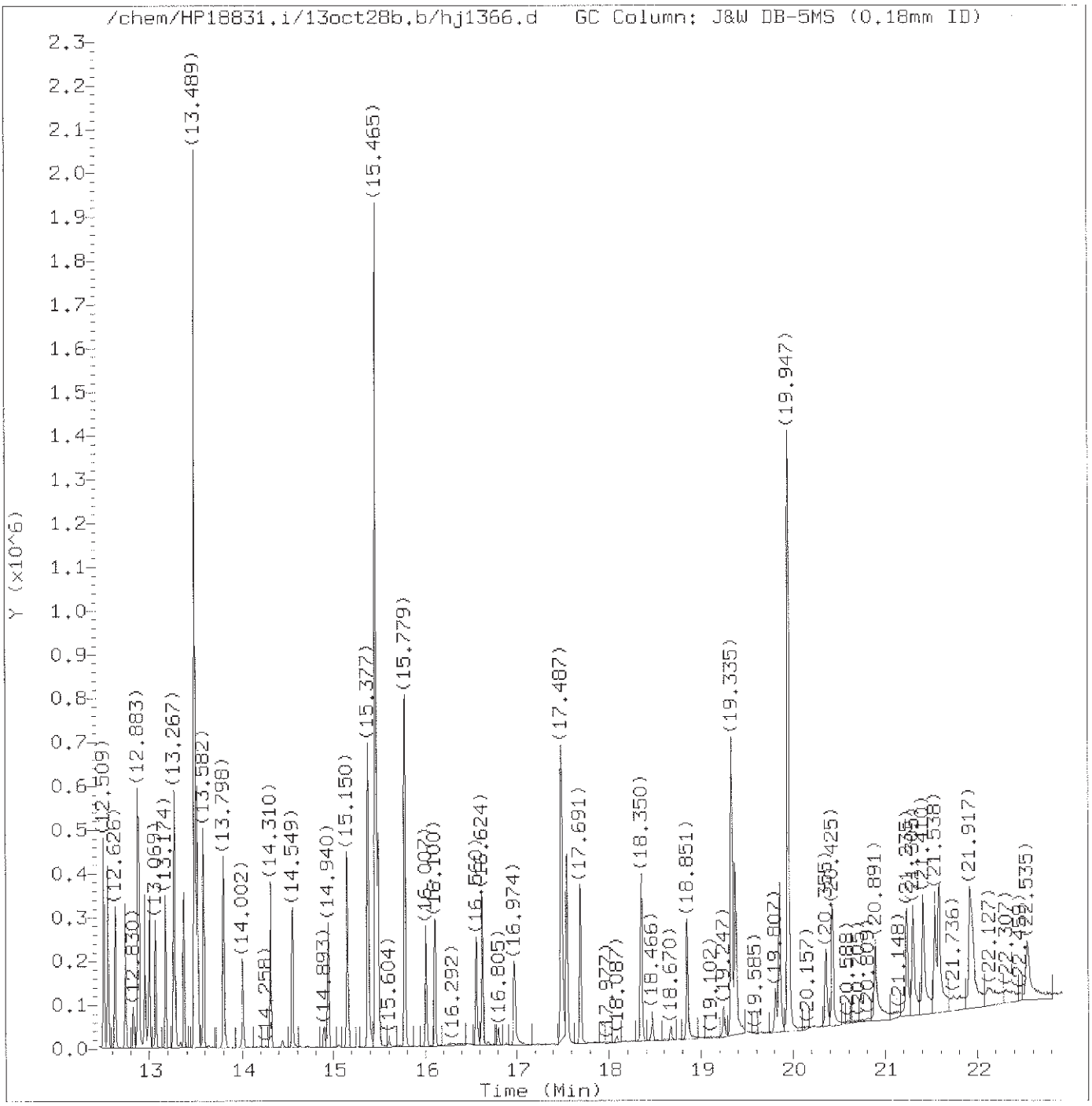
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.432	88	29178	1.242
2) N-Nitrosodimethylamine	(1)	2.985	74	46629M	1.182
3) Pyridine	(1)	3.050	79	78792M	1.228
5) 2-Picoline	(1)	4.180	93	83914M	1.286
6) N-Nitrosomethylethylamine	(1)	4.344	88	36067	1.238
7) Methyl methanesulfonate	(1)	4.787	80	44242	1.231
8)$2-Fluorophenol	(1)	5.014	112	129288	2.495
9) N-Nitrosodiethylamine	(1)	5.352	102	32825	1.209
10) Ethyl methanesulfonate	(1)	5.795	109	35268	1.286
11) Benzaldehyde	(1)	6.255	77	68213	1.361
12)$Phenol-d5	(1)	6.372	99	177609	2.474
13)$Phenol-d6	(1)	6.372	99	177609	2.474
14) Phenol	(1)	6.389	94	104108	1.264
16) Aniline	(1)	6.413	93	120071	1.255
17) bis(2-Chloroethyl)ether	(1)	6.529	93	77968	1.269
18) 2-Chlorophenol	(1)	6.576	128	63723	1.241
19) 1,3-Dichlorobenzene	(1)	6.803	146	73802	1.270
21)*1,4-Dichlorobenzene-d4	(1)	6.891	152	186419	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	75310	1.278
22) Benzyl alcohol	(1)	7.106	108	42882	1.211
23) 1,2-Dichlorobenzene	(1)	7.135	146	69062	1.254
25) Indene	(1)	7.270	115	132416	1.508
26) 2-Methylphenol	(1)	7.287	108	61162	1.228
28) bis(2-Chloroisopropyl)ether	(1)	7.334	45	91763	1.292
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.334	45	91763	1.292
29) N-Nitrosopyrrolidine	(1)	7.462	100	31321	1.177
30) Acetophenone	(1)	7.503	105	101732	1.271
32) N-Nitroso-di-n-propylamine	(1)	7.520	70	61260	1.263
31) 4-Methylphenol	(1)	7.526	108	72255	1.263
33) N-Nitrosomorpholine	(1)	7.526	56	44392	1.280
34) o-Toluidine	(1)	7.549	106	112347	1.266
35) Hexachloroethane	(1)	7.643	117	29140	1.237
36)$Nitrobenzene-d5	(2)	7.718	82	166930	2.455
37) Nitrobenzene	(2)	7.747	77	88150	1.254
38) N-Nitrosopiperidine	(2)	7.981	114	32449	1.205
39) Isophorone	(2)	8.132	82	146536	1.207
40) 2-Nitrophenol	(2)	8.237	139	28219	1.087
41) 2,4-Dimethylphenol	(2)	8.336	107	73175	1.238
43) Benzoic acid	(2)	8.435	105	57874	2.263
42) O,O,O-triethylphosphorothioate	(2)	8.464	198	37064	1.249

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.494	93	90421	1.314
46) 2,4-Dichlorophenol	(2)	8.616	162	52688	1.208
47) 1,2,4-Trichlorobenzene	(2)	8.744	180	66308	1.287
48)*Naphthalene-d8	(2)	8.826	136	719763	5.000
49) Naphthalene	(2)	8.861	128	185235	1.276
50) 4-Chloroaniline	(2)	8.960	127	76087	1.231
51) 2,6-Dichlorophenol	(2)	8.966	162	51786	1.229
52) Hexachloropropene	(2)	9.006	213	35863	1.080
53) Hexachlorobutadiene	(2)	9.082	225	38433	1.255
54) Quinoline	(2)	9.385	129	115933	1.229
55) Caprolactam	(2)	9.467	113	20314	1.200
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	51906	1.056
58) 4-Chloro-3-methylphenol	(2)	9.753	107	56023	1.136
60) Safrole	(2)	9.852	162	49206	1.217
61) 2-Methylnaphthalene	(2)	9.962	142	130107	1.258
62) 1-Methylnaphthalene	(2)	10.114	142	117121	1.246
63) Hexachlorocyclopentadiene	(3)	10.225	237	23035	0.967
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	68022	1.300
65) cis-Isosafrole	(3)	10.318	162	8114	1.164
66) 2,4,6-Trichlorophenol	(3)	10.423	196	39457	1.141
67) 2,4,5-Trichlorophenol	(3)	10.469	196	39963	1.144
68)$2-Fluorobiphenyl	(3)	10.569	172	281516	2.564
70) Isosafrole	(3)	10.679	162	47470	1.178
69) trans-Isosafrole	(3)	10.679	162	47470	1.178
71) 1,1'-Biphenyl	(3)	10.720	154	159626	1.275
72) 2-Chloronaphthalene	(3)	10.726	162	123429	1.219
73) 1-Chloronaphthalene	(3)	10.761	162	121926	1.347
74) Diphenyl ether	(3)	10.901	170	89631	1.291
75) 2-Nitroaniline	(3)	10.907	138	32308	1.090
76) 1,4-Naphthoquinone	(3)	11.017	158	40903	1.066
77) 1,4-Dinitrobenzene	(3)	11.140	168	14996	0.940
78) Dimethylphthalate	(3)	11.239	163	139662	1.335
79) 1,3-Dinitrobenzene	(3)	11.250	168	20655	1.081
80) 2,6-Dinitrotoluene	(3)	11.315	165	30810	1.184
81) Acenaphthylene	(3)	11.385	152	168056	1.222
82) 3-Nitroaniline	(3)	11.554	138	31299	1.139
83)*Acenaphthene-d10	(3)	11.606	164	452080	5.000
84) Acenaphthene	(3)	11.653	153	124291	1.267
85) 2,4-Dinitrophenol	(3)	11.717	184	25369	2.016
86) 4-Nitrophenol	(3)	11.828	109	33084	1.822

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.845	250	54533	1.291
89) 2,4-Dinitrotoluene	(3)	11.903	165	39698	1.184
88) Dibenzofuran	(3)	11.903	168	180128	1.317
90) 1-Naphthylamine	(3)	12.002	143	120788	1.251
91) 2,3,4,6-Tetrachlorophenol	(3)	12.072	232	31946	1.151
92) 2-Naphthylamine	(3)	12.113	143	123586	1.273
93) Diethylphthalate	(3)	12.259	149	128699	1.296
94) Fluorene	(3)	12.346	166	144095	1.298
95) Thionazin	(3)	12.352	107	27219	1.290
97) 5-Nitro-o-toluidine	(3)	12.364	152	34568	1.175
98) 4-Nitroaniline	(3)	12.370	138	33835	1.267
96) 4-Chlorophenyl-phenylether	(3)	12.370	204	75858	1.360
99) 4,6-Dinitro-2-methylphenol	(4)	12.416	198	31580	1.643
102) NDPA as diphenylamine	(4)	12.509	169	115023	1.264
101) N-Nitrosodiphenylamine	(4)	12.509	169	115023	1.264
103) 1,2-Diphenylhydrazine	(4)	12.550	77	169032	1.260
104)$2,4,6-Tribromophenol	(3)	12.632	330	28169	2.409
105) Tetraethyldithiopyrophosphate	(4)	12.737	97	24104	1.195
106) 1,3,5-Trinitrobenzene	(4)	12.830	213	8678	0.636
107) Diallate (peak 1)	(4)	12.877	86	61691	0.940
108) Phorate	(4)	12.883	75	100490	1.229
109) Phenacetin	(4)	12.894	108	66819	1.118
110) 4-Bromophenyl-phenylether	(4)	12.952	248	39298	1.247
111) Diallate (peak 2)	(4)	12.982	86	9010	0.321
112) Hexachlorobenzene	(4)	13.005	284	39140	1.257
113) Dimethoate	(4)	13.069	87	58503	1.127
114) Atrazine	(4)	13.180	200	41228	1.296
115) Pentachlorophenol	(4)	13.256	266	16077	0.802
117) 4-Aminobiphenyl	(4)	13.267	169	138678	1.189
116) Pentachloronitrobenzene	(4)	13.273	237	16817	1.130
118) Pronamide	(4)	13.372	173	60102	1.175
120)*Phenanthrene-d10	(4)	13.489	188	778608	5.000
119) Dinoseb	(4)	13.512	211	14824	0.580
121) Phenanthrene	(4)	13.518	178	212858	1.260
122) Anthracene	(4)	13.582	178	207638	1.229
124) Carbazole	(4)	13.798	167	191988	1.211
125) Methyl parathion	(4)	14.002	109	35494	0.951
126) Di-n-butylphthalate	(4)	14.316	149	211085	1.136
127) Parathion	(4)	14.544	109	23248	0.946
128) 4-Nitroquinoline-1-oxide	(4)	14.549	190	7221	0.504

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	23499	1.151
131) Fluoranthene	(4)	15.150	202	233129	1.184
132) Benzidine	(5)	15.377	184	349651	2.887
134)*Pyrene-d10	(5)	15.465	212	967868	5.000
133) Pyrene	(5)	15.494	202	252251	1.273
137)$Terphenyl-d14	(5)	15.779	244	324259	2.534
140) p-Dimethylaminoazobenzene	(5)	16.007	225	41274	1.028
141) Chlorobenzilate	(5)	16.100	139	65067	1.128
142) 3,3'-Dimethylbenzidine	(5)	16.560	212	121264	0.979
144) Butylbenzylphthalate	(5)	16.624	149	97515	1.148
146) 2-Acetylaminofluorene	(5)	16.974	181	65492	0.864
148) 3,3'-Dichlorobenzidine	(5)	17.481	252	77087	1.118
147) Benzo(a)anthracene	(5)	17.487	228	230373	1.210
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.505	231	37313	1.076
150) Chrysene	(5)	17.551	228	227147	1.263
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	127149	1.120
152) 6-Methylchrysene	(5)	18.350	242	154437	1.168
153) Di-n-octylphthalate	(6)	18.851	149	193347	1.006
154) Benzo(b)fluoranthene	(6)	19.329	252	218153	1.186
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.335	256	94440	1.164
156) Benzo(k)fluoranthene	(6)	19.376	252	232440	1.278
157) Benzo(a)pyrene	(6)	19.854	252	207215	1.209
158)*Perylene-d12	(6)	19.947	264	749170	5.000
159) 3-Methylcholanthrene	(6)	20.425	268	100099	1.160
160) Dibenz(a,h)acridine	(6)	21.235	279	137012	1.081
161) Dibenz(a,j)acridine	(6)	21.305	279	154856	1.148
162) Indeno(1,2,3-cd)pyrene	(6)	21.538	276	204577	1.173
163) Dibenz(a,h)anthracene	(6)	21.585	278	172705	1.165
164) Benzo(g,h,i)perylene	(6)	21.917	276	182463	1.218
165) Diallate TRANS/CIS	(4)			70701	1.257

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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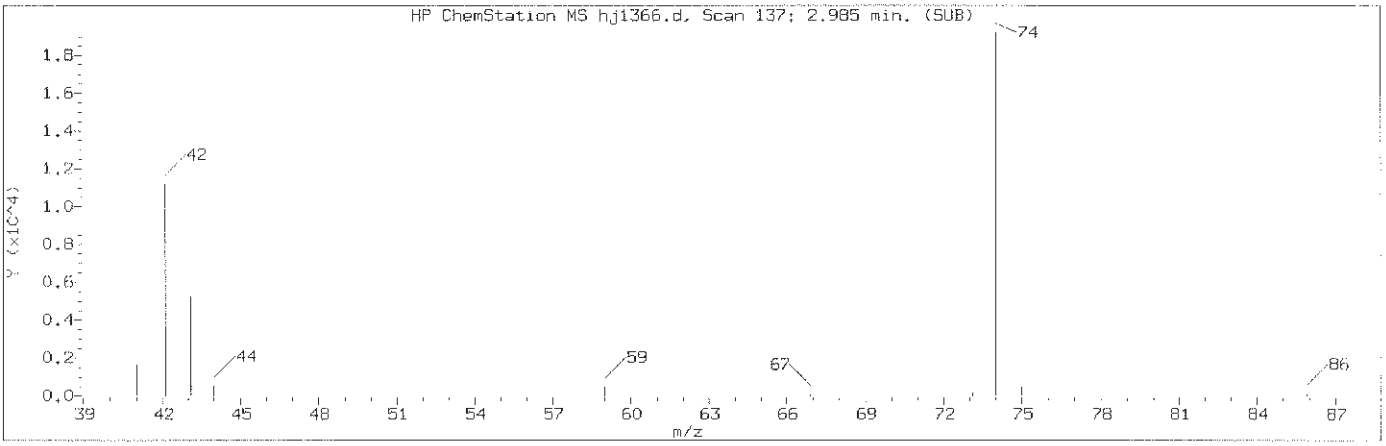
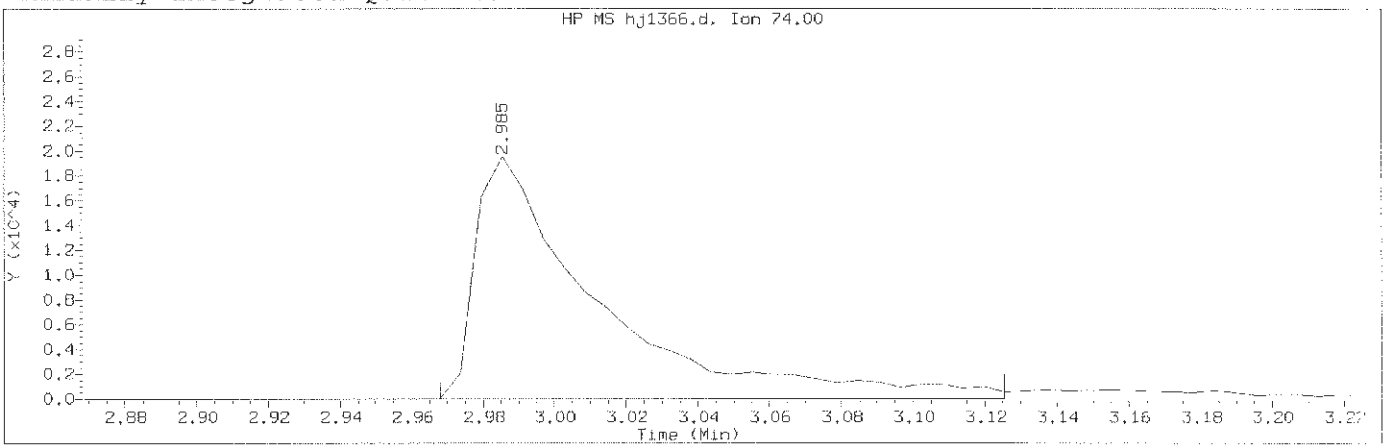
on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 137		
Retention Time (minutes)	: 2.985		
Quant Ion	: 74.00		
Area (flag)	: 46629M		
On-Column Amount (ng/ul)	: 1.1815		
Integration start scan	: 133	Integration stop scan:	160
Y at integration start	: 8	Y at integration end:	8

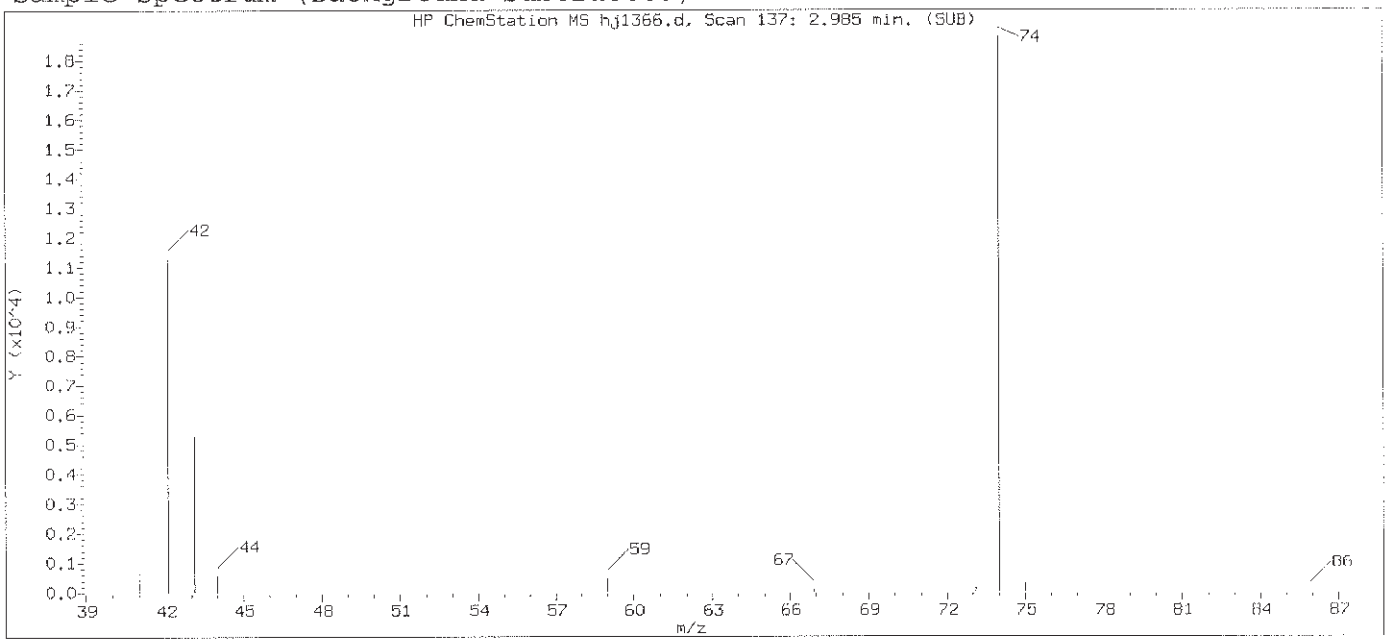
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

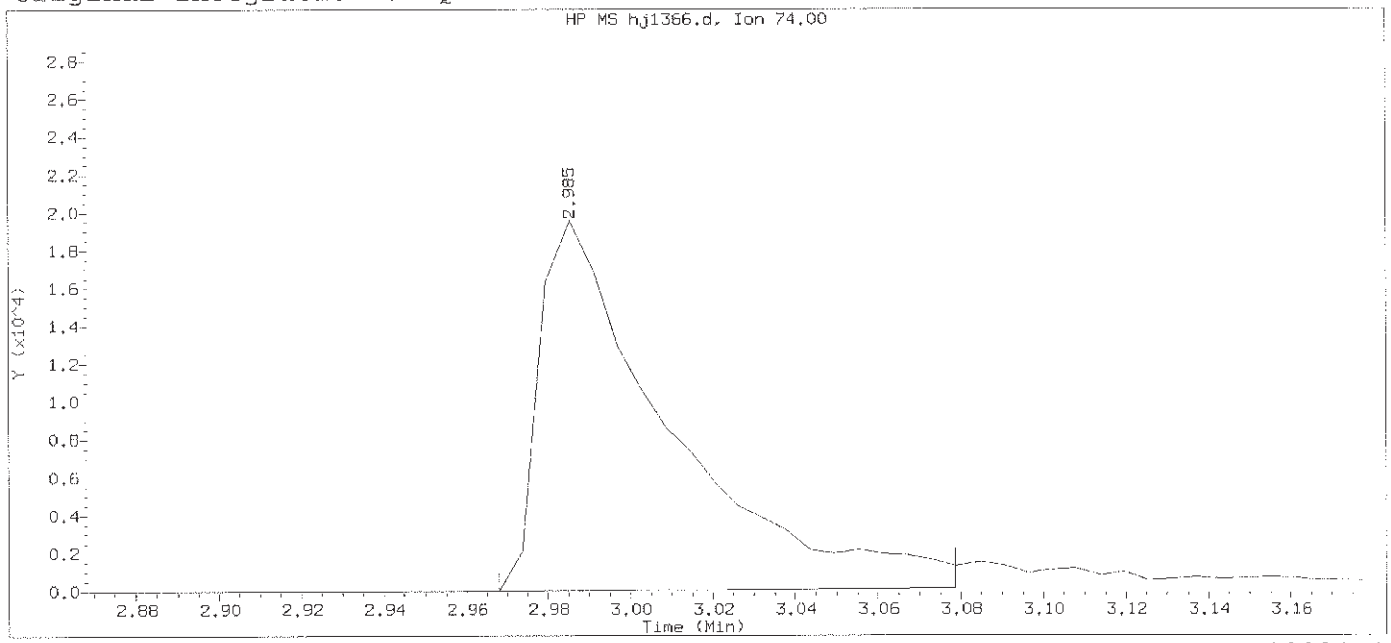
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Section Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 02:35
Date, time and analyst ID of latest file update: 29-Oct-2013 02:35 Automation

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 137		
Retention Time (minutes)	: 2.985		
Quant Ion	: 74.00		
Area	: 42969		
On-column Amount (ng/ul)	: 1.1024		
Integration start scan	: 133	Integration stop scan:	152
Y at integration start	: 0	Y at integration end:	151

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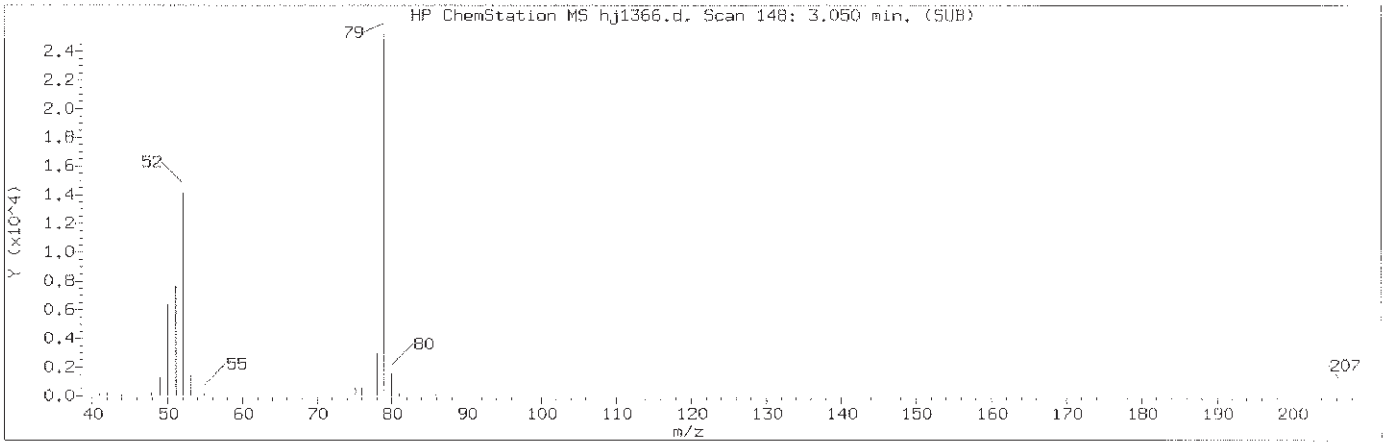
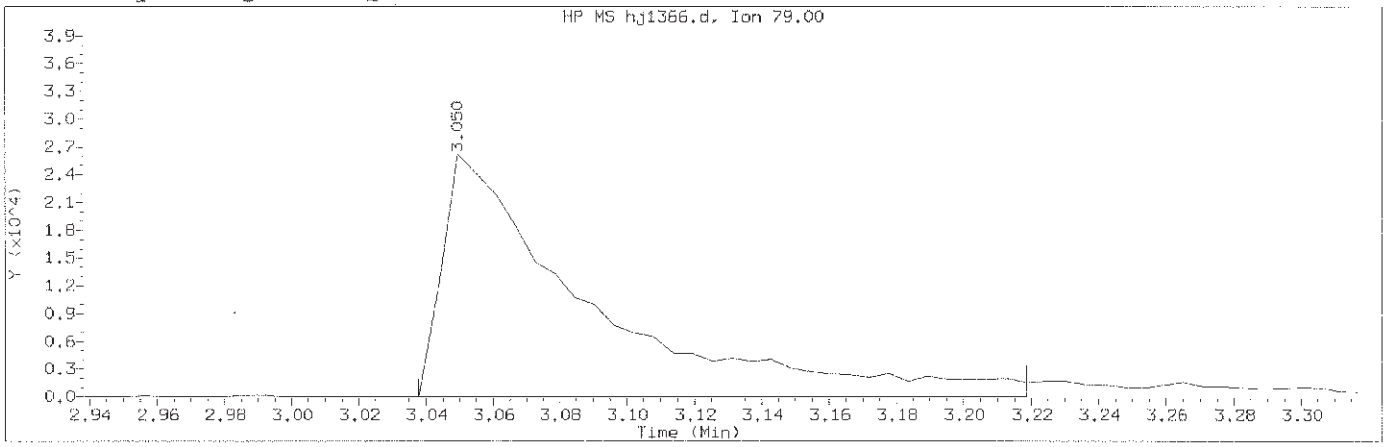
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 148		
Retention Time (minutes)	: 3.050		
Quant Ion	: 79.00		
Area (flag)	: 78792M		
On-Column Amount (ng/ul)	: 1.2277		
Integration start scan	: 145	Integration stop scan:	176
Y at integration start	: -5	Y at integration end:	-5

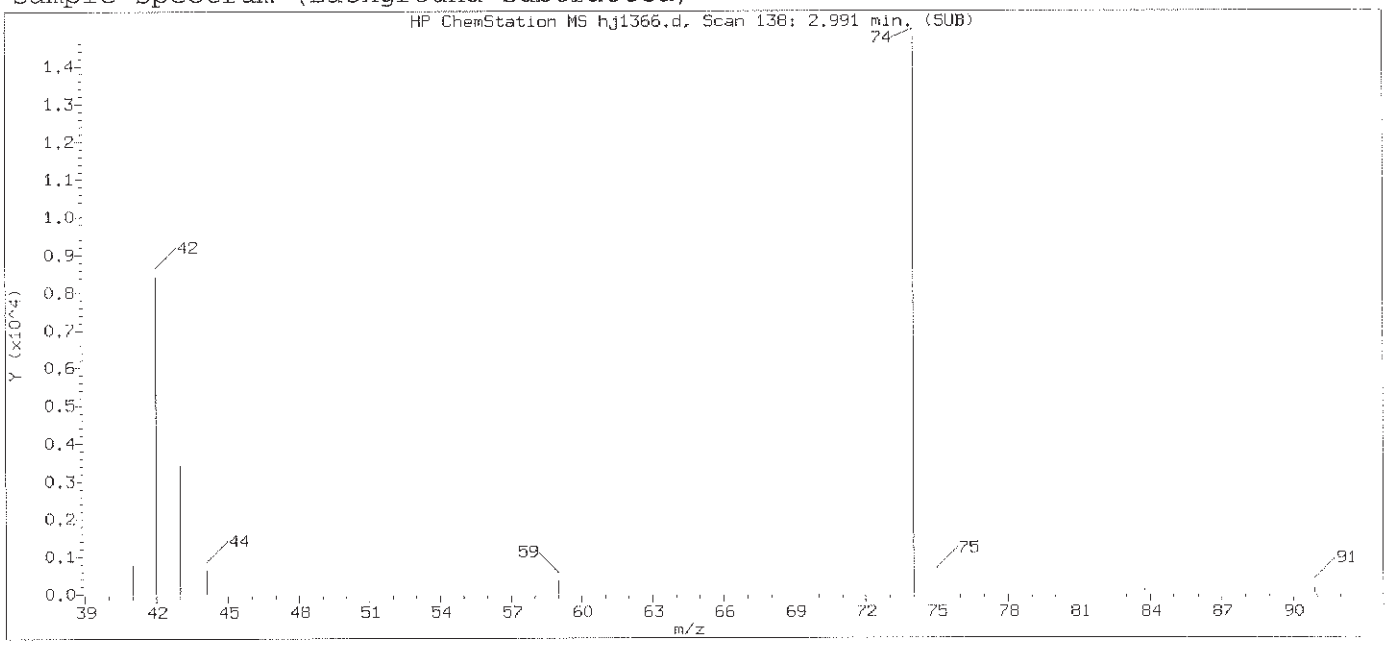
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:35. Target 3.5 esignature user ID: jmg00346

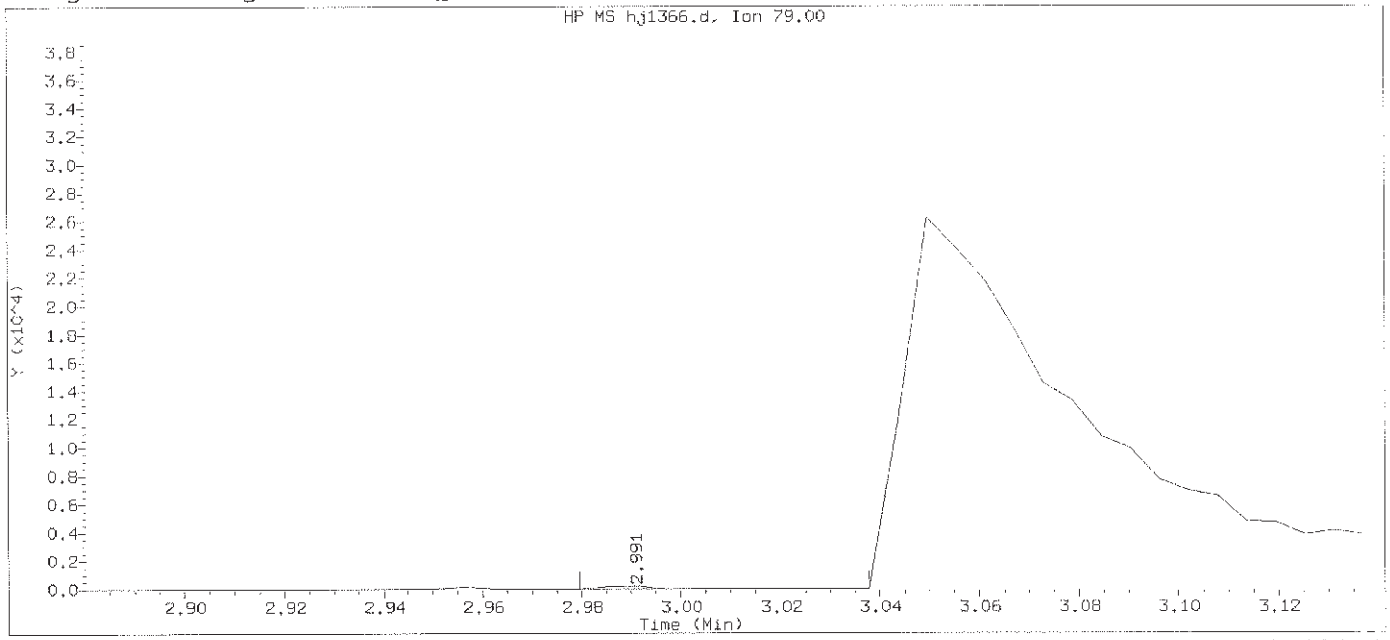
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 02:35
Date, time and analyst ID of latest file update: 29-Oct-2013 02:35 Automation

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 138		
Retention Time (minutes)	: 2.991		
Quant Ion	: 79.00		
Area	: 133		
On-column Amount (ng/ul)	: 0.0025		
Integration start scan	: 135	Integration stop scan:	145
Y at integration start	: 0	Y at integration end:	0

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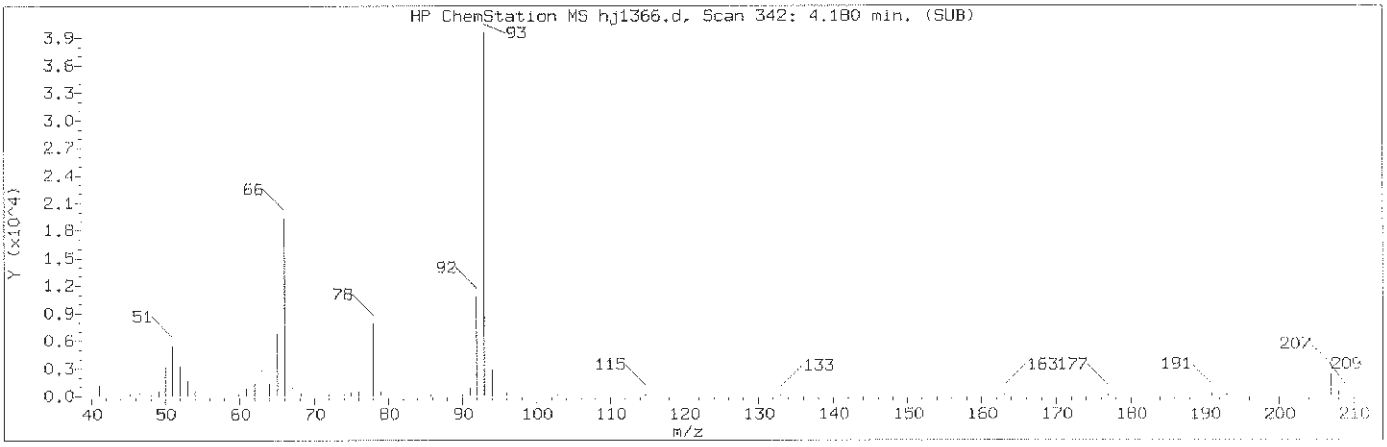
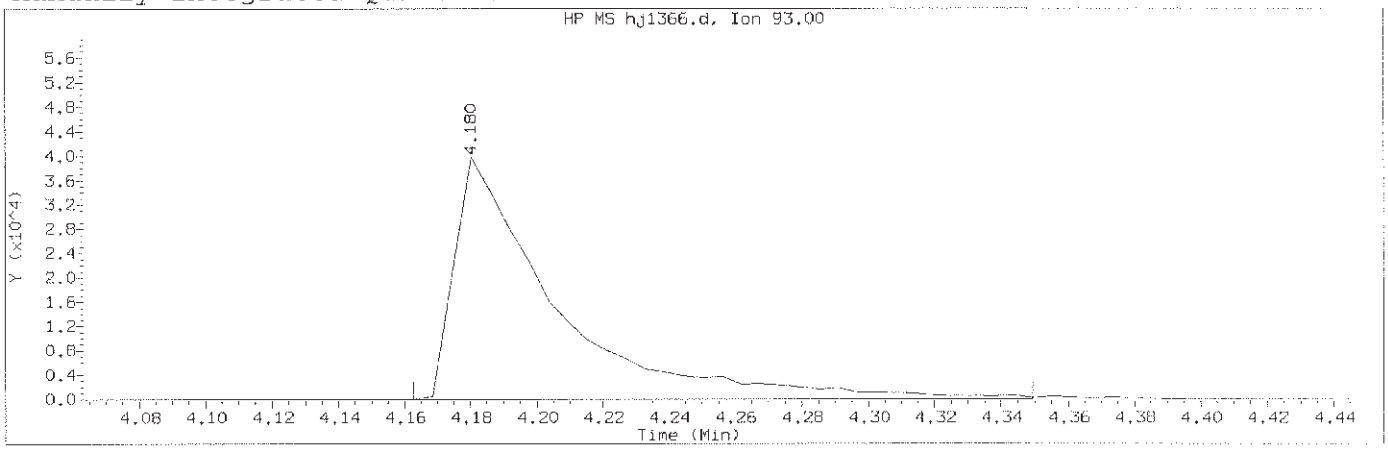
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:23
Date, time and analyst ID of latest file update: 29-Oct-2013 04:23 jmg00346

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 342		
Retention Time (minutes)	: 4.180		
Quant Ion	: 93.00		
Area (flag)	: 83914M		
On-Column Amount (ng/ul)	: 1.2857		
Integration start scan	: 338	Integration stop scan:	370
Y at integration start	: -20	Y at integration end:	-20

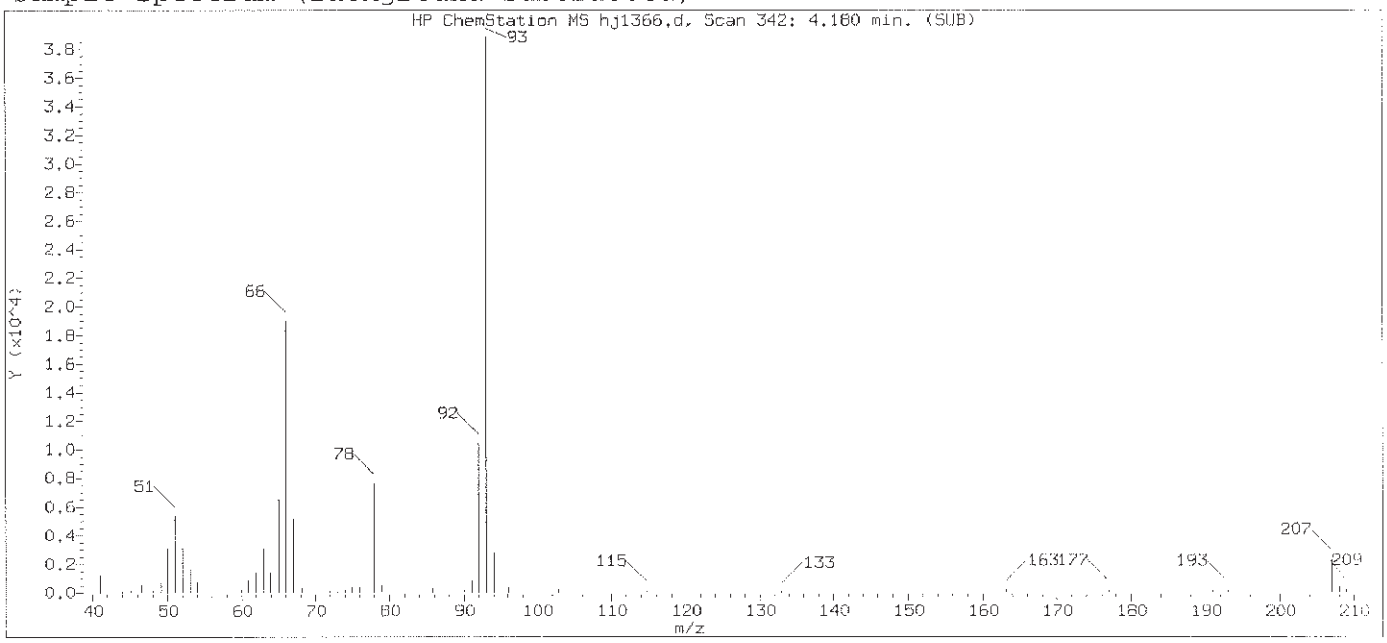
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346

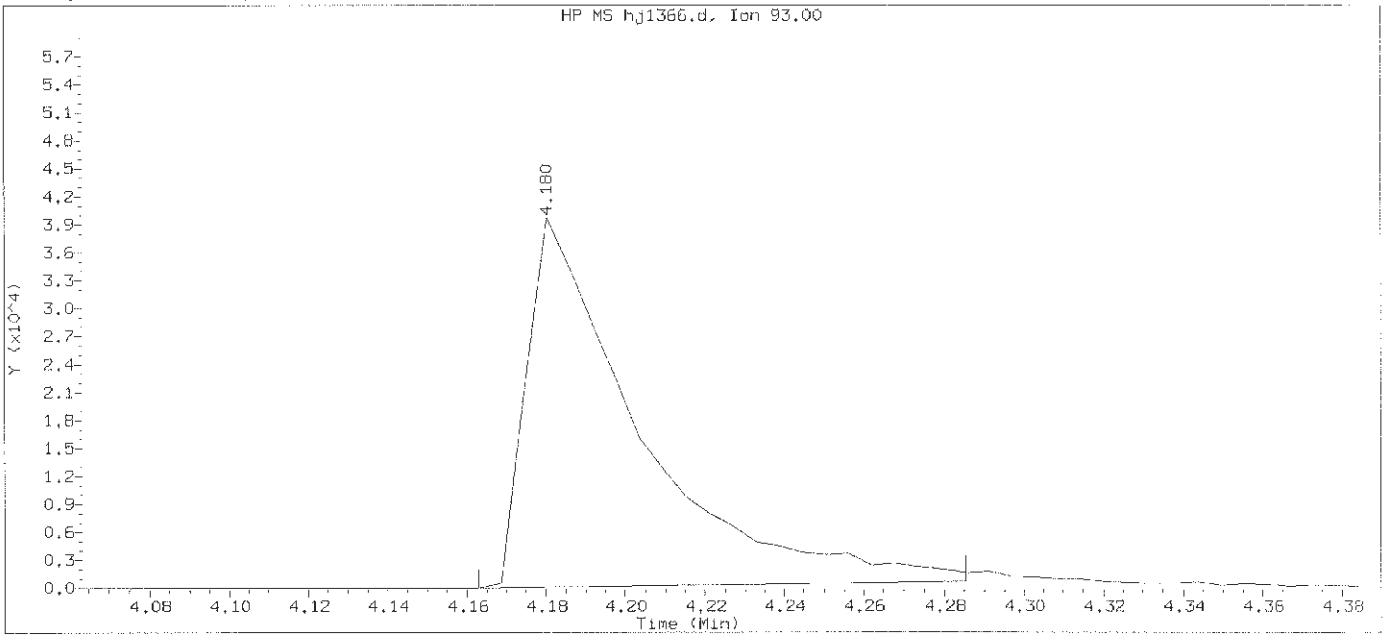
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Chemist Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



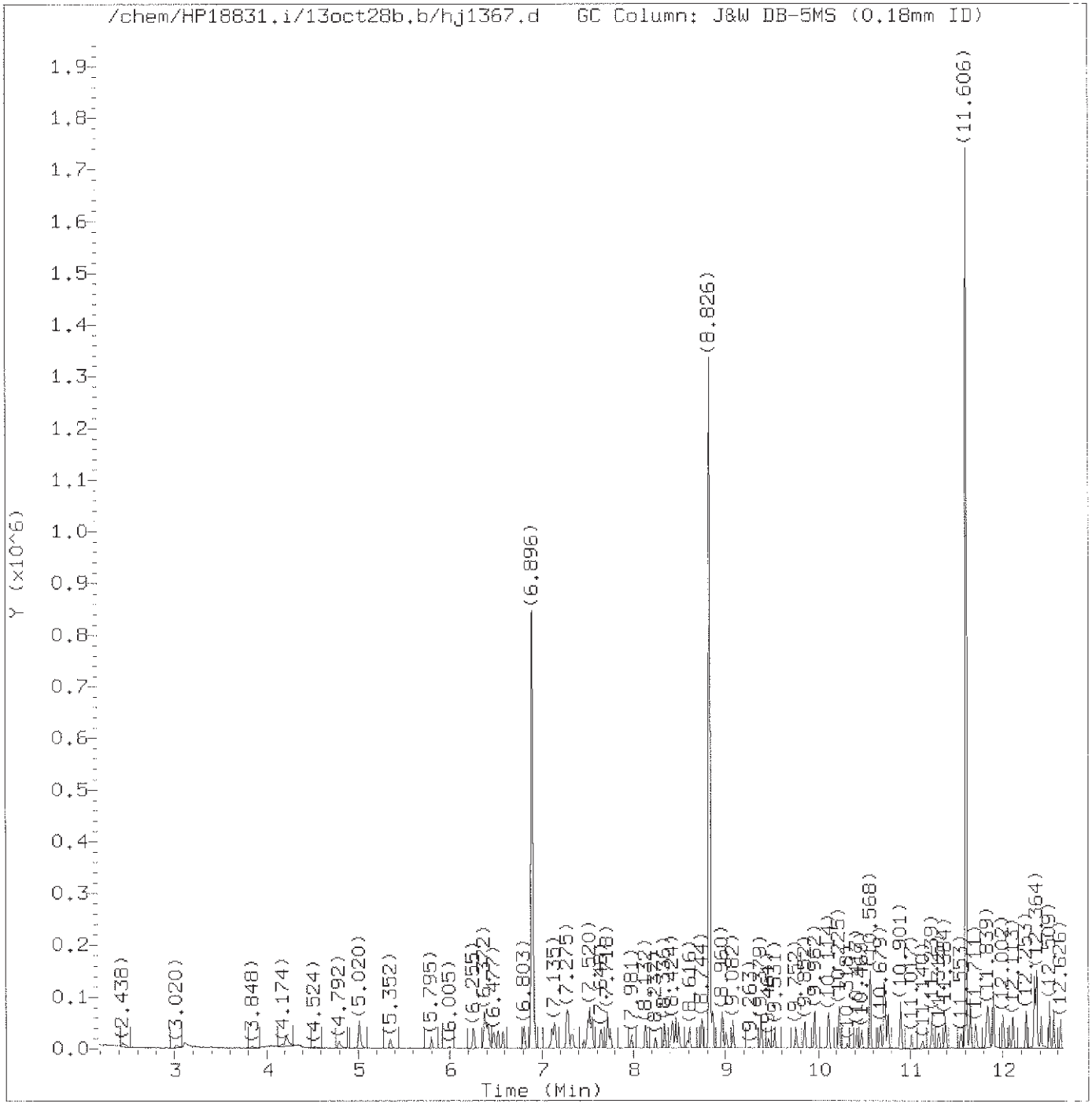
Data File: /chem/HP18831.i/13oct28b.b/hj1366.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:03 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 02:35
Date, time and analyst ID of latest file update: 29-Oct-2013 02:35 Automation

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 342		
Retention Time (minutes)	: 4.180		
Quant Ion	: 93.00		
Area	: 77688		
On-column Amount (ng/ul)	: 1.2057		
Integration start scan	: 338	Integration stop scan:	359
Y at integration start	: 0	Y at integration end:	685

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:35.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

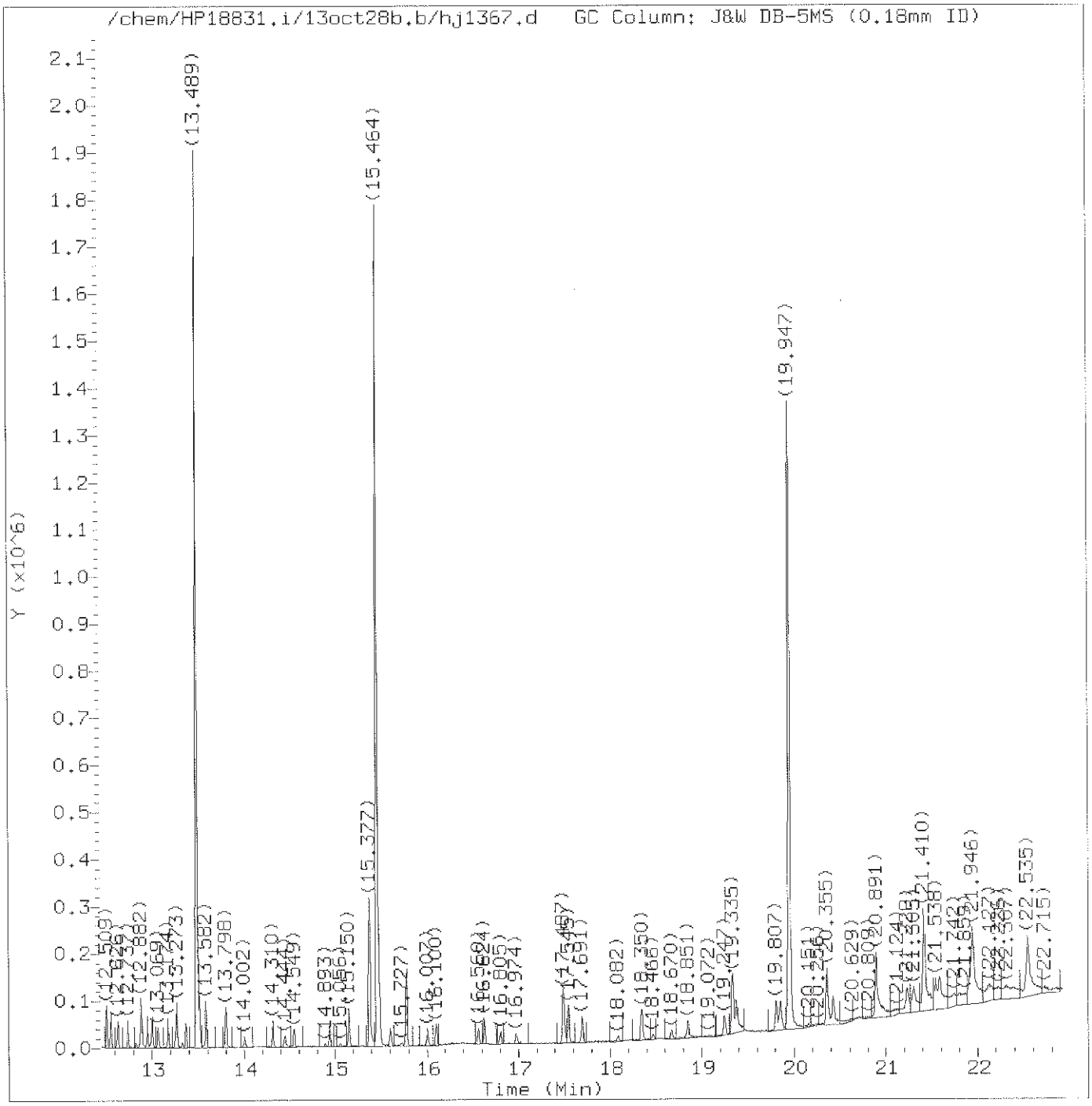
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.438	88	6470M	0.295
2) N-Nitrosodimethylamine	(1)	3.020	74	8936M	0.244
3) Pyridine	(1)	3.108	79	19537M	0.313
5) 2-Picoline	(1)	4.209	93	16259M	0.264
6) N-Nitrosomethylethylamine	(1)	4.361	88	7343	0.267
7) Methyl methanesulfonate	(1)	4.792	80	8643	0.257
8)$2-Fluorophenol	(1)	5.020	112	24027	0.497
9) N-Nitrosodiethylamine	(1)	5.352	102	6220	0.246
10) Ethyl methanesulfonate	(1)	5.801	109	6370	0.249
11) Benzaldehyde	(1)	6.255	77	13457	0.288
12)$Phenol-d5	(1)	6.372	99	31577	0.475
13)$Phenol-d6	(1)	6.372	99	31577	0.475
14) Phenol	(1)	6.389	94	20736	0.267
16) Aniline	(1)	6.413	93	24259	0.268
17) bis(2-Chloroethyl)ether	(1)	6.529	93	15788	0.271
18) 2-Chlorophenol	(1)	6.576	128	10992	0.232
19) 1,3-Dichlorobenzene	(1)	6.809	146	14701	0.268
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	173917	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	15026	0.270
22) Benzyl alcohol	(1)	7.112	108	7402	0.224
23) 1,2-Dichlorobenzene	(1)	7.135	146	13647	0.263
25) Indene	(1)	7.275	115	27443	0.330
26) 2-Methylphenol	(1)	7.287	108	11062	0.240
28) bis(2-Chloroisopropyl)ether	(1)	7.334	45	18414	0.274
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.334	45	18414	0.274
29) N-Nitrosopyrrolidine	(1)	7.462	100	5373	0.221
30) Acetophenone	(1)	7.497	105	18889	0.253
32) N-Nitroso-di-n-propylamine	(1)	7.520	70	10791	0.240
31) 4-Methylphenol	(1)	7.526	108	14029	0.261
33) N-Nitrosomorpholine	(1)	7.526	56	7831	0.243
34) o-Toluidine	(1)	7.549	106	20873	0.252
35) Hexachloroethane	(1)	7.648	117	5687	0.258
36)$Nitrobenzene-d5	(2)	7.718	82	29694	0.465
37) Nitrobenzene	(2)	7.747	77	16483	0.247
38) N-Nitrosopiperidine	(2)	7.981	114	6333	0.248
39) Isophorone	(2)	8.132	82	26543	0.233
40) 2-Nitrophenol	(2)	8.237	139	4542	0.191
41) 2,4-Dimethylphenol	(2)	8.336	107	12764	0.230
43) Benzoic acid	(2)	8.424	105	27521	1.133
42) O,O,O-triethylphosphorothioate	(2)	8.458	198	7008	0.249

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.493	93	17284	0.262
46) 2,4-Dichlorophenol	(2)	8.616	162	9370	0.229
47) 1,2,4-Trichlorobenzene	(2)	8.744	180	13099	0.265
48)*Naphthalene-d8	(2)	8.826	136	683726	5.000
49) Naphthalene	(2)	8.855	128	37663	0.270
50) 4-Chloroaniline	(2)	8.960	127	14977	0.254
51) 2,6-Dichlorophenol	(2)	8.966	162	9356	0.236
52) Hexachloropropene	(2)	9.006	213	6303	0.206
53) Hexachlorobutadiene	(2)	9.082	225	7487	0.256
54) Quinoline	(2)	9.379	129	22672	0.253
55) Caprolactam	(2)	9.461	113	2803	0.174
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	8802	0.189
58) 4-Chloro-3-methylphenol	(2)	9.752	107	9748	0.213
60) Safrole	(2)	9.852	162	8332	0.221
61) 2-Methylnaphthalene	(2)	9.962	142	24498	0.249
62) 1-Methylnaphthalene	(2)	10.114	142	22019	0.247
63) Hexachlorocyclopentadiene	(3)	10.225	237	3739	0.168
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	13572	0.273
65) cis-Isosafrole	(3)	10.318	162	1619	0.248
66) 2,4,6-Trichlorophenol	(3)	10.423	196	6557	0.208
67) 2,4,5-Trichlorophenol	(3)	10.469	196	6428	0.203
68)$2-Fluorobiphenyl	(3)	10.568	172	54316	0.524
70) Isosafrole	(3)	10.679	162	8826	0.236
69) trans-Isosafrole	(3)	10.679	162	8826	0.236
71) 1,1'-Biphenyl	(3)	10.720	154	31189	0.264
72) 2-Chloronaphthalene	(3)	10.726	162	23692	0.250
73) 1-Chloronaphthalene	(3)	10.761	162	23579	0.274
74) Diphenyl ether	(3)	10.901	170	16900	0.258
75) 2-Nitroaniline	(3)	10.901	138	4907	0.184
76) 1,4-Naphthoquinone	(3)	11.017	158	5660	0.157
77) 1,4-Dinitrobenzene	(3)	11.140	168	1919M	0.128
78) Dimethylphthalate	(3)	11.239	163	25872	0.264
79) 1,3-Dinitrobenzene	(3)	11.250	168	2332	0.130
80) 2,6-Dinitrotoluene	(3)	11.315	165	4252	0.182
81) Acenaphthylene	(3)	11.384	152	28675	0.226
82) 3-Nitroaniline	(3)	11.553	138	4848	0.195
83)*Acenaphthene-d10	(3)	11.606	164	423605	5.000
84) Acenaphthene	(3)	11.653	153	23893	0.258
85) 2,4-Dinitrophenol	(3)	11.717	184	7617	0.646
86) 4-Nitrophenol	(3)	11.827	109	11880	0.698

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.845	250	11374	0.281
88) Dibenzofuran	(3)	11.903	168	34420	0.266
89) 2,4-Dinitrotoluene	(3)	11.903	165	5679	0.188
90) 1-Naphthylamine	(3)	12.002	143	21947	0.244
91) 2,3,4,6-Tetrachlorophenol	(3)	12.072	232	5335	0.211
92) 2-Naphthylamine	(3)	12.113	143	21893	0.242
93) Diethylphthalate	(3)	12.253	149	24482	0.263
94) Fluorene	(3)	12.340	166	26591	0.255
95) Thionazin	(3)	12.346	107	4698	0.239
97) 5-Nitro-o-toluidine	(3)	12.364	152	5457	0.204
98) 4-Nitroaniline	(3)	12.364	138	5364	0.219
96) 4-Chlorophenyl-phenylether	(3)	12.370	204	15155	0.283
99) 4,6-Dinitro-2-methylphenol	(4)	12.416	198	9317	0.517
102) NDPA as diphenylamine	(4)	12.509	169	20712	0.244
101) N-Nitrosodiphenylamine	(4)	12.509	169	20712	0.244
103) 1,2-Diphenylhydrazine	(4)	12.550	77	31107	0.248
104)$2,4,6-Tribromophenol	(3)	12.626	330	4806	0.447
105) Tetraethyldithiopyrophosphate	(4)	12.737	97	4412	0.236
106) 1,3,5-Trinitrobenzene	(4)	12.830	213	1058	0.083
107) Diallate (peak 1)	(4)	12.877	86	10848	0.178
108) Phorate	(4)	12.882	75	16020	0.214
109) Phenacetin	(4)	12.888	108	9191	0.173
110) 4-Bromophenyl-phenylether	(4)	12.952	248	7776	0.261
111) Diallate (peak 2)	(4)	12.982	86	1597	0.061
112) Hexachlorobenzene	(4)	13.005	284	7950	0.269
113) Dimethoate	(4)	13.069	87	8465	0.174
114) Atrazine	(4)	13.180	200	6798	0.231
115) Pentachlorophenol	(4)	13.255	266	1791	0.095
117) 4-Aminobiphenyl	(4)	13.273	169	23985	0.223
116) Pentachloronitrobenzene	(4)	13.273	237	2673	0.198
118) Pronamide	(4)	13.366	173	9144	0.197
120)*Phenanthrene-d10	(4)	13.489	188	729988	5.000
119) Dinoseb	(4)	13.512	211	1515	0.063
121) Phenanthrene	(4)	13.518	178	42366	0.265
122) Anthracene	(4)	13.582	178	38078	0.242
124) Carbazole	(4)	13.798	167	35814	0.242
125) Methyl parathion	(4)	14.002	109	4120	0.118
126) Di-n-butylphthalate	(4)	14.310	149	32791	0.188
127) Parathion	(4)	14.544	109	2751	0.119
128) 4-Nitroquinoline-1-oxide	(4)	14.549	190	864	0.064

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	4393	0.232
131) Fluoranthene	(4)	15.150	202	40792	0.225
132) Benzidine	(5)	15.377	184	156355	1.369
134)*Pyrene-d10	(5)	15.464	212	913026	5.000
133) Pyrene	(5)	15.488	202	50763	0.268
137)$Terphenyl-d14	(5)	15.773	244	62096	0.512
140) p-Dimethylaminoazobenzene	(5)	16.007	225	5728	0.160
141) Chlorobenzilate	(5)	16.100	139	9835	0.181
142) 3,3'-Dimethylbenzidine	(5)	16.560	212	17357	0.149
144) Butylbenzylphthalate	(5)	16.624	149	15162	0.189
146) 2-Acetylaminofluorene	(5)	16.974	181	7380	0.103
148) 3,3'-Dichlorobenzidine	(5)	17.481	252	11849	0.182
147) Benzo(a)anthracene	(5)	17.487	228	38214	0.217
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.505	231	5239	0.160
150) Chrysene	(5)	17.545	228	40717	0.241
151) bis(2-Ethylhexyl)phthalate	(5)	17.691	149	18567	0.173
152) 6-Methylchrysene	(5)	18.350	242	27474	0.224
153) Di-n-octylphthalate	(6)	18.851	149	25644	0.142
154) Benzo(b)fluoranthene	(6)	19.329	252	38801	0.228
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.335	256	15335	0.207
156) Benzo(k)fluoranthene	(6)	19.376	252	42945	0.251
157) Benzo(a)pyrene	(6)	19.853	252	35933	0.226
158)*Perylene-d12	(6)	19.947	264	704570	5.000
159) 3-Methylcholanthrene	(6)	20.425	268	18813	0.234
160) Dibenz(a,h)acridine	(6)	21.229	279	22987M	0.193
161) Dibenz(a,j)acridine	(6)	21.305	279	23864	0.188
162) Indeno(1,2,3-cd)pyrene	(6)	21.538	276	36800	0.228
163) Dibenz(a,h)anthracene	(6)	21.585	278	31912	0.232
164) Benzo(g,h,i)perylene	(6)	21.917	276	34566	0.246
165) Diallate TRANS/CIS	(4)			12445	0.238

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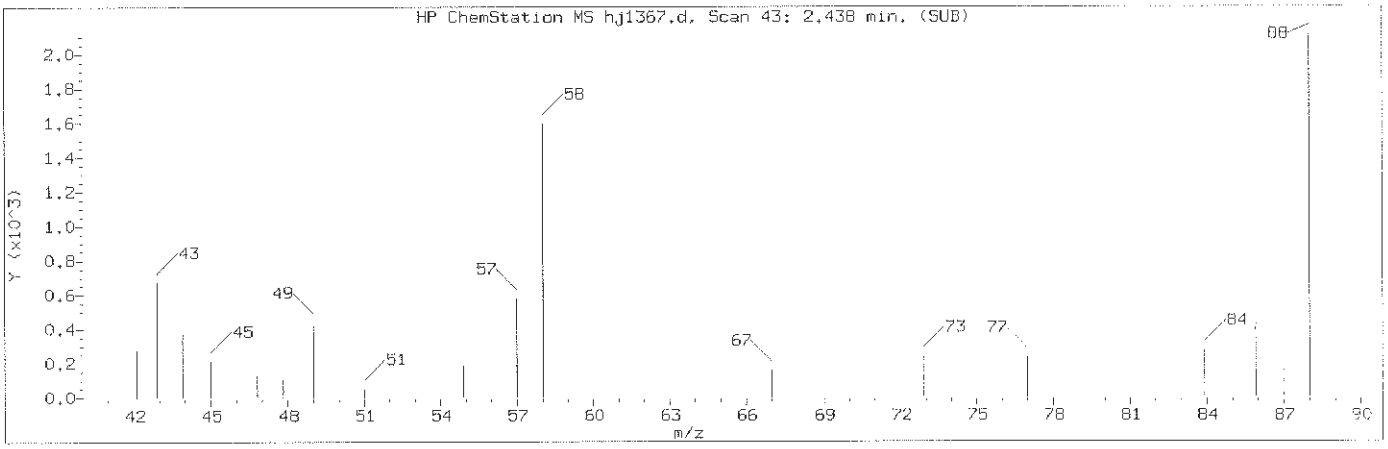
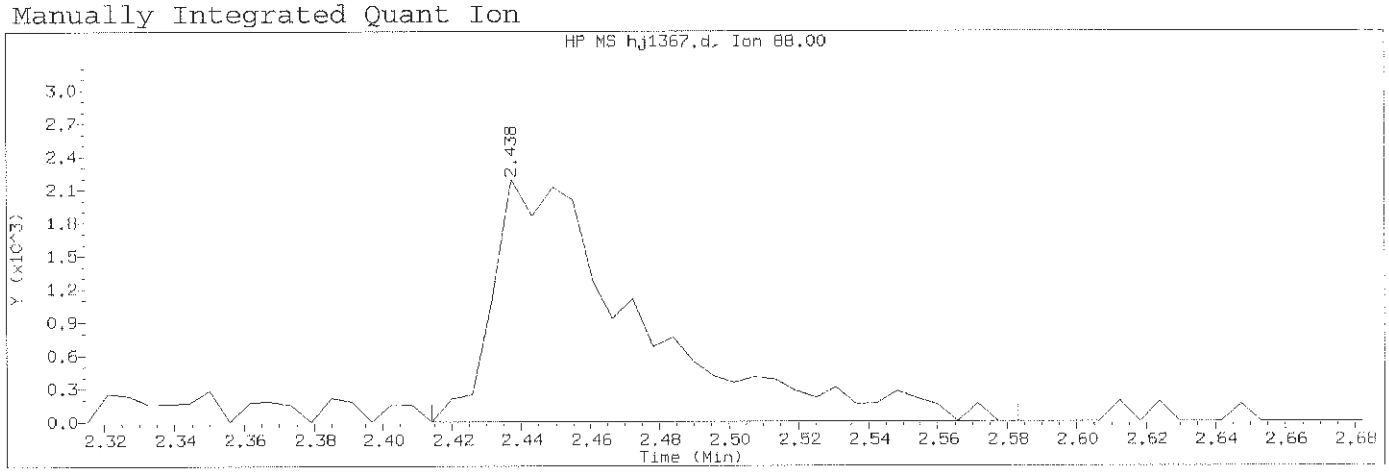
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

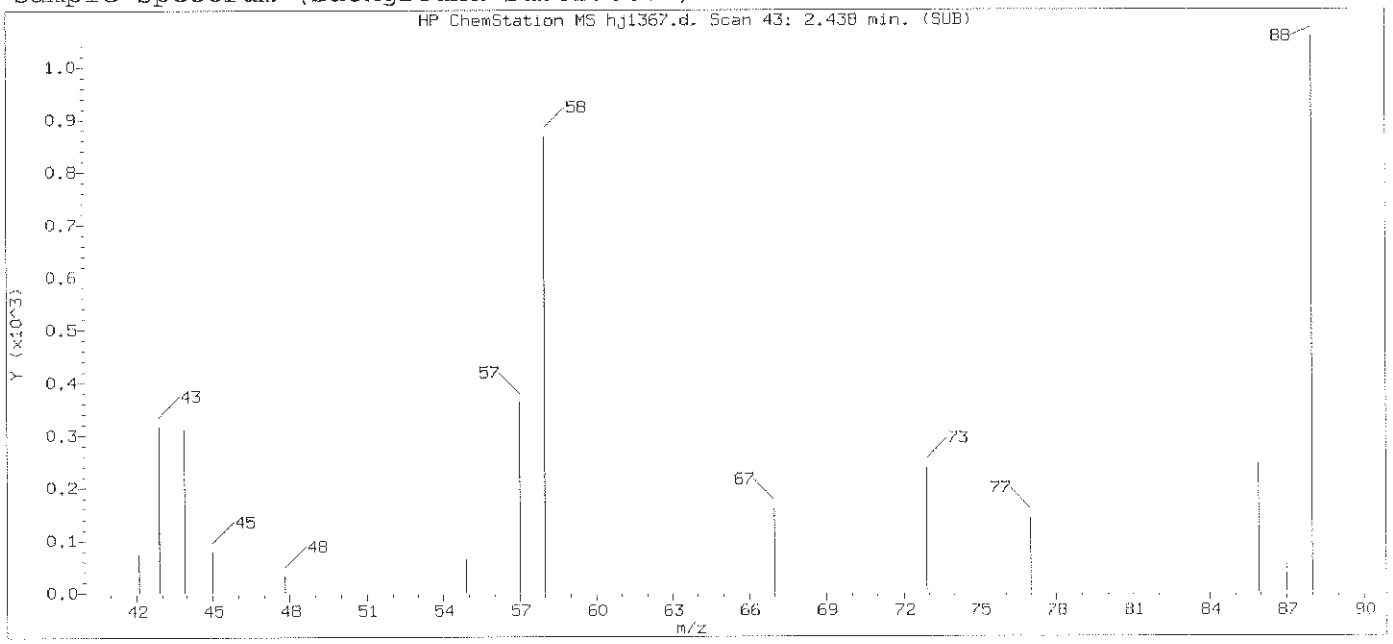
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 43		
Retention Time (minutes)	: 2.438		
Quant Ion	: 88.00		
Area (flag)	: 6470M		
On-Column Amount (ng/ul)	: 0.2953		
Integration start scan	: 38	Integration stop scan:	67
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

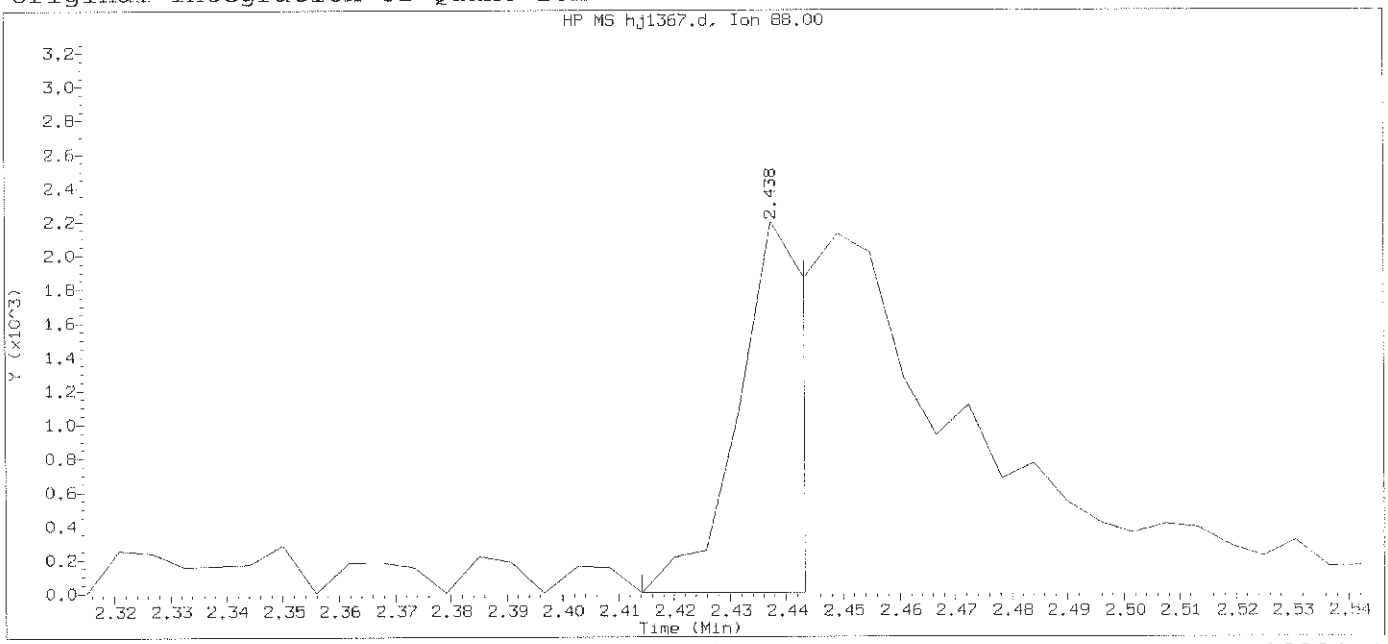
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____
OCT 29 2013
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 43		
Retention Time (minutes)	: 2.438		
Quant Ion	: 88.00		
Area	: 1630		
On-column Amount (ng/ul)	: 0.0744		
Integration start scan	: 38	Integration stop scan:	43
Y at integration start	: 0	Y at integration end:	0

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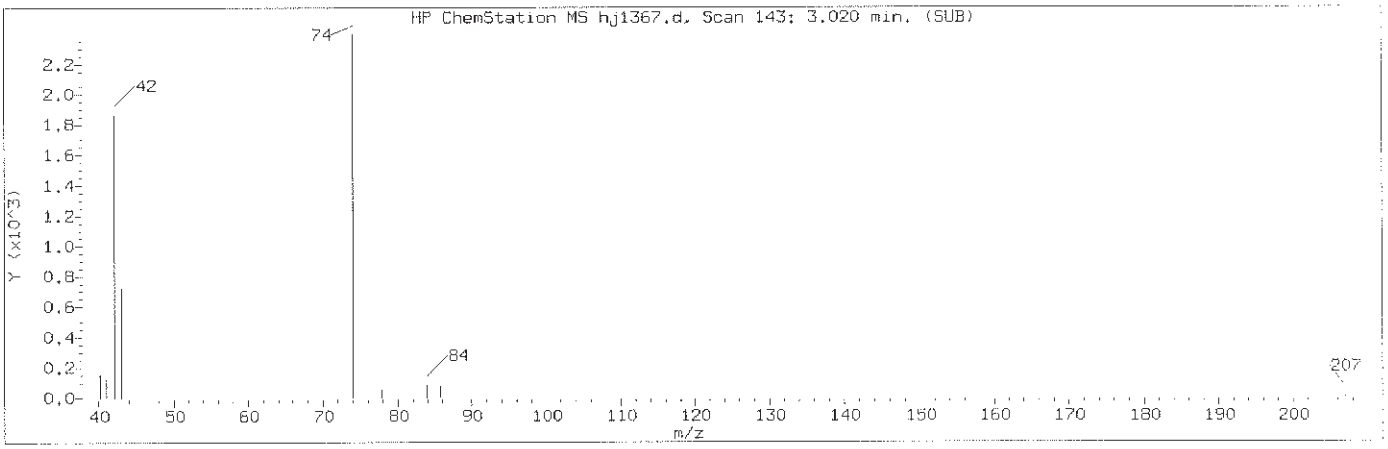
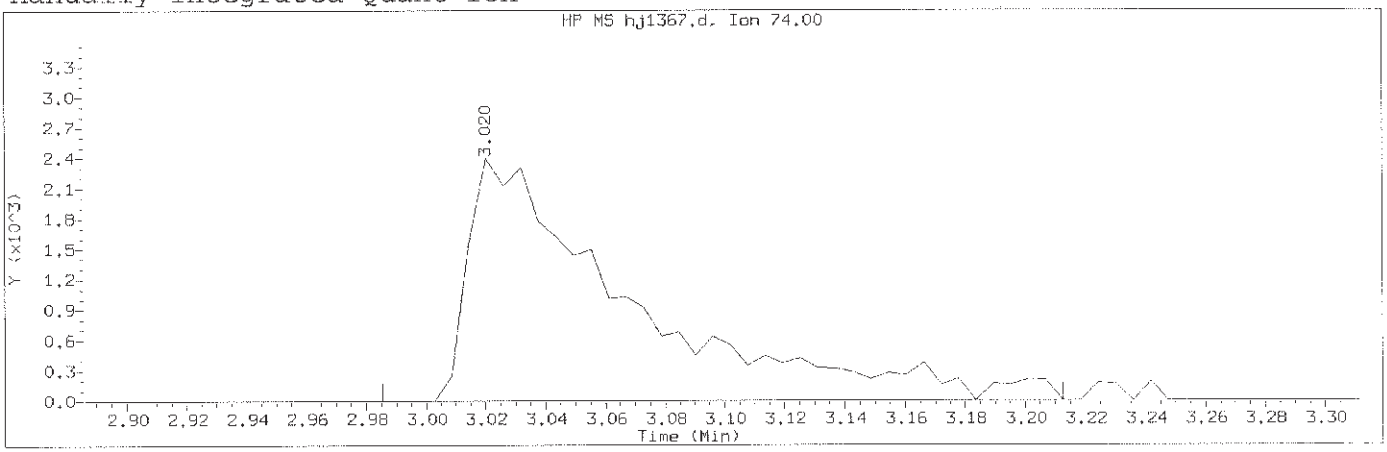
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 143		
Retention Time (minutes)	: 3.020		
Quant Ion	: 74.00		
Area (flag)	: 8936M		
On-Column Amount (ng/ul)	: 0.2437		
Integration start scan	: 136	Integration stop scan:	175
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: OCT 29 2013

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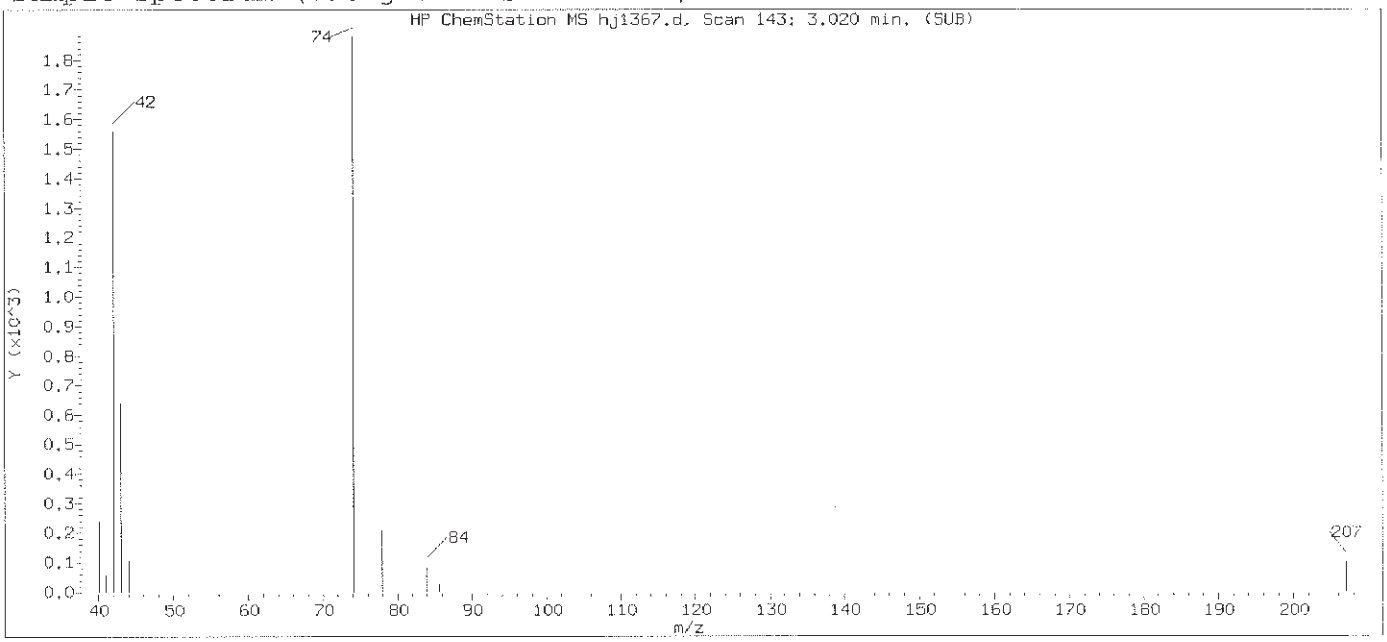
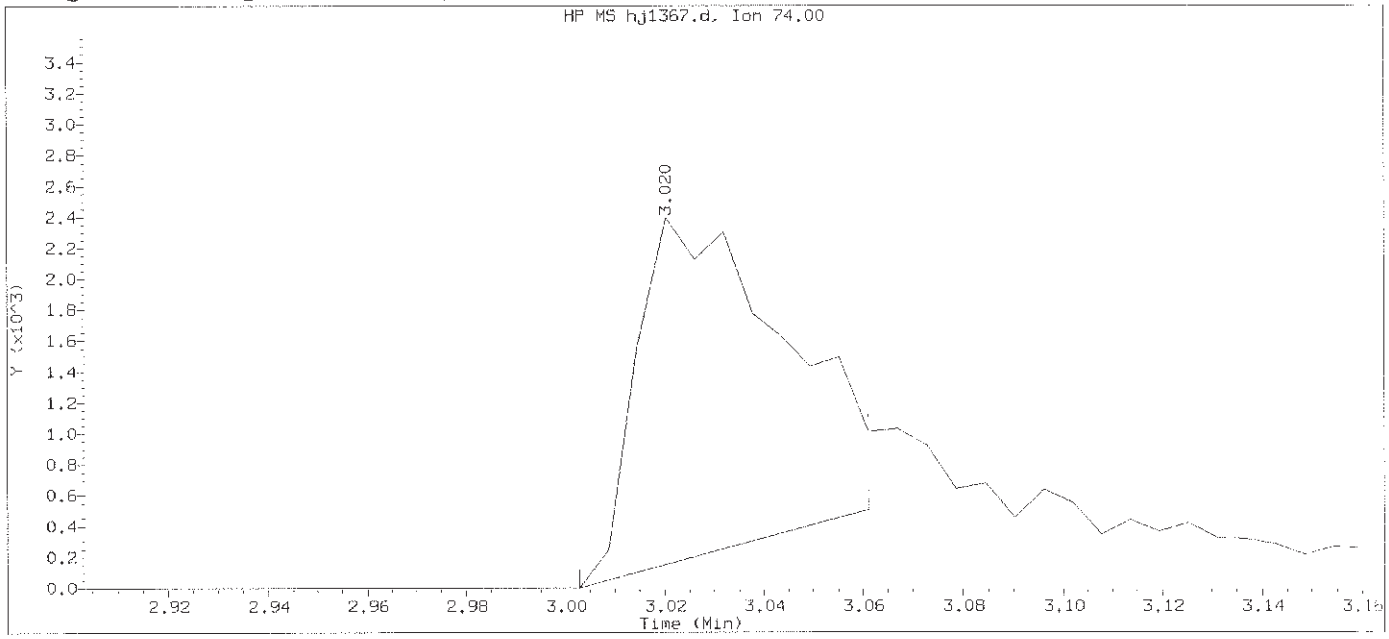
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 143		
Retention Time (minutes)	: 3.020		
Quant Ion	: 74.00		
Area	: 4519		
On-column Amount (ng/ul)	: 0.1324		
Integration start scan	: 139	Integration stop scan:	149
Y at integration start	: 0	Y at integration end:	505

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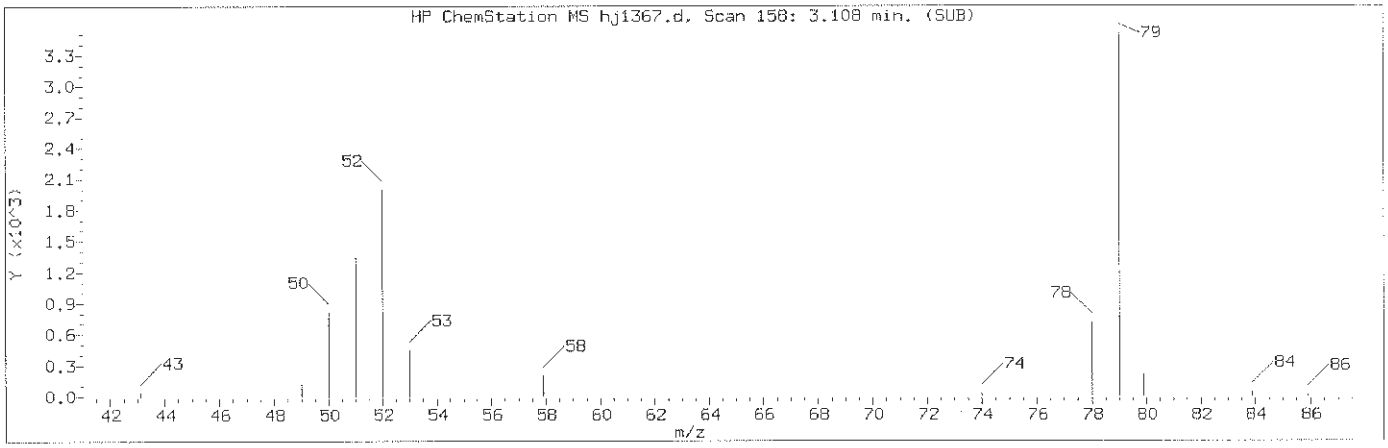
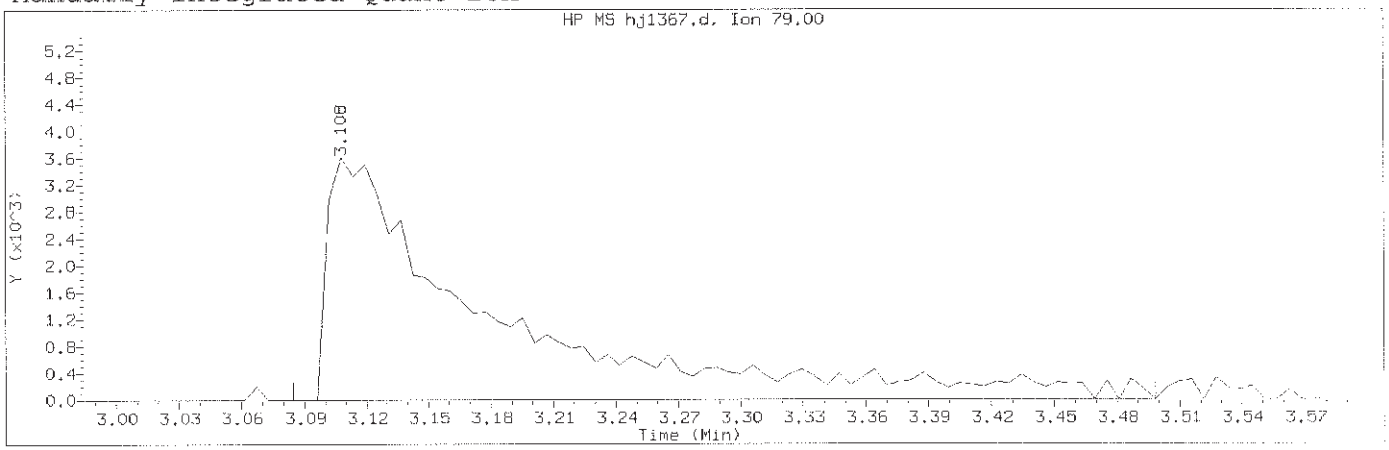
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 158		
Retention Time (minutes)	: 3.108		
Quant Ion	: 79.00		
Area (flag)	: 19537M		
On-Column Amount (ng/ul)	: 0.3127		
Integration start scan	: 153	Integration stop scan:	224
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____

OCT 29 2013

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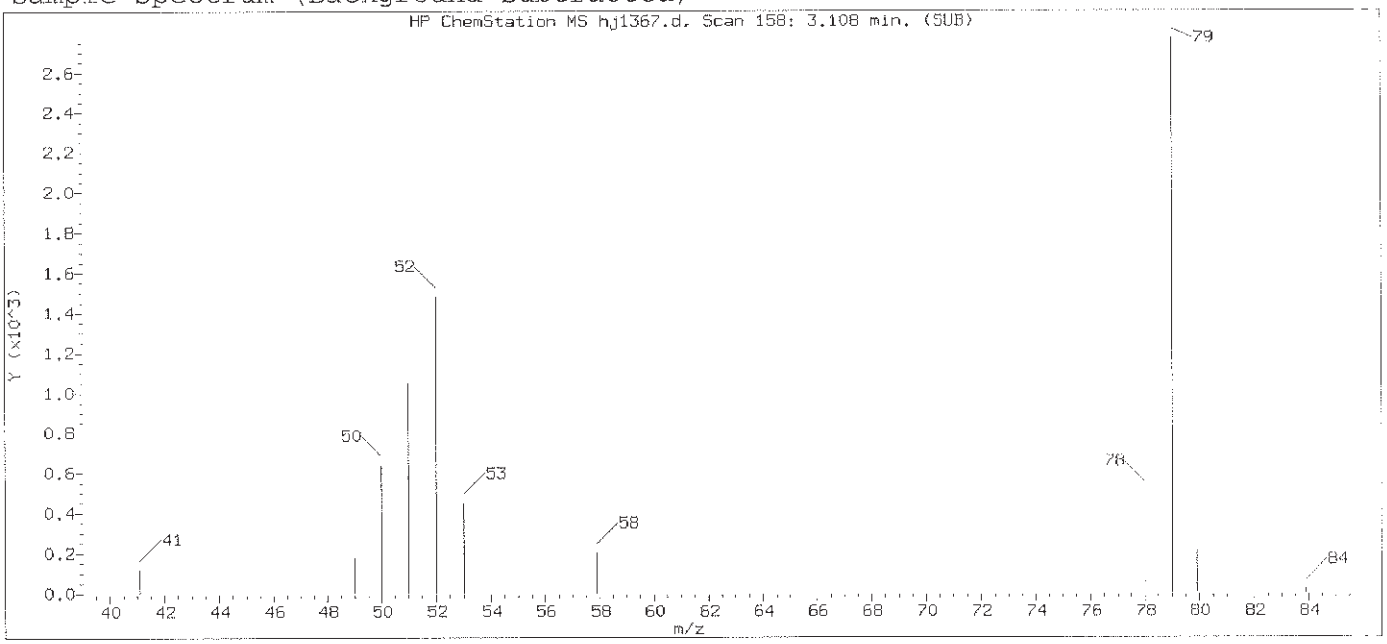
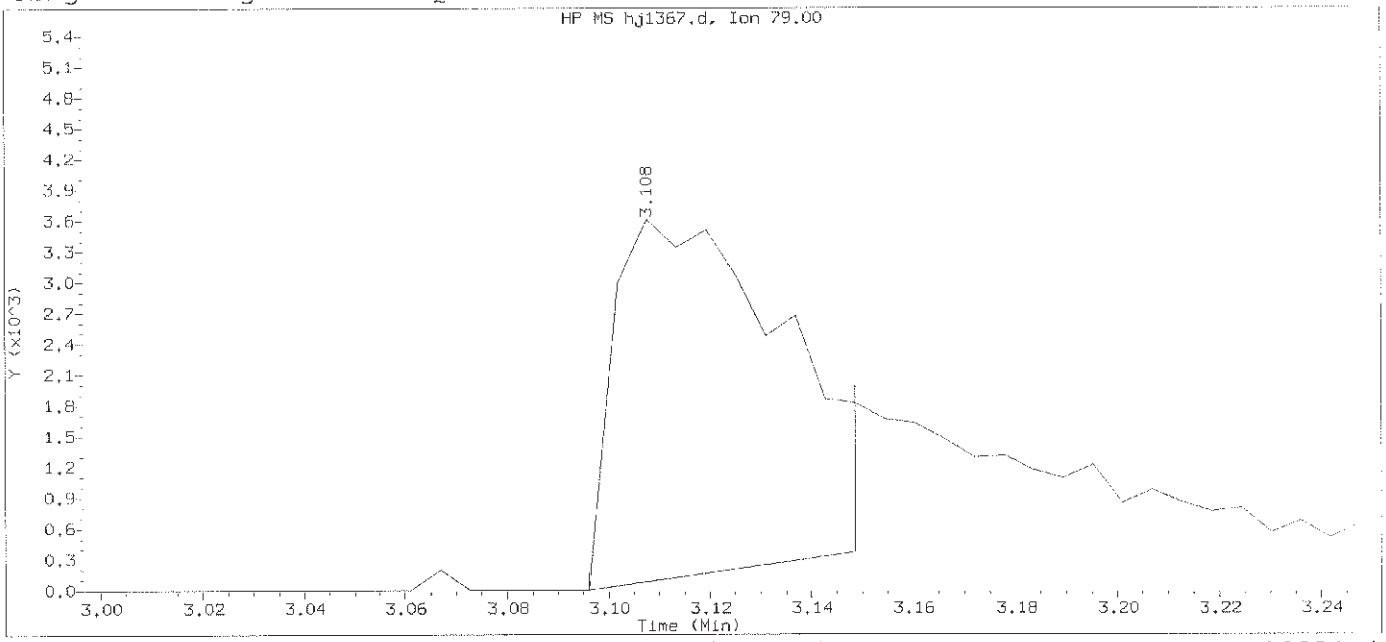
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

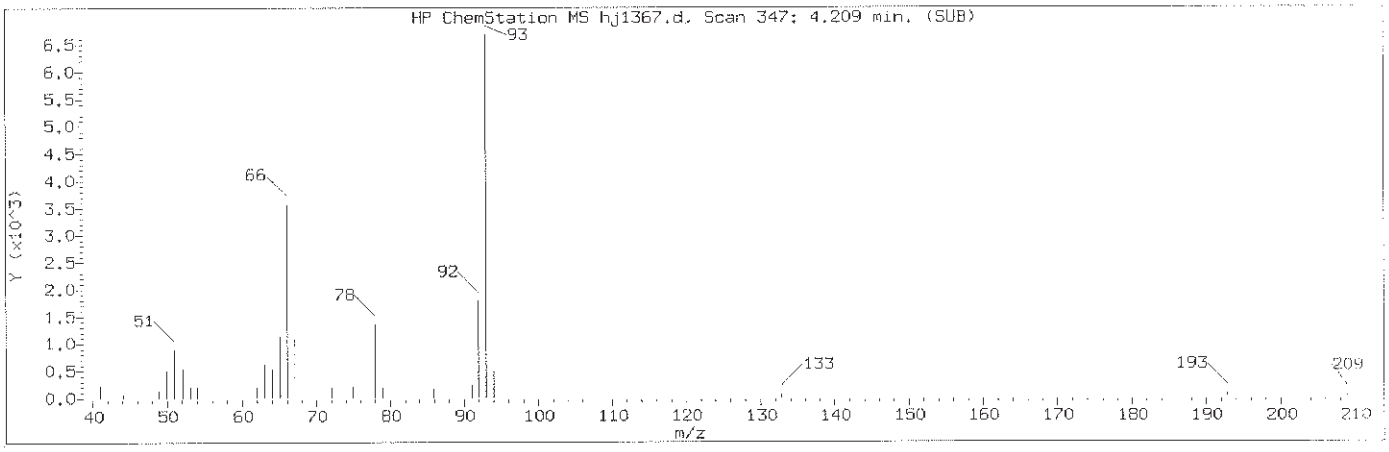
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

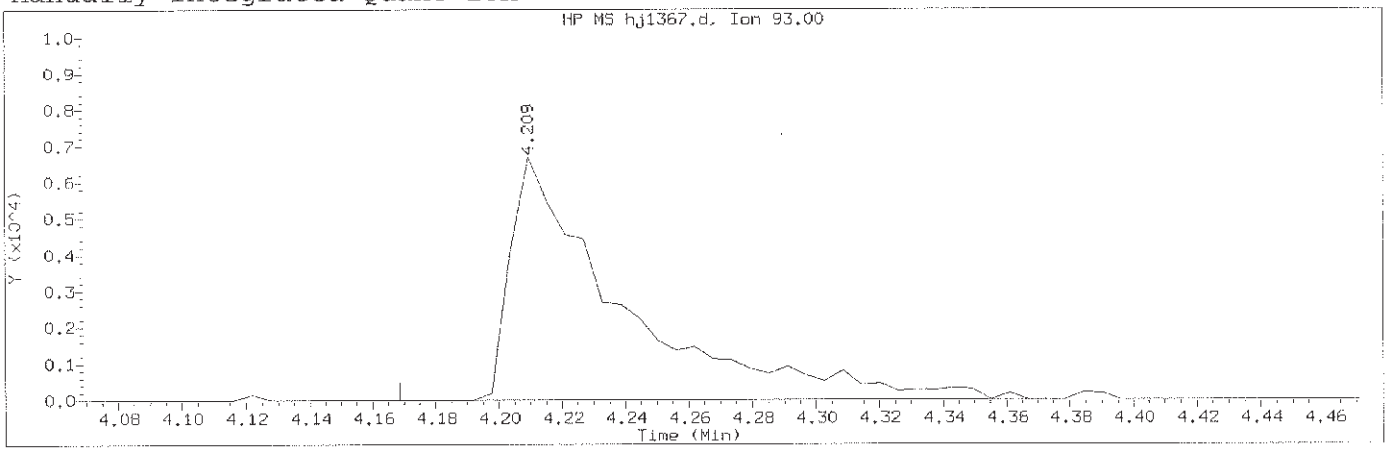
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 158		
Retention Time (minutes)	: 3.108		
Quant Ion	: 79.00		
Area	: 7957		
On-column Amount (ng/ul)	: 0.1424		
Integration start scan	: 155	Integration stop scan:	164
Y at integration start	: 0	Y at integration end:	366

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

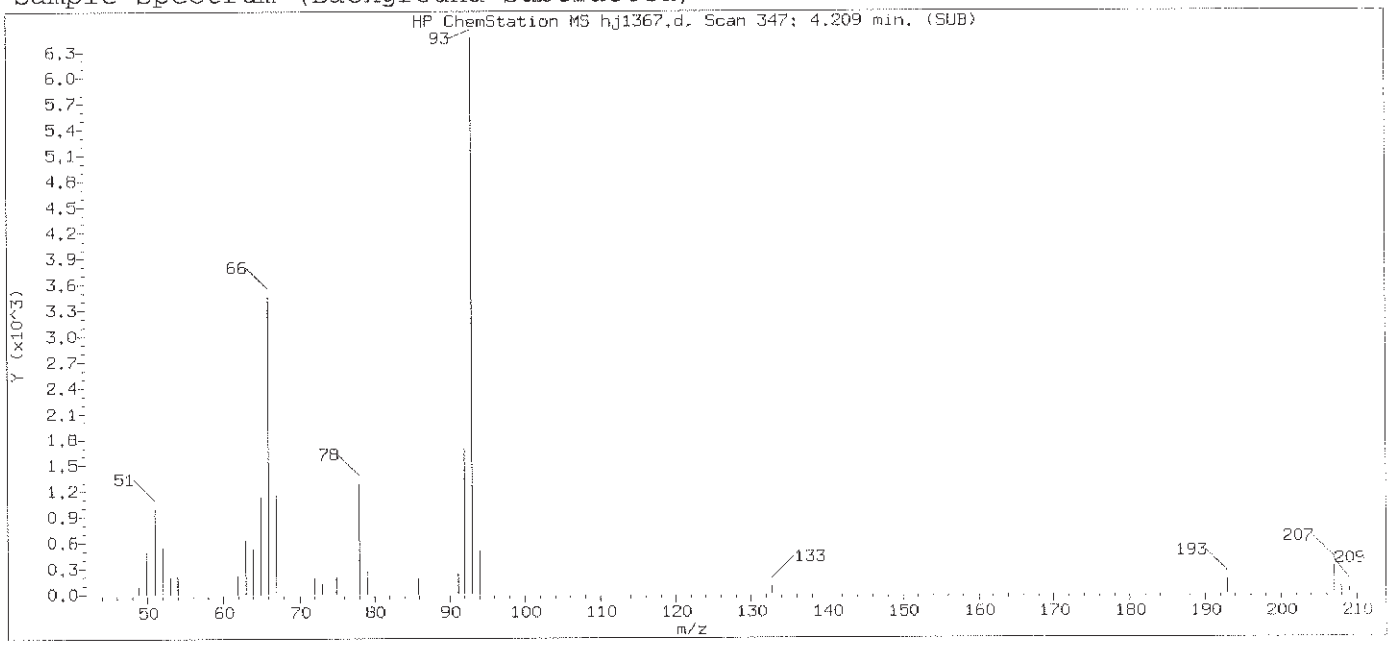
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 347		
Retention Time (minutes)	: 4.209		
Quant Ion	: 93.00		
Area (flag)	: 16259M		
On-Column Amount (ng/ul)	: 0.2645		
Integration start scan	: 339	Integration stop scan:	374
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

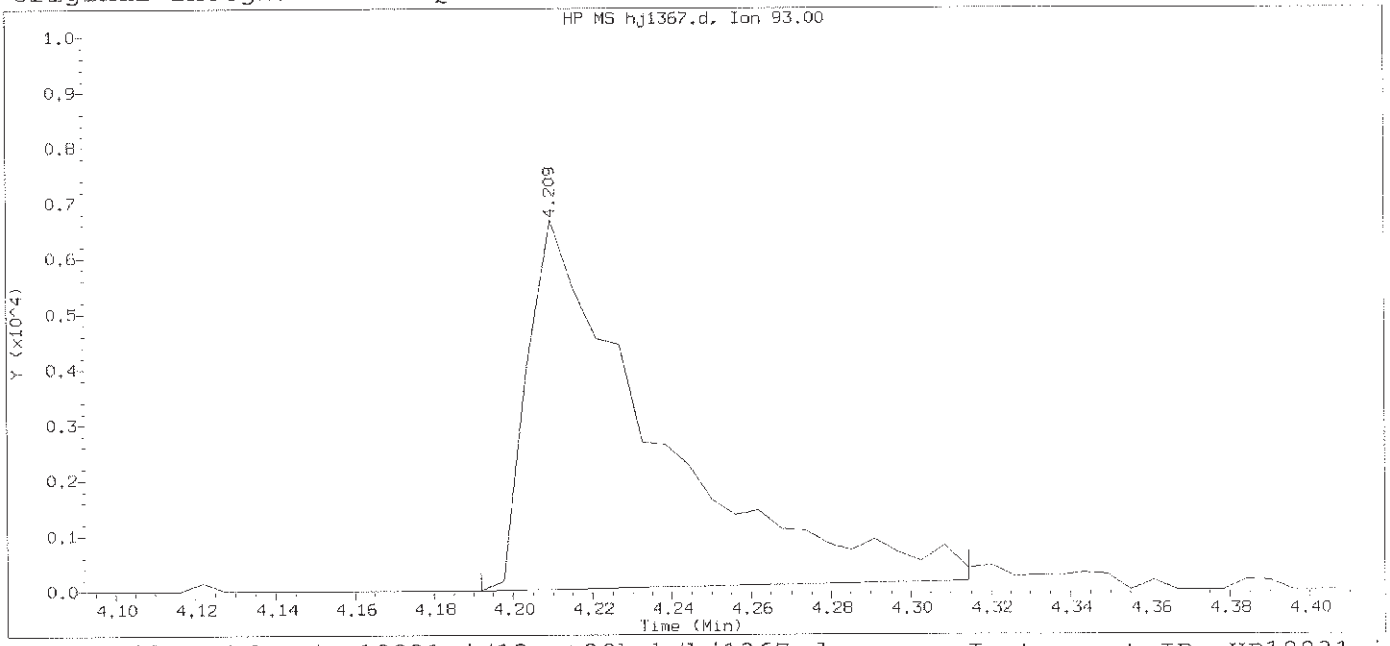
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____
OCT 29 2013
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

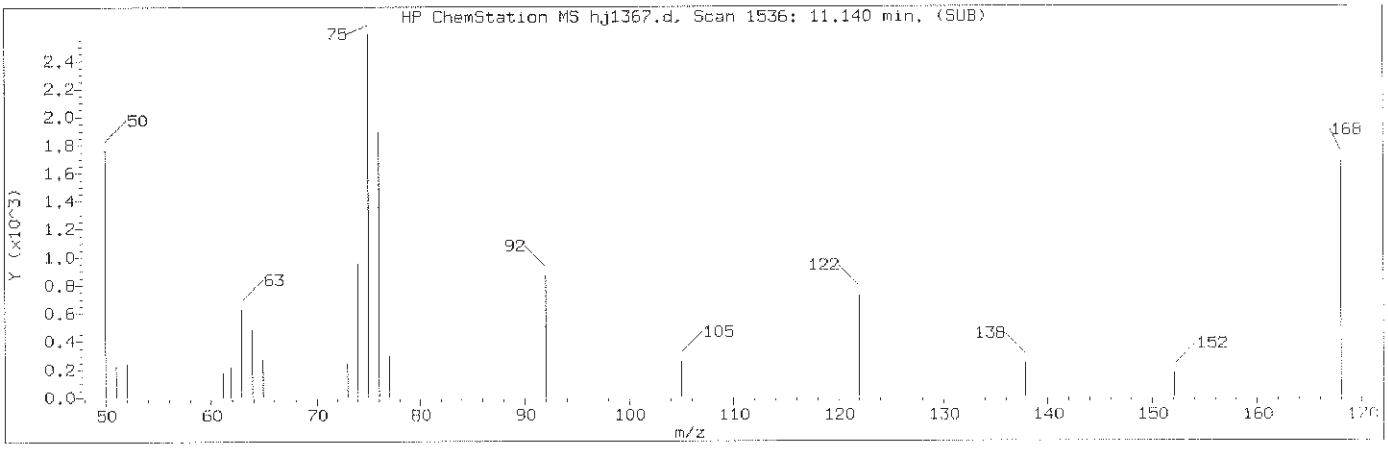
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

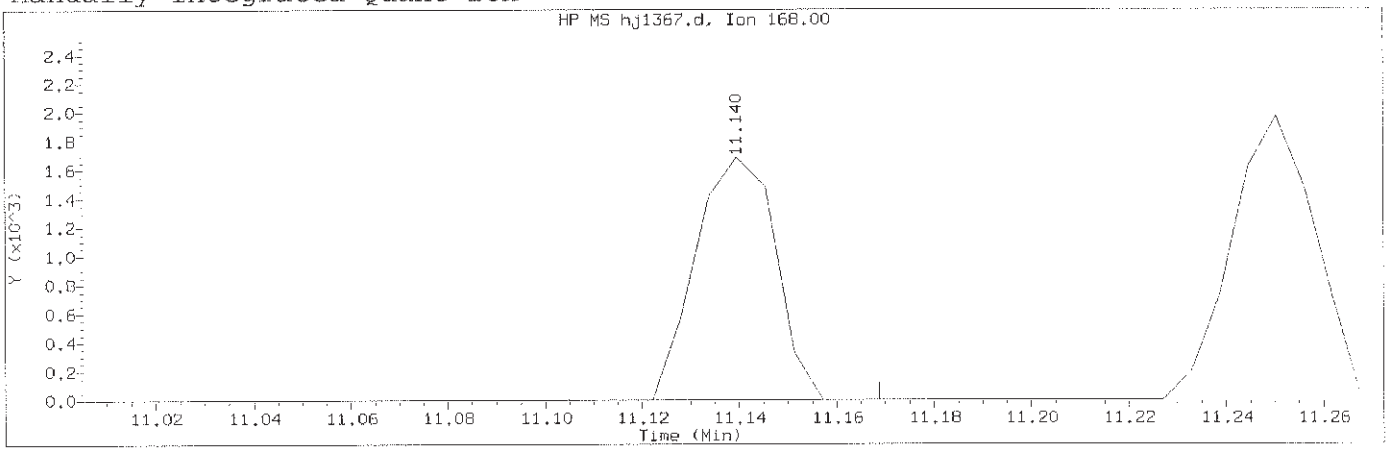
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 347		
Retention Time (minutes)	: 4.209		
Quant Ion	: 93.00		
Area	: 14882		
On-column Amount (ng/ul)	: 0.2452		
Integration start scan	: 343	Integration stop scan:	364
Y at integration start	: 0	Y at integration end:	165

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

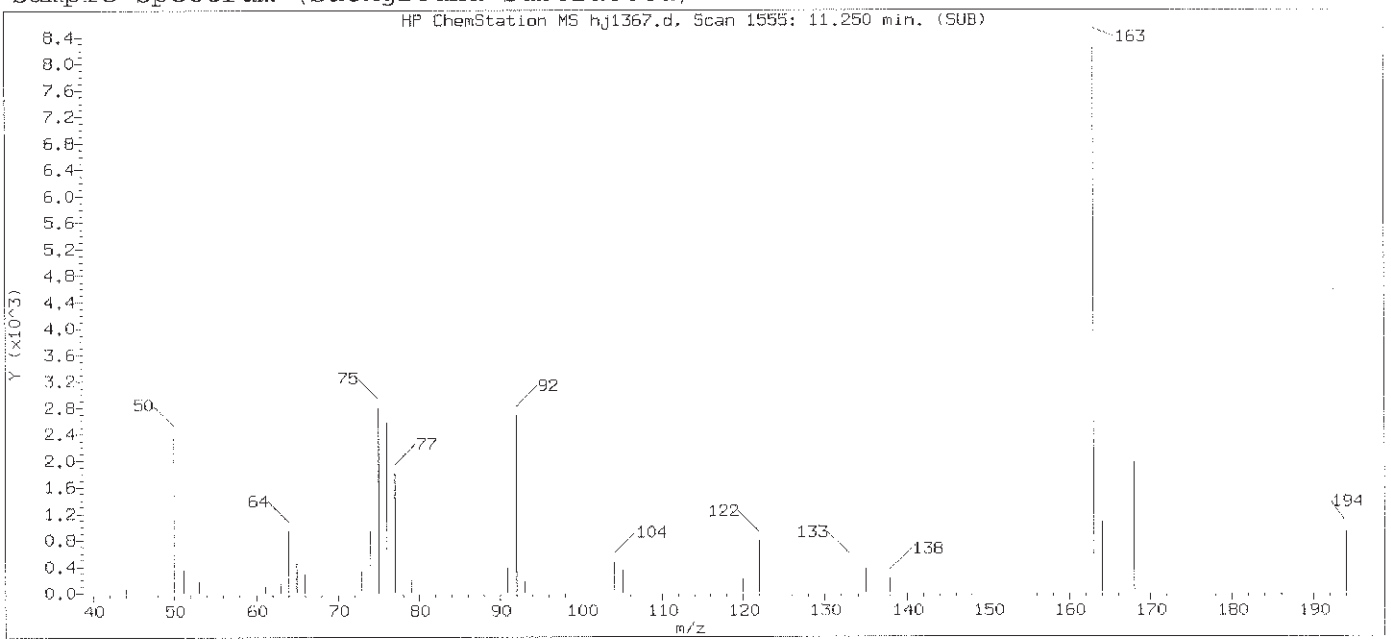
Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1536		
Retention Time (minutes)	: 11.140		
Quant Ion	: 168.00		
Area (flag)	: 1919M		
On-Column Amount (ng/ul)	: 0.1284		
Integration start scan	: 1529	Integration stop scan:	1540
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

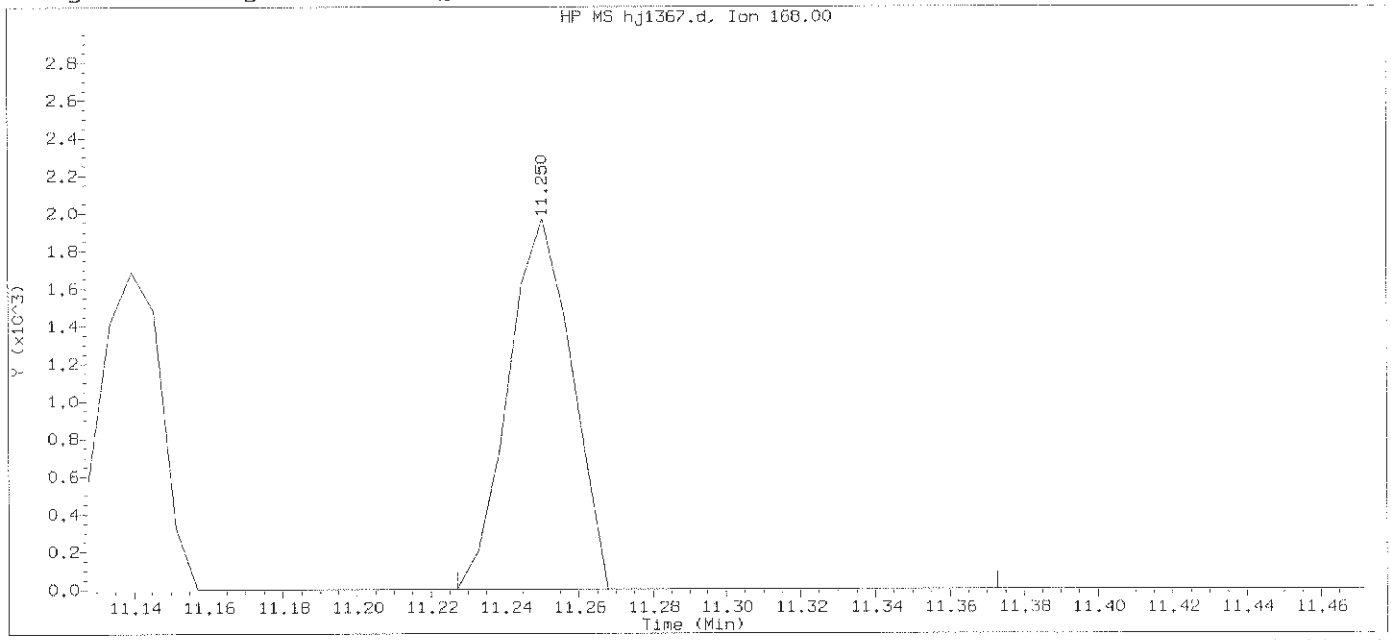
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____
OCT 29 2013
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1555		
Retention Time (minutes)	: 11.250		
Quant Ion	: 168.00		
Area	: 2332		
On-column Amount (ng/ul)	: 0.1561		
Integration start scan	: 1550	Integration stop scan:	1575
Y at integration start	: 0	Y at integration end:	0

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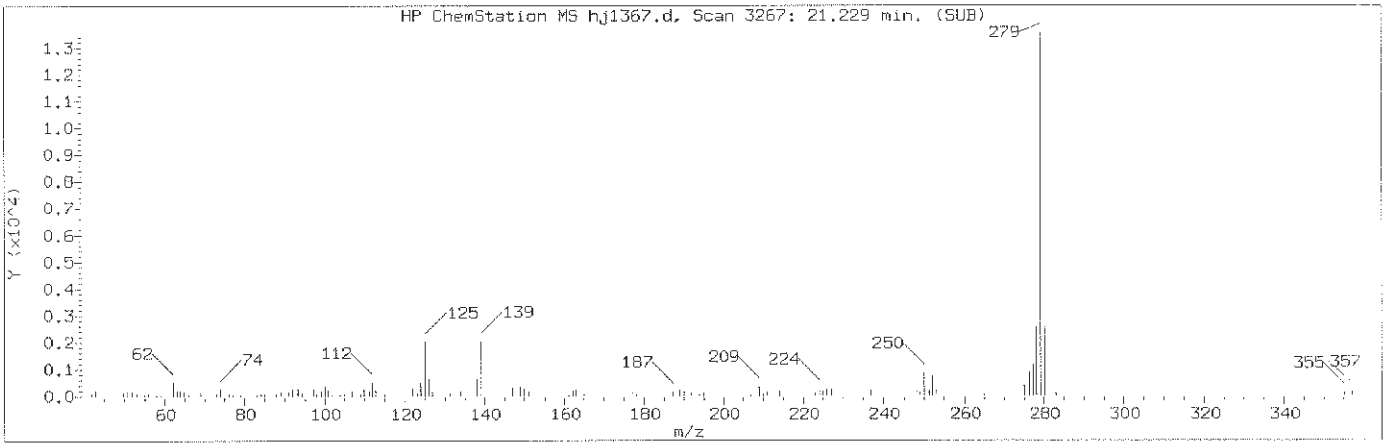
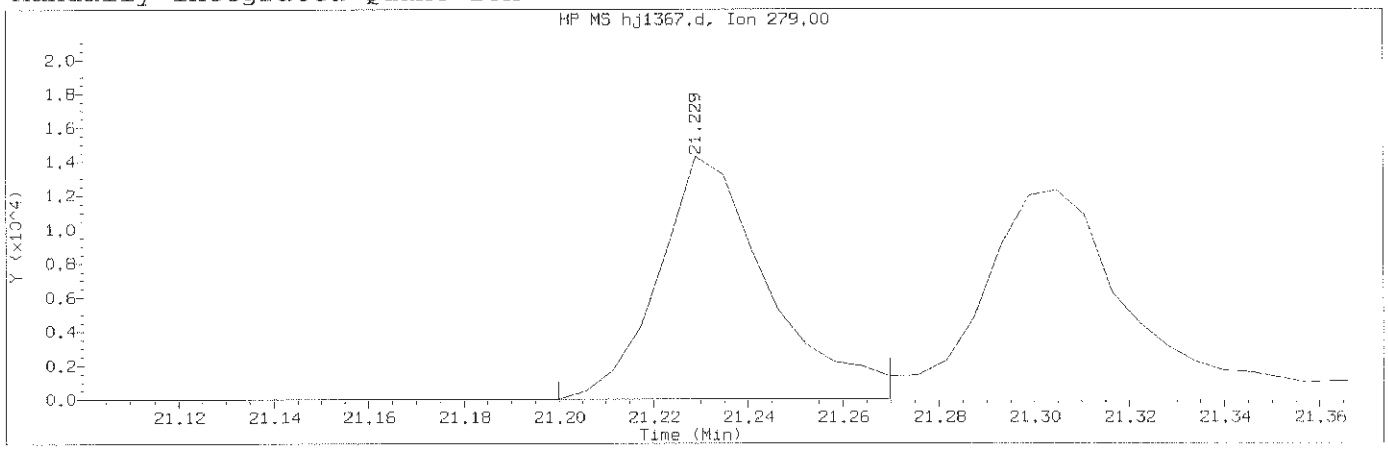
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 160		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3267		
Retention Time (minutes)	: 21.229		
Quant Ion	: 279.00		
Area (flag)	: 22987M		
On-Column Amount (ng/ul)	: 0.1929		
Integration start scan	: 3261	Integration stop scan:	3273
Y at integration start	: 13	Y at integration end:	13

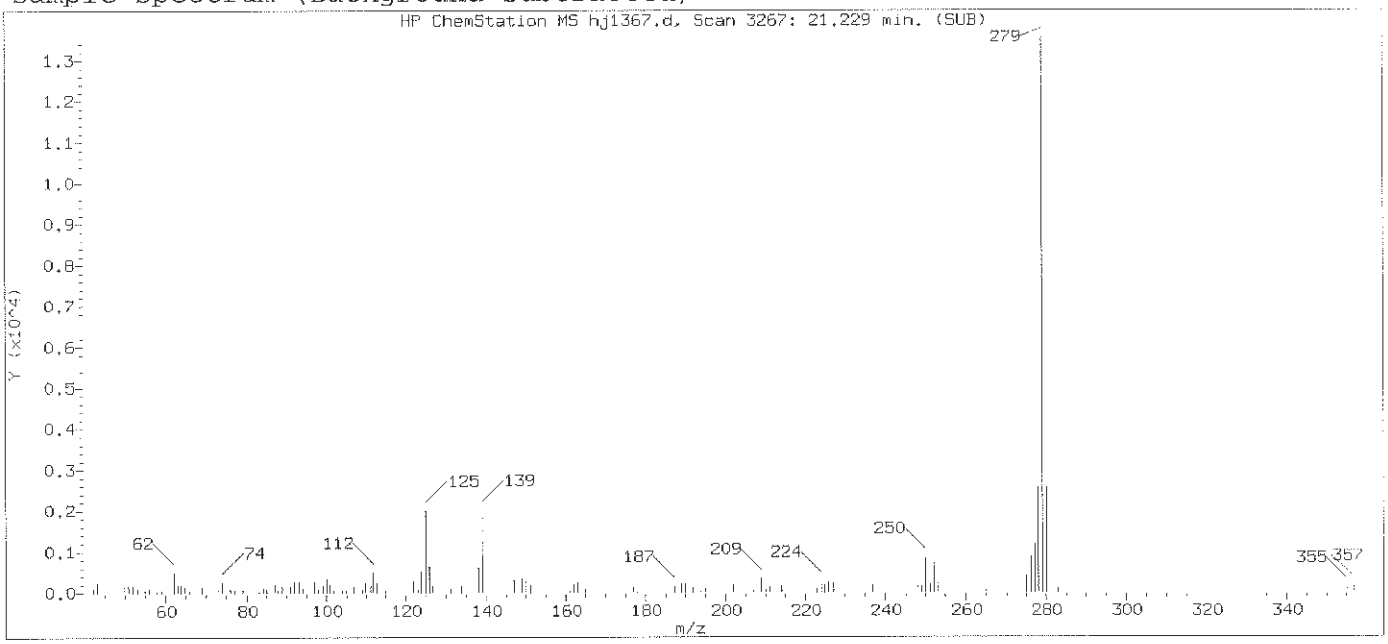
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:36.
Target 3.5 esignature user ID: jmg00346

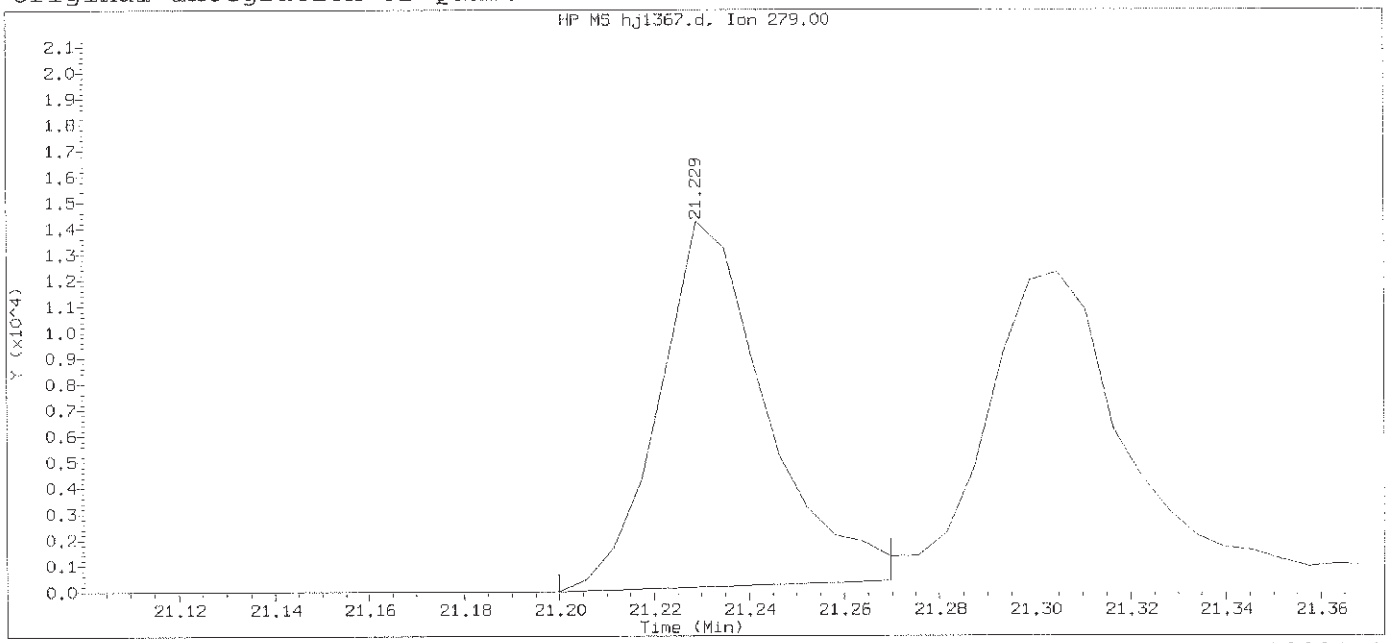
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Data Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1367.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 02:32 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:04
Date, time and analyst ID of latest file update: 29-Oct-2013 03:04 Automation

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 160		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3267		
Retention Time (minutes)	: 21.229		
Quant Ion	: 279.00		
Area	: 21955		
On-column Amount (ng/ul)	: 0.1842		
Integration start scan	: 3261	Integration stop scan:	3273
Y at integration start	: 0	Y at integration end:	408

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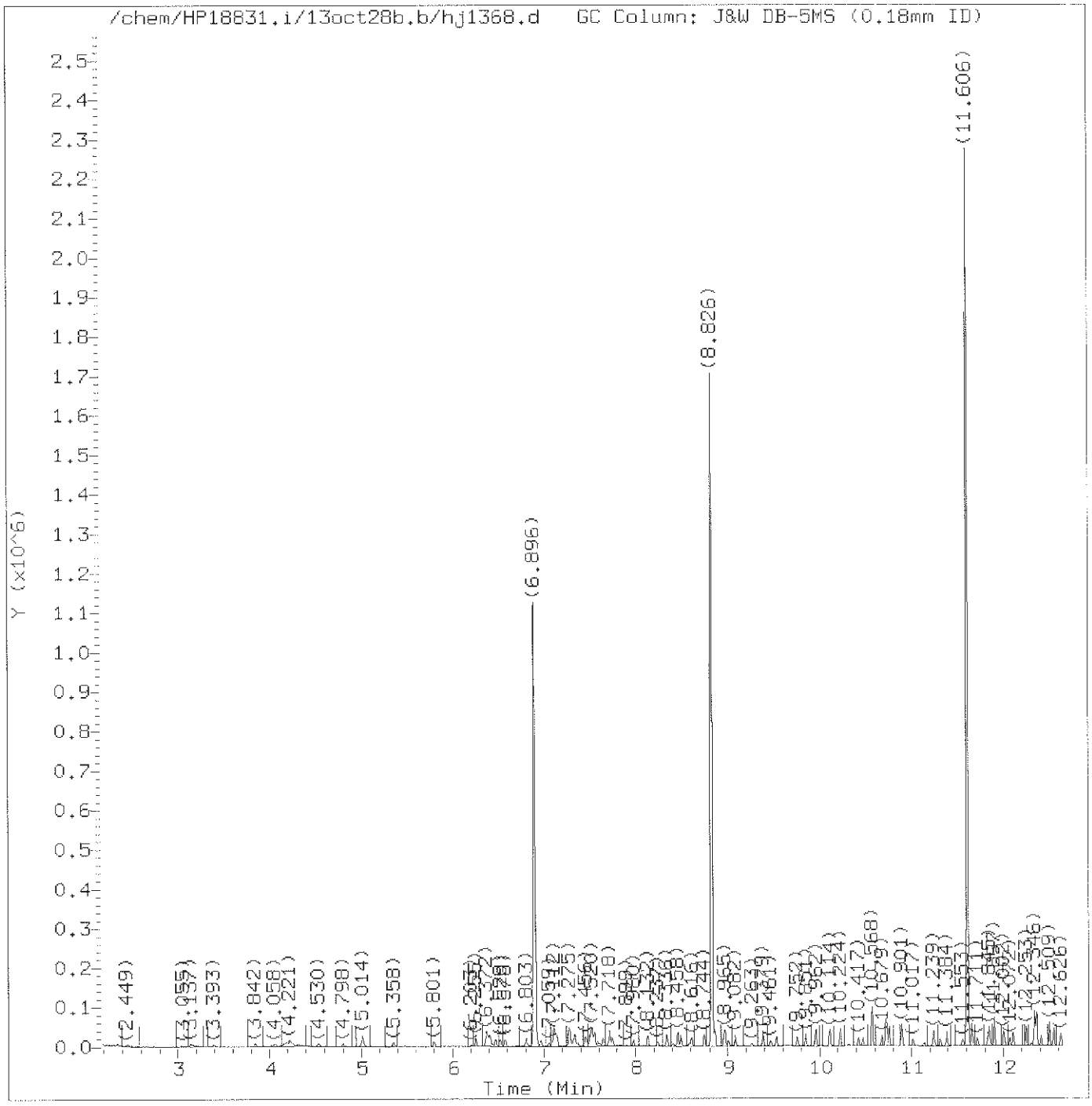
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

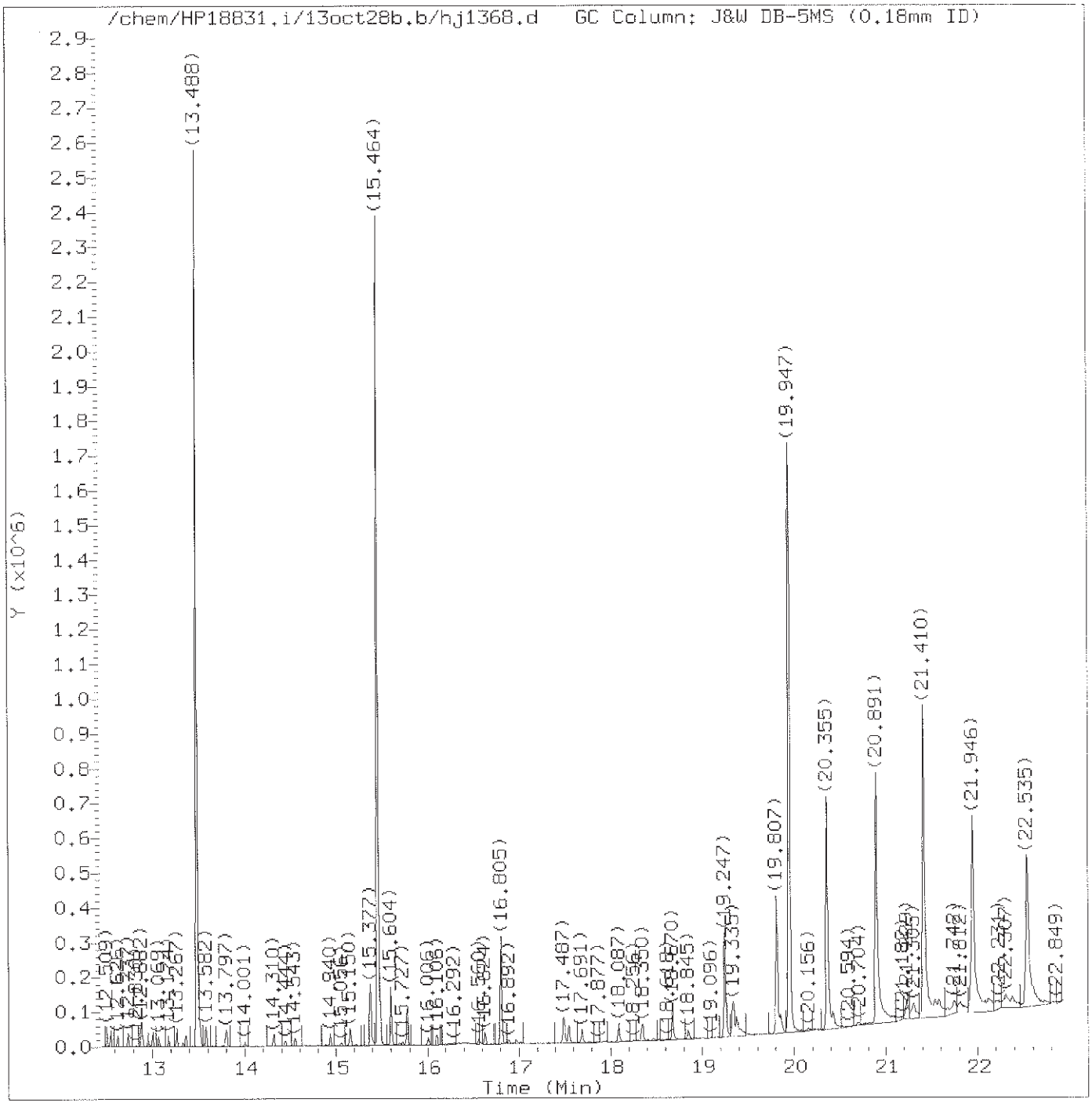
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.449	88	3480M	0.119
2) N-Nitrosodimethylamine	(1)	3.049	74	5125M	0.105
3) Pyridine	(1)	3.137	79	11723M	0.141
6) N-Nitrosomethylethylamine	(1)	4.192	88	5407	0.147
5) 2-Picoline	(1)	4.221	93	8526M	0.104
7) Methyl methanesulfonate	(1)	4.798	80	4389M	0.098
8)$2-Fluorophenol	(1)	5.014	112	12188	0.189
9) N-Nitrosodiethylamine	(1)	5.352	102	2738	0.081
10) Ethyl methanesulfonate	(1)	5.801	109	3369	0.099
11) Benzaldehyde	(1)	6.255	77	7111	0.114
12)$Phenol-d5	(1)	6.372	99	17425	0.197
13)$Phenol-d6	(1)	6.372	99	17425	0.197
14) Phenol	(1)	6.389	94	11072	0.107
16) Aniline	(1)	6.412	93	13909	0.115
17) bis(2-Chloroethyl)ether	(1)	6.529	93	7819	0.101
18) 2-Chlorophenol	(1)	6.582	128	5922	0.094
19) 1,3-Dichlorobenzene	(1)	6.803	146	7445	0.102
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	231931	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	7396	0.100
22) Benzyl alcohol	(1)	7.112	108	4893	0.111
23) 1,2-Dichlorobenzene	(1)	7.135	146	7590	0.110
25) Indene	(1)	7.269	115	15533	0.140
26) 2-Methylphenol	(1)	7.287	108	6713	0.109
28) bis(2-Chloroisopropyl)ether	(1)	7.328	45	9218	0.103
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.328	45	9218	0.103
29) N-Nitrosopyrrolidine	(1)	7.462	100	2891	0.089
30) Acetophenone	(1)	7.502	105	9799	0.098
32) N-Nitroso-di-n-propylamine	(1)	7.520	70	6633	0.111
31) 4-Methylphenol	(1)	7.526	108	7657	0.107
33) N-Nitrosomorpholine	(1)	7.532	56	5830	0.136
34) o-Toluidine	(1)	7.549	106	11266	0.102
35) Hexachloroethane	(1)	7.642	117	2795	0.095
36)$Nitrobenzene-d5	(2)	7.718	82	15898	0.193
37) Nitrobenzene	(2)	7.747	77	8714	0.101
38) N-Nitrosopiperidine	(2)	7.980	114	3596	0.109
39) Isophorone	(2)	8.132	82	15487	0.105
40) 2-Nitrophenol	(2)	8.237	139	2248	0.073
41) 2,4-Dimethylphenol	(2)	8.336	107	7338	0.103
43) Benzoic acid	(2)	8.406	105	3468	0.111
42) O,O,O-triethylphosphorothioate	(2)	8.464	198	4103	0.113

M = Compound was manually integrated.
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on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.493	93	9881	0.116
46) 2,4-Dichlorophenol	(2)	8.616	162	5074	0.096
47) 1,2,4-Trichlorobenzene	(2)	8.744	180	6227	0.098
48)*Naphthalene-d8	(2)	8.826	136	881453	5.000
49) Naphthalene	(2)	8.855	128	21022	0.118
50) 4-Chloroaniline	(2)	8.960	127	8062M	0.106
51) 2,6-Dichlorophenol	(2)	8.971	162	5124	0.100
52) Hexachloropropene	(2)	9.006	213	3155	0.080
53) Hexachlorobutadiene	(2)	9.082	225	3753	0.100
54) Quinoline	(2)	9.379	129	15774	0.136
55) Caprolactam	(2)	9.461	113	1777	0.086
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	5140	0.085
58) 4-Chloro-3-methylphenol	(2)	9.752	107	5914	0.100
60) Safrole	(2)	9.851	162	5009	0.103
61) 2-Methylnaphthalene	(2)	9.962	142	14371	0.115
62) 1-Methylnaphthalene	(2)	10.114	142	13398	0.118
63) Hexachlorocyclopentadiene	(3)	10.224	237	1650	0.057
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	8064	0.124
65) cis-Isosafrole	(3)	10.318	162	986	0.116
66) 2,4,6-Trichlorophenol	(3)	10.423	196	3842	0.093
67) 2,4,5-Trichlorophenol	(3)	10.469	196	3644	0.088
68)$2-Fluorobiphenyl	(3)	10.568	172	32828	0.243
70) Isosafrole	(3)	10.679	162	4763	0.098
69) trans-Isosafrole	(3)	10.679	162	4763	0.098
71) 1,1'-Biphenyl	(3)	10.720	154	16731	0.108
72) 2-Chloronaphthalene	(3)	10.726	162	15176	0.123
73) 1-Chloronaphthalene	(3)	10.761	162	16040	0.143
74) Diphenyl ether	(3)	10.901	170	10690	0.125
75) 2-Nitroaniline	(3)	10.901	138	2470	0.071
76) 1,4-Naphthoquinone	(3)	11.017	158	3105	0.066
77) 1,4-Dinitrobenzene	(3)	11.140	168	1065M	0.055
78) Dimethylphthalate	(3)	11.239	163	16084	0.126
79) 1,3-Dinitrobenzene	(3)	11.250	168	1413M	0.060
80) 2,6-Dinitrotoluene	(3)	11.314	165	2377	0.078
81) Acenaphthylene	(3)	11.384	152	18534	0.113
82) 3-Nitroaniline	(3)	11.553	138	2589	0.080
83)*Acenaphthene-d10	(3)	11.606	164	552628	5.000
84) Acenaphthene	(3)	11.652	153	14839	0.123
85) 2,4-Dinitrophenol	(3)	11.717	184	2828	0.184
86) 4-Nitrophenol	(3)	11.833	109	5466	0.246

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on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
87) Pentachlorobenzene	(3)	11.845	250	6712	0.127
88) Dibenzofuran	(3)	11.903	168	21325	0.126
89) 2,4-Dinitrotoluene	(3)	11.903	165	2839	0.072
90) 1-Naphthylamine	(3)	12.002	143	12507	0.106
91) 2,3,4,6-Tetrachlorophenol	(3)	12.072	232	2832	0.086
92) 2-Naphthylamine	(3)	12.113	143	12911	0.109
93) Diethylphthalate	(3)	12.253	149	14781	0.122
94) Fluorene	(3)	12.340	166	16159	0.119
95) Thionazin	(3)	12.346	107	2775	0.108
97) 5-Nitro-o-toluidine	(3)	12.364	152	2884	0.083
98) 4-Nitroaniline	(3)	12.364	138	2512	0.079
96) 4-Chlorophenyl-phenylether	(3)	12.369	204	9101	0.130
99) 4,6-Dinitro-2-methylphenol	(4)	12.416	198	3786	0.157
102) NDPA as diphenylamine	(4)	12.509	169	14173	0.124
101) N-Nitrosodiphenylamine	(4)	12.509	169	14173	0.124
103) 1,2-Diphenylhydrazine	(4)	12.550	77	18046	0.107
104)$2,4,6-Tribromophenol	(3)	12.626	330	2730	0.194
105) Tetraethyldithiopyrophosphate	(4)	12.737	97	2967	0.118
106) 1,3,5-Trinitrobenzene	(4)	12.830	213	480M	0.028
107) Diallate (peak 1)	(4)	12.876	86	6348	0.078
108) Phorate	(4)	12.882	75	10130	0.101
109) Phenacetin	(4)	12.894	108	5390	0.075
110) 4-Bromophenyl-phenylether	(4)	12.952	248	4621	0.116
111) Diallate (peak 2)	(4)	12.981	86	907	0.026
112) Hexachlorobenzene	(4)	13.005	284	4799	0.122
113) Dimethoate	(4)	13.069	87	5587	0.086
114) Atrazine	(4)	13.180	200	3488	0.088
115) Pentachlorophenol	(4)	13.255	266	1014	0.040
117) 4-Aminobiphenyl	(4)	13.267	169	13362	0.093
116) Pentachloronitrobenzene	(4)	13.273	237	1309	0.072
118) Pronamide	(4)	13.366	173	5830	0.094
120)*Phenanthrene-d10	(4)	13.488	188	978806	5.000
119) Dinoseb	(4)	13.512	211	824M	0.026
121) Phenanthrene	(4)	13.518	178	26540	0.124
122) Anthracene	(4)	13.582	178	22986	0.111
124) Carbazole	(4)	13.797	167	21247	0.107
125) Methyl parathion	(4)	14.007	109	2394	0.051
126) Di-n-butylphthalate	(4)	14.316	149	19656	0.084
127) Parathion	(4)	14.543	109	1563M	0.051
128) 4-Nitroquinoline-1-oxide	(4)	14.549	190	431	0.024

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Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.940	193	3384	0.133
131) Fluoranthene	(4)	15.150	202	25113	0.106
132) Benzidine	(5)	15.377	184	108047	0.714
134)*Pyrene-d10	(5)	15.464	212	1209773	5.000
133) Pyrene	(5)	15.494	202	33269	0.132
137)$Terphenyl-d14	(5)	15.773	244	40774	0.254
140) p-Dimethylaminoazobenzene	(5)	16.006	225	3178	0.067
141) Chlorobenzilate	(5)	16.100	139	6751	0.094
142) 3,3'-Dimethylbenzidine	(5)	16.560	212	9330	0.060
144) Butylbenzylphthalate	(5)	16.624	149	8917	0.084
146) 2-Acetylaminofluorene	(5)	16.974	181	4496	0.047
148) 3,3'-Dichlorobenzidine	(5)	17.481	252	6652	0.077
147) Benzo(a)anthracene	(5)	17.487	228	23618	0.104
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.504	231	3021	0.070
150) Chrysene	(5)	17.545	228	26530	0.119
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	12203	0.086
152) 6-Methylchrysene	(5)	18.350	242	19414	0.120
153) Di-n-octylphthalate	(6)	18.845	149	15304	0.063
154) Benzo(b)fluoranthene	(6)	19.329	252	25032	0.110
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.335	256	8447	0.084
156) Benzo(k)fluoranthene	(6)	19.375	252	28953	0.125
157) Benzo(a)pyrene	(6)	19.853	252	24695	0.116
158)*Perylene-d12	(6)	19.947	264	953438	5.000
159) 3-Methylcholanthrene	(6)	20.425	268	11523	0.106
160) Dibenz(a,h)acridine	(6)	21.229	279	18299M	0.113
161) Dibenz(a,j)acridine	(6)	21.305	279	18330	0.107
162) Indeno(1,2,3-cd)pyrene	(6)	21.538	276	24365	0.113
163) Dibenz(a,h)anthracene	(6)	21.584	278	21088	0.114
164) Benzo(g,h,i)perylene	(6)	21.917	276	21522	0.115
165) Diallate TRANS/CIS	(4)			7255	0.103

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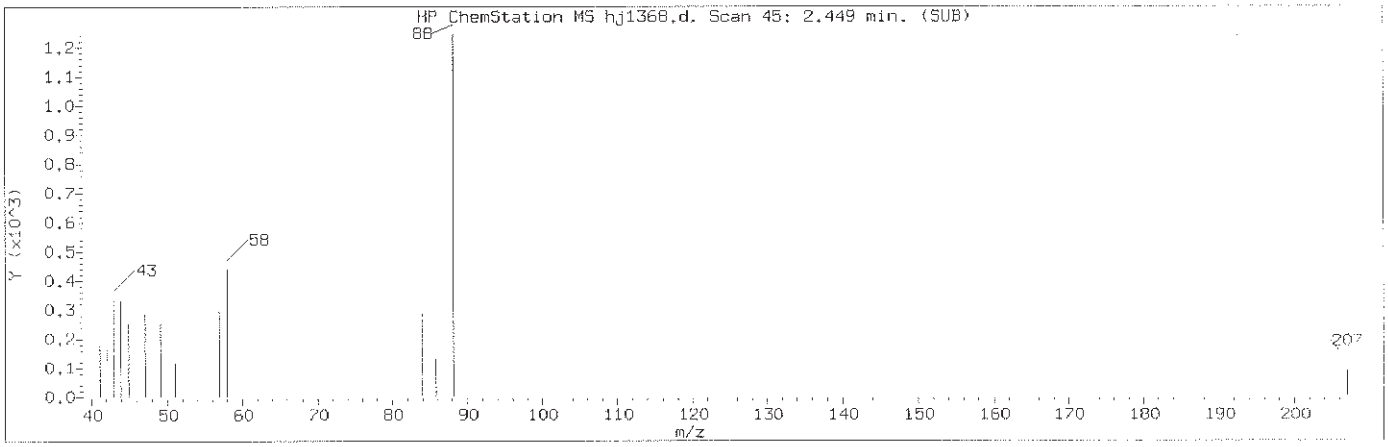
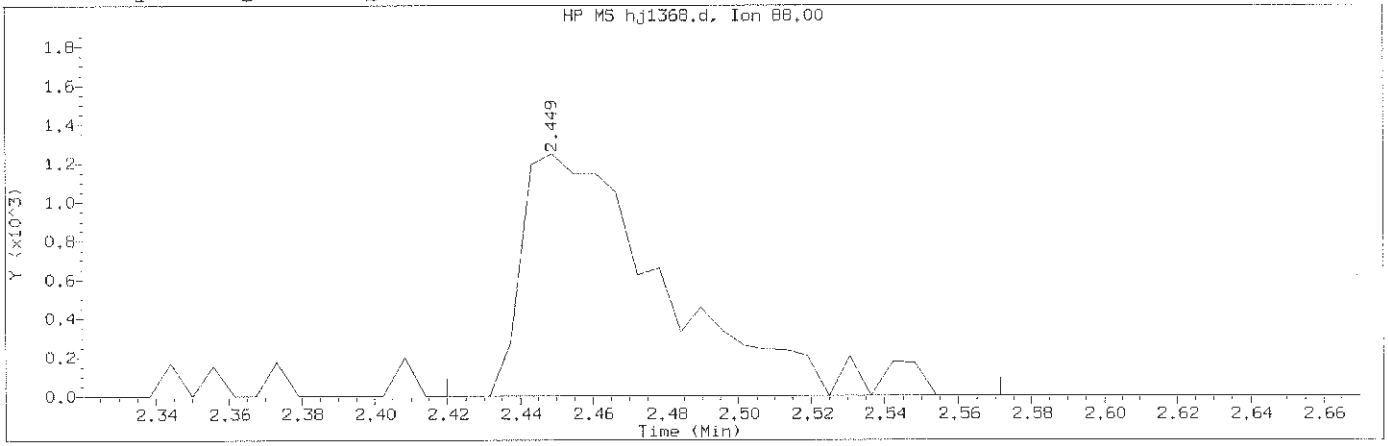
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 45		
Retention Time (minutes)	: 2.449		
Quant Ion	: 88.00		
Area (flag)	: 3480M		
On-Column Amount (ng/ul)	: 0.1191		
Integration start scan	: 39	Integration stop scan:	65
Y at integration start	: 0	Y at integration end:	0

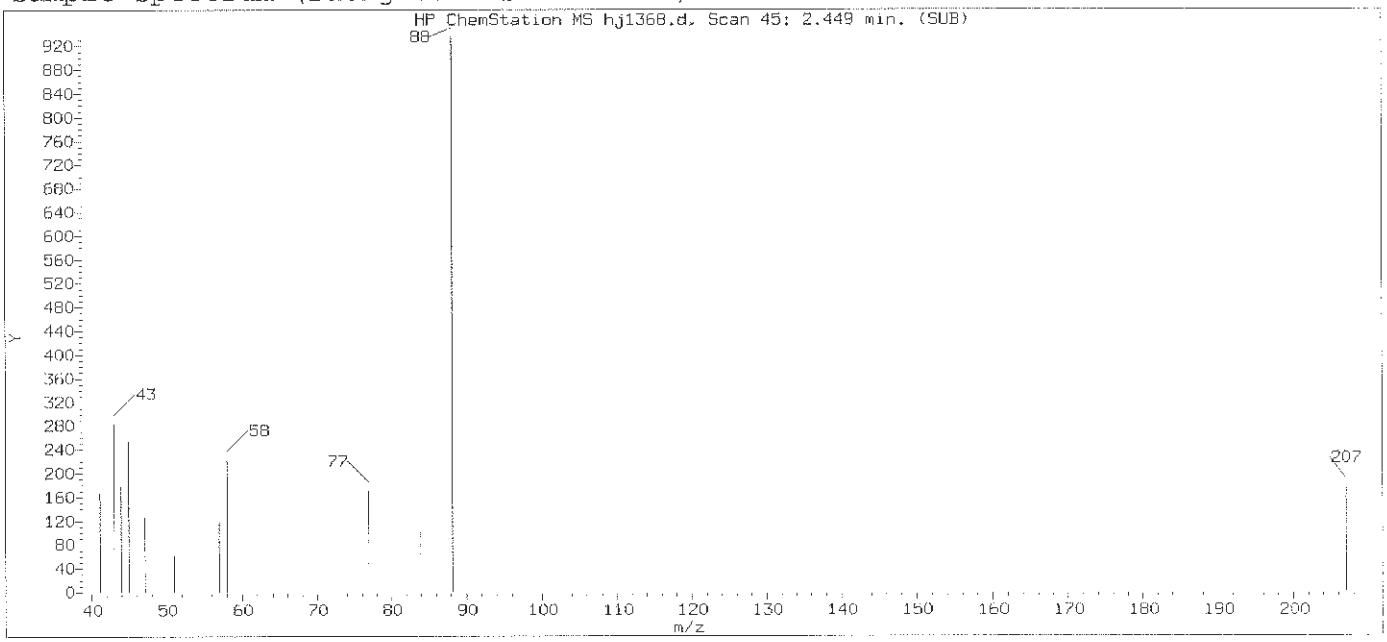
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

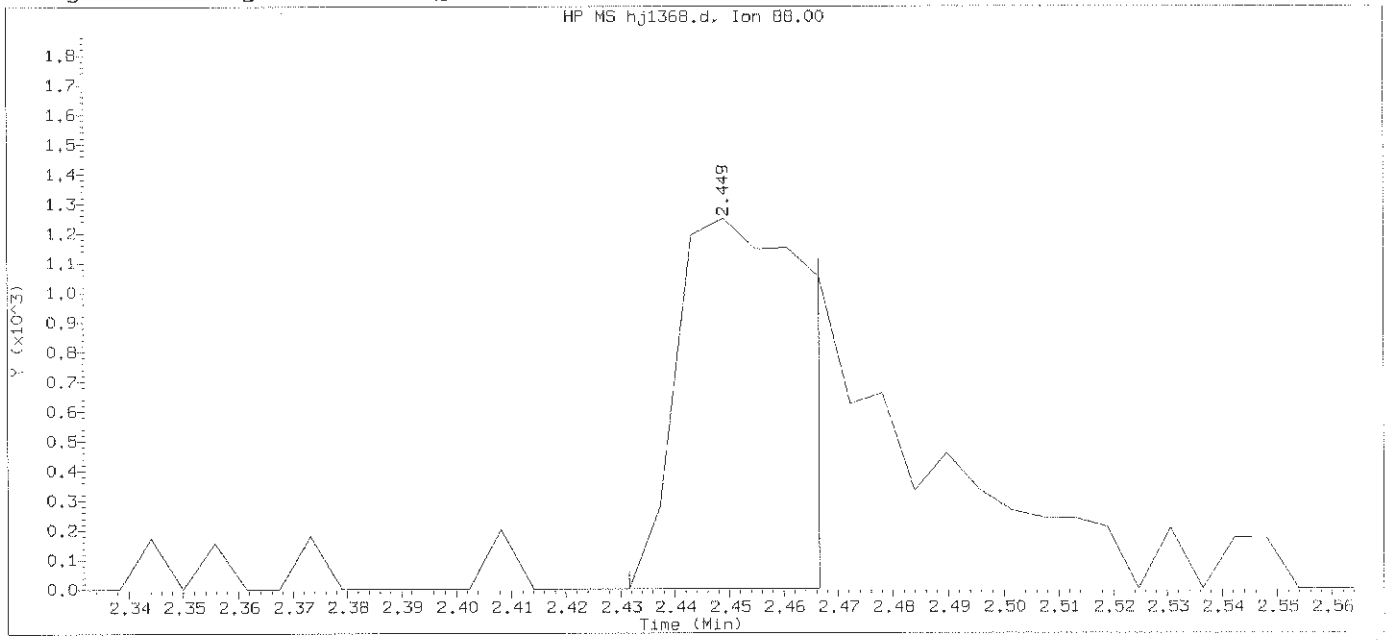
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Data Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

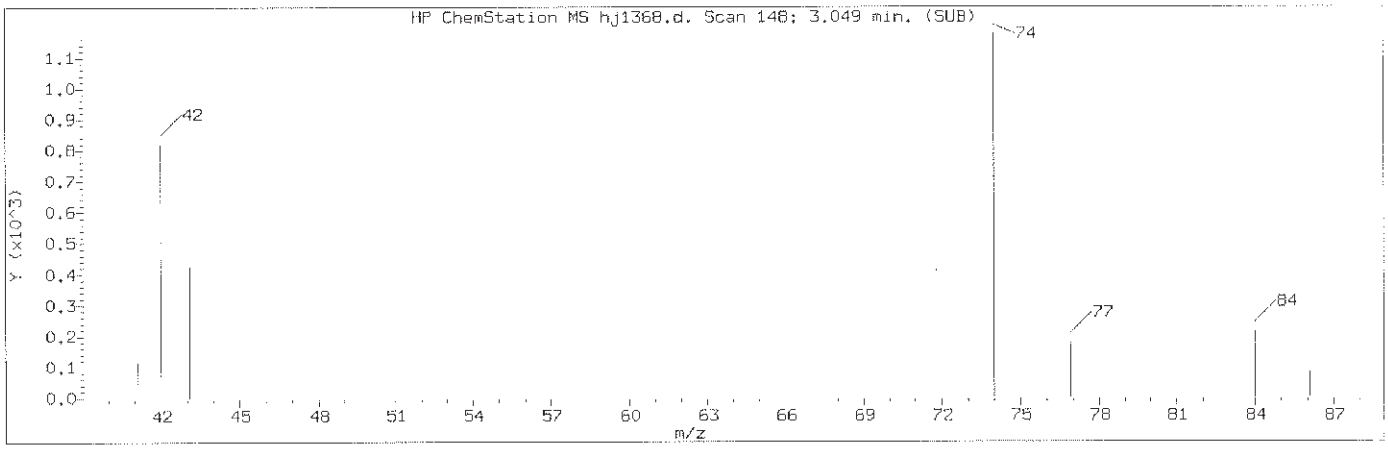
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

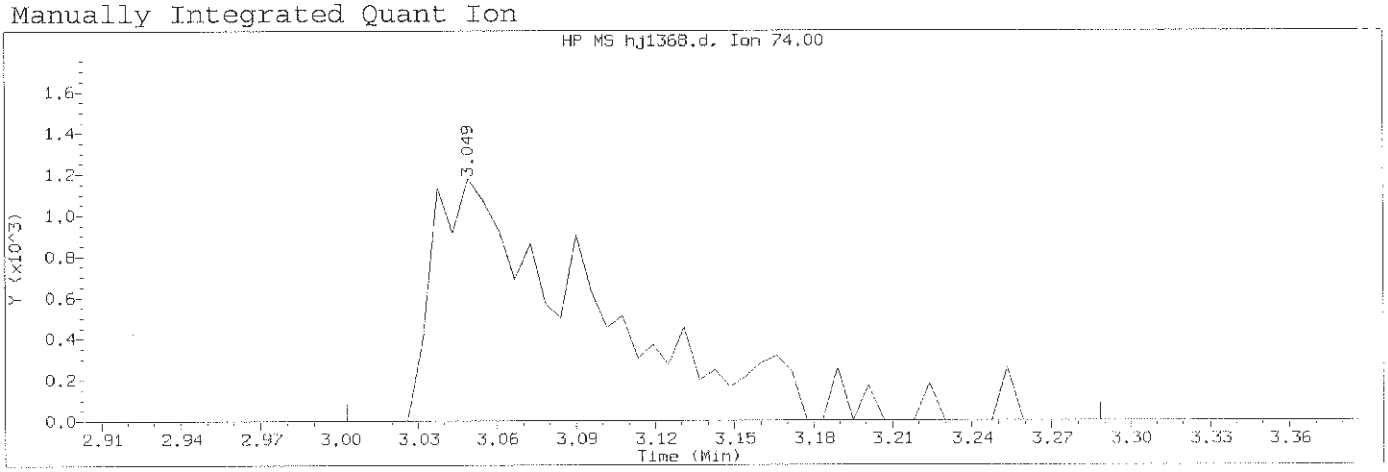
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 45		
Retention Time (minutes)	: 2.449		
Quant Ion	: 88.00		
Area	: 1934		
On-column Amount (ng/ul)	: 0.0662		
Integration start scan	: 41	Integration stop scan:	47
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 148		
Retention Time (minutes)	: 3.049		
Quant Ion	: 74.00		
Area (flag)	: 5125M		
On-Column Amount (ng/ul)	: 0.1048		
Integration start scan	: 139	Integration stop scan:	188
Y at integration start	: 0	Y at integration end:	0

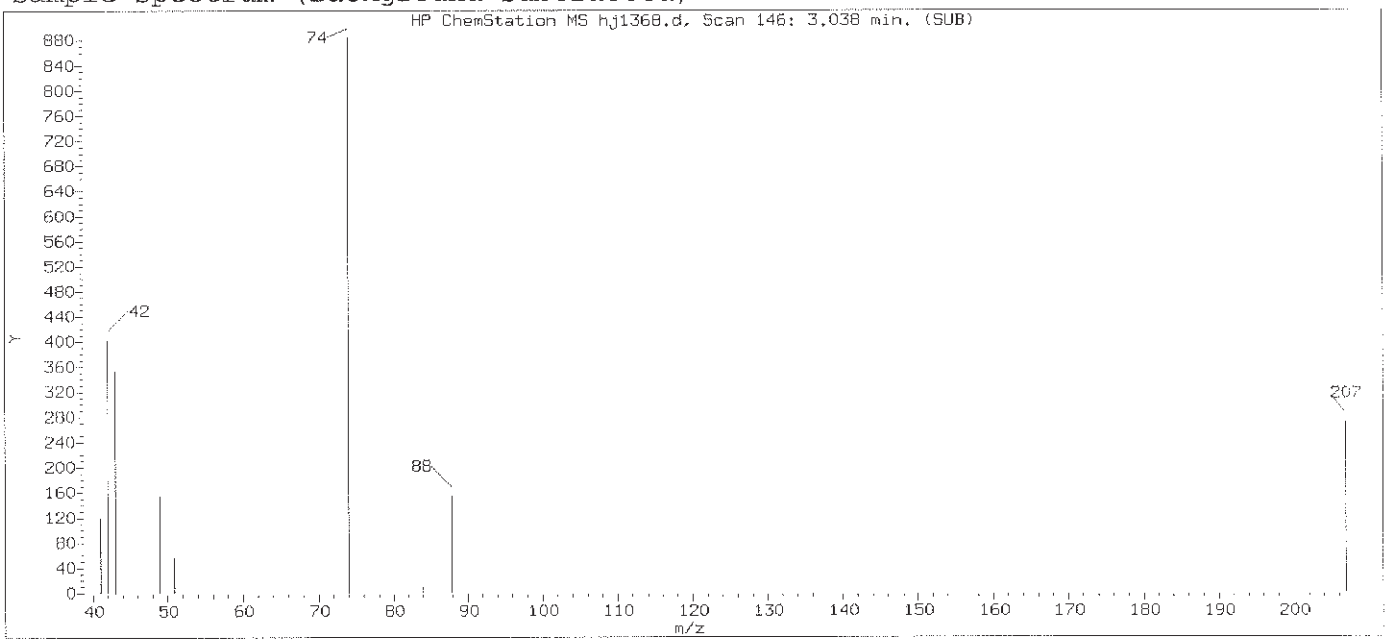
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37. Target 3.5 esignature user ID: jmg00346

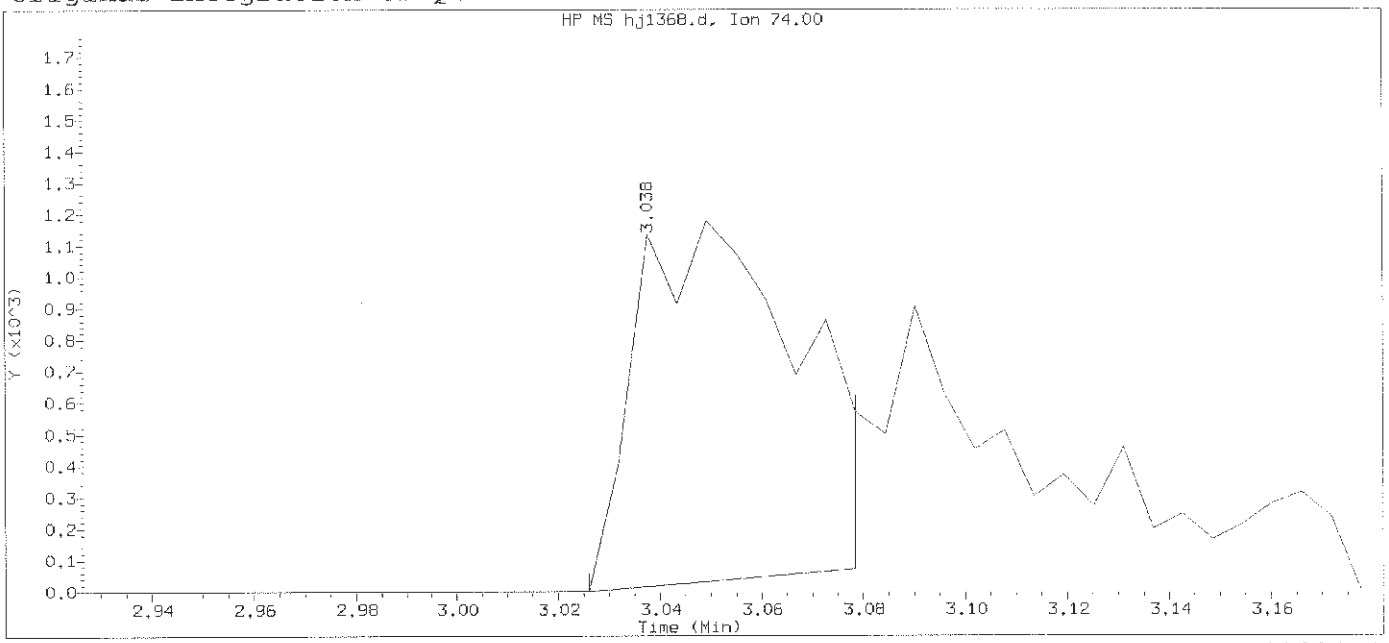
GC/MS audit/management approval: _____ OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

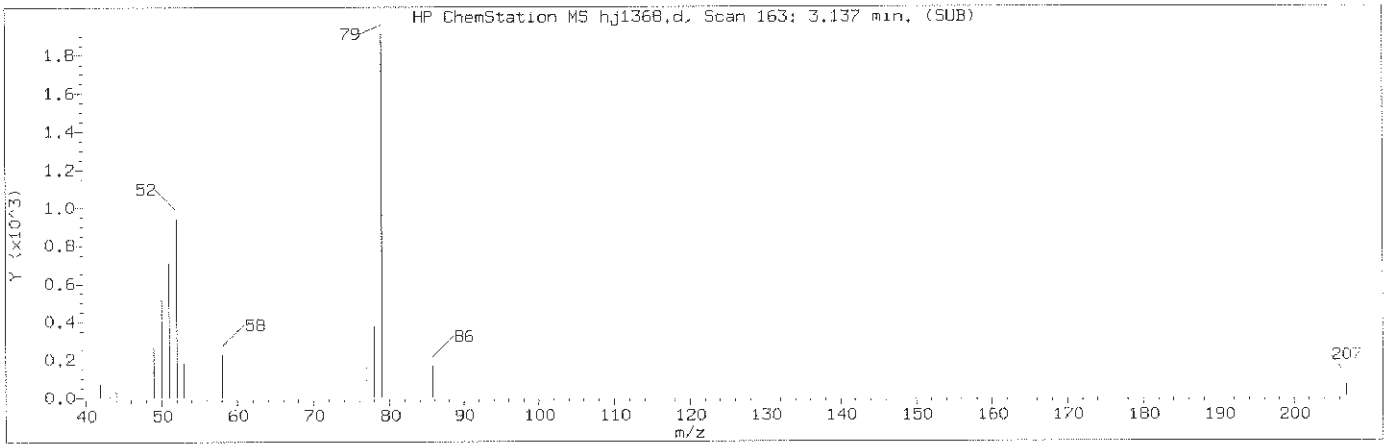
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

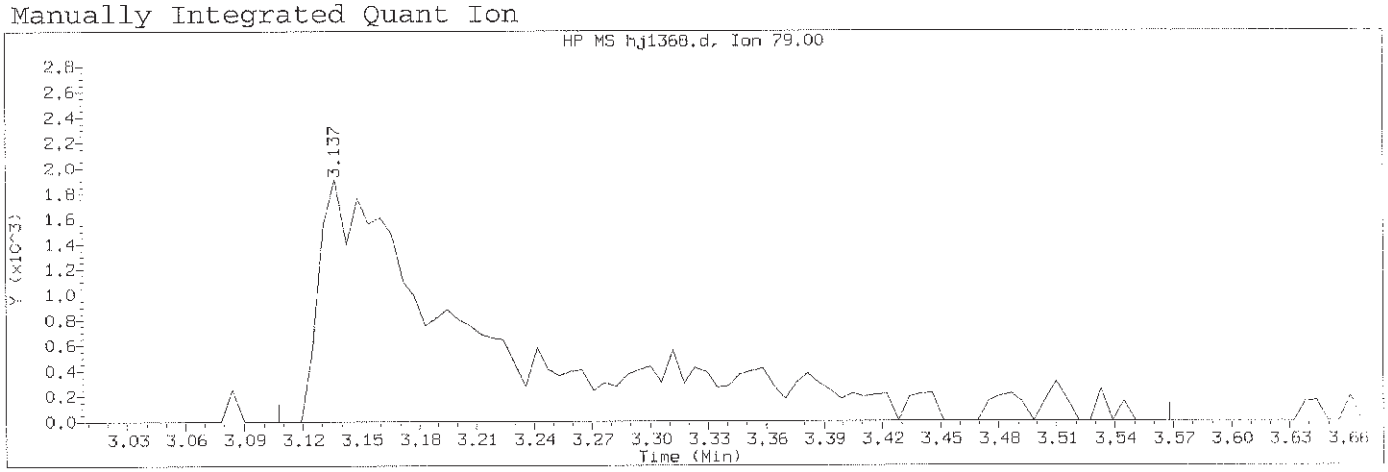
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 146		
Retention Time (minutes)	: 3.038		
Quant Ion	: 74.00		
Area	: 2497		
On-column Amount (ng/ul)	: 0.0549		
Integration start scan	: 143	Integration stop scan:	152
Y at integration start	: 0	Y at integration end:	70

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 163		
Retention Time (minutes)	: 3.137		
Quant Ion	: 79.00		
Area (flag)	: 11723M		
On-Column Amount (ng/ul)	: 0.1407		
Integration start scan	: 157	Integration stop scan:	236
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

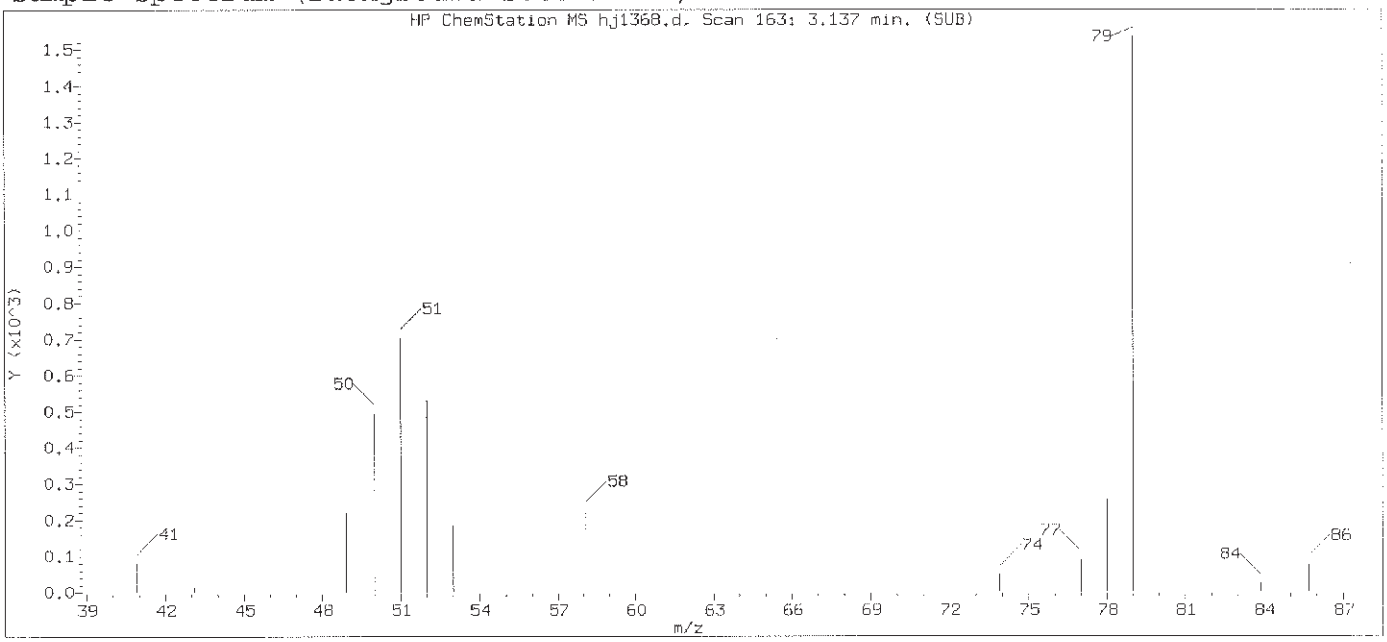
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37. Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____

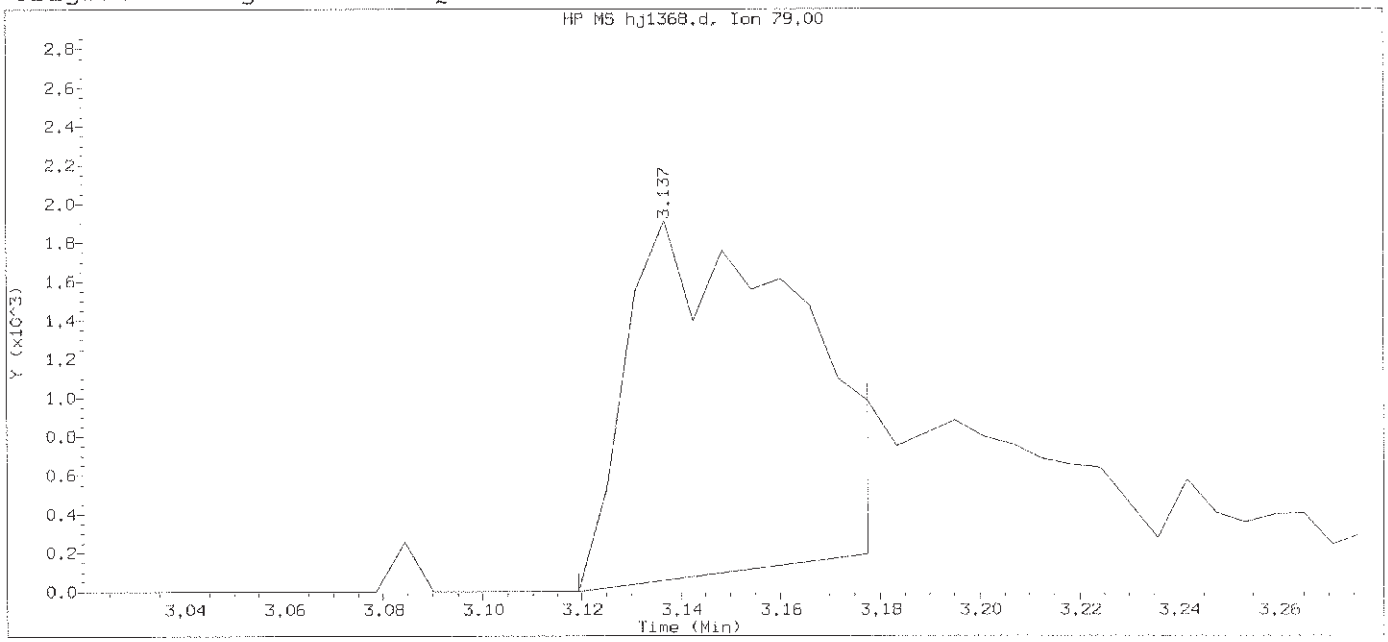
OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

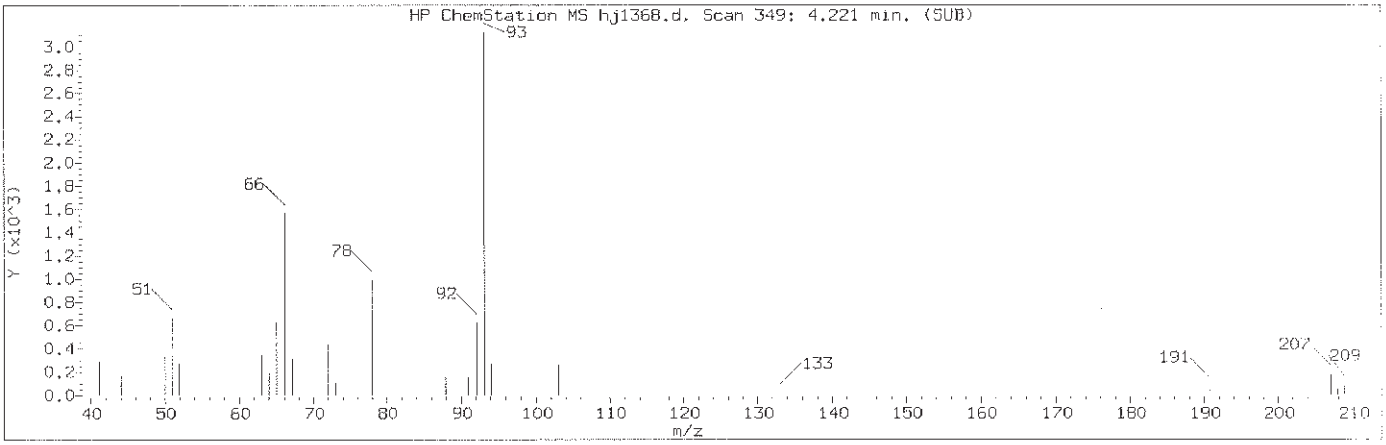
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

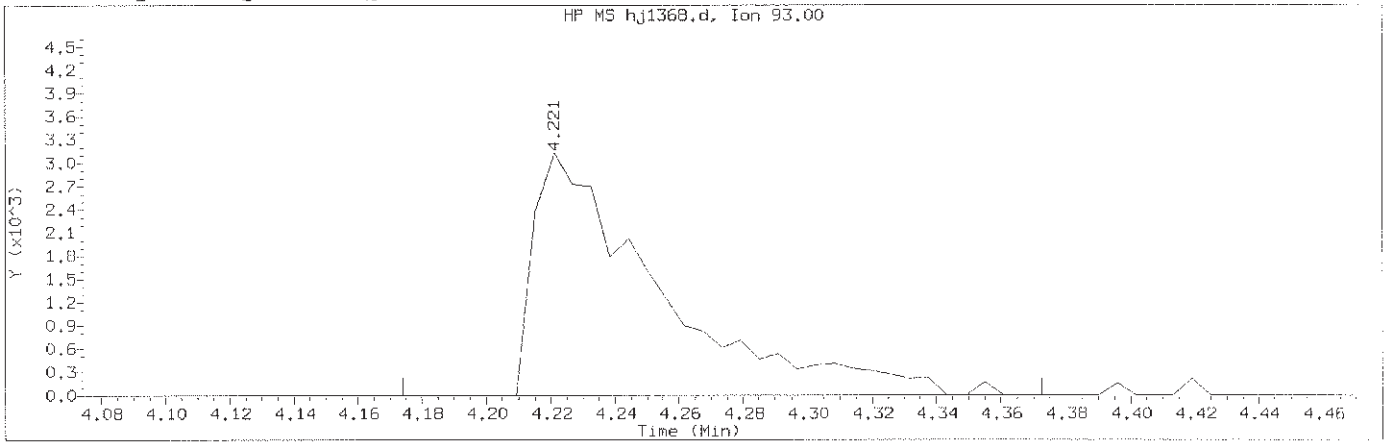
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 163		
Retention Time (minutes)	: 3.137		
Quant Ion	: 79.00		
Area	: 4348		
On-column Amount (ng/ul)	: 0.0584		
Integration start scan	: 159	Integration stop scan:	169
Y at integration start	: 0	Y at integration end:	191

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 349		
Retention Time (minutes)	: 4.221		
Quant Ion	: 93.00		
Area (flag)	: 8526M		
On-Column Amount (ng/ul)	: 0.1040		
Integration start scan	: 340	Integration stop scan:	374
Y at integration start	: 0	Y at integration end:	0

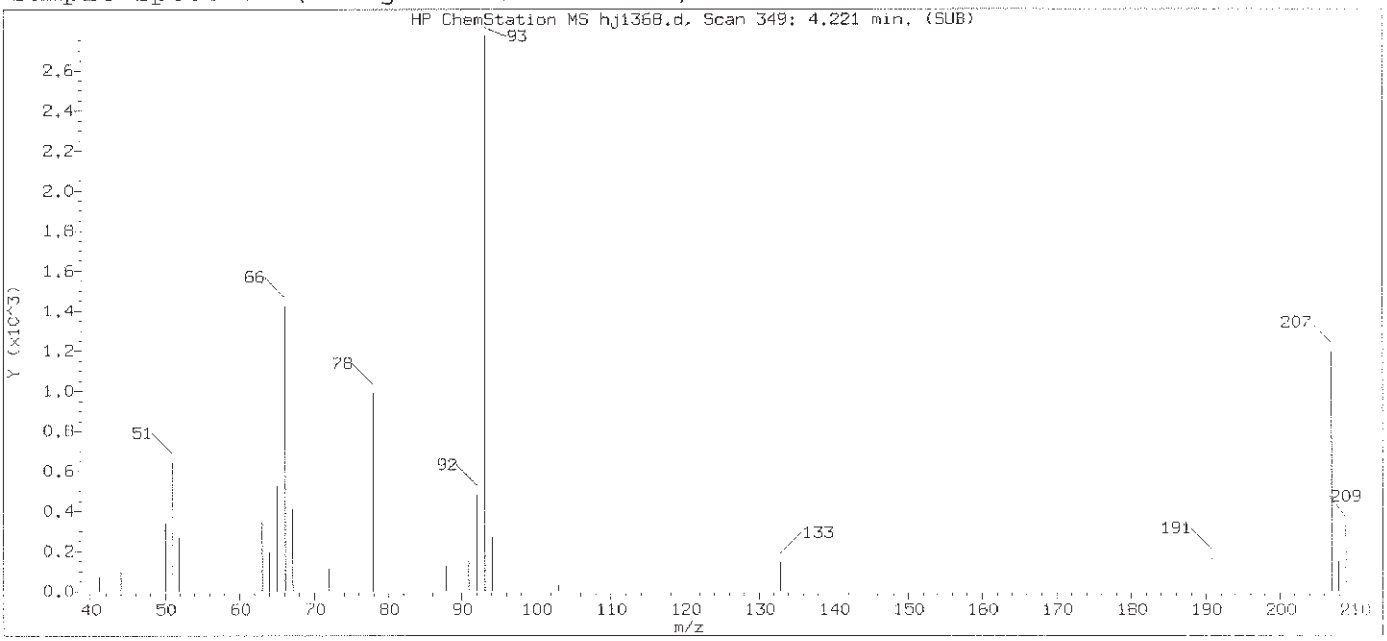
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

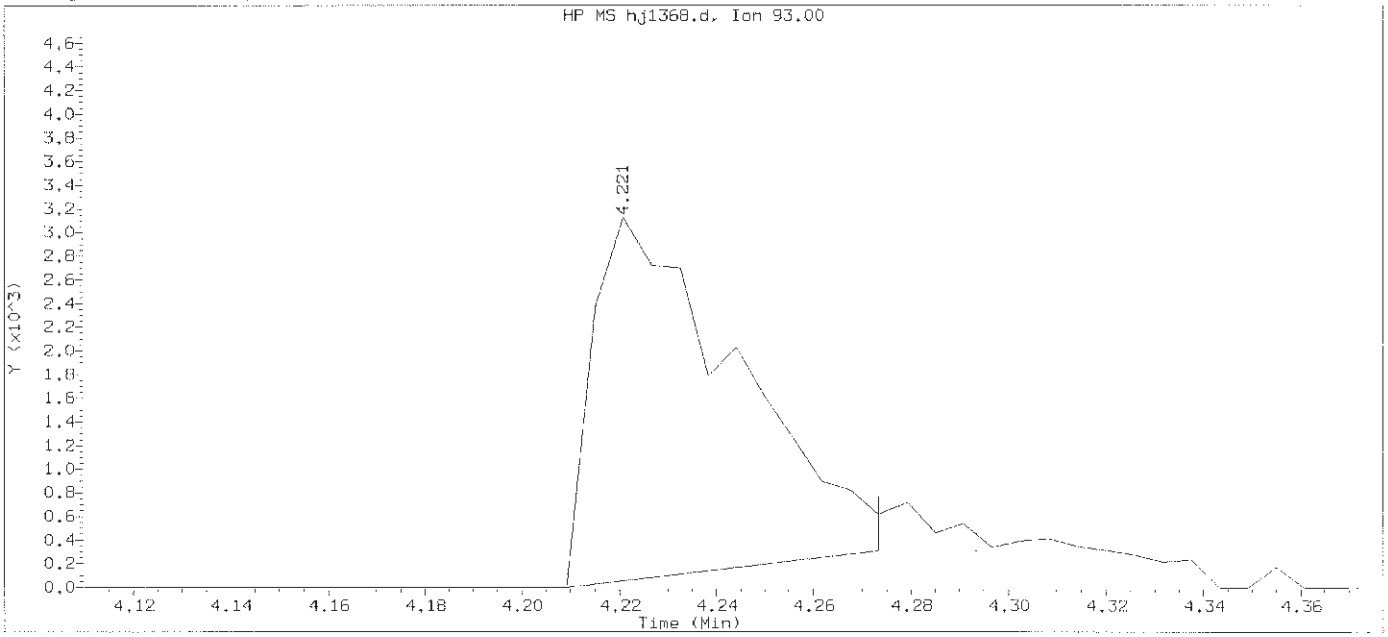
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

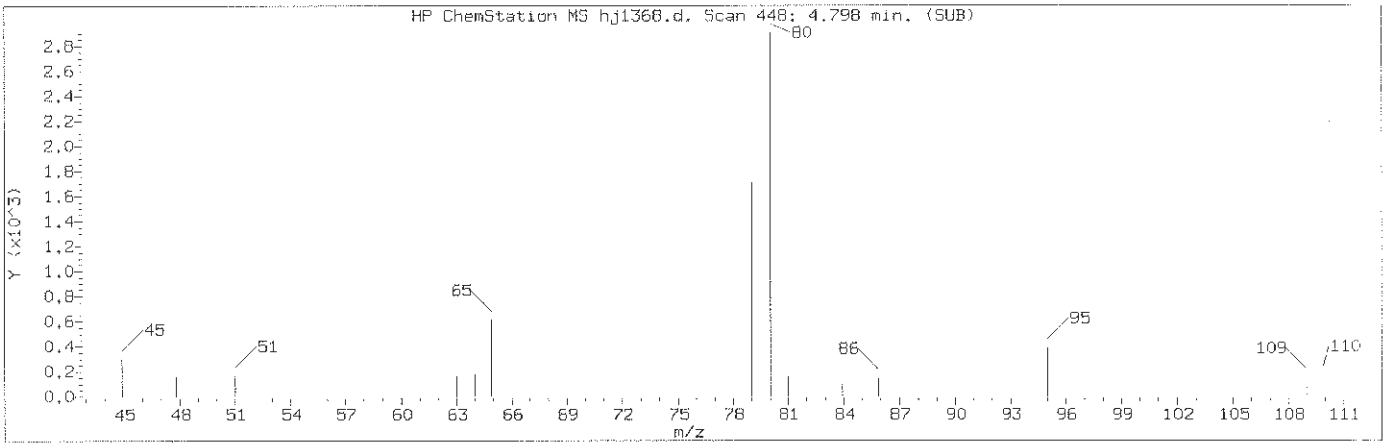
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

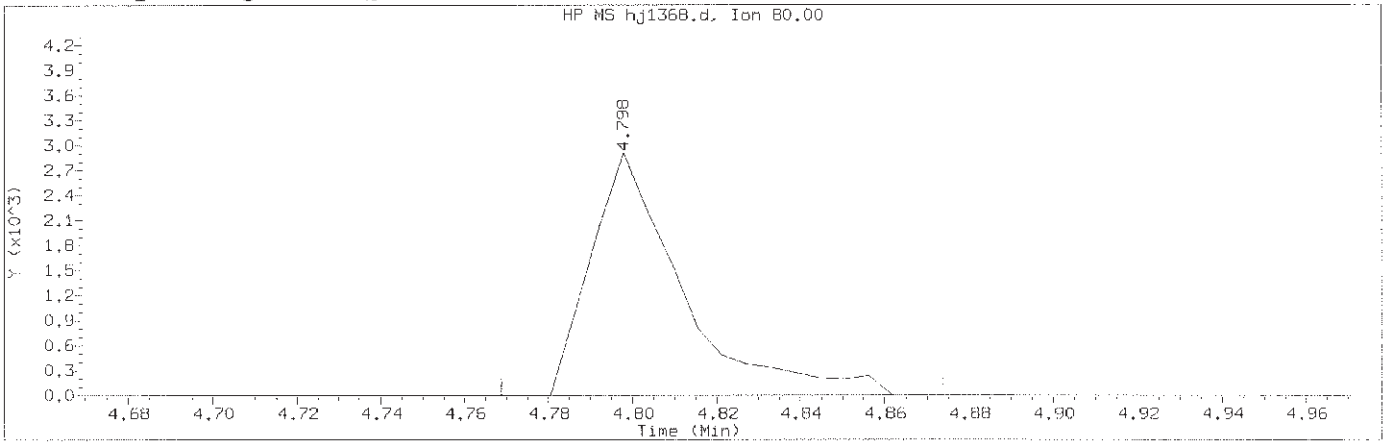
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 349		
Retention Time (minutes)	: 4.221		
Quant Ion	: 93.00		
Area	: 6283		
On-column Amount (ng/ul)	: 0.0776		
Integration start scan	: 346	Integration stop scan:	357
Y at integration start	: 0	Y at integration end:	308

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 7		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 448		
Retention Time (minutes)	: 4.798		
Quant Ion	: 80.00		
Area (flag)	: 4389M		
On-Column Amount (ng/ul)	: 0.0977		
Integration start scan	: 442	Integration stop scan:	460
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

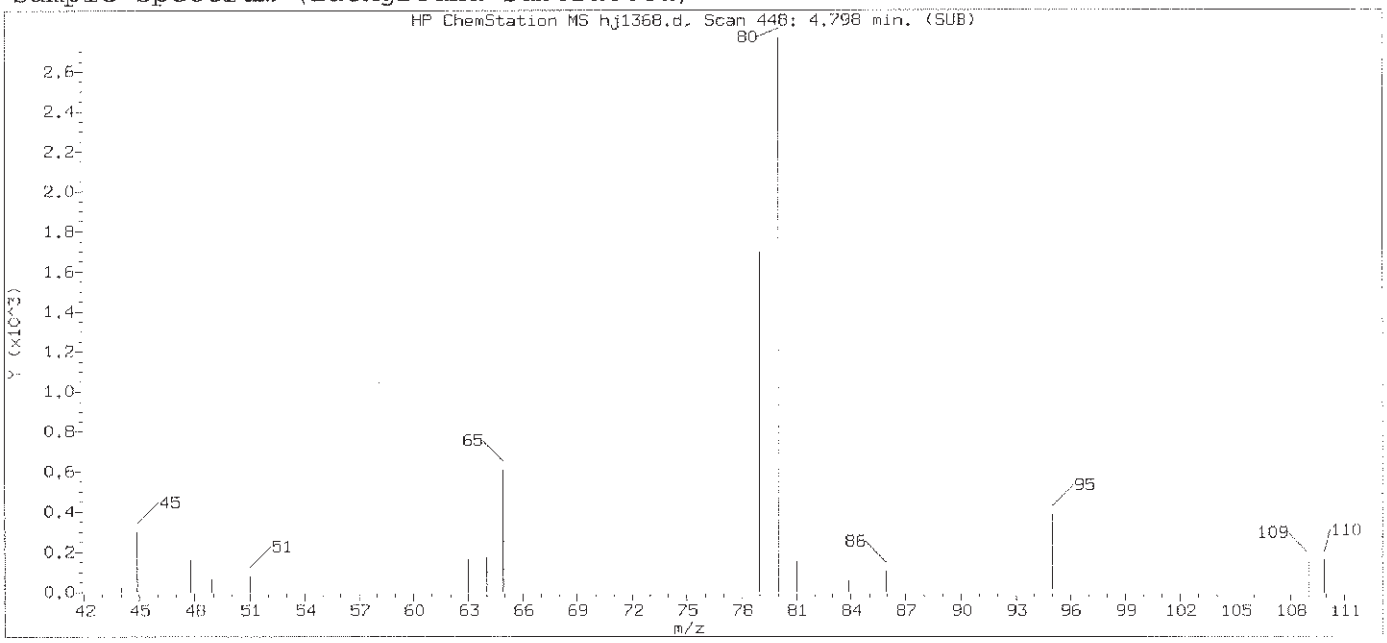
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37. Target 3.5 esignature user ID: jmg00346

GC/MS audit/management approval: _____

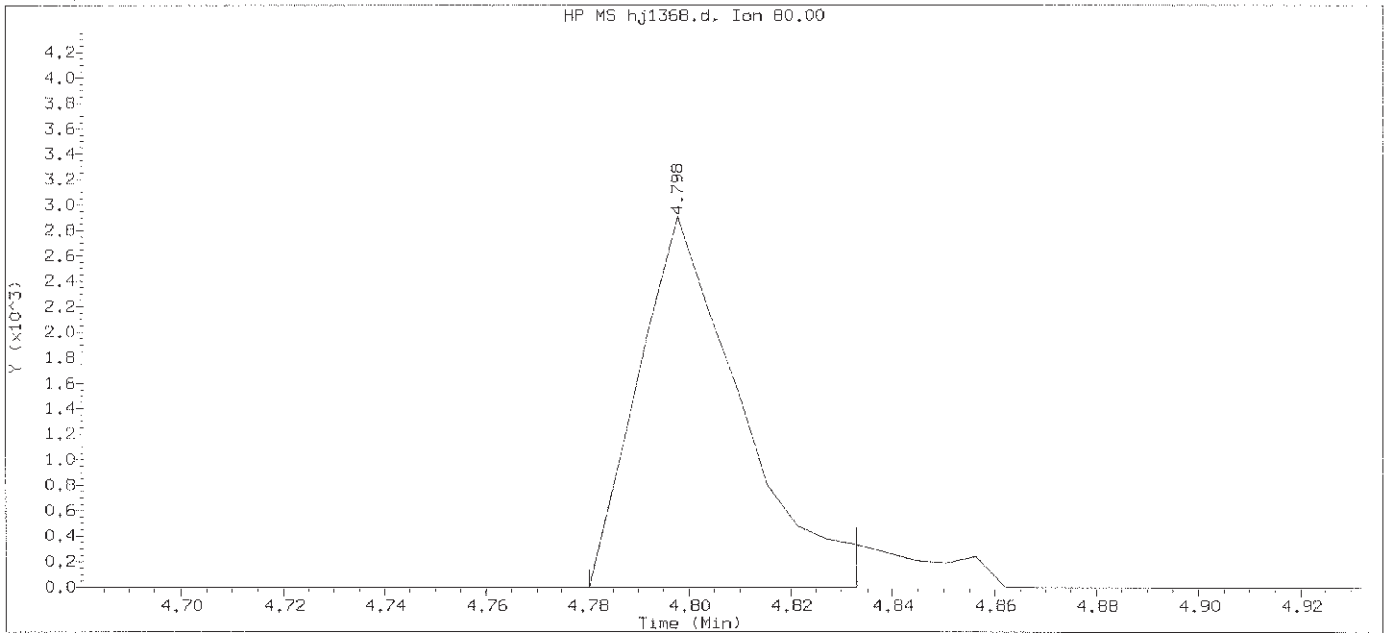
OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

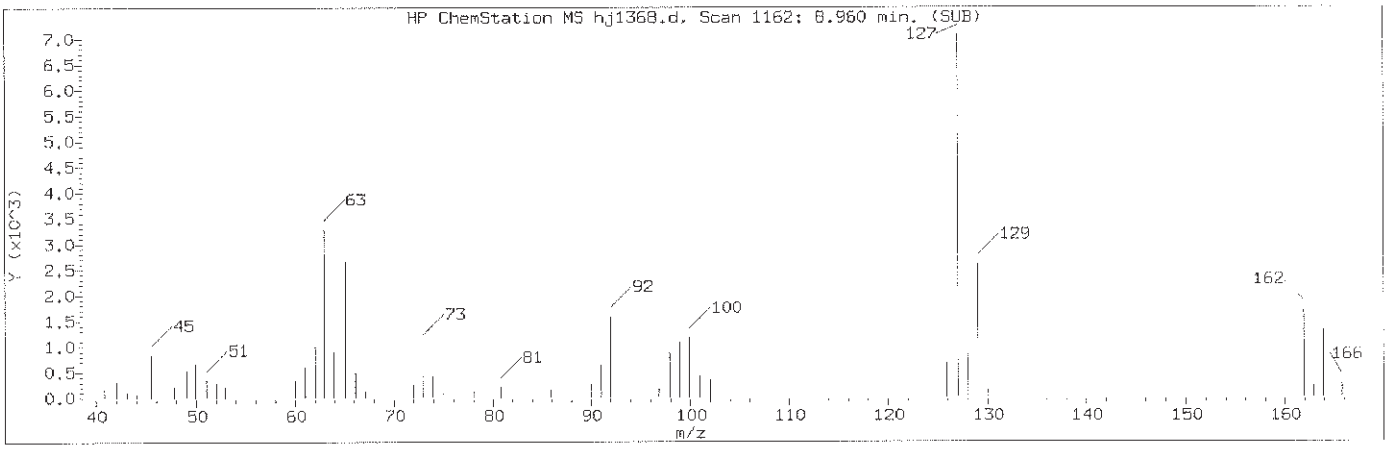
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

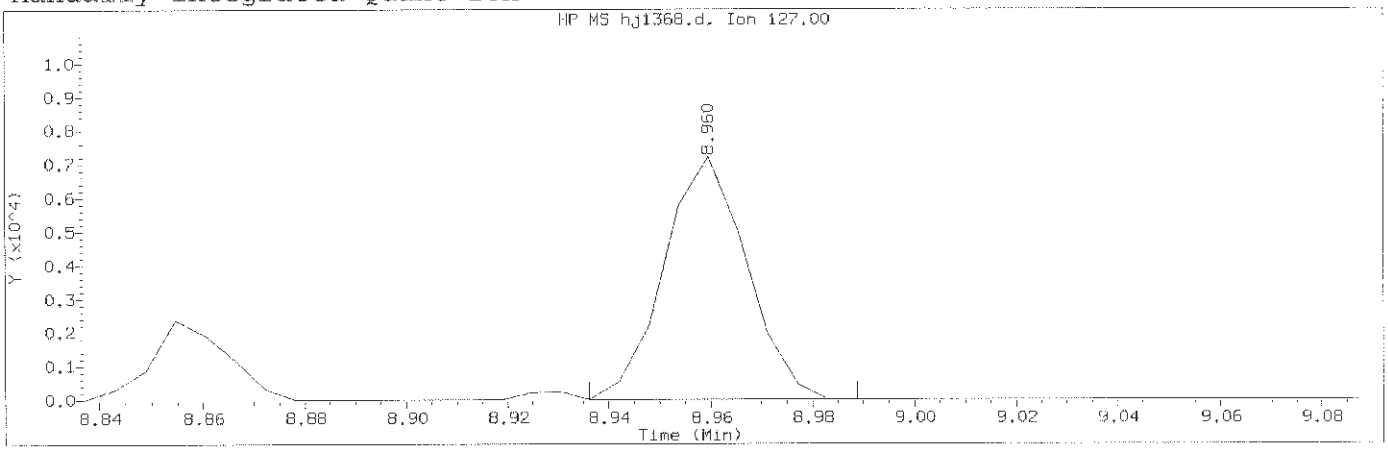
Compound Number	: 7		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 448		
Retention Time (minutes)	: 4.798		
Quant Ion	: 80.00		
Area	: 4011		
On-column Amount (ng/ul)	: 0.0893		
Integration start scan	: 444	Integration stop scan:	453
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 50		
Compound Name	: 4-Chloroaniline		
Scan Number	: 1162		
Retention Time (minutes)	: 8.960		
Quant Ion	: 127.00		
Area (flag)	: 8062M		
On-Column Amount (ng/ul)	: 0.1062		
Integration start scan	: 1157	Integration stop scan:	1166
Y at integration start	: 0	Y at integration end:	0

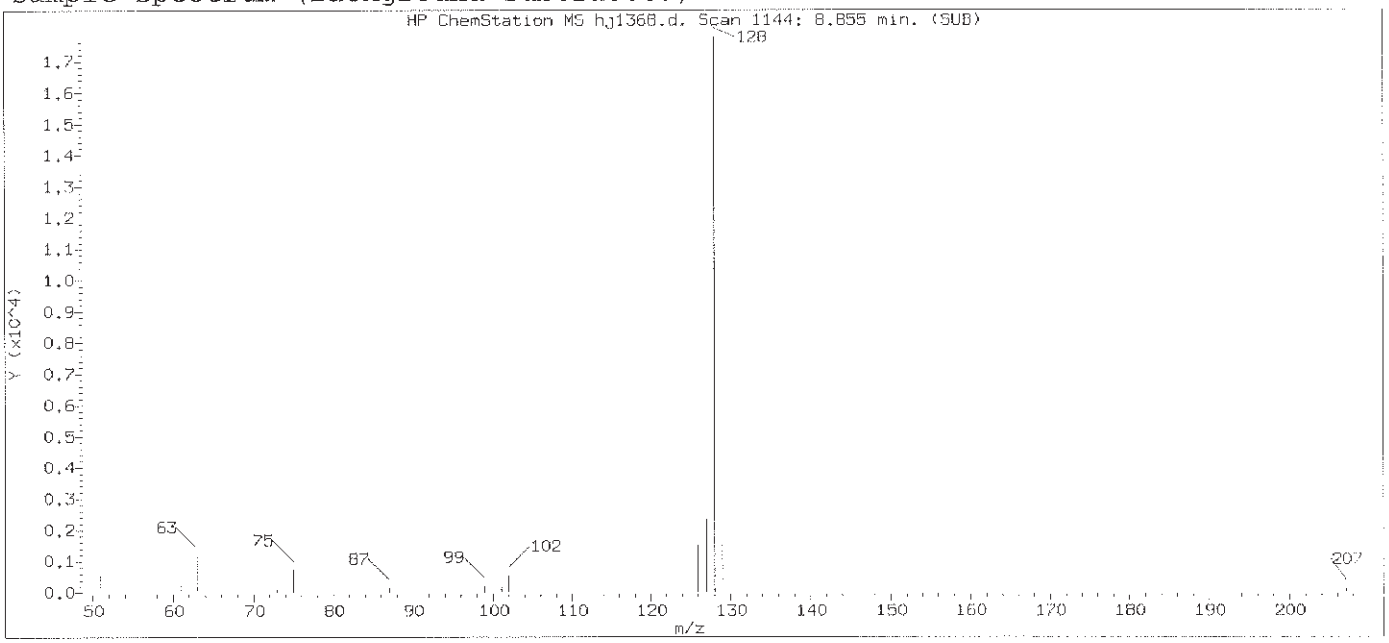
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

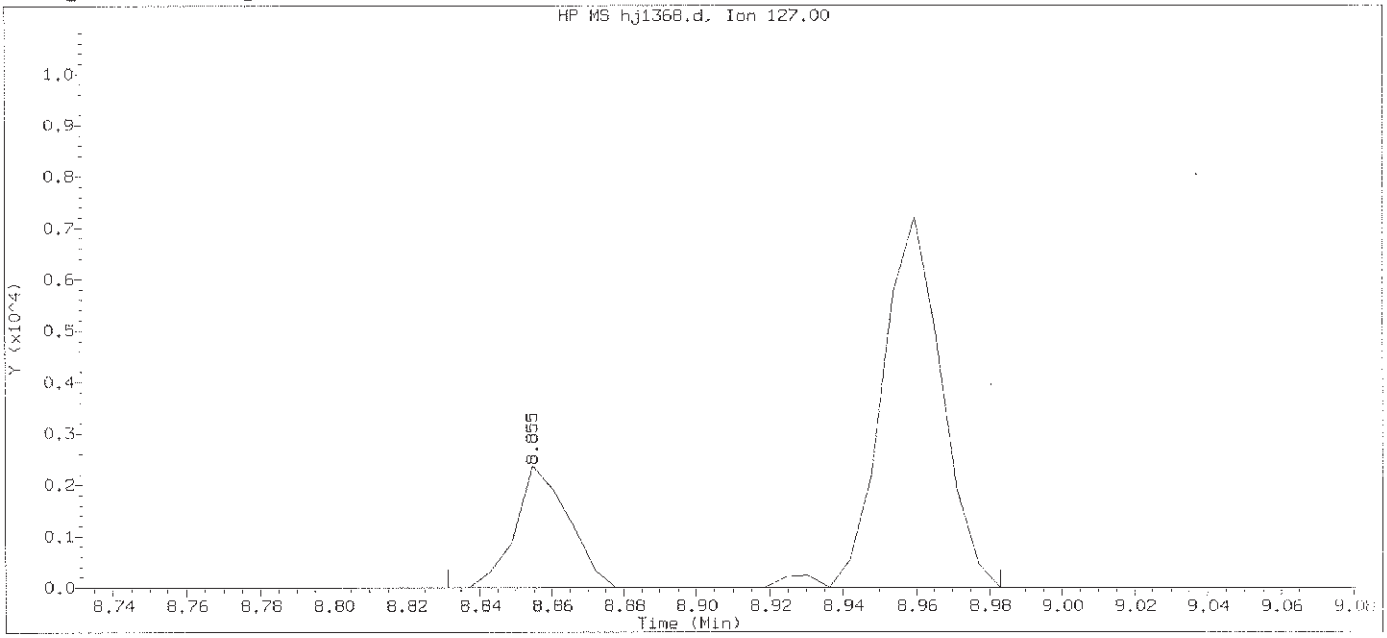
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

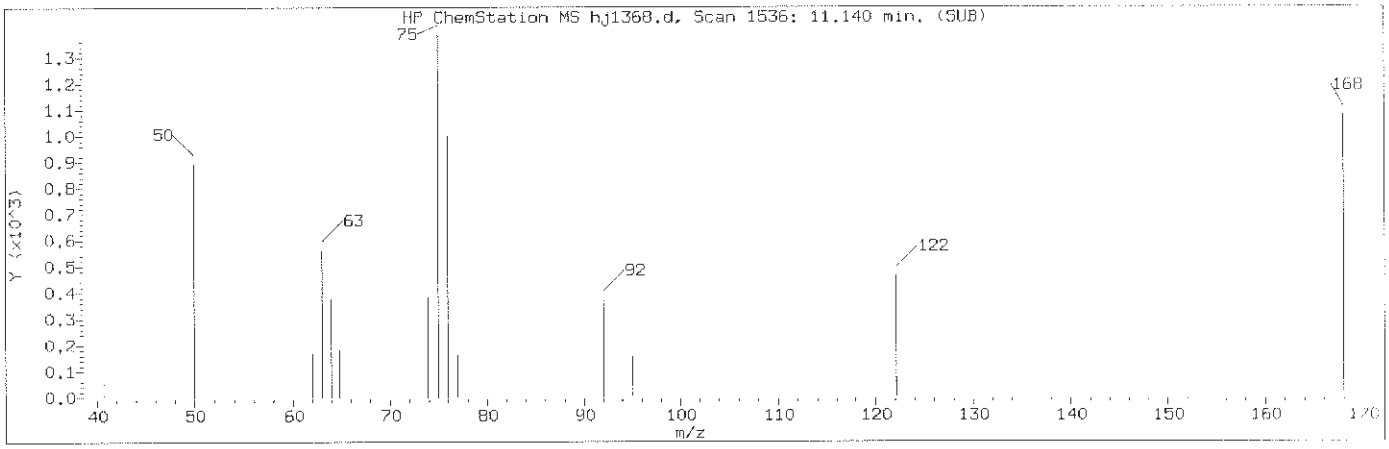
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

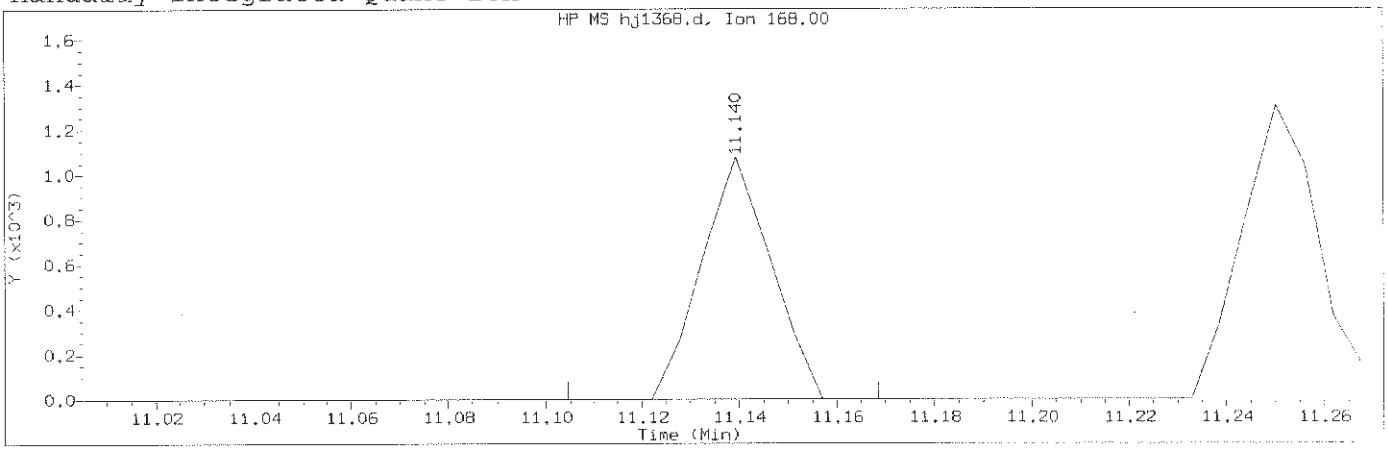
Compound Number	: 50		
Compound Name	: 4-Chloroaniline		
Scan Number	: 1144		
Retention Time (minutes)	: 8.855		
Quant Ion	: 127.00		
Area	: 10643		
On-column Amount (ng/ul)	: 0.1402		
Integration start scan	: 1139	Integration stop scan:	1165
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1536		
Retention Time (minutes)	: 11.140		
Quant Ion	: 168.00		
Area (flag)	: 1065M		
On-Column Amount (ng/ul)	: 0.0546		
Integration start scan	: 1529	Integration stop scan:	1540
Y at integration start	: 0	Y at integration end:	0

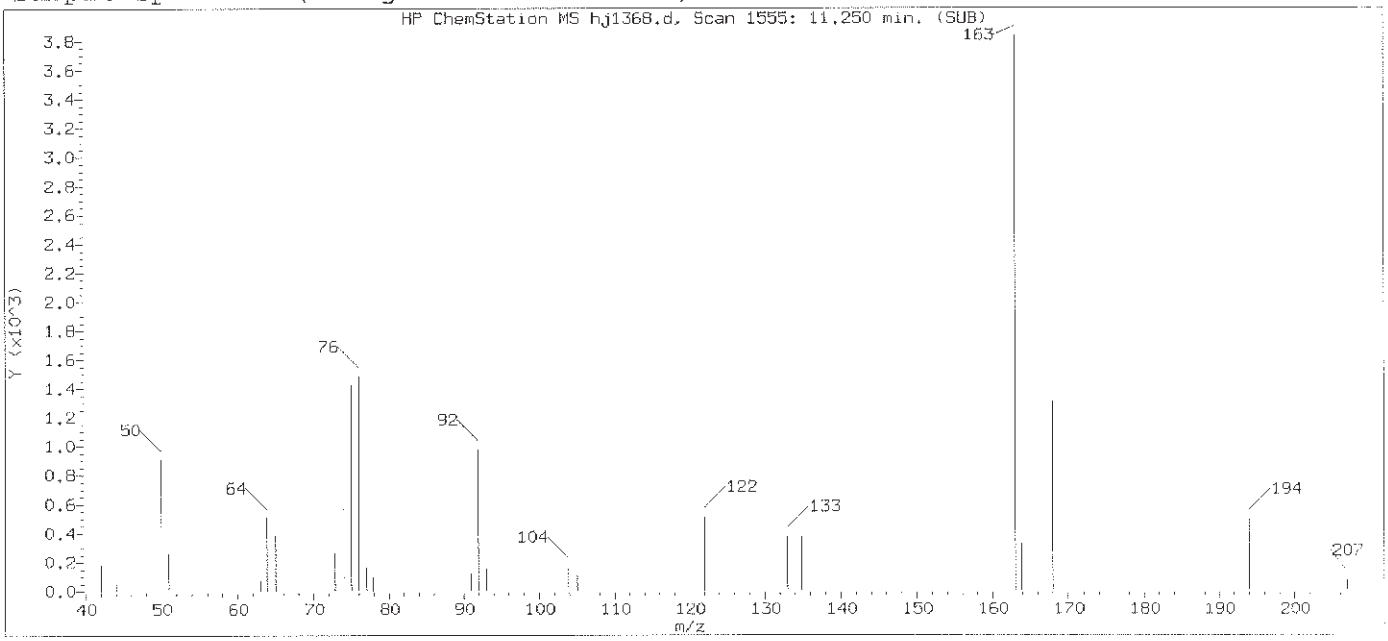
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

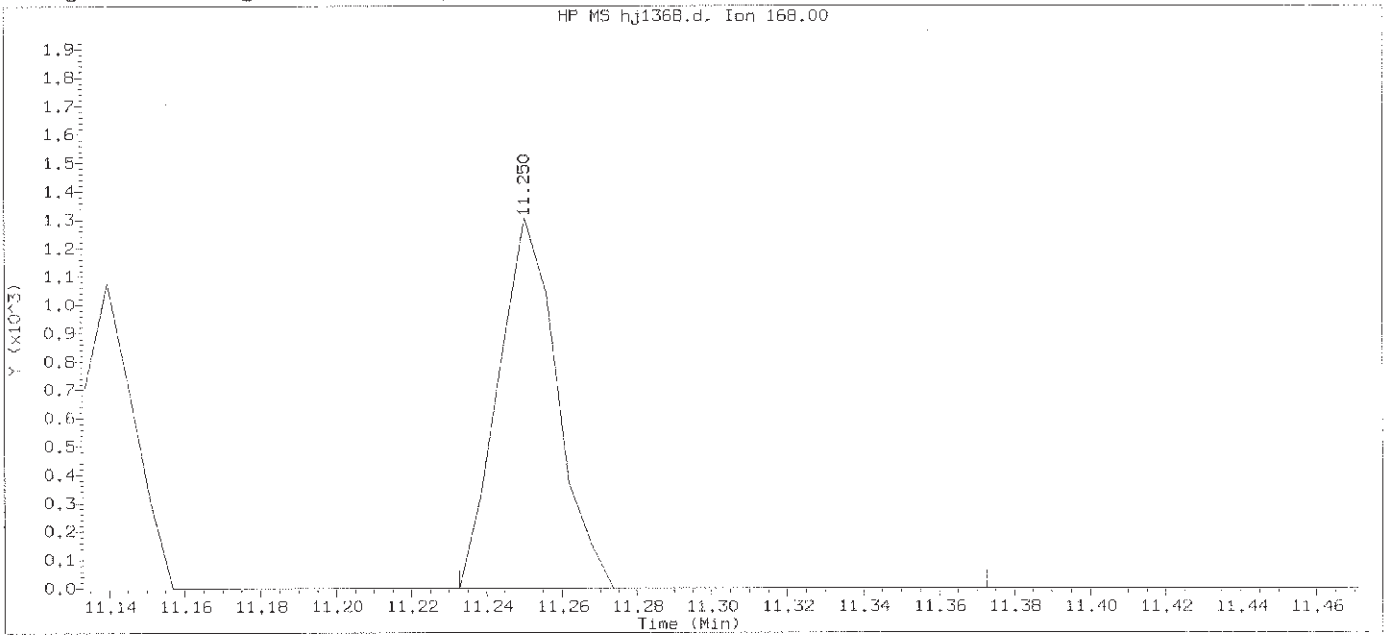
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

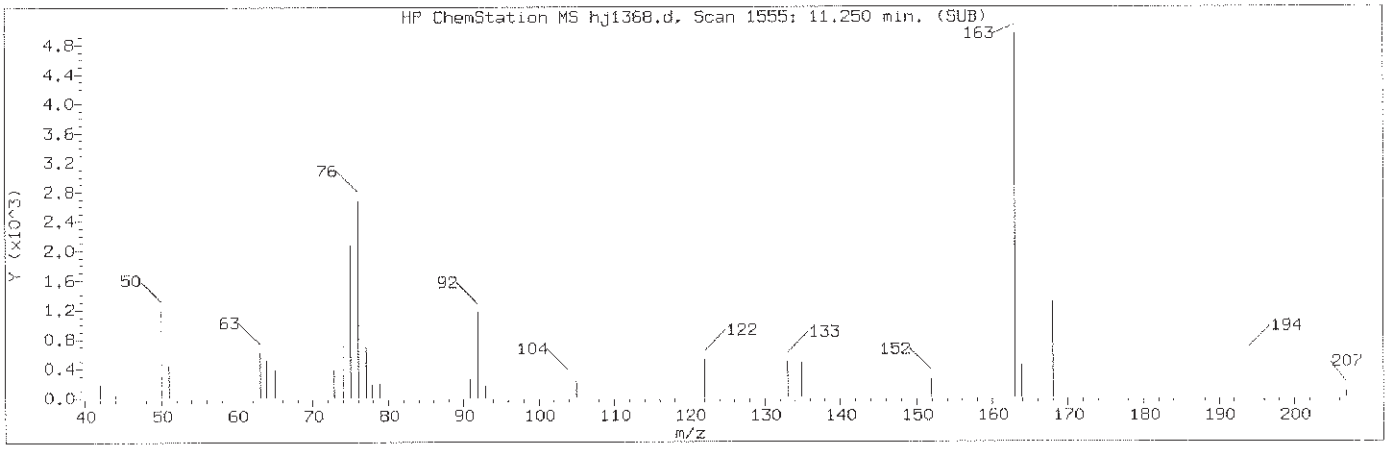
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

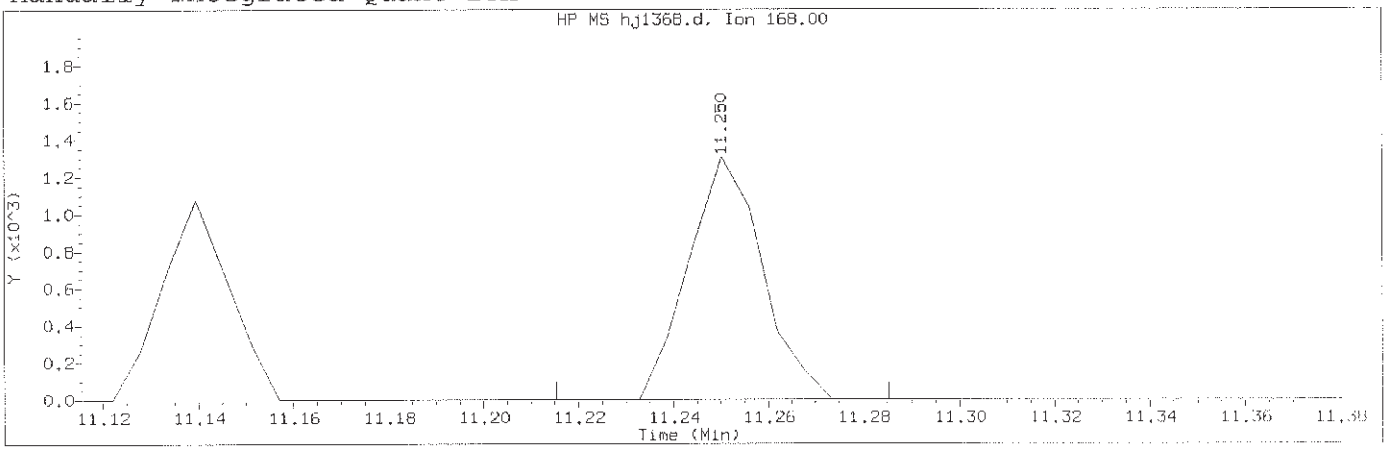
Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1555		
Retention Time (minutes)	: 11.250		
Quant Ion	: 168.00		
Area	: 1413		
On-column Amount (ng/ul)	: 0.0725		
Integration start scan	: 1551	Integration stop scan:	1575
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 79		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1555		
Retention Time (minutes)	: 11.250		
Quant Ion	: 168.00		
Area (flag)	: 1413M		
On-Column Amount (ng/ul)	: 0.0605		
Integration start scan	: 1548	Integration stop scan:	1560
Y at integration start	: 0	Y at integration end:	0

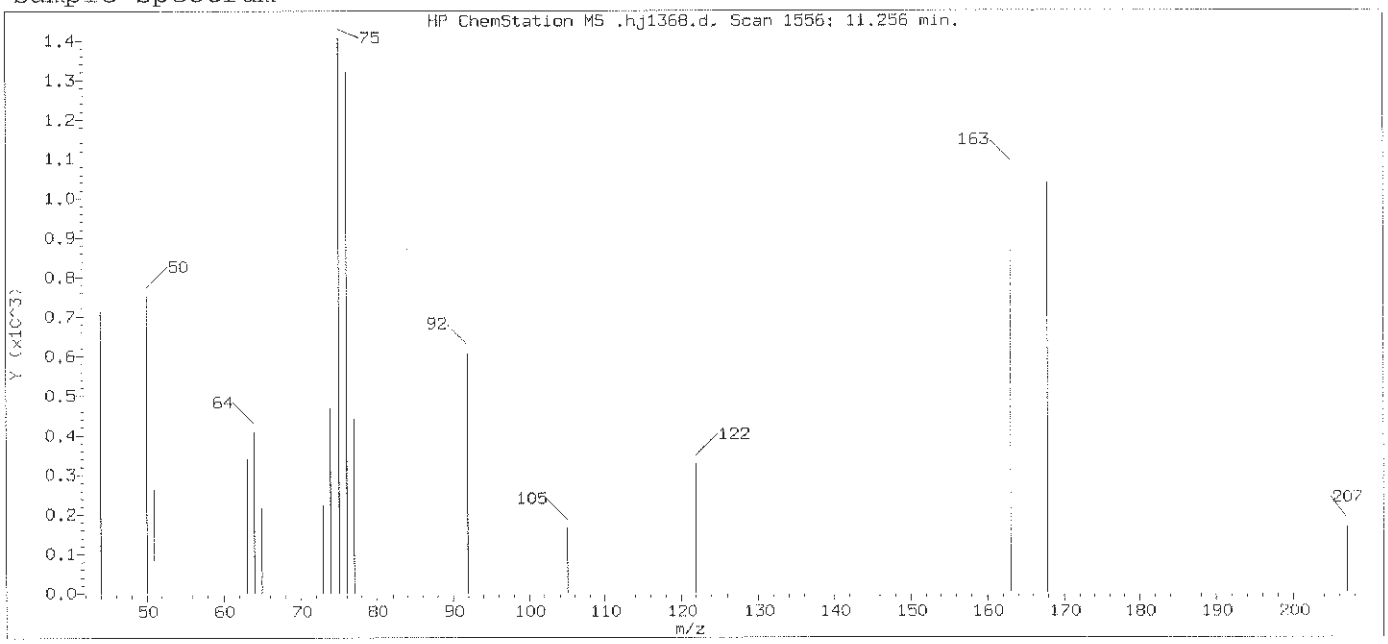
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

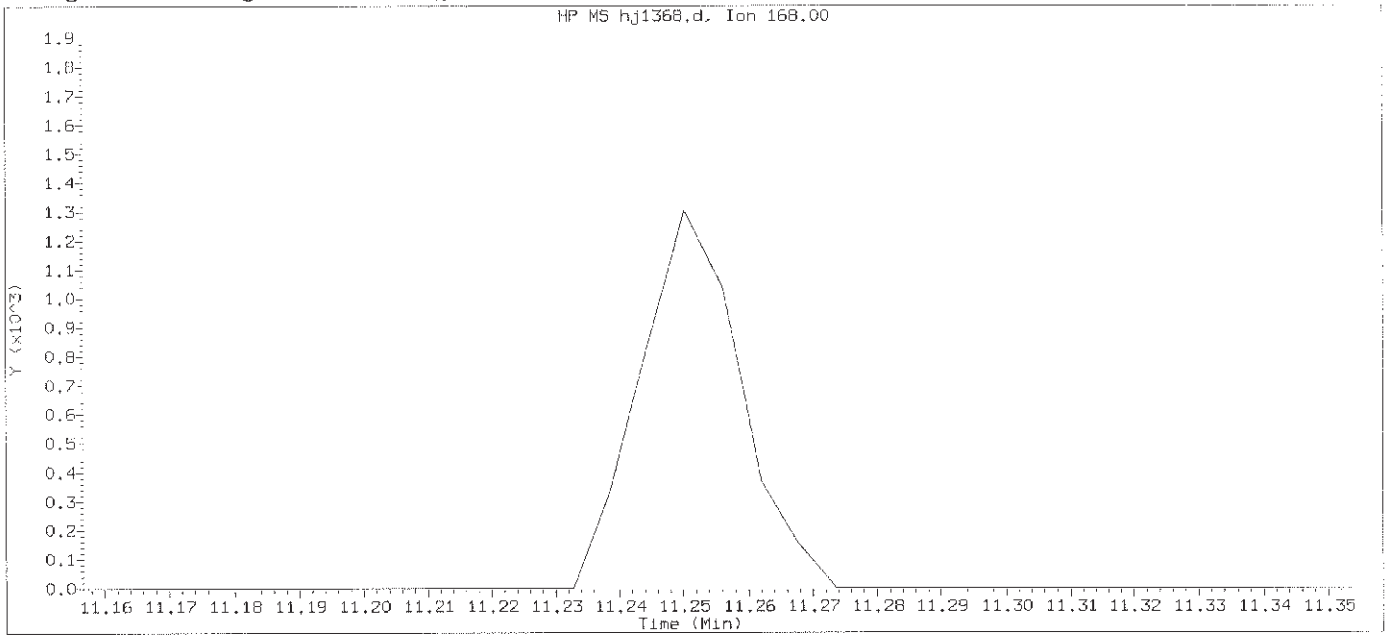
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Major Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

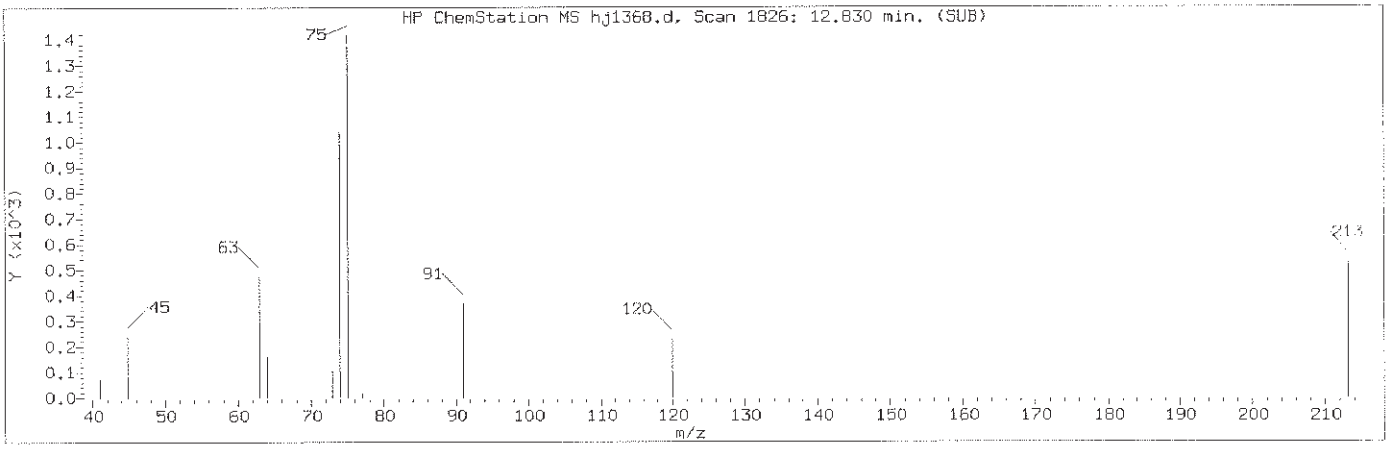
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

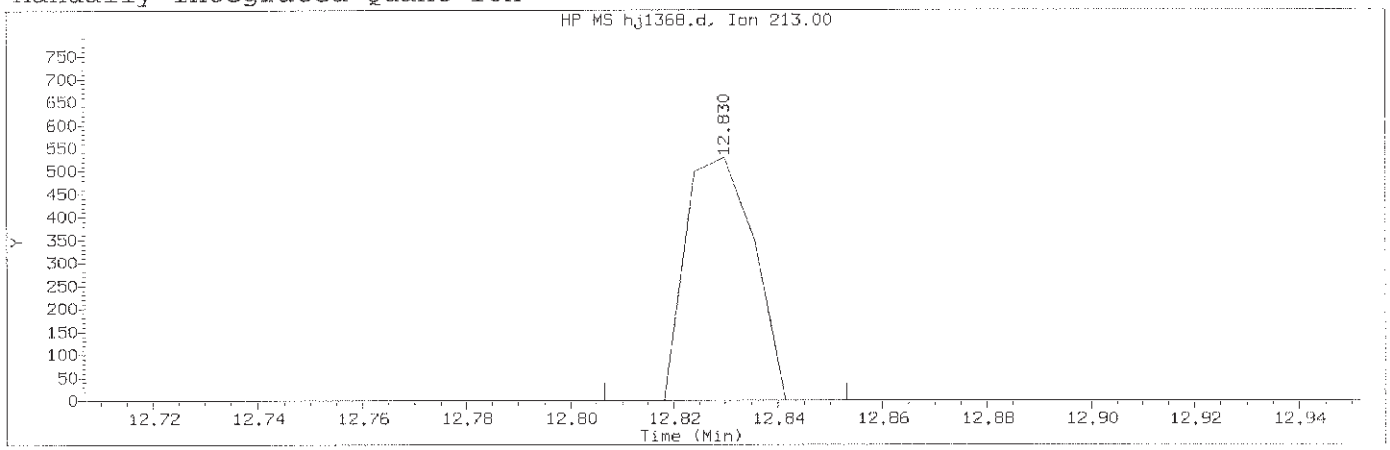
Compound Number : 79
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.256
Quant Ion : 168.00

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 106		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1826		
Retention Time (minutes)	: 12.830		
Quant Ion	: 213.00		
Area (flag)	: 480M		
On-Column Amount (ng/ul)	: 0.0280		
Integration start scan	: 1821	Integration stop scan:	1829
Y at integration start	: 0	Y at integration end:	0

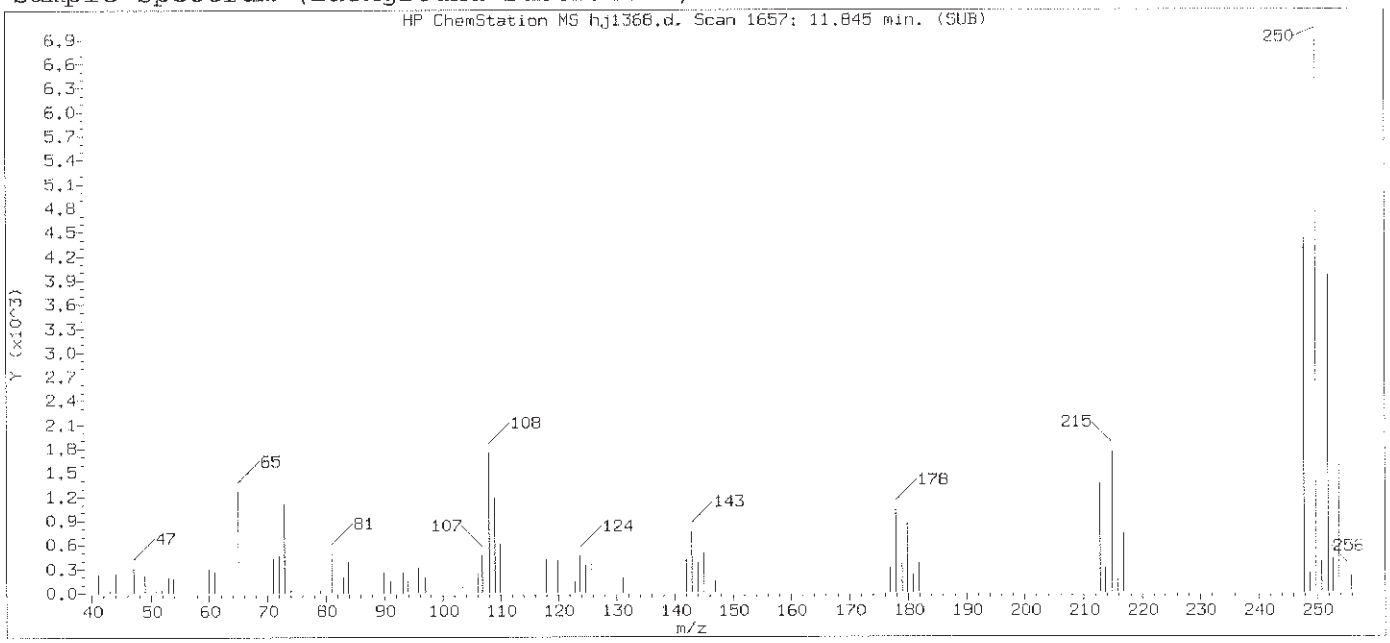
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

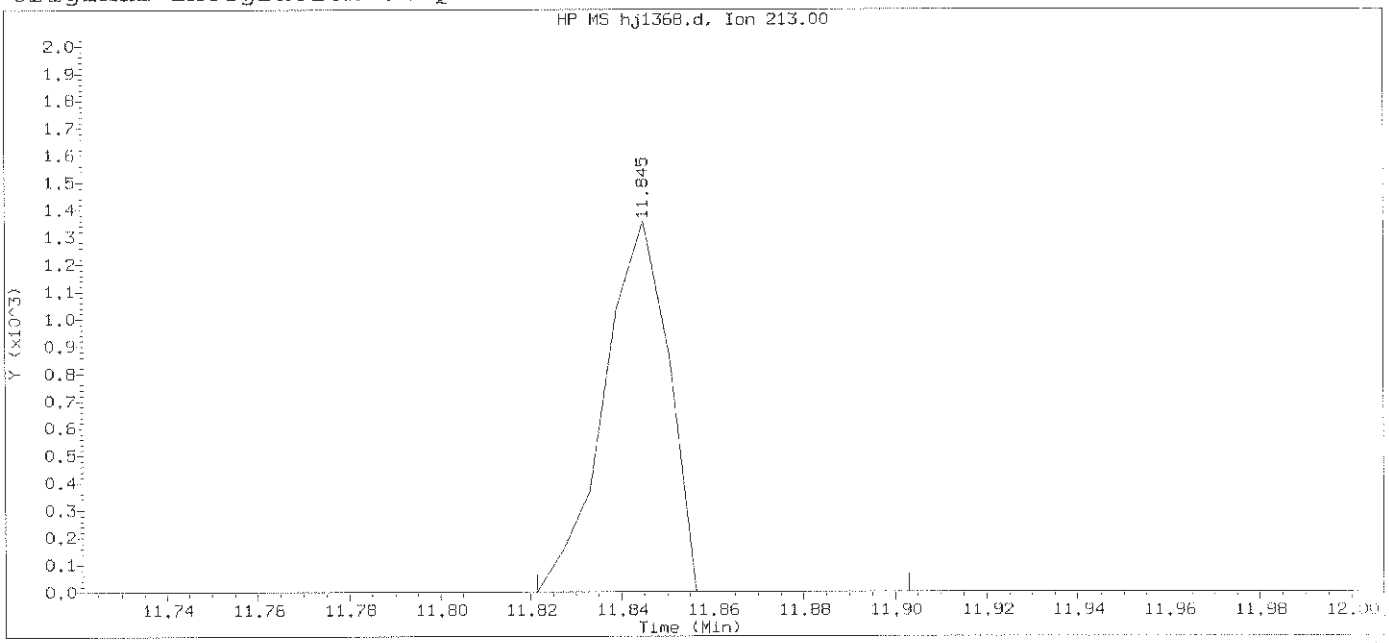
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

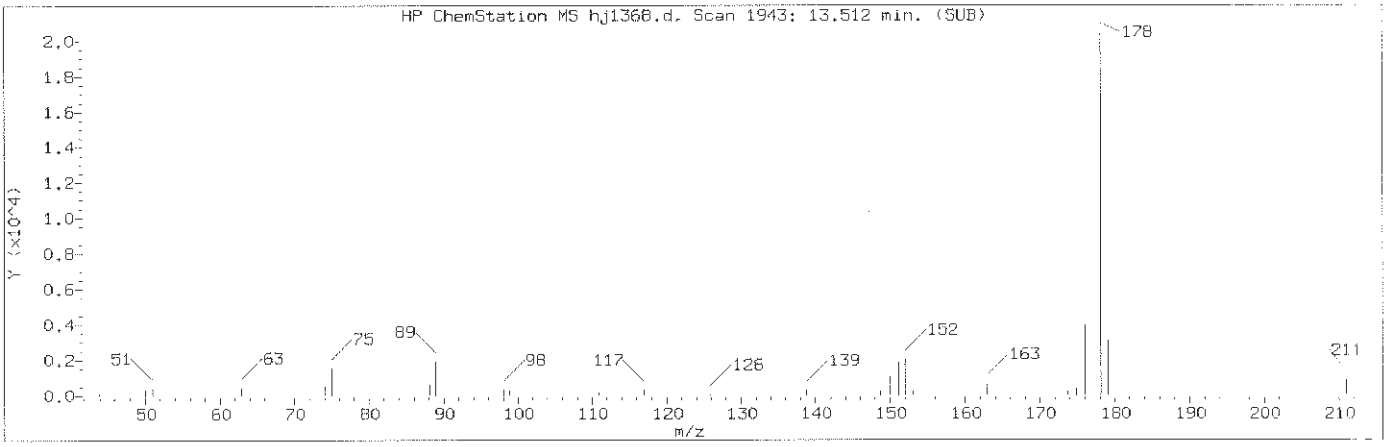
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

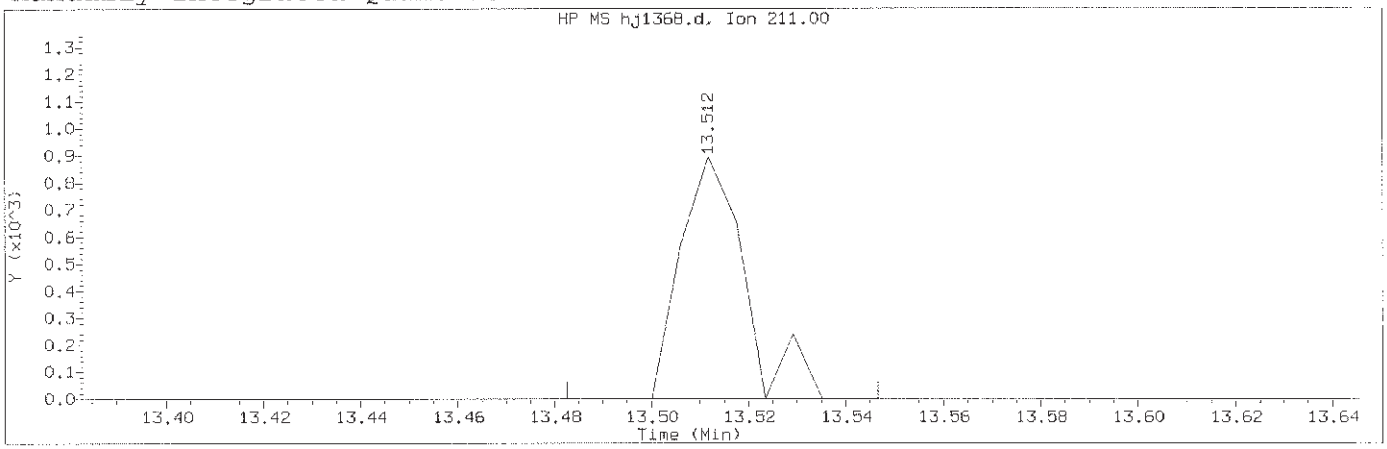
Compound Number	: 106		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1657		
Retention Time (minutes)	: 11.845		
Quant Ion	: 213.00		
Area	: 1317		
On-column Amount (ng/ul)	: 0.0768		
Integration start scan	: 1652	Integration stop scan:	1666
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 119		
Compound Name	: Dinoseb		
Scan Number	: 1943		
Retention Time (minutes)	: 13.512		
Quant Ion	: 211.00		
Area (flag)	: 824M		
On-Column Amount (ng/ul)	: 0.0257		
Integration start scan	: 1937	Integration stop scan:	1948
Y at integration start	: 0	Y at integration end:	0

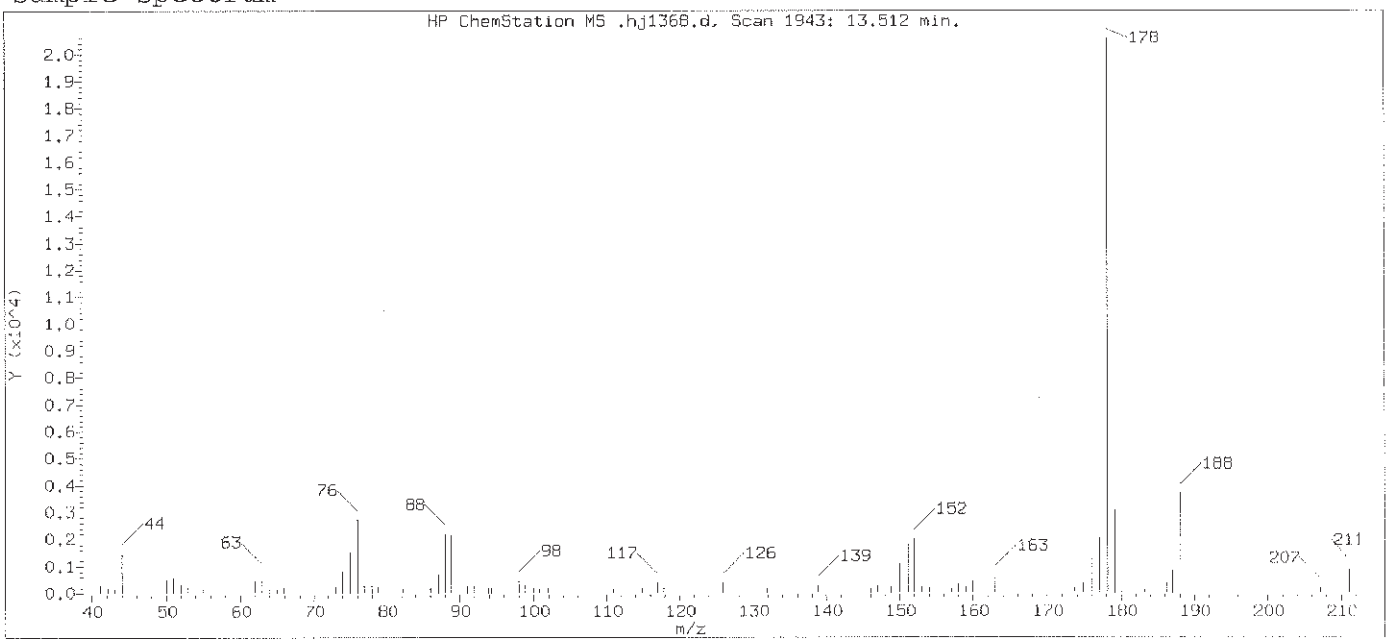
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

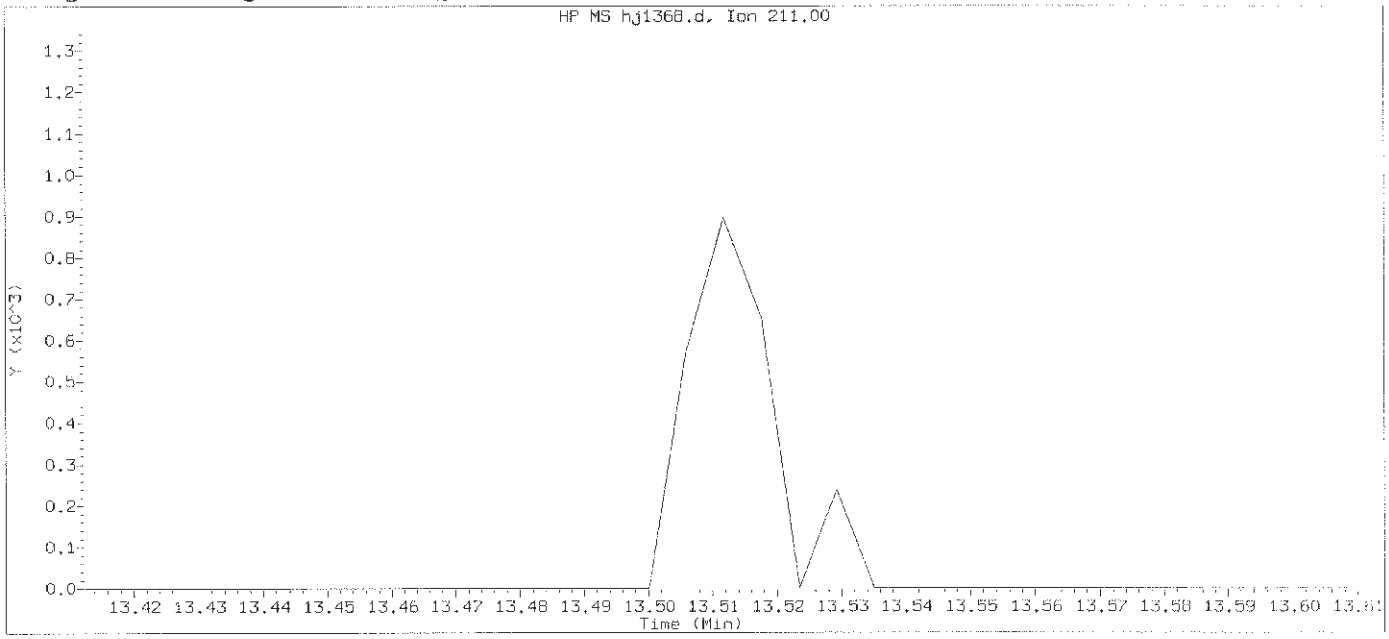
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

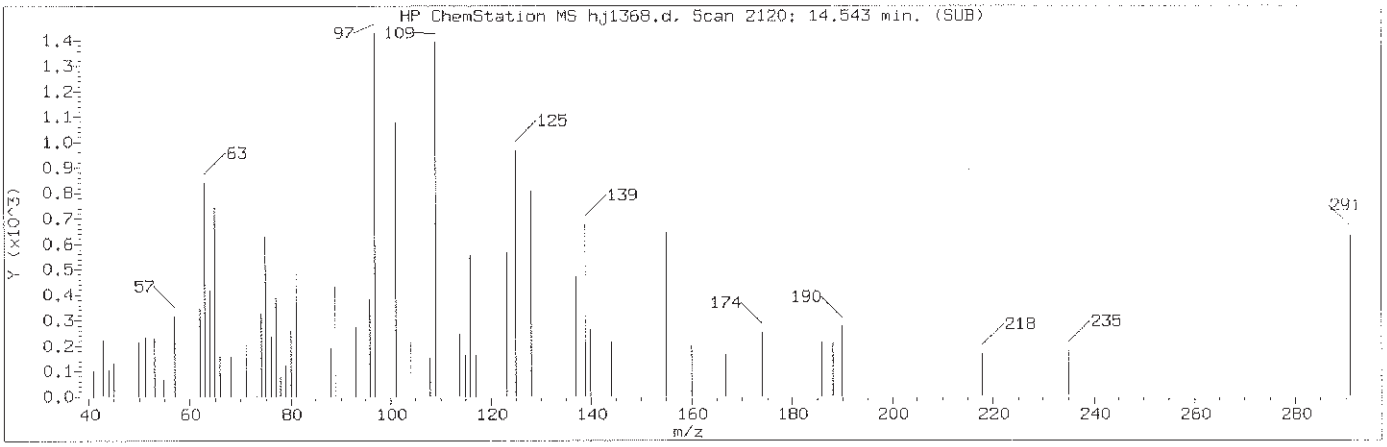
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

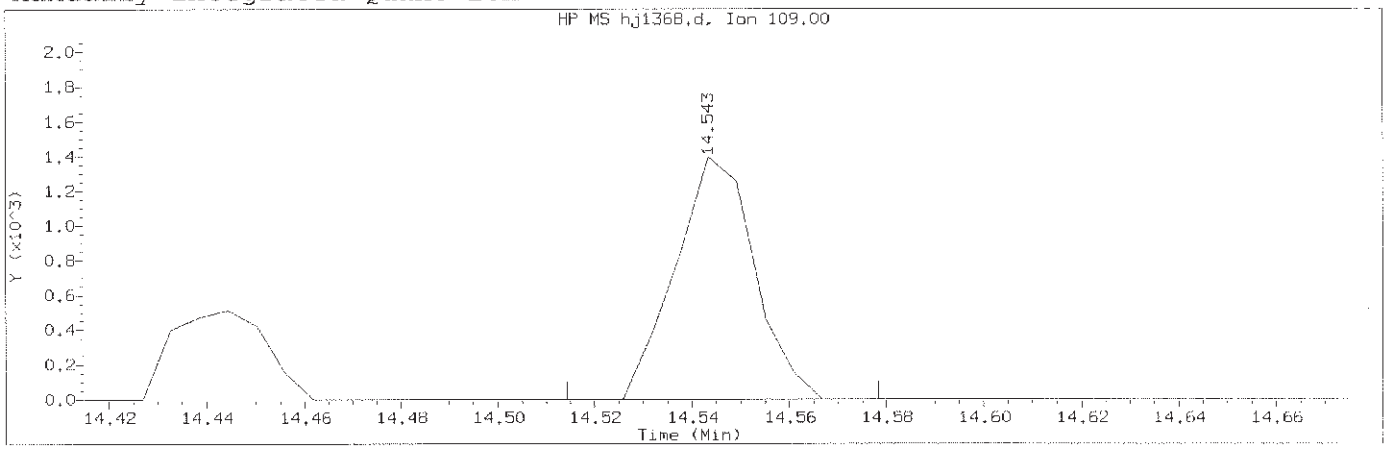
Compound Number : 119
Compound Name : Dinoseb
Expected RT (minutes) : 13.512
Quant Ion : 211.00

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 127		
Compound Name	: Parathion		
Scan Number	: 2120		
Retention Time (minutes)	: 14.543		
Quant Ion	: 109.00		
Area (flag)	: 1563M		
On-Column Amount (ng/ul)	: 0.0506		
Integration start scan	: 2114	Integration stop scan:	2125
Y at integration start	: 0	Y at integration end:	0

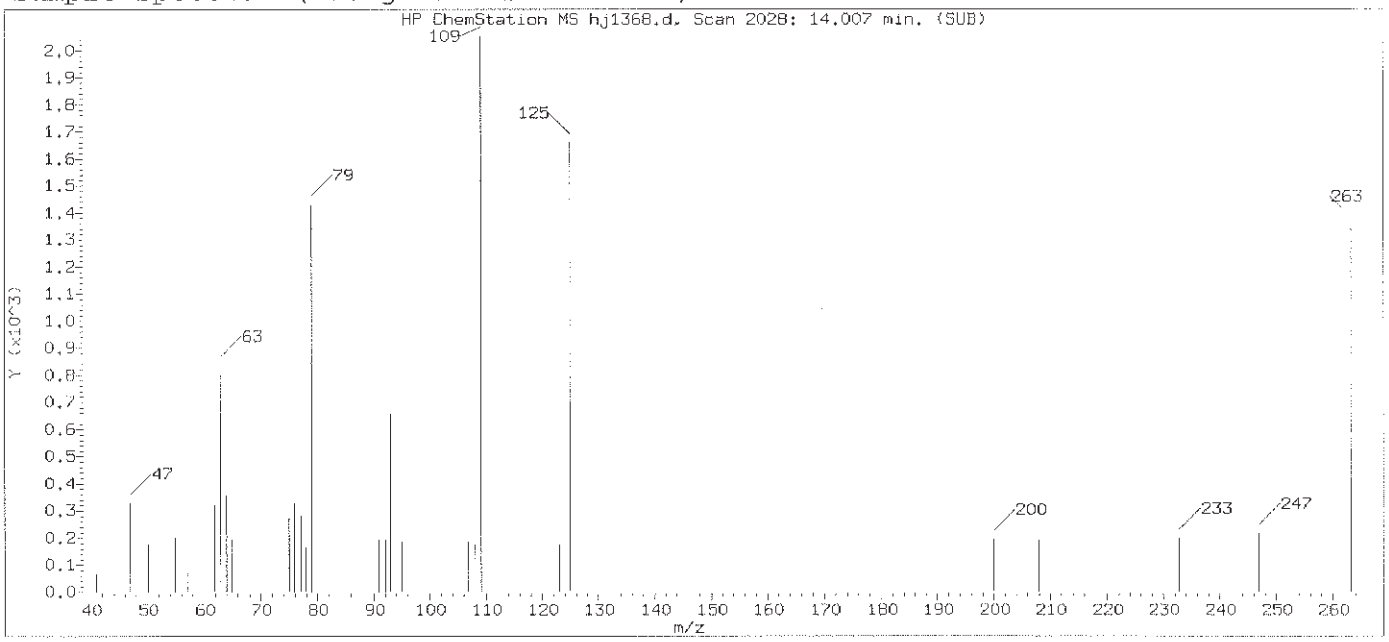
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

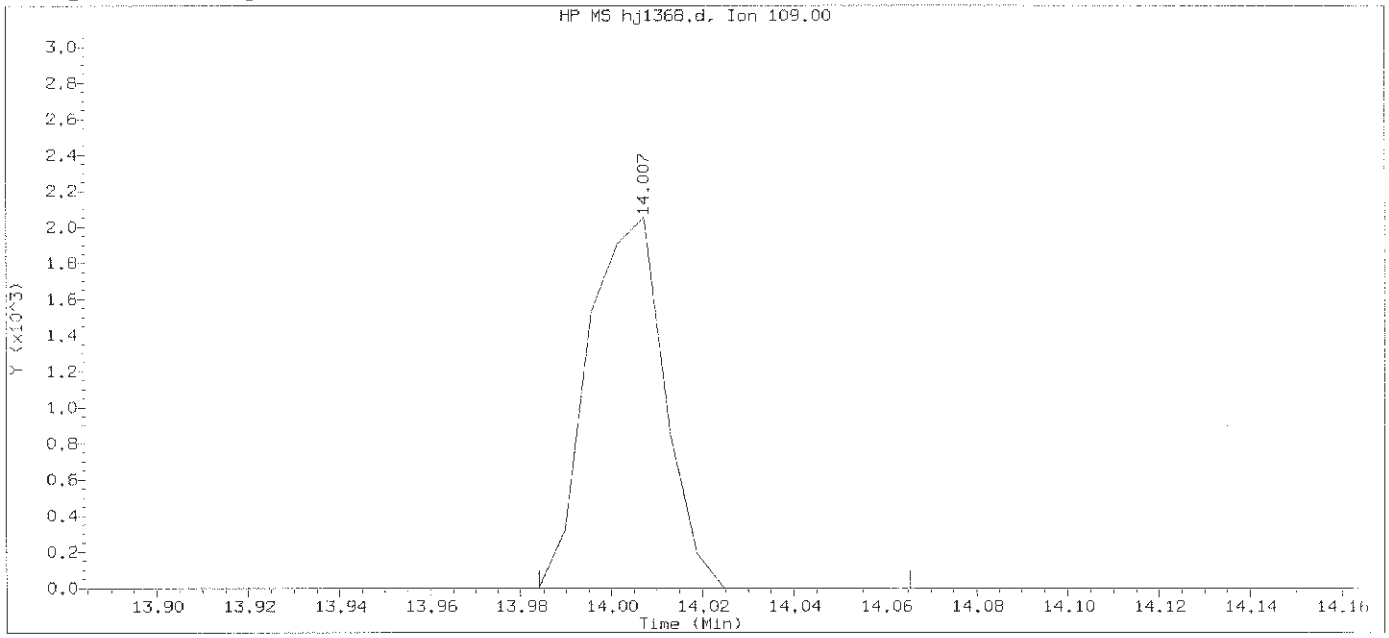
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Section Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

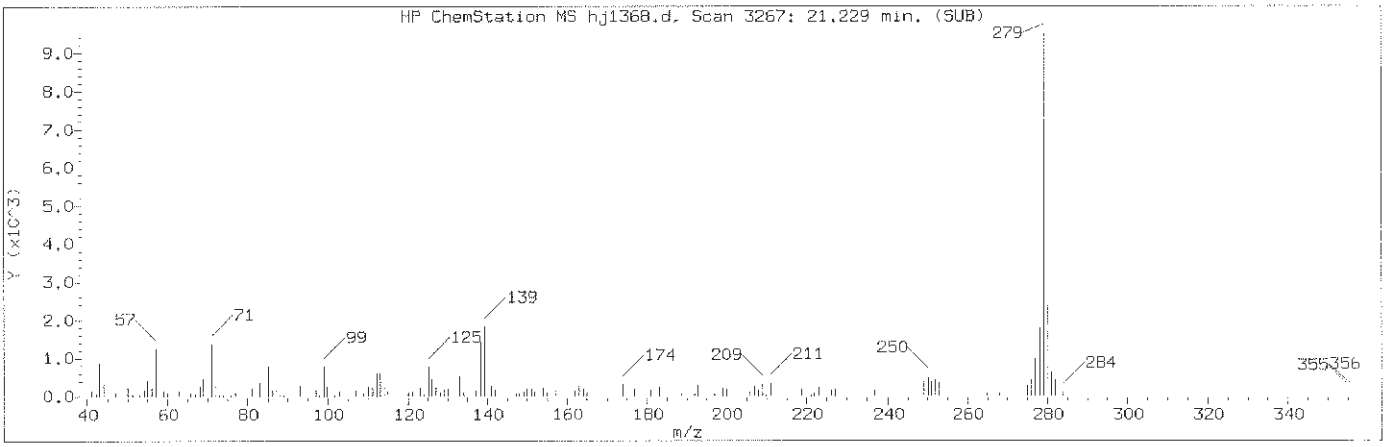
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

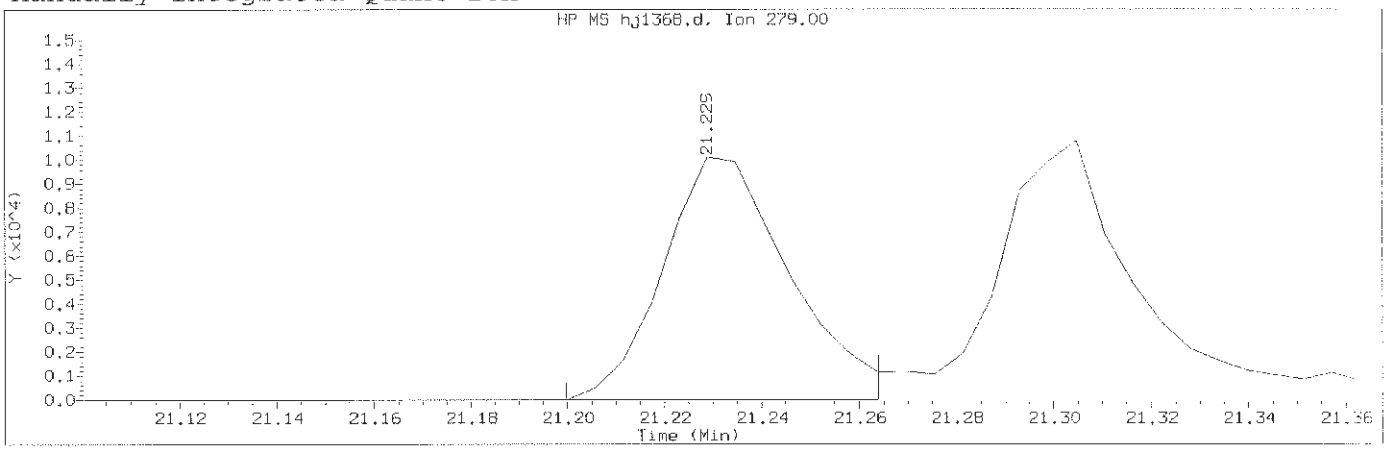
Compound Number	: 127		
Compound Name	: Parathion		
Scan Number	: 2028		
Retention Time (minutes)	: 14.007		
Quant Ion	: 109.00		
Area	: 2394		
On-column Amount (ng/ul)	: 0.0775		
Integration start scan	: 2023	Integration stop scan:	2037
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 04:24
Date, time and analyst ID of latest file update: 29-Oct-2013 04:24 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 160		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3267		
Retention Time (minutes)	: 21.229		
Quant Ion	: 279.00		
Area (flag)	: 18299M		
On-Column Amount (ng/ul)	: 0.1135		
Integration start scan	: 3261	Integration stop scan:	3272
Y at integration start	: -12	Y at integration end:	-12

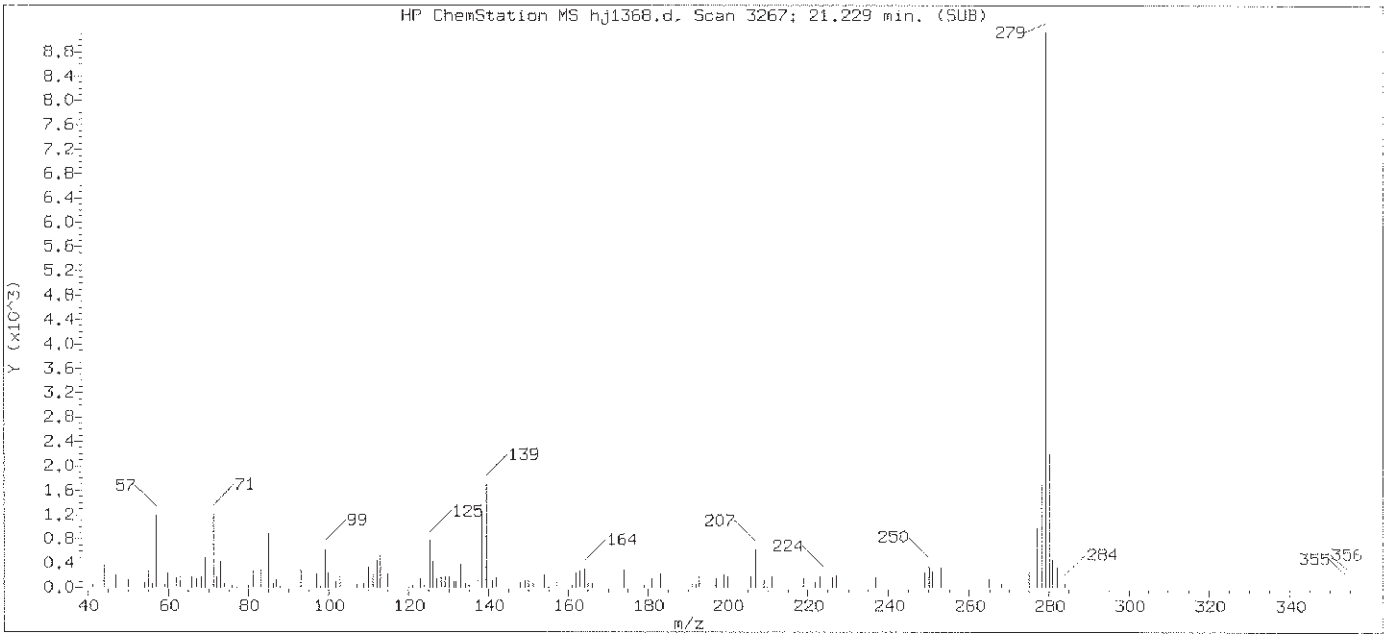
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346

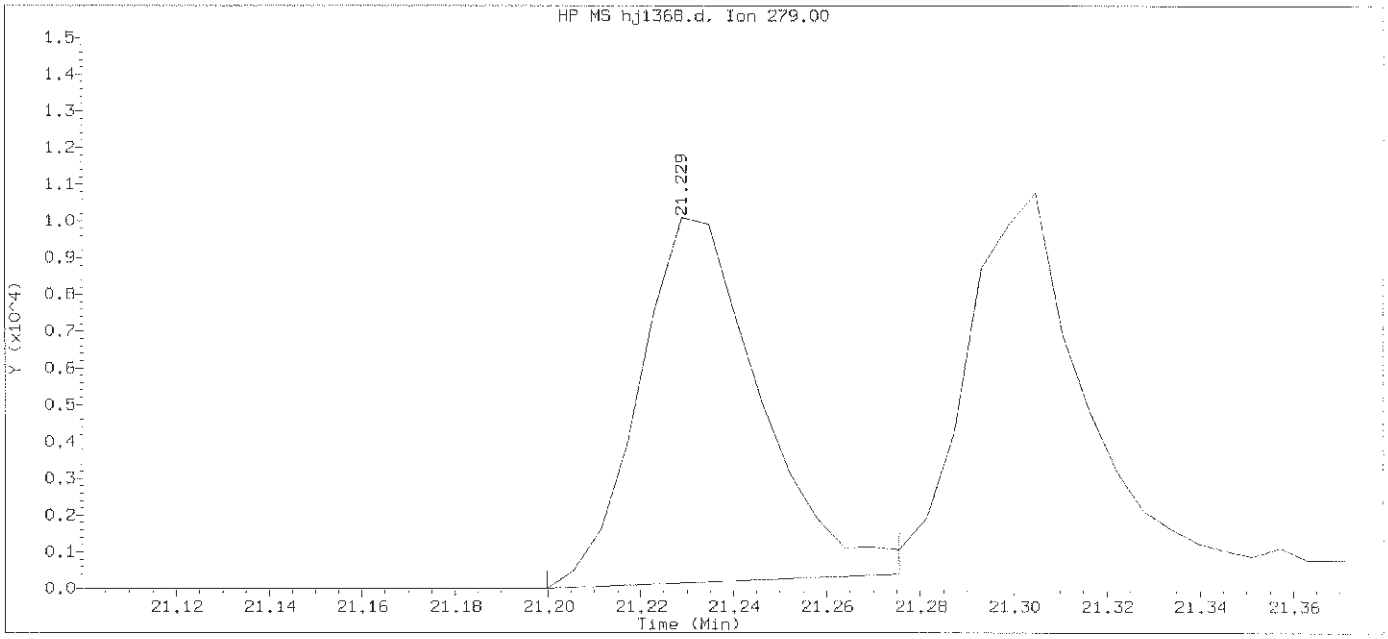
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



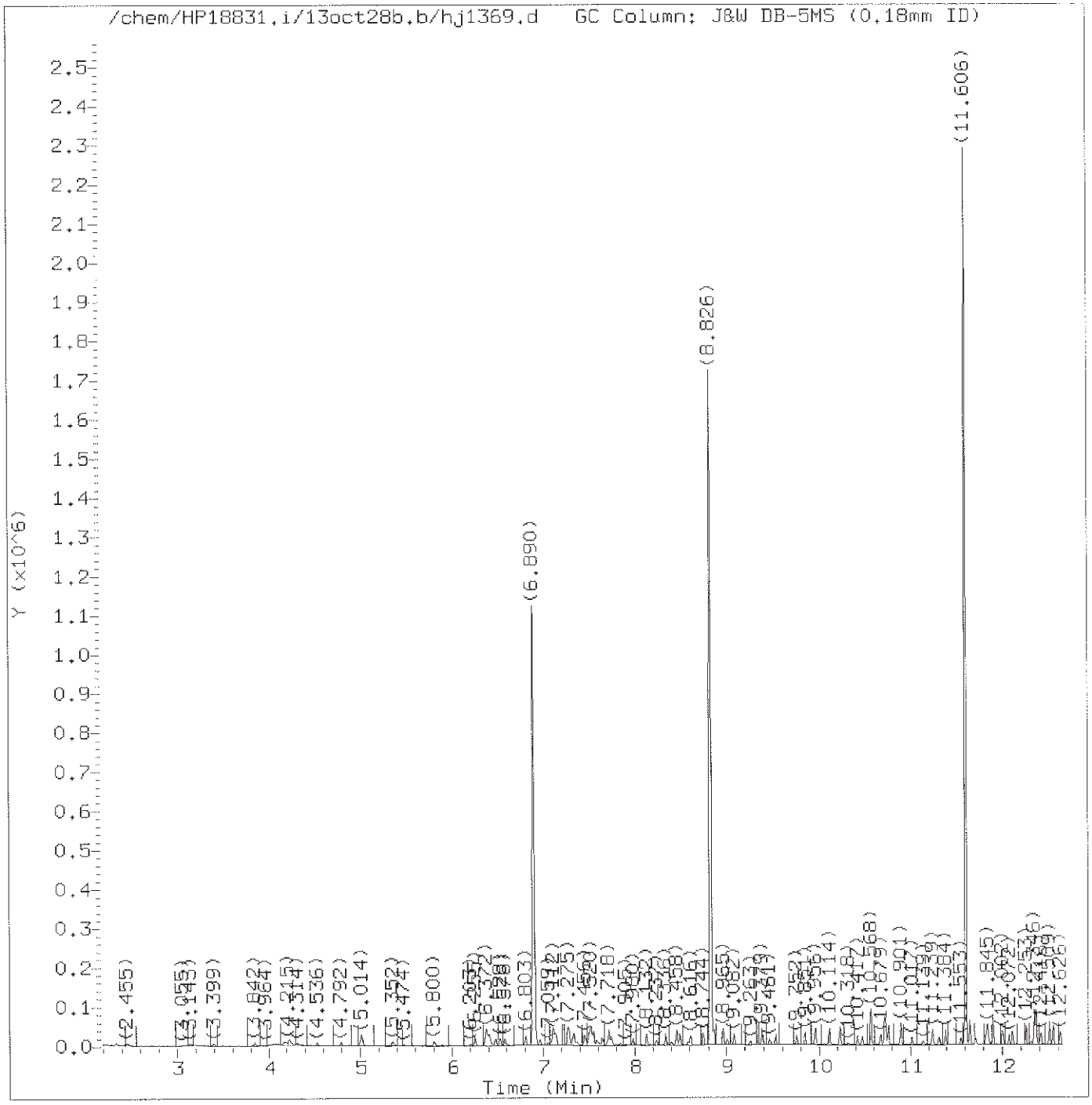
Data File: /chem/HP18831.i/13oct28b.b/hj1368.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:02 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 03:33 Automation

Sample Name: SSTD.125 Lab Sample ID: STD2553

Compound Number	: 160
Compound Name	: Dibenz(a,h)acridine
Scan Number	: 3267
Retention Time (minutes)	: 21.229
Quant Ion	: 279.00
Area	: 17946
On-column Amount (ng/ul)	: 0.1113
Integration start scan	: 3261 Integration stop scan: 3274
Y at integration start	: 0 Y at integration end: 391

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

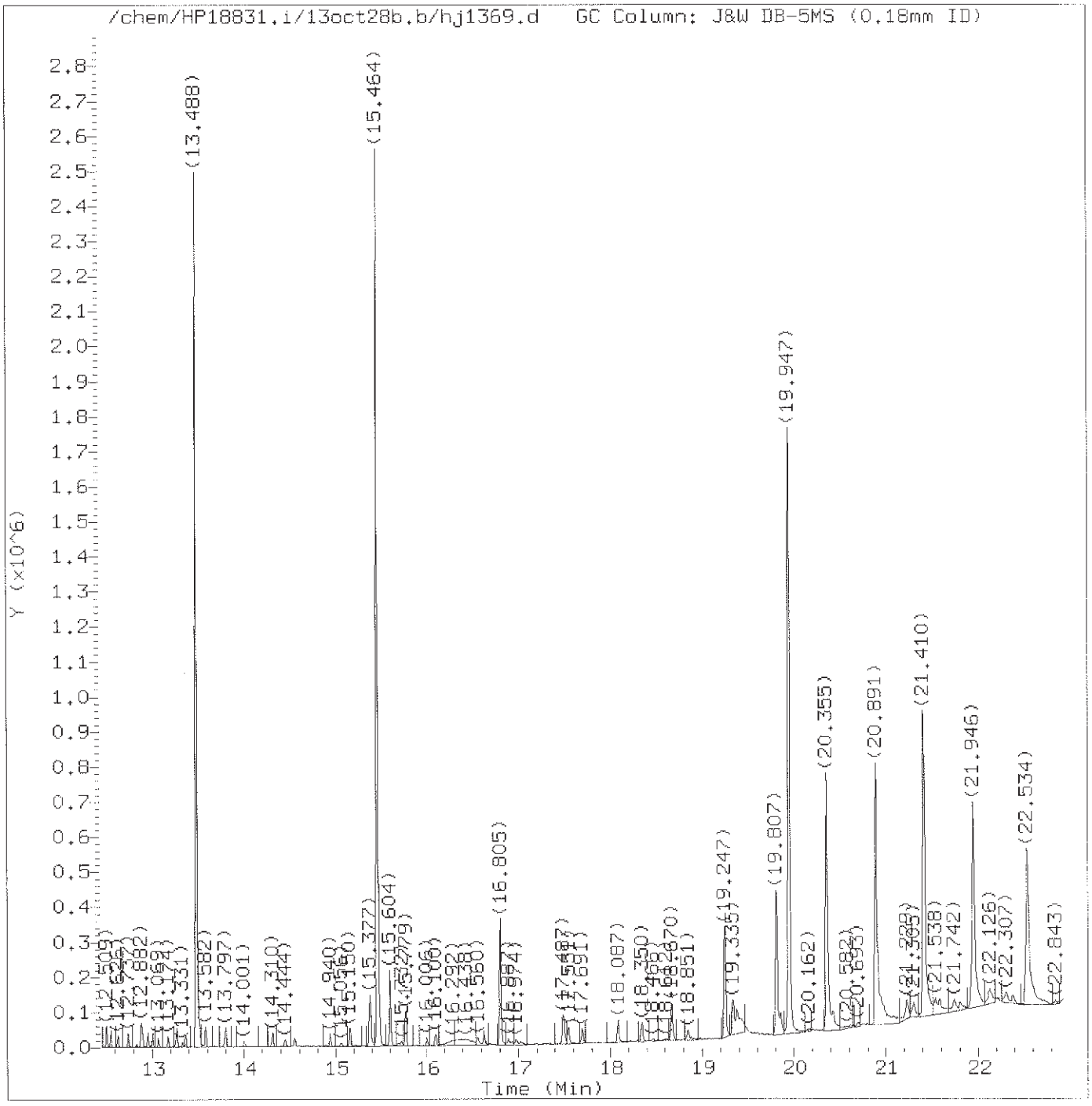
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.449	88	3714M	0.128
2) N-Nitrosodimethylamine	(1)	3.044	74	4668M	0.096
3) Pyridine	(1)	3.143	79	11664M	0.141
5) 2-Picoline	(1)	4.221	93	8554M	0.105
6) N-Nitrosomethylethylamine	(1)	4.355	88	5042M	0.138
7) Methyl methanesulfonate	(1)	4.798	80	4386	0.098
8)$2-Fluorophenol	(1)	5.014	112	12316	0.192
9) N-Nitrosodiethylamine	(1)	5.352	102	3030	0.090
10) Ethyl methanesulfonate	(1)	5.800	109	3553	0.105
11) Benzaldehyde	(1)	6.249	77	7418	0.120
12)$Phenol-d5	(1)	6.372	99	19096	0.217
13)$Phenol-d6	(1)	6.372	99	19096	0.217
14) Phenol	(1)	6.389	94	11456	0.111
16) Aniline	(1)	6.412	93	14017	0.117
17) bis(2-Chloroethyl)ether	(1)	6.529	93	8095	0.105
18) 2-Chlorophenol	(1)	6.576	128	5815	0.093
19) 1,3-Dichlorobenzene	(1)	6.803	146	7595	0.104
21)*1,4-Dichlorobenzene-d4	(1)	6.890	152	230757	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	7665	0.104
22) Benzyl alcohol	(1)	7.112	108	4778	0.109
23) 1,2-Dichlorobenzene	(1)	7.135	146	7090	0.103
25) Indene	(1)	7.275	115	15269	0.138
26) 2-Methylphenol	(1)	7.287	108	6050	0.099
28) bis(2-Chloroisopropyl)ether	(1)	7.333	45	9675	0.108
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.333	45	9675	0.108
29) N-Nitrosopyrrolidine	(1)	7.462	100	3470	0.107
30) Acetophenone	(1)	7.502	105	10420	0.105
32) N-Nitroso-di-n-propylamine	(1)	7.520	70	6698	0.112
33) N-Nitrosomorpholine	(1)	7.526	56	5801	0.136
31) 4-Methylphenol	(1)	7.526	108	7490	0.105
34) o-Toluidine	(1)	7.549	106	11779	0.107
35) Hexachloroethane	(1)	7.642	117	2660	0.091
36)$Nitrobenzene-d5	(2)	7.718	82	16298	0.195
37) Nitrobenzene	(2)	7.747	77	8550	0.098
38) N-Nitrosopiperidine	(2)	7.980	114	3433	0.103
39) Isophorone	(2)	8.132	82	17253	0.116
40) 2-Nitrophenol	(2)	8.237	139	2301	0.074
41) 2,4-Dimethylphenol	(2)	8.336	107	7215	0.099
43) Benzoic acid	(2)	8.400	105	3844	2.966
42) O,O,O-triethylphosphorothioate	(2)	8.464	198	4640	0.126

M = Compound was manually integrated.
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Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
44) bis(2-Chloroethoxy)methane	(2)	8.493	93	10537	0.122
46) 2,4-Dichlorophenol	(2)	8.616	162	5813	0.109
47) 1,2,4-Trichlorobenzene	(2)	8.744	180	6869	0.106
48)*Naphthalene-d8	(2)	8.826	136	895144	5.000
50) 4-Chloroaniline	(2)	8.960	127	9095	0.118
51) 2,6-Dichlorophenol	(2)	8.971	162	5715	0.110
52) Hexachloropropene	(2)	9.006	213	3064	0.076
53) Hexachlorobutadiene	(2)	9.082	225	4241	0.111
54) Quinoline	(2)	9.379	129	16345	0.139
55) Caprolactam	(2)	9.461	113	1941M	0.092
56) N-Nitrosodi-n-butylamine	(2)	9.531	84	5635	0.092
58) 4-Chloro-3-methylphenol	(2)	9.752	107	5968	0.100
60) Safrole	(2)	9.851	162	5089	0.103
63) Hexachlorocyclopentadiene	(3)	10.224	237	1957	0.066
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	7537	0.114
65) cis-Isosafrole	(3)	10.318	162	1025	0.118
66) 2,4,6-Trichlorophenol	(3)	10.417	196	4103	0.098
67) 2,4,5-Trichlorophenol	(3)	10.469	196	4007	0.095
68)$2-Fluorobiphenyl	(3)	10.568	172	33681	0.244
69) trans-Isosafrole	(3)	10.679	162	5301	0.107
70) Isosafrole	(3)	10.679	162	5301	0.107
71) 1,1'-Biphenyl	(3)	10.720	154	16684	0.106
72) 2-Chloronaphthalene	(3)	10.726	162	14448	0.115
73) 1-Chloronaphthalene	(3)	10.761	162	16836	0.147
74) Diphenyl ether	(3)	10.901	170	10381	0.119
75) 2-Nitroaniline	(3)	10.901	138	2829	0.080
76) 1,4-Naphthoquinone	(3)	11.017	158	3558	0.074
77) 1,4-Dinitrobenzene	(3)	11.139	168	1251M	0.063
78) Dimethylphthalate	(3)	11.239	163	15794	0.121
79) 1,3-Dinitrobenzene	(3)	11.250	168	1440M	0.061
80) 2,6-Dinitrotoluene	(3)	11.314	165	2207	0.071
82) 3-Nitroaniline	(3)	11.553	138	2416	0.073
83)*Acenaphthene-d10	(3)	11.606	164	562858	5.000
85) 2,4-Dinitrophenol	(3)	11.717	184	2911	2.462
86) 4-Nitrophenol	(3)	11.827	109	5246	0.232
87) Pentachlorobenzene	(3)	11.845	250	7008	0.130
88) Dibenzofuran	(3)	11.903	168	22468	0.131
89) 2,4-Dinitrotoluene	(3)	11.903	165	2888	0.072
90) 1-Naphthylamine	(3)	12.002	143	12062	0.101
91) 2,3,4,6-Tetrachlorophenol	(3)	12.072	232	2947	0.088

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on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
92) 2-Naphthylamine	(3)	12.113	143	13500	0.112
93) Diethylphthalate	(3)	12.253	149	14725	0.119
95) Thionazin	(3)	12.352	107	3135	0.120
98) 4-Nitroaniline	(3)	12.364	138	3252	0.100
97) 5-Nitro-o-toluidine	(3)	12.364	152	2508	0.071
96) 4-Chlorophenyl-phenylether	(3)	12.369	204	9169	0.129
99) 4,6-Dinitro-2-methylphenol	(4)	12.416	198	3700	1.493
102) NDPA as diphenylamine	(4)	12.509	169	13910	0.121
101) N-Nitrosodiphenylamine	(4)	12.509	169	13910	0.121
103) 1,2-Diphenylhydrazine	(4)	12.550	77	18698	0.110
104)$2,4,6-Tribromophenol	(3)	12.632	330	2821	0.197
105) Tetraethyldithiopyrophosphate	(4)	12.737	97	3037	0.120
106) 1,3,5-Trinitrobenzene	(4)	12.830	213	585M	1.601
107) Diallate (peak 1)	(4)	12.876	86	6647	0.081
108) Phorate	(4)	12.882	75	10333	0.102
109) Phenacetin	(4)	12.894	108	5548	0.077
110) 4-Bromophenyl-phenylether	(4)	12.952	248	4675	0.116
111) Diallate (peak 2)	(4)	12.981	86	898M	0.025
113) Dimethoate	(4)	13.069	87	5555	0.084
114) Atrazine	(4)	13.180	200	3575	0.090
115) Pentachlorophenol	(4)	13.255	266	962	1.413
116) Pentachloronitrobenzene	(4)	13.273	237	1500	0.082
117) 4-Aminobiphenyl	(4)	13.273	169	13041	0.090
118) Pronamide	(4)	13.372	173	6311	0.101
120)*Phenanthrene-d10	(4)	13.488	188	985707	5.000
119) Dinoseb	(4)	13.506	211	861M	1.318
124) Carbazole	(4)	13.797	167	22785	0.114
125) Methyl parathion	(4)	14.001	109	2527	0.053
126) Di-n-butylphthalate	(4)	14.310	149	22141	0.094
127) Parathion	(4)	14.543	109	1862	0.060
128) 4-Nitroquinoline-1-oxide	(4)	14.555	190	425	2.354
130) Isodrin	(4)	14.940	193	3556	0.139
132) Benzidine	(5)	15.377	184	77255	0.495
134)*Pyrene-d10	(5)	15.464	212	1248179	5.000
137)$Terphenyl-d14	(5)	15.779	244	40854	0.247
140) p-Dimethylaminoazobenzene	(5)	16.006	225	3347	0.347
141) Chlorobenzilate	(5)	16.100	139	6961	0.094
142) 3,3'-Dimethylbenzidine	(5)	16.560	212	9631	0.060
144) Butylbenzylphthalate	(5)	16.630	149	10522	0.096
146) 2-Acetylaminofluorene	(5)	16.974	181	4954	0.789

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on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
148) 3,3'-Dichlorobenzidine	(5)	17.487	252	6775	0.076
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.499	231	3445	0.077
151) bis(2-Ethylhexyl)phthalate	(5)	17.691	149	13966	0.095
152) 6-Methylchrysene	(5)	18.350	242	21009	0.125
153) Di-n-octylphthalate	(6)	18.851	149	18033	0.072
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.335	256	8843	0.087
158)*Perylene-d12	(6)	19.947	264	969825	5.000
159) 3-Methylcholanthrene	(6)	20.425	268	13899	0.126
160) Dibenz(a,h)acridine	(6)	21.235	279	18034	0.110
161) Dibenz(a,j)acridine	(6)	21.305	279	18663	0.107
165) Diallate TRANS/CIS	(4)			7545	0.106

* = Compound is an internal standard.

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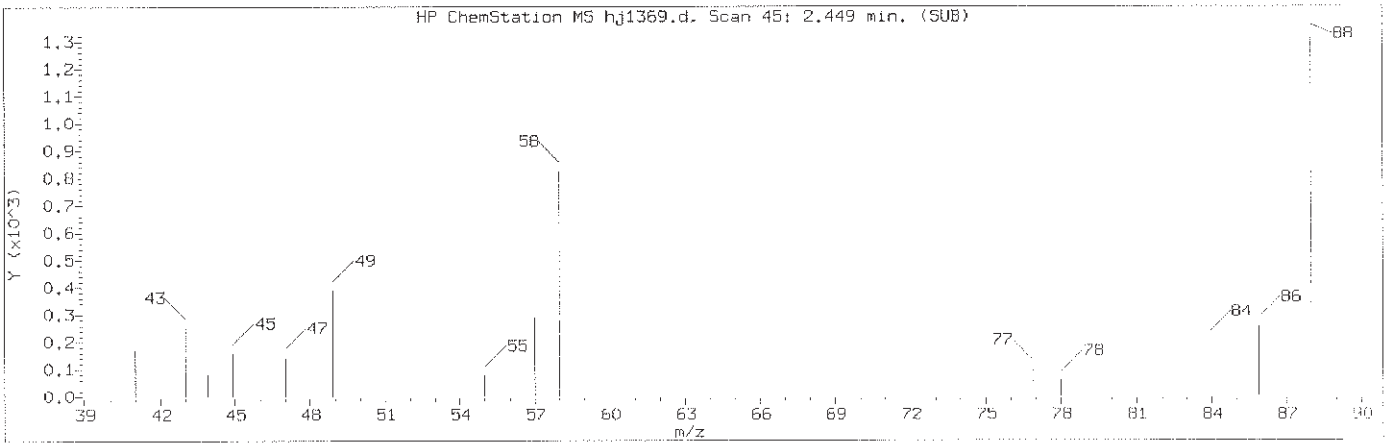
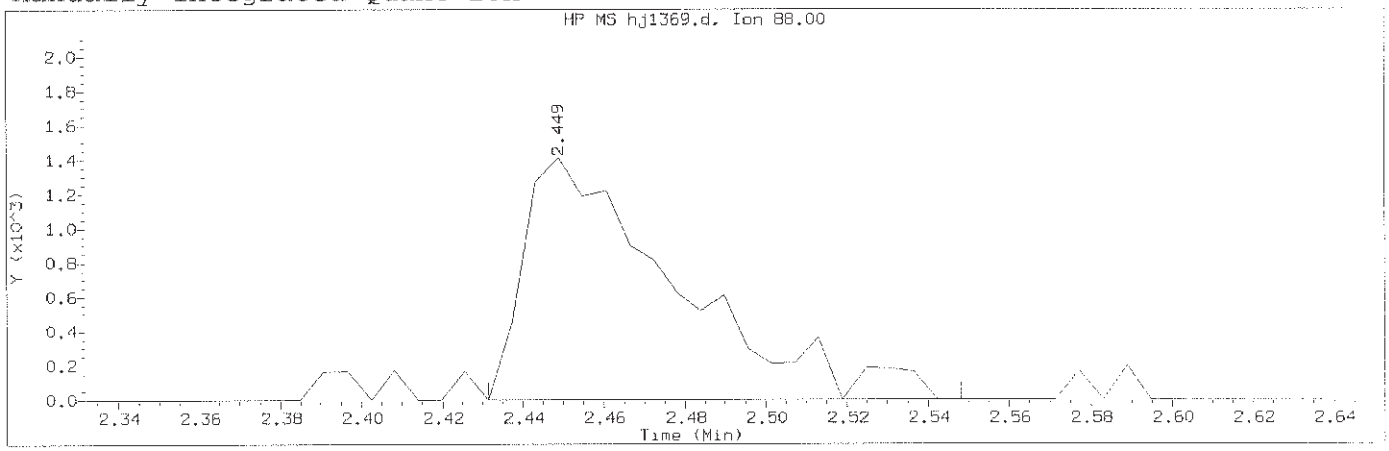
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 45		
Retention Time (minutes)	: 2.449		
Quant Ion	: 88.00		
Area (flag)	: 3714M		
On-Column Amount (ng/ul)	: 0.1278		
Integration start scan	: 41	Integration stop scan:	61
Y at integration start	: 0	Y at integration end:	0

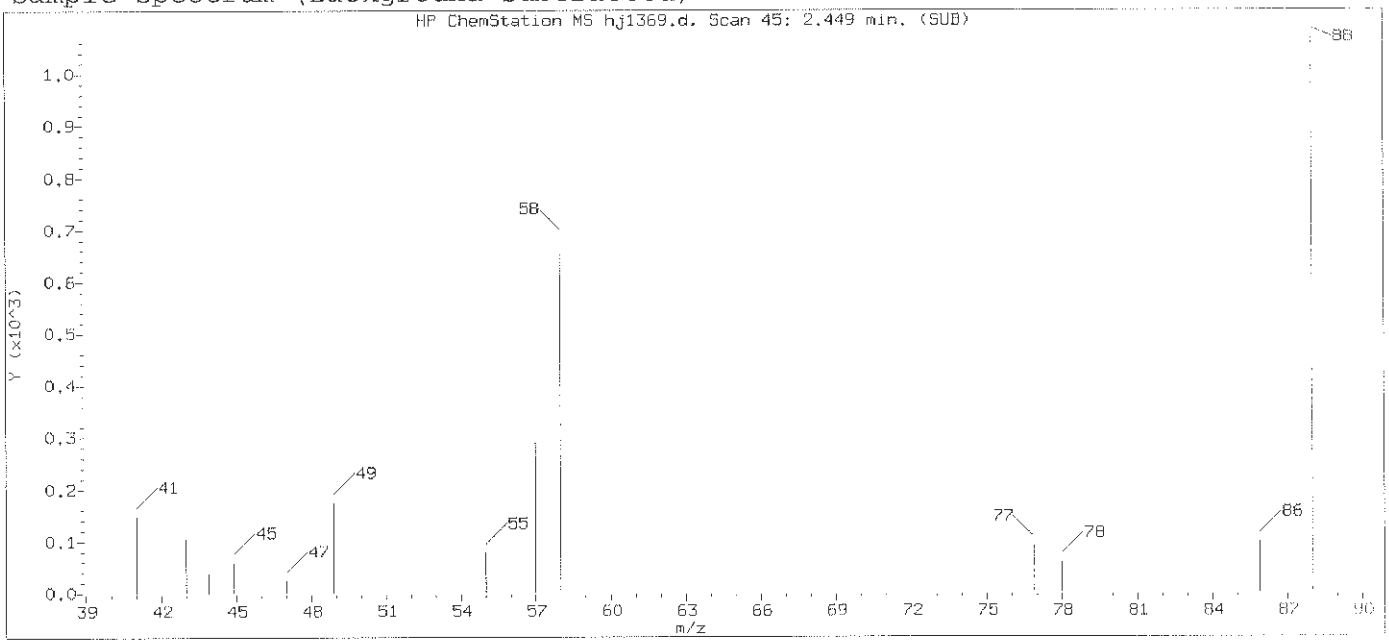
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

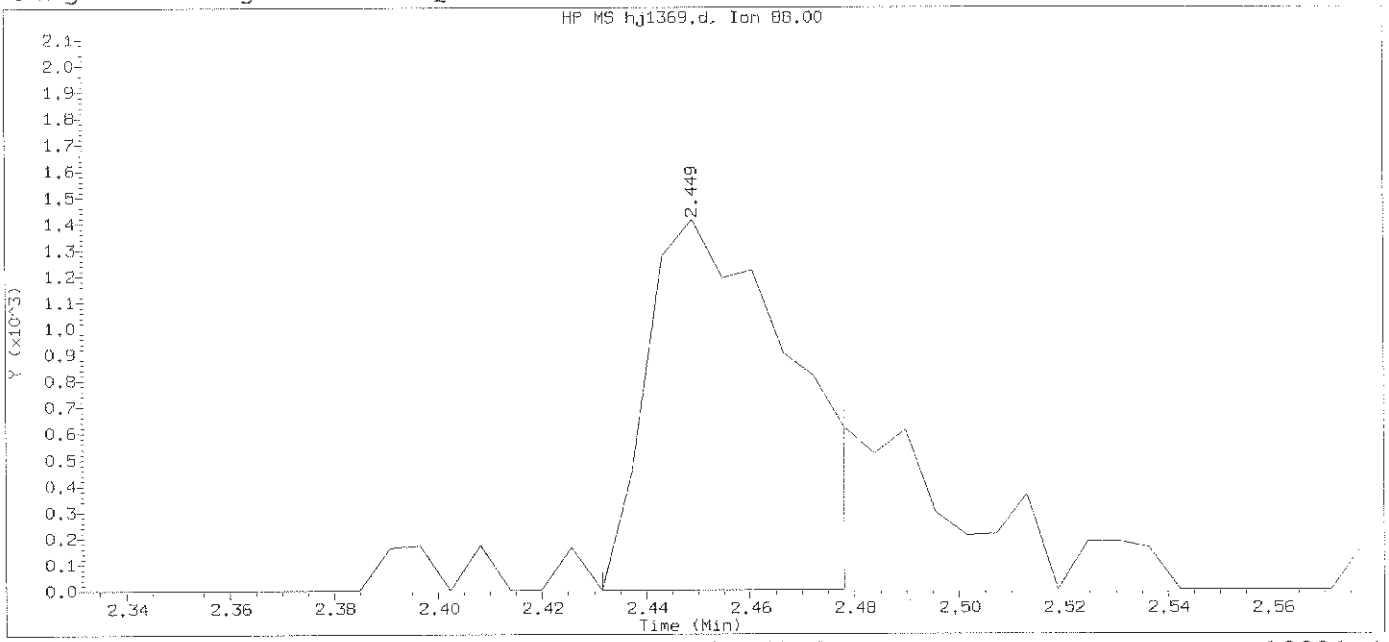
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 45		
Retention Time (minutes)	: 2.449		
Quant Ion	: 88.00		
Area	: 2649		
On-column Amount (ng/ul)	: 0.0911		
Integration start scan	: 41	Integration stop scan:	49
Y at integration start	: 0	Y at integration end:	0

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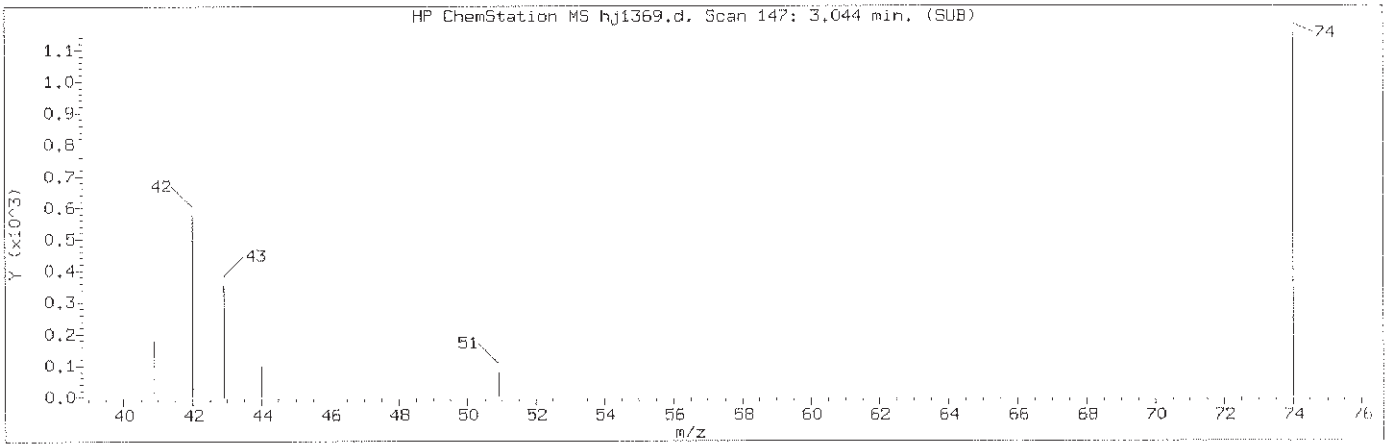
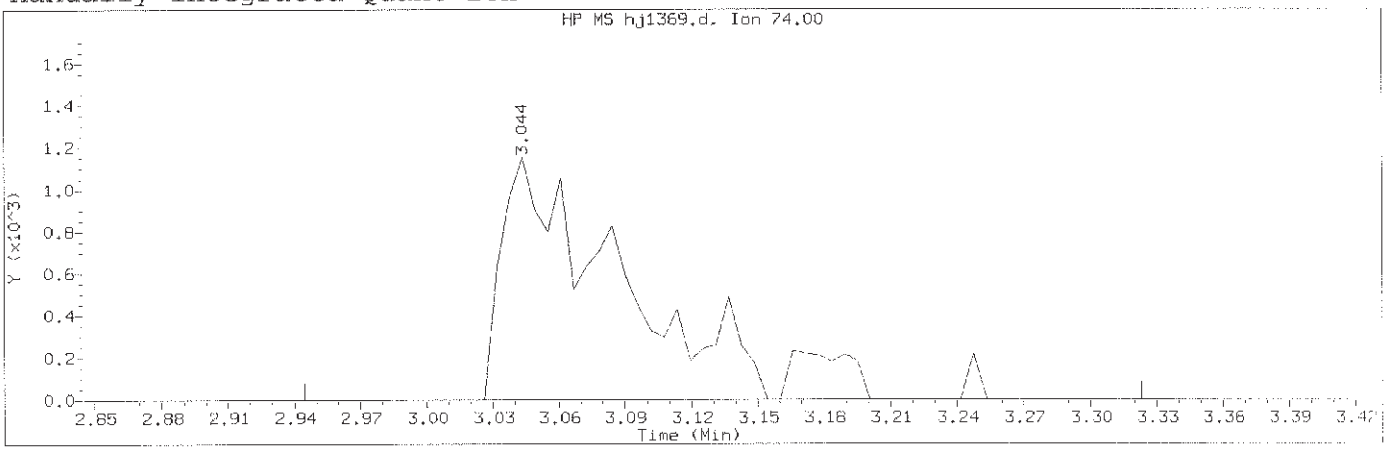
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 147		
Retention Time (minutes)	: 3.044		
Quant Ion	: 74.00		
Area (flag)	: 4668M		
On-Column Amount (ng/ul)	: 0.0960		
Integration start scan	: 129	Integration stop scan:	194
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

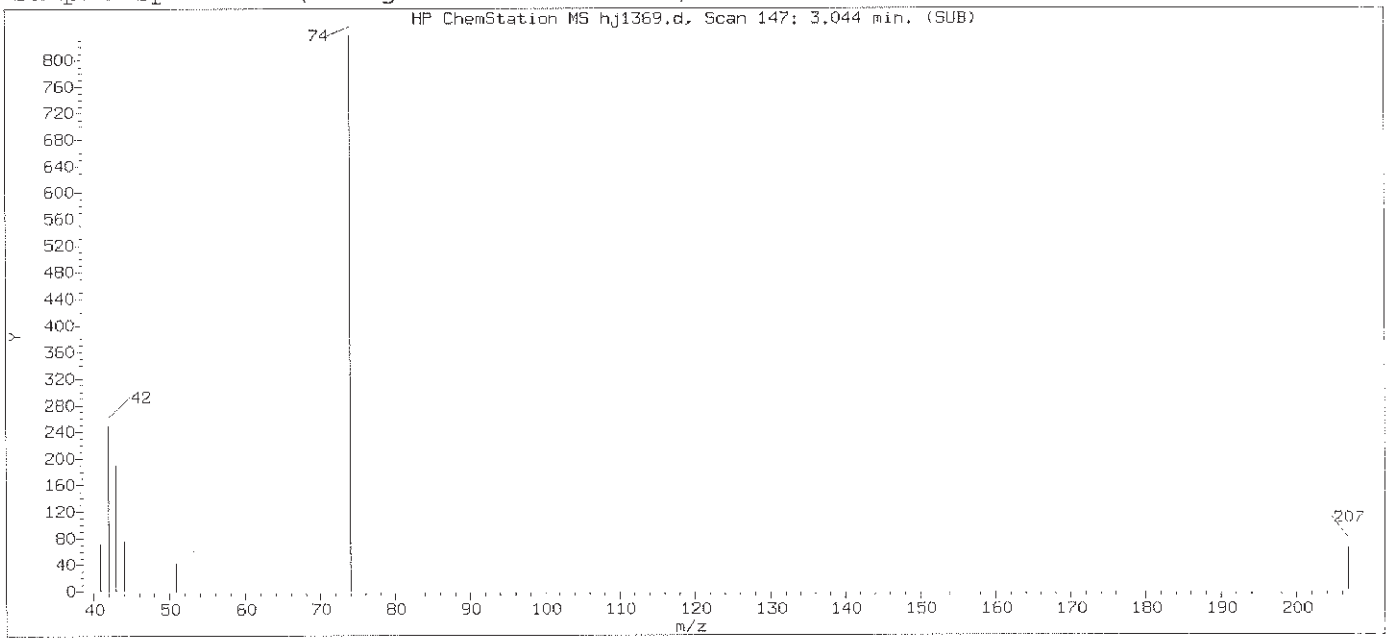
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

OCT 29 2013

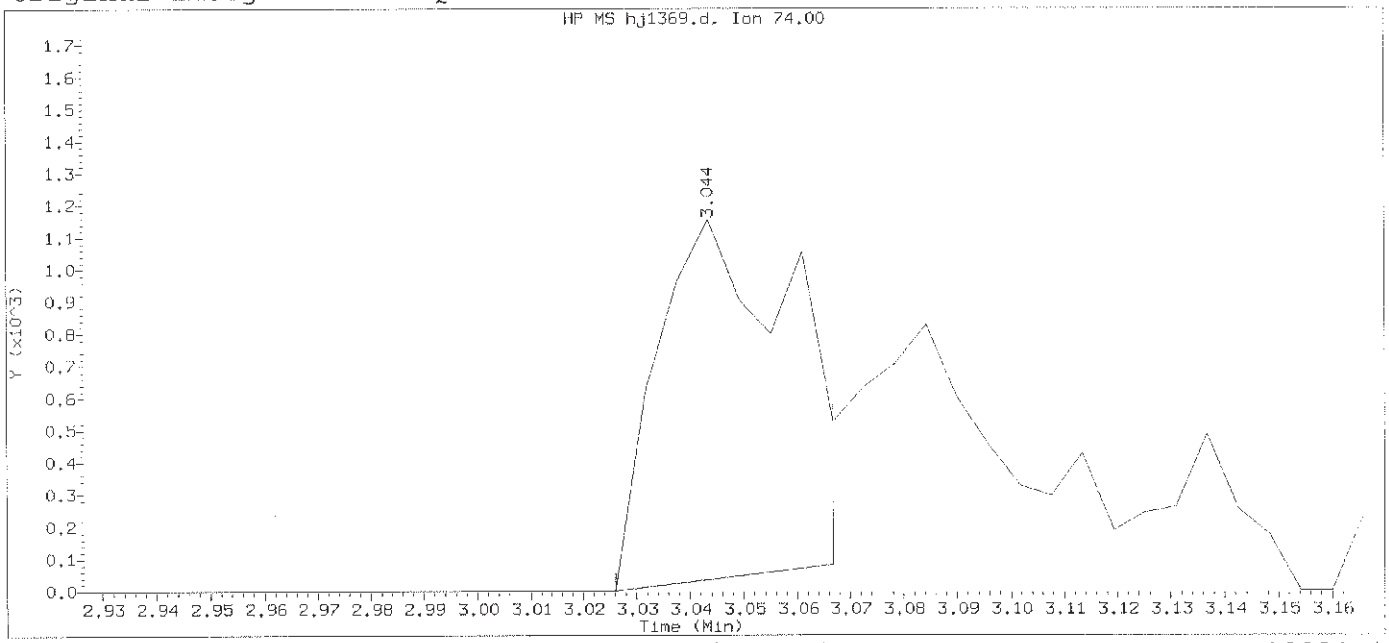
GC/MS audit/management approval: _____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 147		
Retention Time (minutes)	: 3.044		
Quant Ion	: 74.00		
Area	: 1915		
On-column Amount (ng/ul)	: 0.0423		
Integration start scan	: 143	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	81

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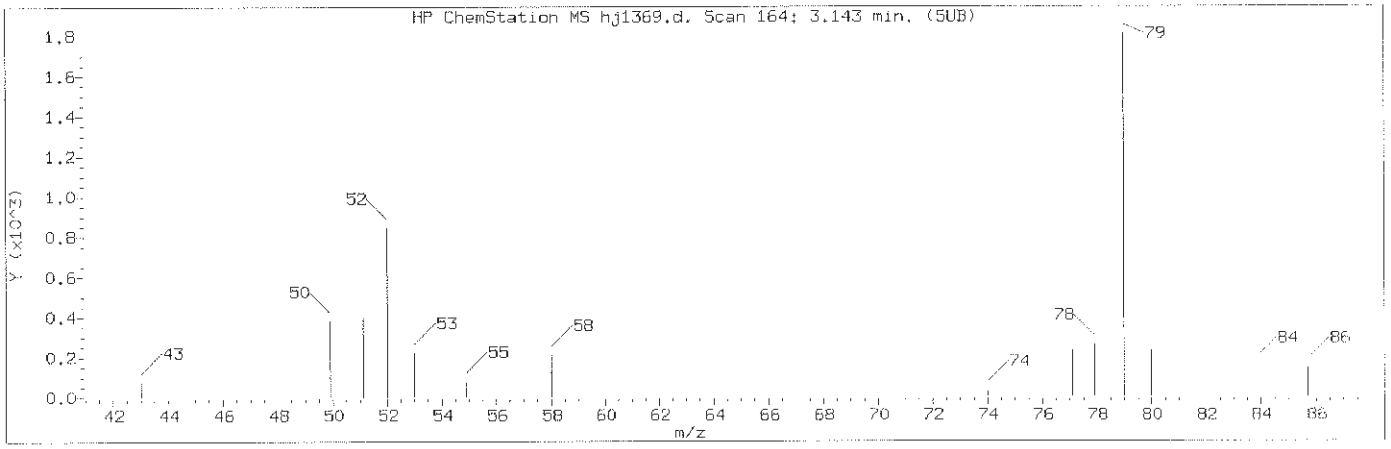
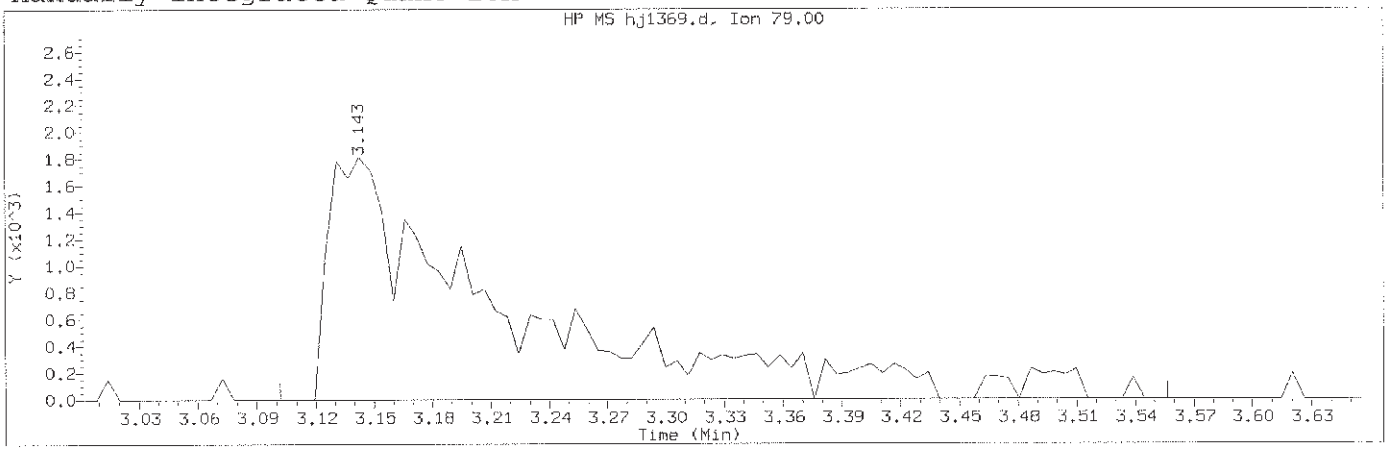
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 164		
Retention Time (minutes)	: 3.143		
Quant Ion	: 79.00		
Area (flag)	: 11664M		
On-Column Amount (ng/ul)	: 0.1407		
Integration start scan	: 156	Integration stop scan:	234
Y at integration start	: 0	Y at integration end:	0

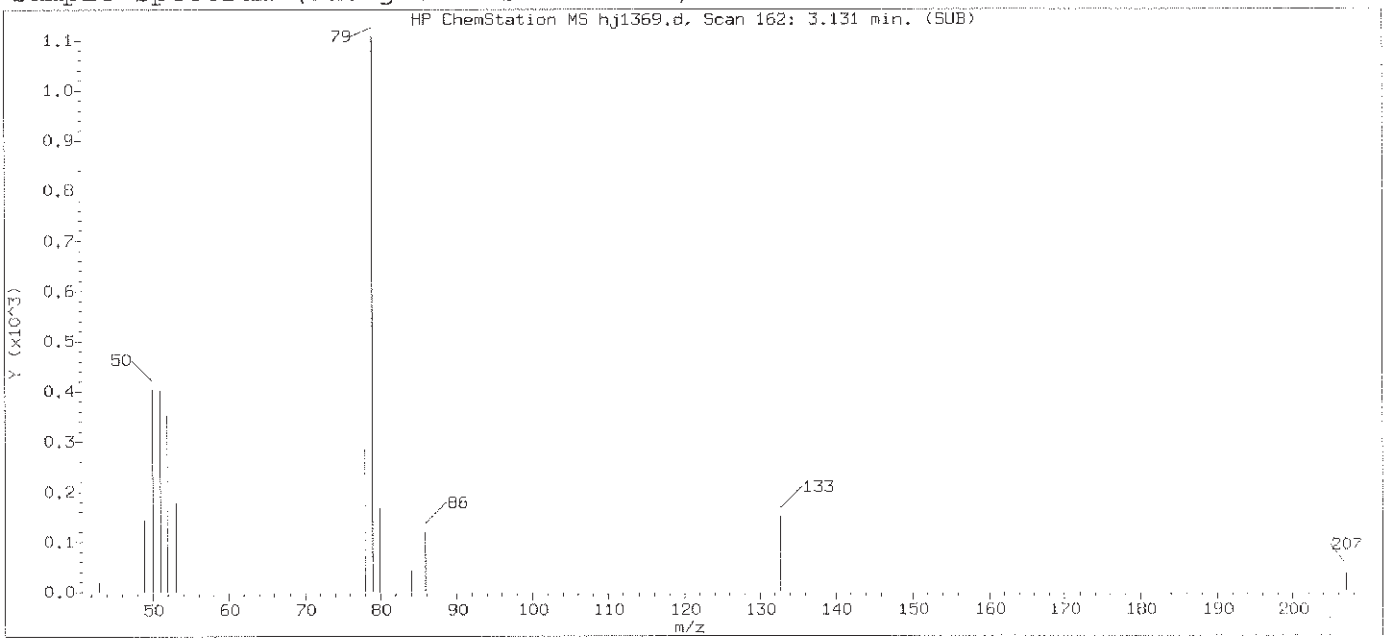
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56. Target 3.5 esignature user ID: jmg00346

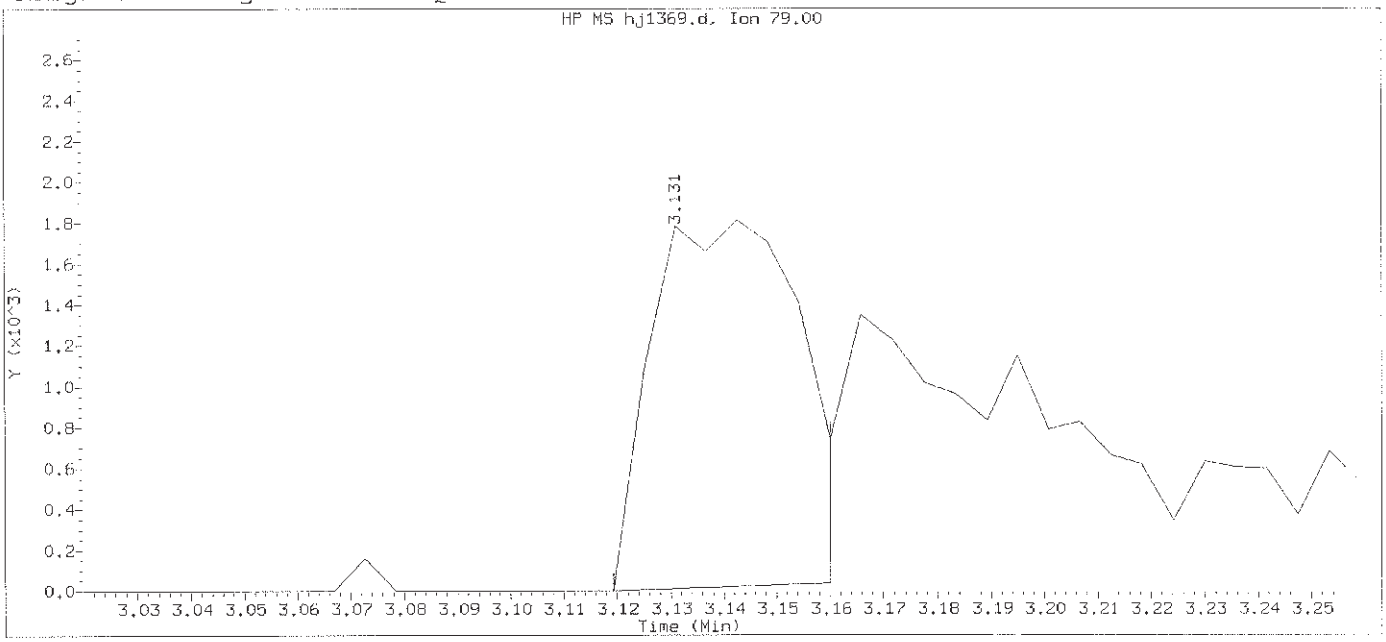
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Technical Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

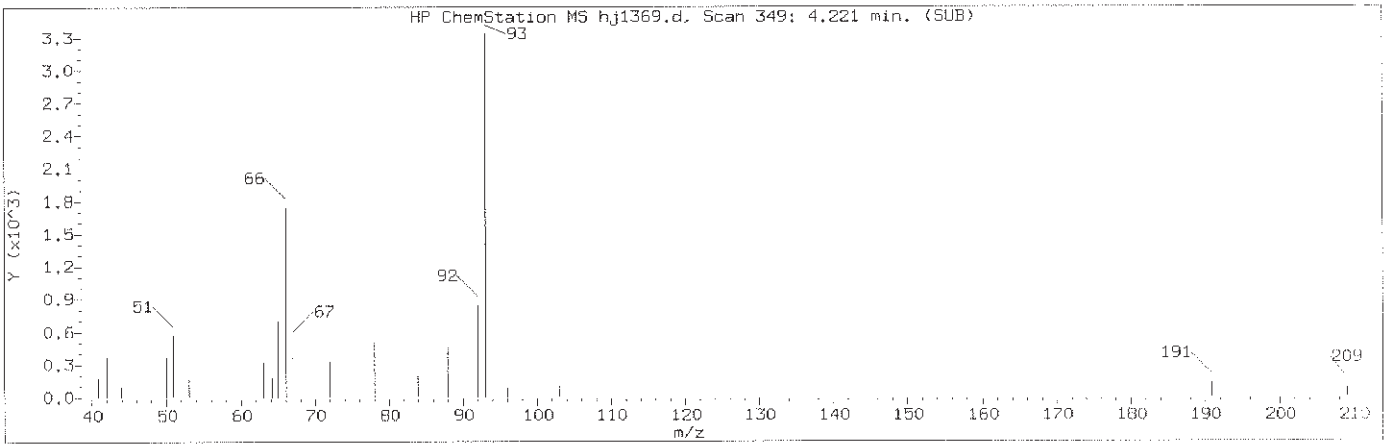
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

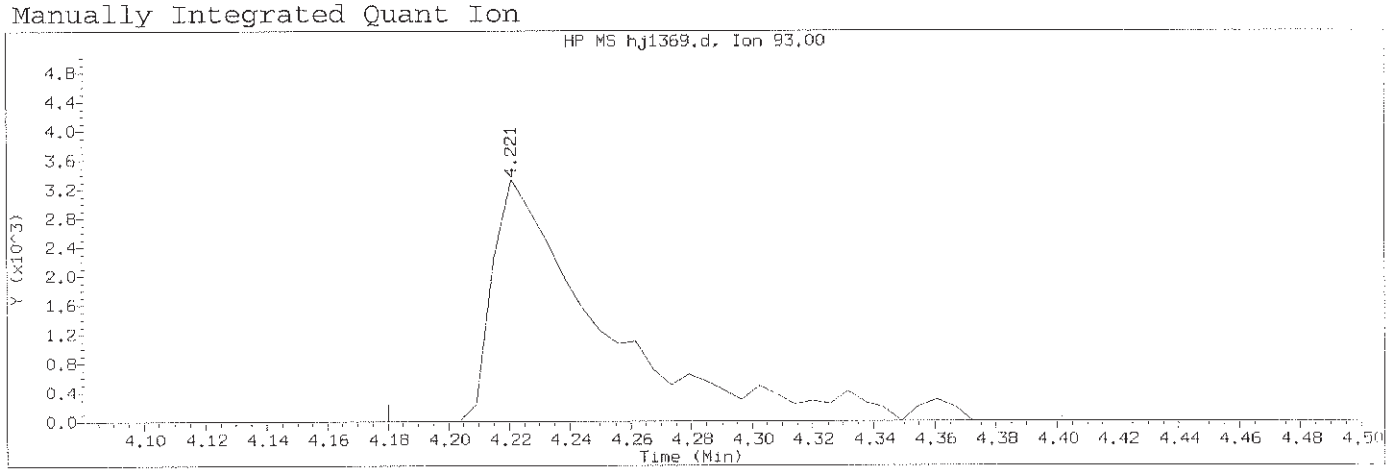
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 162		
Retention Time (minutes)	: 3.131		
Quant Ion	: 79.00		
Area	: 3389		
On-column Amount (ng/ul)	: 0.0457		
Integration start scan	: 159	Integration stop scan:	166
Y at integration start	: 0	Y at integration end:	38

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 349		
Retention Time (minutes)	: 4.221		
Quant Ion	: 93.00		
Area (flag)	: 8554M		
On-Column Amount (ng/ul)	: 0.1049		
Integration start scan	: 341	Integration stop scan:	379
Y at integration start	: 0	Y at integration end:	0

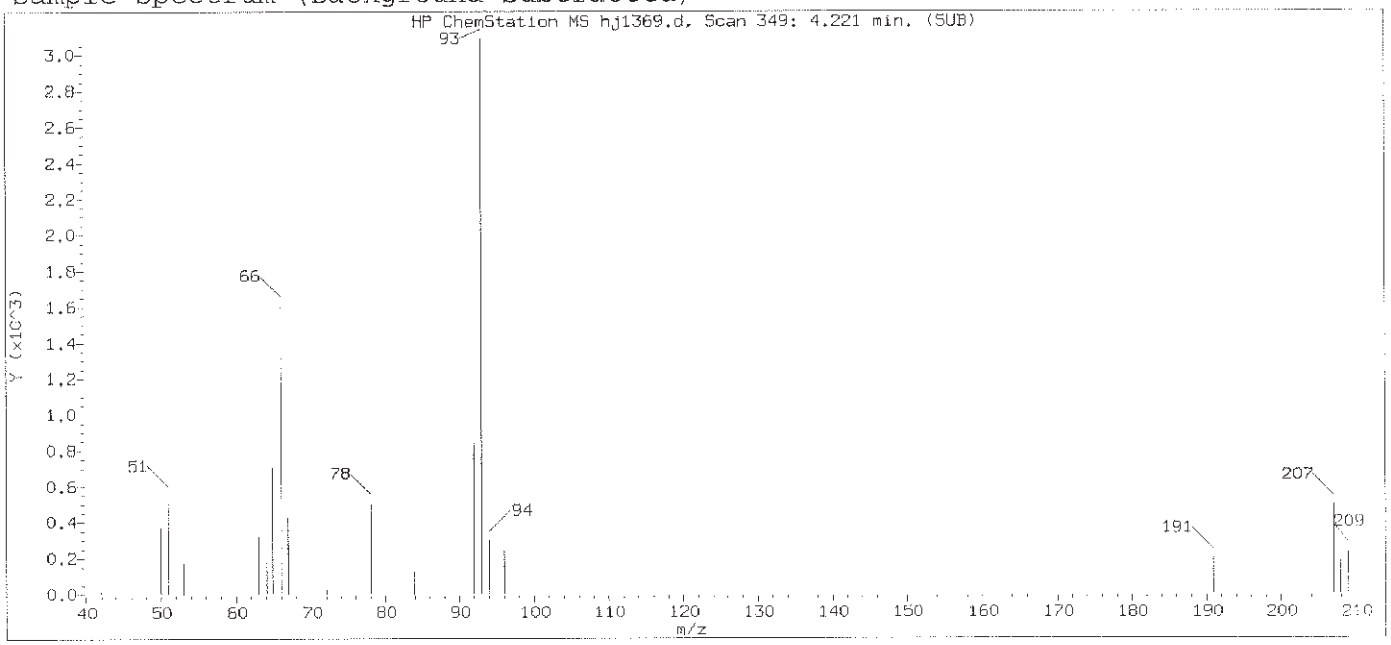
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

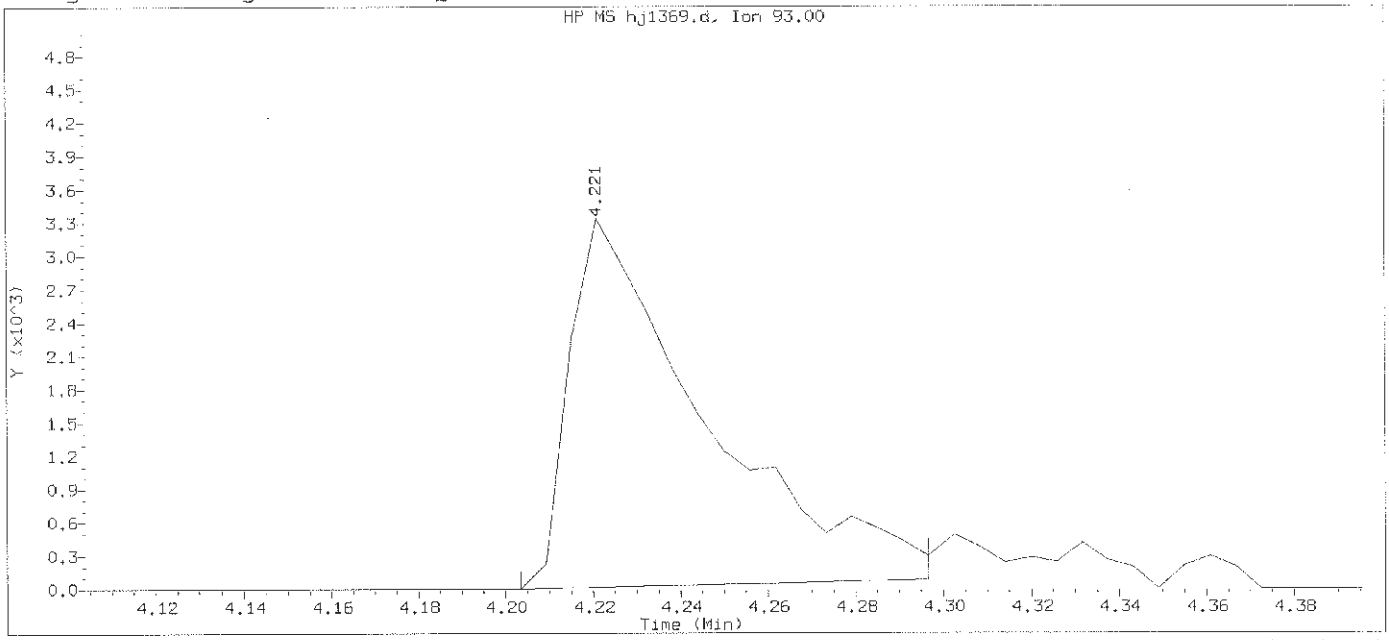
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

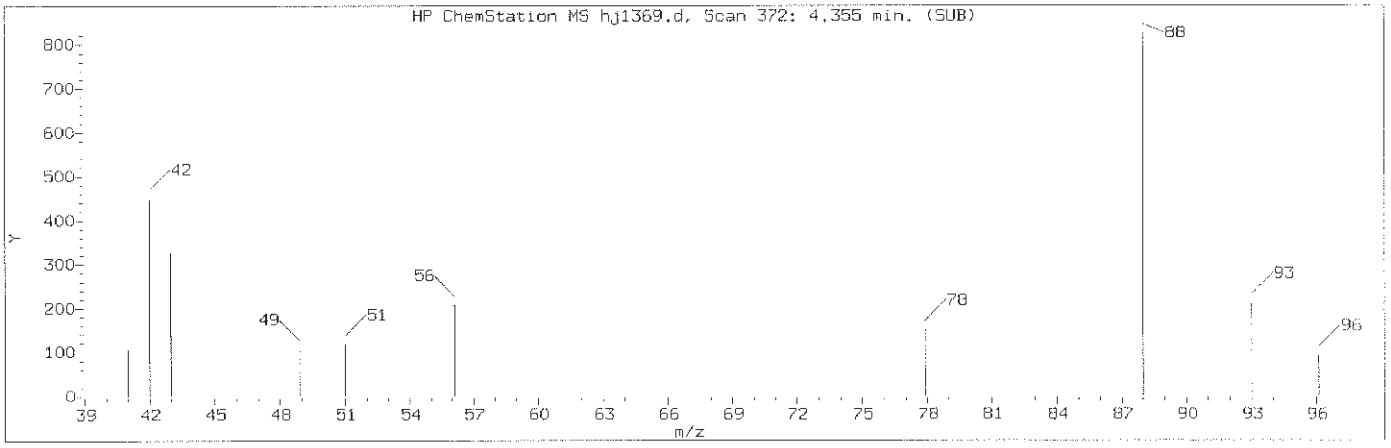
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

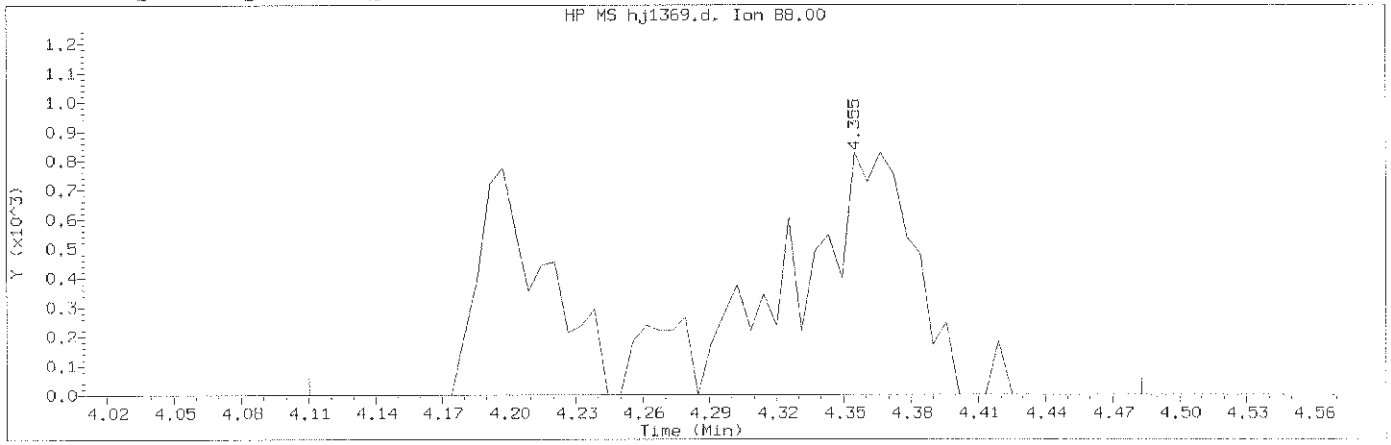
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 349		
Retention Time (minutes)	: 4.221		
Quant Ion	: 93.00		
Area	: 7171		
On-column Amount (ng/ul)	: 0.0891		
Integration start scan	: 345	Integration stop scan:	361
Y at integration start	: 0	Y at integration end:	78

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 6		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 372		
Retention Time (minutes)	: 4.355		
Quant Ion	: 88.00		
Area (flag)	: 5042M		
On-Column Amount (ng/ul)	: 0.1382		
Integration start scan	: 329	Integration stop scan:	393
Y at integration start	: 0	Y at integration end:	0

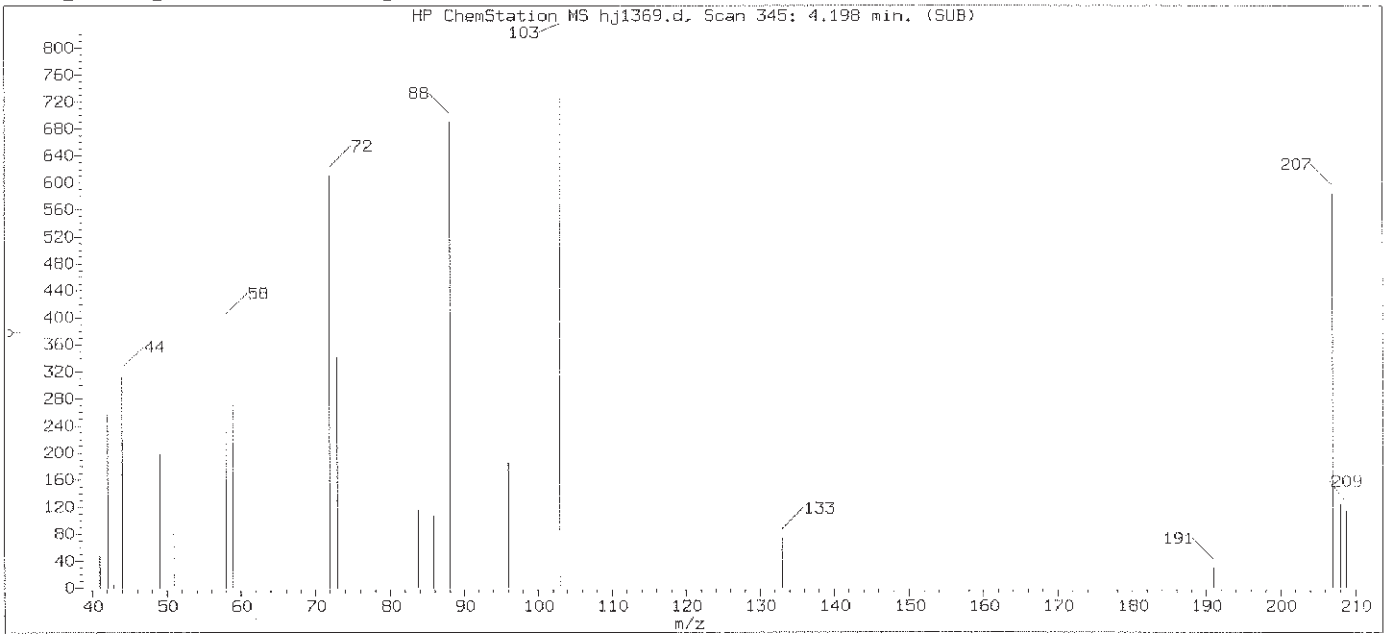
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

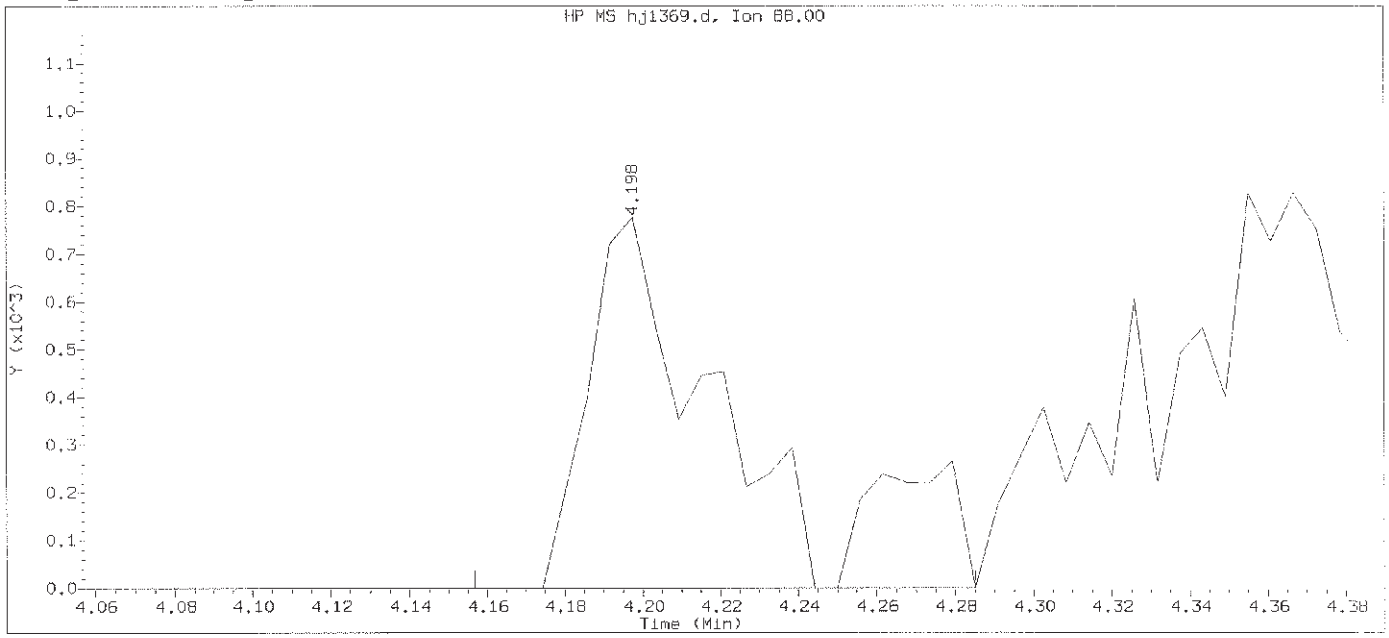
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

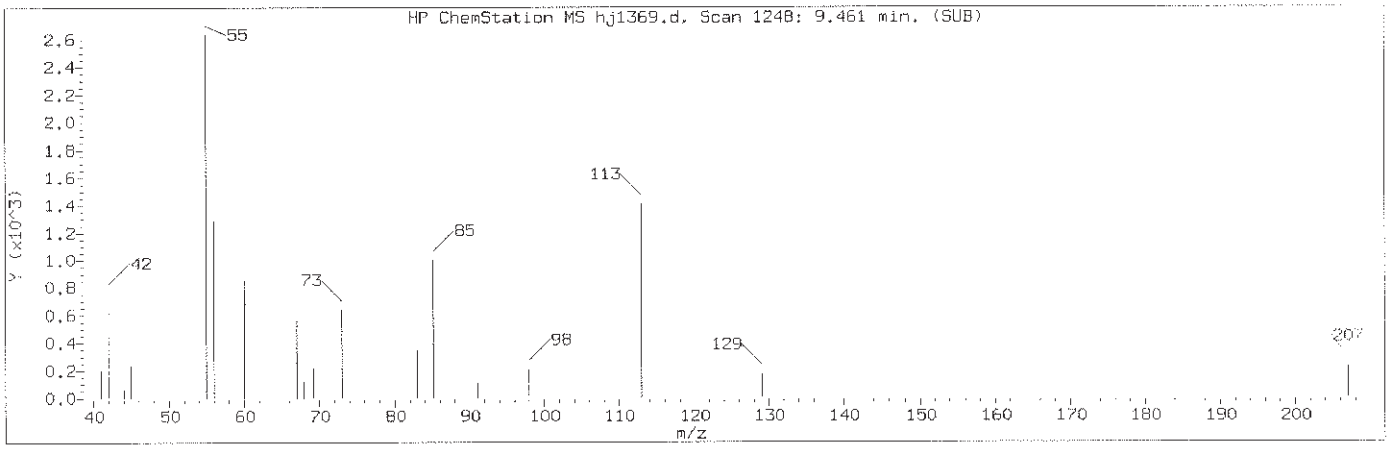
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

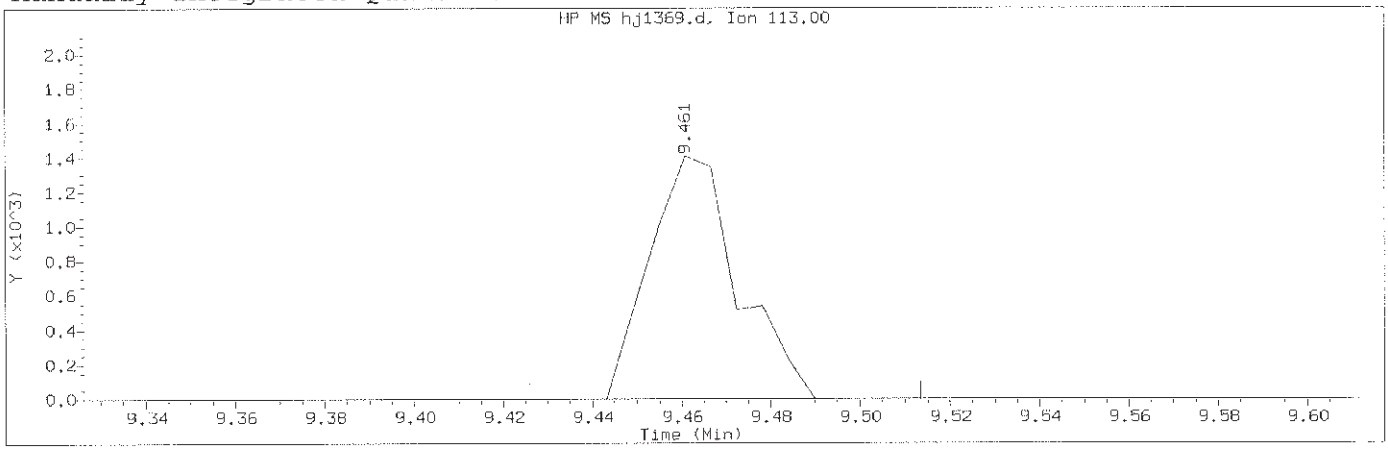
Compound Number	: 6		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 345		
Retention Time (minutes)	: 4.198		
Quant Ion	: 88.00		
Area	: 2018		
On-column Amount (ng/ul)	: 0.0553		
Integration start scan	: 337	Integration stop scan:	359
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 55		
Compound Name	: Caprolactam		
Scan Number	: 1248		
Retention Time (minutes)	: 9.461		
Quant Ion	: 113.00		
Area (flag)	: 1941M		
On-Column Amount (ng/ul)	: 0.0923		
Integration start scan	: 1241	Integration stop scan:	1256
Y at integration start	: 0	Y at integration end:	0

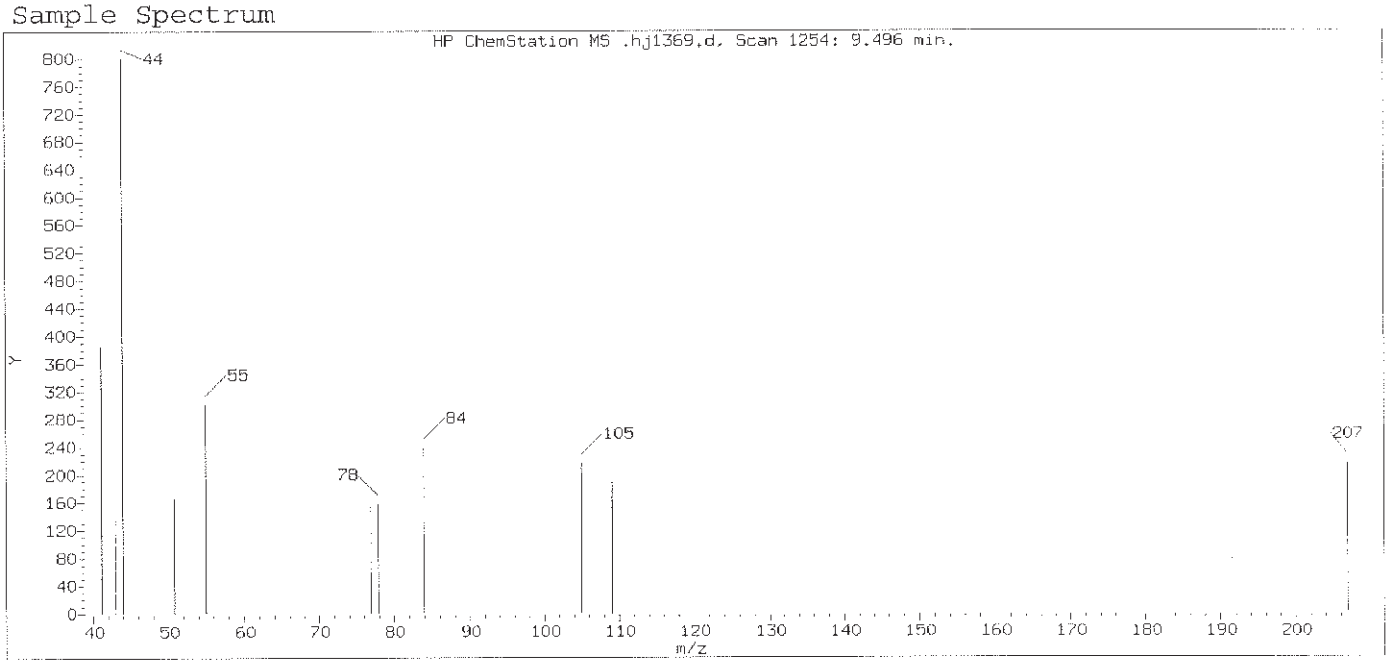
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

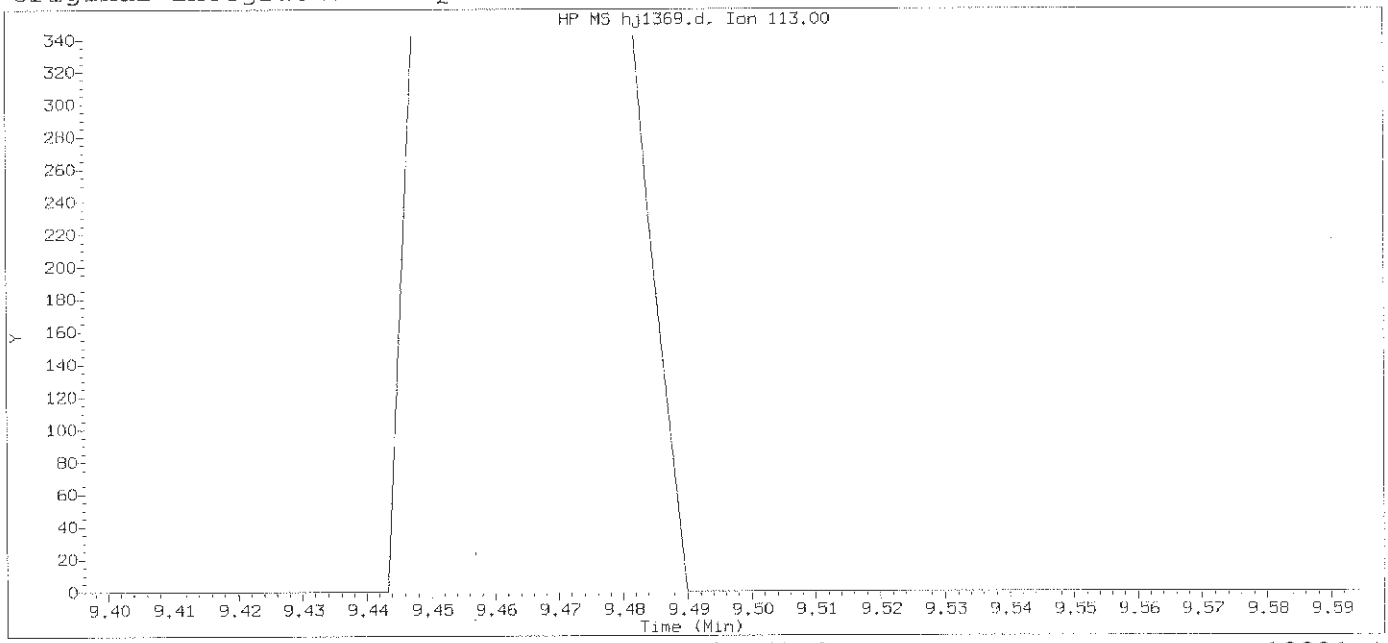
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

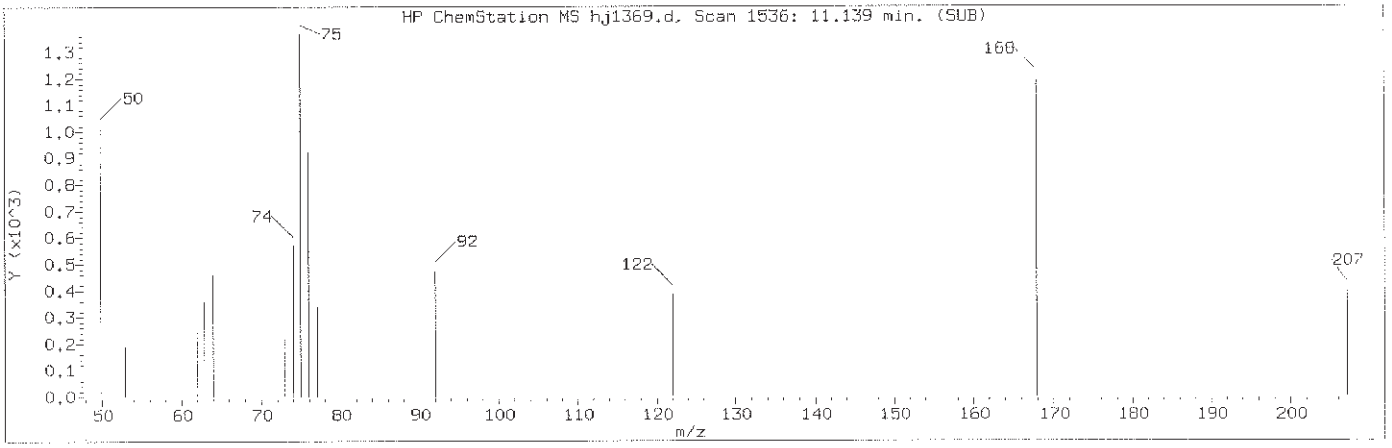
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

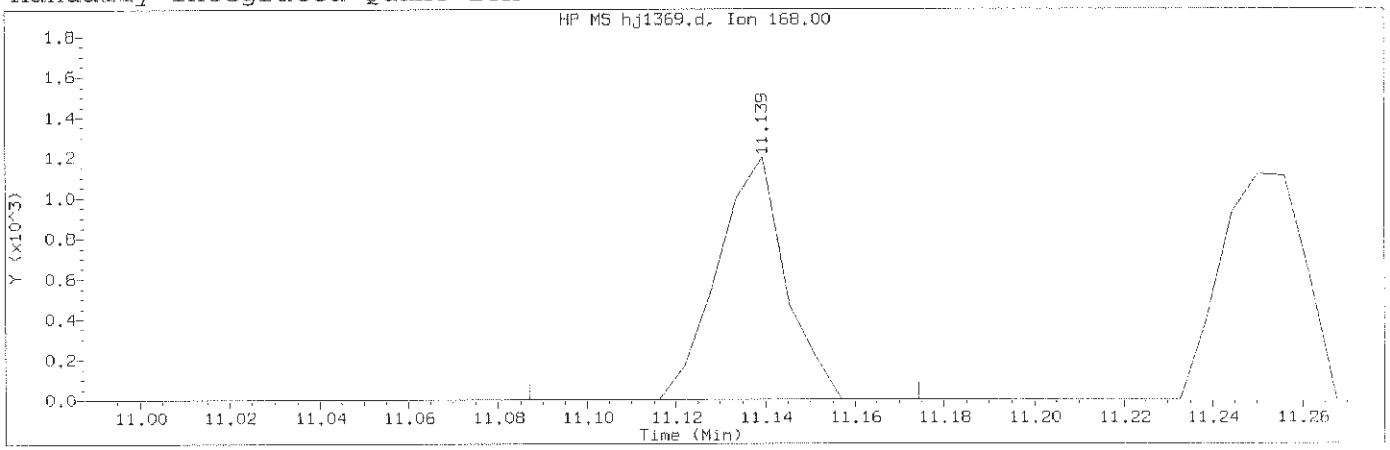
Compound Number : 55
Compound Name : Caprolactam
Expected RT (minutes) : 9.496
Quant Ion : 113.00

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1536		
Retention Time (minutes)	: 11.139		
Quant Ion	: 168.00		
Area (flag)	: 1251M		
On-Column Amount (ng/ul)	: 0.0631		
Integration start scan	: 1526	Integration stop scan:	1541
Y at integration start	: 0	Y at integration end:	0

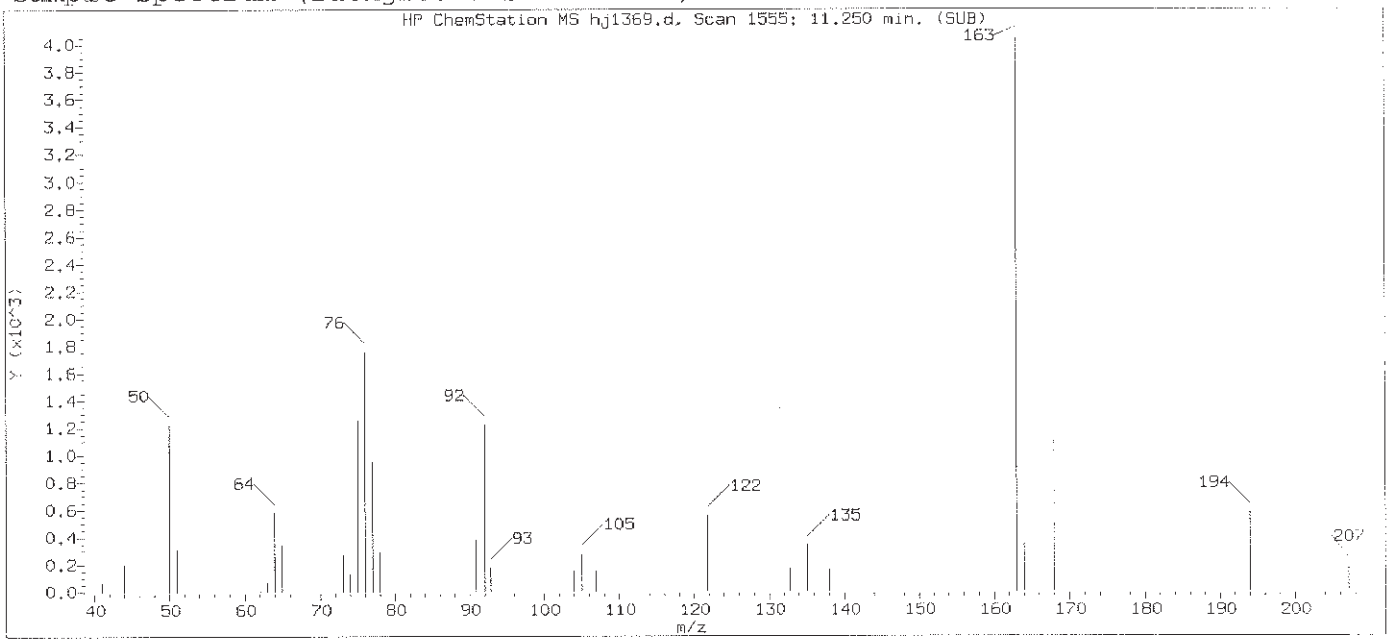
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

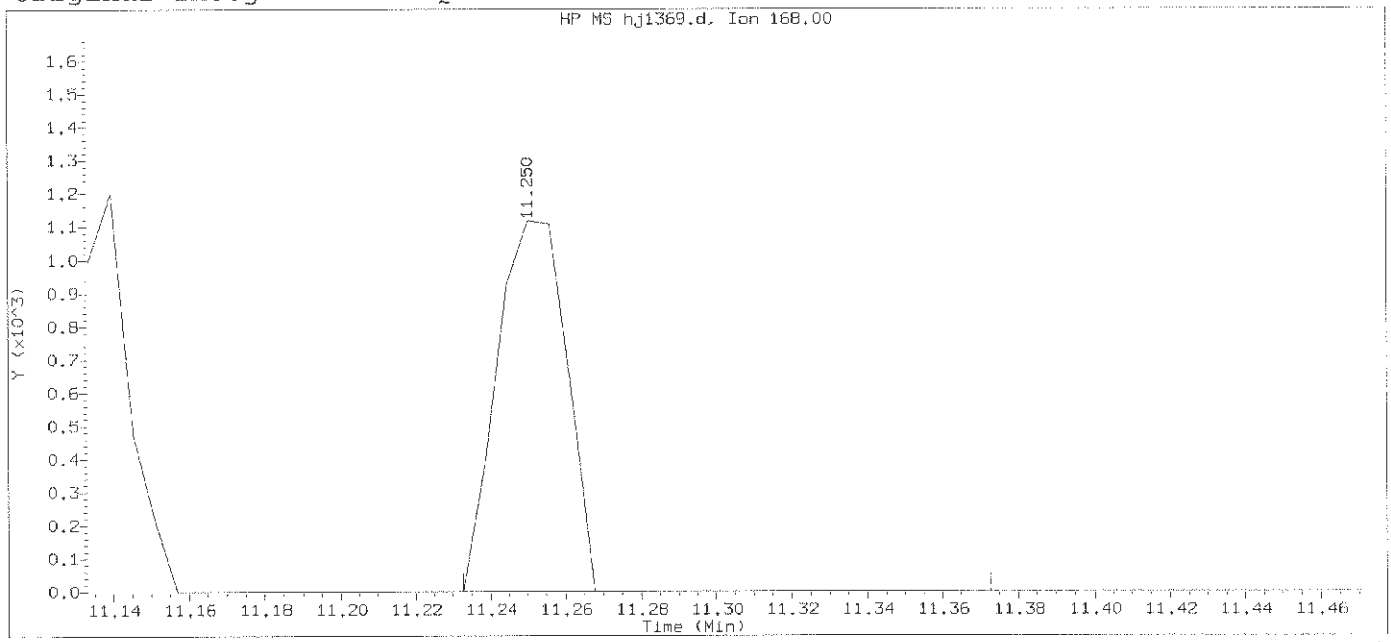
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Chemist Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

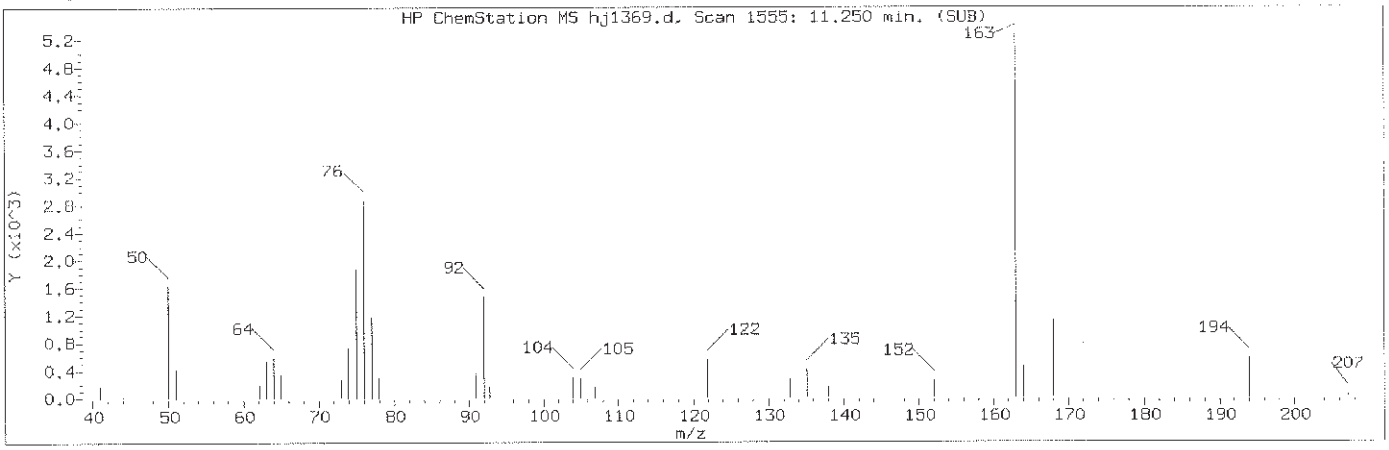
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

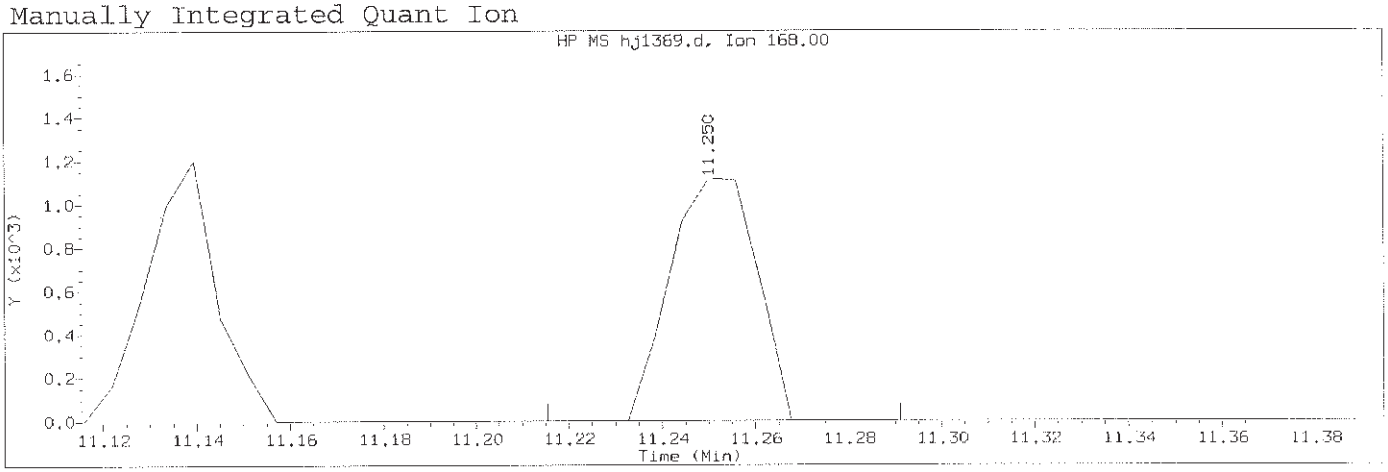
Compound Number	: 77		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1555		
Retention Time (minutes)	: 11.250		
Quant Ion	: 168.00		
Area	: 1440		
On-column Amount (ng/ul)	: 0.0726		
Integration start scan	: 1551	Integration stop scan:	1575
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 79		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1555		
Retention Time (minutes)	: 11.250		
Quant Ion	: 168.00		
Area (flag)	: 1440M		
On-Column Amount (ng/ul)	: 0.0606		
Integration start scan	: 1548	Integration stop scan:	1561
Y at integration start	: 0	Y at integration end:	0

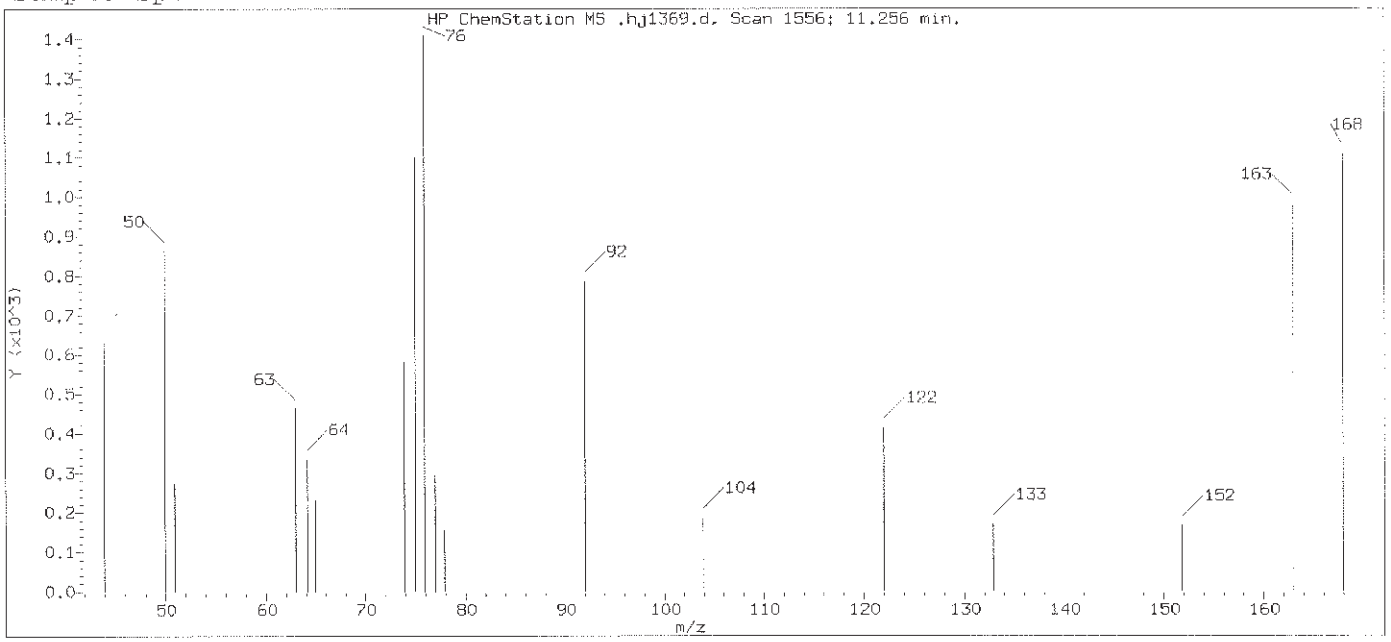
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

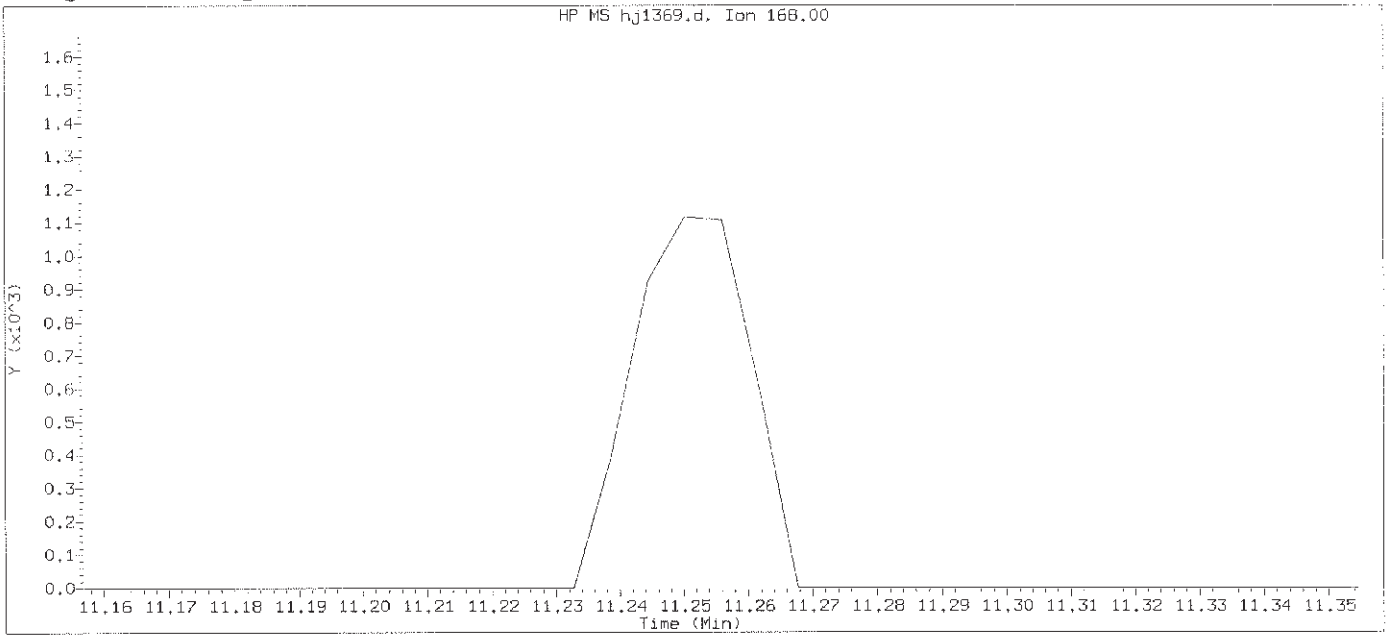
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

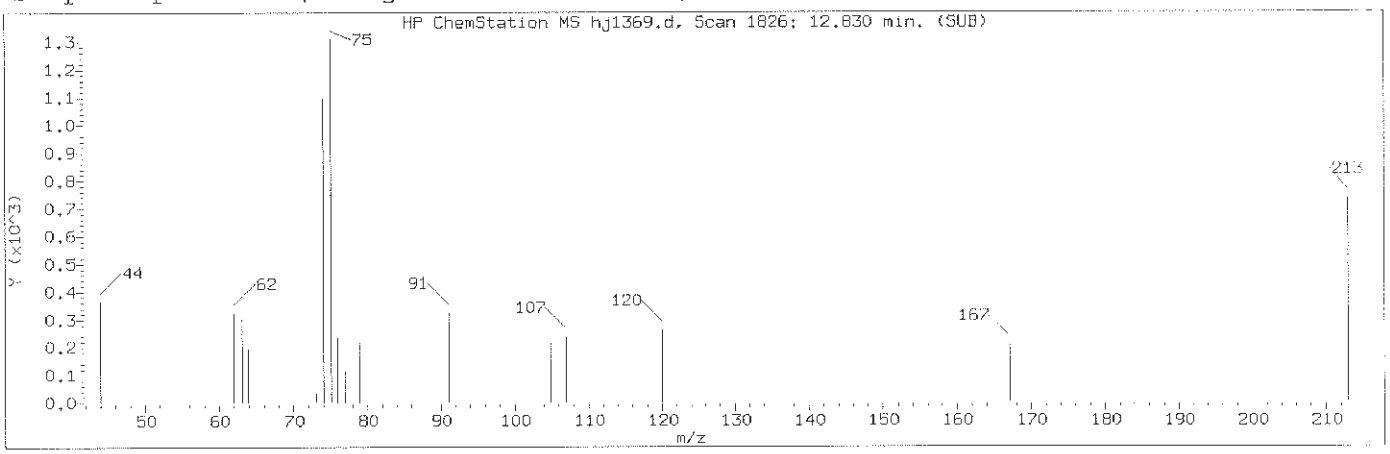
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

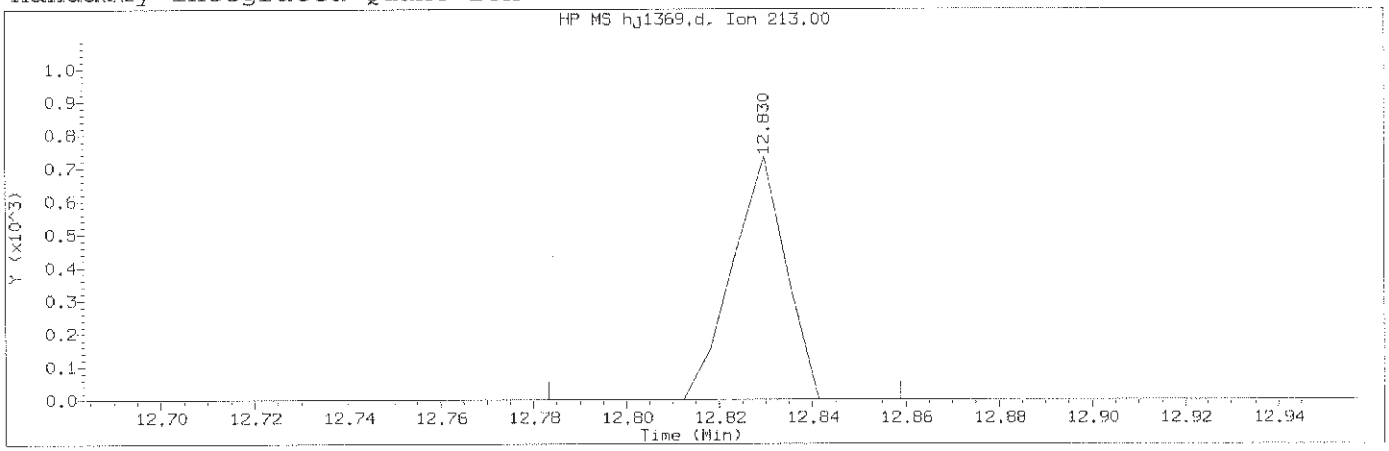
Compound Number : 79
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.256
Quant Ion : 168.00

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 106		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1826		
Retention Time (minutes)	: 12.830		
Quant Ion	: 213.00		
Area (flag)	: 585M		
On-Column Amount (ng/ul)	: 1.6013		
Integration start scan	: 1817	Integration stop scan:	1830
Y at integration start	: 0	Y at integration end:	0

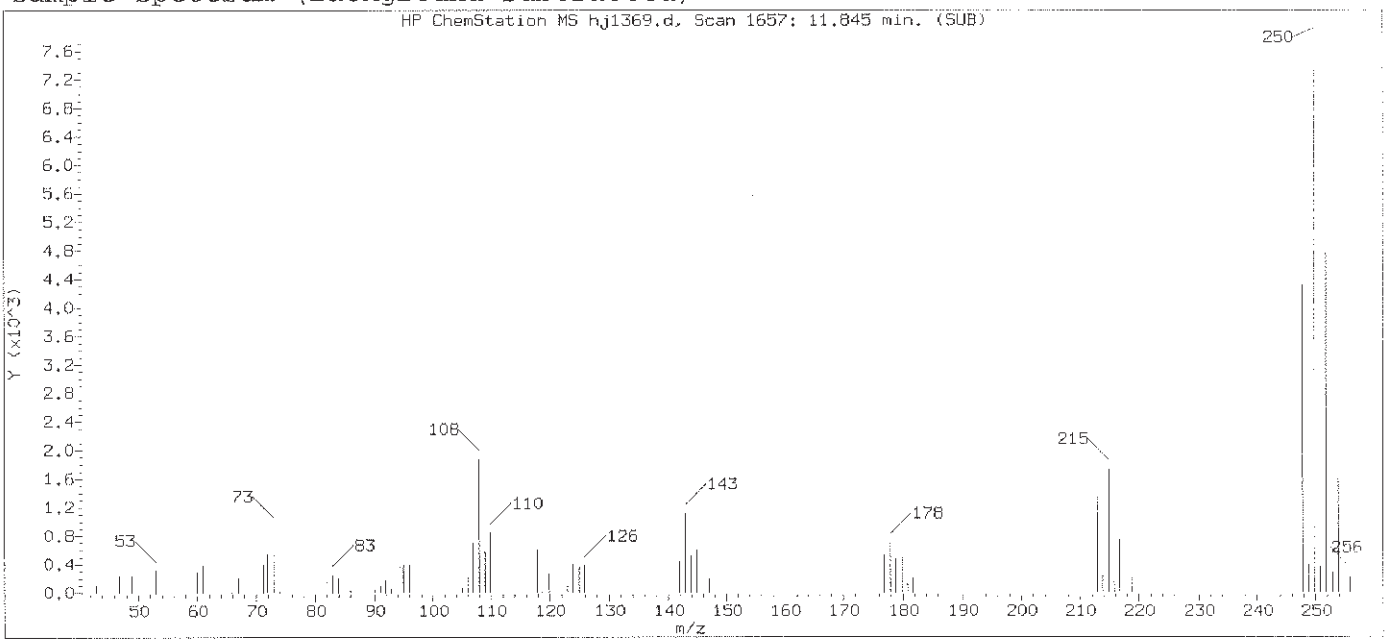
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

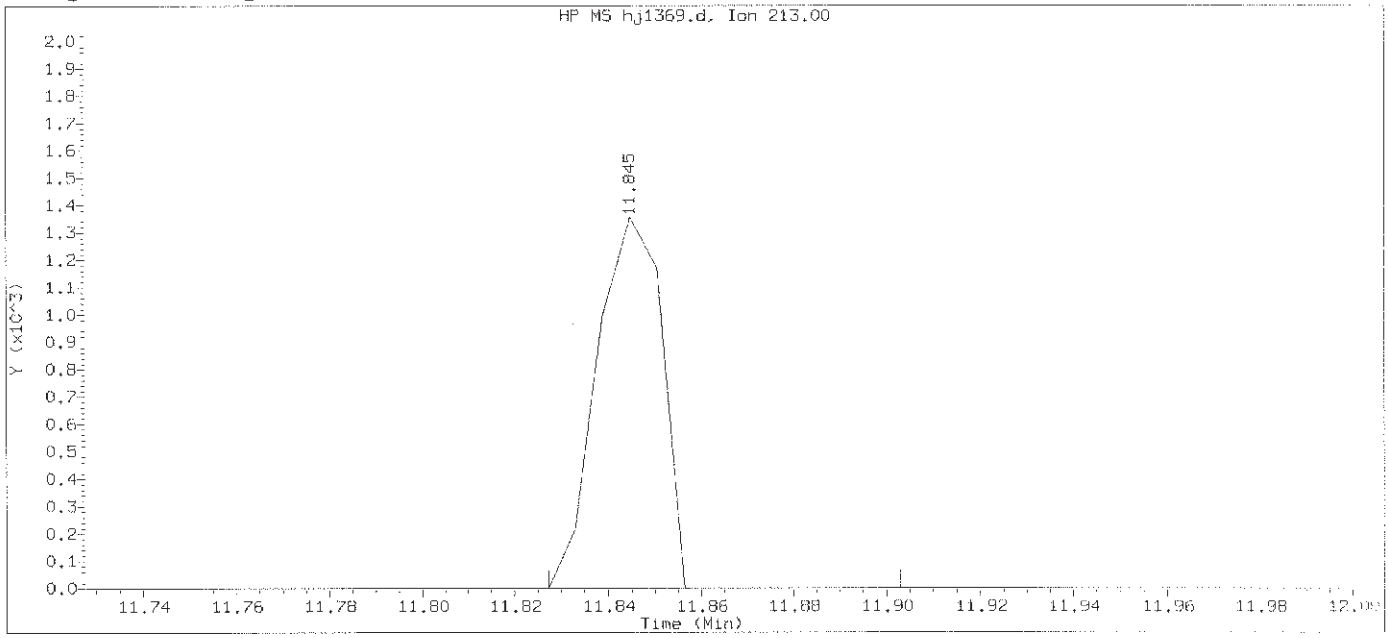
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
GC/MS Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

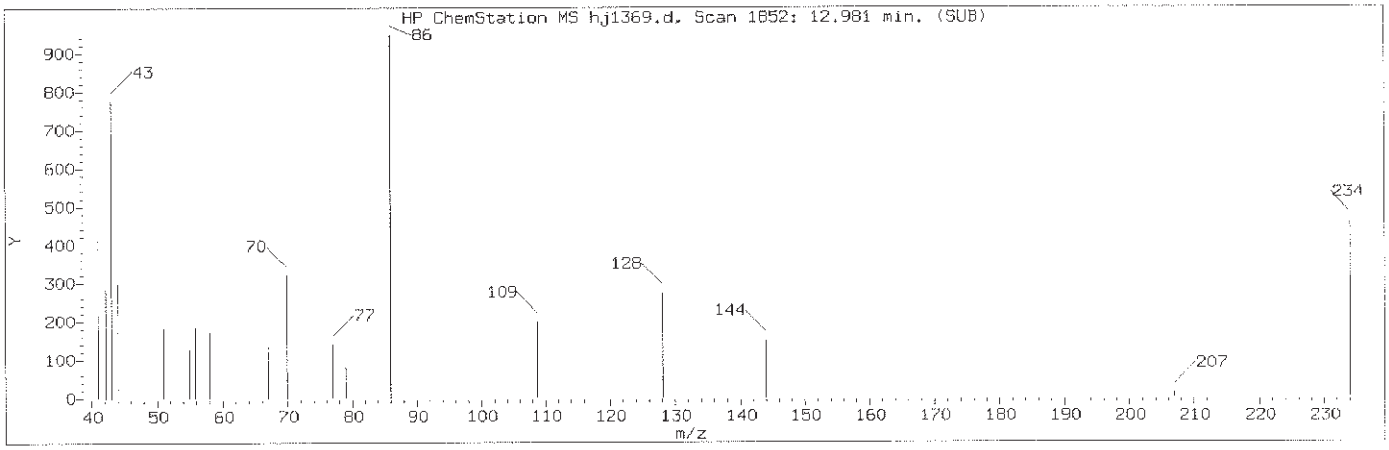
Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

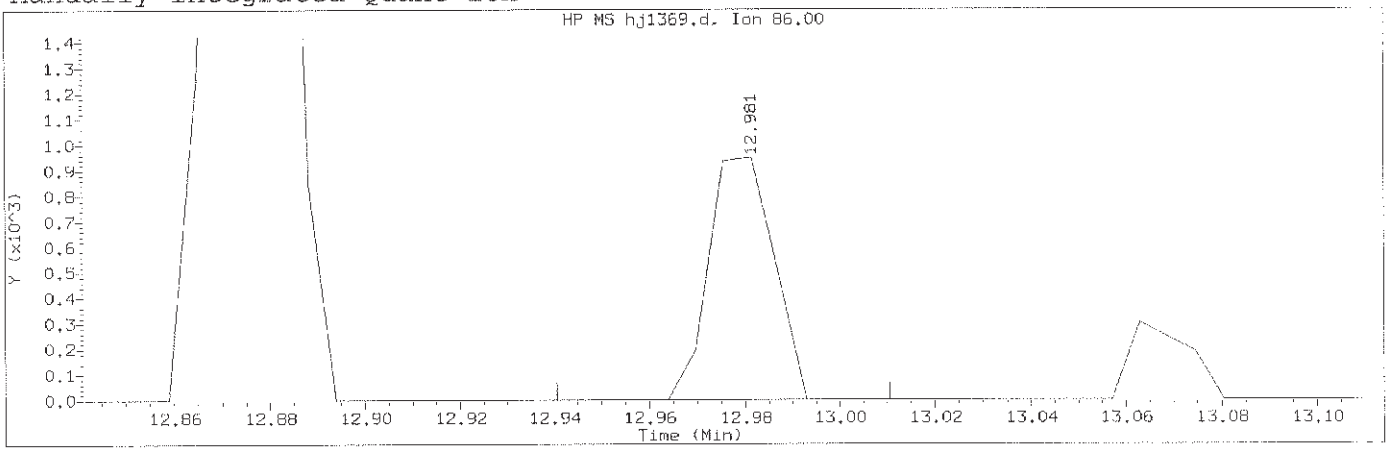
Compound Number	: 106		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1657		
Retention Time (minutes)	: 11.845		
Quant Ion	: 213.00		
Area	: 1305		
On-column Amount (ng/ul)	: 0.0756		
Integration start scan	: 1653	Integration stop scan:	1666
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 111		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1852		
Retention Time (minutes)	: 12.981		
Quant Ion	: 86.00		
Area (flag)	: 898M		
On-Column Amount (ng/ul)	: 0.0254		
Integration start scan	: 1844	Integration stop scan:	1856
Y at integration start	: 0	Y at integration end:	0

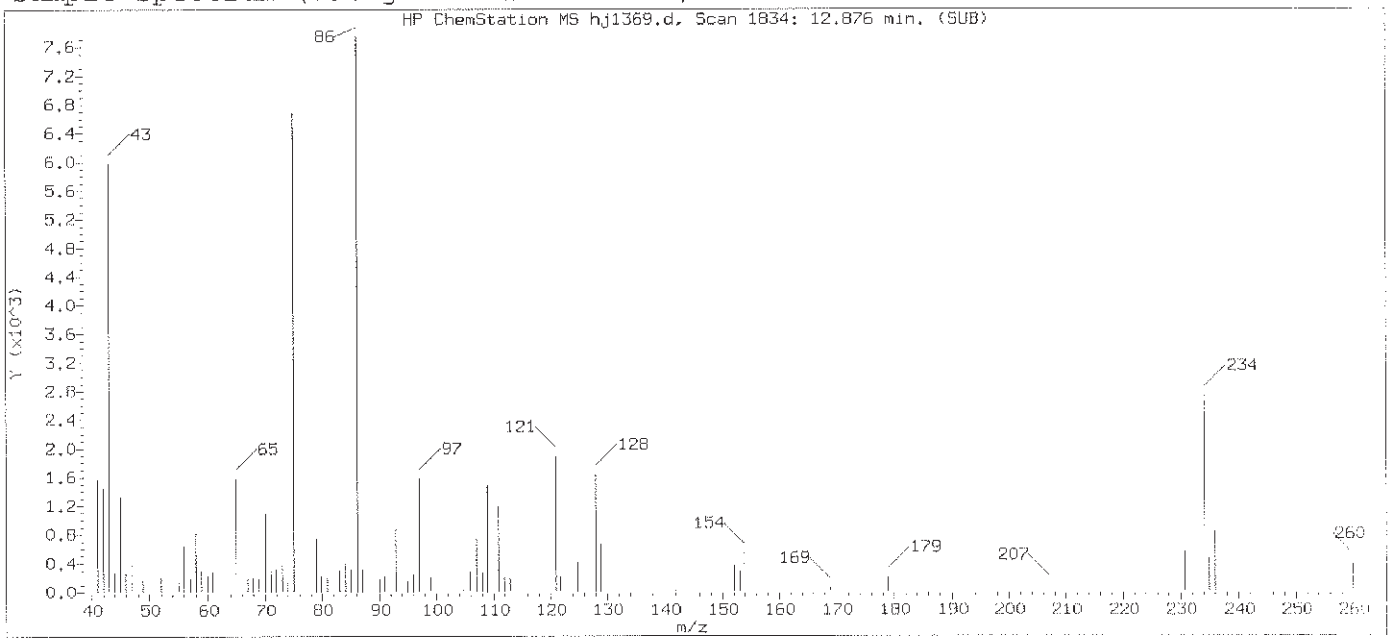
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

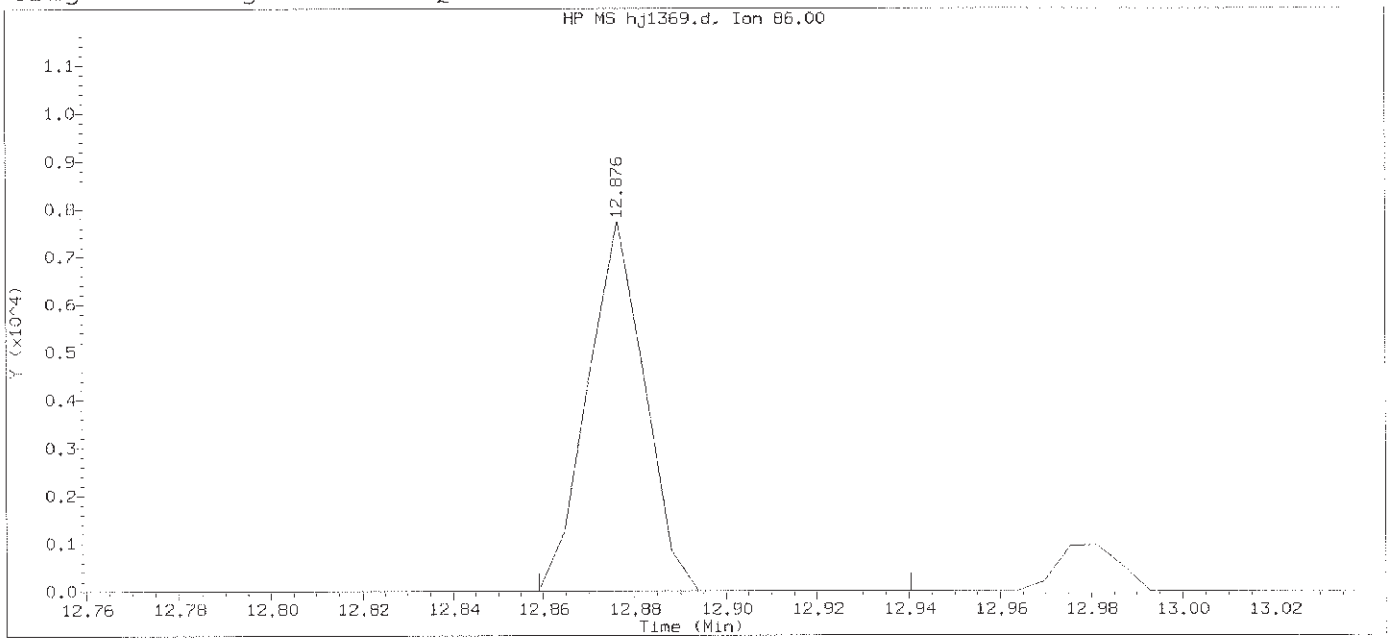
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 111		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1834		
Retention Time (minutes)	: 12.876		
Quant Ion	: 86.00		
Area	: 6647		
On-column Amount (ng/ul)	: 0.1878		
Integration start scan	: 1830	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

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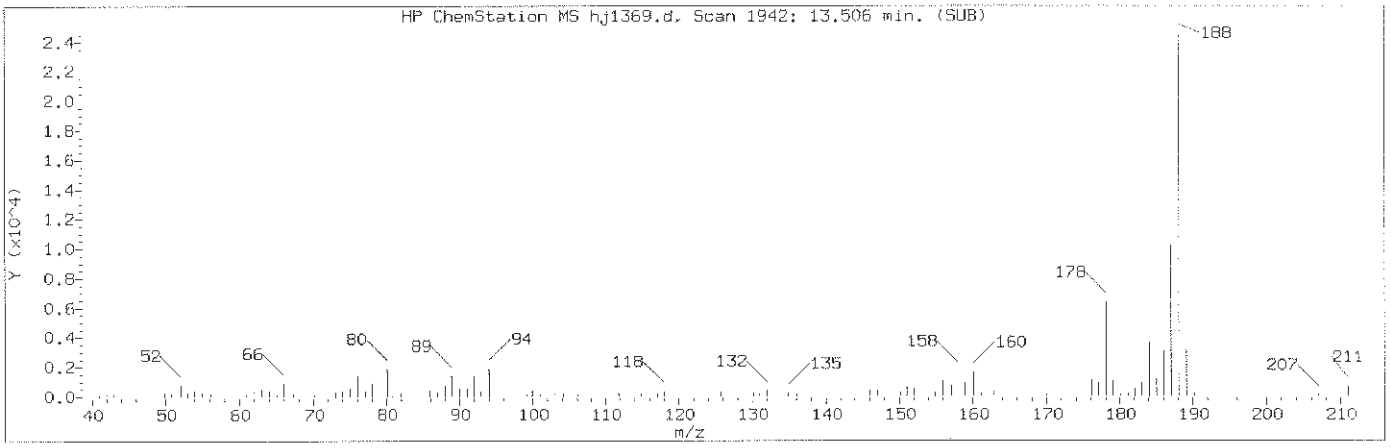
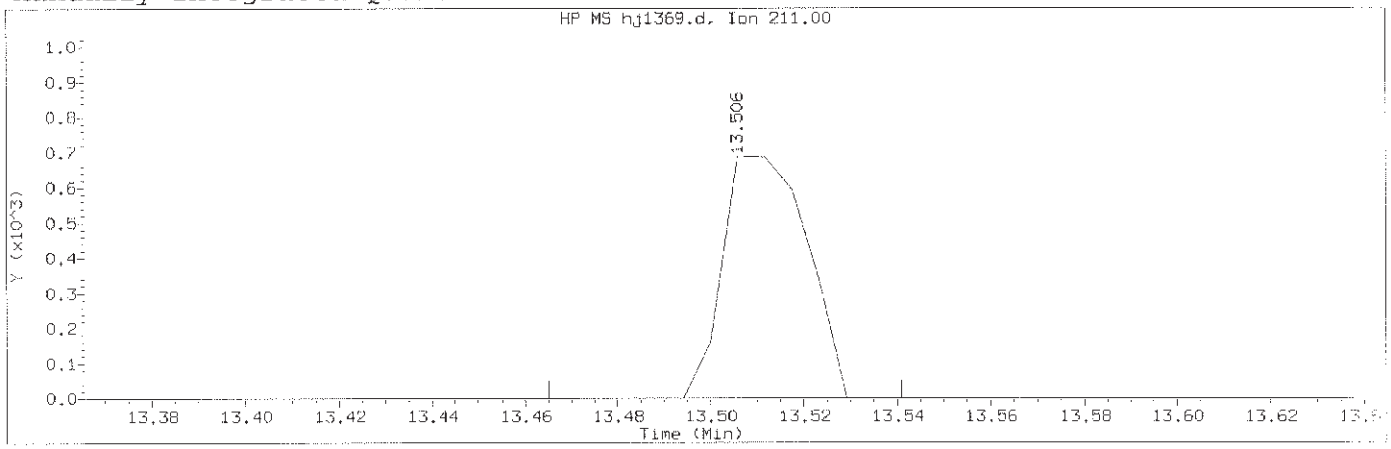
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:54 jmg00346

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number	: 119		
Compound Name	: Dinoseb		
Scan Number	: 1942		
Retention Time (minutes)	: 13.506		
Quant Ion	: 211.00		
Area (flag)	: 861M		
On-Column Amount (ng/ul)	: 1.3180		
Integration start scan	: 1934	Integration stop scan:	1947
Y at integration start	: 0	Y at integration end:	0

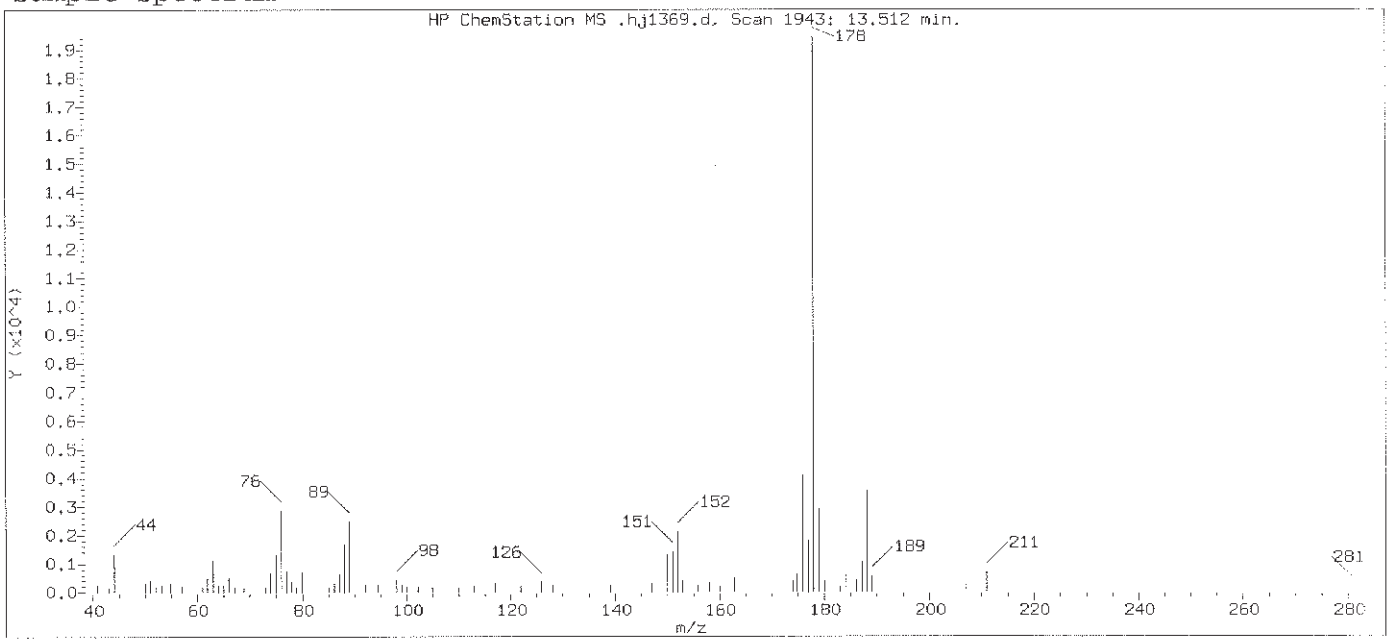
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:56.
Target 3.5 esignature user ID: jmg00346

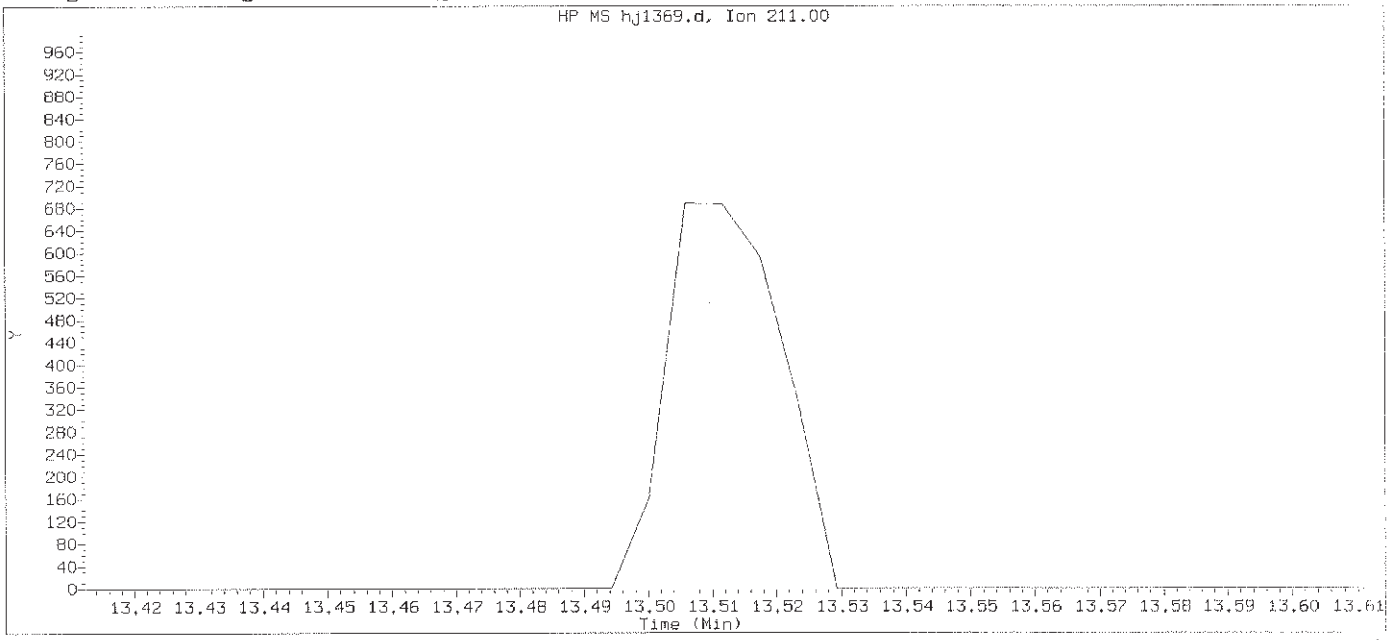
GC/MS audit/management approval: OCT 29 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1369.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:31 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 03:33
Date, time and analyst ID of latest file update: 29-Oct-2013 04:02 Automation

Sample Name: SSTD.125 Lab Sample ID: STDMDL2553

Compound Number : 119
Compound Name : Dinoseb
Expected RT (minutes) : 13.512
Quant Ion : 211.00

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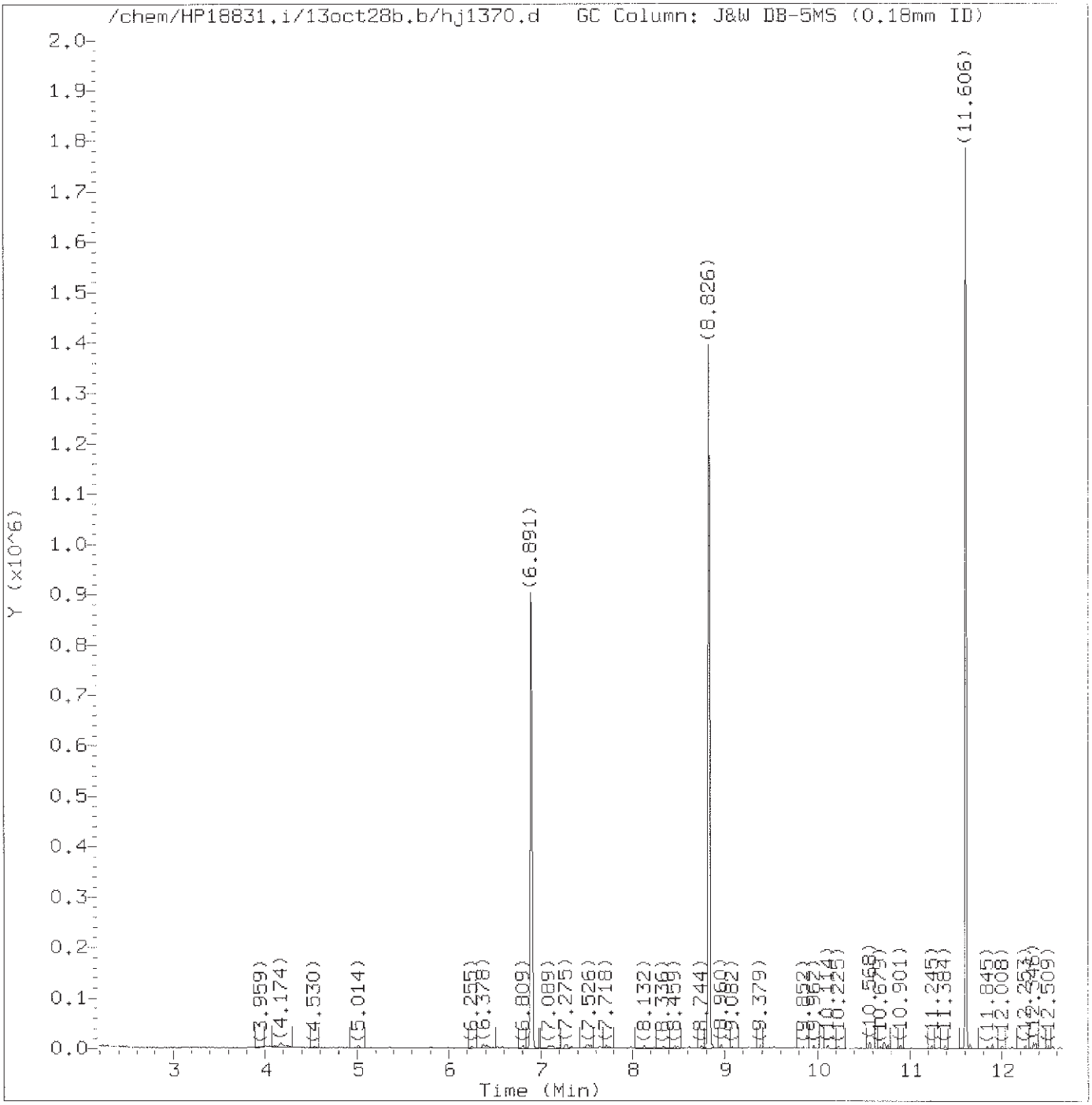
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

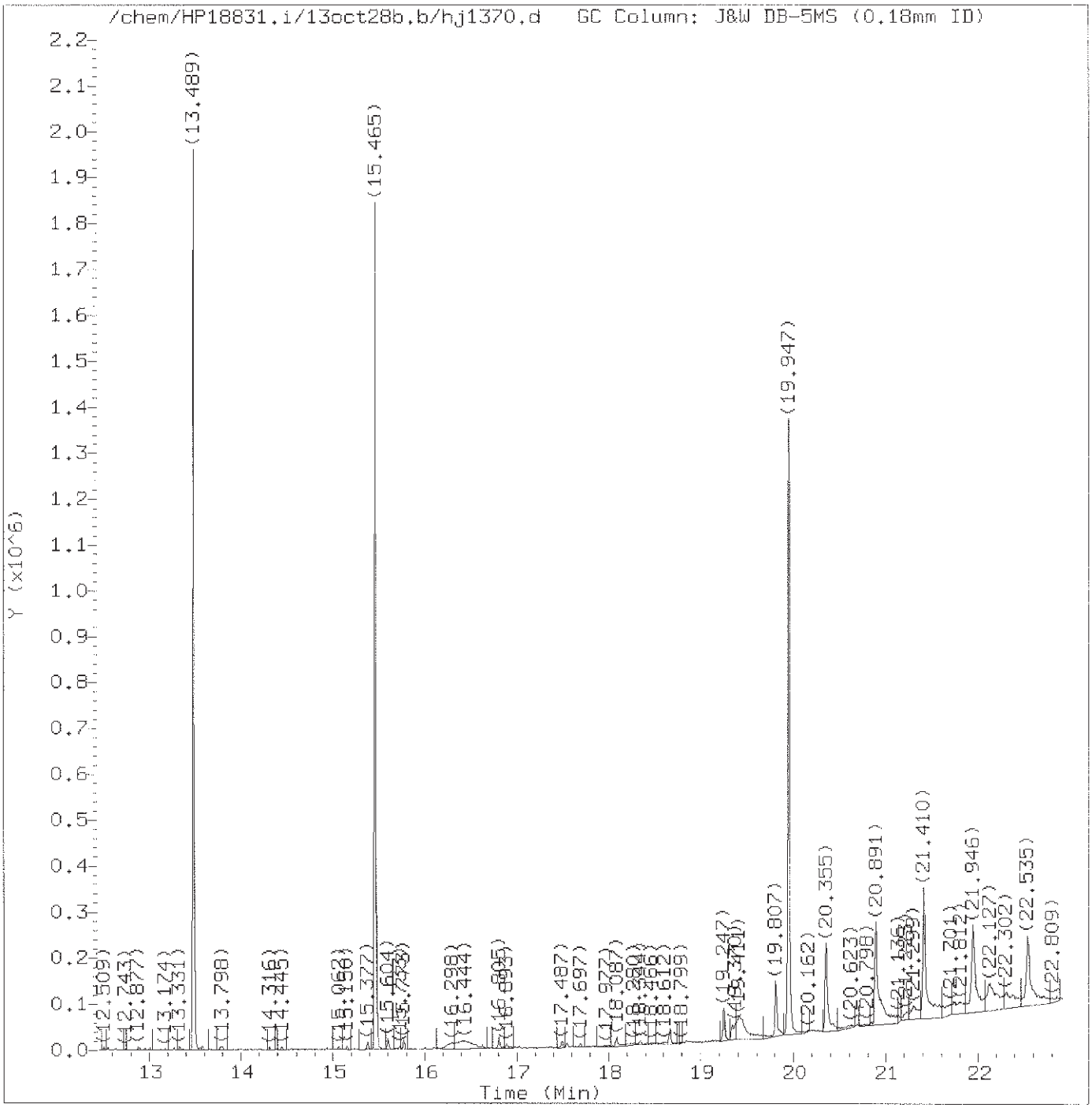
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1370.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:59 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:31 Automation

Sample Name: SSTD.025 Lab Sample ID: STDPAH2813

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 04:57.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1370.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:59 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:31 Automation

Sample Name: SSTD.025 Lab Sample ID: STDPAH2813

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on 10/29/2013 at 04:57.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1370.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 03:59 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 04:31 Automation

Sample Name: SSTD.025 Lab Sample ID: STDPAH2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	5.020	112	2145	0.042
12)$Phenol-d5	(1)	6.372	99	3491	0.050
13)$Phenol-d6	(1)	6.372	99	3491	0.050
21)*1,4-Dichlorobenzene-d4	(1)	6.891	152	184153	5.000
36)$Nitrobenzene-d5	(2)	7.718	82	2851	0.043
48)*Naphthalene-d8	(2)	8.826	136	714574	5.000
49) Naphthalene	(2)	8.861	128	4063	0.028
61) 2-Methylnaphthalene	(2)	9.962	142	2366	0.023
62) 1-Methylnaphthalene	(2)	10.114	142	2381	0.026
68)$2-Fluorobiphenyl	(3)	10.568	172	5017	0.047
81) Acenaphthylene	(3)	11.384	152	2777	0.021
83)*Acenaphthene-d10	(3)	11.606	164	438547	5.000
84) Acenaphthene	(3)	11.653	153	2453	0.026
94) Fluorene	(3)	12.340	166	2454	0.023
104)$2,4,6-Tribromophenol	(3)	12.626	330	490	0.044
112) Hexachlorobenzene	(4)	13.005	284	701	0.023
120)*Phenanthrene-d10	(4)	13.489	188	747767	5.000
121) Phenanthrene	(4)	13.518	178	4708	0.029
122) Anthracene	(4)	13.582	178	3651	0.023
131) Fluoranthene	(4)	15.150	202	3655	0.020
134)*Pyrene-d10	(5)	15.465	212	929201	5.000
133) Pyrene	(5)	15.494	202	5710	0.029
137)$Terphenyl-d14	(5)	15.773	244	8368	0.068
147) Benzo(a)anthracene	(5)	17.487	228	3782	0.022
150) Chrysene	(5)	17.545	228	4068	0.024
154) Benzo(b)fluoranthene	(6)	19.329	252	4032	0.023
156) Benzo(k)fluoranthene	(6)	19.376	252	4609	0.026
157) Benzo(a)pyrene	(6)	19.853	252	4017	0.024
158)*Perylene-d12	(6)	19.947	264	741575	5.000
162) Indeno(1,2,3-cd)pyrene	(6)	21.538	276	3034	0.018
163) Dibenz(a,h)anthracene	(6)	21.579	278	3016	0.021
164) Benzo(g,h,i)perylene	(6)	21.923	276	3973	0.027

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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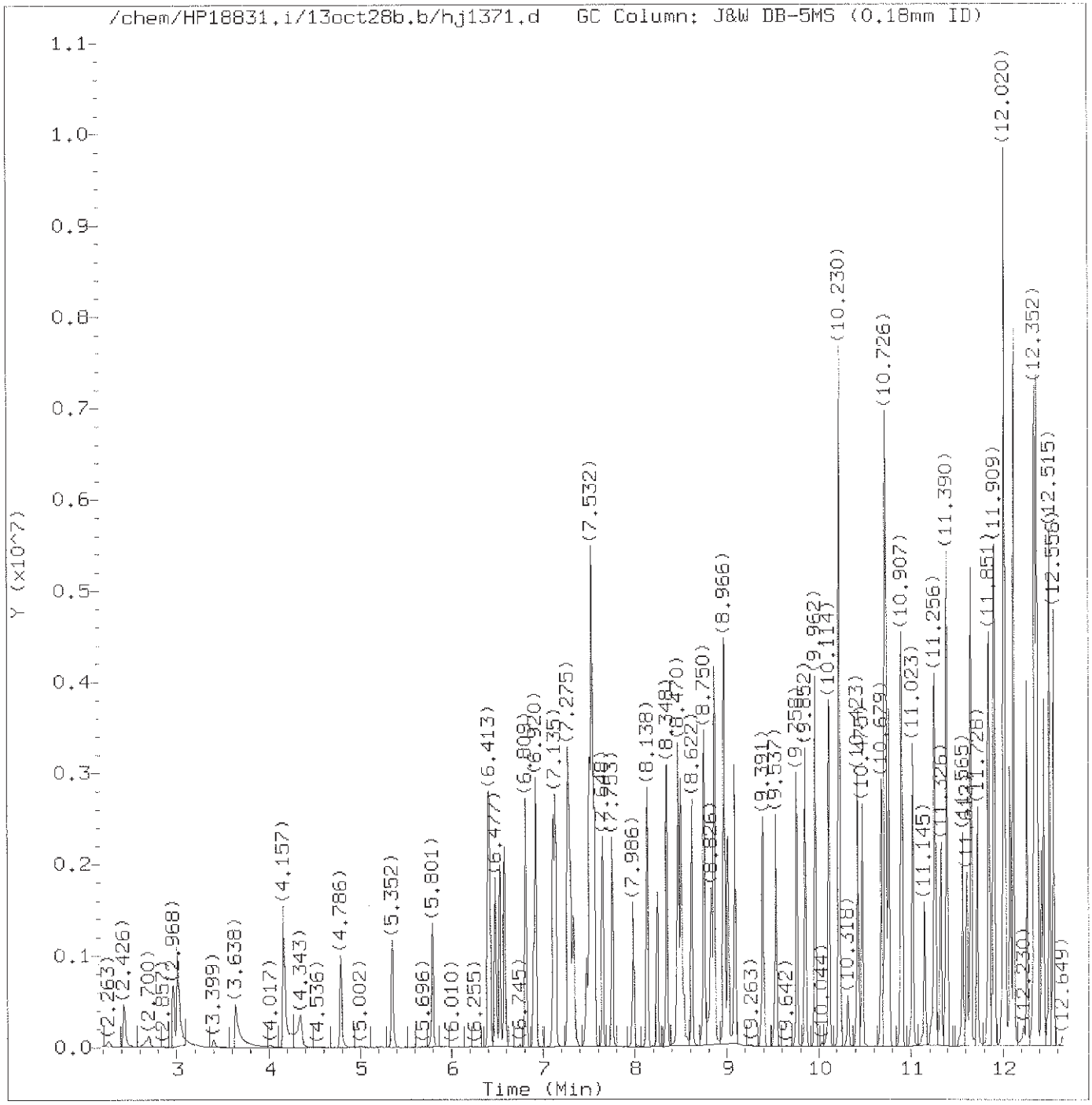
on 10/29/2013 at 04:57.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

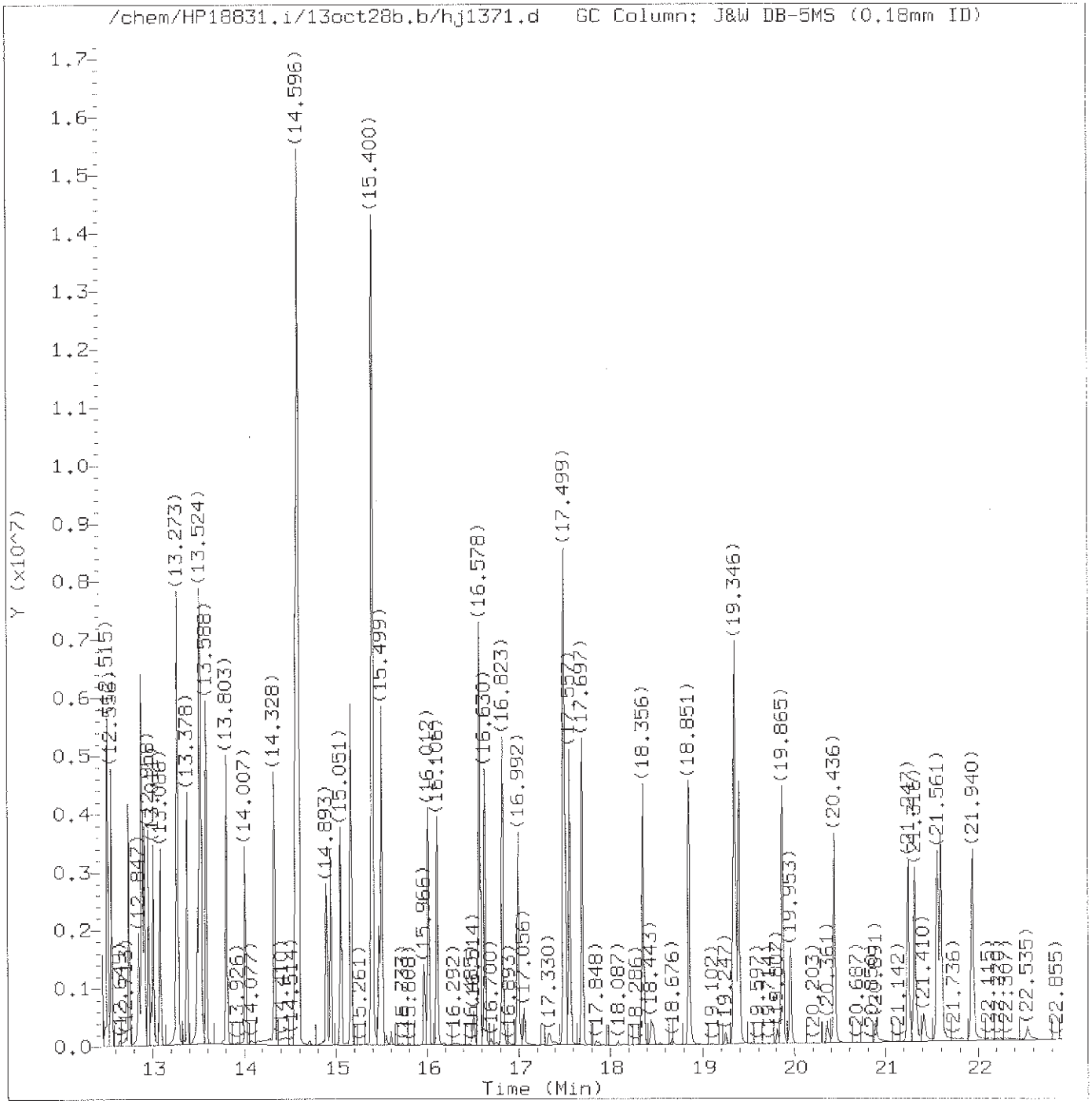
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icval11
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icvall1
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icvall1
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.426	88	354491	12.982
2) N-Nitrosodimethylamine	(1)	2.968	74	604915	13.237
3) Pyridine	(1)	3.009	79	968999	12.443
5) 2-Picoline	(1)	4.157	93	956999	12.489
6) N-Nitrosomethylethylamine	(1)	4.343	88	443692	12.948
7) Methyl methanesulfonate	(1)	4.786	80	583437	13.901
9) N-Nitrosodiethylamine	(1)	5.352	102	419092	13.309
10) Ethyl methanesulfonate	(1)	5.801	109	429749	13.483
14) Phenol	(1)	6.401	94	1249984	12.902
16) Aniline	(1)	6.418	93	1490784	13.234
17) bis(2-Chloroethyl)ether	(1)	6.529	93	930109	12.832
18) 2-Chlorophenol	(1)	6.582	128	785766	13.321
19) 1,3-Dichlorobenzene	(1)	6.809	146	885371	12.947
21)*1,4-Dichlorobenzene-d4	(1)	6.896	152	216763	5.000
20) 1,4-Dichlorobenzene	(1)	6.920	146	903581	13.016
22) Benzyl alcohol	(1)	7.118	108	553641	13.452
23) 1,2-Dichlorobenzene	(1)	7.141	146	830370	12.849
26) 2-Methylphenol	(1)	7.299	108	748281	13.006
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.334	45	1049402	12.510
28) bis(2-Chloroisopropyl)ether	(1)	7.334	45	1049402	12.510
29) N-Nitrosopyrrolidine	(1)	7.473	100	425910	14.036
30) Acetophenone	(1)	7.508	105	1191076	12.777
31) 4-Methylphenol	(1)	7.532	108	857460	12.797
32) N-Nitroso-di-n-propylamine	(1)	7.532	70	738212	13.176
33) N-Nitrosomorpholine	(1)	7.543	56	532267	13.260
34) o-Toluidine	(1)	7.561	106	1313674	12.717
35) Hexachloroethane	(1)	7.648	117	353447	12.840
37) Nitrobenzene	(2)	7.753	77	1044172	12.855
38) N-Nitrosopiperidine	(2)	7.986	114	419637	13.485
39) Isophorone	(2)	8.138	82	1898576	13.663
40) 2-Nitrophenol	(2)	8.243	139	399650	13.820
41) 2,4-Dimethylphenol	(2)	8.348	107	892929	13.223
42) O,O,O-triethylphosphorothioate	(2)	8.470	198	432655	12.604
44) bis(2-Chloroethoxy)methane	(2)	8.499	93	1055416M	13.142
43) Benzoic acid	(2)	8.528	105	588957	16.748
46) 2,4-Dichlorophenol	(2)	8.622	162	668308	13.422
47) 1,2,4-Trichlorobenzene	(2)	8.750	180	788202	13.084
48)*Naphthalene-d8	(2)	8.826	136	833108	5.000
49) Naphthalene	(2)	8.861	128	2156506	12.776
50) 4-Chloroaniline	(2)	8.966	127	959190	13.372

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icval11
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
51) 2,6-Dichlorophenol	(2)	8.971	162	645144	13.350
52) Hexachloropropene	(2)	9.012	213	517073	13.855
53) Hexachlorobutadiene	(2)	9.082	225	450982	12.668
56) N-Nitrosodi-n-butylamine	(2)	9.537	84	675505	11.877
58) 4-Chloro-3-methylphenol	(2)	9.758	107	768391	13.788
60) Safrole	(2)	9.857	162	628011	13.674
61) 2-Methylnaphthalene	(2)	9.962	142	1524944	12.890
62) 1-Methylnaphthalene	(2)	10.114	142	1437206	13.349
63) Hexachlorocyclopentadiene	(3)	10.230	237	908605	32.170
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.230	216	771767	12.249
65) cis-Isosafrole	(3)	10.318	162	107776	13.052
66) 2,4,6-Trichlorophenol	(3)	10.423	196	533573	13.368
67) 2,4,5-Trichlorophenol	(3)	10.475	196	541808	13.489
69) trans-Isosafrole	(3)	10.679	162	641488	13.544
70) Isosafrole	(3)	10.679	162	641488	13.544
71) 1,1'-Biphenyl	(3)	10.726	154	1879929	12.548
72) 2-Chloronaphthalene	(3)	10.732	162	1531802	12.752
73) 1-Chloronaphthalene	(3)	10.767	162	1334172	12.234
74) Diphenyl ether	(3)	10.901	170	1049214	12.668
75) 2-Nitroaniline	(3)	10.912	138	467279	13.869
76) 1,4-Naphthoquinone	(3)	11.023	158	746709	16.405
77) 1,4-Dinitrobenzene	(3)	11.145	168	266453	14.087
78) Dimethylphthalate	(3)	11.250	163	1506296	12.137
79) 1,3-Dinitrobenzene	(3)	11.262	168	294959	13.015
80) 2,6-Dinitrotoluene	(3)	11.326	165	415829	14.078
81) Acenaphthylene	(3)	11.390	152	2274294	14.353
82) 3-Nitroaniline	(3)	11.565	138	439514	13.977
83)*Acenaphthene-d10	(3)	11.612	164	536228	5.000
84) Acenaphthene	(3)	11.658	153	1487773	12.739
85) 2,4-Dinitrophenol	(3)	11.728	184	457020	24.986
86) 4-Nitrophenol	(3)	11.845	109	292532	13.579
87) Pentachlorobenzene	(3)	11.851	250	643892	12.583
88) Dibenzofuran	(3)	11.903	168	2122785	12.951
89) 2,4-Dinitrotoluene	(3)	11.915	165	524022	13.715
90) 1-Naphthylamine	(3)	12.014	143	3105823	27.237
91) 2,3,4,6-Tetrachlorophenol	(3)	12.078	232	464716	14.493
92) 2-Naphthylamine	(3)	12.125	143	2892357	25.252
93) Diethylphthalate	(3)	12.265	149	1476298	12.537
94) Fluorene	(3)	12.346	166	1733239	13.203
95) Thionazin	(3)	12.358	107	300596	12.100

* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icvall1
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
96) 4-Chlorophenyl-phenylether	(3)	12.375	204	855545	12.640
97) 5-Nitro-o-toluidine	(3)	12.375	152	461726	13.639
98) 4-Nitroaniline	(3)	12.387	138	413931	13.338
99) 4,6-Dinitro-2-methylphenol	(4)	12.428	198	311590	12.573
101) N-Nitrosodiphenylamine	(4)	12.515	169	1420431	13.682
102) NDPA as diphenylamine	(4)	12.515	169	1420431	13.682
103) 1,2-Diphenylhydrazine	(4)	12.556	77	2099643	13.690
105) Tetraethyldithiopyrophosphate	(4)	12.743	97	289762	12.664
106) 1,3,5-Trinitrobenzene	(4)	12.853	213	234678	12.603
107) Diallate (peak 1)	(4)	12.882	86	704055	9.445
108) Phorate	(4)	12.888	75	1203905	13.163
109) Phenacetin	(4)	12.912	108	924924	14.214
110) 4-Bromophenyl-phenylether	(4)	12.958	248	492802	13.555
111) Diallate (peak 2)	(4)	12.982	86	100461	3.138
112) Hexachlorobenzene	(4)	13.011	284	470935	13.089
113) Dimethoate	(4)	13.086	87	790847	13.297
115) Pentachlorophenol	(4)	13.261	266	331655	12.606
116) Pentachloronitrobenzene	(4)	13.279	237	232384	14.102
117) 4-Aminobiphenyl	(4)	13.279	169	1934380	14.735
118) Pronamide	(4)	13.378	173	732146	12.939
120)*Phenanthrene-d10	(4)	13.494	188	891758	5.000
119) Dinoseb	(4)	13.518	211	439180	12.645
121) Phenanthrene	(4)	13.524	178	2477412	12.696
122) Anthracene	(4)	13.588	178	2535168	13.393
124) Carbazole	(4)	13.803	167	2437327	13.490
125) Methyl parathion	(4)	14.007	109	614304	14.374
126) Di-n-butylphthalate	(4)	14.328	149	2824241	13.267
127) Parathion	(4)	14.555	109	391748	13.925
128) 4-Nitroquinoline-1-oxide	(4)	14.596	190	3902958	153.343
130) Isodrin	(4)	14.940	193	292567	12.664
131) Fluoranthene	(4)	15.161	202	2976549	13.725
132) Benzidine	(5)	15.406	184	8909915	62.215
134)*Pyrene-d10	(5)	15.470	212	1144575	5.000
133) Pyrene	(5)	15.499	202	2991110	12.513
140) p-Dimethylaminoazobenzene	(5)	16.012	225	668123	13.322
141) Chlorobenzilate	(5)	16.106	139	844999	12.385
142) 3,3'-Dimethylbenzidine	(5)	16.578	212	3855211	26.318
144) Butylbenzylphthalate	(5)	16.630	149	1319975	13.143
146) 2-Acetylaminofluorene	(5)	16.992	181	1214936	12.353
148) 3,3'-Dichlorobenzidine	(5)	17.493	252	1039438	12.751

* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icvall1
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

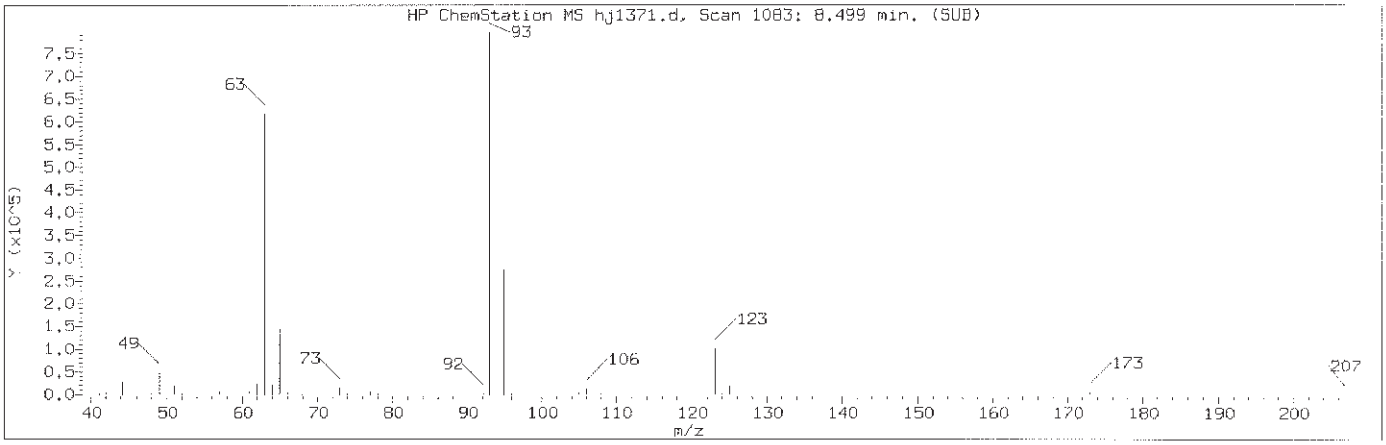
Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
147) Benzo(a)anthracene	(5)	17.499	228	2923518	13.589
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.510	231	518080	12.633
150) Chrysene	(5)	17.557	228	2716550	12.930
151) bis(2-Ethylhexyl)phthalate	(5)	17.697	149	1771727	13.198
152) 6-Methylchrysene	(5)	18.356	242	1901104	12.370
153) Di-n-octylphthalate	(6)	18.851	149	3102033	14.126
154) Benzo(b)fluoranthene	(6)	19.346	252	2750296	13.510
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.352	256	1195963	13.279
156) Benzo(k)fluoranthene	(6)	19.393	252	2707370	13.018
157) Benzo(a)pyrene	(6)	19.865	252	2632110	13.792
158)*Perylene-d12	(6)	19.953	264	855847	5.000
159) 3-Methylcholanthrene	(6)	20.436	268	1329102	13.621
160) Dibenz(a,h)acridine	(6)	21.247	279	1879235	12.982
161) Dibenz(a,j)acridine	(6)	21.316	279	1927538	12.512
162) Indeno(1,2,3-cd)pyrene	(6)	21.561	276	2627453	13.570
163) Dibenz(a,h)anthracene	(6)	21.596	278	2245625	13.582
164) Benzo(g,h,i)perylene	(6)	21.940	276	2245840	13.315
165) Diallate TRANS/CIS	(4)	23.156	86	804516	12.588

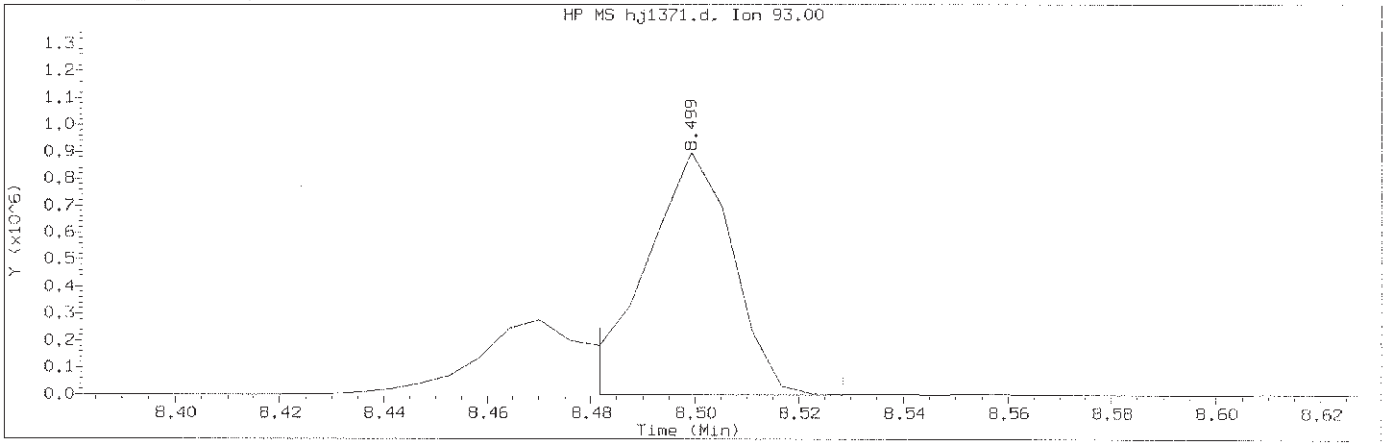
* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icval11
Calibration date and time: 31-OCT-2013 04:02
Date, time and analyst ID of latest file update: 31-Oct-2013 04:03 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 44		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1083		
Retention Time (minutes)	: 8.499		
Quant Ion	: 93.00		
Area (flag)	: 1055416M		
On-Column Amount (ng/ul)	: 13.1423		
Integration start scan	: 1079	Integration stop scan:	1087
Y at integration start	: -760	Y at integration end:	-760

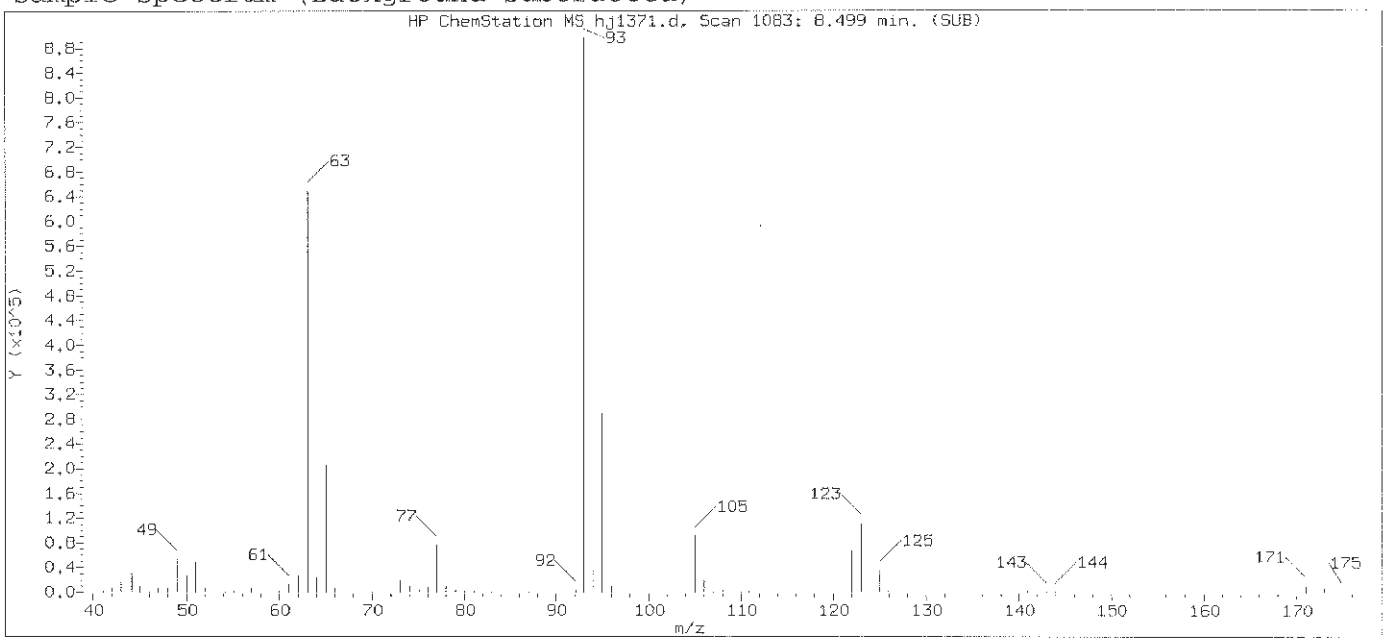
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346

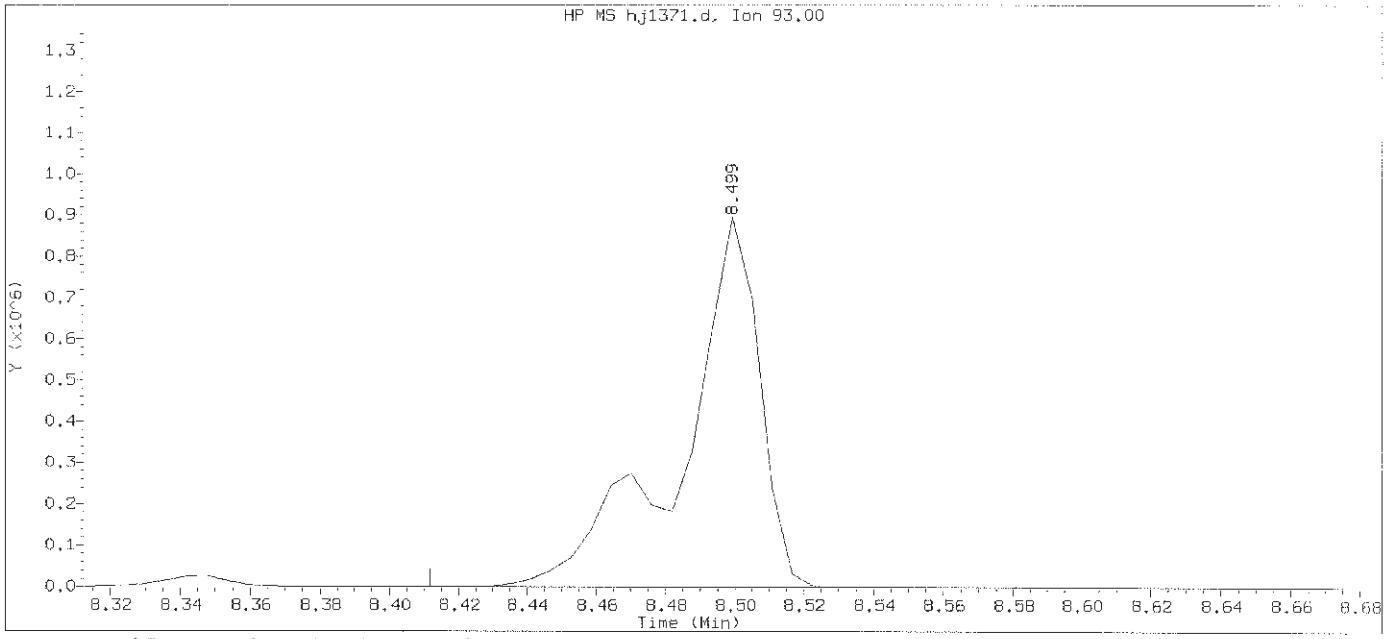
GC/MS audit/management approval: OCT 31 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



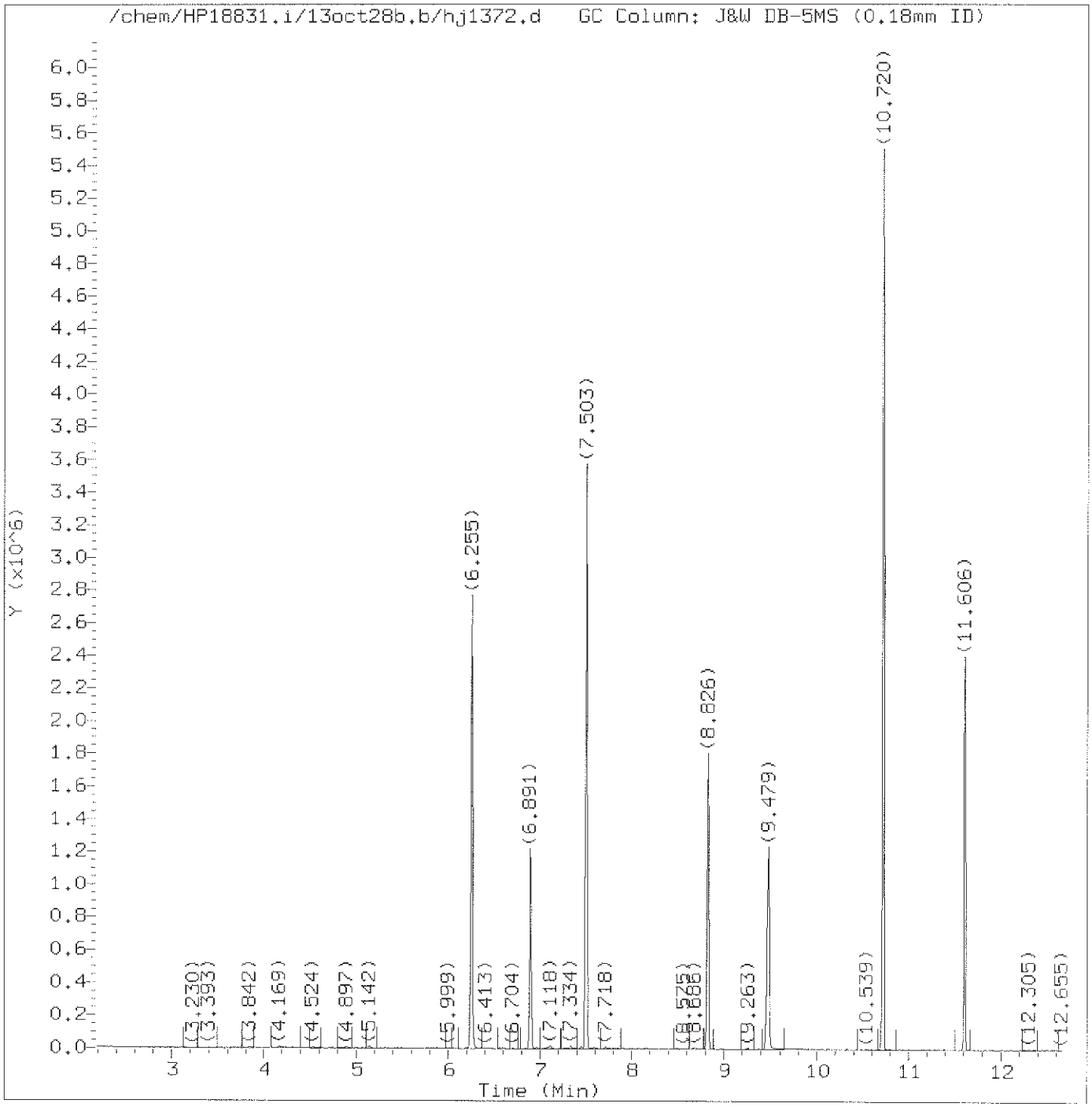
Data File: /chem/HP18831.i/13oct28b.b/hj1371.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:28 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: icval11
Calibration date and time: 29-OCT-2013 04:30
Date, time and analyst ID of latest file update: 29-Oct-2013 05:01 Automation

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 44		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1083		
Retention Time (minutes)	: 8.499		
Quant Ion	: 93.00		
Area	: 1401771		
On-column Amount (ng/ul)	: 17.4551		
Integration start scan	: 1067	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 10/31/2013 at 04:05.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

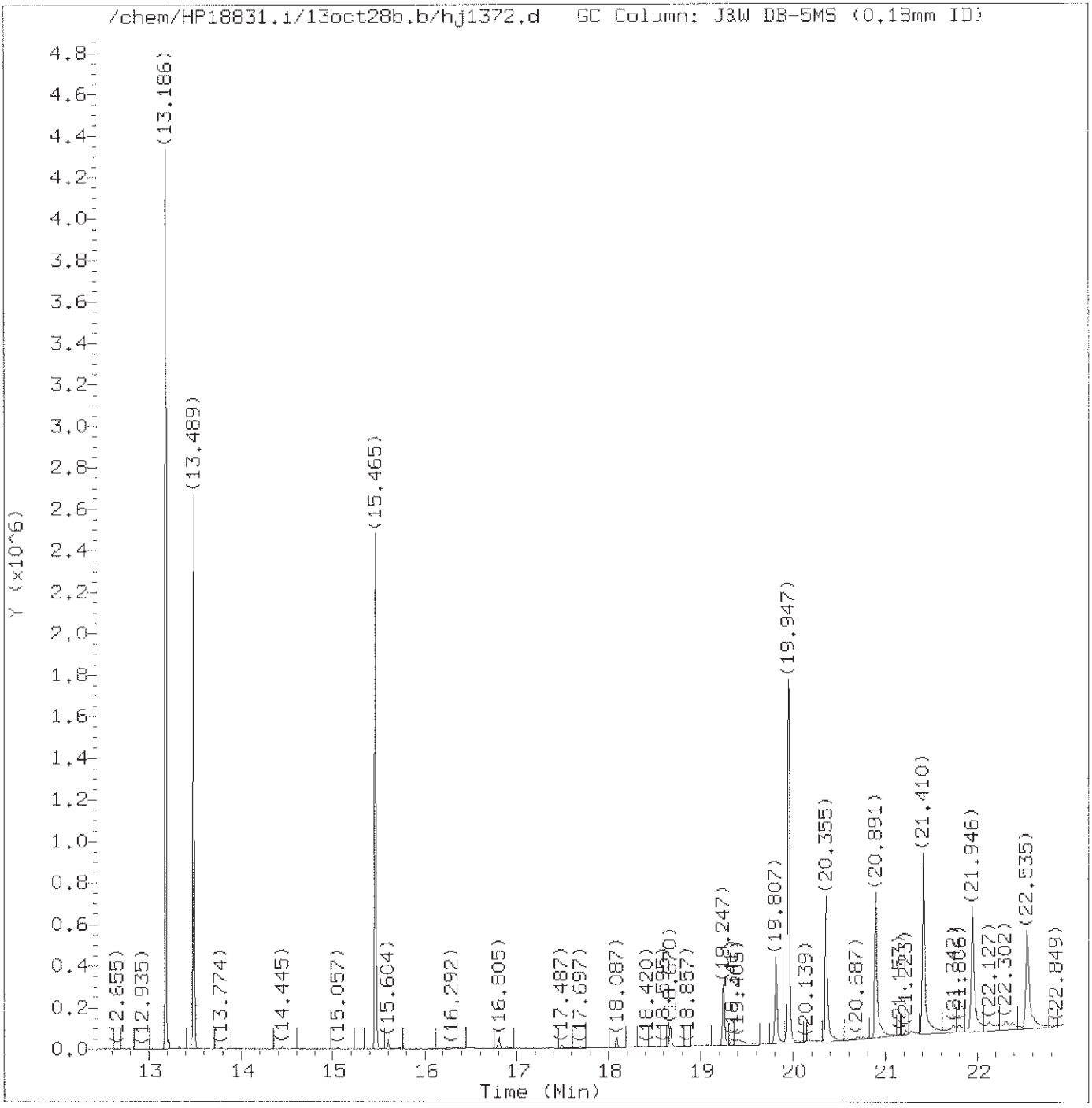
Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1372.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:57 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: basicval11
Calibration date and time: 29-OCT-2013 05:21
Date, time and analyst ID of latest file update: 29-Oct-2013 05:43 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 05:44.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1372.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:57 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: basicval11
Calibration date and time: 29-OCT-2013 05:21
Date, time and analyst ID of latest file update: 29-Oct-2013 05:43 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 05:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13oct28b.b/hj1372.d Instrument ID: HP18831.i
Injection date and time: 29-OCT-2013 04:57 Analyst ID: bkg00522

Method used: /chem/HP18831.i/13oct28b.b/8270_LVI.m Sublist used: basicval11
Calibration date and time: 29-OCT-2013 05:21
Date, time and analyst ID of latest file update: 29-Oct-2013 05:43 jmg00346

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11) Benzaldehyde	(1)	6.255	77	893688	13.668
21)*1,4-Dichlorobenzene-d4	(1)	6.891	152	243112	5.000
48)*Naphthalene-d8	(2)	8.826	136	933564	5.000
55) Caprolactam	(2)	9.479	113	289568	13.191
83)*Acenaphthene-d10	(3)	11.606	164	563565	5.000
114) Atrazine	(4)	13.186	200	561102	13.804
120)*Phenanthrene-d10	(4)	13.489	188	1007359	5.000
134)*Pyrene-d10	(5)	15.465	212	1222897	5.000
158)*Perylene-d12	(6)	19.947	264	978226	5.000

* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 10/29/2013 at 05:44.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0250.d

Date : 08-NOV-2013 04:18

Client ID: DFTPP12.5

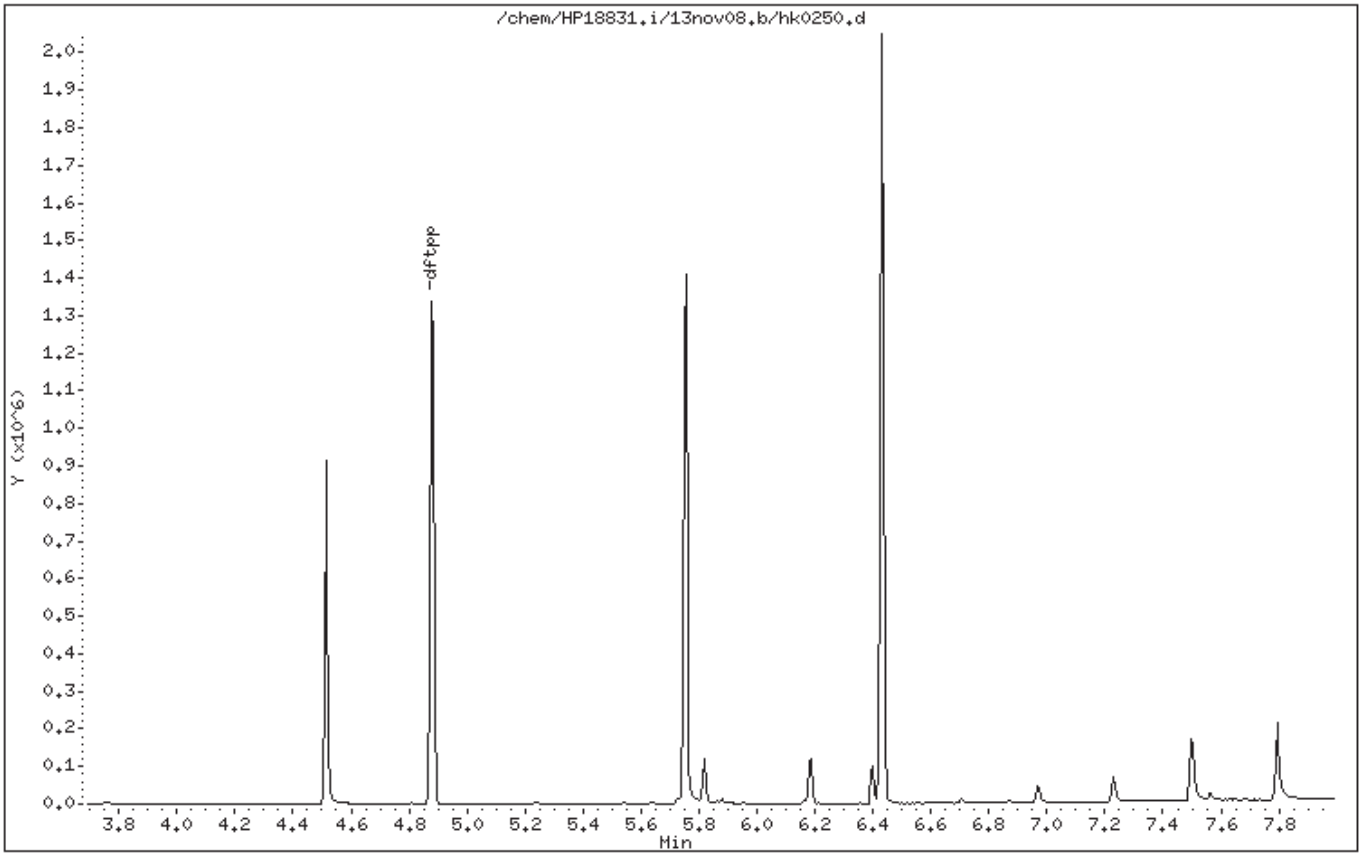
Instrument: HP18831.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0250.d

Date : 08-NOV-2013 04:18

Client ID: DFTPP12.5

Instrument: HP18831.i

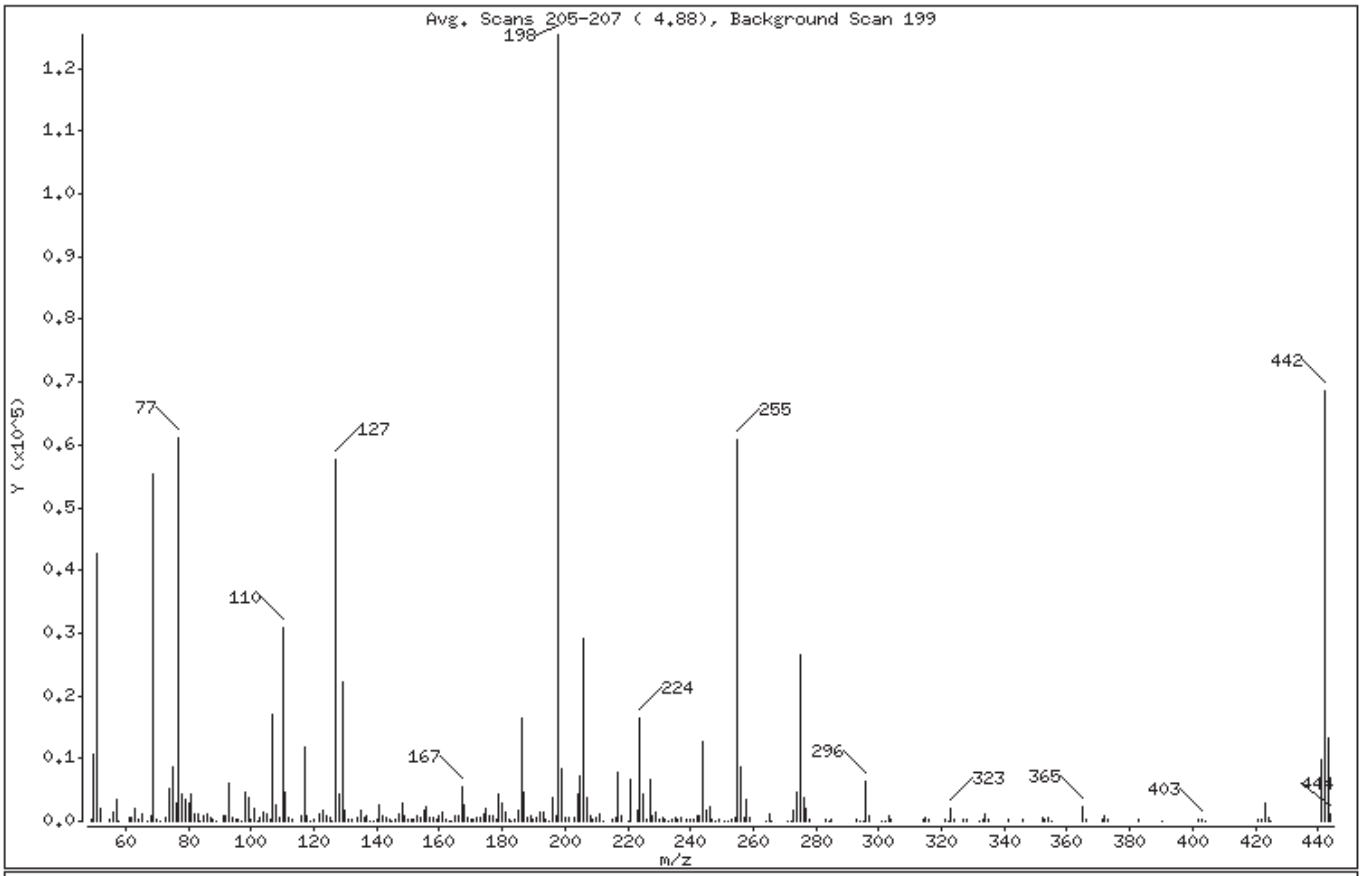
Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	34.04
68	Less than 2.00% of mass 69	0.65 (1.48)
69	Mass 69 relative abundance	44.13
70	Less than 2.00% of mass 69	0.25 (0.56)
127	40.00 - 60.00% of mass 198	45.96
197	Less than 1.00% of mass 198	0.64
199	5.00 - 9.00% of mass 198	6.69
275	10.00 - 30.00% of mass 198	21.15
365	Greater than 1.00% of mass 198	1.76
441	Present, but less than mass 443	7.86
442	40.00 - 99.99% of mass 198	54.70
443	17.00 - 23.00% of mass 442	10.59 (19.35)

Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2013 04:18

Client ID: DFTPP12.5 Instrument: HP18831.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: hk0250.d
Spectrum: Avg. Scans 205-207 (4.88), Background Scan 199
Location of Maximum: 198.00
Number of points: 254

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	338	123.00	1653	188.00	443	259.00	503
50.00	10795	124.00	765	189.00	937	264.00	125
51.00	42680	125.00	600	190.00	162	265.00	1258
52.00	2117	126.00	110	191.00	492	266.00	128
55.00	292	127.00	57624	192.00	1413	271.00	55
56.00	1391	128.00	4254	193.00	1459	272.00	69
57.00	3318	129.00	22136	194.00	256	273.00	1720
58.00	58	130.00	1775	195.00	144	274.00	4576
61.00	654	131.00	273	196.00	3840	275.00	26512
62.00	689	132.00	166	197.00	797	276.00	3604
63.00	1910	134.00	587	198.00	125400	277.00	2154
64.00	253	135.00	1711	199.00	8385	278.00	328
65.00	1161	136.00	607	200.00	608	283.00	206
67.00	58	137.00	927	201.00	575	284.00	92
68.00	819	138.00	58	203.00	703	285.00	299
69.00	55336	139.00	105	204.00	4256	293.00	370
70.00	309	140.00	216	205.00	7184	294.00	117
71.00	113	141.00	2566	206.00	29224	295.00	85
73.00	443	142.00	971	207.00	3703	296.00	6411
74.00	5167	143.00	633	208.00	949	297.00	875
75.00	8505	144.00	166	209.00	300	301.00	53
76.00	2844	145.00	57	210.00	438	302.00	61
77.00	61000	146.00	353	211.00	1143	303.00	763
78.00	4241	147.00	1252	212.00	134	304.00	161
79.00	3537	148.00	2885	215.00	291	314.00	240
80.00	2805	149.00	789	216.00	653	315.00	601
81.00	4197	150.00	193	217.00	7653	316.00	335
82.00	1062	151.00	377	218.00	980	321.00	167
83.00	1094	152.00	227	220.00	134	322.00	55
84.00	51	153.00	908	221.00	6679	323.00	2078
85.00	795	154.00	656	223.00	1709	324.00	371
86.00	1125	155.00	1643	224.00	16432	327.00	297
87.00	589	156.00	2253	225.00	4336	328.00	153
88.00	149	157.00	475	226.00	383	332.00	132
89.00	55	158.00	480	227.00	6507	333.00	172

Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Date : 08-NOV-2013 04:18

Client ID: DFTPP12.5 Instrument: HP18831.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

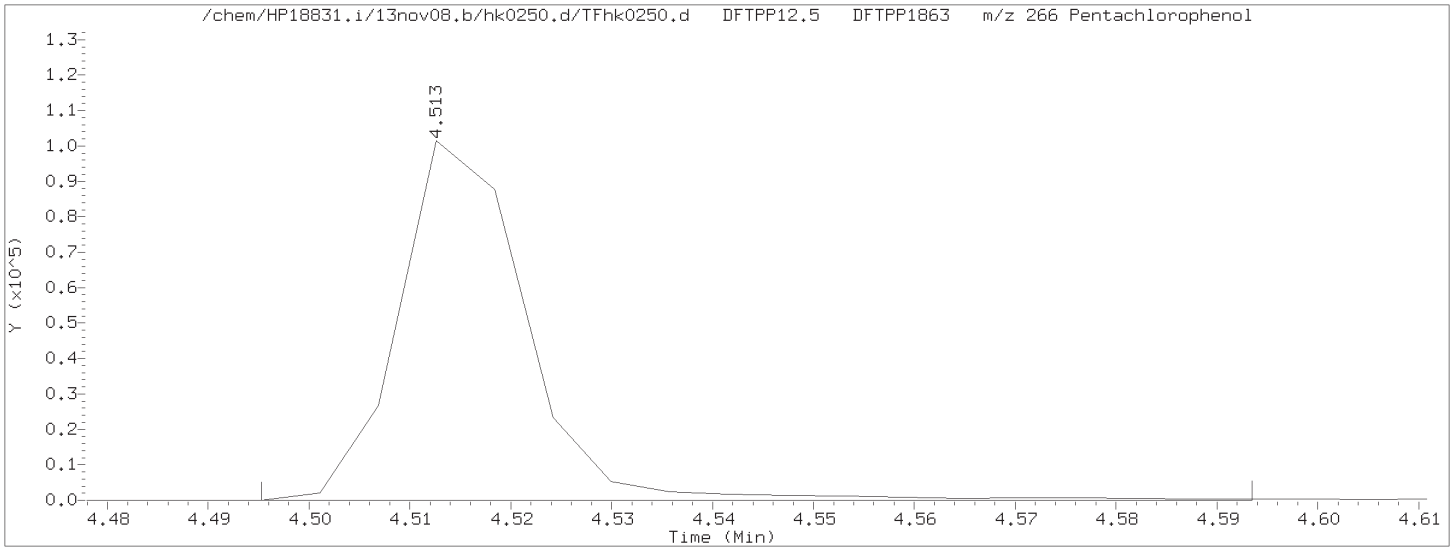
Data File: hk0250.d
Spectrum: Avg. Scans 205-207 (4.88), Background Scan 199
Location of Maximum: 198.00
Number of points: 254

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	964	159.00	357	228.00	857	334.00	1220
92.00	973	160.00	894	229.00	1341	335.00	269
93.00	6077	161.00	1314	230.00	167	341.00	193
94.00	434	162.00	354	231.00	523	346.00	330
95.00	182	163.00	59	232.00	153	352.00	455
96.00	316	164.00	127	233.00	64	353.00	336
97.00	60	165.00	998	234.00	386	354.00	516
98.00	4531	166.00	899	235.00	457	355.00	55
99.00	3889	167.00	5619	236.00	303	365.00	2205
100.00	358	168.00	2605	237.00	508	366.00	316
101.00	2150	169.00	541	239.00	240	371.00	147
102.00	126	170.00	158	240.00	177	372.00	811
103.00	648	171.00	181	241.00	335	373.00	244
104.00	1336	172.00	481	242.00	856	383.00	210
105.00	1266	173.00	603	243.00	810	390.00	69
106.00	431	174.00	1166	244.00	12637	402.00	296
107.00	16944	175.00	2096	245.00	1589	403.00	362
108.00	2733	176.00	747	246.00	2405	404.00	87
109.00	454	177.00	986	247.00	407	421.00	304
110.00	30784	178.00	330	248.00	61	422.00	360
111.00	4605	179.00	4243	249.00	394	423.00	2940
112.00	541	180.00	2841	251.00	59	424.00	616
113.00	213	181.00	1396	252.00	63	425.00	52
116.00	852	182.00	210	253.00	196	441.00	9853
117.00	11688	183.00	78	254.00	499	442.00	68584
118.00	872	184.00	329	255.00	60904	443.00	13274
119.00	70	185.00	1872	256.00	8725	444.00	1216
120.00	196	186.00	16295	257.00	585		
122.00	1012	187.00	4507	258.00	3472		

Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

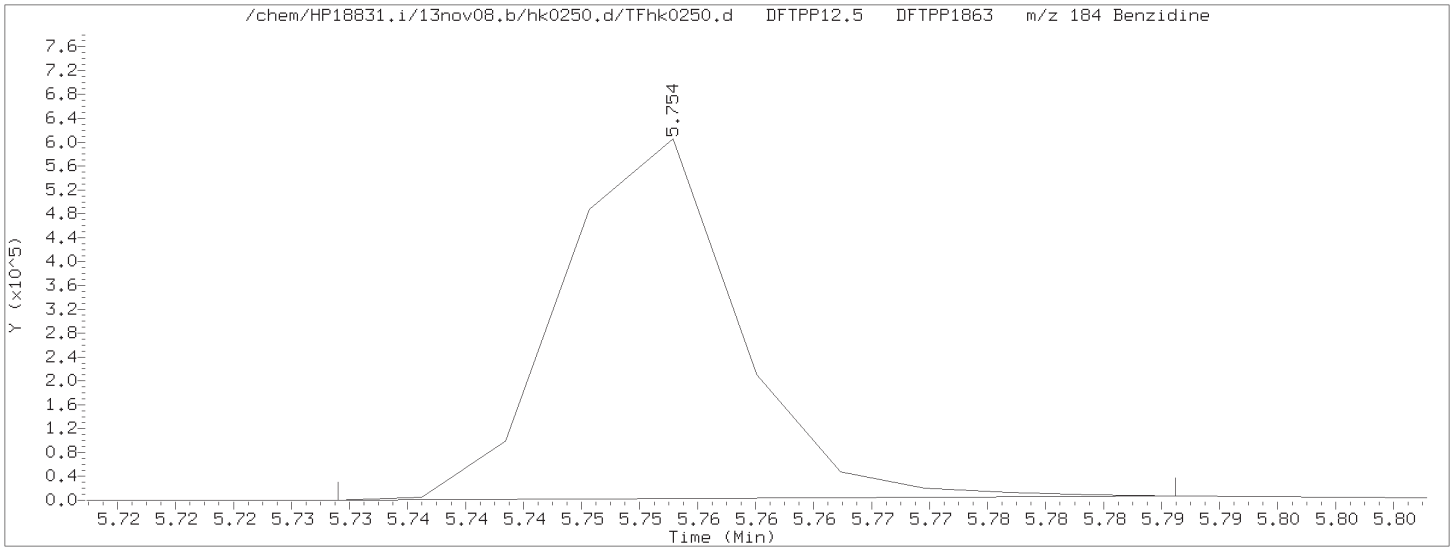
Instrument ID: HP18831.i Injection Date: 08-NOV-2013 04:18 Operator: jmg00346



Pentachlorophenol EICP peak height = 101544 EICP peak height at 10% = 10154 Pentachlorophenol EICP area = 89002

Pentachlorophenol EICP peak apex (min.) = 4.513
RT at 10% of front half of EICP (min.) = 4.503 'Front' peak width (min.) = 0.0096166667
RT at 10% of back half of EICP (min.) = 4.528 'Tailing' peak width (min.) = 0.0157500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0157500000}{0.0096166667} = 1.638$



Benzidine EICP peak height = 602785 EICP peak height at 10% = 60278 Benzidine EICP area = 508256

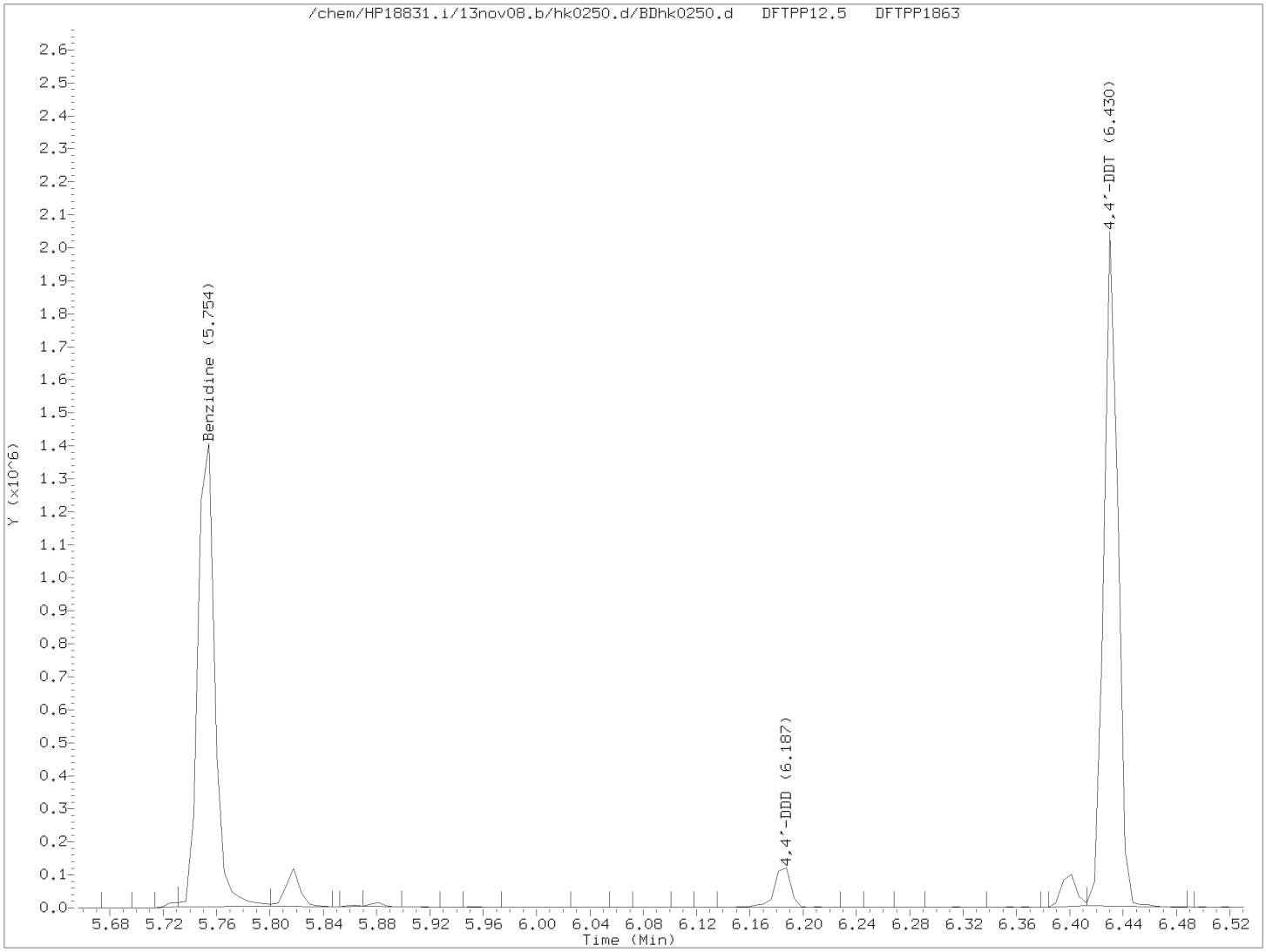
Benzidine EICP peak apex (min.) = 5.754
RT at 10% of front half of EICP (min.) = 5.741 'Front' peak width (min.) = 0.0137500000
RT at 10% of back half of EICP (min.) = 5.765 'Tailing' peak width (min.) = 0.0109833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0109833333}{0.0137500000} = 0.799$

Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

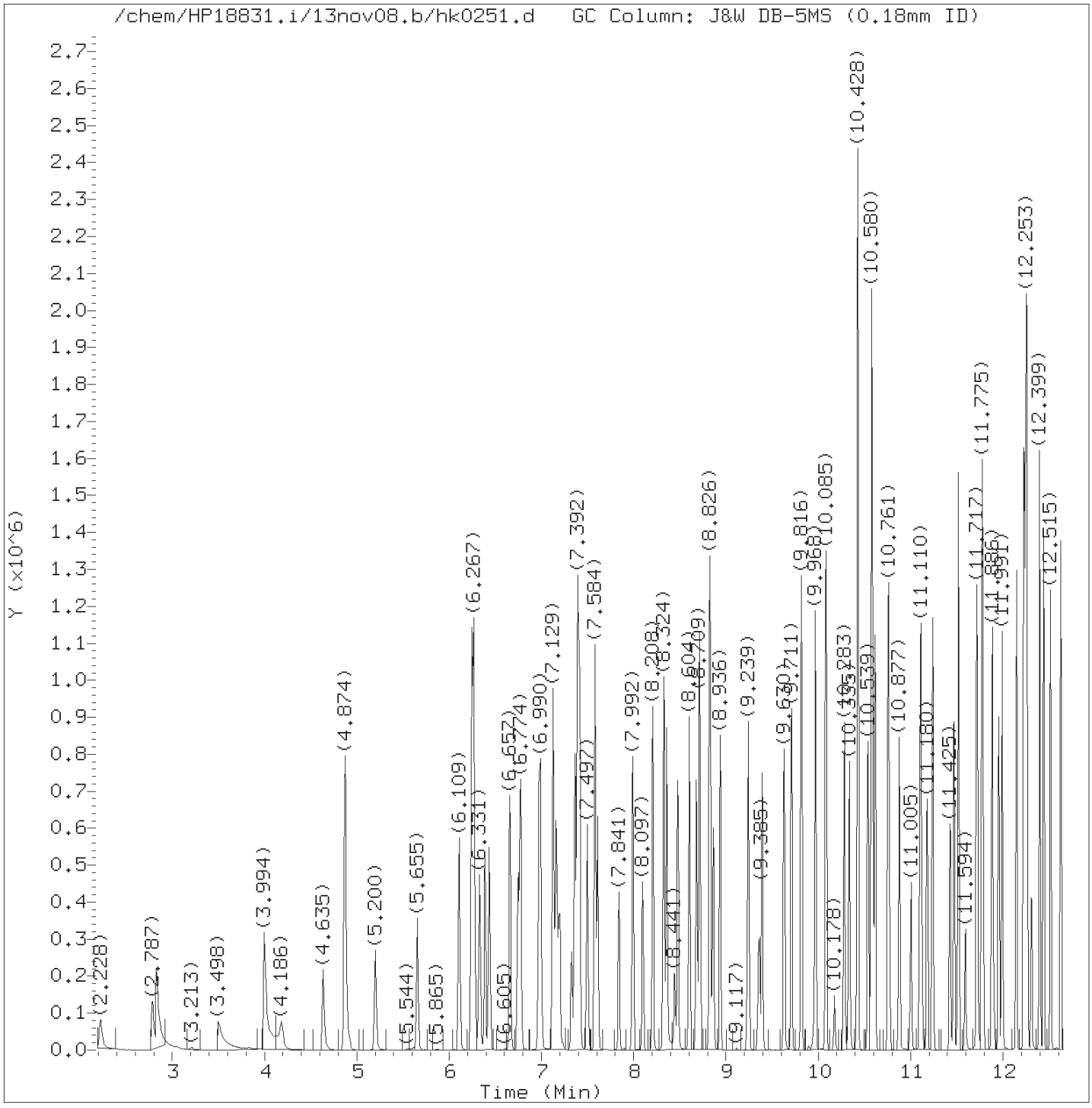
Instrument ID: HP18831.i Injection Date: 08-NOV-2013 04:18 Operator: jmg00346



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 107726}{0 + 107726 + 1500904} \times 100 = 6.7$$

Digitally signed by Joseph M. Gambler on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

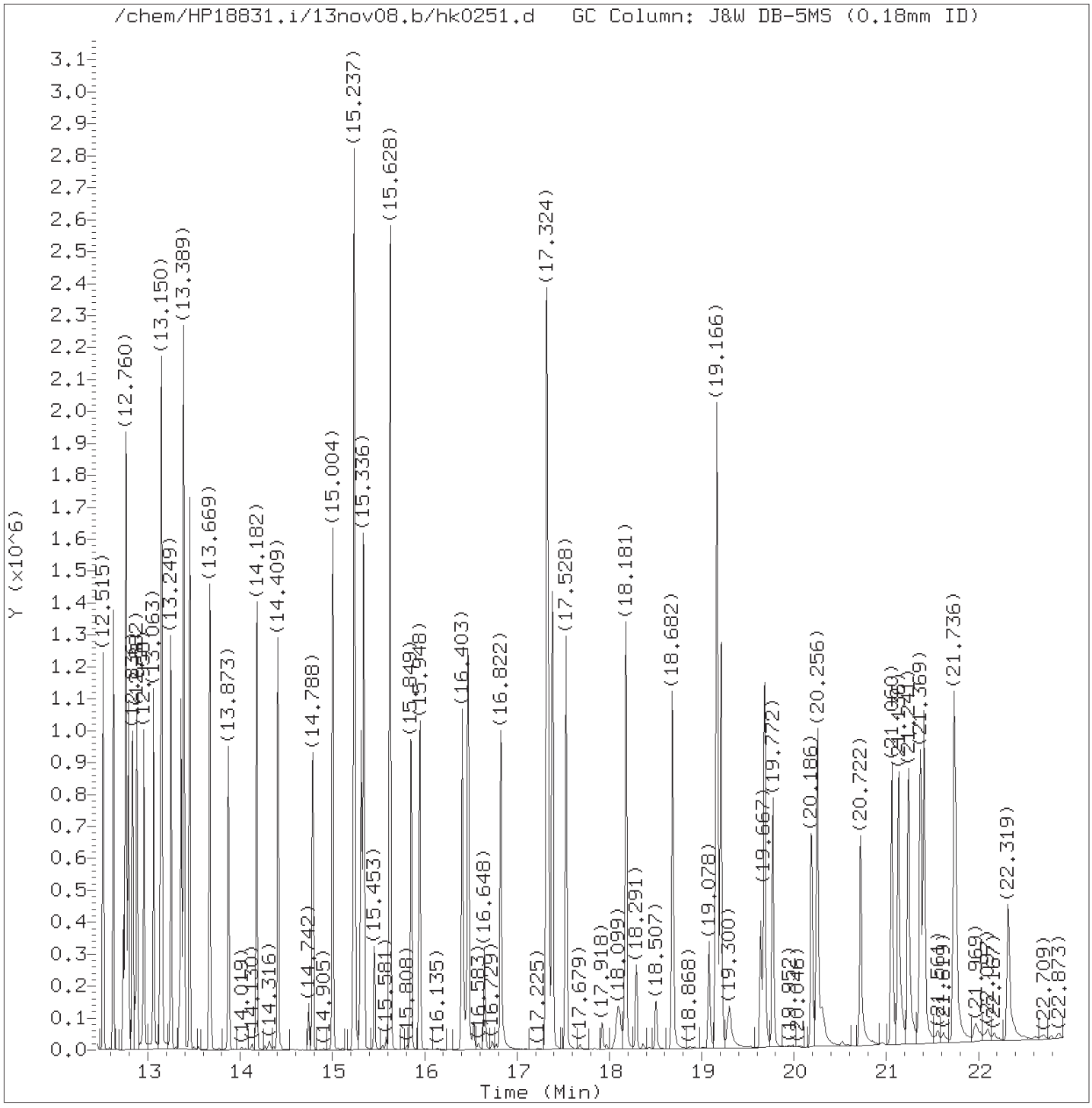
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.222	88	78667	6.123
2) N-Nitrosodimethylamine	(1)	2.787	74	156811	7.293
3) Pyridine	(1)	2.828	79	229740	6.270
5) 2-Picoline	(1)	3.994	93	264088	7.325
6) N-Nitrosomethylethylamine	(1)	4.186	88	116857	7.248
7) Methyl methanesulfonate	(1)	4.635	80	132811	6.726
8)$2-Fluorophenol	(1)	4.874	112	431682	15.243
9) N-Nitrosodiethylamine	(1)	5.200	102	110291	7.444
10) Ethyl methanesulfonate	(1)	5.655	109	111420	7.430
11) Benzaldehyde	(1)	6.109	77	196219	7.154
13)$Phenol-d6	(1)	6.243	99	593857	15.247
12)$Phenol-d5	(1)	6.243	99	593857	15.247
14) Phenol	(1)	6.267	94	337001	7.393
16) Aniline	(1)	6.273	93	392410	7.404
17) bis(2-Chloroethyl)ether	(1)	6.389	93	247910	7.270
18) 2-Chlorophenol	(1)	6.436	128	218105	7.859
19) 1,3-Dichlorobenzene	(1)	6.657	146	240734	7.482
21)*1,4-Dichlorobenzene-d4	(1)	6.751	152	101984	5.000
20) 1,4-Dichlorobenzene	(1)	6.774	146	244405	7.483
22) Benzyl alcohol	(1)	6.972	108	138827	7.169
23) 1,2-Dichlorobenzene	(1)	6.990	146	230052	7.566
25) Indene	(1)	7.129	115	437022	8.951
26) 2-Methylphenol	(1)	7.159	108	212144	7.837
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.194	45	255175	6.465
28) bis(2-Chloroisopropyl)ether	(1)	7.194	45	255175	6.465
29) N-Nitrosopyrrolidine	(1)	7.328	100	110737	7.757
30) Acetophenone	(1)	7.363	105	316516	7.217
32) N-Nitroso-di-n-propylamine	(1)	7.386	70	185788	7.048
33) N-Nitrosomorpholine	(1)	7.398	56	125494	6.645
31) 4-Methylphenol	(1)	7.398	108	240757	7.637
34) o-Toluidine	(1)	7.415	106	369539	7.603
35) Hexachloroethane	(1)	7.497	117	96064	7.418
36)$Nitrobenzene-d5	(2)	7.584	82	519907	14.015
37) Nitrobenzene	(2)	7.607	77	266955	6.892
38) N-Nitrosopiperidine	(2)	7.841	114	115080	7.755
39) Isophorone	(2)	7.992	82	484351	7.309
40) 2-Nitrophenol	(2)	8.097	139	111752	8.103
41) 2,4-Dimethylphenol	(2)	8.208	107	243083	7.548
42) O,O,O-triethylphosphorothioate	(2)	8.324	198	125964	7.695
44) bis(2-Chloroethoxy)methane	(2)	8.359	93	289745	7.566

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2013 at 05:15.
Target 3.5 esignature uses ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
43) Benzoic acid	(2)	8.359	105	103253	7.980
46) 2,4-Dichlorophenol	(2)	8.476	162	182207	7.674
47) 1,2,4-Trichlorobenzene	(2)	8.604	180	214098	7.453
48)*Naphthalene-d8	(2)	8.680	136	397290	5.000
49) Naphthalene	(2)	8.715	128	612250	7.606
50) 4-Chloroaniline	(2)	8.820	127	263123	7.692
51) 2,6-Dichlorophenol	(2)	8.831	162	179218	7.777
52) Hexachloropropene	(2)	8.861	213	129765	7.292
53) Hexachlorobutadiene	(2)	8.936	225	125159	7.373
54) Quinoline	(2)	9.239	129	405992	7.784
55) Caprolactam	(2)	9.362	113	72889	7.803
56) N-Nitrosodi-n-butylamine	(2)	9.391	84	173375	6.392
58) 4-Chloro-3-methylphenol	(2)	9.630	107	209439	7.881
60) Safrole	(2)	9.711	162	173689	7.930
61) 2-Methylnaphthalene	(2)	9.816	142	441217	7.820
62) 1-Methylnaphthalene	(2)	9.968	142	399989	7.791
63) Hexachlorocyclopentadiene	(3)	10.079	237	85820	6.457
64) 1,2,4,5-Tetrachlorobenzene	(3)	10.085	216	222449	7.503
65) cis-Isosafrole	(3)	10.178	162	29477	7.586
66) 2,4,6-Trichlorophenol	(3)	10.283	196	147363	7.846
67) 2,4,5-Trichlorophenol	(3)	10.335	196	147061	7.781
68)$2-Fluorobiphenyl	(3)	10.428	172	933192	15.108
70) Isosafrole	(3)	10.539	162	174111	7.812
69) trans-Isosafrole	(3)	10.539	162	174111	7.812
71) 1,1'-Biphenyl	(3)	10.574	154	508655	7.215
72) 2-Chloronaphthalene	(3)	10.586	162	433311	7.666
73) 1-Chloronaphthalene	(3)	10.615	162	386053	7.523
74) Diphenyl ether	(3)	10.755	170	296671	7.612
75) 2-Nitroaniline	(3)	10.766	138	135938	8.574
76) 1,4-Naphthoquinone	(3)	10.877	158	174911	8.166
77) 1,4-Dinitrobenzene	(3)	11.005	168	73862	8.299
78) Dimethylphthalate	(3)	11.105	163	463733	7.941
79) 1,3-Dinitrobenzene	(3)	11.116	168	87824	8.235
80) 2,6-Dinitrotoluene	(3)	11.180	165	116439	8.377
81) Acenaphthylene	(3)	11.239	152	591339	7.931
82) 3-Nitroaniline	(3)	11.425	138	120374	8.135
83)*Acenaphthene-d10	(3)	11.472	164	252327	5.000
84) Acenaphthene	(3)	11.518	153	421093	7.662
85) 2,4-Dinitrophenol	(3)	11.594	184	60263	8.675
87) Pentachlorobenzene	(3)	11.717	250	183536	7.622

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) 4-Nitrophenol	(3)	11.722	109	68819	6.789
88) Dibenzofuran	(3)	11.775	168	597964	7.753
89) 2,4-Dinitrotoluene	(3)	11.787	165	151731	8.439
90) 1-Naphthylamine	(3)	11.886	143	405652	7.560
91) 2,3,4,6-Tetrachlorophenol	(3)	11.956	232	120828	8.008
92) 2-Naphthylamine	(3)	11.991	143	409511	7.598
93) Diethylphthalate	(3)	12.148	149	451551	8.149
94) Fluorene	(3)	12.224	166	491742	7.960
95) Thionazin	(3)	12.241	107	94672	8.098
96) 4-Chlorophenyl-phenylether	(3)	12.253	204	248623	7.806
97) 5-Nitro-o-toluidine	(3)	12.259	152	132414	8.312
98) 4-Nitroaniline	(3)	12.264	138	121884	8.347
99) 4,6-Dinitro-2-methylphenol	(4)	12.311	198	73417	6.717
101) N-Nitrosodiphenylamine	(4)	12.399	169	394997	7.706
102) NDPA as diphenylamine	(4)	12.399	169	394997	7.706
103) 1,2-Diphenylhydrazine	(4)	12.439	77	528449	6.978
104)$2,4,6-Tribromophenol	(3)	12.515	330	106833	16.663
105) Tetraethyldithiopyrophosphate	(4)	12.626	97	84438	7.474
106) 1,3,5-Trinitrobenzene	(4)	12.737	213	55320	6.841
107) Diallate (peak 1)	(4)	12.760	86	209430	5.690
108) Phorate	(4)	12.766	75	342257	7.579
109) Phenacetin	(4)	12.789	108	252489	7.859
110) 4-Bromophenyl-phenylether	(4)	12.836	248	138990	7.743
111) Diallate (peak 2)	(4)	12.859	86	30157	1.908
112) Hexachlorobenzene	(4)	12.882	284	133973	7.542
113) Dimethoate	(4)	12.958	87	223178	7.600
114) Atrazine	(4)	13.063	200	135023	7.600
115) Pentachlorophenol	(4)	13.139	266	81746	6.986
116) Pentachloronitrobenzene	(4)	13.150	237	61345	7.540
117) 4-Aminobiphenyl	(4)	13.150	169	503178	7.763
118) Pronamide	(4)	13.249	173	221609	7.932
120)*Phenanthrene-d10	(4)	13.360	188	440301	5.000
121) Phenanthrene	(4)	13.389	178	712507	7.395
119) Dinoseb	(4)	13.389	211	97359	6.393
122) Anthracene	(4)	13.454	178	732164	7.834
124) Carbazole	(4)	13.669	167	682274	7.648
125) Methyl parathion	(4)	13.873	109	165365	7.837
126) Di-n-butylphthalate	(4)	14.182	149	799060	7.602
127) Parathion	(4)	14.409	109	105811	7.618
128) 4-Nitroquinoline-1-oxide	(4)	14.415	190	39149	5.407

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$ = Compound is a surrogate standard.

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on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0251.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 04:33 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 05:06 jmg00346

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
130) Isodrin	(4)	14.788	193	86444	7.578
131) Fluoranthene	(4)	15.004	202	839913	7.844
132) Benzidine	(5)	15.237	184	1482766	21.450
134)*Pyrene-d10	(5)	15.313	212	552473	5.000
133) Pyrene	(5)	15.336	202	860930	7.462
137)$Terphenyl-d14	(5)	15.628	244	1118494	15.251
140) p-Dimethylaminoazobenzene	(5)	15.855	225	181070	7.606
141) Chlorobenzilate	(5)	15.948	139	240068	7.290
142) 3,3'-Dimethylbenzidine	(5)	16.409	212	539290	7.627
144) Butylbenzylphthalate	(5)	16.473	149	367167	7.574
146) 2-Acetylaminofluorene	(5)	16.822	181	338075	7.437
147) Benzo(a)anthracene	(5)	17.324	228	813804	7.837
148) 3,3'-Dichlorobenzidine	(5)	17.324	252	301302	7.657
149) 4,4'-Methylenebis(2-Chloroanil	(5)	17.341	231	150027	7.579
150) Chrysene	(5)	17.382	228	782680	7.718
151) bis(2-Ethylhexyl)phthalate	(5)	17.534	149	493517	7.616
152) 6-Methylchrysene	(5)	18.181	242	567144	7.645
153) Di-n-octylphthalate	(6)	18.682	149	836302	7.744
154) Benzo(b)fluoranthene	(6)	19.160	252	749307	7.485
155) 7,12-Dimethylbenz[a]anthracene	(6)	19.166	256	305319	6.894
156) Benzo(k)fluoranthene	(6)	19.212	252	800159	7.824
157) Benzo(a)pyrene	(6)	19.684	252	735049	7.832
158)*Perylene-d12	(6)	19.772	264	420890	5.000
159) 3-Methylcholanthrene	(6)	20.256	268	367599	7.660
160) Dibenz(a,h)acridine	(6)	21.060	279	523803	7.358
161) Dibenz(a,j)acridine	(6)	21.136	279	588608	7.769
162) Indeno(1,2,3-cd)pyrene	(6)	21.369	276	735029	7.719
163) Dibenz(a,h)anthracene	(6)	21.410	278	640094	7.873
164) Benzo(g,h,i)perylene	(6)	21.736	276	645846	7.786
165) Diallate TRANS/CIS	(4)			239587	7.592

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2013 at 05:15.
Target 3.5 esignature user ID: jmg00346

Raw QC Data

Semivolatiles by GC/MS

Data file: /chem/HP10623.i/13nov13a.b/ck0469.d Injection date and time: **13-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLF3103;SBLKLF310;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201	(0.000)	540	152	105657	(-11)	20.00	
52) Naphthalene-d8	6.437	(0.000)	741	136	452226	(-20)	20.00	
98) Acenaphthene-d10	8.146	(0.000)	1019	164	267135	(-26)	20.00	
135) Phenanthrene-d10	9.591	(0.000)	1254	188	507161	(-27)	20.00	
167) Pyrene-d10	10.968	(0.006)	1478	212	608615	(-28)	20.00	
175) Perylene-d12	13.575	(0.000)	1902	264	488624	(-30)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742	(0.000)	82	792964	81.387	81%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.507	(0.000)	172	1672257	99.559	100%		69 - 120
156) Terphenyl-d14	(5)	11.171	(-0.001)	244	2346556	107.852	108%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)				Not Detected					0.1
70) 2-Methylnaphthalene	(2)				Not Detected					0.1
71) 1-Methylnaphthalene	(2)				Not Detected					0.1
95) Acenaphthylene	(3)				Not Detected					0.1
99) Acenaphthene	(3)				Not Detected					0.1
111) Fluorene	(3)				Not Detected					0.1
137) Phenanthrene	(4)				Not Detected					0.1
138) Anthracene	(4)				Not Detected					0.1
147) Fluoranthene	(4)				Not Detected					0.1
154) Pyrene	(5)				Not Detected					0.1
166) Benzo(a)anthracene	(5)				Not Detected					0.1
168) Chrysene	(5)				Not Detected					0.1
172) Benzo(b)fluoranthene	(6)				Not Detected					0.1
173) Benzo(k)fluoranthene	(6)				Not Detected					0.1
174) Benzo(a)pyrene	(6)				Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

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Data file: /chem/HP10623.i/13nov13a.b/ck0469.d Injection date and time: **13-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLF3103;SBLKLF310;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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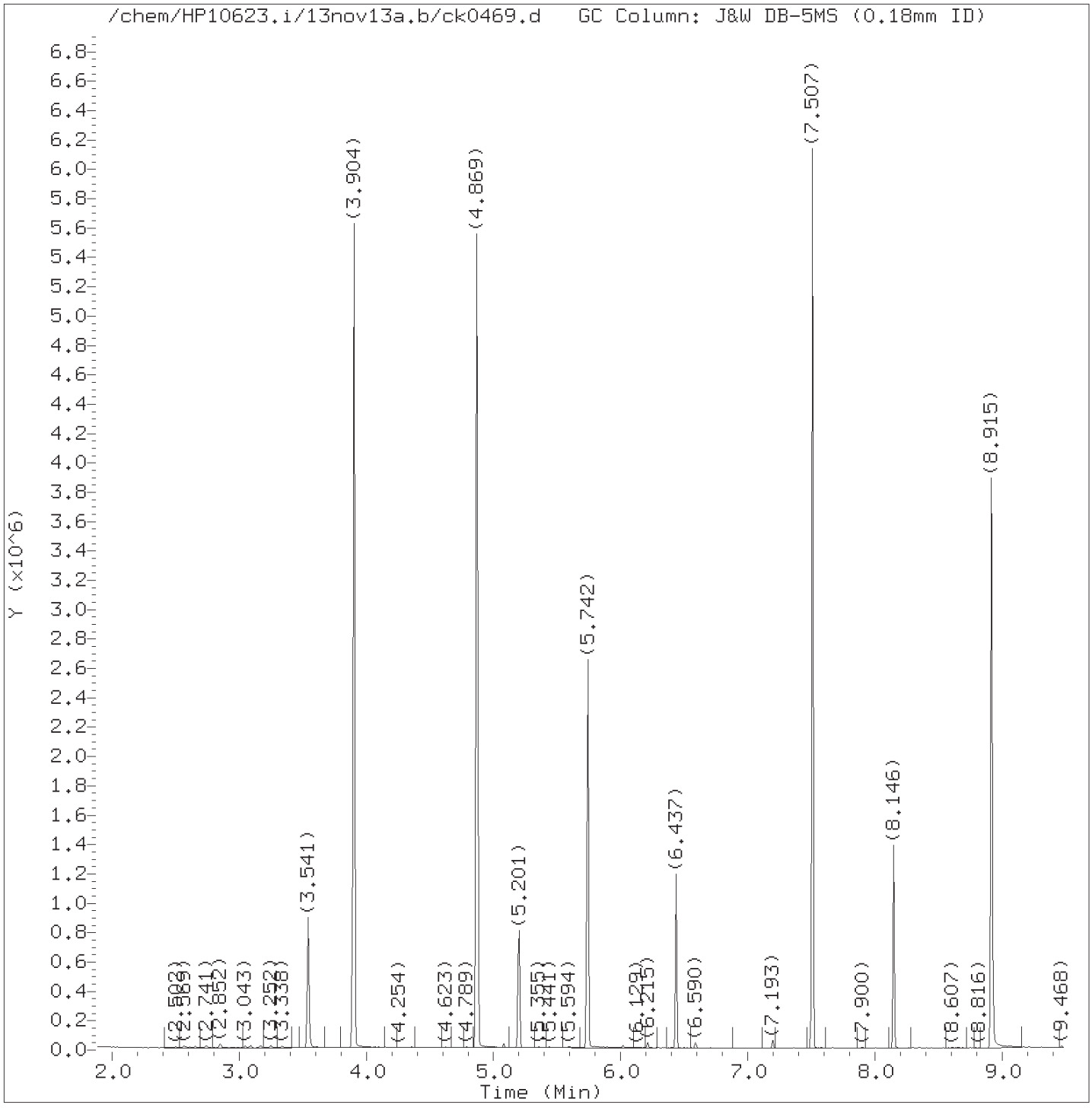
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:15. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:17. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

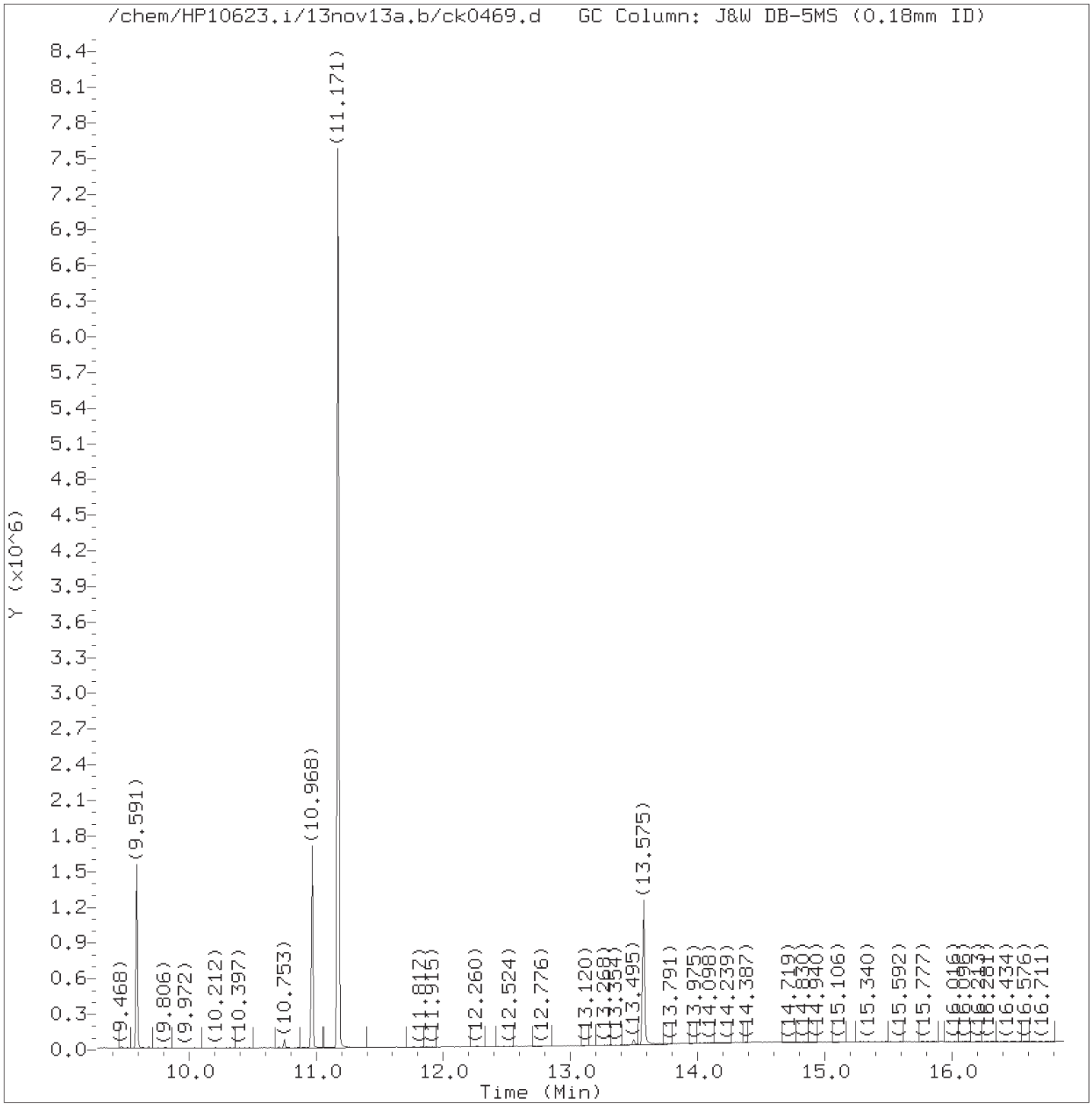
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	105657	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	792964	81.387
52)*Naphthalene-d8	(2)	6.437	136	452226	20.000
78)$2-Fluorobiphenyl	(3)	7.507	172	1672257	99.559
98)*Acenaphthene-d10	(3)	8.146	164	267135	20.000
135)*Phenanthrene-d10	(4)	9.591	188	507161	20.000
167)*Pyrene-d10	(5)	10.968	212	608615	20.000
156)$Terphenyl-d14	(5)	11.171	244	2346556	107.852
175)*Perylene-d12	(6)	13.575	264	488624	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013

Data file: /chem/HP11165.i/13nov13a.b/gk0517.d Injection date and time: **13-NOV-2013 15:08**
Data file Sample Info. Line: SBLKLC3137;SBLKLC313;2;3;BLANK;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.599	(0.000)	638	152	57306	(-26)	20.00	
63) Naphthalene-d8	6.835	(0.000)	869	136	249953	(-33)	20.00	
101) Acenaphthene-d10	8.546	(0.005)	1189	164	151070	(-35)	20.00	
140) Phenanthrene-d10	9.996	(0.011)	1460	188	289508	(-34)	20.00	
164) Pyrene-d10	11.386	(0.005)	1720	212	342396	(-34)	20.00	
188) Perylene-d12	14.034	(0.011)	2215	264	318246A	(-28)	20.00	

A = User selected an alternate peak

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 2-Fluorophenol	(1)	4.342	(0.001)	112	881467	194.117	97%		63 - 126
17) Phenol-d6	(1)	5.284	(0.001)	99	1235958	180.903	90%		61 - 120
41) Nitrobenzene-d5	(2)	6.134	(0.001)	82	486925	88.371	88%		60 - 120
84) 2-Fluorobiphenyl	(3)	7.899	(-0.001)	172	840221	91.318	91%		69 - 120
121) 2,4,6-Tribromophenol	(3)	9.322	(0.000)	330	209302	207.347	104%		42 - 134
166) Terphenyl-d14	(5)	11.579	(0.000)	244	1303805	106.756	107%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Benzaldehyde	(1)				Not Detected					2
18) Phenol	(1)				Not Detected					0.5
20) bis(2-Chloroethyl)ether	(1)				Not Detected					0.5
21) 2-Chlorophenol	(1)				Not Detected					0.5
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.5
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.5
30) 2-Methylphenol	(1)				Not Detected					0.5
31) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.5
35) Acetophenone	(1)				Not Detected					0.5
37) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.5
36) 4-Methylphenol	(1)				Not Detected					0.5
40) Hexachloroethane	(1)				Not Detected					1
42) Nitrobenzene	(2)				Not Detected					0.5
45) Isophorone	(2)				Not Detected					0.5
48) 2-Nitrophenol	(2)				Not Detected					0.5
52) 2,4-Dimethylphenol	(2)				Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.5
60) 2,4-Dichlorophenol	(2)				Not Detected					0.5
64) Naphthalene	(2)				Not Detected					0.1
65) 4-Chloroaniline	(2)				Not Detected					0.5
69) Hexachlorobutadiene	(2)				Not Detected					0.5
74) Caprolactam	(2)				Not Detected					1
75) 4-Chloro-3-methylphenol	(2)				Not Detected					0.5
77) 2-Methylnaphthalene	(2)				Not Detected					0.1
78) 1-Methylnaphthalene	(2)				Not Detected					0.1
79) Hexachlorocyclopentadiene	(3)				Not Detected					5

Digitally signed by Brian K. Graham on 11/13/2013 at 23:01. Target 3.5 esignature user ID: bkg00522

Data file: /chem/HP11165.i/13nov13a.b/gk0517.d Injection date and time: **13-NOV-2013 15:08**
Data file Sample Info. Line: SBLKLC3137;SBLKLC313;2;3;BLANK;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
82) 2,4,6-Trichlorophenol	(3)				Not Detected					0.5
83) 2,4,5-Trichlorophenol	(3)				Not Detected					0.5
87) 1,1'-Biphenyl	(3)				Not Detected					0.5
88) 2-Chloronaphthalene	(3)				Not Detected					0.2
91) 2-Nitroaniline	(3)				Not Detected					0.5
94) Dimethylphthalate	(3)				Not Detected					2
97) 2,6-Dinitrotoluene	(3)				Not Detected					0.5
99) Acenaphthylene	(3)				Not Detected					0.1
100) 3-Nitroaniline	(3)				Not Detected					2
102) Acenaphthene	(3)				Not Detected					0.1
103) 2,4-Dinitrophenol	(3)				Not Detected					9
104) 4-Nitrophenol	(3)				Not Detected					5
107) Dibenzofuran	(3)				Not Detected					0.5
106) 2,4-Dinitrotoluene	(3)				Not Detected					2
111) Diethylphthalate	(3)				Not Detected					2
113) Fluorene	(3)				Not Detected					0.1
114) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
116) 4-Nitroaniline	(3)				Not Detected					2
117) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
118) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
127) 4-Bromophenyl-phenylether	(4)				Not Detected					0.5
129) Hexachlorobenzene	(4)				Not Detected					0.1
132) Atrazine	(4)				Not Detected					1
133) Pentachlorophenol	(4)				Not Detected					1
143) Phenanthrene	(4)				Not Detected					0.1
144) Anthracene	(4)				Not Detected					0.1
146) Carbazole	(4)				Not Detected					0.5
149) Di-n-butylphthalate	(4)				Not Detected					2
157) Fluoranthene	(4)				Not Detected					0.1
165) Pyrene	(5)				Not Detected					0.1
173) Butylbenzylphthalate	(5)				Not Detected					2
175) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
177) Benzo(a)anthracene	(5)				Not Detected					0.1
178) Chrysene	(5)				Not Detected					0.1
179) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					2
183) Di-n-octylphthalate	(6)				Not Detected					2
185) Benzo(b)fluoranthene	(6)				Not Detected					0.1
186) Benzo(k)fluoranthene	(6)				Not Detected					0.1
187) Benzo(a)pyrene	(6)				Not Detected					0.1
193) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.1
194) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
196) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Digitally signed by Brian K. Graham on 11/13/2013 at 23:01. Target 3.5 esignature user ID: bkg00522

Data file: /chem/HP11165.i/13nov13a.b/gk0517.d Injection date and time: **13-NOV-2013 15:08**
Data file Sample Info. Line: SBLKLC3137;SBLKLC313;2;3;BLANK;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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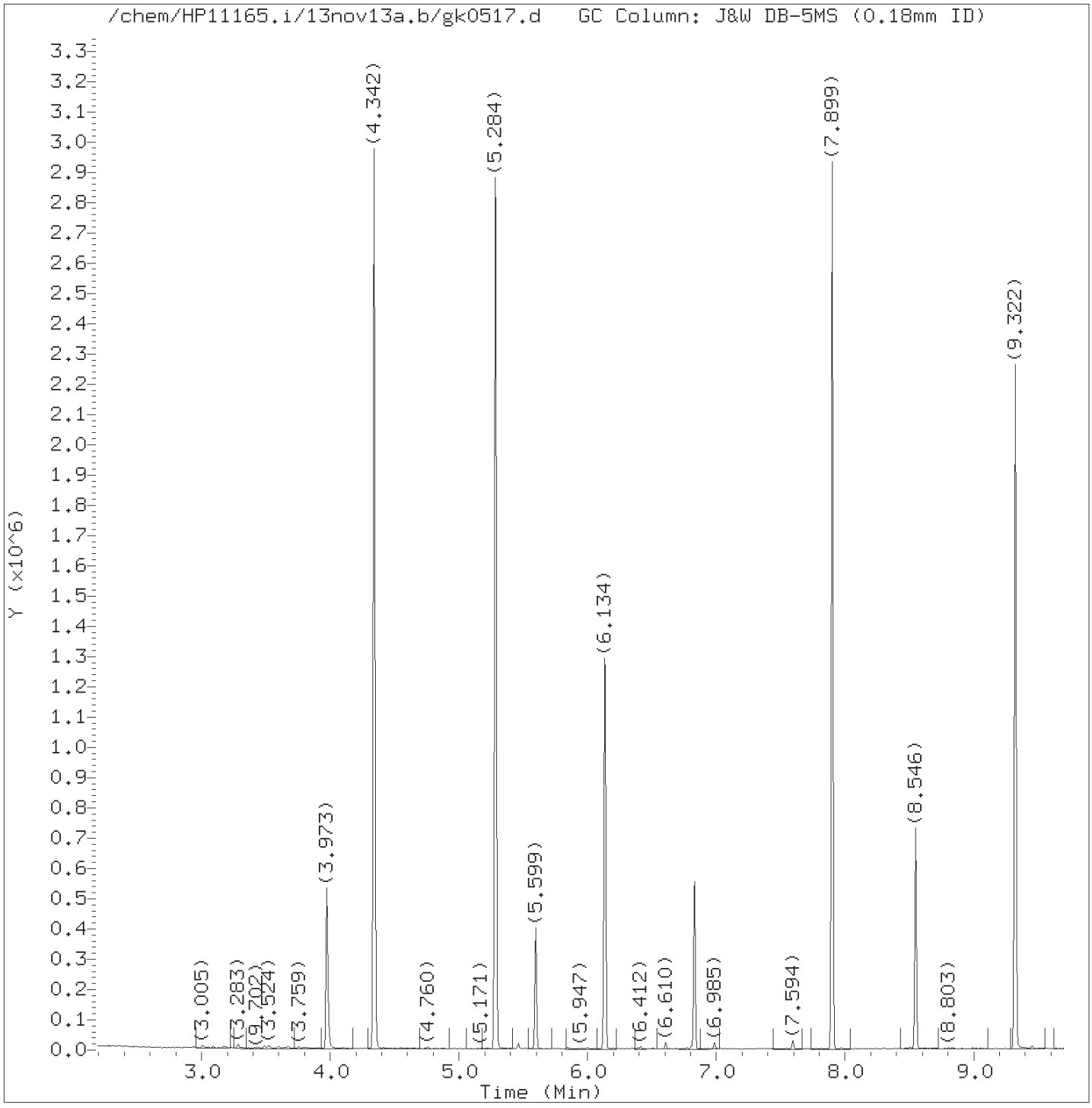
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 68

Digitally signed by Brian K. Graham on 11/13/2013 at 23:01. Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:45. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

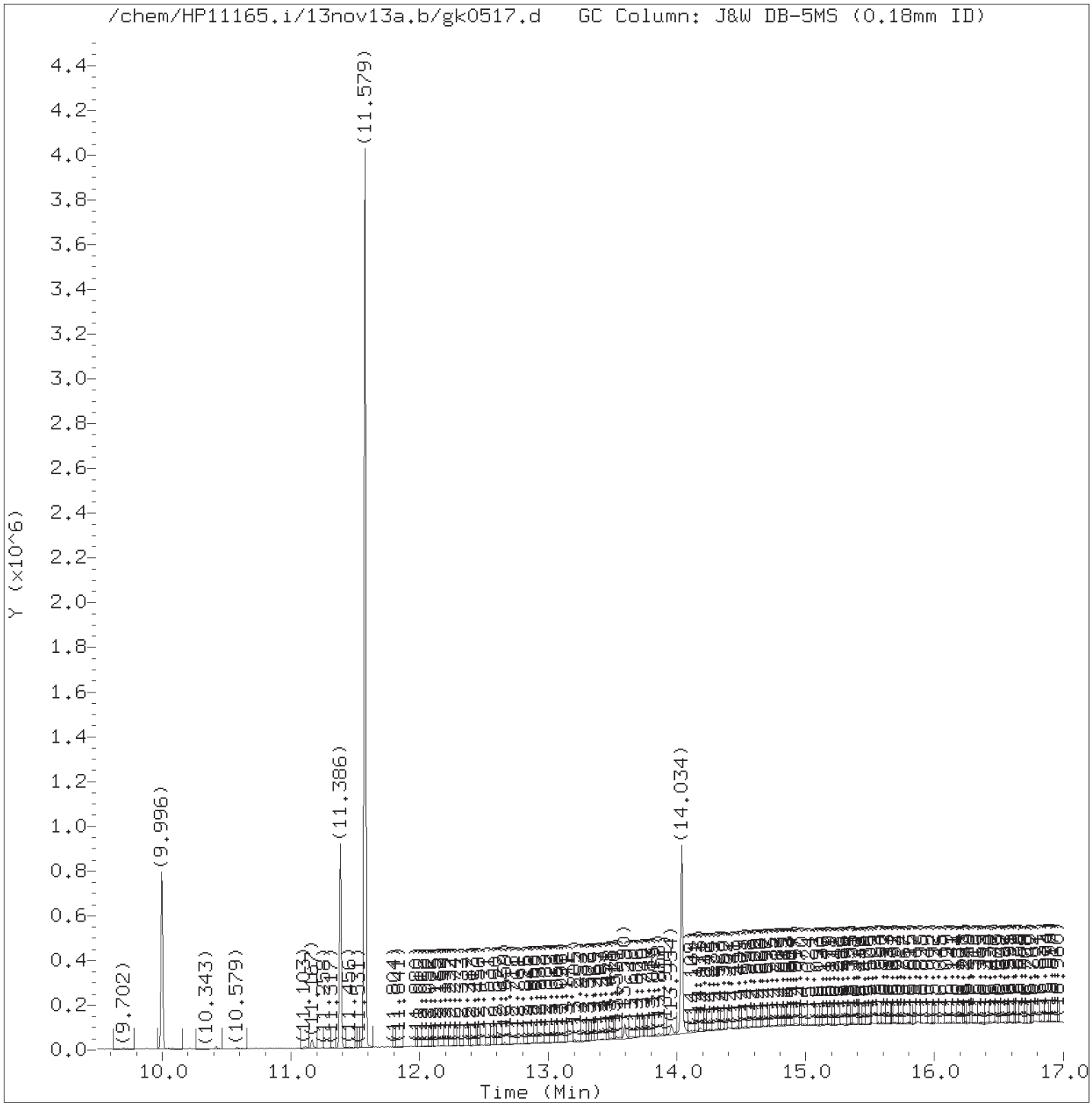
Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Digitally signed by Brian K. Graham
on 11/13/2013 at 23:01.
Target 3.5 esignature used ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Digitally signed by Brian K. Graham
on 11/13/2013 at 23:01.
Target 3.5 esignature used ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

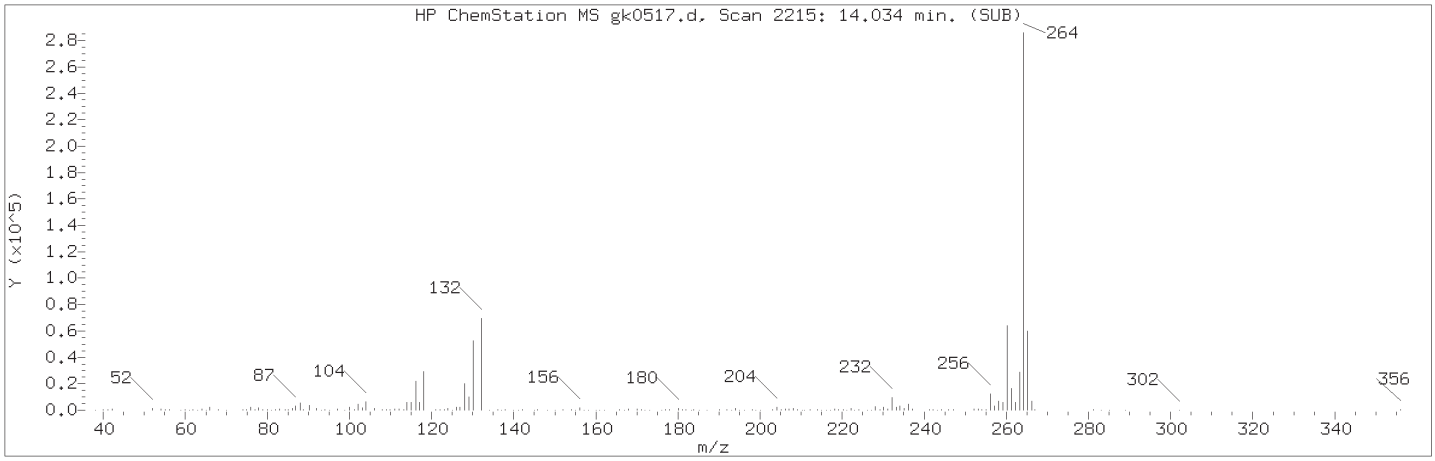
Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
10)$2-Fluorophenol	(1)	4.342	112	881467	194.117
17)$Phenol-d6	(1)	5.284	99	1235958	180.903
25)*1,4-Dichlorobenzene-d4	(1)	5.599	152	57306	20.000
41)$Nitrobenzene-d5	(2)	6.134	82	486925	88.371
63)*Naphthalene-d8	(2)	6.835	136	249953	20.000
84)$2-Fluorobiphenyl	(3)	7.899	172	840221	91.318
101)*Acenaphthene-d10	(3)	8.546	164	151070	20.000
121)$2,4,6-Tribromophenol	(3)	9.322	330	209302	207.347
140)*Phenanthrene-d10	(4)	9.996	188	289508	20.000
164)*Pyrene-d10	(5)	11.386	212	342396	20.000
166)$Terphenyl-d14	(5)	11.579	244	1303805	106.756
188)*Perylene-d12	(6)	14.034	264	318246A	20.000

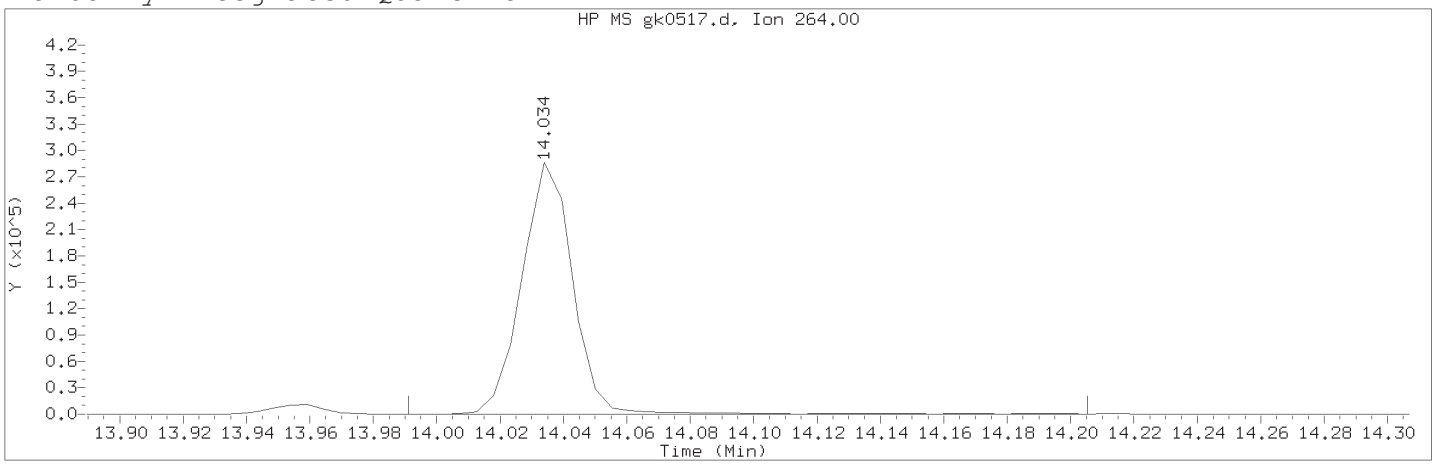
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 11/13/2013 at 23:01.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

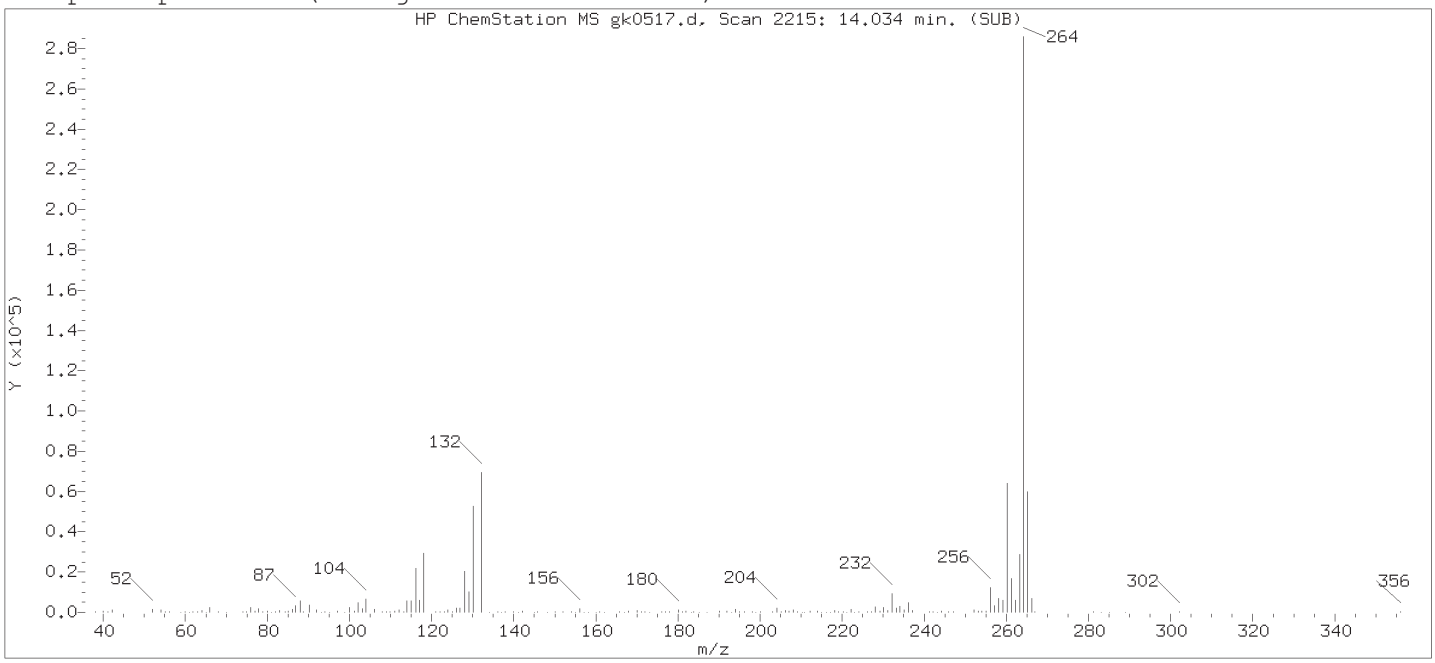
Compound Number : 188
Compound Name : Perylene-d12
Scan Number : 2215
Retention Time (minutes) : 14.034
Quant Ion : 264.00
Area (flag) : 318246A
On-column Amount (ng/ul) : 20.0000
Integration start scan : 2206 Integration stop scan: 2246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

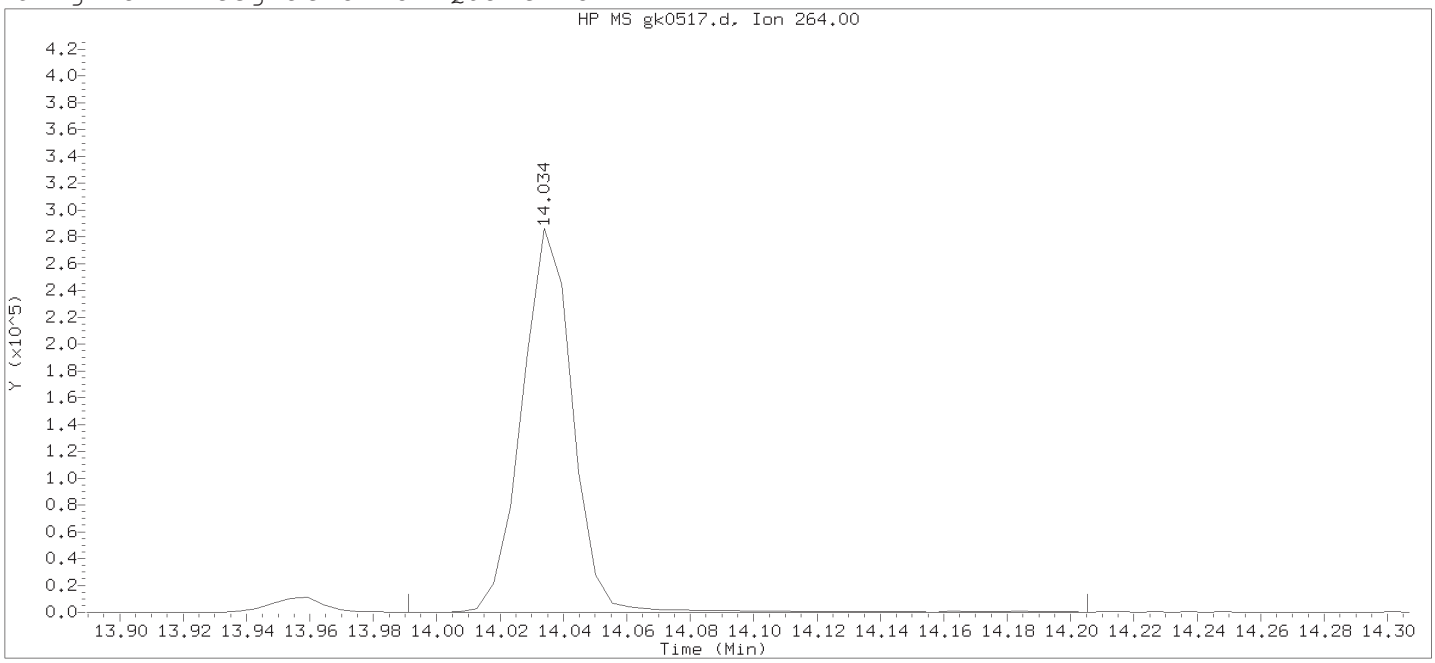
Analyst responsible for change: Digitally signed by Brian K. Graham
on 11/13/2013 at 23:01.
Target 3.5 esignature user ID: bkg00522

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:45.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



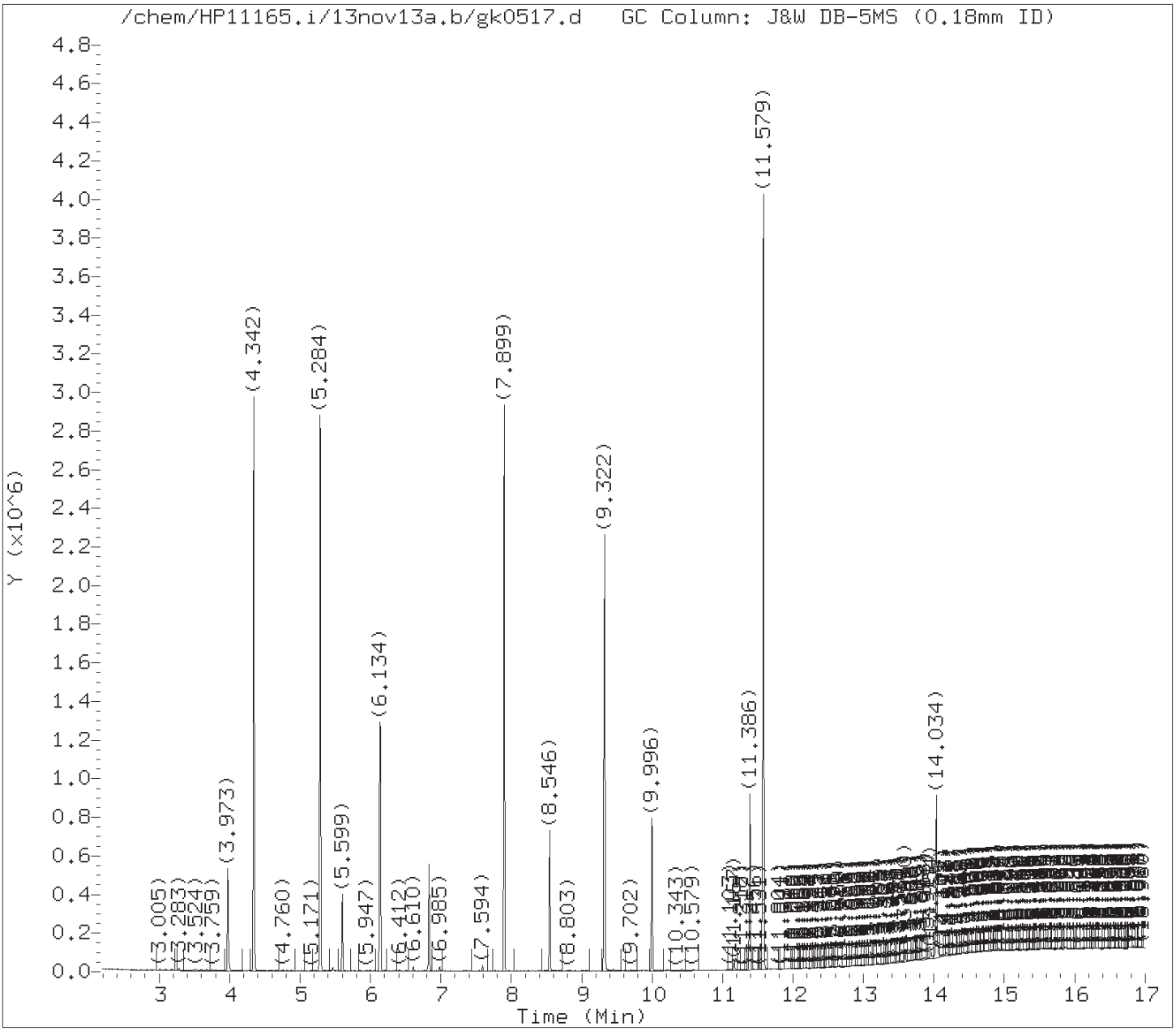
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 13-NOV-2013 13:35
Date, time and analyst ID of latest file update: 13-Nov-2013 15:31 Automation

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Compound Number	: 188		
Compound Name	: Perylene-d12		
Scan Number	: 2215		
Retention Time (minutes)	: 14.034		
Quant Ion	: 264.00		
Area	: 318246		
On-column Amount (ng/ul)	: 20.0000		
Integration start scan	: 2206	Integration stop scan:	2246
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 11/13/2013 at 23:01.
Target 3.5 esignature user ID: bkg0512



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

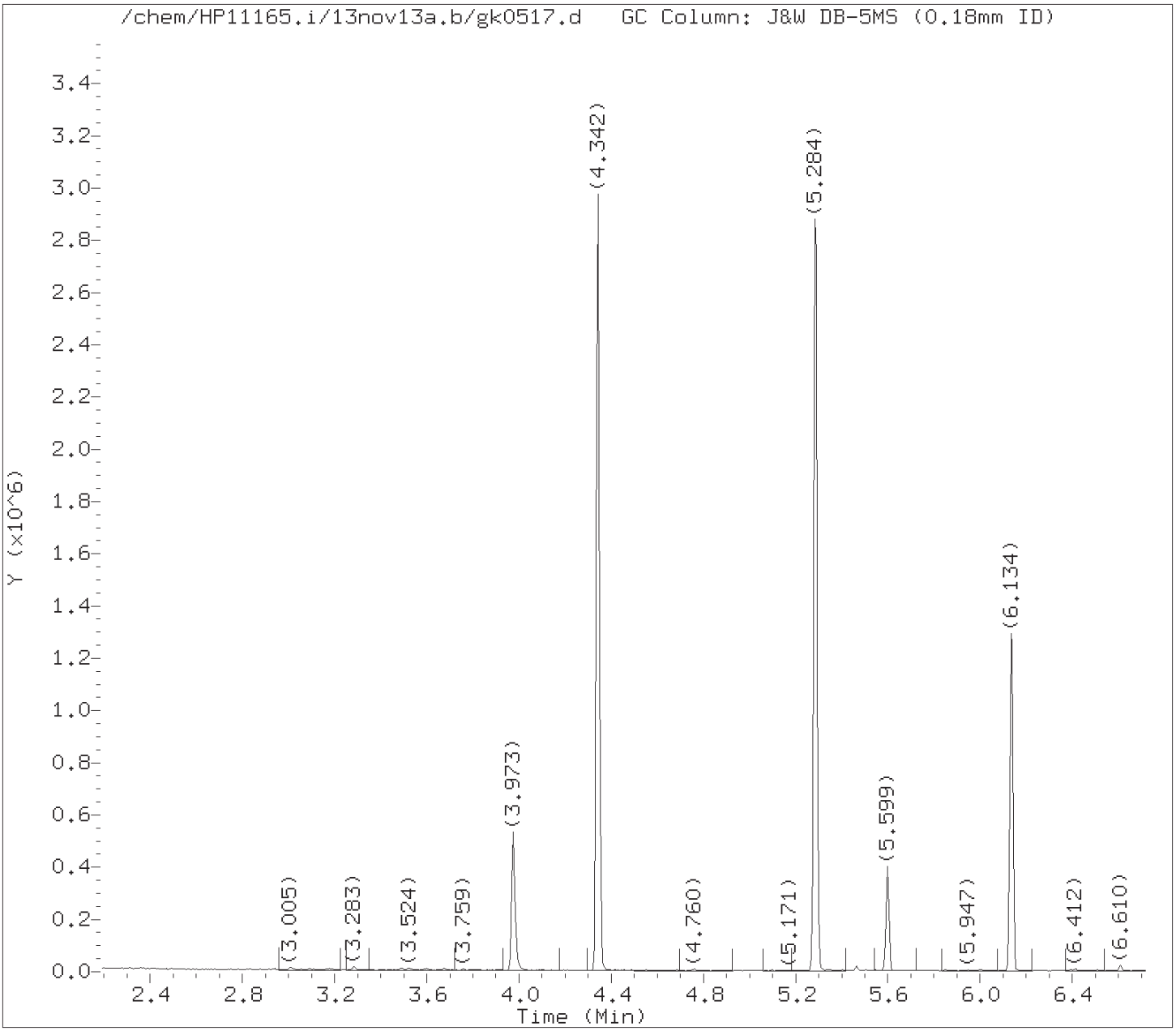
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Chromatogram Start Time (min.): 2.192
Chromatogram End Time (min.): 17.003

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

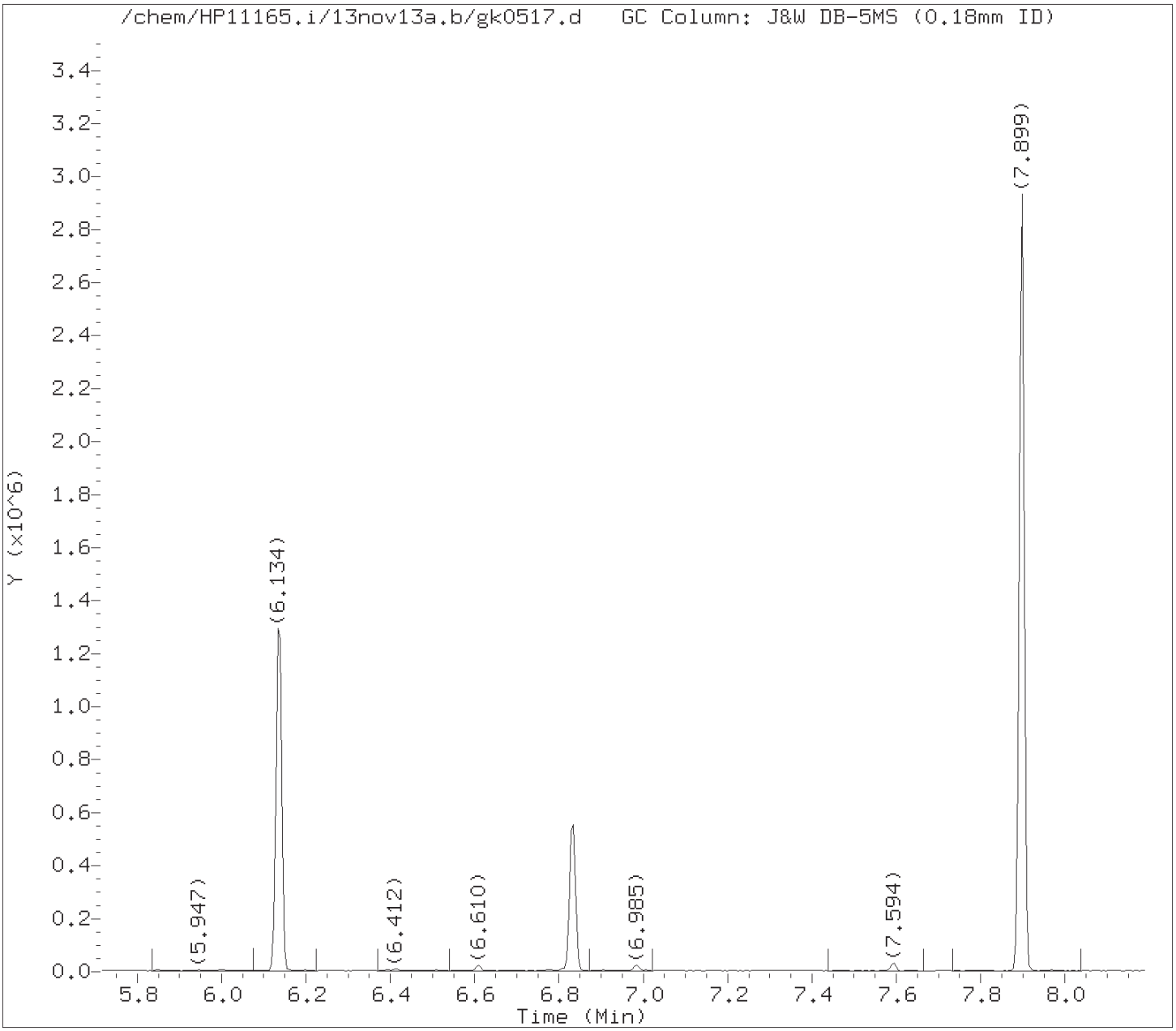
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.599 minutes
Chromatogram Start Time (min.): 2.192
Chromatogram End Time (min.): 6.217

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

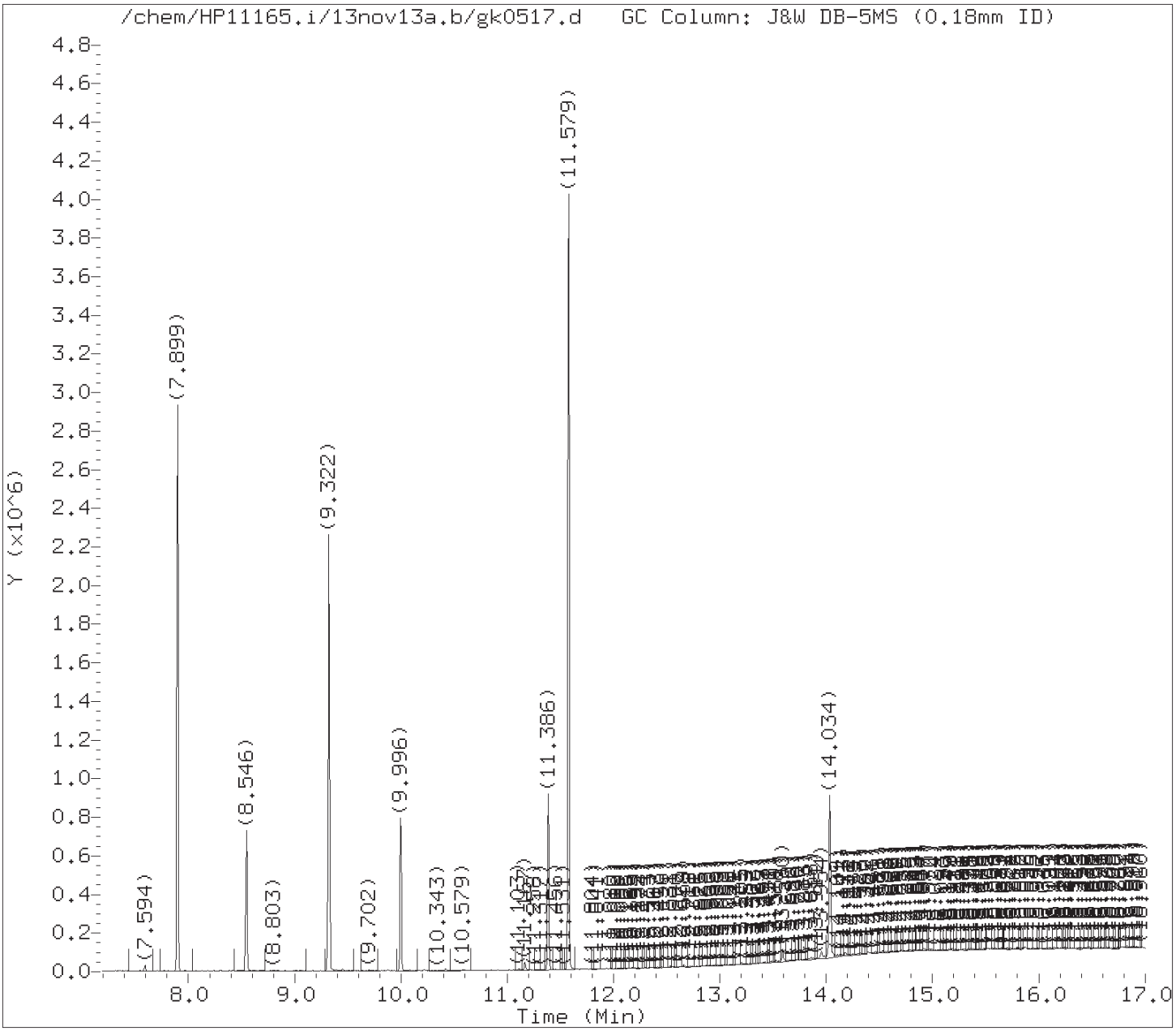
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: Naphthalene-d8 at 6.835 minutes
Chromatogram Start Time (min.): 6.217
Chromatogram End Time (min.): 7.691

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

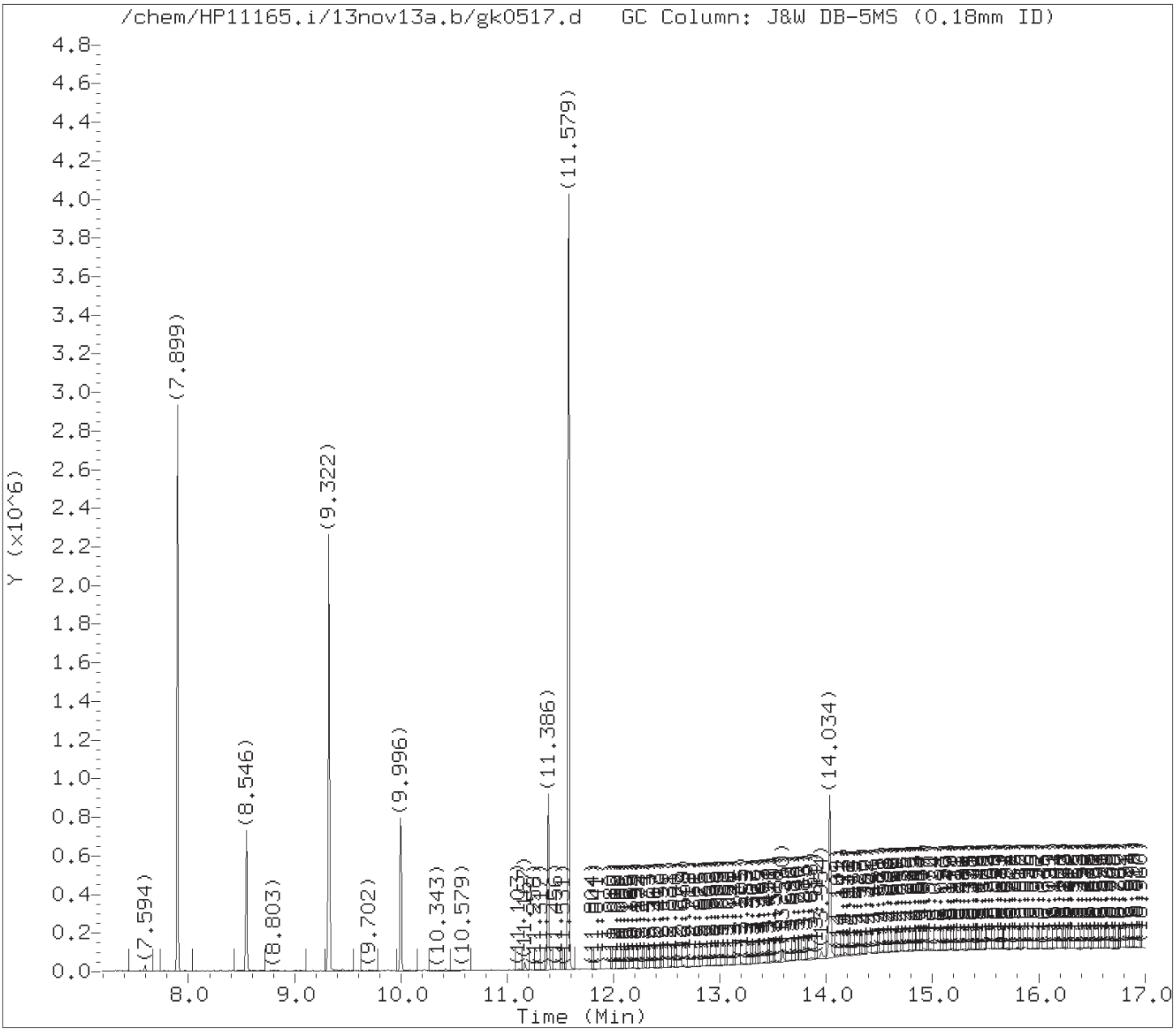
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: Acenaphthene-d10 at 8.546 minutes
Chromatogram Start Time (min.): 7.691
Chromatogram End Time (min.): 9.271

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

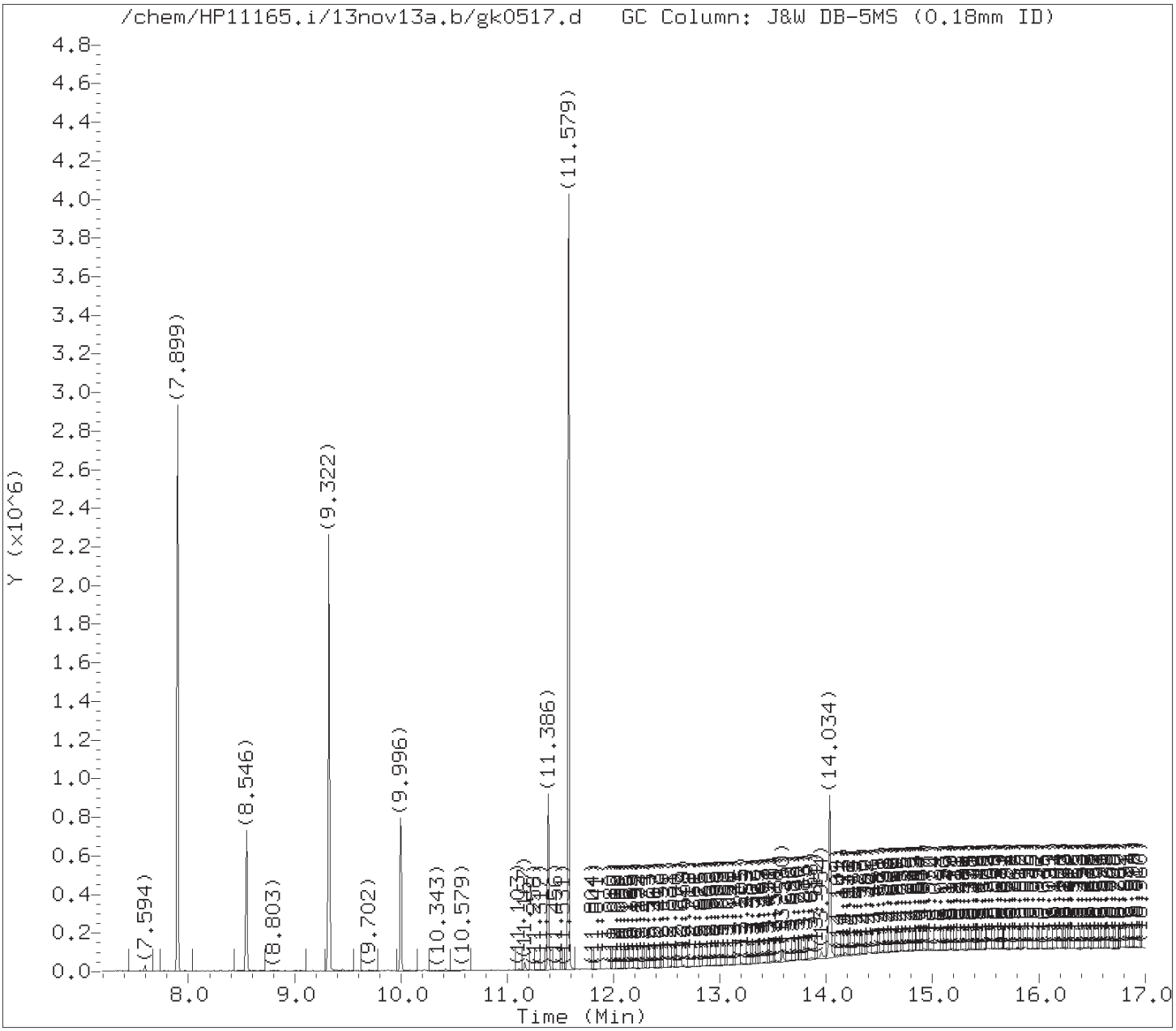
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: Phenanthrene-d10 at 9.996 minutes
Chromatogram Start Time (min.): 9.271
Chromatogram End Time (min.): 10.691

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

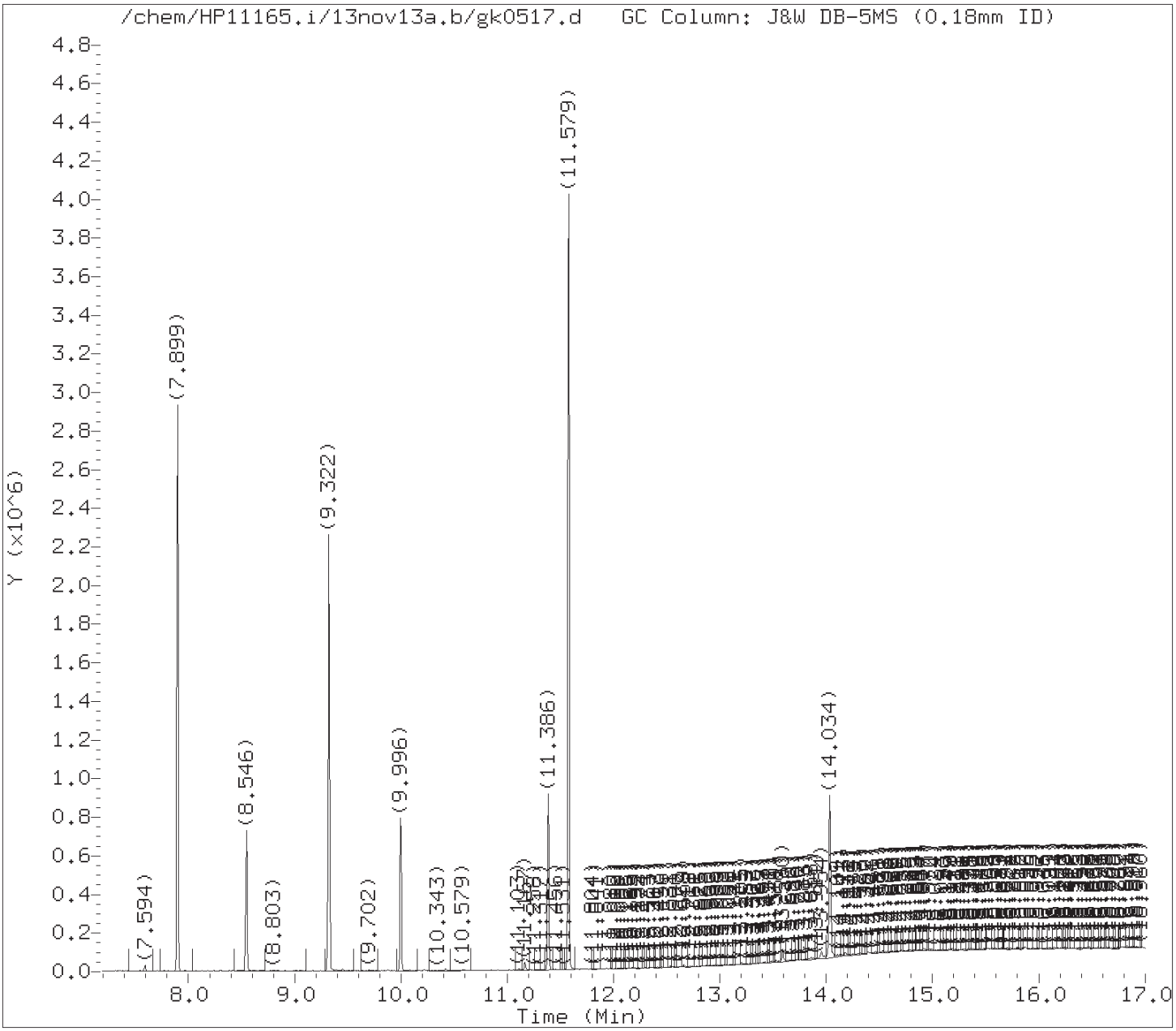
Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: Pyrene-d10 at 11.386 minutes
Chromatogram Start Time (min.): 10.691
Chromatogram End Time (min.): 12.710

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0517.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:08 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:32 bkg00522

Sample Name: SBLKLC3137 Lab Sample ID: SBLKLC313

Internal Standard referenced: Perylene-d12 at 14.034 minutes
Chromatogram Start Time (min.): 12.710
Chromatogram End Time (min.): 17.003

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522

Lancaster Labs

Data file : /chem/HP11165.i/13nov13a.b/gk0517.d
Lab Smp Id: SBLKLC313 Client Smp ID: SBLKLC3137
Inj Date : 13-NOV-2013 15:08
Operator : CAM01237 Inst ID: HP11165.i
Smp Info : SBLKLC3137;SBLKLC313;2;3;BLANK;;;
Misc Info : 13313SLC;newall1-b;30;;1000;0;gk0517;10727;
Comment : Max. number of TICs to report is 20, 1 TICs were found initially.
Method : /chem/HP11165.i/13nov13a.b/mnew8270.m
Meth Date : 13-Nov-2013 22:28 bkg00522 Quant Type: ISTD
Cal Date : 09-NOV-2013 22:09 Cal File: gk0325.d
Als bottle: 6 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 313SLC.sub
Target Version: 3.50
Processing Host: d26cs02

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 25 1,4-Dichlorobenzene-d4	5.599	377316	20.000

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.973	577471	30.6093568	1020.31189	0		0	25

Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP11165.i/13nov13a.b/gk0517.d

Date : 13-NOV-2013 15:08

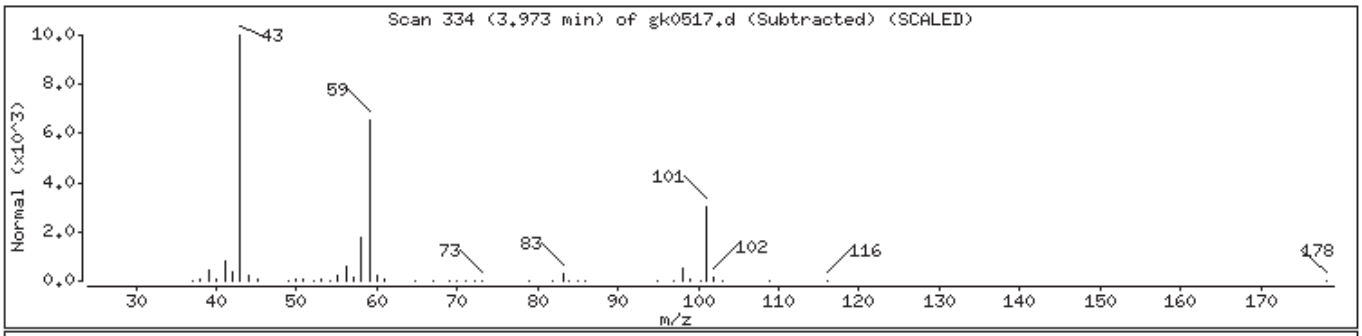
Client ID: SBLKLC3137 Instrument: HP11165.i

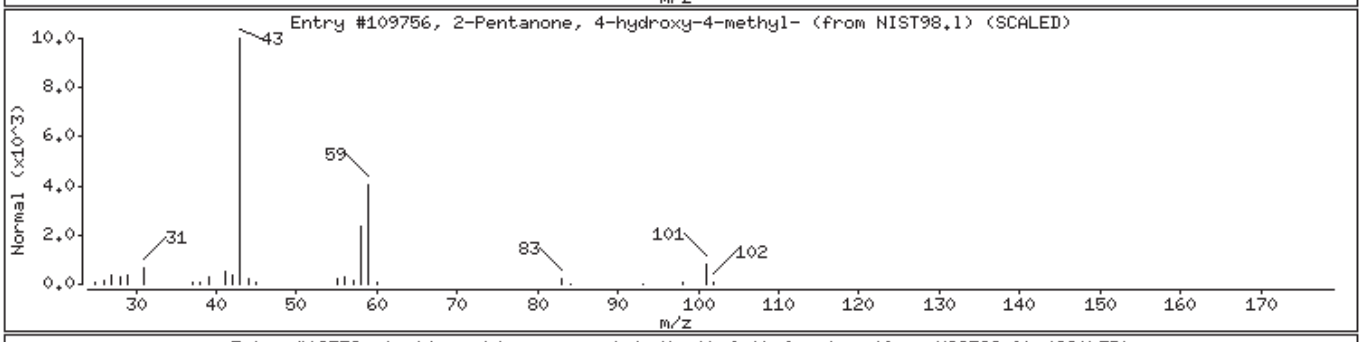
Sample Info: SBLKLC3137;SBLKLC313;2;3;BLANK;;;

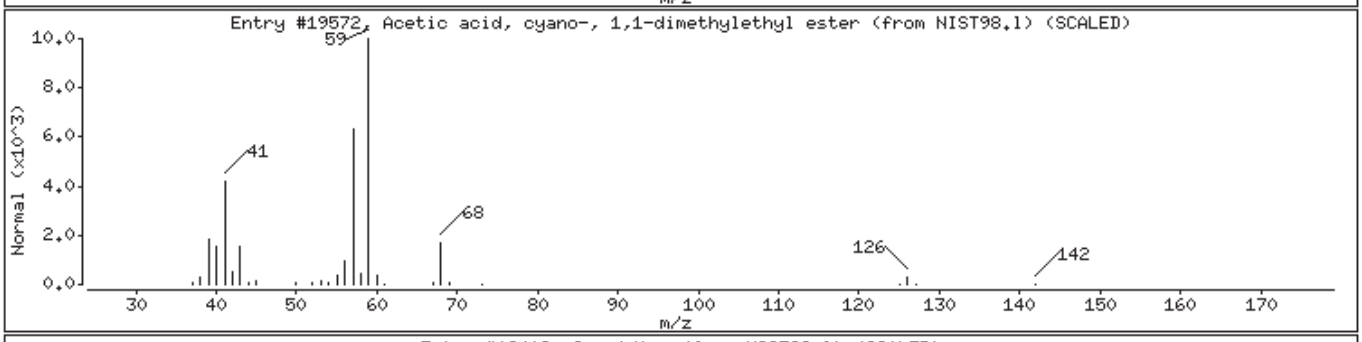
Volume Injected (uL): 1.0 Operator: CAM01237

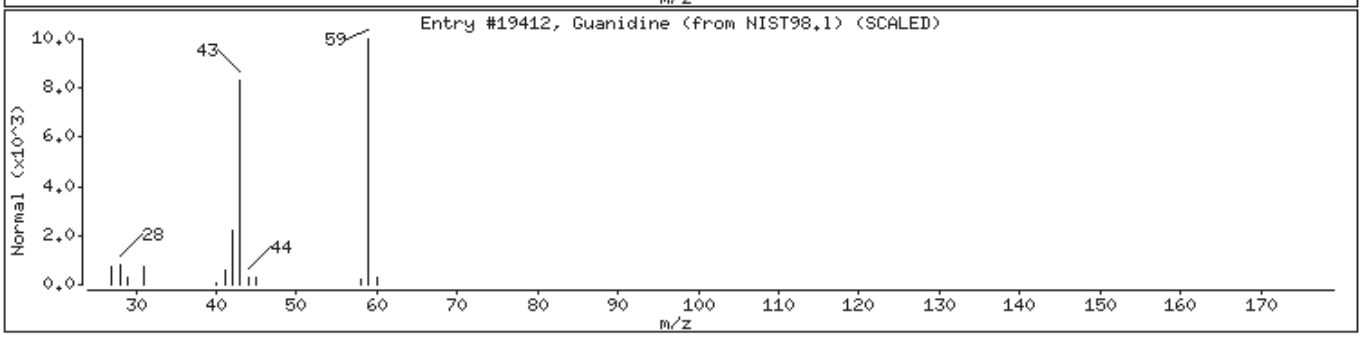
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST98.l	109756	56	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST98.l	19572	17	C7H11NO2	141
Guanidine	113-00-8	NIST98.l	19412	9	CH5N3	59









Digitally signed by Brian K. Graham on 11/13/2013 at 22:58.
Target 3.5 esignature user ID: bkg00522

Data file: /chem/HP18831.i/13nov08.b/hk0252.d Injection date and time: **08-NOV-2013 05:05**
Data file Sample Info. Line: SBLKWG3108;SBLKWG310;1;3;BLANK;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 06:49
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.745	(0.006)	782	152	71933	(-29)	5.00	
48) Naphthalene-d8	8.680	(0.000)	1114	136	281408	(-29)	5.00	
83) Acenaphthene-d10	11.466	(0.006)	1592	164	173751	(-31)	5.00	
120) Phenanthrene-d10	13.354	(0.006)	1916	188	300275	(-32)	5.00	
134) Pyrene-d10	15.307	(0.006)	2251	212	364294	(-34)	5.00	
158) Perylene-d12	19.766	(0.006)	3016	264	293658	(-30)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.874	(-0.001)	112	698365	34.961	70%		10 - 107
13) Phenol-d6	(1)	6.244	(-0.001)	99	659938	24.022	48%		10 - 83
36) Nitrobenzene-d5	(2)	7.578	(0.001)	82	555503	21.141	85%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.428	(0.000)	172	1010273	23.752	95%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.515	(-0.001)	330	225127	50.994	102%		22 - 150
137) Terphenyl-d14	(5)	15.622	(0.000)	244	1314308	27.179	109%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) N-Nitrosodimethylamine	(1)				Not Detected					0.5
11) Benzaldehyde	(1)				Not Detected					0.3
14) Phenol	(1)				Not Detected					0.1
16) Aniline	(1)				Not Detected					0.1
17) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
18) 2-Chlorophenol	(1)				Not Detected					0.1
19) 1,3-Dichlorobenzene	(1)				Not Detected					0.1
20) 1,4-Dichlorobenzene	(1)				Not Detected					0.1
23) 1,2-Dichlorobenzene	(1)				Not Detected					0.1
26) 2-Methylphenol	(1)				Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.1
28) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
30) Acetophenone	(1)				Not Detected					0.1
31) 4-Methylphenol	(1)				Not Detected					0.1
32) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
35) Hexachloroethane	(1)				Not Detected					0.3
37) Nitrobenzene	(2)				Not Detected					0.1
39) Isophorone	(2)				Not Detected					0.1
40) 2-Nitrophenol	(2)				Not Detected					0.1
41) 2,4-Dimethylphenol	(2)				Not Detected					0.1
44) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
46) 2,4-Dichlorophenol	(2)				Not Detected					0.1
47) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.1
49) Naphthalene	(2)				Not Detected					0.03
50) 4-Chloroaniline	(2)				Not Detected					0.1
53) Hexachlorobutadiene	(2)				Not Detected					0.1
55) Caprolactam	(2)				Not Detected					1

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Data file: /chem/HP18831.i/13nov08.b/hk0252.d Injection date and time: **08-NOV-2013 05:05**
Data file Sample Info. Line: SBLKWG3108;SBLKWG310;1;3;BLANK;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 06:49
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
58) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
61) 2-Methylnaphthalene	(2)			Not Detected					0.03
63) Hexachlorocyclopentadiene	(3)			Not Detected					1
66) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
67) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
71) 1,1'-Biphenyl	(3)			Not Detected					0.1
72) 2-Chloronaphthalene	(3)			Not Detected					0.1
75) 2-Nitroaniline	(3)			Not Detected					0.1
78) Dimethylphthalate	(3)			Not Detected					0.5
80) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
81) Acenaphthylene	(3)			Not Detected					0.03
82) 3-Nitroaniline	(3)			Not Detected					0.1
84) Acenaphthene	(3)			Not Detected					0.03
85) 2,4-Dinitrophenol	(3)			Not Detected					3
86) 4-Nitrophenol	(3)			Not Detected					3
88) Dibenzofuran	(3)			Not Detected					0.1
89) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
93) Diethylphthalate	(3)			Not Detected					0.5
94) Fluorene	(3)			Not Detected					0.03
96) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
98) 4-Nitroaniline	(3)			Not Detected					0.1
99) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
101) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
103) 1,2-Diphenylhydrazine	(4)			Not Detected					0.1
110) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
112) Hexachlorobenzene	(4)			Not Detected					0.03
114) Atrazine	(4)			Not Detected					0.5
115) Pentachlorophenol	(4)			Not Detected					0.3
121) Phenanthrene	(4)			Not Detected					0.03
122) Anthracene	(4)			Not Detected					0.03
124) Carbazole	(4)			Not Detected					0.1
126) Di-n-butylphthalate	(4)			Not Detected					0.5
131) Fluoranthene	(4)			Not Detected					0.03
132) Benzidine	(5)			Not Detected					5
133) Pyrene	(5)			Not Detected					0.03
144) Butylbenzylphthalate	(5)			Not Detected					0.5
148) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
147) Benzo(a)anthracene	(5)			Not Detected					0.03
150) Chrysene	(5)			Not Detected					0.03
151) bis(2-Ethylhexyl)phthalate	(5)	17.528(-0.000)	149	86163	2.017	8.07			0.5
153) Di-n-octylphthalate	(6)			Not Detected					0.5
154) Benzo(b)fluoranthene	(6)			Not Detected					0.03
156) Benzo(k)fluoranthene	(6)			Not Detected					0.03
157) Benzo(a)pyrene	(6)			Not Detected					0.03
162) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
163) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
164) Benzo(g,h,i)perylene	(6)			Not Detected					0.03
168) 2,4_2,6-Dinitrotoluenes	(3)			Not Detected					0

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Data file: /chem/HP18831.i/13nov08.b/hk0252.d Injection date and time: **08-NOV-2013 05:05**
Data file Sample Info. Line: SBLKWG3108;SBLKWG310;1;3;BLANK;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 06:49
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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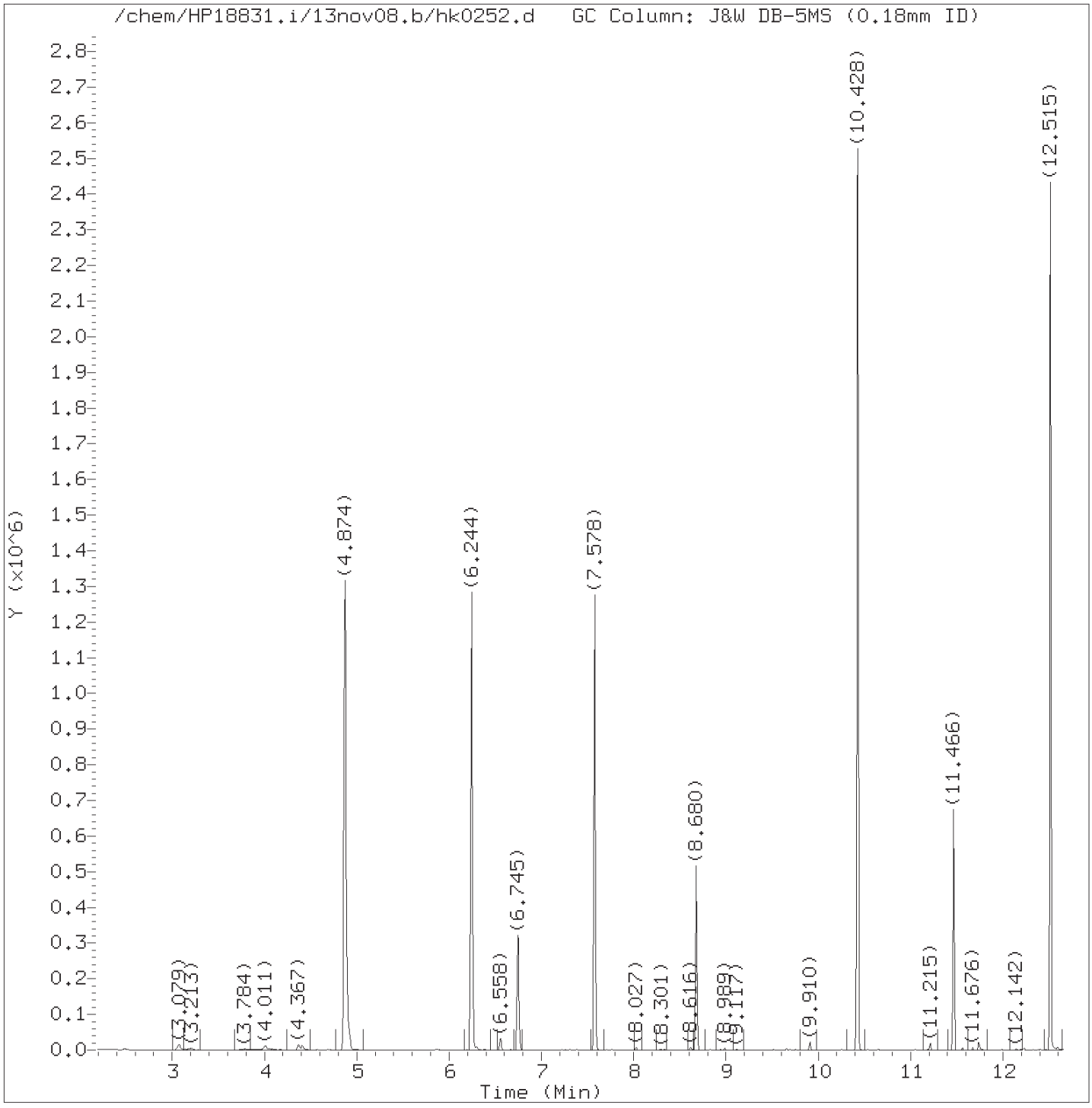
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 75

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:01. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:56. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

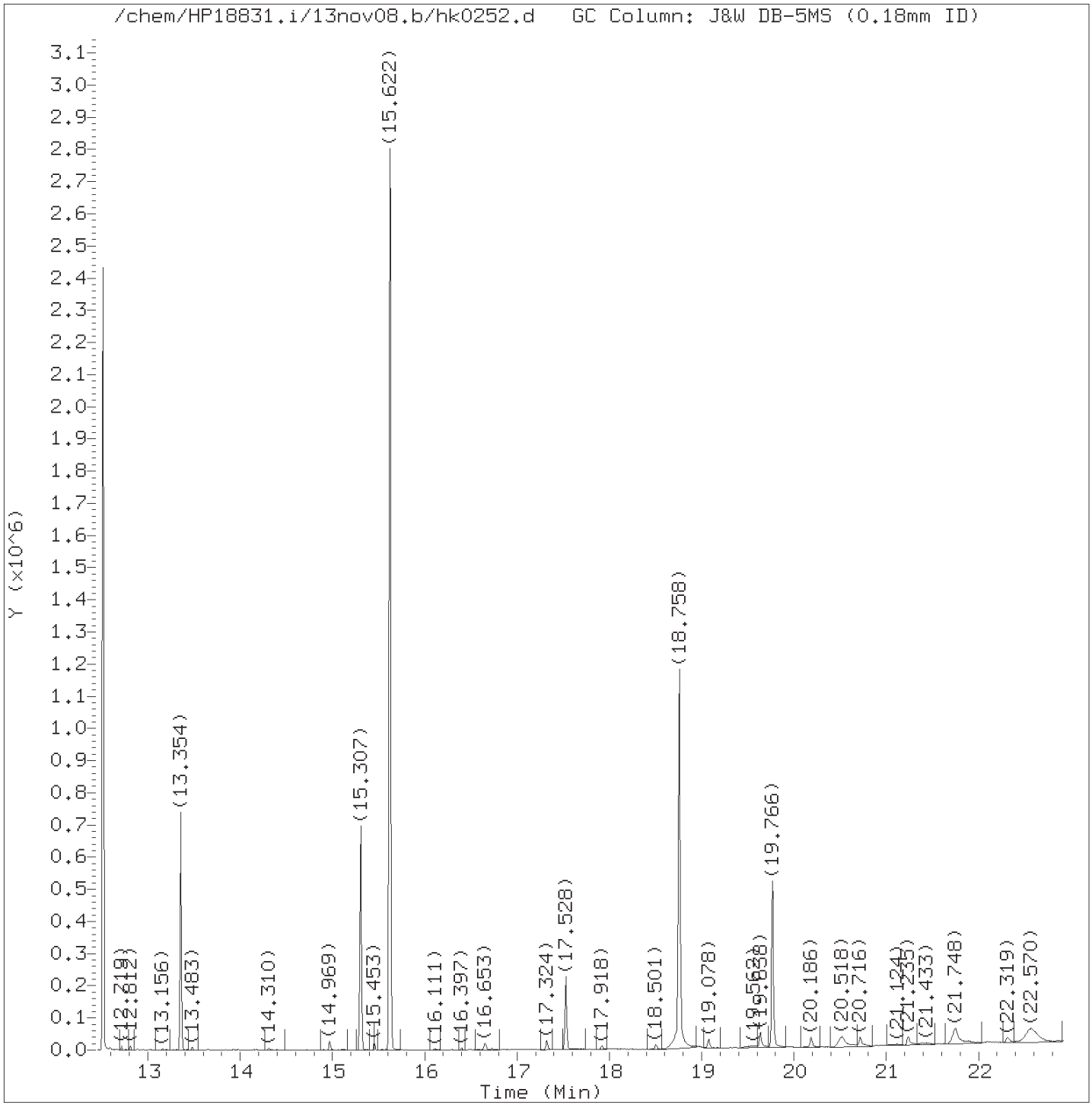
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:01.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:01.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
8)$2-Fluorophenol	(1)	4.874	112	698365	34.961
13)$Phenol-d6	(1)	6.244	99	659938	24.022
21)*1,4-Dichlorobenzene-d4	(1)	6.745	152	71933	5.000
36)$Nitrobenzene-d5	(2)	7.578	82	555503	21.141
48)*Naphthalene-d8	(2)	8.680	136	281408	5.000
68)$2-Fluorobiphenyl	(3)	10.428	172	1010273	23.752
83)*Acenaphthene-d10	(3)	11.466	164	173751	5.000
104)$2,4,6-Tribromophenol	(3)	12.515	330	225127	50.994
120)*Phenanthrene-d10	(4)	13.354	188	300275	5.000
134)*Pyrene-d10	(5)	15.307	212	364294	5.000
137)$Terphenyl-d14	(5)	15.622	244	1314308	27.179
151) bis(2-Ethylhexyl)phthalate	(5)	17.528	149	86163	2.017
158)*Perylene-d12	(6)	19.766	264	293658	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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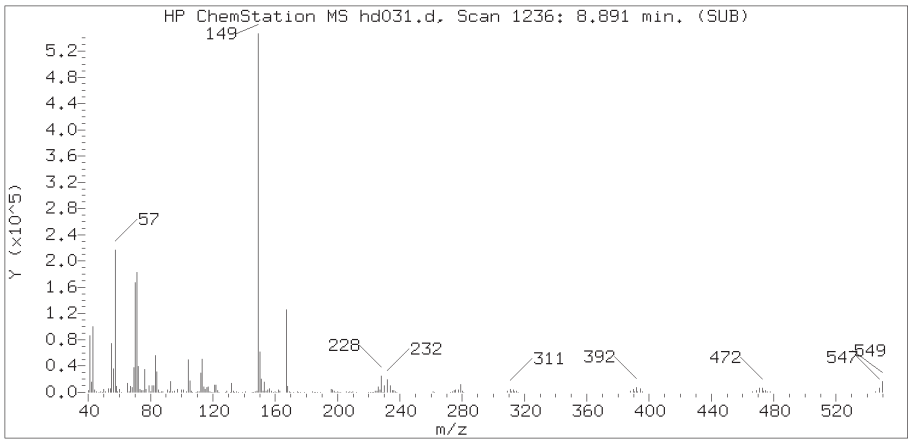
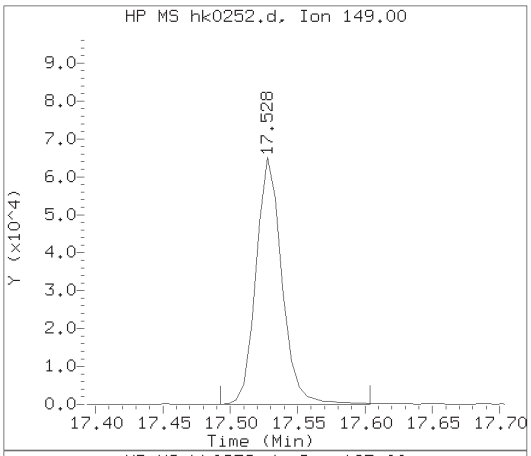
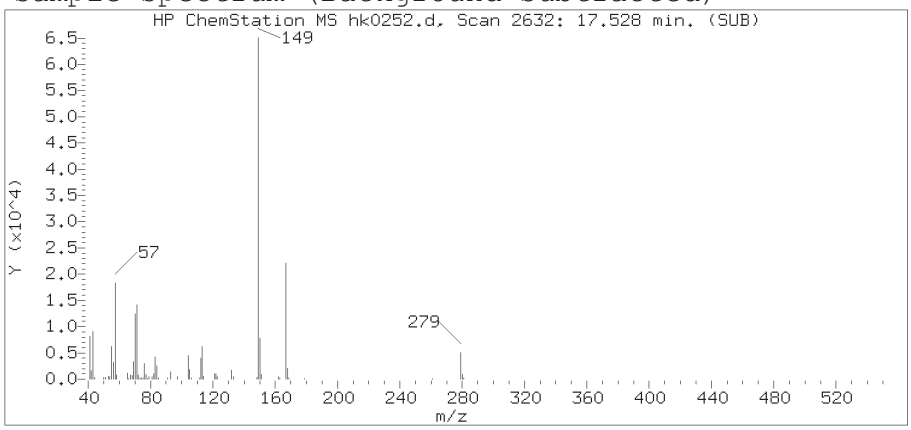
on 11/08/2013 at 08:01.
Target 3.5 esignature user ID: jmg00346

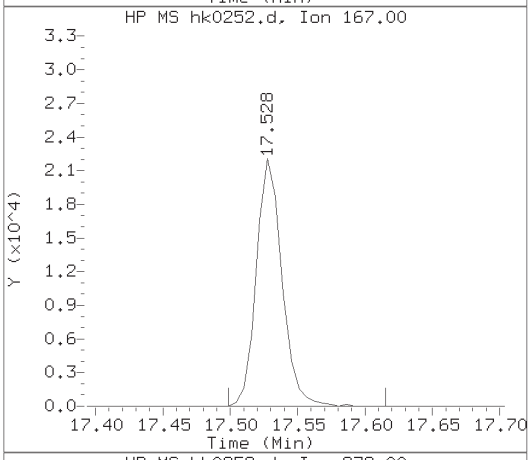
Reference Standard Spectrum for bis(2-Ethylhexyl)phthalate



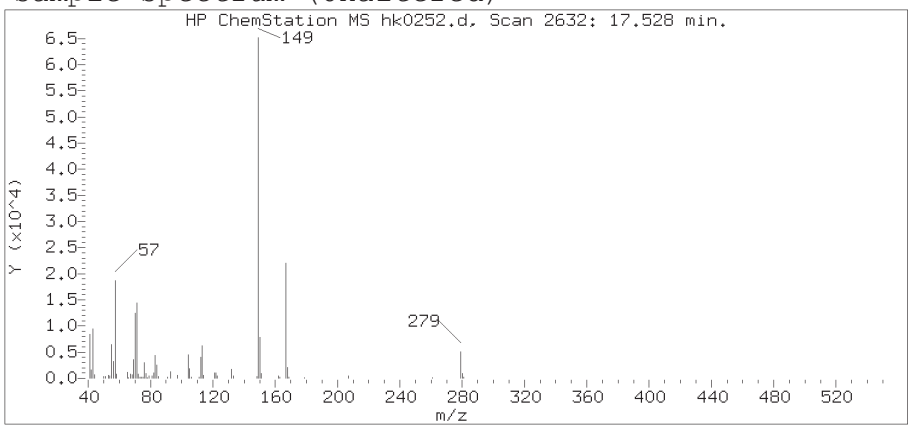


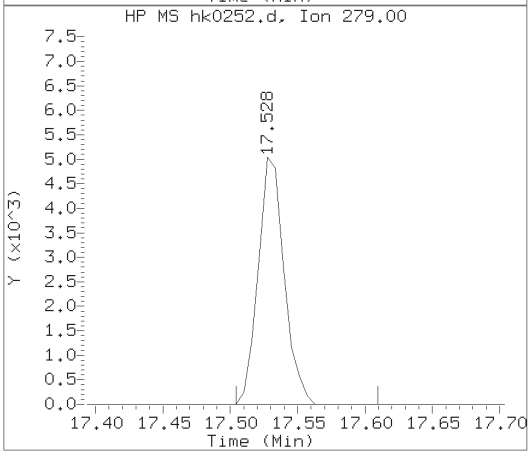
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





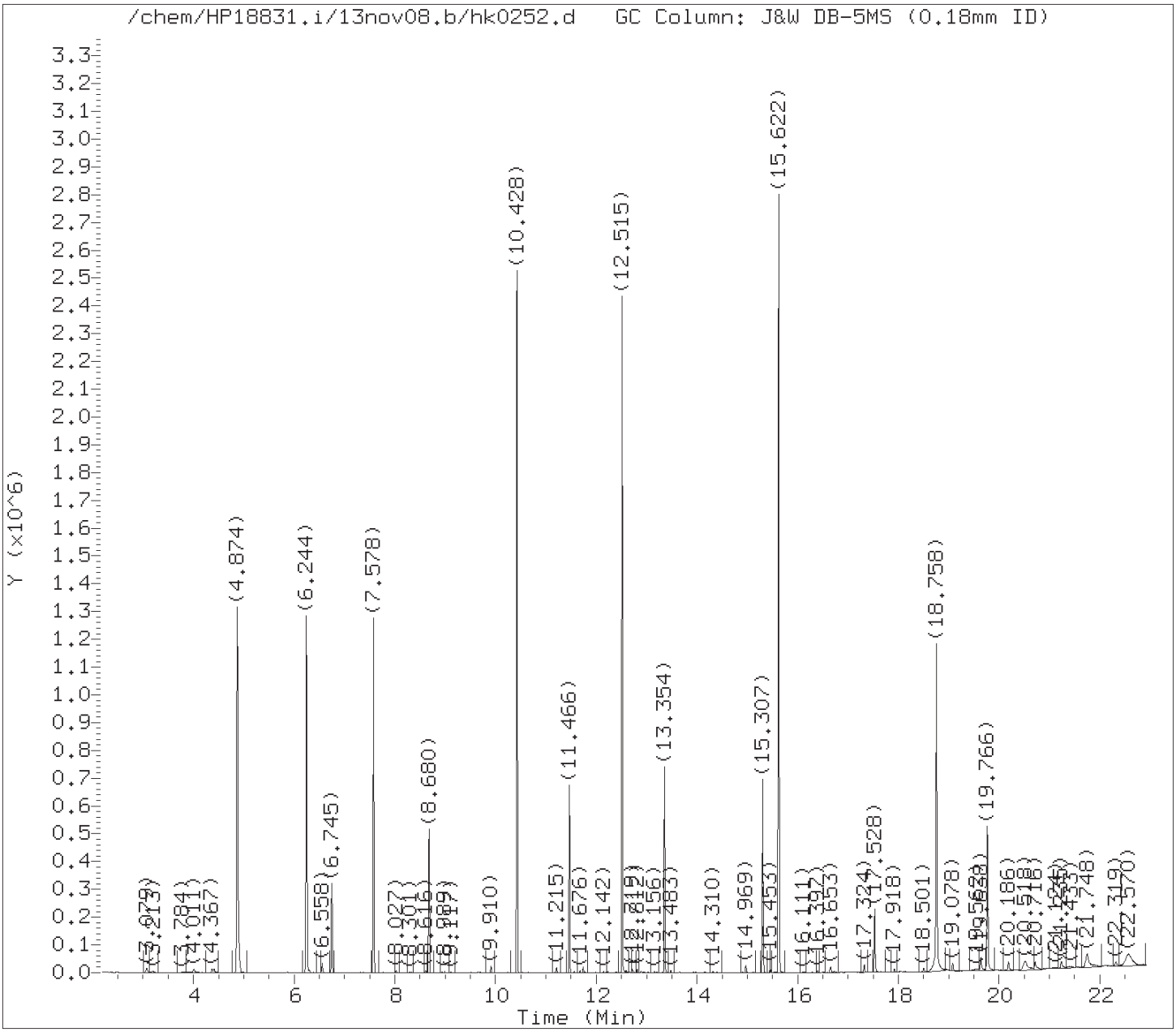
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Compound Number : 151
Compound Name : bis(2-Ethylhexyl)phthalate
Scan Number : 2632
Retention Time (minutes) : 17.528
Relative Retention Time :-0.00006
Quant Ion : 149.00
Area (flag) : 86163
On-column Amount (ng/ul) : 2.0166

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:01.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

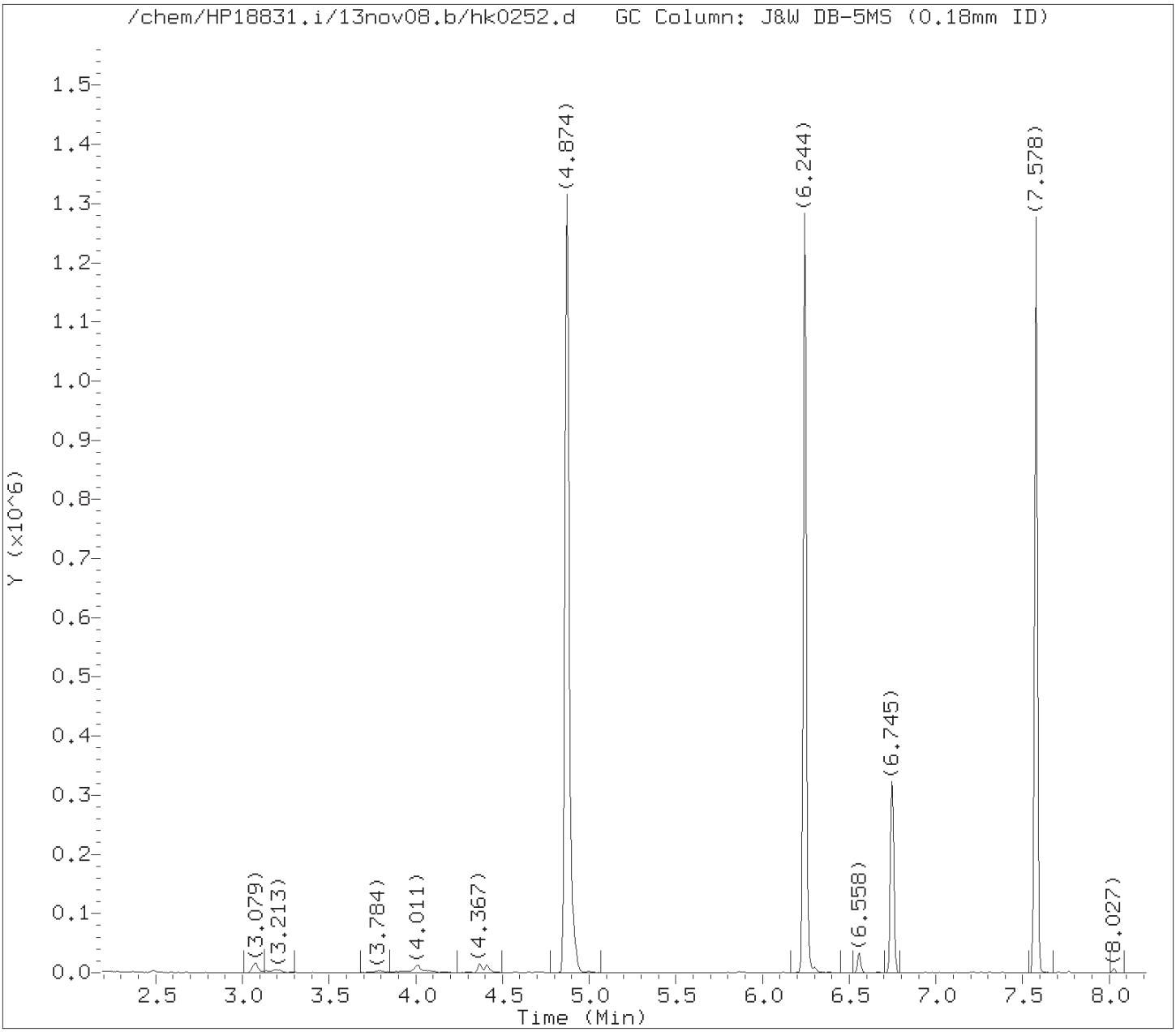
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

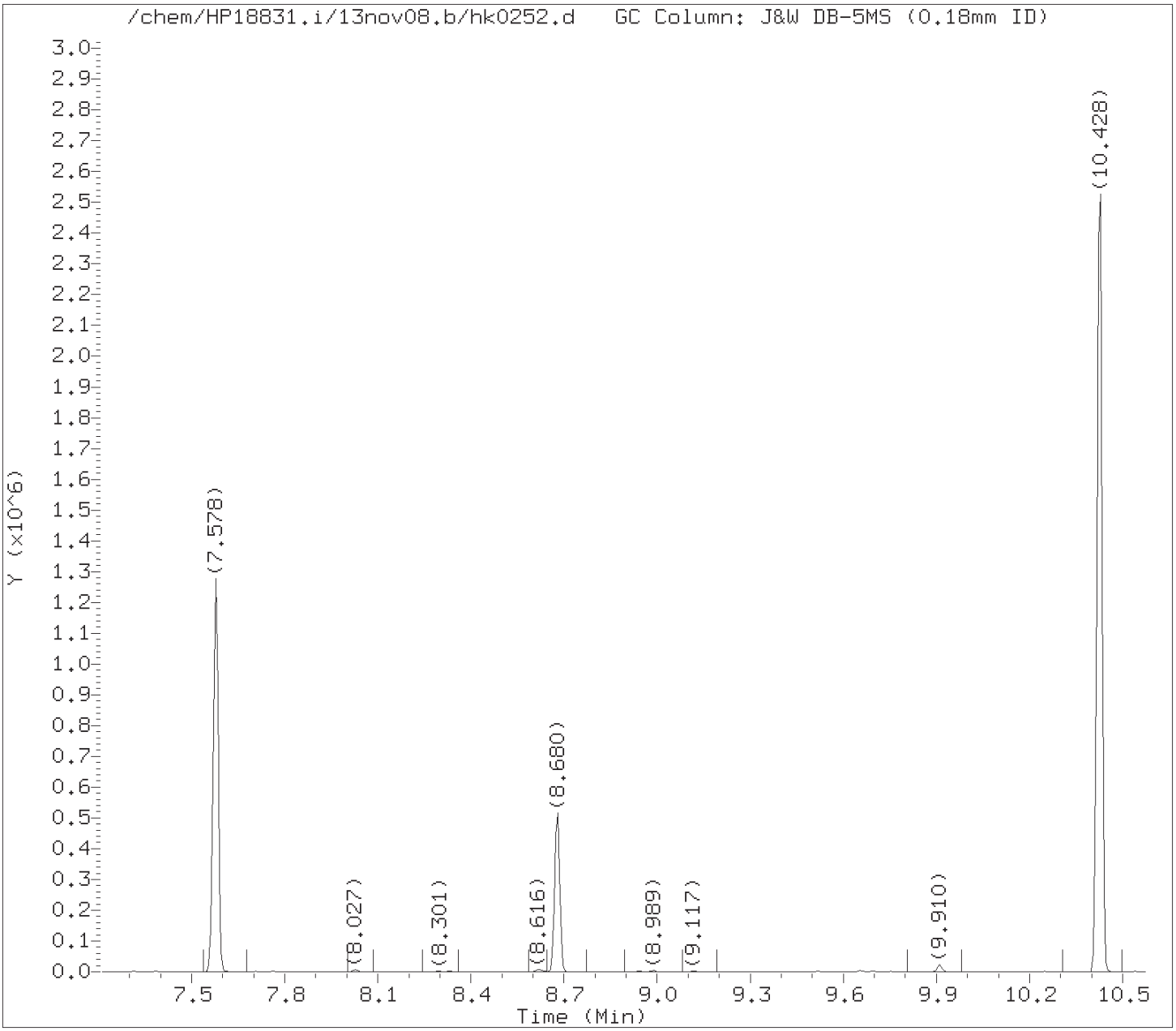
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 6.745 minutes
Chromatogram Start Time (min.): 2.193
Chromatogram End Time (min.): 7.712

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

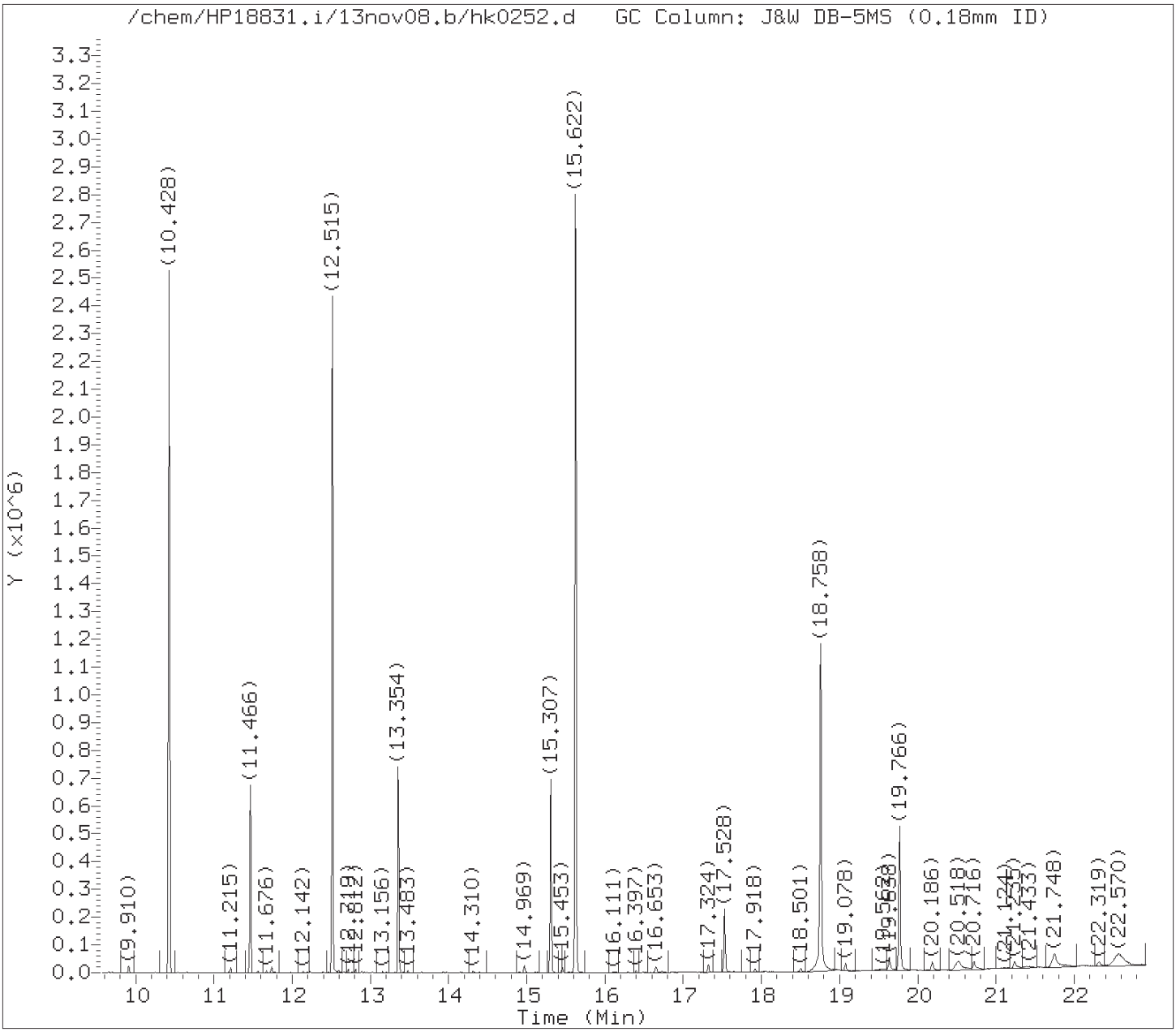
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: Naphthalene-d8 at 8.680 minutes
Chromatogram Start Time (min.): 7.712
Chromatogram End Time (min.): 10.073

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

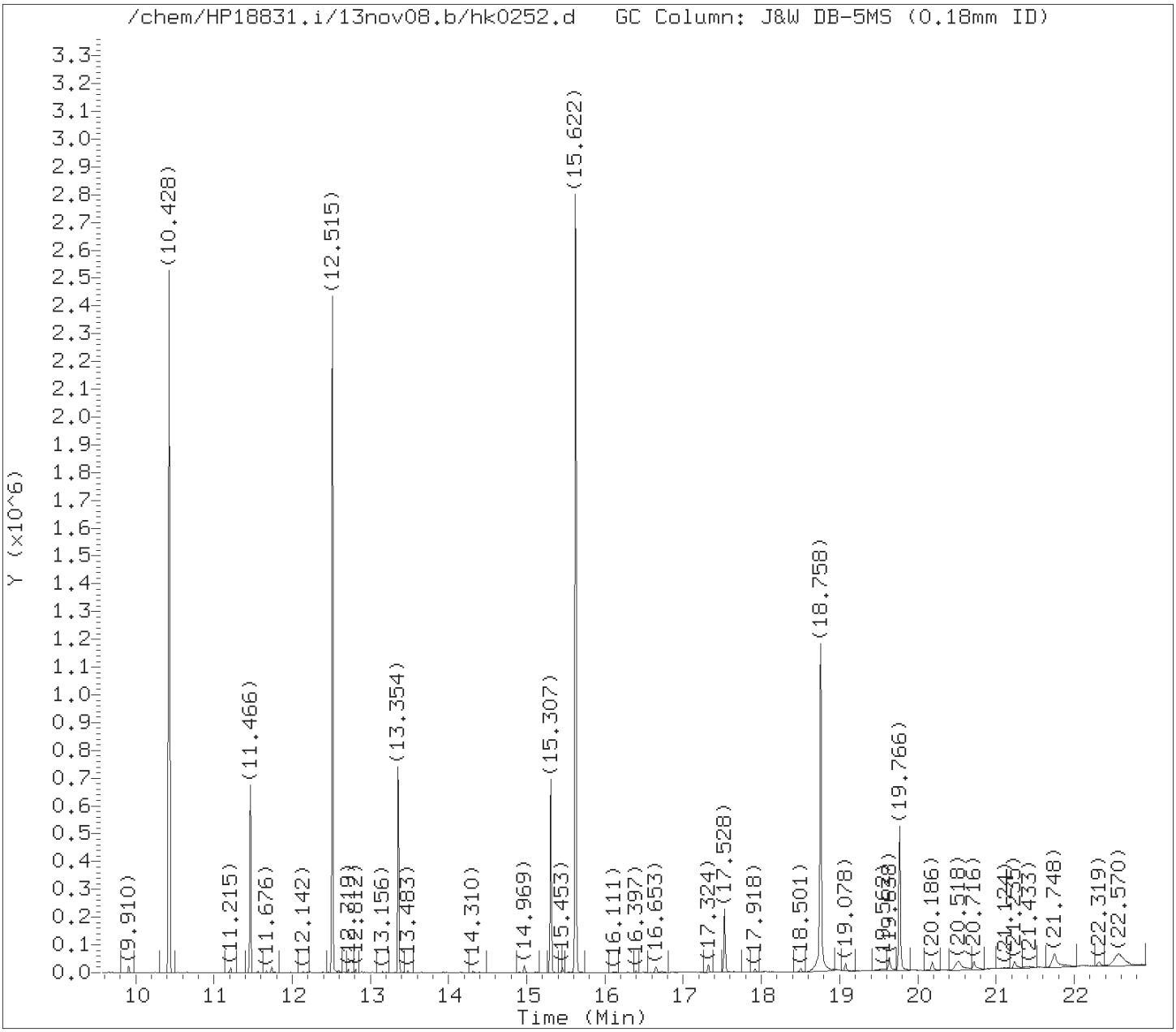
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: Acenaphthene-d10 at 11.466 minutes
Chromatogram Start Time (min.): 10.073
Chromatogram End Time (min.): 12.410

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

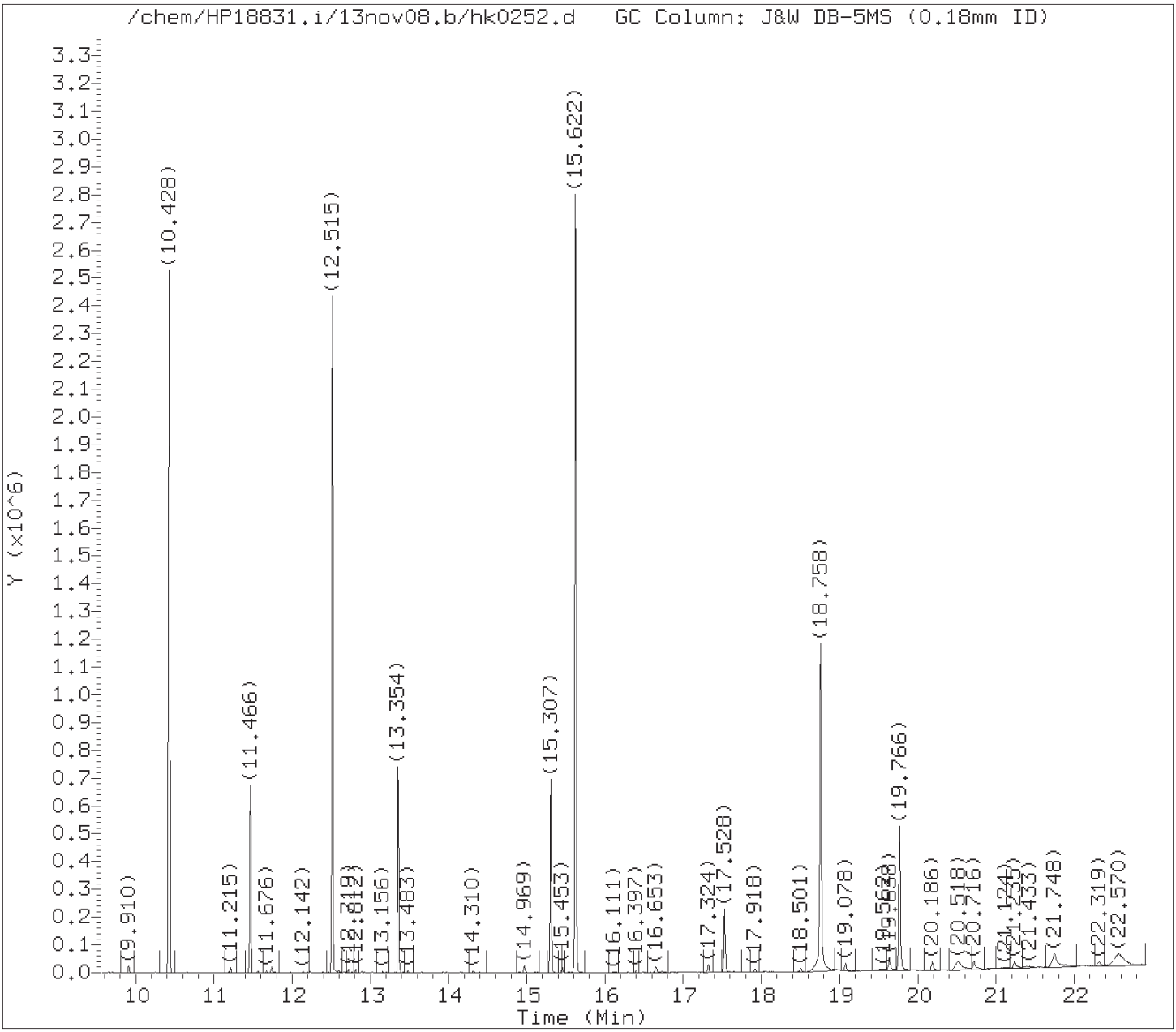
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: Phenanthrene-d10 at 13.354 minutes
Chromatogram Start Time (min.): 12.410
Chromatogram End Time (min.): 14.331

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

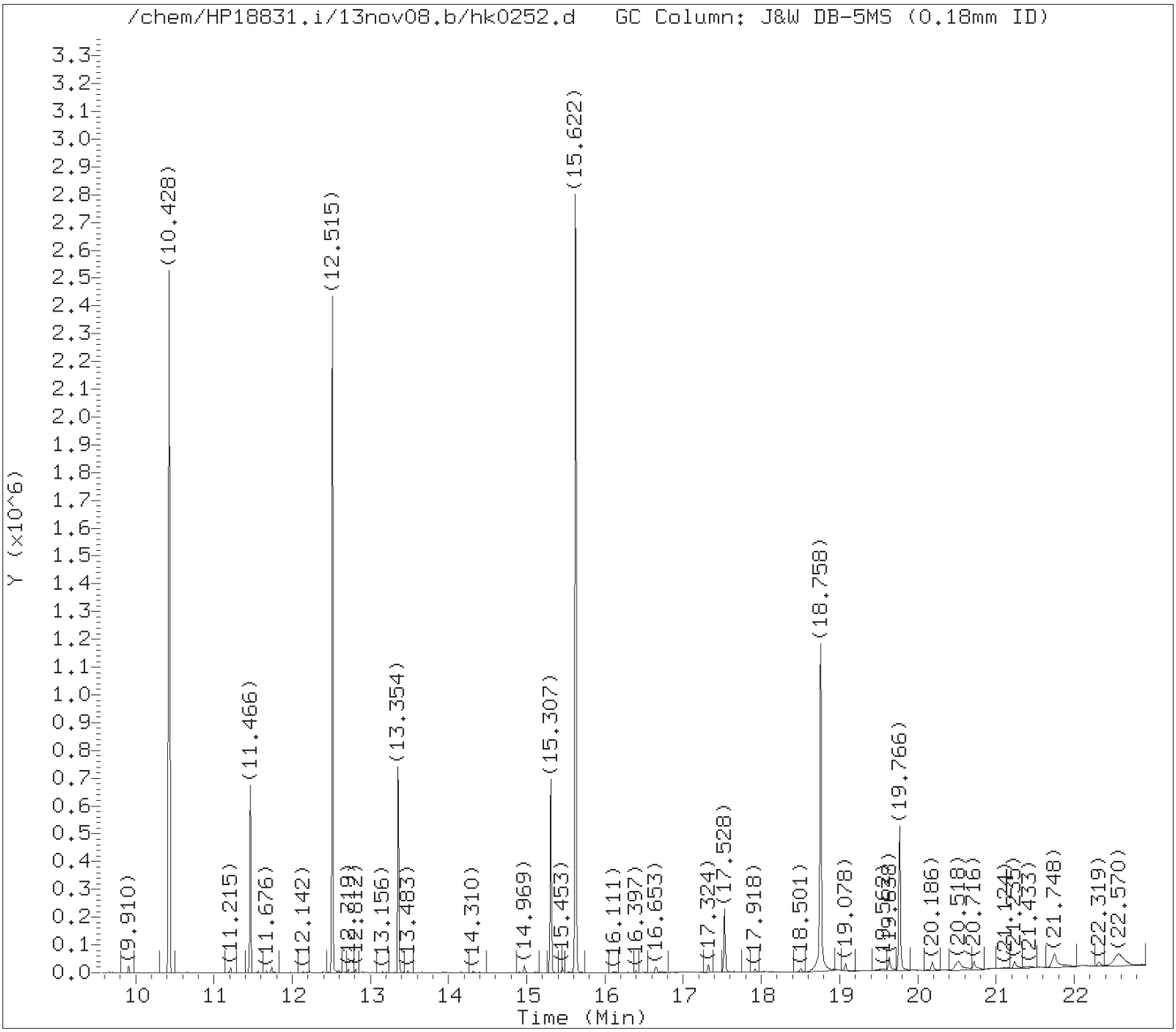
Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: Pyrene-d10 at 15.307 minutes
Chromatogram Start Time (min.): 14.331
Chromatogram End Time (min.): 17.537

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0252.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:05 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 06:49
Date, time and analyst ID of latest file update: 08-Nov-2013 07:58 jmg00346

Sample Name: SBLKWG3108 Lab Sample ID: SBLKWG310

Internal Standard referenced: Perylene-d12 at 19.766 minutes
Chromatogram Start Time (min.): 17.537
Chromatogram End Time (min.): 22.919

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP18831.i/13nov08.b/hk0252.d
Lab Smp Id: SBLKWG310 Client Smp ID: SBLKWG3108
Inj Date : 08-NOV-2013 05:05
Operator : jmg00346 Inst ID: HP18831.i
Smp Info : SBLKWG3108;SBLKWG310;1;3;BLANK;;;
Misc Info : 13310WAG;newall1;;250;1000;0;hk0252;04678;
Comment : Max. number of TICs to report is 25, 4 TICs were found initially.
Method : /chem/HP18831.i/13nov08.b/8270_LVI.m
Meth Date : 08-Nov-2013 07:56 jmg00346 Quant Type: ISTD
Cal Date : 07-NOV-2013 15:39 Cal File: hk0157.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 310WAG.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	250.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 158 Perylene-d12	19.766	792435	5.000

	CONCENTRATIONS			QUANT			
	RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:			
	18.758	1929318	12.1733457	48.69338	0		0	158
Unknown					CAS #:			
	20.518	201392	1.27071606	5.08286	0		0	158

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======
Unknown				CAS #:			
21.748	284815	1.79708606	7.18834	0		0	158
Unknown				CAS #:			
22.570	444212	2.80283063	11.21132	0		0	158

Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0252.d

Date : 08-NOV-2013 05:05

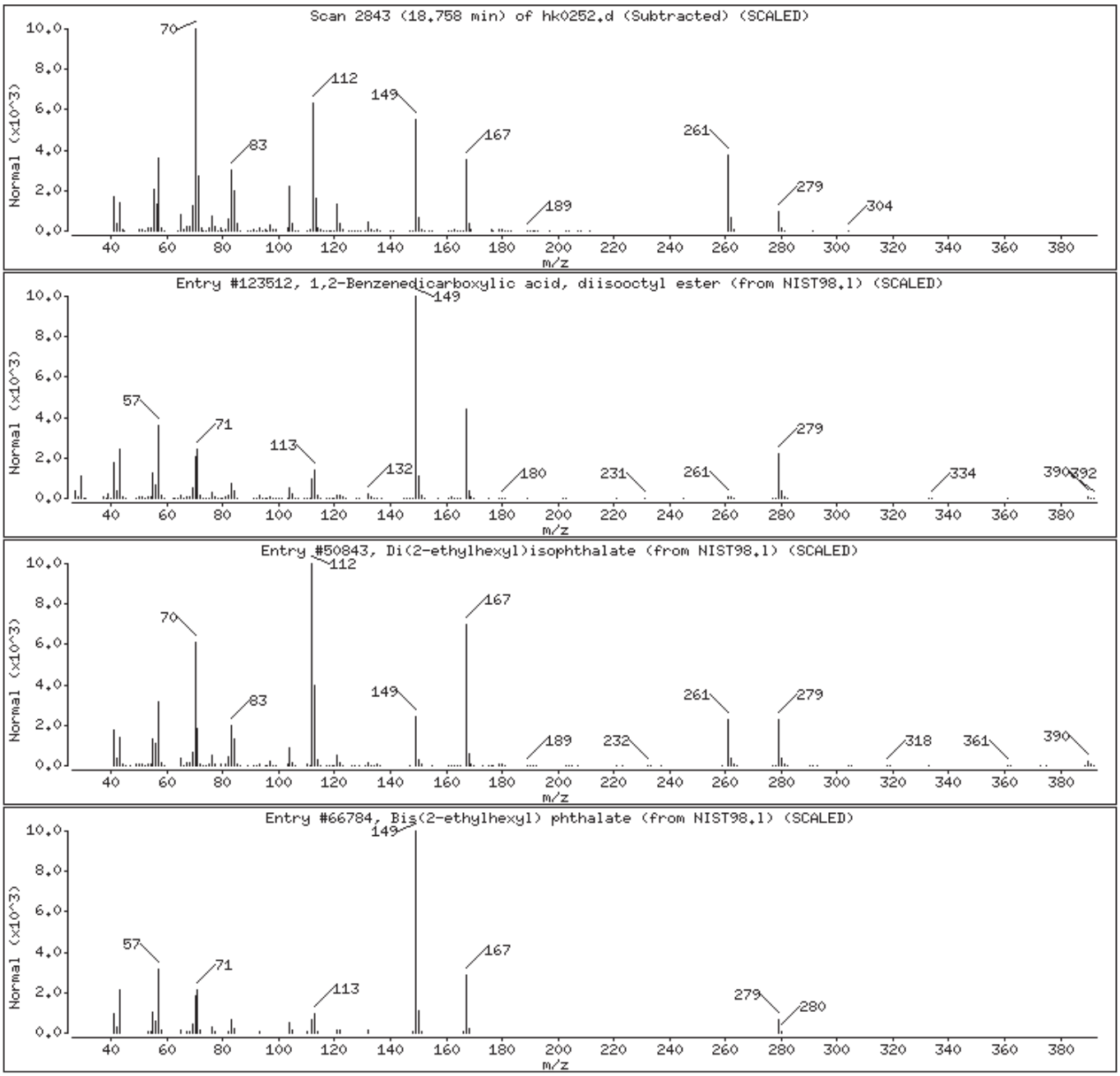
Client ID: SBLKWG3108 Instrument: HP18831.i

Sample Info: SBLKWG3108;SBLKWG310;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1,2-Benzenedicarboxylic acid, diisooctyl	27554-26-3	NIST98.1	123512	38	C24H3804	390
Di(2-ethylhexyl)isophthalate	1000132-34-4	NIST98.1	50843	38	C24H3804	390
Bis(2-ethylhexyl) phthalate	117-81-7	NIST98.1	66784	32	C24H3804	390



Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0252.d

Date : 08-NOV-2013 05:05

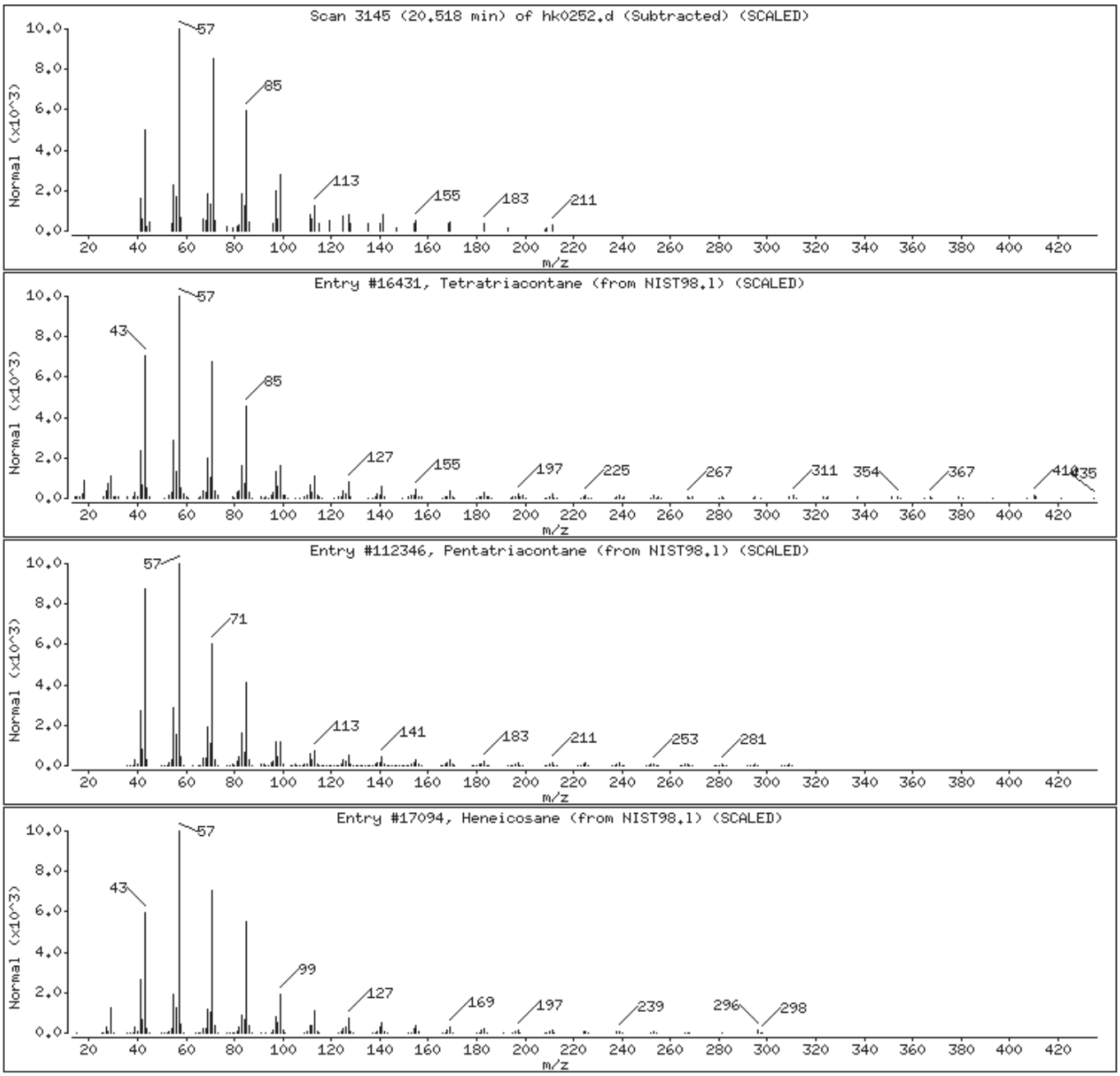
Client ID: SBLKWG3108 Instrument: HP18831.i

Sample Info: SBLKWG3108;SBLKWG310;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetratriacontane	14167-59-0	NIST98.1	16431	90	C34H70	479
Pentatriacontane	630-07-9	NIST98.1	112346	90	C35H72	493
Heneicosane	629-94-7	NIST98.1	17094	87	C21H44	296



Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0252.d

Date : 08-NOV-2013 05:05

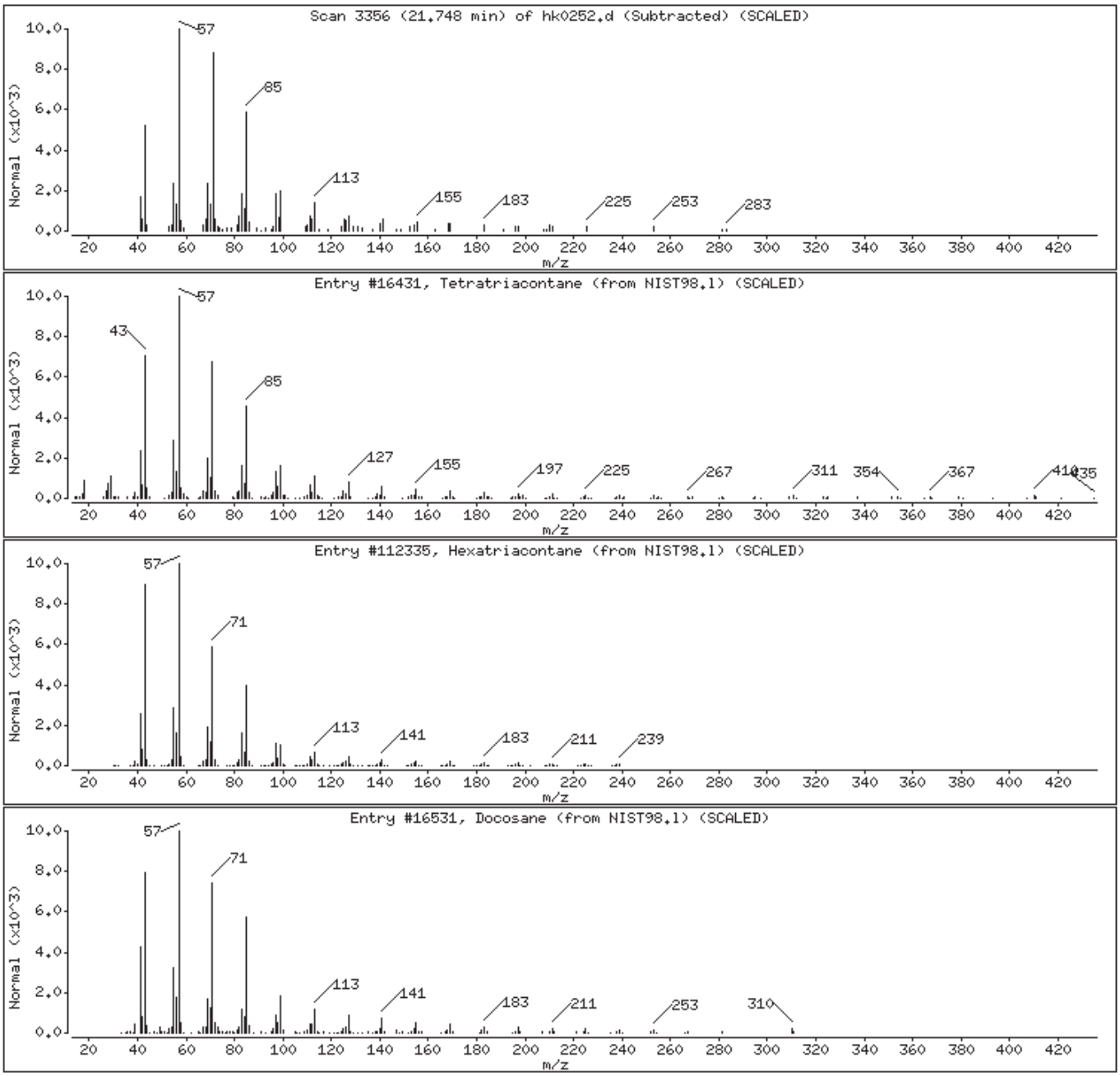
Client ID: SBLKWG3108 Instrument: HP18831.i

Sample Info: SBLKWG3108;SBLKWG310;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetratriacontane	14167-59-0	NIST98.l	16431	91	C34H70	479
Hexatriacontane	630-06-8	NIST98.l	112335	91	C36H74	507
Docosane	629-97-0	NIST98.l	16531	91	C22H46	310



Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP18831.i/13nov08.b/hk0252.d

Date : 08-NOV-2013 05:05

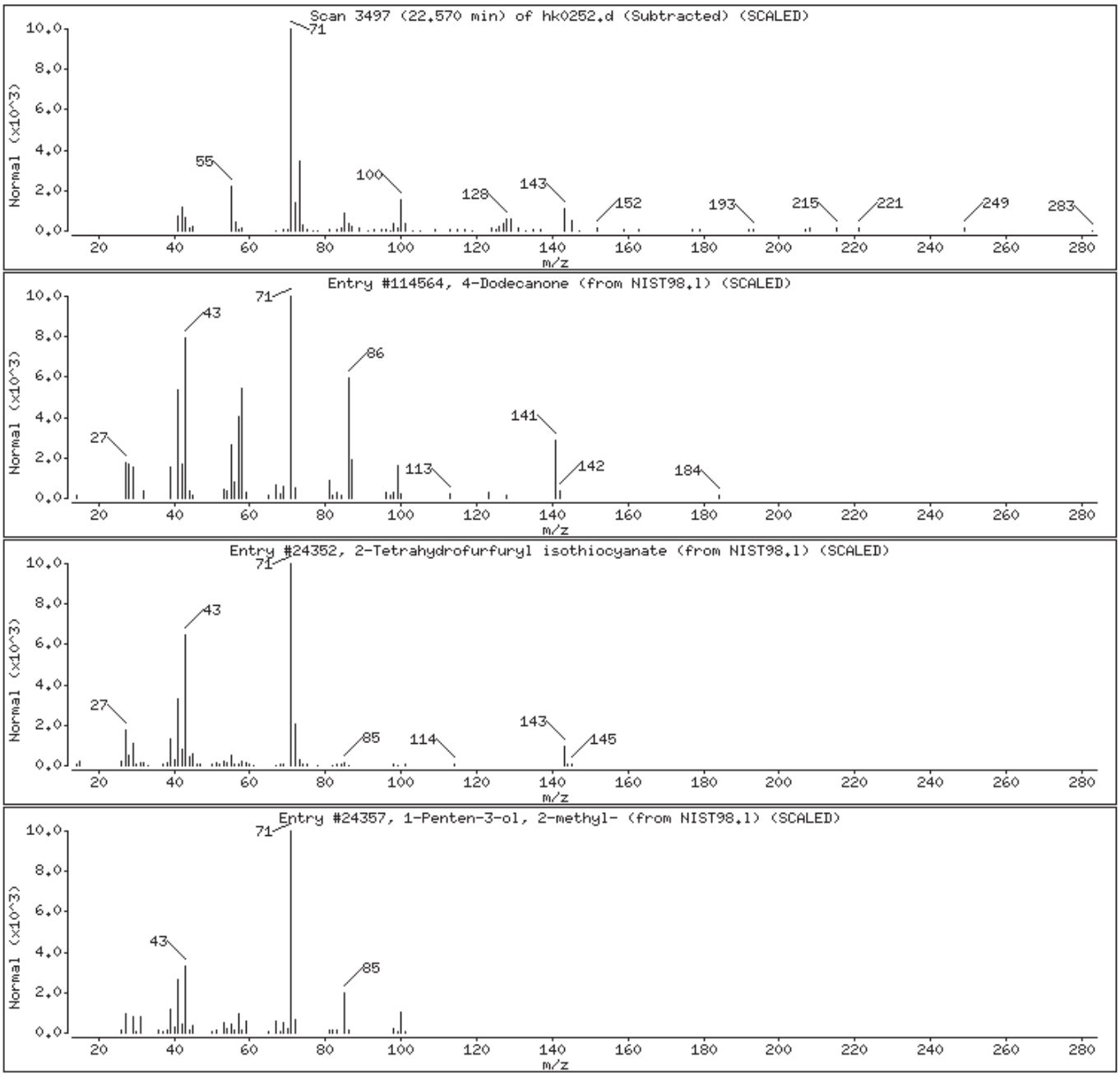
Client ID: SBLKWG3108 Instrument: HP18831.i

Sample Info: SBLKWG3108;SBLKWG310;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
4-Dodecanone	6137-26-4	NIST98.1	114564	46	C12H24O	184
2-Tetrahydrofurfuryl isothiocyanate	36810-87-4	NIST98.1	24352	33	C6H9NOS	143
1-Penten-3-ol, 2-methyl-	2088-07-5	NIST98.1	24357	33	C6H12O	100



Digitally signed by Joseph M. Gambler on 11/08/2013 at 07:58.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov14b.b/dk0513.d Injection date and time: **14-NOV-2013 22:15**
Data file Sample Info. Line: SBLKWK3164;SBLKWK316;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.848	(0.006)	774	152	77397	(-19)	5.00	
52) Naphthalene-d8	7.813	(0.006)	1111	136	301438	(-19)	5.00	
92) Acenaphthene-d10	10.616	(0.006)	1592	164	169563	(-23)	5.00	
130) Phenanthrene-d10	12.528	(0.006)	1920	188	281307	(-22)	5.00	
145) Pyrene-d10	14.457	(0.000)	2251	212	342565	(-25)	5.00	
172) Perylene-d12	18.893	(0.006)	3012	264	233221	(-29)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.878	(0.001)	112	726009	31.592	63%		10 - 107
13) Phenol-d6	(1)	5.324	(0.001)	99	777075	24.621	49%		10 - 83
36) Nitrobenzene-d5	(2)	6.699	(0.001)	82	693978	25.016	100%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.573	(0.000)	172	976875	23.070	92%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.706	(-0.001)	330	214634	48.195	96%		22 - 150
149) Terphenyl-d14	(5)	14.778	(0.000)	244	1061086	24.838	99%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)				Not Detected					0.3
14) Phenol	(1)				Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
17) 2-Chlorophenol	(1)				Not Detected					0.1
18) 1,3-Dichlorobenzene	(1)				Not Detected					0.1
20) 1,4-Dichlorobenzene	(1)				Not Detected					0.1
23) Benzyl alcohol	(1)				Not Detected					1
24) 1,2-Dichlorobenzene	(1)				Not Detected					0.1
26) 2-Methylphenol	(1)				Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)				Not Detected					0.1
30) Acetophenone	(1)				Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.1
33) 4-Methylphenol	(1)				Not Detected					0.1
35) Hexachloroethane	(1)				Not Detected					0.3
37) Nitrobenzene	(2)				Not Detected					0.1
40) Isophorone	(2)				Not Detected					0.1
42) 2-Nitrophenol	(2)				Not Detected					0.1
45) 2,4-Dimethylphenol	(2)				Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)				Not Detected					0.1
49) 2,4-Dichlorophenol	(2)				Not Detected					0.1
51) 1,2,4-Trichlorobenzene	(2)				Not Detected					0.1
53) Naphthalene	(2)				Not Detected					0.03
55) 4-Chloroaniline	(2)				Not Detected					0.1
58) Hexachlorobutadiene	(2)				Not Detected					0.1
61) Caprolactam	(2)				Not Detected					1
63) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
65) 2-Methylnaphthalene	(2)				Not Detected					0.03

Digitally signed by Catherine E. Bachman on 11/22/2013 at 22:19. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP19760.i/13nov14b.b/dk0513.d Injection date and time: **14-NOV-2013 22:15**
Data file Sample Info. Line: SBLKWK3164;SBLKWK316;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Digitally signed by Catherine E. Bachman on 11/22/2013 at 22:19. Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP19760.i/13nov14b.b/dk0513.d Injection date and time: **14-NOV-2013 22:15**
Data file Sample Info. Line: SBLKWK3164;SBLKWK316;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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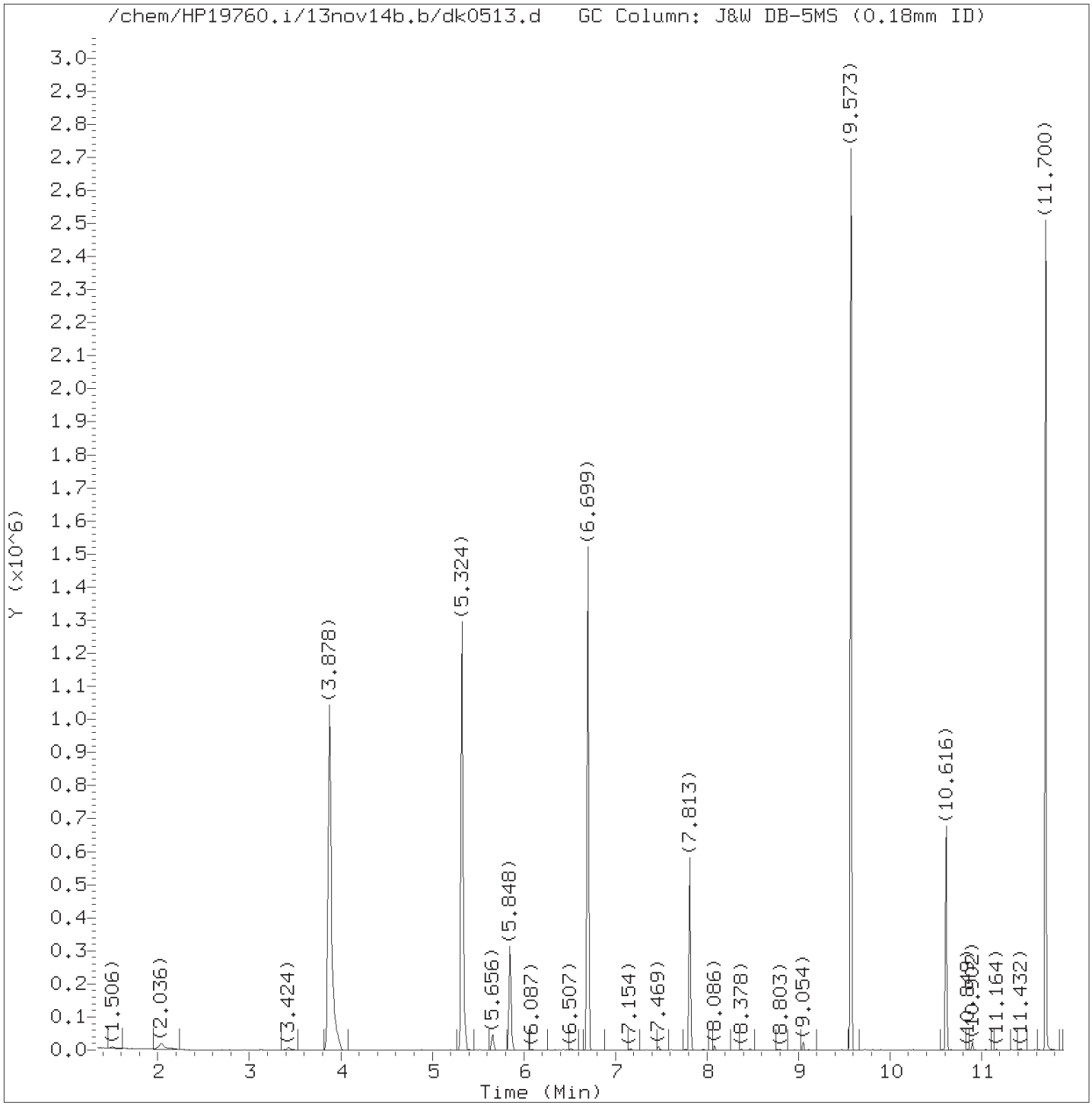
Total number of targets = 70

Digitally signed by Catherine E. Bachman on 11/22/2013 at 22:19. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/25/2013 at 09:40. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

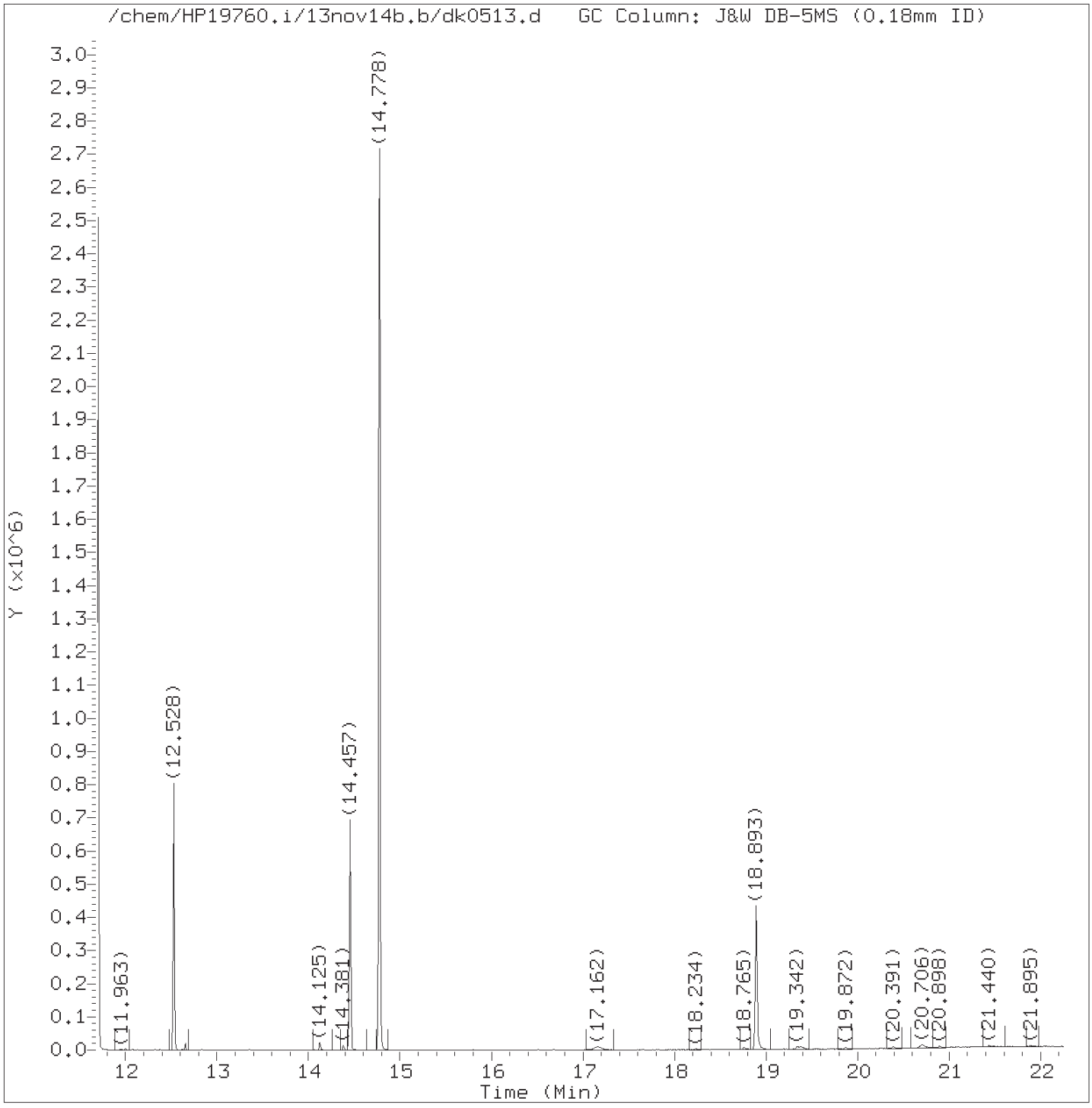
Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0513.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:15 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Sample Name: SBLKWK3164 Lab Sample ID: SBLKWK316

Digitally signed by Catherine E. Bachman
on 11/22/2013 at 22:19.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0513.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:15 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Sample Name: SBLKWK3164 Lab Sample ID: SBLKWK316

Digitally signed by Catherine E. Bachman
on 11/22/2013 at 22:19.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0513.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:15 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 22-Nov-2013 22:17 ceb05247

Sample Name: SBLKWK3164 Lab Sample ID: SBLKWK316

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.878	112	726009	31.592
13)$Phenol-d6	(1)	5.324	99	777075	24.621
19)*1,4-Dichlorobenzene-d4	(1)	5.848	152	77397	5.000
36)$Nitrobenzene-d5	(2)	6.699	82	693978	25.016
52)*Naphthalene-d8	(2)	7.813	136	301438	5.000
72)$2-Fluorobiphenyl	(3)	9.573	172	976875	23.070
92)*Acenaphthene-d10	(3)	10.616	164	169563	5.000
112)$2,4,6-Tribromophenol	(3)	11.706	330	214634	48.195
130)*Phenanthrene-d10	(4)	12.528	188	281307	5.000
145)*Pyrene-d10	(5)	14.457	212	342565	5.000
149)$Terphenyl-d14	(5)	14.778	244	1061086	24.838
172)*Perylene-d12	(6)	18.893	264	233221	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/22/2013 at 22:19.
Target 3.5 esignature user ID: ceb05247

Data file: /chem/HP10623.i/13nov13a.b/ck0470.d Injection date and time: **13-NOV-2013 13:44**
Data file Sample Info. Line: 310LFLCS3;310LFLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201	(0.000)	540	152	105509	(-11)	20.00	
52) Naphthalene-d8	6.437	(0.000)	741	136	488949	(-14)	20.00	
98) Acenaphthene-d10	8.152	(-0.006)	1020	164	300041	(-17)	20.00	
135) Phenanthrene-d10	9.591	(0.000)	1254	188	546606	(-21)	20.00	
167) Pyrene-d10	10.975	(0.000)	1479	212	671064	(-21)	20.00	
175) Perylene-d12	13.575	(0.000)	1902	264	522975	(-25)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742	(0.000)	82	863011	81.924	82%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513	(0.000)	172	1849821	98.052	98%		69 - 120
156) Terphenyl-d14	(5)	11.171	(0.000)	244	2433380	101.434	101%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.462	(-0.000)	128	1227824	47.329	1577.64			0.1
70) 2-Methylnaphthalene	(2)	7.138	(0.000)	142	842756	45.775	1525.83			0.1
71) 1-Methylnaphthalene	(2)	7.230	(0.000)	142	848270	50.353	1678.43			0.1
95) Acenaphthylene	(3)	8.011	(0.000)	152	1427674	54.007	1800.23			0.1
99) Acenaphthene	(3)	8.183	(0.000)	153	894785	48.908	1630.27			0.1
111) Fluorene	(3)	8.687	(0.000)	166	1068343	49.545	1651.50			0.1
137) Phenanthrene	(4)	9.616	(-0.000)	178	1580449	49.727	1657.55			0.1
138) Anthracene	(4)	9.665	(0.000)	178	1642983	50.220	1673.99			0.1
147) Fluoranthene	(4)	10.772	(0.000)	202	1775019	49.947	1664.89			0.1
154) Pyrene	(5)	10.993	(0.000)	202	1882088	50.503	1683.45			0.1
166) Benzo(a)anthracene	(5)	12.167	(0.000)	228	1648340	47.955	1598.49			0.1
168) Chrysene	(5)	12.204	(0.000)	228	1603269	48.378	1612.60			0.1
172) Benzo(b)fluoranthene	(6)	13.225	(-0.000)	252	1590254	49.799	1659.95			0.1
173) Benzo(k)fluoranthene	(6)	13.256	(-0.000)	252	1744096	53.534	1784.46			0.1
174) Benzo(a)pyrene	(6)	13.526	(-0.000)	252	1530265	49.098	1636.60			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.596	(-0.000)	276	1611750	48.605	1620.16			0.1
178) Dibenz(a,h)anthracene	(6)	14.621	(0.000)	278	1362333	49.115	1637.18			0.1
179) Benzo(g,h,i)perylene	(6)	14.879	(-0.000)	276	1362242	48.222	1607.40			0.1

Digitally signed by Mark A. Clark on 11/14/2013 at 00:16. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0470.d Injection date and time: **13-NOV-2013 13:44**
Data file Sample Info. Line: 310LFLCS3;310LFLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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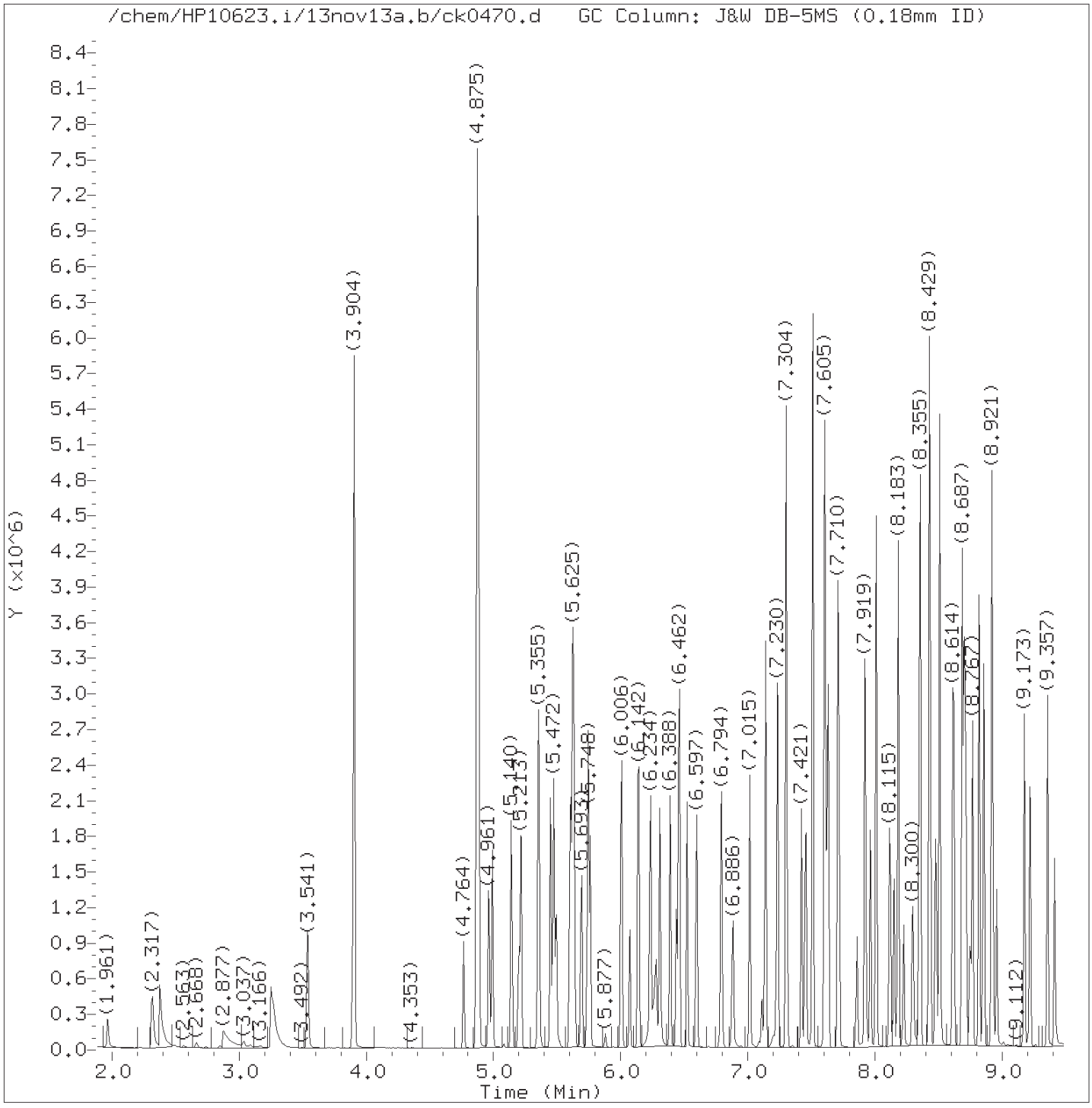
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:16. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:18. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

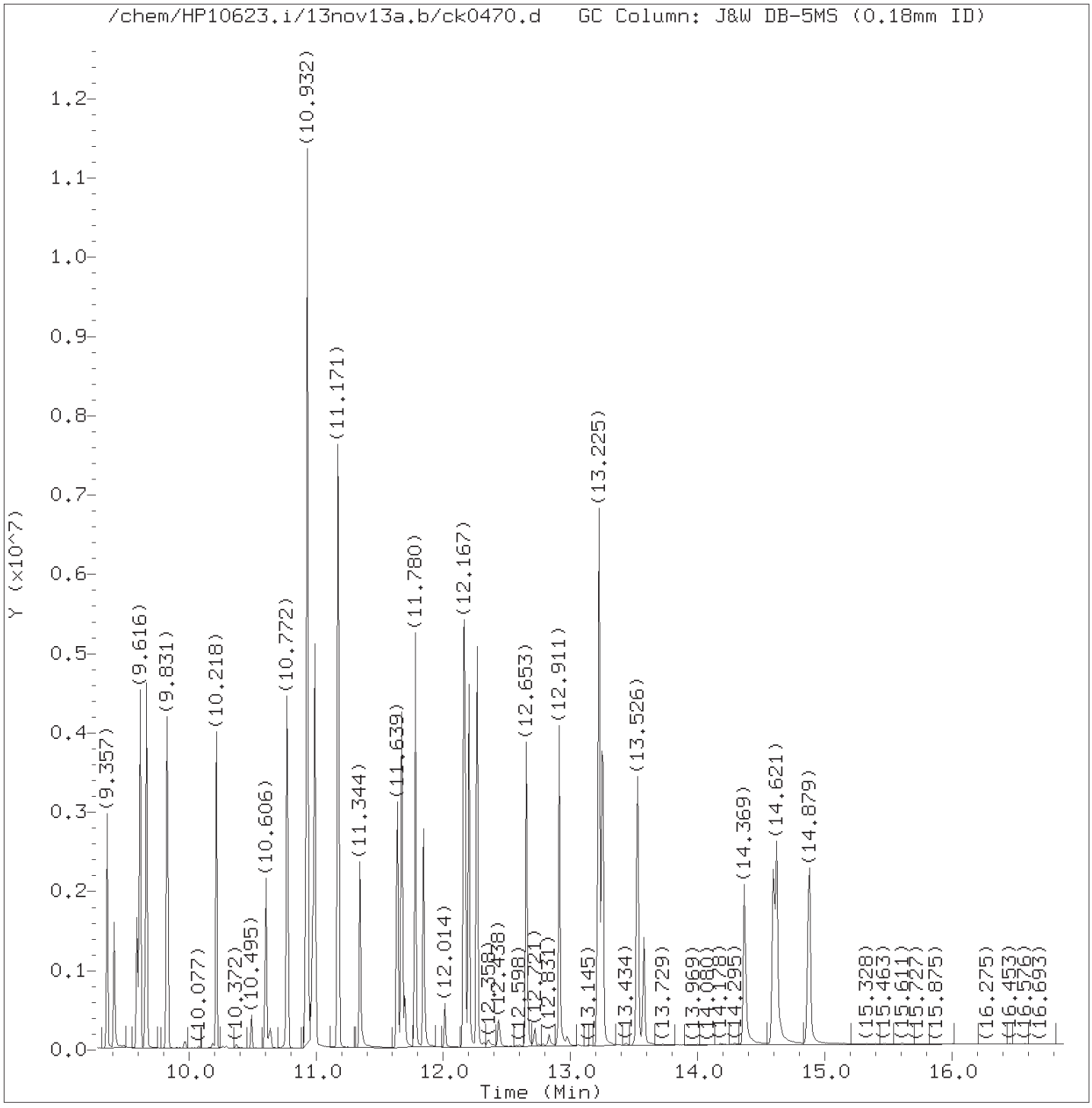
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	105509	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	863011	81.924
52)*Naphthalene-d8	(2)	6.437	136	488949	20.000
53) Naphthalene	(2)	6.462	128	1227824	47.329
70) 2-Methylnaphthalene	(2)	7.138	142	842756	45.775
71) 1-Methylnaphthalene	(2)	7.230	142	848270	50.353
78)$2-Fluorobiphenyl	(3)	7.513	172	1849821	98.052
95) Acenaphthylene	(3)	8.011	152	1427674	54.007
98)*Acenaphthene-d10	(3)	8.152	164	300041	20.000
99) Acenaphthene	(3)	8.183	153	894785	48.908
111) Fluorene	(3)	8.687	166	1068343	49.545
135)*Phenanthrene-d10	(4)	9.591	188	546606	20.000
137) Phenanthrene	(4)	9.616	178	1580449	49.727
138) Anthracene	(4)	9.665	178	1642983	50.220
147) Fluoranthene	(4)	10.772	202	1775019	49.947
167)*Pyrene-d10	(5)	10.975	212	671064	20.000
154) Pyrene	(5)	10.993	202	1882088	50.503
156)$Terphenyl-d14	(5)	11.171	244	2433380	101.434
166) Benzo(a)anthracene	(5)	12.167	228	1648340	47.955
168) Chrysene	(5)	12.204	228	1603269	48.378
172) Benzo(b)fluoranthene	(6)	13.225	252	1590254	49.799
173) Benzo(k)fluoranthene	(6)	13.256	252	1744096	53.534
174) Benzo(a)pyrene	(6)	13.526	252	1530265	49.098
175)*Perylene-d12	(6)	13.575	264	522975	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.596	276	1611750	48.605
178) Dibenz(a,h)anthracene	(6)	14.621	278	1362333	49.115
179) Benzo(g,h,i)perylene	(6)	14.879	276	1362242	48.222

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013

Data file: /chem/HP11165.i/13nov13a.b/gk0518.d Injection date and time: **13-NOV-2013 15:37**
Data file Sample Info. Line: 313LCLCS7;313LCLCS;2;3;LCS;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	5.599	(0.000)	638	152	65995	(-15)	20.00	
63) Naphthalene-d8	6.835	(0.000)	869	136	301646	(-19)	20.00	
101) Acenaphthene-d10	8.552	(0.000)	1190	164	185153	(-20)	20.00	
140) Phenanthrene-d10	10.001	(0.005)	1461	188	337765	(-23)	20.00	
164) Pyrene-d10	11.392	(0.000)	1721	212	390520	(-25)	20.00	
188) Perylene-d12	14.039	(0.005)	2216	264	317593	(-28)	20.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
10) 2-Fluorophenol	(1)	4.348	(0.000)	112	1108505	211.974	106%		63 - 126
17) Phenol-d6	(1)	5.289	(0.000)	99	1583907	201.308	101%		61 - 120
41) Nitrobenzene-d5	(2)	6.140	(0.000)	82	629738	94.704	95%		60 - 120
84) 2-Fluorobiphenyl	(3)	7.899	(0.000)	172	1115535	98.922	99%		69 - 120
121) 2,4,6-Tribromophenol	(3)	9.327	(0.000)	330	264635	213.904	107%		42 - 134
166) Terphenyl-d14	(5)	11.579	(0.000)	244	1478880	106.169	106%		66 - 137

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Benzaldehyde	(1)	5.171	(-0.000)	77	114864	22.401	746.71			2
18) Phenol	(1)	5.300	(0.000)	94	468660	50.098	1669.92			0.5
20) bis(2-Chloroethyl)ether	(1)	5.359	(0.000)	93	319984	47.929	1597.62			0.5
21) 2-Chlorophenol	(1)	5.401	(0.000)	128	261047	49.541	1651.38			0.5
26) 1,4-Dichlorobenzene	(1)	5.615	(0.000)	146	245789	46.043	1534.76			0.5
28) 1,2-Dichlorobenzene	(1)	5.760	(0.000)	146	236700	45.144	1504.80			0.5
30) 2-Methylphenol	(1)	5.877	(0.000)	108	299595	50.549	1684.98			0.5
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.883	(0.000)	45	330310M	36.894	1229.80			0.5
35) Acetophenone	(1)	5.995	(0.000)	105	421827	45.040	1501.32			0.5
37) N-Nitroso-di-n-propylamine	(1)	6.011	(0.000)	70	224866	40.283	1342.77			0.5
36) 4-Methylphenol	(1)	6.027	(0.000)	108	352715	49.952	1665.08			0.5
40) Hexachloroethane	(1)	6.086	(0.000)	117	99939	47.900	1596.66			1
42) Nitrobenzene	(2)	6.161	(0.000)	77	331469	46.674	1555.80			0.5
45) Isophorone	(2)	6.396	(0.000)	82	637060	49.185	1639.49			0.5
48) 2-Nitrophenol	(2)	6.466	(0.000)	139	144483	52.367	1745.55			0.5
52) 2,4-Dimethylphenol	(2)	6.535	(0.000)	107	338000	55.382	1846.05			0.5
55) bis(2-Chloroethoxy)methane	(2)	6.616	(0.000)	93	395003	49.975	1665.82			0.5
60) 2,4-Dichlorophenol	(2)	6.712	(0.000)	162	223244	53.605	1786.82			0.5
64) Naphthalene	(2)	6.856	(0.000)	128	753804	47.433	1581.09			0.1
65) 4-Chloroaniline	(2)	6.915	(0.000)	127	338962	50.667	1688.89			0.5
69) Hexachlorobutadiene	(2)	6.985	(0.000)	225	104214	50.780	1692.67			0.5
74) Caprolactam	(2)	7.289	(-0.001)	113	128442	49.726	1657.53			1
75) 4-Chloro-3-methylphenol	(2)	7.418	(0.000)	107	315490	54.736	1824.53			0.5
77) 2-Methylnaphthalene	(2)	7.536	(0.000)	142	510844	45.645	1521.50			0.1
78) 1-Methylnaphthalene	(2)	7.626	(0.000)	142	517996	51.174	1705.81			0.1
79) Hexachlorocyclopentadiene	(3)	7.691	(-0.000)	237	213228	118.944	3964.80			5
82) 2,4,6-Trichlorophenol	(3)	7.819	(0.000)	196	166121	51.600	1720.01			0.5

M = Compound was manually integrated.

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Data file: /chem/HP11165.i/13nov13a.b/gk0518.d Injection date and time: **13-NOV-2013 15:37**
Data file Sample Info. Line: 313LCLCS7;313LCLCS;2;3;LCS;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2,4,5-Trichlorophenol	(3)	7.862(0.000)	196	180092	53.698	1789.94			0.5
87) 1,1'-Biphenyl	(3)	7.996(-0.000)	154	659478	45.907	1530.23			0.5
88) 2-Chloronaphthalene	(3)	8.012(-0.000)	162	603303M	55.545	1851.51			0.2
91) 2-Nitroaniline	(3)	8.113(0.000)	138	202553	52.991	1766.37			0.5
94) Dimethylphthalate	(3)	8.306(-0.000)	163	622131	49.812	1660.38			2
97) 2,6-Dinitrotoluene	(3)	8.359(0.000)	165	151897	54.330	1810.98			0.5
99) Acenaphthylene	(3)	8.413(-0.000)	152	869131	55.696	1856.53			0.1
100) 3-Nitroaniline	(3)	8.520(-0.000)	138	186546	53.054	1768.47			2
102) Acenaphthene	(3)	8.584(-0.000)	153	540747	48.282	1609.38			0.1
103) 2,4-Dinitrophenol	(3)	8.627(-0.000)	184	146823	77.637	2587.91			9
104) 4-Nitrophenol	(3)	8.718(0.000)	109	89091	42.114	1403.80			5
107) Dibenzofuran	(3)	8.755(-0.000)	168	743301	48.502	1616.73			0.5
106) 2,4-Dinitrotoluene	(3)	8.755(-0.000)	165	204918	52.189	1739.65			2
111) Diethylphthalate	(3)	9.001(-0.000)	149	634862	49.885	1662.82			2
113) Fluorene	(3)	9.087(-0.000)	166	639447	49.988	1666.26			0.1
114) 4-Chlorophenyl-phenylether	(3)	9.097(-0.000)	204	292966	50.095	1669.83			0.5
116) 4-Nitroaniline	(3)	9.119(-0.000)	138	152510	40.250	1341.66			2
117) 4,6-Dinitro-2-methylphenol	(4)	9.151(-0.000)	198	108241	46.374	1545.79			5
118) N-Nitrosodiphenylamine	(4)	9.215(-0.000)	169	568872	50.651	1688.36			0.5
127) 4-Bromophenyl-phenylether	(4)	9.573(-0.000)	248	164242	51.585	1719.51			0.5
129) Hexachlorobenzene	(4)	9.627(-0.000)	284	155404	51.761	1725.37			0.1
132) Atrazine	(4)	9.750(0.000)	200	181752	50.471	1682.38		E	1
133) Pentachlorophenol	(4)	9.825(0.000)	266	83916	40.687	1356.22			1
143) Phenanthrene	(4)	10.023(-0.000)	178	982621	49.195	1639.83			0.1
144) Anthracene	(4)	10.076(-0.000)	178	1026278	52.270	1742.32			0.1
146) Carbazole	(4)	10.236(-0.000)	167	946836	51.472	1715.75			0.5
149) Di-n-butylphthalate	(4)	10.606(-0.000)	149	1123338	50.949	1698.28			2
157) Fluoranthene	(4)	11.189(-0.000)	202	1074351	52.519	1750.63			0.1
165) Pyrene	(5)	11.408(0.000)	202	1122065	50.230	1674.35			0.1
173) Butylbenzylphthalate	(5)	12.071(0.000)	149	503826	50.155	1671.84			2
175) 3,3'-Dichlorobenzidine	(5)	12.579(0.000)	252	308627	45.020	1500.67			3
177) Benzo(a)anthracene	(5)	12.595(0.000)	228	1001972	53.403	1780.10			0.1
178) Chrysene	(5)	12.633(0.000)	228	928205	50.674	1689.14			0.1
179) bis(2-Ethylhexyl)phthalate	(5)	12.665(0.000)	149	704495	51.357	1711.88			2
183) Di-n-octylphthalate	(6)	13.323(-0.000)	149	1217431	51.414	1713.81			2
185) Benzo(b)fluoranthene	(6)	13.676(0.000)	252	1022003M	53.258	1775.27			0.1
186) Benzo(k)fluoranthene	(6)	13.708(-0.000)	252	977853M	48.080	1602.66			0.1
187) Benzo(a)pyrene	(6)	13.986(0.000)	252	896138	52.372	1745.73			0.1
193) Indeno(1,2,3-cd)pyrene	(6)	15.168(-0.000)	276	903316	52.046	1734.87			0.1
194) Dibenz(a,h)anthracene	(6)	15.189(-0.000)	278	764605	53.069	1768.98			0.1
196) Benzo(g,h,i)perylene	(6)	15.489(-0.000)	276	751571	51.370	1712.34			0.1

M = Compound was manually integrated. E = Compound concentration above calibration range.

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP11165.i/13nov13a.b/gk0518.d Injection date and time: **13-NOV-2013 15:37**
Data file Sample Info. Line: 313LCLCS7;313LCLCS;2;3;LCS;;; Instrument ID: **HP11165.i** Batch: **13313SLC**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Blank Data file reference: **/chem/HP11165.i/13nov13a.b/gk0517.d**

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: **313SLC**
Calibration date and time (Last Method Edit): 13-NOV-2013 22:28
Mid Level Daily Calibration Standard Reference: **/chem/HP11165.i/13nov13a.b/gk0511.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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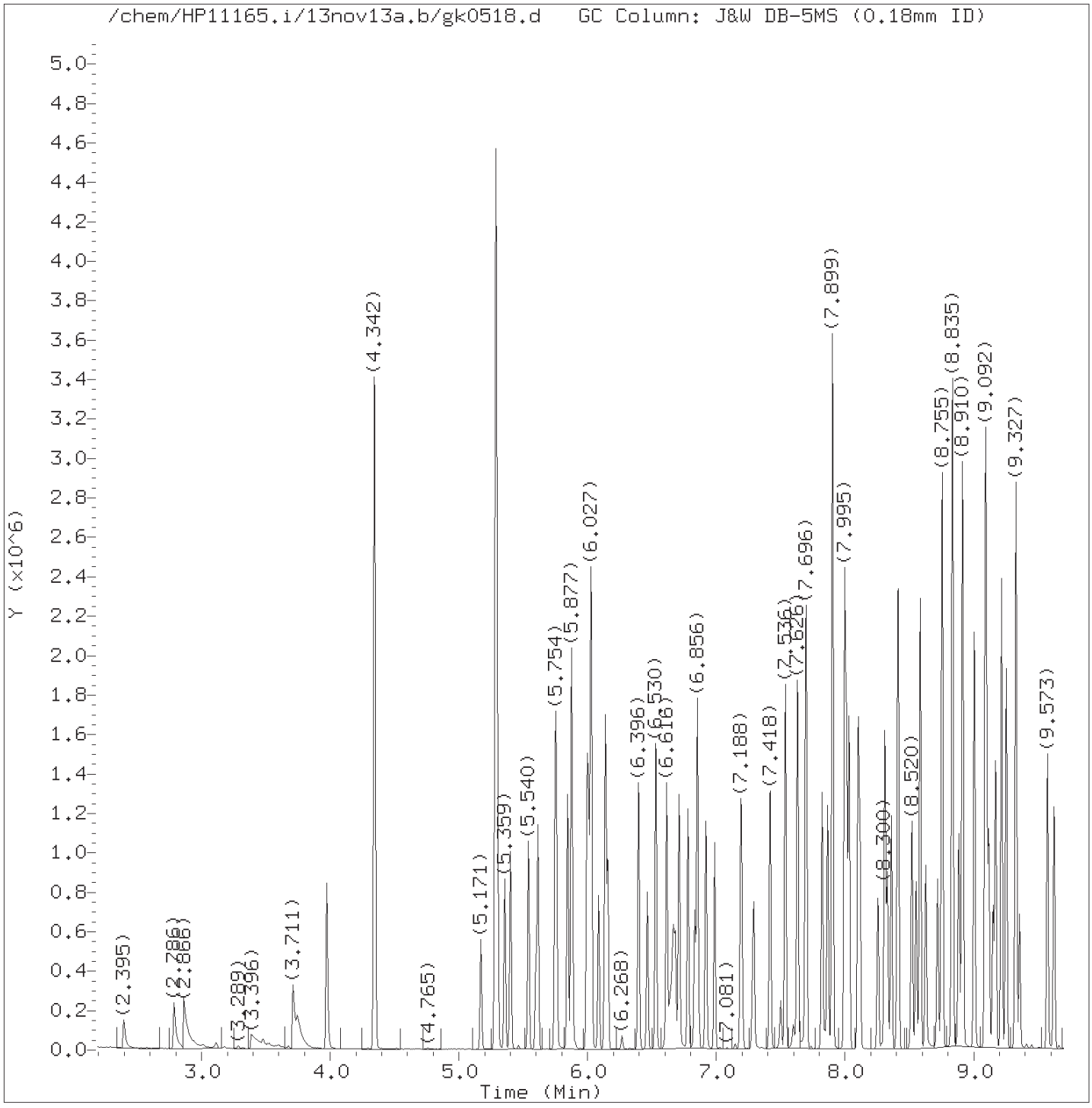
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 68

Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42. Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:46. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

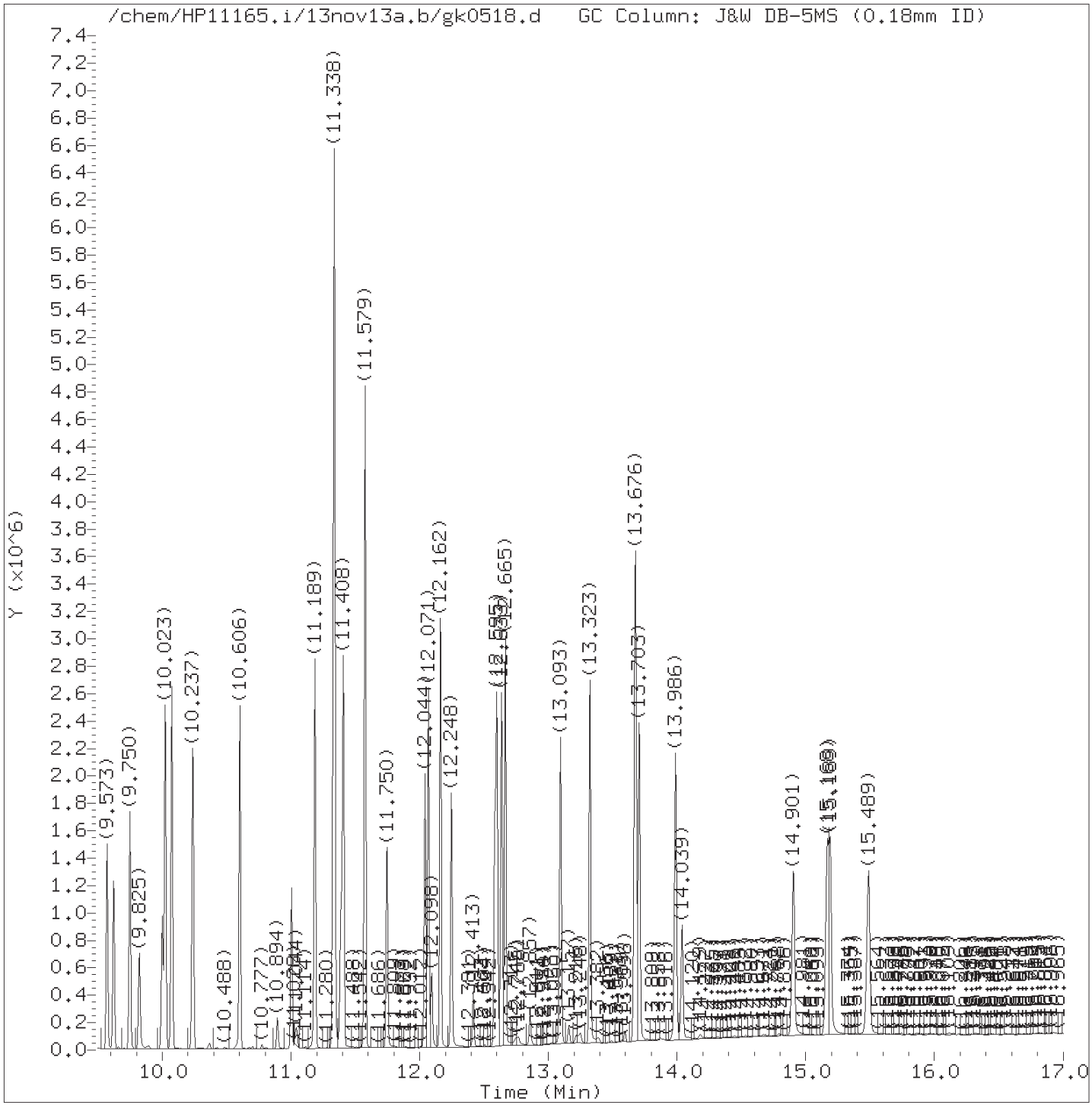
Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Digitally signed by Linda M. Hartenstine
on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Digitally signed by Linda M. Hartenstine
on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
10)$2-Fluorophenol	(1)	4.348	112	1108505	211.974
15) Benzaldehyde	(1)	5.171	77	114864	22.401
17)$Phenol-d6	(1)	5.289	99	1583907	201.308
18) Phenol	(1)	5.300	94	468660	50.098
20) bis(2-Chloroethyl)ether	(1)	5.359	93	319984	47.929
21) 2-Chlorophenol	(1)	5.401	128	261047	49.541
25)*1,4-Dichlorobenzene-d4	(1)	5.599	152	65995	20.000
26) 1,4-Dichlorobenzene	(1)	5.615	146	245789	46.043
28) 1,2-Dichlorobenzene	(1)	5.760	146	236700	45.144
30) 2-Methylphenol	(1)	5.877	108	299595	50.549
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.883	45	330310M	36.894
35) Acetophenone	(1)	5.995	105	421827	45.040
37) N-Nitroso-di-n-propylamine	(1)	6.011	70	224866	40.283
36) 4-Methylphenol	(1)	6.027	108	352715	49.952
40) Hexachloroethane	(1)	6.086	117	99939	47.900
41)$Nitrobenzene-d5	(2)	6.140	82	629738	94.704
42) Nitrobenzene	(2)	6.161	77	331469	46.674
45) Isophorone	(2)	6.396	82	637060	49.185
48) 2-Nitrophenol	(2)	6.466	139	144483	52.367
52) 2,4-Dimethylphenol	(2)	6.535	107	338000	55.382
55) bis(2-Chloroethoxy)methane	(2)	6.616	93	395003	49.975
60) 2,4-Dichlorophenol	(2)	6.712	162	223244	53.605
63)*Naphthalene-d8	(2)	6.835	136	301646	20.000
64) Naphthalene	(2)	6.856	128	753804	47.433
65) 4-Chloroaniline	(2)	6.915	127	338962	50.667
69) Hexachlorobutadiene	(2)	6.985	225	104214	50.780
74) Caprolactam	(2)	7.289	113	128442	49.726
75) 4-Chloro-3-methylphenol	(2)	7.418	107	315490	54.736
77) 2-Methylnaphthalene	(2)	7.536	142	510844	45.645
78) 1-Methylnaphthalene	(2)	7.626	142	517996	51.174
79) Hexachlorocyclopentadiene	(3)	7.691	237	213228	118.944
82) 2,4,6-Trichlorophenol	(3)	7.819	196	166121	51.600
83) 2,4,5-Trichlorophenol	(3)	7.862	196	180092	53.698
84)$2-Fluorobiphenyl	(3)	7.899	172	1115535	98.922
87) 1,1'-Biphenyl	(3)	7.995	154	659478	45.907
88) 2-Chloronaphthalene	(3)	8.012	162	603303M	55.545
91) 2-Nitroaniline	(3)	8.113	138	202553	52.991
94) Dimethylphthalate	(3)	8.306	163	622131	49.812
97) 2,6-Dinitrotoluene	(3)	8.359	165	151897	54.330
99) Acenaphthylene	(3)	8.413	152	869131	55.696

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Quant Report

Target Revision 3.5

Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
100) 3-Nitroaniline	(3)	8.520	138	186546	53.054
101)*Acenaphthene-d10	(3)	8.552	164	185153	20.000
102) Acenaphthene	(3)	8.584	153	540747	48.282
103) 2,4-Dinitrophenol	(3)	8.627	184	146823	77.637
104) 4-Nitrophenol	(3)	8.718	109	89091	42.114
107) Dibenzofuran	(3)	8.755	168	743301	48.502
106) 2,4-Dinitrotoluene	(3)	8.755	165	204918	52.189
111) Diethylphthalate	(3)	9.001	149	634862	49.885
113) Fluorene	(3)	9.087	166	639447	49.988
114) 4-Chlorophenyl-phenylether	(3)	9.097	204	292966	50.095
116) 4-Nitroaniline	(3)	9.119	138	152510	40.250
117) 4,6-Dinitro-2-methylphenol	(4)	9.151	198	108241	46.374
118) N-Nitrosodiphenylamine	(4)	9.215	169	568872	50.651
121)$2,4,6-Tribromophenol	(3)	9.327	330	264635	213.904
127) 4-Bromophenyl-phenylether	(4)	9.573	248	164242	51.585
129) Hexachlorobenzene	(4)	9.627	284	155404	51.761
132) Atrazine	(4)	9.750	200	181752	50.471
133) Pentachlorophenol	(4)	9.825	266	83916	40.687
140)*Phenanthrene-d10	(4)	10.001	188	337765	20.000
143) Phenanthrene	(4)	10.023	178	982621	49.195
144) Anthracene	(4)	10.076	178	1026278	52.270
146) Carbazole	(4)	10.237	167	946836	51.472
149) Di-n-butylphthalate	(4)	10.606	149	1123338	50.949
157) Fluoranthene	(4)	11.189	202	1074351	52.519
164)*Pyrene-d10	(5)	11.392	212	390520	20.000
165) Pyrene	(5)	11.408	202	1122065	50.230
166)$Terphenyl-d14	(5)	11.579	244	1478880	106.169
173) Butylbenzylphthalate	(5)	12.071	149	503826	50.155
175) 3,3'-Dichlorobenzidine	(5)	12.579	252	308627	45.020
177) Benzo(a)anthracene	(5)	12.595	228	1001972	53.403
178) Chrysene	(5)	12.633	228	928205	50.674
179) bis(2-Ethylhexyl)phthalate	(5)	12.665	149	704495	51.357
183) Di-n-octylphthalate	(6)	13.323	149	1217431	51.414
185) Benzo(b)fluoranthene	(6)	13.676	252	1022003M	53.258
186) Benzo(k)fluoranthene	(6)	13.708	252	977853M	48.080
187) Benzo(a)pyrene	(6)	13.986	252	896138	52.372
188)*Perylene-d12	(6)	14.039	264	317593	20.000
193) Indeno(1,2,3-cd)pyrene	(6)	15.168	276	903316	52.046
194) Dibenz(a,h)anthracene	(6)	15.189	278	764605	53.069
196) Benzo(g,h,i)perylene	(6)	15.489	276	751571	51.370

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

M = Compound was manually integrated.
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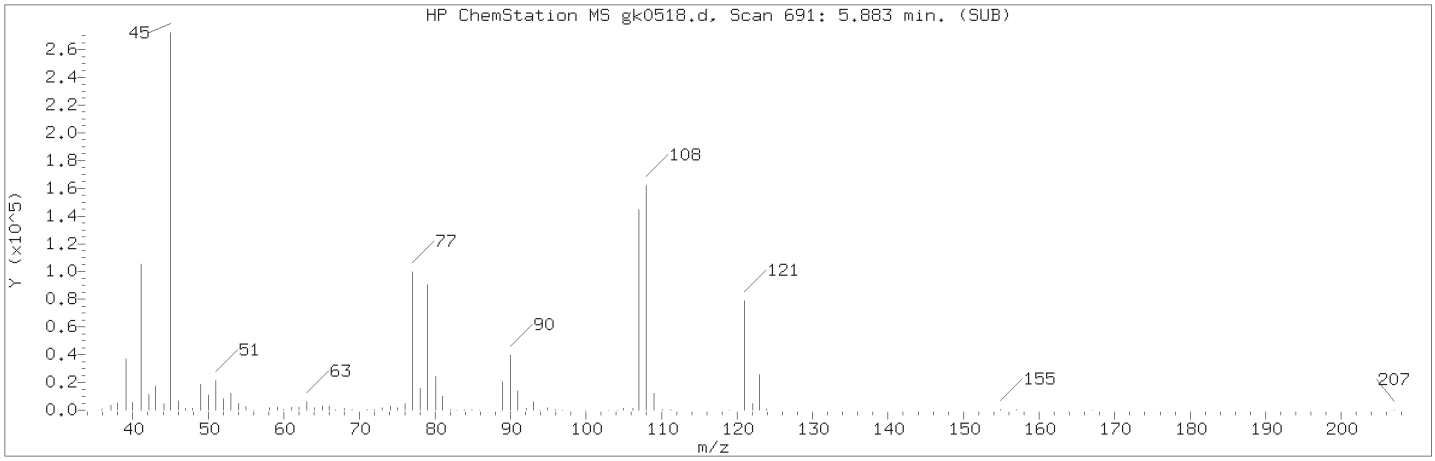
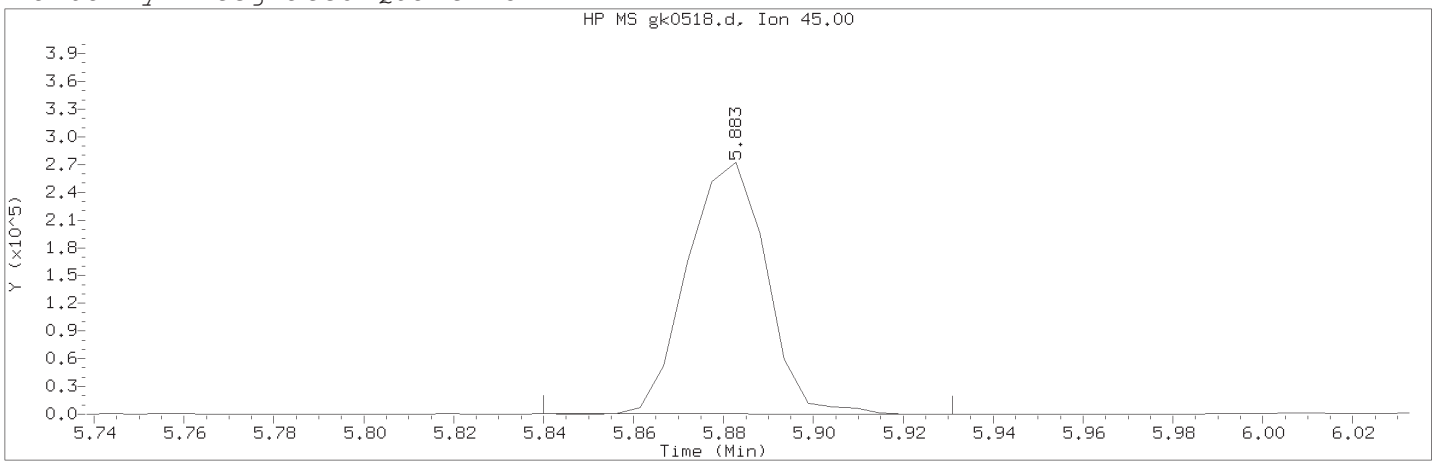
$ = Compound is a surrogate standard.

Digitally signed by Linda M. Hartenstine
on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

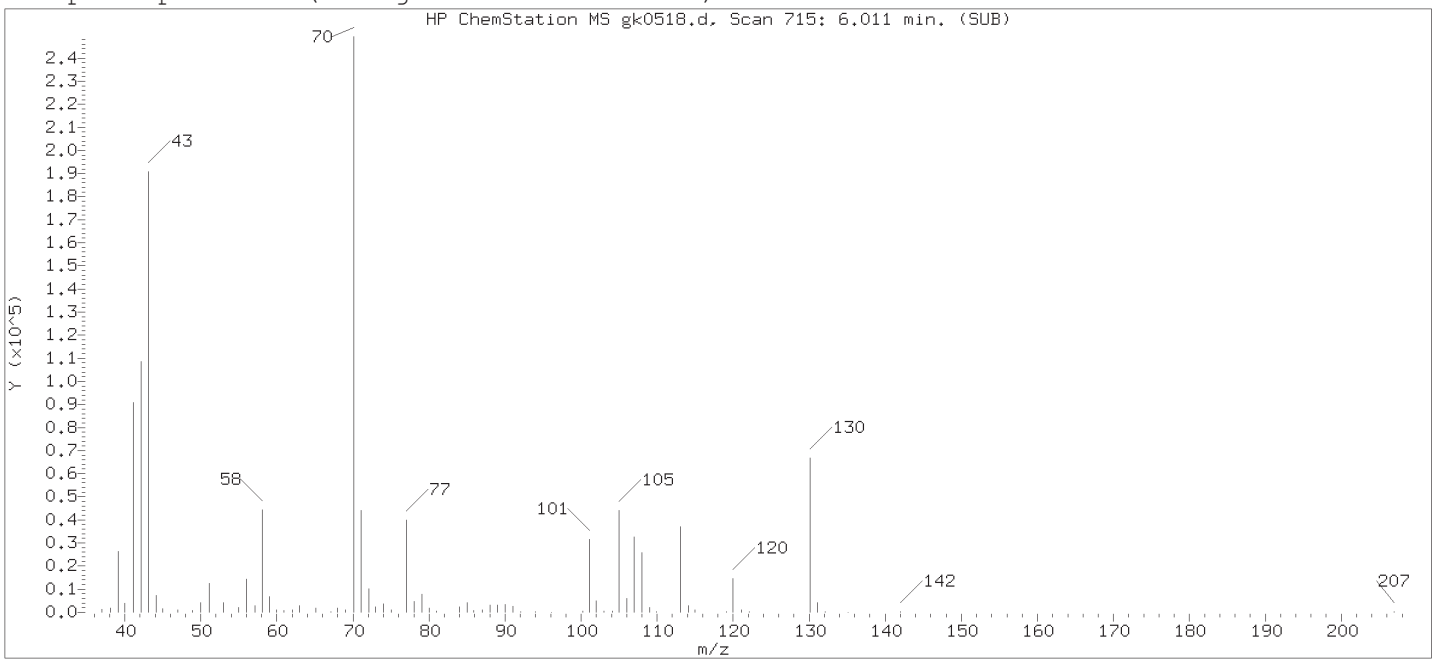
Compound Number : 31
Compound Name : 2,2'-oxybis(1-Chloropropane)
Scan Number : 691
Retention Time (minutes) : 5.883
Quant Ion : 45.00
Area (flag) : 330310M
On-Column Amount (ng/ul) : 36.8940
Integration start scan : 682 Integration stop scan: 699
Y at integration start : 416 Y at integration end: 0

Reason for manual integration: improper integration

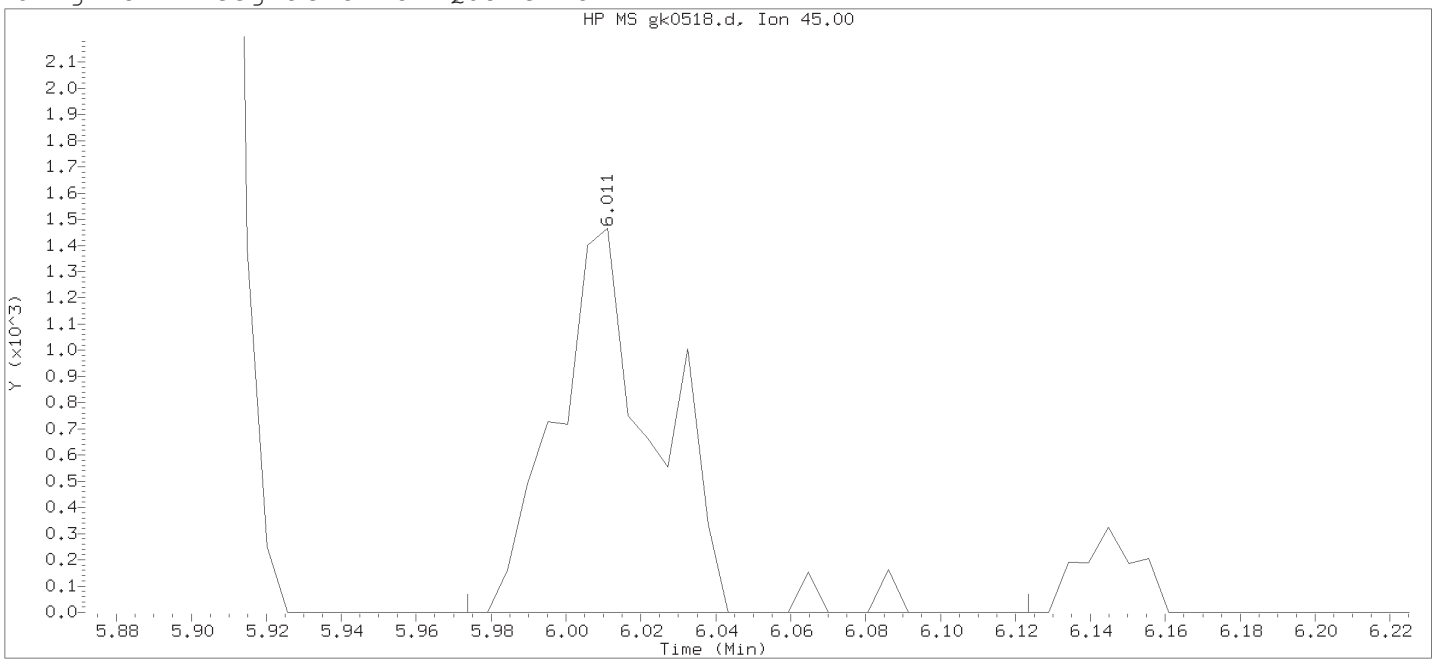
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:46.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

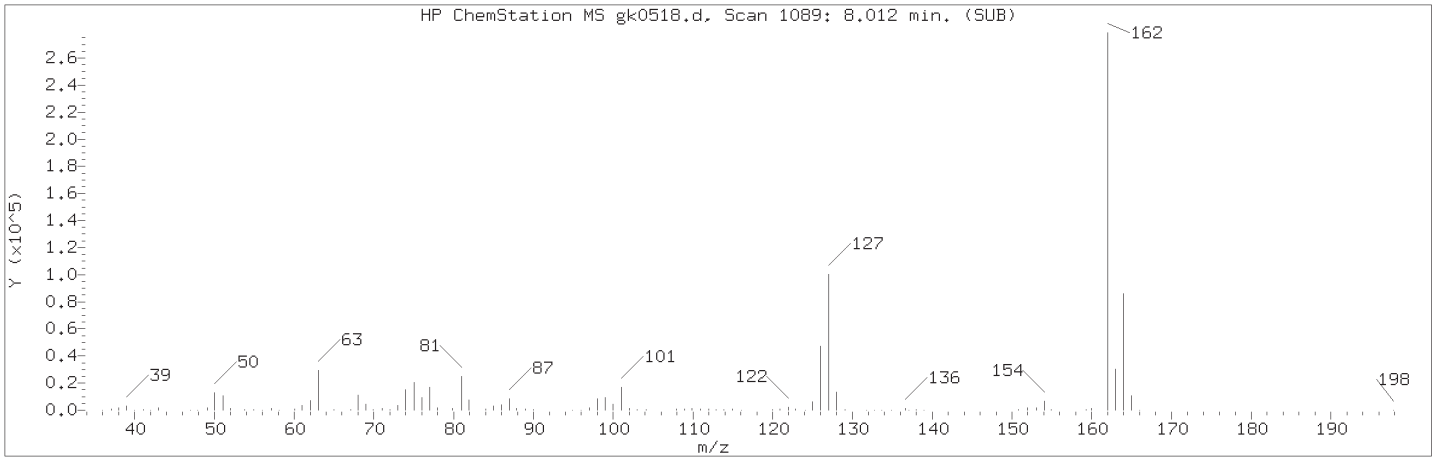
Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 21:50
Date, time and analyst ID of latest file update: 13-Nov-2013 22:26 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

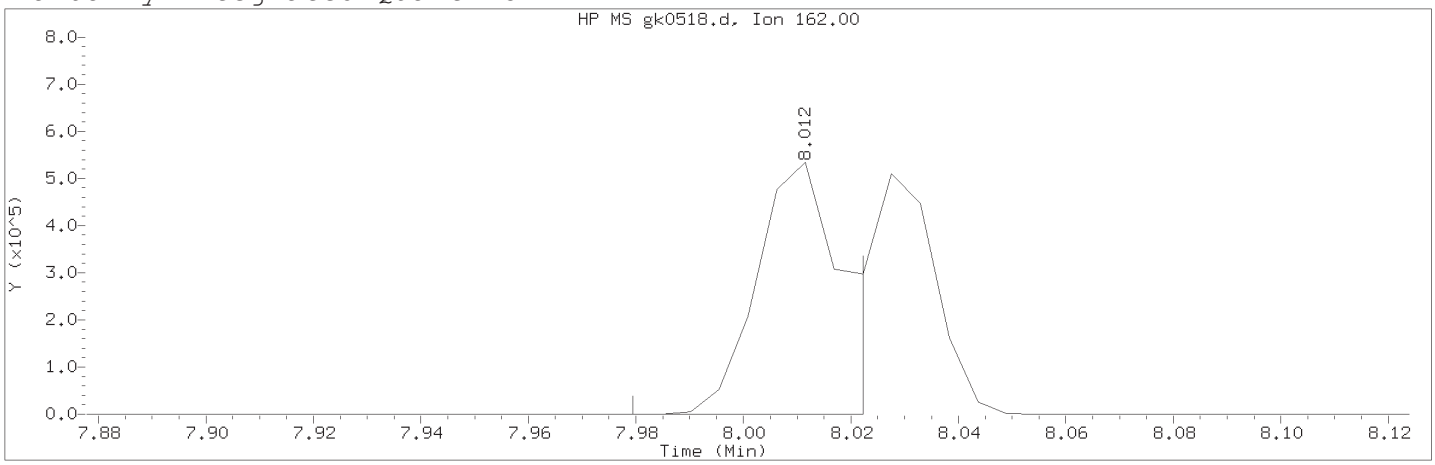
Compound Number	: 31		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 715		
Retention Time (minutes)	: 6.011		
Quant Ion	: 45.00		
Area	: 2756		
On-column Amount (ng/ul)	: 0.3079		
Integration start scan	: 707	Integration stop scan:	735
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: LMH00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

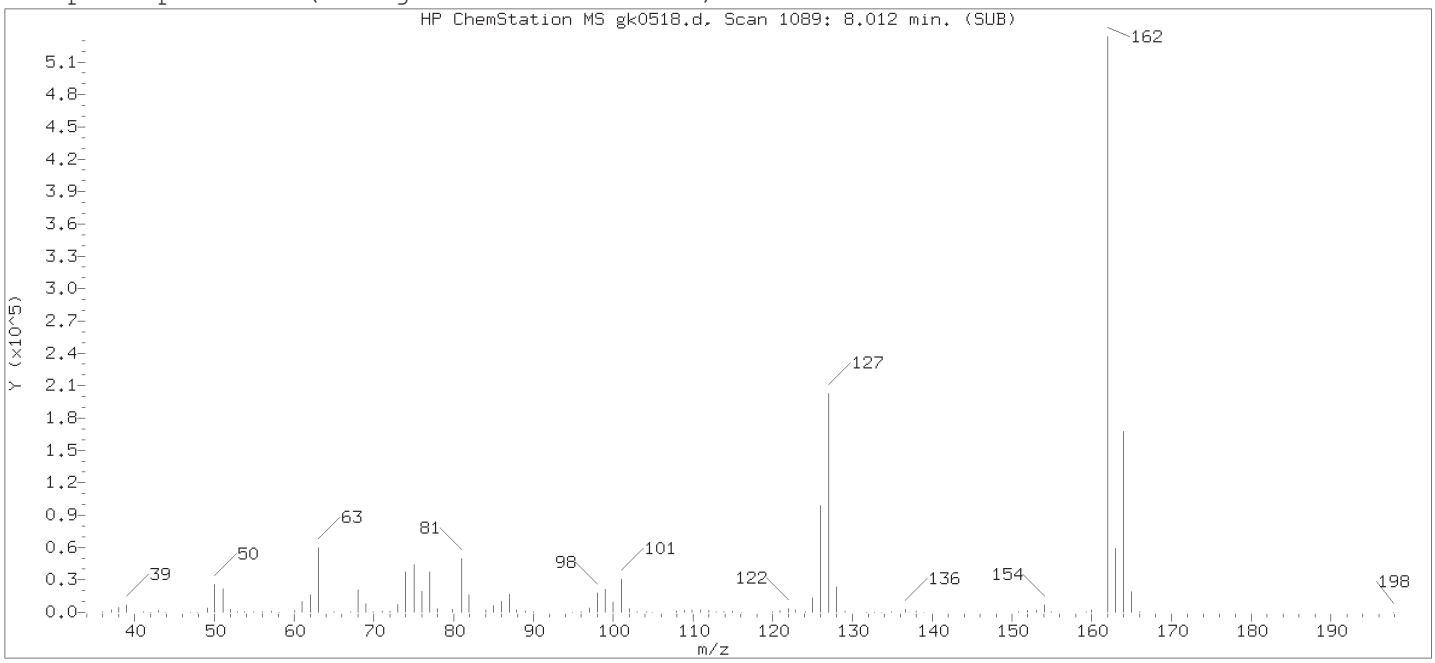
Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1089		
Retention Time (minutes)	: 8.012		
Quant Ion	: 162.00		
Area (flag)	: 603303M		
On-Column Amount (ng/ul)	: 55.5453		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 0	Y at integration end:	15

Reason for manual integration: improper integration

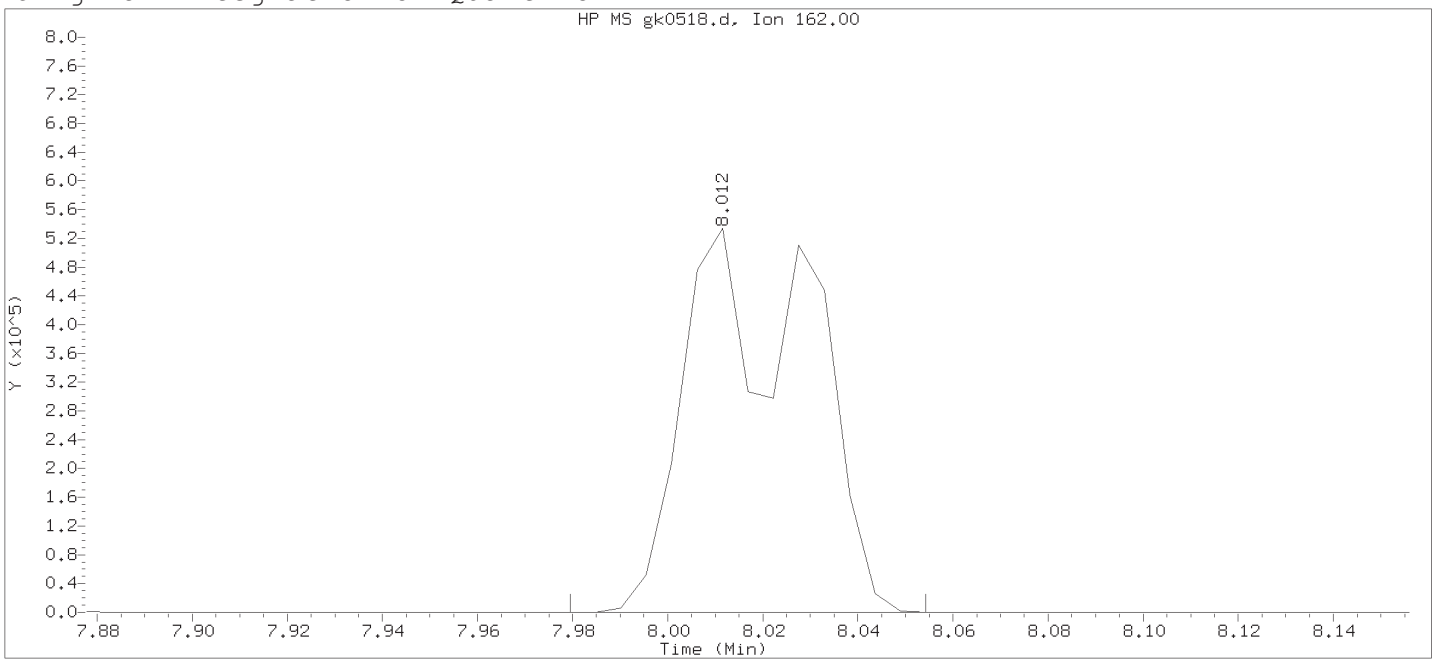
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:46.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

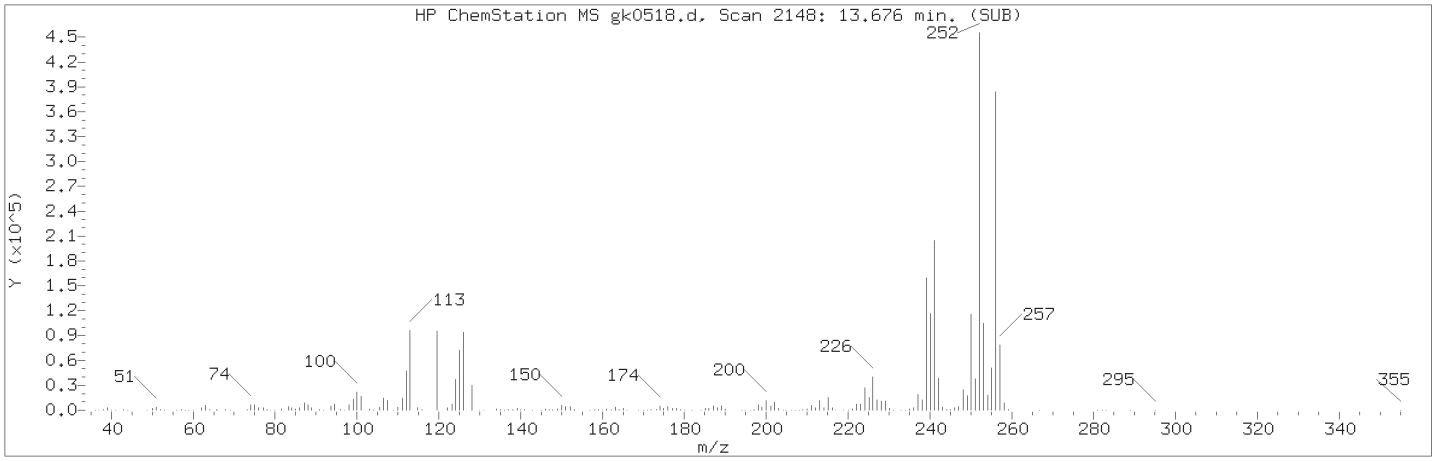
Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 21:50
Date, time and analyst ID of latest file update: 13-Nov-2013 22:26 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

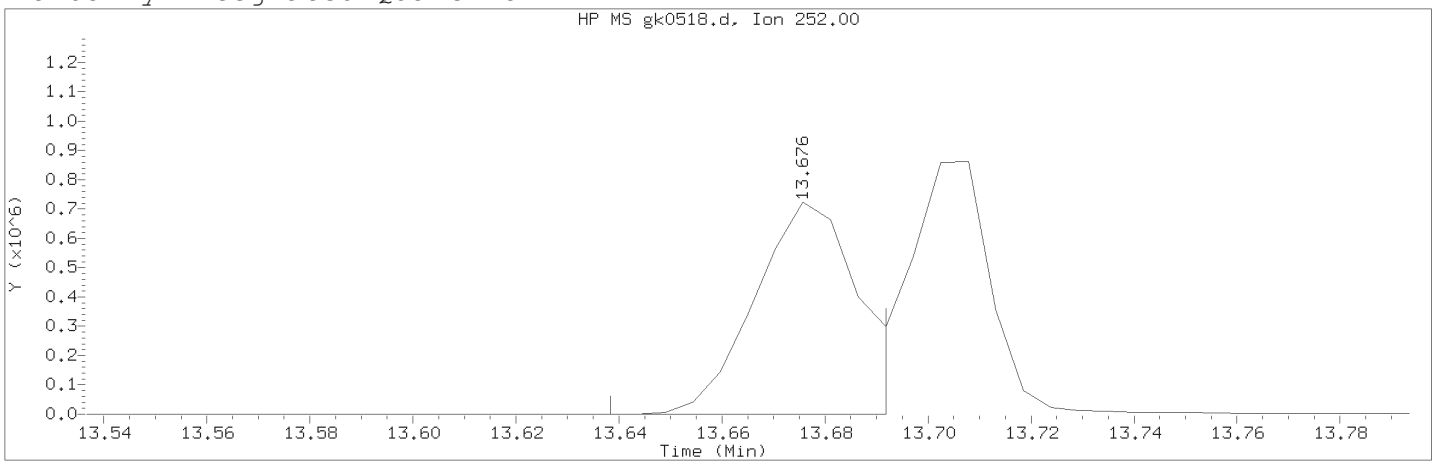
Compound Number	: 88		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 1089		
Retention Time (minutes)	: 8.012		
Quant Ion	: 162.00		
Area	: 972008		
On-column Amount (ng/ul)	: 89.4914		
Integration start scan	: 1082	Integration stop scan:	1096
Y at integration start	: 0	Y at integration end:	27

Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: LMH0956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

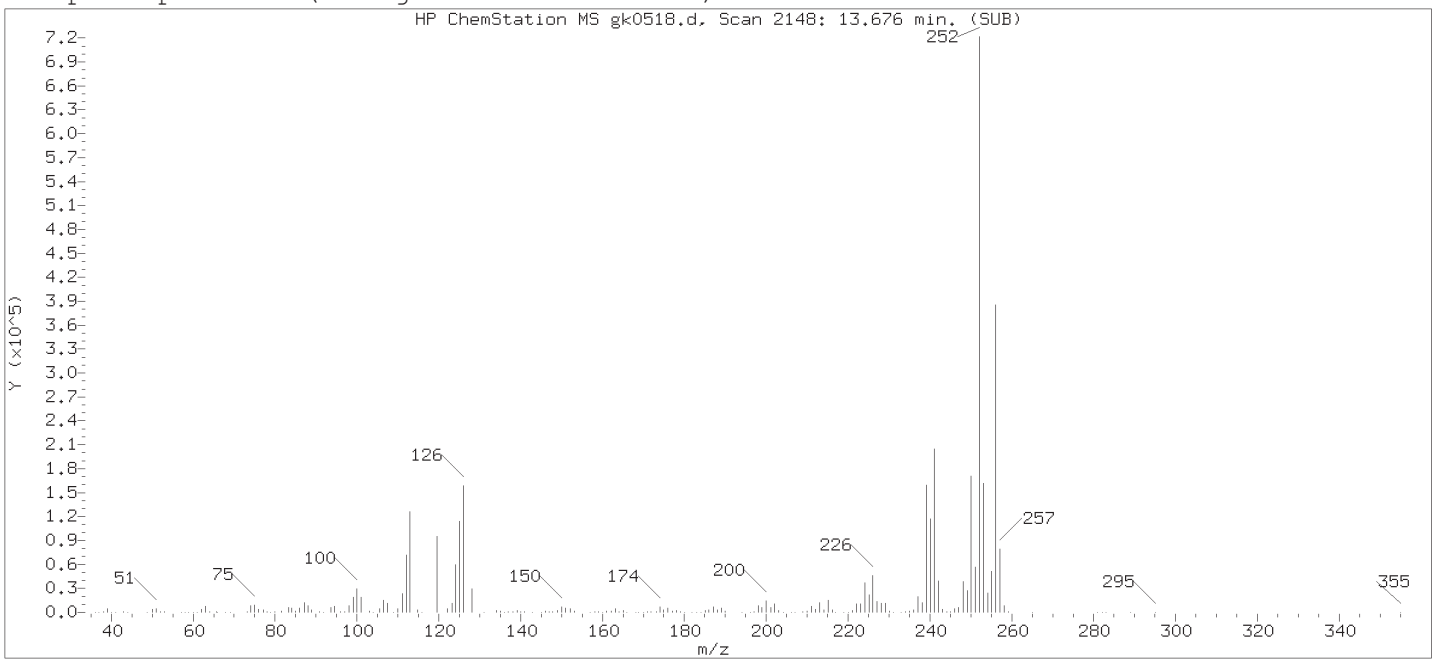
Compound Number : 185
Compound Name : Benzo(b)fluoranthene
Scan Number : 2148
Retention Time (minutes) : 13.676
Quant Ion : 252.00
Area (flag) : 1022003M
On-Column Amount (ng/ul) : 53.2582
Integration start scan : 2140 Integration stop scan: 2150
Y at integration start : 0 Y at integration end: 192

Reason for manual integration: improper integration

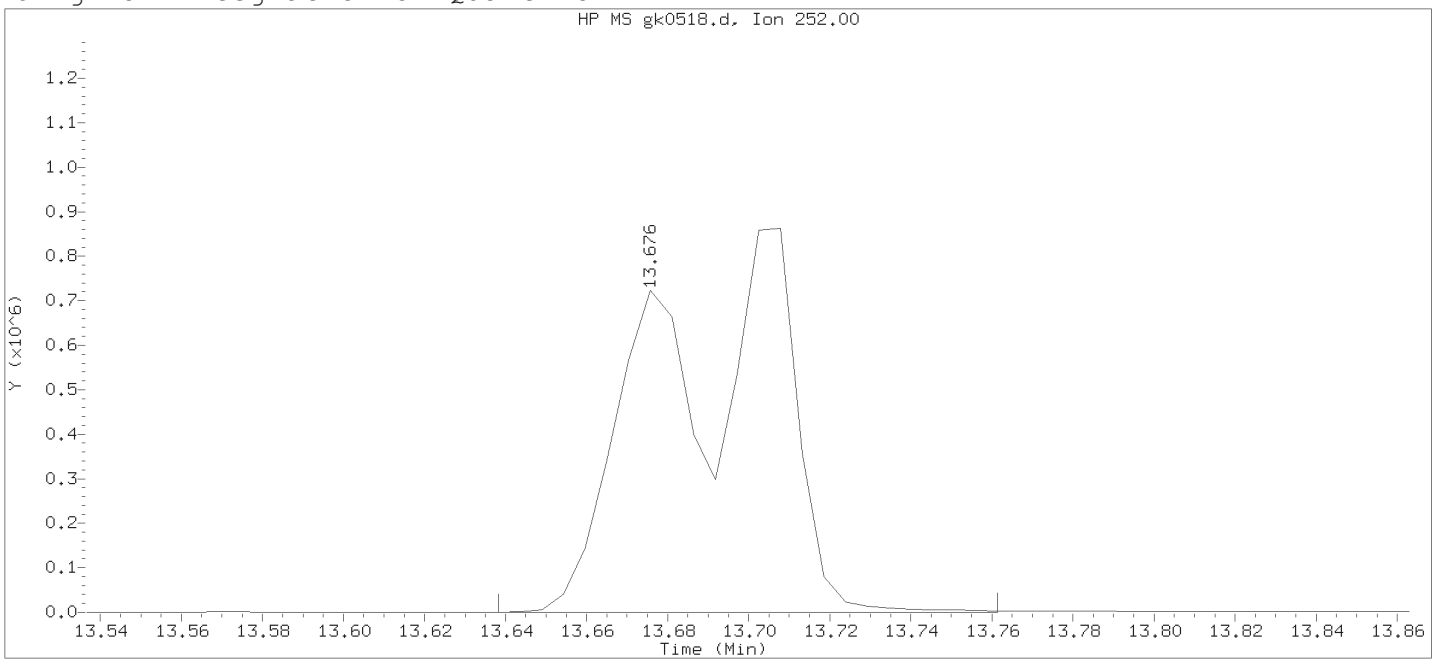
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:46.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 21:50
Date, time and analyst ID of latest file update: 13-Nov-2013 22:26 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Compound Number	:	185
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	2148
Retention Time (minutes)	:	13.676
Quant Ion	:	252.00
Area	:	1907106
On-column Amount (ng/ul)	:	99.3821
Integration start scan	:	2140 Integration stop scan: 2163
Y at integration start	:	0 Y at integration end: 442

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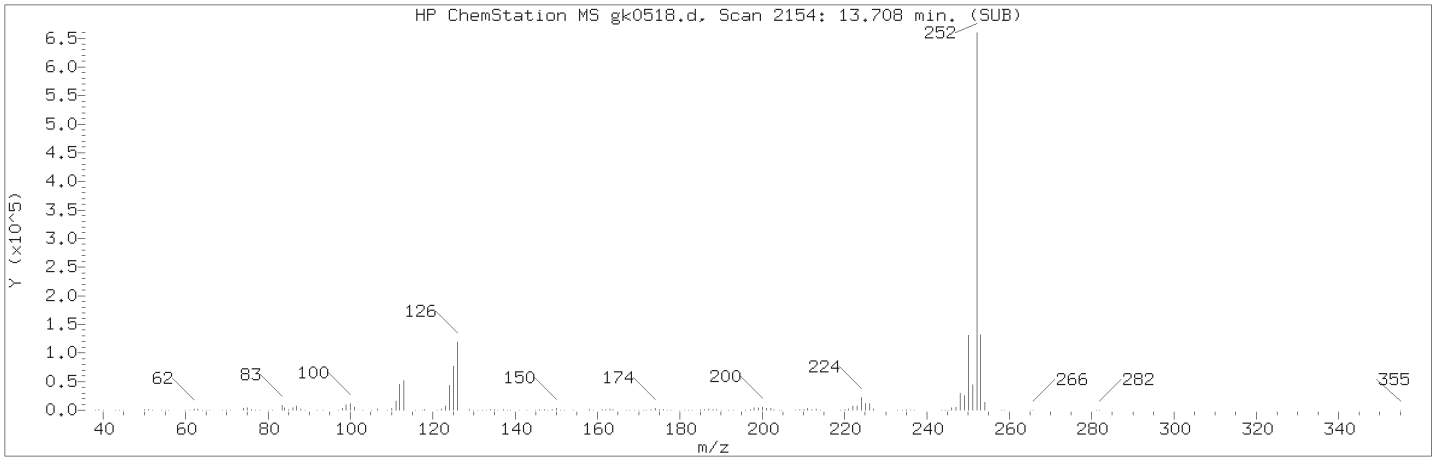
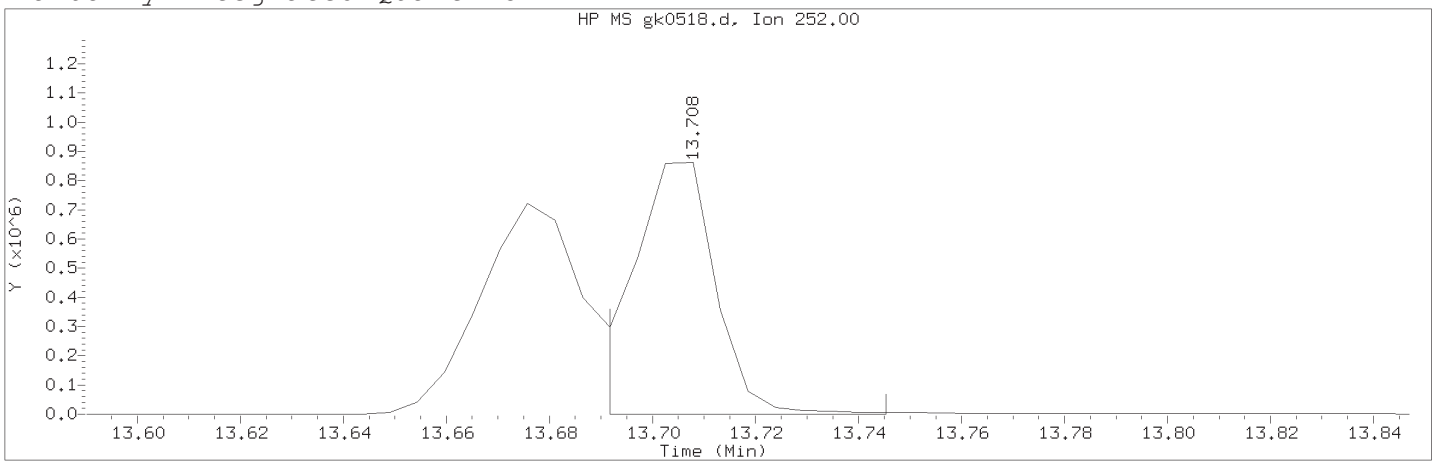
Target 3.5 esignature user ID: LMH00956

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 22:28
Date, time and analyst ID of latest file update: 13-Nov-2013 22:36 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

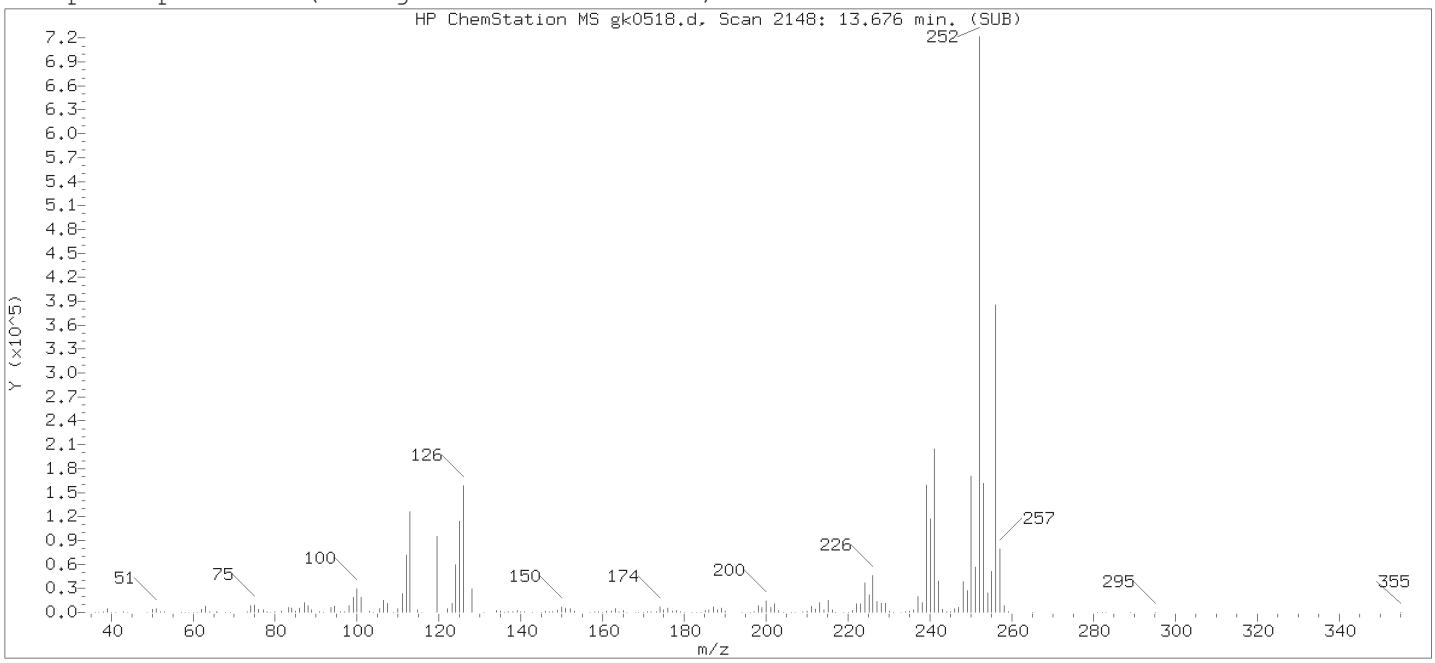
Compound Number : 186
Compound Name : Benzo(k)fluoranthene
Scan Number : 2154
Retention Time (minutes) : 13.708
Quant Ion : 252.00
Area (flag) : 977853M
On-Column Amount (ng/ul) : 48.0797
Integration start scan : 2150 Integration stop scan: 2160
Y at integration start : 271 Y at integration end: 271

Reason for manual integration: improper integration

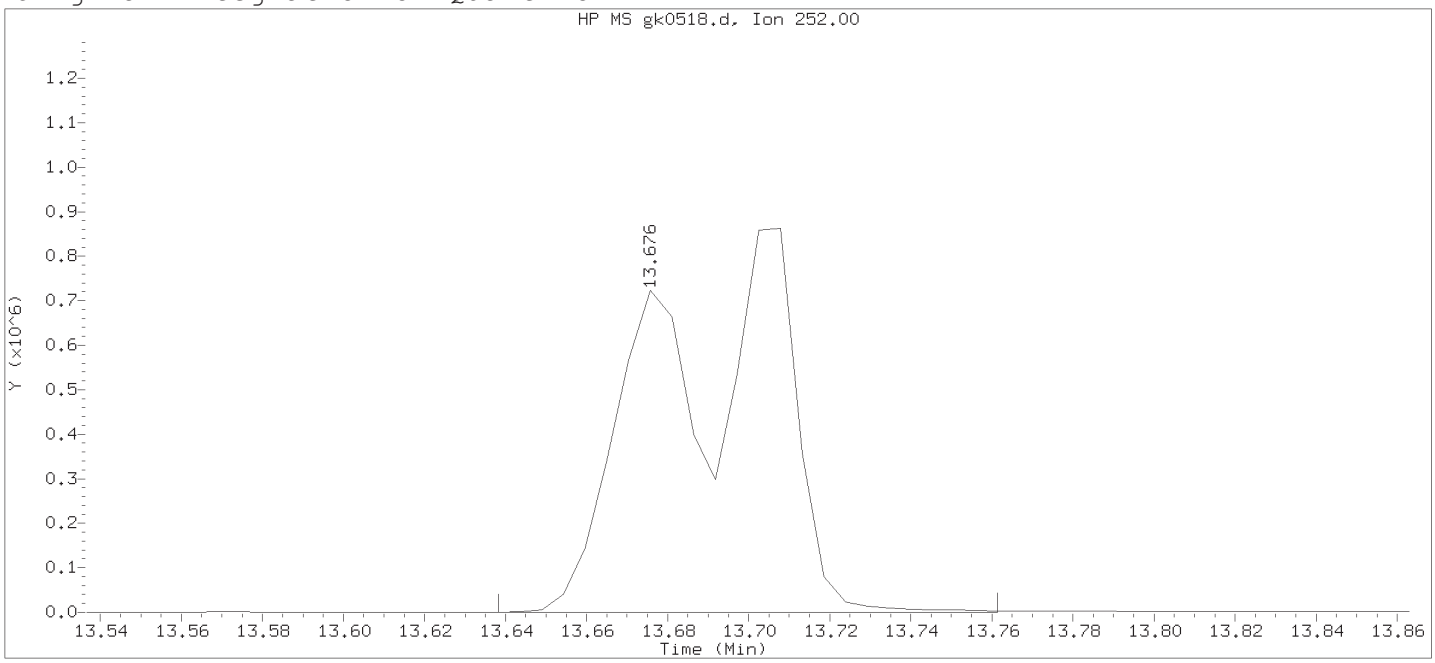
Analyst responsible for change: Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: lmh00956

Secondary review performed and digitally signed by Matthew E. Barton on 11/14/2013 at 12:46.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP11165.i/13nov13a.b/gk0518.d Instrument ID: HP11165.i
Injection date and time: 13-NOV-2013 15:37 Analyst ID: CAM01237

Method used: /chem/HP11165.i/13nov13a.b/mnew8270.m Sublist used: 313SLC
Calibration date and time: 13-NOV-2013 21:50
Date, time and analyst ID of latest file update: 13-Nov-2013 22:26 bkg00522

Sample Name: 313LCLCS7 Lab Sample ID: 313LCLCS

Compound Number	:	186
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	2148
Retention Time (minutes)	:	13.676
Quant Ion	:	252.00
Area	:	1907106
On-column Amount (ng/ul)	:	93.7696
Integration start scan	:	2140 Integration stop scan: 2163
Y at integration start	:	0 Y at integration end: 442

Digitally signed by Linda M. Hartenstine on 11/14/2013 at 12:42.
Target 3.5 esignature user ID: LMH00956

Data file: /chem/HP18831.i/13nov08.b/hk0253.d Injection date and time: **08-NOV-2013 05:34**
Data file Sample Info. Line: 310WGLCS8;310WGLCS;1;3;LCS;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.751	(0.000)	783	152	76745	(-25)	5.00	
48) Naphthalene-d8	8.680	(0.000)	1114	136	299216	(-25)	5.00	
83) Acenaphthene-d10	11.466	(0.006)	1592	164	186171	(-26)	5.00	
120) Phenanthrene-d10	13.360	(0.000)	1917	188	314486	(-29)	5.00	
134) Pyrene-d10	15.307	(0.006)	2251	212	394781	(-29)	5.00	
158) Perylene-d12	19.772	(0.000)	3017	264	302370	(-28)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.897	(-0.003)	112	799908	37.534	75%		10 - 107
13) Phenol-d6	(1)	6.255	(-0.002)	99	824436	28.128	56%		10 - 83
36) Nitrobenzene-d5	(2)	7.584	(0.000)	82	599826	21.470	86%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.429	(0.000)	172	1078262	23.659	95%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.521	(-0.001)	330	240448	50.831	102%		22 - 150
137) Terphenyl-d14	(5)	15.622	(0.000)	244	1357776	25.909	104%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) N-Nitrosodimethylamine	(1)	2.811	(-0.003)	74	152582	9.431	37.72			0.5
11) Benzaldehyde	(1)	6.110	(-0.000)	77	182472	8.840	35.36			0.3
14) Phenol	(1)	6.273	(-0.000)	94	265093	7.728	30.91			0.1
16) Aniline	(1)	6.273	(-0.000)	93	427024	10.707	42.83			0.1
17) bis(2-Chloroethyl)ether	(1)	6.395	(-0.000)	93	307015	11.963	47.85			0.1
18) 2-Chlorophenol	(1)	6.442	(-0.000)	128	267277	12.798	51.19			0.1
19) 1,3-Dichlorobenzene	(1)	6.663	(-0.000)	146	245594	10.144	40.58			0.1
20) 1,4-Dichlorobenzene	(1)	6.774	(-0.000)	146	253518	10.315	41.26			0.1
23) 1,2-Dichlorobenzene	(1)	6.996	(-0.000)	146	247825	10.831	43.32			0.1
26) 2-Methylphenol	(1)	7.165	(-0.000)	108	253942	12.466	49.87			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.200	(-0.000)	45	302538	10.186	40.75			0.1
28) bis(2-Chloroisopropyl)ether	(1)	7.200	(-0.000)	45	302538	10.186	40.75			0.1
30) Acetophenone	(1)	7.363	(0.000)	105	397681	12.050	48.20			0.1
31) 4-Methylphenol	(1)	7.398	(0.000)	108	275579	11.616	46.46			0.1
32) N-Nitroso-di-n-propylamine	(1)	7.386	(0.000)	70	224808	11.333	45.33			0.1
35) Hexachloroethane	(1)	7.497	(0.000)	117	87548	8.983	35.93			0.3
37) Nitrobenzene	(2)	7.608	(-0.000)	77	330715	11.337	45.35			0.1
39) Isophorone	(2)	7.992	(-0.000)	82	600194	12.026	48.11			0.1
40) 2-Nitrophenol	(2)	8.097	(-0.000)	139	136993	13.190	52.76			0.1
41) 2,4-Dimethylphenol	(2)	8.208	(-0.000)	107	288608	11.899	47.60			0.1
44) bis(2-Chloroethoxy)methane	(2)	8.359	(-0.000)	93	351290	12.179	48.72			0.1
46) 2,4-Dichlorophenol	(2)	8.476	(-0.000)	162	226099	12.644	50.57			0.1
47) 1,2,4-Trichlorobenzene	(2)	8.604	(-0.000)	180	235380	10.879	43.52			0.1
49) Naphthalene	(2)	8.715	(0.000)	128	717209	11.830	47.32			0.03
50) 4-Chloroaniline	(2)	8.820	(0.000)	127	302156	11.728	46.91			0.1
53) Hexachlorobutadiene	(2)	8.936	(0.000)	225	124032	9.701	38.80			0.1
55) Caprolactam	(2)	9.350	(0.001)	113	35576	5.057	20.23			1

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:03. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP18831.i/13nov08.b/hk0253.d Injection date and time: **08-NOV-2013 05:34**
Data file Sample Info. Line: 310WGLCS8;310WGLCS;1;3;LCS;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
58) 4-Chloro-3-methylphenol	(2)	9.624(0.000)	107	254440	12.712	50.85			0.1
61) 2-Methylnaphthalene	(2)	9.817(0.000)	142	487719	11.478	45.91			0.03
63) Hexachlorocyclopentadiene	(3)	10.079(-0.000)	237	207373	21.148	84.59			1
66) 2,4,6-Trichlorophenol	(3)	10.283(-0.000)	196	173993	12.556	50.22			0.1
67) 2,4,5-Trichlorophenol	(3)	10.335(-0.000)	196	181286	13.000	52.00			0.1
71) 1,1'-Biphenyl	(3)	10.574(-0.000)	154	630090	12.114	48.46			0.1
72) 2-Chloronaphthalene	(3)	10.586(-0.000)	162	515672	12.365	49.46			0.1
75) 2-Nitroaniline	(3)	10.767(-0.000)	138	162162	13.863	55.45			0.1
78) Dimethylphthalate	(3)	11.110(-0.001)	163	523568	12.151	48.61			0.5
80) 2,6-Dinitrotoluene	(3)	11.180(-0.000)	165	140629	13.713	54.85			0.1
81) Acenaphthylene	(3)	11.239(-0.000)	152	759630	13.809	55.23			0.03
82) 3-Nitroaniline	(3)	11.431(-0.001)	138	144779	13.262	53.05			0.1
84) Acenaphthene	(3)	11.518(-0.000)	153	499255	12.313	49.25			0.03
85) 2,4-Dinitrophenol	(3)	11.594(-0.000)	184	122814	19.865	79.46			3
86) 4-Nitrophenol	(3)	11.722(-0.000)	109	49227	6.581	26.33			3
88) Dibenzofuran	(3)	11.775(-0.000)	168	725101	12.742	50.97			0.1
89) 2,4-Dinitrotoluene	(3)	11.787(-0.000)	165	184984	13.945	55.78			0.3
93) Diethylphthalate	(3)	12.148(-0.000)	149	531046	12.990	51.96			0.5
94) Fluorene	(3)	12.230(-0.001)	166	584568	12.826	51.30			0.03
96) 4-Chlorophenyl-phenylether	(3)	12.253(-0.000)	204	296976	12.638	50.55			0.1
98) 4-Nitroaniline	(3)	12.265(-0.000)	138	129927	12.059	48.24			0.1
99) 4,6-Dinitro-2-methylphenol	(4)	12.311(-0.000)	198	91927	10.742	42.97			1
101) N-Nitrosodiphenylamine	(4)	12.399(-0.000)	169	479312	13.091	52.37			0.1
103) 1,2-Diphenylhydrazine	(4)	12.440(-0.000)	77	644810	11.922	47.69			0.1
110) 4-Bromophenyl-phenylether	(4)	12.836(-0.000)	248	164615	12.839	51.36			0.1
112) Hexachlorobenzene	(4)	12.882(-0.000)	284	159610	12.579	50.32			0.03
114) Atrazine	(4)	13.063(-0.000)	200	167662	13.212	52.85			0.5
115) Pentachlorophenol	(4)	13.133(0.000)	266	89316	9.954	39.81			0.3
121) Phenanthrene	(4)	13.390(0.000)	178	849854	12.350	49.40			0.03
122) Anthracene	(4)	13.454(0.000)	178	876711	13.133	52.53			0.03
124) Carbazole	(4)	13.669(0.000)	167	818505	12.846	51.38			0.1
126) Di-n-butylphthalate	(4)	14.176(0.000)	149	948972	12.640	50.56			0.5
131) Fluoranthene	(4)	15.004(0.000)	202	1004808	13.138	52.55			0.03
132) Benzidine	(5)	15.237(-0.000)	184	2128113	43.083	172.33			5
133) Pyrene	(5)	15.336(-0.000)	202	1053034	12.772	51.09			0.03
144) Butylbenzylphthalate	(5)	16.467(-0.000)	149	433416	12.512	50.05			0.5
148) 3,3'-Dichlorobenzidine	(5)	17.318(-0.000)	252	274629	9.767	39.07			0.5
147) Benzo(a)anthracene	(5)	17.324(-0.000)	228	977087	13.167	52.67			0.03
150) Chrysene	(5)	17.382(-0.000)	228	927838	12.804	51.21			0.03
151) bis(2-Ethylhexyl)phthalate	(5)	17.528(-0.000)	149	593933	12.827	51.31	8.066	B	0.5
153) Di-n-octylphthalate	(6)	18.682(-0.000)	149	1025404	13.216	52.87			0.5
154) Benzo(b)fluoranthene	(6)	19.160(-0.000)	252	941480	13.090	52.36			0.03
156) Benzo(k)fluoranthene	(6)	19.212(-0.000)	252	921333	12.540	50.16			0.03
157) Benzo(a)pyrene	(6)	19.684(-0.000)	252	870445	12.910	51.64			0.03
162) Indeno(1,2,3-cd)pyrene	(6)	21.369(0.000)	276	907949M	13.273	53.09			0.03
163) Dibenz(a,h)anthracene	(6)	21.410(0.000)	278	777711	13.314	53.26			0.03
164) Benzo(g,h,i)perylene	(6)	21.736(0.000)	276	777746	13.051	52.20			0.03
168) 2,4_2,6-Dinitrotoluenes	(3)			325613	27.658	110.63	0		0

B = Compound detected in referenced method blank. M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:03. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP18831.i/13nov08.b/hk0253.d Injection date and time: **08-NOV-2013 05:34**
Data file Sample Info. Line: 310WGLCS8;310WGLCS;1;3;LCS;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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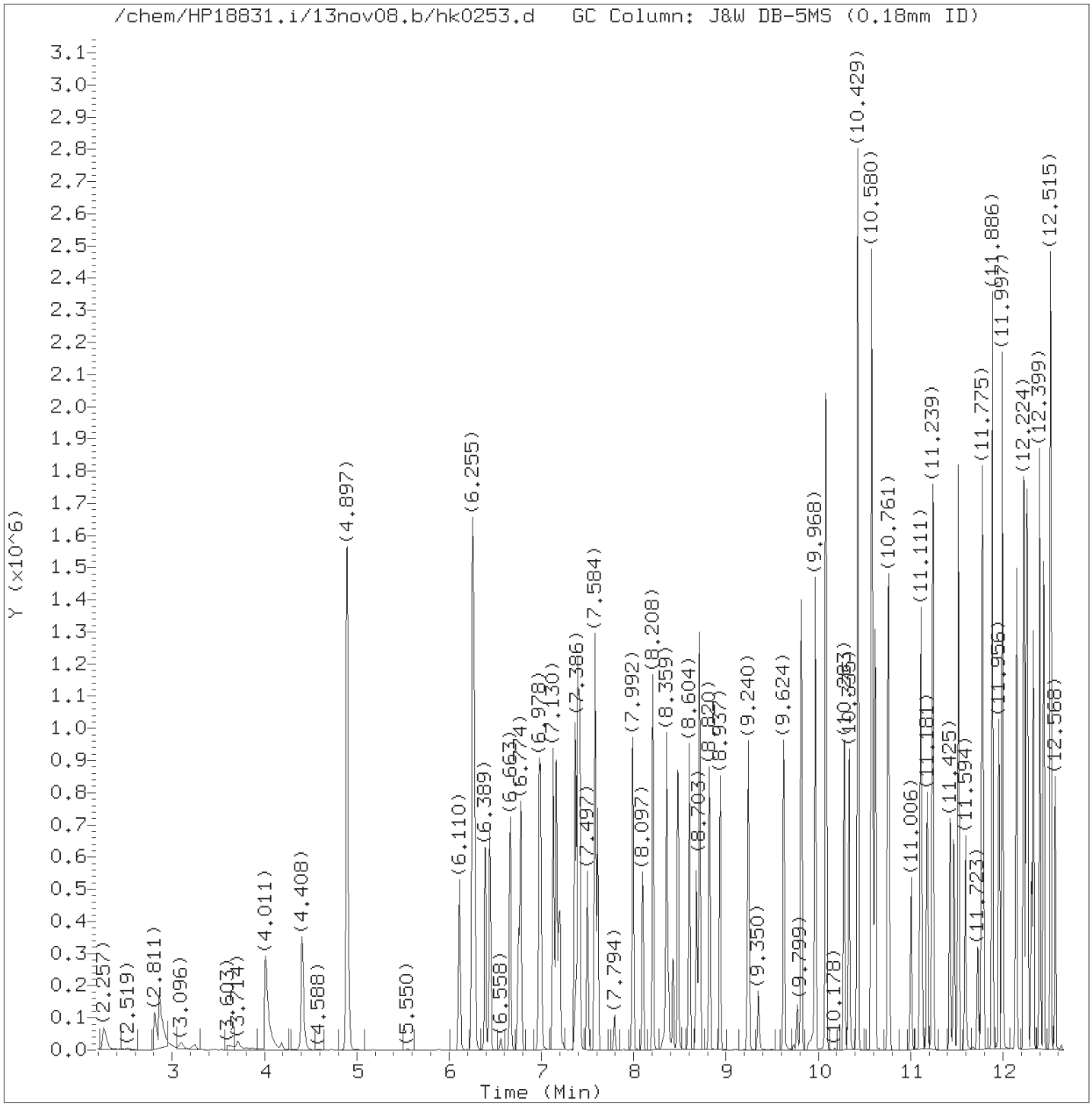
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 75

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:03. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:56. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

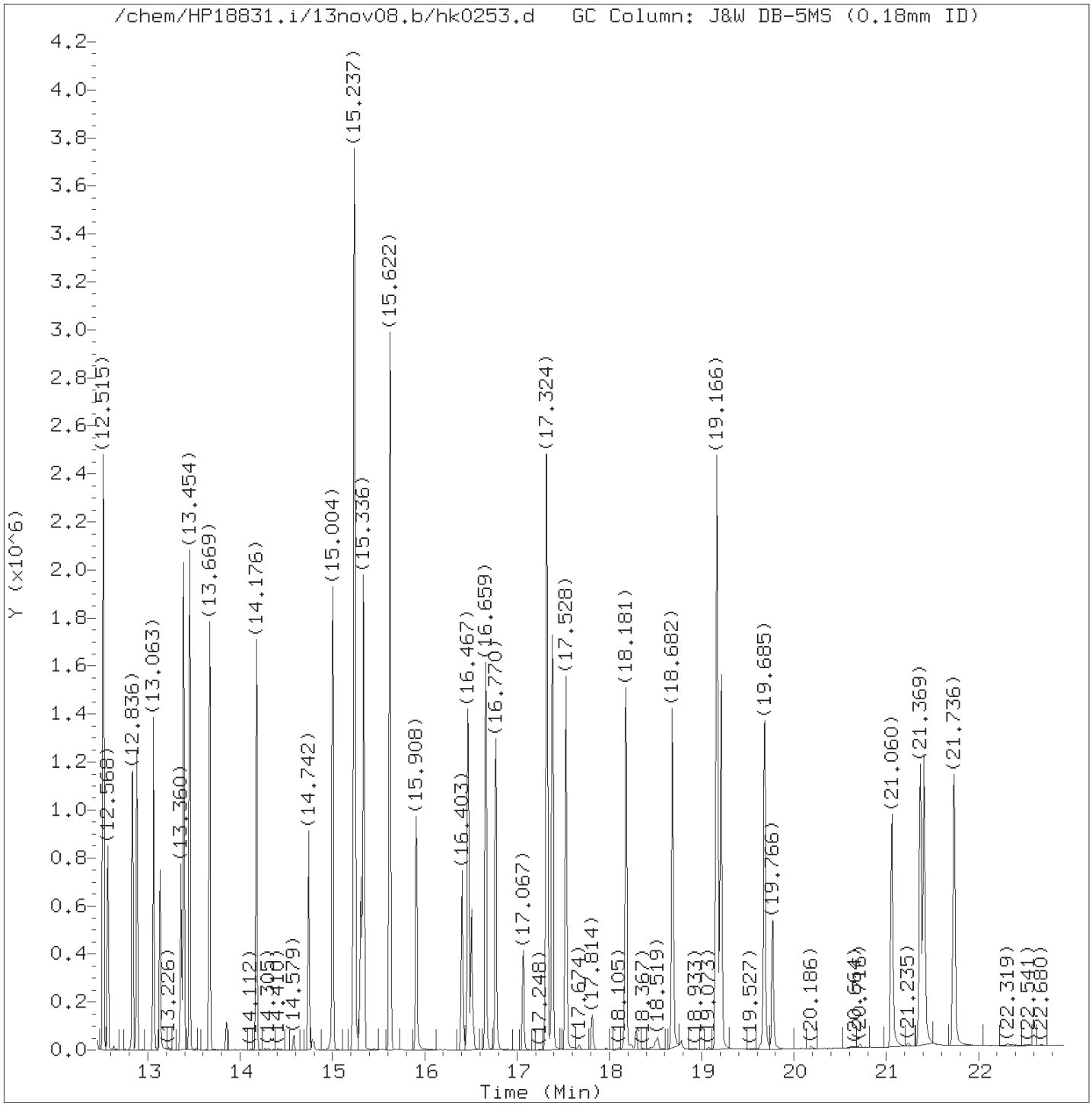
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.811	74	152582	9.431
8)$2-Fluorophenol	(1)	4.897	112	799908	37.534
11) Benzaldehyde	(1)	6.110	77	182472	8.840
13)$Phenol-d6	(1)	6.255	99	824436	28.128
14) Phenol	(1)	6.273	94	265093	7.728
16) Aniline	(1)	6.273	93	427024	10.707
17) bis(2-Chloroethyl)ether	(1)	6.395	93	307015	11.963
18) 2-Chlorophenol	(1)	6.442	128	267277	12.798
19) 1,3-Dichlorobenzene	(1)	6.663	146	245594	10.144
21)*1,4-Dichlorobenzene-d4	(1)	6.751	152	76745	5.000
20) 1,4-Dichlorobenzene	(1)	6.774	146	253518	10.315
23) 1,2-Dichlorobenzene	(1)	6.996	146	247825	10.831
26) 2-Methylphenol	(1)	7.165	108	253942	12.466
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.200	45	302538	10.186
28) bis(2-Chloroisopropyl)ether	(1)	7.200	45	302538	10.186
30) Acetophenone	(1)	7.363	105	397681	12.050
32) N-Nitroso-di-n-propylamine	(1)	7.386	70	224808	11.333
31) 4-Methylphenol	(1)	7.398	108	275579	11.616
35) Hexachloroethane	(1)	7.497	117	87548	8.983
36)$Nitrobenzene-d5	(2)	7.584	82	599826	21.470
37) Nitrobenzene	(2)	7.608	77	330715	11.337
39) Isophorone	(2)	7.992	82	600194	12.026
40) 2-Nitrophenol	(2)	8.097	139	136993	13.190
41) 2,4-Dimethylphenol	(2)	8.208	107	288608	11.899
44) bis(2-Chloroethoxy)methane	(2)	8.359	93	351290	12.179
46) 2,4-Dichlorophenol	(2)	8.476	162	226099	12.644
47) 1,2,4-Trichlorobenzene	(2)	8.604	180	235380	10.879
48)*Naphthalene-d8	(2)	8.680	136	299216	5.000
49) Naphthalene	(2)	8.715	128	717209	11.830
50) 4-Chloroaniline	(2)	8.820	127	302156	11.728
53) Hexachlorobutadiene	(2)	8.937	225	124032	9.701
55) Caprolactam	(2)	9.350	113	35576	5.057
58) 4-Chloro-3-methylphenol	(2)	9.624	107	254440	12.712
61) 2-Methylnaphthalene	(2)	9.817	142	487719	11.478
63) Hexachlorocyclopentadiene	(3)	10.079	237	207373	21.148
66) 2,4,6-Trichlorophenol	(3)	10.283	196	173993	12.556
67) 2,4,5-Trichlorophenol	(3)	10.335	196	181286	13.000
68)$2-Fluorobiphenyl	(3)	10.429	172	1078262	23.659
71) 1,1'-Biphenyl	(3)	10.574	154	630090	12.114
72) 2-Chloronaphthalene	(3)	10.586	162	515672	12.365

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
75) 2-Nitroaniline	(3)	10.767	138	162162	13.863
78) Dimethylphthalate	(3)	11.111	163	523568	12.151
80) 2,6-Dinitrotoluene	(3)	11.181	165	140629	13.713
81) Acenaphthylene	(3)	11.239	152	759630	13.809
82) 3-Nitroaniline	(3)	11.431	138	144779	13.262
83)*Acenaphthene-d10	(3)	11.466	164	186171	5.000
84) Acenaphthene	(3)	11.519	153	499255	12.313
85) 2,4-Dinitrophenol	(3)	11.594	184	122814	19.865
86) 4-Nitrophenol	(3)	11.723	109	49227	6.581
88) Dibenzofuran	(3)	11.775	168	725101	12.742
89) 2,4-Dinitrotoluene	(3)	11.787	165	184984	13.945
93) Diethylphthalate	(3)	12.148	149	531046	12.990
94) Fluorene	(3)	12.230	166	584568	12.826
96) 4-Chlorophenyl-phenylether	(3)	12.253	204	296976	12.638
98) 4-Nitroaniline	(3)	12.265	138	129927	12.059
99) 4,6-Dinitro-2-methylphenol	(4)	12.311	198	91927	10.742
101) N-Nitrosodiphenylamine	(4)	12.399	169	479312	13.091
103) 1,2-Diphenylhydrazine	(4)	12.440	77	644810	11.922
104)$2,4,6-Tribromophenol	(3)	12.521	330	240448	50.831
110) 4-Bromophenyl-phenylether	(4)	12.836	248	164615	12.839
112) Hexachlorobenzene	(4)	12.882	284	159610	12.579
114) Atrazine	(4)	13.063	200	167662	13.212
115) Pentachlorophenol	(4)	13.133	266	89316	9.954
120)*Phenanthrene-d10	(4)	13.360	188	314486	5.000
121) Phenanthrene	(4)	13.390	178	849854	12.350
122) Anthracene	(4)	13.454	178	876711	13.133
124) Carbazole	(4)	13.669	167	818505	12.846
126) Di-n-butylphthalate	(4)	14.176	149	948972	12.640
131) Fluoranthene	(4)	15.004	202	1004808	13.138
132) Benzidine	(5)	15.237	184	2128113	43.083
134)*Pyrene-d10	(5)	15.307	212	394781	5.000
133) Pyrene	(5)	15.336	202	1053034	12.772
137)$Terphenyl-d14	(5)	15.622	244	1357776	25.909
144) Butylbenzylphthalate	(5)	16.467	149	433416	12.512
148) 3,3'-Dichlorobenzidine	(5)	17.318	252	274629	9.767
147) Benzo(a)anthracene	(5)	17.324	228	977087	13.167
150) Chrysene	(5)	17.382	228	927838	12.804
151) bis(2-Ethylhexyl)phthalate	(5)	17.528	149	593933	12.827
153) Di-n-octylphthalate	(6)	18.682	149	1025404	13.216
154) Benzo(b)fluoranthene	(6)	19.160	252	941480	13.090

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

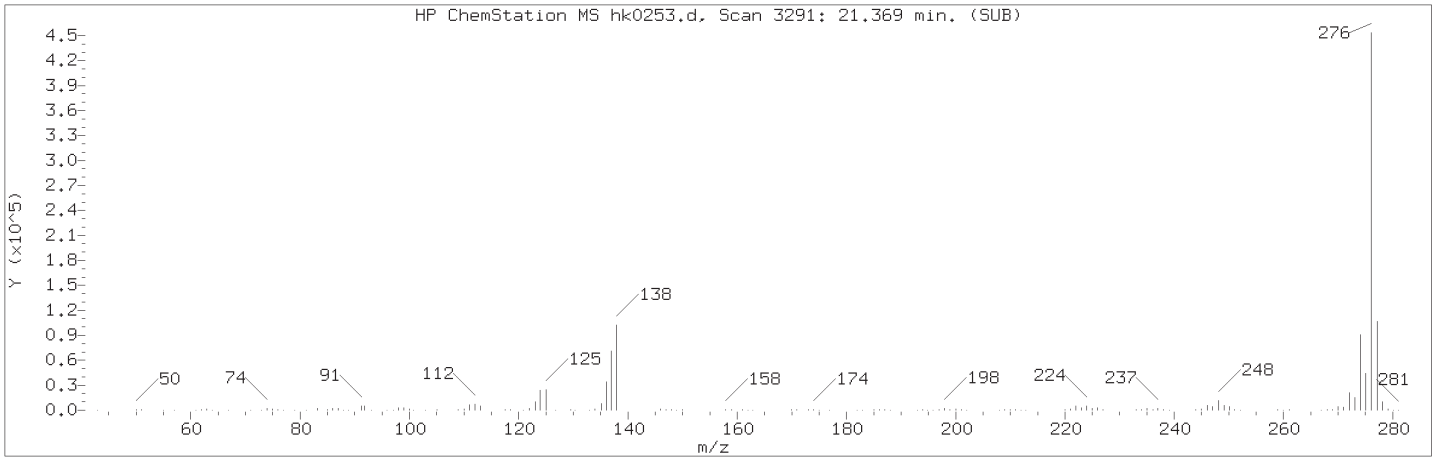
Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
156) Benzo(k)fluoranthene	(6)	19.212	252	921333	12.540
157) Benzo(a)pyrene	(6)	19.685	252	870445	12.910
158)*Perylene-d12	(6)	19.772	264	302370	5.000
162) Indeno(1,2,3-cd)pyrene	(6)	21.369	276	907949M	13.273
163) Dibenz(a,h)anthracene	(6)	21.410	278	777711	13.314
164) Benzo(g,h,i)perylene	(6)	21.736	276	777746	13.051
168) 2,4_2,6-Dinitrotoluenes	(3)			325613	27.658

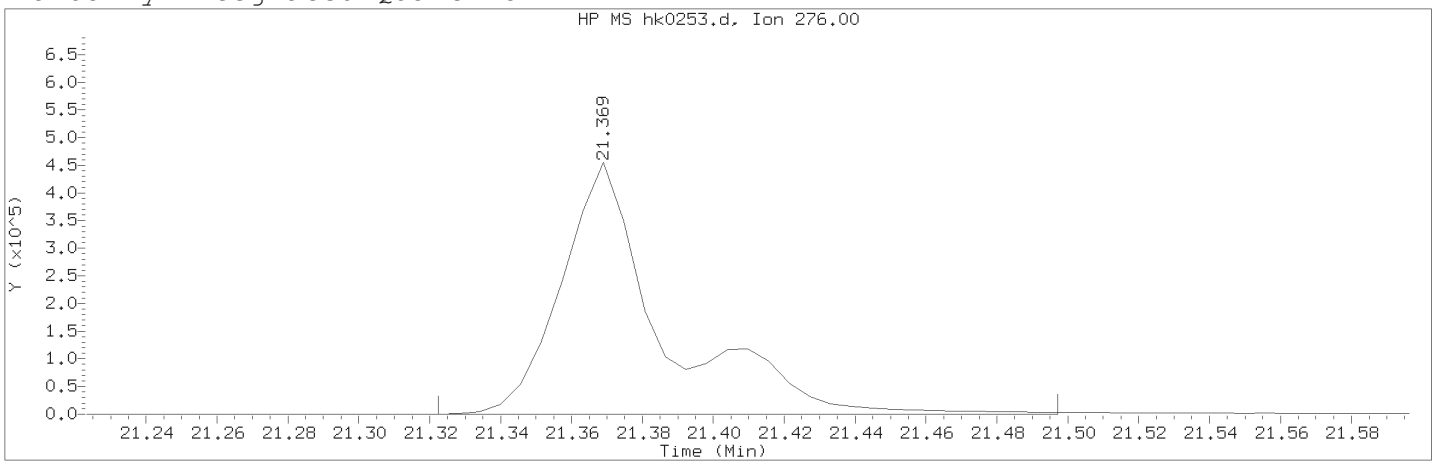
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 08:00 jmg00346

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

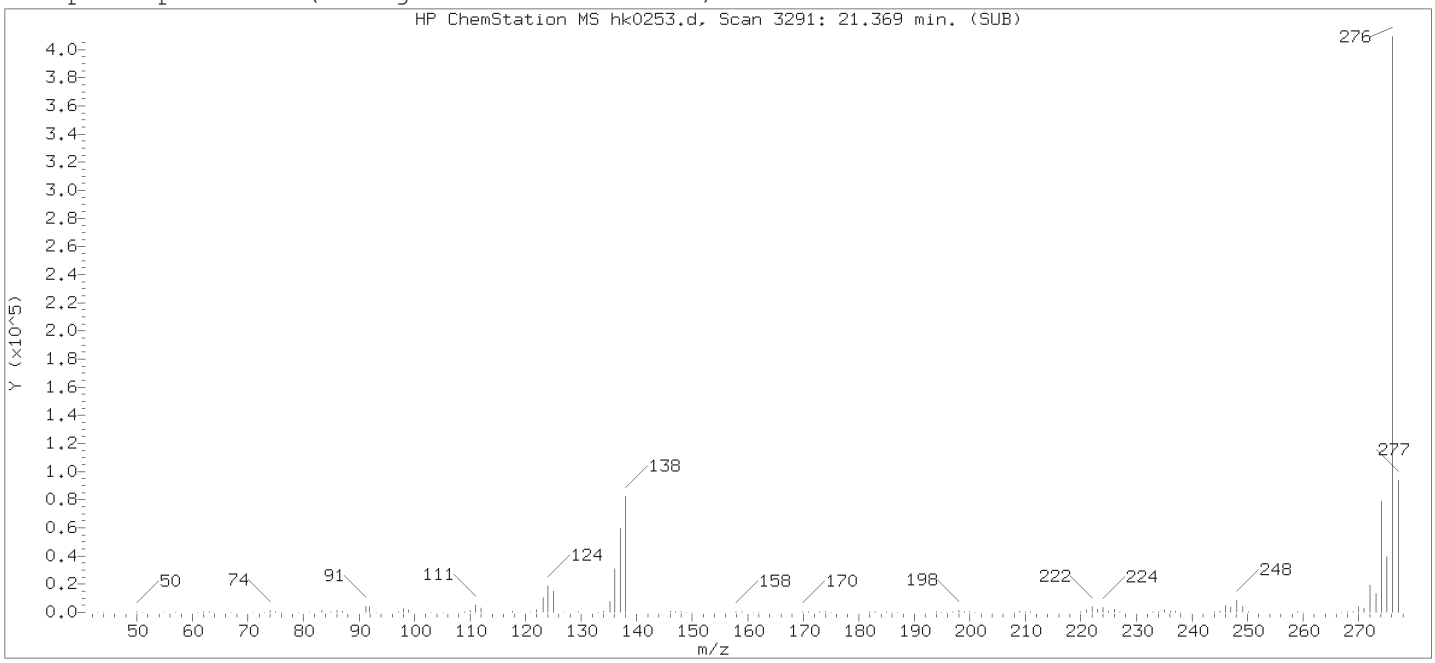
Compound Number : 162
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3291
Retention Time (minutes) : 21.369
Quant Ion : 276.00
Area (flag) : 907949M
On-Column Amount (ng/ul) : 13.2725
Integration start scan : 3282 Integration stop scan: 3312
Y at integration start : -214 Y at integration end: -214

Reason for manual integration: improper integration

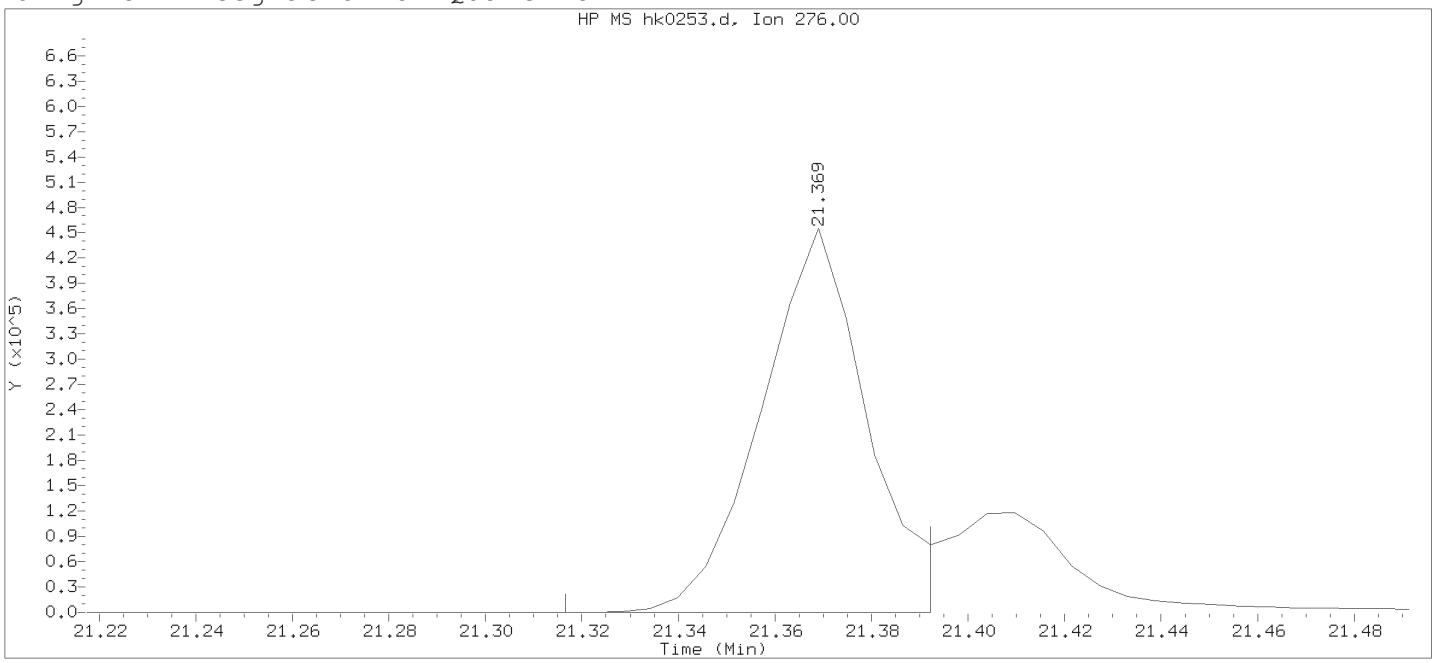
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:56.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP18831.i/13nov08.b/hk0253.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 05:34 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 08-NOV-2013 05:06
Date, time and analyst ID of latest file update: 08-Nov-2013 06:06 Automation

Sample Name: 310WGLCS8 Lab Sample ID: 310WGLCS

Compound Number	: 162		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3291		
Retention Time (minutes)	: 21.369		
Quant Ion	: 276.00		
Area	: 681362		
On-column Amount (ng/ul)	: 9.9602		
Integration start scan	: 3281	Integration stop scan:	3294
Y at integration start	: 0	Y at integration end:	132

Digitally signed by Joseph M. Gambler on 11/08/2013 at 08:03.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP18831.i/13nov08.b/hk0254.d Injection date and time: **08-NOV-2013 06:03**
Data file Sample Info. Line: 310WGLCSD8;310WGLCSD;1;3;LCSD;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	6.751	(0.000)	783	152	79047	(-22)	5.00	
48) Naphthalene-d8	8.680	(0.000)	1114	136	303167	(-24)	5.00	
83) Acenaphthene-d10	11.466	(0.006)	1592	164	189740	(-25)	5.00	
120) Phenanthrene-d10	13.360	(0.000)	1917	188	320442	(-27)	5.00	
134) Pyrene-d10	15.307	(0.006)	2251	212	403512	(-27)	5.00	
158) Perylene-d12	19.772	(0.000)	3017	264	308714	(-27)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
8) 2-Fluorophenol	(1)	4.891	(-0.003)	112	778109	35.448	71%		10 - 107
13) Phenol-d6	(1)	6.255	(-0.002)	99	774420	25.652	51%		10 - 83
36) Nitrobenzene-d5	(2)	7.584	(0.000)	82	619726	21.893	88%		60 - 123
68) 2-Fluorobiphenyl	(3)	10.429	(0.000)	172	1108498	23.865	95%		63 - 121
104) 2,4,6-Tribromophenol	(3)	12.521	(-0.001)	330	247771	51.394	103%		22 - 150
137) Terphenyl-d14	(5)	15.628	(0.000)	244	1410374	26.331	105%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) N-Nitrosodimethylamine	(1)	2.811	(-0.003)	74	141910	8.516	34.06			0.5
11) Benzaldehyde	(1)	6.110	(-0.000)	77	187228	8.807	35.23			0.3
14) Phenol	(1)	6.273	(-0.000)	94	248534	7.035	28.14			0.1
16) Aniline	(1)	6.273	(-0.000)	93	431831	10.512	42.05			0.1
17) bis(2-Chloroethyl)ether	(1)	6.389	(-0.000)	93	312476	11.822	47.29			0.1
18) 2-Chlorophenol	(1)	6.442	(-0.000)	128	270436	12.572	50.29			0.1
19) 1,3-Dichlorobenzene	(1)	6.663	(-0.000)	146	244763	9.815	39.26			0.1
20) 1,4-Dichlorobenzene	(1)	6.774	(-0.000)	146	255422	10.089	40.36			0.1
23) 1,2-Dichlorobenzene	(1)	6.996	(-0.000)	146	247677	10.509	42.04			0.1
26) 2-Methylphenol	(1)	7.165	(-0.000)	108	250215	11.926	47.70			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.194	(-0.000)	45	311052	10.168	40.67			0.1
28) bis(2-Chloroisopropyl)ether	(1)	7.194	(-0.000)	45	311052	10.168	40.67			0.1
30) Acetophenone	(1)	7.363	(0.000)	105	404077	11.887	47.55			0.1
31) 4-Methylphenol	(1)	7.398	(0.000)	108	268813	11.001	44.00			0.1
32) N-Nitroso-di-n-propylamine	(1)	7.386	(0.000)	70	228898	11.204	44.81			0.1
35) Hexachloroethane	(1)	7.497	(0.000)	117	87473	8.714	34.86			0.3
37) Nitrobenzene	(2)	7.608	(-0.000)	77	336849	11.396	45.59			0.1
39) Isophorone	(2)	7.992	(-0.000)	82	612505	12.113	48.45			0.1
40) 2-Nitrophenol	(2)	8.097	(-0.000)	139	139082	13.216	52.86			0.1
41) 2,4-Dimethylphenol	(2)	8.208	(-0.000)	107	286879	11.674	46.70			0.1
44) bis(2-Chloroethoxy)methane	(2)	8.360	(0.000)	93	354881	12.144	48.57			0.1
46) 2,4-Dichlorophenol	(2)	8.482	(-0.000)	162	229438	12.663	50.65			0.1
47) 1,2,4-Trichlorobenzene	(2)	8.604	(-0.000)	180	235111	10.725	42.90			0.1
49) Naphthalene	(2)	8.715	(0.000)	128	727715	11.847	47.39			0.03
50) 4-Chloroaniline	(2)	8.820	(0.000)	127	308597	11.822	47.29			0.1
53) Hexachlorobutadiene	(2)	8.936	(0.000)	225	123334	9.521	38.08			0.1
55) Caprolactam	(2)	9.350	(0.001)	113	31105	4.363	17.45			1

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Data file: /chem/HP18831.i/13nov08.b/hk0254.d Injection date and time: **08-NOV-2013 06:03**
Data file Sample Info. Line: 310WGLCSD8;310WGLCSD;1;3;LCSD;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
58) 4-Chloro-3-methylphenol	(2)	9.624(0.000)	107	258685	12.756	51.02			0.1
61) 2-Methylnaphthalene	(2)	9.817(0.000)	142	495403	11.507	46.03			0.03
63) Hexachlorocyclopentadiene	(3)	10.079(-0.000)	237	203992	20.412	81.65			1
66) 2,4,6-Trichlorophenol	(3)	10.283(-0.000)	196	176360	12.487	49.95			0.1
67) 2,4,5-Trichlorophenol	(3)	10.335(-0.000)	196	184806	13.003	52.01			0.1
71) 1,1'-Biphenyl	(3)	10.574(-0.000)	154	636243	12.002	48.01			0.1
72) 2-Chloronaphthalene	(3)	10.586(-0.000)	162	523290	12.311	49.25			0.1
75) 2-Nitroaniline	(3)	10.767(-0.000)	138	165721	13.900	55.60			0.1
78) Dimethylphthalate	(3)	11.111(-0.001)	163	517670	11.788	47.15			0.5
80) 2,6-Dinitrotoluene	(3)	11.180(-0.000)	165	142411	13.625	54.50			0.1
81) Acenaphthylene	(3)	11.239(-0.000)	152	770497	13.743	54.97			0.03
82) 3-Nitroaniline	(3)	11.431(-0.001)	138	146738	13.188	52.75			0.1
84) Acenaphthene	(3)	11.519(-0.000)	153	502855	12.169	48.67			0.03
85) 2,4-Dinitrophenol	(3)	11.594(-0.000)	184	115947	18.572	74.29			3
86) 4-Nitrophenol	(3)	11.728(-0.001)	109	45325	5.946	23.78			3
88) Dibenzofuran	(3)	11.775(-0.000)	168	731060	12.605	50.42			0.1
89) 2,4-Dinitrotoluene	(3)	11.787(-0.000)	165	190570	14.096	56.38			0.3
93) Diethylphthalate	(3)	12.148(-0.000)	149	538355	12.921	51.68			0.5
94) Fluorene	(3)	12.230(-0.001)	166	600014	12.917	51.67			0.03
96) 4-Chlorophenyl-phenylether	(3)	12.253(-0.000)	204	304731	12.724	50.89			0.1
98) 4-Nitroaniline	(3)	12.265(-0.000)	138	132529	12.069	48.28			0.1
99) 4,6-Dinitro-2-methylphenol	(4)	12.311(-0.000)	198	89971	10.372	41.49			1
101) N-Nitrosodiphenylamine	(4)	12.399(-0.000)	169	481122	12.897	51.59			0.1
103) 1,2-Diphenylhydrazine	(4)	12.440(-0.000)	77	648620	11.769	47.08			0.1
110) 4-Bromophenyl-phenylether	(4)	12.836(-0.000)	248	169430	12.969	51.88			0.1
112) Hexachlorobenzene	(4)	12.882(-0.000)	284	161743	12.510	50.04			0.03
114) Atrazine	(4)	13.063(-0.000)	200	169918	13.141	52.57			0.5
115) Pentachlorophenol	(4)	13.133(0.000)	266	91865	10.034	40.14			0.3
121) Phenanthrene	(4)	13.390(0.000)	178	869503	12.401	49.60			0.03
122) Anthracene	(4)	13.454(0.000)	178	891423	13.105	52.42			0.03
124) Carbazole	(4)	13.669(0.000)	167	835419	12.868	51.47			0.1
126) Di-n-butylphthalate	(4)	14.176(0.000)	149	969946	12.680	50.72			0.5
131) Fluoranthene	(4)	15.004(0.000)	202	1027406	13.184	52.74			0.03
132) Benzidine	(5)	15.243(-0.000)	184	2142036	42.427	169.71			5
133) Pyrene	(5)	15.342(-0.000)	202	1069441	12.691	50.76			0.03
144) Butylbenzylphthalate	(5)	16.473(-0.000)	149	442444	12.496	49.98			0.5
148) 3,3'-Dichlorobenzidine	(5)	17.318(-0.000)	252	278324	9.684	38.74			0.5
147) Benzo(a)anthracene	(5)	17.324(-0.000)	228	992138	13.081	52.32			0.03
150) Chrysene	(5)	17.382(-0.000)	228	951055	12.840	51.36			0.03
151) bis(2-Ethylhexyl)phthalate	(5)	17.534(-0.000)	149	607996	12.847	51.39	8.066	B	0.5
153) Di-n-octylphthalate	(6)	18.682(0.000)	149	1036665	13.087	52.35			0.5
154) Benzo(b)fluoranthene	(6)	19.160(0.000)	252	945971	12.882	51.53			0.03
156) Benzo(k)fluoranthene	(6)	19.212(-0.000)	252	947316	12.628	50.51			0.03
157) Benzo(a)pyrene	(6)	19.684(-0.000)	252	892811	12.970	51.88			0.03
162) Indeno(1,2,3-cd)pyrene	(6)	21.369(0.000)	276	910217	13.032	52.13			0.03
163) Dibenz(a,h)anthracene	(6)	21.410(0.000)	278	792430	13.287	53.15			0.03
164) Benzo(g,h,i)perylene	(6)	21.736(0.000)	276	795302	13.071	52.29			0.03
168) 2,4_2,6-Dinitrotoluenes	(3)			332981	27.721	110.88	0		0

B = Compound detected in referenced method blank. E = Compound concentration above calibration range.

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Data file: /chem/HP18831.i/13nov08.b/hk0254.d Injection date and time: **08-NOV-2013 06:03**
Data file Sample Info. Line: 310WGLCSD8;310WGLCSD;1;3;LCSD;;; Instrument ID: **HP18831.i** Batch: **13310WAG**
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Blank Data file reference: **/chem/HP18831.i/13nov08.b/hk0252.d**

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: **310WAG**
Calibration date and time (Last Method Edit): 08-NOV-2013 07:56
Mid Level Daily Calibration Standard Reference: **/chem/HP18831.i/13nov08.b/hk0251.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 75

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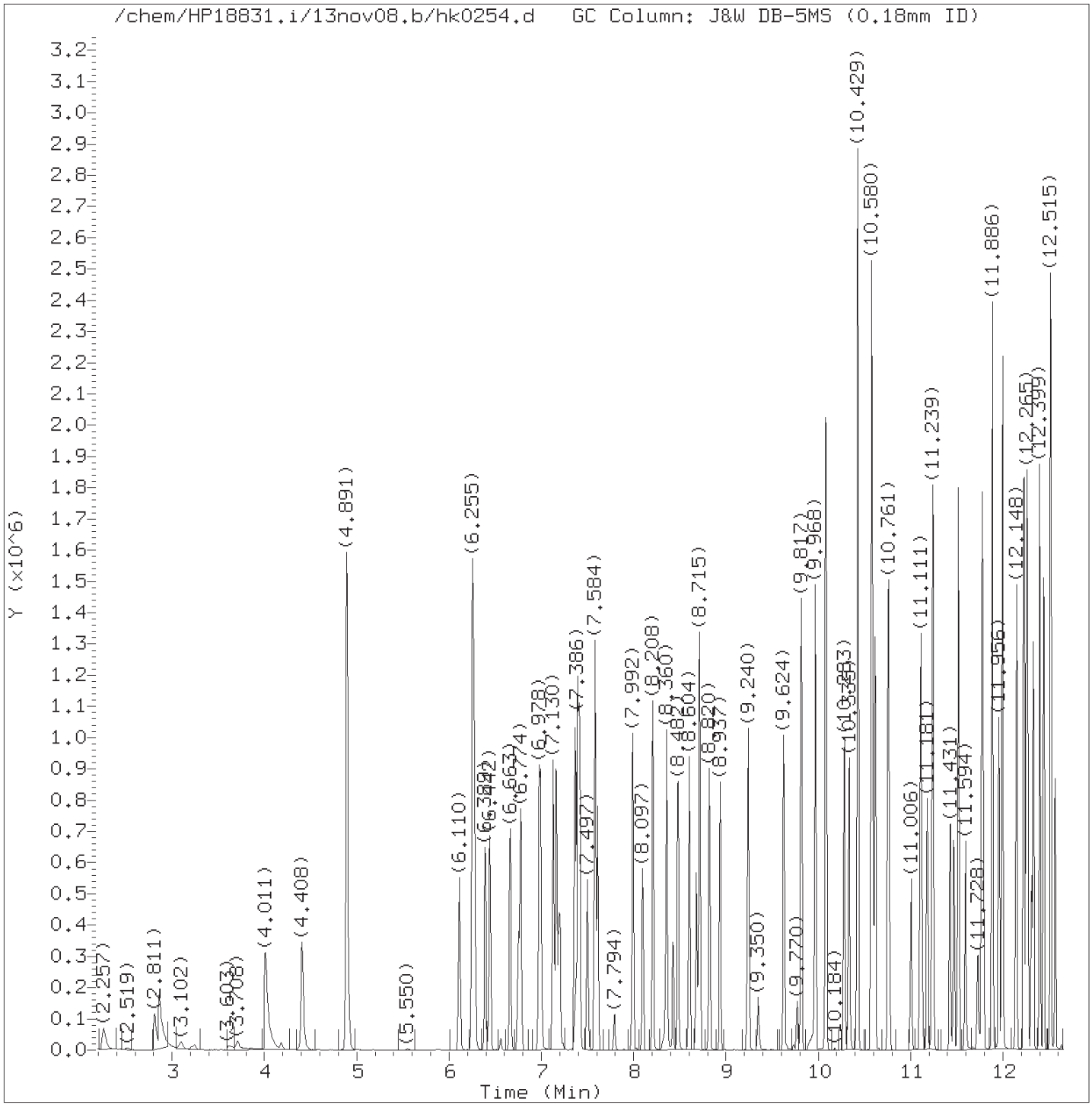
Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:56. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

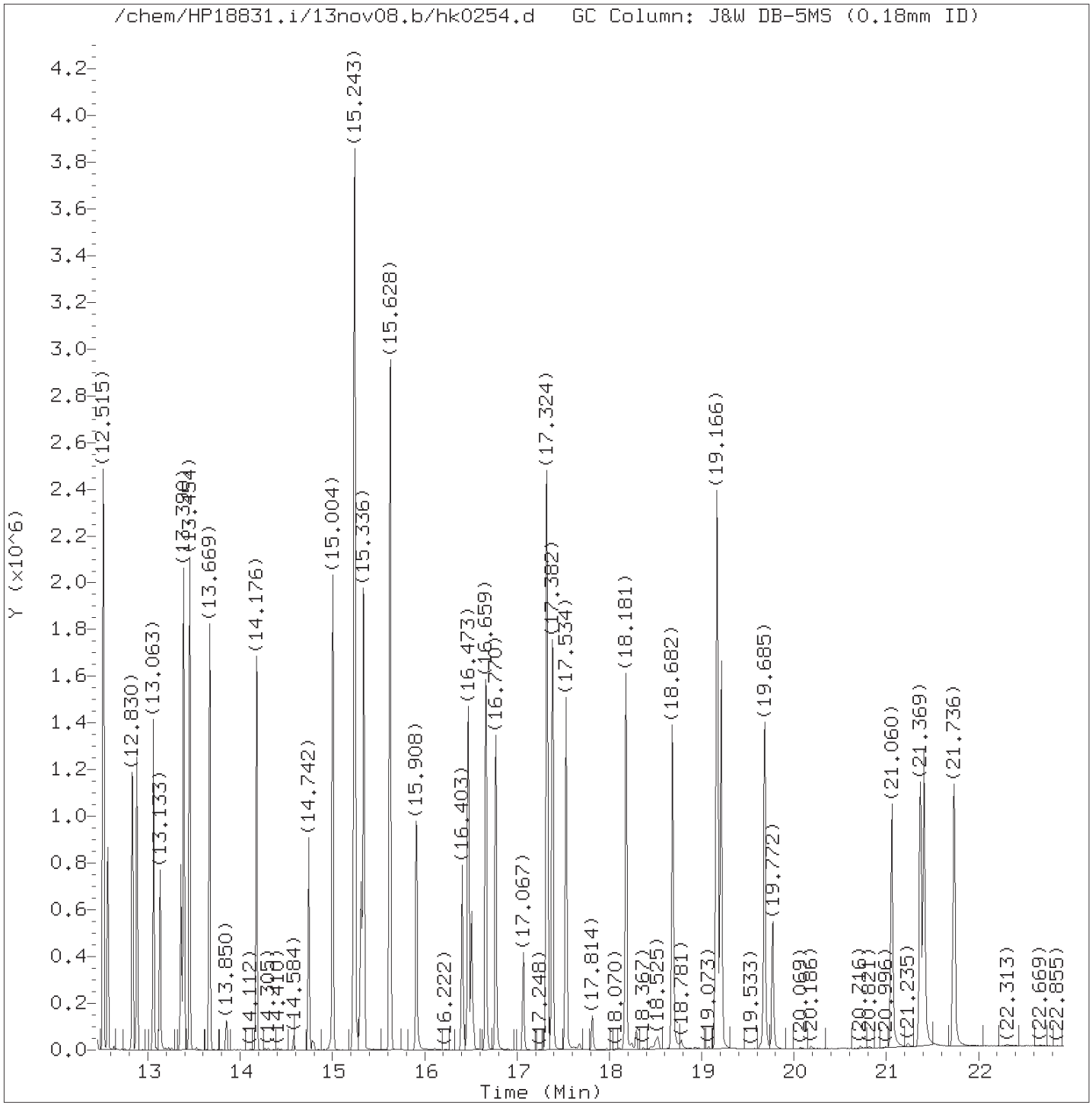
Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0254.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 06:03 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Sample Name: 310WGLCSD8 Lab Sample ID: 310WGLCSD

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0254.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 06:03 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Sample Name: 310WGLCSD8 Lab Sample ID: 310WGLCSD

Digitally signed by Joseph M. Gambler
on 11/08/2013 at 08:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0254.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 06:03 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Sample Name: 310WGLCSD8 Lab Sample ID: 310WGLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.811	74	141910	8.516
8)$2-Fluorophenol	(1)	4.891	112	778109	35.448
11) Benzaldehyde	(1)	6.110	77	187228	8.807
13)$Phenol-d6	(1)	6.255	99	774420	25.652
14) Phenol	(1)	6.273	94	248534	7.035
16) Aniline	(1)	6.273	93	431831	10.512
17) bis(2-Chloroethyl)ether	(1)	6.389	93	312476	11.822
18) 2-Chlorophenol	(1)	6.442	128	270436	12.572
19) 1,3-Dichlorobenzene	(1)	6.663	146	244763	9.815
21)*1,4-Dichlorobenzene-d4	(1)	6.751	152	79047	5.000
20) 1,4-Dichlorobenzene	(1)	6.774	146	255422	10.089
23) 1,2-Dichlorobenzene	(1)	6.996	146	247677	10.509
26) 2-Methylphenol	(1)	7.165	108	250215	11.926
27) 2,2'-oxybis(1-Chloropropane)	(1)	7.194	45	311052	10.168
28) bis(2-Chloroisopropyl)ether	(1)	7.194	45	311052	10.168
30) Acetophenone	(1)	7.363	105	404077	11.887
32) N-Nitroso-di-n-propylamine	(1)	7.386	70	228898	11.204
31) 4-Methylphenol	(1)	7.398	108	268813	11.001
35) Hexachloroethane	(1)	7.497	117	87473	8.714
36)$Nitrobenzene-d5	(2)	7.584	82	619726	21.893
37) Nitrobenzene	(2)	7.608	77	336849	11.396
39) Isophorone	(2)	7.992	82	612505	12.113
40) 2-Nitrophenol	(2)	8.097	139	139082	13.216
41) 2,4-Dimethylphenol	(2)	8.208	107	286879	11.674
44) bis(2-Chloroethoxy)methane	(2)	8.360	93	354881	12.144
46) 2,4-Dichlorophenol	(2)	8.482	162	229438	12.663
47) 1,2,4-Trichlorobenzene	(2)	8.604	180	235111	10.725
48)*Naphthalene-d8	(2)	8.680	136	303167	5.000
49) Naphthalene	(2)	8.715	128	727715	11.847
50) 4-Chloroaniline	(2)	8.820	127	308597	11.822
53) Hexachlorobutadiene	(2)	8.937	225	123334	9.521
55) Caprolactam	(2)	9.350	113	31105	4.363
58) 4-Chloro-3-methylphenol	(2)	9.624	107	258685	12.756
61) 2-Methylnaphthalene	(2)	9.817	142	495403	11.507
63) Hexachlorocyclopentadiene	(3)	10.079	237	203992	20.412
66) 2,4,6-Trichlorophenol	(3)	10.283	196	176360	12.487
67) 2,4,5-Trichlorophenol	(3)	10.335	196	184806	13.003
68)$2-Fluorobiphenyl	(3)	10.429	172	1108498	23.865
71) 1,1'-Biphenyl	(3)	10.574	154	636243	12.002
72) 2-Chloronaphthalene	(3)	10.586	162	523290	12.311

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2013 at 08:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0254.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 06:03 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Sample Name: 310WGLCSD8 Lab Sample ID: 310WGLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
75) 2-Nitroaniline	(3)	10.767	138	165721	13.900
78) Dimethylphthalate	(3)	11.111	163	517670	11.788
80) 2,6-Dinitrotoluene	(3)	11.181	165	142411	13.625
81) Acenaphthylene	(3)	11.239	152	770497	13.743
82) 3-Nitroaniline	(3)	11.431	138	146738	13.188
83)*Acenaphthene-d10	(3)	11.466	164	189740	5.000
84) Acenaphthene	(3)	11.519	153	502855	12.169
85) 2,4-Dinitrophenol	(3)	11.594	184	115947	18.572
86) 4-Nitrophenol	(3)	11.728	109	45325	5.946
88) Dibenzofuran	(3)	11.775	168	731060	12.605
89) 2,4-Dinitrotoluene	(3)	11.787	165	190570	14.096
93) Diethylphthalate	(3)	12.148	149	538355	12.921
94) Fluorene	(3)	12.230	166	600014	12.917
96) 4-Chlorophenyl-phenylether	(3)	12.253	204	304731	12.724
98) 4-Nitroaniline	(3)	12.265	138	132529	12.069
99) 4,6-Dinitro-2-methylphenol	(4)	12.311	198	89971	10.372
101) N-Nitrosodiphenylamine	(4)	12.399	169	481122	12.897
103) 1,2-Diphenylhydrazine	(4)	12.440	77	648620	11.769
104)$2,4,6-Tribromophenol	(3)	12.521	330	247771	51.394
110) 4-Bromophenyl-phenylether	(4)	12.836	248	169430	12.969
112) Hexachlorobenzene	(4)	12.883	284	161743	12.510
114) Atrazine	(4)	13.063	200	169918	13.141
115) Pentachlorophenol	(4)	13.133	266	91865	10.034
120)*Phenanthrene-d10	(4)	13.360	188	320442	5.000
121) Phenanthrene	(4)	13.390	178	869503	12.401
122) Anthracene	(4)	13.454	178	891423	13.105
124) Carbazole	(4)	13.669	167	835419	12.868
126) Di-n-butylphthalate	(4)	14.176	149	969946	12.680
131) Fluoranthene	(4)	15.004	202	1027406	13.184
132) Benzidine	(5)	15.243	184	2142036	42.427
134)*Pyrene-d10	(5)	15.307	212	403512	5.000
133) Pyrene	(5)	15.342	202	1069441	12.691
137)$Terphenyl-d14	(5)	15.628	244	1410374	26.331
144) Butylbenzylphthalate	(5)	16.473	149	442444	12.496
148) 3,3'-Dichlorobenzidine	(5)	17.318	252	278324	9.684
147) Benzo(a)anthracene	(5)	17.324	228	992138	13.081
150) Chrysene	(5)	17.382	228	951055	12.840
151) bis(2-Ethylhexyl)phthalate	(5)	17.534	149	607996	12.847
153) Di-n-octylphthalate	(6)	18.682	149	1036665	13.087
154) Benzo(b)fluoranthene	(6)	19.160	252	945971	12.882

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/08/2013 at 08:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP18831.i/13nov08.b/hk0254.d Instrument ID: HP18831.i
Injection date and time: 08-NOV-2013 06:03 Analyst ID: jmg00346

Method used: /chem/HP18831.i/13nov08.b/8270_LVI.m Sublist used: 310WAG
Calibration date and time: 08-NOV-2013 07:56
Date, time and analyst ID of latest file update: 08-Nov-2013 07:59 jmg00346

Sample Name: 310WGLCSD8 Lab Sample ID: 310WGLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
156) Benzo(k)fluoranthene	(6)	19.212	252	947316	12.628
157) Benzo(a)pyrene	(6)	19.685	252	892811	12.970
158)*Perylene-d12	(6)	19.772	264	308714	5.000
162) Indeno(1,2,3-cd)pyrene	(6)	21.369	276	910217	13.032
163) Dibenz(a,h)anthracene	(6)	21.410	278	792430	13.287
164) Benzo(g,h,i)perylene	(6)	21.736	276	795302	13.071
168) 2,4_2,6-Dinitrotoluenes	(3)			332981	27.721

* = Compound is an internal standard.

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on 11/08/2013 at 08:04.
Target 3.5 esignature user ID: jmg00346

316WKLCS4 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 316WKLCS

Data file: /chem/HP19760.i/13nov14b.b/dk0514.d Injection date and time: **14-NOV-2013 22:42**
Data file Sample Info. Line: 316WKLCS4;316WKLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.854	(0.000)	775	152	81284	(-15)	5.00	
52) Naphthalene-d8	7.818	(0.000)	1112	136	314886	(-16)	5.00	
92) Acenaphthene-d10	10.616	(0.006)	1592	164	182196	(-17)	5.00	
130) Phenanthrene-d10	12.528	(0.006)	1920	188	288607	(-20)	5.00	
145) Pyrene-d10	14.457	(0.000)	2251	212	373991	(-19)	5.00	
172) Perylene-d12	18.893	(0.006)	3012	264	262210	(-20)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.907	(-0.003)	112	640360	26.533	53%		10 - 107
13) Phenol-d6	(1)	5.341	(-0.001)	99	694780	20.961	42%		10 - 83
36) Nitrobenzene-d5	(2)	6.705	(0.001)	82	751363	25.928	104%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.579	(0.000)	172	1078028	23.694	95%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.706	(-0.001)	330	190748	39.861	80%		22 - 150
149) Terphenyl-d14	(5)	14.772	(0.000)	244	716152	15.355	61%		47 - 146

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.195	(-0.000)	77	257966	11.125	44.50			0.3
14) Phenol	(1)	5.359	(-0.000)	94	228804	5.963	23.85			0.1
16) bis(2-Chloroethyl)ether	(1)	5.487	(-0.000)	93	373505	12.337	49.35			0.1
17) 2-Chlorophenol	(1)	5.534	(-0.000)	128	211404	8.907	35.63			0.1
18) 1,3-Dichlorobenzene	(1)	5.761	(-0.000)	146	289214	11.329	45.32			0.1
20) 1,4-Dichlorobenzene	(1)	5.877	(0.000)	146	295894	11.458	45.83			0.1
23) Benzyl alcohol	(1)	6.087	(0.000)	108	170236	10.141	40.56			1
24) 1,2-Dichlorobenzene	(1)	6.105	(-0.000)	146	279889	11.589	46.35			0.1
26) 2-Methylphenol	(1)	6.280	(-0.000)	108	228883	9.609	38.44			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.314	(0.000)	45	568790	15.136	60.55			0.1
30) Acetophenone	(1)	6.484	(0.000)	105	461730	12.397	49.59			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.513	(0.000)	70	278539	12.993	51.97			0.1
33) 4-Methylphenol	(1)	6.524	(0.000)	108	232132	8.723	34.89			0.1
35) Hexachloroethane	(1)	6.618	(0.000)	117	124122	11.372	45.49			0.3
37) Nitrobenzene	(2)	6.734	(-0.000)	77	428209	13.922	55.69			0.1
40) Isophorone	(2)	7.125	(-0.000)	82	721278	13.759	55.04			0.1
42) 2-Nitrophenol	(2)	7.230	(-0.000)	139	113655	10.769	43.08			0.1
45) 2,4-Dimethylphenol	(2)	7.346	(-0.000)	107	288711	11.258	45.03			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.504	(-0.000)	93	414916	12.128	48.51			0.1
49) 2,4-Dichlorophenol	(2)	7.614	(-0.000)	162	170644	9.433	37.73			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.743	(-0.000)	180	251183	12.429	49.72			0.1
53) Naphthalene	(2)	7.848	(0.000)	128	803959	11.975	47.90			0.03
55) 4-Chloroaniline	(2)	7.964	(0.000)	127	301892	10.853	43.41			0.1
58) Hexachlorobutadiene	(2)	8.081	(-0.000)	225	134110	11.384	45.54			0.1
61) Caprolactam	(2)	8.489	(0.003)	113	28781	3.566	14.26			1
63) 4-Chloro-3-methylphenol	(2)	8.774	(0.000)	107	223496	10.289	41.16			0.1
65) 2-Methylnaphthalene	(2)	8.961	(0.000)	142	516225	11.538	46.15			0.03

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Data file: /chem/HP19760.i/13nov14b.b/dk0514.d Injection date and time: **14-NOV-2013 22:42**
Data file Sample Info. Line: 316WKLCS4;316WKLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.229(-0.000)	237	218959	21.971	87.88			1
70) 2,4,6-Trichlorophenol	(3)	9.427(0.000)	196	125760	9.439	37.76			0.1
71) 2,4,5-Trichlorophenol	(3)	9.480(0.000)	196	134150	9.745	38.98			0.1
75) 1,1'-Biphenyl	(3)	9.724(0.000)	154	622154	11.759	47.04			0.1
76) 2-Chloronaphthalene	(3)	9.730(0.000)	162	509002	12.541	50.17			0.1
83) 2-Nitroaniline	(3)	9.917(0.000)	138	168672	13.343	53.37			0.1
86) Dimethylphthalate	(3)	10.260(0.000)	163	549507	11.972	47.89			0.5
88) 2,6-Dinitrotoluene	(3)	10.336(-0.000)	165	140713	13.834	55.34			0.1
90) Acenaphthylene	(3)	10.383(0.000)	152	807429	13.106	52.42			0.03
91) 3-Nitroaniline	(3)	10.581(-0.000)	138	136499	11.691	46.76			0.1
93) Acenaphthene	(3)	10.668(-0.000)	153	505379	11.924	47.70			0.03
94) 2,4-Dinitrophenol	(3)	10.756(-0.000)	184	93788	16.953	67.81			3
96) 4-Nitrophenol	(3)	10.890(-0.000)	109	43238	5.807	23.23			3
97) Dibenzofuran	(3)	10.937(-0.000)	168	693852	11.512	46.05			0.1
98) 2,4-Dinitrotoluene	(3)	10.960(-0.000)	165	181625	13.934	55.74			0.3
102) Diethylphthalate	(3)	11.333(-0.000)	149	536774	11.870	47.48			0.5
103) Fluorene	(3)	11.409(-0.000)	166	570568	11.761	47.04			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.438(-0.000)	204	275543	11.453	45.81			0.1
107) 4-Nitroaniline	(3)	11.450(-0.000)	138	127156	10.588	42.35			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.496(0.000)	198	71266	10.069	40.27			1
109) N-Nitrosodiphenylamine	(4)	11.590(-0.000)	169	452423	12.593	50.37			0.1
120) 4-Bromophenyl-phenylether	(4)	12.015(0.000)	248	143709	12.619	50.48			0.1
122) Hexachlorobenzene	(4)	12.062(0.000)	284	137795	12.238	48.95			0.03
124) Atrazine	(4)	12.248(0.000)	200	160507	13.722	54.89			0.5
125) Pentachlorophenol	(4)	12.306(0.000)	266	59572	7.277	29.11			0.3
131) Phenanthrene	(4)	12.557(0.000)	178	786734	12.222	48.89			0.03
134) Anthracene	(4)	12.621(-0.000)	178	803462	12.519	50.08			0.03
135) Carbazole	(4)	12.843(-0.000)	167	796586	12.825	51.30			0.1
137) Di-n-butylphthalate	(4)	13.350(-0.000)	149	951233	12.931	51.72			0.5
142) Fluoranthene	(4)	14.154(-0.000)	202	947077	13.080	52.32			0.03
146) Pyrene	(5)	14.486(0.000)	202	984731	12.402	49.61			0.03
153) Butylbenzylphthalate	(5)	15.617(0.000)	149	440002	13.020	52.08			0.5
158) Benzo(a)anthracene	(5)	16.456(0.000)	228	834737	12.390	49.56			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.456(0.000)	252	222479	9.143	36.57			0.5
161) Chrysene	(5)	16.515(0.000)	228	830504	12.535	50.14			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.684(0.000)	149	567250	12.761	51.04			0.5
166) Di-n-octylphthalate	(6)	17.832(0.000)	149	965239	12.528	50.11			0.5
168) Benzo(b)fluoranthene	(6)	18.287(0.000)	252	764292	12.374	49.50			0.03
170) Benzo(k)fluoranthene	(6)	18.339(0.000)	252	843379	13.539	54.15			0.03
171) Benzo(a)pyrene	(6)	18.805(0.000)	252	738379	13.024	52.09			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.490(-0.000)	276	691208	13.899	55.60			0.03
177) Dibenz(a,h)anthracene	(6)	20.531(-0.000)	278	603907	14.340	57.36			0.03
178) Benzo(g,h,i)perylene	(6)	20.845(-0.000)	276	607519	14.493	57.97			0.03

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov14b.b/dk0514.d Injection date and time: **14-NOV-2013 22:42**
Data file Sample Info. Line: 316WKLCS4;316WKLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13316WAK**
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov14b.b/dk0513.d**

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: **316WAK**
Calibration date and time (Last Method Edit): 14-NOV-2013 22:50
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov14b.b/dk0512.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 70

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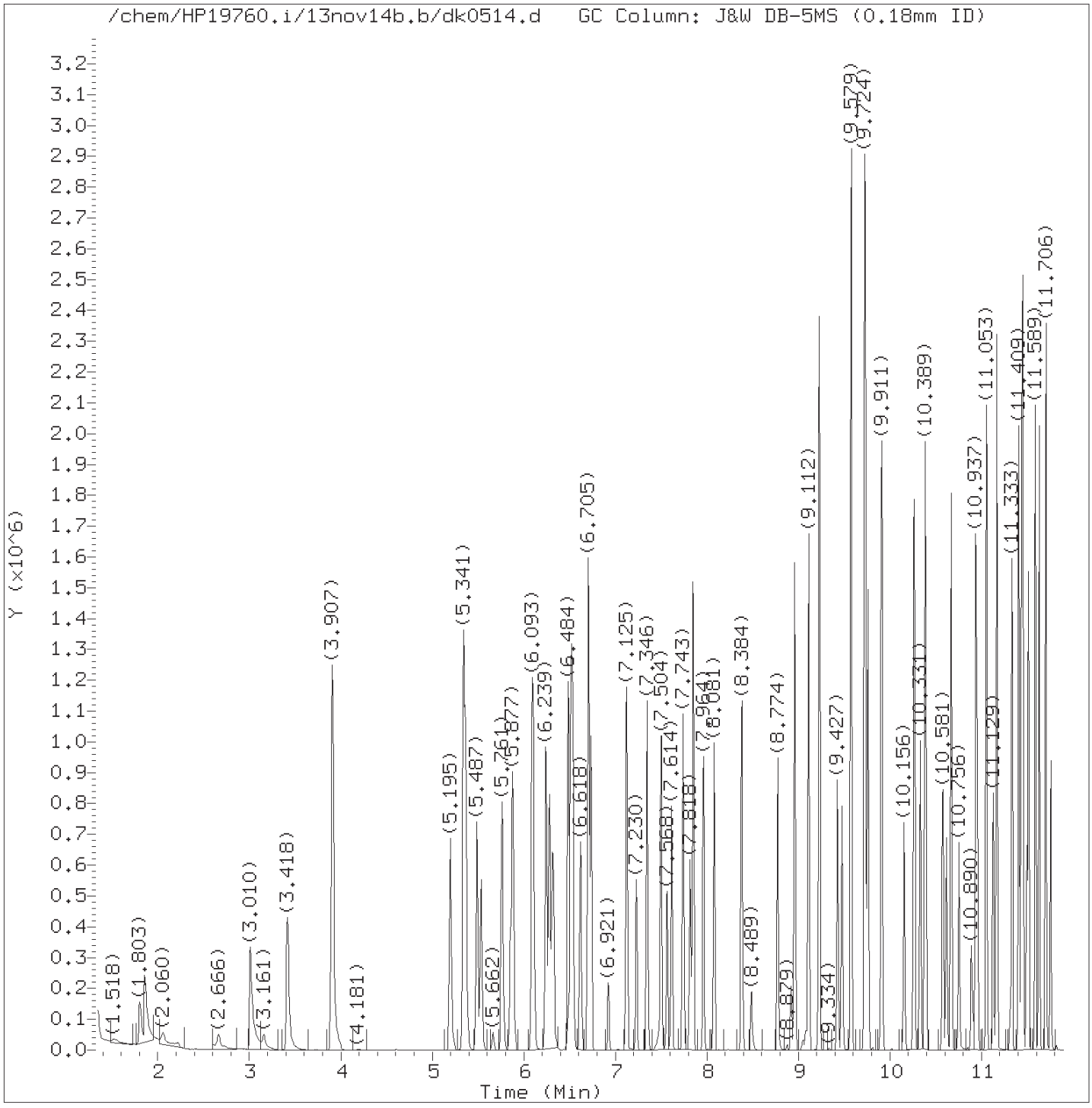
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/22/2013 at 11:48. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0514.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:42 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Sample Name: 316WKLCS4 Lab Sample ID: 316WKLCS

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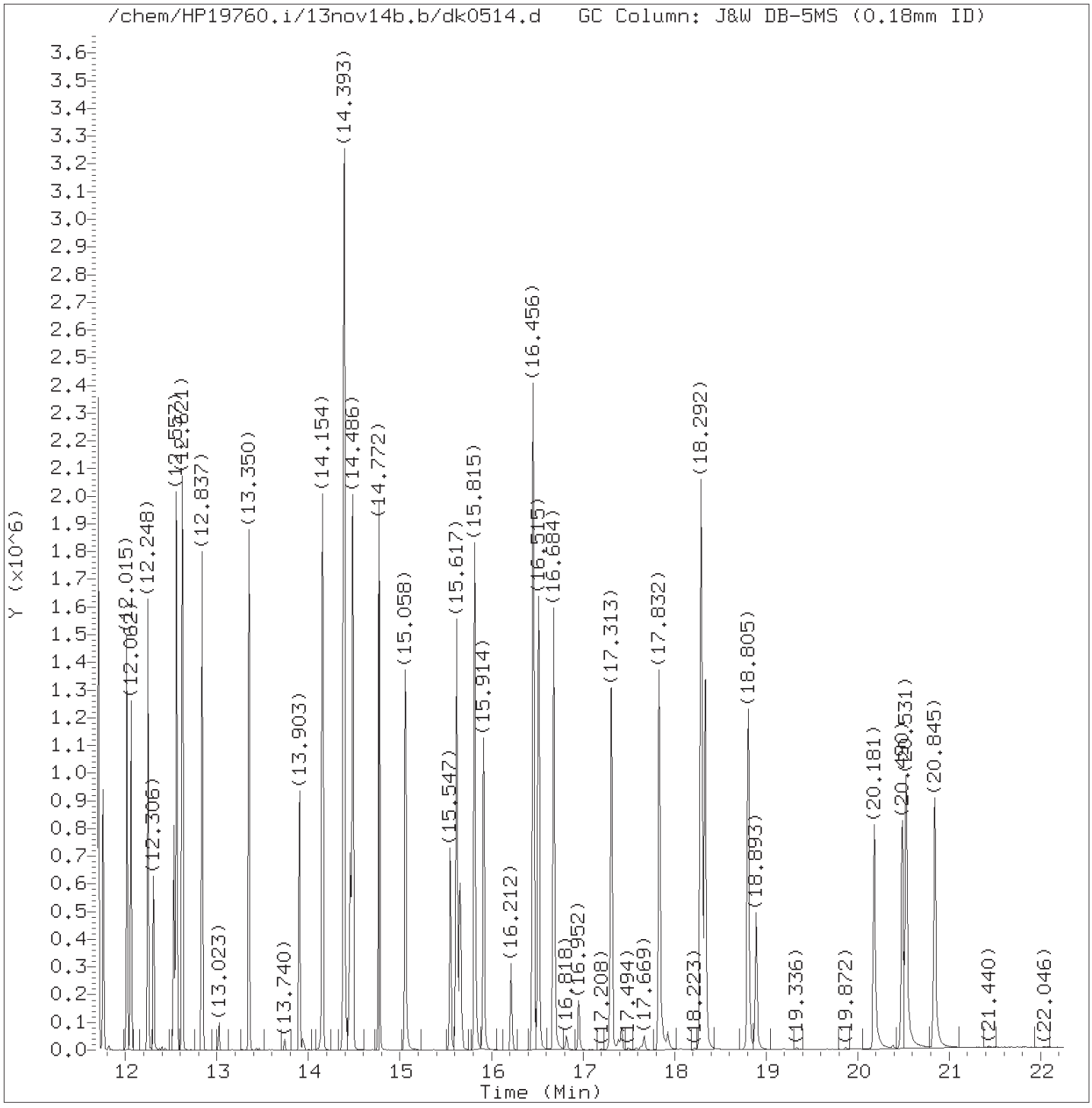
on 11/15/2013 at 09:42.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0514.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:42 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Sample Name: 316WKLCS4 Lab Sample ID: 316WKLCS

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on 11/15/2013 at 09:42.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0514.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:42 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Sample Name: 316WKLCS4 Lab Sample ID: 316WKLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.907	112	640360	26.533
11) Benzaldehyde	(1)	5.195	77	257966	11.125
13)$Phenol-d6	(1)	5.341	99	694780	20.961
14) Phenol	(1)	5.359	94	228804	5.963
16) bis(2-Chloroethyl)ether	(1)	5.487	93	373505	12.337
17) 2-Chlorophenol	(1)	5.534	128	211404	8.907
18) 1,3-Dichlorobenzene	(1)	5.761	146	289214	11.329
19)*1,4-Dichlorobenzene-d4	(1)	5.854	152	81284	5.000
20) 1,4-Dichlorobenzene	(1)	5.877	146	295894	11.458
23) Benzyl alcohol	(1)	6.087	108	170236	10.141
24) 1,2-Dichlorobenzene	(1)	6.105	146	279889	11.589
26) 2-Methylphenol	(1)	6.280	108	228883	9.609
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.315	45	568790	15.136
30) Acetophenone	(1)	6.484	105	461730	12.397
31) N-Nitroso-di-n-propylamine	(1)	6.513	70	278539	12.993
33) 4-Methylphenol	(1)	6.524	108	232132	8.723
35) Hexachloroethane	(1)	6.618	117	124122	11.372
36)$Nitrobenzene-d5	(2)	6.705	82	751363	25.928
37) Nitrobenzene	(2)	6.734	77	428209	13.922
40) Isophorone	(2)	7.125	82	721278	13.759
42) 2-Nitrophenol	(2)	7.230	139	113655	10.769
45) 2,4-Dimethylphenol	(2)	7.346	107	288711	11.258
48) bis(2-Chloroethoxy)methane	(2)	7.504	93	414916	12.128
49) 2,4-Dichlorophenol	(2)	7.614	162	170644	9.433
51) 1,2,4-Trichlorobenzene	(2)	7.743	180	251183	12.429
52)*Naphthalene-d8	(2)	7.818	136	314886	5.000
53) Naphthalene	(2)	7.848	128	803959	11.975
55) 4-Chloroaniline	(2)	7.964	127	301892	10.853
58) Hexachlorobutadiene	(2)	8.081	225	134110	11.384
61) Caprolactam	(2)	8.489	113	28781	3.566
63) 4-Chloro-3-methylphenol	(2)	8.774	107	223496	10.289
65) 2-Methylnaphthalene	(2)	8.961	142	516225	11.538
67) Hexachlorocyclopentadiene	(3)	9.229	237	218959	21.971
70) 2,4,6-Trichlorophenol	(3)	9.427	196	125760	9.439
71) 2,4,5-Trichlorophenol	(3)	9.480	196	134150	9.745
72)$2-Fluorobiphenyl	(3)	9.579	172	1078028	23.694
75) 1,1'-Biphenyl	(3)	9.724	154	622154	11.759
76) 2-Chloronaphthalene	(3)	9.730	162	509002	12.541
83) 2-Nitroaniline	(3)	9.917	138	168672	13.343
86) Dimethylphthalate	(3)	10.261	163	549507	11.972

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/15/2013 at 09:42.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0514.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:42 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Sample Name: 316WKLCS4 Lab Sample ID: 316WKLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
88) 2,6-Dinitrotoluene	(3)	10.336	165	140713	13.834
90) Acenaphthylene	(3)	10.383	152	807429	13.106
91) 3-Nitroaniline	(3)	10.581	138	136499	11.691
92)*Acenaphthene-d10	(3)	10.616	164	182196	5.000
93) Acenaphthene	(3)	10.669	153	505379	11.924
94) 2,4-Dinitrophenol	(3)	10.756	184	93788	16.953
96) 4-Nitrophenol	(3)	10.890	109	43238	5.807
97) Dibenzofuran	(3)	10.937	168	693852	11.512
98) 2,4-Dinitrotoluene	(3)	10.960	165	181625	13.934
102) Diethylphthalate	(3)	11.333	149	536774	11.870
103) Fluorene	(3)	11.409	166	570568	11.761
105) 4-Chlorophenyl-phenylether	(3)	11.438	204	275543	11.453
107) 4-Nitroaniline	(3)	11.450	138	127156	10.588
108) 4,6-Dinitro-2-methylphenol	(4)	11.496	198	71266	10.069
109) N-Nitrosodiphenylamine	(4)	11.589	169	452423	12.593
112)$2,4,6-Tribromophenol	(3)	11.706	330	190748	39.861
120) 4-Bromophenyl-phenylether	(4)	12.015	248	143709	12.619
122) Hexachlorobenzene	(4)	12.062	284	137795	12.238
124) Atrazine	(4)	12.248	200	160507	13.722
125) Pentachlorophenol	(4)	12.306	266	59572	7.277
130)*Phenanthrene-d10	(4)	12.528	188	288607	5.000
131) Phenanthrene	(4)	12.557	178	786734	12.222
134) Anthracene	(4)	12.621	178	803462	12.519
135) Carbazole	(4)	12.843	167	796586	12.825
137) Di-n-butylphthalate	(4)	13.350	149	951233	12.931
142) Fluoranthene	(4)	14.154	202	947077	13.080
145)*Pyrene-d10	(5)	14.457	212	373991	5.000
146) Pyrene	(5)	14.486	202	984731	12.402
149)$Terphenyl-d14	(5)	14.772	244	716152	15.355
153) Butylbenzylphthalate	(5)	15.617	149	440002	13.020
159) 3,3'-Dichlorobenzidine	(5)	16.456	252	222479	9.143
158) Benzo(a)anthracene	(5)	16.456	228	834737	12.390
161) Chrysene	(5)	16.515	228	830504	12.535
162) bis(2-Ethylhexyl)phthalate	(5)	16.684	149	567250	12.761
166) Di-n-octylphthalate	(6)	17.832	149	965239	12.528
168) Benzo(b)fluoranthene	(6)	18.287	252	764292	12.374
170) Benzo(k)fluoranthene	(6)	18.339	252	843379	13.539
171) Benzo(a)pyrene	(6)	18.805	252	738379	13.024
172)*Perylene-d12	(6)	18.893	264	262210	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.490	276	691208	13.899

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/15/2013 at 09:42.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov14b.b/dk0514.d Instrument ID: HP19760.i
Injection date and time: 14-NOV-2013 22:42 Analyst ID: ceb05247

Method used: /chem/HP19760.i/13nov14b.b/8270_LVI.m Sublist used: 316WAK
Calibration date and time: 14-NOV-2013 22:50
Date, time and analyst ID of latest file update: 15-Nov-2013 09:33 ceb05247

Sample Name: 316WKLCS4 Lab Sample ID: 316WKLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
177) Dibenz(a,h)anthracene	(6)	20.531	278	603907	14.340
178) Benzo(g,h,i)perylene	(6)	20.845	276	607519	14.493

Digitally signed by Catherine E. Bachman
on 11/15/2013 at 09:42.
Target 3.5 esignature user ID: ceb05247

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 2991 William Saadeh Reviewed by: [illegible] 11-13-13 Start Date: 11-7-13 Start time: 10:00

13310SLF026

Tech 1: DS 2894 Tech 2: WHS 2991

Dept: 26	Prep Analysis: 10814 BNA Soil Microwave PAH								PAH 8270 (microwave)		
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7262294MSD	GAAV1MSD	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	34A	Rocky brown soil
7262294MS	GAAV1MS	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	34A	↓ ↓
BLANKA	SBLKLF310	30.0	~~SS1330326A~~	1.0			1	Z	Z	Z	Narsorn
LCSA	310LFLCS	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	Z	↓ ↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185103113B
Methylene Chloride	60309
Sodium Sulfate	13309A

~~S~~ Surrogate # changed to SS1330826A WHS 2991 11/7/13

Spike Solutions: Witness: N/A
MS1330526A LCS SPIKE MIX
~~SS1330326A~~ BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7262294	GAAV1	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
2	7262296	GAAV2	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Brown clay-like soil	10724	7600	11/13/2013	P
3	7262298	GAAV3	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
4	7262300	GAAV4	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Brown clay	10724	7600	11/13/2013	P
5	7262302	GAAV5	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
6	7262304	GAAV6	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
7	7262306	GAAV7	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
8	7262308	GAAV8	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
9	7263054	PHERC	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black Sludge	10724	4677	11/14/2013	N
10	7263055	OHERC	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ ↓	10724	4677	11/14/2013	N
11	7265225	R2041	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Brown wet sludge/foul odor	10724	4677	11/15/2013	N
12	7265226	R2042	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ ↓	10724	4677	11/15/2013	N
13	7265227	R2043	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black dry sludge	10724	4677	11/15/2013	N
14	7265234	R2E16	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black gritty sludge	10724	4677	11/15/2013	N
15	7265241	2F142	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Brown wet sludge	10724	4677	11/15/2013	N
16	7265242	R2121	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ /foul odor	10724	4677	11/15/2013	N
17	7265244	R2123	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓	10724	4677	11/15/2013	N
18	7265245	2D141	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A		10724	4677	11/15/2013	N
19	7265246	DUPX1	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A		10724	4677	11/15/2013	N

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Rack ID:		Work Station	Micro
Internal Standard	LB95318	Balance #	17609

S-bath ID 3 87°C S-bath ID — C N-Evap — C M-vap — C 13310SLF026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 5079 Anna Stager

Reviewed by: JMc 11-8-13 Start Date: 11/7/13 Start time: 9:20

13310WAG026

Tech 1: AES 5079 Tech 2:

Dept: 26	Prep Analysis: 00813 BNA Water Extraction					TCL SW846 Semivolatiles/Waters					
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWG310	250	SS1330426A	1			1	✓	✓	–	top H2O
LCSA	310WGLCS	250	SS1330426A	1	~~MS1329726A~~ ③	1	1	✓	✓	–	↓
LCSDA	310WGLCSD	250	SS1330426A	1	~~MS1329726A~~ ③	1	1	✓	✓	–	↓

③ Spike code changed to MS1330826A. AES 5079 11/7/13

Solvent Used	Lot No.
10N NaOH	121122
Methylene Chloride	60309
Sodium Sulfate	133054
Sulfuric Acid	132553

Spike Solutions: Witness: N/A

~~MS1329726A~~ ③ MINI SEP. LCS SPIKE

SS1330426A MINI SEP. BNA SURROGATE

Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1	7252510 R	1560T	244	SS1330426A	1	1	✓	✓	153C	yellow tint	04678	④ 12107	11/06/2013	S
2	7259172 R	3-304	248	SS1330426A	1	1	✓	✓	153B	clear	04678	⑤ 12119	11/11/2013	P
3	7263022	PAB3S	238	SS1330426A	1	1	✓	✓	153A	cloudy yellow color	04678	12868	11/14/2013	N
4	7263023	PAB3I	238	SS1330426A	1	1	✓	✓	153A	↓	04678	12868	11/14/2013	N
5	7263024	PAB3D	238	SS1330426A	1	1	✓	✓	153A	↓	04678	12868	11/14/2013	N
6	7263025	PAB4S	238	SS1330426A	1	1	✓	✓	153A	↓	04678	12868	11/14/2013	N
7	7263026	PAB4I	214	SS1330426A	1	1	✓	✓	153A	↓	04678	12868	11/14/2013	N
8	7263027	PAB4D	223	SS1330426A	1	1	✓	✓	153A	cloudy brown color	04678	12868	11/14/2013	N
9	7263028	PABEB	238	SS1330426A	1	1	✓	✓	153A	clear	04678	12868	11/14/2013	N
10	7263051	FFHEC	244	SS1330426A	1	1	✓	✓	153A	yellow tint	04678	⑥ 2272	11/14/2013	N
11	7263056	DDHER	249	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	N
12	7263057	EEHER	244	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	N
13	7263058	F1HER	245	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	N
14	7263060	FB2HE	240	SS1330426A	1	1	✓	✓	153A	clear	04678	2272	11/14/2013	N
15	7263075	F1112	212	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	N
16	7263092	114C4	219	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	P
17	7263093	115B8	219	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	P
18	7263094	F1141	221	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/14/2013	P
19	7265270	1029E	245	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/15/2013	N

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Rack ID:		Work Station	H205
Internal Standard	IS1030105	Balance #	7

S-bath ID	88° C	S-bath ID	C	N-Evap	C	M-vap	C	13310WAG026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2133 Roman Kuropatkin Reviewed by: CM/1237 Start Date: 11/11/13 Start time: 0615

13313SLC026

Tech 1: RK2133 Tech 2:

Dept: 26 Prep Analysis: 10809 BNA Soil Microwave TCL 8270 (microwave)

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7263083MS	004G3	30.1	SS1330826A	1.0	MS1330526A	1.0	1.0	Z	Z	34A	clay-like soil
7263084MSD	004G3	30.3	SS1330826A	"	MS1330526A	"	1.0	Z	Z	34A	"
BLANKA	SBLKLC313	30	SS1330826A	"	———	———	1.0	Z	Z	—	Na_2SO_4
LCSA	313LCLCS	30	SS1330826A	"	MS1330526A	1.0	1.0	Z	Z	—	"

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185103113B
Methylene Chloride	60310
Sodium Sulfate	13311A/13274A/13296A/13312A

Spike Solutions: Witness:
MS1330526A LCS SPIKE MIX
SS1330826A BNA SURROGATE STANDARD

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7263052	WHERC	30.4	SS1330826A	1.0	1.0	Z	Z	20A	wet soil	10727	1847	11/14/2013	N
2	7263053	XHERC	30.2	SS1330826A	"	1.0	Z	Z	20A	"	10727	1847	11/14/2013	N
3	7263076	002B1	30.3	SS1330826A	"	1.0	Z	Z	34A	clumpy red soil	10727	1847	11/14/2013	N
4	7263077	002H1	30.5	SS1330826A	"	1.0	Z	Z	34A	clay-like soil	10727	1847	11/14/2013	N
5	7263078	003B3	30.2	SS1330826A	"	1.0	Z	Z	34A	clumpy red soil	10727	1847	11/14/2013	N
6	7263079	003H1	30.3	SS1330826A	"	1.0	Z	Z	34A	clay-like soil	10727	1847	11/14/2013	N
7	7263080	004C3	30.10	SS1330826A	"	1.0	Z	Z	34A	clumpy red/brown soil	10727	1847	11/14/2013	N
8	7263081	D1112	30.4	SS1330826A	"	1.0	Z	Z	34A	"	10727	1847	11/14/2013	N
9	7263082BKG	004G3	30.5	SS1330826A	"	1.0	Z	Z	34A	clay-like soil	10727	1847	11/14/2013	N
10	7263086	005B3	30.4	SS1330826A	"	1.0	Z	Z	34A	clumpy red soil	10727	1847	11/14/2013	N
11	7263087	005G3	30.4	SS1330826A	"	1.0	Z	Z	34A	clay-like soil	10727	1847	11/14/2013	N
12	7267406	194AS	30.1	SS1330826A	"	1.0	Z	Z	20A	clumpy brown soil	10727	6381	11/14/2013	S
13	7267408	195AS	30.1	SS1330826A	"	1.0	Z	Z	20A	moist, sludgy soil	10727	6381	11/14/2013	S
14	7267410	196AS	30.3	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
15	7267412	197AS	30.3	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
16	7267414	198AS	30.2	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
17	7267416	199AS	30.0	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
18	7267418	200AS	30.1	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
19	7267420	201AS	30.1	SS1330826A	"	1.0	Z	Z	20A		10727	6381	11/14/2013	S
20	7267423	203AS	30.3	SS1330826A	"	1.0	Z	Z	20A	brown soil	10727	6381	11/14/2013	S

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NA RK2133 11/11/13

Rack ID:		Work Station	16866
Internal Standard	LB99318	Balance #	17609

S-bath ID6	98 C	S-bath ID	C	N-Evap	C	M-vap	C	13313SLC026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 5079 Anna Stager Reviewed by: CBS 11/14/13 Start Date: 11/13/13 Start time: 9:45

13316WAK026

Tech 1: AES 5079 Tech 2:

Dept: 26 Prep Analysis: 00813 BNA Water Extraction TCL SW846 Semivolatiles/Waters

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
7270421MS	OB-1R	246	~~SS1330426A~~ ⑧	1	MS1330826A	1	1	√	√	153A	Orange tint
7270422MSD	OB-1R	245	~~SS1330426A~~ ⑧	1	MS1330826A	1	1	√	√	153A	↓
BLANKA	SBLKWK316	250	~~SS1330426A~~ ⑧	1	—	—	1	√	√	—	tap H2O
LCSA	316WKLCS	250	~~SS1330426A~~ ⑧	1	MS1330826A	1	1	√	√	—	↓

⑧ Surrogate code changed to SS1331226B. AES5079 11/13/13

Solvent Used	Lot No.
10N NaOH	121122
Methylene Chloride	60306
Sodium Sulfate	13312A
Sulfuric Acid	132553

Spike Solutions: Witness: N/A
MS1330826A MINI SEP. LCS SPIKE
~~SS1330426A~~ ⑧ MINI SEP. BNA SURROGATE

	Sample #		Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1	7263058	R	F1HER	247	~~SS1330426A~~ ⑧	1	1	√	√	153B	yellow tint	04678	2272	11/14/2013	N
2	7263093	R	115B8	226	~~SS1330426A~~ ⑧	1	1	√	√	153B	clear	04678	2272	11/14/2013	P
3	7263094	R	F1141	226	~~SS1330426A~~ ⑧	1	1	√	√	153B	↓	04678	2272	11/14/2013	P
4	7267302		4-9R-	205	~~SS1330426A~~ ⑧	1	1	√	√	153C	cloudy brown color	04678	4233	11/19/2013	N
5	7267303		4-10R	211	~~SS1330426A~~ ⑧	1	1	√	√	153C	cloudy yellow color	04678	4233	11/19/2013	N
6	7268209		T-1--	242	~~SS1330426A~~ ⑧	1	1	√	√	153A	clear	04678	12780	11/19/2013	S
7	7268211		-INT-	237	~~SS1330426A~~ ⑧	1	1	√	√	153A	↓	04678	12780	11/19/2013	S
8	7268551		3881X	208	~~SS1330426A~~ ⑧	1	1	√	√	153A	cloudy brown color	04678	2272	11/19/2013	N
9	7268554		3871X	202	~~SS1330426A~~ ⑧	1	1	√	√	153A	cloudy dark purple color	04678	2272	11/19/2013	N
10	7268555		F1178	222	~~SS1330426A~~ ⑧	1	1	√	√	153A	clear	04678	2272	11/19/2013	N
11	7268560		3861X	205	~~SS1330426A~~ ⑧	1	1	√	√	153A	cloudy brown color	04678	2272	11/19/2013	N
12	7268620		322A9	225	~~SS1330426A~~ ⑧	1	1	√	√	153A	↓	04678	2272	11/19/2013	P
13	7268621		F1171	233	~~SS1330426A~~ ⑧	1	1	√	√	153A	clear	04678	2272	11/19/2013	P
14	7269118		SW723	219	~~SS1330426A~~ ⑧	1	1	√	√	153B	yellow tint	04678	4233	11/20/2013	N
15	7270419		EW-1R	245	~~SS1330426A~~ ⑧	1	1	√	√	153A	orange tint	04678	1013	11/19/2013	P
16	7270420BKG		OB-1R	247	~~SS1330426A~~ ⑧	1	1	√	√	153A	↓	04678	1013	11/19/2013	P
17	7270424		OBD1R	246	~~SS1330426A~~ ⑧	1	1	√	√	153A	↓	04678	1013	11/19/2013	P
18	7270839		FD738	208	~~SS1330426A~~ ⑧	1	1	√	√	153C	cloudy no color	04678	4233	11/21/2013	N
19	7270841		FD739	220	~~SS1330426A~~ ⑧	1	1	√	√	153C	cloudy yellow color	04678	4233	11/21/2013	N

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Rack ID:		Work Station	H2O 5
Internal Standard	ISTD3103	Balance #	7

S-bath ID 11	88 °C	S-bath ID — C	N-Evap — C	M-vap — C	13316WAK026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Explosives Data

Case Narrative/Conformance Summary

Explosives

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Pesticide Residue Analysis

Fraction: Explosives

Nitroaromatics/Amines in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7263051	SW-R2-L-5-2	X		1	
7263052	SD-R2-L-5-01D		X	1	
7263053	SD-R2-L-5-02		X	1	
7263054	SD-R2-K-5-2		X	1	
7263055	SD-R2-K-5-1		X	1	
7263056	SW-R2-M-5-1	X		1	
7263057	SW-R2-M-5-2	X		1	
7263058	DUP-01	X		1	Field Duplicate Sample
7263059	FB-01_11042013	X		1	Field Blank
7263060	FB-02_11042013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 7263052-7263055: Analysis: 06918)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Pesticide Residue Analysis

Fraction: Explosives

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Explosives

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Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Ashland, Inc.
SDG: KVM03

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
Nitroaromatics/Amines in Solid	133110004A	PBLK04311	11/12/2013 20:59:00
		LCS04311	11/13/2013 12:01:00
		7263052	11/13/2013 12:44:00
		7263052 MS	11/13/2013 13:26:00
		7263052 MSD	11/13/2013 14:08:00
		7263053	11/13/2013 14:51:00
		7263054	11/13/2013 15:33:00
		7263055	11/13/2013 16:16:00
Nitroaromatics/Amines in Water	133110017A	PBLK17311	11/18/2013 23:25:00
		LCS17311	11/19/2013 00:07:00
		7263051	11/19/2013 00:50:00
		7263056	11/19/2013 01:32:00
		7263057	11/19/2013 02:14:00
		7263058	11/19/2013 02:57:00
		7263059	11/19/2013 03:39:00
		7263060	11/19/2013 04:22:00

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM03
Matrix: LIQUID

Fraction: Explosives

133110017A / PBLK17311 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/18/13	N.D.	ug/l	5.2	15
PETN	11/18/13	N.D.	ug/l	6.0	18
HMX	11/18/13	N.D.	ug/l	0.65	2.0
RDX	11/18/13	N.D.	ug/l	0.20	0.50
1,3,5-Trinitrobenzene	11/18/13	N.D.	ug/l	0.20	0.60
1,2-Dinitrobenzene	11/18/13	N.D.	ug/l	0.20	0.60
1,3-Dinitrobenzene	11/18/13	N.D.	ug/l	0.20	0.60
Tetryl	11/18/13	N.D.	ug/l	0.40	0.60
Nitrobenzene	11/18/13	N.D.	ug/l	0.20	0.60
2,4,6-Trinitrotoluene	11/18/13	N.D.	ug/l	0.20	0.60
4-Amino-2,6-Dinitrotoluene	11/18/13	N.D.	ug/l	0.30	0.60
1,4-Dinitrobenzene	11/18/13	N.D.	ug/l	0.30	0.60
2-Amino-4,6-Dinitrotoluene	11/18/13	N.D.	ug/l	0.20	0.60
2,4-Dinitrotoluene	11/18/13	N.D.	ug/l	0.72	2.0
2,6-Dinitrotoluene	11/18/13	N.D.	ug/l	0.45	1.3
2-Nitrotoluene	11/18/13	N.D.	ug/l	0.25	0.75
3-Nitrotoluene	11/18/13	N.D.	ug/l	0.40	1.2
4-Nitrotoluene	11/18/13	N.D.	ug/l	0.60	1.2
1-Nitronaphthalene	11/18/13	N.D.	ug/l	0.20	0.60

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM03
Matrix: SOLID

Fraction: Explosives

133110004A / PBLK04311 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/12/13	N.D.	mg/kg	2.0	6.0
PETN	11/12/13	N.D.	mg/kg	2.0	6.0
HMX	11/12/13	N.D.	mg/kg	0.25	0.75
RDX	11/12/13	N.D.	mg/kg	0.13	0.30
1,3,5-Trinitrobenzene	11/12/13	N.D.	mg/kg	0.10	0.30
1,4-Dinitrobenzene	11/12/13	N.D.	mg/kg	0.10	0.30
1,2-Dinitrobenzene	11/12/13	N.D.	mg/kg	0.10	0.30
1,3-Dinitrobenzene	11/12/13	N.D.	mg/kg	0.10	0.30
Tetryl	11/12/13	N.D.	mg/kg	0.15	0.30
Nitrobenzene	11/12/13	N.D.	mg/kg	0.10	0.30
2,4,6-Trinitrotoluene	11/12/13	N.D.	mg/kg	0.10	0.30
4-Amino-2,6-Dinitrotoluene	11/12/13	N.D.	mg/kg	0.15	0.30
2-Amino-4,6-Dinitrotoluene	11/12/13	N.D.	mg/kg	0.10	0.30
2,4-Dinitrotoluene	11/12/13	N.D.	mg/kg	0.10	0.30
2,6-Dinitrotoluene	11/12/13	N.D.	mg/kg	0.10	0.30
2-Nitrotoluene	11/12/13	N.D.	mg/kg	0.20	0.30
3-Nitrotoluene	11/12/13	N.D.	mg/kg	0.25	0.30
4-Nitrotoluene	11/12/13	N.D.	mg/kg	0.20	0.30
1-Nitronaphthalene	11/12/13	N.D.	mg/kg	0.10	0.30

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM03
Matrix: LIQUID

Fraction: Explosives

133110017A	2-Nitro-m-xylene	
	Spike Added	10 ug/l
Sample	% Recovery	Limits
PBLK17311	98	73 - 122
LCS17311	92	73 - 122
7263051	98	73 - 122
7263056	90	73 - 122
7263057	84	73 - 122
7263058	85	73 - 122
7263059	96	73 - 122
7263060	85	73 - 122

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM03
Matrix: SOLID

Fraction: Explosives

133110004A	2-Nitro-m-xylene	
	Spike Added	5000 ug/kg
Sample	**% Recovery**	**Limits**
PBLK04311	106	63 - 150
LCS04311	111	63 - 150
7263052	101	63 - 150
7263053	111	63 - 150
7263054	100	63 - 150
7263055	107	63 - 150

Pesticide Residue Analysis

Fraction: Explosives

UNSPK: 7263052 MS: 7263052 MSD: 7263052 **Analyte**	Batch: **133110004A** (Sample number(s): 7263052-7263055)								
	Spike Added ug/kg	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	10113.33	34708.44	33840.71	123 *	119 *	73-116	3	50
PETN	20000	N.D.	18128.	18899.17	91	94	71-133	4	50
HMX	3936.25	N.D.	3431.96	3556.73	87	90	72-107	4	50
RDX	5000	N.D.	4982.67	5146.97	100	103	75-108	3	50
1,3,5-Trinitrobenzene	5020	N.D.	4851.93	5006.54	97	100	58-135	3	50
1,4-Dinitrobenzene	10000	N.D.	9348.15	9868.75	93	99	82-117	5	50
1,2-Dinitrobenzene	10000	N.D.	11108.75	11619.38	111	116	80-120	4	50
1,3-Dinitrobenzene	5000	N.D.	5278.11	5390.22	106	108	89-119	2	50
Tetryl	5000	N.D.	4574.54	5298.97	91	106	58-125	15	50
Nitrobenzene	5000	N.D.	5093.21	5244.64	102	105	86-108	3	50
2,4,6-Trinitrotoluene	5000	N.D.	5128.69	5352.1	103	107	92-114	4	50
4-Amino-2,6-Dinitrotoluene	5000	N.D.	4859.94	5037.24	97	101	85-118	4	50
2-Amino-4,6-Dinitrotoluene	5000	N.D.	4806.75	5031.3	96	101	69-113	5	50
2,4-Dinitrotoluene	5000	N.D.	5131.28	5385.46	103	108	81-111	5	50
2,6-Dinitrotoluene	5000	N.D.	4758.87	4579.2	95	92	86-114	4	50
2-Nitrotoluene	5000	N.D.	4601.59	4782.61	92	96	79-112	4	50
3-Nitrotoluene	5000	N.D.	5422.31	5936.39	108	119	72-119	9	50
4-Nitrotoluene	5000	N.D.	4840.52	4978.36	97	100	90-118	3	50
1-Nitronaphthalene	10000	N.D.	11422.25	11828.2	114	118	89-131	3	50

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM03
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Explosives

LCS: LCS17311	Batch: **133110017A** (Sample number(s): 7263051, 7263056-7263060)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	240	211.29	NA	88	NA	73-116	NA	NA
PETN	240	233.14	NA	97	NA	73-126	NA	NA
HMX	10	7.93	NA	79	NA	73-112	NA	NA
RDX	10	9.91	NA	99	NA	70-117	NA	NA
1,3,5-Trinitrobenzene	10	9.76	NA	98	NA	72-119	NA	NA
1,2-Dinitrobenzene	20	21.95	NA	110	NA	90-118	NA	NA
1,3-Dinitrobenzene	10	10.53	NA	105	NA	78-121	NA	NA
Tetryl	10	10.32	NA	103	NA	43-133	NA	NA
Nitrobenzene	10	9.53	NA	95	NA	71-111	NA	NA
2,4,6-Trinitrotoluene	10	10.88	NA	109	NA	75-119	NA	NA
1,4-Dinitrobenzene	20	18.35	NA	92	NA	81-108	NA	NA
4-Amino-2,6-Dinitrotoluene	10	10.21	NA	102	NA	97-156	NA	NA
2-Amino-4,6-Dinitrotoluene	10	8.25	NA	83	NA	65-107	NA	NA
2,4-Dinitrotoluene	10	10.13	NA	101	NA	71-111	NA	NA
2,6-Dinitrotoluene	10	10.72	NA	107	NA	84-157	NA	NA
2-Nitrotoluene	10	8.48	NA	85	NA	74-115	NA	NA
3-Nitrotoluene	10	10.47	NA	105	NA	76-115	NA	NA
4-Nitrotoluene	10	8.78	NA	88	NA	76-120	NA	NA
1-Nitronaphthalene	20	21.13	NA	106	NA	69-125	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM03
Matrix: SOLID

Pesticide Residue Analysis
Fraction: Explosives

LCS: LCS04311	Batch: **133110004A** (Sample number(s): 7263052-7263055)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	20010.56	NA	100	NA	70-118	NA	NA
PETN	20000	19768.39	NA	99	NA	67-136	NA	NA
HMX	3936.25	3729.65	NA	95	NA	79-104	NA	NA
RDX	5000	5296.38	NA	106	NA	87-111	NA	NA
1,3,5-Trinitrobenzene	5020	5192.3	NA	103	NA	83-119	NA	NA
1,4-Dinitrobenzene	10000	10625.58	NA	106	NA	83-122	NA	NA
1,2-Dinitrobenzene	10000	11778.81	NA	118	NA	94-129	NA	NA
1,3-Dinitrobenzene	5000	5966.82	NA	119	NA	97-119	NA	NA
Tetryl	5000	5526.29	NA	111	NA	80-112	NA	NA
Nitrobenzene	5000	5439.78	NA	109 *	NA	89-107	NA	NA
2,4,6-Trinitrotoluene	5000	5806.82	NA	116	NA	85-122	NA	NA
4-Amino-2,6-Dinitrotoluene	5000	5174.95	NA	103	NA	98-143	NA	NA
2-Amino-4,6-Dinitrotoluene	5000	4925.31	NA	99	NA	84-115	NA	NA
2,4-Dinitrotoluene	5000	5798.76	NA	116 *	NA	91-112	NA	NA
2,6-Dinitrotoluene	5000	5189.77	NA	104	NA	86-137	NA	NA
2-Nitrotoluene	5000	4989.27	NA	100	NA	91-113	NA	NA
3-Nitrotoluene	5000	6304.07	NA	126 *	NA	88-121	NA	NA
4-Nitrotoluene	5000	4931.6	NA	99	NA	89-119	NA	NA
1-Nitronaphthalene	10000	12636.72	NA	126 *	NA	83-122	NA	NA

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	~~MIDPOINT~~ Level 4 RT	RT WINDOW FROM	TO
RDX	4.22	4.21	4.23	4.22	4.20	4.24	4.22	4.12	4.32
1,3,5-Trinitrobenzene	4.89	4.91	4.91	4.90	4.86	4.92	4.90	4.80	5.00
1,4-Dinitrobenzene	5.78	5.80	5.83	5.79	5.68	5.78	5.79	5.69	5.89
o-Dinitrobenzene	6.38	6.41	6.44	6.41	6.23	6.51	6.41	6.31	6.51
1,3-DNB	6.78	6.79	6.82	6.80	6.65	6.82	6.80	6.70	6.90
Nitrobenzene	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
Tetryl	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
2,4,6-Trinitrotoluene	8.12	8.17	8.20	8.16	7.89	8.18	8.16	8.06	8.26
Tetryl breakdown	8.78	8.74	8.88	8.90	8.55	8.89	8.90	8.77	9.02
4-Amino-2,6-dinitrotoluene	9.98	10.00	10.07	10.02	9.59	10.19	10.02	9.88	10.16
2-Amino-4,6-dinitrotoluene	10.41	10.48	10.52	10.47	10.05	10.51	10.47	10.33	10.61
2,6-Dinitrotoluene	10.88	10.91	10.98	10.93	10.46	10.91	10.93	10.79	11.07
2,4-Dinitrotoluene	11.33	11.40	11.43	11.40	10.96	11.43	11.40	11.26	11.54
2-Nitrotoluene	13.38	13.43	13.44	13.39	12.87	13.44	13.39	13.25	13.54
4-Nitrotoluene	14.71	14.73	14.84	14.77	14.25	14.84	14.77	14.61	14.94
3-Nitrotoluene	15.43	15.45	15.57	15.50	14.97	15.56	15.50	15.33	15.66
2-NMX	26.57	26.83	26.85	26.77	25.96	26.86	26.77	26.43	27.11
1-Nitronaphthalene	33.40	33.27	33.29	33.24	33.01	33.29	33.24	32.99	33.48

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31 — Linear
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+02	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310.CAL** Version = 9
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.216 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.899 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.789 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.412 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.800 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.159 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.895 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.022 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.468 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.932 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.398 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.393 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.774 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.496 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.768 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.236 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
HMX	2.79	2.81	2.82	2.81	2.84	2.82	2.81	2.71	2.91
2,4-Diamino-6-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
2,6-Diamino-4-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
Nitroglycerin	8.95	8.99	9.03	8.99	8.69	9.03	8.99	8.80	9.18
PETN	16.67	16.68	16.74	16.67	16.11	16.73	16.67	16.38	16.96
2-NMX	26.75	26.93	27.01	26.91	26.11	27.02	26.91	26.58	27.24

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	
							Average % RSD:	18	

Linear

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310B.CAL** Version = 10
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.809 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.969 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.969 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin

Retention time = 8.992 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN

Retention time = 16.669 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.910 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 2E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 1E12310.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.14			4.14	4.04	4.24
1,3,5-Trinitrobenzene				4.81			4.81	4.71	4.91
1,4-Dinitrobenzene				5.69			5.69	5.59	5.79
o-Dinitrobenzene				6.30			6.30	6.20	6.40
1,3-DNB				6.68			6.68	6.58	6.78
Nitrobenzene				7.57			7.57	7.43	7.71
Tetryl				7.57			7.57	7.43	7.71
2,4,6-Trinitrotoluene				8.00			8.00	7.90	8.10
Tetryl breakdown				8.74			8.74	8.62	8.86
4-Amino-2,6-dinitrotoluene				9.84			9.84	9.70	9.99
2-Amino-4,6-dinitrotoluene				10.27			10.27	10.13	10.41
2,6-Dinitrotoluene				10.70			10.70	10.56	10.84
2,4-Dinitrotoluene				11.17			11.17	11.03	11.31
2-Nitrotoluene				13.12			13.12	12.98	13.26
4-Nitrotoluene				14.47			14.47	14.31	14.64
3-Nitrotoluene				15.18			15.18	15.02	15.34
2-NMX				26.14			26.14	25.80	26.48
1-Nitronaphthalene				33.02			33.02	32.78	33.26

Calculate

RT Update

Files used
1E12310.39 + .40

Applies to
1E12310.20 →

James H. Place
Senior Chemist

NOV 08 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 2E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

Coelute

Linear

James H. Place
Senior Chemist

NOV 0 8 2013

Calibration File Name: **C:\CPWIN\DATA1\2E12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.144 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.814 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.688 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.295 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.675 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.568 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.568 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.004 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.738 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 9.844 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.268 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.697 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.171 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.121 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.473 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.178 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.140 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene

Retention time = 33.023 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 2E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 1E12310B.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

Calculate

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.77			2.77	2.67	2.87
2,4-Diamino-6-nitrotoluene				2.96			2.96	2.86	3.06
2,6-Diamino-4-nitrotoluene				2.96			2.96	2.86	3.06
Nitroglycerin				8.82			8.82	8.63	9.01
PETN				16.30			16.30	16.01	16.59
2-NMX				26.30			26.30	25.96	26.63

James H. Place
Senior Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 2E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Calculate

Average % RSD: 18

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Senior Chemist

NOV 0 8 2013

Calibration File Name: **C:\CPWIN\DATA1\2E12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.769 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.957 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.957 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin

Retention time = 8.821 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN

Retention time = 16.299 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.295 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 4E12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.10			4.10	4.00	4.20
1,3,5-Trinitrobenzene				4.76			4.76	4.66	4.86
1,4-Dinitrobenzene				5.62			5.62	5.52	5.72
o-Dinitrobenzene				6.23			6.23	6.13	6.33
1,3-DNB				6.59			6.59	6.49	6.69
Nitrobenzene				7.47			7.47	7.33	7.61
Tetryl				7.47			7.47	7.33	7.61
2,4,6-Trinitrotoluene				7.88			7.88	7.78	7.98
Tetryl breakdown				8.39			8.39	8.27	8.52
4-Amino-2,6-dinitrotoluene				9.83			9.83	9.69	9.97
2-Amino-4,6-dinitrotoluene				10.11			10.11	9.97	10.25
2,6-Dinitrotoluene				10.52			10.52	10.38	10.66
2,4-Dinitrotoluene				11.00			11.00	10.86	11.14
2-Nitrotoluene				12.94			12.94	12.80	13.08
4-Nitrotoluene				14.27			14.27	14.11	14.43
3-Nitrotoluene				14.95			14.95	14.79	15.12
2-NMX				25.75			25.75	25.41	26.09
1-Nitronaphthalene				32.87			32.87	32.62	33.11

RT Update

Files used 4E12310.58 +.59

Applies to 4E12310.58 →

11/20/13

Audited By:

Lisa A. Reinert
Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	%RSD
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31 — Linear
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310.CAL** Version = 6
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.102 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.764 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.623 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.233 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.594 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 7.876 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown

Retention time = 8.394 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT

Retention time = 9.828 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.111 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.518 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 10.997 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 12.941 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.267 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 14.953 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 25.749 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 32.866 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 4E12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.75			2.75	2.65	2.85
2,4-Diamino-6-nitrotoluene				2.87			2.87	2.77	2.97
2,6-Diamino-4-nitrotoluene				2.87			2.87	2.77	2.97
Nitroglycerin				8.70			8.70	8.51	8.89
PETN				16.04			16.04	15.75	16.33
2-NMX				25.91			25.91	25.57	26.24

James H. Place
Senior Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	
							Average % RSD:	18	

Quinate

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.747 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.698 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.039 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 25.906 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 5E12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT (Level 3 or 4) RT	RT WINDOW FROM	TO
RDX				4.30			4.30	4.20	4.40
1,3,5-Trinitrobenzene				5.00			5.00	4.90	5.10
1,4-Dinitrobenzene				5.90			5.90	5.80	6.00
o-Dinitrobenzene				6.53			6.53	6.43	6.63
1,3-DNB				6.93			6.93	6.83	7.03
Nitrobenzene				7.85			7.85	7.71	7.99
Tetryl				7.85			7.85	7.71	7.99
2,4,6-Trinitrotoluene				8.29			8.29	8.19	8.39
Tetryl breakdown				8.83			8.83	8.71	8.95
4-Amino-2,6-dinitrotoluene				10.35			10.35	10.21	10.49
2-Amino-4,6-dinitrotoluene				10.66			10.66	10.51	10.80
2,6-Dinitrotoluene				11.09			11.09	10.95	11.23
2,4-Dinitrotoluene				11.59			11.59	11.45	11.74
2-Nitrotoluene				13.63			13.63	13.49	13.77
4-Nitrotoluene				15.03			15.03	14.87	15.19
3-Nitrotoluene				15.76			15.76	15.60	15.93
2-NMX				27.25			27.25	26.91	27.59
1-Nitronaphthalene				33.45			33.45	33.20	33.69

RT Update

File used 5E12310.17

Applies to 5E12310.01→

11/22/13

Audited By: Jessica L. Miller
Chemist

NOV 24 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

Linear

1566
11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.301 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.998 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.904 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.531 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.930 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.290 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.833 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.350 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.655 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 11.092 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT

Retention time = 11.593 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT

Retention time = 13.627 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT

Retention time = 15.029 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.763 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 27.252 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.445 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 5E12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
HMX				2.87			2.87	2.77	2.97
Nitroglycerin				9.15			9.15	8.96	9.34
PETN				16.92			16.92	16.63	17.20
2-NMX				27.42			27.42	27.09	27.76

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	- Linear
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	- Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 24

11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

20 HMX

Retention time = 2.870 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

21 Nitroglycerin

Retention time = 9.150 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN

Retention time = 16.917 min., Search window = 0.286 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 27.424 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	~~MIDPOINT~~ Level 4 RT	RT WINDOW FROM	TO
HMX	4.25	4.29	4.29	4.28	4.25	4.25	4.28	4.18	4.38
RDX	5.25	5.24	5.25	5.26	5.17	5.20	5.26	5.16	5.36
Nitrobenzene	12.90	12.88	12.92	12.88	12.46	12.78	12.88	12.72	13.04
o-Dinitrobenzene	14.97	14.97	14.95	14.92	14.40	14.78	14.92	14.74	15.10
2-Amino-4,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
4-Amino-2,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
1,3-DNB	19.07	19.15	19.06	19.04	18.63	18.91	19.04	18.89	19.19
1,4-Dinitrobenzene	19.76	19.90	19.86	19.85	19.40	19.67	19.85	19.70	20.00
2-Nitrotoluene	24.39	24.41	24.38	24.33	23.71	24.14	24.33	24.07	24.59
3-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
4-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
1,3,5-Trinitrobenzene	30.07	30.04	30.02	39.94	29.52	29.67	29.94	29.74	30.14
2,6-Dinitrotoluene	31.07	31.33	30.97	30.89	29.91	30.62	30.89	30.69	31.09
2,4-Dinitrotoluene	33.86	33.85	33.80	33.79	33.62	33.71	33.79	33.68	33.90
2-NMX	34.37	34.28	34.22	34.23	34.10	34.17	34.23	34.13	34.33
Tetryl	34.63	34.59	34.54	34.53	34.42	34.47	34.53	34.43	34.63
2,4,6-Trinitrotoluene	35.58	35.53	35.47	35.46	35.38	35.41	35.46	35.36	35.56
1-Nitronaphthalene	36.54	36.48	36.47	36.46	36.42	36.43	36.46	36.36	36.56

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.00E+02	2.10E+02	19
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23

Linear

Linear

Linear

Average % RSD: 25

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310.CAL** Version = 21
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.260 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.877 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.924 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.035 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.850 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.334 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.943 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.885 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.788 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.226 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.529 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.463 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
2,4-Diamino-6-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
2,6-Diamino-4-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
Nitroglycerin	9.77	9.71	9.70	9.70	9.37	9.63	9.70	9.60	9.80
PETN	26.50	26.32	26.34	26.28	25.64	26.08	26.28	26.07	26.49

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Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310B.CAL** Version = 20
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.695 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.283 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 1C12310.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.31			4.31	4.21	4.41
RDX				5.28			5.28	5.18	5.38
Nitrobenzene				12.98			12.98	12.82	13.14
o-Dinitrobenzene				15.03			15.03	14.85	15.21
2-Amino-4,6-dinitrotoluene				16.97			16.97	16.81	17.13
4-Amino-2,6-dinitrotoluene				16.97			16.97	16.81	17.13
1,3-DNB				19.19			19.19	19.04	19.34
1,4-Dinitrobenzene				19.98			19.98	19.83	20.13
2-Nitrotoluene				24.47			24.47	24.21	24.73
3-Nitrotoluene				28.03			28.03	27.77	28.29
4-Nitrotoluene				28.03			28.03	27.77	28.29
1,3,5-Trinitrobenzene				30.21			30.21	30.01	30.41
2,6-Dinitrotoluene				30.96			30.96	30.76	31.16
2,4-Dinitrotoluene				33.84			33.84	33.73	33.95
2-NMX				34.25			34.25	34.15	34.35
Tetryl				34.57			34.56	34.46	34.66
2,4,6-Trinitrotoluene				35.50			35.50	35.40	35.60
1-Nitronaphthalene				36.48			36.48	36.38	36.58

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RT Update

Files used 1C12310.39+.40

Applies to 1C12310.20 →

James H. Place
Senior Chemist

NOV 08 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	Linear
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

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James H. Place
Senior Chemist

NOV 08 2013

Calibration File Name: **C:\CPWIN\DATA1\2C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.311 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.977 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 15.029 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.194 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.984 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.467 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.212 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.964 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.841 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.248 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.565 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.500 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 **1-Nitronaphthalene**
Retention time = 36.478 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

CONFIDENTIAL

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 1C12310B.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.83			3.83	3.65	4.01
2,6-Diamino-4-nitrotoluene				3.83			3.83	3.65	4.01
Nitroglycerin				9.76			9.76	9.66	9.86
PETN				26.38			26.38	26.17	26.59

James H. Place
Senior Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
							Average % RSD:	12

Calibration File Name: **C:\CPWIN\DATA1\2C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.760 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

S2 PETN
Retention time = 26.381 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 4C12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.30			4.30	4.20	4.40
RDX				5.26			5.26	5.16	5.36
Nitrobenzene				12.91			12.91	12.75	13.07
o-Dinitrobenzene				14.90			14.90	14.72	15.08
2-Amino-4,6-dinitrotoluene				16.82			16.82	16.66	16.98
4-Amino-2,6-dinitrotoluene				16.82			16.82	16.66	16.98
1,3-DNB				19.08			19.08	18.93	19.23
1,4-Dinitrobenzene				19.77			19.77	19.62	19.92
2-Nitrotoluene				24.31			24.31	24.05	24.57
3-Nitrotoluene				27.86			27.86	27.60	28.12
4-Nitrotoluene				27.86			27.86	27.60	28.12
1,3,5-Trinitrobenzene				30.01			30.01	29.81	30.21
2,6-Dinitrotoluene				30.82			30.82	30.62	31.02
2,4-Dinitrotoluene				33.78			33.78	33.67	33.89
2-NMX				34.22			34.22	34.12	34.32
Tetryl				34.51			34.51	34.41	34.61
2,4,6-Trinitrotoluene				35.46			35.46	35.36	35.56
1-Nitronaphthalene				36.46			36.46	36.36	36.56

RT Update

Files used 4C12310.58+.59

Applies to 4C12310.58 →

RT update applies to files 58→ old cali. 2C12310

James H. Place
Senior Chemist

NOV 2 0 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 2 0 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23

Average % RSD: 25

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NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX

Retention time = 4.297 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX

Retention time = 5.262 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene

Retention time = 12.911 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.900 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.078 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB
Retention time = 19.773 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.306 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.009 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.816 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.782 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.215 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.513 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.458 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 4C12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.82			3.82	3.64	4.00
2,6-Diamino-4-nitrotoluene				3.82			3.82	3.64	4.00
Nitroglycerin				9.72			9.72	9.62	9.82
PETN				26.23			26.23	26.02	26.44

James H. Place
Senior Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.719 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.233 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 5C12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.23			4.23	4.13	4.33
RDX				5.18			5.18	5.08	5.28
Nitrobenzene				12.78			12.78	12.62	12.94
o-Dinitrobenzene				14.83			14.83	14.65	15.01
2-Amino-4,6-dinitrotoluene				16.77			16.77	16.61	16.93
4-Amino-2,6-dinitrotoluene				16.77			16.77	16.61	16.93
1,3-DNB				18.95			18.95	18.80	19.10
1,4-Dinitrobenzene				19.75			19.75	19.60	19.90
2-Nitrotoluene				24.15			24.15	23.89	24.41
3-Nitrotoluene				27.75			27.75	27.49	28.01
4-Nitrotoluene				27.75			27.75	27.49	28.01
1,3,5-Trinitrobenzene				29.77			29.77	29.57	29.97
2,6-Dinitrotoluene				30.69			30.69	30.49	30.89
2,4-Dinitrotoluene				33.71			33.71	33.60	33.82
2-NMX				34.15			34.15	34.05	34.25
Tetryl				34.49			34.49	34.39	34.59
2,4,6-Trinitrotoluene				35.42			35.42	35.32	35.52
1-Nitronaphthalene				36.44			36.44	36.34	36.54

RT Update

File used 5C12310.17

Applies to 5C12310.01 →

11/22/13

Audited By:

Jessica L. Miller
Chemist

NOV 24 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	%RSD	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	— Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	— Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

1566
11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.228 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.179 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.784 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.833 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 18.952 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.754 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.150 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.768 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.691 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.711 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.153 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.486 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.417 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.435 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 5C12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
Nitroglycerin				9.57			9.57	9.47	9.67
PETN				25.94			25.94	25.73	26.15

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
							Average % RSD:	13

Calibration File Name: **C:\CPWIN\DATA1\4C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

21 Nitroglycerin

Retention time = 9.567 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN

Retention time = 25.939 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
RDX	4.20	4.12	4.32	496.07	500.00	-1
1,3,5-Trinitrobenzene	4.88	4.80	5.00	492.04	499.80	-2
1,4-Dinitrobenzene	5.77	5.69	5.89	466.40	500.00	-7
o-Dinitrobenzene	6.38	6.31	6.51	485.01	500.00	-3
1,3-DNB	6.77	6.70	6.90	501.80	499.55	0
Tetryl + Breakdown	7.67	7.57	7.85	25.32 + 437.75 = 463.07	500.00	-12 / -7
2,4,6-Trinitrotoluene	8.12	8.06	8.26	492.63	499.80	-1
4-Amino-2,6-dinitrotoluene	9.96	9.88	10.16	553.23	499.80	11
2-Amino-4,6-dinitrotoluene	10.42	10.33	10.61	465.31	500.00	-7
2,6-Dinitrotoluene	10.87	10.79	11.07	488.15	500.00	-2
2,4-Dinitrotoluene	11.34	11.26	11.54	480.84	500.00	-4
2-Nitrotoluene	13.33	13.25	13.54	460.36	500.00	-8
4-Nitrotoluene	14.70	14.61	14.94	496.26	499.55	-1
3-Nitrotoluene	15.43	15.33	15.66	498.88	500.00	0
2-NMX	26.63	26.43	27.11	986.47	1000.45	-1
1-Nitronaphthalene	33.18	32.99	33.48	544.17	500.00	9

Compounds 16 Average of %D: 4

James H. Place
Senior Chemist

NOV 07 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	2.80	2.71	2.91	485.07	500.00	-3
Nitroglycerin	8.95	8.80	9.18	5425.07	6000.00	-10
PETN	16.59	16.38	16.96	5923.12	6000.00	-1
2-NMX	26.76	26.58	27.24	1113.34	1000.45	11

Compounds 4 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.15	4.04	4.24	489.33	494.00	-1
1,3,5-Trinitrobenzene	4.82	4.71	4.91	472.64	500.50	-6
1,4-Dinitrobenzene	5.70	5.59	5.79	494.57	497.00	0
o-Dinitrobenzene	6.30	6.20	6.40	439.04	502.00	-13
1,3-DNB	6.68	6.58	6.78	519.19	500.50	4
Nitrobenzene + Tetryl breakdown	7.57	7.43	7.71	53.84 + 397.41	= 451.25	501.50	-21 / -10
2,4,6-Trinitrotoluene	7.98	7.90	8.10	507.11	501.50	1
4-Amino-2,6-dinitrotoluene	9.93	9.70	9.99	449.45	500.50	-10
2-Amino-4,6-dinitrotoluene	10.24	10.13	10.41	468.86	500.00	-6
2,6-Dinitrotoluene	10.62	10.56	10.84	481.96	500.50	-4
2,4-Dinitrotoluene	11.15	11.03	11.31	510.00	500.50	2
2-Nitrotoluene	13.12	12.98	13.26	455.12	496.00	-8
4-Nitrotoluene	14.47	14.31	14.64	436.73	497.50	-12
3-Nitrotoluene	15.15	15.02	15.34	552.19	495.00	12
2-NMX	26.00	25.80	26.48	1521.92	1500.68	1
1-Nitronaphthalene	32.95	32.78	33.26	547.49	501.00	9

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 13 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.78	2.67	2.87	506.93	498.50	2
Nitroglycerin	8.83	8.63	9.01	9688.12	10030.00	-3
PETN	16.29	16.01	16.59	9932.26	9980.00	0
2-NMX	26.16	25.96	26.63	1486.94	1500.68	-1

Compounds 4 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.18R Time Analyzed: 9:54

Lab Standard ID: NITR3OP Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.94	2.86	3.06	514.29	502.00	2

Compounds 1 Average of %D: 2

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.12	4.04	4.24	488.10	494.00	-1
1,3,5-Trinitrobenzene	4.78	4.71	4.91	470.22	500.50	-6
1,4-Dinitrobenzene	5.65	5.59	5.79	494.19	497.00	-1
o-Dinitrobenzene	6.26	6.20	6.40	458.50	502.00	-9
1,3-DNB	6.63	6.58	6.78	515.63	500.50	3
Tetryl + Breakdown	7.52	7.43	7.71	56.94 + 391.05 = 447.99	499.50	~~-22~~ -10
2,4,6-Trinitrotoluene	7.93	7.90	8.10	513.88	501.50	2
4-Amino-2,6-dinitrotoluene	9.87	9.70	9.99	438.40	500.50	-12
2-Amino-4,6-dinitrotoluene	10.21	10.13	10.41	479.25	500.00	-4
2,6-Dinitrotoluene	10.54	10.56	10.84	471.62	500.50	-6
2,4-Dinitrotoluene	11.08	11.03	11.31	522.95	500.50	4
2-Nitrotoluene	13.05	12.98	13.26	455.81	496.00	-8
4-Nitrotoluene	14.40	14.31	14.64	448.09	497.50	-10
3-Nitrotoluene	15.09	15.02	15.34	540.87	495.00	9
2-NMX	26.04	25.80	26.48	1521.82	1500.68	1
1-Nitronaphthalene	32.96	32.78	33.26	540.11	501.00	8

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 14 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.75	2.67	2.87	506.21	498.50	2
Nitroglycerin	8.77	8.63	9.01	9711.33	10030.00	-3
PETN	16.23	16.01	16.59	9925.43	9980.00	-1
2-NMX	26.19	25.96	26.63	1476.93	1500.68	-2

Compounds 4 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.30R Time Analyzed: 18:23

Lab Standard ID: NITR3OR Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.92	2.86	3.06	521.96	502.00	4

Compounds 1 Average of %D: 4

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 5E12310.06R Time Analyzed: 22:00

Lab Standard ID: NITR3QD Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.30	4.20	4.40	465.04	494.00	-6
1,3,5-Trinitrobenzene	4.98	4.90	5.10	462.72	500.50	-8
1,4-Dinitrobenzene	5.87	5.80	6.00	446.93	497.00	-10
o-Dinitrobenzene	6.48	6.43	6.63	469.30	502.00	-7
1,3-DNB	6.89	6.83	7.03	474.52	500.50	-5
Tetryl + Breakdown	7.80	7.71	7.99	39.28 + 440.76	= 480.04 499.50	~~-12~~ -4
2,4,6-Trinitrotoluene	8.23	8.19	8.39	542.59	501.50	8
2-Amino-4,6-dinitrotoluene	10.58	10.51	10.80	446.92	500.00	-11
2,6-Dinitrotoluene	10.98	10.95	11.23	520.63	500.50	4
2,4-Dinitrotoluene	11.50	11.45	11.74	512.27	500.50	2
2-Nitrotoluene	13.51	13.49	13.77	424.05	496.00	-15
4-Nitrotoluene	14.93	14.87	15.19	456.68	497.50	-8
3-Nitrotoluene	15.65	15.60	15.93	497.27	495.00	0
2-NMX	27.10	26.91	27.59	1395.56	1500.68	-7
1-Nitronaphthalene	33.39	33.20	33.69	510.83	501.00	2

Compounds 15 Average of %D: 7

James H. Place
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NOV 22 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 5E12310B.06R Time Analyzed: 22:00

Lab Standard ID: NITR3QD Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.90	2.77	2.97	500.49	498.50	0
Nitroglycerin	9.09	8.96	9.34	8677.41	10030.00	-13
PETN	16.79	16.63	17.20	9456.82	9980.00	-5
2-NMX	27.23	27.09	27.76	1453.93	1500.68	-3

Compounds 4 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310.17R Time Analyzed: 5:47

Lab Standard ID: NITR3QF Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.30	4.20	4.40	467.84	494.00	-5
1,3,5-Trinitrobenzene	5.00	4.90	5.10	464.63	500.50	-7
1,4-Dinitrobenzene	5.90	5.80	6.00	449.88	497.00	-9
o-Dinitrobenzene	6.53	6.43	6.63	437.73	502.00	-13
1,3-DNB	6.93	6.83	7.03	485.90	500.50	-3
Tetryl + Breakdown	7.85	7.71	7.99	43.77 + 438.13	481.90	499.50	-12 -4
2,4,6-Trinitrotoluene	8.29	8.19	8.39	524.28	501.50	5
4-Amino-2,6-dinitrotoluene	10.35	10.21	10.49	437.43	500.50	-13
2-Amino-4,6-dinitrotoluene	10.65	10.51	10.80	441.09	500.00	-12
2,6-Dinitrotoluene	11.09	10.95	11.23	496.96	500.50	-1
2,4-Dinitrotoluene	11.59	11.45	11.74	505.82	500.50	1
2-Nitrotoluene	13.63	13.49	13.77	427.82	496.00	-14
4-Nitrotoluene	15.03	14.87	15.19	438.12	497.50	-12
3-Nitrotoluene	15.76	15.60	15.93	501.07	495.00	1
2-NMX	27.25	26.91	27.59	1538.23	1500.68	3
1-Nitronaphthalene	33.45	33.20	33.69	526.45	501.00	5

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 22 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310B.17R Time Analyzed: 5:47

Lab Standard ID: NITR3QF Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.87	2.77	2.97	489.90	498.50	-2
Nitroglycerin	9.15	8.96	9.34	8761.39	10030.00	-13
PETN	16.92	16.63	17.20	9468.53	9980.00	-5
2-NMX	27.42	27.09	27.76	1540.29	1500.68	3

Compounds 4 Average of %D: 6

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.035 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.850 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.334 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.943 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.885 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.788 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.226 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.529 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.463 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
2,4-Diamino-6-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
2,6-Diamino-4-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
Nitroglycerin	9.77	9.71	9.70	9.70	9.37	9.63	9.70	9.60	9.80
PETN	26.50	26.32	26.34	26.28	25.64	26.08	26.28	26.07	26.49

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310B.CAL** Version = 20
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.695 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.283 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	4.29	4.18	4.38	443.58	500.00	-11
RDX	5.26	5.16	5.36	502.76	500.00	1
Nitrobenzene	12.89	12.72	13.04	496.28	500.00	-1
o-Dinitrobenzene	14.91	14.74	15.10	502.21	500.00	0
4-Amino-2,6-dinitrotoluene	16.83	16.70	17.02	499.96	499.80	0
1,3-DNB	19.05	18.89	19.19	499.49	499.55	0
1,4-Dinitrobenzene	19.84	19.70	20.00	500.62	500.00	0
2-Nitrotoluene	24.33	24.07	24.59	501.96	500.00	0
4-Nitrotoluene	27.90	27.68	28.20	466.62	499.55	-7
1,3,5-Trinitrobenzene	29.94	29.74	30.14	443.53	499.80	-11
2,6-Dinitrotoluene	30.88	30.69	31.09	498.30	500.00	0
2,4-Dinitrotoluene	33.78	33.68	33.90	528.91	500.00	6
2-NMX	34.22	34.13	34.33	990.46	1000.45	-1
Tetryl	34.52	34.43	34.63	475.03	500.00	-5
2,4,6-Trinitrotoluene	35.46	35.36	35.56	503.01	499.80	1
1-Nitronaphthalene	36.46	36.36	36.56	517.66	500.00	4

Compounds 16 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Nitroglycerin	9.70	9.60	9.80	5470.55	6000.00	-9
PETN	26.30	26.07	26.49	5363.19	6000.00	-11

Compounds 2 Average of %D: 10

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.21	4.41	462.02	498.50	-7
RDX	5.26	5.18	5.38	494.39	494.00	0
Nitrobenzene	12.93	12.82	13.14	524.41	501.50	5
o-Dinitrobenzene	14.96	14.85	15.21	549.18	502.00	9
4-Amino-2,6-dinitrotoluene	16.83	16.81	17.13	506.81	500.50	1
1,3-DNB	19.05	19.04	19.34	500.68	500.50	0
1,4-Dinitrobenzene	19.85	19.83	20.13	531.15	497.00	7
2-Nitrotoluene	24.32	24.21	24.73	497.97	496.00	0
4-Nitrotoluene	27.94	27.77	28.29	467.35	497.50	-6
1,3,5-Trinitrobenzene	30.03	30.01	30.41	427.29	500.50	-15
2,6-Dinitrotoluene	30.89	30.76	31.16	525.12	500.50	5
2,4-Dinitrotoluene	33.80	33.73	33.95	533.42	500.50	7
2-NMX	34.22	34.15	34.35	1537.83	1500.68	2
Tetryl	34.54	34.46	34.66	408.85	499.50	-18
2,4,6-Trinitrotoluene	35.48	35.40	35.60	504.36	501.50	1
1-Nitronaphthalene	36.46	36.38	36.58	466.53	501.00	-7

Compounds 16 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.21	4.41	462.02	498.50	-7
RDX	5.26	5.18	5.38	494.39	494.00	0
Nitrobenzene	12.93	12.82	13.14	524.41	501.50	5
o-Dinitrobenzene	14.96	14.85	15.21	549.18	502.00	9
4-Amino-2,6-dinitrotoluene	16.83	16.81	17.13	506.81	500.50	1
1,3-DNB	19.05	19.04	19.34	500.68	500.50	0
1,4-Dinitrobenzene	19.85	19.83	20.13	531.15	497.00	7
2-Nitrotoluene	24.32	24.21	24.73	497.97	496.00	0
4-Nitrotoluene	27.94	27.77	28.29	467.35	497.50	-6
1,3,5-Trinitrobenzene	30.03	30.01	30.41	427.29	500.50	-15
2,6-Dinitrotoluene	30.89	30.76	31.16	525.12	500.50	5
2,4-Dinitrotoluene	33.80	33.73	33.95	533.42	500.50	7
2-NMX	34.22	34.15	34.35	1537.83	1500.68	2
Tetryl	34.54	34.46	34.66	408.85	499.50	-18
2,4,6-Trinitrotoluene	35.48	35.40	35.60	504.36	501.50	1
1-Nitronaphthalene	36.46	36.38	36.58	466.53	501.00	-7

Compounds 16 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.71	9.66	9.86	9597.09	10030.00	-4
PETN	26.27	26.17	26.59	9056.91	9980.00	-9

Compounds 2 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.18R Time Analyzed: 9:54

Lab Standard ID: NITR3OP Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.86	3.65	4.01	536.58	506.00	6

Compounds 1 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.33	4.21	4.41	460.95	498.50	-8
RDX	5.31	5.18	5.38	503.64	494.00	2
Nitrobenzene	13.03	12.82	13.14	499.51	501.50	0
o-Dinitrobenzene	15.06	14.85	15.21	503.92	502.00	0
2-Amino-4,6-dinitrotoluene	17.00	16.81	17.13	492.25	500.00	-2
1,3-DNB	19.23	19.04	19.34	491.05	500.50	-2
1,4-Dinitrobenzene	20.05	19.83	20.13	513.33	497.00	3
2-Nitrotoluene	24.58	24.21	24.73	502.41	496.00	1
3-Nitrotoluene	28.16	27.77	28.29	459.59	495.00	-7
1,3,5-Trinitrobenzene	30.33	30.01	30.41	426.96	500.50	-15
2,6-Dinitrotoluene	31.07	30.76	31.16	534.62	500.50	7
2,4-Dinitrotoluene	33.88	33.73	33.95	521.50	500.50	4
2-NMX	34.28	34.15	34.35	1439.78	1500.68	-4
Tetryl	34.60	34.46	34.66	393.19	499.50	-21
2,4,6-Trinitrotoluene	35.53	35.40	35.60	476.15	501.50	-5
1-Nitronaphthalene	36.50	36.38	36.58	480.80	501.00	-4

Compounds 16 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.79	9.66	9.86	9555.03	10030.00	-5
PETN	26.50	26.17	26.59	9104.75	9980.00	-9

Compounds 2 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.30R Time Analyzed: 18:23

Lab Standard ID: NITR3OR Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.88	3.65	4.01	540.78	506.00	7

Compounds 1 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 5C12310.06R Time Analyzed: 22:00

Lab Standard ID: NITR3QD Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.21	4.13	4.33	452.65	498.50	-9
RDX	5.16	5.08	5.28	483.64	494.00	-2
Nitrobenzene	12.66	12.62	12.94	495.27	501.50	-1
o-Dinitrobenzene	14.70	14.65	15.01	495.47	502.00	-1
4-Amino-2,6-dinitrotoluene	16.64	16.61	16.93	494.08	500.50	-1
1,3-DNB	18.87	18.80	19.10	489.36	500.50	-2
1,4-Dinitrobenzene	19.67	19.60	19.90	496.70	497.00	0
2-Nitrotoluene	24.08	23.89	24.41	489.18	496.00	-1
4-Nitrotoluene	27.68	27.49	28.01	487.97	497.50	-2
1,3,5-Trinitrobenzene	29.89	29.57	29.97	498.65	500.50	0
2,6-Dinitrotoluene	30.72	30.49	30.89	464.01	500.50	-7
2,4-Dinitrotoluene	33.74	33.60	33.82	530.91	500.50	6
2-NMX	34.16	34.05	34.25	1523.27	1500.68	2
Tetryl	34.51	34.39	34.59	566.63	499.50	13
2,4,6-Trinitrotoluene	35.45	35.32	35.52	496.64	501.50	-1
1-Nitronaphthalene	36.45	36.34	36.54	492.77	501.00	-2

Compounds 16 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 5C12310B.06R Time Analyzed: 22:00

Lab Standard ID: NITR3QD Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.48	9.47	9.67	9313.40	10030.00	-7
PETN	25.84	25.73	26.15	9288.13	9980.00	-7

Compounds 2 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310.17R Time Analyzed: 5:47

Lab Standard ID: NITR3QF Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.23	4.13	4.33	455.38	498.50	-9
RDX	5.18	5.08	5.28	489.57	494.00	-1
Nitrobenzene	12.78	12.62	12.94	500.35	501.50	0
o-Dinitrobenzene	14.83	14.65	15.01	491.07	502.00	-2
2-Amino-4,6-dinitrotoluene	16.77	16.61	16.93	487.20	500.00	-3
1,3-DNB	18.95	18.80	19.10	485.98	500.50	-3
1,4-Dinitrobenzene	19.75	19.60	19.90	491.53	497.00	-1
2-Nitrotoluene	24.15	23.89	24.41	484.08	496.00	-2
4-Nitrotoluene	27.75	27.49	28.01	463.06	497.50	-7
1,3,5-Trinitrobenzene	29.77	29.57	29.97	466.12	500.50	-7
2,6-Dinitrotoluene	30.69	30.49	30.89	462.97	500.50	-7
2,4-Dinitrotoluene	33.71	33.60	33.82	526.13	500.50	5
2-NMX	34.15	34.05	34.25	1494.36	1500.68	0
Tetryl	34.49	34.39	34.59	552.53	499.50	11
2,4,6-Trinitrotoluene	35.42	35.32	35.52	504.24	501.50	1
1-Nitronaphthalene	36.44	36.34	36.54	490.26	501.00	-2

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310B.17R Time Analyzed: 5:47

Lab Standard ID: NITR3QF Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.57	9.47	9.67	9257.89	10030.00	-8
PETN	25.94	25.73	26.15	8829.51	9980.00	-12

Compounds 2 Average of %D: 10

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310	26.08
002		CONDITIONER	11/15/2013	17:25:53	2E12310	25.96
003		CONDITIONER	11/15/2013	18:08:16	2E12310	25.89
004		CONDITIONER	11/15/2013	18:50:40	2E12310	25.82
005		CONDITIONER	11/15/2013	19:33:09	2E12310	25.86
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310	25.75
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310	
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310	25.87
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310	25.99
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310	25.93
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310	
016	C5605	7269438	11/16/2013	03:19:46	2E12310	26.08
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310	26.15
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310	26.20
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310	26.01
021	C5611	7269454	11/16/2013	06:51:59	2E12310	25.86
022	C5621	7269467	11/16/2013	07:34:27	2E12310	25.83
023	C5626	7269472	11/16/2013	08:16:55	2E12310	26.09
024	C5629	7269475	11/16/2013	08:59:20	2E12310	26.01
025	C5632	7269478	11/16/2013	09:41:45	2E12310	25.85
026	C5638	7269484	11/16/2013	10:24:11	2E12310	26.06
027	C5641	7269487	11/16/2013	11:06:32	2E12310	25.99
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310	25.95
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310	25.82
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310	26.00
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310	25.60
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310	25.77

	ICAL Dates		ICAL RT	QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310	25.96
035	C5905	7269504	11/16/2013	16:46:09	2E12310	25.97
036	C5915	7269514	11/16/2013	17:28:35	2E12310	26.07
037	C5921	7269520	11/16/2013	18:11:00	2E12310	25.86
038	C5927	7269526	11/16/2013	18:53:29	2E12310	26.00
039	C5930	7269529	11/16/2013	19:35:53	2E12310	26.01
040	C5933	7269532	11/16/2013	20:18:18	2E12310	26.10
041	C5939	7269538	11/16/2013	21:00:45	2E12310	25.96
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310	25.97
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310	
044	C5942	7269541	11/16/2013	23:07:56	2E12310	26.07
045	C5945	7269544	11/16/2013	23:50:21	2E12310	25.96
046	C5951	7269550	11/17/2013	00:32:48	2E12310	26.22
047	C5954	7269553	11/17/2013	01:15:16	2E12310	26.27
048	C5960	7269559	11/17/2013	01:57:42	2E12310	25.93
049	C6109	7270974	11/17/2013	02:40:06	2E12310	25.87
050	C6109	7270975	11/17/2013	03:22:32	2E12310	26.10
051	C6109	7270976	11/17/2013	04:05:01	2E12310	26.10
052	C6115	7270986	11/17/2013	04:47:25	2E12310	26.08
053	C6118	7270989	11/17/2013	05:29:51	2E12310	26.13
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310	26.04
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310	
056	C6124	7270995	11/17/2013	07:37:16	2E12310	25.86
057	C6130	7271001	11/17/2013	08:19:42	2E12310	25.71
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310	25.67
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310	25.60
062	R2N51	7265223	11/17/2013	11:51:56	3E12310	25.43
063	R2N52	7265224	11/17/2013	12:34:25	3E12310	25.78
064	R2M61	7265228	11/17/2013	13:16:50	3E12310	25.73
065	R2163	7265230	11/17/2013	13:59:19	3E12310	25.57
066	R2163	7265231	11/17/2013	14:41:48	3E12310	25.59

	ICAL Dates		ICAL RT	QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310	25.63
068	E2161	7265235	11/17/2013	16:06:43	3E12310	25.69
069	R2141	7265238	11/17/2013	16:49:08	3E12310	25.66
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310	25.68
071	R2142	7265240	11/17/2013	18:14:03	3E12310	25.78
072	R2122	7265243	11/17/2013	18:56:31	3E12310	25.22 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310	25.62
074	FBX02	7265248	11/17/2013	20:21:28	3E12310	25.50
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310	25.37 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310	25.41
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310	23.69 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310	25.50
079	FB206	7266799	11/17/2013	23:53:49	3E12310	24.89 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310	25.51
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310	25.10 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310	25.47
083	2D123	7266810	11/18/2013	02:43:40	3E12310	25.33 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310	25.34 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310	25.38 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310	24.56 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310	25.29 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310	25.30 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310	25.30 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310	24.73 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310	25.28 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310	24.77 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310	25.27 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310	25.22 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310	25.20 *

	ICAL Dates		ICAL RT QC Limits	
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

Form VIII PEST

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310B	26.22
002		CONDITIONER	11/15/2013	17:25:53	2E12310B	26.12
003		CONDITIONER	11/15/2013	18:08:16	2E12310B	26.04
004		CONDITIONER	11/15/2013	18:50:40	2E12310B	25.96
005		CONDITIONER	11/15/2013	19:33:09	2E12310B	26.02
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310B	25.89
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310B	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310B	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310B	26.39
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310B	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310B	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310B	26.02
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310B	26.16
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310B	26.03
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310B	
016	C5605	7269438	11/16/2013	03:19:46	2E12310B	26.24
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310B	26.27
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310B	26.33
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310B	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310B	26.10
021	C5611	7269454	11/16/2013	06:51:59	2E12310B	26.02
022	C5621	7269467	11/16/2013	07:34:27	2E12310B	26.02
023	C5626	7269472	11/16/2013	08:16:55	2E12310B	26.25
024	C5629	7269475	11/16/2013	08:59:20	2E12310B	26.17
025	C5632	7269478	11/16/2013	09:41:45	2E12310B	26.00
026	C5638	7269484	11/16/2013	10:24:11	2E12310B	26.21
027	C5641	7269487	11/16/2013	11:06:32	2E12310B	26.17
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310B	26.09
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310B	26.00
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310B	26.14
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310B	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310B	25.72
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310B	25.92

	ICAL Dates		ICAL RT	QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91	(25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310B	26.16
035	C5905	7269504	11/16/2013	16:46:09	2E12310B	26.09
036	C5915	7269514	11/16/2013	17:28:35	2E12310B	26.26
037	C5921	7269520	11/16/2013	18:11:00	2E12310B	26.03
038	C5927	7269526	11/16/2013	18:53:29	2E12310B	26.18
039	C5930	7269529	11/16/2013	19:35:53	2E12310B	26.18
040	C5933	7269532	11/16/2013	20:18:18	2E12310B	26.19
041	C5939	7269538	11/16/2013	21:00:45	2E12310B	26.09
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310B	26.11
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310B	
044	C5942	7269541	11/16/2013	23:07:56	2E12310B	26.25
045	C5945	7269544	11/16/2013	23:50:21	2E12310B	26.15
046	C5951	7269550	11/17/2013	00:32:48	2E12310B	26.36
047	C5954	7269553	11/17/2013	01:15:16	2E12310B	26.41
048	C5960	7269559	11/17/2013	01:57:42	2E12310B	26.10
049	C6109	7270974	11/17/2013	02:40:06	2E12310B	26.06
050	C6109	7270975	11/17/2013	03:22:32	2E12310B	26.23
051	C6109	7270976	11/17/2013	04:05:01	2E12310B	26.23
052	C6115	7270986	11/17/2013	04:47:25	2E12310B	26.18
053	C6118	7270989	11/17/2013	05:29:51	2E12310B	26.26
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310B	26.22
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310B	
056	C6124	7270995	11/17/2013	07:37:16	2E12310B	26.00
057	C6130	7271001	11/17/2013	08:19:42	2E12310B	25.85
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310B	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310B	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310B	25.85
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310B	25.81
062	R2N51	7265223	11/17/2013	11:51:56	3E12310B	
063	R2N52	7265224	11/17/2013	12:34:25	3E12310B	25.92
064	R2M61	7265228	11/17/2013	13:16:50	3E12310B	25.94
065	R2163	7265230	11/17/2013	13:59:19	3E12310B	25.71
066	R2163	7265231	11/17/2013	14:41:48	3E12310B	25.70

	ICAL Dates		ICAL RT QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310B	25.79
068	E2161	7265235	11/17/2013	16:06:43	3E12310B	25.82
069	R2141	7265238	11/17/2013	16:49:08	3E12310B	25.80
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310B	25.81
071	R2142	7265240	11/17/2013	18:14:03	3E12310B	25.87
072	R2122	7265243	11/17/2013	18:56:31	3E12310B	25.36 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310B	25.77
074	FBX02	7265248	11/17/2013	20:21:28	3E12310B	25.62
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310B	25.50 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310B	25.58
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310B	23.84 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310B	25.63
079	FB206	7266799	11/17/2013	23:53:49	3E12310B	25.07 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310B	25.65
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310B	25.23 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310B	25.61
083	2D123	7266810	11/18/2013	02:43:40	3E12310B	25.49 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310B	25.49 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310B	25.52 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310B	24.67 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310B	25.45 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310B	25.45 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310B	25.44 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310B	24.89 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310B	25.47 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310B	24.92 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310B	25.42 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310B	25.32 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310B	25.35 *

	ICAL Dates		ICAL RT QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310	27.44
002		CONDITIONER	11/18/2013	19:10:45	4E12310	27.11
003		CONDITIONER	11/18/2013	19:53:12	4E12310	27.36
004		CONDITIONER	11/18/2013	20:35:36	4E12310	27.33
005		CONDITIONER	11/18/2013	21:18:04	4E12310	27.27
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310	27.10
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310	27.26
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310	27.16
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310	27.21
011	DDHER	7263056	11/19/2013	01:32:32	4E12310	27.26
012	EEHER	7263057	11/19/2013	02:14:57	4E12310	27.42
013	F1HER	7263058	11/19/2013	02:57:29	4E12310	27.41
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310	27.34
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310	27.37
016	-K46C	7264286	11/19/2013	05:04:44	4E12310	27.40
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310	27.25
018	-L45C	7264287	11/19/2013	06:29:35	4E12310	27.31
019	-M44C	7264288	11/19/2013	07:12:02	4E12310	27.27
020	-N44A	7264289	11/19/2013	07:54:27	4E12310	27.40
021	-044C	7264290	11/19/2013	08:36:57	4E12310	27.31
022	77M44	7266116	11/19/2013	09:19:26	4E12310	27.34
023	70J23	7266117	11/19/2013	10:01:49	4E12310	27.28
024	152-2	7266118	11/19/2013	10:44:12	4E12310	27.28
025	152-2	7266119	11/19/2013	11:26:35	4E12310	27.35
026	152-2	7266120	11/19/2013	12:09:02	4E12310	27.30
027	44M43	7266121	11/19/2013	12:51:30	4E12310	27.37
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310	27.29
029	55P43	7266122	11/19/2013	14:16:11	4E12310	27.35
030	22K46	7266123	11/19/2013	14:58:37	4E12310	27.48
031	04L45	7266124	11/19/2013	15:41:05	4E12310	27.30
032	47N42	7266127	11/19/2013	16:23:29	4E12310	27.26
033	S1522	7266128	11/19/2013	17:05:54	4E12310	27.37

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310	27.14
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310	27.13
036	R2M71	7265229	11/19/2013	19:13:13	4E12310	27.11
037	R2F14	7265239	11/19/2013	19:55:39	4E12310	27.25
038	2E131	7266809	11/19/2013	20:38:08	4E12310	27.31
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310	27.28
040	2C126	7266812	11/19/2013	22:02:59	4E12310	27.32
041	2C111	7266813	11/19/2013	22:45:27	4E12310	27.06
042	2E101	7266814	11/19/2013	23:27:51	4E12310	27.27
043	2E101	7266815	11/20/2013	00:10:16	4E12310	27.26
044	2E101	7266816	11/20/2013	00:52:39	4E12310	27.14
045	2E102	7266818	11/20/2013	01:35:05	4E12310	27.10
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310	27.23
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310	27.21
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310	27.25
049	75Q40	7270115	11/20/2013	04:24:52	4E12310	27.12
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310	27.35
051	83O39	7270116	11/20/2013	05:49:42	4E12310	27.20
052	83OFD	7270117	11/20/2013	06:32:07	4E12310	27.24
053	93O40	7270118	11/20/2013	07:14:33	4E12310	27.24
054	92P41	7270119	11/20/2013	07:57:03	4E12310	27.35
055	DW104	7270953	11/20/2013	08:39:27	4E12310	26.70 *
056	I1512	7270954	11/20/2013	09:21:52	4E12310	27.27
057	D1512	7270955	11/20/2013	10:04:19	4E12310	27.09
058	S1512	7270956	11/20/2013	10:46:50	4E12310	27.13
059	S1511	7270958	11/20/2013	11:29:15	4E12310	27.19
060	D-151	7270959	11/20/2013	12:11:40	4E12310	27.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310	27.21
062	IW104	7270960	11/20/2013	13:36:38	4E12310	27.14
063	I1511	7270961	11/20/2013	14:19:07	4E12310	26.99
064	M1041	7270962	11/20/2013	15:01:33	4E12310	27.06
065	FB-11	7274073	11/20/2013	15:43:59	4E12310	27.08
066	FB-12	7274074	11/20/2013	16:26:24	4E12310	26.95

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310	27.21

	ICAL Dates		ICAL RT QC Limits	
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310B	27.60
002		CONDITIONER	11/18/2013	19:10:45	4E12310B	27.27
003		CONDITIONER	11/18/2013	19:53:12	4E12310B	27.54
004		CONDITIONER	11/18/2013	20:35:36	4E12310B	27.52
005		CONDITIONER	11/18/2013	21:18:04	4E12310B	27.42
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310B	27.23
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310B	27.43
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310B	27.36
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310B	27.37
011	DDHER	7263056	11/19/2013	01:32:32	4E12310B	27.44
012	EEHER	7263057	11/19/2013	02:14:57	4E12310B	27.57
013	F1HER	7263058	11/19/2013	02:57:29	4E12310B	27.55
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310B	27.44
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310B	27.54
016	-K46C	7264286	11/19/2013	05:04:44	4E12310B	27.56
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310B	27.42
018	-L45C	7264287	11/19/2013	06:29:35	4E12310B	27.44
019	-M44C	7264288	11/19/2013	07:12:02	4E12310B	27.42
020	-N44A	7264289	11/19/2013	07:54:27	4E12310B	27.58
021	-044C	7264290	11/19/2013	08:36:57	4E12310B	27.44
022	77M44	7266116	11/19/2013	09:19:26	4E12310B	27.47
023	70J23	7266117	11/19/2013	10:01:49	4E12310B	27.44
024	152-2	7266118	11/19/2013	10:44:12	4E12310B	27.48
025	152-2	7266119	11/19/2013	11:26:35	4E12310B	27.52
026	152-2	7266120	11/19/2013	12:09:02	4E12310B	27.48
027	44M43	7266121	11/19/2013	12:51:30	4E12310B	27.54
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310B	27.44
029	55P43	7266122	11/19/2013	14:16:11	4E12310B	27.50
030	22K46	7266123	11/19/2013	14:58:37	4E12310B	27.62
031	04L45	7266124	11/19/2013	15:41:05	4E12310B	27.44
032	47N42	7266127	11/19/2013	16:23:29	4E12310B	27.43
033	S1522	7266128	11/19/2013	17:05:54	4E12310B	27.52

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310B	27.28
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310B	27.35
036	R2M71	7265229	11/19/2013	19:13:13	4E12310B	27.30
037	R2F14	7265239	11/19/2013	19:55:39	4E12310B	27.42
038	2E131	7266809	11/19/2013	20:38:08	4E12310B	27.41
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310B	27.42
040	2C126	7266812	11/19/2013	22:02:59	4E12310B	27.48
041	2C111	7266813	11/19/2013	22:45:27	4E12310B	27.21
042	2E101	7266814	11/19/2013	23:27:51	4E12310B	27.37
043	2E101	7266815	11/20/2013	00:10:16	4E12310B	27.39
044	2E101	7266816	11/20/2013	00:52:39	4E12310B	27.36
045	2E102	7266818	11/20/2013	01:35:05	4E12310B	27.30
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310B	27.36
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310B	27.35
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310B	27.39
049	75Q40	7270115	11/20/2013	04:24:52	4E12310B	27.30
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310B	27.48
051	83O39	7270116	11/20/2013	05:49:42	4E12310B	27.33
052	83OFD	7270117	11/20/2013	06:32:07	4E12310B	27.39
053	93O40	7270118	11/20/2013	07:14:33	4E12310B	27.46
054	92P41	7270119	11/20/2013	07:57:03	4E12310B	27.50
055	DW104	7270953	11/20/2013	08:39:27	4E12310B	27.19
056	I1512	7270954	11/20/2013	09:21:52	4E12310B	27.37
057	D1512	7270955	11/20/2013	10:04:19	4E12310B	27.28
058	S1512	7270956	11/20/2013	10:46:50	4E12310B	27.25
059	S1511	7270958	11/20/2013	11:29:15	4E12310B	27.33
060	D-151	7270959	11/20/2013	12:11:40	4E12310B	27.29
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310B	27.35
062	IW104	7270960	11/20/2013	13:36:38	4E12310B	27.28
063	I1511	7270961	11/20/2013	14:19:07	4E12310B	27.15
064	M1041	7270962	11/20/2013	15:01:33	4E12310B	27.17
065	FB-11	7274073	11/20/2013	15:43:59	4E12310B	27.21
066	FB-12	7274074	11/20/2013	16:26:24	4E12310B	27.11

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310B	27.39

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310	27.44
002		CONDITIONER	11/18/2013	19:10:45	4E12310	27.11
003		CONDITIONER	11/18/2013	19:53:12	4E12310	27.36
004		CONDITIONER	11/18/2013	20:35:36	4E12310	27.33
005		CONDITIONER	11/18/2013	21:18:04	4E12310	27.27
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310	27.10
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310	27.26
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310	27.16
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310	27.21
011	DDHER	7263056	11/19/2013	01:32:32	4E12310	27.26
012	EEHER	7263057	11/19/2013	02:14:57	4E12310	27.42
013	F1HER	7263058	11/19/2013	02:57:29	4E12310	27.41
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310	27.34
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310	27.37
016	-K46C	7264286	11/19/2013	05:04:44	4E12310	27.40
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310	27.25
018	-L45C	7264287	11/19/2013	06:29:35	4E12310	27.31
019	-M44C	7264288	11/19/2013	07:12:02	4E12310	27.27
020	-N44A	7264289	11/19/2013	07:54:27	4E12310	27.40
021	-044C	7264290	11/19/2013	08:36:57	4E12310	27.31
022	77M44	7266116	11/19/2013	09:19:26	4E12310	27.34
023	70J23	7266117	11/19/2013	10:01:49	4E12310	27.28
024	152-2	7266118	11/19/2013	10:44:12	4E12310	27.28
025	152-2	7266119	11/19/2013	11:26:35	4E12310	27.35
026	152-2	7266120	11/19/2013	12:09:02	4E12310	27.30
027	44M43	7266121	11/19/2013	12:51:30	4E12310	27.37
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310	27.29
029	55P43	7266122	11/19/2013	14:16:11	4E12310	27.35
030	22K46	7266123	11/19/2013	14:58:37	4E12310	27.48
031	04L45	7266124	11/19/2013	15:41:05	4E12310	27.30
032	47N42	7266127	11/19/2013	16:23:29	4E12310	27.26
033	S1522	7266128	11/19/2013	17:05:54	4E12310	27.37

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310	27.14
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310	27.13
036	R2M71	7265229	11/19/2013	19:13:13	4E12310	27.11
037	R2F14	7265239	11/19/2013	19:55:39	4E12310	27.25
038	2E131	7266809	11/19/2013	20:38:08	4E12310	27.31
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310	27.28
040	2C126	7266812	11/19/2013	22:02:59	4E12310	27.32
041	2C111	7266813	11/19/2013	22:45:27	4E12310	27.06
042	2E101	7266814	11/19/2013	23:27:51	4E12310	27.27
043	2E101	7266815	11/20/2013	00:10:16	4E12310	27.26
044	2E101	7266816	11/20/2013	00:52:39	4E12310	27.14
045	2E102	7266818	11/20/2013	01:35:05	4E12310	27.10
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310	27.23
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310	27.21
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310	27.25
049	75Q40	7270115	11/20/2013	04:24:52	4E12310	27.12
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310	27.35
051	83O39	7270116	11/20/2013	05:49:42	4E12310	27.20
052	83OFD	7270117	11/20/2013	06:32:07	4E12310	27.24
053	93O40	7270118	11/20/2013	07:14:33	4E12310	27.24
054	92P41	7270119	11/20/2013	07:57:03	4E12310	27.35
055	DW104	7270953	11/20/2013	08:39:27	4E12310	26.70 *
056	I1512	7270954	11/20/2013	09:21:52	4E12310	27.27
057	D1512	7270955	11/20/2013	10:04:19	4E12310	27.09
058	S1512	7270956	11/20/2013	10:46:50	4E12310	27.13
059	S1511	7270958	11/20/2013	11:29:15	4E12310	27.19
060	D-151	7270959	11/20/2013	12:11:40	4E12310	27.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310	27.21
062	IW104	7270960	11/20/2013	13:36:38	4E12310	27.14
063	I1511	7270961	11/20/2013	14:19:07	4E12310	26.99
064	M1041	7270962	11/20/2013	15:01:33	4E12310	27.06
065	FB-11	7274073	11/20/2013	15:43:59	4E12310	27.08
066	FB-12	7274074	11/20/2013	16:26:24	4E12310	26.95

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310	27.21

	ICAL Dates		ICAL RT QC Limits	
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

Form VIII PEST

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310B	27.60
002		CONDITIONER	11/18/2013	19:10:45	4E12310B	27.27
003		CONDITIONER	11/18/2013	19:53:12	4E12310B	27.54
004		CONDITIONER	11/18/2013	20:35:36	4E12310B	27.52
005		CONDITIONER	11/18/2013	21:18:04	4E12310B	27.42
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310B	27.23
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310B	27.43
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310B	27.36
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310B	27.37
011	DDHER	7263056	11/19/2013	01:32:32	4E12310B	27.44
012	EEHER	7263057	11/19/2013	02:14:57	4E12310B	27.57
013	F1HER	7263058	11/19/2013	02:57:29	4E12310B	27.55
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310B	27.44
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310B	27.54
016	-K46C	7264286	11/19/2013	05:04:44	4E12310B	27.56
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310B	27.42
018	-L45C	7264287	11/19/2013	06:29:35	4E12310B	27.44
019	-M44C	7264288	11/19/2013	07:12:02	4E12310B	27.42
020	-N44A	7264289	11/19/2013	07:54:27	4E12310B	27.58
021	-044C	7264290	11/19/2013	08:36:57	4E12310B	27.44
022	77M44	7266116	11/19/2013	09:19:26	4E12310B	27.47
023	70J23	7266117	11/19/2013	10:01:49	4E12310B	27.44
024	152-2	7266118	11/19/2013	10:44:12	4E12310B	27.48
025	152-2	7266119	11/19/2013	11:26:35	4E12310B	27.52
026	152-2	7266120	11/19/2013	12:09:02	4E12310B	27.48
027	44M43	7266121	11/19/2013	12:51:30	4E12310B	27.54
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310B	27.44
029	55P43	7266122	11/19/2013	14:16:11	4E12310B	27.50
030	22K46	7266123	11/19/2013	14:58:37	4E12310B	27.62
031	04L45	7266124	11/19/2013	15:41:05	4E12310B	27.44
032	47N42	7266127	11/19/2013	16:23:29	4E12310B	27.43
033	S1522	7266128	11/19/2013	17:05:54	4E12310B	27.52

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310B	27.28
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310B	27.35
036	R2M71	7265229	11/19/2013	19:13:13	4E12310B	27.30
037	R2F14	7265239	11/19/2013	19:55:39	4E12310B	27.42
038	2E131	7266809	11/19/2013	20:38:08	4E12310B	27.41
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310B	27.42
040	2C126	7266812	11/19/2013	22:02:59	4E12310B	27.48
041	2C111	7266813	11/19/2013	22:45:27	4E12310B	27.21
042	2E101	7266814	11/19/2013	23:27:51	4E12310B	27.37
043	2E101	7266815	11/20/2013	00:10:16	4E12310B	27.39
044	2E101	7266816	11/20/2013	00:52:39	4E12310B	27.36
045	2E102	7266818	11/20/2013	01:35:05	4E12310B	27.30
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310B	27.36
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310B	27.35
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310B	27.39
049	75Q40	7270115	11/20/2013	04:24:52	4E12310B	27.30
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310B	27.48
051	83O39	7270116	11/20/2013	05:49:42	4E12310B	27.33
052	83OFD	7270117	11/20/2013	06:32:07	4E12310B	27.39
053	93O40	7270118	11/20/2013	07:14:33	4E12310B	27.46
054	92P41	7270119	11/20/2013	07:57:03	4E12310B	27.50
055	DW104	7270953	11/20/2013	08:39:27	4E12310B	27.19
056	I1512	7270954	11/20/2013	09:21:52	4E12310B	27.37
057	D1512	7270955	11/20/2013	10:04:19	4E12310B	27.28
058	S1512	7270956	11/20/2013	10:46:50	4E12310B	27.25
059	S1511	7270958	11/20/2013	11:29:15	4E12310B	27.33
060	D-151	7270959	11/20/2013	12:11:40	4E12310B	27.29
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310B	27.35
062	IW104	7270960	11/20/2013	13:36:38	4E12310B	27.28
063	I1511	7270961	11/20/2013	14:19:07	4E12310B	27.15
064	M1041	7270962	11/20/2013	15:01:33	4E12310B	27.17
065	FB-11	7274073	11/20/2013	15:43:59	4E12310B	27.21
066	FB-12	7274074	11/20/2013	16:26:24	4E12310B	27.11

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310B	27.39

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

Form VIII PEST

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D

ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D

ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

FORM VIII PEST

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D

ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT QC Limits	
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310	34.29
002		CONDITIONER	11/15/2013	17:25:53	2C12310	34.29
003		CONDITIONER	11/15/2013	18:08:16	2C12310	34.29
004		CONDITIONER	11/15/2013	18:50:40	2C12310	34.29
005		CONDITIONER	11/15/2013	19:33:09	2C12310	34.27
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310	34.29
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310	34.25
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310	34.24
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310	34.25
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310	34.24
015	C5605	7269438	11/16/2013	03:19:46	2C12310	34.22
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310	34.18
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310	34.17
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310	34.27
020	C5611	7269454	11/16/2013	06:51:59	2C12310	34.21
021	C5621	7269467	11/16/2013	07:34:27	2C12310	34.22
022	C5626	7269472	11/16/2013	08:16:55	2C12310	34.19
023	C5629	7269475	11/16/2013	08:59:19	2C12310	34.22
024	C5632	7269478	11/16/2013	09:41:45	2C12310	34.24
025	C5638	7269484	11/16/2013	10:24:11	2C12310	34.19
026	C5641	7269487	11/16/2013	11:06:32	2C12310	34.19
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310	34.20
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310	34.28
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310	34.20
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310	34.17
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310	34.24
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310	34.22
033	C5902	7269501	11/16/2013	16:03:43	2C12310	34.20

	ICAL Dates		ICAL RT	QC Limits
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310	34.19
035	C5915	7269514	11/16/2013	17:28:35	2C12310	34.15
036	C5921	7269520	11/16/2013	18:11:00	2C12310	34.23
037	C5927	7269526	11/16/2013	18:53:29	2C12310	34.19
038	C5930	7269529	11/16/2013	19:35:53	2C12310	34.17
039	C5933	7269532	11/16/2013	20:18:19	2C12310	34.21
040	C5939	7269538	11/16/2013	21:00:44	2C12310	34.23
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310	34.20
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310	
043	C5942	7269541	11/16/2013	23:07:56	2C12310	34.17
044	C5945	7269544	11/16/2013	23:50:21	2C12310	34.18
045	C5951	7269550	11/17/2013	00:32:48	2C12310	34.16
046	C5954	7269553	11/17/2013	01:15:16	2C12310	34.16
047	C5960	7269559	11/17/2013	01:57:42	2C12310	34.21
048	C6109	7270974	11/17/2013	02:40:06	2C12310	34.22
049	C6109	7270975	11/17/2013	03:22:31	2C12310	34.23
050	C6109	7270976	11/17/2013	04:05:00	2C12310	34.25
051	C6115	7270986	11/17/2013	04:47:25	2C12310	34.19
052	C6118	7270989	11/17/2013	05:29:51	2C12310	34.18
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310	34.20
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310	
055	C6124	7270995	11/17/2013	07:37:16	2C12310	34.21
056	C6130	7271001	11/17/2013	08:19:42	2C12310	34.23
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310	34.21
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310	34.26
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310	34.29
061	R2N51	7265223	11/17/2013	11:51:56	3C12310	34.30
062	R2N52	7265224	11/17/2013	12:34:25	3C12310	34.26
063	R2M61	7265228	11/17/2013	13:16:50	3C12310	34.23
064	R2163	7265230	11/17/2013	13:59:19	3C12310	34.29
065	R2163	7265231	11/17/2013	14:41:48	3C12310	34.34 *
066	R2163	7265232	11/17/2013	15:24:17	3C12310	34.32 *

	ICAL Dates		ICAL RT	QC Limits
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310	34.26
068	R2141	7265238	11/17/2013	16:49:08	3C12310	34.27
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310	34.24
070	R2142	7265240	11/17/2013	18:14:03	3C12310	34.26
071	R2122	7265243	11/17/2013	18:56:30	3C12310	34.20
072	FBX01	7265247	11/17/2013	19:38:55	3C12310	34.28
073	FBX02	7265248	11/17/2013	20:21:28	3C12310	34.29
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310	34.30
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310	34.35 *
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310	34.29
077	FB106	7266798	11/17/2013	23:11:20	3C12310	34.30
078	FB206	7266799	11/17/2013	23:53:48	3C12310	34.18
079	2B152	7266805	11/18/2013	00:36:17	3C12310	34.29
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310	34.26
081	2B151	7266807	11/18/2013	02:01:14	3C12310	34.30
082	2D123	7266810	11/18/2013	02:43:40	3C12310	34.31
083	2D121	7266811	11/18/2013	03:25:57	3C12310	34.32 *
084	3--FD	7266819	11/18/2013	04:08:25	3C12310	34.32 *
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310	34.23
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310	34.21
087	2G124	7266800	11/18/2013	06:15:48	3C12310	34.30
088	2G124	7266801	11/18/2013	06:58:17	3C12310	34.30
089	2G124	7266802	11/18/2013	07:40:42	3C12310	34.23
090	2G125	7266804	11/18/2013	08:23:14	3C12310	34.31
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310	34.21
092	2C152	7266806	11/18/2013	09:48:09	3C12310	34.30
093	2C151	7266808	11/18/2013	10:30:40	3C12310	34.32 *
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310B	
002		CONDITIONER	11/15/2013	17:25:53	2C12310B	
003		CONDITIONER	11/15/2013	18:08:16	2C12310B	
004		CONDITIONER	11/15/2013	18:50:40	2C12310B	
005		CONDITIONER	11/15/2013	19:33:09	2C12310B	
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310B	
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310B	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310B	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310B	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310B	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310B	
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310B	
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310B	
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310B	
015	C5605	7269438	11/16/2013	03:19:46	2C12310B	
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310B	
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310B	
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310B	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310B	
020	C5611	7269454	11/16/2013	06:51:59	2C12310B	
021	C5621	7269467	11/16/2013	07:34:27	2C12310B	
022	C5626	7269472	11/16/2013	08:16:55	2C12310B	
023	C5629	7269475	11/16/2013	08:59:19	2C12310B	
024	C5632	7269478	11/16/2013	09:41:45	2C12310B	
025	C5638	7269484	11/16/2013	10:24:11	2C12310B	
026	C5641	7269487	11/16/2013	11:06:32	2C12310B	
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310B	
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310B	
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310B	
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310B	
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310B	
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310B	
033	C5902	7269501	11/16/2013	16:03:43	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310B	
035	C5915	7269514	11/16/2013	17:28:35	2C12310B	
036	C5921	7269520	11/16/2013	18:11:00	2C12310B	
037	C5927	7269526	11/16/2013	18:53:29	2C12310B	
038	C5930	7269529	11/16/2013	19:35:53	2C12310B	
039	C5933	7269532	11/16/2013	20:18:19	2C12310B	
040	C5939	7269538	11/16/2013	21:00:44	2C12310B	
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310B	
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310B	
043	C5942	7269541	11/16/2013	23:07:56	2C12310B	
044	C5945	7269544	11/16/2013	23:50:21	2C12310B	
045	C5951	7269550	11/17/2013	00:32:48	2C12310B	
046	C5954	7269553	11/17/2013	01:15:16	2C12310B	
047	C5960	7269559	11/17/2013	01:57:42	2C12310B	
048	C6109	7270974	11/17/2013	02:40:06	2C12310B	
049	C6109	7270975	11/17/2013	03:22:31	2C12310B	
050	C6109	7270976	11/17/2013	04:05:00	2C12310B	
051	C6115	7270986	11/17/2013	04:47:25	2C12310B	
052	C6118	7270989	11/17/2013	05:29:51	2C12310B	
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310B	
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310B	
055	C6124	7270995	11/17/2013	07:37:16	2C12310B	
056	C6130	7271001	11/17/2013	08:19:42	2C12310B	
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310B	
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310B	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310B	
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310B	
061	R2N51	7265223	11/17/2013	11:51:56	3C12310B	
062	R2N52	7265224	11/17/2013	12:34:25	3C12310B	
063	R2M61	7265228	11/17/2013	13:16:50	3C12310B	
064	R2163	7265230	11/17/2013	13:59:19	3C12310B	
065	R2163	7265231	11/17/2013	14:41:48	3C12310B	
066	R2163	7265232	11/17/2013	15:24:17	3C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310B	
068	R2141	7265238	11/17/2013	16:49:08	3C12310B	
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310B	
070	R2142	7265240	11/17/2013	18:14:03	3C12310B	
071	R2122	7265243	11/17/2013	18:56:30	3C12310B	
072	FBX01	7265247	11/17/2013	19:38:55	3C12310B	
073	FBX02	7265248	11/17/2013	20:21:28	3C12310B	
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310B	
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310B	
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310B	
077	FB106	7266798	11/17/2013	23:11:20	3C12310B	
078	FB206	7266799	11/17/2013	23:53:48	3C12310B	
079	2B152	7266805	11/18/2013	00:36:17	3C12310B	
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310B	
081	2B151	7266807	11/18/2013	02:01:14	3C12310B	
082	2D123	7266810	11/18/2013	02:43:40	3C12310B	
083	2D121	7266811	11/18/2013	03:25:57	3C12310B	
084	3--FD	7266819	11/18/2013	04:08:25	3C12310B	
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310B	
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310B	
087	2G124	7266800	11/18/2013	06:15:48	3C12310B	
088	2G124	7266801	11/18/2013	06:58:17	3C12310B	
089	2G124	7266802	11/18/2013	07:40:42	3C12310B	
090	2G125	7266804	11/18/2013	08:23:14	3C12310B	
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310B	
092	2C152	7266806	11/18/2013	09:48:09	3C12310B	
093	2C151	7266808	11/18/2013	10:30:40	3C12310B	
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310B	

	ICAL Dates		ICAL RT QC Limits	
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310	34.15
002		CONDITIONER	11/18/2013	19:10:45	4C12310	34.18
003		CONDITIONER	11/18/2013	19:53:12	4C12310	34.18
004		CONDITIONER	11/18/2013	20:35:36	4C12310	34.18
005		CONDITIONER	11/18/2013	21:18:04	4C12310	34.18
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310	34.16
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310	34.20
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310	34.19
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310	34.22
011	DDHER	7263056	11/19/2013	01:32:32	4C12310	34.24
012	EEHER	7263057	11/19/2013	02:14:57	4C12310	34.19
013	F1HER	7263058	11/19/2013	02:57:28	4C12310	34.21
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310	34.20
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310	34.18
016	-K46C	7264286	11/19/2013	05:04:44	4C12310	34.17
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310	34.15
018	-L45C	7264287	11/19/2013	06:29:35	4C12310	34.18
019	-M44C	7264288	11/19/2013	07:12:02	4C12310	34.19
020	-N44A	7264289	11/19/2013	07:54:27	4C12310	34.18
021	-044C	7264290	11/19/2013	08:36:57	4C12310	34.18
022	77M44	7266116	11/19/2013	09:19:25	4C12310	34.16
023	70J23	7266117	11/19/2013	10:01:49	4C12310	34.20
024	152-2	7266118	11/19/2013	10:44:12	4C12310	34.19
025	152-2	7266119	11/19/2013	11:26:35	4C12310	34.18
026	152-2	7266120	11/19/2013	12:09:02	4C12310	34.18
027	44M43	7266121	11/19/2013	12:51:29	4C12310	34.15
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310	34.15
029	55P43	7266122	11/19/2013	14:16:11	4C12310	34.19
030	22K46	7266123	11/19/2013	14:58:37	4C12310	34.14
031	04L45	7266124	11/19/2013	15:41:05	4C12310	34.17
032	47N42	7266127	11/19/2013	16:23:28	4C12310	34.17
033	S1522	7266128	11/19/2013	17:05:54	4C12310	34.14

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310	34.15
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310	34.15
036	R2M71	7265229	11/19/2013	19:13:13	4C12310	34.15
037	R2F14	7265239	11/19/2013	19:55:39	4C12310	34.13
038	2E131	7266809	11/19/2013	20:38:08	4C12310	34.15
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310	34.12
040	2C126	7266812	11/19/2013	22:02:59	4C12310	34.13
041	2C111	7266813	11/19/2013	22:45:27	4C12310	34.15
042	2E101	7266814	11/19/2013	23:27:51	4C12310	34.12
043	2E101	7266815	11/20/2013	00:10:15	4C12310	34.15
044	2E101	7266816	11/20/2013	00:52:39	4C12310	34.15
045	2E102	7266818	11/20/2013	01:35:05	4C12310	34.14
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310	34.14
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310	34.14
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310	34.15
049	75Q40	7270115	11/20/2013	04:24:52	4C12310	34.15
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310	34.10
051	83O39	7270116	11/20/2013	05:49:42	4C12310	34.12
052	83OFD	7270117	11/20/2013	06:32:07	4C12310	34.15
053	93O40	7270118	11/20/2013	07:14:33	4C12310	34.12
054	92P41	7270119	11/20/2013	07:57:03	4C12310	34.13
055	DW104	7270953	11/20/2013	08:39:27	4C12310	34.14
056	I1512	7270954	11/20/2013	09:21:52	4C12310	34.14
057	D1512	7270955	11/20/2013	10:04:19	4C12310	34.13
058	S1512	7270956	11/20/2013	10:46:50	4C12310	34.13
059	S1511	7270958	11/20/2013	11:29:14	4C12310	34.16
060	D-151	7270959	11/20/2013	12:11:40	4C12310	34.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310	34.14
062	IW104	7270960	11/20/2013	13:36:38	4C12310	34.16
063	I1511	7270961	11/20/2013	14:19:07	4C12310	34.16
064	M1041	7270962	11/20/2013	15:01:33	4C12310	34.16
065	FB-11	7274073	11/20/2013	15:43:59	4C12310	34.14
066	FB-12	7274074	11/20/2013	16:26:24	4C12310	34.16

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310	34.12

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310B	
002		CONDITIONER	11/18/2013	19:10:45	4C12310B	
003		CONDITIONER	11/18/2013	19:53:12	4C12310B	
004		CONDITIONER	11/18/2013	20:35:36	4C12310B	
005		CONDITIONER	11/18/2013	21:18:04	4C12310B	
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310B	
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310B	
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310B	
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310B	
011	DDHER	7263056	11/19/2013	01:32:32	4C12310B	
012	EEHER	7263057	11/19/2013	02:14:57	4C12310B	
013	F1HER	7263058	11/19/2013	02:57:28	4C12310B	
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310B	
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310B	
016	-K46C	7264286	11/19/2013	05:04:44	4C12310B	
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310B	
018	-L45C	7264287	11/19/2013	06:29:35	4C12310B	
019	-M44C	7264288	11/19/2013	07:12:02	4C12310B	
020	-N44A	7264289	11/19/2013	07:54:27	4C12310B	
021	-044C	7264290	11/19/2013	08:36:57	4C12310B	
022	77M44	7266116	11/19/2013	09:19:25	4C12310B	
023	70J23	7266117	11/19/2013	10:01:49	4C12310B	
024	152-2	7266118	11/19/2013	10:44:12	4C12310B	
025	152-2	7266119	11/19/2013	11:26:35	4C12310B	
026	152-2	7266120	11/19/2013	12:09:02	4C12310B	
027	44M43	7266121	11/19/2013	12:51:29	4C12310B	
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310B	
029	55P43	7266122	11/19/2013	14:16:11	4C12310B	
030	22K46	7266123	11/19/2013	14:58:37	4C12310B	
031	04L45	7266124	11/19/2013	15:41:05	4C12310B	
032	47N42	7266127	11/19/2013	16:23:28	4C12310B	
033	S1522	7266128	11/19/2013	17:05:54	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310B	
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310B	
036	R2M71	7265229	11/19/2013	19:13:13	4C12310B	
037	R2F14	7265239	11/19/2013	19:55:39	4C12310B	
038	2E131	7266809	11/19/2013	20:38:08	4C12310B	
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310B	
040	2C126	7266812	11/19/2013	22:02:59	4C12310B	
041	2C111	7266813	11/19/2013	22:45:27	4C12310B	
042	2E101	7266814	11/19/2013	23:27:51	4C12310B	
043	2E101	7266815	11/20/2013	00:10:15	4C12310B	
044	2E101	7266816	11/20/2013	00:52:39	4C12310B	
045	2E102	7266818	11/20/2013	01:35:05	4C12310B	
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310B	
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310B	
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310B	
049	75Q40	7270115	11/20/2013	04:24:52	4C12310B	
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310B	
051	83O39	7270116	11/20/2013	05:49:42	4C12310B	
052	83OFD	7270117	11/20/2013	06:32:07	4C12310B	
053	93O40	7270118	11/20/2013	07:14:33	4C12310B	
054	92P41	7270119	11/20/2013	07:57:03	4C12310B	
055	DW104	7270953	11/20/2013	08:39:27	4C12310B	
056	I1512	7270954	11/20/2013	09:21:52	4C12310B	
057	D1512	7270955	11/20/2013	10:04:19	4C12310B	
058	S1512	7270956	11/20/2013	10:46:50	4C12310B	
059	S1511	7270958	11/20/2013	11:29:14	4C12310B	
060	D-151	7270959	11/20/2013	12:11:40	4C12310B	
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310B	
062	IW104	7270960	11/20/2013	13:36:38	4C12310B	
063	I1511	7270961	11/20/2013	14:19:07	4C12310B	
064	M1041	7270962	11/20/2013	15:01:33	4C12310B	
065	FB-11	7274073	11/20/2013	15:43:59	4C12310B	
066	FB-12	7274074	11/20/2013	16:26:24	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310	34.15
002		CONDITIONER	11/18/2013	19:10:45	4C12310	34.18
003		CONDITIONER	11/18/2013	19:53:12	4C12310	34.18
004		CONDITIONER	11/18/2013	20:35:36	4C12310	34.18
005		CONDITIONER	11/18/2013	21:18:04	4C12310	34.18
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310	34.16
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310	34.20
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310	34.19
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310	34.22
011	DDHER	7263056	11/19/2013	01:32:32	4C12310	34.24
012	EEHER	7263057	11/19/2013	02:14:57	4C12310	34.19
013	F1HER	7263058	11/19/2013	02:57:28	4C12310	34.21
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310	34.20
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310	34.18
016	-K46C	7264286	11/19/2013	05:04:44	4C12310	34.17
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310	34.15
018	-L45C	7264287	11/19/2013	06:29:35	4C12310	34.18
019	-M44C	7264288	11/19/2013	07:12:02	4C12310	34.19
020	-N44A	7264289	11/19/2013	07:54:27	4C12310	34.18
021	-044C	7264290	11/19/2013	08:36:57	4C12310	34.18
022	77M44	7266116	11/19/2013	09:19:25	4C12310	34.16
023	70J23	7266117	11/19/2013	10:01:49	4C12310	34.20
024	152-2	7266118	11/19/2013	10:44:12	4C12310	34.19
025	152-2	7266119	11/19/2013	11:26:35	4C12310	34.18
026	152-2	7266120	11/19/2013	12:09:02	4C12310	34.18
027	44M43	7266121	11/19/2013	12:51:29	4C12310	34.15
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310	34.15
029	55P43	7266122	11/19/2013	14:16:11	4C12310	34.19
030	22K46	7266123	11/19/2013	14:58:37	4C12310	34.14
031	04L45	7266124	11/19/2013	15:41:05	4C12310	34.17
032	47N42	7266127	11/19/2013	16:23:28	4C12310	34.17
033	S1522	7266128	11/19/2013	17:05:54	4C12310	34.14

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310	34.15
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310	34.15
036	R2M71	7265229	11/19/2013	19:13:13	4C12310	34.15
037	R2F14	7265239	11/19/2013	19:55:39	4C12310	34.13
038	2E131	7266809	11/19/2013	20:38:08	4C12310	34.15
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310	34.12
040	2C126	7266812	11/19/2013	22:02:59	4C12310	34.13
041	2C111	7266813	11/19/2013	22:45:27	4C12310	34.15
042	2E101	7266814	11/19/2013	23:27:51	4C12310	34.12
043	2E101	7266815	11/20/2013	00:10:15	4C12310	34.15
044	2E101	7266816	11/20/2013	00:52:39	4C12310	34.15
045	2E102	7266818	11/20/2013	01:35:05	4C12310	34.14
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310	34.14
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310	34.14
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310	34.15
049	75Q40	7270115	11/20/2013	04:24:52	4C12310	34.15
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310	34.10
051	83O39	7270116	11/20/2013	05:49:42	4C12310	34.12
052	83OFD	7270117	11/20/2013	06:32:07	4C12310	34.15
053	93O40	7270118	11/20/2013	07:14:33	4C12310	34.12
054	92P41	7270119	11/20/2013	07:57:03	4C12310	34.13
055	DW104	7270953	11/20/2013	08:39:27	4C12310	34.14
056	I1512	7270954	11/20/2013	09:21:52	4C12310	34.14
057	D1512	7270955	11/20/2013	10:04:19	4C12310	34.13
058	S1512	7270956	11/20/2013	10:46:50	4C12310	34.13
059	S1511	7270958	11/20/2013	11:29:14	4C12310	34.16
060	D-151	7270959	11/20/2013	12:11:40	4C12310	34.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310	34.14
062	IW104	7270960	11/20/2013	13:36:38	4C12310	34.16
063	I1511	7270961	11/20/2013	14:19:07	4C12310	34.16
064	M1041	7270962	11/20/2013	15:01:33	4C12310	34.16
065	FB-11	7274073	11/20/2013	15:43:59	4C12310	34.14
066	FB-12	7274074	11/20/2013	16:26:24	4C12310	34.16

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310	34.12

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310B	
002		CONDITIONER	11/18/2013	19:10:45	4C12310B	
003		CONDITIONER	11/18/2013	19:53:12	4C12310B	
004		CONDITIONER	11/18/2013	20:35:36	4C12310B	
005		CONDITIONER	11/18/2013	21:18:04	4C12310B	
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310B	
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310B	
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310B	
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310B	
011	DDHER	7263056	11/19/2013	01:32:32	4C12310B	
012	EEHER	7263057	11/19/2013	02:14:57	4C12310B	
013	F1HER	7263058	11/19/2013	02:57:28	4C12310B	
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310B	
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310B	
016	-K46C	7264286	11/19/2013	05:04:44	4C12310B	
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310B	
018	-L45C	7264287	11/19/2013	06:29:35	4C12310B	
019	-M44C	7264288	11/19/2013	07:12:02	4C12310B	
020	-N44A	7264289	11/19/2013	07:54:27	4C12310B	
021	-044C	7264290	11/19/2013	08:36:57	4C12310B	
022	77M44	7266116	11/19/2013	09:19:25	4C12310B	
023	70J23	7266117	11/19/2013	10:01:49	4C12310B	
024	152-2	7266118	11/19/2013	10:44:12	4C12310B	
025	152-2	7266119	11/19/2013	11:26:35	4C12310B	
026	152-2	7266120	11/19/2013	12:09:02	4C12310B	
027	44M43	7266121	11/19/2013	12:51:29	4C12310B	
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310B	
029	55P43	7266122	11/19/2013	14:16:11	4C12310B	
030	22K46	7266123	11/19/2013	14:58:37	4C12310B	
031	04L45	7266124	11/19/2013	15:41:05	4C12310B	
032	47N42	7266127	11/19/2013	16:23:28	4C12310B	
033	S1522	7266128	11/19/2013	17:05:54	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310B	
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310B	
036	R2M71	7265229	11/19/2013	19:13:13	4C12310B	
037	R2F14	7265239	11/19/2013	19:55:39	4C12310B	
038	2E131	7266809	11/19/2013	20:38:08	4C12310B	
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310B	
040	2C126	7266812	11/19/2013	22:02:59	4C12310B	
041	2C111	7266813	11/19/2013	22:45:27	4C12310B	
042	2E101	7266814	11/19/2013	23:27:51	4C12310B	
043	2E101	7266815	11/20/2013	00:10:15	4C12310B	
044	2E101	7266816	11/20/2013	00:52:39	4C12310B	
045	2E102	7266818	11/20/2013	01:35:05	4C12310B	
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310B	
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310B	
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310B	
049	75Q40	7270115	11/20/2013	04:24:52	4C12310B	
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310B	
051	83O39	7270116	11/20/2013	05:49:42	4C12310B	
052	83OFD	7270117	11/20/2013	06:32:07	4C12310B	
053	93O40	7270118	11/20/2013	07:14:33	4C12310B	
054	92P41	7270119	11/20/2013	07:57:03	4C12310B	
055	DW104	7270953	11/20/2013	08:39:27	4C12310B	
056	I1512	7270954	11/20/2013	09:21:52	4C12310B	
057	D1512	7270955	11/20/2013	10:04:19	4C12310B	
058	S1512	7270956	11/20/2013	10:46:50	4C12310B	
059	S1511	7270958	11/20/2013	11:29:14	4C12310B	
060	D-151	7270959	11/20/2013	12:11:40	4C12310B	
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310B	
062	IW104	7270960	11/20/2013	13:36:38	4C12310B	
063	I1511	7270961	11/20/2013	14:19:07	4C12310B	
064	M1041	7270962	11/20/2013	15:01:33	4C12310B	
065	FB-11	7274073	11/20/2013	15:43:59	4C12310B	
066	FB-12	7274074	11/20/2013	16:26:24	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

Sample Data

Explosives

Fraction: Explosives

06918: Nitroaromatics/Amines in Solid Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	2,000	6,000	ug/kg
PETN	2,000	6,000	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
HMX	250	750	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
RDX	130	300	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
Nitrobenzene	100	300	ug/kg
PETN	2,000	6,000	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
HMX	250	750	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
RDX	130	300	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
Tetryl	150	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
Nitrobenzene	100	300	ug/kg
2,4,6-Trinitrotoluene	100	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
Tetryl	150	300	ug/kg
1-Nitronaphthalene	100	300	ug/kg

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	5.2	15	ug/l
PETN	6.0	18	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
HMX	0.65	2.0	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
RDX	0.20	0.50	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
Nitrobenzene	0.20	0.60	ug/l

Fraction: Explosives

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
1,2-Dinitrobenzene	0.20	0.60	ug/l
HMX	0.65	2.0	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
RDX	0.20	0.50	ug/l
1,2-Dinitrobenzene	0.20	0.60	ug/l
Tetryl	0.40	0.60	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
Nitrobenzene	0.20	0.60	ug/l
2,4,6-Trinitrotoluene	0.20	0.60	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
Tetryl	0.40	0.60	ug/l
1-Nitronaphthalene	0.20	0.60	ug/l

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Data Summary

Sample Name: 7263051 FFHEC Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 00:50:07
Instrument	X6329A
Result file	5E12310.10R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 98% (73 - 122) Conc: 9.853521

Analysis Report (B)

Injected on	Nov 19, 2013 00:50:07
Instrument	Y6329A
Result file	5C12310.10R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 106% (73 - 122) Conc: 10.608198

Single Component Data

Compound	Min	RT	Max	Area	Amount
2-NMX	26.91	27.21	27.59	16794	9.853521

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.22	34.25	16660	10.608198

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.853521				7.38	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263051 FFHEC Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 00:50:07
Instrument : CP12--X6329A
Result file : 5E12310.10R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 98% (73-122) Conc.: 9.853521

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	26.91	27.21	27.59	16794	9.853521

Analysis Report (B)

Injected on : NOV 19, 2013 00:50:07
Instrument : CP12--X6329B
Result file : 5E12310B.10R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 100% (73-122) Conc.: 10.007217

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.37	27.76	244411	10.007217

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.853521				1.55	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

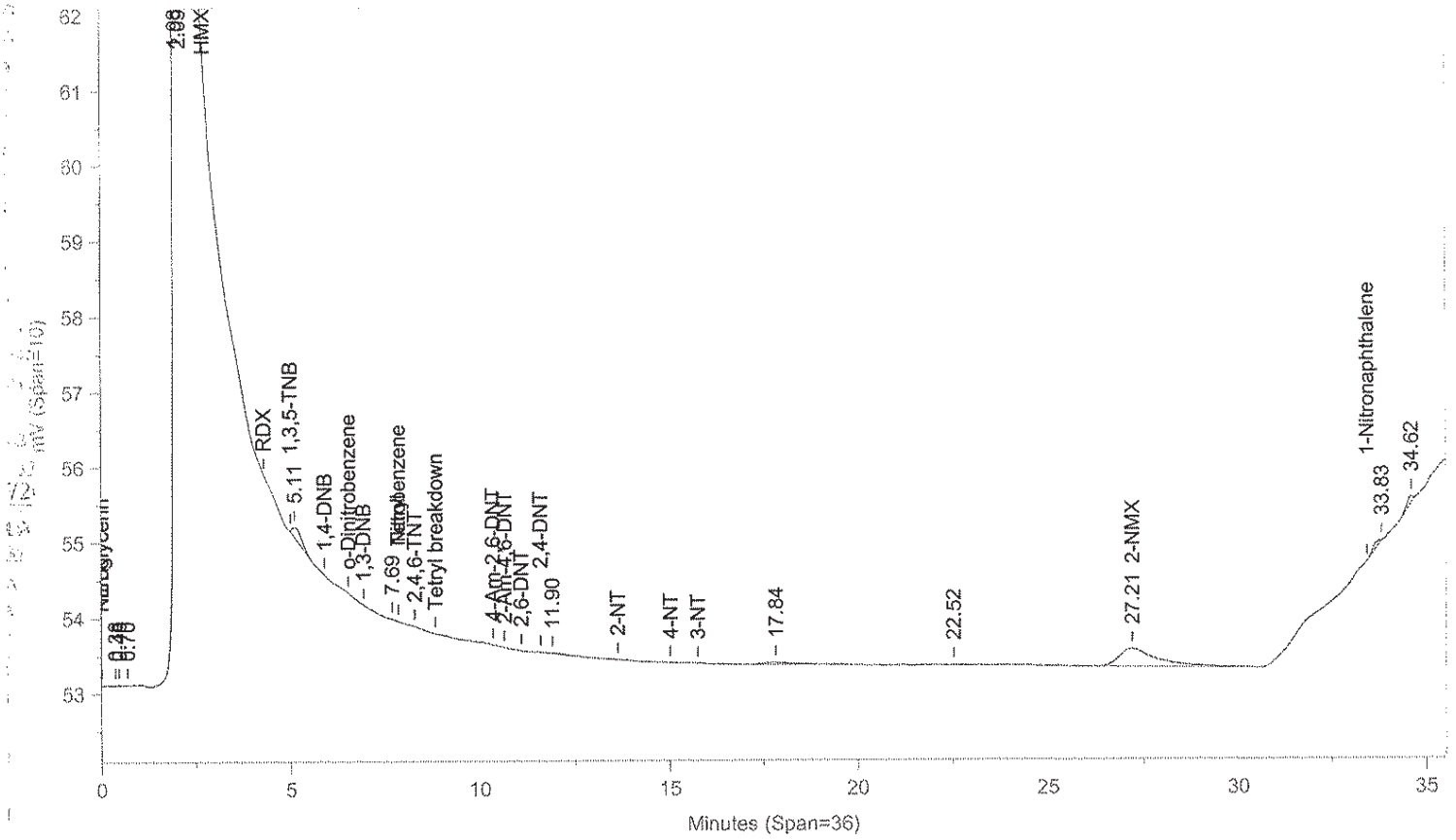
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Finnegan, Principal Chemist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

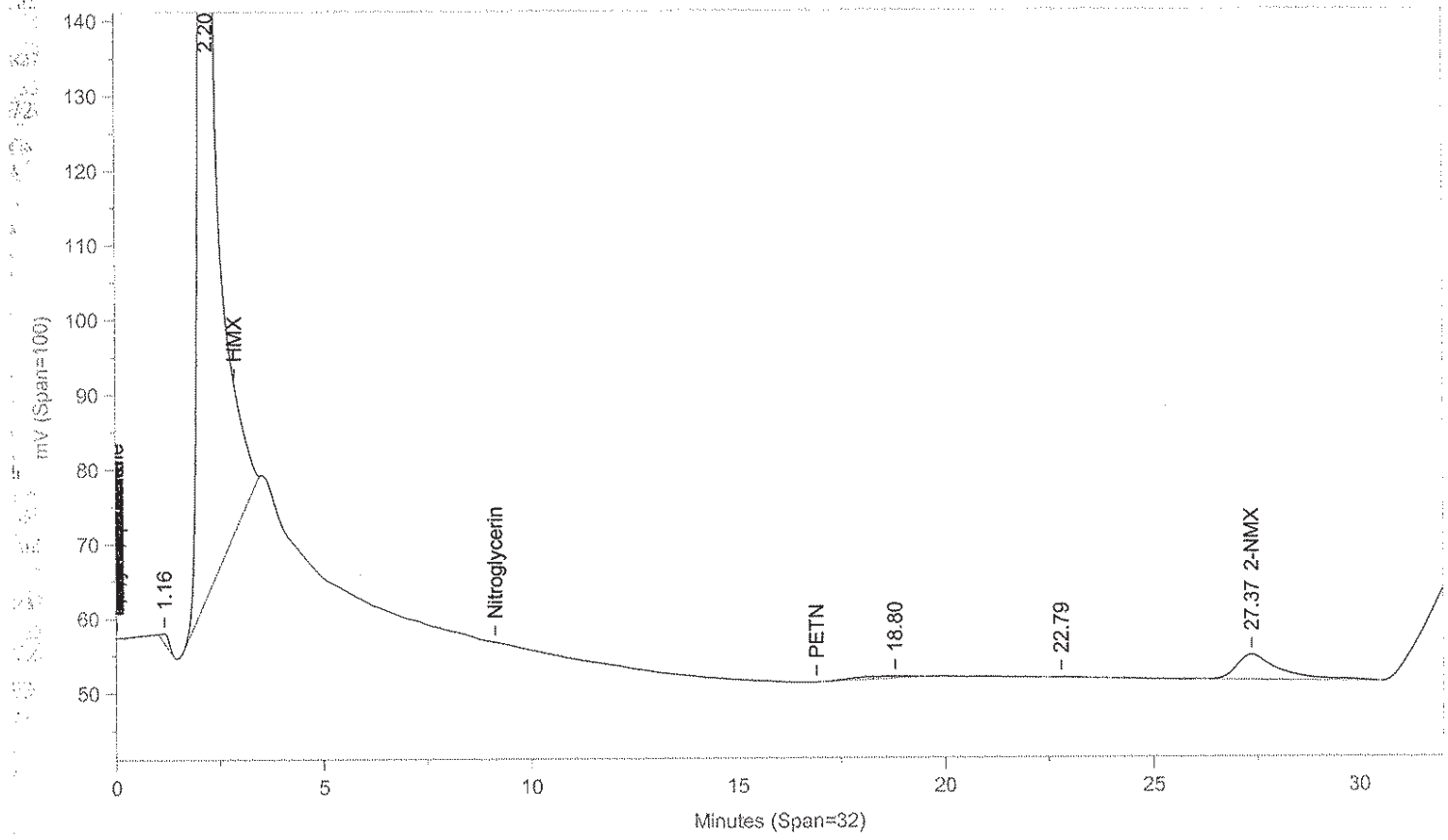
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.10R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 12:50:06 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.10R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 12:50:06 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
27.209	16794	9.854	2-NMX	27.368	244411	10.007	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.10A
Area File: C:\CPWIN\DATA1\5E12310B.10A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:37:34 PM
File Reported On: 11/20/2013 at 4:37:44 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263051 FFHEC Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 00:50:07
Instrument : CP12--Y6329A
Result file : 5C12310.10R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 106% (73-122) Conc.: 10.608198

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.05	34.22	34.25	16660	10.608198

Analysis Report (B)

Injected on : NOV 19, 2013 00:50:07
Instrument : CP12--Y6329B
Result file : 5C12310B.10R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	25.73	25.78	26.15	15744	2.651359

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.608198					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 24 2013

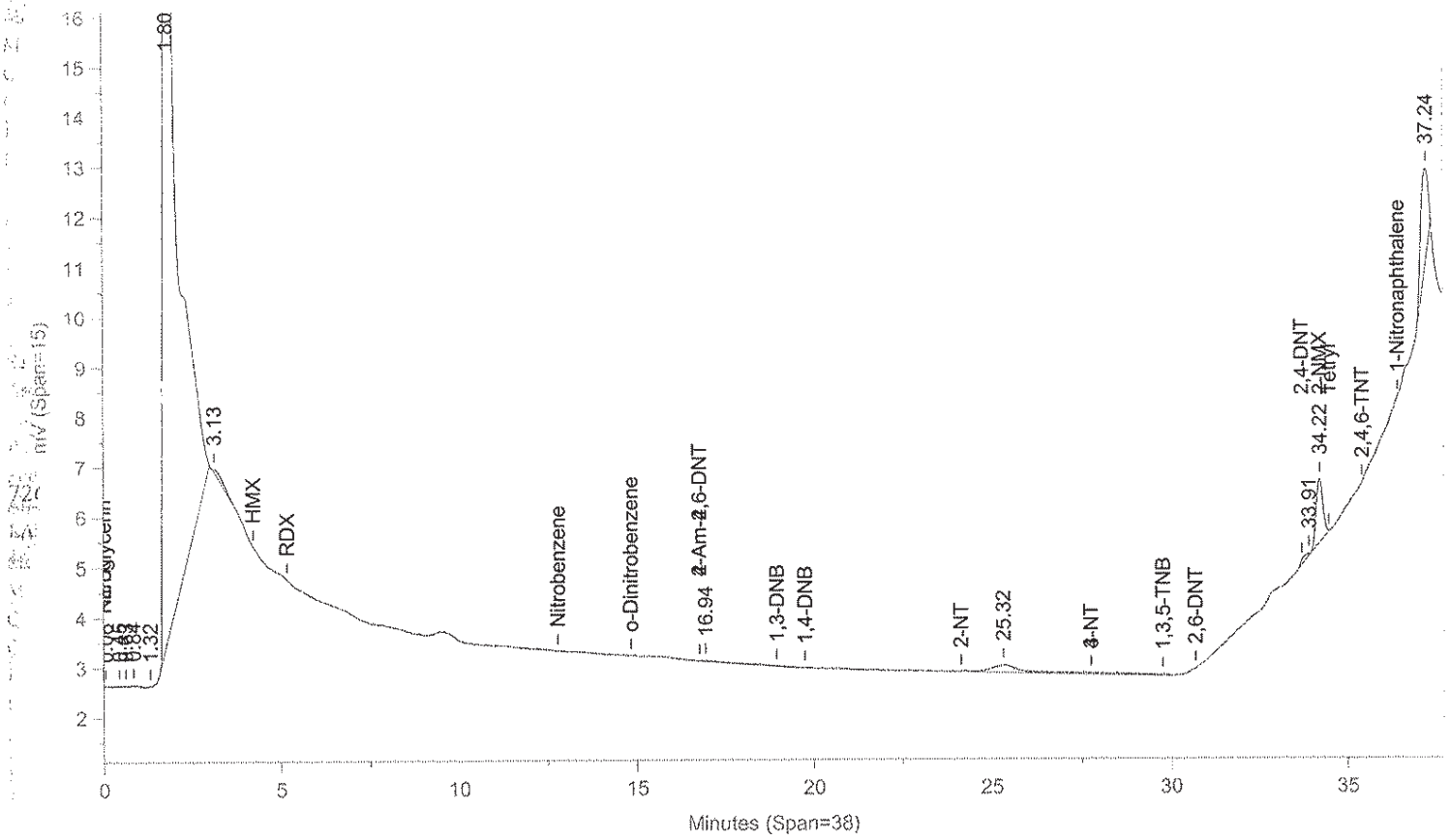
Valerie L. Tomayko
Principal Specialist

Verified by: _____
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

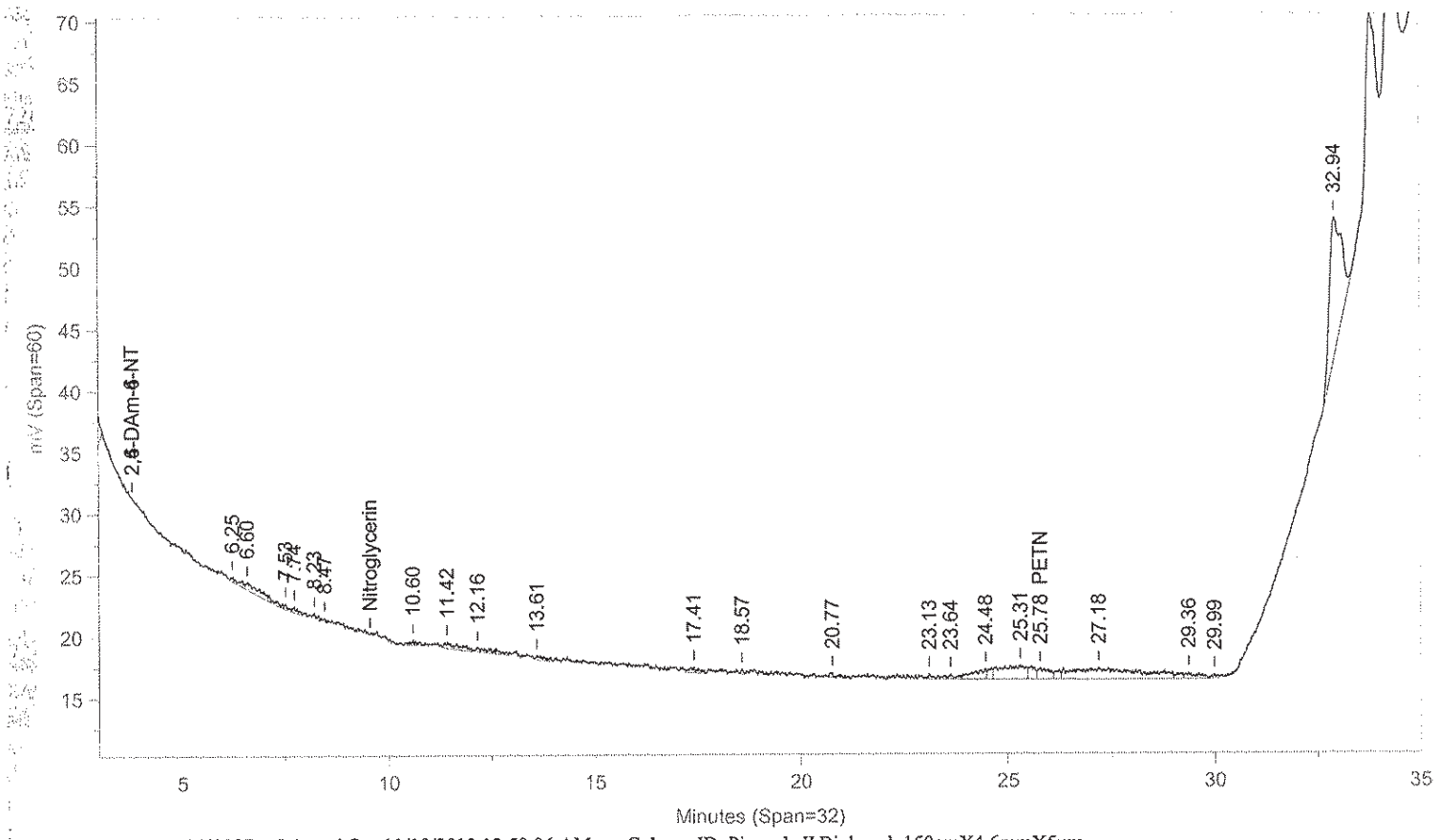
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.10R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 12:50:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.10R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 12:50:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	PETN	25.779	15744	2.651	PETN
34.225	16660	10.608	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.10A
Area File: C:\CPWIN\DATA1\5C12310B.10A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:31:50 PM
File Reported On: 11/20/2013 at 5:31:59 PM

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Data Summary

Sample Name: 7263056 DDHER Sample ID: AA **Batchnumber: 133110017A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 01:32:32
Instrument	X6329A
Result file	5E12310.11R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 90% (73 - 122) Conc: 8.963652

Analysis Report (B)

Injected on	Nov 19, 2013 01:32:32
Instrument	Y6329A
Result file	5C12310.11R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 75% (73 - 122) Conc: 7.544522

Single Component Data

Compound	Min	RT	Max	Area	Amount
2-NMX	26.91	27.26	27.59	15277	8.963652

Compound	Min	RT	Max	Area	Amount
3-Nitrotoluene	27.49	28.00	28.01	1305	0.375861
2-NMX	34.05	34.24	34.25	11313	7.544522

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.963652				17.19	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263056 DDHER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 01:32:32
Instrument : CP12--X6329A
Result file : 5E12310.11R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 90% (73-122) Conc.: 8.963652

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	26.91	27.26	27.59	15277	8.963652

Analysis Report (B)

Injected on : NOV 19, 2013 01:32:32
Instrument : CP12--X6329B
Result file : 5E12310B.11R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 94% (73-122) Conc.: 9.377821

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.44	27.76	229039	9.377821

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.963652				4.52	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

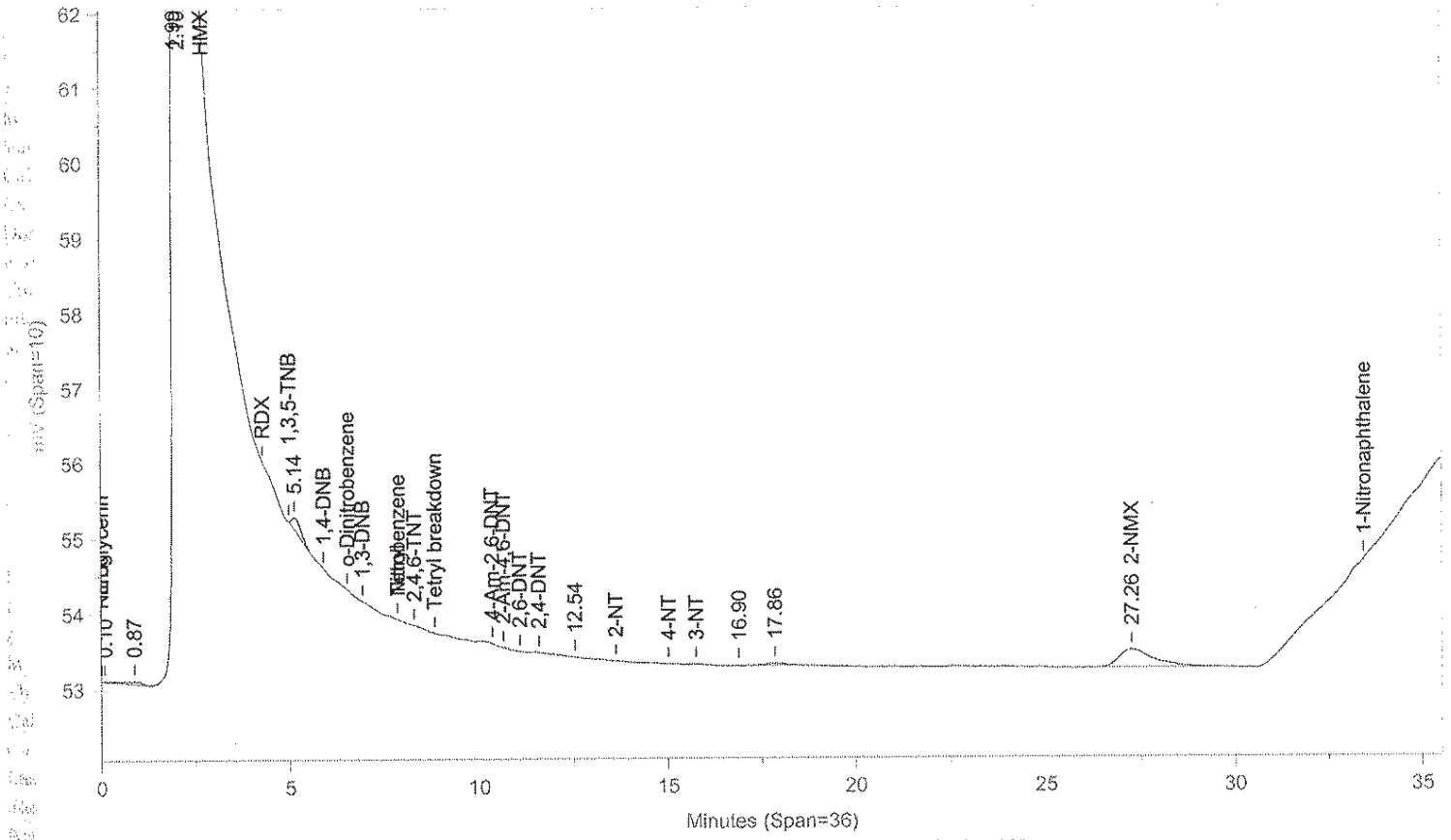
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

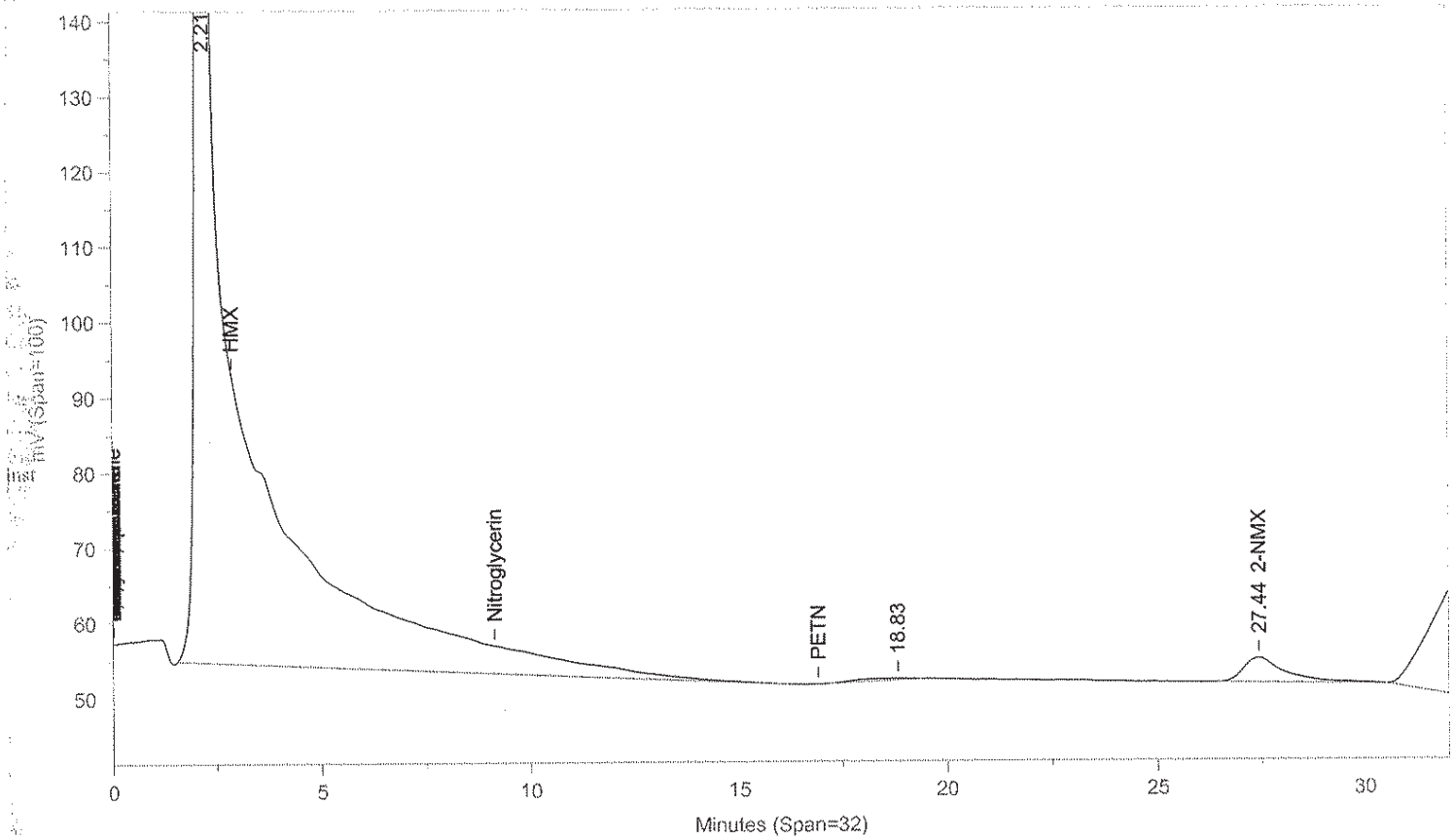
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 1:32:31 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.11R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 1:32:32 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
27.262	15277	8.964	2-NMX	27.439	229039	9.378	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.11A
Area File: C:\CPWIN\DATA1\5E12310B.11A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:38:06 PM
File Reported On: 11/20/2013 at 4:38:15 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263056 DDHER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 01:32:32
Instrument : CP12--Y6329A
Result file : 5C12310.11R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 75% (73-122) Conc.: 7.544522

Analysis Report (B)

Injected on : NOV 19, 2013 01:32:32
Instrument : CP12--Y6329B
Result file : 5C12310B.11R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
3-NT	27.49	28.00	28.01	1305	0.375861
2-NMX	34.05	34.24	34.25	11313	7.544522

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	7.544522					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

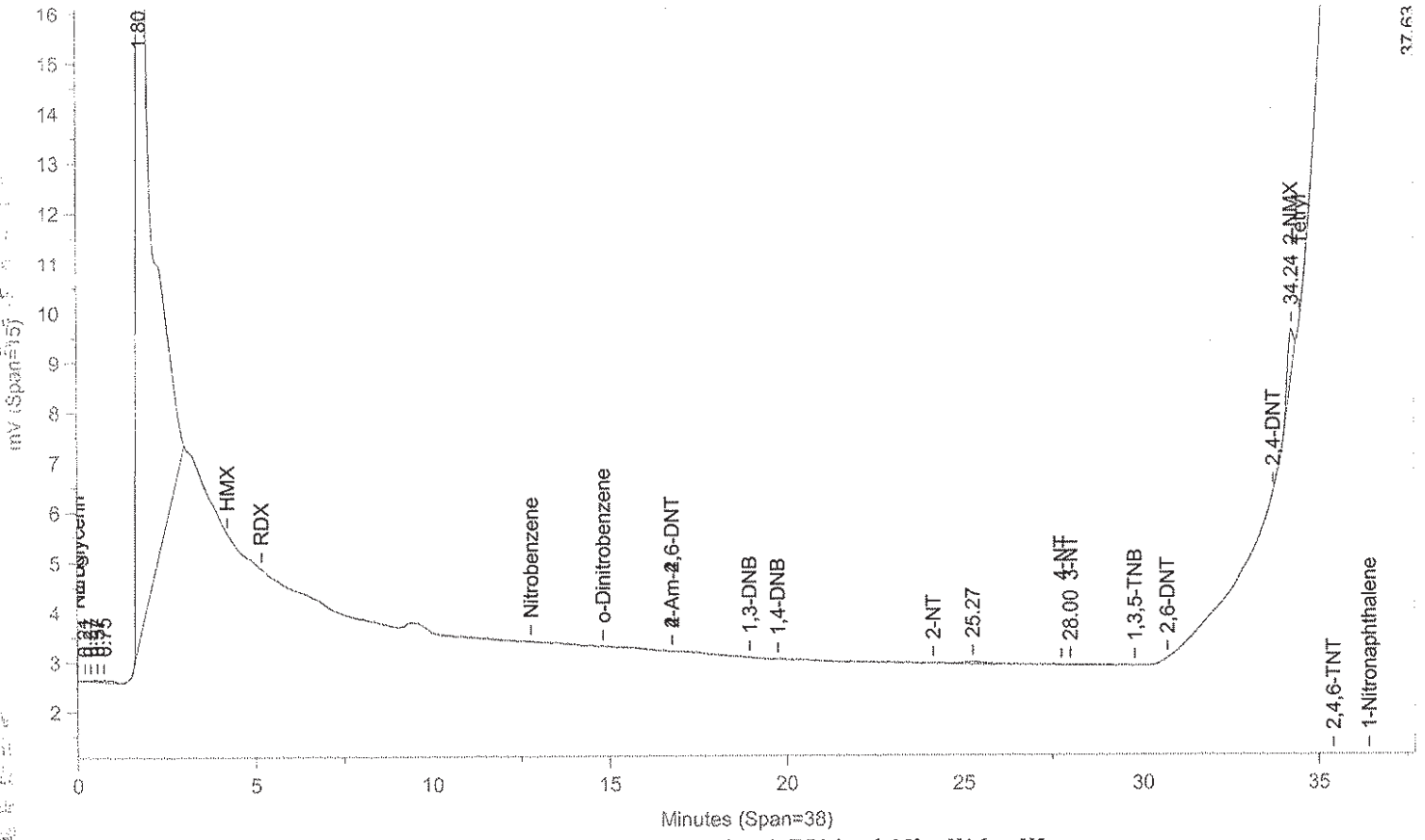
James H. Place
Senior Chemist
Reviewed by: _____
Date: NOV 24 2013

Valerie L. Tomayko
Principal Specialist
Verified by: _____
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

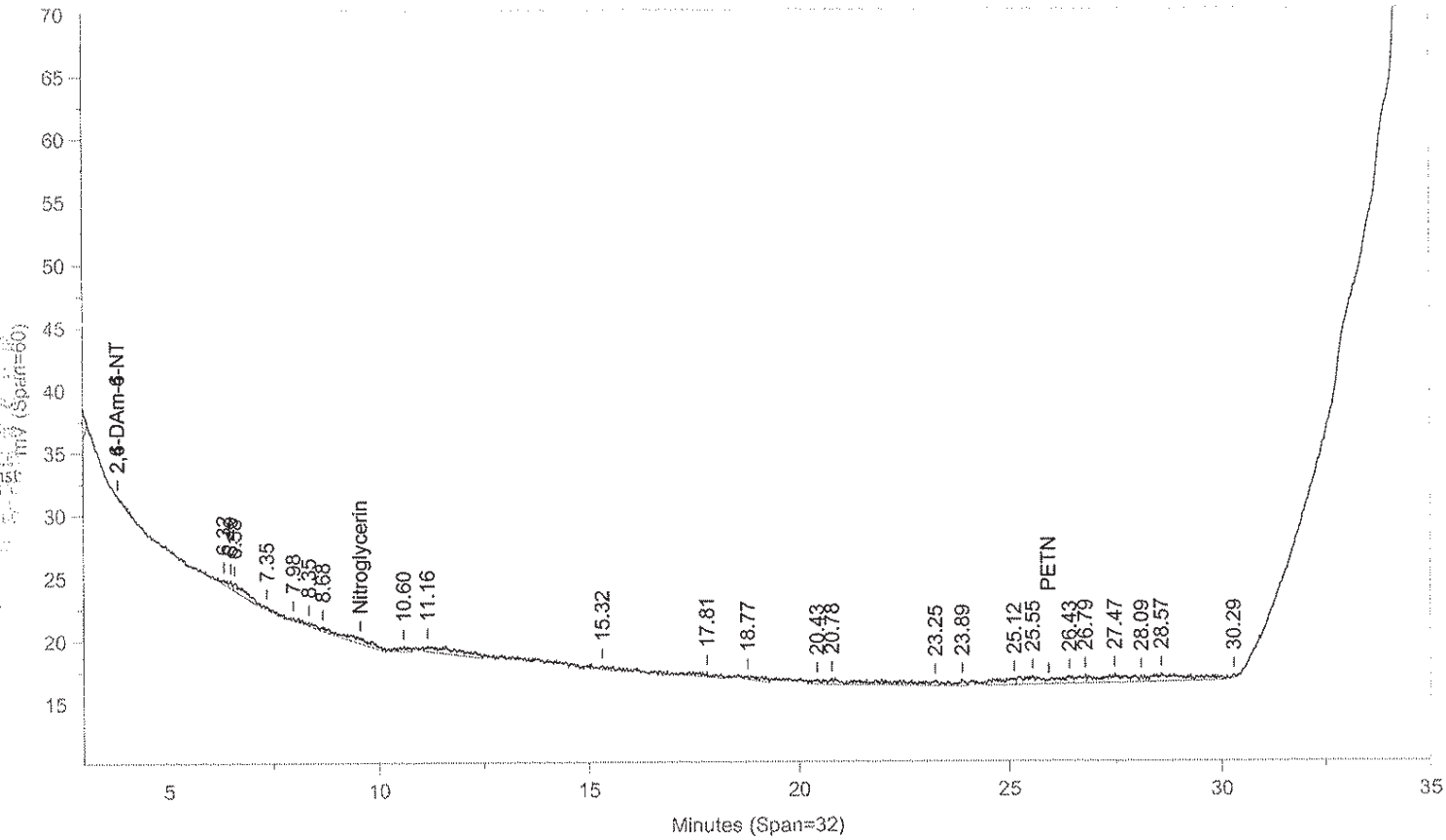
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.11R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 1:32:31 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.11R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 1:32:31 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
27.995	1305	.376	3-NT	.	0	.	3-NT
34.239	11313	7.545	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.11A
Area File: C:\CPWIN\DATA1\5C12310B.11A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:32:22 PM
File Reported On: 11/20/2013 at 5:32:32 PM

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Data Summary

Sample Name: 7263057 EEHER Sample ID: AA **Batchnumber: 133110017A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 02:14:57
Instrument	X6329A
Result file	5E12310.12R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 84% (73 - 122) Conc: 8.452131

Analysis Report (B)

Injected on	Nov 19, 2013 02:14:57
Instrument	Y6329A
Result file	5C12310.12R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 106% (73 - 122) Conc: 10.577195

Single Component Data

Compound	Min	RT	Max	Area	Amount
2-NMX	26.91	27.42	27.59	14406	8.452131

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.19	34.25	16606	10.577195

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.452131				22.33	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263057 EEHER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 02:14:57
Instrument : CP12--X6329A
Result file : 5E12310.12R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 84% (73-122) Conc.: 8.452131

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	26.91	27.42	27.59	14406	8.452131

Analysis Report (B)

Injected on : NOV 19, 2013 02:14:57
Instrument : CP12--X6329B
Result file : 5E12310B.12R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 102% (73-122) Conc.: 10.171152

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.57	27.76	248415	10.171152

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.452131				18.46	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

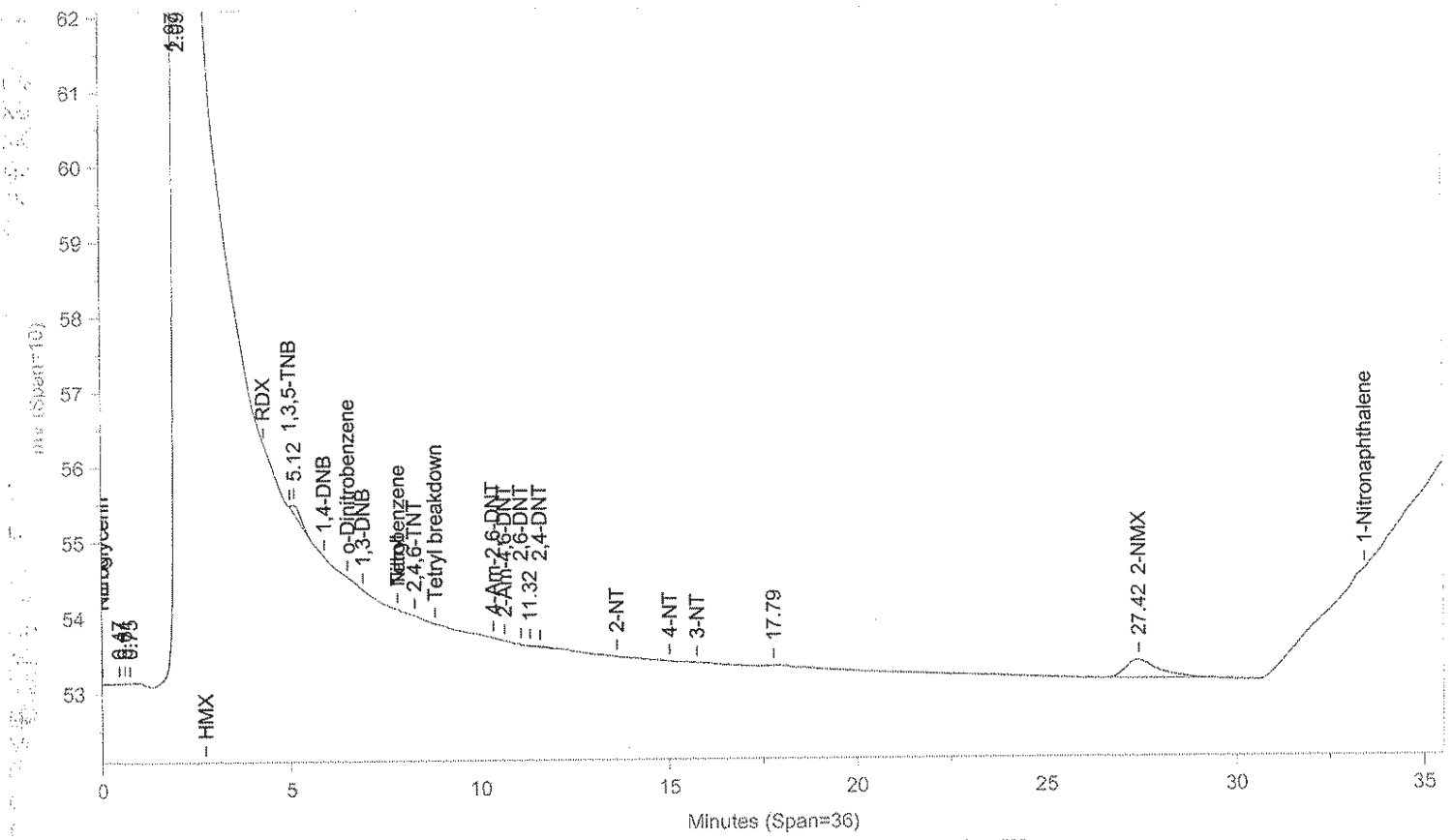
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomaszko, Technical Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

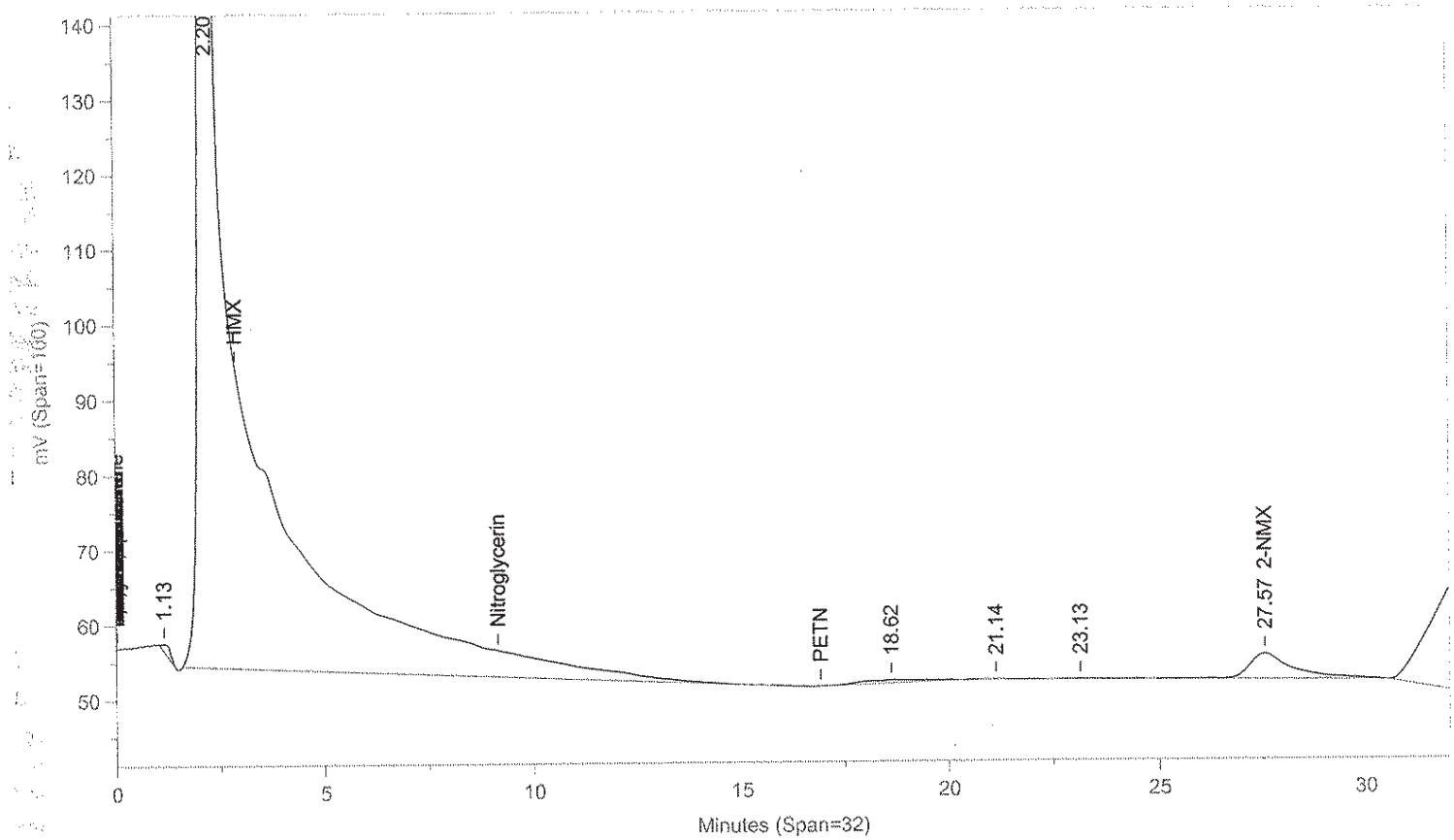
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 2:14:56 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.12R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 2:14:56 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
27.416	14406	8.452	2-NMX	27.569	248415	10.171	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.12A
Area File: C:\CPWIN\DATA1\5E12310B.12A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:38:36 PM
File Reported On: 11/20/2013 at 4:38:45 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263057 EEHER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 02:14:57
Instrument : CP12--Y6329A
Result file : 5C12310.12R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 106% (73-122) Conc.: 10.577195

Analysis Report (B)

Injected on : NOV 19, 2013 02:14:57
Instrument : CP12--Y6329B
Result file : 5C12310B.12R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.05	34.19	34.25	16606	10.577195

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.577195					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

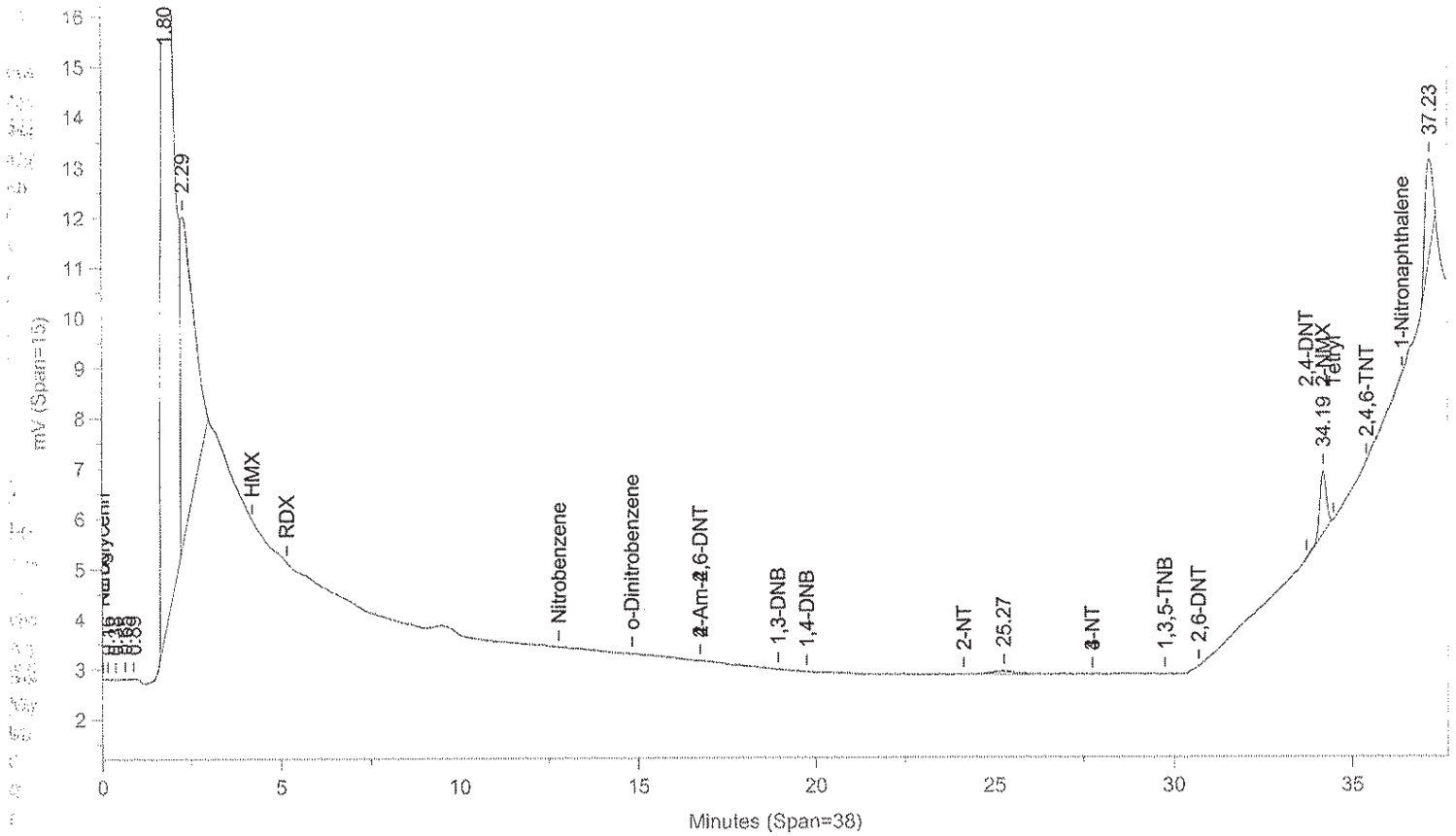
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

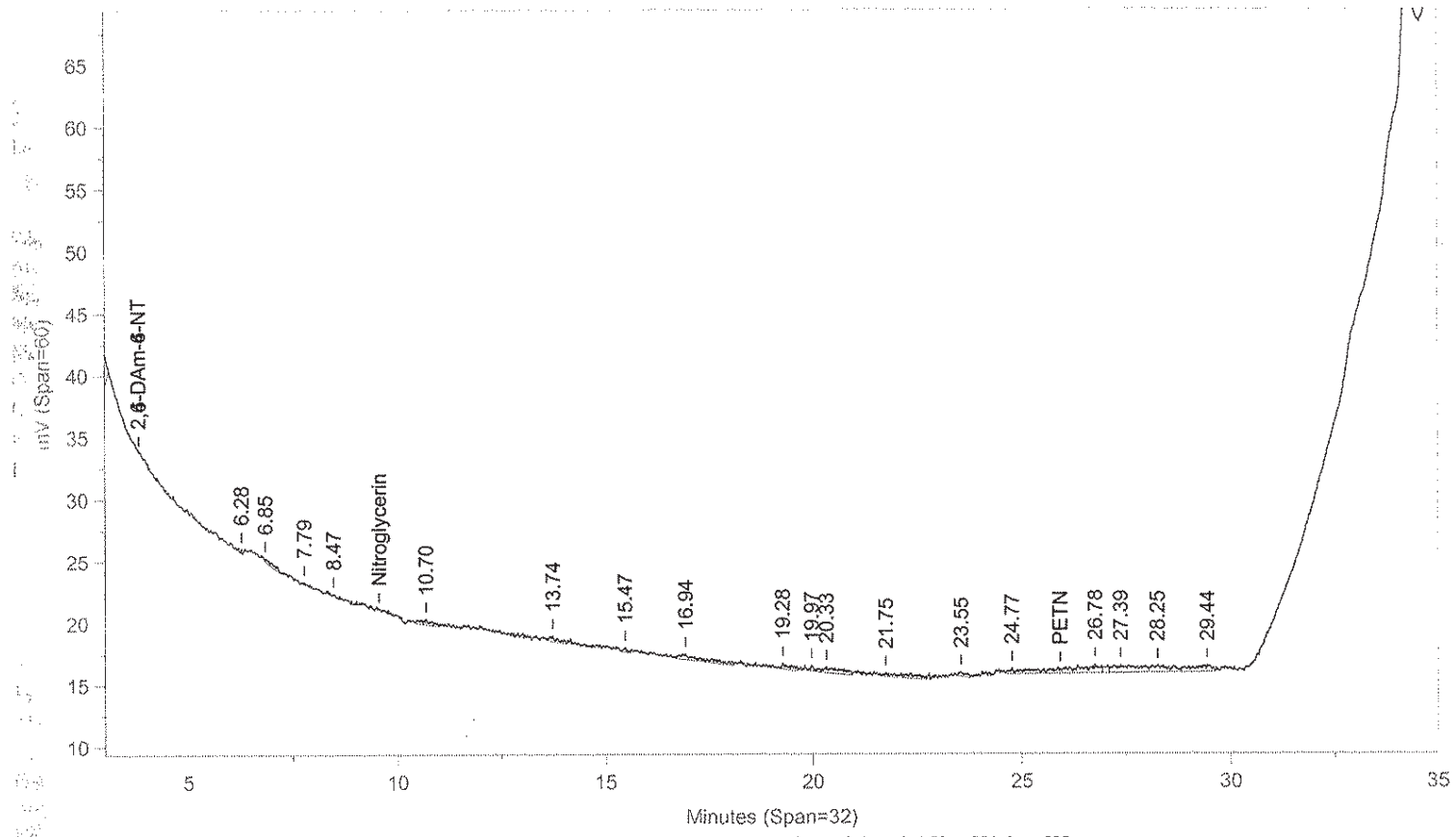
Printed on: 11/22/2013 13:31:51

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.12R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 2:14:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.12R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 2:14:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.193	16606	10.577	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.12A
Area File: C:\CPWIN\DATA1\5C12310B.12A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:32:52 PM
File Reported On: 11/20/2013 at 5:33:02 PM

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Data Summary

Sample Name: 7263058 F1HER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 02:57:29
Instrument	X6329A
Result file	5E12310.13R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 19, 2013 02:57:28
Instrument	Y6329A
Result file	5C12310.13R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 85% (73 - 122) Conc: 8.486008

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.90	5.09	5.10	2038	0.193068
2-NMX	26.91	27.41	27.59	14463	8.486008

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.21	34.25	17025	10.817242
Tetryl	34.39	34.52	34.59	67	0.373442

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.486008				24.15	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263058 F1HER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 02:57:29
Instrument : CP12--X6329A
Result file : 5E12310.13R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 85% (73-122) Conc.: 8.486008

Peak name	Min	R.T.	Max	Area	Amount
1,3,5-TNB	4.90	5.09	5.10	2038	0.193068
2-NMX	26.91	27.41	27.59	14463	8.486008

Analysis Report (B)

Injected on : NOV 19, 2013 02:57:29
Instrument : CP12--X6329B
Result file : 5E12310B.13R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 88% (73-122) Conc.: 8.763028

Peak name	Min	R.T.	Max	Area	Amount
PETN	16.63	16.70	17.20	1041	0.188064
2-NMX	27.09	27.55	27.76	214023	8.763028

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.486008				3.21	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

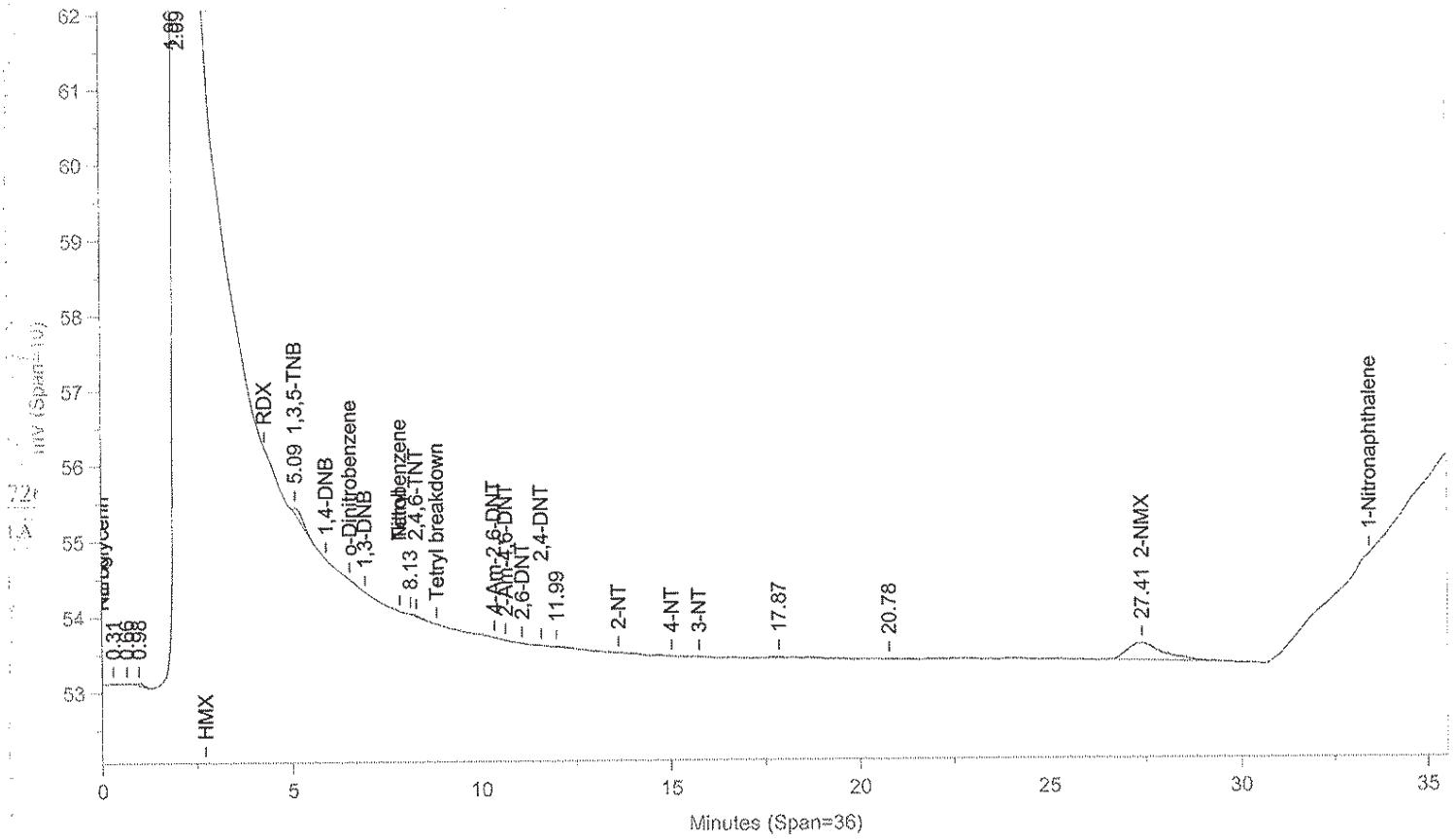
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

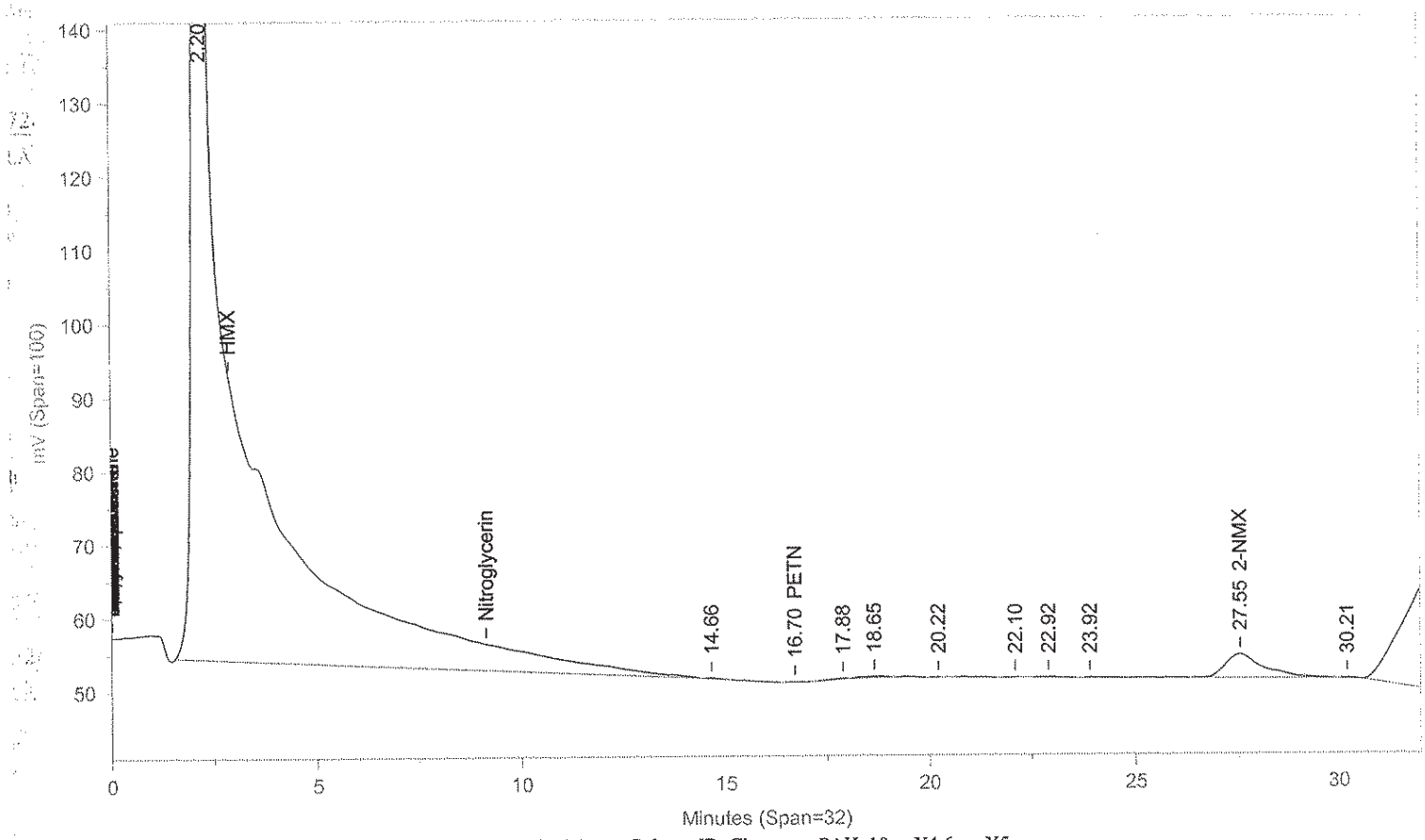
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 2:57:28 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.13R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 2:57:28 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.094	2038	.193	1,3,5-TNB	.	0	.	1,3,5-TNB
.	0	.	PETN	16.7	1041	.188	PETN
27.412	14463	8.486	2-NMX	27.552	214023	8.763	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.13A
Area File: C:\CPWIN\DATA1\5E12310B.13A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:39:06 PM
File Reported On: 11/20/2013 at 4:39:15 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263058 F1HER Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 02:57:28
Instrument : CP12--Y6329A
Result file : 5C12310.13R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 108% (73-122) Conc.: 10.817242

Analysis Report (B)

Injected on : NOV 19, 2013 02:57:28
Instrument : CP12--Y6329B
Result file : 5C12310B.13R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.05	34.21	34.25	17025	10.817242
Tetryl	34.39	34.52	34.59	67	0.373442

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.817242					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

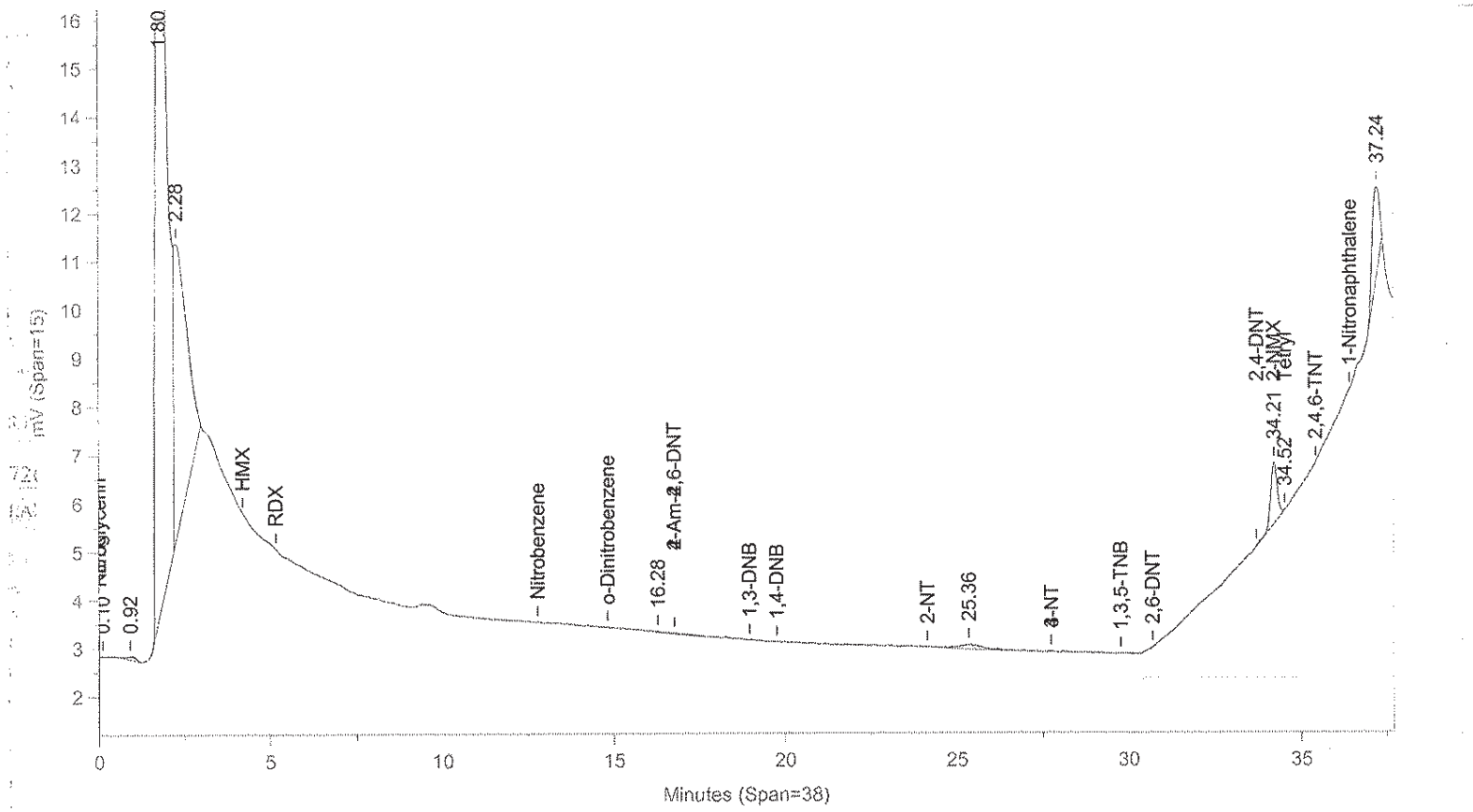
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

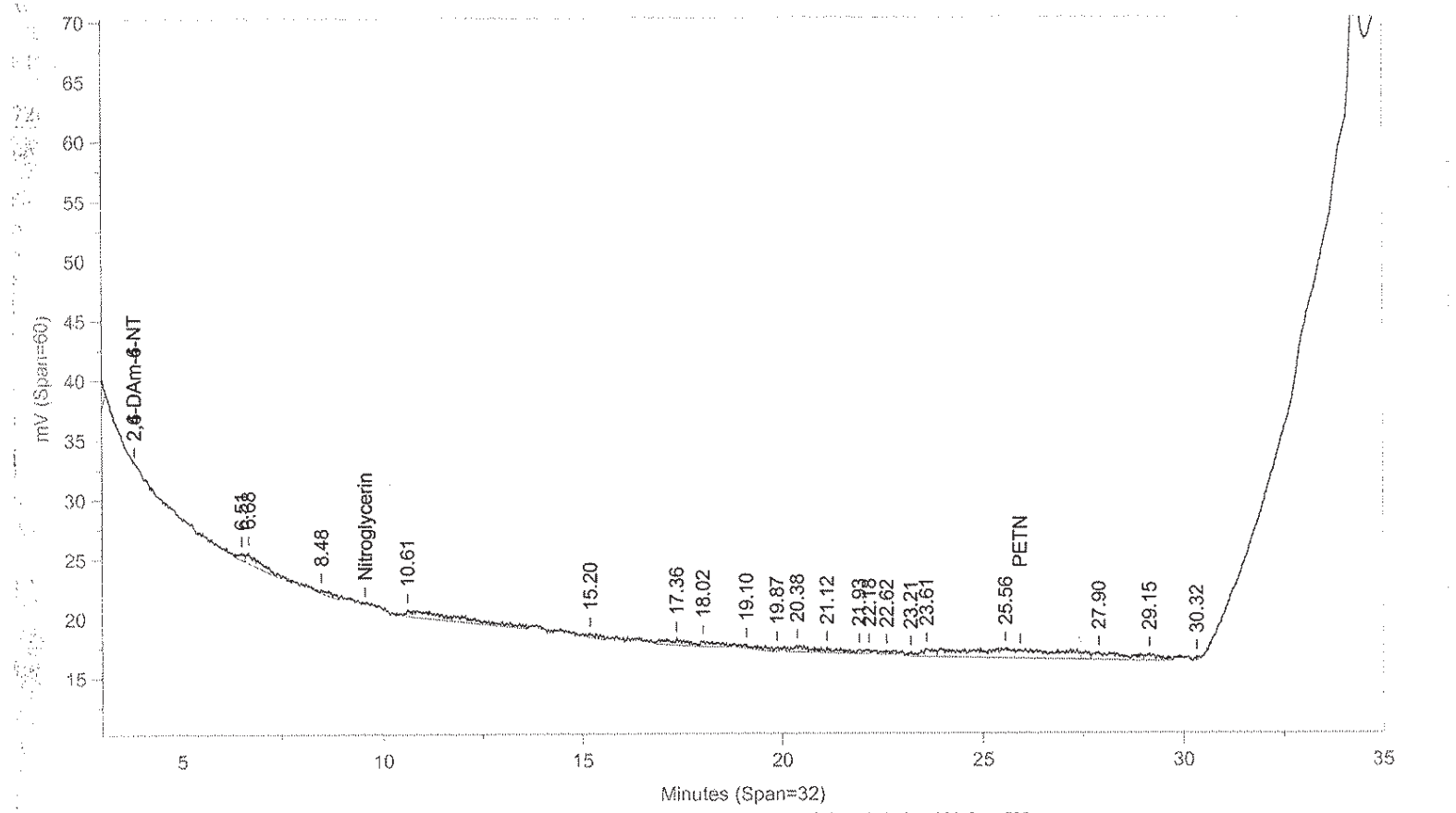
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.13R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 2:57:27 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.13R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 2:57:27 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.205	17025	10.817	2-NMX	.	0	.	2-NMX
34.516	67	.373	Tetryl	.	0	.	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.13A
Area File: C:\CPWIN\DATA1\5C12310B.13A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:33:22 PM
File Reported On: 11/20/2013 at 5:33:32 PM

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Data Summary

Sample Name: 7263059 FB1HE Sample ID: AA **Batchnumber: 133110017A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 03:39:56
Instrument	X6329A
Result file	5E12310.14R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 96% (73 - 122) Conc: 9.640055

Analysis Report (B)

Injected on	Nov 19, 2013 03:39:56
Instrument	Y6329A
Result file	5C12310.14R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 105% (73 - 122) Conc: 10.493692

Single Component Data

Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.43	6.47	6.63	216	0.041977
Tetryl	7.71	7.84	7.99	41	0.002368
2,4,6-Trinitrotoluene	8.19	8.26	8.39	11	0.000935
2,4-Dinitrotoluene	11.45	11.55	11.74	240	0.01453
4-Nitrotoluene	14.87	14.92	15.19	121	0.025891
3-Nitrotoluene	15.60	15.72	15.93	116	0.017189
2-NMX	26.91	27.34	27.59	16430	9.640055

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.20	34.25	16460	10.493692

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.640055				8.48	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valorie L. Tomayko, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263059 FB1HE Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 03:39:56
Instrument : CP12--X6329A
Result file : 5E12310.14R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 96% (73-122) Conc.: 9.640055

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.29	4.40	69	-0.234415
o-Dinitrobenzene	6.43	6.47	6.63	216	0.041977
Tetryl	7.71	7.84	7.99	41	0.002368
2,4,6-TNT	8.19	8.26	8.39	11	0.000935
2,4-DNT	11.45	11.55	11.74	240	0.014530
4-NT	14.87	14.92	15.19	121	0.025891
3-NT	15.60	15.72	15.93	116	0.017189
2-NMX	26.91	27.34	27.59	16430	9.640055

Analysis Report (B)

Injected on : NOV 19, 2013 03:39:56
Instrument : CP12--X6329B
Result file : 5E12310B.14R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 95% (73-122) Conc.: 9.471549

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.44	27.76	231328	9.471549

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.640055				1.76	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

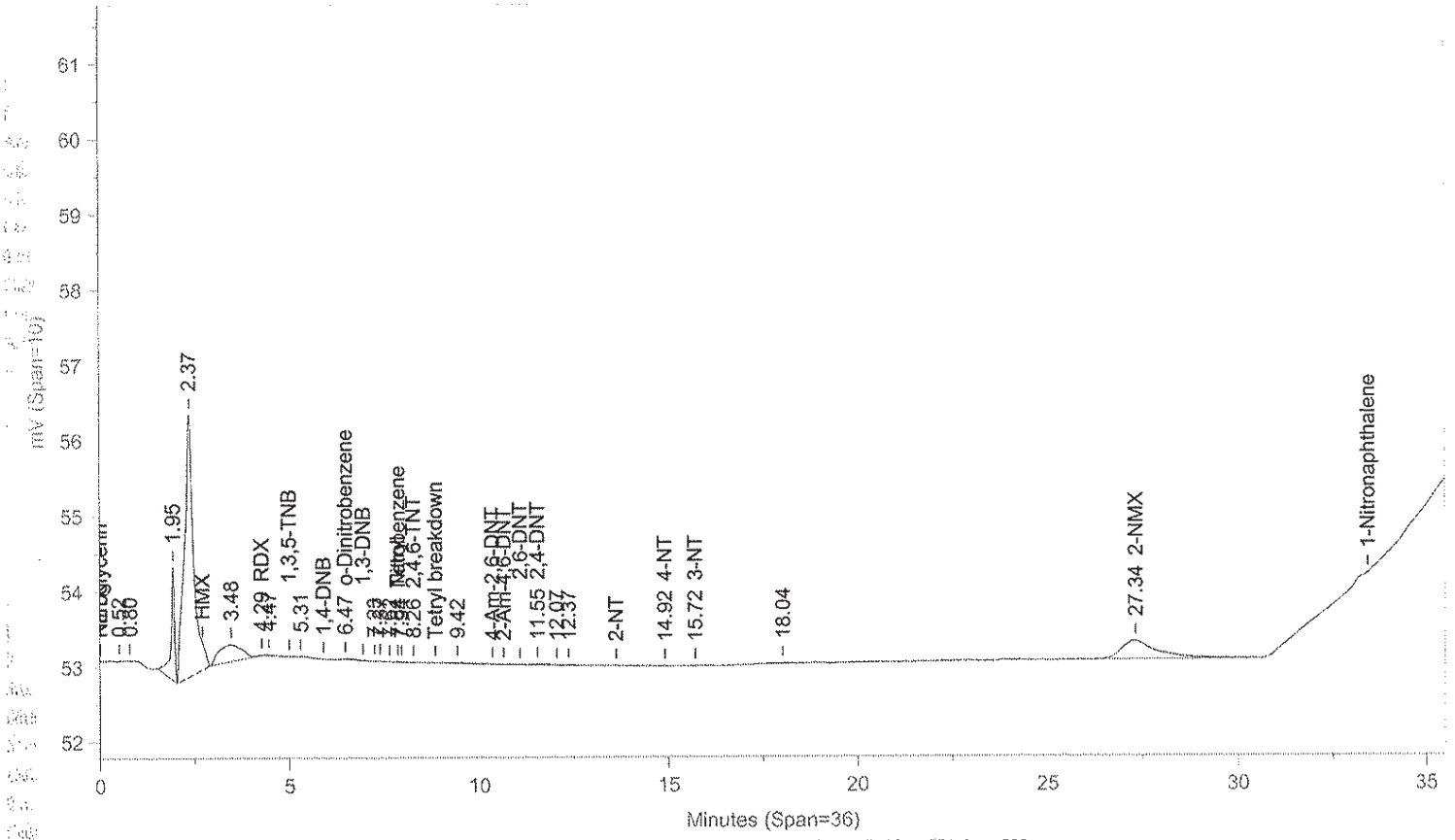
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

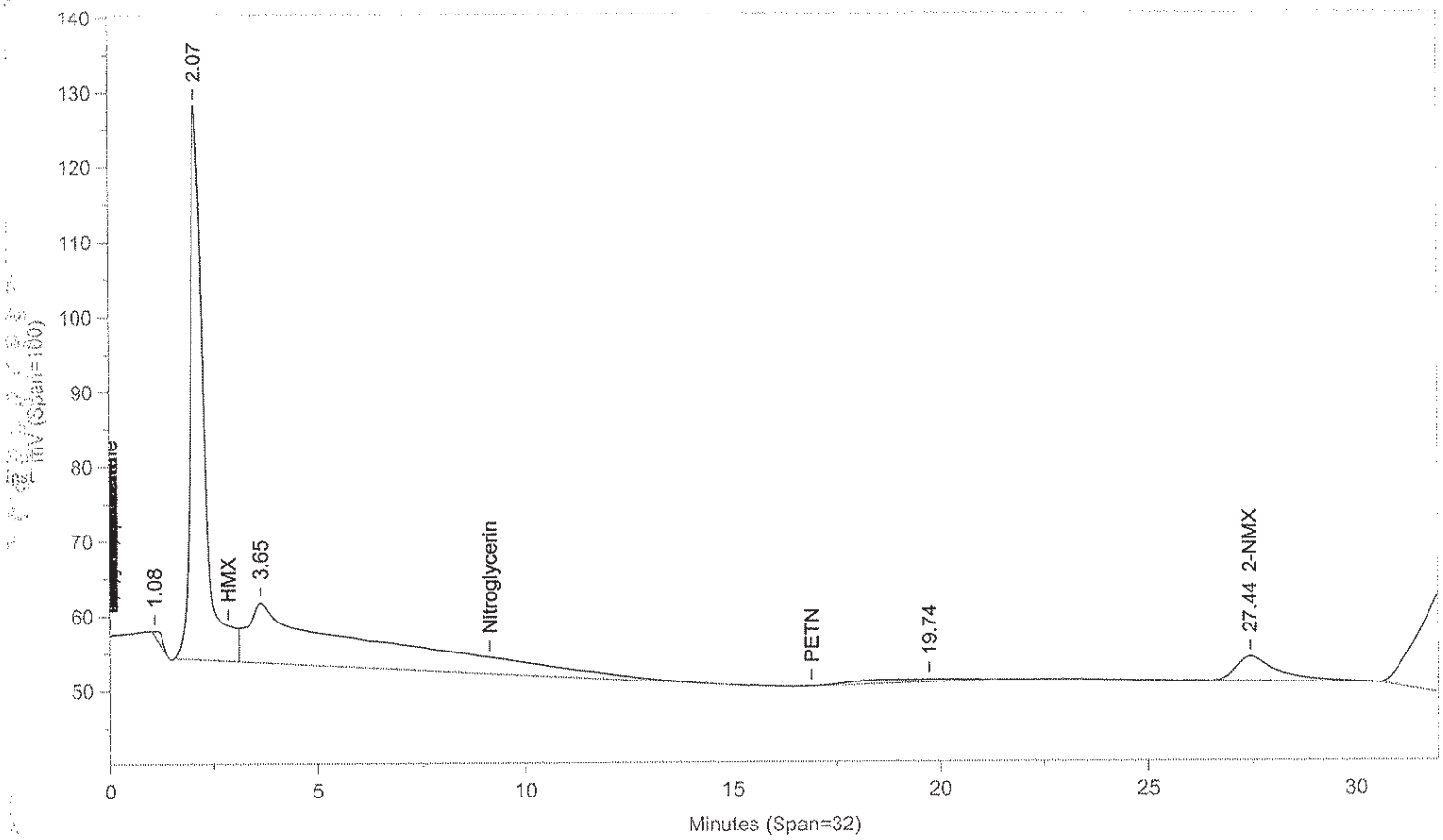
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.14R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 3:39:55 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.14R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 3:39:55 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.287	69	-.234	RDX	.	0	.	RDX
6.467	216	.042	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.843	41	.002	Tetryl	.	0	.	Tetryl
8.259	11	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
11.549	240	.015	2,4-DNT	.	0	.	2,4-DNT
14.917	121	.026	4-NT	.	0	.	4-NT
15.717	116	.017	3-NT	.	0	.	3-NT
27.345	16430	9.64	2-NMX	27.435	231328	9.472	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.14A
Area File: C:\CPWIN\DATA1\5E12310B.14A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:39:36 PM
File Reported On: 11/20/2013 at 4:39:45 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263059 FB1HE **Sample ID:** AA **Batchnumber:** 133110017A
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 03:39:56
Instrument : CP12--Y6329A
Result file : 5C12310.14R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 105% (73-122) Conc.: 10.493692

Analysis Report (B)

Injected on : NOV 19, 2013 03:39:56
Instrument : CP12--Y6329B
Result file : 5C12310B.14R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.08	5.14	5.28	545	-0.374346
2-NMX	34.05	34.20	34.25	16460	10.493692

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.493692					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

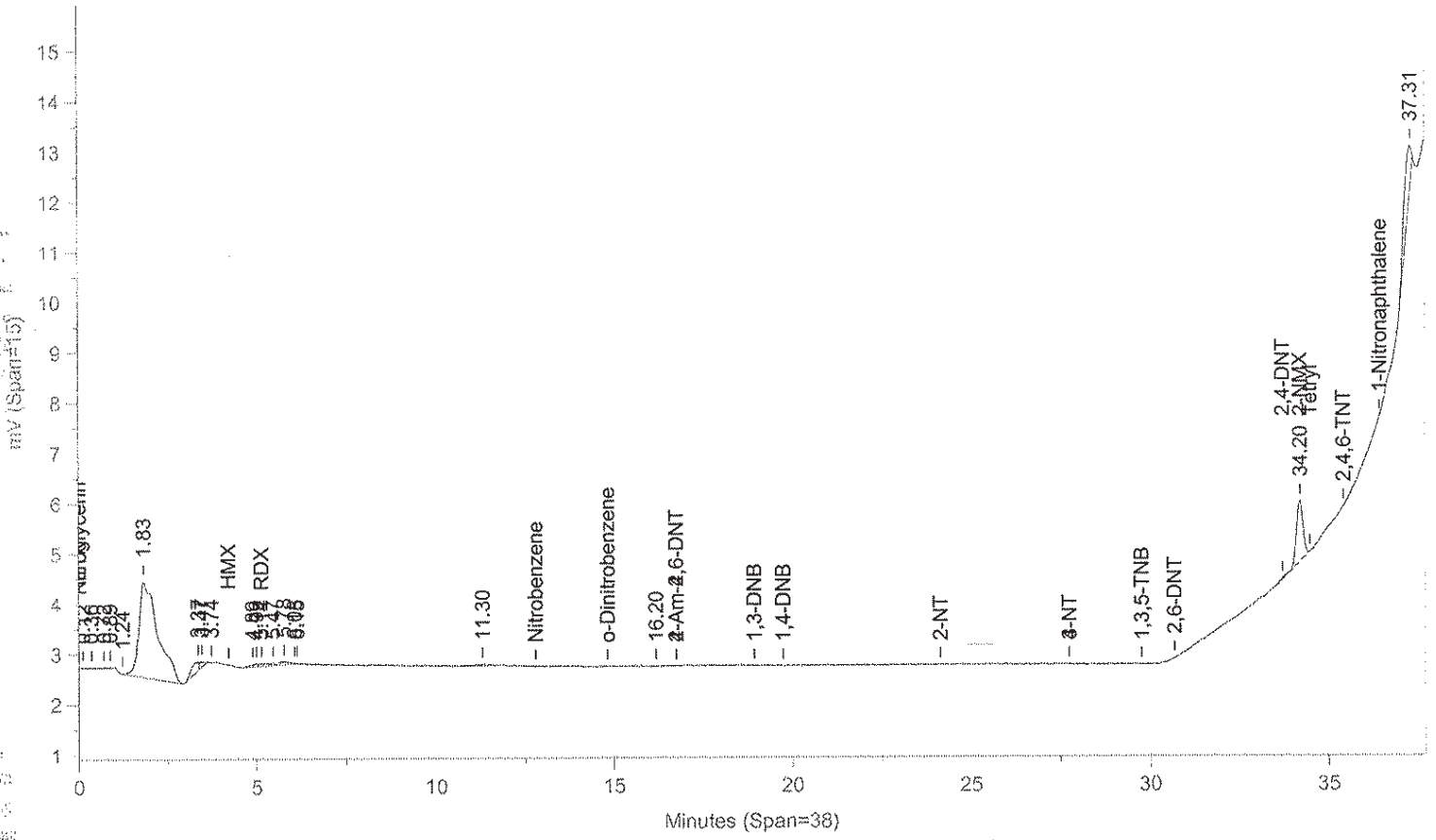
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

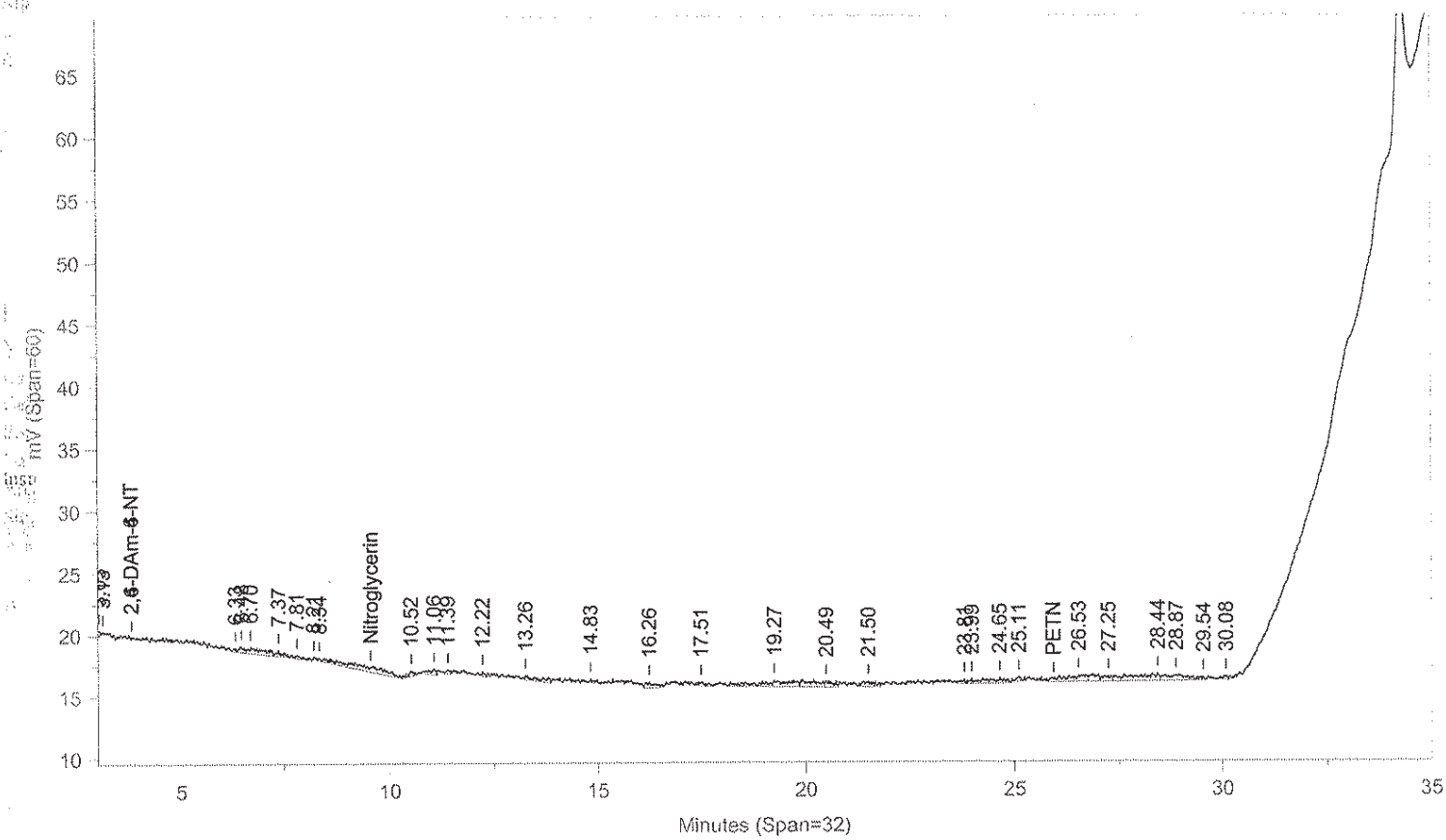
Printed on: 11/22/2013 13:32:15

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.14R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 3:39:55 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.14R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 3:39:55 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.141	545	-.374	RDX	.	0	.	RDX
34.204	16460	10.494	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.14A
Area File: C:\CPWIN\DATA1\5C12310B.14A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:33:52 PM
File Reported On: 11/20/2013 at 5:34:02 PM

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Data Summary

Sample Name: 7263060 FB2HE Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 19, 2013 04:22:20
Instrument X6329A
Result file 5E12310.15R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 85% (73 - 122) Conc: 8.549567

Analysis Report (B)

Injected on Nov 19, 2013 04:22:20
Instrument Y6329A
Result file 5C12310.15R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 109% (73 - 122) Conc: 10.919887

Single Component Data

Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.43	6.48	6.63	58	0.011272
Tetryl	7.71	7.80	7.99	118	0.006808
2,4,6-Trinitrotoluene	8.19	8.25	8.39	15	0.001275
2,6-Dinitrotoluene	10.95	10.95	11.23	31	0.005068
2,4-Dinitrotoluene	11.45	11.67	11.74	42	0.002553
2-NMX	26.91	27.37	27.59	14572	8.549567

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.18	34.25	17204	10.919887

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.549567				24.35	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263060 FB2HE Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 04:22:20
Instrument : CP12--X6329A
Result file : 5E12310.15R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 85% (73-122) Conc.: 8.549567

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.39	4.40	312	-0.178880
o-Dinitrobenzene	6.43	6.48	6.63	58	0.011272
Tetryl	7.71	7.80	7.99	118	0.006808
2,4,6-TNT	8.19	8.25	8.39	15	0.001275
2,6-DNT	10.95	10.95	11.23	31	0.005068
2,4-DNT	11.45	11.67	11.74	42	0.002553
2-NMX	26.91	27.37	27.59	14572	8.549567

Analysis Report (B)

Injected on : NOV 19, 2013 04:22:20
Instrument : CP12--X6329B
Result file : 5E12310B.15R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 96% (73-122) Conc.: 9.61215

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.54	27.76	234762	9.612150

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.549567				11.70	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomaylo, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:43:05

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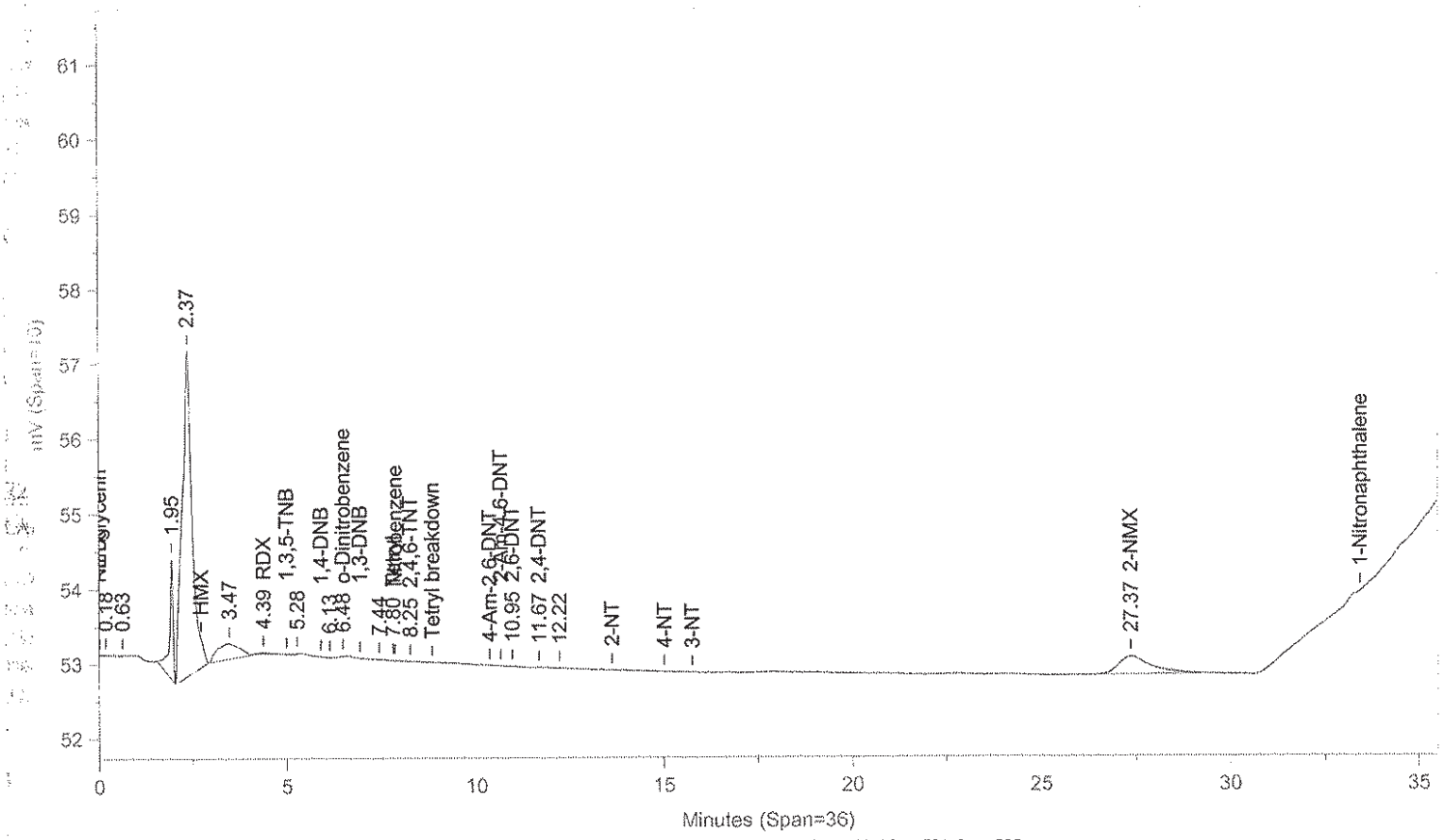
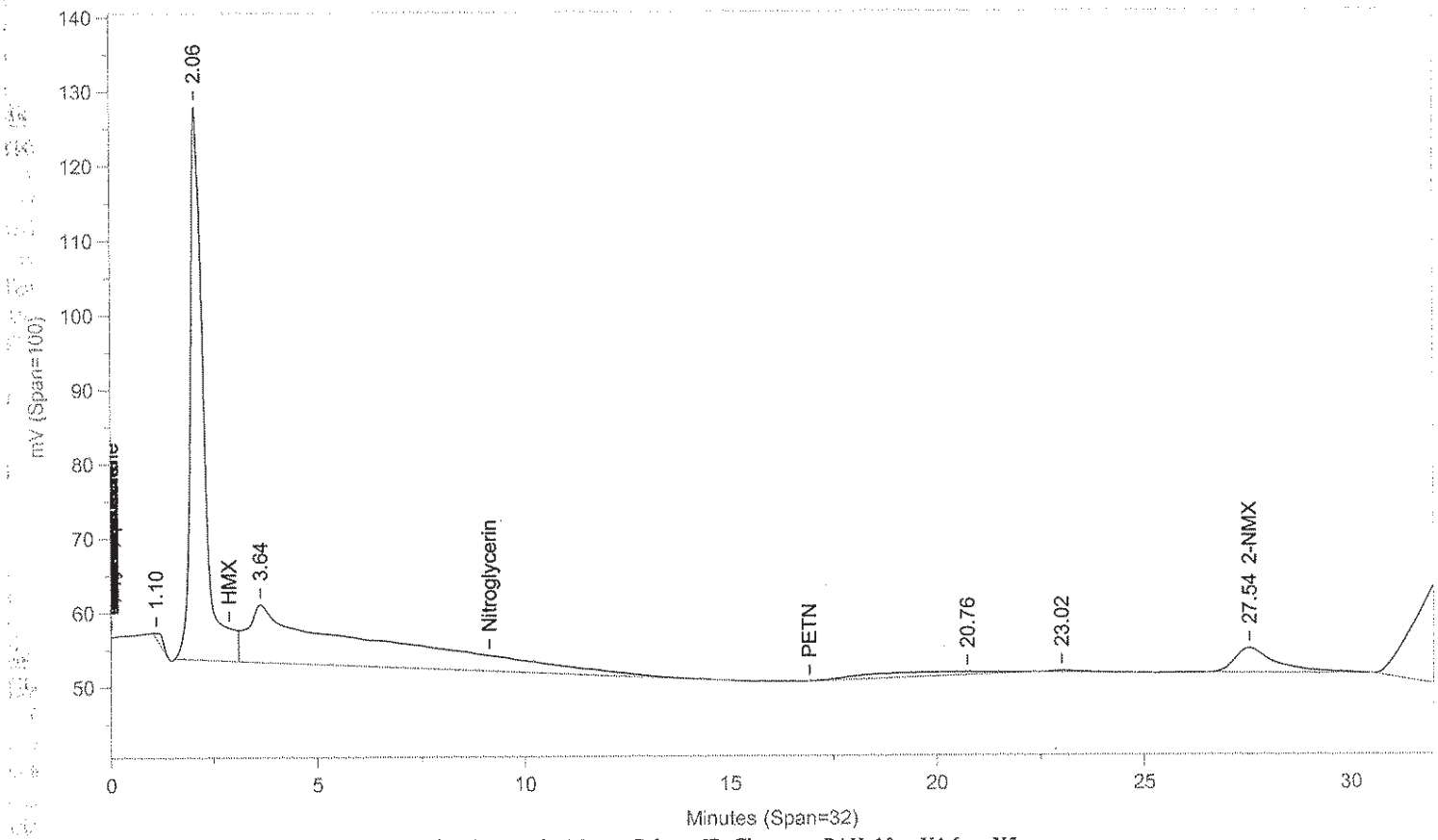


Instrument ID: CP12--X6329A Injected On: 11/19/2013 4:22:19 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.15R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 4:22:19 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.388	312	-.179	RDX	.	0	.	RDX
6.484	58	.011	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.805	118	.007	Tetryl	.	0	.	Tetryl
8.254	15	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
10.952	31	.005	2,6-DNT	.	0	.	2,6-DNT
11.669	42	.003	2,4-DNT	.	0	.	2,4-DNT
27.372	14572	8.55	2-NMX	27.542	234762	9.612	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.15A
Area File: C:\CPWIN\DATA1\5E12310B.15A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:40:06 PM
File Reported On: 11/20/2013 at 4:40:16 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263060 FB2HE Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 04:22:20
Instrument : CP12--Y6329A
Result file : 5C12310.15R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 109% (73-122) Conc.: 10.919887

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.05	34.18	34.25	17204	10.919887

Analysis Report (B)

Injected on : NOV 19, 2013 04:22:20
Instrument : CP12--Y6329B
Result file : 5C12310B.15R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	25.73	25.99	26.15	21074	3.549023

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.919887					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

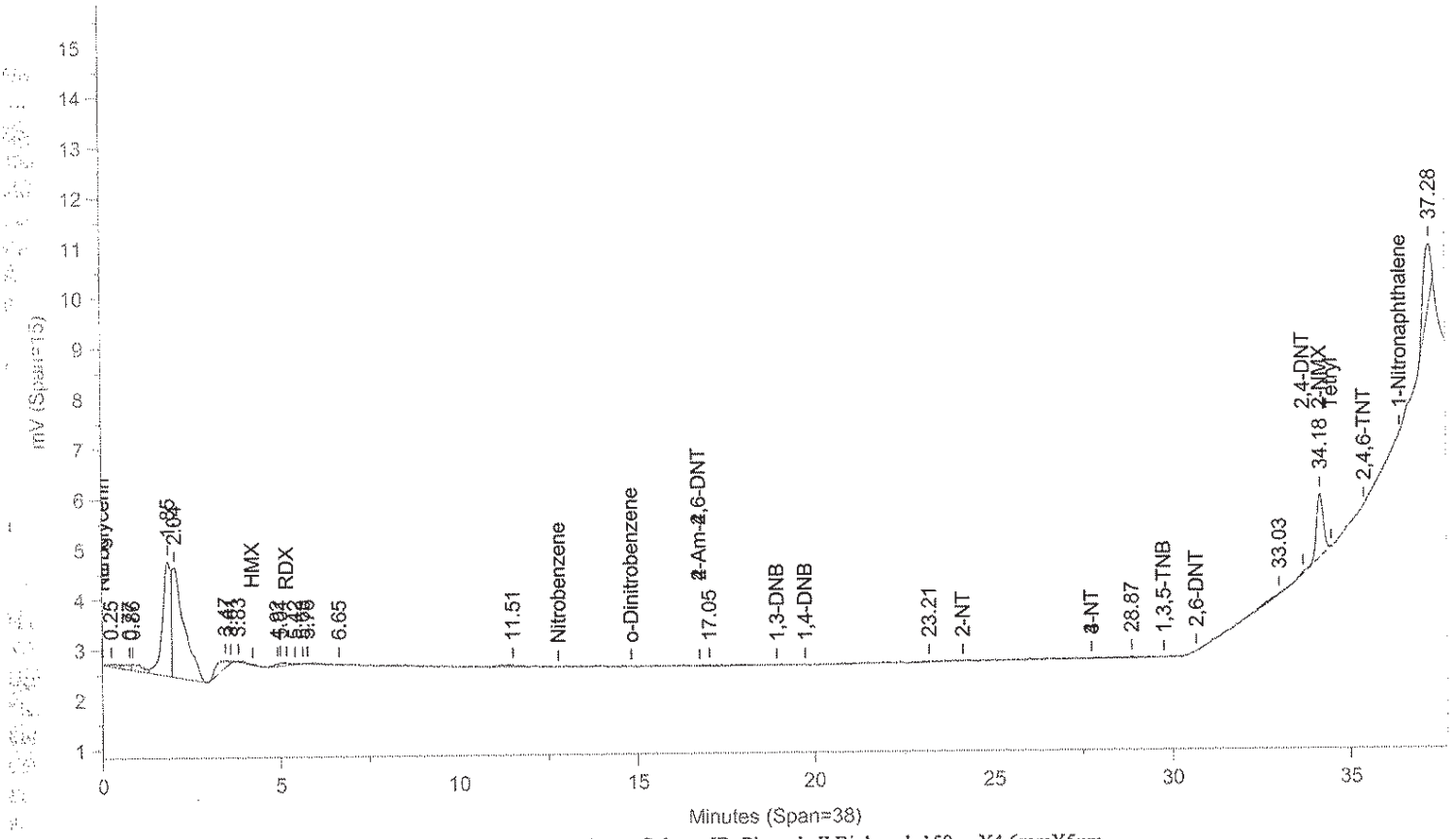
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

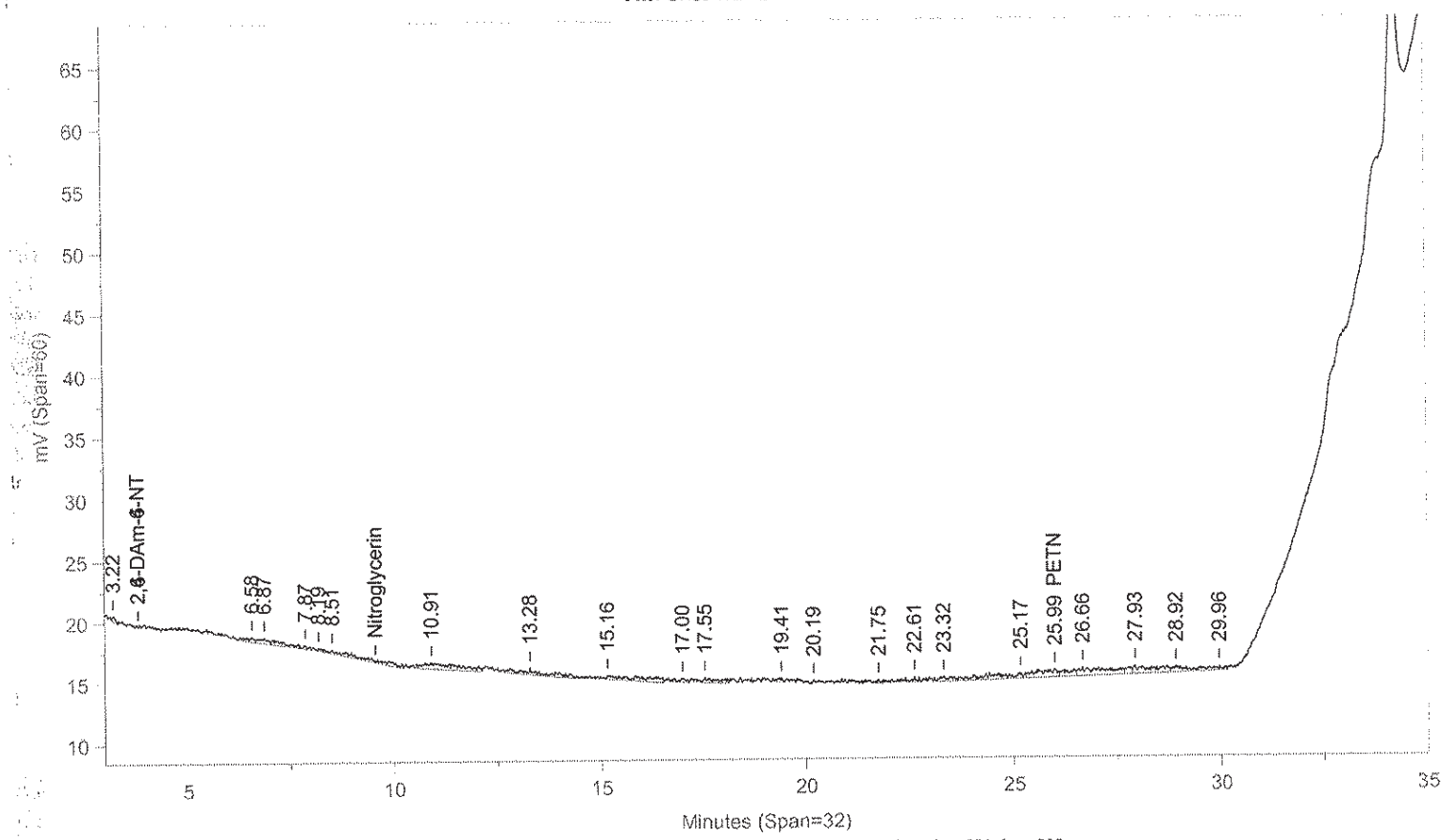
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.15R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 4:22:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.15R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 4:22:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		PETN	25.991	21074	3.549	PETN
34.179	17204	10.92	2-NMX		0		2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.15A
Area File: C:\CPWIN\DATA1\5C12310B.15A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:34:24 PM
File Reported On: 11/20/2013 at 5:34:34 PM

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Data Summary

Sample Name: 7263052 WHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 12:44:00
Instrument X6329A
Result file 3E12310.22R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 101% (63 - 150) Conc: 5030.08252

Analysis Report (B)

Injected on Nov 13, 2013 12:44:00
Instrument Y6329A
Result file 3C12310.22R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 110% (63 - 150) Conc: 5523.421875

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.16	4.24	1804	80.842438
Tetryl	7.43	7.84	7.71	663	19.193316
2-NMX	25.80	25.82	26.48	17146	5030.08252

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.24	4.41	353	33.684727
2-Amino-4,6-dinitrotoluer	16.81	17.07	17.13	2165	56.038963
2-NMX	34.15	34.27	34.35	17426	5523.421875
Tetryl	34.46	34.64	34.66	210	0
1-Nitronaphthalene	36.38	36.41	36.58	770	324.789581

Single Component Summary

	Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑	Nitroglycerin	B	10113.327148	6000	2000		9.14	
☑	PETN			<6000	<2000			
☑	HMX			<750	<250			
☑	RDX			<300	<125			
☑	1,3,5-Trinitrobenzene			<300	<100			
☑	1,4-Dinitrobenzene			<300	<100			
☑	o-Dinitrobenzene			<300	<100			
☑	1,3-DNB			<300	<100			
☑	Tetryl			<300	<153			
☑	Nitrobenzene			<300	<100			
☑	2,4,6-Trinitrotoluene			<300	<100			
☑	4-Amino-2,6-dinitrotoluene			<300	<150			
☑	2-Amino-4,6-dinitrotoluene			<300	<100			
☑	2,6-Dinitrotoluene			<300	<100			
☑	2,4-Dinitrotoluene			<300	<100			
☑	2-Nitrotoluene			<300	<200			
☑	4-Nitrotoluene			<300	<200			
☑	3-Nitrotoluene			<300	<250			
☑	2-NMX	A	5030.08252				9.35	
☑	1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263052 WHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:44:00
Instrument : CP12--X6329A
Result file : 3E12310.22R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 101% (63-150) Conc.: 5030.08252

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.16	4.24	1804	80.842438
o-Dinitrobenzene	6.20	6.22	6.40	-11	0.000000
Tetryl	7.43	7.84	7.71	663	19.193316
2-NMX	25.80	25.82	26.48	17146	5030.082520

Analysis Report (B)

Injected on : NOV 13, 2013 12:44:00
Instrument : CP12--X6329B
Result file : 3E12310B.22R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 102% (63-150) Conc.: 5121.25439

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.63	8.72	9.01	141632	11081.914063
2-NMX	25.96	25.97	26.63	250157	5121.254395

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
2,6-DAm-4-NT							
2,4-DAm-6-NT							
Nitroglycerin	B	11081.914063	6000	2000			confirmed Report Confirmation
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-TNB			<300	<100			
1,4-DNB			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153	7 coeluters		coeluters report confirmation
Nitrobenzene			<300	<100			coeluters report confirmation
2,4,6-TNT			<300	<100			
Tetryl breakdown							
4-Am-2,6-DNT			<300	<150			
2-Am-4,6-DNT			<300	<100			
2,6-DNT			<300	<100			
2,4-DNT			<300	<100			
2-NT			<300	<200			
4-NT			<300	<200			
3-NT			<300	<250			
2-NMX	A	5030.082520				1.80	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

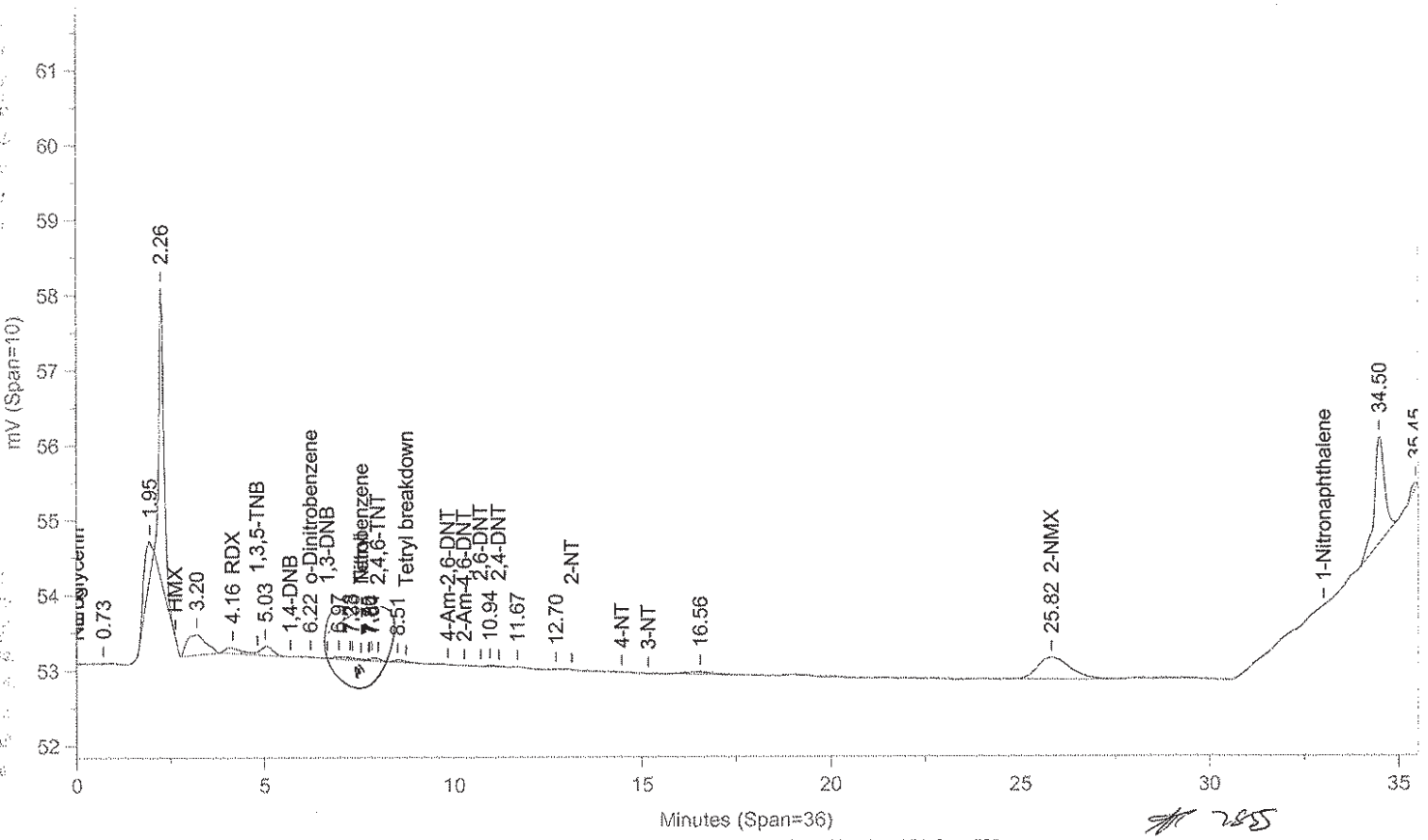
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 23:29:51

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.22R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:43:59 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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See Reintegra...

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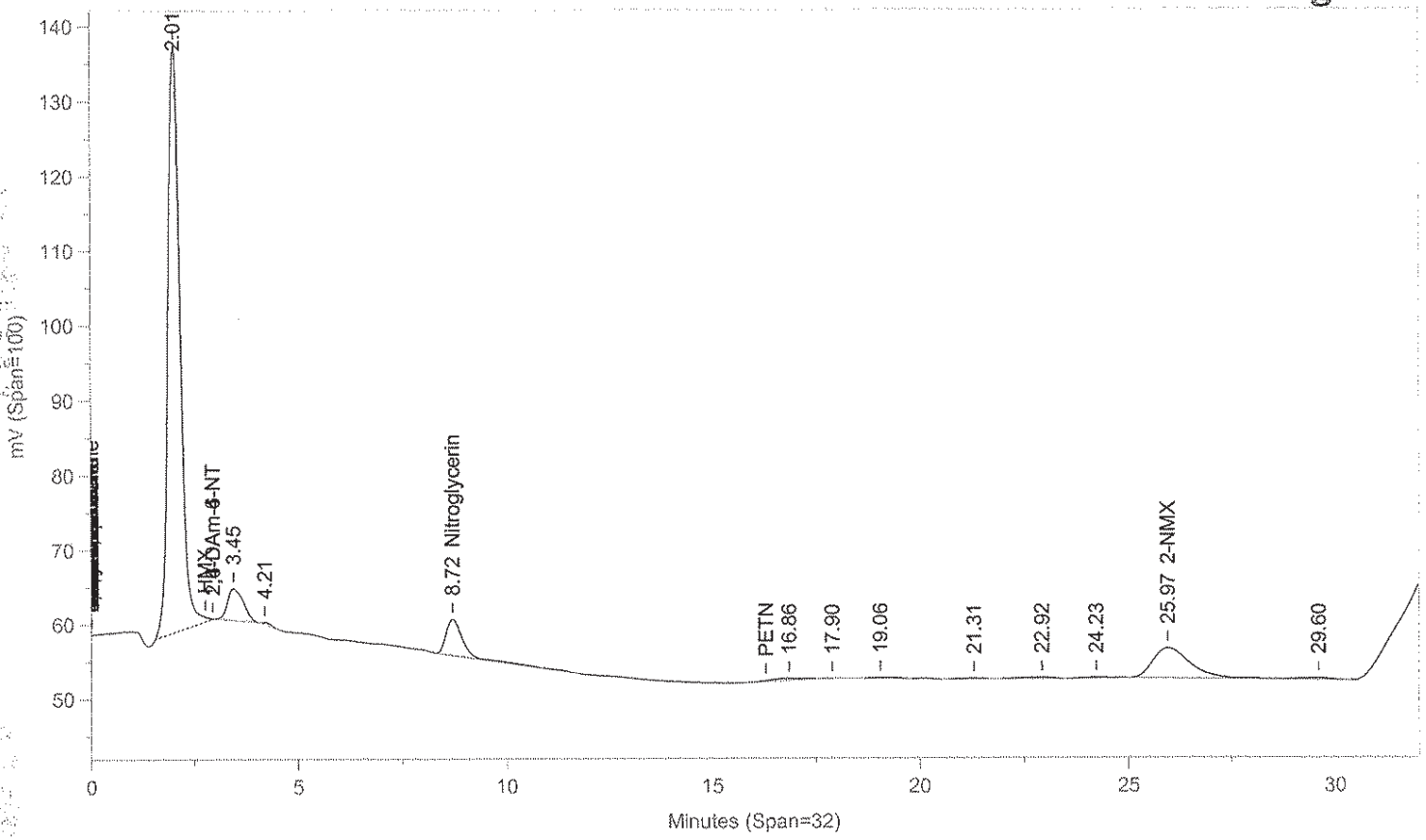


Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:43:59 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

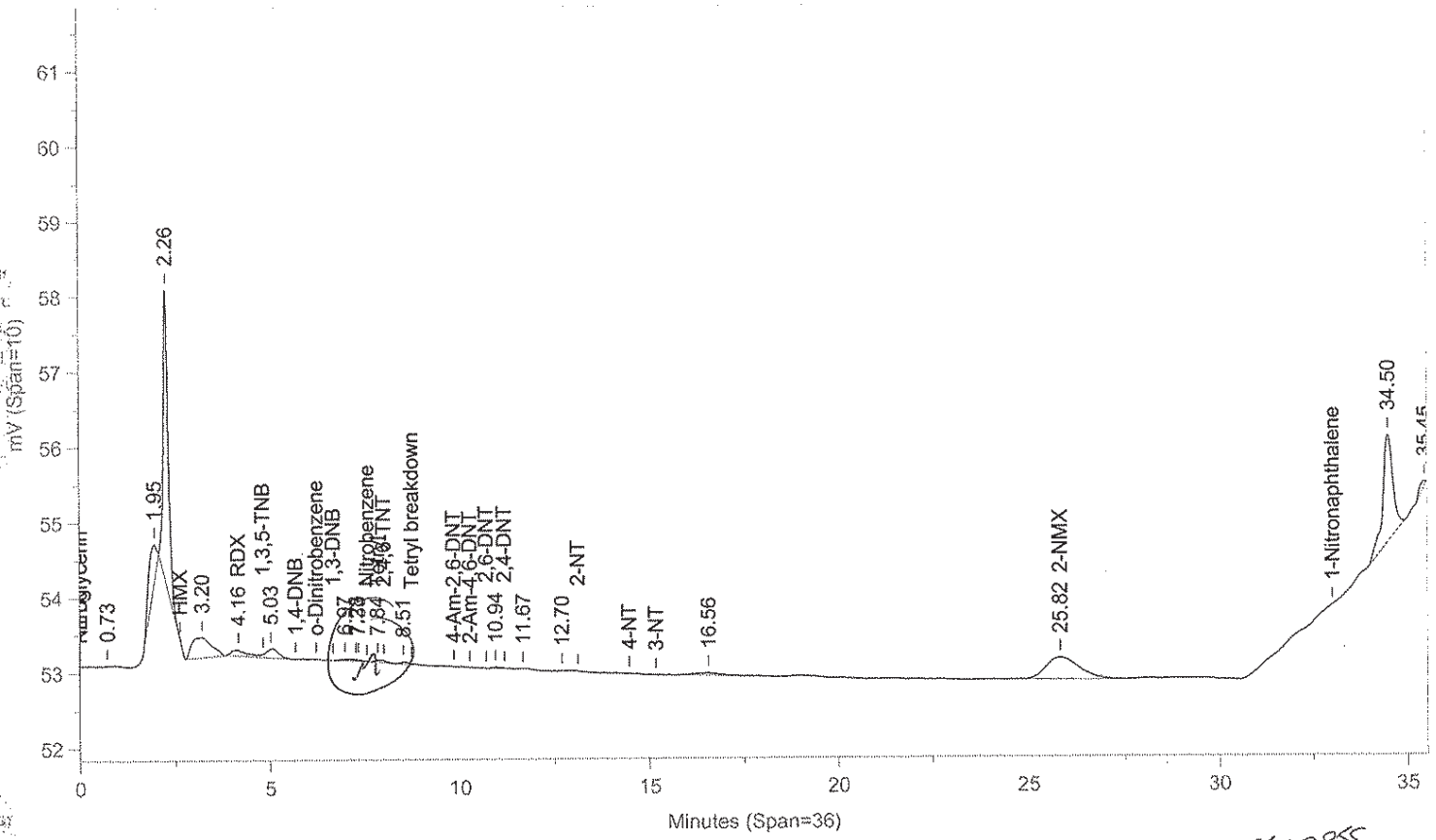
Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.162	1804	80.842	RDX	.	0	.	RDX
6.222	48	4.686	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
.	0	.	Nitroglycerin	8.716	141632	11081.91	Nitroglycerin
25.817	17146	5030.083	2-NMX	25.965	250157	5121.254	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.22A
Area File: C:\CPWIN\DATA1\3E12310B.22A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:24:36 PM
File Reported On: 11/13/2013 at 1:24:46 PM

Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.22R

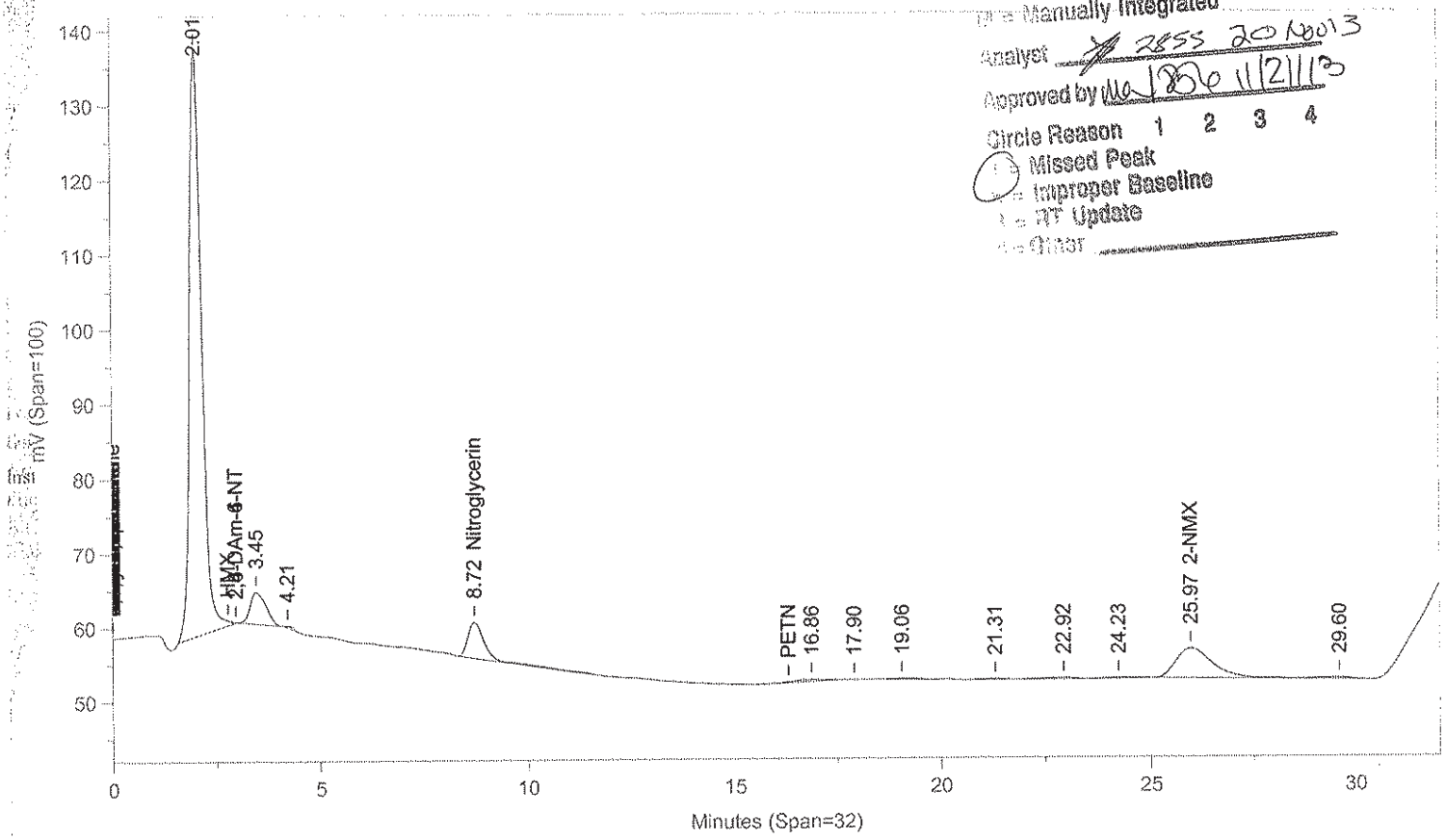


Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:43:59 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.22R

Manually Integrated
Analyst 2855 20 Nov 13
Approved by [illegible] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:43:59 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.162	1804	80.842	RDX	.	0	.	RDX
7.843	663	19.193	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.716	141632	11081.91	Nitroglycerin
25.817	17146	5030.083	2-NMX	25.965	250157	5121.254	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:13:12 PM
File Reported On: 11/20/2013 at 11:13:11 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263052 WHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:44:00
Instrument : CP12--Y6329A
Result file : 3C12310.22R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 110% (63-150) Conc.: 5523.42187

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.24	4.41	353	33.684727
RDX	5.18	5.27	5.38	1286	-121.070404
2-Am-4,6-DNT	16.81	17.07	17.13	2165	56.038963
2-NMX	34.15	34.27	34.35	17426	5523.421875
Tetryl	34.46	34.64	34.66	210	195.699463
1-Nitronaphthalene	36.38	36.41	36.58	770	324.789581

Analysis Report (B)

Injected on : NOV 13, 2013 12:44:00
Instrument : CP12--Y6329B
Result file : 3C12310B.22R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.73	4.01	25259	114.588509
Nitroglycerin	9.66	9.82	9.86	102791	10113.327148
PETN	26.17	26.41	26.59	7988	672.600220

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin	B	10113.327148	6000	2000			confirmed Report
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5523.421875					
☑ Tetryl	A	195.699463	<300	153	J	MC	
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	324.789581	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist Date: NOV 20 2013

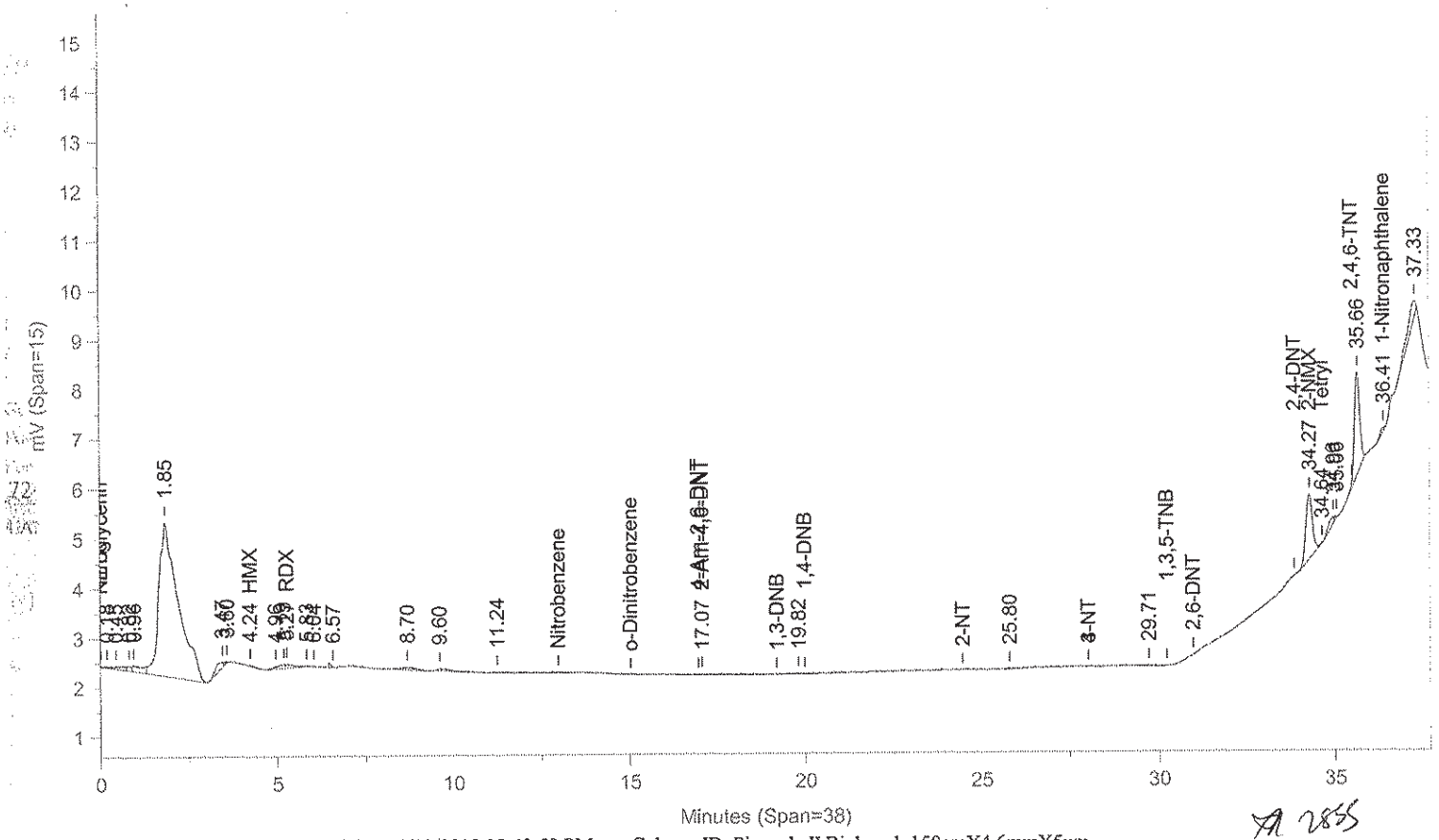
Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

James H. Place, Senior Chemist NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

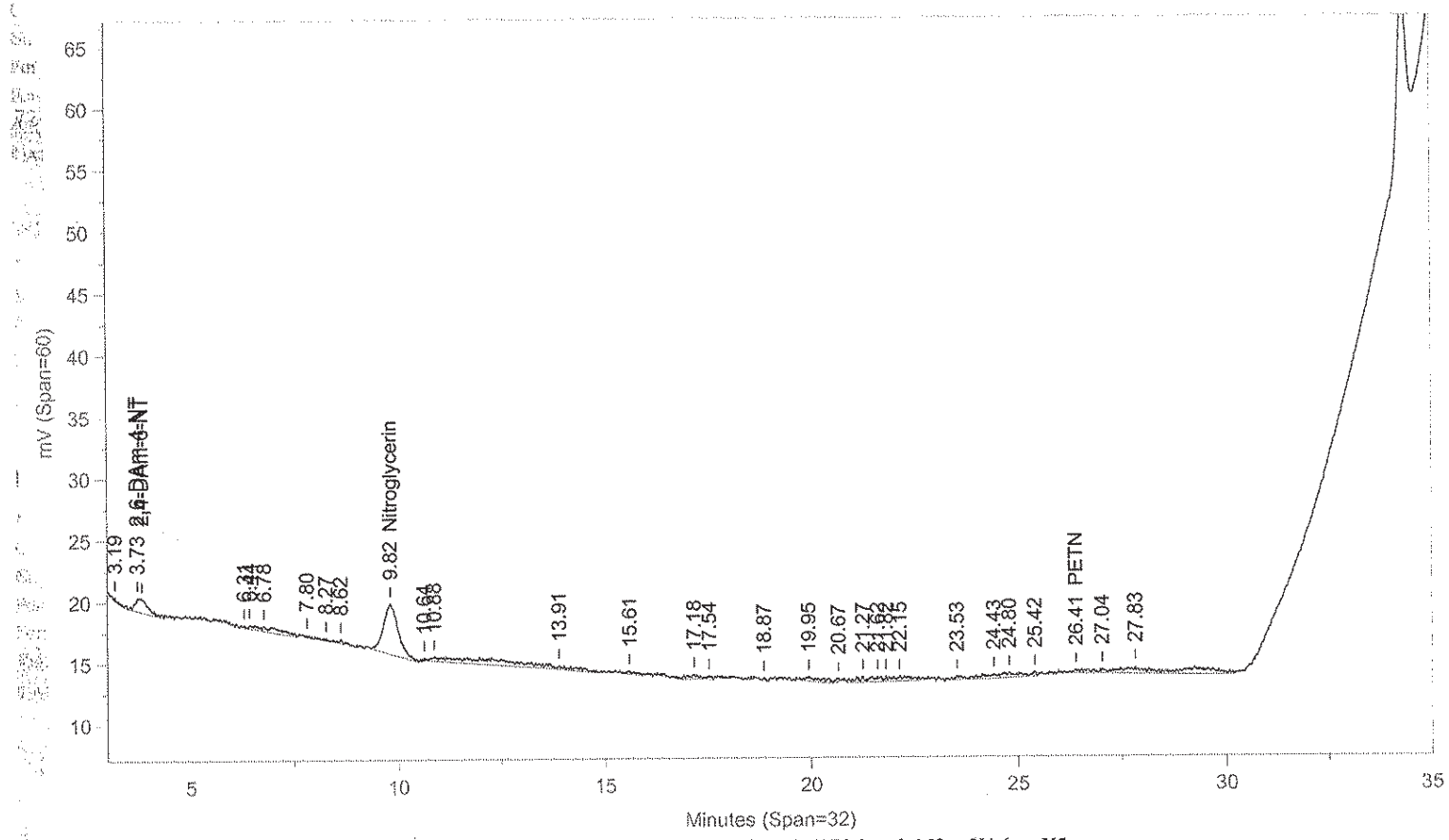
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.22R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 12:43:59 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.22R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 12:43:59 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.732	25259	114.589	2,6-DAm-4-NT
4.238	353	33.685	HMX	.	0	.	HMX
5.273	1286	-121.07	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.82	102791	10113.33	Nitroglycerin
17.072	2165	56.039	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.413	7988	672.6	PETN
34.272	17426	5523.422	2-NMX	.	0	.	2-NMX
34.636	210	195.699	Tetryl	.	0	.	Tetryl
36.406	770	324.79	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Det
Files:
Area File: C:\CPWIN\DATA1\3C12310.22A
Area File: C:\CPWIN\DATA1\3C12310B.22A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:24:08 PM
File Reported On: 11/13/2013 at 1:24:16 PM

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Data Summary

Sample Name: 7263053 XHERC Sample ID: AA **Batchnumber: 133110004A**

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 14:51:16
Instrument	X6329A
Result file	3E12310.25R
Calibration file	2E12310
Method file	8330

%SSR(NMX) 111% (63 - 150) Conc: 5533.308594

Analysis Report (B)

Injected on	Nov 13, 2013 14:51:16
Instrument	Y6329A
Result file	3C12310.25R
Calibration file	2C12310
Method file	8330C

%SSR(NMX) 110% (63 - 150) Conc: 5525.186523

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.90	7.94	8.10	19	0.847831
2-Nitrotoluene	12.98	13.18	13.26	600	45.35466
2-NMX	25.80	25.91	26.48	18862	5533.308594

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.28	34.35	17432	5525.186523

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	11664.424805	6000	2000		17.17	
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5533.308594				0.15	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263053 XHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:51:16
Instrument : CP12--X6329A
Result file : 3E12310.25R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 111% (63-150) Conc.: 5533.30859

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.06	4.24	355	-84.546967
2,4,6-TNT	7.90	7.94	8.10	19	0.847831
Tetryl breakdown	8.62	8.68	8.86	1320	38.191479
2-NT	12.98	13.18	13.26	600	45.354660
2-NMX	25.80	25.91	26.48	18862	5533.308594

Analysis Report (B)

Injected on : NOV 13, 2013 14:51:16
Instrument : CP12--X6329B
Result file : 3E12310B.25R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 5238.24462

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.63	8.78	9.01	177082	13855.628906
2-NMX	25.96	26.03	26.63	255872	5238.244629

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	13855.628906	6000	2000			confirmed Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 coelutes		report confirmation
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5533.308594				5.48	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Melissa A. McDermott
Senior Chemist Group Leader

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

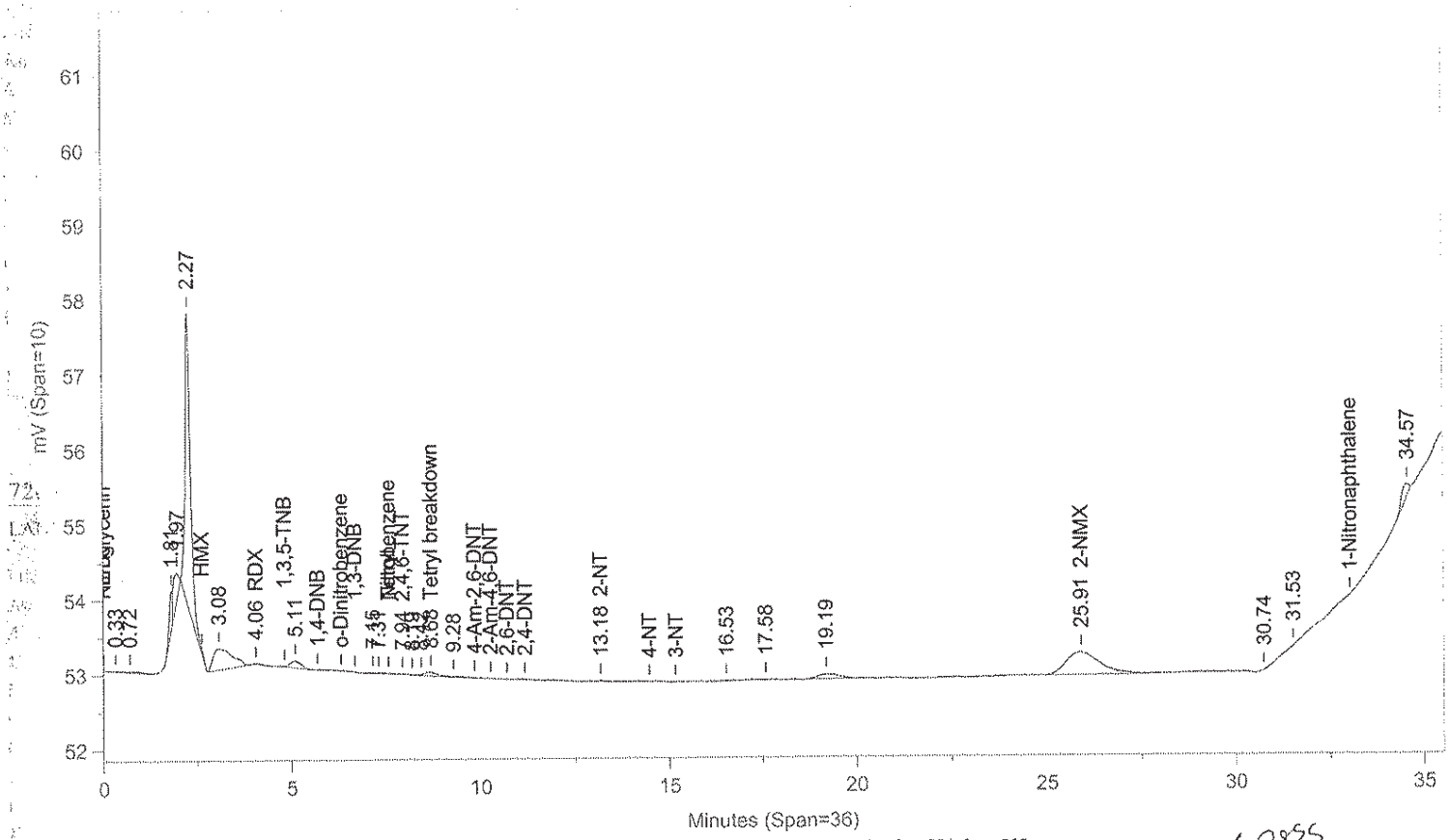
James H. Place
Senior Chemist
NOV 21 2013

Verified by:
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

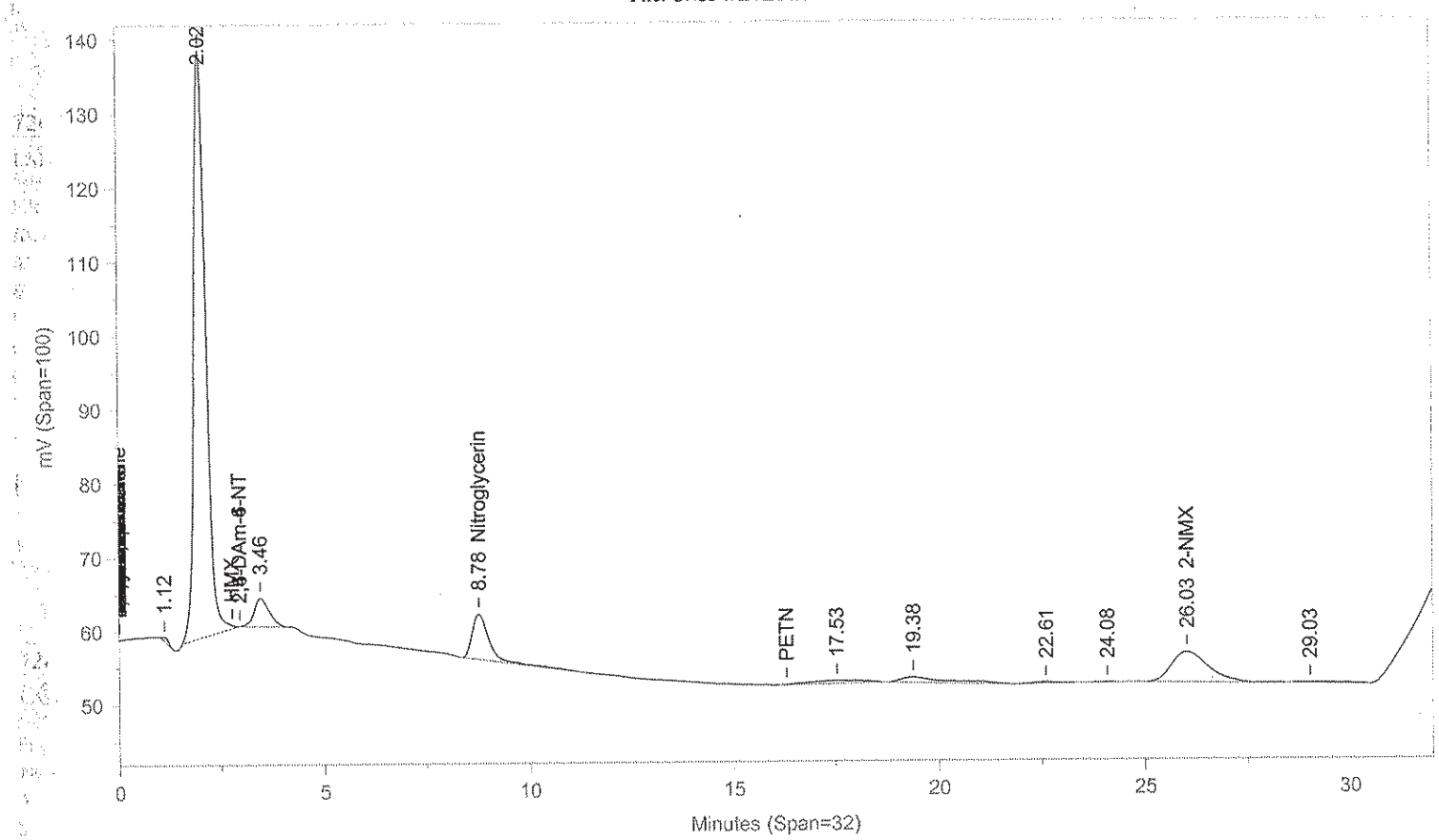
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.25R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 2:51:15 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2835

File: C:\CPWIN\DATA1\3E12310B.25R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 2:51:15 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.059	355	-84.547	RDX	.	0	.	RDX
7.94	19	.848	2,4,6-TNT	.	0	.	2,4,6-TNT
8.685	1320	38.191	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.776	177082	13855.63	Nitroglycerin
13.183	600	45.355	2-NT	.	0	.	2-NT
25.91	18862	5533.309	2-NMX	26.034	255872	5238.245	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.25A
Area File: C:\CPWIN\DATA1\3E12310B.25A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 3:32:00 PM
File Reported On: 11/13/2013 at 3:32:13 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263053 XHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:51:16
Instrument : CP12--Y6329A
Result file : 3C12310.25R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 110% (63-150) Conc.: 5525.18652

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.15	34.28	34.35	17432	5525.186523

Analysis Report (B)

Injected on : NOV 13, 2013 14:51:16
Instrument : CP12--Y6329B
Result file : 3C12310B.25R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.80	4.01	15967	72.432922
Nitroglycerin	9.66	9.79	9.86	118556	11664.424805

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin	B	11664.424805	6000	2000			confirmed
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutors		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutors		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5525.186523					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/17/2013 18:09:26

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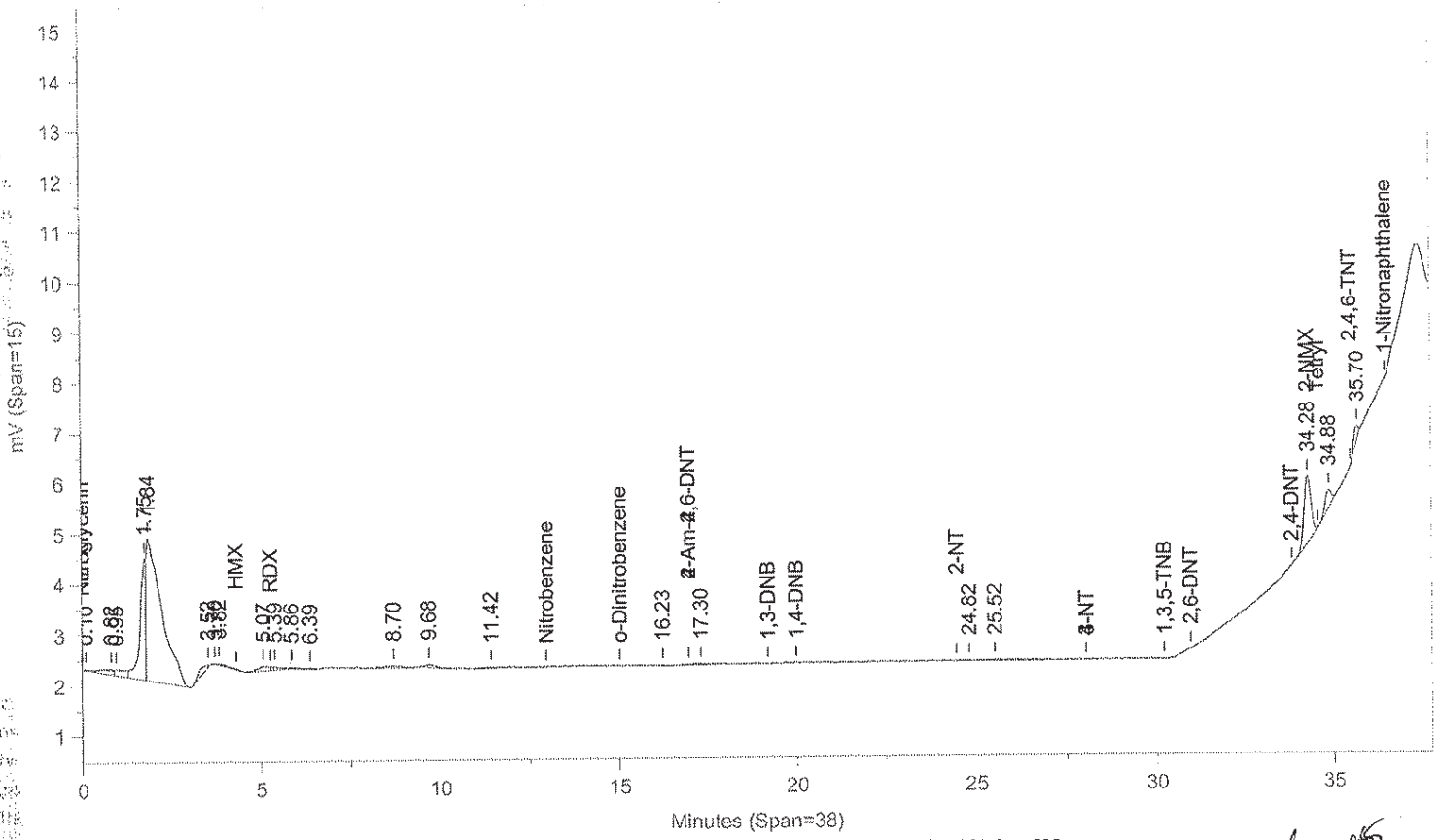
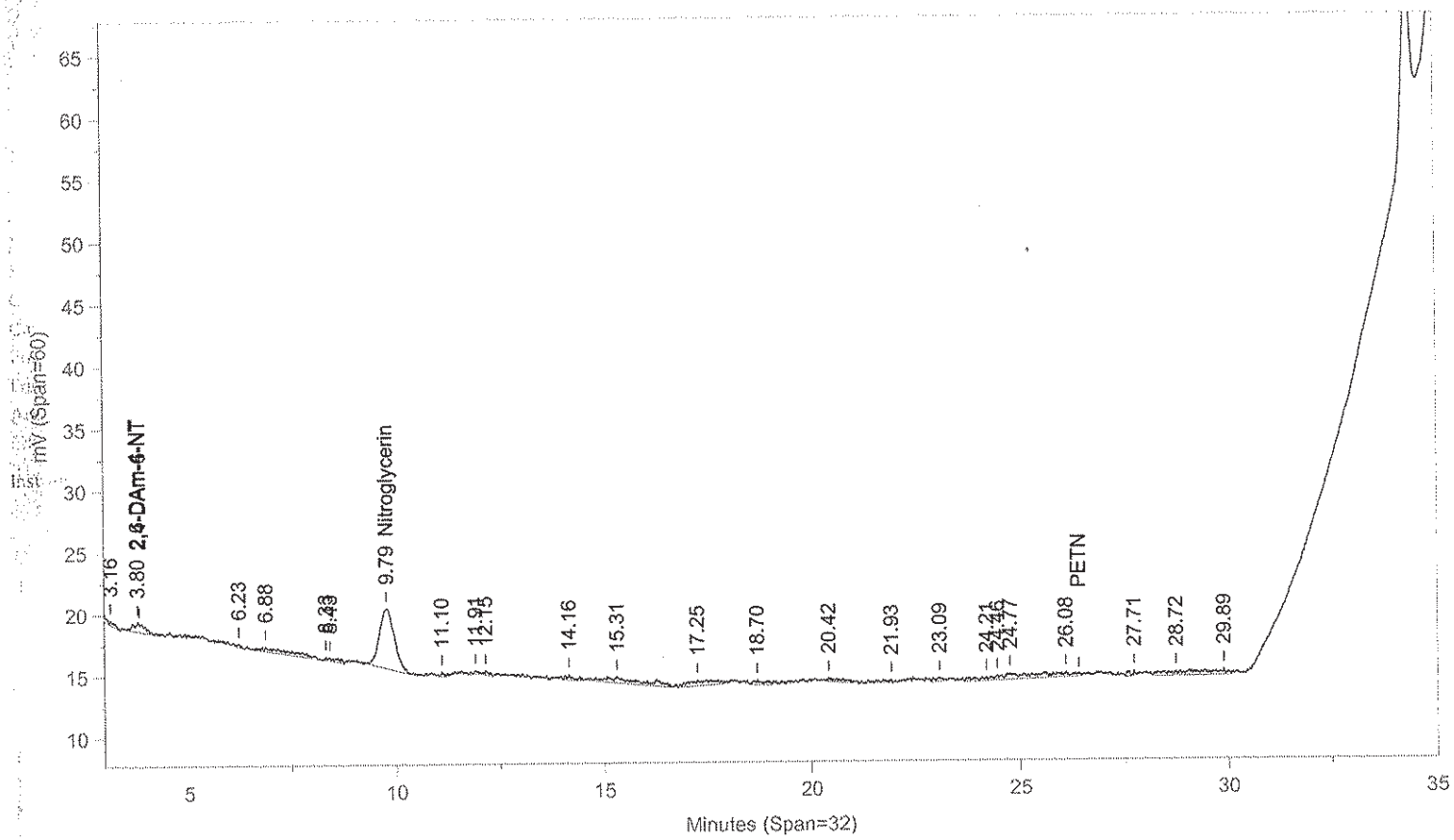
File: C:\CPWIN\DATA1\3C12310.25R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 2:51:15 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.25R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 2:51:15 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.796	15967	72.433	2,6-DAm-4-NT
.	0	.	Nitroglycerin	9.788	118556	11664.43	Nitroglycerin
34.284	17432	5525.187	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.25A
Area File: C:\CPWIN\DATA1\3C12310B.25A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 3:31:22 PM
File Reported On: 11/13/2013 at 3:31:32 PM

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Data Summary

Sample Name: 7263054 PHERC Sample ID: AA **Batchnumber: 133110004A**

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 15:33:38
Instrument X6329A
Result file 3E12310.26R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 100% (63 - 150) Conc: 4989.066406

Analysis Report (B)

Injected on Nov 13, 2013 15:33:38
Instrument Y6329A
Result file 3C12310.26R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 110% (63 - 150) Conc: 5485.572266

Single Component Data

Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.20	6.27	6.40	88	8.49364
Tetryl	7.43	7.54	7.71	13	0.374545
2,4,6-Trinitrotoluene	7.90	7.92	8.10	23	1.01627
2-NMX	25.80	25.88	26.48	17006	4989.066406

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.30	34.35	17293	5485.572266
1-Nitronaphthalene	36.38	36.52	36.58	3420	490.026672

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	4989.066406				9.48	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263054 PHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 15:33:38
Instrument : CP12--X6329A
Result file : 3E12310.26R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 100% (63-150) Conc.: 4989.06640(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.24	4.24	110	-112.457199
o-Dinitrobenzene	6.20	6.27	6.40	88	8.493640
Tetryl	7.43	7.54	7.71	13	0.374545
2,4,6-TNT	7.90	7.92	8.10	23	1.016270
2-NMX	25.80	25.88	26.48	17006	4989.066406

Analysis Report (B)

Injected on : NOV 13, 2013 15:33:38
Instrument : CP12--X6329B
Result file : 3E12310B.26R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 110% (63-150) Conc.: 5487.43115:

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	25.96	26.63	268044	5487.431152

~~RDX = 110/87.623 (20/2) = 12.55378154 LMDL~~ ③ 1566 11/21/13

RDX = 110/110.0628 × 20/2 = 9.9943 Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 coeluters		report confirmation
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4989.066406				9.51	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 23:33:13

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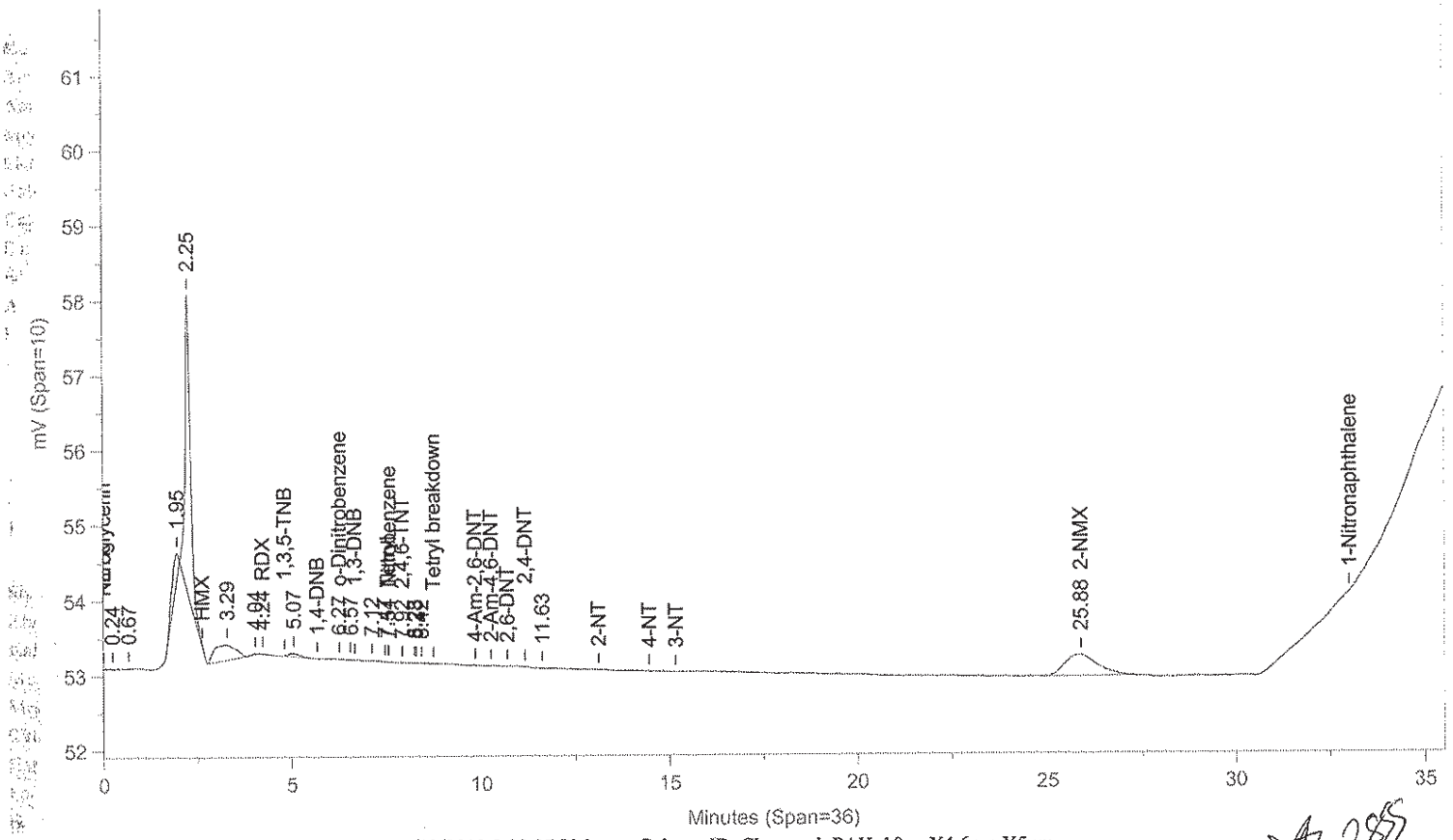
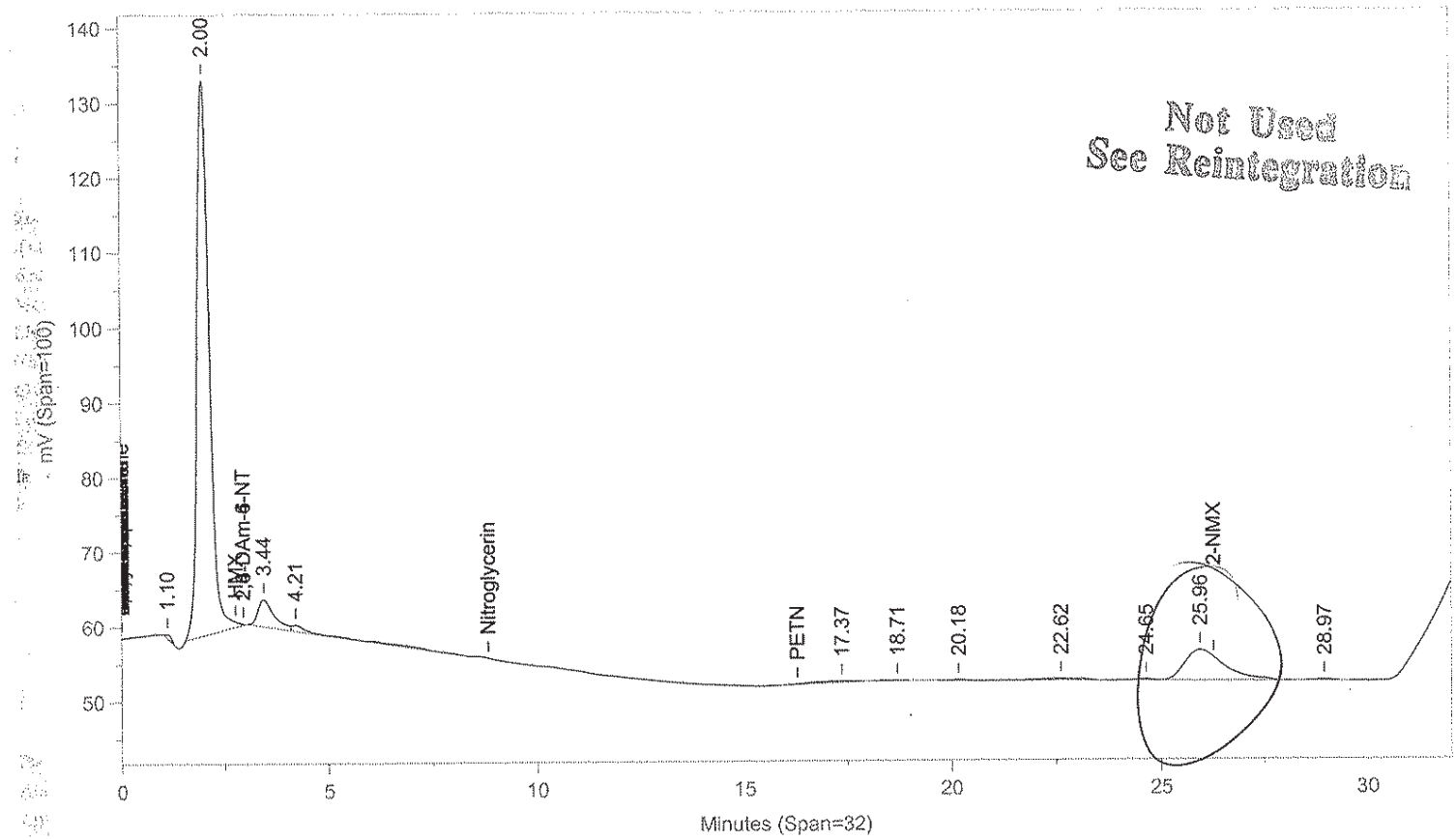


Instrument ID: CP12--X6329A Injected On: 11/13/2013 3:33:37 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

285

File: C:\CPWIN\DATA1\3E12310B.26R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/13/2013 3:33:37 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

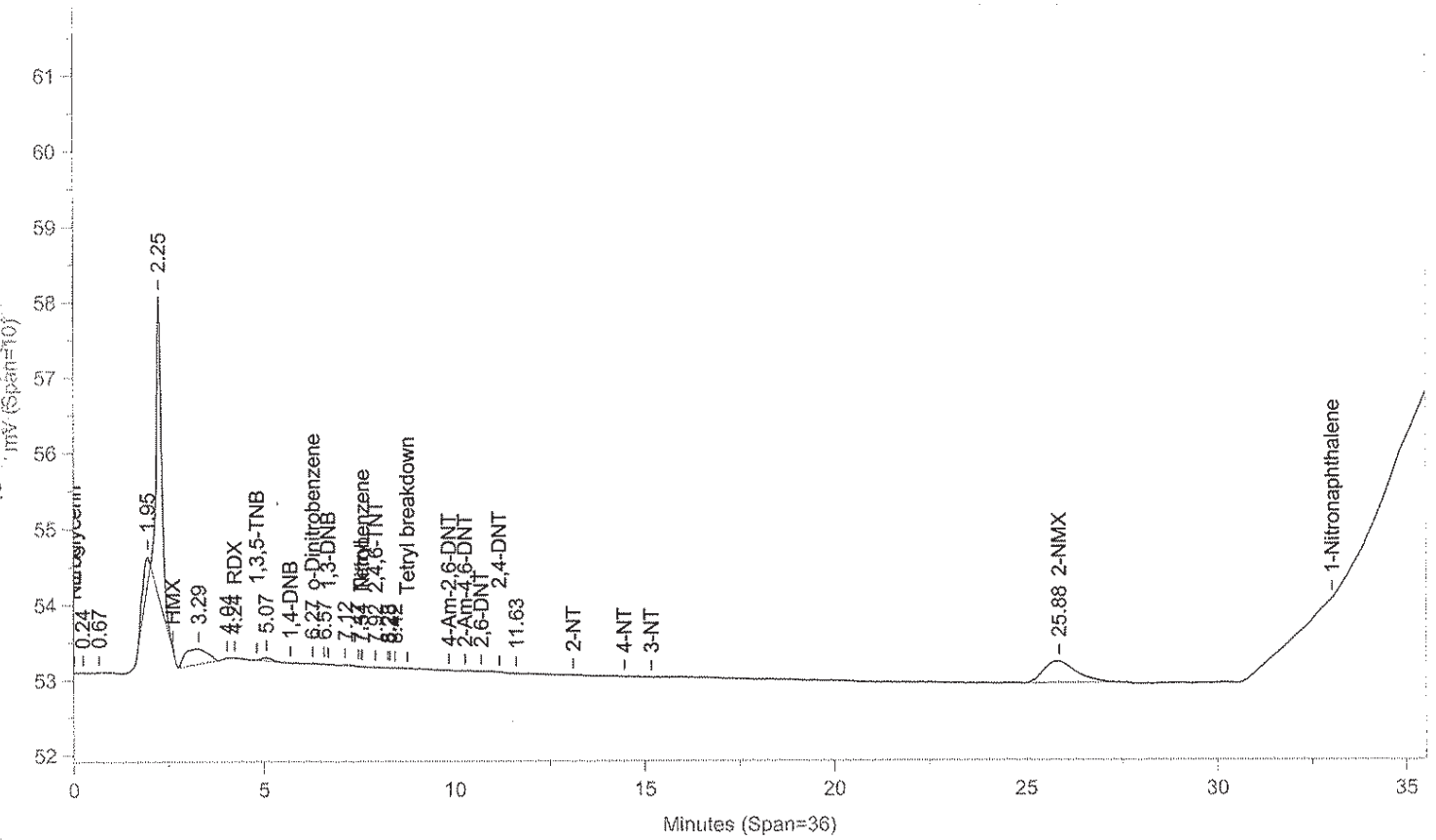
Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.239	110	-112.457	RDX	.	0	.	RDX
6.267	88	8.494	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.543	13	.375	Tetryl	.	0	.	Tetryl
7.918	23	1.016	2,4,6-TNT	.	0	.	2,4,6-TNT
25.875	17006	4989.066	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.26A
Area File: C:\CPWIN\DATA1\3E12310B.26A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 4:14:18 PM
File Reported On: 11/13/2013 at 4:14:30 PM

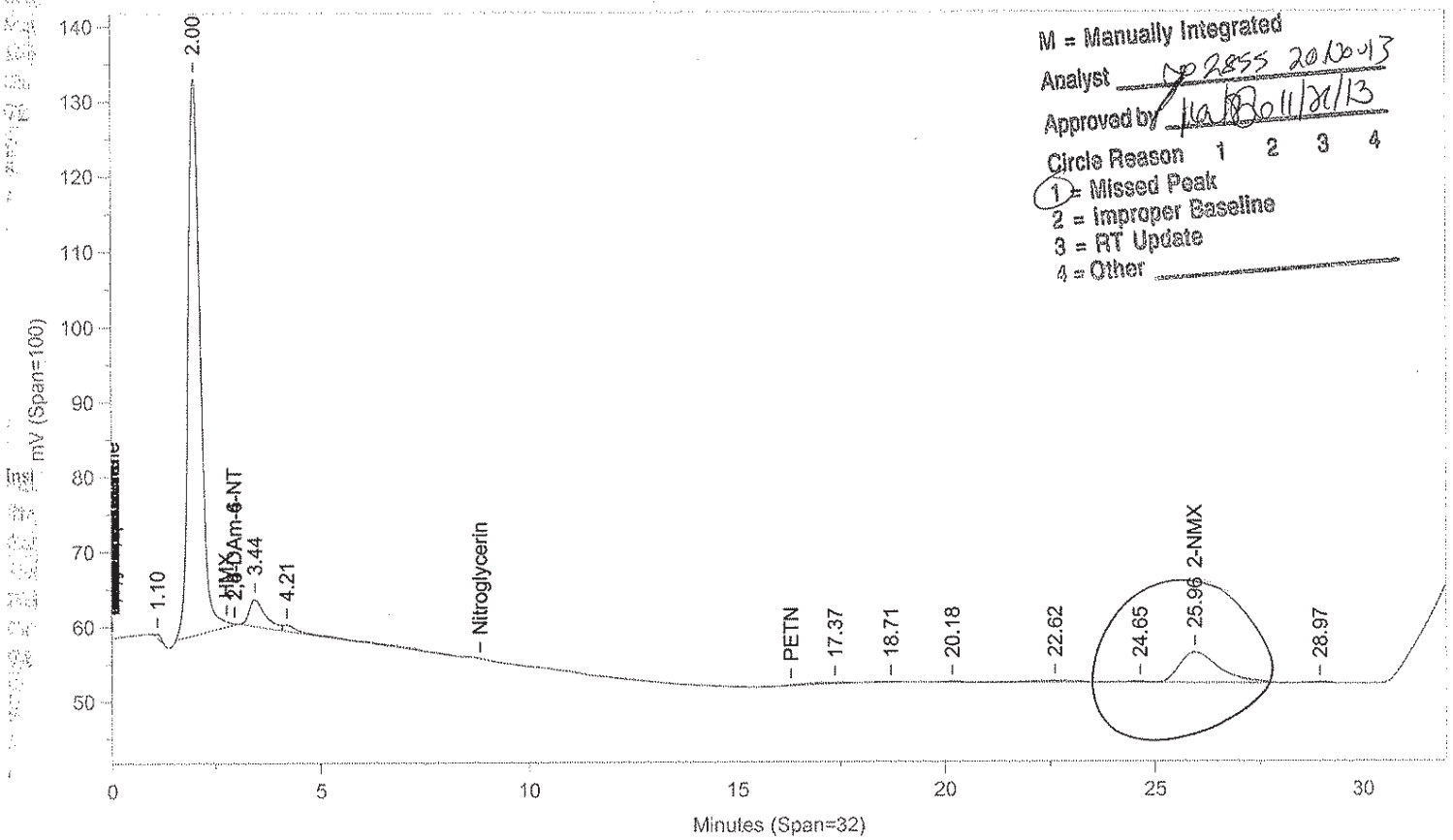
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.26R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 3:33:37 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.26R



M = Manually Integrated
Analyst 2855 20131013
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 3:33:37 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.239	110	-112.457	RDX	.	0	.	RDX
6.267	88	8.494	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.543	13	.375	Tetryl	.	0	.	Tetryl
7.918	23	1.016	2,4,6-TNT	.	0	.	2,4,6-TNT
25.875	17006	4989.066	2-NMX	25.96	268044	5487.431	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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File Reported On: 11/20/2013 at 11:17:29 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263054 PHERC **Sample ID:** AA **Batchnumber:** 133110004A
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 15:33:38
Instrument : CP12--Y6329A
Result file : 3C12310.26R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 110% (63-150) Conc.: 5485.57226(

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.32	5.38	423	-198.068390
2-NMX	34.15	34.30	34.35	17293	5485.572266
1-Nitronaphthalene	36.38	36.52	36.58	3420	490.026672

Analysis Report (B)

Injected on : NOV 13, 2013 15:33:38
Instrument : CP12--Y6329B
Result file : 3C12310B.26R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.17	26.34	26.59	22779	1918.121094

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5485.572266					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	490.026672	300	100	NC		

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

James H. Place, Senior Chemist
NOV 21 2013

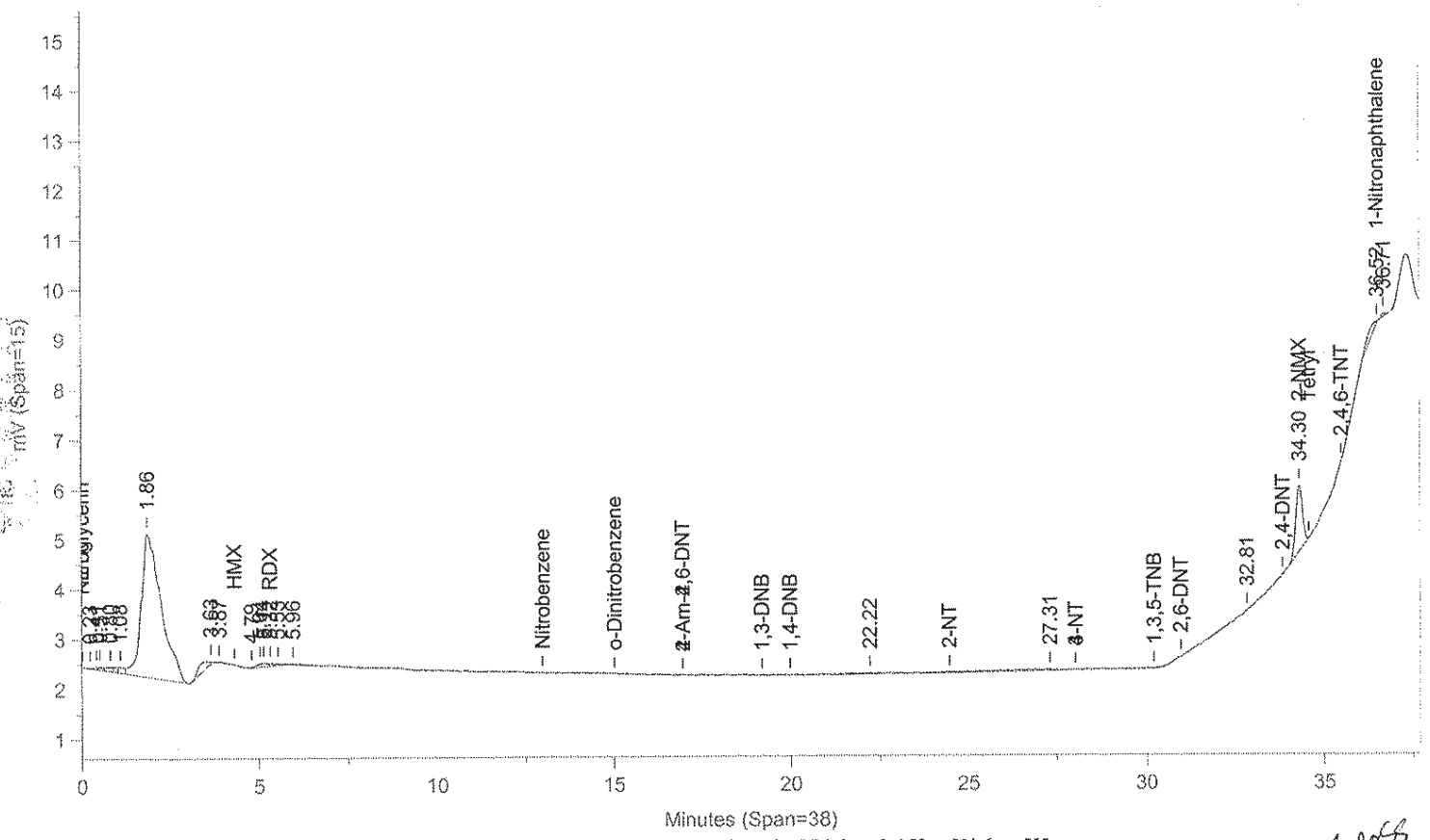
Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

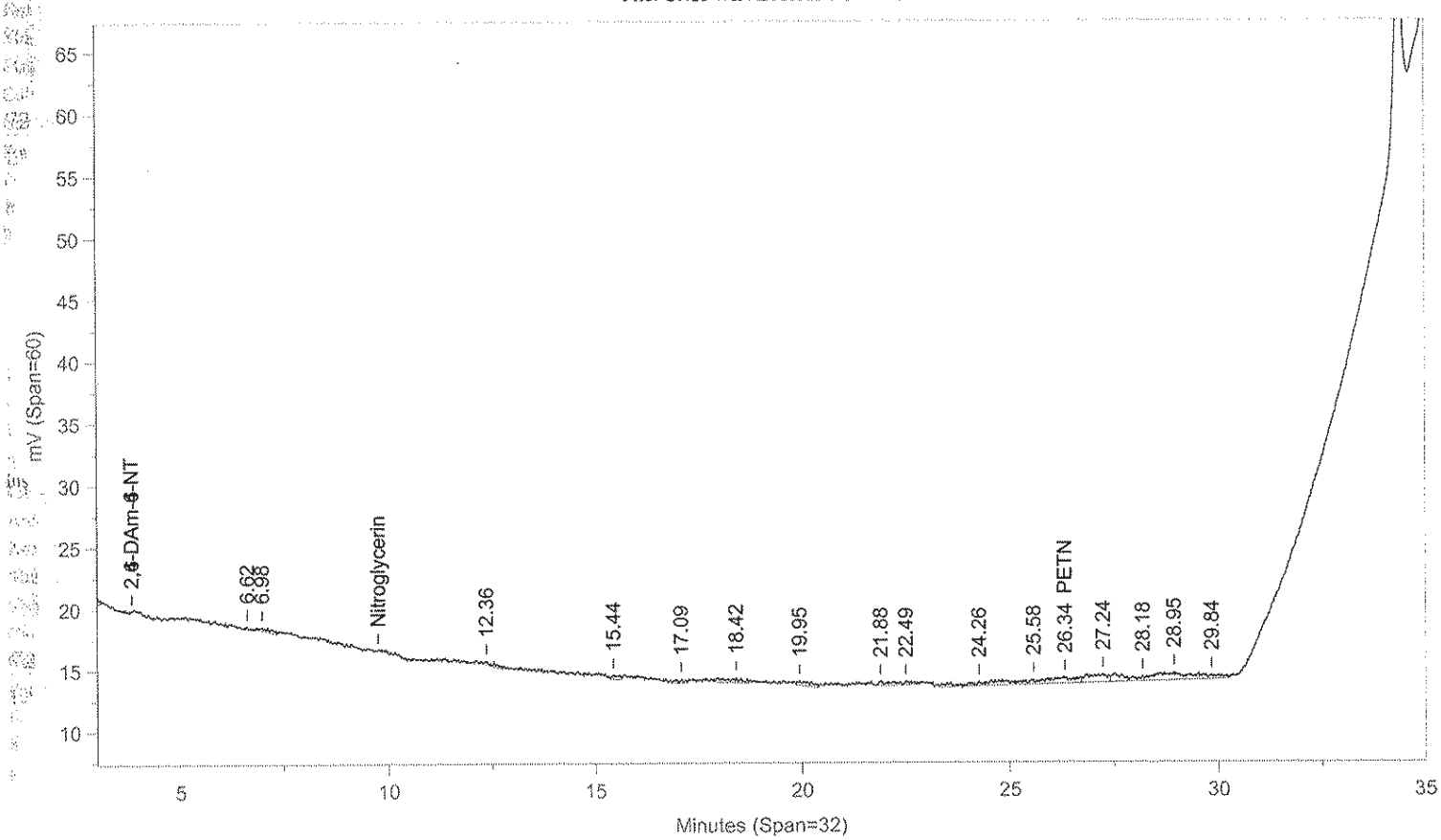
Printed on: 11/17/2013 18:09:42

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.26R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 3:33:37 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.26R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 3:33:37 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.318	423	-198.068	RDX	.	0	.	RDX
.	0	.	PETN	26.338	22779	1918.121	PETN
34.304	17293	5485.572	2-NMX	.	0	.	2-NMX
36.523	3420	490.027	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.26A
Area File: C:\CPWIN\DATA1\3C12310B.26A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 4:13:44 PM
File Reported On: 11/13/2013 at 4:13:55 PM

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Data Summary

Sample Name: 7263055 OHERC Sample ID: AA **Batchnumber: 133110004A**

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 16:16:05
Instrument	X6329A
Result file	3E12310.27R
Calibration file	2E12310
Method file	8330

%SSR(NMX) 107% (63 - 150) Conc: 5332.67334

Analysis Report (B)

Injected on	Nov 13, 2013 16:16:05
Instrument	Y6329A
Result file	3C12310.27R
Calibration file	2C12310
Method file	8330C

%SSR(NMX) 112% (63 - 150) Conc: 5601.674316

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.43	7.53	7.71	47	1.345252
2-NMX	25.80	25.86	26.48	18178	5332.67334

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.29	34.35	17699	5601.674316

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5332.67334				4.92	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist (Group Leader) Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263055 OHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 16:16:05
Instrument : CP12--X6329A
Result file : 3E12310.27R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5332.67334

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.06	4.24	530	-64.565277
Tetryl	7.43	7.53	7.71	47	1.345252
2-NMX	25.80	25.86	26.48	18178	5332.673340

Analysis Report (B)

Injected on : NOV 13, 2013 16:16:05
Instrument : CP12--X6329B
Result file : 3E12310B.27R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 101% (63-150) Conc.: 5055.04589

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.00	26.63	246923	5055.045898

RDX = $\frac{830}{87.623}\left(\frac{20}{2}\right) = 60.486\,40197$ = LMDL

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 coeluters		report confirmation
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5332.673340				5.35	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Chemist
Date: NOV 2 0 2013

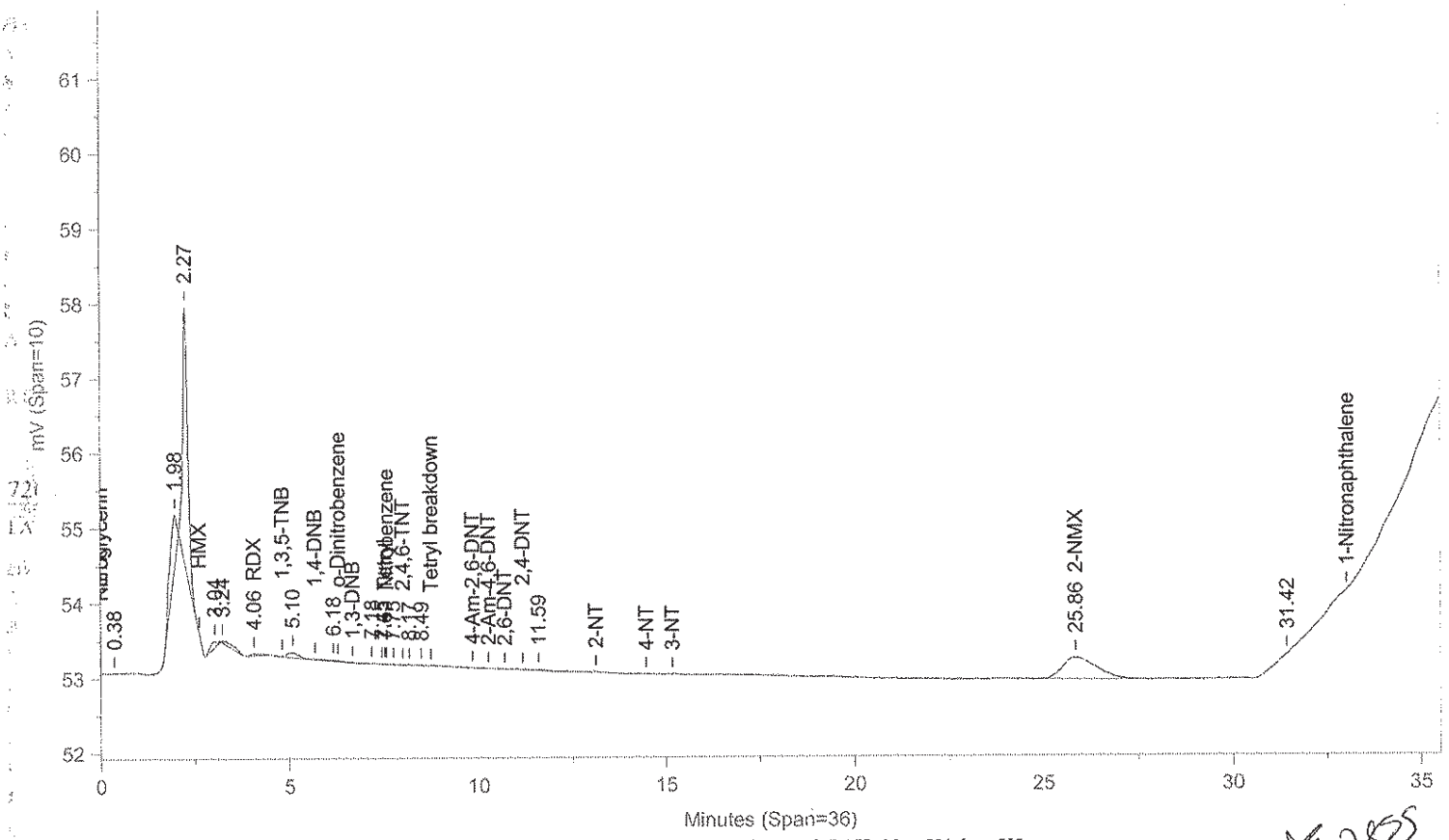
Verified by: Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 2 1 2013

James H. Place
Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

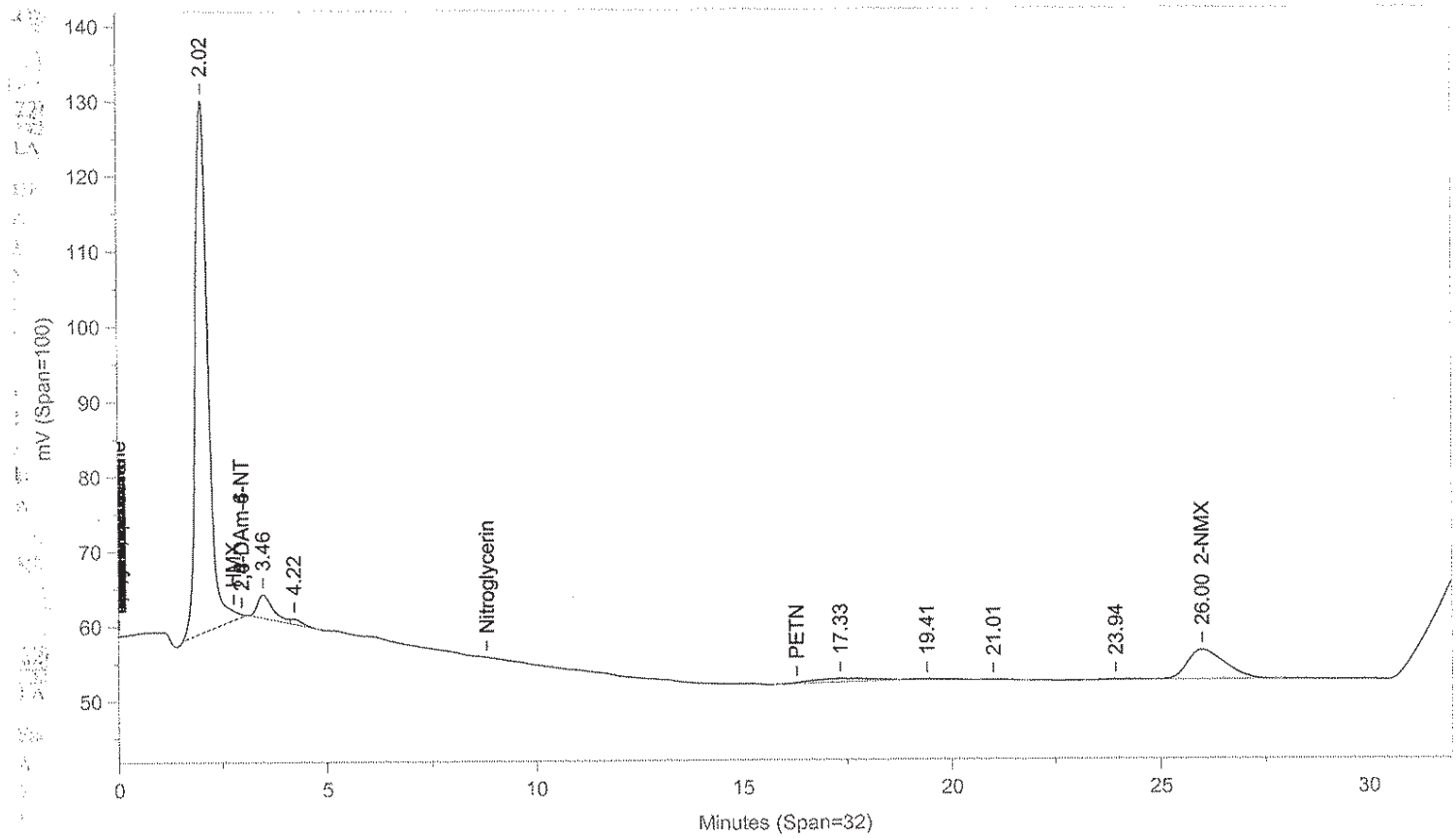
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.27R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 4:16:04 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.27R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 4:16:04 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.06	530	-64.565	RDX	.	0	.	RDX
7.528	47	1.345	Tetryl	.	0	.	Tetryl
25.855	18178	5332.673	2-NMX	26.003	246923	5055.046	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.27A
Area File: C:\CPWIN\DATA1\3E12310B.27A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 4:56:50 PM
File Reported On: 11/13/2013 at 4:57:03 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263055 OHERC Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 16:16:05
Instrument : CP12--Y6329A
Result file : 3C12310.27R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 112% (63-150) Conc.: 5601.67431(

Analysis Report (B)

Injected on : NOV 13, 2013 16:16:05
Instrument : CP12--Y6329B
Result file : 3C12310B.27R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.23	5.38	1914	-64.964523
2-NMX	34.15	34.29	34.35	17699	5601.674316

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5601.674316					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Chemist
Date: NOV 2 0 2013

James H. Place
Senior Chemist
NOV 2 1 2013

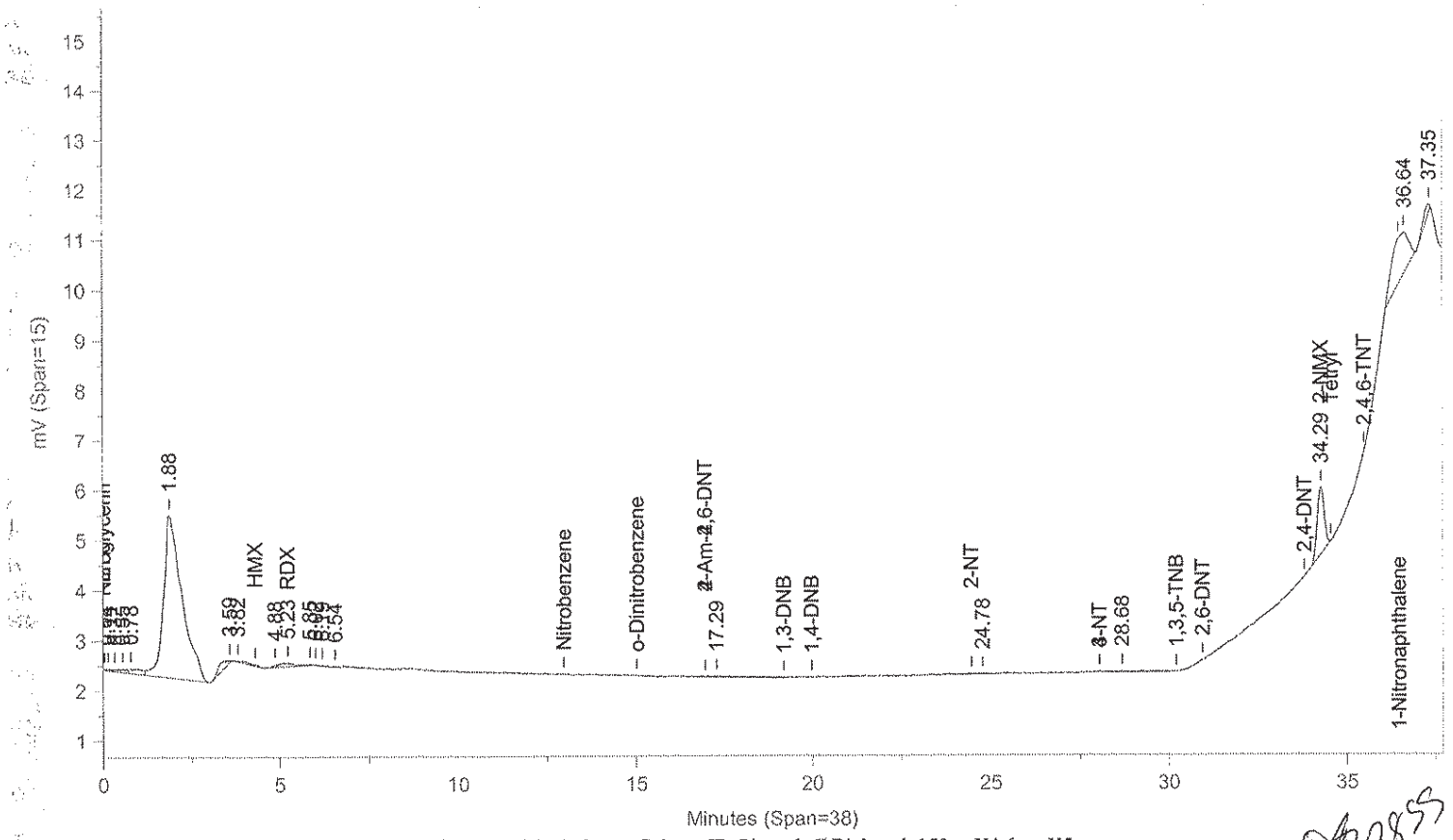
Verified by: Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/17/2013 18:09:56

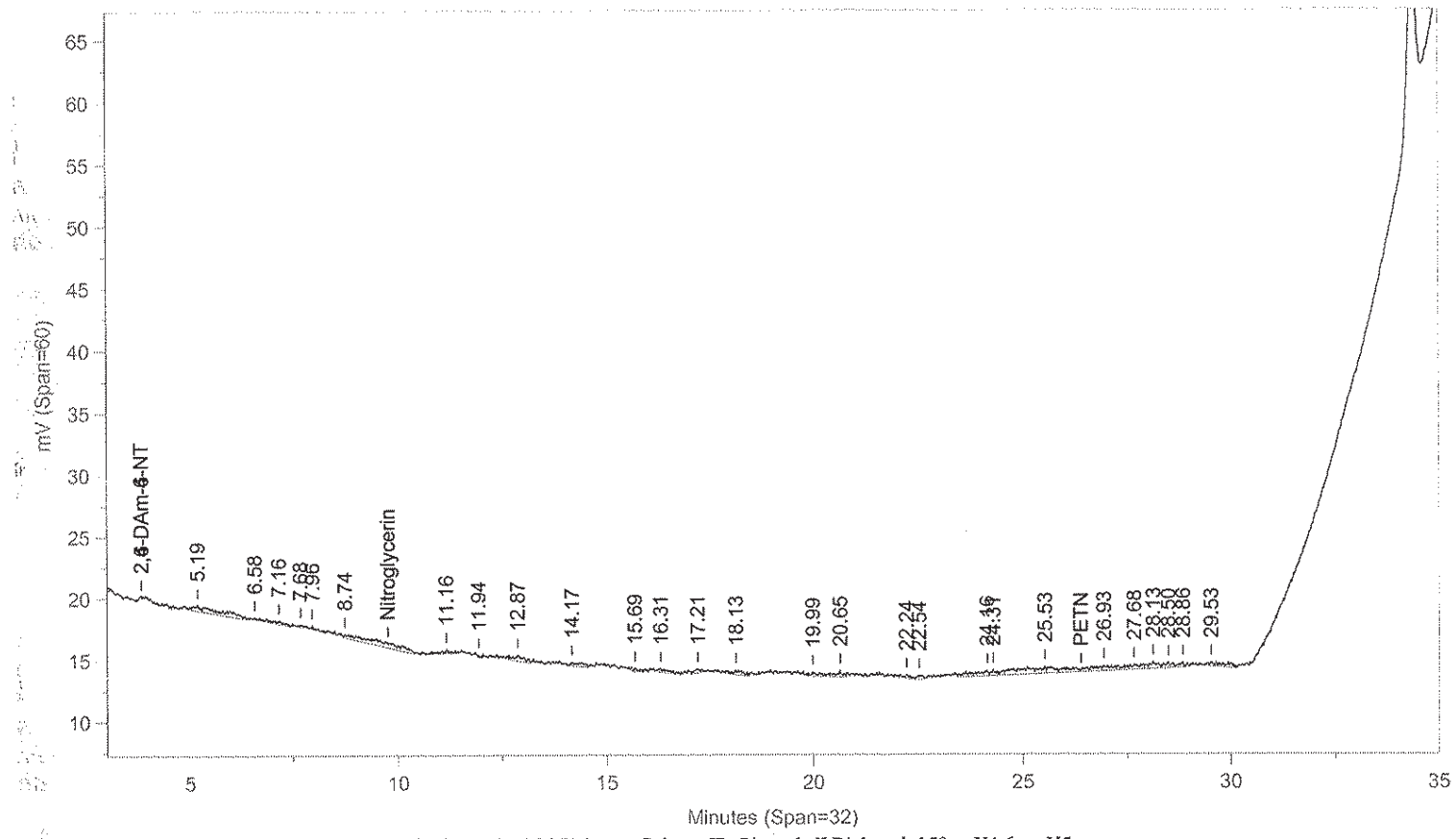
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.27R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 4:16:04 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

7855

File: C:\CPWIN\DATA1\3C12310B.27R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 4:16:04 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.227	1914	-64.965	RDX	.	0	.	RDX
34.294	17699	5601.674	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.27A
Area File: C:\CPWIN\DATA1\3C12310B.27A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 4:56:12 PM
File Reported On: 11/13/2013 at 4:56:23 PM

Standards Data

Explosives

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

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2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

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51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/10/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1331899999	
2	CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1331899999	
3	CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1331899999	
4	CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1331899999	
5	CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1331899999	
6	NITR31324O	6	CCAL	PV		8330.MET	1	1	1	0	1331899999	
7	NITR31324M	7	CCAL	PX		8330.MET	1	1	1	0	1331899999	
8	MS1330124B	8	CCAL	AH		8330.MET	1	50	1	0	1331899999	
9	MS1330124B	9	CCAL	AH		8330.MET	1	50	1	0	1331899999	
10	MS1330124B	10	CCAL	AH		8330.MET	1	50	1	0	1331899999	
11	MS1330124B	11	CCAL	AH		8330.MET	1	50	1	0	1331899999	
12	BLANKA 11/12/13	12	BLK	AA		8330.MET	2	20	1	0	133140021A	10132
13	LCSA 11/12/13	13	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
14	LCSDDIA 11/12/13	14	LCSD	AA		8330.MET	2	20	1	0	133140021A	10132
15	LCSDIA 11/12/13	15	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
16	7269438	16	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
17	7269438MS	17	MS	AA		8330.MET	2	20	1	0	133140021A	10132
18	NITR31324O	18	CCAL	PV		8330.MET	1	1	1	0	1331899999	
19	NITR31324M	19	CCAL	PX		8330.MET	1	1	1	0	1331899999	
20	7269438MSD	20	MSD	AA		8330.MET	2.2	20	1	0	133140021A	10132
21	7269454	21	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
22	7269467	22	T	AA		8330.MET	2	20	1	0	133140021A	10132
23	7269472	23	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
24	7269475	24	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
25	7269478	25	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
26	7269484	26	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
27	7269487	27	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
28	BLANKA 11/12/13	28	BLK	AA		8330.MET	2	20	1	0	133160009A	10132
29	LCSA 11/12/13	29	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
30	NITR31324O	30	CCAL	PV		8330.MET	1	1	1	0	1331899999	
31	NITR31324M	31	CCAL	PX		8330.MET	1	1	1	0	1331899999	
32	LCSDDIA 11/12/13	32	LCSD	AA		8330.MET	2	20	1	0	133160009A	10132
33	LCSDIA 11/12/13	33	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
34	7269501	34	T	AA		8330.MET	2	20	1	0	133160009A	10132
35	7269504	35	T	AA		8330.MET	2	20	1	0	133160009A	10132
36	7269514	36	T	AA		8330.MET	2	20	1	0	133160009A	10132
37	7269520	37	T	AA		8330.MET	2	20	1	0	133160009A	10132
38	7269526	38	T	AA		8330.MET	2	20	1	0	133160009A	10132
39	7269529	39	T	AA		8330.MET	2	20	1	0	133160009A	10132
40	7269532	40	T	AA		8330.MET	2	20	1	0	133160009A	10132
41	7269538	41	T	AA		8330.MET	2	20	1	0	133160009A	10132
42	NITR31324O	42	CCAL	PV		8330.MET	1	1	1	0	1331899999	
43	NITR31324M	43	CCAL	PX		8330.MET	1	1	1	0	1331899999	
44	7269541	44	T	AA		8330.MET	2	20	1	0	133160009A	10132
45	7269544	45	T	AA		8330.MET	2	20	1	0	133160009A	10132
46	7269550	46	T	AA		8330.MET	2	20	1	0	133160009A	10132
47	7269553	47	T	AA		8330.MET	2	20	1	0	133160009A	10132
48	7269559	48	T	AA		8330.MET	2	20	1	0	133160009A	10132
49	7270974	49	T	AA		8330.MET	2	20	1	0	133160009A	10132
50	7270975MS	50	MS	AA		8330.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7270976MSD	51	MSD	AA		8330.MET	2	20	1	0	133160009A	10132
52	7270986	52	T	AA		8330.MET	2	20	1	0	133160009A	10132
53	7270989	53	T	AA		8330.MET	2	20	1	0	133160009A	10132
54	NITR31324O	54	CCAL	PV		8330.MET	1	1	1	0	1331899999	
55	NITR31324M	55	CCAL	PX		8330.MET	1	1	1	0	1331899999	
56	7270995	56	T	AA		8330.MET	2	20	1	0	133160009A	10132
57	7271001	57	T	AA		8330.MET	2	20	1	0	133160009A	10132
58	NITR31324O	58	CCAL	PV		8330.MET	1	1	1	0	1331899999	
59	NITR31324M	59	CCAL	PX		8330.MET	1	1	1	0	1331899999	
60	BLANKA 11/11/13	60	BLK	AA		8330.MET	500	10	1	0	133130015A	06916
61	LCSA 11/11/13	61	LCS	AA		8330.MET	500	10	1	0	133130015A	06916
62	7265223	62	T	AA		8330.MET	500	10	1	0	133130015A	06916
63	7265224	63	T	AA		8330.MET	500	10	1	0	133130015A	06916
64	7265228	64	T	AA		8330.MET	500	10	1	0	133130015A	06916
65	7265230	65	T	AA		8330.MET	500	10	1	0	133130015A	06916
66	7265231MS	66	MS	AA		8330.MET	500	10	1	0	133130015A	06916
67	7265232MSD	67	MSD	AA		8330.MET	500	10	1	0	133130015A	06916
68	7265235	68	T	AA		8330.MET	500	10	1	0	133130015A	06916
69	7265238	69	T	AA		8330.MET	500	10	1	0	133130015A	06916
70	NITR31324O	70	CCAL	PV		8330.MET	1	1	1	0	1331899999	
71	7265240	71	T	AA		8330.MET	500	10	1	0	133130015A	06916
72	7265243	72	T	AA		8330.MET	500	10	1	0	133130015A	06916
73	7265247	73	T	AA		8330.MET	500	10	1	0	133130015A	06916
74	7265248	74	T	AA		8330.MET	500	10	1	0	133130015A	06916
75	BLANKA 11/12/13	75	BLK	AA		8330.MET	500	10	1	0	133140016A	06916
76	LCSA 11/12/13	76	LCS	AA		8330.MET	500	10	1	0	133140016A	06916
77	LCSDA 11/12/13	77	LCSD	AA		8330.MET	500	10	1	0	133140016A	06916
78	7266798	78	T	AA		8330.MET	500	10	1	0	133140016A	06916
79	7266799	79	T	AA		8330.MET	500	10	1	0	133140016A	06916
80	7266805	80	T	AA		8330.MET	500	10	1	0	133140016A	06916
81	NITR31324O	81	CCAL	PV		8330.MET	1	1	1	0	1331899999	
82	7266807	82	T	AA		8330.MET	500	10	1	0	133140016A	06916
83	7266810	83	T	AA		8330.MET	500	10	1	0	133140016A	06916
84	7266811	84	T	AA		8330.MET	500	10	1	0	133140016A	06916
85	7266819	85	T	AA		8330.MET	500	10	1	0	133140016A	06916
86	BLANKA 11/12/13	86	BLK	AA		8330.MET	2	20	1	0	133140019A	06918
87	LCSA 11/12/13	87	LCS	AA		8330.MET	2	20	1	0	133140019A	06918
88	7266800	88	T	AA		8330.MET	2	20	1	0	133140019A	06918
89	7266801MS	89	MS	AA		8330.MET	2.3	20	1	0	133140019A	06918
90	7266802MSD	90	MSD	AA		8330.MET	2.3	20	1	0	133140019A	06918
91	7266804	91	T	AA		8330.MET	2.4	20	1	0	133140019A	06918
92	NITR31324O	92	CCAL	PV		8330.MET	1	1	1	0	1331899999	
93	7266806	93	T	AA		8330.MET	2.2	20	1	0	133140019A	06918
94	7266808	94	T	AA		8330.MET	2.3	20	1	0	133140019A	06918
95	NITR31324O	95	CCAL	PV		8330.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/22/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330.MET	500	10	1	0	133110017A	06916
17	NITR31324P	17	CCAL	QF		8330.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7270116	51	T	AA		8330.MET	500	10	1	0	133170019A	06916
52	7270117	52	T	AA		8330.MET	500	10	1	0	133170019A	06916
53	7270118	53	T	AA		8330.MET	500	10	1	0	133170019A	06916
54	7270119	54	T	AA		8330.MET	500	10	1	0	133170019A	06916
55	7270953	55	T	AA		8330.MET	500	10	1	0	133170019A	06916
56	7270954	56	T	AA		8330.MET	500	10	1	0	133170019A	06916
57	7270955	57	T	AA		8330.MET	500	10	1	0	133170019A	06916
58	7270956	58	T	AA		8330.MET	500	10	1	0	133170019A	06916
59	7270958	59	T	AA		8330.MET	500	10	1	0	133170019A	06916
60	7270959	60	T	AA		8330.MET	500	10	1	0	133170019A	06916
61	NITR31324P	61	CCAL	QJ		8330.MET	1	1	1	0	1332199999	
62	7270960	62	T	AA		8330.MET	500	10	1	0	133170019A	06916
63	7270961	63	T	AA		8330.MET	500	10	1	0	133170019A	06916
64	7270962	64	T	AA		8330.MET	500	10	1	0	133170019A	06916
65	7274073	65	T	AA		8330.MET	500	10	1	0	133170019A	06916
66	7274074	66	T	AA		8330.MET	500	10	1	0	133170019A	06916
67	NITR31324P	67	CCAL	QE		8330.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/18/13

11/18/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330.MET	500	10	1	0	133110017A	06916
17	NITR31324P	17	CCAL	QF		8330.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/20/18

11/18/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13
11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131



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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1331899999	
2 CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1331899999	
3 CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1331899999	
4 CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1331899999	
5 CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1331899999	
6 NITR31324O	6	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
7 NITR31324M	7	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
8 MS1330124B	8	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
9 MS1330124B	9	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
10 MS1330124B	10	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
11 MS1330124B	11	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
12 BLANKA 11/12/13	12	BLK	AA		8330C.MET	2	20	1	0	133140021A	10132
13 LCSA 11/12/13	13	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
14 LCSDDIA 11/12/13	14	LCSD	AA		8330C.MET	2	20	1	0	133140021A	10132
15 LCSDIA 11/12/13	15	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
16 7269438	16	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
17 7269438MS	17	MS	AA		8330C.MET	2	20	1	0	133140021A	10132
18 NITR31324O	18	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
19 NITR31324M	19	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
20 7269438MSD	20	MSD	AA		8330C.MET	2.2	20	1	0	133140021A	10132
21 7269454	21	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
22 7269467	22	T	AA		8330C.MET	2	20	1	0	133140021A	10132
23 7269472	23	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
24 7269475	24	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
25 7269478	25	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
26 7269484	26	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
27 7269487	27	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
28 BLANKA 11/12/13	28	BLK	AA		8330C.MET	2	20	1	0	133160009A	10132
29 LCSA 11/12/13	29	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
30 NITR31324O	30	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
31 NITR31324M	31	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
32 LCSDDIA 11/12/13	32	LCSD	AA		8330C.MET	2	20	1	0	133160009A	10132
33 LCSDIA 11/12/13	33	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
34 7269501	34	T	AA		8330C.MET	2	20	1	0	133160009A	10132
35 7269504	35	T	AA		8330C.MET	2	20	1	0	133160009A	10132
36 7269514	36	T	AA		8330C.MET	2	20	1	0	133160009A	10132
37 7269520	37	T	AA		8330C.MET	2	20	1	0	133160009A	10132
38 7269526	38	T	AA		8330C.MET	2	20	1	0	133160009A	10132
39 7269529	39	T	AA		8330C.MET	2	20	1	0	133160009A	10132
40 7269532	40	T	AA		8330C.MET	2	20	1	0	133160009A	10132
41 7269538	41	T	AA		8330C.MET	2	20	1	0	133160009A	10132
42 NITR31324O	42	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
43 NITR31324M	43	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
44 7269541	44	T	AA		8330C.MET	2	20	1	0	133160009A	10132
45 7269544	45	T	AA		8330C.MET	2	20	1	0	133160009A	10132
46 7269550	46	T	AA		8330C.MET	2	20	1	0	133160009A	10132
47 7269553	47	T	AA		8330C.MET	2	20	1	0	133160009A	10132
48 7269559	48	T	AA		8330C.MET	2	20	1	0	133160009A	10132
49 7270974	49	T	AA		8330C.MET	2	20	1	0	133160009A	10132
50 7270975MS	50	MS	AA		8330C.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7270976MSD	51	MSD	AA		8330C.MET	2	20	1	0	133160009A	10132
52	7270986	52	T	AA		8330C.MET	2	20	1	0	133160009A	10132
53	7270989	53	T	AA		8330C.MET	2	20	1	0	133160009A	10132
54	NITR31324O	54	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
55	NITR31324M	55	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
56	7270995	56	T	AA		8330C.MET	2	20	1	0	133160009A	10132
57	7271001	57	T	AA		8330C.MET	2	20	1	0	133160009A	10132
58	NITR31324O	58	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
59	NITR31324M	59	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
60	BLANKA 11/11/13	60	BLK	AA		8330C.MET	500	10	1	0	133130015A	06916
61	LCSA 11/11/13	61	LCS	AA		8330C.MET	500	10	1	0	133130015A	06916
62	7265223	62	T	AA		8330C.MET	500	10	1	0	133130015A	06916
63	7265224	63	T	AA		8330C.MET	500	10	1	0	133130015A	06916
64	7265228	64	T	AA		8330C.MET	500	10	1	0	133130015A	06916
65	7265230	65	T	AA		8330C.MET	500	10	1	0	133130015A	06916
66	7265231MS	66	MS	AA		8330C.MET	500	10	1	0	133130015A	06916
67	7265232MSD	67	MSD	AA		8330C.MET	500	10	1	0	133130015A	06916
68	7265235	68	T	AA		8330C.MET	500	10	1	0	133130015A	06916
69	7265238	69	T	AA		8330C.MET	500	10	1	0	133130015A	06916
70	NITR31324O	70	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
71	7265240	71	T	AA		8330C.MET	500	10	1	0	133130015A	06916
72	7265243	72	T	AA		8330C.MET	500	10	1	0	133130015A	06916
73	7265247	73	T	AA		8330C.MET	500	10	1	0	133130015A	06916
74	7265248	74	T	AA		8330C.MET	500	10	1	0	133130015A	06916
75	BLANKA 11/12/13	75	BLK	AA		8330C.MET	500	10	1	0	133140016A	06916
76	LCSA 11/12/13	76	LCS	AA		8330C.MET	500	10	1	0	133140016A	06916
77	LCSDA 11/12/13	77	LCSD	AA		8330C.MET	500	10	1	0	133140016A	06916
78	7266798	78	T	AA		8330C.MET	500	10	1	0	133140016A	06916
79	7266799	79	T	AA		8330C.MET	500	10	1	0	133140016A	06916
80	7266805	80	T	AA		8330C.MET	500	10	1	0	133140016A	06916
81	NITR31324O	81	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
82	7266807	82	T	AA		8330C.MET	500	10	1	0	133140016A	06916
83	7266810	83	T	AA		8330C.MET	500	10	1	0	133140016A	06916
84	7266811	84	T	AA		8330C.MET	500	10	1	0	133140016A	06916
85	7266819	85	T	AA		8330C.MET	500	10	1	0	133140016A	06916
86	BLANKA 11/12/13	86	BLK	AA		8330C.MET	2	20	1	0	133140019A	06918
87	LCSA 11/12/13	87	LCS	AA		8330C.MET	2	20	1	0	133140019A	06918
88	7266800	88	T	AA		8330C.MET	2	20	1	0	133140019A	06918
89	7266801MS	89	MS	AA		8330C.MET	2.3	20	1	0	133140019A	06918
90	7266802MSD	90	MSD	AA		8330C.MET	2.3	20	1	0	133140019A	06918
91	7266804	91	T	AA		8330C.MET	2.4	20	1	0	133140019A	06918
92	NITR31324O	92	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
93	7266806	93	T	AA		8330C.MET	2.2	20	1	0	133140019A	06918
94	7266808	94	T	AA		8330C.MET	2.3	20	1	0	133140019A	06918
95	NITR31324O	95	CCAL	PV		8330C.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/20/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330C.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330C.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330C.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330C.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330C.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330C.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330C.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330C.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330C.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330C.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330C.MET	500	10	1	0	133110017A	06916
17	NITR31324P	17	CCAL	QF		8330C.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330C.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330C.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330C.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330C.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330C.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330C.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330C.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330C.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330C.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330C.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330C.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330C.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330C.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330C.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330C.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330C.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330C.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330C.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330C.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330C.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330C.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330C.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330C.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330C.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330C.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330C.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330C.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330C.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330C.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330C.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330C.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330C.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330C.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330C.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330C.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330C.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330C.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330C.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330C.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330C.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330C.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330C.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330C.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330C.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/22/13

11/18/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330C.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330C.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330C.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330C.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330C.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330C.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330C.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330C.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330C.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330C.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330C.MET	500	10	1	0	133110017A	06916
17	NITR31324P	17	CCAL	QF		8330C.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330C.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330C.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330C.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330C.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330C.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330C.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330C.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330C.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330C.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330C.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330C.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330C.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330C.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330C.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330C.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330C.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330C.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330C.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330C.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330C.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330C.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330C.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330C.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330C.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330C.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330C.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330C.MET	1	1	1	0	1332199999	



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CHROM PERFECT SEQUENCE FILE

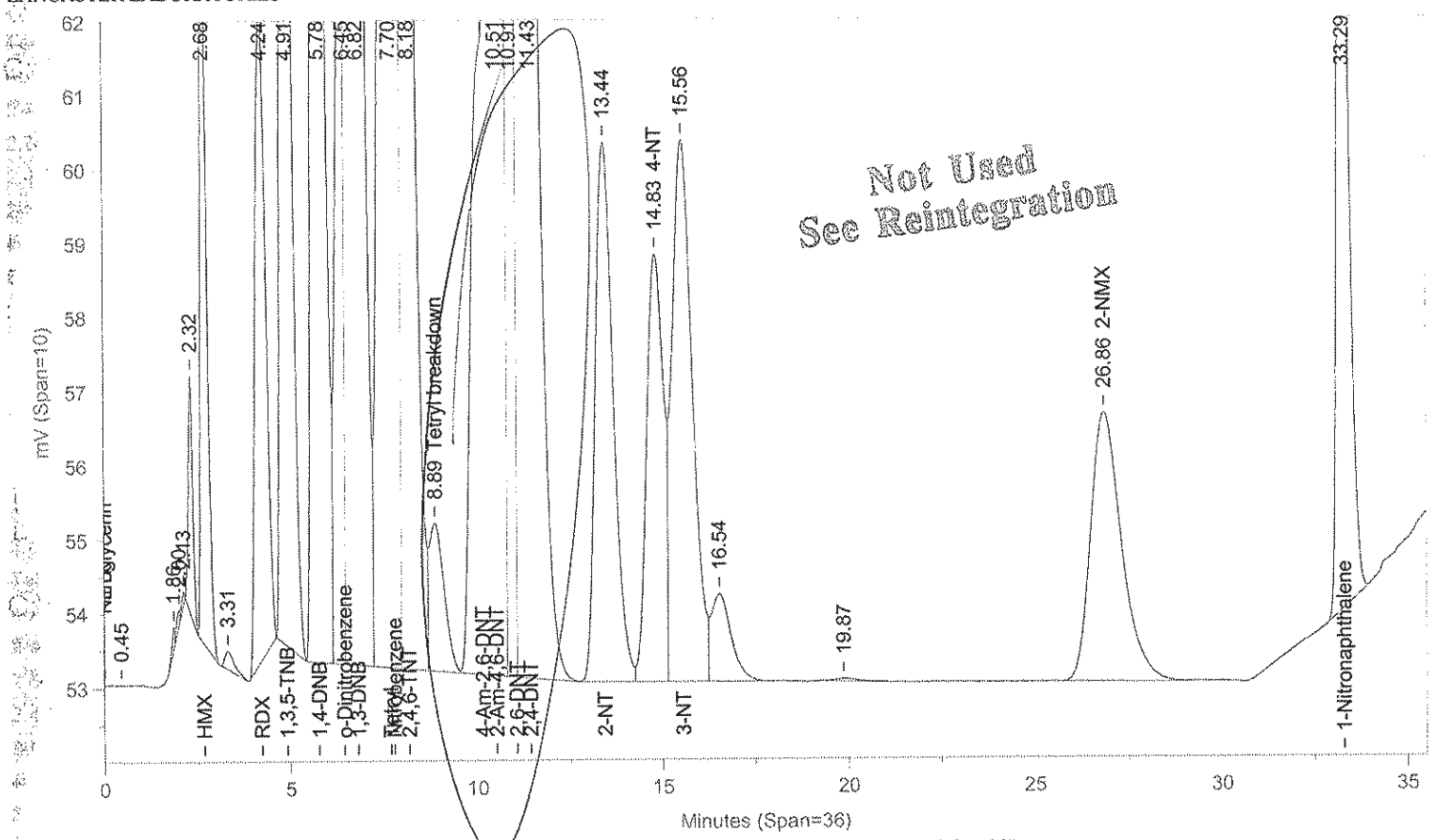
Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330C.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330C.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330C.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330C.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330C.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330C.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330C.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330C.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330C.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330C.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330C.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330C.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330C.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330C.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330C.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330C.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330C.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/22/13
11/18/2013

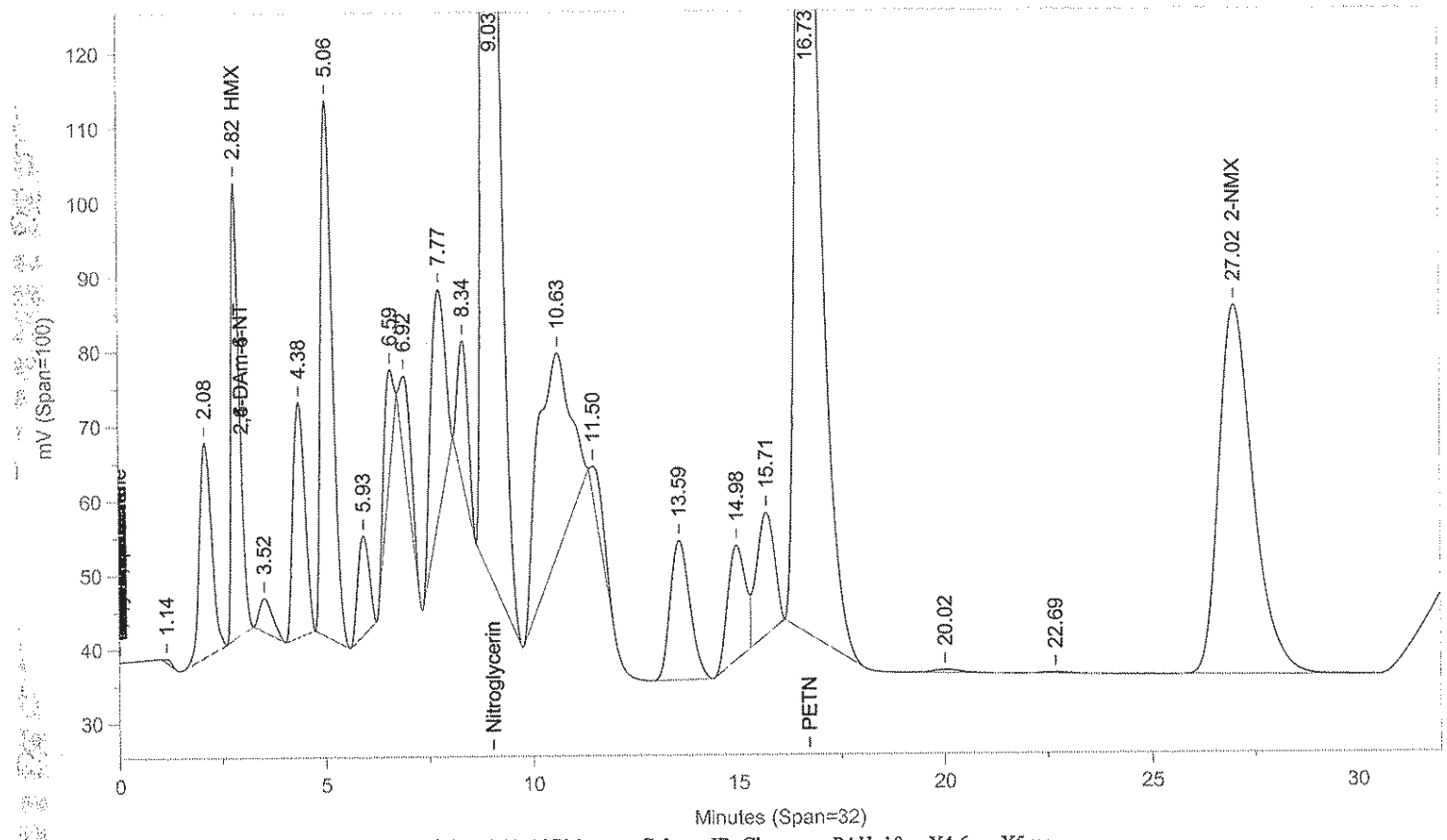
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.04R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

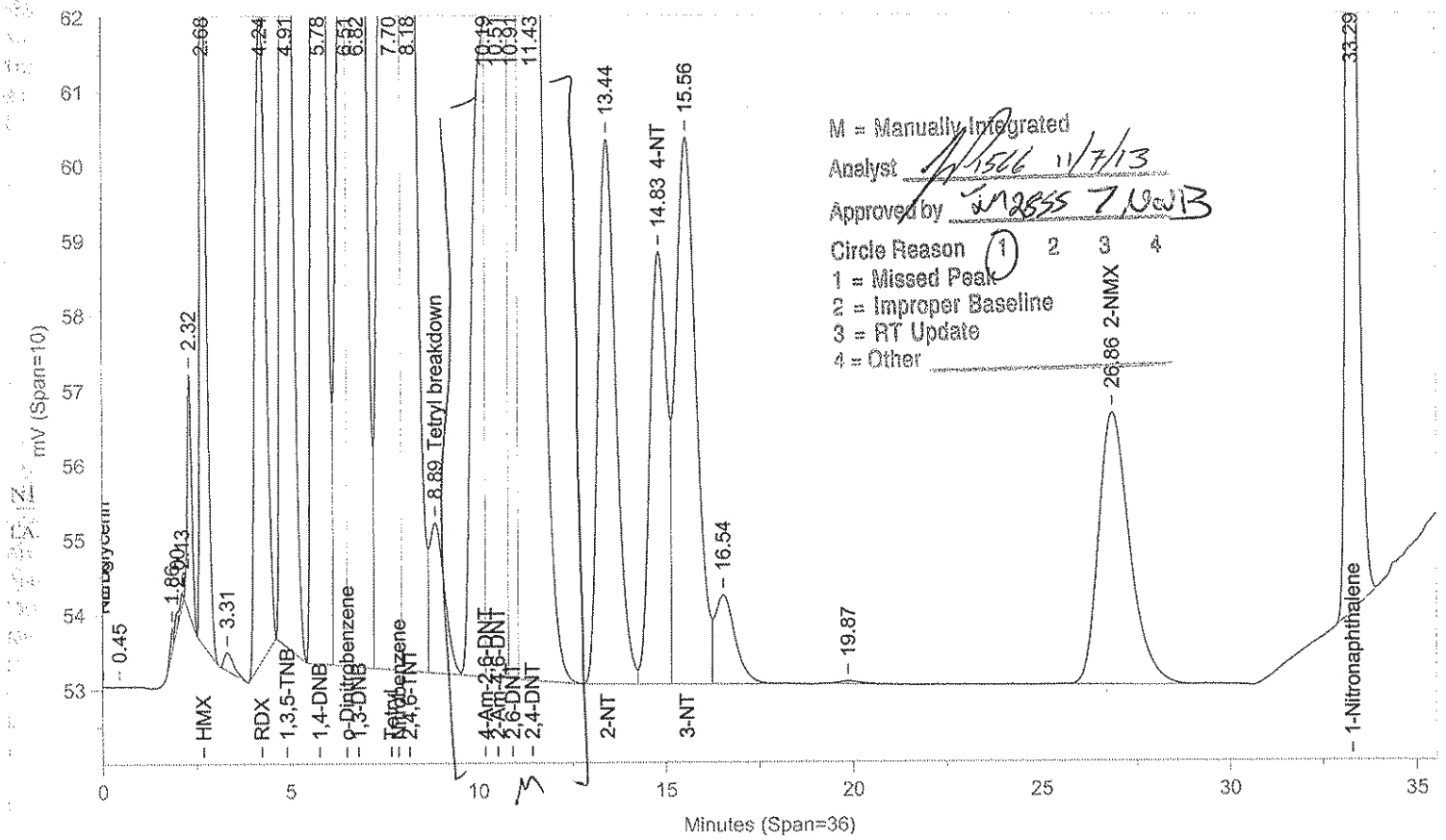
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	2030.674	HMX
4.236	173918	1997.862	RDX	.	0	.	RDX
4.915	403513	1913.478	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	1961.54	1,4-DNB	.	0	.	1,4-DNB
6.454	152192	1597.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	685139	2107.093	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	1762.438	Tetryl	.	0	.	Tetryl
8.184	451815	2029.189	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	153.795	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	38324.7	Nitroglycerin
10.513	624304	2944.329	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.432	677076	2101.777	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	1962.143	2-NT	.	0	.	2-NT
14.835	183964	2051.322	4-NT	.	0	.	4-NT
15.56	279402	2045.584	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	39994.64	PETN
26.863	207607	5974.572	2-NMX	27.017	2865768	5842.708	2-NMX
33.287	288442	2013.93	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.04A
Area File: C:\CPWIN\DATA1\1E12310B.04A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:04 PM
File Reported On: 11/7/2013 at 2:18:21 PM

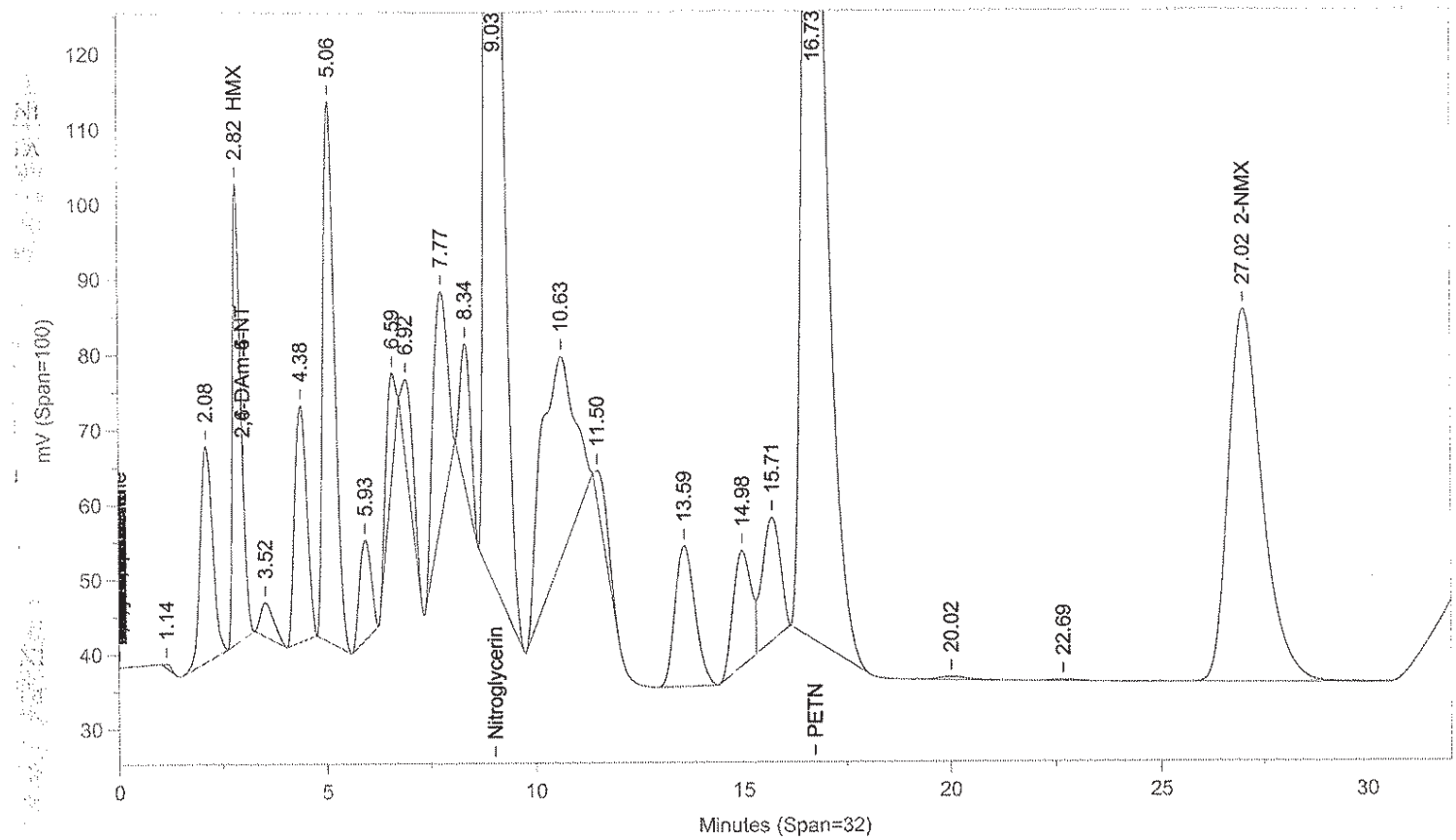
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.04R

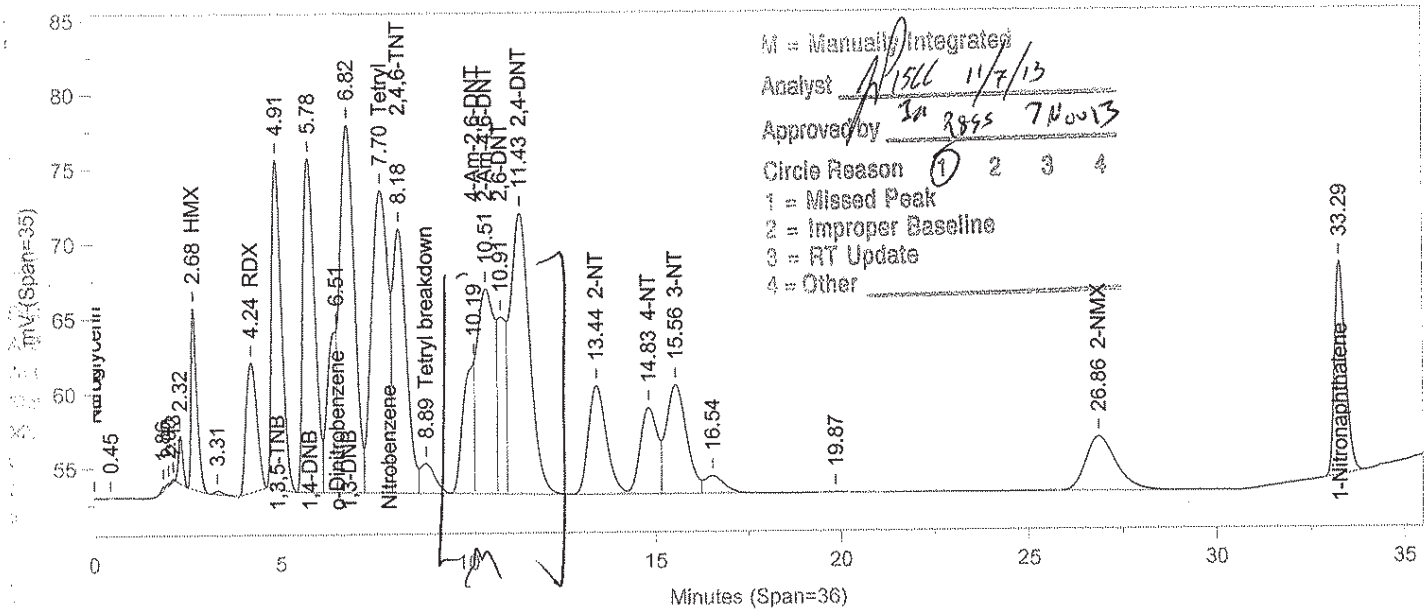


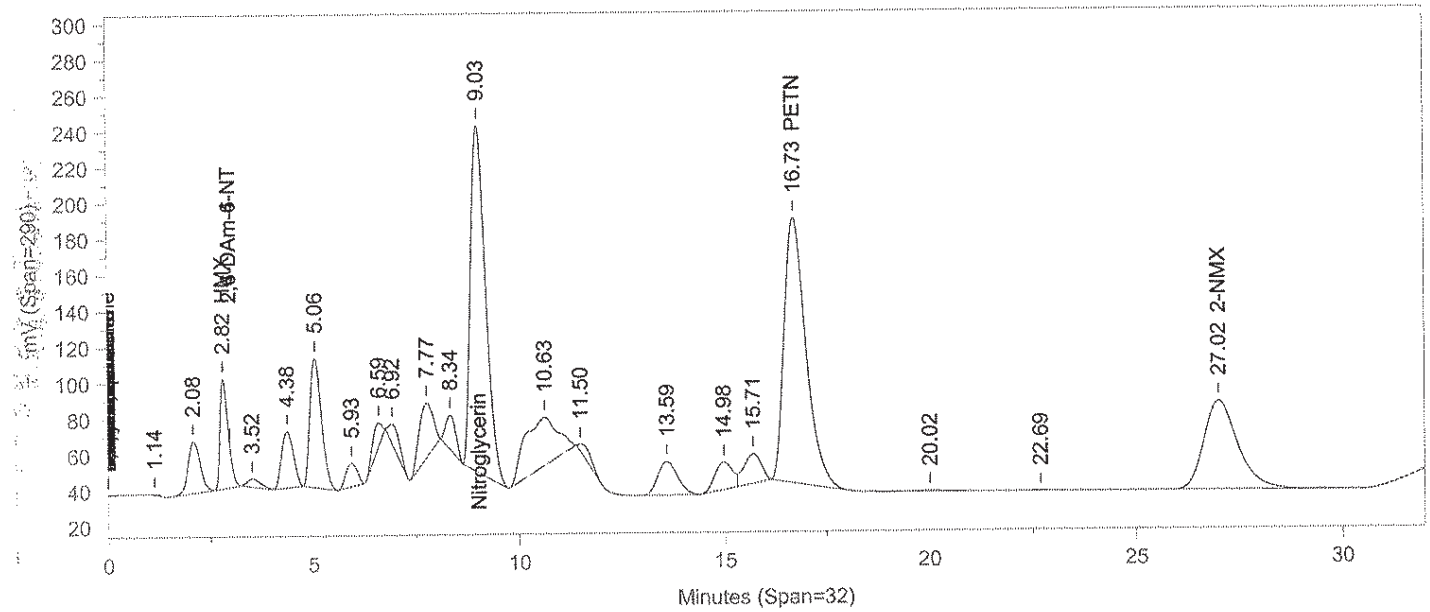
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.45
2.32
2.68 HMX
3.31
4.24 RDX
4.91
1,3,5-TNB
5.78
1,4-DNB
6.54
1,3-DNB
6.82
Nitrobenzene
7.70 Tetryl
8.18 2,4,6-TNT
8.89 Tetryl breakdown
10.19 4-Am-2,6-DNT
10.51 2-Am-4,6-DNT
10.91 2,6-DNT
11.43 2,4-DNT
13.44 2-NT
14.83 4-NT
15.56 3-NT
16.54
19.87
26.86 2-NMX
33.29 1-Nitronaphthalene
mV (Span=35)
Minutes (Span=36)


1.14
2.08
2.82 HMX
3.52
4.38
5.06
5.93
6.59
6.82
7.77
8.34
9.03
Nitroglycerin
10.63
11.50
13.59
14.98
15.71
16.73 PETN
20.02
22.69
27.02 2-NMX
mV (Span=290)
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	1984.604	HMX
4.236	173918	1972.348	RDX	.	0	.	RDX
4.915	403513	1976.331	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	2360.433	1,4-DNB	.	0	.	1,4-DNB
6.511	177323	2224.521	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	660009	2472.194	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	3148.742	Tetryl + Breakdown = 672829	.	0	.	Tetryl
8.184	451815	2717.684	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	3636.271	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	45613.86	Nitroglycerin
10.189	180347	1818.67	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.513	443957	2009.276	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.91	183813	3932.204	2,6-DNT	.	0	.	2,6-DNT
11.432	677076	2478.647	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	2251.094	2-NT	.	0	.	2-NT
14.835	183964	2373.201	4-NT	.	0	.	4-NT
15.56	279402	2573.633	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	55137.47	PETN
26.863	207607	7934.855	2-NMX	27.017	2865768	6985.688	2-NMX
33.287	288442	2400.829	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:25:24 PM
File Reported On: 11/7/2013 at 3:25:22 PM

James H. Place
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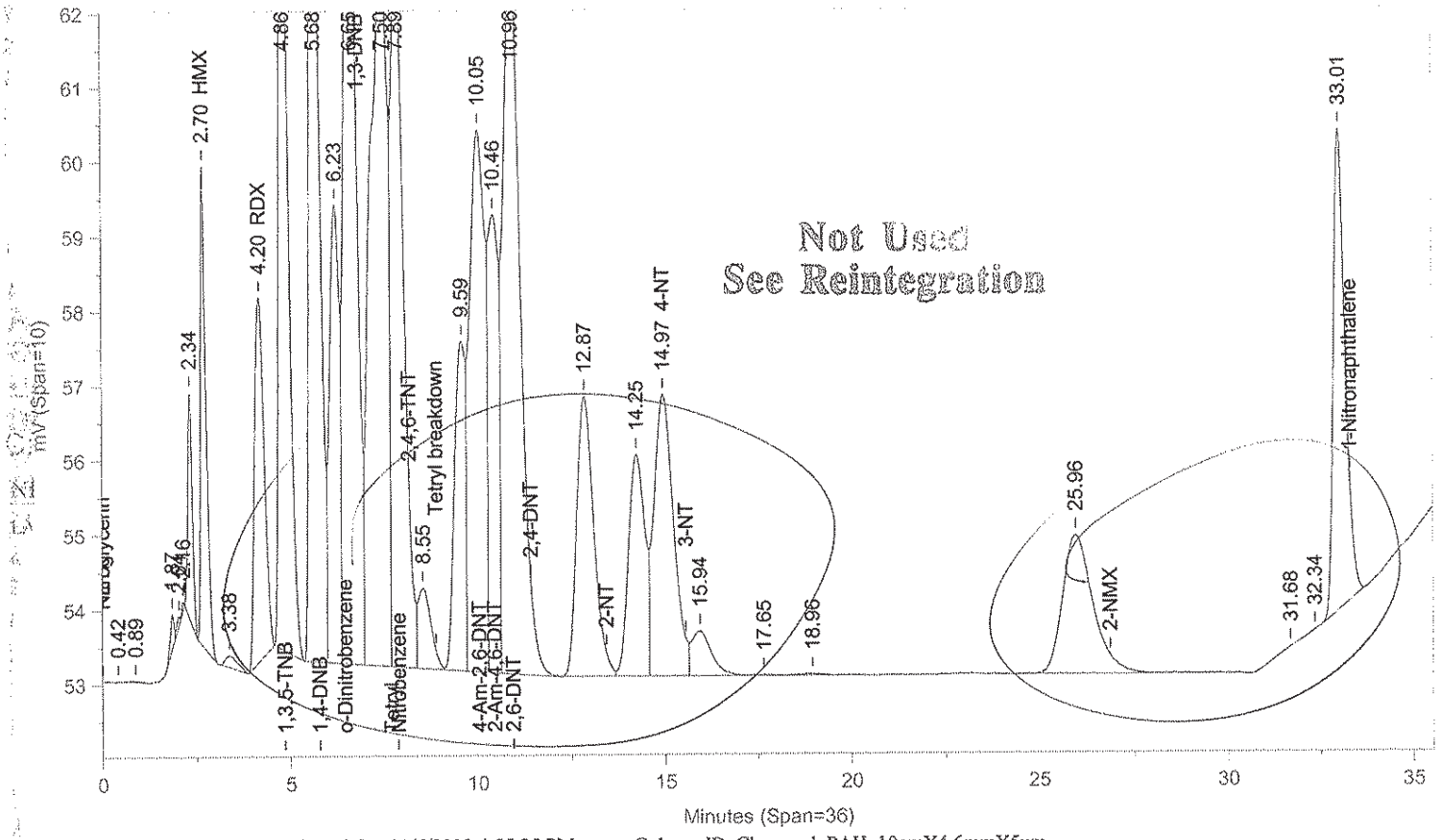
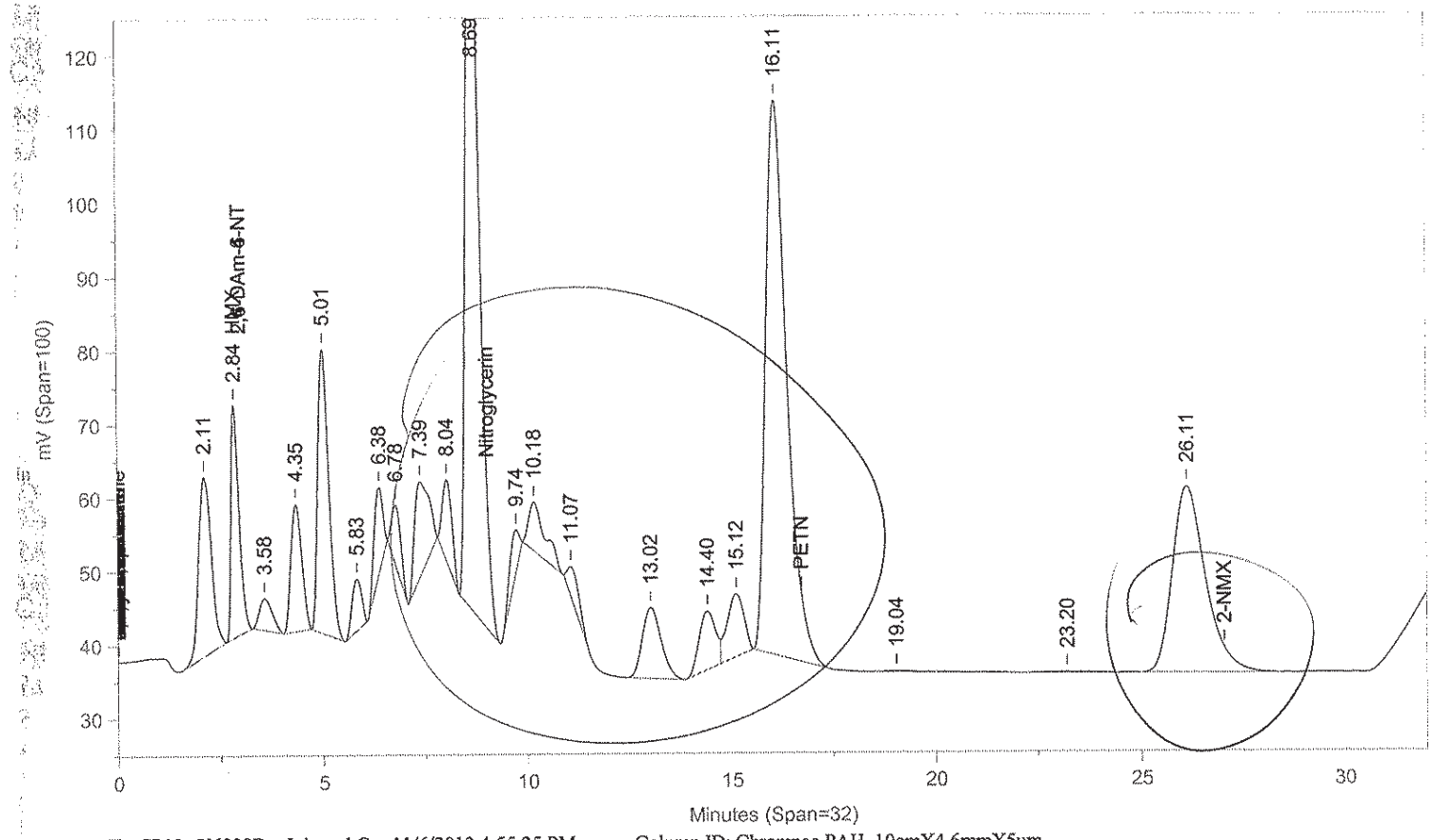
File: C:\CPWIN\DATA1\1E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1024.722	HMX
4.202	87948	996.505	RDX	.	0	.	RDX
4.861	205100	973.585	1,3,5-TNB	.	0	.	1,3,5-TNB
7.887	229234	785.825	Nitrobenzene	.	0	.	Nitrobenzene
10.049	212049	2649.713	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.461	118086	509.17	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.956	313494	33930.22	2,6-DNT	.	0	.	2,6-DNT
14.966	137062	1528.788	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.05A
Area File: C:\CPWIN\DATA1\1E12310B.05A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:48 PM
File Reported On: 11/7/2013 at 2:19:04 PM

Not Used
See Reintegration

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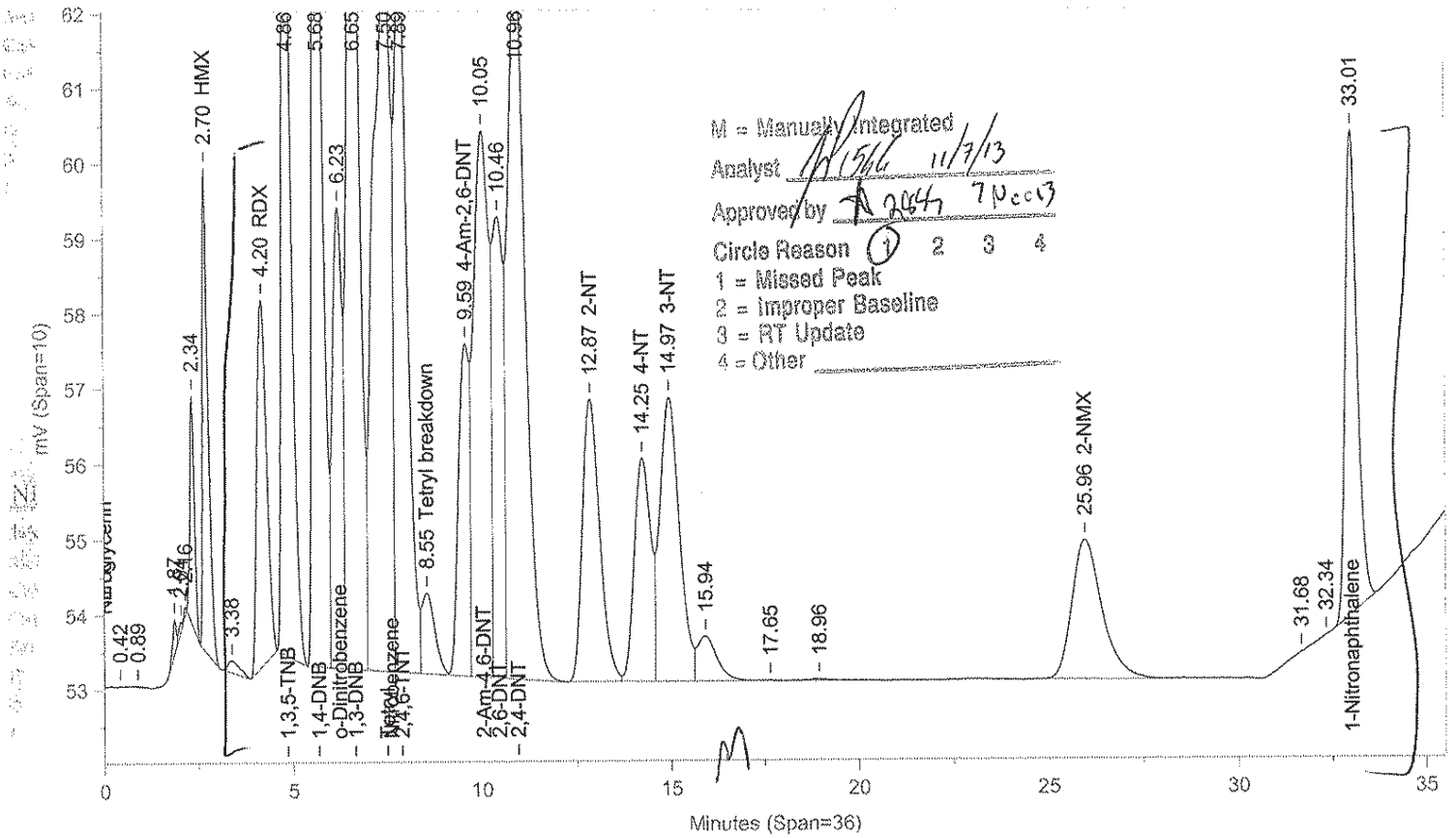
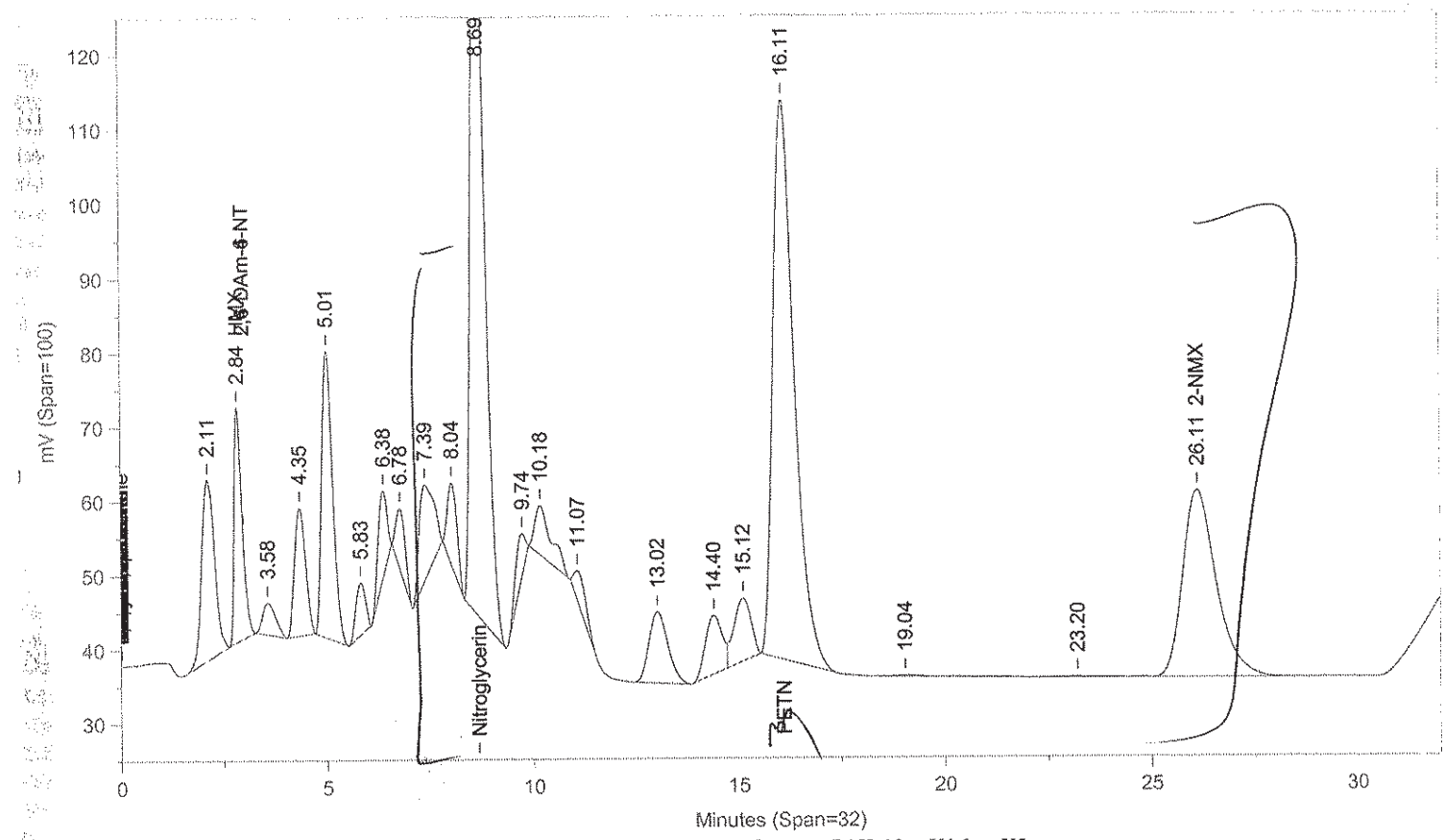
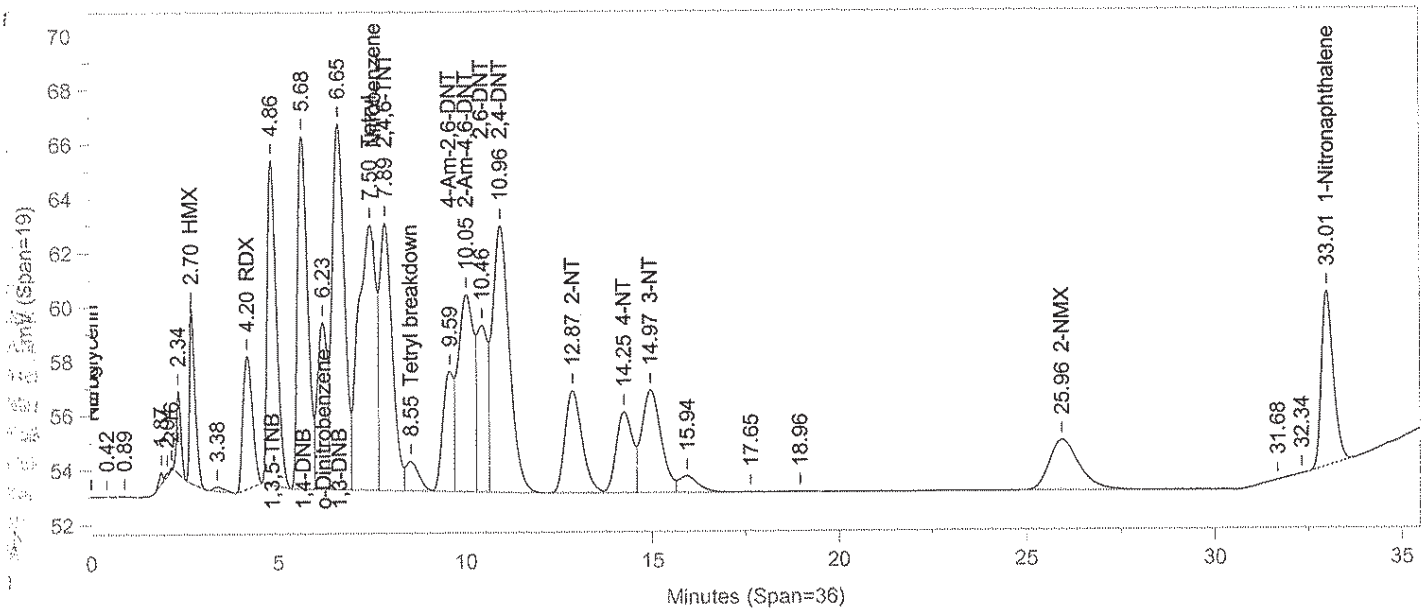


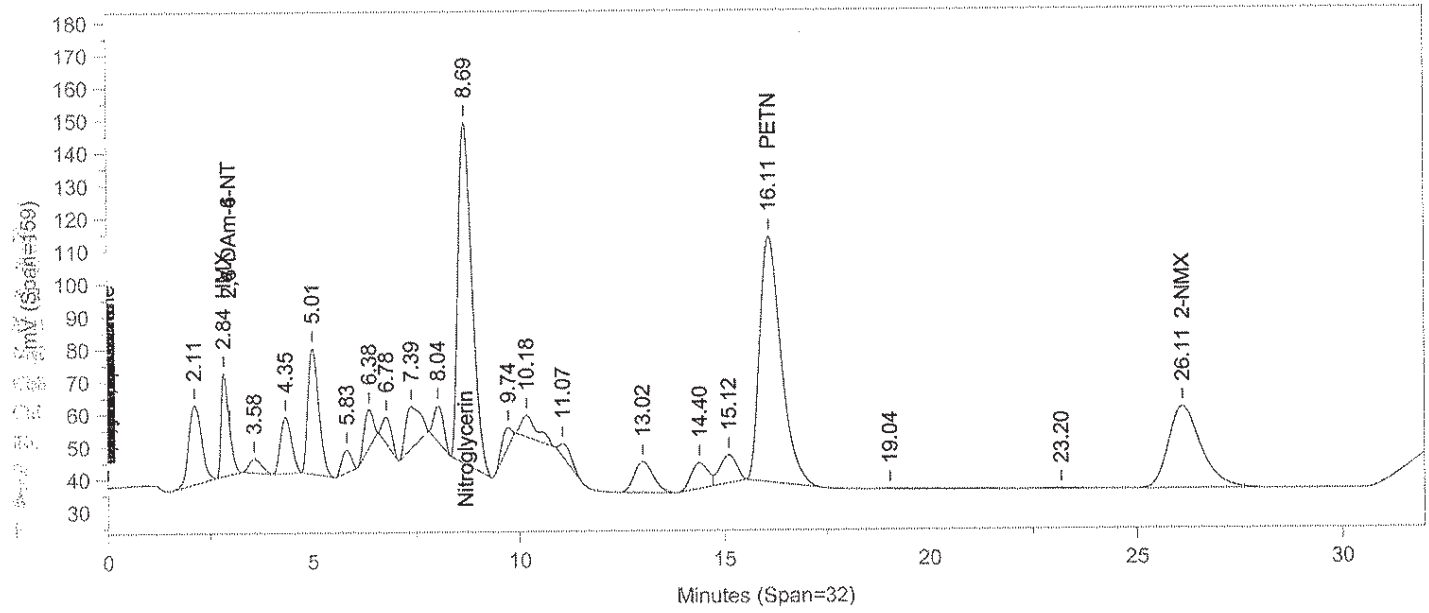
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


0.42
0.89
2.34
2.70 HMX
3.38
4.20 RDX
4.86
5.68
6.65
7.50
7.89
8.55 Tetryl breakdown
9.59
10.05
10.46
10.96
12.87 2-NT
14.25 4-NT
14.97 3-NT
15.94
17.65
18.96
25.96 2-NMX
31.68
32.34
33.01 1-Nitronaphthalene
1,3,5-TNB
1,4-DNB
1,3-DNB
2,4,6-TNT
4-Am-2,6-DNT
2-Am-4,6-DNT
2,6-DNT
2,4-DNT
Minutes (Span=36)


2.11
2.84
3.58
4.35
5.01
5.83
6.38
6.78
7.39
8.04
8.69
9.74
10.18
11.07
13.02
14.40
15.12
16.11 PETN
19.04
23.20
26.11 2-NMX
Nitroglycerin
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1012.248	HMX
4.202	87948	991.209	RDX	.	0	.	RDX
4.861	205100	1004.541	1,3,5-TNB	.	0	.	1,3,5-TNB
5.682	248639	1195.627	1,4-DNB	.	0	.	1,4-DNB
6.226	112229	1407.916	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.65	306036	1146.317	1,3-DNB	.	0	.	1,3-DNB
7.496	315157	1603.592	Tetryl + Breakdown = 340,823	.	0	.	Tetryl
7.887	229234	1378.849	2,4,6-TNT	.	0	.	2,4,6-TNT
8.549	25666	1728.286	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.694	2450463	22806.54	Nitroglycerin
9.594	89879	906.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.049	212049	959.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.461	118086	2097.385	2,6-DNT	.	0	.	2,6-DNT
10.956	313494	1147.641	2,4-DNT	.	0	.	2,4-DNT
12.871	120282	1103.257	2-NT	.	0	.	2-NT
14.253	91440	1179.606	4-NT	.	0	.	4-NT
14.966	137062	1262.512	3-NT	.	0	.	3-NT
.	0	.	PETN	16.108	2722253	27468.08	PETN
25.961	102777	3928.2	2-NMX	26.113	1408885	3434.344	2-NMX
33.014	142444	1239.326	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:34:34 PM
File Reported On: 11/7/2013 at 3:34:33 PM

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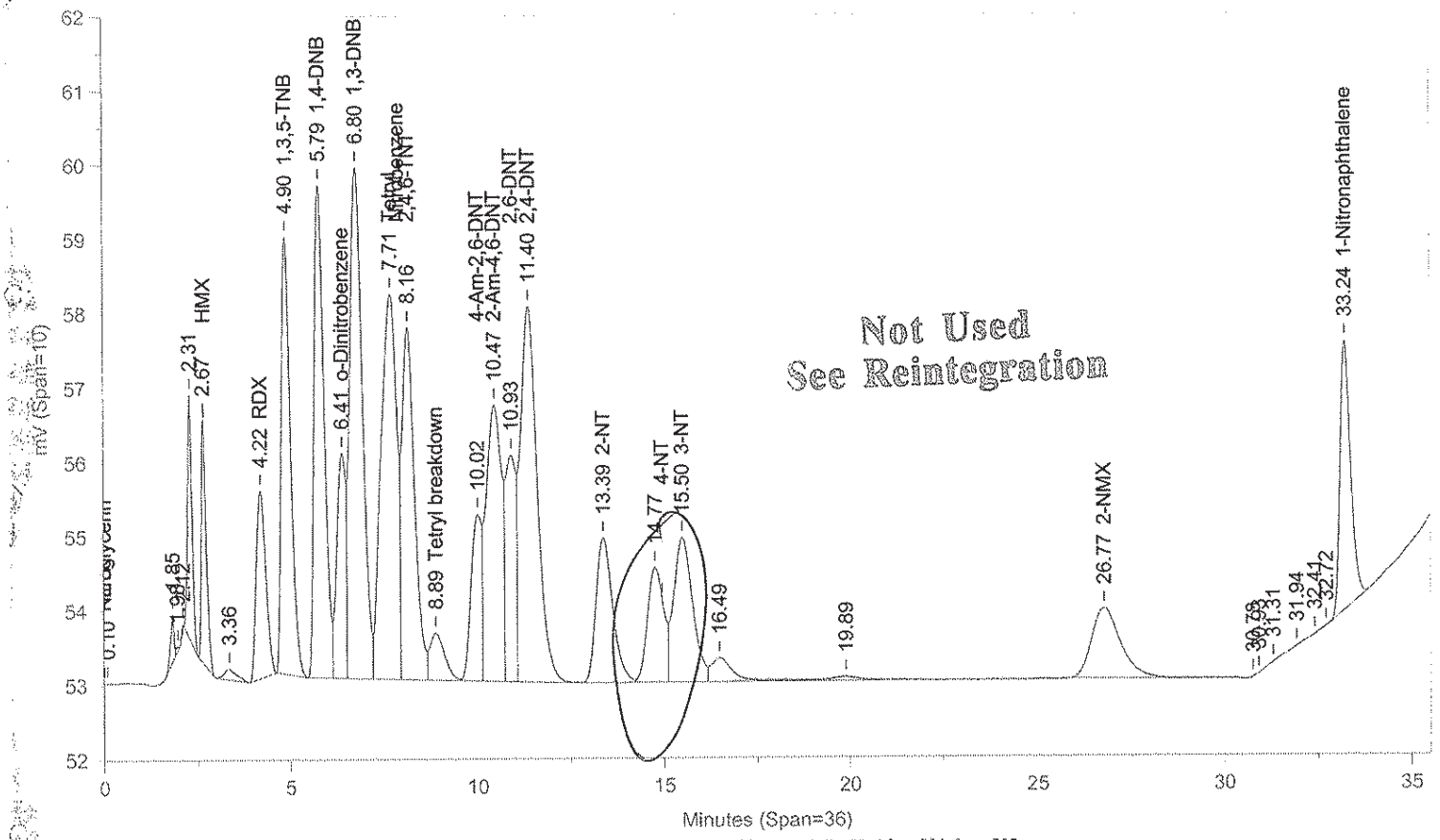
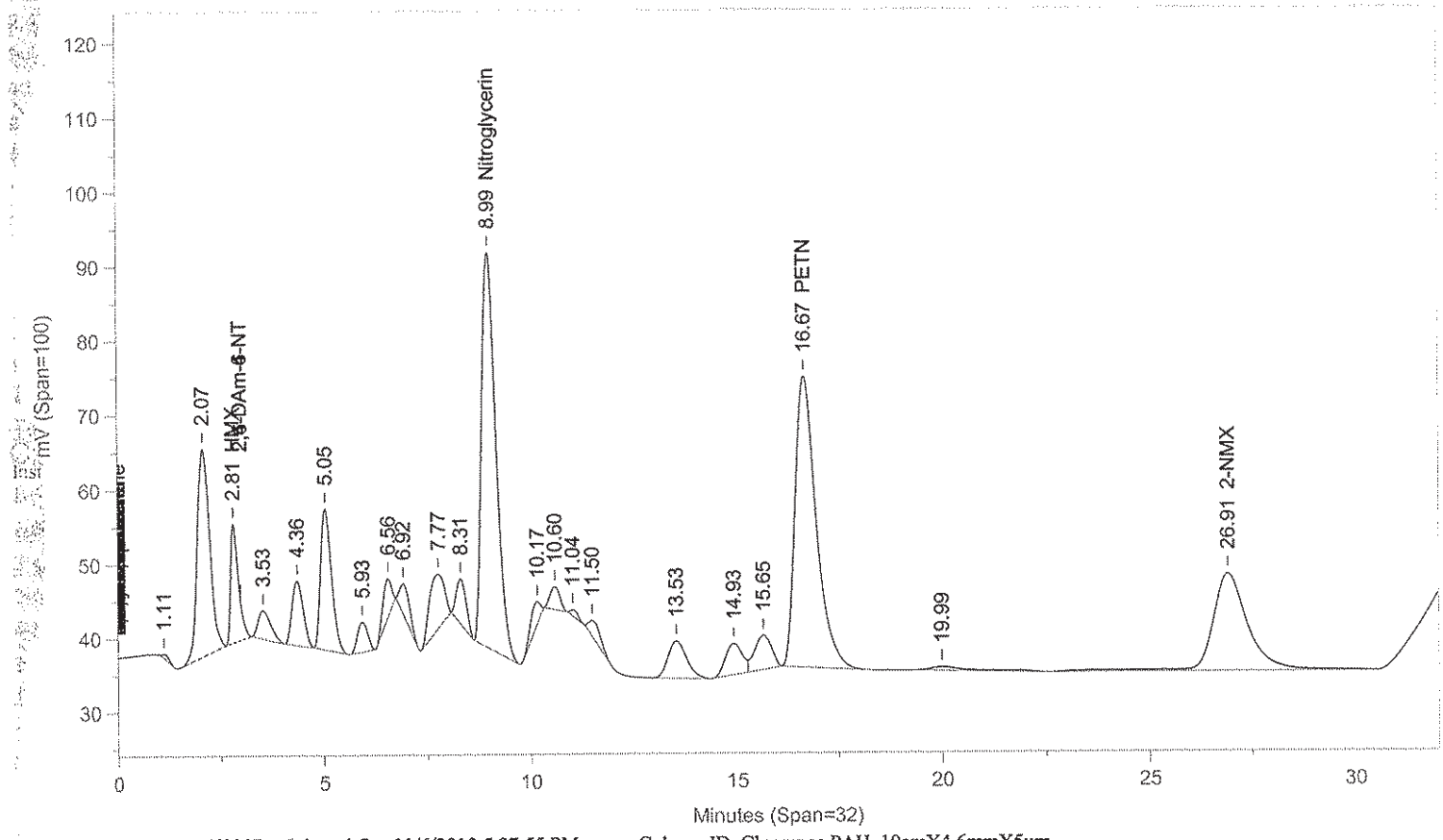
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

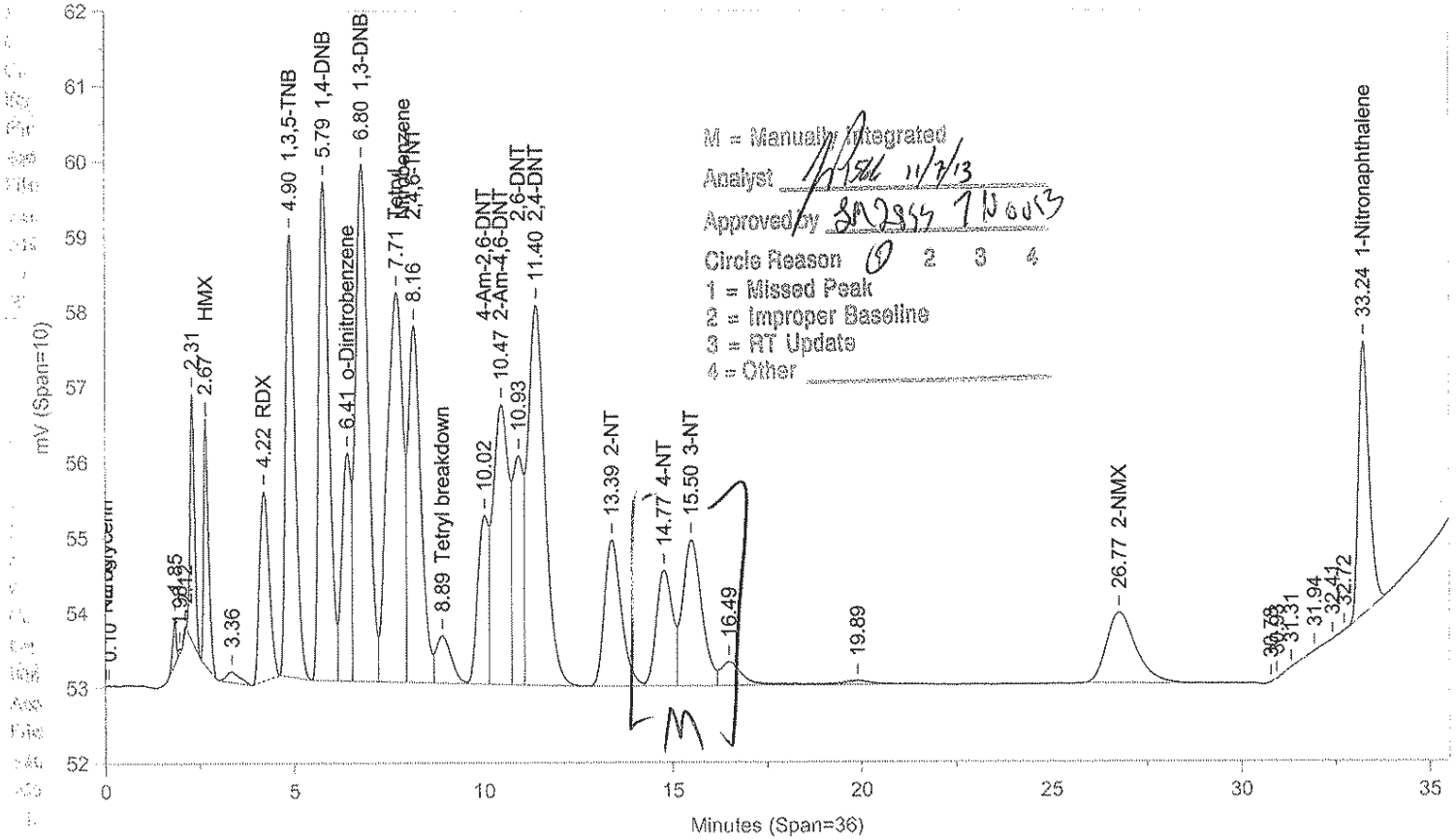
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	511.198	HMX
4.216	45161	503.754	RDX	.	0	.	RDX
4.899	101540	481.274	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	597.575	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	638.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	589.429	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	527.707	Tetryl	.	0	.	Tetryl
8.159	109953	592.518	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	72.629	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11816.78	Nitroglycerin
10.022	44007	436.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	501.563	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	456.94	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	596.64	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	583.272	2-NT	.	0	.	2-NT
15.496	68775	607.768	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	12349.17	PETN
26.768	51441	1767.312	2-NMX	26.91	804532	1952.055	2-NMX
33.236	71524	677.433	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.06A
Area File: C:\CPWIN\DATA1\1E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:19:30 PM
File Reported On: 11/7/2013 at 2:19:47 PM

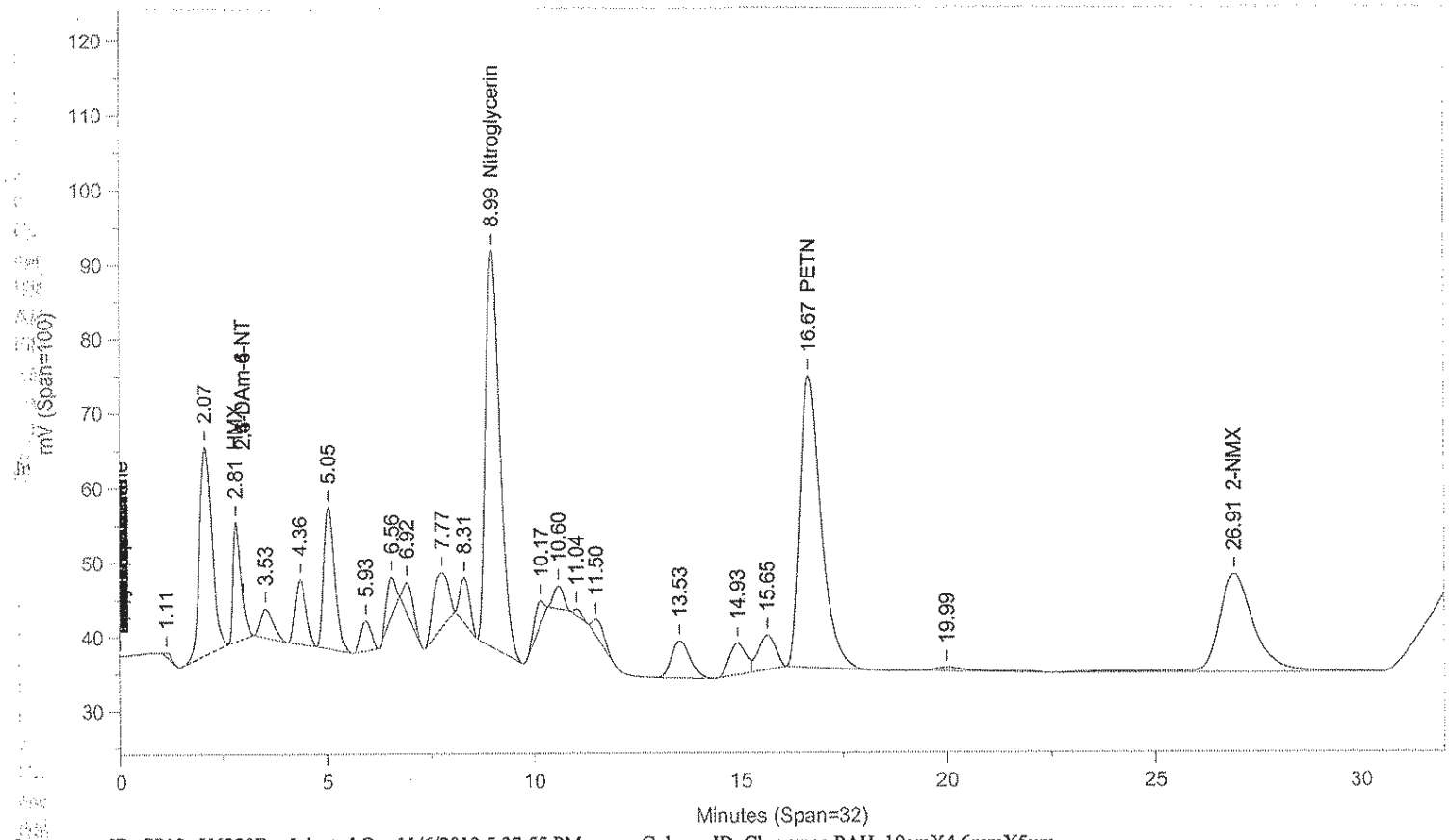
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	510.519	HMX
4.216	45161	502.899	RDX	.	0	.	RDX
4.899	101540	497.322	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	601.558	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	636.928	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	600.669	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	767.889	Tetryl + Breakdown = 168264	.	0	.	Tetryl
8.159	109953	661.368	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	1168.216	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11854.74	Nitroglycerin
10.022	44007	443.776	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	489.236	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	477.694	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	583.866	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	560.392	2-NT	.	0	.	2-NT
14.774	46394	598.498	4-NT	.	0	.	4-NT
15.496	68775	633.506	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	14148.57	PETN
26.768	51441	1966.102	2-NMX	26.91	804532	1961.154	2-NMX
33.236	71524	675.115	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:56:28 PM
File Reported On: 11/7/2013 at 3:56:27 PM

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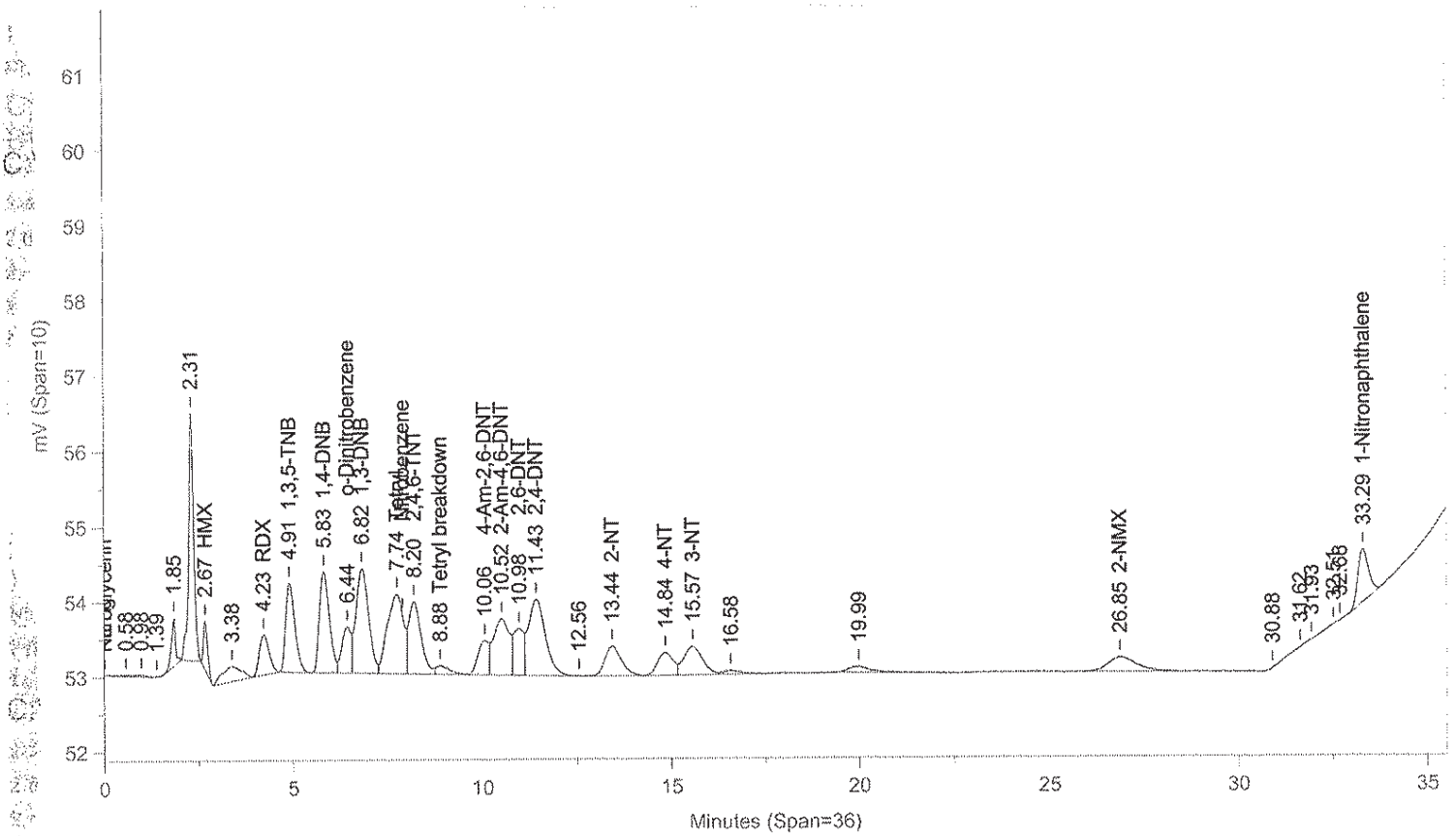
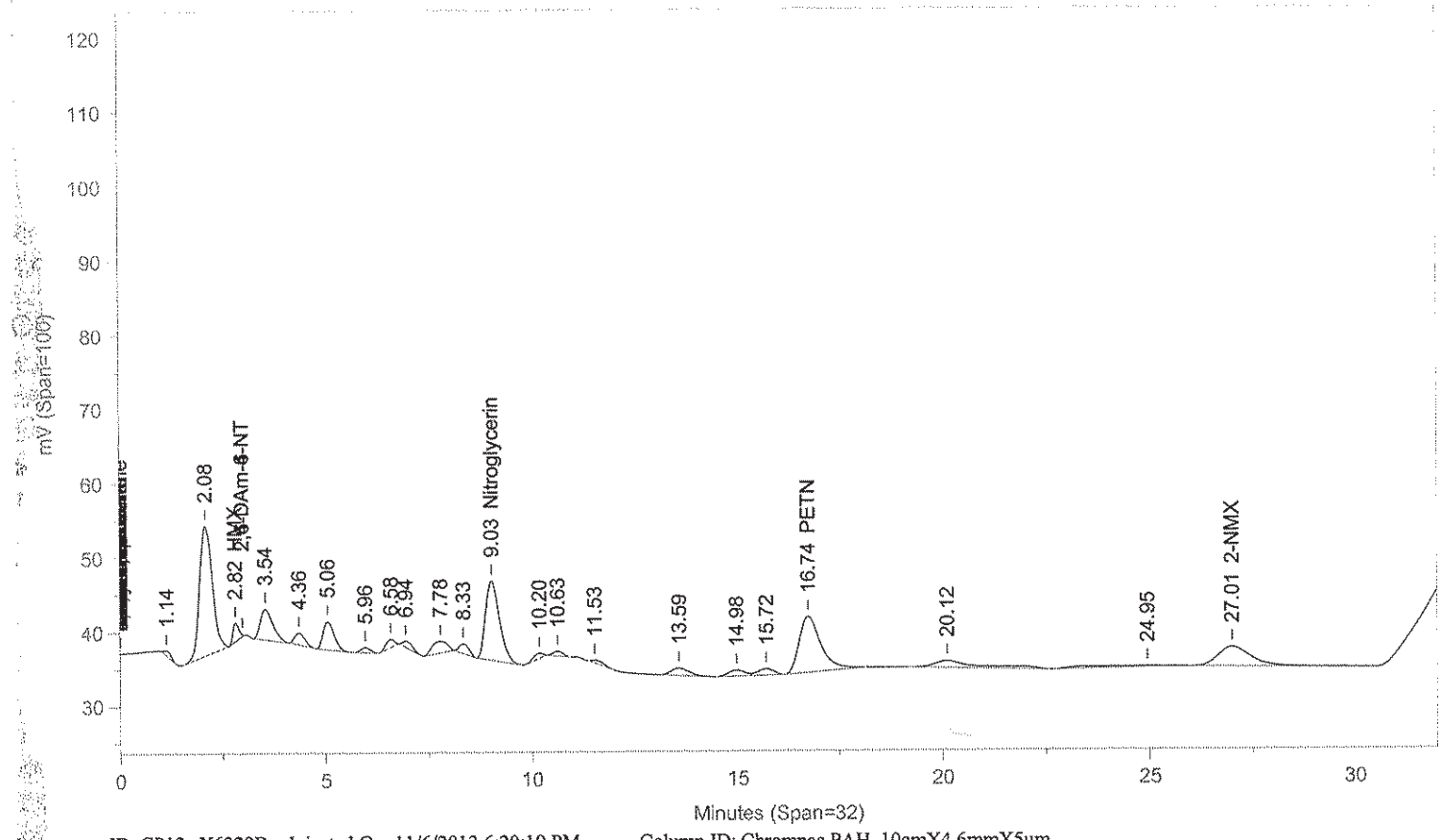
File: C:\CPWIN\DATA1\1E12310.07R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.07R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

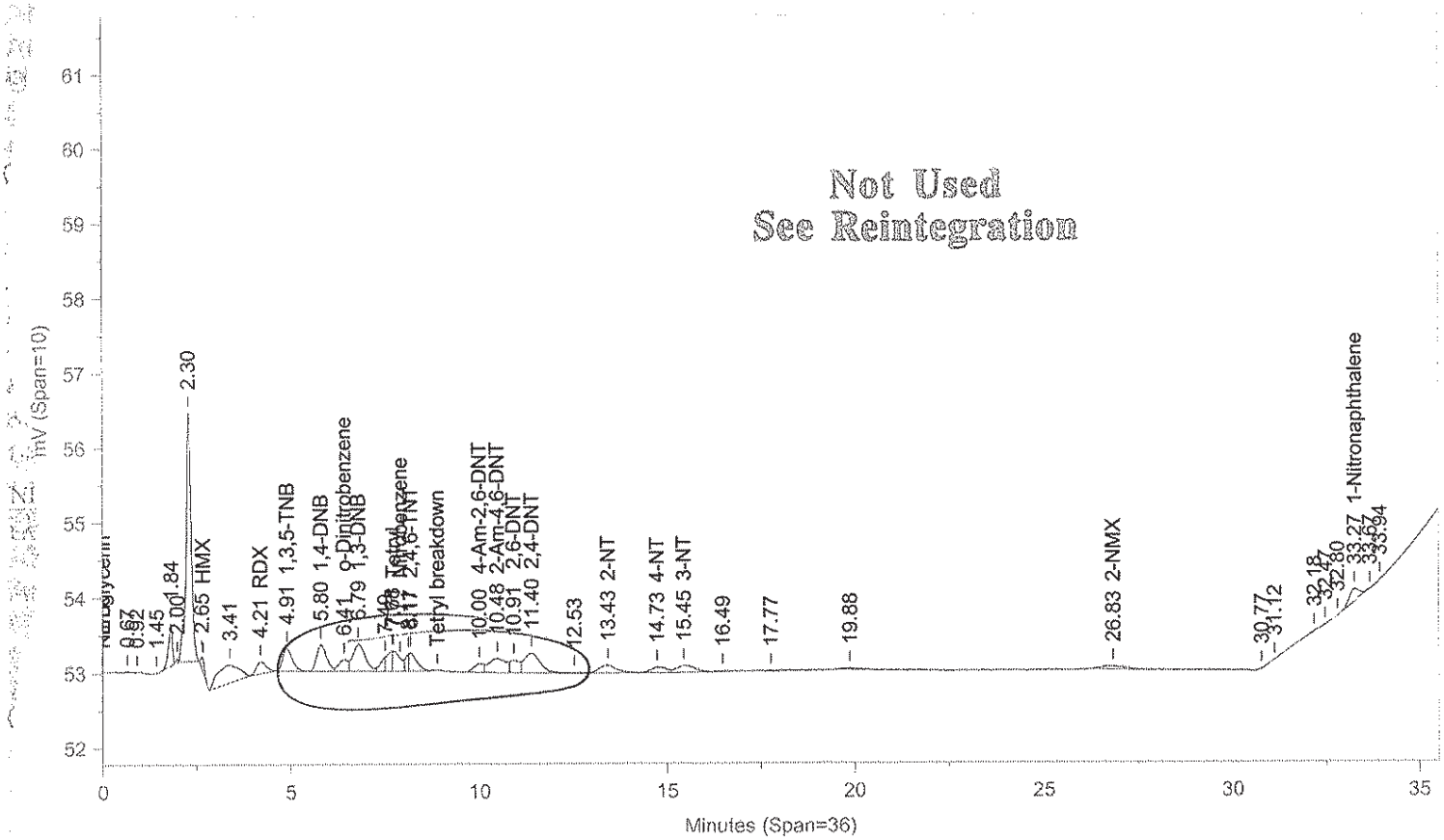
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.817	24794	69.601	HMX
4.233	9542	95.872	RDX	.	0	.	RDX
4.913	20537	97.357	1,3,5-TNB	.	0	.	1,3,5-TNB
5.828	24892	118.679	1,4-DNB	.	0	.	1,4-DNB
6.439	10260	128.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.822	31744	116.544	1,3-DNB	.	0	.	1,3-DNB
7.741	31577	113.932	Tetryl + Breakdown = 34309	.	0	.	Tetryl
8.199	21629	116.547	2,4,6-TNT	.	0	.	2,4,6-TNT
8.878	2732	14.728	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	254397	2350.772	Nitroglycerin
10.065	9029	89.976	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.517	22305	103.167	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.983	11803	-905.124	2,6-DNT	.	0	.	2,6-DNT
11.432	31810	118.828	2,4-DNT	.	0	.	2,4-DNT
13.444	12318	117.604	2-NT	.	0	.	2-NT
14.842	9006	110.395	4-NT	.	0	.	4-NT
15.573	13215	117.012	3-NT	.	0	.	3-NT
.	0	.	PETN	16.741	278777	2451.791	PETN
26.846	10728	369.242	2-NMX	27.013	151561	363.794	2-NMX
33.294	13694	217.299	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.07A
Area File: C:\CPWIN\DATA1\1E12310B.07A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:14 PM
File Reported On: 11/7/2013 at 2:20:30 PM

James H. Place
Senior Chemist

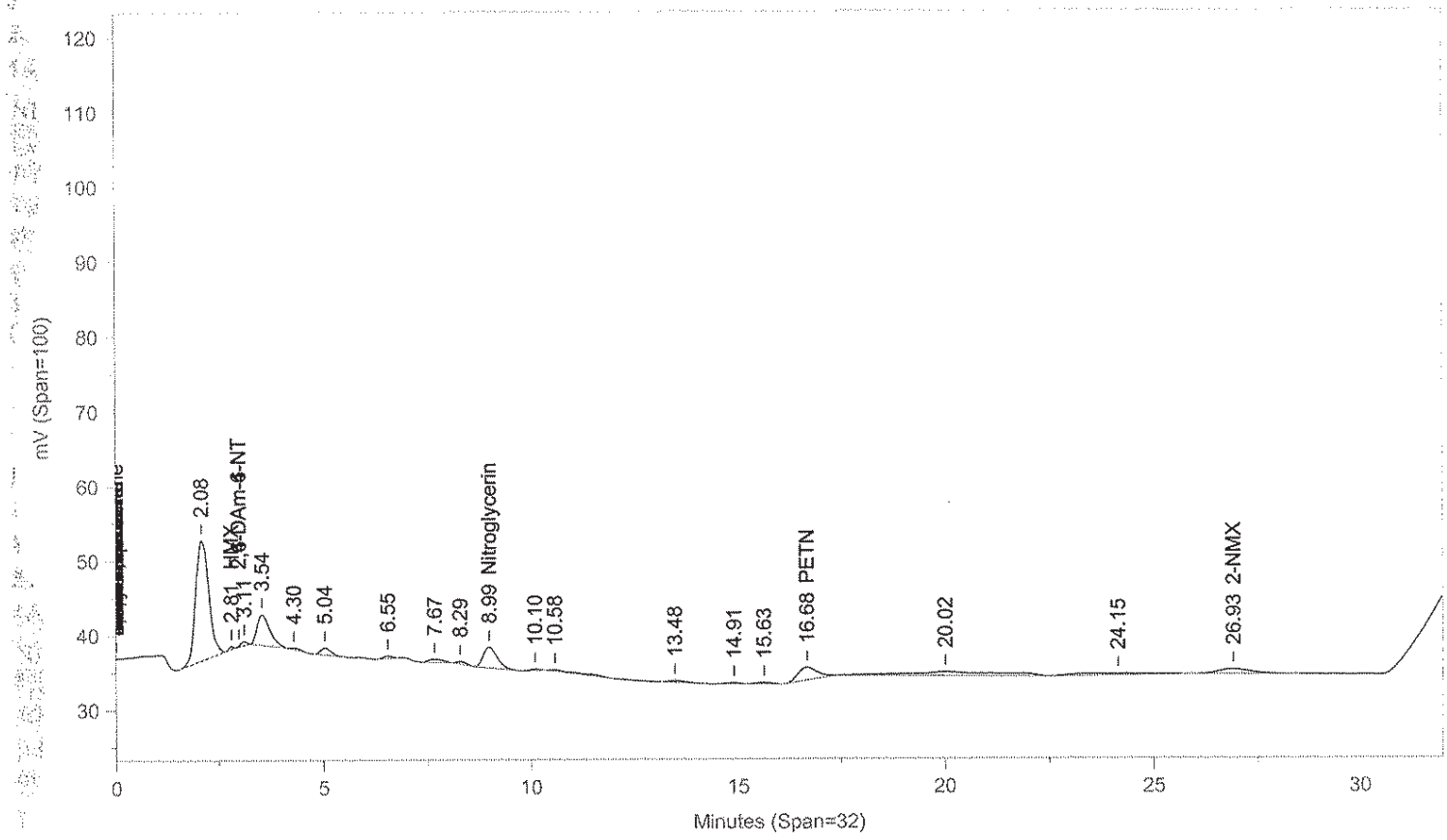
NOV 07 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.08R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

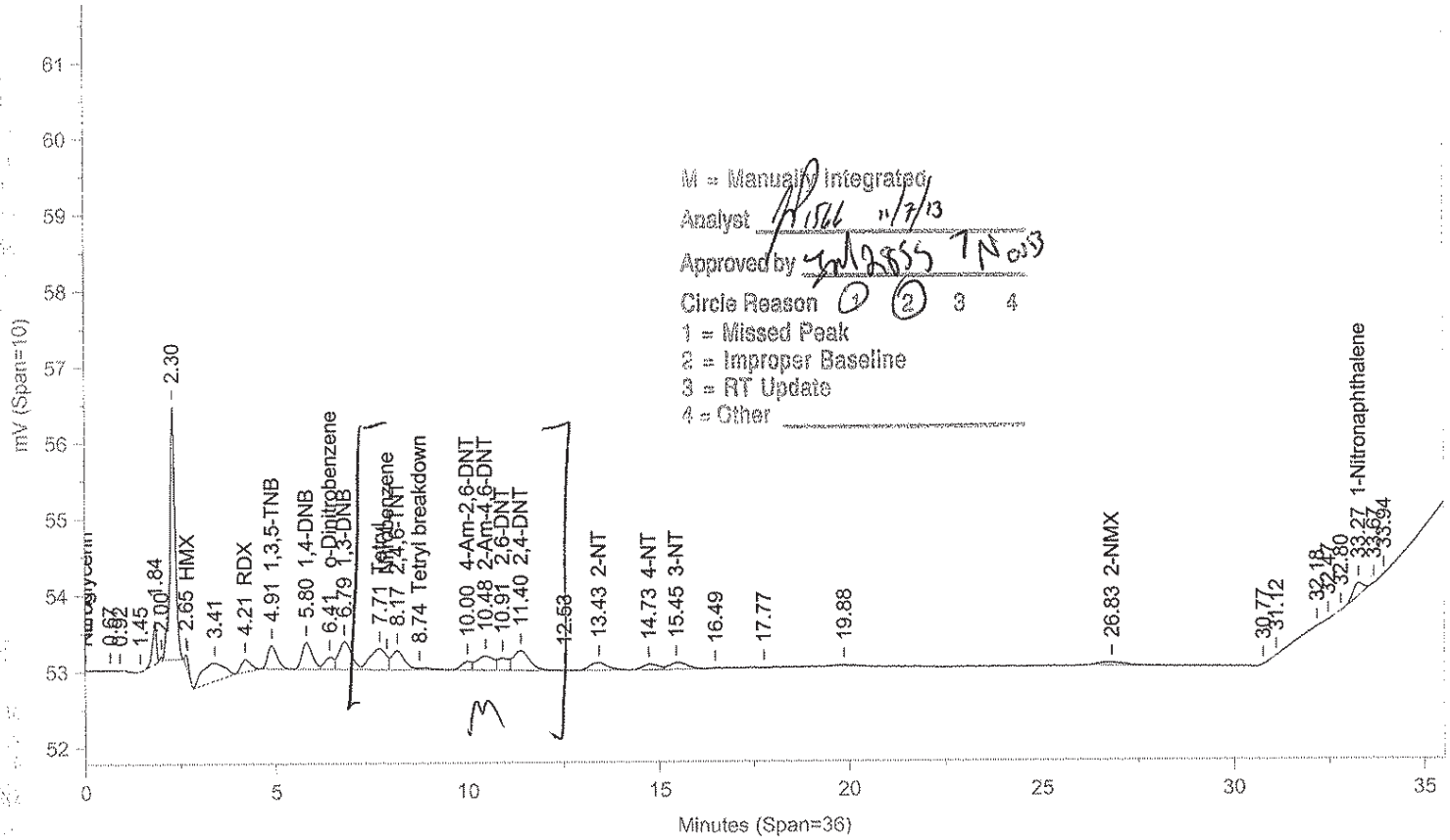
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	24.521	HMX
4.208	2956	20.84	RDX	.	0	.	RDX
4.907	5333	25.317	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6450	30.761	1,4-DNB	.	0	.	1,4-DNB
6.412	2688	33.602	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8139	29.978	1,3-DNB	.	0	.	1,3-DNB
7.715	3855	14.308	Tetryl	.	0	.	Tetryl
8.166	3527	19.204	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.991	66170	609.364	Nitroglycerin
9.997	2141	21.334	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	6131	28.312	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	2702	-1152.824	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	29.313	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	31.816	2-NT	.	0	.	2-NT
14.733	2115	26.078	4-NT	.	0	.	4-NT
15.451	3131	28.146	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	487.427	PETN
26.83	2335	79.388	2-NMX	26.928	37099	88.281	2-NMX
33.267	3188	133.477	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.08A
Area File: C:\CPWIN\DATA1\1E12310B.08A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:58 PM
File Reported On: 11/7/2013 at 2:21:13 PM

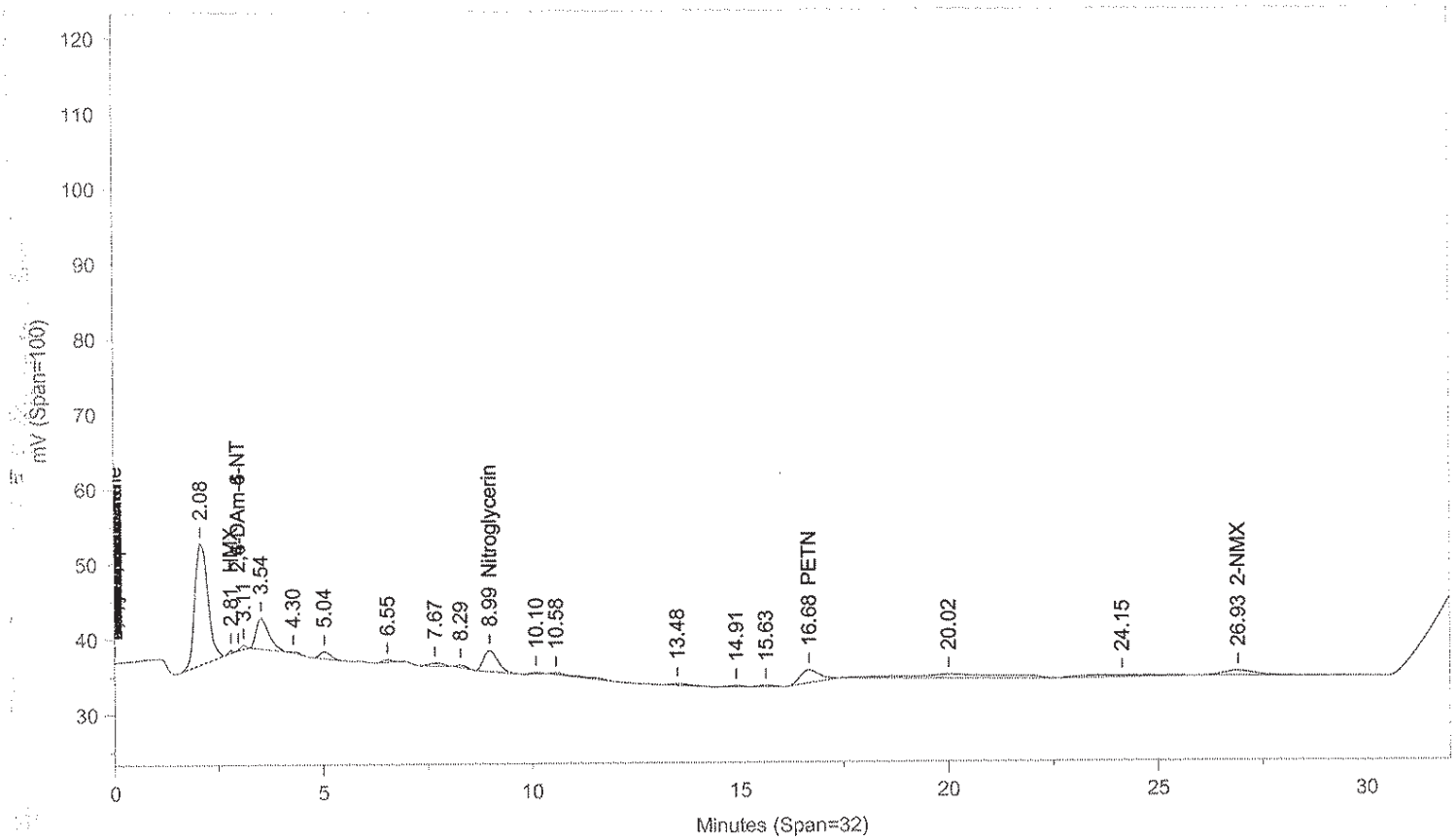
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.08R

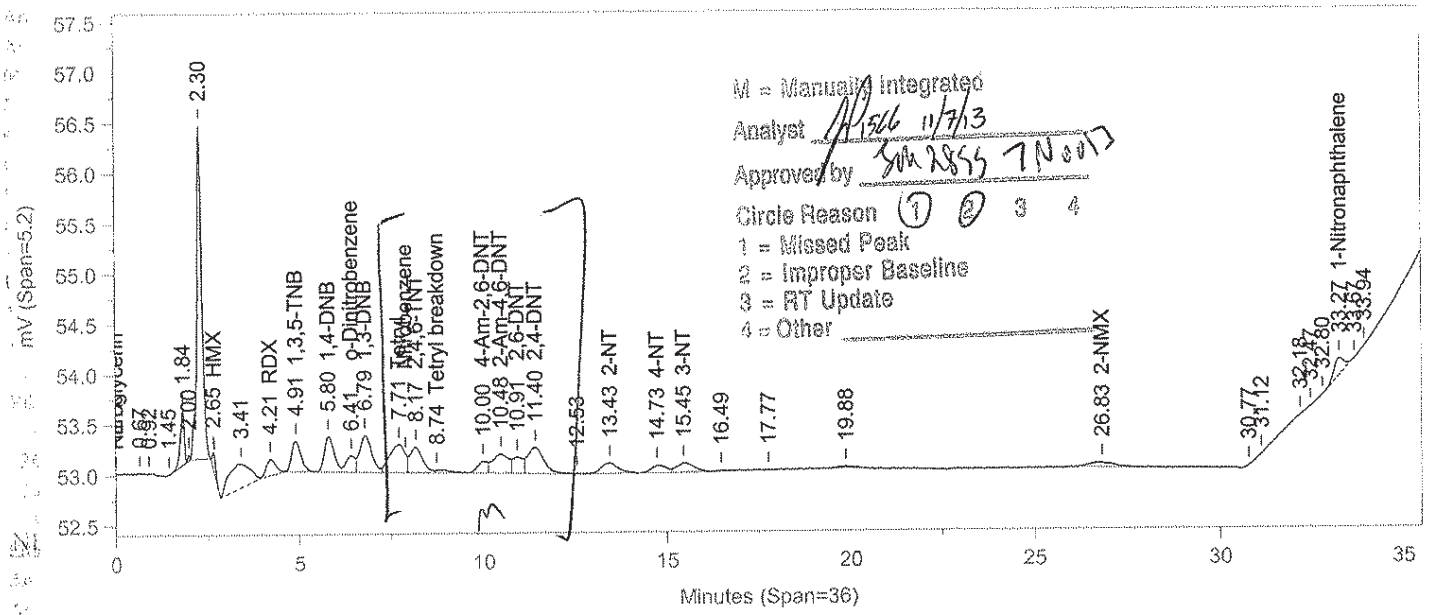


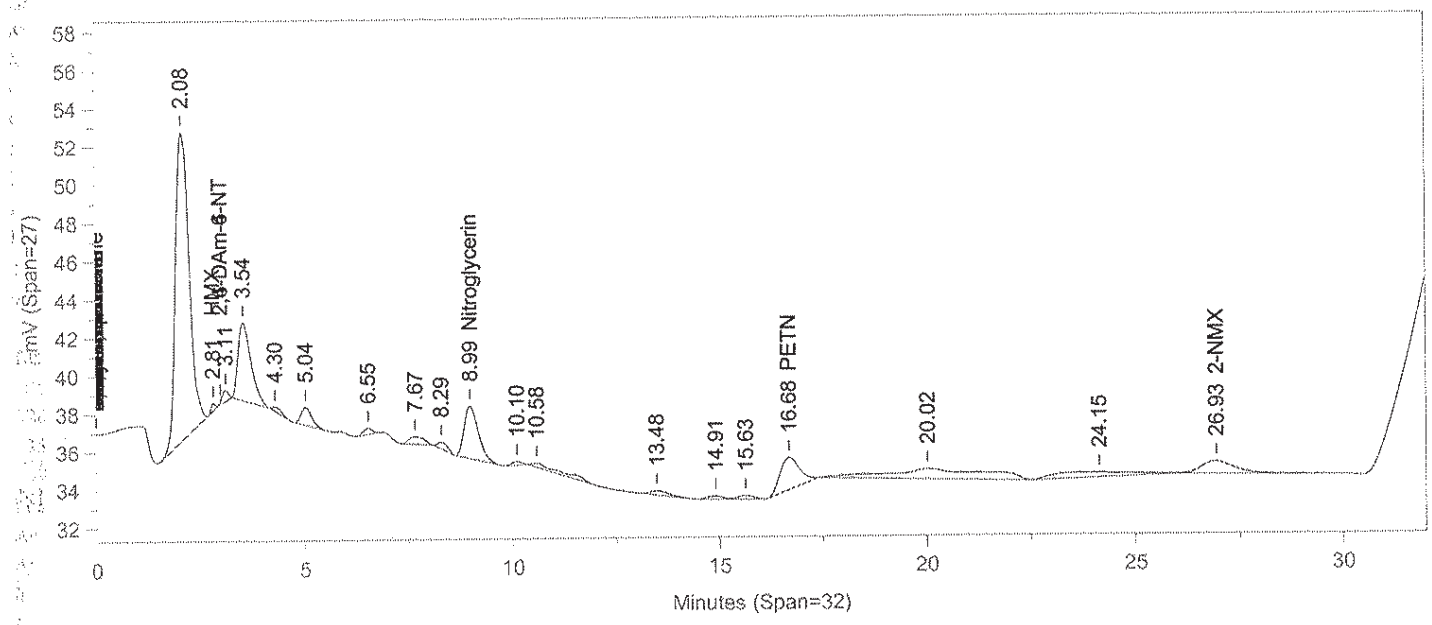
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=5.2)
Minutes (Span=36)
2.30
1.84
2.65 HMX
3.41
4.21 RDX
4.91 1,3,5-TNB
5.80 1,4-DNB
6.41 o-Dinitrobenzene
6.79 1,3-DNB
7.71 Tetryl
8.17 2,4,6-TNT
8.74 Tetryl breakdown
10.00 4-Am-2,6-DNT
10.48 2-Am-4,6-DNT
10.91 2,6-DNT
11.40 2,4-DNT
12.53
13.43 2-NT
14.73 4-NT
15.45 3-NT
16.49
17.77
19.88
26.83 2-NMX
30.77
31.12
32.18
32.80
33.27
33.64
1-Nitronaphthalene


mV (Span=27)
Minutes (Span=32)
2.08
2.81 HMX
3.11
3.54
4.30
5.04
6.55
7.67
8.29
8.99 Nitroglycerin
10.10
10.58
13.48
14.91
15.63
16.68 PETN
20.02
24.15
26.93 2-NMX

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

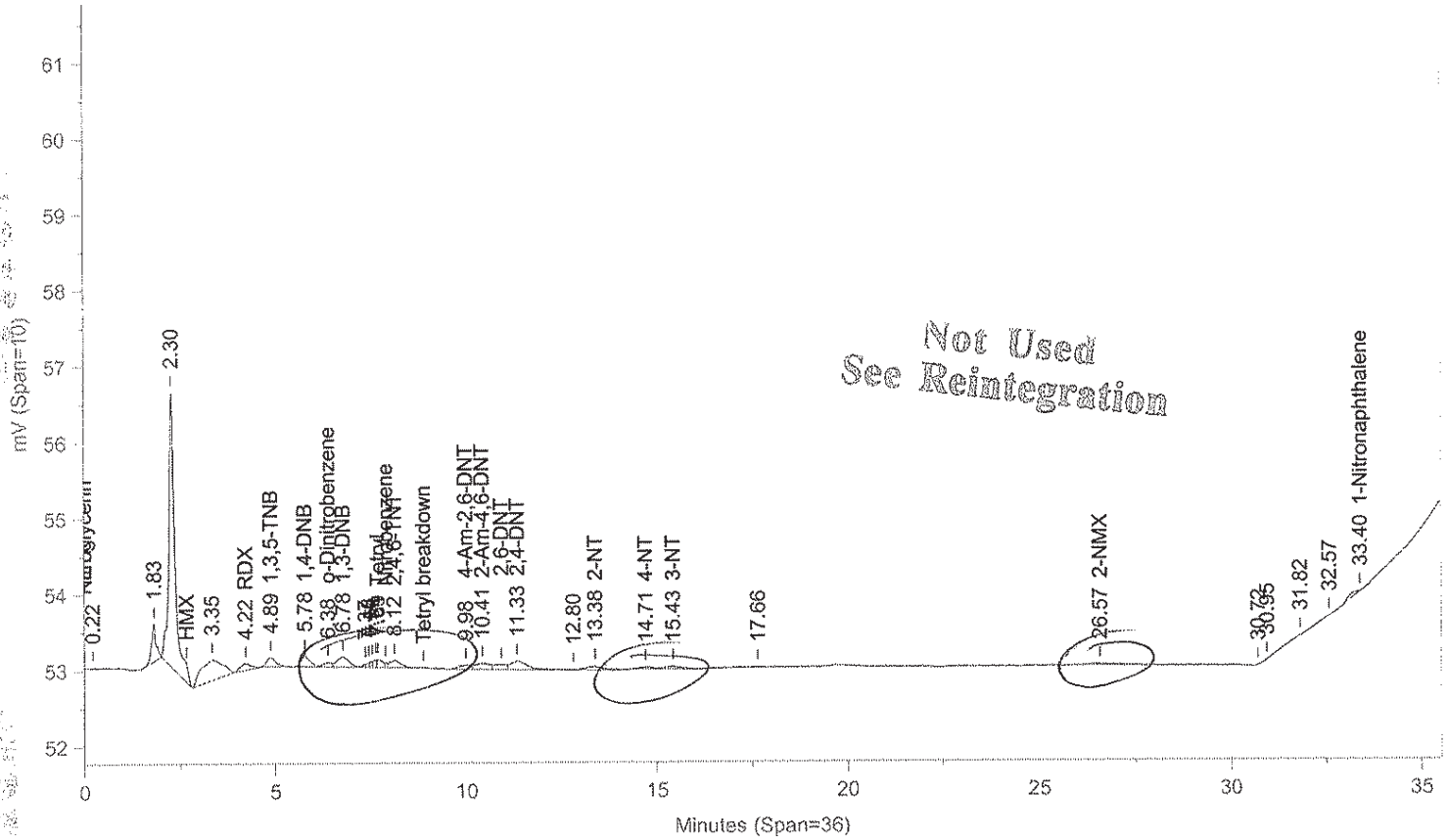
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	23.632	HMX
4.208	2956	21.232	RDX	.	0	.	RDX
4.907	5333	26.121	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6512	31.316	1,4-DNB	.	0	.	1,4-DNB
6.412	2784	34.922	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8427	31.566	1,3-DNB	.	0	.	1,3-DNB
7.715	8012	40.766	Tetryl + Breakdown = 8798	.	0	.	Tetryl
8.166	5917	35.592	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	786	52.959	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.991	66170	615.85	Nitroglycerin
9.997	2141	21.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	5748	26.017	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	3229	-1108.926	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	28.758	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	30.48	2-NT	.	0	.	2-NT
14.733	2115	27.284	4-NT	.	0	.	4-NT
15.451	3131	28.84	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	559.844	PETN
26.83	2335	89.238	2-NMX	26.928	37099	90.433	2-NMX
33.267	3188	131.465	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:03:50 PM
File Reported On: 11/7/2013 at 4:03:49 PM

James H. Place
Senior Chemist

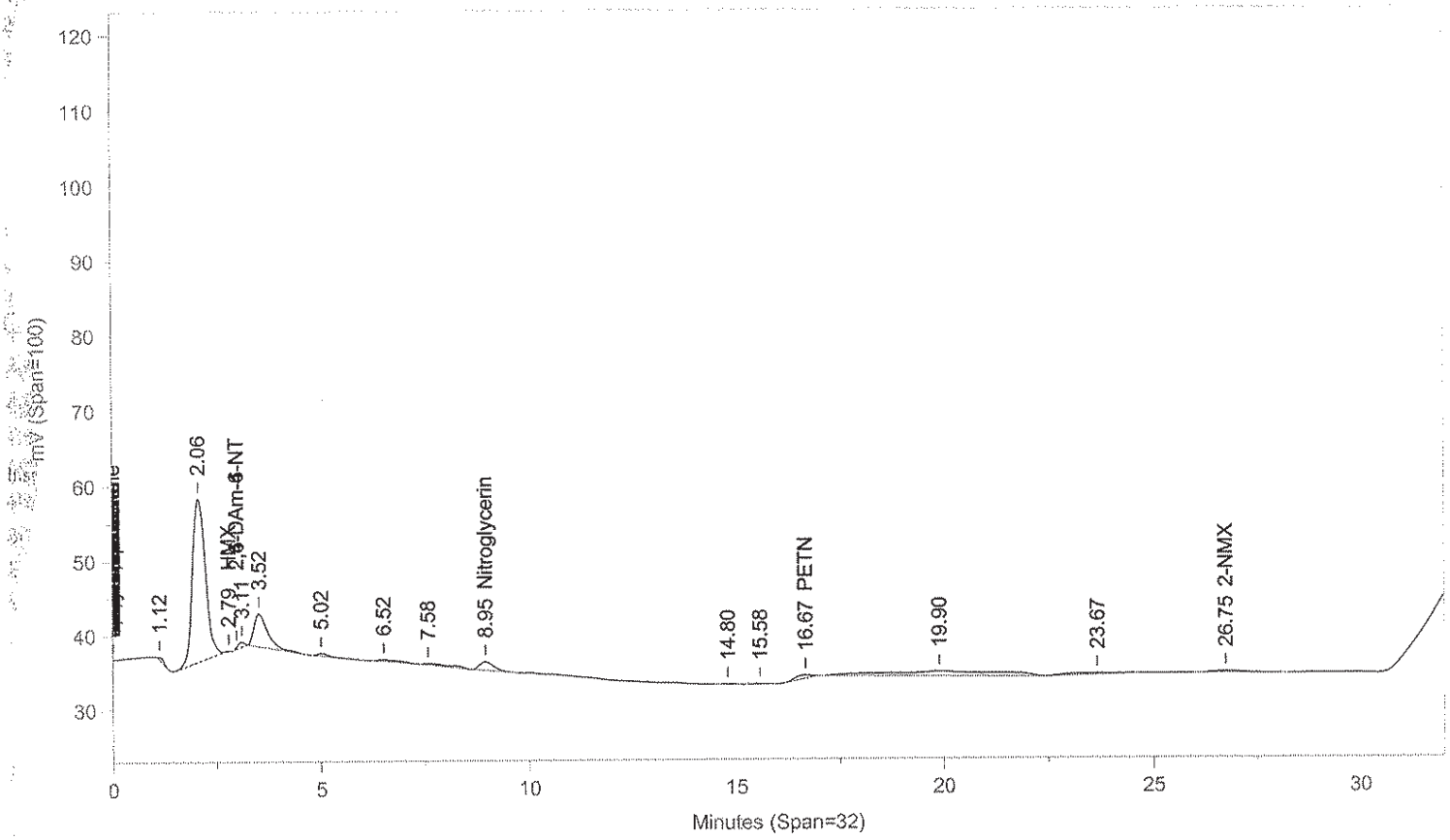
NOV 07 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

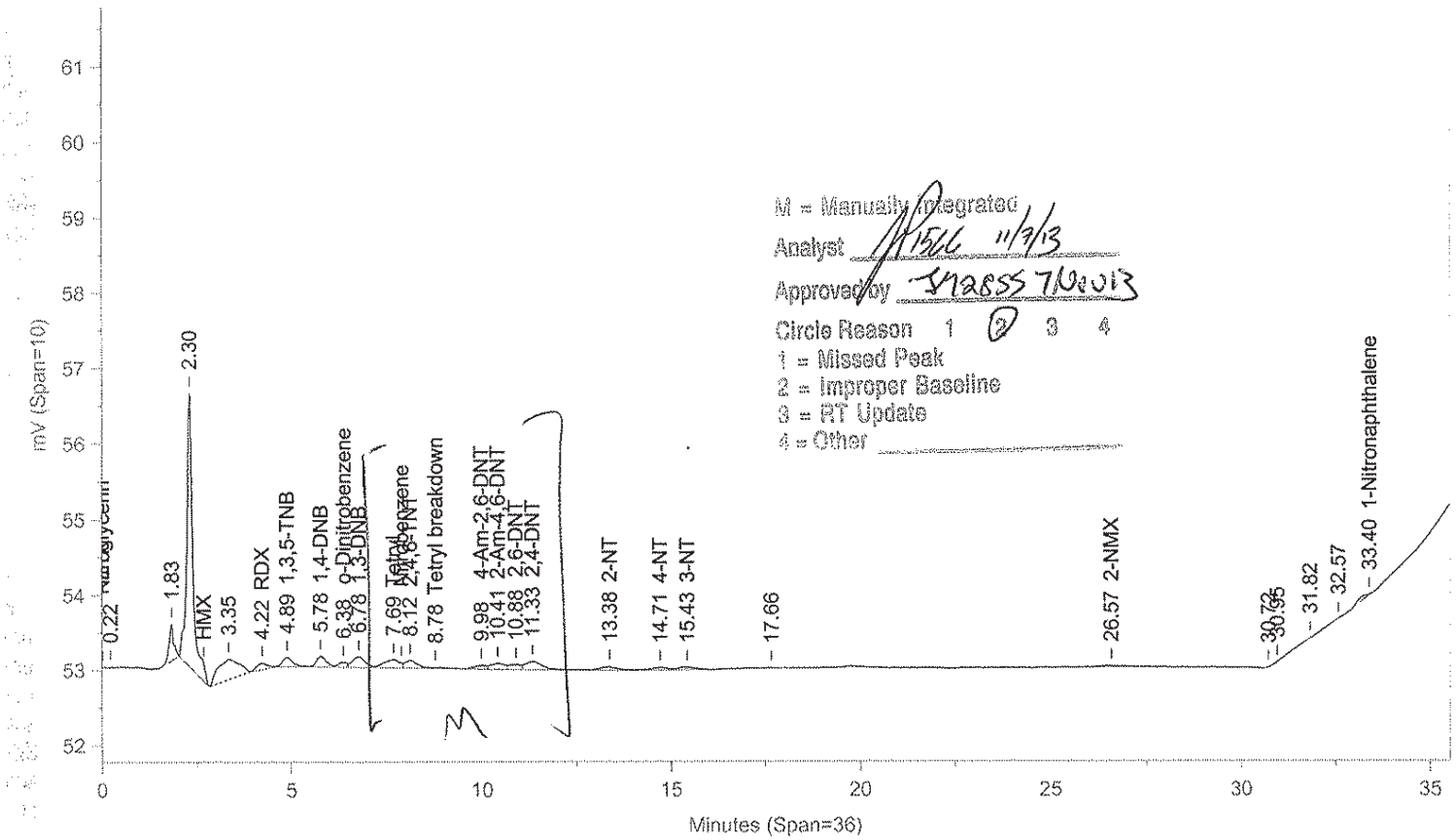
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.787	HMX
4.225	1736	7.531	RDX	.	0	.	RDX
4.89	1977	9.425	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2377	11.319	1,4-DNB	.	0	.	1,4-DNB
6.383	924	11.363	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	2972	10.921	1,3-DNB	.	0	.	1,3-DNB
7.688	968	4.046	Tetryl	.	0	.	Tetryl
8.117	1973	11.416	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.948	27434	252.901	Nitroglycerin
9.982	1196	12.208	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2110	9.538	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.328	3508	13.173	2,4-DNT	.	0	.	2,4-DNT
13.377	1479	14.488	2-NT	.	0	.	2-NT
14.712	591	7.36	4-NT	.	0	.	4-NT
15.433	1102	9.95	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	121.455	PETN
26.571	638	22.009	2-NMX	26.751	13456	31.305	2-NMX
33.395	956	114.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.09A
Area File: C:\CPWIN\DATA1\1E12310B.09A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:21:40 PM
File Reported On: 11/7/2013 at 2:21:56 PM

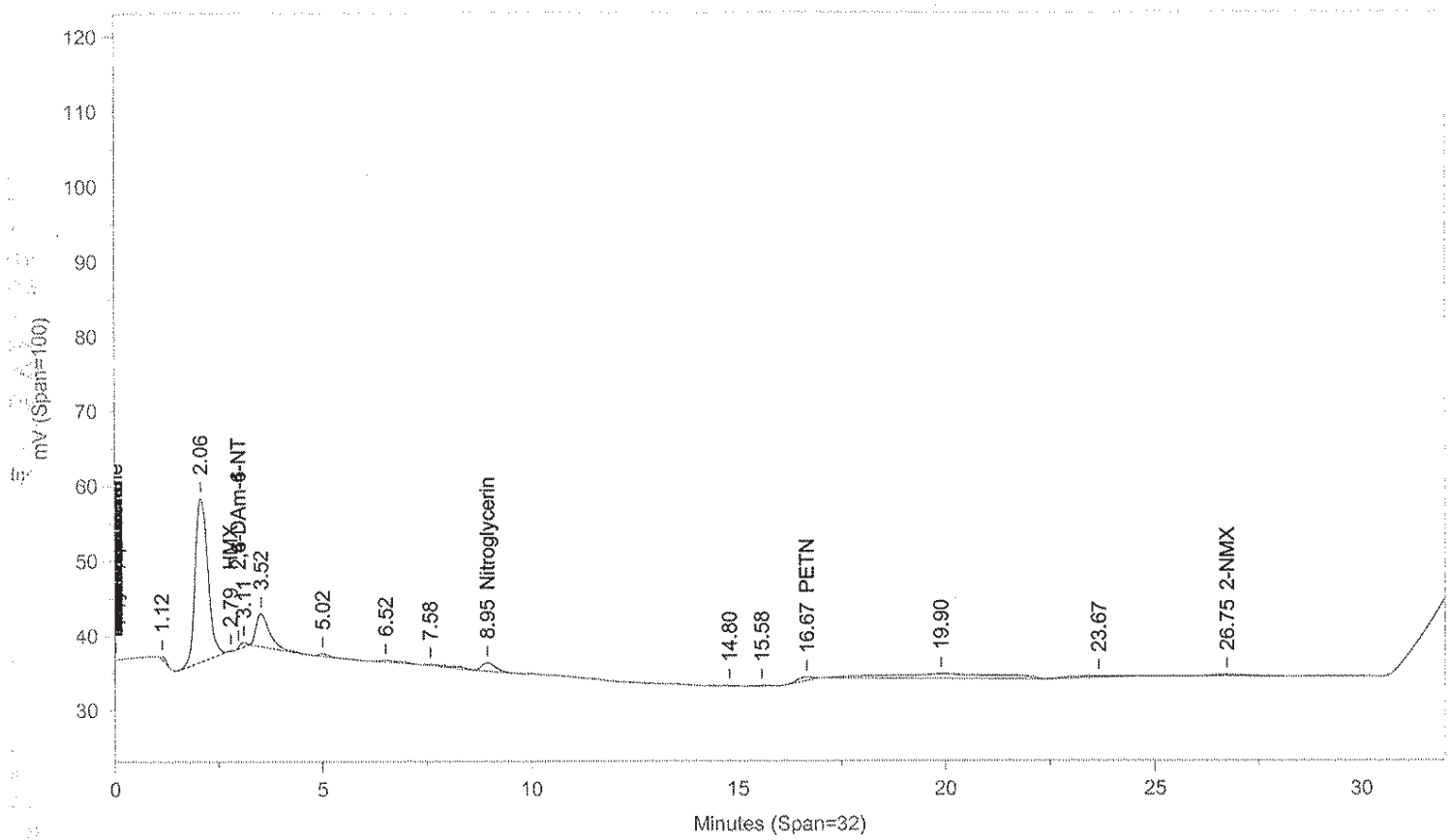
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.09R

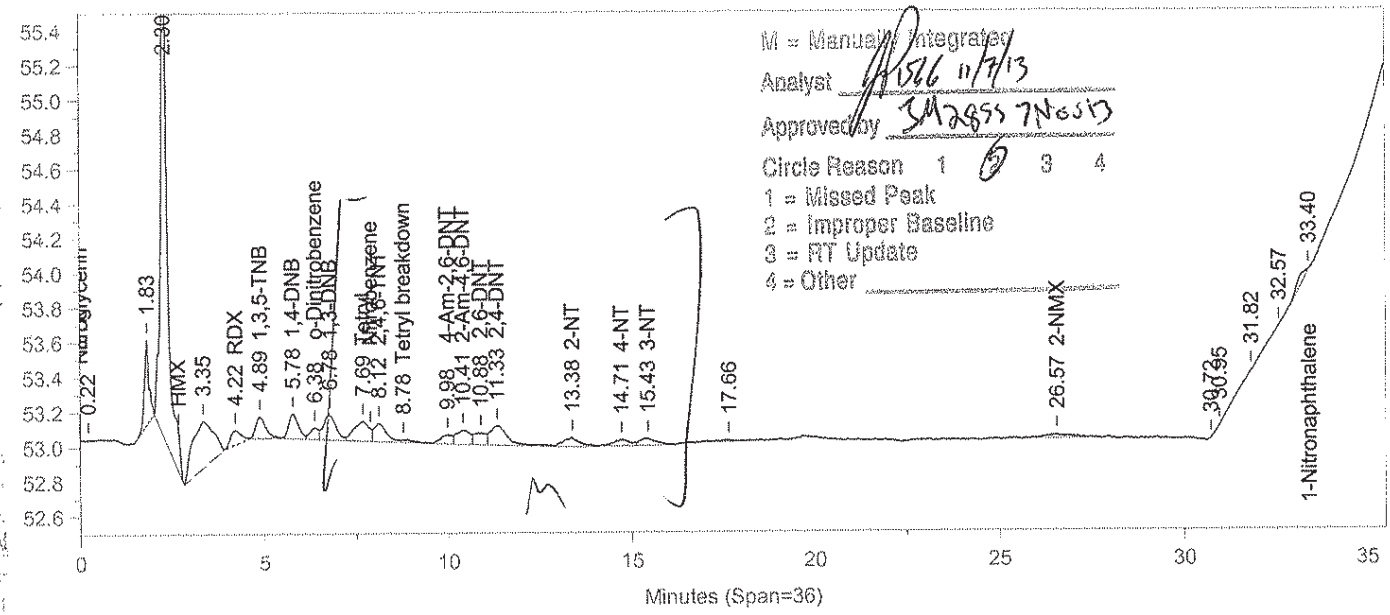


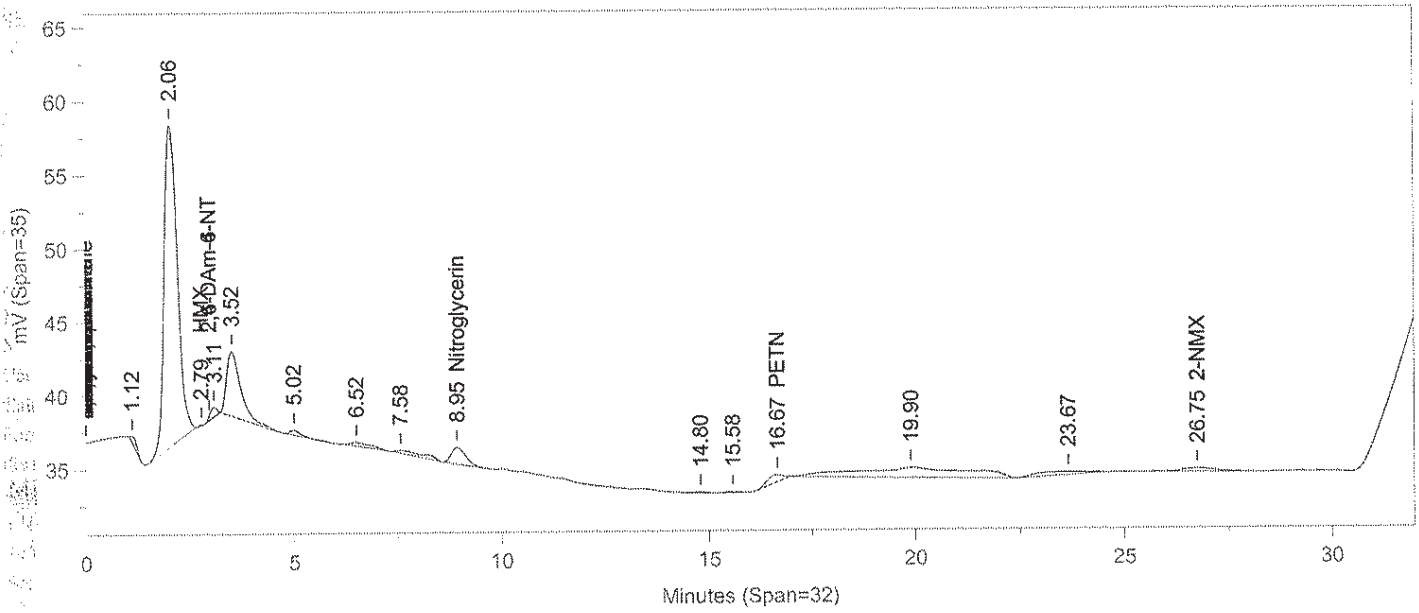
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.22 Nitroglycerin
1.83
2.00
HMX
3.35
4.22 RDX
4.89 1,3,5-TNB
5.78 1,4-DNB
6.38 o-Dinitrobenzene
6.78 1,3-DNB
7.69 Tetryl
8.12 2,4,6-TNT
8.78 Tetryl breakdown
9.88 4-Am-2,6-DNT
10.41 2-Am-4,6-DNT
10.88 2,6-DNT
11.33 2,4-DNT
13.38 2-NT
14.71 4-NT
15.43 3-NT
17.66
26.57 2-NMX
30.73
31.82
32.57
33.40
1-Nitronaphthalene
mV (Span=3.0)
Minutes (Span=36)


1.12
2.06
2.79 HMX
3.11 2-Am-4-NT
3.52
5.02
6.52
7.58
8.95 Nitroglycerin
14.80
15.58
16.67 PETN
19.90
23.67
26.75 2-NMX
mV (Span=35)
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

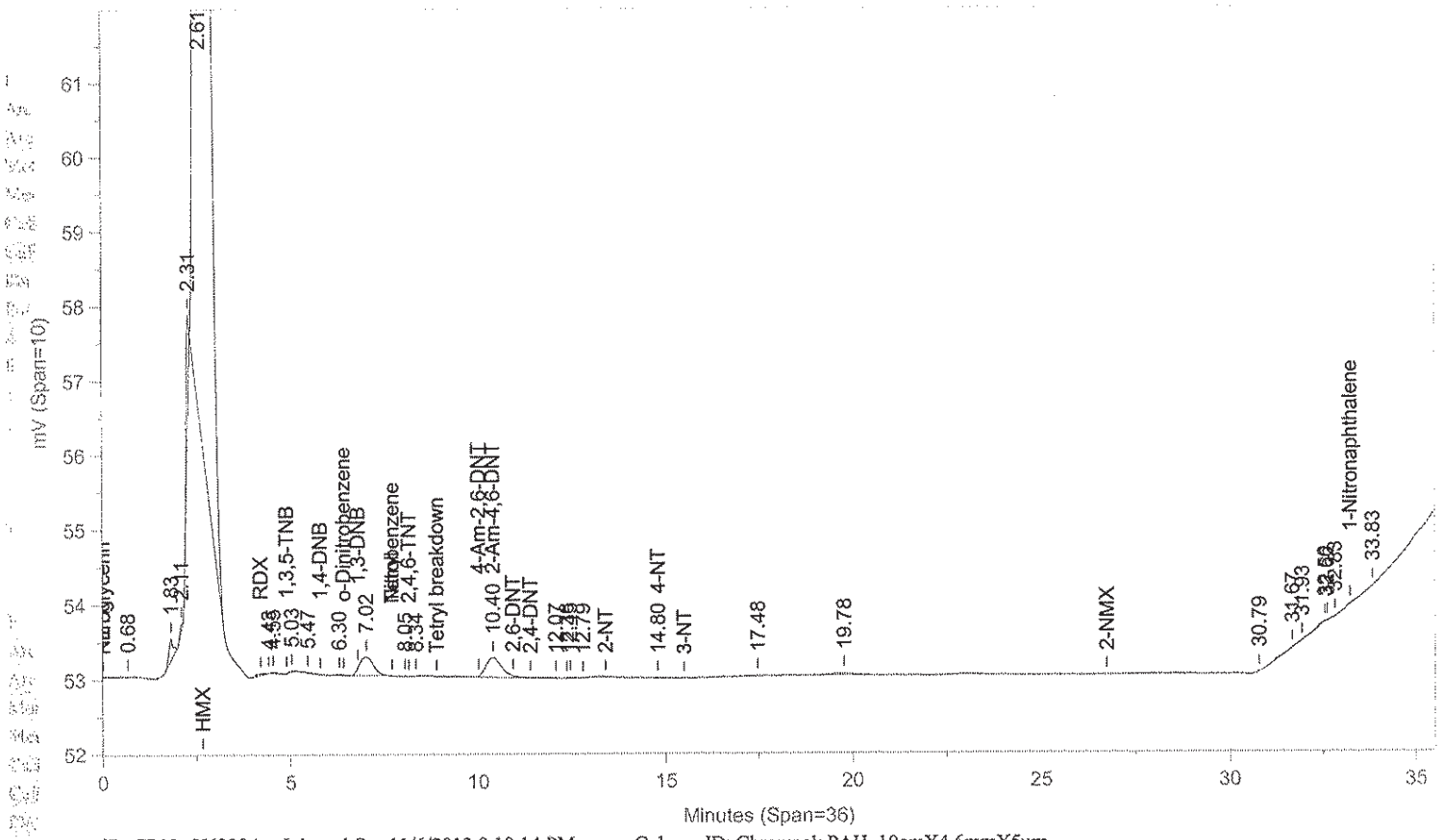
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.592	HMX
4.225	1736	7.303	RDX	.	0	.	RDX
4.89	2392	11.716	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2658	12.781	1,4-DNB	.	0	.	1,4-DNB
6.383	1043	13.088	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	3377	12.648	1,3-DNB	.	0	.	1,3-DNB
7.688	3245	16.513	Tetryl + Breakdown = 3632	.	0	.	Tetryl
8.117	2433	14.635	2,4,6-TNT	.	0	.	2,4,6-TNT
8.783	387	26.066	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.948	27434	255.328	Nitroglycerin
9.982	1195	12.047	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2109	9.545	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.884	1529	-1156.4	2,6-DNT	.	0	.	2,6-DNT
11.328	3833	14.033	2,4-DNT	.	0	.	2,4-DNT
13.377	1661	15.232	2-NT	.	0	.	2-NT
14.712	1093	14.101	4-NT	.	0	.	4-NT
15.433	1326	12.218	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	133.712	PETN
26.571	1037	39.626	2-NMX	26.751	13456	32.801	2-NMX
33.395	956	113.71	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:17:50 PM
File Reported On: 11/7/2013 at 4:17:49 PM

James H. Place
Senior Chemist

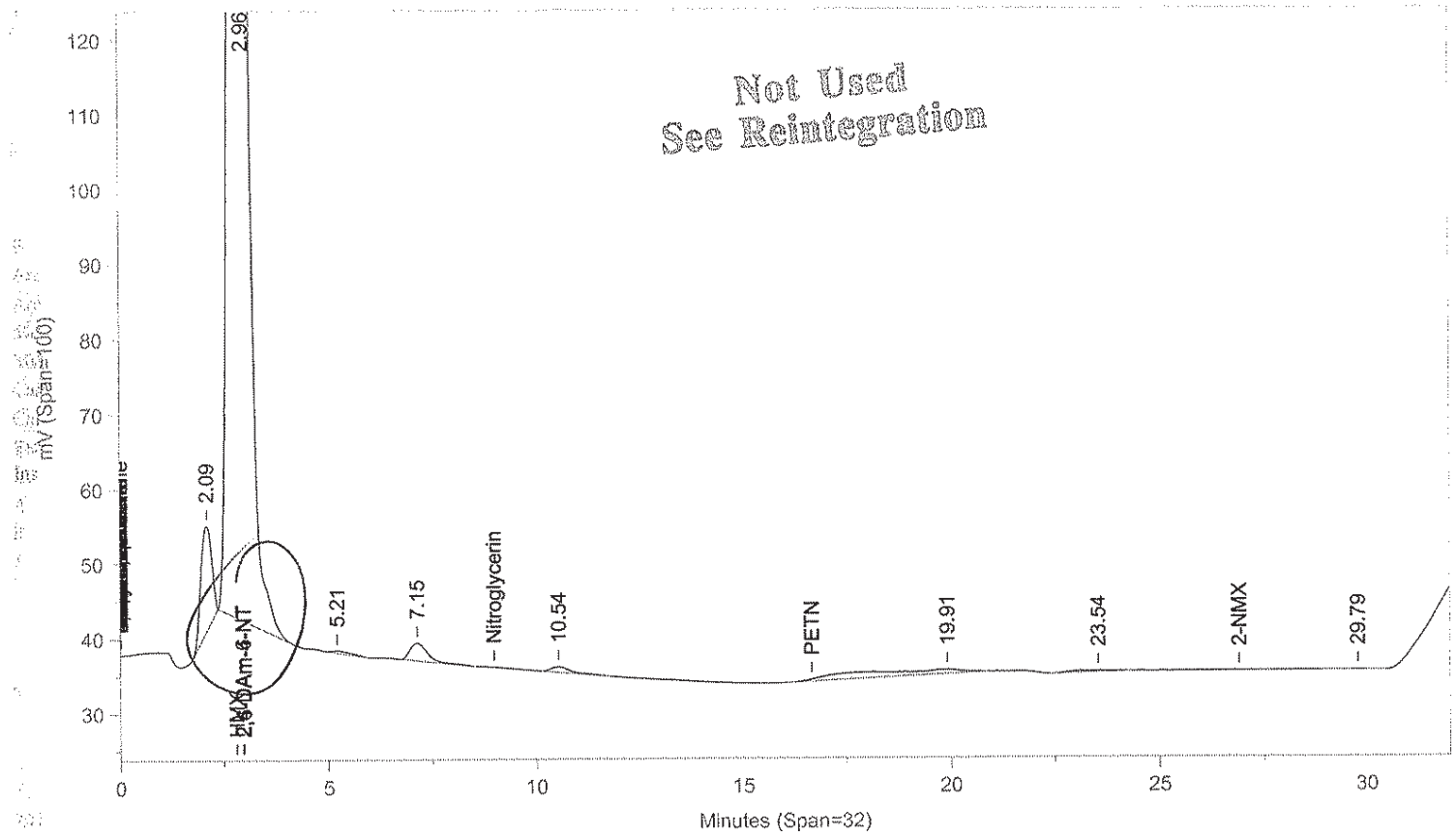
NOV 07 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

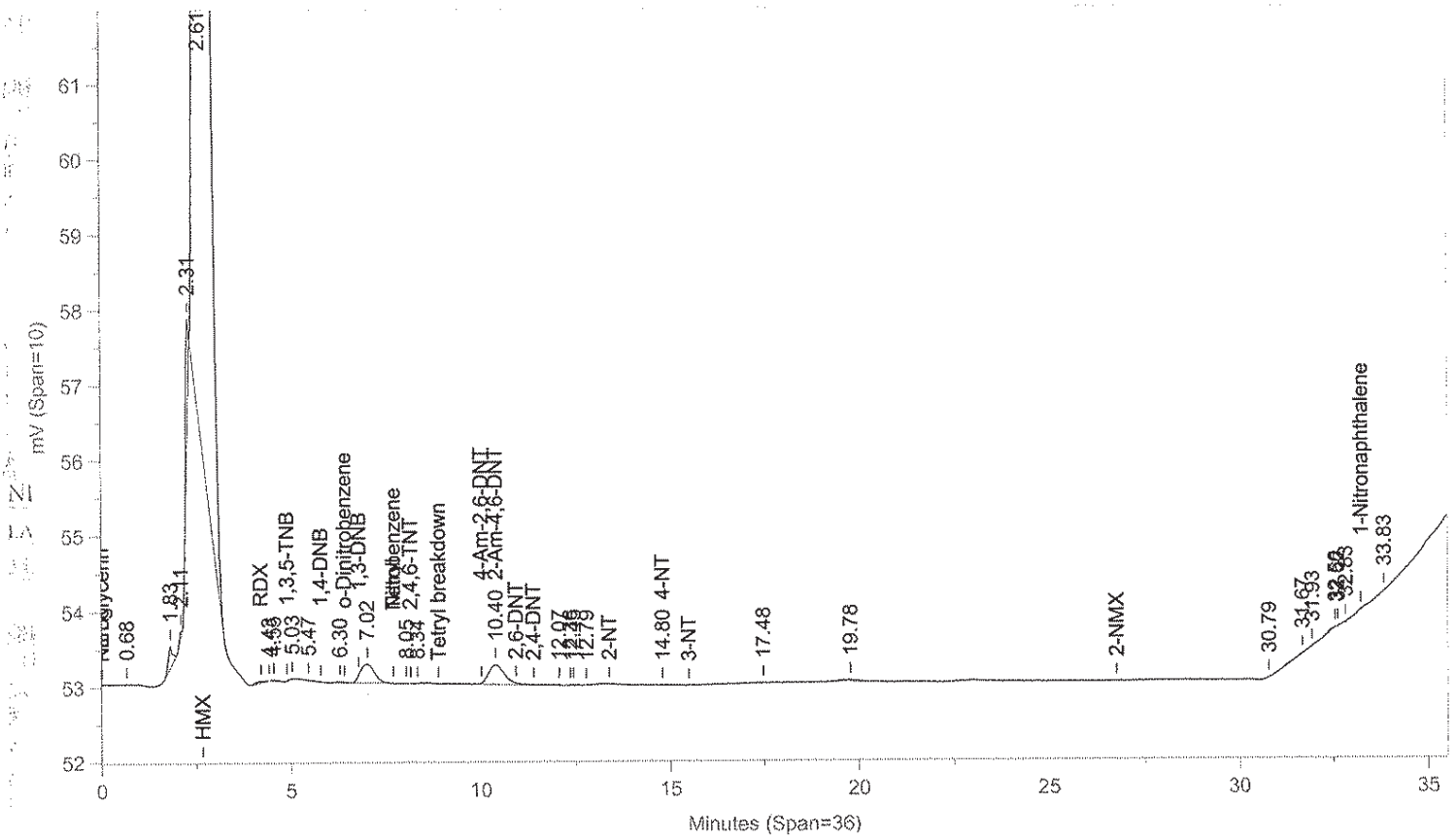
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5296932	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.11A
Area File: C:\CPWIN\DATA1\1E12310B.11A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:18 PM
File Reported On: 11/7/2013 at 4:32:28 PM

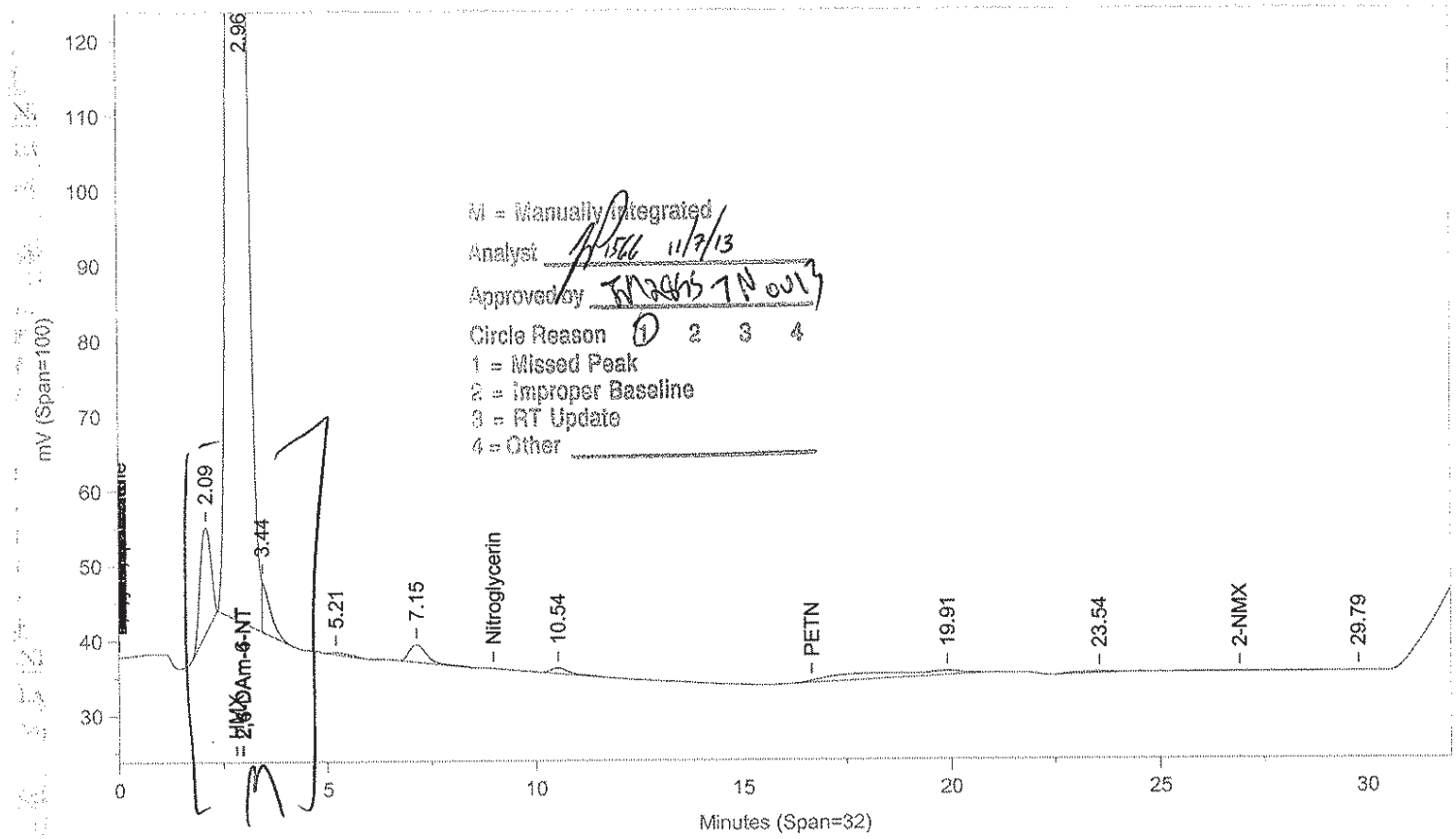
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



M = Manually Integrated
Analyst 11/7/13
Approved by 11/7/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

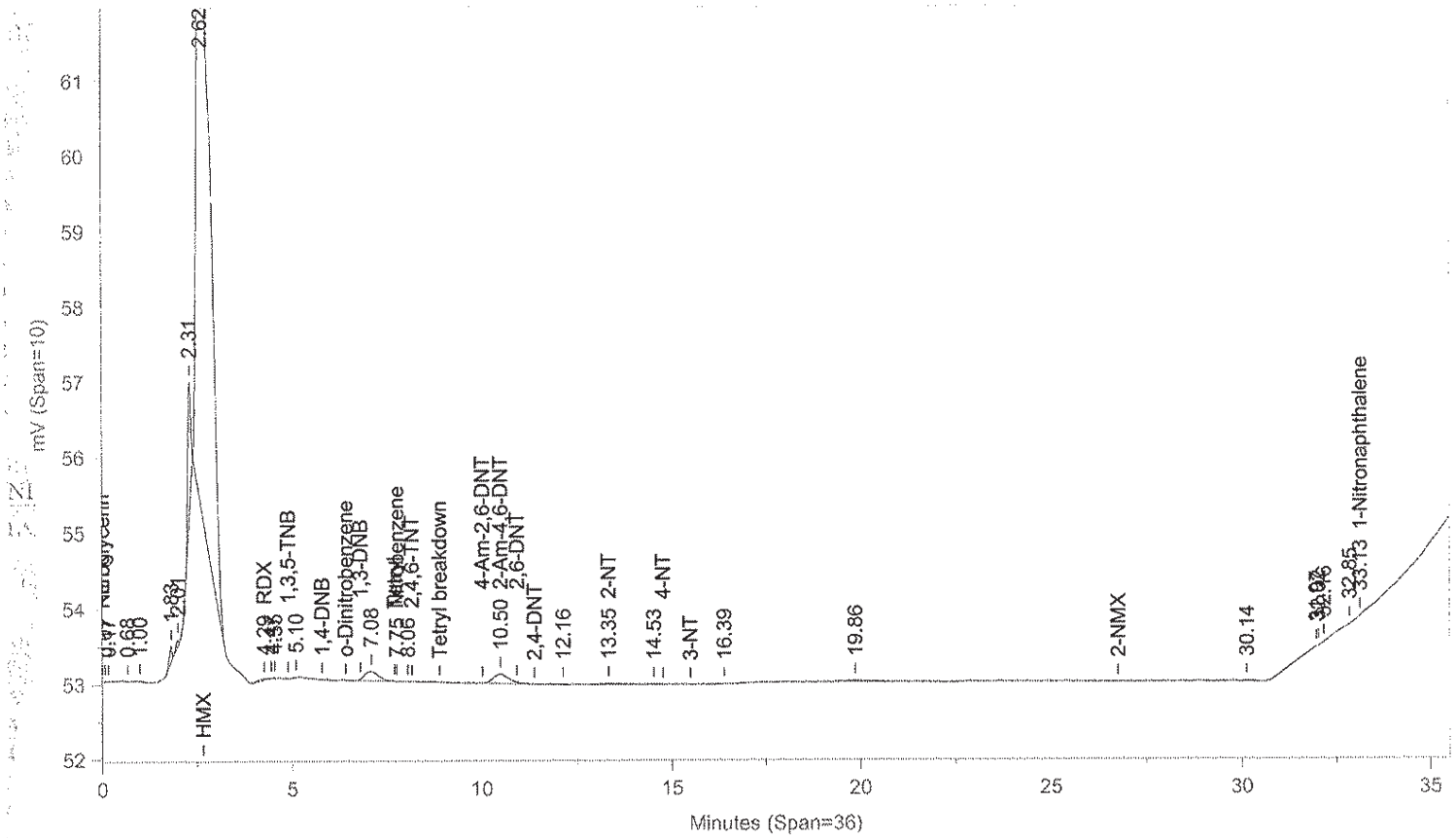
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5203836	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

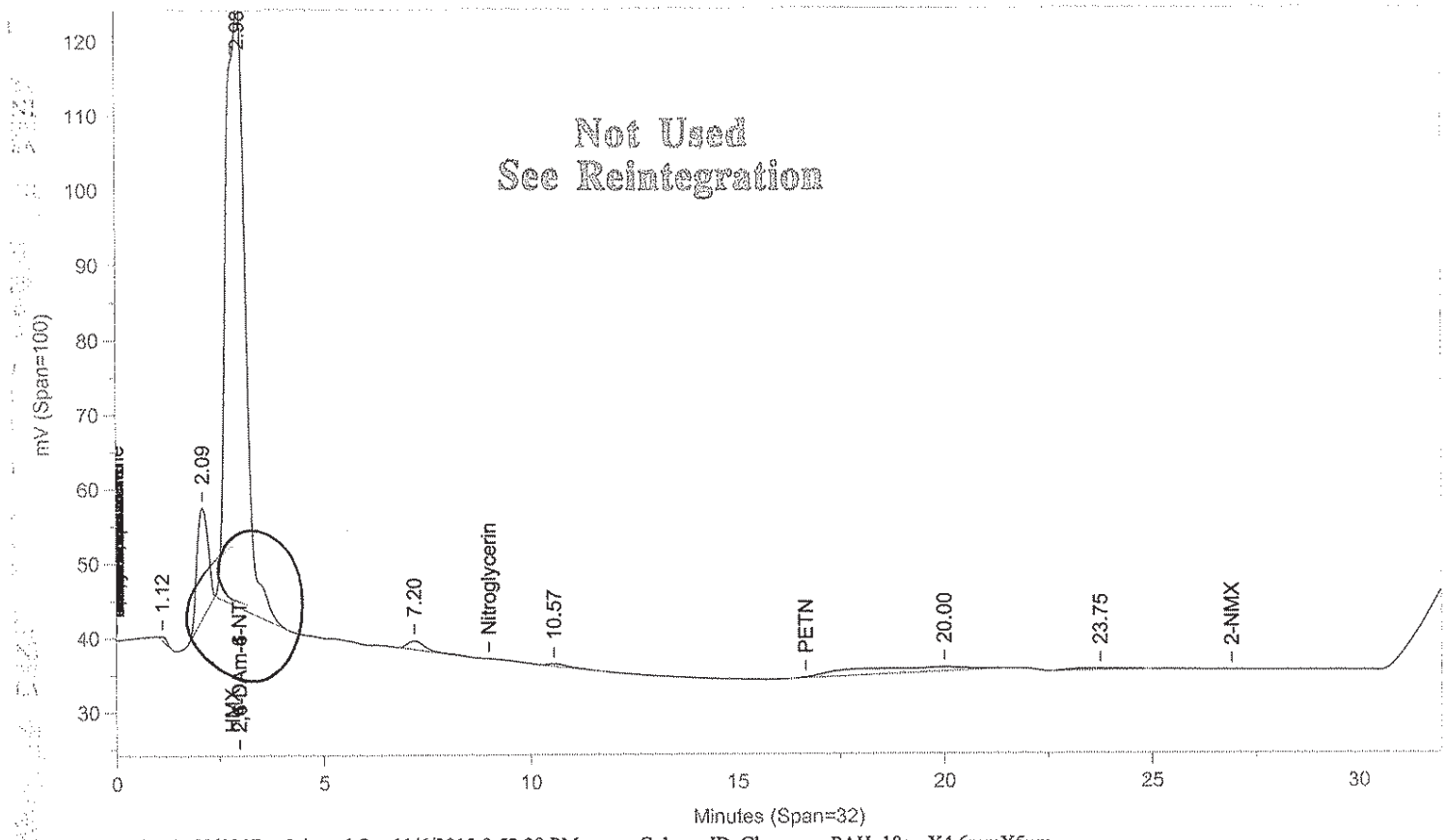
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:38:00 PM
File Reported On: 11/7/2013 at 4:37:58 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

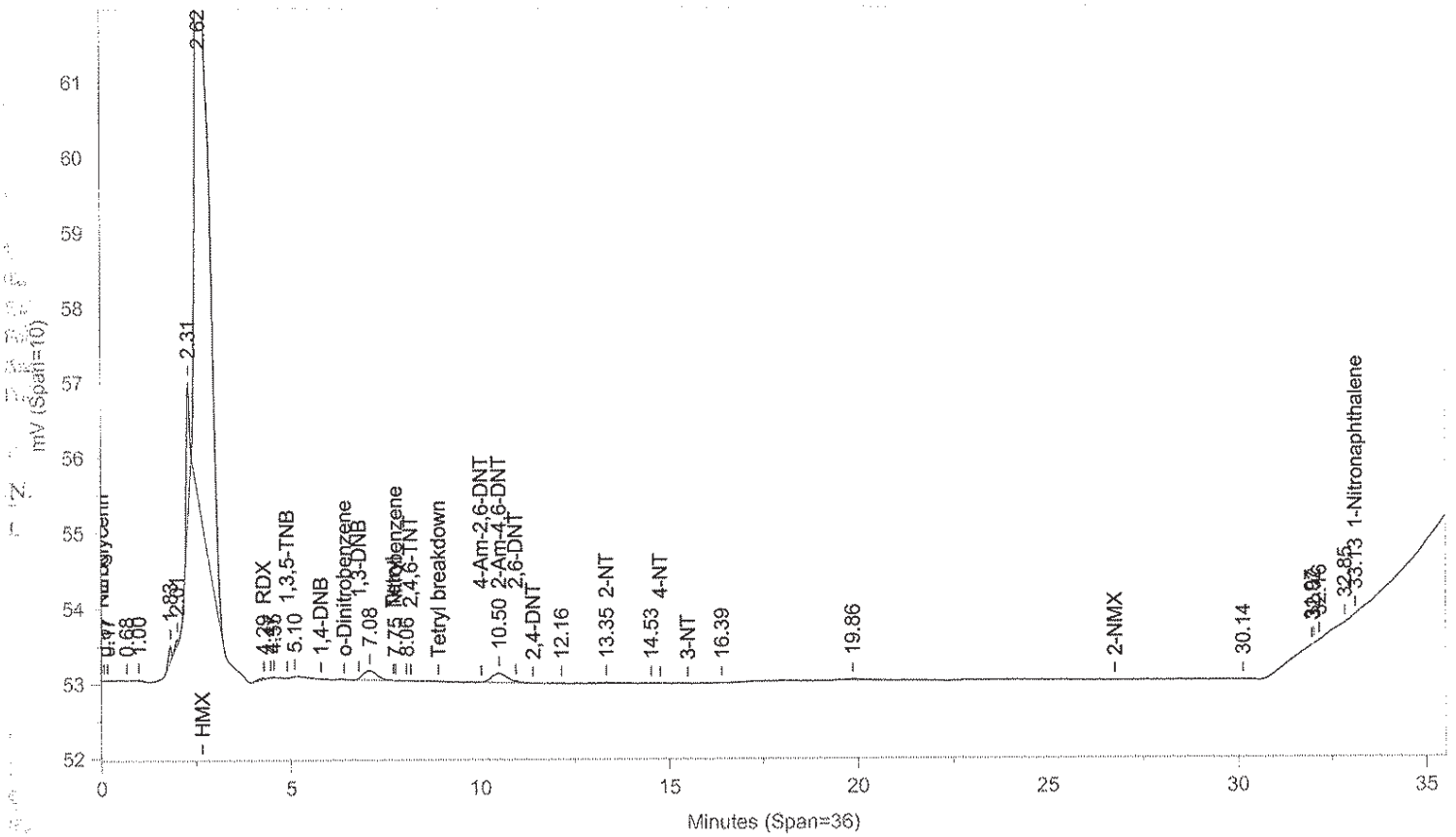
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.984	2610277	.	2,4-DAm-6-NT
4.286	315	-8.906	RDX	.	0	.	RDX
7.752	6	.019	Nitrobenzene	.	0	.	Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
13.345	694	5.246	2-NT	.	0	.	2-NT
33.134	9	.07	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.12A
Area File: C:\CPWIN\DATA1\1E12310B.12A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:48 PM
File Reported On: 11/7/2013 at 4:32:58 PM

Not Used
See Reintegration

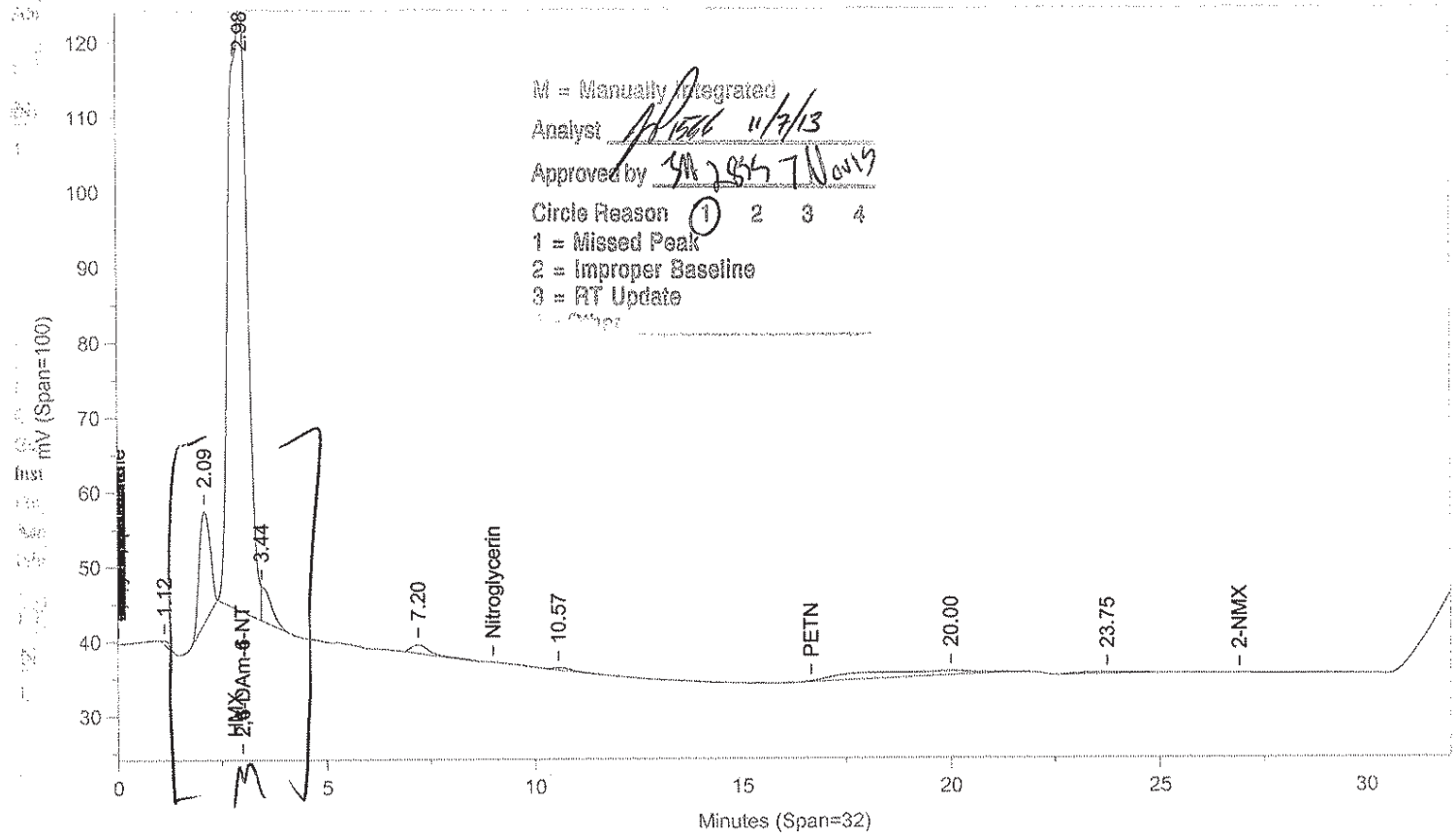
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R

M = Manually Integrated
Analyst 11/7/13
Approved by 7 Nov 13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

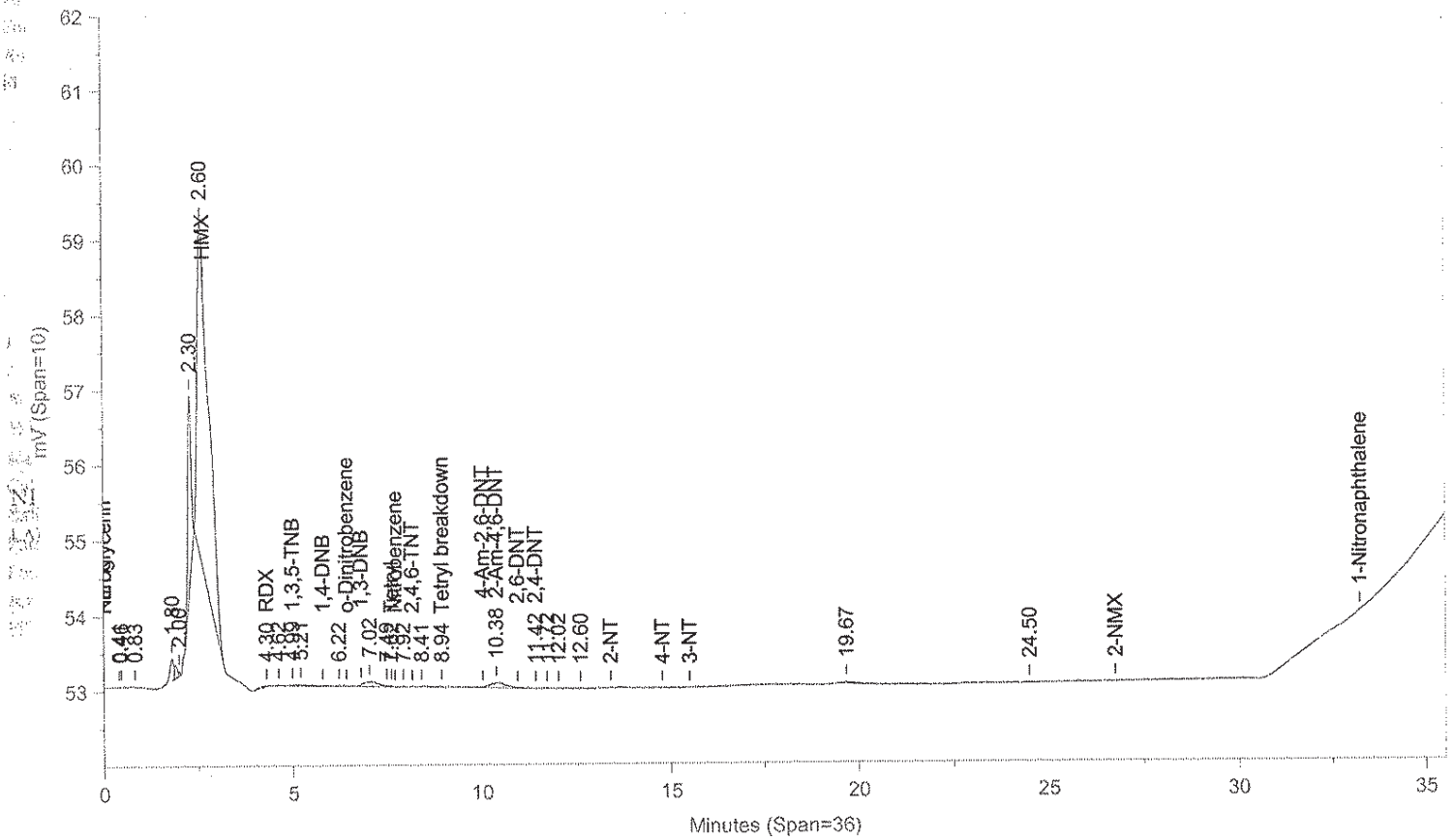
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.984	2533808	.	2,4-DAm-6-NT
4.286	315	-8.906	RDX	.	0	.	RDX
7.752	6	.019	Nitrobenzene	.	0	.	Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
13.345	694	5.246	2-NT	.	0	.	2-NT
33.134	9	.07	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

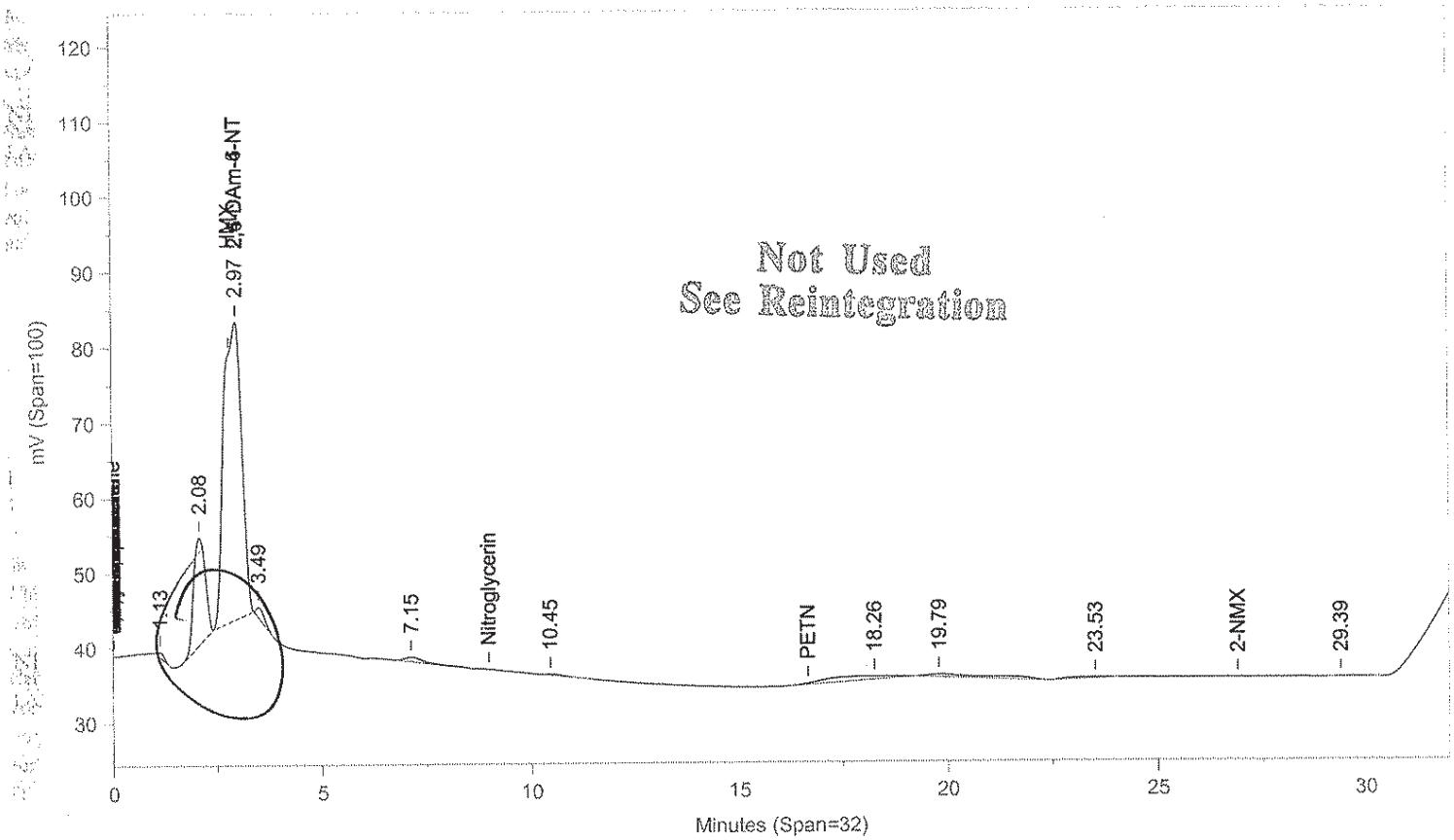
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:39:16 PM
File Reported On: 11/7/2013 at 4:39:14 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

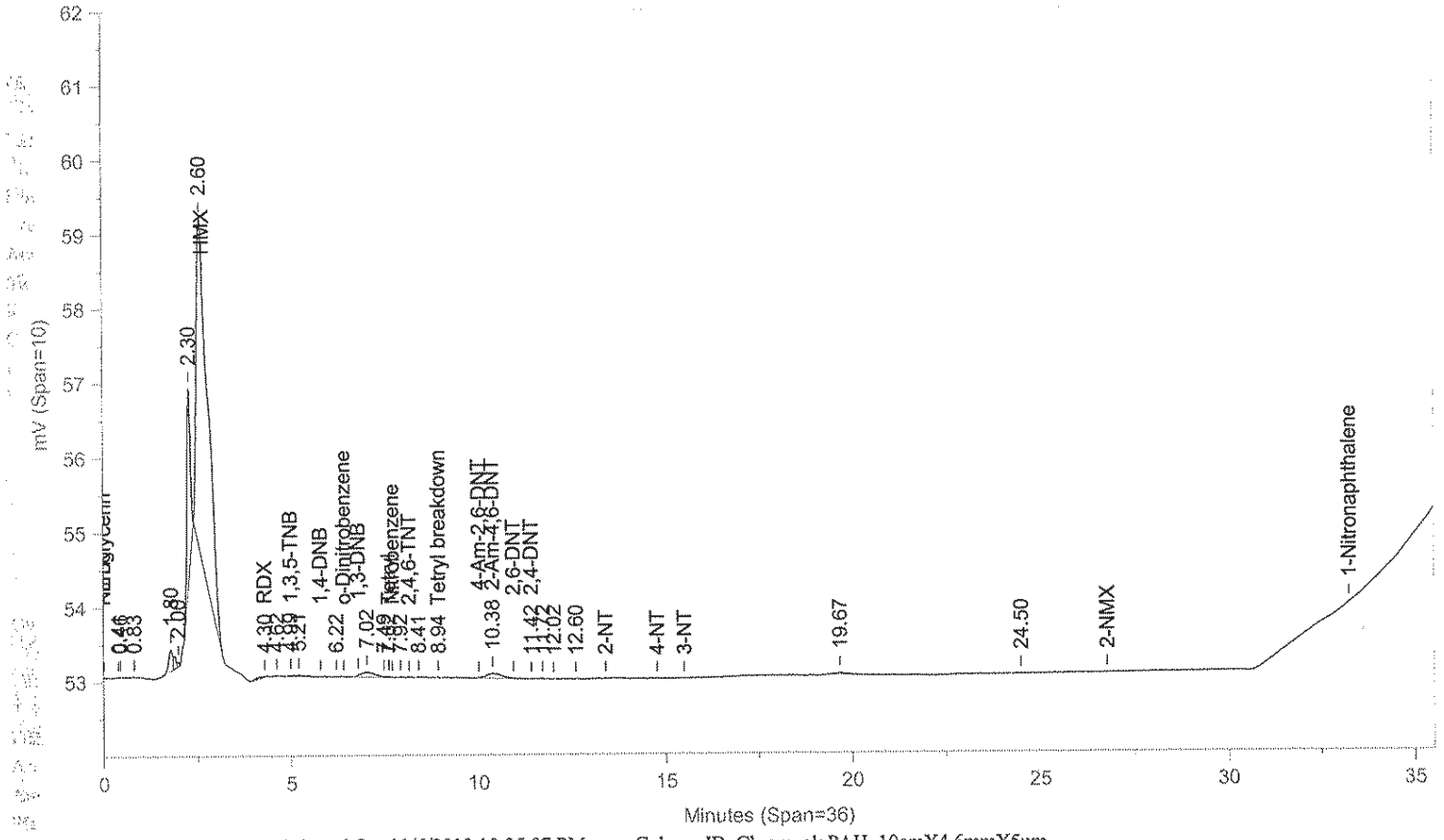
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1176025	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.13A
Area File: C:\CPWIN\DATA1\1E12310B.13A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:18 PM
File Reported On: 11/7/2013 at 4:33:28 PM

Not Used
See Reintegration

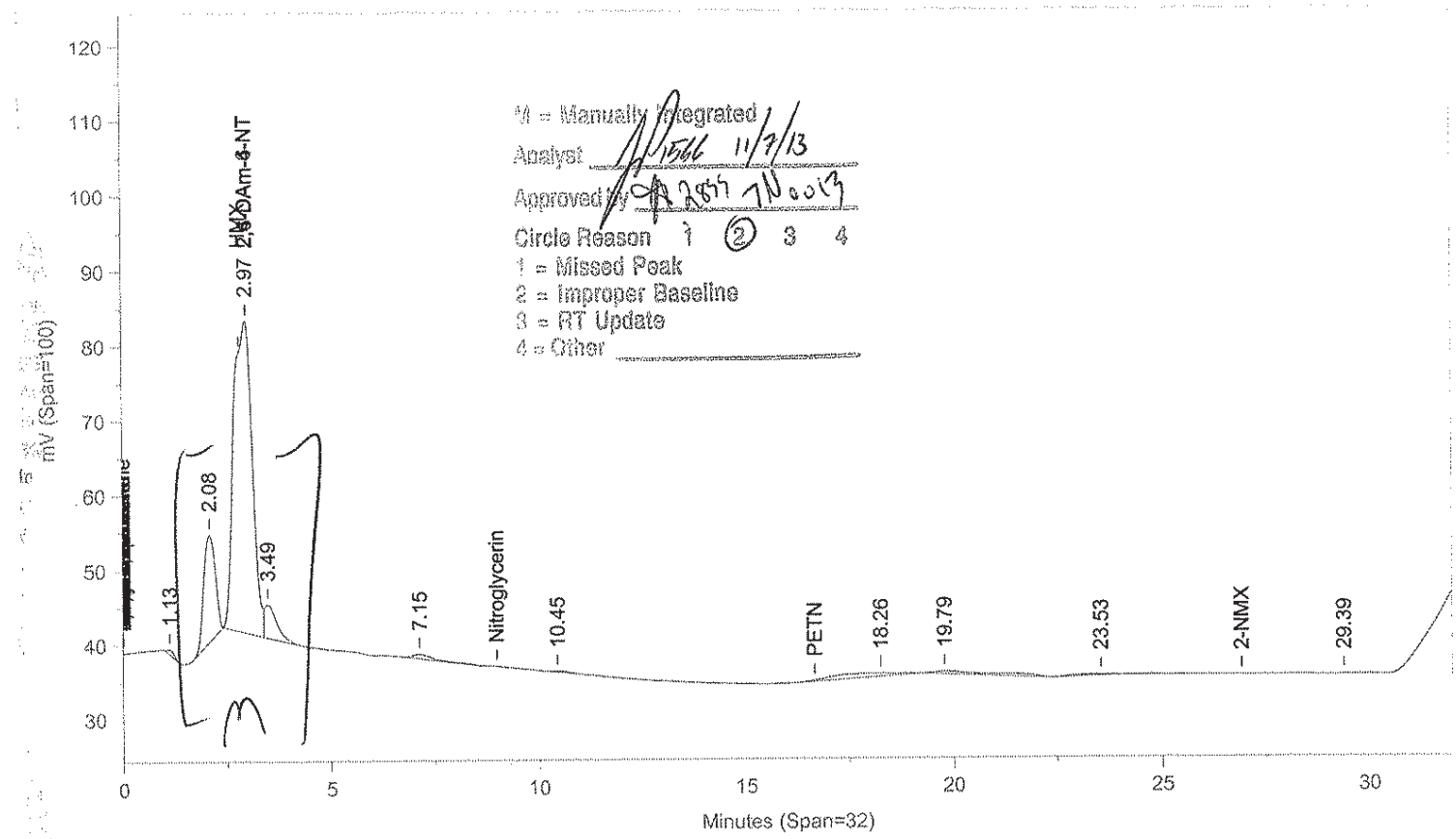
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



M = Manually Integrated
Analyst 1566 11/7/13
Approved by [illegible] 7Nov13
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

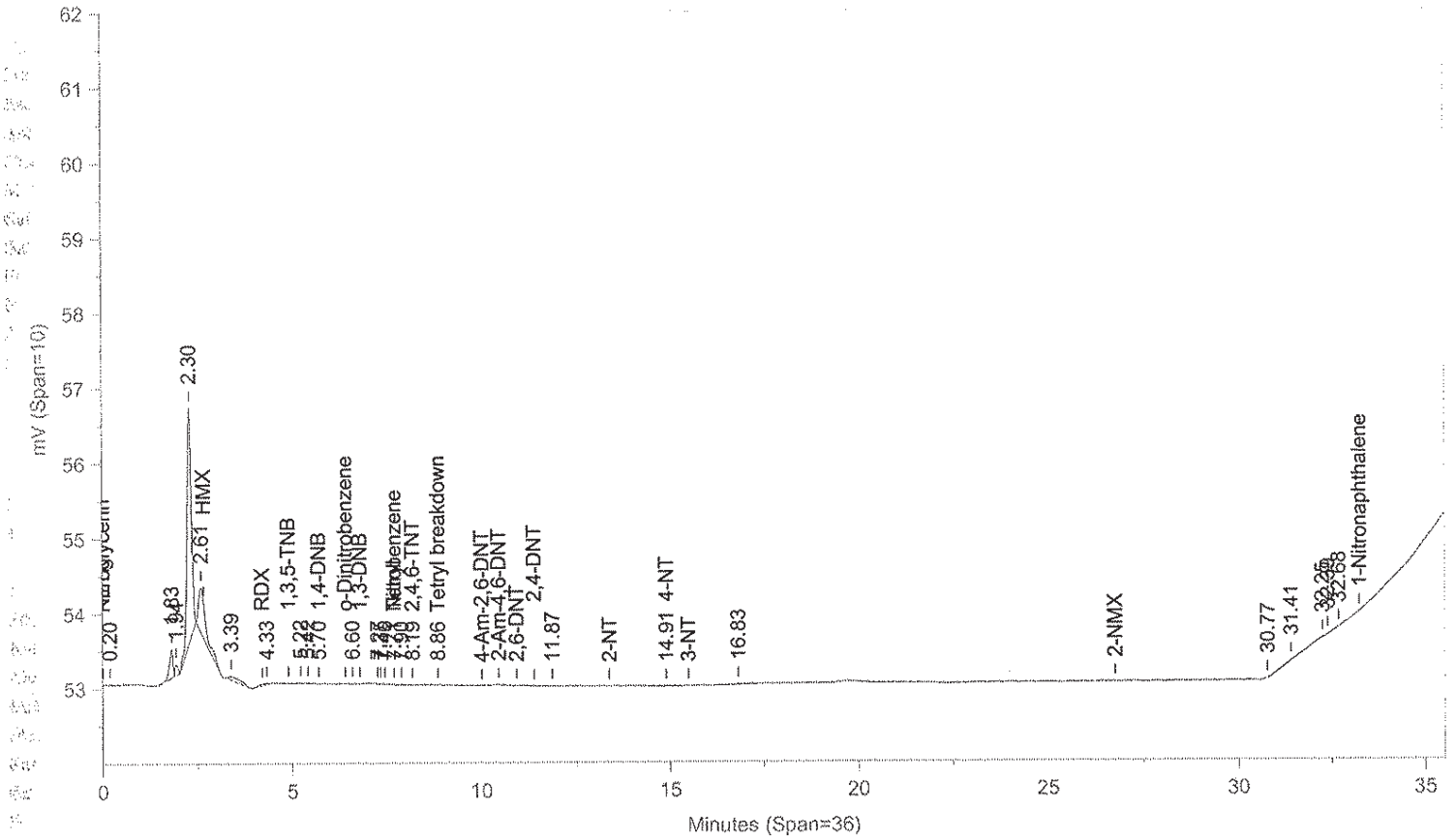
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1287697	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

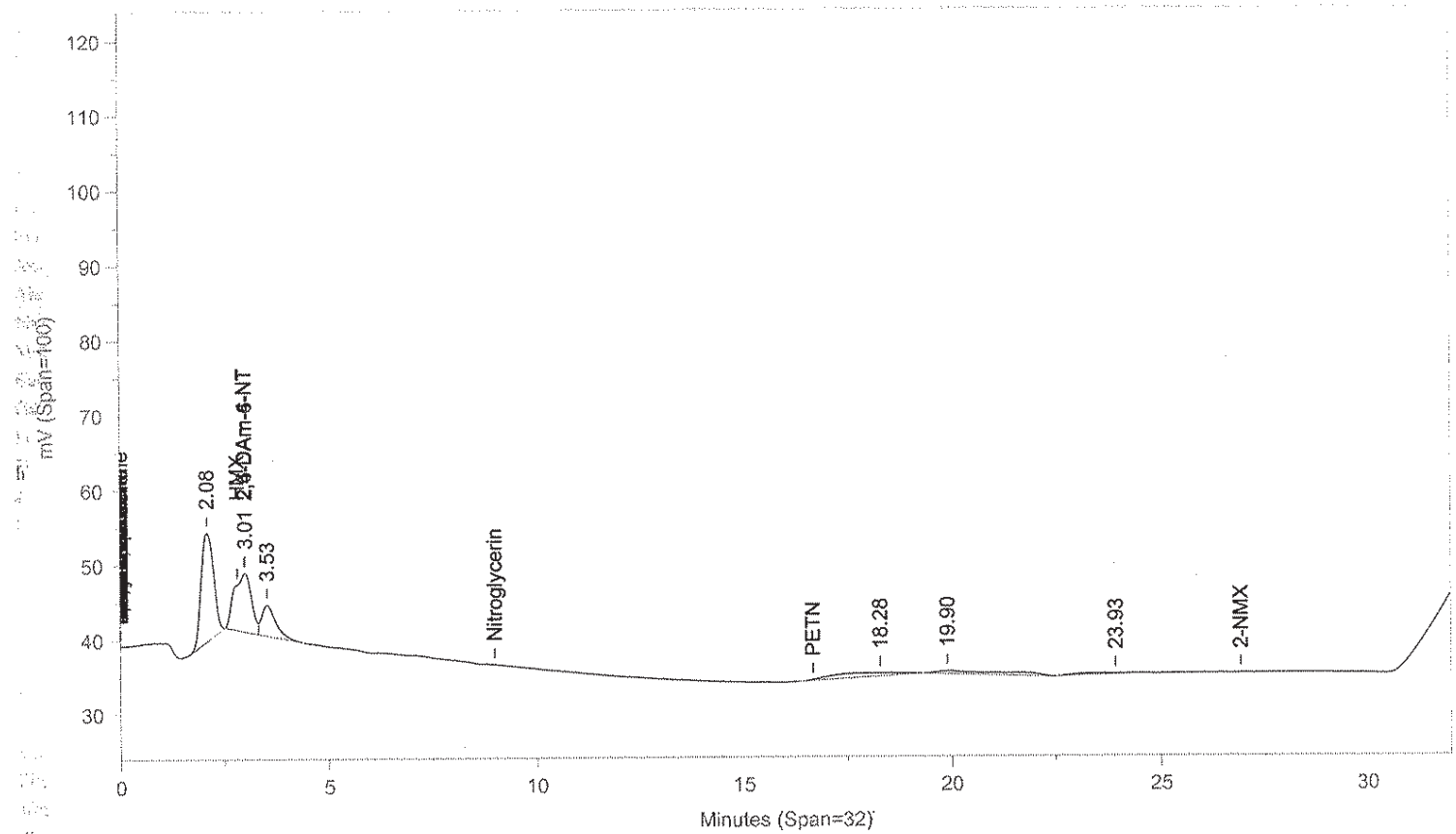
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:40:44 PM
File Reported On: 11/7/2013 at 4:40:42 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.14R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.14R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1

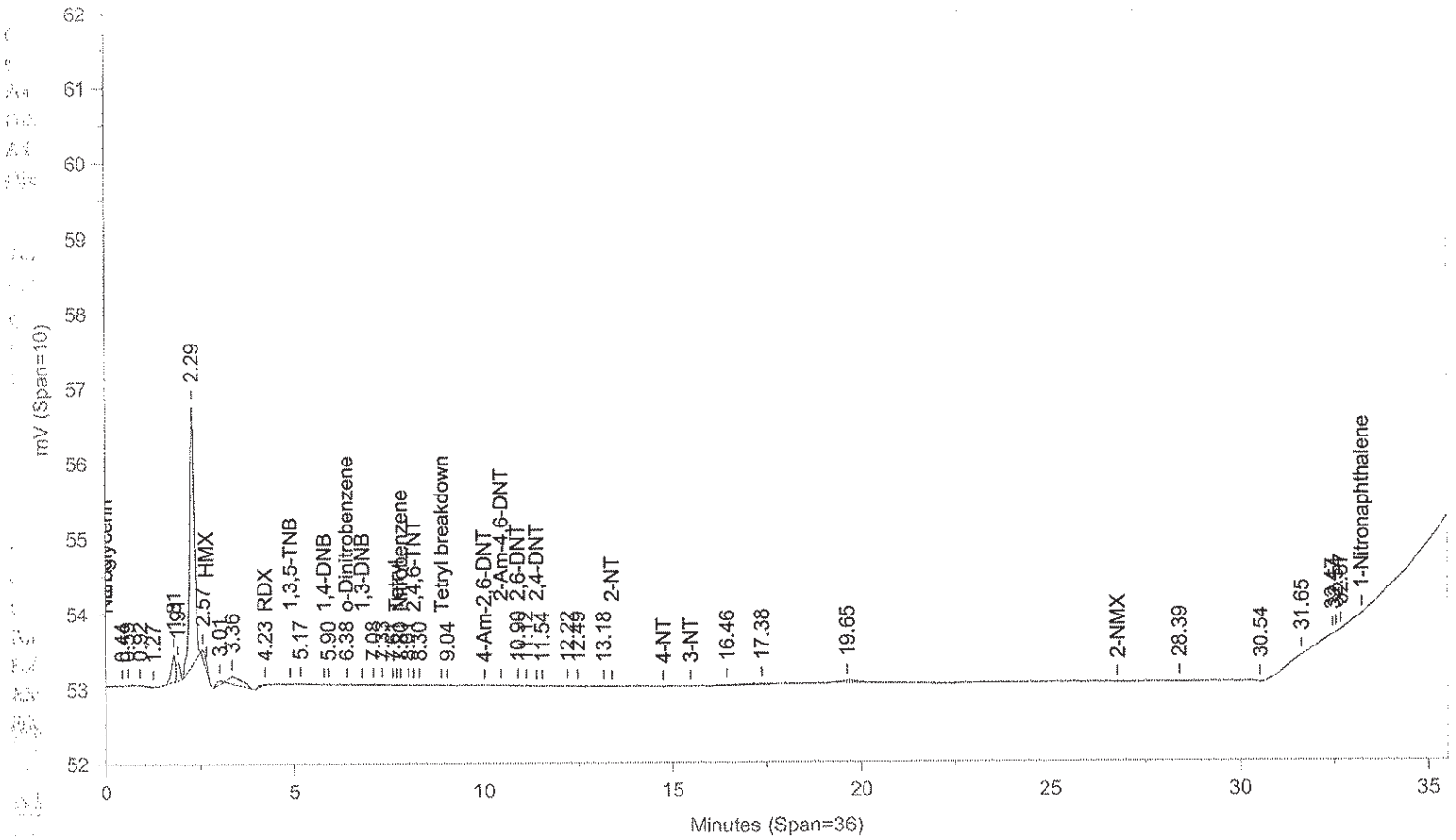
Dilution Factor: 1

Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.006	225601	.	2,4-DAm-6-NT
5.701	20	.078	1,4-DNB	.	0	.	1,4-DNB
7.706	5	.014	Tetryl	.	0	.	Tetryl
8.189	38	.167	2,4,6-TNT	.	0	.	2,4,6-TNT
8.865	15	.044	Tetryl breakdown	.	0	.	Tetryl breakdown
14.91	201	2.138	4-NT	.	0	.	4-NT

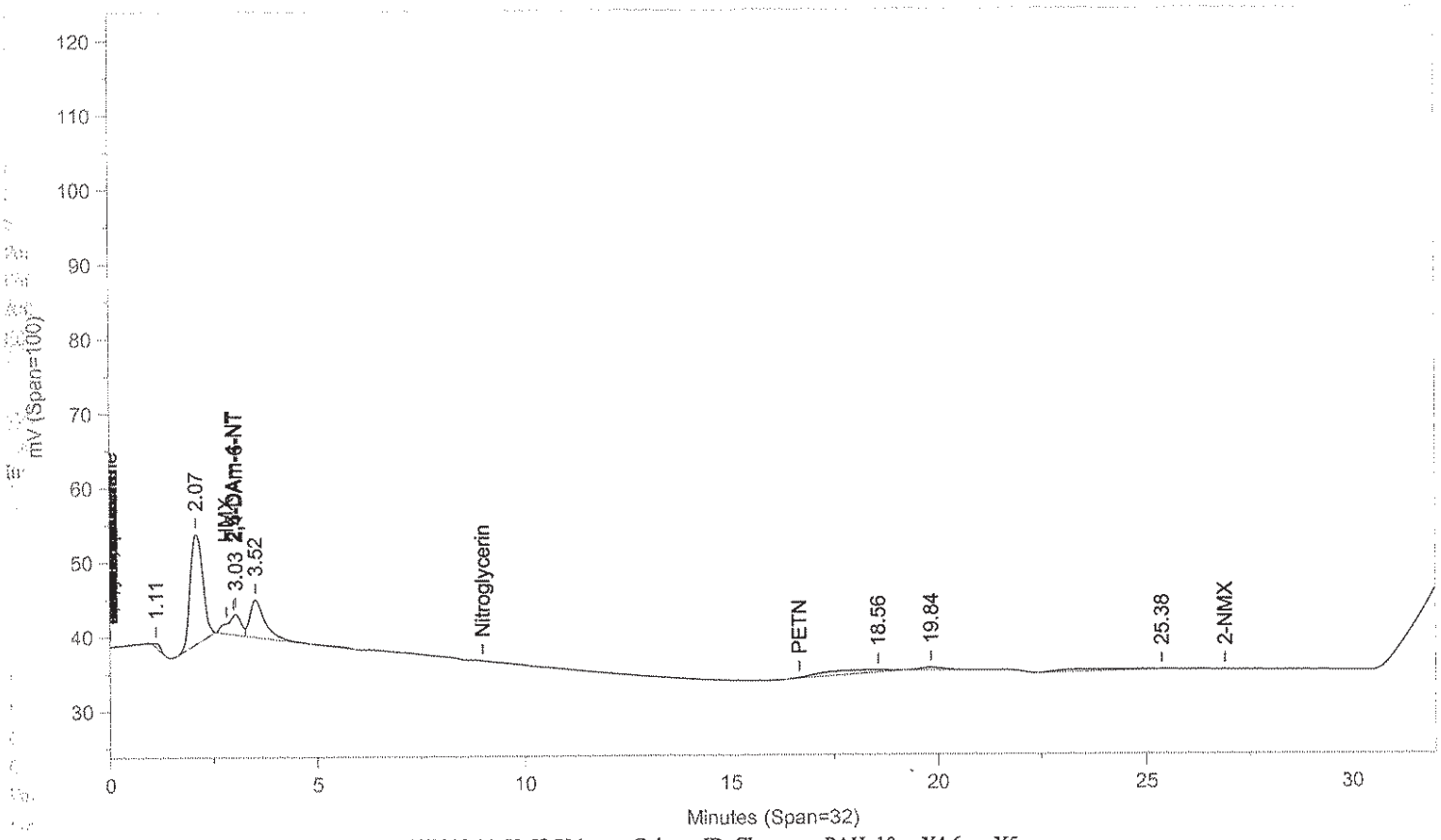
Files:
Area File: C:\CPWIN\DATA1\1E12310.14A
Area File: C:\CPWIN\DATA1\1E12310B.14A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:50 PM
File Reported On: 11/7/2013 at 4:33:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.15R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.15R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

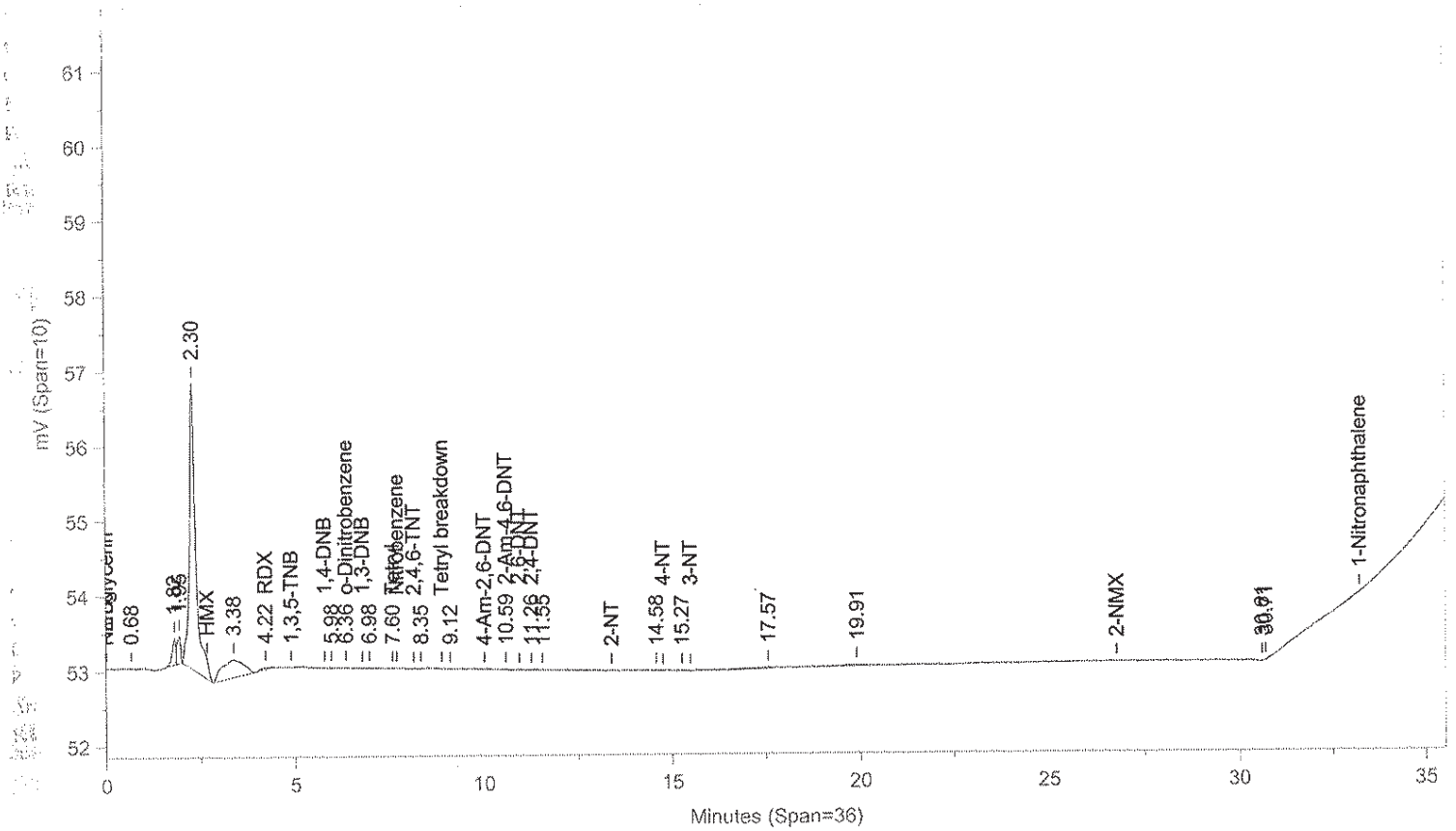
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.033	66258	.	2,4-DAm-6-NT
4.231	292	-9.173	RDX	.	0	.	RDX
6.378	115	1.119	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.8	52	.151	Nitrobenzene	.	0	.	Nitrobenzene
10.905	31	.257	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.15A
Area File: C:\CPWIN\DATA1\1E12310B.15A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:20 PM
Report Reported On: 11/7/2013 at 4:34:29 PM

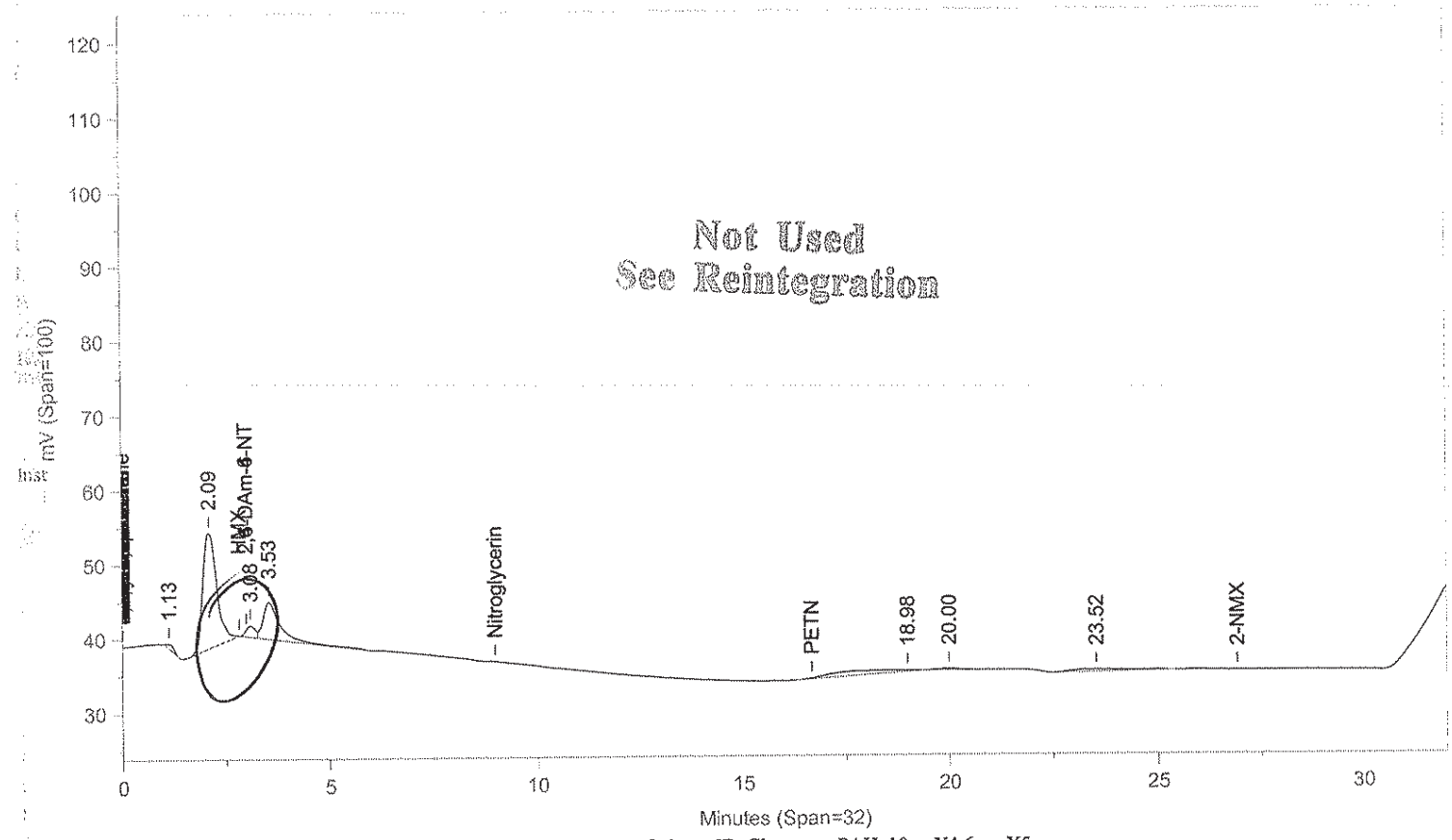
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

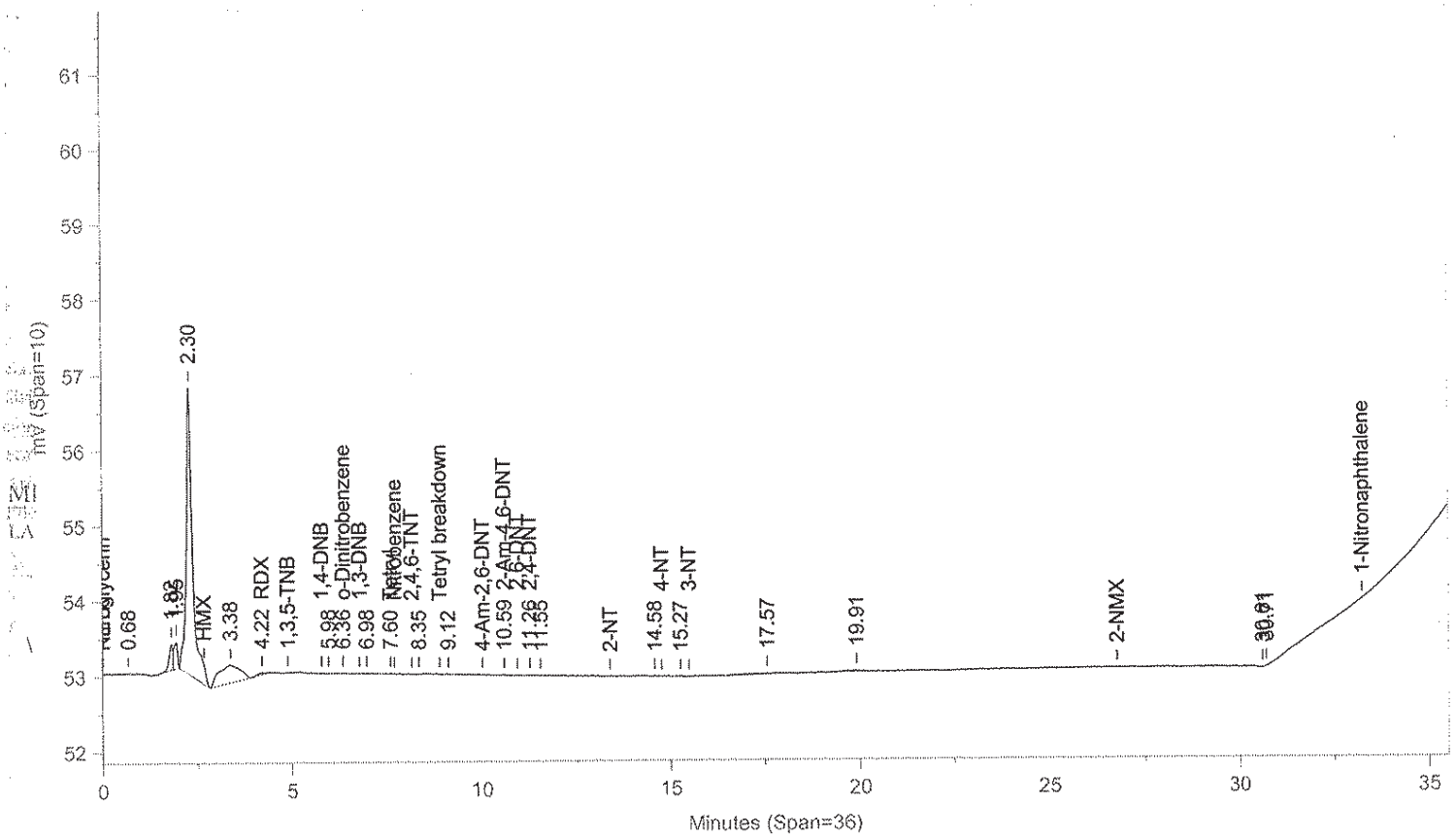
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.16A
Area File: C:\CPWIN\DATA1\1E12310B.16A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:50 PM
File Reported On: 11/7/2013 at 4:35:00 PM

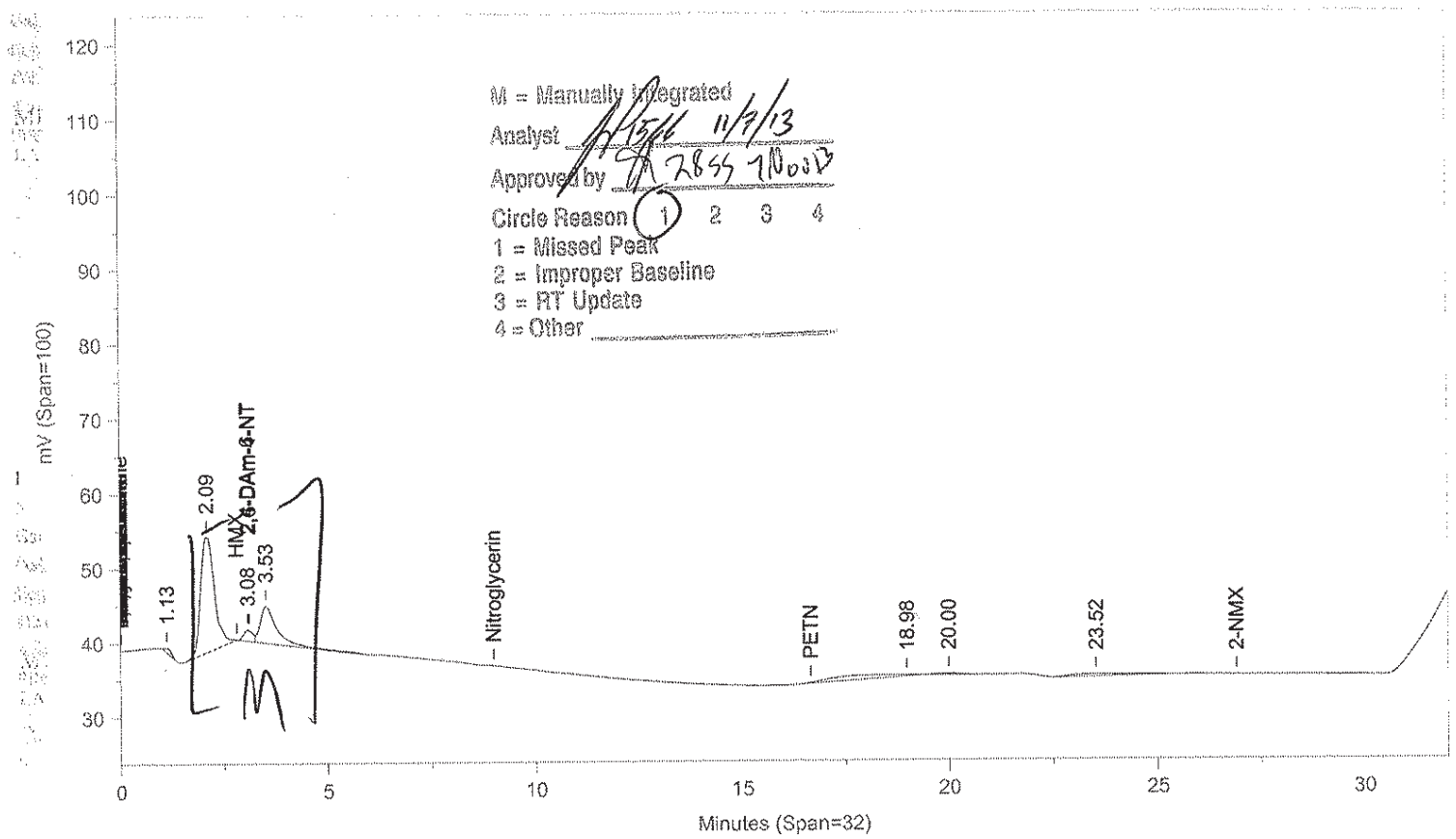
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



M = Manually Integrated
Analyst 11/7/13
Approved by 11/8/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

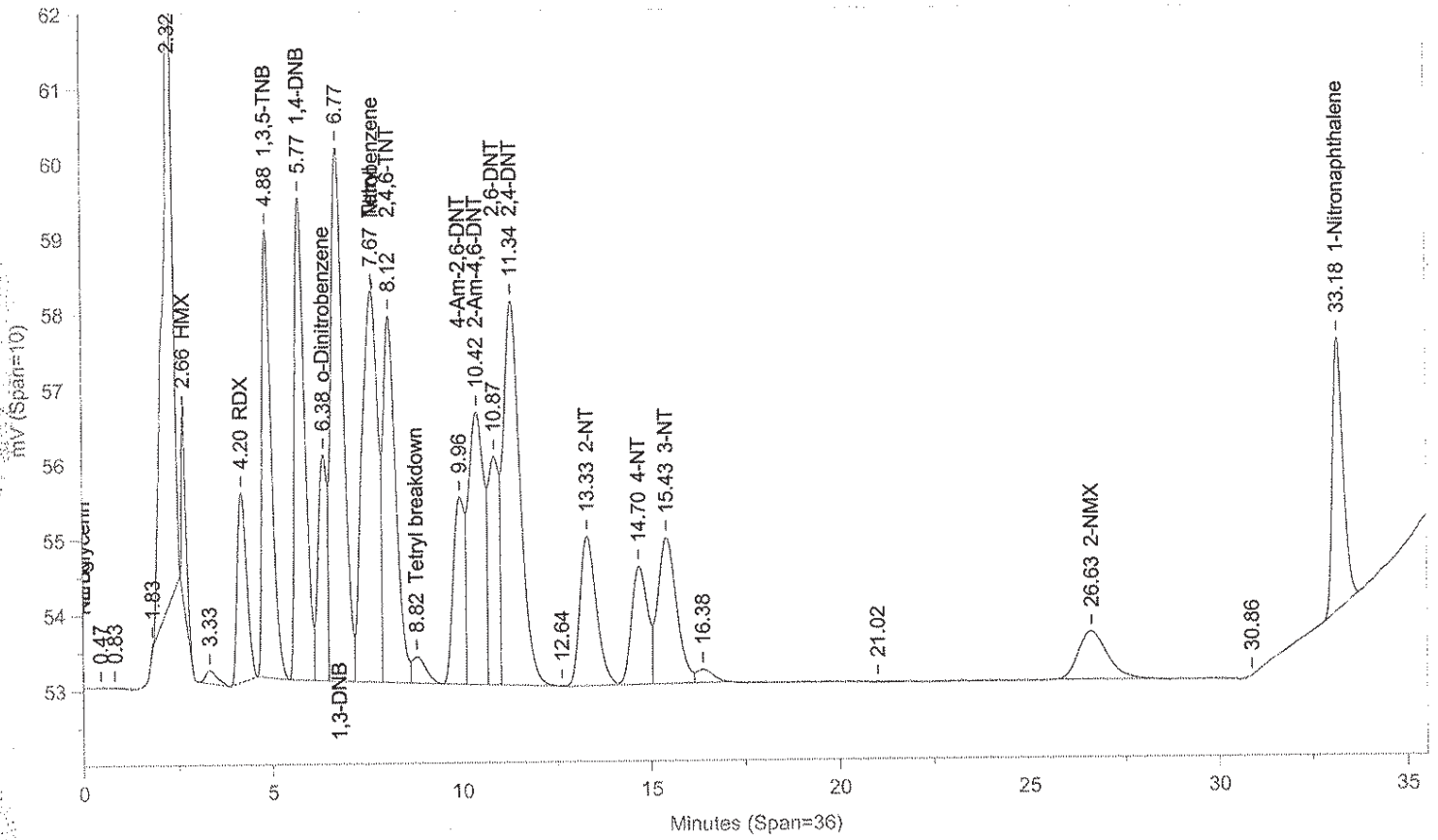
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.084	23496	.	2,4-DAm-6-NT
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:44:58 PM
File Reported On: 11/7/2013 at 4:44:56 PM

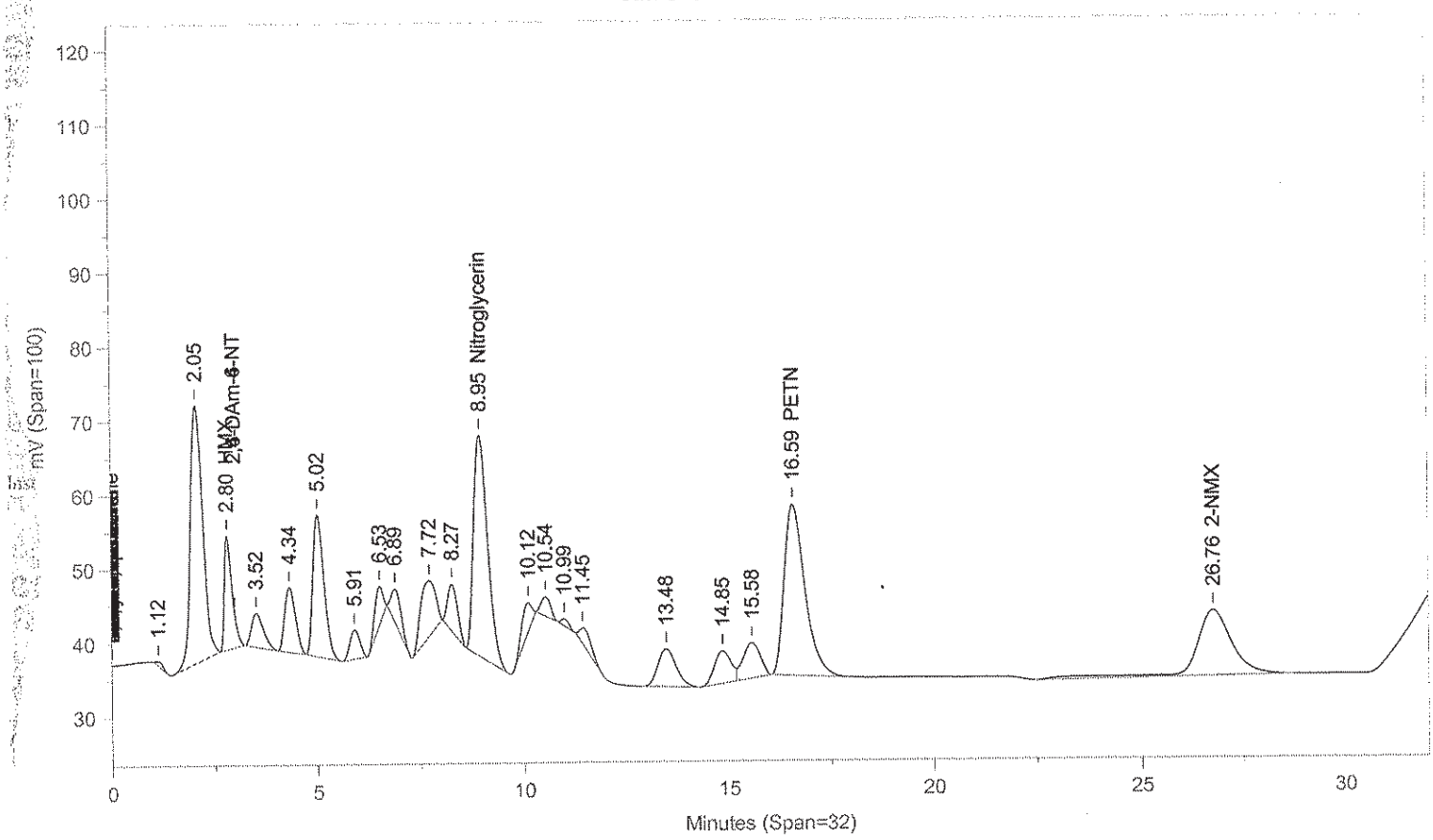
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.10R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.10R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

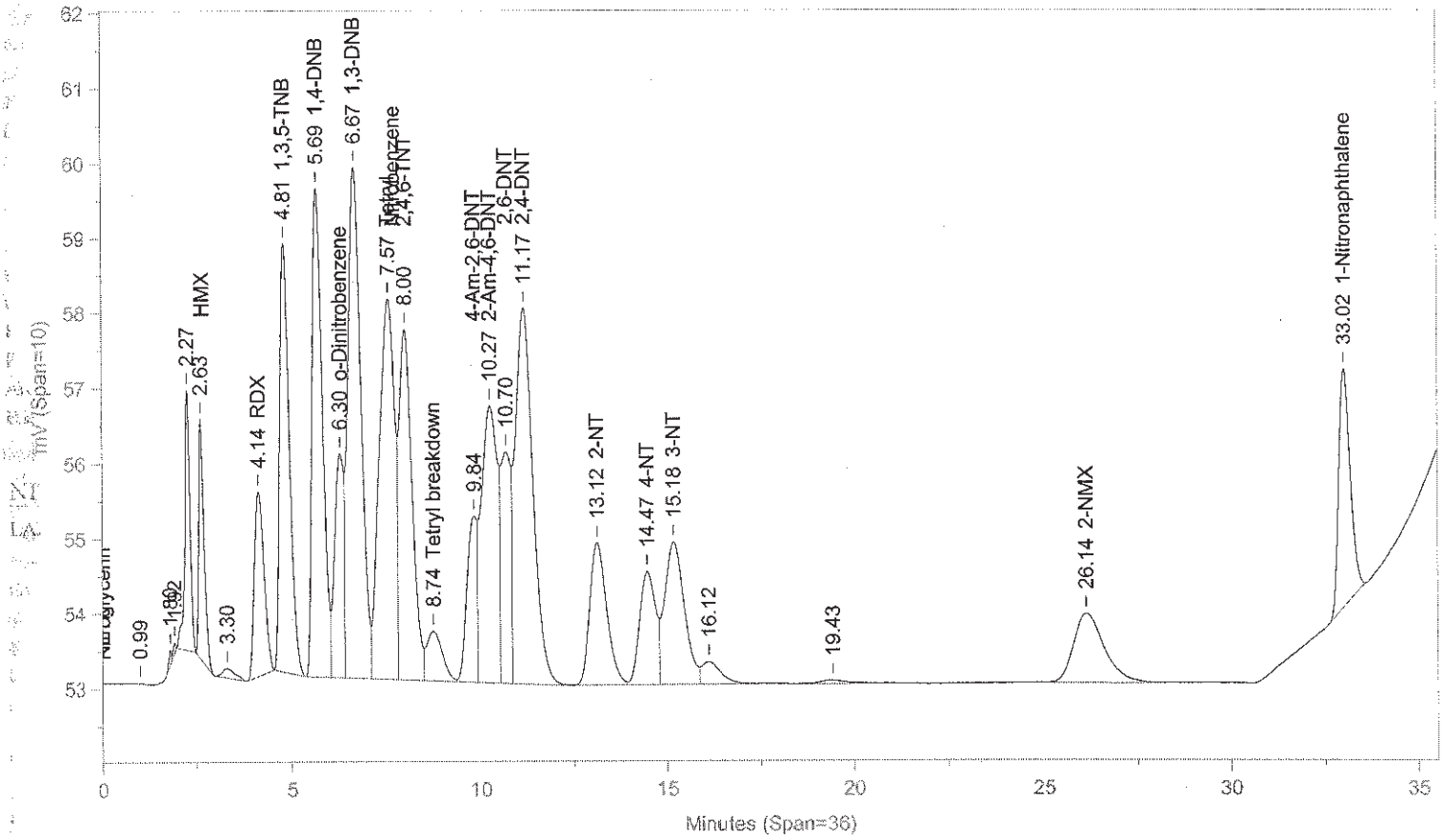
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.799	203173	485.075	HMX
4.196	44563	496.073	RDX	.	0	.	RDX
4.878	103862	492.035	1,3,5-TNB	.	0	.	1,3,5-TNB
5.766	118827	466.405	1,4-DNB	.	0	.	1,4-DNB
6.38	49974	485.012	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.767	162830	501.796	1,3-DNB	.	0	.	1,3-DNB
7.669	151315	437.752	Tetryl	.	0	.	Tetryl
8.122	112252	492.632	2,4,6-TNT	.	0	.	2,4,6-TNT
8.816	8751	25.317	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.952	693352	5425.07	Nitroglycerin
9.965	51904	553.225	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.417	101911	465.313	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.873	59347	488.148	2,6-DNT	.	0	.	2,6-DNT
11.337	159047	480.845	2,4-DNT	.	0	.	2,4-DNT
13.328	60902	460.363	2-NT	.	0	.	2-NT
14.7	46563	496.259	4-NT	.	0	.	4-NT
15.426	67550	498.877	3-NT	.	0	.	3-NT
.	0	.	PETN	16.585	811052	5923.12	PETN
26.628	33626	986.469	2-NMX	26.76	543834	1113.345	2-NMX
33.185	71489	544.173	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

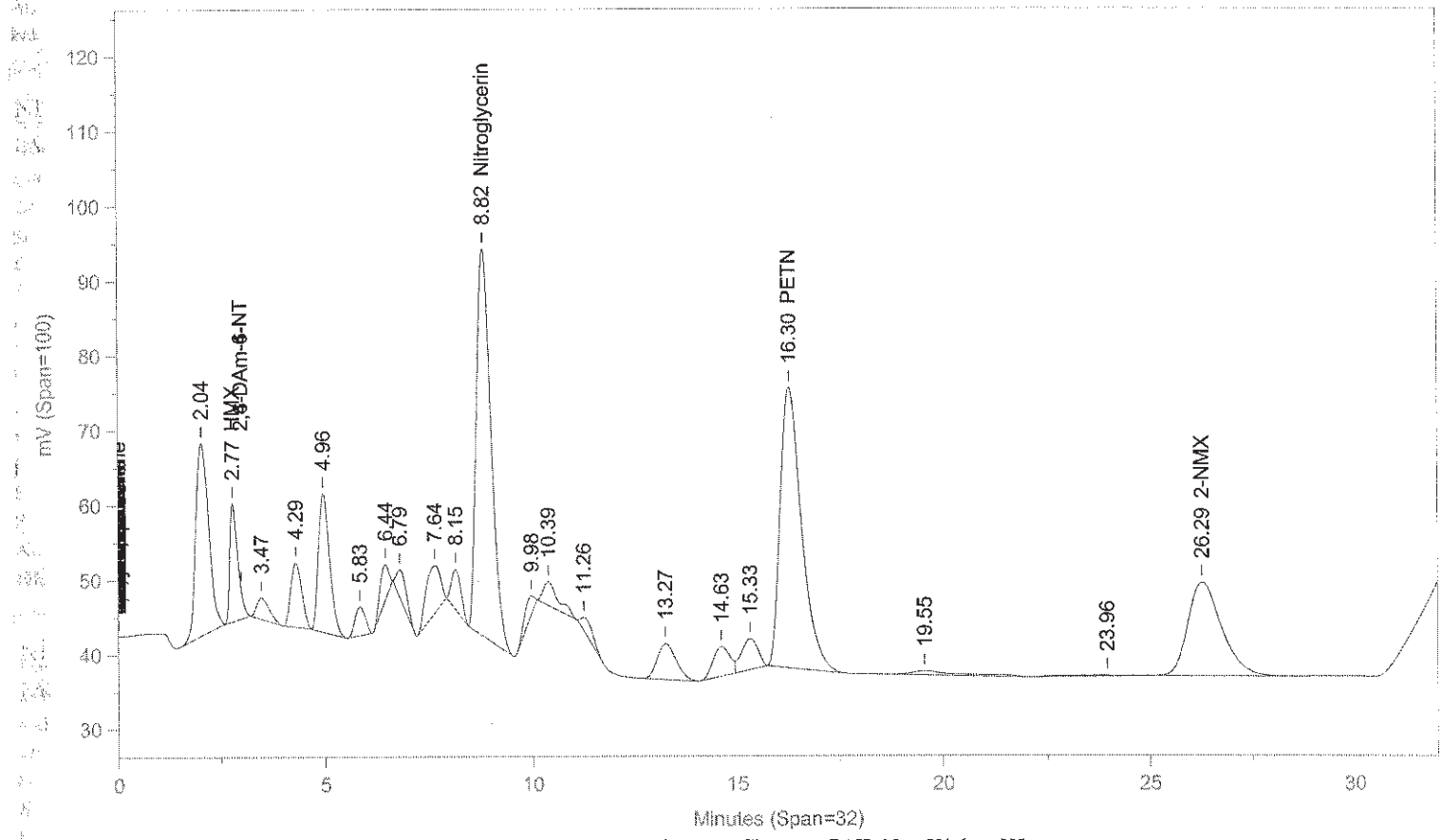
Files:
Area File: C:\CPWIN\DATA1\1E12310.10A
Area File: C:\CPWIN\DATA1\1E12310B.10A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:31:48 PM
File Reported On: 11/7/2013 at 4:31:57 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

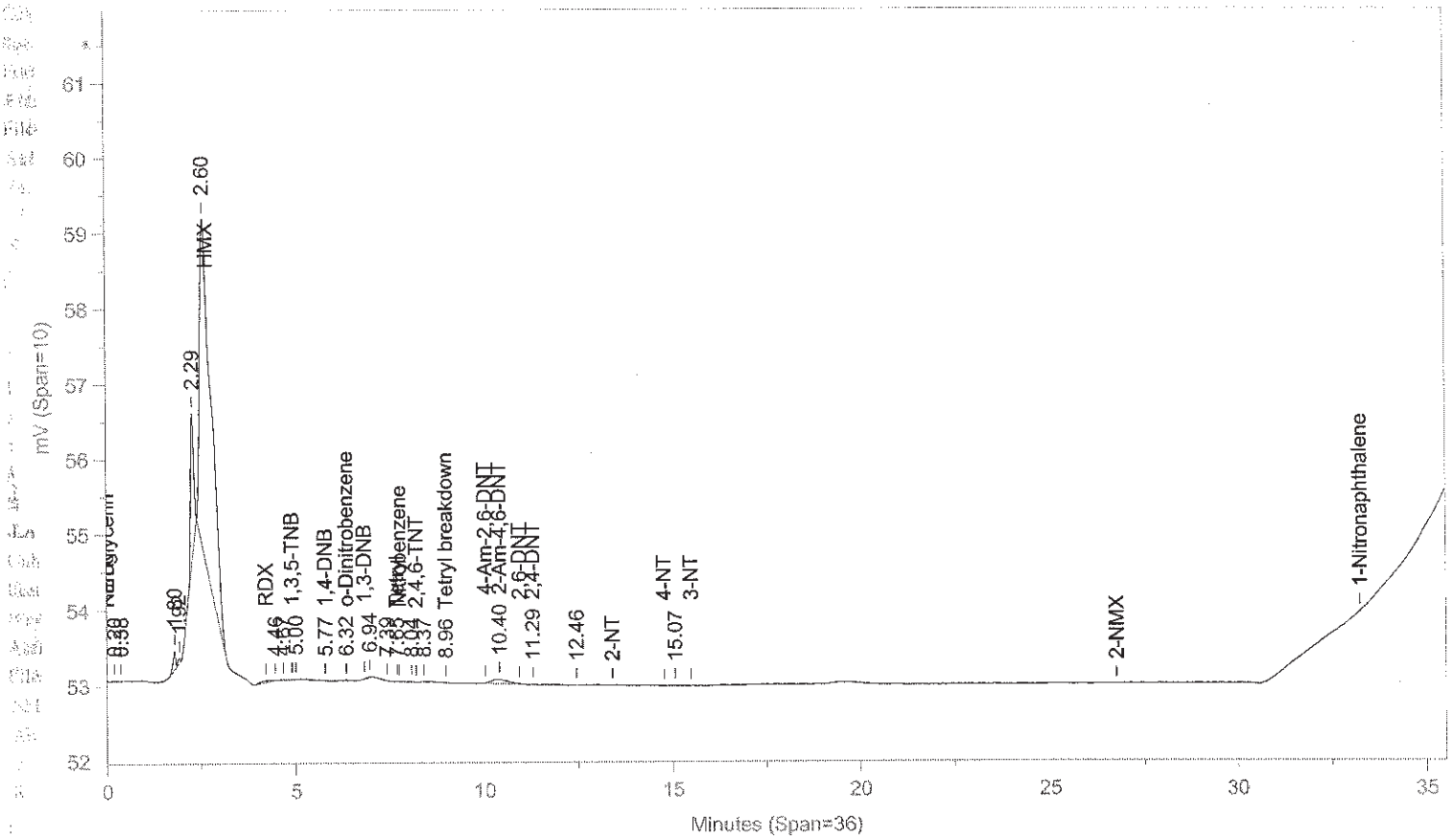
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.769	211572	504.407	HMX
4.144	44221	492.169	RDX	.	0	.	RDX
4.814	100245	474.9	1,3,5-TNB	.	0	.	1,3,5-TNB
5.688	125052	490.836	1,4-DNB	.	0	.	1,4-DNB
6.295	48820	473.808	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.675	162581	501.027	1,3-DNB	.	0	.	1,3-DNB
7.568	145022	419.546	Tetryl	.	0	.	Tetryl
8.004	109830	482.003	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	19154	55.413	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.821	1259876	9857.789	Nitroglycerin
9.844	41479	442.106	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.268	109243	498.79	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.697	56843	467.555	2,6-DNT	.	0	.	2,6-DNT
11.171	163706	494.931	2,4-DNT	.	0	.	2,4-DNT
13.121	60215	455.169	2-NT	.	0	.	2-NT
14.473	45093	480.588	4-NT	.	0	.	4-NT
15.178	69225	511.244	3-NT	.	0	.	3-NT
.	0	.	PETN	16.299	1376269	10049.65	PETN
26.14	52315	1534.716	2-NMX	26.295	704594	1442.454	2-NMX
33.023	69722	530.724	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

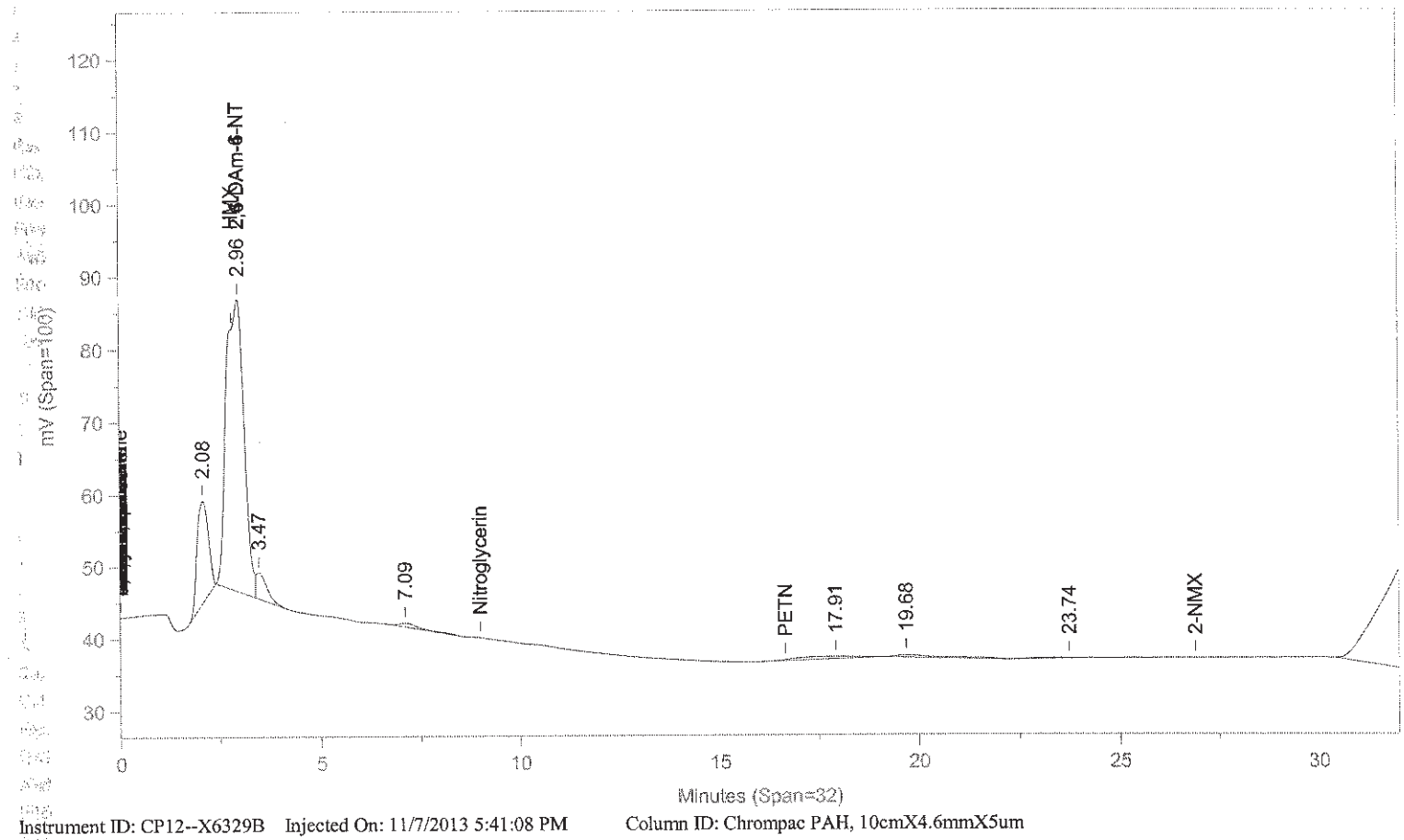
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:03:00 PM
File Reported On: 11/8/2013 at 1:02:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.40R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.40R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.957	1233081	511.388	2,4-DAm-6-NT
5.772	41	.163	1,4-DNB	.	0	.	1,4-DNB
6.317	71	.692	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.65	66	.19	Tetryl	.	0	.	Tetryl
8.958	36	.105	Tetryl breakdown	.	0	.	Tetryl breakdown
10.398	1681	7.677	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.291	91	.275	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:04:58 PM
File Reported On: 11/8/2013 at 1:04:58 PM

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1331899999	
2 CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1331899999	
3 CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1331899999	
4 CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1331899999	
5 CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1331899999	
6 NITR31324O	6	CCAL	PV		8330.MET	1	1	1	0	1331899999	
7 NITR31324M	7	CCAL	PX		8330.MET	1	1	1	0	1331899999	
8 MS1330124B	8	CCAL	AH		8330.MET	1	50	1	0	1331899999	
9 MS1330124B	9	CCAL	AH		8330.MET	1	50	1	0	1331899999	
10 MS1330124B	10	CCAL	AH		8330.MET	1	50	1	0	1331899999	
11 MS1330124B	11	CCAL	AH		8330.MET	1	50	1	0	1331899999	
12 BLANKA 11/12/13	12	BLK	AA		8330.MET	2	20	1	0	133140021A	10132
13 LCSA 11/12/13	13	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
14 LCSDDIA 11/12/13	14	LCSD	AA		8330.MET	2	20	1	0	133140021A	10132
15 LCSDIA 11/12/13	15	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
16 7269438	16	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
17 7269438MS	17	MS	AA		8330.MET	2	20	1	0	133140021A	10132
18 NITR31324O	18	CCAL	PV		8330.MET	1	1	1	0	1331899999	
19 NITR31324M	19	CCAL	PX		8330.MET	1	1	1	0	1331899999	
20 7269438MSD	20	MSD	AA		8330.MET	2.2	20	1	0	133140021A	10132
21 7269454	21	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
22 7269467	22	T	AA		8330.MET	2	20	1	0	133140021A	10132
23 7269472	23	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
24 7269475	24	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
25 7269478	25	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
26 7269484	26	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
27 7269487	27	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
28 BLANKA 11/12/13	28	BLK	AA		8330.MET	2	20	1	0	133160009A	10132
29 LCSA 11/12/13	29	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
30 NITR31324O	30	CCAL	PV		8330.MET	1	1	1	0	1331899999	
31 NITR31324M	31	CCAL	PX		8330.MET	1	1	1	0	1331899999	
32 LCSDDIA 11/12/13	32	LCSD	AA		8330.MET	2	20	1	0	133160009A	10132
33 LCSDIA 11/12/13	33	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
34 7269501	34	T	AA		8330.MET	2	20	1	0	133160009A	10132
35 7269504	35	T	AA		8330.MET	2	20	1	0	133160009A	10132
36 7269514	36	T	AA		8330.MET	2	20	1	0	133160009A	10132
37 7269520	37	T	AA		8330.MET	2	20	1	0	133160009A	10132
38 7269526	38	T	AA		8330.MET	2	20	1	0	133160009A	10132
39 7269529	39	T	AA		8330.MET	2	20	1	0	133160009A	10132
40 7269532	40	T	AA		8330.MET	2	20	1	0	133160009A	10132
41 7269538	41	T	AA		8330.MET	2	20	1	0	133160009A	10132
42 NITR31324O	42	CCAL	PV		8330.MET	1	1	1	0	1331899999	
43 NITR31324M	43	CCAL	PX		8330.MET	1	1	1	0	1331899999	
44 7269541	44	T	AA		8330.MET	2	20	1	0	133160009A	10132
45 7269544	45	T	AA		8330.MET	2	20	1	0	133160009A	10132
46 7269550	46	T	AA		8330.MET	2	20	1	0	133160009A	10132
47 7269553	47	T	AA		8330.MET	2	20	1	0	133160009A	10132
48 7269559	48	T	AA		8330.MET	2	20	1	0	133160009A	10132
49 7270974	49	T	AA		8330.MET	2	20	1	0	133160009A	10132
50 7270975MS	50	MS	AA		8330.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

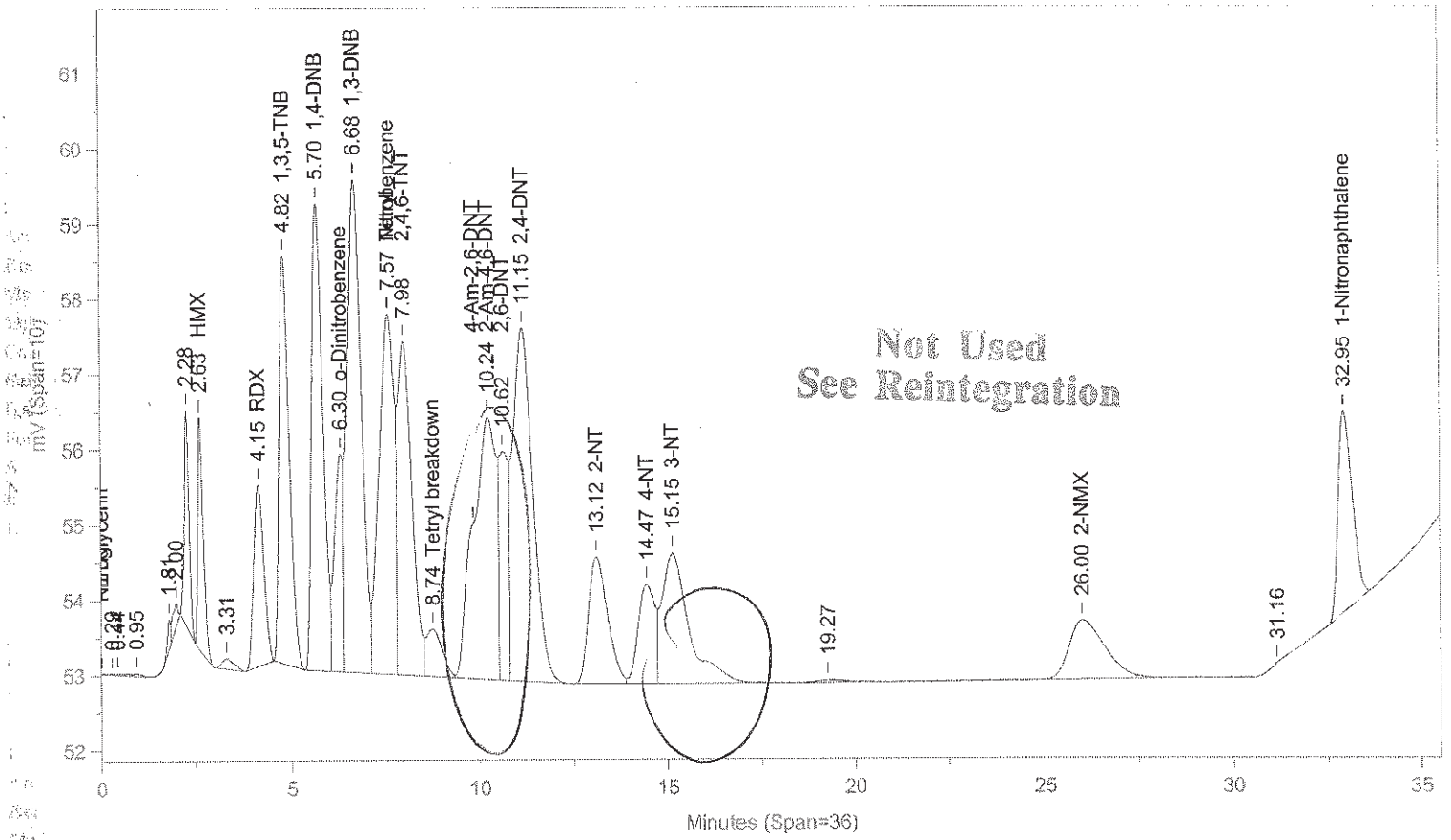
Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7270976MSD	51	MSD	AA		8330.MET	2	20	1	0	133160009A	10132
52	7270986	52	T	AA		8330.MET	2	20	1	0	133160009A	10132
53	7270989	53	T	AA		8330.MET	2	20	1	0	133160009A	10132
54	NITR31324O	54	CCAL	PV		8330.MET	1	1	1	0	1331899999	
55	NITR31324M	55	CCAL	PX		8330.MET	1	1	1	0	1331899999	
56	7270995	56	T	AA		8330.MET	2	20	1	0	133160009A	10132
57	7271001	57	T	AA		8330.MET	2	20	1	0	133160009A	10132
58	NITR31324O	58	CCAL	PV		8330.MET	1	1	1	0	1331899999	
59	NITR31324M	59	CCAL	PX		8330.MET	1	1	1	0	1331899999	
60	BLANKA 11/11/13	60	BLK	AA		8330.MET	500	10	1	0	133130015A	06916
61	LCSA 11/11/13	61	LCS	AA		8330.MET	500	10	1	0	133130015A	06916
62	7265223	62	T	AA		8330.MET	500	10	1	0	133130015A	06916
63	7265224	63	T	AA		8330.MET	500	10	1	0	133130015A	06916
64	7265228	64	T	AA		8330.MET	500	10	1	0	133130015A	06916
65	7265230	65	T	AA		8330.MET	500	10	1	0	133130015A	06916
66	7265231MS	66	MS	AA		8330.MET	500	10	1	0	133130015A	06916
67	7265232MSD	67	MSD	AA		8330.MET	500	10	1	0	133130015A	06916
68	7265235	68	T	AA		8330.MET	500	10	1	0	133130015A	06916
69	7265238	69	T	AA		8330.MET	500	10	1	0	133130015A	06916
70	NITR31324O	70	CCAL	PV		8330.MET	1	1	1	0	1331899999	
71	7265240	71	T	AA		8330.MET	500	10	1	0	133130015A	06916
72	7265243	72	T	AA		8330.MET	500	10	1	0	133130015A	06916
73	7265247	73	T	AA		8330.MET	500	10	1	0	133130015A	06916
74	7265248	74	T	AA		8330.MET	500	10	1	0	133130015A	06916
75	BLANKA 11/12/13	75	BLK	AA		8330.MET	500	10	1	0	133140016A	06916
76	LCSA 11/12/13	76	LCS	AA		8330.MET	500	10	1	0	133140016A	06916
77	LCSDA 11/12/13	77	LCSD	AA		8330.MET	500	10	1	0	133140016A	06916
78	7266798	78	T	AA		8330.MET	500	10	1	0	133140016A	06916
79	7266799	79	T	AA		8330.MET	500	10	1	0	133140016A	06916
80	7266805	80	T	AA		8330.MET	500	10	1	0	133140016A	06916
81	NITR31324O	81	CCAL	PV		8330.MET	1	1	1	0	1331899999	
82	7266807	82	T	AA		8330.MET	500	10	1	0	133140016A	06916
83	7266810	83	T	AA		8330.MET	500	10	1	0	133140016A	06916
84	7266811	84	T	AA		8330.MET	500	10	1	0	133140016A	06916
85	7266819	85	T	AA		8330.MET	500	10	1	0	133140016A	06916
86	BLANKA 11/12/13	86	BLK	AA		8330.MET	2	20	1	0	133140019A	06918
87	LCSA 11/12/13	87	LCS	AA		8330.MET	2	20	1	0	133140019A	06918
88	7266800	88	T	AA		8330.MET	2	20	1	0	133140019A	06918
89	7266801MS	89	MS	AA		8330.MET	2.3	20	1	0	133140019A	06918
90	7266802MSD	90	MSD	AA		8330.MET	2.3	20	1	0	133140019A	06918
91	7266804	91	T	AA		8330.MET	2.4	20	1	0	133140019A	06918
92	NITR31324O	92	CCAL	PV		8330.MET	1	1	1	0	1331899999	
93	7266806	93	T	AA		8330.MET	2.2	20	1	0	133140019A	06918
94	7266808	94	T	AA		8330.MET	2.3	20	1	0	133140019A	06918
95	NITR31324O	95	CCAL	PV		8330.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/22/13

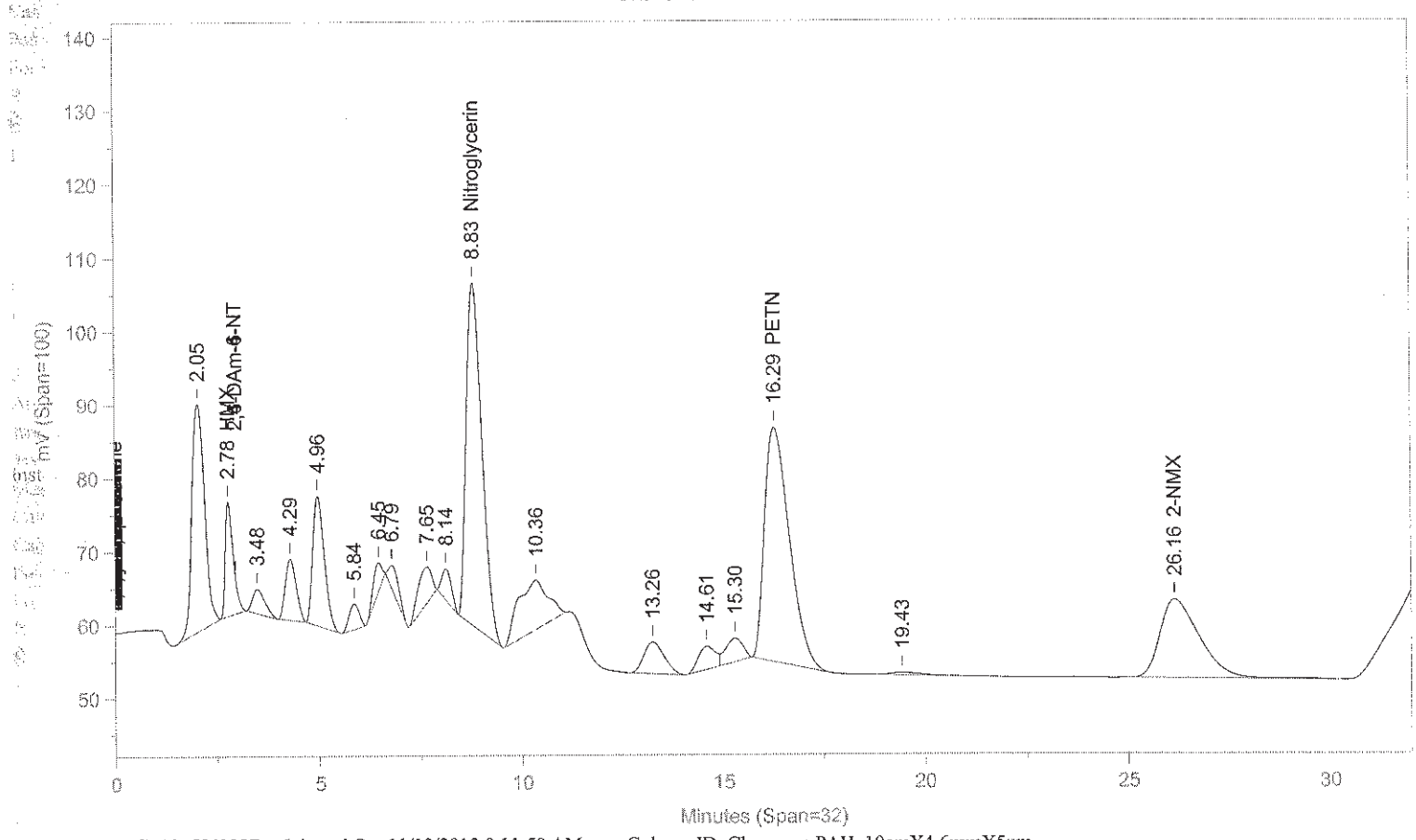
11/15/2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

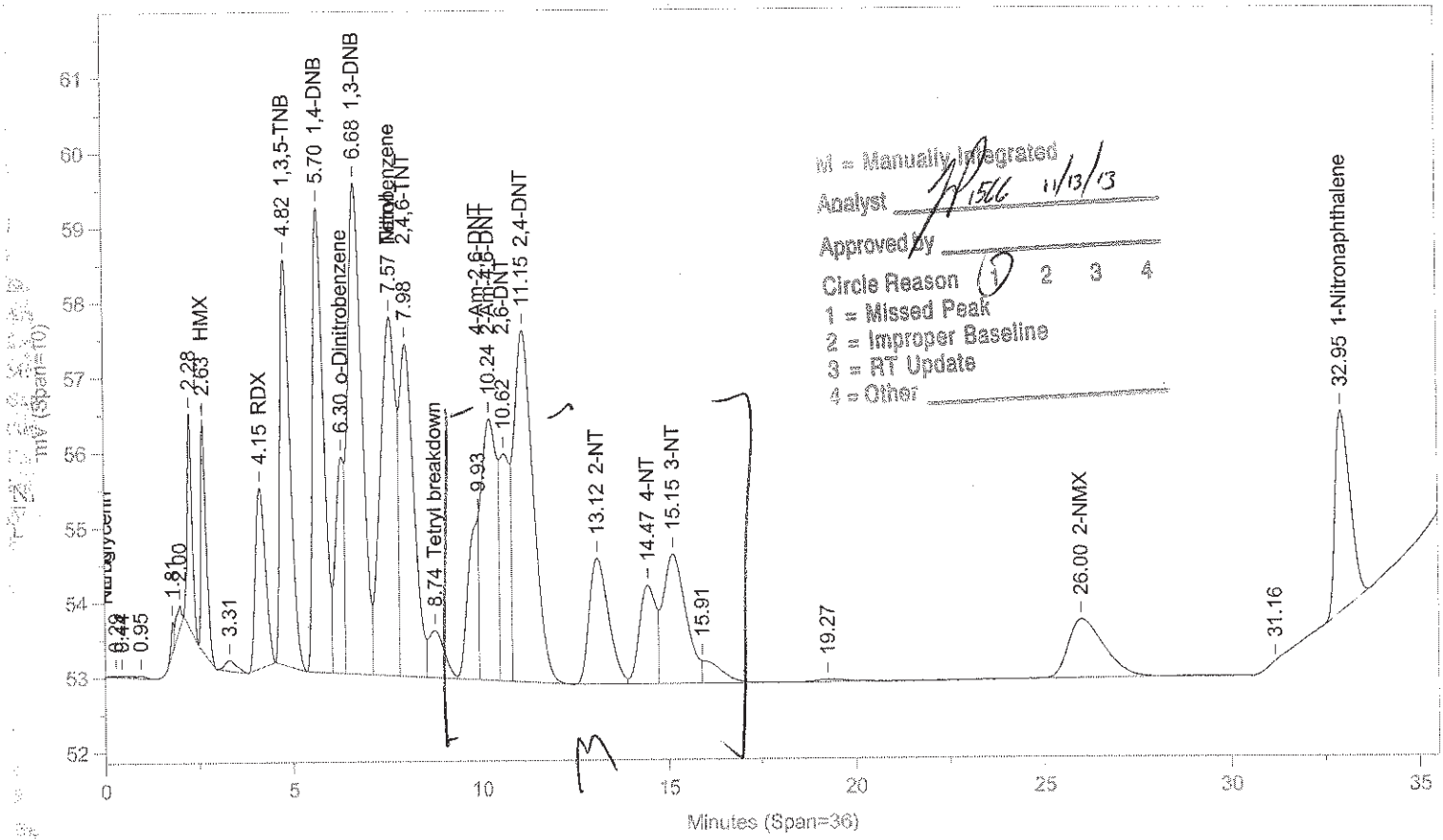
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.776	212668	506.929	HMX
4.146	43972	489.329	RDX	.	0	.	RDX
4.82	99768	472.64	1,3,5-TNB	.	0	.	1,3,5-TNB
5.696	126004	494.573	1,4-DNB	.	0	.	1,4-DNB
6.302	45237	439.041	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.677	168474	519.189	1,3-DNB	.	0	.	1,3-DNB
7.574	136822	397.409	Nitrobenzene	.	0	.	Nitrobenzene
7.983	115550	507.107	2,4,6-TNT	.	0	.	2,4,6-TNT
8.739	18611	53.841	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1238190	9688.115	Nitroglycerin
10.236	147818	674.917	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.623	49809	409.699	2,6-DNT	.	0	.	2,6-DNT
11.149	174514	527.605	2,4-DNT	.	0	.	2,4-DNT
13.117	60208	455.12	2-NT	.	0	.	2-NT
14.467	40977	436.726	4-NT	.	0	.	4-NT
15.151	85683	632.789	3-NT	.	0	.	3-NT
.	0	.	PETN	16.288	1360190	9932.261	PETN
26.001	51878	1521.922	2-NMX	26.159	726325	1486.941	2-NMX
32.95	71925	547.492	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.17A
Area File: C:\CPWIN\DATA1\3E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 9:51:58 AM
File Reported On: 11/13/2013 at 9:52:08 AM

Not Used
See Reintegration

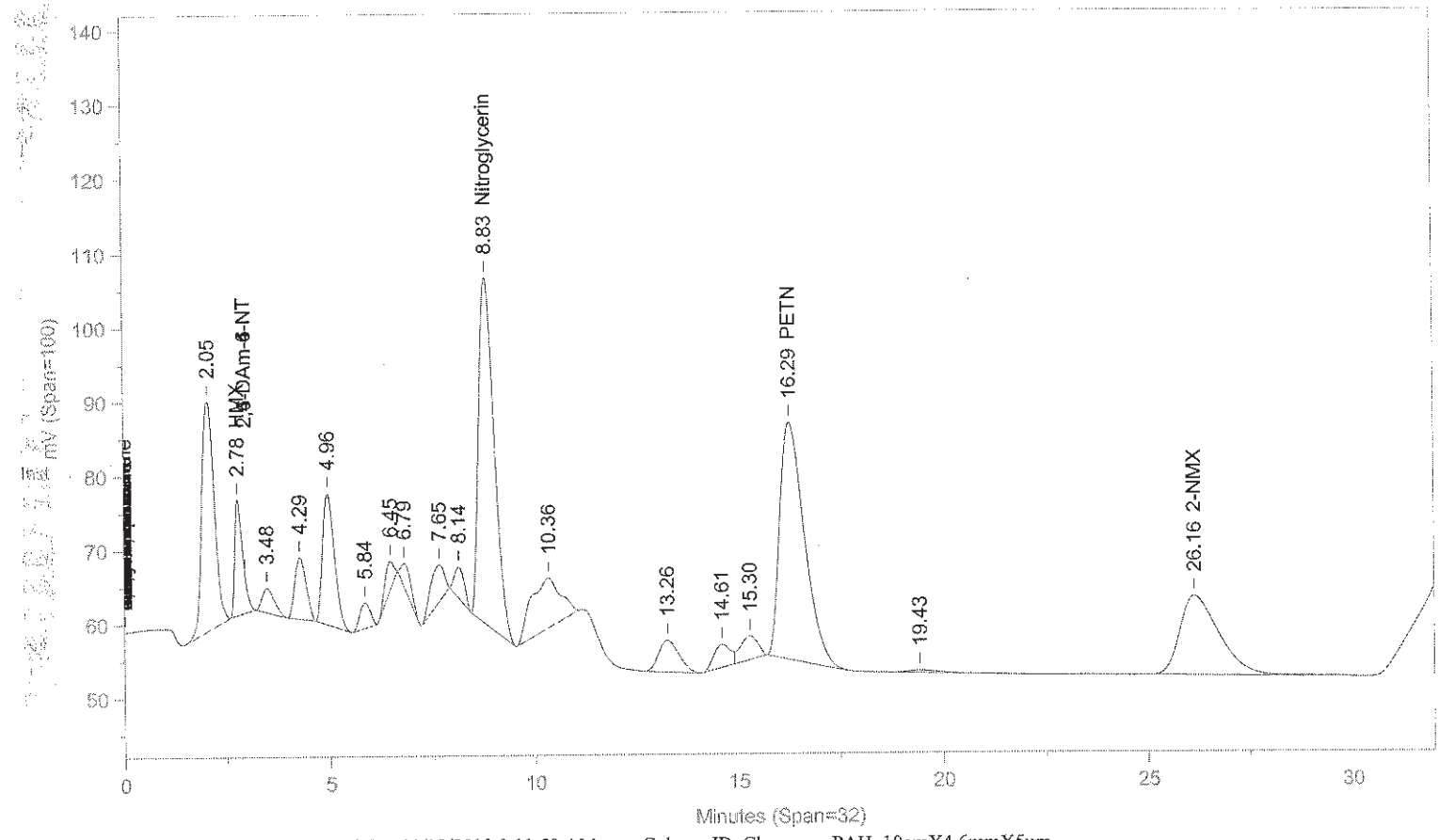
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

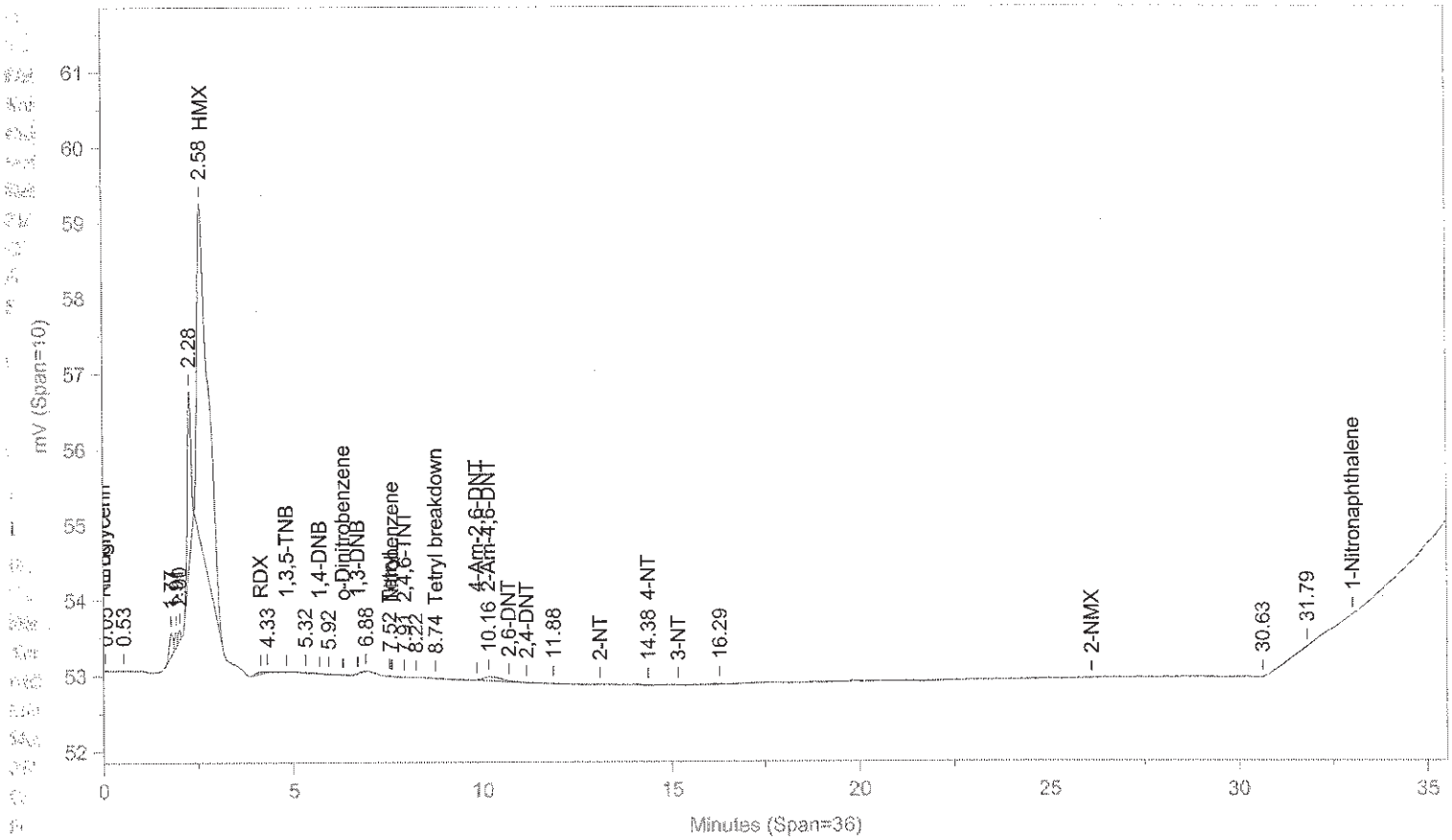
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.776	212668	506.929	HMX
4.146	43972	489.329	RDX	.	0	.	RDX
4.82	99768	472.64	1,3,5-TNB	.	0	.	1,3,5-TNB
5.696	126004	494.573	1,4-DNB	.	0	.	1,4-DNB
6.302	45237	439.041	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.677	168474	519.189	1,3-DNB	.	0	.	1,3-DNB
7.574	136822	397.409	Nitrobenzene	.	0	.	Nitrobenzene
7.983	115550	507.107	2,4,6-TNT	.	0	.	2,4,6-TNT
8.739	18611	53.841	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1238190	9688.115	Nitroglycerin
9.933	42168	449.451	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.236	102688	468.862	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.623	58595	481.964	2,6-DNT	.	0	.	2,6-DNT
11.149	168689	509.997	2,4-DNT	.	0	.	2,4-DNT
13.117	60208	455.12	2-NT	.	0	.	2-NT
14.467	40977	436.726	4-NT	.	0	.	4-NT
15.151	74769	552.188	3-NT	.	0	.	3-NT
.	0	.	PETN	16.288	1360190	9932.261	PETN
26.001	51878	1521.922	2-NMX	26.159	726325	1486.941	2-NMX
32.95	71925	547.492	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

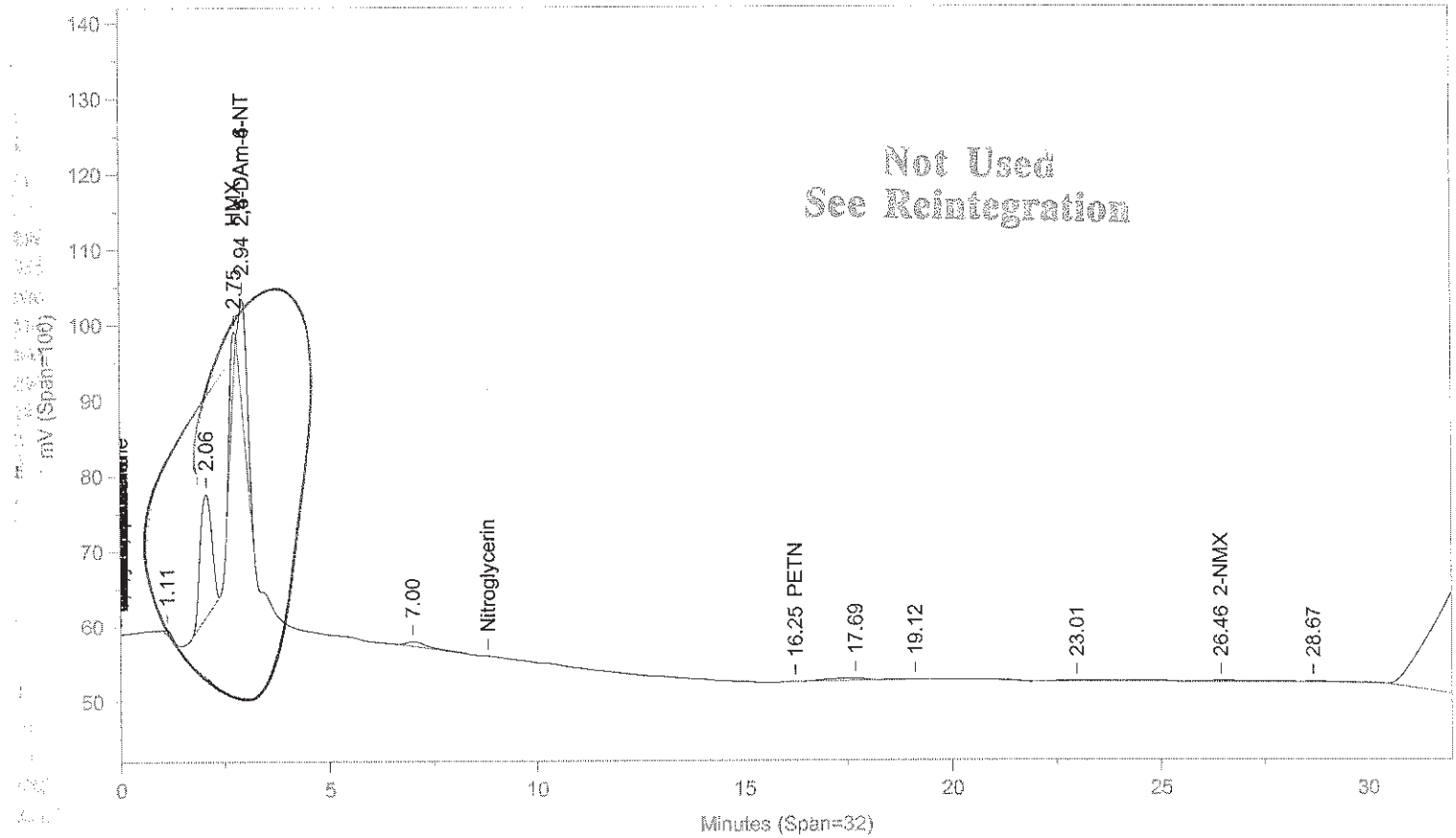
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:45:10 PM
File Reported On: 11/13/2013 at 1:45:10 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.18R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.18R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

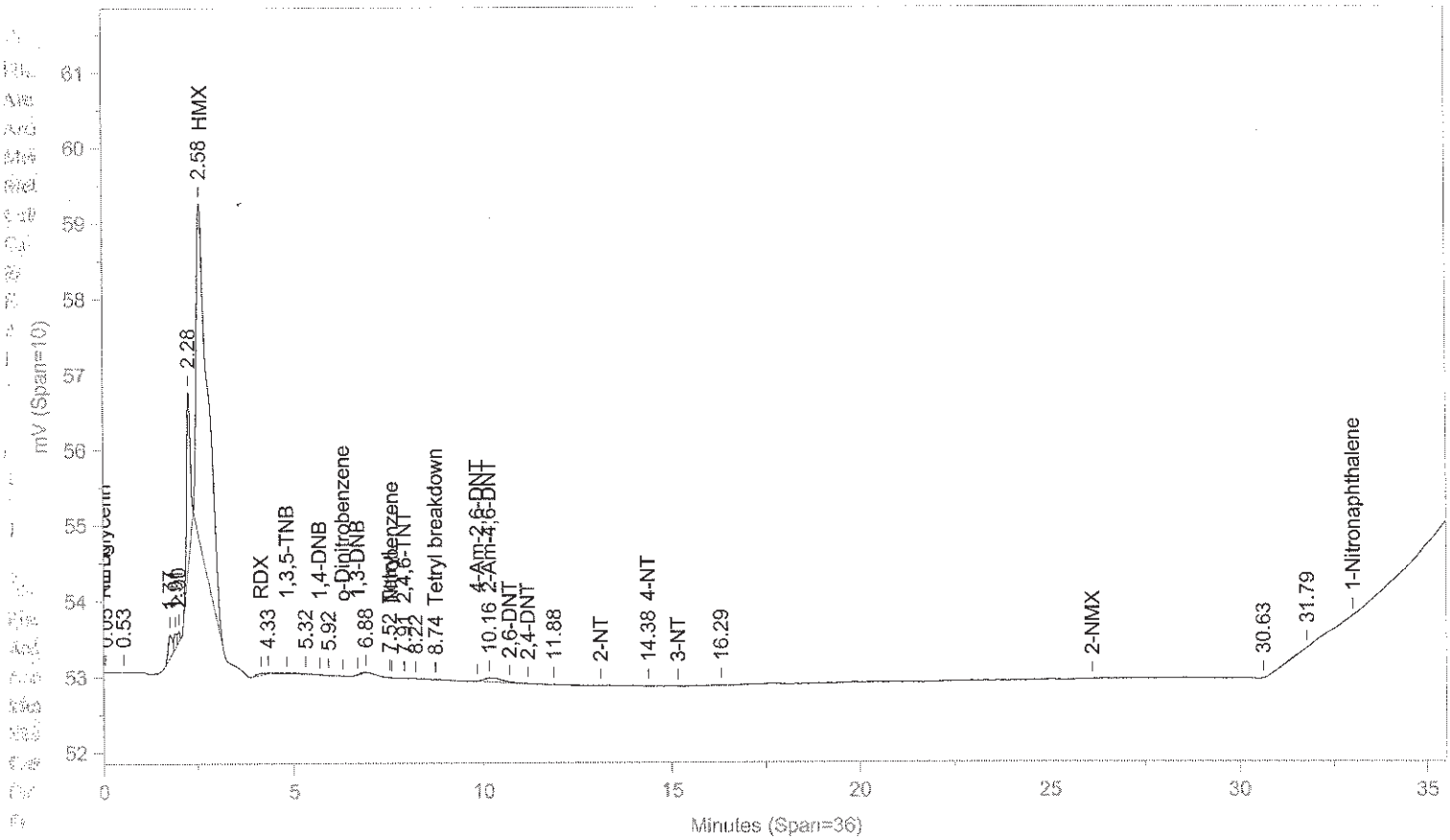
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.754	80828	203.468	HMX
.	0	.	2,4-DAm-6-NT	2.945	211445	87.691	2,4-DAm-6-NT
7.517	50	.146	Tetryl	.	0	.	Tetryl
7.91	9	.041	2,4,6-TNT	.	0	.	2,4,6-TNT
8.744	267	.774	Tetryl breakdown	.	0	.	Tetryl breakdown
10.16	1933	8.826	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.383	184	1.966	4-NT	.	0	.	4-NT
.	0	.	PETN	16.246	929	8.587	PETN
.	0	.	2-NMX	26.456	16280	33.329	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.18A
Area File: C:\CPWIN\DATA1\3E12310B.18A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 10:34:54 AM
File Reported On: 11/13/2013 at 10:35:05 AM

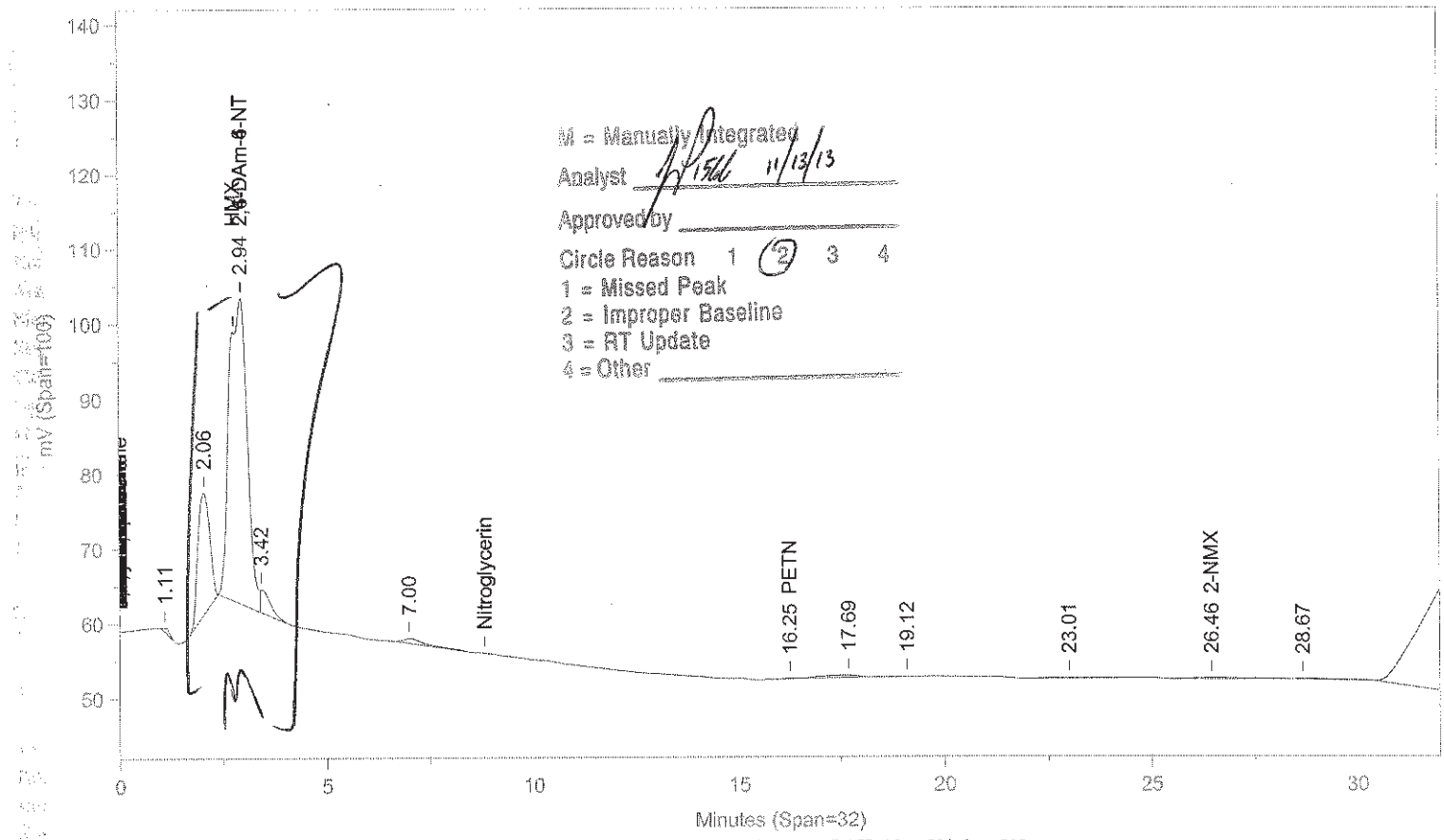
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.18R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.18R



M = Manually Integrated
Analyst 1566 11/13/13
Approved by
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

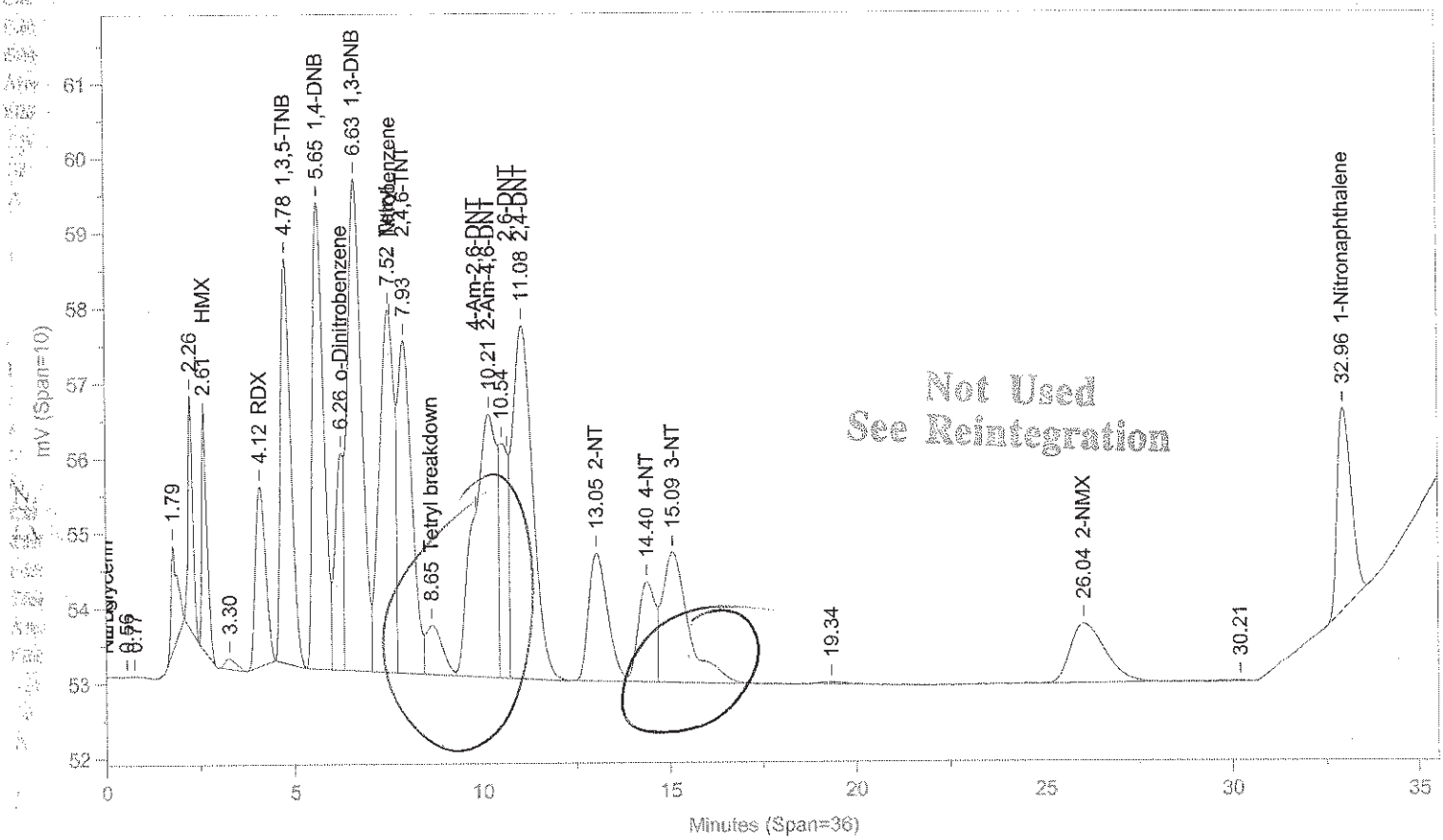
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.945	1240079	514.29	2,4-DAm-6-NT
7.517	50	.146	Tetryl	.	0	.	Tetryl
7.91	9	.041	2,4,6-TNT	.	0	.	2,4,6-TNT
8.744	267	.774	Tetryl breakdown	.	0	.	Tetryl breakdown
10.16	1933	8.826	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.383	184	1.966	4-NT	.	0	.	4-NT
.	0	.	PETN	16.246	929	8.587	PETN
.	0	.	2-NMX	26.456	16280	33.329	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:48:50 PM
File Reported On: 11/13/2013 at 1:48:49 PM

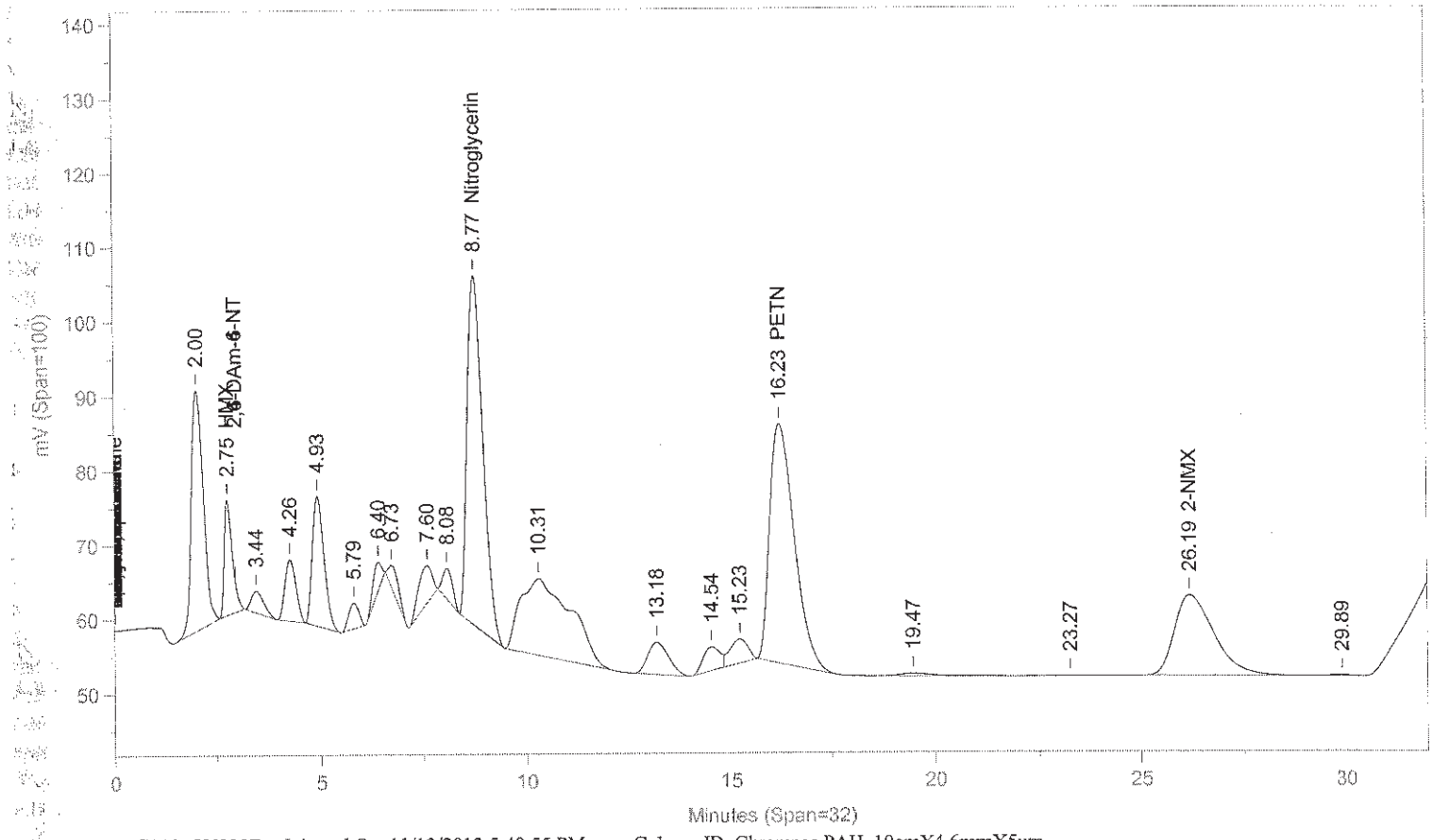
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.29R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.29R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

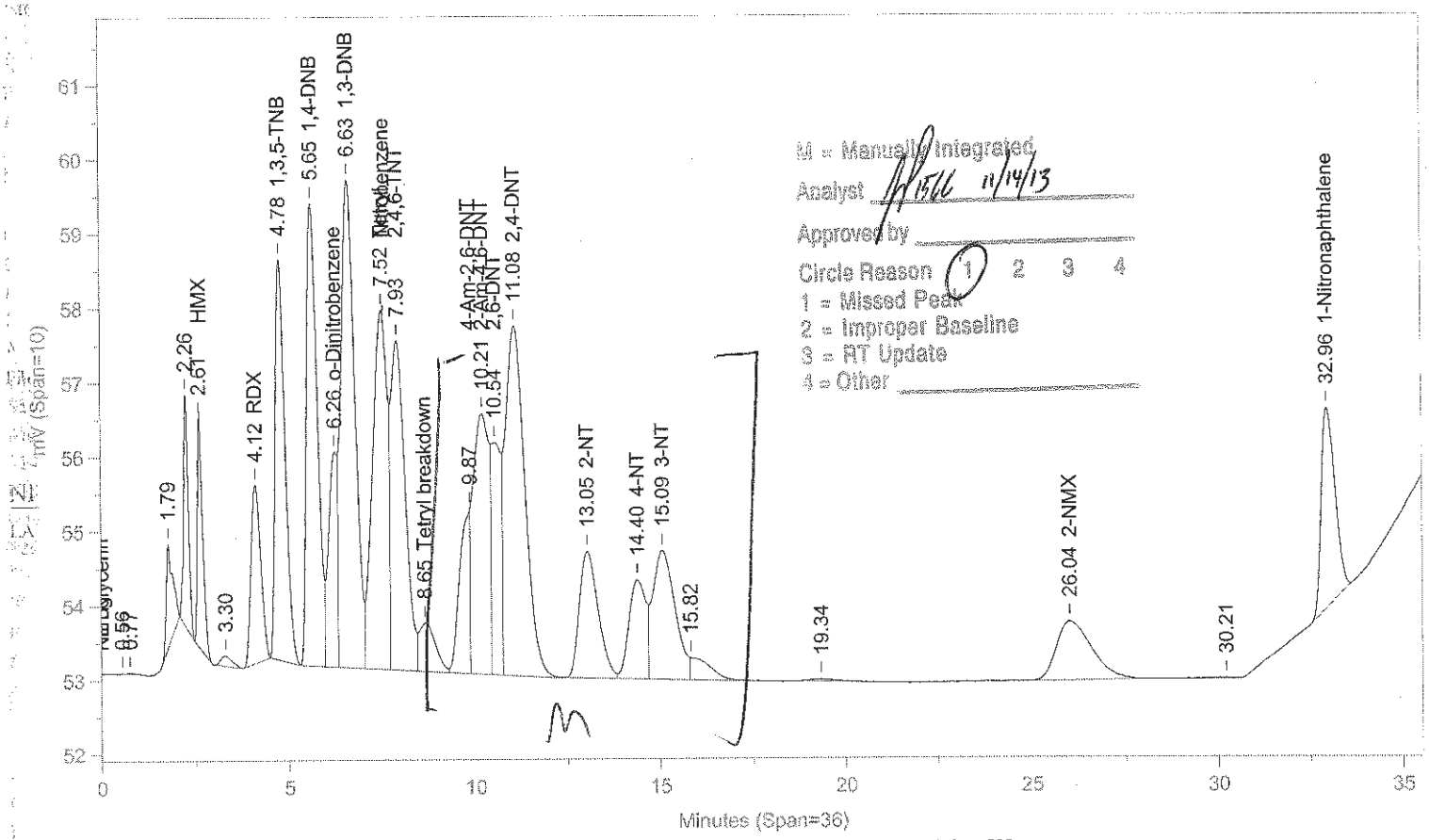
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.752	212356	506.211	HMX
4.116	43864	488.096	RDX	.	0	.	RDX
4.785	99256	470.215	1,3,5-TNB	.	0	.	1,3,5-TNB
5.651	125906	494.187	1,4-DNB	.	0	.	1,4-DNB
6.256	43436	421.558	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.628	171127	527.365	1,3-DNB	.	0	.	1,3-DNB
7.519	135171	391.048	Tetryl	.	0	.	Tetryl
7.933	117092	513.876	2,4,6-TNT	.	0	.	2,4,6-TNT
8.65	19681	56.937	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.766	1241157	9711.327	Nitroglycerin
10.206	150228	685.92	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	174960	528.955	2,4-DNT	.	0	.	2,4-DNT
13.046	60299	455.809	2-NT	.	0	.	2-NT
14.397	42044	448.093	4-NT	.	0	.	4-NT
15.085	84259	622.275	3-NT	.	0	.	3-NT
.	0	.	PETN	16.227	1359254	9925.426	PETN
26.039	51875	1521.817	2-NMX	26.191	721434	1476.929	2-NMX
32.96	70955	540.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.29A
Area File: C:\CPWIN\DATA1\3E12310B.29A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 6:21:32 PM
File Reported On: 11/13/2013 at 6:21:43 PM

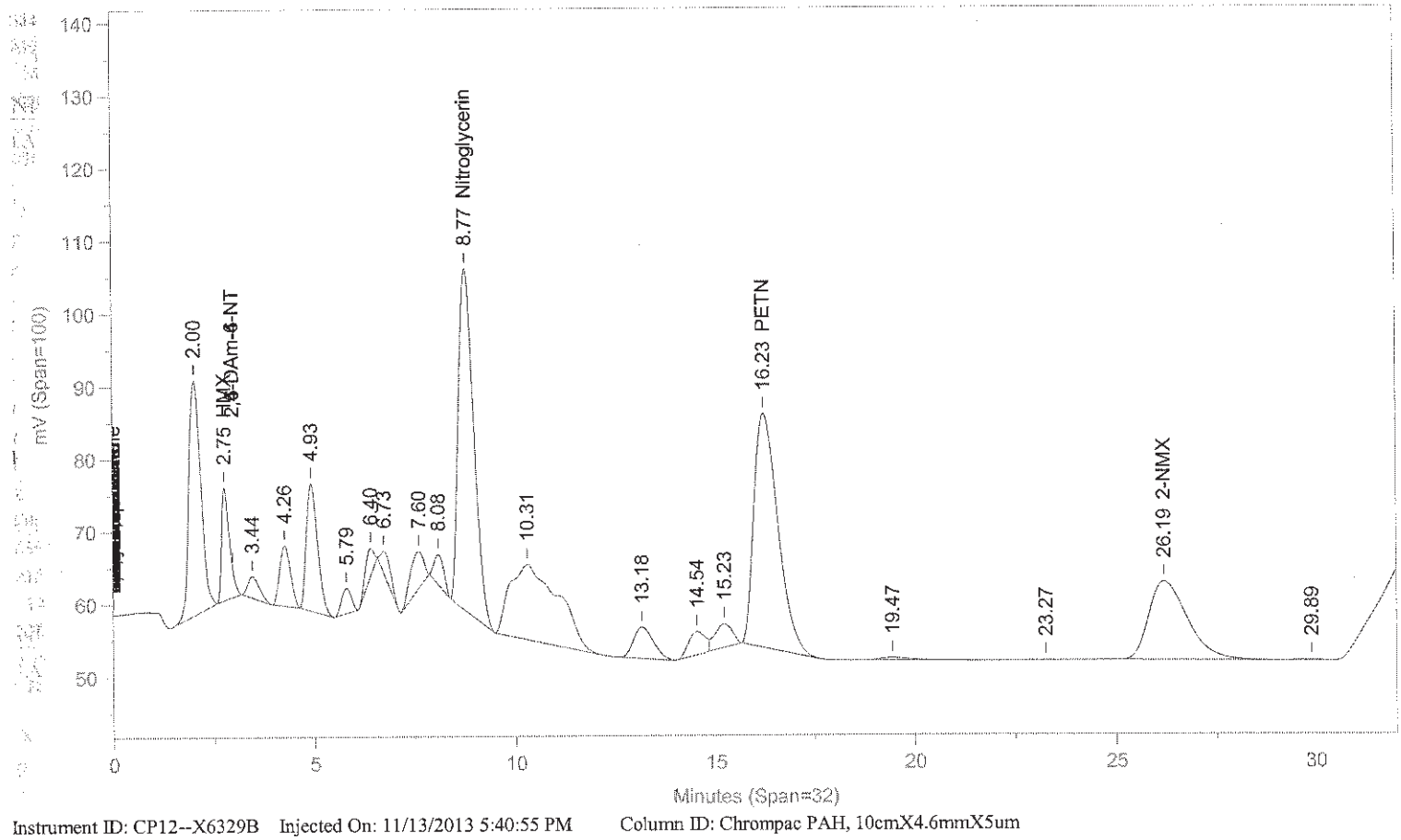
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.29R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.29R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.752	212356	506.211	HMX
4.116	43864	488.096	RDX	.	0	.	RDX
4.785	99256	470.215	1,3,5-TNB	.	0	.	1,3,5-TNB
5.651	125906	494.187	1,4-DNB	.	0	.	1,4-DNB
6.256	47243	458.502	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.628	167320	515.634	1,3-DNB	.	0	.	1,3-DNB
7.519	135171	391.048	Tetryl	.	0	.	Tetryl
7.933	117092	513.876	2,4,6-TNT	.	0	.	2,4,6-TNT
8.65	19681	56.937	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.766	1241157	9711.327	Nitroglycerin
9.867	41131	438.399	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.206	104964	479.253	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.542	57337	471.619	2,6-DNT	.	0	.	2,6-DNT
11.084	172973	522.947	2,4-DNT	.	0	.	2,4-DNT
13.046	60299	455.809	2-NT	.	0	.	2-NT
14.397	42044	448.093	4-NT	.	0	.	4-NT
15.085	73237	540.875	3-NT	.	0	.	3-NT
.	0	.	PETN	16.227	1359254	9925.426	PETN
26.039	51875	1521.817	2-NMX	26.191	721434	1476.929	2-NMX
32.96	70955	540.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:04:48 AM
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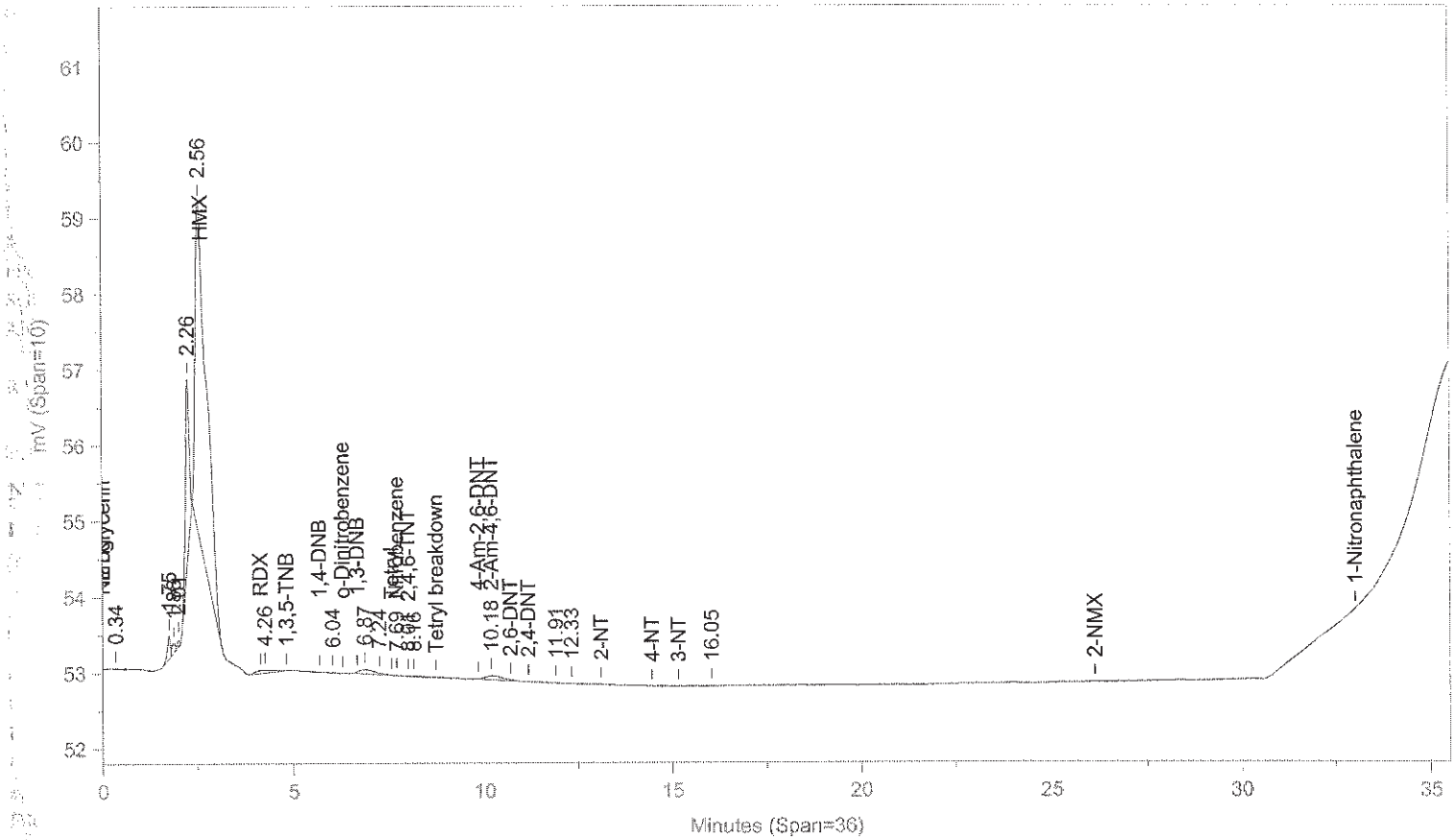
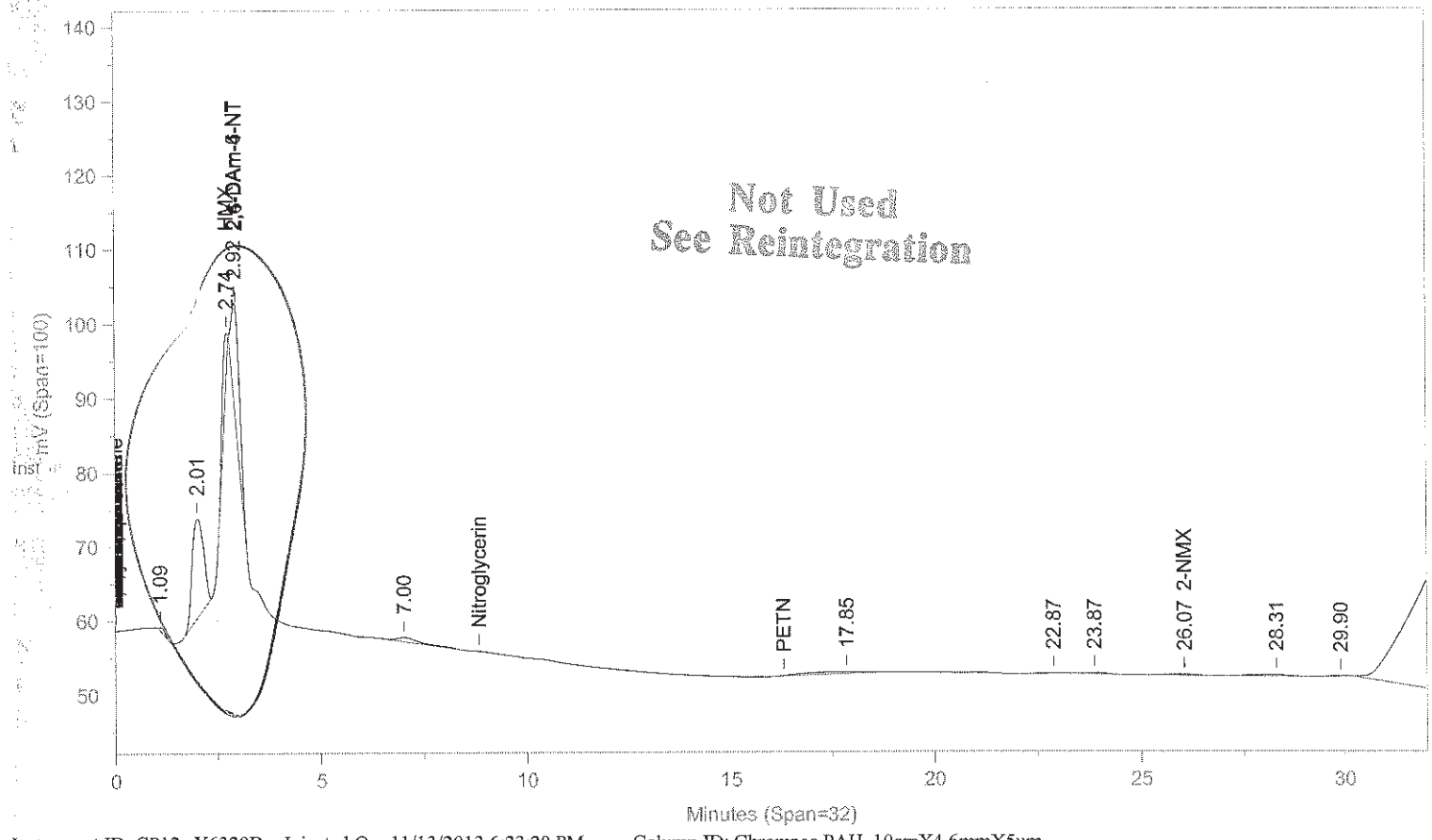
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.30R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.30R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

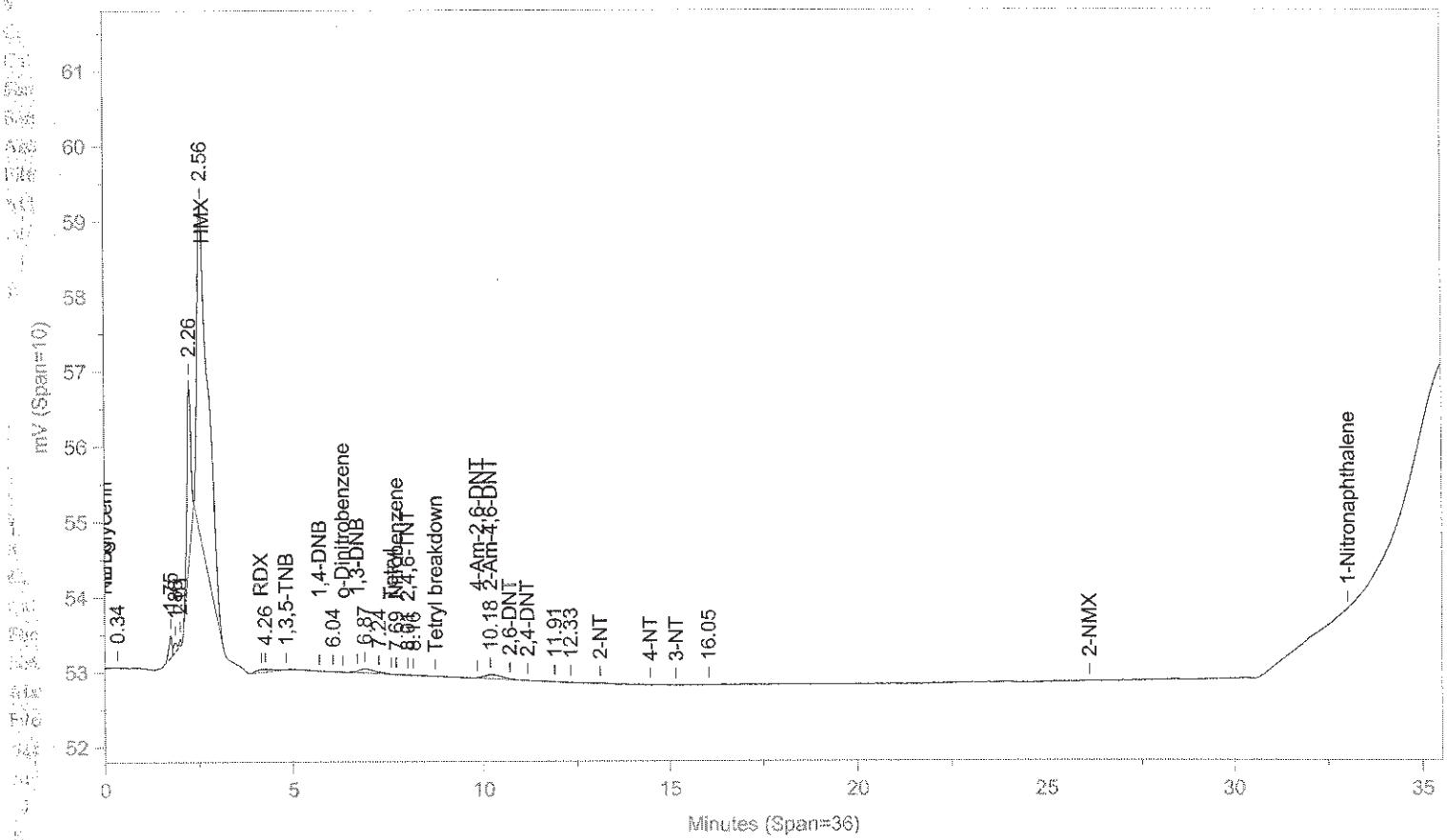
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.739	79998	201.559	HMX
.	0	.	2,4-DAm-6-NT	2.924	203362	84.339	2,4-DAm-6-NT
7.695	47	.136	Nitrobenzene	.	0	.	Nitrobenzene
8.005	47	.205	2,4,6-TNT	.	0	.	2,4,6-TNT
10.183	2011	9.18	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	2-NMX	26.072	7480	15.313	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.30A
Area File: C:\CPWIN\DATA1\3E12310B.30A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 7:04:06 PM
File Reported On: 11/13/2013 at 7:04:19 PM

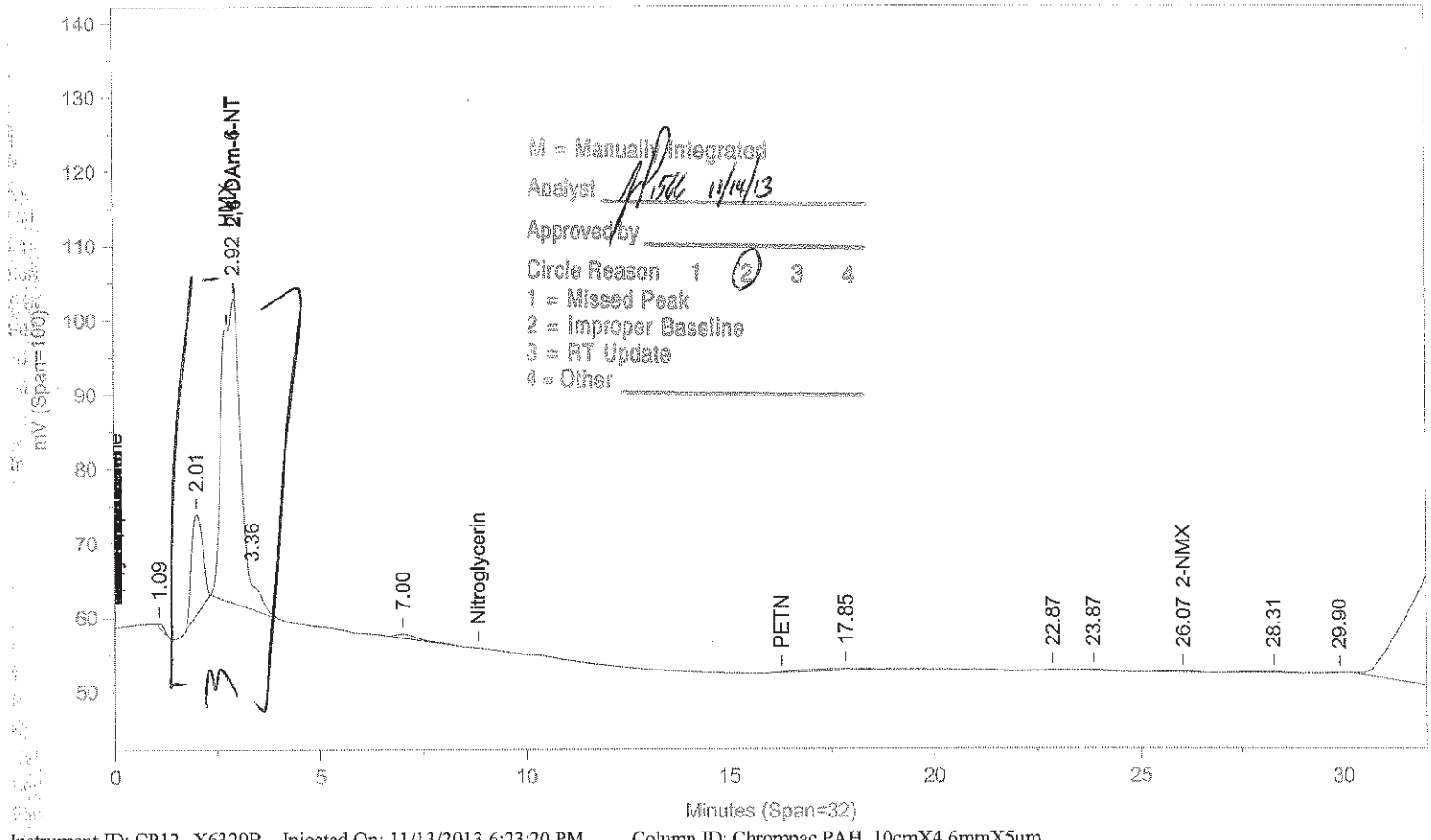
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.30R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.30R



M = Manually Integrated
Analyst 11/14/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

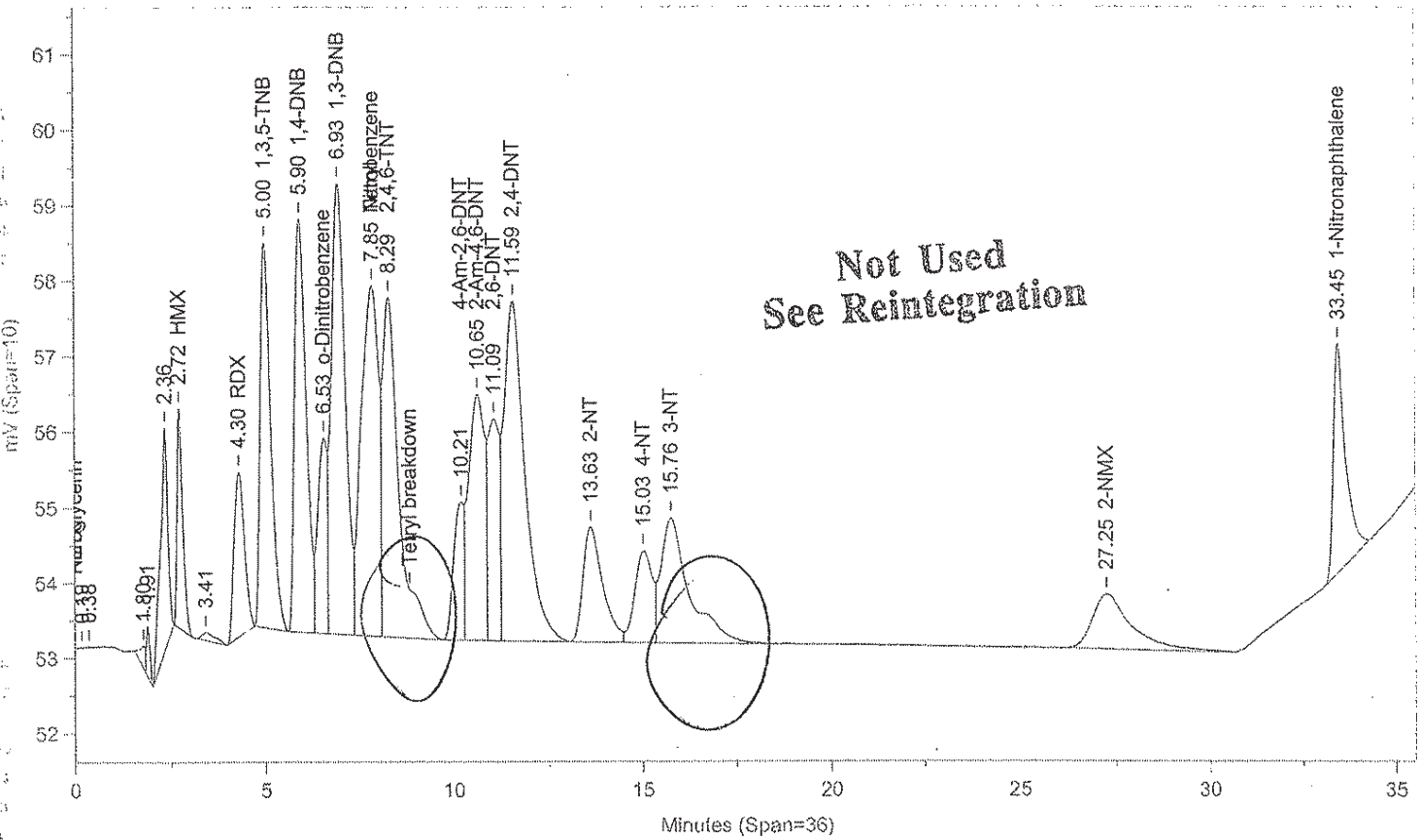
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.924	1258578	521.962	2,4-DAm-6-NT
7.695	47	.136	Nitrobenzene	.	0	.	Nitrobenzene
8.005	47	.205	2,4,6-TNT	.	0	.	2,4,6-TNT
10.183	2011	9.18	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	2-NMX	26.072	7480	15.313	2-NMX

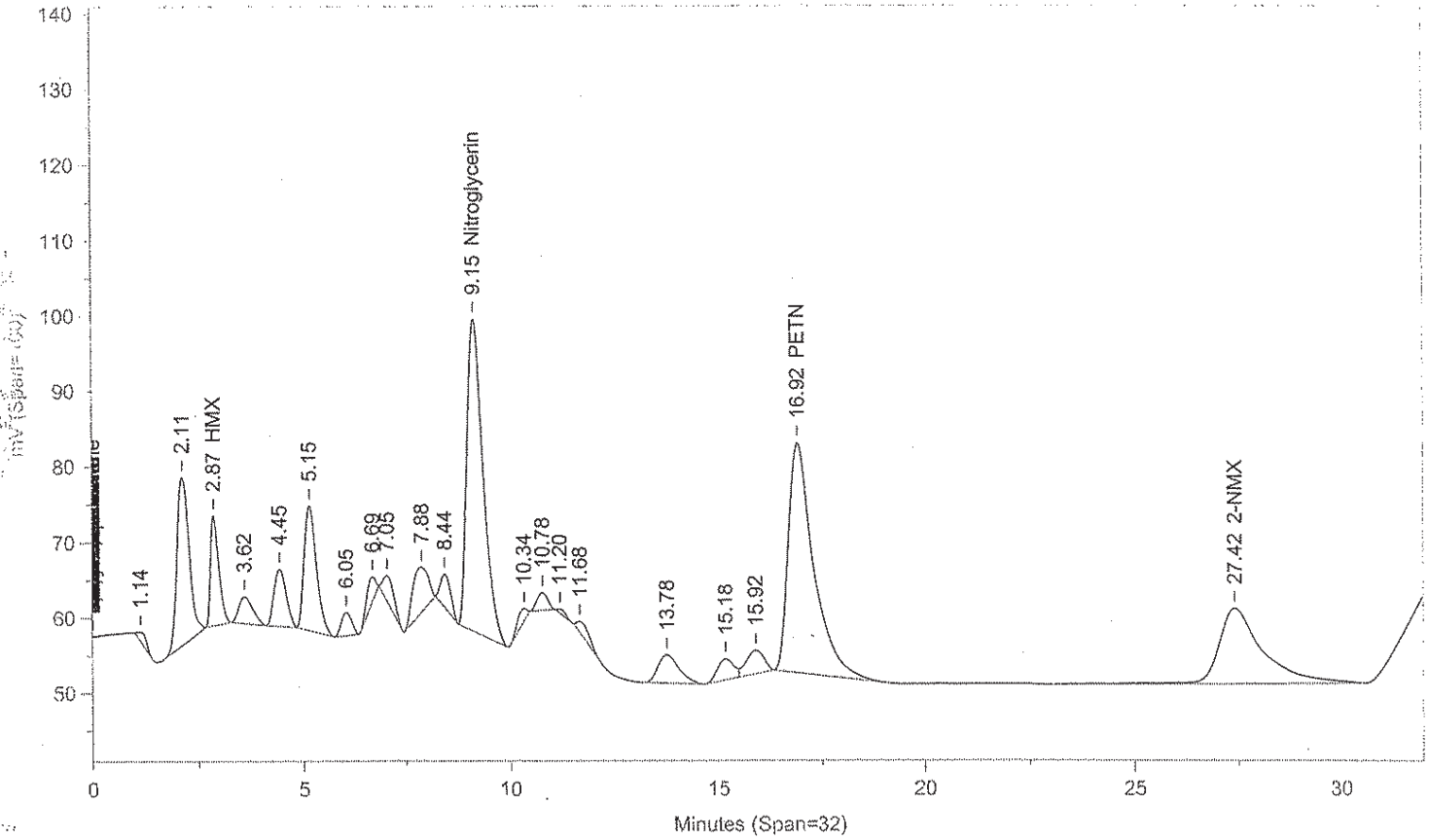
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:07:48 AM
File Reported On: 11/14/2013 at 11:07:46 AM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

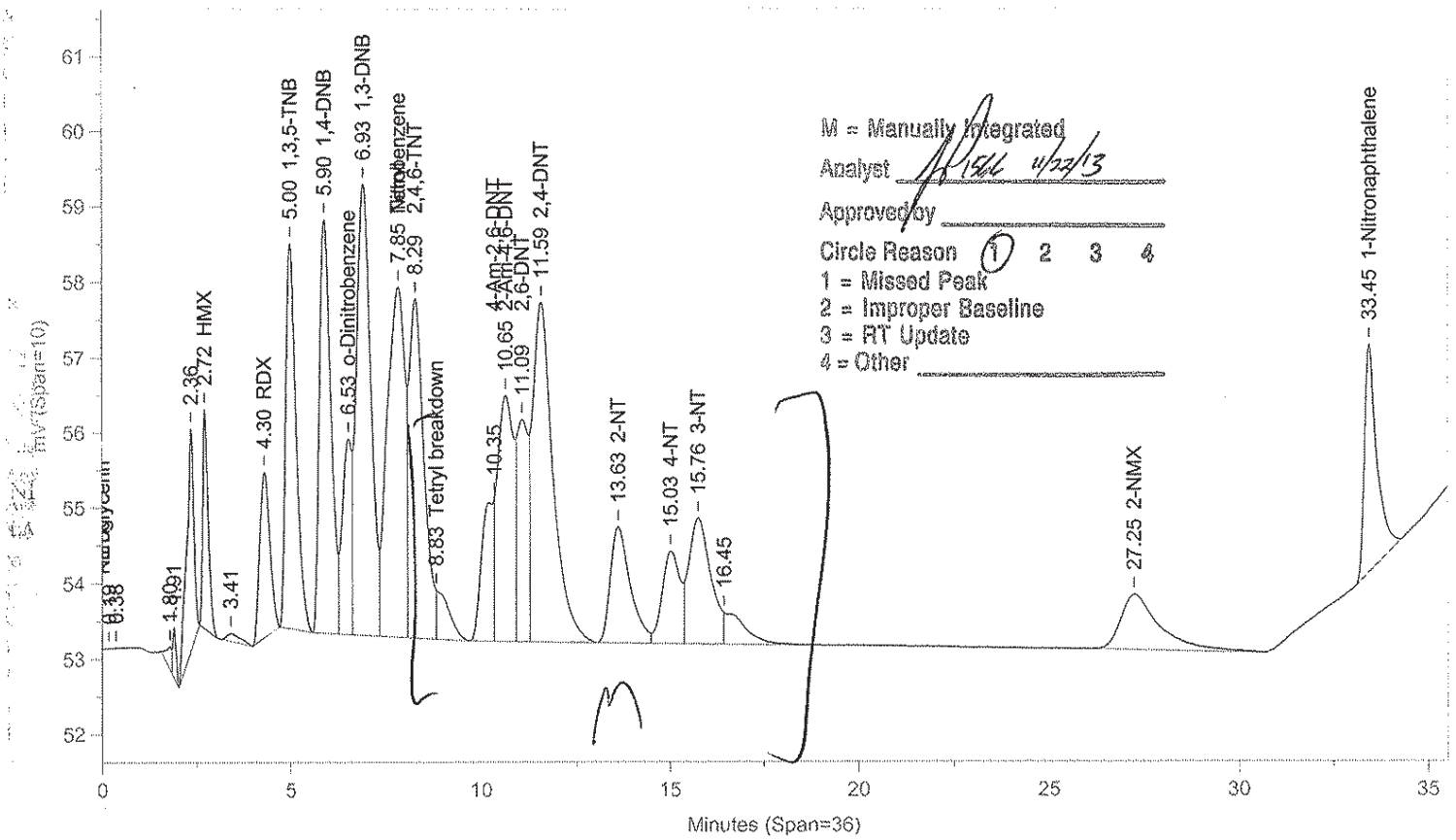
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	134593	590.678	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.212	34931	372.32	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	97348	444.477	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	62135	511.08	2,6-DNT	.	0	.	2,6-DNT
11.593	170959	516.86	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	39770	423.863	4-NT	.	0	.	4-NT
15.763	86127	636.068	3-NT	.	0	.	3-NT
RT .	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.17A
Area File: C:\CPWIN\DATA1\5E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:41:08 PM
File Reported On: 11/20/2013 at 4:41:19 PM

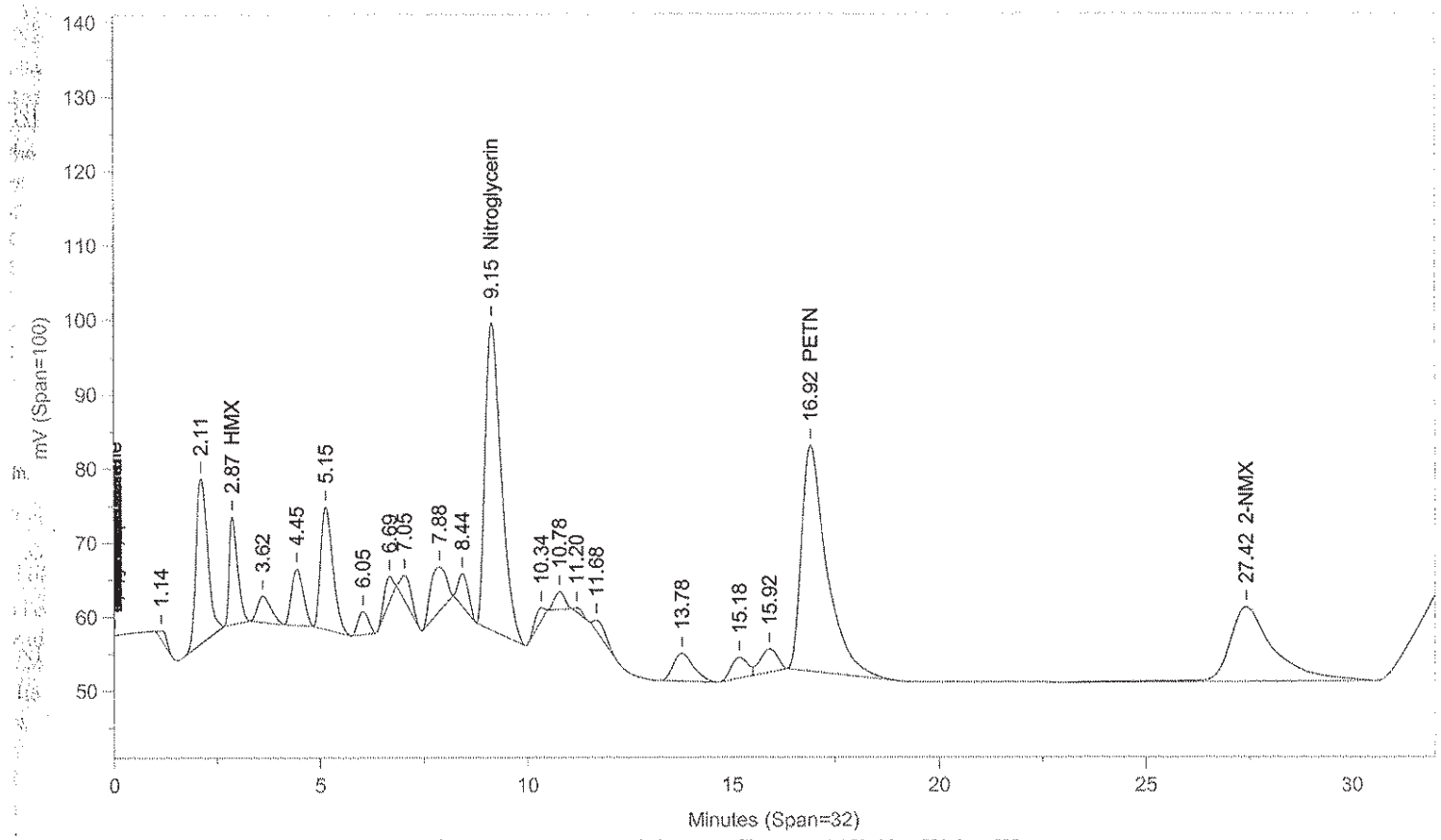
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	119463	524.279	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	15130	43.77	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.35	41040	437.426	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	96606	441.092	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	60419	496.964	2,6-DNT	.	0	.	2,6-DNT
11.593	167308	505.822	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	41107	438.115	4-NT	.	0	.	4-NT
15.763	67848	501.073	3-NT	.	0	.	3-NT
.	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:04:00 PM
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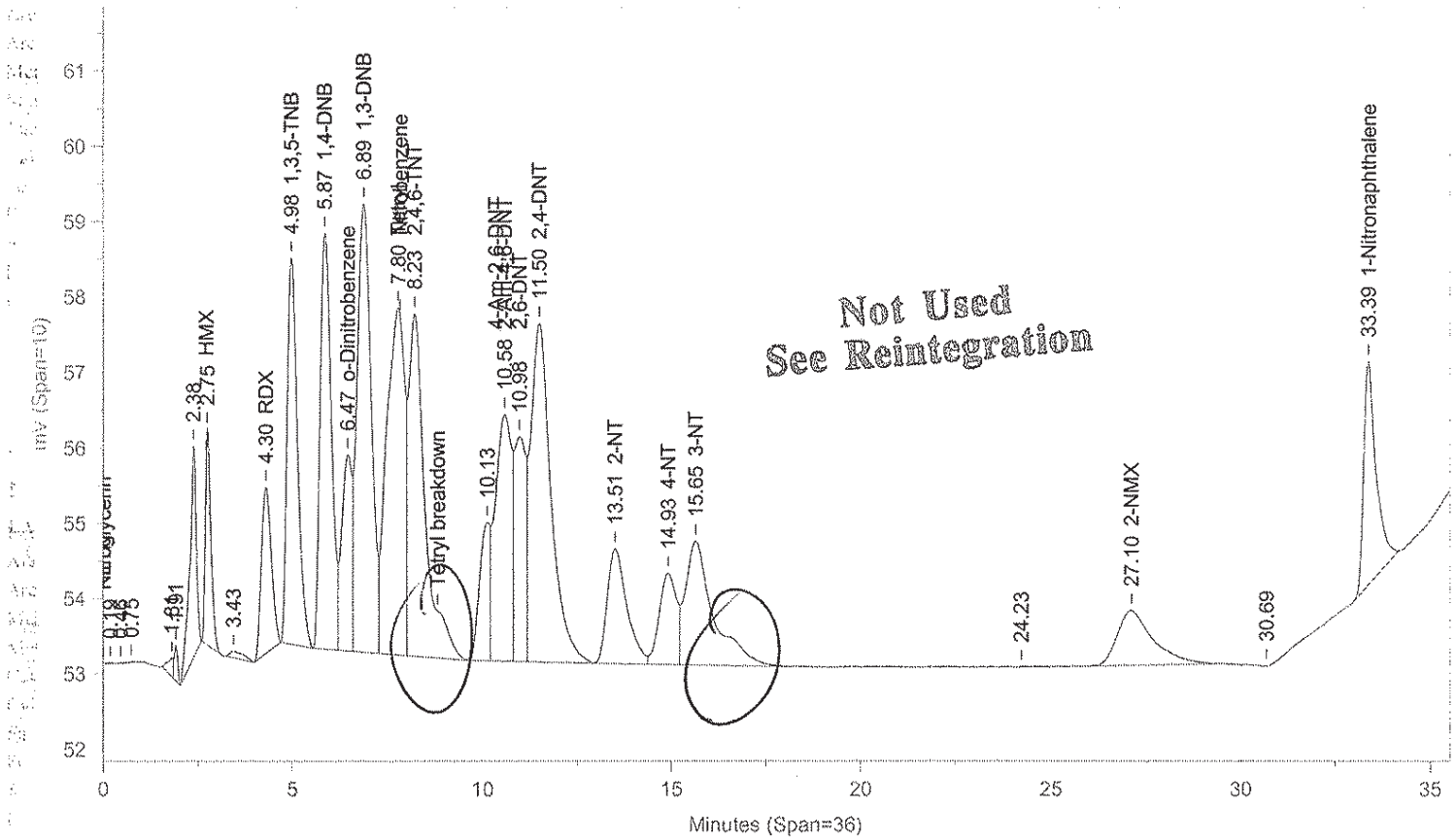
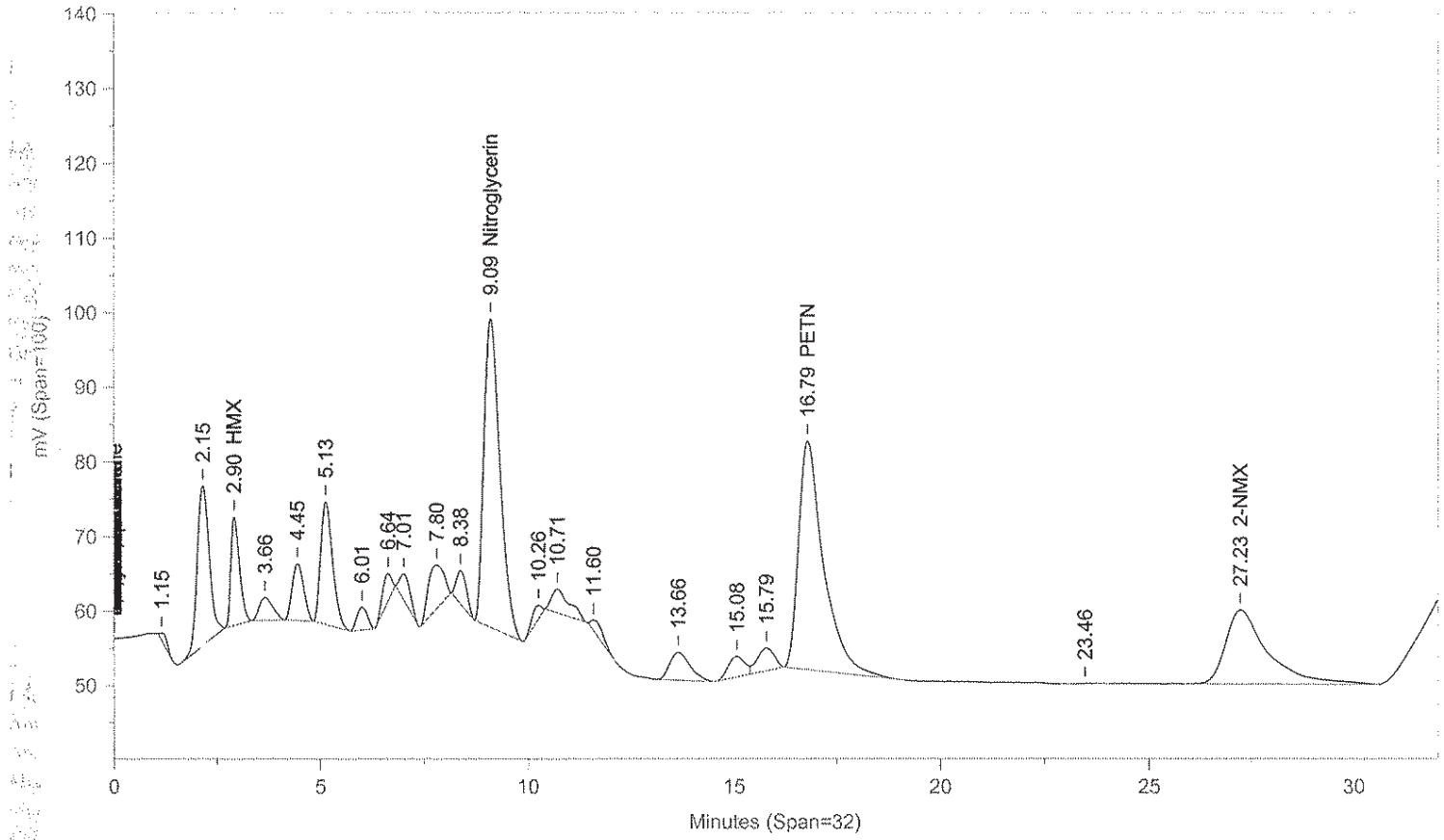
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 10:00:27 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 10:00:27 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

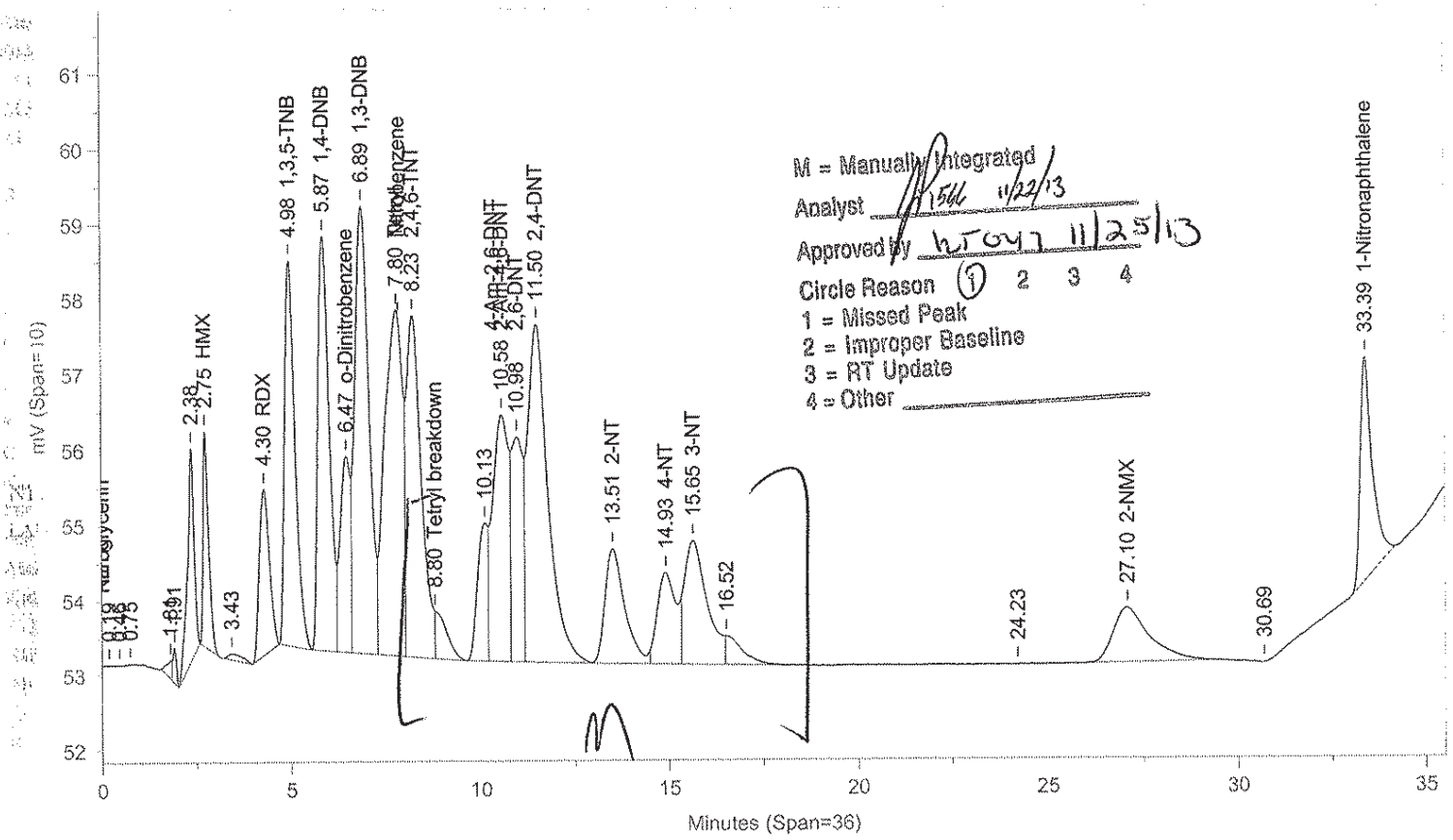
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.899	209869	500.486	HMX
4.303	41844	465.044	RDX	.	0	.	RDX
4.983	97674	462.717	1,3,5-TNB	.	0	.	1,3,5-TNB
5.869	113865	446.926	1,4-DNB	.	0	.	1,4-DNB
6.475	48355	469.297	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.895	153978	474.516	1,3-DNB	.	0	.	1,3-DNB
7.802	152354	440.758	Tetryl	.	0	.	Tetryl
8.232	137212	602.172	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.092	1109017	8677.405	Nitroglycerin
10.582	97882	446.917	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.979	63296	520.632	2,6-DNT	.	0	.	2,6-DNT
11.501	169441	512.27	2,4-DNT	.	0	.	2,4-DNT
13.512	55182	417.129	2-NT	.	0	.	2-NT
14.927	38256	407.72	4-NT	.	0	.	4-NT
15.65	84959	627.445	3-NT	.	0	.	3-NT
.	0	.	PETN	16.795	1295068	9456.816	PETN
RT 27.1	47571	1395.563	2-NMX	27.233	710198	1453.927	2-NMX
33.391	67109	510.832	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.06A
Area File: C:\CPWIN\DATA1\5E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:35:32 PM
File Reported On: 11/20/2013 at 4:35:42 PM

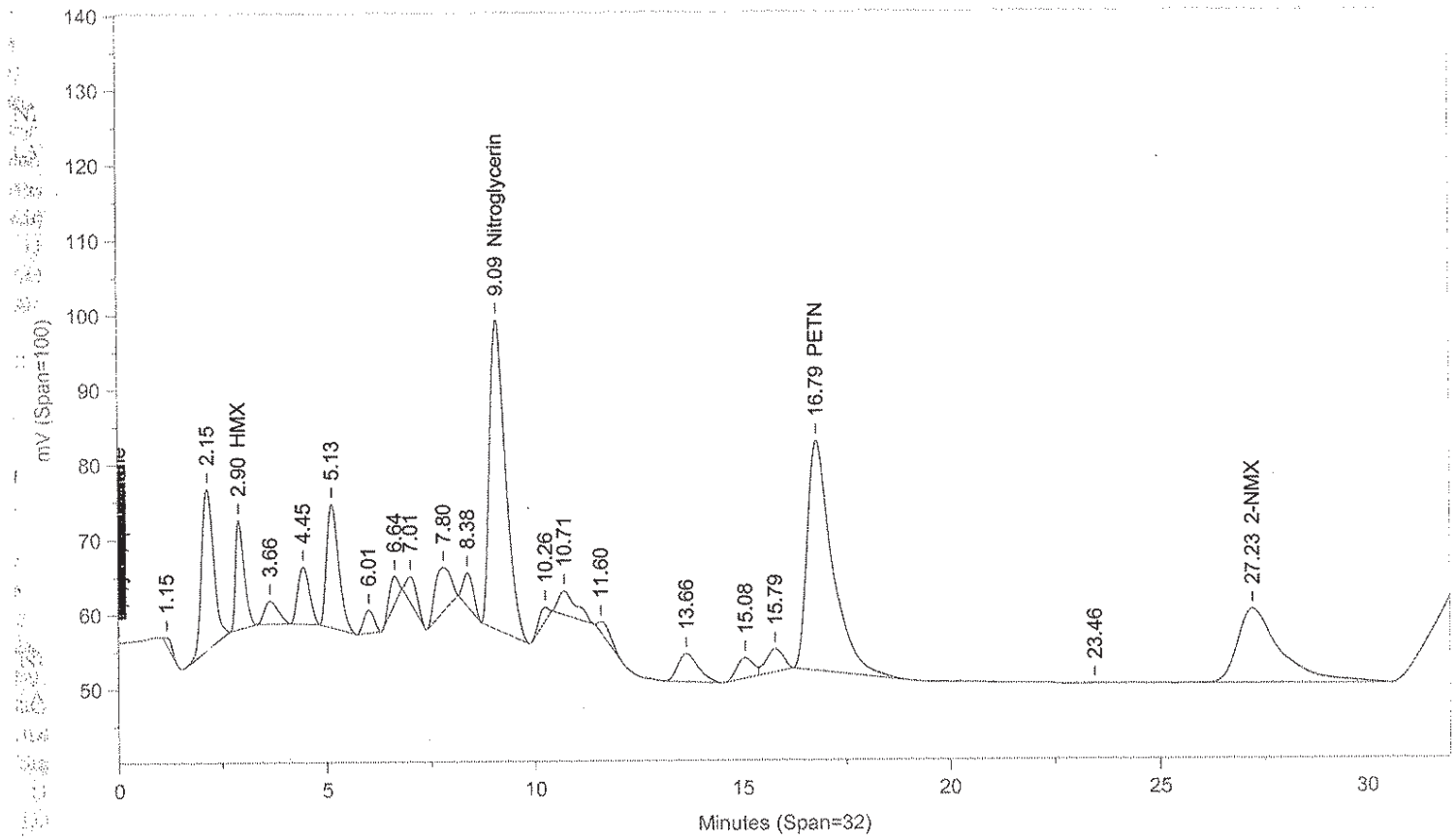
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 10:00:27 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 10:00:27 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

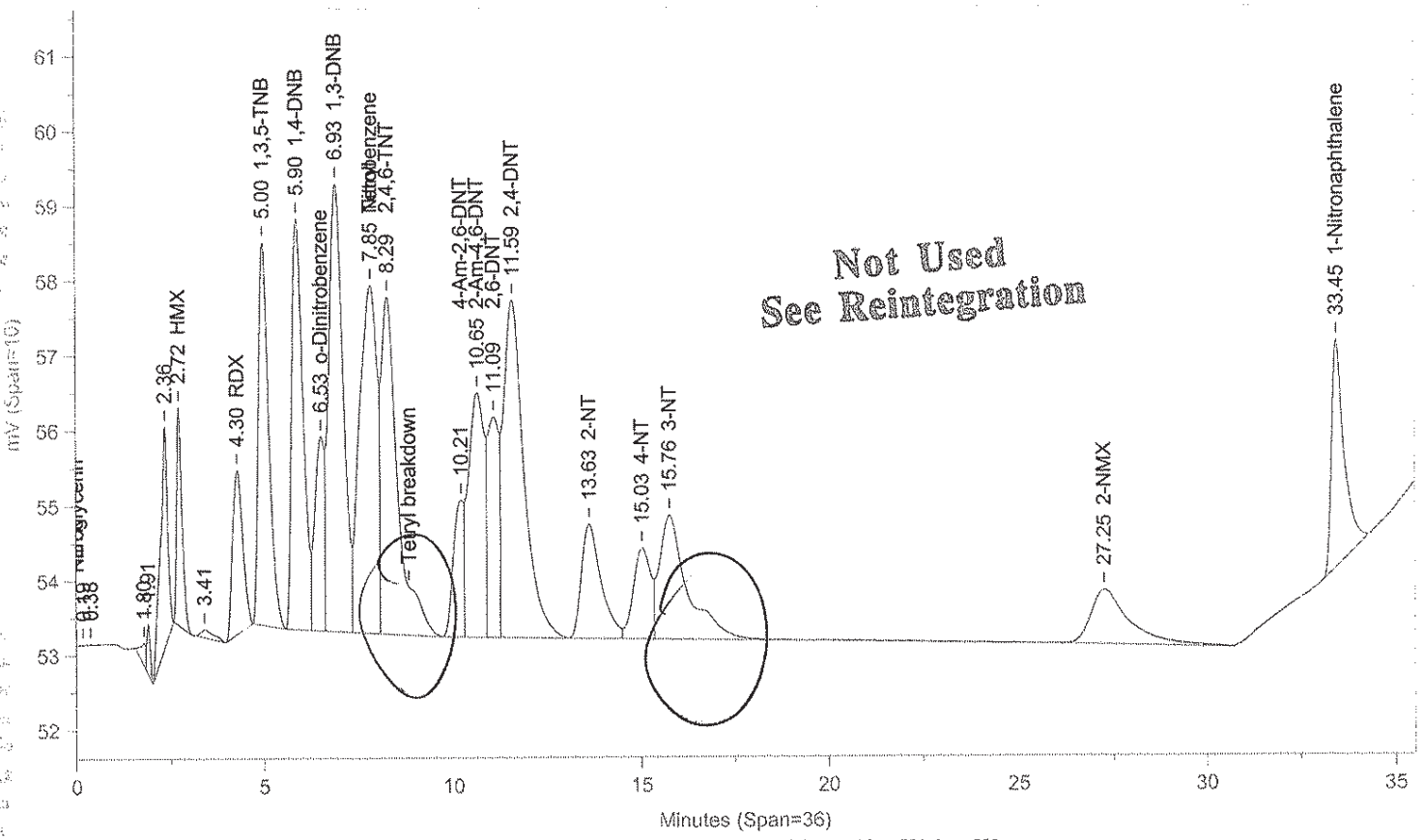
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.899	209869	500.486	HMX
4.303	41844	465.044	RDX	.	0	.	RDX
4.983	97674	462.717	1,3,5-TNB	.	0	.	1,3,5-TNB
5.869	113865	446.926	1,4-DNB	.	0	.	1,4-DNB
6.475	48355	469.297	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.895	153978	474.516	1,3-DNB	.	0	.	1,3-DNB
7.802	152354	440.758	Tetryl	.	0	.	Tetryl
8.232	123636	542.593	2,4,6-TNT	.	0	.	2,4,6-TNT
8.8	13576	39.275	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.092	1109017	8677.405	Nitroglycerin
10.582	97882	446.917	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.979	63296	520.632	2,6-DNT	.	0	.	2,6-DNT
11.501	169441	512.27	2,4-DNT	.	0	.	2,4-DNT
13.512	56097	424.046	2-NT	.	0	.	2-NT
14.927	42849	456.682	4-NT	.	0	.	4-NT
15.65	67332	497.266	3-NT	.	0	.	3-NT
.	0	.	PETN	16.795	1295068	9456.816	PETN
27.1	47571	1395.563	2-NMX	27.233	710198	1453.927	2-NMX
33.391	67109	510.832	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

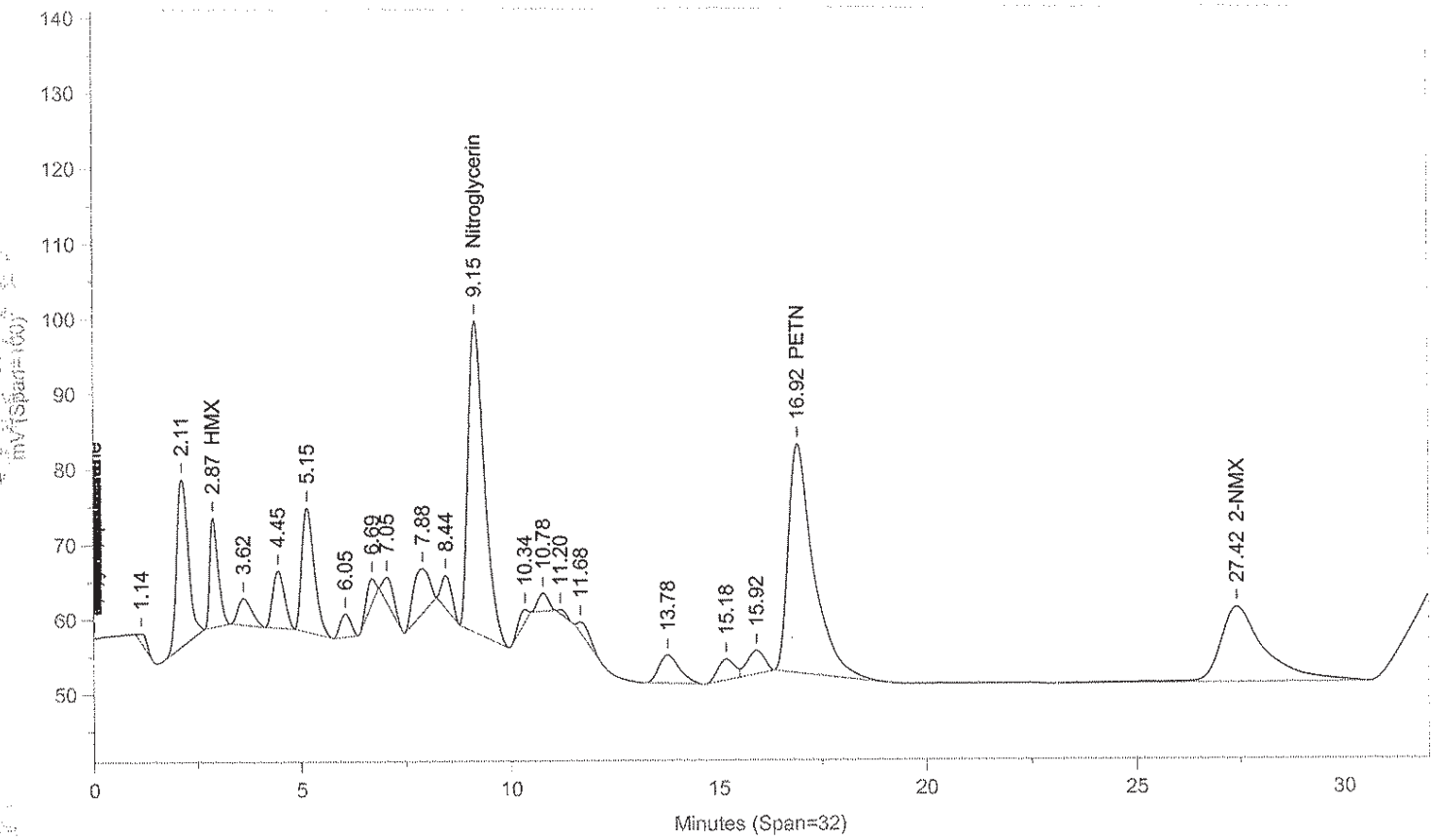
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 2:46:14 PM
File Reported On: 11/22/2013 at 2:46:14 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

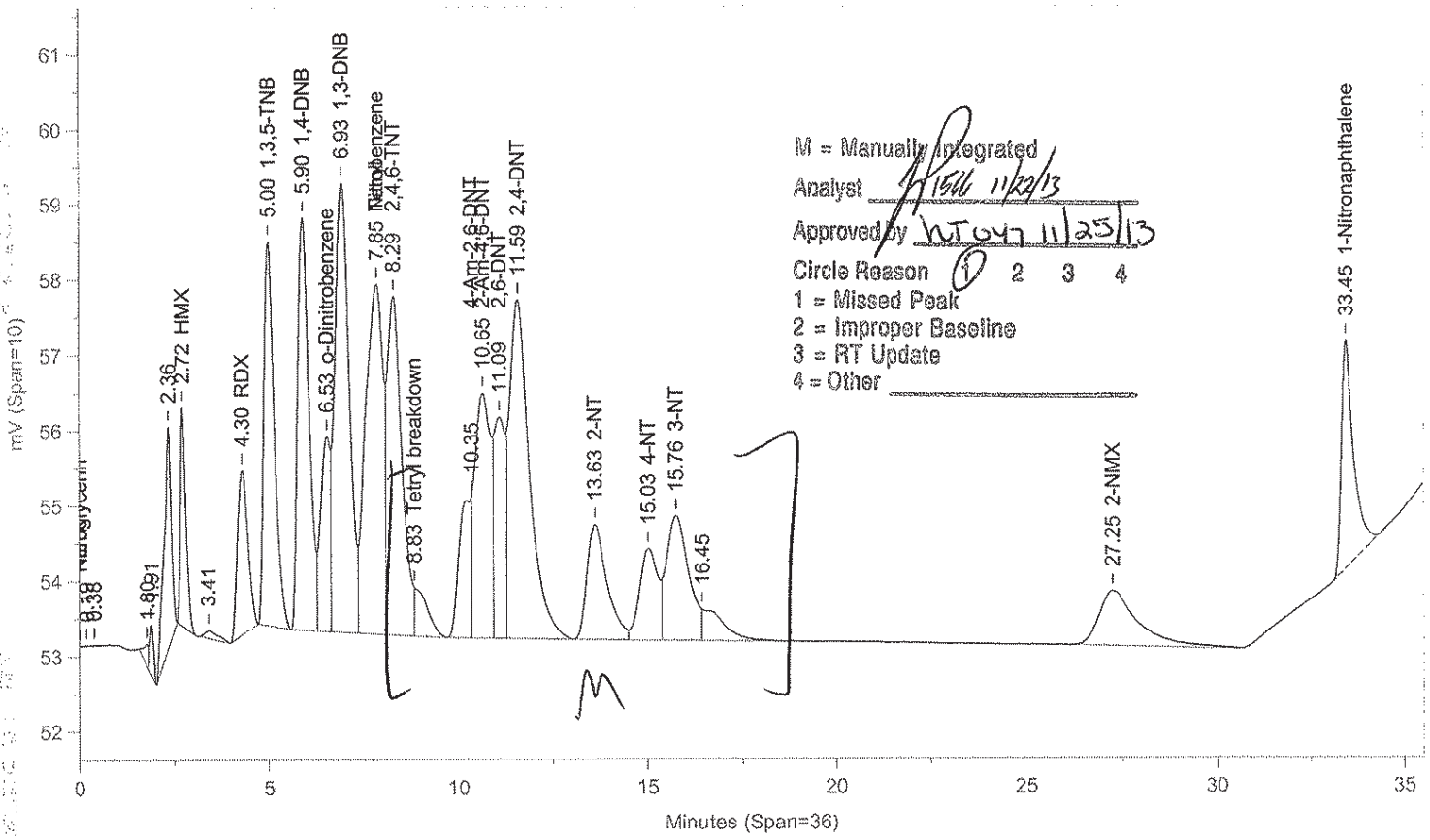
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	134593	590.678	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.212	34931	372.32	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	97348	444.477	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	62135	511.08	2,6-DNT	.	0	.	2,6-DNT
11.593	170959	516.86	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	39770	423.863	4-NT	.	0	.	4-NT
15.763	86127	636.068	3-NT	.	0	.	3-NT
.	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.17A
Area File: C:\CPWIN\DATA1\5E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:41:08 PM
File Reported On: 11/20/2013 at 4:41:19 PM

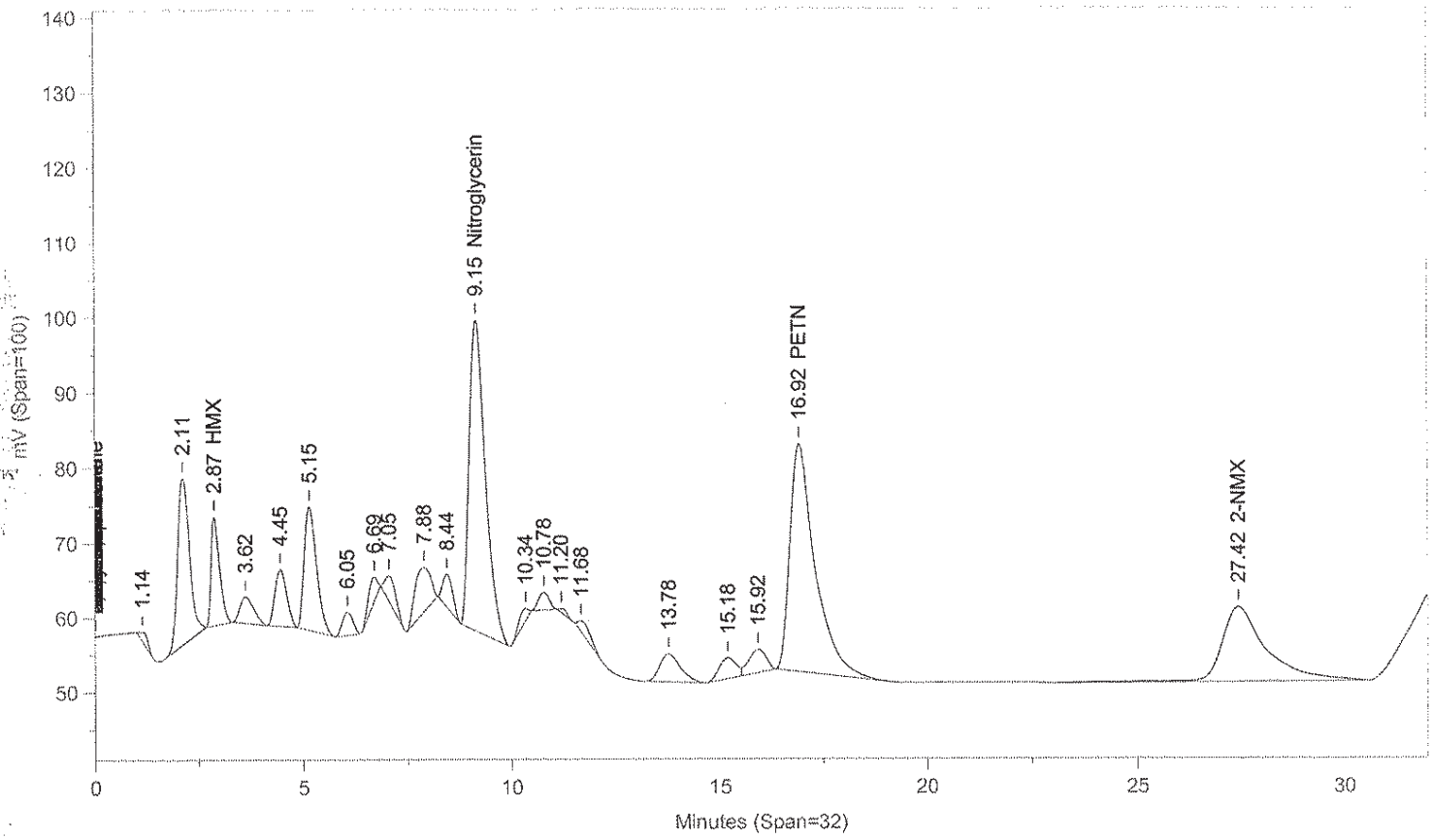
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

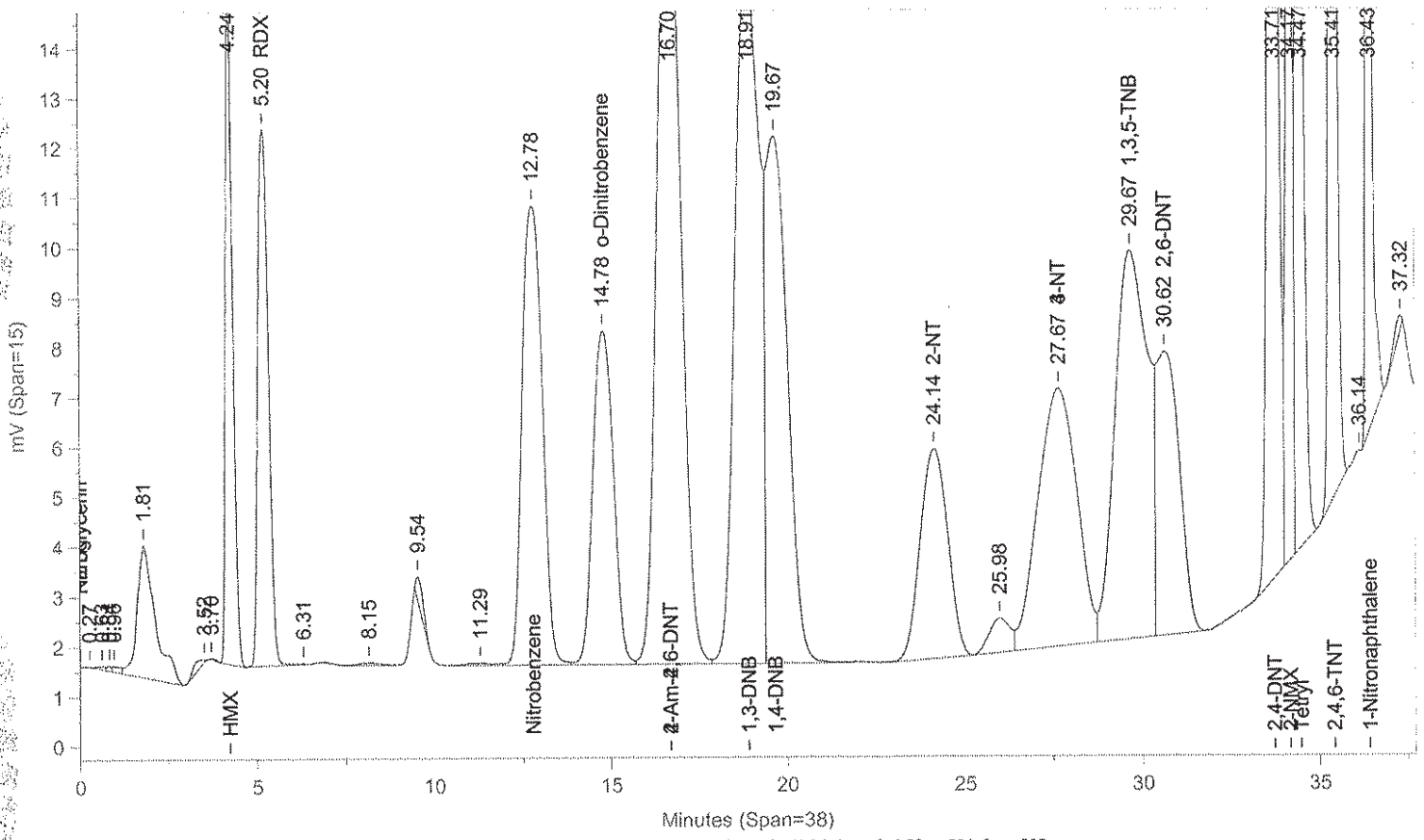
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	119463	524.279	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	15130	43.77	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.35	41040	437.426	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	96606	441.092	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	60419	496.964	2,6-DNT	.	0	.	2,6-DNT
11.593	167308	505.822	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	41107	438.115	4-NT	.	0	.	4-NT
15.763	67848	501.073	3-NT	.	0	.	3-NT
.	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:01:12 PM
File Reported On: 11/22/2013 at 3:01:12 PM

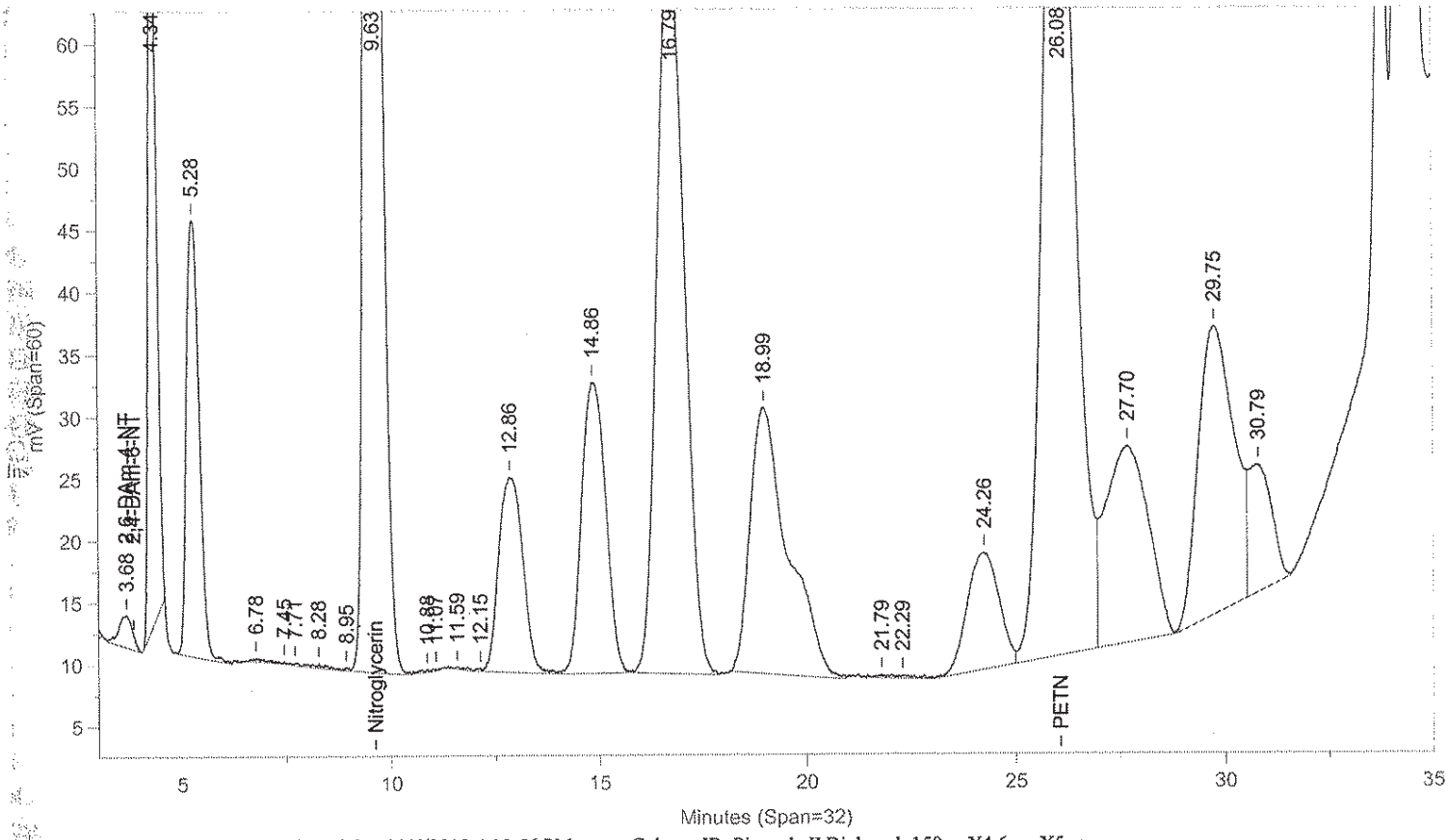
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.04R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.04R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.679	57898	3967.84	2,6-DAm-4-NT
4.245	191071	1822.663	HMX	.	0	.	HMX
5.199	224070	1976.111	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.628	3769975	43871.91	Nitroglycerin
12.782	369767	2065.282	Nitrobenzene	.	0	.	Nitrobenzene
14.784	274911	2411.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.703	761872	6863.797	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
18.907	676453	2411.108	1,3-DNB	.	0	.	1,3-DNB
19.671	450747	-43499.	1,4-DNB	.	0	.	1,4-DNB
24.138	229577	2379.561	2-NT	.	0	.	2-NT
.	0	.	PETN	26.077	4139229	-934754.9	PETN
27.667	397033	-52385.42	4-NT	.	0	.	4-NT
29.671	491541	-87636.54	1,3,5-TNB	.	0	.	1,3,5-TNB
30.618	255956	-73129.59	2,6-DNT	.	0	.	2,6-DNT
33.71	552207	6048.482	2,4-DNT	.	0	.	2,4-DNT
34.167	208653	6174.048	2-NMX	.	0	.	2-NMX
34.468	312750	2032.832	Tetryl	.	0	.	Tetryl
35.408	426797	2008.424	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	322421	2019.438	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.04A
Area File: C:\CPWIN\DATA1\1C12310B.04A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:27:54 PM
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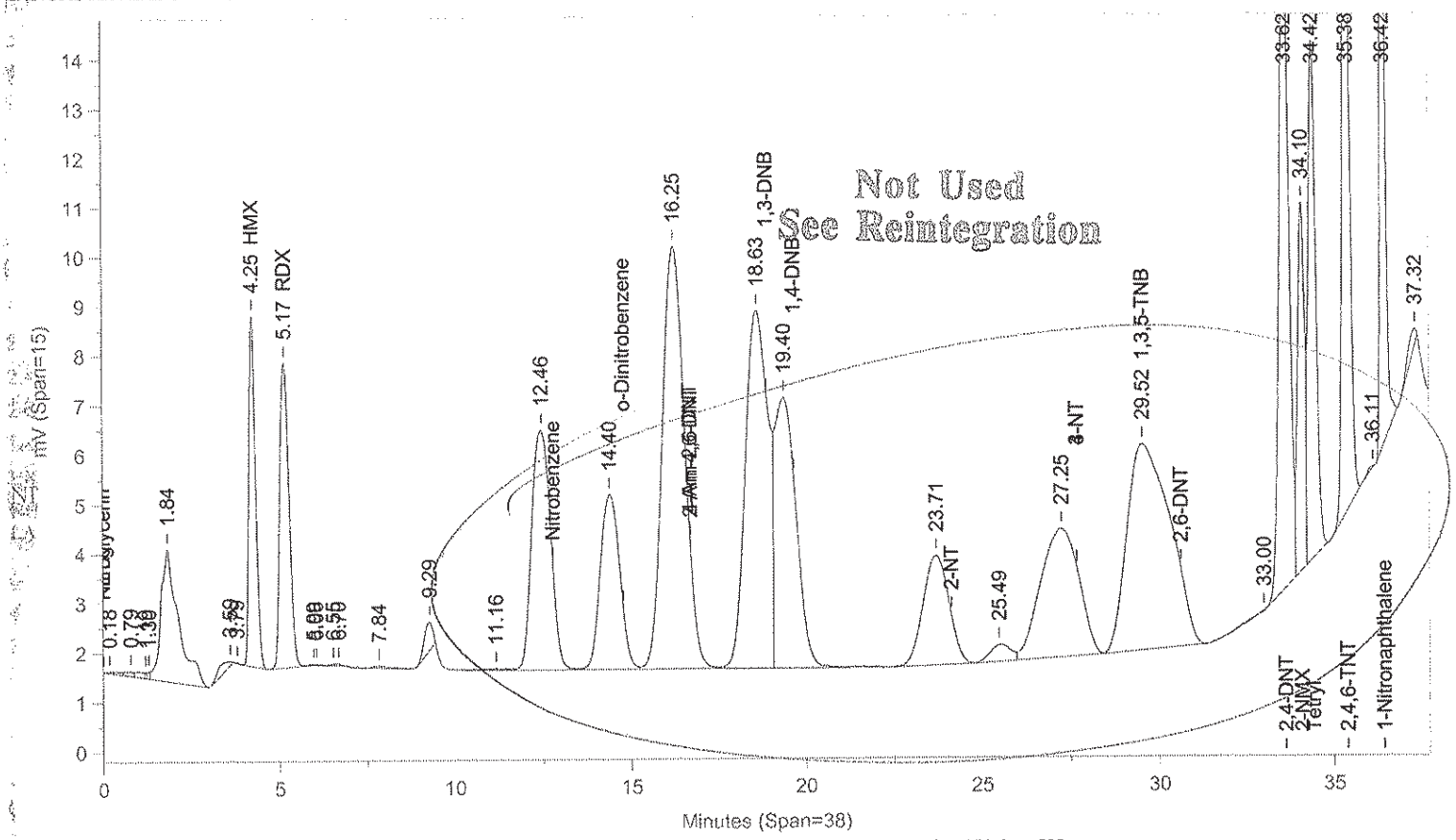
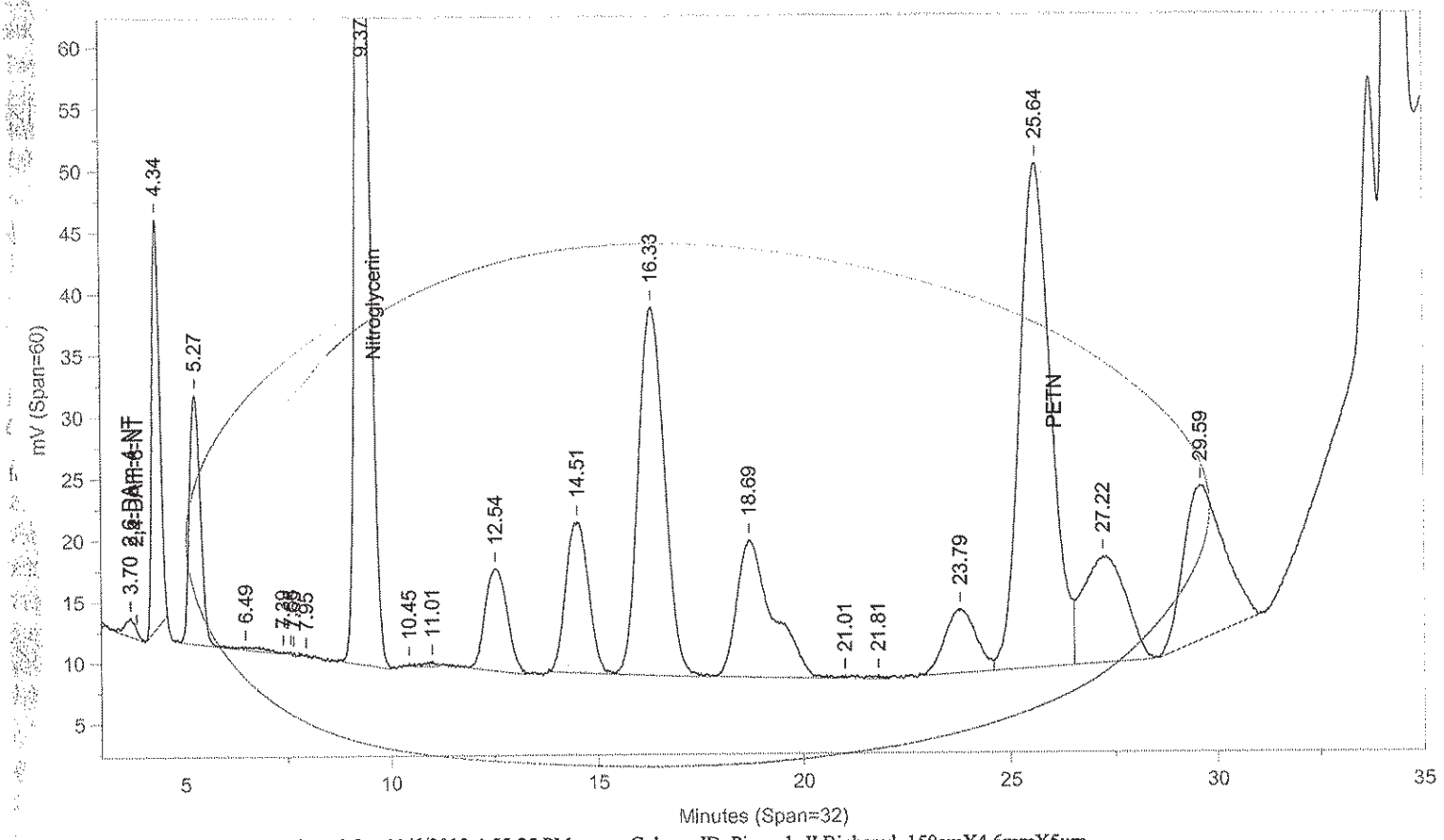
File: C:\CPWIN\DATA1\1C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
29.524	356142	1778.783	1,3,5-TNB	.	0	.	1,3,5-TNB
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	156160	990.7	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Del
Files:
Area File: C:\CPWIN\DATA1\1C12310.05A
Area File: C:\CPWIN\DATA1\1C12310B.05A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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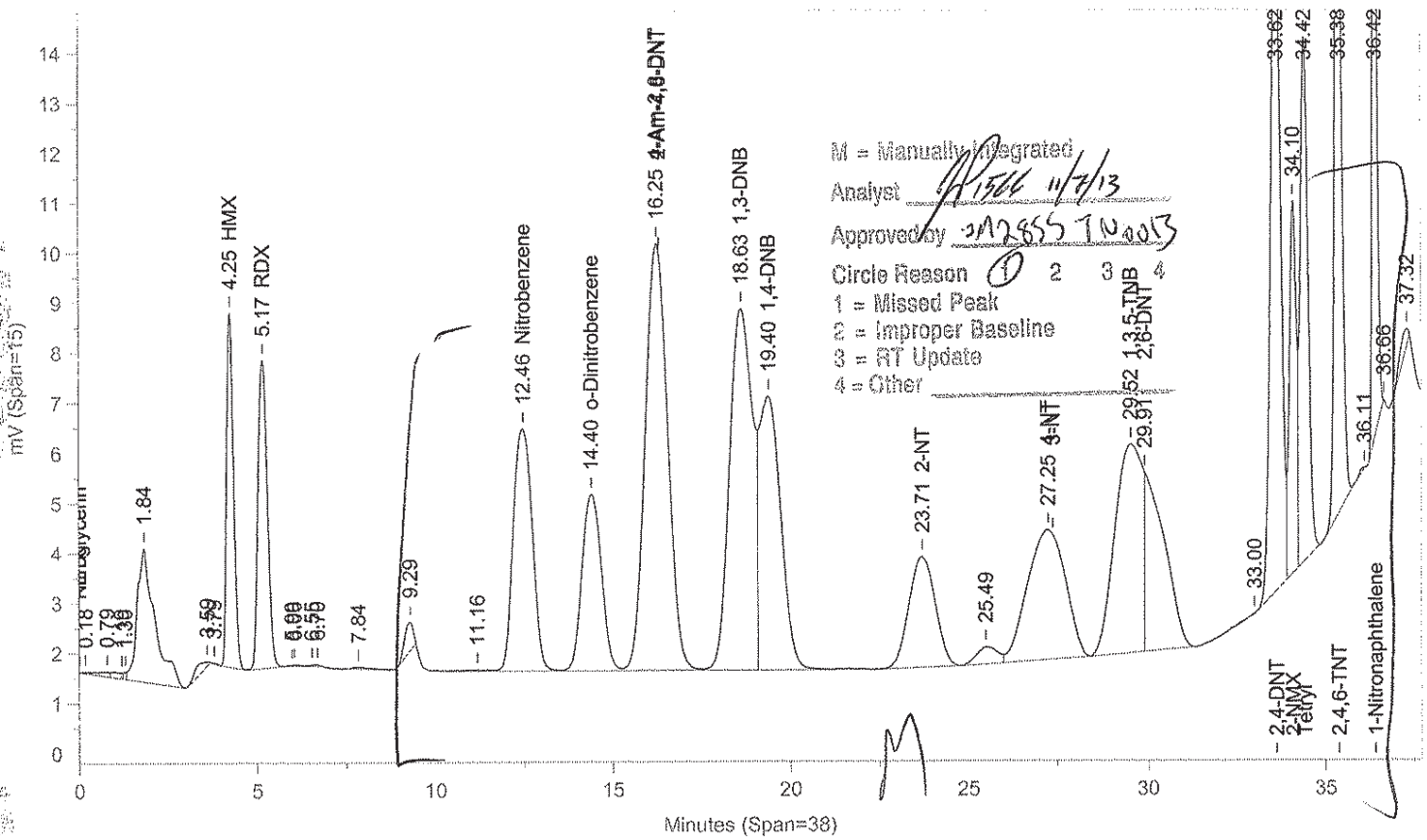
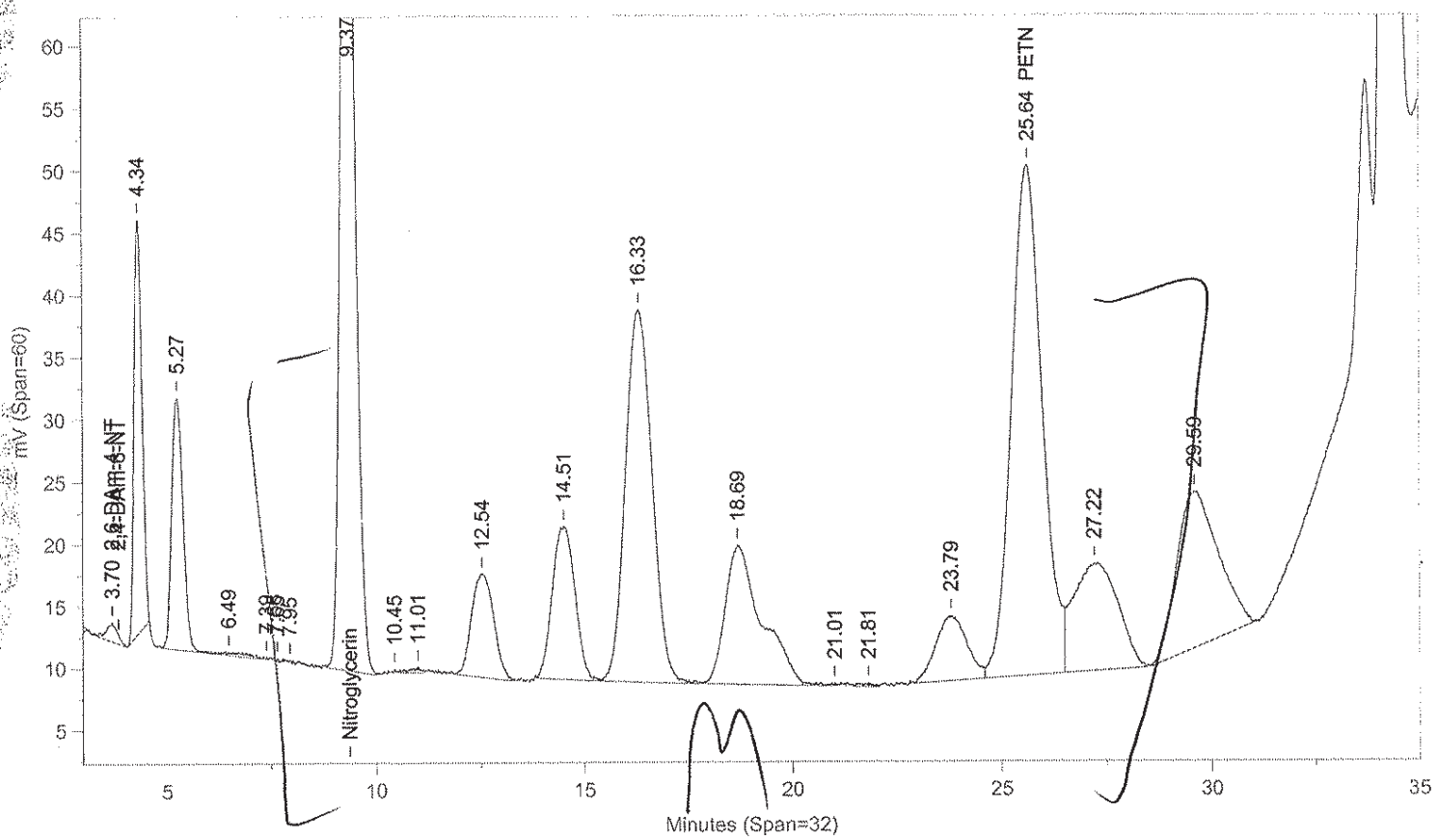
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.372	1890557	22000.77	Nitroglycerin
12.462	181116	1011.597	Nitrobenzene	.	0	.	Nitrobenzene
14.4	137002	1246.378	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.246	375569	16890.87	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.63	329986	979.561	1,3-DNB	.	0	.	1,3-DNB
19.399	228175	1342.629	1,4-DNB	.	0	.	1,4-DNB
23.714	114933	1238.688	2-NT	.	0	.	2-NT
.	0	.	PETN	25.643	2110257	25588.42	PETN
27.246	192701	1298.439	4-NT	.	0	.	4-NT
29.524	218305	892.047	1,3,5-TNB	.	0	.	1,3,5-TNB
29.911	137837	1423.023	2,6-DNT	.	0	.	2,6-DNT
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	148002	940.223	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
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Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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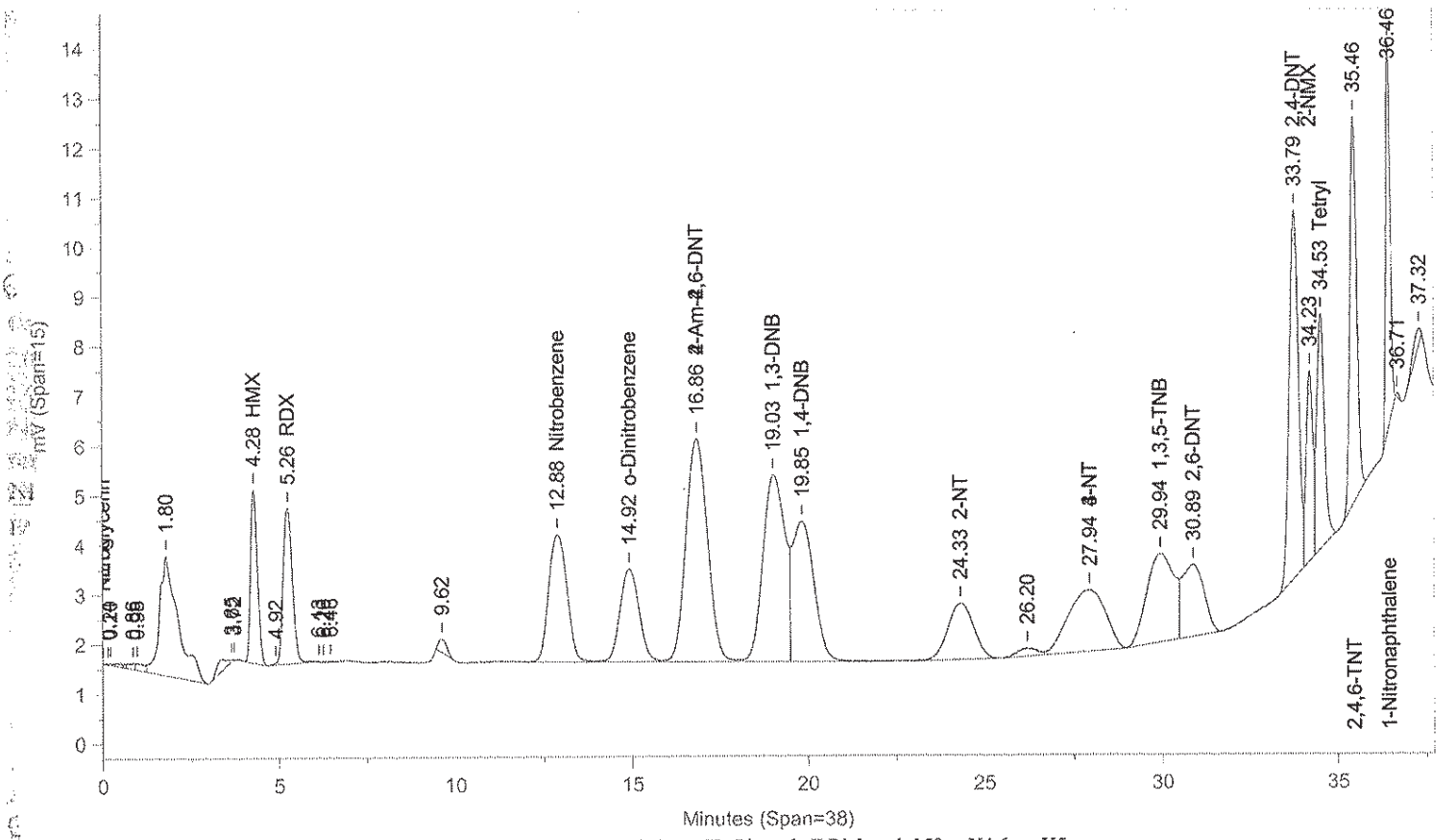
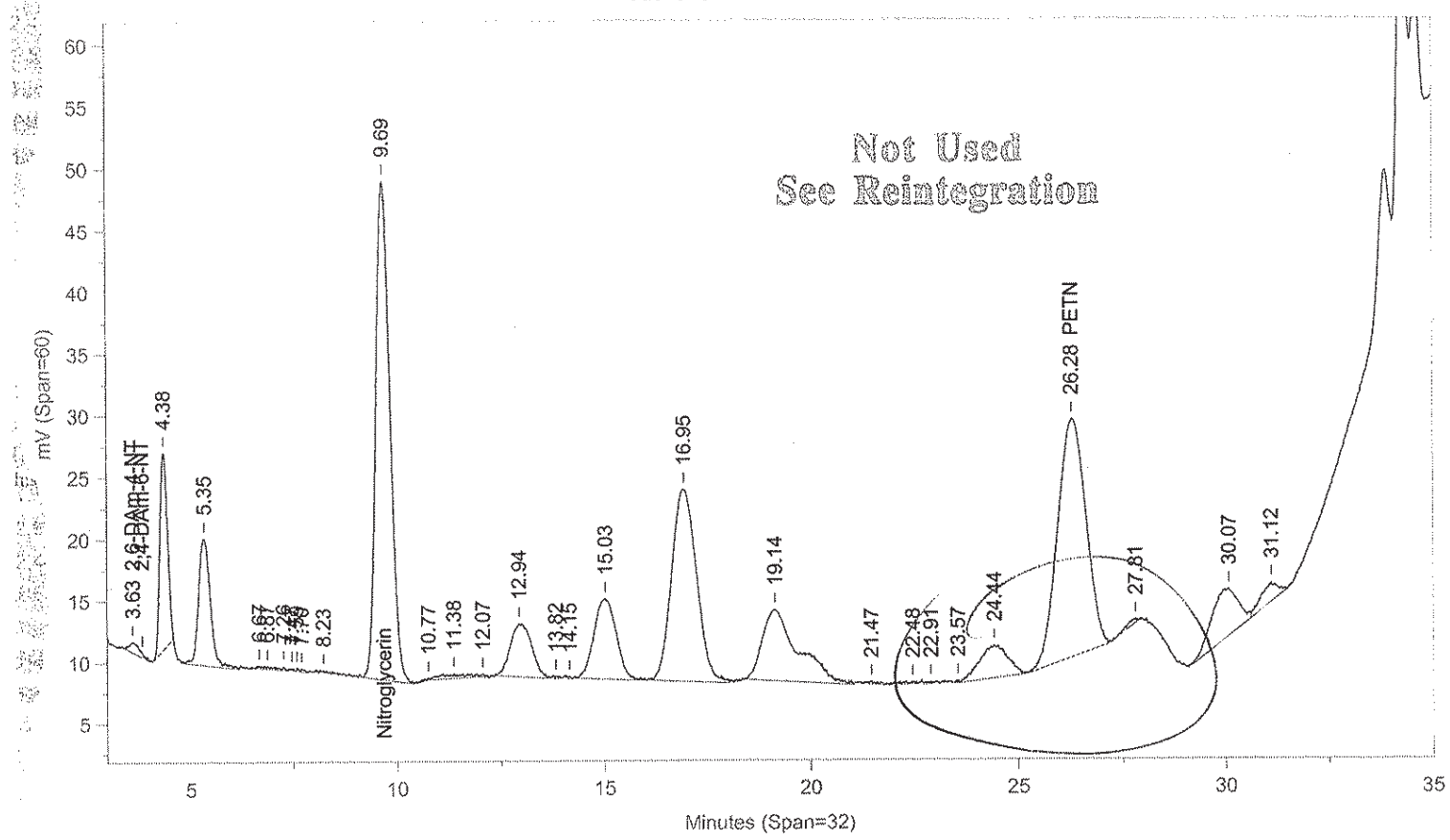


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	524.855	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	638.922	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
Thr .	0	.	PETN	26.283	902583	12224.59	PETN
27.943	89504	537.507	3-NT	.	0	.	3-NT
29.943	96529	519.996	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	592.811	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	1484.672	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1763.87	2-NMX	.	0	.	2-NMX
34.529	70299	551.1	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.06A
Area File: C:\CPWIN\DATA1\1C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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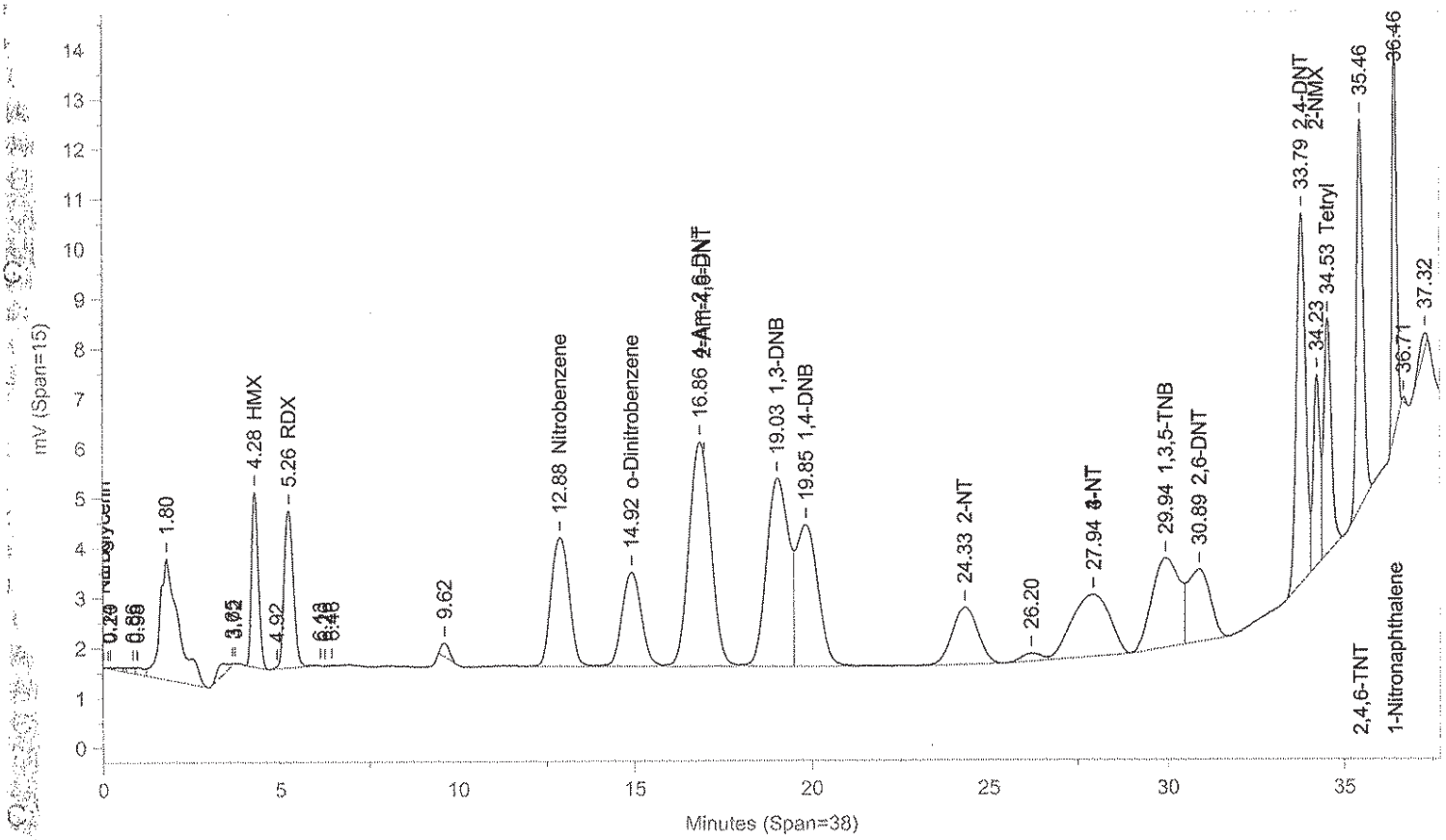
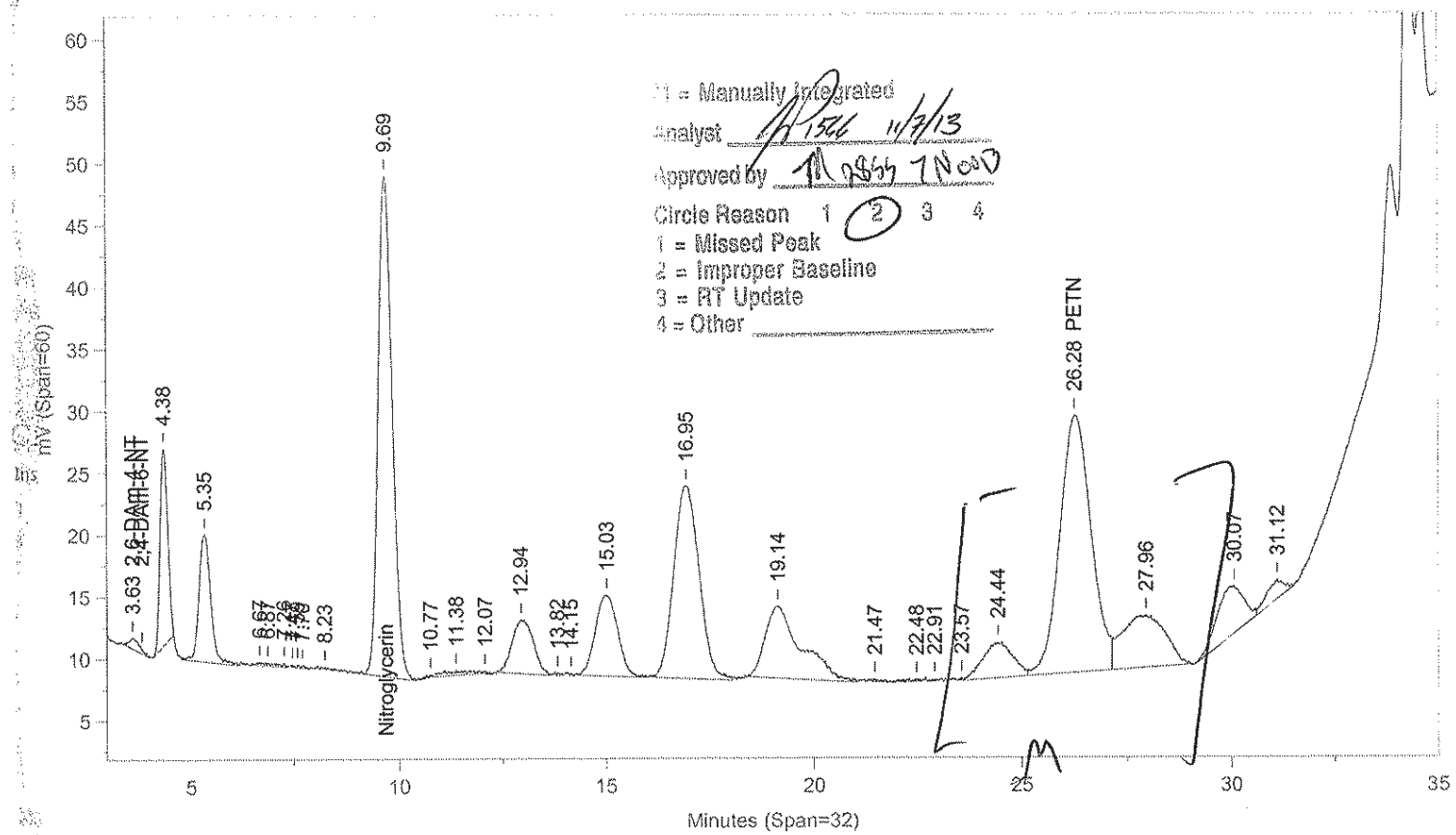
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

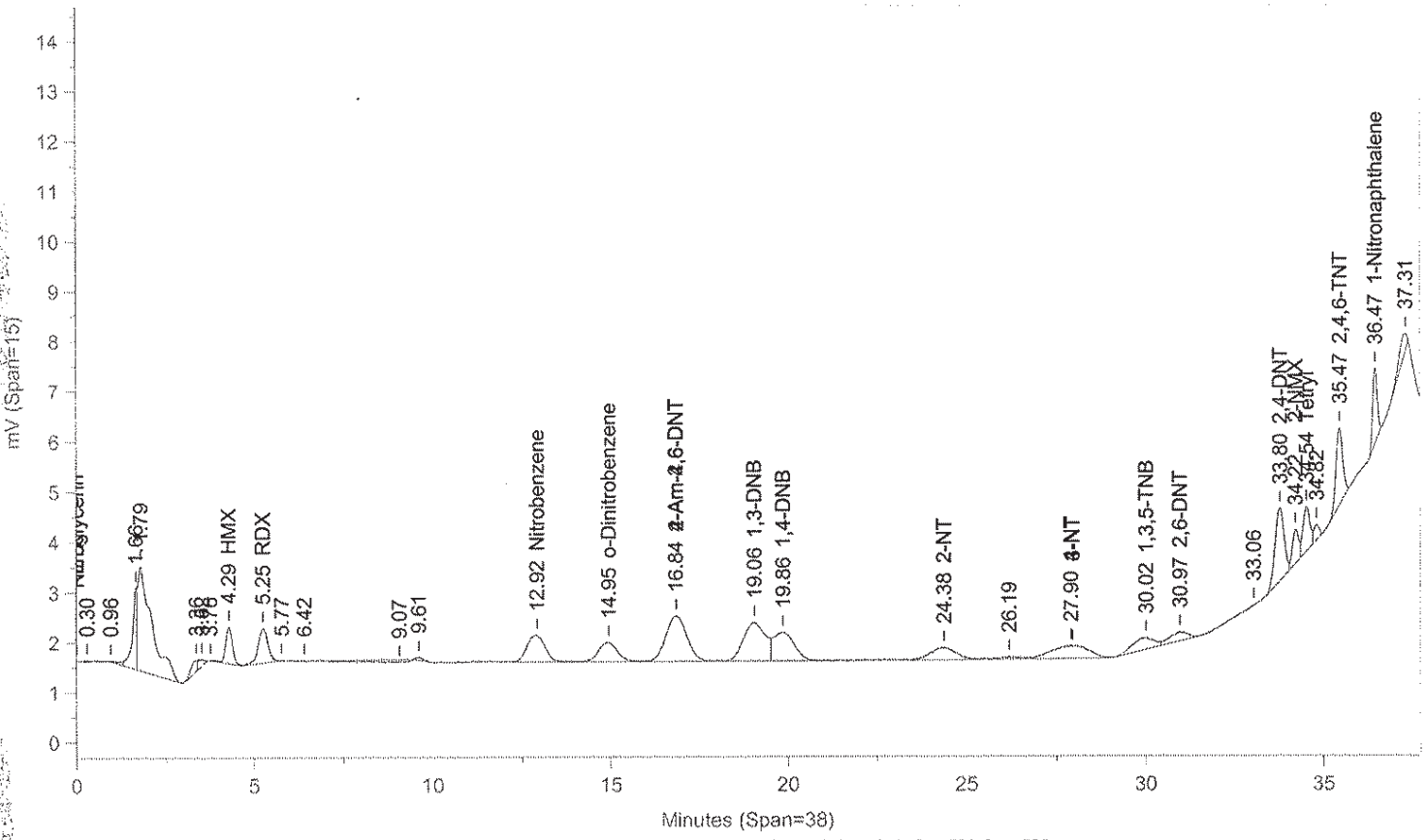
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	903.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	527.832	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
.	0	.	PETN	26.283	1060666	13973.9	PETN
27.943	89504	484.021	3-NT	.	0	.	3-NT
29.943	96529	444.725	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	502.767	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	524.804	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1480.088	2-NMX	.	0	.	2-NMX
34.529	70299	461.521	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

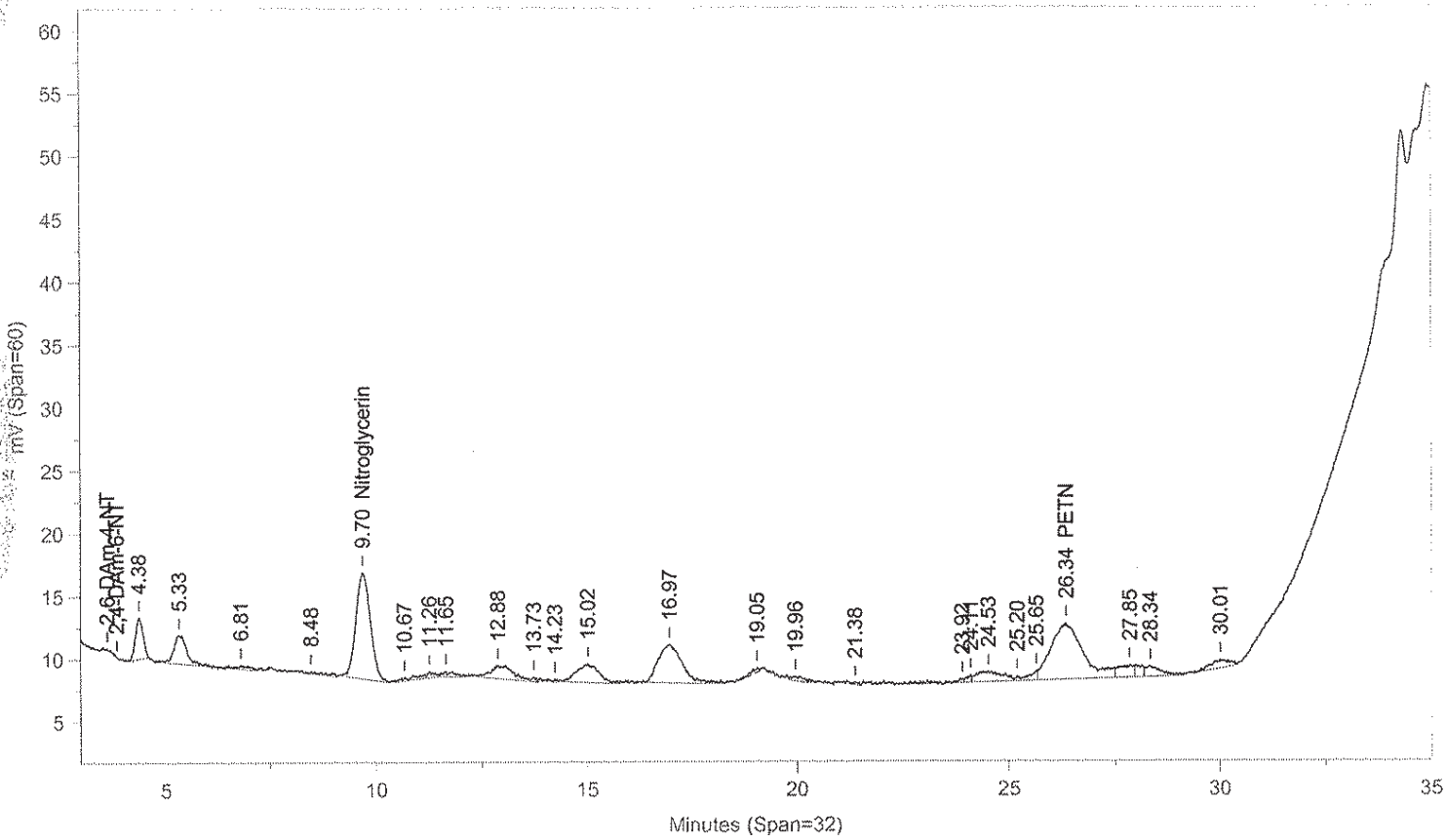
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:01:06 PM
File Reported On: 11/7/2013 at 6:01:05 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.07R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.07R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	9705	92.578	HMX	.	0	.	HMX
5.25	13260	94.755	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	201241	2341.884	Nitroglycerin
12.918	19313	92.346	Nitrobenzene	.	0	.	Nitrobenzene
14.954	14700	96.405	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.843	38007	256.469	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.055	33551	85.63	1,3-DNB	.	0	.	1,3-DNB
19.864	23955	130.294	1,4-DNB	.	0	.	1,4-DNB
24.378	12732	104.748	2-NT	.	0	.	2-NT
.	0	.	PETN	26.336	230586	4788.424	PETN
27.904	18291	216.058	4-NT	.	0	.	4-NT
30.021	10514	108.133	1,3,5-TNB	.	0	.	1,3,5-TNB
30.969	6696	79.784	2,6-DNT	.	0	.	2,6-DNT
33.797	25689	188.292	2,4-DNT	.	0	.	2,4-DNT
34.223	8406	365.011	2-NMX	.	0	.	2-NMX
34.535	12114	116.624	Tetryl	.	0	.	Tetryl
35.47	20303	102.873	2,4,6-TNT	.	0	.	2,4,6-TNT
36.465	13423	112.718	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.07A
Area File: C:\CPWIN\DATA1\1C12310B.07A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:46 PM
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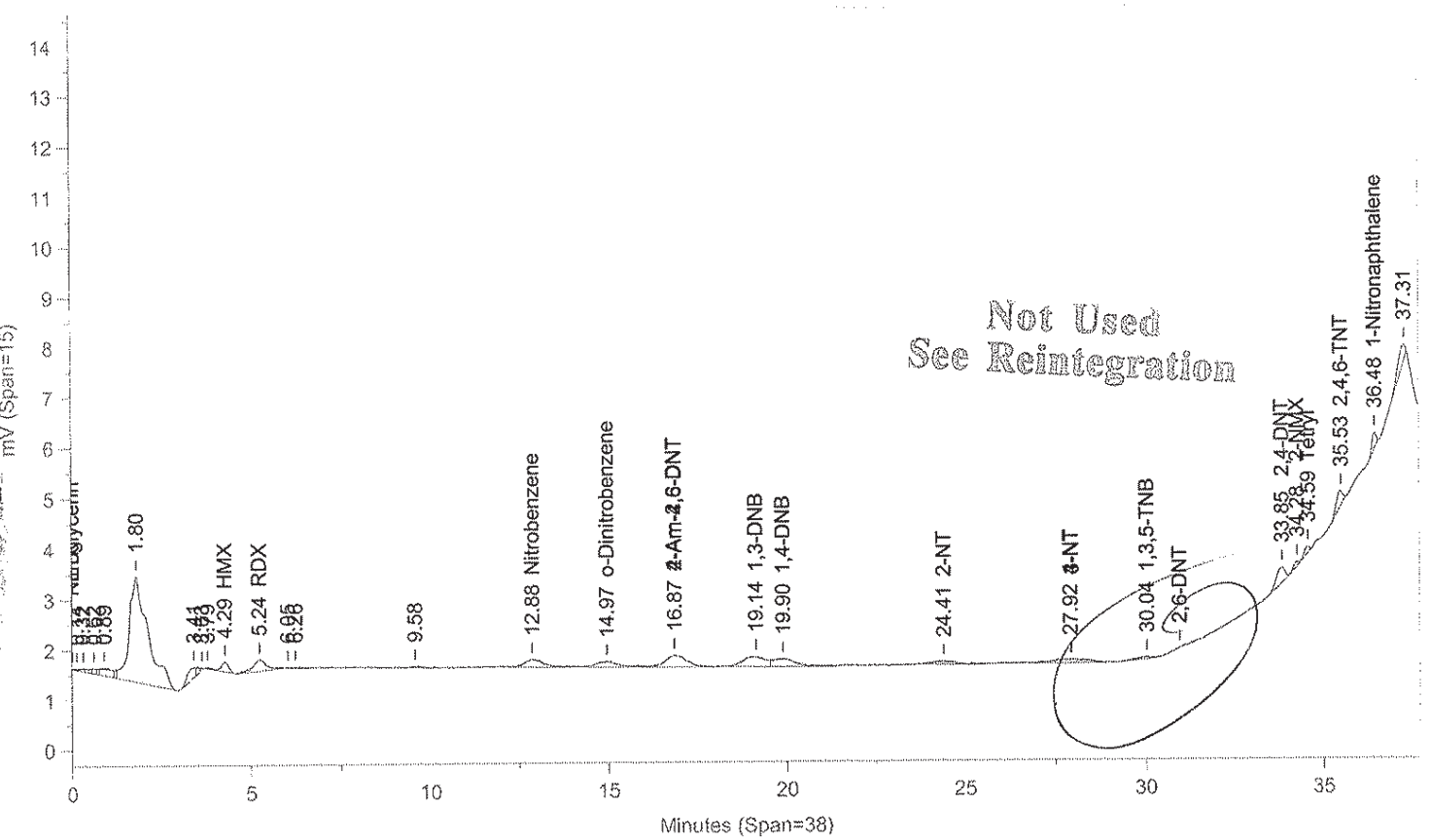
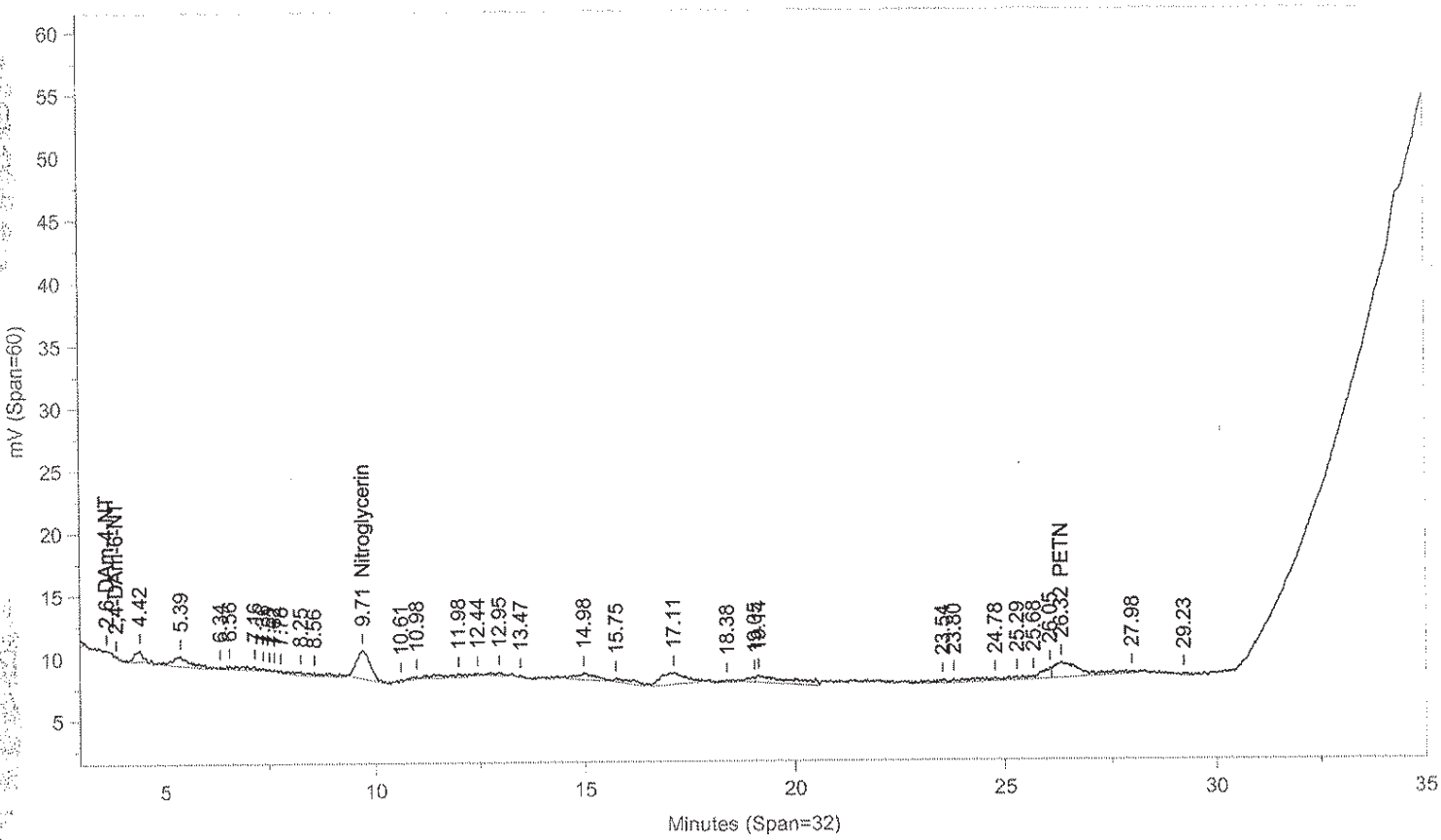
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.08R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	31.978	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
.	0	.	PETN	26.317	53186	2825.361	PETN
27.921	5159	130.897	4-NT	.	0	.	4-NT
30.044	1535	61.155	1,3,5-TNB	.	0	.	1,3,5-TNB
33.849	5674	31.663	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	94.822	2-NMX	.	0	.	2-NMX
34.589	1463	30.879	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Not Used
See Reintegration

Files:
Area File: C:\CPWIN\DATA1\1C12310.08A
Area File: C:\CPWIN\DATA1\1C12310B.08A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:56:30 PM
File Reported On: 11/7/2013 at 5:56:46 PM

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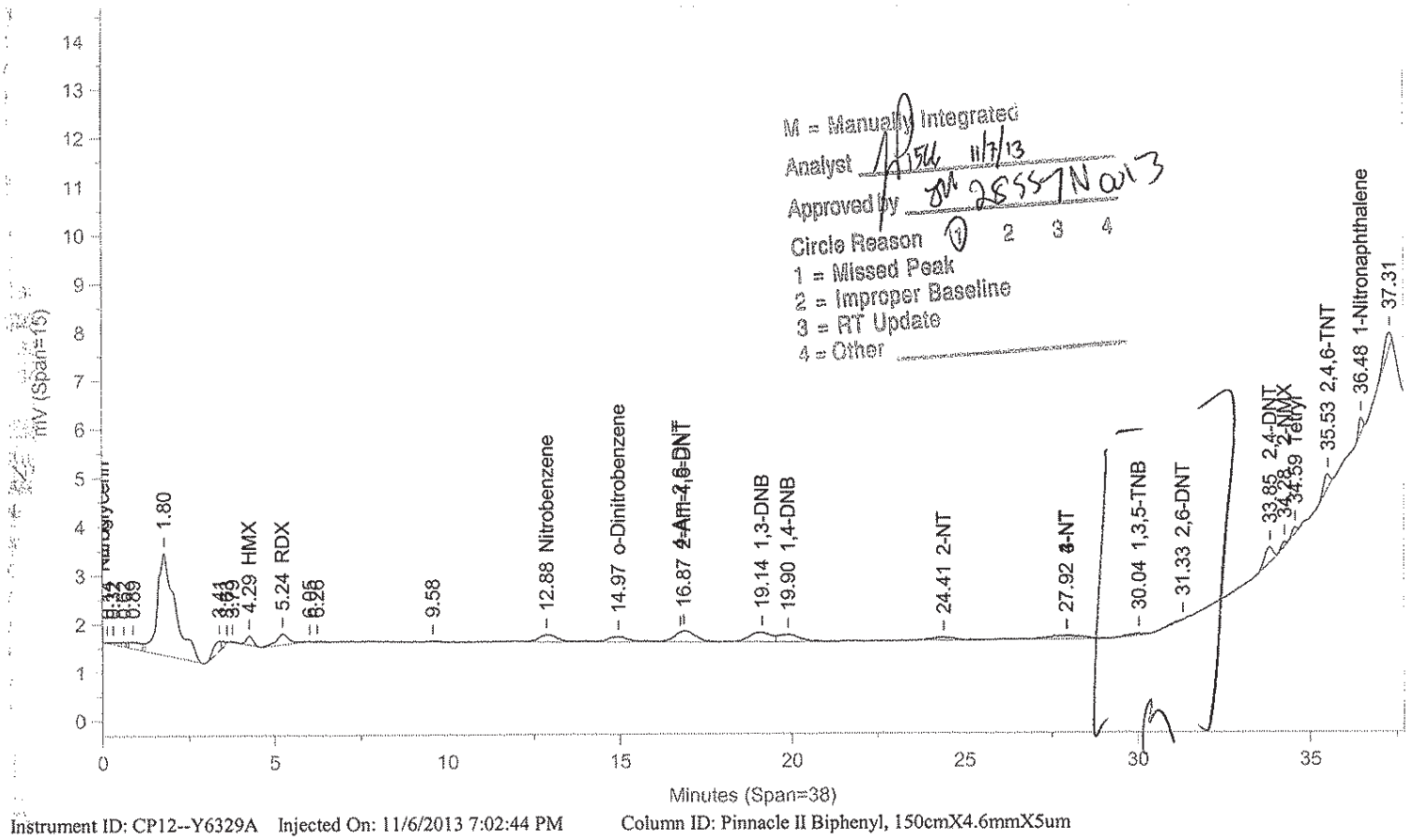
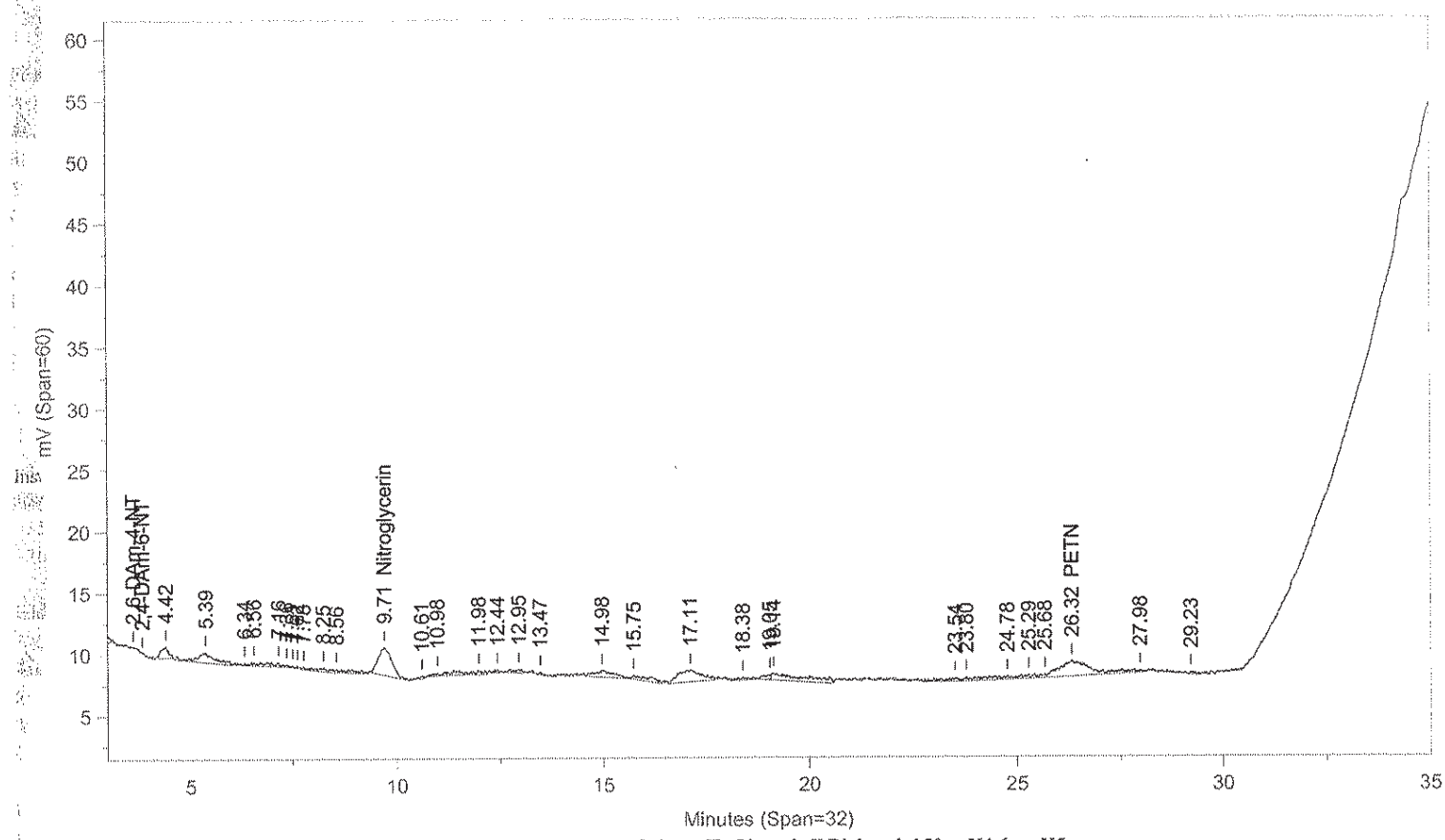
File: C:\CPWIN\DATA1\1C12310.08R



M = Manually Integrated
Analyst 11/7/13
Approved by 28557 Nov 13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	22.972	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
Del .	0	.	PETN	26.317	65376	2960.251	PETN
27.921	5159	124.367	4-NT	.	0	.	4-NT
30.044	1535	59.474	1,3,5-TNB	.	0	.	1,3,5-TNB
31.327	842	22.119	2,6-DNT	.	0	.	2,6-DNT
33.849	5674	21.969	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	86.759	2-NMX	.	0	.	2-NMX
34.589	1463	28.339	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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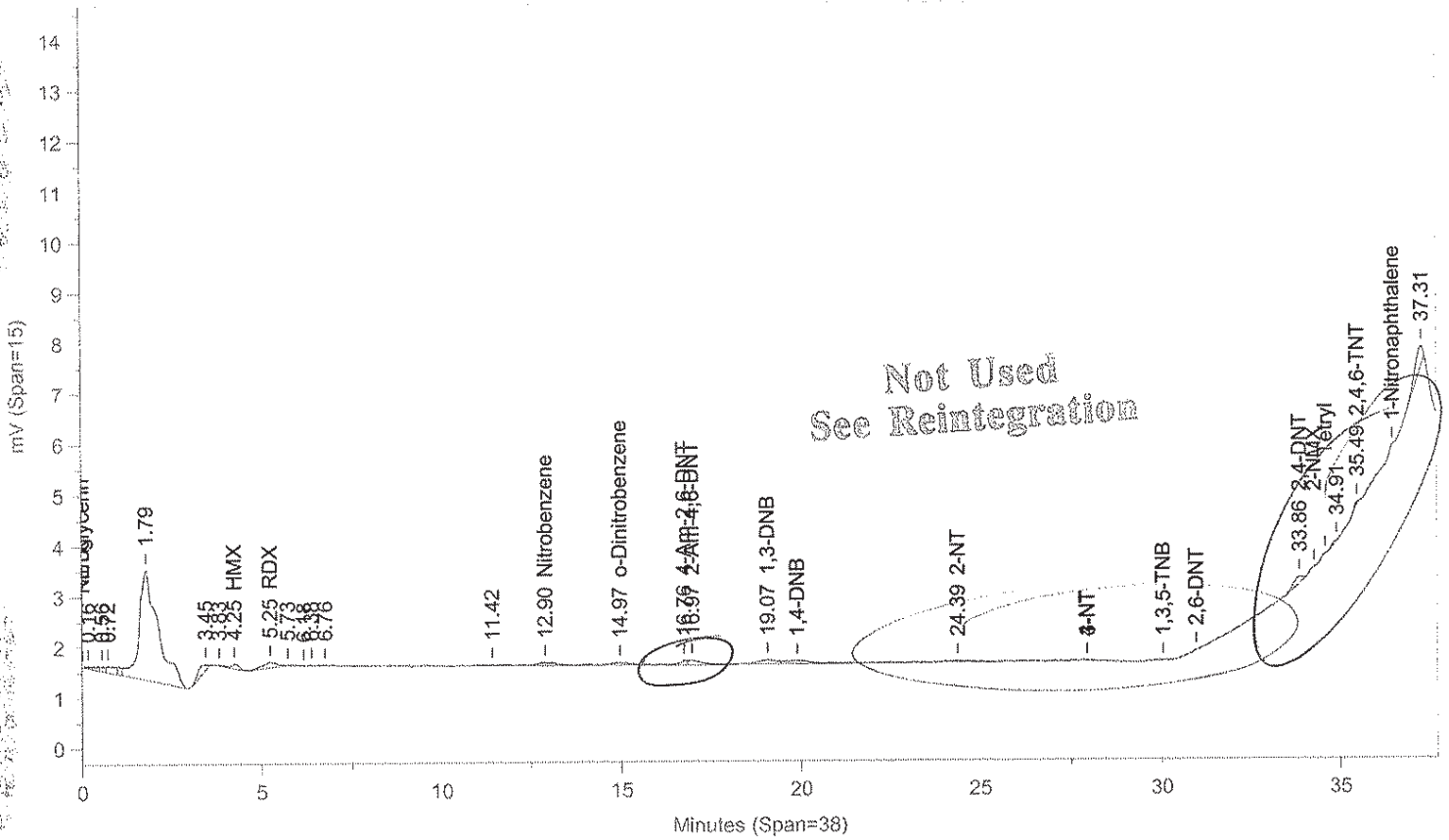
File Reported On: 11/7/2013 at 6:06:43 PM

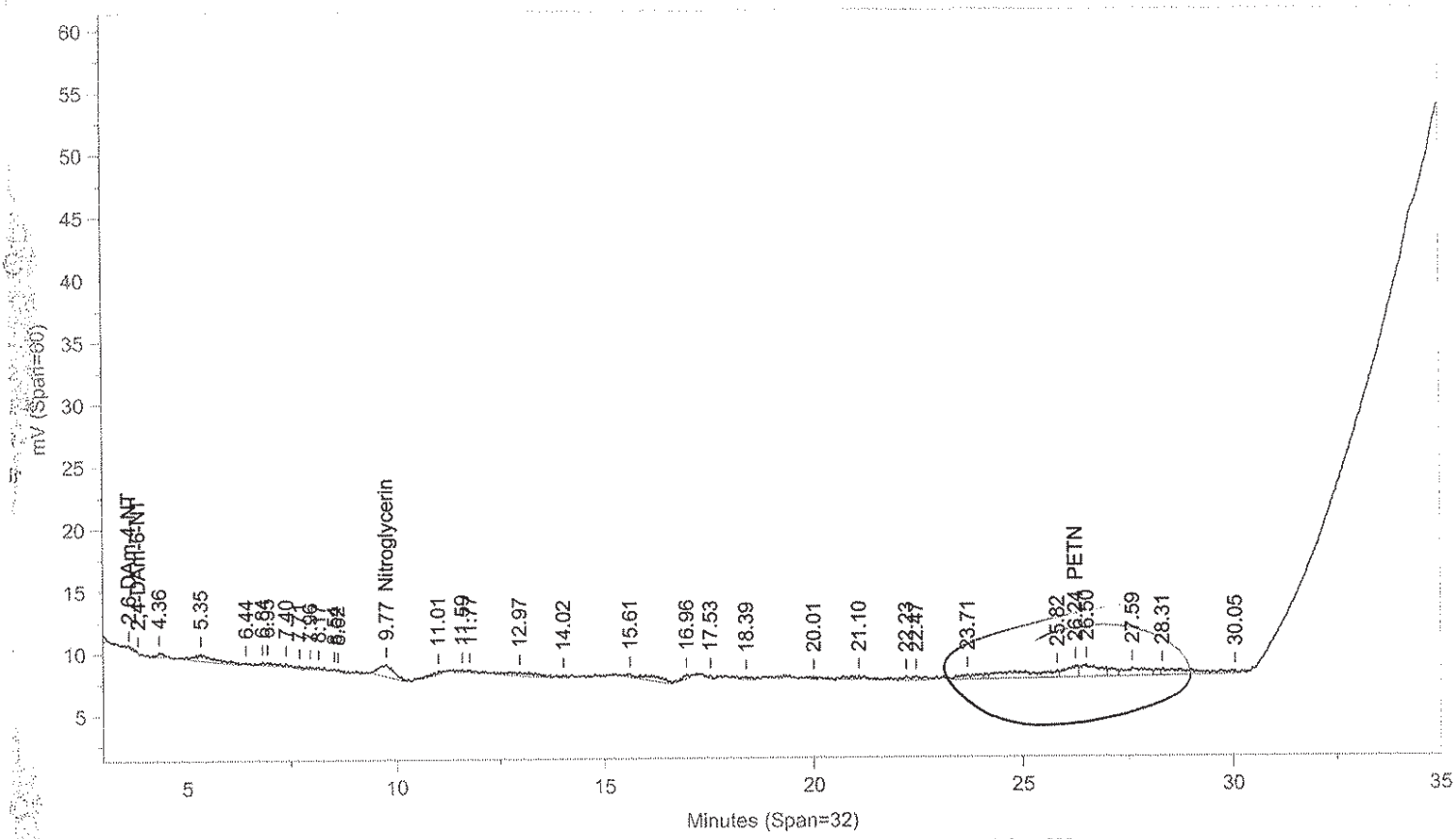
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.09R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

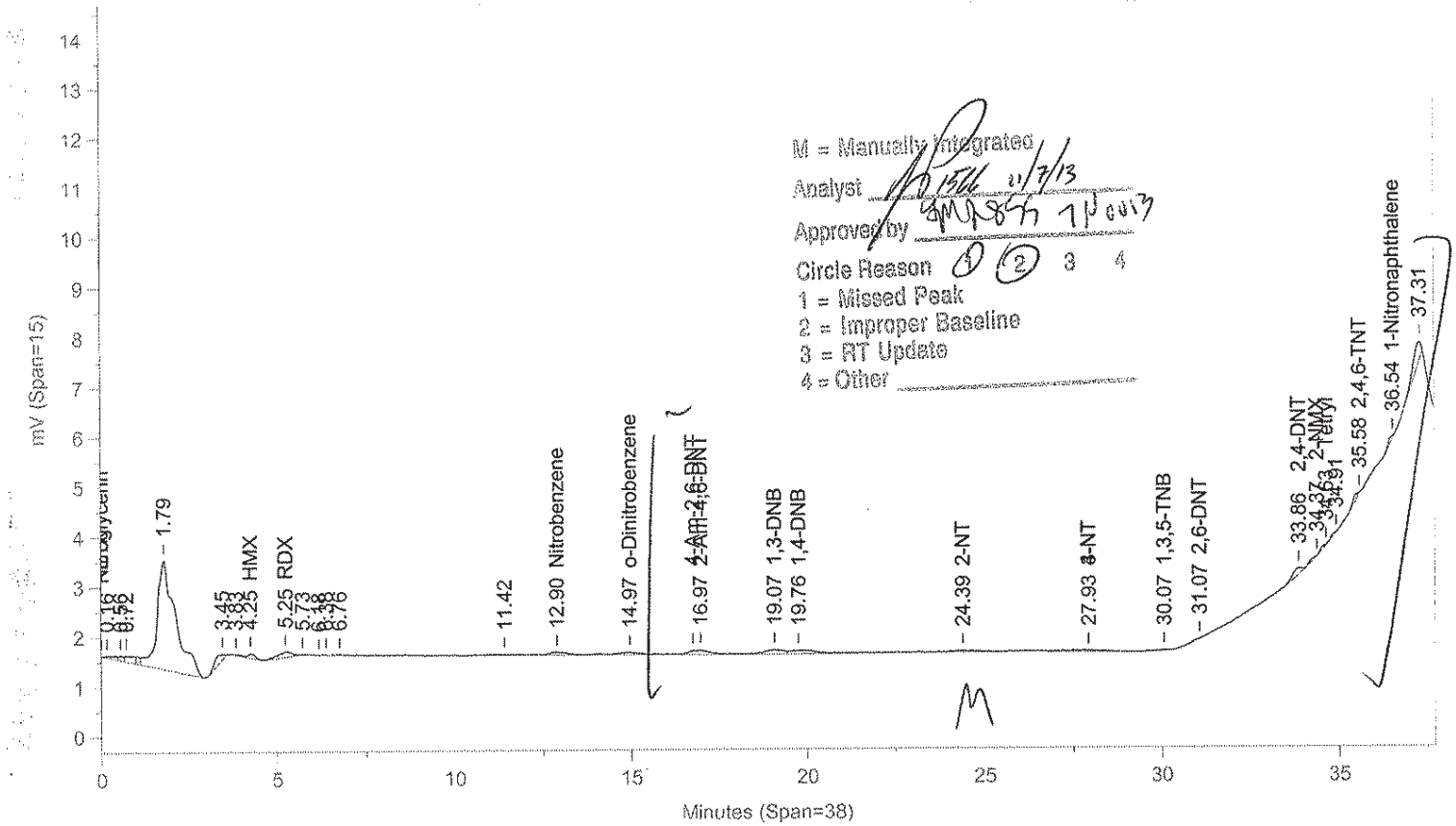
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.764	1335	6.315	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
16.971	2667	8.868	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	6671	17.025	1,3-DNB	.	0	.	1,3-DNB
24.388	1102	3.981	2-NT	.	0	.	2-NT
.	0	.	PETN	26.245	18259	2438.867	PETN
33.863	2480	11.429	2,4-DNT	.	0	.	2,4-DNT
35.493	474	9.918	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.09A
Area File: C:\CPWIN\DATA1\1C12310B.09A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:57:12 PM
File Reported On: 11/7/2013 at 5:57:29 PM

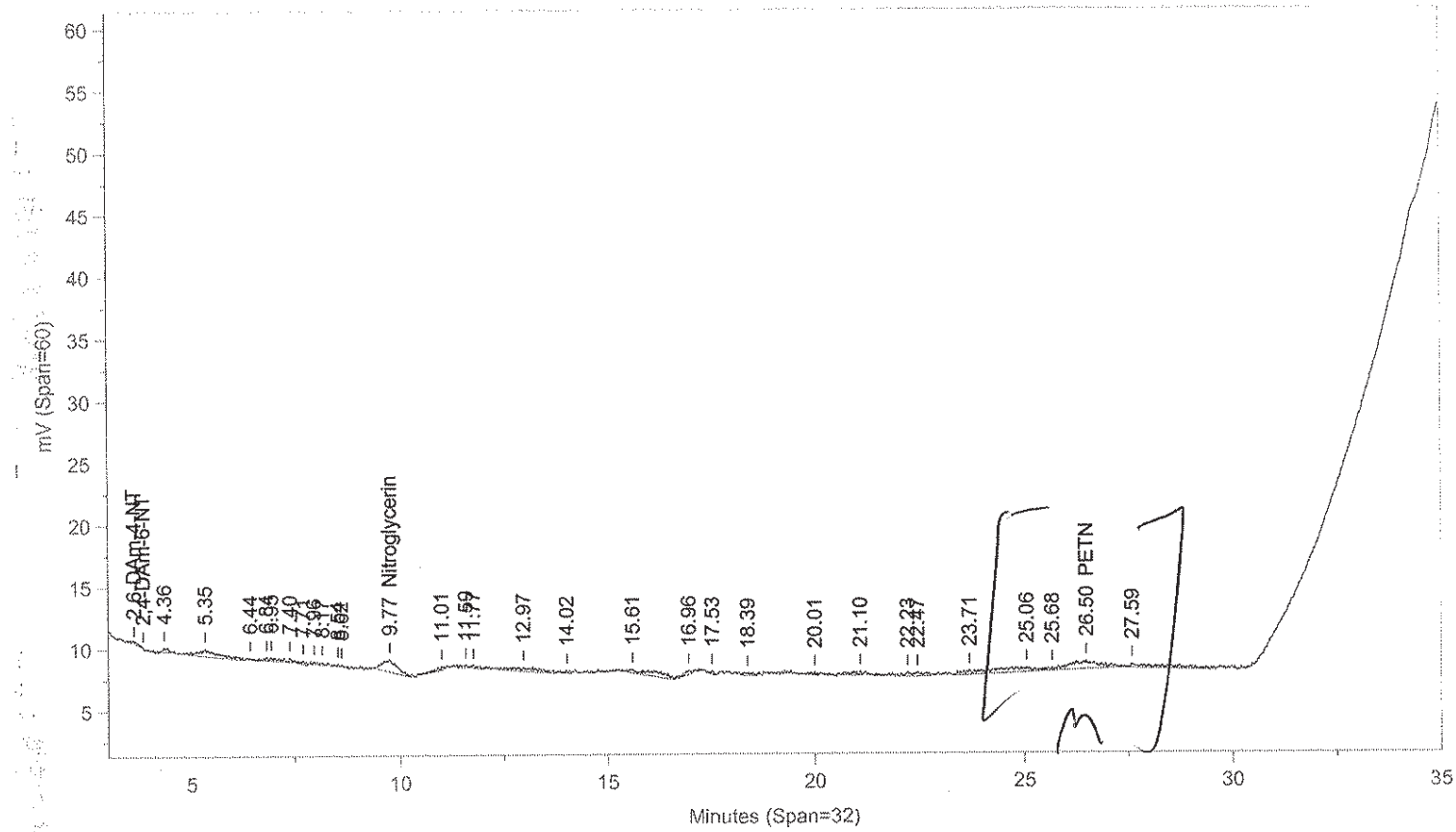
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.09R

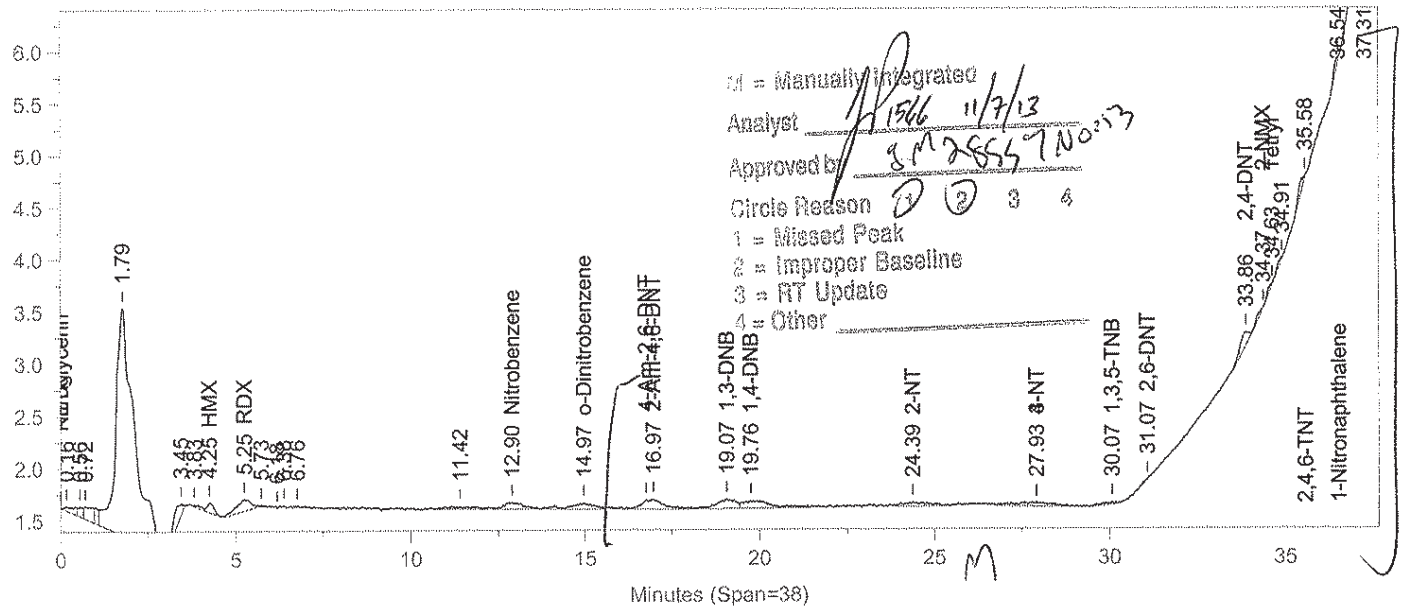


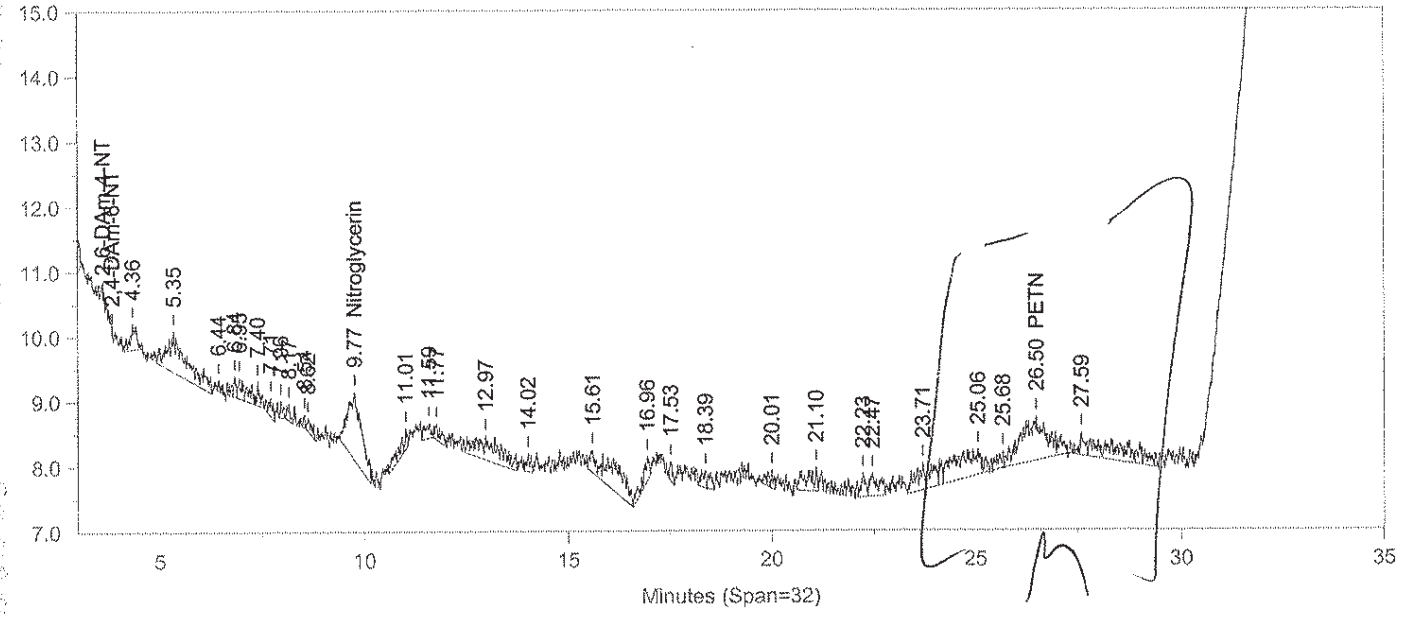
Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=5.0)
Minutes (Span=38)
1.79
HMX
RDX
Nitrobenzene
o-Dinitrobenzene
1,3-DNB
1,4-DNB
2-NT
3-NT
1,3,5-TNB
2,6-DNT
2,4-DNT
2,4,6-TNT
1-Nitronaphthalene


mV (Span=8.0)
Minutes (Span=32)
Nitroglycerin
PETN

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

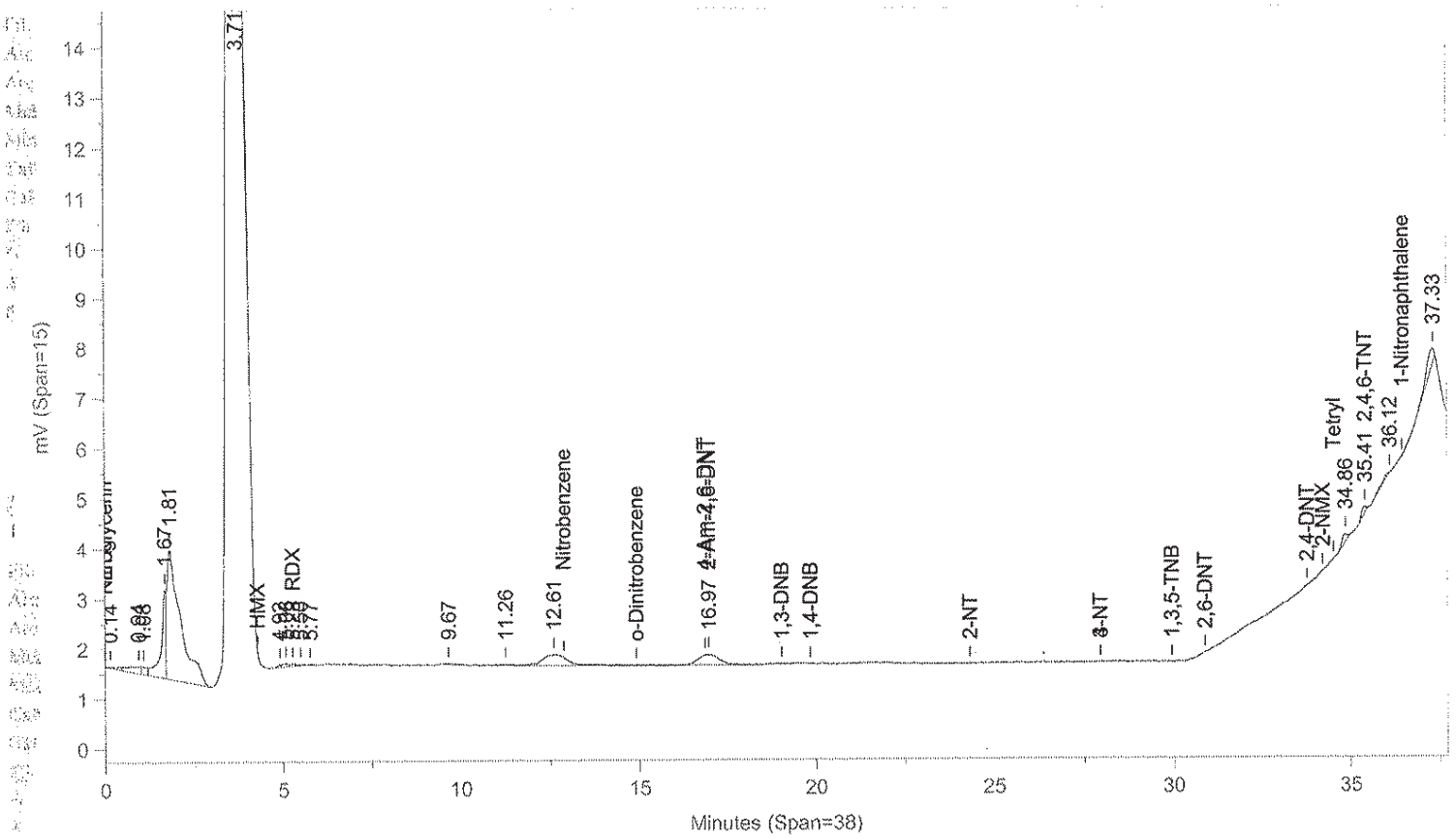
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.971	4003	13.308	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	3481	8.885	1,3-DNB	.	0	.	1,3-DNB
19.76	4154	8.624	1,4-DNB	.	0	.	1,4-DNB
24.388	2024	11.972	2-NT	.	0	.	2-NT
.	0	.	PETN	26.497	30004	2568.832	PETN
27.935	2865	60.908	3-NT	.	0	.	3-NT
30.067	645	55.864	1,3,5-TNB	.	0	.	1,3,5-TNB
31.068	286	17.88	2,6-DNT	.	0	.	2,6-DNT
33.863	2480	9.602	2,4-DNT	.	0	.	2,4-DNT
34.367	547	73.17	2-NMX	.	0	.	2-NMX
34.63	498	22.266	Tetryl	.	0	.	Tetryl
35.583	1137	13.028	2,4,6-TNT	.	0	.	2,4,6-TNT
36.542	828	34.277	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:17:14 PM
File Reported On: 11/7/2013 at 6:17:13 PM

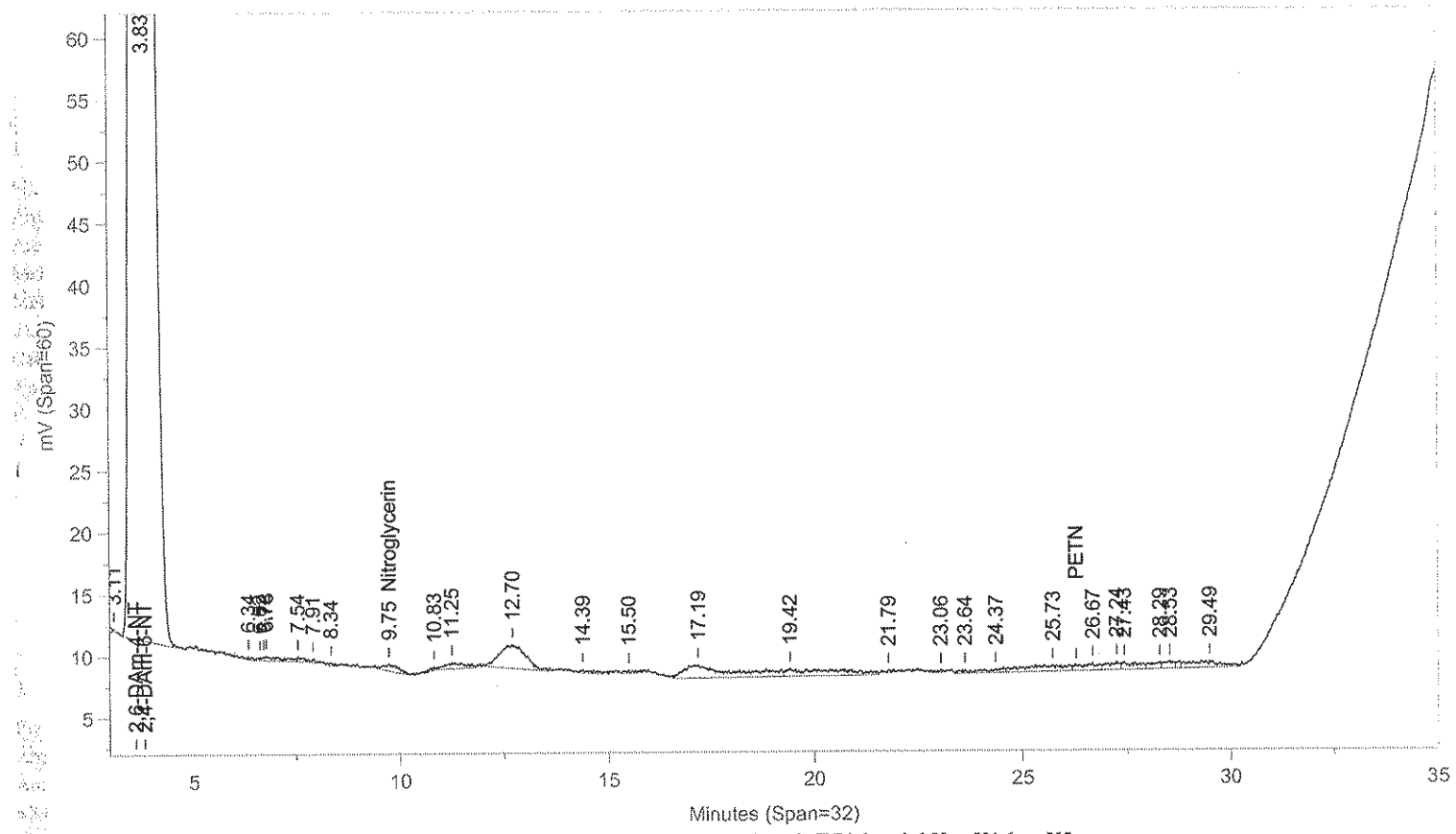
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.11R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.11R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.832	4661927	.	2,4-DAm-6-NT
5.279	536	-18.797	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.75	14347	141.154	Nitroglycerin
16.969	9184	23.769	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
35.414	1426	13.506	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.11A
Area File: C:\CPWIN\DATA1\1C12310B.11A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:48 PM
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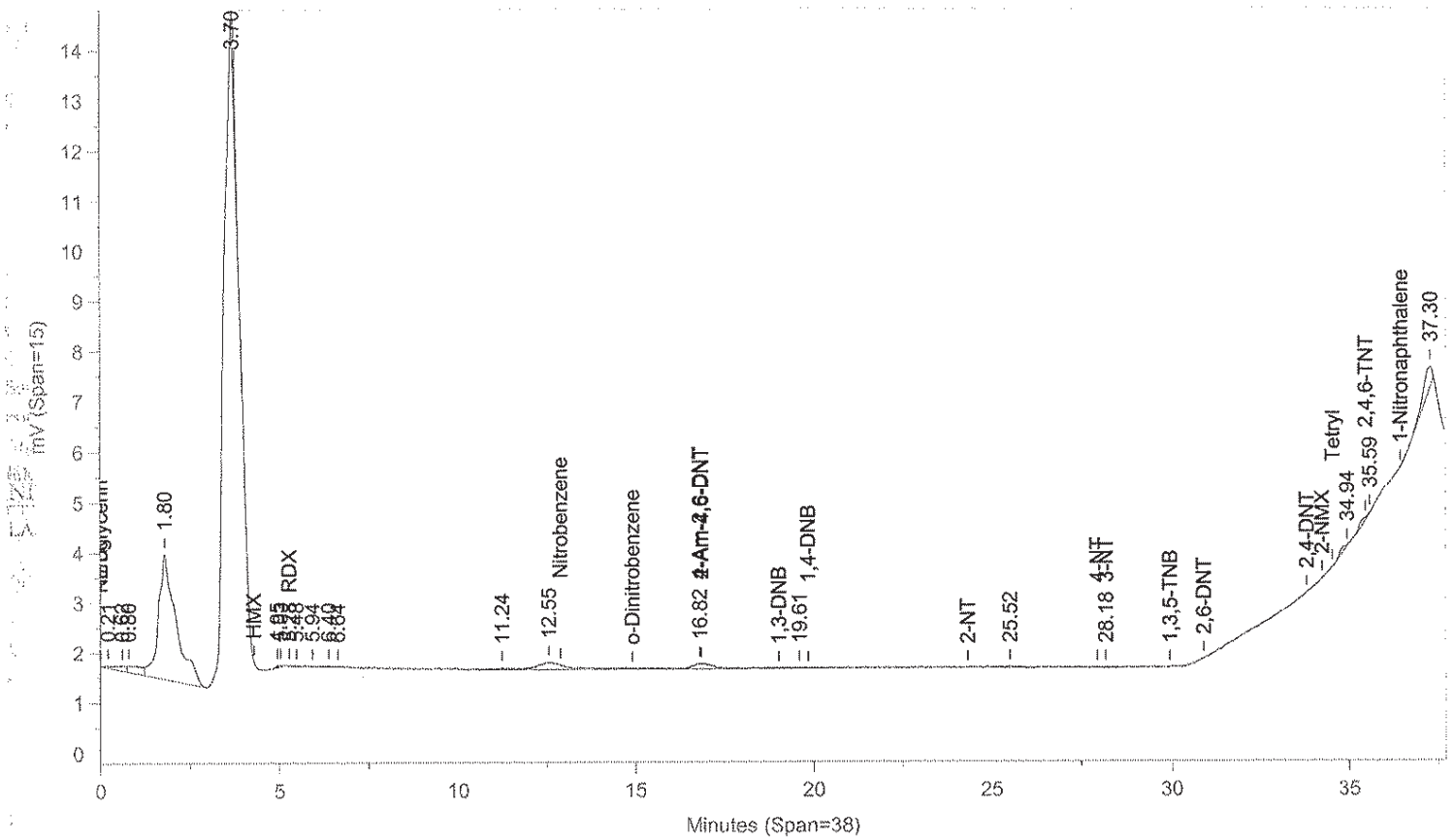
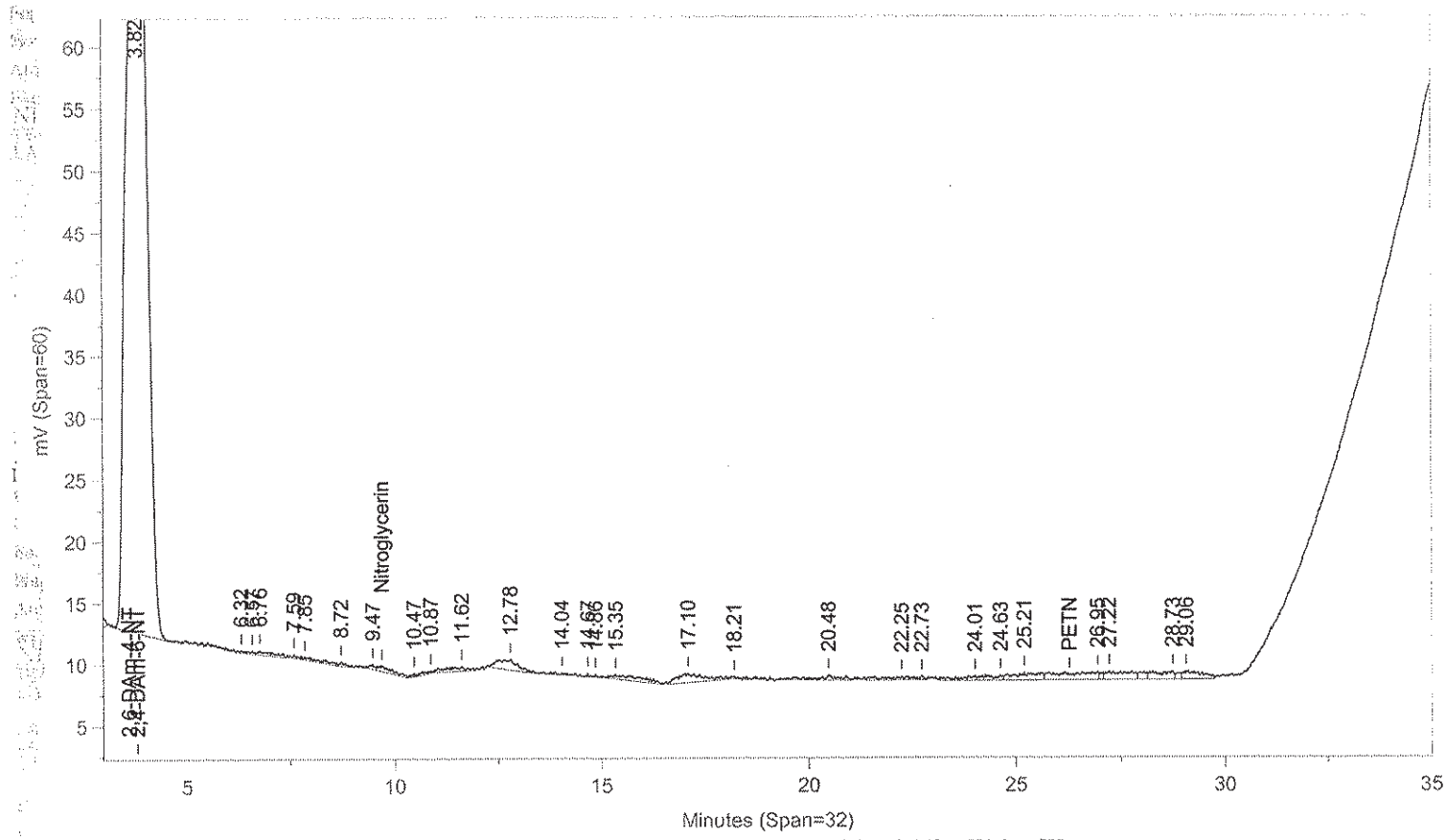
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.12R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.12R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.823	2340450	.	2,4-DAm-6-NT
5.279	49	-23.145	RDX	.	0	.	RDX
16.818	4954	12.834	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
28.178	393	14.232	3-NT	.	0	.	3-NT

Files:
Area File: C:\CPWIN\DATA1\1C12310.12A
Area File: C:\CPWIN\DATA1\1C12310B.12A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:16 PM
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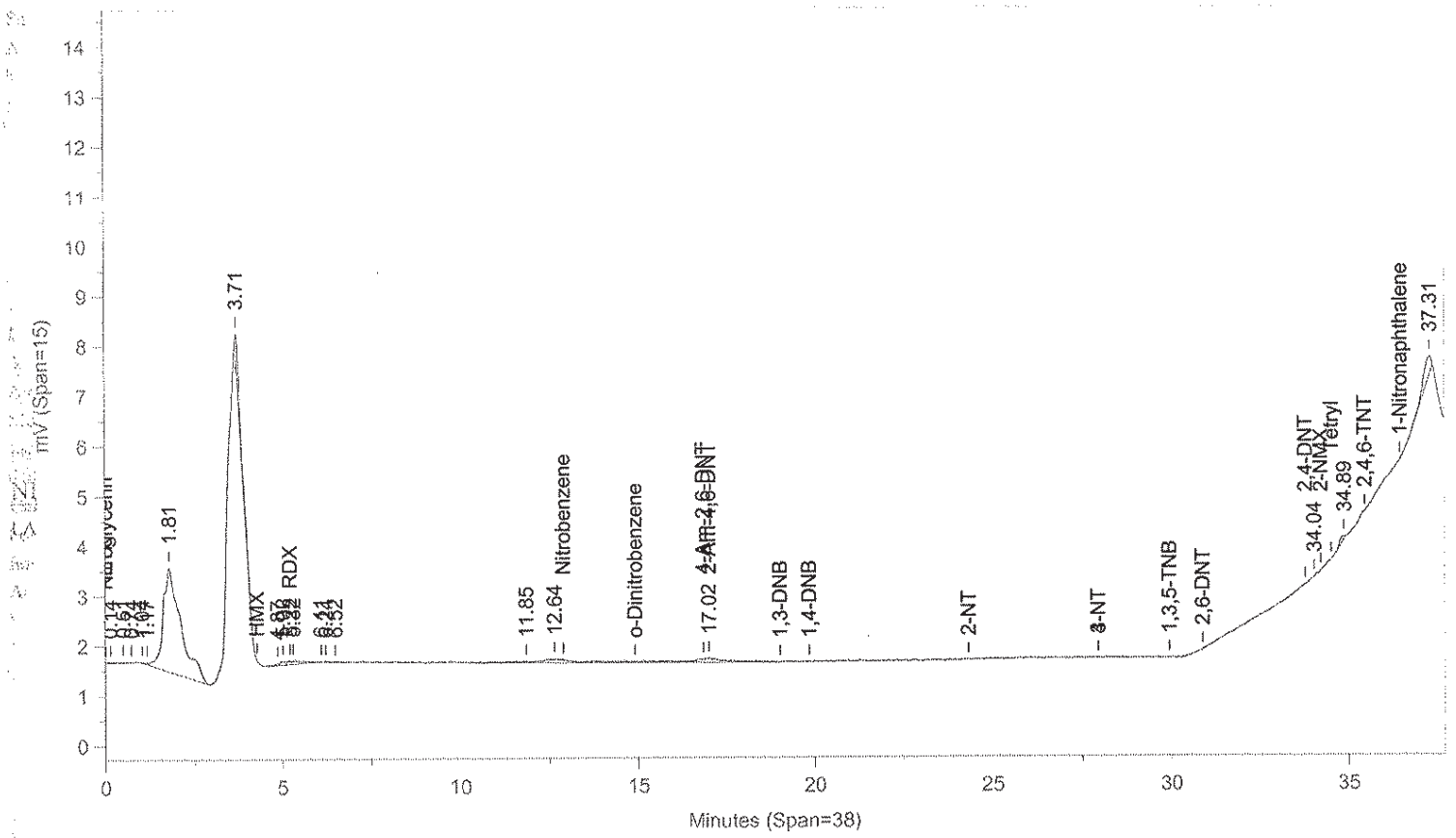
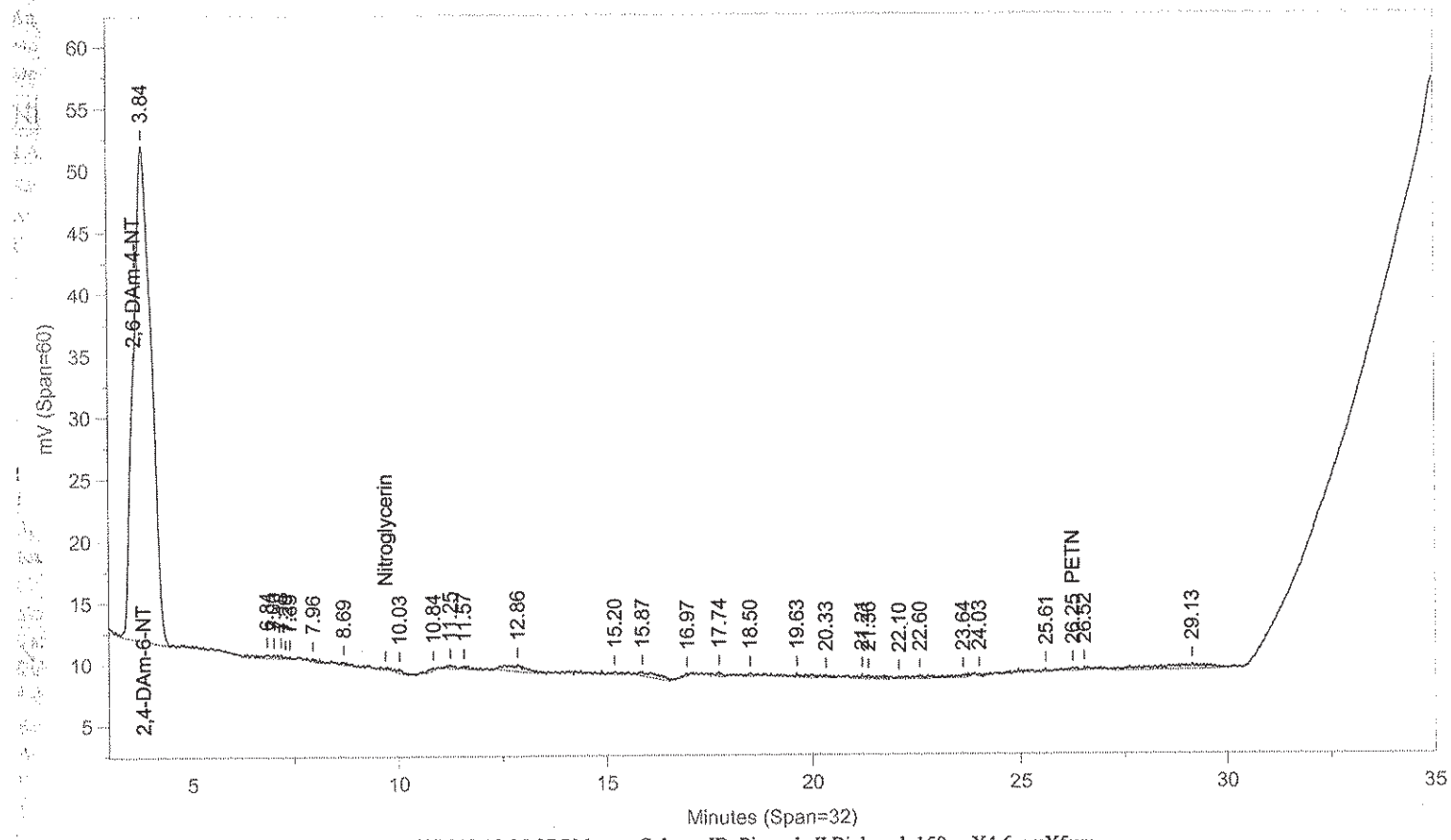
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.13R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.13R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.836	1186674	.	2,4-DAm-6-NT
5.219	575	-18.452	RDX	.	0	.	RDX
17.017	5070	13.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.249	2969	25.002	PETN

Files:
Area File: C:\CPWIN\DATA1\1C12310.13A
Area File: C:\CPWIN\DATA1\1C12310B.13A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:46 PM
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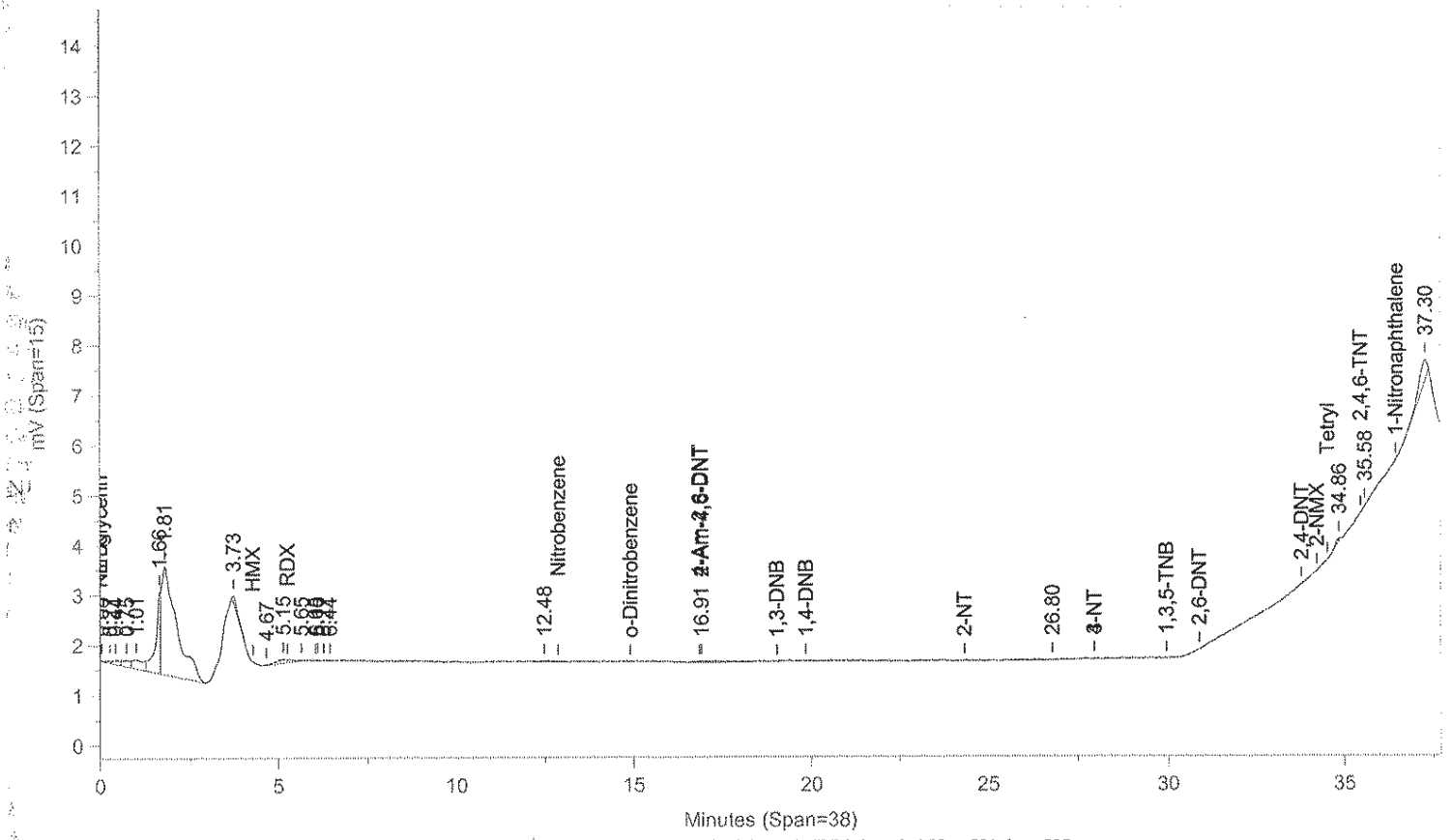
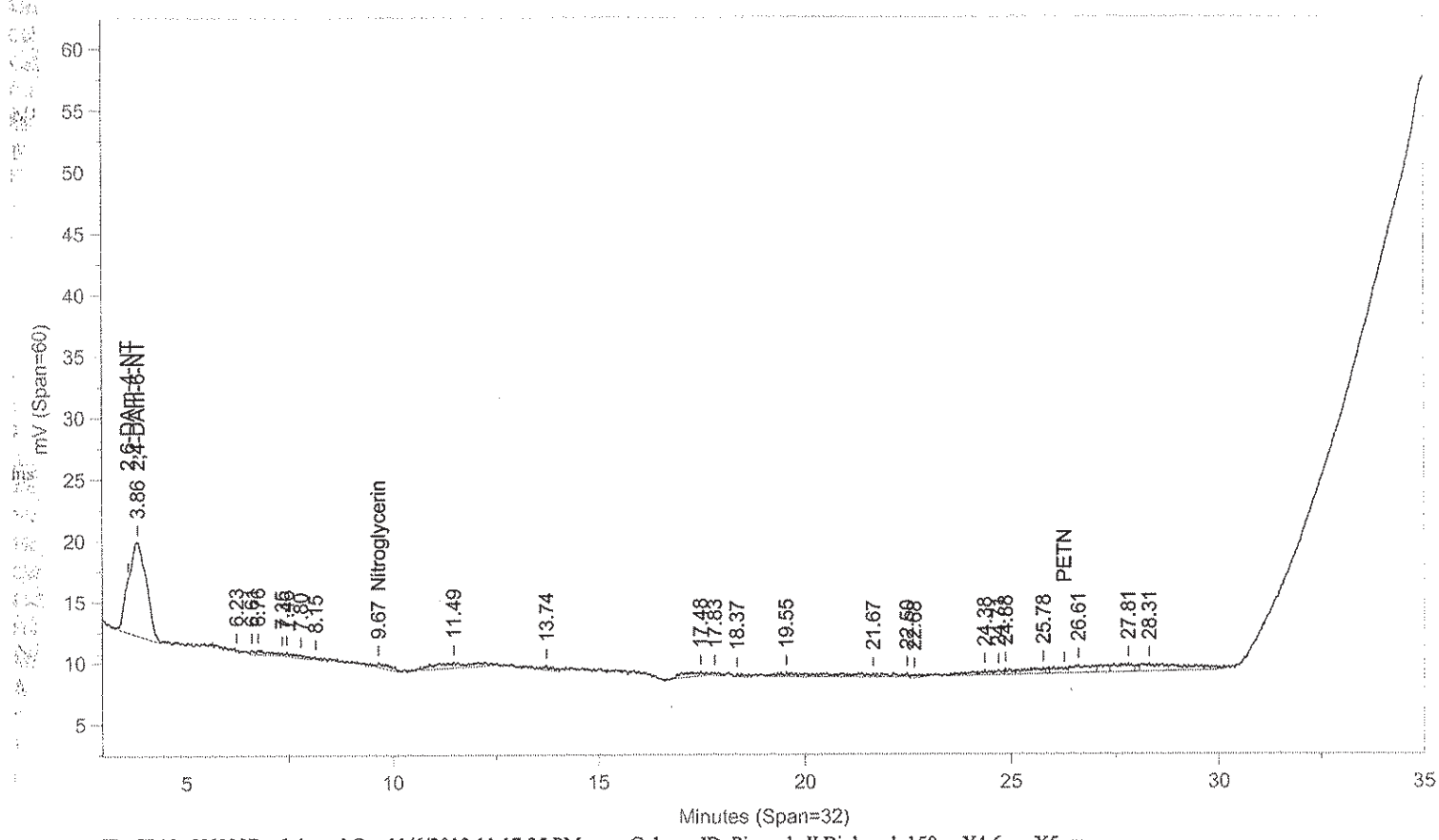
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.14R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.14R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.856	229995	.	2,4-DAm-6-NT
.	0	.	Nitroglycerin	9.671	8117	79.86	Nitroglycerin
16.913	1854	4.799	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Ov.

Files:
Area File: C:\CPWIN\DATA1\1C12310.14A
Area File: C:\CPWIN\DATA1\1C12310B.14A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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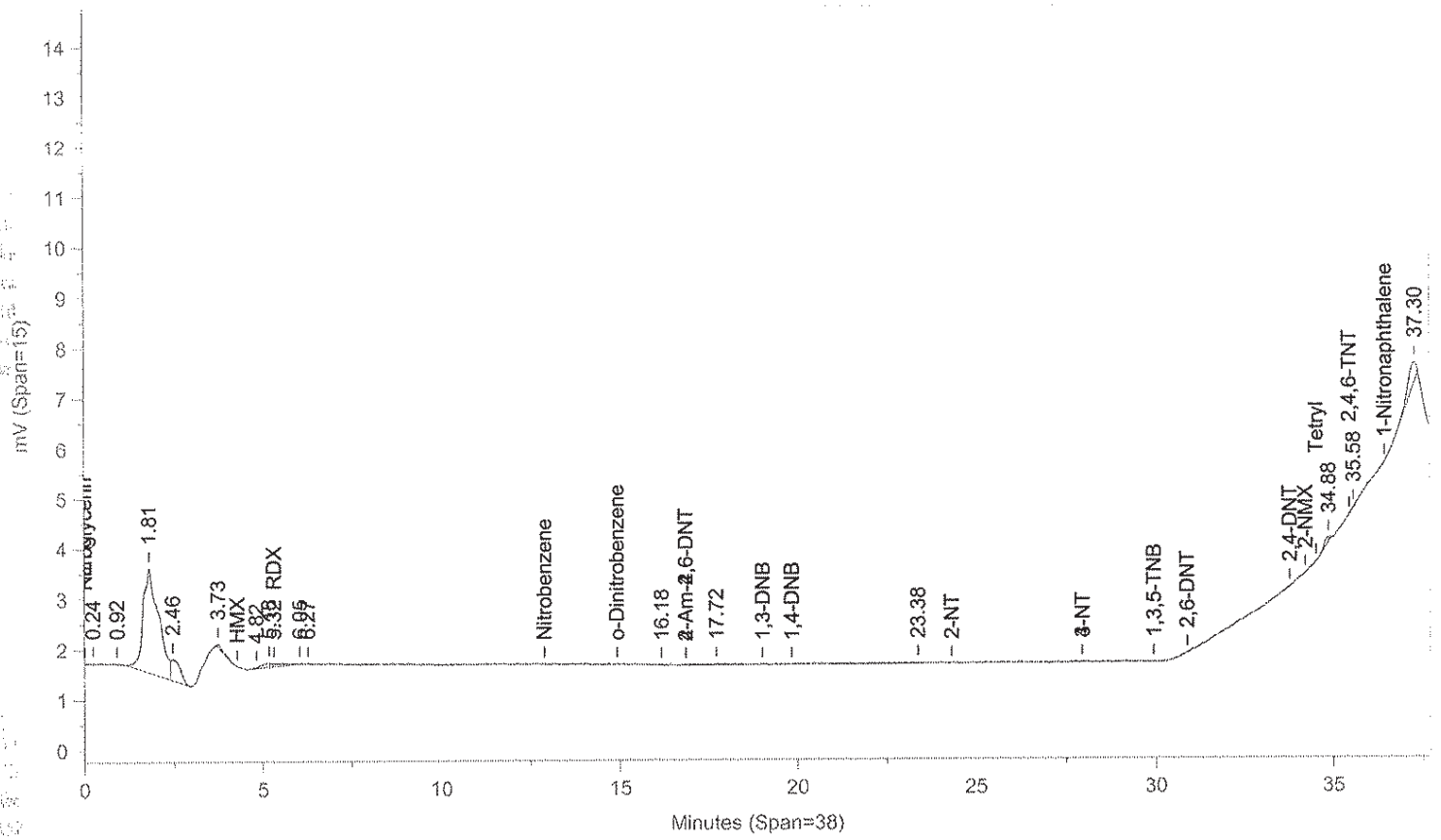
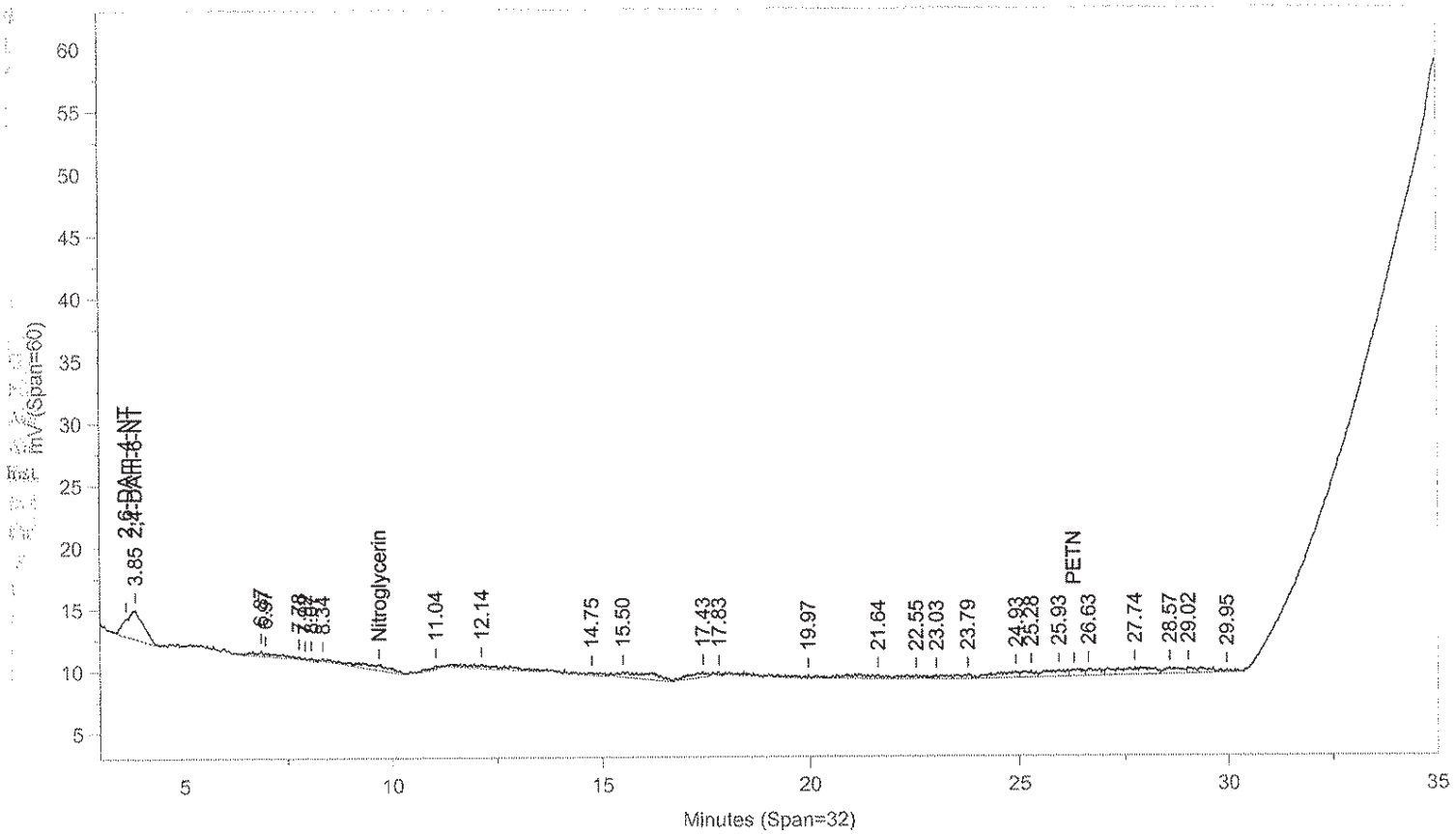


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.15R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	3.849	68461	.	2,4-DAm-6-NT
5.316	1474	-10.427	RDX	.	0	.	RDX

Files:
Area File: C:\CPWIN\DATA1\1C12310.15A
Area File: C:\CPWIN\DATA1\1C12310B.15A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:44 PM
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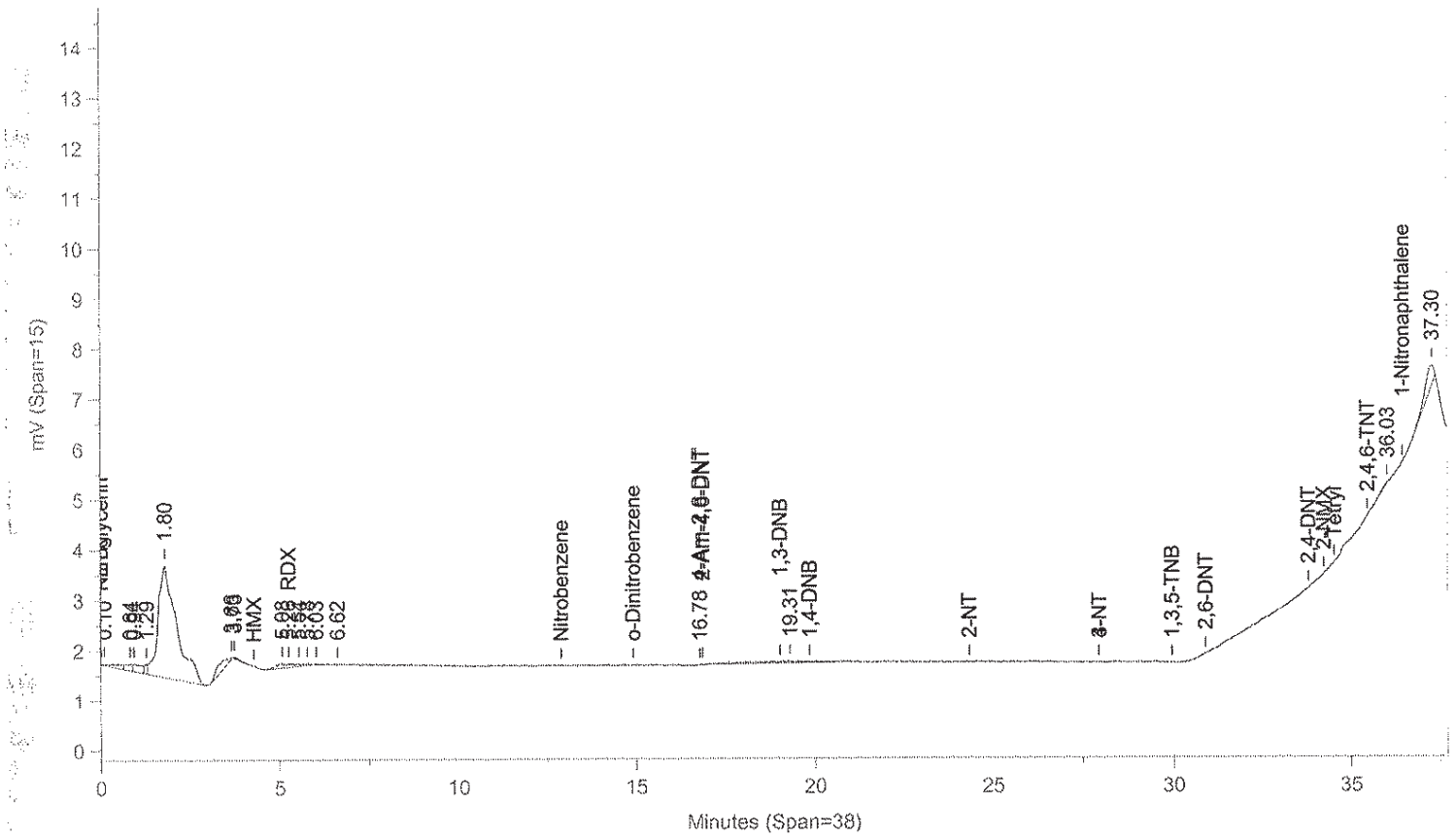
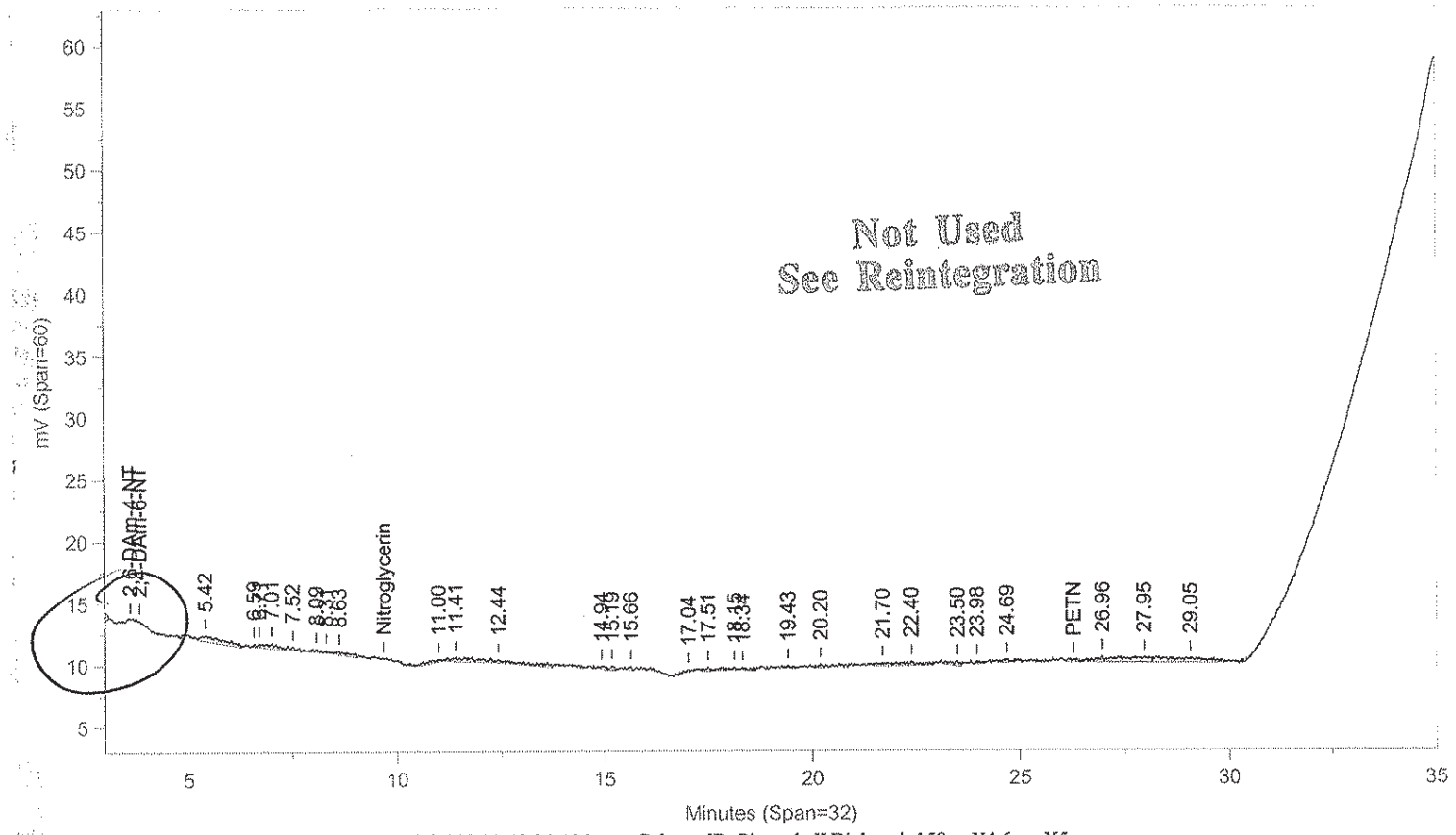
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

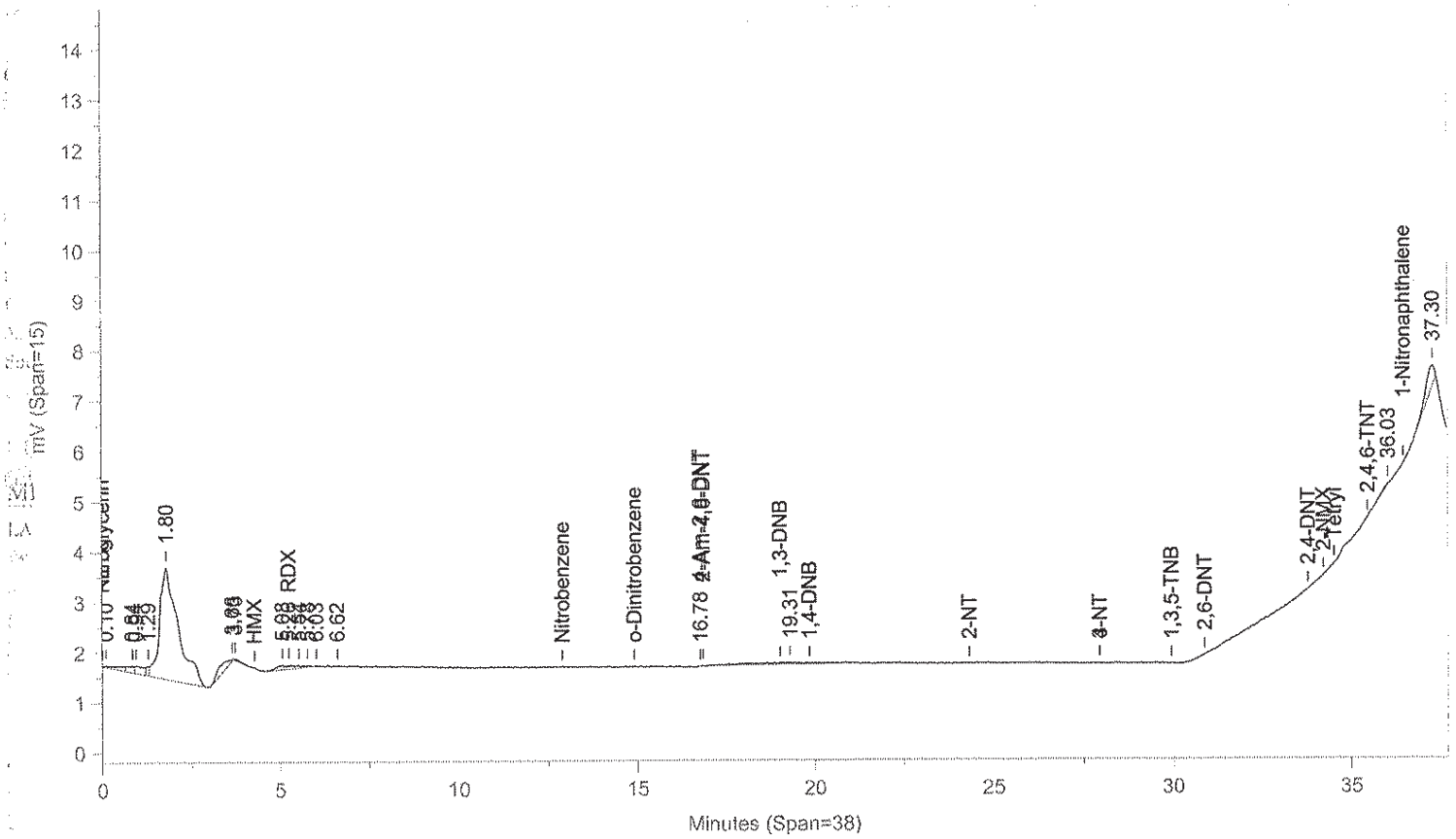
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.26	863	-15.881	RDX	.	0	.	RDX
16.782	22	.057	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.16A
Area File: C:\CPWIN\DATA1\1C12310B.16A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:30:14 PM
File Reported On: 11/7/2013 at 6:30:23 PM

Not Used
See Reintegration

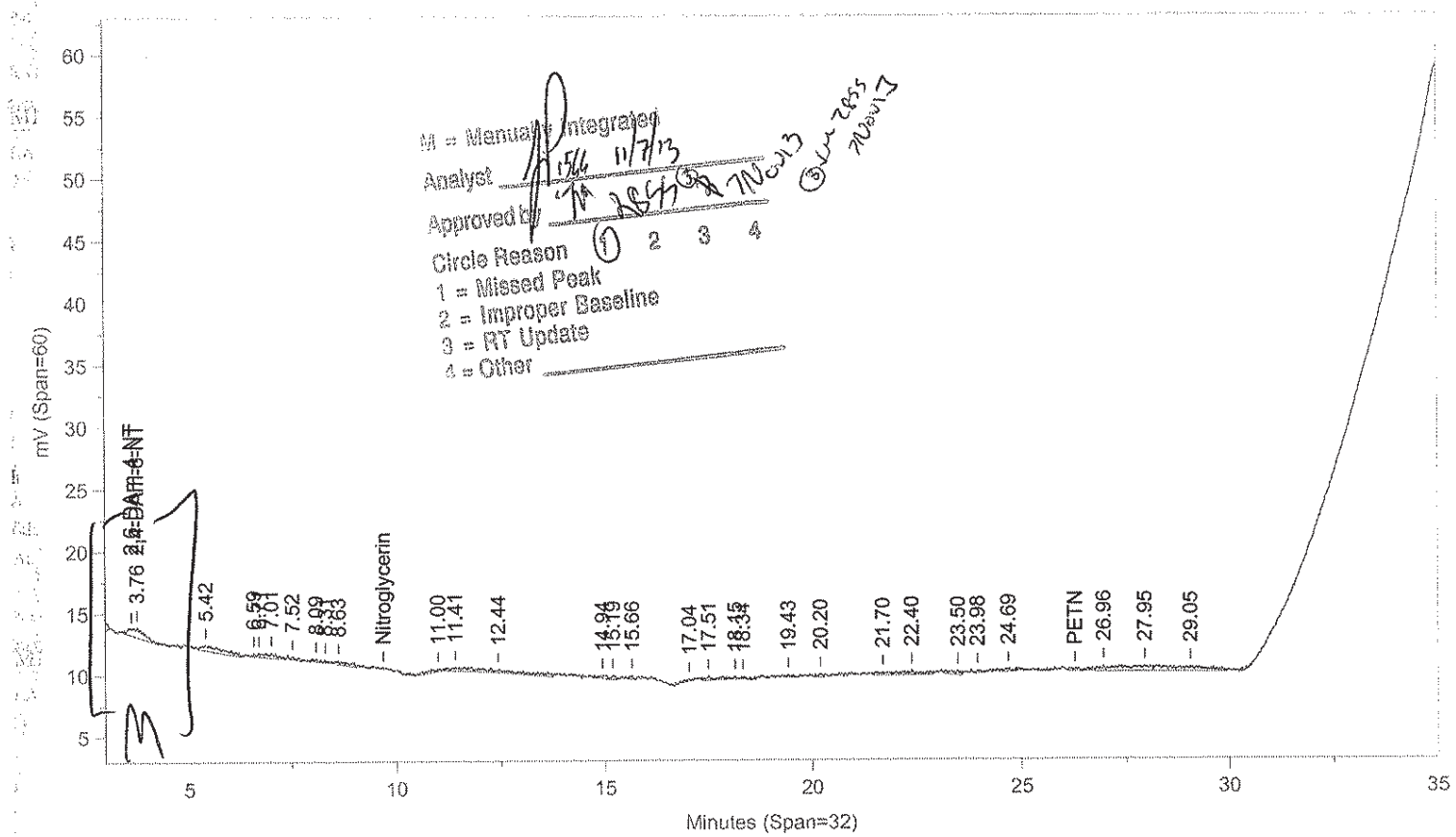
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.761	17579	.	2,4-DAm-6-NT
5.26	863	-15.881	RDX	.	0	.	RDX
16.782	22	.057	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:35:30 PM
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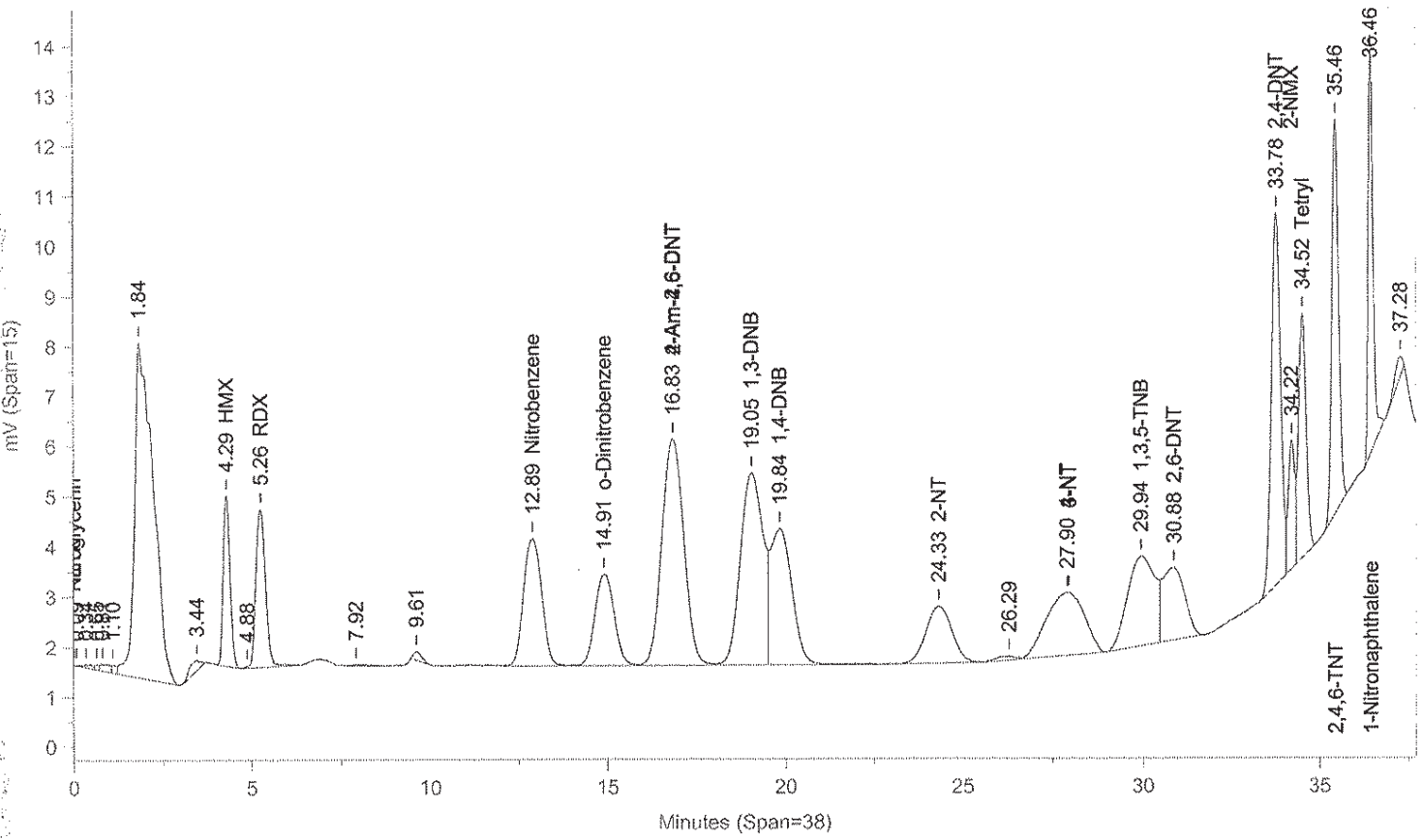
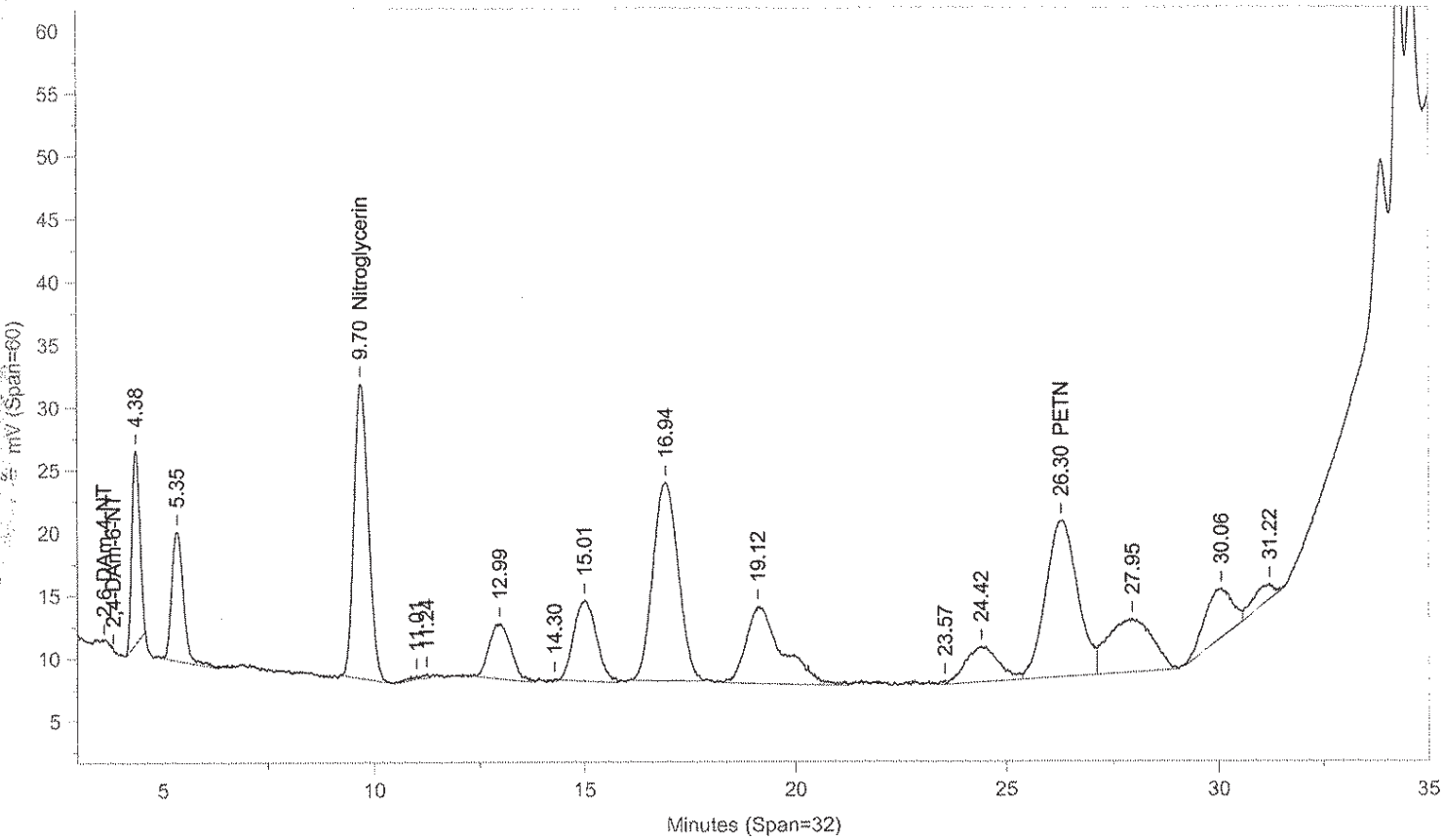
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.10R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.10R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.287	46501	443.578	HMX	.	0	.	HMX
5.259	58978	502.759	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	556021	5470.547	Nitroglycerin
12.894	91644	496.281	Nitrobenzene	.	0	.	Nitrobenzene
14.913	69876	502.214	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.833	192980	499.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.051	169180	499.488	1,3-DNB	.	0	.	1,3-DNB
19.836	116438	500.616	1,4-DNB	.	0	.	1,4-DNB
24.331	58749	501.957	2-NT	.	0	.	2-NT
.	0	.	PETN	26.296	636924	5363.191	PETN
27.897	90471	466.62	4-NT	.	0	.	4-NT
29.945	96363	443.532	1,3,5-TNB	.	0	.	1,3,5-TNB
30.883	63428	498.299	2,6-DNT	.	0	.	2,6-DNT
33.782	136607	528.912	2,4-DNT	.	0	.	2,4-DNT
34.22	32718	990.46	2-NMX	.	0	.	2-NMX
34.522	72541	475.026	Tetryl	.	0	.	Tetryl
35.457	105784	503.005	2,4,6-TNT	.	0	.	2,4,6-TNT
36.455	78595	517.657	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.10A
Area File: C:\CPWIN\DATA1\1C12310B.10A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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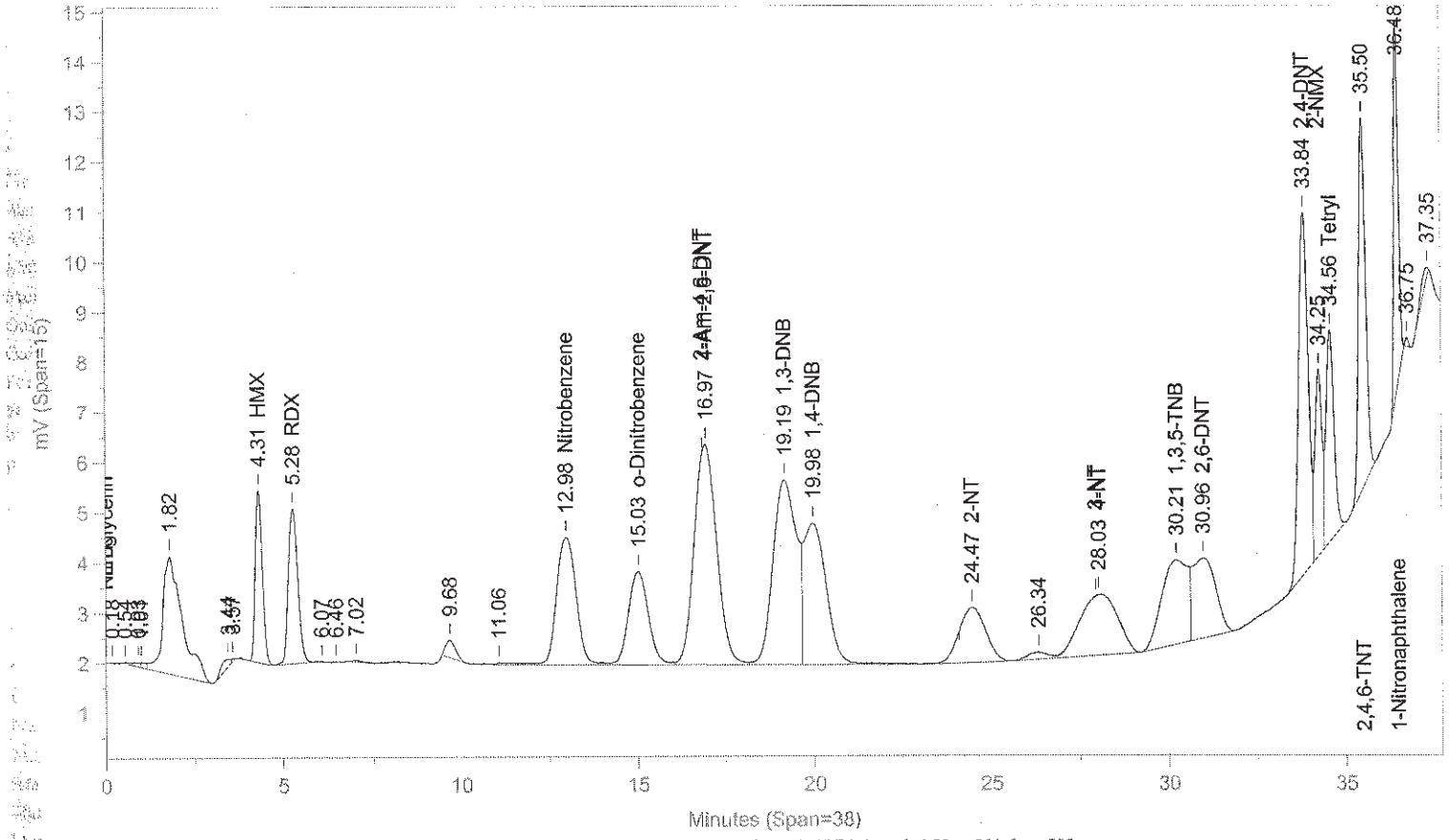
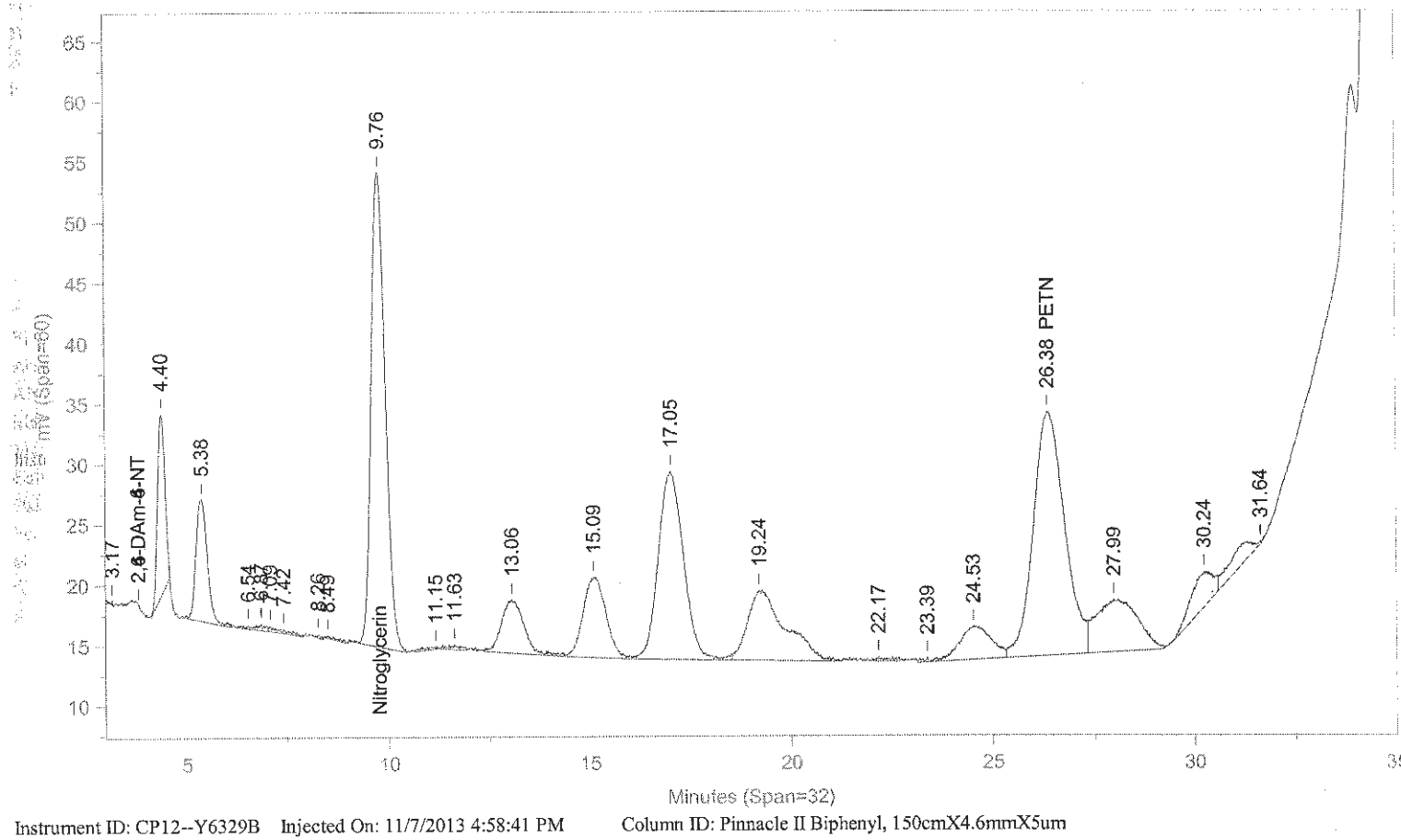
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.39R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.311	47688	454.906	HMX	.	0	.	HMX
15.284	58311	496.808	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.76	965616	9500.457	Nitroglycerin
12.977	95535	517.516	Nitrobenzene	.	0	.	Nitrobenzene
15.029	73460	528.576	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.965	193472	501.229	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.194	170028	501.992	1,3-DNB	.	0	.	1,3-DNB
19.984	122864	529.074	1,4-DNB	.	0	.	1,4-DNB
24.467	57690	492.764	2-NT	.	0	.	2-NT
.	0	.	PETN	26.381	1091611	9191.866	PETN
28.029	88638	457.418	4-NT	.	0	.	4-NT
30.212	87708	408.416	1,3,5-TNB	.	0	.	1,3,5-TNB
30.964	71686	561.447	2,6-DNT	.	0	.	2,6-DNT
33.841	135149	523.268	2,4-DNT	.	0	.	2,4-DNT
34.248	50237	1492.375	2-NMX	.	0	.	2-NMX
34.565	65961	433.595	Tetryl	.	0	.	Tetryl
35.5	104716	497.999	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	69797	462.81	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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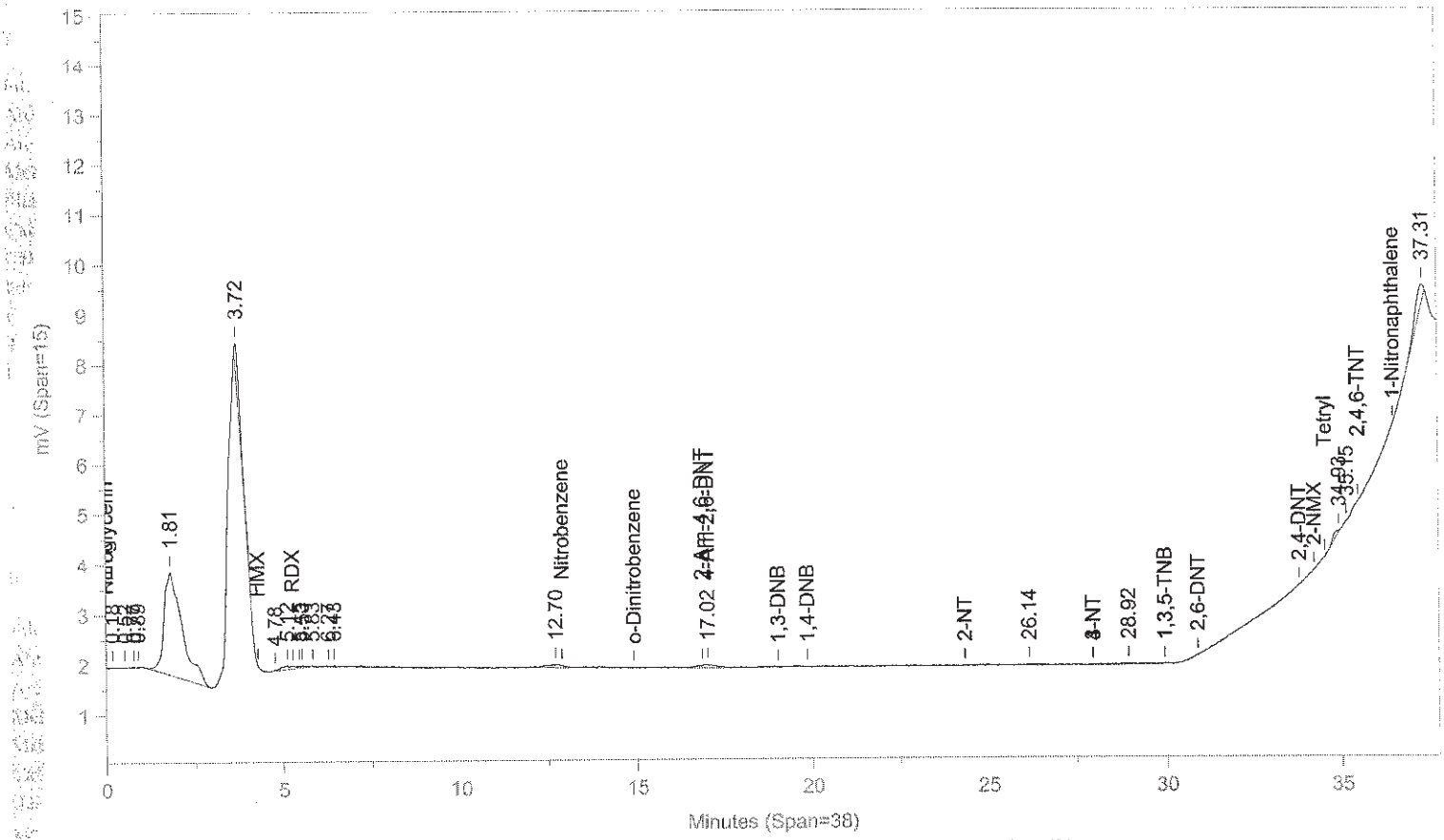
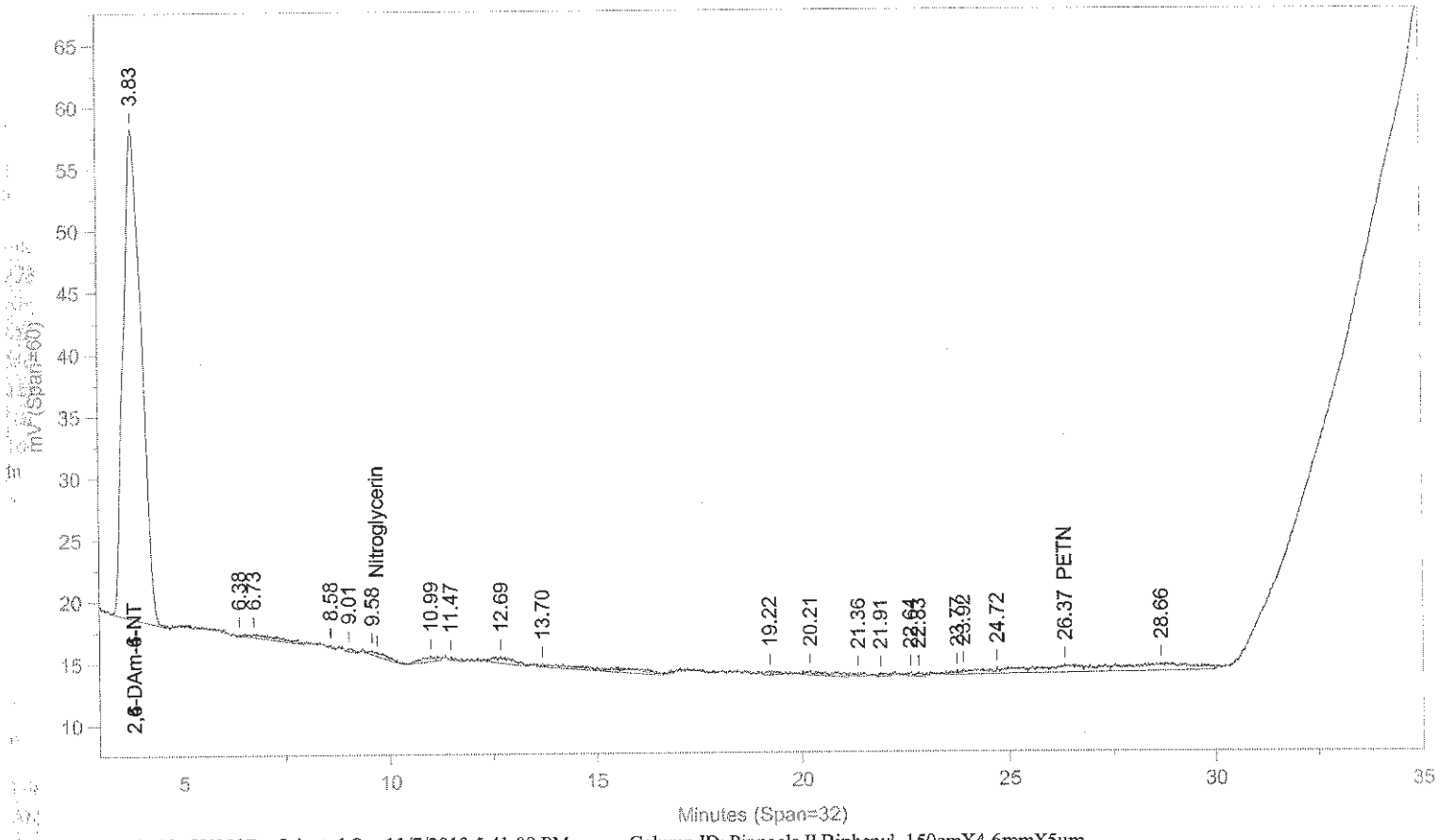
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.40R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.40R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

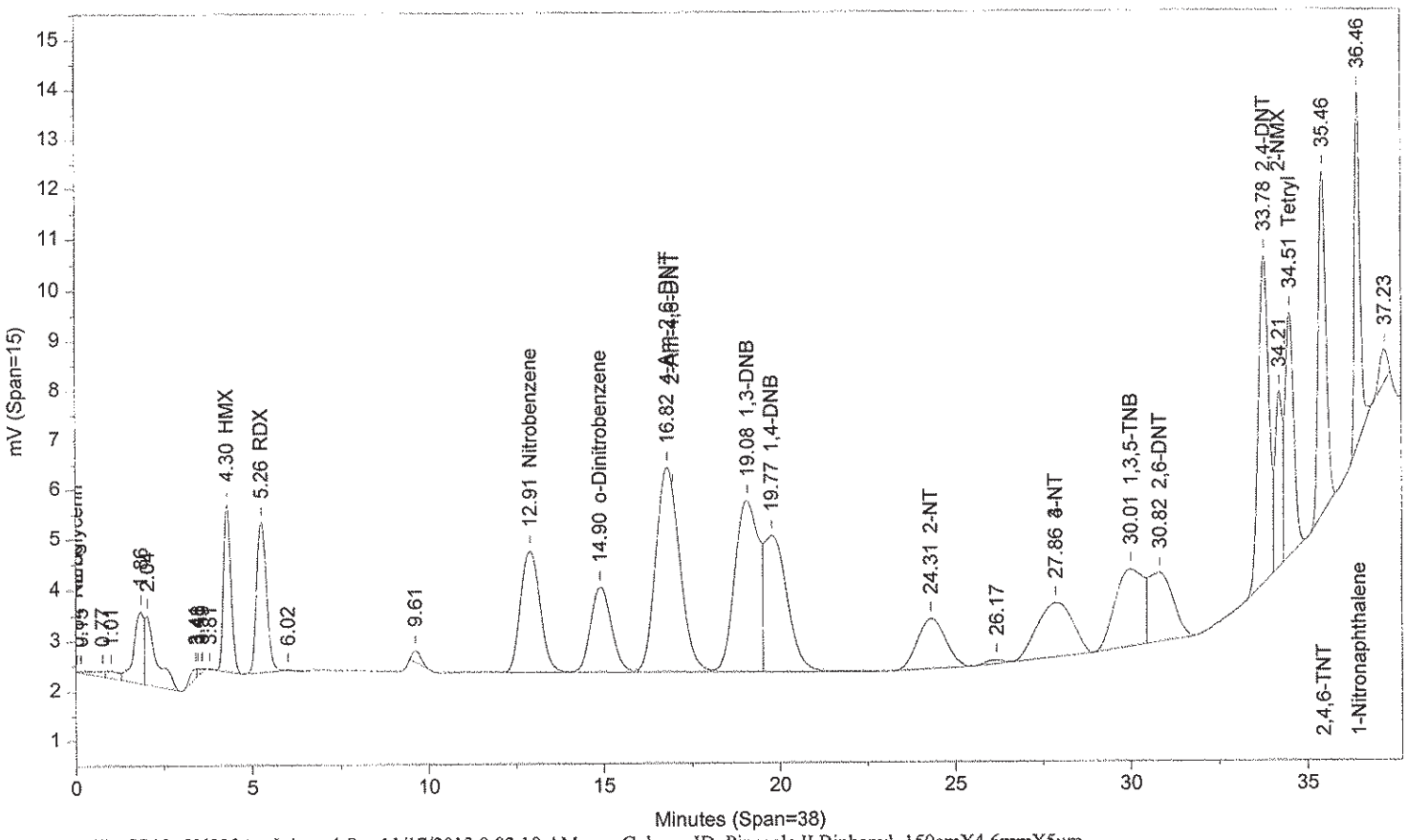
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.834	1187636	538.776	2,6-DAm-4-NT
17.016	3106	8.046	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.366	46924	395.12	PETN

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:45:46 PM
File Reported On: 11/8/2013 at 1:45:44 PM

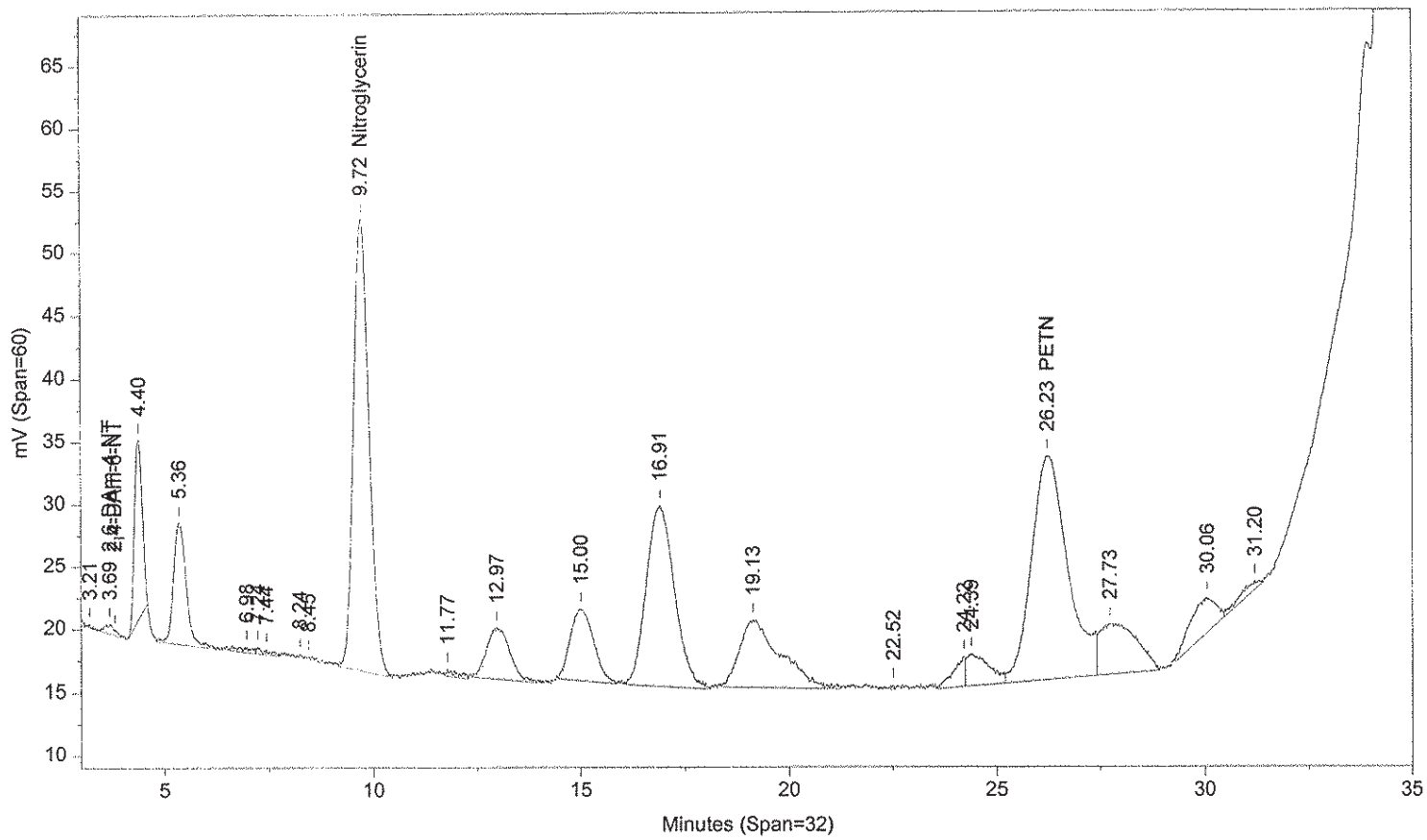
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.58R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.58R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

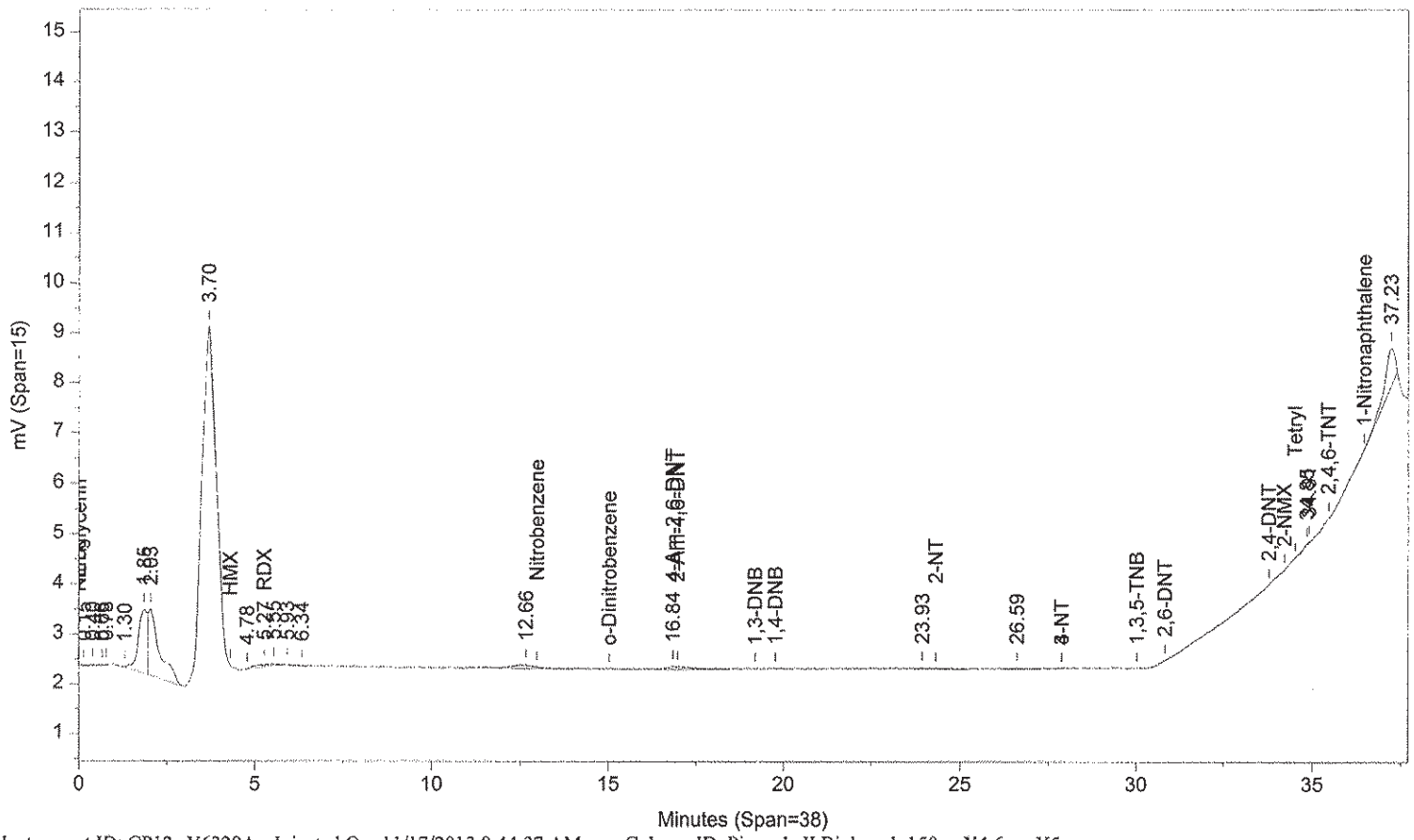
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.694	14543	6.598	2,6-DAm-4-NT
4.297	48637	463.959	HMX	.	0	.	HMX
5.262	58707	500.342	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.719	943360	9281.488	Nitroglycerin
12.911	93190	504.717	Nitrobenzene	.	0	.	Nitrobenzene
14.9	69827	501.855	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.817	192246	498.054	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.078	163081	481.48	1,3-DNB	.	0	.	1,3-DNB
19.773	124527	536.437	1,4-DNB	.	0	.	1,4-DNB
24.306	55862	476.901	2-NT	.	0	.	2-NT
.	0	.	PETN	26.233	1085988	9144.518	PETN
27.861	76417	394.058	3-NT	.	0	.	3-NT
30.009	85309	398.681	1,3,5-TNB	.	0	.	1,3,5-TNB
30.816	64444	506.07	2,6-DNT	.	0	.	2,6-DNT
33.782	135750	525.596	2,4-DNT	.	0	.	2,4-DNT
34.215	52158	1547.416	2-NMX	.	0	.	2-NMX
34.513	83687	545.21	Tetryl	.	0	.	Tetryl
35.458	105419	501.296	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	78051	514.265	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

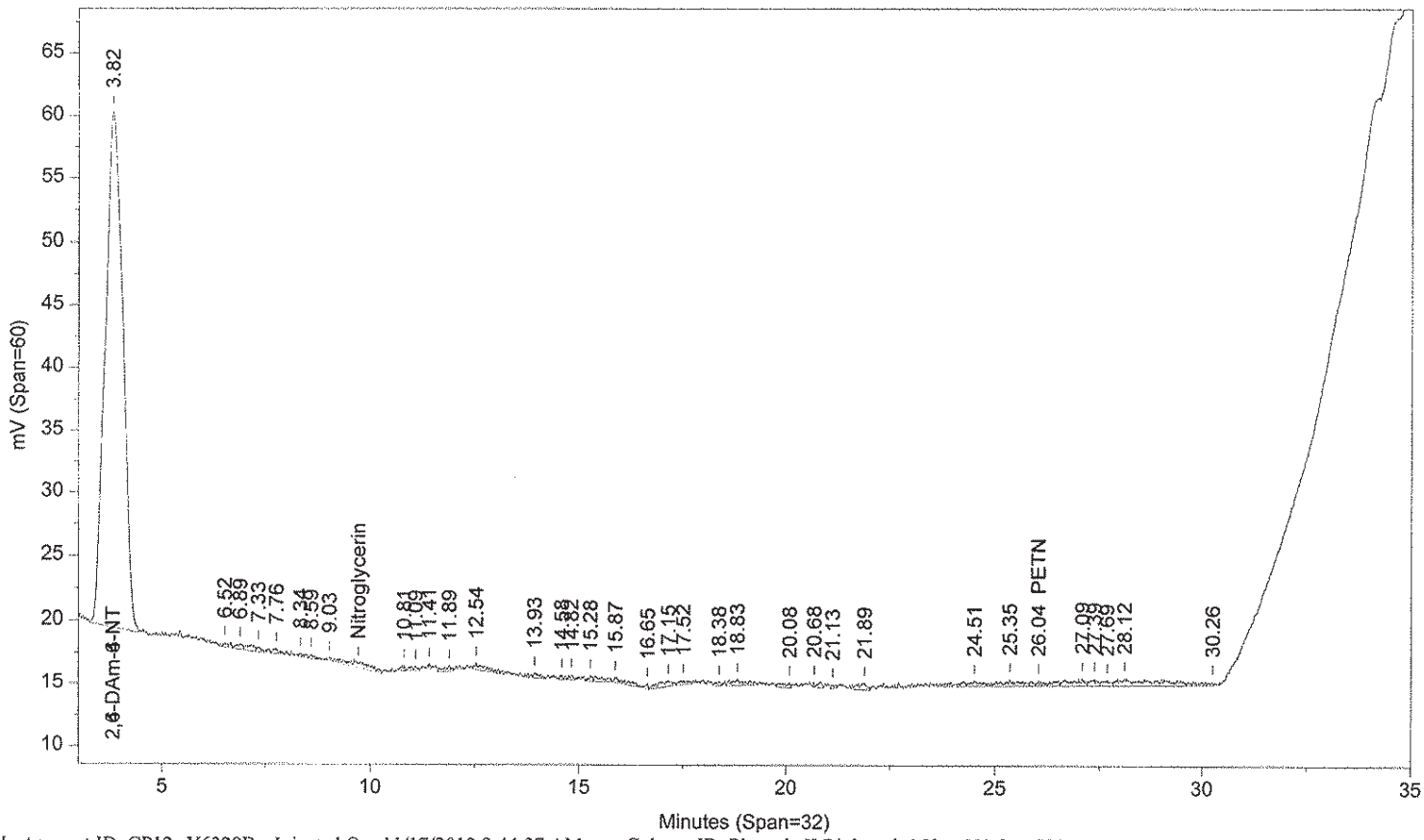
Files:
Area File: C:\CPWIN\DATA1\4C12310.58A
Area File: C:\CPWIN\DATA1\4C12310B.58A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:10 PM
File Reported On: 11/17/2013 at 9:49:20 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.59R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.59R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.818	1194434	541.86	2,6-DAm-4-NT
5.271	1214	-12.751	RDX	.	0	.	RDX
16.844	3478	9.011	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.04	9091	76.554	PETN

Files:
Area File: C:\CPWIN\DATA1\4C12310.59A
Area File: C:\CPWIN\DATA1\4C12310B.59A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:32 PM
File Reported On: 11/17/2013 at 9:49:43 PM

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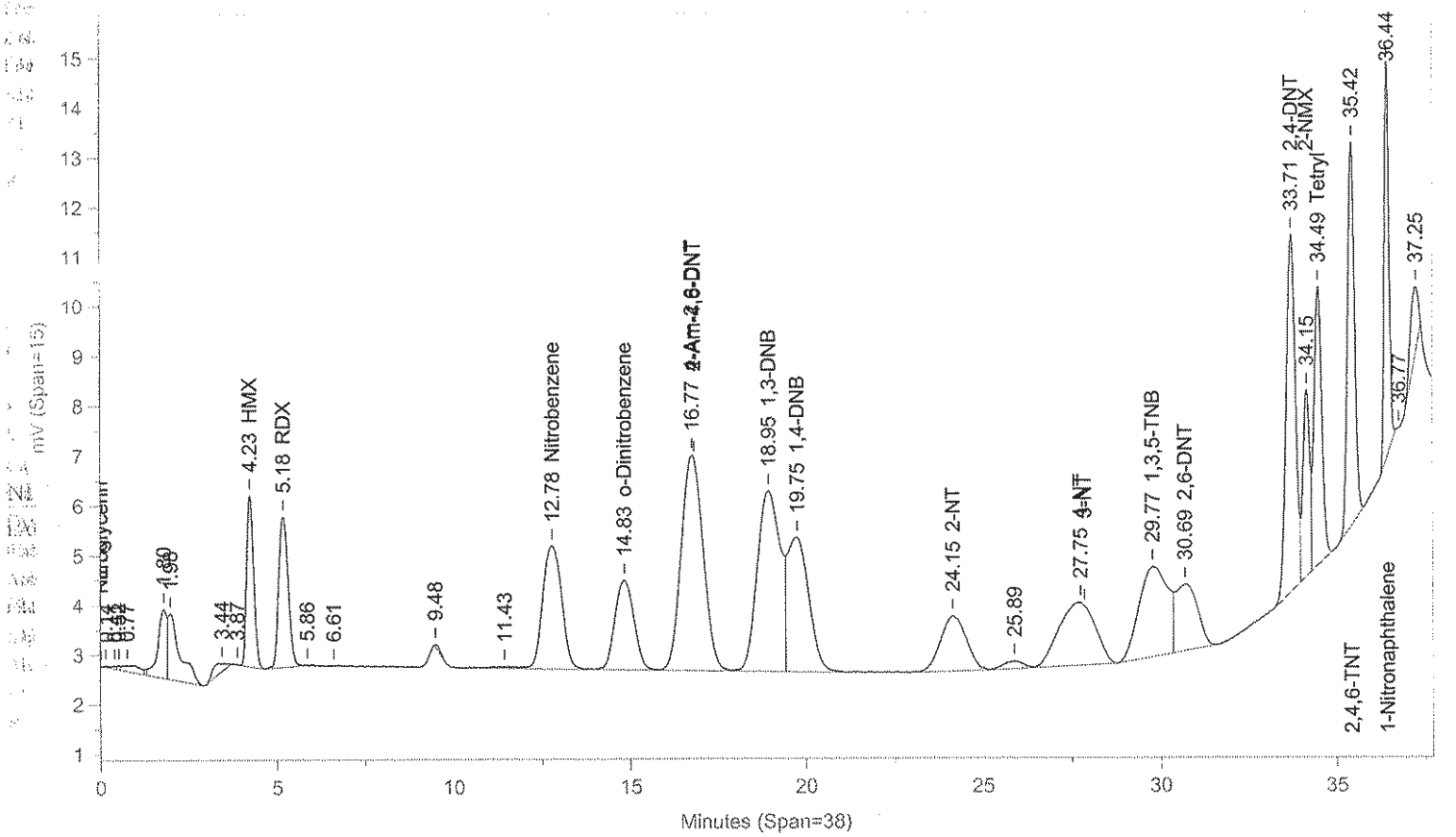
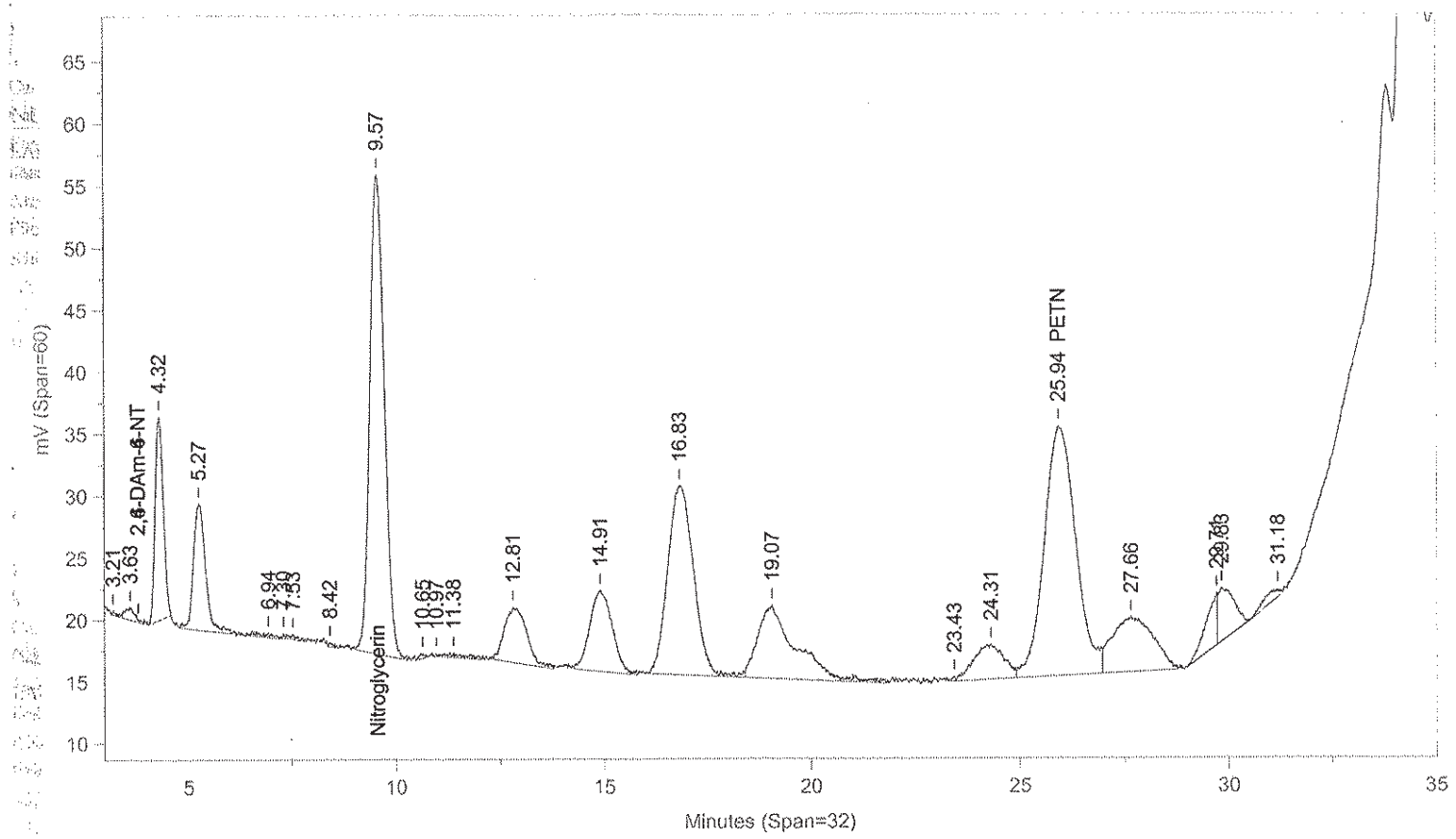
File: C:\CPWIN\DATA1\5C12310.17R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.17R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.228	47738	455.377	HMX	.	0	.	HMX
5.179	57500	489.574	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.567	940962	9257.887	Nitroglycerin
12.784	92389	500.349	Nitrobenzene	.	0	.	Nitrobenzene
14.833	68361	491.074	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.77	188252	487.706	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.952	164604	485.977	1,3-DNB	.	0	.	1,3-DNB
19.754	114385	491.527	1,4-DNB	.	0	.	1,4-DNB
24.15	56689	484.078	2-NT	.	0	.	2-NT
.	0	.	PETN	25.939	1048578	8829.507	PETN
27.749	89761	463.058	4-NT	.	0	.	4-NT
29.768	101930	466.122	1,3,5-TNB	.	0	.	1,3,5-TNB
30.691	58807	462.967	2,6-DNT	.	0	.	2,6-DNT
33.711	135888	526.13	2,4-DNT	.	0	.	2,4-DNT
34.153	50306	1494.359	2-NMX	.	0	.	2-NMX
34.486	84850	552.531	Tetryl	.	0	.	Tetryl
35.417	106047	504.24	2,4,6-TNT	.	0	.	2,4,6-TNT
36.435	74201	490.263	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:51:04 PM
File Reported On: 11/20/2013 at 3:51:02 PM

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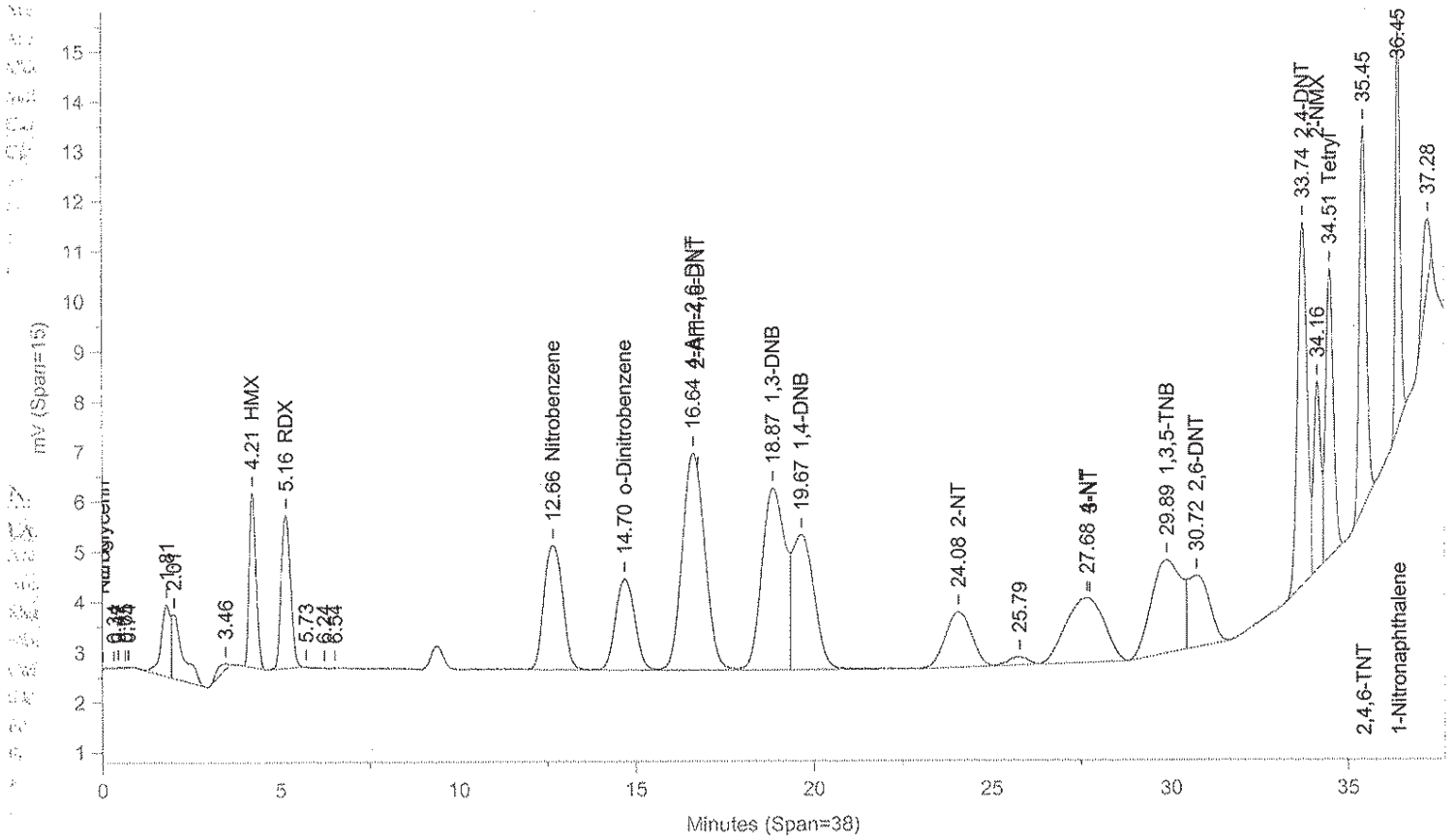
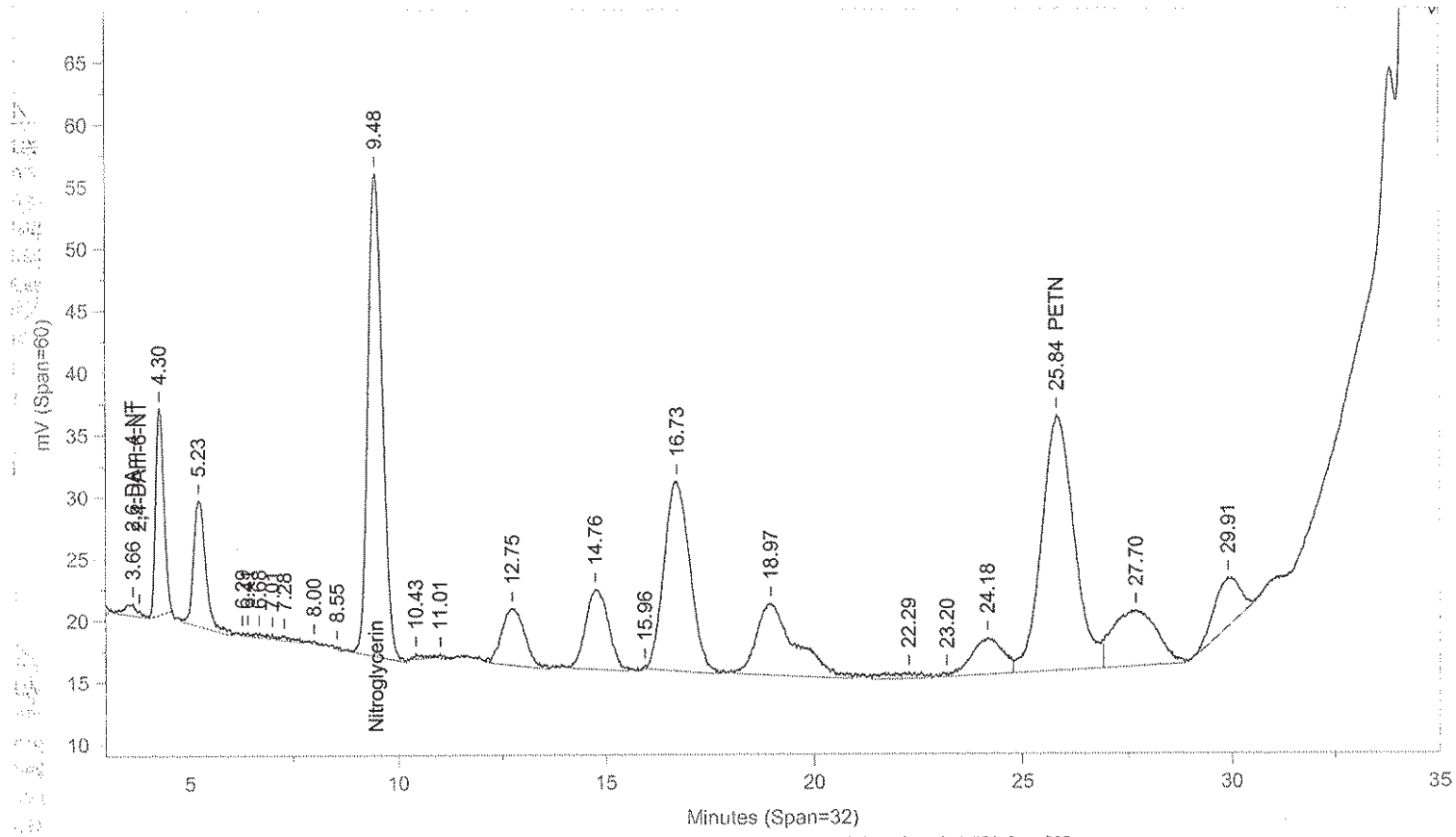
File: C:\CPWIN\DATA1\5C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 10:00:27 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 10:00:27 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.665	21695	9.842	2,6-DAm-4-NT
4.213	47451	452.646	HMX	.	0	.	HMX
5.159	56836	483.64	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.476	946604	9313.397	Nitroglycerin
12.662	91459	495.27	Nitrobenzene	.	0	.	Nitrobenzene
14.696	68959	495.472	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.64	190711	494.077	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.869	165750	489.362	1,3-DNB	.	0	.	1,3-DNB
19.666	115552	496.696	1,4-DNB	.	0	.	1,4-DNB
24.083	57276	489.177	2-NT	.	0	.	2-NT
.	0	.	PETN	25.843	1103043	9288.134	PETN
27.678	94722	487.969	4-NT	.	0	.	4-NT
29.894	109947	498.654	1,3,5-TNB	.	0	.	1,3,5-TNB
30.717	58944	464.013	2,6-DNT	.	0	.	2,6-DNT
33.743	137122	530.909	2,4-DNT	.	0	.	2,4-DNT
34.164	51316	1523.272	2-NMX	.	0	.	2-NMX
34.509	87089	566.631	Tetryl	.	0	.	Tetryl
35.447	104426	496.635	2,4,6-TNT	.	0	.	2,4,6-TNT
36.451	74603	492.767	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.06A
Area File: C:\CPWIN\DATA1\5C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:29:46 PM
File Reported On: 11/20/2013 at 5:29:55 PM

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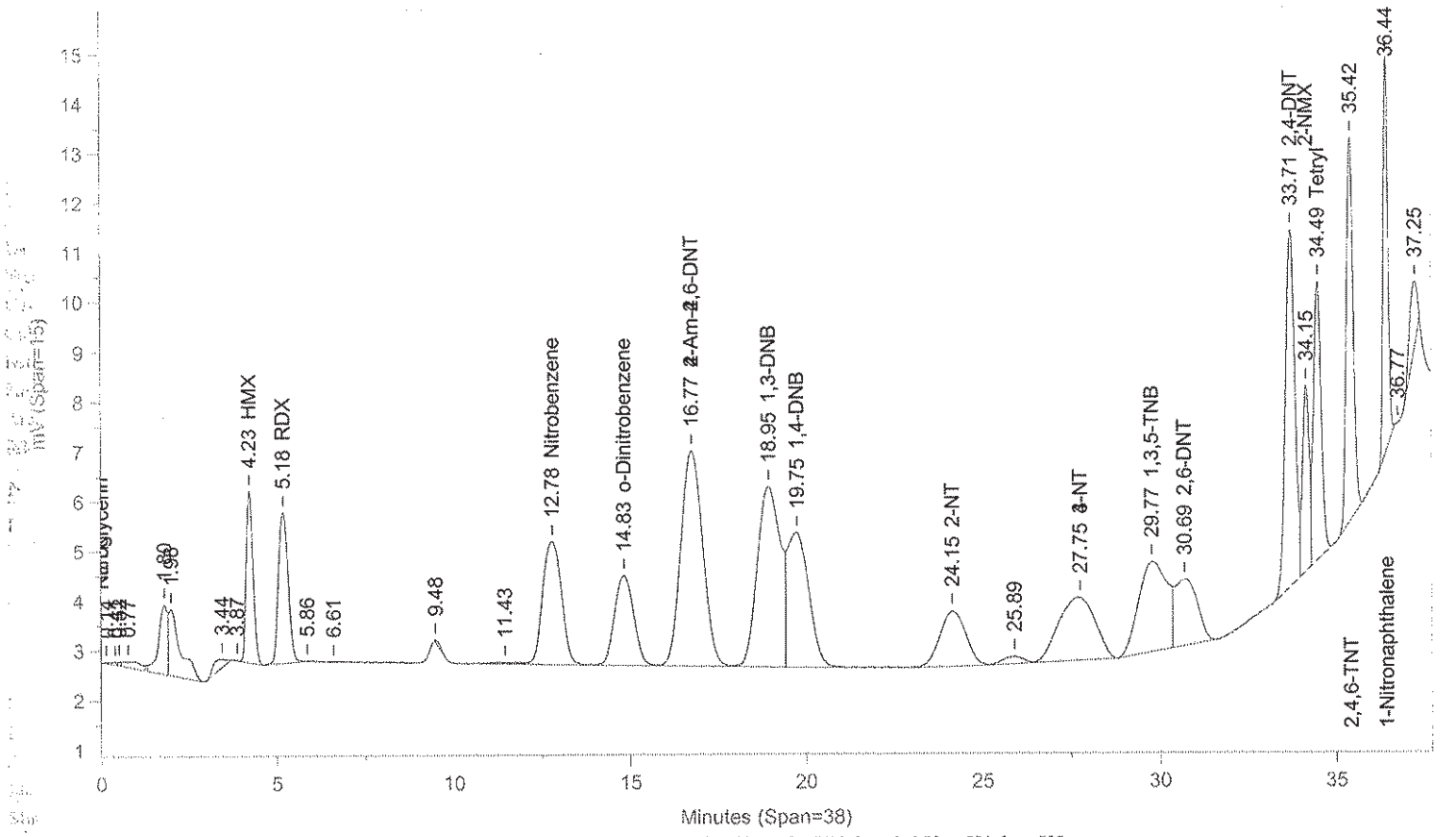
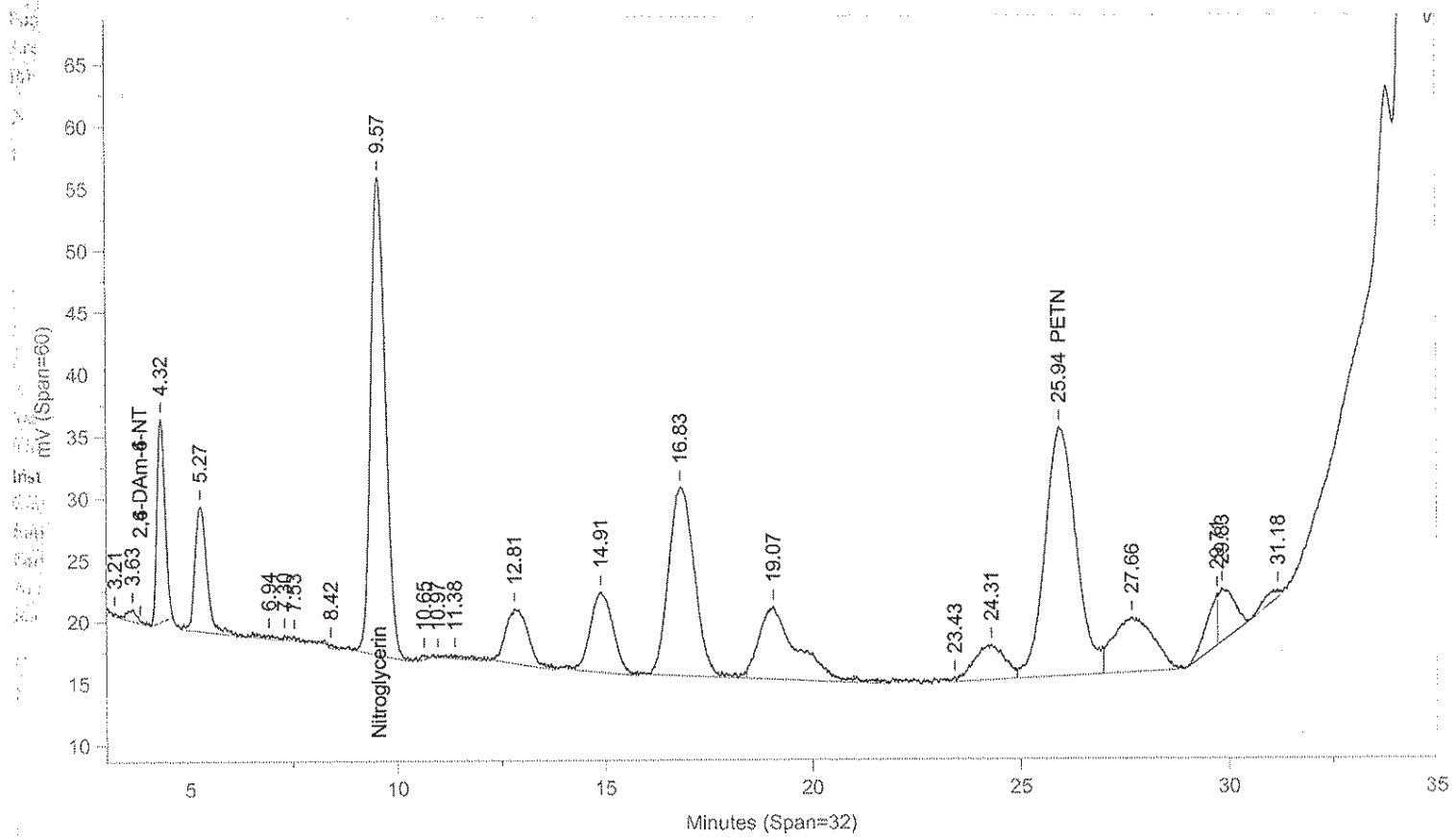
File: C:\CPWIN\DATA1\5C12310.17R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.17R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.228	47738	455.377	HMX	.	0	.	HMX
5.179	57500	489.574	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.567	940962	9257.887	Nitroglycerin
12.784	92389	500.349	Nitrobenzene	.	0	.	Nitrobenzene
14.833	68361	491.074	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.77	188252	487.202	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
18.952	164604	485.977	1,3-DNB	.	0	.	1,3-DNB
19.754	114385	491.527	1,4-DNB	.	0	.	1,4-DNB
24.15	56689	484.078	2-NT	.	0	.	2-NT
.	0	.	PETN	25.939	1048578	8829.507	PETN
27.749	89761	463.058	4-NT	.	0	.	4-NT
29.768	101930	466.122	1,3,5-TNB	.	0	.	1,3,5-TNB
30.691	58807	462.967	2,6-DNT	.	0	.	2,6-DNT
33.711	135888	526.13	2,4-DNT	.	0	.	2,4-DNT
34.153	50306	1494.359	2-NMX	.	0	.	2-NMX
34.486	84850	552.531	Tetryl	.	0	.	Tetryl
35.417	106047	504.24	2,4,6-TNT	.	0	.	2,4,6-TNT
36.435	74201	490.263	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.17A
Area File: C:\CPWIN\DATA1\5C12310B.17A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:35:26 PM
File Reported On: 11/20/2013 at 5:35:36 PM

Raw QC Data

Explosives

eurofins | Lancaster Laboratories Environmental

Data Summary

Sample Name: BLANKA 11/8/13 PBLK17311 BLK Sample ID: AA **Batchnumber:** 133110017A
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on Nov 18, 2013 23:25:17
Instrument X6329A
Result file 5E12310.08R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 98% (73 - 122) Conc: 9.776656

Analysis Report (B)

Injected on Nov 18, 2013 23:25:17
Instrument Y6329A
Result file 5C12310.08R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 103% (73 - 122) Conc: 10.264044

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.43	6.48	6.63	152	0.029561	HMX	4.13	4.16	4.33	360	0.06861
2,4,6-Trinitrotoluene	8.19	8.36	8.39	48	0.004216	2-NMX	34.05	34.20	34.25	16059	10.264044
2-Nitrotoluene	13.49	13.58	13.77	320	0.048414						
2-NMX	26.91	27.26	27.59	16663	9.776656						

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<15	<5.2			
PETN			<18	<6			
HMX			<2	<0.65			
RDX			<0.5	<0.2			
1,3,5-Trinitrobenzene			<0.6	<0.2			
1,4-Dinitrobenzene			<0.6	<0.3			
o-Dinitrobenzene			<0.6	<0.2			
1,3-DNB			<0.6	<0.2			
Tetryl			<0.6	<0.4			
Nitrobenzene			<0.6	<0.2			
2,4,6-Trinitrotoluene			<0.6	<0.2			
4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
2,6-Dinitrotoluene			<1.3	<0.45			
2,4-Dinitrotoluene			<2	<0.72			
2-Nitrotoluene			<0.75	<0.25			
4-Nitrotoluene			<1.2	<0.6			
3-Nitrotoluene			<1.2	<0.4			
2-NMX	A	9.776656				4.86	
1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Analytical Specialist Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/8/13 PBLK17311Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 23:25:17
Instrument : CP12--X6329A
Result file : 5E12310.08R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 98% (73-122) Conc.: 9.776656

Peak name	Min	R.T.	Max	Area	Amount
o-Dinitrobenzene	6.43	6.48	6.63	152	0.029561
2,4,6-TNT	8.19	8.36	8.39	48	0.004216
2-NT	13.49	13.58	13.77	320	0.048414
2-NMX	26.91	27.26	27.59	16663	9.776656

Analysis Report (B)

Injected on : NOV 18, 2013 23:25:17
Instrument : CP12--X6329B
Result file : 5E12310B.08R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.293084

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.43	27.76	251393	10.293084

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.776656				5.15	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

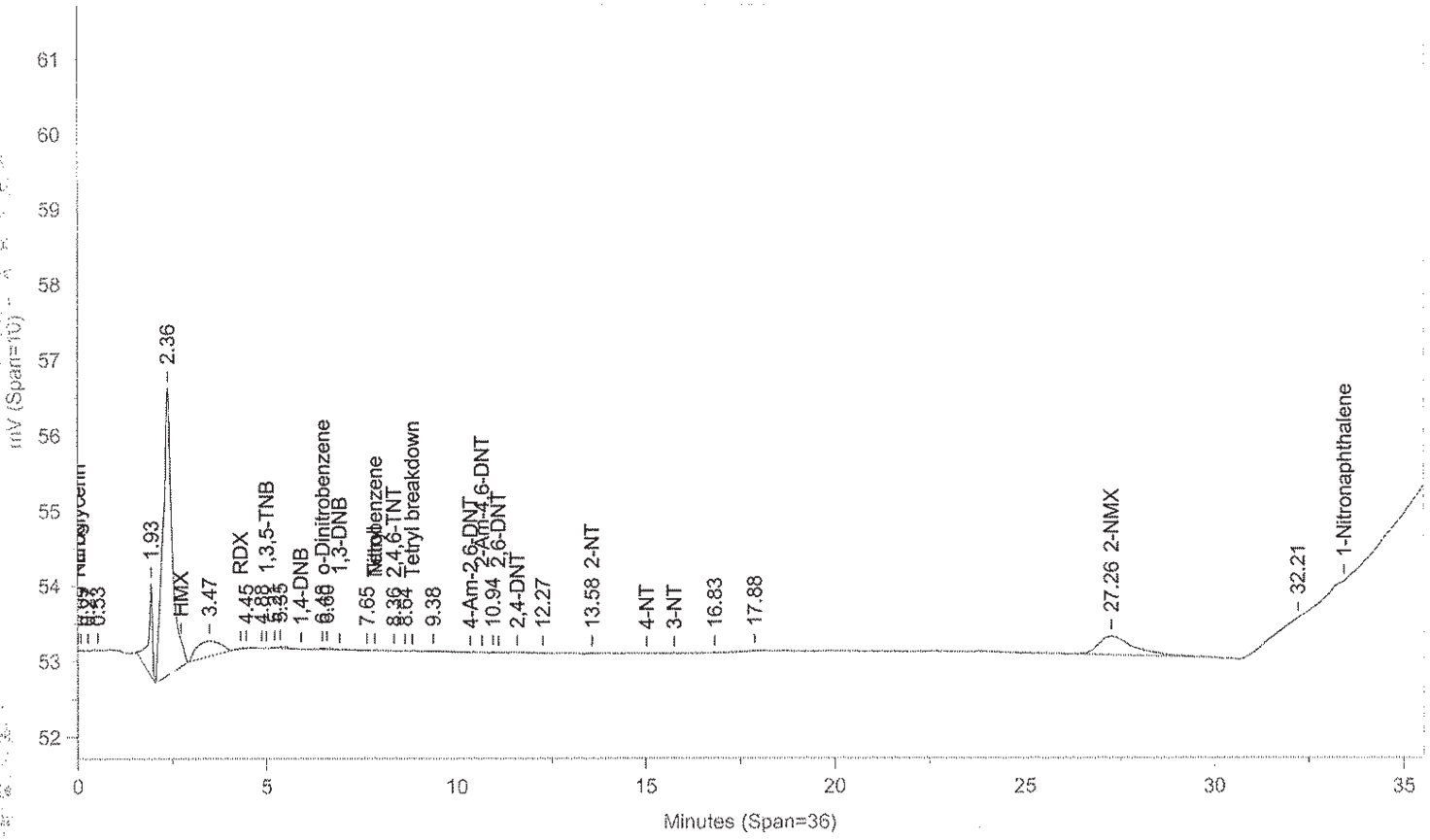
Verified by: Valerie E. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

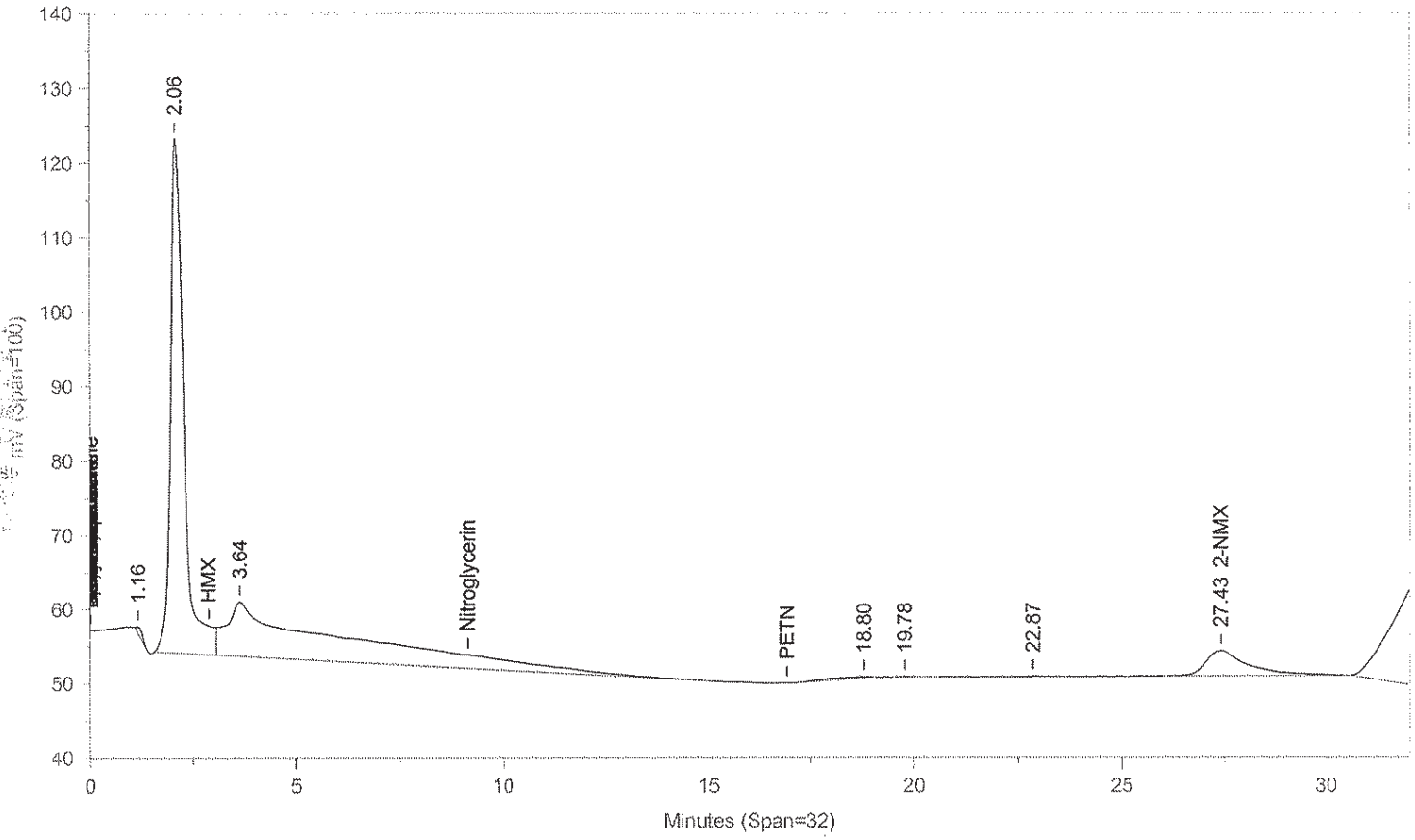
Printed on: 11/22/2013 16:41:18

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.08R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 11:25:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 11:25:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
6.485	152	.03	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
8.356	48	.004	2,4,6-TNT	.	0	.	2,4,6-TNT
13.577	320	.048	2-NT	.	0	.	2-NT
27.262	16663	9.777	2-NMX	27.427	251393	10.293	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.08A
Area File: C:\CPWIN\DATA1\5E12310B.08A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:36:34 PM
File Reported On: 11/20/2013 at 4:36:43 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/8/13 PBLK17311Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 23:25:17
Instrument : CP12--Y6329A
Result file : 5C12310.08R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.264044

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.16	4.33	360	0.068610
RDX	5.08	5.25	5.28	1480	-0.207474
2-NMX	34.05	34.20	34.25	16059	10.264044

Analysis Report (B)

Injected on : NOV 18, 2013 23:25:17
Instrument : CP12--Y6329B
Result file : 5C12310B.08R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	25.73	26.04	26.15	9265	1.560388

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.264044					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist
Reviewed by: _____
Date: NOV 24 2013

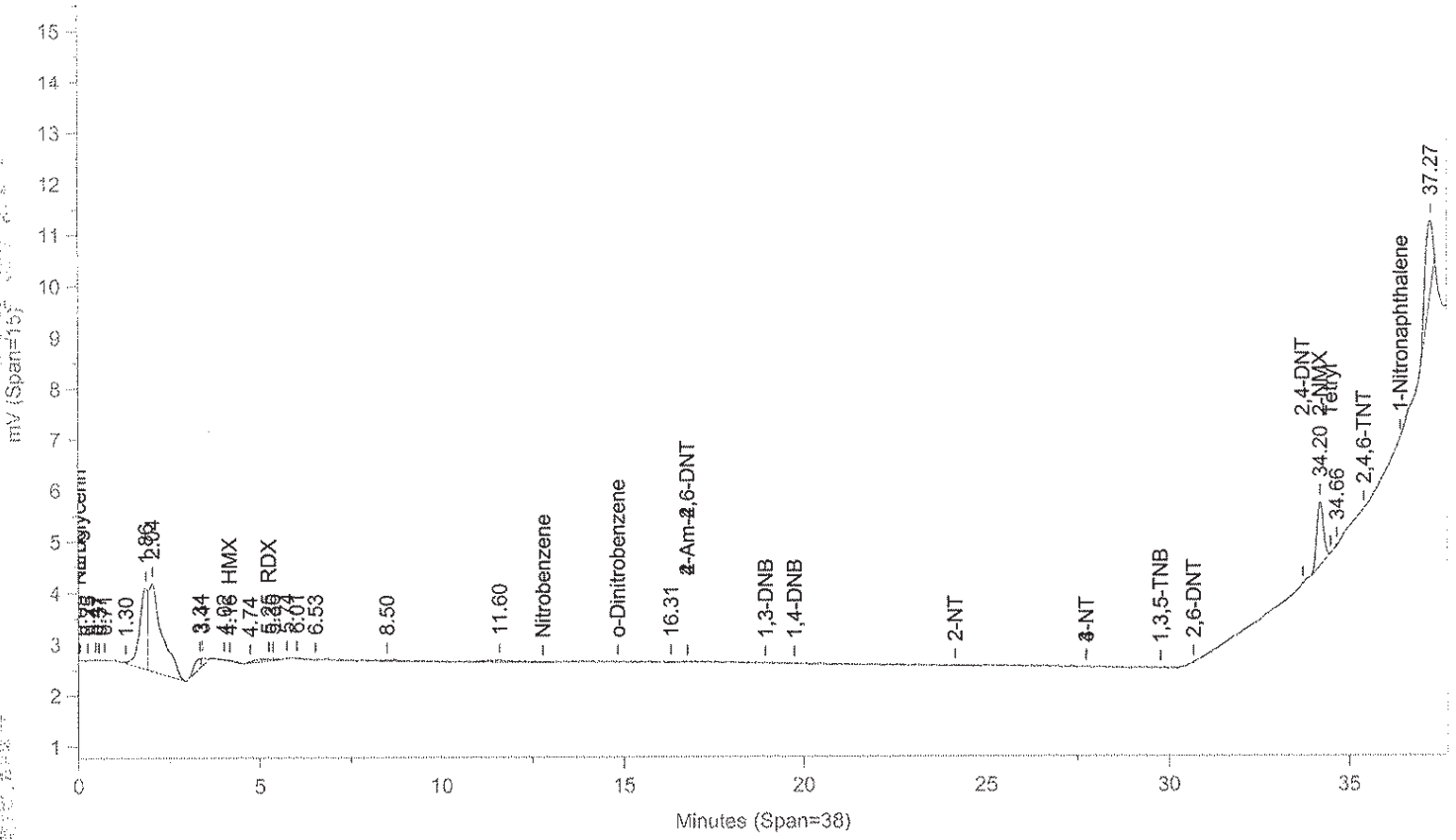
Valerie L. Tomayko
Principal Specialist
Verified by: _____
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

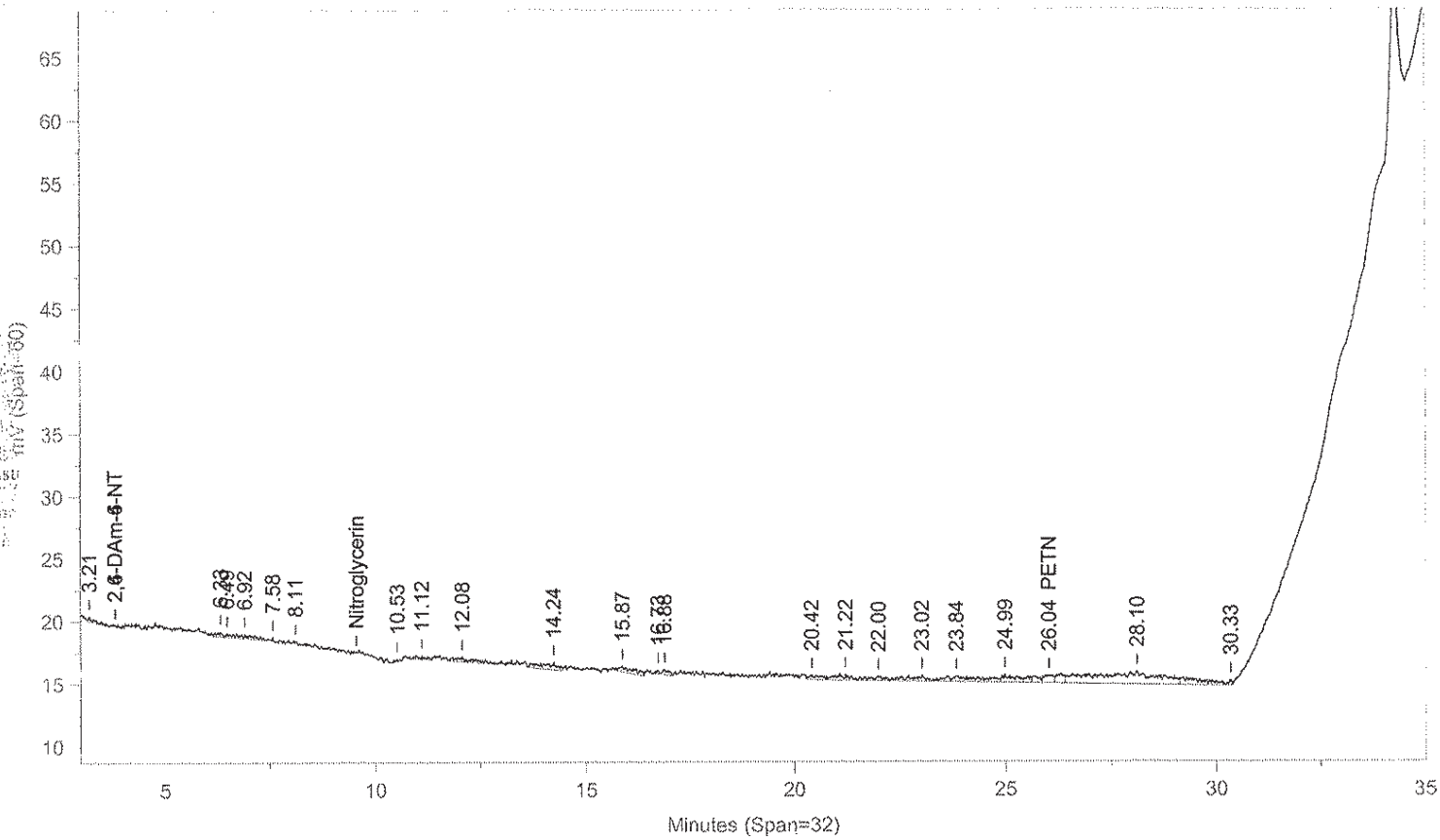
Printed on: 11/22/2013 13:31:06

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.08R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 11:25:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 11:25:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.162	360	.069	HMX	.	0	.	HMX
5.251	1480	-.207	RDX	.	0	.	RDX
.	0	.	PETN	26.035	9265	1.56	PETN
34.197	16059	10.264	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.08A
Area File: C:\CPWIN\DATA1\5C12310B.08A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:30:48 PM
File Reported On: 11/20/2013 at 5:30:57 PM

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Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 BLK Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 12, 2013 20:59:54
Instrument X6329A
Result file 2E12310.70R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 106% (63 - 150) Conc: 5290.549316

Analysis Report (B)

Injected on Nov 12, 2013 20:59:54
Instrument Y6329A
Result file 2C12310.70R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 114% (63 - 150) Conc: 5724.731445

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.71	4.82	4.91	112	5.300833
Tetryl	7.43	7.53	7.71	40	1.155025
2,4-Dinitrotoluene	11.03	11.22	11.31	34	1.02599
2-NMX	25.80	26.06	26.48	18034	5290.549316

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.26	4.41	110	10.528544
2-Amino-4,6-dinitrotoluer	16.81	17.03	17.13	212	5.490153
2-Nitrotoluene	24.21	24.27	24.73	1722	70.919876
2-NMX	34.15	34.30	34.35	18128	5724.731445
1-Nitronaphthalene	36.38	36.51	36.58	13	277.593536

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<6000	<2000			
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-Trinitrobenzene			<300	<100			
1,4-Dinitrobenzene			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153			
Nitrobenzene			<300	<100			
2,4,6-Trinitrotoluene			<300	<100			
4-Amino-2,6-dinitrotoluene			<300	<150			
2-Amino-4,6-dinitrotoluene			<300	<100			
2,6-Dinitrotoluene			<300	<100			
2,4-Dinitrotoluene			<300	<100			
2-Nitrotoluene			<300	<200			
4-Nitrotoluene			<300	<200			
3-Nitrotoluene			<300	<250			
2-NMX	A	5290.549316				7.88	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 12, 2013 20:59:54
Instrument	: CP12--X6329A
Result file	: 2E12310.70R
Calibration file	: 2E12310.CAL
Method file	: 8330.MET
%SSR(2-NMX)	: 106% (63-150) Conc.: 5290.54931(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.17	4.24	466	-71.816254
1,3,5-TNB	4.71	4.82	4.91	112	5.300833
Tetryl	7.43	7.53	7.71	40	1.155025
2,4-DNT	11.03	11.22	11.31	34	1.025990
2-NMX	25.80	26.06	26.48	18034	5290.549316

Analysis Report (B)

Injected on	: NOV 12, 2013 20:59:54
Instrument	: CP12--X6329B
Result file	: 2E12310B.70R
Calibration file	: 2E12310B.CAL
Method file	: 8330B.MET
%SSR(2-NMX)	: 105% (63-150) Conc.: 5267.67480!

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.24	26.63	257310	5267.674805

$RDX = \frac{112}{87.623}\left(\frac{20}{2}\right) = 12.78203211$ LMDL

$RDX \frac{466}{110.0628} \times \frac{20}{2} = 42.3395$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	coeluters		report confirmation
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5290.549316				0.43	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

Verified by: Melissa A. McBurnett
Melissa A. McBurnett
Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/12/2013 21:57:08

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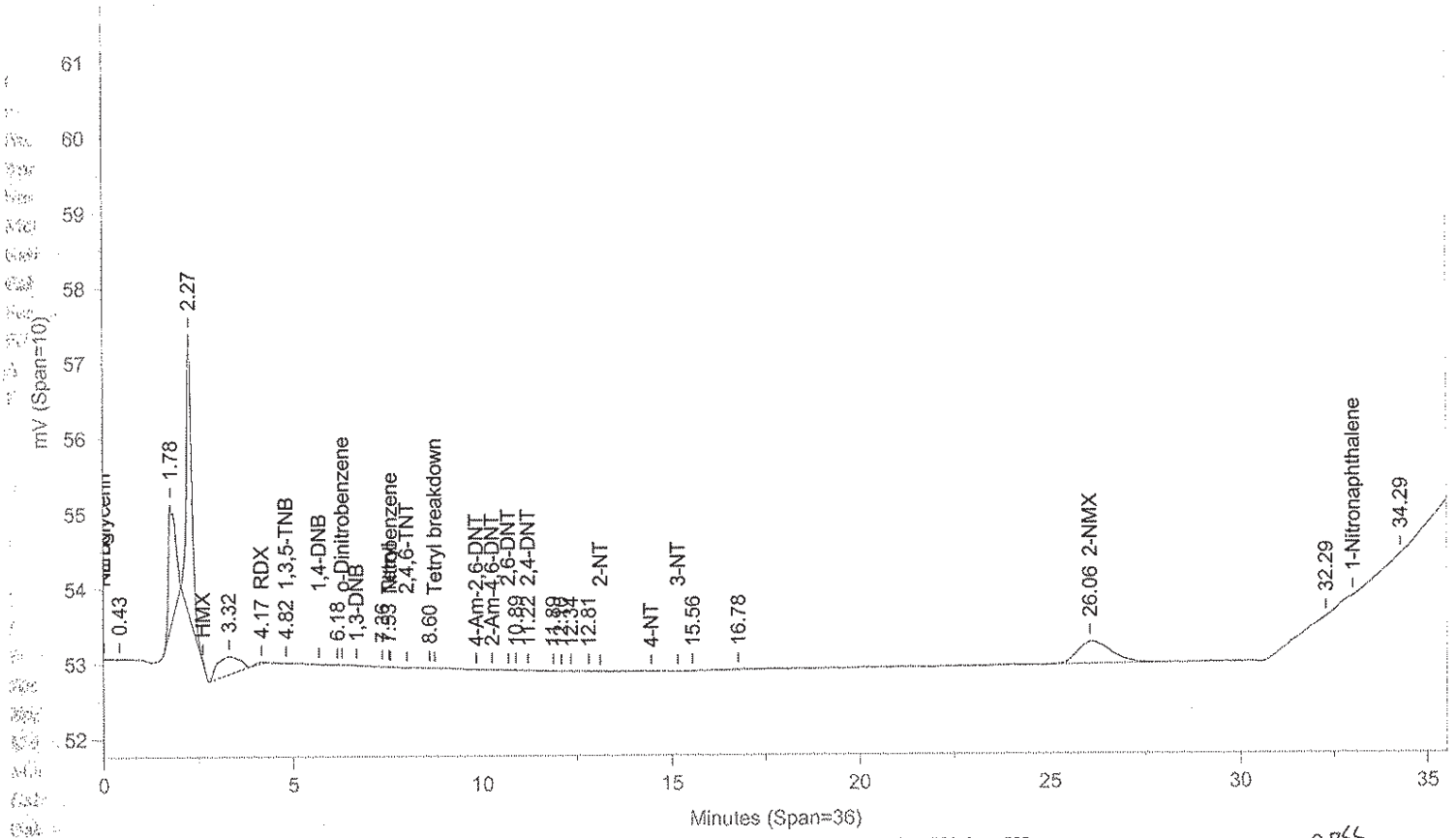
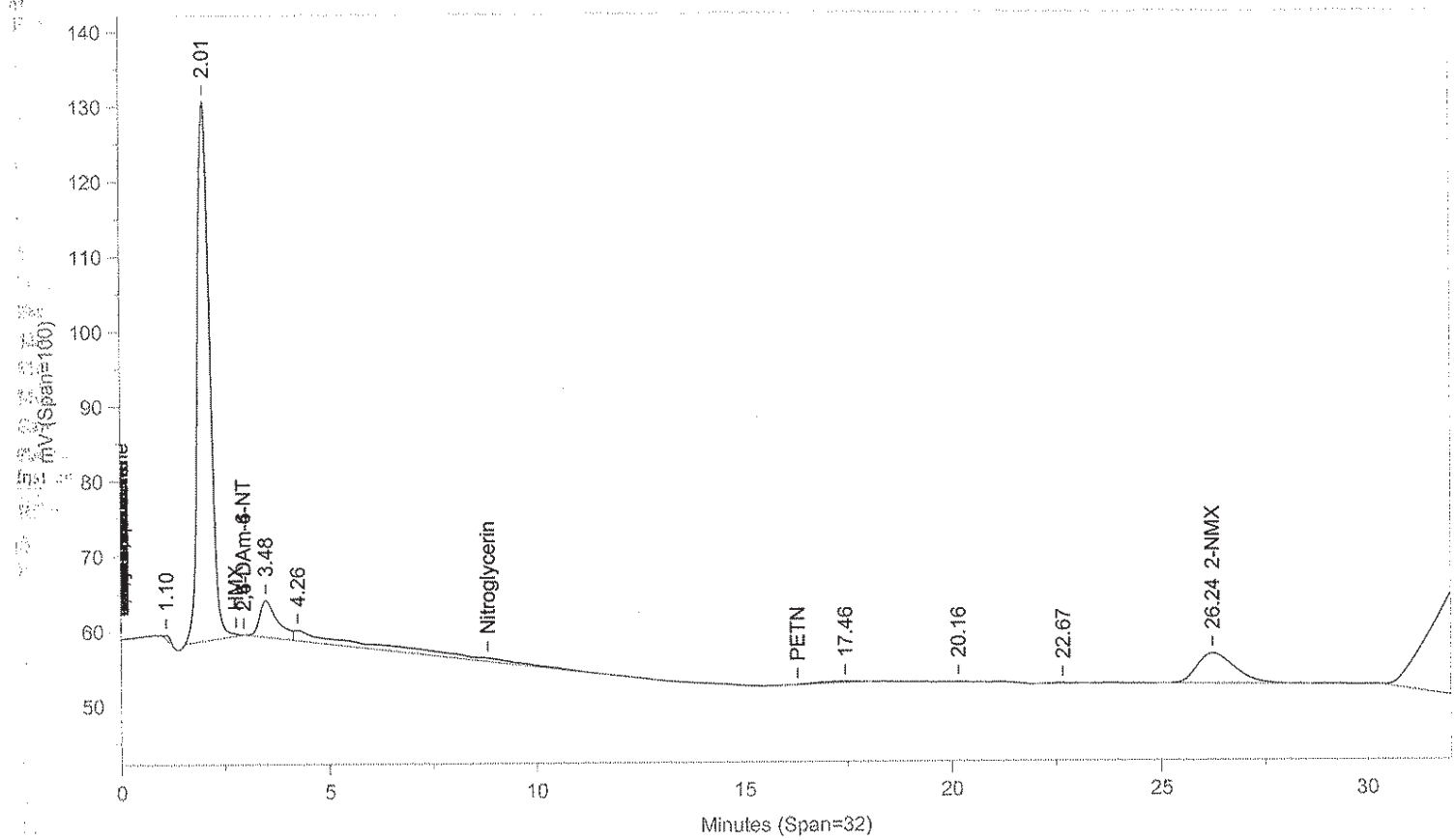


Instrument ID: CP12--X6329A Injected On: 11/12/2013 8:59:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\2E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/12/2013 8:59:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2

Dilution Factor: 20

Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.172	466	-71.816	RDX	.	0	.	RDX
4.817	112	5.301	1,3,5-TNB	.	0	.	1,3,5-TNB
7.534	40	1.155	Tetryl	.	0	.	Tetryl
11.216	34	1.026	2,4-DNT	.	0	.	2,4-DNT
26.055	18034	5290.549	2-NMX	26.238	257310	5267.675	2-NMX

Files:
Area File: C:\CPWIN\DATA1\2E12310.70A
Area File: C:\CPWIN\DATA1\2E12310B.70A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 9:40:32 PM
File Reported On: 11/12/2013 at 9:40:41 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--Y6329A
Result file : 2C12310.70R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 114% (63-150) Conc.: 5724.73144

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.26	4.41	110	10.528544
RDX	5.18	5.34	5.38	1984	-58.781509
2-Am-4,6-DNT	16.81	17.03	17.13	212	5.490153
2-NT	24.21	24.27	24.73	1722	70.919876
2-NMX	34.15	34.30	34.35	18128	5724.731445
1-Nitronaphthalene	36.38	36.51	36.58	13	277.593536

Analysis Report (B)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--Y6329B
Result file : 2C12310B.70R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.87	4.01	8936	40.537300

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5724.731445					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	277.593536	<300	100	J		

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

James H. Place, Senior Chemist
NOV 21 2013

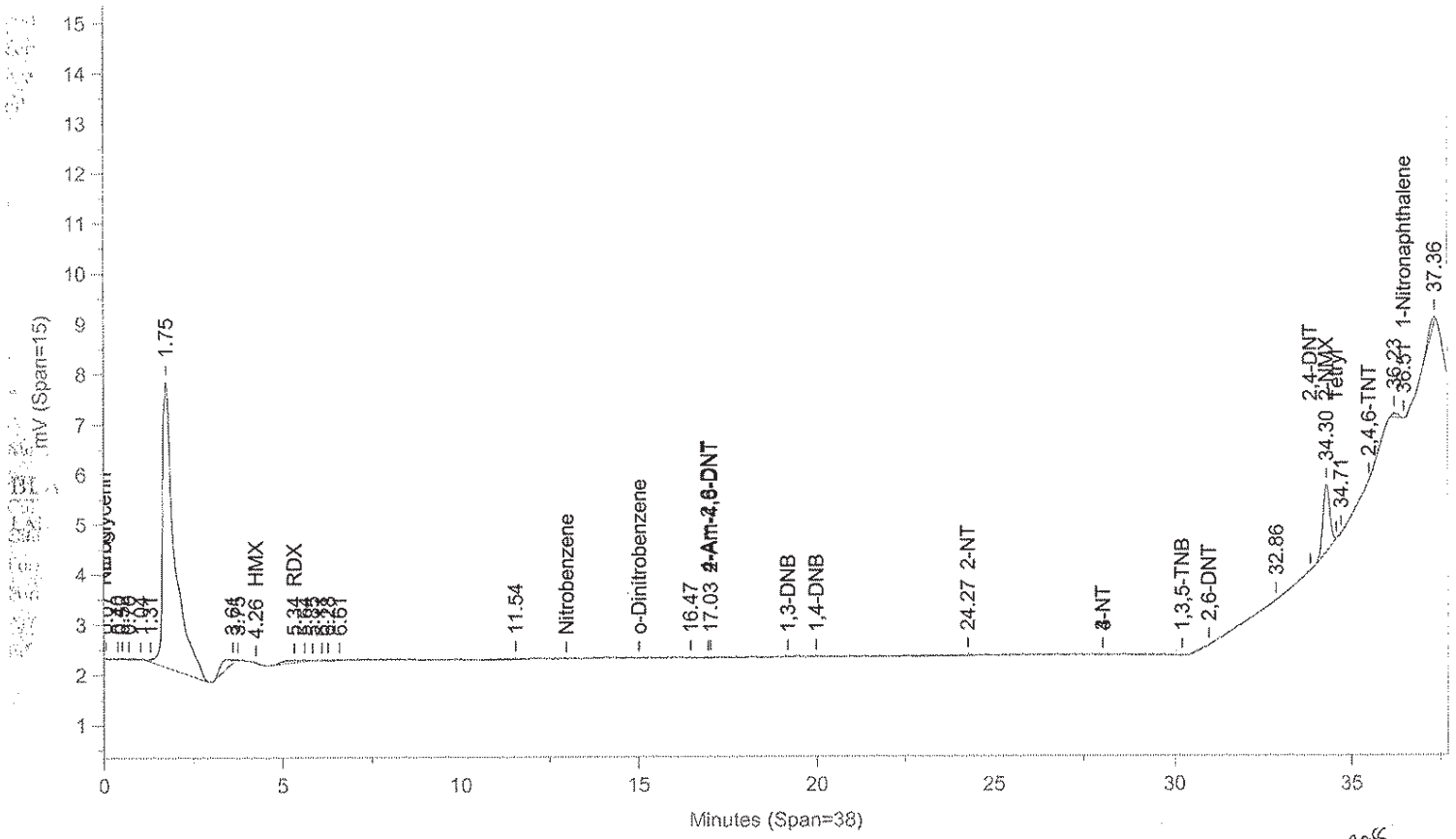
Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

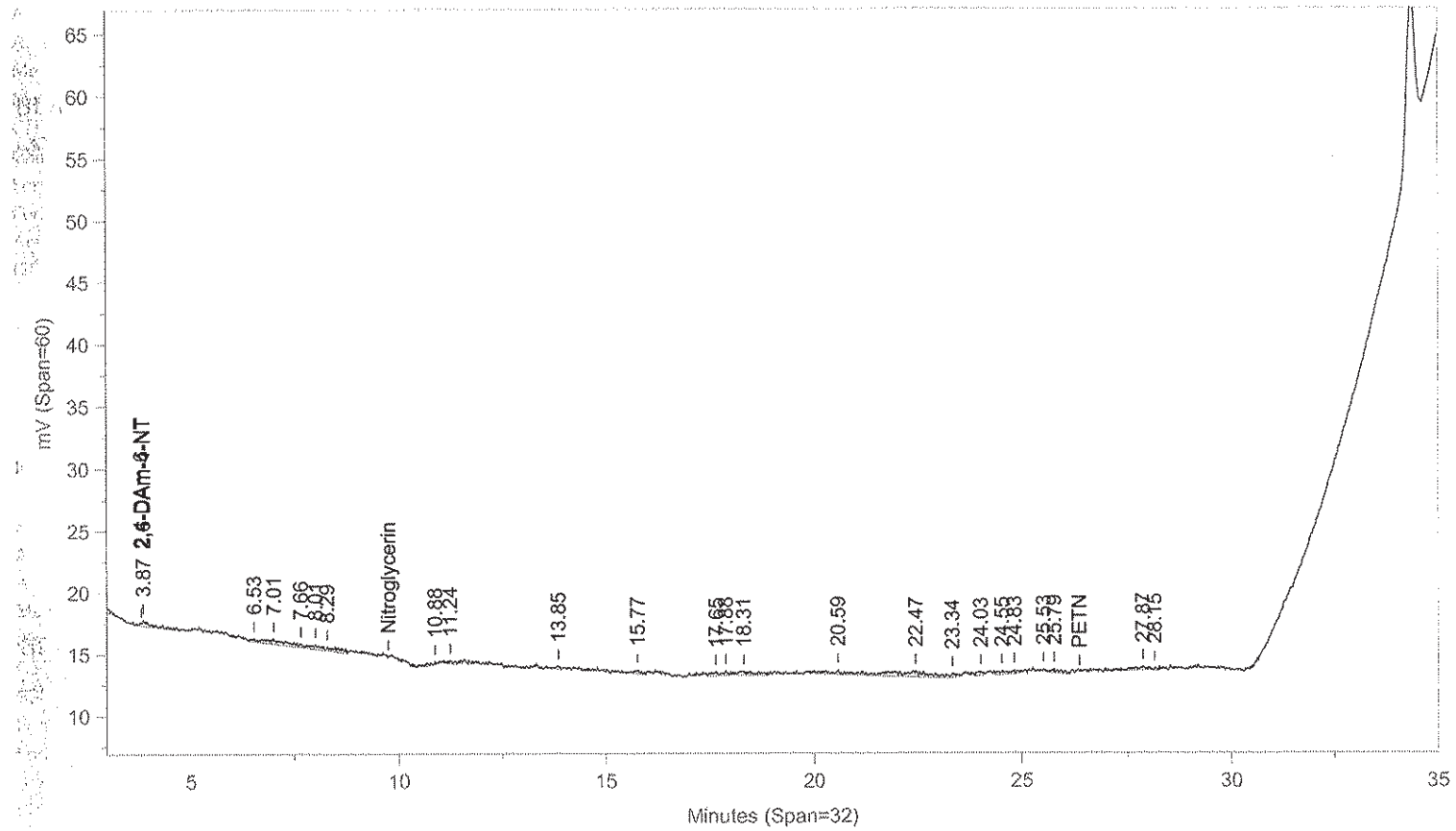
Printed on: 11/12/2013 21:54:53

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\2C12310.70R



Instrument ID: CP12--Y6329A Injected On: 11/12/2013 8:59:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\2C12310B.70R



Instrument ID: CP12--Y6329B Injected On: 11/12/2013 8:59:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.874	8936	40.537	2,6-DAm-4-NT
4.258	110	10.529	HMX	.	0	.	HMX
5.339	1984	-58.782	RDX	.	0	.	RDX
17.027	212	5.49	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
24.267	1722	70.92	2-NT	.	0	.	2-NT
34.295	18128	5724.731	2-NMX	.	0	.	2-NMX
36.507	13	277.594	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\2C12310.70A
Area File: C:\CPWIN\DATA1\2C12310B.70A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 9:40:00 PM
File Reported On: 11/12/2013 at 9:40:10 PM

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Data Summary

Sample Name: LCSA 11/8/13 LCS17311 LCS Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:

Analyses: 06916

Analysis Report (A)

Injected on Nov 19, 2013 00:07:42
Instrument X6329A
Result file 5E12310.09R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 92% (73 - 122) Conc: 9.15734

Analysis Report (B)

Injected on Nov 19, 2013 00:07:41
Instrument Y6329A
Result file 5C12310.09R
Calibration file 4C12310
Method file 8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.20	4.31	4.40	44528	9.913465
1,3,5-Trinitrobenzene	4.90	5.00	5.10	103028	9.761647
1,4-Dinitrobenzene	5.80	5.92	6.00	233705	18.346119
o-Dinitrobenzene	6.43	6.55	6.63	113091	21.951513
1,3-DNB	6.83	6.94	7.03	170828	10.528889
Tetryl	7.71	7.89	7.99	142070	9.202707
2,4,6-Trinitrotoluene	8.19	8.30	8.39	123975	10.881678
4-Amino-2,6-dinitrotoluer	10.21	10.20	10.49	47884	10.207477
2-Amino-4,6-dinitrotoluer	10.51	10.67	10.80	90350	8.250489
2,6-Dinitrotoluene	10.95	11.12	11.23	65193	10.724742
2,4-Dinitrotoluene	11.45	11.61	11.74	167502	10.128143
2-Nitrotoluene	13.49	13.64	13.77	56102	8.481629
4-Nitrotoluene	14.87	15.04	15.19	41182	8.778124
3-Nitrotoluene	15.60	15.78	15.93	70900	10.472349
2-NMX	26.91	27.16	27.59	15608	9.15734
1-Nitronaphthalene	33.20	33.41	33.69	138819	21.133711

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.26	4.33	39947	7.621172
RDX	5.08	5.22	5.28	57704	9.827797
Nitrobenzene	12.62	12.85	12.94	87989	9.526643
o-Dinitrobenzene	14.65	14.90	15.01	139066	20.221775
4-Amino-2,6-dinitrotoluer	16.61	16.86	16.93	190188	9.854464
1,3-DNB	18.80	19.05	19.10	158794	9.376496
1,4-Dinitrobenzene	19.60	19.85	19.90	242155	21.146015
2-Nitrotoluene	23.89	24.34	24.41	56517	9.651669
4-Nitrotoluene	27.49	27.95	28.01	94991	9.786333
1,3,5-Trinitrobenzene	29.57	29.99	29.97	97857	8.991927
2,6-Dinitrotoluene	30.49	30.93	30.89	67290	10.55671
2,4-Dinitrotoluene	33.60	33.77	33.82	140021	10.842594
2-NMX	34.05	34.19	34.25	15039	9.679553
Tetryl	34.39	34.53	34.59	79065	10.322124
2,4,6-Trinitrotoluene	35.32	35.45	35.52	107091	10.182743
1-Nitronaphthalene	36.34	36.45	36.54	151227	19.409136

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	211.286697	15	5.2		3.63	
PETN	A	233.137482	18	6		7.92	
HMX	A	7.932477	2	0.65		4.00	
RDX	A	9.913465	0.5	0.2		0.87	
1,3,5-Trinitrobenzene	A	9.761647	0.6	0.2		8.21	
1,4-Dinitrobenzene	A	18.346119	0.6	0.3		14.18	
o-Dinitrobenzene	A	21.951513	0.6	0.2		8.20	
1,3-DNB	A	10.528889	0.6	0.2		11.58	
Tetryl	B	10.322124	0.6	0.4		11.47	
Nitrobenzene	B	9.526643	0.6	0.2		3.46	
2,4,6-Trinitrotoluene	A	10.881678	0.6	0.2		6.64	
4-Amino-2,6-dinitrotoluene	A	10.207477	0.6	0.3		3.52	
2-Amino-4,6-dinitrotoluene	A	8.250489	0.6	0.2		17.72	
2,6-Dinitrotoluene	A	10.724742	1.3	0.45		1.58	
2,4-Dinitrotoluene	A	10.128143	2	0.72		6.81	
2-Nitrotoluene	A	8.481629	0.75	0.25		12.90	
4-Nitrotoluene	A	8.778124	1.2	0.6		10.86	
3-Nitrotoluene	A	10.472349	1.2	0.4		6.77	
2-NMX	A	9.15734				5.54	
1-Nitronaphthalene	A	21.133711	0.6	0.2		8.51	

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Data Summary

Sample Name: LCSA 11/8/13 LCS17311 LCS Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 19, 2013 00:07:42
Instrument	X6329A
Result file	5E12310.09R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 19, 2013 00:07:41
Instrument	Y6329A
Result file	5C12310.09R
Calibration file	4C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place Senior Chemist Verified by: Valerie L. Trimble Analytical Specialist

Date: NOV 24 2013 Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/8/13 LCS17311 Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 00:07:42
Instrument : CP12--X6329A
Result file : 5E12310.09R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 92% (73-122) Conc.: 9.15734

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.31	4.40	44528	9.913465
1,3,5-TNB	4.90	5.00	5.10	103028	9.761647
1,4-DNB	5.80	5.92	6.00	233705	18.346119
o-Dinitrobenzene	6.43	6.55	6.63	113091	21.951513
1,3-DNB	6.83	6.94	7.03	170828	10.528889
Tetryl	7.71	7.89	7.99	142070	8.220128
2,4,6-TNT	8.19	8.30	8.39	123975	10.881678
Tetryl breakdown	8.71	8.97	8.95	16982	0.982579
4-Am-2,6-DNT	10.21	10.20	10.49	47884	10.207477
2-Am-4,6-DNT	10.51	10.67	10.80	90350	8.250489
2,6-DNT	10.95	11.12	11.23	65193	10.724742
2,4-DNT	11.45	11.61	11.74	167502	10.128143
2-NT	13.49	13.64	13.77	56102	8.481629
4-NT	14.87	15.04	15.19	41182	8.778124
3-NT	15.60	15.78	15.93	70900	10.472349
2-NMX	26.91	27.16	27.59	15608	9.157340
1-Nitronaphthalene	33.20	33.41	33.69	138819	21.133711

Analysis Report (B)

Injected on : NOV 19, 2013 00:07:42
Instrument : CP12--X6329B
Result file : 5E12310B.09R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 86% (73-122) Conc.: 8.645345

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.77	2.87	2.97	164745	7.932477
Nitroglycerin	8.96	9.16	9.34	1350176	211.286697
PETN	16.63	16.91	17.20	1596413	233.137482
2-NMX	27.09	27.36	27.76	211149	8.645345

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	211.286697	15	5.2			
☑ PETN	B	233.137482	18	6			
☑ HMX	B	7.932477	2	0.65			
☑ RDX	A	9.913465	0.5	0.2			
☑ 1,3,5-TNB	A	9.761647	0.6	0.2			
☑ 1,4-DNB	A	18.346119	0.6	0.3			
☑ o-Dinitrobenzene	A	21.951513	0.6	0.2			
☑ 1,3-DNB	A	10.528889	0.6	0.2			
☑ Tetryl	A	8.220128	0.6	0.4			+Breakdown = 9.202707
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.881678	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	10.207477	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.250489	0.6	0.2			
☑ 2,6-DNT	A	10.724742	1.3	0.45			
☑ 2,4-DNT	A	10.128143	2	0.72			
☑ 2-NT	A	8.481629	0.75	0.25			
☑ 4-NT	A	8.778124	1.2	0.6			
☑ 3-NT	A	10.472349	1.2	0.4			
☐ 2-NMX	A	9.157340				5.75	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/8/13 LCS17311 Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 00:07:42
Instrument : CP12--X6329A
Result file : 5E12310.09R
Calibration file : 4E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 19, 2013 00:07:42
Instrument : CP12--X6329B
Result file : 5E12310B.09R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	21.133711	0.6	0.2			

Units: ug/l

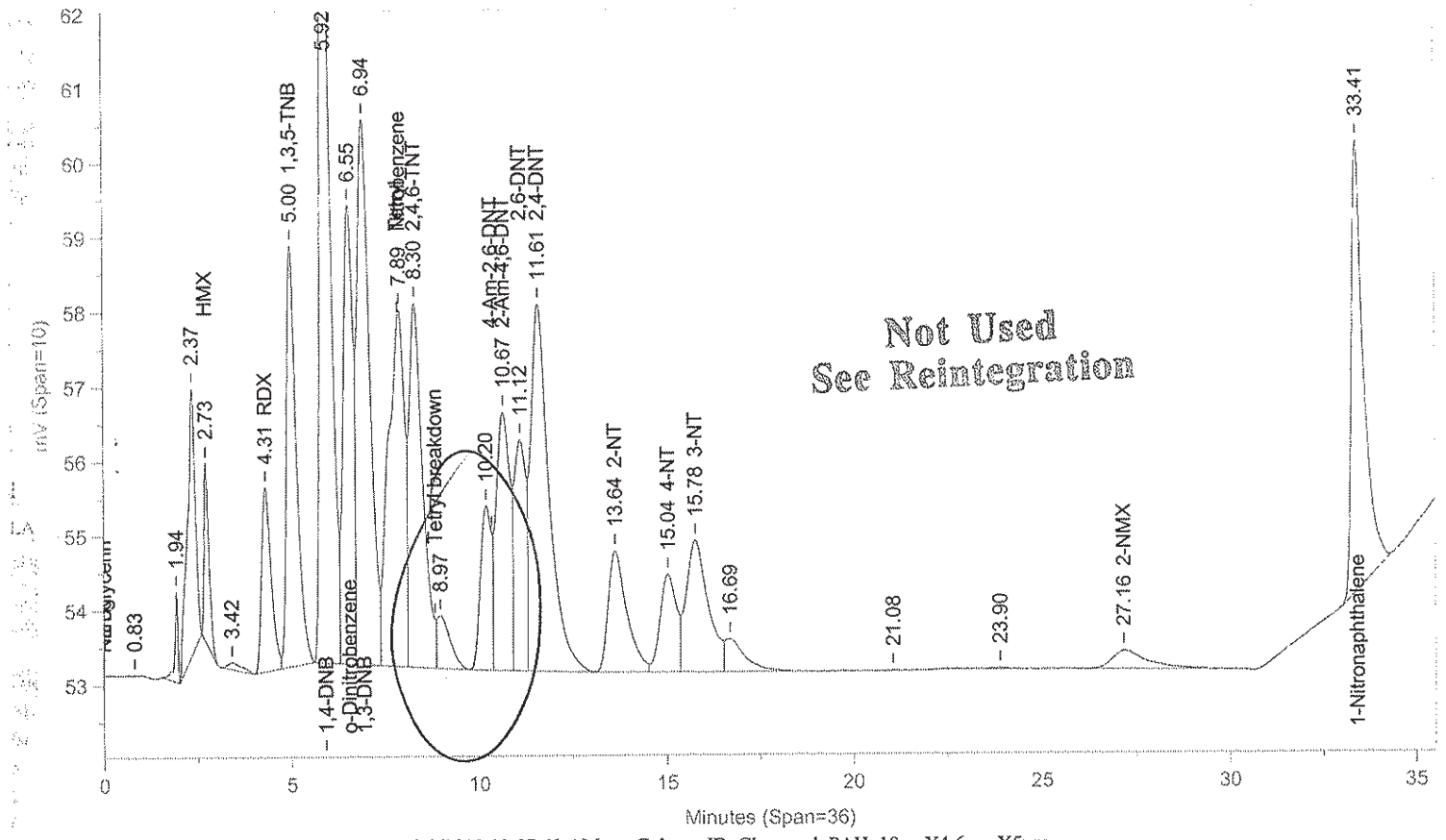
Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Scientist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

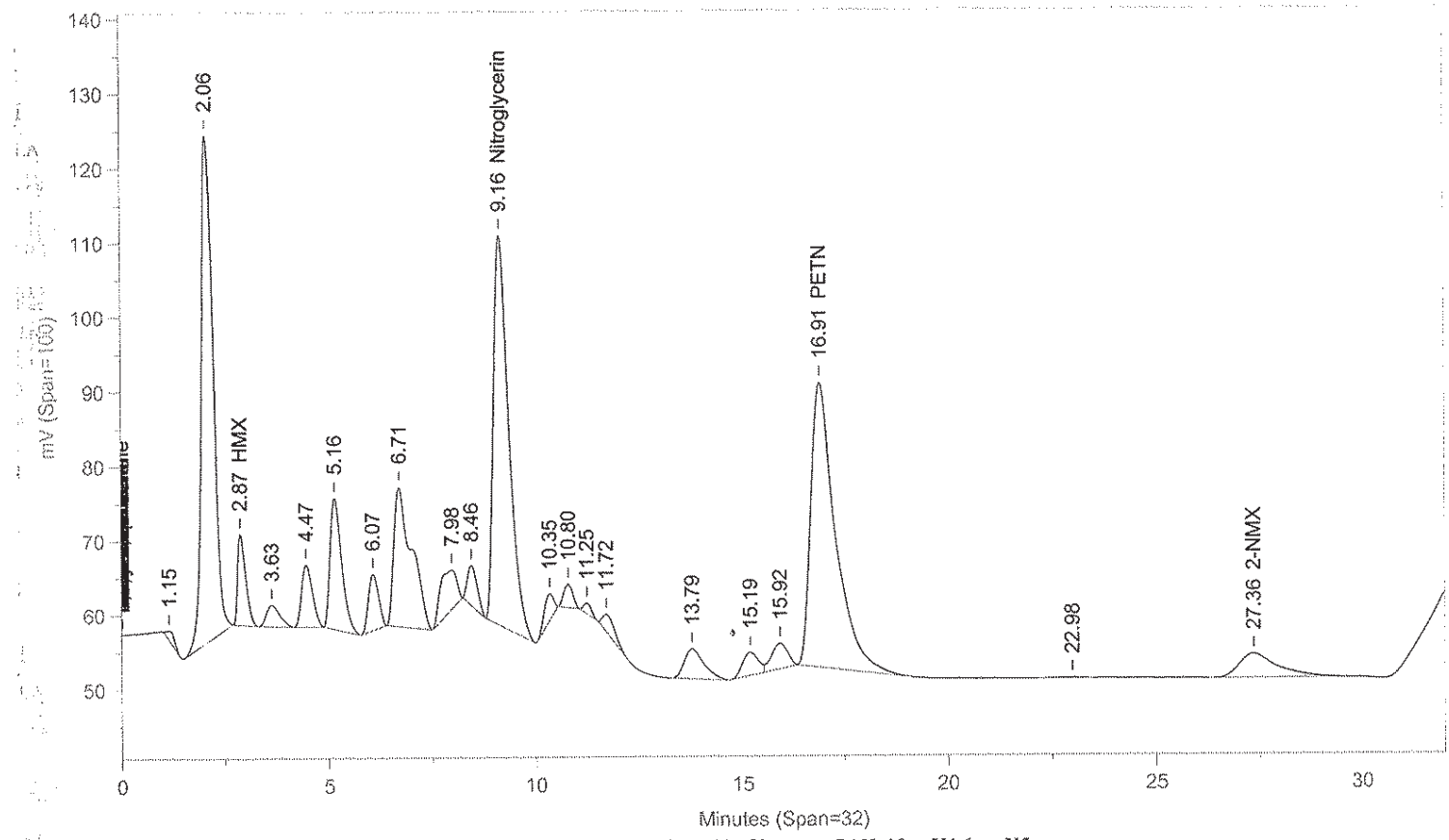
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 12:07:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 12:07:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

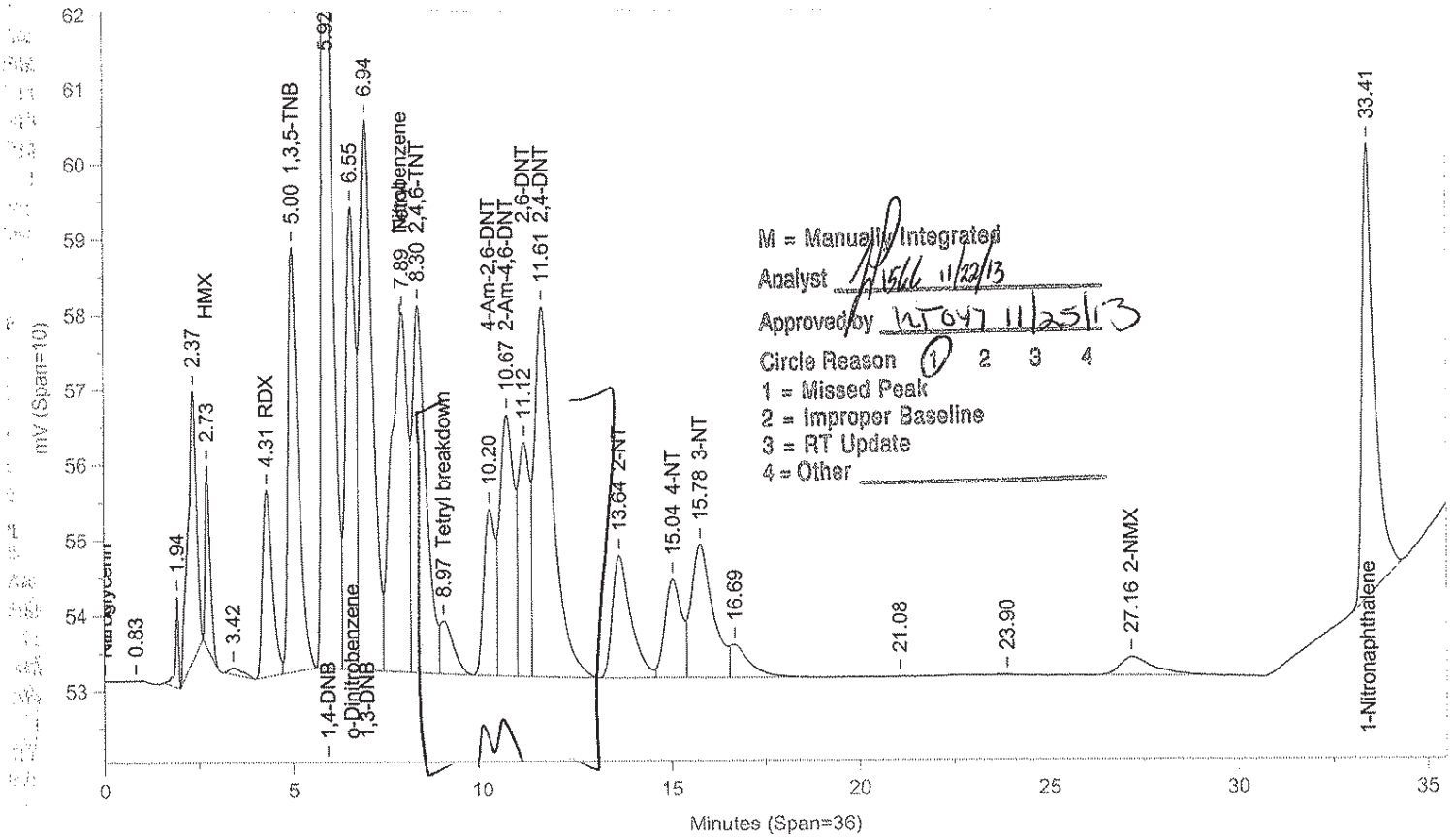
Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.874	164745	7.932	HMX
4.315	44528	9.913	RDX	.	0	.	RDX
5.004	103028	9.762	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	233705	18.346	1,4-DNB	.	0	.	1,4-DNB
6.548	113091	21.952	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.937	170828	10.529	1,3-DNB	.	0	.	1,3-DNB
7.888	142070	8.253	Nitrobenzene	.	0	.	Nitrobenzene
8.303	123975	10.882	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.161	1350176	211.287	Nitroglycerin
10.667	89700	8.191	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.122	65956	10.85	2,6-DNT	.	0	.	2,6-DNT
11.605	169224	10.232	2,4-DNT	.	0	.	2,4-DNT
13.638	55697	8.42	2-NT	.	0	.	2-NT
15.044	39813	8.486	4-NT	.	0	.	4-NT
15.776	71696	10.59	3-NT	.	0	.	3-NT
.	0	.	PETN	16.908	1596413	233.137	PETN
27.161	15608	9.157	2-NMX	27.362	211149	8.645	2-NMX
33.412	138819	21.134	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.09A
Area File: C:\CPWIN\DATA1\5E12310B.09A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:37:04 PM
File Reported On: 11/20/2013 at 4:37:14 PM

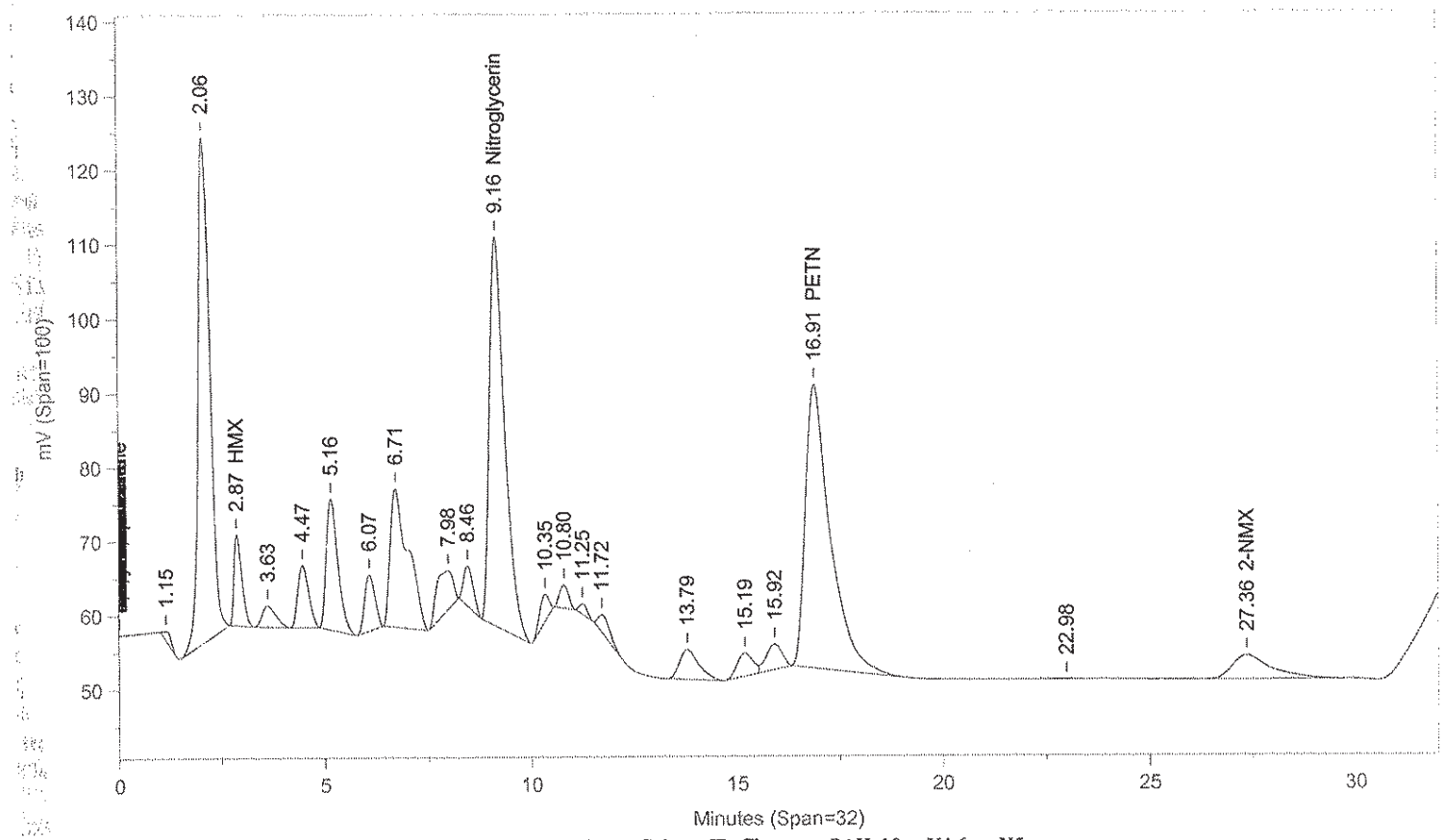
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 12:07:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 12:07:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.874	164745	7.932	HMX
4.315	44528	9.913	RDX	.	0	.	RDX
5.004	103028	9.762	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	233705	18.346	1,4-DNB	.	0	.	1,4-DNB
6.548	113091	21.952	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.937	170828	10.529	1,3-DNB	.	0	.	1,3-DNB
7.888	142070	8.22	Tetryl	.	0	.	Tetryl
8.303	123975	10.882	2,4,6-TNT	.	0	.	2,4,6-TNT
8.969	16982	.983	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.161	1350176	211.287	Nitroglycerin
10.203	47884	10.207	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.667	90350	8.25	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.122	65193	10.725	2,6-DNT	.	0	.	2,6-DNT
11.605	167502	10.128	2,4-DNT	.	0	.	2,4-DNT
13.638	56102	8.482	2-NT	.	0	.	2-NT
15.044	41182	8.778	4-NT	.	0	.	4-NT
15.776	70900	10.472	3-NT	.	0	.	3-NT
.	0	.	PETN	16.908	1596413	233.137	PETN
27.161	15608	9.157	2-NMX	27.362	211149	8.645	2-NMX
33.412	138819	21.134	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 2:51:34 PM
File Reported On: 11/22/2013 at 2:51:33 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/8/13 LCS17311 Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 19, 2013 00:07:41
Instrument : CP12--Y6329A
Result file : 5C12310.09R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 97% (73-122) Conc.: 9.679553

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.26	4.33	39947	7.621172
RDX	5.08	5.22	5.28	57704	9.827797
Nitrobenzene	12.62	12.85	12.94	87989	9.526643
o-Dinitrobenzene	14.65	14.90	15.01	139066	20.221775
4-Am-2,6-DNT	16.61	16.86	16.93	190188	9.854464
1,3-DNB	18.80	19.05	19.10	158794	9.376496
1,4-DNB	19.60	19.85	19.90	242155	21.146015
2-NT	23.89	24.34	24.41	56517	9.651669
4-NT	27.49	27.95	28.01	94991	9.786333
1,3,5-TNB	29.57	29.99	29.97	97857	8.991927
2,6-DNT	30.49	30.93	30.89	67290	10.556710
2,4-DNT	33.60	33.77	33.82	140021	10.842594
2-NMX	34.05	34.19	34.25	15039	9.679553
Tetryl	34.39	34.53	34.59	79065	10.322124
2,4,6-TNT	35.32	35.45	35.52	107091	10.182743
1-Nitronaphthalene	36.34	36.45	36.54	151227	19.409136

Analysis Report (B)

Injected on : NOV 19, 2013 00:07:41
Instrument : CP12--Y6329B
Result file : 5C12310B.09R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.61	9.67	1113409	219.091080
PETN	25.73	26.06	26.15	1278894	215.377487

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	215.377487	18	6			
☑ Nitroglycerin	B	219.091080	15	5.2			
☑ HMX	A	7.621172	2	0.65			
☑ RDX	A	9.827797	0.5	0.2			
☑ Nitrobenzene	A	9.526643	0.6	0.2			
☑ o-Dinitrobenzene	A	20.221775	0.6	0.2			
☑ 4-Am-2,6-DNT	A	9.854464	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	9.376496	0.6	0.2			
☑ 1,4-DNB	A	21.146015	0.6	0.3			
☑ 2-NT	A	9.651669	0.75	0.25			
☑ 4-NT	A	9.786333	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	8.991927	0.6	0.2			
☑ 2,6-DNT	A	10.556710	1.3	0.45			
☑ 2,4-DNT	A	10.842594	2	0.72			
☐ 2-NMX	A	9.679553					
☑ Tetryl	A	10.322124	0.6	0.4			
☑ 2,4,6-TNT	A	10.182743	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:31:17

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/8/13 LCS17311 Sample ID: AA **Batchnumber: 133110017A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 19, 2013 00:07:41
Instrument	: CP12--Y6329A
Result file	: 5C12310.09R
Calibration file	: 4C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 19, 2013 00:07:41
Instrument	: CP12--Y6329B
Result file	: 5C12310B.09R
Calibration file	: 4C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	19.409136	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko

Date: NOV 25 2013

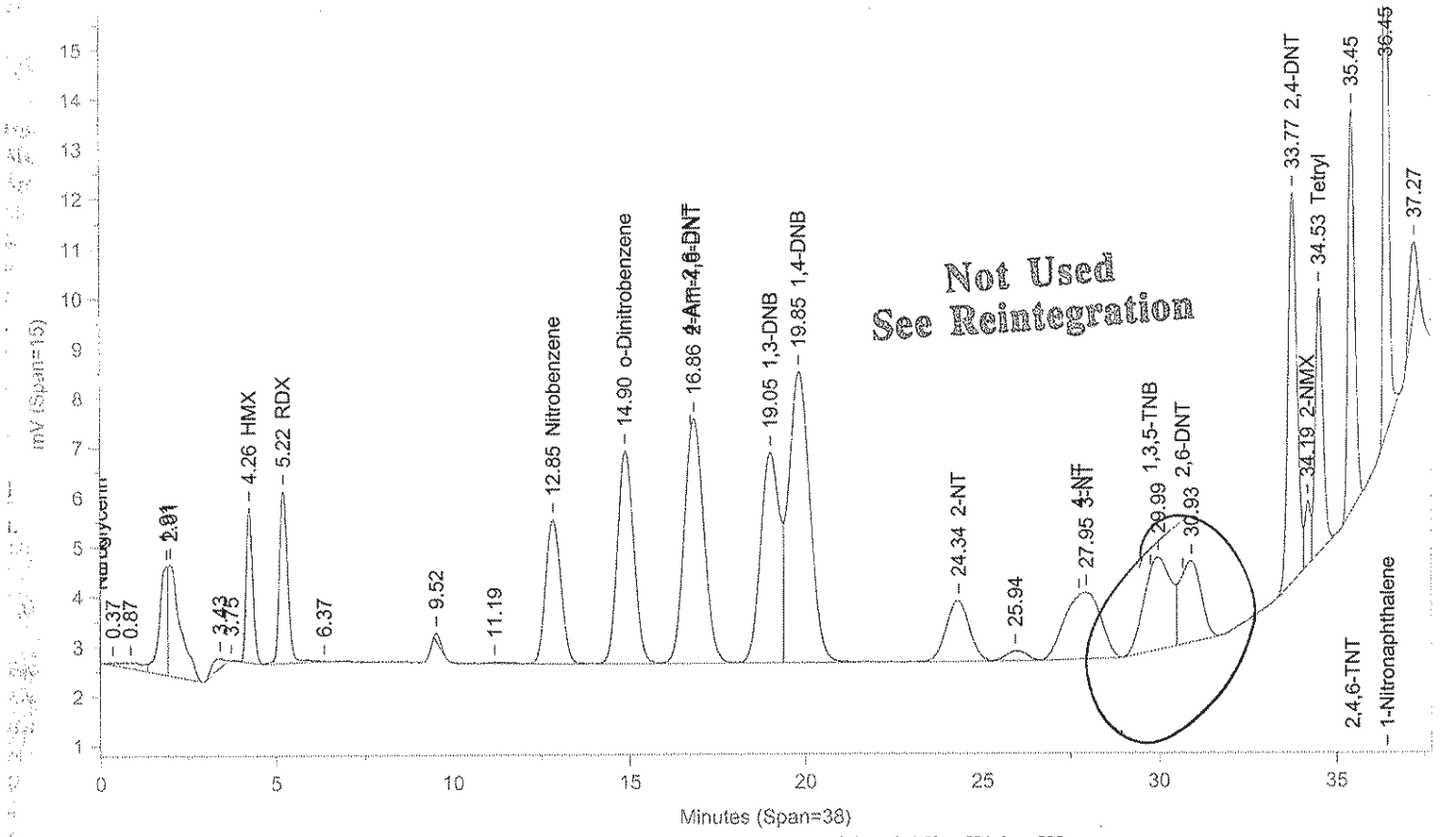
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:31:17

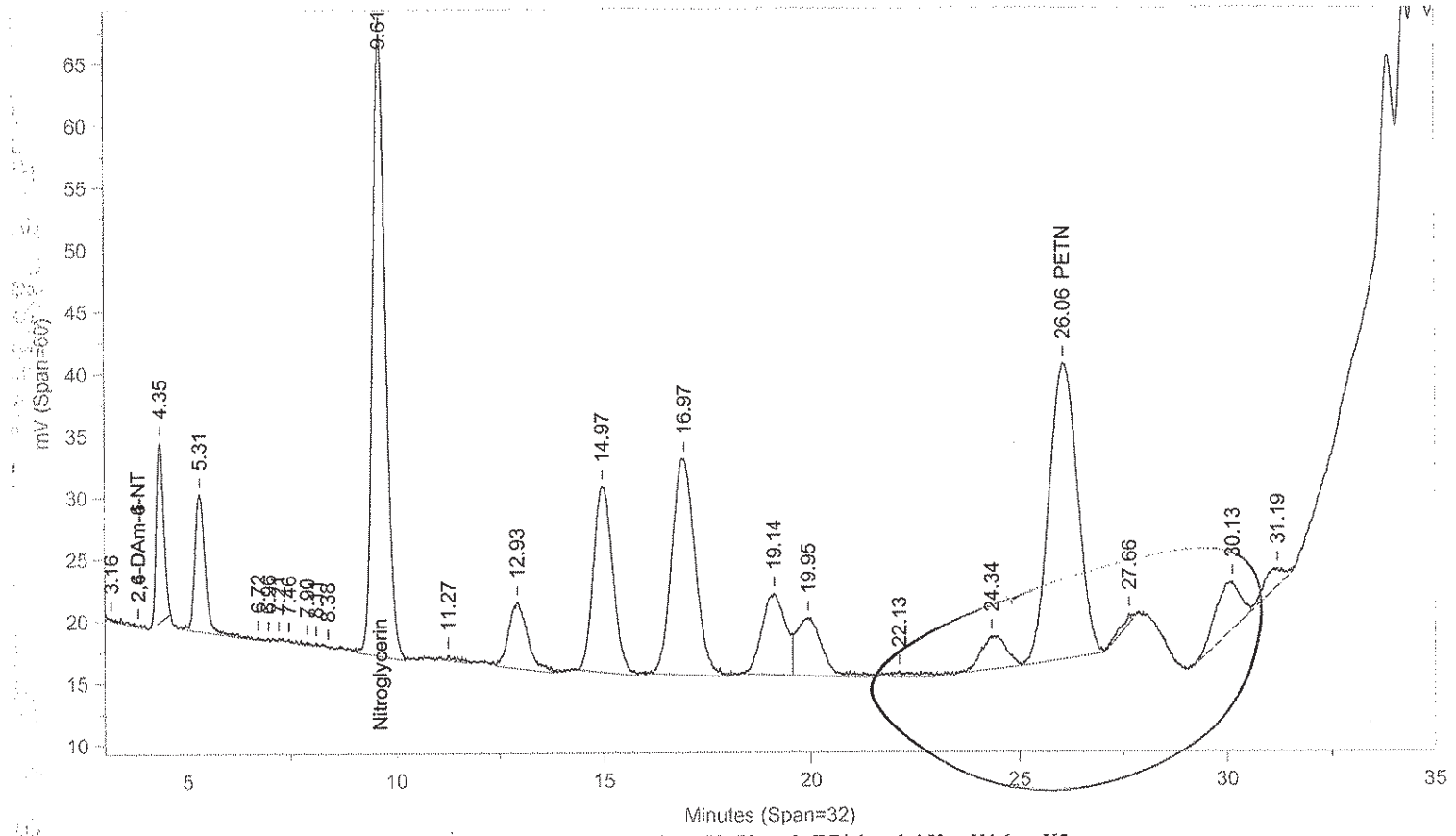
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5C12310.09R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 12:07:40 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 12:07:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

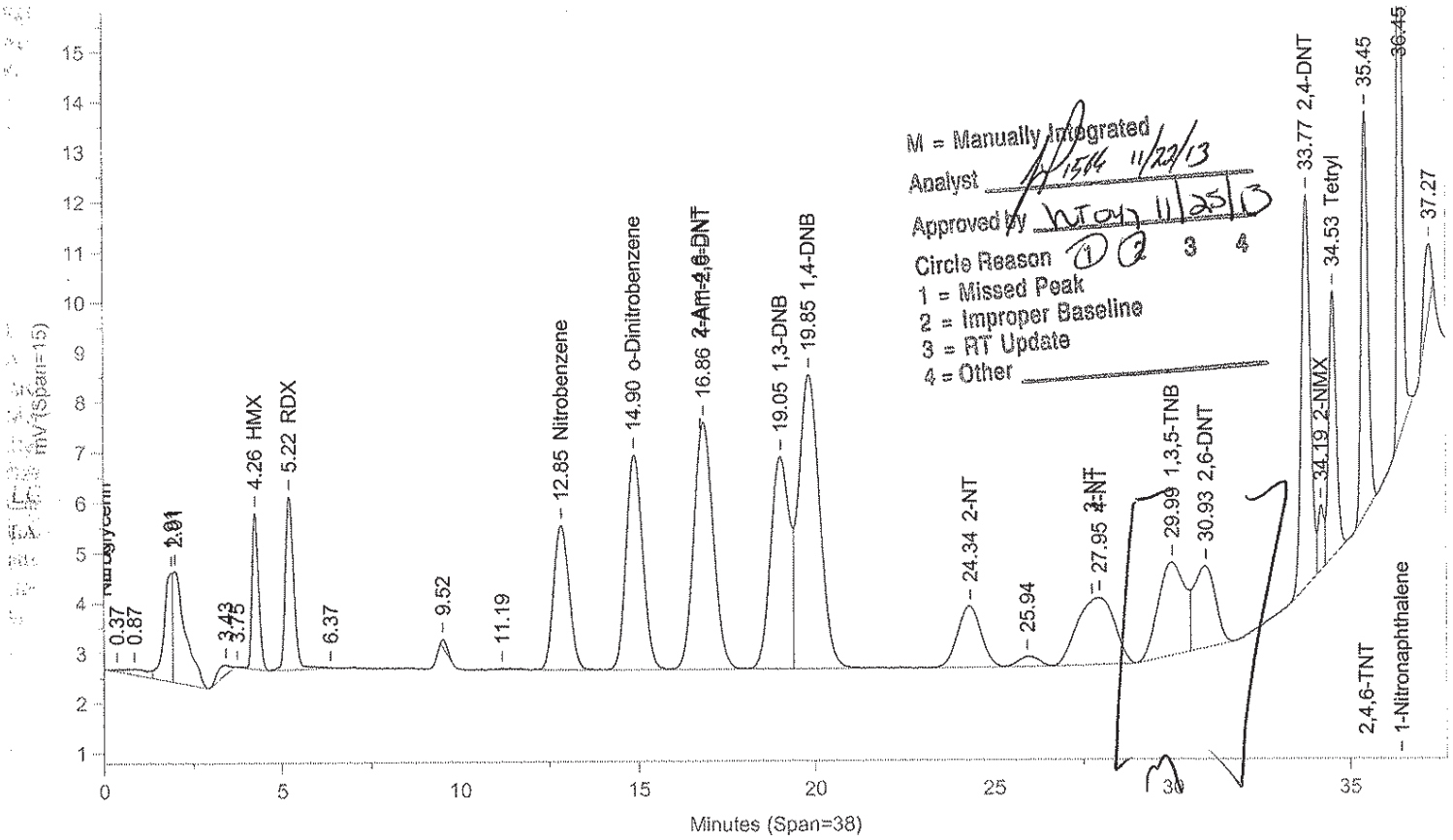
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.255	39947	7.621	HMX	.	0	.	HMX
5.221	57704	9.828	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.614	1113409	219.091	Nitroglycerin
12.854	87989	9.527	Nitrobenzene	.	0	.	Nitrobenzene
14.895	139066	20.222	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.861	190188	9.844	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.045	158794	9.376	1,3-DNB	.	0	.	1,3-DNB
19.847	242155	21.146	1,4-DNB	.	0	.	1,4-DNB
24.344	56517	9.652	2-NT	.	0	.	2-NT
.	0	.	PETN	26.059	1142938	192.481	PETN
27.955	94991	9.737	3-NT	.	0	.	3-NT
33.773	140021	10.843	2,4-DNT	.	0	.	2,4-DNT
34.194	15039	9.68	2-NMX	.	0	.	2-NMX
34.528	79065	10.322	Tetryl	.	0	.	Tetryl
35.455	107091	10.183	2,4,6-TNT	.	0	.	2,4,6-TNT
36.454	151227	19.409	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

RT

Files:
Area File: C:\CPWIN\DATA1\5C12310.09A
Area File: C:\CPWIN\DATA1\5C12310B.09A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:31:18 PM
File Reported On: 11/20/2013 at 5:31:28 PM

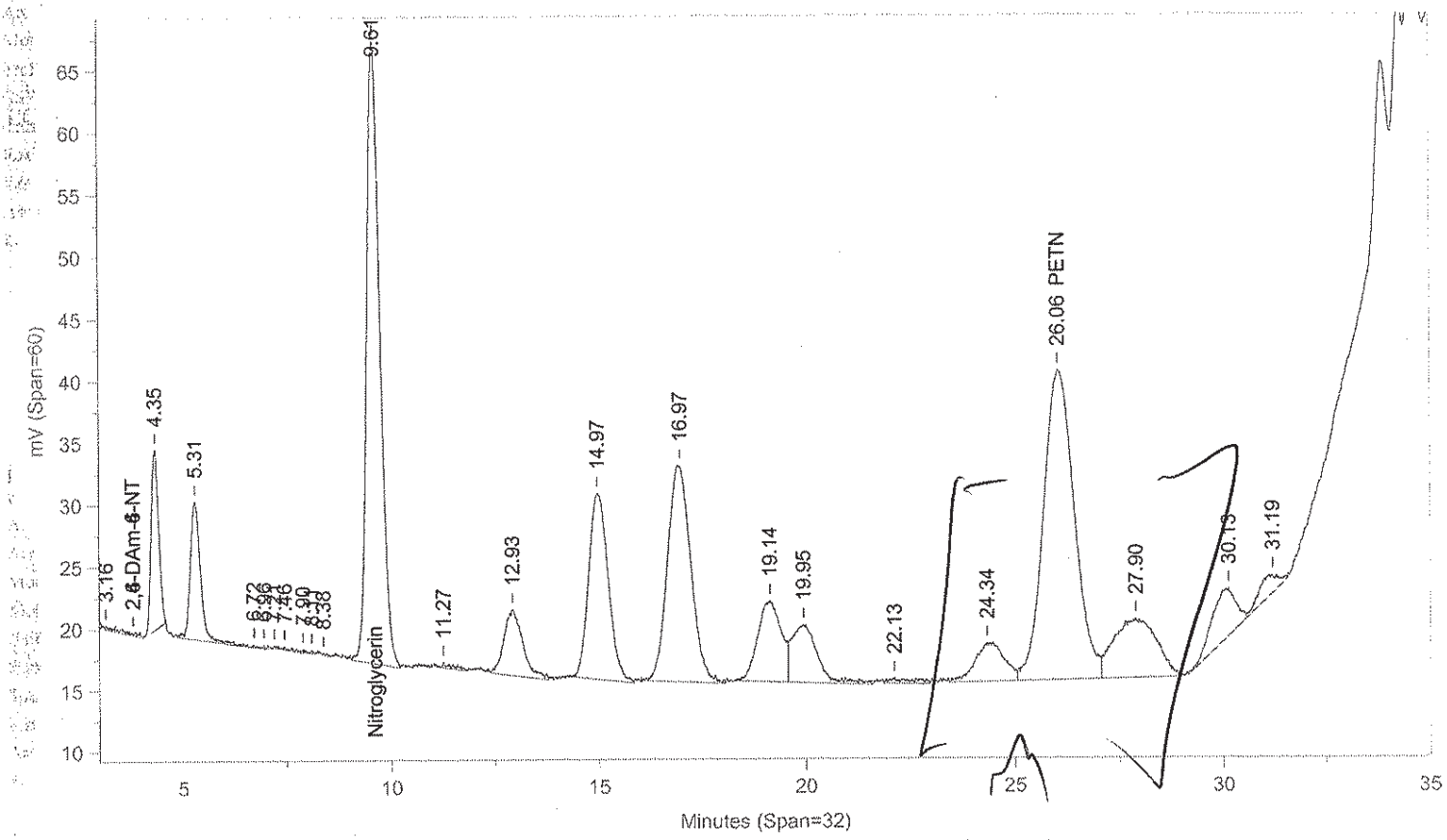
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.09R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 12:07:40 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 12:07:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.255	39947	7.621	HMX	.	0	.	HMX
5.221	57704	9.828	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.614	1113409	219.091	Nitroglycerin
12.854	87989	9.527	Nitrobenzene	.	0	.	Nitrobenzene
14.895	139066	20.222	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.861	190188	9.854	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.045	158794	9.376	1,3-DNB	.	0	.	1,3-DNB
19.847	242155	21.146	1,4-DNB	.	0	.	1,4-DNB
24.344	56517	9.652	2-NT	.	0	.	2-NT
.	0	.	PETN	26.059	1278894	215.377	PETN
27.955	94991	9.786	4-NT	.	0	.	4-NT
29.988	97857	8.992	1,3,5-TNB	.	0	.	1,3,5-TNB
30.927	67290	10.557	2,6-DNT	.	0	.	2,6-DNT
33.773	140021	10.843	2,4-DNT	.	0	.	2,4-DNT
34.194	15039	9.68	2-NMX	.	0	.	2-NMX
34.528	79065	10.322	Tetryl	.	0	.	Tetryl
35.455	107091	10.183	2,4,6-TNT	.	0	.	2,4,6-TNT
36.454	151227	19.409	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 1:02:36 PM
File Reported On: 11/22/2013 at 1:02:35 PM

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Data Summary

Sample Name: LCSA 11/7/13 LCS04311 LCS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 12:01:35
Instrument X6329A
Result file 3E12310.21R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 111% (63 - 150) Conc: 5560.380371

Analysis Report (B)

Injected on Nov 13, 2013 12:01:35
Instrument Y6329A
Result file 3C12310.21R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 91% (63 - 150) Conc: 4541.055664

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.13	4.24	47504	5296.381348
1,3,5-Trinitrobenzene	4.71	4.81	4.91	109603	5192.295898
1,4-Dinitrobenzene	5.59	5.68	5.79	270711	10625.580078
o-Dinitrobenzene	6.20	6.27	6.40	121365	11778.813477
1,3-DNB	6.58	6.63	6.78	193620	5966.815918
Tetryl	7.43	7.53	7.71	161154	4811.008606
2,4,6-Trinitrotoluene	7.90	7.95	8.10	132315	5806.819336
4-Amino-2,6-dinitrotoluer	9.70	9.88	9.99	48552	5174.953613
2-Amino-4,6-dinitrotoluer	10.13	10.18	10.41	107872	4925.307129
2,6-Dinitrotoluene	10.56	10.59	10.84	63095	5189.772949
2,4-Dinitrotoluene	11.03	11.08	11.31	191803	5798.755371
2-Nitrotoluene	12.98	13.03	13.26	66003	4989.265137
4-Nitrotoluene	14.31	14.37	14.64	46272	4931.598633
3-Nitrotoluene	15.02	15.06	15.34	85360	6304.069824
2-NMX	25.80	25.86	26.48	18954	5560.380371
1-Nitronaphthalene	32.78	32.90	33.26	166011	12636.717773

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.30	4.41	38672	3689.013916
RDX	5.18	5.27	5.38	63133	5398.44043
Nitrobenzene	12.82	12.95	13.14	100383	5439.779785
o-Dinitrobenzene	14.85	14.96	15.21	156405	11386.141602
4-Amino-2,6-dinitrotoluer	16.81	16.87	17.13	212319	5500.573242
1,3-DNB	19.04	19.14	19.34	167704	4951.299316
1,4-Dinitrobenzene	19.83	19.91	20.13	279305	12218.036133
2-Nitrotoluene	24.21	24.43	24.73	66587	5699.666992
3-Nitrotoluene	27.77	28.04	28.29	103484	5292.918945
1,3,5-Trinitrobenzene	30.01	30.15	30.41	105688	4813.710449
2,6-Dinitrotoluene	30.76	30.94	31.16	72832	5702.102051
2,4-Dinitrotoluene	33.73	33.84	33.95	152217	5893.522949
2-NMX	34.15	34.25	34.35	13997	4541.055664
Tetryl	34.46	34.57	34.66	84865	5526.286133
2,4,6-Trinitrotoluene	35.40	35.50	35.60	116342	5525.322266
1-Nitronaphthalene	36.38	36.48	36.58	177416	11337.234375

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	20010.5625	6000	2000		37.21	
PETN	B	19768.390625	6000	2000		21.17	
HMX	A	3729.645508	750	250		1.10	
RDX	A	5296.381348	300	125		1.91	
1,3,5-Trinitrobenzene	A	5192.295898	300	100		7.57	
1,4-Dinitrobenzene	A	10625.580078	300	100		13.94	
o-Dinitrobenzene	A	11778.813477	300	100		3.39	
1,3-DNB	A	5966.815918	300	100		18.60	
Tetryl	B	5526.286133	300	153		13.84	
Nitrobenzene	B	5439.779785	300	100		12.27	
2,4,6-Trinitrotoluene	A	5806.819336	300	100		4.97	
4-Amino-2,6-dinitrotoluene	A	5174.953613	300	150		6.10	
2-Amino-4,6-dinitrotoluene	A	4925.307129	300	100		11.04	
2,6-Dinitrotoluene	A	5189.772949	300	100		9.41	
2,4-Dinitrotoluene	A	5798.755371	300	100		1.62	
2-Nitrotoluene	A	4989.265137	300	200		13.29	
4-Nitrotoluene	A	4931.598633	300	200		7.07	
3-Nitrotoluene	A	6304.069824	300	250		17.44	
2-NMX	A	5560.380371				20.18	
1-Nitronaphthalene	A	12636.717773	300	100		10.84	

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Data Summary

Sample Name: LCSA 11/7/13 LCS04311 LCS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 12:01:35
Instrument	X6329A
Result file	3E12310.21R
Calibration file	2E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 13, 2013 12:01:35
Instrument	Y6329A
Result file	3C12310.21R
Calibration file	2C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329A
Result file : 3E12310.21R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 111% (63-150) Conc.: 5560.38037

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.13	4.24	47504	5296.381348
1,3,5-TNB	4.71	4.81	4.91	109603	5192.295898
1,4-DNB	5.59	5.68	5.79	270711	10625.580078
o-Dinitrobenzene	6.20	6.27	6.40	121365	11778.813477
1,3-DNB	6.58	6.63	6.78	193620	5966.815918
Tetryl	7.43	7.53	7.71	161154	4662.155273
2,4,6-TNT	7.90	7.95	8.10	132315	5806.819336
Tetryl breakdown	8.62	8.57	8.86	5145	148.853333
4-Am-2,6-DNT	9.70	9.88	9.99	48552	5174.953613
2-Am-4,6-DNT	10.13	10.18	10.41	107872	4925.307129
2,6-DNT	10.56	10.59	10.84	63095	5189.772949
2,4-DNT	11.03	11.08	11.31	191803	5798.755371
2-NT	12.98	13.03	13.26	66003	4989.265137
4-NT	14.31	14.37	14.64	46272	4931.598633
3-NT	15.02	15.06	15.34	85360	6304.069824
2-NMX	25.80	25.86	26.48	18954	5560.380371
1-Nitronaphthalene	32.78	32.90	33.26	166011	12636.717773

Analysis Report (B)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329B
Result file : 3E12310B.21R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 106% (63-150) Conc.: 5295.91259

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.67	2.77	2.87	154466	3729.645508
Nitroglycerin	8.63	8.78	9.01	175510	13732.622070
PETN	16.01	16.19	16.59	218680	15983.392578
2-NMX	25.96	26.04	26.63	258689	5295.912598

4662.155273 + 148.853333 = 4811.008606

(8) tetryl Breakdown added

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	13732.622070	6000	2000			Report Confirmatio
☑ PETN	B	15983.392578	6000	2000			
☑ HMX	B	3729.645508	750	250			Corrected Value = 3936.25 See ICAR 7295
☑ RDX	A	5296.381348	300	125			
☑ 1,3,5-TNB	A	5192.295898	300	100			
☑ 1,4-DNB	A	10625.580078	300	100			
☑ o-Dinitrobenzene	A	11778.813477	300	100			
☑ 1,3-DNB	A	5966.815918	300	100			
☑ Tetryl	A	4811.008606 4662.155273 (8)	300	153	Calculated ①		report confirmation
☑ Nitrobenzene		4811.008606 (8)	<300	<100			report confirmation
☑ 2,4,6-TNT	A	5806.819336	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	5174.953613	300	150			
☑ 2-Am-4,6-DNT	A	4925.307129	300	100			
☑ 2,6-DNT	A	5189.772949	300	100			
☑ 2,4-DNT	A	5798.755371	300	100			
☑ 2-NT	A	4989.265137	300	200			
☑ 4-NT	A	4931.598633	300	200			
☑ 3-NT	A	6304.069824	300	250			
☐ 2-NMX	A	5560.380371				4.87	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

①, ⑧ Jessica L. Miller
Jessica L. Miller
Chemist

NOV 20 2013

Printed on: 11/13/2013 14:07:02

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329A
Result file : 3E12310.21R
Calibration file : 2E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329B
Result file : 3E12310B.21R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	12636.717773	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller Chemist
Date: NOV 2 0 2013

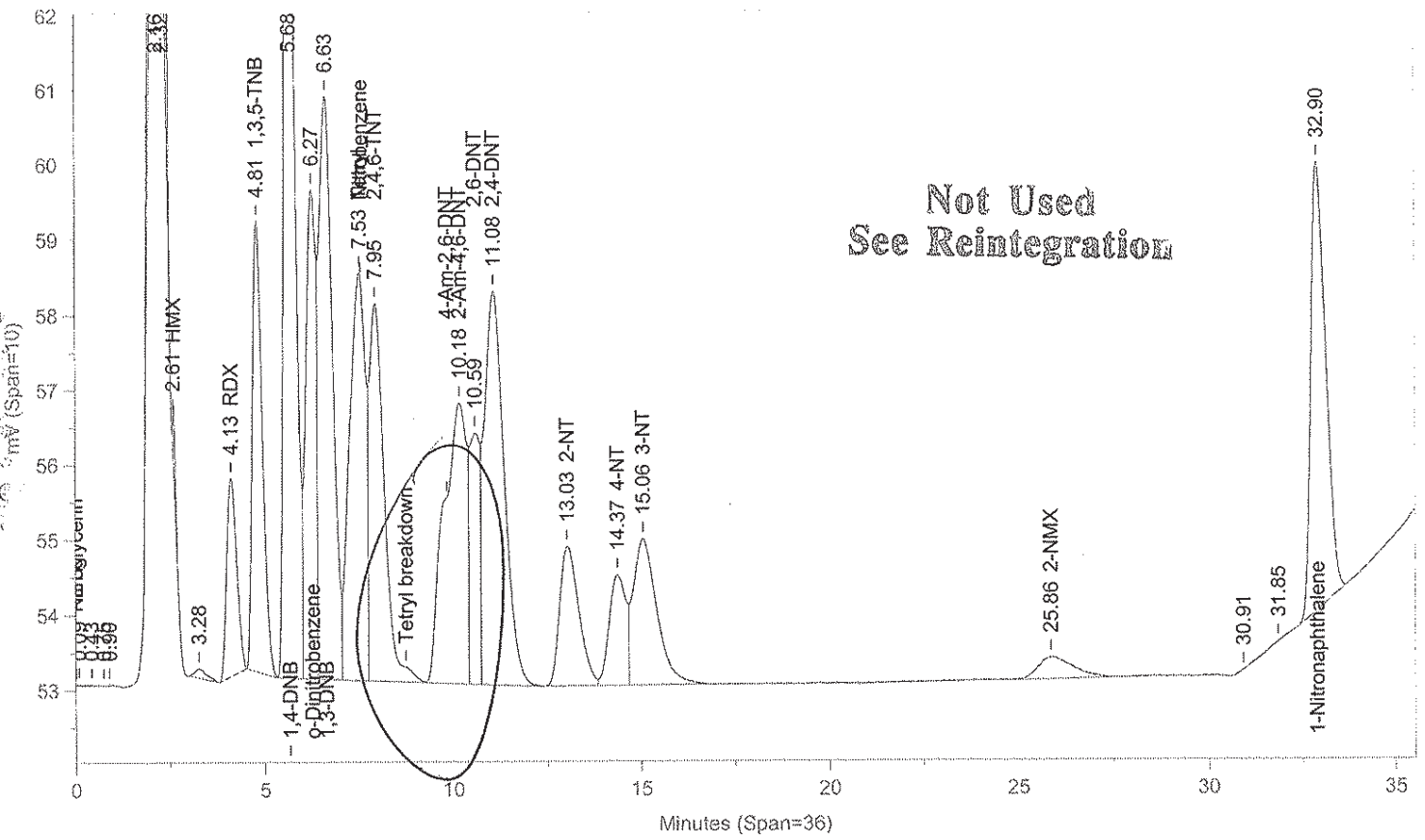
Verified by: Melissa A. McDermott Senior Chemist Group Leader
Date: NOV 2 1 2013

James H. Place Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

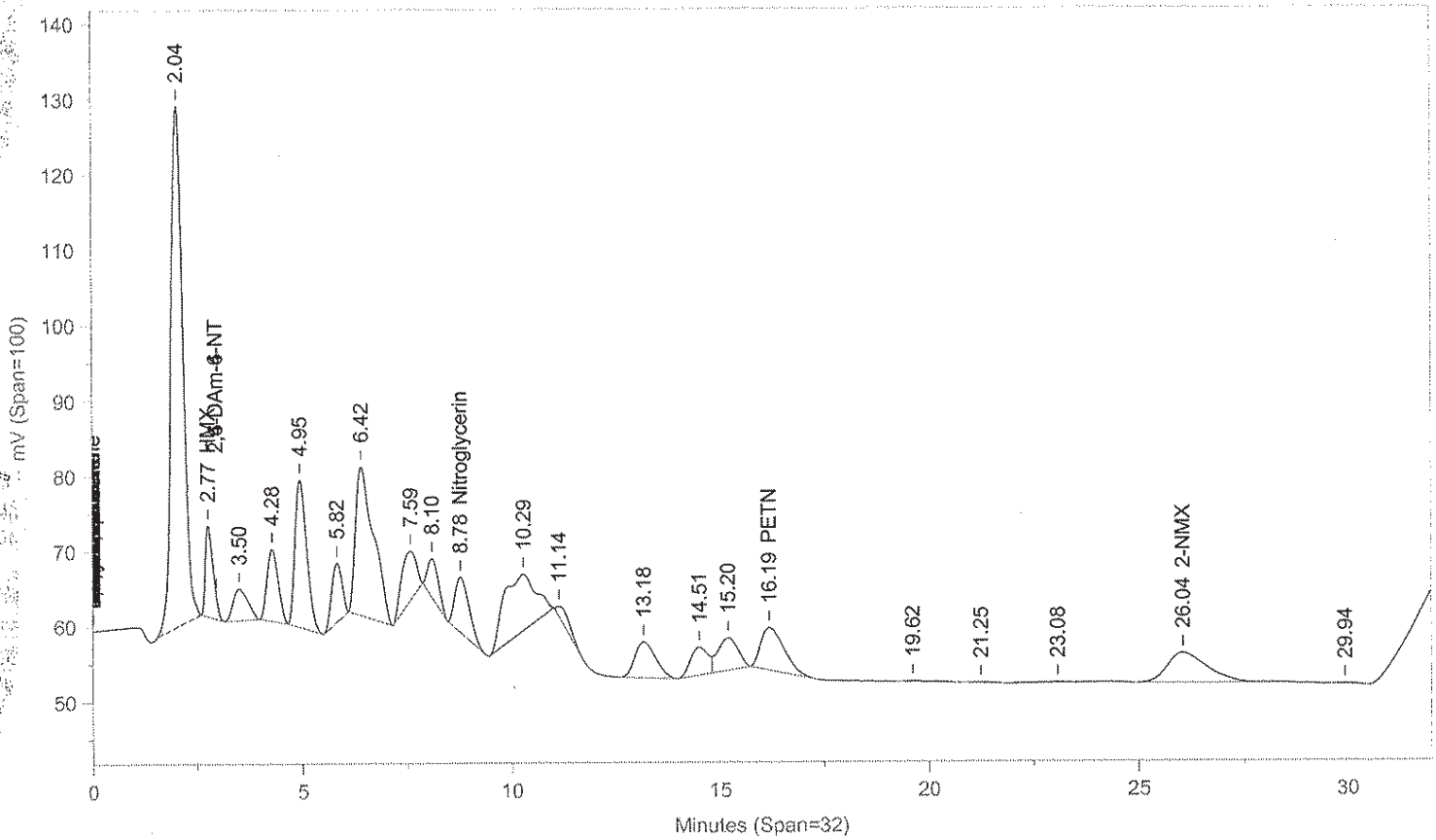
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.21R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.21R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.768	154466	3729.646	HMX
4.133	47504	5296.381	RDX	.	0	.	RDX
4.806	109603	5192.296	1,3,5-TNB	.	0	.	1,3,5-TNB
5.681	270711	10625.58	1,4-DNB	.	0	.	1,4-DNB
6.27	121365	11778.81	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.632	193620	5966.816	1,3-DNB	.	0	.	1,3-DNB
7.533	161154	4662.155	Tetryl	.	0	.	Tetryl
7.95	137460	6032.629	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.78	175510	13732.62	Nitroglycerin
10.18	156424	7142.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.59	63095	5189.773	2,6-DNT	.	0	.	2,6-DNT
11.085	191803	5798.755	2,4-DNT	.	0	.	2,4-DNT
13.03	66003	4989.265	2-NT	.	0	.	2-NT
14.372	46272	4931.599	4-NT	.	0	.	4-NT
15.063	85360	6304.07	3-NT	.	0	.	3-NT
.	0	.	PETN	16.186	218680	15983.39	PETN
25.859	18954	5560.38	2-NMX	26.039	258689	5295.913	2-NMX
32.898	166011	12636.72	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.21A
Area File: C:\CPWIN\DATA1\3E12310B.21A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 12:42:12 PM
Filé Reported On: 11/13/2013 at 12:42:23 PM

Not Used
See Reintegration

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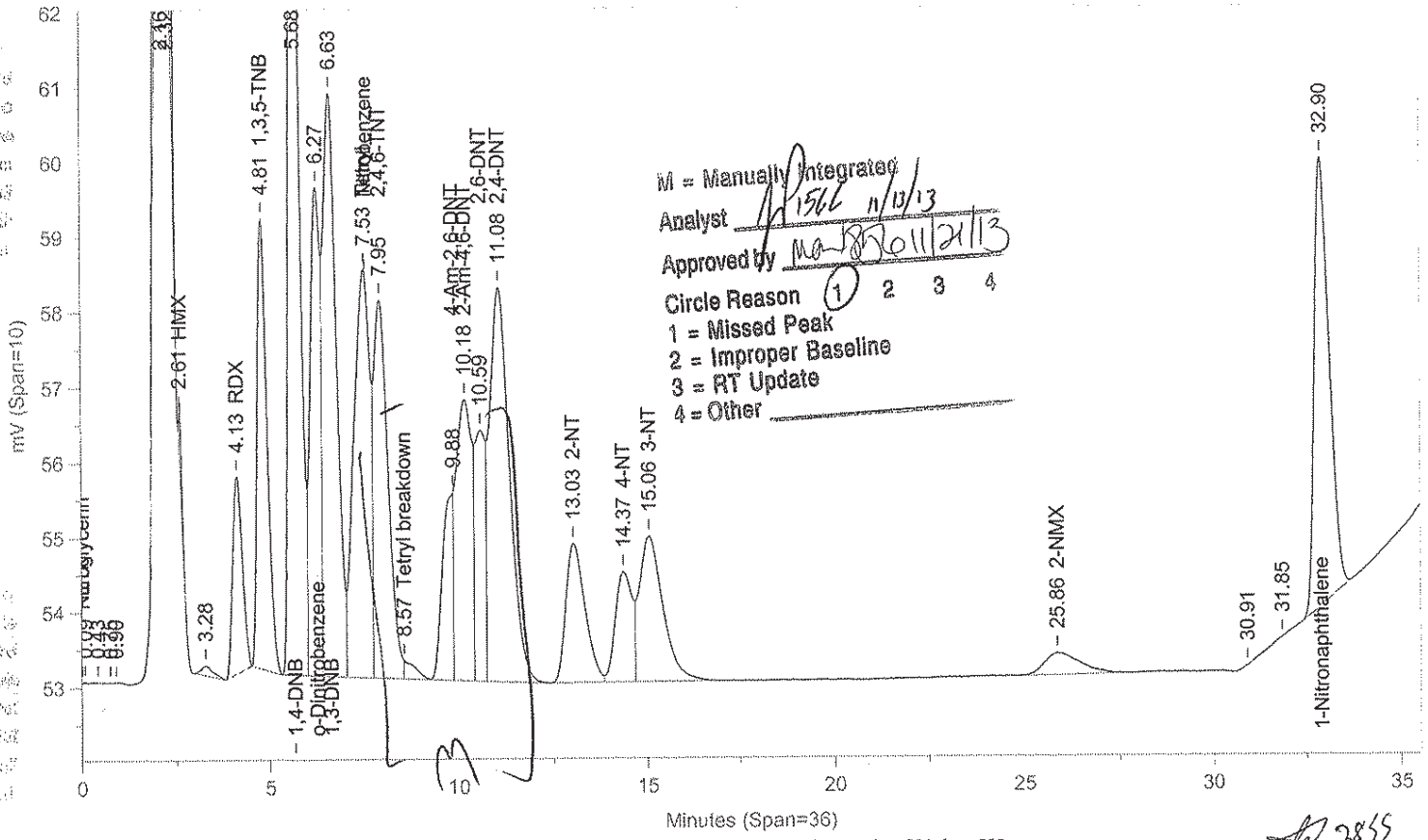
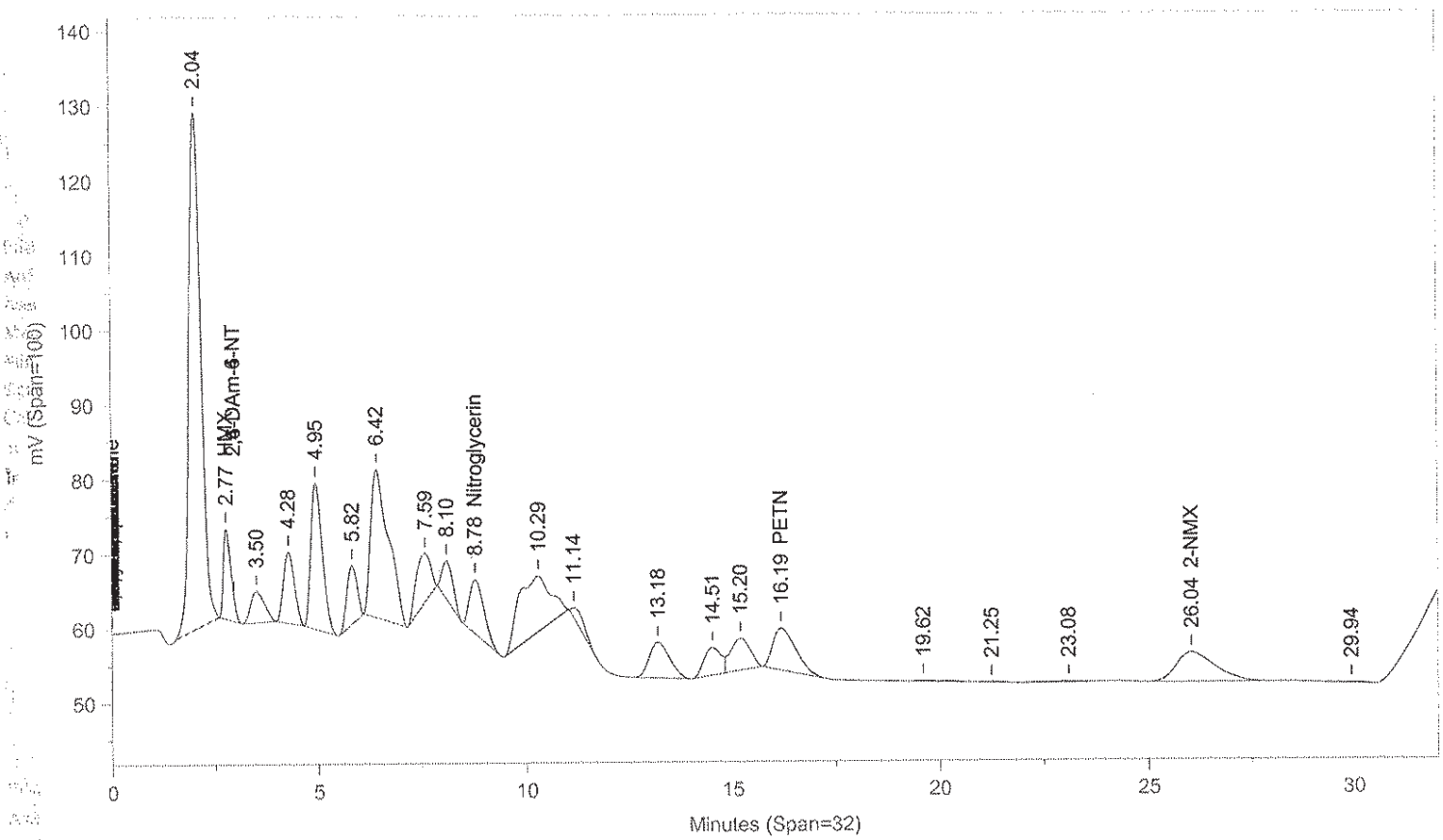
File: C:\CPWIN\DATA1\3E12310.21R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.21R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.768	154466	3729.646	HMX
4.133	47504	5296.381	RDX	.	0	.	RDX
4.806	109603	5192.296	1,3,5-TNB	.	0	.	1,3,5-TNB
5.681	270711	10625.58	1,4-DNB	.	0	.	1,4-DNB
6.27	121365	11778.81	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.632	193620	5966.816	1,3-DNB	.	0	.	1,3-DNB
7.533	161154	4662.155	Tetryl	.	0	.	Tetryl
7.95	132315	5806.819	2,4,6-TNT	.	0	.	2,4,6-TNT
8.572	5145	148.853	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.78	175510	13732.62	Nitroglycerin
9.878	48552	5174.954	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.18	107872	4925.307	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.59	63095	5189.773	2,6-DNT	.	0	.	2,6-DNT
11.085	191803	5798.755	2,4-DNT	.	0	.	2,4-DNT
13.03	66003	4989.265	2-NT	.	0	.	2-NT
14.372	46272	4931.599	4-NT	.	0	.	4-NT
15.063	85360	6304.07	3-NT	.	0	.	3-NT
.	0	.	PETN	16.186	218680	15983.39	PETN
25.859	18954	5560.38	2-NMX	26.039	258689	5295.913	2-NMX
32.898	166011	12636.72	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:54:18 PM
File Reported On: 11/13/2013 at 1:54:17 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329A
Result file : 3C12310.21R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 91% (63-150) Conc.: 4541.05566

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.30	4.41	38672	3689.013916
RDX	5.18	5.27	5.38	63133	5398.440430
Nitrobenzene	12.82	12.95	13.14	100383	5439.779785
o-Dinitrobenzene	14.85	14.96	15.21	156405	11386.141602
4-Am-2,6-DNT	16.81	16.87	17.13	212319	5500.573242
1,3-DNB	19.04	19.14	19.34	167704	4951.299316
1,4-DNB	19.83	19.91	20.13	279305	12218.036133
2-NT	24.21	24.43	24.73	66587	5699.666992
3-NT	27.77	28.04	28.29	103484	5292.918945
1,3,5-TNB	30.01	30.15	30.41	105688	4813.710449
2,6-DNT	30.76	30.94	31.16	72832	5702.102051
2,4-DNT	33.73	33.84	33.95	152217	5893.522949
2-NMX	34.15	34.25	34.35	13997	4541.055664
Tetryl	34.46	34.57	34.66	84865	5526.286133
2,4,6-TNT	35.40	35.50	35.60	116342	5525.322266
1-Nitronaphthalene	36.38	36.48	36.58	177416	11337.234375

Analysis Report (B)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329B
Result file : 3C12310B.21R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.73	4.01	21692	98.405823
Nitroglycerin	9.66	9.74	9.86	203385	20010.562500
PETN	26.17	26.39	26.59	234766	19768.390625

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	19768.390625	6000	2000			
☑ Nitroglycerin	B	20010.562500	6000	2000			
☑ HMX	A	3689.013916	750	250			
☑ RDX	A	5398.440430	300	125			
☑ Nitrobenzene	A	5439.779785	300	100			
☑ o-Dinitrobenzene	A	11386.141602	300	100			
☑ 4-Am-2,6-DNT	A	5500.573242	300	150	7 coelutes		report primary
☑ 2-Am-4,6-DNT		5500.573242	<300	<100			report primary
☑ 1,3-DNB	A	4951.299316	300	100			
☑ 1,4-DNB	A	12218.036133	300	100			
☑ 2-NT	A	5699.666992	300	200			
☑ 4-NT		5292.918945	<300	<200	7 coelutes		report primary
☑ 3-NT	A	5292.918945	300	250			report primary
☑ 1,3,5-TNB	A	4813.710449	300	100			
☑ 2,6-DNT	A	5702.102051	300	100			
☑ 2,4-DNT	A	5893.522949	300	100			
☐ 2-NMX	A	4541.055664					
☑ Tetryl	A	5526.286133	300	153			
☑ 2,4,6-TNT	A	5525.322266	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/13/2013 14:11:43

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 13, 2013 12:01:35
Instrument	: CP12--Y6329A
Result file	: 3C12310.21R
Calibration file	: 2C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 13, 2013 12:01:35
Instrument	: CP12--Y6329B
Result file	: 3C12310B.21R
Calibration file	: 2C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11337.234375	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 2 0 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 2 1 2013

James H. Place
Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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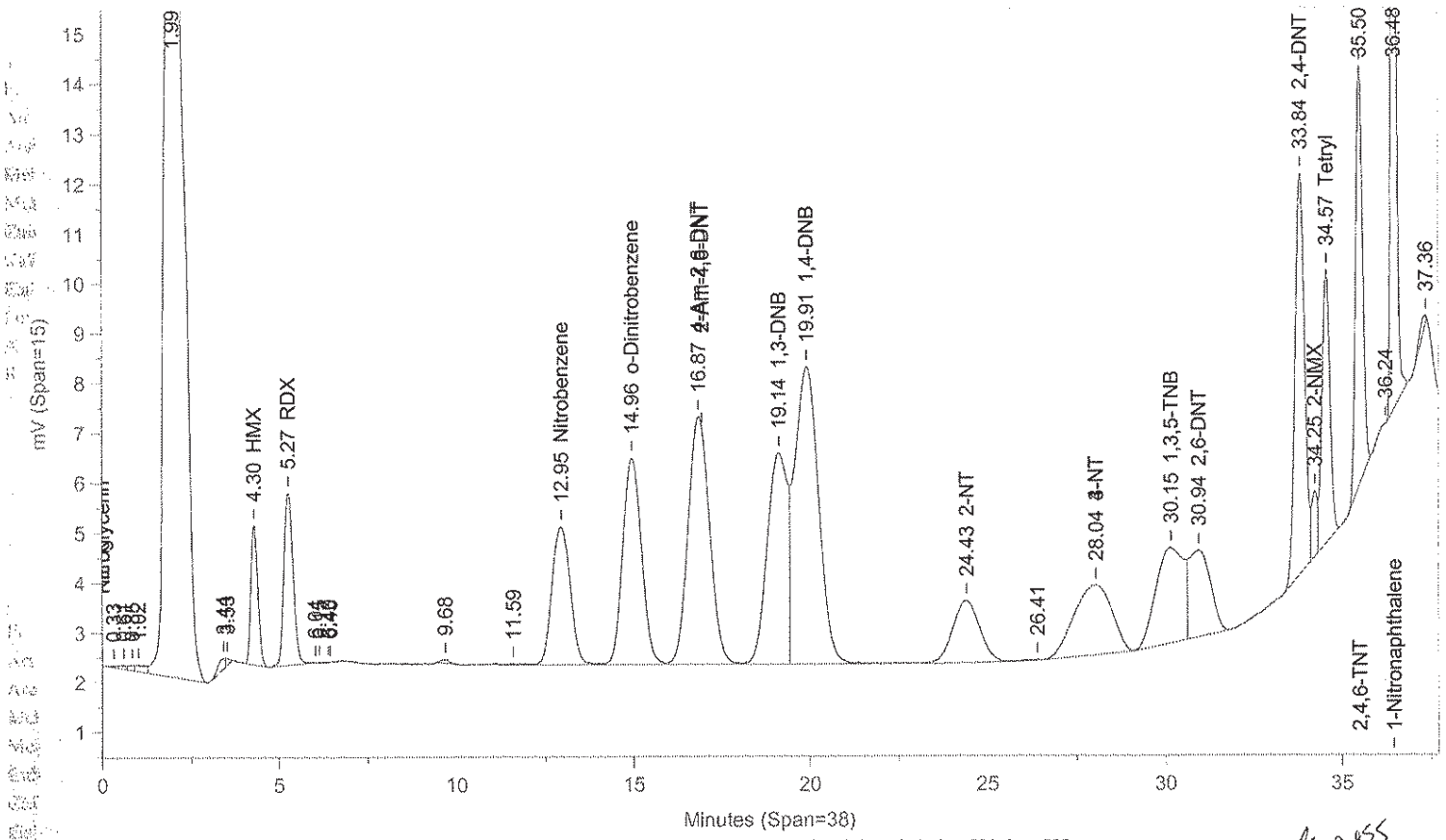
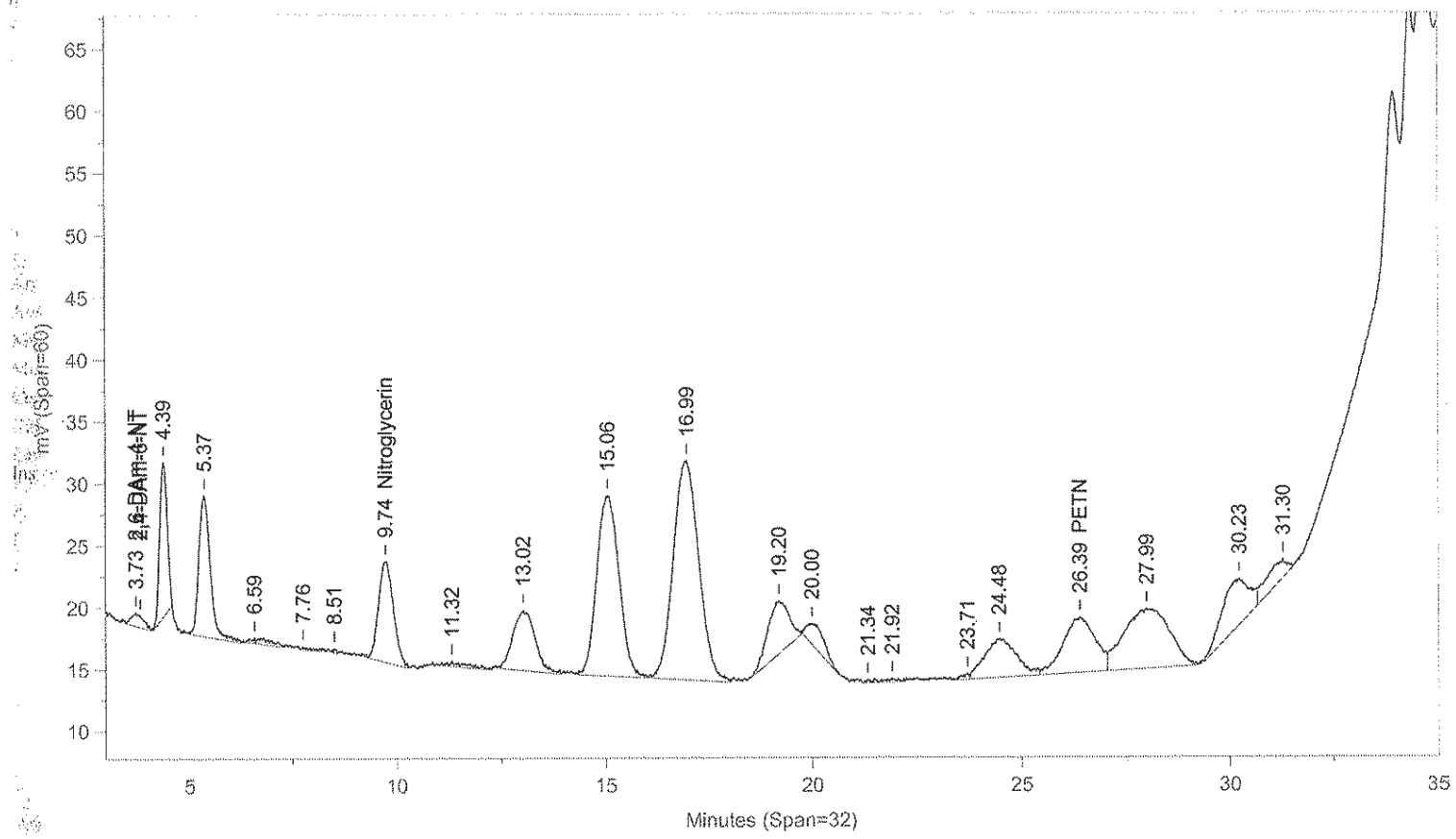
File: C:\CPWIN\DATA1\3C12310.21R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3C12310B.21R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.727	21692	98.406	2,6-DAm-4-NT
4.304	38672	3689.014	HMX	.	0	.	HMX
5.273	63133	5398.44	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.739	203385	20010.56	Nitroglycerin
12.948	100383	5439.78	Nitrobenzene	.	0	.	Nitrobenzene
14.961	156405	11386.14	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.874	212319	5500.573	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.141	167704	4951.299	1,3-DNB	.	0	.	1,3-DNB
19.913	279305	12218.04	1,4-DNB	.	0	.	1,4-DNB
24.429	66587	5699.667	2-NT	.	0	.	2-NT
.	0	.	PETN	26.389	234766	19768.39	PETN
28.038	103484	5292.919	3-NT	.	0	.	3-NT
30.151	105688	4813.71	1,3,5-TNB	.	0	.	1,3,5-TNB
30.945	72832	5702.102	2,6-DNT	.	0	.	2,6-DNT
33.838	152217	5893.523	2,4-DNT	.	0	.	2,4-DNT
34.254	13997	4541.056	2-NMX	.	0	.	2-NMX
34.567	84865	5526.286	Tetryl	.	0	.	Tetryl
35.502	116342	5525.322	2,4,6-TNT	.	0	.	2,4,6-TNT
36.476	177416	11337.23	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.21A
Area File: C:\CPWIN\DATA1\3C12310B.21A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 12:41:42 PM
File Reported On: 11/13/2013 at 12:41:51 PM

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Data Summary

Sample Name: 7263052 MS WHERCMS MS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 13:26:27
Instrument X6329A
Result file 3E12310.23R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 97% (63 - 150) Conc: 4869.477051

Analysis Report (B)

Injected on Nov 13, 2013 13:26:27
Instrument Y6329A
Result file 3C12310.23R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 88% (63 - 150) Conc: 4379.989258

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.06	4.24	44755	4982.667969	HMX	4.21	4.36	4.41	38715	3693.091064
1,3,5-Trinitrobenzene	4.71	4.72	4.91	102418	4851.933105	RDX	5.18	5.35	5.38	57022	4853.016602
1,4-Dinitrobenzene	5.59	5.58	5.79	238166	9348.154297	Nitrobenzene	12.82	13.15	13.14	94033	5093.21044
o-Dinitrobenzene	6.20	6.15	6.40	114461	11108.746094	o-Dinitrobenzene	14.85	15.20	15.21	140879	10244.23242
1,3-DNB	6.58	6.52	6.78	171272	5278.105469	4-Amino-2,6-dinitrotoluer	16.81	17.15	17.13	195307	5059.846191
Tetryl	7.43	7.40	7.71	147640	4427.812775	1,3-DNB	19.04	19.42	19.34	160671	4743.67529
2,4,6-Trinitrotoluene	7.90	7.81	8.10	116863	5128.690918	1,4-Dinitrobenzene	19.83	20.26	20.13	248118	10837.05957
4-Amino-2,6-dinitrotoluer	9.70	9.60	9.99	45596	4859.94043	2-Nitrotoluene	24.21	24.78	24.73	59489	5083.800781
2-Amino-4,6-dinitrotoluer	10.13	10.01	10.41	105276	4806.75293	4-Nitrotoluene	27.77	28.43	28.29	94741	4880.632324
2,6-Dinitrotoluene	10.56	10.43	10.84	57856	4758.866699	1,3,5-Trinitrobenzene	30.01	30.72	30.41	84634	3959.419922
2,4-Dinitrotoluene	11.03	10.89	11.31	169725	5131.28125	2,6-Dinitrotoluene	30.76	31.26	31.16	83181	6493.496582
2-Nitrotoluene	12.98	12.80	13.26	60875	4601.591309	2,4-Dinitrotoluene	33.73	33.96	33.95	141377	5473.81640
4-Nitrotoluene	14.31	14.12	14.64	45418	4840.522949	2-NMX	34.15	34.32	34.35	13434	4379.98925
3-Nitrotoluene	15.02	14.80	15.34	73421	5422.313965	Tetryl	34.46	34.65	34.66	69751	4574.54003
2-NMX	25.80	25.48	26.48	16599	4869.477051	2,4,6-Trinitrotoluene	35.40	35.62	35.60	140154	6642.245117
1-Nitronaphthalene	32.78	32.77	33.26	150056	11422.254883	1-Nitronaphthalene	36.38	36.52	36.58	160018	10252.587891

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	34708.4375	6000	2000		14.82	
PETN	B	18127.996094	6000	2000		3.87	
HMX	A	3431.959961	750	250		7.33	
RDX	A	4982.667969	300	125		2.64	
1,3,5-Trinitrobenzene	A	4851.933105	300	100		20.26	
1,4-Dinitrobenzene	A	9348.154297	300	100		14.75	
o-Dinitrobenzene	A	11108.746094	300	100		8.10	
1,3-DNB	A	5278.105469	300	100		10.67	
Tetryl	B	4574.540039	300	153		3.26	
Nitrobenzene	B	5093.210449	300	100		13.98	
2,4,6-Trinitrotoluene	A	5128.690918	300	100		25.72	
4-Amino-2,6-dinitrotoluene	A	4859.94043	300	150		4.03	
2-Amino-4,6-dinitrotoluene	A	4806.75293	300	100		5.13	
2,6-Dinitrotoluene	A	4758.866699	300	100		30.83	
2,4-Dinitrotoluene	A	5131.28125	300	100		6.46	
2-Nitrotoluene	A	4601.591309	300	200		9.96	
4-Nitrotoluene	A	4840.522949	300	200		0.83	
3-Nitrotoluene	A	5422.313965	300	250		10.52	
2-NMX	A	4869.477051				10.58	
1-Nitronaphthalene	A	11422.254883	300	100		10.79	

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Data Summary

Sample Name: 7263052 MS WHERCMS MS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 13:26:27
Instrument	X6329A
Result file	3E12310.23R
Calibration file	2E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 13, 2013 13:26:27
Instrument	Y6329A
Result file	3C12310.23R
Calibration file	2C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MS WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--X6329A
Result file : 3E12310.23R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 97% (63-150) Conc.: 4869.47705

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.06	4.24	44755	4982.667969
1,3,5-TNB	4.71	4.72	4.91	102418	4851.933105
1,4-DNB	5.59	5.58	5.79	238166	9348.154297
o-Dinitrobenzene	6.20	6.15	6.40	114461	11108.746094
1,3-DNB	6.58	6.52	6.78	171272	5278.105469
Tetryl	7.43	7.40	7.71	147640	4271.221680
2,4,6-TNT	7.90	7.81	8.10	116863	5128.690918
Tetryl breakdown	8.62	8.36	8.86	5413	156.591095
4-Am-2,6-DNT	9.70	9.60	9.99	45596	4859.940430
2-Am-4,6-DNT	10.13	10.01	10.41	105276	4806.752930
2,6-DNT	10.56	10.43	10.84	57856	4758.866699
2,4-DNT	11.03	10.89	11.31	169725	5131.281250
2-NT	12.98	12.80	13.26	60875	4601.591309
4-NT	14.31	14.12	14.64	45418	4840.522949
3-NT	15.02	14.80	15.34	73421	5422.313965
2-NMX	25.80	25.48	26.48	16599	4869.477051
1-Nitronaphthalene	32.78	32.77	33.26	150056	11422.254883

Analysis Report (B)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--X6329B
Result file : 3E12310B.23R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 94% (63-150) Conc.: 4709.11181

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.67	2.72	2.87	141533	3431.959961
Nitroglycerin	8.63	8.62	9.01	382395	29920.210938
PETN	16.01	15.91	16.59	238622	17439.339844
2-NMX	25.96	25.64	26.63	230025	4709.111816

4271.221680 + 156.591095 = 4427.812775

(B) Tetryl Breakdown added

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	29920.210938	6000	2000			Report Confirmation
☑ PETN	B	17439.339844	6000	2000			
☑ HMX	B	3431.959961	750	250			Corrected Value = 3936.25
☑ RDX	A	4982.667969	300	125			
☑ 1,3,5-TNB	A	4851.933105	300	100			
☑ 1,4-DNB	A	9348.154297	300	100			
☑ o-Dinitrobenzene	A	11108.746094	300	100			
☑ 1,3-DNB	A	5278.105469	300	100			
☑ Tetryl	A	4427.812775 4271.221680 (B)	300	153	7 coelutors		report confirmation
☑ Nitrobenzene		4427.812775 (B)	<300	<100			report confirmation
☑ 2,4,6-TNT	A	5128.690918	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	4859.940430	300	150			
☑ 2-Am-4,6-DNT	A	4806.752930	300	100			
☑ 2,6-DNT	A	4758.866699	300	100			
☑ 2,4-DNT	A	5131.281250	300	100			
☑ 2-NT	A	4601.591309	300	200			
☑ 4-NT	A	4840.522949	300	200			
☑ 3-NT	A	5422.313965	300	250			
☐ 2-NMX	A	4869.477051				3.35	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:47:11

Jessica L. Miller
Chemist

NOV 20 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7263052 MS WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 13, 2013 13:26:27
Instrument	: CP12--X6329A
Result file	: 3E12310.23R
Calibration file	: 2E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 13, 2013 13:26:27
Instrument	: CP12--X6329B
Result file	: 3E12310B.23R
Calibration file	: 2E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11422.254883	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

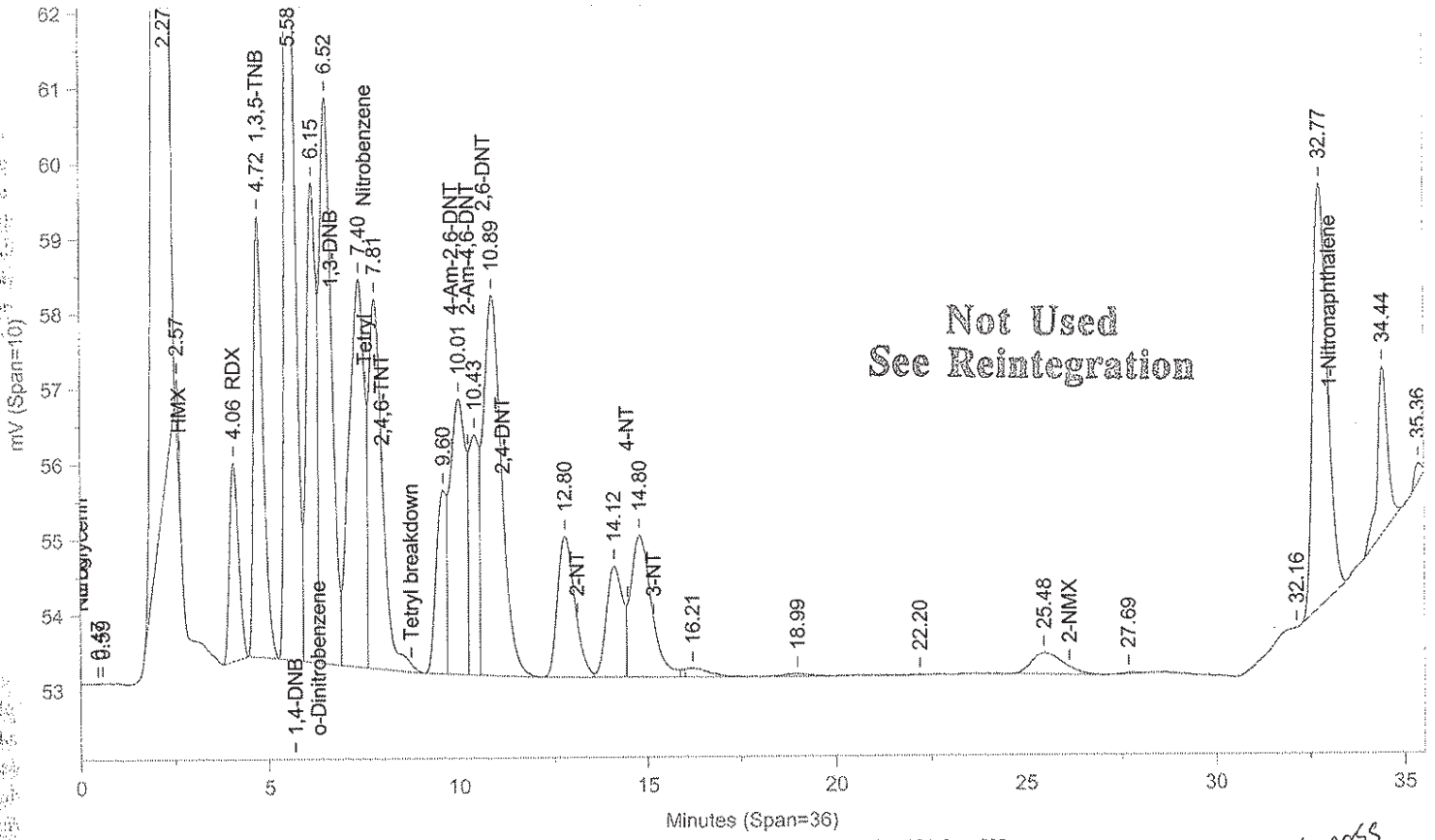
Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

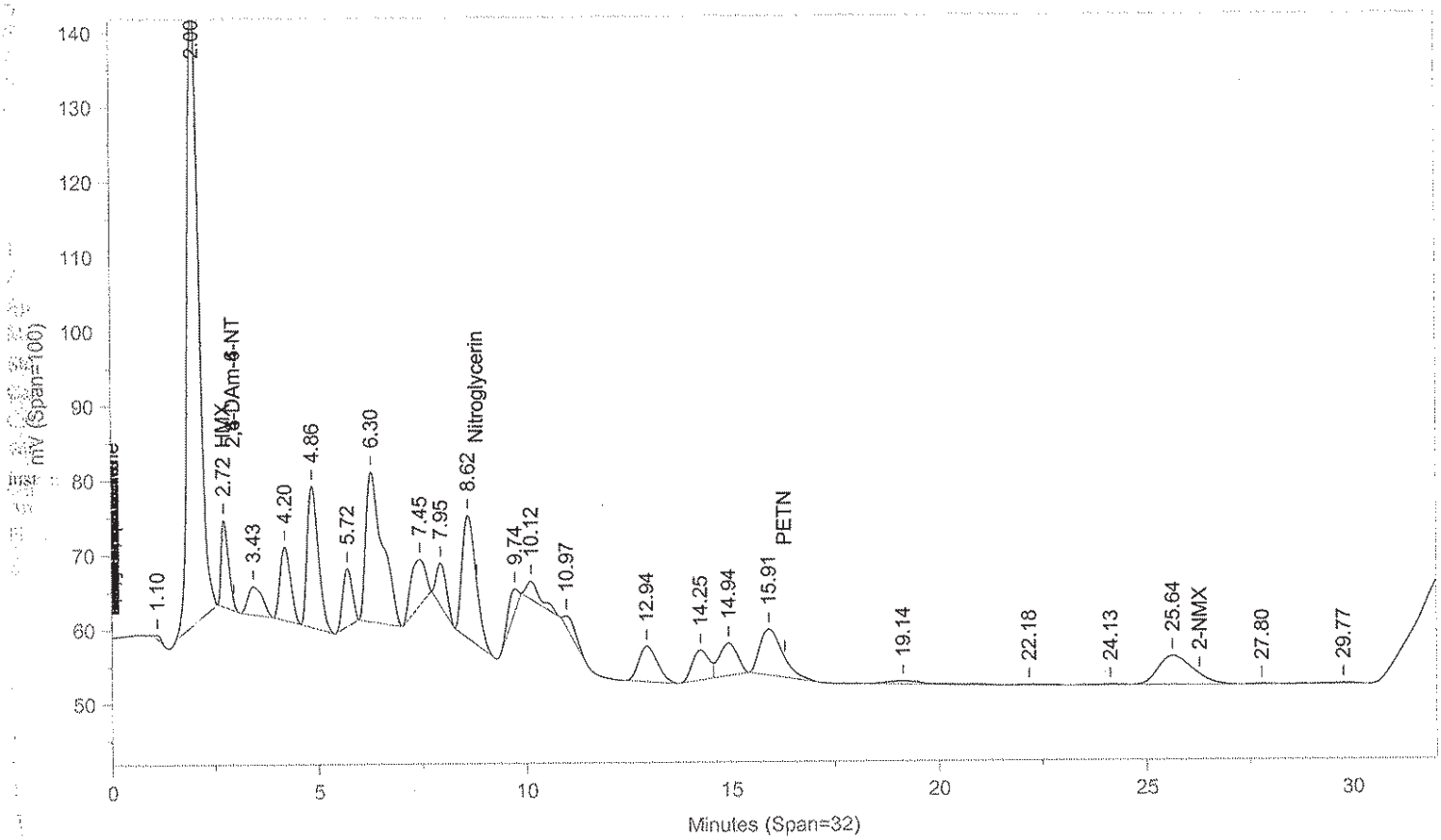
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.23R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 1:26:26 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.23R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 1:26:26 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

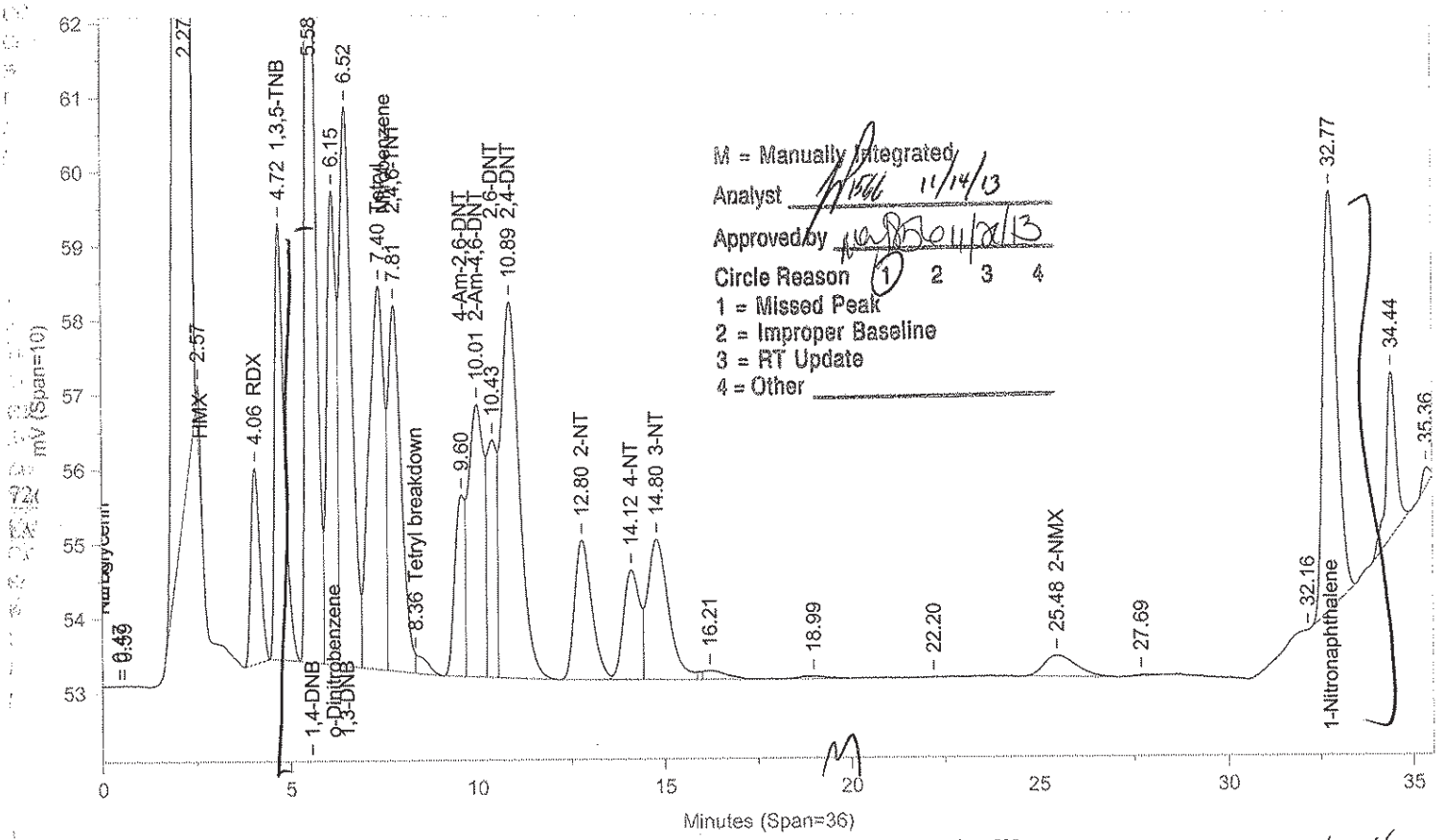
Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.721	141533	3431.96	HMX
4.064	44755	4982.668	RDX	.	0	.	RDX
4.721	102418	4851.933	1,3,5-TNB	.	0	.	1,3,5-TNB

Files:
Area File: C:\CPWIN\DATA1\3E12310.23A
Area File: C:\CPWIN\DATA1\3E12310B.23A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:07:04 PM
File Reported On: 11/13/2013 at 2:07:15 PM

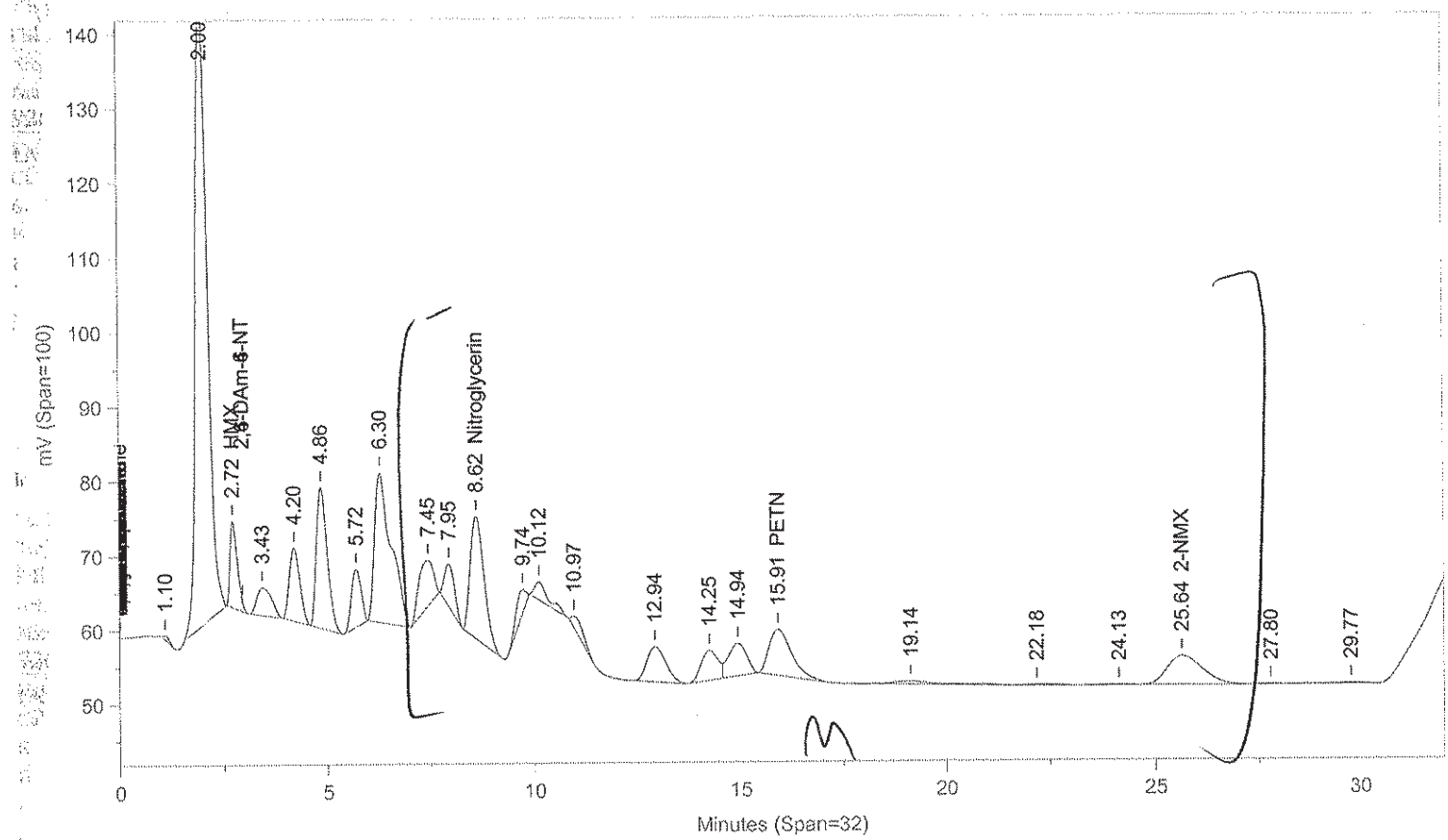
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.23R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 1:26:26 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.23R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 1:26:26 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.721	141533	3431.96	HMX
4.064	44755	4982.668	RDX	.	0	.	RDX
4.721	102418	4851.933	1,3,5-TNB	.	0	.	1,3,5-TNB
5.577	238166	9348.154	1,4-DNB	.	0	.	1,4-DNB
6.154	114461	11108.75	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.519	171272	5278.105	1,3-DNB	.	0	.	1,3-DNB
7.404	147640	4271.222	Tetryl	.	0	.	Tetryl
7.811	116863	5128.691	2,4,6-TNT	.	0	.	2,4,6-TNT
8.361	5413	156.591	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.617	382395	29920.21	Nitroglycerin
9.6	45596	4859.94	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.012	105276	4806.753	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.425	57856	4758.867	2,6-DNT	.	0	.	2,6-DNT
10.891	169725	5131.281	2,4-DNT	.	0	.	2,4-DNT
12.796	60875	4601.591	2-NT	.	0	.	2-NT
14.116	45418	4840.523	4-NT	.	0	.	4-NT
14.801	73421	5422.314	3-NT	.	0	.	3-NT
.	0	.	PETN	15.914	238622	17439.34	PETN
25.483	16599	4869.477	2-NMX	25.64	230025	4709.112	2-NMX
32.768	150056	11422.26	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 10:54:40 AM
File Reported On: 11/14/2013 at 10:54:39 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MS WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--Y6329A
Result file : 3C12310.23R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 88% (63-150) Conc.: 4379.98925

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.36	4.41	38715	3693.091064
RDX	5.18	5.35	5.38	57022	4853.016602
Nitrobenzene	12.82	13.15	13.14	94033	5093.210449
o-Dinitrobenzene	14.85	15.20	15.21	140879	10244.232422
4-Am-2,6-DNT	16.81	17.15	17.13	195307	5059.846191
1,3-DNB	19.04	19.42	19.34	160671	4743.675293
1,4-DNB	19.83	20.26	20.13	248118	10837.059570
2-NT	24.21	24.78	24.73	59489	5083.800781
4-NT	27.77	28.43	28.29	94741	4880.632324
1,3,5-TNB	30.01	30.72	30.41	84634	3959.419922
2,6-DNT	30.76	31.26	31.16	83181	6493.496582
2,4-DNT	33.73	33.96	33.95	141377	5473.816406
2-NMX	34.15	34.32	34.35	13434	4379.989258
Tetryl	34.46	34.65	34.66	69751	4574.540039
2,4,6-TNT	35.40	35.62	35.60	140154	6642.245117
1-Nitronaphthalene	36.38	36.52	36.58	160018	10252.587891

Analysis Report (B)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--Y6329B
Result file : 3C12310B.23R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.82	4.01	24856	112.760132
Nitroglycerin	9.66	9.86	9.86	352773	34708.437500
PETN	26.17	26.68	26.59	215285	18127.996094

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	18127.996094	6000	2000			
☑ Nitroglycerin	B	34708.437500	6000	2000			
☑ HMX	A	3693.091064	750	250			
☑ RDX	A	4853.016602	300	125			
☑ Nitrobenzene	A	5093.210449	300	100			
☑ o-Dinitrobenzene	A	10244.232422	300	100			
☑ 4-Am-2,6-DNT	A	5059.846191	300	150	7 coelutes		report primary
☑ 2-Am-4,6-DNT		5059.846191	<300	<100			report primary
☑ 1,3-DNB	A	4743.675293	300	100			
☑ 1,4-DNB	A	10837.059570	300	100			
☑ 2-NT	A	5083.800781	300	200			
☑ 4-NT	A	4880.632324	300	200	7 coelutes		report primary
☑ 3-NT		4880.632324	<300	<250			report primary
☑ 1,3,5-TNB	A	3959.419922	300	100			
☑ 2,6-DNT	A	6493.496582	300	100			
☑ 2,4-DNT	A	5473.816406	300	100			
☐ 2-NMX	A	4379.989258					
☑ Tetryl	A	4574.540039	300	153			
☑ 2,4,6-TNT	A	6642.245117	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/17/2013 18:08:57

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MS WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--Y6329A
Result file : 3C12310.23R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

Analysis Report (B)

Injected on : NOV 13, 2013 13:26:27
Instrument : CP12--Y6329B
Result file : 3C12310B.23R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	10252.587891	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Chemist
Date: NOV 2 0 2013

Verified by: Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 2 1 2013

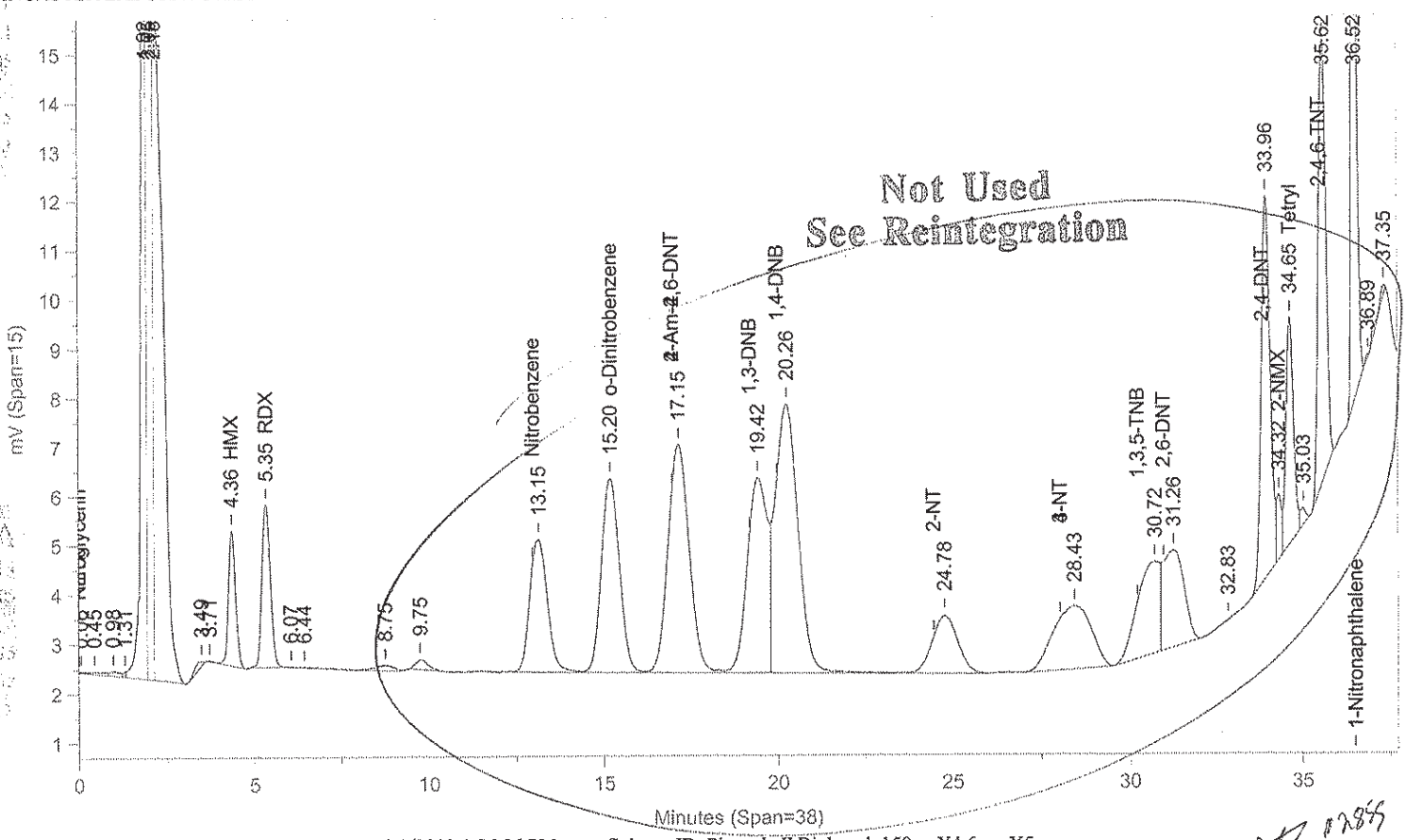
James H. Place
Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

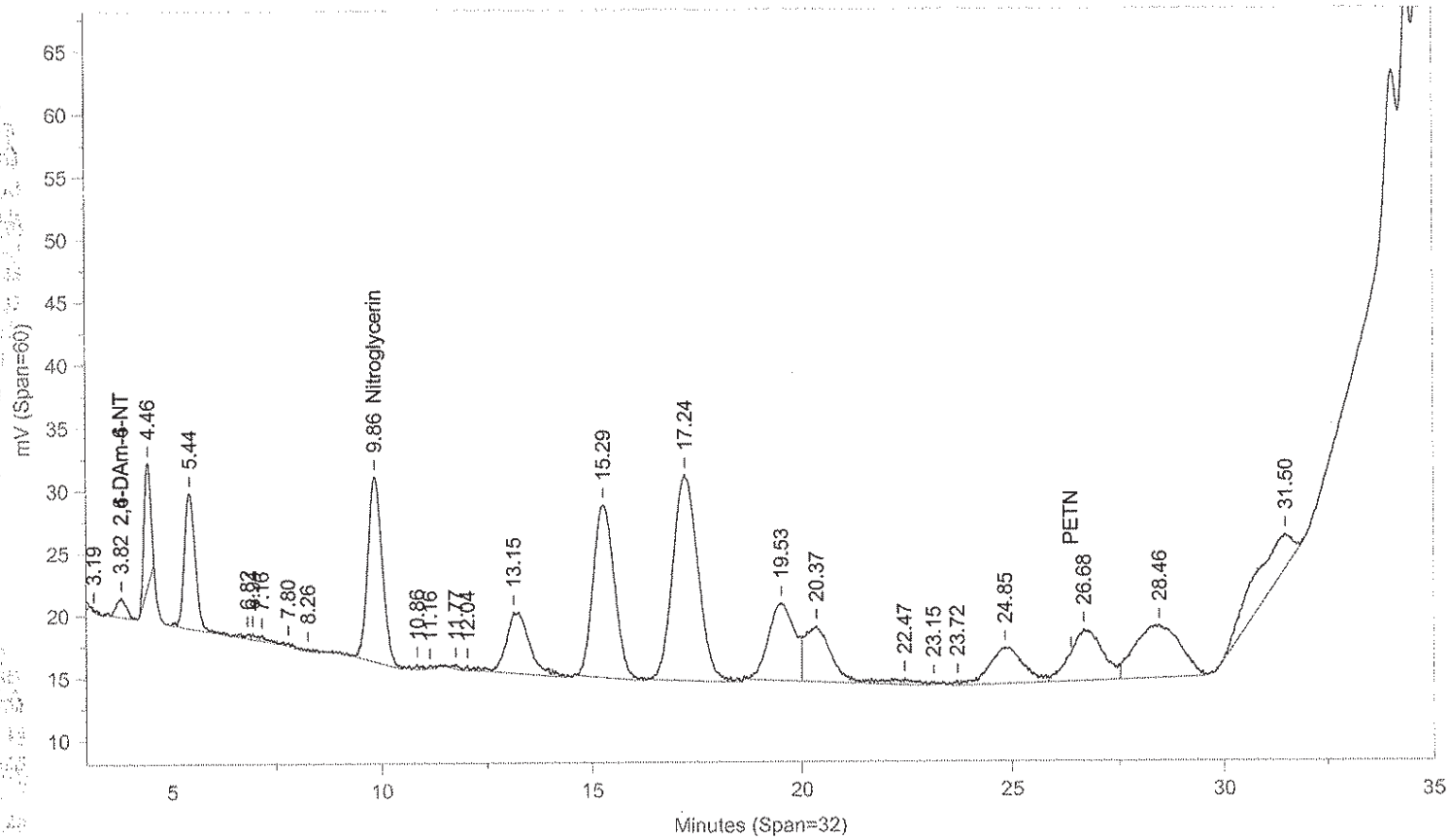
Printed on: 11/17/2013 18:08:57

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.23R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 1:26:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.23R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 1:26:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

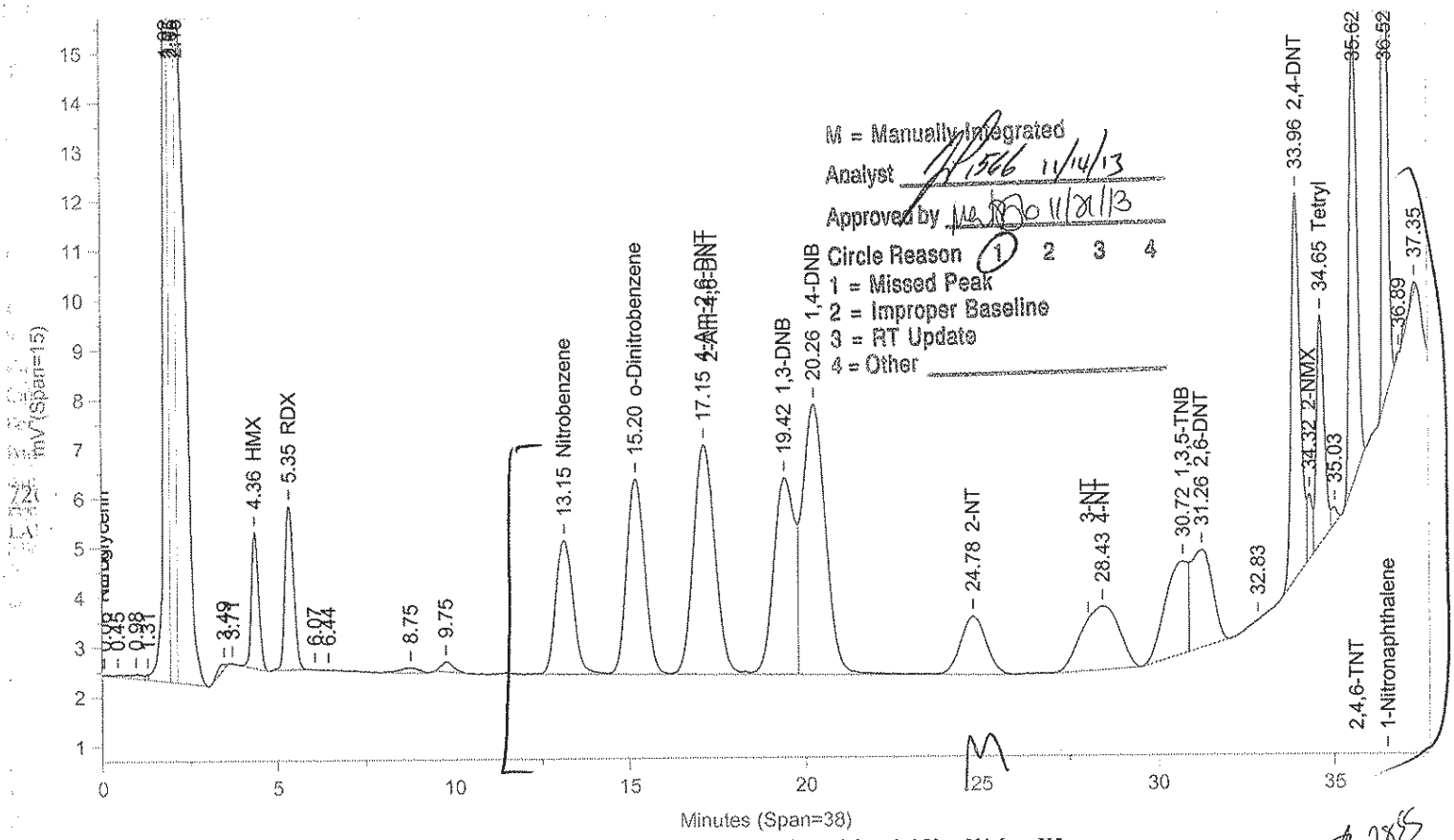
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.824	24856	112.76	2,6-DAm-4-NT
4.357	38715	3693.091	HMX	.	0	.	HMX
5.347	57022	4853.017	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.855	352773	34708.44	Nitroglycerin
15.204	140879	10244.23	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
34.322	13434	4379.989	2-NMX	.	0	.	2-NMX
34.649	69751	4574.54	Tetryl	.	0	.	Tetryl
36.523	160018	10252.59	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.23A
Area File: C:\CPWIN\DATA1\3C12310B.23A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:06:34 PM
File Reported On: 11/13/2013 at 2:06:44 PM

Not Used
See Reintegration

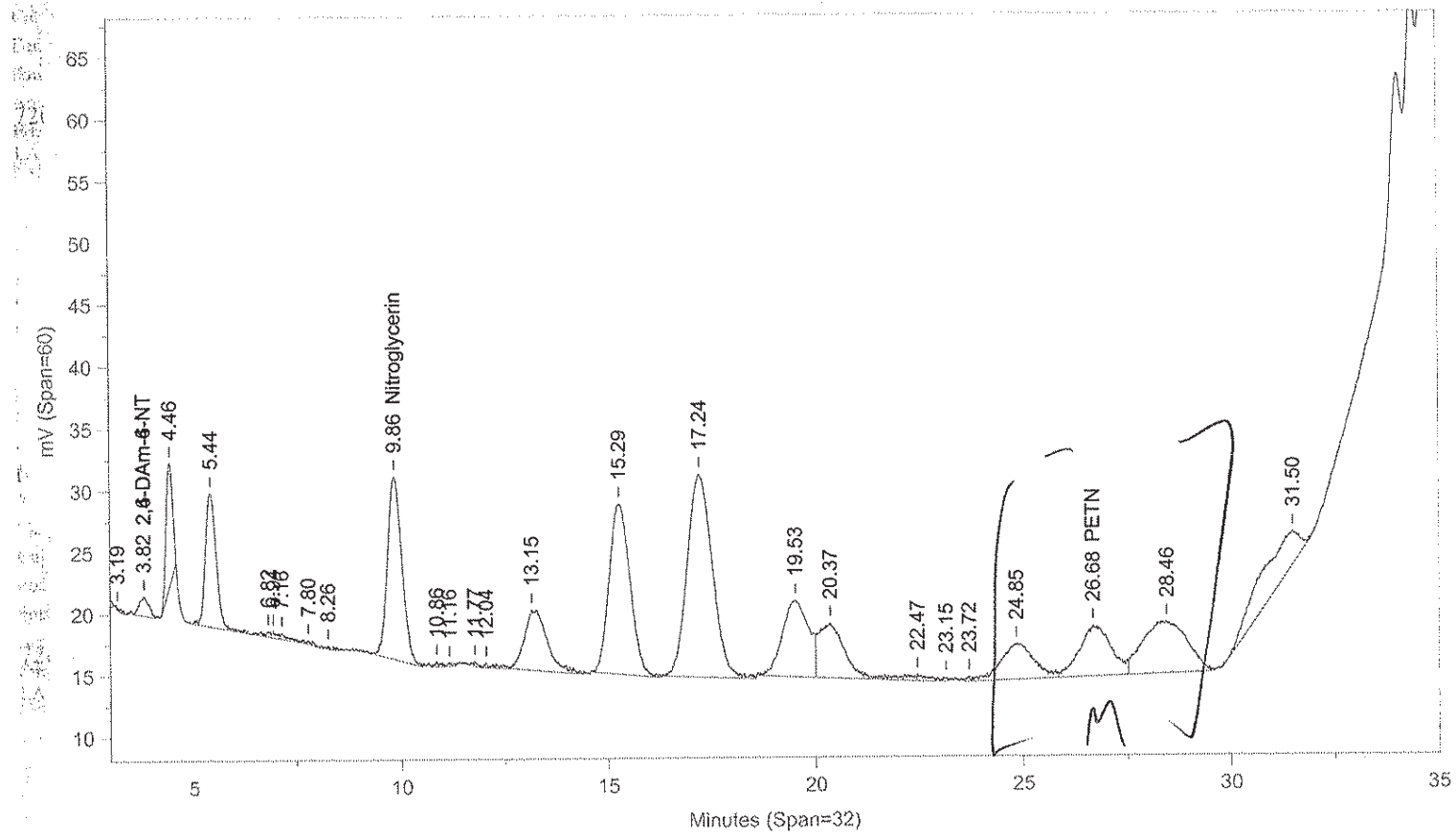
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.23R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 1:26:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.23R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 1:26:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.824	24856	112.76	2,6-DAm-4-NT
4.357	38715	3693.091	HMX	.	0	.	HMX
5.347	57022	4853.017	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.855	352773	34708.44	Nitroglycerin
13.149	94033	5093.21	Nitrobenzene	.	0	.	Nitrobenzene
15.204	140879	10244.23	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.146	195307	5059.846	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.425	160671	4743.675	1,3-DNB	.	0	.	1,3-DNB
20.262	248118	10837.06	1,4-DNB	.	0	.	1,4-DNB
24.779	59489	5083.801	2-NT	.	0	.	2-NT
.	0	.	PETN	26.685	215285	18128.	PETN
28.432	94741	4880.632	4-NT	.	0	.	4-NT
30.717	84634	3959.42	1,3,5-TNB	.	0	.	1,3,5-TNB
31.256	83181	6493.497	2,6-DNT	.	0	.	2,6-DNT
33.959	141377	5473.816	2,4-DNT	.	0	.	2,4-DNT
34.322	13434	4379.989	2-NMX	.	0	.	2-NMX
34.649	69751	4574.54	Tetryl	.	0	.	Tetryl
35.617	140154	6642.245	2,4,6-TNT	.	0	.	2,4,6-TNT
36.523	160018	10252.59	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 2:40:46 PM
File Reported On: 11/14/2013 at 2:40:45 PM

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Data Summary

Sample Name: 7263052 MSD WHERCMS MSD Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 14:08:51
Instrument X6329A
Result file 3E12310.24R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 110% (63 - 150) Conc: 5498.039063

Analysis Report (B)

Injected on Nov 13, 2013 14:08:51
Instrument Y6329A
Result file 3C12310.24R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 90% (63 - 150) Conc: 4486.264648

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.11	4.24	46195	5146.966797
1,3,5-Trinitrobenzene	4.71	4.78	4.91	105682	5006.538574
1,4-Dinitrobenzene	5.59	5.64	5.79	251429	9868.751953
o-Dinitrobenzene	6.20	6.23	6.40	119722	11619.376953
1,3-DNB	6.58	6.60	6.78	174910	5390.22168
Tetryl	7.43	7.49	7.71	154456	4642.125824
2,4,6-Trinitrotoluene	7.90	7.91	8.10	121953	5352.097656
4-Amino-2,6-dinitrotoluer	9.70	9.71	9.99	47260	5037.23584
2-Amino-4,6-dinitrotoluer	10.13	10.13	10.41	110193	5031.296387
2,6-Dinitrotoluene	10.56	10.55	10.84	55672	4579.19873
2,4-Dinitrotoluene	11.03	11.01	11.31	178132	5385.456055
2-Nitrotoluene	12.98	12.95	13.26	63269	4782.606934
4-Nitrotoluene	14.31	14.28	14.64	46711	4978.364746
3-Nitrotoluene	15.02	14.96	15.34	80382	5936.394531
2-NMX	25.80	25.74	26.48	18741	5498.039063
1-Nitronaphthalene	32.78	32.84	33.26	155389	11828.203125

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.34	4.41	38574	3679.606445
RDX	5.18	5.32	5.38	60886	5197.885742
Nitrobenzene	12.82	13.03	13.14	96808	5244.641113
o-Dinitrobenzene	14.85	15.08	15.21	148422	10799.007813
4-Amino-2,6-dinitrotoluer	16.81	17.01	17.13	202043	5234.365234
1,3-DNB	19.04	19.27	19.34	163350	4822.751953
1,4-Dinitrobenzene	19.83	20.10	20.13	256941	11227.767578
2-Nitrotoluene	24.21	24.62	24.73	60802	5197.692383
3-Nitrotoluene	27.77	28.34	28.29	99279	5082.782227
1,3,5-Trinitrobenzene	30.01	30.48	30.41	87321	4068.462402
2,6-Dinitrotoluene	30.76	31.16	31.16	85809	6694.456055
2,4-Dinitrotoluene	33.73	33.91	33.95	145450	5631.520508
2-NMX	34.15	34.28	34.35	13805	4486.264648
Tetryl	34.46	34.62	34.66	81255	5298.97168
2,4,6-Trinitrotoluene	35.40	35.57	35.60	136021	6448.370117
1-Nitronaphthalene	36.38	36.51	36.58	166166	10635.887695

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	33840.710938	6000	2000		13.53	
PETN	B	18899.167969	6000	2000		7.55	
HMX	A	3556.725586	750	250		3.40	
RDX	A	5146.966797	300	125		0.98	
1,3,5-Trinitrobenzene	A	5006.538574	300	100		20.67	
1,4-Dinitrobenzene	A	9868.751953	300	100		12.88	
o-Dinitrobenzene	A	11619.376953	300	100		7.32	
1,3-DNB	A	5390.22168	300	100		11.11	
Tetryl	B	5298.97168	300	153		13.21	
Nitrobenzene	B	5244.641113	300	100		12.19	
2,4,6-Trinitrotoluene	A	5352.097656	300	100		18.58	
4-Amino-2,6-dinitrotoluene	A	5037.23584	300	150		3.84	
2-Amino-4,6-dinitrotoluene	A	5031.296387	300	100		3.96	
2,6-Dinitrotoluene	A	4579.19873	300	100		37.53	
2,4-Dinitrotoluene	A	5385.456055	300	100		4.47	
2-Nitrotoluene	A	4782.606934	300	200		8.32	
4-Nitrotoluene	A	4978.364746	300	200		2.08	
3-Nitrotoluene	A	5936.394531	300	250		15.49	
2-NMX	A	5498.039063				20.27	
1-Nitronaphthalene	A	11828.203125	300	100		10.62	

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Data Summary

Sample Name: 7263052 MSD WHERCMS MSD Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 14:08:51
Instrument	X6329A
Result file	3E12310.24R
Calibration file	2E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 13, 2013 14:08:51
Instrument	Y6329A
Result file	3C12310.24R
Calibration file	2C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MSD WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--X6329A
Result file : 3E12310.24R
Calibration file : 2E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 110% (63-150) Conc.: 5498.03906

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.11	4.24	46195	5146.966797
1,3,5-TNB	4.71	4.78	4.91	105682	5006.538574
1,4-DNB	5.59	5.64	5.79	251429	9868.751953
o-Dinitrobenzene	6.20	6.23	6.40	119722	11619.376953
1,3-DNB	6.58	6.60	6.78	174910	5390.221680 (5)
Tetryl	7.43	7.49	7.71	154456	4468.390625 + 173.735199 = 4642.125824
2,4,6-TNT	7.90	7.91	8.10	121953	5352.097656
Tetryl breakdown	8.62	8.48	8.86	6005	173.735199
4-Am-2,6-DNT	9.70	9.71	9.99	47260	5037.235840
2-Am-4,6-DNT	10.13	10.13	10.41	110193	5031.296387
2,6-DNT	10.56	10.55	10.84	55672	4579.198730
2,4-DNT	11.03	11.01	11.31	178132	5385.456055
2-NT	12.98	12.95	13.26	63269	4782.606934
4-NT	14.31	14.28	14.64	46711	4978.364746
3-NT	15.02	14.96	15.34	80382	5936.394531
2-NMX	25.80	25.74	26.48	18741	5498.039063
1-Nitronaphthalene	32.78	32.84	33.26	155389	11828.203125

Analysis Report (B)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--X6329B
Result file : 3E12310B.24R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 102% (63-150) Conc.: 5119.79394

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.67	2.75	2.87	146954	3556.725586
Nitroglycerin	8.63	8.72	9.01	377678	29551.083984
PETN	16.01	16.09	16.59	239778	17523.742188
2-NMX	25.96	25.88	26.63	250086	5119.793945

(8) tetryl Breakdown added.

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	29551.083984	6000	2000			
☑ PETN	B	17523.742188	6000	2000			
☑ HMX	B	3556.725586	750	250			Corrected Value = 3936.25
☑ RDX	A	5146.966797	300	125			
☑ 1,3,5-TNB	A	5006.538574	300	100			
☑ 1,4-DNB	A	9868.751953	300	100			
☑ o-Dinitrobenzene	A	11619.376953	300	100			
☑ 1,3-DNB	A	5390.221680	300	100			
☑ Tetryl	A	4642.125824 ~~4468.390625~~ (5)	300	153	7	coelutes report	confirmation
☑ Nitrobenzene		4642.125824	<300	<100			report confirmation
☑ 2,4,6-TNT	A	5352.097656	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	5037.235840	300	150			
☑ 2-Am-4,6-DNT	A	5031.296387	300	100			
☑ 2,6-DNT	A	4579.198730	300	100			
☑ 2,4-DNT	A	5385.456055	300	100			
☑ 2-NT	A	4782.606934	300	200			
☑ 4-NT	A	4978.364746	300	200			
☑ 3-NT	A	5936.394531	300	250			
☐ 2-NMX	A	5498.039063				7.12	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Jessica L. Miller
Chemist

NOV 20 2013

Printed on: 11/14/2013 11:47:22

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MSD WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--X6329A
Result file : 3E12310.24R
Calibration file : 2E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--X6329B
Result file : 3E12310B.24R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11828.203125	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

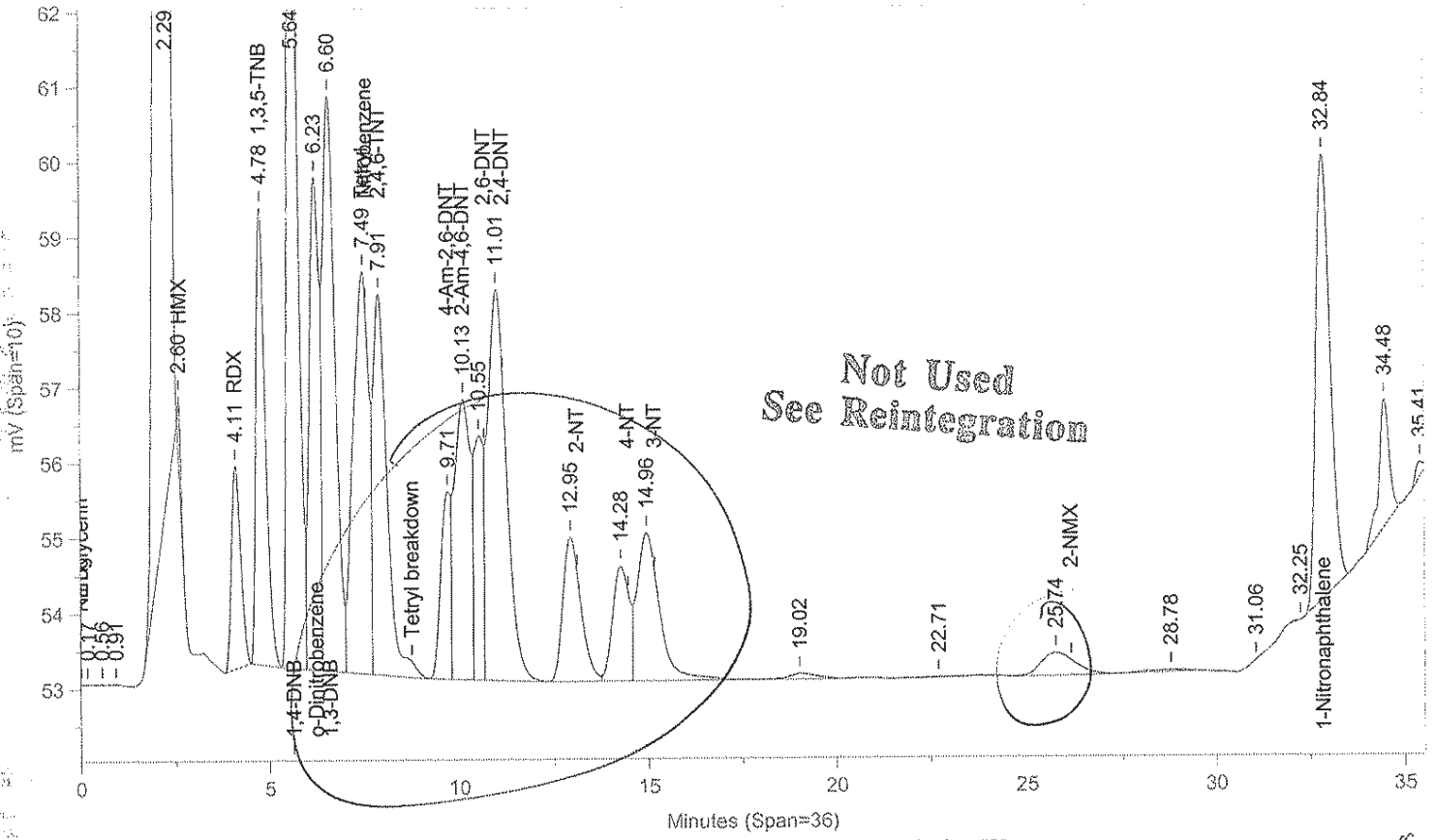
Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place, Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

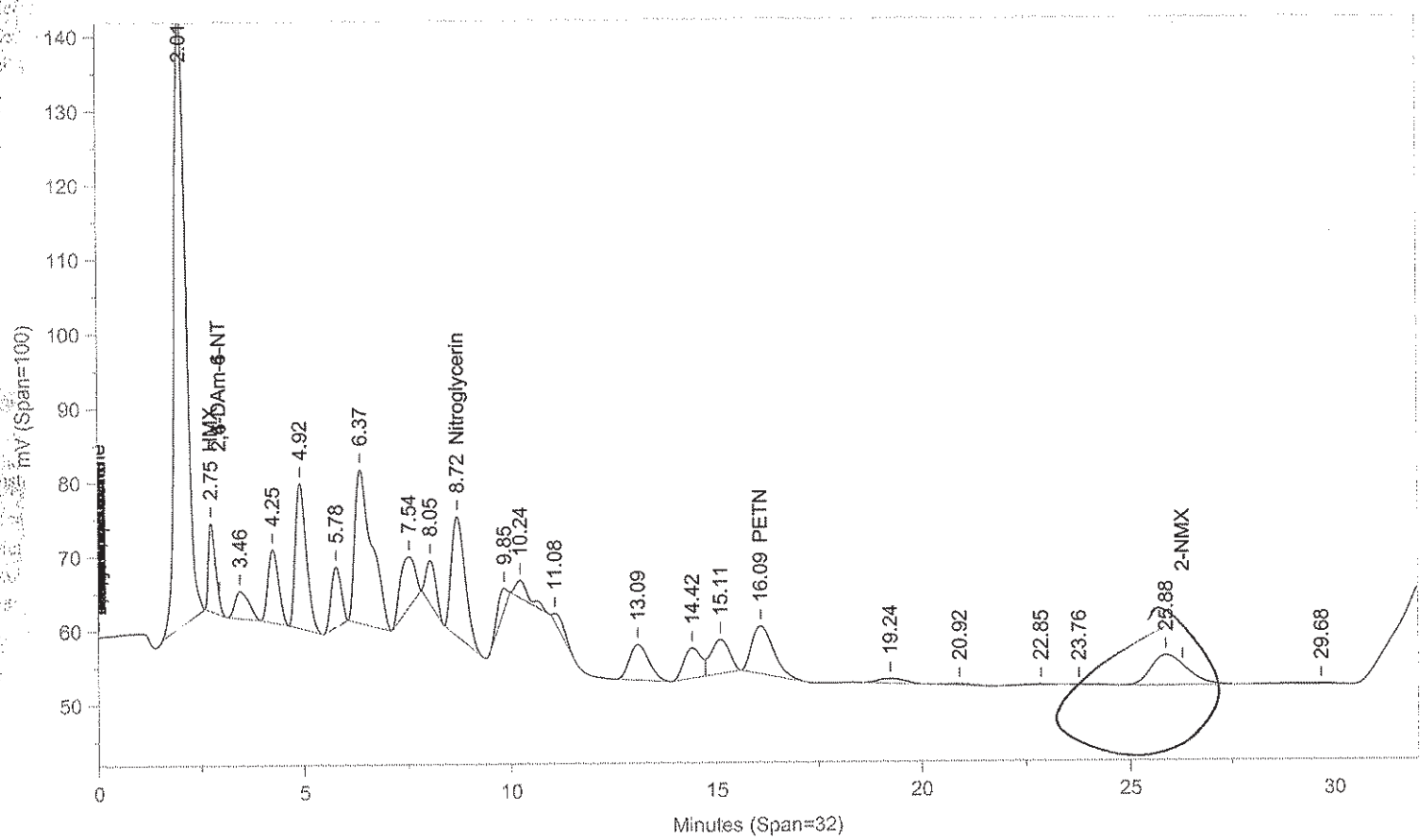
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.24R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 2:08:50 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.24R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 2:08:50 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.749	146954	3556.726	HMX
4.11	46195	5146.967	RDX	.	0	.	RDX
4.776	105682	5006.539	1,3,5-TNB	.	0	.	1,3,5-TNB
5.64	251429	9868.752	1,4-DNB	.	0	.	1,4-DNB
6.229	119722	11619.38	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.597	174910	5390.222	1,3-DNB	.	0	.	1,3-DNB
7.49	154456	4468.391	Tetryl	.	0	.	Tetryl
7.912	127959	5615.654	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.718	377678	29551.08	Nitroglycerin
9.712	47260	5037.236	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.128	110193	5031.296	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	16.086	239778	17523.74	PETN
32.845	155389	11828.2	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.24A
Area File: C:\CPWIN\DATA1\3E12310B.24A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:49:32 PM
File Reported On: 11/13/2013 at 2:49:45 PM

Not Used
See Reintegration

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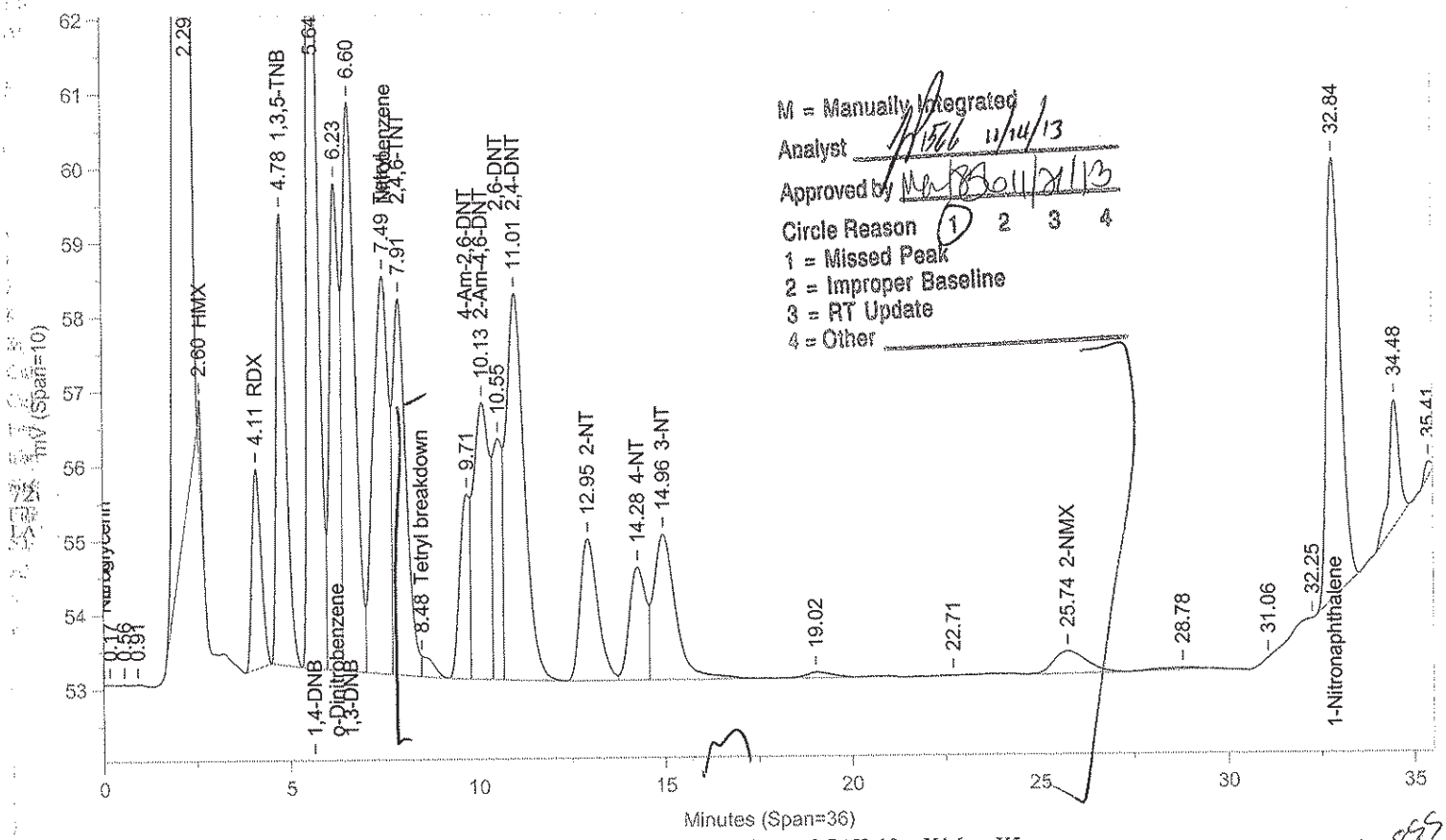
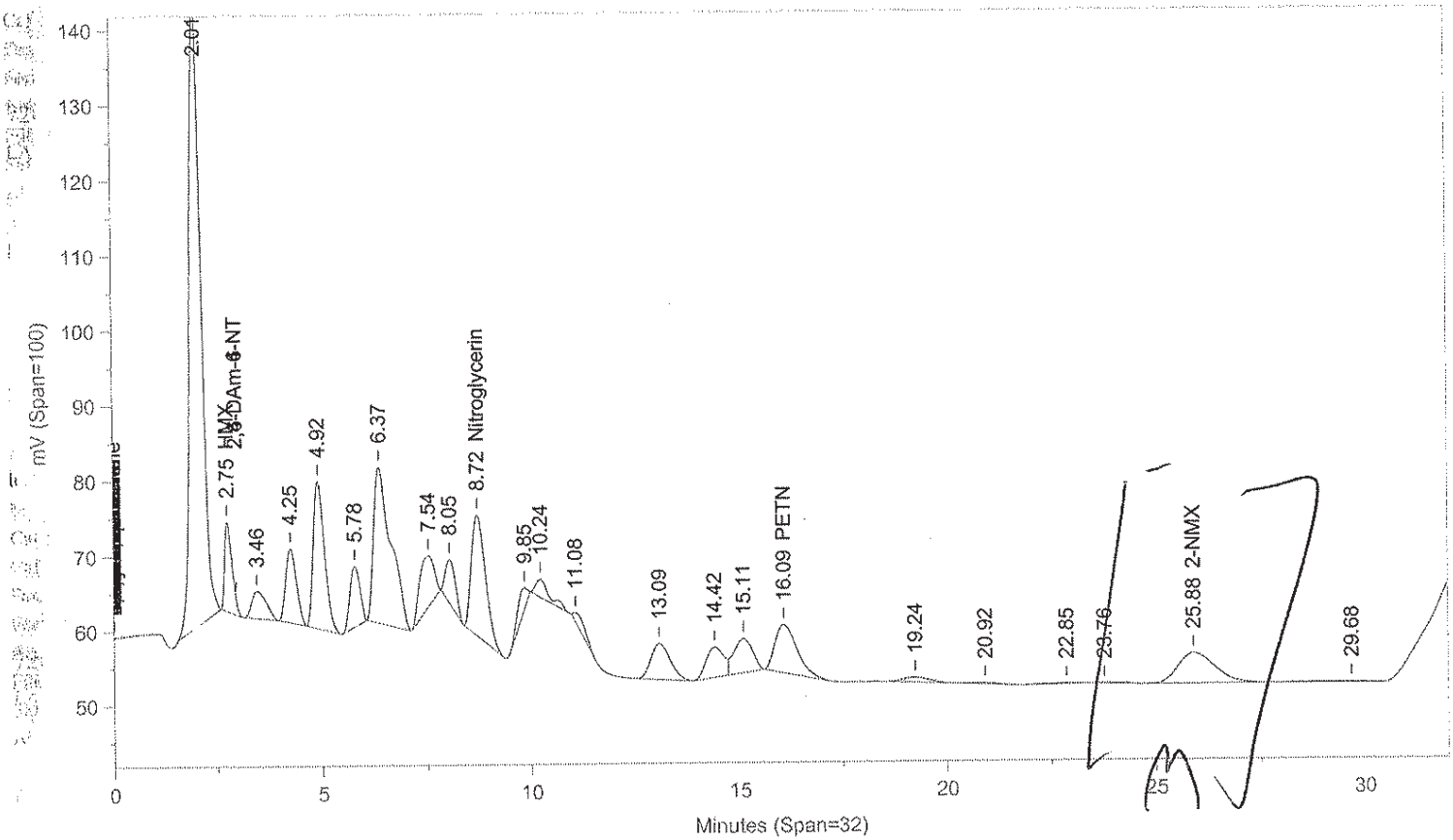
File: C:\CPWIN\DATA1\3E12310.24R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 2:08:50 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.24R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 2:08:50 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.749	146954	3556.726	HMX
4.11	46195	5146.967	RDX	.	0	.	RDX
4.776	105682	5006.539	1,3,5-TNB	.	0	.	1,3,5-TNB
5.64	251429	9868.752	1,4-DNB	.	0	.	1,4-DNB
6.229	119722	11619.38	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.597	174910	5390.222	1,3-DNB	.	0	.	1,3-DNB
7.49	154456	4468.391	Tetryl	.	0	.	Tetryl
7.912	121953	5352.098	2,4,6-TNT	.	0	.	2,4,6-TNT
8.483	6005	173.735	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.718	377678	29551.08	Nitroglycerin
9.712	47260	5037.236	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.128	110193	5031.296	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.551	55672	4579.199	2,6-DNT	.	0	.	2,6-DNT
11.013	178132	5385.456	2,4-DNT	.	0	.	2,4-DNT
12.951	63269	4782.607	2-NT	.	0	.	2-NT
14.282	46711	4978.365	4-NT	.	0	.	4-NT
14.962	80382	5936.395	3-NT	.	0	.	3-NT
.	0	.	PETN	16.086	239778	17523.74	PETN
25.739	18741	5498.039	2-NMX	25.883	250086	5119.794	2-NMX
32.845	155389	11828.2	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 10:57:56 AM
File Reported On: 11/14/2013 at 10:57:54 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MSD WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--Y6329A
Result file : 3C12310.24R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 90% (63-150) Conc.: 4486.264641

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.34	4.41	38574	3679.606445
RDX	5.18	5.32	5.38	60886	5197.885742
Nitrobenzene	12.82	13.03	13.14	96808	5244.641113
o-Dinitrobenzene	14.85	15.08	15.21	148422	10799.007813
4-Am-2,6-DNT	16.81	17.01	17.13	202043	5234.365234
1,3-DNB	19.04	19.27	19.34	163350	4822.751953
1,4-DNB	19.83	20.10	20.13	256941	11227.767578
2-NT	24.21	24.62	24.73	60802	5197.692383
3-NT	27.77	28.34	28.29	99279	5082.782227
1,3,5-TNB	30.01	30.48	30.41	87321	4068.462402
2,6-DNT	30.76	31.16	31.16	85809	6694.456055
2,4-DNT	33.73	33.91	33.95	145450	5631.520508
2-NMX	34.15	34.28	34.35	13805	4486.264648
Tetryl	34.46	34.62	34.66	81255	5298.971680
2,4,6-TNT	35.40	35.57	35.60	136021	6448.370117
1-Nitronaphthalene	36.38	36.51	36.58	166166	10635.887695

Analysis Report (B)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--Y6329B
Result file : 3C12310B.24R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.79	4.01	22798	103.422943
Nitroglycerin	9.66	9.79	9.86	343953	33840.710938
PETN	26.17	26.58	26.59	224443	18899.167969

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	18899.167969	6000	2000			
☑ Nitroglycerin	B	33840.710938	6000	2000			
☑ HMX	A	3679.606445	750	250			
☑ RDX	A	5197.885742	300	125			
☑ Nitrobenzene	A	5244.641113	300	100			
☑ o-Dinitrobenzene	A	10799.007813	300	100			
☑ 4-Am-2,6-DNT	A	5234.365234	300	150	7 coelutes		report confirmation
☑ 2-Am-4,6-DNT		5234.365234	<300	<100			report confirmation
☑ 1,3-DNB	A	4822.751953	300	100			
☑ 1,4-DNB	A	11227.767578	300	100			
☑ 2-NT	A	5197.692383	300	200			
☑ 4-NT		5082.782227	<300	<200	7 coelutes		report confirmation
☑ 3-NT	A	5082.782227	300	250			report confirmation
☑ 1,3,5-TNB	A	4068.462402	300	100			
☑ 2,6-DNT	A	6694.456055	300	100			
☑ 2,4-DNT	A	5631.520508	300	100			
☐ 2-NMX	A	4486.264648					
☑ Tetryl	A	5298.971680	300	153			
☑ 2,4,6-TNT	A	6448.370117	300	100			

Jessica L. Miller
Chemist

NOV 20 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/17/2013 18:09:12

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7263052** MSD WHERCMSSample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM03 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--Y6329A
Result file : 3C12310.24R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

Analysis Report (B)

Injected on : NOV 13, 2013 14:08:51
Instrument : CP12--Y6329B
Result file : 3C12310B.24R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	10635.887695	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist

Date: NOV 2 0 2013

Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader

Date: NOV 2 1 2013

James H. Place
Senior Chemist

NOV 2 1 2013

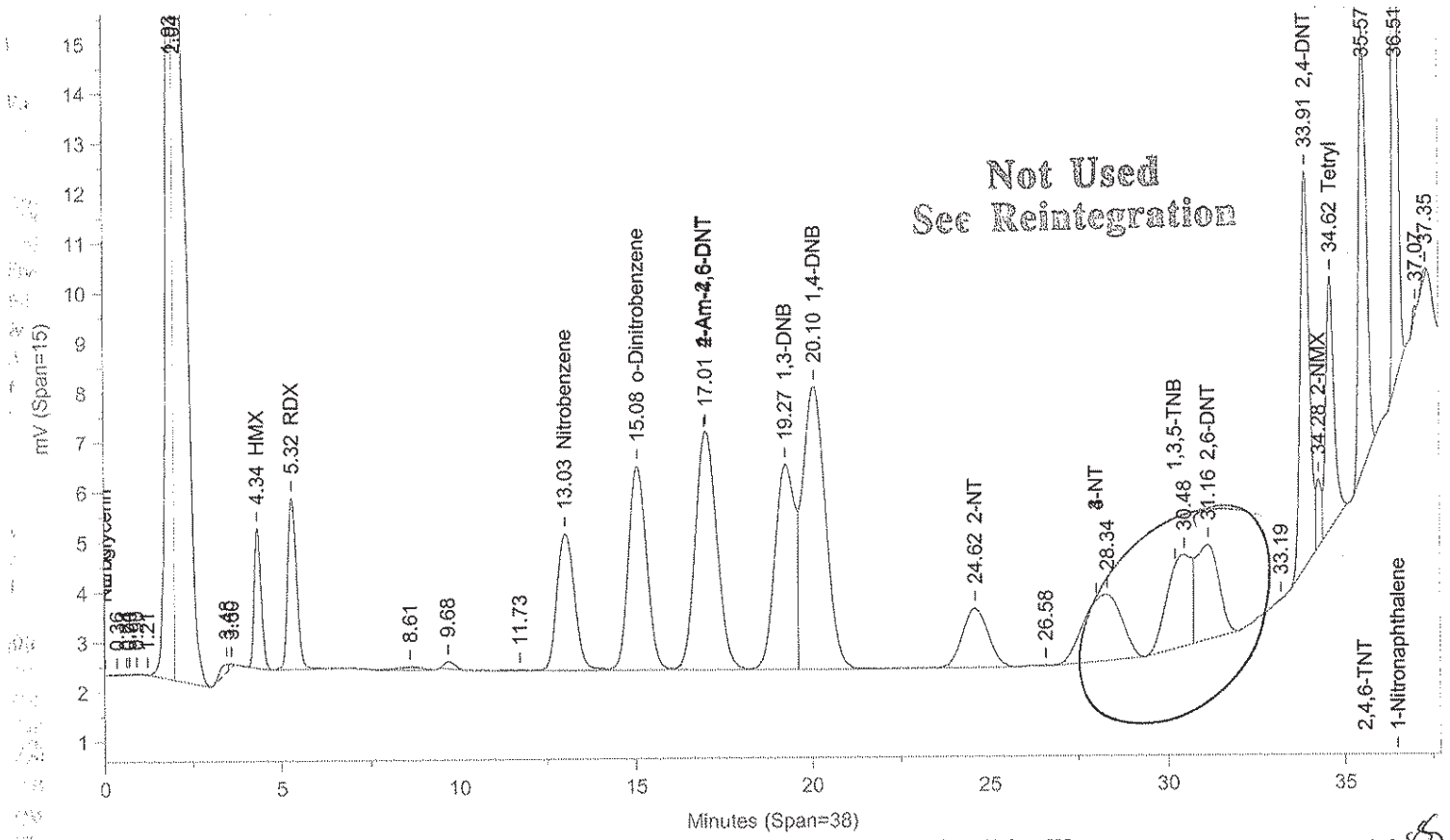
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/17/2013 18:09:12

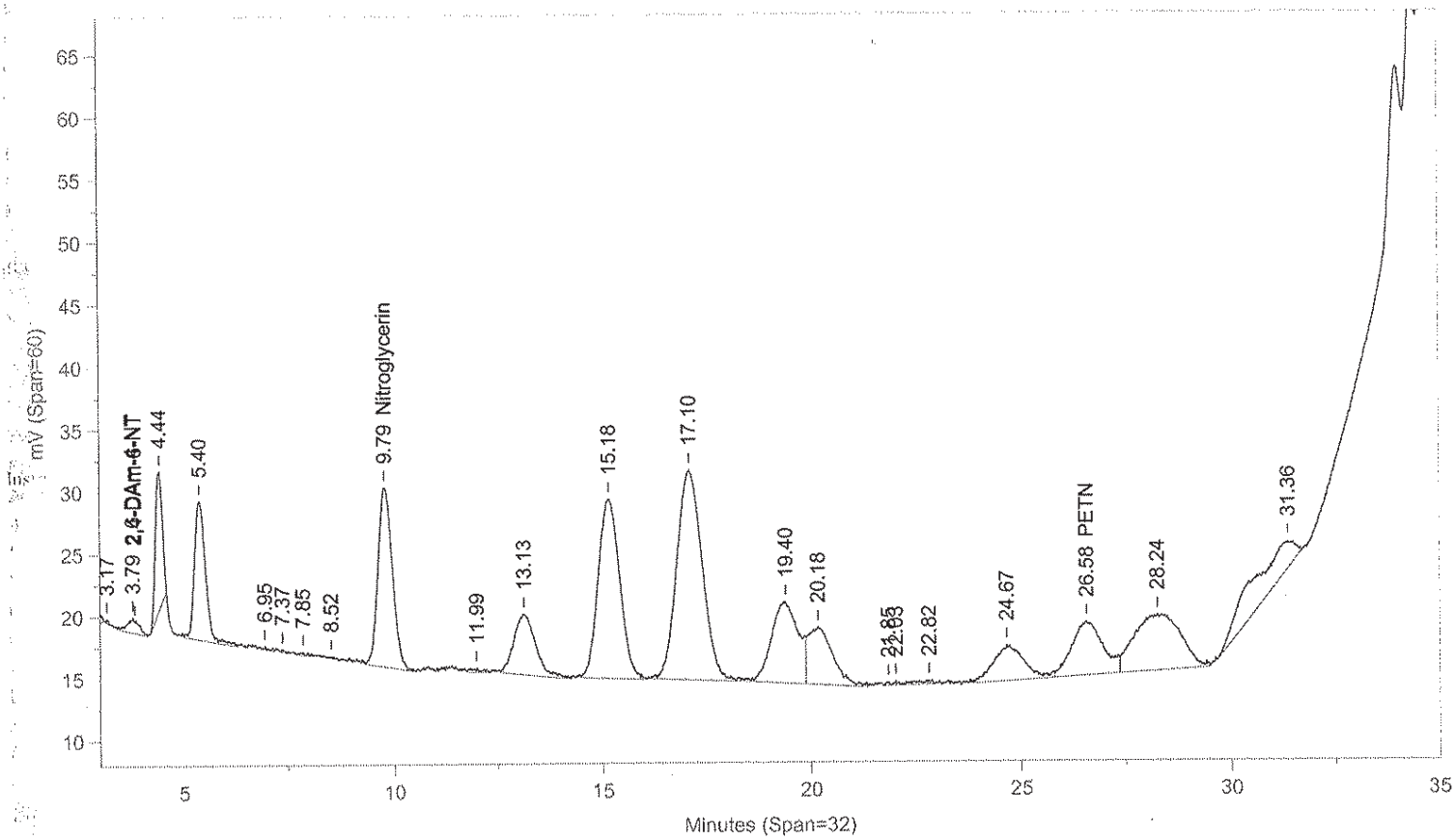
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.24R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 2:08:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.24R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 2:08:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

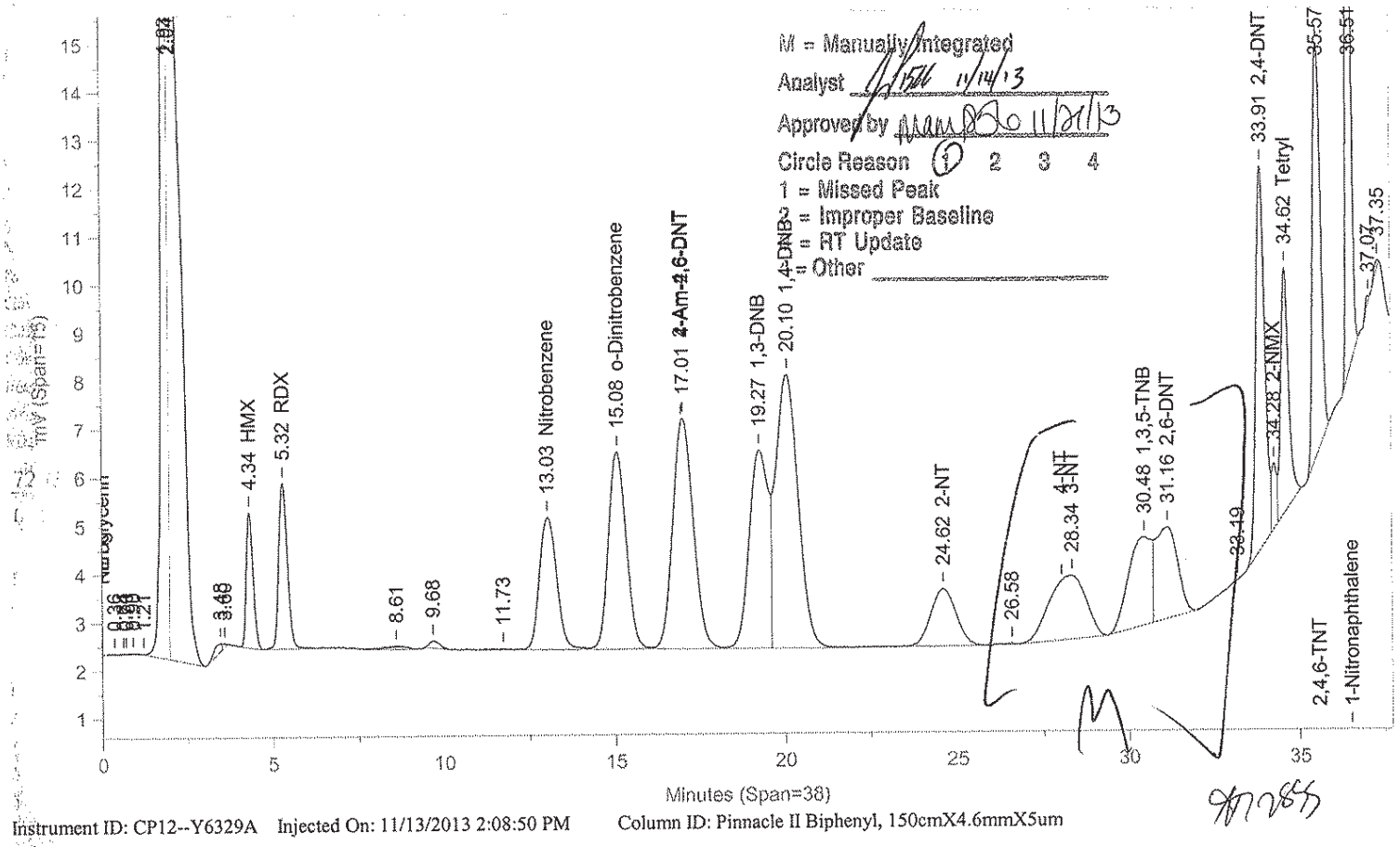
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.786	22798	103.423	2,6-DAm-4-NT
4.337	38574	3679.606	HMX	.	0	.	HMX
5.315	60886	5197.886	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.789	343953	33840.71	Nitroglycerin
13.029	96808	5244.641	Nitrobenzene	.	0	.	Nitrobenzene
15.079	148422	10799.01	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.01	202043	5228.955	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.267	163350	4822.752	1,3-DNB	.	0	.	1,3-DNB
20.099	256941	11227.77	1,4-DNB	.	0	.	1,4-DNB
24.618	60802	5197.692	2-NT	.	0	.	2-NT
.	0	.	PETN	26.577	224443	18899.17	PETN
31.163	85809	6694.456	2,6-DNT	.	0	.	2,6-DNT
33.913	145450	5631.521	2,4-DNT	.	0	.	2,4-DNT
34.284	13805	4486.265	2-NMX	.	0	.	2-NMX
34.616	81255	5298.972	Tetryl	.	0	.	Tetryl
35.57	136021	6448.37	2,4,6-TNT	.	0	.	2,4,6-TNT
36.509	166166	10635.89	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.24A
Area File: C:\CPWIN\DATA1\3C12310B.24A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:48:58 PM
File Reported On: 11/13/2013 at 2:49:09 PM

Not Used
See Reintegration

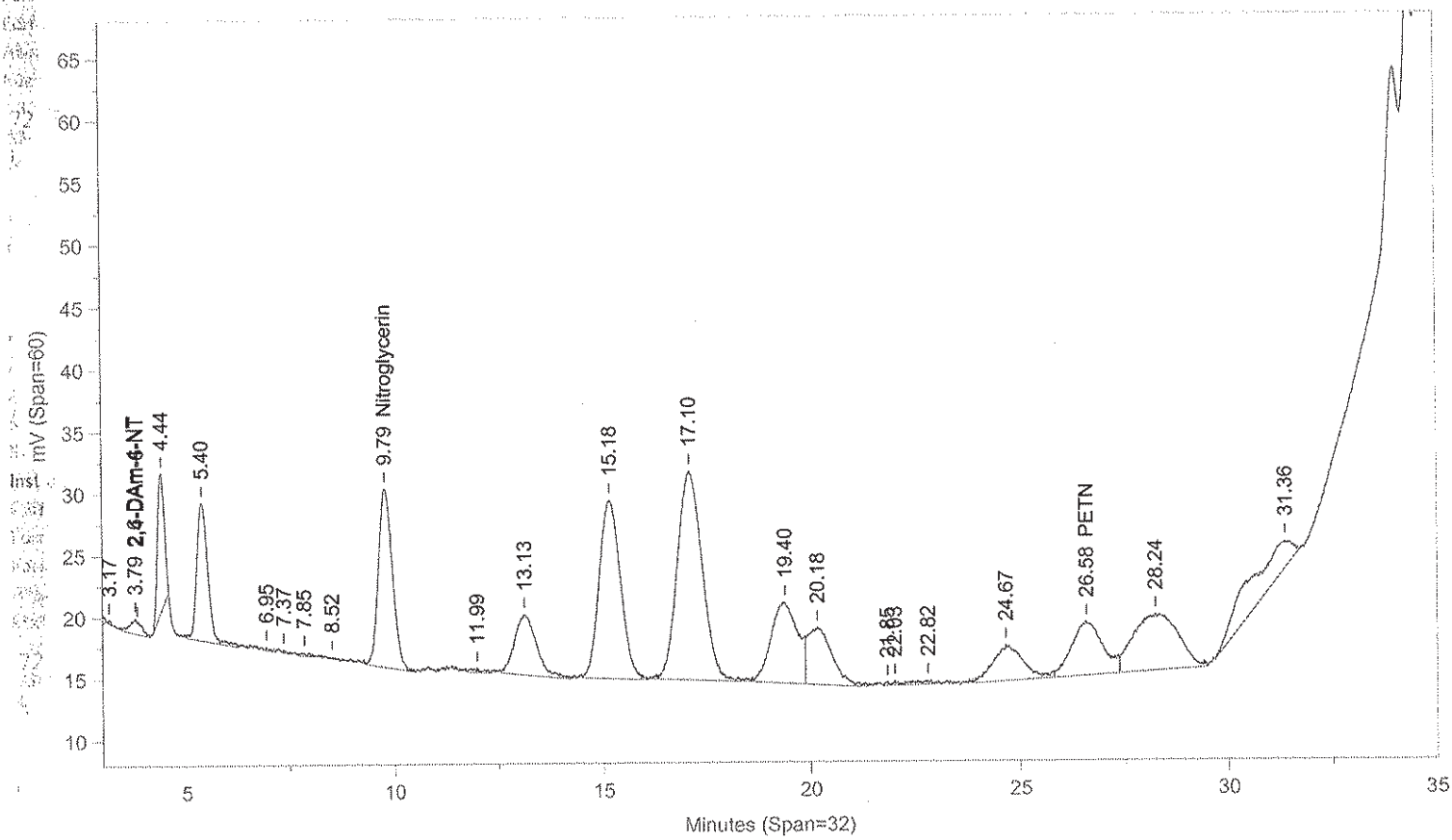
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.24R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 2:08:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.24R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 2:08:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.786	22798	103.423	2,6-DAm-4-NT
4.337	38574	3679.606	HMX	.	0	.	HMX
5.315	60886	5197.886	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.789	343953	33840.71	Nitroglycerin
13.029	96808	5244.641	Nitrobenzene	.	0	.	Nitrobenzene
15.079	148422	10799.01	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.01	202043	5234.365	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.267	163350	4822.752	1,3-DNB	.	0	.	1,3-DNB
20.099	256941	11227.77	1,4-DNB	.	0	.	1,4-DNB
24.618	60802	5197.692	2-NT	.	0	.	2-NT
.	0	.	PETN	26.577	224443	18899.17	PETN
28.339	99279	5082.782	3-NT	.	0	.	3-NT
30.475	87321	4068.462	1,3,5-TNB	.	0	.	1,3,5-TNB
31.163	85809	6694.456	2,6-DNT	.	0	.	2,6-DNT
33.913	145450	5631.521	2,4-DNT	.	0	.	2,4-DNT
34.284	13805	4486.265	2-NMX	.	0	.	2-NMX
34.616	81255	5298.972	Tetryl	.	0	.	Tetryl
35.57	136021	6448.37	2,4,6-TNT	.	0	.	2,4,6-TNT
36.509	166166	10635.89	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 2:42:44 PM
File Reported On: 11/14/2013 at 2:42:43 PM

Extraction/Distillation/Digestion Logs

Explosives

Organic Extraction Batchlog Assigned to: 712 Wanda Oswald Reviewed by: JKM2855 Start Date: 11-7-13 Start time: 15:00

133110004A

Tech 1: WM2 Tech 2: _____

Dept: 24 Prep Analysis: 06917 Nitroaromatics/Amines Sol Ext Nitroaromatics/Amines in Solid

QC	Sample Code	Amt (	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7263052MSD	WHERCMSD	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	20A	
7263052MS	WHERCMS	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	20A	
BLANKA	PBLK04311	2	SS1327424A	0.1			20	Z	Z		
LCSA	LCS04311	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z		

Solvent Used	Lot No.
Acetonitrile	47097
CaCl2 solution	205164134
Syringe Filter	21820316

Start Time: 15:30
Stop Time: 12:00

Spike Solutions: Witness: NA
MS1330124B SOIL EXPLOSIVE SPIKE
SS1327424A EXPLOSIVE SOIL SURROGATE

Sample #	Sample Code	Amt	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7263052	WHERC	SS1327424A	0.1	20	Z	Z	20A	slimy black	06918		11/14/2013	N
2	7263053	XHERC	SS1327424A	0.1	20	Z	Z	20A	↓	06918		11/14/2013	N
3	7263054	PHERC	SS1327424A	0.1	20	Z	Z	20A	spongy black	06918		11/14/2013	N
4	7263055	OHERC	SS1327424A	0.1	20	Z	Z	20A	↓	06918		11/14/2013	N
5	7265225	R2041	SS1327424A	0.1	20	Z	Z	20A	slimy black wet	06918	1688	11/15/2013	N
6	7265226	R2042	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
7	7265227	R2043	SS1327424A	0.1	20	Z	Z	20A	black stoney	06918	1688	11/15/2013	N
8	7265234	R2E16	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
9	7265236	2E161	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
10	7265237	2E16D	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
11	7265241	2F142	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
12	7265242	R2121	SS1327424A	0.1	20	Z	Z	20A	spongy black	06918	1688	11/15/2013	N
13	7265244	R2123	SS1327424A	0.1	20	Z	Z	20A	slimy black/brown	06918	1688	11/15/2013	N
14	7265245	2D141	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
15	7265246	DUPX1	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N

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NA WM2 11-7-13

Rack ID:		Work Station	Solids Rm
Internal Standard		Balance #	17609

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133110004A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 572 Edwin Ortiz

Reviewed by: JP 1506 Start Date: 11-8-13 Start time: 13:00

133110017A

Tech 1: EO 572 Tech 2:

Dept: 24 Prep Analysis: 06915 Nitroaromatics/Amines Wat Ext Nitroaromatics/Amines in Water

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266119MS	152-2	500	SS1330824A	0.5	MS1326324A	0.5	10			162A	Pale yellow
7266120MSD	152-2	500	SS1330824A	0.5	MS1326324A	0.5	10			162A	Pale yellow
BLANKA	PBLK17311	500	SS1330824A	0.5	NA	NA	10			NA	
LCSA	LCS17311	500	SS1328724A	0.5	MS1326324A	0.5	10			NA	

Solvent Used	Lot No.
ACN	H7097
CaCl2 sol'n	2125110413A
Poropak cart.	3853115A
Syringe Filter	2182031G

Spike Solutions: Witness: NA

MS1326324A WATER EXPLOSIVES SPIKE

~~SS1328724A EXPLOSIVE WATER SURROGAT~~

SS1330824A EXPLOSIVE WATER SURROGAT

EO 572 11-8-13

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7263051	FFHEC	500	SS1330824A	0.5	10			162A	Light amber	06916	1225	11/14/2013	N
2	7263056	DDHER	500	SS1330824A	0.5	10			162A	Light amber	06916	1225	11/14/2013	N
3	7263057	EEHER	500	SS1330824A	0.5	10			162A	Light amber	06916	1225	11/14/2013	N
4	7263058	F1HER	500	SS1330824A	0.5	10			162A	Light amber	06916	1225	11/14/2013	N
5	7263059	FB1HE	500	SS1330824A	0.5	10			162A		06916	1225	11/14/2013	N
6	7263060	FB2HE	500	SS1330824A	0.5	10			162A		06916	1225	11/14/2013	N
7	7264286	-K46C	500	SS1330824A	0.5	10			162A		06916	1225	11/15/2013	N
8	7264287	-L45C	500	SS1330824A	0.5	10			162A	Cloudy, filtered prior to SPE.	06916	1225	11/15/2013	N
9	7264288	-M44C	500	SS1330824A	0.5	10			162A		06916	1225	11/15/2013	N
10	7264289	-N44A	500	SS1330824A	0.5	10			162A	Cloudy, filtered prior to SPE.	06916	1225	11/15/2013	N
11	7264290	-044C	500	SS1330824A	0.5	10			162A		06916	1225	11/15/2013	N
12	7266116	77M44	500	SS1330824A	0.5	10			162A	Cloudy, filtered prior to SPE.	06916	1225	11/18/2013	N
13	7266117	70J23	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
14	7266118BKG	152-2	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
15	7266121	44M43	500	SS1330824A	0.5	10			162A	Pale yellow, Cloudy, filtered prior to SPE.	06916	1225	11/18/2013	N
16	7266122	55P43	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
17	7266123	22K46	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
18	7266124	04L45	500	SS1330824A	0.5	10			162A	Pale yellow,	06916	1225	11/18/2013	N
19	7266127	47N42	500	SS1330824A	0.5	10			162A	Pale yellow, Cloudy	06916	1225	11/18/2013	N
20	7266128	S1522	500	SS1330824A	0.5	10			162A	Pale yellow, Cloudy	06916	1225	11/18/2013	N

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Rack ID:		Work Station	GRC room	S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133110017A
Internal Standard		Balance #										

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM03

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7263051	SW-R2-L-5-2	X		1	
7263056	SW-R2-M-5-1	X		1	
7263057	SW-R2-M-5-2	X		1	
7263058	DUP-01	X		1	Field Duplicate Sample
7263059	FB-01_11042013	X		1	Field Blank
7263060	FB-02_11042013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

Method defined actions are taken for any failed matrix QC.

Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM03

ICP Metals

Fraction: Metals in Liquid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263051 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	474			P
7440-36-0	Antimony	0.34	B		MS
7440-38-2	Arsenic	1.9	B		MS
7440-39-3	Barium	33.7			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	9140			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	5.9	B		P
7439-89-6	Iron	838			P
7439-92-1	Lead	14.0			MS
7439-95-4	Magnesium	3770			P
7439-96-5	Manganese	23.0			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	820			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5490			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	21.8			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263056 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.41	B		MS
7440-38-2	Arsenic	1.3	B		MS
7440-39-3	Barium	25.2			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	8400			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	178	B		P
7439-92-1	Lead	1.1			MS
7439-95-4	Magnesium	3560			P
7439-96-5	Manganese	12.7			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	674			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5340			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.1	B		P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263057 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	1.3	B		MS
7440-39-3	Barium	24.6			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	9010			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	202			P
7439-92-1	Lead	2.1			MS
7439-95-4	Magnesium	3640			P
7439-96-5	Manganese	15.3			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	570			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5250			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.5	B		P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263058 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	88.1	B		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	1.5	B		MS
7440-39-3	Barium	25.5			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	9140			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	B		P
7439-89-6	Iron	204			P
7439-92-1	Lead	2.5			MS
7439-95-4	Magnesium	3700			P
7439-96-5	Manganese	16.5			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	634			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5330			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.6	B		P

Comments:

_____
_____
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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263059 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.78	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	33.4	U		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7263060 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.78	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	33.4	U		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: KVM03
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Aluminum	P30905G	*56054BKG
Barium		7263051
Beryllium		7263056
Cadmium		7263057
Calcium		7263058
Chromium		7263059
Cobalt		7263060
Copper		P30905GB
Iron		P30905GQ
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM03
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Antimony	P31250B	7263051
Arsenic		7263056
Lead		7263057
Thallium		7263058
		7263059
		7263060
		*65127BKG
		P31250BB
		P31250BQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM03
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Mercury	P31013D	7263051
		7263056
		7263057
		7263058
		7263059
		7263060
		P31013DB
		P31013DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331201T71
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)
Aluminum		30000.0	30223.27	100.7	25000.0	24927.12	99.7	25000.0	24973.68	99.9
Barium		600.0	610.26	101.7	500.0	507.29	101.5	500.0	508.43	101.7
Beryllium		600.0	588.55	98.1	500.0	489.73	97.9	500.0	494.97	99.0
Cadmium		600.0	603.17	100.5	500.0	497.17	99.4	500.0	497.89	99.6
Calcium		30000.0	29668.64	98.9	25000.0	24280.72	97.1	25000.0	24613.58	98.5
Chromium		600.0	602.34	100.4	500.0	492.64	98.5	500.0	499.27	99.9
Cobalt		600.0	600.25	100.0	500.0	496.61	99.3	500.0	497.64	99.5
Copper		600.0	606.18	101.0	500.0	504.23	100.8	500.0	504.04	100.8
Iron		30000.0	29796.70	99.3	25000.0	24523.82	98.1	25000.0	24598.61	98.4
Magnesium										
Manganese		600.0	607.57	101.3	500.0	500.77	100.2	500.0	500.07	100.0
Nickel		600.0	603.34	100.6	500.0	499.68	99.9	500.0	501.05	100.2
Potassium		30000.0	29734.04	99.1	25000.0	24226.46	96.9	25000.0	24629.05	98.5
Selenium		600.0	600.38	100.1	500.0	498.86	99.8	500.0	502.91	100.6
Silver		600.0	614.98	102.5	500.0	511.29	102.3	500.0	507.71	101.5
Sodium		30000.0	29710.46	99.0	25000.0	24469.92	97.9	25000.0	24643.70	98.6
Vanadium		600.0	606.51	101.1	500.0	499.19	99.8	500.0	503.32	100.7
Zinc		600.0	609.32	101.6	500.0	503.98	100.8	500.0	505.00	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331201T71
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	25020.96	100.1			
Barium					500.0	507.79	101.6			
Beryllium					500.0	501.82	100.4			
Cadmium					500.0	499.98	100.0			
Calcium					25000.0	24774.57	99.1			
Chromium					500.0	505.17	101.0			
Cobalt					500.0	498.10	99.6			
Copper					500.0	500.62	100.1			
Iron					25000.0	24677.67	98.7			
Magnesium										
Manganese					500.0	504.96	101.0			
Nickel					500.0	501.04	100.2			
Potassium					25000.0	24664.06	98.7			
Selenium					500.0	492.80	98.6			
Silver					500.0	507.43	101.5			
Sodium					25000.0	24507.17	98.0			
Vanadium					500.0	507.69	101.5			
Zinc					500.0	503.61	100.7			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331205T73
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium		30000.0	29539.53	98.5	25000.0	24445.47	97.8	25000.0	24453.52	97.8
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium		30000.0	29807.12	99.4	25000.0	24617.36	98.5	25000.0	24758.44	99.0
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331205T73
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium					25000.0	24452.80	97.8	25000.0	24296.10	97.2
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium					25000.0	24746.70	99.0	25000.0	24784.06	99.1
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: MS
Run Name: 1331403E03
Calibration Date(s): 11/10/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	45.13	90.3	25.0	23.08	92.3	25.0	24.82	99.3
Arsenic	75	500.0	490.40	98.1	250.0	246.30	98.5	250.0	267.00	106.8
Lead	208	50.0	48.72	97.4	25.0	24.64	98.6	25.0	27.50	110.0
Thallium	203	50.0	48.24	96.5	25.0	25.05	100.2	25.0	27.33	109.3

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: MS
Run Name: 1331403E03
Calibration Date(s): 11/10/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	23.08	92.3	25.0	25.26	101.0
Arsenic	75				250.0	250.20	100.1	250.0	263.50	105.4
Lead	208				25.0	25.30	101.2	25.0	26.32	105.3
Thallium	203				25.0	24.83	99.3	25.0	26.19	104.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.51	100.4	1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	0.97	97.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.96	96.0	1.0	0.94	94.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	1.01	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.00	100.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: P
Run Name: 1331201T71
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	232.09	116.0	199.84	99.9
Barium		5.0	5.43	108.6	5.42	108.4
Beryllium		5.0	4.94	98.8	4.97	99.4
Cadmium		5.0	5.51	110.2	5.47	109.4
Calcium		200.0	189.99	95.0	193.18	96.6
Chromium		15.0	14.55	97.0	15.18	101.2
Cobalt		5.0	4.67	93.4	4.59	91.8
Copper		10.0	10.40	104.0	10.53	105.3
Iron		200.0	204.65	102.3	198.12	99.1
Magnesium						
Manganese		5.0	5.20	104.0	5.17	103.4
Nickel		10.0	10.30	103.0	10.14	101.4
Potassium		500.0	469.36	93.9	513.56	102.7
Selenium		20.0	21.59	108.0	20.52	102.6
Silver		5.0	5.30	106.0	5.07	101.4
Sodium		1000.0	993.70	99.4	998.41	99.8
Vanadium		5.0	5.11	102.2	4.99	99.8
Zinc		20.0	19.86	99.3	19.87	99.4

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: P
Run Name: 1331205T73
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Magnesium		100.0	115.34	115.3	111.53	111.5
Manganese						
Nickel						
Potassium						
Selenium						
Silver						
Sodium		1000.0	1003.04	100.3	1023.97	102.4
Vanadium						
Zinc						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: MS
Run Name: 1331403E03
Calibration Date(s): 11/10/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.18	118.0	0.98	98.0
Arsenic	75	2.0	2.01	100.5	2.22	111.0
Lead	208	1.0	0.99	99.0	1.06	106.0
Thallium	203	0.5	0.59	118.0	0.51	102.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.20	100.0	0.19	95.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: P
Run Name: 1331201T71
Calibration Date(s): 11/08/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	43.1	B	33.4	U	33.4	U		82.800	U	P30905GB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.330	U	P30905GB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.670	U	P30905GB
Cadmium		0.50	B	0.49	B	0.44	B	0.38	B		0.760	U	P30905GB
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		33.400	U	P30905GB
Chromium		0.55	U	0.55	U	0.55	U	0.55	U		1.600	U	P30905GB
Cobalt		0.44	U	0.44	U	-0.47	B	0.44	U		1.300	U	P30905GB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		2.700	U	P30905GB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		43.000	U	P30905GB
Magnesium													
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.830	U	P30905GB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		1.500	U	P30905GB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		98.000	U	P30905GB
Selenium		2.4	U	2.4	U	2.4	U	2.4	U		8.400	U	P30905GB
Silver		0.75	U	0.75	U	0.75	U	0.75	U		2.100	U	P30905GB
Sodium		167	U	167	U	167	U	167	U		167.000	U	P30905GB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		2.000	U	P30905GB
Zinc		2.0	U	2.0	U	2.0	U	2.0	U		2.000	U	P30905GB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: P
Run Name: 1331205T73
Calibration Date(s): 11/08/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium		16.7	U	25.2	B	16.7	U	16.7	U		21.890	B	P30905GB
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium		167	U	167	U	167	U	167	U				
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: P
Run Name: 1331205T73
Calibration Date(s): 11/08/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium				28.4	B								
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium				167	U								
Vanadium													
Zinc													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: MS
Run Name: 1331403E03
Calibration Date(s): 11/10/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.81	B	0.33	B	0.33	U	0.33	U	121	0.340	U	P31250BB
Arsenic	75	0.78	U	0.78	U	0.78	U	0.78	U	75	0.780	U	P31250BB
Lead	208	0.051	U	0.051	U	0.051	U	0.051	U	208	0.085	U	P31250BB
Thallium	203	0.15	U	0.15	U	0.15	U	0.15	U	203	0.150	U	P31250BB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: MS
Run Name: 1331403E03
Calibration Date(s): 11/10/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121			0.33	U								
Arsenic	75			0.78	U								
Lead	208			0.051	U								
Thallium	203			0.15	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.060	U	P31013DB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U						

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM03

Instrument ID: 16315
Run Name: 1331201T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	523526	104.7	521242.0	104.2	525143	105.0	523595.3	104.7
Barium	0	500	0		505.0	101.0	0		505.9	101.2
Beryllium	0	500	0		511.6	102.3	0		517.7	103.5
Cadmium	0	1000	-2		979.0	97.9	-2		978.8	97.9
Calcium	500000	500000	533631	106.7	530791.3	106.2	539846	108.0	535950.6	107.2
Chromium	0	500	3		485.8	97.2	2		494.0	98.8
Cobalt	0	500	2		498.9	99.8	2		500.6	100.1
Copper	0	500	-1		541.5	108.3	-2		535.4	107.1
Iron	200000	200000	213778	106.9	212509.4	106.3	214783	107.4	213812.0	106.9
Magnesium	500000	500000	639474	127.9	620691.4	124.1	618633	123.7	616255.2	123.3
Manganese	0	500	3		495.1	99.0	3		494.7	98.9
Nickel	0	1000	2		993.9	99.4	2		994.7	99.5
Potassium	0	0	-2		-55.2		-30		-25.1	
Selenium	0	50	3		50.3	100.6	-1		51.0	102.0
Silver	0	200	0		225.8	112.9	1		223.8	111.9
Sodium	0	0	52		49.6		63		56.3	
Vanadium	0	500	-2		498.3	99.7	-2		501.3	100.3
Zinc	0	1000	10		1060.5	106.1	10		1055.7	105.6

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM03

Instrument ID: 18255
Run Name: 1331205T73
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	508574	101.7	505398.7	101.1	504862	101.0	499244.5	99.8
Barium										
Beryllium										
Cadmium										
Calcium	500000	500000	506753	101.4	506705.4	101.3	503020	100.6	500021.0	100.0
Chromium										
Cobalt										
Copper										
Iron	200000	200000	201908	101.0	202558.1	101.3	202804	101.4	201738.9	100.9
Magnesium	500000	500000	501591	100.3	501097.5	100.2	502212	100.4	494622.2	98.9
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium	0	0	1		-0.8		10		17.1	
Vanadium										
Zinc										

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM03

Instrument ID: 11332
Run Name: 1331403E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9333	93.3	9072.0	90.7
Antimony	121	0	0	0		0.0	
Arsenic	75	0	20	0		18.2	91.0
Calcium	44	10000	10000	9107	91.1	8857.0	88.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9396	94.0	9069.0	90.7
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9140	91.4	8840.0	88.4
Molybdenum	98	200	200	190	95.0	186.5	93.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9069	90.7	8998.0	90.0
Sodium	23	10000	10000	9179	91.8	8989.0	89.9
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	184	92.0	185.6	92.8

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM03

Instrument ID: 11332
Run Name: 1331403E03
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	8954	89.5	9143.0	91.4
Antimony	121	0	0	0		-0.1	
Arsenic	75	0	20	0		17.8	89.0
Calcium	44	10000	10000	8632	86.3	8802.0	88.0
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9074	90.7	9173.0	91.7
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	8777	87.8	8922.0	89.2
Molybdenum	98	200	200	183	91.5	188.9	94.5
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	8758	87.6	9081.0	90.8
Sodium	23	10000	10000	8847	88.5	9117.0	91.2
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	182	91.0	190.8	95.4

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM03
Matrix: WATER

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P30905GQ	UG/L	2000.00	2158.49		90 - 112	108	P	Yes
Antimony	121	P31250BQ	UG/L	6.00	5.52		80 - 120	92	MS	Yes
Arsenic	75	P31250BQ	UG/L	10.00	10.16		86 - 120	102	MS	Yes
Barium		P30905GQ	UG/L	2000.00	2139.90		90 - 110	107	P	Yes
Beryllium		P30905GQ	UG/L	50.00	52.73		90 - 111	105	P	Yes
Cadmium		P30905GQ	UG/L	50.00	53.17		90 - 112	106	P	Yes
Calcium		P30905GQ	UG/L	4000.00	4171.38		90 - 112	104	P	Yes
Chromium		P30905GQ	UG/L	200.00	211.25		90 - 110	106	P	Yes
Cobalt		P30905GQ	UG/L	500.00	530.20		90 - 110	106	P	Yes
Copper		P30905GQ	UG/L	250.00	270.89		90 - 112	108	P	Yes
Iron		P30905GQ	UG/L	1000.00	1031.58		90 - 112	103	P	Yes
Lead	208	P31250BQ	UG/L	15.00	15.06		90 - 110	100	MS	Yes
Magnesium		P30905GQ	UG/L	2000.00	2134.16		89 - 110	107	P	Yes
Manganese		P30905GQ	UG/L	500.00	535.15		90 - 110	107	P	Yes
Mercury		P31013DQ	UG/L	1.00	0.95		80 - 120	95	CV	Yes
Nickel		P30905GQ	UG/L	500.00	541.22		90 - 111	108	P	Yes
Potassium		P30905GQ	UG/L	10000.00	10304.13		90 - 110	103	P	Yes
Selenium		P30905GQ	UG/L	150.00	160.73		80 - 120	107	P	Yes
Silver		P30905GQ	UG/L	50.00	57.06		80 - 120	114	P	Yes
Sodium		P30905GQ	UG/L	10000.00	10476.25		87 - 114	105	P	Yes
Thallium	203	P31250BQ	UG/L	2.00	1.95		90 - 115	98	MS	Yes
Vanadium		P30905GQ	UG/L	500.00	540.05		90 - 110	108	P	Yes
Zinc		P30905GQ	UG/L	500.00	535.35		90 - 110	107	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: *56054BKG Serial Dilution Lab Sample ID: *56054L
Batch ID(s): P30905G
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		674.7600		792.5500	B	17		P
Barium		502.8300		498.4500		1		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		149857.9700		140645.4500		6		P
Chromium		7.5400	B	8.0000	U	100		P
Cobalt		1.3000	U	6.5000	U			P
Copper		23.5800		22.5000	B	5		P
Iron		17855.5800		17238.2000		3		P
Magnesium		61152.0900		59623.7000		2		P
Manganese		992.5000		973.6500		2		P
Nickel		2.5800	B	7.5000	U	100		P
Potassium		29950.8900		28213.5500		6		P
Selenium		8.4000	U	42.0000	U			P
Silver		2.1000	U	10.5000	U			P
Vanadium		2.9100	B	10.0000	U	100		P
Zinc		86.8600		110.2000		27		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM03
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: *65127BKG Serial Dilution Lab Sample ID: *65127L
Batch ID(s): P31250B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Antimony	121	1.1000		1.7000	U	100		MS
Arsenic	75	57.1000		58.5500		3		MS
Lead	208	4.2730		4.3895	B	3		MS
Thallium	203	0.1500	U	0.7500	U			MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.55
Cobalt	228.62		0.44
Copper	327.40		1.7
Iron	261.19		33.4
Magnesium			
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		2.4
Silver	328.06		0.75
Sodium	589.59		167
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: P
Instrument ID: 18255
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Magnesium	285.21		16.7
Manganese			
Nickel			
Potassium			
Selenium			
Silver			
Sodium	589.59		167
Vanadium			
Zinc			

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: MS
Instrument ID: 11332
Date: 10/2013

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.33
Arsenic	75		0.78
Lead	208		0.051
Thallium	203		0.15

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: WATER

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	82.8
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	1.3
Copper	327.40		10.0	2.7
Iron	261.19		200	43.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.5
Potassium	766.49		500	98.0
Selenium	196.09		20.0	8.4
Silver	328.06		5.0	2.1
Sodium	589.59		1000	167
Vanadium	292.40		5.0	2.0
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: WATER

Method: MS
Date: 06/2013

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		1.0	0.34
Arsenic				
Lead	208		1.0	0.085
Thallium	203		0.50	0.15

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: WATER

Method: MS
Date: 10/2013

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony				
Arsenic	75		2.0	0.78
Lead				
Thallium				

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: WATER

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000770	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	-0.0000200	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000150	0.0000000	0.0002620
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0001000	0.0000000	0.0000000

Comments:
_____
_____
_____
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0099760
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002000	0.0000000	0.0000000	-0.0000040
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	0.0002000
Nickel	231.60	-0.0001180	0.0000000	0.0000000	0.0000000	0.0018400
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0004790	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	-0.0000600	-0.0094600
Zinc	213.86	0.0000000	0.0000000	0.0012000	0.0000000	0.0000000

Comments:
_____
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	TI	V	ZR	--
Aluminum	308.21	0.0000000	0.0000000	0.0100000	0.0000000	
Beryllium	313.04	0.0000000	0.0000040	0.0001160	0.0000000	
Cadmium	226.50	-0.0000780	0.0000000	0.0000000	0.0000000	
Cobalt	228.62	0.0001140	0.0020220	0.0000000	0.0000000	
Copper	327.40	0.0000000	0.0001460	-0.0000340	0.0000000	
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0006500	
Vanadium	292.40	0.0000000	0.0007950	0.0000000	0.0000000	
Zinc	213.86	0.0053800	0.0000000	0.0000000	0.0000000	

Comments:
_____
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM03

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Barium	455.4	10.00	5000.0
Beryllium	313.04	10.00	5000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Magnesium			
Manganese	257.61	10.00	10000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	10000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM03

Method: P
Instrument ID: 18255
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Magnesium	285.21	10.00	600000.0
Manganese			
Nickel			
Potassium			
Selenium			
Silver			
Sodium	589.59	10.00	100000.0
Vanadium			
Zinc			

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM03

Method: P
Batch ID: P30905G

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7263051	11/06/2013	50.00	50
7263056	11/06/2013	50.00	50
7263057	11/06/2013	50.00	50
7263058	11/06/2013	50.00	50
7263059	11/06/2013	50.00	50
7263060	11/06/2013	50.00	50
*56054BKG	11/06/2013	50.00	50
P30905GB	11/06/2013	50.00	50
P30905GQ	11/06/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM03

Method: MS
Batch ID: P31250B

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7263051	11/10/2013	50.00	50
7263056	11/10/2013	50.00	50
7263057	11/10/2013	50.00	50
7263058	11/10/2013	50.00	50
7263059	11/10/2013	50.00	50
7263060	11/10/2013	50.00	50
*65127BKG	11/10/2013	50.00	50
P31250BB	11/10/2013	50.00	50
P31250BQ	11/10/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM03

Method: CV
Batch ID: P31013D

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7263051	11/07/2013	40.00	40
7263056	11/07/2013	40.00	40
7263057	11/07/2013	40.00	40
7263058	11/07/2013	40.00	40
7263059	11/07/2013	40.00	40
7263060	11/07/2013	40.00	40
P31013DB	11/07/2013	40.00	40
P31013DQ	11/07/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: P
Instrument ID: 16315
Run Name: 1331201T71

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	01:18	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
S	1.00	01:21	X						X				X						X			X										
S	1.00	01:25				X	X	X			X	X				X		X		X	X				X							
S	1.00	01:29								X														X								
ICV	1.00	01:32	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ICB	1.00	01:36	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
LLC	1.00	01:40	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ICSA	1.00	01:44	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ICSAB	1.00	01:48	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
CCV	1.00	01:52	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
CCB	1.00	01:55	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
P30905GB	1.00	01:59	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
P30905GQ	1.00	02:03	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
*56054BKG	1.00	02:07	X			X	X	X	X	X	X	X	X			X		X	X	X	X			X	X							
ZZZZZZ	1.00	02:11																														
ZZZZZZ	1.00	02:14																														
ZZZZZZ	1.00	02:18																														
ZZZZZZ	1.00	02:22																														
*56054L	5.00	02:26	X			X	X	X	X	X	X	X	X			X		X	X	X	X			X	X							
ZZZZZZ	1.00	02:30																														
ZZZZZZ	1.00	02:34																														
CCV	1.00	02:38	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
CCB	1.00	02:41	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:45																														
7263051	1.00	02:49	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
7263056	1.00	02:53	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
7263057	1.00	02:56	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
7263058	1.00	03:00	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
7263059	1.00	03:04	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
7263060	1.00	03:08	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
LLC	1.00	03:11	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ICSA	1.00	03:15	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
ICSAB	1.00	03:19	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
CCV	1.00	03:23	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							
CCB	1.00	03:27	X			X	X	X	X	X	X	X	X			X		X	X	X	X	X		X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM03
No.:

Method: P
Instrument ID: 18255
Run Name: 1331205T73

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	10:17													X							X											
S	1.00	10:21													X							X											
S	1.00	10:25																															
S	1.00	10:29																															
ICV	1.00	10:32													X							X											
ICB	1.00	10:36													X							X											
LLC	1.00	10:40													X							X											
ICSA	1.00	10:43													X							X											
ICSAB	1.00	10:48													X							X											
CCV	1.00	10:51													X							X											
CCB	1.00	10:55													X							X											
P30905GB	1.00	10:59													X																		
P30905GQ	1.00	11:03													X																		
*56054BKG	1.00	11:07													X																		
ZZZZZZ	1.00	11:11																															
ZZZZZZ	1.00	11:15																															
ZZZZZZ	1.00	11:19																															
ZZZZZZ	1.00	11:23																															
*56054L	5.00	11:27													X																		
*56054BKG	5.00	11:31																				X											
ZZZZZZ	5.00	11:34																															
CCV	1.00	11:38													X							X											
CCB	1.00	11:42													X							X											
ZZZZZZ	5.00	11:46																															
ZZZZZZ	5.00	11:49																															
ZZZZZZ	5.00	11:53																															
ZZZZZZ	25.00	11:57																															
ZZZZZZ	1.00	12:01																															
ZZZZZZ	5.00	12:05																															
ZZZZZZ	1.00	12:08																															
ZZZZZZ	1.00	12:12																															
ZZZZZZ	5.00	12:16																															
7263051	1.00	12:20													X																		
CCV	1.00	12:24													X							X											
CCB	1.00	12:27													X							X											
7263056	1.00	12:31													X																		
7263057	1.00	12:35													X																		
7263058	1.00	12:39													X																		

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: P
Instrument ID: 18255
Run Name: 1331205T73

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7263059	1.00	12:43													X																	
7263060	1.00	12:46													X																	
LLC	1.00	12:50													X							X										
ICSA	1.00	12:54													X							X										
ICSAB	1.00	12:58													X							X										
CCV	1.00	13:02													X							X										
CCB	1.00	13:06													X							X										

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: MS
Instrument ID: 11332
Run Name: 1331403E03

Run Start Date: 11/10/2013
Run End Date: 11/10/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	18:12		X	X									X									X										
S	1.00	18:14		X	X									X									X										
CCS	1.00	18:16		X	X									X									X										
CCS	1.00	18:17		X	X									X									X										
ICV	1.00	18:19		X	X									X									X										
ICB	1.00	18:21		X	X									X									X										
LLC	1.00	18:23		X	X									X									X										
ICSA	1.00	18:24		X	X									X									X										
ICSAB	1.00	18:26		X	X									X									X										
CCV	1.00	18:29		X	X									X									X										
CCB	1.00	18:31		X	X									X									X										
P31250BB	1.00	18:32		X	X									X									X										
P31250BQ	1.00	18:34		X	X									X									X										
*65127BKG	1.00	18:36		X	X									X									X										
ZZZZZZ	1.00	18:38																															
ZZZZZZ	1.00	18:40																															
ZZZZZZ	1.00	18:41																															
ZZZZZZ	1.00	18:43																															
*65127L	5.00	18:45		X	X									X									X										
ZZZZZZ	1.00	18:47																															
7263051	1.00	18:49		X	X									X									X										
CCV	1.00	18:50		X	X									X									X										
CCB	1.00	18:52		X	X									X									X										
7263056	1.00	18:54		X	X									X									X										
7263057	1.00	18:56		X	X									X									X										
7263058	1.00	18:58		X	X									X									X										
7263059	1.00	18:59		X	X									X									X										
7263060	1.00	19:01		X	X									X									X										
ZZZZZZ	1.00	19:03																															
ZZZZZZ	1.00	19:05																															
ZZZZZZ	1.00	19:07																															
ZZZZZZ	1.00	19:08																															
ZZZZZZ	1.00	19:10																															
CCV	1.00	19:12		X	X									X									X										
CCB	1.00	19:14		X	X									X									X										
ZZZZZZ	1.00	19:16																															
ZZZZZZ	1.00	19:17																															
ZZZZZZ	1.00	19:19																															

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: MS
Instrument ID: 11332
Run Name: 1331403E03

Run Start Date: 11/10/2013
Run End Date: 11/10/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	19:21																													
ZZZZZZ	1.00	19:23																													
ZZZZZZ	1.00	19:25																													
ZZZZZZ	1.00	19:26																													
LLC	1.00	19:28		X	X									X									X								
ICSA	1.00	19:30		X	X									X									X								
ICSAB	1.00	19:32		X	X									X									X								
CCV	1.00	19:33		X	X									X									X								
CCB	1.00	19:35		X	X									X									X								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes
			AL SB AS BA BE CD CA CR CO CU FE PB MG MN HG NI K SE AG NA TL V ZN
S0	1.00	07:04	X
S0.2	1.00	07:06	X
S0.5	1.00	07:08	X
S1.0	1.00	07:10	X
S2.5	1.00	07:12	X
S5.0	1.00	07:14	X
ICV	1.00	07:16	X
ICB	1.00	07:18	X
CRA	1.00	07:20	X
CCV	1.00	07:22	X
CCB	1.00	07:24	X
ZZZZZZ	1.00	07:26	
ZZZZZZ	1.00	07:28	
ZZZZZZ	1.00	07:30	
ZZZZZZ	1.00	07:32	
ZZZZZZ	1.00	07:34	
ZZZZZZ	1.00	07:36	
ZZZZZZ	1.00	07:38	
ZZZZZZ	1.00	07:41	
ZZZZZZ	1.00	07:43	
ZZZZZZ	1.00	07:45	
CCV	1.00	07:47	X
CCB	1.00	07:49	X
ZZZZZZ	1.00	07:51	
ZZZZZZ	1.00	07:53	
ZZZZZZ	1.00	07:55	
ZZZZZZ	1.00	07:57	
ZZZZZZ	1.00	07:59	
ZZZZZZ	1.00	08:01	
ZZZZZZ	1.00	08:03	
ZZZZZZ	1.00	08:05	
ZZZZZZ	1.00	08:07	
ZZZZZZ	1.00	08:09	
CCV	1.00	08:11	X
CCB	1.00	08:13	X
ZZZZZZ	1.00	08:15	
ZZZZZZ	1.00	08:17	
ZZZZZZ	1.00	08:19	

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:21																													
ZZZZZZ	1.00	08:23																													
ZZZZZZ	1.00	08:25																													
ZZZZZZ	1.00	08:27																													
ZZZZZZ	1.00	08:29																													
ZZZZZZ	1.00	08:32																													
ZZZZZZ	1.00	08:34																													
CCV	1.00	08:36															X														
CCB	1.00	08:38															X														
ZZZZZZ	1.00	08:40																													
ZZZZZZ	1.00	08:42																													
ZZZZZZ	1.00	08:44																													
ZZZZZZ	1.00	08:46																													
ZZZZZZ	1.00	08:48																													
ZZZZZZ	1.00	08:50																													
ZZZZZZ	1.00	08:52																													
ZZZZZZ	1.00	08:54																													
ZZZZZZ	1.00	08:56																													
ZZZZZZ	1.00	08:58																													
CCV	1.00	09:00															X														
CCB	1.00	09:02															X														
ZZZZZZ	1.00	09:04																													
ZZZZZZ	1.00	09:06																													
ZZZZZZ	1.00	09:08																													
ZZZZZZ	1.00	09:10																													
ZZZZZZ	1.00	09:12																													
ZZZZZZ	1.00	09:14																													
ZZZZZZ	1.00	09:16																													
ZZZZZZ	1.00	09:19																													
ZZZZZZ	1.00	09:21																													
ZZZZZZ	1.00	09:23																													
CCV	1.00	09:25															X														
CCB	1.00	09:27															X														
ZZZZZZ	1.00	09:29																													
ZZZZZZ	1.00	09:31																													
ZZZZZZ	1.00	09:33																													
ZZZZZZ	1.00	09:35																													
ZZZZZZ	1.00	09:37																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	09:39																													
ZZZZZZ	1.00	09:41																													
ZZZZZZ	1.00	09:43																													
ZZZZZZ	1.00	09:45																													
ZZZZZZ	1.00	09:47																													
CCV	1.00	09:49															X														
CCB	1.00	09:51															X														
ZZZZZZ	1.00	09:55																													
ZZZZZZ	1.00	09:57																													
ZZZZZZ	1.00	09:59																													
ZZZZZZ	1.00	10:01																													
ZZZZZZ	1.00	10:03																													
ZZZZZZ	1.00	10:05																													
ZZZZZZ	1.00	10:07																													
ZZZZZZ	1.00	10:09																													
P31013DB	1.00	10:11															X														
P31013DQ	1.00	10:13															X														
CCV	1.00	10:15															X														
CCB	1.00	10:17															X														
7263051	1.00	10:19															X														
7263056	1.00	10:21															X														
7263057	1.00	10:23															X														
7263058	1.00	10:25															X														
7263059	1.00	10:27															X														
7263060	1.00	10:29															X														
ZZZZZZ	1.00	10:31																													
ZZZZZZ	1.00	10:33																													
ZZZZZZ	1.00	10:35																													
ZZZZZZ	1.00	10:37																													
CCV	1.00	10:39															X														
CCB	1.00	10:41															X														
ZZZZZZ	1.00	10:44																													
ZZZZZZ	1.00	10:46																													
ZZZZZZ	1.00	10:48																													
ZZZZZZ	1.00	10:50																													
ZZZZZZ	1.00	10:52																													
ZZZZZZ	1.00	10:54																													
ZZZZZZ	1.00	10:56																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	10:58																													
ZZZZZZ	1.00	11:00																													
ZZZZZZ	1.00	11:02																													
CCV	1.00	11:04															X														
CCB	1.00	11:06															X														
ZZZZZZ	1.00	11:08																													
ZZZZZZ	1.00	11:10																													
ZZZZZZ	1.00	11:12																													
ZZZZZZ	1.00	11:14																													
ZZZZZZ	1.00	11:16																													
ZZZZZZ	1.00	11:18																													
ZZZZZZ	1.00	11:20																													
ZZZZZZ	1.00	11:22																													
ZZZZZZ	1.00	11:24																													
ZZZZZZ	1.00	11:26																													
CCV	1.00	11:28															X														
CCB	1.00	11:30															X														
ZZZZZZ	1.00	11:33																													
ZZZZZZ	1.00	11:35																													
ZZZZZZ	1.00	11:37																													
ZZZZZZ	1.00	11:39																													
ZZZZZZ	1.00	11:41																													
ZZZZZZ	1.00	11:43																													
ZZZZZZ	1.00	11:45																													
ZZZZZZ	1.00	11:47																													
ZZZZZZ	1.00	11:49																													
ZZZZZZ	1.00	11:51																													
CCV	1.00	11:53															X														
CCB	1.00	11:55															X														
ZZZZZZ	1.00	11:57																													
ZZZZZZ	1.00	11:59																													
ZZZZZZ	1.00	12:01																													
ZZZZZZ	1.00	12:03																													
ZZZZZZ	1.00	12:05																													
ZZZZZZ	1.00	12:07																													
ZZZZZZ	1.00	12:09																													
ZZZZZZ	1.00	12:12																													
ZZZZZZ	1.00	12:14																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	12:16																													
CCV	1.00	12:18															X														
CCB	1.00	12:20															X														
ZZZZZZ	1.00	12:22																													
ZZZZZZ	1.00	12:24																													
ZZZZZZ	1.00	12:26																													
CRA	1.00	12:28															X														
CCV	1.00	12:30															X														
CCB	1.00	12:32															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 15
ICP-MS TUNE
SDG No.: KVM03
Matrix: WATER

Instrument ID: 11332
Date: 11/10/2013

Analyte	Mass	Avg. Measured Mass (amu)	Avg. Peak Width at 5% Peak Height (amu)	%RSD
Lithium	6.000	5.95	0.65	3.1
Magnesium	24.000	24.00	0.60	1.6
Rhodium	103.000	103.00	0.65	1.7
Indium	115.000	115.00	0.60	2.6
Cerium	140.000	140.05	0.60	1.5
Lead	208.000	208.00	0.65	1.9
Uranium	238.000	238.00	0.65	1.6

Comments:

_____
_____
_____
_____

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM03

Instrument ID: 11332
Run Name: 1331403E03

Start Date: 11/10/2013
End Date: 11/10/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	18:12	100		100											
S	18:14	99		99											
CCS	18:16	97		100											
CCS	18:17	110		107											
ICV	18:19	103		102											
ICB	18:21	107		105											
LLC	18:23	105		105											
ICSA	18:24	107		107											
ICSAB	18:26	115		114											
CCV	18:29	108		108											
CCB	18:31	99		98											
P31250BB	18:32	106		107											
P31250BQ	18:34	101		101											
*65127BKG	18:36	95		91											
ZZZZZZ	18:38														
ZZZZZZ	18:40														
ZZZZZZ	18:41														
ZZZZZZ	18:43														
*65127L	18:45	104		103											
ZZZZZZ	18:47														
7263051	18:49	96		97											
CCV	18:50	100		97											
CCB	18:52	103		101											
7263056	18:54	100		99											
7263057	18:56	107		105											
7263058	18:58	92		92											
7263059	18:59	91		92											
7263060	19:01	96		96											
ZZZZZZ	19:03														
ZZZZZZ	19:05														
ZZZZZZ	19:07														
ZZZZZZ	19:08														
ZZZZZZ	19:10														
CCV	19:12	109		106											
CCB	19:14	110		106											
ZZZZZZ	19:16														
ZZZZZZ	19:17														
ZZZZZZ	19:19														

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

FLAG:
- R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS
- BE = Beryllium
- BI = Bismuth
- GE = Germanium
- HO = Holmium
- IN = Indium
- LI = Lithium
- SC = Scandium
- TB = Terbium
- Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM03

Instrument ID: 11332
Run Name: 1331403E03

Start Date: 11/10/2013
End Date: 11/10/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	19:21														
ZZZZZZ	19:23														
ZZZZZZ	19:25														
ZZZZZZ	19:26														
LLC	19:28	100		98											
ICSA	19:30	113		109											
ICSAB	19:32	112		111											
CCV	19:33	104		102											
CCB	19:35	106		102											

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

Raw Data

Metals in Liquid

ICP Data

Metals in Liquid

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ICP-AES Run Data Report

1331201T71

Reviewed By
Tara L Snyder

Reviewed Date
11/08/2013 5:04AM

Data File Name 1331201T71.TXT
Run Name: 1331201T71

Verified By:
Jennifer L Moyer

Verified Date
11/08/2013 2:41PM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/08/2013 01:18

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00196	36.745	-0.00264	-0.00204	-0.00120
AL	0.000	0.00235	99.904	0.00115	0.00084	0.00504
AS	0.000	-0.00944	26.082	-0.01208	-0.00721	-0.00904
B	0.000	-0.00002	25.898	-0.00002	-0.00001	-0.00001
BA	0.000	0.00018	5.124	0.00017	0.00017	0.00019
BE	0.000	-0.00555	7.753	-0.00524	-0.00604	-0.00537
CA	0.000	0.00216	8.533	0.00198	0.00217	0.00235
CD	0.000	0.00219	358.176	-0.00665	0.00829	0.00492
CO	0.000	-0.00719	18.237	-0.00652	-0.00871	-0.00635
CR	0.000	0.00000	24.735	-0.00001	0.00000	0.00000
CU	0.000	0.01704	2.333	0.01738	0.01713	0.01660
FE	0.000	0.00006	149.299	0.00004	0.00015	-0.00002
K	0.000	0.18707	11.657	0.16408	0.18967	0.20746
LI	0.000	0.00176	15.822	0.00193	0.00144	0.00192
MG	0.000	0.00003	174.158	0.00000	0.00008	0.00000
MN	0.000	0.00026	98.743	0.00022	0.00053	0.00003
MO	0.000	0.00842	5.450	0.00848	0.00885	0.00794
NA	0.000	0.00231	18.643	0.00279	0.00196	0.00219
NI	0.000	0.05658	3.864	0.05881	0.05444	0.05650
P	0.000	0.00000	1107.497	0.00002	0.00002	-0.00005
PB	0.000	0.00487	20.092	0.00597	0.00410	0.00455
S	0.000	0.00002	144.596	0.00006	0.00003	-0.00001
SB	0.000	-0.00031	6.962	-0.00029	-0.00033	-0.00031
SE	0.000	0.01502	8.822	0.01402	0.01452	0.01652
SI	0.000	0.00012	22.381	0.00015	0.00010	0.00011
SN	0.000	0.00672	17.415	0.00773	0.00544	0.00698
SR	0.000	-0.00006	22.020	-0.00005	-0.00007	-0.00006
TI	0.000	0.00176	84.320	0.00203	0.00310	0.00016
TL	0.000	-0.00168	43.288	-0.00181	-0.00233	-0.00090
V	0.000	-0.00026	228.282	-0.00047	-0.00074	0.00041
Y1	0.000	15989.32396	0.025	15987.04723	15993.97775	15986.94691
Y2A	0.000	600520.42586	0.298	602017.25000	601008.36093	598535.66667
Y2R	0.000	32573.29623	0.172	32508.82353	32611.00040	32600.06477
ZN	0.000	0.05481	5.607	0.05827	0.05240	0.05375
ZR	0.000	0.00000	9164.583	0.00023	-0.00013	-0.00010

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/08/2013 01:21

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.27788	0.155	13.29189	13.25422	13.28754
CA	50.000	1.63450	0.035	1.63416	1.63417	1.63515
FE	50.000	0.60235	0.103	0.60235	0.60173	0.60298
K	50.000	21.28827	0.221	21.31271	21.31817	21.23394
MG	50.000	3.99177	0.319	4.00261	3.97773	3.99496
NA	50.000	1.98393	0.162	1.98708	1.98067	1.98404
S	50.000	0.86321	0.131	0.86448	0.86287	0.86229
SI	50.000	0.40282	0.284	0.40216	0.40216	0.40414
Y1	50.000	15599.35422	0.210	15565.79196	15601.18297	15631.08772
Y2R	50.000	31940.93746	0.178	31941.13241	31997.75673	31883.92323

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/08/2013 01:25

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.53038	0.163	1.52981	1.52823	1.53311
AS	1.000	1.46578	0.310	1.46087	1.46982	1.46666
B	1.000	0.00564	0.689	0.00564	0.00559	0.00567
BA	1.000	1.45081	0.246	1.44944	1.45486	1.44814
BE	1.000	43.58176	0.151	43.51291	43.64369	43.58869
CD	1.000	33.02491	0.030	33.03442	33.02570	33.01461
CO	1.000	15.40767	0.108	15.38859	15.41533	15.41908
CU	1.000	1.27307	0.272	1.27306	1.26962	1.27654
LI	1.000	0.23810	0.473	0.23769	0.23724	0.23937
MN	1.000	6.01671	0.112	6.02358	6.01644	6.01011
NI	1.000	8.54502	0.065	8.54948	8.54682	8.53876
P	1.000	0.03157	0.338	0.03146	0.03167	0.03158
PB	1.000	2.78352	0.305	2.79043	2.78607	2.77405
SE	1.000	1.23512	0.063	1.23574	1.23424	1.23537
SR	1.000	1.57832	0.494	1.58701	1.57600	1.57196
TL	1.000	1.61846	0.585	1.62873	1.61655	1.61008
Y1	1.000	15806.07854	0.173	15825.24171	15774.77392	15818.21997
Y2A	1.000	578670.34395	0.164	579606.00531	577711.09821	578693.92833
Y2R	1.000	32158.40160	0.218	32087.33047	32227.60896	32160.26536
ZN	1.000	29.62975	0.144	29.58326	29.63847	29.66753

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 4 Date/Time: 11/08/2013 01:29

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.01817	0.519	0.01828	0.01810	0.01814
MO	1.000	9.87237	0.216	9.88360	9.88568	9.84782
SB	1.000	0.04020	0.246	0.04011	0.04018	0.04031
SN	1.000	3.30680	0.175	3.31338	3.30448	3.30252
TI	1.000	5.16414	0.421	5.18914	5.14941	5.15388
V	1.000	1.66057	0.393	1.66804	1.65595	1.65773
Y1	1.000	16156.74044	0.030	16152.31722	16155.93448	16161.96962
Y2A	1.000	602161.71568	0.394	599456.67331	603905.62749	603122.84626
Y2R	1.000	32309.94869	0.160	32368.70504	32289.32276	32271.81827
ZR	1.000	0.08699	0.345	0.08707	0.08724	0.08666

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/08/2013 01:32

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.61498	10,804.12	0.834	0.61191	0.61213	0.62090
AL	30.22327	5,147.87	0.039	30.23203	30.22776	30.21003
AS	0.60397	277.33	0.350	0.60638	0.60241	0.60313
B	0.58645	1,945.24	0.679	0.58854	0.58186	0.58896
BA	0.61026	508,564.34	0.709	0.60757	0.60796	0.61525
BE	0.58855	294,630.29	1.319	0.58084	0.58845	0.59637
CA	29.66864	31,220.37	0.100	29.65141	29.65166	29.70285
CD	0.60317	6,367.81	0.142	0.60282	0.60255	0.60415
CO	0.60025	2,940.39	0.067	0.60038	0.59980	0.60057
CR	0.60234	6,285.48	0.919	0.59649	0.60302	0.60751
CU	0.60618	8,948.41	0.806	0.60204	0.60493	0.61157
FE	29.79670	11,618.80	0.121	29.83748	29.78373	29.76887
K	29.73404	8,164.72	0.042	29.72956	29.72456	29.74799
LI	0.60717	4,659.62	0.388	0.60518	0.60656	0.60977
MG	29.66809	76,805.46	0.056	29.68074	29.64944	29.67408
MN	0.60757	41,993.00	0.897	0.60215	0.60750	0.61305
MO	0.61868	1,938.57	0.197	0.62003	0.61835	0.61765
NA	29.71046	37,818.59	0.054	29.72733	29.70877	29.69528
NI	0.60334	1,643.93	0.102	0.60340	0.60270	0.60392
P	0.61091	305.87	0.139	0.61188	0.61028	0.61058
PB	0.60138	539.48	0.145	0.60096	0.60239	0.60080
S	29.70943	8,135.58	0.200	29.76966	29.65113	29.70752
SB	0.62861	399.14	0.202	0.63000	0.62832	0.62751
SE	0.60038	237.51	1.048	0.60749	0.59556	0.59808
SI	30.66766	7,921.40	0.101	30.65429	30.70303	30.64567
SN	0.61069	641.44	0.204	0.61063	0.61196	0.60947
SR	0.60204	545,767.46	0.518	0.60270	0.59865	0.60477
TI	0.61670	36,591.01	0.957	0.61151	0.61548	0.62313
TL	0.59736	307.12	0.508	0.59610	0.60082	0.59517
V	0.60651	11,577.25	0.877	0.60297	0.60393	0.61263
Y1	15861.26935	15,861.27	0.124	15849.16350	15883.98775	15850.65681
Y2A	574384.17939	574,384.18	0.859	579578.38421	573819.84074	569754.31321
Y2R	32054.83070	32,054.83	0.152	31999.32648	32074.19532	32090.97028
ZN	0.60932	5,761.39	0.167	0.61007	0.60816	0.60972
ZR	0.60221	1,679.26	0.058	0.60182	0.60250	0.60232

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 6

Date/Time: 11/08/2013 01:36

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00040	-13.93	77.262	0.00007	0.00044	0.00069
AL	0.02899	6.43	41.111	0.03835	0.03306	0.01557
AS	-0.00172	-2.31	21.056	-0.00165	-0.00139	-0.00211
B	0.00137	-4.72	96.040	0.00288	0.00062	0.00060
BA	0.00002	125.70	97.852	0.00000	0.00004	0.00003
BE	0.00011	-58.27	16.814	0.00013	0.00010	0.00010
CA	-0.00681	62.25	28.046	-0.00546	-0.00899	-0.00597
CD	0.00050	2.26	18.697	0.00061	0.00043	0.00047
CO	-0.00031	-1.87	52.756	-0.00013	-0.00037	-0.00044
CR	-0.00039	-7.17	107.917	-0.00034	-0.00084	0.00000
CU	0.00023	206.95	184.215	0.00032	-0.00023	0.00058
FE	0.00386	3.32	31.580	0.00290	0.00524	0.00346
K	-0.00560	118.53	1672.034	0.07031	-0.11027	0.02316
LI	-0.00215	40.23	53.311	-0.00243	-0.00314	-0.00089
MG	0.00187	4.31	39.231	0.00262	0.00184	0.00115
MN	0.00006	7.60	46.593	0.00010	0.00004	0.00005
MO	0.00013	3.12	228.821	-0.00007	0.00047	-0.00001
NA	-0.00478	68.10	158.885	0.00389	-0.00796	-0.01027
NI	0.00014	18.60	146.162	0.00037	0.00012	-0.00005
P	-0.00029	-0.20	208.062	0.00040	-0.00060	-0.00065
PB	0.00472	3.16	36.493	0.00566	0.00273	0.00577
S	0.00498	1.77	16.973	0.00594	0.00433	0.00468
SB	0.00005	-4.65	1065.623	0.00047	0.00024	-0.00056
SE	-0.00209	4.01	31.185	-0.00268	-0.00139	-0.00218
SI	0.01079	6.71	120.043	0.02342	0.01140	-0.00246
SN	-0.00106	1.04	97.062	-0.00141	-0.00187	0.00010
SR	0.00004	-8.89	4.197	0.00004	0.00004	0.00004
TI	0.00009	26.57	14.334	0.00010	0.00007	0.00010
TL	-0.00029	-0.69	644.191	-0.00167	-0.00104	0.00183
V	0.00013	-4.95	0.939	0.00013	0.00013	0.00013
Y1	16086.63020	16,086.63	0.089	16081.20243	16075.88035	16102.80781
Y2A	597453.87112	597,453.87	0.169	596654.45069	598585.32934	597121.83333
Y2R	32066.17872	32,066.18	0.677	32039.33200	31863.64317	32295.56098
ZN	-0.00095	8.69	21.100	-0.00116	-0.00092	-0.00076
ZR	0.00106	2.94	158.077	-0.00084	0.00233	0.00169

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/08/2013 01:40

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00530	76.85	5.449	0.00532	0.00500	0.00558
AL	0.23209	41.58	6.969	0.22564	0.22014	0.25050
AS	0.01887	7.35	13.904	0.01695	0.01780	0.02186
B	0.04907	157.88	3.183	0.04757	0.04896	0.05068
BA	0.00543	4,848.77	0.717	0.00547	0.00543	0.00539
BE	0.00494	2,477.47	0.098	0.00494	0.00494	0.00494
CA	0.18999	273.43	2.447	0.18464	0.19306	0.19228
CD	0.00551	55.37	1.454	0.00542	0.00558	0.00552
CO	0.00467	22.74	3.404	0.00473	0.00478	0.00449
CR	0.01455	156.20	3.696	0.01420	0.01516	0.01427
CU	0.01040	362.38	4.710	0.01029	0.01094	0.00998
FE	0.20465	83.81	2.659	0.21055	0.19983	0.20358
K	0.46936	250.18	11.973	0.50098	0.50262	0.40448
LI	0.02127	220.50	8.261	0.01979	0.02321	0.02079
MG	0.09943	264.57	1.124	0.09861	0.09898	0.10070
MN	0.00520	379.32	0.888	0.00519	0.00515	0.00524
MO	0.01046	35.61	2.038	0.01070	0.01029	0.01037
NA	0.99370	1,354.35	0.418	0.99646	0.99573	0.98892
NI	0.01030	46.02	1.862	0.01052	0.01014	0.01025
P	0.09988	50.11	1.673	0.09822	0.09987	0.10156
PB	0.01838	15.33	1.900	0.01873	0.01804	0.01838
S	0.49342	136.34	0.565	0.49021	0.49475	0.49529
SB	0.02113	9.01	4.270	0.02038	0.02214	0.02088
SE	0.02159	13.20	6.577	0.02083	0.02322	0.02071
SI	0.06339	20.57	15.980	0.06690	0.05197	0.07129
SN	0.01907	22.23	2.241	0.01880	0.01956	0.01885
SR	0.00519	4,880.54	0.864	0.00524	0.00517	0.00516
TI	0.01003	644.23	1.814	0.01017	0.00982	0.01009
TL	0.03022	15.07	7.625	0.03179	0.03128	0.02757
V	0.00511	93.68	1.496	0.00516	0.00514	0.00502
Y1	15959.88753	15,959.89	0.178	15991.95894	15937.92680	15949.77683
Y2A	601802.87330	601,802.87	0.520	598199.28855	603409.84697	603799.48436
Y2R	32481.54625	32,481.55	0.278	32477.57243	32393.18454	32573.88179
ZN	0.01986	204.59	0.349	0.01980	0.01994	0.01984
ZR	0.04803	135.71	2.695	0.04823	0.04664	0.04921

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 8 Date/Time: 11/08/2013 01:44

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00045	-44.83	37.018	0.00056	0.00026	0.00052
AL	523.52607	84,608.38	0.300	521.73829	524.16352	524.67640
AS	-0.00010	-0.31	1488.222	0.00481	-0.00144	-0.00366
B	-0.00621	297.13	11.455	-0.00548	-0.00625	-0.00690
BA	0.00049	455.35	3.453	0.00047	0.00049	0.00050
BE	-0.00028	-223.42	3.727	-0.00029	-0.00028	-0.00027
CA	533.63146	487,721.80	0.814	528.61835	536.13338	536.14265
CD	-0.00240	298.13	3.044	-0.00235	-0.00236	-0.00248
CO	0.00221	9.46	19.512	0.00180	0.00217	0.00267
CR	0.00270	22.73	19.697	0.00328	0.00223	0.00260
CU	-0.00088	308.20	14.277	-0.00082	-0.00080	-0.00103
FE	213.77811	72,121.76	0.297	213.04726	214.19599	214.09108
K	-0.00166	113.29	2094.023	-0.02417	-0.01906	0.03827
LI	0.00304	132.92	29.083	0.00217	0.00394	0.00301
MG	639.47371	1,029,157.71	1.499	628.73209	642.53073	647.15831
MN	0.00326	204.45	2.580	0.00317	0.00328	0.00334
MO	-0.00116	-0.87	18.807	-0.00092	-0.00122	-0.00134
NA	0.05164	132.54	10.924	0.05355	0.05608	0.04530
NI	0.00239	10.90	45.251	0.00237	0.00348	0.00132
P	0.01485	6.64	3.422	0.01467	0.01543	0.01447
PB	-0.00301	77.93	123.817	0.00073	-0.00672	-0.00303
S	0.00274	1.03	30.391	0.00212	0.00241	0.00369
SB	-0.01568	-13.26	22.037	-0.01188	-0.01863	-0.01653
SE	0.00259	7.64	259.653	0.00138	-0.00345	0.00985
SI	0.02909	10.85	11.864	0.03307	0.02692	0.02728
SN	0.00341	5.14	22.104	0.00421	0.00272	0.00328
SR	0.00250	1,984.43	0.322	0.00249	0.00251	0.00249
TI	-0.00075	-21.75	21.573	-0.00089	-0.00080	-0.00057
TL	0.00552	2.08	58.205	0.00213	0.00591	0.00852
V	-0.00236	39.17	12.747	-0.00243	-0.00203	-0.00262
Y1	14317.87322	14,317.87	0.130	14316.00880	14337.33653	14300.27434
Y2A	513792.71732	513,792.72	0.177	512835.60053	513894.82415	514647.72727
Y2R	30396.82994	30,396.83	0.329	30510.69292	30324.15254	30355.64436
ZN	0.01032	282.49	1.565	0.01014	0.01036	0.01046
ZR	0.00538	14.22	7.251	0.00519	0.00512	0.00583

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 9 Date/Time: 11/08/2013 01:48

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22579	3,499.27	1.100	0.22686	0.22295	0.22755
AL	521.24201	84,466.09	0.242	519.85417	521.55366	522.31820
AS	0.10109	42.19	0.526	0.10170	0.10078	0.10078
B	-0.00705	292.42	35.962	-0.00551	-0.00997	-0.00565
BA	0.50498	376,059.47	0.618	0.50695	0.50139	0.50661
BE	0.51161	228,849.52	0.452	0.51359	0.50907	0.51217
CA	530.79128	486,681.21	0.102	531.00548	531.19224	530.17611
CD	0.97902	9,560.76	0.202	0.97772	0.98129	0.97805
CO	0.49893	2,197.43	0.166	0.49963	0.49915	0.49802
CR	0.48579	4,529.33	0.503	0.48816	0.48327	0.48593
CU	0.54152	7,299.94	0.366	0.54377	0.54075	0.54003
FE	212.50942	71,934.00	0.182	212.06262	212.71175	212.75390
K	-0.05515	99.84	45.996	-0.04077	-0.08444	-0.04024
LI	0.00001	111.12	6065.011	0.00150	0.00235	-0.00382
MG	620.69144	1,017,851.02	1.204	629.31827	616.47700	616.27906
MN	0.49510	30,578.80	0.469	0.49597	0.49247	0.49686
MO	-0.00101	-0.44	37.035	-0.00097	-0.00065	-0.00140
NA	0.04963	130.46	19.929	0.05778	0.03862	0.05249
NI	0.99386	2,415.92	0.056	0.99443	0.99333	0.99381
P	0.01482	7.81	17.103	0.01705	0.01206	0.01535
PB	0.04959	119.59	9.734	0.05447	0.04482	0.04948
S	-0.00012	0.32	2158.463	0.00251	-0.00271	-0.00017
SB	0.63012	362.12	0.187	0.63014	0.63129	0.62893
SE	0.05027	24.31	9.280	0.04995	0.04577	0.05508
SI	0.01866	8.32	50.548	0.02061	0.00840	0.02696
SN	0.00434	6.02	46.208	0.00271	0.00659	0.00373
SR	0.00250	1,983.07	0.829	0.00249	0.00248	0.00252
TI	-0.00039	4.71	32.292	-0.00037	-0.00027	-0.00052
TL	0.10473	48.91	1.041	0.10531	0.10347	0.10540
V	0.49825	8,649.03	0.403	0.49975	0.49597	0.49902
Y1	14289.04259	14,289.04	0.109	14287.57628	14274.19415	14305.35733
Y2A	513246.15682	513,246.16	0.489	511257.21632	516063.37094	512417.88321
Y2R	30478.29473	30,478.29	0.168	30423.55702	30486.12777	30525.19940
ZN	1.06052	9,149.33	0.091	1.05951	1.06144	1.06061
ZR	0.00411	10.88	18.349	0.00434	0.00326	0.00471

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 10

Date/Time: 11/08/2013 01:52

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51129	9,019.07	0.656	0.51492	0.51064	0.50830
AL	24.92712	4,258.99	0.008	24.92588	24.92615	24.92934
AS	0.50122	227.96	0.802	0.49671	0.50251	0.50444
B	0.48439	1,612.11	0.750	0.48673	0.48020	0.48623
BA	0.50729	424,663.68	0.545	0.50995	0.50748	0.50444
BE	0.48973	246,243.27	0.644	0.49336	0.48774	0.48808
CA	24.28072	25,663.87	0.248	24.29647	24.21414	24.33155
CD	0.49717	5,204.89	0.061	0.49683	0.49728	0.49741
CO	0.49661	2,412.52	0.024	0.49660	0.49673	0.49649
CR	0.49264	5,163.30	0.659	0.49628	0.49159	0.49005
CU	0.50423	7,509.66	0.996	0.50964	0.50334	0.49971
FE	24.52382	9,616.35	0.241	24.54154	24.45795	24.57198
K	24.22646	6,695.00	0.340	24.28977	24.13333	24.25629
LI	0.50253	3,878.09	0.554	0.50566	0.50033	0.50160
MG	24.45490	63,690.02	0.165	24.44252	24.42211	24.50007
MN	0.50077	34,766.71	0.843	0.50516	0.50042	0.49673
MO	0.51225	1,592.31	0.180	0.51119	0.51288	0.51267
NA	24.46992	31,256.28	0.222	24.48642	24.40925	24.51409
NI	0.49968	1,353.32	0.208	0.49855	0.49989	0.50060
P	0.50565	251.07	0.715	0.50161	0.50676	0.50857
PB	0.49712	442.07	0.311	0.49842	0.49753	0.49541
S	24.68652	6,704.45	0.085	24.66641	24.70842	24.68473
SB	0.52257	328.28	0.428	0.52496	0.52222	0.52052
SE	0.49886	196.52	0.852	0.49966	0.49427	0.50265
SI	25.20888	6,532.01	0.239	25.26294	25.14384	25.21984
SN	0.50569	527.14	0.049	0.50566	0.50595	0.50546
SR	0.50357	458,513.27	0.771	0.50801	0.50081	0.50189
TI	0.50671	30,203.29	0.582	0.51011	0.50482	0.50521
TL	0.49607	252.85	0.089	0.49611	0.49650	0.49562
V	0.49919	9,569.35	0.624	0.50276	0.49773	0.49707
Y1	15730.49270	15,730.49	0.116	15750.32864	15726.66889	15714.48055
Y2A	576942.65649	576,942.66	0.570	573152.62110	578673.60650	579001.74187
Y2R	32152.94495	32,152.94	0.190	32102.84715	32221.03659	32134.95112
ZN	0.50398	4,728.99	0.231	0.50278	0.50510	0.50405
ZR	0.49410	1,382.00	0.268	0.49262	0.49518	0.49449

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 11 Date/Time: 11/08/2013 01:55

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00008	-19.83	457.179	0.00049	-0.00026	0.00002
AL	0.04312	8.90	9.252	0.04655	0.03874	0.04406
AS	-0.00257	-2.69	75.585	-0.00354	-0.00383	-0.00033
B	0.00020	-8.68	980.028	-0.00178	0.00030	0.00207
BA	0.00004	144.03	9.938	0.00005	0.00004	0.00004
BE	0.00014	-43.85	5.115	0.00014	0.00014	0.00013
CA	0.01917	90.23	12.167	0.01856	0.02175	0.01721
CD	0.00049	2.12	9.974	0.00044	0.00054	0.00048
CO	-0.00041	-2.35	59.738	-0.00013	-0.00054	-0.00057
CR	-0.00029	-6.08	154.854	-0.00024	-0.00077	0.00013
CU	-0.00039	198.68	76.436	-0.00071	-0.00012	-0.00034
FE	0.01466	7.64	20.156	0.01418	0.01782	0.01197
K	-0.01015	117.98	312.154	-0.01408	-0.03970	0.02332
LI	-0.00104	48.98	109.371	-0.00123	-0.00206	0.00018
MG	0.02446	64.20	1.333	0.02470	0.02409	0.02459
MN	0.00011	11.15	57.297	0.00018	0.00011	0.00005
MO	0.00016	3.19	182.713	-0.00013	0.00015	0.00046
NA	0.00555	81.75	123.386	-0.00087	0.01277	0.00476
NI	0.00040	19.09	90.793	0.00031	0.00009	0.00080
P	-0.00009	-0.10	1048.233	0.00090	-0.00085	-0.00030
PB	0.00318	1.76	35.511	0.00247	0.00448	0.00258
S	0.00647	2.16	26.776	0.00513	0.00585	0.00843
SB	-0.00049	-4.94	145.457	0.00003	-0.00020	-0.00129
SE	0.00102	5.18	117.937	0.00032	0.00242	0.00033
SI	0.00349	4.86	243.343	0.00329	-0.00490	0.01207
SN	-0.00019	1.94	398.292	-0.00094	-0.00021	0.00058
SR	0.00004	-12.90	14.717	0.00004	0.00003	0.00003
TI	0.00008	26.08	116.141	0.00007	0.00018	-0.00001
TL	-0.00009	-0.58	1472.337	0.00145	-0.00107	-0.00066
V	-0.00001	-7.90	975.880	0.00003	0.00009	-0.00017
Y1	15915.77009	15,915.77	0.070	15926.57031	15916.50690	15904.23305
Y2A	600476.13551	600,476.14	0.218	600529.16667	599144.16667	601755.07319
Y2R	32270.96724	32,270.97	0.361	32380.25922	32148.21642	32284.42607
ZN	-0.00092	8.92	14.376	-0.00081	-0.00106	-0.00087
ZR	0.00017	0.45	2064.929	-0.00384	0.00251	0.00183

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/08/2013 01:59

Sample Number: **PBW** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00006	-20.40	557.730	0.00031	-0.00034	0.00021
AL	0.04803	9.90	60.848	0.01573	0.05571	0.07264
AS	-0.00160	-2.25	22.463	-0.00125	-0.00197	-0.00158
B	0.00150	-4.32	99.008	0.00098	0.00034	0.00317
BA	0.00003	131.67	23.578	0.00003	0.00003	0.00002
BE	0.00013	-47.87	13.440	0.00014	0.00011	0.00014
CA	0.02854	101.87	23.948	0.03602	0.02697	0.02262
CD	0.00034	0.52	49.836	0.00036	0.00049	0.00016
CO	-0.00038	-2.23	35.442	-0.00026	-0.00037	-0.00053
CR	-0.00036	-6.83	164.248	0.00009	-0.00014	-0.00101
CU	0.00039	212.35	122.258	0.00081	0.00047	-0.00012
FE	0.01028	6.00	46.547	0.00849	0.01571	0.00665
K	-0.02457	115.98	91.018	-0.01559	-0.05003	-0.00810
LI	0.00188	72.38	56.813	0.00086	0.00178	0.00298
MG	0.01681	44.67	16.547	0.01996	0.01470	0.01576
MN	0.00020	17.50	9.228	0.00020	0.00021	0.00018
MO	0.00005	2.87	266.133	0.00018	0.00008	-0.00010
NA	-0.00213	73.16	402.331	-0.00777	-0.00634	0.00772
NI	-0.00057	16.59	72.047	-0.00100	-0.00055	-0.00017
P	-0.00041	-0.26	218.512	-0.00026	-0.00137	0.00040
PB	0.00252	1.18	87.668	0.00480	0.00233	0.00041
S	0.01115	3.48	23.030	0.01305	0.00823	0.01216
SB	0.00087	-4.10	128.585	-0.00029	0.00194	0.00097
SE	-0.00167	4.17	118.471	-0.00379	0.00011	-0.00132
SI	0.00756	6.02	77.659	0.01172	0.01013	0.00084
SN	-0.00074	1.38	156.066	0.00023	-0.00043	-0.00200
SR	0.00014	84.96	2.117	0.00014	0.00014	0.00014
TI	0.00000	21.63	2957.064	-0.00014	0.00009	0.00006
TL	-0.00063	-0.86	197.328	0.00076	-0.00162	-0.00101
V	0.00010	-5.68	420.915	0.00035	0.00032	-0.00038
Y1	16042.07349	16,042.07	0.140	16025.31494	16033.28978	16067.61575
Y2A	605839.18584	605,839.19	0.155	606721.03254	604855.53892	605940.98606
Y2R	32815.25729	32,815.26	0.235	32887.04609	32733.99481	32824.73097
ZN	-0.00066	11.34	4.550	-0.00063	-0.00067	-0.00068
ZR	-0.00051	-1.46	335.415	0.00147	-0.00143	-0.00157

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/08/2013 02:03

Sample Number: **LCSW** Class: **** Batch: 133095705007

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05706	1,024.07	0.114	0.05701	0.05705	0.05714
AL	2.15849	381.35	1.646	2.11784	2.17401	2.18363
AS	0.16087	74.11	0.208	0.16060	0.16124	0.16076
B	2.04084	6,817.64	0.573	2.02939	2.04036	2.05277
BA	2.13990	1,836,846.39	0.530	2.13724	2.15233	2.13012
BE	0.05273	27,123.74	0.531	0.05242	0.05282	0.05296
CA	4.17138	4,562.35	0.184	4.16628	4.16767	4.18019
CD	0.05317	557.36	0.105	0.05322	0.05311	0.05317
CO	0.53020	2,610.81	0.095	0.53038	0.52963	0.53059
CR	0.21125	2,269.07	0.550	0.21011	0.21120	0.21243
CU	0.27089	4,239.17	0.206	0.27080	0.27149	0.27039
FE	1.03158	418.19	1.219	1.01723	1.03690	1.04063
K	10.30413	2,969.60	0.306	10.28388	10.28799	10.34051
LI	1.06653	8,309.66	0.698	1.05918	1.06634	1.07406
MG	2.06387	5,541.06	0.157	2.06050	2.06698	2.06414
MN	0.53515	38,104.80	0.320	0.53318	0.53624	0.53605
MO	2.13498	6,705.66	0.202	2.13406	2.13119	2.13968
NA	10.47625	13,667.77	0.143	10.45970	10.48008	10.48897
NI	0.54122	1,490.49	0.130	0.54119	0.54054	0.54194
P	1.07722	539.98	0.226	1.07914	1.07448	1.07804
PB	0.15701	138.34	1.694	0.15398	0.15898	0.15806
S	1.05018	288.92	0.692	1.05467	1.04180	1.05407
SB	0.55655	348.39	0.509	0.55375	0.55649	0.55941
SE	0.16073	67.28	1.610	0.16149	0.15785	0.16286
SI	1.08888	291.10	0.953	1.09675	1.07712	1.09277
SN	4.19554	4,409.07	0.142	4.19651	4.18914	4.20096
SR	1.06907	998,390.10	0.323	1.06540	1.07226	1.06956
TI	1.07246	65,523.21	0.477	1.06656	1.07553	1.07529
TL	0.15851	81.70	1.511	0.15575	0.16010	0.15967
V	0.54005	10,317.97	0.560	0.53658	0.54140	0.54216
Y1	15914.56548	15,914.57	0.093	15916.58052	15928.25568	15898.86023
Y2A	591698.13034	591,698.13	0.443	594656.93250	589678.00265	590759.45587
Y2R	32736.20128	32,736.20	0.070	32753.27435	32745.07500	32710.25449
ZN	0.53535	5,055.19	0.110	0.53593	0.53475	0.53535
ZR	1.04432	2,973.98	0.428	1.04707	1.03917	1.04674

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/08/2013 02:07

Sample Number: **7256054** Class: U*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00009	-20.56	237.055	0.00032	-0.00013	0.00009
AL	0.67476	116.06	3.169	0.68335	0.65042	0.69051
AS	0.00775	-0.15	23.125	0.00933	0.00580	0.00812
B	0.61612	1,893.96	0.711	0.61462	0.62106	0.61269
BA	0.50283	392,647.37	0.867	0.50119	0.50777	0.49953
BE	0.00007	-69.76	6.549	0.00007	0.00008	0.00007
CA	149.85797	153,929.49	0.237	149.63435	150.26803	149.67154
CD	0.00057	31.90	4.454	0.00056	0.00055	0.00060
CO	-0.00009	-0.55	63.020	-0.00003	-0.00011	-0.00014
CR	0.00754	71.18	0.890	0.00751	0.00750	0.00762
CU	0.02358	555.94	3.125	0.02363	0.02428	0.02281
FE	17.85558	6,984.54	0.204	17.82636	17.89644	17.84395
K	29.95089	8,201.96	0.109	29.91709	29.98200	29.95359
LI	0.12540	1,020.85	2.229	0.12770	0.12621	0.12229
MG	62.23602	157,743.17	0.239	62.06411	62.32179	62.32217
MN	0.99250	64,274.47	0.586	0.99375	0.99758	0.98616
MO	0.00062	4.49	73.001	0.00112	0.00053	0.00023
NA	271.14247	343,636.74	0.353	270.04655	271.81132	271.56955
NI	0.00258	23.18	10.384	0.00289	0.00241	0.00245
P	1.09096	528.29	0.383	1.08901	1.08812	1.09576
PB	0.12372	107.91	1.597	0.12150	0.12530	0.12434
S	2.33666	621.33	0.144	2.33283	2.33802	2.33914
SB	0.00391	-2.02	6.998	0.00419	0.00390	0.00364
SE	-0.00136	4.51	52.361	-0.00162	-0.00190	-0.00055
SI	19.95635	5,142.59	0.384	19.88608	20.03800	19.94497
SN	0.01140	13.65	9.579	0.01261	0.01048	0.01111
SR	1.19807	1,017,659.97	0.603	1.19647	1.20597	1.19178
TI	0.02069	1,168.59	1.135	0.02049	0.02095	0.02063
TL	0.00112	0.40	136.277	0.00013	0.00035	0.00288
V	0.00291	52.31	17.613	0.00288	0.00241	0.00343
Y1	15393.12499	15,393.12	0.074	15406.22877	15386.45067	15386.69554
Y2A	538183.58770	538,183.59	0.634	537402.12342	535231.17120	541917.46848
Y2R	31971.38894	31,971.39	0.343	32077.88519	31858.68049	31977.60116
ZN	0.08686	819.11	0.127	0.08675	0.08687	0.08697
ZR	0.00196	5.45	113.767	0.00452	0.00051	0.00084

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/08/2013 02:11

Sample Number: **7256054** Class: UP** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02599	420.96	1.896	0.02656	0.02573	0.02568
AL	1.65492	285.47	1.076	1.64893	1.67495	1.64087
AS	0.52334	232.19	0.214	0.52446	0.52222	0.52333
B	0.81413	2,518.28	0.497	0.81167	0.81192	0.81880
BA	0.52661	414,963.72	0.693	0.52990	0.52269	0.52724
BE	0.02104	9,862.85	0.104	0.02101	0.02105	0.02105
CA	142.76357	148,119.42	0.304	142.73422	143.21137	142.34512
CD	0.05042	535.23	0.318	0.05023	0.05047	0.05054
CO	0.09964	471.30	0.649	0.09891	0.09983	0.10016
CR	0.20773	2,047.92	0.599	0.20870	0.20633	0.20817
CU	0.55087	7,750.86	0.720	0.55531	0.54771	0.54958
FE	17.38302	6,861.52	0.371	17.40490	17.43378	17.31039
K	30.39463	8,395.43	0.329	30.48941	30.40413	30.29035
LI	1.15125	8,849.09	0.284	1.15249	1.15372	1.14755
MG	59.73752	152,971.61	0.310	59.76209	59.90893	59.54155
MN	0.99257	64,865.36	0.581	0.99920	0.98980	0.98871
MO	0.21025	637.76	0.302	0.20980	0.20998	0.21098
NA	259.82957	332,222.14	1.331	262.65024	260.86908	255.96938
NI	0.15175	411.80	0.156	0.15188	0.15189	0.15147
P	2.13786	1,030.53	0.050	2.13857	2.13662	2.13838
PB	0.62070	531.48	0.298	0.61925	0.62278	0.62006
S	2.23860	592.19	0.520	2.22649	2.23956	2.24973
SB	0.42768	260.35	0.282	0.42869	0.42800	0.42634
SE	0.85138	322.99	0.522	0.85501	0.84643	0.85269
SI	18.75545	4,876.22	0.301	18.81276	18.75373	18.69985
SN	0.62375	632.49	0.295	0.62435	0.62521	0.62168
SR	1.14653	982,765.66	0.136	1.14476	1.14715	1.14768
TI	0.12541	7,052.21	0.782	0.12590	0.12428	0.12604
TL	1.00812	499.29	0.393	1.00374	1.01145	1.00915
V	0.10739	1,919.69	0.997	0.10796	0.10616	0.10806
Y1	15313.61053	15,313.61	0.024	15315.39241	15309.37233	15316.06686
Y2A	543082.44857	543,082.45	0.282	541435.71666	544464.33311	543347.29595
Y2R	32254.53438	32,254.53	0.066	32278.70038	32238.86509	32246.03768
ZN	0.20689	1,907.47	0.287	0.20623	0.20706	0.20738
ZR	1.00661	2,824.42	0.448	1.00952	1.00890	1.00142

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/08/2013 02:14

Sample Number: **7256057** Class: D*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00024	-18.07	150.908	0.00047	-0.00018	0.00044
AL	0.69690	120.38	1.131	0.68907	0.69681	0.70483
AS	0.00908	0.42	18.103	0.00733	0.01060	0.00931
B	0.63631	1,952.56	0.865	0.63896	0.63999	0.62998
BA	0.51376	400,524.00	0.561	0.51417	0.51641	0.51069
BE	0.00007	-69.71	6.914	0.00008	0.00007	0.00007
CA	152.49105	157,316.89	0.191	152.38733	152.26539	152.82043
CD	0.00067	33.22	16.004	0.00077	0.00056	0.00069
CO	-0.00014	-0.77	79.747	-0.00027	-0.00007	-0.00008
CR	0.00723	68.01	2.063	0.00739	0.00721	0.00709
CU	0.02063	516.29	6.472	0.01918	0.02092	0.02180
FE	18.10618	7,115.72	0.244	18.07966	18.08177	18.15710
K	30.52965	8,398.33	0.098	30.56285	30.52176	30.50433
LI	0.12820	1,047.31	1.452	0.12609	0.12961	0.12890
MG	63.14054	160,720.29	0.426	62.83759	63.23259	63.35144
MN	1.01115	65,375.57	0.340	1.01196	1.01411	1.00739
MO	0.00070	4.70	31.749	0.00045	0.00077	0.00088
NA	275.81537	351,234.40	0.731	273.64371	276.17466	277.62774
NI	0.00194	21.38	8.355	0.00178	0.00210	0.00194
P	1.12470	542.14	0.263	1.12507	1.12158	1.12745
PB	0.12487	108.46	2.414	0.12443	0.12210	0.12808
S	2.35636	623.71	0.166	2.35471	2.36082	2.35354
SB	0.00171	-3.38	92.741	0.00015	0.00165	0.00331
SE	-0.00014	4.95	891.017	-0.00044	0.00121	-0.00118
SI	20.35206	5,269.67	0.475	20.26406	20.33657	20.45555
SN	0.01207	14.26	4.412	0.01175	0.01268	0.01177
SR	1.22218	1,036,449.04	0.050	1.22150	1.22237	1.22267
TI	0.02115	1,192.23	2.336	0.02172	0.02085	0.02089
TL	0.00122	0.46	92.744	0.00079	0.00251	0.00037
V	0.00307	55.13	2.101	0.00314	0.00305	0.00301
Y1	15323.03014	15,323.03	0.196	15303.66909	15357.68954	15307.73179
Y2A	537296.20106	537,296.20	0.318	536810.05309	535883.46052	539195.08958
Y2R	32124.98882	32,124.99	0.308	32228.52148	32115.31356	32031.13142
ZN	0.08732	819.64	0.099	0.08739	0.08722	0.08734
ZR	0.00456	12.75	43.258	0.00431	0.00665	0.00273

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/08/2013 02:18

Sample Number: **7256055** Class: R*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.06052	982.49	0.872	0.06110	0.06041	0.06006
AL	3.27949	553.61	0.752	3.30077	3.28525	3.25245
AS	0.17166	73.69	1.221	0.17186	0.17365	0.16947
B	2.81350	8,554.99	0.354	2.80936	2.80627	2.82487
BA	2.52340	1,964,216.36	0.720	2.52756	2.53913	2.50351
BE	0.05480	25,562.92	0.485	0.05497	0.05493	0.05449
CA	163.79036	165,105.24	0.104	163.82038	163.94327	163.60742
CD	0.05180	550.42	0.344	0.05166	0.05174	0.05200
CO	0.52053	2,459.00	0.182	0.52104	0.52112	0.51944
CR	0.21755	2,119.13	0.795	0.21932	0.21745	0.21587
CU	0.29159	4,180.55	0.695	0.29232	0.29314	0.28929
FE	19.39177	7,456.10	0.226	19.34122	19.41453	19.41956
K	42.30967	11,348.76	0.214	42.26711	42.24839	42.41351
LI	1.20506	9,030.51	0.114	1.20665	1.20428	1.20425
MG	67.95521	168,870.72	0.077	67.94218	68.01289	67.91054
MN	1.56578	101,096.53	0.784	1.57368	1.57203	1.55163
MO	2.15945	6,505.34	0.152	2.16174	2.16092	2.15570
NA	295.60085	368,514.97	0.399	296.95953	294.84763	294.99539
NI	0.52471	1,385.89	0.219	0.52546	0.52527	0.52339
P	2.28075	1,095.86	0.115	2.28224	2.28227	2.27773
PB	0.27919	239.68	1.186	0.28018	0.28189	0.27549
S	3.15431	831.59	0.205	3.16168	3.14957	3.15167
SB	0.56006	336.28	0.375	0.56182	0.56062	0.55773
SE	0.15985	64.61	0.722	0.16034	0.15853	0.16068
SI	23.14903	5,867.37	0.190	23.19394	23.14689	23.10626
SN	4.23630	4,269.95	0.107	4.23888	4.23896	4.23105
SR	2.23877	1,896,014.64	0.720	2.25156	2.24408	2.22067
TI	1.10972	61,483.87	0.217	1.11164	1.11050	1.10702
TL	0.16213	80.53	0.260	0.16240	0.16165	0.16236
V	0.55322	9,596.58	0.601	0.55570	0.55450	0.54944
Y1	15264.19169	15,264.19	0.049	15255.64511	15267.67386	15269.25610
Y2A	536579.35191	536,579.35	0.467	535524.22031	534773.80557	539440.02986
Y2R	31449.51753	31,449.52	0.234	31428.68910	31388.52631	31531.33719
ZN	0.61882	5,613.26	0.147	0.61961	0.61903	0.61783
ZR	1.04717	2,864.89	0.133	1.04558	1.04784	1.04811

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/08/2013 02:22

Sample Number: **7256056** Class: M*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05961	959.25	0.600	0.05923	0.05964	0.05995
AL	3.25349	553.76	1.170	3.24814	3.21839	3.29393
AS	0.17225	74.43	0.742	0.17078	0.17313	0.17284
B	2.80430	8,453.96	0.773	2.78411	2.82723	2.80156
BA	2.52512	1,948,837.98	1.053	2.49443	2.54150	2.53943
BE	0.05557	25,702.62	0.514	0.05525	0.05581	0.05563
CA	162.02729	164,717.92	0.884	162.70245	160.38266	162.99676
CD	0.05181	553.23	0.068	0.05178	0.05185	0.05179
CO	0.51765	2,460.11	0.122	0.51837	0.51732	0.51724
CR	0.22092	2,133.75	0.450	0.21978	0.22138	0.22160
CU	0.28930	4,113.95	0.787	0.28669	0.29087	0.29035
FE	19.05108	7,386.44	0.888	19.12308	18.85776	19.17239
K	42.05208	11,372.99	0.926	42.08916	41.64533	42.42174
LI	1.19555	9,033.18	0.719	1.20254	1.18595	1.19815
MG	65.96810	165,468.02	0.843	66.26421	65.32688	66.31320
MN	1.56106	99,936.71	0.670	1.54911	1.56859	1.56547
MO	2.13626	6,473.88	0.090	2.13844	2.13548	2.13486
NA	290.70587	365,392.88	0.681	290.85100	288.65769	292.60891
NI	0.52525	1,395.49	0.301	0.52702	0.52473	0.52400
P	2.24713	1,086.16	0.322	2.25292	2.24945	2.23903
PB	0.26976	232.99	0.354	0.27075	0.26969	0.26884
S	3.09778	821.56	0.618	3.11124	3.10624	3.07587
SB	0.55238	333.58	0.400	0.55140	0.55491	0.55083
SE	0.15853	64.49	0.219	0.15834	0.15893	0.15831
SI	22.68490	5,796.99	0.948	22.81502	22.43655	22.80312
SN	4.20062	4,259.26	0.056	4.20327	4.19880	4.19978
SR	2.22795	1,870,807.60	1.029	2.20274	2.23356	2.24755
TI	1.12027	61,540.97	0.545	1.11382	1.12595	1.12104
TL	0.15885	79.39	0.653	0.15997	0.15792	0.15866
V	0.55926	9,626.86	0.609	0.55564	0.56239	0.55975
Y1	15355.23713	15,355.24	0.216	15343.39665	15329.69075	15392.62400
Y2A	532032.26609	532,032.27	0.755	536670.12276	529727.43862	529699.23689
Y2R	31708.54922	31,708.55	0.508	31576.67397	31888.05301	31660.92069
ZN	0.61787	5,637.85	0.242	0.61930	0.61799	0.61633
ZR	1.04734	2,888.87	0.841	1.05117	1.03726	1.05358

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/08/2013 02:26

Sample Number: **7256054** Class: UL** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-19.74	643.342	0.00055	-0.00015	-0.00020
AL	0.15851	28.28	12.327	0.13696	0.16351	0.17507
AS	0.00065	-1.64	392.607	-0.00143	0.00350	-0.00012
B	0.11834	377.45	0.651	0.11843	0.11906	0.11753
BA	0.09969	82,382.90	0.690	0.10046	0.09914	0.09948
BE	0.00010	-57.73	3.506	0.00011	0.00010	0.00010
CA	28.12909	29,388.57	0.107	28.09801	28.15790	28.13135
CD	0.00052	8.27	10.876	0.00048	0.00051	0.00059
CO	-0.00034	-1.93	78.897	-0.00013	-0.00024	-0.00064
CR	0.00152	12.97	26.010	0.00179	0.00107	0.00170
CU	0.00450	268.89	10.252	0.00446	0.00406	0.00498
FE	3.44764	1,352.53	0.453	3.45028	3.46176	3.43089
K	5.64271	1,634.22	0.180	5.64225	5.65308	5.63280
LI	0.02332	234.58	4.012	0.02384	0.02224	0.02388
MG	11.83300	30,708.70	0.353	11.84573	11.86692	11.78635
MN	0.19473	13,334.58	0.548	0.19591	0.19443	0.19384
MO	0.00045	4.08	30.718	0.00034	0.00040	0.00061
NA	52.90539	66,779.35	0.189	52.87055	53.01839	52.82724
NI	0.00038	18.79	164.934	0.00107	-0.00014	0.00020
P	0.20353	101.63	0.688	0.20299	0.20512	0.20248
PB	0.02705	23.44	2.526	0.02688	0.02781	0.02647
S	0.42621	117.24	0.559	0.42350	0.42716	0.42797
SB	0.00095	-4.00	120.142	0.00037	0.00226	0.00022
SE	-0.00185	4.14	35.649	-0.00165	-0.00258	-0.00130
SI	3.77125	970.19	0.188	3.77485	3.77582	3.76307
SN	0.00106	3.25	47.752	0.00063	0.00094	0.00162
SR	0.24059	216,017.60	0.697	0.24252	0.23946	0.23979
TI	0.00531	331.73	2.453	0.00530	0.00518	0.00544
TL	0.00011	-0.41	1229.331	0.00158	-0.00043	-0.00084
V	0.00082	9.81	27.059	0.00075	0.00065	0.00107
Y1	15880.51247	15,880.51	0.039	15881.58396	15873.83519	15886.11826
Y2A	568977.54922	568,977.55	0.535	565610.40146	569796.20106	571526.04512
Y2R	31813.70675	31,813.71	0.451	31700.61852	31765.43179	31975.06994
ZN	0.02204	226.40	4.061	0.02108	0.02220	0.02285
ZR	-0.00012	-0.31	2370.704	-0.00097	-0.00236	0.00298

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/08/2013 02:30

Sample Number: **7256048** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00013	-25.02	135.511	-0.00032	0.00000	-0.00005
AL	0.04754	9.44	51.937	0.04831	0.02247	0.07183
AS	0.04867	18.09	3.502	0.04928	0.04674	0.04999
B	0.36601	1,145.59	0.797	0.36494	0.36379	0.36931
BA	0.55594	436,051.43	0.567	0.55307	0.55544	0.55932
BE	0.00006	-75.05	19.437	0.00007	0.00007	0.00005
CA	68.91618	70,809.24	0.173	68.78234	69.00989	68.95631
CD	0.00011	35.34	96.051	0.00007	0.00024	0.00003
CO	-0.00090	-4.60	47.690	-0.00040	-0.00113	-0.00115
CR	0.00144	11.52	30.630	0.00180	0.00095	0.00156
CU	0.00027	208.87	191.394	-0.00019	0.00017	0.00083
FE	22.47469	8,653.31	0.162	22.43525	22.48172	22.50710
K	14.95435	4,099.02	0.197	14.98819	14.93480	14.94006
LI	0.03762	343.68	3.502	0.03736	0.03645	0.03904
MG	26.94882	68,749.91	0.149	26.90490	26.98371	26.95785
MN	0.91774	59,699.05	0.310	0.91691	0.91540	0.92091
MO	-0.00027	1.79	57.835	-0.00029	-0.00011	-0.00042
NA	243.39228	304,311.45	0.112	243.09910	243.43877	243.63898
NI	-0.00068	14.62	48.249	-0.00053	-0.00045	-0.00105
P	0.42354	208.16	0.619	0.42198	0.42207	0.42656
PB	0.01110	11.30	37.205	0.01516	0.00690	0.01124
S	0.92580	250.14	0.420	0.92166	0.92635	0.92938
SB	0.00220	-3.15	71.989	0.00184	0.00393	0.00083
SE	-0.00240	4.23	42.934	-0.00342	-0.00136	-0.00241
SI	15.60954	3,968.99	0.365	15.54486	15.63160	15.65215
SN	0.00012	2.22	466.153	0.00048	-0.00051	0.00039
SR	0.60301	514,471.25	0.514	0.59991	0.60301	0.60611
TI	0.00373	227.15	3.934	0.00356	0.00378	0.00385
TL	0.00090	0.26	47.112	0.00075	0.00058	0.00138
V	0.00128	24.93	31.733	0.00088	0.00169	0.00125
Y1	15626.78194	15,626.78	0.424	15664.39779	15665.60896	15550.33908
Y2A	540579.37956	540,579.38	0.331	541375.99536	541830.29197	538531.85136
Y2R	31539.72792	31,539.73	0.249	31625.62475	31522.16896	31471.39005
ZN	0.00584	91.32	2.312	0.00573	0.00599	0.00579
ZR	0.00389	10.66	16.976	0.00451	0.00395	0.00319

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/08/2013 02:34

Sample Number: **7256062** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00002	-21.85	751.369	0.00008	-0.00022	0.00006
AL	0.03610	7.86	26.656	0.03175	0.04713	0.02942
AS	-0.00295	-2.88	19.092	-0.00268	-0.00257	-0.00360
B	0.00465	6.43	16.038	0.00383	0.00529	0.00483
BA	0.00006	155.85	25.426	0.00006	0.00007	0.00004
BE	0.00009	-68.23	14.608	0.00007	0.00010	0.00010
CA	0.01689	89.56	8.013	0.01536	0.01735	0.01795
CD	0.00051	2.37	19.350	0.00061	0.00041	0.00052
CO	-0.00058	-3.17	58.133	-0.00096	-0.00033	-0.00044
CR	0.00023	-0.42	76.242	0.00037	0.00003	0.00028
CU	0.00042	211.67	54.514	0.00016	0.00057	0.00054
FE	-0.00028	1.73	1075.405	0.00247	-0.00357	0.00025
K	-0.03001	114.81	72.184	-0.03930	-0.04548	-0.00525
LI	-0.00121	48.65	208.154	-0.00377	0.00127	-0.00113
MG	0.00225	5.45	24.578	0.00179	0.00286	0.00210
MN	0.00014	13.00	30.639	0.00012	0.00018	0.00011
MO	0.00020	3.31	117.664	0.00021	-0.00004	0.00042
NA	0.06431	160.02	18.954	0.07276	0.05033	0.06982
NI	0.00053	19.53	89.458	0.00070	0.00000	0.00091
P	0.00049	0.19	177.802	0.00120	0.00077	-0.00049
PB	0.00380	2.32	22.527	0.00292	0.00462	0.00386
S	0.00493	1.75	41.604	0.00385	0.00364	0.00730
SB	-0.00130	-5.49	52.464	-0.00206	-0.00075	-0.00108
SE	-0.00161	4.17	90.193	-0.00324	-0.00108	-0.00049
SI	-0.00012	4.00	1469.019	0.00174	-0.00184	-0.00027
SN	-0.00050	1.62	191.499	0.00058	-0.00124	-0.00083
SR	0.00016	107.19	8.288	0.00015	0.00018	0.00016
TI	0.00001	21.77	111.957	0.00001	0.00000	0.00001
TL	0.00024	-0.42	249.628	0.00022	0.00083	-0.00034
V	0.00024	-2.75	147.709	-0.00016	0.00052	0.00037
Y1	15980.65056	15,980.65	0.047	15983.57024	15986.29025	15972.09119
Y2A	602506.62454	602,506.62	0.081	603028.60945	602063.12045	602428.14371
Y2R	32916.98599	32,916.99	0.301	32852.34297	33030.96353	32867.65145
ZN	-0.00073	10.68	4.206	-0.00071	-0.00072	-0.00077
ZR	0.00030	0.85	332.351	0.00145	-0.00029	-0.00026

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 22

Date/Time: 11/08/2013 02:38

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50771	8,948.57	0.284	0.50770	0.50915	0.50627
AL	24.97368	4,272.88	0.128	24.93874	24.98086	25.00146
AS	0.50102	228.29	0.459	0.49905	0.50355	0.50045
B	0.49368	1,641.21	0.228	0.49470	0.49387	0.49248
BA	0.50843	425,266.81	0.558	0.50520	0.50953	0.51054
BE	0.49497	248,682.28	0.208	0.49396	0.49601	0.49495
CA	24.61358	26,049.53	0.077	24.62239	24.59180	24.62656
CD	0.49789	5,222.31	0.142	0.49814	0.49709	0.49844
CO	0.49764	2,422.18	0.161	0.49675	0.49831	0.49786
CR	0.49927	5,228.54	0.451	0.49680	0.50120	0.49980
CU	0.50404	7,500.92	0.505	0.50182	0.50681	0.50347
FE	24.59861	9,658.73	0.111	24.59913	24.62560	24.57109
K	24.62905	6,813.76	0.345	24.54987	24.61843	24.71886
LI	0.50684	3,916.33	0.430	0.50485	0.50649	0.50917
MG	24.29134	63,357.73	0.121	24.29668	24.31761	24.25974
MN	0.50007	34,690.72	0.320	0.49856	0.50175	0.49992
MO	0.51495	1,603.71	0.245	0.51413	0.51431	0.51640
NA	24.64370	31,521.49	0.076	24.65693	24.65179	24.62239
NI	0.50105	1,359.56	0.361	0.50023	0.49978	0.50312
P	0.50701	252.22	0.097	0.50666	0.50680	0.50757
PB	0.49922	444.77	0.389	0.49874	0.50136	0.49757
S	24.73693	6,730.87	0.100	24.71978	24.72565	24.76536
SB	0.52191	328.50	0.432	0.51943	0.52383	0.52248
SE	0.50291	198.45	0.753	0.49965	0.50201	0.50706
SI	25.31568	6,568.80	0.070	25.29548	25.32228	25.32929
SN	0.50865	531.22	0.182	0.50961	0.50859	0.50776
SR	0.50106	455,870.34	0.191	0.50214	0.50032	0.50073
TI	0.51298	30,552.05	0.261	0.51180	0.51444	0.51271
TL	0.49859	254.61	0.424	0.50023	0.49620	0.49934
V	0.50332	9,641.06	0.215	0.50227	0.50443	0.50326
Y1	15760.30417	15,760.30	0.077	15773.63109	15757.61188	15749.66955
Y2A	576465.35612	576,465.36	0.239	577605.42468	574932.14997	576858.49370
Y2R	32197.58967	32,197.59	0.161	32151.32104	32187.72446	32253.72351
ZN	0.50500	4,747.60	0.220	0.50400	0.50482	0.50620
ZR	0.49876	1,396.98	0.621	0.50232	0.49669	0.49727

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 23 Date/Time: 11/08/2013 02:41

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00019	-17.68	51.774	0.00030	0.00016	0.00011
AL	0.00373	2.15	263.621	0.01344	-0.00622	0.00396
AS	-0.00166	-2.27	78.480	-0.00018	-0.00265	-0.00215
B	0.00281	0.17	34.236	0.00195	0.00385	0.00263
BA	0.00004	138.15	63.890	0.00001	0.00005	0.00005
BE	0.00012	-50.53	19.906	0.00015	0.00010	0.00012
CA	-0.00194	67.74	223.715	0.00282	-0.00297	-0.00569
CD	0.00044	1.65	14.933	0.00038	0.00043	0.00051
CO	-0.00047	-2.64	85.693	-0.00032	-0.00093	-0.00016
CR	-0.00035	-6.68	236.561	-0.00063	0.00058	-0.00102
CU	0.00047	209.65	83.678	0.00043	0.00089	0.00010
FE	0.00241	2.76	368.622	0.00668	-0.00780	0.00835
K	-0.00989	117.95	107.095	-0.00245	-0.00520	-0.02202
LI	0.00146	67.99	70.170	0.00080	0.00264	0.00094
MG	0.00168	3.83	55.618	0.00270	0.00149	0.00085
MN	0.00011	10.60	7.453	0.00010	0.00011	0.00011
MO	0.00001	2.70	2066.967	-0.00012	0.00009	0.00004
NA	0.01893	98.79	30.118	0.02370	0.02047	0.01262
NI	-0.00033	17.14	72.294	-0.00006	-0.00046	-0.00048
P	0.00030	0.09	139.951	0.00008	0.00077	0.00003
PB	0.00201	0.72	27.402	0.00137	0.00230	0.00235
S	0.00674	2.24	67.707	0.01044	0.00164	0.00814
SB	-0.00041	-4.90	769.643	0.00319	-0.00235	-0.00206
SE	0.00089	5.14	42.714	0.00119	0.00046	0.00103
SI	0.00219	4.52	202.536	0.00079	0.00716	-0.00137
SN	-0.00118	0.90	24.685	-0.00150	-0.00095	-0.00108
SR	0.00006	5.03	28.056	0.00007	0.00005	0.00005
TI	0.00013	28.65	26.443	0.00014	0.00009	0.00015
TL	-0.00022	-0.65	786.147	-0.00209	0.00012	0.00131
V	0.00013	-5.00	154.478	0.00001	0.00035	0.00002
Y1	15945.16815	15,945.17	0.159	15919.01685	15946.96423	15969.52337
Y2A	594578.18165	594,578.18	0.315	592436.79496	595889.75000	595408.00000
Y2R	32247.47387	32,247.47	0.400	32099.12587	32308.63119	32334.66454
ZN	-0.00092	8.82	10.480	-0.00095	-0.00082	-0.00101
ZR	0.00079	2.21	47.453	0.00036	0.00096	0.00105

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/08/2013 02:45

Sample Number: **7256065** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00022	-18.49	88.586	0.00011	0.00011	0.00045
AL	0.63679	109.71	5.795	0.67817	0.62489	0.60731
AS	0.00734	-0.36	29.451	0.00925	0.00777	0.00499
B	0.66450	2,047.06	0.431	0.66772	0.66354	0.66223
BA	0.51535	403,536.22	0.314	0.51698	0.51531	0.51374
BE	0.00005	-78.94	7.857	0.00005	0.00005	0.00005
CA	157.66690	161,916.52	0.315	158.22674	157.27663	157.49734
CD	0.00065	32.79	13.935	0.00070	0.00055	0.00071
CO	-0.00011	-0.65	420.924	0.00037	-0.00057	-0.00014
CR	0.00640	60.16	8.937	0.00647	0.00579	0.00693
CU	0.01842	490.61	3.736	0.01859	0.01900	0.01766
FE	18.03986	7,063.84	0.277	18.09672	18.02013	18.00273
K	31.47759	8,623.64	0.237	31.41123	31.55848	31.46304
LI	0.13222	1,074.44	0.193	0.13241	0.13193	0.13231
MG	65.54502	165,998.51	0.401	65.78333	65.58851	65.26322
MN	1.02585	66,618.42	0.431	1.03068	1.02488	1.02199
MO	0.00038	3.73	119.899	-0.00014	0.00072	0.00057
NA	282.70081	358,683.88	0.089	282.98295	282.62182	282.49766
NI	0.00215	21.87	29.930	0.00219	0.00277	0.00149
P	1.15566	555.40	0.245	1.15561	1.15284	1.15851
PB	0.11033	95.78	2.223	0.11199	0.10751	0.11147
S	1.97155	520.36	0.266	1.97559	1.96563	1.97342
SB	0.00068	-4.00	340.833	0.00334	-0.00034	-0.00095
SE	-0.00271	3.98	3.845	-0.00276	-0.00259	-0.00278
SI	20.82828	5,373.08	0.448	20.93366	20.79471	20.75647
SN	0.00885	10.97	0.307	0.00884	0.00883	0.00888
SR	1.24763	1,062,698.78	0.130	1.24862	1.24575	1.24852
TI	0.01989	1,127.11	3.421	0.01935	0.02066	0.01966
TL	0.00016	-0.07	613.274	0.00111	-0.00082	0.00019
V	0.00300	54.10	11.020	0.00287	0.00337	0.00275
Y1	15277.33589	15,277.34	0.203	15285.03700	15303.78533	15243.18533
Y2A	539666.33488	539,666.33	0.233	538283.92502	539971.63238	540743.44725
Y2R	32007.07547	32,007.08	0.478	31837.32774	32134.44289	32049.45576
ZN	0.08004	751.78	0.471	0.07963	0.08012	0.08037
ZR	0.00093	2.58	116.489	0.00020	0.00041	0.00217

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/08/2013 02:49

Sample Number: **7263051** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-18.10	148.626	-0.00009	0.00019	0.00045
AL	0.47374	84.21	4.749	0.47798	0.44942	0.49381
AS	-0.00064	-1.90	113.850	-0.00149	-0.00027	-0.00017
B	0.02270	68.79	4.953	0.02172	0.02244	0.02393
BA	0.03369	29,313.34	0.436	0.03353	0.03372	0.03383
BE	0.00014	-43.42	5.910	0.00015	0.00014	0.00013
CA	9.13549	9,937.04	0.147	9.12171	9.14852	9.13623
CD	0.00045	3.18	19.180	0.00054	0.00036	0.00046
CO	-0.00018	-1.10	120.535	0.00005	-0.00039	-0.00020
CR	0.00076	5.36	57.392	0.00107	0.00094	0.00026
CU	0.00587	295.45	13.111	0.00538	0.00676	0.00547
FE	0.83770	341.25	0.968	0.83696	0.84615	0.82998
K	0.82012	350.42	2.301	0.82388	0.79966	0.83684
LI	0.00066	64.13	94.902	0.00139	0.00032	0.00027
MG	3.63770	9,795.38	0.638	3.65632	3.64510	3.61170
MN	0.02299	1,655.97	0.464	0.02286	0.02305	0.02305
MO	0.00032	3.70	62.958	0.00036	0.00010	0.00050
NA	5.48500	7,219.36	0.267	5.50069	5.48264	5.47167
NI	0.00048	19.38	104.140	0.00105	0.00011	0.00028
P	0.11779	59.28	0.828	0.11891	0.11715	0.11730
PB	0.01671	14.01	4.155	0.01641	0.01750	0.01621
S	0.89366	247.41	0.418	0.89594	0.89569	0.88935
SB	0.00071	-4.20	150.272	-0.00021	0.00046	0.00188
SE	-0.00091	4.47	46.174	-0.00136	-0.00085	-0.00052
SI	0.61717	167.36	0.185	0.61746	0.61813	0.61591
SN	-0.00041	1.72	108.978	-0.00076	-0.00056	0.00009
SR	0.03040	28,624.27	0.454	0.03025	0.03041	0.03053
TI	0.01354	855.98	0.920	0.01367	0.01344	0.01349
TL	0.00122	0.11	140.221	-0.00066	0.00270	0.00162
V	0.00148	22.53	16.622	0.00176	0.00133	0.00134
Y1	16011.15174	16,011.15	0.113	16004.53909	16031.55553	15997.36060
Y2A	597590.83162	597,590.83	0.380	600093.16667	595669.24484	597010.08333
Y2R	32860.50348	32,860.50	0.249	32883.67500	32769.54609	32928.28934
ZN	0.02179	223.45	0.121	0.02177	0.02178	0.02182
ZR	0.00092	2.63	197.018	-0.00110	0.00144	0.00243

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/08/2013 02:53

Sample Number: **7263056** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00014	-23.89	57.040	-0.00017	-0.00005	-0.00020
AL	0.07539	14.67	10.314	0.07605	0.08282	0.06731
AS	-0.00056	-1.78	174.737	0.00008	-0.00167	-0.00007
B	0.02212	65.79	6.105	0.02199	0.02352	0.02083
BA	0.02517	21,966.17	0.294	0.02526	0.02512	0.02514
BE	0.00011	-56.21	11.577	0.00010	0.00011	0.00013
CA	8.40201	9,130.72	0.285	8.39367	8.42899	8.38336
CD	0.00048	2.32	16.964	0.00053	0.00038	0.00051
CO	-0.00060	-3.30	26.868	-0.00044	-0.00076	-0.00061
CR	-0.00016	-4.62	109.943	-0.00016	-0.00033	0.00002
CU	0.00148	229.85	23.802	0.00174	0.00108	0.00162
FE	0.17847	74.06	4.248	0.18322	0.18246	0.16973
K	0.67379	309.31	4.434	0.69905	0.64081	0.68151
LI	-0.00012	57.86	1677.894	0.00225	-0.00103	-0.00159
MG	3.42830	9,217.12	0.663	3.40397	3.43196	3.44899
MN	0.01268	916.77	0.589	0.01277	0.01264	0.01264
MO	0.00043	4.07	95.772	0.00090	0.00010	0.00030
NA	5.33763	7,015.69	0.250	5.32678	5.35251	5.33361
NI	0.00038	19.20	69.547	0.00066	0.00013	0.00036
P	0.03096	15.58	2.836	0.03184	0.03095	0.03009
PB	0.00364	2.21	28.243	0.00440	0.00404	0.00247
S	0.70952	197.04	0.209	0.71047	0.70781	0.71028
SB	0.00244	-3.09	36.267	0.00235	0.00160	0.00336
SE	-0.00217	3.98	67.428	-0.00274	-0.00051	-0.00326
SI	0.10730	32.37	5.025	0.11217	0.10150	0.10821
SN	-0.00105	1.05	17.306	-0.00120	-0.00109	-0.00085
SR	0.02930	27,634.12	0.277	0.02939	0.02923	0.02928
TI	0.00189	137.65	10.155	0.00170	0.00209	0.00187
TL	0.00069	-0.18	196.965	-0.00060	0.00212	0.00056
V	0.00015	-4.64	232.355	-0.00011	0.00053	0.00001
Y1	16054.20125	16,054.20	0.038	16057.46353	16057.94950	16047.19073
Y2A	598624.05977	598,624.06	0.153	597923.41667	598288.41667	599660.34597
Y2R	32805.61103	32,805.61	0.196	32879.74052	32768.99620	32768.09638
ZN	0.00206	37.27	1.816	0.00204	0.00211	0.00205
ZR	0.00063	1.77	362.114	-0.00178	0.00093	0.00272

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/08/2013 02:56

Sample Number: **7263057** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00005	-22.22	721.360	0.00028	-0.00039	-0.00003
AL	0.06777	13.43	39.081	0.07259	0.09151	0.03920
AS	-0.00157	-2.26	56.186	-0.00084	-0.00255	-0.00132
B	0.02191	65.26	2.803	0.02161	0.02261	0.02150
BA	0.02464	21,552.08	0.636	0.02450	0.02481	0.02462
BE	0.00011	-59.05	7.771	0.00010	0.00010	0.00012
CA	9.00771	9,836.53	0.642	8.94924	9.00904	9.06487
CD	0.00041	1.60	50.804	0.00023	0.00036	0.00063
CO	-0.00043	-2.41	15.925	-0.00044	-0.00049	-0.00035
CR	0.00038	1.23	109.705	0.00084	0.00005	0.00023
CU	0.00125	227.06	34.955	0.00090	0.00174	0.00110
FE	0.20179	83.95	2.554	0.20444	0.20508	0.19585
K	0.57030	282.19	7.721	0.53041	0.61755	0.56295
LI	0.00085	65.77	171.153	0.00065	-0.00050	0.00238
MG	3.51988	9,514.88	0.260	3.51476	3.51444	3.53043
MN	0.01529	1,106.84	1.081	0.01515	0.01547	0.01526
MO	0.00011	3.03	360.799	0.00002	0.00052	-0.00023
NA	5.24513	6,933.28	0.430	5.23977	5.22573	5.26990
NI	0.00041	19.22	138.496	0.00009	0.00007	0.00106
P	0.03663	18.41	1.809	0.03596	0.03728	0.03664
PB	0.00471	3.17	19.142	0.00544	0.00497	0.00370
S	0.72914	202.07	0.239	0.72783	0.73112	0.72848
SB	0.00040	-4.40	741.520	0.00311	-0.00280	0.00090
SE	-0.00127	4.32	78.394	-0.00114	-0.00233	-0.00035
SI	0.19481	55.80	1.920	0.19258	0.19912	0.19271
SN	-0.00043	1.70	76.466	-0.00067	-0.00005	-0.00057
SR	0.03010	28,456.85	0.826	0.02988	0.03037	0.03006
TI	0.00206	148.90	5.223	0.00210	0.00194	0.00214
TL	-0.00023	-0.65	172.997	0.00022	-0.00038	-0.00052
V	0.00070	6.51	22.667	0.00087	0.00067	0.00055
Y1	16022.15926	16,022.16	0.074	16035.58516	16017.44550	16013.44710
Y2A	599898.00222	599,898.00	0.493	601796.07452	596489.00000	601408.93214
Y2R	32985.90042	32,985.90	0.336	33072.60000	33024.24515	32860.85612
ZN	0.00251	41.42	0.863	0.00249	0.00251	0.00253
ZR	0.00154	4.39	66.753	0.00125	0.00068	0.00267

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/08/2013 03:00

Sample Number: **7263058** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00012	-19.02	229.798	0.00044	-0.00011	0.00004
AL	0.08812	16.94	33.025	0.06144	0.11916	0.08378
AS	-0.00289	-2.88	39.909	-0.00156	-0.00355	-0.00357
B	0.02169	64.25	2.799	0.02107	0.02229	0.02170
BA	0.02553	22,230.10	0.629	0.02537	0.02569	0.02552
BE	0.00010	-63.17	3.897	0.00010	0.00010	0.00010
CA	9.13755	9,947.23	0.045	9.13987	9.13277	9.14002
CD	0.00043	1.86	27.365	0.00050	0.00029	0.00050
CO	-0.00047	-2.63	24.541	-0.00044	-0.00037	-0.00060
CR	0.00007	-2.08	333.229	0.00014	0.00028	-0.00020
CU	0.00271	248.22	6.671	0.00251	0.00279	0.00285
FE	0.20387	84.54	3.872	0.20328	0.21205	0.19629
K	0.63373	298.96	5.049	0.63201	0.66655	0.60263
LI	0.00198	74.43	61.868	0.00302	0.00063	0.00230
MG	3.57436	9,632.86	0.265	3.57510	3.56452	3.58345
MN	0.01654	1,191.96	0.770	0.01640	0.01657	0.01664
MO	0.00049	4.25	61.018	0.00082	0.00024	0.00042
NA	5.32835	7,020.97	0.133	5.32136	5.32817	5.33553
NI	0.00017	18.55	154.522	0.00034	0.00032	-0.00014
P	0.03591	18.00	1.547	0.03616	0.03528	0.03630
PB	0.00539	3.77	29.876	0.00654	0.00607	0.00355
S	0.73982	204.51	0.228	0.74027	0.73796	0.74124
SB	0.00006	-4.61	1881.201	-0.00307	0.00272	0.00053
SE	-0.00059	4.58	127.560	-0.00010	-0.00021	-0.00145
SI	0.19382	55.37	3.540	0.18649	0.19489	0.20008
SN	-0.00031	1.82	359.670	-0.00054	0.00090	-0.00130
SR	0.03064	28,844.92	0.720	0.03039	0.03082	0.03069
TI	0.00241	169.91	0.693	0.00240	0.00243	0.00241
TL	0.00002	-0.52	1633.227	0.00095	0.00009	-0.00097
V	0.00043	1.06	85.451	0.00010	0.00036	0.00083
Y1	15981.50364	15,981.50	0.039	15988.68980	15978.75025	15977.07086
Y2A	597464.16667	597,464.17	0.518	600441.08333	594268.83333	597682.58333
Y2R	32886.80696	32,886.81	0.208	32829.00000	32962.40770	32869.01317
ZN	0.00264	42.53	3.239	0.00255	0.00264	0.00272
ZR	0.00079	2.26	193.590	-0.00007	-0.00012	0.00257

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/08/2013 03:04

Sample Number: **7263059** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00011	-23.45	182.096	0.00012	-0.00026	-0.00021
AL	0.00973	3.21	236.393	0.02808	-0.01607	0.01717
AS	-0.00110	-2.01	61.503	-0.00185	-0.00089	-0.00055
B	0.00294	0.62	40.273	0.00179	0.00416	0.00288
BA	0.00001	113.55	375.219	-0.00001	-0.00001	0.00004
BE	0.00009	-68.70	7.406	0.00009	0.00008	0.00010
CA	0.01334	84.76	11.701	0.01188	0.01498	0.01317
CD	0.00039	1.04	32.881	0.00043	0.00024	0.00048
CO	-0.00048	-2.69	41.402	-0.00029	-0.00068	-0.00046
CR	-0.00011	-4.08	439.228	-0.00064	0.00028	0.00004
CU	0.00077	216.38	22.482	0.00088	0.00057	0.00086
FE	0.00151	2.43	195.615	-0.00094	0.00069	0.00478
K	-0.02224	115.67	66.449	-0.02525	-0.00619	-0.03528
LI	-0.00045	53.92	448.379	-0.00273	0.00036	0.00102
MG	0.00142	3.16	40.648	0.00182	0.00168	0.00076
MN	0.00005	7.02	73.249	0.00006	0.00001	0.00009
MO	0.00018	3.26	80.350	0.00033	0.00004	0.00016
NA	0.00875	86.60	22.900	0.01077	0.00873	0.00676
NI	-0.00016	17.73	478.317	0.00052	-0.00097	-0.00002
P	-0.00017	-0.14	462.354	0.00008	0.00047	-0.00107
PB	0.00162	0.37	125.652	0.00366	-0.00041	0.00161
S	0.00460	1.66	13.666	0.00491	0.00387	0.00501
SB	0.00015	-4.57	829.618	-0.00054	0.00158	-0.00059
SE	-0.00063	4.57	183.635	-0.00075	0.00058	-0.00173
SI	0.00620	5.62	196.721	0.01954	0.00341	-0.00436
SN	-0.00093	1.17	35.363	-0.00087	-0.00127	-0.00063
SR	0.00012	67.28	10.687	0.00013	0.00012	0.00011
TI	0.00009	27.07	129.214	-0.00004	0.00014	0.00019
TL	-0.00121	-1.17	87.669	-0.00179	0.00001	-0.00185
V	0.00000	-7.57	3371.296	-0.00011	0.00003	0.00009
Y1	16047.66589	16,047.67	0.174	16017.22589	16072.22570	16053.54607
Y2A	600932.72222	600,932.72	0.229	599707.08333	602417.58333	600673.50000
Y2R	32550.98371	32,550.98	0.198	32618.10689	32489.69149	32545.15276
ZN	0.00054	22.67	9.544	0.00049	0.00053	0.00059
ZR	0.00204	5.78	52.368	0.00296	0.00087	0.00229

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/08/2013 03:08

Sample Number: **7263060** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00055	-11.15	58.355	0.00027	0.00048	0.00091
AL	0.02750	6.29	21.317	0.03358	0.02189	0.02704
AS	-0.00347	-3.13	92.509	-0.00294	-0.00056	-0.00692
B	0.00174	-3.48	8.004	0.00190	0.00164	0.00168
BA	0.00003	129.03	12.900	0.00002	0.00003	0.00003
BE	0.00010	-62.45	6.780	0.00010	0.00011	0.00010
CA	0.01329	84.78	32.445	0.01644	0.00837	0.01505
CD	0.00029	0.01	66.469	0.00023	0.00050	0.00013
CO	-0.00030	-1.82	32.093	-0.00039	-0.00020	-0.00032
CR	-0.00002	-3.13	2015.341	-0.00043	0.00046	-0.00010
CU	-0.00022	200.92	225.758	0.00011	0.00002	-0.00078
FE	-0.00341	0.47	203.141	-0.00517	-0.00929	0.00422
K	-0.06389	104.32	37.973	-0.08964	-0.06059	-0.04145
LI	-0.00054	53.25	428.591	0.00212	-0.00212	-0.00163
MG	0.00090	1.78	251.341	-0.00139	0.00097	0.00311
MN	0.00014	13.48	48.462	0.00019	0.00006	0.00018
MO	0.00031	3.68	35.591	0.00042	0.00031	0.00020
NA	0.02191	103.65	17.295	0.01765	0.02316	0.02491
NI	-0.00011	17.86	235.664	-0.00039	-0.00003	0.00010
P	0.00040	0.14	156.318	0.00101	-0.00023	0.00042
PB	0.00117	-0.03	64.323	0.00190	0.00040	0.00120
S	0.00486	1.74	85.262	0.00613	0.00822	0.00023
SB	-0.00027	-4.84	436.028	-0.00026	-0.00142	0.00089
SE	-0.00197	4.05	141.747	0.00035	-0.00508	-0.00119
SI	0.00551	5.43	193.452	0.01770	0.00087	-0.00205
SN	-0.00053	1.59	174.965	0.00019	-0.00021	-0.00159
SR	0.00012	62.85	3.395	0.00012	0.00012	0.00011
TI	0.00004	23.65	373.487	0.00006	-0.00012	0.00018
TL	0.00008	-0.50	2369.136	-0.00202	0.00193	0.00035
V	0.00002	-7.32	684.079	0.00009	-0.00011	0.00007
Y1	16037.12258	16,037.12	0.066	16033.95454	16048.94874	16028.46446
Y2A	599188.64667	599,188.65	0.333	599262.85667	601147.58333	597155.50000
Y2R	32573.80659	32,573.81	0.560	32554.24481	32402.12405	32765.05092
ZN	-0.00042	13.61	16.656	-0.00034	-0.00043	-0.00048
ZR	0.00205	5.79	69.825	0.00351	0.00198	0.00065

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 31

Date/Time: 11/08/2013 03:11

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00507	72.60	8.100	0.00472	0.00498	0.00552
AL	0.19984	36.00	11.217	0.20035	0.17718	0.22200
AS	0.01780	6.85	9.209	0.01866	0.01883	0.01591
B	0.04847	155.67	3.916	0.05049	0.04820	0.04672
BA	0.00542	4,838.27	0.359	0.00544	0.00540	0.00542
BE	0.00497	2,488.63	0.263	0.00496	0.00496	0.00498
CA	0.19318	276.65	2.710	0.19569	0.19669	0.18717
CD	0.00547	55.00	2.823	0.00532	0.00563	0.00545
CO	0.00459	22.37	4.366	0.00481	0.00450	0.00444
CR	0.01518	162.97	0.527	0.01514	0.01527	0.01513
CU	0.01053	363.90	0.613	0.01050	0.01060	0.01048
FE	0.19812	81.14	2.544	0.19811	0.20316	0.19309
K	0.51356	262.13	5.114	0.54388	0.49923	0.49759
LI	0.01873	200.92	5.466	0.01887	0.01968	0.01765
MG	0.09618	255.73	0.891	0.09717	0.09573	0.09564
MN	0.00517	377.23	0.733	0.00513	0.00519	0.00520
MO	0.01017	34.74	1.379	0.01005	0.01013	0.01032
NA	0.99841	1,359.51	1.029	0.99691	1.00935	0.98896
NI	0.01014	45.62	1.635	0.01016	0.00996	0.01029
P	0.09893	49.68	1.033	0.09799	0.10002	0.09876
PB	0.01862	15.55	6.854	0.02009	0.01792	0.01785
S	0.48898	135.24	0.509	0.48686	0.48835	0.49172
SB	0.01975	8.13	3.377	0.02052	0.01945	0.01929
SE	0.02052	12.80	13.872	0.01808	0.02365	0.01984
SI	0.06303	20.46	9.276	0.05638	0.06538	0.06734
SN	0.01984	23.06	2.318	0.01973	0.02034	0.01944
SR	0.00513	4,824.86	0.495	0.00514	0.00510	0.00515
TI	0.01036	664.67	0.805	0.01039	0.01027	0.01043
TL	0.02886	14.38	2.719	0.02828	0.02975	0.02855
V	0.00499	91.25	4.038	0.00485	0.00490	0.00522
Y1	15974.90763	15,974.91	0.132	15995.99680	15953.84841	15974.87767
Y2A	601257.33821	601,257.34	0.412	599862.66667	604115.10313	599794.24484
Y2R	32460.49250	32,460.49	0.519	32313.11189	32424.24621	32644.11941
ZN	0.01987	204.85	0.341	0.01983	0.01983	0.01995
ZR	0.04875	137.64	0.355	0.04862	0.04867	0.04894

LANCASTER LABORATORIES

Run Name: 1331201T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/08/2013 03:15

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00068	-41.22	14.210	0.00060	0.00065	0.00078
AL	525.14323	84,928.97	0.306	526.63303	525.35933	523.43734
AS	-0.00063	-0.45	176.608	-0.00131	0.00066	-0.00125
B	-0.00217	309.17	39.173	-0.00315	-0.00163	-0.00173
BA	0.00047	437.18	3.114	0.00048	0.00045	0.00047
BE	-0.00030	-229.85	8.075	-0.00030	-0.00031	-0.00027
CA	539.84586	493,197.69	0.854	542.42008	542.59535	534.52215
CD	-0.00249	298.15	5.150	-0.00243	-0.00264	-0.00240
CO	0.00244	10.42	8.139	0.00257	0.00221	0.00253
CR	0.00183	14.50	17.141	0.00176	0.00155	0.00217
CU	-0.00161	299.63	68.855	-0.00059	-0.00279	-0.00146
FE	214.78341	72,472.96	0.435	215.72001	214.78079	213.84945
K	-0.03041	105.98	92.566	0.00150	-0.04098	-0.05174
LI	0.00256	130.20	108.321	0.00563	0.00185	0.00021
MG	618.63332	1,014,261.15	0.906	623.25038	612.39871	620.25087
MN	0.00337	209.90	0.903	0.00340	0.00336	0.00334
MO	-0.00149	-1.79	5.048	-0.00143	-0.00157	-0.00146
NA	0.06312	146.46	15.344	0.07219	0.05292	0.06425
NI	0.00194	9.73	35.006	0.00122	0.00203	0.00256
P	0.01573	7.02	8.248	0.01424	0.01650	0.01647
PB	0.00191	81.95	74.310	0.00034	0.00230	0.00310
S	-0.00483	-0.84	31.409	-0.00623	-0.00505	-0.00322
SB	-0.01031	-10.12	14.744	-0.00907	-0.01201	-0.00986
SE	-0.00075	6.47	48.308	-0.00037	-0.00079	-0.00110
SI	0.02498	9.86	63.051	0.00740	0.02973	0.03779
SN	0.00541	7.02	29.918	0.00638	0.00631	0.00354
SR	0.00247	1,957.24	0.210	0.00247	0.00247	0.00248
TI	-0.00087	-27.83	21.563	-0.00075	-0.00077	-0.00109
TL	0.00371	1.24	11.659	0.00411	0.00325	0.00377
V	-0.00215	43.15	5.393	-0.00218	-0.00224	-0.00202
Y1	14288.29342	14,288.29	0.189	14258.56477	14311.07143	14295.24406
Y2A	511773.44614	511,773.45	0.346	510460.68348	513784.58859	511075.06636
Y2R	30417.98468	30,417.98	0.406	30301.11255	30405.68295	30547.15852
ZN	0.01029	282.48	2.888	0.01057	0.00998	0.01033
ZR	0.00589	15.57	17.262	0.00473	0.00666	0.00627

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 33

Date/Time: 11/08/2013 03:19

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22379	3,451.66	0.746	0.22207	0.22387	0.22541
AL	523.59528	84,220.20	0.221	522.91263	522.94269	524.93051
AS	0.10318	43.28	1.640	0.10494	0.10304	0.10157
B	-0.00275	305.45	100.737	-0.00588	-0.00064	-0.00172
BA	0.50591	375,006.25	0.926	0.50342	0.50299	0.51131
BE	0.51772	230,514.72	0.826	0.51423	0.51645	0.52249
CA	535.95060	487,332.23	0.146	535.16049	536.72977	535.96154
CD	0.97882	9,583.36	0.148	0.97756	0.98040	0.97850
CO	0.50055	2,209.77	0.089	0.50027	0.50032	0.50107
CR	0.49396	4,584.30	0.974	0.48996	0.49263	0.49930
CU	0.53544	7,189.65	0.948	0.53252	0.53249	0.54130
FE	213.81199	71,790.63	0.301	213.37661	213.50685	214.55250
K	-0.02506	106.81	169.750	0.01432	-0.07016	-0.01932
LI	0.00208	125.66	50.151	0.00288	0.00090	0.00245
MG	616.25517	1,006,904.45	0.779	612.46352	614.65005	621.65193
MN	0.49465	30,409.84	0.950	0.49162	0.49227	0.50007
MO	-0.00113	-0.78	53.931	-0.00175	-0.00053	-0.00111
NA	0.05628	137.45	15.862	0.04628	0.06345	0.05911
NI	0.99469	2,423.57	0.057	0.99449	0.99532	0.99425
P	0.01710	8.85	14.087	0.01494	0.01970	0.01666
PB	0.04853	119.41	7.866	0.05037	0.04414	0.05109
S	0.00369	1.26	96.204	-0.00030	0.00648	0.00489
SB	0.62963	362.70	0.400	0.62743	0.63237	0.62907
SE	0.05104	24.65	11.034	0.05532	0.04466	0.05315
SI	0.01205	6.64	20.026	0.01003	0.01140	0.01472
SN	0.00298	4.74	30.306	0.00306	0.00203	0.00383
SR	0.00248	1,963.65	0.668	0.00247	0.00248	0.00250
TI	-0.00026	11.43	25.025	-0.00029	-0.00031	-0.00019
TL	0.10715	50.16	0.972	0.10734	0.10809	0.10603
V	0.50133	8,662.44	0.656	0.49902	0.49988	0.50510
Y1	14322.72991	14,322.73	0.201	14338.57162	14289.43167	14340.18643
Y2A	510884.28998	510,884.29	0.683	513645.07299	512047.36231	506960.43464
Y2R	30253.07804	30,253.08	0.519	30418.40659	30234.94516	30105.88235
ZN	1.05571	9,131.48	0.217	1.05557	1.05807	1.05350
ZR	0.00381	10.03	6.943	0.00353	0.00406	0.00385

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/08/2013 03:23

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50743	8,855.80	0.927	0.51277	0.50561	0.50390
AL	25.02096	4,226.22	0.456	24.93577	24.97658	25.15052
AS	0.49815	227.67	0.020	0.49825	0.49806	0.49812
B	0.49280	1,622.37	1.071	0.49889	0.48952	0.49001
BA	0.50779	420,558.01	1.281	0.51518	0.50291	0.50529
BE	0.50182	249,646.46	0.879	0.50691	0.49937	0.49918
CA	24.77457	25,883.58	0.252	24.74879	24.72902	24.84589
CD	0.49998	5,260.88	0.094	0.49960	0.50051	0.49983
CO	0.49810	2,432.15	0.225	0.49866	0.49883	0.49681
CR	0.50517	5,238.62	0.394	0.50739	0.50457	0.50354
CU	0.50062	7,378.33	1.143	0.50703	0.49881	0.49603
FE	24.67767	9,565.56	0.228	24.69163	24.61572	24.72566
K	24.66406	6,735.98	0.624	24.52254	24.64171	24.82793
LI	0.50038	3,817.79	0.358	0.50217	0.49859	0.50037
MG	24.17994	62,264.89	0.203	24.15096	24.15222	24.23665
MN	0.50496	34,686.16	0.850	0.50974	0.50145	0.50370
MO	0.51193	1,599.39	0.211	0.51224	0.51282	0.51073
NA	24.50717	30,946.55	0.242	24.47888	24.46729	24.57535
NI	0.50104	1,363.85	0.277	0.50232	0.50123	0.49957
P	0.50594	252.49	0.403	0.50828	0.50497	0.50457
PB	0.50006	446.93	0.211	0.49885	0.50081	0.50052
S	24.52793	6,695.19	0.074	24.53655	24.54025	24.50699
SB	0.51632	325.98	0.443	0.51892	0.51462	0.51542
SE	0.49280	195.19	0.117	0.49224	0.49277	0.49339
SI	25.33415	6,489.53	0.396	25.23346	25.33481	25.43419
SN	0.50669	530.85	0.400	0.50871	0.50669	0.50465
SR	0.50150	451,778.72	0.973	0.50713	0.49848	0.49888
TI	0.51700	30,488.53	1.039	0.52320	0.51391	0.51389
TL	0.49739	254.81	0.564	0.49833	0.49960	0.49423
V	0.50769	9,630.62	0.895	0.51289	0.50569	0.50449
Y1	15810.31820	15,810.32	0.085	15814.96868	15795.17480	15820.81113
Y2A	570836.70648	570,836.71	0.998	564263.76908	573839.49900	574406.85136
Y2R	31786.04429	31,786.04	0.210	31860.41459	31766.31085	31731.40744
ZN	0.50361	4,749.71	0.057	0.50361	0.50389	0.50332
ZR	0.49872	1,379.03	0.956	0.50271	0.49345	0.50001

LANCASTER LABORATORIES

Run Name: 1331201T71

Instrument ID: 16315

Tube: 35

Date/Time: 11/08/2013 03:27

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00018	-24.45	117.365	-0.00027	-0.00032	0.00006
AL	0.03247	6.99	48.236	0.05002	0.01993	0.02744
AS	-0.00060	-1.78	129.577	-0.00025	-0.00006	-0.00148
B	0.00011	-8.95	1043.762	0.00103	-0.00116	0.00046
BA	0.00002	125.37	36.625	0.00002	0.00001	0.00003
BE	0.00011	-57.93	5.239	0.00010	0.00011	0.00011
CA	0.00455	73.74	50.416	0.00685	0.00455	0.00226
CD	0.00038	1.00	42.149	0.00021	0.00053	0.00040
CO	-0.00004	-0.54	489.443	-0.00004	0.00017	-0.00025
CR	-0.00024	-5.53	267.904	-0.00082	-0.00036	0.00046
CU	0.00072	214.22	104.596	0.00020	0.00159	0.00038
FE	0.00532	3.88	72.813	0.00888	0.00120	0.00587
K	0.02717	126.50	152.878	0.02541	-0.01346	0.06954
LI	-0.00194	41.56	120.701	0.00020	-0.00445	-0.00159
MG	0.00997	25.47	14.944	0.01091	0.00825	0.01074
MN	0.00005	6.63	47.091	0.00008	0.00004	0.00003
MO	0.00016	3.20	12.561	0.00014	0.00016	0.00017
NA	0.00103	74.97	668.863	-0.00307	0.00898	-0.00282
NI	0.00021	18.75	403.340	0.00020	0.00107	-0.00064
P	0.00063	0.26	291.865	0.00261	-0.00098	0.00024
PB	0.00413	2.64	100.345	0.00730	-0.00056	0.00566
S	0.00415	1.54	57.700	0.00323	0.00686	0.00235
SB	-0.00108	-5.37	213.878	0.00128	-0.00118	-0.00333
SE	-0.00109	4.40	23.472	-0.00080	-0.00127	-0.00119
SI	0.00941	6.31	58.983	0.00880	0.01525	0.00419
SN	-0.00109	1.00	50.570	-0.00122	-0.00049	-0.00157
SR	0.00002	-24.87	21.186	0.00002	0.00003	0.00002
TI	-0.00001	20.62	1526.256	-0.00013	0.00003	0.00008
TL	0.00053	-0.26	187.197	0.00119	-0.00061	0.00100
V	-0.00002	-7.98	1121.826	-0.00021	-0.00008	0.00023
Y1	16060.87250	16,060.87	0.453	16142.95078	16003.95843	16035.70829
Y2A	596837.90845	596,837.91	0.278	597713.48969	597877.15232	594923.08333
Y2R	31853.39610	31,853.40	0.427	31971.17882	31704.54772	31884.46175
ZN	-0.00095	8.64	14.685	-0.00105	-0.00101	-0.00079
ZR	0.00207	5.74	36.584	0.00295	0.00160	0.00168

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ICP-AES Run Data Report

1331205T73

Reviewed By
Maria A Orrs

Reviewed Date
11/08/2013 1:51PM

Data File Name 1331205T73.TXT
Run Name: 1331205T73

Verified By:
Jennifer L Moyer

Verified Date
11/08/2013 2:41PM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 1170

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 1 Date/Time: 11/08/2013 10:17

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00118	22.221	-0.00122	-0.00090	-0.00142
AL	0.000	0.02915	16.045	0.02376	0.03160	0.03210
AS	0.000	0.00281	70.493	0.00377	0.00053	0.00411
B	0.000	0.00002	46.064	0.00002	0.00001	0.00002
BA	0.000	0.00184	5.452	0.00189	0.00190	0.00172
BE	0.000	-0.01182	12.110	-0.01109	-0.01090	-0.01347
CA	0.000	0.00175	9.175	0.00184	0.00156	0.00185
CD	0.000	-0.01003	114.079	-0.00999	-0.02149	0.00139
CO	0.000	0.00894	109.036	-0.00165	0.01094	0.01752
CR	0.000	0.00002	79.534	0.00003	0.00002	0.00000
CU	0.000	0.01045	22.905	0.01271	0.00795	0.01068
FE	0.000	0.00000	2165.404	-0.00007	-0.00003	0.00009
K	0.000	0.20891	2.199	0.20759	0.21402	0.20512
LI	0.000	-0.00497	18.242	-0.00400	-0.00579	-0.00513
MG	0.000	0.00022	21.388	0.00027	0.00018	0.00020
MN	0.000	0.00052	106.442	-0.00007	0.00102	0.00060
MO	0.000	0.01695	38.209	0.01707	0.01041	0.02336
NA	0.000	-0.00305	14.395	-0.00276	-0.00283	-0.00355
NI	0.000	0.03629	23.621	0.03044	0.03230	0.04613
P	0.000	0.00022	25.248	0.00015	0.00025	0.00025
PB	0.000	-0.00405	147.115	0.00077	-0.01072	-0.00221
S	0.000	0.00117	7.904	0.00121	0.00106	0.00124
SB	0.000	0.00055	24.658	0.00043	0.00070	0.00052
SI	0.000	0.00007	45.996	0.00009	0.00009	0.00003
SN	0.000	0.01962	5.711	0.02091	0.01890	0.01905
SR	0.000	0.00003	77.143	0.00001	0.00006	0.00002
TI	0.000	0.00576	12.483	0.00554	0.00518	0.00657
TL	0.000	0.01264	20.578	0.01012	0.01532	0.01248
V	0.000	-0.00369	22.316	-0.00406	-0.00275	-0.00427
Y1	0.000	5024.34323	0.138	5032.04249	5022.48201	5018.50520
Y2A	0.000	173942.36204	0.252	173619.49372	174440.83417	173766.75824
Y2R	0.000	37027.06279	0.370	36934.44056	37184.60694	36962.14086
ZN	0.000	0.05171	23.646	0.03772	0.05710	0.06033
ZR	0.000	-0.00089	17.477	-0.00071	-0.00097	-0.00099

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 2 Date/Time: 11/08/2013 10:21

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	9.14466	0.135	9.14348	9.15756	9.13293
CA	50.000	1.71332	0.096	1.71470	1.71376	1.71150
FE	50.000	0.50742	0.333	0.50881	0.50792	0.50554
K	50.000	38.57649	0.053	38.59983	38.56193	38.56770
MG	50.000	2.11355	0.137	2.11635	2.11373	2.11058
NA	50.000	2.90510	0.170	2.91034	2.90051	2.90443
S	50.000	0.71048	0.225	0.70875	0.71076	0.71191
SI	50.000	0.30511	0.164	0.30518	0.30558	0.30458
Y1	50.000	4782.10072	0.199	4788.86632	4771.19333	4786.24250
Y2R	50.000	36329.12843	0.277	36291.40016	36252.74890	36443.23623

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 3 Date/Time: 11/08/2013 10:25

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.01378	0.964	1.00266	1.01763	1.02103
AS	1.000	1.12496	0.270	1.12736	1.12155	1.12598
B	1.000	0.01274	0.511	0.01266	0.01278	0.01276
BA	1.000	2.72080	0.310	2.72823	2.72255	2.71163
BE	1.000	31.37052	0.519	31.32303	31.55192	31.23661
CD	1.000	31.94374	0.277	32.04582	31.89686	31.88856
CO	1.000	17.54374	0.166	17.52767	17.52618	17.57737
CU	1.000	0.81076	0.373	0.80853	0.81420	0.80956
LI	1.000	0.33587	0.305	0.33560	0.33700	0.33501
MN	1.000	5.07306	0.427	5.04834	5.08881	5.08203
NI	1.000	8.44413	0.471	8.41640	8.42626	8.48973
P	1.000	0.02848	0.334	0.02849	0.02858	0.02839
PB	1.000	2.75604	0.668	2.75022	2.74124	2.77666
SR	1.000	2.54975	0.874	2.54789	2.57291	2.52844
TL	1.000	1.54452	0.537	1.53818	1.55390	1.54147
Y1	1.000	4881.24420	0.156	4874.58356	4889.51016	4879.63888
Y2A	1.000	165680.12386	0.154	165702.15680	165414.57462	165923.64017
Y2R	1.000	36629.41404	0.341	36545.73353	36569.50000	36773.00858
ZN	1.000	24.58314	0.202	24.57710	24.63550	24.53682

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 4 Date/Time: 11/08/2013 10:29

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.01846	0.119	0.01848	0.01844	0.01846
MO	1.000	8.79755	0.162	8.80576	8.78113	8.80577
SB	1.000	0.03251	0.420	0.03242	0.03243	0.03267
SN	1.000	3.60747	0.526	3.58805	3.60842	3.62594
TI	1.000	4.05412	0.607	4.07632	4.05837	4.02769
V	1.000	1.17111	1.180	1.18451	1.17190	1.15690
Y1	1.000	5062.63110	0.084	5062.69074	5066.83758	5058.36497
Y2A	1.000	174014.38682	0.171	173759.59239	173941.10745	174342.46063
Y2R	1.000	36923.10551	0.266	36939.64400	37012.08067	36817.59185
ZR	1.000	0.07830	0.456	0.07796	0.07868	0.07827

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 5

Date/Time: 11/08/2013 10:32

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.61381	2,027.80	0.476	0.61291	0.61143	0.61707
AL	30.17321	4,046.59	0.169	30.13002	30.22959	30.16000
AS	0.61061	67.16	0.893	0.60493	0.61580	0.61109
B	0.59117	1,298.69	0.687	0.59002	0.59568	0.58780
BA	0.60965	274,223.10	0.367	0.60707	0.61100	0.61088
BE	0.58600	60,741.12	0.362	0.58361	0.58766	0.58671
CA	29.98021	37,663.33	0.221	30.03821	29.90781	29.99461
CD	0.60633	1,886.58	0.119	0.60552	0.60691	0.60655
CO	0.59753	1,021.39	0.389	0.59542	0.59716	0.60002
CR	0.59919	1,829.20	0.406	0.59826	0.60195	0.59736
CU	0.60350	1,619.53	0.040	0.60369	0.60359	0.60323
FE	29.81399	11,129.52	0.356	29.85106	29.69423	29.89667
K	30.11632	17,046.43	0.340	30.13390	30.20872	30.00634
LI	0.60843	7,408.54	0.130	0.60857	0.60913	0.60757
MG	29.53953	46,034.39	0.408	29.57958	29.40398	29.63503
MN	0.60876	10,206.00	0.240	0.60770	0.61042	0.60816
MO	0.63311	541.63	0.427	0.63016	0.63548	0.63370
NA	29.80712	63,265.44	0.179	29.86299	29.80175	29.75662
NI	0.60374	496.97	0.447	0.60064	0.60553	0.60505
P	0.62974	87.57	0.829	0.62620	0.62727	0.63573
PB	0.60567	164.89	0.811	0.60778	0.60005	0.60916
S	29.88879	2,067.47	0.296	29.81051	29.98476	29.87110
SB	0.62399	99.68	1.429	0.61470	0.62479	0.63248
SI	30.52564	6,811.20	0.421	30.51201	30.40462	30.66030
SN	0.59754	210.37	0.515	0.59534	0.60106	0.59622
SR	0.59964	252,649.45	0.239	0.59814	0.60100	0.59977
TI	0.62967	8,475.23	0.337	0.62748	0.63172	0.62979
TL	0.60080	90.65	1.266	0.59255	0.60229	0.60755
V	0.61622	2,384.05	0.129	0.61570	0.61583	0.61713
Y1	4861.71074	4,861.71	0.128	4864.60498	4865.97935	4854.54788
Y2A	165249.93307	165,249.93	0.198	165612.36264	164978.85000	165158.58657
Y2R	36550.76571	36,550.77	0.274	36507.32509	36665.16876	36479.80328
ZN	0.60673	1,461.40	0.273	0.60485	0.60798	0.60736
ZR	0.61198	1,741.85	0.142	0.61293	0.61122	0.61179

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 6

Date/Time: 11/08/2013 10:36

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00004	-7.88	3713.004	-0.00108	-0.00049	0.00169
AL	0.02483	24.85	124.338	0.06013	0.00284	0.01153
AS	0.00446	0.79	124.426	0.01012	0.00423	-0.00097
B	0.00250	8.85	16.148	0.00272	0.00203	0.00275
BA	-0.00001	316.34	532.250	-0.00004	-0.00001	0.00003
BE	0.00002	-34.72	312.283	-0.00003	0.00007	0.00001
CA	0.00151	66.43	66.792	0.00267	0.00098	0.00087
CD	0.00020	-1.00	99.150	0.00027	-0.00002	0.00036
CO	-0.00004	0.83	2085.922	-0.00099	0.00060	0.00027
CR	0.00084	5.74	15.577	0.00071	0.00085	0.00097
CU	-0.00119	32.98	65.698	-0.00131	-0.00191	-0.00036
FE	0.01775	-2.76	34.919	0.01083	0.02279	0.01964
K	-0.00627	150.56	531.486	-0.04069	-0.00392	0.02581
LI	0.00145	-147.89	67.741	0.00163	0.00232	0.00039
MG	0.01474	5.83	30.458	0.01987	0.01152	0.01284
MN	0.00008	-0.45	207.375	0.00028	-0.00002	-0.00001
MO	0.00289	4.25	13.013	0.00317	0.00246	0.00303
NA	-0.00751	-103.64	65.843	-0.01294	-0.00325	-0.00635
NI	0.00021	3.83	574.012	0.00073	-0.00118	0.00109
P	-0.00063	0.99	293.839	0.00150	-0.00164	-0.00174
PB	0.00251	-0.07	49.078	0.00136	0.00381	0.00237
S	0.00363	6.13	104.900	0.00759	0.00000	0.00330
SB	-0.00461	2.02	59.455	-0.00147	-0.00654	-0.00582
SI	0.00328	3.40	134.085	0.00830	0.00005	0.00150
SN	-0.00073	1.71	158.897	0.00031	-0.00197	-0.00052
SR	0.00007	21.38	23.563	0.00009	0.00006	0.00006
TI	0.00068	29.63	72.034	0.00101	0.00012	0.00091
TL	0.00094	1.41	301.611	0.00123	-0.00203	0.00363
V	0.00042	-10.18	219.394	0.00142	-0.00042	0.00027
Y1	5025.63005	5,025.63	0.050	5028.47962	5023.89015	5024.52038
Y2A	173777.38724	173,777.39	0.623	174914.51967	172757.65204	173659.99001
Y2R	36880.76697	36,880.77	0.099	36839.41059	36894.25379	36908.63655
ZN	0.00000	5.20	9555.863	0.00003	-0.00019	0.00016
ZR	-0.00290	-33.61	52.030	-0.00408	-0.00120	-0.00341

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 7

Date/Time: 11/08/2013 10:40

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00470	8.97	41.257	0.00649	0.00496	0.00264
AL	0.19389	47.69	23.875	0.24669	0.17471	0.16027
AS	0.02613	3.24	22.354	0.01984	0.02717	0.03138
B	0.04822	110.21	3.179	0.04973	0.04666	0.04827
BA	0.00544	2,884.37	1.745	0.00555	0.00537	0.00541
BE	0.00481	486.95	2.173	0.00492	0.00478	0.00472
CA	0.20090	319.85	0.731	0.20204	0.20141	0.19924
CD	0.00520	15.11	5.631	0.00501	0.00506	0.00554
CO	0.00468	9.19	12.414	0.00402	0.00511	0.00491
CR	0.01576	53.45	4.491	0.01585	0.01501	0.01642
CU	0.01004	63.92	19.934	0.00850	0.01231	0.00932
FE	0.21620	72.83	0.493	0.21503	0.21645	0.21712
K	0.53580	457.71	9.169	0.55379	0.57340	0.48021
LI	0.02449	141.56	8.041	0.02497	0.02617	0.02232
MG	0.11534	166.18	1.304	0.11613	0.11628	0.11361
MN	0.00537	92.55	2.653	0.00521	0.00548	0.00542
MO	0.01107	11.48	8.206	0.01019	0.01201	0.01100
NA	1.00304	2,064.86	0.974	0.99247	1.01174	1.00490
NI	0.01027	12.35	4.815	0.00971	0.01062	0.01049
P	0.09433	14.45	3.892	0.09856	0.09194	0.09249
PB	0.01051	2.17	13.681	0.01201	0.00914	0.01039
S	0.47145	39.54	1.060	0.46693	0.47681	0.47059
SB	0.01664	5.43	26.326	0.01355	0.01471	0.02165
SI	0.06022	16.24	9.857	0.05401	0.06080	0.06584
SN	0.02005	9.21	5.291	0.02006	0.02110	0.01898
SR	0.00528	2,322.14	1.377	0.00536	0.00523	0.00525
TI	0.01023	163.99	2.959	0.00993	0.01054	0.01024
TL	0.03133	6.08	11.635	0.03244	0.02725	0.03428
V	0.00546	10.21	24.533	0.00700	0.00487	0.00452
Y1	5032.23778	5,032.24	0.064	5028.53858	5034.21596	5033.95881
Y2A	173411.39052	173,411.39	0.777	171914.53013	174528.94027	173790.70116
Y2R	36904.12046	36,904.12	0.320	37006.40578	36931.01556	36774.94002
ZN	0.01878	51.48	2.235	0.01920	0.01877	0.01836
ZR	0.03742	83.89	5.569	0.03936	0.03522	0.03769

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 8

Date/Time: 11/08/2013 10:43

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.02539	-295.64	1.894	-0.02546	-0.02487	-0.02583
AL	508.57367	64,731.56	0.256	507.36441	508.40323	509.95339
AS	0.00577	1.18	101.907	0.00050	0.01211	0.00469
B	-0.01019	303.30	30.332	-0.01070	-0.00688	-0.01300
BA	0.00040	428.23	10.138	0.00045	0.00039	0.00037
BE	-0.00157	-174.33	2.229	-0.00156	-0.00160	-0.00153
CA	506.75273	577,570.14	0.417	508.56091	504.42690	507.27039
CD	-0.00037	21.62	140.312	-0.00068	-0.00066	0.00023
CO	0.00217	4.13	26.843	0.00181	0.00284	0.00185
CR	0.00060	4.16	72.505	0.00074	0.00011	0.00094
CU	0.00323	65.32	51.678	0.00428	0.00410	0.00131
FE	201.90820	68,485.44	0.322	202.64225	201.67961	201.40275
K	0.04999	174.03	42.669	0.07167	0.04926	0.02903
LI	0.00113	-84.18	94.711	0.00237	0.00048	0.00054
MG	501.59063	601,222.22	0.031	501.43886	501.74791	501.58513
MN	0.00370	53.28	2.629	0.00366	0.00363	0.00381
MO	0.00266	-4.99	18.985	0.00324	0.00238	0.00235
NA	0.00053	-82.42	886.303	-0.00490	0.00288	0.00361
NI	0.00508	4.86	24.559	0.00519	0.00378	0.00627
P	0.00286	1.30	142.854	0.00081	0.00757	0.00020
PB	-0.00688	32.78	104.094	-0.01206	0.00129	-0.00988
S	0.02765	6.86	46.508	0.01677	0.02434	0.04184
SB	-0.00069	-0.31	768.833	-0.00040	-0.00617	0.00449
SI	0.01573	5.91	16.759	0.01572	0.01837	0.01310
SN	0.00280	2.61	114.053	0.00164	0.00641	0.00035
SR	0.00251	926.82	1.224	0.00249	0.00250	0.00255
TI	0.00031	19.40	51.808	0.00024	0.00050	0.00020
TL	0.01785	2.15	2.647	0.01746	0.01837	0.01770
V	-0.00053	8.46	57.591	-0.00051	-0.00024	-0.00084
Y1	4394.67064	4,394.67	0.189	4391.70665	4388.25823	4404.04703
Y2A	146119.25325	146,119.25	0.249	145956.74516	145865.50380	146535.51080
Y2R	35191.85156	35,191.85	0.253	35104.81211	35282.53048	35188.21207
ZN	0.00156	64.29	45.684	0.00076	0.00211	0.00182
ZR	-0.01684	-70.84	12.196	-0.01646	-0.01501	-0.01906

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 9

Date/Time: 11/08/2013 10:48

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.19941	371.32	1.120	0.20144	0.19975	0.19702
AL	505.39865	64,210.49	0.966	502.86740	502.30163	511.02691
AS	0.11730	12.20	4.087	0.11184	0.12083	0.11924
B	-0.00995	302.96	6.412	-0.00923	-0.01044	-0.01019
BA	0.50405	200,614.76	0.159	0.50330	0.50489	0.50395
BE	0.51108	46,860.48	0.195	0.51045	0.51055	0.51223
CA	506.70538	576,452.33	0.500	504.64879	505.93481	509.53254
CD	0.95604	2,703.93	0.206	0.95377	0.95730	0.95703
CO	0.46508	716.41	0.063	0.46542	0.46492	0.46490
CR	0.49221	1,329.73	0.415	0.48991	0.49380	0.49292
CU	0.52586	1,288.23	0.603	0.52878	0.52631	0.52249
FE	202.55806	68,561.82	0.858	201.13621	202.04148	204.49648
K	-0.09169	97.41	42.607	-0.10295	-0.04823	-0.12390
LI	0.00127	-82.33	28.464	0.00145	0.00151	0.00085
MG	501.09753	599,685.27	0.150	500.63095	500.69929	501.96236
MN	0.50252	7,452.66	0.157	0.50342	0.50212	0.50200
MO	0.00231	-5.24	54.600	0.00299	0.00310	0.00086
NA	-0.00081	-85.06	689.702	-0.00717	0.00155	0.00320
NI	0.93216	689.18	0.493	0.93496	0.92686	0.93466
P	0.00680	2.12	43.416	0.00379	0.00969	0.00691
PB	0.05762	48.22	6.895	0.05463	0.05611	0.06213
S	0.01789	6.42	26.313	0.01549	0.02331	0.01487
SB	0.62939	89.80	0.832	0.63503	0.62469	0.62845
SI	0.02420	7.71	37.022	0.02834	0.01392	0.03033
SN	0.00562	3.49	30.879	0.00666	0.00658	0.00362
SR	0.00249	918.22	1.136	0.00246	0.00252	0.00249
TI	0.00043	32.96	76.918	0.00054	0.00006	0.00070
TL	0.11039	15.00	2.702	0.10869	0.11383	0.10863
V	0.51176	1,788.04	0.085	0.51157	0.51226	0.51145
Y1	4387.52212	4,387.52	0.165	4383.21459	4383.46318	4395.88859
Y2A	146186.75127	146,186.75	0.208	146536.47394	145994.95101	146028.82887
Y2R	35127.38922	35,127.39	0.736	35290.12592	35262.79174	34829.25000
ZN	1.03829	2,293.75	0.145	1.03840	1.03973	1.03673
ZR	-0.01850	-75.26	21.388	-0.01565	-0.01684	-0.02302

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 10

Date/Time: 11/08/2013 10:51

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50811	1,694.61	0.537	0.50999	0.50498	0.50935
AL	24.87722	3,389.41	0.251	24.82742	24.94722	24.85703
AS	0.51738	57.37	0.498	0.51850	0.51920	0.51443
B	0.48993	1,088.25	0.803	0.49445	0.48806	0.48728
BA	0.50905	231,416.90	0.264	0.51045	0.50892	0.50778
BE	0.48788	51,093.51	0.379	0.48982	0.48768	0.48614
CA	24.84577	31,701.34	0.389	24.79519	24.95721	24.78490
CD	0.50488	1,582.31	0.078	0.50508	0.50443	0.50513
CO	0.49752	856.88	0.312	0.49907	0.49597	0.49752
CR	0.49623	1,531.23	0.373	0.49671	0.49779	0.49419
CU	0.50617	1,378.24	0.676	0.50965	0.50603	0.50281
FE	24.81450	9,413.05	0.631	24.71646	24.99506	24.73196
K	24.84216	14,294.63	0.139	24.84635	24.87431	24.80583
LI	0.50644	6,229.27	0.150	0.50580	0.50728	0.50624
MG	24.44547	38,735.90	0.453	24.39512	24.57237	24.36891
MN	0.50702	8,588.91	0.225	0.50834	0.50634	0.50639
MO	0.52100	449.31	0.151	0.52186	0.52082	0.52032
NA	24.61736	53,001.44	0.358	24.56034	24.71875	24.57300
NI	0.50548	419.76	0.347	0.50376	0.50542	0.50727
P	0.52294	73.44	0.626	0.52610	0.52315	0.51956
PB	0.49982	136.96	0.707	0.49970	0.50341	0.49634
S	24.73582	1,724.71	0.244	24.78714	24.66926	24.75106
SB	0.51985	84.11	0.394	0.51828	0.51910	0.52217
SI	25.37539	5,745.59	0.220	25.34790	25.43966	25.33861
SN	0.49796	176.93	0.352	0.49595	0.49917	0.49877
SR	0.49907	212,471.79	0.325	0.50029	0.49723	0.49969
TI	0.52254	7,110.02	0.349	0.52345	0.52044	0.52373
TL	0.50183	76.48	1.537	0.50595	0.49293	0.50661
V	0.50849	1,985.92	0.437	0.50962	0.50592	0.50992
Y1	4897.77381	4,897.77	0.015	4898.20144	4896.91642	4898.20357
Y2A	166976.51461	166,976.51	0.276	166558.71212	167471.90562	166898.92607
Y2R	37087.44827	37,087.45	0.504	37223.22500	36874.30056	37164.81925
ZN	0.50391	1,223.69	0.225	0.50509	0.50284	0.50379
ZR	0.50404	1,451.25	0.371	0.50568	0.50200	0.50445

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 11

Date/Time: 11/08/2013 10:55

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00023	-8.79	178.903	-0.00054	-0.00037	0.00023
AL	-0.01397	19.74	175.963	-0.03558	0.01278	-0.01911
AS	0.00165	0.47	334.387	0.00051	-0.00322	0.00767
B	0.00246	8.76	53.550	0.00329	0.00314	0.00094
BA	0.00002	330.27	228.627	0.00000	0.00009	-0.00001
BE	0.00000	-36.62	826.423	-0.00001	0.00002	-0.00001
CA	0.01357	82.26	19.990	0.01047	0.01549	0.01475
CD	0.00007	-1.43	60.253	0.00010	0.00002	0.00008
CO	-0.00018	0.59	506.410	-0.00051	-0.00085	0.00084
CR	-0.00038	1.83	251.086	0.00061	-0.00045	-0.00129
CU	0.00107	39.23	175.363	0.00324	0.00008	-0.00011
FE	0.02154	-1.33	11.669	0.01864	0.02305	0.02294
K	-0.02349	141.68	185.421	0.02229	-0.02836	-0.06439
LI	0.00049	-160.89	140.555	0.00103	-0.00028	0.00071
MG	0.02516	22.55	12.415	0.02510	0.02831	0.02207
MN	0.00018	1.25	20.930	0.00022	0.00015	0.00016
MO	0.00150	3.02	64.620	0.00199	0.00212	0.00038
NA	-0.00082	-89.91	785.591	-0.00444	0.00660	-0.00462
NI	-0.00074	3.02	161.921	-0.00133	-0.00153	0.00064
P	-0.00009	1.07	2873.840	-0.00104	0.00276	-0.00197
PB	-0.00172	-1.24	296.476	-0.00263	-0.00630	0.00377
S	0.00161	5.98	292.758	0.00691	-0.00006	-0.00204
SB	-0.00809	1.44	60.318	-0.00942	-0.00268	-0.01216
SI	0.00061	2.80	1266.462	0.00548	0.00461	-0.00827
SN	-0.00052	1.78	291.231	-0.00120	-0.00156	0.00121
SR	0.00005	10.18	13.335	0.00004	0.00005	0.00005
TI	0.00047	26.60	75.522	0.00062	0.00006	0.00072
TL	-0.00058	1.18	234.893	0.00006	0.00034	-0.00216
V	0.00060	-9.37	94.833	0.00091	0.00095	-0.00006
Y1	5018.45635	5,018.46	0.105	5019.79222	5012.64988	5022.92694
Y2A	173559.30467	173,559.30	0.158	173818.09348	173586.68993	173273.13061
Y2R	37114.23371	37,114.23	0.606	37193.88112	36860.23543	37288.58457
ZN	-0.00006	5.03	256.719	-0.00024	-0.00002	0.00007
ZR	-0.00152	-29.81	76.354	-0.00200	-0.00020	-0.00237

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 12 Date/Time: 11/08/2013 10:59

Sample Number: **PBW** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00050	-6.34	228.957	0.00081	0.00146	-0.00077
AL	-0.00976	20.66	239.601	-0.00665	0.01191	-0.03453
AS	0.00428	0.77	108.928	0.00683	0.00711	-0.00110
B	0.00327	10.76	27.554	0.00431	0.00267	0.00283
BA	-0.00001	318.41	123.662	-0.00002	-0.00003	0.00001
BE	0.00001	-35.50	261.233	0.00002	-0.00003	0.00005
CA	0.02118	93.51	21.510	0.02175	0.01636	0.02541
CD	0.00033	-0.61	47.501	0.00025	0.00050	0.00022
CO	-0.00012	0.69	415.993	-0.00067	0.00030	0.00001
CR	0.00020	3.75	162.301	0.00032	0.00045	-0.00017
CU	0.00002	37.02	7074.397	-0.00065	-0.00116	0.00188
FE	0.01930	-2.23	34.963	0.02411	0.02220	0.01159
K	-0.04197	133.35	45.266	-0.04210	-0.02291	-0.06091
LI	-0.00007	-170.77	1937.565	-0.00003	-0.00148	0.00129
MG	0.02189	17.61	3.172	0.02266	0.02132	0.02169
MN	0.00033	3.90	92.154	0.00019	0.00067	0.00012
MO	0.00042	2.09	189.954	-0.00036	0.00125	0.00038
NA	-0.01166	-115.16	67.099	-0.00451	-0.02001	-0.01045
NI	-0.00007	3.62	297.799	0.00010	0.00000	-0.00033
P	-0.00282	0.69	116.536	-0.00553	-0.00375	0.00083
PB	-0.00029	-0.85	901.405	-0.00296	0.00221	-0.00011
S	0.00934	6.60	30.940	0.01210	0.00956	0.00634
SB	-0.00226	2.42	150.208	-0.00143	-0.00600	0.00064
SI	0.00191	3.15	457.468	0.01167	-0.00076	-0.00518
SN	-0.00163	1.40	148.315	-0.00310	-0.00294	0.00116
SR	0.00014	49.92	6.596	0.00013	0.00014	0.00014
TI	-0.00014	18.45	32.213	-0.00014	-0.00018	-0.00009
TL	-0.00016	1.26	1409.595	0.00234	-0.00195	-0.00086
V	0.00009	-11.63	2132.584	0.00233	-0.00096	-0.00110
Y1	5070.53154	5,070.53	0.279	5057.34550	5068.76416	5085.48495
Y2A	176894.37963	176,894.38	0.333	177544.40000	176742.35306	176396.38584
Y2R	37731.26177	37,731.26	0.344	37583.15000	37825.84382	37784.79150
ZN	0.00048	6.44	105.841	0.00079	0.00077	-0.00011
ZR	-0.00147	-30.13	155.516	-0.00126	-0.00384	0.00070

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 13 Date/Time: 11/08/2013 11:03

Sample Number: **LCSW** Class: **** Batch: 133095705007

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.04992	182.16	2.733	0.05115	0.05016	0.04845
AL	2.15721	325.20	0.386	2.14890	2.15716	2.16556
AS	0.14894	17.49	2.058	0.15065	0.15076	0.14540
B	2.05008	4,479.10	0.459	2.05958	2.04988	2.04077
BA	2.14460	999,338.53	0.528	2.15276	2.13168	2.14935
BE	0.05245	5,604.39	0.341	0.05255	0.05225	0.05256
CA	4.28772	5,589.38	0.430	4.26943	4.28743	4.30629
CD	0.05423	171.03	0.474	0.05414	0.05452	0.05402
CO	0.54590	957.64	0.327	0.54385	0.54717	0.54666
CR	0.21273	675.24	0.679	0.21252	0.21426	0.21140
CU	0.26660	740.72	0.357	0.26625	0.26768	0.26588
FE	1.07706	406.37	0.809	1.06705	1.08288	1.08125
K	10.54819	6,216.19	0.961	10.45208	10.65406	10.53841
LI	1.07854	13,573.99	0.280	1.07547	1.08152	1.07863
MG	2.13416	3,429.40	0.543	2.12448	2.13101	2.14700
MN	0.54321	9,441.96	0.159	0.54420	0.54282	0.54262
MO	2.17382	1,903.06	0.203	2.16878	2.17692	2.17576
NA	10.54522	22,865.16	0.080	10.53889	10.55486	10.54191
NI	0.55306	467.56	0.623	0.54910	0.55468	0.55539
P	1.10065	155.57	0.169	1.09964	1.10281	1.09952
PB	0.16728	44.42	3.254	0.16532	0.16309	0.17343
S	1.05416	81.07	1.244	1.03969	1.06527	1.05753
SB	0.60155	84.37	1.195	0.60042	0.60924	0.59499
SI	1.10149	260.20	1.095	1.10666	1.08770	1.11011
SN	4.17662	1,494.74	0.097	4.17284	4.18090	4.17610
SR	1.06353	464,591.38	0.888	1.07314	1.05425	1.06321
TI	1.07421	14,919.88	0.465	1.07919	1.07422	1.06921
TL	0.16783	27.33	0.675	0.16707	0.16729	0.16913
V	0.53817	2,076.45	0.501	0.53961	0.53984	0.53506
Y1	4980.89772	4,980.90	0.206	4981.91022	4990.61563	4970.16731
Y2A	171329.58798	171,329.59	0.405	170758.41969	172100.94424	171129.40000
Y2R	37433.26328	37,433.26	0.290	37532.48954	37450.24417	37317.05612
ZN	0.53665	1,316.79	0.156	0.53585	0.53657	0.53752
ZR	1.05838	3,103.78	0.322	1.05804	1.05516	1.06194

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 14 Date/Time: 11/08/2013 11:07

Sample Number: **7256054** Class: U*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00200	-33.75	74.619	-0.00193	-0.00353	-0.00054
AL	0.65252	107.87	3.053	0.63605	0.67466	0.64685
AS	0.00724	1.04	60.247	0.00251	0.01110	0.00811
B	0.62375	1,267.25	0.154	0.62378	0.62277	0.62469
BA	0.49388	208,706.14	0.233	0.49344	0.49301	0.49518
BE	-0.00045	-76.05	5.272	-0.00047	-0.00044	-0.00043
CA	147.36342	181,474.40	0.104	147.22345	147.33971	147.52711
CD	0.00088	3.33	71.978	0.00048	0.00055	0.00161
CO	0.00019	1.19	42.660	0.00011	0.00027	0.00020
CR	0.00605	20.04	20.493	0.00689	0.00463	0.00664
CU	0.02595	104.89	14.801	0.03012	0.02514	0.02257
FE	18.11388	6,752.96	0.565	18.05634	18.23196	18.05333
K	29.64889	16,706.23	0.225	29.58846	29.72040	29.63781
LI	0.12547	1,408.14	1.398	0.12507	0.12738	0.12394
MG	61.15209	93,596.11	0.126	61.06867	61.16777	61.21983
MN	0.98465	15,506.02	0.066	0.98453	0.98407	0.98536
MO	0.00626	4.03	21.330	0.00475	0.00729	0.00674
NA	271.59528	574,475.94	0.652	273.54971	271.13403	270.10209
NI	0.00449	6.63	23.639	0.00364	0.00416	0.00568
P	1.12237	146.45	0.416	1.12560	1.11702	1.12452
PB	0.12506	31.86	1.771	0.12464	0.12746	0.12309
S	2.36428	160.18	1.140	2.39520	2.34576	2.35186
SB	-0.01698	-1.41	40.499	-0.00905	-0.02055	-0.02135
SI	19.94852	4,430.31	0.576	19.91150	20.07731	19.85676
SN	0.01068	5.34	2.815	0.01048	0.01102	0.01053
SR	1.16698	461,823.68	0.613	1.17469	1.16058	1.16567
TI	0.02200	294.20	5.700	0.02173	0.02337	0.02090
TL	-0.00032	1.13	1312.658	0.00131	0.00276	-0.00502
V	0.00289	2.83	19.260	0.00349	0.00239	0.00280
Y1	4604.55105	4,604.55	0.209	4597.21297	4615.44431	4600.99587
Y2A	155209.31172	155,209.31	0.201	154865.74721	155476.35946	155285.82850
Y2R	36380.99236	36,380.99	0.270	36268.06748	36447.14514	36427.76445
ZN	0.08887	209.43	1.140	0.08826	0.08831	0.09004
ZR	0.00007	-24.63	1720.943	0.00103	-0.00133	0.00051

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 15 Date/Time: 11/08/2013 11:11

Sample Number: **7256054** Class: UP** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01585	38.40	3.282	0.01619	0.01612	0.01525
AL	1.69779	247.81	1.493	1.68272	1.68359	1.72705
AS	0.53941	56.21	0.079	0.53896	0.53979	0.53949
B	0.81016	1,643.68	0.399	0.80950	0.81367	0.80730
BA	0.52368	222,443.01	0.306	0.52361	0.52531	0.52211
BE	0.02079	2,002.74	0.286	0.02072	0.02079	0.02084
CA	141.94998	175,155.68	0.410	141.66842	142.61871	141.56281
CD	0.05214	154.43	0.624	0.05251	0.05196	0.05194
CO	0.10017	163.22	0.145	0.10009	0.10034	0.10008
CR	0.20886	603.79	0.620	0.20737	0.20955	0.20967
CU	0.54074	1,388.10	0.464	0.54261	0.53789	0.54172
FE	17.84569	6,662.20	0.577	17.81062	17.96163	17.76481
K	30.36927	17,131.22	0.198	30.33907	30.43839	30.33034
LI	1.12969	13,861.39	0.076	1.12930	1.13068	1.12910
MG	59.46856	91,205.68	0.536	59.40801	59.81321	59.18447
MN	1.00469	15,904.69	0.231	1.00240	1.00703	1.00466
MO	0.21213	170.91	0.798	0.21384	0.21209	0.21046
NA	260.25680	551,232.01	0.364	261.26274	259.38168	260.12597
NI	0.15550	123.89	1.222	0.15631	0.15685	0.15333
P	2.22413	290.03	0.786	2.24340	2.21971	2.20929
PB	0.61408	156.58	0.537	0.61030	0.61560	0.61635
S	2.27563	154.74	1.098	2.28335	2.29584	2.24770
SB	0.42286	62.68	1.498	0.42390	0.42861	0.41607
SI	19.14616	4,258.45	0.456	19.04828	19.21609	19.17410
SN	0.60631	202.52	0.820	0.61006	0.60819	0.60067
SR	1.13562	451,777.15	0.180	1.13358	1.13560	1.13768
TI	0.12855	1,642.97	1.005	0.12742	0.12996	0.12826
TL	0.95958	136.10	0.385	0.95541	0.96246	0.96089
V	0.10986	390.44	1.525	0.10976	0.10823	0.11158
Y1	4613.36294	4,613.36	0.196	4603.66585	4614.85109	4621.57190
Y2A	156024.52837	156,024.53	0.312	156385.38760	155471.80151	156216.39597
Y2R	36429.66958	36,429.67	0.434	36363.90000	36315.13171	36609.97704
ZN	0.21021	485.43	0.072	0.21019	0.21037	0.21007
ZR	1.02087	2,912.63	0.209	1.01929	1.02330	1.02001

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 16 Date/Time: 11/08/2013 11:15

Sample Number: **7256057** Class: D*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00343	-38.73	69.034	-0.00074	-0.00433	-0.00522
AL	0.67603	112.24	6.951	0.69422	0.62266	0.71120
AS	0.00623	0.94	79.012	0.01171	0.00217	0.00481
B	0.64485	1,310.11	0.628	0.64070	0.64504	0.64880
BA	0.51162	216,242.55	0.623	0.50878	0.51102	0.51507
BE	-0.00051	-81.70	8.007	-0.00055	-0.00047	-0.00050
CA	151.94580	189,150.16	0.246	151.58199	152.32789	151.92751
CD	0.00103	3.85	27.467	0.00071	0.00117	0.00122
CO	0.00051	1.71	106.759	0.00114	0.00022	0.00017
CR	0.00622	20.53	1.410	0.00631	0.00614	0.00620
CU	0.02274	97.23	3.196	0.02214	0.02254	0.02355
FE	18.60881	7,015.74	0.801	18.44740	18.74107	18.63796
K	30.51250	17,384.92	0.490	30.54889	30.34804	30.64057
LI	0.12794	1,455.75	1.019	0.12662	0.12797	0.12923
MG	62.96399	97,394.35	0.454	62.71593	63.27677	62.89928
MN	1.01885	16,048.03	0.804	1.01355	1.01473	1.02829
MO	0.00159	0.17	37.324	0.00213	0.00095	0.00169
NA	280.18870	599,431.43	0.461	278.72708	280.66635	281.17267
NI	0.00326	5.68	15.183	0.00359	0.00350	0.00269
P	1.17012	152.88	0.766	1.16633	1.16368	1.18036
PB	0.12477	31.86	0.624	0.12490	0.12393	0.12548
S	2.40257	162.96	0.315	2.39577	2.41071	2.40123
SB	-0.01242	-0.77	44.016	-0.01409	-0.00631	-0.01686
SI	20.68268	4,645.68	0.695	20.53159	20.81783	20.69864
SN	0.01044	5.26	20.033	0.00826	0.01062	0.01243
SR	1.20148	475,571.91	1.341	1.19482	1.18977	1.21986
TI	0.02212	295.70	2.717	0.02143	0.02249	0.02245
TL	0.00228	1.49	122.334	0.00053	0.00548	0.00081
V	0.00422	8.00	22.512	0.00312	0.00478	0.00475
Y1	4611.88162	4,611.88	0.244	4624.79022	4604.18665	4606.66800
Y2A	155248.81714	155,248.82	0.844	156352.35906	155593.33766	153800.75470
Y2R	36796.97250	36,796.97	0.376	36955.82951	36732.12857	36702.95941
ZN	0.08962	211.57	0.317	0.08945	0.08995	0.08946
ZR	0.00256	-17.67	31.892	0.00211	0.00351	0.00207

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 17 Date/Time: 11/08/2013 11:19

Sample Number: **7256055** Class: R*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05055	146.38	0.802	0.05055	0.05095	0.05014
AL	3.21725	458.05	0.494	3.23357	3.21636	3.20181
AS	0.16889	18.21	4.340	0.17505	0.16078	0.17084
B	2.83635	5,649.75	0.344	2.84638	2.83581	2.82687
BA	2.54716	1,076,170.98	0.428	2.54473	2.55908	2.53766
BE	0.05490	5,320.59	0.742	0.05493	0.05530	0.05448
CA	161.83831	199,455.30	0.402	162.19906	162.22918	161.08670
CD	0.05371	158.41	1.208	0.05297	0.05420	0.05395
CO	0.51946	839.98	0.194	0.51875	0.51902	0.52062
CR	0.21785	626.92	0.352	0.21708	0.21862	0.21784
CU	0.28977	737.36	0.984	0.28982	0.29260	0.28689
FE	19.79232	7,394.22	0.348	19.81925	19.84364	19.71406
K	42.23389	23,793.55	0.298	42.08995	42.32260	42.28913
LI	1.18797	14,604.37	0.100	1.18673	1.18810	1.18909
MG	67.13465	102,749.22	0.372	67.22831	67.32388	66.85175
MN	1.57040	24,753.49	0.052	1.57102	1.56947	1.57070
MO	2.19538	1,768.14	0.095	2.19610	2.19701	2.19302
NA	299.07282	634,202.61	0.984	298.33316	302.31451	296.57079
NI	0.52688	410.43	0.301	0.52518	0.52831	0.52715
P	2.40638	312.01	0.462	2.40575	2.39559	2.41780
PB	0.27638	69.40	1.680	0.27103	0.27929	0.27883
S	3.24514	217.73	0.589	3.26402	3.22580	3.24561
SB	0.60119	76.50	1.274	0.60982	0.59858	0.59519
SI	23.40651	5,216.83	0.573	23.38468	23.55013	23.28473
SN	4.09549	1,350.57	0.162	4.09329	4.09023	4.10294
SR	2.21927	879,055.79	0.904	2.20345	2.24182	2.21253
TI	1.12030	14,107.95	0.131	1.12198	1.11962	1.11930
TL	0.14655	22.20	1.554	0.14457	0.14605	0.14904
V	0.55181	1,935.32	0.469	0.55275	0.55380	0.54888
Y1	4589.53315	4,589.53	0.073	4591.79100	4585.66767	4591.14080
Y2A	155349.34870	155,349.35	0.236	155596.18076	154927.73945	155524.12587
Y2R	36474.17348	36,474.17	0.708	36542.90561	36188.46039	36691.15446
ZN	0.63618	1,440.85	0.135	0.63560	0.63577	0.63717
ZR	1.07526	3,072.89	0.282	1.07768	1.07626	1.07186

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 18 Date/Time: 11/08/2013 11:23

Sample Number: **7256056** Class: M*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05055	145.81	2.543	0.04970	0.05203	0.04992
AL	3.15897	452.58	0.774	3.18686	3.14126	3.14879
AS	0.16979	18.40	4.502	0.17757	0.16951	0.16229
B	2.82308	5,591.39	0.414	2.81053	2.82506	2.83366
BA	2.53507	1,065,083.39	0.198	2.53747	2.52930	2.53845
BE	0.05509	5,309.04	0.846	0.05463	0.05508	0.05556
CA	158.69538	196,641.12	0.333	158.46655	159.30036	158.31924
CD	0.05420	160.61	0.335	0.05434	0.05425	0.05399
CO	0.51900	843.54	0.272	0.51738	0.51964	0.51997
CR	0.21933	627.65	0.537	0.21798	0.22015	0.21986
CU	0.28936	731.99	0.784	0.29095	0.28676	0.29037
FE	19.41960	7,292.19	0.477	19.39269	19.52268	19.34343
K	41.45638	23,475.69	0.409	41.31666	41.40721	41.64527
LI	1.17809	14,554.07	0.381	1.17828	1.17352	1.18248
MG	65.91040	101,436.41	0.546	65.73985	66.32372	65.66765
MN	1.55609	24,390.66	0.037	1.55602	1.55669	1.55555
MO	2.20234	1,782.90	0.263	2.20396	2.20717	2.19591
NA	292.25204	622,872.91	0.805	291.52759	294.88037	290.34816
NI	0.52875	413.99	0.301	0.52962	0.52691	0.52972
P	2.37332	309.32	0.485	2.37071	2.38592	2.36334
PB	0.27600	69.64	3.553	0.27727	0.28510	0.26562
S	3.18713	215.05	0.188	3.18079	3.18794	3.19266
SB	0.60314	77.28	1.001	0.60461	0.59650	0.60831
SI	22.93611	5,137.96	0.396	22.90022	23.03952	22.86860
SN	4.07661	1,351.25	0.326	4.06408	4.09056	4.07520
SR	2.22916	878,044.40	0.359	2.21993	2.23403	2.23351
TI	1.12348	14,068.71	0.182	1.12422	1.12504	1.12116
TL	0.14828	22.56	2.990	0.14461	0.15321	0.14702
V	0.55540	1,937.31	0.183	0.55446	0.55648	0.55525
Y1	4613.06999	4,613.07	0.223	4612.82128	4602.91317	4623.47551
Y2A	154480.17159	154,480.17	0.191	154632.67347	154139.37500	154668.46631
Y2R	36657.28784	36,657.29	0.160	36713.30734	36596.16344	36662.39274
ZN	0.63341	1,441.94	0.138	0.63325	0.63435	0.63263
ZR	1.06376	3,055.03	0.204	1.06348	1.06606	1.06175

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 19 Date/Time: 11/08/2013 11:27

Sample Number: **7256054** Class: UL** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00124	-16.12	50.222	-0.00052	-0.00165	-0.00154
AL	0.12547	38.35	8.207	0.13299	0.11373	0.12969
AS	0.00366	0.68	123.703	0.00587	-0.00155	0.00667
B	0.12060	265.57	0.608	0.12145	0.12017	0.12019
BA	0.09896	45,116.98	0.044	0.09901	0.09892	0.09894
BE	-0.00011	-46.12	30.641	-0.00007	-0.00012	-0.00014
CA	28.60502	36,193.57	0.177	28.56213	28.59222	28.66071
CD	0.00059	0.71	44.280	0.00088	0.00051	0.00038
CO	-0.00010	0.73	251.193	-0.00037	0.00008	0.00000
CR	0.00116	6.47	23.560	0.00123	0.00138	0.00085
CU	0.00515	50.13	28.775	0.00680	0.00394	0.00471
FE	3.56834	1,344.58	0.571	3.54568	3.57417	3.58516
K	5.75627	3,405.05	0.505	5.75210	5.78722	5.72949
LI	0.02738	180.89	1.994	0.02795	0.02732	0.02686
MG	11.92474	18,842.60	0.180	11.91195	11.91272	11.94954
MN	0.19523	3,297.55	0.684	0.19559	0.19376	0.19635
MO	0.00792	7.90	30.490	0.00560	0.00774	0.01042
NA	53.87656	115,214.92	0.074	53.83197	53.90980	53.88789
NI	0.00183	5.00	11.863	0.00202	0.00187	0.00159
P	0.20764	29.55	1.394	0.20431	0.20913	0.20949
PB	0.02800	6.95	9.673	0.02853	0.02507	0.03041
S	0.43820	36.09	1.275	0.44401	0.43286	0.43773
SB	-0.01336	0.28	10.816	-0.01285	-0.01223	-0.01499
SI	3.86158	869.73	0.488	3.87765	3.84084	3.86626
SN	0.00232	2.73	96.689	0.00244	0.00002	0.00451
SR	0.23575	100,102.45	0.370	0.23646	0.23478	0.23601
TI	0.00634	104.53	3.589	0.00629	0.00613	0.00658
TL	0.00072	1.34	246.228	-0.00043	-0.00018	0.00278
V	0.00052	-8.98	55.017	0.00086	0.00035	0.00036
Y1	4876.30221	4,876.30	0.115	4882.79502	4872.75697	4873.35465
Y2A	166546.33596	166,546.34	0.366	165906.92921	167119.83327	166612.24541
Y2R	36803.86784	36,803.87	0.412	36861.90000	36631.69197	36918.01156
ZN	0.02173	57.78	1.633	0.02166	0.02211	0.02141
ZR	-0.00091	-27.78	263.528	-0.00358	-0.00023	0.00108

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 20 Date/Time: 11/08/2013 11:31

Sample Number: **7256054** Class: U*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00111	-15.62	118.194	-0.00248	0.00012	-0.00096
AL	0.10773	36.25	38.932	0.14168	0.12065	0.06084
AS	0.00376	0.70	127.312	-0.00111	0.00846	0.00393
B	0.12827	281.41	1.983	0.12799	0.13095	0.12588
BA	0.09896	45,058.33	0.641	0.09845	0.09877	0.09967
BE	-0.00009	-44.23	28.468	-0.00009	-0.00006	-0.00011
CA	28.20560	36,002.39	0.225	28.16285	28.27841	28.17555
CD	0.00063	0.84	5.842	0.00067	0.00061	0.00061
CO	-0.00022	0.51	314.119	-0.00075	-0.00046	0.00056
CR	0.00129	6.86	22.362	0.00146	0.00096	0.00145
CU	0.00553	51.10	16.159	0.00545	0.00468	0.00646
FE	3.52515	1,339.81	1.097	3.48194	3.55645	3.53705
K	5.71107	3,409.09	1.225	5.77635	5.71962	5.63724
LI	0.02396	139.22	9.849	0.02147	0.02617	0.02425
MG	11.80825	18,822.16	0.329	11.77421	11.85051	11.80001
MN	0.19632	3,311.42	0.342	0.19596	0.19590	0.19709
MO	0.00057	1.62	232.436	-0.00095	0.00127	0.00139
NA	53.30275	114,982.47	0.130	53.25222	53.27415	53.38189
NI	0.00116	4.47	131.140	0.00289	0.00007	0.00051
P	0.21727	31.00	0.838	0.21524	0.21778	0.21878
PB	0.03061	7.69	9.754	0.03067	0.02760	0.03357
S	0.45618	37.49	0.735	0.45840	0.45233	0.45783
SB	-0.01189	0.52	30.838	-0.01606	-0.00914	-0.01047
SI	3.80479	864.44	0.545	3.80466	3.82559	3.78414
SN	0.00102	2.28	16.550	0.00114	0.00083	0.00109
SR	0.23631	100,203.24	0.700	0.23489	0.23590	0.23812
TI	0.00501	86.60	8.734	0.00478	0.00552	0.00474
TL	-0.00190	0.96	123.855	-0.00037	-0.00071	-0.00460
V	0.00138	-5.25	64.781	0.00196	0.00035	0.00183
Y1	4896.40531	4,896.41	0.172	4902.31420	4900.14665	4886.75510
Y2A	166324.63589	166,324.64	0.362	166842.92500	166467.24465	165663.73802
Y2R	37125.28796	37,125.29	0.068	37152.35858	37121.15077	37102.35453
ZN	0.01768	48.34	1.560	0.01740	0.01795	0.01768
ZR	-0.00199	-31.19	65.346	-0.00307	-0.00055	-0.00236

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 21 Date/Time: 11/08/2013 11:34

Sample Number: **7256057** Class: DP** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01839	65.29	21.561	0.01410	0.02193	0.01913
AL	1.10552	171.46	1.145	1.09389	1.10368	1.11900
AS	0.52449	57.89	2.053	0.51404	0.52387	0.53554
B	0.33634	721.76	0.592	0.33594	0.33458	0.33850
BA	0.15047	68,246.58	0.134	0.15036	0.15035	0.15070
BE	0.02041	2,092.76	0.298	0.02044	0.02034	0.02046
CA	29.62125	37,625.89	0.212	29.54961	29.66689	29.64727
CD	0.05333	165.53	2.142	0.05234	0.05307	0.05458
CO	0.10270	177.21	1.008	0.10198	0.10223	0.10389
CR	0.20023	616.21	0.285	0.19997	0.20088	0.19984
CU	0.50908	1,386.82	0.859	0.50923	0.50464	0.51338
FE	4.03331	1,527.02	0.392	4.01829	4.03181	4.04982
K	7.66934	4,503.97	0.518	7.71102	7.66501	7.63198
LI	0.99913	12,404.66	0.367	1.00243	0.99977	0.99519
MG	12.93021	20,507.71	0.366	12.87569	12.96055	12.95439
MN	0.25902	4,362.99	0.389	0.25846	0.25842	0.26019
MO	0.20414	176.33	0.980	0.20257	0.20344	0.20639
NA	55.94520	120,131.55	0.098	55.90695	55.92036	56.00830
NI	0.15873	134.08	2.009	0.15776	0.15614	0.16229
P	1.33966	185.61	1.444	1.32017	1.33995	1.35886
PB	0.54844	147.56	1.221	0.54465	0.54451	0.55617
S	0.46076	37.81	2.794	0.44955	0.45792	0.47482
SB	0.38570	61.60	0.817	0.38221	0.38832	0.38658
SI	3.88902	880.00	0.450	3.87046	3.89138	3.90522
SN	0.61298	216.92	1.342	0.60590	0.61104	0.62200
SR	0.25795	109,213.44	0.033	0.25790	0.25789	0.25805
TI	0.10716	1,461.37	0.540	0.10780	0.10702	0.10666
TL	1.04724	157.25	1.611	1.03681	1.03821	1.06671
V	0.10172	381.35	2.096	0.10398	0.10141	0.09976
Y1	4888.03449	4,888.03	0.129	4895.25523	4885.29510	4883.55316
Y2A	166065.15956	166,065.16	0.433	165336.94567	166773.60000	166084.93301
Y2R	36954.37163	36,954.37	0.192	36872.82630	37003.22049	36987.06810
ZN	0.14412	352.72	1.603	0.14288	0.14269	0.14678
ZR	0.97400	2,817.77	0.377	0.97697	0.97514	0.96989

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 22

Date/Time: 11/08/2013 11:38

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50798	1,692.59	0.122	0.50754	0.50869	0.50773
AL	24.92589	3,360.12	0.348	25.02592	24.87463	24.87712
AS	0.50938	56.48	1.147	0.50842	0.51564	0.50408
B	0.49125	1,090.15	0.380	0.49161	0.48922	0.49291
BA	0.50894	231,151.55	0.092	0.50947	0.50878	0.50858
BE	0.48477	50,720.20	0.006	0.48476	0.48475	0.48480
CA	24.83260	31,349.65	0.555	24.97548	24.70057	24.82176
CD	0.50656	1,587.35	0.102	0.50597	0.50677	0.50695
CO	0.49994	860.92	0.309	0.49816	0.50081	0.50086
CR	0.49596	1,528.94	0.067	0.49587	0.49633	0.49568
CU	0.50398	1,371.09	0.526	0.50120	0.50426	0.50648
FE	24.87984	9,338.03	0.700	25.00569	24.68094	24.95289
K	25.00010	14,232.79	0.142	24.95993	25.02675	25.01362
LI	0.50548	6,151.57	0.223	0.50447	0.50528	0.50670
MG	24.45352	38,338.66	0.835	24.64581	24.23943	24.47534
MN	0.50590	8,561.79	0.122	0.50532	0.50583	0.50654
MO	0.52874	455.90	0.744	0.52429	0.53015	0.53177
NA	24.75844	52,743.58	0.053	24.74428	24.77037	24.76065
NI	0.50341	417.99	0.345	0.50430	0.50141	0.50453
P	0.53157	74.62	1.028	0.52691	0.53022	0.53758
PB	0.50363	137.97	0.616	0.50107	0.50709	0.50274
S	24.80555	1,729.29	0.477	24.66979	24.88621	24.86065
SB	0.52508	84.92	0.527	0.52202	0.52741	0.52580
SI	25.52802	5,719.00	0.785	25.69755	25.30701	25.57949
SN	0.49999	177.61	0.801	0.49540	0.50284	0.50172
SR	0.50084	213,025.35	0.112	0.50126	0.50106	0.50020
TI	0.52296	7,109.04	0.230	0.52330	0.52163	0.52395
TL	0.50510	76.96	0.323	0.50337	0.50662	0.50531
V	0.51114	1,994.19	0.264	0.51038	0.51270	0.51033
Y1	4897.07104	4,897.07	0.326	4913.89685	4882.17261	4895.14366
Y2A	166819.29186	166,819.29	0.256	166888.17500	166362.10774	167207.59285
Y2R	36695.82756	36,695.83	0.912	36320.51538	36803.69245	36963.27487
ZN	0.50518	1,226.52	0.322	0.50366	0.50690	0.50497
ZR	0.50747	1,445.82	0.432	0.50927	0.50503	0.50811

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 23

Date/Time: 11/08/2013 11:42

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00054	-9.92	157.349	-0.00043	-0.00145	0.00025
AL	0.00854	22.88	256.495	-0.00508	0.03379	-0.00310
AS	0.00500	0.84	70.824	0.00128	0.00539	0.00833
B	0.00308	10.14	65.014	0.00146	0.00246	0.00531
BA	0.00002	328.19	24.740	0.00002	0.00001	0.00002
BE	-0.00001	-37.53	469.590	-0.00006	0.00004	-0.00001
CA	-0.00046	64.57	45.063	-0.00060	-0.00055	-0.00022
CD	-0.00035	-2.76	79.334	-0.00008	-0.00063	-0.00034
CO	-0.00045	0.10	48.278	-0.00039	-0.00070	-0.00027
CR	0.00024	3.82	440.337	-0.00017	-0.00056	0.00146
CU	0.00075	38.40	203.150	0.00221	-0.00084	0.00089
FE	0.02276	-0.86	33.144	0.01489	0.02345	0.02992
K	-0.00686	151.72	292.527	-0.00916	-0.02567	0.01426
LI	-0.00087	-178.69	21.439	-0.00074	-0.00078	-0.00108
MG	0.01211	1.65	26.445	0.00894	0.01534	0.01204
MN	0.00025	2.44	45.156	0.00034	0.00012	0.00027
MO	0.00248	3.88	41.857	0.00161	0.00220	0.00362
NA	0.02593	-32.24	7.939	0.02640	0.02367	0.02770
NI	0.00032	3.91	276.672	0.00074	-0.00069	0.00090
P	-0.00032	1.03	375.647	0.00066	0.00004	-0.00164
PB	0.00060	-0.60	219.771	0.00013	-0.00042	0.00209
S	-0.00188	5.72	417.259	-0.01029	0.00527	-0.00063
SB	0.00069	2.87	576.079	0.00181	0.00401	-0.00375
SI	0.00956	4.85	71.318	0.00347	0.01693	0.00829
SN	0.00004	1.98	2737.220	0.00123	-0.00068	-0.00043
SR	0.00010	31.48	7.533	0.00010	0.00010	0.00009
TI	0.00015	22.11	40.971	0.00019	0.00008	0.00018
TL	0.00261	1.67	114.938	0.00599	0.00027	0.00156
V	0.00001	-11.88	1863.003	0.00010	-0.00022	0.00015
Y1	5012.67510	5,012.68	0.200	5022.62762	5002.60791	5012.78977
Y2A	173811.32946	173,811.33	0.113	173586.63046	173951.17149	173896.18644
Y2R	37243.68365	37,243.68	0.378	37199.20239	37130.56165	37401.28691
ZN	-0.00014	4.86	56.166	-0.00014	-0.00022	-0.00006
ZR	-0.00140	-29.56	119.406	-0.00328	-0.00006	-0.00086

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 24 Date/Time: 11/08/2013 11:46

Sample Number: **7256057** Class: D*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00038	-13.36	89.124	-0.00072	-0.00005	-0.00035
AL	0.11411	37.29	23.477	0.08504	0.13780	0.11949
AS	0.00159	0.46	137.660	0.00124	-0.00040	0.00394
B	0.12884	284.10	0.304	0.12841	0.12896	0.12917
BA	0.10305	47,122.29	0.292	0.10271	0.10324	0.10321
BE	-0.00011	-46.92	28.870	-0.00008	-0.00012	-0.00014
CA	29.40788	37,716.34	0.616	29.22158	29.58324	29.41882
CD	0.00055	0.60	76.407	0.00019	0.00045	0.00101
CO	0.00008	1.02	688.517	0.00019	-0.00050	0.00054
CR	0.00183	8.57	36.569	0.00204	0.00108	0.00237
CU	0.00614	53.02	11.389	0.00539	0.00625	0.00677
FE	3.63448	1,388.51	1.233	3.59200	3.68129	3.63015
K	5.85341	3,507.62	1.098	5.84790	5.79205	5.92028
LI	0.02525	156.39	5.208	0.02373	0.02595	0.02605
MG	12.31409	19,723.08	1.006	12.17420	12.41010	12.35796
MN	0.20272	3,434.99	0.542	0.20150	0.20364	0.20300
MO	-0.00080	0.42	102.211	-0.00133	-0.00120	0.00014
NA	55.52842	120,385.37	0.013	55.53106	55.51997	55.53423
NI	0.00185	5.05	78.095	0.00177	0.00045	0.00333
P	0.22005	31.48	1.525	0.22028	0.21659	0.22329
PB	0.02847	7.14	14.053	0.02945	0.03190	0.02407
S	0.45688	37.65	1.894	0.45163	0.45213	0.46687
SB	-0.00975	0.85	0.785	-0.00977	-0.00966	-0.00981
SI	3.94430	900.51	1.522	3.87864	3.99638	3.95788
SN	0.00210	2.66	44.328	0.00120	0.00204	0.00305
SR	0.24514	104,421.78	0.160	0.24468	0.24540	0.24532
TI	0.00529	90.76	5.557	0.00540	0.00495	0.00551
TL	-0.00019	1.21	124.111	-0.00040	0.00007	-0.00025
V	0.00069	-7.92	79.756	0.00084	0.00008	0.00115
Y1	4911.90160	4,911.90	0.559	4916.62227	4936.69511	4882.38742
Y2A	167079.29399	167,079.29	0.210	167348.15553	166682.08367	167207.64277
Y2R	37310.63653	37,310.64	0.116	37277.69446	37294.45722	37359.75792
ZN	0.01757	48.28	1.052	0.01775	0.01738	0.01758
ZR	-0.00302	-34.37	20.779	-0.00370	-0.00289	-0.00246

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 25 Date/Time: 11/08/2013 11:49

Sample Number: **7256055** Class: R*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01035	25.74	20.525	0.01098	0.00799	0.01209
AL	0.61493	106.59	7.004	0.56847	0.65354	0.62277
AS	0.03471	4.17	3.561	0.03368	0.03437	0.03608
B	0.56505	1,200.02	0.123	0.56473	0.56457	0.56585
BA	0.51877	233,481.74	0.200	0.51848	0.51790	0.51992
BE	0.01059	1,063.70	0.302	0.01058	0.01062	0.01055
CA	31.03262	39,575.65	0.380	30.97902	30.95104	31.16781
CD	0.01175	35.40	1.337	0.01159	0.01176	0.01191
CO	0.10737	184.53	1.901	0.10582	0.10660	0.10968
CR	0.04299	133.98	3.134	0.04226	0.04454	0.04217
CU	0.05769	183.94	1.724	0.05679	0.05753	0.05876
FE	3.83631	1,458.20	0.897	3.82848	3.80651	3.87394
K	8.10751	4,772.64	0.951	8.02307	8.12524	8.17422
LI	0.23155	2,761.69	0.977	0.23184	0.22916	0.23365
MG	12.97334	20,662.67	0.452	13.00084	12.90602	13.01316
MN	0.31391	5,264.04	0.131	0.31436	0.31383	0.31355
MO	0.41892	358.68	1.468	0.41213	0.42054	0.42410
NA	58.76915	126,734.12	0.466	58.45594	58.88929	58.96223
NI	0.11148	94.75	2.035	0.10955	0.11093	0.11398
P	0.47362	65.88	1.256	0.46756	0.47385	0.47946
PB	0.05968	15.29	9.468	0.05724	0.06614	0.05566
S	0.63314	49.57	0.906	0.63309	0.62744	0.63891
SB	0.10833	16.36	5.366	0.11489	0.10629	0.10381
SI	4.41967	1,004.45	1.212	4.38806	4.38944	4.48152
SN	0.85241	299.23	1.509	0.83940	0.85271	0.86512
SR	0.45739	192,789.12	0.176	0.45803	0.45649	0.45765
TI	0.21891	2,948.92	0.319	0.21970	0.21840	0.21862
TL	0.03268	6.19	11.233	0.03509	0.03449	0.02845
V	0.10718	391.36	0.527	0.10778	0.10711	0.10666
Y1	4860.94888	4,860.95	0.287	4873.29848	4845.84999	4863.69817
Y2A	165316.16226	165,316.16	0.355	165445.59353	165827.66893	164675.22433
Y2R	37110.65456	37,110.65	0.164	37040.53582	37148.78462	37142.64324
ZN	0.12838	312.01	2.127	0.12577	0.12817	0.13122
ZR	0.19518	546.80	0.785	0.19358	0.19534	0.19663

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 26 Date/Time: 11/08/2013 11:53

Sample Number: **7256056** Class: M*** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00943	22.67	19.301	0.00765	0.00935	0.01129
AL	0.62449	107.53	3.250	0.61810	0.60815	0.64721
AS	0.03138	3.81	3.168	0.03252	0.03070	0.03092
B	0.55799	1,177.95	0.149	0.55881	0.55803	0.55715
BA	0.51242	229,260.87	0.265	0.51274	0.51093	0.51359
BE	0.01045	1,043.64	0.298	0.01042	0.01047	0.01047
CA	30.26580	38,487.79	0.279	30.26216	30.18323	30.35200
CD	0.01144	34.42	1.477	0.01148	0.01125	0.01159
CO	0.10452	179.71	1.671	0.10272	0.10463	0.10621
CR	0.04239	131.37	3.793	0.04064	0.04381	0.04271
CU	0.05557	177.29	2.575	0.05575	0.05691	0.05406
FE	3.73719	1,416.09	0.320	3.72623	3.73538	3.74997
K	7.98264	4,687.55	0.406	8.01904	7.97195	7.95692
LI	0.23013	2,735.63	1.164	0.23178	0.23157	0.22704
MG	12.61698	20,037.83	0.286	12.61323	12.58293	12.65480
MN	0.30904	5,151.44	0.477	0.30770	0.30878	0.31062
MO	0.41458	355.05	0.342	0.41326	0.41440	0.41608
NA	57.58837	123,815.78	0.259	57.62981	57.42283	57.71247
NI	0.10828	92.15	1.730	0.10615	0.10901	0.10968
P	0.45793	63.74	0.396	0.45616	0.45979	0.45786
PB	0.05652	14.44	9.612	0.06185	0.05099	0.05671
S	0.61375	48.23	0.146	0.61458	0.61388	0.61280
SB	0.10826	16.46	3.345	0.10798	0.10479	0.11201
SI	4.29290	972.80	0.972	4.27580	4.26246	4.34044
SN	0.82442	289.52	1.138	0.81750	0.82066	0.83510
SR	0.44888	188,075.77	0.437	0.44819	0.44735	0.45109
TI	0.21691	2,904.75	0.636	0.21534	0.21746	0.21792
TL	0.03341	6.29	7.053	0.03129	0.03595	0.03298
V	0.10540	382.23	1.470	0.10485	0.10419	0.10714
Y1	4861.76314	4,861.76	0.071	4860.76903	4865.60418	4858.91620
Y2A	164333.82363	164,333.82	0.318	164042.68049	164936.27842	164022.51197
Y2R	37000.49376	37,000.49	0.535	37068.42210	37155.65850	36777.40068
ZN	0.12471	303.28	0.612	0.12393	0.12474	0.12545
ZR	0.19779	552.79	1.234	0.19990	0.19512	0.19836

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 27 Date/Time: 11/08/2013 11:57

Sample Number: **7256057** Class: DL** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00002	-8.78	9975.842	0.00022	0.00139	-0.00165
AL	0.03048	25.82	74.456	0.05317	0.03048	0.00778
AS	0.00678	1.04	34.738	0.00407	0.00825	0.00804
B	0.02816	65.70	5.467	0.02714	0.02741	0.02993
BA	0.02116	10,108.12	0.919	0.02103	0.02138	0.02106
BE	-0.00004	-40.08	154.410	0.00003	-0.00008	-0.00008
CA	5.98495	7,719.24	0.093	5.98165	5.99138	5.98182
CD	0.00043	-0.18	58.151	0.00050	0.00015	0.00063
CO	-0.00016	0.61	71.677	-0.00025	-0.00003	-0.00020
CR	-0.00039	1.75	124.311	-0.00046	0.00012	-0.00084
CU	0.00169	40.55	172.416	0.00196	-0.00135	0.00445
FE	0.74128	274.75	1.471	0.73790	0.73247	0.75347
K	1.22587	854.54	3.196	1.27111	1.20333	1.20316
LI	0.00396	-116.46	27.912	0.00483	0.00434	0.00272
MG	2.51919	4,021.95	0.291	2.51093	2.52171	2.52492
MN	0.04149	715.09	0.627	0.04136	0.04133	0.04179
MO	0.00498	5.95	20.525	0.00421	0.00460	0.00614
NA	11.33495	24,409.67	0.170	11.32409	11.32355	11.35721
NI	0.00047	4.01	217.781	-0.00044	0.00028	0.00157
P	0.04315	7.14	6.082	0.04031	0.04548	0.04365
PB	0.00784	1.43	30.275	0.00964	0.00874	0.00515
S	0.08195	11.67	3.185	0.08356	0.07894	0.08335
SB	-0.00793	1.40	30.445	-0.00537	-0.00827	-0.01016
SI	0.78068	179.71	0.841	0.77600	0.77785	0.78818
SN	0.00086	2.27	106.232	0.00121	0.00153	-0.00018
SR	0.05013	21,753.27	0.633	0.04995	0.05050	0.04995
TI	0.00112	35.03	29.227	0.00149	0.00086	0.00100
TL	-0.00269	0.85	86.841	-0.00402	-0.00405	0.00001
V	0.00064	-9.08	163.222	0.00173	-0.00034	0.00052
Y1	4995.75568	4,995.76	0.156	4999.34403	4986.80056	5001.12244
Y2A	170280.78981	170,280.79	0.757	170680.08390	168839.98404	171322.30148
Y2R	37167.47042	37,167.47	0.245	37156.47464	37082.56697	37263.36965
ZN	0.00306	12.86	6.258	0.00293	0.00328	0.00297
ZR	-0.00032	-26.33	554.655	0.00126	0.00004	-0.00228

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 28 Date/Time: 11/08/2013 12:01

Sample Number: **7256048** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00259	-41.47	91.929	-0.00013	-0.00276	-0.00489
AL	0.00507	21.95	429.961	-0.01530	0.02804	0.00246
AS	0.04310	4.82	21.139	0.05186	0.03368	0.04377
B	0.36924	784.52	0.434	0.36759	0.36935	0.37079
BA	0.55080	236,646.26	0.249	0.55225	0.54953	0.55063
BE	-0.00023	-55.48	19.583	-0.00026	-0.00018	-0.00024
CA	67.91618	84,718.95	0.178	67.84718	68.05546	67.84590
CD	0.00066	3.31	42.652	0.00062	0.00096	0.00040
CO	0.00030	1.34	308.039	0.00083	-0.00077	0.00085
CR	0.00125	6.39	131.567	0.00101	0.00299	-0.00026
CU	0.00164	40.99	48.037	0.00154	0.00091	0.00247
FE	22.71387	8,482.85	0.997	22.75940	22.91401	22.46821
K	14.76917	8,423.40	0.352	14.76492	14.71944	14.82316
LI	0.03730	307.41	4.330	0.03875	0.03556	0.03757
MG	26.67302	41,547.87	0.224	26.68853	26.72358	26.60695
MN	0.90092	14,426.05	0.296	0.90330	0.89805	0.90141
MO	0.00029	0.61	319.926	-0.00049	0.00004	0.00133
NA	242.58118	514,632.83	0.869	240.27652	244.40948	243.05756
NI	0.00124	4.11	50.423	0.00075	0.00194	0.00102
P	0.44066	58.88	1.007	0.44090	0.43610	0.44497
PB	0.00847	2.24	33.731	0.00874	0.01118	0.00549
S	0.95845	69.25	1.336	0.97256	0.94757	0.95523
SB	-0.01383	0.04	22.506	-0.01665	-0.01049	-0.01436
SI	15.70450	3,498.79	0.716	15.70410	15.81708	15.59232
SN	-0.00033	1.72	415.749	0.00007	0.00079	-0.00185
SR	0.58934	237,149.30	0.208	0.59060	0.58814	0.58928
TI	0.00407	70.01	1.968	0.00398	0.00413	0.00409
TL	-0.00550	0.36	75.684	-0.00977	-0.00145	-0.00527
V	0.00081	-4.31	55.863	0.00084	0.00125	0.00034
Y1	4667.08964	4,667.09	0.174	4658.13466	4673.92681	4669.20744
Y2A	157821.96937	157,821.97	0.235	157394.46885	158049.24696	158022.19230
Y2R	36490.17242	36,490.17	0.413	36648.16198	36474.67565	36347.67964
ZN	0.00618	25.61	6.400	0.00606	0.00585	0.00662
ZR	-0.00044	-26.18	401.007	-0.00218	-0.00043	0.00131

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 29 Date/Time: 11/08/2013 12:05

Sample Number: **7256048** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00203	-19.96	75.211	-0.00065	-0.00366	-0.00177
AL	0.00948	23.04	292.448	0.00595	-0.01631	0.03878
AS	0.01105	1.51	69.267	0.00227	0.01632	0.01455
B	0.07604	173.62	0.969	0.07625	0.07522	0.07665
BA	0.11136	51,068.20	0.334	0.11174	0.11133	0.11099
BE	-0.00008	-43.87	17.400	-0.00009	-0.00009	-0.00007
CA	13.17774	16,962.05	0.331	13.20381	13.12738	13.20201
CD	0.00030	-0.08	20.645	0.00034	0.00034	0.00023
CO	-0.00028	0.40	140.409	0.00010	-0.00025	-0.00069
CR	-0.00062	1.02	96.165	-0.00015	-0.00041	-0.00128
CU	0.00021	36.40	599.647	0.00018	-0.00103	0.00147
FE	4.39404	1,679.61	0.455	4.39154	4.37540	4.41519
K	2.88347	1,806.28	0.598	2.86403	2.89692	2.88946
LI	0.00781	-67.03	1.587	0.00793	0.00769	0.00782
MG	5.23271	8,392.26	0.858	5.28225	5.19462	5.22128
MN	0.18070	3,072.18	0.568	0.18184	0.17986	0.18038
MO	-0.00055	0.95	96.141	0.00004	-0.00072	-0.00097
NA	47.95522	103,912.59	0.372	47.92596	47.79348	48.14622
NI	0.00080	4.21	87.429	0.00012	0.00152	0.00077
P	0.08637	13.09	4.890	0.08165	0.08980	0.08766
PB	0.00478	0.71	90.073	0.00965	0.00146	0.00323
S	0.18561	18.88	7.551	0.17532	0.17994	0.20157
SB	-0.00785	1.38	47.490	-0.00380	-0.01114	-0.00862
SI	2.97537	679.67	0.374	2.98160	2.96252	2.98198
SN	-0.00212	1.19	41.941	-0.00255	-0.00110	-0.00271
SR	0.11891	50,821.76	0.437	0.11947	0.11882	0.11845
TI	0.00084	30.64	58.812	0.00028	0.00100	0.00123
TL	0.00039	1.30	968.797	-0.00053	-0.00281	0.00450
V	0.00082	-7.39	75.865	0.00147	0.00078	0.00022
Y1	4947.39182	4,947.39	0.170	4956.37079	4946.05649	4939.74820
Y2A	167654.94775	167,654.95	0.762	166420.75425	167571.90000	168972.18900
Y2R	37295.28802	37,295.29	0.587	37059.02500	37335.45029	37491.38878
ZN	0.00083	8.50	14.504	0.00069	0.00092	0.00087
ZR	-0.00332	-35.25	15.659	-0.00301	-0.00392	-0.00304

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 30 Date/Time: 11/08/2013 12:08

Sample Number: **7256062** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-7.43	883.517	-0.00130	0.00001	0.00182
AL	-0.03286	17.46	100.107	-0.00873	-0.07034	-0.01953
AS	0.00610	0.98	93.907	0.01262	0.00379	0.00189
B	0.00278	9.56	72.132	0.00505	0.00202	0.00126
BA	0.00000	323.45	472.701	-0.00001	0.00000	0.00001
BE	-0.00002	-39.26	246.488	-0.00006	0.00004	-0.00005
CA	0.01917	90.77	36.148	0.01135	0.02160	0.02455
CD	0.00009	-1.38	378.164	-0.00020	0.00001	0.00045
CO	-0.00035	0.29	102.443	-0.00076	-0.00019	-0.00010
CR	-0.00052	1.38	273.213	-0.00027	0.00076	-0.00206
CU	-0.00023	36.03	819.640	0.00128	0.00036	-0.00233
FE	0.01965	-2.10	23.488	0.01457	0.02078	0.02359
K	0.03803	179.57	158.357	0.09899	-0.02142	0.03652
LI	0.00338	-126.13	59.508	0.00508	0.00390	0.00116
MG	0.01123	0.23	9.365	0.01160	0.01004	0.01204
MN	0.00022	1.95	37.157	0.00031	0.00016	0.00018
MO	0.00131	2.88	34.580	0.00079	0.00156	0.00159
NA	0.03628	-9.87	27.579	0.03502	0.04685	0.02696
NI	-0.00004	3.64	395.420	-0.00011	-0.00016	0.00015
P	0.00150	1.30	173.585	0.00377	-0.00135	0.00209
PB	0.00048	-0.64	658.052	0.00094	0.00334	-0.00286
S	0.00342	6.16	312.687	-0.00801	0.00508	0.01319
SB	-0.00276	2.33	113.209	0.00060	-0.00559	-0.00330
SI	0.00046	2.82	1242.802	0.00685	-0.00388	-0.00161
SN	-0.00161	1.40	119.564	-0.00272	-0.00271	0.00061
SR	0.00017	65.94	15.072	0.00020	0.00015	0.00017
TI	-0.00008	19.10	218.584	-0.00022	-0.00013	0.00012
TL	-0.00221	0.94	110.096	-0.00216	0.00020	-0.00467
V	0.00025	-10.95	417.760	0.00142	-0.00054	-0.00013
Y1	5060.01521	5,060.02	0.207	5061.22469	5048.99347	5069.82747
Y2A	175543.91072	175,543.91	0.072	175423.35730	175533.44965	175674.92522
Y2R	37693.62165	37,693.62	0.921	37996.77822	37769.26729	37314.81943
ZN	0.01045	31.00	2.340	0.01069	0.01047	0.01020
ZR	-0.00107	-28.95	187.746	-0.00083	-0.00320	0.00081

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 31 Date/Time: 11/08/2013 12:12

Sample Number: **7256065** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00344	-38.37	27.047	-0.00249	-0.00436	-0.00348
AL	0.61621	102.40	4.275	0.60447	0.64639	0.59779
AS	0.01077	1.40	57.562	0.00977	0.01741	0.00513
B	0.65830	1,325.97	0.435	0.65544	0.65829	0.66117
BA	0.51409	215,583.35	0.146	0.51349	0.51385	0.51494
BE	-0.00046	-76.77	9.520	-0.00042	-0.00046	-0.00051
CA	156.00979	190,740.99	0.099	156.11297	155.83254	156.08386
CD	0.00093	3.51	30.036	0.00099	0.00118	0.00063
CO	0.00092	2.35	58.339	0.00064	0.00059	0.00154
CR	0.00585	19.33	17.372	0.00609	0.00474	0.00673
CU	0.02008	90.21	6.623	0.02151	0.01985	0.01888
FE	18.43683	6,830.60	0.276	18.37899	18.47430	18.45721
K	31.53163	17,648.33	0.266	31.48322	31.48313	31.62855
LI	0.13231	1,484.82	0.113	0.13239	0.13241	0.13214
MG	64.54809	98,043.62	0.112	64.62781	64.48655	64.52991
MN	1.03990	16,251.43	0.200	1.03957	1.04212	1.03800
MO	-0.00023	-1.37	466.976	-0.00072	-0.00100	0.00102
NA	289.52413	608,641.20	1.116	288.65172	286.82008	293.10060
NI	0.00419	6.34	16.249	0.00482	0.00347	0.00428
P	1.18949	154.06	0.509	1.19614	1.18803	1.18430
PB	0.10097	25.57	7.382	0.10099	0.10841	0.09350
S	2.00649	135.87	0.404	2.01477	2.00614	1.99855
SB	-0.01545	-1.25	14.114	-0.01770	-0.01529	-0.01335
SI	21.13855	4,665.64	0.484	21.02760	21.22934	21.15872
SN	0.00855	4.60	36.040	0.00596	0.01195	0.00772
SR	1.24055	487,206.90	0.380	1.23512	1.24300	1.24353
TI	0.01883	252.38	0.799	0.01866	0.01887	0.01896
TL	-0.00231	0.84	205.612	0.00283	-0.00321	-0.00656
V	0.00296	3.43	82.804	0.00458	0.00014	0.00416
Y1	4572.24289	4,572.24	0.093	4567.36639	4575.26330	4574.09899
Y2A	154028.28035	154,028.28	0.155	154303.62855	153906.01259	153875.19992
Y2R	36157.65330	36,157.65	0.397	36049.86025	36320.37019	36102.72945
ZN	0.08229	193.39	0.922	0.08276	0.08269	0.08141
ZR	-0.00087	-27.16	108.077	-0.00005	-0.00066	-0.00189

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 32 Date/Time: 11/08/2013 12:16

Sample Number: **7256065** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00023	-12.53	402.798	-0.00114	0.00070	-0.00024
AL	0.08814	33.54	33.407	0.09942	0.11027	0.05472
AS	-0.00175	0.09	129.988	-0.00358	-0.00244	0.00079
B	0.12740	280.08	1.697	0.12985	0.12661	0.12575
BA	0.09810	44,787.13	0.292	0.09797	0.09791	0.09843
BE	-0.00010	-45.32	20.645	-0.00008	-0.00012	-0.00009
CA	28.51647	36,362.23	0.193	28.48733	28.57995	28.48214
CD	0.00079	1.30	38.345	0.00047	0.00082	0.00107
CO	0.00005	0.97	1981.015	-0.00108	0.00061	0.00062
CR	0.00074	5.21	203.561	-0.00085	0.00216	0.00092
CU	0.00396	47.08	9.900	0.00351	0.00417	0.00421
FE	3.40469	1,292.52	0.271	3.41440	3.39608	3.40359
K	5.76545	3,436.81	0.593	5.78408	5.72602	5.78626
LI	0.02471	148.55	7.880	0.02664	0.02274	0.02474
MG	11.91035	18,966.03	0.269	11.93068	11.92693	11.87344
MN	0.19587	3,312.53	0.269	0.19647	0.19557	0.19556
MO	-0.00214	-0.72	23.202	-0.00270	-0.00197	-0.00175
NA	54.07438	116,536.75	0.262	53.91177	54.16944	54.14194
NI	0.00085	4.21	62.218	0.00103	0.00125	0.00025
P	0.21704	30.95	1.045	0.21752	0.21457	0.21903
PB	0.02475	6.09	11.746	0.02512	0.02167	0.02745
S	0.36542	31.17	2.920	0.35690	0.36197	0.37739
SB	-0.00715	1.28	60.863	-0.00603	-0.00347	-0.01195
SI	3.80102	862.74	0.746	3.76986	3.82530	3.80788
SN	-0.00105	1.55	91.943	-0.00197	-0.00004	-0.00114
SR	0.23820	101,272.31	0.466	0.23856	0.23696	0.23909
TI	0.00492	85.62	8.417	0.00540	0.00464	0.00473
TL	0.00227	1.58	120.997	0.00522	0.00178	-0.00020
V	0.00191	-3.03	49.114	0.00300	0.00134	0.00141
Y1	4894.82542	4,894.83	0.376	4914.05438	4893.07554	4877.34635
Y2A	166759.80821	166,759.81	0.279	166634.39624	167274.29655	166370.73183
Y2R	37089.80414	37,089.80	0.313	37096.11355	36970.69378	37202.60510
ZN	0.01489	41.62	2.399	0.01459	0.01528	0.01478
ZR	-0.00202	-31.24	92.116	-0.00227	-0.00004	-0.00373

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 33 Date/Time: 11/08/2013 12:20

Sample Number: **7263051** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00002	-8.99	3882.757	0.00029	0.00135	-0.00159
AL	0.47405	86.75	5.772	0.45376	0.46321	0.50516
AS	0.00296	0.62	110.478	0.00450	0.00518	-0.00080
B	0.02459	59.11	2.439	0.02528	0.02427	0.02422
BA	0.03368	16,148.04	0.101	0.03372	0.03365	0.03368
BE	-0.00003	-39.89	64.371	-0.00003	-0.00006	-0.00001
CA	9.30676	12,071.13	0.313	9.32335	9.27318	9.32376
CD	0.00049	0.04	77.937	0.00051	0.00086	0.00010
CO	-0.00025	0.49	206.945	-0.00062	-0.00048	0.00035
CR	0.00040	4.31	28.231	0.00053	0.00033	0.00034
CU	0.00631	53.91	18.713	0.00534	0.00762	0.00596
FE	0.89299	335.92	0.796	0.89152	0.88672	0.90071
K	0.90378	676.89	3.060	0.87185	0.91938	0.92010
LI	-0.00001	-167.70	4872.605	0.00070	0.00002	-0.00073
MG	3.76526	6,071.39	0.383	3.76816	3.74962	3.77801
MN	0.02359	411.94	0.933	0.02384	0.02341	0.02353
MO	-0.00001	1.51	7632.741	-0.00066	-0.00025	0.00087
NA	5.60945	12,144.18	0.084	5.61489	5.60708	5.60636
NI	0.00074	4.25	111.115	0.00122	0.00122	-0.00021
P	0.10945	16.49	1.598	0.10921	0.11130	0.10783
PB	0.01297	2.89	18.229	0.01058	0.01531	0.01302
S	0.88351	68.57	0.180	0.88267	0.88251	0.88534
SB	-0.00704	1.52	32.887	-0.00861	-0.00438	-0.00811
SI	0.63254	147.42	0.495	0.63191	0.62977	0.63593
SN	-0.00169	1.36	15.939	-0.00195	-0.00141	-0.00171
SR	0.03070	13,517.95	0.245	0.03068	0.03063	0.03078
TI	0.01339	207.19	2.748	0.01335	0.01303	0.01377
TL	0.00187	1.55	156.040	-0.00096	0.00171	0.00485
V	0.00264	-0.71	23.730	0.00242	0.00216	0.00335
Y1	5003.81998	5,003.82	0.265	4994.45222	5019.00747	4998.00027
Y2A	172861.13800	172,861.14	0.266	173201.67963	173043.96947	172337.76489
Y2R	37503.75373	37,503.75	0.109	37494.39629	37548.49590	37468.36898
ZN	0.02265	60.67	3.056	0.02276	0.02191	0.02328
ZR	-0.00196	-31.41	39.946	-0.00286	-0.00158	-0.00144

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 34

Date/Time: 11/08/2013 12:24

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51222	1,692.30	0.459	0.51463	0.51209	0.50993
AL	24.92018	3,328.13	0.419	25.03686	24.83558	24.88811
AS	0.50263	55.43	0.547	0.50381	0.49949	0.50460
B	0.49368	1,085.89	0.792	0.49525	0.48922	0.49655
BA	0.50854	228,987.44	0.203	0.50736	0.50930	0.50896
BE	0.48589	50,400.83	0.192	0.48525	0.48696	0.48545
CA	24.84326	31,071.85	0.226	24.87379	24.77859	24.87742
CD	0.50574	1,576.04	0.090	0.50522	0.50598	0.50602
CO	0.49875	854.13	0.215	0.49752	0.49953	0.49918
CR	0.49774	1,521.26	0.388	0.49792	0.49957	0.49572
CU	0.50680	1,366.76	0.482	0.50453	0.50648	0.50939
FE	24.85013	9,240.30	0.306	24.89066	24.76243	24.89729
K	24.95496	14,074.95	0.485	24.93297	24.84648	25.08545
LI	0.50542	6,093.39	0.402	0.50323	0.50725	0.50578
MG	24.45280	37,981.92	0.283	24.49597	24.37295	24.48948
MN	0.50821	8,527.16	0.139	0.50828	0.50888	0.50747
MO	0.51994	445.86	0.499	0.52075	0.52203	0.51704
NA	24.74670	52,227.41	0.048	24.74002	24.76031	24.73977
NI	0.50388	416.07	0.268	0.50241	0.50416	0.50507
P	0.52359	73.12	0.796	0.51881	0.52553	0.52644
PB	0.50616	137.90	1.279	0.49875	0.50899	0.51073
S	24.66656	1,710.16	0.131	24.70162	24.66004	24.63801
SB	0.51491	82.86	0.604	0.51223	0.51832	0.51419
SI	25.48138	5,655.51	0.290	25.42867	25.44952	25.56596
SN	0.49558	175.10	0.331	0.49419	0.49740	0.49516
SR	0.50162	211,528.54	0.143	0.50160	0.50235	0.50092
TI	0.52552	7,082.47	0.508	0.52471	0.52850	0.52334
TL	0.50211	76.09	0.448	0.50264	0.50404	0.49964
V	0.51209	1,981.25	0.245	0.51074	0.51323	0.51228
Y1	4870.05033	4,870.05	0.191	4872.59622	4859.75553	4877.79925
Y2A	165389.31300	165,389.31	0.366	166046.42644	164853.72658	165267.78597
Y2R	36354.09498	36,354.09	0.312	36483.50279	36272.84732	36305.93482
ZN	0.50362	1,216.07	0.176	0.50407	0.50419	0.50260
ZR	0.50407	1,422.61	0.346	0.50305	0.50608	0.50308

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 35 Date/Time: 11/08/2013 12:27

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00058	-5.90	119.266	-0.00006	0.00048	0.00132
AL	0.00470	21.95	663.472	-0.01476	0.04063	-0.01178
AS	0.00071	0.36	535.581	0.00285	0.00297	-0.00369
B	0.00260	8.97	50.922	0.00111	0.00305	0.00363
BA	0.00001	320.00	670.944	0.00006	-0.00004	0.00000
BE	-0.00001	-36.90	194.174	-0.00001	0.00001	-0.00002
CA	-0.00093	62.78	239.088	-0.00198	-0.00243	0.00162
CD	-0.00013	-2.06	263.653	-0.00021	-0.00044	0.00025
CO	-0.00042	0.15	95.687	-0.00007	-0.00086	-0.00034
CR	0.00003	3.10	2427.714	-0.00059	-0.00002	0.00069
CU	0.00235	42.44	56.115	0.00297	0.00325	0.00084
FE	0.01417	-4.10	76.041	0.02661	0.00822	0.00769
K	0.03386	171.71	75.979	0.05700	0.03844	0.00615
LI	0.00033	-160.47	194.361	0.00040	0.00093	-0.00034
MG	0.01306	3.11	33.735	0.01746	0.00865	0.01307
MN	0.00022	2.00	102.804	0.00020	0.00046	0.00000
MO	0.00117	2.72	79.149	0.00011	0.00184	0.00155
NA	0.02369	-36.39	30.991	0.01582	0.03035	0.02489
NI	-0.00032	3.36	315.829	0.00083	-0.00106	-0.00073
P	-0.00183	0.82	22.249	-0.00224	-0.00142	-0.00182
PB	-0.00165	-1.22	250.311	-0.00352	-0.00454	0.00309
S	0.00853	6.45	136.895	0.01405	-0.00488	0.01642
SB	-0.00319	2.23	98.935	-0.00675	-0.00203	-0.00078
SI	0.00032	2.70	2702.740	0.00989	-0.00688	-0.00206
SN	-0.00081	1.67	171.777	-0.00229	0.00047	-0.00061
SR	0.00009	29.70	9.714	0.00010	0.00010	0.00008
TI	0.00046	26.29	42.869	0.00031	0.00039	0.00068
TL	0.00060	1.35	1110.519	-0.00479	0.00798	-0.00140
V	0.00037	-10.23	88.274	0.00027	0.00074	0.00011
Y1	4996.53482	4,996.53	0.209	4992.38305	4988.79483	5008.42659
Y2A	172197.16986	172,197.17	0.213	172405.79530	171773.10190	172412.61239
Y2R	36553.73718	36,553.74	0.230	36456.61838	36603.15874	36601.43443
ZN	-0.00026	4.55	84.018	-0.00044	-0.00002	-0.00031
ZR	-0.00265	-32.61	73.354	-0.00346	-0.00043	-0.00406

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 36 Date/Time: 11/08/2013 12:31

Sample Number: **7263056** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00037	-9.56	241.029	-0.00141	0.00023	0.00006
AL	0.05535	29.57	26.710	0.07083	0.05383	0.04138
AS	0.00190	0.50	350.195	0.00888	-0.00439	0.00122
B	0.02321	55.19	7.611	0.02438	0.02118	0.02407
BA	0.02530	12,301.41	0.322	0.02531	0.02521	0.02537
BE	-0.00005	-41.71	56.369	-0.00007	-0.00006	-0.00002
CA	8.64355	11,263.26	0.318	8.61192	8.65679	8.66193
CD	0.00029	-0.70	108.840	-0.00007	0.00046	0.00048
CO	-0.00023	0.49	212.001	0.00025	-0.00074	-0.00021
CR	-0.00034	1.95	123.031	-0.00006	-0.00082	-0.00014
CU	0.00054	38.43	215.844	-0.00076	0.00087	0.00151
FE	0.20459	69.80	5.070	0.19263	0.21120	0.20994
K	0.76542	599.75	2.961	0.74461	0.78957	0.76208
LI	0.00338	-125.14	13.446	0.00384	0.00335	0.00293
MG	3.55763	5,760.04	0.287	3.54712	3.55826	3.56752
MN	0.01284	225.10	0.701	0.01282	0.01294	0.01276
MO	0.00036	1.86	153.528	0.00012	-0.00003	0.00100
NA	5.48346	11,918.94	0.211	5.47086	5.49361	5.48590
NI	-0.00016	3.51	480.129	-0.00005	0.00054	-0.00097
P	0.02635	4.81	4.462	0.02547	0.02769	0.02590
PB	0.00507	0.65	95.586	-0.00035	0.00899	0.00657
S	0.69915	55.77	0.385	0.69791	0.69729	0.70224
SB	-0.00625	1.65	75.271	-0.00861	-0.00929	-0.00083
SI	0.09585	24.73	11.321	0.09780	0.08416	0.10559
SN	-0.00085	1.67	91.047	-0.00161	-0.00006	-0.00088
SR	0.02943	13,058.22	0.301	0.02943	0.02934	0.02952
TI	0.00143	40.19	11.186	0.00125	0.00154	0.00150
TL	-0.00011	1.26	3233.778	-0.00314	0.00387	-0.00107
V	0.00161	-5.15	53.881	0.00089	0.00257	0.00136
Y1	5029.63339	5,029.63	0.208	5035.98227	5035.33529	5017.58260
Y2A	174183.47641	174,183.48	0.102	174142.55000	174377.24148	174030.63774
Y2R	37660.23763	37,660.24	0.205	37703.43382	37706.16397	37571.11510
ZN	0.00255	11.50	9.036	0.00279	0.00252	0.00233
ZR	-0.00067	-27.72	249.938	-0.00036	-0.00249	0.00083

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 37 Date/Time: 11/08/2013 12:35

Sample Number: **7263057** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00017	-7.74	912.756	-0.00129	0.00172	0.00007
AL	0.07182	31.81	10.821	0.06533	0.08043	0.06969
AS	0.00301	0.62	180.485	0.00438	-0.00298	0.00764
B	0.02158	51.63	11.232	0.01999	0.02437	0.02038
BA	0.02465	11,997.73	0.617	0.02452	0.02482	0.02460
BE	-0.00004	-41.24	75.546	-0.00007	-0.00001	-0.00005
CA	9.19318	11,967.45	0.422	9.18890	9.15665	9.23398
CD	0.00018	-1.05	154.393	0.00000	0.00004	0.00050
CO	-0.00011	0.71	156.860	0.00009	-0.00017	-0.00025
CR	-0.00002	2.99	1214.727	0.00001	0.00017	-0.00023
CU	0.00112	40.07	71.798	0.00037	0.00101	0.00196
FE	0.22663	78.32	5.199	0.22931	0.21374	0.23685
K	0.66177	539.52	8.088	0.61811	0.64571	0.72149
LI	0.00232	-138.59	11.634	0.00213	0.00220	0.00262
MG	3.63598	5,883.62	0.744	3.62268	3.61815	3.66710
MN	0.01581	277.58	0.971	0.01565	0.01595	0.01582
MO	-0.00070	0.91	77.630	-0.00133	-0.00042	-0.00036
NA	5.34881	11,617.30	0.203	5.33671	5.35193	5.35779
NI	0.00152	4.93	124.002	0.00015	0.00367	0.00075
P	0.03139	5.52	7.423	0.02876	0.03320	0.03222
PB	0.00440	0.47	40.562	0.00646	0.00324	0.00351
S	0.71010	56.53	1.286	0.72002	0.70823	0.70204
SB	-0.00673	1.57	28.819	-0.00451	-0.00758	-0.00809
SI	0.18554	45.31	2.649	0.18090	0.18503	0.19069
SN	-0.00151	1.43	49.208	-0.00070	-0.00166	-0.00217
SR	0.03027	13,436.25	0.581	0.03012	0.03046	0.03021
TI	0.00194	47.44	12.418	0.00181	0.00222	0.00179
TL	-0.00121	1.09	293.486	-0.00419	-0.00218	0.00273
V	-0.00011	-12.23	898.432	-0.00118	0.00001	0.00084
Y1	5027.26198	5,027.26	0.446	5044.87214	5002.01839	5034.89542
Y2A	174257.63853	174,257.64	0.585	175412.97942	173489.42538	173870.51077
Y2R	37638.19367	37,638.19	0.409	37515.42224	37810.78853	37588.37024
ZN	0.00344	13.71	6.532	0.00321	0.00344	0.00366
ZR	-0.00287	-34.21	63.070	-0.00456	-0.00307	-0.00096

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 38 Date/Time: 11/08/2013 12:39

Sample Number: **7263058** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00027	-7.30	169.540	-0.00026	0.00057	0.00049
AL	0.04438	28.05	45.303	0.03320	0.03235	0.06759
AS	-0.00118	0.15	632.744	-0.00098	0.00616	-0.00872
B	0.02347	55.46	2.483	0.02324	0.02413	0.02303
BA	0.02560	12,364.82	0.396	0.02572	0.02552	0.02556
BE	-0.00002	-38.60	85.499	-0.00004	-0.00002	-0.00001
CA	9.36623	12,199.11	0.334	9.37821	9.33068	9.38979
CD	0.00017	-1.07	187.113	0.00054	0.00001	-0.00004
CO	-0.00012	0.70	497.388	-0.00065	-0.00020	0.00051
CR	-0.00044	1.63	67.600	-0.00029	-0.00078	-0.00024
CU	0.00484	50.10	32.277	0.00663	0.00405	0.00383
FE	0.22619	78.22	6.536	0.24265	0.22186	0.21405
K	0.71828	572.57	2.927	0.73032	0.73051	0.69401
LI	0.00182	-145.03	51.595	0.00147	0.00288	0.00110
MG	3.70383	5,997.46	0.160	3.70639	3.69705	3.70804
MN	0.01708	297.97	0.878	0.01704	0.01694	0.01724
MO	-0.00006	1.48	940.903	-0.00058	0.00045	-0.00004
NA	5.48437	11,921.70	0.154	5.49186	5.48603	5.47523
NI	0.00189	5.25	26.887	0.00190	0.00138	0.00239
P	0.03378	5.87	3.628	0.03438	0.03237	0.03459
PB	0.00248	-0.06	236.041	0.00686	0.00476	-0.00417
S	0.73231	58.18	1.329	0.72107	0.73818	0.73766
SB	-0.01007	1.02	44.749	-0.01407	-0.01096	-0.00519
SI	0.18543	45.31	4.296	0.18663	0.17694	0.19273
SN	-0.00143	1.46	86.399	-0.00155	-0.00014	-0.00260
SR	0.03102	13,677.55	0.365	0.03113	0.03090	0.03104
TI	0.00222	51.12	8.763	0.00202	0.00241	0.00224
TL	0.00144	1.49	77.586	0.00226	0.00017	0.00189
V	0.00179	-4.33	15.526	0.00211	0.00158	0.00169
Y1	5033.25090	5,033.25	0.303	5048.69473	5032.84373	5018.21424
Y2A	173066.11604	173,066.12	0.336	172553.50379	173698.87271	172945.97161
Y2R	37662.44487	37,662.44	0.449	37770.23857	37749.35169	37467.74435
ZN	0.00301	12.68	9.908	0.00319	0.00266	0.00316
ZR	-0.00317	-35.14	51.261	-0.00503	-0.00245	-0.00203

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 39 Date/Time: 11/08/2013 12:43

Sample Number: **7263059** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00049	-6.34	162.800	-0.00015	0.00138	0.00023
AL	0.00600	22.72	488.813	0.02891	0.01617	-0.02707
AS	-0.00178	0.08	106.750	-0.00397	-0.00068	-0.00069
B	0.00401	12.35	53.132	0.00471	0.00571	0.00162
BA	-0.00004	304.86	60.943	-0.00005	-0.00005	-0.00001
BE	-0.00005	-42.00	110.422	-0.00009	0.00001	-0.00007
CA	0.01922	90.55	18.639	0.01527	0.02225	0.02015
CD	0.00015	-1.17	187.627	0.00015	0.00044	-0.00013
CO	-0.00071	-0.36	42.582	-0.00099	-0.00039	-0.00076
CR	-0.00024	2.30	688.342	0.00111	-0.00206	0.00024
CU	-0.00188	31.45	23.609	-0.00164	-0.00239	-0.00160
FE	0.02617	0.45	13.068	0.02694	0.02914	0.02243
K	-0.00279	155.28	1845.714	-0.05660	0.04601	0.00222
LI	-0.00082	-179.54	72.492	-0.00150	-0.00042	-0.00053
MG	0.00901	-3.37	17.673	0.01065	0.00747	0.00889
MN	0.00011	0.07	104.489	-0.00001	0.00022	0.00013
MO	-0.00020	1.54	299.598	0.00044	-0.00073	-0.00030
NA	0.01202	-62.88	41.141	0.01241	0.00689	0.01676
NI	-0.00006	3.63	1669.741	-0.00108	0.00022	0.00070
P	-0.00060	1.00	263.032	-0.00202	-0.00089	0.00110
PB	0.00004	-0.76	9455.146	-0.00252	0.00415	-0.00151
S	0.00181	6.05	432.766	-0.00588	0.00980	0.00152
SB	-0.00279	2.34	126.547	-0.00676	-0.00158	-0.00002
SI	0.01050	5.10	128.034	0.02359	0.01115	-0.00326
SN	-0.00268	1.01	55.011	-0.00437	-0.00163	-0.00204
SR	0.00016	58.73	15.103	0.00017	0.00017	0.00013
TI	-0.00021	17.33	157.825	-0.00052	0.00014	-0.00025
TL	-0.00104	1.12	159.013	-0.00104	0.00061	-0.00269
V	0.00076	-8.77	211.102	0.00154	-0.00108	0.00180
Y1	5064.34325	5,064.34	0.100	5061.84403	5061.01520	5070.17053
Y2A	175730.35579	175,730.36	0.281	175166.39205	176085.31469	175939.36064
Y2R	37553.61478	37,553.61	0.133	37610.51449	37533.16174	37517.16813
ZN	0.00124	8.29	14.105	0.00135	0.00132	0.00104
ZR	-0.00111	-28.92	216.202	0.00163	-0.00215	-0.00281

LANCASTER LABORATORIES

Run Name: 1331205T73 Instrument ID: 18255

Tube: 40 Date/Time: 11/08/2013 12:46

Sample Number: **7263060** Class: **** Batch: 133095705007

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00022	-8.86	556.529	-0.00145	0.00099	-0.00019
AL	0.00120	22.04	3526.731	-0.02589	-0.02061	0.05011
AS	-0.00064	0.21	279.768	-0.00268	0.00056	0.00021
B	0.00226	8.39	30.355	0.00205	0.00303	0.00170
BA	0.00000	321.54	196.002	0.00000	0.00000	0.00000
BE	-0.00004	-41.55	110.849	-0.00004	0.00000	-0.00009
CA	0.01767	88.48	6.087	0.01891	0.01711	0.01699
CD	-0.00017	-2.20	144.776	0.00003	-0.00044	-0.00009
CO	-0.00004	0.83	953.629	-0.00036	0.00036	-0.00012
CR	-0.00014	2.61	62.724	-0.00012	-0.00007	-0.00024
CU	-0.00068	34.73	69.222	-0.00075	-0.00110	-0.00017
FE	0.01844	-2.55	10.814	0.02013	0.01624	0.01896
K	0.01384	164.73	410.730	-0.02953	-0.00714	0.07819
LI	0.00043	-163.45	284.902	0.00136	0.00087	-0.00095
MG	0.00783	-5.26	53.423	0.01216	0.00380	0.00754
MN	0.00021	1.83	92.989	0.00043	0.00013	0.00007
MO	-0.00055	1.22	94.620	-0.00060	-0.00105	-0.00001
NA	0.02057	-44.17	43.028	0.01830	0.03034	0.01308
NI	0.00066	4.22	183.687	0.00072	0.00183	-0.00058
P	-0.00093	0.95	191.120	0.00112	-0.00205	-0.00185
PB	-0.00292	-1.58	97.229	-0.00200	-0.00066	-0.00611
S	0.00265	6.09	273.230	-0.00425	0.00201	0.01020
SB	-0.00278	2.33	154.716	-0.00135	-0.00760	0.00062
SI	0.00055	2.82	762.889	-0.00307	0.00515	-0.00043
SN	-0.00198	1.26	50.729	-0.00290	-0.00091	-0.00215
SR	0.00016	57.62	8.202	0.00017	0.00014	0.00015
TI	-0.00038	14.75	76.732	-0.00010	-0.00069	-0.00036
TL	-0.00186	0.99	36.485	-0.00255	-0.00120	-0.00183
V	0.00102	-7.64	30.481	0.00066	0.00120	0.00119
Y1	5048.05956	5,048.06	0.192	5058.55754	5046.13975	5039.48140
Y2A	175251.30212	175,251.30	0.111	175474.31096	175120.65435	175158.94106
Y2R	37523.49871	37,523.50	0.116	37565.10469	37527.18912	37478.20231
ZN	0.00038	6.17	101.068	0.00082	0.00014	0.00018
ZR	-0.00218	-32.08	91.086	-0.00060	-0.00441	-0.00153

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 41

Date/Time: 11/08/2013 12:50

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00518	10.64	32.259	0.00667	0.00548	0.00338
AL	0.22516	51.49	11.846	0.23419	0.19514	0.24614
AS	0.01922	2.45	19.336	0.01601	0.01836	0.02330
B	0.04943	112.55	1.297	0.04933	0.04884	0.05011
BA	0.00542	2,864.63	0.685	0.00541	0.00546	0.00538
BE	0.00477	481.82	0.619	0.00479	0.00479	0.00474
CA	0.19623	311.60	1.267	0.19767	0.19336	0.19766
CD	0.00500	14.39	2.451	0.00514	0.00496	0.00490
CO	0.00495	9.61	12.311	0.00562	0.00444	0.00477
CR	0.01536	52.01	3.641	0.01577	0.01559	0.01472
CU	0.00930	61.69	32.635	0.01031	0.01170	0.00589
FE	0.20880	69.49	2.334	0.21436	0.20526	0.20679
K	0.53699	454.94	4.683	0.56300	0.51280	0.53517
LI	0.01957	79.03	7.169	0.01987	0.01804	0.02079
MG	0.11153	158.94	1.898	0.10912	0.11309	0.11238
MN	0.00532	91.43	3.698	0.00541	0.00509	0.00545
MO	0.00906	9.67	7.418	0.00874	0.00861	0.00984
NA	1.02397	2,094.30	0.685	1.02330	1.01731	1.03130
NI	0.01048	12.47	10.878	0.00922	0.01077	0.01145
P	0.09522	14.51	1.982	0.09519	0.09713	0.09335
PB	0.01449	3.27	23.479	0.01191	0.01321	0.01834
S	0.47132	39.36	1.296	0.46715	0.47833	0.46847
SB	0.02055	6.05	25.909	0.02661	0.01841	0.01663
SI	0.07096	18.51	9.011	0.06927	0.06558	0.07803
SN	0.01912	8.84	7.700	0.01941	0.01753	0.02043
SR	0.00529	2,321.39	0.504	0.00527	0.00528	0.00532
TI	0.00964	155.18	3.730	0.01003	0.00931	0.00957
TL	0.03435	6.52	10.612	0.03345	0.03124	0.03837
V	0.00618	13.24	6.471	0.00653	0.00574	0.00625
Y1	5010.83830	5,010.84	0.297	4994.93869	5013.17280	5024.40341
Y2A	172919.79838	172,919.80	0.324	173281.49940	173203.57356	172274.32217
Y2R	36633.90768	36,633.91	0.573	36602.41775	36857.70692	36441.59836
ZN	0.01900	51.80	0.979	0.01901	0.01881	0.01918
ZR	0.03623	79.82	1.186	0.03585	0.03670	0.03613

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 42

Date/Time: 11/08/2013 12:54

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.02591	-300.40	8.303	-0.02441	-0.02838	-0.02495
AL	504.86159	64,385.28	0.406	506.47083	502.55321	505.56075
AS	0.01224	1.83	93.044	0.01082	0.02428	0.00163
B	-0.00798	311.22	5.795	-0.00802	-0.00841	-0.00749
BA	0.00039	427.14	18.405	0.00042	0.00044	0.00031
BE	-0.00156	-174.55	3.122	-0.00159	-0.00150	-0.00158
CA	503.01998	574,674.71	0.462	504.47106	500.34109	504.24780
CD	-0.00050	21.40	48.109	-0.00060	-0.00067	-0.00022
CO	0.00193	3.77	17.587	0.00232	0.00176	0.00171
CR	0.00257	9.55	77.609	0.00405	0.00030	0.00335
CU	0.00328	65.73	75.367	0.00510	0.00427	0.00047
FE	202.80403	68,898.66	0.455	203.03467	201.78844	203.58899
K	-0.09649	95.12	34.660	-0.10057	-0.06119	-0.12770
LI	0.00228	-70.85	147.284	-0.00159	0.00405	0.00438
MG	502.21176	602,909.74	0.743	501.12004	499.14632	506.36892
MN	0.00382	55.40	2.761	0.00373	0.00378	0.00393
MO	0.00122	-6.04	58.998	0.00203	0.00070	0.00091
NA	0.00984	-63.53	37.641	0.01401	0.00858	0.00693
NI	0.00518	4.93	37.461	0.00522	0.00322	0.00710
P	0.00789	1.92	53.753	0.01238	0.00395	0.00733
PB	0.00502	35.51	33.434	0.00615	0.00583	0.00309
S	0.01921	6.34	57.759	0.00860	0.01829	0.03073
SB	0.00763	0.93	106.257	0.01685	0.00168	0.00435
SI	0.01329	5.40	83.864	0.00138	0.01502	0.02346
SN	0.00249	2.51	167.751	0.00465	0.00513	-0.00232
SR	0.00250	928.64	0.721	0.00248	0.00251	0.00251
TI	0.00102	27.96	36.845	0.00062	0.00108	0.00137
TL	0.01744	2.09	27.528	0.01194	0.02079	0.01959
V	-0.00151	5.25	63.021	-0.00188	-0.00043	-0.00222
Y1	4399.53264	4,399.53	0.137	4394.33604	4406.13842	4398.12346
Y2A	147239.70617	147,239.71	0.145	147452.92500	147239.17933	147027.01419
Y2R	35258.90185	35,258.90	0.550	35035.25833	35380.18652	35361.26072
ZN	0.00127	63.98	46.215	0.00065	0.00182	0.00133
ZR	-0.01558	-67.44	7.859	-0.01675	-0.01431	-0.01568

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 43

Date/Time: 11/08/2013 12:58

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.20065	378.87	2.112	0.19838	0.19804	0.20554
AL	499.24454	64,293.88	0.241	499.46346	500.32426	497.94589
AS	0.11086	11.64	1.297	0.10950	0.11237	0.11071
B	-0.01045	303.11	18.593	-0.01251	-0.01017	-0.00866
BA	0.50325	201,875.20	0.167	0.50398	0.50346	0.50233
BE	0.50986	47,116.21	0.068	0.50985	0.50951	0.51020
CA	500.02102	577,005.68	0.891	503.65299	501.36280	495.04727
CD	0.95970	2,730.87	0.260	0.96251	0.95886	0.95772
CO	0.46636	722.82	0.349	0.46728	0.46448	0.46733
CR	0.49199	1,339.60	0.752	0.48772	0.49413	0.49412
CU	0.53325	1,315.43	1.305	0.52762	0.53109	0.54103
FE	201.73890	69,227.24	0.564	200.56640	202.84036	201.80994
K	-0.09911	94.60	2.841	-0.10172	-0.09949	-0.09613
LI	0.00178	-78.10	105.170	0.00367	-0.00007	0.00174
MG	494.62218	601,986.90	0.617	497.31243	495.24758	491.30653
MN	0.50421	7,536.65	0.911	0.49926	0.50502	0.50834
MO	0.00155	-5.75	69.622	0.00199	0.00234	0.00032
NA	0.01711	-49.09	49.355	0.01479	0.02647	0.01007
NI	0.93480	695.41	0.423	0.93917	0.93147	0.93376
P	0.00903	2.41	8.420	0.00872	0.00848	0.00990
PB	0.05098	46.51	5.263	0.05026	0.05394	0.04873
S	0.02051	6.63	101.109	0.03815	0.02572	-0.00234
SB	0.62149	89.30	1.970	0.63273	0.60845	0.62329
SI	0.02078	7.07	66.327	0.03215	0.02472	0.00545
SN	0.00051	1.89	162.227	0.00046	0.00135	-0.00029
SR	0.00249	926.88	2.210	0.00244	0.00255	0.00250
TI	-0.00030	24.59	242.006	-0.00018	-0.00107	0.00036
TL	0.10689	14.63	5.477	0.10101	0.11272	0.10695
V	0.51318	1,807.04	0.977	0.51034	0.51023	0.51897
Y1	4414.62201	4,414.62	0.100	4418.57428	4415.42231	4409.86943
Y2A	147336.19975	147,336.20	0.178	147132.15069	147243.48152	147632.96703
Y2R	35600.79665	35,600.80	0.141	35614.30281	35545.17290	35642.91425
ZN	1.03896	2,309.19	0.383	1.04353	1.03621	1.03715
ZR	-0.01713	-72.46	16.128	-0.01419	-0.01967	-0.01752

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 44

Date/Time: 11/08/2013 13:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50820	1,686.98	0.532	0.50735	0.51123	0.50602
AL	24.81195	3,355.99	0.484	24.91946	24.83391	24.68248
AS	0.50817	56.36	0.211	0.50704	0.50917	0.50830
B	0.49511	1,094.25	0.751	0.49165	0.49904	0.49463
BA	0.50940	230,499.32	0.137	0.51020	0.50910	0.50891
BE	0.48733	50,798.63	0.141	0.48812	0.48684	0.48703
CA	24.76285	31,366.78	0.132	24.72617	24.78882	24.77356
CD	0.50833	1,593.41	0.040	0.50841	0.50848	0.50810
CO	0.50147	863.82	0.431	0.50161	0.49924	0.50355
CR	0.49702	1,526.52	0.283	0.49540	0.49791	0.49776
CU	0.50822	1,377.29	0.473	0.50797	0.51074	0.50595
FE	24.86451	9,363.52	0.033	24.85516	24.86842	24.86994
K	24.96714	14,261.29	0.358	25.05241	24.97477	24.87425
LI	0.50782	6,201.15	0.598	0.50742	0.51104	0.50500
MG	24.29610	38,222.35	0.191	24.24925	24.29683	24.34220
MN	0.50753	8,557.53	0.303	0.50576	0.50837	0.50847
MO	0.51903	447.70	0.257	0.52057	0.51835	0.51817
NA	24.78406	52,973.47	0.200	24.76053	24.84110	24.75056
NI	0.50615	420.39	0.176	0.50565	0.50563	0.50718
P	0.52401	73.61	1.170	0.52418	0.51780	0.53006
PB	0.50545	138.51	2.288	0.49761	0.50002	0.51873
S	24.63362	1,717.93	0.088	24.61066	24.63660	24.65360
SB	0.51861	83.93	1.104	0.51258	0.51927	0.52397
SI	25.37549	5,703.89	0.131	25.38694	25.33809	25.40143
SN	0.49768	176.86	0.853	0.49280	0.49968	0.50055
SR	0.49938	211,616.03	0.180	0.49996	0.49984	0.49835
TI	0.52373	7,092.97	0.250	0.52253	0.52513	0.52353
TL	0.50689	77.25	0.799	0.50226	0.50863	0.50979
V	0.50904	1,978.98	0.424	0.50765	0.50795	0.51153
Y1	4898.69286	4,898.69	0.019	4899.36333	4897.60746	4899.10780
Y2A	166199.21702	166,199.22	0.376	165877.16806	166919.61439	165800.86861
Y2R	36817.84081	36,817.84	0.361	36772.76812	36713.18391	36967.57040
ZN	0.50331	1,222.53	0.293	0.50210	0.50288	0.50495
ZR	0.50161	1,433.61	0.413	0.50384	0.49974	0.50125

LANCASTER LABORATORIES

Run Name: 1331205T73

Instrument ID: 18255

Tube: 45

Date/Time: 11/08/2013 13:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00066	-5.67	205.323	0.00210	0.00045	-0.00058
AL	0.02779	25.33	49.314	0.02203	0.01791	0.04344
AS	0.00104	0.40	716.038	-0.00681	0.00800	0.00193
B	0.00416	12.52	34.084	0.00333	0.00335	0.00580
BA	-0.00001	316.26	632.518	0.00000	0.00003	-0.00005
BE	-0.00001	-36.94	626.561	-0.00004	0.00000	0.00002
CA	0.01301	81.29	33.068	0.01012	0.01095	0.01795
CD	0.00030	-0.68	61.642	0.00009	0.00042	0.00040
CO	-0.00043	0.14	62.162	-0.00020	-0.00072	-0.00037
CR	0.00091	5.96	40.131	0.00105	0.00119	0.00050
CU	-0.00209	30.47	31.590	-0.00257	-0.00134	-0.00237
FE	0.01610	-3.41	22.467	0.01327	0.01485	0.02017
K	0.02663	169.64	279.624	0.02591	-0.04747	0.10144
LI	0.00219	-138.99	47.786	0.00139	0.00337	0.00180
MG	0.02844	27.75	6.845	0.02665	0.03051	0.02816
MN	0.00018	1.27	25.509	0.00022	0.00013	0.00019
MO	0.00090	2.50	105.591	-0.00016	0.00169	0.00118
NA	-0.00317	-94.67	289.082	0.00050	-0.01361	0.00359
NI	0.00077	4.31	168.868	0.00065	0.00214	-0.00047
P	-0.00430	0.47	85.385	-0.00344	-0.00114	-0.00833
PB	0.00197	-0.22	146.605	0.00459	0.00244	-0.00113
S	-0.00331	5.65	220.578	0.00504	-0.00652	-0.00845
SB	-0.00252	2.36	60.887	-0.00075	-0.00335	-0.00345
SI	0.00518	3.83	138.307	0.00578	0.01201	-0.00227
SN	-0.00109	1.58	151.632	0.00060	-0.00117	-0.00271
SR	0.00006	15.40	21.927	0.00005	0.00006	0.00007
TI	-0.00008	18.90	252.654	-0.00023	0.00016	-0.00017
TL	0.00053	1.35	261.305	0.00139	0.00127	-0.00107
V	-0.00006	-12.09	1094.456	-0.00046	0.00069	-0.00041
Y1	5031.54609	5,031.55	0.094	5034.18299	5034.37875	5026.07652
Y2A	173663.31458	173,663.31	0.202	173986.32500	173290.23391	173713.38485
Y2R	36998.52925	36,998.53	0.237	36996.38584	37087.14086	36912.06105
ZN	-0.00025	4.61	90.133	-0.00026	-0.00047	-0.00002
ZR	-0.00224	-31.80	74.768	-0.00047	-0.00246	-0.00379

ICP-MS Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

ICP-MS Run Data Report

1331403E03

Date File Name: 13K10L01.E03

Run Name: 1331403E03

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 3020A
SW-846 6020

Reviewed By:	Reviewed Date
John P Hook	11/10/2013 20:05
Nina C Haller	11/19/2013 09:05

Verified By:	Verified Date
Deborah A Krady	11/11/2013 03:20
Nina C Haller	11/19/2013 09:14

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331403E03 Date/Time: 11/10/2013 18:12:00
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	69990.60000	177398000	4.57057	-7.86753	3.29900
MG	24	0.00000	13.33380	5148210000	0.04309	-0.02265	-0.02044
AL	27	0.00000	56.66900	1206910000	-0.66890	0.40282	0.26607
K	39	0.00000	39296.40000	-416056000	4.24518	-14.05568	9.81197
CA	44	0.00000	300.01700	268433000	7.24093	-0.53175	-6.70909
SC-1	45	55311.20000	0.00000	1.942	55980.20000	55880.60000	54072.90000
TI	47	0.00000	3.33346	5516730000	0.21334	-0.10667	-0.10667
V	51	0.00000	26.66820	-2563870000	-0.02748	0.02341	0.00407
CR	52	0.00000	300.01400	1222640000	0.06176	-0.04259	-0.01917
MN	55	0.00000	53.33560	1395600000	0.05483	-0.03602	-0.01881
FE	57	0.00000	10.00040	40892700	-0.00493	-0.00421	0.00914
CO	59	0.00000	86.67020	-1270820000	-0.01029	0.01372	-0.00343
NI	60	0.00000	10.00040	43496300000	-0.00107	0.02044	-0.01937
CU	63	0.00000	380.02200	446299000	-0.03182	0.06544	-0.03361
ZN	66	0.00000	23.33420	67650400000	-0.12901	-0.07213	0.20114
GE-1	72	12289.70000	0.00000	4.017	12186.40000	11855.80000	12826.90000
AS	75	0.00000	9.33340	766600000	0.00215	0.01020	-0.01235
SR	88	0.00000	20.00160	1954710000	-0.00142	0.01568	-0.01426
MO	98	0.00000	56.66910	1047380000	0.01047	0.00591	-0.01639
AG	107	0.00000	30.00120	4946790000	0.00934	-0.00449	-0.00484
CD	111	0.00000	16.66690	792364000	-0.02203	0.02500	-0.00297
IN-1	115	50150.50000	0.00000	4.253	52427.00000	48199.10000	49825.40000
SN	120	0.00000	430.02500	203184000	-0.01230	0.07231	-0.06001
SB	121	0.00000	80.00420	810207000	-0.07054	0.07168	-0.00114
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
TB-1	159	155678.00000	0.00000	3.562	162067.00000	152858.00000	152110.00000
TL	203	0.00000	6.66694	-4169200000	0.00189	-0.00412	0.00222
PB	208	0.00000	76.66990	1270970000	0.00577	-0.00288	-0.00289
BI-1	209	113724.00000	0.00000	3.127	117830.00000	111651.00000	111692.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:14:00
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	56302.90000	0.00000	1.291	55539.40000	56986.30000	56382.90000
AL	27	10000.00000	564502.00000	1.454	9928.76776	9903.93849	10167.37607
CA	44	10000.00000	51372.30000	1.280	9903.30167	9951.54330	10145.15361
CR	52	1000.00000	1249150.00000	1.061	1004.16127	1007.89970	987.94374
FE	57	10000.00000	252140.00000	2.176	10224.20681	9789.58777	9986.22678
K	39	10000.00000	1082730.00000	1.313	10085.08259	9848.83730	10066.16728
MG	24	10000.00000	1527000.00000	1.247	10082.30977	9856.46341	10061.20788
MN	55	1000.00000	663555.00000	1.972	1021.40412	982.57949	996.01500
NA	23	10000.00000	2915500.00000	2.129	9965.85258	9806.21561	10227.94313
TI	47	1000.00000	31432.20000	2.069	997.09826	980.91070	1021.99542
V	51	1000.00000	989953.00000	1.765	1014.46636	980.32853	1005.19969
IN-1	115	49716.10000	0.00000	1.351	49321.30000	49335.00000	50491.90000
AG	107	100.00000	193658.00000	1.727	101.24980	100.72110	98.02859
AS	75	1000.00000	103427.00000	1.548	1012.85750	1004.33373	982.80486
BA	137	1000.00000	246681.00000	0.693	1004.08218	992.00107	1003.91526
CD	111	100.00000	24064.30000	1.889	100.48508	101.59931	97.91598
CO	59	1000.00000	1961580.00000	0.256	1000.72052	1002.11741	997.16099
CU	63	1000.00000	1466550.00000	0.920	996.68470	992.91599	1010.40359
MO	98	100.00000	98575.80000	1.623	100.43336	101.36313	98.20413
NI	60	1000.00000	518098.00000	1.274	1009.59187	1004.85971	985.55042
SB	121	100.00000	60437.20000	1.361	100.68897	100.87783	98.43225
SN	120	100.00000	80254.10000	1.602	101.84452	98.95735	99.19814
SR	88	100.00000	70042.90000	0.922	100.85111	100.12848	99.02132
ZN	66	1000.00000	181344.00000	1.453	1005.09391	1011.28863	983.61326
BI-1	209	112733.00000	0.00000	0.560	113408.00000	112157.00000	112632.00000
PB	208	100.00000	515903.00000	0.686	100.20375	99.23522	100.56145
TL	203	100.00000	159261.00000	1.322	98.79085	99.79814	101.41224
GE-1	72	12603.30000	0.00000	3.944	12316.30000	13177.30000	12316.20000
TB-1	159	156043.00000	0.00000	1.138	158062.00000	154718.00000	155349.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:16:00
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	55382.10000	0.00000	7.797	60269.80000	53792.10000	52084.50000
AL	27	0.23700	70.00360	438.819	-0.03221	1.38550	-0.64224
CA	44	6.50300	333.35700	46.671	9.79537	3.81538	5.90012
CR	52	-0.18480	73.33610	-4.643	-0.17697	-0.19401	-0.18370
FE	57	1.13100	36.66830	97.790	-0.03331	1.25654	2.16830
K	39	-11.72000	38029.20000	-209.556	-39.99088	4.31828	0.50945
MG	24	0.15660	36.66850	69.221	0.15607	0.04845	0.26532
MN	55	0.08139	106.67200	56.444	0.10144	0.02884	0.11391
NA	23	-1.34000	69423.40000	-1503.730	-23.46081	3.47471	15.96575
TI	47	0.41990	16.66750	111.265	0.78505	-0.10667	0.58122
V	51	0.02482	50.00210	92.385	0.00083	0.04653	0.02711
IN-1	115	48813.00000	0.00000	6.916	52706.10000	47042.90000	46689.90000
AG	107	0.01484	56.66910	114.690	0.00921	0.03397	0.00135
AS	75	0.31090	41.33380	46.060	0.47590	0.23744	0.21932
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.02067	11.33340	-75.278	-0.03797	-0.00783	-0.01622
CO	59	0.01258	106.67200	234.579	-0.02008	0.02053	0.03730
CU	63	0.03880	426.69000	50.825	0.02489	0.03013	0.06137
MO	98	0.25810	310.01800	46.881	0.39307	0.22198	0.15925
NI	60	0.03455	26.66790	126.715	-0.00117	0.02142	0.08338
SB	121	0.51030	376.68900	52.910	0.31981	0.39187	0.81923
SN	120	0.30190	653.38900	29.748	0.22131	0.28582	0.39874
SR	88	-0.01334	10.00040	-114.018	-0.02851	-0.01342	0.00190
ZN	66	0.23290	63.33600	58.738	0.07906	0.27895	0.34075
BI-1	209	113333.00000	0.00000	7.195	122558.00000	110349.00000	107091.00000
PB	208	-0.00111	70.00350	-182.172	-0.00215	0.00122	-0.00238
TL	203	0.02934	53.33610	68.337	0.03054	0.00871	0.04877
GE-1	72	12179.60000	0.00000	6.733	13117.10000	11826.00000	11595.70000
TB-1	159	151827.00000	0.00000	8.556	166777.00000	145390.00000	143314.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:17:00
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	60310.10000	0.00000	1.736	59365.30000	61435.90000	60129.20000
AL	27	-0.08915	56.66880	-274.369	-0.01709	0.11130	-0.36169
CA	44	1.91500	336.68800	907.050	-2.14886	-13.06375	20.95872
CR	52	-0.18190	83.33670	-6.537	-0.18354	-0.19292	-0.16931
FE	57	0.33620	20.00100	292.653	-0.40377	-0.04034	1.45289
K	39	-41.03000	38259.80000	-31.392	-31.47105	-55.67883	-35.94393
MG	24	0.13570	36.66800	52.557	0.09769	0.09141	0.21796
MN	55	0.00768	63.33620	294.125	0.03276	0.00129	-0.01102
NA	23	-26.48000	68230.70000	-27.576	-19.09653	-33.69682	-26.66662
TI	47	0.19250	10.00060	154.753	0.19509	-0.10667	0.48921
V	51	-0.00866	20.00070	-108.594	-0.01790	-0.00897	0.00089
IN-1	115	54988.20000	0.00000	2.228	55325.30000	56009.00000	53630.30000
AG	107	-0.00268	26.66770	-103.392	-0.00587	-0.00140	-0.00079
AS	75	0.07318	18.66690	97.472	0.15374	0.04778	0.01802
BA	137	0.01200	3.33347	173.167	0.00000	0.03599	0.00000
CD	111	-0.03174	10.00010	-2.662	-0.03199	-0.03244	-0.03080
CO	59	0.01417	126.67200	40.847	0.01543	0.01923	0.00786
CU	63	0.00660	430.02500	405.729	0.02375	0.02030	-0.02425
MO	98	0.00424	66.66930	534.292	-0.02042	0.02418	0.00896
NI	60	0.02721	26.66820	38.111	0.01531	0.03202	0.03430
SB	121	0.05073	123.34000	82.752	0.06015	0.08720	0.00484
SN	120	0.04359	510.03300	171.301	-0.01717	0.02099	0.12695
SR	88	-0.02005	6.66692	-73.018	-0.02851	-0.00316	-0.02851
ZN	66	0.10360	46.66870	72.577	0.01965	0.16469	0.12659
BI-1	209	121703.00000	0.00000	0.593	121486.00000	122508.00000	121116.00000
PB	208	-0.00146	73.33750	-309.302	0.00336	-0.00214	-0.00561
TL	203	0.00754	20.00080	77.958	0.00754	0.00166	0.01342
GE-1	72	12476.50000	0.00000	3.555	12536.50000	12886.90000	12006.00000
TB-1	159	165065.00000	0.00000	1.288	166070.00000	166502.00000	162624.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:19:00
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57795.60000	0.00000	2.678	58150.40000	56101.20000	59135.30000
AL	27	4736.00000	274308.00000	3.670	4720.91639	4917.32632	4570.76873
CA	44	4780.00000	25358.70000	2.600	4713.54707	4923.41272	4703.16382
CR	52	476.70000	611049.00000	3.510	482.31114	489.86314	457.84997
FE	57	4773.00000	123518.00000	3.065	4864.02137	4850.87588	4604.23288
K	39	4633.00000	536602.00000	4.194	4607.20137	4838.30544	4452.14205
MG	24	4668.00000	731407.00000	3.665	4682.30347	4832.43820	4491.02283
MN	55	487.20000	331758.00000	3.426	484.47634	505.12776	472.08606
NA	23	4880.00000	1497310.00000	2.820	4907.65865	5001.47582	4730.53541
TI	47	480.90000	15506.50000	4.494	474.28446	505.03931	463.35423
V	51	491.00000	498814.00000	3.283	493.47052	505.82096	473.85764
IN-1	115	51771.20000	0.00000	1.885	52598.70000	50695.00000	52020.00000
AG	107	48.13000	97067.30000	2.352	47.99352	49.32219	47.07047
AS	75	490.40000	52813.50000	2.382	490.17281	502.12814	478.76005
BA	137	482.40000	123904.00000	1.956	482.25061	491.96749	473.09810
CD	111	48.15000	12073.80000	3.416	48.28395	49.72459	46.44366
CO	59	483.80000	988210.00000	2.764	484.54796	496.86835	470.16042
CU	63	483.60000	738660.00000	2.963	491.86921	491.92646	467.08028
MO	98	49.20000	50535.10000	1.227	48.60972	49.81648	49.17982
NI	60	495.20000	267203.00000	2.504	506.48485	497.12422	481.91426
SB	121	45.13000	28443.20000	2.426	44.60696	46.38599	44.39142
SN	120	47.16000	39640.50000	4.434	47.57817	49.01577	44.89510
SR	88	49.31000	35975.40000	2.874	49.63417	50.54430	47.76421
ZN	66	482.50000	91134.80000	0.821	485.88619	483.39185	478.12492
BI-1	209	116495.00000	0.00000	1.998	117981.00000	113812.00000	117690.00000
PB	208	48.72000	259711.00000	3.237	48.84437	50.23910	47.09240
TL	203	48.24000	79378.00000	3.402	49.22559	49.14438	46.34374
GE-1	72	12776.80000	0.00000	3.087	13097.20000	12896.90000	12336.30000
TB-1	159	158374.00000	0.00000	1.474	160924.00000	157860.00000	156339.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:21:00
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	58592.70000	0.00000	4.658	60943.10000	55599.80000	59235.20000
AL	27	-0.58250	26.66770	-65.854	-0.37056	-1.02529	-0.35168
CA	44	-6.05900	283.34800	-196.732	-12.68642	7.69931	-13.19182
CR	52	-0.17550	90.00370	-10.011	-0.16292	-0.19564	-0.16818
FE	57	1.00500	36.66830	62.577	1.06169	1.60414	0.35009
K	39	-21.20000	39306.50000	-45.901	-31.52242	-12.18987	-19.90659
MG	24	0.22590	50.00230	26.073	0.27437	0.24294	0.16034
MN	55	-0.01053	50.00240	-464.008	0.04373	-0.05105	-0.02428
NA	23	-15.97000	69350.10000	-53.701	-20.80914	-6.07070	-21.03803
TI	47	0.31630	13.33410	156.339	-0.10667	0.85995	0.19576
V	51	-0.02086	6.66692	-27.483	-0.02748	-0.01725	-0.01788
IN-1	115	53897.10000	0.00000	1.174	54061.60000	53198.70000	54431.10000
AG	107	0.00704	46.66850	137.935	-0.00090	0.00416	0.01787
AS	75	0.11250	22.66690	16.409	0.12386	0.09118	0.12241
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.04378	6.66672	-9.961	-0.03876	-0.04603	-0.04656
CO	59	-0.00017	93.33790	-15638.900	-0.03006	0.01781	0.01175
CU	63	-0.01492	386.69000	-158.244	0.01151	-0.02235	-0.03392
MO	98	0.07108	136.67300	40.293	0.10177	0.06641	0.04507
NI	60	0.02811	26.66770	131.306	0.06937	0.01670	-0.00174
SB	121	0.81360	620.04700	31.367	0.55221	0.82656	1.06207
SN	120	0.14730	590.03600	70.808	0.04101	0.24938	0.15153
SR	88	-0.01102	13.33380	-182.123	0.01089	-0.02851	-0.01547
ZN	66	0.04040	33.33460	68.812	0.02313	0.02560	0.07247
BI-1	209	118949.00000	0.00000	3.236	122991.00000	115327.00000	118527.00000
PB	208	0.00321	96.67150	153.863	-0.00219	0.00432	0.00750
TL	203	0.02367	46.66860	14.816	0.02466	0.02658	0.01977
GE-1	72	11909.30000	0.00000	4.465	12226.20000	11295.30000	12206.30000
TB-1	159	163838.00000	0.00000	2.119	166015.00000	159834.00000	165664.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:23:00
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	57591.10000	0.00000	2.285	56603.50000	57085.10000	59084.60000
AL	27	100.20000	5844.85000	3.346	97.68514	104.02049	98.94584
CA	44	212.20000	1420.13000	8.831	201.30970	233.88089	201.54456
CR	52	1.80500	2617.04000	3.527	1.83484	1.84890	1.73227
FE	57	103.40000	2673.72000	8.616	106.50498	110.29756	93.32295
K	39	160.40000	58022.00000	9.021	176.42724	156.69388	148.22259
MG	24	99.67000	15583.10000	2.477	97.47733	102.34481	99.18908
MN	55	2.28900	1606.83000	11.647	2.58673	2.20749	2.07257
NA	23	186.10000	126972.00000	5.981	195.30443	189.19581	173.70923
TI	47	14.54000	470.02600	10.688	16.03437	14.64292	12.93089
V	51	0.43870	473.36100	18.651	0.37441	0.41087	0.53080
IN-1	115	52551.10000	0.00000	1.269	53282.10000	52394.80000	51976.20000
AG	107	0.50930	1073.43000	6.648	0.49080	0.54838	0.48869
AS	75	2.01400	230.00400	5.079	2.02145	2.11226	1.90802
BA	137	2.12200	553.36600	12.818	2.26970	1.80804	2.28797
CD	111	0.43150	127.33500	7.286	0.41947	0.46720	0.40789
CO	59	0.41880	960.07700	3.983	0.42684	0.42998	0.39965
CU	63	2.03500	3553.96000	3.669	2.07161	1.94920	2.08448
MO	98	0.45560	533.36600	13.367	0.42608	0.41500	0.52559
NI	60	2.07400	1146.77000	6.591	2.12375	2.17839	1.91913
SB	121	1.17900	836.72800	9.788	1.08784	1.13996	1.30868
SN	120	2.01400	2150.27000	7.324	2.01331	1.86624	2.16121
SR	88	0.99850	760.05500	9.270	0.99754	0.90650	1.09161
ZN	66	15.60000	3013.83000	8.897	14.89781	17.19331	14.69484
BI-1	209	118943.00000	0.00000	0.454	118772.00000	118509.00000	119548.00000
PB	208	0.99380	5487.38000	4.259	1.02332	1.01270	0.94526
TL	203	0.59100	1000.08000	7.723	0.54423	0.59324	0.63542
GE-1	72	12753.50000	0.00000	3.575	12536.60000	12446.60000	13277.30000
TB-1	159	161118.00000	0.00000	1.464	163615.00000	158926.00000	160812.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:24:00
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	59928.80000	0.00000	0.686	59787.30000	60392.00000	59607.20000
AL	27	9333.00000	560807.00000	1.001	9238.90359	9335.96740	9425.66536
CA	44	9107.00000	49822.80000	1.105	9197.34432	8998.52793	9125.00453
CR	52	-0.02346	293.34900	-166.113	0.01210	-0.06512	-0.01738
FE	57	9396.00000	252204.00000	0.610	9348.25981	9379.42500	9459.35986
K	39	9069.00000	1049260.00000	2.893	8770.63597	9173.62989	9263.23220
MG	24	9140.00000	1485620.00000	1.230	9079.88395	9070.16173	9269.61953
MN	55	1.47200	1096.76000	9.898	1.45116	1.33744	1.62661
NA	23	9179.00000	2854920.00000	0.601	9133.17179	9164.38694	9240.45941
TI	47	184.40000	6175.01000	4.873	177.31425	194.53240	181.45932
V	51	-0.01162	16.66730	-95.181	-0.01797	-0.01806	0.00114
IN-1	115	53869.00000	0.00000	0.797	54364.40000	53641.10000	53601.60000
AG	107	-0.00879	13.33380	-31.713	-0.01043	-0.01036	-0.00557
AS	75	0.03571	14.00020	201.764	-0.03648	0.10761	0.03602
BA	137	0.06247	16.66730	69.665	0.03707	0.11272	0.03760
CD	111	-0.02322	12.00010	-67.356	-0.03893	-0.02311	-0.00765
CO	59	-0.01740	56.66880	-125.862	-0.03014	-0.02995	0.00789
CU	63	0.01261	430.02500	214.512	-0.01494	0.01363	0.03914
MO	98	189.80000	202715.00000	0.901	187.89366	191.15510	190.42152
NI	60	0.03414	30.00140	91.125	0.01593	0.07007	0.01643
SB	121	0.07570	136.67300	32.787	0.04842	0.09694	0.08174
SN	120	-0.07220	400.02100	-89.308	-0.14549	-0.02413	-0.04700
SR	88	0.04169	53.33540	46.870	0.06291	0.02443	0.03772
ZN	66	0.14270	53.33610	55.536	0.07271	0.22877	0.12674
BI-1	209	121204.00000	0.00000	0.902	120902.00000	120294.00000	122416.00000
PB	208	0.01661	173.34200	50.554	0.00706	0.01989	0.02286
TL	203	0.00372	13.33390	241.655	0.00174	0.01354	-0.00412
GE-1	72	12957.10000	0.00000	3.130	13367.50000	12947.10000	12556.60000
TB-1	159	166110.00000	0.00000	0.234	166383.00000	166281.00000	165665.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:26:00
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	64406.70000	0.00000	1.207	65303.90000	63947.50000	63968.60000
AL	27	9072.00000	585721.00000	1.855	8888.68670	9106.24565	9219.77207
CA	44	8857.00000	52081.50000	3.755	8659.41341	8671.21618	9241.25829
CR	52	18.38000	26601.20000	2.760	17.86212	18.40178	18.87601
FE	57	9069.00000	261608.00000	1.086	9004.27926	9019.83545	9182.08909
K	39	8998.00000	1118900.00000	3.061	8682.70565	9120.11522	9191.25448
MG	24	8840.00000	1544220.00000	1.594	8728.25550	8794.16446	8998.52044
MN	55	19.59000	14935.80000	1.086	19.73045	19.69919	19.34742
NA	23	8989.00000	3006530.00000	0.803	9038.02728	8906.31588	9023.26475
TI	47	185.60000	6675.30000	3.656	179.06840	185.11385	192.61511
V	51	-0.01568	13.33410	-33.099	-0.01877	-0.00969	-0.01859
IN-1	115	57861.60000	0.00000	2.653	59392.50000	56323.20000	57869.10000
AG	107	18.38000	41456.00000	1.849	18.50381	18.63936	17.99468
AS	75	18.19000	2200.21000	2.660	18.17004	18.68710	17.72036
BA	137	0.02354	6.66693	86.619	0.00000	0.03579	0.03483
CD	111	18.40000	5169.76000	0.213	18.43621	18.35789	18.40168
CO	59	18.20000	41641.50000	3.599	17.98581	18.94130	17.68737
CU	63	18.19000	31469.20000	2.373	17.72132	18.56829	18.28869
MO	98	186.50000	213826.00000	2.814	182.40495	192.41171	184.65706
NI	60	19.16000	11562.30000	1.340	18.87530	19.37634	19.22348
SB	121	-0.04280	63.33610	-56.636	-0.06404	-0.01639	-0.04799
SN	120	0.08297	573.36900	77.450	0.01029	0.10635	0.13226
SR	88	0.04461	60.00230	94.777	0.09103	0.03452	0.00830
ZN	66	18.45000	3917.42000	6.011	17.32261	19.53946	18.49274
BI-1	209	129571.00000	0.00000	2.781	132483.00000	125541.00000	130688.00000
PB	208	0.01340	166.67400	60.261	0.01177	0.00626	0.02216
TL	203	0.00323	13.33390	105.385	0.00123	0.00716	0.00130
GE-1	72	13904.70000	0.00000	1.393	14128.30000	13798.00000	13787.80000
TB-1	159	179043.00000	0.00000	0.548	180157.00000	178308.00000	178666.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:29:00
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	59777.40000	0.00000	1.021	59586.60000	59285.30000	60460.10000
AL	27	2429.00000	145587.00000	1.430	2456.28021	2439.84595	2389.59616
CA	44	2441.00000	13557.50000	2.924	2363.66984	2504.43889	2454.61459
CR	52	245.70000	326030.00000	0.846	243.70873	247.84439	245.40699
FE	57	2455.00000	65741.10000	0.975	2455.19124	2479.08576	2431.22808
K	39	2316.00000	298883.00000	1.138	2302.19867	2346.34818	2299.33755
MG	24	2383.00000	386434.00000	1.447	2366.78481	2423.13537	2360.51202
MN	55	252.70000	178082.00000	1.769	251.96114	257.49528	248.64671
NA	23	2429.00000	809060.00000	1.317	2451.50052	2442.63550	2392.16789
TI	47	247.50000	8262.97000	1.587	247.70021	251.38020	243.52684
V	51	252.50000	265423.00000	1.091	254.07238	254.09663	249.31300
IN-1	115	54187.50000	0.00000	0.858	54651.30000	53721.50000	54189.70000
AG	107	25.00000	52801.80000	2.292	25.57609	24.43037	24.98497
AS	75	246.30000	27783.30000	0.464	247.19960	246.81805	245.05731
BA	137	248.30000	66770.90000	0.766	246.79690	247.78643	250.47130
CD	111	24.61000	6468.37000	3.187	23.70462	25.10158	25.02158
CO	59	244.10000	521938.00000	0.736	244.01825	245.92215	242.33117
CU	63	245.30000	392433.00000	1.059	247.45219	246.10687	242.43256
MO	98	24.85000	26745.70000	0.944	25.07362	24.60505	24.85836
NI	60	246.70000	139351.00000	0.494	247.78194	245.38918	246.99425
SB	121	23.08000	15269.90000	1.069	22.84808	23.33829	23.04400
SN	120	24.83000	22070.40000	1.980	24.84308	25.31675	24.33364
SR	88	25.09000	19168.50000	4.229	23.91808	25.36492	25.98531
ZN	66	243.90000	48228.00000	1.051	245.64908	245.03091	240.93359
BI-1	209	122680.00000	0.00000	1.545	121033.00000	124751.00000	122258.00000
PB	208	24.64000	138361.00000	2.383	25.25551	24.08595	24.57722
TL	203	25.05000	43413.50000	1.790	25.49562	24.59912	25.05432
GE-1	72	13177.30000	0.00000	3.657	13297.50000	13587.80000	12646.70000
TB-1	159	165710.00000	0.00000	1.094	167803.00000	164668.00000	164658.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:31:00
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	55649.70000	0.00000	1.928	56884.90000	54946.60000	55117.50000
AL	27	-0.36650	36.66850	-31.351	-0.49919	-0.29909	-0.30135
CA	44	-5.59300	273.34900	-36.152	-3.51487	-7.55272	-5.71412
CR	52	-0.18190	76.66960	-17.257	-0.20467	-0.19506	-0.14614
FE	57	0.40770	20.00080	172.357	-0.40377	0.81527	0.81149
K	39	-12.36000	38263.30000	-66.861	-21.53540	-10.04336	-5.50280
MG	24	0.06773	23.33440	206.112	-0.08863	0.17978	0.11205
MN	55	-0.02568	36.66810	-91.277	-0.02191	-0.00437	-0.05079
NA	23	-5.99700	68720.60000	-99.100	-12.84939	-2.25810	-2.88347
TI	47	-0.00170	3.33346	-10719.300	0.20825	-0.10667	-0.10667
V	51	-0.01403	13.33380	-108.553	0.00251	-0.01713	-0.02748
IN-1	115	49807.40000	0.00000	2.375	50024.00000	48530.60000	50867.60000
AG	107	0.01234	53.33620	23.679	0.01565	0.01130	0.01009
AS	75	0.12160	22.00020	59.548	0.12186	0.04913	0.19395
BA	137	0.01384	3.33347	173.266	0.00000	0.04153	0.00000
CD	111	-0.03338	8.66673	-51.258	-0.05282	-0.02675	-0.02058
CO	59	0.01190	110.00700	76.807	0.00147	0.01855	0.01567
CU	63	-0.03781	323.35100	-102.883	-0.00061	-0.03461	-0.07822
MO	98	0.11480	170.00800	31.864	0.11458	0.07827	0.15142
NI	60	0.00010	10.00040	20527.200	-0.01937	0.02017	-0.00051
SB	121	0.32840	280.01600	32.004	0.26178	0.27394	0.44953
SN	120	0.12530	530.03300	138.947	0.06261	-0.00884	0.32206
SR	88	-0.02385	3.33346	-33.786	-0.02851	-0.02851	-0.01455
ZN	66	-0.09277	6.66692	-33.826	-0.07420	-0.12901	-0.07511
BI-1	209	111625.00000	0.00000	1.525	113297.00000	109894.00000	111684.00000
PB	208	-0.00097	70.00350	-716.281	0.00080	-0.00866	0.00494
TL	203	0.00431	13.33390	81.810	0.00838	0.00233	0.00222
GE-1	72	12289.70000	0.00000	3.243	12196.20000	11946.00000	12726.70000
TB-1	159	151934.00000	0.00000	2.084	155433.00000	151106.00000	149264.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:32:00
Tube Number: 12 Batch: 133126050002A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57581.00000	0.00000	2.457	56774.10000	56753.90000	59215.10000
AL	27	0.42220	83.33690	55.021	0.55603	0.55660	0.15395
CA	44	2.14200	323.34900	472.923	-9.23236	10.21339	5.44463
CR	52	-0.10050	183.34400	-14.637	-0.08547	-0.10130	-0.11486
FE	57	0.75460	30.00110	87.914	-0.01050	1.16987	1.10446
K	39	-25.78000	38162.80000	-16.090	-23.31448	-23.46781	-30.57400
MG	24	0.87580	150.00700	28.625	0.95043	1.08075	0.59628
MN	55	0.02203	70.00290	184.975	0.00809	0.06792	-0.00993
NA	23	-13.53000	68903.90000	-50.406	-9.30525	-9.88695	-21.39871
TI	47	0.10380	6.66692	351.156	-0.10667	0.52462	-0.10667
V	51	-0.01105	16.66750	-137.738	-0.02748	0.00258	-0.00827
IN-1	115	53162.50000	0.00000	0.131	53100.50000	53238.00000	53149.10000
AG	107	-0.00387	23.33420	-190.860	0.00419	-0.01033	-0.00549
AS	75	-0.01118	8.66674	-186.136	-0.03522	0.00076	0.00091
BA	137	0.01262	3.33347	173.217	0.00000	0.03786	0.00000
CD	111	-0.03567	8.66674	-69.919	-0.05378	-0.00722	-0.04601
CO	59	-0.02982	30.00110	-15.939	-0.02981	-0.02508	-0.03459
CU	63	0.16500	663.38100	31.224	0.16969	0.11125	0.21396
MO	98	0.03168	93.33720	45.391	0.01912	0.04736	0.02855
NI	60	-0.00736	6.66692	-282.898	-0.01937	0.01667	-0.01937
SB	121	-0.03525	63.33610	-101.560	-0.05583	-0.05603	0.00609
SN	120	0.07812	523.36500	165.387	0.01625	-0.00856	0.22667
SR	88	-0.00623	16.66730	-446.781	0.02497	-0.02851	-0.01515
ZN	66	0.55870	133.33900	28.298	0.59383	0.38597	0.69634
BI-1	209	121363.00000	0.00000	1.936	121054.00000	119184.00000	123852.00000
PB	208	-0.00564	50.00230	-29.986	-0.00741	-0.00546	-0.00404
TL	203	-0.00214	3.33347	-160.609	-0.00412	0.00182	-0.00412
GE-1	72	12683.40000	0.00000	1.342	12676.60000	12516.60000	12856.90000
TB-1	159	163155.00000	0.00000	1.229	162116.00000	161884.00000	165466.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:34:00
Tube Number: 13 Batch: 133126050002A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	56275.50000	0.00000	1.582	56051.20000	57256.40000	55518.90000
AL	27	1983.00000	111926.00000	0.822	1988.06963	1964.82448	1996.27062
CA	44	3942.00000	20426.70000	0.775	3976.00017	3916.20042	3935.17761
CR	52	49.85000	62524.50000	2.786	51.43457	48.83495	49.28569
FE	57	995.50000	25101.90000	3.591	1035.93576	982.46222	968.08477
K	39	9809.00000	1062330.00000	1.556	9653.70583	9813.86249	9958.83030
MG	24	1942.00000	296439.00000	1.169	1946.93611	1917.57560	1962.24345
MN	55	51.05000	33908.30000	2.468	51.93755	49.60884	51.60909
NA	23	9755.00000	2844170.00000	1.082	9814.19235	9632.83065	9816.81473
TI	47	240.90000	7569.16000	3.968	245.74115	229.92231	247.12966
V	51	51.51000	50997.90000	2.621	53.06129	50.85665	50.60834
IN-1	115	50612.00000	0.00000	2.106	51762.60000	49656.90000	50416.60000
AG	107	50.15000	98887.60000	0.427	49.98874	50.39001	50.06030
AS	75	10.16000	1080.05000	4.698	10.62702	10.19083	9.67363
BA	137	51.32000	12887.20000	3.038	50.76318	50.11199	53.07865
CD	111	4.92700	1223.40000	0.493	4.95458	4.90949	4.91651
CO	59	246.80000	492862.00000	1.782	246.38939	251.38514	242.61755
CU	63	51.07000	76587.30000	3.803	50.77348	53.14399	49.29445
MO	98	50.23000	50431.00000	2.098	50.07005	51.34917	49.25803
NI	60	52.28000	27583.60000	2.760	52.60994	53.52428	50.69594
SB	121	5.51500	3470.63000	1.458	5.48433	5.60630	5.45448
SN	120	48.83000	40105.60000	3.338	48.24716	50.66880	47.56674
SR	88	40.17000	28653.10000	0.786	39.80623	40.30677	40.38982
ZN	66	50.83000	9410.49000	6.280	53.38743	51.84409	47.25157
BI-1	209	114776.00000	0.00000	2.057	116792.00000	115357.00000	112178.00000
PB	208	15.06000	79157.10000	1.168	14.86935	15.09596	15.21561
TL	203	1.94800	3167.21000	5.919	2.06301	1.94753	1.83245
GE-1	72	12600.00000	0.00000	4.495	12917.00000	12936.90000	11946.00000
TB-1	159	156845.00000	0.00000	2.105	159373.00000	158053.00000	153110.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:36:00
Tube Number: 14 Batch: 133126050002A
Sample Number: **7265127** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	54441.10000	0.00000	0.628	54795.40000	54414.80000	54113.30000
AL	27	699.20000	38214.80000	14.152	630.08789	812.58564	655.05351
CA	44	62470.00000	308758.00000	1.498	61900.16356	61968.21157	63553.62699
CR	52	1.25200	1806.90000	9.026	1.30273	1.33013	1.12220
FE	57	55950.00000	1364110.00000	2.441	55727.75264	54701.98359	57407.63825
K	39	9106.00000	956864.00000	1.419	9216.77938	8963.94073	9136.17026
MG	24	20210.00000	2984510.00000	0.584	20167.95244	20122.14900	20345.59080
MN	55	1180.00000	757082.00000	1.684	1192.01379	1156.84738	1190.44738
NA	23	59450.00000	16419500.00000	1.625	58779.85799	59019.22411	60559.86726
TI	47	16.44000	503.45400	43.613	23.43950	9.11198	16.77884
V	51	2.51100	2430.37000	3.384	2.44299	2.60649	2.48448
IN-1	115	47883.30000	0.00000	0.722	47533.90000	48224.90000	47891.00000
AG	107	0.03677	96.67100	59.587	0.04966	0.01147	0.04918
AS	75	57.10000	5696.64000	2.874	58.93826	55.77909	56.59025
BA	137	162.90000	38708.20000	2.562	167.62550	159.60919	161.60450
CD	111	-0.02609	10.00010	-67.382	-0.00847	-0.04363	-0.02619
CO	59	0.96520	1906.89000	10.599	0.91042	0.90199	1.08328
CU	63	2.93600	4510.98000	8.283	2.94571	3.17417	2.68807
MO	98	1.44000	1420.14000	4.056	1.42932	1.38709	1.50252
NI	60	1.51000	763.38500	1.902	1.49466	1.49284	1.54347
SB	121	1.10000	716.71700	5.255	1.16622	1.06218	1.07052
SN	120	0.65650	916.74900	37.989	0.38217	0.71773	0.86956
SR	88	360.20000	242971.00000	1.516	363.14132	353.93626	363.63092
ZN	66	5.15800	923.40700	3.732	5.11987	4.98778	5.36696
BI-1	209	103409.00000	0.00000	1.911	105165.00000	101270.00000	103791.00000
PB	208	4.27300	20294.20000	2.506	4.39698	4.20809	4.21512
TL	203	0.01640	30.00210	71.768	0.00935	0.00987	0.02999
GE-1	72	11709.10000	0.00000	1.727	11926.00000	11525.70000	11675.70000
TB-1	159	148319.00000	0.00000	2.599	151845.00000	144203.00000	148908.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:38:00
Tube Number: 15 Batch: 133126050002A
Sample Number: **7265127** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	57765.10000	0.00000	2.001	58984.10000	57627.60000	56683.60000
AL	27	840.60000	48741.90000	2.445	834.80260	863.43999	823.58673
CA	44	59590.00000	312490.00000	0.535	59493.69107	59326.27872	59942.60132
CR	52	4.84300	6518.64000	2.406	4.94728	4.71712	4.86350
FE	57	54070.00000	1398770.00000	0.861	53676.12283	53948.18265	54583.52025
K	39	9323.00000	1038360.00000	2.077	9130.72017	9517.88760	9320.17094
MG	24	19480.00000	3051130.00000	1.755	19125.52481	19501.06252	19808.20514
MN	55	1141.00000	777037.00000	1.448	1123.21664	1145.54601	1155.48130
NA	23	56570.00000	16577700.00000	2.150	55181.86255	57094.31759	57439.26411
TI	47	42.61000	1376.87000	6.365	42.41711	39.99656	45.41083
V	51	3.54100	3631.09000	14.558	4.12992	3.31839	3.17344
IN-1	115	51336.00000	0.00000	1.050	51664.50000	51629.30000	50714.10000
AG	107	1.00500	2040.26000	7.950	0.93901	1.09384	0.98221
AS	75	58.76000	6284.90000	1.055	58.51908	58.29826	59.46578
BA	137	159.90000	40728.10000	0.712	158.64639	160.86997	160.18679
CD	111	1.00100	266.00500	6.329	0.99492	1.06772	0.94150
CO	59	1.83100	3797.37000	4.224	1.88912	1.74311	1.86036
CU	63	6.81200	10701.50000	2.591	6.61061	6.88473	6.94014
MO	98	2.51500	2617.05000	0.958	2.50219	2.54302	2.50041
NI	60	4.86600	2613.72000	5.095	5.07006	4.59021	4.93835
SB	121	2.92600	1906.89000	8.859	3.15095	2.64259	2.98509
SN	120	4.23300	3930.78000	1.927	4.17898	4.32703	4.19367
SR	88	344.30000	248965.00000	0.905	341.00119	344.67965	347.19762
ZN	66	34.21000	6428.54000	2.287	33.36418	34.34319	34.91096
BI-1	209	110764.00000	0.00000	1.522	110683.00000	112489.00000	109119.00000
PB	208	6.16800	31334.70000	0.664	6.14558	6.14400	6.21575
TL	203	0.97990	1540.17000	3.141	0.96168	1.01542	0.96256
GE-1	72	12289.70000	0.00000	0.339	12276.40000	12336.30000	12256.30000
TB-1	159	158041.00000	0.00000	0.571	157122.00000	158927.00000	158073.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:40:00
Tube Number: 16 Batch: 133126050002A
Sample Number: **7265130** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	56811.40000	0.00000	1.440	57528.30000	56985.50000	55920.40000
AL	27	759.40000	43318.90000	20.266	892.43043	590.80506	794.86653
CA	44	62910.00000	324420.00000	1.283	62301.88303	62600.64063	63824.87271
CR	52	1.39500	2063.62000	12.072	1.26843	1.33030	1.58609
FE	57	57050.00000	1451300.00000	1.809	56161.49189	56794.39596	58179.58708
K	39	9643.00000	1054840.00000	2.597	9556.00145	9447.73510	9925.31659
MG	24	20290.00000	3126690.00000	0.778	20151.43902	20263.16132	20462.92229
MN	55	1196.00000	800721.00000	1.167	1198.31713	1180.74723	1208.32079
NA	23	59810.00000	17237100.00000	0.080	59756.35274	59851.01016	59814.89133
TI	47	11.39000	363.37200	36.664	7.67843	10.58251	15.91229
V	51	2.58300	2607.09000	4.348	2.46398	2.68738	2.59663
IN-1	115	50144.20000	0.00000	2.405	51519.90000	49643.00000	49269.80000
AG	107	0.02426	76.67040	47.197	0.01475	0.02105	0.03696
AS	75	59.82000	6247.55000	2.571	58.04906	60.80884	60.60634
BA	137	166.80000	41487.50000	1.081	164.82274	167.14385	168.37349
CD	111	-0.01692	12.66680	-118.262	-0.02923	-0.02771	0.00617
CO	59	0.97290	2013.57000	4.922	1.01862	0.97709	0.92311
CU	63	3.14900	5037.86000	3.070	3.09951	3.26066	3.08759
MO	98	1.48500	1530.16000	9.246	1.33392	1.51865	1.60229
NI	60	1.40600	743.38500	15.128	1.19125	1.41101	1.61659
SB	121	0.91710	640.04200	4.991	0.96973	0.89530	0.88637
SN	120	0.57740	893.43400	37.565	0.39583	0.51886	0.81768
SR	88	369.30000	260808.00000	2.046	362.15020	377.20918	368.57806
ZN	66	4.84400	910.07200	5.091	5.03310	4.56546	4.93490
BI-1	209	110721.00000	0.00000	1.674	112065.00000	111492.00000	108605.00000
PB	208	4.35500	22132.50000	2.338	4.24244	4.38205	4.44053
TL	203	0.00874	20.00080	75.735	0.00220	0.00858	0.01544
GE-1	72	12349.70000	0.00000	1.238	12316.30000	12516.40000	12216.20000
TB-1	159	159583.00000	0.00000	2.155	162877.00000	159856.00000	156016.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:41:00
Tube Number: 17 Batch: 133126050002A
Sample Number: **7265128** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	59021.40000	0.00000	2.145	60270.70000	57739.10000	59054.50000
AL	27	4205.00000	248888.00000	1.116	4223.28187	4240.88774	4152.22936
CA	44	65830.00000	352619.00000	2.104	64578.45448	67318.59827	65597.10911
CR	52	50.46000	66356.80000	2.103	49.68081	51.66570	50.02588
FE	57	54770.00000	1447420.00000	2.573	53358.96431	56176.08589	54783.77171
K	39	18860.00000	2103200.00000	3.268	18309.15138	19527.74951	18756.56552
MG	24	21610.00000	3459150.00000	2.293	21383.84104	22182.54850	21274.83707
MN	55	1202.00000	835780.00000	2.271	1173.86095	1228.42324	1202.92392
NA	23	67030.00000	20055700.00000	2.078	66512.15294	68604.27684	65964.12763
TI	47	334.40000	10999.60000	13.071	297.24701	382.53843	323.27591
V	51	54.26000	56353.40000	0.770	54.71624	54.18975	53.89143
IN-1	115	52105.80000	0.00000	2.228	53177.50000	50872.00000	52267.80000
AG	107	47.88000	97194.50000	2.047	47.52963	48.99142	47.12976
AS	75	63.62000	6905.90000	0.912	63.05548	64.21579	63.60263
BA	137	218.80000	56536.30000	3.787	219.23634	226.78465	210.23541
CD	111	4.74100	1212.07000	4.847	4.47880	4.83937	4.90602
CO	59	237.30000	487909.00000	2.330	235.61251	243.54022	232.90242
CU	63	56.24000	86788.20000	2.457	55.73815	57.80539	55.18364
MO	98	51.94000	53688.40000	2.255	52.40609	52.80034	50.60388
NI	60	52.15000	28328.60000	0.461	51.87886	52.33948	52.22975
SB	121	6.95300	4481.02000	3.760	6.76035	7.25078	6.84861
SN	120	47.00000	39764.20000	2.832	47.24257	48.19211	45.56451
SR	88	393.60000	288809.00000	2.558	389.24198	405.11960	386.45069
ZN	66	58.33000	11098.60000	7.632	54.80158	63.33216	56.85911
BI-1	209	112551.00000	0.00000	3.622	117255.00000	110027.00000	110371.00000
PB	208	29.16000	150174.00000	1.764	28.59678	29.60733	29.26967
TL	203	1.94900	3107.19000	7.630	1.98842	1.78467	2.07422
GE-1	72	12720.20000	0.00000	2.097	12916.90000	12416.70000	12826.90000
TB-1	159	161021.00000	0.00000	4.245	168709.00000	158730.00000	155624.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:43:00
Tube Number: 18 Batch: 133126050002A
Sample Number: **7265129** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	56868.30000	0.00000	2.318	56423.10000	55830.50000	58351.20000
AL	27	4364.00000	248661.00000	7.518	4713.30885	4315.88128	4062.33372
CA	44	66640.00000	343940.00000	1.449	66362.50114	67708.75205	65836.34527
CR	52	52.22000	66146.10000	3.579	52.04959	54.17132	50.44542
FE	57	55570.00000	1415150.00000	2.262	54754.01442	57018.77871	54941.30766
K	39	19380.00000	2080790.00000	1.863	19343.09723	19753.33943	19033.43201
MG	24	21990.00000	3391990.00000	0.734	22067.60746	22103.86238	21807.94327
MN	55	1205.00000	807627.00000	2.095	1209.08335	1228.31092	1178.25857
NA	23	68310.00000	19693900.00000	1.018	68371.93536	68971.25870	67584.15313
TI	47	330.70000	10478.80000	16.541	308.94315	392.87608	290.13016
V	51	55.12000	55127.80000	2.157	55.28115	56.21636	53.85570
IN-1	115	49473.50000	0.00000	3.006	51170.10000	48856.10000	48394.30000
AG	107	48.91000	94255.60000	1.256	48.21682	49.10841	49.39522
AS	75	64.10000	6601.74000	3.760	61.35988	65.90431	65.02355
BA	137	223.90000	54929.40000	2.523	218.58131	223.21521	229.82349
CD	111	4.88600	1185.40000	5.137	4.68955	5.16884	4.80020
CO	59	249.50000	486736.00000	3.326	239.90661	253.84675	254.67945
CU	63	59.32000	86851.30000	3.570	56.90673	60.15943	60.88339
MO	98	52.76000	51760.20000	2.527	51.30501	53.04214	53.92563
NI	60	53.93000	27797.20000	4.267	51.86588	53.51657	56.41060
SB	121	7.80100	4754.45000	12.691	6.74080	7.96020	8.70148
SN	120	49.53000	39768.60000	1.887	48.85144	50.59936	49.15113
SR	88	406.70000	283291.00000	2.759	393.80770	412.24613	414.10003
ZN	66	58.27000	10524.70000	6.192	54.16730	59.65972	60.96783
BI-1	209	108429.00000	0.00000	1.902	107483.00000	107009.00000	110795.00000
PB	208	29.20000	144917.00000	2.012	29.44896	29.62624	28.53171
TL	203	2.18600	3353.95000	3.246	2.22230	2.23216	2.10460
GE-1	72	12293.10000	0.00000	4.220	12186.20000	12857.00000	11836.00000
TB-1	159	155525.00000	0.00000	1.320	153193.00000	157061.00000	156321.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:45:00
Tube Number: 19 Batch: 133126050002A
Sample Number: **7265127** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	58257.80000	0.00000	2.000	56936.00000	58702.40000	59134.90000
AL	27	145.00000	8566.54000	38.414	95.71675	133.85873	205.43748
CA	44	12470.00000	66205.60000	1.880	12716.76266	12453.15273	12249.17084
CR	52	0.10680	453.35700	25.609	0.12789	0.11669	0.07593
FE	57	11330.00000	295585.00000	2.778	11659.86783	11302.64972	11032.41200
K	39	1875.00000	243668.00000	2.725	1933.84976	1851.62319	1840.15923
MG	24	4208.00000	664746.00000	2.783	4335.48030	4184.41313	4105.02868
MN	55	241.10000	165606.00000	1.603	245.60738	238.85902	238.97374
NA	23	11970.00000	3595790.00000	2.514	12314.66715	11843.20125	11755.05170
TI	47	1.93900	66.66970	31.929	1.46654	2.63988	1.71095
V	51	0.48430	523.37200	16.560	0.55187	0.50536	0.39568
IN-1	115	52293.50000	0.00000	2.427	52012.80000	53679.40000	51188.20000
AG	107	-0.00216	26.66770	-334.505	-0.00034	0.00398	-0.01013
AS	75	11.71000	1282.74000	7.243	12.44240	10.78170	11.91175
BA	137	33.11000	8586.62000	2.780	32.91073	32.30195	34.11068
CD	111	-0.03518	8.66674	-24.508	-0.02961	-0.03084	-0.04512
CO	59	0.15300	406.69100	2.295	0.15567	0.15419	0.14899
CU	63	0.57380	1283.44000	4.740	0.59595	0.58206	0.54346
MO	98	0.37140	443.35800	18.376	0.31175	0.35671	0.44584
NI	60	0.25420	150.00800	48.781	0.31270	0.33813	0.11185
SB	121	0.16620	190.01000	12.611	0.18333	0.14280	0.17234
SN	120	0.23820	650.04700	26.944	0.19541	0.31199	0.20719
SR	88	71.73000	52837.00000	2.737	71.75314	69.76284	73.68936
ZN	66	1.34000	280.01500	24.291	1.71590	1.14786	1.15645
BI-1	209	116994.00000	0.00000	1.952	119631.00000	115669.00000	115680.00000
PB	208	0.87790	4773.92000	6.420	0.81304	0.90564	0.91501
TL	203	-0.00010	6.66694	-3384.620	0.00180	0.00200	-0.00412
GE-1	72	12700.20000	0.00000	2.179	13017.10000	12576.70000	12506.70000
TB-1	159	159655.00000	0.00000	0.808	159261.00000	161096.00000	158608.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:47:00
Tube Number: 20 Batch: 133126050002A
Sample Number: **7268506** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	51773.60000	0.00000	1.168	51201.80000	52406.20000	51713.00000
AL	27	1.09900	110.00500	88.471	1.11777	0.11679	2.06112
CA	44	9.84800	326.68400	119.517	2.72371	3.39213	23.42814
CR	52	-0.16020	96.67110	-13.096	-0.18266	-0.14106	-0.15711
FE	57	4.20000	106.67300	12.993	4.82917	3.85676	3.91396
K	39	8.99400	37655.10000	126.862	17.07446	13.96110	-4.05454
MG	24	1.02500	156.67400	19.902	0.84750	1.24811	0.98084
MN	55	0.06552	90.00490	112.027	0.05099	0.14509	0.00046
NA	23	18.15000	70261.60000	21.989	22.34845	14.40551	17.69137
TI	47	0.00880	3.33346	2272.210	-0.10667	-0.10667	0.23975
V	51	-0.00908	16.66730	-185.304	-0.00527	-0.02748	0.00551
IN-1	115	47181.80000	0.00000	2.274	46712.40000	48410.10000	46422.90000
AG	107	0.00852	43.33500	101.373	0.01783	0.00076	0.00697
AS	75	-0.02838	6.00006	-4.845	-0.02779	-0.02995	-0.02740
BA	137	0.02885	6.66693	86.620	0.04315	0.00000	0.04342
CD	111	-0.02588	10.00010	-97.604	-0.02510	-0.00103	-0.05154
CO	59	-0.02639	33.33460	-44.903	-0.03328	-0.01271	-0.03321
CU	63	-0.02759	320.01600	-154.005	0.00314	-0.07609	-0.00985
MO	98	0.00354	56.66910	306.324	-0.00289	0.01606	-0.00255
NI	60	0.01414	16.66730	215.347	0.02171	0.04009	-0.01937
SB	121	-0.10400	16.66730	-19.933	-0.11575	-0.11637	-0.08016
SN	120	0.03240	430.02300	83.086	0.05164	0.04393	0.00163
SR	88	0.02649	36.66810	130.238	-0.01331	0.04482	0.04796
ZN	66	0.39580	90.00440	77.817	0.75138	0.21079	0.22534
BI-1	209	108295.00000	0.00000	2.024	108726.00000	110239.00000	105920.00000
PB	208	0.01162	130.00600	31.239	0.00748	0.01313	0.01426
TL	203	-0.00412	0.00000	0.000	-0.00412	-0.00412	-0.00412
GE-1	72	12049.50000	0.00000	2.537	12066.10000	12346.50000	11735.80000
TB-1	159	146097.00000	0.00000	1.458	144597.00000	148535.00000	145158.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:49:00
Tube Number: 21 Batch: 133126050002A
Sample Number: **7263051** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	54223.70000	0.00000	1.260	54223.30000	54906.90000	53540.80000
AL	27	439.30000	23935.70000	3.710	457.47867	425.92759	434.58940
CA	44	9322.00000	46139.00000	3.224	9667.60736	9121.21564	9177.73161
CR	52	0.58490	996.74300	22.995	0.72857	0.46191	0.56414
FE	57	864.30000	21001.10000	0.244	865.01863	861.96992	866.01731
K	39	855.70000	124458.00000	2.650	870.30674	829.58032	867.25301
MG	24	3802.00000	559166.00000	2.799	3905.14758	3692.69390	3809.24031
MN	55	23.71000	15202.80000	2.700	24.32733	23.04918	23.75044
NA	23	5721.00000	1635640.00000	0.582	5744.74364	5682.61135	5734.50785
TI	47	10.82000	330.01700	23.327	10.13517	8.70262	13.61165
V	51	1.50400	1460.13000	8.770	1.65071	1.46408	1.39591
IN-1	115	48278.50000	0.00000	2.941	48839.40000	46663.20000	49333.00000
AG	107	0.01853	63.33680	15.359	0.02165	0.01786	0.01608
AS	75	1.89200	199.33700	14.646	1.70170	1.76463	2.20992
BA	137	34.69000	8299.79000	5.618	33.93448	36.89963	33.22665
CD	111	0.03645	24.66690	33.114	0.04070	0.04583	0.02283
CO	59	0.19460	453.36100	20.041	0.16346	0.23833	0.18194
CU	63	6.20900	9200.23000	4.993	6.26434	6.48848	5.87569
MO	98	0.26900	310.01600	39.368	0.18073	0.38646	0.23972
NI	60	1.06800	546.70300	11.713	0.92369	1.13219	1.14768
SB	121	0.34020	276.68100	36.714	0.20390	0.44909	0.36749
SN	120	0.25420	613.37200	42.054	0.33215	0.13234	0.29822
SR	88	32.04000	21806.00000	1.931	32.63532	32.08570	31.40058
ZN	66	24.34000	4307.57000	2.177	23.78865	24.84563	24.38348
BI-1	209	109793.00000	0.00000	1.649	111854.00000	108455.00000	109070.00000
PB	208	14.02000	70520.30000	1.486	13.88444	13.92389	14.26330
TL	203	0.00881	20.00080	148.308	0.00854	0.02199	-0.00412
GE-1	72	11819.20000	0.00000	3.831	12326.30000	11455.60000	11675.60000
TB-1	159	148644.00000	0.00000	0.845	149792.00000	147302.00000	148837.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:50:00
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	53386.70000	0.00000	3.662	55107.10000	53791.90000	51261.20000
AL	27	2694.00000	144177.00000	2.065	2642.46992	2687.05715	2753.03913
CA	44	2731.00000	13507.50000	1.307	2696.85226	2727.37640	2768.01128
CR	52	273.30000	323814.00000	2.171	266.52839	276.02374	277.44297
FE	57	2702.00000	64587.70000	2.021	2653.54363	2691.34128	2761.20986
K	39	2595.00000	294357.00000	2.451	2530.43205	2596.09103	2657.63265
MG	24	2634.00000	381385.00000	1.108	2608.64964	2628.55392	2666.11431
MN	55	278.20000	174983.00000	2.750	271.85315	276.02563	286.68908
NA	23	2678.00000	789290.00000	3.742	2573.70330	2687.84692	2773.41621
TI	47	276.50000	8239.59000	4.825	277.60288	262.73056	289.34468
V	51	280.70000	263425.00000	2.116	275.04011	280.22620	286.88657
IN-1	115	49982.20000	0.00000	3.397	51940.30000	49088.50000	48917.70000
AG	107	26.49000	51573.30000	3.794	25.51172	27.52008	26.44639
AS	75	267.00000	27761.90000	3.677	260.34828	278.28476	262.39924
BA	137	266.50000	66063.60000	3.676	259.98877	277.77637	261.76649
CD	111	26.45000	6411.00000	1.935	25.93294	26.47461	26.95613
CO	59	261.90000	516384.00000	2.032	255.86838	265.84348	264.06828
CU	63	265.80000	391955.00000	2.101	260.08882	271.25112	266.00642
MO	98	27.06000	26835.90000	4.061	25.82081	27.92126	27.43019
NI	60	269.30000	140247.00000	2.524	262.05697	275.50946	270.48709
SB	121	24.82000	15136.40000	3.812	24.17476	25.90623	24.37883
SN	120	25.58000	20948.30000	3.610	24.83428	26.61271	25.29210
SR	88	26.72000	18831.10000	2.351	26.56420	27.41360	26.18684
ZN	66	270.10000	49228.10000	3.103	260.85784	277.25080	272.08643
BI-1	209	110745.00000	0.00000	2.457	113198.00000	111218.00000	107819.00000
PB	208	27.50000	139432.00000	0.827	27.69886	27.54397	27.25108
TL	203	27.33000	42771.20000	1.426	27.42392	27.66304	26.90122
GE-1	72	12216.30000	0.00000	0.782	12306.30000	12116.20000	12226.30000
TB-1	159	150014.00000	0.00000	1.983	153251.00000	149388.00000	147401.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:52:00
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57116.20000	0.00000	3.493	54846.00000	58592.90000	57909.60000
AL	27	-0.26220	43.33540	-112.853	0.06600	-0.34428	-0.50852
CA	44	7.12700	346.68700	90.711	2.59518	4.25535	14.53090
CR	52	-0.18120	80.00380	-7.130	-0.18675	-0.19043	-0.16644
FE	57	0.49860	23.33450	86.021	0.00332	0.73941	0.75293
K	39	-26.21000	37792.20000	-63.487	-17.64773	-45.39722	-15.59861
MG	24	0.01793	16.66730	397.267	-0.02141	0.10015	-0.02496
MN	55	0.03270	76.67060	109.480	0.05766	0.04875	-0.00832
NA	23	-16.06000	67580.80000	-63.512	-4.30745	-22.53088	-21.35203
TI	47	-0.10660	0.00000	0.000	-0.10667	-0.10667	-0.10667
V	51	-0.01082	16.66780	-55.065	-0.00674	-0.00807	-0.01766
IN-1	115	51494.40000	0.00000	5.309	48831.20000	54293.70000	51358.30000
AG	107	0.00448	40.00160	199.420	-0.00463	0.01322	0.00485
AS	75	0.06633	16.66680	35.097	0.08765	0.06983	0.04150
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.04055	7.33339	-62.762	-0.06935	-0.03128	-0.02105
CO	59	-0.00908	70.00270	-201.057	0.00259	-0.03012	0.00029
CU	63	-0.08229	266.68000	-47.892	-0.04988	-0.07084	-0.12616
MO	98	0.02974	86.67080	173.100	0.08777	-0.01043	0.01188
NI	60	0.01895	20.00100	184.116	0.05923	-0.00170	-0.00069
SB	121	0.30460	276.68100	44.320	0.15336	0.41274	0.34774
SN	120	0.16610	580.03800	52.402	0.10272	0.13032	0.26536
SR	88	0.00324	23.33450	461.396	-0.01397	0.01072	0.01296
ZN	66	0.01795	26.66770	784.401	0.15172	-0.12901	0.03114
BI-1	209	114857.00000	0.00000	2.576	111441.00000	116640.00000	116490.00000
PB	208	-0.00253	63.33620	-128.356	0.00106	-0.00339	-0.00525
TL	203	0.01448	30.00120	45.877	0.02129	0.00802	0.01412
GE-1	72	12329.80000	0.00000	9.019	11105.30000	12606.60000	13277.40000
TB-1	159	156598.00000	0.00000	1.969	153171.00000	159154.00000	157467.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:54:00
Tube Number: 24 Batch: 133126050002A
Sample Number: **7263056** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	54404.50000	0.00000	1.500	53721.00000	54184.40000	55308.00000
AL	27	49.57000	2757.10000	15.066	48.93160	57.34136	42.44573
CA	44	9049.00000	44938.30000	2.233	9258.08725	9035.41157	8854.62784
CR	52	-0.02887	260.01300	-18.019	-0.03448	-0.02795	-0.02420
FE	57	194.50000	4751.11000	2.759	190.81854	192.06874	200.67549
K	39	761.90000	115410.00000	3.193	776.75529	775.08130	733.80319
MG	24	3737.00000	551335.00000	1.997	3796.27026	3761.33960	3653.13462
MN	55	13.54000	8729.98000	4.900	13.99553	13.84389	12.77819
NA	23	5919.00000	1695530.00000	1.375	5982.45373	5947.92486	5827.40584
TI	47	0.54970	20.00070	58.341	0.56026	0.22395	0.86502
V	51	0.50610	510.03000	8.888	0.55477	0.49731	0.46608
IN-1	115	49902.60000	0.00000	0.674	49665.90000	50287.30000	49754.60000
AG	107	-0.00139	26.66770	-1077.140	0.01587	-0.01004	-0.00999
AS	75	1.28500	142.66900	5.371	1.20734	1.30601	1.34028
BA	137	25.46000	6301.85000	4.855	26.38513	24.05418	25.93277
CD	111	-0.01688	12.66680	-172.927	-0.04438	-0.02002	0.01374
CO	59	0.04731	180.00800	38.998	0.03242	0.04156	0.06795
CU	63	1.04400	1916.89000	11.398	1.10069	1.12438	0.90741
MO	98	0.10840	163.34000	39.668	0.15645	0.07355	0.09522
NI	60	0.43610	236.67900	25.636	0.56023	0.34317	0.40491
SB	121	0.40600	326.68500	11.067	0.44705	0.35799	0.41290
SN	120	0.02670	450.02600	208.427	-0.00832	-0.00245	0.09087
SR	88	30.25000	21285.20000	1.456	30.00105	29.99803	30.76256
ZN	66	2.41700	463.36200	3.969	2.41030	2.32445	2.51600
BI-1	209	112442.00000	0.00000	1.700	110433.00000	114239.00000	112653.00000
PB	208	1.12500	5860.79000	3.055	1.14919	1.08554	1.13985
TL	203	0.01274	26.66780	76.060	0.01512	0.00208	0.02102
GE-1	72	12329.70000	0.00000	3.084	12706.60000	11946.10000	12336.40000
TB-1	159	152501.00000	0.00000	1.587	150540.00000	155206.00000	151755.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:56:00
Tube Number: 25 Batch: 133126050002A
Sample Number: **7263057** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	58542.20000	0.00000	1.802	59084.70000	59215.10000	57326.90000
AL	27	56.21000	3357.22000	5.862	52.66961	56.76337	59.18930
CA	44	9322.00000	49799.40000	3.919	9545.36558	8900.03109	9519.31149
CR	52	-0.02140	290.01700	-426.075	0.08383	-0.07679	-0.07127
FE	57	216.30000	5684.78000	5.848	230.91853	209.66113	208.40063
K	39	602.10000	106879.00000	2.420	613.25680	585.60455	607.37785
MG	24	3649.00000	579395.00000	0.753	3620.59016	3651.20693	3675.40715
MN	55	15.97000	11075.10000	1.739	15.67815	16.23132	15.99829
NA	23	5439.00000	1682380.00000	1.491	5415.55426	5372.05574	5529.07294
TI	47	1.52500	53.33640	30.171	2.01576	1.10344	1.45581
V	51	0.50970	553.37200	5.419	0.53079	0.51996	0.47847
IN-1	115	53688.80000	0.00000	3.369	54826.80000	54636.20000	51603.30000
AG	107	-0.00225	26.66770	-340.728	-0.01046	-0.00105	0.00475
AS	75	1.26900	151.33500	20.102	1.34827	0.98379	1.47535
BA	137	24.01000	6395.26000	3.627	23.12917	24.87081	24.02695
CD	111	-0.02343	12.00010	-82.074	-0.00148	-0.03151	-0.03730
CO	59	0.05209	203.34500	20.119	0.04833	0.04402	0.06393
CU	63	0.87360	1790.20000	7.516	0.79956	0.89636	0.92480
MO	98	0.06803	133.34000	64.545	0.11796	0.03546	0.05066
NI	60	0.46830	273.34800	16.647	0.55818	0.41969	0.42690
SB	121	0.29610	280.01400	22.621	0.36236	0.22842	0.29757
SN	120	0.31060	733.75100	131.970	0.14657	0.77717	0.00811
SR	88	29.72000	22480.80000	3.003	29.23709	29.17001	30.74839
ZN	66	4.31500	870.07200	6.941	4.57174	3.98589	4.38715
BI-1	209	119263.00000	0.00000	1.861	118789.00000	121681.00000	117318.00000
PB	208	2.06300	11329.30000	5.705	2.16607	1.93456	2.08719
TL	203	0.00783	20.00080	78.432	0.00780	0.00170	0.01399
GE-1	72	13143.90000	0.00000	0.958	13277.30000	13127.00000	13027.20000
TB-1	159	162880.00000	0.00000	3.114	167345.00000	163931.00000	157365.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:58:00
Tube Number: 26 Batch: 133126050002A
Sample Number: **7263058** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	49950.10000	0.00000	3.618	51202.00000	47878.80000	50769.70000
AL	27	84.42000	4287.58000	8.947	87.24540	75.86573	90.15981
CA	44	9797.00000	44620.30000	4.209	9338.15512	10136.21674	9917.33904
CR	52	0.01734	290.01400	68.281	0.01107	0.00996	0.03100
FE	57	247.50000	5541.41000	3.661	239.91862	257.53822	245.04770
K	39	734.90000	103422.00000	4.122	711.68553	769.18642	723.90513
MG	24	3934.00000	532580.00000	3.383	3865.72141	4087.53149	3848.98149
MN	55	18.27000	10801.50000	0.886	18.23697	18.44415	18.12523
NA	23	5995.00000	1574970.00000	2.981	5934.97943	6195.75173	5853.83990
TI	47	2.05100	60.00280	69.039	0.59308	2.13830	3.42189
V	51	0.65920	603.37700	15.640	0.76115	0.66146	0.55501
IN-1	115	46075.80000	0.00000	1.119	46624.50000	46001.30000	45601.40000
AG	107	-0.00026	26.66770	-4521.770	-0.00964	0.01276	-0.00389
AS	75	1.51800	154.00200	6.247	1.41565	1.60322	1.53374
BA	137	24.99000	5711.58000	11.016	25.42488	22.04359	27.49872
CD	111	-0.02444	10.00010	-37.786	-0.03388	-0.01543	-0.02402
CO	59	0.05103	173.34200	61.023	0.08634	0.02750	0.03925
CU	63	1.23400	2026.93000	3.638	1.18207	1.26060	1.25902
MO	98	0.09247	136.67300	47.789	0.12708	0.10764	0.04269
NI	60	0.40330	203.34300	25.242	0.51571	0.37695	0.31730
SB	121	0.22390	200.01100	27.937	0.23759	0.27843	0.15561
SN	120	-0.11600	310.01500	-29.828	-0.09419	-0.15591	-0.09796
SR	88	32.45000	21078.00000	3.103	32.35659	31.49663	33.50415
ZN	66	4.29200	743.38700	8.984	4.69292	3.92384	4.26007
BI-1	209	105051.00000	0.00000	2.065	107144.00000	102813.00000	105194.00000
PB	208	2.54300	12289.70000	2.329	2.48063	2.59850	2.54974
TL	203	0.00927	20.00080	69.751	0.01571	0.00277	0.00934
GE-1	72	11525.60000	0.00000	1.297	11415.50000	11465.60000	11695.80000
TB-1	159	140699.00000	0.00000	3.350	145651.00000	136266.00000	140179.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 18:59:00
Tube Number: 27 Batch: 133126050002A
Sample Number: **7263059** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	48832.20000	0.00000	1.703	49544.80000	47918.60000	49033.10000
AL	27	2.71600	183.34300	25.188	2.59889	2.09731	3.45049
CA	44	8.69000	303.35000	87.319	11.48936	0.09945	14.48049
CR	52	-0.18580	63.33620	-7.277	-0.17150	-0.18784	-0.19832
FE	57	0.35910	16.66730	74.269	0.49754	0.52812	0.05158
K	39	37.79000	38109.80000	28.367	27.41995	48.83390	37.11776
MG	24	1.47100	206.67800	14.867	1.39974	1.29636	1.71605
MN	55	0.03477	66.66940	158.729	0.02118	0.09549	-0.01236
NA	23	31.90000	69654.70000	19.382	29.26307	38.96664	27.47646
TI	47	-0.10660	0.00000	0.000	-0.10667	-0.10667	-0.10667
V	51	0.00355	26.66770	375.035	-0.00452	-0.00374	0.01891
IN-1	115	45506.20000	0.00000	1.675	46193.00000	45639.40000	44686.00000
AG	107	-0.01514	0.00000	0.000	-0.01515	-0.01515	-0.01515
AS	75	-0.01873	6.66672	-179.498	-0.04791	-0.02634	0.01804
BA	137	0.01472	3.33347	173.234	0.00000	0.04416	0.00000
CD	111	-0.01785	11.33340	-163.025	0.00225	-0.05123	-0.00459
CO	59	-0.02180	40.00150	-51.284	-0.03315	-0.01081	-0.02144
CU	63	0.04655	410.02200	162.535	0.13089	0.02414	-0.01537
MO	98	-0.04580	10.00040	-0.407	-0.04597	-0.04584	-0.04561
NI	60	0.00180	10.00040	1167.680	-0.01937	0.02268	0.00210
SB	121	-0.10910	13.33390	-25.225	-0.13338	-0.07924	-0.11495
SN	120	0.04907	426.69100	27.736	0.04475	0.03814	0.06431
SR	88	-0.00266	16.66730	-660.143	0.01760	-0.01295	-0.01262
ZN	66	0.51690	106.67100	57.535	0.28645	0.41163	0.85264
BI-1	209	105083.00000	0.00000	2.314	103238.00000	107839.00000	104173.00000
PB	208	-0.00492	46.66890	-89.400	-0.00828	-0.00652	0.00006
TL	203	0.00034	6.66694	1141.420	-0.00412	0.00245	0.00268
GE-1	72	11485.60000	0.00000	3.624	11055.20000	11885.90000	11515.70000
TB-1	159	138931.00000	0.00000	3.163	142868.00000	139733.00000	134192.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:01:00
Tube Number: 28 Batch: 133126050002A
Sample Number: **7263060** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	51864.20000	0.00000	3.156	50820.00000	51021.20000	53751.40000
AL	27	0.49020	80.00320	225.010	-0.24014	-0.04772	1.75846
CA	44	7.61700	316.68500	99.619	1.02336	15.91086	5.91615
CR	52	-0.17490	80.00400	-26.381	-0.13783	-0.22662	-0.16042
FE	57	0.46520	20.00080	96.475	0.47492	0.90906	0.01161
K	39	18.48000	38611.10000	67.208	19.65610	30.28042	5.51809
MG	24	0.69250	110.00400	16.332	0.56432	0.77854	0.73449
MN	55	0.12130	123.33900	45.408	0.13547	0.16787	0.06049
NA	23	21.08000	71095.80000	56.357	26.59125	29.20395	7.44276
TI	47	0.00442	3.33346	4349.990	-0.10667	-0.10667	0.22661
V	51	-0.00201	23.33450	-270.503	-0.00510	-0.00519	0.00426
IN-1	115	48351.90000	0.00000	0.163	48340.70000	48279.40000	48435.40000
AG	107	-0.00276	23.33420	-111.240	0.00079	-0.00451	-0.00455
AS	75	-0.01000	8.00009	-1.293	-0.00998	-0.00988	-0.01014
BA	137	0.06943	16.66730	69.120	0.04169	0.04175	0.12484
CD	111	0.01048	18.66690	250.382	0.01617	0.03341	-0.01813
CO	59	-0.02839	30.00140	-18.503	-0.02316	-0.02838	-0.03366
CU	63	-0.05009	296.68200	-106.608	-0.02672	-0.01237	-0.11119
MO	98	-0.03951	16.66730	-30.397	-0.04646	-0.04645	-0.02564
NI	60	0.00049	10.00040	4025.530	0.00048	0.02038	-0.01937
SB	121	-0.08794	26.66770	-22.447	-0.09931	-0.06514	-0.09937
SN	120	0.02754	436.69600	260.857	0.03188	0.09711	-0.04637
SR	88	0.02534	36.66860	33.741	0.03024	0.03031	0.01547
ZN	66	0.77850	160.00900	44.496	0.60829	1.17710	0.55026
BI-1	209	108742.00000	0.00000	2.364	106770.00000	107807.00000	111650.00000
PB	208	-0.00062	70.00320	-818.694	-0.00644	0.00159	0.00299
TL	203	0.00451	13.33390	77.871	0.00251	0.00245	0.00857
GE-1	72	11699.10000	0.00000	2.723	11495.40000	12066.20000	11535.60000
TB-1	159	145435.00000	0.00000	2.007	142414.00000	148240.00000	145651.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:03:00
Tube Number: 29 Batch: 133126050002A
Sample Number: **7265122** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	53718.30000	0.00000	2.496	52396.20000	55077.50000	53681.30000
AL	27	0.15140	63.33620	284.016	-0.07336	-0.11971	0.64715
CA	44	-5.14000	266.68200	-193.580	-11.32656	6.33789	-10.43135
CR	52	-0.11800	150.00700	-41.042	-0.07220	-0.11332	-0.16871
FE	57	0.30640	16.66730	401.436	1.72687	-0.40377	-0.40377
K	39	-3.04500	37855.60000	-389.163	10.62727	-9.55213	-10.21081
MG	24	1.13100	176.67400	37.781	1.45948	0.64773	1.28503
MN	55	0.01889	63.33570	141.398	0.04797	-0.00455	0.01326
NA	23	9.73400	70576.50000	123.998	23.60897	1.66656	3.92741
TI	47	-0.10660	0.00000	0.000	-0.10667	-0.10667	-0.10667
V	51	-0.00586	20.00100	-491.123	0.02679	-0.02748	-0.01689
IN-1	115	49788.10000	0.00000	1.045	49361.90000	49634.60000	50367.70000
AG	107	-0.00826	13.33380	-36.829	-0.00475	-0.00998	-0.01005
AS	75	-0.05081	4.00004	-38.398	-0.05058	-0.03142	-0.07044
BA	137	0.09478	23.33430	50.042	0.12250	0.12182	0.04002
CD	111	-0.03617	8.00007	-22.203	-0.03585	-0.04436	-0.02831
CO	59	-0.03225	23.33420	-24.202	-0.03899	-0.02370	-0.03406
CU	63	0.08913	510.02900	38.977	0.11277	0.04924	0.10537
MO	98	-0.02649	30.00140	-1.193	-0.02623	-0.02640	-0.02684
NI	60	0.06437	43.33520	70.406	0.11670	0.03862	0.03778
SB	121	-0.12220	6.66693	-15.769	-0.10001	-0.13338	-0.13338
SN	120	-0.08421	360.02300	-183.470	0.08324	-0.22131	-0.11458
SR	88	0.01907	33.33460	45.239	0.02902	0.01440	0.01378
ZN	66	0.88180	183.34200	31.731	1.20401	0.69954	0.74191
BI-1	209	113257.00000	0.00000	1.518	114752.00000	113640.00000	111379.00000
PB	208	0.00522	103.33800	207.240	0.00823	0.01422	-0.00678
TL	203	0.00214	10.00040	4.463	0.00205	0.00211	0.00224
GE-1	72	12032.80000	0.00000	4.575	11825.90000	12656.80000	11615.70000
TB-1	159	151346.00000	0.00000	1.374	152037.00000	152992.00000	149010.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:05:00
Tube Number: 30 Batch: 133126050002A
Sample Number: **7265139** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57765.90000	0.00000	7.188	62550.60000	55639.80000	55107.50000
AL	27	0.54180	90.00380	69.343	0.25055	0.40899	0.96589
CA	44	29.58000	470.03300	31.579	38.98921	29.45041	20.30830
CR	52	-0.13860	136.67300	-15.382	-0.11455	-0.15516	-0.14612
FE	57	3.80400	110.00500	41.483	4.95059	2.00395	4.45821
K	39	-7.53000	40082.30000	-430.943	-44.72803	14.99086	7.14764
MG	24	1.85200	303.35000	8.515	1.73866	2.03190	1.78476
MN	55	0.03754	80.00330	96.910	-0.00019	0.04042	0.07239
NA	23	23.85000	79825.60000	73.124	4.02960	30.71226	36.82342
TI	47	0.00065	3.33346	28481.700	-0.10667	0.21530	-0.10667
V	51	0.00781	36.66830	223.190	0.02707	0.00318	-0.00684
IN-1	115	52537.00000	0.00000	3.974	54946.00000	51240.60000	51424.30000
AG	107	-0.01348	3.33346	-21.380	-0.01515	-0.01515	-0.01016
AS	75	-0.03539	6.00005	-81.605	-0.00205	-0.05201	-0.05214
BA	137	0.13090	33.33490	91.749	0.00000	0.23601	0.15678
CD	111	-0.02711	10.66670	-70.675	-0.03925	-0.03708	-0.00503
CO	59	-0.02009	50.00240	-19.816	-0.01645	-0.02434	-0.01948
CU	63	-0.05363	316.68400	-22.320	-0.06072	-0.03981	-0.06038
MO	98	-0.03110	26.66770	-37.910	-0.03853	-0.01751	-0.03727
NI	60	-0.00691	6.66692	-156.151	-0.01937	-0.00065	-0.00071
SB	121	-0.12800	3.33347	-7.250	-0.13338	-0.11731	-0.13338
SN	120	-0.05946	400.02200	-124.083	-0.11561	0.02411	-0.08689
SR	88	0.03333	46.66870	154.635	0.08778	0.02691	-0.01470
ZN	66	0.46000	113.33800	31.217	0.56954	0.51305	0.29750
BI-1	209	119348.00000	0.00000	5.134	126228.00000	117338.00000	114480.00000
PB	208	0.02311	206.67700	14.422	0.02693	0.02076	0.02164
TL	203	-0.00412	0.00000	0.000	-0.00412	-0.00412	-0.00412
GE-1	72	12479.90000	0.00000	5.188	13067.30000	11785.80000	12586.60000
TB-1	159	160431.00000	0.00000	6.128	171664.00000	156242.00000	153387.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:07:00
Tube Number: 31 Batch: 133126050002A
Sample Number: **7265217** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	56416.30000	0.00000	1.716	56603.80000	55368.00000	57277.00000
AL	27	544.70000	30849.60000	6.938	567.62573	565.49272	501.13625
CA	44	59570.00000	305111.00000	0.657	59324.60269	60024.17222	59370.24533
CR	52	0.71530	1200.13000	12.048	0.79127	0.73291	0.62164
FE	57	4133.00000	104429.00000	0.633	4106.29143	4158.63574	4132.74888
K	39	24100.00000	2558490.00000	0.798	23907.58556	24292.37472	24108.10029
MG	24	59580.00000	9116280.00000	1.569	58498.20532	60120.63260	60113.44581
MN	55	333.00000	221444.00000	1.532	328.48395	338.52817	331.94411
NA	23	253300.00000	72263600.00000	1.955	248204.19592	258087.96637	253693.58407
TI	47	33.51000	1067.30000	88.063	18.56697	14.45414	67.50366
V	51	1.58400	1600.16000	6.976	1.53996	1.50302	1.71019
IN-1	115	48906.30000	0.00000	2.421	48247.60000	48197.60000	50273.50000
AG	107	0.00061	30.00120	880.826	0.00614	-0.00449	0.00017
AS	75	1.37700	149.33500	19.680	1.62404	1.08727	1.42113
BA	137	779.50000	189070.00000	2.521	791.05149	790.60926	756.79670
CD	111	-0.01849	12.00010	-51.244	-0.01794	-0.00930	-0.02823
CO	59	0.18600	443.36400	29.882	0.25008	0.15045	0.15755
CU	63	1.59100	2667.04000	4.483	1.52026	1.66289	1.59028
MO	98	1.19200	1210.10000	0.477	1.19814	1.18897	1.18772
NI	60	0.71540	373.35300	22.533	0.87559	0.71725	0.55323
SB	121	0.04647	106.67100	79.148	0.08854	0.02042	0.03045
SN	120	0.29910	653.43700	62.655	0.22660	0.51192	0.15875
SR	88	557.90000	384311.00000	1.157	557.86733	564.44115	551.52935
ZN	66	4.70100	860.06300	14.705	5.43999	4.59247	4.07025
BI-1	209	104784.00000	0.00000	2.650	103217.00000	103144.00000	107991.00000
PB	208	2.40100	11586.00000	2.903	2.37645	2.34631	2.47925
TL	203	0.00254	10.00040	257.845	-0.00412	0.00275	0.00899
GE-1	72	11735.80000	0.00000	6.581	12216.20000	10844.90000	12146.30000
TB-1	159	153942.00000	0.00000	1.328	151602.00000	155372.00000	154854.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:08:00
Tube Number: 32 Batch: 133126050002A
Sample Number: **7265218** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	53393.40000	0.00000	1.664	53370.10000	52516.80000	54293.20000
AL	27	234.80000	12623.60000	6.278	217.84222	241.90227	244.62654
CA	44	136100.00000	659104.00000	3.130	136728.85894	139995.46878	131546.91560
CR	52	1.46000	2016.90000	10.020	1.52988	1.55871	1.29210
FE	57	442600.00000	10582400.00000	2.677	439408.69749	455760.94322	432731.47109
K	39	17020.00000	1721210.00000	1.586	16891.17888	17334.29851	16845.77959
MG	24	103400.00000	14973900.00000	2.956	102397.80744	106866.20458	101019.44513
MN	55	16880.00000	10618900.00000	2.633	16767.83132	17367.42484	16499.30550
NA	23	716200.00000	193215000.00000	1.925	711509.78354	731720.97586	705351.03372
TI	47	3.25100	100.00500	45.125	4.92826	2.62223	2.20302
V	51	2.40800	2286.99000	0.419	2.40231	2.42008	2.40287
IN-1	115	46412.20000	0.00000	2.267	47273.90000	46723.60000	45239.20000
AG	107	0.01052	46.66930	259.316	0.03916	-0.01515	0.00755
AS	75	21.18000	2054.18000	2.201	21.04071	21.70118	20.80097
BA	137	92.95000	21389.20000	4.718	89.35372	91.65920	97.83478
CD	111	0.01328	18.66680	330.271	0.01810	0.05453	-0.03279
CO	59	175.60000	321621.00000	1.900	171.93156	176.56951	178.40529
CU	63	0.60830	1186.77000	21.124	0.73897	0.48213	0.60390
MO	98	0.33390	360.02200	12.537	0.38073	0.32108	0.30002
NI	60	33.66000	16287.40000	2.376	32.74056	34.19549	34.04389
SB	121	0.11480	140.00600	38.972	0.09311	0.16629	0.08509
SN	120	0.11910	486.69600	65.449	0.03150	0.14481	0.18088
SR	88	744.90000	487010.00000	0.564	741.01954	749.36909	744.42247
ZN	66	12.52000	2140.27000	13.323	11.00687	14.30715	12.23512
BI-1	209	93167.70000	0.00000	0.941	93133.80000	94061.30000	92308.00000
PB	208	1.03500	4477.33000	7.131	1.11433	1.02408	0.96805
TL	203	0.00602	13.33420	145.869	-0.00412	0.01094	0.01122
GE-1	72	12072.80000	0.00000	2.134	12236.20000	12206.40000	11775.80000
TB-1	159	147722.00000	0.00000	2.259	149546.00000	149748.00000	143871.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:10:00
Tube Number: 33 Batch: 133126050002A
Sample Number: **7265219** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	53751.80000	0.00000	1.457	53330.10000	53270.00000	54655.40000
AL	27	1303.00000	70270.20000	2.643	1338.31624	1302.09023	1269.45684
CA	44	216000.00000	1053260.00000	2.415	219694.72599	218351.01573	210061.16018
CR	52	1.49400	2073.60000	6.177	1.53122	1.38932	1.56245
FE	57	27740.00000	667758.00000	1.514	27933.59625	28028.52520	27258.12361
K	39	4402.00000	476388.00000	1.570	4467.04060	4409.47138	4329.45439
MG	24	45480.00000	6629910.00000	0.774	45379.30222	45867.63464	45184.59845
MN	55	2358.00000	1493720.00000	1.500	2342.91564	2398.24538	2332.40776
NA	23	136500.00000	37137800.00000	1.529	137943.24770	137516.88613	134133.05868
TI	47	42.32000	1273.66000	6.198	42.56481	39.58074	44.80861
V	51	3.44300	3280.57000	2.321	3.35335	3.50668	3.46914
IN-1	115	46779.20000	0.00000	2.011	47864.80000	46201.80000	46271.20000
AG	107	0.00324	33.33460	267.449	-0.00442	0.01264	0.00150
AS	75	1.82100	186.00300	8.880	1.89885	1.92880	1.63491
BA	137	110.00000	25533.70000	2.632	109.17376	107.64092	113.24214
CD	111	-0.00181	15.33350	-935.841	0.01702	-0.00671	-0.01574
CO	59	4.80800	8956.77000	3.658	4.87708	4.93893	4.60803
CU	63	4.41500	6448.55000	2.467	4.53966	4.36726	4.33830
MO	98	0.96850	950.07500	7.875	0.91298	0.93698	1.05544
NI	60	9.43800	4610.99000	5.798	9.46443	9.97201	8.87844
SB	121	0.23120	206.67900	37.141	0.17636	0.33013	0.18703
SN	120	0.20660	556.70200	19.177	0.16764	0.24684	0.20530
SR	88	989.60000	651933.00000	1.456	972.95828	997.08715	998.66024
ZN	66	14.39000	2477.00000	2.678	13.96302	14.70748	14.50748
BI-1	209	102117.00000	0.00000	3.057	105133.00000	98898.90000	102319.00000
PB	208	4.01200	18807.10000	2.759	3.96363	4.13908	3.93424
TL	203	0.02116	36.66850	48.393	0.02282	0.01020	0.03048
GE-1	72	11795.80000	0.00000	2.563	11475.50000	11835.80000	12076.10000
TB-1	159	149022.00000	0.00000	1.523	151644.00000	147717.00000	147706.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:12:00
Tube Number: 34
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	60139.30000	0.00000	1.652	61234.20000	59295.40000	59888.30000
AL	27	2412.00000	145465.00000	1.648	2377.63574	2455.57978	2403.12726
CA	44	2326.00000	13017.00000	3.881	2385.01749	2371.85229	2222.47935
CR	52	246.60000	329247.00000	1.007	244.00894	248.95631	246.85657
FE	57	2421.00000	65204.90000	2.354	2357.62817	2436.60085	2468.32804
K	39	2308.00000	299791.00000	2.565	2245.69581	2315.55298	2363.42270
MG	24	2361.00000	385069.00000	1.216	2330.29689	2387.20047	2365.20363
MN	55	251.00000	177922.00000	1.386	246.96551	252.59224	253.32362
NA	23	2408.00000	807536.00000	0.912	2382.47746	2417.51372	2422.95564
TI	47	256.30000	8609.88000	3.265	255.67306	248.31117	265.00921
V	51	252.70000	267293.00000	0.818	251.24551	255.10255	251.88166
IN-1	115	54668.10000	0.00000	0.312	54799.20000	54475.50000	54729.70000
AG	107	24.70000	52624.10000	0.864	24.88554	24.74010	24.46530
AS	75	250.20000	28464.10000	1.491	253.86506	246.40676	250.24420
BA	137	243.70000	66107.10000	1.895	248.34821	239.11277	243.66634
CD	111	24.54000	6508.39000	1.703	24.49332	24.14577	24.97808
CO	59	244.10000	526666.00000	1.626	243.82252	240.31515	248.23714
CU	63	247.30000	399049.00000	1.520	251.42922	244.11499	246.27387
MO	98	24.87000	27013.00000	0.688	24.96906	24.97837	24.67743
NI	60	251.70000	143449.00000	2.419	257.07948	245.11003	253.03007
SB	121	23.08000	15410.10000	2.807	23.82474	22.63499	22.78507
SN	120	24.64000	22103.80000	0.336	24.74004	24.60397	24.59007
SR	88	24.69000	19035.00000	1.676	24.55421	25.15707	24.36452
ZN	66	246.90000	49264.80000	1.581	251.40892	244.31497	245.03903
BI-1	209	121003.00000	0.00000	0.805	120015.00000	121032.00000	121962.00000
PB	208	25.30000	140138.00000	1.763	25.68165	24.80826	25.40189
TL	203	24.83000	42453.40000	0.609	24.74115	24.74435	25.00486
GE-1	72	12903.70000	0.00000	1.322	12726.80000	13067.30000	12917.00000
TB-1	159	164790.00000	0.00000	1.830	166260.00000	161323.00000	166788.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:14:00
Tube Number: 35
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	60916.80000	0.00000	0.695	60803.30000	60561.60000	61385.40000
AL	27	0.23070	76.67350	44.473	0.28720	0.29261	0.11224
CA	44	2.45800	343.35300	604.150	18.25124	0.35379	-11.22924
CR	52	-0.18500	80.00350	-10.740	-0.17014	-0.17729	-0.20757
FE	57	1.42800	50.00270	25.518	1.79948	1.07101	1.41486
K	39	-30.09000	39894.90000	-17.139	-35.69950	-25.54986	-29.03241
MG	24	0.31530	66.66960	72.978	0.57840	0.21577	0.15162
MN	55	0.07171	110.00500	51.973	0.11378	0.05853	0.04282
NA	23	-16.52000	72004.30000	-20.466	-14.38893	-14.75920	-20.42206
TI	47	0.08882	6.66692	190.610	0.18796	-0.10667	0.18516
V	51	0.00050	30.00190	1837.440	-0.00877	0.00069	0.00958
IN-1	115	55019.70000	0.00000	0.510	54705.80000	55107.50000	55245.90000
AG	107	-0.00269	26.66800	-203.462	0.00362	-0.00583	-0.00585
AS	75	0.04438	15.33350	176.769	0.05105	-0.03719	0.11929
BA	137	0.03663	10.00040	0.511	0.03684	0.03657	0.03648
CD	111	-0.04185	7.33340	-41.266	-0.06179	-0.03184	-0.03193
CO	59	-0.02107	50.00190	-57.997	-0.01633	-0.01193	-0.03495
CU	63	-0.04863	340.01700	-14.818	-0.04126	-0.04899	-0.05565
MO	98	0.02557	90.00380	93.430	0.00767	0.01635	0.05270
NI	60	0.01554	20.00080	194.530	0.03325	-0.01937	0.03273
SB	121	0.30540	293.34800	38.965	0.19785	0.28511	0.43315
SN	120	0.11050	570.03600	146.697	0.23916	-0.07163	0.16395
SR	88	-0.00694	16.66730	-285.261	0.01043	-0.00274	-0.02851
ZN	66	-0.04589	16.66730	-63.216	-0.02878	-0.02951	-0.07938
BI-1	209	121108.00000	0.00000	1.574	122741.00000	119013.00000	121568.00000
PB	208	-0.00381	60.00250	-81.061	-0.00573	-0.00545	-0.00025
TL	203	0.01152	26.66780	77.856	0.00165	0.01373	0.01918
GE-1	72	13280.70000	0.00000	2.108	13177.10000	13067.30000	13597.60000
TB-1	159	169681.00000	0.00000	2.257	173771.00000	166181.00000	169090.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:16:00
Tube Number: 36 Batch: 133126050002A
Sample Number: **7265220** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	55492.80000	0.00000	4.350	58220.40000	53631.70000	54626.20000
AL	27	587.70000	32732.00000	4.312	568.93490	577.60837	616.51041
CA	44	60590.00000	305006.00000	2.996	58579.19938	61066.65951	62113.67558
CR	52	0.78220	1260.11000	12.479	0.66955	0.84021	0.83698
FE	57	4316.00000	107168.00000	4.221	4118.73494	4477.45236	4353.54647
K	39	24690.00000	2574860.00000	3.258	23769.01102	25247.69129	25057.40680
MG	24	62340.00000	9376770.00000	2.180	60889.69469	63586.25216	62533.24110
MN	55	344.70000	225286.00000	3.821	329.68837	354.11454	350.41373
NA	23	257700.00000	72248800.00000	3.181	248283.32786	261458.64651	263320.19808
TI	47	18.93000	590.09100	10.449	18.97397	16.92916	20.88379
V	51	1.95500	1933.57000	2.093	1.91653	1.99801	1.95071
IN-1	115	47883.60000	0.00000	5.522	50879.40000	45878.70000	46892.80000
AG	107	-0.00079	26.66770	-1449.090	-0.00506	-0.00955	0.01223
AS	75	1.16200	125.33500	17.195	1.38425	1.10485	0.99701
BA	137	808.90000	191871.00000	4.396	767.84410	827.98684	830.78869
CD	111	0.00168	16.66680	1558.530	0.02816	-0.02429	0.00118
CO	59	0.29340	636.70900	9.990	0.28467	0.32604	0.26938
CU	63	1.90600	3053.82000	3.145	1.86162	1.97439	1.88269
MO	98	1.16000	1156.77000	8.733	1.21256	1.04297	1.22364
NI	60	1.06300	540.03600	4.085	1.05563	1.11005	1.02423
SB	121	0.11030	140.00800	73.128	0.02850	0.18976	0.11252
SN	120	0.34540	673.38200	54.951	0.23618	0.56458	0.23533
SR	88	588.20000	396148.00000	4.223	561.44156	610.51820	592.69997
ZN	66	4.70900	843.39900	6.059	4.39752	4.77133	4.95775
BI-1	209	103856.00000	0.00000	4.604	109280.00000	100251.00000	102035.00000
PB	208	2.80300	13371.00000	7.553	2.68795	3.04755	2.67416
TL	203	-0.00180	3.33347	-222.253	-0.00412	-0.00412	0.00282
GE-1	72	11759.10000	0.00000	4.795	11375.40000	11495.50000	12406.50000
TB-1	159	153990.00000	0.00000	3.674	160504.00000	151168.00000	150297.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:17:00
Tube Number: 37 Batch: 133126050002A
Sample Number: **7265221** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	59774.40000	0.00000	2.228	58241.00000	60440.40000	60641.70000
AL	27	0.59780	96.67100	113.048	1.37262	0.13002	0.29068
CA	44	29.30000	483.36400	29.478	19.78689	31.48980	36.64109
CR	52	-0.13830	140.00700	-29.161	-0.11269	-0.11748	-0.18482
FE	57	1.46000	50.00190	23.432	1.12969	1.81271	1.43717
K	39	-11.08000	41245.80000	-33.592	-6.90713	-12.28539	-14.05423
MG	24	2.00100	336.68600	43.928	3.01343	1.55847	1.43137
MN	55	0.06534	103.33900	87.955	0.07868	0.11496	0.00237
NA	23	5.16900	77169.50000	174.289	15.21025	2.50620	-2.20659
TI	47	-0.00820	3.33346	-2080.740	-0.10667	-0.10667	0.18874
V	51	-0.00219	26.66770	-483.120	-0.00795	-0.00866	0.01003
IN-1	115	53641.40000	0.00000	2.906	51893.60000	54143.60000	54887.00000
AG	107	-0.00715	16.66730	-39.608	-0.00525	-0.01041	-0.00579
AS	75	-0.04190	5.33337	-21.864	-0.05248	-0.03626	-0.03698
BA	137	0.08938	23.33430	101.555	0.19420	0.03723	0.03672
CD	111	-0.02845	10.66680	-59.016	-0.03748	-0.03881	-0.00909
CO	59	-0.03335	23.33420	-55.952	-0.04413	-0.04413	-0.01180
CU	63	-0.03942	346.68500	-87.468	-0.06871	-0.00142	-0.04815
MO	98	-0.01951	40.00180	-93.490	-0.03745	-0.00098	-0.02012
NI	60	0.05196	40.00180	31.967	0.03610	0.06924	0.05056
SB	121	-0.09236	26.66770	-10.034	-0.08577	-0.10296	-0.08836
SN	120	-0.05742	410.02100	-191.571	0.05307	-0.16691	-0.05842
SR	88	0.01616	33.33460	215.718	0.05358	-0.01540	0.01030
ZN	66	1.09100	240.01300	30.898	0.71631	1.18755	1.36954
BI-1	209	122446.00000	0.00000	3.442	117922.00000	126260.00000	123158.00000
PB	208	0.00629	116.67200	171.356	0.01503	0.00960	-0.00576
TL	203	0.00159	10.00040	362.650	-0.00412	0.00149	0.00738
GE-1	72	13280.70000	0.00000	1.736	13057.10000	13267.40000	13517.70000
TB-1	159	163409.00000	0.00000	1.209	161639.00000	163048.00000	165540.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:19:00
Tube Number: 38 Batch: 133126050002A
Sample Number: **7267254** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	58739.60000	0.00000	1.635	59828.00000	58380.70000	58010.30000
AL	27	89.92000	5361.38000	10.616	99.87326	89.04150	80.84224
CA	44	295000.00000	1571940.00000	1.531	289832.52828	297818.03124	297484.86859
CR	52	0.27610	676.71300	34.448	0.17019	0.30404	0.35417
FE	57	107.50000	2840.43000	8.506	108.95524	115.87386	97.75319
K	39	5498.00000	639871.00000	1.855	5400.91650	5604.36893	5490.28241
MG	24	55640.00000	8863500.00000	1.793	54803.92626	56743.49217	55369.15955
MN	55	73.45000	50904.30000	2.790	72.78487	75.74401	71.80893
NA	23	562500.00000	167000000.00000	1.673	557499.96050	573398.63340	556724.64907
TI	47	3.35700	113.33800	20.265	2.58818	3.88239	3.59906
V	51	0.87320	930.07200	23.225	0.79953	1.10254	0.71761
IN-1	115	50317.40000	0.00000	4.553	52075.50000	51150.00000	47726.70000
AG	107	-0.00302	23.33450	-281.260	-0.00529	-0.01013	0.00637
AS	75	0.58840	70.66740	16.043	0.51967	0.54948	0.69603
BA	137	10.72000	2673.74000	2.472	10.45126	10.71921	10.98127
CD	111	-0.00069	16.66680	-1599.070	0.00210	-0.01277	0.00861
CO	59	0.15280	393.35700	27.709	0.17004	0.18382	0.10457
CU	63	2.95600	4764.39000	4.709	2.80310	2.99114	3.07491
MO	98	26.35000	26301.40000	4.998	25.02549	26.37846	27.66037
NI	60	1.41800	753.38600	8.752	1.49160	1.27505	1.48853
SB	121	0.02498	96.67070	133.907	-0.00685	0.05985	0.02193
SN	120	0.04511	466.69500	194.347	-0.04465	0.04945	0.13053
SR	88	4998.00000	3537770.00000	4.872	4749.37894	5009.94792	5236.01731
ZN	66	0.72490	156.67300	1.404	0.71335	0.72860	0.73266
BI-1	209	104074.00000	0.00000	2.662	105154.00000	106142.00000	100927.00000
PB	208	0.10220	556.69700	8.055	0.11008	0.10274	0.09365
TL	203	0.01190	23.33430	121.429	-0.00412	0.01589	0.02394
GE-1	72	12146.10000	0.00000	1.931	12296.30000	12266.10000	11875.80000
TB-1	159	161532.00000	0.00000	2.580	162051.00000	165416.00000	157128.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:21:00
Tube Number: 39 Batch: 133126050002A
Sample Number: **7267256** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	54149.90000	0.00000	2.151	52968.80000	55297.70000	54183.20000
AL	27	1525.00000	82826.70000	3.344	1584.05237	1499.88303	1492.08581
CA	44	154200.00000	757418.00000	2.193	157831.69631	153594.16195	151147.60068
CR	52	2.95700	3847.40000	6.047	2.90553	3.15622	2.80995
FE	57	1372.00000	33270.30000	5.155	1452.80848	1343.04184	1320.68423
K	39	6731.00000	713305.00000	2.597	6932.37738	6633.57090	6625.85091
MG	24	73600.00000	10808300.00000	2.330	75314.49038	73606.70105	71884.54397
MN	55	13.48000	8646.55000	7.008	14.45204	12.56538	13.42107
NA	23	642300.00000	175727000.00000	2.581	661232.39471	635292.25815	630383.63619
TI	47	53.46000	1620.28000	23.176	57.39563	63.40102	39.56976
V	51	2.65500	2550.38000	13.363	3.05425	2.53358	2.37632
IN-1	115	45541.60000	0.00000	3.017	46721.80000	45869.90000	44033.00000
AG	107	0.01294	50.00190	37.288	0.01782	0.01284	0.00817
AS	75	2.06500	204.00300	9.056	2.11210	1.85957	2.22470
BA	137	15.97000	3607.33000	1.329	15.74818	16.17239	15.97706
CD	111	0.00296	16.00010	543.427	0.01914	0.00275	-0.01301
CO	59	0.57550	1113.44000	4.410	0.59606	0.54715	0.58333
CU	63	4.58500	6501.88000	2.117	4.51179	4.54858	4.69525
MO	98	10.25000	9300.43000	2.849	9.91483	10.40815	10.43210
NI	60	1.97300	946.74200	8.115	2.15770	1.88429	1.87654
SB	121	-0.00047	73.33650	-3079.690	-0.00998	-0.00769	0.01626
SN	120	0.04197	423.35900	232.928	0.11818	0.07599	-0.06825
SR	88	3825.00000	2452910.00000	1.434	3770.61836	3823.74589	3880.28242
ZN	66	4.94800	843.40200	6.447	5.21114	4.59298	5.03903
BI-1	209	94810.40000	0.00000	1.811	96299.00000	95200.60000	92931.70000
PB	208	0.75040	3320.32000	8.467	0.73211	0.82108	0.69801
TL	203	0.06065	86.67020	8.608	0.05469	0.06281	0.06444
GE-1	72	11348.80000	0.00000	2.388	11645.90000	11285.30000	11115.10000
TB-1	159	146282.00000	0.00000	2.386	147431.00000	149054.00000	142362.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:23:00
Tube Number: 40 Batch: 133126050002A
Sample Number: **7267259** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	52904.90000	0.00000	0.588	52567.10000	53179.50000	52968.10000
AL	27	9788.00000	519195.00000	0.182	9808.64044	9776.06830	9779.89243
CA	44	123600.00000	593619.00000	1.172	125330.04475	122860.44225	122783.17969
CR	52	28.35000	33550.90000	1.997	28.85195	28.45695	27.73532
FE	57	9970.00000	236248.00000	1.749	10170.42657	9888.81012	9851.47922
K	39	7496.00000	772063.00000	3.785	7824.08707	7332.14516	7333.22674
MG	24	62250.00000	8931800.00000	1.032	62928.08898	61652.54195	62159.20437
MN	55	340.40000	212313.00000	1.375	344.39899	341.57117	335.26064
NA	23	849400.00000	227098000.00000	0.363	848787.74730	846726.53150	852793.81027
TI	47	318.40000	9407.47000	5.559	305.68540	338.59524	310.82552
V	51	23.00000	21426.50000	2.766	22.65526	23.73620	22.61463
IN-1	115	44712.40000	0.00000	1.956	44134.00000	45718.50000	44284.60000
AG	107	-0.00179	23.33420	-168.865	-0.00351	0.00170	-0.00355
AS	75	12.23000	1146.06000	6.863	11.56443	11.95967	13.17482
BA	137	70.90000	15724.20000	3.463	71.05982	68.37663	73.28034
CD	111	0.13380	44.00050	28.408	0.08990	0.15672	0.15470
CO	59	6.04800	10744.80000	2.361	6.21264	5.96253	5.96804
CU	63	5.82000	8009.42000	4.363	5.92934	5.52933	6.00031
MO	98	13.66000	12146.20000	5.075	14.18409	12.87296	13.91895
NI	60	11.11000	5181.24000	4.782	11.24500	10.51859	11.55349
SB	121	0.20480	183.34400	62.500	0.10923	0.15487	0.35019
SN	120	0.34630	633.37500	28.498	0.36815	0.43222	0.23850
SR	88	3092.00000	1946680.00000	3.120	3183.80110	2991.45015	3101.02475
ZN	66	21.77000	3570.66000	3.719	22.05126	20.86278	22.40943
BI-1	209	90600.70000	0.00000	0.498	90996.90000	90695.00000	90110.30000
PB	208	4.06600	16915.90000	2.100	4.00265	4.03255	4.16325
TL	203	0.20170	263.34700	11.552	0.17481	0.21443	0.21585
GE-1	72	10748.20000	0.00000	0.834	10794.90000	10644.80000	10804.90000
TB-1	159	141742.00000	0.00000	0.833	143102.00000	141146.00000	140977.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:25:00
Tube Number: 41 Batch: 133126050002A
Sample Number: **7267261** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	51117.50000	0.00000	0.622	50769.10000	51191.00000	51392.50000
AL	27	1454.00000	74573.20000	1.294	1473.25399	1435.64723	1453.79468
CA	44	169500.00000	786201.00000	0.663	170716.39488	169360.81906	168486.52261
CR	52	2.96400	3637.31000	4.339	3.08638	2.82992	2.97580
FE	57	1373.00000	31445.60000	2.619	1397.61966	1390.02291	1331.87867
K	39	6280.00000	630845.00000	1.521	6383.64248	6195.76743	6259.68867
MG	24	71130.00000	9861600.00000	2.148	71824.31346	72189.23736	69379.54476
MN	55	495.00000	298293.00000	2.135	499.18145	502.90939	483.03182
NA	23	864200.00000	223240000.00000	0.916	861943.23860	873011.08821	857666.49635
TI	47	50.22000	1436.81000	16.844	46.82627	43.98957	59.85193
V	51	3.40800	3087.16000	8.659	3.74795	3.21681	3.25947
IN-1	115	42575.40000	0.00000	1.113	42628.00000	42077.30000	43021.00000
AG	107	0.00493	33.33490	66.572	0.00292	0.00316	0.00872
AS	75	1.10100	105.33500	13.588	1.08317	1.25845	0.96073
BA	137	45.10000	9527.42000	5.634	47.96383	43.12678	44.19631
CD	111	0.00525	15.33350	401.942	-0.00146	0.02890	-0.01169
CO	59	1.93000	3313.89000	5.974	1.91236	2.05244	1.82374
CU	63	1.73800	2507.02000	9.919	1.89796	1.55536	1.76000
MO	98	4.35400	3720.70000	4.789	4.15760	4.57265	4.33030
NI	60	3.49600	1560.15000	10.572	3.92009	3.24179	3.32640
SB	121	-0.02368	56.66890	-51.225	-0.01745	-0.01594	-0.03766
SN	120	0.21700	513.37200	75.023	0.29781	0.32349	0.02959
SR	88	3914.00000	2346770.00000	2.437	3900.37164	4015.38262	3826.02684
ZN	66	4.68000	746.71600	9.962	5.20933	4.49724	4.33208
BI-1	209	86974.70000	0.00000	1.742	85870.30000	86352.20000	88701.70000
PB	208	1.03600	4180.48000	1.887	1.01371	1.05101	1.04250
TL	203	0.10690	136.67400	21.347	0.08657	0.10246	0.13156
GE-1	72	10554.70000	0.00000	1.165	10604.70000	10414.60000	10644.90000
TB-1	159	137060.00000	0.00000	0.970	135751.00000	137020.00000	138410.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:26:00
Tube Number: 42 Batch: 133126050002A
Sample Number: **7265535** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	53965.50000	0.00000	1.466	53058.40000	54323.30000	54514.60000
AL	27	61.94000	3403.96000	8.947	68.17270	57.55955	60.10065
CA	44	326400.00000	1597640.00000	0.597	328469.15687	326025.45165	324616.22182
CR	52	1.43000	2003.56000	5.790	1.51482	1.34934	1.42645
FE	57	119.50000	2897.12000	4.299	125.43330	116.33745	116.74771
K	39	24070.00000	2443550.00000	1.970	24604.64877	23706.55000	23892.29264
MG	24	111400.00000	16300200.00000	2.205	114208.95549	109750.43577	110193.10270
MN	55	15.02000	9607.29000	3.004	15.19554	14.51175	15.36370
NA	23	923800.00000	251863000.00000	2.672	952077.56047	906546.14454	912804.69836
TI	47	3.89800	120.01700	53.746	6.30946	2.86133	2.52223
V	51	1.01200	986.74200	10.504	0.94792	1.13460	0.95316
IN-1	115	44683.00000	0.00000	0.612	44896.40000	44778.00000	44374.60000
AG	107	0.04796	110.00500	51.647	0.05919	0.06512	0.01957
AS	75	0.87210	89.33430	19.723	0.68132	0.91952	1.01535
BA	137	10.67000	2366.99000	10.693	11.98787	10.08350	9.94803
CD	111	0.03880	23.33360	133.428	0.01353	0.00451	0.09835
CO	59	0.41930	816.72800	11.553	0.36801	0.42571	0.46425
CU	63	3.14800	4487.62000	6.223	3.09616	2.98378	3.36496
MO	98	20.10000	17853.20000	3.282	20.81777	19.51843	19.96973
NI	60	3.61100	1690.19000	9.676	3.20805	3.79520	3.82993
SB	121	-0.05980	40.00180	-80.853	-0.00496	-0.07820	-0.09626
SN	120	0.03195	406.68700	186.479	-0.03561	0.07698	0.05447
SR	88	10880.00000	6850480.00000	0.777	10927.12111	10787.06576	10939.20522
ZN	66	0.77100	146.67300	4.857	0.78698	0.72818	0.79776
BI-1	209	90083.80000	0.00000	0.683	89486.30000	90050.20000	90715.00000
PB	208	0.03878	220.01000	35.534	0.05376	0.02663	0.03597
TL	203	0.02999	43.33540	66.622	0.05126	0.01161	0.02710
GE-1	72	11145.30000	0.00000	2.929	11455.60000	10805.00000	11175.30000
TB-1	159	145918.00000	0.00000	1.688	148446.00000	145782.00000	143525.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:28:00
Tube Number: 43
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	56037.90000	0.00000	3.483	54966.30000	54855.90000	58291.40000
AL	27	102.10000	5791.48000	1.010	101.17025	103.19541	101.84596
CA	44	178.00000	1206.78000	17.601	154.92006	213.64766	165.37540
CR	52	1.91300	2680.38000	2.799	1.91315	1.96685	1.85974
FE	57	103.90000	2617.02000	6.564	110.90706	97.29042	103.40930
K	39	249.60000	65694.90000	5.349	256.37576	258.15210	234.19534
MG	24	104.20000	15840.00000	2.436	103.20320	107.04377	102.25024
MN	55	1.94800	1343.45000	9.795	1.89435	1.78999	2.16011
NA	23	261.40000	144721.00000	11.764	285.46835	271.92930	226.74731
TI	47	17.88000	563.36800	17.998	20.42632	14.26251	18.94769
V	51	0.47810	500.03000	16.518	0.44846	0.41832	0.56766
IN-1	115	50251.30000	0.00000	1.280	49511.20000	50570.10000	50672.60000
AG	107	0.53520	1076.76000	7.399	0.57082	0.49255	0.54219
AS	75	2.22000	241.33700	7.694	2.41523	2.09664	2.14914
BA	137	2.23600	556.70300	22.066	2.76830	1.79356	2.14793
CD	111	0.45370	127.33500	21.402	0.35651	0.45386	0.55071
CO	59	0.53970	1156.77000	9.298	0.58559	0.54733	0.48610
CU	63	2.13300	3540.64000	10.577	2.39297	1.98863	2.01754
MO	98	0.53660	590.03900	27.507	0.68709	0.39212	0.53062
NI	60	2.14200	1133.43000	19.524	1.72492	2.56129	2.13944
SB	121	0.98240	680.04900	22.527	1.13095	1.08818	0.72810
SN	120	2.09300	2120.25000	6.871	2.15706	1.92824	2.19369
SR	88	1.15000	833.39600	11.696	1.30512	1.08064	1.06440
ZN	66	14.84000	2743.74000	3.184	14.38053	15.32398	14.80547
BI-1	209	111948.00000	0.00000	1.169	113327.00000	111794.00000	110722.00000
PB	208	1.06000	5504.07000	5.115	1.02303	1.03531	1.12248
TL	203	0.51440	820.06300	2.253	0.50811	0.52780	0.50737
GE-1	72	12586.60000	0.00000	0.766	12546.60000	12696.60000	12516.60000
TB-1	159	152165.00000	0.00000	0.406	152869.00000	151712.00000	151915.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:30:00
Tube Number: 44
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	62095.20000	0.00000	1.322	61405.00000	61877.80000	63002.70000
AL	27	8954.00000	557439.00000	0.971	9014.38853	8994.21887	8854.68386
CA	44	8632.00000	48945.90000	1.090	8738.99050	8593.03939	8563.23474
CR	52	-0.08261	223.34400	-70.754	-0.11213	-0.12043	-0.01530
FE	57	9074.00000	252374.00000	0.155	9075.57432	9087.15778	9059.10386
K	39	8758.00000	1051350.00000	0.352	8793.24576	8737.43573	8742.80192
MG	24	8777.00000	1478210.00000	0.933	8842.59558	8685.00018	8802.51113
MN	55	1.47300	1136.76000	12.980	1.68714	1.41309	1.31904
NA	23	8847.00000	2853760.00000	0.494	8897.27569	8819.92516	8823.23438
TI	47	182.20000	6318.43000	6.224	194.53101	172.19275	179.92229
V	51	-0.01824	10.00060	-50.779	-0.00896	-0.01829	-0.02748
IN-1	115	56657.30000	0.00000	1.508	55790.00000	56683.80000	57498.10000
AG	107	-0.01212	6.66693	-21.601	-0.01055	-0.01515	-0.01068
AS	75	-0.05018	4.66670	-50.339	-0.07230	-0.05561	-0.02265
BA	137	0.02373	6.66693	86.599	0.03613	0.00000	0.03505
CD	111	0.00596	20.66690	295.184	0.00475	-0.01100	0.02412
CO	59	-0.01734	60.00250	-42.393	-0.02141	-0.02177	-0.00886
CU	63	0.07304	553.37200	24.918	0.08827	0.05289	0.07797
MO	98	182.90000	205397.00000	1.078	184.87985	182.82005	180.93651
NI	60	0.02589	26.66790	101.468	0.04942	-0.00244	0.03069
SB	121	-0.09952	23.33420	-7.940	-0.10386	-0.10432	-0.09041
SN	120	0.01109	496.69800	1092.880	0.09016	-0.12847	0.07158
SR	88	0.08845	93.33800	32.685	0.07330	0.12179	0.07028
ZN	66	0.08122	43.33500	94.509	0.16584	0.01609	0.06172
BI-1	209	124054.00000	0.00000	1.539	125539.00000	121901.00000	124722.00000
PB	208	0.01944	193.34200	11.590	0.02019	0.02123	0.01691
TL	203	-0.00224	3.33347	-145.682	0.00152	-0.00412	-0.00412
GE-1	72	13751.20000	0.00000	0.537	13667.70000	13777.80000	13808.00000
TB-1	159	173282.00000	0.00000	3.195	168065.00000	172688.00000	179092.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:32:00
Tube Number: 45
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	61965.00000	0.00000	1.728	60873.20000	63013.70000	62008.10000
AL	27	9143.00000	567945.00000	2.111	9271.61386	8921.63365	9237.52756
CA	44	8802.00000	49789.00000	2.811	9086.69201	8639.03171	8680.19085
CR	52	18.09000	25195.30000	2.083	18.40850	17.67472	18.19100
FE	57	9173.00000	254522.00000	2.839	9337.48062	8872.71159	9308.69064
K	39	9081.00000	1085860.00000	2.851	9359.63899	8848.05345	9033.90121
MG	24	8922.00000	1499130.00000	2.233	9058.78565	8693.20136	9012.97153
MN	55	20.25000	14849.10000	1.882	20.55867	20.36985	19.82474
NA	23	9117.00000	2931780.00000	2.798	9217.75568	8826.99059	9306.48051
TI	47	190.80000	6608.62000	8.401	175.03535	190.41629	207.09222
V	51	-0.00005	30.00110	-33333.300	-0.01814	-0.00040	0.01838
IN-1	115	56085.40000	0.00000	1.004	56342.70000	56474.10000	55439.50000
AG	107	18.71000	40914.40000	1.972	18.60106	18.41650	19.12768
AS	75	17.79000	2085.52000	4.244	18.37348	16.93442	18.04985
BA	137	0.03594	10.00040	1.010	0.03577	0.03569	0.03636
CD	111	18.32000	4990.36000	1.181	18.16067	18.24277	18.56963
CO	59	18.37000	40745.30000	1.812	18.10427	18.26503	18.74400
CU	63	18.72000	31378.80000	3.057	18.34443	18.43379	19.37718
MO	98	188.90000	209964.00000	1.818	186.40868	187.37573	192.78207
NI	60	18.69000	10938.30000	4.200	19.42089	17.86201	18.80215
SB	121	-0.11870	10.00040	-12.283	-0.13338	-0.10421	-0.11853
SN	120	0.00934	490.03000	406.722	-0.02652	0.00538	0.04916
SR	88	0.06010	70.00270	20.832	0.04710	0.07206	0.06113
ZN	66	18.44000	3797.38000	8.080	18.16989	17.10758	20.05073
BI-1	209	126048.00000	0.00000	1.670	123629.00000	127044.00000	127470.00000
PB	208	0.01653	180.00900	61.766	0.01189	0.00946	0.02824
TL	203	0.01448	33.33500	79.282	0.00161	0.01817	0.02365
GE-1	72	13093.80000	0.00000	0.845	13107.20000	13197.20000	12977.00000
TB-1	159	174624.00000	0.00000	1.569	172167.00000	174127.00000	177579.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:33:00
Tube Number: 46
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57862.30000	0.00000	1.239	58291.10000	57034.80000	58261.10000
AL	27	2577.00000	149559.00000	0.635	2561.44280	2576.12169	2594.11108
CA	44	2547.00000	13681.10000	2.185	2608.81321	2501.13093	2530.59118
CR	52	259.70000	333681.00000	1.043	262.86048	258.33945	258.01326
FE	57	2566.00000	66495.00000	2.050	2589.46501	2602.08918	2505.30645
K	39	2510.00000	310154.00000	1.140	2541.49703	2504.10050	2485.27865
MG	24	2513.00000	394431.00000	0.407	2521.31353	2516.45056	2501.69097
MN	55	263.90000	180046.00000	0.263	263.18385	264.55877	264.02424
NA	23	2589.00000	830020.00000	1.546	2613.27896	2611.09871	2542.88920
TI	47	260.50000	8412.98000	5.651	250.13145	277.32749	253.95116
V	51	268.20000	272947.00000	1.192	271.90075	266.23575	266.49955
IN-1	115	52183.40000	0.00000	2.390	53272.20000	50822.80000	52455.10000
AG	107	26.42000	53735.90000	0.332	26.34003	26.51454	26.41150
AS	75	263.50000	28612.40000	1.079	262.35440	266.73875	261.41092
BA	137	257.50000	66654.00000	2.272	251.74032	263.44066	257.39956
CD	111	26.15000	6617.79000	0.701	26.05926	26.35822	26.02484
CO	59	259.00000	533429.00000	0.204	259.35476	259.34153	258.43460
CU	63	259.80000	400240.00000	0.613	261.33696	259.99760	258.16601
MO	98	27.12000	28118.70000	5.018	28.61950	26.77769	25.96198
NI	60	266.80000	145140.00000	1.038	268.98602	267.84409	263.72131
SB	121	25.26000	16090.90000	0.800	25.48656	25.09851	25.19433
SN	120	25.23000	21576.10000	4.039	25.16023	26.27534	24.24006
SR	88	26.13000	19218.60000	3.126	25.76607	27.06511	25.55788
ZN	66	264.00000	50255.00000	2.117	261.40522	270.38433	260.12940
BI-1	209	115778.00000	0.00000	1.648	117942.00000	114338.00000	115054.00000
PB	208	26.32000	139538.00000	0.560	26.41774	26.15431	26.40080
TL	203	26.19000	42854.60000	1.282	26.38664	26.39249	25.80801
GE-1	72	11942.60000	0.00000	3.115	12196.20000	12116.10000	11515.50000
TB-1	159	157490.00000	0.00000	2.441	161580.00000	153952.00000	156937.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:35:00
Tube Number: 47
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	57668.30000	0.00000	0.480	57407.60000	57638.20000	57959.10000
AL	27	-0.33330	40.00170	-0.994	-0.33023	-0.33301	-0.33683
CA	44	10.99000	370.02400	103.367	-2.10688	16.79307	18.27380
CR	52	-0.17910	83.33670	-14.065	-0.18932	-0.15043	-0.19762
FE	57	0.11060	13.33380	531.826	-0.40377	-0.01640	0.75191
K	39	2.15500	41209.00000	453.689	10.44855	4.64332	-8.62463
MG	24	0.08177	26.66770	44.429	0.03982	0.10327	0.10221
MN	55	0.02134	70.00320	117.010	0.00710	0.00675	0.05018
NA	23	-3.45800	71974.10000	-125.680	0.47872	-8.12095	-2.73156
TI	47	0.20450	10.00040	151.980	0.20538	0.51494	-0.10667
V	51	0.01199	40.00150	165.555	0.03196	-0.00775	0.01177
IN-1	115	53199.30000	0.00000	0.887	52828.60000	53038.90000	53730.30000
AG	107	-0.00392	23.33450	-184.910	-0.00543	-0.01031	0.00397
AS	75	0.01888	12.00010	95.180	0.00146	0.03735	0.01782
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.02527	11.33340	-36.700	-0.01457	-0.03037	-0.03088
CO	59	-0.01243	66.66940	-121.722	-0.02973	-0.00590	-0.00167
CU	63	-0.03719	346.68800	-127.346	-0.07206	0.01672	-0.05625
MO	98	0.13230	200.01000	59.864	0.05772	0.12386	0.21544
NI	60	-0.00123	10.00040	-1472.830	0.01695	-0.00128	-0.01937
SB	121	0.16030	190.00900	74.735	0.02253	0.23932	0.21919
SN	120	0.15150	586.70600	55.558	0.05446	0.20477	0.19526
SR	88	-0.01070	13.33380	-72.551	-0.01507	-0.00174	-0.01530
ZN	66	-0.00848	23.33450	-934.080	-0.02522	0.07776	-0.07798
BI-1	209	116121.00000	0.00000	1.914	115287.00000	114437.00000	118640.00000
PB	208	-0.00333	60.00280	-6.422	-0.00326	-0.00317	-0.00358
TL	203	0.00596	16.66740	113.691	0.00203	0.00207	0.01378
GE-1	72	12746.80000	0.00000	1.186	12586.60000	12766.90000	12886.90000
TB-1	159	162280.00000	0.00000	1.348	160151.00000	162168.00000	164520.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:37:00
Tube Number: 48
Sample Number: **LRS**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	56577.00000	0.00000	0.188	56674.30000	56593.50000	56463.00000
AL	27	49520.00000	2808510.00000	2.983	47814.79389	50272.56889	50462.78573
CA	44	48500.00000	249188.00000	1.104	47915.69518	48965.50207	48624.22103
CR	52	497.00000	623970.00000	1.798	489.95612	507.03396	493.94087
FE	57	49440.00000	1252750.00000	2.856	47889.06283	50654.30737	49768.19741
K	39	47450.00000	5012960.00000	2.230	46480.99713	48581.19801	47302.87754
MG	24	45900.00000	7043730.00000	1.729	45261.43439	46788.71869	45651.91038
MN	55	505.50000	337112.00000	2.380	491.59374	513.04862	511.74925
NA	23	48980.00000	14071200.00000	2.811	47735.32798	50458.54306	48746.46048
TI	47	526.10000	16617.90000	3.013	508.79716	529.48405	539.93399
V	51	516.00000	513364.00000	2.062	507.96541	528.04598	511.91403
IN-1	115	49719.40000	0.00000	2.269	48557.80000	50810.80000	49789.50000
AG	107	112.50000	217950.00000	1.359	113.87369	110.87304	112.88259
AS	75	512.50000	53016.50000	0.502	513.39923	509.57221	514.46300
BA	137	508.20000	125338.00000	1.301	515.72924	505.22122	503.52563
CD	111	488.90000	117593.00000	0.737	491.86917	484.87241	489.87928
CO	59	489.20000	959799.00000	0.250	490.37096	489.41282	487.93899
CU	63	484.50000	710700.00000	0.817	486.01244	487.43033	479.98146
MO	98	522.90000	515253.00000	0.714	526.53625	522.97152	519.07585
NI	60	495.20000	256644.00000	0.969	497.36021	498.64060	489.76390
SB	121	427.50000	258230.00000	1.540	420.01381	432.27066	430.30549
SN	120	503.90000	402635.00000	1.105	510.26776	501.04026	500.25933
SR	88	509.10000	356471.00000	1.607	515.64351	499.92356	511.71872
ZN	66	493.00000	89412.30000	2.497	506.08592	491.30048	481.64484
BI-1	209	106455.00000	0.00000	1.902	105113.00000	108785.00000	105468.00000
PB	208	545.40000	2656860.00000	1.243	539.27576	544.33452	552.69945
TL	203	532.50000	800898.00000	0.364	531.21803	534.74415	531.58841
GE-1	72	12129.50000	0.00000	2.448	12466.50000	11906.00000	12016.20000
TB-1	159	154585.00000	0.00000	1.309	152859.00000	156813.00000	154082.00000

Run Name: 1331403E03 Date/Time: 11/10/2013 19:39:00
Tube Number: 49
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	56449.80000	0.00000	2.911	54926.80000	56232.00000	58190.70000
AL	27	0.76680	100.00400	207.877	2.60697	-0.13831	-0.16816
CA	44	2.88700	320.01600	197.610	8.52546	3.01960	-2.88249
CR	52	-0.16420	100.00500	-10.548	-0.14579	-0.18015	-0.16682
FE	57	1.85300	56.66880	48.046	2.84820	1.58153	1.13101
K	39	16.34000	41814.30000	46.114	24.89708	10.69428	13.43091
MG	24	1.41400	226.68500	97.242	2.99934	0.69818	0.54498
MN	55	0.02331	70.00290	226.555	0.04200	-0.03631	0.06423
NA	23	-2.70200	70630.20000	-277.683	5.36831	-4.00685	-9.46614
TI	47	0.21340	10.00040	152.905	0.54562	-0.10667	0.20118
V	51	-0.00763	20.00100	-218.463	-0.01713	-0.01737	0.01161
IN-1	115	52672.60000	0.00000	0.889	52362.10000	53211.10000	52444.70000
AG	107	0.01730	66.66950	89.711	0.02408	0.02828	-0.00046
AS	75	0.11730	22.66690	32.268	0.14914	0.12727	0.07545
BA	137	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CD	111	-0.01964	12.66680	-162.169	0.00961	-0.01496	-0.05358
CO	59	-0.02170	46.66890	-24.567	-0.02477	-0.01555	-0.02480
CU	63	-0.00697	390.02300	-513.137	0.03323	-0.03516	-0.01897
MO	98	1.31300	1430.14000	9.741	1.38865	1.38454	1.16506
NI	60	0.00486	13.33380	211.079	-0.00105	0.01669	-0.00108
SB	121	8.51700	5534.81000	19.984	6.58422	9.17157	9.79458
SN	120	2.22200	2333.65000	34.622	1.35623	2.48498	2.82600
SR	88	-0.00142	20.00100	-1908.390	-0.00139	-0.02851	0.02564
ZN	66	0.13080	50.00240	137.462	0.23751	0.23166	-0.07673
BI-1	209	115376.00000	0.00000	0.443	114830.00000	115843.00000	115456.00000
PB	208	0.02268	196.67700	78.439	0.04247	0.00801	0.01755
TL	203	0.05932	103.33800	26.416	0.07603	0.05699	0.04494
GE-1	72	11605.70000	0.00000	2.859	11875.90000	11235.30000	11705.90000
TB-1	159	157111.00000	0.00000	2.639	161039.00000	157517.00000	152776.00000

Lancaster Laboratories

Instrument Tuning Report

(ICPMS #11332)

File Name: default.tun

File Path: C:\elandata\Tuning

Sample Date/Time: 11/10/2013 1:16:00PM

Number of Replicates: 6

Method File: c:\elandata\Method\dailytune.mth

Measured Mass must be within +/- 0.1 amu of the Exact Mass.

Measured Peak Width must be > or = to 0.640 AND < or = to 0.660.

Analyte	EXACT MASS	MEAS. MASS	Mass DAC	RES. DAC	MEAS. PK. WIDTH
Ce	140.000	140.050	0	0	0.600
In	115.000	115.000	0	0	0.600
Li	6.000	5.950	0	0	0.650
Mg	24.000	24.000	0	0	0.600
Pb	208.000	208.000	0	0	0.650
Rh	103.000	103.000	0	0	0.650
U	238.000	238.000	0	0	0.650

Summary: Verify that the RSD is less than 5 for the following masses.

Mass	Meas. Intens. Mean	Meas. Intens. RSD
140.000	44708.000	1.510
115.000	44246.000	2.600
6.000	21227.000	3.080
24.000	22236.000	1.560
208.000	22142.000	1.870
103.000	43840.000	1.740
238.000	47736.000	1.600

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

1331202M07

Mercury Run Data Report

Data File Name: 1331202.M07

Run Name: 1331202M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By	Reviewed Date
Damary Valentin	11/08/2013 1:26PM

Method Reference Name(s):

EPA 245.1 rev 3

SW-846 7470A

Verified By:	Verified Date
Jennifer L Moyer	11/08/2013 2:20PM
Robert Strocko	11/10/2013 8:26AM

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/08/2013 07:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	-23.0

2 Burn Date/Time: 11/08/2013 07:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1312.0

3 Burn Date/Time: 11/08/2013 07:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3312.0

4 Burn Date/Time: 11/08/2013 07:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6723.0

5 Burn Date/Time: 11/08/2013 07:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	17288.0

6 Burn Date/Time: 11/08/2013 07:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33001.0

CorrelationCoefficient = 1.00000
Slope = 6639.7721500000
Y-Intercept = 87.8493700000

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/08/2013 07:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.5107	16762.0

8 Burn Date/Time: 11/08/2013 07:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0328	-136.0

9 Burn Date/Time: 11/08/2013 07:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1964	1387.0

10 Burn Date/Time: 11/08/2013 07:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9877	6644.0

11 Burn Date/Time: 11/08/2013 07:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0254	-87.0

12 Burn Date/Time: 11/08/2013 07:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0141	-12.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/08/2013 07:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9170	6174.0		

14 Burn Date/Time: 11/08/2013 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	U*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0206	-55.0		

15 Burn Date/Time: 11/08/2013 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	D*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

16 Burn Date/Time: 11/08/2013 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	R*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9676	6510.0		

17 Burn Date/Time: 11/08/2013 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266607	**********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0167	-29.0		

18 Burn Date/Time: 11/08/2013 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0054	46.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/08/2013 07:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9521	6407.0		

20 Burn Date/Time: 11/08/2013 07:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264692	**********	8	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.8894	19278.0		

21 Burn Date/Time: 11/08/2013 07:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264889	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0482	-238.0		

22 Burn Date/Time: 11/08/2013 07:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9837	6617.0

23 Burn Date/Time: 11/08/2013 07:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0251	-85.0

24 Burn Date/Time: 11/08/2013 07:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264890	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0010	75.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/08/2013 07:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261320	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0396	345.0		

26 Burn Date/Time: 11/08/2013 07:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265746	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0404	350.0		

27 Burn Date/Time: 11/08/2013 07:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263711	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4353	2974.0		

28 Burn Date/Time: 11/08/2013 07:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264230	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0069	36.0		

29 Burn Date/Time: 11/08/2013 08:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266437	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0515	424.0		

30 Burn Date/Time: 11/08/2013 08:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	U**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0126	-2.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/08/2013 08:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	D*********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0104	13.0		

32 Burn Date/Time: 11/08/2013 08:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	R*********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9894	6655.0		

33 Burn Date/Time: 11/08/2013 08:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0274	-100.0		

34 Burn Date/Time: 11/08/2013 08:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9852	6627.0

35 Burn Date/Time: 11/08/2013 08:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0245	-81.0

36 Burn Date/Time: 11/08/2013 08:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9269	6240.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/08/2013 08:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265645	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0132	-6.0		

38 Burn Date/Time: 11/08/2013 08:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266278	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1880	1331.0		

39 Burn Date/Time: 11/08/2013 08:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266279	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4308	2944.0		

40 Burn Date/Time: 11/08/2013 08:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266280	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.7038	18045.0		

41 Burn Date/Time: 11/08/2013 08:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262069	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0320	-131.0		

42 Burn Date/Time: 11/08/2013 08:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262070	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/08/2013 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262318	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

44 Burn Date/Time: 11/08/2013 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262319	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0174	-34.0		

45 Burn Date/Time: 11/08/2013 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262320	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0081	28.0		

46 Burn Date/Time: 11/08/2013 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9796	6590.0

47 Burn Date/Time: 11/08/2013 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0183	-40.0

48 Burn Date/Time: 11/08/2013 08:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262321	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	-28.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/08/2013 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262322	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

50 Burn Date/Time: 11/08/2013 08:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262323	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0056	45.0		

51 Burn Date/Time: 11/08/2013 08:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262324	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0078	30.0		

52 Burn Date/Time: 11/08/2013 08:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262325	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

53 Burn Date/Time: 11/08/2013 08:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262326	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0144	-14.0		

54 Burn Date/Time: 11/08/2013 08:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262327	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0078	134.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/08/2013 08:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262328	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0137	-9.0		

56 Burn Date/Time: 11/08/2013 08:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265131	U*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0129	-4.0		

57 Burn Date/Time: 11/08/2013 08:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265134	D*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

58 Burn Date/Time: 11/08/2013 09:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9731	6547.0

59 Burn Date/Time: 11/08/2013 09:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0150	-18.0

60 Burn Date/Time: 11/08/2013 09:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265132	R*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9239	6220.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/08/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265133	M*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9102	6129.0		

62 Burn Date/Time: 11/08/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265140	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0284	-107.0		

63 Burn Date/Time: 11/08/2013 09:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0131	-5.0		

64 Burn Date/Time: 11/08/2013 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9362	6302.0		

65 Burn Date/Time: 11/08/2013 09:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262329	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0238	-76.0		

66 Burn Date/Time: 11/08/2013 09:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262330	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0117	4.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/08/2013 09:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262331	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0034	59.0		

68 Burn Date/Time: 11/08/2013 09:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263088	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0331	302.0		

69 Burn Date/Time: 11/08/2013 09:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263089	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0045	52.0		

70 Burn Date/Time: 11/08/2013 09:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9712	6534.0

71 Burn Date/Time: 11/08/2013 09:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0152	-19.0

72 Burn Date/Time: 11/08/2013 09:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263090	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0101	15.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/08/2013 09:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263091	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0162	-26.0		

74 Burn Date/Time: 11/08/2013 09:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263092	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0108	10.0		

75 Burn Date/Time: 11/08/2013 09:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263093	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	-20.0		

76 Burn Date/Time: 11/08/2013 09:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263094	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0110	9.0		

77 Burn Date/Time: 11/08/2013 09:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264065	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0077	31.0		

78 Burn Date/Time: 11/08/2013 09:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264067	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0060	42.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/08/2013 09:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264069	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2091	1471.0		

80 Burn Date/Time: 11/08/2013 09:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264071	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

81 Burn Date/Time: 11/08/2013 09:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264267	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0062	41.0		

82 Burn Date/Time: 11/08/2013 09:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9769	6572.0

83 Burn Date/Time: 11/08/2013 09:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0250	-84.0

84 Burn Date/Time: 11/08/2013 09:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265658	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0090	22.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/08/2013 09:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265659	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0162	-26.0		

86 Burn Date/Time: 11/08/2013 09:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265660	U*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

87 Burn Date/Time: 11/08/2013 10:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265663	D*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0074	33.0		

88 Burn Date/Time: 11/08/2013 10:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265661	R*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9596	6457.0		

89 Burn Date/Time: 11/08/2013 10:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265662	M*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9370	6307.0		

90 Burn Date/Time: 11/08/2013 10:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265664	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0174	-34.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/08/2013 10:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265665	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0446	378.0		

92 Burn Date/Time: 11/08/2013 10:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0171	-32.0		

93 Burn Date/Time: 11/08/2013 10:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9496	6391.0		

94 Burn Date/Time: 11/08/2013 10:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9629	6479.0

95 Burn Date/Time: 11/08/2013 10:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0226	-68.0

96 Burn Date/Time: 11/08/2013 10:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263051	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0270	261.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/08/2013 10:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263056	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0040	55.0		

98 Burn Date/Time: 11/08/2013 10:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263057	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

99 Burn Date/Time: 11/08/2013 10:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263058	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0006	78.0		

100 Burn Date/Time: 11/08/2013 10:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263059	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

101 Burn Date/Time: 11/08/2013 10:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263060	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0119	3.0		

102 Burn Date/Time: 11/08/2013 10:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265223	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0045	52.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/08/2013 10:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265224	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0102	14.0		

104 Burn Date/Time: 11/08/2013 10:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265228	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

105 Burn Date/Time: 11/08/2013 10:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265230	U*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0068	37.0		

106 Burn Date/Time: 11/08/2013 10:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9648	6492.0

107 Burn Date/Time: 11/08/2013 10:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0232	-72.0

108 Burn Date/Time: 11/08/2013 10:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265233	D*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0016	71.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/08/2013 10:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265231	R*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9430	6347.0		

110 Burn Date/Time: 11/08/2013 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265232	M*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9135	6151.0		

111 Burn Date/Time: 11/08/2013 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265235	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0209	-57.0		

112 Burn Date/Time: 11/08/2013 10:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265238	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0021	96.0		

113 Burn Date/Time: 11/08/2013 10:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265240	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0229	-70.0		

114 Burn Date/Time: 11/08/2013 10:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265243	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0138	-10.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/08/2013 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265247	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0211	-58.0		

116 Burn Date/Time: 11/08/2013 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265248	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0132	-6.0		

117 Burn Date/Time: 11/08/2013 11:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265525	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0205	218.0		

118 Burn Date/Time: 11/08/2013 11:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
0.9362	6302.0

119 Burn Date/Time: 11/08/2013 11:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0053	47.0

120 Burn Date/Time: 11/08/2013 11:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265527	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0145	178.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

121 Burn Date/Time: 11/08/2013 11:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265529	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

122 Burn Date/Time: 11/08/2013 11:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265531	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0042	110.0		

123 Burn Date/Time: 11/08/2013 11:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0110	9.0		

124 Burn Date/Time: 11/08/2013 11:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9685	6516.0		

125 Burn Date/Time: 11/08/2013 11:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262193	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0283	-106.0		

126 Burn Date/Time: 11/08/2013 11:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263628	U*1*******	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0053	47.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

127 Burn Date/Time: 11/08/2013 11:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263628	R*1*******	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4930	10001.0		

128 Burn Date/Time: 11/08/2013 11:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264111	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0301	-118.0		

129 Burn Date/Time: 11/08/2013 11:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264122	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

130 Burn Date/Time: 11/08/2013 11:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 11		1	1	1.00

AVG (ppb)	Intensity
0.9654	6496.0

131 Burn Date/Time: 11/08/2013 11:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 11		1	1	1.00

AVG (ppb)	Intensity
-0.0099	16.0

132 Burn Date/Time: 11/08/2013 11:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	U*********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0069	36.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

133 Burn Date/Time: 11/08/2013 11:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	D*********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

134 Burn Date/Time: 11/08/2013 11:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	R*********	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5457	10351.0		

135 Burn Date/Time: 11/08/2013 11:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	M*********	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5195	10177.0		

136 Burn Date/Time: 11/08/2013 11:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262715	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0284	-107.0		

137 Burn Date/Time: 11/08/2013 11:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261866	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0191	-45.0		

138 Burn Date/Time: 11/08/2013 11:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261872	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	-28.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

139 Burn Date/Time: 11/08/2013 11:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261886	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0471	395.0		

140 Burn Date/Time: 11/08/2013 11:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261463	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0292	276.0		

141 Burn Date/Time: 11/08/2013 11:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261466	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0143	-13.0		

142 Burn Date/Time: 11/08/2013 11:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 12		1	1	1.00

AVG (ppb)	Intensity
1.0142	6820.0

143 Burn Date/Time: 11/08/2013 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 12		1	1	1.00

AVG (ppb)	Intensity
-0.0224	-67.0

144 Burn Date/Time: 11/08/2013 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265197	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0068	37.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

145 Burn Date/Time: 11/08/2013 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264454	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0343	310.0		

146 Burn Date/Time: 11/08/2013 12:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266829	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

147 Burn Date/Time: 11/08/2013 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0117	4.0		

148 Burn Date/Time: 11/08/2013 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9168	6173.0		

149 Burn Date/Time: 11/08/2013 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262237	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	186.0		

150 Burn Date/Time: 11/08/2013 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7256103	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

151 Burn Date/Time: 11/08/2013 12:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	U*********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0003	80.0		

152 Burn Date/Time: 11/08/2013 12:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	D*********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0099	16.0		

153 Burn Date/Time: 11/08/2013 12:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	R*********	4	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5192	10175.0		

154 Burn Date/Time: 11/08/2013 12:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 13		1	1	1.00

AVG (ppb)	Intensity
1.0010	6732.0

155 Burn Date/Time: 11/08/2013 12:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 13		1	1	1.00

AVG (ppb)	Intensity
-0.0193	-46.0

156 Burn Date/Time: 11/08/2013 12:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	M*********	4	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5302	10248.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

157 Burn Date/Time: 11/08/2013 12:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261875	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0191	-45.0		

158 Burn Date/Time: 11/08/2013 12:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266830	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0281	-105.0		

159 Burn Date/Time: 11/08/2013 12:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1886	1335.0

160 Burn Date/Time: 11/08/2013 12:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 14		1	1	1.00

AVG (ppb)	Intensity
0.9611	6467.0

161 Burn Date/Time: 11/08/2013 12:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 14		1	1	1.00

AVG (ppb)	Intensity
-0.0200	-51.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 5705 ICP SW846 Water

Batch# 13 309 5705 007

Balance ID#: CLEAR **Start Time:** 11/6/13 10:25 **End Time:** 11/6/13 14:50 **Hot Block:** 10

Pipette ID: W/1000

Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HCL	P13301C	5.00
HNO3	1113030	3.00
ICP Spike 1A	1317716#29	1.00
ICP Spike 1B	1317717#29	1.00
LCS A1	1317716#29	1.00
LCS B1	1317717#29	1.00

Method Ref: SW-846 3010A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7256048	11/08/13 22:15		WW	N8			008a	1306159	
4)	**7256054U**	11/08/13 22:15		WW	N8			008a	1306159	
5)	**7256055R**	11/08/13 22:15		WW	N8			008a	1306159	
6)	**7256056M**	11/08/13 22:15		WW	N8			008a	1306159	
7)	**7256057D**	11/08/13 22:15		WW	N8			008a	1306159	
8)	7256062FB	11/08/13 22:15		WW	N8			008a	1306159	
9)	7256065FD	11/08/13 22:15		WW	N8			008a	1306159	
10)	7263051	11/14/13 00:00		WW	N8			008a	1306159	
11)	7263056	11/14/13 00:00		WW	N8			008a	1306159	
12)	7263057	11/14/13 00:00		WW	N8			008a	1306159	
13)	7263058FD	11/14/13 00:00		WW	N8			008a	1306159	
14)	7263059FB	11/14/13 00:00		WW	N8			008a	1306159	
15)	7263060FB	11/14/13 00:00		WW	N8			008a	1306159	

Prep Employee: JLM01184

11/6/2013

v 1.0.1

Batch# 13 309 5705 007

LLENS Batch Chronology and Change Log - ICP SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/5/13 17:04	01184
2)	Sample Vol		11/6/13 13:49	01184
3)	Final Vol	CLEAR	11/6/13 13:49	01184
4)	Trial		11/6/13 13:49	01184
5)	Upload Prep	US19VDIELB001	11/6/13 13:49	01184

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5705 ICP SW846 Water

Batch# 13 309 5705 007

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7256048	11/08/13	N8	347A3	CP171-01	50.0000	50.0000	1
7256054U	11/08/13	N8	348A1	CP171-04BKG	50.0000	50.0000	1
7256055R	11/08/13	N8	348A1	CP171-04MS	50.0000	50.0000	1
7256056M	11/08/13	N8	348A1	CP171-04MSD	50.0000	50.0000	1
7256057D	11/08/13	N8	348A1	CP171-04DUP	50.0000	50.0000	1
7256062FB	11/08/13	N8	F298-	CP171-06FB	50.0000	50.0000	1
7256065FD	11/08/13	N8	D298-	CP171-09FD	50.0000	50.0000	1
7263051	11/14/13	N8	FFHEC	KVM03-01	50.0000	50.0000	1
7263056	11/14/13	N8	DDHER	KVM03-06	50.0000	50.0000	1
7263057	11/14/13	N8	EEHER	KVM03-07	50.0000	50.0000	1
7263058FD	11/14/13	N8	F1HER	KVM03-08FD	50.0000	50.0000	1
7263059FB	11/14/13	N8	FB1HE	KVM03-09FB	50.0000	50.0000	1
7263060FB	11/14/13	N8	FB2HE	KVM03-10FB	50.0000	50.0000	1

LLENS Worksheet for 6050 ICP/MS SW846 Water

Batch# 13 312 6050 002

Balance ID#: CLEAR **Start Time:** 11/10/13 8:00 **End Time:** 11/10/13 12:13 **Hot Block:** 13

Pipette ID: JU06758
Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	1113030	3.00
ICP/MS Spike	1316309#5	0.50
LCS	1316309#5	0.50

Method Ref: SW-846 3010A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7268506FB	11/11/13 19:00		WW	S2			008a	1306159	
4)	7263051	11/14/13 19:30		WW	N8			008a	1306159	
5)	7263056	11/14/13 19:30		WW	N8			008a	1306159	
6)	7263057	11/14/13 19:30		WW	N8			008a	1306159	
7)	7263058FD	11/14/13 19:30		WW	N8			008a	1306159	
8)	7263059FB	11/14/13 19:30		WW	N8			008a	1306159	
9)	7263060FB	11/14/13 19:30		WW	N8			008a	1306159	
10)	7265122FB	11/15/13 19:30		WW	N8			008a	1306159	
11)	**7265127U**	11/15/13 19:30		WW	N8			008a	1306159	
12)	**7265128R**	11/15/13 19:30		WW	N8		Y	008b	1306159	
13)	**7265129M**	11/15/13 19:30		WW	N8			008a	1306159	
14)	**7265130D**	11/15/13 19:30		WW	N8			008a	1306159	
15)	7265139FB	11/15/13 19:30		WW	N8			008a	1306159	
16)	7265217	11/15/13 19:30		WW	P8			008a	1306159	
17)	7265218	11/15/13 19:30		WW	P8			008a	1306159	
18)	7265219	11/15/13 19:30		WW	P8			008a	1306159	
19)	7265220FD	11/15/13 19:30		WW	P8			008a	1306159	
20)	7265221FB	11/15/13 19:30		WW	P8			008a	1306159	
21)	7267254	11/19/13 09:15		WW	P8			008a	1306159	
22)	7267256	11/19/13 09:15		WW	P8			008a	1306159	
23)	7267259	11/19/13 09:15		WW	P8			008a	1306159	
24)	7267261	11/19/13 09:15		WW	P8		Y	008a	1306159	
25)	7265535	11/18/13 09:05		WW	P8			008a	1306159	

Prep Employee: JLM01184
11/10/2013
v 1.0.1

Batch# 13 312 6050 002

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 15:25	01184
2)	Sample Vol		11/10/13 9:55	01184
3)	Final Vol	CLEAR	11/10/13 9:55	01184
4)	Trial		11/10/13 9:55	01184
5)	Upload Prep	US19VDIELA001	11/10/13 9:55	01184

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 6050 ICP/MS SW846 Water

Batch# 13 312 6050 002

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7268506FB	11/11/13	S2	F1179	CP189-07FB	50.0000	50.0000	1
7263051	11/14/13	N8	FFHEC	KVM03-01	50.0000	50.0000	1
7263056	11/14/13	N8	DDHER	KVM03-06	50.0000	50.0000	1
7263057	11/14/13	N8	EEHER	KVM03-07	50.0000	50.0000	1
7263058FD	11/14/13	N8	F1HER	KVM03-08FD	50.0000	50.0000	1
7263059FB	11/14/13	N8	FB1HE	KVM03-09FB	50.0000	50.0000	1
7263060FB	11/14/13	N8	FB2HE	KVM03-10FB	50.0000	50.0000	1
7265122FB	11/15/13	N8	11052	CP182-07FB	50.0000	50.0000	1
7265127U	11/15/13	N8	389A1	CP183-01BKG	50.0000	50.0000	1
7265128R	11/15/13	N8	389A1	CP183-01MS	50.0000	50.0000	1
7265129M	11/15/13	N8	389A1	CP183-01MSD	50.0000	50.0000	1
7265130D	11/15/13	N8	389A1	CP183-01DUP	50.0000	50.0000	1
7265139FB	11/15/13	N8	F1158	CP183-04FB	50.0000	50.0000	1
7265217	11/15/13	P8	325A8	CS039-01	50.0000	50.0000	1
7265218	11/15/13	P8	324A8	CS039-02	50.0000	50.0000	1
7265219	11/15/13	P8	323A9	CS039-03	50.0000	50.0000	1
7265220FD	11/15/13	P8	D1151	CS039-04FD	50.0000	50.0000	1
7265221FB	11/15/13	P8	F1151	CS039-05FB	50.0000	50.0000	1
7267254	11/19/13	P8	D4-10		50.0000	50.0000	1
7267256	11/19/13	P8	D4-6-		50.0000	50.0000	1
7267259	11/19/13	P8	D4-5D		50.0000	50.0000	1
7267261	11/19/13	P8	D4-1-		50.0000	50.0000	1
7265535	11/18/13	P8	49324		50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 13 310 5713 004

Balance ID#: CLEAR **Start Time:** 11/7/13 16:00 **End Time:** 11/7/13 18:00 **Hot Block:** 15

Pipette ID: HJ29630

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	H13-297 S	3.20
5%KMnO4	H13-305 B	6.00
H2SO4	135111	2.00
HNO3	1113030	1.00
LCS	H13-311 A	0.04
Spike 1ppm Hg	H13-311 A	0.04

Method Ref: SW-846 7470A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7263051	11/14/13 19:30		WW	N8			008a	1306159	
4)	7263056	11/14/13 19:30		WW	N8			008a	1306159	
5)	7263057	11/14/13 19:30		WW	N8			008a	1306159	
6)	7263058FD	11/14/13 19:30		WW	N8			008a	1306159	
7)	7263059FB	11/14/13 19:30		WW	N8			008a	1306159	
8)	7263060FB	11/14/13 19:30		WW	N8			008a	1306159	
9)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
12)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
13)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
14)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
15)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
16)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
17)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
18)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
19)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
20)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
21)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
22)	7265525	11/18/13 09:05		WW	P8			008a	1306159	
23)	7265527	11/18/13 09:05		WW	P8			008a	1306159	
24)	7265529	11/18/13 09:05		WW	P8			008a	1306159	

Prep Employee: NSM00823

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	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
25)	7265531FD	11/18/13 09:05		WW	P8			008a	1306159	

Batch# 13 310 5713 004

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/6/13 17:59	00823
2)	Sample Vol		11/7/13 18:39	00823
3)	Final Vol	CLEAR	11/7/13 18:39	00823
4)	Trial		11/7/13 18:39	00823
5)	Upload Prep	US19VDIELA01	11/7/13 18:39	00823

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 13 310 5713 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
7263051	11/14/13	N8	FFHEC	KVM03-01	40.0000		40.0000	1
7263056	11/14/13	N8	DDHER	KVM03-06	40.0000		40.0000	1
7263057	11/14/13	N8	EEHER	KVM03-07	40.0000		40.0000	1
7263058FD	11/14/13	N8	F1HER	KVM03-08FD	40.0000		40.0000	1
7263059FB	11/14/13	N8	FB1HE	KVM03-09FB	40.0000		40.0000	1
7263060FB	11/14/13	N8	FB2HE	KVM03-10FB	40.0000		40.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	40.0000		40.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	40.0000		40.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	40.0000		40.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	40.0000		40.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	40.0000		40.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	40.0000		40.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	40.0000		40.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	40.0000		40.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	40.0000		40.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	40.0000		40.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	40.0000		40.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	40.0000		40.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	40.0000		40.0000	1
7265525	11/18/13	P8	3-004		40.0000		40.0000	1
7265527	11/18/13	P8	4D004		40.0000		40.0000	1
7265529	11/18/13	P8	8D004		40.0000		40.0000	1
7265531FD	11/18/13	P8	D2004	FD	40.0000		40.0000	1

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 CCV	H13-301G	Hg 1.0 mg/L Cont		11-04-13	H13-301C	.10 ml			
2	CCV	H	↓		↓	↓	.10			
3	CRA	I	Hg 0.1 mg/L Cont			H13-301D	.20			
4	Std Cal	J	Hg 0.1 mg/L Cal			H13-301B	.20			
5	↓	K	↓			↓	.50			
6		L	Hg 1.0 mg/L Cal			H13-301A	.10			
7		m	↓			↓	.25			
8		N	↓		↓	↓	.50 ↓			
9	↓	O								
10	SI	P	Hg 0.1 mg/L Cal		11-04-13	H13-301B	.10 ml			
11	CRA	Q	Hg 0.1 mg/L Cont		↓	H13-301D	.10			
12	↓ CRA	R	↓		↓	↓	.40 ↓			
13	Aqua Regia	↓ S						19	4	111330
14	Hydroxylamine	H13-301T	$NH_2OH \cdot HCl$	6	10-26-17	54809 #1	240.00g			
15	↓	↓	NaCl	1	3-17-18	48151 #1	240.03g			
16		H13-301U	$NH_2OH \cdot HCl$		10-26-17	54809 #1-2	240.02g			
17		↓	NaCl		3-17-18	48151 #1	240.02g			
18		H13-301V	$NH_2OH \cdot HCl$		10-26-17	54809 #2	240.0 lg			
19	↓	↓	NaCl	↓	3-17-18	48151 #1	240.02g			
20	Hg 1.0 mg/L Inter Cont	H13-302A	Hg 10 mg/L Cont	—	1-11-14	H13-1921D	1.0 ml			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua Regia 15ml KMnO4		H13-3015 H13-295F	100	1.0ug/L	DU354	10-28-13	11-04-13	RT
2								1.0				
3								0.2				
4								0.2				
5								0.5				
6								1.0				
7								2.5				
8								5.0				
9								6.0				
10								6.1				
11								6.1				
12								6.4				
13	57	6	40272				76	1:3			10-28-13	
14							2000	12%			4-28-14	
15												
16												
17												
18												
19												
20				To vol w/ 0.15% HNO3		H13-161CC	10	1.0ml	DU354	10-29-13	11-05-13	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-0.1mg/L InterCont	H13-302B	Hg-1.0mg/L Cont	–	11-05-13	H13-302A	1.0ml			
2	Potassium Permanganate	H13-302C	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
3	↓	D	↓	↓	↓	↓	100.07g			
4	↓	E	↓	↓	↓	↓	100.01g			
5	Hg-1.0mg/L InterCal	H13-303A	Hg-10mg/L Cal		1-11-14	H13-192C	1.0ml			
6	0.1mg/L InterCal	B	10mg/L Cal		11-06-13	H13-303A	↓			
7	1.0mg/L InterCont	C	10mg/L Cont		1-11-14	H13-192D	↓			
8	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont		11-06-13	H13-303C	↓			
9	Hg-5700 ICV	E			↓	↓	.25ml	1	2	111330
10	CCV	F			↓	↓	.20	↓	↓	↓
11	CRA	G	Hg-0.1mg/L Cont		↓	H13-303D	.20			
12	Std Cal	H	Hg-0.1mg/L Cal		↓	H13-303B	.20			
13	↓	I	↓		↓	↓	.50			
14	↓	J	Hg-1.0mg/L Cal		↓	H13-303A	.20			
15	↓	K	↓		↓	↓	.25			
16	↓	L	↓		↓	↓	.50			
17	↓	M						↓	↓	↓
18	Hg-1.0mg/L InterCal	H13-304A	Hg-10mg/L Cal		1-11-14	H13-192C	1.0ml			
19	0.1mg/L InterCal	B	1.0mg/L Cal		11-07-13	H13-304A	↓			
20	↓ 1.0mg/L InterCont	C	↓ 10mg/L Cont		1-11-14	H13-192D	↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
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4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/ 0.15%	HNO3	HI3-1601CC	10	0.1	DW354	10-29-13	11-05-13	RT
2				to volume w/ DI H2O			2000	5%	NSM823	10-29-13	4-29-14	RT
3				↓		↓	↓	↓	↓	↓	↓	↓
4				↓		↓	↓	↓	↓	↓	↓	↓
5				To vol w/ 0.15%	HNO3	HI3-1606C	10	1.0	DW354	10-30-13	11-06-13	RT
6				↓	↓	↓	↓	0.1	↓	↓	↓	↓
7				↓	↓	↓	↓	1.0	↓	↓	↓	↓
8				↓	↓	↓	↓	0.1	↓	↓	↓	↓
9	2ml H2SO4	4	135111	3.2ml K2S2O8 1ml KmNO3		HI3-2910K HI3-2898F	100	2.5	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
18				To vol w/ 0.15%	HNO3	HI3-1601CC	10	1.0	DW354	10-31-13	11-07-13	RT
19				↓	↓	↓	↓	0.1	↓	↓	↓	↓
20				↓	↓	↓	↓	1.0	↓	↓	↓	↓

KVM03 Page 2156 of 2349

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 1.0 mg/L Inter Cont	H13-304D	Hg 1.0 mg/L Cont	7	11-07-13	H13-304C	1.0 ml			
2	Hg-5701 ICV	E					.25			
3	CCV	F					.10			
4	CCV	G					.10			
5	CCV	H					.10			
6	CCV	I	↓	↓	↓	↓	.10			
7	CRA	J	Hg 0.1 mg/L Cont	7		H13-304D	.20			
8	Std Cal	K	Hg 0.1 mg/L Cal			H13-304B	.20			
9	↓	L	↓			↓	.50			
10		M	Hg 1.0 mg/L Cal			H13-304A	.10			
11		N	↓			↓	.25			
12		O	↓	↓	↓	↓	.50			
13	↓	P	—	—	—	—	—			
14	SI	Q	Hg 0.1 mg/L Cal	7	11-07-13	H13-304B	.10 ml			
15	CRA	R	Hg 0.1 mg/L Cont			H13-304D	.10			
16	CRA	S	↓	↓	↓	↓	.40			
17	Aqua Regia	T	—	—	—	—	—	20	A	1113030
18	Stannous Chloride	U	$SnCl_2 \cdot 2H_2O$	6	8-06-18	55057 #1	200.03g			
19	Stannous Chloride	V	↓	6	↓	↓ #12	200.04g			
20	Hg 1.0 mg/L Inter Cont	H13-305A	Hg 10 mg/L CONT	—	1-11-14	H13-192D	1.0 mL			

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Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/ 0.15% HNO3		H13-161CC	10	0.1	DU354	10-31-13	11-07-13	RT
2				5ml Aqua Regia 15ml Am NO4		H13-304T H13-298F	100	2.5 ug/L				
3								1.0				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17	60	4	40272				80	1.3			10-31-13	
18	200						2000	10%			4-30-14	
19	200						2000	10%				
20				to volume w/ 0.15% HNO3 - H13-161CC			10	1.0	NSM823	11-01-13	11-08-13	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	↓	100.07g			
3	Hg-1.0mg/L Inter Cal	H13-307A	Hg-10mg/L Cal		1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L Inter Cal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L Inter Cal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L Inter Cont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L Inter Cont	D	1.0mg/L Cont		11-11-13	H13-308C				
9	Hg-5700 ICV	E					.25ml	1	4	1113030
10	CCV	F					.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-~~28~~ 308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13		I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K					.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	↓ M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L Inter Cal	H13-309A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L Inter Cal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

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10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume	w/ DI H_2O		2000	5%	NSM323	11-01-13	5-01-14	RT
2	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15%	HNO_3	HI3-166CC	10	1.0	DU354	11-03-13	11-10-13	RT
4	↓	↓	↓	↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15%	HNO_3	HI3-166CC	10	1.0	DU354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8	↓	↓	↓	↓	↓	↓	↓	0.1				
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 6ml KMnO4		HI3-297R HI3-302C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12							↓	0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16							↓	5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.04	↓	↓	↓	↓
18				to volume	w/ DI H_2O		2000	5%	NSM323	11-04-13	5-04-14	RT
19				To vol w/ 0.15%	HNO_3	HI3-166CC	10	1.0	DU354	11-05-13	11-12-13	RT
20	↓	↓	↓	↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L InterCont	H13-309C	Hg-10mg/L Cont		4-15-14	H13-288D	1.0ml			
2	Hg-0.1mg/L InterCont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		M	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	91	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

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XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15% HNO3	H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DU354

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 Std Cal	H13-309W	Hg-0.1mg/L Cal		11-12-13	H13-309B	.50ml			
2	↓	X	Hg-1.0mg/L Cal		↓	H13-309A	.10			
3		Y	↓			↓	.25			
4		Z	↓		↓	↓	.50			
5	↓	AA	—		—	—	—			
6	Aqua Regia	BB	—		—	—	—	30	H	1113030
7	Hg-1.0mg/L Inter Cal	H13-310A	Hg-10mg/L Cal		H-15-14	H13-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	H13-310N	↓			
9	1.0mg/L Inter Conf	C	10mg/L Conf		H-15-14	H13-288D				
10	↓ 0.1mg/L Inter Conf	D	↓ 1.0mg/L Conf		11-13-13	H13-310C	↓			
11	Hg-5700 ICV	E	↓		↓	↓	.25ml	1	H	1113030
12	CCV	F	↓ 11-6-13 DV3554 ③		↓	↓	.20	↓	↓	↓
13	CRA	G	Hg-0.1mg/L ~~Pal~~ Conf			H13-310D	.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H13-310B	.20			
15	↓	I	↓			↓	.50			
16		J	Hg-1.0mg/L Cal			H13-310A	.20			
17		K	↓			↓	.25			
18		L	↓		↓	↓	.50			
19	↓	M	—		—	—	—	↓	↓	↓
20	Potassium Permanganate	H13-310N	$KMnO_4$ #1	6	4-10-18	46760	100.04g	—	—	—

Key – Manufacturer (M•)

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6 – J. T. Baker
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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua 25ml Km	Aqua NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O3 6ml KmNO4		H13-297R H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Metals in Solid Data

Case Narrative/Conformance Summary

Metals in Solid

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Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM03

ICP Metals

Fraction: Metals in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7263052	SD-R2-L-5-01D		X	
7263053	SD-R2-L-5-02		X	
7263054	SD-R2-K-5-2		X	
7263055	SD-R2-K-5-1		X	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Site specific matrix QC samples were not submitted for this SDG. The batch matrix QC was performed on samples from another project. Therefore the matrix effects would not be relevant and matrix QC is not provided in the data package. Laboratory spike data (LCS) are provided.

Method defined actions are taken for any failed matrix QC.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM03

ICP Metals

Fraction: Metals in Solid

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Solid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7263052 % Solids: 35.9
Concentration Units: MG/KG Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7110			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	3.4	B		P
7440-39-3	Barium	261			P
7440-41-7	Beryllium	0.42	B		P
7440-43-9	Cadmium	0.41	B		P
7440-70-2	Calcium	1260			P
7440-47-3	Chromium	9.1			P
7440-48-4	Cobalt	1.7			P
7440-50-8	Copper	41.7			P
7439-89-6	Iron	5780			P
7439-92-1	Lead	162			P
7439-95-4	Magnesium	926			P
7439-96-5	Manganese	50.6			P
7439-97-6	Mercury	0.18	B		CV
7440-02-0	Nickel	6.3			P
7440-09-7	Potassium	343			P
7782-49-2	Selenium	2.2	U		P
7440-22-4	Silver	0.47	U		P
7440-23-5	Sodium	64.1	B		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	11.2			P
7440-66-6	Zinc	235			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7263053 % Solids: 55.8
Concentration Units: MG/KG Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7030			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	5.3			P
7440-39-3	Barium	101			P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	0.37	B		P
7440-70-2	Calcium	3720			P
7440-47-3	Chromium	13.9			P
7440-48-4	Cobalt	2.6			P
7440-50-8	Copper	37.0			P
7439-89-6	Iron	11000			P
7439-92-1	Lead	259			P
7439-95-4	Magnesium	1890			P
7439-96-5	Manganese	91.3			P
7439-97-6	Mercury	0.25			CV
7440-02-0	Nickel	11.9			P
7440-09-7	Potassium	665			P
7782-49-2	Selenium	1.4	U		P
7440-22-4	Silver	0.30	U		P
7440-23-5	Sodium	188			P
7440-28-0	Thallium	0.92	U		P
7440-62-2	Vanadium	21.4			P
7440-66-6	Zinc	263			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7263054 % Solids: 22.9
Concentration Units: MG/KG Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23100			P
7440-36-0	Antimony	3.1	U		P
7440-38-2	Arsenic	7.1	B		P
7440-39-3	Barium	164			P
7440-41-7	Beryllium	2.0	B		P
7440-43-9	Cadmium	1.2	B		P
7440-70-2	Calcium	13300			P
7440-47-3	Chromium	52.1			P
7440-48-4	Cobalt	2.8			P
7440-50-8	Copper	37.4			P
7439-89-6	Iron	10500			P
7439-92-1	Lead	155			P
7439-95-4	Magnesium	2320			P
7439-96-5	Manganese	164			P
7439-97-6	Mercury	0.76			CV
7440-02-0	Nickel	14.8			P
7440-09-7	Potassium	460			P
7782-49-2	Selenium	3.4	U		P
7440-22-4	Silver	0.71	U		P
7440-23-5	Sodium	121	B		P
7440-28-0	Thallium	2.2	U		P
7440-62-2	Vanadium	26.6			P
7440-66-6	Zinc	245			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM03
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7263055 % Solids: 19.2
Concentration Units: MG/KG Date Received: 11/04/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13800			P
7440-36-0	Antimony	3.9	U		P
7440-38-2	Arsenic	10.4			P
7440-39-3	Barium	175			P
7440-41-7	Beryllium	1.9	B		P
7440-43-9	Cadmium	1.7	B		P
7440-70-2	Calcium	13200			P
7440-47-3	Chromium	18.6			P
7440-48-4	Cobalt	3.0			P
7440-50-8	Copper	52.2			P
7439-89-6	Iron	23400			P
7439-92-1	Lead	214			P
7439-95-4	Magnesium	1730			P
7439-96-5	Manganese	514			P
7439-97-6	Mercury	1.2			CV
7440-02-0	Nickel	15.2			P
7440-09-7	Potassium	430			P
7782-49-2	Selenium	5.5	B		P
7440-22-4	Silver	0.89	U		P
7440-23-5	Sodium	138	B		P
7440-28-0	Thallium	2.7	U		P
7440-62-2	Vanadium	36.8			P
7440-66-6	Zinc	219			P

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Solid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM03
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Aluminum	P30908B	*57240BKG
Antimony		7263052
Arsenic		7263053
Barium		7263054
Beryllium		7263055
Cadmium		P30908BB
Calcium		P30908BQ
Chromium		
Cobalt		
Copper		
Iron		
Lead		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Thallium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM03
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Mercury	P30911A	7263052
		7263053
		7263054
		7263055
		P30911AB
		P30911AQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331008T72
Calibration Date(s): 11/06/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	29320.72	97.7	25000.0	24534.89	98.1	25000.0	24159.89	96.6
Antimony		600.0	619.99	103.3	500.0	511.77	102.4	500.0	512.97	102.6
Arsenic		600.0	592.70	98.8	500.0	487.33	97.5	500.0	487.10	97.4
Barium		600.0	609.33	101.6	500.0	506.31	101.3	500.0	504.07	100.8
Beryllium		600.0	594.45	99.1	500.0	497.16	99.4	500.0	487.92	97.6
Cadmium		600.0	596.13	99.4	500.0	495.73	99.1	500.0	493.80	98.8
Calcium		30000.0	29333.66	97.8	25000.0	24539.86	98.2	25000.0	24138.79	96.6
Chromium		600.0	597.75	99.6	500.0	502.36	100.5	500.0	489.04	97.8
Cobalt		600.0	598.50	99.8	500.0	497.17	99.4	500.0	496.02	99.2
Copper		600.0	609.71	101.6	500.0	509.54	101.9	500.0	504.52	100.9
Iron		30000.0	29315.66	97.7	25000.0	24522.57	98.1	25000.0	24182.90	96.7
Lead		600.0	601.13	100.2	500.0	500.97	100.2	500.0	498.70	99.7
Magnesium		30000.0	28920.44	96.4	25000.0	24114.29	96.5	25000.0	23928.81	95.7
Manganese		600.0	596.87	99.5	500.0	502.02	100.4	500.0	491.16	98.2
Nickel		600.0	598.33	99.7	500.0	498.70	99.7	500.0	497.17	99.4
Potassium		30000.0	29371.92	97.9	25000.0	24560.50	98.2	25000.0	24426.46	97.7
Selenium		600.0	600.95	100.2	500.0	493.41	98.7	500.0	496.42	99.3
Silver		600.0	601.74	100.3	500.0	502.00	100.4	500.0	495.53	99.1
Sodium		30000.0	28667.86	95.6	25000.0	24053.77	96.2	25000.0	23828.53	95.3
Thallium		600.0	591.61	98.6	500.0	493.84	98.8	500.0	492.08	98.4
Vanadium		600.0	605.91	101.0	500.0	506.70	101.3	500.0	496.66	99.3
Zinc		600.0	599.47	99.9	500.0	496.61	99.3	500.0	498.13	99.6

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: P
Run Name: 1331008T72
Calibration Date(s): 11/06/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24347.35	97.4	25000.0	24226.02	96.9
Antimony					500.0	514.44	102.9	500.0	514.14	102.8
Arsenic					500.0	488.97	97.8	500.0	486.50	97.3
Barium					500.0	510.62	102.1	500.0	512.29	102.5
Beryllium					500.0	493.86	98.8	500.0	493.65	98.7
Cadmium					500.0	497.77	99.6	500.0	498.87	99.8
Calcium					25000.0	24432.08	97.7	25000.0	24470.02	97.9
Chromium					500.0	494.35	98.9	500.0	493.67	98.7
Cobalt					500.0	496.97	99.4	500.0	495.93	99.2
Copper					500.0	506.95	101.4	500.0	505.28	101.1
Iron					25000.0	24440.95	97.8	25000.0	24507.66	98.0
Lead					500.0	504.04	100.8	500.0	505.37	101.1
Magnesium					25000.0	24158.69	96.6	25000.0	24217.46	96.9
Manganese					500.0	494.41	98.9	500.0	490.80	98.2
Nickel					500.0	499.40	99.9	500.0	501.96	100.4
Potassium					25000.0	24571.73	98.3	25000.0	24639.28	98.6
Selenium					500.0	497.15	99.4	500.0	492.00	98.4
Silver					500.0	500.90	100.2	500.0	505.31	101.1
Sodium					25000.0	23906.96	95.6	25000.0	23807.71	95.2
Thallium					500.0	497.85	99.6	500.0	498.40	99.7
Vanadium					500.0	504.58	100.9	500.0	503.68	100.7
Zinc					500.0	499.78	100.0	500.0	499.69	99.9

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.60	104.0	1.0	1.05	105.0	1.0	1.06	106.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.05	105.0	1.0	1.05	105.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.06	106.0	1.0	1.05	105.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: P
Run Name: 1331008T72
Calibration Date(s): 11/06/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	212.19	106.1	240.41	120.2
Antimony		20.0	20.56	102.8	20.68	103.4
Arsenic		20.0	18.47	92.4	19.86	99.3
Barium		5.0	5.42	108.4	5.47	109.4
Beryllium		5.0	5.43	108.6	5.47	109.4
Cadmium		5.0	4.97	99.4	4.96	99.2
Calcium		200.0	196.63	98.3	194.13	97.1
Chromium		15.0	15.62	104.1	15.70	104.7
Cobalt		5.0	5.09	101.8	5.20	104.0
Copper		10.0	11.84	118.4	11.68	116.8
Iron		200.0	190.45	95.2	199.35	99.7
Lead		15.0	15.00	100.0	16.11	107.4
Magnesium		100.0	96.86	96.9	98.60	98.6
Manganese		5.0	5.30	106.0	5.30	106.0
Nickel		10.0	10.21	102.1	10.24	102.4
Potassium		500.0	428.68	85.7	462.04	92.4
Selenium		20.0	19.46	97.3	19.55	97.8
Silver		5.0	5.09	101.8	4.95	99.0
Sodium		1000.0	988.94	98.9	980.41	98.0
Thallium		30.0	33.09	110.3	31.83	106.1
Vanadium		5.0	4.72	94.4	5.22	104.4
Zinc		20.0	21.21	106.1	21.27	106.4

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013
Concentration Units: UG/L

			Initial		Final	
Analyte	Mass	True	Found	%R	Found	%R
Mercury		0.2	0.22	110.0	0.23	115.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: P
Run Name: 1331008T72
Calibration Date(s): 11/06/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U		7.200	U	P30908BB
Antimony		2.0	U	2.0	U	2.0	U	2.0	U		0.740	U	P30908BB
Arsenic		2.3	U	2.3	U	2.3	U	2.3	U		0.700	U	P30908BB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.033	U	P30908BB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.067	U	P30908BB
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U		0.076	U	P30908BB
Calcium		33.4	U	33.4	U	109	B	33.4	U		8.398	B	P30908BB
Chromium		0.61	U	0.61	U	0.61	U	0.61	U		0.160	U	P30908BB
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U		0.099	U	P30908BB
Copper		1.7	U	1.7	U	1.7	U	1.9	B		0.290	U	P30908BB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		3.600	U	P30908BB
Lead		1.8	U	1.8	U	1.8	U	1.8	U		0.500	U	P30908BB
Magnesium		16.7	U	16.7	U	16.7	U	16.7	U		1.700	U	P30908BB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.083	U	P30908BB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		0.130	U	P30908BB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		8.300	U	P30908BB
Selenium		3.4	U	3.4	U	3.4	U	3.4	U		0.800	U	P30908BB
Silver		-0.58	B	0.33	U	-0.34	B	0.33	U		0.170	U	P30908BB
Sodium		167	U	167	U	167	U	167	U		16.700	U	P30908BB
Thallium		1.9	U	1.9	U	1.9	U	1.9	U		0.520	U	P30908BB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		0.130	U	P30908BB
Zinc		2.0	U	2.0	U	2.0	U	2.0	U		0.246	B	P30908BB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: P
Run Name: 1331008T72
Calibration Date(s): 11/06/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (MG/KG) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Antimony				2.0	U								
Arsenic				2.3	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.33	U								
Calcium				33.4	U								
Chromium				0.65	B								
Cobalt				0.26	U								
Copper				1.8	B								
Iron				33.4	U								
Lead				1.8	U								
Magnesium				16.7	U								
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				3.4	U								
Silver				0.33	U								
Sodium				167	U								
Thallium				1.9	U								
Vanadium				0.83	U								
Zinc				2.0	U								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.010	U	P30911AB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM03

Method: CV
Run Name: 1331102M07
Calibration Date(s): 11/07/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM03

Instrument ID: 16417
Run Name: 1331008T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	498214	99.6	494556.8	98.9	492070	98.4	492153.6	98.4
Antimony	0	600	-9		638.9	106.5	-7		631.6	105.3
Arsenic	0	100	4		100.5	100.5	2		105.1	105.1
Barium	0	500	0		507.3	101.5	0		515.2	103.0
Beryllium	0	500	0		499.9	100.0	0		503.5	100.7
Cadmium	0	1000	1		923.7	92.4	1		925.5	92.6
Calcium	500000	500000	507742	101.5	500963.9	100.2	505088	101.0	501874.8	100.4
Chromium	0	500	2		475.8	95.2	2		475.1	95.0
Cobalt	0	500	1		456.7	91.3	1		455.9	91.2
Copper	0	500	6		536.1	107.2	7		539.8	108.0
Iron	200000	200000	204599	102.3	202131.9	101.1	204362	102.2	202523.5	101.3
Lead	0	50	-1		42.7	85.4	-2		44.8	89.6
Magnesium	500000	500000	556960	111.4	545008.5	109.0	556150	111.2	553147.7	110.6
Manganese	0	500	4		478.7	95.7	4		476.2	95.2
Nickel	0	1000	1		907.4	90.7	1		909.1	90.9
Potassium	0	0	-63		-64.8		-53		-88.6	
Selenium	0	50	2		50.3	100.6	-10		43.7	87.4
Silver	0	200	2		217.4	108.7	3		221.6	110.8
Sodium	0	0	32		21.0		34		17.7	
Thallium	0	100	-1		87.7	87.7	-2		87.7	87.7
Vanadium	0	500	-3		490.6	98.1	-3		497.8	99.6
Zinc	0	1000	6		1025.7	102.6	6		1026.1	102.6

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM03
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P30908BQ	UG/L	200000.0	195352.0		80 - 120	98	P	Yes
Antimony		P30908BQ	UG/L	50000.0	50106.0		80 - 120	100	P	Yes
Arsenic		P30908BQ	UG/L	15000.0	15070.0		80 - 120	100	P	Yes
Barium		P30908BQ	UG/L	200000.0	206885.0		80 - 120	103	P	Yes
Beryllium		P30908BQ	UG/L	5000.0	5058.0		80 - 120	101	P	Yes
Cadmium		P30908BQ	UG/L	5000.0	5121.0		80 - 120	102	P	Yes
Calcium		P30908BQ	UG/L	400000.0	401113.0		80 - 120	100	P	Yes
Chromium		P30908BQ	UG/L	20000.0	20454.0		80 - 120	102	P	Yes
Cobalt		P30908BQ	UG/L	50000.0	52315.0		80 - 120	105	P	Yes
Copper		P30908BQ	UG/L	25000.0	26959.0		80 - 120	108	P	Yes
Iron		P30908BQ	UG/L	100000.0	99891.0		80 - 120	100	P	Yes
Lead		P30908BQ	UG/L	15000.0	15927.0		80 - 120	106	P	Yes
Magnesium		P30908BQ	UG/L	200000.0	195517.0		80 - 120	98	P	Yes
Manganese		P30908BQ	UG/L	50000.0	51447.0		80 - 120	103	P	Yes
Mercury		P30911AQ	UG/L	100.0	102.7		80 - 120	103	CV	Yes
Nickel		P30908BQ	UG/L	50000.0	53382.0		80 - 120	107	P	Yes
Potassium		P30908BQ	UG/L	1000000.0	997940.0		80 - 120	100	P	Yes
Selenium		P30908BQ	UG/L	15000.0	15349.0		80 - 120	102	P	Yes
Silver		P30908BQ	UG/L	5000.0	5011.0		80 - 120	100	P	Yes
Sodium		P30908BQ	UG/L	1000000.0	982998.0		80 - 120	98	P	Yes
Thallium		P30908BQ	UG/L	15000.0	15918.0		80 - 120	106	P	Yes
Vanadium		P30908BQ	UG/L	50000.0	50481.0		80 - 120	101	P	Yes
Zinc		P30908BQ	UG/L	50000.0	51361.0		80 - 120	103	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM03
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: *57240BKG Serial Dilution Lab Sample ID: *57240L
Batch ID(s): P30908B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		104831.5300		102185.8000		3		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		99.5600		97.1500	B	2		P
Barium		464.5400		462.0000		1		P
Beryllium		5.3700		7.4000	B	38		P
Cadmium		2.3100	B	3.8000	U	100		P
Calcium		66680.4900		65228.1000		2		P
Chromium		228.4700		230.6000		1		P
Cobalt		83.6800		84.0500		0		P
Copper		242.1000		244.6000		1		P
Iron		177406.8500		165579.3500		7		P
Lead		115.6800		119.7000		3		P
Magnesium		80746.7900		77684.7500		4		P
Manganese		1882.3600		1909.3000		1		P
Nickel		213.2100		212.1500		0		P
Potassium		24506.3700		23723.7500		3		P
Selenium		8.0000	U	40.0000	U			P
Silver		1.7000	U	8.5000	U			P
Sodium		9397.2500		9263.3000		1		P
Thallium		7.9500	B	26.0000	U	100		P
Vanadium		196.2400		195.5000		0		P
Zinc		523.8800		497.1500		5		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Antimony	206.83		2.0
Arsenic	189.04		2.3
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.61
Cobalt	228.62		0.26
Copper	327.40		1.7
Iron	261.19		33.4
Lead	220.35		1.8
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		3.4
Silver	328.06		0.33
Sodium	589.59		167
Thallium	190.86		1.9
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
_____
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: SOIL

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	72.1
Antimony	206.83		20.0	7.4
Arsenic	189.04		20.0	7.0
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	0.99
Copper	327.40		10.0	2.9
Iron	261.19		200	36.2
Lead	220.35		15.0	5.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.3
Potassium	766.49		500	83.4
Selenium	196.09		20.0	8.0
Silver	328.06		5.0	1.7
Sodium	589.59		1000	167
Thallium	190.86		30.0	5.2
Vanadium	292.40		5.0	1.3
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM03
Matrix: SOIL

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.60	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0000000	0.0000000	0.0000170	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0001240	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000810	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0001340	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	-0.0000580	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	-0.0000140	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0278000
Antimony	206.83	0.0000000	0.0160000	0.0000000	0.0000000	-0.0026800
Arsenic	189.04	0.0000000	0.0004690	0.0000000	0.0000000	0.0012120
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	-0.0000400	0.0000160	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002200	0.0000000	0.0000000	0.0000710
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	-0.0007830
Lead	220.35	-0.0007200	-0.0000520	0.0001970	0.0000000	-0.0021700
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0005900	0.0000000	0.0000000	0.0000000	0.0007680
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0039800	0.0002880	0.0000000	0.0009070	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0045500
Zinc	213.86	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM03

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	SI	TI	V	ZR
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0320000	0.0000000
Antimony	206.83	0.0001630	0.0000000	0.0000000	0.0004560	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	-0.0000140	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0001240	0.0000000	0.0023400	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000000	-0.0057500	0.0000000	0.0000000
Lead	220.35	-0.0000500	0.0000280	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0080000
Thallium	190.86	0.0000000	0.0000000	-0.0018400	-0.0418000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0003400	0.0000000	0.0000000
Zinc	213.86	0.0049600	0.0000000	0.0000000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM03

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Antimony	206.83	10.00	10000.0
Arsenic	189.04	10.00	20000.0
Barium	455.4	10.00	10000.0
Beryllium	313.04	10.00	10000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Lead	220.35	10.00	10000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	20000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	20000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Thallium	190.86	10.00	10000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM03

Method: P
Batch ID: P30908B

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7263052	11/06/2013	1.01	100
7263053	11/06/2013	1.01	100
7263054	11/06/2013	1.04	100
7263055	11/06/2013	1.00	100
*57240BKG	11/06/2013	1.01	100
P30908BB	11/06/2013	1.00	100
P30908BQ	11/06/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM03

Method: CV
Batch ID: P30911A

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7263052	11/06/2013	0.60	100
7263053	11/06/2013	0.62	100
7263054	11/06/2013	0.64	100
7263055	11/06/2013	0.61	100
P30911AB	11/06/2013	0.60	100
P30911AQ	11/06/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM03
No.:

Method: P
Instrument ID: 16417
Run Name: 1331008T72

Run Start Date: 11/06/2013
Run End Date: 11/06/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	20:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
S	1.00	20:35	X						X				X		X				X			X										
S	1.00	20:39			X	X	X	X			X	X		X		X		X		X	X		X		X							
S	1.00	20:44		X						X														X								
ICV	1.00	20:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICB	1.00	20:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
LLC	1.00	20:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	21:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	21:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	21:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	21:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
P30908BB	1.00	21:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
P30908BQ	1.00	21:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
*57240BKG	1.00	21:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	21:28																														
ZZZZZZ	1.00	21:32																														
ZZZZZZ	1.00	21:36																														
ZZZZZZ	1.00	21:40																														
*57240L	5.00	21:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	21:48																														
ZZZZZZ	1.00	21:52																														
CCV	1.00	21:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	22:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	22:05																														
ZZZZZZ	1.00	22:09																														
ZZZZZZ	1.00	22:13																														
ZZZZZZ	1.00	22:18																														
ZZZZZZ	1.00	22:22																														
ZZZZZZ	1.00	22:26																														
7263052	1.00	22:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
7263053	1.00	22:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
7263054	1.00	22:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
7263055	1.00	22:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	22:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	22:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	22:54																														
ZZZZZZ	1.00	22:58																														
ZZZZZZ	1.00	23:02																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: P
Instrument ID: 16417
Run Name: 1331008T72

Run Start Date: 11/06/2013
Run End Date: 11/06/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	23:07																													
ZZZZZZ	1.00	23:10																													
ZZZZZZ	1.00	23:14																													
ZZZZZZ	1.00	23:19																													
LLC	1.00	23:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	23:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	23:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	23:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	23:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331102M07

Run Start Date: 11/07/2013
Run End Date: 11/07/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	12:33															X															
S0.2	1.00	12:35															X															
S0.5	1.00	12:37															X															
S1.0	1.00	12:39															X															
S2.5	1.00	12:41															X															
S5.0	1.00	12:43															X															
ICV	1.00	12:45															X															
ICB	1.00	12:47															X															
CRA	1.00	12:49															X															
CCV	1.00	12:51															X															
CCB	1.00	12:53															X															
P30911AB	1.00	12:55															X															
P30911AQ	1.00	12:57															X															
ZZZZZZ	1.00	12:59																														
ZZZZZZ	1.00	13:01																														
ZZZZZZ	1.00	13:03																														
ZZZZZZ	1.00	13:05																														
ZZZZZZ	1.00	13:07																														
ZZZZZZ	1.00	13:09																														
ZZZZZZ	1.00	13:11																														
ZZZZZZ	1.00	13:13																														
CCV	1.00	13:16															X															
CCB	1.00	13:18															X															
ZZZZZZ	1.00	13:20																														
ZZZZZZ	1.00	13:22																														
ZZZZZZ	1.00	13:24																														
7263052	1.00	13:26															X															
7263053	1.00	13:28															X															
7263054	1.00	13:30															X															
7263055	1.00	13:32															X															
ZZZZZZ	1.00	13:34																														
ZZZZZZ	1.00	13:36																														
ZZZZZZ	1.00	13:38																														
CCV	1.00	13:40															X															
CCB	1.00	13:42															X															
ZZZZZZ	1.00	13:44																														
ZZZZZZ	1.00	13:46																														
ZZZZZZ	1.00	13:48																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM03

Method: CV
Instrument ID: 17384
Run Name: 1331102M07

Run Start Date: 11/07/2013
Run End Date: 11/07/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	13:50																													
ZZZZZZ	1.00	13:52																													
ZZZZZZ	1.00	13:54																													
ZZZZZZ	1.00	13:56																													
ZZZZZZ	1.00	13:58																													
ZZZZZZ	1.00	14:00																													
ZZZZZZ	1.00	14:02																													
CCV	1.00	14:04															X														
CCB	1.00	14:06															X														
ZZZZZZ	1.00	14:08																													
ZZZZZZ	1.00	14:10																													
ZZZZZZ	1.00	14:12																													
ZZZZZZ	5.00	14:14																													
ZZZZZZ	10.00	14:16																													
ZZZZZZ	2.50	14:18																													
ZZZZZZ	1.00	14:20																													
ZZZZZZ	1.00	14:22																													
ZZZZZZ	1.00	14:24																													
ZZZZZZ	1.00	14:26																													
CCV	1.00	14:29															X														
CCB	1.00	14:31															X														
ZZZZZZ	1.00	14:33																													
ZZZZZZ	1.00	14:35																													
ZZZZZZ	1.00	14:37																													
ZZZZZZ	1.00	14:39																													
ZZZZZZ	1.00	14:41																													
ZZZZZZ	1.00	14:43																													
ZZZZZZ	1.00	14:45																													
ZZZZZZ	1.00	14:47																													
CRA	1.00	14:49															X														
CCV	1.00	14:51															X														
CCB	1.00	14:53															X														

METHODS:
P = ICP Atomic Emission Spectrometer
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Raw Data

Metals in Solid

ICP Data

Metals in Solid

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ICP-AES Run Data Report

1331008T72

Reviewed By
John W Yanzuk

Reviewed Date
11/06/2013 11:58PM

Data File Name 1331008T72.TXT
Run Name: 1331008T72

Verified By:
Jennifer L Moyer

Verified Date
11/07/2013 8:51AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/06/2013 20:31

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00474	15.012	-0.00552	-0.00411	-0.00460
AL	0.000	0.01927	19.794	0.02232	0.02050	0.01499
AS	0.000	-0.00441	8.637	-0.00458	-0.00468	-0.00398
B	0.000	0.00001	101.581	0.00001	0.00000	0.00001
BA	0.000	0.00009	39.340	0.00012	0.00007	0.00006
BE	0.000	-0.04454	1.020	-0.04462	-0.04405	-0.04495
CA	0.000	0.00285	4.067	0.00287	0.00272	0.00295
CD	0.000	-0.01030	11.342	-0.00895	-0.01092	-0.01103
CO	0.000	0.00316	41.273	0.00234	0.00248	0.00467
CR	0.000	-0.00001	228.038	-0.00002	-0.00001	0.00001
CU	0.000	-0.00422	5.285	-0.00404	-0.00414	-0.00447
FE	0.000	0.00006	10.894	0.00005	0.00005	0.00006
K	0.000	-0.04864	61.978	-0.04127	-0.08179	-0.02286
LI	0.000	0.00118	30.459	0.00076	0.00140	0.00137
MG	0.000	0.00002	811.788	-0.00004	0.00016	-0.00007
MN	0.000	0.00170	6.013	0.00161	0.00181	0.00168
MO	0.000	0.00252	21.201	0.00241	0.00309	0.00204
NA	0.000	-0.00022	103.547	0.00000	-0.00045	-0.00020
NI	0.000	0.03312	5.914	0.03098	0.03355	0.03482
P	0.000	0.00003	105.252	0.00007	0.00000	0.00003
PB	0.000	0.00965	7.526	0.00883	0.00993	0.01019
S	0.000	-0.00023	13.163	-0.00025	-0.00019	-0.00024
SB	0.000	0.00011	20.165	0.00012	0.00008	0.00011
SE	0.000	0.00015	1692.188	0.00227	0.00095	-0.00276
SI	0.000	0.00010	26.093	0.00012	0.00007	0.00012
SN	0.000	0.00630	45.076	0.00729	0.00310	0.00850
SR	0.000	-0.00011	28.030	-0.00011	-0.00014	-0.00008
TI	0.000	0.00121	60.707	0.00077	0.00081	0.00206
TL	0.000	-0.01286	7.318	-0.01185	-0.01370	-0.01303
V	0.000	-0.00156	8.904	-0.00170	-0.00142	-0.00157
Y1	0.000	21671.86026	0.326	21753.43588	21630.20384	21631.94107
Y2A	0.000	426727.49061	0.327	426021.40490	428334.99006	425826.07687
Y2R	0.000	33509.05363	0.428	33352.20823	33541.19992	33633.75275
ZN	0.000	0.05352	5.673	0.05043	0.05362	0.05650
ZR	0.000	0.00009	248.803	-0.00003	0.00036	-0.00005

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/06/2013 20:35

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	8.64365	1.692	8.59024	8.80906	8.53165
CA	50.000	1.67280	1.688	1.65905	1.70529	1.65408
FE	50.000	0.55165	1.634	0.54726	0.56201	0.54566
K	50.000	24.02922	1.822	23.87321	24.52379	23.69067
MG	50.000	3.07947	1.632	3.06972	3.13387	3.03481
NA	50.000	1.28388	1.991	1.27976	1.31124	1.26061
S	50.000	0.44683	0.137	0.44626	0.44748	0.44675
SI	50.000	0.34520	1.675	0.34504	0.35106	0.33950
Y1	50.000	20794.95979	0.061	20781.64002	20796.16477	20807.07459
Y2R	50.000	32571.44111	1.525	32856.25625	31997.89337	32860.17372

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/06/2013 20:39

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.54329	0.203	1.54471	1.53970	1.54547
AS	1.000	0.98329	0.392	0.98127	0.98774	0.98087
B	1.000	0.01708	0.782	0.01700	0.01700	0.01723
BA	1.000	1.40073	0.359	1.40624	1.39955	1.39638
BE	1.000	48.00972	0.411	48.11519	47.78227	48.13171
CD	1.000	35.98232	0.085	35.97653	36.01539	35.95505
CO	1.000	13.94197	0.111	13.92553	13.95642	13.94397
CU	1.000	1.31835	0.505	1.31631	1.31296	1.32579
LI	1.000	0.15060	0.455	0.14991	0.15128	0.15062
MN	1.000	7.14715	0.377	7.14023	7.12433	7.17688
NI	1.000	8.36662	0.158	8.35192	8.37760	8.37035
P	1.000	0.02344	0.195	0.02341	0.02349	0.02341
PB	1.000	2.90590	0.067	2.90367	2.90693	2.90711
SE	1.000	0.64310	0.763	0.64328	0.63810	0.64791
SR	1.000	1.45789	0.838	1.45369	1.44833	1.47165
TL	1.000	1.54501	0.304	1.54116	1.55025	1.54362
Y1	1.000	21404.39934	0.069	21404.74813	21418.88837	21389.56151
Y2A	1.000	417522.38789	0.510	417737.54142	419534.89066	415294.73161
Y2R	1.000	33641.73886	0.509	33803.32136	33659.91000	33461.98521
ZN	1.000	27.06819	0.026	27.06113	27.06815	27.07529

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 4

Date/Time: 11/06/2013 20:44

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.02176	0.234	0.02175	0.02182	0.02172
MO	1.000	9.92980	0.275	9.95294	9.89968	9.93678
SB	1.000	0.03244	0.237	0.03252	0.03241	0.03238
SN	1.000	2.64242	0.310	2.64234	2.63427	2.65064
TI	1.000	6.25113	0.402	6.23649	6.28016	6.23675
V	1.000	1.53287	0.328	1.53031	1.53867	1.52963
Y1	1.000	21988.82935	0.246	21939.49217	22046.79989	21980.19597
Y2A	1.000	432114.72924	0.335	432303.14778	430584.12856	433456.91138
Y2R	1.000	33635.10173	0.421	33795.55688	33527.47703	33582.27127
ZR	1.000	0.07761	0.376	0.07729	0.07787	0.07768

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/06/2013 20:48

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60174	7,676.90	0.292	0.59978	0.60224	0.60319
AL	29.32072	3,367.79	0.434	29.45375	29.30851	29.19991
AS	0.59270	242.97	0.717	0.59400	0.59615	0.58795
B	0.57882	4,205.37	0.292	0.57733	0.58066	0.57846
BA	0.60933	350,944.83	0.819	0.61436	0.60926	0.60438
BE	0.59445	234,462.86	0.152	0.59479	0.59343	0.59514
CA	29.33366	32,661.59	0.386	29.32605	29.22429	29.45062
CD	0.59613	9,075.58	0.348	0.59724	0.59741	0.59373
CO	0.59850	3,520.95	0.408	0.59989	0.59994	0.59568
CR	0.59775	5,338.75	0.253	0.59944	0.59653	0.59728
CU	0.60971	6,553.22	0.746	0.60672	0.60745	0.61494
FE	29.31566	10,812.35	0.379	29.33506	29.19608	29.41583
K	29.37192	9,350.42	0.229	29.36791	29.30689	29.44097
LI	0.60508	3,051.89	0.792	0.60401	0.61032	0.60091
MG	28.92044	59,675.41	0.441	28.86283	28.83179	29.06669
MN	0.59687	35,086.10	0.261	0.59570	0.59626	0.59864
MO	0.61158	2,555.65	0.382	0.61236	0.61343	0.60895
NA	28.66786	24,399.02	0.117	28.65267	28.70626	28.64465
NI	0.59833	2,110.49	0.434	0.60003	0.59962	0.59534
P	0.60624	299.22	0.841	0.60918	0.60918	0.60035
PB	0.60113	742.74	0.105	0.60142	0.60157	0.60041
S	29.86097	5,611.54	0.457	29.94659	29.93278	29.70354
SB	0.61999	425.50	0.414	0.62287	0.61797	0.61912
SE	0.60095	162.48	0.940	0.60729	0.59910	0.59646
SI	29.74164	6,809.24	0.429	29.60144	29.77296	29.85052
SN	0.59276	660.12	0.863	0.59261	0.59794	0.58771
SR	0.59217	354,942.27	0.450	0.59369	0.59372	0.58909
TI	0.61254	31,530.32	0.238	0.61097	0.61281	0.61385
TL	0.59161	365.31	0.541	0.59023	0.59527	0.58933
V	0.60591	7,635.66	0.330	0.60434	0.60523	0.60816
Y1	21038.37585	21,038.38	0.423	20954.53117	21028.96749	21131.62890
Y2A	411172.59775	411,172.60	0.557	408667.62757	413160.17230	411689.99337
Y2R	33149.66127	33,149.66	0.330	33026.97447	33185.35000	33236.65935
ZN	0.59947	6,872.45	0.396	0.60112	0.60054	0.59675
ZR	0.59762	1,538.82	0.198	0.59755	0.59883	0.59647

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/06/2013 20:52

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00058	-46.87	81.239	-0.00107	-0.00012	-0.00056
AL	0.00276	13.10	1834.088	0.06115	-0.02549	-0.02738
AS	-0.00036	-2.49	344.729	0.00002	-0.00174	0.00064
B	0.00107	10.10	33.439	0.00146	0.00076	0.00098
BA	0.00002	45.18	161.331	0.00000	0.00001	0.00004
BE	0.00055	-355.28	1.005	0.00055	0.00055	0.00054
CA	-0.00398	90.03	119.346	0.00126	-0.00801	-0.00519
CD	-0.00005	-4.45	136.812	-0.00008	0.00003	-0.00009
CO	-0.00023	-0.01	57.730	-0.00013	-0.00017	-0.00038
CR	0.00031	-1.22	123.340	0.00041	-0.00011	0.00062
CU	0.00091	-36.47	63.369	0.00093	0.00032	0.00148
FE	-0.00432	-1.98	270.007	0.00914	-0.01132	-0.01077
K	-0.01312	-24.12	147.215	0.00699	-0.01482	-0.03153
LI	-0.00069	35.71	313.612	-0.00279	0.00151	-0.00078
MG	0.00129	3.18	416.551	0.00731	-0.00053	-0.00293
MN	0.00001	15.00	772.929	0.00006	-0.00008	0.00005
MO	0.00018	1.87	104.976	-0.00002	0.00035	0.00021
NA	0.01376	4.48	107.139	0.02229	0.02224	-0.00326
NI	-0.00040	12.88	53.784	-0.00033	-0.00065	-0.00024
P	-0.00019	0.64	100.325	-0.00017	-0.00039	-0.00001
PB	0.00028	4.53	464.723	-0.00076	-0.00013	0.00172
S	-0.00269	-4.80	87.972	-0.00181	-0.00089	-0.00537
SB	-0.00089	1.66	119.713	-0.00110	0.00027	-0.00183
SE	0.00130	0.29	423.759	-0.00354	0.00730	0.00014
SI	0.00624	4.86	124.564	0.01279	-0.00235	0.00828
SN	-0.00033	2.35	178.278	-0.00077	0.00034	-0.00057
SR	0.00002	-56.48	83.959	0.00002	0.00002	0.00000
TI	0.00010	15.40	63.370	0.00006	0.00017	0.00007
TL	0.00101	-4.82	116.119	-0.00022	0.00112	0.00211
V	-0.00026	-15.92	32.333	-0.00031	-0.00032	-0.00017
Y1	21648.29178	21,648.29	0.042	21658.74950	21643.01960	21643.10625
Y2A	423370.79744	423,370.80	0.052	423336.01723	423170.67594	423605.69914
Y2R	33199.95209	33,199.95	0.250	33110.12190	33216.04753	33273.68684
ZN	-0.00116	9.71	4.473	-0.00120	-0.00110	-0.00118
ZR	0.00030	3.88	80.349	0.00052	0.00005	0.00032

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/06/2013 20:56

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00509	32.83	5.203	0.00484	0.00505	0.00537
AL	0.21219	37.45	19.273	0.25752	0.20099	0.17806
AS	0.01847	5.56	1.835	0.01864	0.01808	0.01869
B	0.04826	353.68	0.942	0.04804	0.04795	0.04878
BA	0.00542	3,262.71	0.153	0.00542	0.00543	0.00541
BE	0.00543	1,640.67	0.105	0.00543	0.00543	0.00544
CA	0.19663	316.87	2.427	0.19430	0.20212	0.19347
CD	0.00497	73.94	1.910	0.00507	0.00495	0.00488
CO	0.00509	32.25	1.083	0.00516	0.00505	0.00508
CR	0.01562	140.42	3.860	0.01631	0.01536	0.01519
CU	0.01184	85.67	4.410	0.01226	0.01126	0.01201
FE	0.19045	71.48	2.166	0.18587	0.19163	0.19386
K	0.42868	118.14	6.608	0.44524	0.39597	0.44482
LI	0.01875	133.46	10.113	0.01713	0.01829	0.02083
MG	0.09686	205.44	0.853	0.09743	0.09723	0.09591
MN	0.00530	336.28	1.055	0.00524	0.00531	0.00535
MO	0.01039	45.68	1.198	0.01027	0.01037	0.01052
NA	0.98894	843.73	1.184	1.00237	0.98085	0.98361
NI	0.01021	51.13	4.929	0.01056	0.01044	0.00963
P	0.09954	50.87	0.792	0.09973	0.09868	0.10022
PB	0.01500	22.99	10.714	0.01644	0.01528	0.01327
S	0.48789	90.03	0.394	0.48586	0.48967	0.48814
SB	0.02056	16.61	5.106	0.02040	0.01960	0.02168
SE	0.01946	5.34	10.190	0.01808	0.01857	0.02173
SI	0.05373	15.91	19.324	0.04234	0.06266	0.05620
SN	0.02022	25.77	1.180	0.02023	0.02045	0.01997
SR	0.00524	3,177.59	0.675	0.00527	0.00520	0.00524
TI	0.01025	555.38	0.797	0.01024	0.01034	0.01018
TL	0.03309	16.56	2.477	0.03249	0.03402	0.03276
V	0.00472	48.75	12.814	0.00541	0.00442	0.00432
Y1	21621.43744	21,621.44	0.203	21657.41471	21634.22862	21572.66898
Y2A	424979.84264	424,979.84	0.643	427650.79365	425102.65076	422186.08350
Y2R	33507.76067	33,507.76	0.045	33501.79712	33496.44498	33525.03992
ZN	0.02121	270.42	0.495	0.02133	0.02118	0.02113
ZR	0.05067	134.76	2.732	0.05201	0.05074	0.04925

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/06/2013 21:00

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00196	-46.75	23.791	0.00249	0.00176	0.00162
AL	498.21427	55,559.32	0.717	502.00107	494.90878	497.73296
AS	0.00446	-11.46	39.237	0.00246	0.00571	0.00520
B	-0.03091	687.98	3.433	-0.03175	-0.02972	-0.03127
BA	0.00027	173.76	2.748	0.00028	0.00027	0.00027
BE	0.00041	-358.83	9.808	0.00041	0.00037	0.00045
CA	507.74215	507,457.86	0.347	509.68596	507.29227	506.24822
CD	0.00060	331.87	33.101	0.00048	0.00049	0.00082
CO	0.00096	6.27	40.519	0.00109	0.00127	0.00052
CR	0.00187	-37.20	19.817	0.00147	0.00194	0.00219
CU	0.00616	133.72	14.211	0.00523	0.00626	0.00697
FE	204.59912	67,397.35	0.698	206.24257	203.90167	203.65311
K	-0.06304	-38.48	61.200	-0.02979	-0.05399	-0.10534
LI	-0.00011	298.17	2232.958	0.00240	-0.00228	-0.00043
MG	556.96008	813,162.69	0.541	556.23542	560.26709	554.37772
MN	0.00399	224.13	2.688	0.00407	0.00387	0.00403
MO	-0.00139	-4.33	22.394	-0.00157	-0.00103	-0.00158
NA	0.03218	19.41	43.331	0.03396	0.01743	0.04515
NI	0.00058	-5.07	135.115	0.00088	-0.00031	0.00116
P	0.01387	6.84	19.004	0.01084	0.01561	0.01516
PB	-0.00089	116.63	378.628	-0.00038	-0.00446	0.00219
S	-0.12446	-26.05	3.517	-0.12926	-0.12069	-0.12343
SB	-0.00878	7.66	9.766	-0.00976	-0.00819	-0.00839
SE	0.00215	-1.11	172.115	0.00084	-0.00072	0.00631
SI	0.01699	7.03	18.759	0.01372	0.01715	0.02009
SN	0.00378	6.22	51.887	0.00600	0.00306	0.00228
SR	0.00256	1,325.73	1.288	0.00255	0.00259	0.00253
TI	-0.00427	-188.67	3.886	-0.00444	-0.00424	-0.00411
TL	-0.00081	-5.16	177.935	0.00064	-0.00083	-0.00224
V	-0.00324	-29.68	1.966	-0.00330	-0.00317	-0.00325
Y1	19135.13644	19,135.14	0.087	19143.58486	19115.92854	19145.89592
Y2A	371002.02202	371,002.02	0.952	371144.03579	367401.22842	374460.80186
Y2R	31871.11340	31,871.11	0.282	31781.93696	31869.88240	31961.52083
ZN	0.00576	306.82	1.958	0.00564	0.00586	0.00578
ZR	0.00407	13.06	17.805	0.00330	0.00417	0.00474

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 9 Date/Time: 11/06/2013 21:04

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21735	2,467.95	0.298	0.21740	0.21797	0.21668
AL	494.55682	55,699.89	0.446	492.25899	496.65711	494.75436
AS	0.10050	25.07	2.442	0.09843	0.09986	0.10322
B	-0.03122	684.49	3.099	-0.03010	-0.03184	-0.03170
BA	0.50730	268,014.90	0.382	0.50635	0.50953	0.50602
BE	0.49987	180,762.79	0.263	0.50047	0.50078	0.49836
CA	500.96392	506,188.15	0.697	499.32112	504.97583	498.59481
CD	0.92374	13,027.54	0.195	0.92241	0.92301	0.92579
CO	0.45670	2,435.30	0.214	0.45562	0.45753	0.45696
CR	0.47579	3,853.92	0.393	0.47612	0.47748	0.47378
CU	0.53614	5,426.54	0.138	0.53548	0.53694	0.53601
FE	202.13185	67,324.85	0.448	201.25975	203.06612	202.06968
K	-0.06475	-39.39	54.588	-0.09460	-0.02572	-0.07394
LI	0.00270	311.13	71.824	0.00047	0.00362	0.00400
MG	545.00850	810,220.64	0.494	542.86852	544.12409	548.03290
MN	0.47868	25,813.18	0.200	0.47944	0.47900	0.47761
MO	-0.00148	-4.66	12.302	-0.00129	-0.00149	-0.00166
NA	0.02101	10.36	54.142	0.01053	0.01940	0.03311
NI	0.90737	2,884.49	0.155	0.90574	0.90817	0.90820
P	0.01217	7.29	27.269	0.01183	0.01564	0.00903
PB	0.04270	163.64	5.190	0.04471	0.04308	0.04032
S	-0.12616	-26.30	2.904	-0.12891	-0.12200	-0.12758
SB	0.63888	407.13	0.156	0.63790	0.63989	0.63883
SE	0.05033	10.74	17.407	0.04470	0.06043	0.04587
SI	0.01071	5.71	13.979	0.00899	0.01175	0.01138
SN	0.00432	6.75	67.516	0.00199	0.00337	0.00759
SR	0.00253	1,334.42	1.609	0.00257	0.00254	0.00249
TI	-0.00385	-155.24	1.562	-0.00391	-0.00379	-0.00385
TL	0.08765	36.44	4.251	0.08393	0.09138	0.08765
V	0.49059	5,709.15	0.494	0.49051	0.49305	0.48820
Y1	19111.89178	19,111.89	0.163	19147.84120	19092.16731	19095.66682
Y2A	377155.22421	377,155.22	0.413	375752.51822	376879.45659	378833.69781
Y2R	32190.62650	32,190.63	0.305	32253.75947	32077.61343	32240.50658
ZN	1.02569	10,823.33	0.077	1.02478	1.02618	1.02611
ZR	0.00506	15.64	23.775	0.00439	0.00644	0.00433

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/06/2013 21:08

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50200	6,439.33	1.057	0.50771	0.50108	0.49722
AL	24.53489	2,817.36	1.071	24.47207	24.82344	24.30916
AS	0.48733	201.39	0.594	0.48990	0.48790	0.48419
B	0.48355	3,536.19	1.343	0.49101	0.47915	0.48049
BA	0.50631	293,494.55	0.948	0.51056	0.50727	0.50110
BE	0.49716	197,254.31	1.036	0.50307	0.49484	0.49359
CA	24.53986	27,333.59	0.601	24.56377	24.67402	24.38179
CD	0.49573	7,624.01	0.376	0.49649	0.49710	0.49361
CO	0.49717	2,955.04	0.562	0.49969	0.49765	0.49417
CR	0.50236	4,514.94	1.168	0.50892	0.49761	0.50054
CU	0.50954	5,504.06	1.067	0.51570	0.50747	0.50543
FE	24.52257	9,054.40	0.493	24.56524	24.61637	24.38609
K	24.56050	7,809.00	0.273	24.49310	24.56097	24.62741
LI	0.50846	2,568.62	0.814	0.50369	0.51064	0.51104
MG	24.11429	49,836.04	0.125	24.11496	24.14404	24.08387
MN	0.50202	29,701.83	1.069	0.50817	0.49830	0.49959
MO	0.50768	2,143.37	0.226	0.50811	0.50855	0.50638
NA	24.05377	20,453.78	0.253	24.00180	24.12079	24.03872
NI	0.49870	1,779.40	0.372	0.49805	0.50079	0.49725
P	0.49842	248.68	0.399	0.50020	0.49879	0.49628
PB	0.50097	626.02	0.361	0.50084	0.50283	0.49922
S	24.76603	4,701.02	0.115	24.79257	24.73613	24.76939
SB	0.51177	355.32	0.203	0.51205	0.51263	0.51061
SE	0.49341	134.75	1.933	0.49915	0.49868	0.48240
SI	24.84005	5,682.79	0.349	24.78239	24.93976	24.79799
SN	0.49356	555.73	0.251	0.49498	0.49297	0.49272
SR	0.49861	300,773.45	0.818	0.50269	0.49861	0.49453
TI	0.51349	26,602.69	0.960	0.51914	0.51135	0.51000
TL	0.49384	307.14	0.828	0.48926	0.49517	0.49711
V	0.50670	6,424.53	1.011	0.51260	0.50335	0.50416
Y1	21253.54154	21,253.54	0.227	21223.50017	21228.00240	21309.12206
Y2A	413830.38436	413,830.38	0.816	409939.76143	415532.93572	416018.45593
Y2R	33122.11652	33,122.12	0.371	33064.98404	33038.10000	33263.26551
ZN	0.49661	5,755.91	0.475	0.49825	0.49768	0.49391
ZR	0.50047	1,288.12	0.226	0.50143	0.50076	0.49923

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 11 Date/Time: 11/06/2013 21:12

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00020	-36.68	166.357	-0.00008	0.00011	0.00058
AL	-0.01900	10.65	33.565	-0.01366	-0.01728	-0.02606
AS	0.00004	-2.32	2710.394	-0.00117	0.00046	0.00083
B	0.00109	10.38	47.007	0.00125	0.00052	0.00151
BA	0.00004	57.49	32.360	0.00005	0.00002	0.00004
BE	0.00055	-357.18	3.842	0.00053	0.00055	0.00057
CA	-0.00824	85.44	22.060	-0.01002	-0.00830	-0.00639
CD	-0.00005	-4.43	295.462	-0.00002	0.00007	-0.00020
CO	-0.00010	0.80	86.665	-0.00014	-0.00014	0.00000
CR	-0.00005	-4.55	447.894	-0.00025	-0.00012	0.00021
CU	0.00090	-36.82	43.152	0.00046	0.00107	0.00118
FE	0.00078	-0.07	282.454	0.00083	0.00296	-0.00145
K	-0.01523	-24.86	303.524	-0.03308	-0.04987	0.03726
LI	0.00080	43.14	32.757	0.00081	0.00053	0.00105
MG	-0.00120	-2.01	94.226	0.00009	-0.00167	-0.00203
MN	0.00004	16.90	211.942	0.00012	-0.00004	0.00004
MO	0.00004	1.25	347.485	0.00004	-0.00010	0.00017
NA	0.00314	-4.56	102.944	0.00686	0.00111	0.00143
NI	-0.00002	14.26	739.025	-0.00020	0.00014	-0.00001
P	-0.00005	0.71	942.617	0.00033	-0.00056	0.00009
PB	-0.00003	4.14	1522.643	0.00039	-0.00006	-0.00041
S	-0.00405	-5.06	34.516	-0.00563	-0.00298	-0.00353
SB	0.00048	2.61	102.835	0.00071	-0.00009	0.00082
SE	0.00300	0.77	97.065	0.00024	0.00272	0.00604
SI	-0.00116	3.17	746.573	-0.00781	0.00861	-0.00427
SN	-0.00040	2.27	124.573	0.00017	-0.00062	-0.00074
SR	0.00002	-52.58	114.494	0.00005	0.00002	0.00000
TI	0.00012	16.92	26.327	0.00009	0.00012	0.00016
TL	0.00015	-5.40	735.266	-0.00042	-0.00057	0.00145
V	-0.00006	-13.37	80.167	-0.00011	-0.00001	-0.00006
Y1	21661.12154	21,661.12	0.442	21578.11559	21639.42046	21765.82856
Y2A	426585.17942	426,585.18	0.447	424961.60714	426107.95229	428685.97884
Y2R	33264.78305	33,264.78	0.666	33516.28697	33179.26051	33098.80168
ZN	-0.00112	10.20	4.270	-0.00113	-0.00115	-0.00106
ZR	0.00140	6.74	89.389	0.00194	-0.00003	0.00229

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/06/2013 21:16

Sample Number: **PBS** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00032	-44.78	225.821	-0.00112	0.00029	-0.00013
AL	0.03724	17.58	38.523	0.03909	0.05057	0.02206
AS	0.00104	-1.93	105.909	0.00026	0.00230	0.00056
B	0.00421	33.87	3.553	0.00427	0.00404	0.00432
BA	0.00017	139.59	16.877	0.00019	0.00018	0.00014
BE	0.00054	-366.60	1.144	0.00054	0.00055	0.00054
CA	0.08398	193.99	0.990	0.08356	0.08344	0.08493
CD	-0.00005	-4.50	125.326	-0.00008	0.00002	-0.00008
CO	0.00000	1.42	1575.338	0.00040	-0.00031	-0.00008
CR	0.00045	0.13	207.979	-0.00053	0.00055	0.00132
CU	0.00221	-22.62	16.736	0.00180	0.00252	0.00230
FE	0.00917	3.16	25.122	0.00853	0.00726	0.01173
K	-0.00126	-20.90	4609.101	0.01043	0.05002	-0.06422
LI	0.00145	47.75	44.272	0.00131	0.00089	0.00215
MG	0.00113	2.99	272.074	-0.00241	0.00258	0.00323
MN	0.00032	34.87	5.547	0.00033	0.00030	0.00033
MO	-0.00001	1.09	3870.086	0.00015	-0.00021	0.00005
NA	0.02687	16.14	29.872	0.03531	0.02594	0.01934
NI	-0.00069	12.07	57.577	-0.00096	-0.00023	-0.00089
P	0.01549	8.71	2.180	0.01588	0.01525	0.01535
PB	0.00009	4.39	2309.014	-0.00236	0.00134	0.00129
S	0.00152	-4.06	374.396	0.00417	0.00541	-0.00502
SB	-0.00072	1.81	204.298	-0.00067	0.00073	-0.00223
SE	-0.00077	-0.29	97.245	-0.00018	-0.00162	-0.00051
SI	0.00876	5.60	78.961	0.00703	0.00287	0.01638
SN	0.01365	18.66	3.561	0.01418	0.01324	0.01352
SR	0.00047	228.55	1.767	0.00047	0.00048	0.00046
TI	0.00048	36.57	15.782	0.00052	0.00052	0.00039
TL	0.00189	-4.33	70.827	0.00036	0.00283	0.00249
V	0.00043	-7.10	48.949	0.00032	0.00029	0.00067
Y1	22078.18106	22,078.18	0.026	22074.04315	22084.64471	22075.85532
Y2A	436151.25472	436,151.25	0.599	433474.05063	436285.67622	438694.03731
Y2R	34217.93229	34,217.93	0.670	34004.17666	34460.16544	34189.45476
ZN	0.00246	52.75	1.996	0.00250	0.00241	0.00246
ZR	-0.00068	1.44	402.450	-0.00373	0.00022	0.00148

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/06/2013 21:20

Sample Number: **LCSW** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05011	728.45	1.277	0.05034	0.04939	0.05060
AL	1.95352	251.11	2.451	2.00848	1.93128	1.92081
AS	0.15070	62.96	0.921	0.15216	0.15056	0.14939
B	1.96424	14,296.99	0.174	1.96737	1.96060	1.96475
BA	2.06885	1,234,159.22	0.402	2.06378	2.06433	2.07845
BE	0.05058	20,128.13	0.123	0.05056	0.05052	0.05064
CA	4.01113	4,689.98	0.454	4.03207	3.99897	4.00236
CD	0.05121	792.32	0.154	0.05112	0.05124	0.05127
CO	0.52315	3,160.50	0.152	0.52363	0.52358	0.52223
CR	0.20454	1,892.06	0.242	0.20494	0.20399	0.20470
CU	0.26959	2,908.81	0.356	0.27000	0.26849	0.27027
FE	0.99891	382.69	0.691	1.00507	1.00021	0.99146
K	9.97940	3,252.11	0.288	9.94628	9.99826	9.99366
LI	1.03404	5,307.27	0.294	1.03397	1.03103	1.03711
MG	1.95517	4,203.36	0.090	1.95671	1.95325	1.95554
MN	0.51447	31,327.36	0.186	0.51511	0.51337	0.51493
MO	2.08742	8,933.54	0.185	2.08493	2.08545	2.09187
NA	9.82998	8,594.90	0.152	9.82764	9.84597	9.81634
NI	0.53382	1,937.53	0.119	0.53439	0.53313	0.53394
P	1.05100	528.87	0.137	1.05152	1.04937	1.05211
PB	0.15927	197.52	0.472	0.15901	0.16012	0.15868
S	1.02649	190.34	0.618	1.02772	1.01962	1.03214
SB	0.50106	345.36	0.034	0.50105	0.50089	0.50123
SE	0.15349	42.48	2.238	0.15272	0.15050	0.15724
SI	0.60603	149.31	1.516	0.59915	0.60248	0.61646
SN	4.05744	4,613.22	0.269	4.04770	4.05540	4.06921
SR	1.02528	636,601.43	0.477	1.02955	1.01995	1.02634
TI	1.04670	55,727.00	0.146	1.04802	1.04503	1.04704
TL	0.15918	87.24	0.589	0.15839	0.15894	0.16022
V	0.50481	6,493.05	0.054	0.50513	0.50468	0.50463
Y1	21552.67880	21,552.68	0.064	21538.51235	21566.00027	21553.52377
Y2A	425895.46057	425,895.46	0.223	425237.01127	426981.77601	425467.59443
Y2R	34075.09954	34,075.10	0.512	33884.26092	34114.50260	34226.53509
ZN	0.51361	6,002.71	0.029	0.51348	0.51357	0.51377
ZR	1.01850	2,693.54	0.207	1.01918	1.01615	1.02019

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/06/2013 21:24

Sample Number: **7257240** Class: U*** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00038	-71.22	267.433	-0.00006	-0.00151	0.00044
AL	104.83153	12,562.32	0.555	105.27960	104.17403	105.04096
AS	0.09956	28.82	2.285	0.09738	0.10192	0.09937
B	-0.00273	859.45	126.462	-0.00317	0.00092	-0.00593
BA	0.46454	277,016.50	1.875	0.46832	0.47072	0.45457
BE	0.00537	1,618.02	1.590	0.00537	0.00546	0.00529
CA	66.68049	77,068.36	0.322	66.91030	66.48460	66.64658
CD	0.00231	345.28	33.425	0.00170	0.00318	0.00206
CO	0.08368	549.02	3.821	0.08171	0.08737	0.08196
CR	0.22847	2,064.69	1.866	0.22902	0.23243	0.22396
CU	0.24210	2,422.23	0.721	0.24296	0.24325	0.24010
FE	177.40685	64,268.09	0.425	178.14666	176.63960	177.43429
K	24.50637	8,148.39	0.334	24.50930	24.42311	24.58672
LI	0.14879	848.17	0.701	0.14768	0.14893	0.14975
MG	80.74679	169,584.51	0.220	80.87781	80.54506	80.81749
MN	1.88236	114,533.52	1.466	1.88213	1.91006	1.85489
MO	0.01489	63.67	3.797	0.01502	0.01538	0.01427
NA	9.39725	8,352.01	0.337	9.42535	9.36293	9.40347
NI	0.21321	747.88	3.521	0.20950	0.22185	0.20828
P	6.00643	2,962.28	3.520	5.86927	6.24995	5.90009
PB	0.11568	167.85	4.293	0.11269	0.12141	0.11293
S	2.22012	414.31	3.631	2.16938	2.31306	2.17791
SB	-0.01265	6.76	1.146	-0.01256	-0.01282	-0.01257
SE	-0.00104	-0.70	534.871	0.00447	-0.00669	-0.00091
SI	3.85421	925.03	0.591	3.87752	3.83203	3.85309
SN	0.02091	26.00	5.714	0.01973	0.02211	0.02090
SR	0.33226	206,171.35	1.266	0.33190	0.33663	0.32824
TI	3.86663	205,730.74	1.354	3.86638	3.91911	3.81440
TL	0.00795	-8.80	47.138	0.00509	0.01219	0.00656
V	0.19624	2,596.29	1.815	0.19571	0.20003	0.19297
Y1	21186.32865	21,186.33	3.041	21589.16322	20443.34089	21526.48184
Y2A	425773.33077	425,773.33	1.479	425117.69384	419830.24650	432372.05197
Y2R	34638.52783	34,638.53	0.333	34532.36291	34761.41803	34621.80256
ZN	0.52388	6,211.52	3.563	0.51111	0.54530	0.51523
ZR	0.07762	211.68	1.394	0.07719	0.07885	0.07682

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/06/2013 21:28

Sample Number: **7257240** Class: UP** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01755	268.00	1.221	0.01741	0.01779	0.01744
AL	102.53018	12,389.99	0.188	102.73859	102.49283	102.35913
AS	0.56922	229.82	0.877	0.57350	0.57041	0.56373
B	0.18781	2,221.79	1.355	0.18490	0.18963	0.18890
BA	0.50030	298,770.80	0.547	0.49734	0.50275	0.50082
BE	0.02433	9,389.48	0.468	0.02430	0.02445	0.02423
CA	65.55374	76,413.65	0.451	65.85420	65.26287	65.54413
CD	0.04815	1,052.47	1.492	0.04874	0.04835	0.04735
CO	0.17101	1,083.95	0.769	0.17239	0.17088	0.16977
CR	0.41169	3,769.60	0.107	0.41152	0.41219	0.41136
CU	0.73505	7,984.47	0.331	0.73294	0.73771	0.73451
FE	172.10308	63,012.47	0.536	172.94644	171.11693	172.24587
K	25.74932	8,634.51	0.293	25.66800	25.76291	25.81705
LI	1.14024	6,029.22	0.321	1.13636	1.14361	1.14075
MG	79.21294	167,888.50	0.264	79.41949	79.00094	79.21839
MN	1.90143	115,856.40	0.664	1.88753	1.91219	1.90456
MO	0.20274	868.13	0.905	0.20443	0.20300	0.20079
NA	11.09809	9,947.86	0.430	11.07509	11.15290	11.06629
NI	0.34155	1,222.82	0.435	0.34321	0.34108	0.34035
P	6.68543	3,355.74	0.249	6.70419	6.67230	6.67981
PB	0.56383	729.29	1.421	0.57001	0.56669	0.55478
S	2.13905	405.69	0.786	2.13249	2.12649	2.15816
SB	0.38485	281.33	1.107	0.38962	0.38350	0.38143
SE	0.76684	212.07	1.457	0.77626	0.76976	0.75450
SI	2.29597	557.43	1.107	2.32343	2.27328	2.29120
SN	0.56129	640.14	1.268	0.56809	0.56188	0.55389
SR	0.34540	214,627.01	0.593	0.34304	0.34648	0.34668
TI	3.90835	208,245.26	0.417	3.89104	3.92336	3.91065
TL	0.90856	590.21	0.802	0.91637	0.90737	0.90194
V	0.28751	3,787.53	0.701	0.28725	0.28964	0.28564
Y1	21540.23250	21,540.23	0.196	21508.52079	21588.12850	21524.04821
Y2A	426316.91062	426,316.91	0.386	427498.54497	424439.43009	427012.75679
Y2R	34928.68371	34,928.68	0.403	34837.81487	35090.91091	34857.32535
ZN	0.84234	10,010.97	6.032	0.79447	0.83690	0.89565
ZR	1.04179	2,824.01	0.703	1.04760	1.03357	1.04420

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/06/2013 21:32

Sample Number: **7257240** Class: D*** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00008	-66.07	304.858	0.00002	0.00037	-0.00013
AL	94.77043	11,612.86	0.389	94.36815	94.85143	95.09172
AS	0.10003	30.26	2.413	0.09950	0.10266	0.09792
B	-0.00608	819.59	19.028	-0.00487	-0.00717	-0.00621
BA	0.41449	249,575.67	0.726	0.41578	0.41105	0.41663
BE	0.00512	1,527.62	0.369	0.00511	0.00510	0.00514
CA	64.05396	75,748.07	0.270	63.86340	64.20093	64.09755
CD	0.00248	350.59	4.974	0.00254	0.00233	0.00255
CO	0.07796	527.55	0.103	0.07795	0.07788	0.07804
CR	0.21333	1,944.48	0.773	0.21374	0.21152	0.21474
CU	0.23569	2,393.98	0.480	0.23534	0.23477	0.23695
FE	172.66661	64,105.32	0.275	172.11866	172.97216	172.90901
K	22.77540	7,743.67	0.212	22.80561	22.80081	22.71979
LI	0.13891	813.68	1.473	0.13969	0.14046	0.13659
MG	77.71212	167,185.37	0.066	77.76851	77.69895	77.66891
MN	1.76969	108,722.48	0.608	1.77097	1.75834	1.77976
MO	0.01384	61.18	1.361	0.01402	0.01385	0.01364
NA	9.07256	8,246.70	0.117	9.07968	9.06038	9.07761
NI	0.20654	748.79	0.107	0.20666	0.20628	0.20666
P	5.75323	2,931.28	0.122	5.74512	5.75716	5.75740
PB	0.12007	176.35	1.589	0.11828	0.11984	0.12208
S	1.78044	342.11	0.230	1.77616	1.78431	1.78084
SB	-0.01090	7.73	21.689	-0.01359	-0.00918	-0.00992
SE	0.00041	-0.30	1213.232	-0.00532	0.00340	0.00314
SI	3.57219	877.13	1.083	3.60292	3.58491	3.52876
SN	0.01931	25.02	7.372	0.01898	0.01809	0.02087
SR	0.31177	195,326.83	0.675	0.31262	0.30938	0.31332
TI	3.53732	190,031.74	0.639	3.54200	3.51275	3.55720
TL	0.00641	-9.31	7.934	0.00697	0.00626	0.00599
V	0.18044	2,410.45	0.624	0.18119	0.17915	0.18099
Y1	21871.36179	21,871.36	0.036	21880.51289	21865.82862	21867.74387
Y2A	429844.39246	429,844.39	0.395	429813.35321	431558.05169	428161.77249
Y2R	35426.63092	35,426.63	0.127	35448.19181	35374.85012	35456.85082
ZN	0.52963	6,477.72	0.100	0.53015	0.52909	0.52964
ZR	0.06678	186.73	1.919	0.06532	0.06769	0.06734

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/06/2013 21:36

Sample Number: **7257240** Class: R*** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.04717	655.91	2.040	0.04651	0.04674	0.04828
AL	173.77883	21,261.59	0.236	174.18489	173.78723	173.36437
AS	0.24236	91.10	0.911	0.24298	0.24418	0.23990
B	1.82180	14,181.55	0.875	1.81121	1.81407	1.84013
BA	2.61282	1,559,194.46	0.599	2.59779	2.61164	2.62903
BE	0.05260	20,963.94	0.785	0.05234	0.05239	0.05308
CA	73.30098	86,229.59	0.284	73.51866	73.28117	73.10310
CD	0.04762	1,075.11	0.939	0.04798	0.04712	0.04776
CO	0.53469	3,344.66	0.540	0.53745	0.53170	0.53493
CR	0.48992	4,488.87	0.676	0.48849	0.48756	0.49370
CU	0.49488	4,989.57	0.842	0.49155	0.49353	0.49955
FE	186.16073	68,450.29	0.437	187.03286	186.02655	185.42277
K	40.80642	13,837.78	0.395	40.96682	40.80822	40.64423
LI	1.13538	6,070.50	0.130	1.13380	1.13672	1.13560
MG	90.57099	192,823.23	0.157	90.73277	90.46427	90.51592
MN	2.35425	143,353.50	0.735	2.34308	2.34550	2.37417
MO	1.84997	7,955.61	0.657	1.85750	1.83594	1.85645
NA	18.50323	16,762.59	0.375	18.46301	18.46338	18.58332
NI	0.66524	2,400.77	0.512	0.66800	0.66143	0.66628
P	7.00622	3,535.02	0.586	7.04073	6.96083	7.01709
PB	0.24922	352.67	1.646	0.25183	0.24450	0.25134
S	3.25129	620.36	0.692	3.27339	3.22840	3.25209
SB	0.16327	128.66	1.618	0.16432	0.16026	0.16522
SE	0.14461	39.59	2.800	0.14772	0.14003	0.14607
SI	9.59224	2,343.05	0.801	9.66811	9.59423	9.51439
SN	3.39902	3,883.71	0.510	3.41103	3.37914	3.40690
SR	1.28860	800,399.82	0.495	1.28795	1.28257	1.29527
TI	8.04306	428,266.69	0.533	8.01068	8.02678	8.09172
TL	0.14480	63.32	1.807	0.14759	0.14443	0.14239
V	0.76652	9,995.58	0.737	0.76278	0.76375	0.77301
Y1	21657.04664	21,657.05	0.477	21587.49800	21775.64325	21607.99867
Y2A	426050.48012	426,050.48	0.415	427165.00994	426975.49603	424010.93439
Y2R	35290.96981	35,290.97	0.296	35188.13424	35288.06059	35396.71460
ZN	0.98118	11,712.29	0.591	0.98548	0.97459	0.98348
ZR	1.04303	2,856.72	0.422	1.04810	1.04069	1.04029

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/06/2013 21:40

Sample Number: **7257240** Class: M*** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.04839	675.31	1.201	0.04792	0.04904	0.04822
AL	168.13635	20,624.55	0.170	168.37324	168.21770	167.81812
AS	0.24324	91.39	1.654	0.23880	0.24427	0.24665
B	1.81833	14,225.22	0.275	1.81313	1.82309	1.81876
BA	2.79344	1,673,225.80	0.408	2.78309	2.79155	2.80567
BE	0.05356	21,436.13	0.519	0.05334	0.05346	0.05387
CA	70.69659	83,425.26	0.157	70.58618	70.69523	70.80837
CD	0.04866	1,098.21	0.141	0.04873	0.04860	0.04864
CO	0.54254	3,389.69	0.273	0.54237	0.54115	0.54410
CR	0.48255	4,436.35	0.302	0.48103	0.48394	0.48268
CU	0.51054	5,212.56	0.562	0.50793	0.51007	0.51361
FE	189.30131	69,700.08	0.282	188.81262	189.21932	189.87200
K	39.91367	13,571.50	0.205	39.85874	39.87438	40.00790
LI	1.15697	6,199.72	0.057	1.15760	1.15704	1.15628
MG	92.38820	197,042.60	0.162	92.22793	92.41129	92.52537
MN	2.40060	146,723.46	0.548	2.39077	2.39550	2.41554
MO	1.87171	8,058.28	0.335	1.86462	1.87656	1.87395
NA	19.01319	17,271.54	0.176	18.98418	19.00552	19.04988
NI	0.68419	2,471.72	0.309	0.68175	0.68525	0.68557
P	7.05305	3,562.72	0.283	7.03033	7.06090	7.06791
PB	0.25638	360.36	0.770	0.25423	0.25680	0.25811
S	3.22880	616.65	0.321	3.21718	3.23222	3.23701
SB	0.14723	117.79	1.801	0.14714	0.14992	0.14462
SE	0.14969	41.08	2.195	0.15342	0.14844	0.14721
SI	9.95383	2,437.81	0.177	9.95268	9.93682	9.97198
SN	3.45427	3,951.27	0.239	3.44501	3.46090	3.45691
SR	1.31713	821,164.89	1.099	1.30934	1.30823	1.33383
TI	7.60421	406,422.64	0.164	7.59159	7.60444	7.61660
TL	0.14617	64.88	1.133	0.14541	0.14806	0.14502
V	0.76744	10,042.23	0.667	0.76423	0.76475	0.77334
Y1	21681.28232	21,681.28	0.099	21705.22394	21674.89535	21663.72768
Y2A	427648.16656	427,648.17	0.634	428829.05898	429570.77535	424544.66534
Y2R	35387.02345	35,387.02	0.133	35438.62455	35375.75455	35346.69125
ZN	1.00979	12,063.91	0.320	1.00608	1.01133	1.01197
ZR	1.05621	2,900.68	0.209	1.05382	1.05818	1.05664

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/06/2013 21:44

Sample Number: **7257240** Class: UL** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00029	-48.56	200.942	-0.00094	-0.00005	0.00014
AL	20.43716	2,427.50	0.505	20.32439	20.45989	20.52721
AS	0.01943	3.97	14.914	0.02241	0.01924	0.01662
B	0.00355	193.59	10.728	0.00370	0.00383	0.00311
BA	0.09240	55,613.31	0.233	0.09222	0.09234	0.09264
BE	0.00148	23.43	1.290	0.00145	0.00148	0.00149
CA	13.04562	15,104.67	0.521	12.96788	13.07480	13.09419
CD	0.00053	64.69	2.435	0.00054	0.00052	0.00053
CO	0.01681	114.23	0.819	0.01683	0.01693	0.01666
CR	0.04612	417.91	0.739	0.04650	0.04599	0.04585
CU	0.04892	456.77	0.395	0.04893	0.04911	0.04872
FE	33.11587	12,608.46	0.610	32.90172	33.14255	33.30334
K	4.74475	1,544.45	0.229	4.75514	4.74569	4.73343
LI	0.03001	201.30	2.410	0.02991	0.03078	0.02935
MG	15.53695	33,368.03	0.219	15.51104	15.52425	15.57555
MN	0.38186	23,449.85	0.276	0.38065	0.38251	0.38243
MO	0.00315	14.68	6.487	0.00338	0.00306	0.00301
NA	1.85266	1,623.23	1.134	1.86519	1.82841	1.86439
NI	0.04243	164.54	0.539	0.04236	0.04225	0.04269
P	1.13534	575.30	0.135	1.13627	1.13356	1.13618
PB	0.02394	38.75	7.444	0.02190	0.02519	0.02473
S	0.40921	74.88	0.083	0.40939	0.40882	0.40942
SB	-0.00522	1.21	20.928	-0.00646	-0.00440	-0.00480
SE	0.00058	0.02	393.363	0.00248	-0.00195	0.00122
SI	0.47339	115.53	2.384	0.47864	0.46044	0.48110
SN	0.00360	6.86	12.459	0.00411	0.00325	0.00345
SR	0.06597	41,240.81	0.114	0.06589	0.06599	0.06604
TI	0.77298	41,496.06	0.286	0.77177	0.77164	0.77553
TL	0.00060	-6.87	168.363	0.00173	-0.00025	0.00034
V	0.03910	511.53	2.120	0.03843	0.03885	0.04003
Y1	21729.58315	21,729.58	0.115	21716.33482	21758.51333	21713.90129
Y2A	429441.84614	429,441.85	0.291	430470.74221	428048.43438	429806.36183
Y2R	34273.53020	34,273.53	0.475	34346.45991	34386.96043	34087.17026
ZN	0.09943	1,228.27	0.322	0.09910	0.09946	0.09973
ZR	0.01566	44.84	15.774	0.01298	0.01785	0.01616

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/06/2013 21:48

Sample Number: **7262886** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG		-0.00287	-66.90	21.696	-0.00317	-0.00215	-0.00328
AL		3.87481	454.35	0.500	3.85812	3.87028	3.89604
AS		-0.00120	-2.58	265.266	0.00176	-0.00456	-0.00080
B		0.05360	351.52	2.072	0.05482	0.05265	0.05332
BA		0.02317	12,106.48	1.133	0.02347	0.02305	0.02299
BE		0.00043	-354.88	2.657	0.00044	0.00043	0.00041
CA	k	0.00000	2,210,566.54	0.000	0.00000	0.00000	0.00000
CD		0.00159	21.59	5.419	0.00149	0.00162	0.00166
CO		0.00148	11.64	2.654	0.00143	0.00151	0.00149
CR		0.08338	671.30	2.318	0.08533	0.08335	0.08146
CU	k	0.05967	534.49	2.837	0.06162	0.05862	0.05876
FE		2.01576	749.67	1.080	1.99092	2.03157	2.02479
K		0.18815	40.05	5.633	0.19025	0.19755	0.17666
LI	k	0.25772	1,312.68	0.611	0.25935	0.25758	0.25622
MG		15.88893	32,925.76	0.357	15.84896	15.86394	15.95389
MN		0.10660	5,680.77	0.926	0.10774	0.10600	0.10606
MO		0.00516	20.32	3.615	0.00530	0.00495	0.00523
NA		0.25552	209.85	1.947	0.25963	0.24999	0.25695
NI		0.00439	26.16	8.242	0.00397	0.00461	0.00459
P	k	468.18432	205,925.08	0.243	466.93336	468.47001	469.14959
PB	k	0.00465	9.66	58.007	0.00155	0.00591	0.00649
S	k	0.98295	162.24	0.702	0.97824	0.97975	0.99087
SB		0.00440	5.54	5.535	0.00462	0.00443	0.00414
SE		-0.00627	-1.60	33.802	-0.00599	-0.00851	-0.00430
SI		2.67489	614.08	1.212	2.71176	2.65085	2.66207
SN		0.01489	17.20	3.229	0.01486	0.01538	0.01442
SR		1.06585	578,181.19	1.019	1.07425	1.06973	1.05358
TI		0.20758	9,661.97	1.595	0.21137	0.20524	0.20614
TL		0.00142	-4.76	7.015	0.00153	0.00135	0.00136
V		0.02625	290.68	3.109	0.02679	0.02664	0.02531
Y1		18889.61276	18,889.61	0.140	18909.36176	18899.80153	18859.67499
Y2A		372103.51226	372,103.51	0.927	368230.41750	373233.83035	374846.28893
Y2R		33075.73981	33,075.74	0.153	33132.88791	33057.82374	33036.50778
ZN	k	0.09299	965.80	0.402	0.09341	0.09284	0.09271
ZR		0.01054	30.14	12.888	0.00917	0.01056	0.01189

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/06/2013 21:52

Sample Number: **7262888** Class: **** Batch: 133095708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG		-0.00374	-76.54	11.819	-0.00330	-0.00374	-0.00419
AL		2.42598	288.45	0.705	2.41289	2.44534	2.41972
AS		0.00174	-1.45	117.622	0.00238	-0.00055	0.00340
B		0.06523	420.39	2.426	0.06438	0.06706	0.06426
BA		0.01760	9,128.84	0.455	0.01759	0.01769	0.01753
BE		0.00041	-358.92	6.307	0.00041	0.00038	0.00043
CA	k	0.00000	2,271,668.41	0.000	0.00000	0.00000	0.00000
CD		0.00149	19.49	5.942	0.00139	0.00156	0.00150
CO		0.00156	10.95	10.175	0.00173	0.00141	0.00155
CR		0.09268	740.53	1.328	0.09322	0.09355	0.09127
CU	k	0.06175	555.44	0.531	0.06144	0.06210	0.06172
FE		1.65828	615.05	0.477	1.65498	1.65255	1.66731
K		0.18626	39.26	31.489	0.11988	0.20778	0.23110
LI	k	0.27426	1,390.42	5.321	0.25815	0.28660	0.27804
MG		5.09481	10,585.49	0.392	5.09149	5.07668	5.11626
MN		0.09436	4,988.11	0.841	0.09360	0.09518	0.09430
MO		0.00565	22.00	2.123	0.00561	0.00555	0.00578
NA		0.24550	200.79	5.782	0.25676	0.22955	0.25018
NI		0.00381	24.23	9.906	0.00424	0.00352	0.00368
P	k	470.55640	205,789.31	0.152	470.36057	469.95729	471.35133
PB	k	0.00316	7.62	53.802	0.00459	0.00362	0.00128
S	k	0.82135	134.19	1.261	0.81965	0.81195	0.83245
SB		0.00642	6.79	25.541	0.00753	0.00719	0.00454
SE		-0.00700	-1.76	30.547	-0.00837	-0.00810	-0.00454
SI		1.69619	389.57	0.896	1.68007	1.71025	1.69825
SN		0.01356	15.79	8.976	0.01473	0.01230	0.01365
SR		1.02719	552,541.23	1.073	1.02513	1.03909	1.01733
TI		0.11979	5,533.25	1.166	0.11983	0.12117	0.11837
TL		0.00110	-4.74	66.796	0.00039	0.00185	0.00105
V		0.02239	244.00	1.410	0.02223	0.02275	0.02218
Y1		18781.99031	18,781.99	0.152	18779.56133	18811.62438	18754.78521
Y2A		368985.91783	368,985.92	0.609	369246.65341	366621.57058	371089.52949
Y2R		32985.15007	32,985.15	0.669	33204.74715	32987.43754	32763.26551
ZN	k	0.09121	941.92	0.536	0.09177	0.09096	0.09089
ZR		0.00791	23.30	20.573	0.00665	0.00733	0.00974

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/06/2013 21:57

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49553	6,441.31	0.226	0.49450	0.49537	0.49672
AL	24.15989	2,826.68	0.584	24.29178	24.17660	24.01128
AS	0.48710	201.07	0.149	0.48693	0.48647	0.48789
B	0.47491	3,520.16	0.233	0.47493	0.47379	0.47600
BA	0.50407	296,112.80	0.608	0.50122	0.50731	0.50367
BE	0.48792	196,173.32	0.285	0.48631	0.48878	0.48866
CA	24.13879	27,395.81	0.265	24.21190	24.09274	24.11175
CD	0.49380	7,584.57	0.032	0.49393	0.49363	0.49383
CO	0.49602	2,944.48	0.157	0.49513	0.49656	0.49637
CR	0.48904	4,454.08	0.485	0.48631	0.49052	0.49029
CU	0.50452	5,522.71	0.422	0.50225	0.50483	0.50648
FE	24.18290	9,098.20	0.364	24.28428	24.13951	24.12491
K	24.42646	7,912.29	0.152	24.44260	24.38403	24.45274
LI	0.50613	2,604.93	0.450	0.50648	0.50821	0.50369
MG	23.92881	50,387.25	0.318	24.01637	23.87810	23.89196
MN	0.49116	29,449.58	0.363	0.48945	0.49101	0.49301
MO	0.50767	2,140.72	0.064	0.50745	0.50752	0.50805
NA	23.82853	20,643.21	0.281	23.88833	23.75614	23.84111
NI	0.49717	1,771.85	0.080	0.49671	0.49745	0.49734
P	0.51684	257.47	0.272	0.51548	0.51674	0.51829
PB	0.49870	622.36	0.536	0.49760	0.49675	0.50174
S	24.85289	4,711.75	0.179	24.80294	24.86732	24.88842
SB	0.51297	355.54	0.333	0.51103	0.51423	0.51366
SE	0.49642	135.42	0.803	0.49353	0.50097	0.49477
SI	24.41970	5,691.80	0.289	24.43264	24.34363	24.48283
SN	0.49141	552.64	0.241	0.49209	0.49209	0.49004
SR	0.49590	303,151.27	0.407	0.49816	0.49427	0.49526
TI	0.50519	26,523.76	0.291	0.50352	0.50629	0.50575
TL	0.49208	305.88	0.314	0.49204	0.49056	0.49365
V	0.49666	6,380.96	0.366	0.49502	0.49862	0.49634
Y1	21227.53712	21,227.54	0.081	21247.13496	21220.45573	21215.02066
Y2A	419363.54098	419,363.54	0.224	420054.83764	419742.71040	418293.07488
Y2R	33745.08597	33,745.09	0.382	33597.77534	33799.90034	33837.58222
ZN	0.49813	5,765.68	0.082	0.49792	0.49860	0.49788
ZR	0.49548	1,299.28	0.272	0.49649	0.49395	0.49600

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/06/2013 22:01

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00034	-44.22	28.291	-0.00042	-0.00023	-0.00035
AL	-0.00618	12.33	241.888	-0.02234	0.00713	-0.00332
AS	0.00085	-1.97	214.327	-0.00105	0.00256	0.00103
B	0.00147	13.15	41.748	0.00179	0.00185	0.00076
BA	0.00002	47.22	179.361	0.00000	0.00006	0.00000
BE	0.00054	-361.98	4.499	0.00051	0.00056	0.00054
CA	0.10886	220.70	187.030	-0.00750	0.34396	-0.00987
CD	0.00000	-3.65	3266.446	-0.00013	0.00005	0.00009
CO	-0.00009	0.85	306.302	0.00020	-0.00014	-0.00031
CR	0.00030	-1.27	163.768	0.00054	-0.00027	0.00062
CU	0.00100	-35.87	73.841	0.00152	0.00016	0.00131
FE	-0.00118	-0.81	263.017	-0.00323	0.00240	-0.00272
K	-0.01021	-23.64	225.001	-0.02172	-0.02516	0.01624
LI	-0.00001	39.84	0723.132	0.00199	-0.00258	0.00056
MG	0.00032	1.22	852.173	-0.00048	0.00337	-0.00193
MN	0.00005	17.50	115.711	0.00005	0.00011	-0.00001
MO	0.00004	1.27	212.227	-0.00004	0.00003	0.00014
NA	0.01954	9.61	62.928	0.03245	0.01821	0.00796
NI	-0.00010	13.92	149.011	-0.00009	-0.00025	0.00004
P	0.00913	5.31	10.637	0.00964	0.00801	0.00975
PB	-0.00054	3.48	225.018	-0.00189	-0.00022	0.00048
S	-0.00487	-5.20	72.553	-0.00080	-0.00716	-0.00666
SB	0.00021	2.41	307.020	0.00093	0.00005	-0.00035
SE	-0.00034	-0.17	203.748	0.00040	-0.00046	-0.00096
SI	0.00436	4.52	40.558	0.00320	0.00640	0.00349
SN	-0.00047	2.18	58.203	-0.00033	-0.00079	-0.00030
SR	0.00004	-43.16	52.534	0.00003	0.00006	0.00002
TI	0.00008	14.42	180.699	-0.00004	0.00003	0.00023
TL	-0.00027	-5.66	435.777	0.00098	-0.00130	-0.00047
V	0.00035	-8.03	96.595	0.00029	0.00005	0.00071
Y1	21554.38788	21,554.39	0.303	21509.94540	21523.94347	21629.27476
Y2A	427967.02996	427,967.03	0.203	427449.73492	427482.90258	428968.45238
Y2R	33840.94605	33,840.95	0.350	33778.49023	33977.62133	33766.72658
ZN	-0.00114	9.86	10.178	-0.00125	-0.00115	-0.00102
ZR	-0.00080	1.08	233.297	0.00025	0.00030	-0.00297

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/06/2013 22:05

Sample Number: **7262890** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG		-0.00276	-64.16	20.149	-0.00212	-0.00304	-0.00312
AL		3.72214	429.77	0.865	3.70188	3.70528	3.75925
AS		-0.00301	-3.27	103.462	0.00014	-0.00609	-0.00309
B		0.04923	320.69	1.700	0.04844	0.05011	0.04914
BA		0.02051	10,479.15	0.454	0.02040	0.02057	0.02055
BE		0.00047	-330.99	2.179	0.00046	0.00048	0.00048
CA	k	0.00000	2,235,116.68	0.000	0.00000	0.00000	0.00000
CD		0.00043	7.26	25.818	0.00032	0.00054	0.00043
CO		0.00146	11.60	40.216	0.00205	0.00145	0.00088
CR		0.07239	569.05	0.939	0.07194	0.07317	0.07205
CU	k	0.06123	536.36	0.787	0.06167	0.06131	0.06071
FE		3.00922	1,100.39	0.742	2.98394	3.01758	3.02615
K		0.12152	18.52	24.287	0.12592	0.14858	0.09005
LI	k	0.26174	1,310.51	1.018	0.25914	0.26447	0.26160
MG		4.38686	8,991.92	0.188	4.38701	4.37856	4.39501
MN		0.09282	4,837.26	0.391	0.09241	0.09311	0.09293
MO		0.00698	26.77	1.869	0.00691	0.00713	0.00690
NA		0.21494	172.48	2.350	0.21279	0.21133	0.22071
NI		0.00906	40.25	0.788	0.00898	0.00908	0.00912
P	k	473.17506	205,406.97	0.091	473.19184	473.59795	472.73539
PB	k	0.00256	7.21	10.618	0.00233	0.00250	0.00286
S	k	0.95914	156.15	0.098	0.95815	0.96002	0.95924
SB		0.00481	5.67	75.893	0.00109	0.00839	0.00497
SE		-0.00298	-0.79	125.081	-0.00342	-0.00646	0.00095
SI		2.66121	600.86	1.492	2.68740	2.68073	2.61552
SN		0.01479	16.88	11.452	0.01557	0.01285	0.01595
SR		1.02072	541,288.48	0.497	1.01763	1.02657	1.01796
TI		0.22731	10,342.52	0.390	0.22674	0.22833	0.22685
TL		-0.00011	-5.82	1646.164	0.00191	-0.00051	-0.00174
V		0.03467	378.66	1.776	0.03463	0.03407	0.03530
Y1		18643.31903	18,643.32	0.071	18628.22000	18648.91109	18652.82601
Y2A		363749.47477	363,749.47	0.315	365062.35060	362945.32803	363240.74567
Y2R		32529.20123	32,529.20	0.231	32600.64831	32450.72956	32536.22581
ZN	k	0.07761	800.58	0.512	0.07806	0.07746	0.07731
ZR		0.01259	34.81	15.814	0.01163	0.01126	0.01488

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/06/2013 22:09

Sample Number: **7257236** Class: **** Batch: 133095708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00071	-59.84	150.109	-0.00177	0.00037	-0.00074
AL	115.48041	13,499.47	0.244	115.74372	115.18370	115.51380
AS	0.05997	16.18	1.087	0.05935	0.06065	0.05989
B	0.05716	896.82	0.968	0.05741	0.05652	0.05754
BA	2.75852	1,564,894.87	0.109	2.75541	2.76143	2.75870
BE	0.00483	1,328.61	1.026	0.00482	0.00479	0.00489
CA	308.31833	335,938.10	0.415	306.96709	309.50819	308.47971
CD	0.00092	194.12	4.421	0.00087	0.00092	0.00095
CO	0.03841	263.50	0.271	0.03829	0.03848	0.03847
CR	0.18776	1,624.01	0.292	0.18737	0.18752	0.18839
CU	0.12450	1,188.66	0.510	0.12514	0.12449	0.12387
FE	106.09440	38,635.82	0.298	106.45772	105.94710	105.87839
K	17.24558	5,586.31	0.169	17.21192	17.26136	17.26347
LI	0.10480	736.86	1.485	0.10658	0.10370	0.10412
MG	51.15448	106,368.64	0.015	51.14651	51.16181	51.15513
MN	1.74492	101,009.88	0.511	1.75040	1.73464	1.74973
MO	0.00356	15.73	7.000	0.00370	0.00327	0.00371
NA	2.22733	1,924.99	0.735	2.24616	2.21643	2.21940
NI	0.11291	393.66	0.397	0.11307	0.11327	0.11241
P	3.35278	1,622.01	0.237	3.34517	3.36101	3.35216
PB	0.07135	116.94	2.044	0.07219	0.07219	0.06967
S	2.57491	474.04	0.360	2.56756	2.58533	2.57182
SB	-0.00633	6.25	52.603	-0.01012	-0.00391	-0.00495
SE	-0.00087	-0.70	217.410	0.00001	0.00042	-0.00303
SI	14.58069	3,403.06	0.723	14.69185	14.56805	14.48216
SN	0.01689	21.10	3.607	0.01621	0.01706	0.01739
SR	0.73583	434,467.75	0.517	0.73686	0.73900	0.73161
TI	2.91904	147,762.58	0.304	2.91970	2.90986	2.92757
TL	0.00406	-11.91	69.622	0.00338	0.00163	0.00716
V	0.25999	3,255.49	0.771	0.26076	0.25771	0.26149
Y1	20763.87153	20,763.87	0.112	20787.06219	20763.88441	20740.66800
Y2A	405016.69980	405,016.70	0.280	404279.25779	406320.17893	404450.66269
Y2R	33781.42153	33,781.42	0.387	33724.08074	33689.32854	33930.85532
ZN	0.27111	3,180.61	0.276	0.27025	0.27156	0.27152
ZR	0.06568	175.16	0.970	0.06634	0.06507	0.06561

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/06/2013 22:13

Sample Number: **7257237** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00041	-59.70	59.544	-0.00054	-0.00013	-0.00057
AL	141.05112	16,706.13	0.961	139.50142	141.64013	142.01182
AS	0.04974	9.70	5.574	0.04750	0.04886	0.05284
B	0.02336	845.47	8.985	0.02476	0.02436	0.02094
BA	2.04984	1,156,707.38	1.909	2.03121	2.09481	2.02350
BE	0.00653	1,979.60	1.276	0.00646	0.00662	0.00652
CA	333.29794	366,445.86	0.368	332.21765	333.04689	334.62927
CD	0.00128	269.71	7.617	0.00134	0.00117	0.00133
CO	0.05535	363.46	0.797	0.05572	0.05486	0.05546
CR	0.24199	2,080.82	1.627	0.24035	0.24648	0.23914
CU	0.17937	1,768.17	1.520	0.17766	0.18252	0.17793
FE	145.84756	52,886.09	0.855	144.42258	146.38558	146.73453
K	27.92889	9,173.35	0.877	27.64619	28.07908	28.06140
LI	0.17657	1,126.76	1.308	0.17480	0.17573	0.17918
MG	70.81237	147,613.33	0.839	70.13892	71.26160	71.03659
MN	3.74663	215,720.60	1.931	3.72042	3.82845	3.69103
MO	0.00437	19.15	9.326	0.00391	0.00452	0.00468
NA	2.10420	1,841.03	0.999	2.08105	2.12212	2.10942
NI	0.15326	531.67	0.188	0.15327	0.15354	0.15296
P	3.63681	1,767.67	0.092	3.64060	3.63430	3.63554
PB	0.09709	153.78	1.553	0.09535	0.09796	0.09796
S	38.23259	7,126.55	0.102	38.25973	38.18813	38.24992
SB	-0.01228	5.23	11.318	-0.01068	-0.01319	-0.01296
SE	0.00306	0.26	106.022	0.00250	0.00655	0.00013
SI	9.20523	2,176.82	1.035	9.14493	9.31505	9.15570
SN	0.01970	24.29	1.921	0.01999	0.01927	0.01984
SR	1.58883	933,248.84	1.634	1.57601	1.61870	1.57177
TI	2.93128	147,594.74	2.010	2.90511	2.99875	2.88998
TL	0.00399	-11.24	37.962	0.00491	0.00224	0.00480
V	0.27690	3,452.13	1.965	0.27427	0.28316	0.27329
Y1	20860.71951	20,860.72	0.194	20813.95138	20886.31621	20881.89094
Y2A	402968.68787	402,968.69	1.932	406536.05036	394040.75547	408329.25779
Y2R	34206.88014	34,206.88	0.402	34365.30714	34134.11271	34121.22058
ZN	0.36418	4,288.98	0.237	0.36517	0.36374	0.36362
ZR	0.10138	272.02	2.552	0.10012	0.10435	0.09966

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/06/2013 22:18

Sample Number: **7257239** Class: **** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00088	-57.72	51.811	0.00062	0.00061	0.00140
AL	97.63551	11,709.70	0.166	97.75022	97.70571	97.45060
AS	0.13357	42.68	1.187	0.13397	0.13492	0.13182
B	0.00952	1,003.18	10.767	0.01069	0.00906	0.00881
BA	0.47465	280,251.51	0.703	0.47486	0.47120	0.47787
BE	0.00582	1,781.18	0.719	0.00586	0.00580	0.00578
CA	88.69551	102,276.74	0.142	88.55234	88.74622	88.78796
CD	0.00234	372.22	5.346	0.00220	0.00242	0.00240
CO	0.07304	483.01	0.298	0.07317	0.07278	0.07315
CR	0.29704	2,669.97	0.530	0.29805	0.29522	0.29784
CU	0.19494	1,912.68	0.261	0.19528	0.19518	0.19435
FE	190.45416	68,672.82	0.136	190.22371	190.40403	190.73475
K	21.76249	7,240.69	0.230	21.80543	21.70756	21.77448
LI	0.12850	756.15	0.903	0.12807	0.12760	0.12981
MG	84.28016	176,855.37	0.164	84.30083	84.40647	84.13317
MN	1.87369	112,877.60	0.702	1.88744	1.86123	1.87241
MO	0.01268	54.86	0.938	0.01254	0.01277	0.01272
NA	15.29801	13,614.52	0.560	15.29481	15.38530	15.21391
NI	0.24798	877.35	0.387	0.24869	0.24689	0.24837
P	5.46590	2,720.70	0.231	5.46067	5.45674	5.48028
PB	0.11000	159.96	1.854	0.10904	0.11234	0.10861
S	6.70861	1,275.68	0.134	6.69829	6.71432	6.71324
SB	-0.01540	6.47	10.828	-0.01622	-0.01650	-0.01348
SE	-0.00231	-1.05	114.420	-0.00536	-0.00095	-0.00062
SI	3.71250	892.03	0.533	3.72930	3.71753	3.69066
SN	0.01812	23.10	0.713	0.01823	0.01815	0.01798
SR	0.38559	236,906.58	0.406	0.38739	0.38454	0.38485
TI	3.30670	174,197.01	0.758	3.33388	3.28454	3.30167
TL	0.00852	-7.34	17.290	0.00960	0.00684	0.00912
V	0.18043	2,364.38	0.157	0.18069	0.18013	0.18046
Y1	21367.62179	21,367.62	0.105	21386.44461	21373.57600	21342.84477
Y2A	421509.45438	421,509.45	0.653	419259.84095	424576.67329	420691.84891
Y2R	34671.78105	34,671.78	0.414	34746.39083	34762.68985	34506.26247
ZN	0.47402	5,714.36	0.230	0.47277	0.47477	0.47452
ZR	0.06866	187.81	1.094	0.06871	0.06939	0.06789

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/06/2013 22:22

Sample Number: **7257243** Class: **** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00101	-43.51	63.159	0.00035	0.00105	0.00162
AL	43.70210	5,093.71	0.729	43.35126	43.78198	43.97307
AS	0.05269	12.31	1.779	0.05165	0.05348	0.05295
B	0.01115	625.91	4.530	0.01119	0.01062	0.01163
BA	0.75349	426,571.11	0.489	0.75324	0.74994	0.75730
BE	0.00226	324.35	1.632	0.00226	0.00221	0.00229
CA	295.38290	321,670.00	0.685	293.06319	296.30067	296.78483
CD	0.00145	215.44	3.238	0.00141	0.00150	0.00145
CO	0.04230	279.51	0.319	0.04220	0.04225	0.04245
CR	0.14498	1,241.48	1.226	0.14327	0.14487	0.14681
CU	0.13338	1,276.85	0.642	0.13286	0.13291	0.13437
FE	116.47044	42,131.21	0.986	115.21770	116.72016	117.47345
K	5.24787	1,681.92	0.218	5.25076	5.25759	5.23527
LI	0.06752	540.37	3.096	0.06657	0.06992	0.06607
MG	132.45693	263,486.33	0.412	131.84187	132.64703	132.88187
MN	2.48142	143,333.26	0.781	2.46033	2.48548	2.49846
MO	0.00560	23.60	4.557	0.00534	0.00560	0.00585
NA	3.61705	3,123.33	1.198	3.57954	3.60714	3.66446
NI	0.11092	377.43	0.435	0.11041	0.11097	0.11137
P	4.35451	2,061.32	0.183	4.35344	4.34711	4.36298
PB	0.03340	50.71	8.636	0.03014	0.03444	0.03562
S	1.26636	226.23	0.596	1.26315	1.26096	1.27498
SB	-0.00638	6.20	37.168	-0.00373	-0.00830	-0.00709
SE	0.00318	0.62	27.132	0.00370	0.00365	0.00218
SI	6.99158	1,629.83	0.478	6.95924	7.02595	6.98955
SN	0.01627	19.99	3.134	0.01623	0.01681	0.01579
SR	0.30420	179,192.69	0.591	0.30224	0.30459	0.30577
TI	2.89586	146,276.53	0.810	2.87154	2.89766	2.91838
TL	0.00270	-10.12	71.522	0.00064	0.00447	0.00298
V	0.18621	2,330.51	0.753	0.18474	0.18635	0.18754
Y1	20320.06755	20,320.07	0.236	20329.04150	20362.86457	20268.29658
Y2A	404161.39828	404,161.40	0.442	405734.02916	404530.11928	402220.04639
Y2R	33703.16373	33,703.16	0.563	33920.44955	33569.11735	33619.92429
ZN	0.18025	2,133.55	0.219	0.17990	0.18019	0.18068
ZR	0.03257	88.27	5.364	0.03355	0.03361	0.03055

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/06/2013 22:26

Sample Number: **7257244** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00048	-55.87	58.741	-0.00080	-0.00039	-0.00025
AL	70.78863	8,360.76	0.574	71.25382	70.60730	70.50476
AS	0.02955	3.95	1.910	0.03018	0.02934	0.02911
B	0.02888	686.35	1.334	0.02924	0.02848	0.02893
BA	1.07231	616,252.80	0.560	1.07489	1.06544	1.07660
BE	0.00409	1,052.49	0.551	0.00409	0.00411	0.00406
CA	324.49613	356,702.00	0.544	325.78571	325.21787	322.48482
CD	0.00105	186.14	6.350	0.00106	0.00111	0.00098
CO	0.04049	264.77	0.091	0.04053	0.04048	0.04046
CR	0.15618	1,364.41	0.391	0.15648	0.15548	0.15658
CU	0.10135	999.73	0.607	0.10142	0.10070	0.10193
FE	101.07493	37,296.74	0.409	101.53348	100.95969	100.73163
K	17.42974	5,709.16	0.378	17.50507	17.40172	17.38243
LI	0.07802	617.33	5.153	0.08211	0.07408	0.07787
MG	88.67766	182,911.93	0.194	88.87004	88.53726	88.62567
MN	2.06998	121,382.39	0.496	2.08161	2.06612	2.06220
MO	0.00240	10.88	4.776	0.00230	0.00238	0.00253
NA	4.58830	4,017.63	0.434	4.59512	4.60393	4.56586
NI	0.11068	383.83	0.478	0.11127	0.11053	0.11024
P	3.85793	1,853.59	0.162	3.85245	3.86472	3.85662
PB	0.05625	86.46	2.646	0.05570	0.05793	0.05511
S	2.35004	429.64	0.093	2.35198	2.35046	2.34768
SB	-0.00566	6.00	26.634	-0.00481	-0.00739	-0.00476
SE	0.00134	0.04	94.480	0.00273	0.00102	0.00026
SI	9.71528	2,294.00	0.791	9.77229	9.62785	9.74570
SN	0.01577	19.74	0.471	0.01572	0.01573	0.01585
SR	0.52823	315,927.80	0.563	0.53064	0.52490	0.52914
TI	2.26144	115,966.09	0.474	2.26008	2.27277	2.25145
TL	0.00308	-8.80	29.083	0.00334	0.00209	0.00383
V	0.15912	2,019.22	0.507	0.15973	0.15941	0.15820
Y1	20623.83034	20,623.83	0.260	20676.55807	20569.51753	20625.41542
Y2A	410286.11663	410,286.12	0.419	408490.42412	410455.99735	411911.92843
Y2R	34158.32397	34,158.32	0.110	34123.66899	34152.89133	34198.41159
ZN	0.22666	2,660.41	0.164	0.22631	0.22661	0.22705
ZR	0.07392	198.94	0.710	0.07336	0.07399	0.07440

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/06/2013 22:30

Sample Number: **7263052** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00076	-33.93	64.419	0.00123	0.00025	0.00081
AL	25.76261	3,093.15	0.438	25.79523	25.63718	25.85541
AS	0.01231	1.69	5.374	0.01227	0.01298	0.01166
B	0.00289	129.57	13.698	0.00254	0.00281	0.00332
BA	0.94607	575,490.09	1.014	0.95195	0.95125	0.93500
BE	0.00151	38.30	0.760	0.00151	0.00152	0.00150
CA	4.55109	5,401.84	0.355	4.56701	4.53471	4.55156
CD	0.00148	58.53	6.848	0.00151	0.00156	0.00136
CO	0.00601	50.84	3.413	0.00612	0.00577	0.00613
CR	0.03307	302.63	0.929	0.03341	0.03297	0.03282
CU	0.15107	1,630.46	0.857	0.15142	0.15215	0.14964
FE	20.94338	8,107.81	0.326	20.99783	20.86674	20.96558
K	1.24367	394.24	1.199	1.23791	1.23250	1.26060
LI	0.02238	159.39	14.311	0.01870	0.02451	0.02393
MG	3.35809	7,341.72	0.168	3.36416	3.35710	3.35301
MN	0.18364	11,411.49	0.971	0.18409	0.18515	0.18167
MO	0.00185	9.25	6.759	0.00179	0.00176	0.00199
NA	0.23259	199.64	9.921	0.20934	0.25549	0.23294
NI	0.02272	96.33	0.970	0.02287	0.02247	0.02283
P	1.78573	922.78	0.155	1.78657	1.78264	1.78799
PB	0.58675	764.55	0.236	0.58519	0.58786	0.58719
S	5.84210	1,153.11	0.130	5.84521	5.84763	5.83347
SB	-0.00208	2.55	25.547	-0.00210	-0.00153	-0.00259
SE	0.00147	0.25	39.848	0.00207	0.00089	0.00146
SI	1.22055	295.73	1.026	1.20661	1.23084	1.22420
SN	0.03018	38.06	1.791	0.03071	0.03020	0.02963
SR	0.02444	15,406.18	0.928	0.02448	0.02464	0.02419
TI	0.84807	46,037.65	1.246	0.85067	0.85710	0.83645
TL	0.00166	-6.59	62.640	0.00172	0.00266	0.00059
V	0.04065	537.11	1.281	0.04112	0.04073	0.04009
Y1	22165.15175	22,165.15	0.206	22114.01092	22201.95867	22179.48568
Y2A	434303.15629	434,303.16	1.061	431203.99734	432108.66089	439596.81063
Y2R	34678.00480	34,678.00	0.426	34553.97648	34841.39066	34638.64725
ZN	0.85284	10,204.31	0.218	0.85445	0.85081	0.85328
ZR	0.00256	10.16	43.443	0.00193	0.00385	0.00191

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/06/2013 22:34

Sample Number: **7263053** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00008	-49.87	474.989	0.00050	-0.00022	-0.00004
AL	39.63171	4,735.70	0.336	39.78034	39.59120	39.52359
AS	0.02981	6.73	6.849	0.02757	0.03029	0.03157
B	0.00634	357.48	7.944	0.00672	0.00654	0.00577
BA	0.56660	341,119.99	1.530	0.57648	0.56304	0.56028
BE	0.00261	493.75	0.762	0.00264	0.00260	0.00260
CA	20.98935	24,411.37	0.686	21.13424	20.98740	20.84639
CD	0.00206	141.61	5.269	0.00212	0.00193	0.00213
CO	0.01488	120.39	0.453	0.01494	0.01490	0.01480
CR	0.07857	713.97	0.685	0.07914	0.07807	0.07848
CU	0.20870	2,194.25	1.401	0.21171	0.20852	0.20587
FE	61.78972	23,438.91	0.438	62.03651	61.83245	61.50020
K	3.74774	1,225.30	0.933	3.78595	3.73991	3.71734
LI	0.04020	259.92	4.790	0.04049	0.04197	0.03815
MG	10.66620	23,147.22	0.383	10.70509	10.66983	10.62368
MN	0.51469	31,628.51	1.035	0.52000	0.51474	0.50934
MO	0.00420	19.34	0.453	0.00421	0.00418	0.00421
NA	1.05687	930.21	1.445	1.06547	1.03924	1.06590
NI	0.06704	252.32	0.604	0.06739	0.06713	0.06660
P	2.06202	1,051.80	0.240	2.05715	2.06186	2.06705
PB	1.46201	1,867.11	0.076	1.46134	1.46140	1.46328
S	4.93056	959.56	0.136	4.92353	4.93127	4.93689
SB	-0.00203	5.59	111.972	-0.00397	-0.00258	0.00047
SE	0.00236	0.45	140.418	0.00174	-0.00060	0.00594
SI	5.71747	1,366.92	0.401	5.73526	5.72559	5.69156
SN	0.03355	41.45	2.542	0.03273	0.03348	0.03443
SR	0.05776	36,128.42	1.065	0.05834	0.05782	0.05711
TI	1.96901	105,774.89	1.074	1.99252	1.96301	1.95151
TL	0.00217	-9.56	83.466	0.00391	0.00231	0.00029
V	0.12081	1,602.43	1.044	0.12221	0.11978	0.12043
Y1	21879.58998	21,879.59	0.120	21890.11254	21898.93664	21849.72076
Y2A	429832.20418	429,832.20	0.968	425114.45106	431393.47102	432988.69048
Y2R	34548.91303	34,548.91	0.601	34339.25364	34552.78110	34754.70435
ZN	1.47993	17,495.23	0.103	1.47861	1.47958	1.48161
ZR	0.01210	35.64	1.554	0.01228	0.01191	0.01210

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/06/2013 22:38

Sample Number: **7263054** Class: **** Batch: 133095708002

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00034	-50.24	137.065	-0.00044	0.00017	-0.00074
AL	55.09664	6,761.61	0.455	55.16478	55.30624	54.81891
AS	0.01680	3.47	5.955	0.01632	0.01613	0.01795
B	0.01130	217.85	10.469	0.01254	0.01120	0.01018
BA	0.38969	242,870.12	2.158	0.39636	0.39247	0.38024
BE	0.00486	1,470.23	1.430	0.00493	0.00485	0.00479
CA	31.69187	37,764.10	0.197	31.72811	31.72756	31.61994
CD	0.00279	88.23	3.848	0.00286	0.00266	0.00284
CO	0.00663	53.69	3.781	0.00645	0.00692	0.00653
CR	0.12417	1,191.20	2.085	0.12539	0.12591	0.12119
CU	0.08901	956.63	2.540	0.09113	0.08927	0.08663
FE	25.05795	9,912.94	0.316	25.11643	25.08972	24.96769
K	1.09610	353.15	3.187	1.05600	1.11237	1.11993
LI	0.04293	287.66	4.730	0.04522	0.04223	0.04135
MG	5.52072	12,340.76	0.172	5.52565	5.52671	5.50980
MN	0.39074	24,859.14	1.831	0.39647	0.39301	0.38272
MO	0.00216	10.77	5.152	0.00219	0.00204	0.00226
NA	0.28730	254.20	5.051	0.27363	0.30253	0.28576
NI	0.03535	144.41	0.713	0.03552	0.03546	0.03506
P	4.44874	2,327.05	0.104	4.45121	4.45159	4.44343
PB	0.36953	500.04	0.100	0.36995	0.36931	0.36932
S	7.96329	1,594.06	0.165	7.95948	7.95245	7.97793
SB	-0.00378	2.67	67.227	-0.00419	-0.00610	-0.00106
SE	0.00496	1.15	145.407	0.01057	-0.00318	0.00749
SI	2.63039	648.09	1.168	2.64203	2.65358	2.59555
SN	0.01950	25.92	3.521	0.01974	0.02004	0.01873
SR	0.14192	91,991.14	1.909	0.14406	0.14282	0.13887
TI	0.72058	40,077.44	1.982	0.73220	0.72489	0.70463
TL	0.00347	-5.75	12.442	0.00305	0.00391	0.00345
V	0.06334	861.07	3.022	0.06525	0.06333	0.06143
Y1	22455.06141	22,455.06	0.030	22447.36554	22458.19466	22459.62403
Y2A	445034.88459	445,034.88	2.153	436995.91362	442473.80000	455634.94016
Y2R	35495.19350	35,495.19	0.356	35382.26031	35631.85178	35471.46842
ZN	0.58458	7,108.43	0.085	0.58416	0.58512	0.58445
ZR	0.00817	25.81	10.948	0.00885	0.00850	0.00716

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/06/2013 22:42

Sample Number: **7263055** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00038	-43.87	147.682	0.00103	0.00009	0.00002
AL	26.48677	3,218.40	0.095	26.50965	26.49070	26.45995
AS	0.02000	3.58	11.905	0.02004	0.02237	0.01761
B	0.01879	371.58	1.949	0.01841	0.01914	0.01882
BA	0.33569	205,996.48	0.236	0.33532	0.33660	0.33516
BE	0.00356	900.41	0.204	0.00355	0.00356	0.00356
CA	25.38326	29,952.63	0.482	25.51970	25.28314	25.34695
CD	0.00335	132.98	2.762	0.00327	0.00332	0.00345
CO	0.00571	44.55	5.099	0.00600	0.00570	0.00542
CR	0.03580	324.56	0.438	0.03565	0.03578	0.03596
CU	0.10023	1,078.80	0.213	0.10038	0.10032	0.09999
FE	44.90025	17,422.70	0.532	45.17470	44.73724	44.78881
K	0.82501	257.61	3.475	0.80417	0.85771	0.81315
LI	0.02133	167.57	1.810	0.02134	0.02094	0.02171
MG	3.31342	7,331.86	0.206	3.31937	3.30594	3.31495
MN	0.98755	61,835.45	0.374	0.98420	0.99151	0.98695
MO	0.00300	14.33	2.784	0.00296	0.00309	0.00294
NA	0.26572	231.87	3.739	0.26999	0.27281	0.25437
NI	0.02917	117.74	1.095	0.02881	0.02928	0.02942
P	4.05741	2,098.94	0.191	4.06346	4.06012	4.04865
PB	0.41093	539.00	0.281	0.41069	0.41218	0.40991
S	9.11617	1,805.14	0.120	9.12504	9.11950	9.10396
SB	-0.00173	4.33	70.248	-0.00040	-0.00202	-0.00277
SE	0.01055	2.84	28.731	0.01228	0.00705	0.01232
SI	1.92661	470.34	0.840	1.92865	1.90950	1.94168
SN	0.02273	29.40	1.567	0.02291	0.02232	0.02295
SR	0.12150	77,532.26	0.442	0.12090	0.12193	0.12168
TI	0.53413	29,250.91	0.412	0.53264	0.53666	0.53308
TL	0.00203	-6.29	80.524	0.00391	0.00100	0.00117
V	0.07056	946.62	0.361	0.07065	0.07077	0.07028
Y1	22206.05307	22,206.05	0.182	22178.40453	22252.47783	22187.27685
Y2A	438040.38308	438,040.38	0.102	438522.02658	437644.90340	437954.21927
Y2R	35097.44898	35,097.45	0.166	35031.99241	35144.14289	35116.21164
ZN	0.41967	5,088.71	0.163	0.42028	0.41980	0.41893
ZR	0.00640	20.71	6.257	0.00640	0.00600	0.00680

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/06/2013 22:46

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50090	6,438.80	1.099	0.50538	0.50256	0.49476
AL	24.34735	2,813.98	0.742	24.20058	24.29233	24.54914
AS	0.48897	200.68	0.704	0.48856	0.49261	0.48575
B	0.47833	3,506.12	1.190	0.48307	0.47989	0.47202
BA	0.51062	296,599.58	1.054	0.51666	0.50886	0.50634
BE	0.49386	196,338.00	1.485	0.49974	0.49620	0.48565
CA	24.43208	27,389.85	0.697	24.29268	24.38152	24.62202
CD	0.49777	7,601.87	0.117	0.49797	0.49822	0.49712
CO	0.49697	2,933.28	0.137	0.49749	0.49723	0.49620
CR	0.49435	4,451.98	1.151	0.49809	0.49716	0.48780
CU	0.50695	5,487.26	1.180	0.51298	0.50686	0.50102
FE	24.44095	9,082.65	0.944	24.25252	24.37201	24.69831
K	24.57173	7,862.97	0.286	24.58971	24.49424	24.63123
LI	0.50992	2,592.42	0.641	0.50659	0.51313	0.51005
MG	24.15869	50,248.48	0.564	24.11208	24.05184	24.31215
MN	0.49441	29,311.00	1.485	0.50074	0.49613	0.48636
MO	0.51071	2,141.18	0.303	0.51197	0.51118	0.50899
NA	23.90696	20,460.13	0.249	23.89165	23.85661	23.97260
NI	0.49940	1,769.52	0.143	0.49988	0.49974	0.49858
P	0.50473	250.04	0.209	0.50574	0.50480	0.50364
PB	0.50404	625.36	0.736	0.50277	0.50821	0.50113
S	25.06592	4,724.92	0.207	25.07820	25.11063	25.00893
SB	0.51444	354.55	0.585	0.51666	0.51563	0.51101
SE	0.49715	134.83	0.988	0.49813	0.50149	0.49182
SI	24.48822	5,638.44	0.712	24.35723	24.42136	24.68606
SN	0.49545	553.97	0.113	0.49486	0.49598	0.49551
SR	0.49523	299,347.02	1.065	0.49808	0.49846	0.48914
TI	0.50904	26,425.69	1.306	0.51461	0.51083	0.50167
TL	0.49785	307.67	0.556	0.49924	0.49964	0.49466
V	0.50458	6,410.32	1.345	0.51030	0.50637	0.49708
Y1	21105.80307	21,105.80	0.184	21085.49137	21081.37784	21150.53998
Y2A	414693.23777	414,693.24	1.171	410708.84692	413266.66667	420104.19974
Y2R	33336.16417	33,336.16	0.593	33492.83719	33401.37532	33114.28000
ZN	0.49978	5,751.71	0.210	0.50056	0.50019	0.49859
ZR	0.50394	1,305.37	0.379	0.50256	0.50313	0.50612

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 35

Date/Time: 11/06/2013 22:50

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-36.78	213.829	0.00036	0.00045	-0.00026
AL	-0.01166	11.46	84.063	-0.00449	-0.00765	-0.02282
AS	0.00059	-2.08	179.273	-0.00006	0.00181	0.00002
B	0.00117	10.80	52.768	0.00049	0.00132	0.00169
BA	0.00003	54.40	170.113	-0.00003	0.00005	0.00007
BE	0.00056	-348.82	2.929	0.00055	0.00058	0.00055
CA	-0.00971	83.63	2.845	-0.01003	-0.00956	-0.00954
CD	-0.00004	-4.29	147.997	0.00001	-0.00010	-0.00002
CO	-0.00009	0.81	178.400	-0.00022	-0.00015	0.00009
CR	0.00015	-2.62	250.080	0.00049	0.00022	-0.00026
CU	0.00186	-25.77	26.240	0.00206	0.00221	0.00130
FE	-0.00296	-1.46	47.080	-0.00251	-0.00184	-0.00451
K	-0.04659	-34.79	73.673	-0.01439	-0.08271	-0.04267
LI	-0.00001	39.02	1097.779	0.00111	0.00227	-0.00342
MG	-0.00152	-2.68	18.264	-0.00122	-0.00176	-0.00158
MN	0.00009	19.92	38.917	0.00012	0.00010	0.00005
MO	0.00008	1.42	255.387	0.00005	0.00029	-0.00010
NA	-0.00212	-9.03	1291.678	0.02342	-0.03113	0.00134
NI	-0.00086	11.18	42.826	-0.00085	-0.00050	-0.00124
P	0.00227	1.87	36.198	0.00226	0.00146	0.00310
PB	-0.00060	3.41	181.694	0.00061	-0.00092	-0.00148
S	0.00010	-4.24	5206.535	-0.00393	-0.00261	0.00683
SB	-0.00075	1.75	77.058	-0.00135	-0.00020	-0.00070
SE	0.00068	0.12	575.708	0.00516	-0.00084	-0.00226
SI	0.00034	3.51	1997.649	-0.00186	0.00792	-0.00504
SN	-0.00057	2.07	16.920	-0.00051	-0.00052	-0.00068
SR	0.00001	-61.18	50.808	0.00001	0.00000	0.00001
TI	0.00009	14.98	149.480	0.00012	0.00020	-0.00006
TL	0.00051	-5.14	90.990	0.00096	0.00051	0.00004
V	-0.00006	-13.25	289.895	0.00001	0.00007	-0.00027
Y1	21566.86233	21,566.86	0.175	21553.83939	21609.49873	21537.24887
Y2A	422142.29070	422,142.29	0.820	420825.28164	426070.90789	419530.68257
Y2R	33194.99483	33,194.99	0.085	33219.61431	33164.14192	33201.22828
ZN	-0.00112	10.03	10.689	-0.00113	-0.00124	-0.00100
ZR	-0.00053	1.77	255.834	0.00067	-0.00199	-0.00026

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/06/2013 22:54

Sample Number: **7264009** Class: **** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-63.34	511.847	-0.00044	0.00050	-0.00036
AL	56.48454	6,702.29	0.717	56.58929	56.82702	56.03731
AS	0.03288	2.45	12.348	0.03744	0.02966	0.03155
B	0.07338	1,280.06	2.425	0.07305	0.07179	0.07530
BA	0.73661	437,007.14	0.551	0.73932	0.73194	0.73856
BE	0.00636	2,010.59	0.271	0.00637	0.00636	0.00634
CA	39.38643	45,305.92	0.657	39.57640	39.49139	39.09150
CD	0.00281	313.52	3.377	0.00274	0.00277	0.00291
CO	0.02629	172.50	1.926	0.02676	0.02635	0.02575
CR	0.03690	294.88	2.057	0.03756	0.03706	0.03607
CU	0.07592	732.23	2.350	0.07780	0.07425	0.07570
FE	151.77842	55,077.02	0.792	152.49395	152.45100	150.39030
K	12.13630	3,987.61	0.382	12.18780	12.12310	12.09800
LI	0.07448	444.16	1.042	0.07517	0.07364	0.07463
MG	18.29674	39,292.49	0.231	18.30730	18.33271	18.25022
MN	0.99391	60,172.93	0.309	0.99745	0.99199	0.99227
MO	0.01114	48.83	0.710	0.01116	0.01105	0.01121
NA	46.72060	41,170.05	0.190	46.66141	46.82250	46.67790
NI	0.04973	176.89	1.300	0.05007	0.05013	0.04898
P	4.77575	2,401.45	0.104	4.77436	4.78127	4.77161
PB	0.12704	173.24	0.644	0.12629	0.12791	0.12692
S	16.31132	3,142.50	0.145	16.30181	16.33825	16.29391
SB	-0.00907	5.66	20.862	-0.01125	-0.00810	-0.00785
SE	0.00040	-0.16	502.465	0.00195	-0.00184	0.00108
SI	6.89237	1,636.11	0.342	6.91504	6.86793	6.89416
SN	0.02278	28.64	3.008	0.02335	0.02297	0.02202
SR	0.55422	342,182.58	0.487	0.55690	0.55151	0.55425
TI	0.91366	48,371.32	0.490	0.91862	0.90991	0.91244
TL	0.00234	-8.36	31.972	0.00297	0.00151	0.00254
V	0.14567	1,907.71	0.184	0.14584	0.14537	0.14581
Y1	21587.38876	21,587.39	0.136	21572.28309	21568.59542	21621.28779
Y2A	423542.24286	423,542.24	0.444	421440.55666	425072.18915	424113.98277
Y2R	34318.23782	34,318.24	0.346	34189.52352	34342.06855	34423.12139
ZN	0.35534	4,335.91	0.113	0.35491	0.35570	0.35542
ZR	0.06748	182.74	1.795	0.06617	0.06855	0.06771

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/06/2013 22:58

Sample Number: **7261865** Class: **** Batch: 133095708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00460	-13.44	9.831	0.00509	0.00420	0.00451
AL	72.69214	8,665.64	1.183	73.56691	72.66170	71.84782
AS	0.09619	25.78	2.414	0.09354	0.09788	0.09714
B	0.07016	1,555.04	2.694	0.06798	0.07112	0.07137
BA	0.80890	468,943.77	0.885	0.80094	0.81482	0.81092
BE	0.00320	707.12	0.775	0.00317	0.00321	0.00322
CA	140.27164	159,647.83	0.974	141.67188	140.20052	138.94252
CD	0.01539	623.33	1.531	0.01512	0.01549	0.01556
CO	0.06194	411.23	0.904	0.06132	0.06242	0.06207
CR	4.29982	38,678.72	0.432	4.27842	4.31195	4.30908
CU	0.79510	8,504.89	0.485	0.79075	0.79812	0.79642
FE	219.80840	77,797.61	1.049	222.26273	219.47263	217.68984
K	12.93768	4,271.45	0.876	13.01670	12.98849	12.80786
LI	0.12586	766.94	0.695	0.12655	0.12615	0.12488
MG	35.38592	75,683.81	0.885	35.70250	35.37871	35.07654
MN	2.43710	144,160.60	0.605	2.42089	2.44069	2.44972
MO	0.01546	66.35	0.766	0.01533	0.01555	0.01550
NA	4.27714	3,779.13	1.010	4.30390	4.30021	4.22731
NI	0.19950	698.23	0.106	0.19974	0.19941	0.19935
P	3.75995	1,864.80	0.180	3.75595	3.75613	3.76777
PB	0.79550	996.31	0.332	0.79247	0.79679	0.79726
S	47.28394	8,985.63	0.118	47.24958	47.25408	47.34815
SB	-0.07843	8.95	4.652	-0.07429	-0.08117	-0.07984
SE	0.00562	1.21	57.052	0.00325	0.00434	0.00927
SI	1.69328	406.49	0.498	1.68494	1.70179	1.69310
SN	0.16567	188.44	0.803	0.16667	0.16617	0.16416
SR	0.59316	357,881.33	0.351	0.59137	0.59267	0.59544
TI	2.66211	137,748.92	0.484	2.64728	2.67047	2.66858
TL	0.00426	-15.13	37.333	0.00254	0.00454	0.00568
V	0.42993	5,503.76	0.882	0.42555	0.43215	0.43209
Y1	21268.57517	21,268.58	0.044	21275.85059	21258.06357	21271.81134
Y2A	413882.90258	413,882.90	0.349	415490.68920	413461.66335	412696.35520
Y2R	34473.52353	34,473.52	0.661	34210.35308	34597.89463	34612.32289
ZN	3.93582	45,263.94	0.050	3.93737	3.93650	3.93359
ZR	0.08066	218.77	1.204	0.08157	0.08077	0.07963

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/06/2013 23:02

Sample Number: **7261868** Class: **** Batch: 133095708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00079	-48.93	27.933	-0.00104	-0.00062	-0.00070
AL	47.56103	5,272.24	0.266	47.61625	47.41629	47.65056
AS	0.01554	0.15	5.305	0.01579	0.01462	0.01621
B	0.08514	858.14	0.685	0.08572	0.08515	0.08455
BA	0.26553	140,194.98	0.409	0.26606	0.26428	0.26624
BE	0.00196	195.92	1.465	0.00193	0.00198	0.00198
CA	970.53340	911,157.38	0.898	980.50846	964.42556	966.66616
CD	0.00105	122.65	10.644	0.00110	0.00113	0.00092
CO	0.03014	194.04	0.025	0.03015	0.03015	0.03014
CR	0.83424	6,823.92	0.432	0.83324	0.83125	0.83825
CU	0.18098	1,883.27	1.126	0.18174	0.17867	0.18252
FE	70.33374	24,668.14	0.323	70.59470	70.22616	70.18035
K	8.89070	2,723.48	0.468	8.93487	8.88505	8.85217
LI	0.05128	785.47	3.732	0.04961	0.05087	0.05337
MG	275.71675	482,225.98	1.281	279.79481	273.76208	273.59336
MN	1.22318	65,892.72	0.292	1.22522	1.21906	1.22526
MO	0.00605	23.75	2.170	0.00614	0.00612	0.00590
NA	4.23627	3,480.59	0.233	4.22506	4.24363	4.24011
NI	0.09329	300.86	0.486	0.09299	0.09381	0.09308
P	1.48396	656.26	0.387	1.47820	1.48399	1.48969
PB	0.08272	103.86	0.427	0.08231	0.08288	0.08296
S	19.61813	3,325.79	0.486	19.52074	19.62250	19.71114
SB	-0.01296	6.03	15.487	-0.01088	-0.01311	-0.01489
SE	-0.00170	-0.63	339.698	-0.00167	0.00406	-0.00750
SI	5.67382	1,258.66	0.345	5.66618	5.69608	5.65918
SN	0.02769	30.07	1.456	0.02761	0.02813	0.02733
SR	1.86246	1,023,366.49	0.582	1.86897	1.84995	1.86846
TI	2.62585	123,694.31	0.429	2.63381	2.61295	2.63080
TL	0.00325	-10.03	52.822	0.00285	0.00177	0.00513
V	0.21060	2,451.23	0.562	0.21145	0.20925	0.21110
Y1	18962.12224	18,962.12	0.220	18969.21559	18999.86007	18917.29107
Y2A	376881.86437	376,881.86	0.342	376059.70842	378369.54937	376216.33532
Y2R	32056.02435	32,056.02	0.601	31837.02153	32198.79024	32132.26129
ZN	0.70142	7,246.23	0.094	0.70070	0.70199	0.70156
ZR	0.08052	203.08	2.982	0.08304	0.07826	0.08027

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/06/2013 23:07

Sample Number: **7261869** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01426	109.41	3.849	0.01489	0.01394	0.01394
AL	86.80684	10,332.28	0.129	86.69638	86.80413	86.92001
AS	0.09501	24.28	4.021	0.09426	0.09915	0.09162
B	0.08429	1,712.79	2.919	0.08403	0.08687	0.08198
BA	2.28709	1,340,776.14	0.850	2.29947	2.29713	2.26468
BE	0.00398	1,028.02	1.648	0.00403	0.00399	0.00391
CA	61.14189	70,268.35	0.319	61.04791	61.01146	61.36630
CD	0.00200	432.52	3.689	0.00204	0.00204	0.00191
CO	0.07503	491.53	0.812	0.07482	0.07571	0.07454
CR	1.54690	14,029.44	0.447	1.54602	1.55422	1.54046
CU	0.76517	8,216.41	0.591	0.76750	0.76804	0.75996
FE	227.87878	80,231.57	0.353	227.71964	227.16587	228.75083
K	15.07477	4,971.86	0.524	15.01851	15.04076	15.16504
LI	0.15862	890.15	1.280	0.16069	0.15663	0.15854
MG	41.31612	87,954.14	0.170	41.29632	41.25784	41.39422
MN	2.13147	127,504.96	0.589	2.13719	2.14015	2.11707
MO	0.01226	52.92	1.367	0.01208	0.01231	0.01240
NA	4.54354	4,008.12	0.349	4.52646	4.55782	4.54634
NI	0.23936	839.77	0.360	0.23892	0.23881	0.24036
P	3.69617	1,835.43	0.018	3.69570	3.69589	3.69693
PB	0.96134	1,206.17	0.396	0.96568	0.95977	0.95857
S	42.42909	8,072.00	0.196	42.34131	42.43934	42.50662
SB	-0.03346	10.07	8.462	-0.03670	-0.03221	-0.03147
SE	0.00563	1.16	11.094	0.00622	0.00498	0.00568
SI	9.57060	2,276.79	0.249	9.54573	9.57273	9.59332
SN	0.11153	127.90	1.221	0.11065	0.11085	0.11310
SR	0.29552	180,274.65	0.644	0.29632	0.29689	0.29334
TI	3.07018	160,618.07	0.678	3.07599	3.08747	3.04707
TL	0.00406	-15.65	34.577	0.00419	0.00259	0.00539
V	0.40141	5,200.70	0.900	0.40416	0.40276	0.39732
Y1	21295.15293	21,295.15	0.103	21270.28979	21311.86054	21303.30846
Y2A	418554.57256	418,554.57	0.703	416843.10802	416867.52816	421953.08151
Y2R	34413.63989	34,413.64	0.329	34433.00419	34515.92268	34291.99281
ZN	2.39344	27,696.30	0.081	2.39358	2.39532	2.39144
ZR	0.07475	202.62	2.575	0.07292	0.07455	0.07676

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/06/2013 23:10

Sample Number: **7261870** Class: **** Batch: 133095708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00142	-38.64	7.677	0.00133	0.00154	0.00138
AL	37.88315	4,469.22	0.442	37.86469	38.05889	37.72586
AS	0.05945	15.61	2.495	0.05794	0.05949	0.06091
B	0.03050	841.41	2.575	0.03082	0.03108	0.02961
BA	0.56412	337,112.67	0.799	0.56238	0.56924	0.56075
BE	0.00250	445.00	0.753	0.00252	0.00251	0.00248
CA	44.39959	50,707.99	0.346	44.35426	44.57088	44.27363
CD	0.03742	808.54	0.119	0.03747	0.03739	0.03740
CO	0.03884	272.63	0.113	0.03881	0.03889	0.03882
CR	0.19543	1,776.76	1.324	0.19763	0.19609	0.19258
CU	0.68501	7,519.28	1.241	0.69126	0.68845	0.67533
FE	124.47239	45,409.60	0.388	124.20973	125.02971	124.17773
K	4.94533	1,602.64	0.240	4.94149	4.93584	4.95866
LI	0.05595	349.70	6.040	0.05633	0.05912	0.05239
MG	22.20679	47,299.63	0.025	22.20405	22.20317	22.21316
MN	1.02627	62,579.56	1.256	1.03311	1.03429	1.01140
MO	0.01441	63.35	0.375	0.01436	0.01440	0.01447
NA	2.58485	2,256.53	0.368	2.59247	2.57419	2.58788
NI	0.13578	493.49	0.452	0.13509	0.13600	0.13626
P	2.42138	1,229.19	0.238	2.42793	2.41924	2.41699
PB	0.51221	656.08	0.435	0.50982	0.51256	0.51424
S	15.01166	2,914.67	0.183	15.03215	15.02235	14.98050
SB	-0.00570	8.15	40.708	-0.00588	-0.00793	-0.00330
SE	0.00176	0.28	73.339	0.00255	0.00244	0.00027
SI	1.02452	244.70	0.362	1.02876	1.02193	1.02286
SN	0.09088	106.99	0.527	0.09139	0.09082	0.09043
SR	0.19668	122,266.22	1.123	0.19783	0.19808	0.19413
TI	2.48966	132,744.06	1.081	2.50569	2.50468	2.45860
TL	0.00471	-10.35	17.205	0.00462	0.00555	0.00394
V	0.20346	2,685.14	1.079	0.20424	0.20515	0.20098
Y1	21756.62686	21,756.63	0.087	21778.09245	21742.87807	21748.91006
Y2A	426620.31502	426,620.32	0.819	424932.96885	424291.60053	430636.37566
Y2R	34104.05887	34,104.06	0.152	34099.70084	34054.44577	34158.03000
ZN	2.92987	34,425.44	0.050	2.93149	2.92862	2.92951
ZR	0.06505	175.16	2.780	0.06639	0.06575	0.06299

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/06/2013 23:14

Sample Number: **7261871** Class: **** Batch: 133095708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00216	-41.29	28.428	0.00283	0.00162	0.00204
AL	115.47986	13,569.01	0.518	116.04332	115.54343	114.85282
AS	0.03303	-1.66	3.980	0.03181	0.03287	0.03442
B	0.05315	1,471.62	2.871	0.05224	0.05230	0.05491
BA	0.80068	465,904.01	0.155	0.80200	0.79953	0.80049
BE	0.00538	1,580.57	0.193	0.00537	0.00539	0.00538
CA	87.69282	99,039.83	0.492	88.12320	87.69450	87.26077
CD	0.02111	718.27	1.333	0.02088	0.02142	0.02102
CO	0.10328	727.56	0.701	0.10383	0.10354	0.10246
CR	1.80424	16,251.90	0.394	1.79952	1.80079	1.81242
CU	0.28655	2,570.46	0.249	0.28573	0.28707	0.28684
FE	226.38907	78,693.14	0.526	227.39385	226.69824	225.07511
K	10.34349	3,359.47	0.300	10.35146	10.36978	10.30923
LI	0.12559	725.20	1.962	0.12842	0.12389	0.12447
MG	60.46656	125,778.08	0.215	60.61613	60.38100	60.40255
MN	1.42956	84,880.99	0.687	1.41886	1.43162	1.43819
MO	0.00954	41.16	0.530	0.00959	0.00949	0.00955
NA	4.54984	3,960.06	0.720	4.53485	4.58743	4.52726
NI	0.28273	987.51	0.688	0.28407	0.28362	0.28050
P	2.87892	1,419.84	0.674	2.89502	2.88437	2.85738
PB	0.09691	145.87	1.461	0.09783	0.09763	0.09528
S	9.03810	1,703.53	0.717	9.07998	9.07081	8.96352
SB	-0.03875	9.17	4.313	-0.03963	-0.03682	-0.03978
SE	0.00016	-0.43	3447.976	-0.00138	-0.00430	0.00615
SI	7.22081	1,695.61	1.614	7.33995	7.21550	7.10697
SN	0.03320	39.71	1.998	0.03244	0.03360	0.03357
SR	0.72455	438,788.59	0.248	0.72465	0.72271	0.72630
TI	8.29892	430,871.24	0.628	8.34068	8.24051	8.31556
TL	0.00695	-23.17	25.165	0.00648	0.00549	0.00889
V	0.50733	6,540.54	0.530	0.50426	0.50846	0.50927
Y1	21159.59364	21,159.59	0.465	21115.20250	21091.16459	21272.41384
Y2A	415414.00486	415,414.00	0.326	415808.58184	416525.21537	413908.21736
Y2R	33953.98570	33,953.99	0.587	33755.07188	33953.36788	34153.51734
ZN	0.71599	8,455.08	0.564	0.71776	0.71884	0.71137
ZR	0.12727	338.17	0.344	0.12754	0.12750	0.12677

LANCASTER LABORATORIES

Run Name: 1331008T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/06/2013 23:19

Sample Number: **7258716** Class: **** Batch: 133095708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00060	-32.33	119.933	-0.00009	0.00055	0.00135
AL	0.48426	68.03	5.740	0.49252	0.45327	0.50699
AS	0.00598	-0.65	62.866	0.00462	0.01024	0.00310
B	0.00395	99.49	13.650	0.00348	0.00383	0.00454
BA	0.23938	133,533.72	0.344	0.24032	0.23896	0.23884
BE	0.00061	-310.49	2.479	0.00060	0.00062	0.00059
CA	335.63648	357,288.49	0.286	336.23013	334.52914	336.15019
CD	0.00075	33.00	16.391	0.00075	0.00088	0.00063
CO	0.01254	71.71	1.322	0.01236	0.01269	0.01256
CR	0.00732	55.79	5.162	0.00774	0.00722	0.00701
CU	0.19288	2,088.41	0.356	0.19276	0.19362	0.19226
FE	15.22225	5,642.92	0.472	15.20641	15.15971	15.30062
K	15.12280	4,801.83	0.694	15.24133	15.08514	15.04192
LI	0.00000	218.48	1417.497	-0.00489	0.00253	0.00236
MG	3.52378	7,359.54	0.167	3.53042	3.51915	3.52177
MN	0.95032	54,089.61	0.211	0.95086	0.94810	0.95200
MO	0.00040	2.61	12.772	0.00043	0.00043	0.00034
NA	16.06220	13,659.31	0.211	16.02335	16.07730	16.08595
NI	0.00568	30.81	2.400	0.00584	0.00558	0.00562
P	18.20990	8,526.21	0.119	18.21286	18.18698	18.22986
PB	0.00533	9.77	27.757	0.00603	0.00634	0.00363
S	11.00091	1,975.02	0.263	10.97121	11.00265	11.02888
SB	-0.00055	2.69	292.866	-0.00231	-0.00015	0.00082
SE	0.00689	1.71	29.073	0.00833	0.00775	0.00460
SI	0.81061	188.78	1.810	0.82192	0.79403	0.81587
SN	0.01586	19.34	5.156	0.01500	0.01595	0.01662
SR	0.56602	328,547.04	0.416	0.56374	0.56845	0.56588
TI	0.01155	584.66	11.061	0.01293	0.01041	0.01132
TL	0.00109	-3.92	76.542	0.00046	0.00203	0.00077
V	0.00180	11.82	32.522	0.00155	0.00247	0.00138
Y1	20105.77092	20,105.77	0.213	20109.22728	20146.69999	20061.38547
Y2A	398177.08195	398,177.08	0.159	398000.46388	397652.31942	398878.46256
Y2R	33130.41438	33,130.41	0.279	33116.82941	33228.92372	33045.49000
ZN	0.19521	2,149.60	0.337	0.19530	0.19451	0.19581
ZR	-0.00046	1.93	336.654	-0.00094	-0.00170	0.00127

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 43

Date/Time: 11/06/2013 23:23

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00495	31.03	15.312	0.00516	0.00558	0.00411
AL	0.24041	40.25	16.891	0.20430	0.23255	0.28437
AS	0.01986	6.13	9.802	0.02005	0.01782	0.02170
B	0.04754	348.08	1.962	0.04752	0.04848	0.04662
BA	0.00547	3,284.82	0.230	0.00545	0.00547	0.00547
BE	0.00547	1,655.63	0.870	0.00543	0.00547	0.00552
CA	0.19413	310.39	0.623	0.19410	0.19294	0.19535
CD	0.00496	73.63	2.040	0.00505	0.00498	0.00485
CO	0.00520	32.79	8.348	0.00559	0.00529	0.00473
CR	0.01570	140.93	2.026	0.01535	0.01577	0.01597
CU	0.01168	83.77	2.783	0.01163	0.01139	0.01203
FE	0.19935	73.96	2.449	0.20345	0.19395	0.20065
K	0.46204	127.35	7.491	0.48568	0.47812	0.42231
LI	0.02053	140.68	6.252	0.02133	0.02121	0.01905
MG	0.09860	206.68	0.316	0.09890	0.09828	0.09862
MN	0.00530	335.98	2.593	0.00517	0.00544	0.00529
MO	0.01058	46.34	1.097	0.01068	0.01061	0.01045
NA	0.98041	826.59	1.331	0.99531	0.97103	0.97490
NI	0.01024	51.04	1.186	0.01037	0.01020	0.01014
P	0.10050	51.17	0.896	0.09999	0.10154	0.09997
PB	0.01611	24.29	9.735	0.01581	0.01471	0.01780
S	0.49747	91.54	0.371	0.49703	0.49949	0.49588
SB	0.02068	16.63	8.134	0.02149	0.01874	0.02180
SE	0.01955	5.35	18.042	0.02078	0.01557	0.02230
SI	0.05388	15.75	17.103	0.04952	0.06446	0.04765
SN	0.02031	25.78	1.534	0.02007	0.02066	0.02019
SR	0.00519	3,142.40	0.515	0.00515	0.00520	0.00520
TI	0.01047	566.02	1.919	0.01033	0.01070	0.01037
TL	0.03183	15.65	5.126	0.03352	0.03172	0.03026
V	0.00522	55.20	8.671	0.00471	0.00555	0.00540
Y1	21542.33178	21,542.33	0.016	21544.95539	21543.64908	21538.39088
Y2A	424438.17746	424,438.18	0.612	426840.92114	421683.39960	424790.21164
Y2R	33115.92056	33,115.92	0.405	33026.58152	33051.11620	33270.06395
ZN	0.02127	270.03	0.851	0.02133	0.02106	0.02141
ZR	0.05115	134.43	2.772	0.04973	0.05116	0.05256

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 44

Date/Time: 11/06/2013 23:27

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00269	-38.13	7.944	0.00266	0.00250	0.00292
AL	492.07019	54,844.88	0.435	490.55501	494.51752	491.13804
AS	0.00228	-12.21	175.476	0.00559	0.00339	-0.00216
B	-0.03293	674.60	3.833	-0.03271	-0.03180	-0.03429
BA	0.00028	178.03	2.181	0.00028	0.00028	0.00029
BE	0.00048	-335.95	7.348	0.00047	0.00044	0.00051
CA	505.08837	504,808.98	1.125	511.27554	503.88182	500.10775
CD	0.00068	330.77	22.019	0.00068	0.00053	0.00082
CO	0.00082	5.50	52.502	0.00050	0.00131	0.00065
CR	0.00192	-36.75	25.583	0.00177	0.00247	0.00152
CU	0.00740	145.18	8.027	0.00787	0.00760	0.00673
FE	204.36162	67,303.24	0.179	204.17101	204.78260	204.13125
K	-0.05262	-35.21	111.277	-0.11329	-0.04810	0.00354
LI	0.00222	307.75	81.551	0.00414	0.00196	0.00055
MG	556.14987	812,146.92	0.153	557.04406	556.05497	555.35057
MN	0.00385	216.95	5.103	0.00388	0.00404	0.00365
MO	-0.00130	-3.96	5.355	-0.00123	-0.00131	-0.00137
NA	0.03442	21.23	8.028	0.03128	0.03552	0.03646
NI	0.00092	-3.95	62.988	0.00054	0.00062	0.00158
P	0.01976	9.41	4.757	0.02057	0.01873	0.01997
PB	-0.00226	113.00	39.217	-0.00144	-0.00214	-0.00320
S	-0.12350	-25.73	4.341	-0.12007	-0.12968	-0.12076
SB	-0.00667	8.89	28.470	-0.00674	-0.00473	-0.00853
SE	-0.00998	-4.05	101.991	-0.02137	-0.00677	-0.00179
SI	0.01182	5.89	58.967	0.01568	0.01601	0.00377
SN	0.00390	6.31	41.622	0.00575	0.00272	0.00323
SR	0.00254	1,316.30	2.632	0.00253	0.00261	0.00248
TI	-0.00406	-179.32	2.653	-0.00414	-0.00394	-0.00411
TL	-0.00163	-5.63	101.430	-0.00274	0.00027	-0.00242
V	-0.00282	-24.85	17.453	-0.00277	-0.00333	-0.00235
Y1	19029.71598	19,029.72	0.220	18990.18398	19025.50530	19073.45867
Y2A	371288.70113	371,288.70	1.888	368031.97482	366500.62956	379333.49901
Y2R	31859.92030	31,859.92	0.368	31777.25913	31808.59593	31993.90584
ZN	0.00578	305.05	2.619	0.00563	0.00593	0.00577
ZR	0.00577	17.24	29.599	0.00772	0.00508	0.00452

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/06/2013 23:31

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22157	2,492.30	0.967	0.22272	0.21909	0.22289
AL	492.15358	55,251.04	0.399	493.67934	492.84496	489.93642
AS	0.10507	26.63	2.837	0.10247	0.10441	0.10832
B	-0.03303	667.94	3.228	-0.03422	-0.03270	-0.03216
BA	0.51515	269,499.11	0.137	0.51503	0.51452	0.51591
BE	0.50350	180,296.53	0.156	0.50315	0.50296	0.50440
CA	501.87480	505,449.86	0.771	501.46528	505.93346	498.22566
CD	0.92549	12,980.99	0.219	0.92741	0.92571	0.92337
CO	0.45589	2,417.69	0.281	0.45643	0.45681	0.45443
CR	0.47506	3,810.06	0.624	0.47252	0.47433	0.47832
CU	0.53982	5,409.94	0.242	0.53834	0.54034	0.54079
FE	202.52350	67,232.38	0.275	203.12045	202.01798	202.43206
K	-0.08864	-46.60	43.113	-0.12063	-0.09897	-0.04632
LI	0.00273	310.76	138.443	0.00709	0.00067	0.00043
MG	553.14768	815,197.18	1.290	555.27397	558.97699	545.19209
MN	0.47620	25,427.47	0.344	0.47483	0.47575	0.47801
MO	-0.00139	-4.27	11.330	-0.00130	-0.00157	-0.00129
NA	0.01772	7.62	60.519	0.02715	0.00606	0.01996
NI	0.90909	2,874.14	0.101	0.90840	0.91013	0.90875
P	0.01733	9.55	8.660	0.01605	0.01695	0.01898
PB	0.04480	164.46	4.058	0.04339	0.04685	0.04415
S	-0.12554	-26.05	2.906	-0.12973	-0.12306	-0.12383
SB	0.63157	400.49	0.392	0.62871	0.63287	0.63312
SE	0.04369	9.07	16.813	0.03576	0.05026	0.04505
SI	0.01059	5.66	30.602	0.00686	0.01213	0.01277
SN	0.00317	5.57	40.962	0.00462	0.00212	0.00277
SR	0.00253	1,319.77	0.531	0.00253	0.00252	0.00254
TI	-0.00397	-159.01	3.803	-0.00414	-0.00386	-0.00390
TL	0.08772	36.10	3.147	0.08507	0.09058	0.08751
V	0.49784	5,736.69	0.206	0.49761	0.49694	0.49895
Y1	19007.38697	19,007.39	0.150	18993.11264	18988.80432	19040.24397
Y2A	373459.52065	373,459.52	0.167	374070.44400	373486.58052	372821.53744
Y2R	32089.48210	32,089.48	0.301	32032.14642	32035.15079	32201.14908
ZN	1.02609	10,768.75	0.178	1.02763	1.02656	1.02406
ZR	0.00363	12.05	19.812	0.00286	0.00373	0.00429

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/06/2013 23:35

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50531	6,482.11	0.699	0.50867	0.50163	0.50565
AL	24.22602	2,765.21	1.097	24.43290	24.31888	23.92629
AS	0.48650	199.09	0.189	0.48550	0.48731	0.48668
B	0.47485	3,474.74	0.235	0.47510	0.47363	0.47582
BA	0.51229	296,945.36	1.368	0.51549	0.50425	0.51712
BE	0.49365	195,855.51	0.510	0.49559	0.49080	0.49456
CA	24.47002	27,090.25	0.167	24.51430	24.43407	24.46170
CD	0.49887	7,597.32	0.537	0.49612	0.49902	0.50147
CO	0.49593	2,918.90	0.379	0.49403	0.49596	0.49779
CR	0.49367	4,436.75	0.393	0.49323	0.49199	0.49579
CU	0.50528	5,457.71	0.752	0.50952	0.50218	0.50414
FE	24.50766	8,993.84	0.243	24.55549	24.52661	24.44089
K	24.63928	7,786.19	0.105	24.61656	24.63403	24.66726
LI	0.50692	2,545.23	0.979	0.50472	0.50343	0.51260
MG	24.21746	49,741.07	0.201	24.25468	24.16231	24.23540
MN	0.49080	29,038.64	0.503	0.49222	0.48795	0.49225
MO	0.51218	2,141.30	0.594	0.50963	0.51136	0.51555
NA	23.80771	20,121.15	0.626	23.93861	23.83892	23.64560
NI	0.50196	1,773.53	0.382	0.50006	0.50190	0.50390
P	0.50386	248.91	0.657	0.50024	0.50673	0.50462
PB	0.50537	625.19	0.537	0.50246	0.50584	0.50782
S	25.19017	4,735.03	0.592	25.03947	25.19344	25.33761
SB	0.51414	353.36	0.447	0.51161	0.51473	0.51609
SE	0.49200	133.06	1.226	0.49009	0.48716	0.49875
SI	24.38892	5,545.64	0.263	24.45503	24.38501	24.32670
SN	0.49673	553.83	0.546	0.49391	0.49933	0.49694
SR	0.48983	295,465.92	1.077	0.49241	0.48376	0.49331
TI	0.50759	26,297.69	0.286	0.50834	0.50592	0.50852
TL	0.49840	307.19	0.630	0.49544	0.49807	0.50170
V	0.50368	6,385.69	0.509	0.50527	0.50072	0.50505
Y1	21046.80683	21,046.81	0.407	21124.07089	21061.61262	20954.73698
Y2A	413814.22576	413,814.23	0.558	411657.15706	416253.47913	413532.04109
Y2R	32919.76558	32,919.77	0.378	33022.76000	32955.04084	32781.49591
ZN	0.49969	5,734.73	0.512	0.49694	0.50012	0.50200
ZR	0.50448	1,290.49	0.671	0.50535	0.50734	0.50074

LANCASTER LABORATORIES

Run Name: 1331008T72

Instrument ID: 16417

Tube: 47

Date/Time: 11/06/2013 23:39

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00018	-41.27	120.613	-0.00034	-0.00027	0.00007
AL	-0.03287	9.07	62.083	-0.00955	-0.04162	-0.04743
AS	0.00051	-2.10	204.267	0.00049	0.00157	-0.00052
B	0.00122	11.13	10.621	0.00136	0.00118	0.00111
BA	0.00003	52.70	32.987	0.00002	0.00003	0.00004
BE	0.00058	-339.72	1.433	0.00058	0.00058	0.00057
CA	-0.00962	83.96	14.986	-0.00844	-0.01123	-0.00920
CD	-0.00014	-5.77	74.400	-0.00007	-0.00009	-0.00025
CO	-0.00011	0.73	181.427	0.00012	-0.00022	-0.00021
CR	0.00065	1.93	109.720	0.00061	0.00139	-0.00004
CU	0.00181	-26.23	38.616	0.00259	0.00161	0.00123
FE	0.00198	0.38	115.726	0.00123	0.00016	0.00456
K	-0.06246	-40.02	110.631	-0.12503	0.01170	-0.07404
LI	-0.00064	36.02	261.363	-0.00061	-0.00234	0.00102
MG	-0.00064	-0.82	580.198	0.00179	-0.00489	0.00118
MN	0.00003	15.73	109.988	0.00001	0.00006	0.00001
MO	0.00013	1.63	119.094	-0.00003	0.00028	0.00013
NA	0.00686	-1.38	93.757	0.01418	0.00421	0.00217
NI	-0.00052	12.37	19.467	-0.00054	-0.00062	-0.00041
P	0.00063	1.05	85.236	0.00002	0.00084	0.00104
PB	-0.00025	3.83	519.927	-0.00031	-0.00150	0.00107
S	-0.00152	-4.54	61.160	-0.00258	-0.00107	-0.00090
SB	-0.00025	2.09	403.690	0.00085	-0.00115	-0.00046
SE	0.00048	0.06	119.306	0.00062	0.00098	-0.00015
SI	-0.00302	2.75	81.299	-0.00273	-0.00561	-0.00072
SN	-0.00021	2.47	172.372	-0.00032	0.00019	-0.00049
SR	0.00003	-49.26	68.326	0.00005	0.00002	0.00001
TI	0.00008	14.25	200.387	0.00019	-0.00010	0.00014
TL	-0.00120	-6.26	168.865	0.00074	-0.00329	-0.00104
V	-0.00011	-13.92	480.929	0.00006	0.00033	-0.00073
Y1	21508.00187	21,508.00	0.314	21478.06636	21585.29710	21460.64215
Y2A	419933.49506	419,933.50	1.253	417455.06958	416366.40159	425979.01399
Y2R	33286.75310	33,286.75	0.270	33375.94735	33195.90573	33288.40623
ZN	-0.00112	10.08	5.141	-0.00106	-0.00113	-0.00117
ZR	-0.00031	2.35	239.693	-0.00021	-0.00108	0.00037

Mercury Data

Metals in Solid

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1331102M07

Mercury Run Data Report

Data File Name: 1331110.M07

Run Name: 1331102M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By
Damary Valentin

Reviewed Date
11/07/2013 3:00PM

Method Reference Name(s):
SW-846 7471A
SW-846 7471A modified

Verified By:
Robert Strocko

Verified Date
11/08/2013 8:19AM

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/07/2013 12:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	-105.0

2 Burn Date/Time: 11/07/2013 12:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1245.0

3 Burn Date/Time: 11/07/2013 12:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3135.0

4 Burn Date/Time: 11/07/2013 12:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6127.0

5 Burn Date/Time: 11/07/2013 12:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	15125.0

6 Burn Date/Time: 11/07/2013 12:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	30670.0

CorrelationCoefficient = 1.00000
Slope = 6126.7956600000
Y-Intercept = -28.2533500000

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/07/2013 12:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.5992	15897.0

8 Burn Date/Time: 11/07/2013 12:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0274	-197.0

9 Burn Date/Time: 11/07/2013 12:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.2211	1326.0

10 Burn Date/Time: 11/07/2013 12:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
1.0499	6404.0

11 Burn Date/Time: 11/07/2013 12:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0098	-89.0

12 Burn Date/Time: 11/07/2013 12:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0075	17.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/07/2013 12:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0269	6263.0		

14 Burn Date/Time: 11/07/2013 12:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257236	**********	0.6216	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0777	447.0		

15 Burn Date/Time: 11/07/2013 13:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257237	**********	0.6203	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0752	432.0		

16 Burn Date/Time: 11/07/2013 13:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257239	**********	0.6157	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1839	1098.0		

17 Burn Date/Time: 11/07/2013 13:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257240	U*********	0.6003	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1980	1184.0		

18 Burn Date/Time: 11/07/2013 13:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257240	UP********	0.6003	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1813	7209.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/07/2013 13:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257240	D*********	0.6034	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1467	870.0		

20 Burn Date/Time: 11/07/2013 13:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257240	R*********	0.6375	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2028	7341.0		

21 Burn Date/Time: 11/07/2013 13:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257240	M*********	0.6351	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2182	7435.0		

22 Burn Date/Time: 11/07/2013 13:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
1.0584	6456.0

23 Burn Date/Time: 11/07/2013 13:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0088	-83.0

24 Burn Date/Time: 11/07/2013 13:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257243	**********	0.6401	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2234	1340.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/07/2013 13:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7257244	**********	0.6270	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1340	792.0		

26 Burn Date/Time: 11/07/2013 13:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258716	**********	0.6174	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0584	329.0		

27 Burn Date/Time: 11/07/2013 13:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263052	**********	0.6049	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3816	2309.0		

28 Burn Date/Time: 11/07/2013 13:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263053	**********	0.6152	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8707	5306.0		

29 Burn Date/Time: 11/07/2013 13:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263054	**********	0.6446	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1230	6852.0		

30 Burn Date/Time: 11/07/2013 13:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263055	**********	0.6073	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.3608	8309.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/07/2013 13:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264009	**********	0.6007	100	1.00	133095711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1069	626.0		

32 Burn Date/Time: 11/07/2013 13:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0049	1.0		

33 Burn Date/Time: 11/07/2013 13:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0956	6684.0		

34 Burn Date/Time: 11/07/2013 13:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
1.0507	6409.0

35 Burn Date/Time: 11/07/2013 13:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0039	-53.0

36 Burn Date/Time: 11/07/2013 13:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263650	**********	0.6224	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	9.9255	60787.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/07/2013 13:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263653	**********	0.6340	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	14.8811	91151.0		

38 Burn Date/Time: 11/07/2013 13:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262714	**********	0.6337	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1309	773.0		

39 Burn Date/Time: 11/07/2013 13:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261465	U*********	0.6320	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8641	11393.0		

40 Burn Date/Time: 11/07/2013 13:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261465	UP********	0.6320	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.8736	17578.0		

41 Burn Date/Time: 11/07/2013 13:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261465	D*********	0.6100	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.2033	13471.0		

42 Burn Date/Time: 11/07/2013 13:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261465	R*********	0.6201	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.9413	17993.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/07/2013 13:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261465	M*********	0.6376	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.9946	18320.0		

44 Burn Date/Time: 11/07/2013 14:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260348	**********	0.6089	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.1373	19194.0		

45 Burn Date/Time: 11/07/2013 14:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260351	**********	0.6149	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0199	93.0		

46 Burn Date/Time: 11/07/2013 14:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
1.0535	6426.0

47 Burn Date/Time: 11/07/2013 14:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0044	-56.0

48 Burn Date/Time: 11/07/2013 14:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260354	**********	0.6147	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	5.7288	35073.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/07/2013 14:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260357	**********	0.6114	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0599	-396.0		

50 Burn Date/Time: 11/07/2013 14:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260368	**********	0.6091	100	1.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.5595	15654.0		

51 Burn Date/Time: 11/07/2013 14:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263650	**********	0.6224	100	5.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1143	12926.0		

52 Burn Date/Time: 11/07/2013 14:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263653	**********	0.6340	100	10.00	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6722	10217.0		

53 Burn Date/Time: 11/07/2013 14:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260354	**********	0.6147	100	2.50	133105711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.4089	14731.0		

54 Burn Date/Time: 11/07/2013 14:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0168	-132.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/07/2013 14:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0528	6422.0		

56 Burn Date/Time: 11/07/2013 14:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258712	**********	0.6105	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2810	1693.0		

57 Burn Date/Time: 11/07/2013 14:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258713	**********	0.6225	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1031	603.0		

58 Burn Date/Time: 11/07/2013 14:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
1.0554	6438.0

59 Burn Date/Time: 11/07/2013 14:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0031	-48.0

60 Burn Date/Time: 11/07/2013 14:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258714	U**********	0.6094	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2774	1671.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/07/2013 14:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258714	UP********	0.6094	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1651	7110.0		

62 Burn Date/Time: 11/07/2013 14:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258714	D*********	0.6258	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2843	1713.0		

63 Burn Date/Time: 11/07/2013 14:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258714	R*********	0.6098	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2464	7608.0		

64 Burn Date/Time: 11/07/2013 14:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258714	M*********	0.6334	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2516	7640.0		

65 Burn Date/Time: 11/07/2013 14:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258715	**********	0.6013	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2423	1456.0		

66 Burn Date/Time: 11/07/2013 14:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258717	**********	0.6201	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2394	1438.0		

LANCASTER LABORATORIES

Run Name: 1331102M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/07/2013 14:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7258718	**********	0.6119	100	1.00	133105711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2756	1660.0		

68 Burn Date/Time: 11/07/2013 14:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.2293	1376.0

69 Burn Date/Time: 11/07/2013 14:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
1.0494	6401.0

70 Burn Date/Time: 11/07/2013 14:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0106	-94.0

Extraction/Distillation/Digestion Logs

Metals in Solid

LLENS Worksheet for 5708 SW846 ICP/ICP MS Digest

Batch# 13 309 5708 002

Balance ID#: 10685 **Start Time:** 11/6/13 9:55 **End Time:** 11/6/13 15:00 **Hot Block:** 4

Pipette ID: S/2000 S/1000

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HNO3	P13-305 B	10.00
30% H2O2	133502	4.00
HCL	40272	10.00
HNO3	1113030	5.00
ICP Spike A1	1317716#30	2.00
ICP Spike B1	1317717#30	2.00
ICP/MS Spike	1316309 #6	2.00
LCS 2 ICP/MS Spike	1316306 #6	1.00
LCS A1	1317716#30	2.00
LCS B1	1317717#30	2.00

Method Ref: SW-846 3050B

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1303205	1.03g Teflon chips used Lot J114-3H037
2)	LCSW	.							1303205	1.02g Teflon chips used Lot J114-3H037
3)	LCSW2	.							1303205	1.03g Teflon chips used Lot J114-3H037
4)	7262886	11/07/13 14:55		G4	S3			099a	1303205	
5)	7262888	11/07/13 14:55		G4	S3			099a	1303205	
6)	7262890	11/07/13 14:55		G4	S3			099a	1303205	
7)	7257236	11/11/13 09:15		SW	P8			034a	1303205	
8)	7257237FD	11/11/13 09:15		SW	P8			034a	1303205	
9)	7257239	11/11/13 09:15		SW	P8			034a	1303205	
10)	**7257240U**	11/11/13 09:15		SW	P8			034a	1303205	
11)	**7257240R**	11/11/13 09:15		SW	P8			034a	1303205	
12)	**7257240R2**	11/11/13 09:15		SW	P8			034a	1303205	
13)	**7257240M**	11/11/13 09:15		SW	P8			034a	1303205	
14)	**7257240M2**	11/11/13 09:15		SW	P8			034a	1303205	
15)	**7257240D**	11/11/13 09:15		SW	P8			034a	1303205	
16)	7257243	11/11/13 09:15		SW	P8			034a	1303205	
17)	7257244	11/11/13 09:15		SW	P8			034a	1303205	
18)	7263052	11/14/13 19:30		SW	N8			020a	1303205	
19)	7263053	11/14/13 19:30		SW	N8			020a	1303205	
20)	7263054	11/14/13 19:30		SW	N8			020a	1303205	
21)	7263055	11/14/13 19:30		SW	N8			020a	1303205	
22)	7264009	11/08/13 09:15		SW	S3			036a	1303205	

Prep Employee: DC01155

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	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
23)	7261865	11/12/13 20:13		SW	P7			020a	1303205	
24)	7261868	11/12/13 20:13		SW	P7			020a	1303205	
25)	7261869	11/12/13 20:13		SW	P7			020a	1303205	
26)	7261870	11/12/13 20:13		SW	P7			020a	1303205	
27)	7261871	11/12/13 20:13		SW	P7			020a	1303205	
28)	7258716	11/13/13 00:00		G4	P8			034a	1303205	

Batch# 13 309 5708 002

LLENS Batch Chronology and Change Log - SW846 ICP/ICP MS Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/5/13 15:28	01155
2)	Final Vol	10685	11/6/13 9:17	01155
3)	Trial		11/6/13 9:17	01155
4)	Sample Wt		11/6/13 9:48	01155
5)	Upload Prep	US19LAB00001	11/6/13 15:00	01155

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5708 SW846 ICP/ICP MS Digest

Batch# 13 309 5708 002

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					1.0000	100.0000	1
LCSW					1.0000	100.0000	1
LCSW2					1.0000	100.0000	1
7262886	11/07/13	S3			1.0100	100.0000	1
7262888	11/07/13	S3			1.0200	100.0000	1
7262890	11/07/13	S3			1.0100	100.0000	1
7257236	11/11/13	P8			1.0200	100.0000	1
7257237FD	11/11/13	P8		FD	1.0000	100.0000	1
7257239	11/11/13	P8	SP816		1.0300	100.0000	1
7257240U	11/11/13	P8	SP824		1.0100	100.0000	1
7257240R	11/11/13	P8	SP824		1.0300	100.0000	1
7257240R2	11/11/13	P8	SP824		1.0300	100.0000	1
7257240M	11/11/13	P8	SP824		1.0300	100.0000	1
7257240M2	11/11/13	P8	SP824		1.0300	100.0000	1
7257240D	11/11/13	P8	SP824		1.0000	100.0000	1
7257243	11/11/13	P8	SP719		1.0300	100.0000	1
7257244	11/11/13	P8	SP619		1.0100	100.0000	1
7263052	11/14/13	N8	WHERC	KVM03-02	1.0100	100.0000	1
7263053	11/14/13	N8	XHERC	KVM03-03	1.0100	100.0000	1
7263054	11/14/13	N8	PHERC	KVM03-04	1.0400	100.0000	1
7263055	11/14/13	N8	OHERC	KVM03-05	1.0000	100.0000	1
7264009	11/08/13	S3	ASTWC		1.0300	100.0000	1
7261865	11/12/13	P7	60CSA	TSV36-07	1.0200	100.0000	1
7261868	11/12/13	P7	60DR1	TSV36-10	1.0300	100.0000	1
7261869	11/12/13	P7	60DR2	TSV36-11	1.0000	100.0000	1
7261870	11/12/13	P7	60DR4	TSV36-12	1.0200	100.0000	1
7261871	11/12/13	P7	176AR	TSV37-01	1.0100	100.0000	1
7258716	11/13/13	P8			1.0000	100.0000	1

LLENS Worksheet for 5711 SW SW846 Hg Digest

Batch# 13 309 5711 001

Balance ID#: 19119 **Start Time:** 11/6/13 13:00 **End Time:** 11/6/13 13:30 **Hot Block:** 1

Pipette ID: S/100

Spike/Reagent	Lot#	Volume Added(mL)
5%KMnO4	H13-302 E	15.00
Aqua Regia	P13-310 A	5.00
LCS	P13-304 A	0.10
Spike 1ppm Hg	P13-304 A	0.10

Method Ref: SW-846 7471A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1303205	0.6456g Teflon chips used Lot J114-3H037
2)	LCSW	.							1303205	0.6004g Teflon chips used Lot J114-3H037
3)	7257236	11/11/13 09:15		SW	P8			034a	1303205	
4)	7257237FD	11/11/13 09:15		SW	P8			034a	1303205	
5)	7257239	11/11/13 09:15		SW	P8			034a	1303205	
6)	**7257240U**	11/11/13 09:15		SW	P8			034a	1303205	
7)	**7257240R**	11/11/13 09:15		SW	P8			034a	1303205	
8)	**7257240M**	11/11/13 09:15		SW	P8			034a	1303205	
9)	**7257240D**	11/11/13 09:15		SW	P8			034a	1303205	
10)	7257243	11/11/13 09:15		SW	P8			034a	1303205	
11)	7257244	11/11/13 09:15		SW	P8			034a	1303205	
12)	7258716	11/13/13 00:00		G4	P8			034a	1303205	
13)	7263052	11/14/13 19:30		SW	N8			020a	1303205	
14)	7263053	11/14/13 19:30		SW	N8			020a	1303205	
15)	7263054	11/14/13 19:30		SW	N8			020a	1303205	
16)	7263055	11/14/13 19:30		SW	N8			020a	1303205	
17)	7264009	11/08/13 09:15		SW	S3			036a	1303205	

Prep Employee: DC01155

11/6/2013

v 1.0.1

Batch# 13 309 5711 001

LLENS Batch Chronology and Change Log - SW SW846 Hg Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/5/13 15:37	01155
2)	Final Vol	19119	11/6/13 10:16	01155
3)	Trial		11/6/13 10:16	01155
4)	Sample Wt	19119	11/6/13 10:35	01155
5)	Upload Prep	US19PCC1851	11/6/13 13:28	01155

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5711 SW SW846 Hg Digest

Batch# 13 309 5711 001

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					.6000	100.0000	1
LCSW					1.0000	100.0000	1
7257236	11/11/13	P8			.6216	100.0000	1
7257237FD	11/11/13	P8		FD	.6203	100.0000	1
7257239	11/11/13	P8	SP816		.6157	100.0000	1
7257240U	11/11/13	P8	SP824		.6003	100.0000	1
7257240R	11/11/13	P8	SP824		.6375	100.0000	1
7257240M	11/11/13	P8	SP824		.6351	100.0000	1
7257240D	11/11/13	P8	SP824		.6034	100.0000	1
7257243	11/11/13	P8	SP719		.6401	100.0000	1
7257244	11/11/13	P8	SP619		.6270	100.0000	1
7258716	11/13/13	P8			.6174	100.0000	1
7263052	11/14/13	N8	WHERC	KVM03-02	.6049	100.0000	1
7263053	11/14/13	N8	XHERC	KVM03-03	.6152	100.0000	1
7263054	11/14/13	N8	PHERC	KVM03-04	.6446	100.0000	1
7263055	11/14/13	N8	OHERC	KVM03-05	.6073	100.0000	1
7264009	11/08/13	S3	ASTWC		.6007	100.0000	1

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 CCV	H13-301G	Hg 1.0 mg/L Cont		11-04-13	H13-301C	.10 ml			
2	CCV	H	↓		↓	↓	.10			
3	CRA	I	Hg 0.1 mg/L Cont			H13-301D	.20			
4	Std Cal	J	Hg 0.1 mg/L Cal			H13-301B	.20			
5	↓	K	↓			↓	.50			
6		L	Hg 1.0 mg/L Cal			H13-301A	.10			
7		m	↓			↓	.25			
8		N	↓		↓	↓	.50 ↓			
9	↓	O	—		—	—	—			
10	SI	P	Hg 0.1 mg/L Cal		11-04-13	H13-301B	.10 ml			
11	CRA	Q	Hg 0.1 mg/L Cont		↓	H13-301D	.10			
12	↓ CRA	R	↓		↓	↓	.40 ↓			
13	Aqua Regia	↓ S	—		—	—	—	19	4	1113030
14	Hydroxylamine	H13-301T	$NH_2OH \cdot HCl$	6	10-26-17	54809 #1	240.00g			
15	↓	↓	NaCl		3-17-18	48151 #1	240.03g			
16		H13-301U	$NH_2OH \cdot HCl$		10-26-17	54809 #1-2	240.02g			
17		↓	NaCl		3-17-18	48151 #1	240.02g			
18		H13-301V	$NH_2OH \cdot HCl$		10-26-17	54809 #2	240.0 lg			
19	↓	↓	NaCl	↓	3-17-18	48151 #1	240.02g			
20	Hg 1.0 mg/L Inter Cont	H13-302A	Hg 10 mg/L Cont	—	1-11-14	H13-1921D	1.0 ml			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua Regia 15ml KMnO4		H13-3015 H13-295F	100	1.0ug/L	DU354	10-28-13	11-04-13	RT
2								1.0				
3								0.2				
4								0.2				
5								0.5				
6								1.0				
7								2.5				
8								5.0				
9								6.0				
10								6.1				
11								6.1				
12								6.4				
13	57	6	40272				76	1:3			10-28-13	
14							2000	12%			4-28-14	
15												
16												
17												
18												
19												
20				To vol w/ 0.15% HNO3		H13-161CC	10	1.0ml	DU354	10-29-13	11-05-13	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-0.1mg/L InterCont	H13-302B	Hg-1.0mg/L Cont	–	11-05-13	H13-302A	1.0ml			
2	Potassium Permanganate	H13-302C	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
3	↓	D	↓	↓	↓	↓	100.07g			
4	↓	E	↓	↓	↓	↓	100.01g			
5	Hg-1.0mg/L InterCal	H13-303A	Hg-10mg/L Cal		1-11-14	H13-192C	1.0ml			
6	0.1mg/L InterCal	B	10mg/L Cal		11-06-13	H13-303A	↓			
7	1.0mg/L InterCont	C	10mg/L Cont		1-11-14	H13-192D	↓			
8	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont		11-06-13	H13-303C	↓			
9	Hg-5700 ICV	E			↓	↓	.25ml	1	2	111330
10	CCV	F			↓	↓	.20	↓	↓	↓
11	CRA	G	Hg-0.1mg/L Cont		↓	H13-303D	.20			
12	Std Cal	H	Hg-0.1mg/L Cal		↓	H13-303B	.20			
13	↓	I	↓		↓	↓	.50			
14	↓	J	Hg-1.0mg/L Cal		↓	H13-303A	.20			
15	↓	K	↓		↓	↓	.25			
16	↓	L	↓		↓	↓	.50			
17	↓	M						↓	↓	↓
18	Hg-1.0mg/L InterCal	H13-304A	Hg-10mg/L Cal		1-11-14	H13-192C	1.0ml			
19	0.1mg/L InterCal	B	1.0mg/L Cal		11-07-13	H13-304A	↓			
20	↓ 1.0mg/L InterCont	C	↓ 10mg/L Cont		1-11-14	H13-192D	↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/0.15% HNO3		H13-161CC	10	0.1	DU354	10-29-13	11-05-13	RT
2				to volume w/ DIH2O			2000	5%	NSM823	10-29-13	4-29-14	RT
3												
4												
5				To vol w/0.15% HNO3		H13-161CC	10	1.0	DU354	10-30-13	11-06-13	RT
6								0.1				
7								1.0				
8								0.1				
9	2ml H2SO4	4'	135111	3.2ml K2S2O8 6ml KmNO4		H13-240R H13-298F	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13								0.5				
14							200	1.0				
15							100	2.5				
16								5.0				
17								0.0				
18				To vol w/0.15% HNO3		H13-161CC	10	1.0	DU354	10-31-13	11-07-13	RT
19								0.1				
20								1.0				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 1.0 mg/L Inter Cont	H13-304D	Hg 1.0 mg/L Cont	7	11-07-13	H13-304C	1.0 ml			
2	Hg-5701 ICV	E					.25			
3	CCV	F					.10			
4	CCV	G					.10			
5	CCV	H					.10			
6	CCV	I	↓	↓	↓	↓	.10			
7	CRA	J	Hg 0.1 mg/L Cont	7		H13-304D	.20			
8	Std Cal	K	Hg 0.1 mg/L Cal			H13-304B	.20			
9	↓	L	↓			↓	.50			
10		M	Hg 1.0 mg/L Cal			H13-304A	.10			
11		N	↓			↓	.25			
12		O	↓	↓	↓	↓	.50			
13	↓	P								
14	S1	Q	Hg 0.1 mg/L Cal	7	11-07-13	H13-304B	.10 ml			
15	CRA	R	Hg 0.1 mg/L Cont		↓	H13-304D	.10			
16	CRA	S	↓	↓	↓	↓	.40			
17	Aqua Regia	T						20	A	1113030
18	Stannous Chloride	U	$SnCl_2 \cdot 2H_2O$	6	8-06-18	55057 #1	200.03g			
19	Stannous Chloride	V	↓	6	↓	↓ #12	200.04g			
20	Hg 1.0 mg/L Inter Cont	H13-305A	Hg 10 ug/L CONT	—	1-11-14	H13-192D	1.0 mL			

Key – Manufacturer (M•)

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2 – Conostan Specialty Products
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10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/ 0.15% HNO3		H13-161CC	10	0.1	DW354	10-31-13	11-07-13	RT
2				5ml Aqua Regia 15ml 1Nm NO3		H13-304-T H13-298F	100	2.5 ug/L				
3							1	1.0				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17	60	4	402.72				80	1:3			10-31-13	
18	200						2000	10/.			4-30-14	
19	200						2000	10/.				
20				to volume w/ 0.15%		HNO_3 - H13-161CC	10	1.0	NSM823	11-01-13	11-02-13	RT

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	1113-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	✓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C				
9	Hg-5700 ICV	E					.25ml	1	4	1113030
10	CCV	F					.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13		I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

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10 – Plasma Pure
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12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume	w/DI H2O		2000	5%	NSM323	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/0.15%	HNO3	HI3-166CC	10	1.0	DW354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/0.15%	HNO3	HI3-166CC	10	1.0	DW354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8								0.1				
9	2ml H2SO4	4	135111	3.2ml K2S2O8 6ml KMnO4		HI3-297R HI3-302C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16								5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.04	↓	↓	↓	↓
18				to volume	w/DI H2O		2000	5%	NSM323	11-04-13	5-04-14	RT
19				To vol w/0.15%	HNO3	HI3-166CC	10	1.0	DW354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L InterCont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-288D	1.0ml			
2	Hg-0.1mg/L InterCont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		m	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	91	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

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11 – Solutions Plus
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13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15% HNO3	H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DU354

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 Std Cal	H13-309W	Hg-0.1mg/L Cal		11-12-13	H13-309B	.50ml			
2		X	Hg-1.0mg/L Cal			H13-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-1.0mg/L Inter Cal	H13-310A	Hg-10mg/L Cal		H-15-14	H13-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	H13-310N				
9	1.0mg/L Inter Conf	C	10mg/L Conf		H-15-14	H13-288D				
10	0.1mg/L Inter Conf	D	1.0mg/L Conf		11-13-13	H13-310C				
11	Hg-5700 ICV	E					.25ml	1	H	1113030
12	CCV	F	11-6-13 DV355y ③				.20			
13	CRA	G	Hg-0.1mg/L ~~Pal~~ Conf			H13-310D	.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H13-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			H13-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	H13-310N	$KMnO_4$ # 1	6	4-10-18	46760	100.04g			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua 25ml Km	Aqua NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O3 6ml KmNO4		H13-297R H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

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C = KCl
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E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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* * units are mg/L unless otherwise specified

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Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7263052	SD-R2-L-5-01D		X	1	
7263053	SD-R2-L-5-02		X	1	
7263054	SD-R2-K-5-2		X	1	
7263055	SD-R2-K-5-1		X	1	
7263060	FB-02_11042013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Ashland, Inc.
SDG: KVM03

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
TOC by Lloyd Kahn	13311049532A	B262379B	11/07/2013 21:35:00
		262379Q	11/07/2013 21:26:00
		7263052	11/08/2013 00:35:00
		7263053	11/08/2013 02:08:00
		7263054	11/08/2013 02:22:00
		7263055	11/08/2013 02:32:00
Total Organic Carbon	13312049501A	P31249AB	11/08/2013 03:21:00
		P31249AQ	11/08/2013 03:07:00
Total Organic Carbon	13312049501B	7263060	11/08/2013 08:10:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM03
Matrix: LIQUID

Fraction: Instrumental Wet Chemistry

13312049501A / P31249AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Organic Carbon	TOC	11/08/13	N.D.	mg/l	0.50	1.0

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM03
Matrix: SOLID

Fraction: Instrumental Wet Chemistry

13311049532A / B262379B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
TOC by Lloyd Kahn	TOC	11/07/13	N.D.	mg/kg	100	300

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM03
Matrix: LIQUID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: P31249AQ	Batch: **13312049501B** (Sample number(s): 7263060)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Organic Carbon	TOC	25	25.23	NA	101	NA	91-113	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM03
Matrix: SOLID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: Q262379	Batch: **13311049532A** (Sample number(s): 7263052-7263055)								
Parameter	**ME**	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	5880	4879.58	NA	83	NA	47-143	NA	NA

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM03

Instrument ID: 15610
Calibration Date: 11/01/2013

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	CC
TOC	12300	72009	98977	229220	458881	888166	0.9999

Acceptance Range:
ICV/CCV: 90%-110%
ICB/CCB: < LOQ

Concentration units: mg/L

Batch Numbers: 13312049501A, 13312049501B
Run Start Dates: 11/08/2013
Run Names: 1331201G03

	TOC		
Sample	True	Result	%Rec
ICV	25	25.443	102
ICB	0	ND	NA
High Chk	40	41.212	103
Low Chk	12.5	13.157	105
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.084	100
CCB	0	ND	NA
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.059	100
CCB	0	ND	NA

* = Out of Specification are immediately followed by two acceptable CCVs

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM03

Instrument ID: 08610
Calibration Date: 11/04/13

Analysis	0.3 mg C	0.9 mg C	3.0 mg C	6.0 mg C	CC
TOC	509	1275	3416	6312	0.9985

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < LOQ

Units: CTS

Batch Numbers: 13312049501A
Analysis Dates: 11/07/2013/-11/08/2013

	TOC		
Sample	True	Result	%Rec
ICV	3.0	2.547	85*
ICV	3.0	2.692	90
ICV	3.0	2.811	94
ICB	0	ND	NA
CCV2	3.0	2.888	96
CCB	0	ND	NA
CCV2	3.0	2.597	87*
CCB	0	ND	NA
CCV2	3.0	2.770	92
CCV2	3.0	2.842	95
CCB	0	ND	NA
CCV2	3.0	2.780	93

* = Out of Specifications

Raw Data

Instrumental Wet Chemistry

Fraction: Instrumental Wet Chemistry

00383: TOC by Lloyd Kahn Analyte Name	Default MDL	Default LOQ	Units
TOC by Lloyd Kahn	100	300	mg/kg
TOC by Lloyd Kahn	100	300	mg/kg

00273: Total Organic Carbon Analyte Name	Default MDL	Default LOQ	Units
Total Organic Carbon	0.50	1.0	mg/l

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.4.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature]

Sucrose Soln Lot #: 042012 exp 4.20.15
15000 mg/L ICH p. 10. 20.13
e. 11.19.13
BK.146420 p.21

Run #: 1 3 3 0 8 C AL — CALIB —

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	BLANK	0.000	0.0				0027				
2	0.3 STD	509 cts.	1.0 µl				0036				
3	0.9 STD	1275 cts.	3.0 µl				0048				
4	3.0 STD	3416 cts.	10.0 µl				0059				
5	6.0 STD	6312 cts.	20.0 µl				0111				
6	ICV 3.0	2.547	0.2 mL	OS			0124		85%		
7	ICV 3.0	2.692	0.2 mL	IS			0133		90%		
8	ICV 3.0	2.811	0.2 mL	↓			0142		94%		
9	ICB	-.226	0.0	↓			0149				N/A

Verified by: EP/LD Date: 11/4/13

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SOLIDS: EXTERNALLY ABORTED

Bk. 177658
p. 16

13308-CAL

Omega
Inst. 8610
11/4/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:21:08 2013

1

#0001 00:27:56 TC SPL#01 0.000 mg 0000000 cts 000.000 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:28:23 2013

#0001 00:36:47 TC STD#01 000.300 mgC 0000509 cts

2

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
RF = 589.391 ugC/k-cts
R2 = 0.0000
OFFSET = 0 cts (0.00000 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:37:13 2013

#0001 00:48:14 TC STD#02 000.900 mgC 0001275 cts

3

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
RF = 783.290 ugC/k-cts
R2 = 1.0000
OFFSET = 126 cts (-0.099 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:48:40 2013

#0001 00:59:46 TC STD#03 003.000 mgC 0003416 cts

4

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
RF = 915.475 ugC/k-cts
R2 = 0.9958
OFFSET = 204 cts (-0.187 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:00:12 2013

#0001 01:11:50 TC STD#04 006.000 mgC 0006312 cts

(5)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
STD#4 = 06.000 mgC 1 reps Avg Area = 6312.0 cts %rsd = 0.00
RF = 964.399 ugC/k-cts
R2 = 0.9970
OFFSET = 233 cts (-0.226 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:12:16 2013

(6)

#0001 01:24:48 TC SPL#01 3.000 mg 0002875 cts 002.547 mgC 84.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:25:15 2013

SOLIDS: EXTERNALLY ABORTED

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:27:10 2013

(7)

#0001 01:33:56 TC SPL#01 3.000 mg 0003025 cts 002.692 mgC 89.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:35:44 2013

(8)

#0001 01:42:36 TC SPL#01 3.000 mg 0003149 cts 002.811 mgC 93.71 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:43:04 2013

(9)

#0001 01:49:49 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.7.13 - 11.8.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature]

Sucrose Soln Lot #: 042012 exp. 4.20.15

15000mg/L KHP p. 10.20.13 e. 11.19.13

BK.146420 p.21

Run #: 1 3 3 1 1 1

KVM03 Page 23 of 2349

Inj #	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	CCV 3.0	2.588	0.2 mL	(IS)			2038		96%		
2	CCB	-.226	0.0	↓			2049				
3	~~LCSS~~	.466	(4) ~~0.0~~ 95.5	4879.55	10.47	3141	2126	133110495S2A	TV=5850 83% (E)		
4	~~LCSS~~ PBS	-.226	(4) ~~0.0~~ ~~95.5~~ 0.0	0	1	300	2135		(E)		
5	7262377	.072	999.3	72.05	1.00	300	2157				POM89
6	7262378	.281	998.7	RPT			2210		Irreg. peak		
7	7262379-W	.278	340.3	RPT			2224				
8	↓ -D	.564	545.5	1033.91	1.83	549	2308				
9	↓ -R	2.681	157.9	16979.1	6.33	1899	2315		SA=18999 81% (E)		
10	7262379-W	.945	601.3	1571.59	1.66	498	2340				
11	7262378	.871	999.1	871.78	1.00	300	2351				↓
12	7263052	1.771	81.8	21650.37	12.22	3666	0035				KVM03
13	CCV 3.0	2.597	0.2mL	0%			0116		87%		
14	CCV 3.0	2.770	0.2 mL	(E)			0126		92%		

Verified by: BF/LCS Date: 11/12/13

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.8.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: Emily

Sucrose Soln Lot #: 042012 exp. 4.20.15

Run #: 133111

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
15	CCV 3.0	2.542	0.2mL	IS			0135		95%		
16	CCB	-.226	0.0	↓			0146				
17	7263053	1.430	66.3	21568.63	15.08	4524	0208	131104953ZA			KVM03
18	7263054	3.501	79.5	44037.74	12.58	3774	0222				↓
19	7263055	2.636	56.2	46903.91	17.79	5337	0232				
20	7265225	1.394	62.8	22197.45	15.92	4776	0246				KVM04
21	7265226	3.186	81.6	39044.12	12.25	3675	0300				↓
22	7265227	1.968	91.4	21531.73	10.94	3282	0312	↓			↓
23	CCV 3.0	2.780	0.2mL	IS			0321		93%		
24	CCB	-.226	0.0	↓			0329				
											N/A

Verified by: EF/LS Date: 11/8/13

BK-177658
p. 24-25

13311-1

Inst. 8610
11/8/13

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 20:30:50 2013 (1)

#0001 20:38:17 TC SPL#01 3.000 mg 0003228 cts 002.888 mgC 96.25 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 20:38:44 2013 (2)

#0001 20:49:23 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:02:36 2013 (3)

#0001 21:26:25 TC SPL#01 95.500 mg 0000717 cts 000.466 mgC 0.49 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:28:47 2013 (4)

#0001 21:35:41 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:50:03 2013 (5)

#0001 21:57:01 TC SPL#01 999.300 mg 0000309 cts 000.072 mgC 0.01 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:03:42 2013 (6)

#0001 22:10:32 TC SPL#01 998.700 mg 0000525 cts 000.281 mgC 0.03 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:16:33 2013 (7)

#0001 22:24:09 TC SPL#01 340.300 mg 0000522 cts 000.278 mgC 0.08 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:45:36 2013 (8)

#0001 23:08:58 TC SPL#01 545.500 mg 0000819 cts 000.564 mgC 0.10 %C

OI Analytical
TOC Solids V3.0 (9)

Analysis Date: Thu Nov 07 23:10:56 2013

#0001 23:18:21 TC SPL#01 157.900 mg 0003014 cts 002.681 mgC 1.70 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 23:33:15 2013 (10)

#0001 23:40:05 TC SPL#01 601.300 mg 0001214 cts 000.945 mgC 0.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 23:44:47 2013 (11)

#0001 23:51:52 TC SPL#01 999.100 mg 0001137 cts 000.871 mgC 0.09 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 00:28:15 2013 (12)

#0001 00:35:32 TC SPL#01 81.800 mg 0002070 cts 001.771 mgC 2.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 00:55:08 2013

SOLIDS: EXTERNALLY ABORTED

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:06:52 2013 (13)

#0001 01:16:17 TC SPL#01 3.000 mg 0002927 cts 002.597 mgC 86.58 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:21:15 2013 (14)

#0001 01:28:02 TC SPL#01 3.000 mg 0003106 cts 002.770 mgC 92.33 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:31:11 2013 (15)

#0001 01:38:00 TC SPL#01 3.000 mg 0003181 cts 002.842 mgC 94.74 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:40:03 2013 (16)

#0001 01:46:54 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:55:06 2013 (17)

#0001 02:08:52 TC SPL#01 3.000 mg 0001727 cts 001.430 mgC 2.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:15:35 2013

18

#0001 02:22:19 TC SPL#01 79.500 mg 0003864 cts 003.501 mgC 4.40 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:25:59 2013

19

#0001 02:32:52 TC SPL#01 56.200 mg 0002967 cts 002.636 mgC 4.69 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:39:38 2013

20

#0001 02:46:23 TC SPL#01 62.800 mg 0001679 cts 001.394 mgC 2.22 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:53:46 2013

21

#0001 03:00:32 TC SPL#01 81.600 mg 0003537 cts 003.186 mgC 3.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:05:25 2013

22

#0001 03:12:11 TC SPL#01 91.400 mg 0002274 cts 001.968 mgC 2.15 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:13:55 2013

23

#0001 03:21:14 TC SPL#01 3.000 mg 0003116 cts 002.780 mgC 92.65 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:22:55 2013

24

#0001 03:29:41 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331101G03

Data File Name: 133112.G03

Run Start Date/Time: Thursday, November 07, 2013 01:05:22

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS	25.0	22.63	28.35
PB	0.0	-1.00	1.00

Analyst: [signature] 495 Date: 11.7.13

Verified By: [signature] Date: 11/8/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331101G03 Instrument Number: 15610

Employee ID: 0495

Injection # 0 — Date/Time: 11/7/2013 1:05:22AM

CLEANUP

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		3672

Comments:

Injection # 1 — Date/Time: 11/7/2013 1:17:13AM

RINSE

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		2237

Comments:

Injection # 2 — Date/Time: 11/7/2013 1:37:28AM

25 TIC

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	24.93600		222010

IS

Comments:

Injection # 3 — Date/Time: 11/7/2013 1:44:04AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	24.90900		221770

% Recovery = 100

Comments:

Injection # 4 — Date/Time: 11/7/2013 1:52:54AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.11600		2001

Comments:

Injection # 5 — Date/Time: 11/7/2013 2:01:35AM Batch Number: 13311049502A Element: TOC V

LCS

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	24.89800	25.56200	25.56200	224616

Comments: TV=25 1029 IS

Injection # 6 — Date/Time: 11/7/2013 2:15:52AM Batch Number: 13311049502A Element: TOC V

PB

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.14500	0.08200	0.14500	1974

IS

Comments:

Injection # 7 — Date/Time: 11/7/2013 2:31:40AM Batch Number: 13311049502A Element: TOC V

7261380

Class: U********* SDG: CLB88

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	5.18200	5.46700	5.46700	48168

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331101G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	V
8	11/7/2013 2:46:39AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: D*********	SDG: CLB88	Area Counts
1.0	5.26100	5.65400	Calculated Result (mg/L): 5.65400		49343

7261380

Comments: R = 3 (IS)

Injection #	Date/Time	Batch Number	Element	V
9	11/7/2013 3:01:41AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: R*********	SDG: CLB88	Area Counts
1.0	15.71100	16.14900	Calculated Result (mg/L): 16.14900		142176

7261380

Comments: SA=10 10.79 (IS)

Injection #	Date/Time	Batch Number	Element	V
10	11/7/2013 3:16:41AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: **********	SDG: CLB88	Area Counts
1.0	40.04600	41.53900	Calculated Result (mg/L): 41.53900		362564

7261383

Comments:

Injection #	Date/Time	Batch Number	Element	V
11	11/7/2013 3:31:46AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: **********	SDG: CLB88	Area Counts
25.0	19.20000	19.47100	Calculated Result (mg/L): 486.77500		172364

7261384

Comments:

Injection #	Date/Time	Batch Number	Element	V
12	11/7/2013 3:46:49AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: **********	SDG: CLB88	Area Counts
25.0	19.08400	19.39100	Calculated Result (mg/L): 484.77500		171496

7261386

Comments:

Injection #	Date/Time	Batch Number	Element	V
13	11/7/2013 4:02:02AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: **********	SDG: CLB88	Area Counts
1.0	3.39800	4.06200	Calculated Result (mg/L): 4.06200		34036

7261387

Comments:

Injection #	Date/Time	Batch Number	Element	V
14	11/7/2013 4:17:07AM	13311049502A	TOC	✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class: **********	SDG: CLB88	Area Counts
10.0	108.43700	110.40500	Calculated Result (mg/L): 1104.05000		970904

7261389

Comments: RPT- O.R.

Injection #	Date/Time
15	11/7/2013 4:32:08AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.09800	% Recovery = 100	223448

CCV2 (IS)

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331101G03 Instrument Number: 15610

Employee ID: 0495

Injection # 16 — Date/Time: 11/7/2013 4:40:11AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.36000		4157

Comments:

Injection # 17 — Date/Time: 11/7/2013 4:48:27AM — Batch Number: 13311049502A — Element: TOC — V

7261397 — Class: ********** — SDG: CLB88

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.80500	1.94400	1.94400	17595

Comments:

Injection # 18 — Date/Time: 11/7/2013 5:03:50AM — Batch Number: 13311049502A — Element: TOC — V

7261398 — Class: ********** — SDG: CLB88

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	5.40400	5.63500	5.63500	49896

Comments:

Injection # 19 — Date/Time: 11/7/2013 5:18:54AM — Batch Number: 13311049502A — Element: TOC — V

7261399 — Class: ********** — SDG: CLB88

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	6.09700	6.27500	6.27500	55801

Comments:

Injection # 20 — Date/Time: 11/7/2013 5:33:57AM — Batch Number: 13311049502B — Element: TOC — V

7264941 — Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	5.45300	5.53400	5.53400	49665

Comments:

Injection # 21 — Date/Time: 11/7/2013 5:48:58AM — Batch Number: 13311049502B — Element: TOC — V

7264942 — Class: U*********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.01600	3.03600	3.03600	27793

Comments:

Injection # 22 — Date/Time: 11/7/2013 6:04:00AM — Batch Number: 13311049502B — Element: TOC — V

7264942 — Class: D*********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	2.91900	2.97300	2.97300	27087

Comments:

Injection # 23 — Date/Time: 11/7/2013 6:19:07AM — Batch Number: 13311049502B — Element: TOC — V

7264942 — Class: R*********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	13.64200	13.99800	13.99800	123472

Comments: SA=10 1107o

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331101G03 Instrument Number: 15610

Employee ID: 0495

Injection # 24 Date/Time: 11/7/2013 6:34:20AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	24.60600	% Recovery = 98	219079

Comments: ID

Injection # 25 Date/Time: 11/7/2013 6:41:59AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.15300		2324

Comments:

Analyst: [signature] 495 Date: 11.7.13

Verified By: [signature] Date: 11/8/13

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03

Data File Name: 13306CAL.G03

Run Start Date/Time: Friday, November 01, 2013 23:54:51

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

CALIB.

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS			
PB	0.0	-1.00	1.00

Analyst: OSMathurst 495 Date: 11.3.13

Verified By: BS/LCB Date: 11/4/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
0 CLEANUP	11/1/2013 11:54:51PM	1.0	0.00000		2982
Comments:					
1 RINSE	11/2/2013 12:11:00AM	1.0	0.16100		2467
Comments:					
2 MBLANK	11/2/2013 12:17:28AM	1.0	0.00000		1340
Comments:					
3 S0	11/2/2013 1:13:12AM	1.0	0.00000		2573
Comments:					
4 S1.0	11/2/2013 1:27:23AM	1.0	1.00000		12300
Comments:					
5 S7.5	11/2/2013 1:34:03AM	1.0	7.50000		72009
Comments:					
6 S10.0	11/2/2013 1:43:13AM	1.0	10.00000		98977
Comments:					
7 S25.0	11/2/2013 1:51:32AM	1.0	25.00000		229220
Comments:					

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection # 8 Date/Time: 11/2/2013 1:59:55AM

S50.0

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	50.00000		458881

Comments:

Injection # 9 Date/Time: 11/2/2013 2:08:09AM

S100.0

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	100.00000		888166

Comments:

Injection # 10 Date/Time: 11/2/2013 2:21:54AM

RINSE

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.25300		3214

Comments:

Injection # 11 Date/Time: 11/2/2013 2:29:11AM

ICV

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.44300		225534

Comments: 1029. IS

Injection # 12 Date/Time: 11/2/2013 2:36:55AM

ICB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.09000		1766

Comments:

Analyst: [signature] 495 Date: 11.3.13

Verified By: BPG Date: 11/4/13

User ID:jsm00495 Name:James S. Mathiot
Title:Chemist Dept:4027

Calibration - Quick View -TOC

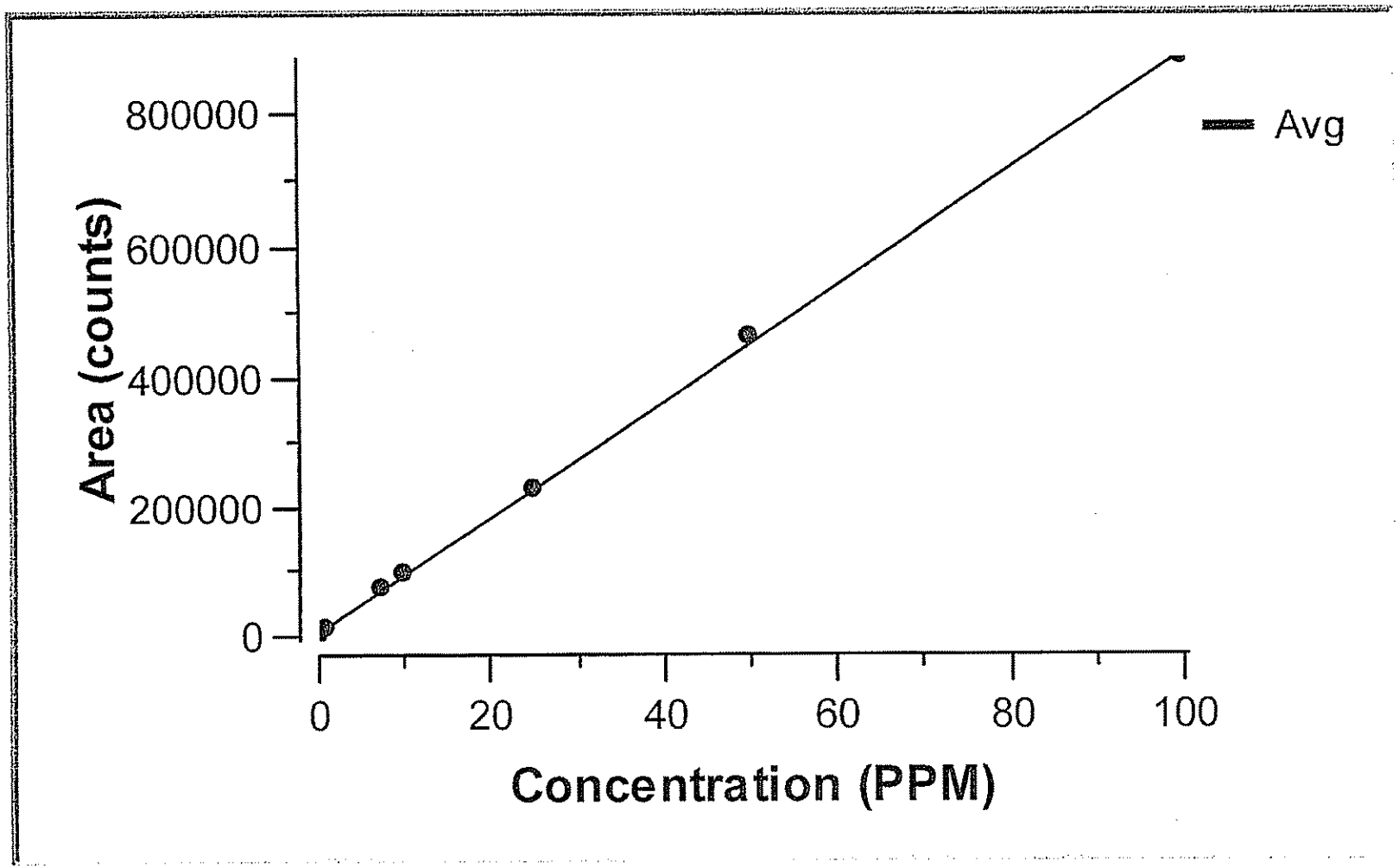
Revision: 19-lli-new - Jun 14, 2012; 03-47-17 PM
Modified By: toc
Date Created: 2012/06/14; 03:47 PM
Last Modified: 2013/11/02; 12:17 AM
Last Calibrated: 2013/11/02; 02:08 AM

RF(ugC/k-cnt): 0.2256
R2: 0.9998
Reagent Blank(cts): 970
Offset Area(cts): 6,700
Offset Mass(ugC): -1.51

Std #	Conc (PPM)	Volume (mL)	# Reps	Area	Std. Dev	%RSD	Date Analysed
RW	0.000	2.000	1	2,573	0	0.00	2013-11-02; 01:13AM
1	1.000	2.000	1	12,300	0	0.00	2013-11-02; 01:27AM
2	7.500	2.000	1	72,009	0	0.00	2013-11-02; 01:34AM
3	10.000	2.000	1	98,977	0	0.00	2013-11-02; 01:43AM
4	25.000	2.000	1	229,220	0	0.00	2013-11-02; 01:51AM
5	50.000	2.000	1	458,881	0	0.00	2013-11-02; 01:59AM
6	100.000	2.000	1	888,166	0	0.00	2013-11-02; 02:08AM

Erik J. Frederiksen
Manager

NOV 04 2013


800000
600000
400000
200000
0
Area (counts)
0
20
40
60
80
100
Concentration (PPM)
Avg

NOV 0 4 2013

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03

Data File Name: 13312.G03

Run Start Date/Time: Friday, November 08, 2013 01:54:08

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS	25.0	22.63	28.35
PB	0.0	-1.00	1.00

Analyst: J S Matthews 495 Date: 11.8.13

Verified By: EF/CS Date: 11/11/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 0 — Date/Time: 11/8/2013 1:54:08AM

CLEANUP

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		3925

Comments:

Injection # 1 — Date/Time: 11/8/2013 2:06:29AM

RINSE

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		2360

Comments:

Injection # 2 — Date/Time: 11/8/2013 2:26:24AM

25 TIC

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.23700		224675

IS

Comments:

Injection # 3 — Date/Time: 11/8/2013 2:32:59AM

HIGH CH

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	41.21200		366281

Comments: TV=40 103%

Injection # 4 — Date/Time: 11/8/2013 2:42:16AM

LOW CHE

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	13.15700		117599

Comments: TV=12.5 105%

Injection # 5 — Date/Time: 11/8/2013 2:50:29AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.07200		223211

% Recovery = 100

Comments:

Injection # 6 — Date/Time: 11/8/2013 2:58:16AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.14800		2280

Comments:

Injection # 7 — Date/Time: 11/8/2013 3:07:08AM Batch Number: 13312049501A Element: TOC

LCS

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.05800	25.23200	25.23200	223858

Comments: TV=25 101% IS

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	
8	11/8/2013 3:21:54AM	13312049501A	TOC	V

Class: **********

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
PB	1.0	0.23300	0.13500	0.23300	2601

Comments: IJ

Injection #	Date/Time	Batch Number	Element	
9	11/8/2013 3:37:18AM	13311049502A	TOC	V

Class: ********** SDG: CLB88

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261389	25.0	43.07200	44.64600	1116.15000	389748

Comments:

Injection #	Date/Time	Batch Number	Element	
10	11/8/2013 3:52:12AM	13312049501A	TOC	V

Class: ********** SDG: CLB89

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261416	1.0	2.16400	2.46600	2.46600	21489

Comments:

Injection #	Date/Time	Batch Number	Element	
11	11/8/2013 4:07:03AM	13312049501A	TOC	V

Class: ********** SDG: CLB89

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261417	1.0	1.37500	1.59900	1.59900	14149

Comments:

Injection #	Date/Time	Batch Number	Element	
12	11/8/2013 4:22:13AM	13312049501A	TOC	V

Class: ********** SDG: CLB89

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261418	1.0	1.30200	1.60400	1.60400	13852

Comments:

Injection #	Date/Time	Batch Number	Element	
13	11/8/2013 4:37:36AM	13312049501A	TOC	V

Class: ********** SDG: CLB89

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261420	1.0	14.23400	16.98500	16.98500	139334

Comments: RPT- Rpd

Injection #	Date/Time	Batch Number	Element	
14	11/8/2013 4:52:22AM	13312049501A	TOC	V

Class: ********** SDG: CLB89

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261435	1.0	1.07800	1.29700	1.29700	11497

Comments:

Injection #	Date/Time	Batch Number	Element	
15	11/8/2013 5:07:43AM	13312049501A	TOC	V

Class: ********** SDG: CLB90

	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261436	1.0	1.76400	2.28200	2.28200	18899

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 16 — Date/Time: 11/8/2013 5:22:50AM — Batch Number: 13312049501A — Element: TOC — V

7261437 — Class: ********** — SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.52800	4.15800	4.15800	35033

Comments:

Injection # 17 — Date/Time: 11/8/2013 5:38:08AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.08400		223318

% Recovery = 100 TS

Comments:

Injection # 18 — Date/Time: 11/8/2013 5:45:55AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.26400		3308

Comments:

Injection # 19 — Date/Time: 11/8/2013 5:54:18AM — Batch Number: 13312049501A — Element: TOC — V

7261438 — Class: ********** — SDG: CLB90 — V

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	2.13000	2.50400	2.50400	21509

Comments:

Injection # 20 — Date/Time: 11/8/2013 6:09:42AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: U********** — SDG: CS037 — ✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.57400	3.89300	3.89300	34067

Comments:

Injection # 21 — Date/Time: 11/8/2013 6:24:59AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: D********** — SDG: CS037 — ✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.65000	4.09400	4.09400	35298

Comments:

Injection # 22 — Date/Time: 11/8/2013 6:40:09AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: R********** — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	14.20100	14.82900	14.82900	129630

Comments: SIA=10 1099 ±S

Injection # 23 — Date/Time: 11/8/2013 6:54:42AM — Batch Number: 13312049501A — Element: TOC — V

~~7251564~~ — Class: ********** — SDG: CS037 — ✓

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.32200	0.30600	0.32200	3753

7261564

Comments:

(3) asm 495 11.8.13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	V
24	11/8/2013 7:10:03AM	13312049501B	TOC	✓

Class: ********** SDG: CS037

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261566	1.0	3.50700	4.27900	4.27900	35481

Comments:

Injection #	Date/Time	Batch Number	Element	V
25	11/8/2013 7:25:22AM	13312049501B	TOC	

Class: ********** SDG: CP177

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261929	1.0	19.61200	22.51700	22.51700	187690

Comments: Rpt - Rpd

Injection #	Date/Time	Batch Number	Element	V
26	11/8/2013 7:40:10AM	13312049501B	TOC	✓

Class: ********** SDG: CP177

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7261930	1.0	0.55100	0.44300	0.55100	5378

Comments:

Injection #	Date/Time	Batch Number	Element	V
27	11/8/2013 7:55:12AM	13312049501B	TOC	✓

Class: ********** SDG: POM89

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7262380	1.0	0.57500	0.47400	0.57500	5619

Comments:

Injection #	Date/Time	Batch Number	Element	V
28	11/8/2013 8:10:24AM	13312049501B	TOC	✓

Class: ********** SDG: KVM03

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7263060	1.0	0.32600	0.27800	0.32600	3647

Comments:

Injection #	Date/Time
29	11/8/2013 8:25:53AM

Sample	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
CCV2	1.0	25.07200		223214

% Recovery = 100

Comments:

Injection #	Date/Time
30	11/8/2013 8:33:33AM

Sample	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
CCB	1.0	0.17400		2515

Comments:

Injection #	Date/Time	Batch Number	Element	V
31	11/8/2013 8:42:38AM	13312049501B	TOC	✓

Class: U********** SDG: SOF26

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
7265107	1.0	1.87700	1.84800	1.87700	17483

Comments:

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

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Combustion TOC Prep Log
Analysis #2079, #0383

Phosphoric Lot #053113 exp. 11.30.13

Oven ID# 1887

Oven Temperature (°C) 75°

Tray #: 30 Balance ID: B35614 Time In: 2015 Time Out: 2030

Position	Date	Analyst	Sample #	Weight (mg)	Batch Number	Comments
A1	11.7.13	Jsm495	PBS	0.0	13311049532A	
A2			LCSS	95.5		
A3			7262377	999.3		
A4			7262378	998.7		
A5			7262379-4	340.3		
A6			-D	~~3~~ 545.5		
A7			-R	157.9		
A8			7262378	999.1		
B1			7262379-4	601.3		
B2			7263052	81.8		
B3			7263053	66.3		
B4			7263054	79.5		
B5			7263055	56.2		
B6			7265225	62.8		
B7			7265226	81.6		
B8			7265227	91.4		
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						

N/A

Verified by: [illegible] Date: 11/8/13

2705.04

175470 26

Wet Chemistry Data

Case Narrative/Conformance Summary

Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Water Quality

Fraction: Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7263051	SW-R2-L-5-2	X		1	
7263056	SW-R2-M-5-1	X		1	
7263057	SW-R2-M-5-2	X		1	
7263058	DUP-01	X		1	Field Duplicate Sample
7263059	FB-01_11042013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM03

Water Quality

Fraction: Wet Chemistry

BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

QC Summary

Wet Chemistry

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Quality Control Reference List
Water Quality

CLIENT: Ashland, Inc.
SDG: KVM03

Fraction: Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
pH	13309003103A	P003103Q	11/05/2013 17:20:00
		7263051	11/05/2013 18:19:00
		7263056	11/05/2013 18:23:00
		7263057	11/05/2013 18:33:00
		7263058	11/05/2013 18:36:00
		7263059	11/05/2013 18:26:00
Total Hardness	13311001104A	P001104B	11/08/2013 00:36:00
		P001104Q	11/08/2013 00:44:00
		7263051	11/08/2013 00:00:00
		7263056	11/08/2013 00:08:00
		7263058	11/08/2013 01:08:00
		7263059	11/08/2013 01:24:00
Total Hardness	13311001104B	7263057 BKG	11/08/2013 00:52:00
		7263057 DUP	11/08/2013 01:00:00

Quality Control Summary
Method Blank
Water Quality
SDG: KVM03
Matrix: LIQUID

Fraction: Wet Chemistry

13311001104A / P001104B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/08/13	N.D.	mg/l as CaCO3	3.0	5.0

Water Quality
Fraction: Wet Chemistry

BKG: 7263057 DUP: 7263057 **Parameter**	Batch: **13311001104B** (Sample number(s): 7263057) **ME**	**Unspiked Conc mg/l as CaCO3**	**DUP Conc mg/l as CaCO3**	**%RPD**	**%RPD Limits**
Total Hardness	TI	38.93	38.77	0	5

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

Water Quality
Fraction: Wet Chemistry

LCS: P003103	Batch: **13309003103A** (Sample number(s): 7263051, 7263056-7263059)								
Parameter	**ME**	**Spike Added Std. Units**	**LCS Conc Std. Units**	**LCSD Conc Std. Units**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
pH	MTR	6.86	6.86	NA	100	NA	92-106	NA	NA

LCS: P001104	Batch: **13311001104A** (Sample number(s): 7263051, 7263056, 7263058-7263059) Batch: **13311001104B** (Sample number(s): 7263057)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	41.15	NA	103	NA	96-110	NA	NA

Raw Data

Wet Chemistry

Fraction: Wet Chemistry

12152: pH Analyte Name	Default MDL	Default LOQ	Units
pH	0.010	0.010	Std. Units

12147: Total Hardness Analyte Name	Default MDL	Default LOQ	Units
Total Hardness	3.0	5.0	mg/l as CaCO3

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Water Quality Run Report

Run Name: 20131105-31 **Instrument: 19074**

Analyst : 1124 - Michele L. Graham Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Bicarbonate	mg/l as CaCO3
Carbonate	mg/l as CaCO3
Phenolphthalein Alkalinity	mg/l as CaCO3
Specific Conductance	umhos/cm
Temperature of pH	Degrees C
Total Alkalinity	mg/l as CaCO3
pH	Std. Units

Analysis Name	QC Check	True Value	Acceptance Range
Specific Conductance	CCVSC1	147.00	132.30 - 161.70
Specific Conductance	CCVSC2	1413.00	1271.70 - 1554.30
Specific Conductance	CCVSC3	12900.00	11610.00 - 14190.00
pH	CCVPH2	7.00	6.27 - 7.73

Analysis Name	QC Check	Acceptance Range
Specific Conductance	CCB	< 5.00
Specific Conductance	PBW	< 5.00
Total Alkalinity	CCB	< 2.00
Total Alkalinity	PBW	< 2.00

Analysis Name	Reagent Name	Lot Info

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Specific Conductance	LCSSC	147.00	140.39 - 153.47	174884p68
Total Alkalinity	LCSAK	188.00	168.26 - 207.55	174884p56
pH	LCSPH	7.00	6.27 - 7.73	C129-02
pH	LCSSSFL	7.00	6.62 - 7.38	

Water Quality Run Report

Run Name: 20131105-31 **Instrument: 19074**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
0957 - Kenneth A. Bell

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262972	35263	D	13309003101B	1	070A	11/05/2013 16:45

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Specific Conductance	1211.00	1211.00	Y	Y		
Bicarbonate	58.46	58.46				
Carbonate	0.00	0.00				
Hydroxide	0.00	0.00				
Phenolphthalein Alkalinit	0.00	0.00				
pH	7.75	7.75				
Total Alkalinity	58.46	58.46				
Temperature of pH	21.53	21.53				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262973	35264		13309003101B	1	070A	11/05/2013 16:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Specific Conductance	1209.00	1209.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVSC2	35265	CCV		1	11/05/2013 16:49

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Specific Conductance	1398.00	1398.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	35266	CCV		1	11/05/2013 16:52

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.85	6.85		
Temperature of pH	21.15	21.15		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35267	CCB		1	11/05/2013 16:58

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	1.33	1.33		
Carbonate	0.00	0.00		
Specific Conductance	3.39	3.39		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	6.69	6.69		
Total Alkalinity	1.33	1.33		
Temperature of pH	21.24	21.24		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	35268	Q	13309003102A	1	11/05/2013 17:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.85	6.85	Y			
Temperature of pH	21.14	21.14				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	35269	Y	13309003102A	1	11/05/2013 17:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.85	6.85	Y			
Temperature of pH	21.03	21.03				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260600	35270		13309003102A	1	005A	11/05/2013 17:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.53	6.53	Y	Y		
Temperature of pH	21.16	21.16				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260602	35271		13309003102A	1	004A	11/05/2013 17:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.60	5.60	Y	Y		
Temperature of pH	21.27	21.27				

Water Quality Run Report

Run Name: 20131105-31 **Instrument: 19074**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
0957 - Kenneth A. Bell

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262134	35272		13309003102A	1	085A	11/05/2013 17:15

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.99	5.99	Y	Y		
Temperature of pH	21.35	21.35				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	35273	CCV		1	11/05/2013 17:17

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.85	6.85		
Temperature of pH	21.18	21.18		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSPH	35274	Q	13309003103A	1	11/05/2013 17:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.86	6.86	Y			
Temperature of pH	21.11	21.11				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260321	35275		13309003103A	1	004A	11/05/2013 17:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.33	7.33	Y	Y		
Temperature of pH	21.19	21.19				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261520	35276	U	13309003103A	1	085A	11/05/2013 17:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	8.13	8.13	Y	Y		
Temperature of pH	21.18	21.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261520	35277	D	13309003103A	1	085A	11/05/2013 17:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	8.22	8.22	Y			
Temperature of pH	21.18	21.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261525	35278		13309003103A	1	004A	11/05/2013 17:34

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.31	4.31	Y	Y		
Temperature of pH	21.12	21.12				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261526	35279		13309003103A	1	004A	11/05/2013 17:38

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.65	4.65	Y	Y		
Temperature of pH	21.11	21.11				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261527	35280		13309003103A	1	004A	11/05/2013 17:41

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.34	4.34	Y	Y		
Temperature of pH	21.11	21.11				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261534	35281		13309003103A	1	070A	11/05/2013 17:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.22	4.22	Y	Y		
Temperature of pH	21.15	21.15				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262958	35282		13309003103A	1	070A	11/05/2013 17:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.57	7.57	Y	Y		
Temperature of pH	21.37	21.37				

Water Quality Run Report

Run Name: 20131105-31 **Instrument: 19074**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
0957 - Kenneth A. Bell

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262959	35283		13309003103A	1	070A	11/05/2013 17:51

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.34	6.34	Y	Y		
Temperature of pH	21.31	21.31				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	35284	CCV		1	11/05/2013 17:54

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.84	6.84		
Temperature of pH	21.18	21.18		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262960	35285		13309003103A	1	070A	11/05/2013 17:57

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	8.14	8.14	Y	Y		
Temperature of pH	21.24	21.24				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262961	35286	U	13309003103B	1	070A	11/05/2013 18:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.52	5.52	Y	Y		
Temperature of pH	21.18	21.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262961	35287	D	13309003103B	1	070A	11/05/2013 18:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.33	5.33	Y			
Temperature of pH	21.19	21.19				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7258317	35288		13309003103A	1	004A	11/05/2013 18:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	11.31	11.31	Y	Y		
Temperature of pH	21.19	21.19				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263006	35289		13309003103A	1	070A	11/05/2013 18:12

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.57	7.57	Y	Y		
Temperature of pH	21.21	21.21				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263009	35290		13309003103A	1	070A	11/05/2013 18:15

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.11	7.11	Y	Y		
Temperature of pH	21.22	21.22				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263051	35291		13309003103A	1	004A	11/05/2013 18:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.20	7.20	Y	Y		
Temperature of pH	21.25	21.25				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263056	35292		13309003103A	1	004A	11/05/2013 18:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.23	7.23	Y	Y		
Temperature of pH	21.32	21.32				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263059	35293		13309003103A	1	004A	11/05/2013 18:26

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.38	6.38	Y	Y		
Temperature of pH	21.27	21.27				

Water Quality Run Report

Run Name: 20131105-31 **Instrument: 19074**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
0957 - Kenneth A. Bell

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	35294	CCV		1	11/05/2013 18:29

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.85	6.85		
Temperature of pH	21.11	21.11		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35295		13309003103A	1	004A	11/05/2013 18:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.21	7.21	Y	Y		
Temperature of pH	21.16	21.16				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263058	35296		13309003103A	1	004A	11/05/2013 18:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.24	7.24	Y	Y		
Temperature of pH	21.16	21.16				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7262962	35297		13309003103A	1	070A	11/05/2013 18:39

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	8.97	8.97	Y	Y		
Temperature of pH	21.08	21.08				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	35298	CCV		1	11/05/2013 18:42

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.86	6.86		
Temperature of pH	21.02	21.02		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35299	CCB		1	11/05/2013 18:47

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	2.08	2.08		
Carbonate	0.00	0.00		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	6.80	6.80		
Total Alkalinity	2.08	2.08		
Temperature of pH	21.14	21.14		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBW	35300	B	13309003104A	1	11/05/2013 18:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Bicarbonate	1.02	1.02				
Carbonate	0.00	0.00				
Hydroxide	0.00	0.00				
Phenolphthalein Alkalinit	0.00	0.00	Y		TALK is out - CCB is >= 2 at 35299	Blank is N.D.
pH	6.05	6.05				
Total Alkalinity	1.02	1.02	Y		CCB is >= 2 at 35299	Blank is N.D.
Temperature of pH	21.25	21.25				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSAK	35301	Q	13309003104A	1	11/05/2013 19:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Bicarbonate	20.97	20.97				
Carbonate	167.59	167.59				
Hydroxide	0.00	0.00				
Phenolphthalein Alkalinit	83.80	83.80	Y		TALK is out - CCB is >= 2 at 35299	TALK is > 10X CCB
pH	10.42	10.42				
Total Alkalinity	188.57	188.57	Y		CCB is >= 2 at 35299	TALK is > 10X CCB
Temperature of pH	21.35	21.35				

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Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	174884/73

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	24.58	24.58	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259635	35475		13311001103A	1	008A	11/07/2013 21:50

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259637	35476		13311001103A	1	008A	11/07/2013 21:55

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.14	1.14	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259639	35477		13311001103A	1	008A	11/07/2013 22:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259860	35478		13311001103A	1	007A	11/07/2013 22:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	76.92	76.92	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259862	35479		13311001103A	1	007A	11/07/2013 22:28

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	61.54	61.54	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259863	35480		13311001103A	1	007A	11/07/2013 22:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	63.36	63.36	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35481	CCV		1	11/07/2013 22:45

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	41.99	41.99		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35482	CCB		1	11/07/2013 22:50

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.42	1.42		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259864	35483		13311001103A	1	007A	11/07/2013 22:58

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	19.65	19.65	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259865	35484		13311001103A	1	007A	11/07/2013 23:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.37	1.37	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259866	35485	U	13311001103B	1	007A	11/07/2013 23:12

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	80.74	80.74	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259866	35486	D	13311001103B	1	007A	11/07/2013 23:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	80.68	80.68	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261490	35487		13311001103A	5	007A	11/07/2013 23:26

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.67	13.35	N		CCV is > 44 at 35458 - For PB;	

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261491	35488		13311001103A	1	007A	11/07/2013 23:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	23.70	23.70	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261492	35489		13311001103A	1	007A	11/07/2013 23:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	53.48	53.48	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261493	35490		13311001103A	1	007A	11/07/2013 23:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	103.03	103.03	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263051	35491		13311001104A	1	007A	11/08/2013 00:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.71	38.71	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263056	35492		13311001104A	1	007A	11/08/2013 00:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	36.91	36.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35493	CCV		1	11/08/2013 00:15

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	21.28	21.28		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35494	CCB		1	11/08/2013 00:20

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.15	1.15		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35495	B	13311001104A	1	11/08/2013 00:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35496	Q	13311001104A	1	11/08/2013 00:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.15	41.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35497	U	13311001104B	1	007A	11/08/2013 00:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.93	38.93	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35498	D	13311001104B	1	007A	11/08/2013 01:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.77	38.77	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263058	35499		13311001104A	1	007A	11/08/2013 01:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.78	38.78	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263059	35500		13311001104A	1	007A	11/08/2013 01:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	35501		13311001104A	1	007A	11/08/2013 01:40

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	35502		13311001104A	1	007A	11/08/2013 01:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	35503		13311001104A	1	007A	11/08/2013 02:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.58	38.58	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35504	CCV		1	11/08/2013 02:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	41.49	41.49		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35505	CCB		1	11/08/2013 02:17

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.18	1.18		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	35506	U	13311001104A	1	007A	11/08/2013 02:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.54	154.54	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265231	35507	R	13311001104A	1	007A	11/08/2013 02:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	190.84	190.84	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265232	35508	M	13311001104A	1	007A	11/08/2013 02:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	189.25	189.25	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	35509	D	13311001104A	1	007A	11/08/2013 02:57

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	155.14	155.14	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	35510		13311001104A	1	007A	11/08/2013 03:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.17	154.17	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	35511		13311001104A	1	007A	11/08/2013 03:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	237.40	237.40	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	35512		13311001104A	1	007A	11/08/2013 03:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	235.62	235.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	35513		13311001104A	1	007A	11/08/2013 03:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	221.52	221.52	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	35514		13311001104A	1	007A	11/08/2013 03:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.04	2.04	Y	Y		

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
7263052	WHERC
7263053	XHERC
7263054	PHERC
7263055	OHERC

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name		LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number:	13312820010B	Sample number(s):		7263052-7263055		
Moisture		100		99-101		

Sample Matrix Quality Control

Analysis Name		BKG Conc	DUP Conc	RPD	RPD Max
Batch number:	13312820010B	Sample number(s):		7263052-7263055	
Moisture		64.1	61.5	4	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 06138820001

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1119	5.0055	1.6406	89.44	5/18/06 (0189/WCS)	5/19/06 (0236/CW)
P772359BKG	A	00111	1.0980	5.5639	5.3253	24.02	5/18/06 (0189/WCS)	5/19/06 (0236/CW)
P772359DUP	A	00111	1.0873	7.2005	6.5926	23.54	5/18/06 (0189/WCS)	5/19/06 (0236/CW)

Batch #: 13312820010

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.1599	5.0290	1.6969	89.32	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)
7263052BKG	B	00111	1.0396	7.2139	3.6304	64.09	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)
7263052DUP	B	00111	1.0580	7.2535	3.8524	61.48	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)
7263053	B	00111	1.1150	6.9348	4.9858	44.18	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)
7263054	B	00111	1.1256	7.8630	2.9278	77.08	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)
7263055	B	00111	1.1138	6.3655	2.3378	80.77	11/ 8/13 (1201/SWF)	11/11/13 (1382/SAS)

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Type I Data Package

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

Project: Hercules Phase II R.I.
Sediment, Surface Water and Water Samples
Collected on 11/05/13

SDG# KVM04

GROUP	SAMPLE NUMBERS
1431593	7265223-7265249

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date: 12/19/2013**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Wendy Kozma at (717) 556-7257.

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Sample Reference List for SDG Number KVM04
with a Data Package Type of I

06716 - Ashland, Inc.

Project: Hercules Phase II R.I.

Lab Sample Number	Lab Sample Code	Client Sample Description
7265223	R2N51	SW-R2-N-5-1 Grab Surface Water Sample
7265224	R2N52	SW-R2-N-5-2 Grab Surface Water Sample
7265225	R2041	SD-R2-0-4-1 Grab Sediment Sample
7265226	R2042	SD-R2-0-4-2 Grab Sediment Sample
7265227	R2043	SD-R2-0-4-3 Grab Sediment Sample
7265228	R2M61	SW-R2-M-6-1 Grab Surface Water Sample
7265229	R2M71	SD-R2-M-7-01D Grab Sediment Sample
7265230	R2163	SW-R2-E-16-3 Grab Surface Water Sample
7265231	R2163	SW-R2-E-16-3_MS Grab Surface Water Sample
7265232	R2163	SW-R2-E-16-3_MSD Grab Surface Water Sample
7265233	R2163	SW-R2-E-16-3_DUP Grab Surface Water Sample
7265234	R2E16	SD-R2-E16-3 Grab Sediment Sample
7265235	E2161	SW-R2-E-16-1 Grab Surface Water Sample
7265236	2E161	SD-R2-E-16-1 Grab Sediment Sample
7265237	2E16D	SD-R2-E-16-1D Grab Sediment Sample
7265238	R2141	SW-R2-F-14-1 Grab Surface Water Sample
7265239	R2F14	SD-R2-F-14-1 Grab Sediment Sample
7265240	R2142	SW-R2-F-14-2 Grab Surface Water Sample
7265241	2F142	SD-R2-F-14-2 Grab Sediment Sample
7265242	R2121	SD-R2-G-12-1 Grab Sediment Sample
7265243	R2122	SW-R2-G-12-2 Grab Surface Water Sample
7265244	R2123	SD-R2-G-12-3 Grab Sediment Sample
7265245	2D141	SD-R2-D-14-1 Grab Sediment Sample
7265246	DUPX1	DUP-02 Grab Sediment Sample
7265247	FBX01	FB-01_11052013 Grab Water Sample
7265248	FBX02	FB-02_11052013 Grab Water Sample
7265249	TBXXX	TB Water Sample

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Sample pH Log

SDG: KVM04

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7265223	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265223	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265224	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265224	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265228	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265228	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265230	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265230	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265231	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265231	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265232	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265232	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265235	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265235	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265238	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265238	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265240	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265240	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265243	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265243	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265247	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265247	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265247	091A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265247	091B	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265248	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265248	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7265249	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

10335 8260 Ext. Water Master w/GRO

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996

10237 8260 Ext. Soil Master w/GRO

The soil sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996

00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

00159 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A, September 1994

05705 WW/TL SW 846 ICP Digest (tot)

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

05711 SW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A Modified, September 1994.

01743 Aluminum
01643 Aluminum
06944 Antimony
06935 Arsenic
07046 Barium
06946 Barium
06947 Beryllium
07047 Beryllium
07049 Cadmium
06949 Cadmium
01650 Calcium
01750 Calcium
06951 Chromium
07051 Chromium
06952 Cobalt
07052 Cobalt
07053 Copper
06953 Copper
01754 Iron
01654 Iron
06955 Lead
01757 Magnesium
01657 Magnesium
06958 Manganese
07058 Manganese
07061 Nickel
06961 Nickel
01762 Potassium
01662 Potassium
07036 Selenium
06936 Selenium
07066 Silver
06966 Silver
01667 Sodium
01767 Sodium
06925 Thallium
07071 Vanadium
06971 Vanadium
07072 Zinc
06972 Zinc

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010B, December 1996.

06024 Antimony
06025 Arsenic
06035 Lead
06045 Thallium

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020, September 1994.

06050 ICP/MS SW-846 Water Digest

The sample is digested with nitric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A Modified, July 1992

05708 SW SW846 ICP/ICP MS Digest

The sample is digested with nitric acid, hydrochloric acid and hydrogen peroxide.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3050B, December 1996

06915 Nitroaromatics/Amines Wat Ext

The sample is passed through a Porapak RDX cartridge. The cartridge is then eluted with acetonitrile and the extract is brought to 5 mL. The extract is diluted to 10 mL using a calcium chloride solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06916 Nitroaromatics/Amines in Water

The sample is extracted into acetonitrile using SPE on a Porapak RDX cartridge. The extract is analyzed using High Performance Liquid Chromatography with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06917 Nitroaromatics/Amines Sol Ext

The sample is extracted with acetonitrile in a vial using a chilled ultrasonic bath. The vial is centrifuged and the acetonitrile removed. The extract is brought to volume with calcium chloride solution and filtered prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06918 Nitroaromatics/Amines in Solid

The sample is extracted into acetonitrile using an ultrasonic bath. The extract is analyzed using High Performance Liquid Chromatography (HPLC) with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

00813 BNA Water Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, December 1996

10724 PAH 8270 (microwave)
10727 TCL 8270 (microwave)

04678 TCL SW846 Semivolatiles/Waters

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270C, December 1996

10809 BNA Soil Microwave
10814 BNA Soil Microwave PAH

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546, Revision 0, February 2007.

00383 TOC by Lloyd Kahn

Total organic carbon is determined by acidifying a sample aliquot and heating it to remove any inorganic carbon. The sample is then heated to 900oC for combustion of the remaining organic carbon. The resulting carbon dioxide from the organic carbon is detected by a nondispersive infrared detector that has been calibrated to directly display the mass of carbon dioxide detected. The mass is proportional to the mass of total organic carbon in the sample.

Reference: Lloyd Kahn (modified)

00273 Total Organic Carbon

TOC is determined by first removing the inorganic carbon from a sample. The remaining carbon is then oxidized to carbon dioxide, which is measured by a nondispersive infrared detector. The mass of carbon dioxide detected is proportional to the mass of TOC in the sample.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 5310 C-2000

12152 pH

The activity of hydrogen ions in the sample is measured using a glass electrode and a reference electrode.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 4500 H/B-2000

12147 Total Hardness

The concentration of calcium and magnesium ions is determined by titration with EDTA to a blue endpoint, in the presence of Eriochrome Black T indicator. The result is expressed in mg/L calcium carbonate.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2340 C-1997

00111 Moisture

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G-1997

08389 GC/MS - LL Encore Prep

Two EnCore samples are collected per sample. The vials used for preparation are pre-preserved and pre-weighed. Two aliquots are extruded into a sodium bisulfate solution. The vials are re-weighed and the weight of the sample should be 5-g +/- .5 g. The prepared samples are then delivered to the lab for analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846, Method 5035A, July 2002.

07578 GC/MS-HL Encore Prep-NC

The sample is collected in an EnCore sampler and is submitted to the laboratory. A vial containing 5-ml methanol is prepared for each sample and weighed prior to adding the sample. After the sample is added to the vial, the vial is reweighed and the weight of sample is determined by difference. The weight of the sample should be 5-g +/- .5 g. The sample vial is then delivered to the lab for analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846, Method 5035A, July 2002.

00374 GC/MS - Bulk Soil Prep

Samples are field collected in glass containers, and preserved within 48 hours. An aliquot of the soil sample is prepared in reagent water and is purged at 40oC with helium.

Reference: Test Methods for Evaluating Solid Waste, SW-846, Method 5035A Modified, July 2002.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

November 25, 2013

Project: Hercules Phase II R.I.

Submittal Date: 11/05/2013
Group Number: 1431593
SDG: KVM04
PO Number: 4501686843
Release Number: KENVIL
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
SW-R2-N-5-1 Grab Surface Water Sample	7265223
SW-R2-N-5-2 Grab Surface Water Sample	7265224
SD-R2-0-4-1 Grab Sediment Sample	7265225
SD-R2-0-4-2 Grab Sediment Sample	7265226
SD-R2-0-4-3 Grab Sediment Sample	7265227
SW-R2-M-6-1 Grab Surface Water Sample	7265228
SD-R2-M-7-01D Grab Sediment Sample	7265229
SW-R2-E-16-3 Grab Surface Water Sample	7265230
SW-R2-E-16-3_MS Grab Surface Water Sample	7265231
SW-R2-E-16-3_MSD Grab Surface Water Sample	7265232
SW-R2-E-16-3_DUP Grab Surface Water Sample	7265233
SD-R2-E16-3 Grab Sediment Sample	7265234
SW-R2-E-16-1 Grab Surface Water Sample	7265235
SD-R2-E-16-1 Grab Sediment Sample	7265236
SD-R2-E-16-1D Grab Sediment Sample	7265237
SW-R2-F-14-1 Grab Surface Water Sample	7265238
SD-R2-F-14-1 Grab Sediment Sample	7265239
SW-R2-F-14-2 Grab Surface Water Sample	7265240
SD-R2-F-14-2 Grab Sediment Sample	7265241
SD-R2-G-12-1 Grab Sediment Sample	7265242
SW-R2-G-12-2 Grab Surface Water Sample	7265243
SD-R2-G-12-3 Grab Sediment Sample	7265244
SD-R2-D-14-1 Grab Sediment Sample	7265245
DUP-02 Grab Sediment Sample	7265246
FB-01_11052013 Grab Water Sample	7265247
FB-02_11052013 Grab Water Sample	7265248
TB Water Sample	7265249

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Ashland	Attn: Ed Meeks
ELECTRONIC COPY TO	OBG	Attn: John Lucey

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: SW-R2-N-5-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265223
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N51 SDG#: KVM04-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-N-5-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265223
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N51 SDG#: KVM04-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	5	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-N-5-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265223
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N51 SDG#: KVM04-01

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	605		82.8	200	1
07046	Barium	7440-39-3	33.2		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	3,030		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	5.2	J	2.7	10.0	1
01754	Iron	7439-89-6	1,080		43.0	200	1
01757	Magnesium	7439-95-4	901		16.7	100	1
07058	Manganese	7439-96-5	140		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,100		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	1,270		167	1,000	1
07071	Vanadium	7440-62-2	4.3	J	2.0	5.0	1
07072	Zinc	7440-66-6	20.4		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	1.3	J	0.42	2.0	1
06035	Lead	7439-92-1	5.0		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.		15,000	25,000	5
	Reporting limits were raised due to interference from the sample matrix.						
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	4.6		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-N-5-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265223
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N51 SDG#: KVM04-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 11:16	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 11:51	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:55	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:57	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:57	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:57	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:57	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:31	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	2	13326002101A	11/22/2013 11:54	Susan A Engle	5
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:23	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2N51

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265223
Sample wt/vol: 234 (g/mL) mL Lab File ID: dk0336.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.772	33	J
2.		Unknown	16.590	8	J
3.		Unknown	17.185	7	J
4.		Unknown	17.774	16	J
5.		Unknown	18.904	35	J
6.		Unknown	19.691	16	J
7.		Unknown	19.988	24	J
8.		Unknown	20.047	26	J
9.		Unknown	20.227	12	J
10.		Unknown	20.332	11	J
11.		Unknown	20.466	9	J
12.		Unknown	20.618	7	J
13.		Unknown	20.752	20	J
14.		Unknown	20.933	10	J
15.		Unknown	21.020	13	J
16.		Unknown	21.259	47	J
17.		Unknown	21.463	6	J
18.		Unknown	21.568	18	J
19.		Unknown	21.644	11	J
20.		Unknown	21.883	9	J
21.					
22.	SVOCTIC	Total SVOC TICs		340	J
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SW-R2-N-5-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265224
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N52 SDG#: KVM04-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-N-5-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265224
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N52 SDG#: KVM04-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-N-5-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265224
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N52 SDG#: KVM04-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	433		82.8	200	1
07046	Barium	7440-39-3	25.6		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	2,480		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	874		43.0	200	1
01757	Magnesium	7439-95-4	730		16.7	100	1
07058	Manganese	7439-96-5	87.7		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,390		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	1,650		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	11.6	J	2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	1.1	J	0.42	2.0	1
06035	Lead	7439-92-1	2.9		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.		15,000	25,000	5
	Reporting limits were raised due to interference from the sample matrix.						
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	4.6		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SW-R2-N-5-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265224
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 08:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2N52 SDG#: KVM04-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 11:43	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 12:34	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:58	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:59	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:59	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:59	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:59	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:33	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	2	13326002101A	11/22/2013 11:59	Susan A Engle	5
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:27	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

R2N52

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265224
Sample wt/vol: 240 (g/mL) mL Lab File ID: dk0337.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 8 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.771	6	J
2.		Unknown	18.904	5	J
3.		Unknown	20.047	11	J
4.		Unknown	20.746	5	J
5.		Unknown	20.939	4	J
6.		Unknown	21.265	5	J
7.		Unknown	21.317	8	J
8.		Unknown	21.568	6	J
9.					
10.	SVOCTIC	Total SVOC TICs		51	J
11.					
12.					
13.					
14.					
15.					
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30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-0-4-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265225
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:10 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2041 SDG#: KVM04-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		1,000	5,200	5
10724	Acenaphthylene	208-96-8	N.D.		1,000	5,200	5
10724	Anthracene	120-12-7	N.D.		1,000	5,200	5
10724	Benzo(a)anthracene	56-55-3	N.D.		1,000	5,200	5
10724	Benzo(a)pyrene	50-32-8	N.D.		1,000	5,200	5
10724	Benzo(b)fluoranthene	205-99-2	N.D.		1,000	5,200	5
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		1,000	5,200	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.		1,000	5,200	5
10724	Chrysene	218-01-9	N.D.		1,000	5,200	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		1,000	5,200	5
10724	Fluoranthene	206-44-0	1,100	J	1,000	5,200	5
10724	Fluorene	86-73-7	N.D.		1,000	5,200	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		1,000	5,200	5
10724	1-Methylnaphthalene	90-12-0	N.D.		1,000	5,200	5
10724	2-Methylnaphthalene	91-57-6	N.D.		1,000	5,200	5
10724	Naphthalene	91-20-3	N.D.		1,000	5,200	5
10724	Phenanthrene	85-01-8	1,100	J	1,000	5,200	5
10724	Pyrene	129-00-0	1,100	J	1,000	5,200	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		1,500	3,100	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		1,000	3,100	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		1,000	3,100	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		1,000	3,100	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		1,000	3,100	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		1,000	3,100	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		1,000	3,100	1
06918	HMX	2691-41-0	N.D.		2,600	7,700	1
06918	Nitrobenzene	98-95-3	N.D.		1,000	3,100	1
06918	Nitroglycerin	55-63-0	N.D.		20,000	61,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		1,000	3,100	1
06918	2-Nitrotoluene	88-72-2	N.D.		2,000	3,100	1
06918	3-Nitrotoluene	99-08-1	N.D.		2,600	3,100	1
06918	4-Nitrotoluene	99-99-0	N.D.		2,000	3,100	1
06918	PETN	78-11-5	N.D.		20,000	61,000	1
06918	RDX	121-82-4	N.D.		1,300	3,100	1
06918	Tetryl	479-45-8	N.D.		1,600	3,100	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		1,000	3,100	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		1,000	3,100	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	12,200		714	1,980	10
06944	Antimony	7440-36-0	N.D.		73.3	198	10
06935	Arsenic	7440-38-2	N.D.		69.3	198	10
06946	Barium	7440-39-3	153		3.27	49.5	10
06947	Beryllium	7440-41-7	N.D.		6.64	49.5	10
06949	Cadmium	7440-43-9	N.D.		7.53	49.5	10
01650	Calcium	7440-70-2	6,970		331	1,980	10
06951	Chromium	7440-47-3	21.4	J	15.9	149	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265225
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:10 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2041 SDG#: KVM04-03

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	N.D.		9.81	49.5	10
06953	Copper	7440-50-8	98.7	J	28.7	99.1	10
01654	Iron	7439-89-6	9,200		359	1,980	10
06955	Lead	7439-92-1	214		49.5	149	10
01657	Magnesium	7439-95-4	1,220		165	991	10
06958	Manganese	7439-96-5	135		8.22	49.5	10
06961	Nickel	7440-02-0	17.5	J	12.9	99.1	10
01662	Potassium	7440-09-7	N.D.		826	4,950	10
06936	Selenium	7782-49-2	N.D.		79.3	198	10
06966	Silver	7440-22-4	N.D.		16.8	49.5	10
01667	Sodium	7440-23-5	N.D.		1,650	9,910	10
06925	Thallium	7440-28-0	N.D.		51.5	297	10
06971	Vanadium	7440-62-2	N.D.		12.9	49.5	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
06972	Zinc	7440-66-6	279		19.8	198	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	N.D.		0.101	1.01	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	227,000		16,200	48,700	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	90.2		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/13/2013 19:04	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 16:58	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SD-R2-0-4-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265225
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:10 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2041 SDG#: KVM04-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/13/2013 23:59	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:01	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:32	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 02:46	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265226
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2042 SDG#: KVM04-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		54	270	1
10724	Acenaphthylene	208-96-8	N.D.		54	270	1
10724	Anthracene	120-12-7	N.D.		54	270	1
10724	Benzo(a)anthracene	56-55-3	57	J	54	270	1
10724	Benzo(a)pyrene	50-32-8	N.D.		54	270	1
10724	Benzo(b)fluoranthene	205-99-2	120	J	54	270	1
10724	Benzo(g,h,i)perylene	191-24-2	86	J	54	270	1
10724	Benzo(k)fluoranthene	207-08-9	59	J	54	270	1
10724	Chrysene	218-01-9	110	J	54	270	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		54	270	1
10724	Fluoranthene	206-44-0	180	J	54	270	1
10724	Fluorene	86-73-7	N.D.		54	270	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	64	J	54	270	1
10724	1-Methylnaphthalene	90-12-0	83	J	54	270	1
10724	2-Methylnaphthalene	91-57-6	63	J	54	270	1
10724	Naphthalene	91-20-3	90	J	54	270	1
10724	Phenanthrene	85-01-8	200	J	54	270	1
10724	Pyrene	129-00-0	160	J	54	270	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		400	810	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		270	810	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		270	810	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		270	810	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		270	810	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		270	810	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		270	810	1
06918	HMX	2691-41-0	N.D.		670	2,000	1
06918	Nitrobenzene	98-95-3	N.D.		270	810	1
06918	Nitroglycerin	55-63-0	N.D.		5,400	16,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		270	810	1
06918	2-Nitrotoluene	88-72-2	N.D.		540	810	1
06918	3-Nitrotoluene	99-08-1	N.D.		670	810	1
06918	4-Nitrotoluene	99-99-0	N.D.		540	810	1
06918	PETN	78-11-5	N.D.		5,400	16,000	1
06918	RDX	121-82-4	N.D.		340	810	1
06918	Tetryl	479-45-8	N.D.		410	810	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		270	810	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		270	810	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	15,600		19.0	52.7	1
06944	Antimony	7440-36-0	N.D.		19.5	52.7	10
06935	Arsenic	7440-38-2	N.D.		18.4	52.7	10
06946	Barium	7440-39-3	119		0.870	13.2	10
06947	Beryllium	7440-41-7	N.D.		1.77	13.2	10
06949	Cadmium	7440-43-9	N.D.		2.00	13.2	10
01650	Calcium	7440-70-2	706		8.80	52.7	1
06951	Chromium	7440-47-3	16.3	J	4.22	39.5	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265226
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2042 SDG#: KVM04-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	N.D.		2.61	13.2	10
06953	Copper	7440-50-8	31.0		7.64	26.4	10
01654	Iron	7439-89-6	2,340		9.54	52.7	1
06955	Lead	7439-92-1	42.4		13.2	39.5	10
01657	Magnesium	7439-95-4	443		44.0	264	10
06958	Manganese	7439-96-5	46.0		2.19	13.2	10
06961	Nickel	7440-02-0	7.46	J	3.43	26.4	10
01662	Potassium	7440-09-7	412		22.0	132	1
06936	Selenium	7782-49-2	N.D.		21.1	52.7	10
06966	Silver	7440-22-4	5.06	J	4.48	13.2	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	46.3	J	44.0	264	1
06925	Thallium	7440-28-0	N.D.		13.7	79.1	10
06971	Vanadium	7440-62-2	20.1		3.43	13.2	10
06972	Zinc	7440-66-6	67.1		5.27	52.7	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0671	J	0.0263	0.263	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	105,000		3,290	9,880	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	62.8		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 05:01	Mark A Clark	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 22:37	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 20:07	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265226
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2042 SDG#: KVM04-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 20:07	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 20:07	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 20:07	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:03	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 20:07	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:14	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:34	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 03:00	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265227
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:30 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2043 SDG#: KVM04-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		37	190	1
10724	Acenaphthylene	208-96-8	N.D.		37	190	1
10724	Anthracene	120-12-7	N.D.		37	190	1
10724	Benzo(a)anthracene	56-55-3	N.D.		37	190	1
10724	Benzo(a)pyrene	50-32-8	N.D.		37	190	1
10724	Benzo(b)fluoranthene	205-99-2	49	J	37	190	1
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		37	190	1
10724	Benzo(k)fluoranthene	207-08-9	N.D.		37	190	1
10724	Chrysene	218-01-9	41	J	37	190	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		37	190	1
10724	Fluoranthene	206-44-0	56	J	37	190	1
10724	Fluorene	86-73-7	N.D.		37	190	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		37	190	1
10724	1-Methylnaphthalene	90-12-0	N.D.		37	190	1
10724	2-Methylnaphthalene	91-57-6	N.D.		37	190	1
10724	Naphthalene	91-20-3	N.D.		37	190	1
10724	Phenanthrene	85-01-8	49	J	37	190	1
10724	Pyrene	129-00-0	57	J	37	190	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		280	550	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		180	550	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		180	550	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		180	550	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		180	550	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		180	550	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		180	550	1
06918	HMX	2691-41-0	N.D.		460	1,400	1
06918	Nitrobenzene	98-95-3	N.D.		180	550	1
06918	Nitroglycerin	55-63-0	N.D.		3,700	11,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		180	550	1
06918	2-Nitrotoluene	88-72-2	N.D.		370	550	1
06918	3-Nitrotoluene	99-08-1	N.D.		460	550	1
06918	4-Nitrotoluene	99-99-0	N.D.		370	550	1
06918	PETN	78-11-5	N.D.		3,700	11,000	1
06918	RDX	121-82-4	N.D.		230	550	1
06918	Tetryl	479-45-8	N.D.		280	550	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		180	550	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		180	550	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	38,000		13.1	36.3	1
06944	Antimony	7440-36-0	N.D.		13.4	36.3	10
06935	Arsenic	7440-38-2	N.D.		12.7	36.3	10
06946	Barium	7440-39-3	191		0.600	9.08	10
06947	Beryllium	7440-41-7	N.D.		1.22	9.08	10
06949	Cadmium	7440-43-9	N.D.		1.38	9.08	10
01650	Calcium	7440-70-2	490		60.7	363	10
06951	Chromium	7440-47-3	25.8	J	2.91	27.3	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265227
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:30 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2043 SDG#: KVM04-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	1.96	J	1.80	9.08	10
06953	Copper	7440-50-8	15.0	J	5.27	18.2	10
01654	Iron	7439-89-6	4,640		6.58	36.3	1
06955	Lead	7439-92-1	39.4		9.08	27.3	10
01657	Magnesium	7439-95-4	1,240		30.3	182	10
06958	Manganese	7439-96-5	25.6		1.51	9.08	10
06961	Nickel	7440-02-0	17.6	J	2.36	18.2	10
01662	Potassium	7440-09-7	665		15.2	90.8	1
06936	Selenium	7782-49-2	N.D.		14.5	36.3	10
06966	Silver	7440-22-4	3.12	J	3.09	9.08	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	37.7	J	30.3	182	1
06925	Thallium	7440-28-0	N.D.		9.45	54.5	10
06971	Vanadium	7440-62-2	26.1		2.36	9.08	10
06972	Zinc	7440-66-6	63.2		3.63	36.3	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.166	J	0.0179	0.179	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	39,500		2,010	6,020	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	45.5		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/13/2013 19:54	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/13/2013 23:20	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 20:19	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-0-4-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265227
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:30 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2043 SDG#: KVM04-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 20:19	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 20:19	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:08	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 20:19	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:18	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:36	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13311049532A	11/08/2013 03:12	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-6-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265228
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:55 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M61 SDG#: KVM04-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-6-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265228
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:55 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M61 SDG#: KVM04-06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-6-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265228
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:55 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M61 SDG#: KVM04-06

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	20.9		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	9,030		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	184	J	43.0	200	1
01757	Magnesium	7439-95-4	3,700		16.7	100	1
07058	Manganese	7439-96-5	9.2		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	608		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	5,230		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	0.89	J	0.42	2.0	1
06035	Lead	7439-92-1	0.99	J	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	38,600		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.2		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-M-6-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265228
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 09:55 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M61 SDG#: KVM04-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 12:10	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 13:16	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:10	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:01	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:01	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:01	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:01	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:35	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 02:03	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:20	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2M61

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265228
Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0338.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.795	27	J
2.					
3.	SVOCTIC	Total SVOC TICs		27	J
4.					
5.					
6.					
7.					
8.					
9.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-M-7-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265229
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 10:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M71 SDG#: KVM04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/kg	ug/kg	ug/kg	
10727	Acenaphthene	83-32-9	N.D.	150	780	10
10727	Acenaphthylene	208-96-8	N.D.	150	780	10
10727	Acetophenone	98-86-2	N.D.	760	1,500	10
10727	Anthracene	120-12-7	N.D.	150	780	10
10727	Atrazine	1912-24-9	N.D.	1,500	7,600	10
10727	Benzaldehyde	100-52-7	N.D.	3,100	7,600	10
10727	Benzo(a)anthracene	56-55-3	N.D.	150	780	10
10727	Benzo(a)pyrene	50-32-8	N.D.	150	780	10
10727	Benzo(b)fluoranthene	205-99-2	N.D.	150	780	10
10727	Benzo(g,h,i)perylene	191-24-2	N.D.	150	780	10
10727	Benzo(k)fluoranthene	207-08-9	N.D.	150	780	10
10727	1,1'-Biphenyl	92-52-4	N.D.	760	1,500	10
10727	4-Bromophenyl-phenylether	101-55-3	N.D.	760	1,500	10
10727	Butylbenzylphthalate	85-68-7	N.D.	3,100	7,600	10
10727	Di-n-butylphthalate	84-74-2	N.D.	3,100	7,600	10
10727	Caprolactam	105-60-2	N.D.	1,500	7,600	10
10727	Carbazole	86-74-8	N.D.	760	1,500	10
10727	4-Chloro-3-methylphenol	59-50-7	N.D.	760	1,500	10
10727	4-Chloroaniline	106-47-8	N.D.	760	1,500	10
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.	760	1,500	10
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.	760	1,500	10
10727	2-Chloronaphthalene	91-58-7	N.D.	320	1,500	10
10727	2-Chlorophenol	95-57-8	N.D.	760	1,500	10
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.	760	1,500	10
10727	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	760	1,500	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
10727	Chrysene	218-01-9	N.D.	150	780	10
10727	Dibenz(a,h)anthracene	53-70-3	N.D.	150	780	10
10727	Dibenzofuran	132-64-9	N.D.	760	1,500	10
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.	4,600	15,000	10
10727	2,4-Dichlorophenol	120-83-2	N.D.	760	1,500	10
10727	Diethylphthalate	84-66-2	N.D.	3,100	7,600	10
10727	2,4-Dimethylphenol	105-67-9	N.D.	760	1,500	10
10727	Dimethylphthalate	131-11-3	N.D.	3,100	7,600	10
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	7,600	23,000	10
10727	2,4-Dinitrophenol	51-28-5	N.D.	14,000	46,000	10
10727	2,4-Dinitrotoluene	121-14-2	N.D.	3,100	7,600	10
10727	2,6-Dinitrotoluene	606-20-2	N.D.	760	1,500	10
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	3,100	7,800	10
10727	Fluoranthene	206-44-0	N.D.	150	780	10
10727	Fluorene	86-73-7	N.D.	150	780	10
10727	Hexachlorobenzene	118-74-1	N.D.	150	780	10
10727	Hexachlorobutadiene	87-68-3	N.D.	760	1,500	10
10727	Hexachlorocyclopentadiene	77-47-4	N.D.	7,600	23,000	10
10727	Hexachloroethane	67-72-1	N.D.	1,500	7,600	10
10727	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	150	780	10
10727	Isophorone	78-59-1	N.D.	760	1,500	10
10727	2-Methylnaphthalene	91-57-6	N.D.	150	780	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-M-7-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265229
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 10:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M71 SDG#: KVM04-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg	ug/kg	ug/kg	
10727	2-Methylphenol	95-48-7	N.D.	760	1,500	10
10727	4-Methylphenol	106-44-5	N.D.	760	1,500	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
10727	Naphthalene	91-20-3	N.D.	150	780	10
10727	2-Nitroaniline	88-74-4	N.D.	760	1,500	10
10727	3-Nitroaniline	99-09-2	N.D.	3,100	7,600	10
10727	4-Nitroaniline	100-01-6	N.D.	3,100	7,600	10
10727	Nitrobenzene	98-95-3	N.D.	760	1,500	10
10727	2-Nitrophenol	88-75-5	N.D.	760	1,500	10
10727	4-Nitrophenol	100-02-7	N.D.	7,600	23,000	10
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.	760	1,500	10
10727	N-Nitrosodiphenylamine	86-30-6	N.D.	760	1,500	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
10727	Di-n-octylphthalate	117-84-0	N.D.	3,100	7,600	10
10727	Pentachlorophenol	87-86-5	N.D.	1,500	7,800	10
10727	Phenanthrene	85-01-8	N.D.	150	780	10
10727	Phenol	108-95-2	N.D.	760	1,500	10
10727	Pyrene	129-00-0	N.D.	150	780	10
10727	2,4,5-Trichlorophenol	95-95-4	N.D.	760	1,500	10
10727	2,4,6-Trichlorophenol	88-06-2	N.D.	760	1,500	10
Reporting limits were raised due to interference from the sample matrix.						
00893 Semivolatile Library Search						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/kg	ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	230	460	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	150	460	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.	150	460	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.	150	460	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.	150	460	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.	150	460	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.	150	460	1
06918	HMX	2691-41-0	N.D.	380	1,100	1
06918	Nitrobenzene	98-95-3	N.D.	150	460	1
06918	Nitroglycerin	55-63-0	N.D.	3,100	9,200	1
06918	1-Nitronaphthalene	86-57-7	N.D.	150	460	1
06918	2-Nitrotoluene	88-72-2	N.D.	310	460	1
06918	3-Nitrotoluene	99-08-1	N.D.	380	460	1
06918	4-Nitrotoluene	99-99-0	N.D.	310	460	1
06918	PETN	78-11-5	N.D.	3,100	9,200	1
06918	RDX	121-82-4	N.D.	190	460	1
06918	Tetryl	479-45-8	N.D.	230	460	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.	150	460	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.	150	460	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-M-7-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265229
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 10:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M71 SDG#: KVM04-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	27,200		109	303	10
06944	Antimony	7440-36-0	N.D.		11.2	30.3	10
06935	Arsenic	7440-38-2	N.D.		10.6	30.3	10
06946	Barium	7440-39-3	111		0.500	7.57	10
06947	Beryllium	7440-41-7	N.D.		1.01	7.57	10
06949	Cadmium	7440-43-9	N.D.		1.15	7.57	10
01650	Calcium	7440-70-2	1,130		50.6	303	10
06951	Chromium	7440-47-3	857		2.42	22.7	10
06952	Cobalt	7440-48-4	5.36	J	1.50	7.57	10
06953	Copper	7440-50-8	9.42	J	4.39	15.1	10
01654	Iron	7439-89-6	11,500		54.8	303	10
06955	Lead	7439-92-1	16.2	J	7.57	22.7	10
01657	Magnesium	7439-95-4	2,560		25.3	151	10
06958	Manganese	7439-96-5	90.7		1.26	7.57	10
06961	Nickel	7440-02-0	16.0		1.97	15.1	10
01662	Potassium	7440-09-7	924		126	757	10
06936	Selenium	7782-49-2	N.D.		12.1	30.3	10
06966	Silver	7440-22-4	N.D.		2.57	7.57	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	N.D.		253	1,510	10
06925	Thallium	7440-28-0	N.D.		7.87	45.4	10
06971	Vanadium	7440-62-2	26.9		1.97	7.57	10
06972	Zinc	7440-66-6	121		3.03	30.3	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0841	J	0.0150	0.150	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	13,900		936	2,810	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	34.6		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-M-7-01D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265229
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 10:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2M71 SDG#: KVM04-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10727	TCL 8270 (microwave)	SW-846 8270C	1	13314SLD026	11/15/2013 10:10	Mark A Clark	10
10809	BNA Soil Microwave	SW-846 3546	1	13314SLD026	11/12/2013 09:30	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 19:13	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:12	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:22	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:38	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/08/2013 22:59	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

R2M71

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 7265229
Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0557.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: 35 Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.307	7300	J
2.		Unknown	7.341	13000	J
3.		Unknown	12.782	7300	J
4.		Unknown	13.372	7000	J
5.		Unknown	14.086	8600	J
6.		Unknown	14.934	14000	J
7.					
8.	SVOCTIC	Total SVOC TICs		57000	J
9.					
10.					
11.					
12.					
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28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SW-R2-E-16-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265230
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265230
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.77	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265230
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08BKG

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	148	J	82.8	200	1
07046	Barium	7440-39-3	39.4		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	36,100		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	1,450		43.0	200	1
01757	Magnesium	7439-95-4	14,400		16.7	100	1
07058	Manganese	7439-96-5	739		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,960		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	71,600		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	2.1	J	2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	0.73	J	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	155,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265230
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 05:55	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 13:59	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:32	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:37	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:37	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:37	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:37	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:37	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 02:27	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:08	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2163

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265230
Sample wt/vol: 243 (g/mL) mL Lab File ID: dk0324.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	4.729	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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12.					
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28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SW-R2-E-16-3_MS Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265231
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	49	0.1	0.5	1
04678	Acenaphthylene	208-96-8	54	0.1	0.5	1
04678	Acetophenone	98-86-2	47	0.5	1	1
04678	Anthracene	120-12-7	51	0.1	0.5	1
04678	Atrazine	1912-24-9	56	2	5	1
04678	Benzaldehyde	100-52-7	36	1	5	1
04678	Benzo(a)anthracene	56-55-3	53	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	51	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	51	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	49	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	54	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	49	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	54	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	48	2	5	1
04678	Di-n-butylphthalate	84-74-2	51	2	5	1
04678	Caprolactam	105-60-2	19	5	15	1
04678	Carbazole	86-74-8	52	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	43	0.5	1	1
04678	4-Chloroaniline	106-47-8	39	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	45	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	46	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	49	0.4	1	1
04678	2-Chlorophenol	95-57-8	44	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	52	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	38	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	52	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	54	0.1	0.5	1
04678	Dibenzofuran	132-64-9	50	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	32	2	5	1
04678	2,4-Dichlorophenol	120-83-2	47	0.5	1	1
04678	Diethylphthalate	84-66-2	48	2	5	1
04678	2,4-Dimethylphenol	105-67-9	38	0.5	1	1
04678	Dimethylphthalate	131-11-3	47	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	49	5	15	1
04678	2,4-Dinitrophenol	51-28-5	92	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	56	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	56	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	48	2	5	1
04678	Fluoranthene	206-44-0	55	0.1	0.5	1
04678	Fluorene	86-73-7	51	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	56	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	54	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	100	5	15	1
04678	Hexachloroethane	67-72-1	44	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	53	0.1	0.5	1
04678	Isophorone	78-59-1	48	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	49	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MS Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265231
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MS

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	37		0.5	1	1
04678	4-Methylphenol	106-44-5	33		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	50		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	55		0.5	1	1
04678	3-Nitroaniline	99-09-2	44		0.5	1	1
04678	4-Nitroaniline	100-01-6	43		0.5	1	1
04678	Nitrobenzene	98-95-3	47		0.5	1	1
04678	2-Nitrophenol	88-75-5	56		0.5	1	1
04678	4-Nitrophenol	100-02-7	30	J	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	45		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	52		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	46		2	5	1
04678	Pentachlorophenol	87-86-5	40		1	5	1
04678	Phenanthrene	85-01-8	50		0.1	0.5	1
04678	Phenol	108-95-2	25		0.5	1	1
04678	Pyrene	129-00-0	50		0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	52		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	47		0.5	1	1
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	9.0		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	8.2		0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	20		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	9.9		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	17		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	9.7		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	10		0.45	1.3	1
06916	HMX	2691-41-0	7.1		0.65	2.0	1
06916	Nitrobenzene	98-95-3	9.1		0.20	0.60	1
06916	Nitroglycerin	55-63-0	200		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	18		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	7.9		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	9.2		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	8.0		0.60	1.2	1
06916	PETN	78-11-5	220		6.0	18	1
06916	RDX	121-82-4	8.7		0.20	0.50	1
06916	Tetryl	479-45-8	8.9		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	8.7		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	9.7		0.20	0.60	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MS Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265231
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
01743	Aluminum	7429-90-5	2,120	82.8	200	1
07046	Barium	7440-39-3	2,050	0.33	5.0	1
07047	Beryllium	7440-41-7	52.7	0.67	5.0	1
07049	Cadmium	7440-43-9	50.6	0.76	5.0	1
01750	Calcium	7440-70-2	40,400	33.4	200	1
07051	Chromium	7440-47-3	207	1.6	15.0	1
07052	Cobalt	7440-48-4	506	1.3	5.0	1
07053	Copper	7440-50-8	258	2.7	10.0	1
01754	Iron	7439-89-6	1,970	43.0	200	1
01757	Magnesium	7439-95-4	16,400	16.7	100	1
07058	Manganese	7439-96-5	1,140	0.83	5.0	1
07061	Nickel	7440-02-0	512	1.5	10.0	1
01762	Potassium	7440-09-7	12,200	98.0	500	1
07036	Selenium	7782-49-2	152	8.4	20.0	1
07066	Silver	7440-22-4	56.5	2.1	5.0	1
01767	Sodium	7440-23-5	81,900	167	1,000	1
07071	Vanadium	7440-62-2	534	2.0	5.0	1
07072	Zinc	7440-66-6	508	2.0	20.0	1
	SW-846 6020		ug/l	ug/l	ug/l	
06024	Antimony	7440-36-0	6.2	0.34	1.0	1
06025	Arsenic	7440-38-2	10.9	0.42	2.0	1
06035	Lead	7439-92-1	15.4	0.085	1.0	1
06045	Thallium	7440-28-0	2.0	0.15	0.50	1
	SW-846 7470A		ug/l	ug/l	ug/l	
00259	Mercury	7439-97-6	0.94	0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		ug/l	ug/l	ug/l	
12147	Total Hardness	471-34-1	191,000	3,000	5,000	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 06:22	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 14:41	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MS Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265231
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:43	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 22:50	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:43	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:43	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:43	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:46	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 02:37	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MSD Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265232
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	50	0.1	0.5	1
04678	Acenaphthylene	208-96-8	55	0.1	0.5	1
04678	Acetophenone	98-86-2	47	0.5	1	1
04678	Anthracene	120-12-7	52	0.1	0.5	1
04678	Atrazine	1912-24-9	57	2	5	1
04678	Benzaldehyde	100-52-7	36	1	5	1
04678	Benzo(a)anthracene	56-55-3	54	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	52	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	52	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	52	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	54	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	49	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	54	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	48	2	5	1
04678	Di-n-butylphthalate	84-74-2	50	2	5	1
04678	Caprolactam	105-60-2	20	5	15	1
04678	Carbazole	86-74-8	52	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	43	0.5	1	1
04678	4-Chloroaniline	106-47-8	42	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	46	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	45	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	50	0.4	1	1
04678	2-Chlorophenol	95-57-8	44	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	53	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	38	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	53	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	56	0.1	0.5	1
04678	Dibenzofuran	132-64-9	51	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	37	2	5	1
04678	2,4-Dichlorophenol	120-83-2	48	0.5	1	1
04678	Diethylphthalate	84-66-2	48	2	5	1
04678	2,4-Dimethylphenol	105-67-9	38	0.5	1	1
04678	Dimethylphthalate	131-11-3	47	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	49	5	15	1
04678	2,4-Dinitrophenol	51-28-5	91	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	56	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	56	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	50	2	5	1
04678	Fluoranthene	206-44-0	55	0.1	0.5	1
04678	Fluorene	86-73-7	51	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	56	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	57	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	110	5	15	1
04678	Hexachloroethane	67-72-1	46	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	55	0.1	0.5	1
04678	Isophorone	78-59-1	49	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	49	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MSD Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265232
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MSD

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	37		0.5	1	1
04678	4-Methylphenol	106-44-5	33		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	51		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	56		0.5	1	1
04678	3-Nitroaniline	99-09-2	47		0.5	1	1
04678	4-Nitroaniline	100-01-6	44		0.5	1	1
04678	Nitrobenzene	98-95-3	48		0.5	1	1
04678	2-Nitrophenol	88-75-5	57		0.5	1	1
04678	4-Nitrophenol	100-02-7	30	J	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	44		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	52		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	47		2	5	1
04678	Pentachlorophenol	87-86-5	40		1	5	1
04678	Phenanthrene	85-01-8	50		0.1	0.5	1
04678	Phenol	108-95-2	24		0.5	1	1
04678	Pyrene	129-00-0	51		0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	52		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	47		0.5	1	1
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	8.6		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	7.6		0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	18		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	8.9		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	16		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	8.9		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	9.3		0.45	1.3	1
06916	HMX	2691-41-0	6.8		0.65	2.0	1
06916	Nitrobenzene	98-95-3	8.3		0.20	0.60	1
06916	Nitroglycerin	55-63-0	180		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	18		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	7.4		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	8.7		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	7.4		0.60	1.2	1
06916	PETN	78-11-5	200		6.0	18	1
06916	RDX	121-82-4	7.8		0.20	0.50	1
06916	Tetryl	479-45-8	8.1		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	7.7		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	8.6		0.20	0.60	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MSD Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265232
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		ug/l	ug/l	ug/l	
01743	Aluminum	7429-90-5	2,080	82.8	200	1
07046	Barium	7440-39-3	2,050	0.33	5.0	1
07047	Beryllium	7440-41-7	52.8	0.67	5.0	1
07049	Cadmium	7440-43-9	50.9	0.76	5.0	1
01750	Calcium	7440-70-2	40,900	33.4	200	1
07051	Chromium	7440-47-3	207	1.6	15.0	1
07052	Cobalt	7440-48-4	508	1.3	5.0	1
07053	Copper	7440-50-8	259	2.7	10.0	1
01754	Iron	7439-89-6	1,940	43.0	200	1
01757	Magnesium	7439-95-4	16,600	16.7	100	1
07058	Manganese	7439-96-5	1,140	0.83	5.0	1
07061	Nickel	7440-02-0	516	1.5	10.0	1
01762	Potassium	7440-09-7	12,200	98.0	500	1
07036	Selenium	7782-49-2	159	8.4	20.0	1
07066	Silver	7440-22-4	56.4	2.1	5.0	1
01767	Sodium	7440-23-5	82,800	167	1,000	1
07071	Vanadium	7440-62-2	535	2.0	5.0	1
07072	Zinc	7440-66-6	513	2.0	20.0	1
	SW-846 6020		ug/l	ug/l	ug/l	
06024	Antimony	7440-36-0	6.6	0.34	1.0	1
06025	Arsenic	7440-38-2	9.9	0.42	2.0	1
06035	Lead	7439-92-1	14.8	0.085	1.0	1
06045	Thallium	7440-28-0	2.0	0.15	0.50	1
	SW-846 7470A		ug/l	ug/l	ug/l	
00259	Mercury	7439-97-6	0.91	0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		ug/l	ug/l	ug/l	
12147	Total Hardness	471-34-1	189,000	3,000	5,000	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 06:49	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 15:24	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_MSD Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265232
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:47	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 22:52	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:45	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:45	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:45	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:48	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 02:47	Susan A Engle	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_DUP Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265233
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08DUP

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	137 J	82.8	200	1
07046	Barium	7440-39-3	40.4	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	36,300	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	1,430	43.0	200	1
01757	Magnesium	7439-95-4	14,600	16.7	100	1
07058	Manganese	7439-96-5	750	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	1,920	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	72,100	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	N.D.	2.0	20.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.	0.42	2.0	1
06035	Lead	7439-92-1	0.70 J	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	155,000	3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.5	0.010	0.010	1

The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-3_DUP Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265233
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2163 SDG#: KVM04-08DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 01:40	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:41	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:41	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:41	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:41	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:44	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 02:57	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:12	Michele L Graham	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E16-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265234
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2E16 SDG#: KVM04-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		25	130	1
10724	Acenaphthylene	208-96-8	39	J	25	130	1
10724	Anthracene	120-12-7	37	J	25	130	1
10724	Benzo(a)anthracene	56-55-3	88	J	25	130	1
10724	Benzo(a)pyrene	50-32-8	110	J	25	130	1
10724	Benzo(b)fluoranthene	205-99-2	140		25	130	1
10724	Benzo(g,h,i)perylene	191-24-2	95	J	25	130	1
10724	Benzo(k)fluoranthene	207-08-9	64	J	25	130	1
10724	Chrysene	218-01-9	110	J	25	130	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		25	130	1
10724	Fluoranthene	206-44-0	170		25	130	1
10724	Fluorene	86-73-7	N.D.		25	130	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	59	J	25	130	1
10724	1-Methylnaphthalene	90-12-0	N.D.		25	130	1
10724	2-Methylnaphthalene	91-57-6	N.D.		25	130	1
10724	Naphthalene	91-20-3	N.D.		25	130	1
10724	Phenanthrene	85-01-8	93	J	25	130	1
10724	Pyrene	129-00-0	200		25	130	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		190	380	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		130	380	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		130	380	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		130	380	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		130	380	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		130	380	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		130	380	1
06918	HMX	2691-41-0	N.D.		310	940	1
06918	Nitrobenzene	98-95-3	N.D.		130	380	1
06918	Nitroglycerin	55-63-0	N.D.		2,500	7,500	1
06918	1-Nitronaphthalene	86-57-7	N.D.		130	380	1
06918	2-Nitrotoluene	88-72-2	N.D.		250	380	1
06918	3-Nitrotoluene	99-08-1	N.D.		310	380	1
06918	4-Nitrotoluene	99-99-0	N.D.		250	380	1
06918	PETN	78-11-5	N.D.		2,500	7,500	1
06918	RDX	121-82-4	N.D.		160	380	1
06918	Tetryl	479-45-8	N.D.		190	380	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		130	380	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		130	380	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	4,910		90.6	251	10
06944	Antimony	7440-36-0	N.D.		9.30	25.1	10
06935	Arsenic	7440-38-2	N.D.		8.79	25.1	10
06946	Barium	7440-39-3	31.9		0.415	6.28	10
06947	Beryllium	7440-41-7	N.D.		0.842	6.28	10
06949	Cadmium	7440-43-9	N.D.		0.955	6.28	10
01650	Calcium	7440-70-2	2,150		42.0	251	10
06951	Chromium	7440-47-3	15.5	J	2.01	18.8	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E16-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265234
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2E16 SDG#: KVM04-09

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	2.95	J	1.24	6.28	10
06953	Copper	7440-50-8	10.5	J	3.64	12.6	10
01654	Iron	7439-89-6	13,700		45.5	251	10
06955	Lead	7439-92-1	40.1		6.28	18.8	10
01657	Magnesium	7439-95-4	1,480		21.0	126	10
06958	Manganese	7439-96-5	109		1.04	6.28	10
06961	Nickel	7440-02-0	4.74	J	1.63	12.6	10
01662	Potassium	7440-09-7	551	J	105	628	10
06936	Selenium	7782-49-2	N.D.		10.1	25.1	10
06966	Silver	7440-22-4	N.D.		2.14	6.28	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	N.D.		210	1,260	10
06925	Thallium	7440-28-0	N.D.		6.53	37.7	10
06971	Vanadium	7440-62-2	13.6		1.63	6.28	10
06972	Zinc	7440-66-6	62.9		2.51	25.1	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.0348	J	0.0119	0.119	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	4,160		955	2,860	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	20.4		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/13/2013 20:18	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 00:02	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E16-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265234
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2E16 SDG#: KVM04-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:24	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:26	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:40	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/08/2013 23:10	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265235
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:45 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

E2161 SDG#: KVM04-10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265235
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:45 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

E2161 SDG#: KVM04-10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.		0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	0.9		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.		0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.		0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.		0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.		0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.		0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.		10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		2	5	1
04678	Pentachlorophenol	87-86-5	N.D.		1	5	1
04678	Phenanthrene	85-01-8	N.D.		0.1	0.5	1
04678	Phenol	108-95-2	N.D.		0.5	1	1
04678	Pyrene	129-00-0	N.D.		0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		0.5	1	1
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.90		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.31	J	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.		0.45	1.3	1
06916	HMX	2691-41-0	N.D.		0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.		0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1
06916	PETN	78-11-5	N.D.		6.0	18	1
06916	RDX	121-82-4	N.D.		0.20	0.50	1
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265235
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:45 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

E2161 SDG#: KVM04-10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	37.8		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	36,300		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	926		43.0	200	1
01757	Magnesium	7439-95-4	14,600		16.7	100	1
07058	Manganese	7439-96-5	631		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,990		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	72,200		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	0.35	J	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	154,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.4		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-E-16-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265235
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 11:45 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

E2161 SDG#: KVM04-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 12:37	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 16:06	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:14	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:03	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:03	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:03	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:03	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:50	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 03:07	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 13:11	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E2161

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265235
Sample wt/vol: 244 (g/mL) mL Lab File ID: dk0339.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	4.729	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-E-16-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265236
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:05 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E161 SDG#: KVM04-11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/kg**		**ug/kg**	**ug/kg**	
10237	Acetone	67-64-1	19	J	8	23	0.84
10237	Benzene	71-43-2	N.D.		0.6	6	0.84
10237	Bromodichloromethane	75-27-4	N.D.		1	6	0.84
10237	Bromoform	75-25-2	N.D.		1	6	0.84
10237	Bromomethane	74-83-9	N.D.		2	6	0.84
10237	2-Butanone	78-93-3	N.D.		5	12	0.84
10237	Carbon Disulfide	75-15-0	2	J	1	6	0.84
10237	Carbon Tetrachloride	56-23-5	N.D.		1	6	0.84
10237	Chlorobenzene	108-90-7	N.D.		1	6	0.84
10237	Chloroethane	75-00-3	N.D.		2	6	0.84
10237	Chloroform	67-66-3	N.D.		1	6	0.84
10237	Chloromethane	74-87-3	N.D.		2	6	0.84
10237	Cyclohexane	110-82-7	N.D.		1	6	0.84
10237	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		2	6	0.84
10237	Dibromochloromethane	124-48-1	N.D.		1	6	0.84
10237	1,2-Dibromoethane	106-93-4	N.D.		1	6	0.84
10237	1,2-Dichlorobenzene	95-50-1	N.D.		1	6	0.84
10237	1,3-Dichlorobenzene	541-73-1	N.D.		1	6	0.84
10237	1,4-Dichlorobenzene	106-46-7	N.D.		1	6	0.84
10237	Dichlorodifluoromethane	75-71-8	N.D.		2	6	0.84
10237	1,1-Dichloroethane	75-34-3	N.D.		1	6	0.84
10237	1,2-Dichloroethane	107-06-2	N.D.		1	6	0.84
10237	1,1-Dichloroethene	75-35-4	N.D.		1	6	0.84
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		1	6	0.84
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		1	6	0.84
10237	1,2-Dichloropropane	78-87-5	N.D.		1	6	0.84
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	6	0.84
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	6	0.84
10237	Ethylbenzene	100-41-4	N.D.		1	6	0.84
10237	Freon 113	76-13-1	N.D.		2	12	0.84
10237	2-Hexanone	591-78-6	N.D.		3	12	0.84
10237	Isopropylbenzene	98-82-8	N.D.		1	6	0.84
10237	Methyl Acetate	79-20-9	N.D.		2	6	0.84
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.6	6	0.84
10237	4-Methyl-2-pentanone	108-10-1	N.D.		3	12	0.84
10237	Methylcyclohexane	108-87-2	N.D.		1	6	0.84
10237	Methylene Chloride	75-09-2	N.D.		2	6	0.84
10237	Styrene	100-42-5	N.D.		1	6	0.84
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	6	0.84
10237	Tetrachloroethene	127-18-4	N.D.		1	6	0.84
10237	Toluene	108-88-3	N.D.		1	6	0.84
10237	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	6	0.84
10237	1,1,1-Trichloroethane	71-55-6	N.D.		1	6	0.84
10237	1,1,2-Trichloroethane	79-00-5	N.D.		1	6	0.84
10237	Trichloroethene	79-01-6	N.D.		1	6	0.84
10237	Trichlorofluoromethane	75-69-4	N.D.		2	6	0.84
10237	Vinyl Chloride	75-01-4	N.D.		1	6	0.84
10237	Xylene (Total)	1330-20-7	N.D.		1	6	0.84

00890 VOA GC/MS Library Search

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265236
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:05 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E161 SDG#: KVM04-11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10727	Acenaphthene	83-32-9	N.D.		140	700	10
10727	Acenaphthylene	208-96-8	N.D.		140	700	10
10727	Acetophenone	98-86-2	N.D.		690	1,400	10
10727	Anthracene	120-12-7	N.D.		140	700	10
10727	Atrazine	1912-24-9	N.D.		1,400	6,900	10
10727	Benzaldehyde	100-52-7	N.D.		2,700	6,900	10
10727	Benzo(a)anthracene	56-55-3	190	J	140	700	10
10727	Benzo(a)pyrene	50-32-8	210	J	140	700	10
10727	Benzo(b)fluoranthene	205-99-2	290	J	140	700	10
10727	Benzo(g,h,i)perylene	191-24-2	170	J	140	700	10
10727	Benzo(k)fluoranthene	207-08-9	160	J	140	700	10
10727	1,1'-Biphenyl	92-52-4	N.D.		690	1,400	10
10727	4-Bromophenyl-phenylether	101-55-3	N.D.		690	1,400	10
10727	Butylbenzylphthalate	85-68-7	N.D.		2,700	6,900	10
10727	Di-n-butylphthalate	84-74-2	N.D.		2,700	6,900	10
10727	Caprolactam	105-60-2	N.D.		1,400	6,900	10
10727	Carbazole	86-74-8	N.D.		690	1,400	10
10727	4-Chloro-3-methylphenol	59-50-7	N.D.		690	1,400	10
10727	4-Chloroaniline	106-47-8	N.D.		690	1,400	10
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.		690	1,400	10
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.		690	1,400	10
10727	2-Chloronaphthalene	91-58-7	N.D.		290	1,400	10
10727	2-Chlorophenol	95-57-8	N.D.		690	1,400	10
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.		690	1,400	10
10727	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		690	1,400	10
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10727	Chrysene	218-01-9	230	J	140	700	10
10727	Dibenz(a,h)anthracene	53-70-3	N.D.		140	700	10
10727	Dibenzofuran	132-64-9	N.D.		690	1,400	10
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.		4,100	14,000	10
10727	2,4-Dichlorophenol	120-83-2	N.D.		690	1,400	10
10727	Diethylphthalate	84-66-2	N.D.		2,700	6,900	10
10727	2,4-Dimethylphenol	105-67-9	N.D.		690	1,400	10
10727	Dimethylphthalate	131-11-3	N.D.		2,700	6,900	10
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		6,900	21,000	10
10727	2,4-Dinitrophenol	51-28-5	N.D.		12,000	41,000	10
10727	2,4-Dinitrotoluene	121-14-2	N.D.		2,700	6,900	10
10727	2,6-Dinitrotoluene	606-20-2	N.D.		690	1,400	10
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		2,700	7,000	10
10727	Fluoranthene	206-44-0	360	J	140	700	10
10727	Fluorene	86-73-7	N.D.		140	700	10
10727	Hexachlorobenzene	118-74-1	N.D.		140	700	10
10727	Hexachlorobutadiene	87-68-3	N.D.		690	1,400	10
10727	Hexachlorocyclopentadiene	77-47-4	N.D.		6,900	21,000	10
10727	Hexachloroethane	67-72-1	N.D.		1,400	6,900	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265236
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:05 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E161 SDG#: KVM04-11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10727	Indeno(1,2,3-cd)pyrene	193-39-5	150	J	140	700	10
10727	Isophorone	78-59-1	N.D.		690	1,400	10
10727	2-Methylnaphthalene	91-57-6	N.D.		140	700	10
10727	2-Methylphenol	95-48-7	N.D.		690	1,400	10
10727	4-Methylphenol	106-44-5	N.D.		690	1,400	10
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10727	Naphthalene	91-20-3	N.D.		140	700	10
10727	2-Nitroaniline	88-74-4	N.D.		690	1,400	10
10727	3-Nitroaniline	99-09-2	N.D.		2,700	6,900	10
10727	4-Nitroaniline	100-01-6	N.D.		2,700	6,900	10
10727	Nitrobenzene	98-95-3	N.D.		690	1,400	10
10727	2-Nitrophenol	88-75-5	N.D.		690	1,400	10
10727	4-Nitrophenol	100-02-7	N.D.		6,900	21,000	10
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.		690	1,400	10
10727	N-Nitrosodiphenylamine	86-30-6	N.D.		690	1,400	10
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10727	Di-n-octylphthalate	117-84-0	N.D.		2,700	6,900	10
10727	Pentachlorophenol	87-86-5	N.D.		1,400	7,000	10
10727	Phenanthrene	85-01-8	240	J	140	700	10
10727	Phenol	108-95-2	N.D.		690	1,400	10
10727	Pyrene	129-00-0	390	J	140	700	10
10727	2,4,5-Trichlorophenol	95-95-4	N.D.		690	1,400	10
10727	2,4,6-Trichlorophenol	88-06-2	N.D.		690	1,400	10
Reporting limits were raised due to interference from the sample matrix.							
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		210	410	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		140	410	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		140	410	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		140	410	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		140	410	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		140	410	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		140	410	1
06918	HMX	2691-41-0	N.D.		340	1,000	1
06918	Nitrobenzene	98-95-3	N.D.		140	410	1
06918	Nitroglycerin	55-63-0	N.D.		2,700	8,200	1
06918	1-Nitronaphthalene	86-57-7	N.D.		140	410	1
06918	2-Nitrotoluene	88-72-2	N.D.		270	410	1
06918	3-Nitrotoluene	99-08-1	N.D.		340	410	1
06918	4-Nitrotoluene	99-99-0	N.D.		270	410	1
06918	PETN	78-11-5	N.D.		2,700	8,200	1
06918	RDX	121-82-4	N.D.		170	410	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265236
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:05 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E161 SDG#: KVM04-11

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	Tetryl	479-45-8	N.D.		210	410	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		140	410	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		140	410	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	6,240		9.71	26.9	1
06944	Antimony	7440-36-0	N.D.		0.997	2.69	1
06935	Arsenic	7440-38-2	1.34	J	0.943	2.69	1
06946	Barium	7440-39-3	39.5		0.0444	0.673	1
06947	Beryllium	7440-41-7	0.281	J	0.0902	0.673	1
06949	Cadmium	7440-43-9	N.D.		0.102	0.673	1
01650	Calcium	7440-70-2	1,780		4.50	26.9	1
06951	Chromium	7440-47-3	12.2		0.215	2.02	1
06952	Cobalt	7440-48-4	4.08		0.133	0.673	1
06953	Copper	7440-50-8	16.3		0.391	1.35	1
01654	Iron	7439-89-6	23,100		4.88	26.9	1
06955	Lead	7439-92-1	56.2		0.673	2.02	1
01657	Magnesium	7439-95-4	1,390		2.25	13.5	1
06958	Manganese	7439-96-5	394		0.112	0.673	1
06961	Nickel	7440-02-0	6.76		0.175	1.35	1
01662	Potassium	7440-09-7	362		11.2	67.3	1
06936	Selenium	7782-49-2	N.D.		1.08	2.69	1
06966	Silver	7440-22-4	N.D.		0.229	0.673	1
01667	Sodium	7440-23-5	134	J	22.5	135	1
06925	Thallium	7440-28-0	N.D.		0.700	4.04	1
06971	Vanadium	7440-62-2	24.0		0.175	0.673	1
06972	Zinc	7440-66-6	74.2		0.269	2.69	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.119	J	0.0131	0.131	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	10,000		419	1,260	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	27.2		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265236
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:05 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E161 SDG#: KVM04-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	8260 Ext. Soil Master w/GRO	SW-846 8260B	1	X133152AA	11/12/2013 10:16	Stephanie A Selis	0.84
08389	GC/MS - LL Encore Prep	SW-846 5035A	1	201331033040	11/06/2013 09:26	Larry E Bevins	n.a.
08389	GC/MS - LL Encore Prep	SW-846 5035A	2	201331033040	11/06/2013 09:26	Larry E Bevins	n.a.
07578	GC/MS-HL Encore Prep-NC	SW-846 5035A	1	201331033040	11/06/2013 09:25	Larry E Bevins	n.a.
10727	TCL 8270 (microwave)	SW-846 8270C	1	13314SLD026	11/15/2013 10:35	Mark A Clark	10
10809	BNA Soil Microwave	SW-846 3546	1	13314SLD026	11/12/2013 09:30	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 00:45	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:30	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 20:32	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:42	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/08/2013 23:44	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E161

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 7265236
Sample wt/vol: 5.94 (g/mL) g Lab File ID: HP09193.i/13nov11b.b/xn11s52.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: not dec. 27 Date Analyzed: 11/12/13
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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28.					
29.					
30.					

page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2E161

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 7265236
Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0558.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: 27 Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13
Injection Volume: 1 (uL) Dilution Factor: 10
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-E-16-1D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265237
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E16D SDG#: KVM04-12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/kg**		**ug/kg**	**ug/kg**	
10237	Acetone	67-64-1	12	J	9	25	1
10237	Benzene	71-43-2	N.D.		0.6	6	1
10237	Bromodichloromethane	75-27-4	N.D.		1	6	1
10237	Bromoform	75-25-2	N.D.		1	6	1
10237	Bromomethane	74-83-9	N.D.		3	6	1
10237	2-Butanone	78-93-3	N.D.		5	13	1
10237	Carbon Disulfide	75-15-0	N.D.		1	6	1
10237	Carbon Tetrachloride	56-23-5	N.D.		1	6	1
10237	Chlorobenzene	108-90-7	N.D.		1	6	1
10237	Chloroethane	75-00-3	N.D.		3	6	1
10237	Chloroform	67-66-3	N.D.		1	6	1
10237	Chloromethane	74-87-3	N.D.		3	6	1
10237	Cyclohexane	110-82-7	N.D.		1	6	1
10237	1,2-Dibromo-3-chloropropane	96-12-8	N.D.		3	6	1
10237	Dibromochloromethane	124-48-1	N.D.		1	6	1
10237	1,2-Dibromoethane	106-93-4	N.D.		1	6	1
10237	1,2-Dichlorobenzene	95-50-1	N.D.		1	6	1
10237	1,3-Dichlorobenzene	541-73-1	N.D.		1	6	1
10237	1,4-Dichlorobenzene	106-46-7	N.D.		1	6	1
10237	Dichlorodifluoromethane	75-71-8	N.D.		3	6	1
10237	1,1-Dichloroethane	75-34-3	N.D.		1	6	1
10237	1,2-Dichloroethane	107-06-2	N.D.		1	6	1
10237	1,1-Dichloroethene	75-35-4	N.D.		1	6	1
10237	cis-1,2-Dichloroethene	156-59-2	N.D.		1	6	1
10237	trans-1,2-Dichloroethene	156-60-5	N.D.		1	6	1
10237	1,2-Dichloropropane	78-87-5	N.D.		1	6	1
10237	cis-1,3-Dichloropropene	10061-01-5	N.D.		1	6	1
10237	trans-1,3-Dichloropropene	10061-02-6	N.D.		1	6	1
10237	Ethylbenzene	100-41-4	N.D.		1	6	1
10237	Freon 113	76-13-1	N.D.		3	13	1
10237	2-Hexanone	591-78-6	N.D.		4	13	1
10237	Isopropylbenzene	98-82-8	N.D.		1	6	1
10237	Methyl Acetate	79-20-9	N.D.		3	6	1
10237	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.6	6	1
10237	4-Methyl-2-pentanone	108-10-1	N.D.		4	13	1
10237	Methylcyclohexane	108-87-2	N.D.		1	6	1
10237	Methylene Chloride	75-09-2	N.D.		3	6	1
10237	Styrene	100-42-5	N.D.		1	6	1
10237	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1	6	1
10237	Tetrachloroethene	127-18-4	N.D.		1	6	1
10237	Toluene	108-88-3	N.D.		1	6	1
10237	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	6	1
10237	1,1,1-Trichloroethane	71-55-6	N.D.		1	6	1
10237	1,1,2-Trichloroethane	79-00-5	N.D.		1	6	1
10237	Trichloroethene	79-01-6	N.D.		1	6	1
10237	Trichlorofluoromethane	75-69-4	N.D.		3	6	1
10237	Vinyl Chloride	75-01-4	N.D.		1	6	1
10237	Xylene (Total)	1330-20-7	N.D.		1	6	1

00890 VOA GC/MS Library Search

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265237
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E16D SDG#: KVM04-12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10727	Acenaphthene	83-32-9	18	J	13	65	1
10727	Acenaphthylene	208-96-8	130		13	65	1
10727	Acetophenone	98-86-2	N.D.		63	130	1
10727	Anthracene	120-12-7	110		13	65	1
10727	Atrazine	1912-24-9	N.D.		130	630	1
10727	Benzaldehyde	100-52-7	N.D.		250	630	1
10727	Benzo(a)anthracene	56-55-3	390		13	65	1
10727	Benzo(a)pyrene	50-32-8	360		13	65	1
10727	Benzo(b)fluoranthene	205-99-2	570		13	65	1
10727	Benzo(g,h,i)perylene	191-24-2	180		13	65	1
10727	Benzo(k)fluoranthene	207-08-9	220		13	65	1
10727	1,1'-Biphenyl	92-52-4	N.D.		63	130	1
10727	4-Bromophenyl-phenylether	101-55-3	N.D.		63	130	1
10727	Butylbenzylphthalate	85-68-7	N.D.		250	630	1
10727	Di-n-butylphthalate	84-74-2	N.D.		250	630	1
10727	Caprolactam	105-60-2	N.D.		130	630	1
10727	Carbazole	86-74-8	140		63	130	1
10727	4-Chloro-3-methylphenol	59-50-7	N.D.		63	130	1
10727	4-Chloroaniline	106-47-8	N.D.		63	130	1
10727	bis(2-Chloroethoxy)methane	111-91-1	N.D.		63	130	1
10727	bis(2-Chloroethyl)ether	111-44-4	N.D.		63	130	1
10727	2-Chloronaphthalene	91-58-7	N.D.		27	130	1
10727	2-Chlorophenol	95-57-8	N.D.		63	130	1
10727	4-Chlorophenyl-phenylether	7005-72-3	N.D.		63	130	1
10727	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		63	130	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
10727	Chrysene	218-01-9	500		13	65	1
10727	Dibenz(a,h)anthracene	53-70-3	68		13	65	1
10727	Dibenzofuran	132-64-9	64	J	63	130	1
10727	3,3'-Dichlorobenzidine	91-94-1	N.D.		380	1,300	1
10727	2,4-Dichlorophenol	120-83-2	N.D.		63	130	1
10727	Diethylphthalate	84-66-2	N.D.		250	630	1
10727	2,4-Dimethylphenol	105-67-9	N.D.		63	130	1
10727	Dimethylphthalate	131-11-3	N.D.		250	630	1
10727	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		630	1,900	1
10727	2,4-Dinitrophenol	51-28-5	N.D.		1,100	3,800	1
10727	2,4-Dinitrotoluene	121-14-2	N.D.		250	630	1
10727	2,6-Dinitrotoluene	606-20-2	N.D.		63	130	1
10727	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		250	650	1
10727	Fluoranthene	206-44-0	1,100		13	65	1
10727	Fluorene	86-73-7	89		13	65	1
10727	Hexachlorobenzene	118-74-1	N.D.		13	65	1
10727	Hexachlorobutadiene	87-68-3	N.D.		63	130	1
10727	Hexachlorocyclopentadiene	77-47-4	N.D.		630	1,900	1
10727	Hexachloroethane	67-72-1	N.D.		130	630	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265237
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E16D SDG#: KVM04-12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10727	Indeno(1,2,3-cd)pyrene	193-39-5	180		13	65	1
10727	Isophorone	78-59-1	N.D.		63	130	1
10727	2-Methylnaphthalene	91-57-6	63	J	13	65	1
10727	2-Methylphenol	95-48-7	N.D.		63	130	1
10727	4-Methylphenol	106-44-5	N.D.		63	130	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
10727	Naphthalene	91-20-3	110		13	65	1
10727	2-Nitroaniline	88-74-4	N.D.		63	130	1
10727	3-Nitroaniline	99-09-2	N.D.		250	630	1
10727	4-Nitroaniline	100-01-6	N.D.		250	630	1
10727	Nitrobenzene	98-95-3	N.D.		63	130	1
10727	2-Nitrophenol	88-75-5	N.D.		63	130	1
10727	4-Nitrophenol	100-02-7	N.D.		630	1,900	1
10727	N-Nitroso-di-n-propylamine	621-64-7	N.D.		63	130	1
10727	N-Nitrosodiphenylamine	86-30-6	N.D.		63	130	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
10727	Di-n-octylphthalate	117-84-0	N.D.		250	630	1
10727	Pentachlorophenol	87-86-5	N.D.		130	650	1
10727	Phenanthrene	85-01-8	1,600		13	65	1
10727	Phenol	108-95-2	N.D.		63	130	1
10727	Pyrene	129-00-0	950		13	65	1
10727	2,4,5-Trichlorophenol	95-95-4	N.D.		63	130	1
10727	2,4,6-Trichlorophenol	88-06-2	N.D.		63	130	1
Reporting limits were raised due to interference from the sample matrix.							
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		190	380	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		130	380	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		130	380	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		130	380	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		130	380	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		130	380	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		130	380	1
06918	HMX	2691-41-0	N.D.		320	950	1
06918	Nitrobenzene	98-95-3	N.D.		130	380	1
06918	Nitroglycerin	55-63-0	N.D.		2,500	7,600	1
06918	1-Nitronaphthalene	86-57-7	N.D.		130	380	1
06918	2-Nitrotoluene	88-72-2	N.D.		250	380	1
06918	3-Nitrotoluene	99-08-1	N.D.		320	380	1
06918	4-Nitrotoluene	99-99-0	N.D.		250	380	1
06918	PETN	78-11-5	N.D.		2,500	7,600	1
06918	RDX	121-82-4	N.D.		160	380	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265237
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E16D SDG#: KVM04-12

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	Tetryl	479-45-8	N.D.		190	380	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		130	380	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		130	380	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	8,490		8.79	24.4	1
06944	Antimony	7440-36-0	N.D.		0.902	2.44	1
06935	Arsenic	7440-38-2	1.78	J	0.853	2.44	1
06946	Barium	7440-39-3	59.7		0.0402	0.609	1
06947	Beryllium	7440-41-7	0.340	J	0.0817	0.609	1
06949	Cadmium	7440-43-9	N.D.		0.0926	0.609	1
01650	Calcium	7440-70-2	3,030		4.07	24.4	1
06951	Chromium	7440-47-3	16.1		0.195	1.83	1
06952	Cobalt	7440-48-4	3.93		0.121	0.609	1
06953	Copper	7440-50-8	24.3		0.353	1.22	1
01654	Iron	7439-89-6	25,400		4.41	24.4	1
06955	Lead	7439-92-1	57.2		0.609	1.83	1
01657	Magnesium	7439-95-4	2,410		2.04	12.2	1
06958	Manganese	7439-96-5	281		0.101	0.609	1
06961	Nickel	7440-02-0	7.37		0.158	1.22	1
01662	Potassium	7440-09-7	388		10.2	60.9	1
06936	Selenium	7782-49-2	N.D.		0.975	2.44	1
06966	Silver	7440-22-4	N.D.		0.207	0.609	1
01667	Sodium	7440-23-5	176		20.4	122	1
06925	Thallium	7440-28-0	1.03	J	0.634	3.66	1
06971	Vanadium	7440-62-2	27.6		0.158	0.609	1
06972	Zinc	7440-66-6	79.9		0.244	2.44	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.111	J	0.0119	0.119	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	4,770		308	924	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	21.1		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-16-1D Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265237
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 12:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E16D SDG#: KVM04-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10237	8260 Ext. Soil Master w/GRO	SW-846 8260B	1	A133151AA	11/11/2013 13:56	Chelsea B Stong	1
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	1	201331033036	11/06/2013 00:55	Scott W Freisher	n.a.
00374	GC/MS - Bulk Soil Prep	SW-846 5035A Modified	2	201331033036	11/06/2013 00:55	Scott W Freisher	n.a.
10727	TCL 8270 (microwave)	SW-846 8270C	1	13314SLD026	11/15/2013 01:55	Mark A Clark	1
10809	BNA Soil Microwave	SW-846 3546	1	13314SLD026	11/12/2013 09:30	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 01:27	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:34	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 20:36	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:44	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 01:20	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E16D

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) SOIL Lab Sample ID: 7265237
Sample wt/vol: 5.01 (g/mL) g Lab File ID: HP09685.i/13nov11a.b/an11s03.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: not dec. 21 Date Analyzed: 11/11/13
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. VOCTIC	Total VOC TICs		0	U
2.				
3.				
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page 1 of 1

FORM I VOA-TIC

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E16D

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) SOIL Lab Sample ID: 7265237
Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0559.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: 21 Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13
Injection Volume: 1 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Mic
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.467	5000	JB
2.		Unknown	14.947	590	J
3.		Unknown	16.275	650	J
4.					
5.	SVOCTIC	Total SVOC TICs		6300	JB
6.					
7.					
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page 1 of 1

FORM I SV-1

Sample Description: SW-R2-F-14-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265238
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2141 SDG#: KVM04-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265238
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2141 SDG#: KVM04-13

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265238
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2141 SDG#: KVM04-13

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	107	J	82.8	200	1
07046	Barium	7440-39-3	38.3		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	57,600		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	275		43.0	200	1
01757	Magnesium	7439-95-4	22,300		16.7	100	1
07058	Manganese	7439-96-5	100		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,750		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	82,700		334	2,000	2
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	1.9		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	237,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.0		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265238
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2141 SDG#: KVM04-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 13:03	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 16:49	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/13/2013 00:58	John W Yanzuk II	2
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:17	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:05	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:05	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:05	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:05	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:52	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 03:19	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:15	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2141

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265238
Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0340.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-F-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265239
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2F14 SDG#: KVM04-14

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	480	J	130	680	5
10724	Acenaphthylene	208-96-8	2,400		130	680	5
10724	Anthracene	120-12-7	2,100		130	680	5
10724	Benzo(a)anthracene	56-55-3	4,300		130	680	5
10724	Benzo(a)pyrene	50-32-8	4,200		130	680	5
10724	Benzo(b)fluoranthene	205-99-2	5,500		130	680	5
10724	Benzo(g,h,i)perylene	191-24-2	2,700		130	680	5
10724	Benzo(k)fluoranthene	207-08-9	2,100		130	680	5
10724	Chrysene	218-01-9	6,600		130	680	5
10724	Dibenz(a,h)anthracene	53-70-3	560	J	130	680	5
10724	Fluoranthene	206-44-0	11,000		130	680	5
10724	Fluorene	86-73-7	1,500		130	680	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	2,200		130	680	5
10724	1-Methylnaphthalene	90-12-0	810		130	680	5
10724	2-Methylnaphthalene	91-57-6	780		130	680	5
10724	Naphthalene	91-20-3	770		130	680	5
10724	Phenanthrene	85-01-8	9,700		130	680	5
10724	Pyrene	129-00-0	13,000		130	680	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		550	1,100	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		360	1,100	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		360	1,100	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		360	1,100	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		360	1,100	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		360	1,100	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		360	1,100	1
06918	HMX	2691-41-0	N.D.		910	2,700	1
06918	Nitrobenzene	98-95-3	N.D.		360	1,100	1
06918	Nitroglycerin	55-63-0	N.D.		7,300	22,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		360	1,100	1
06918	2-Nitrotoluene	88-72-2	N.D.		730	1,100	1
06918	3-Nitrotoluene	99-08-1	N.D.		910	1,100	1
06918	4-Nitrotoluene	99-99-0	N.D.		730	1,100	1
06918	PETN	78-11-5	N.D.		7,300	22,000	1
06918	RDX	121-82-4	N.D.		450	1,100	1
06918	Tetryl	479-45-8	N.D.		560	1,100	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		360	1,100	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		360	1,100	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,300		27.7	76.9	1
06944	Antimony	7440-36-0	N.D.		2.85	7.69	1
06935	Arsenic	7440-38-2	22.6		2.69	7.69	1
06946	Barium	7440-39-3	71.1		0.127	1.92	1
06947	Beryllium	7440-41-7	1.41	J	0.258	1.92	1
06949	Cadmium	7440-43-9	1.53	J	0.292	1.92	1
01650	Calcium	7440-70-2	10,600		12.8	76.9	1
06951	Chromium	7440-47-3	246		0.615	5.77	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-F-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265239
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2F14 SDG#: KVM04-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	8.81	0.381	1.92	1
06953	Copper	7440-50-8	91.6	1.12	3.85	1
01654	Iron	7439-89-6	28,300	13.9	76.9	1
06955	Lead	7439-92-1	1,120	1.92	5.77	1
01657	Magnesium	7439-95-4	3,080	6.42	38.5	1
06958	Manganese	7439-96-5	66.7	0.319	1.92	1
06961	Nickel	7440-02-0	17.2	0.500	3.85	1
01662	Potassium	7440-09-7	639	32.1	192	1
06936	Selenium	7782-49-2	N.D.	3.08	7.69	1
06966	Silver	7440-22-4	2.98	0.654	1.92	1
01667	Sodium	7440-23-5	624	64.2	385	1
06925	Thallium	7440-28-0	N.D.	2.00	11.5	1
06971	Vanadium	7440-62-2	43.5	0.500	1.92	1
06972	Zinc	7440-66-6	390	0.769	7.69	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	11.0	0.385	3.85	10
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	78,700	6,430	19,300	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	75.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 11:10	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 19:55	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-F-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265239
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:25 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2F14 SDG#: KVM04-14

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:29	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 18:29	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 21:30	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 11:00	Damary Valentin	10
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 00:05	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265240
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2142 SDG#: KVM04-15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265240
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2142 SDG#: KVM04-15

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.		0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	0.1	J	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.		0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.		0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.		0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.		0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.		0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.		10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		2	5	1
04678	Pentachlorophenol	87-86-5	N.D.		1	5	1
04678	Phenanthrene	85-01-8	N.D.		0.1	0.5	1
04678	Phenol	108-95-2	N.D.		0.5	1	1
04678	Pyrene	129-00-0	N.D.		0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		0.5	1	1
00893 Semivolatile Library Search							
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.		0.45	1.3	1
06916	HMX	2691-41-0	N.D.		0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.		0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1
06916	PETN	78-11-5	N.D.		6.0	18	1
06916	RDX	121-82-4	N.D.		0.20	0.50	1
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265240
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2142 SDG#: KVM04-15

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	37.5		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	56,500		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	118	J	43.0	200	1
01757	Magnesium	7439-95-4	21,900		16.7	100	1
07058	Manganese	7439-96-5	75.6		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	1,810		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	89,600		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	0.54	J	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	236,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	8.0		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-F-14-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265240
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2142 SDG#: KVM04-15

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 13:30	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 18:14	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:21	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:07	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:07	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:07	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:07	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:54	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 03:31	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:39	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2142

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265240
Sample wt/vol: 241 (g/mL) mL Lab File ID: dk0341.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-F-14-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265241
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:50 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2F142 SDG#: KVM04-16

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		100	520	1
10724	Acenaphthylene	208-96-8	510	J	100	520	1
10724	Anthracene	120-12-7	410	J	100	520	1
10724	Benzo(a)anthracene	56-55-3	1,100		100	520	1
10724	Benzo(a)pyrene	50-32-8	1,400		100	520	1
10724	Benzo(b)fluoranthene	205-99-2	2,300		100	520	1
10724	Benzo(g,h,i)perylene	191-24-2	1,100		100	520	1
10724	Benzo(k)fluoranthene	207-08-9	810		100	520	1
10724	Chrysene	218-01-9	1,600		100	520	1
10724	Dibenz(a,h)anthracene	53-70-3	250	J	100	520	1
10724	Fluoranthene	206-44-0	2,900		100	520	1
10724	Fluorene	86-73-7	230	J	100	520	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	890		100	520	1
10724	1-Methylnaphthalene	90-12-0	170	J	100	520	1
10724	2-Methylnaphthalene	91-57-6	180	J	100	520	1
10724	Naphthalene	91-20-3	170	J	100	520	1
10724	Phenanthrene	85-01-8	1,800		100	520	1
10724	Pyrene	129-00-0	3,100		100	520	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		760	1,500	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		510	1,500	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		510	1,500	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		510	1,500	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		510	1,500	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		510	1,500	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		510	1,500	1
06918	HMX	2691-41-0	N.D.		1,300	3,800	1
06918	Nitrobenzene	98-95-3	N.D.		510	1,500	1
06918	Nitroglycerin	55-63-0	N.D.		10,000	30,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		510	1,500	1
06918	2-Nitrotoluene	88-72-2	N.D.		1,000	1,500	1
06918	3-Nitrotoluene	99-08-1	N.D.		1,300	1,500	1
06918	4-Nitrotoluene	99-99-0	N.D.		1,000	1,500	1
06918	PETN	78-11-5	N.D.		10,000	30,000	1
06918	RDX	121-82-4	N.D.		630	1,500	1
06918	Tetryl	479-45-8	N.D.		780	1,500	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		510	1,500	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		510	1,500	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	16,300		362	1,010	10
06944	Antimony	7440-36-0	N.D.		37.2	101	10
06935	Arsenic	7440-38-2	N.D.		35.2	101	10
06946	Barium	7440-39-3	78.2		1.66	25.1	10
06947	Beryllium	7440-41-7	N.D.		3.37	25.1	10
06949	Cadmium	7440-43-9	N.D.		3.82	25.1	10
01650	Calcium	7440-70-2	10,200		168	1,010	10
06951	Chromium	7440-47-3	64.5	J	8.04	75.4	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-F-14-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265241
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:50 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2F142 SDG#: KVM04-16

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	10.4	J	4.98	25.1	10
06953	Copper	7440-50-8	58.0		14.6	50.3	10
01654	Iron	7439-89-6	17,700		182	1,010	10
06955	Lead	7439-92-1	386		25.1	75.4	10
01657	Magnesium	7439-95-4	3,330		83.9	503	10
06958	Manganese	7439-96-5	118		4.17	25.1	10
06961	Nickel	7440-02-0	21.1	J	6.53	50.3	10
01662	Potassium	7440-09-7	481	J	419	2,510	10
06936	Selenium	7782-49-2	N.D.		40.2	101	10
06966	Silver	7440-22-4	11.1	J	8.54	25.1	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	N.D.		839	5,030	10
06925	Thallium	7440-28-0	N.D.		26.1	151	10
06971	Vanadium	7440-62-2	49.1		6.53	25.1	10
06972	Zinc	7440-66-6	371		10.1	101	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	4.26		0.121	1.21	2.5
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	53,400		7,720	23,100	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	80.3		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 02:58	Mark A Clark	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 03:35	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-F-14-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265241
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 13:50 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2F142 SDG#: KVM04-16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:29	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:39	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 11:02	Damary Valentin	2.5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 00:17	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265242
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2121 SDG#: KVM04-17

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		760	3,900	5
10724	Acenaphthylene	208-96-8	N.D.		760	3,900	5
10724	Anthracene	120-12-7	N.D.		760	3,900	5
10724	Benzo(a)anthracene	56-55-3	N.D.		760	3,900	5
10724	Benzo(a)pyrene	50-32-8	N.D.		760	3,900	5
10724	Benzo(b)fluoranthene	205-99-2	820	J	760	3,900	5
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		760	3,900	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.		760	3,900	5
10724	Chrysene	218-01-9	N.D.		760	3,900	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		760	3,900	5
10724	Fluoranthene	206-44-0	960	J	760	3,900	5
10724	Fluorene	86-73-7	N.D.		760	3,900	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		760	3,900	5
10724	1-Methylnaphthalene	90-12-0	N.D.		760	3,900	5
10724	2-Methylnaphthalene	91-57-6	N.D.		760	3,900	5
10724	Naphthalene	91-20-3	N.D.		760	3,900	5
10724	Phenanthrene	85-01-8	N.D.		760	3,900	5
10724	Pyrene	129-00-0	960	J	760	3,900	5
	Reporting limits were raised due to interference from the sample matrix.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		1,100	2,300	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		760	2,300	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		760	2,300	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		760	2,300	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		760	2,300	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		760	2,300	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		760	2,300	1
06918	HMX	2691-41-0	N.D.		1,900	5,700	1
06918	Nitrobenzene	98-95-3	N.D.		12,000	12,000	1
06918	Nitroglycerin	55-63-0	N.D.		15,000	46,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		760	2,300	1
06918	2-Nitrotoluene	88-72-2	N.D.		1,500	2,300	1
06918	3-Nitrotoluene	99-08-1	N.D.		1,900	2,300	1
06918	4-Nitrotoluene	99-99-0	N.D.		1,500	2,300	1
06918	PETN	78-11-5	N.D.		15,000	46,000	1
06918	RDX	121-82-4	N.D.		950	2,300	1
06918	Tetryl	479-45-8	N.D.		6,500	6,500	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		760	2,300	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		760	2,300	1
	Reporting limits were raised due to interference from the sample matrix.						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	6,210		545	1,510	10
06944	Antimony	7440-36-0	N.D.		55.9	151	10
06935	Arsenic	7440-38-2	N.D.		52.9	151	10
06946	Barium	7440-39-3	52.8		2.49	37.8	10
06947	Beryllium	7440-41-7	N.D.		5.06	37.8	10
06949	Cadmium	7440-43-9	N.D.		5.74	37.8	10
01650	Calcium	7440-70-2	10,000		252	1,510	10
06951	Chromium	7440-47-3	53.1	J	12.1	113	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265242
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2121 SDG#: KVM04-17

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	N.D.		7.48	37.8	10
06953	Copper	7440-50-8	92.5		21.9	75.6	10
01654	Iron	7439-89-6	12,600		274	1,510	10
06955	Lead	7439-92-1	720		37.8	113	10
01657	Magnesium	7439-95-4	2,460		126	756	10
06958	Manganese	7439-96-5	81.8		6.27	37.8	10
06961	Nickel	7440-02-0	28.0	J	9.83	75.6	10
01662	Potassium	7440-09-7	N.D.		630	3,780	10
06936	Selenium	7782-49-2	N.D.		60.5	151	10
06966	Silver	7440-22-4	13.4	J	12.8	37.8	10
01667	Sodium	7440-23-5	N.D.		1,260	7,560	10
06925	Thallium	7440-28-0	N.D.		39.3	227	10
06971	Vanadium	7440-62-2	62.4		9.83	37.8	10
06972	Zinc	7440-66-6	140	J	15.1	151	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	2.97		0.0732	0.732	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	226,000		6,630	19,900	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	86.9		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 03:23	Mark A Clark	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 04:17	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265242
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:15 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2121 SDG#: KVM04-17

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:33	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:43	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:52	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 00:46	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-G-12-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265243
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2122 SDG#: KVM04-18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-G-12-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265243
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2122 SDG#: KVM04-18

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.45	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-G-12-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265243
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2122 SDG#: KVM04-18

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene Reporting limits were raised due to interference from the sample matrix.						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	37.8		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	51,100		33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	142	J	43.0	200	1
01757	Magnesium	7439-95-4	20,800		16.7	100	1
07058	Manganese	7439-96-5	210		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	3,100		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	86,600		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	N.D.		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	222,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.7		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SW-R2-G-12-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265243
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2122 SDG#: KVM04-18

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 13:57	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 18:56	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:25	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:13	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:13	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:13	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:13	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:56	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 03:42	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:31	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
R2122

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265243
Sample wt/vol: 240 (g/mL) mL Lab File ID: dk0342.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-G-12-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265244
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2123 SDG#: KVM04-19

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		44	220	1
10724	Acenaphthylene	208-96-8	65	J	44	220	1
10724	Anthracene	120-12-7	60	J	44	220	1
10724	Benzo(a)anthracene	56-55-3	200	J	44	220	1
10724	Benzo(a)pyrene	50-32-8	290		44	220	1
10724	Benzo(b)fluoranthene	205-99-2	430		44	220	1
10724	Benzo(g,h,i)perylene	191-24-2	230		44	220	1
10724	Benzo(k)fluoranthene	207-08-9	190	J	44	220	1
10724	Chrysene	218-01-9	300		44	220	1
10724	Dibenz(a,h)anthracene	53-70-3	50	J	44	220	1
10724	Fluoranthene	206-44-0	560		44	220	1
10724	Fluorene	86-73-7	N.D.		44	220	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	180	J	44	220	1
10724	1-Methylnaphthalene	90-12-0	N.D.		44	220	1
10724	2-Methylnaphthalene	91-57-6	N.D.		44	220	1
10724	Naphthalene	91-20-3	N.D.		44	220	1
10724	Phenanthrene	85-01-8	280		44	220	1
10724	Pyrene	129-00-0	550		44	220	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		330	660	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		220	660	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		220	660	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		220	660	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		220	660	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		220	660	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		220	660	1
06918	HMX	2691-41-0	N.D.		550	1,600	1
06918	Nitrobenzene	98-95-3	N.D.		220	660	1
06918	Nitroglycerin	55-63-0	N.D.		4,400	13,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		220	660	1
06918	2-Nitrotoluene	88-72-2	N.D.		440	660	1
06918	3-Nitrotoluene	99-08-1	N.D.		550	660	1
06918	4-Nitrotoluene	99-99-0	N.D.		440	660	1
06918	PETN	78-11-5	N.D.		4,400	13,000	1
06918	RDX	121-82-4	N.D.		270	660	1
06918	Tetryl	479-45-8	N.D.		340	660	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		220	660	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		220	660	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	7,350		157	435	10
06944	Antimony	7440-36-0	N.D.		16.1	43.5	10
06935	Arsenic	7440-38-2	N.D.		15.2	43.5	10
06946	Barium	7440-39-3	50.8		0.718	10.9	10
06947	Beryllium	7440-41-7	N.D.		1.46	10.9	10
06949	Cadmium	7440-43-9	N.D.		1.65	10.9	10
01650	Calcium	7440-70-2	2,820		72.7	435	10
06951	Chromium	7440-47-3	22.2	J	3.48	32.6	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265244
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2123 SDG#: KVM04-19

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	4.59	J	2.15	10.9	10
06953	Copper	7440-50-8	18.3	J	6.31	21.8	10
01654	Iron	7439-89-6	19,400		78.8	435	10
06955	Lead	7439-92-1	36.2		10.9	32.6	10
01657	Magnesium	7439-95-4	1,380		36.3	218	10
06958	Manganese	7439-96-5	137		1.81	10.9	10
06961	Nickel	7440-02-0	7.55	J	2.83	21.8	10
01662	Potassium	7440-09-7	N.D.		181	1,090	10
06936	Selenium	7782-49-2	N.D.		17.4	43.5	10
06966	Silver	7440-22-4	3.76	J	3.70	10.9	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
01667	Sodium	7440-23-5	N.D.		363	2,180	10
06925	Thallium	7440-28-0	N.D.		11.3	65.3	10
06971	Vanadium	7440-62-2	22.0		2.83	10.9	10
06972	Zinc	7440-66-6	105		4.35	43.5	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.334		0.0210	0.210	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	34,000		1,950	5,840	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	54.5		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 03:47	Mark A Clark	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 04:59	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SD-R2-G-12-3 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265244
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 14:40 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

R2123 SDG#: KVM04-19

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:37	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:47	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:54	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 00:56	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-D-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265245
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 15:00 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D141 SDG#: KVM04-20

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		300	1,500	1
10724	Acenaphthylene	208-96-8	N.D.		300	1,500	1
10724	Anthracene	120-12-7	N.D.		300	1,500	1
10724	Benzo(a)anthracene	56-55-3	N.D.		300	1,500	1
10724	Benzo(a)pyrene	50-32-8	N.D.		300	1,500	1
10724	Benzo(b)fluoranthene	205-99-2	350	J	300	1,500	1
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		300	1,500	1
10724	Benzo(k)fluoranthene	207-08-9	N.D.		300	1,500	1
10724	Chrysene	218-01-9	N.D.		300	1,500	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		300	1,500	1
10724	Fluoranthene	206-44-0	520	J	300	1,500	1
10724	Fluorene	86-73-7	N.D.		300	1,500	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		300	1,500	1
10724	1-Methylnaphthalene	90-12-0	N.D.		300	1,500	1
10724	2-Methylnaphthalene	91-57-6	N.D.		300	1,500	1
10724	Naphthalene	91-20-3	N.D.		300	1,500	1
10724	Phenanthrene	85-01-8	N.D.		300	1,500	1
10724	Pyrene	129-00-0	470	J	300	1,500	1
	Reporting limits were raised due to interference from the sample matrix.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		2,200	4,500	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		1,500	4,500	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		1,500	4,500	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		1,500	4,500	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		1,500	4,500	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		1,500	4,500	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		1,500	4,500	1
06918	HMX	2691-41-0	N.D.		3,700	11,000	1
06918	Nitrobenzene	98-95-3	N.D.		1,500	4,500	1
06918	Nitroglycerin	55-63-0	N.D.		30,000	90,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		1,500	4,500	1
06918	2-Nitrotoluene	88-72-2	N.D.		3,000	4,500	1
06918	3-Nitrotoluene	99-08-1	N.D.		3,700	4,500	1
06918	4-Nitrotoluene	99-99-0	N.D.		3,000	4,500	1
06918	PETN	78-11-5	N.D.		30,000	90,000	1
06918	RDX	121-82-4	N.D.		1,900	4,500	1
06918	Tetryl	479-45-8	N.D.		2,300	4,500	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		1,500	4,500	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		1,500	4,500	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	1,670	J	1,070	2,960	10
06944	Antimony	7440-36-0	N.D.		109	296	10
06935	Arsenic	7440-38-2	N.D.		103	296	10
06946	Barium	7440-39-3	64.1	J	4.88	73.9	10
06947	Beryllium	7440-41-7	N.D.		9.90	73.9	10
06949	Cadmium	7440-43-9	N.D.		11.2	73.9	10
01650	Calcium	7440-70-2	16,500		494	2,960	10
06951	Chromium	7440-47-3	N.D.		23.6	222	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-D-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265245
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 15:00 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D141 SDG#: KVM04-20

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	N.D.		14.6	73.9	10
06953	Copper	7440-50-8	N.D.		42.9	148	10
01654	Iron	7439-89-6	22,200		535	2,960	10
06955	Lead	7439-92-1	81.0	J	73.9	222	10
01657	Magnesium	7439-95-4	2,060		247	1,480	10
06958	Manganese	7439-96-5	2,400		12.3	73.9	10
06961	Nickel	7440-02-0	N.D.		19.2	148	10
01662	Potassium	7440-09-7	N.D.		1,230	7,390	10
06936	Selenium	7782-49-2	N.D.		118	296	10
06966	Silver	7440-22-4	N.D.		25.1	73.9	10
01667	Sodium	7440-23-5	N.D.		2,470	14,800	10
06925	Thallium	7440-28-0	N.D.		76.8	443	10
06971	Vanadium	7440-62-2	N.D.		19.2	73.9	10
06972	Zinc	7440-66-6	207	J	29.6	296	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.219	J	0.144	1.44	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	258,000		17,800	53,400	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	93.3		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 04:12	Mark A Clark	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 05:42	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: SD-R2-D-14-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265245
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 15:00 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D141 SDG#: KVM04-20

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:41	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 17:51	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:56	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 01:33	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-02 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265246
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DUPX1 SDG#: KVM04-21FD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		33	170	1
10724	Acenaphthylene	208-96-8	35	J	33	170	1
10724	Anthracene	120-12-7	N.D.		33	170	1
10724	Benzo(a)anthracene	56-55-3	76	J	33	170	1
10724	Benzo(a)pyrene	50-32-8	110	J	33	170	1
10724	Benzo(b)fluoranthene	205-99-2	170		33	170	1
10724	Benzo(g,h,i)perylene	191-24-2	87	J	33	170	1
10724	Benzo(k)fluoranthene	207-08-9	89	J	33	170	1
10724	Chrysene	218-01-9	120	J	33	170	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		33	170	1
10724	Fluoranthene	206-44-0	220		33	170	1
10724	Fluorene	86-73-7	N.D.		33	170	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	78	J	33	170	1
10724	1-Methylnaphthalene	90-12-0	N.D.		33	170	1
10724	2-Methylnaphthalene	91-57-6	N.D.		33	170	1
10724	Naphthalene	91-20-3	N.D.		33	170	1
10724	Phenanthrene	85-01-8	150	J	33	170	1
10724	Pyrene	129-00-0	230		33	170	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		250	500	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		170	500	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		170	500	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		170	500	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		170	500	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		170	500	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		170	500	1
06918	HMX	2691-41-0	N.D.		420	1,300	1
06918	Nitrobenzene	98-95-3	N.D.		170	500	1
06918	Nitroglycerin	55-63-0	N.D.		3,300	10,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		170	500	1
06918	2-Nitrotoluene	88-72-2	N.D.		330	500	1
06918	3-Nitrotoluene	99-08-1	N.D.		420	500	1
06918	4-Nitrotoluene	99-99-0	N.D.		330	500	1
06918	PETN	78-11-5	N.D.		3,300	10,000	1
06918	RDX	121-82-4	N.D.		210	500	1
06918	Tetryl	479-45-8	N.D.		260	500	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		170	500	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		170	500	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	6,330		12.0	33.3	1
06944	Antimony	7440-36-0	N.D.		1.23	3.33	1
06935	Arsenic	7440-38-2	4.57		1.17	3.33	1
06946	Barium	7440-39-3	52.0		0.0550	0.833	1
06947	Beryllium	7440-41-7	0.463	J	0.112	0.833	1
06949	Cadmium	7440-43-9	N.D.		0.127	0.833	1
01650	Calcium	7440-70-2	2,330		5.57	33.3	1
06951	Chromium	7440-47-3	17.8		0.267	2.50	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-02 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265246
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DUPX1 SDG#: KVM04-21FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	5.51	0.165	0.833	1
06953	Copper	7440-50-8	18.5	0.483	1.67	1
01654	Iron	7439-89-6	32,800	6.03	33.3	1
06955	Lead	7439-92-1	21.3	0.833	2.50	1
01657	Magnesium	7439-95-4	1,920	2.78	16.7	1
06958	Manganese	7439-96-5	501	0.138	0.833	1
06961	Nickel	7440-02-0	5.69	0.217	1.67	1
01662	Potassium	7440-09-7	415	13.9	83.3	1
06936	Selenium	7782-49-2	N.D.	1.33	3.33	1
06966	Silver	7440-22-4	0.363 J	0.283	0.833	1
01667	Sodium	7440-23-5	210	27.8	167	1
06925	Thallium	7440-28-0	N.D.	0.867	5.00	1
06971	Vanadium	7440-62-2	23.7	0.217	0.833	1
06972	Zinc	7440-66-6	102	0.333	3.33	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.170	0.0157	0.157	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	9,820	1,620	4,860	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	40.0	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13310SLF026	11/14/2013 04:36	Mark A Clark	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13310SLF026	11/07/2013 10:00	David S Schrum	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133110004A	11/14/2013 06:24	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133110004A	11/07/2013 15:00	Wanda F Oswald	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-02 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7265246
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

DUPX1 SDG#: KVM04-21FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:04	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 18:04	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 21:34	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:58	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13312049531A	11/09/2013 01:12	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13316820005A	11/12/2013 22:33	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265247
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX01 SDG#: KVM04-22FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	Benzene	71-43-2	N.D.	0.5	5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	5	1
10335	Bromoform	75-25-2	N.D.	1	5	1
10335	Bromomethane	74-83-9	N.D.	1	5	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	5	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	5	1
10335	Chloroethane	75-00-3	N.D.	1	5	1
10335	Chloroform	67-66-3	N.D.	0.8	5	1
10335	Chloromethane	74-87-3	N.D.	1	5	1
10335	Cyclohexane	110-82-7	N.D.	2	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	1	5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	5	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1	5	1
10335	Methyl Acetate	79-20-9	N.D.	1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1	5	1
10335	Methylene Chloride	75-09-2	N.D.	2	5	1
10335	Styrene	100-42-5	N.D.	1	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	5	1
10335	Toluene	108-88-3	N.D.	0.7	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	5	1
10335	Trichloroethene	79-01-6	N.D.	1	5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	5	1

00890 VOA GC/MS Library Search

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265247
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX01 SDG#: KVM04-22FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265247
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX01 SDG#: KVM04-22FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265247
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX01 SDG#: KVM04-22FB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	N.D.		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	58.1	J	33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	N.D.		43.0	200	1
01757	Magnesium	7439-95-4	N.D.		16.7	100	1
07058	Manganese	7439-96-5	N.D.		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	N.D.		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	N.D.		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	N.D.		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry	**SM 5310 C-2000**		**mg/l**		**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	N.D.		0.50	1.0	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265247
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:20 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX01 SDG#: KVM04-22FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	Y133112AA	11/07/2013 15:49	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y133112AA	11/07/2013 15:49	Angela D Sneeringer	1
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 14:24	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 19:38	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:29	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:15	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:15	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:15	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:15	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 10:58	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
00273	Total Organic Carbon	SM 5310 C-2000	1	13312049501B	11/08/2013 09:42	James S Mathiot	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FBX01

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 7265247
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/13nov07a.b/yn07s35.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: not dec. Date Analyzed: 11/07/13
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. VOCTIC	Total VOC TICs		0	U
2.				
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page 1 of 1

FORM I VOA-TIC

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FBX01

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265247
Sample wt/vol: 238 (g/mL) mL Lab File ID: dk0343.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

Sample Description: FB-02_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265248
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX02 SDG#: KVM04-23FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265248
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX02 SDG#: KVM04-23FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265248
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX02 SDG#: KVM04-23FB

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.		82.8	200	1
07046	Barium	7440-39-3	N.D.		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	73.2	J	33.4	200	1
07051	Chromium	7440-47-3	N.D.		1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.		1.3	5.0	1
07053	Copper	7440-50-8	N.D.		2.7	10.0	1
01754	Iron	7439-89-6	N.D.		43.0	200	1
01757	Magnesium	7439-95-4	N.D.		16.7	100	1
07058	Manganese	7439-96-5	N.D.		0.83	5.0	1
07061	Nickel	7440-02-0	N.D.		1.5	10.0	1
01762	Potassium	7440-09-7	N.D.		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	N.D.		167	1,000	1
07071	Vanadium	7440-62-2	N.D.		2.0	5.0	1
07072	Zinc	7440-66-6	N.D.		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.		0.42	2.0	1
06035	Lead	7439-92-1	N.D.		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.0		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11052013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265248
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013 17:35 by RB

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FBX02 SDG#: KVM04-23FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13312WAD026	11/11/2013 14:51	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13312WAD026	11/09/2013 16:30	Seth A Farrier	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133130015A	11/17/2013 20:21	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133130015A	11/11/2013 15:00	Kelli M Barto	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:32	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:27	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:27	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:27	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:27	John P Hook	1
00259	Mercury	SW-846 7470A	1	133105713004	11/08/2013 11:00	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133105713004	11/07/2013 16:00	Nelli S Markaryan	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 03:47	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:35	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FBX02

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7265248
Sample wt/vol: 237 (g/mL) mL Lab File ID: dk0344.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
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page 1 of 1

FORM I SV-1

Sample Description: TB Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265249
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

TBXXX SDG#: KVM04-24TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	Benzene	71-43-2	N.D.	0.5	5	1
10335	Bromodichloromethane	75-27-4	N.D.	1	5	1
10335	Bromoform	75-25-2	N.D.	1	5	1
10335	Bromomethane	74-83-9	N.D.	1	5	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	1	5	1
10335	Chlorobenzene	108-90-7	N.D.	0.8	5	1
10335	Chloroethane	75-00-3	N.D.	1	5	1
10335	Chloroform	67-66-3	N.D.	0.8	5	1
10335	Chloromethane	74-87-3	N.D.	1	5	1
10335	Cyclohexane	110-82-7	N.D.	2	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	1	5	1
10335	1,2-Dibromoethane	106-93-4	N.D.	1	5	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	2	5	1
10335	1,1-Dichloroethane	75-34-3	N.D.	1	5	1
10335	1,2-Dichloroethane	107-06-2	N.D.	1	5	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.8	5	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.8	5	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	5	1
10335	1,2-Dichloropropane	78-87-5	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	1	5	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	1	5	1
10335	Ethylbenzene	100-41-4	N.D.	0.8	5	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	Isopropylbenzene	98-82-8	N.D.	1	5	1
10335	Methyl Acetate	79-20-9	N.D.	1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	5	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.	3	10	1
10335	Methylcyclohexane	108-87-2	N.D.	1	5	1
10335	Methylene Chloride	75-09-2	N.D.	2	5	1
10335	Styrene	100-42-5	N.D.	1	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1	5	1
10335	Tetrachloroethene	127-18-4	N.D.	0.8	5	1
10335	Toluene	108-88-3	N.D.	0.7	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.	1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	5	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	5	1
10335	Trichloroethene	79-01-6	N.D.	1	5	1
10335	Trichlorofluoromethane	75-69-4	N.D.	2	5	1
10335	Vinyl Chloride	75-01-4	N.D.	1	5	1
10335	Xylene (Total)	1330-20-7	N.D.	0.8	5	1

00890 VOA GC/MS Library Search

*=This limit was used in the evaluation of the final result

Sample Description: TB Water Sample
Hercules Phase II R.I.

LL Sample # WW 7265249
LL Group # 1431593
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/05/2013

Submitted: 11/05/2013 20:32
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

TBXXX SDG#: KVM04-24TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor

The results from the volatile library search are listed on the attached FORM 1 - VOA-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	8260 Ext. Water Master w/GRO	SW-846 8260B	1	Y133112AA	11/07/2013 16:11	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y133112AA	11/07/2013 16:11	Angela D Sneeringer	1

*=This limit was used in the evaluation of the final result

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
TBXXX

Lab Name: Lancaster Laboratories Contract:_____
Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____
Matrix: (soil/water) WATER Lab Sample ID: 7265249
Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/13nov07a.b/yn07s36.d
Level: (low/med) LOW Date Received: 11/05/13
% Moisture: not dec. Date Analyzed: 11/07/13
Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. VOCTIC	Total VOC TICs		0	U
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FORM I VOA-TIC

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: A133151AA	Sample number(s): 7265237								
Acetone	N.D.	7.	20	ug/kg	80	76	23-171	6	30
Benzene	N.D.	0.5	5	ug/kg	91	89	80-120	2	30
Bromodichloromethane	N.D.	1.	5	ug/kg	92	91	75-120	1	30
Bromoform	N.D.	1.	5	ug/kg	92	90	70-120	2	30
Bromomethane	N.D.	2.	5	ug/kg	101	99	32-162	3	30
2-Butanone	N.D.	4.	10	ug/kg	84	81	38-146	4	30
Carbon Disulfide	N.D.	1.	5	ug/kg	89	85	63-128	5	30
Carbon Tetrachloride	N.D.	1.	5	ug/kg	97	93	69-122	4	30
Chlorobenzene	N.D.	1.	5	ug/kg	92	90	80-120	2	30
Chloroethane	N.D.	2.	5	ug/kg	91	88	17-171	3	30
Chloroform	N.D.	1.	5	ug/kg	97	96	80-120	1	30
Chloromethane	N.D.	2.	5	ug/kg	87	86	56-120	1	30
Cyclohexane	N.D.	1.	5	ug/kg	80	76	63-124	4	30
1,2-Dibromo-3-chloropropane	N.D.	2.	5	ug/kg	84	78	55-128	7	30
Dibromochloromethane	N.D.	1.	5	ug/kg	89	88	77-120	1	30
1,2-Dibromoethane	N.D.	1.	5	ug/kg	92	91	80-120	1	30
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	92	91	80-120	1	30
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	92	90	80-120	2	30
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	92	90	80-120	1	30
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	90	86	32-120	4	30
1,1-Dichloroethane	N.D.	1.	5	ug/kg	89	88	80-120	2	30
1,2-Dichloroethane	N.D.	1.	5	ug/kg	102	101	72-126	1	30
1,1-Dichloroethene	N.D.	1.	5	ug/kg	96	93	73-129	3	30
cis-1,2-Dichloroethene	N.D.	1.	5	ug/kg	95	94	80-120	2	30
trans-1,2-Dichloroethene	N.D.	1.	5	ug/kg	100	96	79-120	4	30
1,2-Dichloropropane	N.D.	1.	5	ug/kg	87	86	77-120	1	30
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	91	90	74-120	1	30
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	85	86	77-120	1	30
Ethylbenzene	N.D.	1.	5	ug/kg	89	88	80-120	2	30
Freon 113	N.D.	2.	10	ug/kg	97	90	64-137	7	30
2-Hexanone	N.D.	3.	10	ug/kg	80	76	40-129	4	30
Isopropylbenzene	N.D.	1.	5	ug/kg	90	88	76-120	3	30
Methyl Acetate	N.D.	2.	5	ug/kg	89	87	62-158	2	30
Methyl Tertiary Butyl Ether	N.D.	0.5	5	ug/kg	95	94	69-126	1	30
4-Methyl-2-pentanone	N.D.	3.	10	ug/kg	83	81	52-125	2	30
Methylcyclohexane	N.D.	1.	5	ug/kg	90	86	58-134	4	30
Methylene Chloride	N.D.	2.	5	ug/kg	96	96	80-124	0	30
Styrene	N.D.	1.	5	ug/kg	94	93	76-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	82	80	71-123	2	30
Tetrachloroethene	N.D.	1.	5	ug/kg	99	96	78-126	3	30
Toluene	N.D.	1.	5	ug/kg	89	87	80-120	2	30
1,2,4-Trichlorobenzene	N.D.	1.	5	ug/kg	95	92	68-120	2	30
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	87	86	71-125	2	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	91	89	80-120	2	30
Trichloroethene	N.D.	1.	5	ug/kg	97	95	80-120	3	30
Trichlorofluoromethane	N.D.	2.	5	ug/kg	97	94	58-133	4	30
Vinyl Chloride	N.D.	1.	5	ug/kg	92	89	53-120	3	30
Xylene (Total)	N.D.	1.	5	ug/kg	91	88	80-120	3	30
Batch number: X133152AA	Sample number(s): 7265236								
Acetone	N.D.	7.	20	ug/kg	77	84	23-171	9	30
Benzene	N.D.	0.5	5	ug/kg	96	97	80-120	1	30
Bromodichloromethane	N.D.	1.	5	ug/kg	93	93	75-120	0	30
Bromoform	N.D.	1.	5	ug/kg	99	99	70-120	1	30
Bromomethane	N.D.	2.	5	ug/kg	89	90	32-162	1	30
2-Butanone	N.D.	4.	10	ug/kg	77	83	38-146	7	30
Carbon Disulfide	N.D.	1.	5	ug/kg	92	94	63-128	1	30
Carbon Tetrachloride	N.D.	1.	5	ug/kg	96	96	69-122	0	30
Chlorobenzene	N.D.	1.	5	ug/kg	99	100	80-120	1	30
Chloroethane	N.D.	2.	5	ug/kg	90	93	17-171	3	30
Chloroform	N.D.	1.	5	ug/kg	97	98	80-120	1	30
Chloromethane	N.D.	2.	5	ug/kg	75	77	56-120	2	30
Cyclohexane	N.D.	1.	5	ug/kg	86	87	63-124	2	30
1,2-Dibromo-3-chloropropane	N.D.	2.	5	ug/kg	85	89	55-128	4	30
Dibromochloromethane	N.D.	1.	5	ug/kg	96	97	77-120	1	30
1,2-Dibromoethane	N.D.	1.	5	ug/kg	93	95	80-120	2	30
1,2-Dichlorobenzene	N.D.	1.	5	ug/kg	97	98	80-120	0	30
1,3-Dichlorobenzene	N.D.	1.	5	ug/kg	98	97	80-120	1	30
1,4-Dichlorobenzene	N.D.	1.	5	ug/kg	98	98	80-120	0	30
Dichlorodifluoromethane	N.D.	2.	5	ug/kg	72	73	32-120	2	30
1,1-Dichloroethane	N.D.	1.	5	ug/kg	93	95	80-120	2	30
1,2-Dichloroethane	N.D.	1.	5	ug/kg	93	92	72-126	1	30
1,1-Dichloroethene	N.D.	1.	5	ug/kg	97	97	73-129	0	30
cis-1,2-Dichloroethene	N.D.	1.	5	ug/kg	99	99	80-120	0	30
trans-1,2-Dichloroethene	N.D.	1.	5	ug/kg	99	100	79-120	1	30
1,2-Dichloropropane	N.D.	1.	5	ug/kg	97	99	77-120	2	30
cis-1,3-Dichloropropene	N.D.	1.	5	ug/kg	91	93	74-120	2	30
trans-1,3-Dichloropropene	N.D.	1.	5	ug/kg	92	92	77-120	0	30
Ethylbenzene	N.D.	1.	5	ug/kg	99	99	80-120	1	30
Freon 113	N.D.	2.	10	ug/kg	92	94	64-137	2	30
2-Hexanone	N.D.	3.	10	ug/kg	82	87	40-129	6	30
Isopropylbenzene	N.D.	1.	5	ug/kg	101	100	76-120	1	30
Methyl Acetate	N.D.	2.	5	ug/kg	81	88	62-158	8	30
Methyl Tertiary Butyl Ether	N.D.	0.5	5	ug/kg	99	104	69-126	5	30
4-Methyl-2-pentanone	N.D.	3.	10	ug/kg	79	85	52-125	8	30
Methylcyclohexane	N.D.	1.	5	ug/kg	88	90	58-134	1	30
Methylene Chloride	N.D.	2.	5	ug/kg	97	98	80-124	2	30
Styrene	N.D.	1.	5	ug/kg	96	96	76-120	0	30
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/kg	92	95	71-123	3	30
Tetrachloroethene	N.D.	1.	5	ug/kg	101	100	78-126	1	30
Toluene	N.D.	1.	5	ug/kg	99	100	80-120	2	30
1,2,4-Trichlorobenzene	N.D.	1.	5	ug/kg	90	91	68-120	1	30
1,1,1-Trichloroethane	N.D.	1.	5	ug/kg	91	92	71-125	1	30
1,1,2-Trichloroethane	N.D.	1.	5	ug/kg	95	97	80-120	2	30
Trichloroethene	N.D.	1.	5	ug/kg	100	100	80-120	0	30
Trichlorofluoromethane	N.D.	2.	5	ug/kg	89	87	58-133	2	30
Vinyl Chloride	N.D.	1.	5	ug/kg	86	87	53-120	2	30
Xylene (Total)	N.D.	1.	5	ug/kg	98	99	80-120	0	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y133112AA	Sample number(s): 7265247,7265249								
Acetone	N.D.	6.	20	ug/l	85		38-157		
Benzene	N.D.	0.5	5	ug/l	99		78-120		
Bromodichloromethane	N.D.	1.	5	ug/l	91		73-120		
Bromoform	N.D.	1.	5	ug/l	87		61-120		
Bromomethane	N.D.	1.	5	ug/l	90		51-120		
2-Butanone	N.D.	3.	10	ug/l	86		58-126		
Carbon Disulfide	N.D.	1.	5	ug/l	89		58-126		
Carbon Tetrachloride	N.D.	1.	5	ug/l	106		74-130		
Chlorobenzene	N.D.	0.8	5	ug/l	101		80-120		
Chloroethane	N.D.	1.	5	ug/l	78		45-120		
Chloroform	N.D.	0.8	5	ug/l	105		77-122		
Chloromethane	N.D.	1.	5	ug/l	94		55-120		
Cyclohexane	N.D.	2.	5	ug/l	90		66-136		
1,2-Dibromo-3-chloropropane	N.D.	2.	5	ug/l	79		56-120		
Dibromochloromethane	N.D.	1.	5	ug/l	92		72-120		
1,2-Dibromoethane	N.D.	1.	5	ug/l	95		76-120		
1,2-Dichlorobenzene	N.D.	1.	5	ug/l	100		80-120		
1,3-Dichlorobenzene	N.D.	1.	5	ug/l	100		80-120		
1,4-Dichlorobenzene	N.D.	1.	5	ug/l	99		80-120		
Dichlorodifluoromethane	N.D.	2.	5	ug/l	114		35-122		
1,1-Dichloroethane	N.D.	1.	5	ug/l	105		80-120		
1,2-Dichloroethane	N.D.	1.	5	ug/l	108		71-130		
1,1-Dichloroethene	N.D.	0.8	5	ug/l	106		76-124		
cis-1,2-Dichloroethene	N.D.	0.8	5	ug/l	103		80-120		
trans-1,2-Dichloroethene	N.D.	0.8	5	ug/l	103		80-120		
1,2-Dichloropropane	N.D.	1.	5	ug/l	96		80-120		
cis-1,3-Dichloropropene	N.D.	1.	5	ug/l	94		80-120		
trans-1,3-Dichloropropene	N.D.	1.	5	ug/l	82		69-120		
Ethylbenzene	N.D.	0.8	5	ug/l	96		79-120		
Freon 113	N.D.	2.	10	ug/l	105		63-133		
2-Hexanone	N.D.	3.	10	ug/l	77		59-125		
Isopropylbenzene	N.D.	1.	5	ug/l	100		77-120		
Methyl Acetate	N.D.	1.	5	ug/l	99		54-138		
Methyl Tertiary Butyl Ether	N.D.	0.5	5	ug/l	103		75-120		
4-Methyl-2-pentanone	N.D.	3.	10	ug/l	85		59-120		
Methylcyclohexane	N.D.	1.	5	ug/l	105		71-132		
Methylene Chloride	N.D.	2.	5	ug/l	101		80-120		
Styrene	N.D.	1.	5	ug/l	93		80-120		
1,1,2,2-Tetrachloroethane	N.D.	1.	5	ug/l	82		70-120		
Tetrachloroethene	N.D.	0.8	5	ug/l	111		80-120		
Toluene	N.D.	0.7	5	ug/l	97		80-120		
1,2,4-Trichlorobenzene	N.D.	1.	5	ug/l	102		65-120		
1,1,1-Trichloroethane	N.D.	0.8	5	ug/l	102		66-126		
1,1,2-Trichloroethane	N.D.	0.8	5	ug/l	94		80-120		
Trichloroethene	N.D.	1.	5	ug/l	103		80-120		
Trichlorofluoromethane	N.D.	2.	5	ug/l	110		65-130		
Vinyl Chloride	N.D.	1.	5	ug/l	97		63-120		
Xylene (Total)	N.D.	0.8	5	ug/l	97		80-120		
Batch number: 13310SLF026	Sample number(s): 7265225-7265227,7265234,7265241-7265242,7265244-7265246								
Acenaphthene	N.D.	3.	17	ug/kg	98		83-111		
Acenaphthylene	N.D.	3.	17	ug/kg	108		83-127		
Anthracene	N.D.	3.	17	ug/kg	100		82-118		
Benzo(a)anthracene	N.D.	3.	17	ug/kg	96		81-117		
Benzo(a)pyrene	N.D.	3.	17	ug/kg	98		84-122		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Benzo(b)fluoranthene	N.D.	3.	17	ug/kg	100		76-124		
Benzo(g,h,i)perylene	N.D.	3.	17	ug/kg	96		77-122		
Benzo(k)fluoranthene	N.D.	3.	17	ug/kg	107		80-125		
Chrysene	N.D.	3.	17	ug/kg	97		77-116		
Dibenz(a,h)anthracene	N.D.	3.	17	ug/kg	98		81-123		
Fluoranthene	N.D.	3.	17	ug/kg	100		79-123		
Fluorene	N.D.	3.	17	ug/kg	99		86-118		
Indeno(1,2,3-cd)pyrene	N.D.	3.	17	ug/kg	97		77-122		
1-Methylnaphthalene	N.D.	3.	17	ug/kg	101		77-115		
2-Methylnaphthalene	N.D.	3.	17	ug/kg	92		80-114		
Naphthalene	N.D.	3.	17	ug/kg	95		77-115		
Phenanthrene	N.D.	3.	17	ug/kg	99		85-116		
Pyrene	N.D.	3.	17	ug/kg	101		81-114		
Batch number: 13312WAD026	Sample number(s): 7265223-7265224,7265228,7265230-7265232,7265235,7265238,7265240,7265243,7265247-7265248								
Acenaphthene	N.D.	0.1	0.5	ug/l	94		69-122		
Acenaphthylene	N.D.	0.1	0.5	ug/l	104		84-125		
Acetophenone	N.D.	0.5	1	ug/l	88		71-110		
Anthracene	N.D.	0.1	0.5	ug/l	99		82-116		
Atrazine	N.D.	2.	5	ug/l	108		67-127		
Benzaldehyde	N.D.	1.	5	ug/l	67		19-100		
Benzo(a)anthracene	N.D.	0.1	0.5	ug/l	101		84-121		
Benzo(a)pyrene	N.D.	0.1	0.5	ug/l	98		82-116		
Benzo(b)fluoranthene	N.D.	0.1	0.5	ug/l	97		82-121		
Benzo(g,h,i)perylene	N.D.	0.1	0.5	ug/l	98		81-121		
Benzo(k)fluoranthene	N.D.	0.1	0.5	ug/l	100		81-122		
1,1'-Biphenyl	N.D.	0.5	1	ug/l	94		60-120		
4-Bromophenyl-phenylether	N.D.	0.5	1	ug/l	103		75-115		
Butylbenzylphthalate	N.D.	2.	5	ug/l	93		70-122		
Di-n-butylphthalate	N.D.	2.	5	ug/l	97		72-120		
Caprolactam	N.D.	5.	15	ug/l	36		14-46		
Carbazole	N.D.	0.5	1	ug/l	99		70-128		
4-Chloro-3-methylphenol	N.D.	0.5	1	ug/l	97		67-131		
4-Chloroaniline	N.D.	0.5	1	ug/l	80		46-112		
bis(2-Chloroethoxy)methane	N.D.	0.5	1	ug/l	87		65-125		
bis(2-Chloroethyl)ether	N.D.	0.5	1	ug/l	86		73-112		
2-Chloronaphthalene	N.D.	0.4	1	ug/l	95		60-138		
2-Chlorophenol	N.D.	0.5	1	ug/l	92		76-111		
4-Chlorophenyl-phenylether	N.D.	0.5	1	ug/l	99		77-114		
2,2'-oxybis(1-Chloropropane)	N.D.	0.5	1	ug/l	73		55-123		
Chrysene	N.D.	0.1	0.5	ug/l	99		81-120		
Dibenz(a,h)anthracene	N.D.	0.1	0.5	ug/l	106		83-124		
Dibenzofuran	N.D.	0.5	1	ug/l	97		81-110		
3,3'-Dichlorobenzidine	N.D.	2.	5	ug/l	71		47-108		
2,4-Dichlorophenol	N.D.	0.5	1	ug/l	102		84-114		
Diethylphthalate	N.D.	2.	5	ug/l	93		60-121		
2,4-Dimethylphenol	N.D.	0.5	1	ug/l	94		66-125		
Dimethylphthalate	N.D.	2.	5	ug/l	91		50-127		
4,6-Dinitro-2-methylphenol	N.D.	5.	15	ug/l	89		68-131		
2,4-Dinitrophenol	N.D.	10.	30	ug/l	79		43-137		
2,4-Dinitrotoluene	N.D.	1.	5	ug/l	107		81-120		
2,6-Dinitrotoluene	N.D.	0.5	1	ug/l	106		81-124		
bis(2-Ethylhexyl)phthalate	N.D.	2.	5	ug/l	95		78-117		
Fluoranthene	N.D.	0.1	0.5	ug/l	105		71-129		
Fluorene	N.D.	0.1	0.5	ug/l	97		71-126		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachlorobenzene	N.D.	0.1	0.5	ug/l	107		74-126		
Hexachlorobutadiene	N.D.	0.5	1	ug/l	105		56-119		
Hexachlorocyclopentadiene	N.D.	5.	15	ug/l	95		21-126		
Hexachloroethane	N.D.	1.	5	ug/l	86		55-109		
Indeno(1,2,3-cd)pyrene	N.D.	0.1	0.5	ug/l	101		83-121		
Isophorone	N.D.	0.5	1	ug/l	92		68-124		
2-Methylnaphthalene	N.D.	0.1	0.5	ug/l	93		63-120		
2-Methylphenol	N.D.	0.5	1	ug/l	87		61-118		
4-Methylphenol	N.D.	0.5	1	ug/l	82		54-112		
Naphthalene	N.D.	0.1	0.5	ug/l	95		75-108		
2-Nitroaniline	N.D.	0.5	1	ug/l	105		84-122		
3-Nitroaniline	N.D.	0.5	1	ug/l	89		70-118		
4-Nitroaniline	N.D.	0.5	1	ug/l	84		61-110		
Nitrobenzene	N.D.	0.5	1	ug/l	90		67-123		
2-Nitrophenol	N.D.	0.5	1	ug/l	106		84-118		
4-Nitrophenol	N.D.	10.	30	ug/l	56		16-91		
N-Nitroso-di-n-propylamine	N.D.	0.5	1	ug/l	84		71-117		
N-Nitrosodiphenylamine	N.D.	0.5	1	ug/l	99		80-115		
Di-n-octylphthalate	N.D.	2.	5	ug/l	88		72-129		
Pentachlorophenol	N.D.	1.	5	ug/l	80		50-129		
Phenanthrene	N.D.	0.1	0.5	ug/l	96		68-127		
Phenol	N.D.	0.5	1	ug/l	53		23-82		
Pyrene	N.D.	0.1	0.5	ug/l	95		81-112		
2,4,5-Trichlorophenol	N.D.	0.5	1	ug/l	104		81-121		
2,4,6-Trichlorophenol	N.D.	0.5	1	ug/l	101		84-119		
Batch number: 13314SLD026	Sample number(s): 7265229,7265236-7265237								
Acenaphthene	N.D.	3.	17	ug/kg	92		83-111		
Acenaphthylene	N.D.	3.	17	ug/kg	101		83-127		
Acetophenone	N.D.	17.	33	ug/kg	83		70-116		
Anthracene	N.D.	3.	17	ug/kg	96		82-118		
Atrazine	N.D.	33.	170	ug/kg	95		69-145		
Benzaldehyde	N.D.	67.	170	ug/kg	56		10-97		
Benzo(a)anthracene	N.D.	3.	17	ug/kg	90		81-117		
Benzo(a)pyrene	N.D.	3.	17	ug/kg	93		84-122		
Benzo(b)fluoranthene	N.D.	3.	17	ug/kg	100		76-124		
Benzo(g,h,i)perylene	N.D.	3.	17	ug/kg	89		77-122		
Benzo(k)fluoranthene	N.D.	3.	17	ug/kg	94		80-125		
1,1'-Biphenyl	N.D.	17.	33	ug/kg	87		76-117		
4-Bromophenyl-phenylether	N.D.	17.	33	ug/kg	100		84-120		
Butylbenzylphthalate	N.D.	67.	170	ug/kg	87		80-118		
Di-n-butylphthalate	N.D.	67.	170	ug/kg	95		84-120		
Caprolactam	N.D.	33.	170	ug/kg	92		67-117		
Carbazole	N.D.	17.	33	ug/kg	94		84-119		
4-Chloro-3-methylphenol	N.D.	17.	33	ug/kg	100		80-124		
4-Chloroaniline	N.D.	17.	33	ug/kg	24		10-100		
bis(2-Chloroethoxy)methane	N.D.	17.	33	ug/kg	83		71-121		
bis(2-Chloroethyl)ether	N.D.	17.	33	ug/kg	84		77-115		
2-Chloronaphthalene	N.D.	7.	33	ug/kg	106		56-144		
2-Chlorophenol	N.D.	17.	33	ug/kg	94		80-122		
4-Chlorophenyl-phenylether	N.D.	17.	33	ug/kg	96		83-115		
2,2'-oxybis(1-Chloropropane)	N.D.	17.	33	ug/kg	76		61-120		
Chrysene	N.D.	3.	17	ug/kg	88		77-116		
Dibenz(a,h)anthracene	N.D.	3.	17	ug/kg	92		81-123		
Dibenzofuran	N.D.	17.	33	ug/kg	94		85-115		
3,3'-Dichlorobenzidine	N.D.	100.	330	ug/kg	53		10-119		

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
2,4-Dichlorophenol	N.D.	17.	33	ug/kg	103		81-123		
Diethylphthalate	N.D.	67.	170	ug/kg	96		82-113		
2,4-Dimethylphenol	N.D.	17.	33	ug/kg	93		83-120		
Dimethylphthalate	N.D.	67.	170	ug/kg	96		82-113		
4,6-Dinitro-2-methylphenol	N.D.	170.	500	ug/kg	109		56-132		
2,4-Dinitrophenol	N.D.	300.	1,000	ug/kg	114		24-136		
2,4-Dinitrotoluene	N.D.	67.	170	ug/kg	108		81-122		
2,6-Dinitrotoluene	N.D.	17.	33	ug/kg	104		83-120		
bis(2-Ethylhexyl)phthalate	N.D.	67.	170	ug/kg	89		81-121		
Fluoranthene	N.D.	3.	17	ug/kg	95		79-123		
Fluorene	N.D.	3.	17	ug/kg	94		86-118		
Hexachlorobenzene	N.D.	3.	17	ug/kg	97		80-121		
Hexachlorobutadiene	N.D.	17.	33	ug/kg	93		76-115		
Hexachlorocyclopentadiene	N.D.	170.	500	ug/kg	115		70-138		
Hexachloroethane	N.D.	33.	170	ug/kg	85		76-109		
Indeno(1,2,3-cd)pyrene	N.D.	3.	17	ug/kg	90		77-122		
Isophorone	N.D.	17.	33	ug/kg	88		77-119		
2-Methylnaphthalene	N.D.	3.	17	ug/kg	89		80-114		
2-Methylphenol	N.D.	17.	33	ug/kg	92		82-125		
4-Methylphenol	N.D.	17.	33	ug/kg	87		73-124		
Naphthalene	N.D.	3.	17	ug/kg	91		83-112		
2-Nitroaniline	N.D.	17.	33	ug/kg	99		84-126		
3-Nitroaniline	N.D.	67.	170	ug/kg	86		69-122		
4-Nitroaniline	N.D.	67.	170	ug/kg	67		51-107		
Nitrobenzene	N.D.	17.	33	ug/kg	85		73-118		
2-Nitrophenol	N.D.	17.	33	ug/kg	99		83-125		
4-Nitrophenol	N.D.	170.	500	ug/kg	84		55-133		
N-Nitroso-di-n-propylamine	N.D.	17.	33	ug/kg	80		70-113		
N-Nitrosodiphenylamine	N.D.	17.	33	ug/kg	97		83-118		
Di-n-octylphthalate	N.D.	67.	170	ug/kg	99		80-139		
Pentachlorophenol	N.D.	33.	170	ug/kg	111		57-120		
Phenanthrene	N.D.	3.	17	ug/kg	94		85-116		
Phenol	N.D.	17.	33	ug/kg	88		76-124		
Pyrene	N.D.	3.	17	ug/kg	95		81-114		
2,4,5-Trichlorophenol	N.D.	17.	33	ug/kg	105		86-123		
2,4,6-Trichlorophenol	N.D.	17.	33	ug/kg	102		81-123		
Batch number: 13316SLC026	Sample number(s): 7265239								
Acenaphthene	N.D.	3.	17	ug/kg	97		83-111		
Acenaphthylene	N.D.	3.	17	ug/kg	106		83-127		
Anthracene	N.D.	3.	17	ug/kg	99		82-118		
Benzo(a)anthracene	N.D.	3.	17	ug/kg	95		81-117		
Benzo(a)pyrene	N.D.	3.	17	ug/kg	96		84-122		
Benzo(b)fluoranthene	N.D.	3.	17	ug/kg	99		76-124		
Benzo(g,h,i)perylene	N.D.	3.	17	ug/kg	99		77-122		
Benzo(k)fluoranthene	N.D.	3.	17	ug/kg	99		80-125		
Chrysene	N.D.	3.	17	ug/kg	97		77-116		
Dibenz(a,h)anthracene	N.D.	3.	17	ug/kg	100		81-123		
Fluoranthene	N.D.	3.	17	ug/kg	98		79-123		
Fluorene	N.D.	3.	17	ug/kg	97		86-118		
Indeno(1,2,3-cd)pyrene	N.D.	3.	17	ug/kg	99		77-122		
1-Methylnaphthalene	N.D.	3.	17	ug/kg	101		77-115		
2-Methylnaphthalene	N.D.	3.	17	ug/kg	94		80-114		
Naphthalene	N.D.	3.	17	ug/kg	98		77-115		
Phenanthrene	N.D.	3.	17	ug/kg	99		85-116		
Pyrene	N.D.	3.	17	ug/kg	101		81-114		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 133110004A	Sample number(s): 7265225-7265227,7265234,7265236-7265237,7265241-7265242,7265244-7265246								
4-Amino-2,6-Dinitrotoluene	N.D.	150.	300	ug/kg	103		98-143		
2-Amino-4,6-Dinitrotoluene	N.D.	100.	300	ug/kg	99		84-115		
1,2-Dinitrobenzene	N.D.	100.	300	ug/kg	118		94-129		
1,3-Dinitrobenzene	N.D.	100.	300	ug/kg	119		97-119		
1,4-Dinitrobenzene	N.D.	100.	300	ug/kg	106		83-122		
2,4-Dinitrotoluene	N.D.	100.	300	ug/kg	116*		91-112		
2,6-Dinitrotoluene	N.D.	100.	300	ug/kg	104		86-137		
HMX	N.D.	250.	750	ug/kg	95		79-104		
Nitrobenzene	N.D.	100.	300	ug/kg	109*		89-107		
Nitroglycerin	N.D.	2,000.	6,000	ug/kg	100		70-118		
1-Nitronaphthalene	N.D.	100.	300	ug/kg	126*		83-122		
2-Nitrotoluene	N.D.	200.	300	ug/kg	100		91-113		
3-Nitrotoluene	N.D.	250.	300	ug/kg	126*		88-121		
4-Nitrotoluene	N.D.	200.	300	ug/kg	99		89-119		
PETN	N.D.	2,000.	6,000	ug/kg	99		67-136		
RDX	N.D.	130.	300	ug/kg	106		87-111		
Tetryl	N.D.	150.	300	ug/kg	111		80-112		
1,3,5-Trinitrobenzene	N.D.	100.	300	ug/kg	103		83-119		
2,4,6-Trinitrotoluene	N.D.	100.	300	ug/kg	116		85-122		
Batch number: 133130015A	Sample number(s): 7265223-7265224,7265228,7265230-7265232,7265235,7265238,7265240,7265243,7265247-7265248								
4-Amino-2,6-Dinitrotoluene	N.D.	0.30	0.60	ug/l	89*		97-156		
2-Amino-4,6-Dinitrotoluene	N.D.	0.20	0.60	ug/l	80		65-107		
1,2-Dinitrobenzene	N.D.	0.20	0.60	ug/l	98		90-118		
1,3-Dinitrobenzene	N.D.	0.20	0.60	ug/l	101		78-121		
1,4-Dinitrobenzene	N.D.	0.30	0.60	ug/l	88		81-108		
2,4-Dinitrotoluene	N.D.	0.72	2.0	ug/l	96		71-111		
2,6-Dinitrotoluene	N.D.	0.45	1.3	ug/l	94		84-157		
HMX	N.D.	0.65	2.0	ug/l	76		73-112		
Nitrobenzene	N.D.	0.20	0.60	ug/l	90		71-111		
Nitroglycerin	N.D.	5.2	15	ug/l	83		73-116		
1-Nitronaphthalene	N.D.	0.20	0.60	ug/l	94		69-125		
2-Nitrotoluene	N.D.	0.25	0.75	ug/l	80		74-115		
3-Nitrotoluene	N.D.	0.40	1.2	ug/l	96		76-115		
4-Nitrotoluene	N.D.	0.60	1.2	ug/l	80		76-120		
PETN	N.D.	6.0	18	ug/l	91		73-126		
RDX	N.D.	0.20	0.50	ug/l	88		70-117		
Tetryl	N.D.	0.40	0.60	ug/l	101		43-133		
1,3,5-Trinitrobenzene	N.D.	0.20	0.60	ug/l	90		72-119		
2,4,6-Trinitrotoluene	N.D.	0.20	0.60	ug/l	101		75-119		
Batch number: 133140020A	Sample number(s): 7265229,7265239								
4-Amino-2,6-Dinitrotoluene	N.D.	150.	300	ug/kg	99		98-143		
2-Amino-4,6-Dinitrotoluene	N.D.	100.	300	ug/kg	91		84-115		
1,2-Dinitrobenzene	N.D.	100.	300	ug/kg	110		94-129		
1,3-Dinitrobenzene	N.D.	100.	300	ug/kg	111		97-119		
1,4-Dinitrobenzene	N.D.	100.	300	ug/kg	94		83-122		
2,4-Dinitrotoluene	N.D.	100.	300	ug/kg	105		91-112		
2,6-Dinitrotoluene	N.D.	100.	300	ug/kg	107		86-137		
HMX	N.D.	250.	750	ug/kg	88		79-104		
Nitrobenzene	N.D.	100.	300	ug/kg	98		89-107		
Nitroglycerin	N.D.	2,000.	6,000	ug/kg	98		70-118		

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1-Nitronaphthalene	N.D.		100.	300	ug/kg	119		83-122		
2-Nitrotoluene	N.D.		200.	300	ug/kg	91		91-113		
3-Nitrotoluene	N.D.		250.	300	ug/kg	111		88-121		
4-Nitrotoluene	N.D.		200.	300	ug/kg	94		89-119		
PETN	N.D.		2,000.	6,000	ug/kg	89		67-136		
RDX	N.D.		130.	300	ug/kg	95		87-111		
Tetryl	N.D.		150.	300	ug/kg	108		80-112		
1,3,5-Trinitrobenzene	N.D.		100.	300	ug/kg	94		83-119		
2,4,6-Trinitrotoluene	N.D.		100.	300	ug/kg	111		85-122		
Batch number: 133105713004	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248									
Mercury	N.D.		0.060	0.20	ug/l	95		80-120		
Batch number: 133115705006	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248									
Aluminum	N.D.		82.8	200	ug/l	104		90-112		
Barium	N.D.		0.33	5.0	ug/l	103		90-110		
Beryllium	N.D.		0.67	5.0	ug/l	103		90-111		
Cadmium	N.D.		0.76	5.0	ug/l	102		90-112		
Calcium	N.D.		33.4	200	ug/l	102		90-112		
Chromium	N.D.		1.6	15.0	ug/l	103		90-110		
Cobalt	N.D.		1.3	5.0	ug/l	103		90-110		
Copper	N.D.		2.7	10.0	ug/l	104		90-112		
Iron	N.D.		43.0	200	ug/l	101		90-112		
Magnesium	N.D.		16.7	100	ug/l	101		89-110		
Manganese	N.D.		0.83	5.0	ug/l	102		90-110		
Nickel	N.D.		1.5	10.0	ug/l	104		90-111		
Potassium	N.D.		98.0	500	ug/l	102		90-110		
Selenium	N.D.		8.4	20.0	ug/l	104		80-120		
Silver	N.D.		2.1	5.0	ug/l	112		80-120		
Sodium	N.D.		167.	1,000	ug/l	102		87-114		
Vanadium	N.D.		2.0	5.0	ug/l	105		90-110		
Zinc	N.D.		2.0	20.0	ug/l	102		90-110		
Batch number: 133116050004A	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248									
Antimony	N.D.		0.34	1.0	ug/l	94		80-120		
Arsenic	N.D.		0.42	2.0	ug/l	100		86-120		
Lead	N.D.		0.085	1.0	ug/l	99		90-110		
Thallium	N.D.		0.15	0.50	ug/l	93		90-115		
Batch number: 133125708003	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246									
Aluminum	9.00	J	7.21	20.0	mg/kg	110		80-120		
Antimony	N.D.		0.740	2.00	mg/kg	99		80-120		
Arsenic	N.D.		0.700	2.00	mg/kg	105		80-120		
Barium	N.D.		0.0330	0.500	mg/kg	103		80-120		
Beryllium	N.D.		0.0670	0.500	mg/kg	96		80-120		
Cadmium	N.D.		0.0760	0.500	mg/kg	102		80-120		
Calcium	10.1	J	3.34	20.0	mg/kg	105		80-120		
Chromium	N.D.		0.160	1.50	mg/kg	100		80-120		
Cobalt	N.D.		0.0990	0.500	mg/kg	103		80-120		
Copper	N.D.		0.290	1.00	mg/kg	105		80-120		
Iron	N.D.		3.62	20.0	mg/kg	102		80-120		
Lead	N.D.		0.500	1.50	mg/kg	106		80-120		

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Magnesium	2.20	J	1.67	10.0	mg/kg	100		80-120		
Manganese	N.D.		0.0830	0.500	mg/kg	102		80-120		
Nickel	N.D.		0.130	1.00	mg/kg	106		80-120		
Potassium	N.D.		8.34	50.0	mg/kg	101		80-120		
Selenium	N.D.		0.800	2.00	mg/kg	103		80-120		
Silver	N.D.		0.170	0.500	mg/kg	105		80-120		
Sodium	N.D.		16.7	100	mg/kg	101		80-120		
Thallium	N.D.		0.520	3.00	mg/kg	107		80-120		
Vanadium	N.D.		0.130	0.500	mg/kg	98		80-120		
Zinc	N.D.		0.200	2.00	mg/kg	103		80-120		
Batch number: 133125711003	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246									
Mercury	N.D.		0.0100	0.100	mg/kg	99		80-120		
Batch number: 13311049532A	Sample number(s): 7265225-7265227									
TOC by Lloyd Kahn	N.D.		100.	300	mg/kg	83		47-143		
Batch number: 13312049501B	Sample number(s): 7265247									
Total Organic Carbon	N.D.		0.50	1.0	mg/l	101		91-113		
Batch number: 13312049531A	Sample number(s): 7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246									
TOC by Lloyd Kahn	N.D.		100.	300	mg/kg	71		47-143		
Batch number: 13311001104A	Sample number(s): 7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265248									
Total Hardness	N.D.		3,000.	5,000	ug/l	103		96-110		
Batch number: 13312002202A	Sample number(s): 7265223-7265224,7265228,7265230,7265233,7265235,7265238,7265240,7265243,7265248									
pH						99		93-106		
Batch number: 13326002101A	Sample number(s): 7265223-7265224									
Total Hardness	N.D.		3,000.	5,000	ug/l	100		96-110		
Batch number: 13316820005A	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246									
Moisture						100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: Y133112AA	Sample number(s): 7265247,7265249 UNSPK: P252952								
Acetone	90	89	35-144	1	30				
Benzene	111	116	72-134	4	30				
Bromodichloromethane	93	96	38-137	3	30				
Bromoform	81	83	48-118	2	30				
Bromomethane	87	87	47-129	1	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
2-Butanone	81	83	53-124	2	30				
Carbon Disulfide	83	79	53-149	4	30				
Carbon Tetrachloride	132	139*	72-135	6	30				
Chlorobenzene	168*	178*	87-124	3	30				
Chloroethane	77	78	51-145	2	30				
Chloroform	118	122	81-134	3	30				
Chloromethane	91	90	50-131	1	30				
Cyclohexane	95	96	75-156	1	30				
1,2-Dibromo-3-chloropropane	78	78	54-134	1	30				
Dibromochloromethane	95	98	74-116	3	30				
1,2-Dibromoethane	95	97	77-116	2	30				
1,2-Dichlorobenzene	117	120*	84-119	2	30				
1,3-Dichlorobenzene	103	105	86-121	2	30				
1,4-Dichlorobenzene	102	104	85-121	2	30				
Dichlorodifluoromethane	117	114	52-129	2	30				
1,1-Dichloroethane	151*	165*	84-129	5	30				
1,2-Dichloroethane	205 (2)	227 (2)	68-131	3	30				
1,1-Dichloroethene	216*	318*	75-155	23	30				
cis-1,2-Dichloroethene	270 (2)	290 (2)	80-141	3	30				
trans-1,2-Dichloroethene	112	114	81-142	2	30				
1,2-Dichloropropane	97	99	83-124	1	30				
cis-1,3-Dichloropropene	91	92	70-116	2	30				
trans-1,3-Dichloropropene	78	80	74-119	2	30				
Ethylbenzene	109	116	71-134	5	30				
Freon 113	1345 (2)	2281 (2)	89-148	27	30				
2-Hexanone	75	78	55-127	4	30				
Isopropylbenzene	99	99	75-128	1	30				
Methyl Acetate	90	96	51-137	6	30				
Methyl Tertiary Butyl Ether	101	101	72-126	0	30				
4-Methyl-2-pentanone	82	85	63-123	3	30				
Methylcyclohexane	106	106	80-156	0	30				
Methylene Chloride	721 (2)	795 (2)	78-133	3	30				
Styrene	94	96	78-125	2	30				
1,1,2,2-Tetrachloroethane	93	97	72-128	1	30				
Tetrachloroethene	2293 (2)	3531 (2)	80-128	18	30				
Toluene	161*	180*	80-125	7	30				
1,2,4-Trichlorobenzene	103	104	56-137	0	30				
1,1,1-Trichloroethane	3465 (2)	5651 (2)	69-140	22	30				
1,1,2-Trichloroethane	95	98	71-141	3	30				
Trichloroethene	846 (2)	1148 (2)	88-133	13	30				
Trichlorofluoromethane	132	150*	64-146	10	30				
Vinyl Chloride	103	109	66-133	5	30				
Xylene (Total)	114	120	79-125	4	30				
Batch number: 13310SLF026	Sample number(s): 7265225-7265227,7265234,7265241-7265242,7265244-7265246 UNSPK: P262294								
Acenaphthene	75	94	61-128	23	30				
Acenaphthylene	82	102	67-130	22	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Anthracene	72	96	41-142	29	30				
Benzo(a)anthracene	69	90	32-150	26	30				
Benzo(a)pyrene	71	96	36-151	30	30				
Benzo(b)fluoranthene	74	97	29-150	27	30				
Benzo(g,h,i)perylene	69	92	41-147	29	30				
Benzo(k)fluoranthene	73	101	44-145	33*	30				
Chrysene	69	91	28-146	27	30				
Dibenz(a,h)anthracene	71	94	54-142	28	30				
Fluoranthene	72	95	30-151	27	30				
Fluorene	74	95	55-128	24	30				
Indeno(1,2,3-cd)pyrene	69	93	44-147	29	30				
1-Methylnaphthalene	81*	99	82-115	20	30				
2-Methylnaphthalene	74	91	39-140	20	30				
Naphthalene	77	94	44-142	20	30				
Phenanthrene	72	96	34-147	28	30				
Pyrene	74	98	29-148	27	30				
Batch number: 13312WAD026	Sample number(s): 7265223-7265224,7265228,7265230-7265232,7265235,7265238,7265240,7265243,7265247-7265248 UNSPK: 7265230								
Acenaphthene	95	97	71-115	2	30				
Acenaphthylene	105	107	75-124	1	30				
Acetophenone	91	92	48-135	1	30				
Anthracene	100	101	78-114	1	30				
Atrazine	110	111	28-150	1	30				
Benzaldehyde	70	70	10-77	1	30				
Benzo(a)anthracene	104	106	77-122	2	30				
Benzo(a)pyrene	99	102	82-119	2	30				
Benzo(b)fluoranthene	100	103	78-120	2	30				
Benzo(g,h,i)perylene	95	102	81-120	6	30				
Benzo(k)fluoranthene	105	106	77-120	1	30				
1,1'-Biphenyl	95	97	67-114	1	30				
4-Bromophenyl-phenylether	105	106	79-118	0	30				
Butylbenzylphthalate	93	95	76-124	2	30				
Di-n-butylphthalate	99	99	79-118	0	30				
Caprolactam	37	39	10-44	5	30				
Carbazole	101	102	72-122	0	30				
4-Chloro-3-methylphenol	84	84	19-155	0	30				
4-Chloroaniline	75	82	30-117	9	30				
bis(2-Chloroethoxy)methane	88	89	73-115	1	30				
bis(2-Chloroethyl)ether	89	88	71-115	1	30				
2-Chloronaphthalene	95	98	55-139	3	30				
2-Chlorophenol	86	86	27-146	0	30				
4-Chlorophenyl-phenylether	102	104	73-117	1	30				
2,2'-oxybis(1-Chloropropane)	75	75	59-117	1	30				
Chrysene	102	104	70-116	1	30				
Dibenz(a,h)anthracene	106	111	82-124	4	30				
Dibenzofuran	98	100	71-116	2	30				
3,3'-Dichlorobenzidine	63	72	16-128	13	30				
2,4-Dichlorophenol	92	93	31-147	1	30				
Diethylphthalate	94	95	69-118	1	30				
2,4-Dimethylphenol	75	74	36-143	2	30				
Dimethylphthalate	91	93	42-132	1	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
4,6-Dinitro-2-methylphenol	96	96	44-154	0	30				
2,4-Dinitrophenol	90	89	20-168	1	30				
2,4-Dinitrotoluene	109	111	55-141	1	30				
2,6-Dinitrotoluene	109	110	74-123	1	30				
bis(2-Ethylhexyl)phthalate	94	98	73-129	3	30				
Fluoranthene	106	108	78-122	1	30				
Fluorene	99	101	71-123	1	30				
Hexachlorobenzene	110	110	72-119	0	30				
Hexachlorobutadiene	106	111	64-115	4	30				
Hexachlorocyclopentadiene	101	107	26-142	6	30				
Hexachloroethane	87	90	48-125	3	30				
Indeno(1,2,3-cd)pyrene	104	109	82-121	4	30				
Isophorone	94	95	73-114	1	30				
2-Methylnaphthalene	95	96	77-118	1	30				
2-Methylphenol	72	73	19-136	0	30				
4-Methylphenol	65	66	13-128	1	30				
Naphthalene	99	101	53-131	2	30				
2-Nitroaniline	108	110	63-141	1	30				
3-Nitroaniline	87	92	40-151	6	30				
4-Nitroaniline	83	87	33-132	4	30				
Nitrobenzene	92	94	75-121	1	30				
2-Nitrophenol	110	111	54-142	1	30				
4-Nitrophenol	58	60	10-109	2	30				
N-Nitroso-di-n-propylamine	87	87	66-117	1	30				
N-Nitrosodiphenylamine	101	102	60-136	1	30				
Di-n-octylphthalate	91	92	71-137	1	30				
Pentachlorophenol	77	78	23-133	0	30				
Phenanthrene	97	98	76-112	0	30				
Phenol	48	48	10-83	1	30				
Pyrene	98	100	77-117	2	30				
2,4,5-Trichlorophenol	101	101	37-141	0	30				
2,4,6-Trichlorophenol	91	92	19-162	0	30				
Batch number: 13314SLD026	Sample number(s): 7265229,7265236-7265237 UNSPK: P265020								
Acenaphthene	83	85	61-128	2	30				
Acenaphthylene	87	89	67-130	2	30				
Acetophenone	80	85	57-118	6	30				
Anthracene	80	83	41-142	4	30				
Atrazine	81	85	34-152	5	30				
Benzaldehyde	78	81	10-85	3	30				
Benzo(a)anthracene	78	79	32-150	1	30				
Benzo(a)pyrene	80	81	36-151	1	30				
Benzo(b)fluoranthene	80	81	29-150	1	30				
Benzo(g,h,i)perylene	72	73	41-147	2	30				
Benzo(k)fluoranthene	86	88	44-145	2	30				
1,1'-Biphenyl	77	78	64-120	2	30				
4-Bromophenyl-phenylether	85	88	66-122	3	30				
Butylbenzylphthalate	84	86	67-126	3	30				
Di-n-butylphthalate	82	81	70-124	0	30				
Caprolactam	87	87	34-131	1	30				
Carbazole	83	83	63-126	0	30				
4-Chloro-3-methylphenol	87	91	61-131	4	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
4-Chloroaniline	0*	0*	11-114	0	30				
bis(2-Chloroethoxy)methane	76	78	58-122	3	30				
bis(2-Chloroethyl)ether	83	83	66-122	1	30				
2-Chloronaphthalene	99	100	50-140	1	30				
2-Chlorophenol	88	92	71-130	5	30				
4-Chlorophenyl-phenylether	87	85	65-117	1	30				
2,2'-oxybis(1-Chloropropane)	78	79	47-120	1	30				
Chrysene	79	79	28-146	0	30				
Dibenz(a,h)anthracene	80	80	54-142	0	30				
Dibenzofuran	83	86	65-124	3	30				
3,3'-Dichlorobenzidine	0*	0*	10-143	0	30				
2,4-Dichlorophenol	93	95	54-135	3	30				
Diethylphthalate	84	84	66-120	1	30				
2,4-Dimethylphenol	75	76	62-132	1	30				
Dimethylphthalate	83	84	69-119	1	30				
4,6-Dinitro-2-methylphenol	187*	189*	10-148	1	30				
2,4-Dinitrophenol	168*	166*	20-143	1	30				
2,4-Dinitrotoluene	81	82	39-144	1	30				
2,6-Dinitrotoluene	84	87	54-134	3	30				
bis(2-Ethylhexyl)phthalate	86	86	60-134	0	30				
Fluoranthene	84	84	30-151	0	30				
Fluorene	87	87	55-128	0	30				
Hexachlorobenzene	88	89	46-132	1	30				
Hexachlorobutadiene	84	83	65-125	1	30				
Hexachlorocyclopentadiene	0*	0*	10-153	0	30				
Hexachloroethane	77	77	24-138	1	30				
Indeno(1,2,3-cd)pyrene	74	76	44-147	2	30				
Isophorone	79	81	68-119	2	30				
2-Methylnaphthalene	81	82	39-140	1	30				
2-Methylphenol	87	87	62-133	0	30				
4-Methylphenol	80	81	59-132	1	30				
Naphthalene	84	88	44-142	4	30				
2-Nitroaniline	83	84	64-131	2	30				
3-Nitroaniline	0*	0*	31-145	0	30				
4-Nitroaniline	0*	0*	30-131	0	30				
Nitrobenzene	74	77	63-125	4	30				
2-Nitrophenol	88	96	45-146	9	30				
4-Nitrophenol	0*	0*	25-142	0	30				
N-Nitroso-di-n-propylamine	78	79	58-126	0	30				
N-Nitrosodiphenylamine	77	82	59-135	7	30				
Di-n-octylphthalate	87	91	48-155	4	30				
Pentachlorophenol	104	98	23-145	6	30				
Phenanthrene	83	83	34-147	1	30				
Phenol	82	82	61-130	1	30				
Pyrene	84	83	29-148	1	30				
2,4,5-Trichlorophenol	96	94	64-131	1	30				
2,4,6-Trichlorophenol	94	93	60-136	1	30				
Batch number: 13316SLC026	Sample number(s): 7265239 UNSPK: P266814								
Acenaphthene	79	83	61-128	5	30				
Acenaphthylene	84	90	67-130	7	30				
Anthracene	80	86	41-142	7	30				

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Quality Control Summary

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Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

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Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzo(a)anthracene	83	90	32-150	8	30				
Benzo(a)pyrene	80	82	36-151	4	30				
Benzo(b)fluoranthene	79	84	29-150	6	30				
Benzo(g,h,i)perylene	78	85	41-147	8	30				
Benzo(k)fluoranthene	78	85	44-145	9	30				
Chrysene	83	87	28-146	5	30				
Dibenz(a,h)anthracene	79	85	54-142	7	30				
Fluoranthene	82	84	30-151	3	30				
Fluorene	82	85	55-128	5	30				
Indeno(1,2,3-cd)pyrene	79	84	44-147	6	30				
1-Methylnaphthalene	84	89	82-115	7	30				
2-Methylnaphthalene	77	81	39-140	5	30				
Naphthalene	114	88	44-142	25	30				
Phenanthrene	80	84	34-147	4	30				
Pyrene	82	85	29-148	4	30				
Batch number: 133110004A	Sample number(s): 7265225-7265227,7265234,7265236-7265237,7265241-7265242,7265244-7265246 UNSPK: P263052								
4-Amino-2,6-Dinitrotoluene	97	101	85-118	4	50				
2-Amino-4,6-Dinitrotoluene	96	101	69-113	5	50				
1,2-Dinitrobenzene	111	116	80-120	4	50				
1,3-Dinitrobenzene	106	108	89-119	2	50				
1,4-Dinitrobenzene	93	99	82-117	5	50				
2,4-Dinitrotoluene	103	108	81-111	5	50				
2,6-Dinitrotoluene	95	92	86-114	4	50				
HMX	87	90	72-107	4	50				
Nitrobenzene	102	105	86-108	3	50				
Nitroglycerin	123*	119*	73-116	3	50				
1-Nitronaphthalene	114	118	89-131	3	50				
2-Nitrotoluene	92	96	79-112	4	50				
3-Nitrotoluene	108	119	72-119	9	50				
4-Nitrotoluene	97	100	90-118	3	50				
PETN	91	94	71-133	4	50				
RDX	100	103	75-108	3	50				
Tetryl	91	106	58-125	15	50				
1,3,5-Trinitrobenzene	97	100	58-135	3	50				
2,4,6-Trinitrotoluene	103	107	92-114	4	50				
Batch number: 133130015A	Sample number(s): 7265223-7265224,7265228,7265230-7265232,7265235,7265238,7265240,7265243,7265247-7265248 UNSPK: 7265230								
4-Amino-2,6-Dinitrotoluene	82	78*	80-120	5	30				
2-Amino-4,6-Dinitrotoluene	82	76*	80-120	9	30				
1,2-Dinitrobenzene	100	90	80-120	11	30				
1,3-Dinitrobenzene	99	89	80-120	10	30				
1,4-Dinitrobenzene	87	78*	80-120	11	30				
2,4-Dinitrotoluene	97	89	80-120	9	30				
2,6-Dinitrotoluene	101	93	80-120	9	30				
HMX	71	68	34-105	5	30				
Nitrobenzene	91	83	75-144	8	30				
Nitroglycerin	85	74*	80-120	14	30				
1-Nitronaphthalene	92	92	43-114	0	30				
2-Nitrotoluene	79*	74*	80-120	6	30				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
3-Nitrotoluene	92	87	80-120	6	30				
4-Nitrotoluene	80	74*	80-120	8	30				
PETN	94	82	80-120	14	30				
RDX	87	78*	80-120	11	30				
Tetryl	89	81	45-113	11	30				
1,3,5-Trinitrobenzene	87	77*	80-120	11	30				
2,4,6-Trinitrotoluene	97	86	80-120	13	30				
Batch number: 133140020A	Sample number(s): 7265229,7265239 UNSPK: P266814								
4-Amino-2,6-Dinitrotoluene	78*	82*	85-118	5	50				
2-Amino-4,6-Dinitrotoluene	74	73	69-113	1	50				
1,2-Dinitrobenzene	99	98	80-120	1	50				
1,3-Dinitrobenzene	98	97	89-119	1	50				
1,4-Dinitrobenzene	84	83	82-117	1	50				
2,4-Dinitrotoluene	95	95	81-111	0	50				
2,6-Dinitrotoluene	97	98	86-114	1	50				
HMX	72	73	72-107	1	50				
Nitrobenzene	90	89	86-108	2	50				
Nitroglycerin	94	105	73-116	11	50				
1-Nitronaphthalene	103	103	89-131	0	50				
2-Nitrotoluene	79	78*	79-112	1	50				
3-Nitrotoluene	108	108	72-119	0	50				
4-Nitrotoluene	79*	78*	90-118	1	50				
PETN	85	81	71-133	5	50				
RDX	88	82	75-108	7	50				
Tetryl	69	78	58-125	13	50				
1,3,5-Trinitrobenzene	88	85	58-135	4	50				
2,4,6-Trinitrotoluene	96	95	92-114	2	50				
Batch number: 133105713004	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248 UNSPK: 7265230 BKG: 7265230								
Mercury	94	91	80-120	3	20	N.D.	N.D.	0 (1)	20
Batch number: 133115705006	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248 UNSPK: 7265230 BKG: 7265230								
Aluminum	98	96	75-125	2	20	148	J 137	J 8 (1)	20
Barium	100	100	78-118	0	20	39.4	40.4	3	20
Beryllium	105	106	87-114	0	20	N.D.	N.D.	0 (1)	20
Cadmium	101	102	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	108 (2)	120 (2)	75-125	1	20	36,100	36,300	1	20
Chromium	104	104	76-120	0	20	N.D.	N.D.	0 (1)	20
Cobalt	101	102	82-112	0	20	N.D.	N.D.	0 (1)	20
Copper	103	104	86-122	1	20	N.D.	N.D.	0 (1)	20
Iron	52*	50*	75-125	1	20	1,450	1,430	1	20
Magnesium	101 (2)	111 (2)	75-125	1	20	14,400	14,600	2	20
Manganese	81	80	75-125	0	20	739	750	1	20
Nickel	102	103	86-115	1	20	N.D.	N.D.	0 (1)	20
Potassium	102	103	77-128	1	20	1,960	1,920	2 (1)	20
Selenium	102	106	75-125	4	20	N.D.	N.D.	0 (1)	20
Silver	113	113	75-125	0	20	N.D.	N.D.	0 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Sodium	103 (2)	112 (2)	75-125	1	20	71,600	72,100	1	20
Vanadium	107	107	90-117	0	20	N.D.	N.D.	0 (1)	20
Zinc	101	102	85-117	1	20	2.1 J	N.D.	200* (1)	20
Batch number: 133116050004A	Sample number(s): 7265223-7265224,7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265247-7265248 UNSPK: 7265230 BKG: 7265230								
Antimony	103	110	75-125	7	20	N.D.	N.D.	0 (1)	20
Arsenic	109	99	75-125	10	20	N.D.	N.D.	0 (1)	20
Lead	98	94	89-120	4	20	0.73 J	0.70 J	3 (1)	20
Thallium	98	99	85-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 133125708003	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246 UNSPK: P266814 BKG: P266814								
Aluminum	400 (2)	448 (2)	75-125	5	20	1,150	1,180	3	20
Antimony	98	95	75-125	4	20	N.D.	N.D.	0 (1)	20
Arsenic	97	110	75-125	13	20	N.D.	N.D.	0 (1)	20
Barium	111	104	75-125	6	20	28.0	26.0	8	20
Beryllium	81*	78*	83-119	3	20	N.D.	N.D.	0 (1)	20
Cadmium	111	108	75-125	2	20	N.D.	N.D.	0 (1)	20
Calcium	171 (2)	94 (2)	75-125	8	20	3,180	3,060	4	20
Chromium	108	102	75-125	5	20	3.37 J	3.86 J	14 (1)	20
Cobalt	103	101	78-113	2	20	3.24 J	2.76 J	16 (1)	20
Copper	111	103	75-125	5	20	13.4	13.7	2 (1)	20
Iron	219 (2)	-728 (2)	75-125	10	20	9,700	8,310	15	20
Lead	-552 (2)	337 (2)	75-125	5	20	2,740	2,740	0	20
Magnesium	127*	118	75-125	3	20	402	387	4 (1)	20
Manganese	266 (2)	-14 (2)	75-125	39*	20	298	246	19	20
Nickel	106	104	75-125	2	20	7.08 J	6.80 J	4 (1)	20
Potassium	123	115	75-125	7	20	N.D.	N.D.	0 (1)	20
Selenium	104	96	75-125	8	20	N.D.	N.D.	0 (1)	20
Silver	116	99	75-125	11	20	1.90 J	2.00 J	5 (1)	20
Sodium	119	114	75-125	4	20	N.D.	N.D.	0 (1)	20
Thallium	93	97	78-119	4	20	N.D.	N.D.	0 (1)	20
Vanadium	102	97	75-125	4	20	9.25	8.92	4 (1)	20
Zinc	101	98	75-125	2	20	18.0 J	17.8 J	1 (1)	20
Batch number: 133125711003	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246 UNSPK: P266814 BKG: P266814								
Mercury	100	95	80-120	3	20	0.149	0.142	5 (1)	20
Batch number: 13311049532A	Sample number(s): 7265225-7265227 UNSPK: P262379 BKG: P262379								
TOC by Lloyd Kahn	81		59-125			1,570	1,030	41* (1)	15
Batch number: 13312049501B	Sample number(s): 7265247 UNSPK: P265107 BKG: P265107								
Total Organic Carbon	108		63-142			1.9	1.9	0 (1)	4
Batch number: 13312049531A	Sample number(s): 7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246 UNSPK: 7265234 BKG: 7265234								
TOC by Lloyd Kahn	104		59-125			3,310	4,920	39* (1)	15

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13311001104A	Sample number(s): 7265228,7265230-7265233,7265235,7265238,7265240,7265243,7265248 UNSPK: 7265230 BKG: 7265230								
Total Hardness	91	87	67-120	1	5	155,000	155,000	0	5
Batch number: 13312002202A	Sample number(s): 7265223-7265224,7265228,7265230,7265233,7265235,7265238,7265240,7265243,7265248 BKG: 7265230								
pH						7.4	7.5	0	3
Batch number: 13326002101A	Sample number(s): 7265223-7265224 UNSPK: P285563 BKG: P285563								
Total Hardness	98		67-120			48,000	48,300	1	5
Batch number: 13316820005A	Sample number(s): 7265225-7265227,7265229,7265234,7265236-7265237,7265239,7265241-7265242,7265244-7265246 BKG: 7265227								
Moisture						45.5	44.9	1	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260 Ext. Soil Master w/GRO
Batch number: A133151AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7265237	105	102	97	90
Blank	105	107	93	93
LCS	104	101	96	98
LCSD	104	101	97	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: 8260 Ext. Soil Master w/GRO
Batch number: X133152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7265236	107	105	99	90
Blank	101	101	97	93
LCS	97	98	102	98
LCSD	98	100	101	98
Limits:	50-141	54-135	52-141	50-131

Analysis Name: 8260 Ext. Water Master w/GRO
Batch number: Y133112AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7265247	106	103	97	93

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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Surrogate Quality Control

7265249	106	102	97	92
Blank	104	102	97	94
LCS	104	102	99	98
MS	107	101	97	96
MSD	107	101	97	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: PAH 8270 (microwave)
Batch number: 13310SLF026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7265225	82	93	94
7265226	88	96	103
7265227	83	90	95
7265234	87	97	101
7265241	88	99	105
7265242	82	93	96
7265244	87	97	103
7265245	83	93	97
7265246	85	95	99
Blank	81	100	108
LCS	82	98	101
MS	65	75	74
MSD	83	94	98
Limits:	60-120	69-120	66-137

Analysis Name: TCL SW846 Semivolatiles/Waters
Batch number: 13312WAD026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7265223	75	56	133	90	100	114
7265224	59	42	96	83	92	93
7265228	61	43	111	76	78	104
7265230	56	41	96	90	99	115
7265231	63	48	106	95	103	113
7265232	63	47	108	96	105	116
7265235	55	40	93	89	97	111
7265238	57	40	106	77	85	101
7265240	63	44	114	80	87	111
7265243	66	48	117	87	95	113
7265247	70	49	114	88	95	112
7265248	70	49	117	89	98	115
Blank	74	54	124	88	97	116
LCS	74	54	126	94	102	114
MS	63	48	106	95	103	113
MSD	63	47	108	96	105	116
Limits:	10-107	10-83	22-150	60-123	63-121	47-146

Analysis Name: TCL 8270 (microwave)
Batch number: 13314SLD026

	Phenol-d6	2-Fluorophenol	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7265229	91	93	108	83	92	95

*- Outside of specification
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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Surrogate Quality Control

7265236	93	96	108	83	92	95
7265237	87	92	105	84	92	95
Blank	90	97	110	86	97	100
LCS	89	93	112	83	91	96
MS	83	85	98	75	79	85
MSD	84	88	98	75	80	85
Limits:	61-120	63-126	42-134	60-120	69-120	66-137

Analysis Name: PAH 8270 (microwave)
Batch number: 13316SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7265239	79	87	88
Blank	89	100	101
LCS	88	98	98
MS	76	84	83
MSD	75	82	85
Limits:	60-120	69-120	66-137

Analysis Name: Nitroaromatics/Amines in Solid
Batch number: 133110004A

	2-Nitro-m-xylene
7265225	107
7265226	105
7265227	104
7265234	101
7265236	104
7265237	109
7265241	102
7265242	117
7265244	119
7265245	115
7265246	109
Blank	106
LCS	111
MS	97
MSD	110
Limits:	63-150

Analysis Name: Nitroaromatics/Amines in Water
Batch number: 133130015A

	2-Nitro-m-xylene
7265223	103
7265224	105
7265228	99
7265230	94
7265231	89
7265232	81
7265235	83
7265238	89
7265240	93

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431593
Reported: 11/25/13 at 09:01 AM

Surrogate Quality Control

7265243	83
7265247	91
7265248	82
Blank	98
LCS	85
MS	89
MSD	81
Limits:	73-122

Analysis Name: Nitroaromatics/Amines in Solid
Batch number: 133140020A

	2-Nitro-m-xylene
7265229	82
7265239	92
Blank	89
LCS	97
MS	84
MSD	79
Limits:	63-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only

Acct. # 6716 Group # 1431593 Sample # 7265223-49

Instructions on reverse side correspond with circled numbers.

COC # 340699

2

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucey	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:
Name of state where samples were collected: New Jersey	

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

2 Sample Identification / **3 Matrix** / **4 Matrix** / **5 Analysis Requested**

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil ☐	Water: Potable ☐	Water: Ground ☐	Water: Surface ☒	Water: NPDES ☐	Other:	Total # of Containers	SVOCs	Nitroaromatics	TAL Metals (N)	Hardness (N)	pH	PAHs, Nitroaromatics, metals, moisture, solids	TOC	SVOCs, Metals, moisture, solids			6 Remarks
SW-R2-N-5-1	11/5/13	0825	X			X					7	X	X	X	X	X						
SW-R2-N-5-2	11/5/13	0835	X			X					7	X	X	X	X	X						
SD-R2-O-4-1	11/5/13	0910	X		X						3						X	X				
SD-R2-O-4-2	11/5/13	0915	X		X						3						X	X				
SD-R2-O-4-3	11/5/13	0930	X		X						3						X	X				
SW-R2-M-6-1	11/5/13	0955	X			X					7	X	X	X	X	X						
SD-R2-M-7-01D	11/5/13	1020	X		X						3	~~X~~						X	X			
SW-R2-E-16-3	11/5/13	1125	X			X					7	X	X	X	X	X						
SW-R2-E-16-3_MS	11/5/13	1125	X			X					7	X	X	X	X	X						QC
SW-R2-E-16-3_MSD	11/5/13	1125	X			X					7	X	X	X	X	X						QC

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: _____

E-mail address: John.Lucey@obg.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/5/13	1740	Harry Wagner	11/5/13	17:40
Harry Wagner	11/5/13	20:32			
			[signature]	11/5/13	2032

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 1.1-4.2 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 6716 For Eurofins Lancaster Laboratories Environmental use only Group # 1431593 Sample # 7265223-49

Instructions on reverse side correspond with circled numbers.

COC # 340698

2

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucey	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:
Name of state where samples were collected: New Jersey	

4 Matrix: Sediment ☒ Soil ☐ Ground ☐ Potable ☐ Surface ☒ NPDES ☐ Water Other: ____

5 Analysis Requested

Preservation Codes: SVOCs; Nitroaromatics; TAL Metals (N); Hardness (N); pH; PAHs, Nitroaromatics, metals, moisture, solids; TOC; VOCs (X); SVOCs, Nitroaromatics, metals, moisture, solids

For Lab Use Only
FSC: ____
SCR#: ____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

2 Sample Identification / **3 Collected**

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Other	Total # of Containers	SVOCs	Nitroaromatics	TAL Metals	Hardness	pH	PAHs, Nitroaromatics, metals, moisture, solids	TOC	VOCs	SVOCs, Nitroaromatics, metals, moisture, solids		6 Remarks
SD-R2-E16-3	11/5/13	1135	X		X			3						X	X				
SW-R2-E-16-1	11/5/13	1145	X			X		7	X	X	X	X	X						
SD-R2-E-16-1	11/5/13	1205	X		X			5	~~X~~						X	X	X		3 encores
SD-R2-E-16-1D	11/5/13	1215	X		X			3	~~X~~						X	X	X		2 oz. (VOCs) jar
SW-R2-F-14-1	11/5/13	1315	X			X		7	X	X	X	X	X						
SD-R2-F-14-1	11/5/13	1325	X		X			3							X				
SW-R2-F-14-2	11/5/13	1340	X			X		7	X	X	X	X	X						
SD-R2-F-14-2	11/5/13	1350	X		X			3						X	X				
SD-R2-G-12-1	11/5/13	1415	X		X			3						X	X				
SW-R2-G-12-2	11/5/13	1435	X			X		7	X	X	X	X	X						

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: ____

E-mail address: John.Lucey@obg.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/5/13	17:40	Harry Weyer	11/5/13	17:40
Harry Weyer	11/5/13	20:32			
			[signature]	11/5/13	2032

EDD Required? Yes No
If yes, format: ____

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.1-4.2 °C

Environmental Analysis Request/Chain of Custody

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Acct. # 6716 Group # 1431593 Sample # 7265223-49

Instructions on reverse side correspond with circled numbers.

COC # 340697

2

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucy	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:
Name of state where samples were collected: New Jersey	

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate

N=HNO_3 B=NaOH

S=H_2SO_4 O=Other

2 Sample Identification / **3 Collected** / **4 Matrix** / **5 Analysis Requested**

Sample Identification	Date	Time	Grab	Composite	Soil	Water (Potable / Ground / Surface / NPDES)	Other:	Total # of Containers	SVOCs	Nitroaromatics	TAL Metals (N)	Hardness (N)	pH	PAHs, Nitroaromatics, metals	TOC	VOCs (H)	TOC (O)		Remarks
SD-R2-G-12-3	11/5/13	1440	X		X			2						X	X				
SD-R2-D-14-1	11/5/13	1500	X		X			2						X	X				
DUP-02	11/5/13	~~X~~	X		X			2						X	X				QC
FB-01_11052013	11/5/13	1720	X		X			10	X	X	X				~~X~~ RPB	X	X		QC
FB-02_11052013	11/5/13	17	X			X		7	X	X	X	X	X						QC
	~~11/5/13~~	~~RPB~~	X																

6 Remarks

O = H_3PO_4

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed:

E-mail address: John.Lucey@dbg.com

8 Data Package Options (circle if required)

Type IV (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/5/13	17:40	Hanyweger	11/5/13	17:40
Hanyweger	11/5/13	20:32			
			[signature]	11/5/13	2032

9

EDD Required? Yes No

If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS ____ FedEx ____ Other ____

Temperature upon receipt 1.1-4.2 °C

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

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7044 0713

Rachel L. Kreamer A# 6716 Gr. 1431593 Sample 726522349

From: Wendy Kozma
Sent: Thursday, November 07, 2013 10:29 AM
To: Rachel L. Kreamer
Subject: FW: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement
Attachments: 1431593c.pdf; 1431593d.pdf; EAcknow_1431593.xls
Do you have this group? If not, can you make the necessary corrections?

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Thursday, November 07, 2013 10:27 AM
To: Wendy Kozma
Cc: Robert P. Barnes
Subject: FW: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

Wendy,

The analyte list for the 11/5/2013 sediment samples also need to be revised as indicated below:

Sample ID	Additional Analytes
SD-R2-G-12-3	moisture, solids
SD-R2-F-14-1	PAHs, E&E Compounds, TAL Metals, moisture, solids
SD-R2-D-14-1	moisture, solids,
SD-R2-M-7-01D	E&E Compounds
Dup-2	moisture, solids,

Please let me know if you have any questions.

Thanks,

John

From: USLAN-PXAdmin [mailto:USLAN-PXAdmin@lancasterlabs.com]
Sent: Thursday, November 07, 2013 9:14 AM
To: John Lucey; Dak.Patel@arcadis-us.com; Cody.Spencer@arcadis-us.com
Subject: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

The following is an acknowledgement of the receipt of samples by Lancaster Laboratories. Please review this acknowledgement and contact your Client Service Representative if you have concerns.

This is an automated message from an unmonitored address. Please do not reply to this address.

A#6716, Gr# 1431593, Sample 7265223-49

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:33 AM
To: Wendy Kozma
Subject: RE: Ashland

yes and yes

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]
Sent: Friday, November 08, 2013 8:29 AM
To: John Lucey
Subject: RE: Ashland

OK--thanks for letting me know.

Does this include the Surfacewater/Sediment received this week?
And I'm confirming non-interpretive TICs? 10 VOC and 20 SVOC?

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:10 AM
To: Wendy Kozma
Subject: Ashland

Wendy,

For all VOC and SVOC analyses we need to run TICs

John

This email, including any attachment(s) to it, is confidential and intended solely for the use of the individual or entity to which it is addressed. If you have received this email in error, please notify the sender. Note that any views or opinions presented in this email are solely those of the author and do not represent those of O'Brien & Gere. O'Brien & Gere does not accept liability for any damage caused by any virus transmitted by this email. The recipient should check this email and any attachments for the presence of viruses.

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Environmental Sample Administration Receipt Documentation Log

1431593

Client/Project: Ashland

Date of Receipt: 11/5/13

Time of Receipt: 2032

Source Code: 01

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers

Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	4.2	TB	WI	Y	B	
2	↓	1.1	↓	↓	↓	↓	
3	↓	2.0	↓	↓	↓	↓	
4	↓	2.1	↓	↓	↓	↓	
5	↓	2.6	↓	↓	↓	↓	
6							

Number of Trip Blanks received NOT listed on chain of custody: 2 (HCl)

Paperwork Discrepancy/Unpacking Problems:

60mL Soil Jar for SD-R2-E-16-ID has no label and just has F-D 11/5/13 1215 written on lid

1 container of SW-R2-N-S-2 date=11/4/13

SD-R2-O-4-1 labeled SD-R2-K-5-1 11/5/13 910

SD-R2-D-14-1 labeled SW-R2-D-14-1, 1 vial of FB-01 time=1550

Unpacker Signature/Emp#: [signature] 2308 **Date/Time:** 11/5/13 2118

Issued by Dept. 6042 Management

2174.06

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

GC/MS Volatiles

Fraction: Volatiles by GC/MS

8260 Ext. Soil Master w/GRO

		Matrix			
Sample #	Client ID	Liquid	Solid	DF	Comments
7265236	SD-R2-E-16-1		X	0.84	
7265237	SD-R2-E-16-1D		X	1	
7265247	FB-01_11052013	X		1	Field Blank
7265249	TB	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

(Sample number(s): 7265236: Analysis: 10237)
The VOA soil weight is outside the acceptable weight range.
See the VOA Prep Summary Sheet for the affected sample(s).

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Ashland, Inc.
SDG: KVM04

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
8260 Ext. Soil Master w/GRO	A133151AA	VBLKA26	11/11/2013 11:43:00
		LCSA26	11/11/2013 12:06:00
		LCDA26	11/11/2013 12:29:00
		7265237	11/11/2013 13:56:00
8260 Ext. Soil Master w/GRO	X133152AA	VBLKX48	11/12/2013 00:46:00
		LCSX48	11/12/2013 01:08:00
		LCDX48	11/12/2013 01:31:00
		7265236	11/12/2013 10:16:00
8260 Ext. Water Master w/GRO	Y133112AA	VBLKY34	11/07/2013 10:09:00
		LCSY34	11/07/2013 10:36:00
		7265247	11/07/2013 15:49:00
		7265249	11/07/2013 16:11:00

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: KVM04
Matrix: SOLID

Fraction: Volatiles by GC/MS

A133151AA / VBLKA26 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	11/11/13	N.D.	ug/kg	2	5
Chloromethane	11/11/13	N.D.	ug/kg	2	5
Vinyl Chloride	11/11/13	N.D.	ug/kg	1	5
Bromomethane	11/11/13	N.D.	ug/kg	2	5
Chloroethane	11/11/13	N.D.	ug/kg	2	5
Trichlorofluoromethane	11/11/13	N.D.	ug/kg	2	5
1,1-Dichloroethene	11/11/13	N.D.	ug/kg	1	5
Acetone	11/11/13	N.D.	ug/kg	7	20
Carbon Disulfide	11/11/13	N.D.	ug/kg	1	5
Freon 113	11/11/13	N.D.	ug/kg	2	10
Methyl Acetate	11/11/13	N.D.	ug/kg	2	5
2-Butanone	11/11/13	N.D.	ug/kg	4	10
Chloroform	11/11/13	N.D.	ug/kg	1	5
1,1-Dichloroethane	11/11/13	N.D.	ug/kg	1	5
cis-1,2-Dichloroethene	11/11/13	N.D.	ug/kg	1	5
trans-1,2-Dichloroethene	11/11/13	N.D.	ug/kg	1	5
Methyl Tertiary Butyl Ether	11/11/13	N.D.	ug/kg	0.5	5
Methylene Chloride	11/11/13	N.D.	ug/kg	2	5
Benzene	11/11/13	N.D.	ug/kg	0.5	5
Carbon Tetrachloride	11/11/13	N.D.	ug/kg	1	5
Cyclohexane	11/11/13	N.D.	ug/kg	1	5
1,1,1-Trichloroethane	11/11/13	N.D.	ug/kg	1	5
Bromodichloromethane	11/11/13	N.D.	ug/kg	1	5
1,2-Dichloroethane	11/11/13	N.D.	ug/kg	1	5
1,2-Dichloropropane	11/11/13	N.D.	ug/kg	1	5
cis-1,3-Dichloropropene	11/11/13	N.D.	ug/kg	1	5
4-Methyl-2-pentanone	11/11/13	N.D.	ug/kg	3	10
Methylcyclohexane	11/11/13	N.D.	ug/kg	1	5
Toluene	11/11/13	N.D.	ug/kg	1	5
Trichloroethene	11/11/13	N.D.	ug/kg	1	5
Dibromochloromethane	11/11/13	N.D.	ug/kg	1	5
1,2-Dibromoethane	11/11/13	N.D.	ug/kg	1	5
trans-1,3-Dichloropropene	11/11/13	N.D.	ug/kg	1	5
2-Hexanone	11/11/13	N.D.	ug/kg	3	10
Tetrachloroethene	11/11/13	N.D.	ug/kg	1	5
1,1,2-Trichloroethane	11/11/13	N.D.	ug/kg	1	5
Bromoform	11/11/13	N.D.	ug/kg	1	5
Chlorobenzene	11/11/13	N.D.	ug/kg	1	5
Ethylbenzene	11/11/13	N.D.	ug/kg	1	5
Isopropylbenzene	11/11/13	N.D.	ug/kg	1	5
Styrene	11/11/13	N.D.	ug/kg	1	5
1,1,2,2-Tetrachloroethane	11/11/13	N.D.	ug/kg	1	5
Xylene (Total)	11/11/13	N.D.	ug/kg	1	5
1,2-Dibromo-3-chloropropane	11/11/13	N.D.	ug/kg	2	5
1,2-Dichlorobenzene	11/11/13	N.D.	ug/kg	1	5

Fraction: Volatiles by GC/MS

A133151AA / VBLKA26 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
1,3-Dichlorobenzene	11/11/13	N.D.	ug/kg	1	5
1,4-Dichlorobenzene	11/11/13	N.D.	ug/kg	1	5
1,2,4-Trichlorobenzene	11/11/13	N.D.	ug/kg	1	5

X133152AA / VBLKX48 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	11/12/13	N.D.	ug/kg	2	5
Chloromethane	11/12/13	N.D.	ug/kg	2	5
Vinyl Chloride	11/12/13	N.D.	ug/kg	1	5
Bromomethane	11/12/13	N.D.	ug/kg	2	5
Chloroethane	11/12/13	N.D.	ug/kg	2	5
Trichlorofluoromethane	11/12/13	N.D.	ug/kg	2	5
1,1-Dichloroethene	11/12/13	N.D.	ug/kg	1	5
Acetone	11/12/13	N.D.	ug/kg	7	20
Carbon Disulfide	11/12/13	N.D.	ug/kg	1	5
Freon 113	11/12/13	N.D.	ug/kg	2	10
Methyl Acetate	11/12/13	N.D.	ug/kg	2	5
2-Butanone	11/12/13	N.D.	ug/kg	4	10
Chloroform	11/12/13	N.D.	ug/kg	1	5
1,1-Dichloroethane	11/12/13	N.D.	ug/kg	1	5
cis-1,2-Dichloroethene	11/12/13	N.D.	ug/kg	1	5
trans-1,2-Dichloroethene	11/12/13	N.D.	ug/kg	1	5
Methyl Tertiary Butyl Ether	11/12/13	N.D.	ug/kg	0.5	5
Methylene Chloride	11/12/13	N.D.	ug/kg	2	5
Benzene	11/12/13	N.D.	ug/kg	0.5	5
Carbon Tetrachloride	11/12/13	N.D.	ug/kg	1	5
Cyclohexane	11/12/13	N.D.	ug/kg	1	5
1,1,1-Trichloroethane	11/12/13	N.D.	ug/kg	1	5
Bromodichloromethane	11/12/13	N.D.	ug/kg	1	5
1,2-Dichloroethane	11/12/13	N.D.	ug/kg	1	5
1,2-Dichloropropane	11/12/13	N.D.	ug/kg	1	5
cis-1,3-Dichloropropene	11/12/13	N.D.	ug/kg	1	5
4-Methyl-2-pentanone	11/12/13	N.D.	ug/kg	3	10
Methylcyclohexane	11/12/13	N.D.	ug/kg	1	5
Toluene	11/12/13	N.D.	ug/kg	1	5
Trichloroethene	11/12/13	N.D.	ug/kg	1	5
Dibromochloromethane	11/12/13	N.D.	ug/kg	1	5
1,2-Dibromoethane	11/12/13	N.D.	ug/kg	1	5
trans-1,3-Dichloropropene	11/12/13	N.D.	ug/kg	1	5
2-Hexanone	11/12/13	N.D.	ug/kg	3	10
Tetrachloroethene	11/12/13	N.D.	ug/kg	1	5
1,1,2-Trichloroethane	11/12/13	N.D.	ug/kg	1	5
Bromoform	11/12/13	N.D.	ug/kg	1	5
Chlorobenzene	11/12/13	N.D.	ug/kg	1	5
Ethylbenzene	11/12/13	N.D.	ug/kg	1	5

Fraction: Volatiles by GC/MS

X133152AA / VBLKX48 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Isopropylbenzene	11/12/13	N.D.	ug/kg	1	5
Styrene	11/12/13	N.D.	ug/kg	1	5
1,1,2,2-Tetrachloroethane	11/12/13	N.D.	ug/kg	1	5
Xylene (Total)	11/12/13	N.D.	ug/kg	1	5
1,2-Dibromo-3-chloropropane	11/12/13	N.D.	ug/kg	2	5
1,2-Dichlorobenzene	11/12/13	N.D.	ug/kg	1	5
1,3-Dichlorobenzene	11/12/13	N.D.	ug/kg	1	5
1,4-Dichlorobenzene	11/12/13	N.D.	ug/kg	1	5
1,2,4-Trichlorobenzene	11/12/13	N.D.	ug/kg	1	5

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: KVM04
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Y133112AA / VBLKY34 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	11/07/13	N.D.	ug/l	2	5
Chloromethane	11/07/13	N.D.	ug/l	1	5
Vinyl Chloride	11/07/13	N.D.	ug/l	1	5
Bromomethane	11/07/13	N.D.	ug/l	1	5
Chloroethane	11/07/13	N.D.	ug/l	1	5
Trichlorofluoromethane	11/07/13	N.D.	ug/l	2	5
1,1-Dichloroethene	11/07/13	N.D.	ug/l	0.8	5
Acetone	11/07/13	N.D.	ug/l	6	20
Freon 113	11/07/13	N.D.	ug/l	2	10
Carbon Disulfide	11/07/13	N.D.	ug/l	1	5
Methyl Acetate	11/07/13	N.D.	ug/l	1	5
Methylene Chloride	11/07/13	N.D.	ug/l	2	5
trans-1,2-Dichloroethene	11/07/13	N.D.	ug/l	0.8	5
Methyl Tertiary Butyl Ether	11/07/13	N.D.	ug/l	0.5	5
1,1-Dichloroethane	11/07/13	N.D.	ug/l	1	5
2-Butanone	11/07/13	N.D.	ug/l	3	10
cis-1,2-Dichloroethene	11/07/13	N.D.	ug/l	0.8	5
Chloroform	11/07/13	N.D.	ug/l	0.8	5
1,1,1-Trichloroethane	11/07/13	N.D.	ug/l	0.8	5
Cyclohexane	11/07/13	N.D.	ug/l	2	5
Carbon Tetrachloride	11/07/13	N.D.	ug/l	1	5
Benzene	11/07/13	N.D.	ug/l	0.5	5
1,2-Dichloroethane	11/07/13	N.D.	ug/l	1	5
Trichloroethene	11/07/13	N.D.	ug/l	1	5
Methylcyclohexane	11/07/13	N.D.	ug/l	1	5
1,2-Dichloropropane	11/07/13	N.D.	ug/l	1	5
Bromodichloromethane	11/07/13	N.D.	ug/l	1	5
cis-1,3-Dichloropropene	11/07/13	N.D.	ug/l	1	5
4-Methyl-2-pentanone	11/07/13	N.D.	ug/l	3	10
Toluene	11/07/13	N.D.	ug/l	0.7	5
trans-1,3-Dichloropropene	11/07/13	N.D.	ug/l	1	5
1,1,2-Trichloroethane	11/07/13	N.D.	ug/l	0.8	5
Tetrachloroethene	11/07/13	N.D.	ug/l	0.8	5
2-Hexanone	11/07/13	N.D.	ug/l	3	10
Dibromochloromethane	11/07/13	N.D.	ug/l	1	5
1,2-Dibromoethane	11/07/13	N.D.	ug/l	1	5
Chlorobenzene	11/07/13	N.D.	ug/l	0.8	5
Ethylbenzene	11/07/13	N.D.	ug/l	0.8	5
Xylene (Total)	11/07/13	N.D.	ug/l	0.8	5
Styrene	11/07/13	N.D.	ug/l	1	5
Bromoform	11/07/13	N.D.	ug/l	1	5
Isopropylbenzene	11/07/13	N.D.	ug/l	1	5
1,1,2,2-Tetrachloroethane	11/07/13	N.D.	ug/l	1	5
1,3-Dichlorobenzene	11/07/13	N.D.	ug/l	1	5
1,4-Dichlorobenzene	11/07/13	N.D.	ug/l	1	5

Fraction: Volatiles by GC/MS

Y133112AA / VBLKY34 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
1,2-Dichlorobenzene	11/07/13	N.D.	ug/l	1	5
1,2-Dibromo-3-chloropropane	11/07/13	N.D.	ug/l	2	5
1,2,4-Trichlorobenzene	11/07/13	N.D.	ug/l	1	5

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: KVM04
Matrix: SOLID

Fraction: Volatiles by GC/MS

A133151AA	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	Spike Added	50 ug/kg	Spike Added	50 ug/kg	Spike Added	50 ug/kg	Spike Added	50 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKA26	105	50 - 141	107	54 - 135	93	52 - 141	93	50 - 131
LCSA26	104	50 - 141	101	54 - 135	96	52 - 141	98	50 - 131
LCDA26	104	50 - 141	101	54 - 135	97	52 - 141	97	50 - 131
7265237	105	50 - 141	102	54 - 135	97	52 - 141	90	50 - 131

X133152AA	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	Spike Added	50 ug/kg	Spike Added	50 ug/kg	Spike Added	50 ug/kg	Spike Added	50 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKX48	101	50 - 141	101	54 - 135	97	52 - 141	93	50 - 131
LCSX48	97	50 - 141	98	54 - 135	102	52 - 141	98	50 - 131
LCDX48	98	50 - 141	100	54 - 135	101	52 - 141	98	50 - 131
7265236	107	50 - 141	105	54 - 135	99	52 - 141	90	50 - 131

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: KVM04
Matrix: LIQUID

Fraction: Volatiles by GC/MS

Y133112AA	Dibromofluoromethane		1,2-Dichloroethane-d4		Toluene-d8		4-Bromofluorobenzene	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKY34	104	80 - 116	102	77 - 113	97	80 - 113	94	78 - 113
LCSY34	104	80 - 116	102	77 - 113	99	80 - 113	98	78 - 113
7265247	106	80 - 116	103	77 - 113	97	80 - 113	93	78 - 113
7265249	106	80 - 116	102	77 - 113	97	80 - 113	92	78 - 113

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: SOLID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSA26 LCSD: LCDA26	Batch: **A133151AA** (Sample number(s): 7265237)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	20	17.96	17.24	90	86	32-120	4	30
Chloromethane	20	17.36	17.2	87	86	56-120	1	30
Vinyl Chloride	20	18.46	17.84	92	89	53-120	3	30
Bromomethane	20	20.29	19.72	101	99	32-162	3	30
Chloroethane	20	18.18	17.64	91	88	17-171	3	30
Trichlorofluoromethane	20	19.4	18.7	97	94	58-133	4	30
1,1-Dichloroethene	20	19.24	18.58	96	93	73-129	3	30
Acetone	150	120.31	113.78	80	76	23-171	6	30
Carbon Disulfide	20	17.77	16.95	89	85	63-128	5	30
Freon 113	20	19.35	18.05	97	90	64-137	7	30
Methyl Acetate	20	17.72	17.37	89	87	62-158	2	30
1,1-Dichloroethane	20	17.9	17.55	89	88	80-120	2	30
2-Butanone	150	125.58	121.04	84	81	38-146	4	30
Chloroform	20	19.34	19.21	97	96	80-120	1	30
cis-1,2-Dichloroethene	20	19.09	18.8	95	94	80-120	2	30
Methyl Tertiary Butyl Ether	20	19	18.83	95	94	69-126	1	30
Methylene Chloride	20	19.14	19.15	96	96	80-124	0	30
trans-1,2-Dichloroethene	20	20.05	19.18	100	96	79-120	4	30
1,1,1-Trichloroethane	20	17.46	17.16	87	86	71-125	2	30
Benzene	20	18.17	17.76	91	89	80-120	2	30
Carbon Tetrachloride	20	19.31	18.64	97	93	69-122	4	30
Cyclohexane	20	15.92	15.27	80	76	63-124	4	30
1,2-Dichloroethane	20	20.44	20.18	102	101	72-126	1	30
1,2-Dichloropropane	20	17.5	17.28	87	86	77-120	1	30
4-Methyl-2-pentanone	100	82.98	81.27	83	81	52-125	2	30
Bromodichloromethane	20	18.31	18.13	92	91	75-120	1	30
cis-1,3-Dichloropropene	20	18.1	18	91	90	74-120	1	30
Methylcyclohexane	20	18	17.25	90	86	58-134	4	30
Toluene	20	17.77	17.47	89	87	80-120	2	30
Trichloroethene	20	19.48	18.98	97	95	80-120	3	30
1,1,2-Trichloroethane	20	18.29	17.85	91	89	80-120	2	30
1,2-Dibromoethane	20	18.39	18.25	92	91	80-120	1	30
2-Hexanone	100	79.62	76.42	80	76	40-129	4	30
Dibromochloromethane	20	17.8	17.64	89	88	77-120	1	30
Tetrachloroethene	20	19.72	19.1	99	96	78-126	3	30
trans-1,3-Dichloropropene	20	17.02	17.25	85	86	77-120	1	30
1,1,2,2-Tetrachloroethane	20	16.32	16.02	82	80	71-123	2	30
Bromoform	20	18.48	18.06	92	90	70-120	2	30
Chlorobenzene	20	18.38	18.05	92	90	80-120	2	30
Ethylbenzene	20	17.88	17.52	89	88	80-120	2	30
Isopropylbenzene	20	18.1	17.63	90	88	76-120	3	30
Styrene	20	18.74	18.56	94	93	76-120	1	30

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSA26 LCSD: LCDA26	Batch: **A133151AA** (Sample number(s): 7265237)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Xylene (Total)	60	54.3	52.76	91	88	80-120	3	30
1,2-Dibromo-3-chloropropane	20	16.9	15.68	84	78	55-128	7	30
1,2-Dichlorobenzene	20	18.39	18.27	92	91	80-120	1	30
1,3-Dichlorobenzene	20	18.43	17.97	92	90	80-120	2	30
1,4-Dichlorobenzene	20	18.33	18.07	92	90	80-120	1	30
1,2,4-Trichlorobenzene	20	18.92	18.47	95	92	68-120	2	30

LCS: LCSX48 LCSD: LCDX48	Batch: **X133152AA** (Sample number(s): 7265236)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	20	14.38	14.67	72	73	32-120	2	30
Chloromethane	20	15.07	15.38	75	77	56-120	2	30
Vinyl Chloride	20	17.11	17.49	86	87	53-120	2	30
Bromomethane	20	17.72	17.91	89	90	32-162	1	30
Chloroethane	20	18	18.58	90	93	17-171	3	30
Trichlorofluoromethane	20	17.71	17.39	89	87	58-133	2	30
1,1-Dichloroethene	20	19.4	19.48	97	97	73-129	0	30
Acetone	150	115.8	126.17	77	84	23-171	9	30
Carbon Disulfide	20	18.48	18.72	92	94	63-128	1	30
Freon 113	20	18.43	18.88	92	94	64-137	2	30
Methyl Acetate	20	16.24	17.58	81	88	62-158	8	30
1,1-Dichloroethane	20	18.67	19.03	93	95	80-120	2	30
2-Butanone	150	115.85	123.79	77	83	38-146	7	30
Chloroform	20	19.31	19.6	97	98	80-120	1	30
cis-1,2-Dichloroethene	20	19.76	19.81	99	99	80-120	0	30
Methyl Tertiary Butyl Ether	20	19.74	20.72	99	104	69-126	5	30
Methylene Chloride	20	19.37	19.68	97	98	80-124	2	30
trans-1,2-Dichloroethene	20	19.86	20.02	99	100	79-120	1	30
1,1,1-Trichloroethane	20	18.25	18.41	91	92	71-125	1	30
Benzene	20	19.26	19.39	96	97	80-120	1	30
Carbon Tetrachloride	20	19.12	19.16	96	96	69-122	0	30
Cyclohexane	20	17.1	17.47	86	87	63-124	2	30
1,2-Dichloroethane	20	18.56	18.33	93	92	72-126	1	30
1,2-Dichloropropane	20	19.31	19.71	97	99	77-120	2	30
4-Methyl-2-pentanone	100	78.83	85.37	79	85	52-125	8	30
Bromodichloromethane	20	18.57	18.52	93	93	75-120	0	30
cis-1,3-Dichloropropene	20	18.2	18.52	91	93	74-120	2	30
Methylcyclohexane	20	17.67	17.9	88	90	58-134	1	30
Toluene	20	19.75	20.08	99	100	80-120	2	30
Trichloroethene	20	19.98	19.9	100	100	80-120	0	30
1,1,2-Trichloroethane	20	19.07	19.49	95	97	80-120	2	30

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSX48 LCSD: LCDX48	Batch: **X133152AA** (Sample number(s): 7265236)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,2-Dibromoethane	20	18.64	18.97	93	95	80-120	2	30
2-Hexanone	100	81.87	87.24	82	87	40-129	6	30
Dibromochloromethane	20	19.18	19.41	96	97	77-120	1	30
Tetrachloroethene	20	20.24	20.08	101	100	78-126	1	30
trans-1,3-Dichloropropene	20	18.47	18.46	92	92	77-120	0	30
1,1,2,2-Tetrachloroethane	20	18.35	18.91	92	95	71-123	3	30
Bromoform	20	19.89	19.7	99	99	70-120	1	30
Chlorobenzene	20	19.88	20.01	99	100	80-120	1	30
Ethylbenzene	20	19.84	19.71	99	99	80-120	1	30
Isopropylbenzene	20	20.24	20.01	101	100	76-120	1	30
Styrene	20	19.19	19.14	96	96	76-120	0	30
Xylene (Total)	60	59.06	59.3	98	99	80-120	0	30
1,2-Dibromo-3-chloropropane	20	17.02	17.72	85	89	55-128	4	30
1,2-Dichlorobenzene	20	19.47	19.52	97	98	80-120	0	30
1,3-Dichlorobenzene	20	19.57	19.45	98	97	80-120	1	30
1,4-Dichlorobenzene	20	19.54	19.59	98	98	80-120	0	30
1,2,4-Trichlorobenzene	20	17.97	18.14	90	91	68-120	1	30

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSY34	Batch: **Y133112AA** (Sample number(s): 7265247, 7265249)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	20	22.89	NA	114	NA	35-122	NA	NA
Chloromethane	20	18.85	NA	94	NA	55-120	NA	NA
Vinyl Chloride	20	19.34	NA	97	NA	63-120	NA	NA
Bromomethane	20	17.99	NA	90	NA	51-120	NA	NA
Chloroethane	20	15.6	NA	78	NA	45-120	NA	NA
Trichlorofluoromethane	20	22.04	NA	110	NA	65-130	NA	NA
1,1-Dichloroethene	20	21.29	NA	106	NA	76-124	NA	NA
Acetone	150	127.89	NA	85	NA	38-157	NA	NA
Freon 113	20	20.96	NA	105	NA	63-133	NA	NA
Carbon Disulfide	20	17.74	NA	89	NA	58-126	NA	NA
Methyl Acetate	20	19.86	NA	99	NA	54-138	NA	NA
Methylene Chloride	20	20.16	NA	101	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.64	NA	103	NA	80-120	NA	NA
Methyl Tertiary Butyl Ether	20	20.53	NA	103	NA	75-120	NA	NA
1,1-Dichloroethane	20	21.02	NA	105	NA	80-120	NA	NA
2-Butanone	150	128.73	NA	86	NA	58-126	NA	NA
cis-1,2-Dichloroethene	20	20.62	NA	103	NA	80-120	NA	NA
Chloroform	20	21.07	NA	105	NA	77-122	NA	NA
1,1,1-Trichloroethane	20	20.4	NA	102	NA	66-126	NA	NA
Cyclohexane	20	17.98	NA	90	NA	66-136	NA	NA
Carbon Tetrachloride	20	21.13	NA	106	NA	74-130	NA	NA
Benzene	20	19.85	NA	99	NA	78-120	NA	NA
1,2-Dichloroethane	20	21.61	NA	108	NA	71-130	NA	NA
Trichloroethene	20	20.67	NA	103	NA	80-120	NA	NA
Methylcyclohexane	20	21	NA	105	NA	71-132	NA	NA
1,2-Dichloropropane	20	19.21	NA	96	NA	80-120	NA	NA
Bromodichloromethane	20	18.19	NA	91	NA	73-120	NA	NA
cis-1,3-Dichloropropene	20	18.77	NA	94	NA	80-120	NA	NA
4-Methyl-2-pentanone	100	84.58	NA	85	NA	59-120	NA	NA
Toluene	20	19.4	NA	97	NA	80-120	NA	NA
trans-1,3-Dichloropropene	20	16.42	NA	82	NA	69-120	NA	NA
1,1,2-Trichloroethane	20	18.76	NA	94	NA	80-120	NA	NA
Tetrachloroethene	20	22.28	NA	111	NA	80-120	NA	NA
2-Hexanone	100	76.67	NA	77	NA	59-125	NA	NA
Dibromochloromethane	20	18.34	NA	92	NA	72-120	NA	NA
1,2-Dibromoethane	20	18.92	NA	95	NA	76-120	NA	NA
Chlorobenzene	20	20.3	NA	101	NA	80-120	NA	NA
Ethylbenzene	20	19.25	NA	96	NA	79-120	NA	NA
Xylene (Total)	60	58.3	NA	97	NA	80-120	NA	NA
Styrene	20	18.65	NA	93	NA	80-120	NA	NA
Bromoform	20	17.33	NA	87	NA	61-120	NA	NA
Isopropylbenzene	20	19.99	NA	100	NA	77-120	NA	NA

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSY34	Batch: **Y133112AA** (Sample number(s): 7265247, 7265249)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
1,1,2,2-Tetrachloroethane	20	16.36	NA	82	NA	70-120	NA	NA
1,3-Dichlorobenzene	20	20.03	NA	100	NA	80-120	NA	NA
1,4-Dichlorobenzene	20	19.82	NA	99	NA	80-120	NA	NA
1,2-Dichlorobenzene	20	20.03	NA	100	NA	80-120	NA	NA
1,2-Dibromo-3-chloropropane	20	15.76	NA	79	NA	56-120	NA	NA
1,2,4-Trichlorobenzene	20	20.35	NA	102	NA	65-120	NA	NA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: ac23t05.d BFB Injection Date: 10/23/13

Instrument ID: HP09685 BFB Injection Time: 18:38

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.09
75	30.0 - 60.0% of mass 95	47.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.24 (0.27)1
174	Greater than 50.0% of mass 95	88.69
175	5.0 - 9.0% of mass 174	6.29 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.64 (96.56)1
177	5.0 - 9.0% of mass 176	5.74 (6.70)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	ac23i01.d	10/23/13	19:23
02	VSTD100	ac23i02.d	10/23/13	19:46
03	VSTD50	ac23i03.d	10/23/13	20:09
04	VSTD20	ac23i04.d	10/23/13	20:31
05	VSTD10	ac23i05.d	10/23/13	20:54
06	VSTD4	ac23i06.d	10/23/13	21:40
07	VSTD2	ac23i07.d	10/23/13	22:03
08	VSTD001	ac23m01.d	10/23/13	22:25
09	VBLKA96	ac23b51.d	10/23/13	22:48
10	LCSA96	ac23s51.d	10/23/13	23:17
11	LCDA96	ac23s52.d	10/23/13	23:39
12	7240856	ac23s33.d	10/24/13	00:30
13	7240858	ac23s34.d	10/24/13	00:54
14	7240860	ac23s35.d	10/24/13	01:17
15	7240861	ac23s36.d	10/24/13	01:40
16	7240863	ac23s37.d	10/24/13	02:03
17	7240864	ac23s38.d	10/24/13	02:25
18	7240866	ac23s39.d	10/24/13	02:48
19	7240867	ac23s40.d	10/24/13	03:11
20	7240873	ac23s41.d	10/24/13	03:34
21	7240876	ac23s42.d	10/24/13	03:56
22	7242201	ac23s43.d	10/24/13	04:19

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: ac23t05.d BFB Injection Date: 10/23/13

Instrument ID: HP09685 BFB Injection Time: 18:38

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.09
75	30.0 - 60.0% of mass 95	47.26
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.75
173	Less than 2.0% of mass 174	0.24 (0.27)1
174	Greater than 50.0% of mass 95	88.69
175	5.0 - 9.0% of mass 174	6.29 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	85.64 (96.56)1
177	5.0 - 9.0% of mass 176	5.74 (6.70)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	7239048	ac23s44.d	10/24/13	04:42
24	7239042	ac23s45.d	10/24/13	05:05
25	7242769	ac23s46.d	10/24/13	05:27

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: an11t01.d BFB Injection Date: 11/11/13

Instrument ID: HP09685 BFB Injection Time: 10:29

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.15
75	30.0 - 60.0% of mass 95	45.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.63
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	99.77
175	5.0 - 9.0% of mass 174	6.90 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	96.37 (96.59)1
177	5.0 - 9.0% of mass 176	6.29 (6.53)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	an11c01.d	11/11/13	10:56
02	VBLKA26	an11b02.d	11/11/13	11:43
03	LCSA26	an11l01.d	11/11/13	12:06
04	LCDA26	an11l02.d	11/11/13	12:29
05	7269163	an11s02.d	11/11/13	13:33
06	7265237	an11s03.d	11/11/13	13:56
07	7263999	an11s21.d	11/11/13	14:41
08	7265769	an11s22.d	11/11/13	15:05
09	7265770	an11s05.d	11/11/13	15:27
10	7265771	an11s06.d	11/11/13	15:50
11	7265772	an11s07.d	11/11/13	16:12
12	7265773	an11s08.d	11/11/13	16:35
13	7265774	an11s09.d	11/11/13	16:58
14	7265775	an11s10.d	11/11/13	17:20
15	7265776	an11s11.d	11/11/13	17:43
16	7265777	an11s12.d	11/11/13	18:05
17	7265778	an11s13.d	11/11/13	18:28
18	7265780	an11s14.d	11/11/13	18:51
19	7265782	an11s16.d	11/11/13	19:36
20	7265783	an11s17.d	11/11/13	19:58
21	7265784	an11s18.d	11/11/13	20:21
22	7265785	an11s19.d	11/11/13	20:44

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: an11t01.d BFB Injection Date: 11/11/13

Instrument ID: HP09685 BFB Injection Time: 10:29

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.15
75	30.0 - 60.0% of mass 95	45.70
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.63
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	99.77
175	5.0 - 9.0% of mass 174	6.90 (6.92)1
176	Greater than 95.0%, but less than 101.0% of mass 174	96.37 (96.59)1
177	5.0 - 9.0% of mass 176	6.29 (6.53)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	7265779	an11s20.d	11/11/13	21:06

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: xc22t01.d BFB Injection Date: 10/22/13

Instrument ID: HP09193 BFB Injection Time: 01:30

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.34
75	30.0 - 60.0% of mass 95	58.24
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.44
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	86.28
175	5.0 - 9.0% of mass 174	6.10 (7.06)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.80 (98.29)1
177	5.0 - 9.0% of mass 176	5.09 (6.00)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	xc22i01.d	10/22/13	01:57
02	VSTD100	xc22i02.d	10/22/13	02:22
03	VSTD50	xc22i03.d	10/22/13	02:45
04	VSTD20	xc22i04.d	10/22/13	03:14
05	VSTD10	xc22i05.d	10/22/13	03:42
06	VSTD4	xc22i06.d	10/22/13	04:08
07	1PPBMDL - VSTD1.0	xc22m01.d	10/22/13	04:33
08	0.5PPBMDL - VSTD0.5	xc22m02.d	10/22/13	04:59
09	LCSXICV	xc22v01.d	10/22/13	05:27

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: xn11t05.d BFB Injection Date: 11/11/13

Instrument ID: HP09193 BFB Injection Time: 23:10

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.43
75	30.0 - 60.0% of mass 95	51.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.77
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	83.89
175	5.0 - 9.0% of mass 174	6.28 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.14 (97.91)1
177	5.0 - 9.0% of mass 176	5.20 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	xn11c01.d	11/11/13	23:56
02	VBLKX48	xn11b05.d	11/12/13	00:46
03	LCSX48	xn11l31.d	11/12/13	01:08
04	LCDX48	xn11l32.d	11/12/13	01:31
05	7270650	xn11s31.d	11/12/13	02:18
06	7270652	xn11s32.d	11/12/13	02:40
07	7270653	xn11s33.d	11/12/13	03:03
08	7270654	xn11s34.d	11/12/13	03:26
09	7270655	xn11s35.d	11/12/13	03:49
10	7267422	xn11s36.d	11/12/13	04:12
11	7267425	xn11s37.d	11/12/13	04:34
12	7266447	xn11s38.d	11/12/13	04:57
13	7267416	xn11s39.d	11/12/13	05:20
14	7267418	xn11s40.d	11/12/13	05:42
15	7267420	xn11s41.d	11/12/13	06:05
16	7265023RE	xn11s43.d	11/12/13	06:51
17	7265025RE	xn11s44.d	11/12/13	07:13
18	7265027RE	xn11s45.d	11/12/13	07:36
19	7265033	xn11s46.d	11/12/13	07:59
20	7265039RE	xn11s47.d	11/12/13	08:21
21	7270185	xn11s49.d	11/12/13	09:07
22	7270186	xn11s50.d	11/12/13	09:30

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: xn11t05.d BFB Injection Date: 11/11/13

Instrument ID: HP09193 BFB Injection Time: 23:10

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.43
75	30.0 - 60.0% of mass 95	51.82
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.77
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	83.89
175	5.0 - 9.0% of mass 174	6.28 (7.48)1
176	Greater than 95.0%, but less than 101.0% of mass 174	82.14 (97.91)1
177	5.0 - 9.0% of mass 176	5.20 (6.33)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	7267425RE	xn11s51.d	11/12/13	09:53
24	7265236	xn11s52.d	11/12/13	10:16
25	7267416RE	xn11s53.d	11/12/13	10:39
26	7267420RE	xn11s54.d	11/12/13	11:02

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: yc23t01.d BFB Injection Date: 10/23/13

Instrument ID: HP09355 BFB Injection Time: 11:28

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.25
75	30.0 - 60.0% of mass 95	48.00
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.65
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	86.66
175	5.0 - 9.0% of mass 174	6.07 (7.01)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.51 (97.52)1
177	5.0 - 9.0% of mass 176	5.56 (6.57)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	yc23i01.d	10/23/13	12:11
02	VSTD50	yc23i03.d	10/23/13	12:53
03	VSTD20	yc23i04.d	10/23/13	13:18
04	VSTD10	yc23i05.d	10/23/13	13:39
05	VSTD4	yc23i06.d	10/23/13	14:01
06	VSTD1	yc23i07.d	10/23/13	14:22
07	MDL0.5 - MDL0.5	yc23m01.d	10/23/13	14:43
08	YLGICV	yc23v01.d	10/23/13	15:04
09	VSTD100	yc23i08.d	10/23/13	15:38
10	VSTD300	yc23i11.d	10/23/13	17:45
11	VSTD100	yc23i12.d	10/23/13	18:06
12	VSTD50	yc23i13.d	10/23/13	18:28
13	VSTD20	yc23i14.d	10/23/13	18:50
14	VSTD10	yc23i15.d	10/23/13	19:12
15	VSTD4	yc23i16.d	10/23/13	19:33
16	MDL001 - MDL001	yc23m11.d	10/23/13	19:54
17	YSMICV	yc23v11.d	10/23/13	21:14

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: yn07t01.d BFB Injection Date: 11/07/13

Instrument ID: HP09355 BFB Injection Time: 09:09

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.95
75	30.0 - 60.0% of mass 95	48.11
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	96.46
175	5.0 - 9.0% of mass 174	7.11 (7.37)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.46 (97.92)1
177	5.0 - 9.0% of mass 176	6.01 (6.36)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	yn07c01.d	11/07/13	09:26
02	VSTD50	yn07c02.d	11/07/13	09:47
03	VBLKY32	yn07b01.d	11/07/13	10:09
04	VBLKY34	yn07b05.d	11/07/13	10:09
05	LCSY32	yn07s01.d	11/07/13	10:36
06	LCSY34	yn07s31.d	11/07/13	10:36
07	LCDY32	yn07s02.d	11/07/13	10:57
08	LCSY33	yn07s03.d	11/07/13	11:18
09	LCSY35	yn07s32.d	11/07/13	11:18
10	LCDY33	yn07s04.d	11/07/13	11:40
11	LCDY35	yn07s33.d	11/07/13	11:40
12	7263614	yn07s05.d	11/07/13	12:16
13	7263616	yn07s06.d	11/07/13	12:37
14	7264451	yn07s07.d	11/07/13	12:59
15	7264596	yn07s08.d	11/07/13	13:20
16	7265637	yn07s09.d	11/07/13	13:42
17	7265639	yn07s10.d	11/07/13	14:03
18	7266347	yn07s11.d	11/07/13	14:24
19	7266393	yn07s12.d	11/07/13	14:45
20	7266394	yn07s13.d	11/07/13	15:07
21	7260460	yn07s34.d	11/07/13	15:28
22	7265247	yn07s35.d	11/07/13	15:49

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID: yn07t01.d BFB Injection Date: 11/07/13

Instrument ID: HP09355 BFB Injection Time: 09:09

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.95
75	30.0 - 60.0% of mass 95	48.11
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.71
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	96.46
175	5.0 - 9.0% of mass 174	7.11 (7.37)1
176	Greater than 95.0%, but less than 101.0% of mass 174	94.46 (97.92)1
177	5.0 - 9.0% of mass 176	6.01 (6.36)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	7265249	yn07s36.d	11/07/13	16:11
24	7252954MSD	yn07s37.d	11/07/13	16:32
25	7252953MS	yn07s38.d	11/07/13	16:53
26	7252952	yn07s39.d	11/07/13	17:14
27	7264534	yn07s40.d	11/07/13	17:57
28	7264535	yn07s41.d	11/07/13	18:18
29	7264536	yn07s42.d	11/07/13	18:39
30	7264537	yn07s43.d	11/07/13	19:01
31	7264539	yn07s44.d	11/07/13	19:22

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date(s): 10/22/13 10/22/13

Heated Purge: (Y/N) Y Calibration Times: 01:57 04:08

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 4 = xc22i06.d RRF 10= xc22i05.d RRF 20= xc22i04.d
RRF 50= xc22i03.d RRF100= xc22i02.d RRF300= xc22i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
Dichlorodifluoromethane	0.4785	0.3173	0.4222	0.3941	0.3841	0.3556		0.3920	14	AVG
Chloromethane	#0.4142	0.3296	0.3673	0.3201	0.3194	0.2584		0.3348	16	2NDDEG #
Vinyl Chloride	*0.3723	0.2779	0.3409	0.3015	0.3012	0.2485		0.3070	14	AVG *
Bromomethane	0.2745	0.2249	0.2487	0.2259	0.2279	0.2121		0.2357	9	AVG
Chloroethane	0.2282	0.1716	0.1976	0.1743	0.1730	0.1499		0.1824	15	AVG
Dichlorofluoromethane	0.5345	0.4420	0.5064	0.4673	0.4576	0.4268		0.4724	9	AVG
Trichlorofluoromethane	0.5465	0.3870	0.4939	0.4541	0.4590	0.4600		0.4668	11	AVG
Ethanol	0.1314	0.1182	0.1161	0.1268	0.1128	0.1074		0.1188	7	AVG
Freon 123a	0.3229	0.2493	0.3022	0.2800	0.2658	0.2358		0.2760	12	AVG
Acrolein	2.1840	2.0145	2.1067	1.8214	1.9412	1.5698		1.9396	11	AVG
1,1-Dichloroethene	*0.2116	0.1842	0.2179	0.2078	0.2023	0.1958		0.2033	6	AVG *
1,1-Dichloroethene(2)	*0.1203	0.1019	0.1286	0.1166	0.1153	0.1146		0.1162	7	AVG *
Acetone	0.0291	0.0300	0.0255	0.0253	0.0246	0.0212		0.0259	12	AVG
Freon 113	0.2253	0.1798	0.2352	0.2248	0.2112	0.2116		0.2146	9	AVG
2-Propanol	0.7719	0.7522	0.7247	0.7190	0.7113	0.7250		0.7340	3	AVG
Methyl Iodide	0.4267	0.3909	0.4396	0.4226	0.4192	0.4167		0.4193	4	AVG
Carbon Disulfide	0.7611	0.6664	0.8035	0.7441	0.7305	0.6829		0.7314	7	AVG
Methyl Acetate	0.2041	0.2141	0.1935	0.1931	0.1951	0.1659		0.1943	8	AVG
Allyl Chloride	0.4045	0.3481	0.3983	0.3713	0.3867	0.3234		0.3721	8	AVG
Methylene Chloride	0.2632	0.2380	0.2509	0.2443	0.2366	0.2231		0.2427	6	AVG
t-Butyl alcohol	1.1192	1.1409	1.1516	1.2110	1.2154	1.2821		1.1867	5	AVG
Acrylonitrile	0.1020	0.1123	0.1016	0.0981	0.0988	0.0868		0.0999	8	AVG
Methyl Tertiary Butyl Ether	0.6118	0.6578	0.6737	0.6908	0.6847	0.6908		0.6683	5	AVG
trans-1,2-Dichloroethene	0.2414	0.2213	0.2516	0.2389	0.2375	0.2301		0.2368	4	AVG
n-Hexane	0.2911	0.2354	0.3277	0.3223	0.3086	0.2828		0.2946	11	AVG
1,1-Dichloroethane	#0.4550	0.4165	0.4762	0.4535	0.4521	0.4336		0.4478	5	AVG #
di-Isopropyl ether	0.6927	0.7138	0.7963	0.7796	0.7736	0.7066		0.7437	6	AVG
2-Chloro-1,3-butadiene	0.3697	0.3393	0.4233	0.4108	0.4124	0.4179		0.3956	8	AVG
Ethyl t-butyl ether	0.4732	0.4950	0.5316	0.5664	0.5642	0.5509		0.5302	7	AVG
2-Butanone	0.1307	0.1464	0.1309	0.1327	0.1336	0.1221		0.1327	6	AVG
cis-1,2-Dichloroethene	0.2495	0.2437	0.2756	0.2691	0.2666	0.2623		0.2611	5	AVG
2,2-Dichloropropane	0.3821	0.3451	0.4143	0.3981	0.4073	0.4205		0.3946	7	AVG
Propionitrile	1.3188	1.2594	1.2885	1.2702	1.2349	1.2023		1.2623	3	AVG
Methacrylonitrile	0.1030	0.1142	0.1074	0.1098	0.1068	0.1055		0.1078	4	AVG
Bromochloromethane	0.1518	0.1402	0.1424	0.1414	0.1467	0.1371		0.1433	4	AVG
Tetrahydrofuran	1.3084	1.2686	1.2533	1.1942	1.2434	1.1666		1.2391	4	AVG
Chloroform	*0.4544	0.4313	0.4734	0.4612	0.4621	0.4724		0.4591	3	AVG *
1,1,1-Trichloroethane	0.4889	0.3896	0.4709	0.4303	0.4335	0.4590		0.4454	8	AVG
Cyclohexane	0.3622	0.2915	0.4082	0.3922	0.3795	0.3677		0.3669	11	AVG
Cyclohexane(2)	0.3119	0.2575	0.3526	0.3478	0.3379	0.3343		0.3237	11	AVG
Cyclohexane(3)	0.1134	0.0908	0.1268	0.1238	0.1195	0.1176		0.1153	11	AVG
1,1-Dichloropropene	0.3303	0.2884	0.3552	0.3418	0.3461	0.3526		0.3357	7	AVG
Carbon Tetrachloride	0.3649	0.3040	0.3718	0.3616	0.3699	0.4078		0.3633	9	AVG
Isobutyl Alcohol	0.4114	0.4062	0.4138	0.3841	0.4050	0.4247		0.4075	3	AVG
Benzene	1.0452	0.9322	1.0261	0.9744	0.9618	0.9217		0.9769	5	AVG
1,2-Dichloroethane	0.4028	0.3918	0.4034	0.3997	0.4139	0.4391		0.4084	4	AVG
1,2-Dichloroethane(2)	0.0280	0.0295	0.0301	0.0303	0.0303	0.0305		0.0298	3	AVG
t-Amyl methyl ether	0.3861	0.3985	0.4130	0.4550	0.4549	0.4620		0.4283	8	AVG
n-Heptane	0.3416	0.2768	0.3656	0.3469	0.3383	0.3198		0.3315	9	AVG
n-Butanol	0.2942	0.2979	0.3173	0.3158	0.3212	0.3333		0.3133	5	AVG
Trichloroethene	0.2566	0.2362	0.2695	0.2579	0.2596	0.2671		0.2578	5	AVG
Methylcyclohexane	0.3862	0.3033	0.4246	0.4147	0.4240	0.3916		0.3907	12	AVG

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date(s): 10/22/13 10/22/13

Heated Purge: (Y/N) Y Calibration Times: 01:57 04:08

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 4 = xc22i06.d RRF 10= xc22i05.d RRF 20= xc22i04.d
RRF 50= xc22i03.d RRF100= xc22i02.d RRF300= xc22i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
1,2-Dichloropropane	*0.2478	0.2358	0.2550	0.2508	0.2491	0.2409		0.2465	3	AVG	*
Methyl Methacrylate	0.1634	0.1887	0.1917	0.2010	0.2033	0.2059		0.1923	8	AVG	
1,4-Dioxane	0.1126	0.1078	0.1161	0.1168	0.1130	0.1193		0.1143	4	AVG	
Dibromomethane	0.1682	0.1671	0.1719	0.1727	0.1709	0.1796		0.1717	3	AVG	
Bromodichloromethane	0.3378	0.3352	0.3630	0.3618	0.3696	0.3954		0.3605	6	AVG	
2-Nitropropane	2.8115	2.7638	3.0848	3.0789	3.3803	3.4987		3.1030	9	AVG	
cis-1,3-Dichloropropene	0.3330	0.3616	0.4047	0.4162	0.4246	0.4342		0.3957	10	AVG	
4-Methyl-2-pentanone	0.2508	0.3132	0.2970	0.3058	0.3081	0.2886		0.2939	8	AVG	
Toluene	*0.8303	0.7545	0.8493	0.8109	0.8029	0.7769		0.8041	4	AVG	*
trans-1,3-Dichloropropene	0.4837	0.4887	0.5378	0.5539	0.5615	0.5688		0.5324	7	AVG	
Ethyl Methacrylate	0.3538	0.4273	0.4587	0.4853	0.4813	0.4765		0.4471	11	AVG	
1,1,2-Trichloroethane	0.2933	0.2926	0.2933	0.2944	0.2881	0.2860		0.2913	1	AVG	
Tetrachloroethene	0.3801	0.3352	0.4001	0.3778	0.3785	0.3906		0.3771	6	AVG	
1,3-Dichloropropane	0.5071	0.5075	0.5258	0.5290	0.5203	0.5103		0.5167	2	AVG	
2-Hexanone	0.2480	0.3016	0.2835	0.2909	0.2946	0.2733		0.2820	7	AVG	
Dibromochloromethane	0.3174	0.3303	0.3521	0.3658	0.3721	0.3973		0.3559	8	AVG	
1,2-Dibromoethane	0.3007	0.3098	0.3207	0.3229	0.3230	0.3238		0.3168	3	AVG	
Chlorobenzene	#0.9670	0.8993	0.9819	0.9489	0.9400	0.9216		0.9431	3	AVG	#
1,1,1,2-Tetrachloroethane	0.3249	0.3147	0.3555	0.3545	0.3643	0.3949		0.3514	8	AVG	
Ethylbenzene	*1.4656	1.4004	1.6699	1.6022	1.6008	1.4838		1.5371	7	AVG	*
m+p-Xylene	0.5868	0.5660	0.6598	0.6375	0.6403	0.6358		0.6210	6	AVG	
o-Xylene	0.5292	0.5336	0.6335	0.6134	0.6224	0.6434		0.5959	9	AVG	
Styrene	0.8949	0.9231	1.0599	1.0470	1.0646	1.0620		1.0086	8	AVG	
Bromoform	#0.2053	0.2145	0.2255	0.2416	0.2516			0.2277	8	AVG	#
Isopropylbenzene	1.3912	1.3667	1.6540	1.6189	1.6238	1.4759		1.5217	8	AVG	
Cyclohexanone	0.3176	0.3175	0.3523	0.3816	0.3720	0.4196		0.3601	11	AVG	
1,1,2,2-Tetrachloroethane	#0.7424	0.7855	0.7490	0.7632	0.7307	0.6687		0.7399	5	AVG	#
Bromobenzene	0.7671	0.7224	0.7891	0.7755	0.7698	0.7533		0.7629	3	AVG	
trans-1,4-Dichloro-2-butene	0.2555	0.2733	0.2644	0.2700	0.2673	0.2656		0.2660	2	AVG	
1,2,3-Trichloropropane	0.2425	0.2518	0.2365	0.2402	0.2347	0.2296		0.2392	3	AVG	
n-Propylbenzene	3.2661	3.0164	3.4916	3.3124	3.2175	2.3898		3.1156	12	AVG	
2-Chlorotoluene	0.6818	0.6429	0.7312	0.7047	0.6996	0.6649		0.6875	5	AVG	
1,3,5-Trimethylbenzene	2.2560	2.1943	2.5308	2.4558	2.4230	2.1013		2.3269	7	AVG	
4-Chlorotoluene	0.7192	0.6905	0.7559	0.7380	0.7379	0.7044		0.7243	3	AVG	
tert-Butylbenzene	0.5205	0.4929	0.5941	0.5813	0.5919	0.5759		0.5594	8	AVG	
Pentachloroethane	0.4501	0.4471	0.4753	0.4892	0.5262	0.4972		0.4809	6	AVG	
1,2,4-Trimethylbenzene	2.3090	2.3002	2.6065	2.5461	2.5209	2.1725		2.4092	7	AVG	
sec-Butylbenzene	2.7859	2.6602	3.1930	3.0791	3.0104	2.3552		2.8473	11	AVG	
1,3-Dichlorobenzene	1.4251	1.3416	1.4885	1.4403	1.4322	1.4207		1.4247	3	AVG	
p-Isopropyltoluene	2.5548	2.4623	2.9321	2.8471	2.8336	2.2847		2.6524	10	AVG	
1,4-Dichlorobenzene	1.5301	1.4137	1.5318	1.4934	1.4713	1.4579		1.4830	3	AVG	
1,2,3-Trimethylbenzene	2.7005	2.4673	2.7503	2.6422	2.7228	2.2123		2.5826	8	AVG	
Benzyl Chloride	0.2714	0.3078	0.3250	0.3603	0.3594	0.3835		0.3346	12	AVG	
1,3-Diethylbenzene	1.5896	1.4721	1.7668	1.6840	1.7615	1.5473		1.6369	7	AVG	
1,4-Diethylbenzene	1.6942	1.4701	1.7966	1.7020	1.7901	1.5936		1.6744	7	AVG	
n-Butylbenzene	1.3482	1.2298	1.4475	1.3844	1.3803	1.3485		1.3564	5	AVG	
1,2-Dichlorobenzene	1.4133	1.3739	1.4494	1.4030	1.3884	1.3742		1.4004	2	AVG	
1,2-Diethylbenzene	1.4226	1.2597	1.4815	1.4076	1.4723	1.3281		1.3953	6	AVG	
1,2-Dibromo-3-chloropropane	0.1565	0.1786	0.1679	0.1810	0.1800	0.1966		0.1768	8	AVG	
1,3,5-Trichlorobenzene	1.1560	1.0712	1.2263	1.1824	1.1810	1.2071		1.1707	5	AVG	
1,2,4-Trichlorobenzene	1.0103	0.9959	1.1315	1.1118	1.1067	1.1480		1.0840	6	AVG	
Hexachlorobutadiene	0.5719	0.5174	0.6139	0.5858	0.5858	0.6352		0.5850	7	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date(s): 10/22/13 10/22/13

Heated Purge: (Y/N) Y Calibration Times: 01:57 04:08

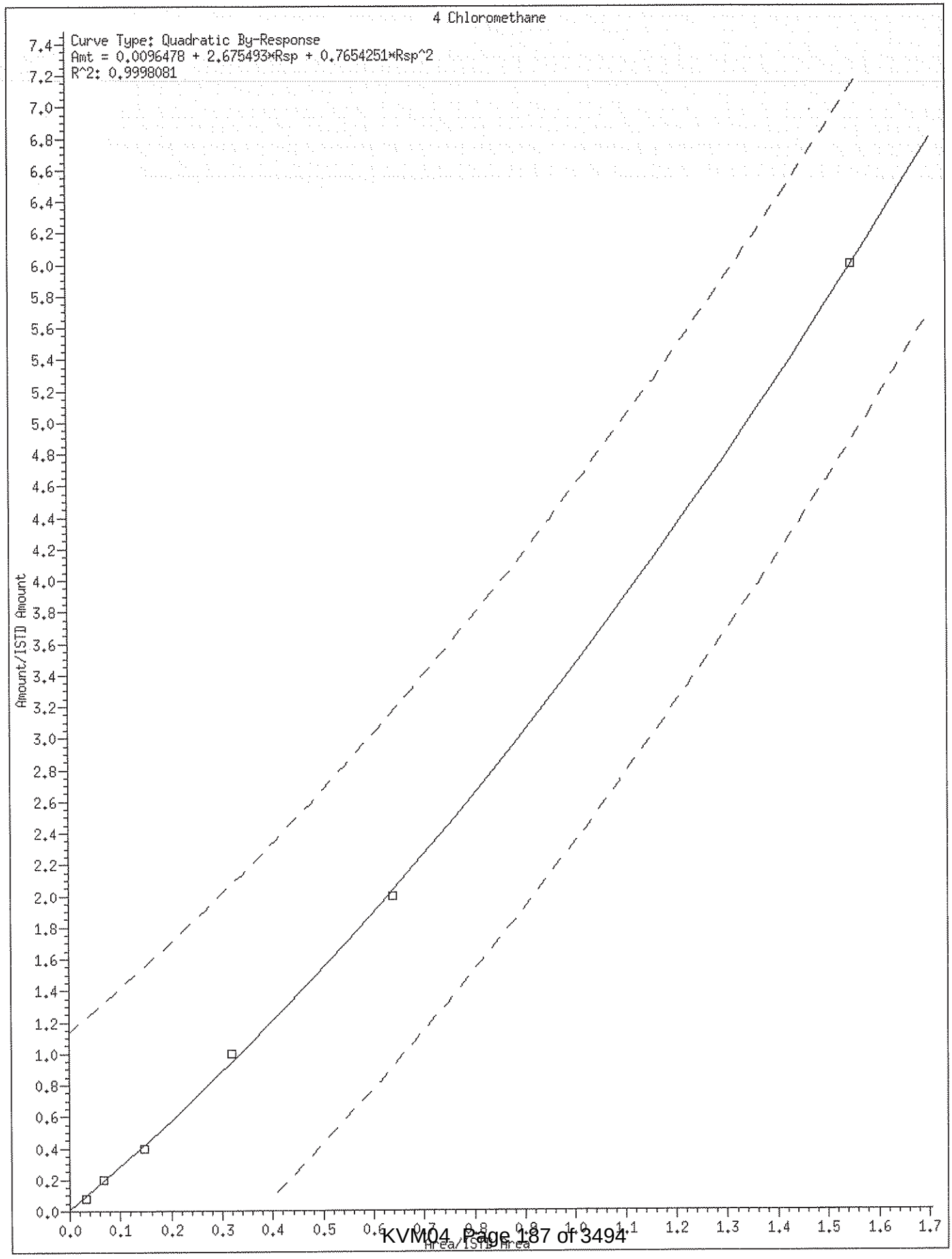
Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 4 = xc22i06.d RRF 10= xc22i05.d RRF 20= xc22i04.d
RRF 50= xc22i03.d RRF100= xc22i02.d RRF300= xc22i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
Naphthalene	2.3323	2.6551	2.8037	2.8728	2.7432	2.3303		2.6229	9	AVG
1,2,3-Trichlorobenzene	1.0431	1.0279	1.1127	1.1010	1.0564	1.1106		1.0753	3	AVG
2-Methylnaphthalene	1.4839	1.5751	1.8516	1.9409	1.9095	1.8004		1.7602	11	AVG
Dibromofluoromethane	0.2604	0.2583	0.2584	0.2580	0.2614	0.2675		0.2607	1	AVG
Dibromofluoromethane(2)	0.2667	0.2656	0.2624	0.2639	0.2665	0.2763		0.2669	2	AVG
1,2-Dichloroethane-d4	0.0593	0.0594	0.0599	0.0586	0.0578	0.0575		0.0587	2	AVG
1,2-Dichloroethane-d4(2)	0.3496	0.3536	0.3399	0.3469	0.3525	0.3746		0.3528	3	AVG
1,2-Dichloroethane-d4(3)	0.0375	0.0383	0.0382	0.0381	0.0377	0.0375		0.0379	1	AVG
Toluene-d8	1.3036	1.2934	1.3066	1.3034	1.2926	1.2477		1.2912	2	AVG
Toluene-d8(2)	0.8532	0.8495	0.8518	0.8547	0.8472	0.8161		0.8454	2	AVG
4-Bromofluorobenzene	0.5109	0.5016	0.5086	0.5096	0.5148	0.5253		0.5118	2	AVG
4-Bromofluorobenzene(2)	0.4468	0.4434	0.4474	0.4468	0.4525	0.4693		0.4510	2	AVG

Average %RSD 7

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%



CAT 3258 10/22/15

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09193.i/13oct22a.b/xc22i01.d	VSTD300
/chem2/HP09193.i/13oct22a.b/xc22i02.d	VSTD100
/chem2/HP09193.i/13oct22a.b/xc22i03.d	VSTD050
/chem2/HP09193.i/13oct22a.b/xc22i04.d	VSTD020
/chem2/HP09193.i/13oct22a.b/xc22i05.d	VSTD010
/chem2/HP09193.i/13oct22a.b/xc22i06.d	VSTD004

Area Summary

File ID:

Internal Standard Name	xc22i01.d	xc22i02.d	xc22i03.d	xc22i04.d	xc22i05.d	xc22i06.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	284413	328142	353216	336599	384879	315446	333782	10	Yes
Fluorobenzene	1960781	2287973	2403873	2428981	2419176	2365422	2311034	8	Yes
Chlorobenzene-d5	1587593	1777390	1852474	1869435	1867107	1815318	1794886	6	Yes
1,4-Dichlorobenzene-d4	1033658	1045043	1066014	1084607	1057800	1042280	1054900	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	xc22i01.d	xc22i02.d	xc22i03.d	xc22i04.d	xc22i05.d	xc22i06.d	Avg. RT
t-Butyl alcohol-d10	4.213	4.195	4.201	4.195	4.189	4.201	4.199
Fluorobenzene	7.717	7.711	7.711	7.711	7.711	7.711	7.712
Chlorobenzene-d5	11.197	11.197	11.197	11.197	11.197	11.197	11.197
1,4-Dichlorobenzene-d4	13.089	13.089	13.083	13.089	13.089	13.083	13.087

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 10/22/2013 at 04:56.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 ICV Date: 10/22/13 Time: 05:27

Lab File ID: xc22v01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.3920	0.3163	16.14	20	-19	
#	Chloromethane	0.3348	0.2921	16.63	20	-17	#
*	Vinyl Chloride	0.3070	0.2780	18.11	20	-9	*
	Bromomethane	0.2357	0.2161	18.34	20	-8	
	Chloroethane	0.1824	0.1621	17.77	20	-11	
	Dichlorofluoromethane	0.4724	0.4782	20.24	20	1	
	Trichlorofluoromethane	0.4668	0.4307	18.46	20	-8	
	Ethanol	0.1188	0.1212	1020.12	1000	2	
	Freon 123a	0.2760	0.2870	20.80	20	4	
	Acrolein	1.9396	1.8717	144.75	150	-3	
*	1,1-Dichloroethene	0.2033	0.1806	17.77	20	-11	*
	Acetone	0.0259	0.0257	148.44	150	-1	
	Freon 113	0.2146	0.1681	15.67	20	-22	
	2-Propanol	0.7340	0.7946	162.37	150	8	
	Methyl Iodide	0.4193	0.3746	17.87	20	-11	
	Carbon Disulfide	0.7314	0.5732	15.67	20	-22	
	Methyl Acetate	0.1943	0.1922	19.78	20	-1	
	Allyl Chloride	0.3721	0.3263	17.54	20	-12	
	Methylene Chloride	0.2427	0.2322	19.13	20	-4	
	t-Butyl alcohol	1.1867	1.3849	233.41	200	17	
	Acrylonitrile	0.0999	0.0860	86.07	100	-14	
	Methyl Tertiary Butyl Ether	0.6683	0.6337	18.96	20	-5	
	trans-1,2-Dichloroethene	0.2368	0.2217	18.73	20	-6	
	n-Hexane	0.2946	0.2111	14.33	20	-28	
#	1,1-Dichloroethane	0.4478	0.4306	19.23	20	-4	#
	di-Isopropyl ether	0.7437	0.7358	19.79	20	-1	
	2-Chloro-1,3-butadiene	0.3956	0.3545	17.92	20	-10	
	Ethyl t-butyl ether	0.5302	0.5084	19.18	20	-4	
	2-Butanone	0.1327	0.1191	134.60	150	-10	
	cis-1,2-Dichloroethene	0.2611	0.2509	19.21	20	-4	
	2,2-Dichloropropane	0.3946	0.3616	18.33	20	-8	
	Propionitrile	1.2623	1.2787	151.94	150	1	
	Methacrylonitrile	0.1078	0.1049	146.00	150	-3	
	Bromochloromethane	0.1433	0.1371	19.14	20	-4	
	Tetrahydrofuran	1.2391	1.1820	95.39	100	-5	
*	Chloroform	0.4591	0.4494	19.58	20	-2	*

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 ICV Date: 10/22/13 Time: 05:27

Lab File ID: xc22v01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF	CONC.	CONC.	DRIFT	
1,1,1-Trichloroethane	0.4454	0.4040	18.14	20	-9	
Cyclohexane	0.3669	0.2937	16.01	20	-20	
1,1-Dichloropropene	0.3357	0.3126	18.62	20	-7	
Carbon Tetrachloride	0.3633	0.3332	18.34	20	-8	
Isobutyl Alcohol	0.4075	0.4069	499.18	500	0	
Benzene	0.9769	0.9296	19.03	20	-5	
1,2-Dichloroethane	0.4084	0.3922	19.20	20	-4	
t-Amyl methyl ether	0.4283	0.4120	19.24	20	-4	
n-Heptane	0.3315	0.2561	15.45	20	-23	
n-Butanol	0.3133	0.3174	1013.21	1000	1	
Trichloroethene	0.2578	0.2500	19.40	20	-3	
Methylcyclohexane	0.3907	0.3596	18.41	20	-8	
* 1,2-Dichloropropane	0.2465	0.2450	19.88	20	-1	*
Methyl Methacrylate	0.1923	0.1811	18.83	20	-6	
1,4-Dioxane	0.1143	0.1108	484.73	500	-3	
Dibromomethane	0.1717	0.1634	19.03	20	-5	
Bromodichloromethane	0.3605	0.3364	18.66	20	-7	
2-Nitropropane	3.1030	2.5925	16.71	20	-16	
cis-1,3-Dichloropropene	0.3957	0.3838	19.40	20	-3	
4-Methyl-2-pentanone	0.2939	0.2715	92.37	100	-8	
* Toluene	0.8041	0.7777	19.34	20	-3	*
trans-1,3-Dichloropropene	0.5324	0.4762	17.89	20	-11	
Ethyl Methacrylate	0.4471	0.4331	19.37	20	-3	
1,1,2-Trichloroethane	0.2913	0.2812	19.31	20	-3	
Tetrachloroethene	0.3771	0.3722	19.74	20	-1	
1,3-Dichloropropane	0.5167	0.4983	19.29	20	-4	
2-Hexanone	0.2820	0.2598	92.14	100	-8	
Dibromochloromethane	0.3559	0.3291	18.50	20	-8	
1,2-Dibromoethane	0.3168	0.2978	18.80	20	-6	
# Chlorobenzene	0.9431	0.9281	19.68	20	-2	#
1,1,1,2-Tetrachloroethane	0.3514	0.3271	18.61	20	-7	
* Ethylbenzene	1.5371	1.5316	19.93	20	0	*
m+p-Xylene	0.6210	0.6101	39.29	40	-2	
o-Xylene	0.5959	0.5800	19.47	20	-3	
Styrene	1.0086	0.9886	19.60	20	-2	
# Bromoform	0.2277	0.2208	19.39	20	-3	#

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 ICV Date: 10/22/13 Time: 05:27

Lab File ID: xc22v01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Isopropylbenzene	1.5217	1.5145	19.91	20	0	
	Cyclohexanone	0.3601	0.3544	492.07	500	-2	
#	1,1,2,2-Tetrachloroethane	0.7399	0.7121	19.25	20	-4	#
	Bromobenzene	0.7629	0.7301	19.14	20	-4	
	trans-1,4-Dichloro-2-butene	0.2660	0.2654	99.79	100	0	
	1,2,3-Trichloropropane	0.2392	0.2251	18.82	20	-6	
	n-Propylbenzene	3.1156	3.1540	20.25	20	1	
	2-Chlorotoluene	0.6875	0.6558	19.08	20	-5	
	1,3,5-Trimethylbenzene	2.3269	2.3143	19.89	20	-1	
	4-Chlorotoluene	0.7243	0.6906	19.07	20	-5	
	tert-Butylbenzene	0.5594	0.5368	19.19	20	-4	
	Pentachloroethane	0.4809	0.4331	18.01	20	-10	
	1,2,4-Trimethylbenzene	2.4092	2.4140	20.04	20	0	
	sec-Butylbenzene	2.8473	2.8996	20.37	20	2	
	1,3-Dichlorobenzene	1.4247	1.3930	19.56	20	-2	
	p-Isopropyltoluene	2.6524	2.6285	19.82	20	-1	
	1,4-Dichlorobenzene	1.4830	1.4420	19.45	20	-3	
	1,2,3-Trimethylbenzene	2.5826	2.4919	19.30	20	-4	
	Benzyl Chloride	0.3346	0.3038	18.16	20	-9	
	1,3-Diethylbenzene	1.6369	1.5418	18.84	20	-6	
	1,4-Diethylbenzene	1.6744	1.6297	19.47	20	-3	
	n-Butylbenzene	1.3564	1.3663	20.14	20	1	
	1,2-Dichlorobenzene	1.4004	1.3549	19.35	20	-3	
	1,2-Diethylbenzene	1.3953	1.3337	19.12	20	-4	
	1,2-Dibromo-3-chloropropane	0.1768	0.1568	17.74	20	-11	
	1,3,5-Trichlorobenzene	1.1707	1.1169	19.08	20	-5	
	1,2,4-Trichlorobenzene	1.0840	1.0219	18.85	20	-6	
	Hexachlorobutadiene	0.5850	0.5558	19.00	20	-5	
	Naphthalene	2.6229	2.5862	19.72	20	-1	
	1,2,3-Trichlorobenzene	1.0753	1.0232	19.03	20	-5	
	2-Methylnaphthalene	1.7602	1.5680	17.82	20	-11	

Average %Drift 6

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 19:23 21:40

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 4 = ac23i06.d RRF 10= ac23i05.d RRF 20= ac23i04.d
RRF 50= ac23i03.d RRF100= ac23i02.d RRF300= ac23i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
Dichlorodifluoromethane	0.4184	0.3954	0.4115	0.4577	0.4488	0.4364		0.4280	6	AVG	
Chloromethane	#0.3547	0.3470	0.3391	0.3598	0.3444	0.3097		0.3424	5	AVG	#
Vinyl Chloride	*0.3319	0.3272	0.3253	0.3514	0.3311	0.3014		0.3280	5	AVG	*
Bromomethane	0.2458	0.2492	0.2411	0.2570	0.2379	0.2075		0.2397	7	AVG	
Chloroethane	0.2125	0.1978	0.1913	0.1978	0.1850	0.1588		0.1905	9	AVG	
Dichlorofluoromethane	0.5415	0.4289	0.5093	0.5097	0.4847	0.4550		0.4882	8	AVG	
Trichlorofluoromethane	0.4765	0.4588	0.4709	0.5254	0.5222	0.5088		0.4938	6	AVG	
Ethanol	0.1324	0.1263	0.1300	0.1250	0.1431	0.1340		0.1318	5	AVG	
Freon 123a	0.3814	0.3015	0.3505	0.3577	0.3458	0.3213		0.3430	8	AVG	
Acrolein	2.8976	2.8921	2.8414	3.2592	2.9165	2.6026		2.9015	7	AVG	
1,1-Dichloroethene	*0.2770	0.2436	0.2523	0.2597	0.2469	0.2395		0.2532	5	AVG	*
Acetone	0.0317	0.0301	0.0275	0.0284	0.0295	0.0242		0.0286	9	AVG	
Freon 113	0.2963	0.2574	0.2688	0.2864	0.2767	0.2725		0.2764	5	AVG	
2-Propanol	0.9210	0.7499	0.8272	0.8744	0.8764	0.8882		0.8562	7	AVG	
Methyl Iodide	0.5244	0.4821	0.5021	0.5108	0.4908	0.4757		0.4976	4	AVG	
Carbon Disulfide	0.9664	0.8458	0.8876	0.9105	0.8725	0.8502		0.8888	5	AVG	
Methyl Acetate	0.1954	0.1858	0.1735	0.1760	0.1783	0.1600		0.1781	7	AVG	
Allyl Chloride	0.4005	0.3683	0.3927	0.4023	0.4011	0.3823		0.3912	3	AVG	
Methylene Chloride	0.3236	0.2934	0.2985	0.2972	0.2867	0.2729		0.2954	6	AVG	
t-Butyl alcohol	1.3287	1.2974	1.3771	1.4023	1.4294	1.4043		1.3732	4	AVG	@
Acrylonitrile	0.0956	0.1011	0.0990	0.1073	0.1127	0.0949		0.1018	7	AVG	
Methyl Tertiary Butyl Ether	0.7761	0.7578	0.7971	0.8101	0.8182	0.7680		0.7879	3	AVG	
trans-1,2-Dichloroethene	0.3165	0.2855	0.2932	0.3003	0.2881	0.2786		0.2937	5	AVG	
n-Hexane	0.3920	0.3550	0.3797	0.4120	0.4065	0.4018		0.3911	5	AVG	
1,1-Dichloroethane	#0.5313	0.4934	0.5106	0.5281	0.5109	0.4914		0.5110	3	AVG	#
di-Isopropyl ether	0.8125	0.7877	0.8405	0.8697	0.8515	0.7980		0.8267	4	AVG	
2-Chloro-1,3-butadiene	0.3652	0.3392	0.3726	0.4033	0.3979	0.4007		0.3798	7	AVG	
Ethyl t-butyl ether	0.7696	0.7551	0.8098	0.8342	0.8353	0.7934		0.7996	4	AVG	
2-Butanone	0.1103	0.1177	0.1115	0.1250	0.1333	0.1081		0.1177	8	AVG	
cis-1,2-Dichloroethene	0.3392	0.3095	0.3263	0.3359	0.3246	0.3111		0.3244	4	AVG	
2,2-Dichloropropane	0.4094	0.3781	0.4099	0.4333	0.4285	0.4336		0.4155	5	AVG	
Propionitrile	1.8209	1.6969	1.8484	1.8621	1.6941	1.7294		1.7753	4	AVG	
Methacrylonitrile	0.1095	0.1087	0.1140	0.1112	0.1135	0.1045		0.1102	3	AVG	
Bromochloromethane	0.1686	0.1616	0.1668	0.1654	0.1679	0.1611		0.1652	2	AVG	
Tetrahydrofuran	1.6332	1.6323	1.5902	1.8396	1.7431	1.6460		1.6807	6	AVG	
Chloroform	*0.5235	0.4803	0.5012	0.5112	0.5003	0.4925		0.5015	3	AVG	*
1,1,1-Trichloroethane	0.5518	0.4532	0.4806	0.4772	0.4687	0.4820		0.4856	7	AVG	
Cyclohexane	0.4830	0.4347	0.4654	0.5128	0.5001	0.4946		0.4818	6	AVG	
Cyclohexane(2)	0.4504	0.4014	0.4260	0.4656	0.4559	0.4534		0.4421	5	AVG	
Cyclohexane(3)	0.1505	0.1354	0.1467	0.1617	0.1583	0.1576		0.1517	6	AVG	
1,1-Dichloropropene	0.4008	0.3653	0.3859	0.4093	0.3994	0.4009		0.3936	4	AVG	
Carbon Tetrachloride	0.3962	0.3581	0.3822	0.4092	0.4063	0.4309		0.3971	6	AVG	
Isobutyl Alcohol	0.4424	0.4386	0.4627	0.4758	0.4552	0.4679		0.4571	3	AVG	
Benzene	1.2703	1.1621	1.2132	1.2223	1.1818	1.1280		1.1963	4	AVG	
1,2-Dichloroethane	0.3670	0.3444	0.3585	0.3610	0.3638	0.3623		0.3595	2	AVG	
1,2-Dichloroethane(2)	0.0347	0.0342	0.0350	0.0355	0.0350	0.0342		0.0348	1	AVG	
t-Amyl methyl ether	0.7256	0.7233	0.7770	0.7975	0.8077	0.7804		0.7686	5	AVG	
n-Heptane	0.4205	0.3678	0.3913	0.4124	0.4155	0.4199		0.4046	5	AVG	
n-Butanol	0.3535	0.3604	0.4109	0.4262	0.4227	0.4308		0.4007	9	AVG	
Trichloroethene	0.3224	0.2926	0.3081	0.3172	0.3105	0.3111		0.3103	3	AVG	
Methylcyclohexane	0.5130	0.4637	0.5062	0.5425	0.5462	0.5448		0.5194	6	AVG	
1,2-Dichloropropane	*0.3009	0.2884	0.3025	0.3090	0.3033	0.2943		0.2997	2	AVG	*

@RRF for level 1 std. taken from ac23i07
Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 19:23 21:40

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

LAB FILE ID: RRF 4 = ac23i06.d RRF 10= ac23i05.d RRF 20= ac23i04.d
RRF 50= ac23i03.d RRF100= ac23i02.d RRF300= ac23i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
Methyl Methacrylate	0.1664	0.1709	0.1865	0.1952	0.2030	0.1969		0.1865	8	AVG	
1,4-Dioxane	0.1391	0.1357	0.1513	0.1592	0.1495	0.1537		0.1481	6	AVG	
Dibromomethane	0.1867	0.1765	0.1868	0.1884	0.1879	0.1869		0.1855	2	AVG	
Bromodichloromethane	0.3579	0.3404	0.3681	0.3864	0.3895	0.4002		0.3737	6	AVG	
2-Nitropropane	2.3678	2.6241	2.7175	3.5324	3.3605	3.3737		2.9960	16	1STDEG	
cis-1,3-Dichloropropene	0.4059	0.4051	0.4520	0.4789	0.4855	0.4804		0.4513	8	AVG	
4-Methyl-2-pentanone	0.2002	0.2446	0.2294	0.2840	0.2994	0.2426		0.2500	15	AVG	
Toluene	*1.0830	0.9655	1.0154	1.0370	0.9935	0.9515		1.0076	5	AVG	*
trans-1,3-Dichloropropene	0.4862	0.4972	0.5542	0.5862	0.5938	0.5797		0.5495	9	AVG	
Ethyl Methacrylate	0.3742	0.3980	0.4659	0.4911	0.5075	0.4724		0.4515	12	AVG	
1,1,2-Trichloroethane	0.3504	0.3281	0.3460	0.3392	0.3347	0.3174		0.3360	4	AVG	
Tetrachloroethene	0.4963	0.4270	0.4548	0.4682	0.4531	0.4692		0.4614	5	AVG	
1,3-Dichloropropane	0.5929	0.5645	0.5955	0.5990	0.5898	0.5543		0.5827	3	AVG	
2-Hexanone	0.1892	0.2355	0.2148	0.2741	0.2835	0.2227		0.2366	15	AVG	
Dibromochloromethane	0.3550	0.3481	0.3839	0.4071	0.4142	0.4235		0.3887	8	AVG	
1,2-Dibromoethane	0.3448	0.3333	0.3585	0.3602	0.3589	0.3461		0.3503	3	AVG	
Chlorobenzene	#1.2682	1.1574	1.1947	1.2093	1.1683	1.1195		1.1862	4	AVG	#
1,1,1,2-Tetrachloroethane	0.3968	0.3772	0.4151	0.4271	0.4262	0.4225		0.4108	5	AVG	
Ethylbenzene	*1.9597	1.8067	1.9453	1.9874	1.9255	1.7594		1.8973	5	AVG	*
m+p-Xylene	0.7940	0.7387	0.7913	0.8112	0.7840	0.7330		0.7753	4	AVG	
o-Xylene	0.7415	0.7049	0.7690	0.7918	0.7703	0.7386		0.7527	4	AVG	
Styrene	1.0869	1.0917	1.2021	1.2748	1.2715	1.2034		1.1884	7	AVG	
Bromoform	#0.2056	0.2046	0.2301	0.2473	0.2637	0.2787		0.2383	13	AVG	#
Isopropylbenzene	1.9155	1.7941	1.9748	2.0439	1.9823	1.8458		1.9260	5	AVG	
Cyclohexanone	0.4879	0.4894	0.5284	0.5716	0.6118	0.6801		0.5615	13	AVG	
1,1,2,2-Tetrachloroethane	#0.8913	0.8560	0.8791	0.8576	0.8365	0.7380		0.8431	7	AVG	#
Bromobenzene	1.0351	0.9612	0.9912	0.9932	0.9612	0.9269		0.9781	4	AVG	
trans-1,4-Dichloro-2-butene	0.2058	0.2134	0.2274	0.2256	0.2304	0.2081		0.2184	5	AVG	
1,2,3-Trichloropropane	0.2785	0.2619	0.2649	0.2593	0.2573	0.2343		0.2594	6	AVG	
n-Propylbenzene	4.5899	4.0491	4.3182	4.3734	4.0918	3.4901		4.1521	9	AVG	
2-Chlorotoluene	0.9902	0.9037	0.9376	0.9652	0.9155	0.8754		0.9313	5	AVG	
1,3,5-Trimethylbenzene	3.1340	2.9160	3.1679	3.2606	3.0988	2.8262		3.0673	5	AVG	
4-Chlorotoluene	1.0285	0.9261	0.9727	0.9879	0.9540	0.9128		0.9637	4	AVG	
tert-Butylbenzene	0.7123	0.6523	0.7029	0.7349	0.7091	0.6912		0.7004	4	AVG	
Pentachloroethane	0.5675	0.5508	0.6055	0.6147	0.6282	0.6154		0.5970	5	AVG	
1,2,4-Trimethylbenzene	3.2158	3.0403	3.2546	3.3440	3.2130	2.8757		3.1572	5	AVG	
sec-Butylbenzene	4.0242	3.6718	3.9852	4.1735	3.9520	3.4581		3.8775	7	AVG	
1,3-Dichlorobenzene	1.9430	1.7446	1.8550	1.8782	1.8195	1.6663		1.8178	5	AVG	
p-Isopropyltoluene	3.4470	3.2651	3.5756	3.7531	3.6137	3.1618		3.4694	6	AVG	
1,4-Dichlorobenzene	2.0331	1.8123	1.8938	1.9145	1.8627	1.6901		1.8678	6	AVG	
1,2,3-Trimethylbenzene	3.4029	3.2103	3.4488	3.4449	3.3572	2.9450		3.3015	6	AVG	
Benzyl Chloride	0.2811	0.3090	0.3500	0.3820	0.4060	0.4035		0.3553	15	AVG	
1,3-Diethylbenzene	2.0763	1.9244	2.1791	2.2340	2.2024	2.0644		2.1134	5	AVG	
1,4-Diethylbenzene	2.0679	1.9363	2.1874	2.2021	2.2166	2.0420		2.1087	5	AVG	
n-Butylbenzene	1.7352	1.5326	1.6844	1.7630	1.7267	1.6498		1.6819	5	AVG	
1,2-Dichlorobenzene	1.8378	1.7062	1.7748	1.7906	1.7476	1.6694		1.7544	3	AVG	
1,2-Diethylbenzene	1.7920	1.6720	1.8331	1.8442	1.8303	1.7190		1.7818	4	AVG	
1,2-Dibromo-3-chloropropane	0.1308	0.1356	0.1502	0.1536	0.1714	0.1637		0.1509	10	AVG	
1,3,5-Trichlorobenzene	1.4230	1.2859	1.4204	1.4581	1.4766	1.4743		1.4231	5	AVG	
1,2,4-Trichlorobenzene	1.1468	1.0811	1.2046	1.2683	1.3129	1.3044		1.2197	8	AVG	
Hexachlorobutadiene	0.7057	0.6180	0.6695	0.6950	0.6978	0.7573		0.6906	7	AVG	
Naphthalene	2.3861	2.5653	2.8661	3.0247	3.1275	2.7033		2.7788	10	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 19:23 21:40

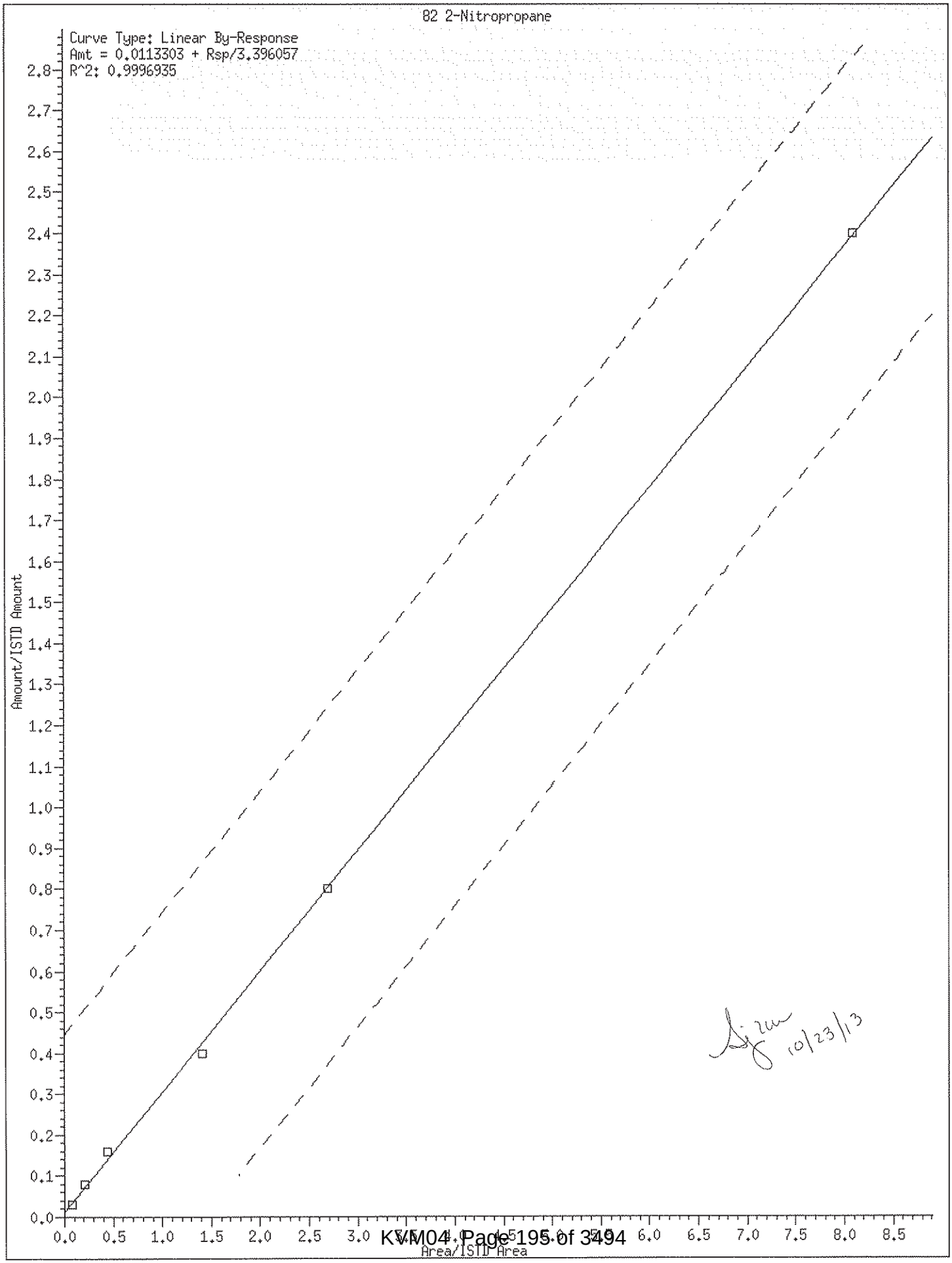
Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

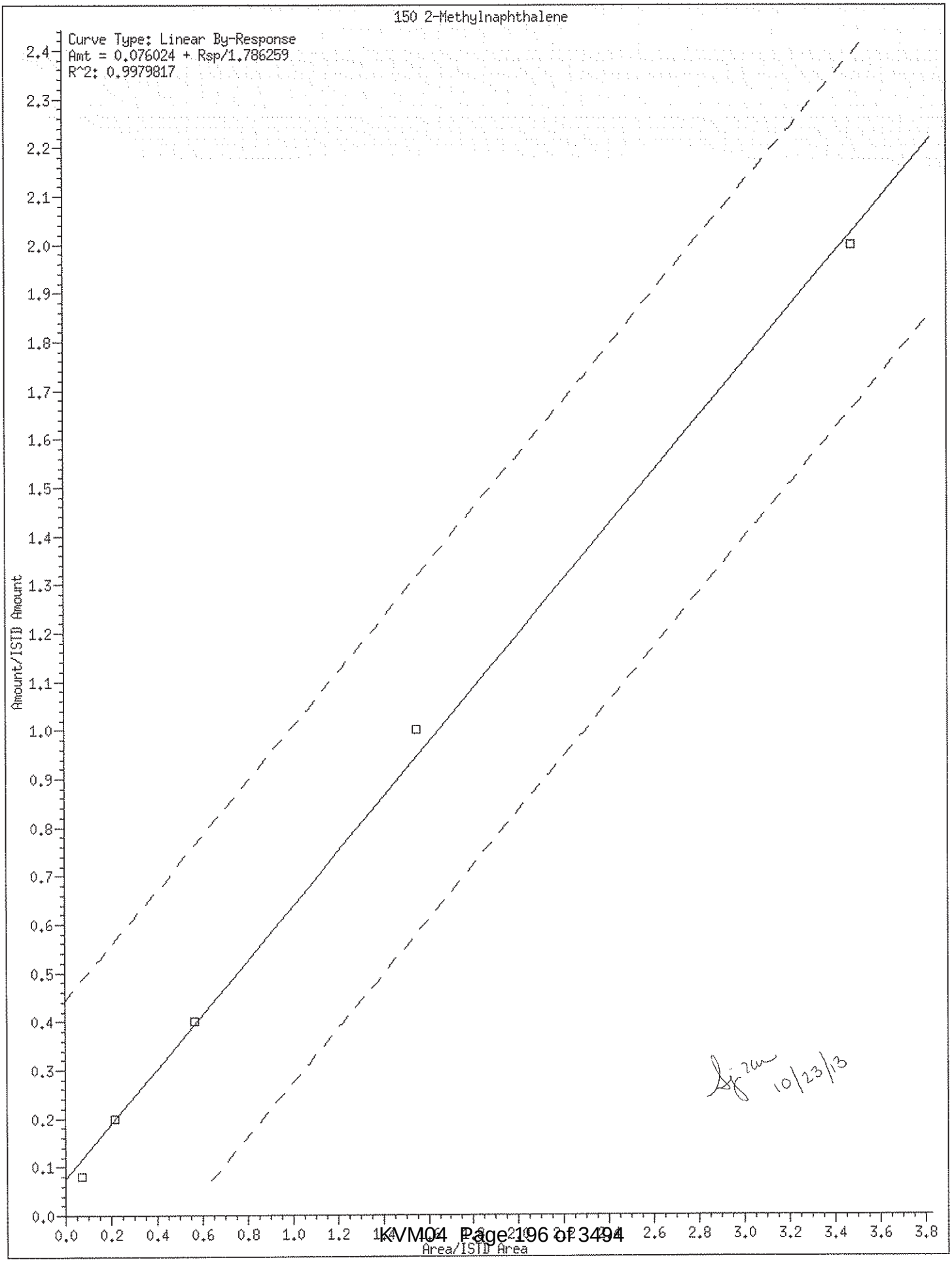
LAB FILE ID: RRF 4 = ac23i06.d RRF 10= ac23i05.d RRF 20= ac23i04.d
RRF 50= ac23i03.d RRF100= ac23i02.d RRF300= ac23i01.d RRF =

COMPOUND	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
1,2,3-Trichlorobenzene	1.0904	1.0345	1.1400	1.1722	1.2331	1.2041		1.1457	6	AVG
2-Methylnaphthalene	0.9278	1.0834	1.4257	1.5527	1.7403			1.3460	25	1STDEG
Dibromofluoromethane	0.2427	0.2439	0.2425	0.2428	0.2457	0.2489		0.2444	1	AVG
Dibromofluoromethane(2)	0.2482	0.2490	0.2478	0.2477	0.2499	0.2530		0.2493	1	AVG
1,2-Dichloroethane-d4	0.0563	0.0560	0.0552	0.0548	0.0560	0.0542		0.0554	1	AVG
1,2-Dichloroethane-d4(2)	0.2509	0.2563	0.2501	0.2479	0.2572	0.2607		0.2539	2	AVG
1,2-Dichloroethane-d4(3)	0.0351	0.0354	0.0352	0.0350	0.0356	0.0347		0.0351	1	AVG
Toluene-d8	1.2940	1.3065	1.3078	1.3084	1.2931	1.2764		1.2977	1	AVG
Toluene-d8(2)	0.8453	0.8459	0.8525	0.8565	0.8372	0.8292		0.8444	1	AVG
4-Bromofluorobenzene	0.4753	0.4764	0.4816	0.4806	0.4874	0.4938		0.4825	1	AVG
4-Bromofluorobenzene(2)	0.4186	0.4154	0.4167	0.4149	0.4190	0.4284		0.4188	1	AVG

Average %RSD 6

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%


82 2-Nitropropane
Curve Type: Linear By-Response
Amt = 0.0113303 + Rsp/3.396057
R^2: 0.9996935
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
0.0
0.5
1.0
1.5
2.0
2.5
3.0
6.0
6.5
7.0
7.5
8.0
8.5
10/23/13


150 2-Methylnaphthalene
Curve Type: Linear By-Response
Amt = 0.076024 + Rsp/1.786259
R^2: 0.9979817
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
0.0
0.2
0.4
0.6
0.8
1.0
1.2
2.6
2.8
3.0
3.2
3.4
3.6
3.8
10/23/13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09685.i/13oct23b.b/ac23i01.d	VSTD300
/chem2/HP09685.i/13oct23b.b/ac23i02.d	VSTD100
/chem2/HP09685.i/13oct23b.b/ac23i03.d	VSTD050
/chem2/HP09685.i/13oct23b.b/ac23i04.d	VSTD020
/chem2/HP09685.i/13oct23b.b/ac23i05.d	VSTD010
/chem2/HP09685.i/13oct23b.b/ac23i06.d	VSTD004

Area Summary

File ID:

Internal Standard Name	ac23i01.d	ac23i02.d	ac23i03.d	ac23i04.d	ac23i05.d	ac23i06.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	127444	161666	144941	150070	157708	145668	147916	8	Yes
Fluorobenzene	1295790	1448280	1487743	1464206	1457791	1448722	1433755	5	Yes
Chlorobenzene-d5	1021222	1110032	1118683	1100451	1101461	1079954	1088634	3	Yes
1,4-Dichlorobenzene-d4	592349	616680	600378	589451	579456	563848	590360	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ac23i01.d	ac23i02.d	ac23i03.d	ac23i04.d	ac23i05.d	ac23i06.d	Avg. RT
t-Butyl alcohol-d10	4.049	4.049	4.061	4.049	4.030	4.037	4.046
Fluorobenzene	7.547	7.541	7.547	7.547	7.541	7.541	7.544
Chlorobenzene-d5	11.075	11.075	11.075	11.075	11.075	11.075	11.075
1,4-Dichlorobenzene-d4	12.979	12.980	12.980	12.980	12.979	12.980	12.980

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 10/23/2013 at 22:40.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 ICV Date: 10/23/13 Time: 23:17

Lab File ID: ac23s51.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4280	0.3875	18.11	20	-9	
#	Chloromethane	0.3424	0.3203	18.70	20	-6	#
*	Vinyl Chloride	0.3280	0.3181	19.39	20	-3	*
	Bromomethane	0.2397	0.1792	14.95	20	-25	
	Chloroethane	0.1905	0.1485	15.59	20	-22	
	Dichlorofluoromethane	0.4882	0.5543	22.71	20	14	
	Trichlorofluoromethane	0.4938	0.4814	19.50	20	-3	
	Ethanol	0.1318	0.1408	1068.21	1000	7	
	Freon 123a	0.3430	0.3887	22.67	20	13	
	Acrolein	2.9015	2.4335	125.81	150	-16	
*	1,1-Dichloroethene	0.2532	0.2824	22.31	20	12	*
	Acetone	0.0286	0.0323	169.77	150	13	
	Freon 113	0.2764	0.2998	21.70	20	8	
	2-Propanol	0.8562	0.8190	143.49	150	-4	
	Methyl Iodide	0.4976	0.5499	22.10	20	10	
	Carbon Disulfide	0.8888	0.9523	21.43	20	7	
	Methyl Acetate	0.1781	0.2117	23.77	20	19	
	Allyl Chloride	0.3912	0.3774	19.29	20	-4	
	Methylene Chloride	0.2954	0.3256	22.05	20	10	
	t-Butyl alcohol	1.3732	1.5002	218.50	200	9	
	Acrylonitrile	0.1018	0.1107	108.75	100	9	
	Methyl Tertiary Butyl Ether	0.7879	0.8598	21.83	20	9	
	trans-1,2-Dichloroethene	0.2937	0.3146	21.42	20	7	
	n-Hexane	0.3911	0.4234	21.65	20	8	
#	1,1-Dichloroethane	0.5110	0.5466	21.40	20	7	#
	di-Isopropyl ether	0.8267	0.8912	21.56	20	8	
	2-Chloro-1,3-butadiene	0.3798	0.3984	20.98	20	5	
	Ethyl t-butyl ether	0.7996	0.8252	20.64	20	3	
	2-Butanone	0.1177	0.1352	172.35	150	15	
	cis-1,2-Dichloroethene	0.3244	0.3448	21.25	20	6	
	2,2-Dichloropropane	0.4155	0.4265	20.53	20	3	
	Propionitrile	1.7753	1.6609	140.34	150	-6	
	Methacrylonitrile	0.1102	0.1299	176.80	150	18	
	Bromochloromethane	0.1652	0.1723	20.86	20	4	
	Tetrahydrofuran	1.6807	1.5042	89.50	100	-11	
*	Chloroform	0.5015	0.5241	20.90	20	5	*

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 ICV Date: 10/23/13 Time: 23:17

Lab File ID: ac23s51.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1,1,1-Trichloroethane	0.4856	0.5018	20.67	20	3	
	Cyclohexane	0.4818	0.5028	20.87	20	4	
	1,1-Dichloropropene	0.3936	0.4090	20.78	20	4	
	Carbon Tetrachloride	0.3971	0.4108	20.69	20	3	
	Isobutyl Alcohol	0.4571	0.4433	484.88	500	-3	
	Benzene	1.1963	1.2571	21.02	20	5	
	1,2-Dichloroethane	0.3595	0.3835	21.33	20	7	
	t-Amyl methyl ether	0.7686	0.8045	20.93	20	5	
	n-Heptane	0.4046	0.4174	20.63	20	3	
	n-Butanol	0.4007	0.3799	947.92	1000	-5	
	Trichloroethene	0.3103	0.3257	20.99	20	5	
	Methylcyclohexane	0.5194	0.5430	20.91	20	5	
*	1,2-Dichloropropane	0.2997	0.3170	21.15	20	6	*
	Methyl Methacrylate	0.1865	0.2052	22.01	20	10	
	1,4-Dioxane	0.1481	0.1476	498.29	500	0	
	Dibromomethane	0.1855	0.1960	21.12	20	6	
	Bromodichloromethane	0.3737	0.3659	19.58	20	-2	
	2-Nitropropane	2.9960	2.3496	16.67	20	-17	
	cis-1,3-Dichloropropene	0.4513	0.4712	20.88	20	4	
	4-Methyl-2-pentanone	0.2500	0.2809	112.37	100	12	
*	Toluene	1.0076	1.0443	20.73	20	4	*
	trans-1,3-Dichloropropene	0.5495	0.5434	19.77	20	-1	
	Ethyl Methacrylate	0.4515	0.5010	22.19	20	11	
	1,1,2-Trichloroethane	0.3360	0.3609	21.49	20	7	
	Tetrachloroethene	0.4614	0.4943	21.42	20	7	
	1,3-Dichloropropane	0.5827	0.6167	21.17	20	6	
	2-Hexanone	0.2366	0.2735	115.57	100	16	
	Dibromochloromethane	0.3887	0.3974	20.45	20	2	
	1,2-Dibromoethane	0.3503	0.3749	21.41	20	7	
#	Chlorobenzene	1.1862	1.2424	20.95	20	5	#
	1,1,1,2-Tetrachloroethane	0.4108	0.4161	20.26	20	1	
*	Ethylbenzene	1.8973	2.0007	21.09	20	5	*
	m+p-Xylene	0.7753	0.8182	42.21	40	6	
	o-Xylene	0.7527	0.7909	21.02	20	5	
	Styrene	1.1884	1.2464	20.98	20	5	
#	Bromoform	0.2383	0.2532	21.25	20	6	#

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 ICV Date: 10/23/13 Time: 23:17

Lab File ID: ac23s51.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF	CONC.	CONC.	DRIFT	
Isopropylbenzene	1.9260	2.0296	21.08	20	5	
Cyclohexanone	0.5615	0.5469	486.97	500	-3	
# 1,1,2,2-Tetrachloroethane	0.8431	0.9512	22.56	20	13	#
Bromobenzene	0.9781	1.0008	20.46	20	2	
trans-1,4-Dichloro-2-butene	0.2184	0.2548	116.64	100	17	
1,2,3-Trichloropropane	0.2594	0.2872	22.15	20	11	
n-Propylbenzene	4.1521	4.3864	21.13	20	6	
2-Chlorotoluene	0.9313	0.9540	20.49	20	2	
1,3,5-Trimethylbenzene	3.0673	3.1992	20.86	20	4	
4-Chlorotoluene	0.9637	0.9903	20.55	20	3	
tert-Butylbenzene	0.7004	0.7746	22.12	20	11	
Pentachloroethane	0.5970	0.5960	19.97	20	0	
1,2,4-Trimethylbenzene	3.1572	3.3136	20.99	20	5	
sec-Butylbenzene	3.8775	4.0756	21.02	20	5	
1,3-Dichlorobenzene	1.8178	1.9211	21.14	20	6	
p-Isopropyltoluene	3.4694	3.6710	21.16	20	6	
1,4-Dichlorobenzene	1.8678	1.9677	21.07	20	5	
1,2,3-Trimethylbenzene	3.3015	3.4322	20.79	20	4	
Benzyl Chloride	0.3553	0.3806	21.42	20	7	
1,3-Diethylbenzene	2.1134	2.2011	20.83	20	4	
1,4-Diethylbenzene	2.1087	2.3157	21.96	20	10	
n-Butylbenzene	1.6819	1.7772	21.13	20	6	
1,2-Dichlorobenzene	1.7544	1.8400	20.98	20	5	
1,2-Diethylbenzene	1.7818	1.8566	20.84	20	4	
1,2-Dibromo-3-chloropropane	0.1509	0.1658	21.98	20	10	
1,3,5-Trichlorobenzene	1.4231	1.5009	21.09	20	5	
1,2,4-Trichlorobenzene	1.2197	1.2887	21.13	20	6	
Hexachlorobutadiene	0.6906	0.6998	20.27	20	1	
Naphthalene	2.7788	2.9447	21.19	20	6	
1,2,3-Trichlorobenzene	1.1457	1.2330	21.52	20	8	
2-Methylnaphthalene	1.3460	1.1512	16.69	20	-17	

Average %Drift 7

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 12:11 15:38

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = yc23i07.d RRF 4 = yc23i06.d RRF 10= yc23i05.d
RRF 20= yc23i04.d RRF 50= yc23i03.d RRF100= yc23i08.d RRF300= yc23i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
Dichlorodifluoromethane	0.3210	0.4644	0.3999	0.4336	0.4170	0.3966	0.3789	0.4016	11	AVG	
Chloromethane	#0.4812	0.5563	0.4593	0.5156	0.4753	0.4881	0.4330	0.4870	8	AVG	#
1,3-Butadiene		0.2692	0.2223	0.2483	0.2412	0.2196	0.2196	0.2367	8	AVG	
Vinyl Chloride	*0.3703	0.4616	0.3997	0.4575	0.4223	0.4271	0.3728	0.4159	9	AVG	*
Bromomethane	0.2696	0.3034	0.2603	0.2926	0.2739	0.2661	0.2223	0.2697	10	AVG	
Chloroethane	0.2279	0.2691	0.2330	0.2611	0.2432	0.2398	0.2037	0.2397	9	AVG	
Dichlorofluoromethane	0.5848	0.6367	0.5748	0.5999	0.5702	0.5789	0.5062	0.5788	7	AVG	
n-Pentane		0.6409	0.5245	0.5954	0.5669	0.5247	0.4745	0.5545	11	AVG	
Trichlorofluoromethane	0.4072	0.5425	0.4714	0.5218	0.4937	0.4829	0.4364	0.4794	10	AVG	
Ethyl ether		0.3463	0.2987	0.3234	0.3213	0.3224	0.2823	0.3157	7	AVG	
Freon 123a		0.4328	0.3501	0.3719	0.3494	0.3479	0.3123	0.3607	11	AVG	
Acrolein		1.8363	2.0970	2.1208	2.3845	2.4119	2.2456	2.1827	10	AVG	
1,1-Dichloroethene	*0.2338	0.2814	0.2445	0.2619	0.2504	0.2593	0.2297	0.2515	7	AVG	*
1,1-Dichloroethene(2)	*	0.1450	0.1292	0.1401	0.1268	0.1339	0.1161	0.1318	8	AVG	*
Acetone		0.0737	0.0647	0.0674	0.0701	0.0715	0.0618	0.0682	6	AVG	
Freon 113		0.2826	0.2570	0.2756	0.2679	0.2548	0.2422	0.2633	6	AVG	
2-Propanol		0.7854	0.8307	0.7650	0.7980	0.8701	0.7144	0.7939	7	AVG	
Methyl Iodide	0.4403	0.5140	0.4695	0.4996	0.4818	0.5052	0.4498	0.4800	6	AVG	
Carbon Disulfide		0.9191	0.8359	0.9237	0.8643	0.9031	0.8332	0.8799	5	AVG	
Allyl Chloride		0.5379	0.4879	0.5052	0.4778	0.4932	0.4307	0.4888	7	AVG	
Methyl Acetate		0.3917	0.3670	0.3913	0.3998	0.4176	0.3763	0.3906	5	AVG	
Methylene Chloride	0.3246	0.3304	0.2994	0.3111	0.2982	0.3119	0.2765	0.3074	6	AVG	
t-Butyl alcohol	1.5154	1.5162	1.7186	1.5347	1.4437	1.7418	1.4606	1.5616	8	AVG	
Acrylonitrile		0.2809	0.2475	0.2543	0.2660	0.2657	0.2471	0.2603	5	AVG	
trans-1,2-Dichloroethene	0.2814	0.3135	0.2874	0.3012	0.2885	0.3047	0.2734	0.2929	5	AVG	
Methyl Tertiary Butyl Ether	1.0506	1.1004	1.0751	1.0763	1.0607	1.0932	0.9792	1.0622	4	AVG	
n-Hexane		0.5598	0.4843	0.5079	0.4818	0.4683	0.4527	0.4925	8	AVG	
1,1-Dichloroethane	#0.5062	0.5931	0.5487	0.5800	0.5561	0.5801	0.5326	0.5567	5	AVG	#
di-Isopropyl ether	1.1448	1.2246	1.1773	1.1889	1.1463	1.1897	1.0594	1.1616	5	AVG	
2-Chloro-1,3-butadiene		0.5204	0.4782	0.5256	0.4959	0.5207	0.4695	0.5017	5	AVG	
Ethyl t-butyl ether	1.0405	1.1300	1.1179	1.1093	1.0852	1.1126	1.0049	1.0858	4	AVG	
cis-1,2-Dichloroethene	0.2976	0.3483	0.3219	0.3388	0.3326	0.3501	0.3214	0.3301	6	AVG	
2-Butanone		0.3639	0.3415	0.3666	0.3966	0.4247	0.3916	0.3808	8	AVG	
2,2-Dichloropropane	0.4052	0.4666	0.4277	0.4558	0.4478	0.4681	0.4278	0.4427	5	AVG	
Propionitrile		1.4949	1.7864	1.6955	1.7312	1.8105	1.6922	1.7018	7	AVG	
Methacrylonitrile		0.2405	0.2586	0.2571	0.2550	0.2634	0.2363	0.2518	4	AVG	
Bromochloromethane		0.1624	0.1676	0.1717	0.1678	0.1763	0.1659	0.1686	3	AVG	
Tetrahydrofuran		1.2884	1.4236	1.4923	1.6953	1.7052	1.7947	1.5666	12	AVG	
Chloroform	*0.4794	0.5507	0.5233	0.5340	0.5261	0.5494	0.5000	0.5233	5	AVG	*
1,1,1-Trichloroethane	0.5035	0.5910	0.4876	0.5189	0.4846	0.4965	0.4616	0.5063	8	AVG	
Cyclohexane		0.6444	0.5759	0.6146	0.5990	0.5826	0.5635	0.5967	5	AVG	
Cyclohexane(2)		0.5067	0.5232	0.4835	0.5510	0.4627	0.4508	0.4963	8	AVG	
Cyclohexane(3)		0.1954	0.1702	0.1846	0.1796	0.1741	0.1703	0.1790	5	AVG	
1,1-Dichloropropene	0.3434	0.4486	0.3999	0.4291	0.4159	0.4400	0.4061	0.4119	8	AVG	
Carbon Tetrachloride	0.3023	0.3997	0.3701	0.3997	0.3982	0.4161	0.3864	0.3818	10	AVG	
Isobutyl Alcohol		0.4956	0.5773	0.5235	0.5319	0.5874	0.4978	0.5356	7	AVG	
Benzene	1.2152	1.3446	1.2572	1.3177	1.2835	1.3513	1.2273	1.2852	4	AVG	
1,2-Dichloroethane	0.4333	0.4662	0.4675	0.4656	0.4599	0.4762	0.4291	0.4568	4	AVG	
1,2-Dichloroethane(2)		0.0412	0.0408	0.0415	0.0413	0.0437	0.0398	0.0414	3	AVG	
t-Amyl methyl ether	0.9931	1.0444	1.0569	1.0375	1.0341	1.0634	0.9707	1.0286	3	AVG	
n-Heptane		0.6416	0.6105	0.6159	0.5931	0.5968	0.5610	0.6031	4	AVG	
n-Butanol		0.3898	0.4702	0.4400	0.4473	0.4762	0.4074	0.4385	8	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 12:11 15:38

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = yc23i07.d RRF 4 = yc23i06.d RRF 10= yc23i05.d
RRF 20= yc23i04.d RRF 50= yc23i03.d RRF100= yc23i08.d RRF300= yc23i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD	
Trichloroethene	0.2922	0.3307	0.3205	0.3311	0.3232	0.3392	0.3124	0.3213	5	AVG	
Methylcyclohexane		0.5519	0.5321	0.5839	0.5645	0.5516	0.5424	0.5544	3	AVG	
Methylcyclohexane(2)		0.2428	0.2309	0.2512	0.2468	0.2432	0.2389	0.2423	3	AVG	
1,2-Dichloropropane	*0.3032	0.3588	0.3429	0.3510	0.3471	0.3649	0.3356	0.3434	6	AVG	*
Dibromomethane	0.2115	0.2279	0.2347	0.2297	0.2300	0.2406	0.2212	0.2279	4	AVG	
1,4-Dioxane		0.0785	0.0971	0.1008	0.1035	0.0977	0.0908	0.0947	10	AVG	
Methyl Methacrylate		0.3964	0.4191	0.4064	0.4023	0.4218	0.3761	0.4037	4	AVG	
Bromodichloromethane	0.3524	0.3963	0.4193	0.4291	0.4317	0.4555	0.4183	0.4146	8	AVG	
2-Nitropropane		0.1420	0.1519	0.1642	0.1884	0.2101	0.1961	0.1754	15	AVG	
2-Chloroethyl Vinyl Ether		0.2757	0.2745	0.3160	0.3105	0.3220	0.3019	0.3001	7	AVG	
cis-1,3-Dichloropropene	0.4426	0.5261	0.5358	0.5467	0.5514	0.5833	0.5319	0.5311	8	AVG	
4-Methyl-2-pentanone		0.6261	0.6710	0.6842	0.7493	0.8417	0.7342	0.7177	10	AVG	
Toluene	*1.0114	1.1699	1.1077	1.1532	1.1194	1.1667	1.0495	1.1111	5	AVG	*
trans-1,3-Dichloropropene	0.5732	0.6713	0.7320	0.7449	0.7492	0.7881	0.7193	0.7111	10	AVG	
Ethyl Methacrylate		0.8454	0.9035	0.8996	0.8731	0.9180	0.8102	0.8750	5	AVG	
1,1,2-Trichloroethane	0.4133	0.4544	0.4765	0.4678	0.4548	0.4756	0.4228	0.4522	6	AVG	
Tetrachloroethene	0.4270	0.5036	0.4775	0.4998	0.4853	0.5107	0.4748	0.4827	6	AVG	
1,3-Dichloropropane	0.7140	0.7796	0.8182	0.8073	0.7806	0.8188	0.7412	0.7800	5	AVG	
2-Hexanone		0.7310	0.7686	0.7732	0.8226	0.9262	0.7985	0.8033	8	AVG	
Dibromochloromethane	0.3243	0.4158	0.4622	0.4870	0.4931	0.5309	0.4897	0.4576	15	AVG	
1,2-Dibromoethane	0.4326	0.4798	0.5165	0.5164	0.5032	0.5317	0.4780	0.4940	7	AVG	
Chlorobenzene	#1.1272	1.2999	1.2561	1.2691	1.2414	1.3025	1.1567	1.2361	6	AVG	#
1,1,1,2-Tetrachloroethane	0.3602	0.4089	0.4255	0.4357	0.4383	0.4651	0.4275	0.4230	8	AVG	
Ethylbenzene	*	2.2524	2.1418	2.2207	2.1652	2.2818	1.9554	2.1695	5	AVG	*
m+p-Xylene		0.8817	0.8504	0.8791	0.8611	0.9068	0.7694	0.8580	6	AVG	
o-Xylene		0.8727	0.8329	0.8562	0.8448	0.8899	0.7781	0.8457	5	AVG	
Styrene		1.4211	1.4179	1.4686	1.4484	1.5401	1.3140	1.4350	5	AVG	
Bromoform	#	0.2722	0.3184	0.3535	0.3755	0.4224	0.3944	0.3561	15	AVG	#
Isopropylbenzene		2.2621	2.1875	2.2423	2.1758	2.2886	1.8686	2.1708	7	AVG	
Cyclohexanone	0.3663	0.4313	0.4520	0.5120	0.5108	0.4737	0.4747	0.4601	11	AVG	
Bromobenzene		1.0444	1.0380	1.0509	1.0146	1.0644	0.9830	1.0325	3	AVG	
1,1,2,2-Tetrachloroethane	#1.3480	1.4697	1.5074	1.4826	1.4245	1.4797	1.3225	1.4335	5	AVG	#
1,2,3-Trichloropropane		0.4506	0.4672	0.4621	0.4386	0.4594	0.4105	0.4480	5	AVG	
trans-1,4-Dichloro-2-butene		0.4768	0.5400	0.5464	0.5072	0.5318	0.4612	0.5106	7	AVG	
n-Propylbenzene		4.8916	4.6705	4.7341	4.5552	4.6724	3.4873	4.5018	11	AVG	
2-Chlorotoluene		0.9737	0.9450	0.9616	0.9232	0.9651	0.8903	0.9431	3	AVG	
4-Chlorotoluene		1.0098	0.9937	1.0115	0.9700	1.0195	0.9276	0.9887	4	AVG	
1,3,5-Trimethylbenzene		3.5256	3.4302	3.4848	3.3825	3.4904	2.8701	3.3639	7	AVG	
tert-Butylbenzene		0.7825	0.7569	0.7675	0.7538	0.7899	0.7018	0.7587	4	AVG	
Pentachloroethane		0.5954	0.6635	0.6402	0.6329	0.6680	0.6386	0.6398	4	AVG	
1,2,4-Trimethylbenzene		3.5490	3.4910	3.5803	3.4431	3.5637	2.9555	3.4304	7	AVG	
sec-Butylbenzene		4.4508	4.3151	4.4028	4.2286	4.3288	3.3220	4.1747	10	AVG	
1,3-Dichlorobenzene		1.9519	1.9145	1.9599	1.8991	1.9889	1.7840	1.9164	4	AVG	
p-Isopropyltoluene		3.9850	3.9211	3.9986	3.8734	3.9894	3.0707	3.8064	10	AVG	
1,4-Dichlorobenzene		2.1253	2.0561	2.0626	1.9909	2.0968	1.7873	2.0198	6	AVG	
1,2,3-Trimethylbenzene		3.6858	3.8873	3.6796	3.4887	3.5447	2.9578	3.5406	9	AVG	
Benzyl Chloride		2.5523	2.7980	2.9469	2.9745	3.1878	2.6359	2.8492	8	AVG	
1,3-Diethylbenzene		2.3013	2.4375	2.3805	2.2495	2.3197	2.0880	2.2961	5	AVG	
1,4-Diethylbenzene		2.3766	2.4854	2.4323	2.3017	2.4021	2.0513	2.3415	7	AVG	
1,2-Dichlorobenzene		1.9648	1.9647	1.9762	1.9239	1.9955	1.6247	1.9083	7	AVG	
n-Butylbenzene		1.9701	1.9242	1.9747	1.8748	1.9854	1.7072	1.9061	6	AVG	
1,2-Diethylbenzene		1.9244	2.0431	1.9562	1.8537	1.8958	1.7309	1.9007	6	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date(s): 10/23/13 10/23/13

Heated Purge: (Y/N) Y Calibration Times: 12:11 15:38

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = yc23i07.d RRF 4 = yc23i06.d RRF 10= yc23i05.d
RRF 20= yc23i04.d RRF 50= yc23i03.d RRF100= yc23i08.d RRF300= yc23i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	$\overline{RRF}$	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane		0.3212	0.3509	0.3748	0.3798	0.4038	0.3599	0.3651	8	AVG
1,3,5-Trichlorobenzene		1.6190	1.6140	1.6200	1.5523	1.6558	1.4528	1.5856	5	AVG
1,2,4-Trichlorobenzene		1.5532	1.5534	1.5496	1.4934	1.5622	1.3776	1.5149	5	AVG
Hexachlorobutadiene		0.7657	0.7429	0.7882	0.7169	0.7948	0.7041	0.7521	5	AVG
Naphthalene		5.0861	5.2206	5.2003	5.0426	5.0765	3.4218	4.8413	14	AVG
1,2,3-Trichlorobenzene		1.5103	1.5088	1.4949	1.4242	1.5074	1.3267	1.4620	5	AVG
2-Methylnaphthalene		3.0761	3.3098	3.2042	3.0014	2.9295	2.4835	3.0007	10	AVG
Dibromofluoromethane	0.2330	0.2339	0.2360	0.2323	0.2318	0.2342	0.2327	0.2334	1	AVG
Dibromofluoromethane(2)		0.2374	0.2377	0.2378	0.2372	0.2398	0.2386	0.2381	0	AVG
1,2-Dichloroethane-d4	0.0593	0.0604	0.0609	0.0610	0.0633	0.0593	0.0593	0.0605	2	AVG
1,2-Dichloroethane-d4(2)		0.3055	0.3078	0.3128	0.3216	0.3009	0.2921	0.3068	3	AVG
1,2-Dichloroethane-d4(3)		0.0379	0.0382	0.0380	0.0380	0.0381	0.0380	0.0380	0	AVG
Toluene-d8	1.3279	1.3336	1.3350	1.3372	1.3367	1.3262	1.3194	1.3309	0	AVG
Toluene-d8(2)		0.8598	0.8581	0.8611	0.8672	0.8634	0.8822	0.8653	1	AVG
4-Bromofluorobenzene	0.5000	0.5068	0.5061	0.5112	0.5045	0.5081	0.5085	0.5064	1	AVG
4-Bromofluorobenzene(2)		0.4351	0.4365	0.4386	0.4325	0.4395	0.4343	0.4361	1	AVG

Average %RSD 6

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09355.i/13oct23a.b/yc23i01.d	VSTD300
/chem2/HP09355.i/13oct23a.b/yc23i03.d	VSTD050
/chem2/HP09355.i/13oct23a.b/yc23i04.d	VSTD020
/chem2/HP09355.i/13oct23a.b/yc23i05.d	VSTD010
/chem2/HP09355.i/13oct23a.b/yc23i06.d	VSTD004
/chem2/HP09355.i/13oct23a.b/yc23i07.d	VSTD001
/chem2/HP09355.i/13oct23a.b/yc23i08.d	VSTD100

Area Summary

File ID:

Internal Standard Name	yc23i01.d	yc23i03.d	yc23i04.d	yc23i05.d	yc23i06.d	yc23i07.d	yc23i08.d	Avg. Area	%RS
t-Butyl alcohol-d10	359640	386848	398256	374096	435307	462697	382800	399949	9
Fluorobenzene	1297379	1282627	1262505	1234976	1232499	1227784	1251004	1255539	2
Chlorobenzene-d5	964966	941147	920704	912520	900030	902733	929866	924567	2
1,4-Dichlorobenzene-d4	543016	533348	514483	507935	505140	500668	539354	520563	3

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	yc23i01.d	yc23i03.d	yc23i04.d	yc23i05.d	yc23i06.d	yc23i07.d	yc23i08.d	Avg. RT
t-Butyl alcohol-d10	2.030	2.030	2.017	2.030	2.024	2.036	2.017	2.026
Fluorobenzene	4.098	4.098	4.098	4.104	4.098	4.104	4.098	4.100
Chlorobenzene-d5	7.280	7.280	7.274	7.280	7.280	7.280	7.280	7.279
1,4-Dichlorobenzene-d4	9.318	9.312	9.312	9.318	9.318	9.312	9.318	9.315

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 10/23/2013 at 22:21.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 10/23/13 Time: 15:04

Lab File ID: yc23v01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4016	0.3380	16.83	20	-16	
#	Chloromethane	0.4870	0.4372	17.96	20	-10	#
	1,3-Butadiene	0.2367	0.2278	19.25	20	-4	
*	Vinyl Chloride	0.4159	0.3852	18.53	20	-7	*
	Bromomethane	0.2697	0.1955	14.49	20	-28	
	Chloroethane	0.2397	0.1928	16.09	20	-20	
	Dichlorofluoromethane	0.5788	0.6141	21.22	20	6	
	n-Pentane	0.5545	0.5293	19.09	20	-5	
	Trichlorofluoromethane	0.4794	0.4381	18.28	20	-9	
	Ethyl ether	0.3157	0.3026	19.17	20	-4	
	Freon 123a	0.3607	0.3613	20.03	20	0	
	Acrolein	2.1827	2.2529	154.83	150	3	
*	1,1-Dichloroethene	0.2515	0.2678	21.29	20	6	*
	Acetone	0.0682	0.0584	128.43	150	-14	
	Freon 113	0.2633	0.2615	19.86	20	-1	
	2-Propanol	0.7939	0.7049	133.17	150	-11	
	Methyl Iodide	0.4800	0.5166	21.53	20	8	
	Carbon Disulfide	0.8799	0.8646	19.65	20	-2	
	Allyl Chloride	0.4888	0.4492	18.38	20	-8	
	Methyl Acetate	0.3906	0.3872	19.83	20	-1	
	Methylene Chloride	0.3074	0.3173	20.64	20	3	
	t-Butyl alcohol	1.5616	1.4927	191.18	200	-4	
	Acrylonitrile	0.2603	0.2364	90.82	100	-9	
	trans-1,2-Dichloroethene	0.2929	0.3039	20.75	20	4	
	Methyl Tertiary Butyl Ether	1.0622	1.0592	19.94	20	0	
	n-Hexane	0.4925	0.4761	19.34	20	-3	
#	1,1-Dichloroethane	0.5567	0.5790	20.80	20	4	#
	di-Isopropyl ether	1.1616	1.1819	20.35	20	2	
	2-Chloro-1,3-butadiene	0.5017	0.4967	19.80	20	-1	
	Ethyl t-butyl ether	1.0858	1.0802	19.90	20	-1	
	cis-1,2-Dichloroethene	0.3301	0.3371	20.42	20	2	
	2-Butanone	0.3808	0.3594	141.56	150	-6	
	2,2-Dichloropropane	0.4427	0.4403	19.89	20	-1	
	Propionitrile	1.7018	1.7341	152.85	150	2	
	Methacrylonitrile	0.2518	0.2427	144.54	150	-4	
	Bromochloromethane	0.1686	0.1718	20.38	20	2	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 10/23/13 Time: 15:04

Lab File ID: yc23v01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Tetrahydrofuran	1.5666	1.6527	105.50	100	6	
*	Chloroform	0.5233	0.5265	20.12	20	1	*
	1,1,1-Trichloroethane	0.5063	0.5065	20.01	20	0	
	Cyclohexane	0.5967	0.5810	19.47	20	-3	
	1,1-Dichloropropene	0.4119	0.4131	20.06	20	0	
	Carbon Tetrachloride	0.3818	0.3868	20.26	20	1	
	Isobutyl Alcohol	0.5356	0.4864	454.10	500	-9	
	Benzene	1.2852	1.2888	20.05	20	0	
	1,2-Dichloroethane	0.4568	0.4585	20.07	20	0	
	t-Amyl methyl ether	1.0286	1.0085	19.61	20	-2	
	n-Heptane	0.6031	0.5565	18.45	20	-8	
	n-Butanol	0.4385	0.3896	888.53	1000	-11	
	Trichloroethene	0.3213	0.3255	20.26	20	1	
	Methylcyclohexane	0.5544	0.5584	20.15	20	1	
*	1,2-Dichloropropane	0.3434	0.3497	20.37	20	2	*
	Dibromomethane	0.2279	0.2196	19.27	20	-4	
	1,4-Dioxane	0.0947	0.0839	442.79	500	-11	
	Methyl Methacrylate	0.4037	0.3712	18.39	20	-8	
	Bromodichloromethane	0.4146	0.3910	18.86	20	-6	
	2-Nitropropane	0.1754	0.1535	17.49	20	-13	
	2-Chloroethyl Vinyl Ether	0.3001	0.2926	19.50	20	-2	
	cis-1,3-Dichloropropene	0.5311	0.5364	20.20	20	1	
	4-Methyl-2-pentanone	0.7177	0.6834	95.21	100	-5	
*	Toluene	1.1111	1.1017	19.83	20	-1	*
	trans-1,3-Dichloropropene	0.7111	0.6627	18.64	20	-7	
	Ethyl Methacrylate	0.8750	0.8171	18.68	20	-7	
	1,1,2-Trichloroethane	0.4522	0.4332	19.16	20	-4	
	Tetrachloroethene	0.4827	0.4863	20.15	20	1	
	1,3-Dichloropropane	0.7800	0.7453	19.11	20	-4	
	2-Hexanone	0.8033	0.7310	90.99	100	-9	
	Dibromochloromethane	0.4576	0.4336	18.95	20	-5	
	1,2-Dibromoethane	0.4940	0.4713	19.08	20	-5	
#	Chlorobenzene	1.2361	1.2406	20.07	20	0	#
	1,1,1,2-Tetrachloroethane	0.4230	0.4090	19.34	20	-3	
*	Ethylbenzene	2.1695	2.1133	19.48	20	-3	*
	m+p-Xylene	0.8580	0.8409	39.20	40	-2	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 ICV Date: 10/23/13 Time: 15:04

Lab File ID: yc23v01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	o-Xylene	0.8457	0.8185	19.36	20	-3	
	Styrene	1.4350	1.4069	19.61	20	-2	
#	Bromoform	0.3561	0.3100	17.41	20	-13	#
	Isopropylbenzene	2.1708	2.1157	19.49	20	-3	
	Cyclohexanone	0.4601	0.3684	400.30	500	-20	
	Bromobenzene	1.0325	0.9885	19.15	20	-4	
#	1,1,2,2-Tetrachloroethane	1.4335	1.3484	18.81	20	-6	#
	1,2,3-Trichloropropane	0.4480	0.4110	18.35	20	-8	
	trans-1,4-Dichloro-2-butene	0.5106	0.4887	95.72	100	-4	
	n-Propylbenzene	4.5018	4.4858	19.93	20	0	
	2-Chlorotoluene	0.9431	0.9057	19.21	20	-4	
	4-Chlorotoluene	0.9887	0.9496	19.21	20	-4	
	1,3,5-Trimethylbenzene	3.3639	3.2713	19.45	20	-3	
	tert-Butylbenzene	0.7587	0.7241	19.09	20	-5	
	Pentachloroethane	0.6398	0.5976	18.68	20	-7	
	1,2,4-Trimethylbenzene	3.4304	3.3509	19.54	20	-2	
	sec-Butylbenzene	4.1747	4.1486	19.87	20	-1	
	1,3-Dichlorobenzene	1.9164	1.8978	19.81	20	-1	
	p-Isopropyltoluene	3.8064	3.7128	19.51	20	-2	
	1,4-Dichlorobenzene	2.0198	1.9963	19.77	20	-1	
	1,2,3-Trimethylbenzene	3.5406	3.4577	19.53	20	-2	
	Benzyl Chloride	2.8492	2.6392	18.53	20	-7	
	1,3-Diethylbenzene	2.2961	2.1833	19.02	20	-5	
	1,4-Diethylbenzene	2.3415	2.3458	20.04	20	0	
	1,2-Dichlorobenzene	1.9083	1.8957	19.87	20	-1	
	n-Butylbenzene	1.9061	1.8150	19.04	20	-5	
	1,2-Diethylbenzene	1.9007	1.8566	19.54	20	-2	
	1,2-Dibromo-3-chloropropane	0.3651	0.3012	16.50	20	-17	
	1,3,5-Trichlorobenzene	1.5856	1.4955	18.86	20	-6	
	1,2,4-Trichlorobenzene	1.5149	1.4094	18.61	20	-7	
	Hexachlorobutadiene	0.7521	0.6708	17.84	20	-11	
	Naphthalene	4.8413	4.6411	19.17	20	-4	
	1,2,3-Trichlorobenzene	1.4620	1.3631	18.65	20	-7	
	2-Methylnaphthalene	3.0007	2.6493	17.66	20	-12	

Average %Drift 5

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09685.i/13oct23b.b/ac23i06.d
/chem2/HP09685.i/13oct23b.b/ac23i05.d
/chem2/HP09685.i/13oct23b.b/ac23i04.d
/chem2/HP09685.i/13oct23b.b/ac23i03.d
/chem2/HP09685.i/13oct23b.b/ac23i02.d
/chem2/HP09685.i/13oct23b.b/ac23i01.d

File /chem2/HP09685.i/13oct23b.b/ac23i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09685.i/13nov11a.b/an11c01.d

RT Summary

Internal Standard Name	an11c01.d File ID:	ICAL RT	In Spec
t-Butyl alcohol-d10	4.049	4.061	Yes
Fluorobenzene	7.541	7.547	Yes
Chlorobenzene-d5	11.075	11.075	Yes
1,4-Dichlorobenzene-d4	12.980	12.980	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	an11c01.d File ID:	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	188608	144941	72470	289882	Yes
Fluorobenzene	1714015	1487743	743872	2975486	Yes
Chlorobenzene-d5	1386357	1118683	559342	2237366	Yes
1,4-Dichlorobenzene-d4	793219	600378	300189	1200756	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date: 11/11/13 Time: 10:56

Lab File ID: an11c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4280	0.4376	51.12	50	2	
#	Chloromethane	0.3424	0.3212	46.89	50	-6	#
*	Vinyl Chloride	0.3280	0.3277	49.95	50	0	*
	Bromomethane	0.2397	0.2561	53.41	50	7	
	Chloroethane	0.1905	0.1875	49.20	50	-2	
	Dichlorofluoromethane	0.4882	0.4874	49.92	50	0	
	Trichlorofluoromethane	0.4938	0.5104	51.69	50	3	
	Ethanol	0.1318	0.0974	1846.68	2500	-26	
	Freon 123a	0.3430	0.2746	40.03	50	-20	
	Acrolein	2.9015	2.2383	385.70	500	-23	
*	1,1-Dichloroethene	0.2532	0.2529	49.95	50	0	*
	Acetone	0.0286	0.0251	87.90	100	-12	
	Freon 113	0.2764	0.2876	52.04	50	4	
	2-Propanol	0.8562	0.7267	212.19	250	-15	
	Methyl Iodide	0.4976	0.5400	54.25	50	9	
	Carbon Disulfide	0.8888	0.8409	47.30	50	-5	
	Methyl Acetate	0.1781	0.1590	44.62	50	-11	
	Allyl Chloride	0.3912	0.3387	43.29	50	-13	
	Methylene Chloride	0.2954	0.2736	46.31	50	-7	
	t-Butyl alcohol	1.3732	1.2943	235.63	250	-6	
	Acrylonitrile	0.1018	0.0876	43.01	50	-14	
	Methyl Tertiary Butyl Ether	0.7879	0.7772	49.32	50	-1	
	trans-1,2-Dichloroethene	0.2937	0.2841	48.36	50	-3	
	n-Hexane	0.3911	0.3543	45.28	50	-9	
#	1,1-Dichloroethane	0.5110	0.4580	44.82	50	-10	#
	di-Isopropyl ether	0.8267	0.7109	43.00	50	-14	
	2-Chloro-1,3-butadiene	0.3798	0.3814	50.20	50	0	
	Ethyl t-butyl ether	0.7996	0.7443	46.54	50	-7	
	2-Butanone	0.1177	0.1019	86.60	100	-13	
	cis-1,2-Dichloroethene	0.3244	0.3135	48.32	50	-3	
	2,2-Dichloropropane	0.4155	0.4181	50.32	50	1	
	Propionitrile	1.7753	1.5355	216.23	250	-14	
	Methacrylonitrile	0.1102	0.1032	117.07	125	-6	
	Bromochloromethane	0.1652	0.1688	51.09	50	2	
	Tetrahydrofuran	1.6807	1.4407	85.72	100	-14	
*	Chloroform	0.5015	0.4773	47.59	50	-5	*

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date: 11/11/13 Time: 10:56

Lab File ID: an11c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1,1,1-Trichloroethane	0.4856	0.4350	44.79	50	-10	
	Cyclohexane	0.4818	0.4185	43.43	50	-13	
	Cyclohexane(2)	0.4421	0.4180	47.28	50	-5	
	Cyclohexane(3)	0.1517	0.1392	45.87	50	-8	
	1,1-Dichloropropene	0.3936	0.3676	46.69	50	-7	
	Carbon Tetrachloride	0.3971	0.3947	49.69	50	-1	
	Isobutyl Alcohol	0.4571	0.4019	549.57	625	-12	
	Benzene	1.1963	1.0946	45.75	50	-8	
	1,2-Dichloroethane	0.3595	0.3607	50.16	50	0	
	1,2-Dichloroethane(2)	0.0348	0.0344	49.39	50	-1	
	t-Amyl methyl ether	0.7686	0.7275	47.32	50	-5	
	n-Heptane	0.4046	0.3490	43.13	50	-14	
	n-Butanol	0.4007	0.3395	1059.05	1250	-15	
	Trichloroethene	0.3103	0.2931	47.23	50	-6	
	Methylcyclohexane	0.5194	0.5011	48.23	50	-4	
*	1,2-Dichloropropane	0.2997	0.2582	43.07	50	-14	*
	Methyl Methacrylate	0.1865	0.1821	48.84	50	-2	
	1,4-Dioxane	0.1481	0.1369	577.77	625	-8	
	Dibromomethane	0.1855	0.1799	48.47	50	-3	
	Bromodichloromethane	0.3737	0.3648	48.81	50	-2	
	2-Nitropropane	2.9960	2.8784	87.59	100	-12	
	cis-1,3-Dichloropropene	0.4513	0.4243	47.01	50	-6	
	4-Methyl-2-pentanone	0.2500	0.2197	87.89	100	-12	
*	Toluene	1.0076	0.8946	44.39	50	-11	*
	trans-1,3-Dichloropropene	0.5495	0.5068	46.11	50	-8	
	Ethyl Methacrylate	0.4515	0.4231	46.86	50	-6	
	1,1,2-Trichloroethane	0.3360	0.3044	45.30	50	-9	
	Tetrachloroethene	0.4614	0.4505	48.81	50	-2	
	1,3-Dichloropropane	0.5827	0.5046	43.31	50	-13	
	2-Hexanone	0.2366	0.1945	82.18	100	-18	
	Dibromochloromethane	0.3887	0.3737	48.07	50	-4	
	1,2-Dibromoethane	0.3503	0.3275	46.75	50	-7	
#	Chlorobenzene	1.1862	1.0732	45.23	50	-10	#
	1,1,1,2-Tetrachloroethane	0.4108	0.3921	47.72	50	-5	
*	Ethylbenzene	1.8973	1.7333	45.68	50	-9	*
	m+p-Xylene	0.7753	0.7068	91.15	100	-9	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date: 11/11/13 Time: 10:56

Lab File ID: an11c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	o-Xylene	0.7527	0.6827	45.35	50	-9	
	Styrene	1.1884	1.1459	48.21	50	-4	
#	Bromoform	0.2383	0.2445	51.29	50	3	#
	Isopropylbenzene	1.9260	1.7909	46.49	50	-7	
	Cyclohexanone	0.5615	0.4456	495.97	625	-21	
#	1,1,2,2-Tetrachloroethane	0.8431	0.6946	41.19	50	-18	#
	Bromobenzene	0.9781	0.8863	45.31	50	-9	
	trans-1,4-Dichloro-2-butene	0.2184	0.2014	115.25	125	-8	
	1,2,3-Trichloropropane	0.2594	0.2291	44.17	50	-12	
	n-Propylbenzene	4.1521	3.6166	43.55	50	-13	
	2-Chlorotoluene	0.9313	0.8251	44.30	50	-11	
	1,3,5-Trimethylbenzene	3.0673	2.7277	44.46	50	-11	
	4-Chlorotoluene	0.9637	0.8481	44.00	50	-12	
	tert-Butylbenzene	0.7004	0.6372	45.49	50	-9	
	Pentachloroethane	0.5970	0.5456	45.69	50	-9	
	1,2,4-Trimethylbenzene	3.1572	2.7812	44.04	50	-12	
	sec-Butylbenzene	3.8775	3.5050	45.20	50	-10	
	1,3-Dichlorobenzene	1.8178	1.6317	44.88	50	-10	
	p-Isopropyltoluene	3.4694	3.2899	47.41	50	-5	
	1,4-Dichlorobenzene	1.8678	1.6686	44.67	50	-11	
	1,2,3-Trimethylbenzene	3.3015	2.8795	43.61	50	-13	
	Benzyl Chloride	0.3553	0.3580	50.39	50	1	
	1,3-Diethylbenzene	2.1134	1.9505	46.15	50	-8	
	1,4-Diethylbenzene	2.1087	1.9706	46.72	50	-7	
	n-Butylbenzene	1.6819	1.5065	44.78	50	-10	
	1,2-Dichlorobenzene	1.7544	1.5726	44.82	50	-10	
	1,2-Diethylbenzene	1.7818	1.6153	45.33	50	-9	
	1,2-Dibromo-3-chloropropane	0.1509	0.1386	45.93	50	-8	
	1,3,5-Trichlorobenzene	1.4231	1.3947	49.00	50	-2	
	1,2,4-Trichlorobenzene	1.2197	1.2425	50.94	50	2	
	Hexachlorobutadiene	0.6906	0.6565	47.53	50	-5	
	Naphthalene	2.7788	2.7635	49.72	50	-1	
	1,2,3-Trichlorobenzene	1.1457	1.1834	51.64	50	3	
	2-Methylnaphthalene	1.3460	1.5838	48.13	50	-4	
	Dibromofluoromethane	0.2444	0.2559	52.35	50	5	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09685 Calibration Date: 11/11/13 Time: 10:56

Lab File ID: an11c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane(2)	0.2493	0.2622	52.59	50	5
1,2-Dichloroethane-d4	0.0554	0.0571	51.54	50	3
1,2-Dichloroethane-d4(2)	0.2539	0.2722	53.62	50	7
1,2-Dichloroethane-d4(3)	0.0351	0.0365	51.90	50	4
Toluene-d8	1.2977	1.2379	47.70	50	-5
Toluene-d8(2)	0.8444	0.8210	48.61	50	-3
4-Bromofluorobenzene	0.4825	0.4735	49.07	50	-2
4-Bromofluorobenzene(2)	0.4188	0.4609	55.02	50	10

Average %Drift 8

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09193.i/13oct22a.b/xc22i06.d
/chem2/HP09193.i/13oct22a.b/xc22i05.d
/chem2/HP09193.i/13oct22a.b/xc22i04.d
/chem2/HP09193.i/13oct22a.b/xc22i03.d
/chem2/HP09193.i/13oct22a.b/xc22i02.d
/chem2/HP09193.i/13oct22a.b/xc22i01.d

File /chem2/HP09193.i/13oct22a.b/xc22i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09193.i/13nov11b.b/xn11c01.d

RT Summary

Internal Standard Name	File ID: xn11c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	4.213	4.201	Yes
Fluorobenzene	7.717	7.711	Yes
Chlorobenzene-d5	11.197	11.197	Yes
1,4-Dichlorobenzene-d4	13.083	13.083	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: xn11c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	246641	353216	176608	706432	Yes
Fluorobenzene	1807540	2403873	1201936	4807746	Yes
Chlorobenzene-d5	1389041	1852474	926237	3704948	Yes
1,4-Dichlorobenzene-d4	814480	1066014	533007	2132028	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments:_____

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date: 11/11/13 Time: 23:56

Lab File ID: xn11c01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.3920	0.3660	46.69	50	-7	
#	Chloromethane	0.3348	0.3002	44.09	50	-12	#
*	Vinyl Chloride	0.3070	0.3018	49.15	50	-2	*
	Bromomethane	0.2357	0.2292	48.63	50	-3	
	Chloroethane	0.1824	0.1810	49.62	50	-1	
	Dichlorofluoromethane	0.4724	0.4582	48.50	50	-3	
	Trichlorofluoromethane	0.4668	0.4615	49.44	50	-1	
	Ethanol	0.1188	0.0908	1909.92	2500	-24	
	Freon 123a	0.2760	0.2675	48.45	50	-3	
	Acrolein	1.9396	1.7440	449.59	500	-10	
*	1,1-Dichloroethene	0.2033	0.1990	48.95	50	-2	*
*	1,1-Dichloroethene(2)	0.1162	0.1093	47.03	50	-6	*
	Acetone	0.0259	0.0261	100.47	100	0	
	Freon 113	0.2146	0.2096	48.83	50	-2	
	2-Propanol	0.7340	0.6345	216.10	250	-14	
	Methyl Iodide	0.4193	0.4017	47.91	50	-4	
	Carbon Disulfide	0.7314	0.7225	49.39	50	-1	
	Methyl Acetate	0.1943	0.1718	44.22	50	-12	
	Allyl Chloride	0.3721	0.3448	46.34	50	-7	
	Methylene Chloride	0.2427	0.2298	47.35	50	-5	
	t-Butyl alcohol	1.1867	1.1967	252.11	250	1	
	Acrylonitrile	0.0999	0.0918	45.92	50	-8	
	Methyl Tertiary Butyl Ether	0.6683	0.7047	52.73	50	5	
	trans-1,2-Dichloroethene	0.2368	0.2320	48.99	50	-2	
	n-Hexane	0.2946	0.2724	46.22	50	-8	
#	1,1-Dichloroethane	0.4478	0.4244	47.39	50	-5	#
	di-Isopropyl ether	0.7437	0.7036	47.30	50	-5	
	2-Chloro-1,3-butadiene	0.3956	0.3777	47.74	50	-5	
	Ethyl t-butyl ether	0.5302	0.6373	60.10	50	20	
	2-Butanone	0.1327	0.1206	90.90	100	-9	
	cis-1,2-Dichloroethene	0.2611	0.2558	48.99	50	-2	
	2,2-Dichloropropane	0.3946	0.3830	48.53	50	-3	
	Propionitrile	1.2623	1.2175	241.11	250	-4	
	Methacrylonitrile	0.1078	0.1002	116.26	125	-7	
	Bromochloromethane	0.1433	0.1415	49.39	50	-1	
	Tetrahydrofuran	1.2391	1.2049	97.24	100	-3	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date: 11/11/13 Time: 23:56

Lab File ID: xn11c01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4591	0.4376	47.66	50	-5	*
	1,1,1-Trichloroethane	0.4454	0.3868	43.42	50	-13	
	Cyclohexane	0.3669	0.3523	48.01	50	-4	
	Cyclohexane(2)	0.3237	0.3133	48.40	50	-3	
	Cyclohexane(3)	0.1153	0.1093	47.39	50	-5	
	1,1-Dichloropropene	0.3357	0.3243	48.29	50	-3	
	Carbon Tetrachloride	0.3633	0.3509	48.29	50	-3	
	Isobutyl Alcohol	0.4075	0.3800	582.71	625	-7	
	Benzene	0.9769	0.9347	47.84	50	-4	
	1,2-Dichloroethane	0.4084	0.3698	45.26	50	-9	
	1,2-Dichloroethane(2)	0.0298	0.0295	49.53	50	-1	
	t-Amyl methyl ether	0.4283	0.5776	67.43	50	35	
	n-Heptane	0.3315	0.3059	46.14	50	-8	
	n-Butanol	0.3133	0.2952	1177.83	1250	-6	
	Trichloroethene	0.2578	0.2485	48.20	50	-4	
	Methylcyclohexane	0.3907	0.3801	48.64	50	-3	
*	1,2-Dichloropropane	0.2465	0.2356	47.79	50	-4	*
	Methyl Methacrylate	0.1923	0.1860	48.36	50	-3	
	1,4-Dioxane	0.1143	0.1088	594.93	625	-5	
	Dibromomethane	0.1717	0.1620	47.18	50	-6	
	Bromodichloromethane	0.3605	0.3459	47.98	50	-4	
	2-Nitropropane	3.1030	3.0601	98.62	100	-1	
	cis-1,3-Dichloropropene	0.3957	0.3818	48.24	50	-4	
	4-Methyl-2-pentanone	0.2939	0.2819	95.92	100	-4	
*	Toluene	0.8041	0.7907	49.16	50	-2	*
	trans-1,3-Dichloropropene	0.5324	0.5203	48.86	50	-2	
	Ethyl Methacrylate	0.4471	0.4591	51.34	50	3	
	1,1,2-Trichloroethane	0.2913	0.2829	48.56	50	-3	
	Tetrachloroethene	0.3771	0.3862	51.21	50	2	
	1,3-Dichloropropane	0.5167	0.5020	48.58	50	-3	
	2-Hexanone	0.2820	0.2745	97.33	100	-3	
	Dibromochloromethane	0.3559	0.3543	49.78	50	0	
	1,2-Dibromoethane	0.3168	0.3029	47.80	50	-4	
#	Chlorobenzene	0.9431	0.9158	48.55	50	-3	#
	1,1,1,2-Tetrachloroethane	0.3514	0.3444	49.00	50	-2	
*	Ethylbenzene	1.5371	1.5558	50.61	50	1	*

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date: 11/11/13 Time: 23:56

Lab File ID: xn11c01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	m+p-Xylene	0.6210	0.6216	100.09	100	0	
	o-Xylene	0.5959	0.5979	50.16	50	0	
	Styrene	1.0086	1.0098	50.06	50	0	
#	Bromoform	0.2277	0.2375	52.16	50	4	#
	Isopropylbenzene	1.5217	1.5698	51.58	50	3	
	Cyclohexanone	0.3601	0.3303	573.21	625	-8	
#	1,1,2,2-Tetrachloroethane	0.7399	0.7089	47.90	50	-4	#
	Bromobenzene	0.7629	0.7394	48.46	50	-3	
	trans-1,4-Dichloro-2-butene	0.2660	0.2460	115.60	125	-8	
	1,2,3-Trichloropropane	0.2392	0.2260	47.23	50	-6	
	n-Propylbenzene	3.1156	3.1684	50.85	50	2	
	2-Chlorotoluene	0.6875	0.6726	48.91	50	-2	
	1,3,5-Trimethylbenzene	2.3269	2.3473	50.44	50	1	
	4-Chlorotoluene	0.7243	0.7103	49.03	50	-2	
	tert-Butylbenzene	0.5594	0.5139	45.93	50	-8	
	Pentachloroethane	0.4809	0.4787	49.78	50	0	
	1,2,4-Trimethylbenzene	2.4092	2.4268	50.37	50	1	
	sec-Butylbenzene	2.8473	2.9331	51.51	50	3	
	1,3-Dichlorobenzene	1.4247	1.3771	48.33	50	-3	
	p-Isopropyltoluene	2.6524	2.7281	51.43	50	3	
	1,4-Dichlorobenzene	1.4830	1.4179	47.80	50	-4	
	1,2,3-Trimethylbenzene	2.5826	2.6885	52.05	50	4	
	Benzyl Chloride	0.3346	0.3276	48.97	50	-2	
	1,3-Diethylbenzene	1.6369	1.7014	51.97	50	4	
	1,4-Diethylbenzene	1.6744	1.7411	51.99	50	4	
	n-Butylbenzene	1.3564	1.3283	48.96	50	-2	
	1,2-Dichlorobenzene	1.4004	1.3410	47.88	50	-4	
	1,2-Diethylbenzene	1.3953	1.4407	51.63	50	3	
	1,2-Dibromo-3-chloropropane	0.1768	0.1668	47.19	50	-6	
	1,3,5-Trichlorobenzene	1.1707	1.1114	47.47	50	-5	
	1,2,4-Trichlorobenzene	1.0840	1.0247	47.26	50	-5	
	Hexachlorobutadiene	0.5850	0.5669	48.45	50	-3	
	Naphthalene	2.6229	2.6612	50.73	50	1	
	1,2,3-Trichlorobenzene	1.0753	1.0041	46.69	50	-7	
	2-Methylnaphthalene	1.7602	1.8349	52.12	50	4	
	Dibromofluoromethane	0.2607	0.2539	48.71	50	-3	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09193 Calibration Date: 11/11/13 Time: 23:56

Lab File ID: xn11c01.d Init. Calib. Date(s): 10/22/13 10/22/13

Matrix: (soil/water) SOIL Level: (low/med) LOW GC Column: Rxi-624Sil .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dibromofluoromethane(2)	0.2669	0.2593	48.58	50	-3
1,2-Dichloroethane-d4	0.0587	0.0610	51.90	50	4
1,2-Dichloroethane-d4(2)	0.3528	0.3343	47.38	50	-5
1,2-Dichloroethane-d4(3)	0.0379	0.0377	49.74	50	-1
Toluene-d8	1.2912	1.3060	50.57	50	1
Toluene-d8(2)	0.8454	0.8548	50.55	50	1
4-Bromofluorobenzene	0.5118	0.5053	49.36	50	-1
4-Bromofluorobenzene(2)	0.4510	0.4476	49.62	50	-1

Average %Drift 4

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09355.i/13oct23a.b/yc23i07.d
/chem2/HP09355.i/13oct23a.b/yc23i06.d
/chem2/HP09355.i/13oct23a.b/yc23i05.d
/chem2/HP09355.i/13oct23a.b/yc23i04.d
/chem2/HP09355.i/13oct23a.b/yc23i03.d
/chem2/HP09355.i/13oct23a.b/yc23i08.d
/chem2/HP09355.i/13oct23a.b/yc23i01.d

File /chem2/HP09355.i/13oct23a.b/yc23i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09355.i/13nov07a.b/yn07c01.d

RT Summary

Internal Standard Name	File ID: yn07c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.024	2.030	Yes
Fluorobenzene	4.092	4.098	Yes
Chlorobenzene-d5	7.280	7.280	Yes
1,4-Dichlorobenzene-d4	9.318	9.312	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: yn07c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	375157	386848	193424	773696	Yes
Fluorobenzene	1034145	1282627	641314	2565254	Yes
Chlorobenzene-d5	800676	941147	470574	1882294	Yes
1,4-Dichlorobenzene-d4	483597	533348	266674	1066696	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/07/13 Time: 09:26

Lab File ID: yn07c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4016	0.4588	57.12	50	14	
#	Chloromethane	0.4870	0.4499	46.19	50	-8	#
*	Vinyl Chloride	0.4159	0.4043	48.61	50	-3	*
	Bromomethane	0.2697	0.2703	50.10	50	0	
	Chloroethane	0.2397	0.2209	46.07	50	-8	
	Dichlorofluoromethane	0.5788	0.5814	50.23	50	0	
	Trichlorofluoromethane	0.4794	0.5448	56.82	50	14	
	Ethyl ether	0.3157	0.2338	37.03	50	-26	
	Freon 123a	0.3607	0.3404	47.18	50	-6	
	Acrolein	2.1827	1.7010	389.66	500	-22	
*	1,1-Dichloroethene	0.2515	0.2501	49.71	50	-1	*
*	1,1-Dichloroethene(2)	0.1318	0.1305	49.50	50	-1	*
	Acetone	0.0682	0.0678	99.36	100	-1	
	Freon 113	0.2633	0.2640	50.13	50	0	
	2-Propanol	0.7939	0.7771	244.71	250	-2	
	Methyl Iodide	0.4800	0.5331	55.52	50	11	
	Carbon Disulfide	0.8799	0.8126	46.18	50	-8	
	Allyl Chloride	0.4888	0.4445	45.46	50	-9	
	Methyl Acetate	0.3906	0.3956	50.64	50	1	
	Methylene Chloride	0.3074	0.2960	48.14	50	-4	
	t-Butyl alcohol	1.5616	1.4694	235.25	250	-6	
	Acrylonitrile	0.2603	0.2460	47.27	50	-5	
	trans-1,2-Dichloroethene	0.2929	0.2925	49.94	50	0	
	Methyl Tertiary Butyl Ether	1.0622	1.0634	50.05	50	0	
	n-Hexane	0.4925	0.4096	41.59	50	-17	
#	1,1-Dichloroethane	0.5567	0.5436	48.82	50	-2	#
	di-Isopropyl ether	1.1616	1.0215	43.97	50	-12	
	2-Chloro-1,3-butadiene	0.5017	0.4848	48.32	50	-3	
	Ethyl t-butyl ether	1.0858	0.9919	45.68	50	-9	
	cis-1,2-Dichloroethene	0.3301	0.3320	50.28	50	1	
	2-Butanone	0.3808	0.3707	97.34	100	-3	
	2,2-Dichloropropane	0.4427	0.4263	48.15	50	-4	
	Propionitrile	1.7018	1.3679	200.95	250	-20	
	Methacrylonitrile	0.2518	0.2250	111.68	125	-11	
	Bromochloromethane	0.1686	0.1893	56.14	50	12	
	Tetrahydrofuran	1.5666	1.3280	84.77	100	-15	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/07/13 Time: 09:26

Lab File ID: yn07c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
* Chloroform	0.5233	0.5353	51.15	50	2	*
1,1,1-Trichloroethane	0.5063	0.4643	45.85	50	-8	
Cyclohexane	0.5967	0.5005	41.94	50	-16	
Cyclohexane(2)	0.4963	0.4215	42.46	50	-15	
Cyclohexane(3)	0.1790	0.1516	42.34	50	-15	
1,1-Dichloropropene	0.4119	0.4108	49.87	50	0	
Carbon Tetrachloride	0.3818	0.4077	53.39	50	7	
Isobutyl Alcohol	0.5356	0.4471	521.78	625	-17	
Benzene	1.2852	1.2375	48.14	50	-4	
1,2-Dichloroethane	0.4568	0.4833	52.90	50	6	
1,2-Dichloroethane(2)	0.0414	0.0413	49.95	50	0	
t-Amyl methyl ether	1.0286	0.9307	45.24	50	-10	
n-Heptane	0.6031	0.4715	39.09	50	-22	
n-Butanol	0.4385	0.3683	1050.03	1250	-16	
Trichloroethene	0.3213	0.3232	50.29	50	1	
Methylcyclohexane	0.5544	0.5659	51.04	50	2	
Methylcyclohexane(2)	0.2423	0.2536	52.33	50	5	
* 1,2-Dichloropropane	0.3434	0.3174	46.22	50	-8	*
Dibromomethane	0.2279	0.2251	49.36	50	-1	
1,4-Dioxane	0.0947	0.0956	630.50	625	1	
Methyl Methacrylate	0.4037	0.3498	43.32	50	-13	
Bromodichloromethane	0.4146	0.4152	50.06	50	0	
2-Nitropropane	0.1754	0.1854	105.69	100	6	
2-Chloroethyl Vinyl Ether	0.3001	0.2761	46.00	50	-8	
cis-1,3-Dichloropropene	0.5311	0.5057	47.61	50	-5	
4-Methyl-2-pentanone	0.7177	0.7039	98.07	100	-2	
* Toluene	1.1111	1.0452	47.03	50	-6	*
trans-1,3-Dichloropropene	0.7111	0.6552	46.07	50	-8	
Ethyl Methacrylate	0.8750	0.7320	41.83	50	-16	
1,1,2-Trichloroethane	0.4522	0.4205	46.50	50	-7	
Tetrachloroethene	0.4827	0.5039	52.21	50	4	
1,3-Dichloropropane	0.7800	0.7078	45.37	50	-9	
2-Hexanone	0.8033	0.7133	88.79	100	-11	
Dibromochloromethane	0.4576	0.4681	51.15	50	2	
1,2-Dibromoethane	0.4940	0.4762	48.20	50	-4	
# Chlorobenzene	1.2361	1.2081	48.87	50	-2	#

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/07/13 Time: 09:26

Lab File ID: yn07c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1,1,1,2-Tetrachloroethane	0.4230	0.4294	50.76	50	2	
*	Ethylbenzene	2.1695	2.0276	46.73	50	-7	*
	m+p-Xylene	0.8580	0.8163	95.13	100	-5	
	o-Xylene	0.8457	0.7952	47.01	50	-6	
	Styrene	1.4350	1.3566	47.27	50	-5	
#	Bromoform	0.3561	0.3595	50.49	50	1	#
	Isopropylbenzene	2.1708	2.0790	47.88	50	-4	
	Cyclohexanone	0.4601	0.3329	452.16	625	-28	
	Bromobenzene	1.0325	0.9918	48.03	50	-4	
#	1,1,2,2-Tetrachloroethane	1.4335	1.2005	41.87	50	-16	#
	1,2,3-Trichloropropane	0.4480	0.3997	44.61	50	-11	
	trans-1,4-Dichloro-2-butene	0.5106	0.3160	77.37	125	-38	
	n-Propylbenzene	4.5018	4.0074	44.51	50	-11	
	2-Chlorotoluene	0.9431	0.8526	45.20	50	-10	
	4-Chlorotoluene	0.9887	0.9026	45.64	50	-9	
	1,3,5-Trimethylbenzene	3.3639	3.0404	45.19	50	-10	
	tert-Butylbenzene	0.7587	0.7006	46.17	50	-8	
	Pentachloroethane	0.6398	0.6393	49.96	50	0	
	1,2,4-Trimethylbenzene	3.4304	3.1299	45.62	50	-9	
	sec-Butylbenzene	4.1747	3.8133	45.67	50	-9	
	1,3-Dichlorobenzene	1.9164	1.8287	47.71	50	-5	
	p-Isopropyltoluene	3.8064	3.5581	46.74	50	-7	
	1,4-Dichlorobenzene	2.0198	1.9241	47.63	50	-5	
	1,2,3-Trimethylbenzene	3.5406	3.4599	48.86	50	-2	
	Benzyl Chloride	2.8492	2.3360	40.99	50	-18	
	1,3-Diethylbenzene	2.2961	2.2897	49.86	50	0	
	1,4-Diethylbenzene	2.3415	2.3376	49.92	50	0	
	1,2-Dichlorobenzene	1.9083	1.8549	48.60	50	-3	
	n-Butylbenzene	1.9061	1.6920	44.38	50	-11	
	1,2-Diethylbenzene	1.9007	1.8659	49.08	50	-2	
	1,2-Dibromo-3-chloropropane	0.3651	0.3345	45.80	50	-8	
	1,3,5-Trichlorobenzene	1.5856	1.6316	51.45	50	3	
	1,2,4-Trichlorobenzene	1.5149	1.5552	51.33	50	3	
	Hexachlorobutadiene	0.7521	0.7933	52.74	50	5	
	Naphthalene	4.8413	4.7878	49.45	50	-1	
	1,2,3-Trichlorobenzene	1.4620	1.5091	51.61	50	3	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09355 Calibration Date: 11/07/13 Time: 09:26

Lab File ID: yn07c01.d Init. Calib. Date(s): 10/23/13 10/23/13

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	3.0007	3.1352	52.24	50	4
Dibromofluoromethane	0.2334	0.2472	52.95	50	6
Dibromofluoromethane(2)	0.2381	0.2514	52.81	50	6
1,2-Dichloroethane-d4	0.0605	0.0618	51.04	50	2
1,2-Dichloroethane-d4(2)	0.3068	0.3147	51.30	50	3
1,2-Dichloroethane-d4(3)	0.0380	0.0391	51.39	50	3
Toluene-d8	1.3309	1.3013	48.89	50	-2
Toluene-d8(2)	0.8653	0.8409	48.59	50	-3
4-Bromofluorobenzene	0.5064	0.4935	48.72	50	-3
4-Bromofluorobenzene(2)	0.4361	0.4821	55.27	50	11

Average %Drift 7

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID (Standard): an11c01.d Date Analyzed: 11/11/13

Instrument ID: HP09685 Time Analyzed: 10:56

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA	#	RT	#	IS2(FBZ) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#	IS4(DCB) AREA	#	RT	#
	12 HOUR STD	188608		4.049		1714015		7.541		1386357		11.075		793219		12.980	
	UPPER LIMIT	377216		4.549		3428030		8.041		2772714		11.575		1586438		13.480	
	LOWER LIMIT	94304		3.549		857008		7.041		693178		10.575		396610		12.480	
	LAB SAMPLE ID																
01	VBLKA26	189339		4.055		1561978		7.547		1277520		11.075		708260		12.980	
02	LCSA26	169762		4.036		1627719		7.541		1308157		11.075		751016		12.979	
03	LCDA26	162463		4.043		1618341		7.547		1305455		11.075		743157		12.979	
04	7269163	115737		4.037		1502597		7.541		1171573		11.075		589084		12.980	
05	7265237	134715		4.049		1573149		7.547		1237711		11.075		637165		12.979	
06	7263999	127341		4.049		1571469		7.547		1304104		11.075		709827		12.979	
07	7265769	59713	*	4.043		1447912		7.541		1132713		11.075		542354		12.980	
08	7265770	142992		4.031		1592461		7.541		1290002		11.075		705028		12.980	
09	7265771	108545		4.043		1513884		7.547		1222175		11.075		662001		12.980	
10	7265772	123753		4.055		1484443		7.547		1192342		11.075		653340		12.980	
11	7265773	134019		4.043		1446674		7.541		1165332		11.075		635221		12.979	
12	7265774	108586		4.024		936072		7.541		765025		11.075		426692		12.980	
13	7265775	136650		4.049		1461153		7.547		1212794		11.075		667969		12.980	
14	7265776	119898		4.049		1392424		7.547		1137955		11.075		626751		12.980	
15	7265777	105278		4.043		1357694		7.541		1085433		11.076		563058		12.980	
16	7265778	114533		4.043		1372815		7.547		1123776		11.075		609763		12.980	
17	7265780	111483		4.036		1389167		7.541		1149789		11.075		632369		12.979	
18	7265782	132209		4.043		1379314		7.547		1137090		11.075		636480		12.980	
19	7265783	118577		4.049		1337580		7.547		1103326		11.076		617256		12.980	
20	7265784	105903		4.049		1318597		7.547		1102941		11.075		625103		12.980	
21	7265785	114072		4.037		1326147		7.541		1101192		11.075		620411		12.980	
22	7265779	116757		4.037		1396627		7.541		1160523		11.076		653063		12.980	

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID (Standard): xn11c01.d Date Analyzed: 11/11/13

Instrument ID: HP09193 Time Analyzed: 23:56

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA	#	RT	#	IS2(FBZ) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#	IS4(DCB) AREA	#	RT	#
	12 HOUR STD	246641		4.213		1807540		7.717		1389041		11.197		814480		13.083	
	UPPER LIMIT	493282		4.713		3615080		8.217		2778082		11.697		1628960		13.583	
	LOWER LIMIT	123320		3.713		903770		7.217		694520		10.697		407240		12.583	
	LAB SAMPLE ID																
01	VBLKX48	231152		4.213		1648673		7.711		1284556		11.197		725598		13.083	
02	LCSX48	209590		4.207		1759543		7.711		1336957		11.197		788067		13.083	
03	LCDX48	231536		4.207		1775605		7.711		1363495		11.197		805337		13.083	
04	7270650	165589		4.207		1480299		7.711		1045985		11.197		468152		13.083	
05	7270652	224379		4.195		1518366		7.711		1168254		11.197		640020		13.083	
06	7270653	237748		4.207		1499706		7.711		1157569		11.197		654931		13.083	
07	7270654	186342		4.207		1281589		7.711		926624		11.197		419142		13.083	
08	7270655	162742		4.195		1129058		7.711		880827		11.197		478520		13.083	
09	7267422	138807		4.189		992594		7.711		700703		11.197		277640	*	13.083	
10	7267425	135304		4.177		838317*		7.705		583541	*	11.197		232166	*	13.083	
11	7266447	183194		4.207		1371345		7.711		1090049		11.197		633409		13.083	
12	7267416	142837		4.189		876906*		7.711		655680	*	11.197		307577	*	13.083	
13	7267418	145191		4.189		949729		7.711		719450		11.197		340782	*	13.083	
14	7267420	153950		4.188		832077*		7.711		632068	*	11.197		297239	*	13.089	
15	7265023RE	189905		4.213		1323678		7.711		915207		11.197		367126	*	13.083	
16	7265025RE	199546		4.201		1172536		7.711		860506		11.197		351652	*	13.083	
17	7265027RE	188627		4.213		1309975		7.717		878799		11.197		323344	*	13.083	
18	7265033	199017		4.195		1336921		7.711		1065540		11.197		573105		13.083	
19	7265039RE	175415		4.201		1236600		7.711		765036		11.197		283148	*	13.083	
20	7270185	203910		4.213		1276150		7.711		1020505		11.197		577062		13.083	
21	7270186	221212		4.213		1274148		7.717		1039560		11.197		588210		13.089	
22	7267425RE	131282		4.189		868537*		7.711		590068	*	11.197		221534	*	13.083	

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID (Standard): xn11c01.d Date Analyzed: 11/11/13

Instrument ID: HP09193 Time Analyzed: 23:56

Matrix: (soil/water) SOIL Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA	#	RT	#	IS2(FBZ) AREA	#	RT	#	IS3(CBZ) AREA	#	RT	#	IS4(DCB) AREA	#	RT	#
	12 HOUR STD	246641		4.213		1807540		7.717		1389041		11.197		814480		13.083	
	UPPER LIMIT	493282		4.713		3615080		8.217		2778082		11.697		1628960		13.583	
	LOWER LIMIT	123320		3.713		903770		7.217		694520		10.697		407240		12.583	
	LAB SAMPLE ID																
23	7265236	178584		4.213		1184640		7.717		916391		11.197		473874		13.083	
24	7267416RE	135357		4.176		787206	*	7.705		597327	*	11.197		289879	*	13.083	
25	7267420RE	127574		4.183		840514	*	7.705		560913	*	11.197		190413	*	13.083	

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
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IS4 (DCB)=1,4-Dichlorobenzene-d4

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LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID (Standard): yn07c01.d Date Analyzed: 11/07/13

Instrument ID: HP09355 Time Analyzed: 09:26

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
	12 HOUR STD	375157	2.024	1034145	4.092	800676	7.280	483597	9.318
	UPPER LIMIT	750314	2.524	2068290	4.592	1601352	7.780	967194	9.818
	LOWER LIMIT	187578	1.524	517072	3.592	400338	6.780	241798	8.818
	LAB SAMPLE ID								
01	VBLKY32	343322	2.030	1007749	4.092	763409	7.280	442222	9.318
02	VBLKY34	343322	2.030	1007749	4.092	763409	7.280	442222	9.318
03	LCSY32	343515	2.018	1021402	4.092	776682	7.274	467739	9.312
04	LCSY34	343515	2.018	1021402	4.092	776682	7.274	467739	9.312
05	LCDY32	344379	2.024	1033964	4.092	786400	7.274	465062	9.318
06	LCSY33	347753	2.017	1026913	4.086	770523	7.274	445317	9.312
07	LCSY35	347753	2.017	1026913	4.086	770523	7.274	445317	9.312
08	LCDY33	349613	2.012	1015211	4.086	764504	7.274	437590	9.312
09	LCDY35	349613	2.012	1015211	4.086	764504	7.274	437590	9.312
10	7263614	354306	2.024	1005037	4.086	761353	7.274	439878	9.312
11	7263616	312660	2.011	980577	4.086	743397	7.274	432488	9.318
12	7264451	315637	2.024	977212	4.092	730027	7.274	428782	9.318
13	7264596	299903	2.024	950318	4.092	720484	7.274	420875	9.312
14	7265637	302389	2.024	939237	4.092	709983	7.274	419996	9.318
15	7265639	302767	2.012	954908	4.086	722758	7.274	428089	9.312
16	7266347	309326	2.012	943922	4.086	720691	7.274	421476	9.312
17	7266393	299318	2.024	930091	4.086	706163	7.274	414468	9.312
18	7266394	299656	2.024	925246	4.086	701386	7.274	412398	9.312
19	7260460	285357	2.018	929446	4.086	709373	7.274	413053	9.312
20	7265247	304680	2.018	922337	4.092	701857	7.274	413735	9.312
21	7265249	285726	2.018	895942	4.092	681626	7.274	400212	9.312
22	7252954MSD	309708	2.012	968901	4.086	752733	7.274	452242	9.312

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
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FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.: KVM04

Lab File ID (Standard): yn07c01.d Date Analyzed: 11/07/13

Instrument ID: HP09355 Time Analyzed: 09:26

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
	12 HOUR STD	375157	2.024	1034145	4.092	800676	7.280	483597	9.318
	UPPER LIMIT	750314	2.524	2068290	4.592	1601352	7.780	967194	9.818
	LOWER LIMIT	187578	1.524	517072	3.592	400338	6.780	241798	8.818
	LAB SAMPLE ID								
23	7252953MS	337168	2.024	1014934	4.092	777890	7.274	461322	9.312
24	7252952	330012	2.024	999668	4.092	757092	7.274	440722	9.312
25	7264534	332469	2.024	941405	4.086	714481	7.274	417612	9.312
26	7264535	285189	2.018	954133	4.086	730969	7.274	435152	9.312
27	7264536	188113	2.030	953228	4.086	723549	7.274	428962	9.312
28	7264537	273558	2.024	962732	4.092	740519	7.274	440358	9.312
29	7264539	304226	2.030	977036	4.092	744028	7.274	440880	9.312

IS1 (TBA)=t-Butyl alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

Sample Data

Volatiles by GC/MS

Fraction: Volatiles by GC/MS

10237: 8260 Ext. Soil Master w/GRO Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	2	5	ug/kg
Chloromethane	2	5	ug/kg
Vinyl Chloride	1	5	ug/kg
Bromomethane	2	5	ug/kg
Chloroethane	2	5	ug/kg
Trichlorofluoromethane	2	5	ug/kg
1,1-Dichloroethene	1	5	ug/kg
Freon 113	2	10	ug/kg
Acetone	7	20	ug/kg
Carbon Disulfide	1	5	ug/kg
Methyl Acetate	2	5	ug/kg
Methylene Chloride	2	5	ug/kg
trans-1,2-Dichloroethene	1	5	ug/kg
Methyl Tertiary Butyl Ether	0.5	5	ug/kg
1,1-Dichloroethane	1	5	ug/kg
2-Butanone	4	10	ug/kg
cis-1,2-Dichloroethene	1	5	ug/kg
Chloroform	1	5	ug/kg
1,1,1-Trichloroethane	1	5	ug/kg
Cyclohexane	1	5	ug/kg
Carbon Tetrachloride	1	5	ug/kg
Benzene	0.5	5	ug/kg
1,2-Dichloroethane	1	5	ug/kg
Trichloroethene	1	5	ug/kg
Methylcyclohexane	1	5	ug/kg
1,2-Dichloropropane	1	5	ug/kg
Bromodichloromethane	1	5	ug/kg
cis-1,3-Dichloropropene	1	5	ug/kg
4-Methyl-2-pentanone	3	10	ug/kg
Toluene	1	5	ug/kg
trans-1,3-Dichloropropene	1	5	ug/kg
1,1,2-Trichloroethane	1	5	ug/kg
Tetrachloroethene	1	5	ug/kg
2-Hexanone	3	10	ug/kg
Dibromochloromethane	1	5	ug/kg
1,2-Dibromoethane	1	5	ug/kg
Chlorobenzene	1	5	ug/kg
Ethylbenzene	1	5	ug/kg
Xylene (Total)	1	5	ug/kg
Styrene	1	5	ug/kg
Bromoform	1	5	ug/kg
Isopropylbenzene	1	5	ug/kg
1,1,2,2-Tetrachloroethane	1	5	ug/kg
1,3-Dichlorobenzene	1	5	ug/kg
1,4-Dichlorobenzene	1	5	ug/kg
1,2-Dichlorobenzene	1	5	ug/kg
1,2-Dibromo-3-chloropropane	2	5	ug/kg

Fraction: Volatiles by GC/MS

10237: 8260 Ext. Soil Master w/GRO Analyte Name	Default MDL	Default LOQ	Units
1,2,4-Trichlorobenzene	1	5	ug/kg

10335: 8260 Ext. Water Master w/GRO Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	2	5	ug/l
Chloromethane	1	5	ug/l
Vinyl Chloride	1	5	ug/l
Bromomethane	1	5	ug/l
Chloroethane	1	5	ug/l
Trichlorofluoromethane	2	5	ug/l
1,1-Dichloroethene	0.8	5	ug/l
Acetone	6	20	ug/l
Freon 113	2	10	ug/l
Carbon Disulfide	1	5	ug/l
Methyl Acetate	1	5	ug/l
Methylene Chloride	2	5	ug/l
trans-1,2-Dichloroethene	0.8	5	ug/l
Methyl Tertiary Butyl Ether	0.5	5	ug/l
1,1-Dichloroethane	1	5	ug/l
2-Butanone	3	10	ug/l
cis-1,2-Dichloroethene	0.8	5	ug/l
Chloroform	0.8	5	ug/l
1,1,1-Trichloroethane	0.8	5	ug/l
Cyclohexane	2	5	ug/l
Carbon Tetrachloride	1	5	ug/l
Benzene	0.5	5	ug/l
1,2-Dichloroethane	1	5	ug/l
Trichloroethene	1	5	ug/l
Methylcyclohexane	1	5	ug/l
1,2-Dichloropropane	1	5	ug/l
Bromodichloromethane	1	5	ug/l
cis-1,3-Dichloropropene	1	5	ug/l
4-Methyl-2-pentanone	3	10	ug/l
Toluene	0.7	5	ug/l
trans-1,3-Dichloropropene	1	5	ug/l
1,1,2-Trichloroethane	0.8	5	ug/l
Tetrachloroethene	0.8	5	ug/l
2-Hexanone	3	10	ug/l
Dibromochloromethane	1	5	ug/l
1,2-Dibromoethane	1	5	ug/l
Chlorobenzene	0.8	5	ug/l
Ethylbenzene	0.8	5	ug/l
Xylene (Total)	0.8	5	ug/l
Styrene	1	5	ug/l
Bromoform	1	5	ug/l
Isopropylbenzene	1	5	ug/l
1,1,2,2-Tetrachloroethane	1	5	ug/l

Fraction: Volatiles by GC/MS

10335: 8260 Ext. Water Master w/GRO Analyte Name	Default MDL	Default LOQ	Units
1,3-Dichlorobenzene	1	5	ug/l
1,4-Dichlorobenzene	1	5	ug/l
1,2-Dichlorobenzene	1	5	ug/l
1,2-Dibromo-3-chloropropane	2	5	ug/l
1,2,4-Trichlorobenzene	1	5	ug/l

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11s52.d Injection date and time: **12-NOV-2013 10:16**
Data file Sample Info. Line: 2E161;7265236;2;0;;KVM04;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8305**
Calibration date and time (Last Method Edit): 12-NOV-2013 09:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: **193B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.84**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.94 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl Alcohol-d10	4.213(0.000)	433	65	178584 (-28)	250.00	
69) Fluorobenzene	7.717(0.000)	1009	96	1184640 (-34)	50.00	
101) Chlorobenzene-d5	11.197(0.000)	1581	117	916391 (-34)	50.00	
135) 1,4-Dichlorobenzene-d4	13.083(0.000)	1891	152	473874M (-42)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	6.817(0.000)	113	331477	53.676	107%		50 - 141
62) 1,2-Dichloroethane-d4	(2)	7.286(-0.001)	102	72969	52.426	105%		54 - 135
88) Toluene-d8	(3)	9.737(0.000)	98	1166832	49.306	99%		52 - 141
114) 4-Bromofluorobenzene	(3)	12.201(0.000)	95	422964	45.093	90%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)			Not Detected					2	4
4) Chloromethane	(2)			Not Detected					2	4
5) Vinyl Chloride	(2)			Not Detected					0.8	4
9) Bromomethane	(2)			Not Detected					2	4
10) Chloroethane	(2)			Not Detected					2	4
13) Trichlorofluoromethane	(2)			Not Detected					2	4
19) 1,1-Dichloroethene	(2)			Not Detected					0.8	4
20) Acetone	(2)	3.562(0.000)	58	9968M	16.226	13.66		J	6	17
22) Freon 113	(2)			Not Detected					2	8
25) Carbon Disulfide	(2)	3.860(-0.000)	76	25011	1.443	1.21		J	0.8	4
27) Methyl Acetate	(2)			Not Detected					2	4
31) Methylene Chloride	(2)			Not Detected					2	4
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.4	4
35) trans-1,2-Dichloroethene	(2)			Not Detected					0.8	4
40) 1,1-Dichloroethane	(2)			Not Detected					0.8	4
45) 2-Butanone	(2)			Not Detected					3	8
46) cis-1,2-Dichloroethene	(2)			Not Detected					0.8	4
54) Chloroform	(2)			Not Detected					0.8	4
57) 1,1,1-Trichloroethane	(2)			Not Detected					0.8	4
58) Cyclohexane	(2)			Not Detected					0.8	4
60) Carbon Tetrachloride	(2)			Not Detected					0.8	4
63) Benzene	(2)			Not Detected					0.4	4
66) 1,2-Dichloroethane	(2)			Not Detected					0.8	4
74) Trichloroethene	(2)			Not Detected					0.8	4
75) Methylcyclohexane	(2)			Not Detected					0.8	4
76) 1,2-Dichloropropane	(2)			Not Detected					0.8	4
83) Bromodichloromethane	(2)			Not Detected					0.8	4
86) cis-1,3-Dichloropropene	(2)			Not Detected					0.8	4
87) 4-Methyl-2-pentanone	(2)			Not Detected					3	8

M = Compound was manually integrated.

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54. Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11s52.d Injection date and time: **12-NOV-2013 10:16**
Data file Sample Info. Line: 2E161;7265236;2;0;;KVM04;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8305**
Calibration date and time (Last Method Edit): 12-NOV-2013 09:42
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: **193B** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **0.84**

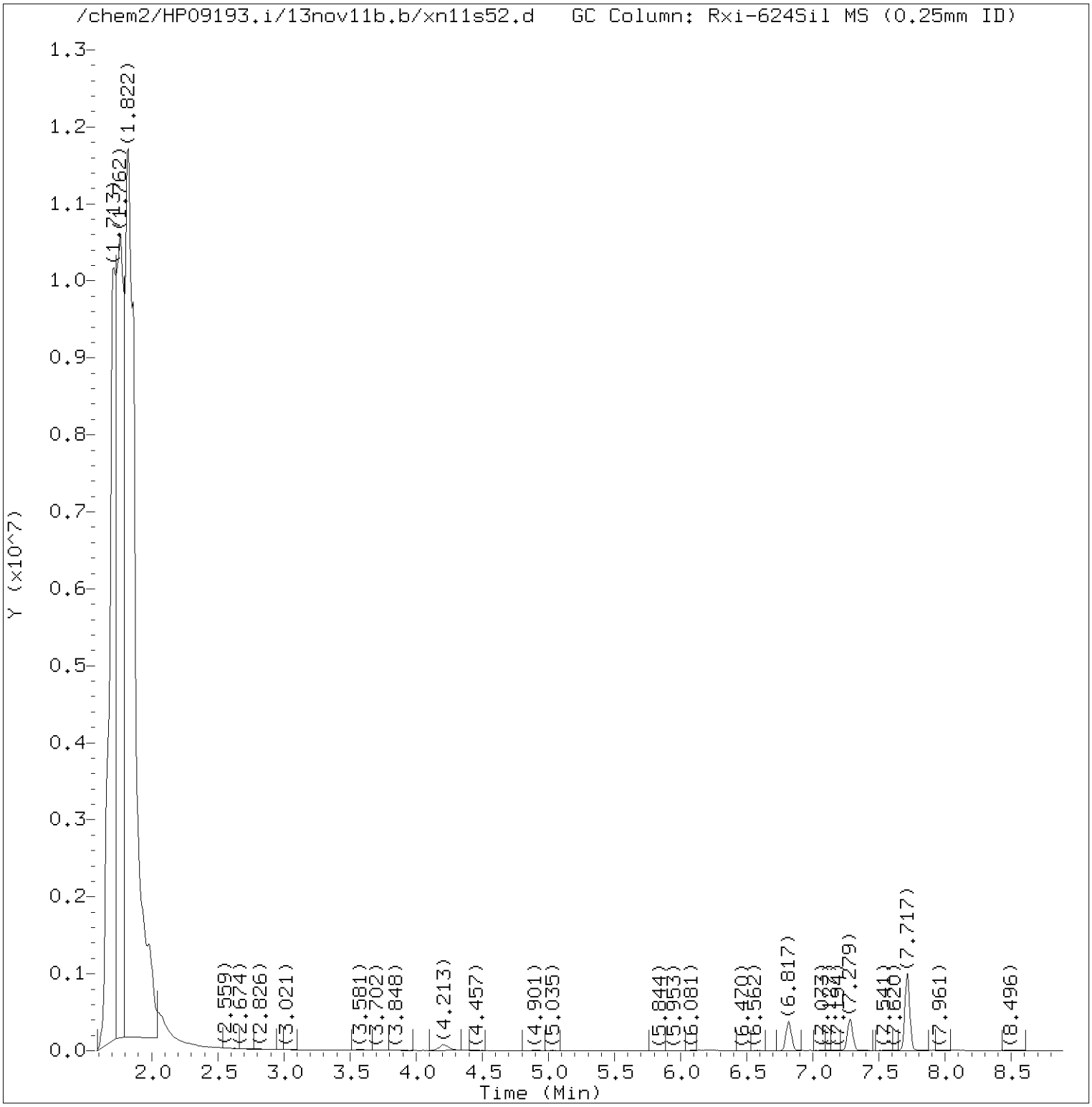
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.94 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
89) Toluene	(3)				Not Detected					0.8	4
90) trans-1,3-Dichloropropene	(3)				Not Detected					0.8	4
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.8	4
94) Tetrachloroethene	(3)				Not Detected					0.8	4
97) 2-Hexanone	(3)				Not Detected					3	8
99) Dibromochloromethane	(3)				Not Detected					0.8	4
100) 1,2-Dibromoethane	(3)				Not Detected					0.8	4
102) Chlorobenzene	(3)				Not Detected					0.8	4
104) Ethylbenzene	(3)				Not Detected					0.8	4
105) m+p-Xylene	(3)				Not Detected					0.8	4
106) o-Xylene	(3)				Not Detected					0.8	4
107) Xylene (Total)	(3)				Not Detected					0.8	4
108) Styrene	(3)				Not Detected					0.8	4
109) Bromoform	(3)				Not Detected					0.8	4
110) Isopropylbenzene	(3)				Not Detected					0.8	4
115) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.8	4
133) 1,3-Dichlorobenzene	(4)				Not Detected					0.8	4
136) 1,4-Dichlorobenzene	(4)				Not Detected					0.8	4
142) 1,2-Dichlorobenzene	(4)				Not Detected					0.8	4
146) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	4
148) 1,2,4-Trichlorobenzene	(4)				Not Detected					0.8	4

Total number of targets = 50

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Abraham H. Uysal on 11/14/2013 at 09:35. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

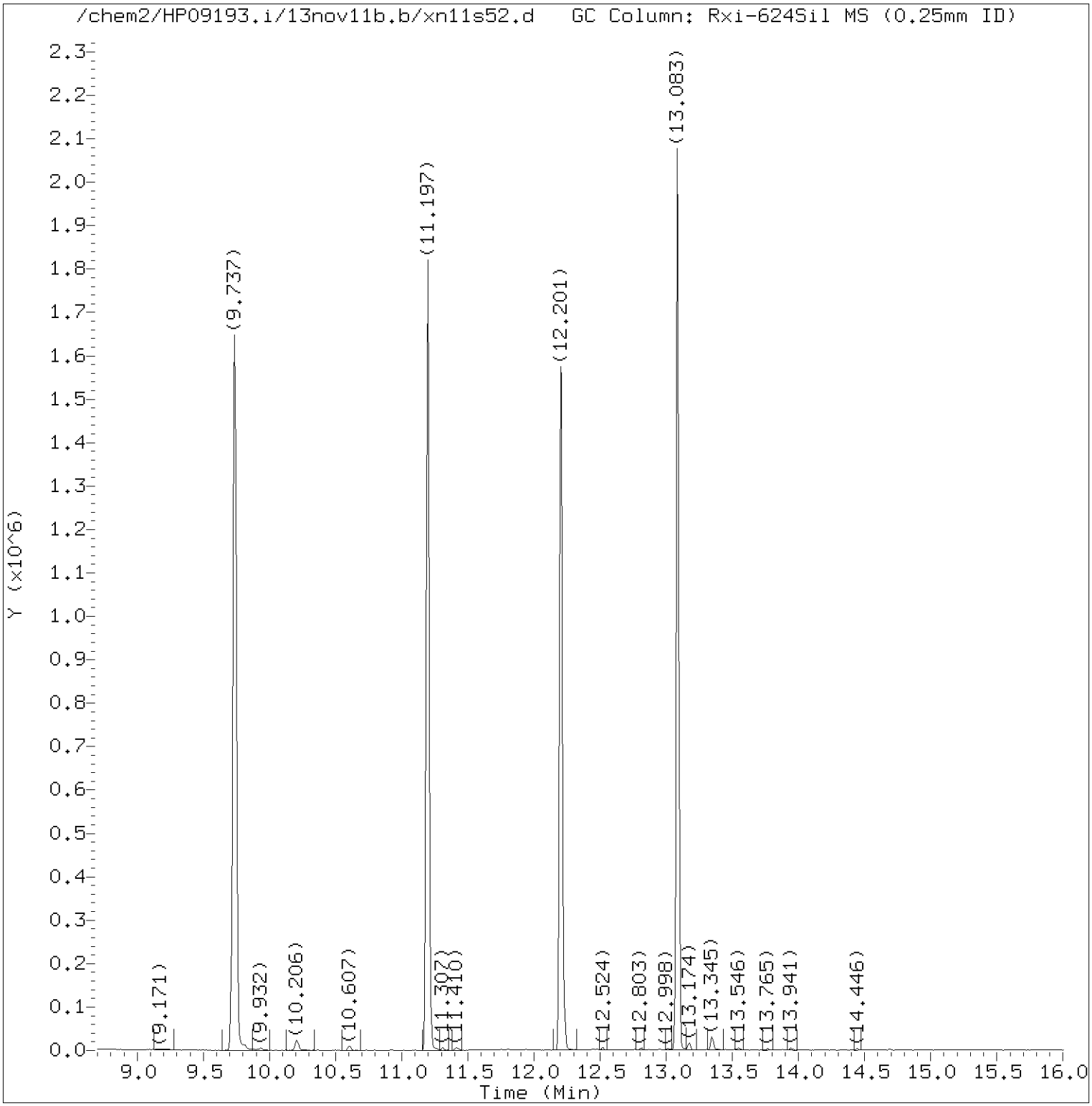
Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Digitally signed by Chelsea B. Stong
on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Digitally signed by Chelsea B. Stong
on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

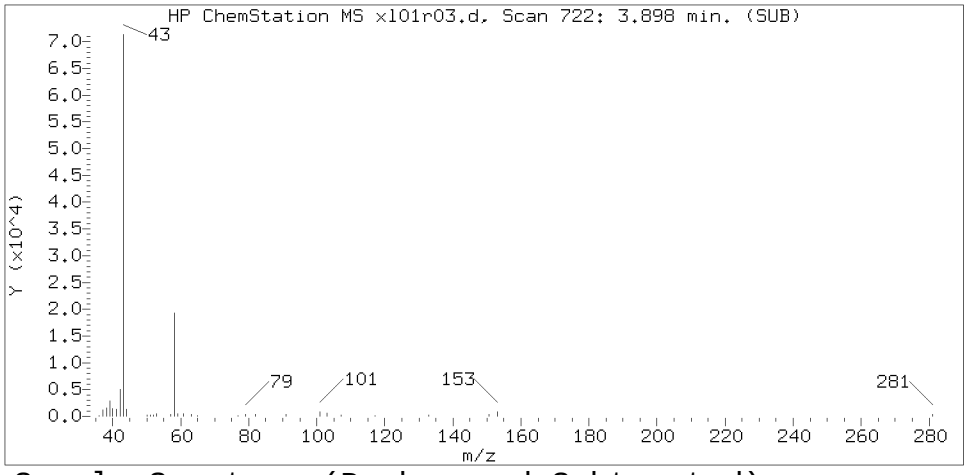
Sample Name: 2E161 Lab Sample ID: 7265236

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(2)	3.562	58	9968M	16.226
25) Carbon Disulfide	(2)	3.860	76	25011	1.443
30)*t-Butyl Alcohol-d10	(1)	4.213	65	178584	250.000
56)$Dibromofluoromethane	(2)	6.817	113	331477	53.676
62)$1,2-Dichloroethane-d4	(2)	7.286	102	72969	52.426
69)*Fluorobenzene	(2)	7.717	96	1184640	50.000
88)$Toluene-d8	(3)	9.737	98	1166832	49.306
101)*Chlorobenzene-d5	(3)	11.197	117	916391	50.000
114)$4-Bromofluorobenzene	(3)	12.201	95	422964	45.093
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	473874M	50.000

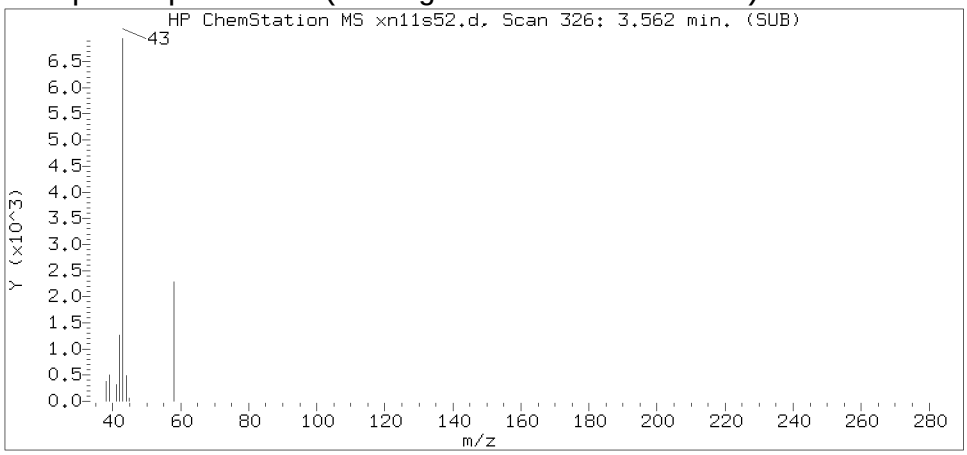
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

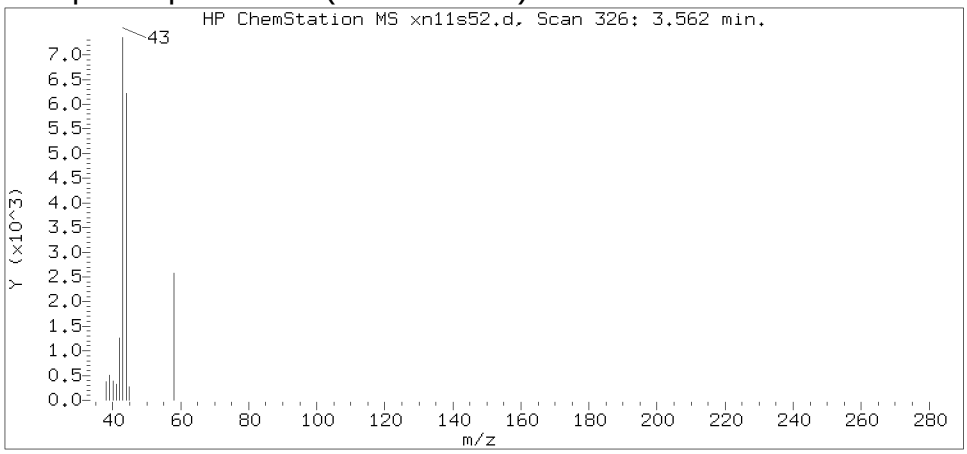
Reference Standard Spectrum for Acetone

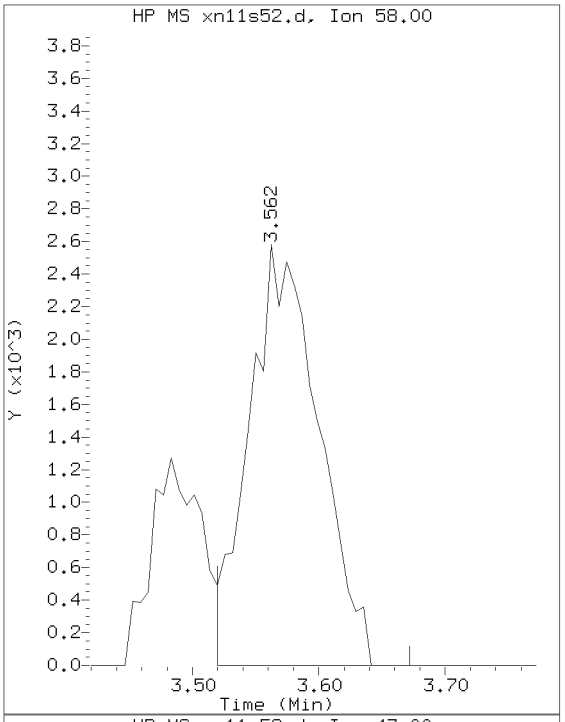


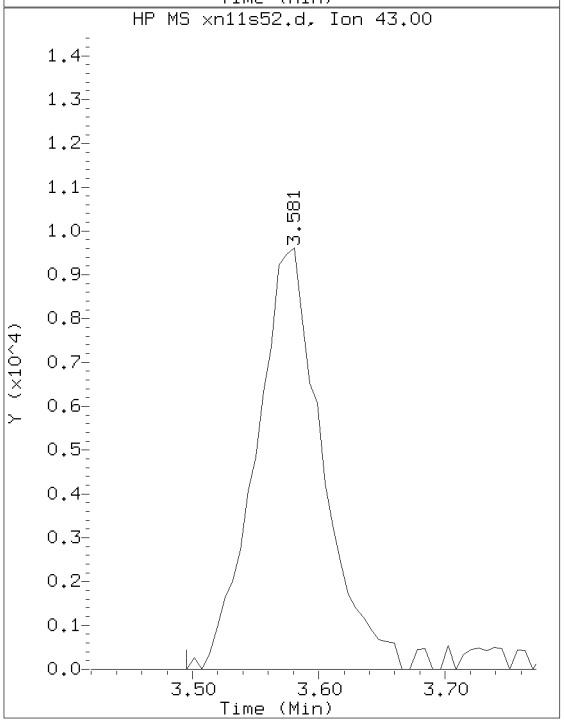
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

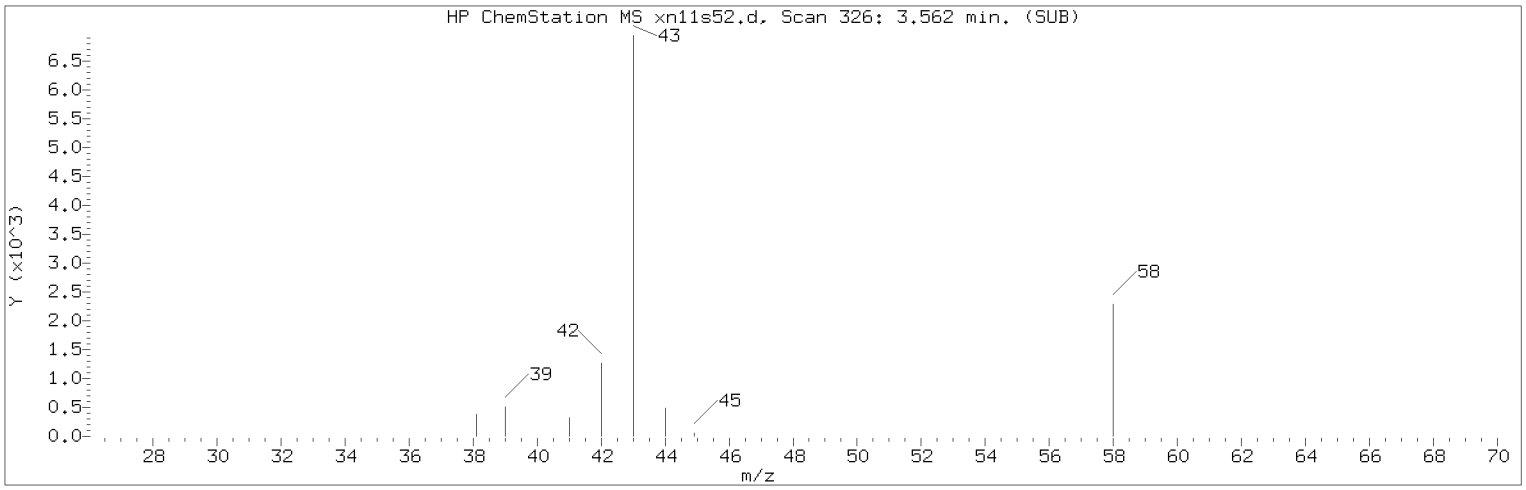
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

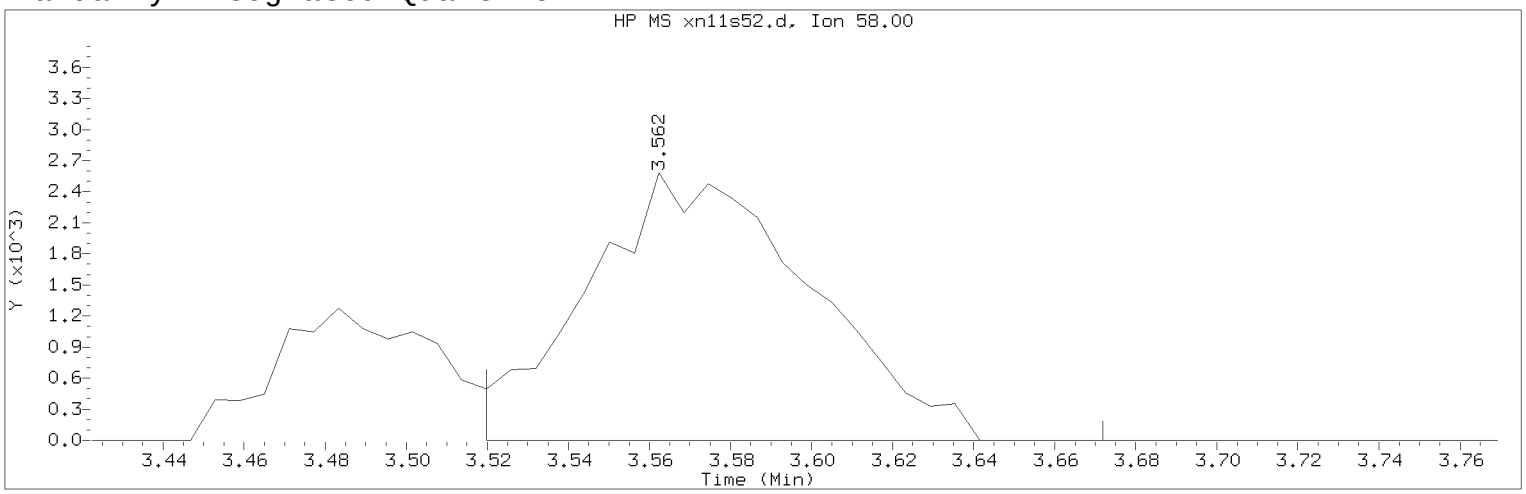
Compound Number : 20
Compound Name : Acetone
Scan Number : 326
Retention Time (minutes): 3.562
Relative Retention Time : 0.00077
Quant Ion : 58.00
Area (flag) : 9968M
On-Column Amount (ng) : 16.2265

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

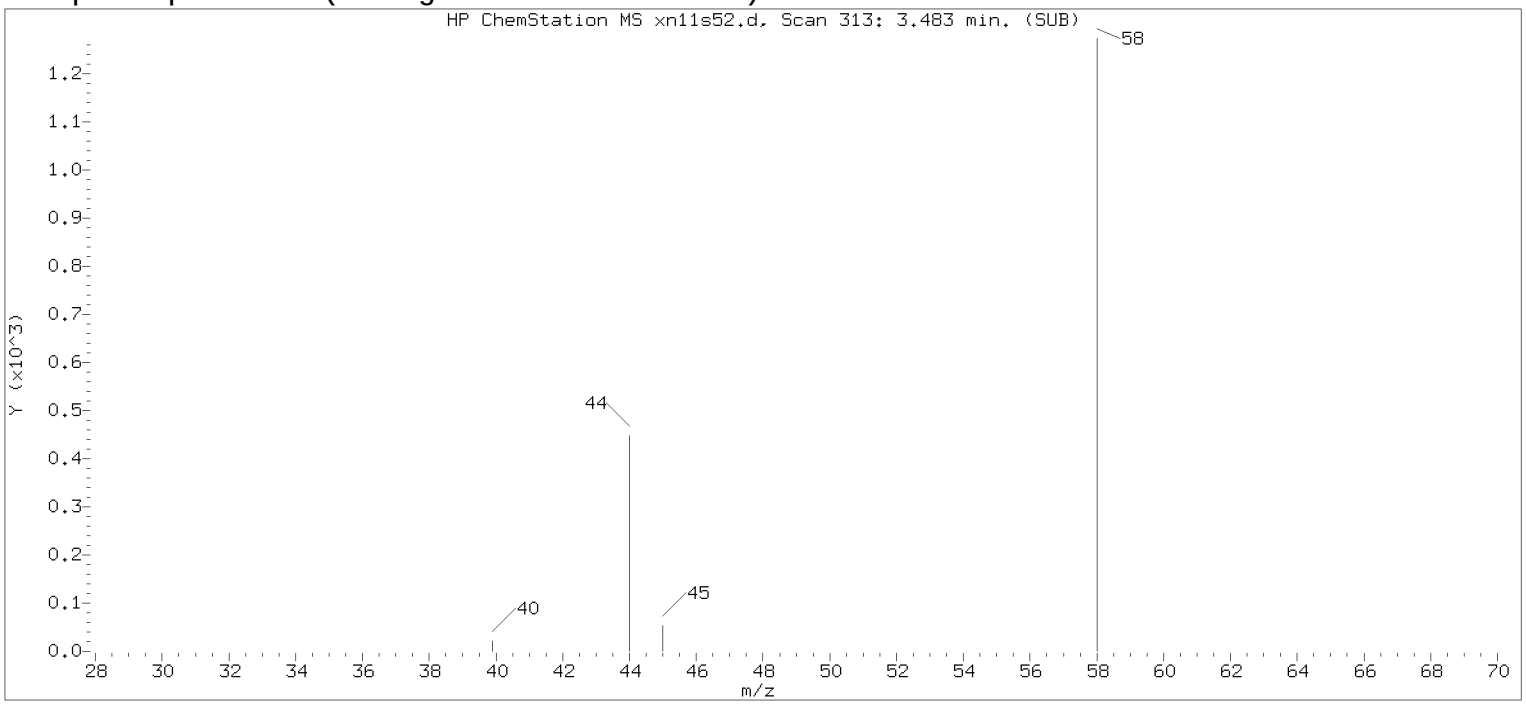
Compound Number : 20
Compound Name : Acetone
Scan Number : 326
Retention Time (minutes): 3.562
Quant Ion : 58.00
Area (flag) : 9968M
On-Column Amount (ng) : 16.2265
Integration start scan : 318 Integration stop scan: 343
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

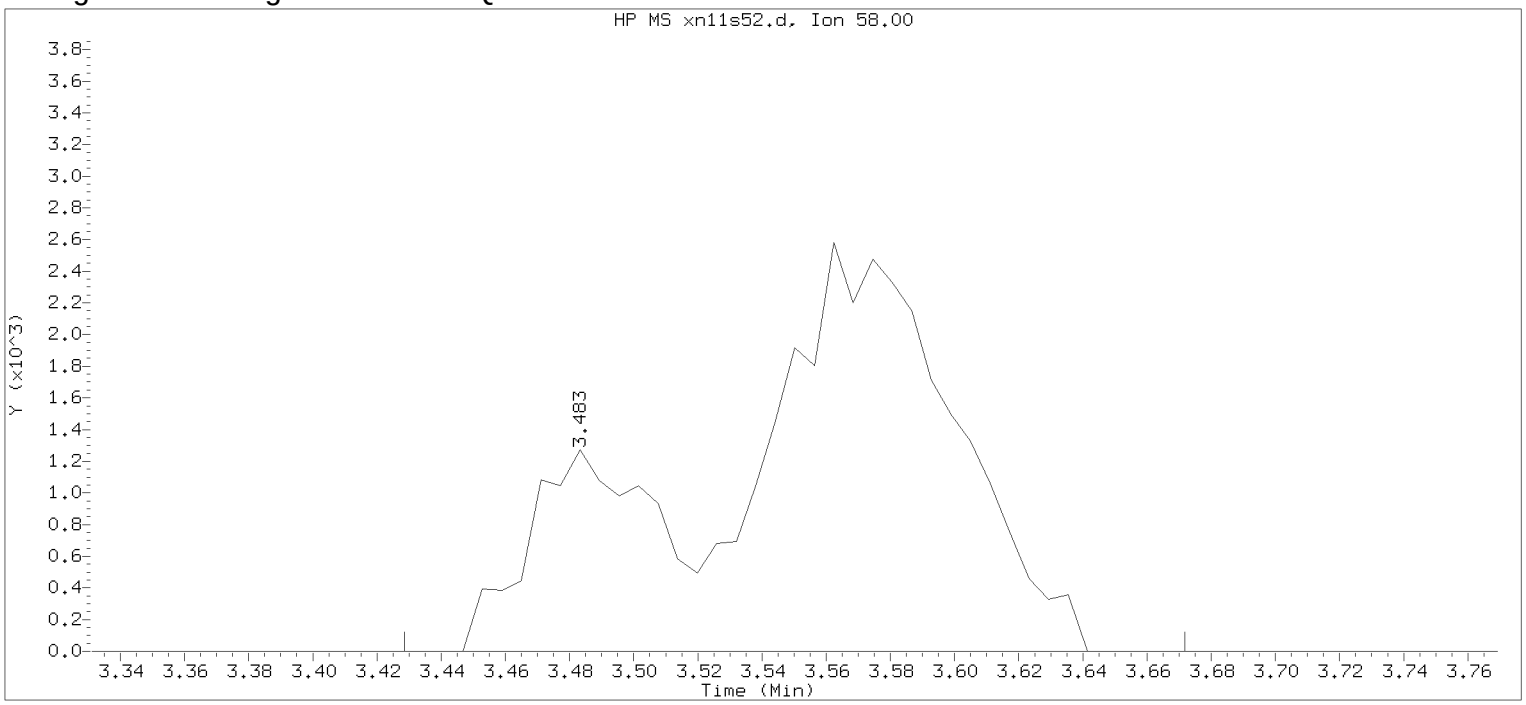
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Abraham H. Uysal on 11/14/2013 at 09:35.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

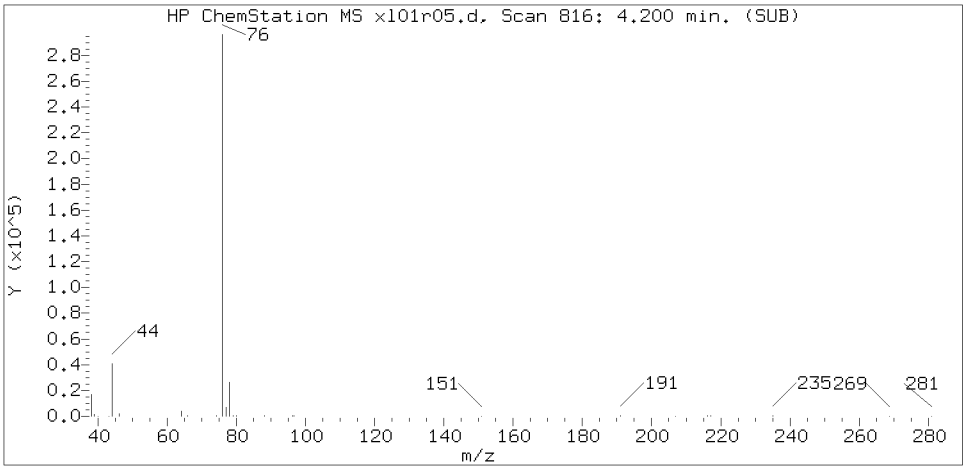
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:36 Automation

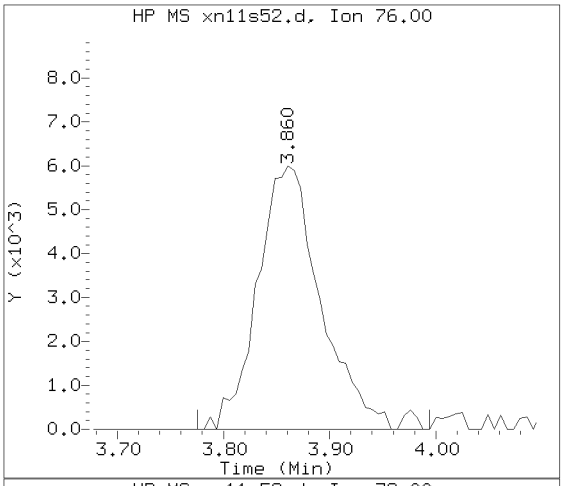
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 20
Compound Name : Acetone
Scan Number : 313
Retention Time (minutes): 3.483
Quant Ion : 58.00
Area : 13344
On-column Amount (ng) : 21.7209
Integration start scan : 303 Integration stop scan: 343
Y at integration start : 0 Y at integration end: 0

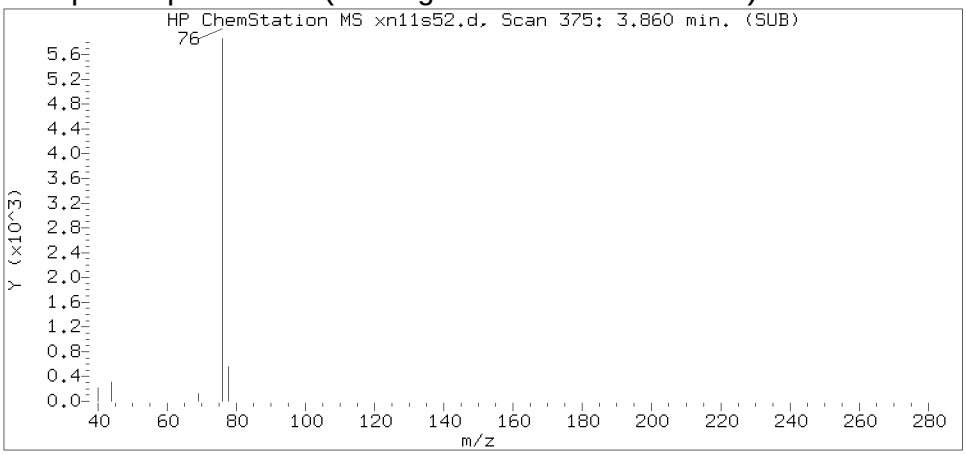
Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: chs01947

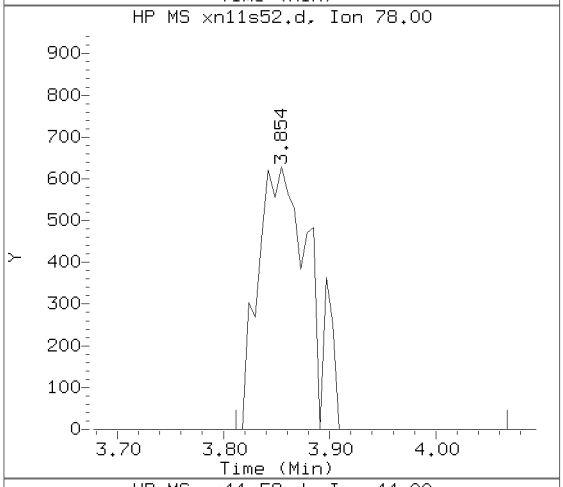
Reference Standard Spectrum for Carbon Disulfide



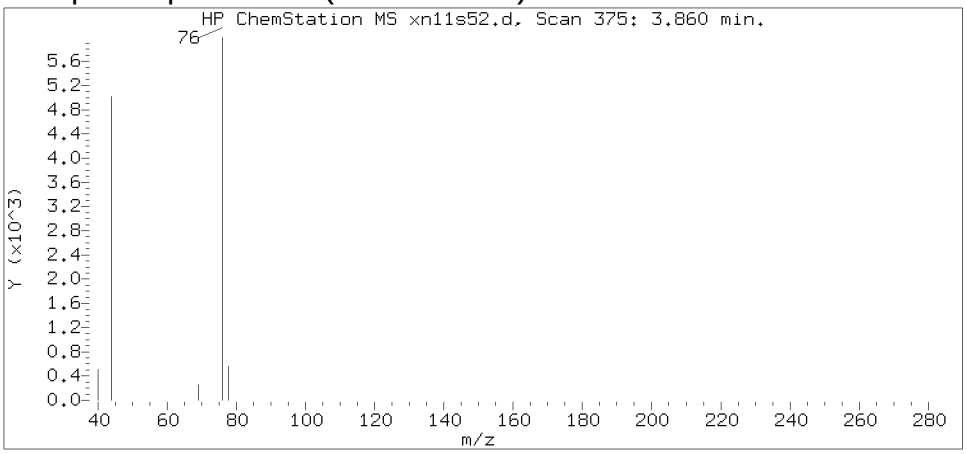


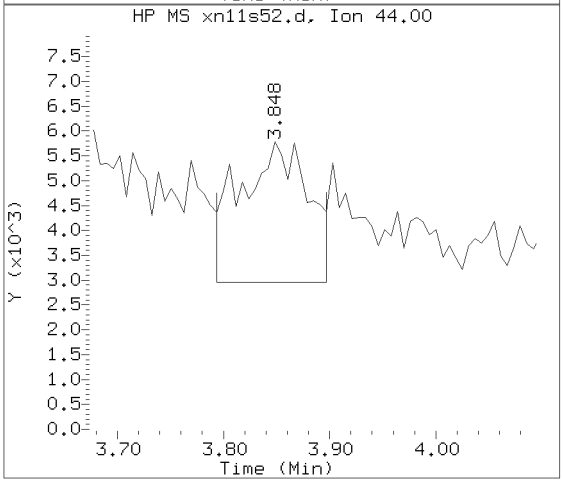
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

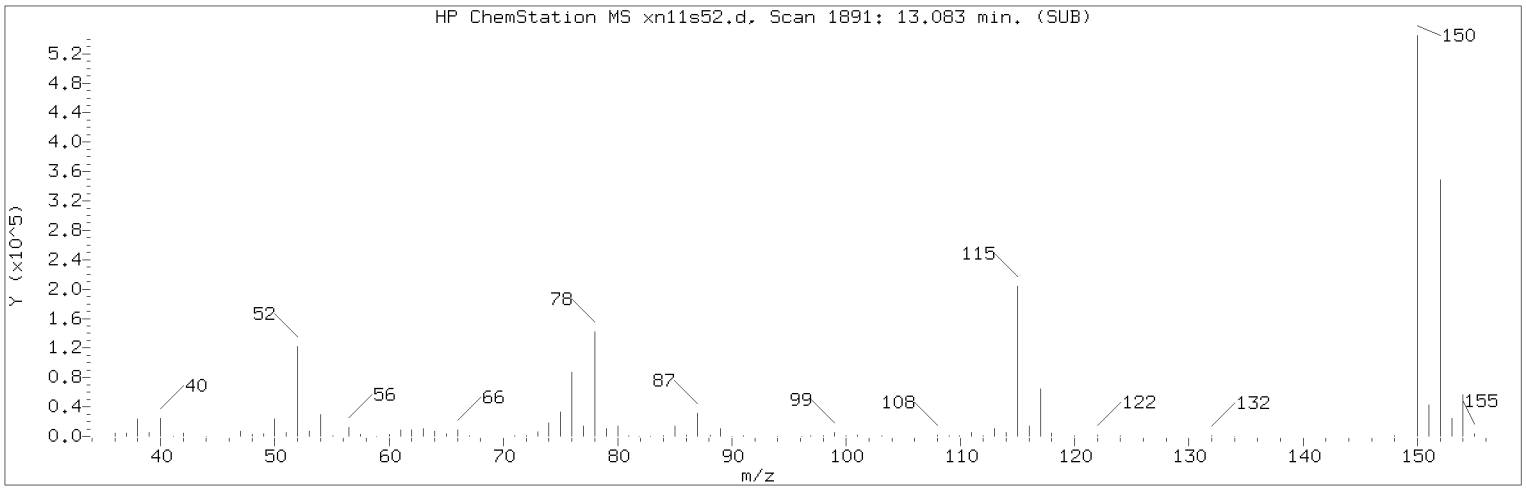
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

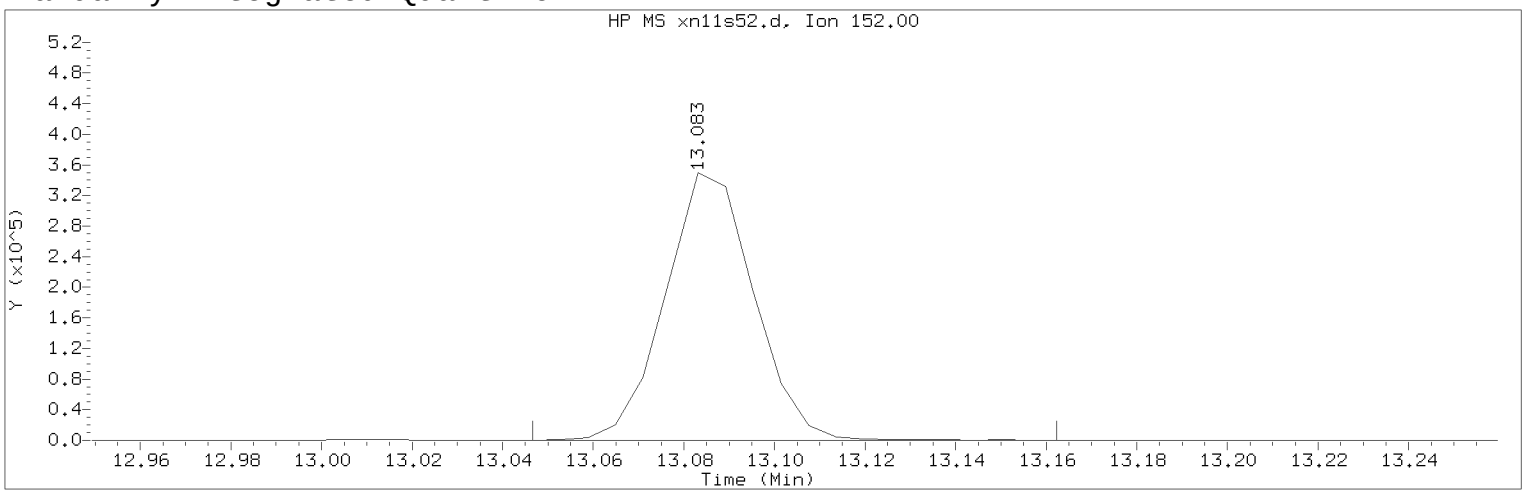
Compound Number : 25
Compound Name : Carbon Disulfide
Scan Number : 375
Retention Time (minutes): 3.860
Relative Retention Time :-0.00001
Quant Ion : 76.00
Area (flag) : 25011
On-Column Amount (ng) : 1.4433

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

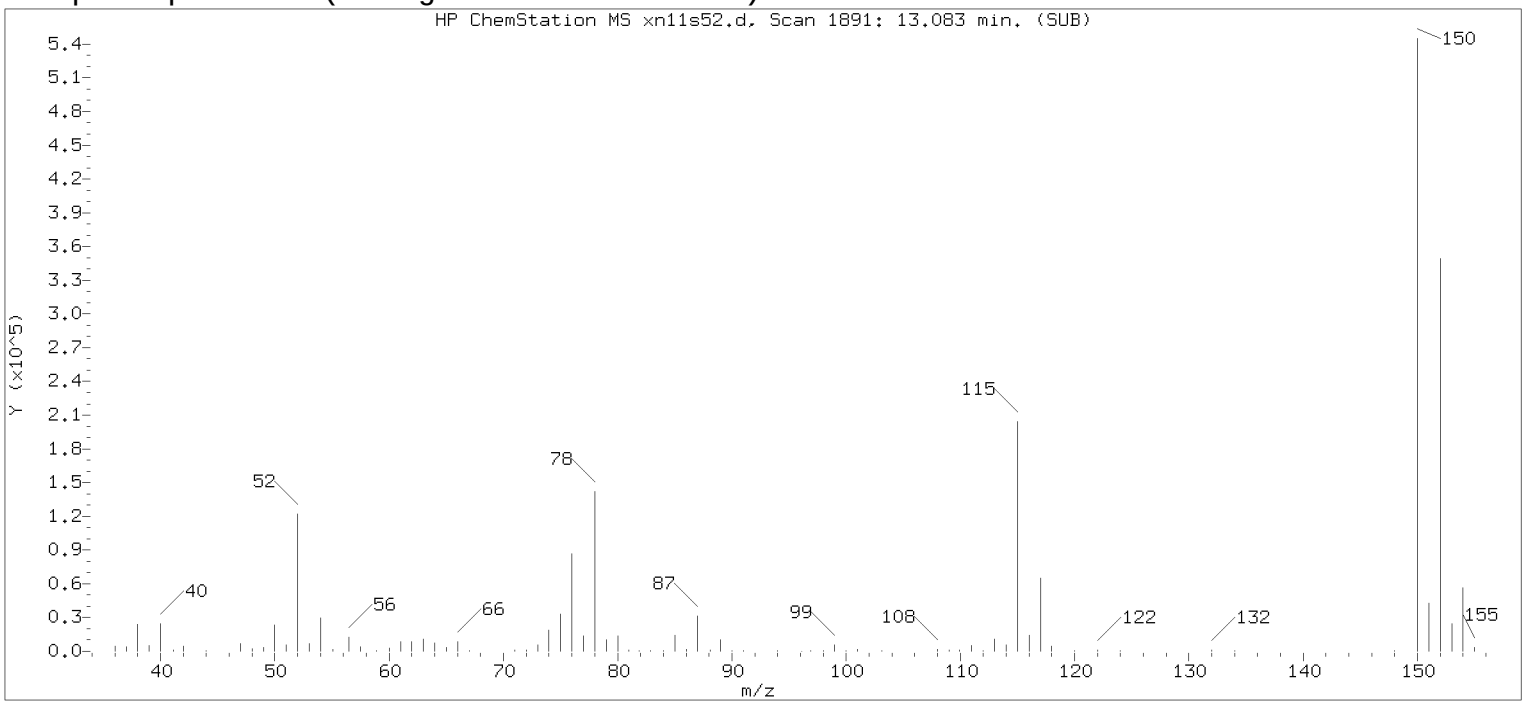
Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area (flag) : 473874M
On-Column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1903
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

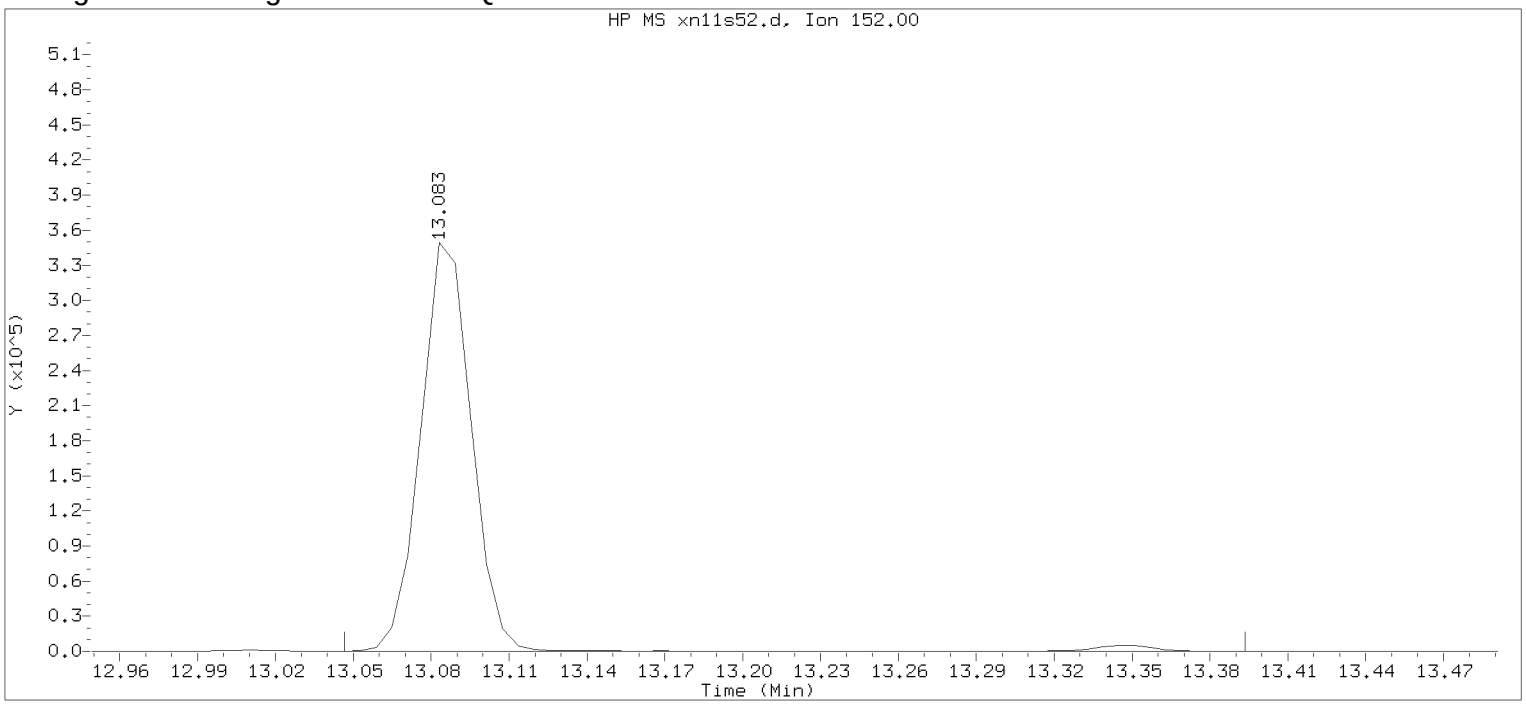
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Abraham H. Uysal on 11/14/2013 at 09:35.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:36 Automation

Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area : 481759
On-column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: chsp1945

1E

EPA SAMPLE NO.

2E161

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) SOIL Lab Sample ID: 7265236

Sample wt/vol: 5.94 (g/mL) g Lab File ID: HP09193.i/13nov11b.b/xn11s52.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: not dec. 27 Date Analyzed: 11/12/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
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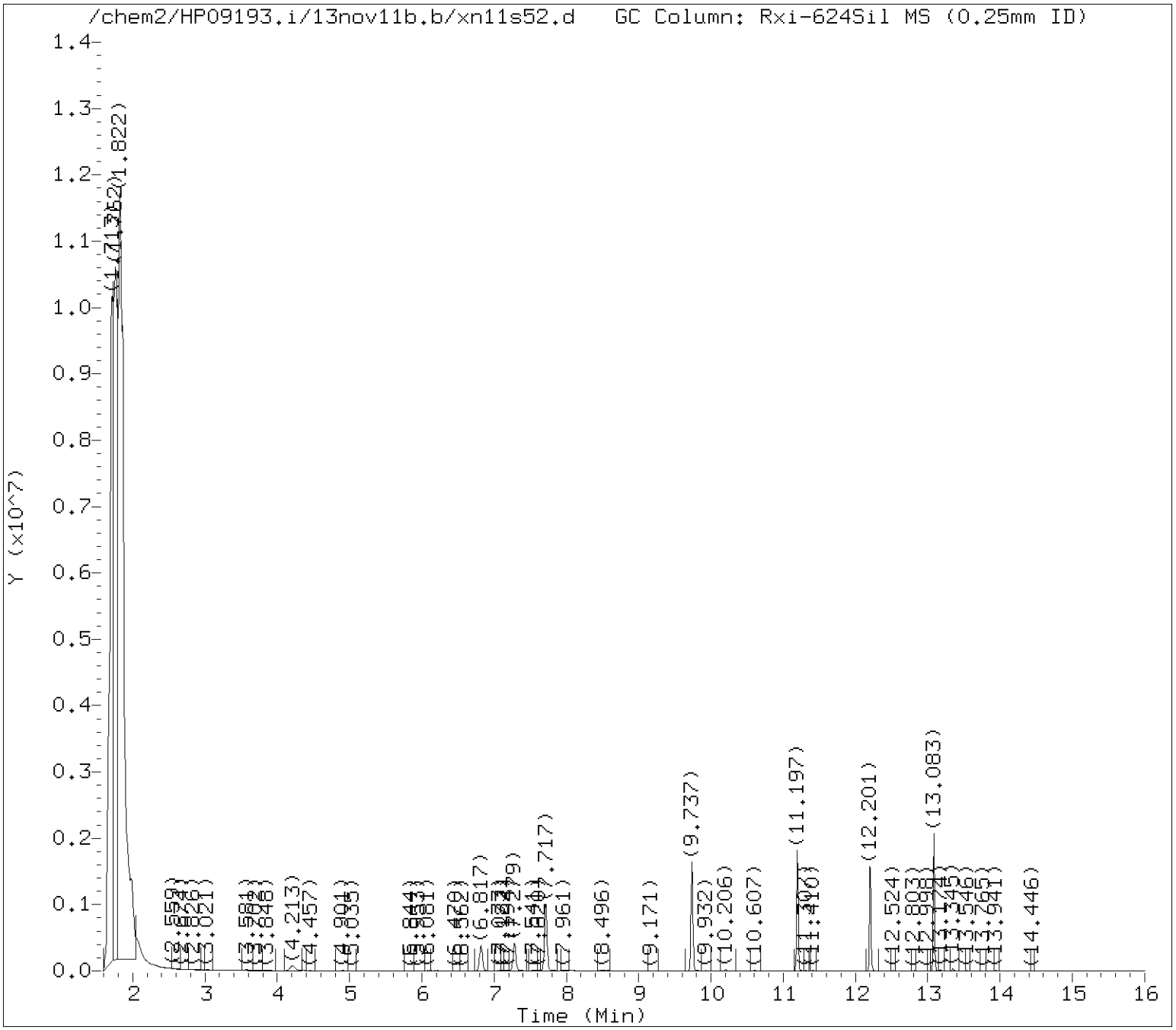
28.					
29.					
30.					

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

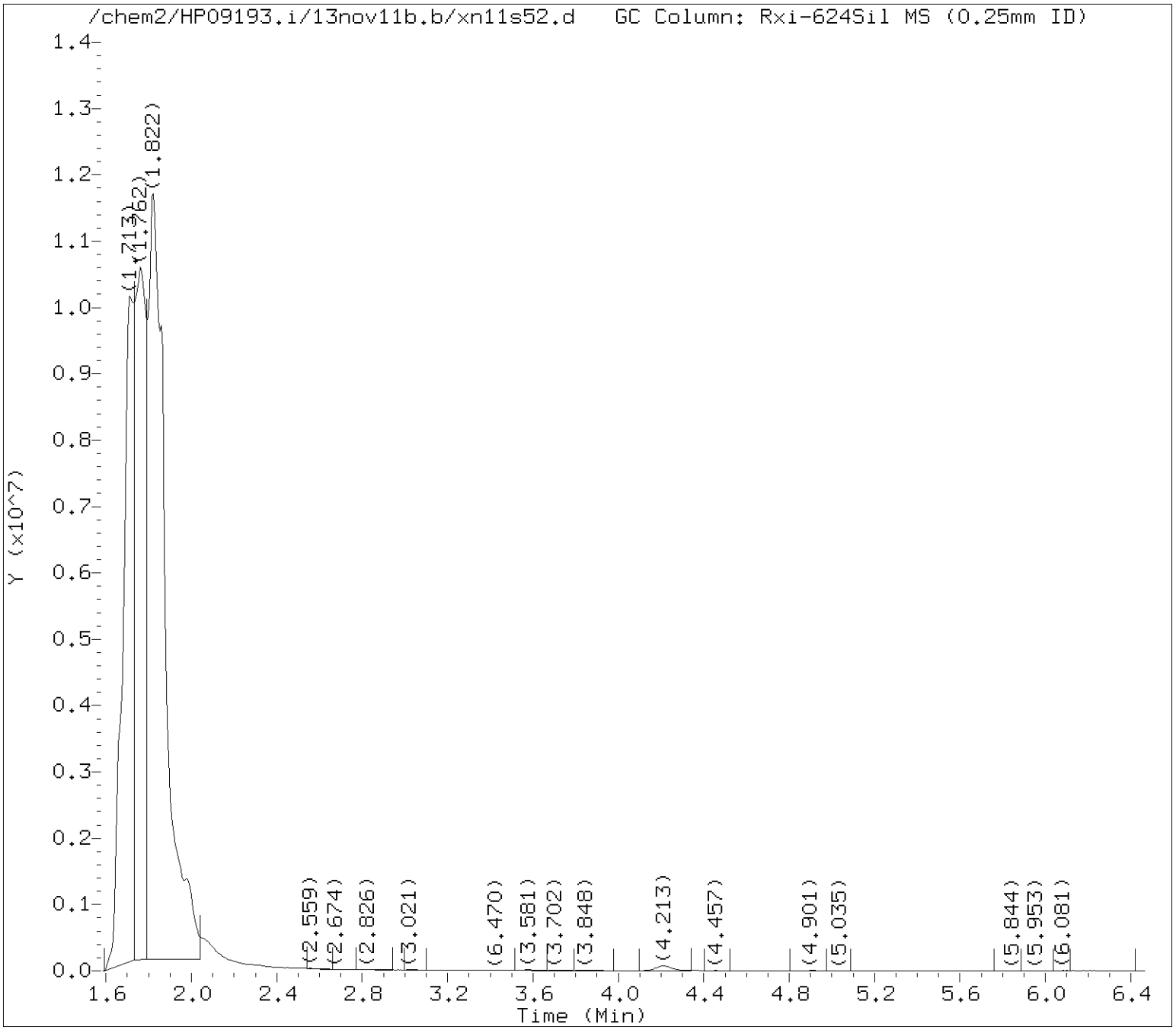
Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 16.003

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

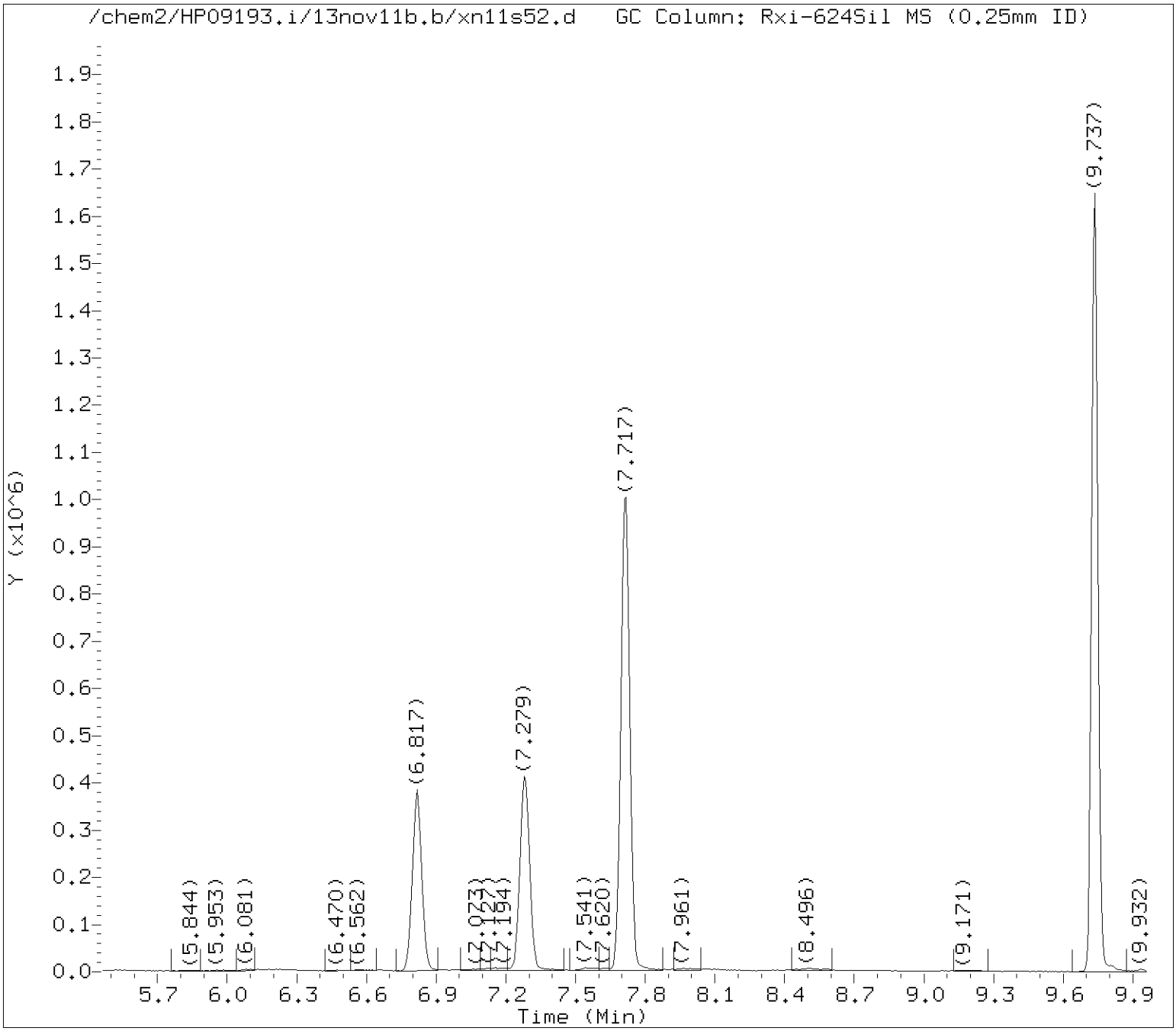
Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: t-Butyl Alcohol-d10 at 4.213 minutes
Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 5.965

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

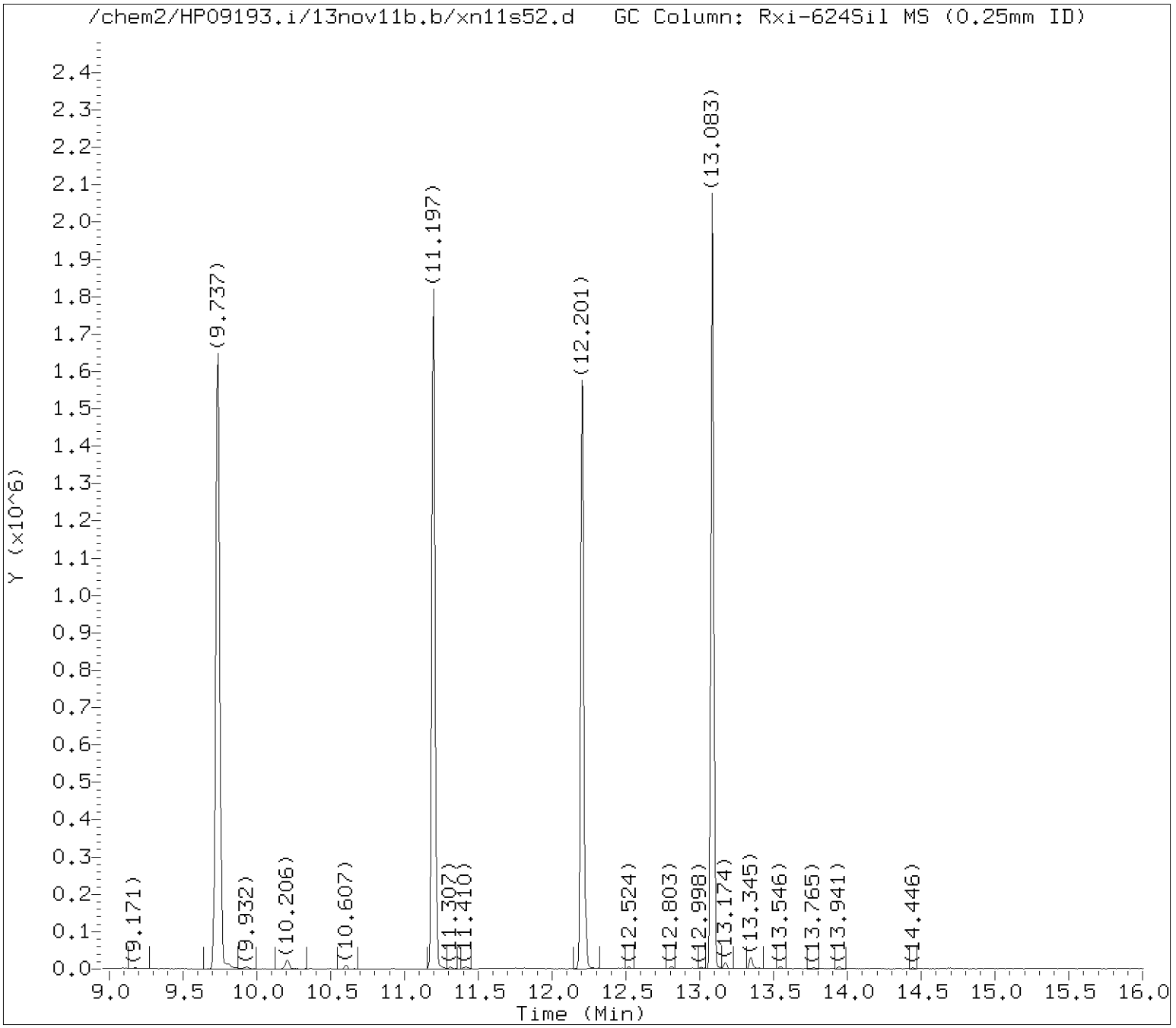
Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Fluorobenzene at 7.717 minutes
Chromatogram Start Time (min.): 5.965
Chromatogram End Time (min.): 9.457

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11s52.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 10:16 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8305
Calibration date and time: 12-NOV-2013 09:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:54 cbs01947

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Chlorobenzene-d5 at 11.197 minutes
Chromatogram Start Time (min.): 9.457
Chromatogram End Time (min.): 16.003

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Target 3.5 esignature user ID: cbs01947

Lancaster Laboratories

Data file : /chem2/HP09193.i/13nov11b.b/xn11s52.d
Lab Smp Id: 7265236 Client Smp ID: 2E161
Inj Date : 12-NOV-2013 10:16
Operator : SAS00403 Inst ID: HP09193.i
Smp Info : 2E161;7265236;2;0;;KVM04;;;xn11b05;
Misc Info : 8305.sub;X133152AA;5.94;;5;;;193b
Comment : Max. number of TICs to report is 11, 3 TICs were found initially.
Method : /chem2/HP09193.i/13nov11b.b/na8260b.m
Meth Date : 12-Nov-2013 09:42 cbs01947 Quant Type: ISTD
Cal Date : 22-OCT-2013 04:08 Cal File: xc22i06.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8305.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	Purge Volume
Ws	5.94000	Weight of soil sample

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 30 t-Butyl alcohol-d10	4.213	387179	250.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/Kg)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report					CAS #:		
1.713	34928958	22553.4726	18984.4046	0	0		30
Artifact - Do not report					CAS #:		
1.762	36816921	23772.5223	20010.5406	0	0		30
Air Peak - Do not report					CAS #:		
1.822	65503092	42295.0550	35601.8981	0	0		30

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Target 3.5 esignature user ID: cbs01947

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/Kg)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
====	====	==========	==========	====	=======	=========	======

Digitally signed by Chelsea B. Stong on 11/12/2013 at 10:54.
Target 3.5 esignature user ID: cbs01947

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11s03.d Injection date and time: **11-NOV-2013 13:56**
Data file Sample Info. Line: 2E16D;7265237;2;0;;KVM04;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8305**
Calibration date and time (Last Method Edit): 11-NOV-2013 14:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: **150A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.01 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl Alcohol-d10	4.049(0.000)	406	65	134715 (-29)	250.00	
67) Fluorobenzene	7.547(-0.006)	981	96	1573149 (-8)	50.00	
99) Chlorobenzene-d5	11.075(0.000)	1561	117	1237711 (-11)	50.00	
133) 1,4-Dichlorobenzene-d4	12.979(0.000)	1874	152	637165 (-20)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
55) Dibromofluoromethane	(2)	6.646(0.000)	113	403710	52.493	105%		50 - 141
61) 1,2-Dichloroethane-d4	(2)	7.115(0.000)	102	89029	51.045	102%		54 - 135
86) Toluene-d8	(3)	9.591(-0.001)	98	1552009	48.314	97%		52 - 141
112) 4-Bromofluorobenzene	(3)	12.091(0.000)	95	538551	45.092	90%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
2) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					2	5
5) Vinyl Chloride	(2)			Not Detected					1	5
9) Bromomethane	(2)			Not Detected					2	5
10) Chloroethane	(2)			Not Detected					2	5
13) Trichlorofluoromethane	(2)			Not Detected					2	5
19) 1,1-Dichloroethene	(2)			Not Detected					1	5
20) Acetone	(2)	3.440(-0.000)	58	8484	9.440	9.42		J	7	20
22) Freon 113	(2)			Not Detected					2	10
25) Carbon Disulfide	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					2	5
31) Methylene Chloride	(2)			Not Detected					2	5
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)			Not Detected					1	5
40) 1,1-Dichloroethane	(2)			Not Detected					1	5
45) 2-Butanone	(2)			Not Detected					4	10
46) cis-1,2-Dichloroethene	(2)			Not Detected					1	5
54) Chloroform	(2)			Not Detected					1	5
56) 1,1,1-Trichloroethane	(2)			Not Detected					1	5
57) Cyclohexane	(2)			Not Detected					1	5
59) Carbon Tetrachloride	(2)			Not Detected					1	5
62) Benzene	(2)			Not Detected					0.5	5
64) 1,2-Dichloroethane	(2)			Not Detected					1	5
72) Trichloroethene	(2)			Not Detected					1	5
73) Methylcyclohexane	(2)			Not Detected					1	5
74) 1,2-Dichloropropane	(2)			Not Detected					1	5
81) Bromodichloromethane	(2)			Not Detected					1	5
84) cis-1,3-Dichloropropene	(2)			Not Detected					1	5
85) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
87) Toluene	(3)			Not Detected					1	5

Digitally signed by Chelsea B. Stong on 11/15/2013 at 11:51. Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11s03.d Injection date and time: **11-NOV-2013 13:56**
Data file Sample Info. Line: 2E16D;7265237;2;0;;KVM04;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8305**
Calibration date and time (Last Method Edit): 11-NOV-2013 14:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: **150A** Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

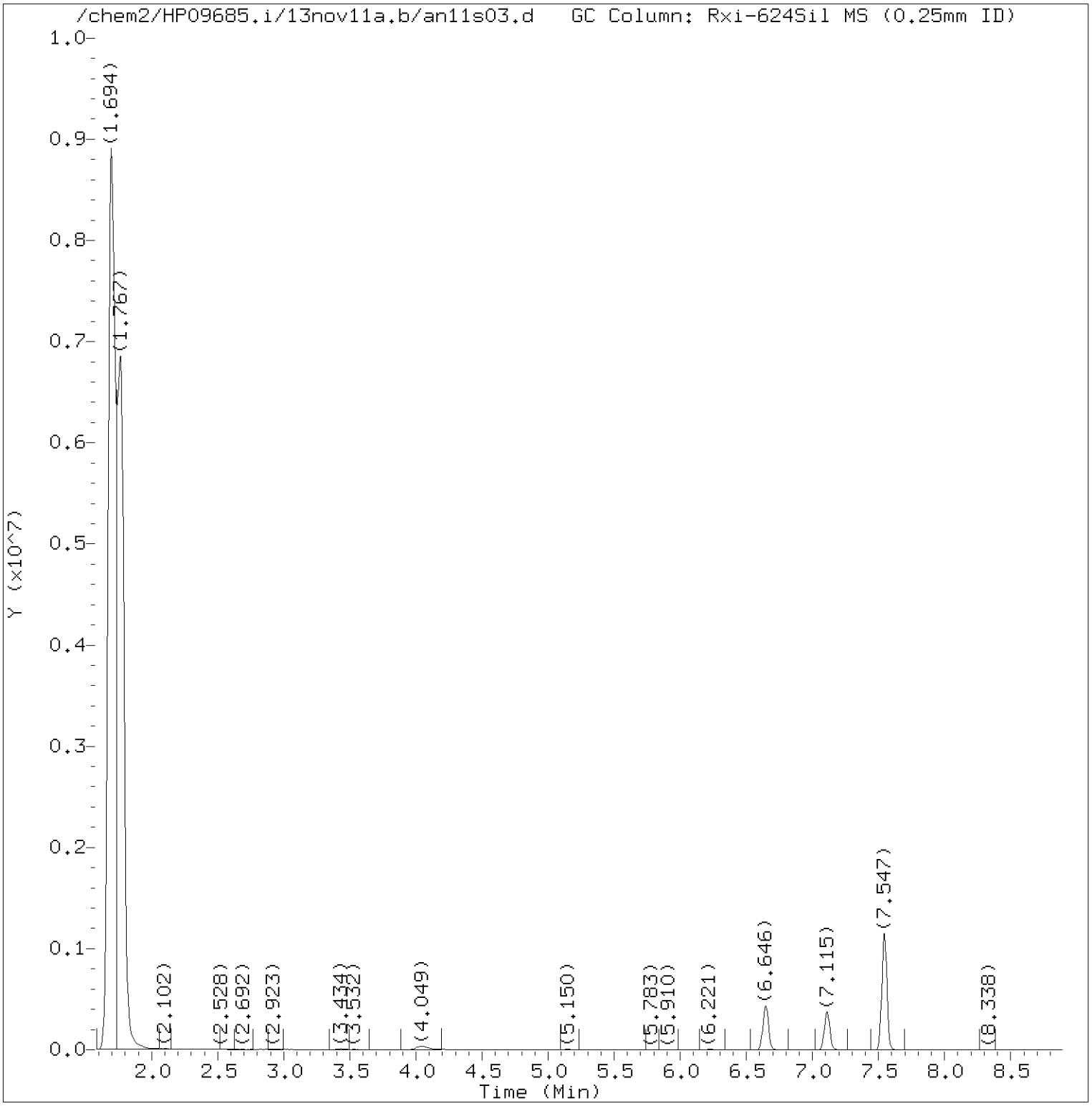
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5.01 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
88) trans-1,3-Dichloropropene	(3)			Not Detected					1	5
90) 1,1,2-Trichloroethane	(3)			Not Detected					1	5
92) Tetrachloroethene	(3)			Not Detected					1	5
95) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					1	5
98) 1,2-Dibromoethane	(3)			Not Detected					1	5
100) Chlorobenzene	(3)			Not Detected					1	5
102) Ethylbenzene	(3)			Not Detected					1	5
103) m+p-Xylene	(3)			Not Detected					1	5
104) o-Xylene	(3)			Not Detected					1	5
105) Xylene (Total)	(3)			Not Detected					1	5
106) Styrene	(3)			Not Detected					1	5
107) Bromoform	(3)			Not Detected					1	5
108) Isopropylbenzene	(3)			Not Detected					1	5
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					1	5
131) 1,3-Dichlorobenzene	(4)			Not Detected					1	5
134) 1,4-Dichlorobenzene	(4)			Not Detected					1	5
140) 1,2-Dichlorobenzene	(4)			Not Detected					1	5
144) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					2	5
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					1	5

Total number of targets = 50

Digitally signed by Chelsea B. Stong on 11/15/2013 at 11:51. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/15/2013 at 15:32. Parallax ID: ads01731



Total Ion Chromatogram (TIC)

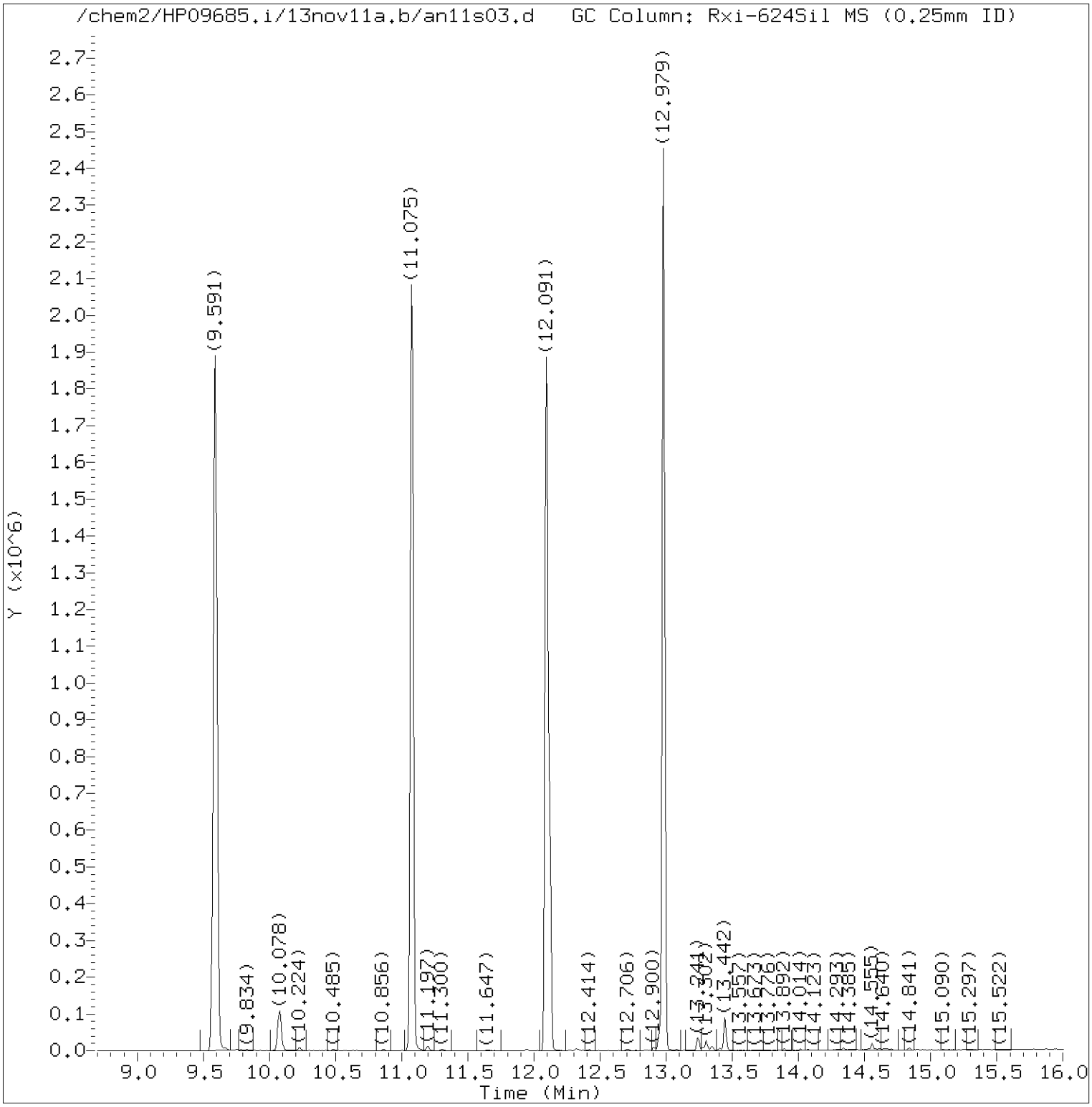
Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Digitally signed by Chelsea B. Stong
on 11/15/2013 at 11:51.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Digitally signed by Chelsea B. Stong
on 11/15/2013 at 11:51.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
20) Acetone	(2)	3.440	58	8484	9.440
30)*t-Butyl Alcohol-d10	(1)	4.049	65	134715	250.000
55)$Dibromofluoromethane	(2)	6.646	113	403710	52.493
61)$1,2-Dichloroethane-d4	(2)	7.115	102	89029	51.045
67)*Fluorobenzene	(2)	7.547	96	1573149	50.000
86)$Toluene-d8	(3)	9.591	98	1552009	48.314
99)*Chlorobenzene-d5	(3)	11.075	117	1237711	50.000
112)$4-Bromofluorobenzene	(3)	12.091	95	538551	45.092
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	637165	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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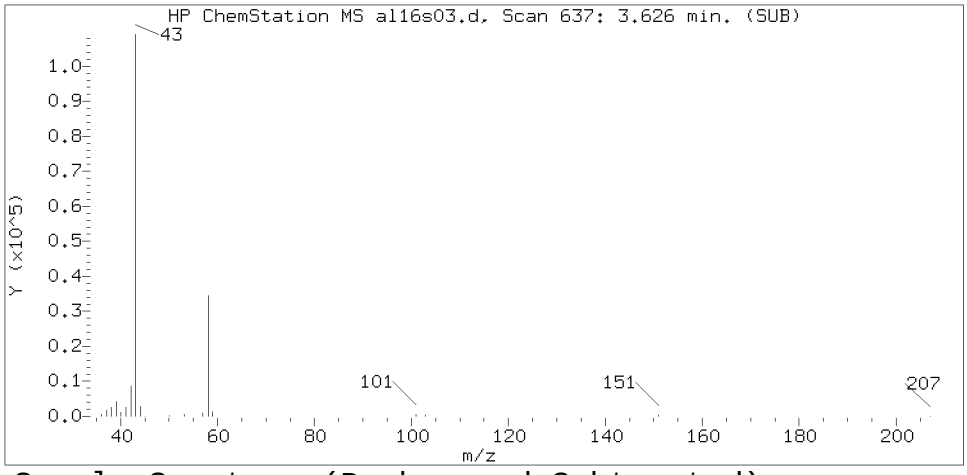
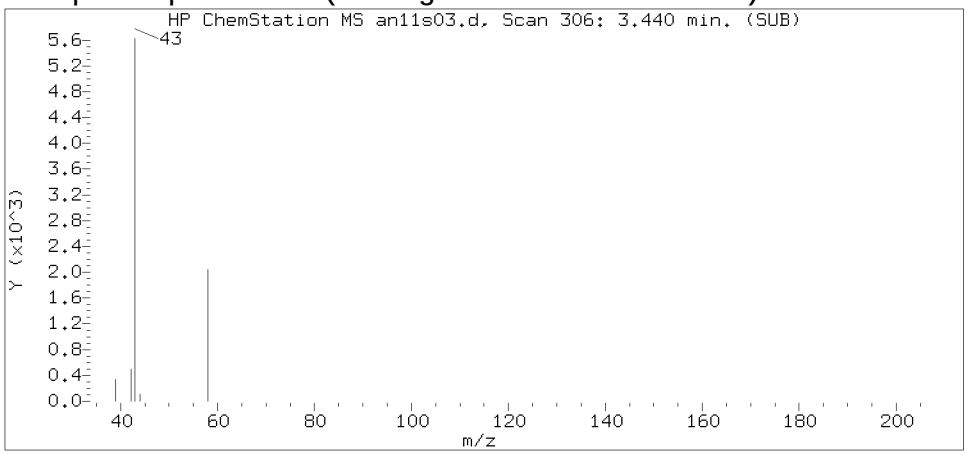
on 11/15/2013 at 11:51.
Target 3.5 esignature user ID: cbs01947

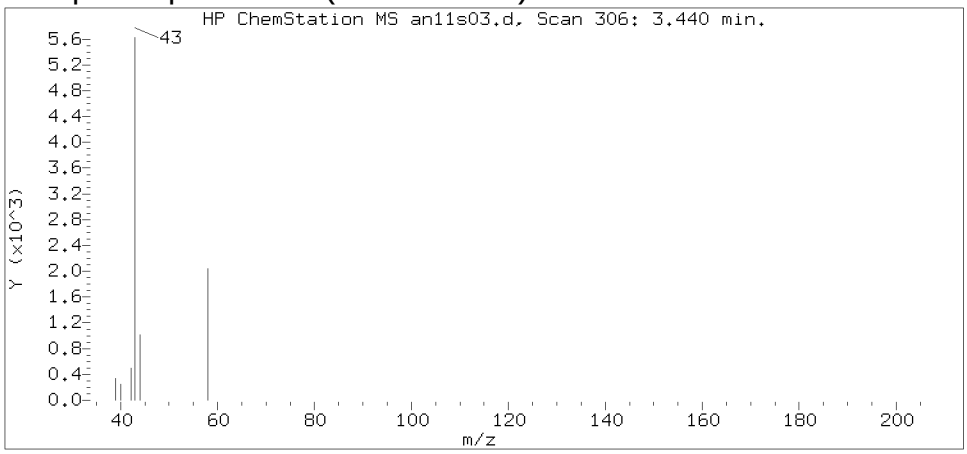
Reference Standard Spectrum for Acetone

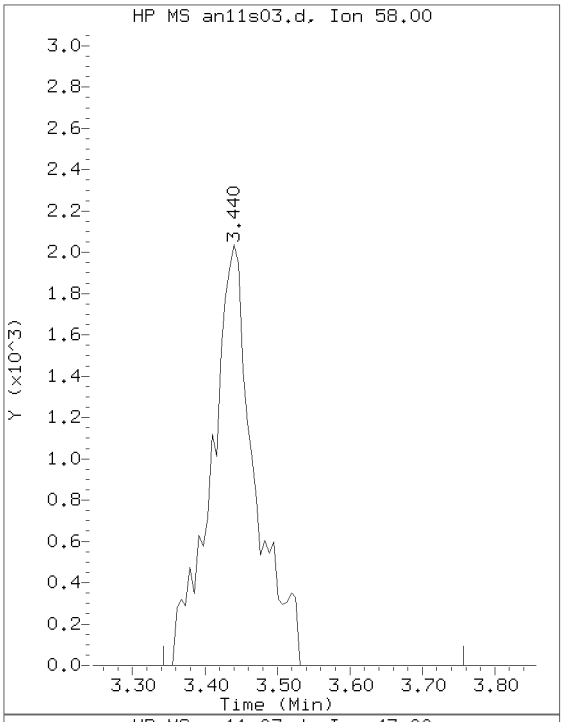


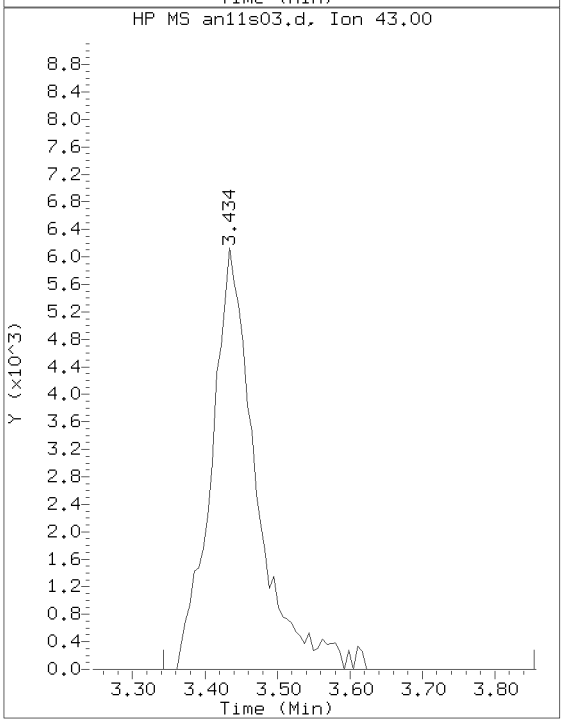
Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)







Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 14:22
Date, time and analyst ID of latest file update: 15-Nov-2013 11:51 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 20
Compound Name : Acetone
Scan Number : 306
Retention Time (minutes): 3.440
Relative Retention Time :-0.00042
Quant Ion : 58.00
Area (flag) : 8484
On-Column Amount (ng) : 9.4396

Digitally signed by Chelsea B. Stong on 11/15/2013 at 11:51.
Target 3.5 esignature user ID: cbs01947

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E16D

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) SOIL Lab Sample ID: 7265237

Sample wt/vol: 5.01 (g/mL) g Lab File ID: HP09685.i/13nov11a.b/an11s03.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: not dec. 21 Date Analyzed: 11/11/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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11.					
12.					
13.					
14.					
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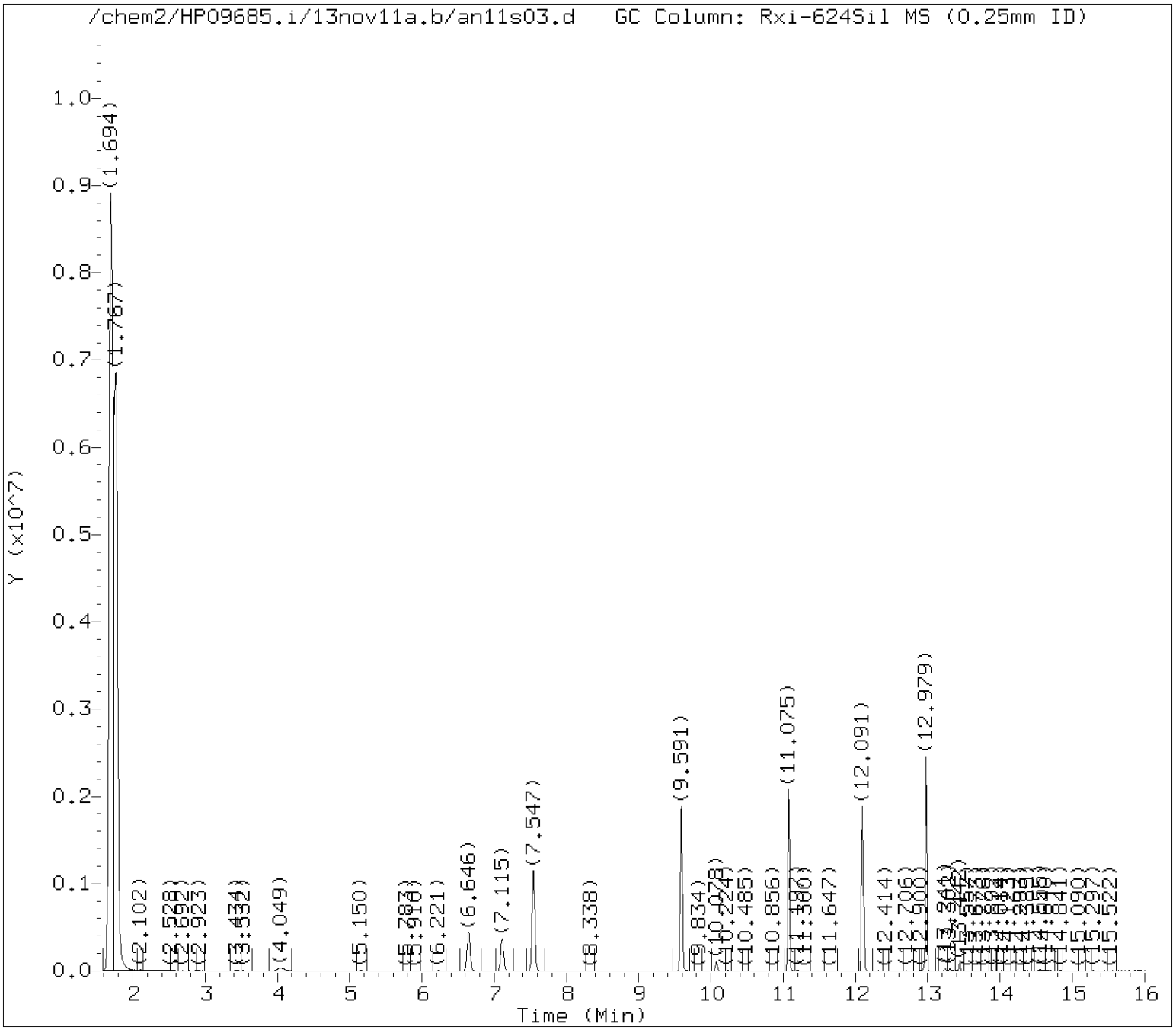
FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

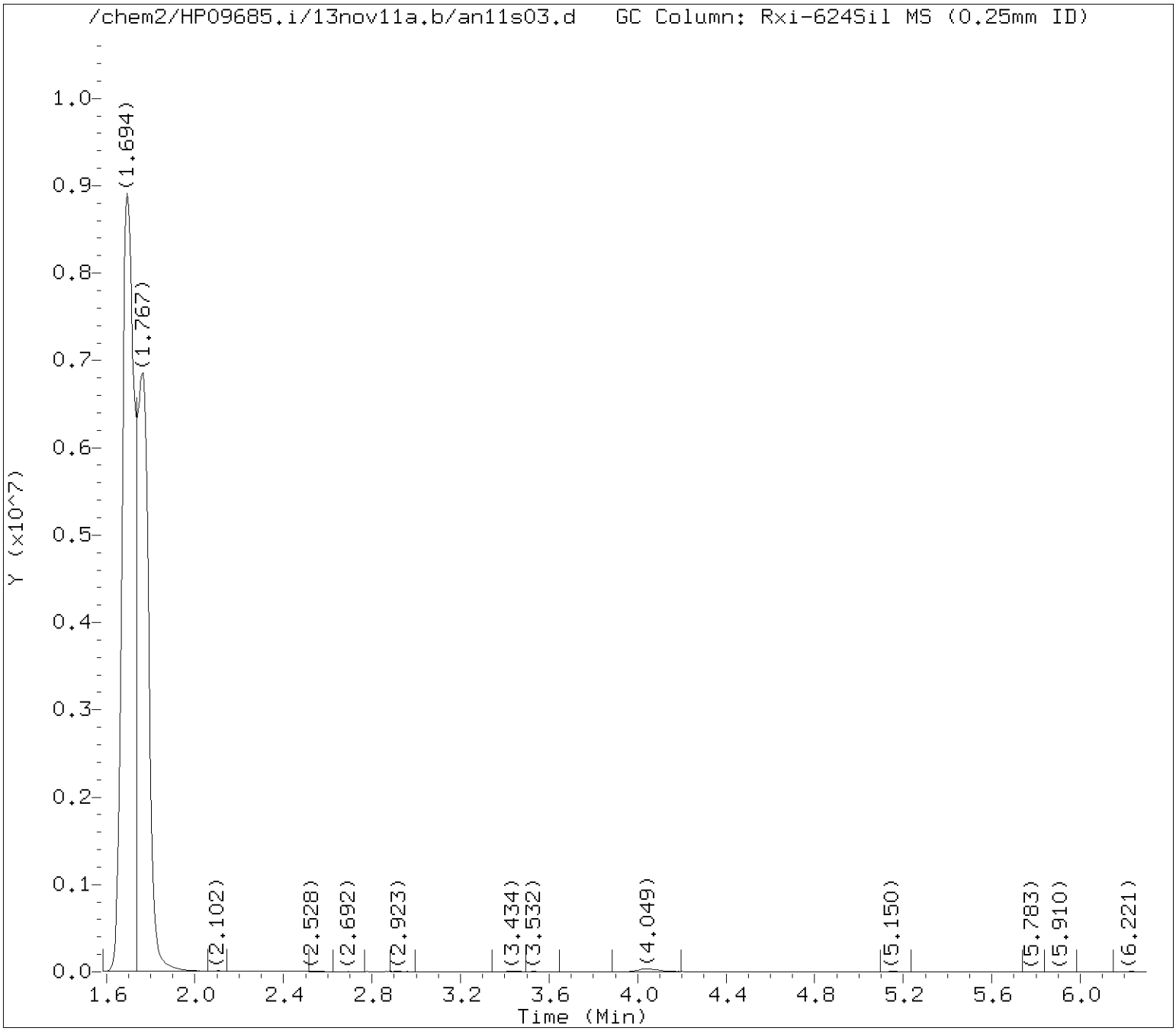
Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 14:21 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 16.003

Digitally signed by Chelsea B. Stong on 11/11/2013 at 14:22.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

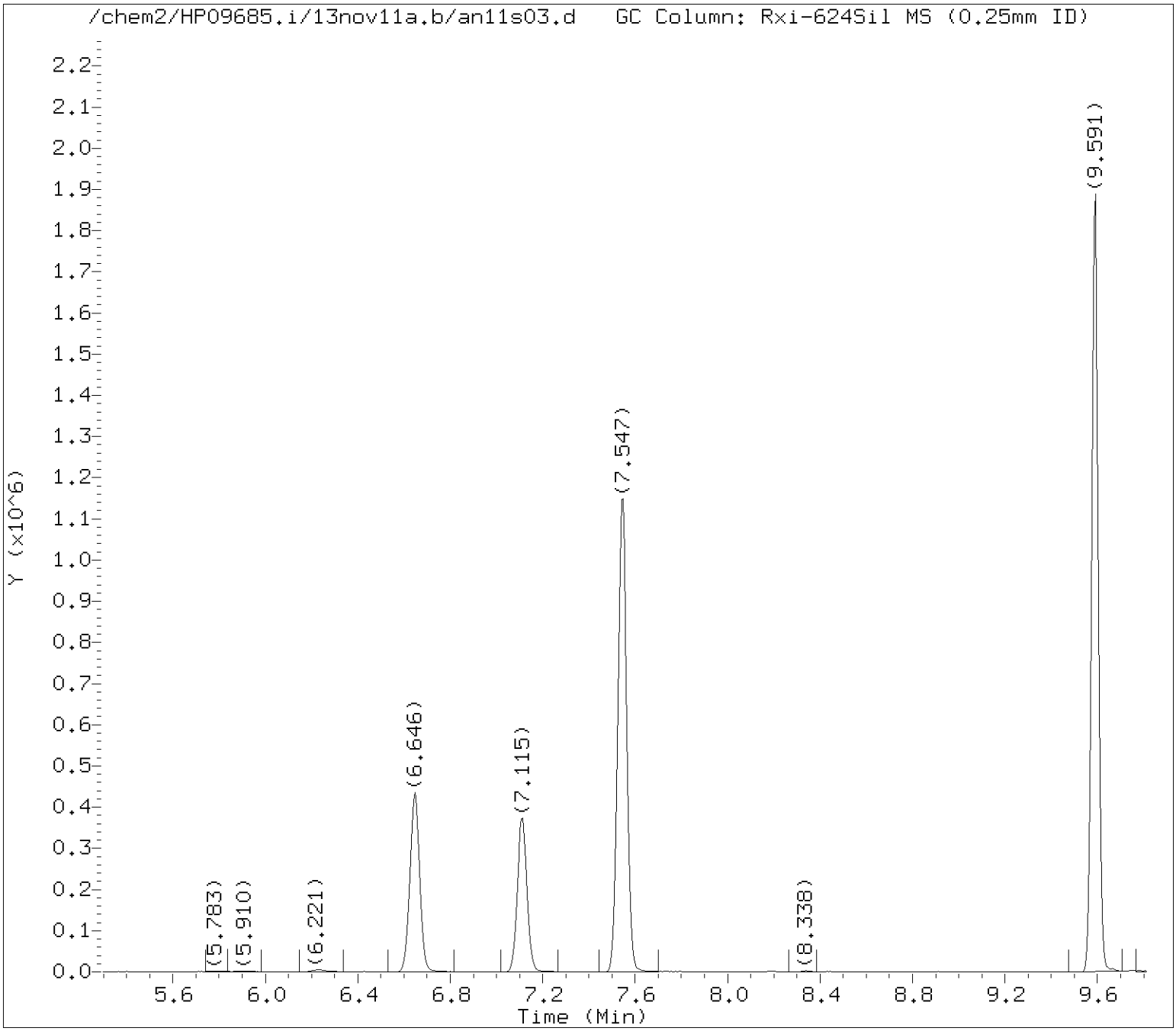
Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 14:21 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: t-Butyl Alcohol-d10 at 4.049 minutes
Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 5.798

Digitally signed by Chelsea B. Stong on 11/11/2013 at 14:22.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

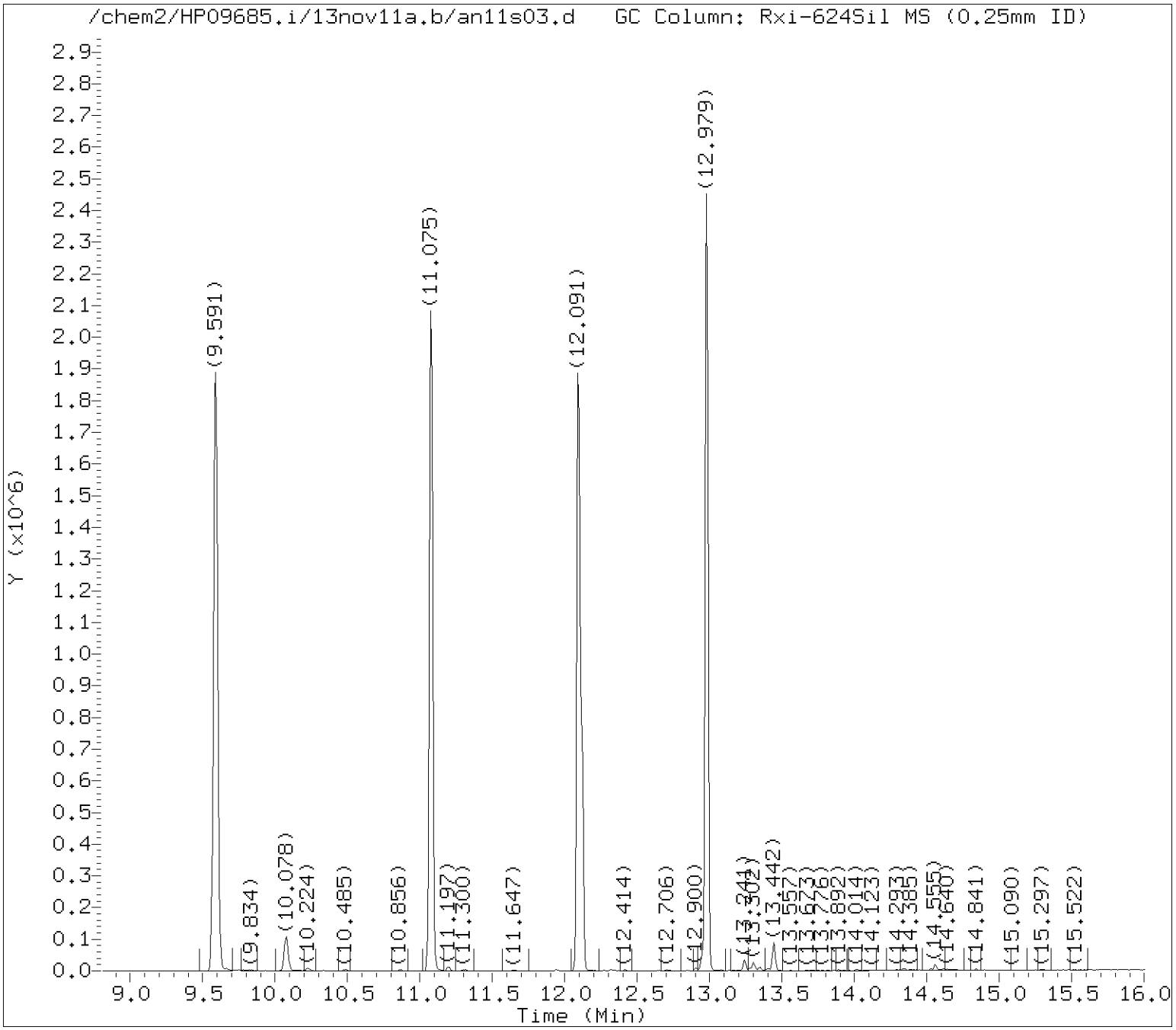
Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 14:21 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Fluorobenzene at 7.547 minutes
Chromatogram Start Time (min.): 5.798
Chromatogram End Time (min.): 9.311

Digitally signed by Chelsea B. Stong on 11/11/2013 at 14:22.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11s03.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 13:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8305
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 14:21 cbs01947

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Chlorobenzene-d5 at 11.075 minutes
Chromatogram Start Time (min.): 9.311
Chromatogram End Time (min.): 16.003

Digitally signed by Chelsea B. Stong on 11/11/2013 at 14:22.
Target 3.5 esignature user ID: cbs01947

Lancaster Laboratories

Data file : /chem2/HP09685.i/13nov11a.b/an11s03.d
Lab Smp Id: 7265237 Client Smp ID: 2E16D
Inj Date : 11-NOV-2013 13:56
Operator : CBS01947 Inst ID: HP09685.i
Smp Info : 2E16D;7265237;2;0;;KVM04;;;an11b02;
Misc Info : 8305.sub;A133151AA;5.01;;5;;;150a
Comment : Max. number of TICs to report is 16, 2 TICs were found initially.
Method : /chem2/HP09685.i/13nov11a.b/di8260b.m
Meth Date : 11-Nov-2013 11:16 chemist Quant Type: ISTD
Cal Date : 29-OCT-2013 01:46 Cal File: ac28i06.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8305.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	Purge Volume
Ws	4.73000	Weight of soil sample

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 30 t-Butyl alcohol-d10	4.049	228496	250.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/Kg)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
1.694	34073385	37280.0577	39408.0948	0		0	30

Air Peak - Do not report CAS #:

1.767	24341318	26632.0977	28152.3232	0		0	30

Air Peak - Do not report CAS #:

Digitally signed by Chelsea B. Stong on 11/11/2013 at 14:22.
Target 3.5 esignature user ID: cbs01947

FBX01 Lancaster Laboratories 7265247
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s35.d Injection date and time: **07-NOV-2013 15:49**
Data file Sample Info. Line: FBX01;7265247;1;0;;KVM04;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 16:06 Automation

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **10437**
Calibration date and time (Last Method Edit): 07-NOV-2013 15:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.018(0.006)	195	65	304680 (-19)	250.00	
66) Fluorobenzene	4.092(0.000)	536	96	922337 (-11)	50.00	
100) Chlorobenzene-d5	7.274(0.006)	1059	117	701857 (-12)	50.00	
131) 1,4-Dichlorobenzene-d4	9.312(0.006)	1394	152	413735 (-14)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	3.453(0.000)	113	228225	53.004	106%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	3.758(0.000)	102	57283	51.322	103%		77 - 113
83) Toluene-d8	(3)	5.710(-0.001)	98	901394	48.251	97%		80 - 113
114) 4-Bromofluorobenzene	(3)	8.399(-0.001)	95	332186	46.727	93%		78 - 113

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					1	5
6) Vinyl Chloride	(2)			Not Detected					1	5
8) Bromomethane	(2)			Not Detected					1	5
9) Chloroethane	(2)			Not Detected					1	5
12) Trichlorofluoromethane	(2)			Not Detected					2	5
17) 1,1-Dichloroethene	(2)			Not Detected					0.8	5
18) Acetone	(2)			Not Detected					6	20
19) Freon 113	(2)			Not Detected					2	10
23) Carbon Disulfide	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					2	5
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.8	5
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
36) 1,1-Dichloroethane	(2)			Not Detected					1	5
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.8	5
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.8	5
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.8	5
54) Cyclohexane	(2)			Not Detected					2	5
56) Carbon Tetrachloride	(2)			Not Detected					1	5
60) Benzene	(2)			Not Detected					0.5	5
61) 1,2-Dichloroethane	(2)			Not Detected					1	5
71) Trichloroethene	(2)			Not Detected					1	5
72) Methylcyclohexane	(2)			Not Detected					1	5
73) 1,2-Dichloropropane	(2)			Not Detected					1	5
78) Bromodichloromethane	(2)			Not Detected					1	5
81) cis-1,3-Dichloropropene	(2)			Not Detected					1	5
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.7	5
89) trans-1,3-Dichloropropene	(3)			Not Detected					1	5

Digitally signed by Kevin A. Sposito on 11/07/2013 at 16:15. Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s35.d Injection date and time: **07-NOV-2013 15:49**
Data file Sample Info. Line: FBX01;7265247;1;0;;KVM04;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 16:06 Automation

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **10437**
Calibration date and time (Last Method Edit): 07-NOV-2013 15:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

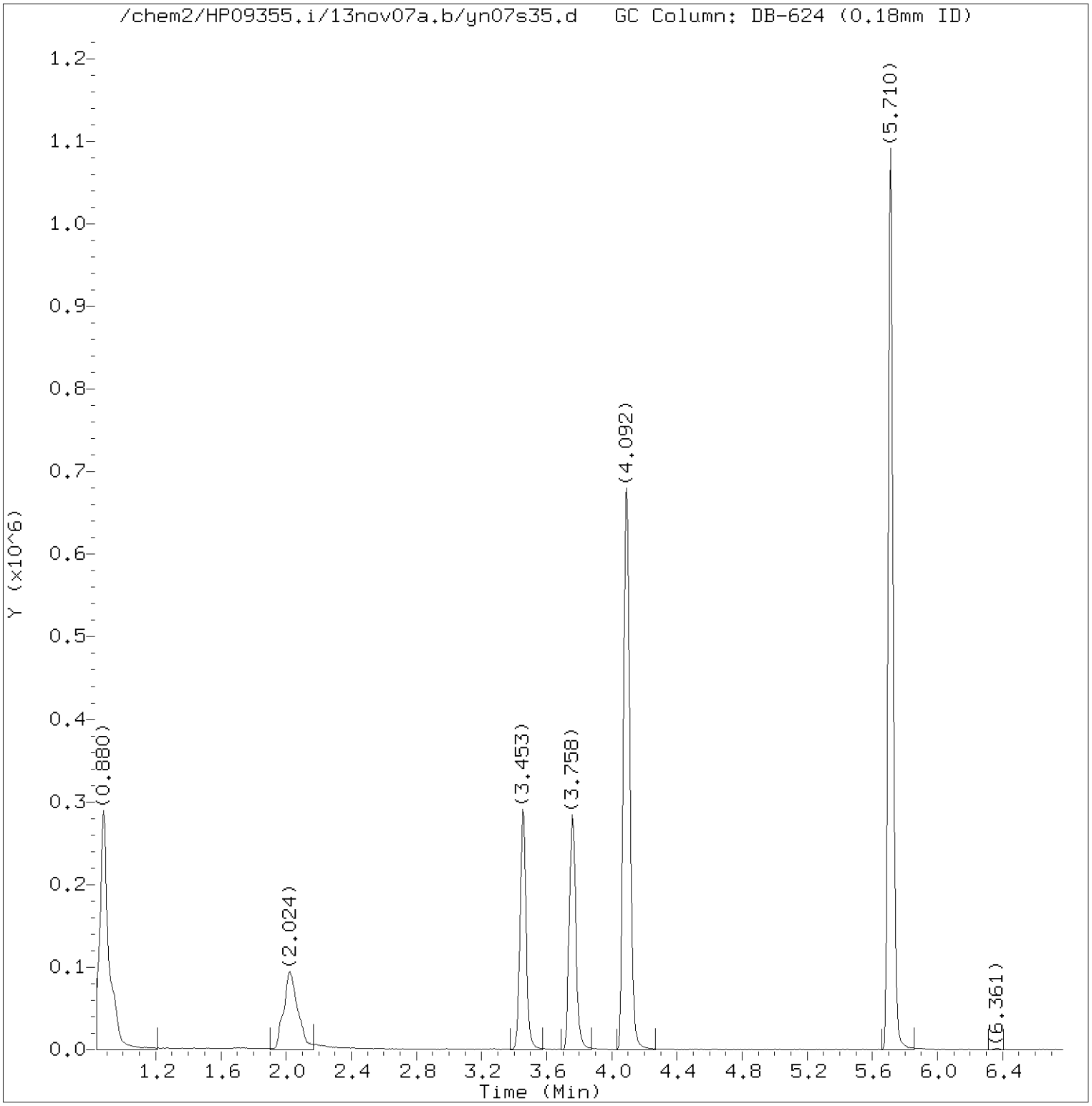
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.8	5
93) Tetrachloroethene	(3)				Not Detected					0.8	5
96) 2-Hexanone	(3)				Not Detected					3	10
97) Dibromochloromethane	(3)				Not Detected					1	5
99) 1,2-Dibromoethane	(3)				Not Detected					1	5
102) Chlorobenzene	(3)				Not Detected					0.8	5
104) Ethylbenzene	(3)				Not Detected					0.8	5
106) m+p-Xylene	(3)				Not Detected					0.8	5
107) o-Xylene	(3)				Not Detected					0.8	5
108) Xylene (Total)	(3)				Not Detected					0.8	5
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					1	5
111) Isopropylbenzene	(3)				Not Detected					1	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					1	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5

Total number of targets = 50

Digitally signed by Kevin A. Sposito on 11/07/2013 at 16:15. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10. Parallax ID: rcr00559



Total Ion Chromatogram (TIC)

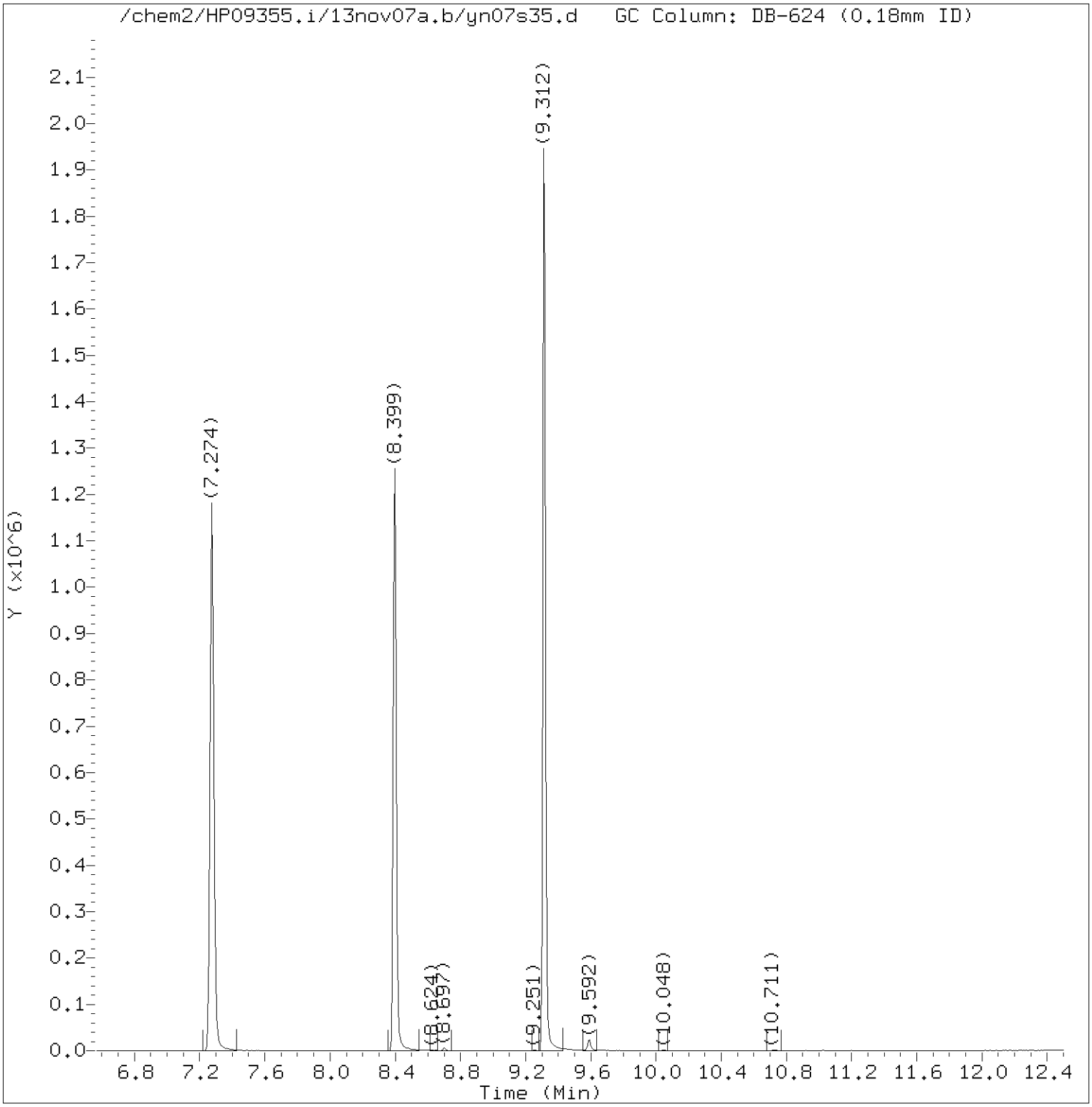
Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:06 Automation

Sample Name: FBX01 Lab Sample ID: 7265247

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:15.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:06 Automation

Sample Name: FBX01 Lab Sample ID: 7265247

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:15.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:06 Automation

Sample Name: FBX01 Lab Sample ID: 7265247

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.018	65	304680	250.000
52)$Dibromofluoromethane	(2)	3.453	113	228225	53.004
57)$1,2-Dichloroethane-d4	(2)	3.758	102	57283	51.322
66)*Fluorobenzene	(2)	4.092	96	922337	50.000
83)$Toluene-d8	(3)	5.710	98	901394	48.251
100)*Chlorobenzene-d5	(3)	7.274	117	701857	50.000
114)$4-Bromofluorobenzene	(3)	8.399	95	332186	46.727
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	413735	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:15.
Target 3.5 esignature user ID: kas02648

1E

EPA SAMPLE NO.

FBX01

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 7265247

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/13nov07a.b/yn07s35.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: not dec. Date Analyzed: 11/07/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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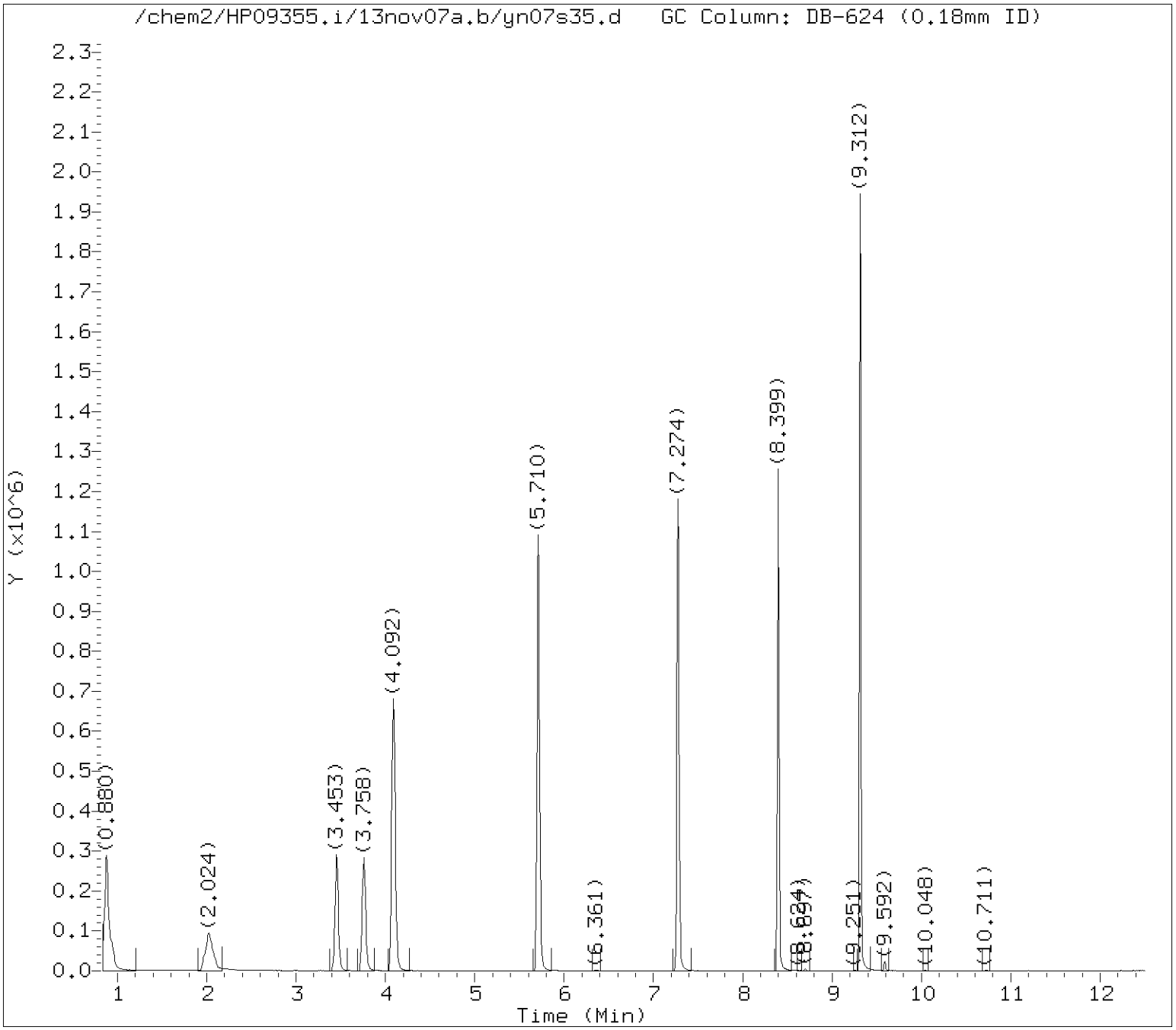
26.					
27.					
28.					
29.					
30.					

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

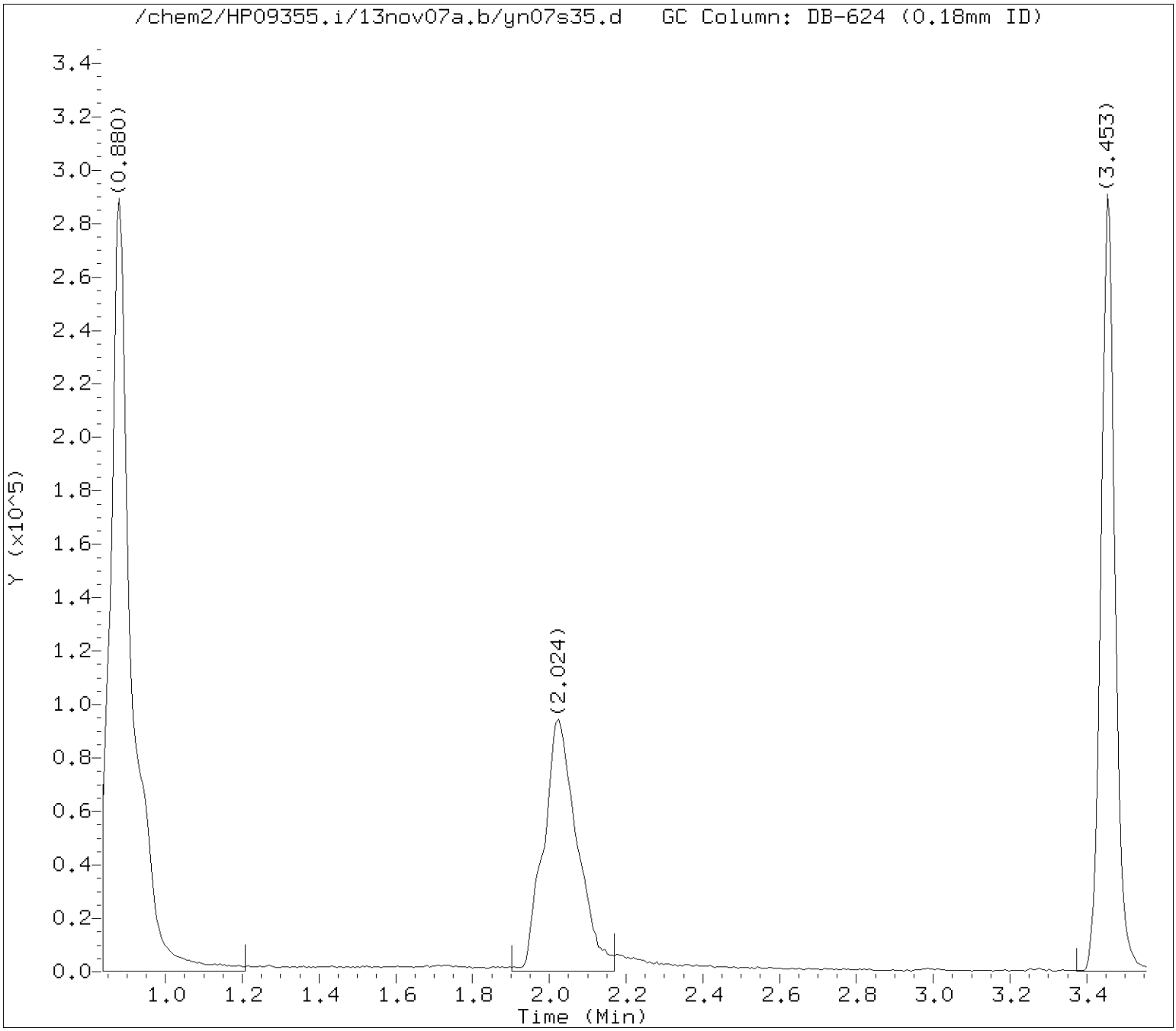
Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:29 msl01251

Sample Name: FBX01 Lab Sample ID: 7265247

Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 12.500

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

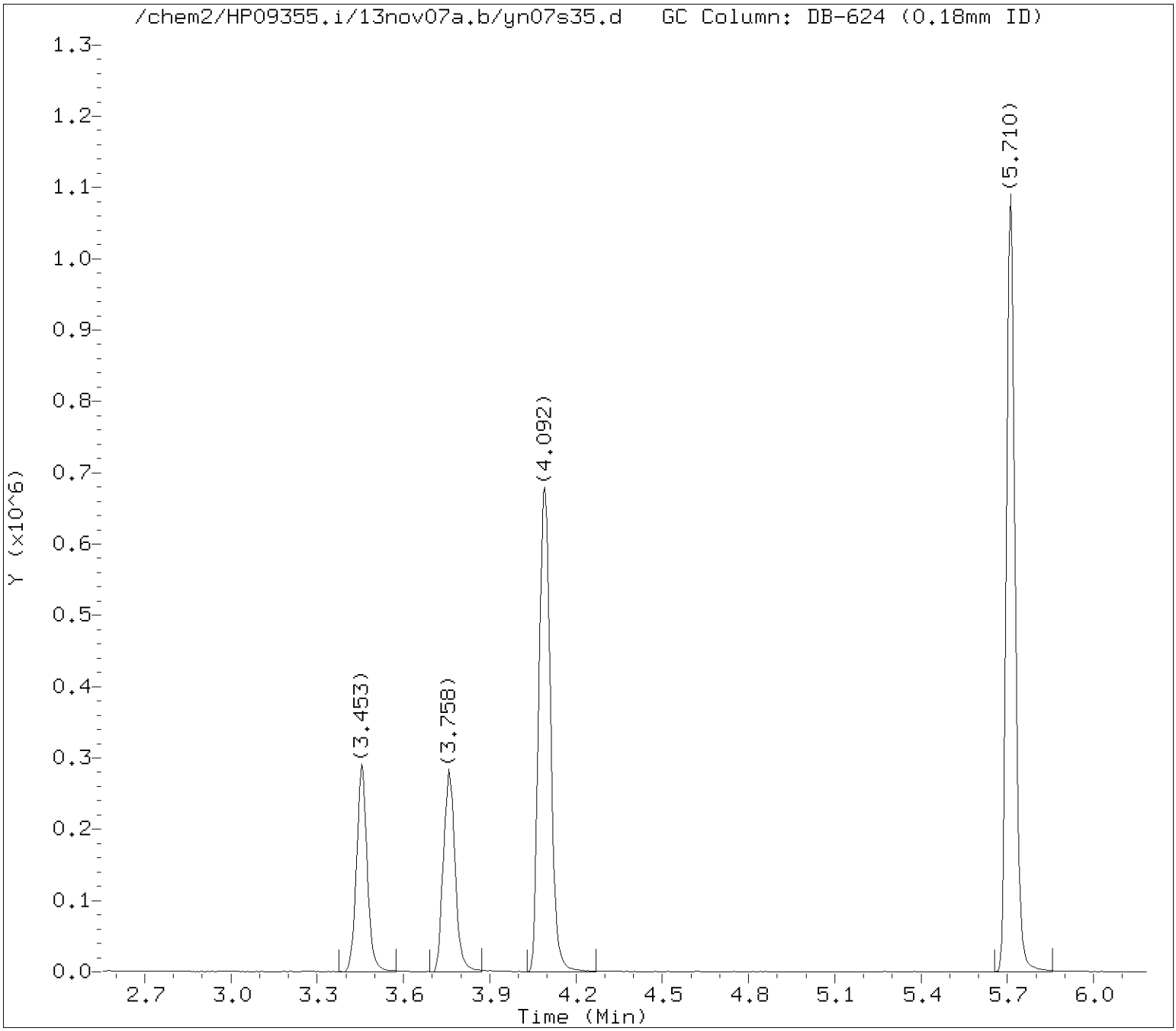
Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:29 msl01251

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: t-Butyl alcohol-d10 at 2.018 minutes
Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 3.055

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

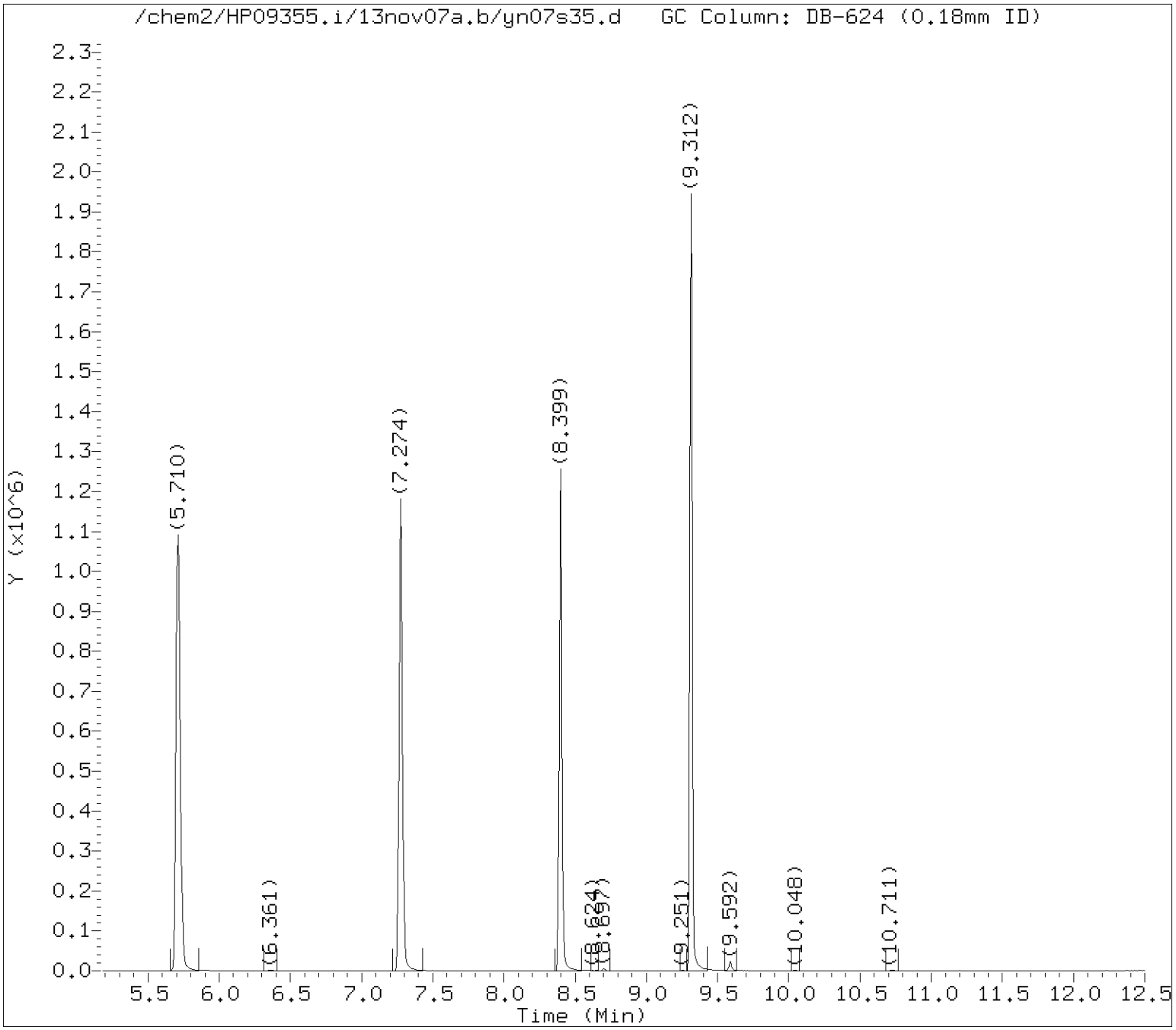
Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:29 msl01251

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Fluorobenzene at 4.092 minutes
Chromatogram Start Time (min.): 3.055
Chromatogram End Time (min.): 5.683

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

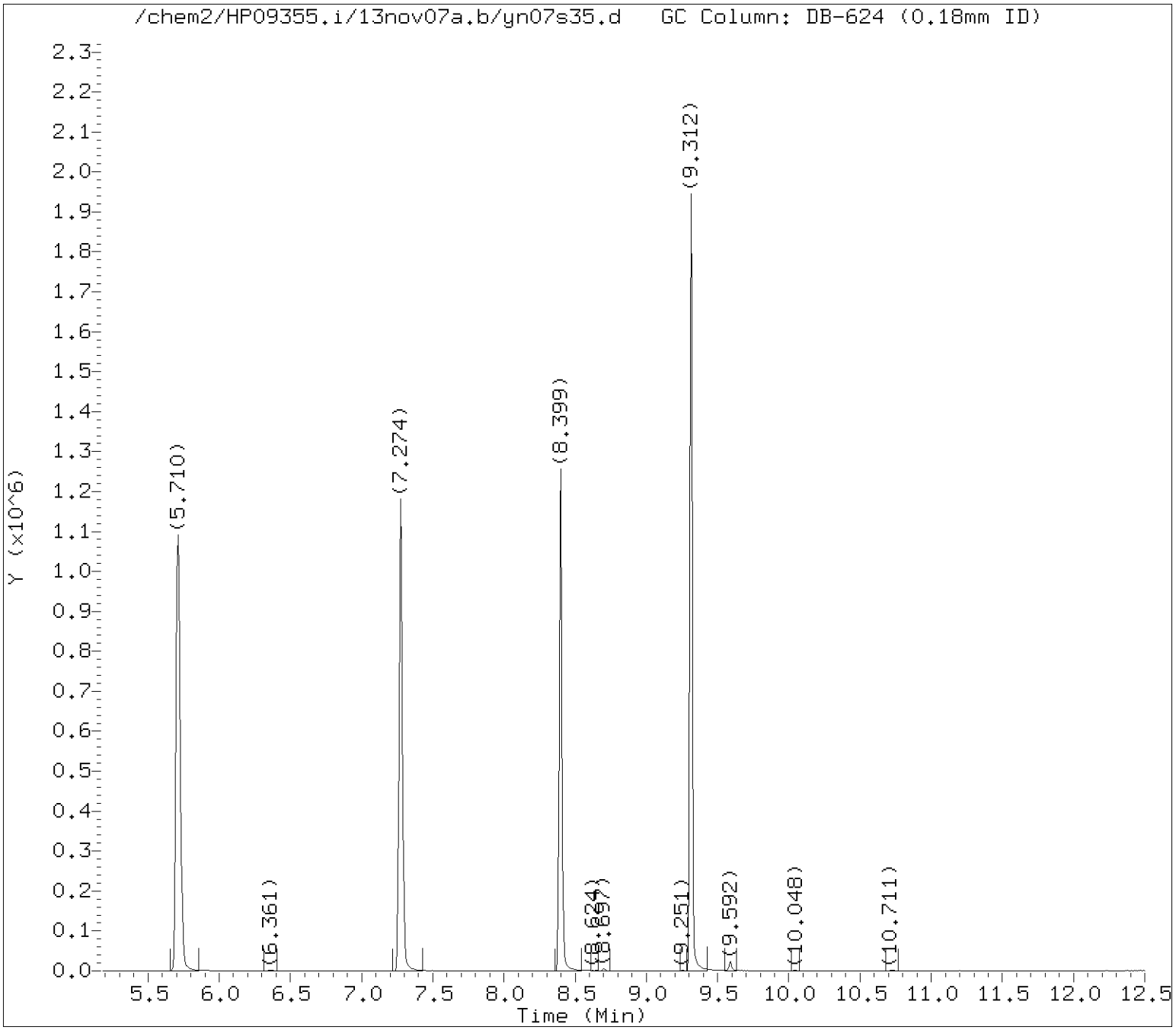
Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:29 msl01251

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Chlorobenzene-d5 at 7.274 minutes
Chromatogram Start Time (min.): 5.683
Chromatogram End Time (min.): 8.293

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s35.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 15:49 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:29 msl01251

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 9.312 minutes
Chromatogram Start Time (min.): 8.293
Chromatogram End Time (min.): 12.500

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories

Data file : /chem2/HP09355.i/13nov07a.b/yn07s35.d
Lab Smp Id: 7265247 Client Smp ID: FBX01
Inj Date : 07-NOV-2013 15:49
Operator : ADS01731 Inst ID: HP09355.i
Smp Info : FBX01;7265247;1;0;;KVM04;;;yn07b05;
Misc Info : 10437.sub;Y133112AA;;5;5;;;038a
Comment : Max. number of TICs to report is 16, 1 TICs were found initially.
Method : /chem2/HP09355.i/13nov07a.b/m8260b5.m
Meth Date : 07-Nov-2013 20:02 kas02648 Quant Type: ISTD
Cal Date : 23-OCT-2013 14:22 Cal File: yc23i07.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10437.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	normal purge volume
Vo	5.00000	sample volume

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 29 t-Butyl alcohol-d10	2.018	573740	250.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report						CAS #:	
0.880	1123143	489.395001	489.395001	0		0	29

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002

TBXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

7265249

Data file: /chem2/HP09355.i/13nov07a.b/yn07s36.d Injection date and time: **07-NOV-2013 16:11**
Data file Sample Info. Line: TBXXX;7265249;1;0;;KVM04;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 16:27 Automation

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **10437**
Calibration date and time (Last Method Edit): 07-NOV-2013 15:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.018(0.006)	195	65	285726 (-24)	250.00	
66) Fluorobenzene	4.092(0.000)	536	96	895942 (-13)	50.00	
100) Chlorobenzene-d5	7.274(0.006)	1059	117	681626 (-15)	50.00	
131) 1,4-Dichlorobenzene-d4	9.312(0.006)	1394	152	400212 (-17)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	3.453(0.000)	113	221521	52.962	106%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	3.758(0.000)	102	55110	50.830	102%		77 - 113
83) Toluene-d8	(3)	5.710(-0.001)	98	876277	48.298	97%		80 - 113
114) 4-Bromofluorobenzene	(3)	8.399(-0.001)	95	319217	46.236	92%		78 - 113

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
3) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					1	5
6) Vinyl Chloride	(2)			Not Detected					1	5
8) Bromomethane	(2)			Not Detected					1	5
9) Chloroethane	(2)			Not Detected					1	5
12) Trichlorofluoromethane	(2)			Not Detected					2	5
17) 1,1-Dichloroethene	(2)			Not Detected					0.8	5
18) Acetone	(2)			Not Detected					6	20
19) Freon 113	(2)			Not Detected					2	10
23) Carbon Disulfide	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					2	5
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.8	5
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
36) 1,1-Dichloroethane	(2)			Not Detected					1	5
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.8	5
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.8	5
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.8	5
54) Cyclohexane	(2)			Not Detected					2	5
56) Carbon Tetrachloride	(2)			Not Detected					1	5
60) Benzene	(2)			Not Detected					0.5	5
61) 1,2-Dichloroethane	(2)			Not Detected					1	5
71) Trichloroethene	(2)			Not Detected					1	5
72) Methylcyclohexane	(2)			Not Detected					1	5
73) 1,2-Dichloropropane	(2)			Not Detected					1	5
78) Bromodichloromethane	(2)			Not Detected					1	5
81) cis-1,3-Dichloropropene	(2)			Not Detected					1	5
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.7	5
89) trans-1,3-Dichloropropene	(3)			Not Detected					1	5

Digitally signed by Kevin A. Sposito on 11/07/2013 at 16:29. Target 3.5 esignature user ID: kas02648

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s36.d Injection date and time: **07-NOV-2013 16:11**
Data file Sample Info. Line: TBXXX;7265249;1;0;;KVM04;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 16:27 Automation

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **10437**
Calibration date and time (Last Method Edit): 07-NOV-2013 15:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

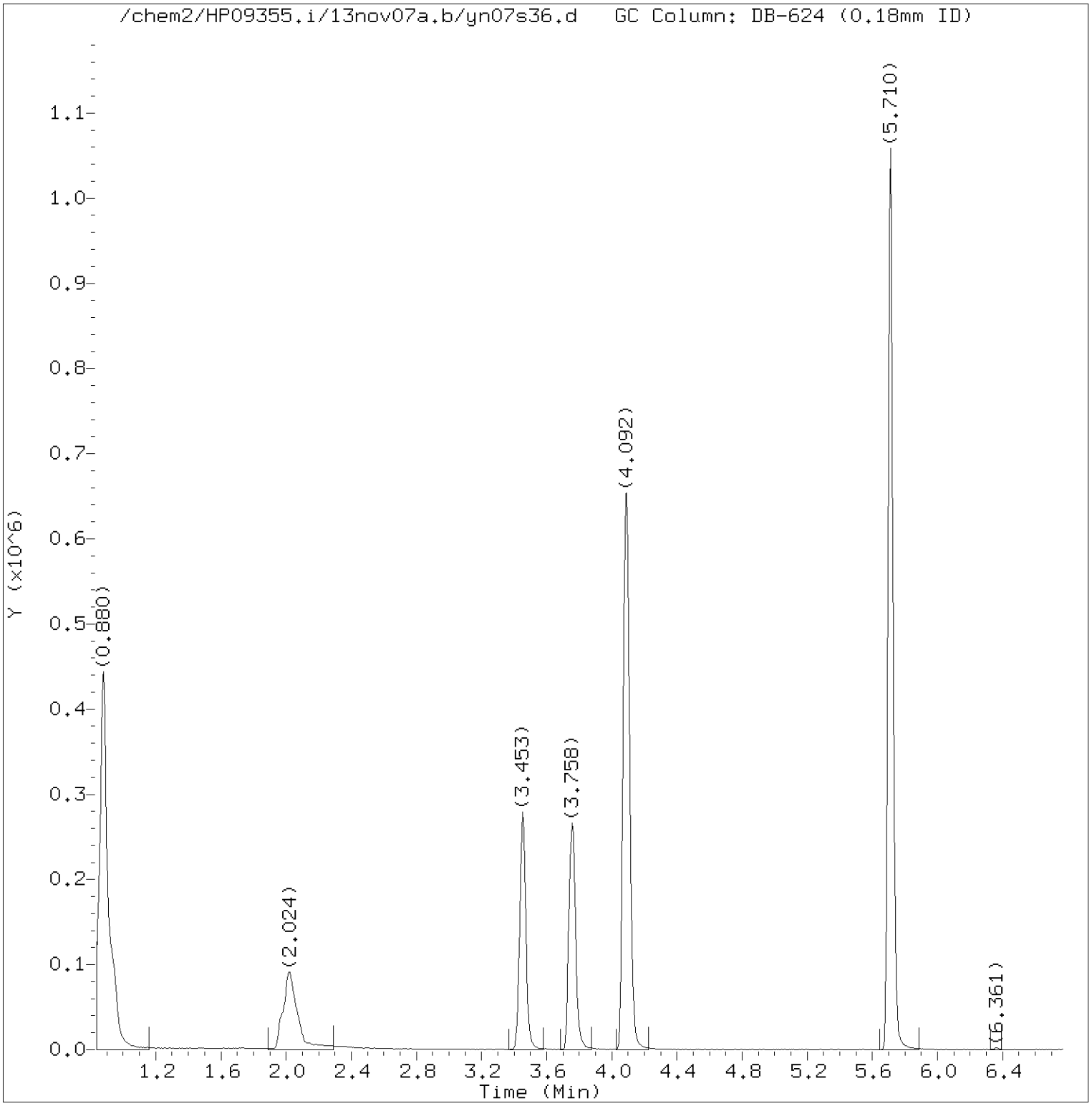
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.8	5
93) Tetrachloroethene	(3)				Not Detected					0.8	5
96) 2-Hexanone	(3)				Not Detected					3	10
97) Dibromochloromethane	(3)				Not Detected					1	5
99) 1,2-Dibromoethane	(3)				Not Detected					1	5
102) Chlorobenzene	(3)				Not Detected					0.8	5
104) Ethylbenzene	(3)				Not Detected					0.8	5
106) m+p-Xylene	(3)				Not Detected					0.8	5
107) o-Xylene	(3)				Not Detected					0.8	5
108) Xylene (Total)	(3)				Not Detected					0.8	5
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					1	5
111) Isopropylbenzene	(3)				Not Detected					1	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					1	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5

Total number of targets = 50

Digitally signed by Kevin A. Sposito on 11/07/2013 at 16:29. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10. Parallax ID: rcr00559



Total Ion Chromatogram (TIC)

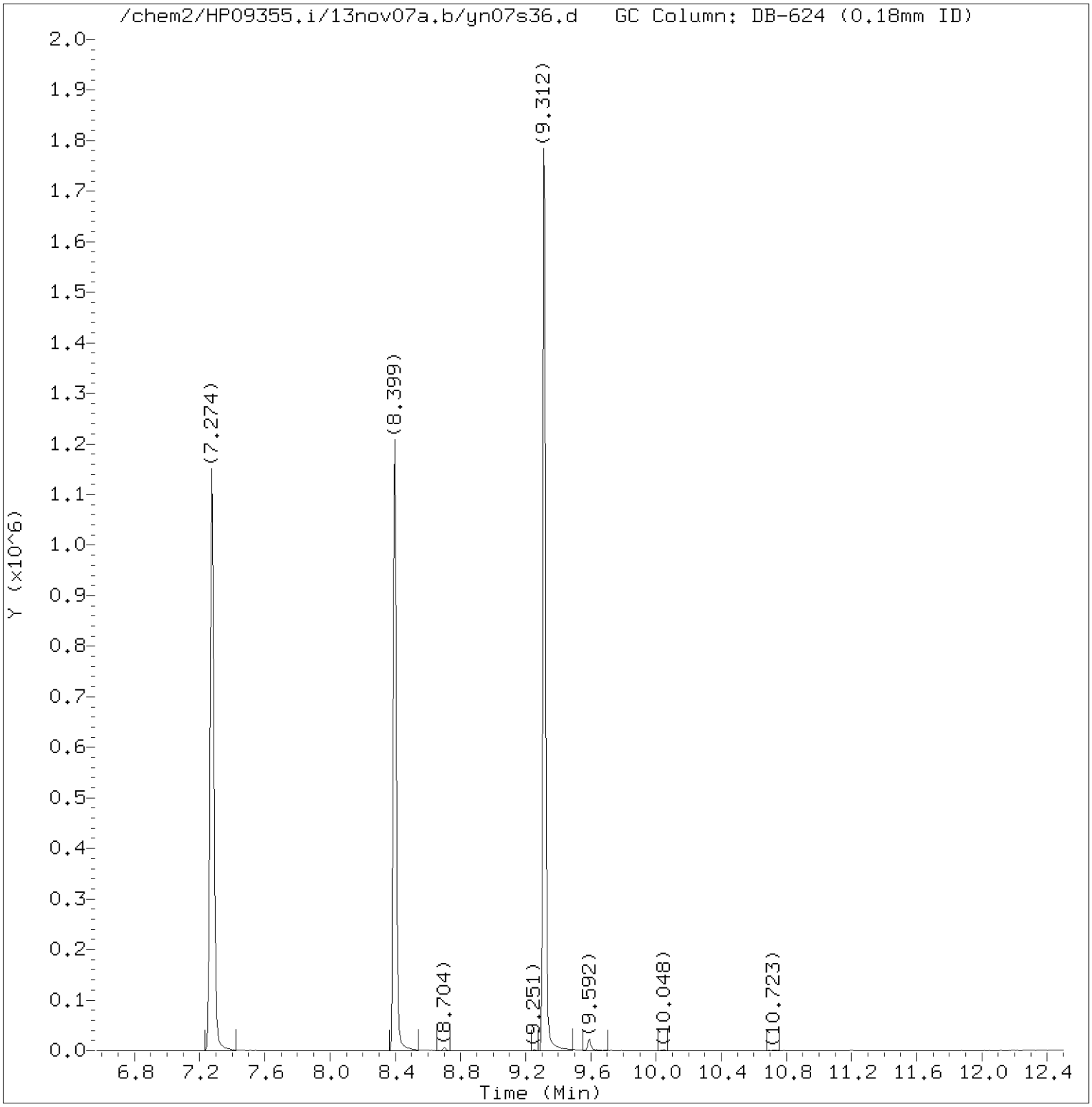
Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:27 Automation

Sample Name: TBXXX Lab Sample ID: 7265249

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:29.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:27 Automation

Sample Name: TBXXX Lab Sample ID: 7265249

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:29.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 07-Nov-2013 16:27 Automation

Sample Name: TBXXX Lab Sample ID: 7265249

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.018	65	285726	250.000
52)$Dibromofluoromethane	(2)	3.453	113	221521	52.962
57)$1,2-Dichloroethane-d4	(2)	3.758	102	55110	50.830
66)*Fluorobenzene	(2)	4.092	96	895942	50.000
83)$Toluene-d8	(3)	5.710	98	876277	48.298
100)*Chlorobenzene-d5	(3)	7.274	117	681626	50.000
114)$4-Bromofluorobenzene	(3)	8.399	95	319217	46.236
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	400212	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 11/07/2013 at 16:29.
Target 3.5 esignature user ID: kas02648

1E

EPA SAMPLE NO.

TBXXX

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: 7265249

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/13nov07a.b/yn07s36.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: not dec. Date Analyzed: 11/07/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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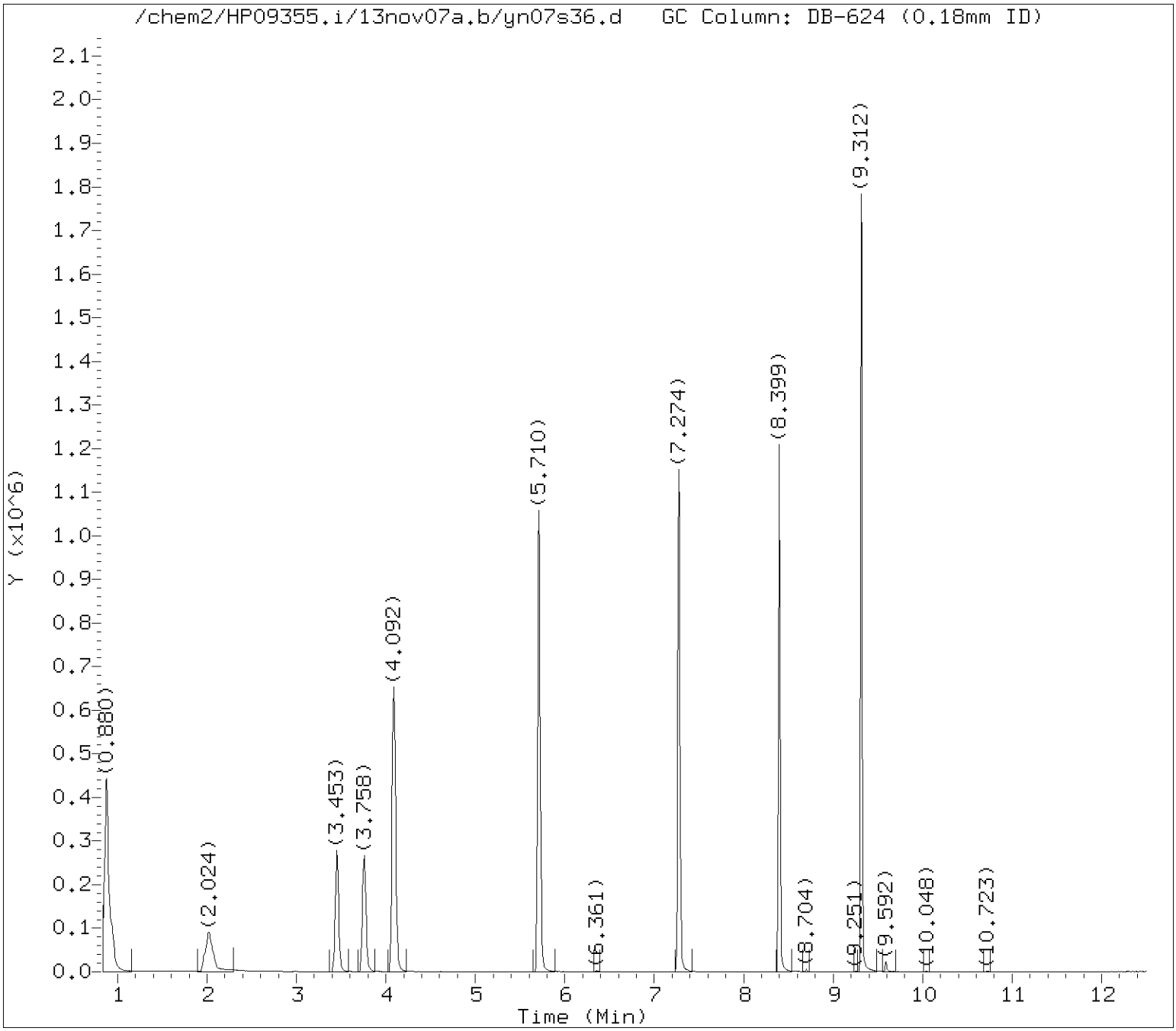
29.					
30.					

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

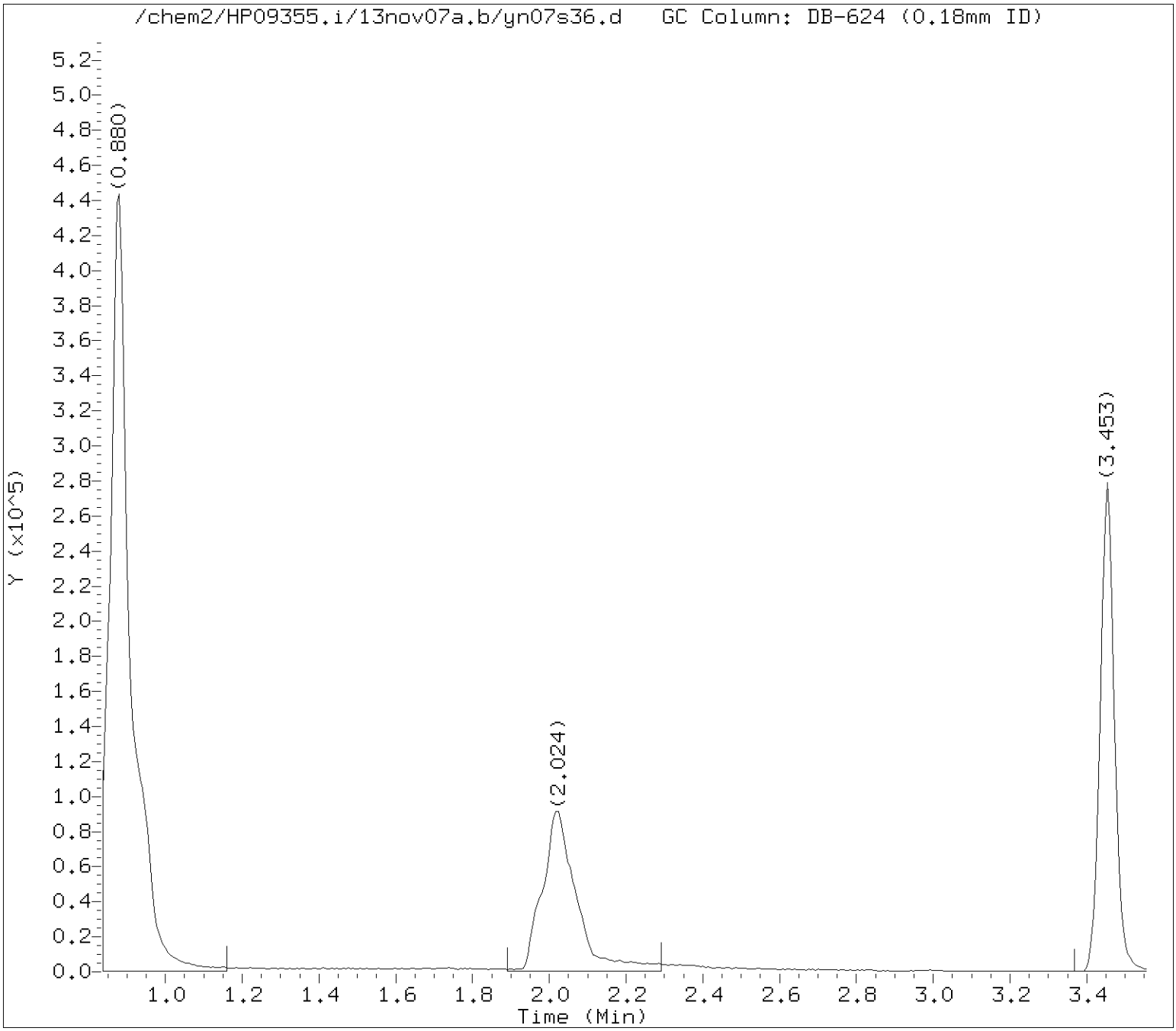
Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:30 msl01251

Sample Name: TBXXX Lab Sample ID: 7265249

Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 12.500

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

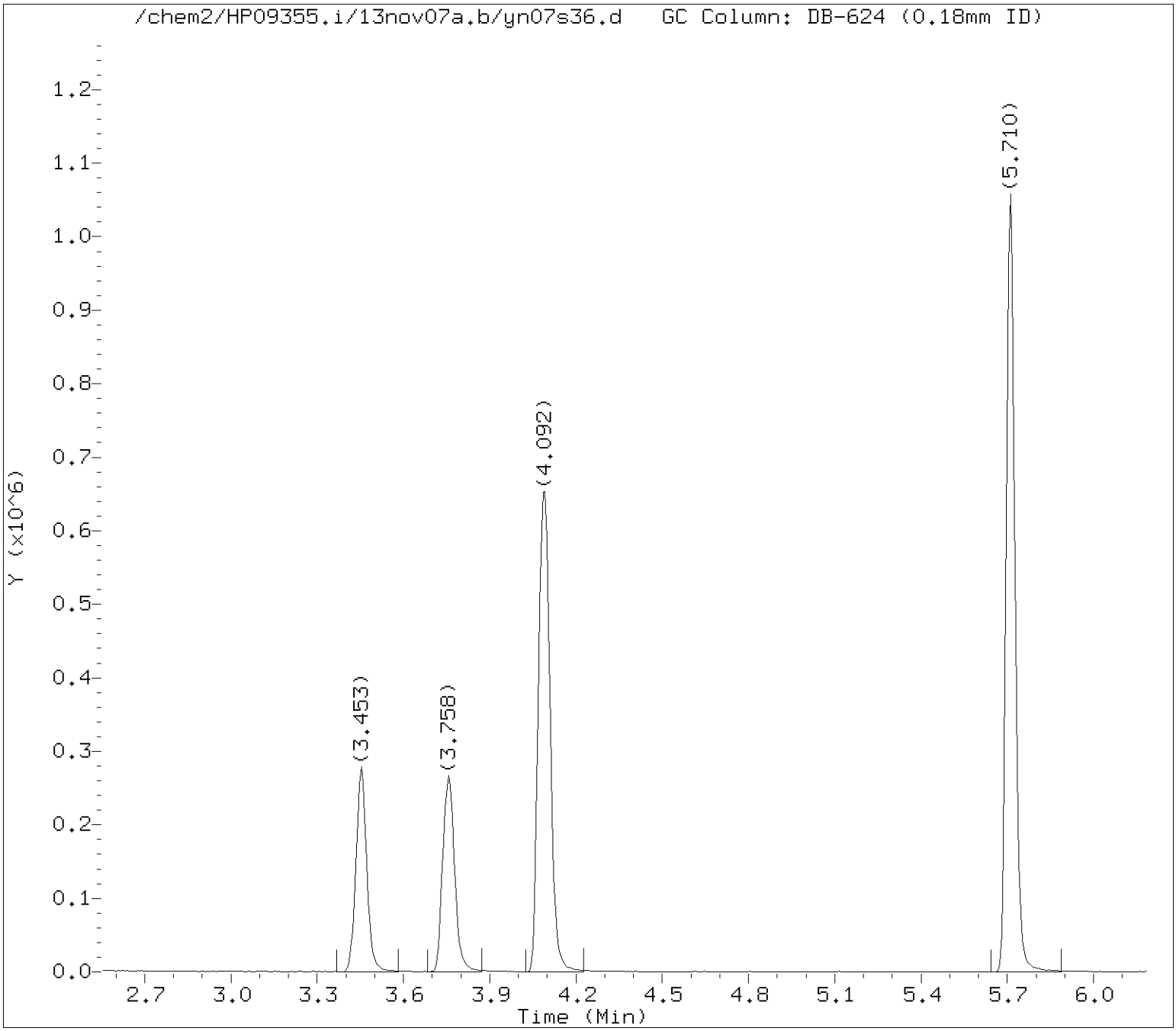
Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:30 msl01251

Sample Name: TBXXX Lab Sample ID: 7265249

Internal Standard referenced: t-Butyl alcohol-d10 at 2.018 minutes
Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 3.055

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

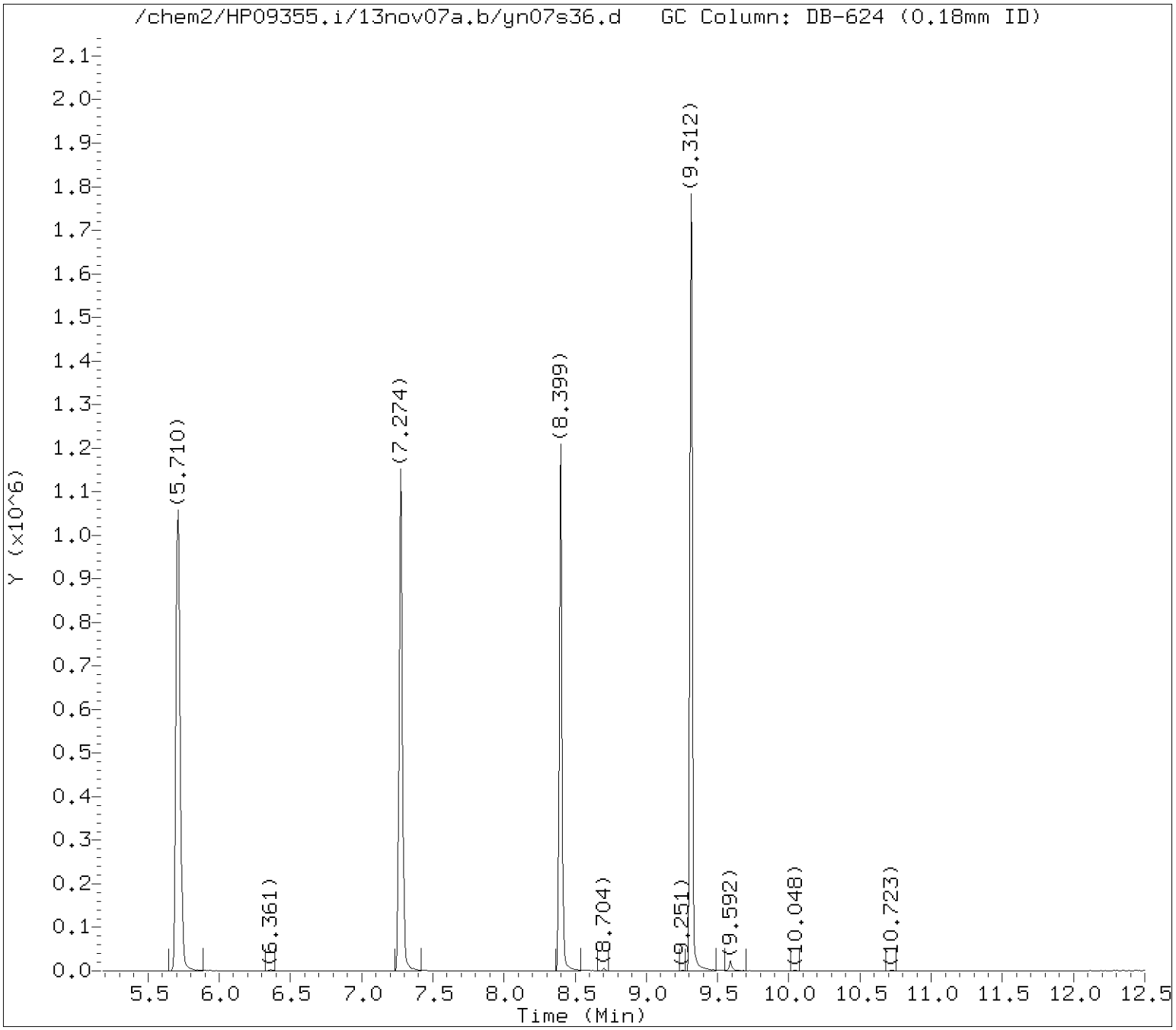
Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:30 msl01251

Sample Name: TBXXX Lab Sample ID: 7265249

Internal Standard referenced: Fluorobenzene at 4.092 minutes
Chromatogram Start Time (min.): 3.055
Chromatogram End Time (min.): 5.683

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

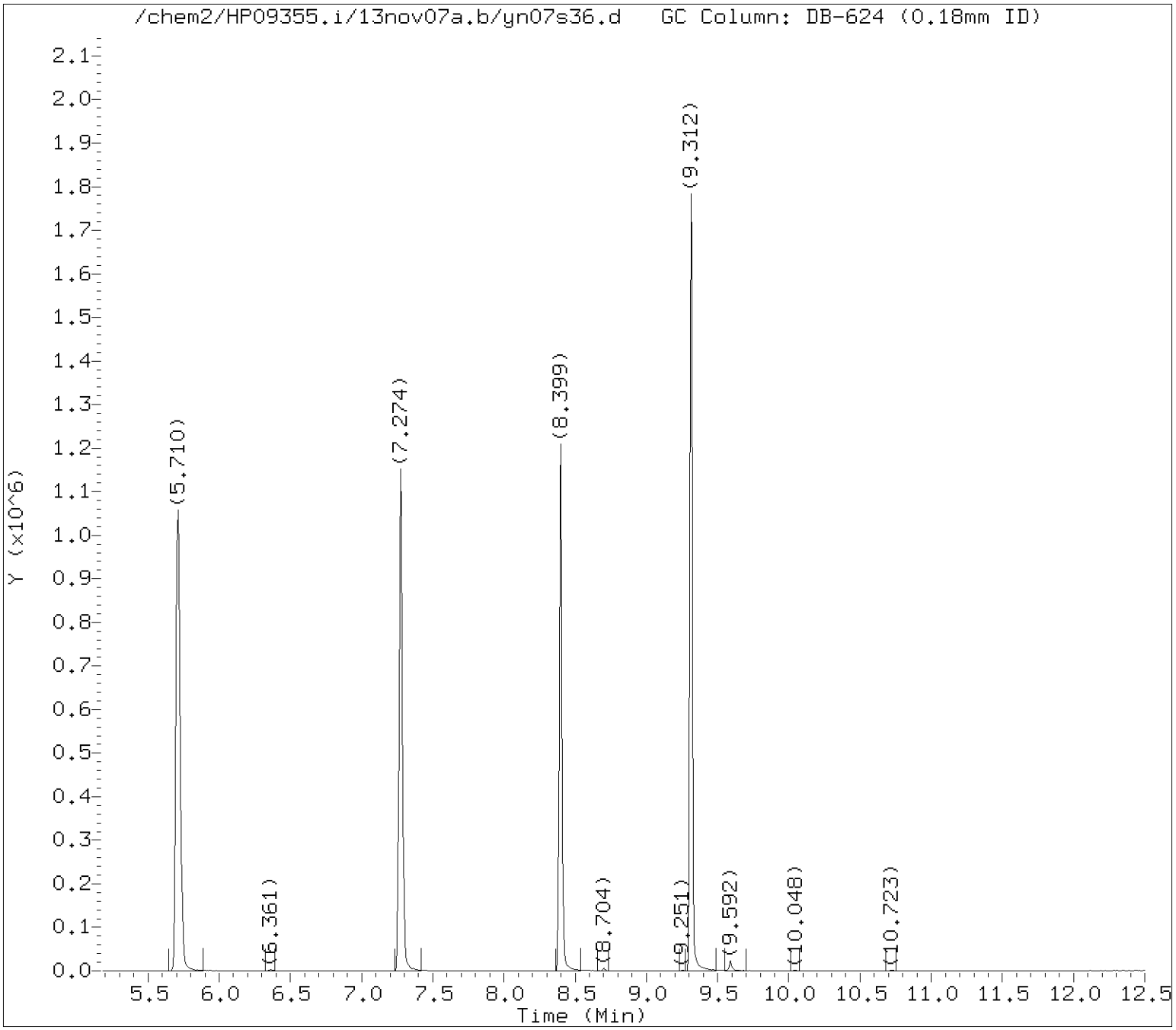
Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:30 msl01251

Sample Name: TBXXX Lab Sample ID: 7265249

Internal Standard referenced: Chlorobenzene-d5 at 7.274 minutes
Chromatogram Start Time (min.): 5.683
Chromatogram End Time (min.): 8.293

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s36.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 16:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 10437
Calibration date and time: 07-NOV-2013 15:10
Date, time and analyst ID of latest file update: 20-Nov-2013 19:30 msl01251

Sample Name: TBXXX Lab Sample ID: 7265249

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 9.312 minutes
Chromatogram Start Time (min.): 8.293
Chromatogram End Time (min.): 12.500

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories

Data file : /chem2/HP09355.i/13nov07a.b/yn07s36.d
Lab Smp Id: 7265249 Client Smp ID: TBXXX
Inj Date : 07-NOV-2013 16:11
Operator : ADS01731 Inst ID: HP09355.i
Smp Info : TBXXX;7265249;1;0;;KVM04;;;yn07b05;
Misc Info : 10437.sub;Y133112AA;;5;5;;;038a
Comment : Max. number of TICs to report is 16, 1 TICs were found initially.
Method : /chem2/HP09355.i/13nov07a.b/m8260b5.m
Meth Date : 07-Nov-2013 20:02 kas02648 Quant Type: ISTD
Cal Date : 23-OCT-2013 14:22 Cal File: yc23i07.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 10437.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	normal purge volume
Vo	5.00000	sample volume

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 29 t-Butyl alcohol-d10	2.018	571803	250.000

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
tBA-d10 ISTD - Do not report					CAS #:		
0.880	1676761	733.102684	733.102684	0		0	29

Digitally signed by Sara E. Johnson on 11/20/2013 at 19:38.
Target 3.5 esignature user ID: sej02002

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP09685 **HP #22**

** Shift #1 Analyst:_____** Shift #2 Analyst:____SJ_____** Shift #3 Analyst:__CGT_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = S, I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____
_____
_____
_____

Data Directory Path is - d:\data\13OCT23B\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
AC23T05.D	BFB SEP18-13	50NGBFB	23 Oct 13	18:38			MR
AC23X51.D	BLK	BLK	23 Oct 13	19:00			NU
AC23I01.D	VSTD300	VSTD300	23 Oct 13	19:23			MR
AC23I02.D	VSTD100	VSTD100	23 Oct 13	19:46			MR
AC23I03.D	VSTD050	VSTD050	23 Oct 13	20:09			MR
AC23I04.D	VSTD020	VSTD020	23 Oct 13	20:31			MR
AC23I05.D	VSTD010	VSTD010	23 Oct 13	20:54			MR
AC23I06.D	VSTD004	VSTD004	23 Oct 13	21:40			MR
AC23I07.D	VSTD002	VSTD002	23 Oct 13	22:03			MR
AC23M01.D	VSTD001	VSTD001	23 Oct 13	22:25			MR
AC23B51.D	VBLKA96	VBLKA96	23 Oct 13	22:48	A132962AA		MR
AC23S51.D	LCSA96	LCSA96	23 Oct 13	23:17	A132962AA		MR

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09685 **HP #22**

Data Directory Path is - d:\data\13NOV11A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
CBS01947	AN11X05.D	CLNBLK	11/11/2013	09:35		
CBS01947	AN11X06.D	CLNBLK	11/11/2013	09:58		
CBS01947	AN11T01.D	50NGBFB	11/11/2013	10:29		
CBS01947	AN11C01.D	VSTD050	11/11/2013	10:56	A133151AA	
CBS01947	AN11B01.D	VBLKA26	11/11/2013	11:18	A133151AA	
CBS01947	AN11B02.D	VBLKA26	11/11/2013	11:43	A133151AA	
CBS01947	AN11L01.D	LCSA26	11/11/2013	12:06	A133151AA	
CBS01947	AN11L02.D	LCDA26	11/11/2013	12:29	A133151AA	
CBS01947	AN11S01.D	7263999	11/11/2013	13:11	A133151AA	
CBS01947	AN11S02.D	7265237	11/11/2013	13:33	A133151AA	
CBS01947	AN11S03.D	7269163	11/11/2013	13:56	A133151AA	
CBS01947	AN11S04.D	7265769	11/11/2013	14:19	A133151AA	
CBS01947	AN11S21.D	7263999RE	11/11/2013	14:41	A133151AA	
CBS01947	AN11S22.D	7265769	11/11/2013	15:05	A133151AA	
CBS01947	AN11S05.D	7265770	11/11/2013	15:27	A133151AA	
CBS01947	AN11S06.D	7265771	11/11/2013	15:50	A133151AA	
CBS01947	AN11S07.D	7265772	11/11/2013	16:12	A133151AA	
CBS01947	AN11S08.D	7265773	11/11/2013	16:35	A133151AA	
CBS01947	AN11S09.D	7265774	11/11/2013	16:58	A133151AA	
CBS01947	AN11S10.D	7265775	11/11/2013	17:20	A133151AA	
CBS01947	AN11S11.D	7265776	11/11/2013	17:43	A133151AA	
CBS01947	AN11S12.D	7265777	11/11/2013	18:05	A133151AA	
CBS01947	AN11S13.D	7265778	11/11/2013	18:28	A133151AA	
CBS01947	AN11S14.D	7265780	11/11/2013	18:51	A133151AA	
CBS01947	AN11S15.D	7265781	11/11/2013	19:13	A133151AA	
CBS01947	AN11S16.D	7265782	11/11/2013	19:36	A133151AA	
CBS01947	AN11S17.D	7265783	11/11/2013	19:58	A133151AA	
CBS01947	AN11S18.D	7265784	11/11/2013	20:21	A133151AA	
CBS01947	AN11S19.D	7265785	11/11/2013	20:44	A133151AA	
CBS01947	AN11S20.D	7265779	11/11/2013	21:06	A133151AA	

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP09193 **HP #19**

** Shift #1 Analyst:_____** Shift #2 Analyst:_____** Shift #3 Analyst: CGT_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = S, I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____
_____
_____
_____

Data Directory Path is - C:\MSDCHEM\1\DATA\13OCT22A\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
XC22T01.D	50 NG BFB	BFB SEP18-13	22 Oct 13	01:30			MR
XC22I01.D	VSTD300	VSTD300	22 Oct 13	01:57			MR
XC22I02.D	VSTD100	VSTD100	22 Oct 13	02:22			MR
XC22I03.D	VSTD050	VSTD050	22 Oct 13	02:45			MR
XC22I04.D	VSTD020	VSTD020	22 Oct 13	03:14			MR
XC22I05.D	VSTD010	VSTD010	22 Oct 13	03:42			MR
XC22I06.D	VSTD004	VSTD004	22 Oct 13	04:08			MR
XC22M01.D	VSTD1.0	1PPBMDL	22 Oct 13	04:33			MR
XC22M02.D	VSTD0.5	0.5PPBMDL	22 Oct 13	04:59			MR
XC22V01.D	LCSXICV	LCSXICV	22 Oct 13	05:27			MR

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - c:\msdchem\1\data\13NOV07A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ADS01731	YN07T01.D	BFB SEP18-13	11/07/2013	09:09		
ADS01731	YN07C01.D	VSTD050	11/07/2013	09:26	Y133111AA	
ADS01731	YN07C02.D	VSTD050	11/07/2013	09:47	Y133111AA	
ADS01731	YN07B01.D	VBLKY32	11/07/2013	10:09	Y133111AA	
ADS01731	YN07S01.D	LCSY32	11/07/2013	10:36	Y133111AA	
ADS01731	YN07S02.D	LCDY32	11/07/2013	10:57	Y133111AA	
ADS01731	YN07S03.D	LCSY33	11/07/2013	11:18	Y133111AA	
ADS01731	YN07S04.D	LCDY33	11/07/2013	11:40	Y133111AA	
ADS01731	YN07S05.D	7263614	11/07/2013	12:16	Y133111AA	
ADS01731	YN07S06.D	7263616	11/07/2013	12:37	Y133111AA	
ADS01731	YN07S07.D	7264451	11/07/2013	12:59	Y133111AA	
ADS01731	YN07S08.D	7264596	11/07/2013	13:20	Y133111AA	
ADS01731	YN07S09.D	7265637	11/07/2013	13:42	Y133111AA	
ADS01731	YN07S10.D	7265639	11/07/2013	14:03	Y133111AA	
ADS01731	YN07S11.D	7266347	11/07/2013	14:24	Y133111AA	
ADS01731	YN07S12.D	7266393	11/07/2013	14:45	Y133111AA	
ADS01731	YN07S13.D	7266394	11/07/2013	15:07	Y133111AA	
ADS01731	YN07S34.D	7260460	11/07/2013	15:28	Y133112AA	
ADS01731	YN07S35.D	7265247	11/07/2013	15:49	Y133112AA	
ADS01731	YN07S36.D	7265249	11/07/2013	16:11	Y133112AA	
ADS01731	YN07S37.D	7252954MSD	11/07/2013	16:32	Y133112AA	2
ADS01731	YN07S38.D	7252953MS	11/07/2013	16:53	Y133112AA	2
ADS01731	YN07S39.D	7252952	11/07/2013	17:14	Y133112AA	2
ADS01731	YN07X01.D	BLK	11/07/2013	17:36	Y133112AA	
ADS01731	YN07S40.D	7264534	11/07/2013	17:57	Y133112AA	
ADS01731	YN07S41.D	7264535	11/07/2013	18:18	Y133112AA	
ADS01731	YN07S42.D	7264536	11/07/2013	18:39	Y133112AA	
ADS01731	YN07S43.D	7264537	11/07/2013	19:01	Y133112AA	
ADS01731	YN07S44.D	7264539	11/07/2013	19:22	Y133112AA	

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP09355 **HP #20**

** Shift #1 Analyst:_____ADS___** Shift #2 Analyst:_____** Shift #3 Analyst:_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = S, I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____
_____
_____
_____

Data Directory Path is - c:\msdchem\1\data\13OCT23A\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
YC23T01.D	50ng BFB	BFB SEP18-13	23 Oct 2013	11:28			MR
YC23X11.D	BLANK	BLANK	23 Oct 2013	11:49			NU
YC23I01.D	VSTD300	VSTD300	23 Oct 2013	12:11			MR
YC23I02.D	VSTD100	VSTD100	23 Oct 2013	12:32			NU
YC23I03.D	VSTD050	VSTD050	23 Oct 2013	12:53			MR
YC23I04.D	VSTD020	VSTD020	23 Oct 2013	13:18			MR
YC23I05.D	VSTD010	VSTD010	23 Oct 2013	13:39			MR
YC23I06.D	VSTD004	VSTD004	23 Oct 2013	14:01			MR
YC23I07.D	VSTD001	VSTD001	23 Oct 2013	14:22			MR
YC23M01.D	MDL0.5	MDL0.5	23 Oct 2013	14:43			MR
YC23V01.D	YLGICV	YLGICV	23 Oct 2013	15:04			MR
YC23I08.D	VSTD100	VSTD100	23 Oct 2013	15:38			MR

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09355 **HP #20**

Data Directory Path is - c:\msdchem\1\data\13NOV07A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
ADS01731	YN07T01.D	BFB SEP18-13	11/07/2013	09:09		
ADS01731	YN07C01.D	VSTD050	11/07/2013	09:26	Y133111AA	
ADS01731	YN07C02.D	VSTD050	11/07/2013	09:47	Y133111AA	
ADS01731	YN07B01.D	VBLKY32	11/07/2013	10:09	Y133111AA	
ADS01731	YN07S01.D	LCSY32	11/07/2013	10:36	Y133111AA	
ADS01731	YN07S02.D	LCDY32	11/07/2013	10:57	Y133111AA	
ADS01731	YN07S03.D	LCSY33	11/07/2013	11:18	Y133111AA	
ADS01731	YN07S04.D	LCDY33	11/07/2013	11:40	Y133111AA	
ADS01731	YN07S05.D	7263614	11/07/2013	12:16	Y133111AA	
ADS01731	YN07S06.D	7263616	11/07/2013	12:37	Y133111AA	
ADS01731	YN07S07.D	7264451	11/07/2013	12:59	Y133111AA	
ADS01731	YN07S08.D	7264596	11/07/2013	13:20	Y133111AA	
ADS01731	YN07S09.D	7265637	11/07/2013	13:42	Y133111AA	
ADS01731	YN07S10.D	7265639	11/07/2013	14:03	Y133111AA	
ADS01731	YN07S11.D	7266347	11/07/2013	14:24	Y133111AA	
ADS01731	YN07S12.D	7266393	11/07/2013	14:45	Y133111AA	
ADS01731	YN07S13.D	7266394	11/07/2013	15:07	Y133111AA	
ADS01731	YN07S34.D	7260460	11/07/2013	15:28	Y133112AA	
ADS01731	YN07S35.D	7265247	11/07/2013	15:49	Y133112AA	
ADS01731	YN07S36.D	7265249	11/07/2013	16:11	Y133112AA	
ADS01731	YN07S37.D	7252954MSD	11/07/2013	16:32	Y133112AA	2
ADS01731	YN07S38.D	7252953MS	11/07/2013	16:53	Y133112AA	2
ADS01731	YN07S39.D	7252952	11/07/2013	17:14	Y133112AA	2
ADS01731	YN07X01.D	BLK	11/07/2013	17:36	Y133112AA	
ADS01731	YN07S40.D	7264534	11/07/2013	17:57	Y133112AA	
ADS01731	YN07S41.D	7264535	11/07/2013	18:18	Y133112AA	
ADS01731	YN07S42.D	7264536	11/07/2013	18:39	Y133112AA	
ADS01731	YN07S43.D	7264537	11/07/2013	19:01	Y133112AA	
ADS01731	YN07S44.D	7264539	11/07/2013	19:22	Y133112AA	

Data File: /chem2/HP09193.i/13oct22a.b/xc22t01.d

Date : 22-OCT-2013 01:30

Client ID: 50 NG BFB

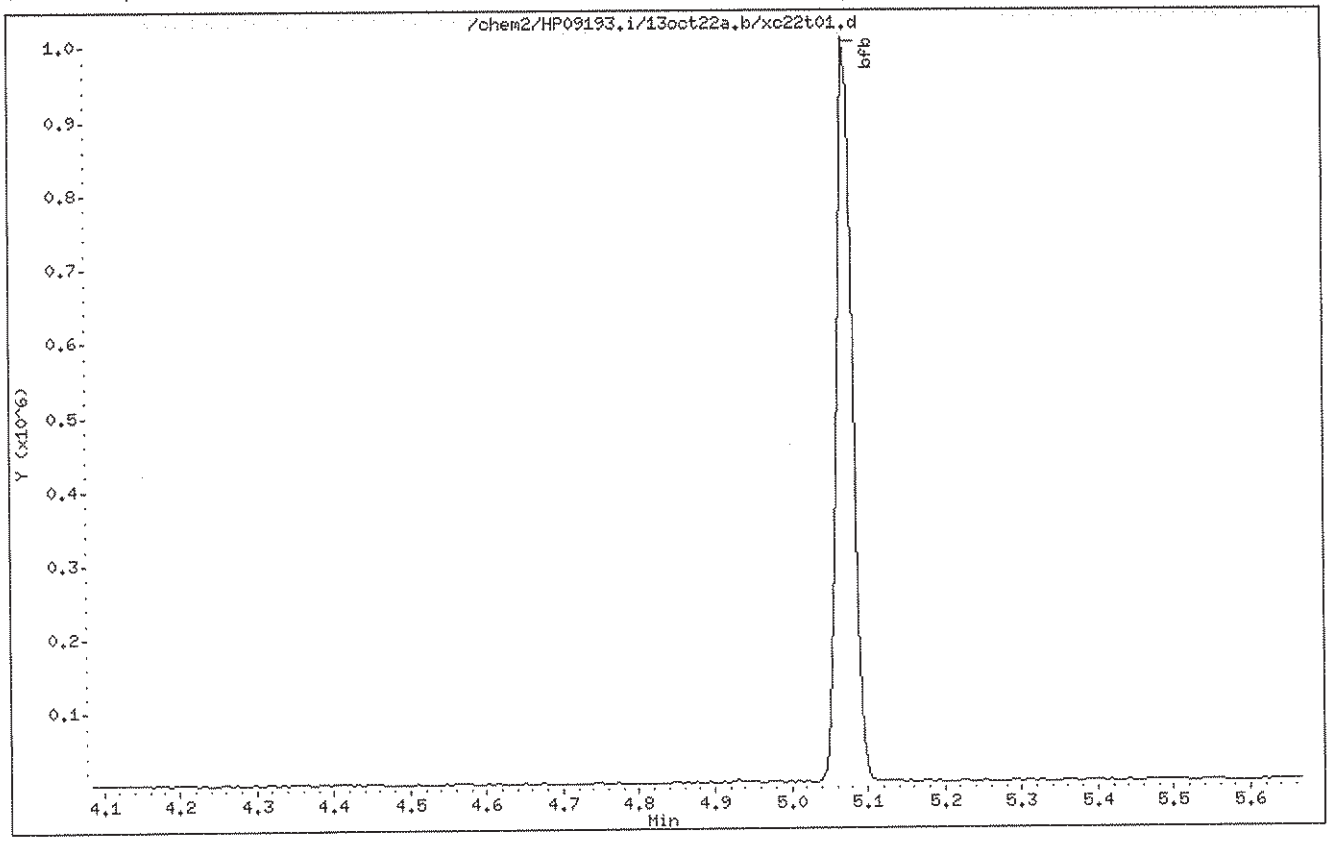
Instrument: HP09193.i

Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

Operator: CGT03258

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Christopher G. Torres on 10/22/2013 at 06:09.
Target 3.5 esignature user ID: cgt03258

Data File: /chem2/HP09193.i/13oct22a.b/xc22t01.d

Date : 22-OCT-2013 01:30

Client ID: 50 NG BFB

Instrument: HP09193.i

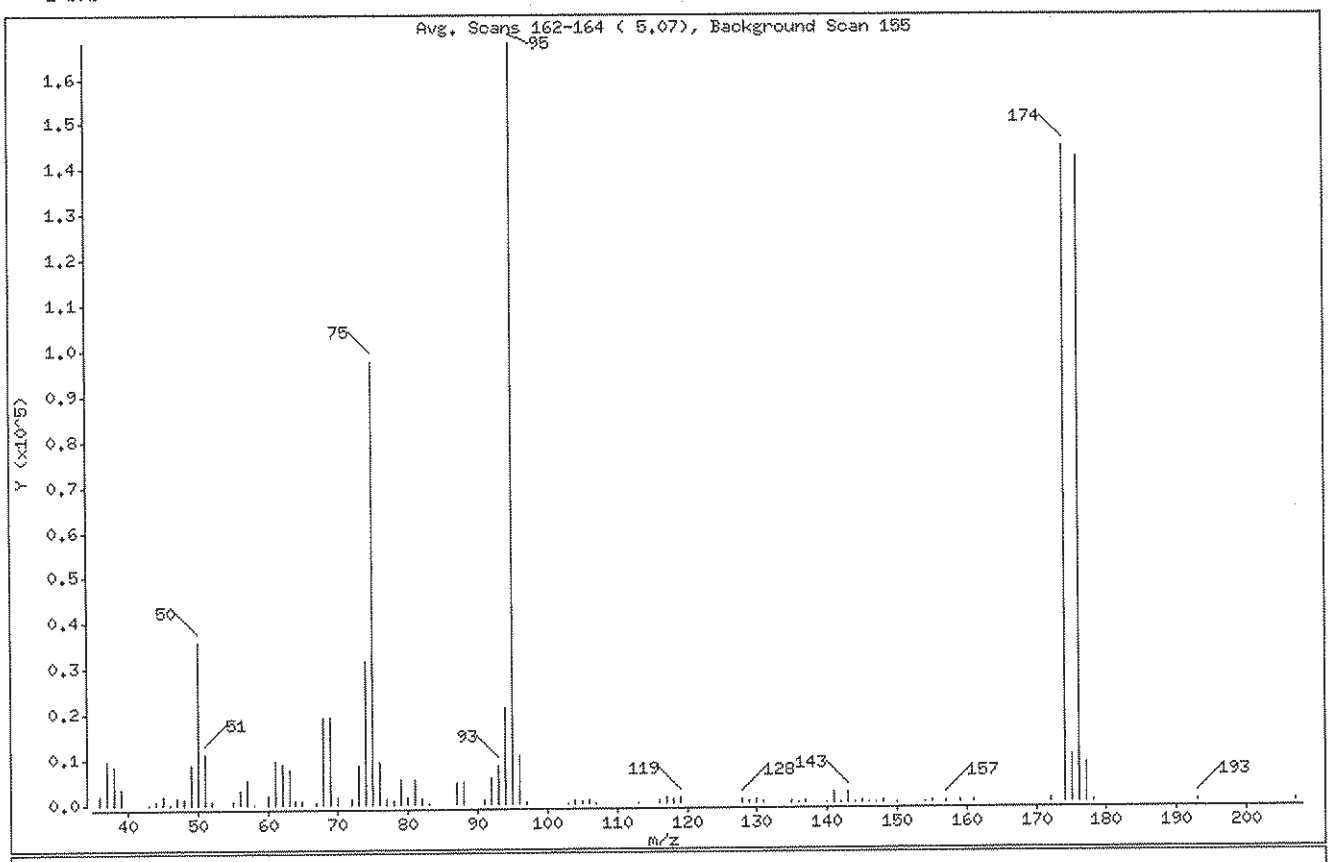
Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

Operator: CGT03258

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.34
75	30.00 - 60.00% of mass 95	58.24
96	5.00 - 9.00% of mass 95	6.44
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	86.28
175	5.00 - 9.00% of mass 174	6.10 (7.06)
176	95.00 - 101.00% of mass 174	84.80 (98.29)
177	5.00 - 9.00% of mass 176	5.09 (6.00)

Digitally signed by Christopher G. Torres on 10/22/2013 at 06:09.
Target 3.5 esignature user ID: cgt03258

Data File: /chem2/HP09193.i/13oct22a.b/xc22t01.d

Date : 22-OCT-2013 01:30

Client ID: 50 NG BFB

Instrument: HP09193.i

Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

Operator: CGT03258

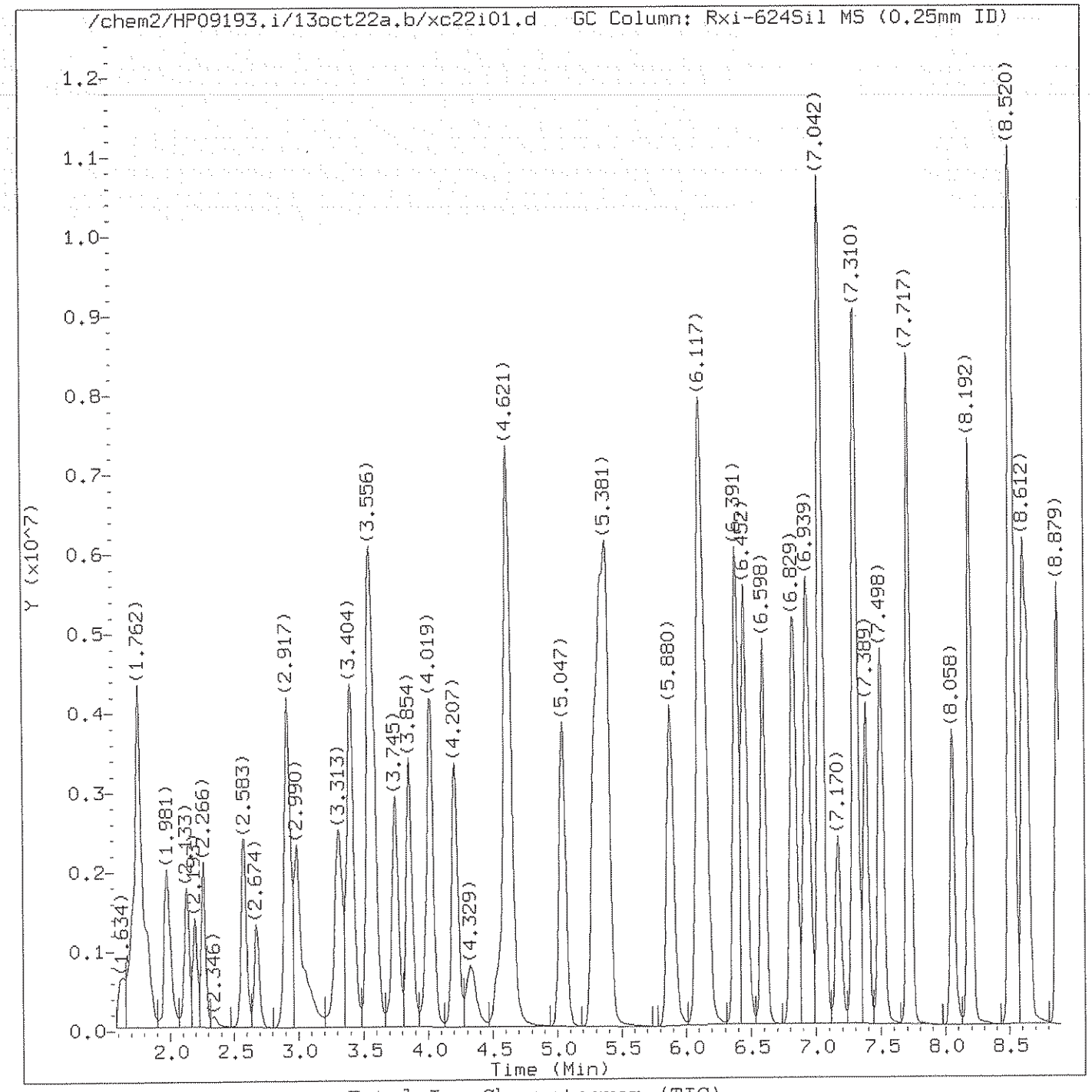
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: xc22t01.d
Spectrum: Avg. Scans 162-164 (5.07), Background Scan 155
Location of Maximum: 96.00
Number of points: 89

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1920	65.00	849	95.00	167936	143.00	2376
37.00	9685	67.00	500	96.00	10810	144.00	98
38.00	8598	68.00	19200	97.00	271	145.00	371
39.00	3537	69.00	19168	103.00	87	146.00	93
43.00	100	70.00	1357	104.00	861	147.00	107
44.00	848	72.00	1088	105.00	255	148.00	371
45.00	1744	73.00	8410	106.00	760	150.00	91
46.00	106	74.00	31808	107.00	118	154.00	118
47.00	1379	75.00	97816	113.00	84	155.00	258
48.00	1070	76.00	9100	116.00	743	157.00	282
49.00	8713	77.00	1128	117.00	1056	159.00	260
50.00	35848	78.00	598	118.00	858	161.00	270
51.00	11251	79.00	5524	119.00	1109	172.00	886
52.00	598	80.00	1691	128.00	776	174.00	144896
55.00	605	81.00	5445	129.00	397	175.00	10237
56.00	3026	82.00	1325	130.00	635	176.00	142400
57.00	5529	83.00	92	131.00	272	177.00	8545
58.00	116	87.00	4512	135.00	559	178.00	195
60.00	1800	88.00	4904	136.00	98	193.00	462
61.00	9671	91.00	747	137.00	236	207.00	236
62.00	8705	92.00	5722	140.00	93		
63.00	7642	93.00	8383	141.00	2351		
64.00	887	94.00	21416	142.00	172		

Digitally signed by Christopher G. Torres on 10/22/2013 at 06:09.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d
Injection date and time: 22-OCT-2013 01:57

Instrument ID: HP09193.i
Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m
Calibration date and time: 22-OCT-2013 02:24

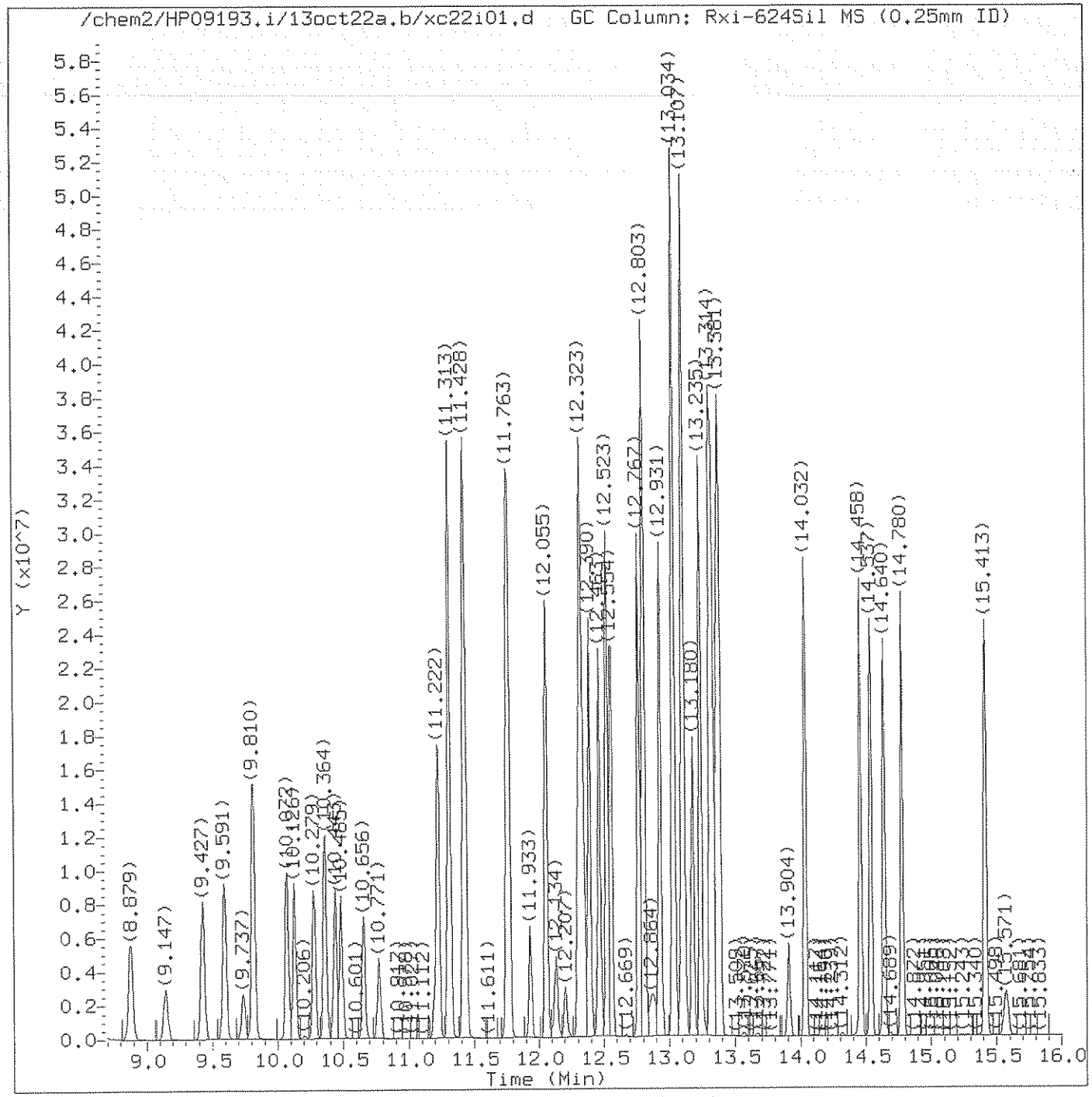
Sublist used: 8260S-2C

Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300

Lab Sample ID: VSTD300

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.981	85	4183261	300.000
4) Chloromethane	(2)	2.133	50	3039739	300.000
5) Vinyl Chloride	(2)	2.266	62	2923175	300.000
9) Bromomethane	(2)	2.577	94	2495742	300.000
10) Chloroethane	(2)	2.674	64	1763048	300.000
11) Dichlorofluoromethane	(2)	2.917	67	5021233	300.000
13) Trichlorofluoromethane	(2)	2.990	101	5412303	300.000
15) Ethanol	(1)	3.094	45	1833043	15000.000
17) Freon 123a	(2)	3.313	67	2773608	300.000
18) Acrolein	(1)	3.410	56	5357692	3000.000
19) 1,1-Dichloroethene	(2)	3.544	96	2303907	300.000
19) 1,1-Dichloroethene	(2)	3.544	63	1348237	300.000
20) Acetone	(2)	3.568	58	498605	600.000
22) Freon 113	(2)	3.581	101	2489672	300.000
23) 2-Propanol	(1)	3.727	45	1237236	1500.000
24) Methyl Iodide	(2)	3.751	142	4901796	300.000
25) Carbon Disulfide	(2)	3.854	76	8033670	300.000
27) Methyl Acetate	(2)	3.988	43	1951686	300.000
29) Allyl Chloride	(2)	4.025	41	3804995	300.000
30)*t-Butyl alcohol-d10	(1)	4.213	65	284413	250.000
31) Methylene Chloride	(2)	4.213	84	2624141	300.000
32) t-Butyl alcohol	(1)	4.329	59	2187818	1500.000
33) Acrylonitrile	(2)	4.536	53	1021611	300.000
34) Methyl Tertiary Butyl Ether	(2)	4.615	73	8127194	300.000
35) trans-1,2-Dichloroethene	(2)	4.627	96	2707401	300.000
38) n-Hexane	(2)	5.047	57	3327080	300.000
40) 1,1-Dichloroethane	(2)	5.290	63	5101074	300.000
41) di-Isopropyl ether	(2)	5.345	45	8312748	300.000
42) 2-Chloro-1,3-butadiene	(2)	5.393	53	4916411	300.000
44) Ethyl t-butyl ether	(2)	5.880	59	6481281	300.000
45) 2-Butanone	(2)	6.081	43	2872759	600.000
47) 1,2-Dichloroethene (Total)	(2)		96	5793020	600.000
46) cis-1,2-Dichloroethene	(2)	6.117	96	3085619	300.000
48) 2,2-Dichloropropane	(2)	6.142	77	4947603	300.000
50) Propionitrile	(1)	6.172	54	2051741	1500.000
51) Methacrylonitrile	(2)	6.391	67	3102561	750.000
52) Bromochloromethane	(2)	6.452	128	1613352	300.000
53) Tetrahydrofuran	(1)	6.464	71	796316	600.000

* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	5557146	300.000
56)$Dibromofluoromethane	(2)	6.817	113	524504	50.000
56)$Dibromofluoromethane	(2)	6.817	111	541808	50.000
57) 1,1,1-Trichloroethane	(2)	6.835	97	5399920	300.000
58) Cyclohexane	(2)	6.939	56	4326300	300.000
58) Cyclohexane	(2)	6.939	84	3932677	300.000
58) Cyclohexane	(2)	6.939	69	1383391	300.000
60) Carbon Tetrachloride	(2)	7.042	117	4798013	300.000
59) 1,1-Dichloropropene	(2)	7.042	75	4147784	300.000
61) Isobutyl Alcohol	(1)	7.170	41	1811854	3750.000
62)$1,2-Dichloroethane-d4	(2)	7.285	102	112720	50.000
62)$1,2-Dichloroethane-d4	(2)	7.285	65	734425	50.000
62)$1,2-Dichloroethane-d4	(2)	7.285	104	73592	50.000
63) Benzene	(2)	7.310	78	10843498	300.000
66) 1,2-Dichloroethane	(2)	7.389	62	5165537	300.000
66) 1,2-Dichloroethane	(2)	7.389	98	358788	300.000
67) t-Amyl methyl ether	(2)	7.504	73	5435762	300.000
69)*Fluorobenzene	(2)	7.717	96	1960781	50.000
71) n-Heptane	(2)	7.723	43	3762902	300.000
72) n-Butanol	(1)	8.058	56	2843881	7500.000
74) Trichloroethene	(2)	8.192	95	3142140	300.000
75) Methylcyclohexane	(2)	8.514	83	4606884	300.000
76) 1,2-Dichloropropane	(2)	8.539	63	2833823	300.000
78) Methyl Methacrylate	(2)	8.612	69	2421984	300.000
79) 1,4-Dioxane	(1)	8.618	88	509060	3750.000
80) Dibromomethane	(2)	8.642	93	2112481	300.000
83) Bromodichloromethane	(2)	8.879	83	4651981	300.000
84) 2-Nitropropane	(1)	9.147	41	2388196	600.000
86) cis-1,3-Dichloropropene	(2)	9.427	75	5108780	300.000
87) 4-Methyl-2-pentanone	(2)	9.591	43	6791010	600.000
88)$Toluene-d8	(3)	9.737	98	1980864	50.000
88)$Toluene-d8	(3)	9.737	100	1295685	50.000
89) Toluene	(3)	9.816	92	7400420	300.000
90) trans-1,3-Dichloropropene	(3)	10.072	75	5418053	300.000
91) Ethyl Methacrylate	(3)	10.126	69	4538702	300.000
92) 1,1,2-Trichloroethane	(3)	10.279	97	2724715	300.000
94) Tetrachloroethene	(3)	10.364	166	3720594	300.000
95) 1,3-Dichloropropane	(3)	10.443	76	4861071	300.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	5207171	600.000
99) Dibromochloromethane	(3)	10.656	129	3784368	300.000
100) 1,2-Dibromoethane	(3)	10.771	107	3084179	300.000
101)*Chlorobenzene-d5	(3)	11.197	117	1587593	50.000
102) Chlorobenzene	(3)	11.228	112	8779122	300.000
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	3761517	300.000
104) Ethylbenzene	(3)	11.313	91	14134002	300.000
105) m+p-Xylene	(3)	11.428	106	12111773	600.000
107) Xylene (Total)	(3)		106	18240122	900.000
106) o-Xylene	(3)	11.757	106	6128349	300.000
108) Styrene	(3)	11.769	104	10115672	300.000
109) Bromoform	(3)	11.933	173	2711513	0.000
110) Isopropylbenzene	(3)	12.061	105	14058309	300.000
113) Cyclohexanone	(1)	12.134	55	1789936	3750.000
114)$4-Bromofluorobenzene	(3)	12.201	95	833920	50.000
114)$4-Bromofluorobenzene	(3)	12.207	174	745034	50.000
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	4147552M	300.000
116) Bromobenzene	(4)	12.323	156	4672216	300.000
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	4118116	750.000
118) 1,2,3-Trichloropropane	(4)	12.353	110	1424206	300.000
119) n-Propylbenzene	(4)	12.396	91	14821654	300.000
121) 2-Chlorotoluene	(4)	12.463	126	4123974	300.000
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	13031876	300.000
125) 4-Chlorotoluene	(4)	12.560	126	4368659	300.000
128) tert-Butylbenzene	(4)	12.767	134	3571511	300.000
129) Pentachloroethane	(4)	12.797	167	3083863	300.000
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	13473474	300.000
131) sec-Butylbenzene	(4)	12.937	105	14606646	300.000
133) 1,3-Dichlorobenzene	(4)	13.028	146	8811036	300.000
134) p-Isopropyltoluene	(4)	13.034	119	14169687M	300.000
135)*1,4-Dichlorobenzene-d4	(4)	13.089	152	1033658	50.000
136) 1,4-Dichlorobenzene	(4)	13.107	146	9041713	300.000
137) 1,2,3-Trimethylbenzene	(4)	13.114	105	13720491	300.000
138) Benzyl Chloride	(4)	13.180	126	2378224	300.000
139) 1,3-Diethylbenzene	(4)	13.235	119	9596571	300.000
140) 1,4-Diethylbenzene	(4)	13.314	119	9883654	300.000
141) n-Butylbenzene	(4)	13.333	92	8363035	300.000
142) 1,2-Dichlorobenzene	(4)	13.363	146	8522920	300.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

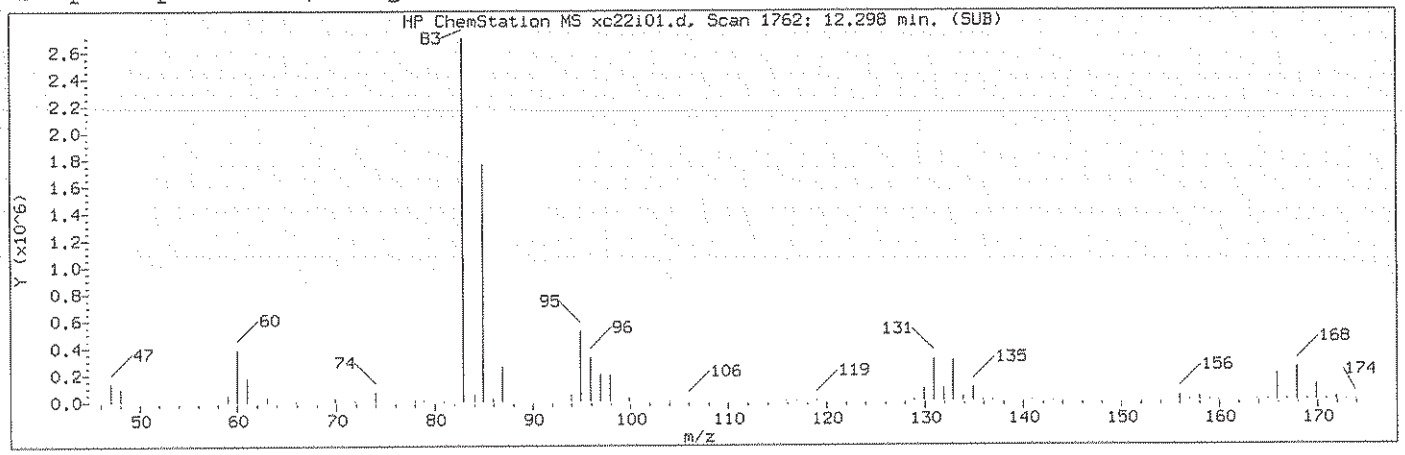
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

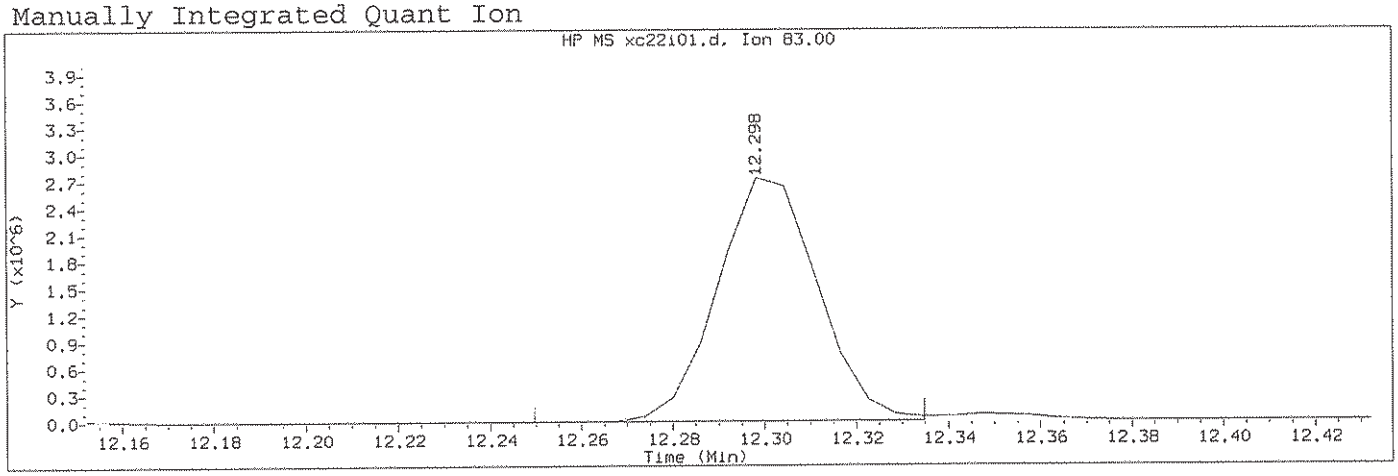
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	8236582	300.000
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	1219536	300.000
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	7486171	300.000
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	7119753	300.000
149) Hexachlorobutadiene	(4)	14.537	225	3939556	300.000
150) Naphthalene	(4)	14.647	128	14452209	300.000
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	6887652	300.000
152) 2-Methylnaphthalene	(4)	15.413	142	11165857	300.000

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

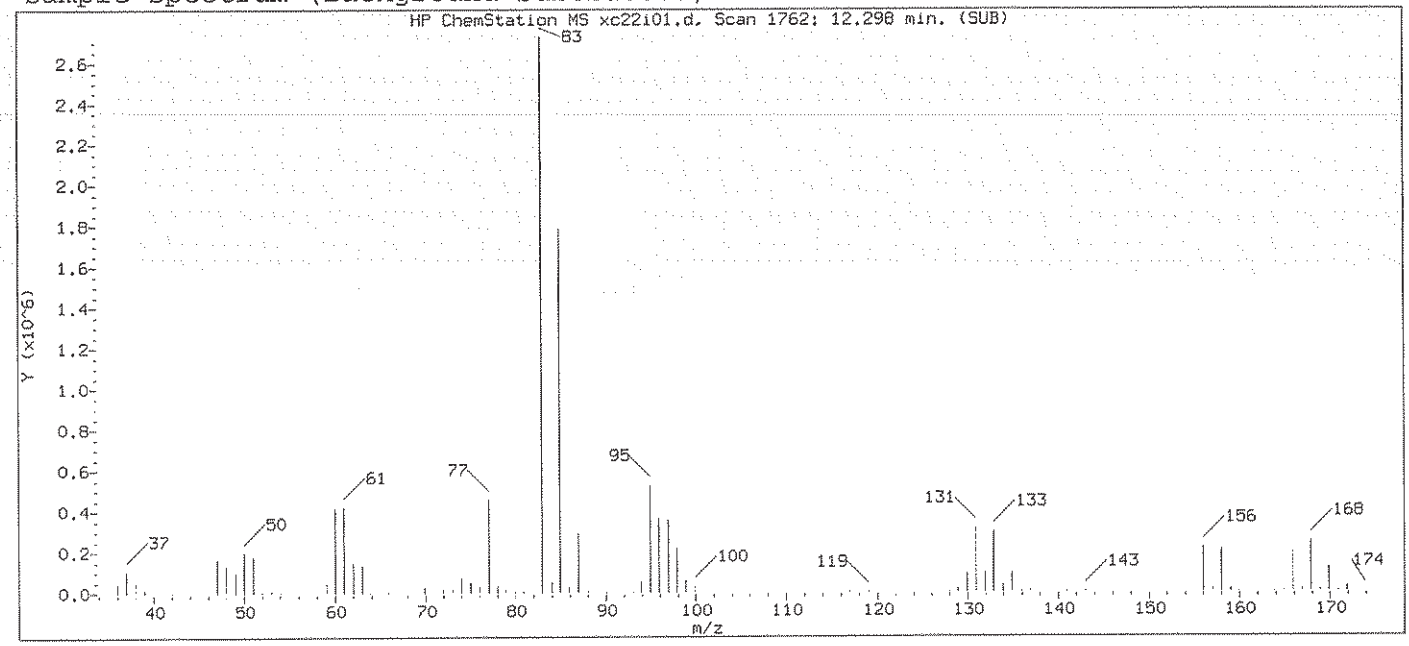
Compound Number : 115
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1762
Retention Time (minutes): 12.298
Quant Ion : 83.00
Area (flag) : 4147552M
On-Column Amount (ng) : 300.0000
Integration start scan : 1753 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

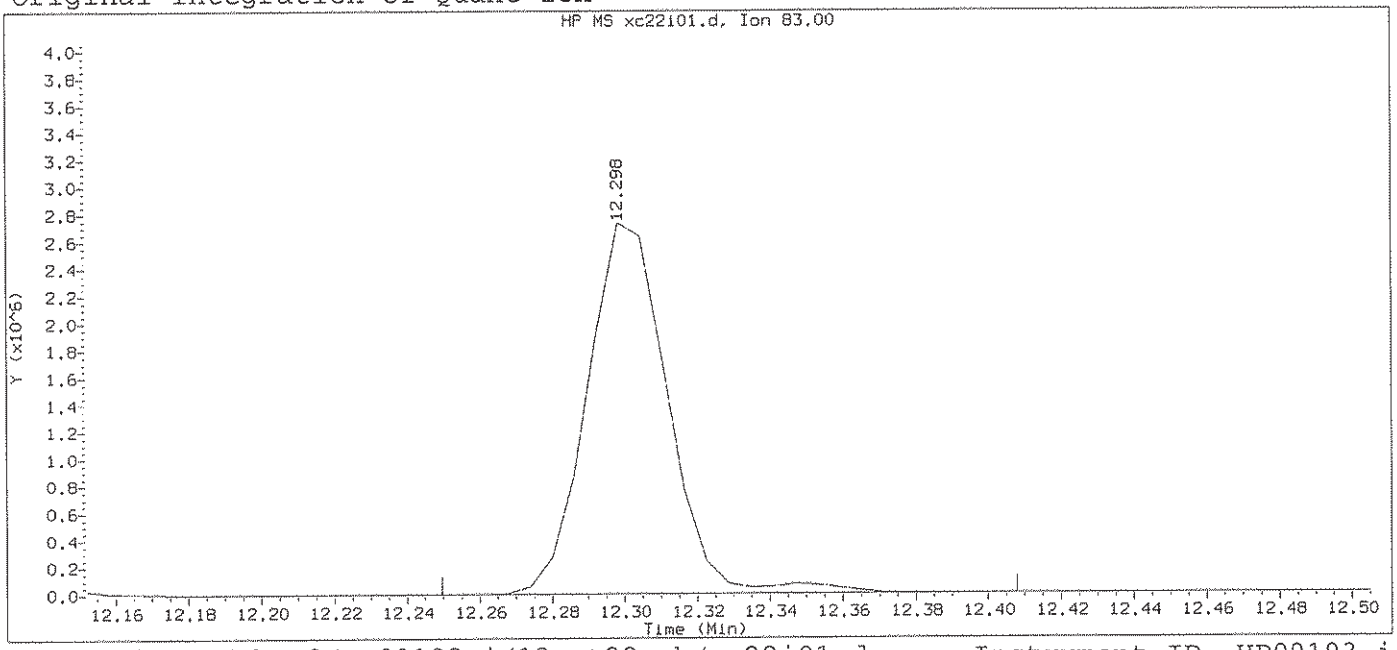
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

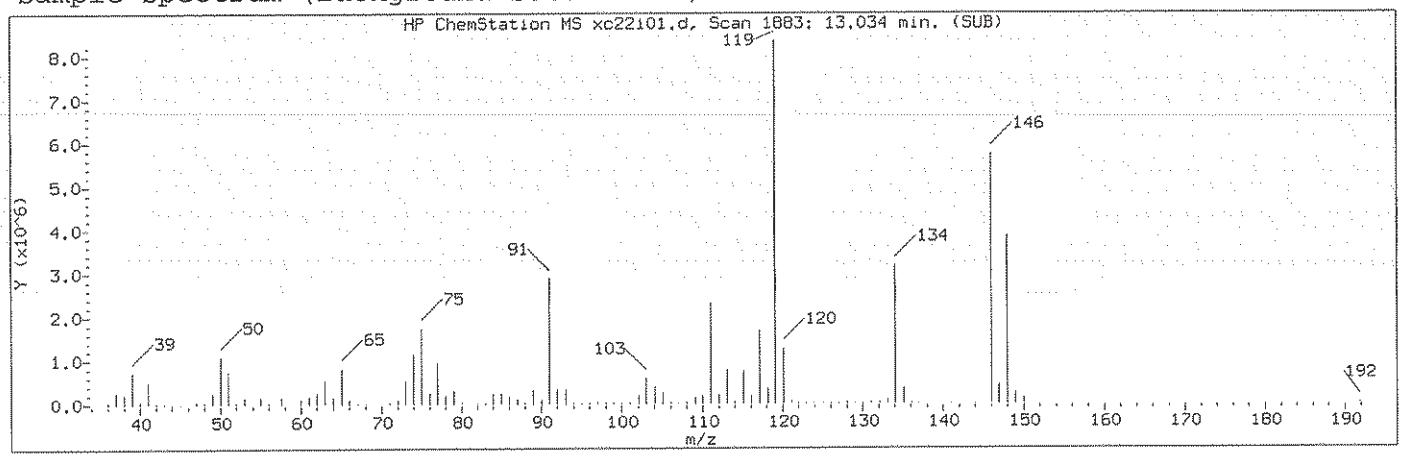
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:17
Date, time and analyst ID of latest file update: 22-Oct-2013 02:18 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

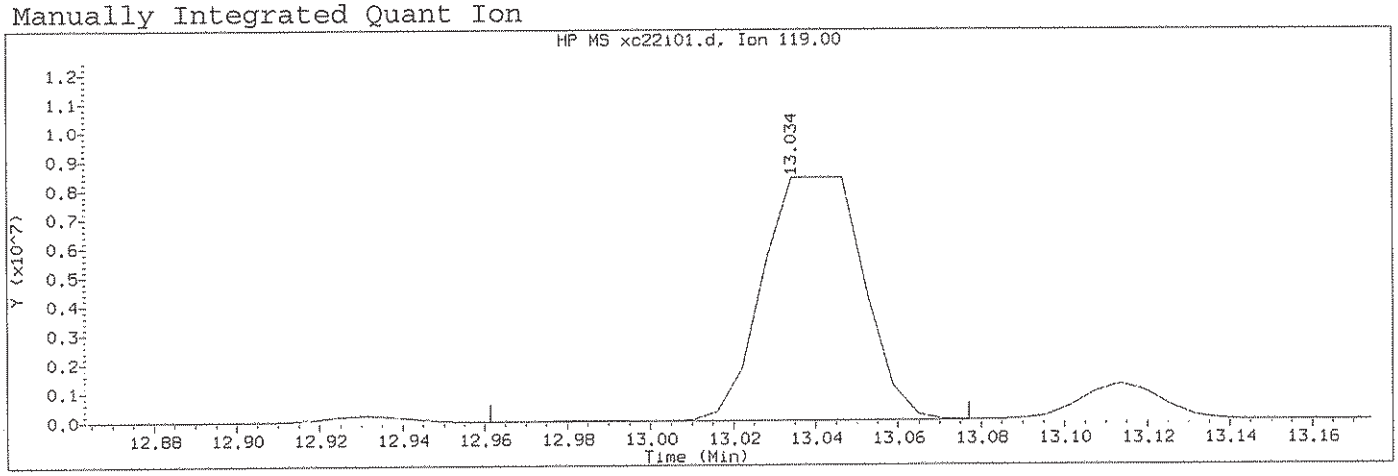
Compound Number	:	115
Compound Name	:	1,1,2,2-Tetrachloroethane
Scan Number	:	1762
Retention Time (minutes)	:	12.298
Quant Ion	:	83.00
Area	:	4246525
On-column Amount (ng)	:	264.6089
Integration start scan	:	1753 Integration stop scan: 1779
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature used: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:24
Date, time and analyst ID of latest file update: 22-Oct-2013 02:24 cgt03258

Sample Name: VSTD300 Lab Sample ID: VSTD300

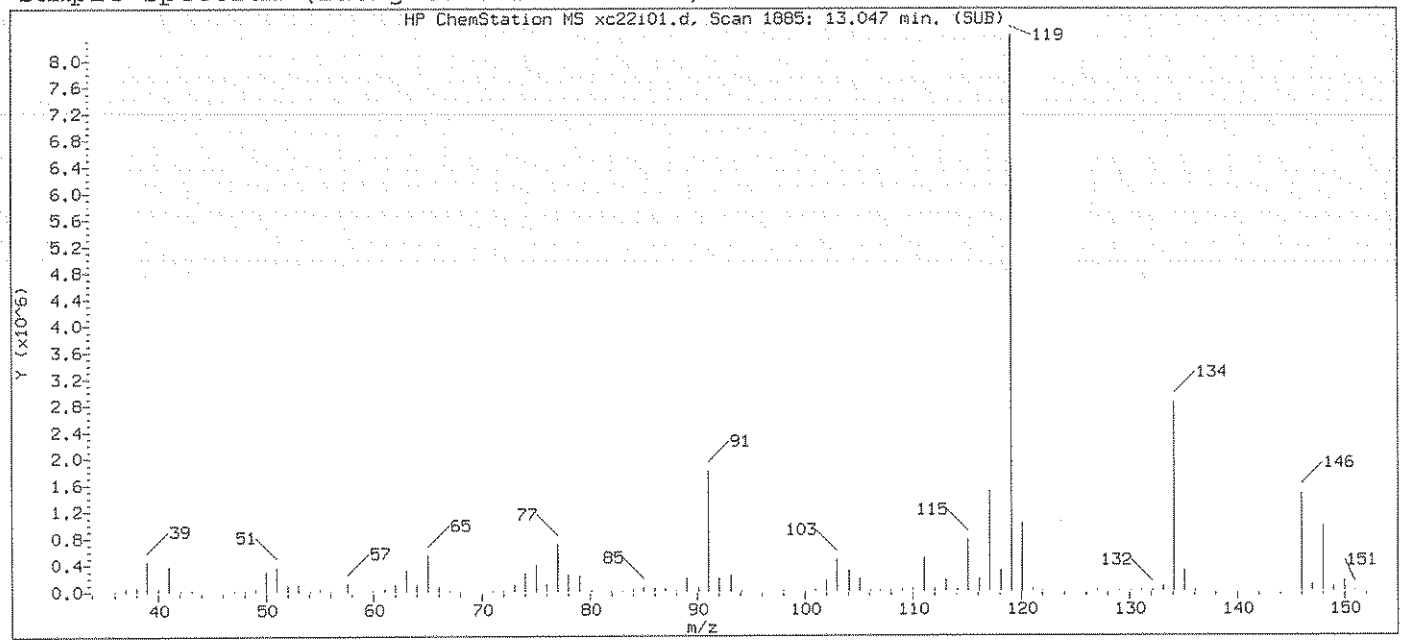
Compound Number : 134
Compound Name : p-Isopropyltoluene
Scan Number : 1883
Retention Time (minutes): 13.034
Quant Ion : 119.00
Area (flag) : 14169687M
On-Column Amount (ng) : 300.0000
Integration start scan : 1870 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

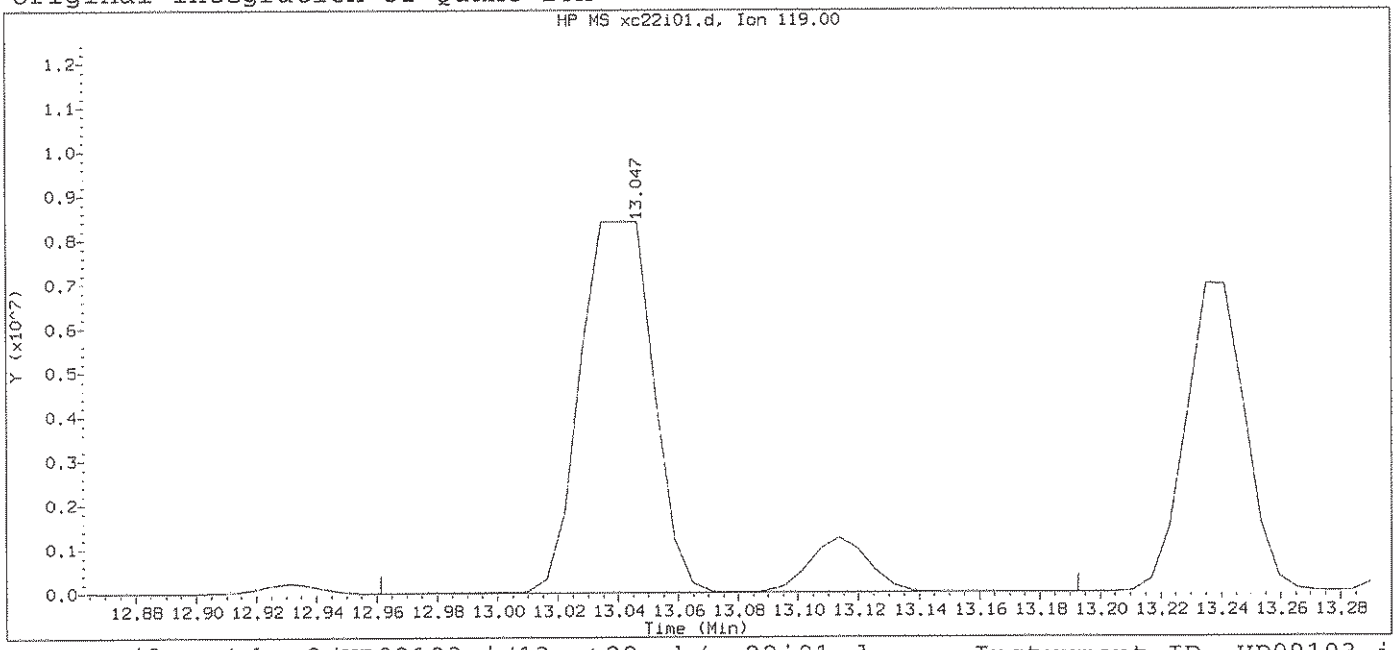
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: A Andrew 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 01:57 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:17
Date, time and analyst ID of latest file update: 22-Oct-2013 02:18 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 134		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1885		
Retention Time (minutes)	: 13.047		
Quant Ion	: 119.00		
Area	: 15861462		
On-column Amount (ng)	: 256.3415		
Integration start scan	: 1870	Integration stop scan:	1908
Y at integration start	: 0	Y at integration end:	0

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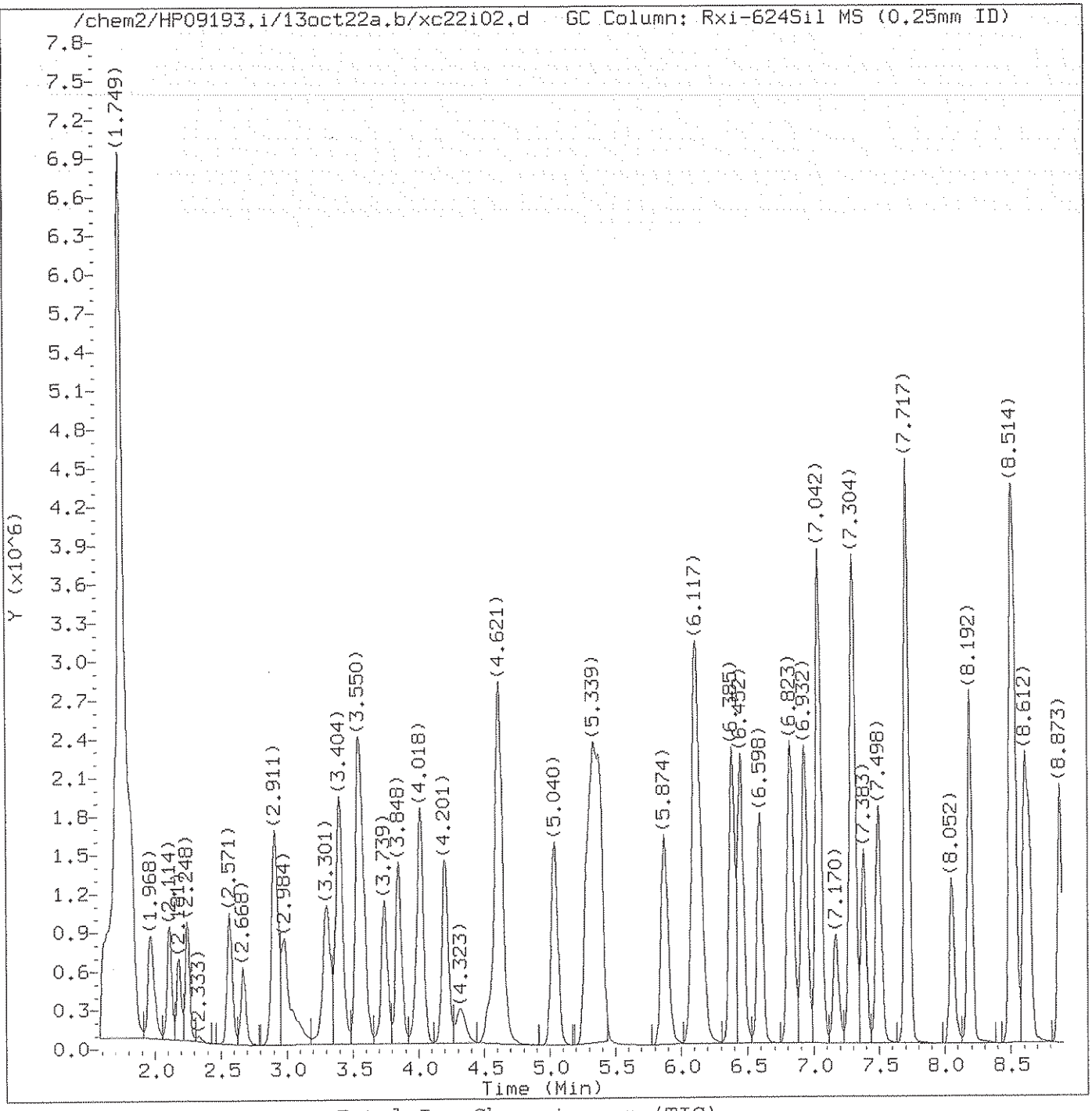
Target 3.5 esignature used. Page 0308



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

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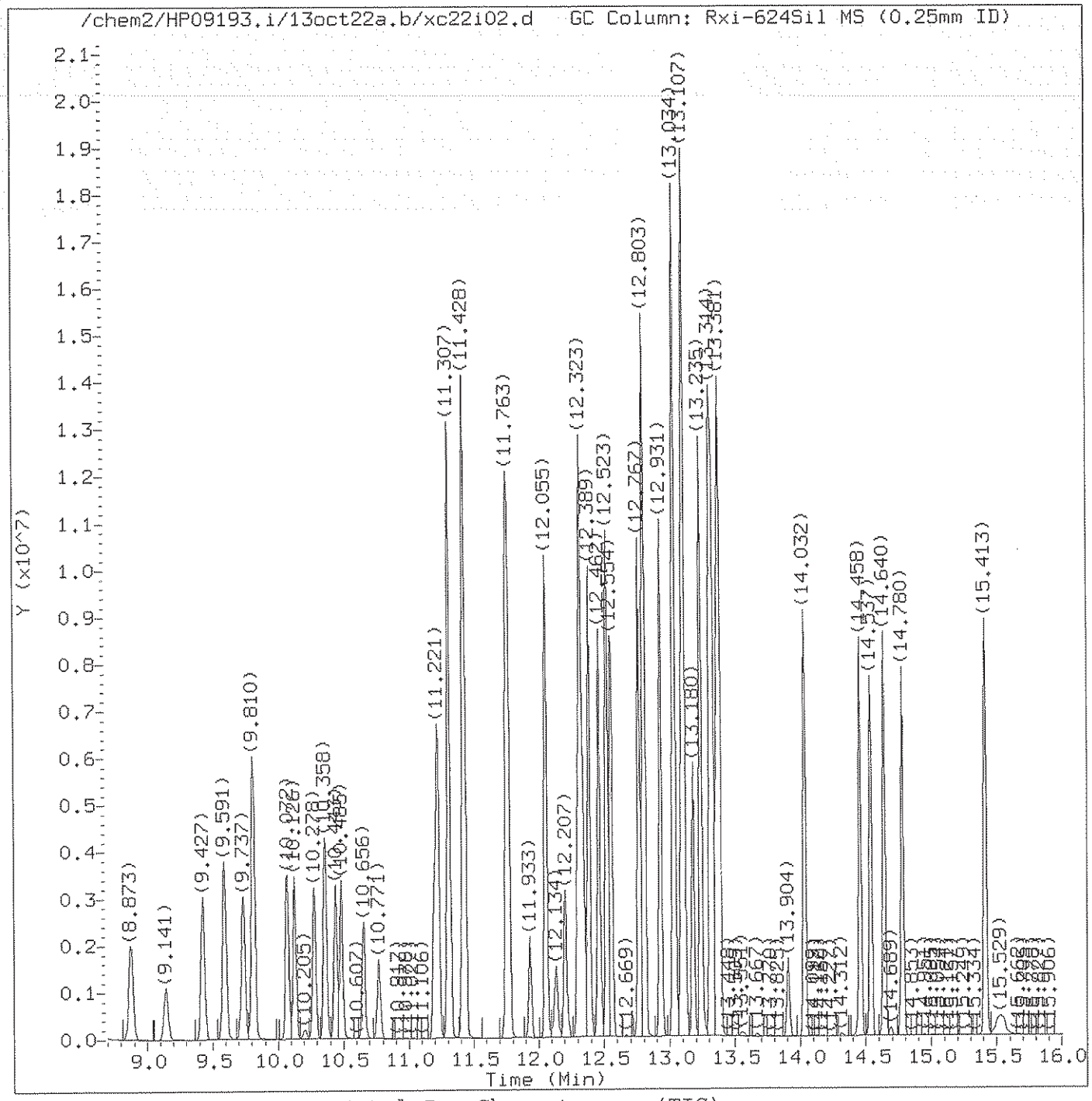
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.968	85	1757482	103.852
4) Chloromethane	(2)	2.114	50	1461459	110.558
5) Vinyl Chloride	(2)	2.248	62	1378215	109.591
9) Bromomethane	(2)	2.571	94	1042909	103.584
10) Chloroethane	(2)	2.668	64	791790	107.177
11) Dichlorofluoromethane	(2)	2.905	67	2093815	103.479
13) Trichlorofluoromethane	(2)	2.984	101	2100288	99.884
15) Ethanol	(1)	3.094	45	740575	5123.194
17) Freon 123a	(2)	3.307	67	1216508	105.999
18) Acrolein	(1)	3.404	56	2547970	1105.781
19) 1,1-Dichloroethene	(2)	3.538	96	925483	101.612
19) 1,1-Dichloroethene	(2)	3.538	63	527660	100.309
20) Acetone	(2)	3.568	58	224922	214.796
22) Freon 113	(2)	3.574	101	966515	99.904
23) 2-Propanol	(1)	3.726	45	466789M	495.209
24) Methyl Iodide	(2)	3.745	142	1918146	100.302
25) Carbon Disulfide	(2)	3.848	76	3342850	103.372
27) Methyl Acetate	(2)	3.982	43	892566	108.079
29) Allyl Chloride	(2)	4.018	41	1769321	108.905
30)*t-Butyl alcohol-d10	(1)	4.195	65	328142	250.000
31) Methylene Chloride	(2)	4.207	84	1082819	102.954
32) t-Butyl alcohol	(1)	4.323	59	797670	486.660
33) Acrylonitrile	(2)	4.529	53	452207	106.456
34) Methyl Tertiary Butyl Ether	(2)	4.609	73	3133078	99.554
35) trans-1,2-Dichloroethene	(2)	4.621	96	1086636	101.569
38) n-Hexane	(2)	5.040	57	1412034	104.358
40) 1,1-Dichloroethane	(2)	5.284	63	2068727	102.088
41) di-Isopropyl ether	(2)	5.339	45	3539774	104.525
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	1887258	99.342
44) Ethyl t-butyl ether	(2)	5.874	59	2581950	101.196
45) 2-Butanone	(2)	6.081	43	1222569	208.991
47) 1,2-Dichloroethene (Total)	(2)		96	2306597	202.387
46) cis-1,2-Dichloroethene	(2)	6.111	96	1219961	100.818
48) 2,2-Dichloropropane	(2)	6.129	77	1863699	98.398
50) Propionitrile	(1)	6.166	54	810466	506.689
51) Methacrylonitrile	(2)	6.385	67	1221292	251.496
52) Bromochloromethane	(2)	6.446	128	671328	103.373
53) Tetrahydrofuran	(1)	6.458	71	326419	206.376

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	2114755	98.907
56)$Dibromofluoromethane	(2)	6.817	113	598130	49.426
56)$Dibromofluoromethane	(2)	6.811	111	609680	49.093
57) 1,1,1-Trichloroethane	(2)	6.829	97	1983841	97.148
58) Cyclohexane	(2)	6.932	56	1736499	101.572
58) Cyclohexane	(2)	6.932	84	1546160	100.537
58) Cyclohexane	(2)	6.932	69	546869	100.810
59) 1,1-Dichloropropene	(2)	7.036	75	1583809	99.077
60) Carbon Tetrachloride	(2)	7.042	117	1692727	95.125
61) Isobutyl Alcohol	(1)	7.170	41	664442	1220.277
62)$1,2-Dichloroethane-d4	(2)	7.273	102	132143	50.116
62)$1,2-Dichloroethane-d4	(2)	7.279	65	806576	48.485
62)$1,2-Dichloroethane-d4	(2)	7.279	104	86278	50.118
63) Benzene	(2)	7.304	78	4401255	102.130
66) 1,2-Dichloroethane	(2)	7.383	62	1893891	97.047
66) 1,2-Dichloroethane	(2)	7.383	98	138548	99.639
67) t-Amyl methyl ether	(2)	7.498	73	2081482	99.218
69)*Fluorobenzene	(2)	7.711	96	2287973	50.000
71) n-Heptane	(2)	7.717	43	1548183	102.808
72) n-Butanol	(1)	8.052	56	1053862	2453.612
74) Trichloroethene	(2)	8.192	95	1187708	98.571
75) Methylcyclohexane	(2)	8.508	83	1939988	103.969
76) 1,2-Dichloropropane	(2)	8.532	63	1139787	101.675
78) Methyl Methacrylate	(2)	8.605	69	930341	99.375
79) 1,4-Dioxane	(1)	8.624	88	185441	1216.111
80) Dibromomethane	(2)	8.642	93	782257	97.543
83) Bromodichloromethane	(2)	8.873	83	1691227	96.624
84) 2-Nitropropane	(1)	9.141	41	887376	200.000
86) cis-1,3-Dichloropropene	(2)	9.427	75	1942936	98.876
87) 4-Methyl-2-pentanone	(2)	9.591	43	2819256	206.514
88)$Toluene-d8	(3)	9.737	98	2297372	50.883
88)$Toluene-d8	(3)	9.737	100	1505846	50.935
89) Toluene	(3)	9.810	92	2854090	101.645
90) trans-1,3-Dichloropropene	(3)	10.072	75	1996066	99.356
91) Ethyl Methacrylate	(3)	10.126	69	1710853	100.502
92) 1,1,2-Trichloroethane	(3)	10.278	97	1024292	100.366
94) Tetrachloroethene	(3)	10.358	166	1345402	98.425
95) 1,3-Dichloropropane	(3)	10.443	76	1849675	100.972

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	2094789	207.507
99) Dibromochloromethane	(3)	10.656	129	1322667	96.724
100) 1,2-Dibromoethane	(3)	10.771	107	1148280	99.883
101)*Chlorobenzene-d5	(3)	11.197	117	1777390	50.000
102) Chlorobenzene	(3)	11.227	112	3341505	100.986
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	1294837	95.965
104) Ethylbenzene	(3)	11.313	91	5690640	103.794
105) m+p-Xylene	(3)	11.428	106	4551977	200.707
107) Xylene (Total)	(3)		106	6764622	299.054
106) o-Xylene	(3)	11.757	106	2212645	98.348
108) Styrene	(3)	11.769	104	3784538	100.126
109) Bromoform	(3)	11.933	173	894320	100.000
110) Isopropylbenzene	(3)	12.055	105	5772093	104.772
113) Cyclohexanone	(1)	12.134	55	610286A	1174.832
114)$4-Bromofluorobenzene	(3)	12.201	95	914979	49.496
114)$4-Bromofluorobenzene	(3)	12.207	174	804307	49.091
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	1527234	104.427
116) Bromobenzene	(4)	12.323	156	1608903	101.079
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	1396861	250.811
118) 1,2,3-Trichloropropane	(4)	12.347	110	490494	101.085
119) n-Propylbenzene	(4)	12.389	91	6724789	114.760
121) 2-Chlorotoluene	(4)	12.462	126	1462266	102.541
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	5064378	107.112
125) 4-Chlorotoluene	(4)	12.560	126	1542340	102.325
128) tert-Butylbenzene	(4)	12.767	134	1237212	101.376
129) Pentachloroethane	(4)	12.797	167	1099755	102.827
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	5268871	107.424
131) sec-Butylbenzene	(4)	12.931	105	6291900	112.211
133) 1,3-Dichlorobenzene	(4)	13.028	146	2993415	100.403
134) p-Isopropyltoluene	(4)	13.040	119	5922543	110.725
135)*1,4-Dichlorobenzene-d4	(4)	13.089	152	1045043M	50.000
136) 1,4-Dichlorobenzene	(4)	13.107	146	3075106	100.457
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	5690958	110.345
138) Benzyl Chloride	(4)	13.180	126	751085	100.000
139) 1,3-Diethylbenzene	(4)	13.235	119	3681725	106.473
140) 1,4-Diethylbenzene	(4)	13.314	119	3741432	105.806
141) n-Butylbenzene	(4)	13.332	92	2884968	101.167
142) 1,2-Dichlorobenzene	(4)	13.363	146	2901970	100.514

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	3077267	105.151
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	376217	95.583
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	2468406	98.909
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	2313090	98.169
149) Hexachlorobutadiene	(4)	14.537	225	1224439	95.956
150) Naphthalene	(4)	14.640	128	5733623	108.140
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	2207905	97.499
152) 2-Methylnaphthalene	(4)	15.413	142	3991095	102.942

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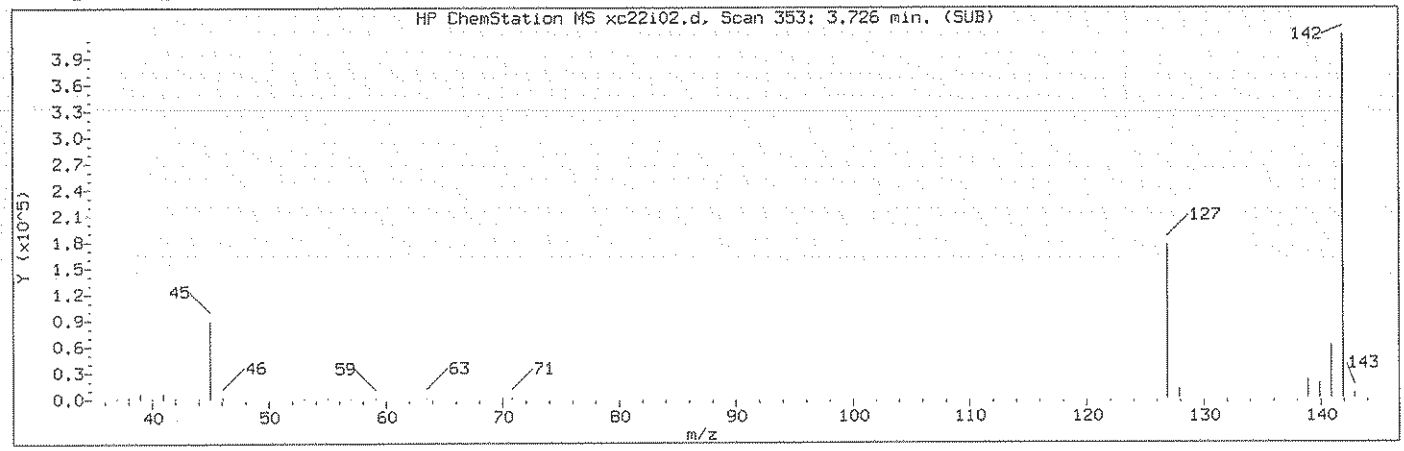
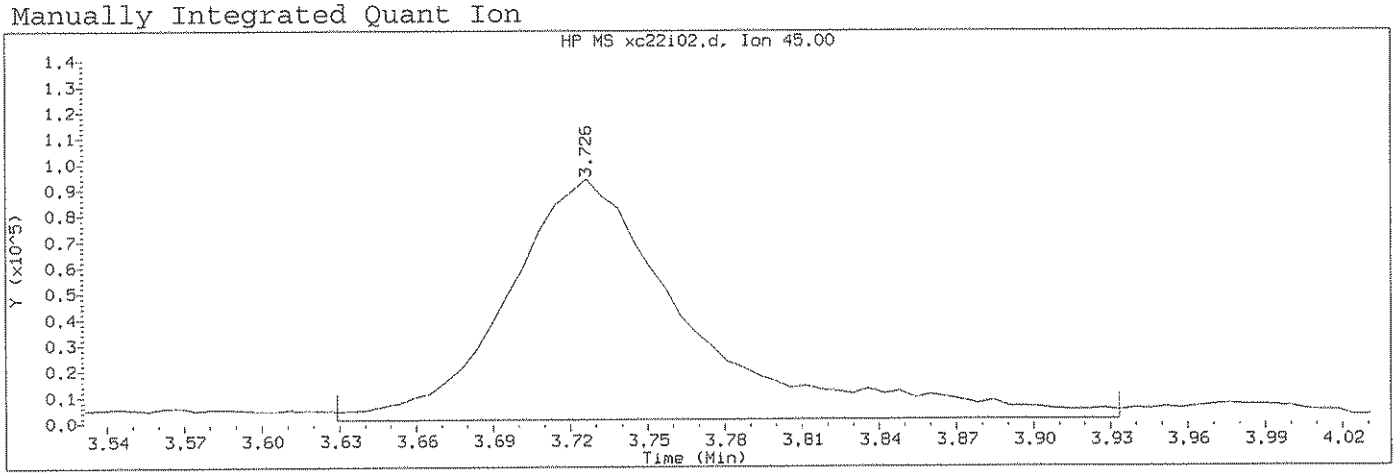
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

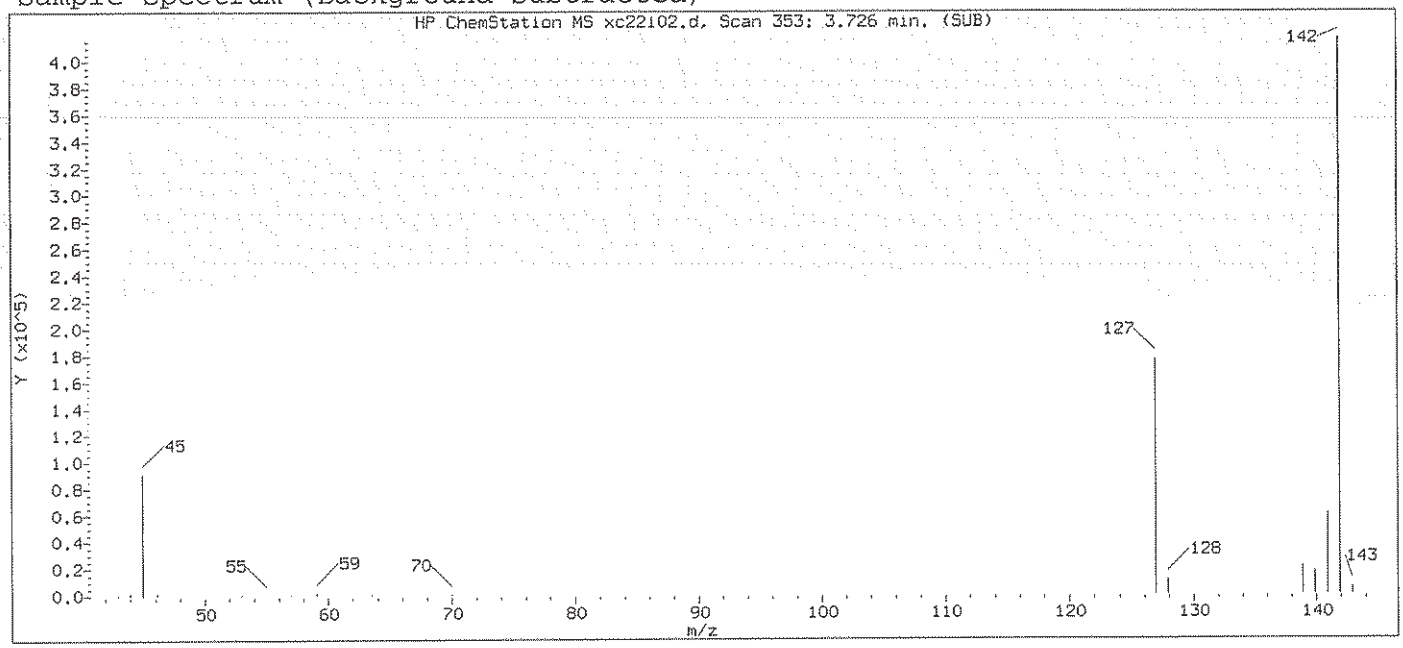
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 353		
Retention Time (minutes)	: 3.726		
Quant Ion	: 45.00		
Area (flag)	: 466789M		
On-Column Amount (ng)	: 495.2094		
Integration start scan	: 336	Integration stop scan:	386
Y at integration start	: 1097	Y at integration end:	1097

Reason for manual integration: improper integration

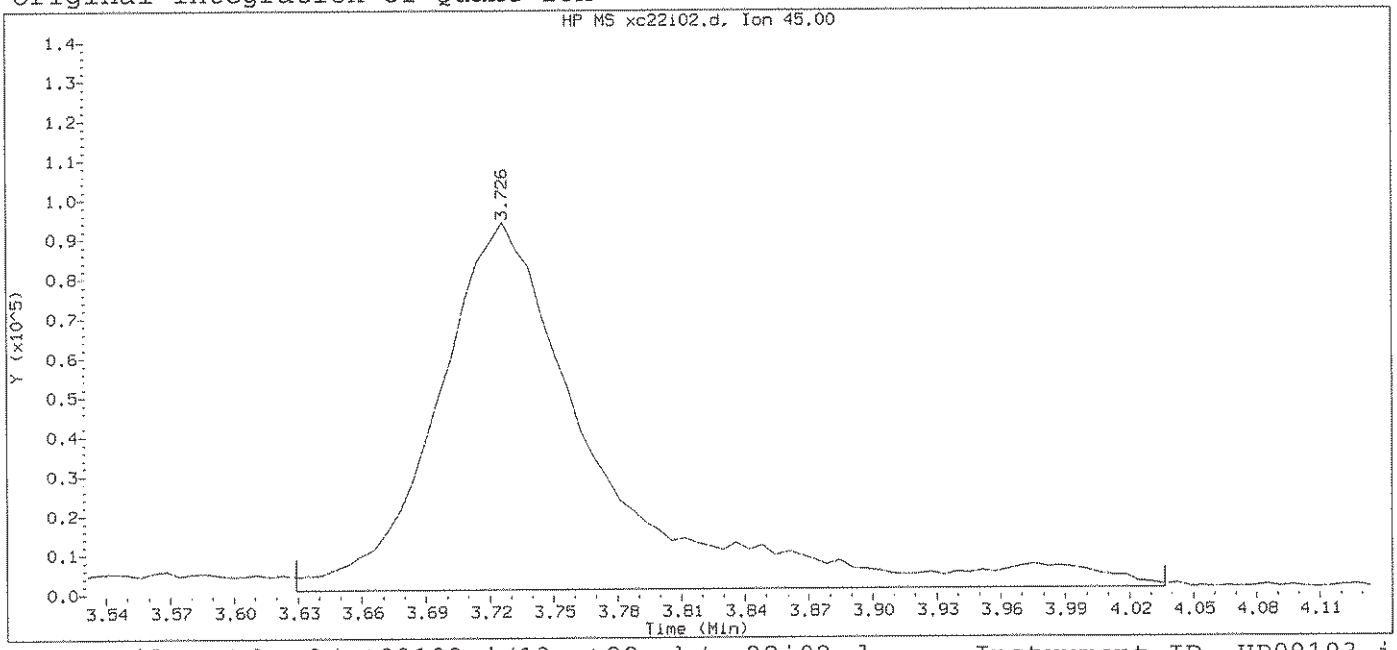
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 02:43 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 353		
Retention Time (minutes)	: 3.726		
Quant Ion	: 45.00		
Area	: 490658		
On-column Amount (ng)	: 507.6753		
Integration start scan	: 336	Integration stop scan:	403
Y at integration start	: 1097	Y at integration end:	1097

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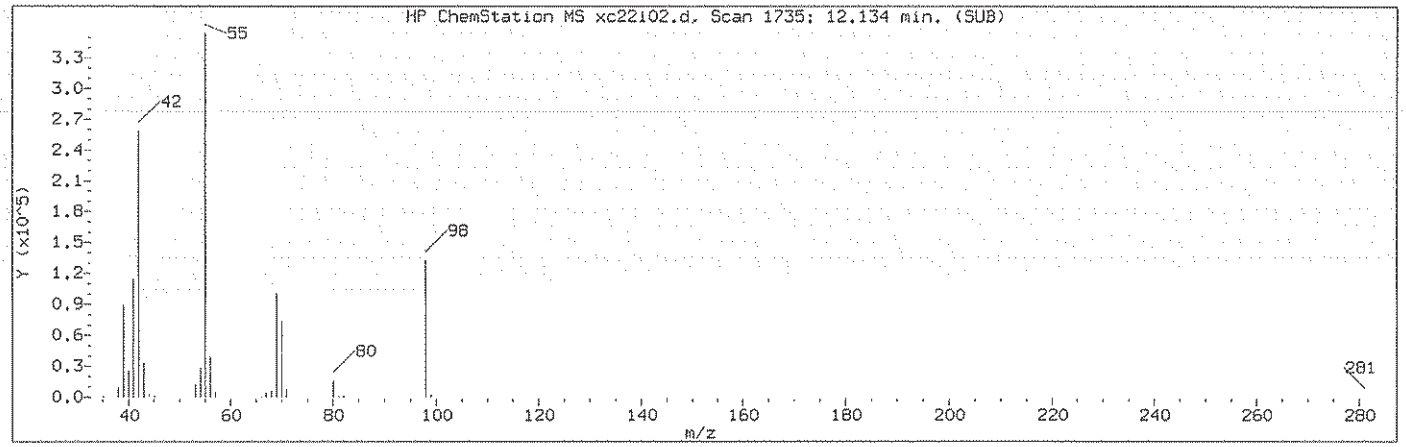
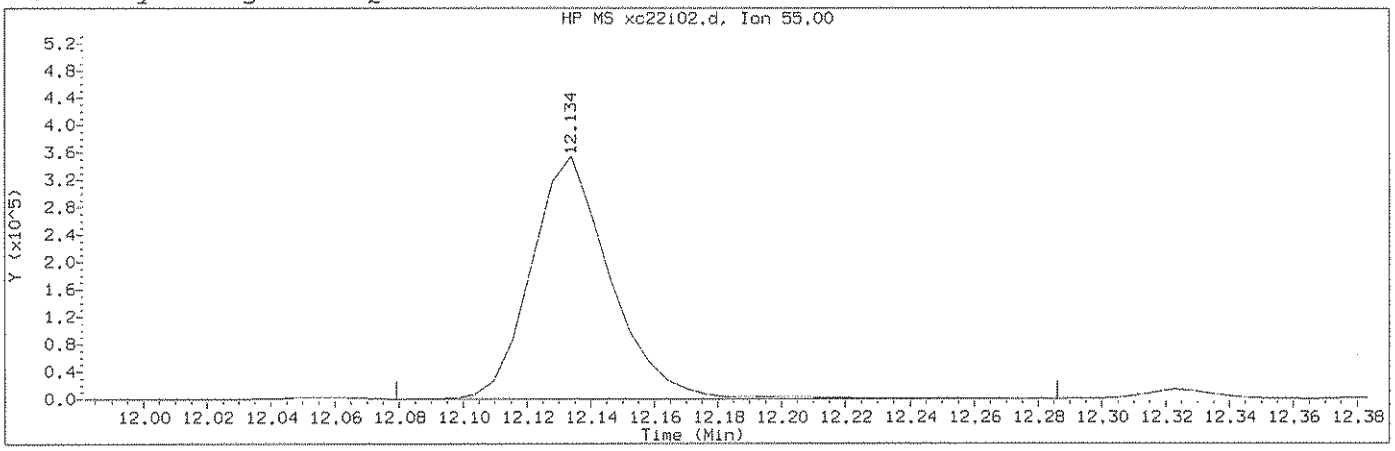
Target 3.5 esignature used. Page 0158

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

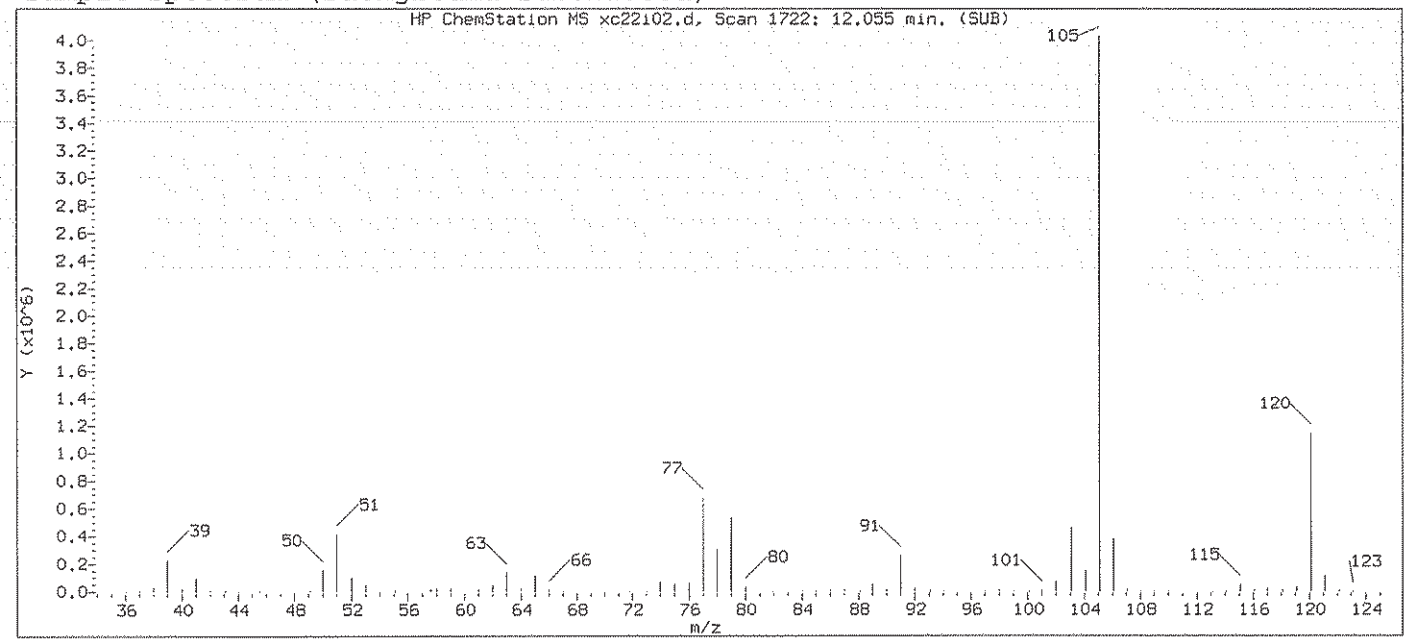
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.134
Quant Ion : 55.00
Area (flag) : 610286A
On-Column Amount (ng) : 1174.8319
Integration start scan : 1725 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

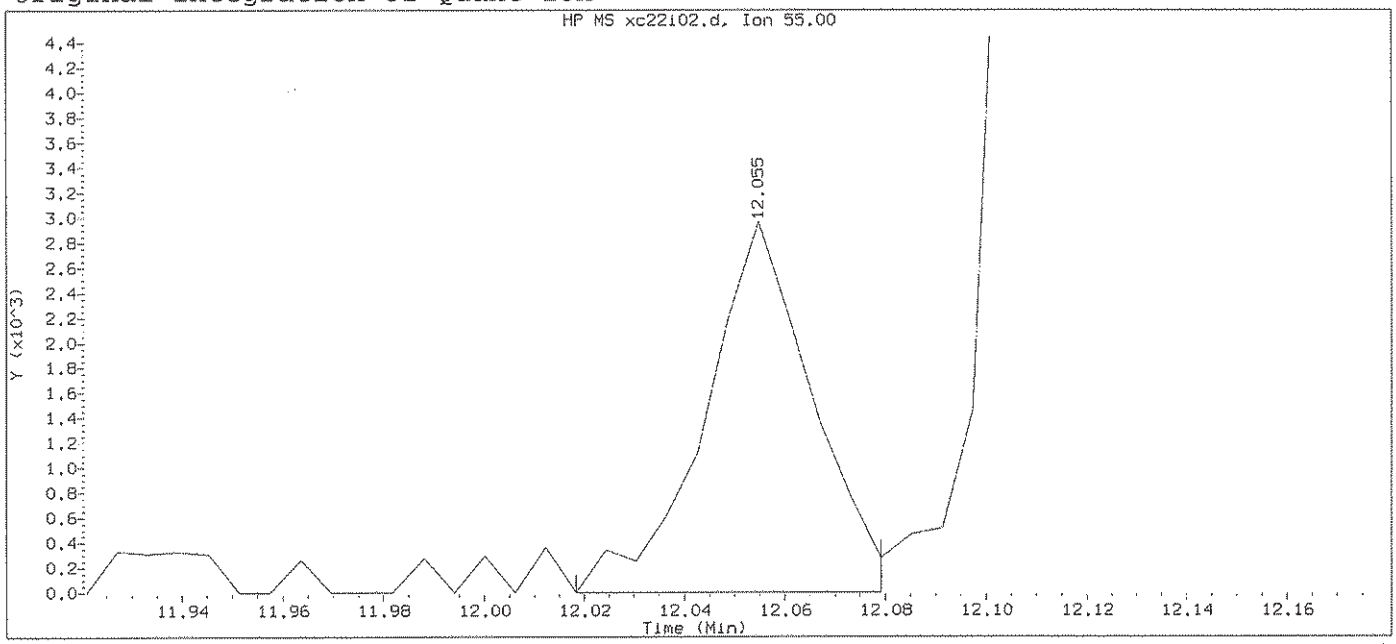
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 02:43 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 113		
Compound Name	: Cyclohexanone		
Scan Number	: 1722		
Retention Time (minutes)	: 12.055		
Quant Ion	: 55.00		
Area	: 4356		
On-column Amount (ng)	: 15.7207		
Integration start scan	: 1715	Integration stop scan:	1725
Y at integration start	: 0	Y at integration end:	0

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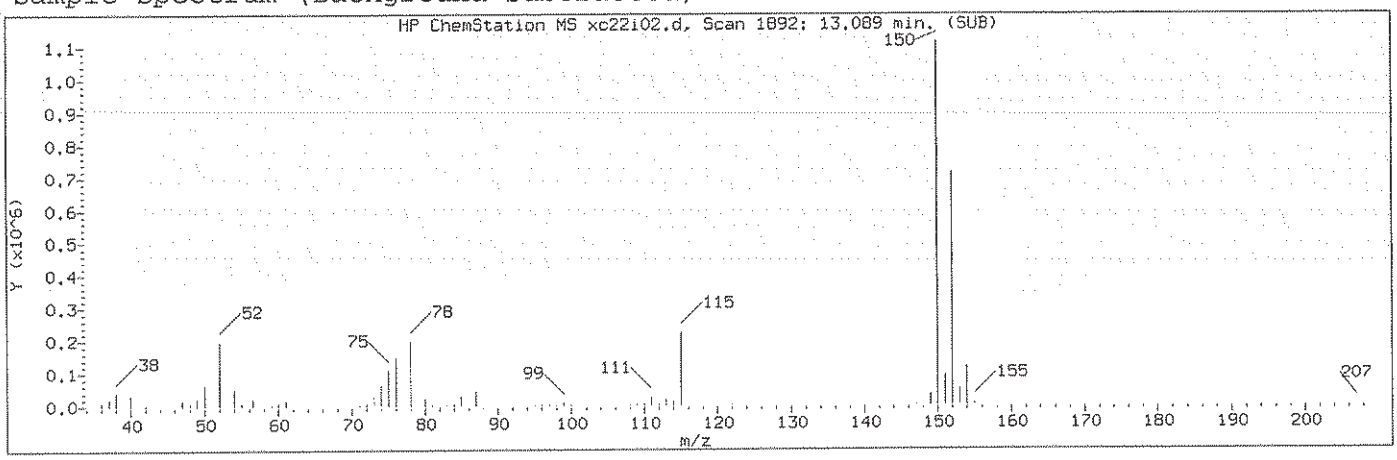
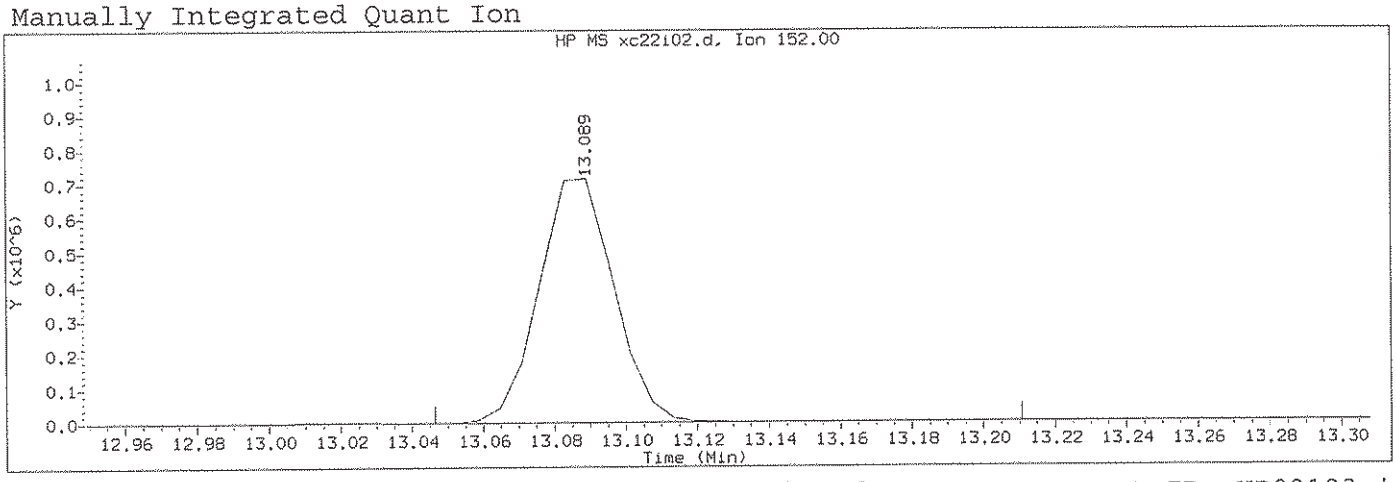
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 03:03 cgt03258

Sample Name: VSTD100 Lab Sample ID: VSTD100

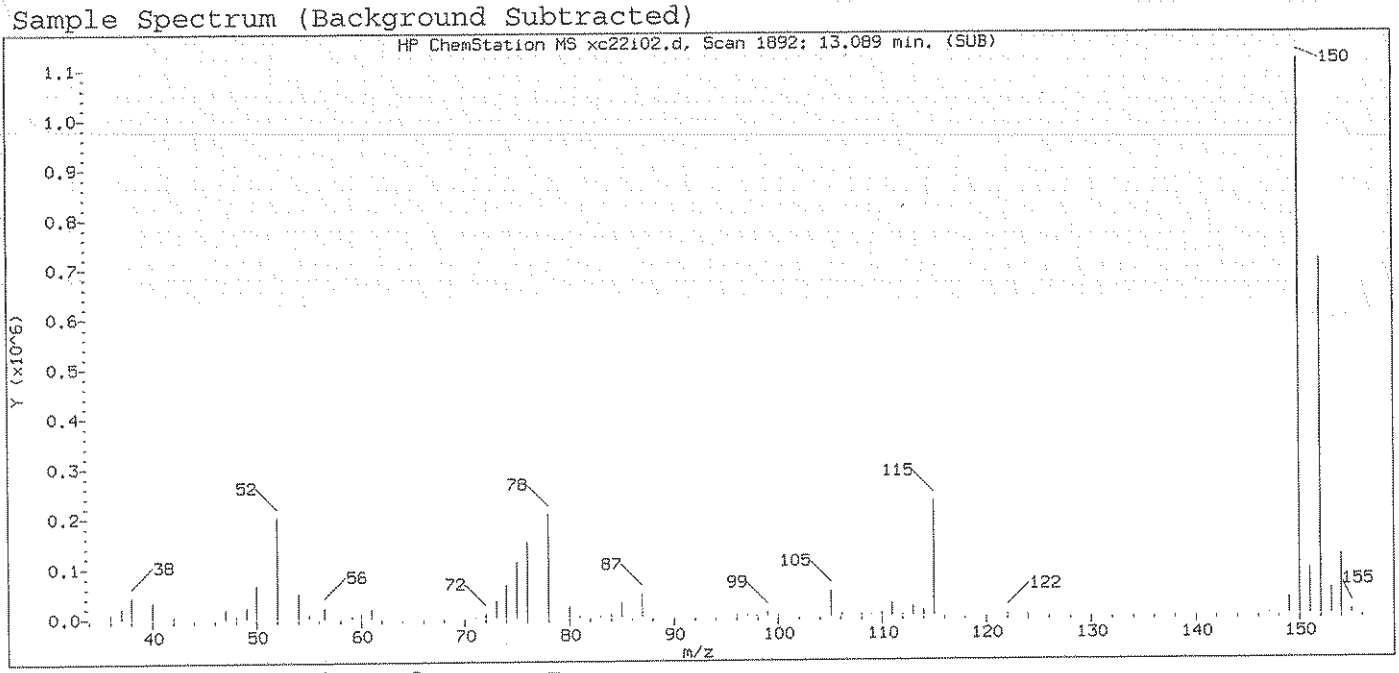
Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1892
Retention Time (minutes): 13.089
Quant Ion : 152.00
Area (flag) : 1045043M
On-Column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1911
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

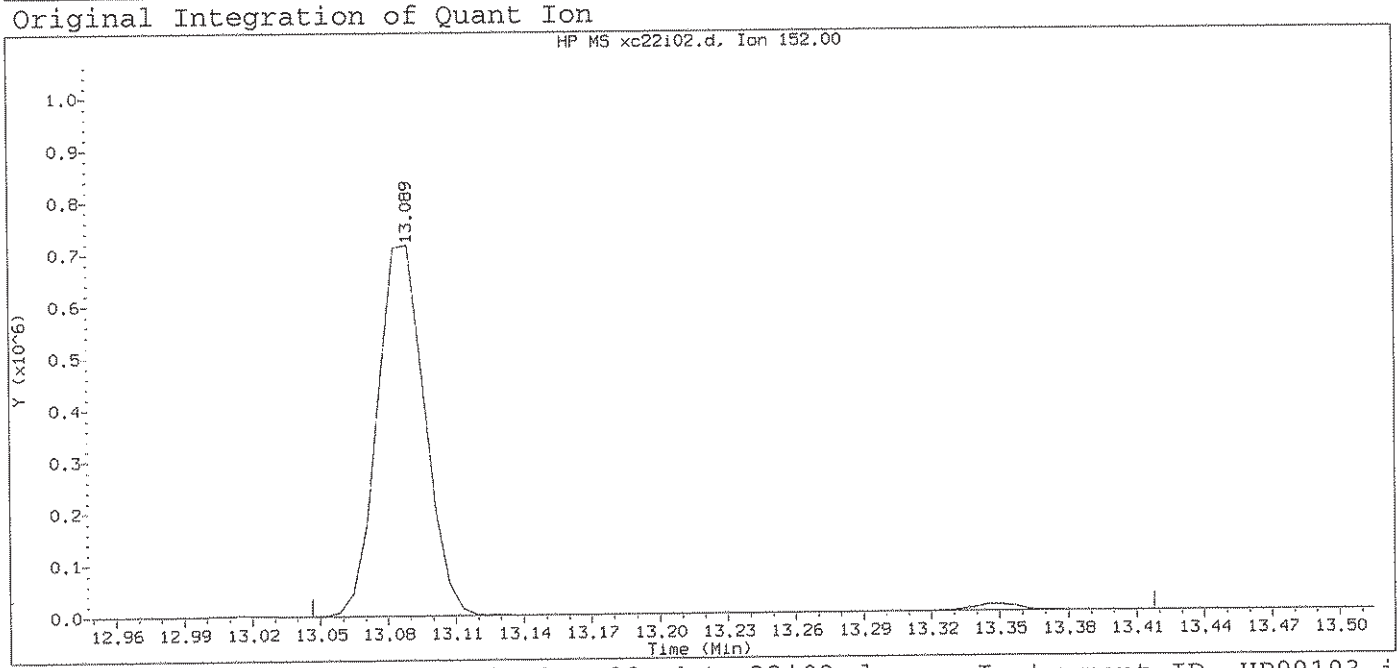
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Andrew 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:22 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 02:43
Date, time and analyst ID of latest file update: 22-Oct-2013 02:43 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1892		
Retention Time (minutes)	: 13.089		
Quant Ion	: 152.00		
Area	: 1064077		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1945
Y at integration start	: 0	Y at integration end:	0

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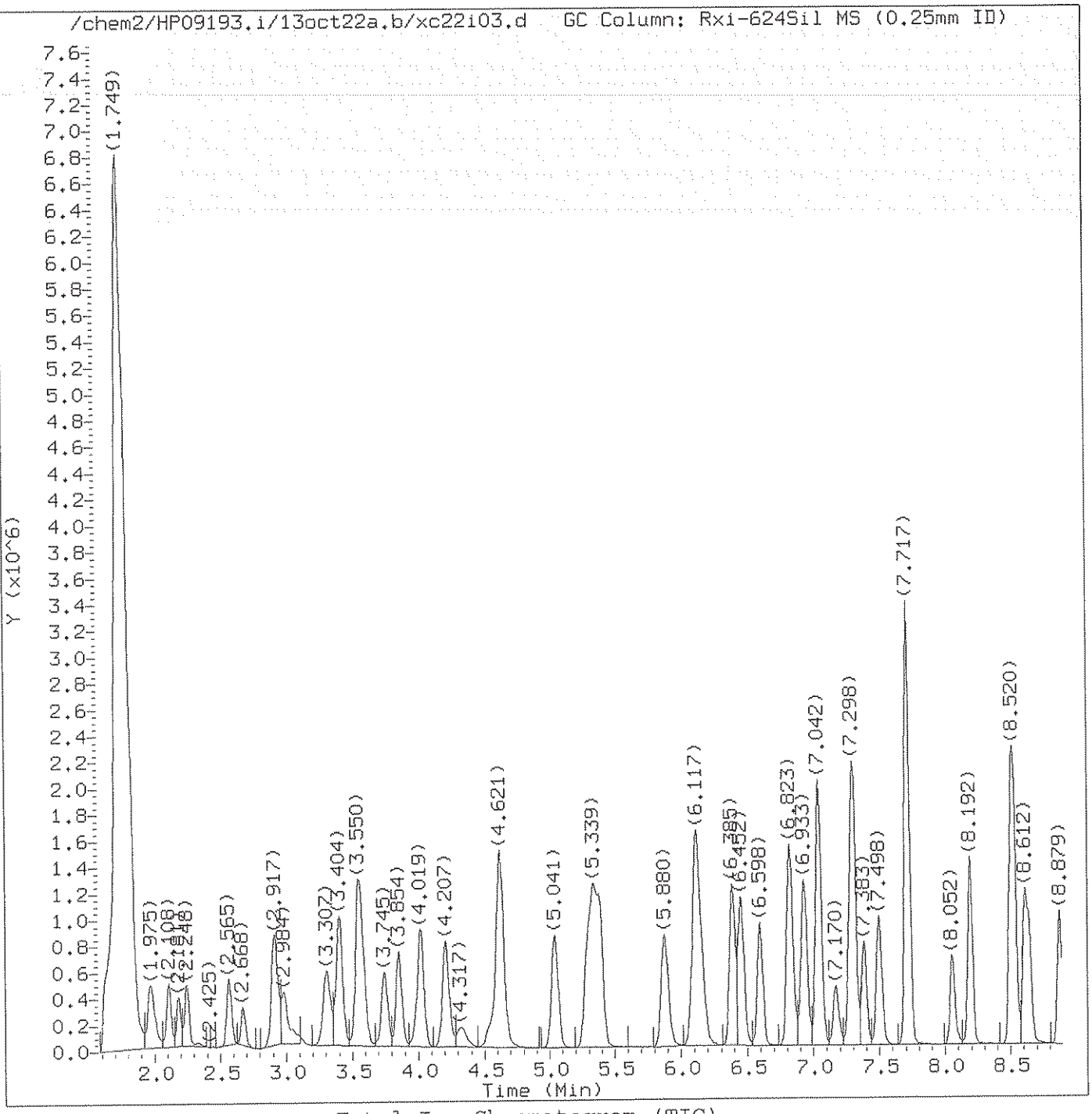
Target 3.5 esignature user ID: CGT03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d
Injection date and time: 22-OCT-2013 02:45

Instrument ID: HP09193.i
Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m
Calibration date and time: 22-OCT-2013 03:05

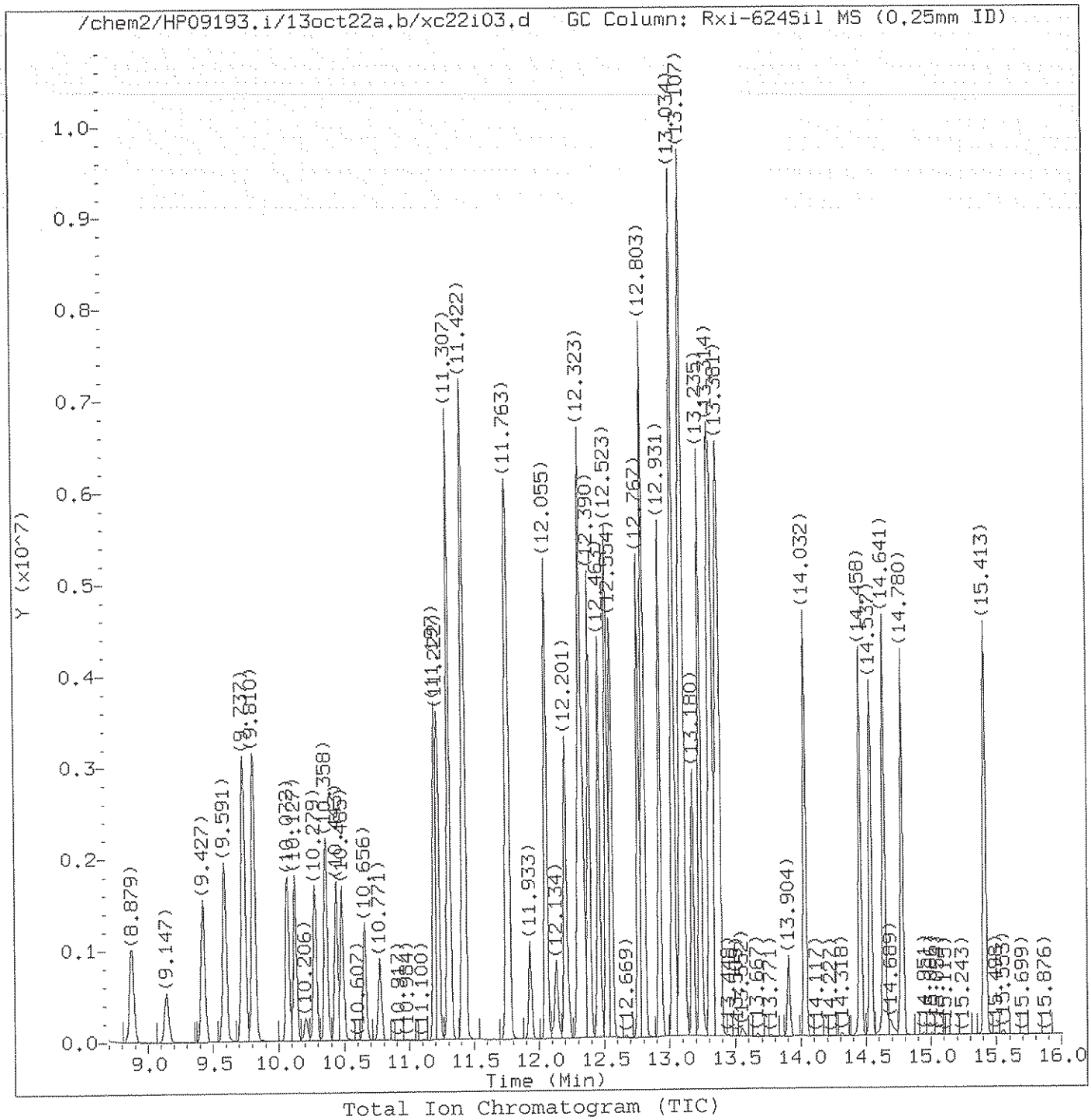
Sublist used: 8260S-2C

Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d
Injection date and time: 22-OCT-2013 02:45

Instrument ID: HP09193.i
Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m
Calibration date and time: 22-OCT-2013 03:05

Sublist used: 8260S-2C

Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.975	85	947372	52.141
4) Chloromethane	(2)	2.108	50	769390	53.473
5) Vinyl Chloride	(2)	2.248	62	724807	53.135
9) Bromomethane	(2)	2.565	94	542970	50.878
10) Chloroethane	(2)	2.668	64	418907	52.578
11) Dichlorofluoromethane	(2)	2.905	67	1123281	51.856
13) Trichlorofluoromethane	(2)	2.984	101	1091520	49.603
15) Ethanol	(1)	3.100	45	447801	2739.858
17) Freon 123a	(2)	3.307	67	673056	53.734
18) Acrolein	(1)	3.410	56	1286662	512.348
19) 1,1-Dichloroethene	(2)	3.544	96	499483	51.443
19) 1,1-Dichloroethene	(2)	3.544	63	280313	50.477
20) Acetone	(2)	3.574	58	121618	106.790
22) Freon 113	(2)	3.574	101	540343	52.063
23) 2-Propanol	(1)	3.727	45	253979	250.210
24) Methyl Iodide	(2)	3.751	142	1015788	50.369
25) Carbon Disulfide	(2)	3.854	76	1788746	51.734
27) Methyl Acetate	(2)	3.982	43	464184	52.278
29) Allyl Chloride	(2)	4.019	41	892618	51.506
30)*t-Butyl alcohol-d10	(1)	4.201	65	353216	250.000
31) Methylene Chloride	(2)	4.207	84	587153	52.047
32) t-Butyl alcohol	(1)	4.317	59	427743	244.910
33) Acrylonitrile	(2)	4.530	53	235901	51.869
34) Methyl Tertiary Butyl Ether	(2)	4.609	73	1660477	50.145
35) trans-1,2-Dichloroethene	(2)	4.627	96	574348	50.726
38) n-Hexane	(2)	5.041	57	774763	52.912
40) 1,1-Dichloroethane	(2)	5.290	63	1090241	50.799
41) di-Isopropyl ether	(2)	5.339	45	1873980	51.748
42) 2-Chloro-1,3-butadiene	(2)	5.393	53	987516	49.649
44) Ethyl t-butyl ether	(2)	5.874	59	1361540	50.524
45) 2-Butanone	(2)	6.081	43	637812	102.484
47) 1,2-Dichloroethene (Total)	(2)		96	1221335	101.315
46) cis-1,2-Dichloroethene	(2)	6.111	96	646987	50.589
48) 2,2-Dichloropropane	(2)	6.136	77	956866	48.706
50) Propionitrile	(1)	6.166	54	448646	256.952
51) Methacrylonitrile	(2)	6.385	67	659774	127.843
52) Bromochloromethane	(2)	6.452	128	339806	49.867
53) Tetrahydrofuran	(1)	6.464	71	168724	99.399

* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	1108675	49.567
56)$Dibromofluoromethane	(2)	6.817	113	620174	49.178
56)$Dibromofluoromethane	(2)	6.817	111	634502	49.077
57) 1,1,1-Trichloroethane	(2)	6.829	97	1034317	48.791
58) Cyclohexane	(2)	6.933	56	942690	51.628
58) Cyclohexane	(2)	6.933	84	836086	51.149
58) Cyclohexane	(2)	6.933	69	297647	51.460
59) 1,1-Dichloropropene	(2)	7.036	75	821703	49.278
60) Carbon Tetrachloride	(2)	7.042	117	869339	47.610
61) Isobutyl Alcohol	(1)	7.170	41	339153	593.319
62)$1,2-Dichloroethane-d4	(2)	7.279	102	140950	50.583
62)$1,2-Dichloroethane-d4	(2)	7.279	65	833880	48.449
62)$1,2-Dichloroethane-d4	(2)	7.279	104	91477	50.382
63) Benzene	(2)	7.304	78	2342357	51.142
66) 1,2-Dichloroethane	(2)	7.383	62	960855	47.863
66) 1,2-Dichloroethane	(2)	7.389	98	72875	49.921
67) t-Amyl methyl ether	(2)	7.498	73	1093847	49.751
69)*Fluorobenzene	(2)	7.711	96	2403873	50.000
71) n-Heptane	(2)	7.717	43	833994	51.776
72) n-Butanol	(1)	8.052	56	557651	1220.430
74) Trichloroethene	(2)	8.192	95	619949	49.309
75) Methylcyclohexane	(2)	8.508	83	996988	50.567
76) 1,2-Dichloropropane	(2)	8.533	63	602773	50.779
78) Methyl Methacrylate	(2)	8.612	69	483245	49.416
79) 1,4-Dioxane	(1)	8.624	88	103132	627.211
80) Dibromomethane	(2)	8.642	93	415254	49.520
83) Bromodichloromethane	(2)	8.879	83	869710	48.162
84) 2-Nitropropane	(1)	9.147	41	435009	92.758
86) cis-1,3-Dichloropropene	(2)	9.427	75	1000612	48.967
87) 4-Methyl-2-pentanone	(2)	9.591	43	1470352	101.661
88)$Toluene-d8	(3)	9.737	98	2414527	50.866
88)$Toluene-d8	(3)	9.737	100	1583385	50.916
89) Toluene	(3)	9.810	92	1502231	50.880
90) trans-1,3-Dichloropropene	(3)	10.072	75	1026088	49.332
91) Ethyl Methacrylate	(3)	10.127	69	898981	50.444
92) 1,1,2-Trichloroethane	(3)	10.279	97	545340	50.839
94) Tetrachloroethene	(3)	10.364	166	699938	49.416
95) 1,3-Dichloropropane	(3)	10.443	76	980021	50.879

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	1077873	101.617
99) Dibromochloromethane	(3)	10.656	129	677665	48.338
100) 1,2-Dibromoethane	(3)	10.771	107	598248	49.953
101)*Chlorobenzene-d5	(3)	11.197	117	1852474	50.000
102) Chlorobenzene	(3)	11.222	112	1757735	50.642
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	656629	47.745
104) Ethylbenzene	(3)	11.313	91	2968030	51.278
105) m+p-Xylene	(3)	11.422	106	2362004	99.950
107) Xylene (Total)	(3)		106	3498326	148.913
106) o-Xylene	(3)	11.757	106	1136322	48.963
108) Styrene	(3)	11.769	104	1939615	49.488
109) Bromoform	(3)	11.933	173	447510	48.985
110) Isopropylbenzene	(3)	12.055	105	2998932	51.464
113) Cyclohexanone	(1)	12.134	55	336979	609.922
114)$4-Bromofluorobenzene	(3)	12.201	95	943975	49.325
114)$4-Bromofluorobenzene	(3)	12.207	174	827692	48.970
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	813619	52.937
116) Bromobenzene	(4)	12.323	156	826707	50.607
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	719466	126.089
118) 1,2,3-Trichloropropane	(4)	12.347	110	256099	51.147
119) n-Propylbenzene	(4)	12.390	91	3531029	55.703
121) 2-Chlorotoluene	(4)	12.463	126	751196	51.082
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	2617937	52.775
125) 4-Chlorotoluene	(4)	12.554	126	786682	50.771
128) tert-Butylbenzene	(4)	12.767	134	619684	49.852
129) Pentachloroethane	(4)	12.797	167	521484	48.511
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	2714183	52.755
131) sec-Butylbenzene	(4)	12.931	105	3282333	54.693
133) 1,3-Dichlorobenzene	(4)	13.028	146	1535367	50.322
134) p-Isopropyltoluene	(4)	13.034	119	3035056	53.615
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	1066014M	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	1591974	50.651
137) 1,2,3-Trimethylbenzene	(4)	13.114	105	2816633	52.305
138) Benzyl Chloride	(4)	13.180	126	384107	48.995
139) 1,3-Diethylbenzene	(4)	13.235	119	1795120	50.591
140) 1,4-Diethylbenzene	(4)	13.308	119	1814348	50.199
141) n-Butylbenzene	(4)	13.333	92	1475790M	50.487
142) 1,2-Dichlorobenzene	(4)	13.363	146	1495671	50.521

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	1500507	50.176
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	193001	48.696
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	1260451	49.674
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	1185191	49.538
149) Hexachlorobutadiene	(4)	14.537	225	624509	48.634
150) Naphthalene	(4)	14.641	128	3062423	54.229
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	1173663	50.536
152) 2-Methylnaphthalene	(4)	15.413	142	2069001	51.520

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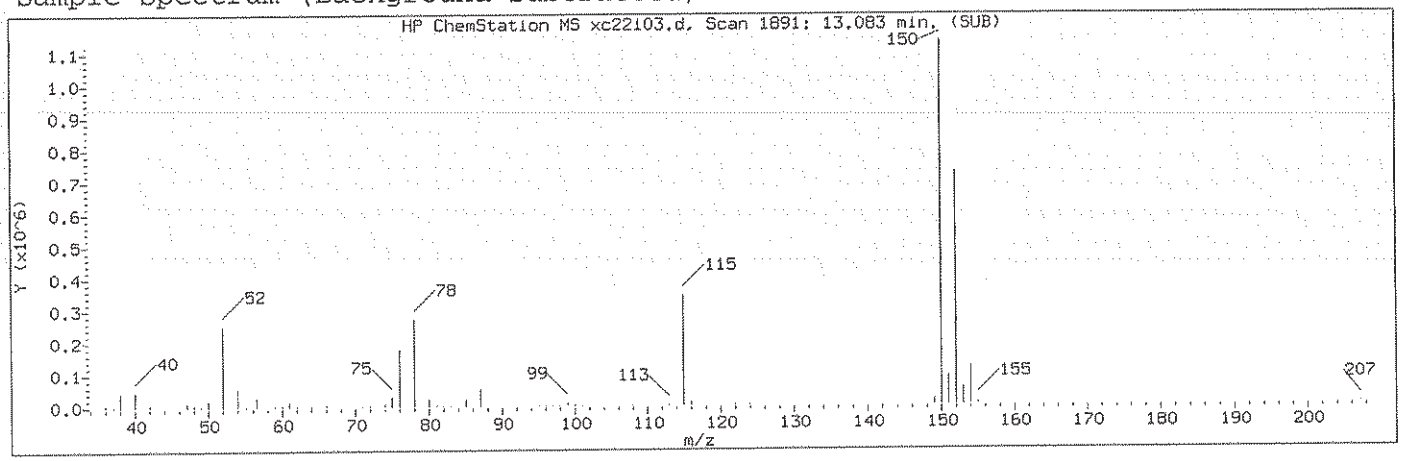
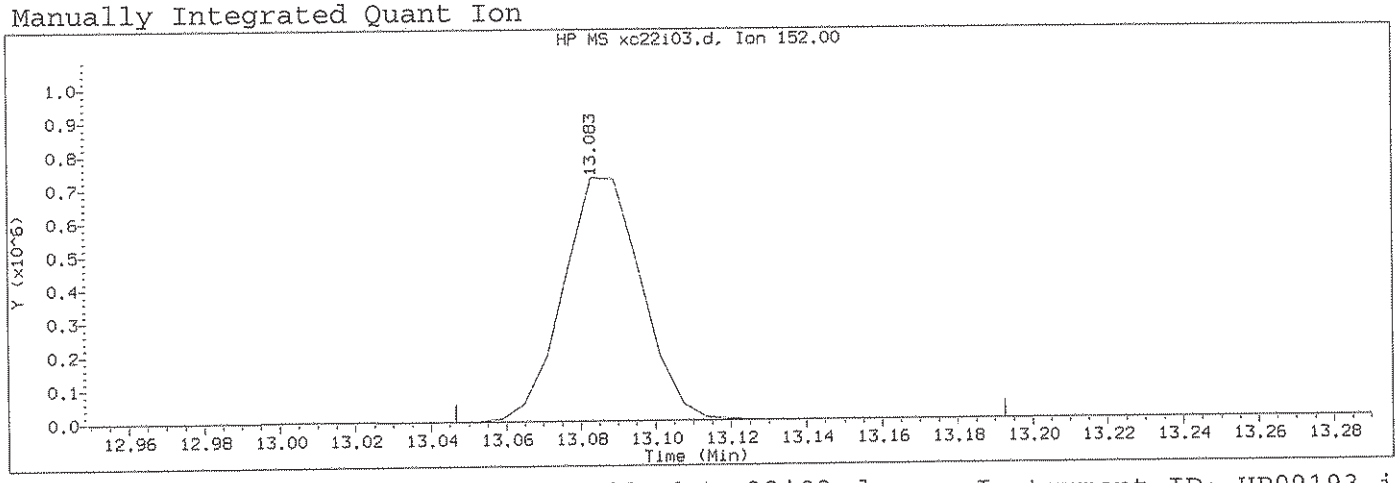
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

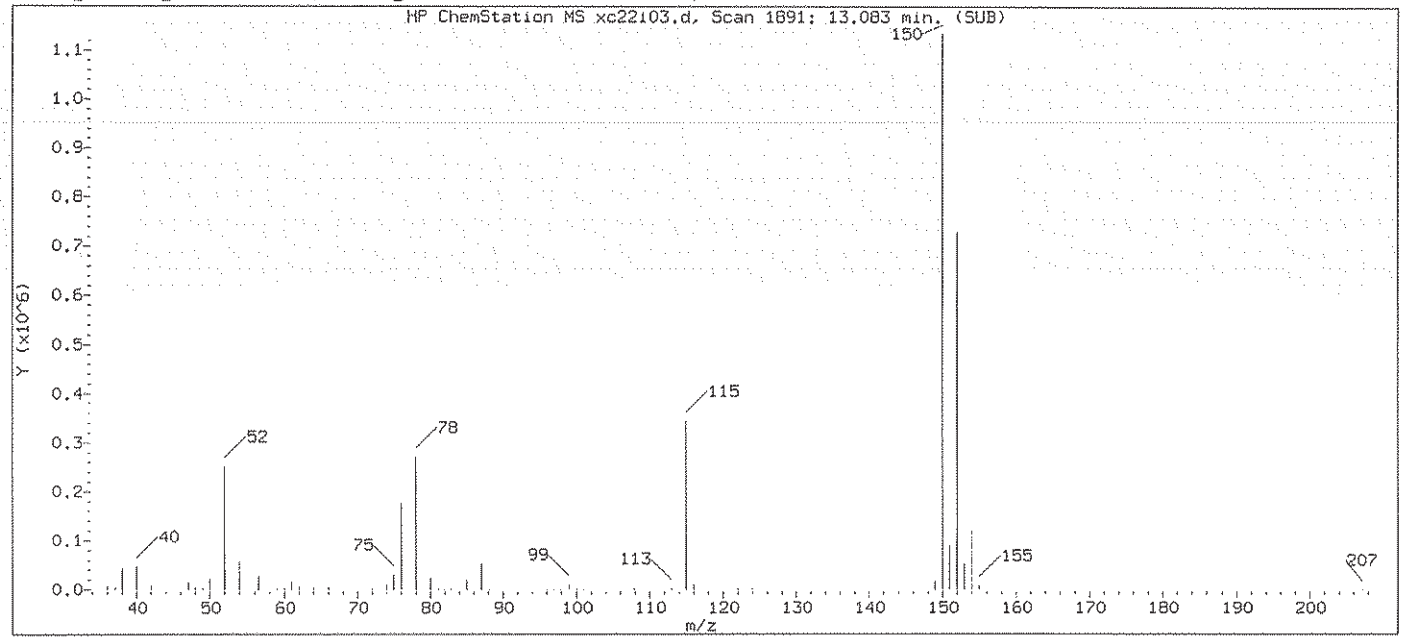
Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1891		
Retention Time (minutes)	: 13.083		
Quant Ion	: 152.00		
Area (flag)	: 1066014M		
On-Column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1908
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

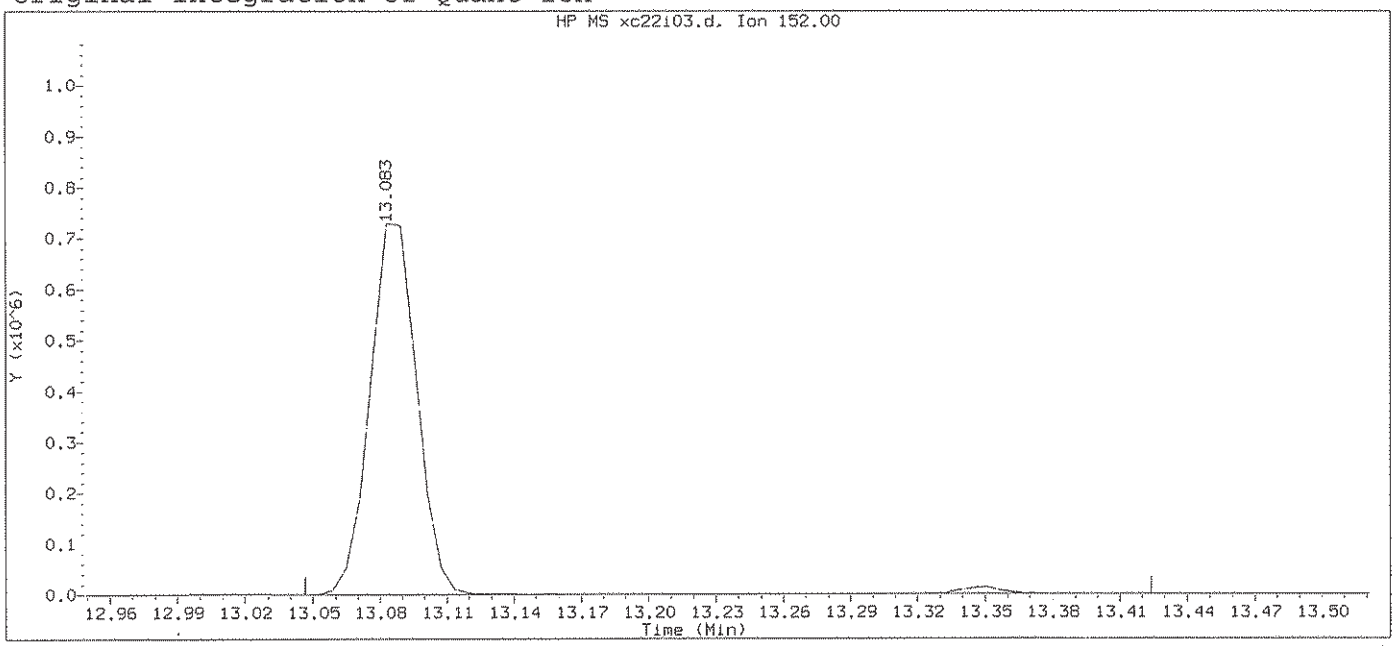
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:05 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area : 1083720
On-column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1946
Y at integration start : 0 Y at integration end: 0

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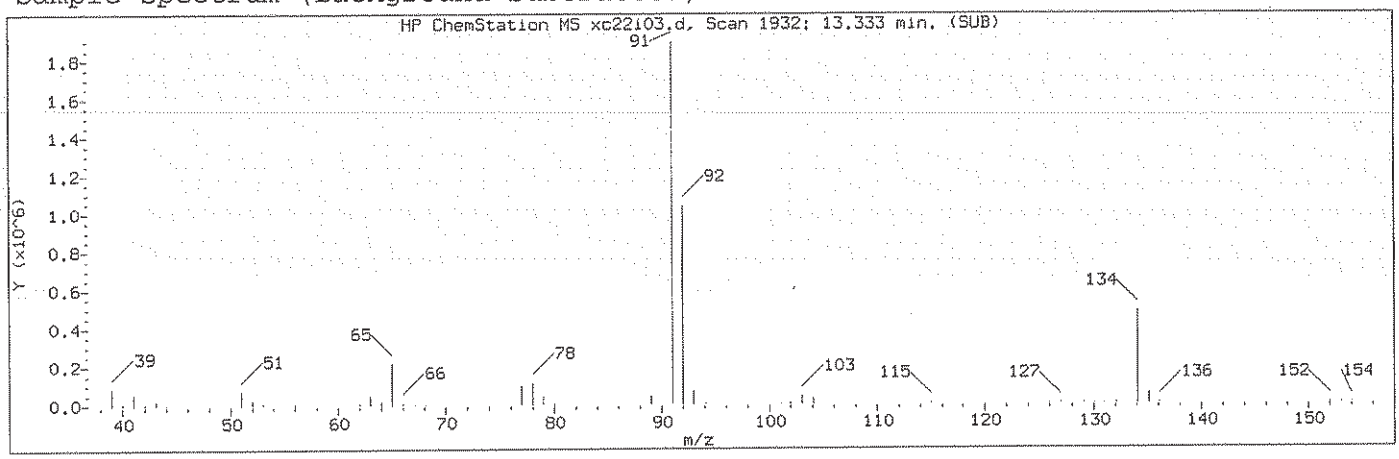
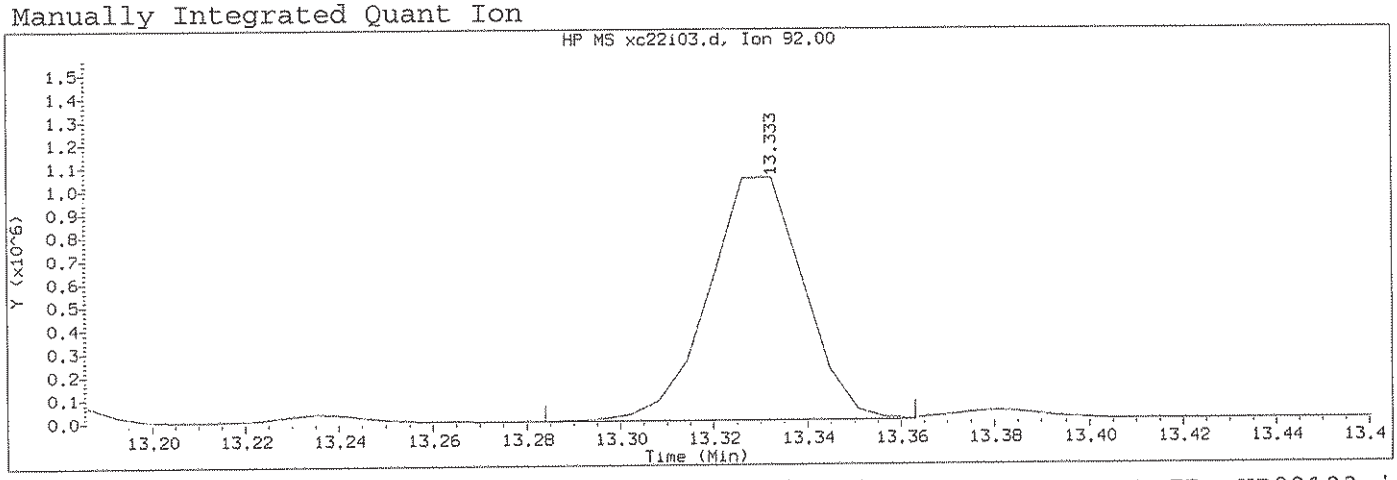
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:09 cgt03258

Sample Name: VSTD050 Lab Sample ID: VSTD050

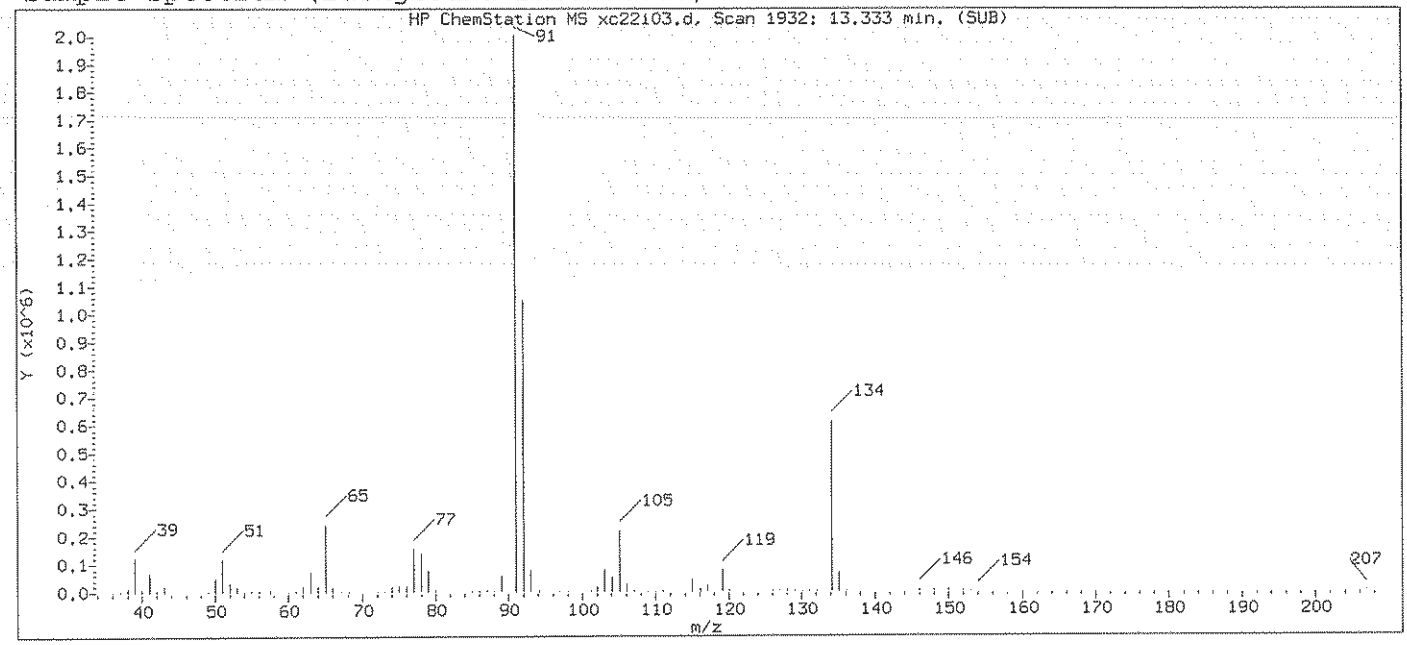
Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.333		
Quant Ion	: 92.00		
Area (flag)	: 1475790M		
On-Column Amount (ng)	: 50.4867		
Integration start scan	: 1923	Integration stop scan:	1936
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

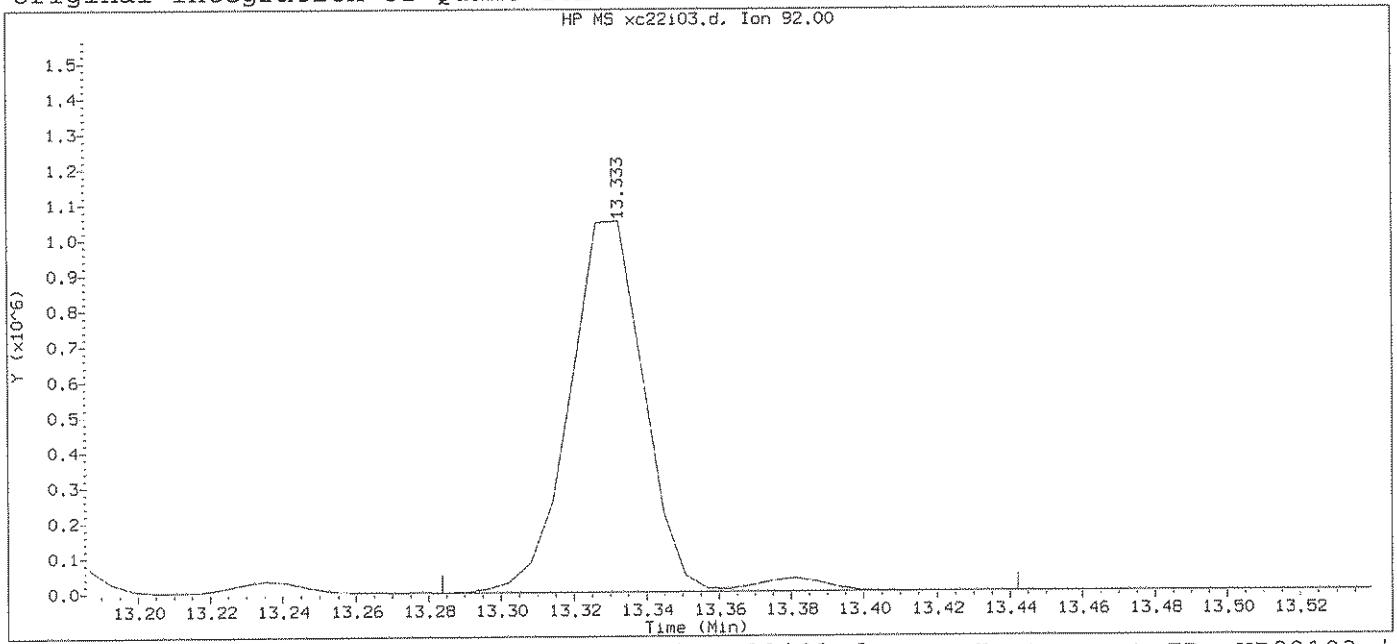
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i03.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 02:45 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:05
Date, time and analyst ID of latest file update: 22-Oct-2013 03:05 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.333		
Quant Ion	: 92.00		
Area	: 1524849		
On-column Amount (ng)	: 51.0317		
Integration start scan	: 1923	Integration stop scan:	1949
Y at integration start	: 0	Y at integration end:	0

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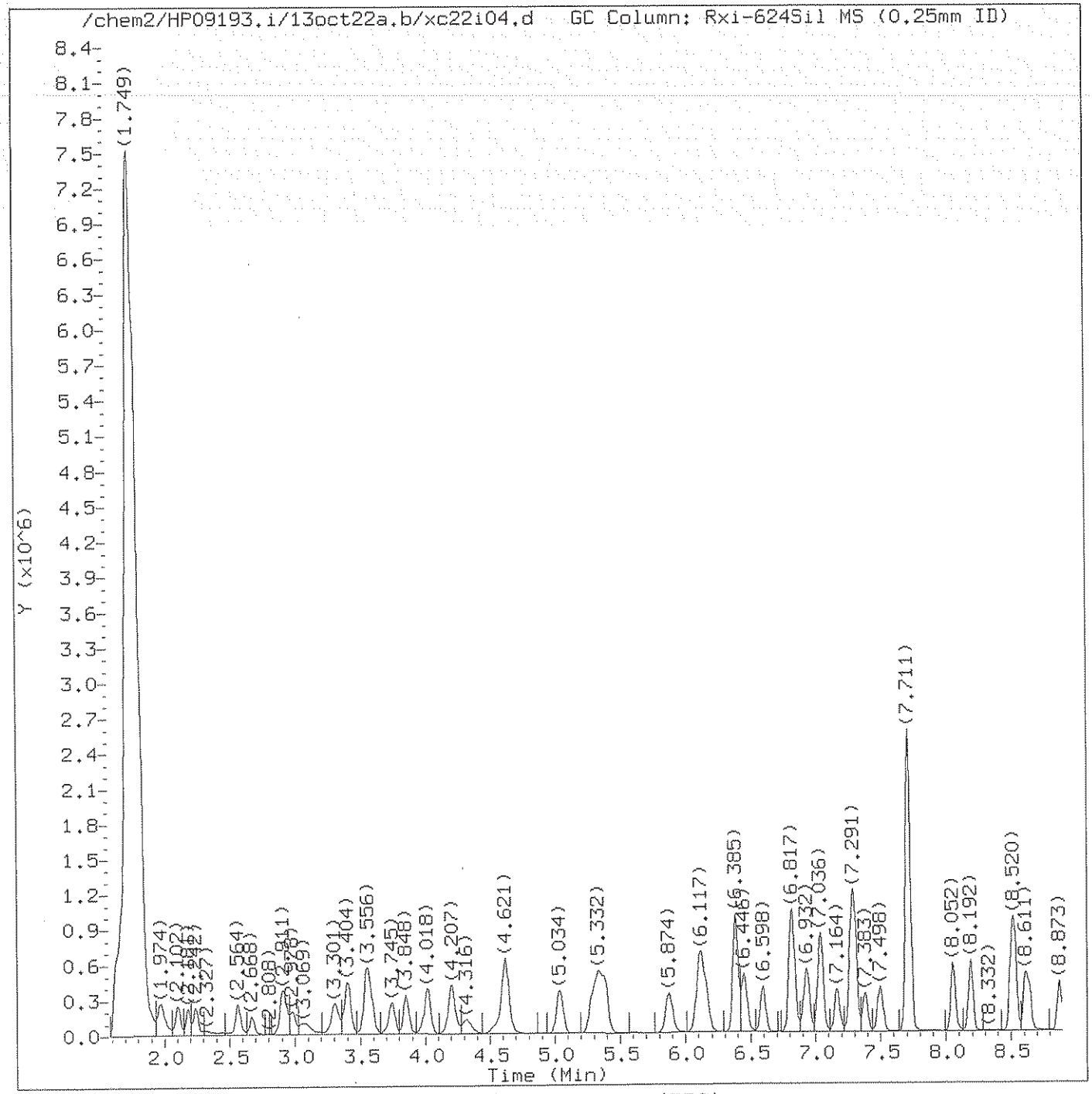
Target 3.5 esignature user ID: CGT03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d
Injection date and time: 22-OCT-2013 03:14

Instrument ID: HP09193.i
Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m
Calibration date and time: 22-OCT-2013 03:34

Sublist used: 8260S-2C

Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020

Lab Sample ID: VSTD020

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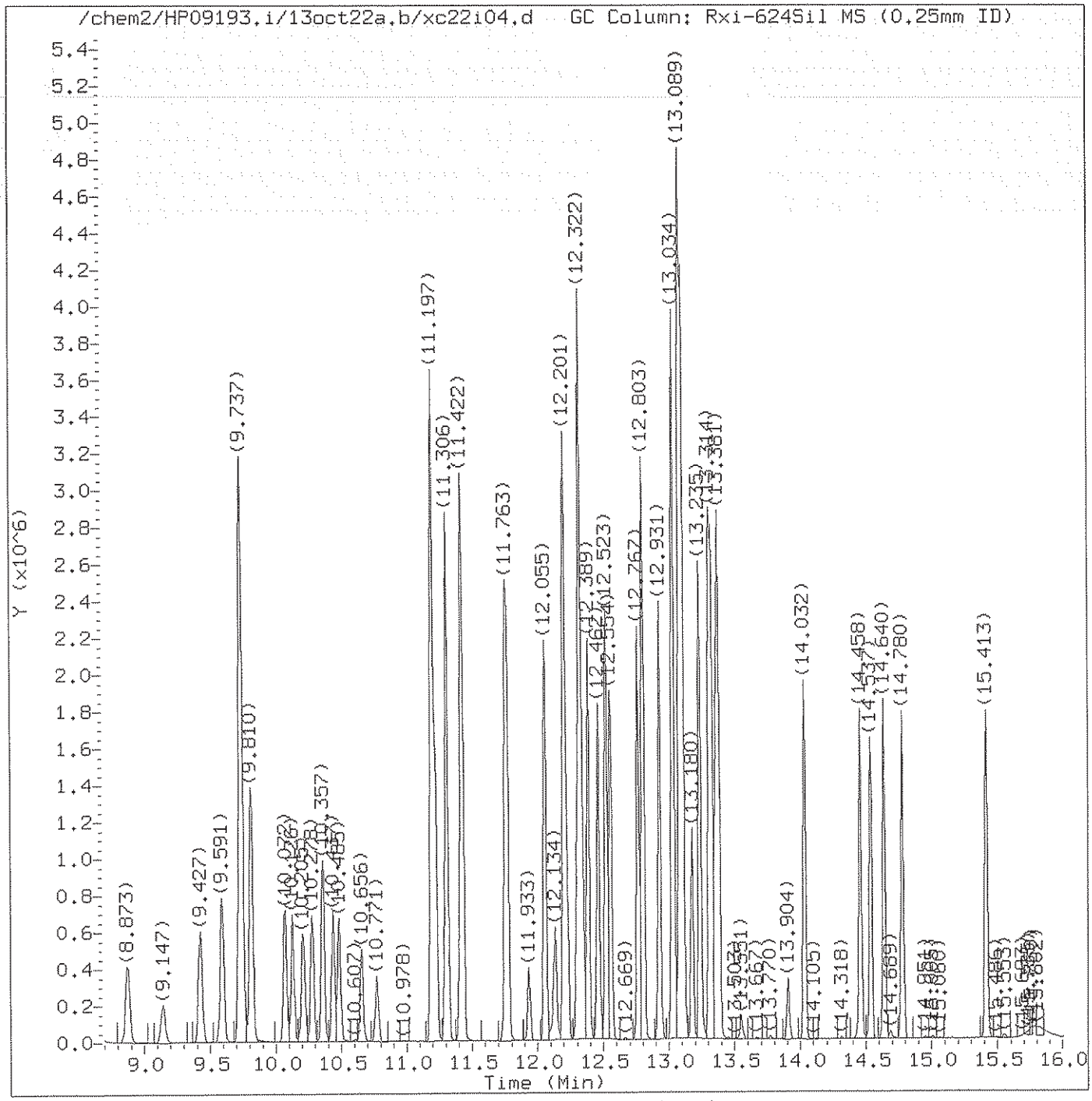
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	410192	21.707
4) Chloromethane	(2)	2.102	50	356848	23.225
5) Vinyl Chloride	(2)	2.242	62	331175	22.876
9) Bromomethane	(2)	2.564	94	241662	21.755
10) Chloroethane	(2)	2.674	64	191989	22.754
11) Dichlorofluoromethane	(2)	2.905	67	491974	21.802
13) Trichlorofluoromethane	(2)	2.978	101	479903	21.164
15) Ethanol	(1)	3.088	45	312626	2005.413
17) Freon 123a	(2)	3.307	67	293586	22.305
18) Acrolein	(1)	3.404	56	567296	226.557
19) 1,1-Dichloroethene	(2)	3.544	96	211691	21.160
19) 1,1-Dichloroethene	(2)	3.544	63	124933	21.652
20) Acetone	(2)	3.574	58	49531	42.239
22) Freon 113	(2)	3.580	101	228520	21.314
23) 2-Propanol	(1)	3.720	45	195159	201.313
24) Methyl Iodide	(2)	3.745	142	427085	20.710
25) Carbon Disulfide	(2)	3.848	76	780659	21.709
27) Methyl Acetate	(2)	3.976	43	188005	20.708
29) Allyl Chloride	(2)	4.018	41	386956	21.533
30)*t-Butyl alcohol-d10	(1)	4.195	65	336599	250.000
31) Methylene Chloride	(2)	4.207	84	243785	21.022
32) t-Butyl alcohol	(1)	4.316	59	310095	189.557
33) Acrylonitrile	(2)	4.529	53	98701	21.088
34) Methyl Tertiary Butyl Ether	(2)	4.608	73	654523	19.670
35) trans-1,2-Dichloroethene	(2)	4.621	96	244477	21.009
38) n-Hexane	(2)	5.034	57	318404	21.119
40) 1,1-Dichloroethane	(2)	5.284	63	462694	20.985
41) di-Isopropyl ether	(2)	5.332	45	773694	20.846
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	411321	20.347
44) Ethyl t-butyl ether	(2)	5.874	59	516491	19.216
45) 2-Butanone	(2)	6.075	43	254405	40.341
47) 1,2-Dichloroethene (Total)	(2)		96	512244	41.545
46) cis-1,2-Dichloroethene	(2)	6.111	96	267767	20.536
48) 2,2-Dichloropropane	(2)	6.129	77	402505	20.207
50) Propionitrile	(1)	6.160	54	346974	206.331
51) Methacrylonitrile	(2)	6.385	67	521717	100.036
52) Bromochloromethane	(2)	6.446	128	138329	20.068
53) Tetrahydrofuran	(1)	6.464	71	67500	41.283

* = Compound is an internal standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	459927	20.261
56)$Dibromofluoromethane	(2)	6.811	113	627585	49.436
56)$Dibromofluoromethane	(2)	6.811	111	637329	49.084
57) 1,1,1-Trichloroethane	(2)	6.829	97	457569	21.004
58) Cyclohexane	(2)	6.932	56	396569	21.100
58) Cyclohexane	(2)	6.932	84	342580	20.551
58) Cyclohexane	(2)	6.926	69	123234	20.803
59) 1,1-Dichloropropene	(2)	7.036	75	345147	20.361
60) Carbon Tetrachloride	(2)	7.042	117	361286	19.684
61) Isobutyl Alcohol	(1)	7.164	41	278550	508.469
62)$1,2-Dichloroethane-d4	(2)	7.273	102	145606	51.274
62)$1,2-Dichloroethane-d4	(2)	7.273	65	825541	48.078
62)$1,2-Dichloroethane-d4	(2)	7.273	104	92701	50.396
63) Benzene	(2)	7.304	78	996978	21.135
66) 1,2-Dichloroethane	(2)	7.383	62	391932	19.487
66) 1,2-Dichloroethane	(2)	7.383	98	29254	19.874
67) t-Amyl methyl ether	(2)	7.492	73	401252	18.510
69)*Fluorobenzene	(2)	7.711	96	2428981	50.000
71) n-Heptane	(2)	7.717	43	355238	21.339
72) n-Butanol	(1)	8.052	56	427274	985.879
74) Trichloroethene	(2)	8.192	95	261892	20.458
75) Methylcyclohexane	(2)	8.508	83	412518	20.525
76) 1,2-Dichloropropane	(2)	8.532	63	247728	20.486
78) Methyl Methacrylate	(2)	8.605	69	186242	19.123
79) 1,4-Dioxane	(1)	8.618	88	78158	499.095
80) Dibromomethane	(2)	8.642	93	167023M	19.783
83) Bromodichloromethane	(2)	8.873	83	352728	19.494
84) 2-Nitropropane	(1)	9.147	41	166136	37.843
86) cis-1,3-Dichloropropene	(2)	9.427	75	393177	19.273
87) 4-Methyl-2-pentanone	(2)	9.591	43	577156	39.618
88)$Toluene-d8	(3)	9.737	98	2442560	50.738
88)$Toluene-d8	(3)	9.737	100	1592345	50.553
89) Toluene	(3)	9.810	92	635100	20.971
90) trans-1,3-Dichloropropene	(3)	10.072	75	402140	19.362
91) Ethyl Methacrylate	(3)	10.126	69	343019	19.297
92) 1,1,2-Trichloroethane	(3)	10.278	97	219351	20.197
94) Tetrachloroethene	(3)	10.357	166	299219	20.692
95) 1,3-Dichloropropane	(3)	10.437	76	393178	20.170

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	423936	39.702
99) Dibromochloromethane	(3)	10.656	129	263326	18.941
100) 1,2-Dibromoethane	(3)	10.771	107	239842	19.883
101)*Chlorobenzene-d5	(3)	11.197	117	1869435	50.000
102) Chlorobenzene	(3)	11.221	112	734239	20.713
103) 1,1,1,2-Tetrachloroethane	(3)	11.306	131	265851	19.360
104) Ethylbenzene	(3)	11.313	91	1248678	21.015
105) m+p-Xylene	(3)	11.422	106	986784	41.024
107) Xylene (Total)	(3)		106	1460527	61.195
106) o-Xylene	(3)	11.757	106	473743	20.170
108) Styrene	(3)	11.769	104	792551	20.028
109) Bromoform	(3)	11.933	173	168641	18.828
110) Isopropylbenzene	(3)	12.055	105	1236789	20.764
113) Cyclohexanone	(1)	12.134	55	237183	461.923
114)$4-Bromofluorobenzene	(3)	12.201	95	950717	49.418
114)$4-Bromofluorobenzene	(3)	12.207	174	836398	49.273
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	324954	20.579
116) Bromobenzene	(4)	12.322	156	342361	20.445
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	573644	99.105
118) 1,2,3-Trichloropropane	(4)	12.353	110	102600	20.105
119) n-Propylbenzene	(4)	12.389	91	1514818	22.506
121) 2-Chlorotoluene	(4)	12.462	126	317233	20.888
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	1097977	21.288
125) 4-Chlorotoluene	(4)	12.554	126	327937	20.595
128) tert-Butylbenzene	(4)	12.767	134	257753	20.284
129) Pentachloroethane	(4)	12.797	167	206199	19.127
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	1130832	21.179
131) sec-Butylbenzene	(4)	12.931	105	1385240	21.949
133) 1,3-Dichlorobenzene	(4)	13.028	146	645759	20.596
134) p-Isopropyltoluene	(4)	13.040	119	1272092	21.525
135)*1,4-Dichlorobenzene-d4	(4)	13.089	152	1084607	50.000
136) 1,4-Dichlorobenzene	(4)	13.107	146	664575	20.581
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	1193215	21.305
138) Benzyl Chloride	(4)	13.180	126	140988	18.204
139) 1,3-Diethylbenzene	(4)	13.235	119	766513	20.910
140) 1,4-Diethylbenzene	(4)	13.308	119	779449	20.884
141) n-Butylbenzene	(4)	13.332	92	627989M	20.825
142) 1,2-Dichlorobenzene	(4)	13.363	146	628820	20.650

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	642732	20.831
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	72856	18.515
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	532007	20.452
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	490914	20.125
149) Hexachlorobutadiene	(4)	14.537	225	266324	20.287
150) Naphthalene	(4)	14.640	128	1216372	20.865
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	482756	20.321
152) 2-Methylnaphthalene	(4)	15.413	142	803302	19.744

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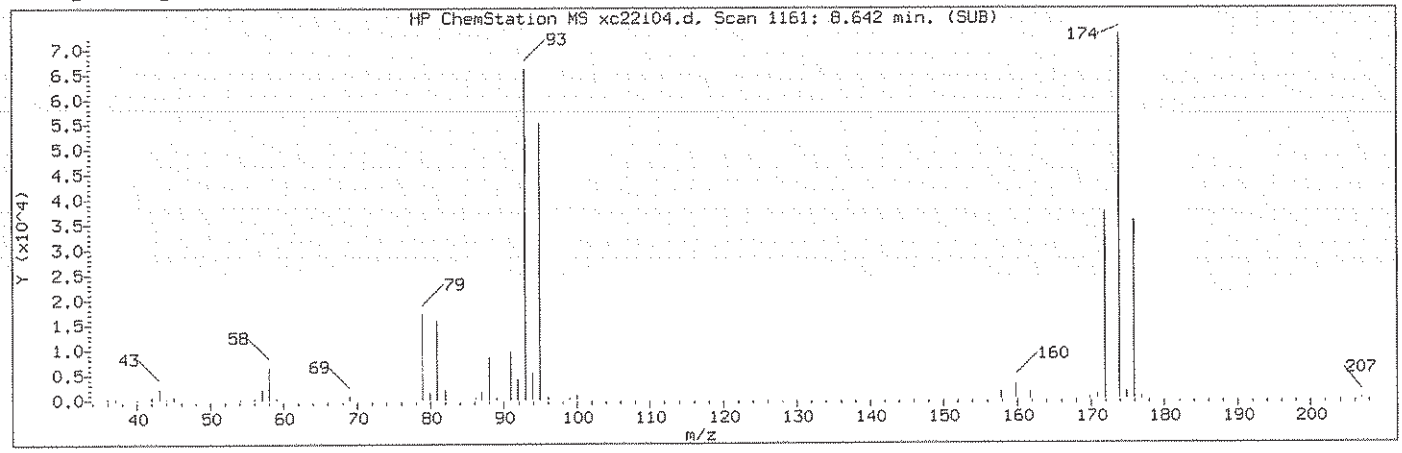
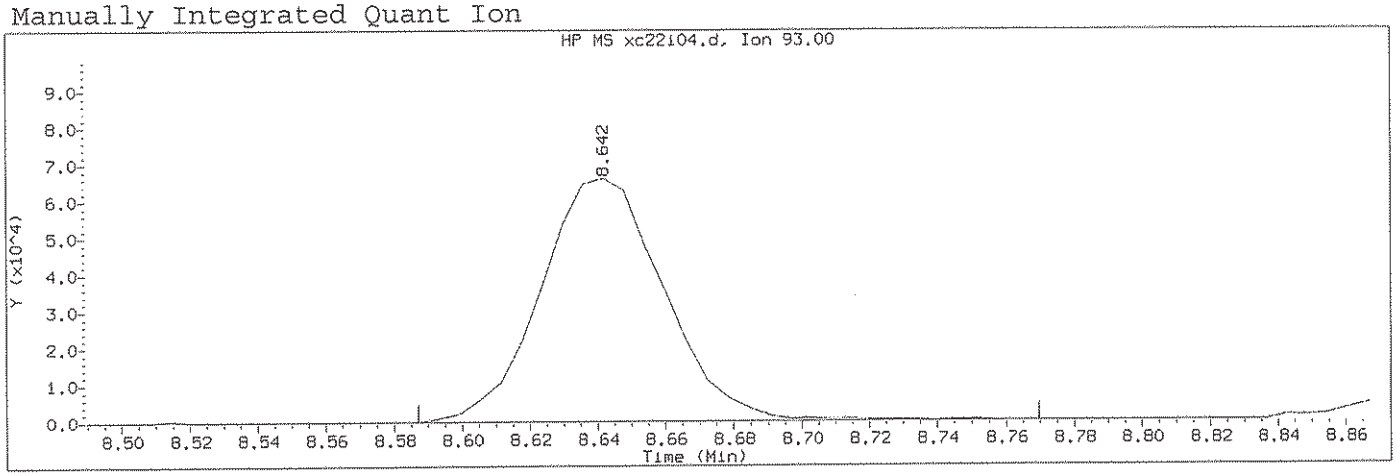
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

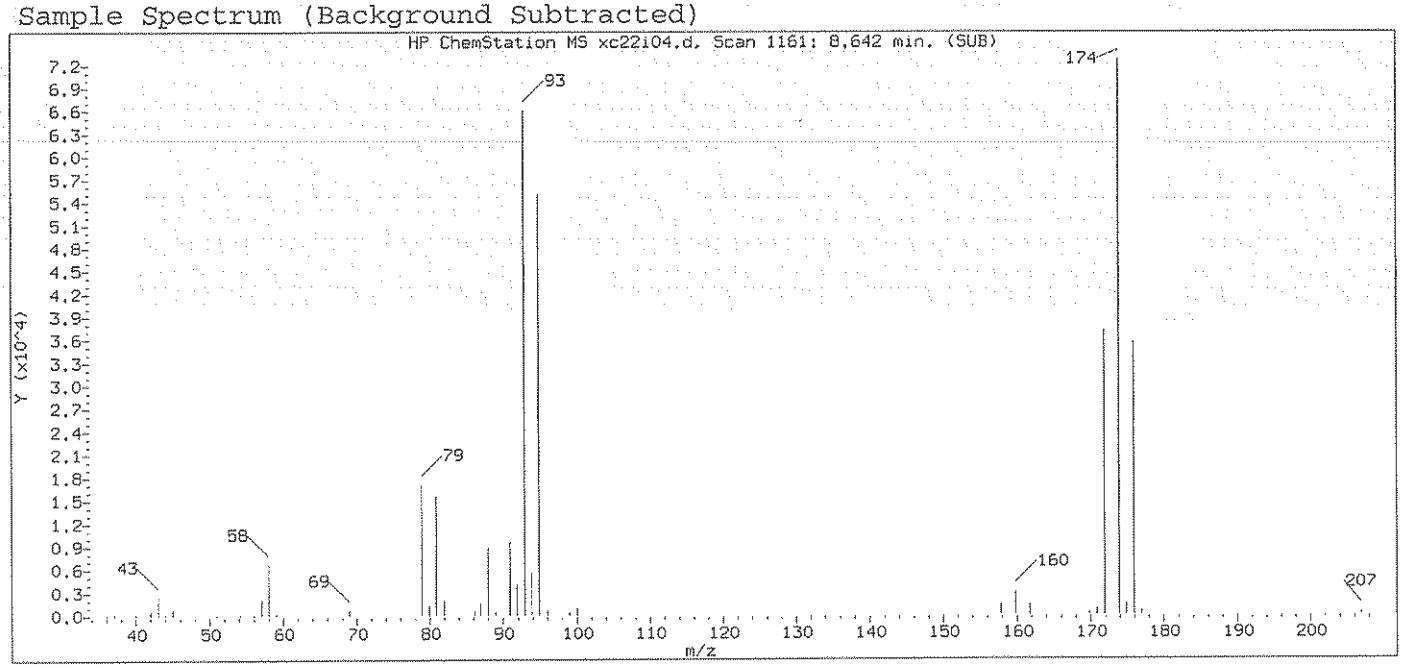
Compound Number	:	80
Compound Name	:	Dibromomethane
Scan Number	:	1161
Retention Time (minutes)	:	8.642
Quant Ion	:	93.00
Area (flag)	:	167023M
On-Column Amount (ng)	:	19.7832
Integration start scan	:	1151 Integration stop scan: 1181
Y at integration start	:	0 Y at integration end: 0

Reason for manual integration: improper integration

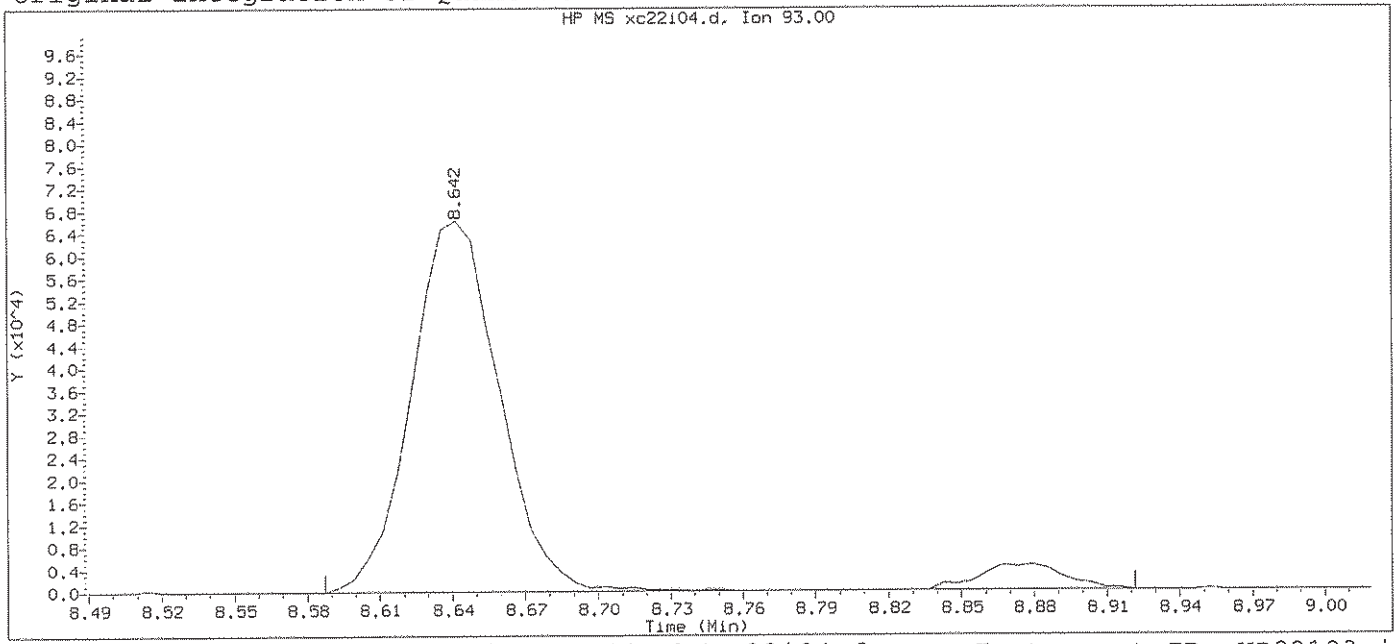
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: [signature] 10 22 13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 80		
Compound Name	: Dibromomethane		
Scan Number	: 1161		
Retention Time (minutes)	: 8.642		
Quant Ion	: 93.00		
Area	: 178061		
On-column Amount (ng)	: 20.7515		
Integration start scan	: 1151	Integration stop scan:	1206
Y at integration start	: 0	Y at integration end:	0

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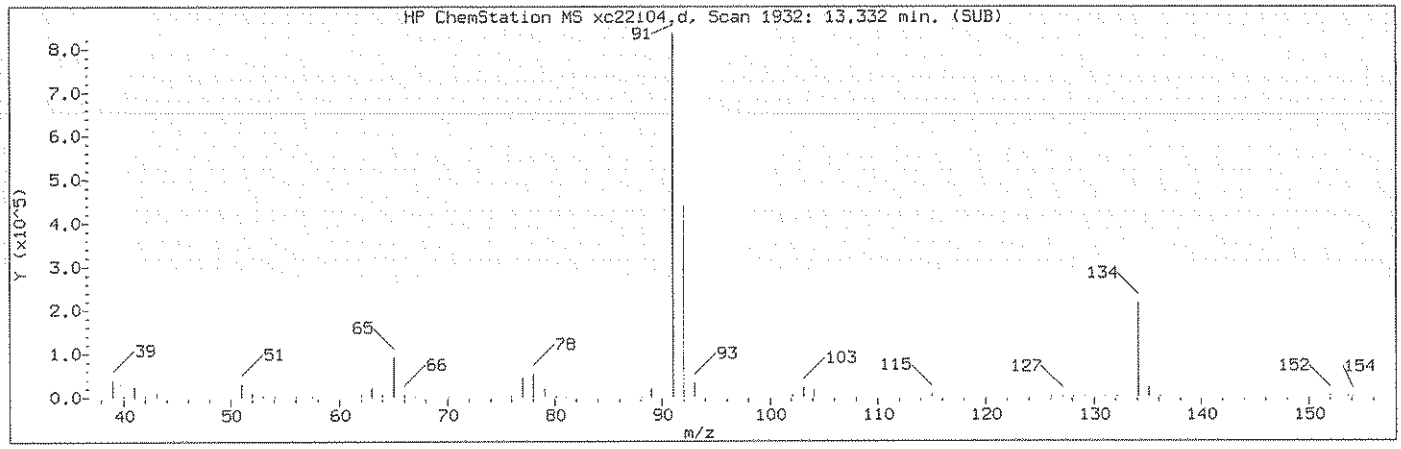
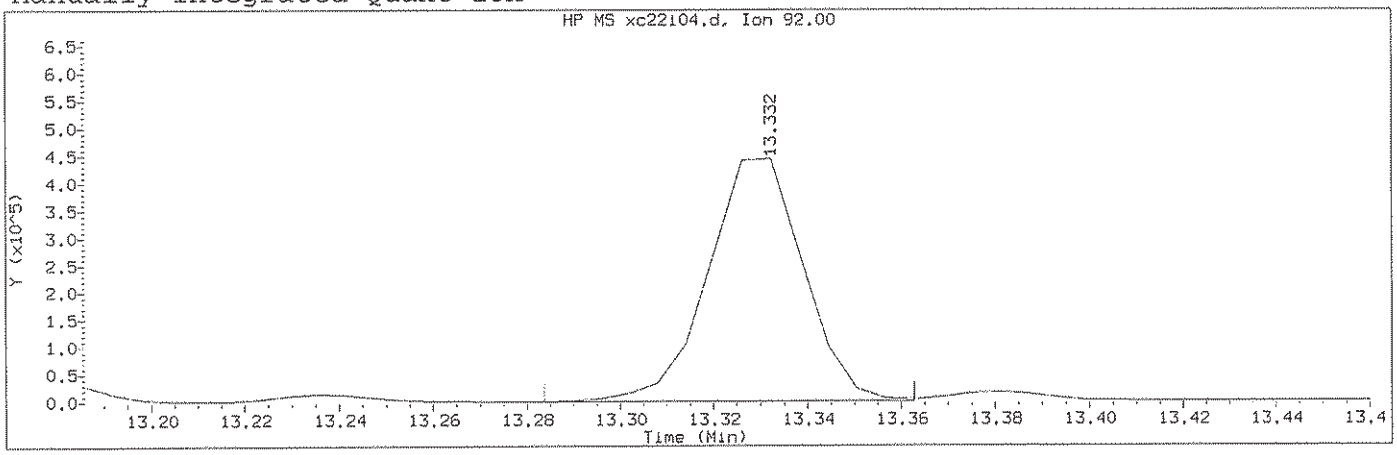
Target 3.5 esignature user ID: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:49 cgt03258

Sample Name: VSTD020 Lab Sample ID: VSTD020

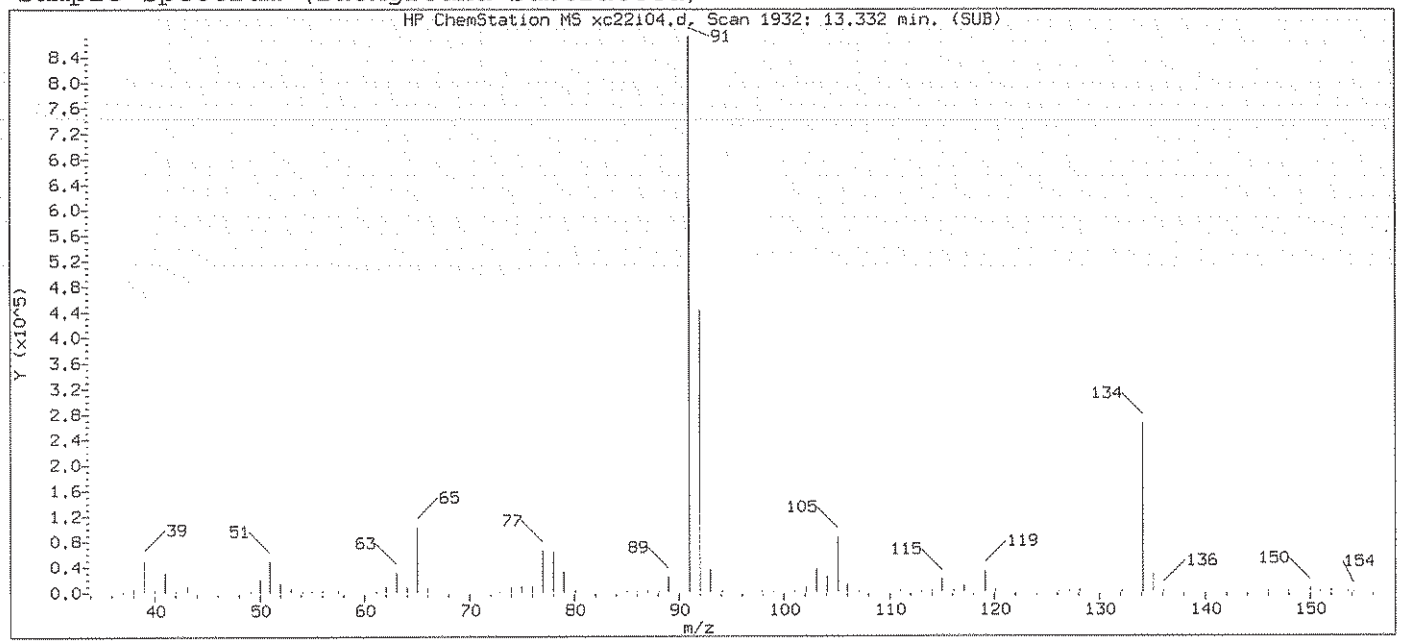
Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.332		
Quant Ion	: 92.00		
Area (flag)	: 627989M		
On-Column Amount (ng)	: 20.8249		
Integration start scan	: 1923	Integration stop scan:	1936
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

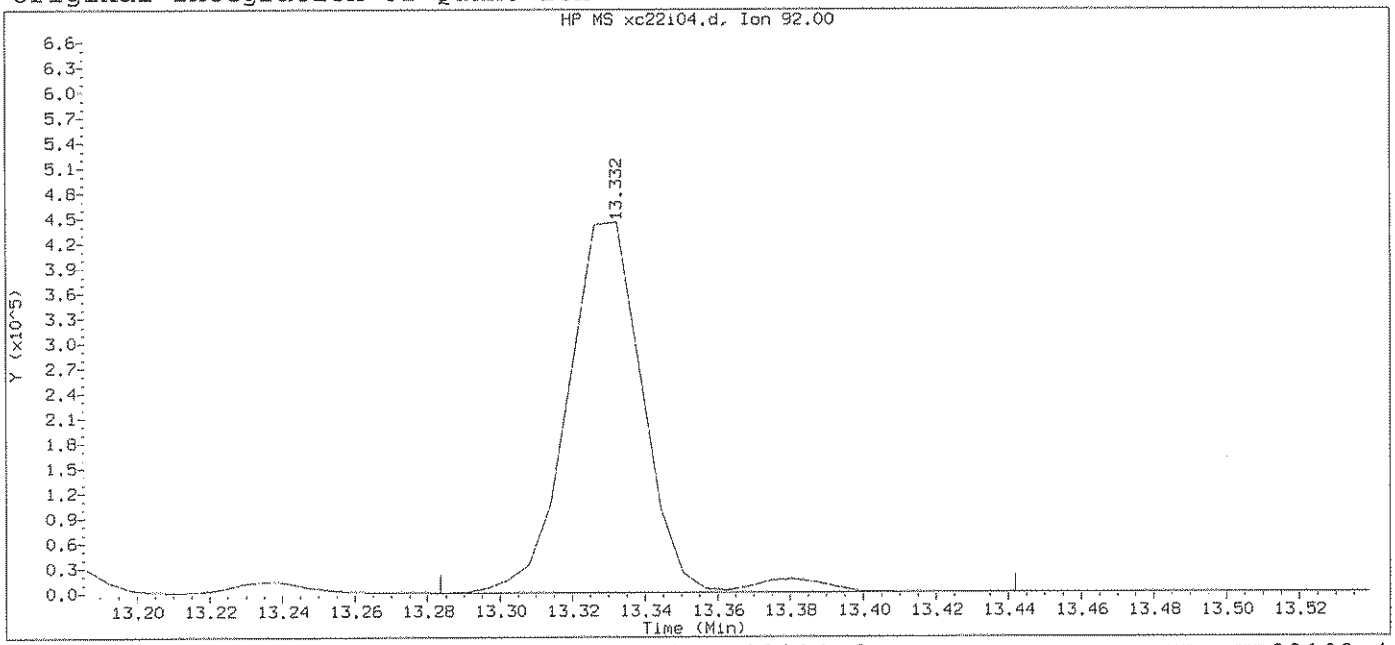
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Approved 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i04.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:14 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 03:34
Date, time and analyst ID of latest file update: 22-Oct-2013 03:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.332		
Quant Ion	: 92.00		
Area	: 649593		
On-column Amount (ng)	: 21.3501		
Integration start scan	: 1923	Integration stop scan:	1949
Y at integration start	: 0	Y at integration end:	0

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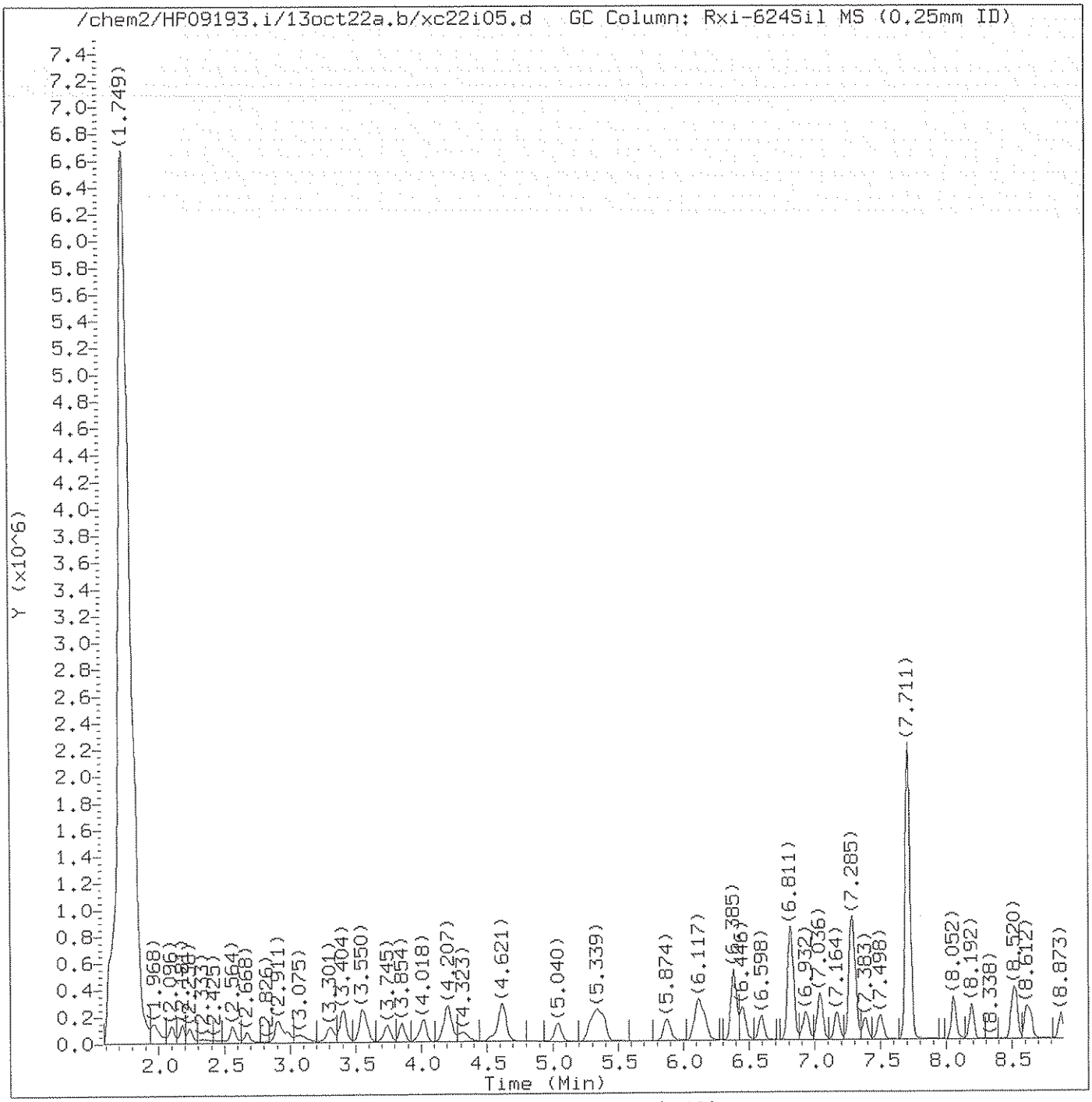
Target 3.5 esignature user ID: CGT03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

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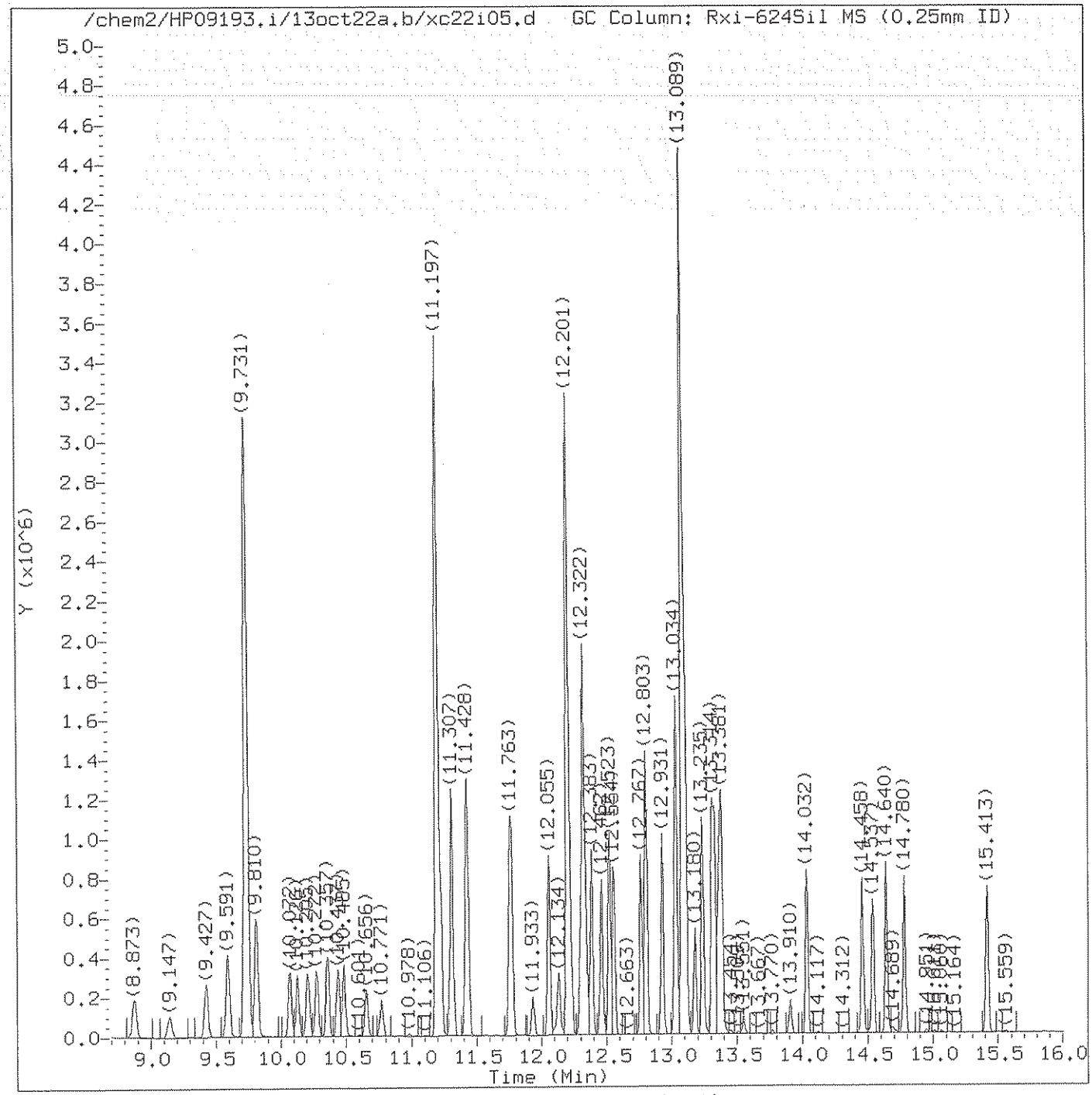
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	153525	8.469
4) Chloromethane	(2)	2.096	50	159469	10.334
5) Vinyl Chloride	(2)	2.236	62	134448	9.452
9) Bromomethane	(2)	2.558	94	108825	9.869
10) Chloroethane	(2)	2.674	64	83034	9.904
11) Dichlorofluoromethane	(2)	2.899	67	213834	9.608
13) Trichlorofluoromethane	(2)	2.942	101	187263M	8.585
15) Ethanol	(1)	3.088	45	181895	1016.286
17) Freon 123a	(2)	3.307	67	120610	9.350
18) Acrolein	(1)	3.404	56	310129	106.545
19) 1,1-Dichloroethene	(2)	3.544	96	89110	9.136
19) 1,1-Dichloroethene	(2)	3.550	63	49312	8.831
22) Freon 113	(2)	3.568	101	86991	8.460
20) Acetone	(2)	3.574	58	28991M	23.682
23) 2-Propanol	(1)	3.720	45	115807	103.547
24) Methyl Iodide	(2)	3.745	142	189151	9.358
25) Carbon Disulfide	(2)	3.854	76	322435	9.186
27) Methyl Acetate	(2)	3.988	43	103585	11.132
29) Allyl Chloride	(2)	4.024	41	168446	9.524
30)*t-Butyl alcohol-d10	(1)	4.189	65	384879	250.000
31) Methylene Chloride	(2)	4.201	84	115176	9.978
32) t-Butyl alcohol	(1)	4.323	59	175636	95.056
33) Acrylonitrile	(2)	4.529	53	54327	11.281
34) Methyl Tertiary Butyl Ether	(2)	4.609	73	318261	9.680
35) trans-1,2-Dichloroethene	(2)	4.621	96	107091	9.383
38) n-Hexane	(2)	5.040	57	113916	7.971
40) 1,1-Dichloroethane	(2)	5.284	63	201531	9.331
41) di-Isopropyl ether	(2)	5.339	45	345356	9.467
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	164166	8.467
44) Ethyl t-butyl ether	(2)	5.874	59	239515	9.140
45) 2-Butanone	(2)	6.081	43	141642	21.990
47) 1,2-Dichloroethene (Total)	(2)		96	224988	18.632
46) cis-1,2-Dichloroethene	(2)	6.111	96	117897	9.249
48) 2,2-Dichloropropane	(2)	6.123	77	166976	8.692
50) Propionitrile	(1)	6.166	54	193886	100.665
51) Methacrylonitrile	(2)	6.385	67	276177	52.504
52) Bromochloromethane	(2)	6.446	128	67832	9.904
53) Tetrahydrofuran	(1)	6.452	71	39062	20.708

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	208660	9.374
56)$Dibromofluoromethane	(2)	6.811	113	624788	49.531
56)$Dibromofluoromethane	(2)	6.811	111	642516	49.747
57) 1,1,1-Trichloroethane	(2)	6.829	97	188495	8.922
58) Cyclohexane	(2)	6.932	56	141035	7.925
58) Cyclohexane	(2)	6.932	84	124580	7.898
58) Cyclohexane	(2)	6.932	69	43911	7.844
60) Carbon Tetrachloride	(2)	7.036	117	147062	8.372
59) 1,1-Dichloropropene	(2)	7.036	75	139554	8.563
61) Isobutyl Alcohol	(1)	7.164	41	156352	249.684
62)$1,2-Dichloroethane-d4	(2)	7.279	102	143678	50.638
62)$1,2-Dichloroethane-d4	(2)	7.279	65	855439	50.016
62)$1,2-Dichloroethane-d4	(2)	7.279	104	92767	50.507
63) Benzene	(2)	7.304	78	451018	9.677
66) 1,2-Dichloroethane	(2)	7.383	62	189585	9.567
66) 1,2-Dichloroethane	(2)	7.383	98	14269	9.785
67) t-Amyl methyl ether	(2)	7.498	73	192819	9.126
69)*Fluorobenzene	(2)	7.711	96	2419176	50.000
71) n-Heptane	(2)	7.717	43	133907	8.399
72) n-Butanol	(1)	8.052	56	229310	469.734
74) Trichloroethene	(2)	8.192	95	114271	9.152
75) Methylcyclohexane	(2)	8.508	83	146731	7.744
76) 1,2-Dichloropropane	(2)	8.532	63	114066	9.572
78) Methyl Methacrylate	(2)	8.605	69	91316	9.526
79) 1,4-Dioxane	(1)	8.618	88	41494	235.168
80) Dibromomethane	(2)	8.642	93	80828	9.688
83) Bromodichloromethane	(2)	8.873	83	162185	9.183
84) 2-Nitropropane	(1)	9.147	41	85099	17.485
86) cis-1,3-Dichloropropene	(2)	9.427	75	174968	8.857
87) 4-Methyl-2-pentanone	(2)	9.591	43	303047	20.703
88)$Toluene-d8	(3)	9.737	98	2414933	50.181
88)$Toluene-d8	(3)	9.731	100	1586087	50.333
89) Toluene	(3)	9.810	92	281750	9.444
90) trans-1,3-Dichloropropene	(3)	10.072	75	182490	9.014
91) Ethyl Methacrylate	(3)	10.126	69	159578	9.174
92) 1,1,2-Trichloroethane	(3)	10.272	97	109246	10.057
94) Tetrachloroethene	(3)	10.364	166	125181	8.905
95) 1,3-Dichloropropane	(3)	10.437	76	189516	9.786

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	225223	20.885
99) Dibromochloromethane	(3)	10.656	129	123355	9.087
100) 1,2-Dibromoethane	(3)	10.771	107	115679	9.679
101)*Chlorobenzene-d5	(3)	11.197	117	1867107	50.000
102) Chlorobenzene	(3)	11.221	112	335800	9.584
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	117507	8.820
104) Ethylbenzene	(3)	11.307	91	522951	9.027
105) m+p-Xylene	(3)	11.428	106	422688	18.028
107) Xylene (Total)	(3)		106	621935	26.786
106) o-Xylene	(3)	11.757	106	199247	8.758
108) Styrene	(3)	11.769	104	344707	8.951
109) Bromoform	(3)	11.933	173	80111	9.195
110) Isopropylbenzene	(3)	12.055	105	510341	8.830
113) Cyclohexanone	(1)	12.134	55	122216M	215.372
114)$4-Bromofluorobenzene	(3)	12.201	95	936540	48.988
114)$4-Bromofluorobenzene	(3)	12.207	174	827912	49.063
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	166176	10.623
116) Bromobenzene	(4)	12.316	156	152834M	9.480
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	289044	50.957
118) 1,2,3-Trichloropropane	(4)	12.353	110	53272M	10.555
119) n-Propylbenzene	(4)	12.383	91	638158	9.776
121) 2-Chlorotoluene	(4)	12.462	126	136018	9.336
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	464224	9.373
125) 4-Chlorotoluene	(4)	12.554	126	146091	9.520
128) tert-Butylbenzene	(4)	12.767	134	104285	8.690
129) Pentachloroethane	(4)	12.797	167	94593	9.181
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	486636	9.469
131) sec-Butylbenzene	(4)	12.931	105	562800	9.303
133) 1,3-Dichlorobenzene	(4)	13.028	146	283826	9.417
134) p-Isopropyltoluene	(4)	13.040	119	520915	9.215
135)*1,4-Dichlorobenzene-d4	(4)	13.089	152	1057800M	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	299088	9.594
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	521974	9.642
138) Benzyl Chloride	(4)	13.180	126	65125	8.866
139) 1,3-Diethylbenzene	(4)	13.235	119	311443	8.942
140) 1,4-Diethylbenzene	(4)	13.308	119	311007	8.800
141) n-Butylbenzene	(4)	13.332	92	260185M	9.056
142) 1,2-Dichlorobenzene	(4)	13.363	146	290663	9.829

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	266492	9.063
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	37776	9.874
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	226628	9.128
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	210697	9.064
149) Hexachlorobutadiene	(4)	14.537	225	109471	8.806
150) Naphthalene	(4)	14.640	128	561718	9.903
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	217459	9.502
152) 2-Methylnaphthalene	(4)	15.413	142	333226	8.676

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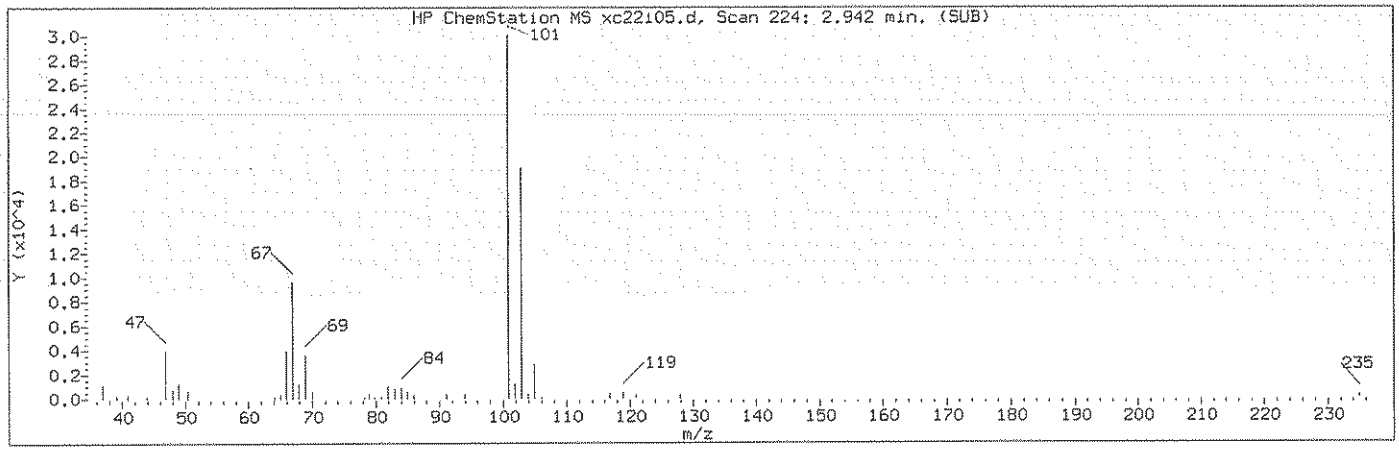
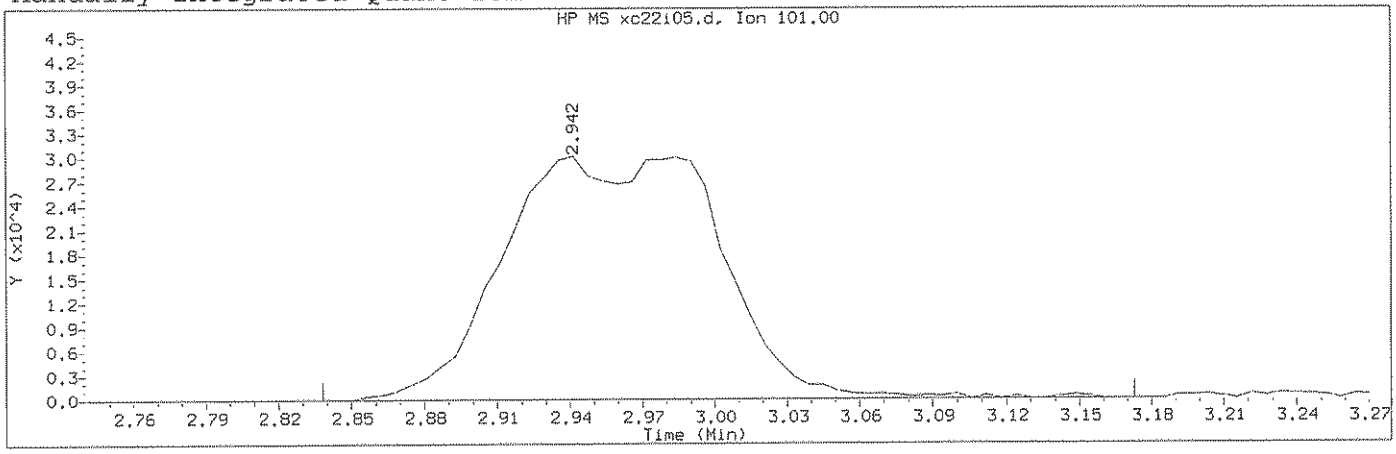
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

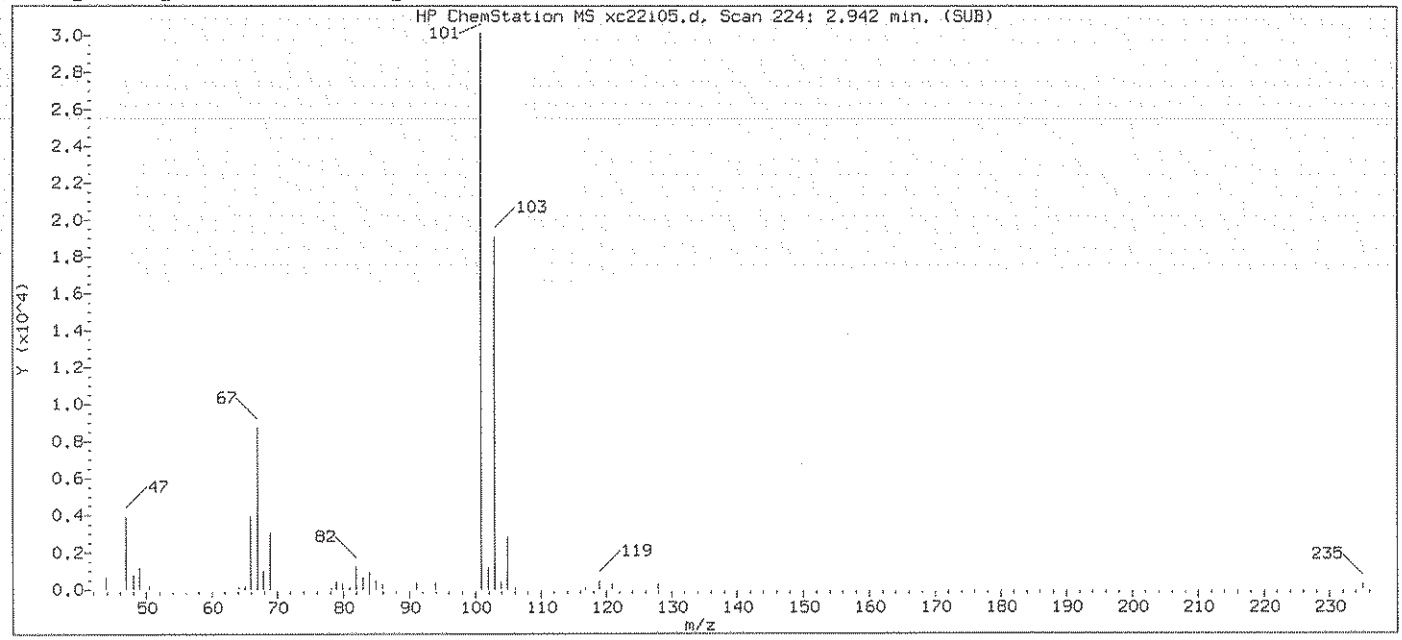
Compound Number	: 13		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.942		
Quant Ion	: 101.00		
Area (flag)	: 187263M		
On-Column Amount (ng)	: 8.5853		
Integration start scan	: 206	Integration stop scan:	261
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

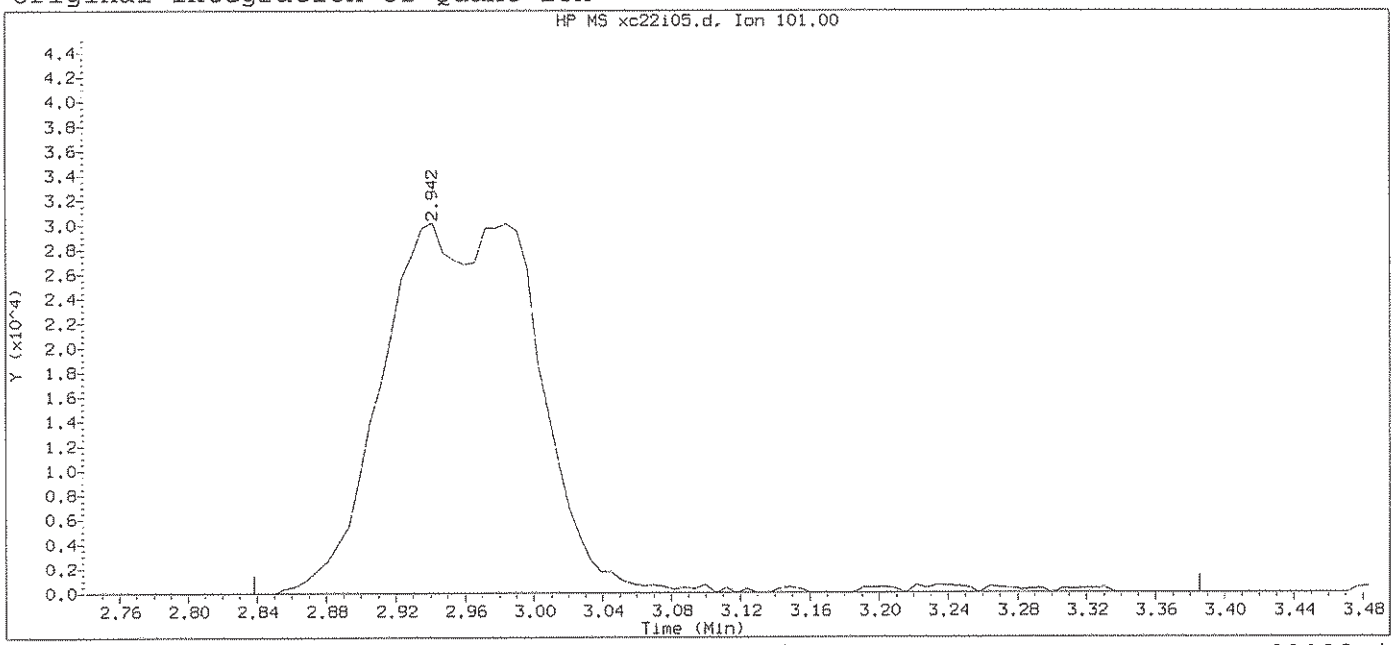
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Andrew 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

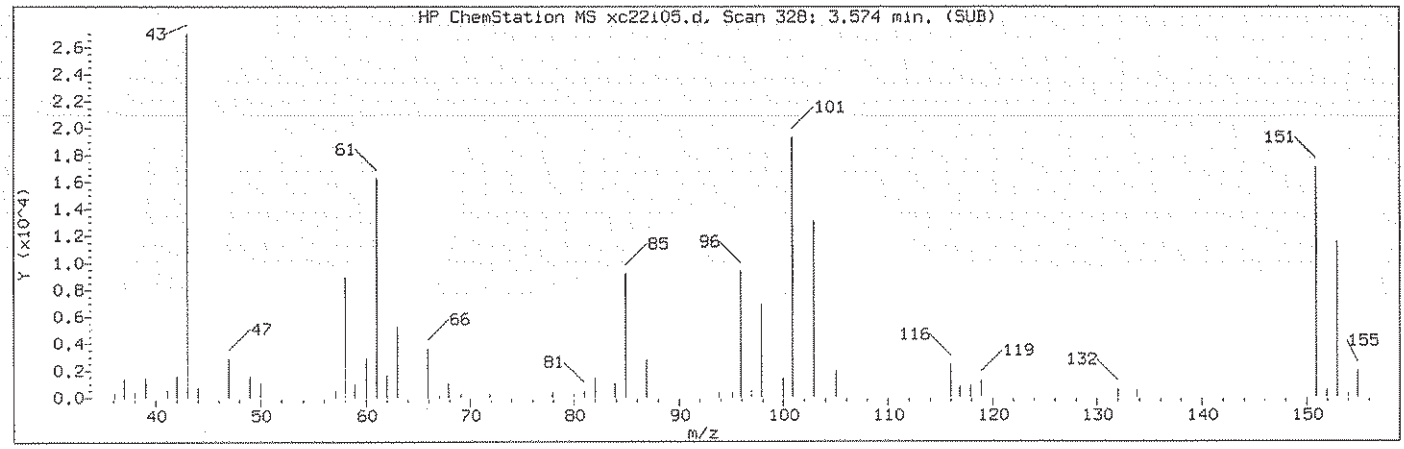
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

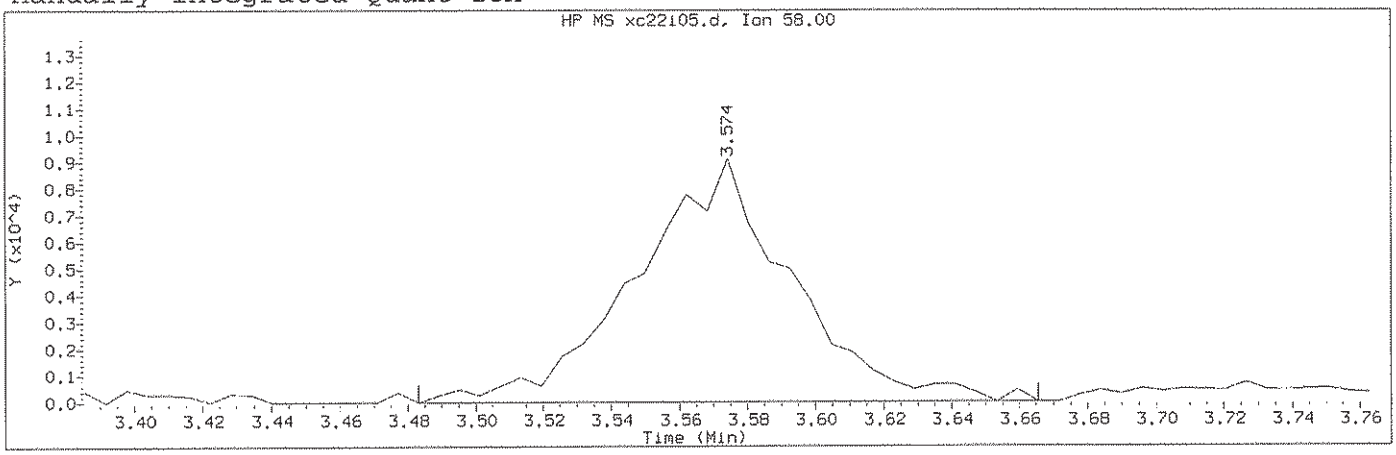
Compound Number	: 13		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.942		
Quant Ion	: 101.00		
Area	: 190422		
On-column Amount (ng)	: 8.7049		
Integration start scan	: 206	Integration stop scan:	296
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

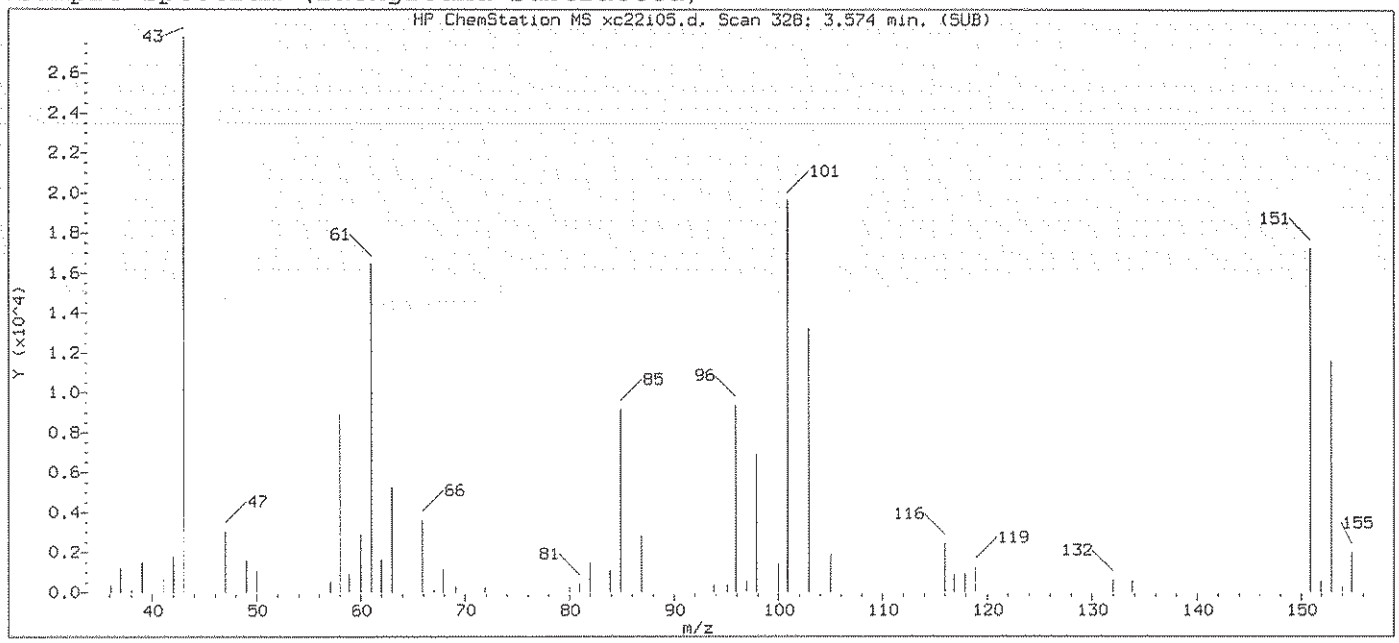
Compound Number	: 20		
Compound Name	: Acetone		
Scan Number	: 328		
Retention Time (minutes)	: 3.574		
Quant Ion	: 58.00		
Area (flag)	: 28991M		
On-Column Amount (ng)	: 23.6816		
Integration start scan	: 312	Integration stop scan:	342
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

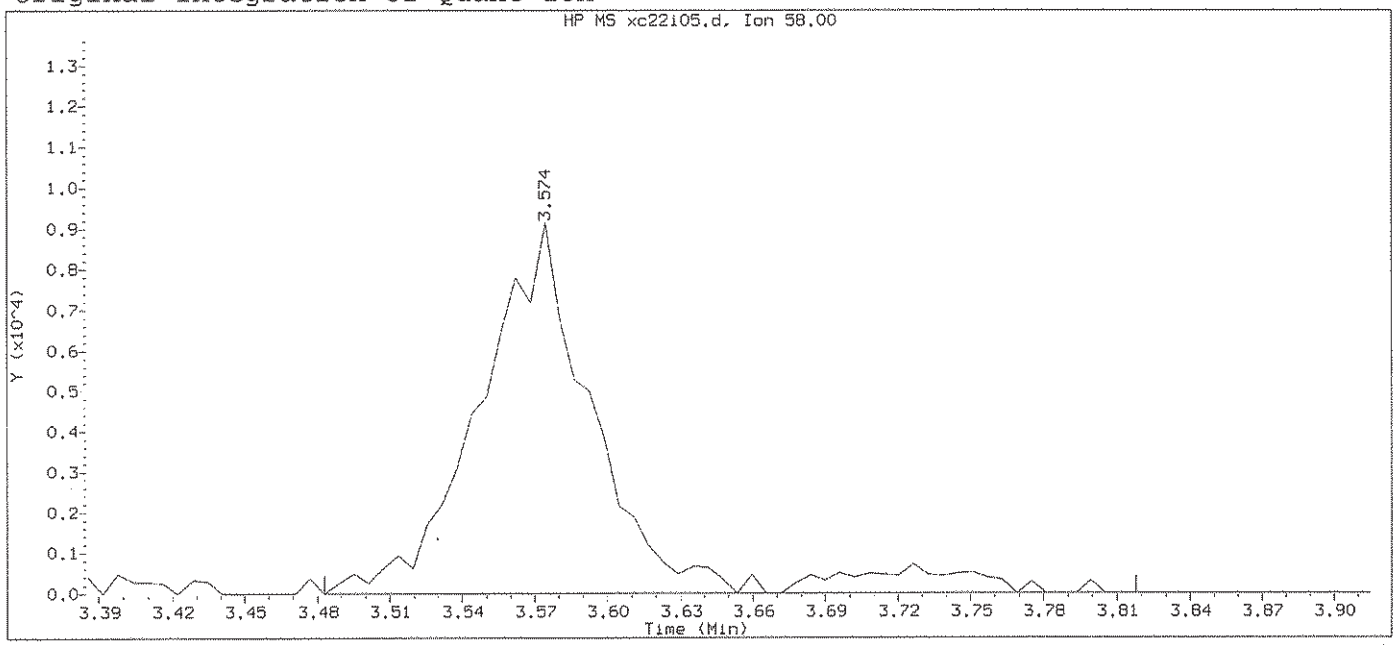
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 20		
Compound Name	: Acetone		
Scan Number	: 328		
Retention Time (minutes)	: 3.574		
Quant Ion	: 58.00		
Area	: 31616		
On-column Amount (ng)	: 25.2833		
Integration start scan	: 312	Integration stop scan:	367
Y at integration start	: 0	Y at integration end:	0

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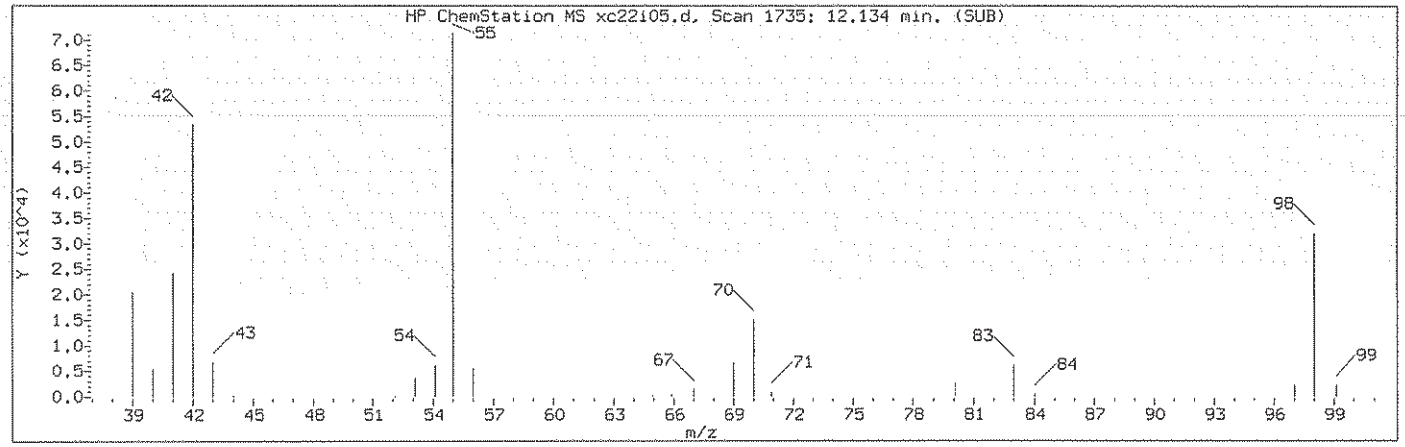
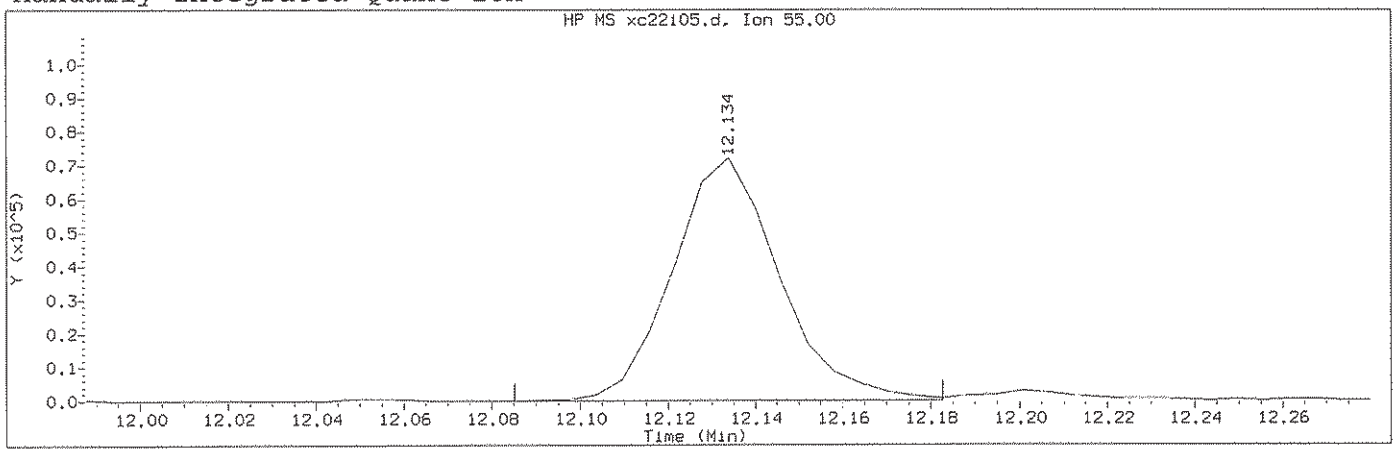
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

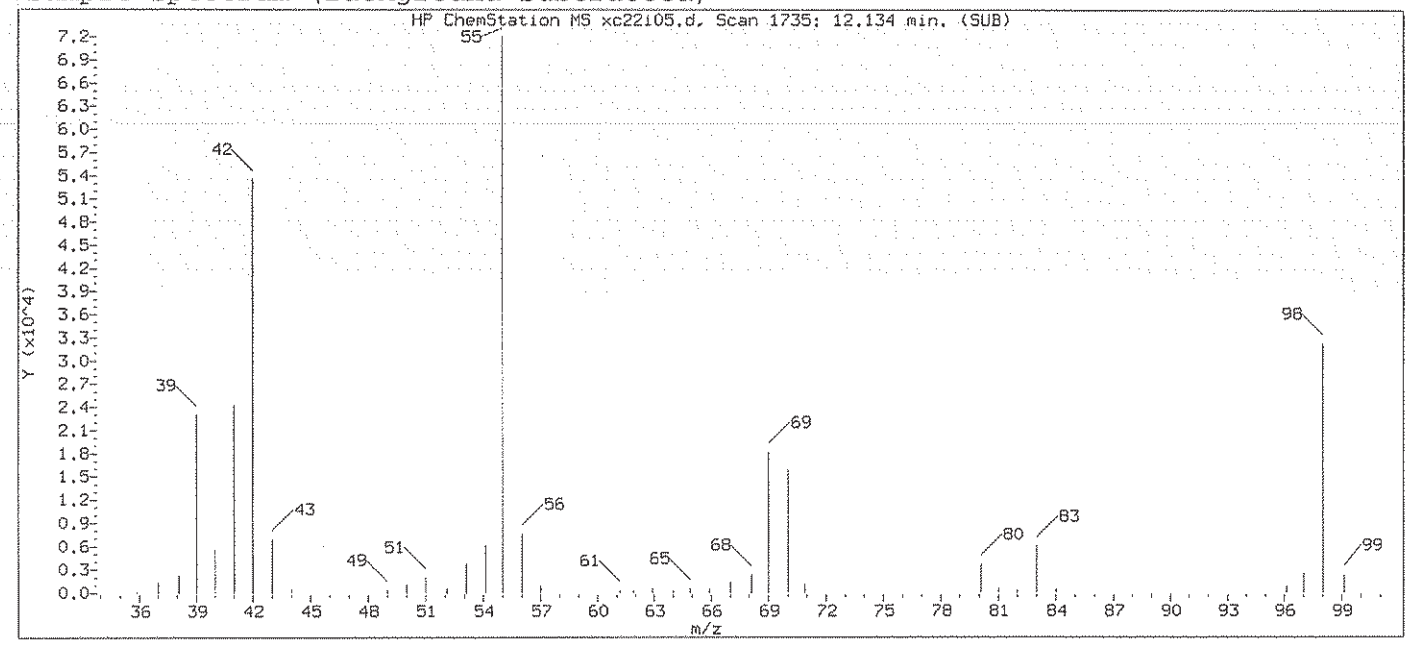
Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.134
Quant Ion : 55.00
Area (flag) : 122216M
On-Column Amount (ng) : 215.3719
Integration start scan : 1726 Integration stop scan: 1742
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

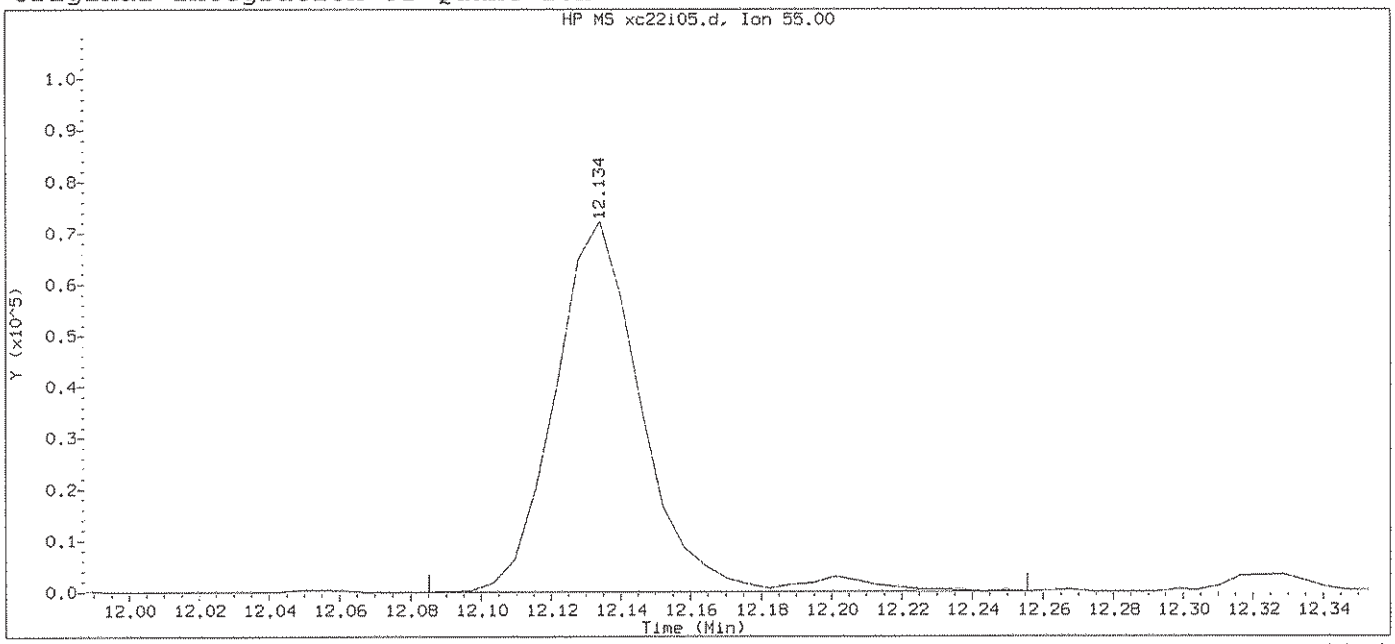
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 113
Compound Name : Cyclohexanone
Scan Number : 1735
Retention Time (minutes): 12.134
Quant Ion : 55.00
Area : 126714
On-column Amount (ng) : 221.8907
Integration start scan : 1726 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

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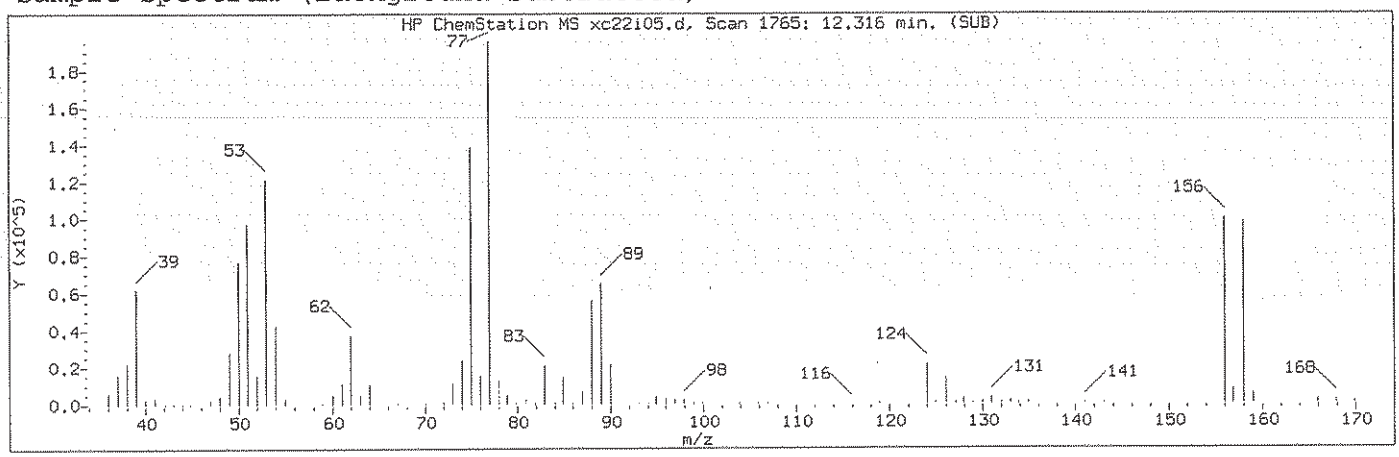
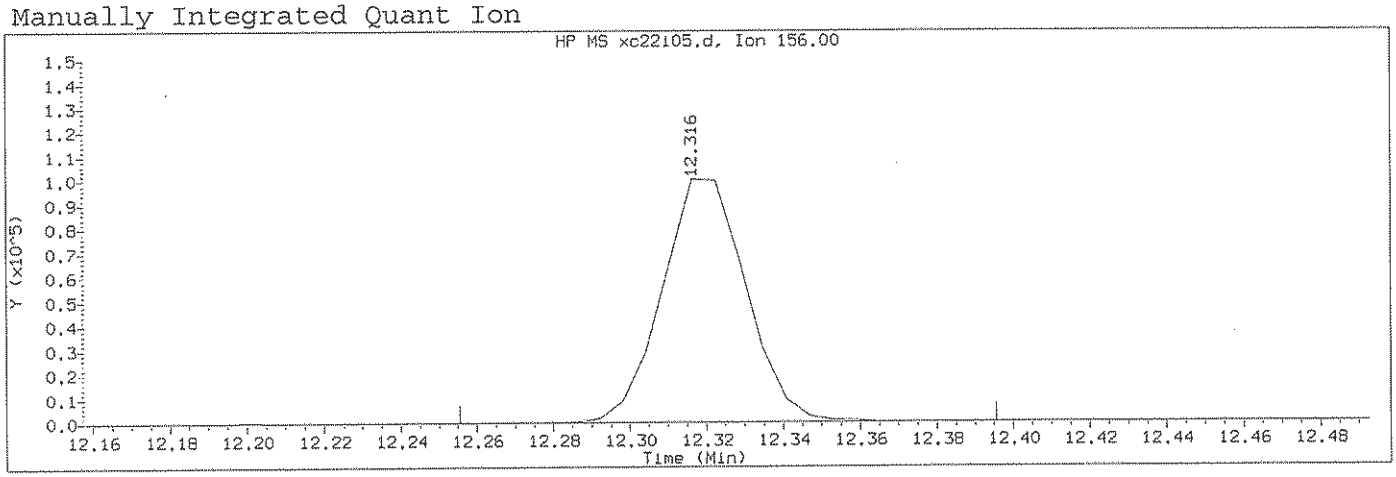
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

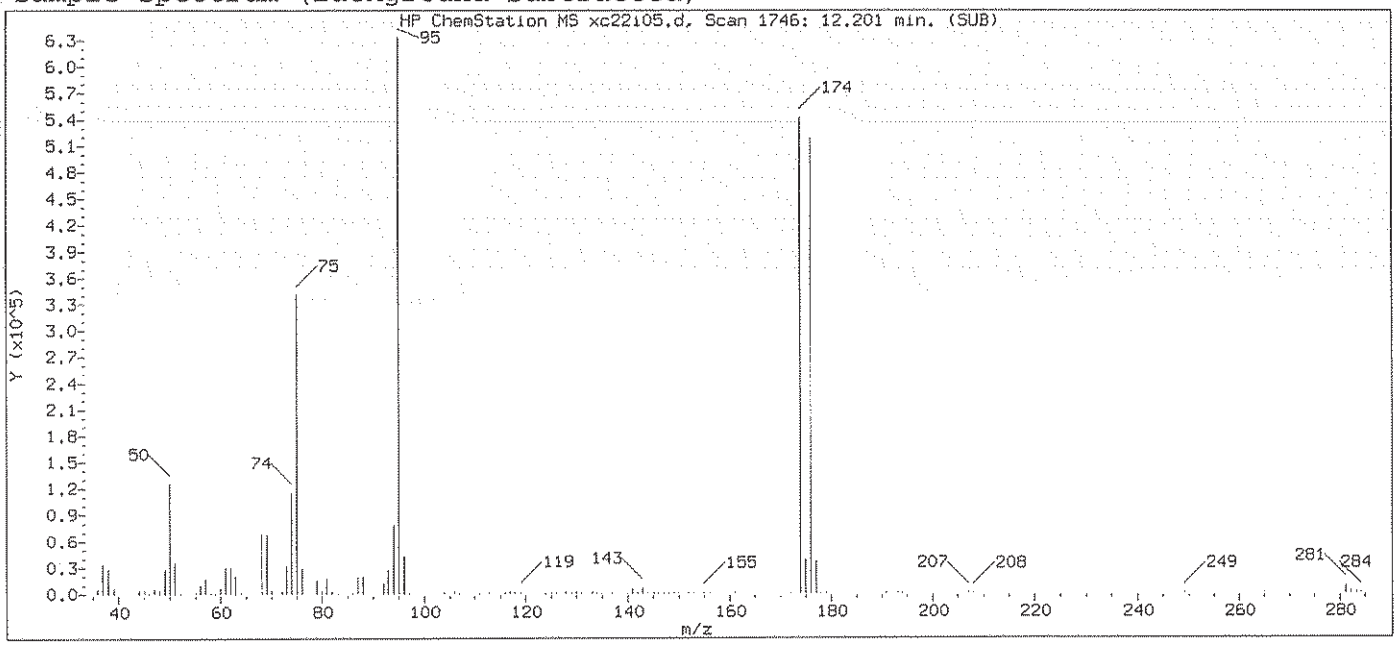
Compound Number	: 116		
Compound Name	: Bromobenzene		
Scan Number	: 1765		
Retention Time (minutes)	: 12.316		
Quant Ion	: 156.00		
Area (flag)	: 152834M		
On-Column Amount (ng)	: 9.4801		
Integration start scan	: 1754	Integration stop scan:	1777
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

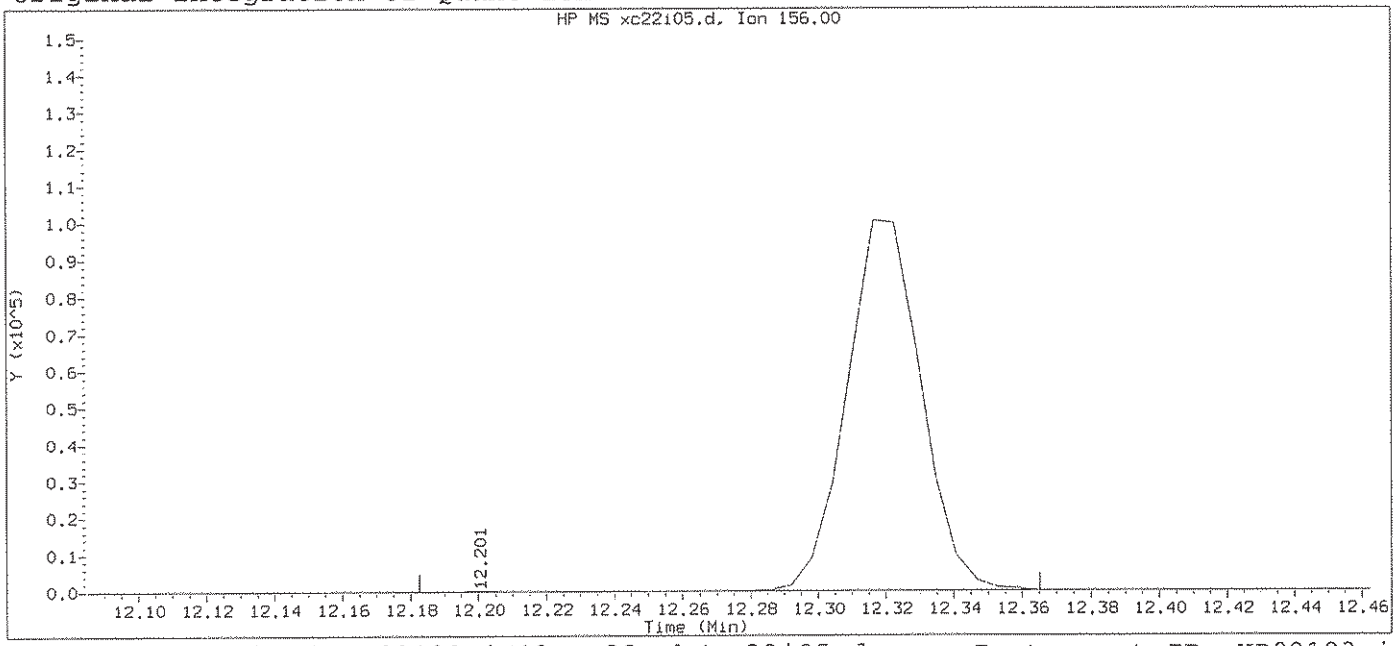
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Andrew 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

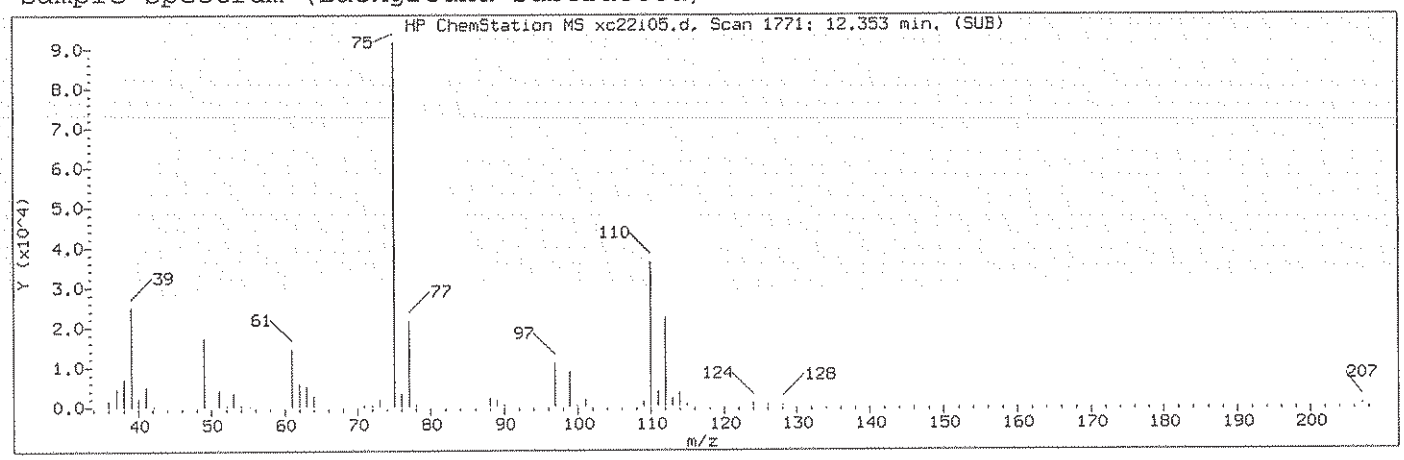
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

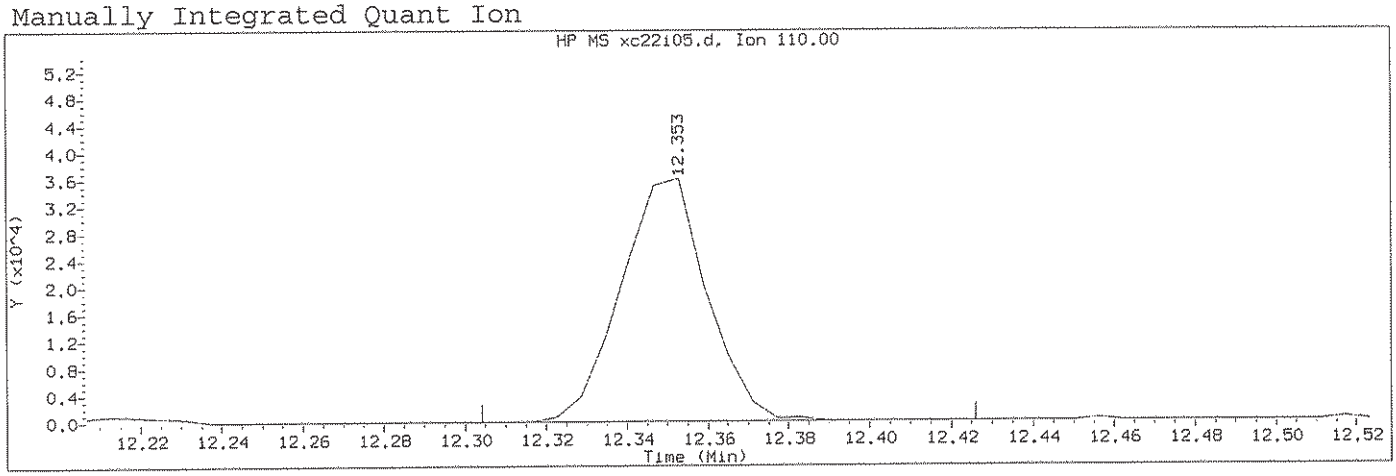
Compound Number	: 116		
Compound Name	: Bromobenzene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.201		
Quant Ion	: 156.00		
Area	: 152938		
On-column Amount (ng)	: 9.3576		
Integration start scan	: 1742	Integration stop scan:	1772
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

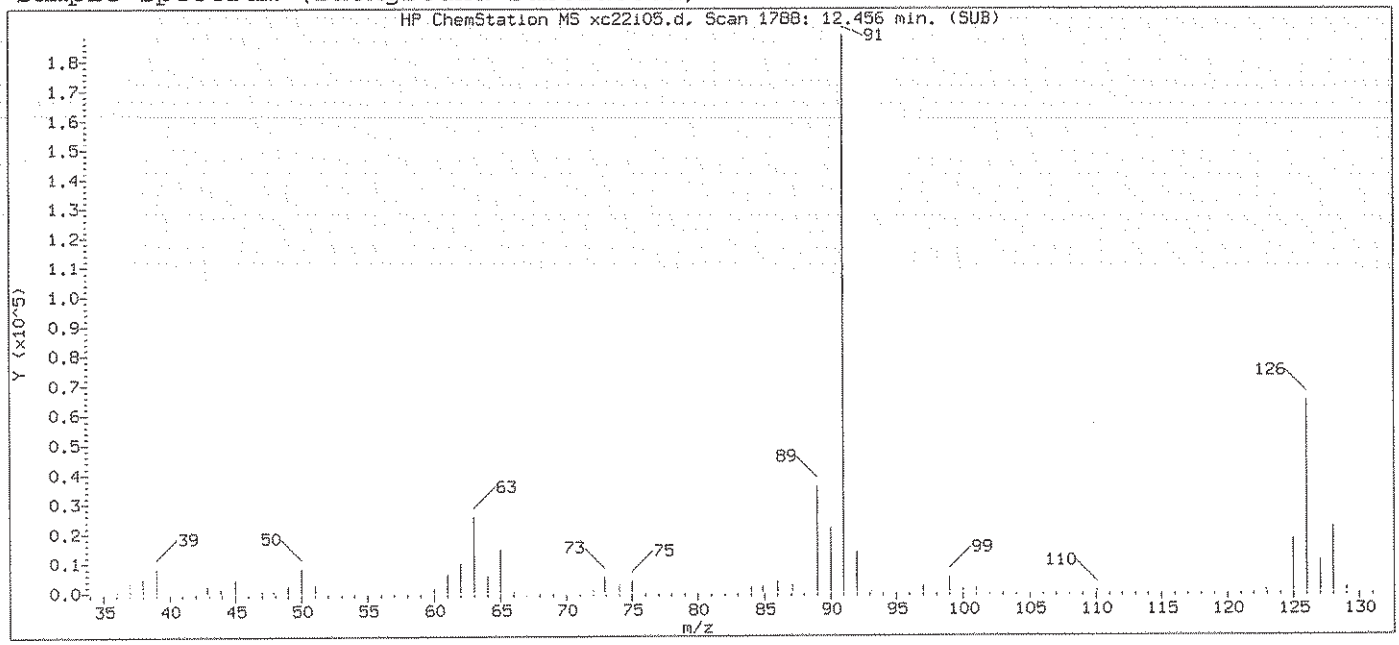
Compound Number	: 118		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1771		
Retention Time (minutes)	: 12.353		
Quant Ion	: 110.00		
Area (flag)	: 53272M		
On-Column Amount (ng)	: 10.5548		
Integration start scan	: 1762	Integration stop scan:	1782
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

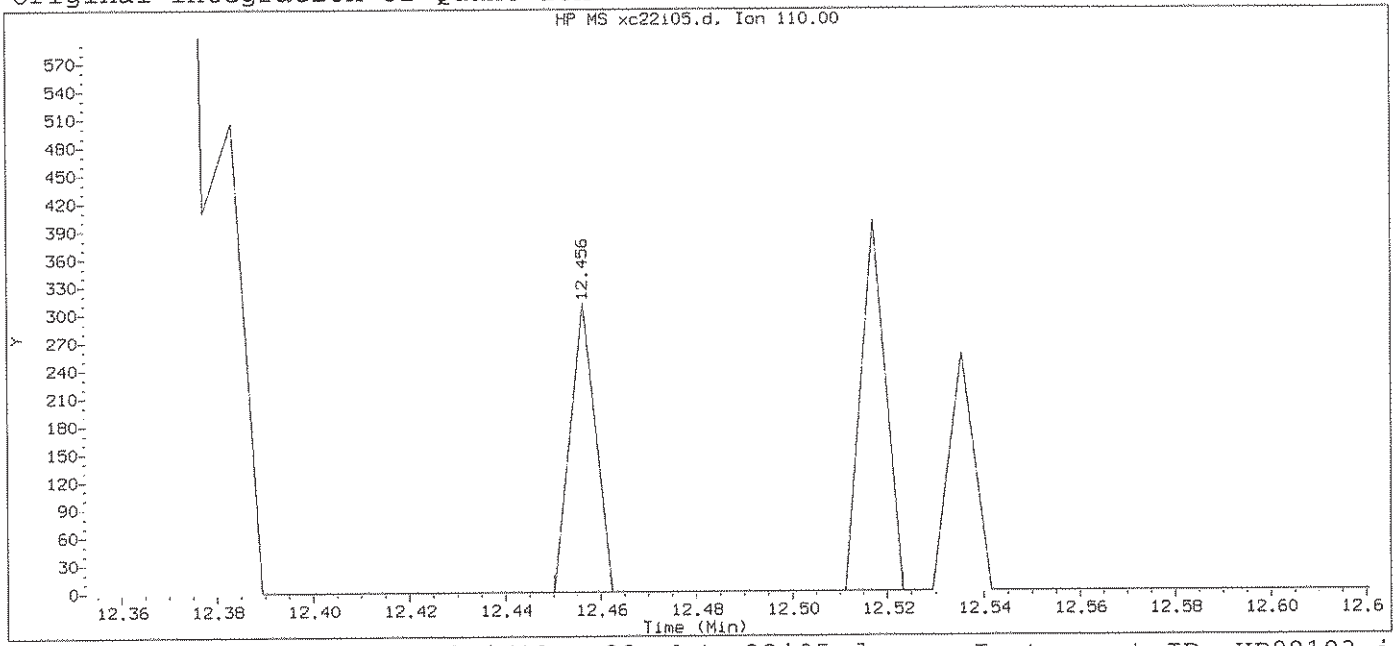
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

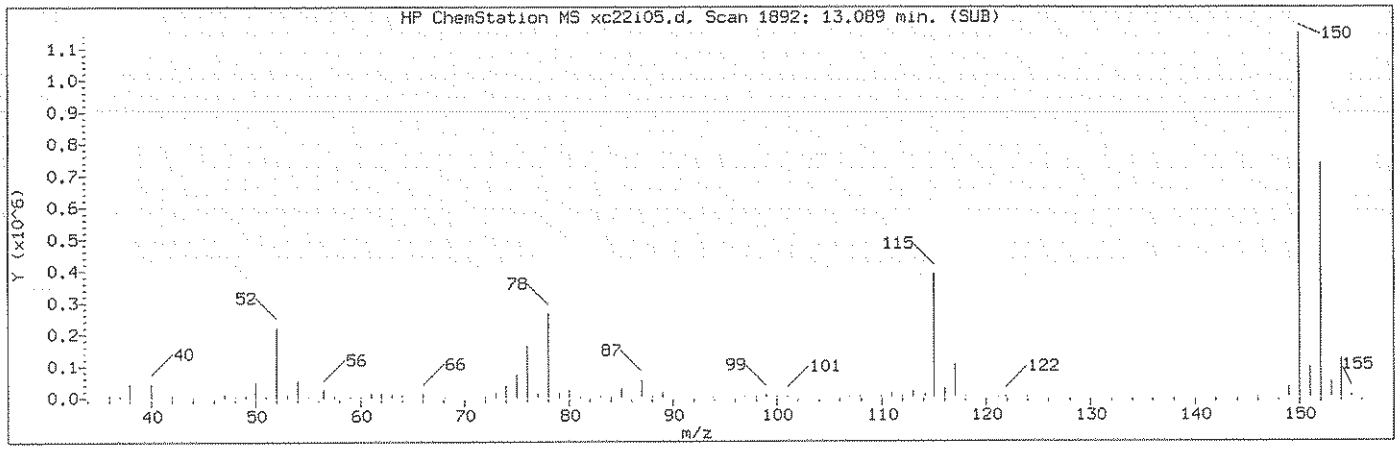
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

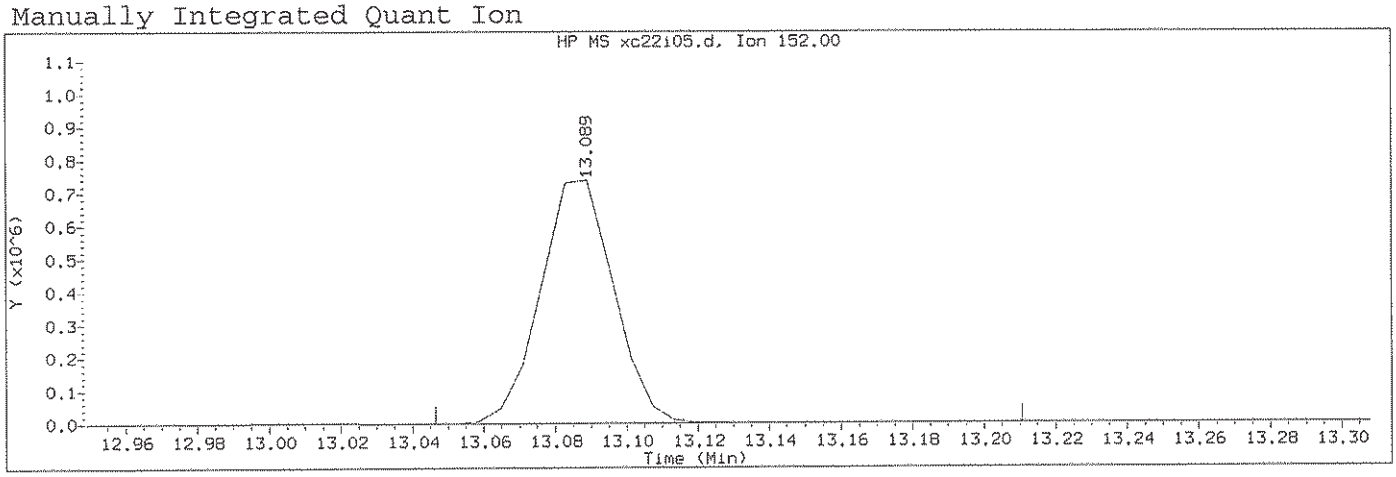
Compound Number	: 118		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1788		
Retention Time (minutes)	: 12.456		
Quant Ion	: 110.00		
Area	: 259		
On-column Amount (ng)	: 0.0640		
Integration start scan	: 1786	Integration stop scan:	1798
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

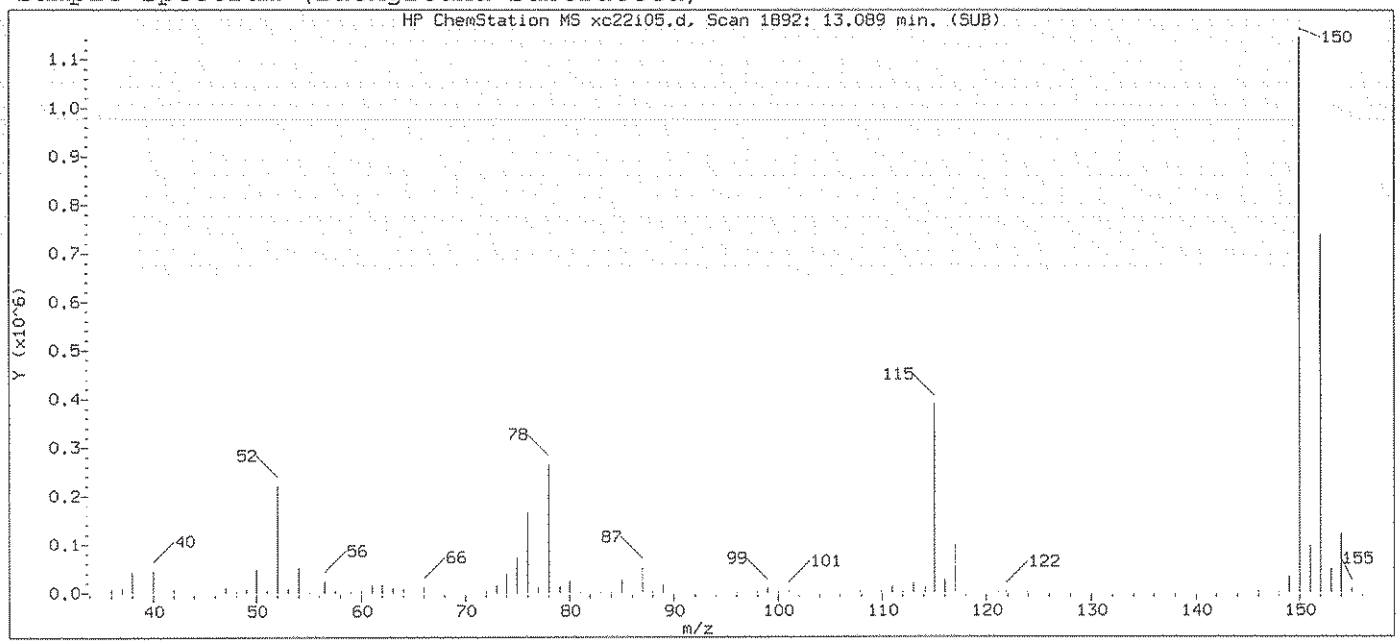
Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1892		
Retention Time (minutes)	: 13.089		
Quant Ion	: 152.00		
Area (flag)	: 1057800M		
On-Column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1911
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

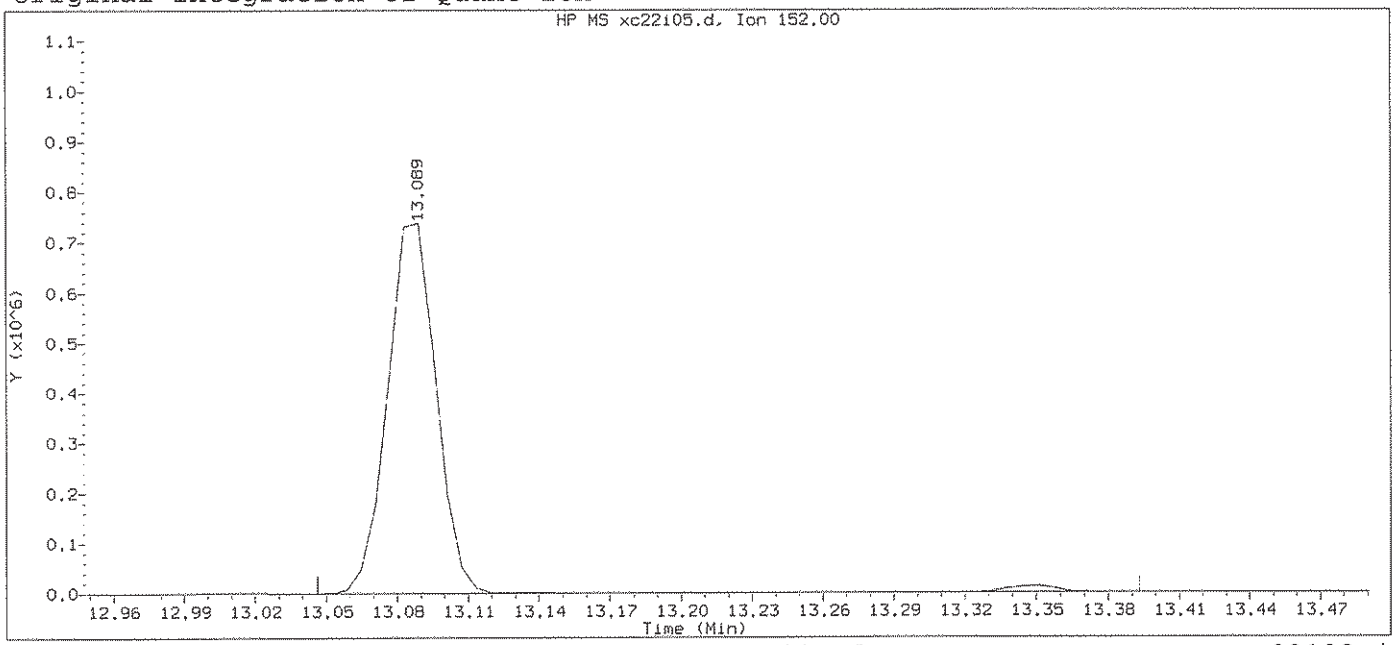
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Christopher 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

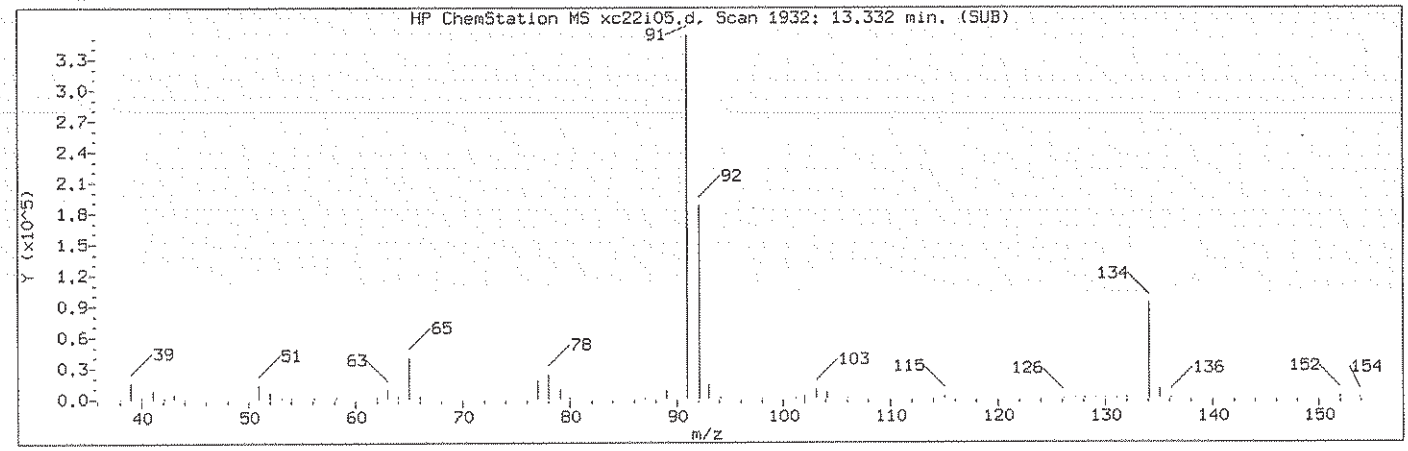
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

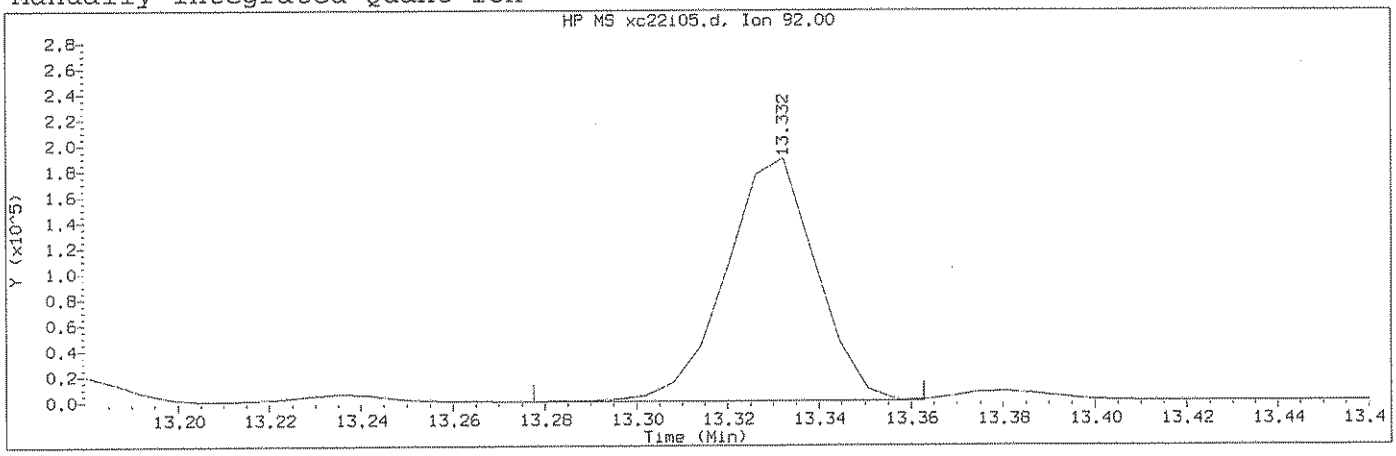
Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1892		
Retention Time (minutes)	: 13.089		
Quant Ion	: 152.00		
Area	: 1075613		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1941
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:24 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

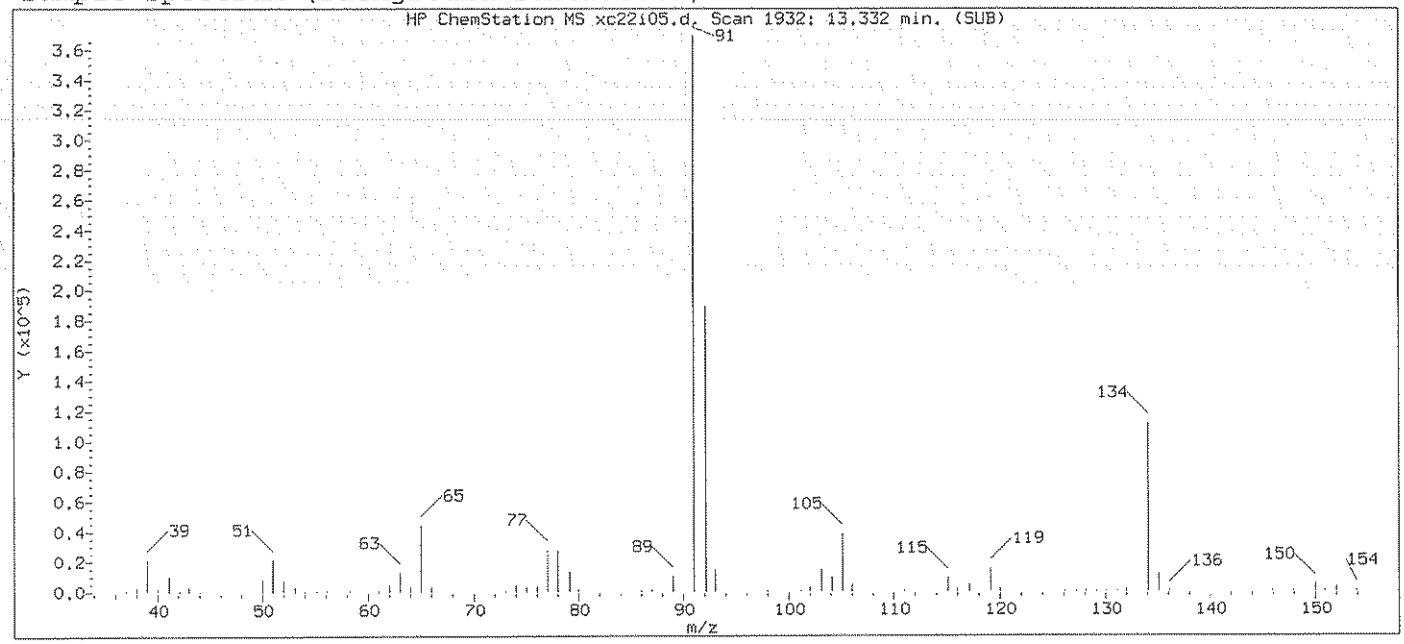
Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.332		
Quant Ion	: 92.00		
Area (flag)	: 260185M		
On-Column Amount (ng)	: 9.0556		
Integration start scan	: 1922	Integration stop scan:	1936
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

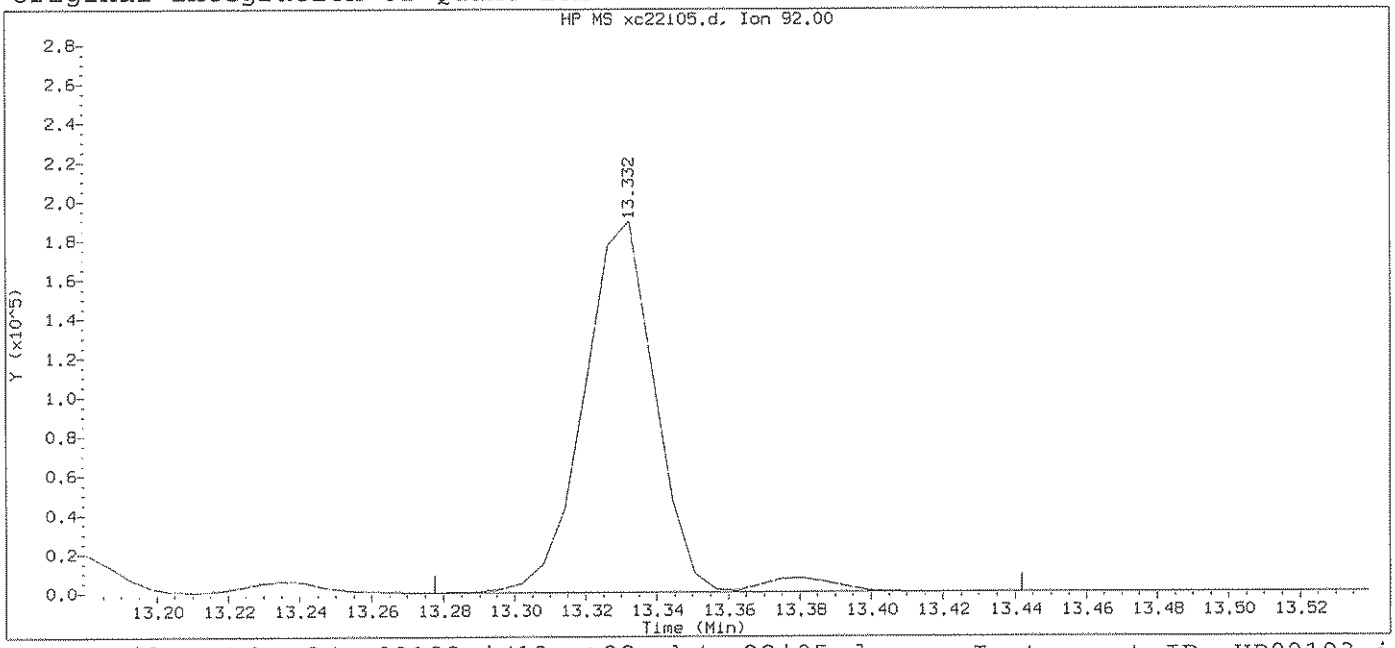
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Andrew 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



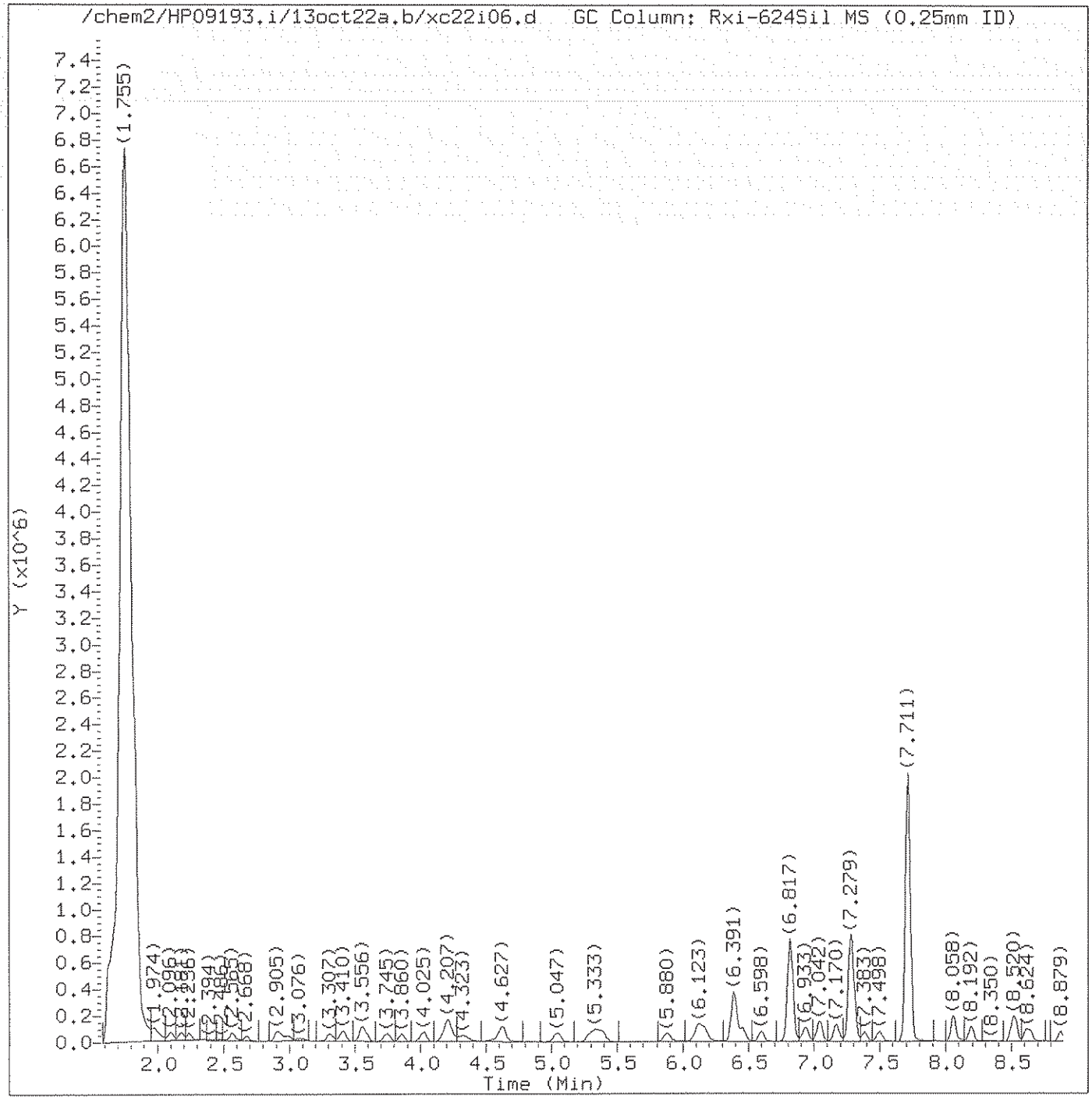
Data File: /chem2/HP09193.i/13oct22a.b/xc22i05.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 03:42 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:02
Date, time and analyst ID of latest file update: 22-Oct-2013 04:02 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1932		
Retention Time (minutes)	: 13.332		
Quant Ion	: 92.00		
Area	: 270138		
On-column Amount (ng)	: 9.2112		
Integration start scan	: 1922	Integration stop scan:	1949
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:54.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

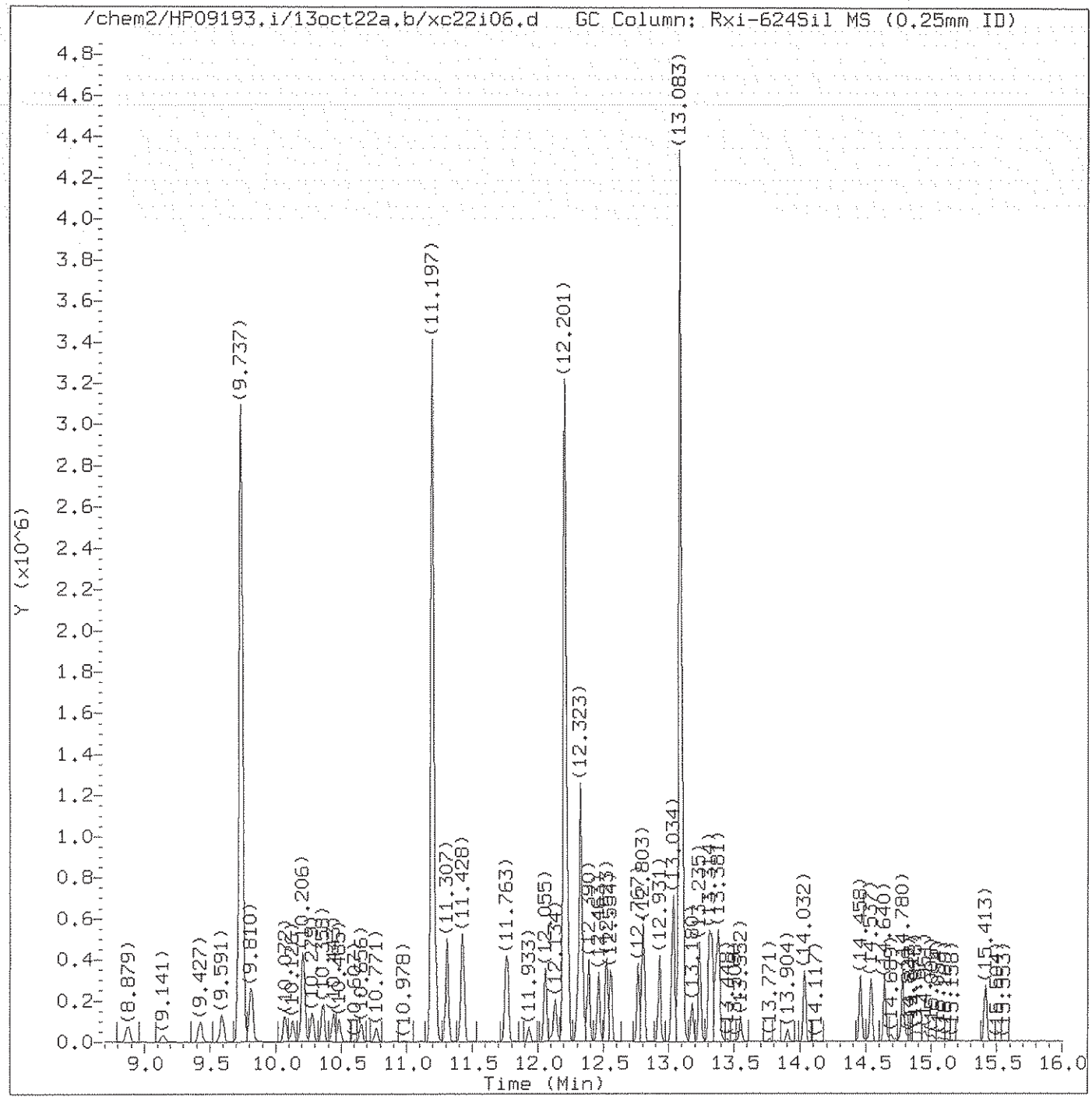
Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	90547	4.883
4) Chloromethane	(2)	2.096	50	78387	4.949
5) Vinyl Chloride	(2)	2.236	62	70455	4.850
9) Bromomethane	(2)	2.565	94	51945	4.659
10) Chloroethane	(2)	2.680	64	43187	5.004
11) Dichlorofluoromethane	(2)	2.905	67	101141	4.526
13) Trichlorofluoromethane	(2)	2.984	101	103418M	4.683
15) Ethanol	(1)	3.106	45	82930	553.286
17) Freon 123a	(2)	3.319	67	61096	4.679
18) Acrolein	(1)	3.410	56	110229	45.040
19) 1,1-Dichloroethene	(2)	3.556	96	40039	4.164
19) 1,1-Dichloroethene	(2)	3.544	63	22763	4.140
20) Acetone	(2)	3.574	58	11001M	8.968
22) Freon 113	(2)	3.574	101	42628	4.198
23) 2-Propanol	(1)	3.727	45	77914	84.124
24) Methyl Iodide	(2)	3.751	142	80746	4.071
25) Carbon Disulfide	(2)	3.860	76	144027	4.162
27) Methyl Acetate	(2)	3.994	43	38629	4.203
29) Allyl Chloride	(2)	4.031	41	76554	4.349
30)*t-Butyl alcohol-d10	(1)	4.201	65	315446	250.000
31) Methylene Chloride	(2)	4.207	84	49803	4.338
32) t-Butyl alcohol	(1)	4.329	59	112978M	75.452
33) Acrylonitrile	(2)	4.542	53	19306	4.083
34) Methyl Tertiary Butyl Ether	(2)	4.621	73	115773	3.662
35) trans-1,2-Dichloroethene	(2)	4.627	96	45674	4.077
38) n-Hexane	(2)	5.047	57	55077	3.951
40) 1,1-Dichloroethane	(2)	5.284	63	86092	4.064
41) di-Isopropyl ether	(2)	5.339	45	131082	3.725
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	69969	3.739
44) Ethyl t-butyl ether	(2)	5.880	59	89550	3.570
45) 2-Butanone	(2)	6.081	43	49457	7.877
47) 1,2-Dichloroethene (Total)	(2)		96	92882	7.898
46) cis-1,2-Dichloroethene	(2)	6.123	96	47208	3.821
48) 2,2-Dichloropropane	(2)	6.130	77	72310	3.874
50) Propionitrile	(1)	6.166	54	133121	83.576
51) Methacrylonitrile	(2)	6.391	67	194921	38.233
52) Bromochloromethane	(2)	6.458	128	28734	4.239
53) Tetrahydrofuran	(1)	6.470	71	13207	8.447

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	85981	3.959
56)$Dibromofluoromethane	(2)	6.817	113	615848	49.943
56)$Dibromofluoromethane	(2)	6.817	111	630835	49.960
57) 1,1,1-Trichloroethane	(2)	6.835	97	92511	4.391
58) Cyclohexane	(2)	6.927	56	68544	3.949
58) Cyclohexane	(2)	6.933	84	59027	3.855
58) Cyclohexane	(2)	6.933	69	21456	3.933
59) 1,1-Dichloropropene	(2)	7.036	75	62502	3.935
60) Carbon Tetrachloride	(2)	7.042	117	69047	4.017
61) Isobutyl Alcohol	(1)	7.170	41	103825	201.910
62)$1,2-Dichloroethane-d4	(2)	7.279	102	140175	50.438
62)$1,2-Dichloroethane-d4	(2)	7.279	65	826934	49.540
62)$1,2-Dichloroethane-d4	(2)	7.285	104	88754	49.516
63) Benzene	(2)	7.304	78	197794	4.280
66) 1,2-Dichloroethane	(2)	7.383	62	76216	3.944
66) 1,2-Dichloroethane	(2)	7.383	98	5290	3.756
67) t-Amyl methyl ether	(2)	7.498	73	73071	3.607
69)*Fluorobenzene	(2)	7.711	96	2365422	50.000
71) n-Heptane	(2)	7.723	43	64636	4.121
72) n-Butanol	(1)	8.058	56	148488	375.644
74) Trichloroethene	(2)	8.198	95	48564	3.982
75) Methylcyclohexane	(2)	8.508	83	73085	3.954
76) 1,2-Dichloropropane	(2)	8.533	63	46883	4.020
78) Methyl Methacrylate	(2)	8.612	69	30915	3.398
79) 1,4-Dioxane	(1)	8.618	88	28428	197.141
80) Dibromomethane	(2)	8.642	93	31829	3.918
83) Bromodichloromethane	(2)	8.873	83	63927	3.749
84) 2-Nitropropane	(1)	9.147	41	28380	7.248
86) cis-1,3-Dichloropropene	(2)	9.427	75	63015	3.366
87) 4-Methyl-2-pentanone	(2)	9.591	43	94904	6.826
88)$Toluene-d8	(3)	9.737	98	2366470	50.480
88)$Toluene-d8	(3)	9.737	100	1548878	50.461
89) Toluene	(3)	9.810	92	120585	4.130
90) trans-1,3-Dichloropropene	(3)	10.072	75	70244	3.634
91) Ethyl Methacrylate	(3)	10.126	69	51376	3.165
92) 1,1,2-Trichloroethane	(3)	10.279	97	42594	4.027
94) Tetrachloroethene	(3)	10.358	166	55203	4.032
95) 1,3-Dichloropropane	(3)	10.443	76	73648	3.926

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	72025	7.035
99) Dibromochloromethane	(3)	10.656	129	46099	3.568
100) 1,2-Dibromoethane	(3)	10.771	107	43675	3.797
101)*Chlorobenzene-d5	(3)	11.197	117	1815318	50.000
102) Chlorobenzene	(3)	11.222	112	140438	4.101
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	47189	3.698
104) Ethylbenzene	(3)	11.307	91	212840	3.814
105) m+p-Xylene	(3)	11.428	106	170450	7.560
107) Xylene (Total)	(3)		106	247298	11.112
106) o-Xylene	(3)	11.757	106	76848	3.552
108) Styrene	(3)	11.769	104	129965	3.549
109) Bromoform	(3)	11.933	173	29820	3.607
110) Isopropylbenzene	(3)	12.061	105	202039M	3.657
113) Cyclohexanone	(1)	12.134	55	80137M	176.373
114)$4-Bromofluorobenzene	(3)	12.201	95	927422	49.913
114)$4-Bromofluorobenzene	(3)	12.207	174	811043	49.528
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	61899	4.013
116) Bromobenzene	(4)	12.317	156	63962M	4.022
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	213009	38.414
118) 1,2,3-Trichloropropane	(4)	12.347	110	20222M	4.055
119) n-Propylbenzene	(4)	12.390	91	272334	4.193
121) 2-Chlorotoluene	(4)	12.463	126	56853	3.967
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	188111	3.878
125) 4-Chlorotoluene	(4)	12.554	126	59971	3.972
128) tert-Butylbenzene	(4)	12.767	134	43403	3.722
129) Pentachloroethane	(4)	12.797	167	37534	3.744
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	192531	3.834
131) sec-Butylbenzene	(4)	12.931	105	232295	3.914
133) 1,3-Dichlorobenzene	(4)	13.028	146	118826	4.001
134) p-Isopropyltoluene	(4)	13.041	119	213024	3.853
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	1042280M	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	127581	4.127
137) 1,2,3-Trimethylbenzene	(4)	13.114	105	225174	4.183
138) Benzyl Chloride	(4)	13.180	126	22634	3.245
139) 1,3-Diethylbenzene	(4)	13.235	119	132543	3.884
140) 1,4-Diethylbenzene	(4)	13.308	119	141268	4.047
141) n-Butylbenzene	(4)	13.326	92	112414M	3.976
142) 1,2-Dichlorobenzene	(4)	13.363	146	117843	4.037

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

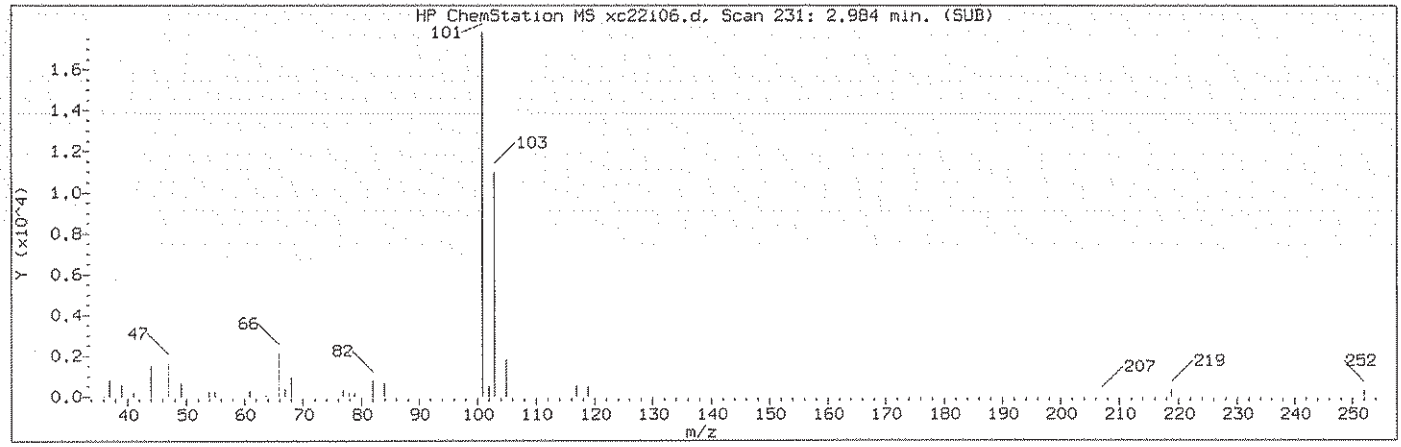
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

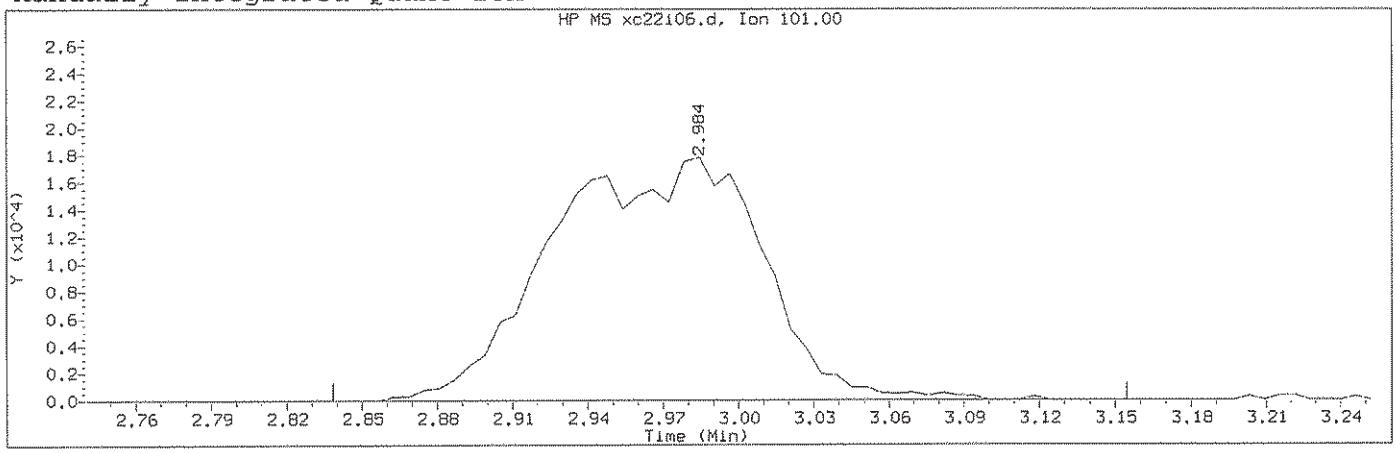
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	118619	4.078
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	13050	3.541
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	96392	3.950
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	84243	3.728
149) Hexachlorobutadiene	(4)	14.537	225	47683	3.910
150) Naphthalene	(4)	14.640	128	194469	3.557
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	86974	3.880
152) 2-Methylnaphthalene	(4)	15.413	142	123729	3.372

Digitally signed by Christopher G. Torres
on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

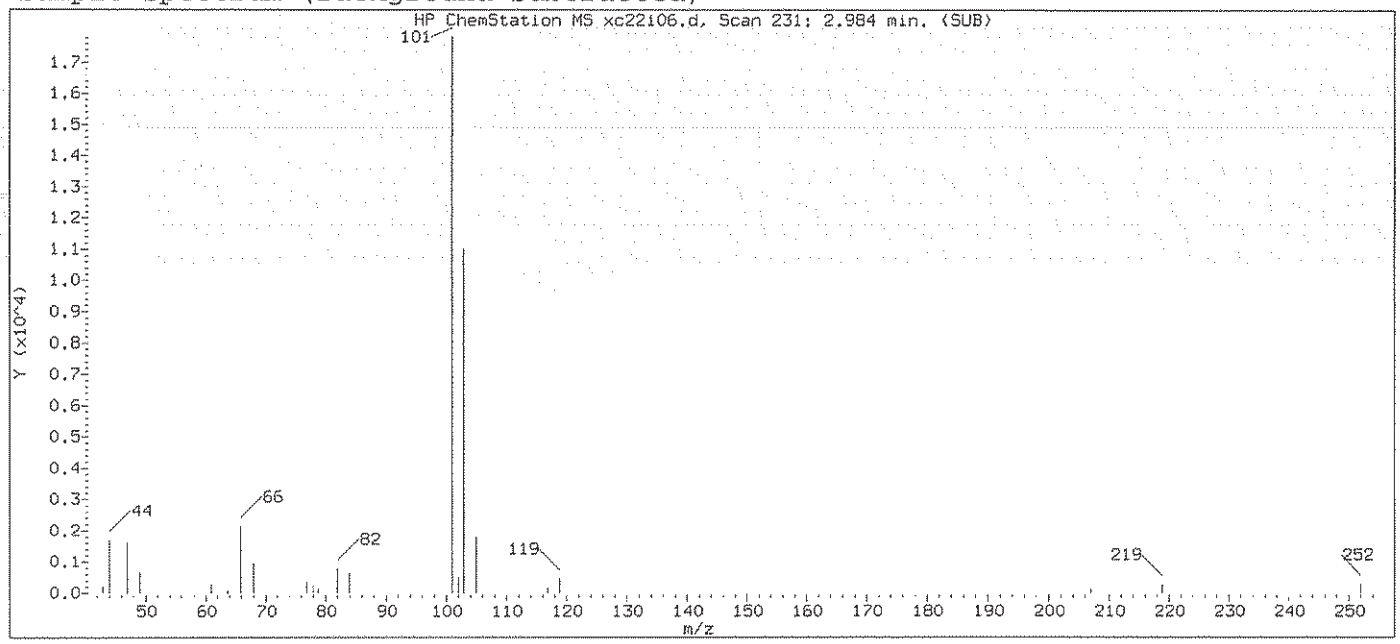
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 231
Retention Time (minutes): 2.984
Quant Ion : 101.00
Area (flag) : 103418M
On-Column Amount (ng) : 4.6834
Integration start scan : 206 Integration stop scan: 258
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

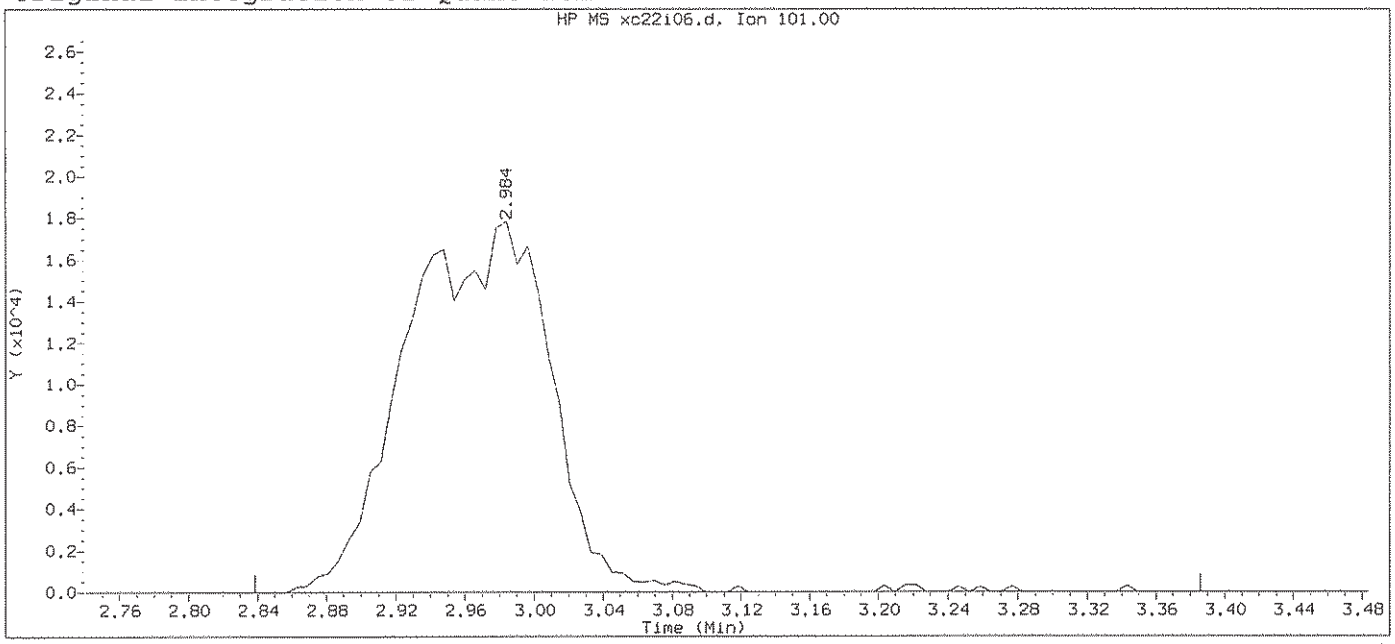
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

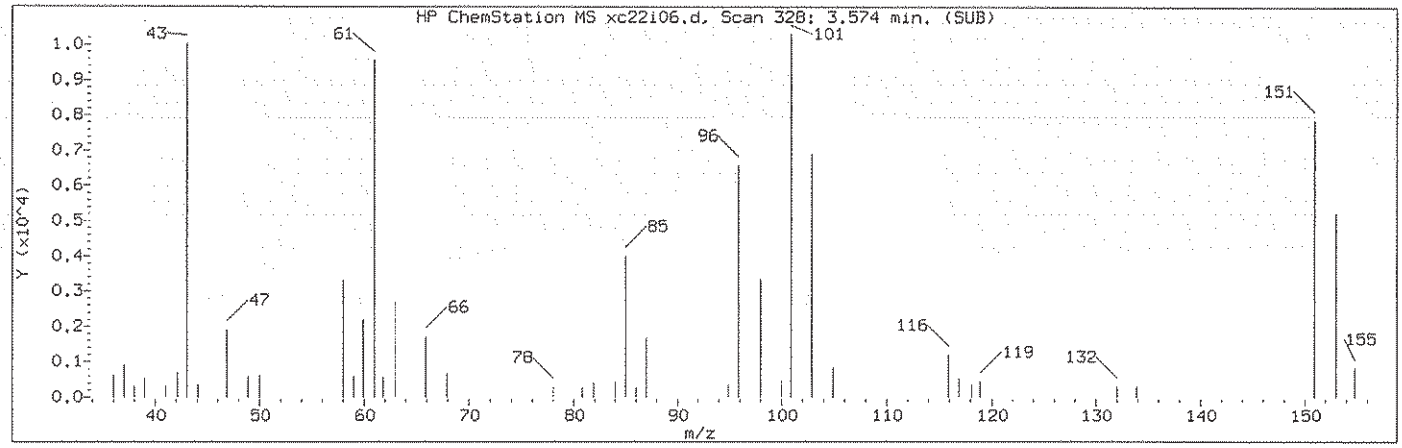
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

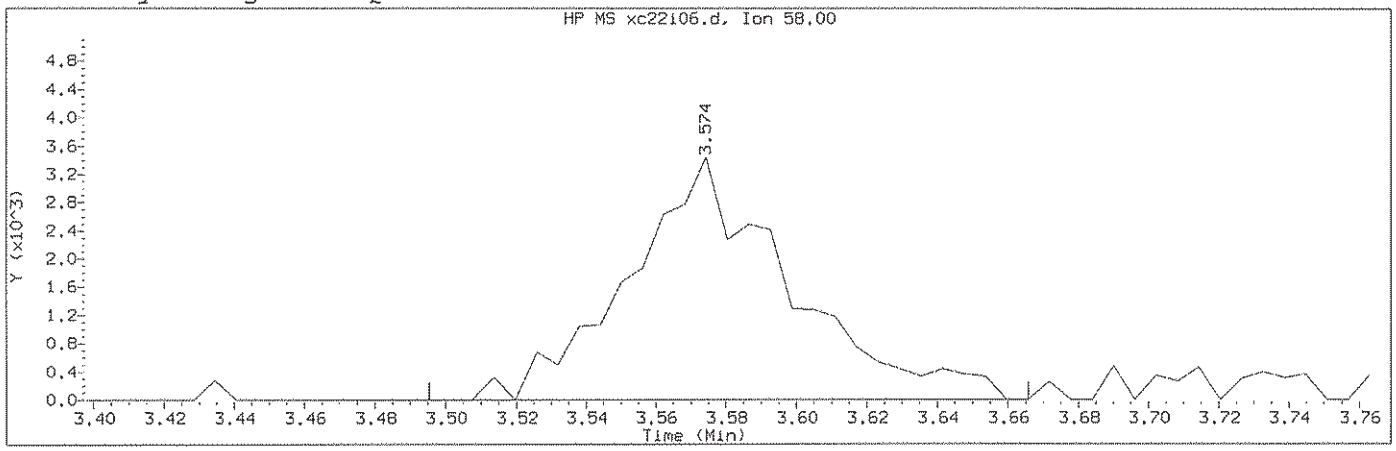
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 231
Retention Time (minutes): 2.984
Quant Ion : 101.00
Area : 104178
On-column Amount (ng) : 4.7111
Integration start scan : 206 Integration stop scan: 296
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

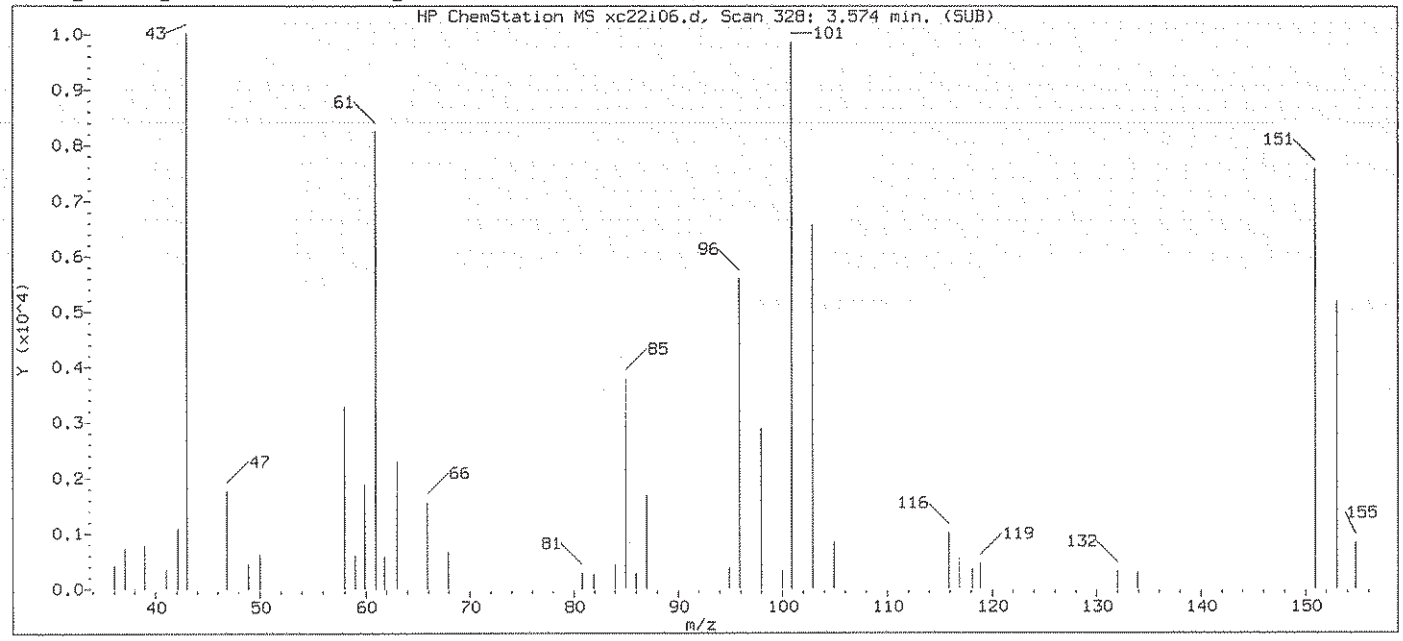
Compound Number : 20
Compound Name : Acetone
Scan Number : 328
Retention Time (minutes): 3.574
Quant Ion : 58.00
Area (flag) : 11001M
On-Column Amount (ng) : 8.9680
Integration start scan : 314 Integration stop scan: 342
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

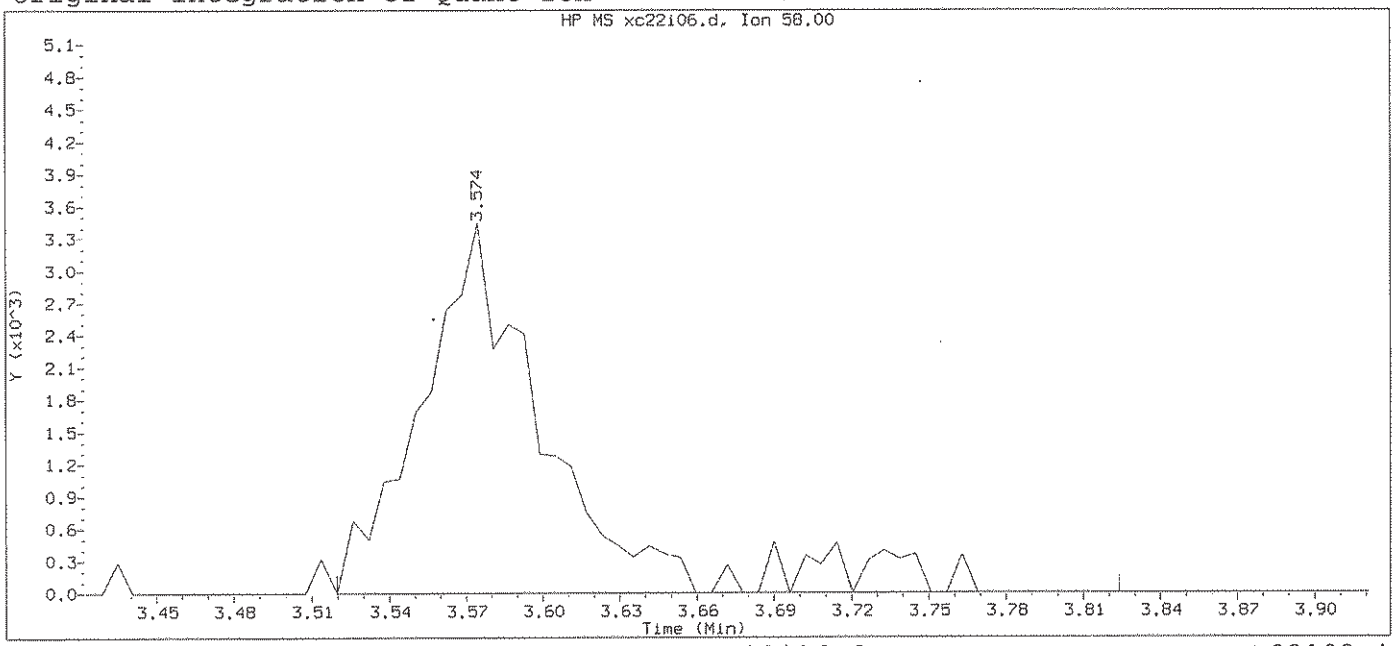
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

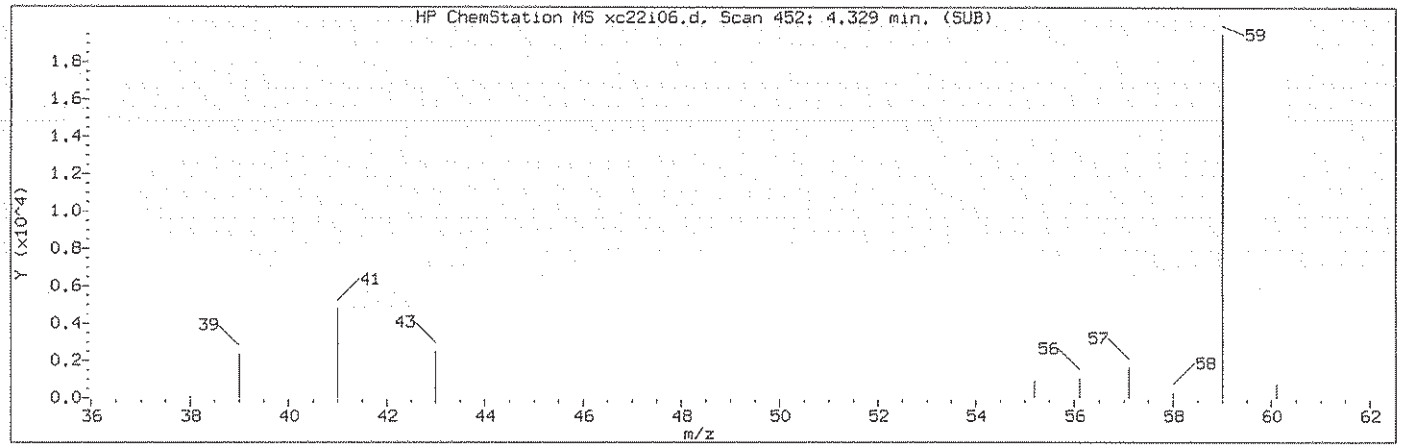
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

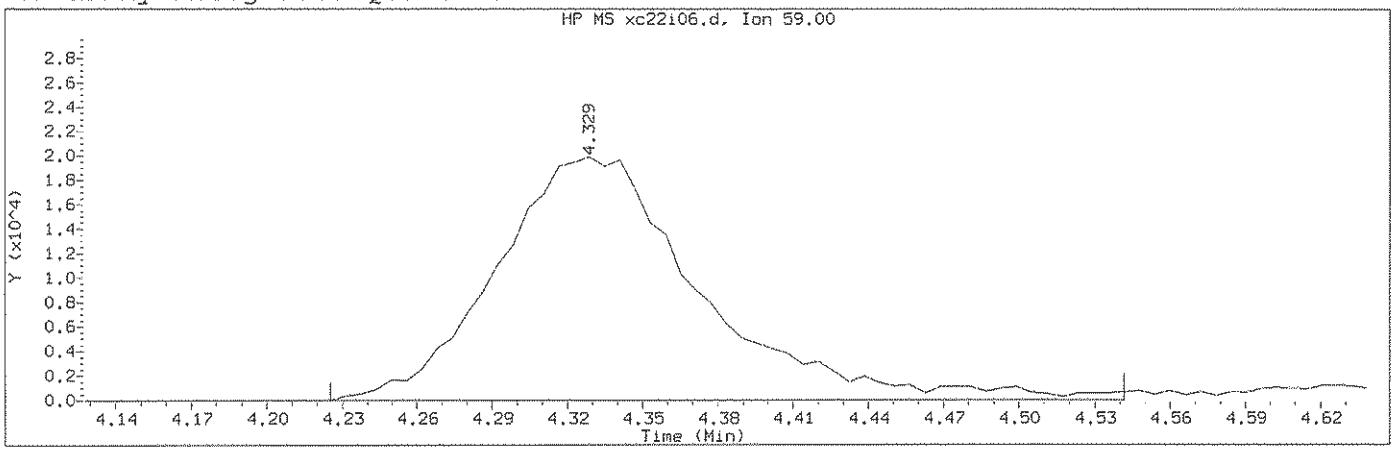
Compound Number	: 20		
Compound Name	: Acetone		
Scan Number	: 328		
Retention Time (minutes)	: 3.574		
Quant Ion	: 58.00		
Area	: 12177		
On-column Amount (ng)	: 9.7328		
Integration start scan	: 318	Integration stop scan:	368
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

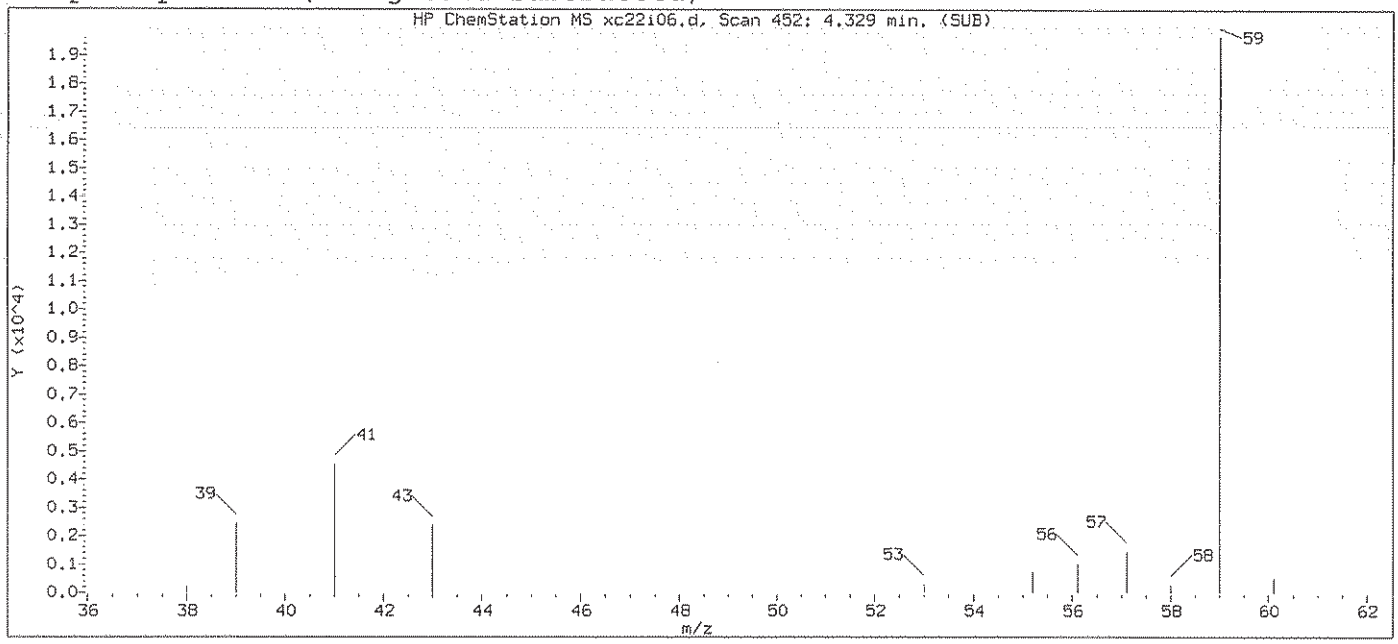
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 452		
Retention Time (minutes)	: 4.329		
Quant Ion	: 59.00		
Area (flag)	: 112978M		
On-Column Amount (ng)	: 75.4520		
Integration start scan	: 434	Integration stop scan:	486
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

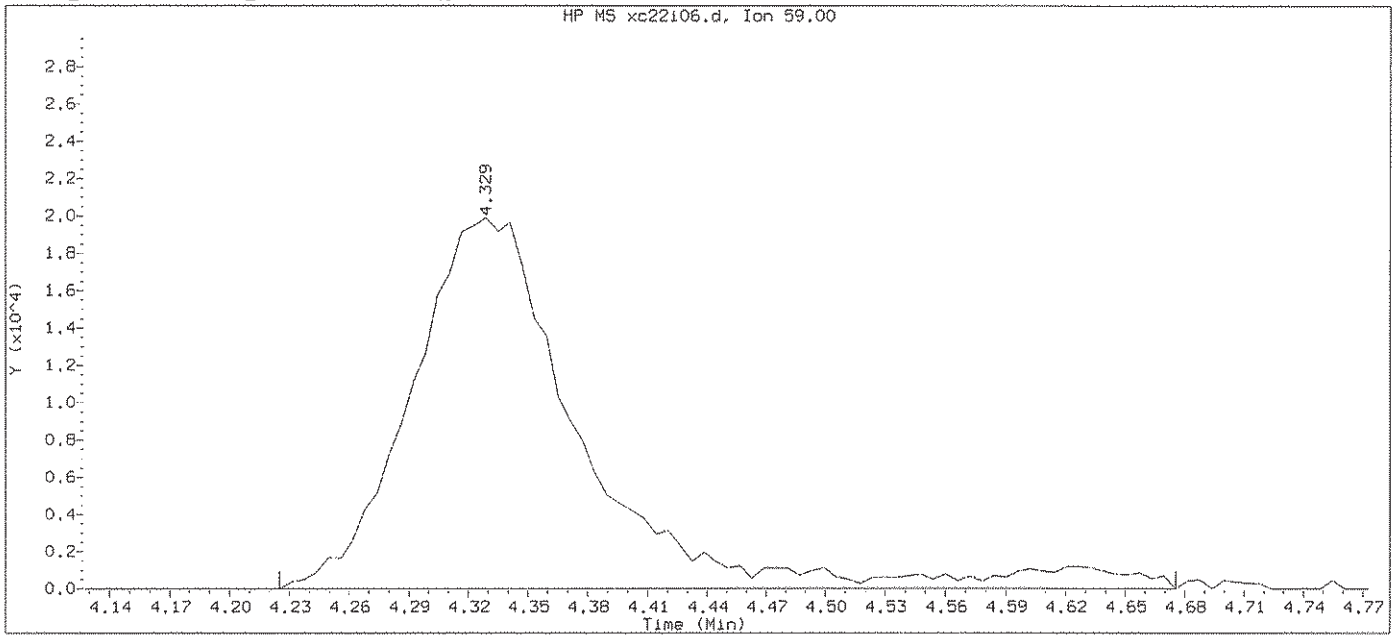
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

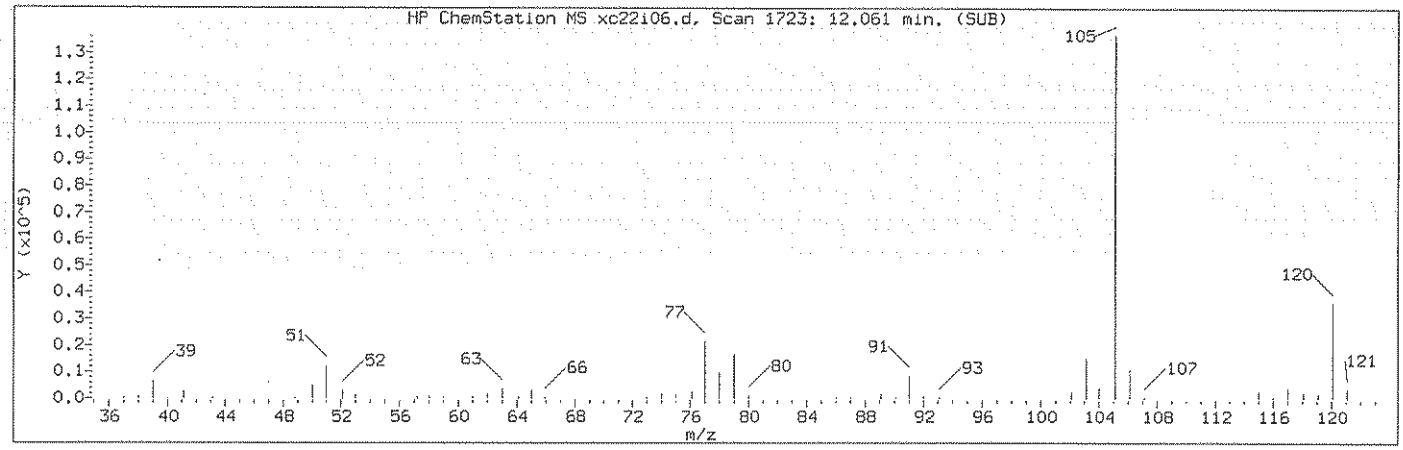
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

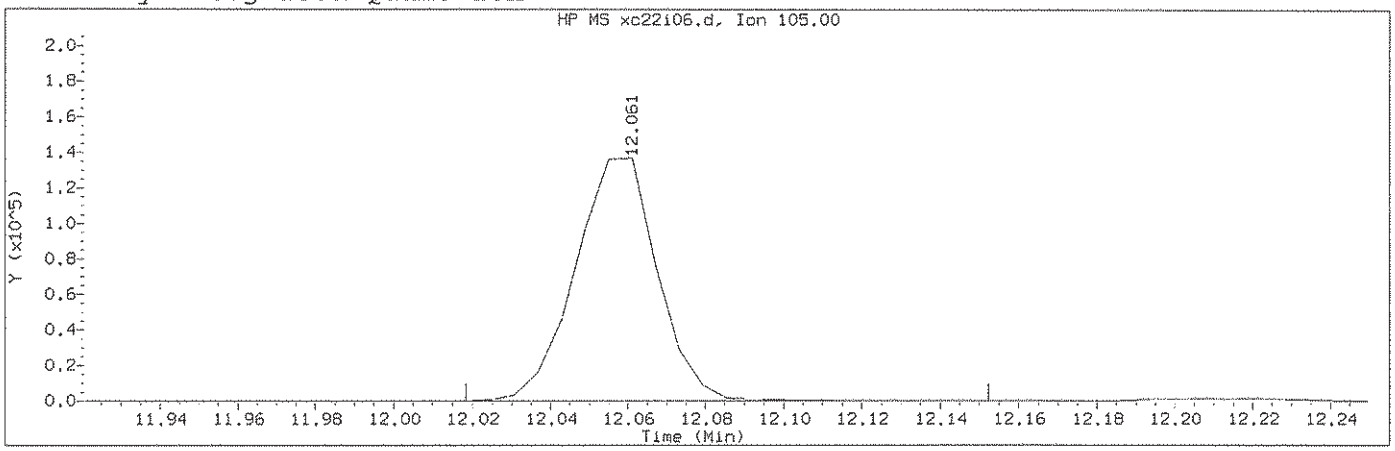
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 452		
Retention Time (minutes)	: 4.329		
Quant Ion	: 59.00		
Area	: 119085		
On-column Amount (ng)	: 78.8606		
Integration start scan	: 434	Integration stop scan:	508
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

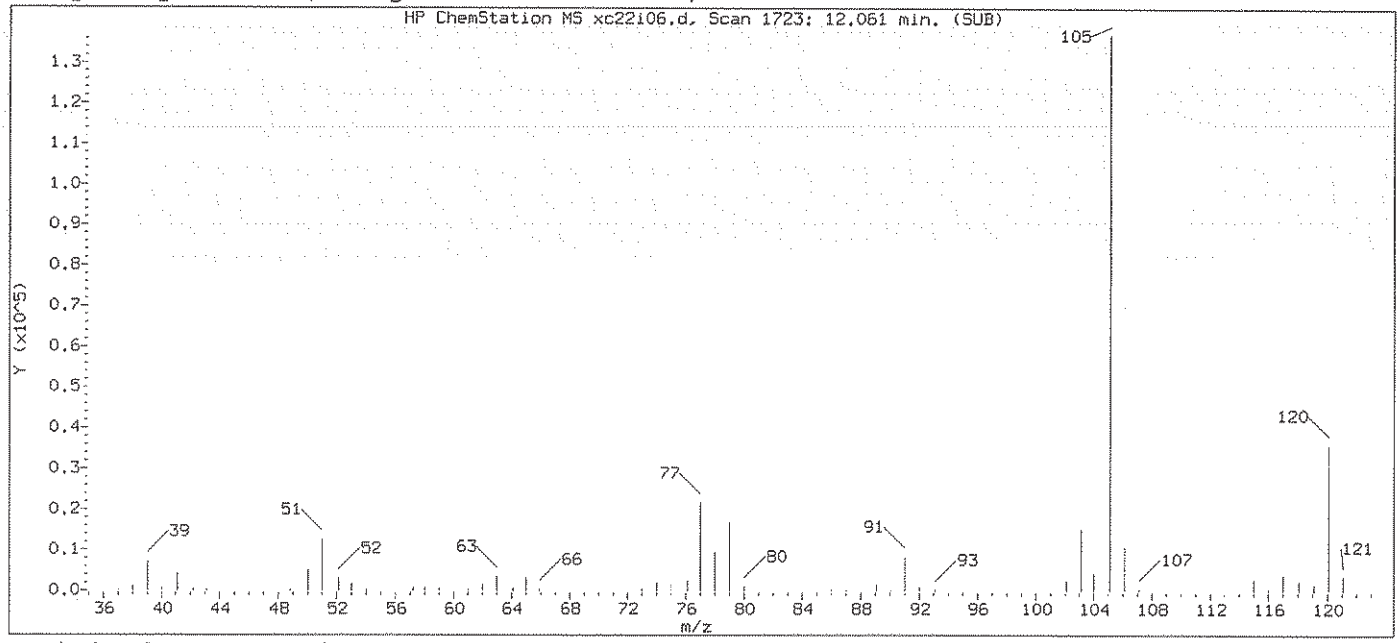
Compound Number : 110
Compound Name : Isopropylbenzene
Scan Number : 1723
Retention Time (minutes): 12.061
Quant Ion : 105.00
Area (flag) : 202039M
On-Column Amount (ng) : 3.6569
Integration start scan : 1715 Integration stop scan: 1737
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

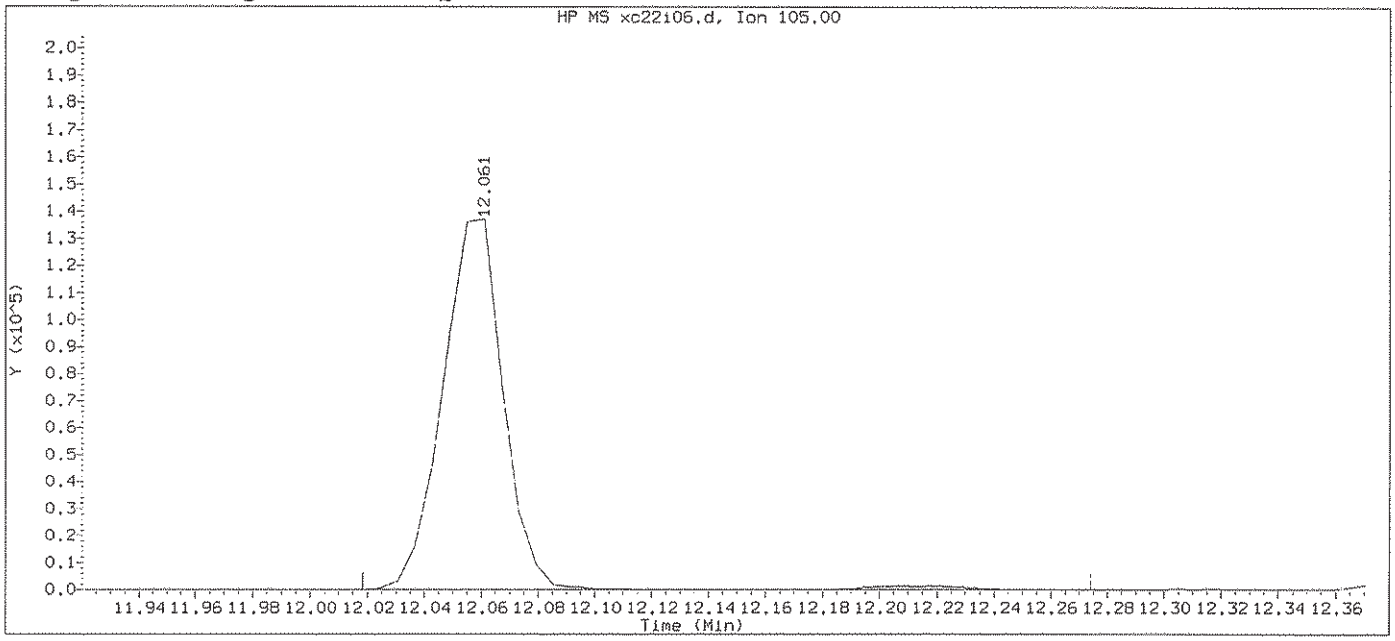
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

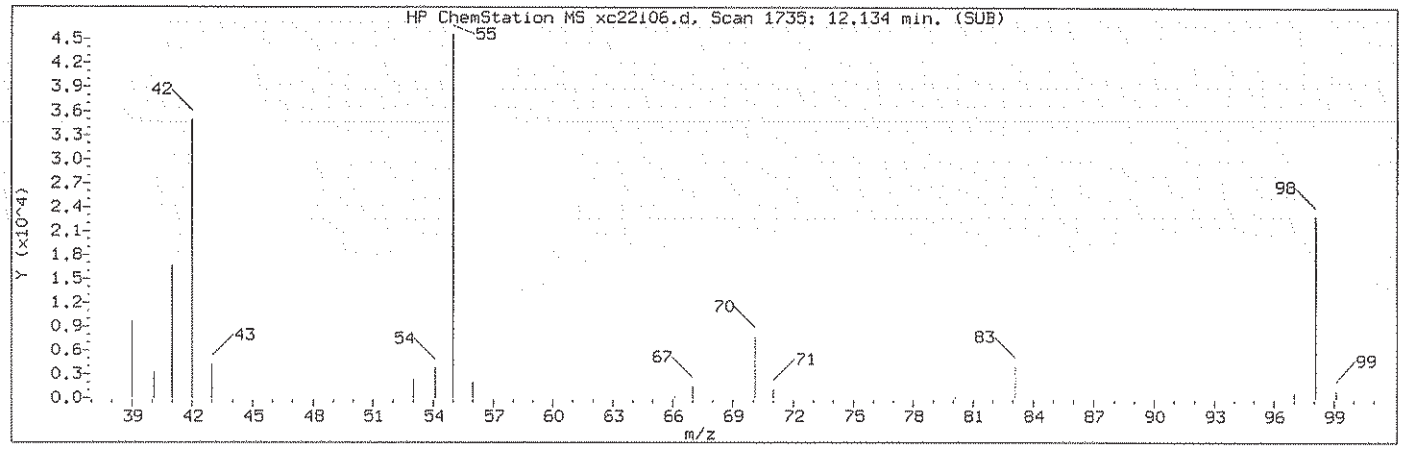
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

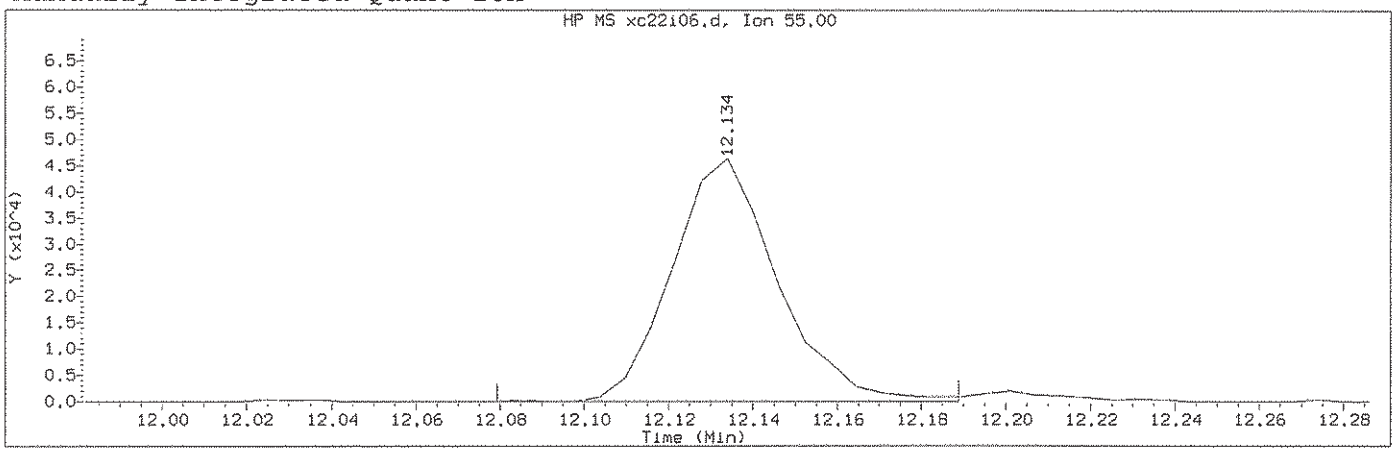
Compound Number	: 110		
Compound Name	: Isopropylbenzene		
Scan Number	: 1723		
Retention Time (minutes)	: 12.061		
Quant Ion	: 105.00		
Area	: 205074		
On-column Amount (ng)	: 3.7034		
Integration start scan	: 1715	Integration stop scan:	1757
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

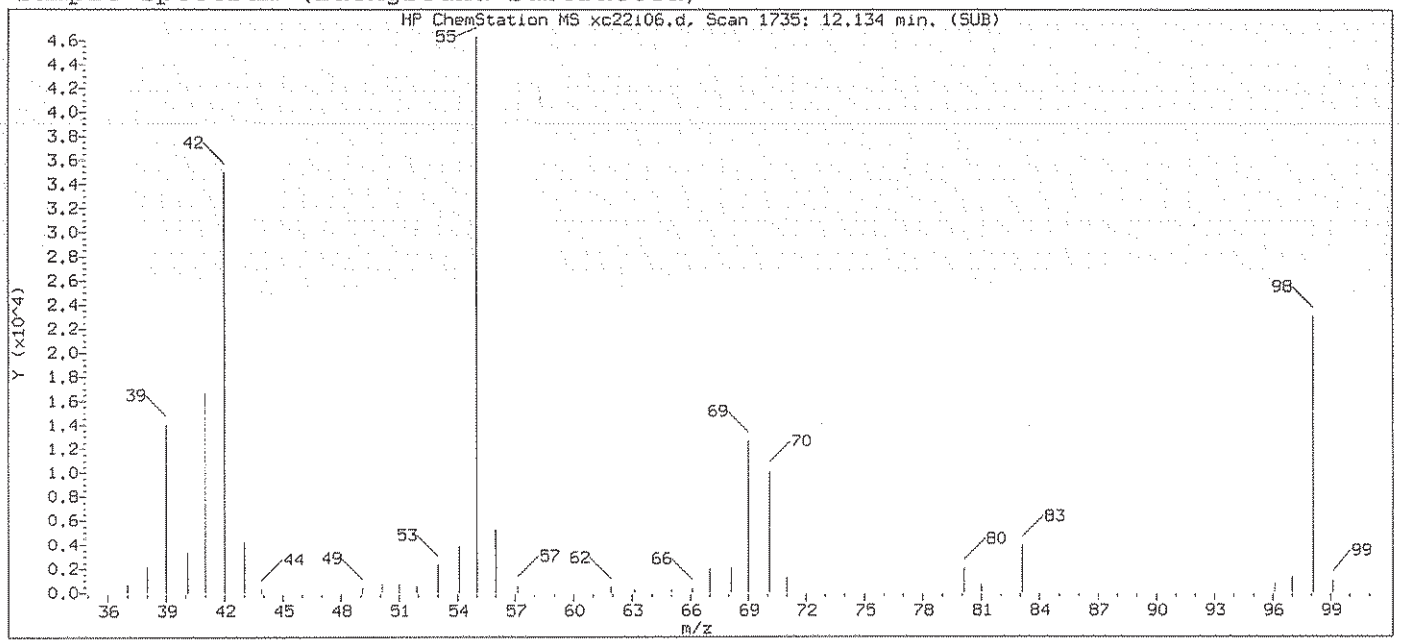
Compound Number	: 113		
Compound Name	: Cyclohexanone		
Scan Number	: 1735		
Retention Time (minutes)	: 12.134		
Quant Ion	: 55.00		
Area (flag)	: 80137M		
On-Column Amount (ng)	: 176.3733		
Integration start scan	: 1725	Integration stop scan:	1743
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

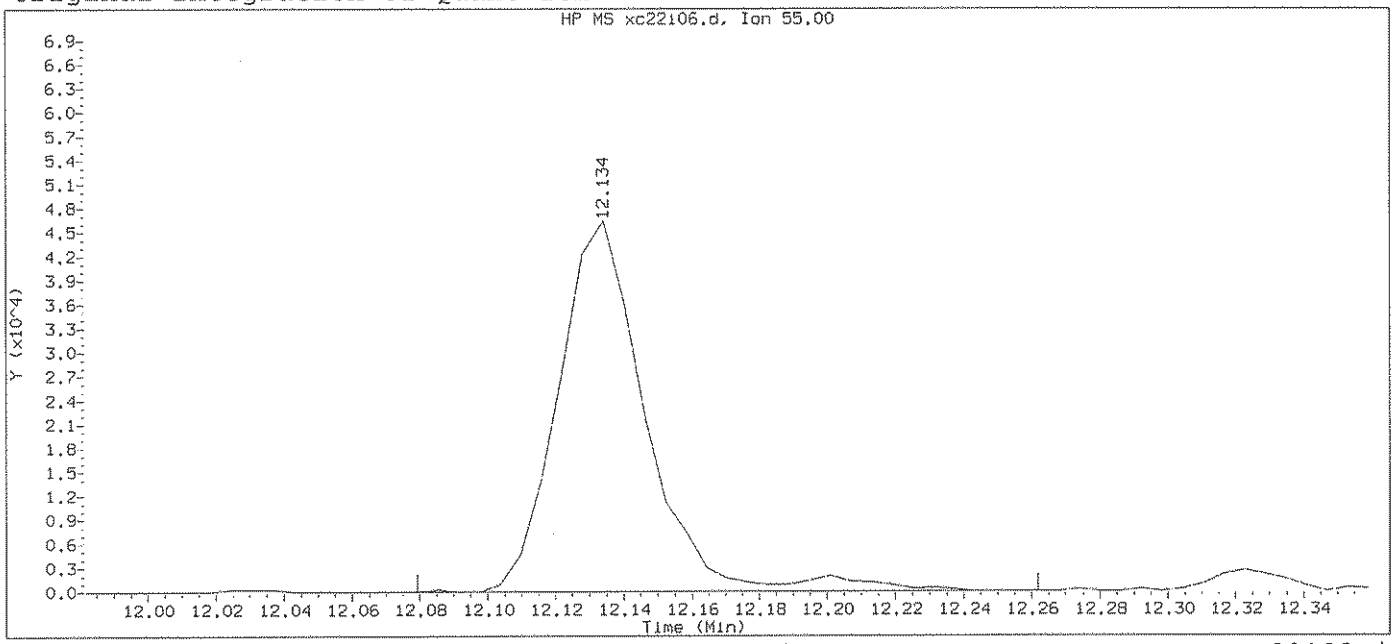
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

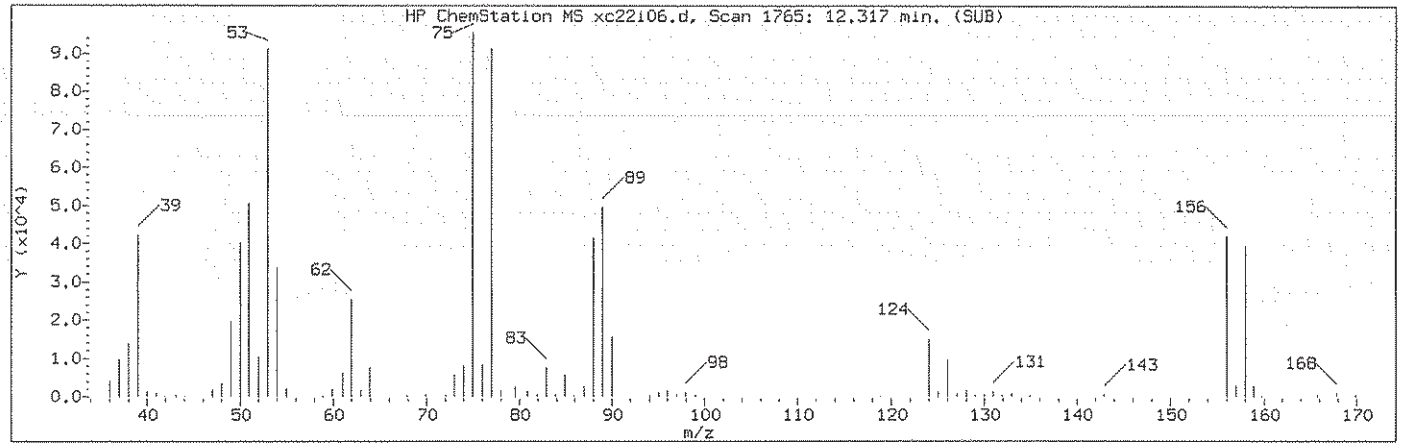
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

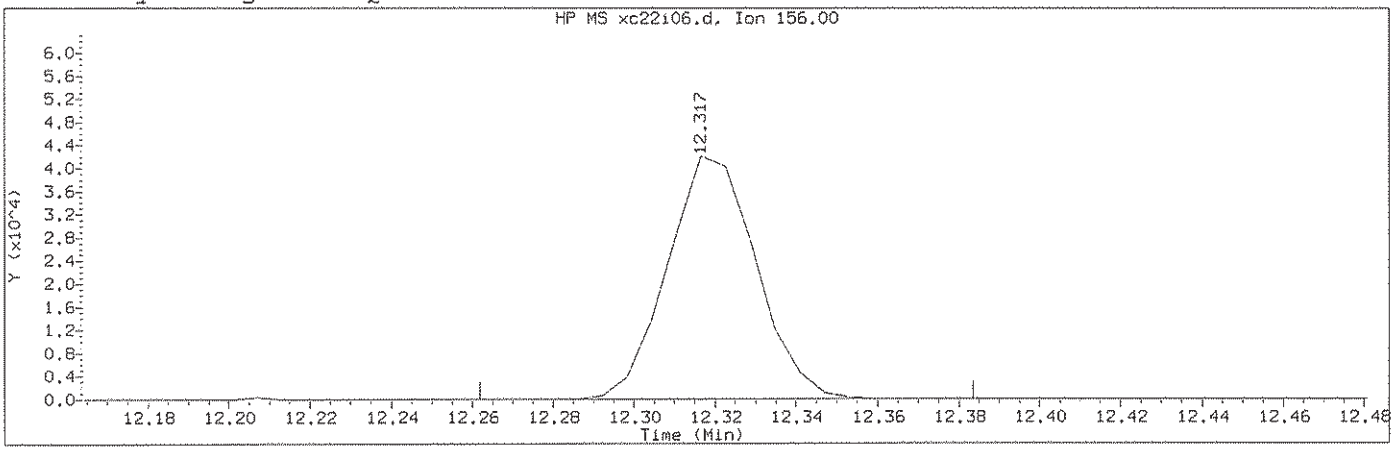
Compound Number	: 113		
Compound Name	: Cyclohexanone		
Scan Number	: 1735		
Retention Time (minutes)	: 12.134		
Quant Ion	: 55.00		
Area	: 82935		
On-column Amount (ng)	: 181.5997		
Integration start scan	: 1725	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

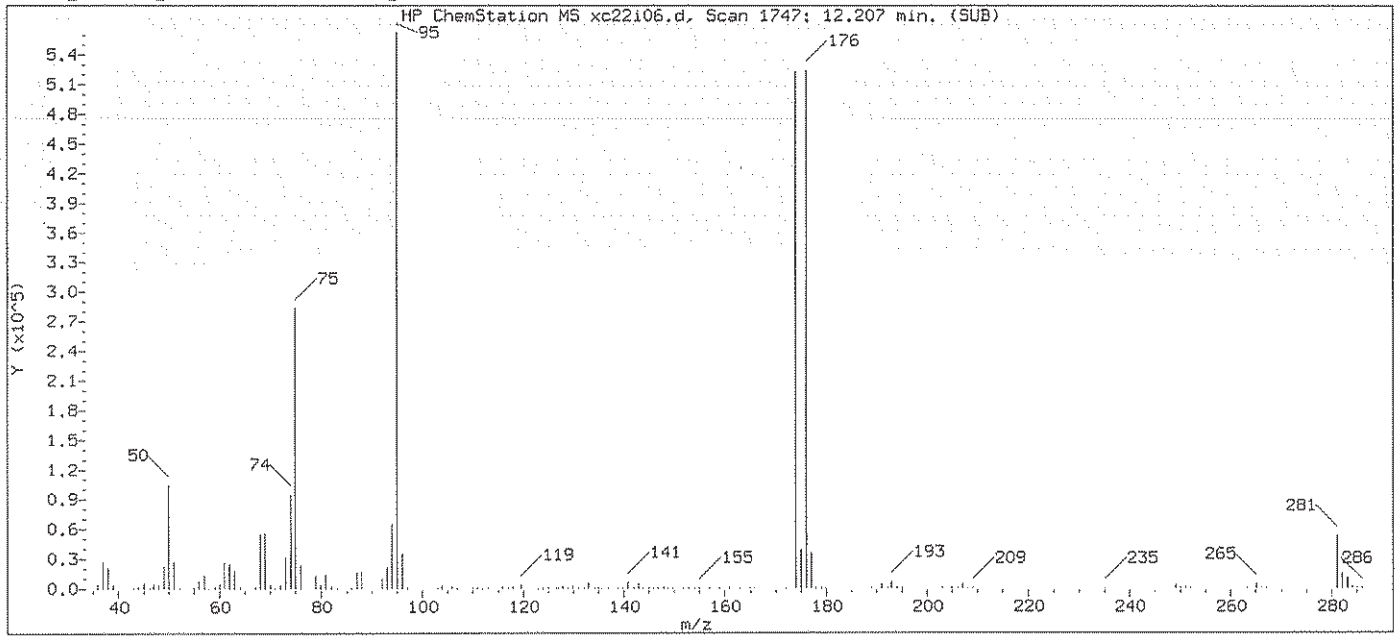
Compound Number : 116
Compound Name : Bromobenzene
Scan Number : 1765
Retention Time (minutes): 12.317
Quant Ion : 156.00
Area (flag) : 63962M
On-Column Amount (ng) : 4.0221
Integration start scan : 1755 Integration stop scan: 1775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

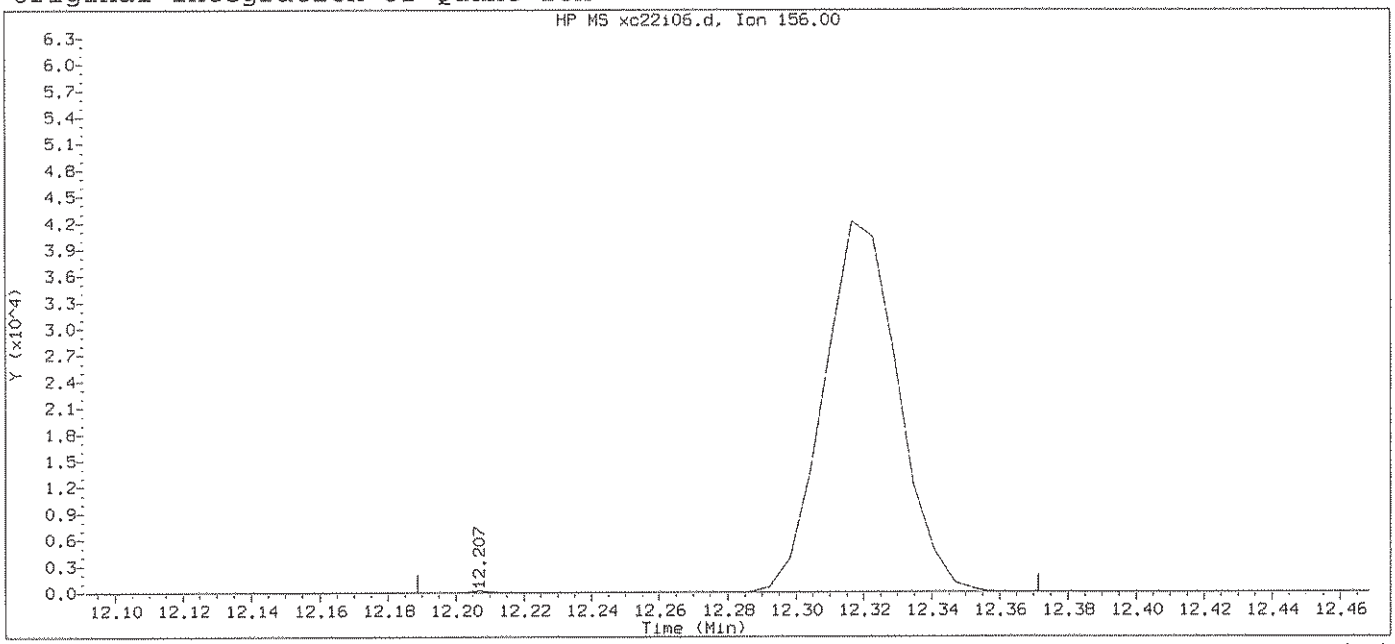
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: A Wilson 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

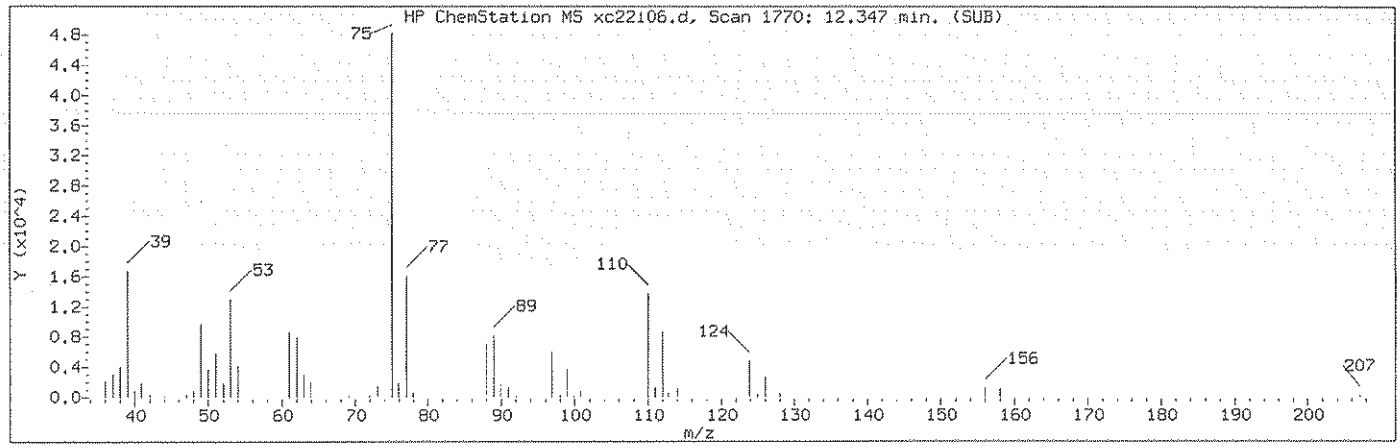
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

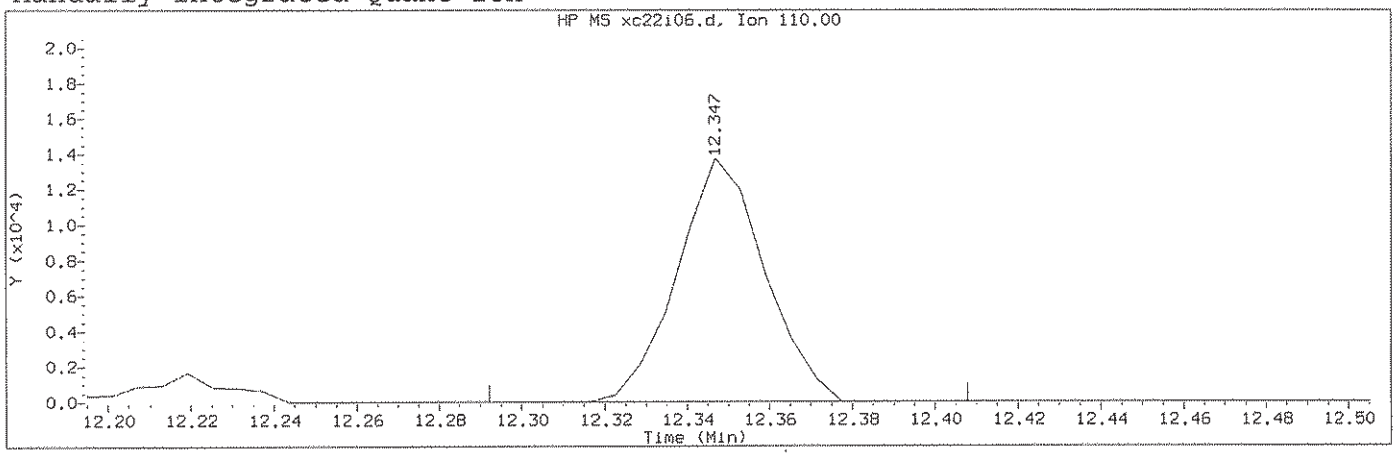
Compound Number : 116
Compound Name : Bromobenzene
Scan Number : 1747
Retention Time (minutes): 12.207
Quant Ion : 156.00
Area : 64056
On-column Amount (ng) : 3.9713
Integration start scan : 1743 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

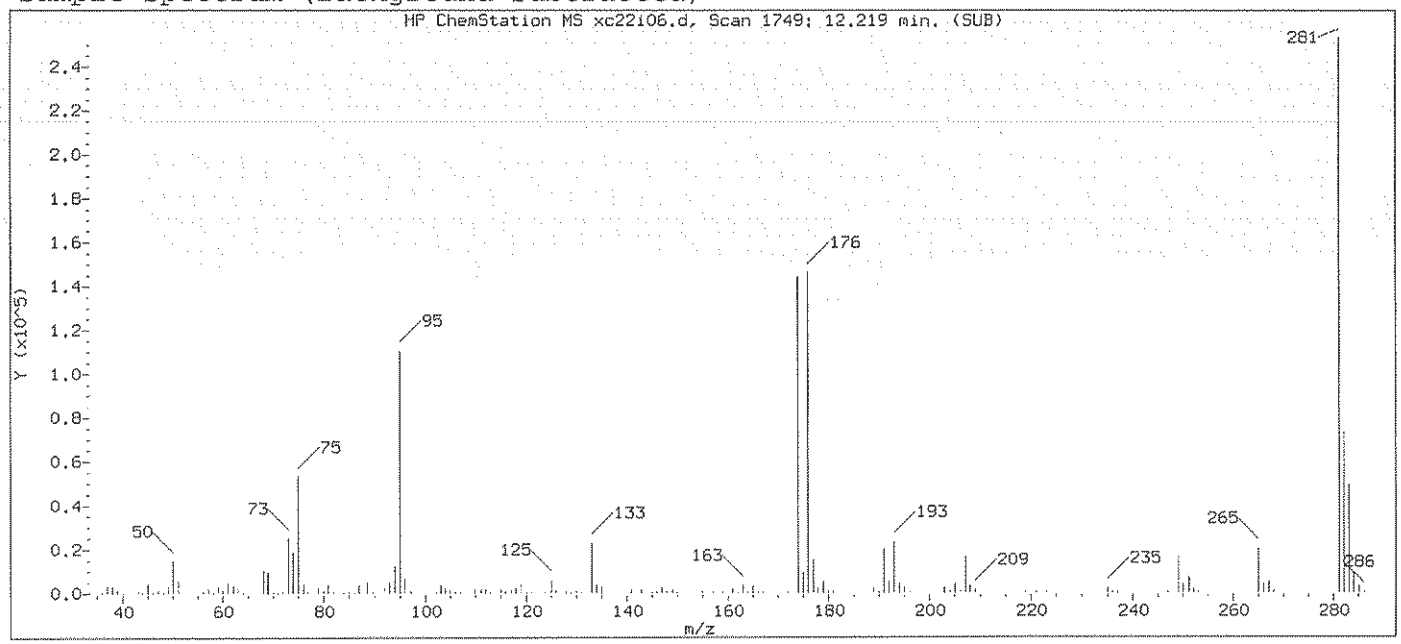
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1770
Retention Time (minutes): 12.347
Quant Ion : 110.00
Area (flag) : 20222M
On-Column Amount (ng) : 4.0551
Integration start scan : 1760 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

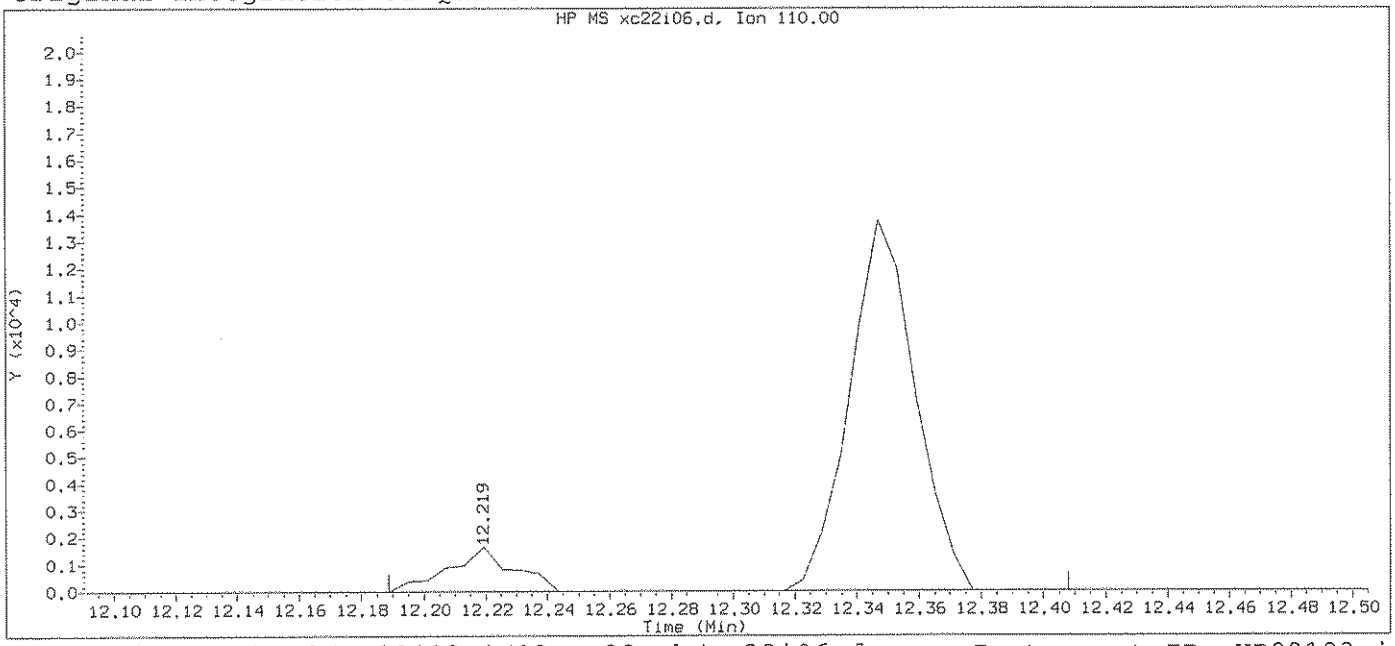
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Approved 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

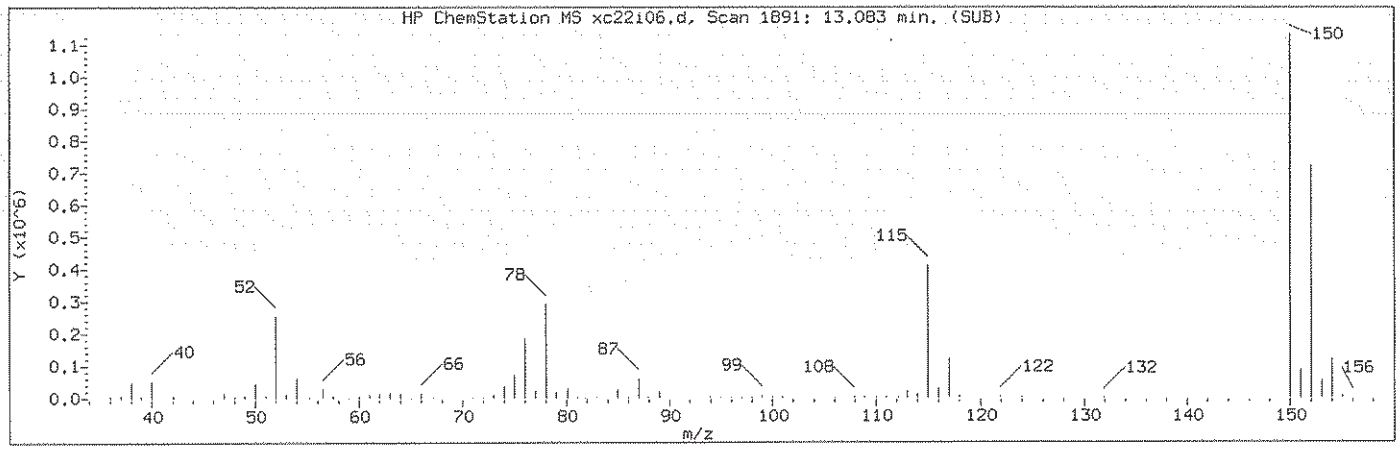
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

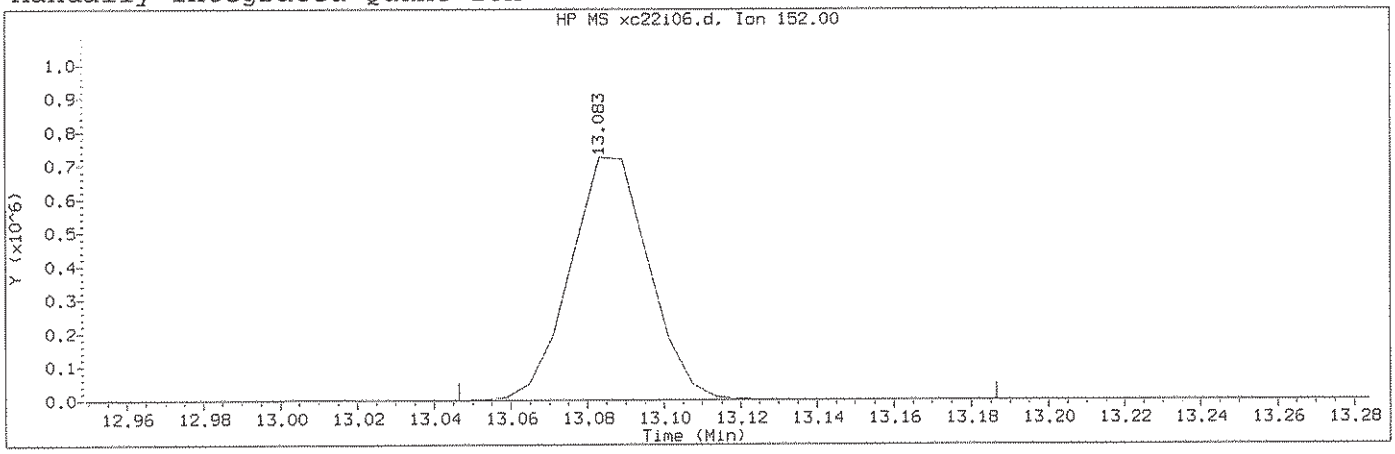
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 110.00
Area : 22618
On-column Amount (ng) : 4.3864
Integration start scan : 1743 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

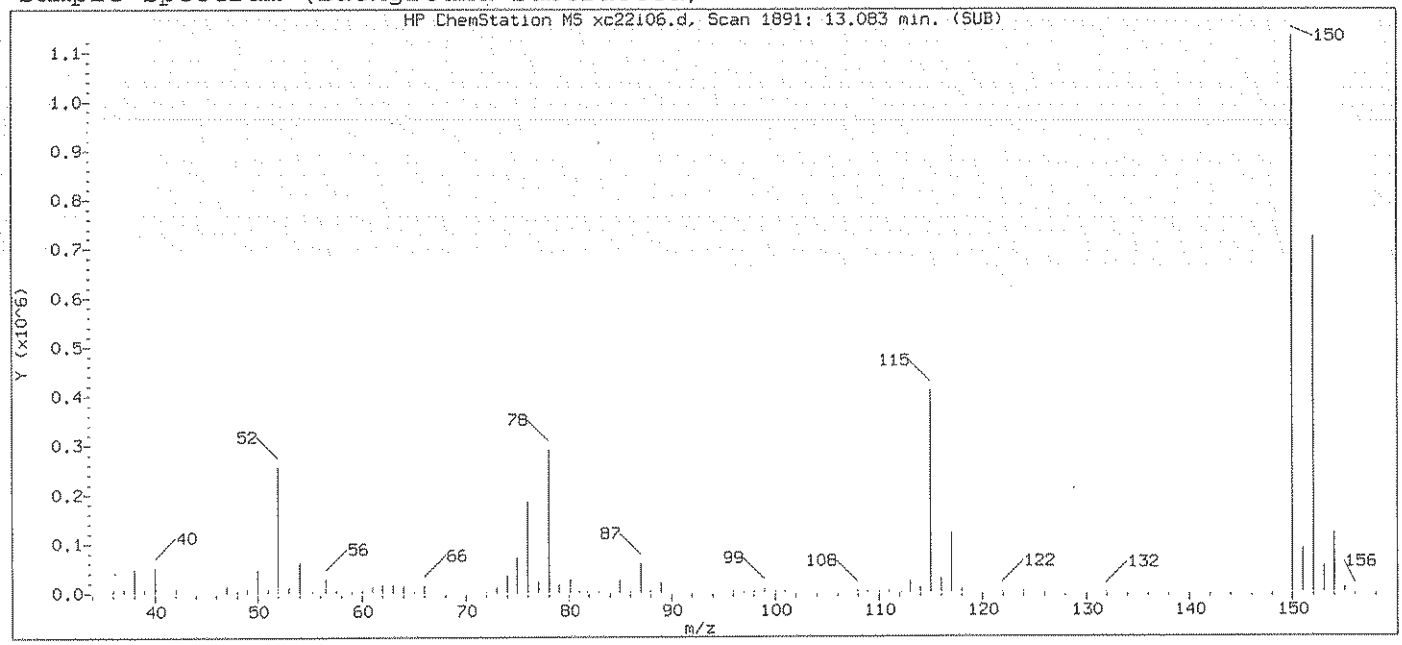
Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1891		
Retention Time (minutes)	: 13.083		
Quant Ion	: 152.00		
Area (flag)	: 1042280M		
On-Column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1907
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

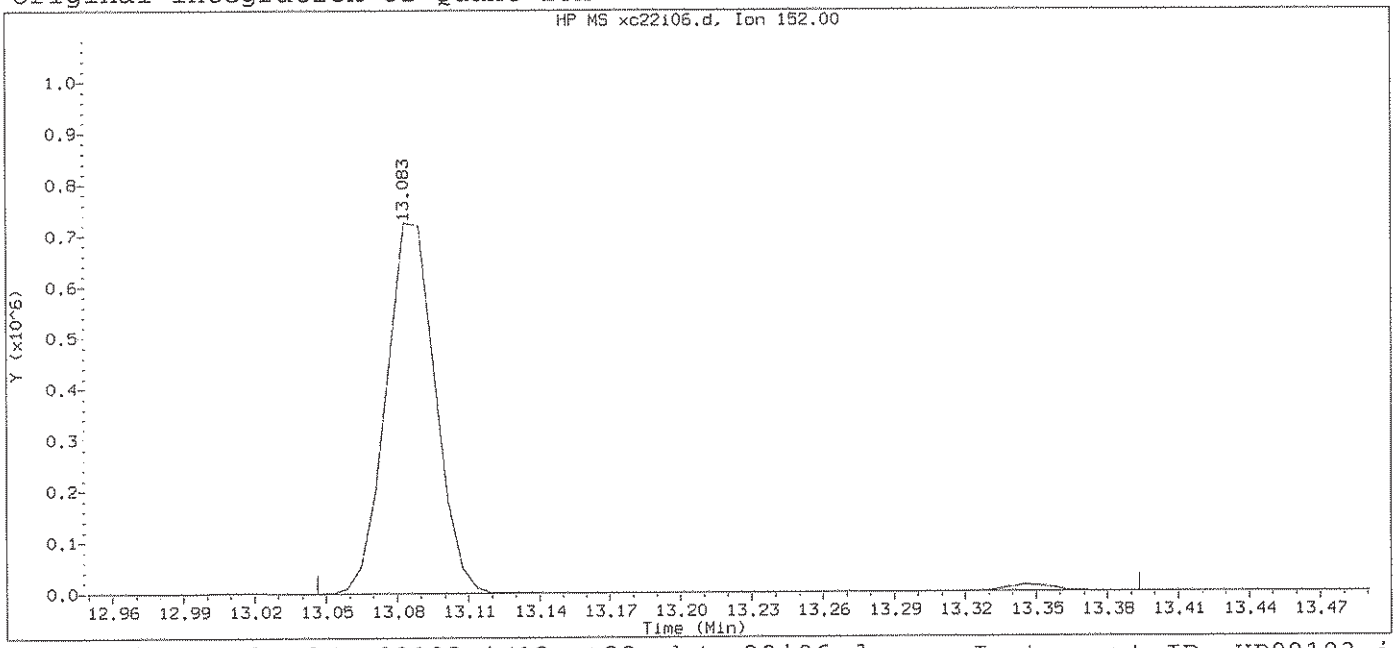
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Approved 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1891		
Retention Time (minutes)	: 13.083		
Quant Ion	: 152.00		
Area	: 1059849		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1941
Y at integration start	: 0	Y at integration end:	0

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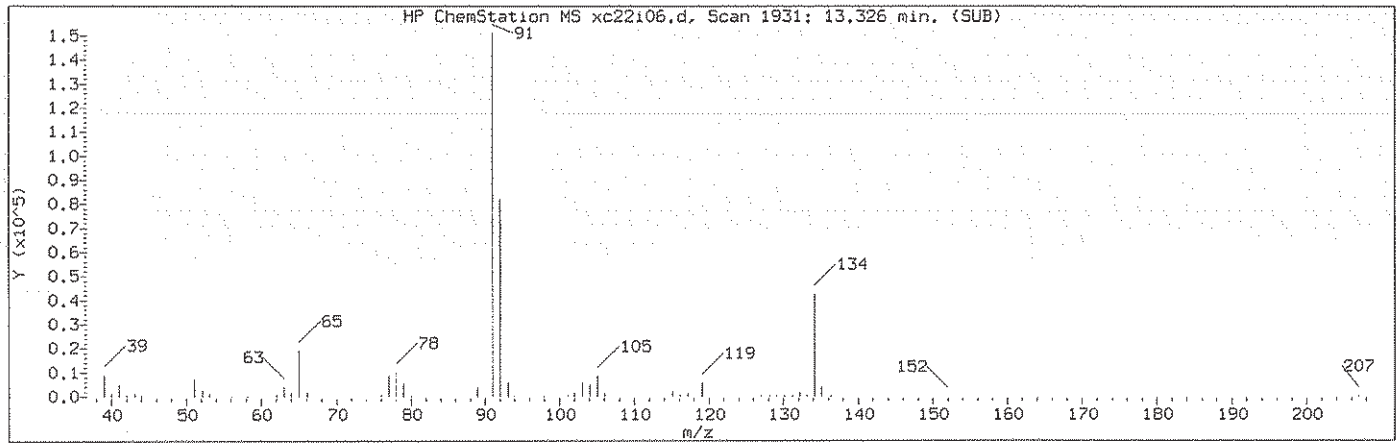
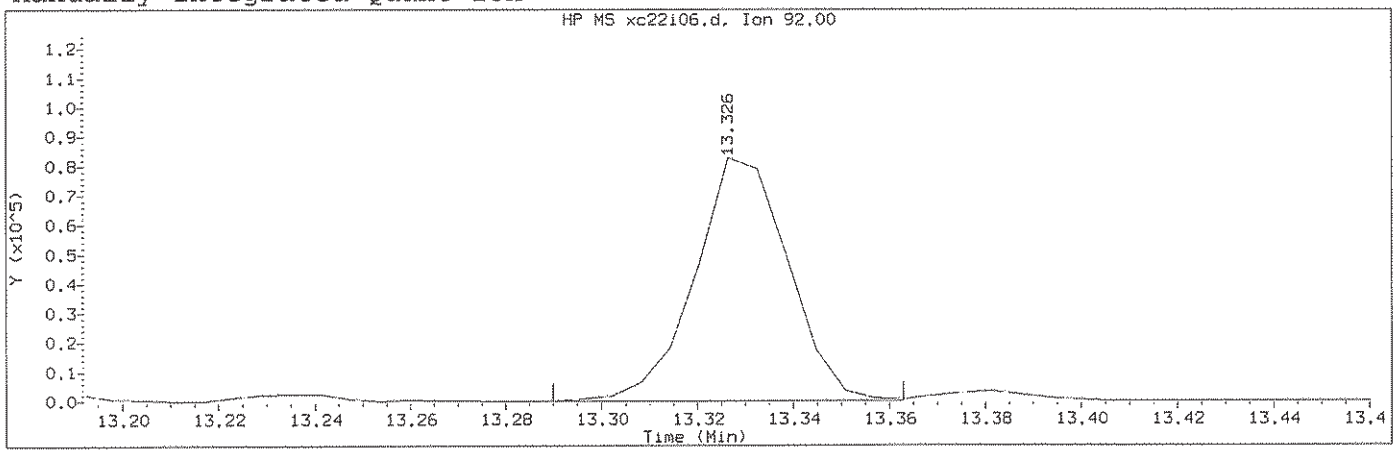
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 cgt03258

Sample Name: VSTD004 Lab Sample ID: VSTD004

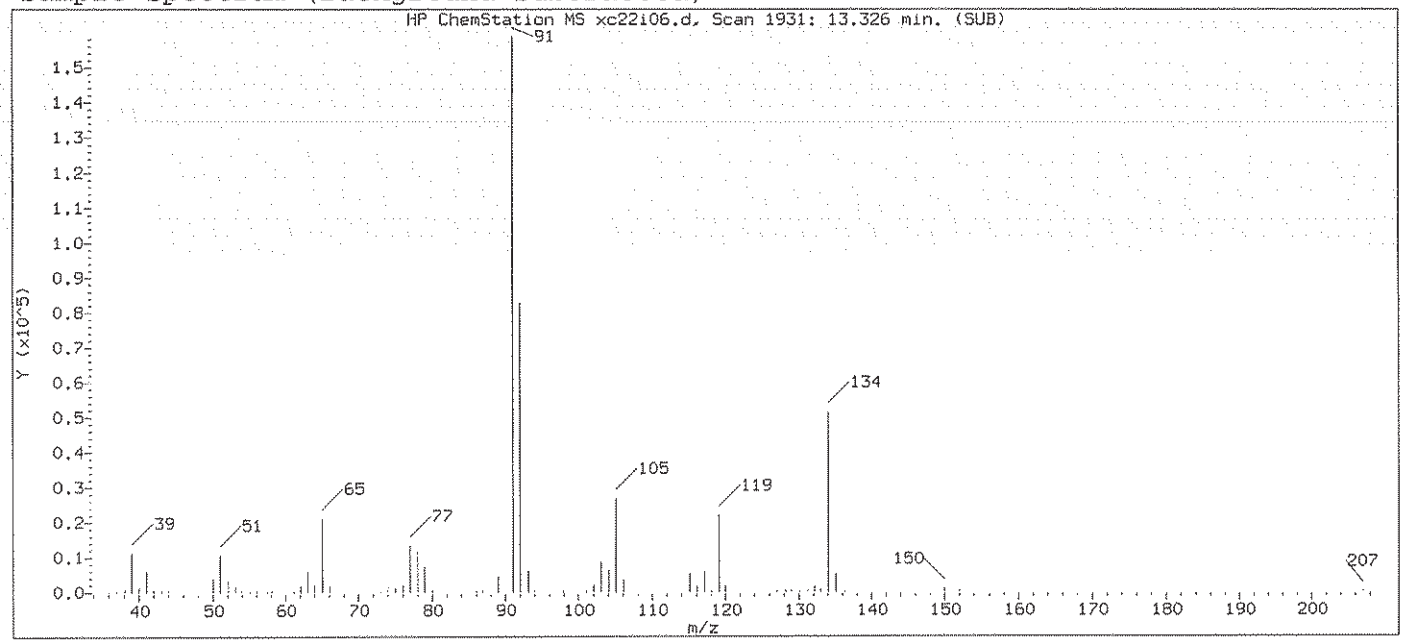
Compound Number : 141
Compound Name : n-Butylbenzene
Scan Number : 1931
Retention Time (minutes): 13.326
Quant Ion : 92.00
Area (flag) : 112414M
On-Column Amount (ng) : 3.9756
Integration start scan : 1924 Integration stop scan: 1936
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

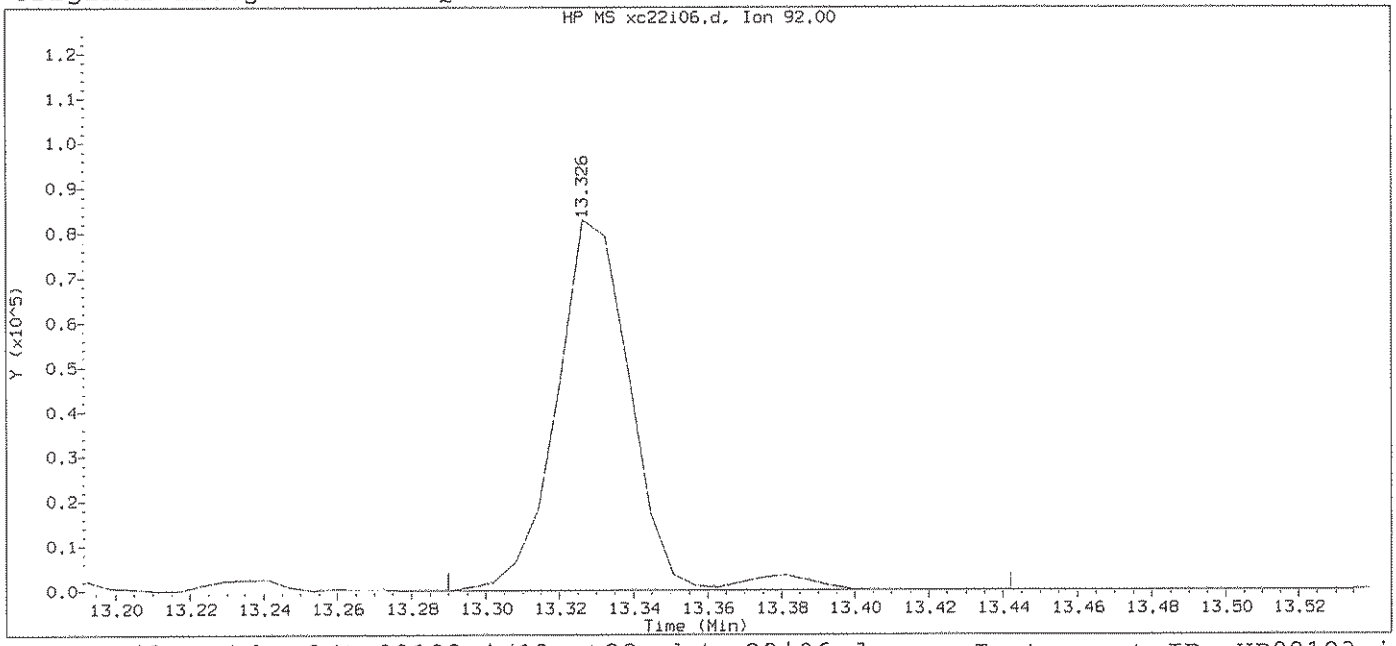
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



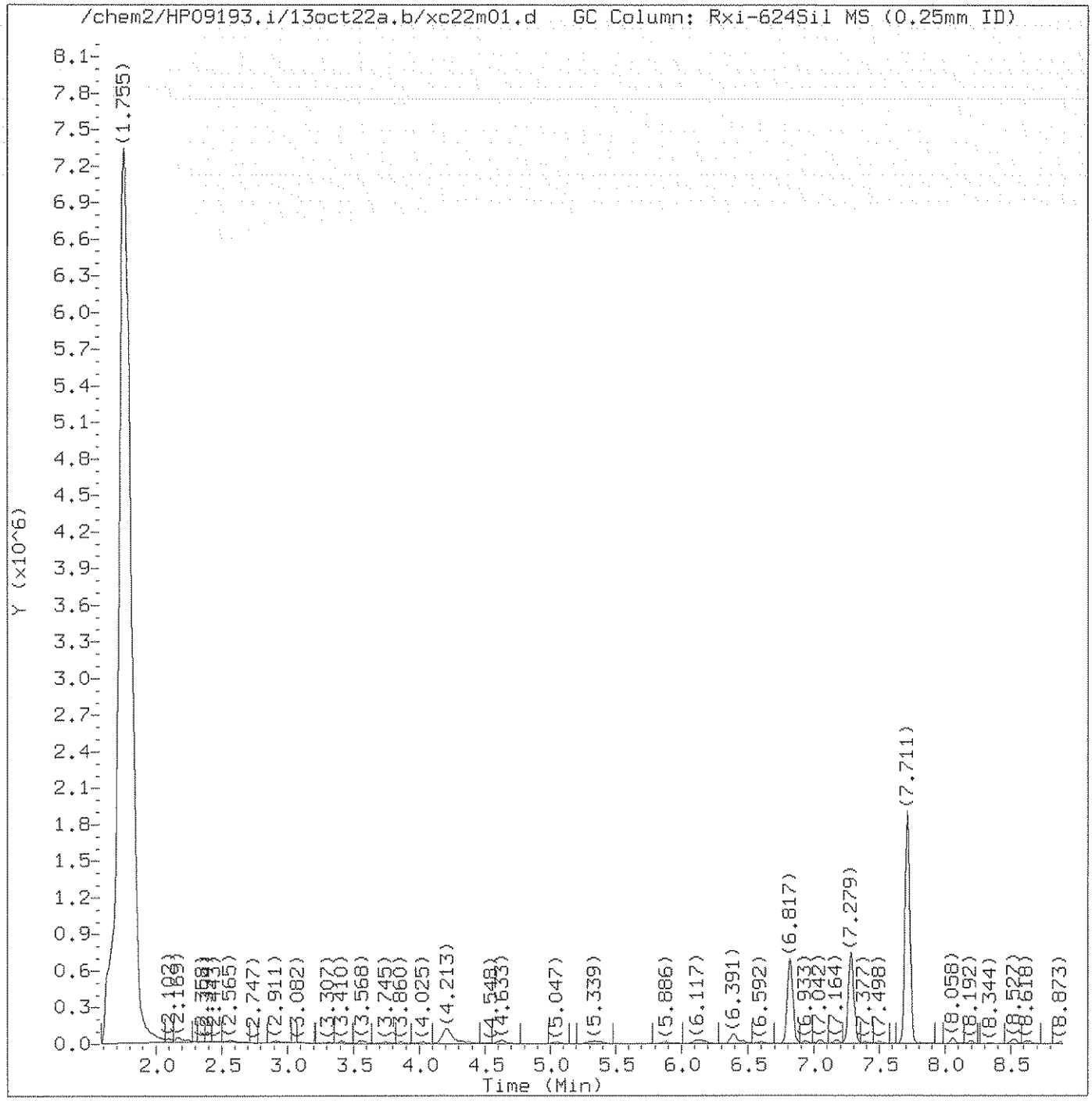
Data File: /chem2/HP09193.i/13oct22a.b/xc22i06.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:08 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:28
Date, time and analyst ID of latest file update: 22-Oct-2013 04:28 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 141
Compound Name : n-Butylbenzene
Scan Number : 1931
Retention Time (minutes): 13.326
Quant Ion : 92.00
Area : 116632
On-column Amount (ng) : 4.0428
Integration start scan : 1924 Integration stop scan: 1949
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 04:55.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

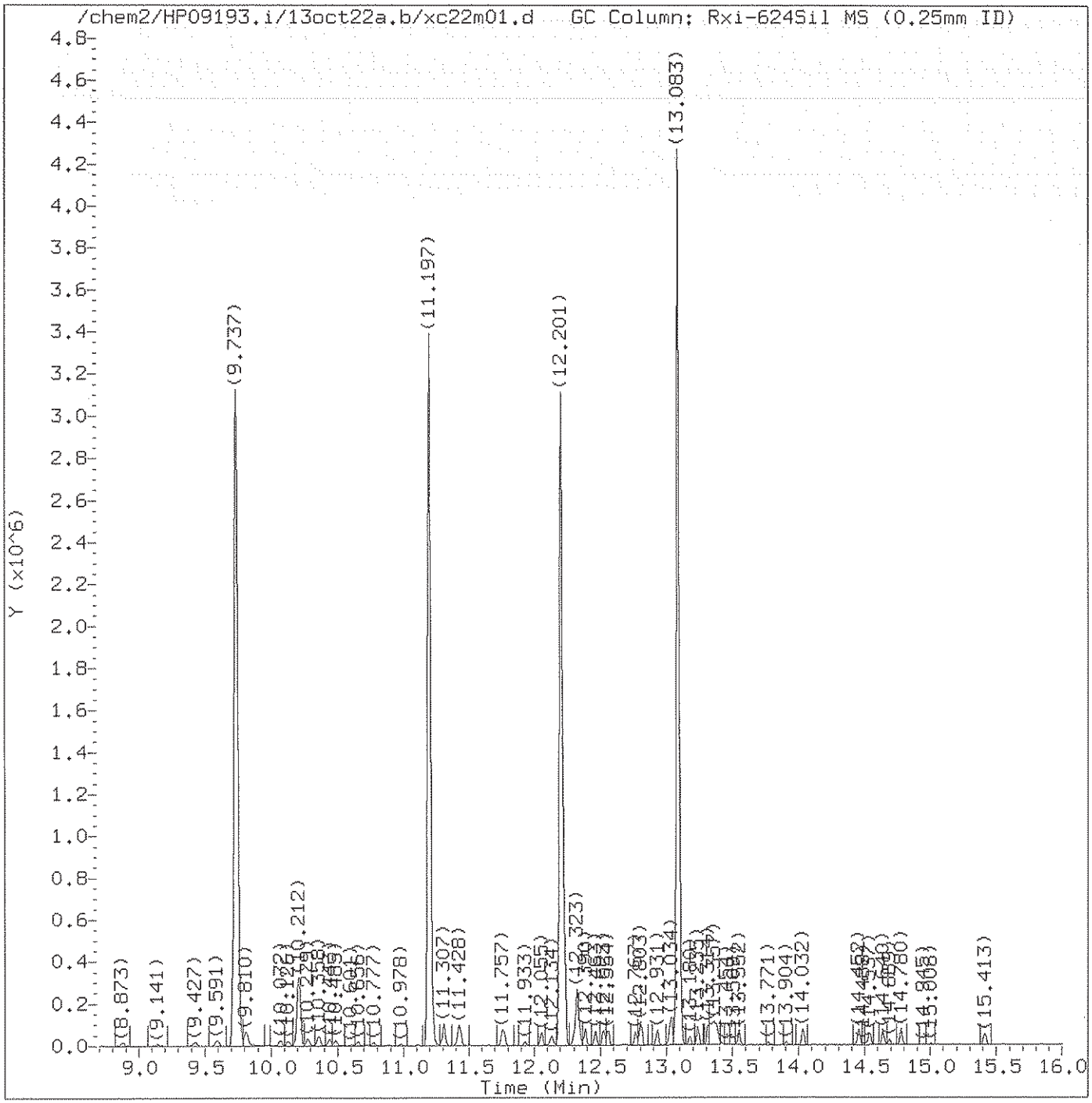
Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	14762M	0.809
4) Chloromethane	(2)	2.102	50	18690	1.199
5) Vinyl Chloride	(2)	2.242	62	12985M	0.909
9) Bromomethane	(2)	2.565	94	11299	1.030
10) Chloroethane	(2)	2.674	64	10444	1.230
11) Dichlorofluoromethane	(2)	2.911	67	20928	0.952
13) Trichlorofluoromethane	(2)	2.942	101	18431	0.848
15) Ethanol	(1)	3.106	45	23345	156.115
17) Freon 123a	(2)	3.313	67	13229	1.030
18) Acrolein	(1)	3.416	56	25882	10.600
19) 1,1-Dichloroethene	(2)	3.556	96	8063	0.852
22) Freon 113	(2)	3.562	101	7199	0.721
20) Acetone	(2)	3.587	58	5192	4.303
23) 2-Propanol	(1)	3.733	45	18770	20.313
24) Methyl Iodide	(2)	3.745	142	15566	0.798
25) Carbon Disulfide	(2)	3.860	76	32560	0.957
27) Methyl Acetate	(2)	4.006	43	10060	1.113
29) Allyl Chloride	(2)	4.025	41	13633M	0.787
30)*t-Butyl alcohol-d10	(1)	4.201	65	314711	250.000
31) Methylene Chloride	(2)	4.207	84	11397	1.009
32) t-Butyl alcohol	(1)	4.323	59	28971M	19.393
33) Acrylonitrile	(2)	4.536	53	4354	0.936
34) Methyl Tertiary Butyl Ether	(2)	4.609	73	25994	0.836
35) trans-1,2-Dichloroethene	(2)	4.627	96	8791	0.798
38) n-Hexane	(2)	5.047	57	7783	0.568
40) 1,1-Dichloroethane	(2)	5.290	63	17111	0.821
41) di-Isopropyl ether	(2)	5.357	45	25743	0.744
42) 2-Chloro-1,3-butadiene	(2)	5.400	53	11203	0.609
44) Ethyl t-butyl ether	(2)	5.886	59	17837	0.723
45) 2-Butanone	(2)	6.093	43	13157	2.130
47) 1,2-Dichloroethene (Total)	(2)		96	18849	1.625
46) cis-1,2-Dichloroethene	(2)	6.111	96	10058	0.828
48) 2,2-Dichloropropane	(2)	6.130	77	13713	0.747
50) Propionitrile	(1)	6.178	54	31368	19.739
51) Methacrylonitrile	(2)	6.385	67	41734	8.322
52) Bromochloromethane	(2)	6.458	128	5908	0.886
53) Tetrahydrofuran	(1)	6.495	71	3007	1.928
54) Chloroform	(2)	6.598	83	19075	0.893

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	6.817	113	611409	50.404
57) 1,1,1-Trichloroethane	(2)	6.841	97	18336	0.885
58) Cyclohexane	(2)	6.933	56	10138	0.594
60) Carbon Tetrachloride	(2)	7.042	117	12190	0.721
59) 1,1-Dichloropropene	(2)	7.054	75	11186	0.716
61) Isobutyl Alcohol	(1)	7.164	41	24554	47.862
62)$1,2-Dichloroethane-d4	(2)	7.285	102	140949	51.556
63) Benzene	(2)	7.310	78	45311	0.997
66) 1,2-Dichloroethane	(2)	7.395	62	17909	0.942
67) t-Amyl methyl ether	(2)	7.504	73	14886	0.747
69)*Fluorobenzene	(2)	7.711	96	2326893	50.000
71) n-Heptane	(2)	7.723	43	11277	0.731
72) n-Butanol	(1)	8.052	56	35650	90.398
74) Trichloroethene	(2)	8.198	95	10599	0.883
75) Methylcyclohexane	(2)	8.508	83	11026	0.606
76) 1,2-Dichloropropane	(2)	8.533	63	9052	0.789
78) Methyl Methacrylate	(2)	8.618	69	6157	0.688
79) 1,4-Dioxane	(1)	8.624	88	5578	38.772
80) Dibromomethane	(2)	8.648	93	6721	0.841
83) Bromodichloromethane	(2)	8.873	83	13450	0.802
84) 2-Nitropropane	(1)	9.147	41	6866M	1.758
86) cis-1,3-Dichloropropene	(2)	9.427	75	12542	0.681
87) 4-Methyl-2-pentanone	(2)	9.591	43	19344	1.414
88)$Toluene-d8	(3)	9.737	98	2301329	49.898
89) Toluene	(3)	9.816	92	26474	0.922
90) trans-1,3-Dichloropropene	(3)	10.072	75	13722	0.722
91) Ethyl Methacrylate	(3)	10.126	69	11226	0.703
92) 1,1,2-Trichloroethane	(3)	10.279	97	9742	0.936
94) Tetrachloroethene	(3)	10.358	166	11121	0.826
95) 1,3-Dichloropropane	(3)	10.443	76	16240	0.880
97) 2-Hexanone	(3)	10.485	43	15993	1.588
99) Dibromochloromethane	(3)	10.656	129	10255	0.807
100) 1,2-Dibromoethane	(3)	10.777	107	10388	0.918
101)*Chlorobenzene-d5	(3)	11.197	117	1785957	50.000
102) Chlorobenzene	(3)	11.228	112	31479	0.934
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	9472	0.755
104) Ethylbenzene	(3)	11.313	91	41864	0.762
105) m+p-Xylene	(3)	11.422	106	31476	1.419

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
107) Xylene (Total)	(3)		106	44926	2.051
106) o-Xylene	(3)	11.751	106	13450M	0.632
108) Styrene	(3)	11.775	104	22348M	0.620
109) Bromoform	(3)	11.933	173	6699	0.824
110) Isopropylbenzene	(3)	12.055	105	33402M	0.615
113) Cyclohexanone	(1)	12.134	55	16011	35.321
114)$4-Bromofluorobenzene	(3)	12.201	95	900727	49.273
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	14260	0.941
116) Bromobenzene	(4)	12.323	156	14125M	0.904
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	47668	8.749
118) 1,2,3-Trichloropropane	(4)	12.347	110	4884M	0.997
119) n-Propylbenzene	(4)	12.390	91	52700	0.826
121) 2-Chlorotoluene	(4)	12.463	126	12098	0.859
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	32912	0.691
125) 4-Chlorotoluene	(4)	12.560	126	11455	0.772
128) tert-Butylbenzene	(4)	12.767	134	8073	0.705
129) Pentachloroethane	(4)	12.803	167	7282	0.739
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	33226	0.673
131) sec-Butylbenzene	(4)	12.931	105	38221	0.655
133) 1,3-Dichlorobenzene	(4)	13.028	146	25886	0.887
134) p-Isopropyltoluene	(4)	13.041	119	33589	0.618
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	1024041M	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	30577	1.007
137) 1,2,3-Trimethylbenzene	(4)	13.114	105	45682	0.864
138) Benzyl Chloride	(4)	13.174	126	4546	0.663
139) 1,3-Diethylbenzene	(4)	13.235	119	23415	0.698
140) 1,4-Diethylbenzene	(4)	13.314	119	23200	0.677
141) n-Butylbenzene	(4)	13.326	92	19249M	0.693
142) 1,2-Dichlorobenzene	(4)	13.363	146	28138	0.981
143) 1,2-Diethylbenzene	(4)	13.387	119	20395M	0.714
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	2980	0.823
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	20238	0.844
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	19842	0.894
149) Hexachlorobutadiene	(4)	14.537	225	9067	0.757
150) Naphthalene	(4)	14.640	128	44102	0.821
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	20302	0.922
152) 2-Methylnaphthalene	(4)	15.419	142	24091	0.668

M = Compound was manually integrated.
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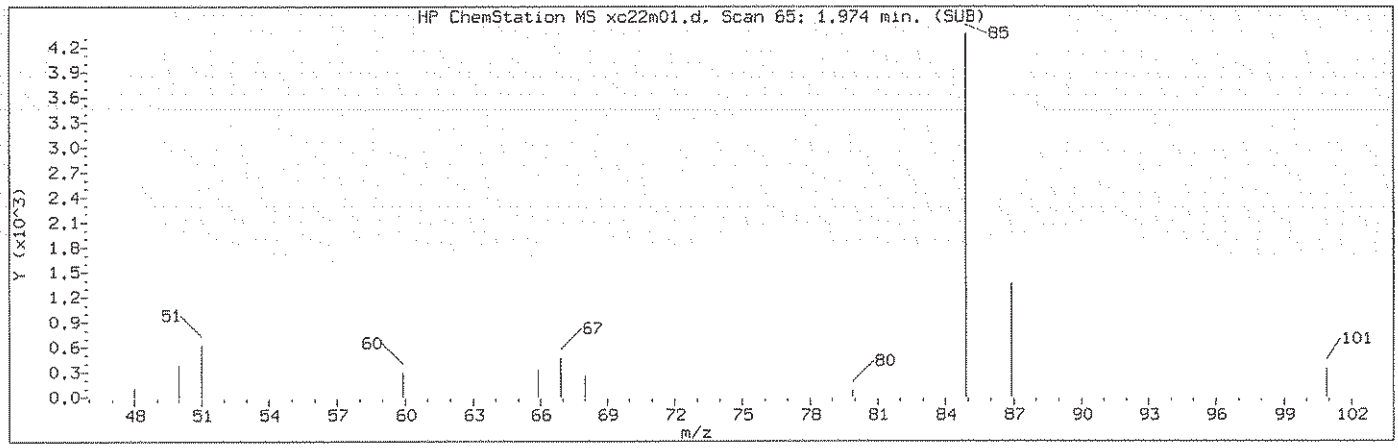
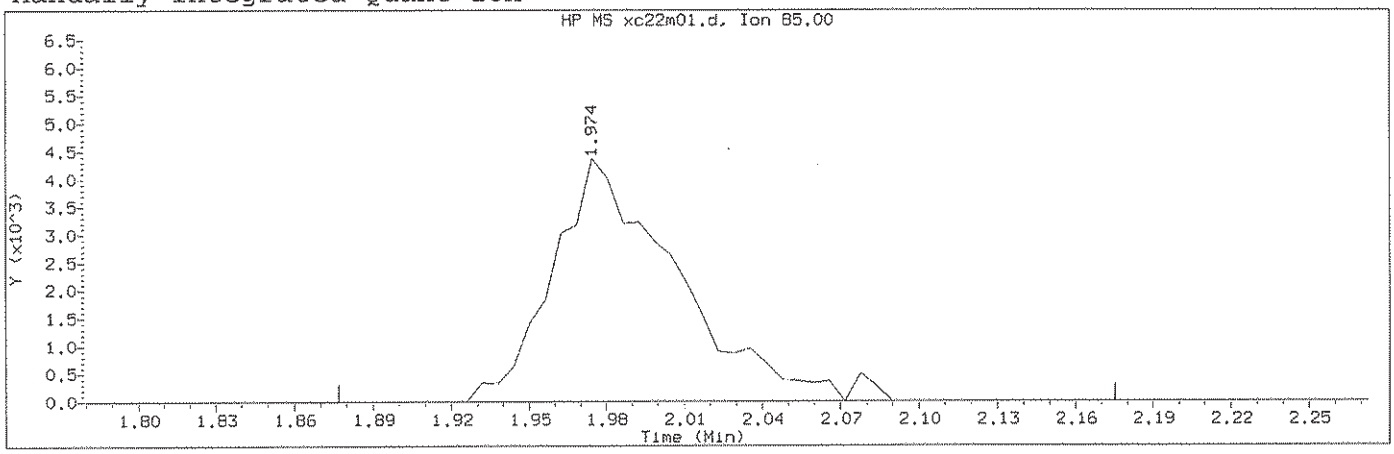
on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

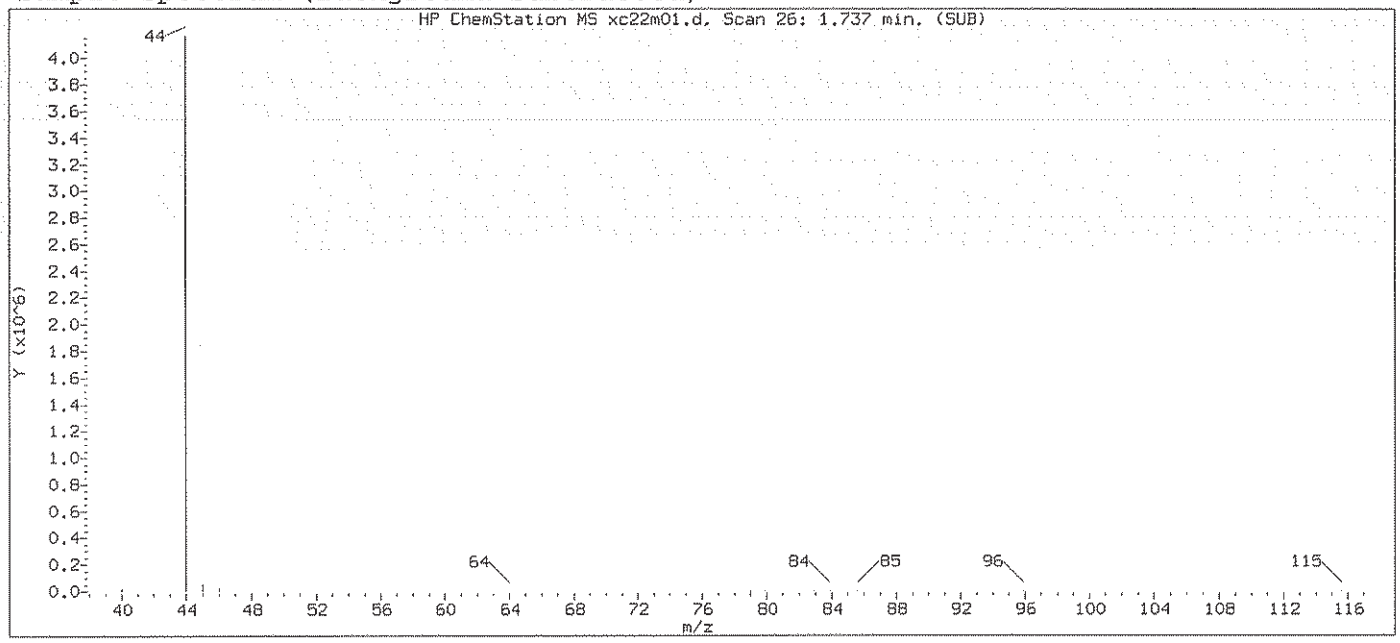
Compound Number	: 2		
Compound Name	: Dichlorodifluoromethane		
Scan Number	: 65		
Retention Time (minutes)	: 1.974		
Quant Ion	: 85.00		
Area (flag)	: 14762M		
On-Column Amount (ng)	: 0.8093		
Integration start scan	: 48	Integration stop scan:	97
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

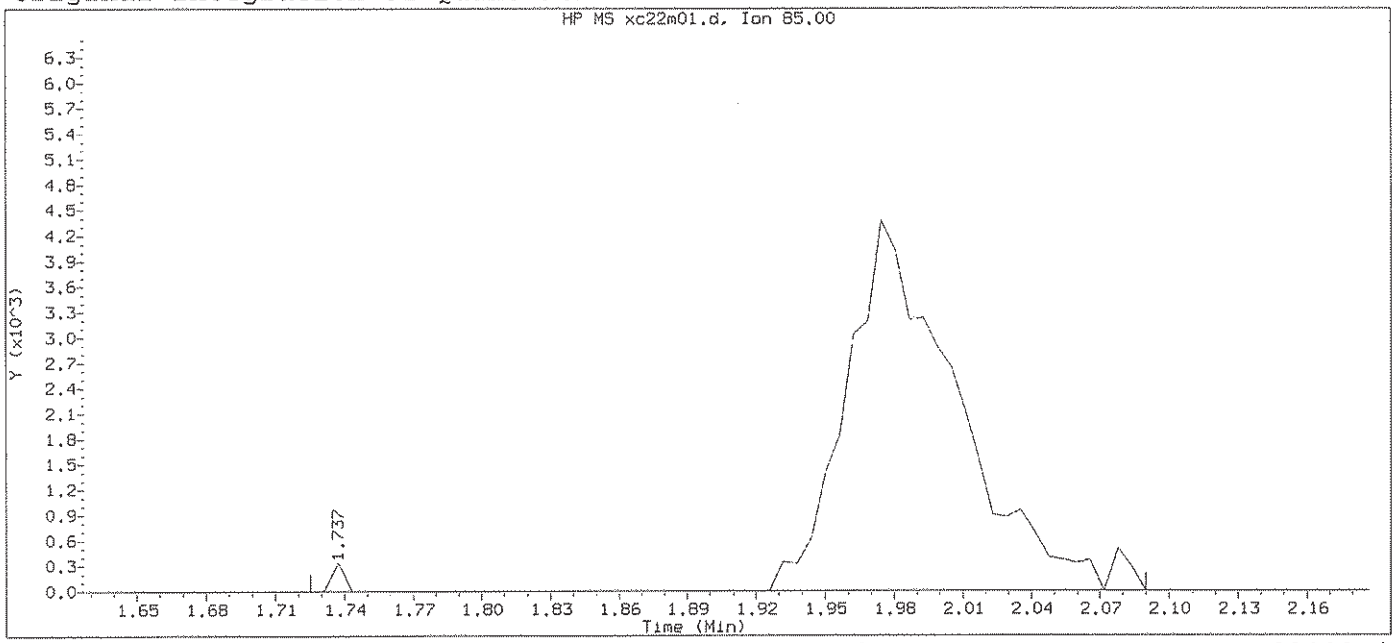
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

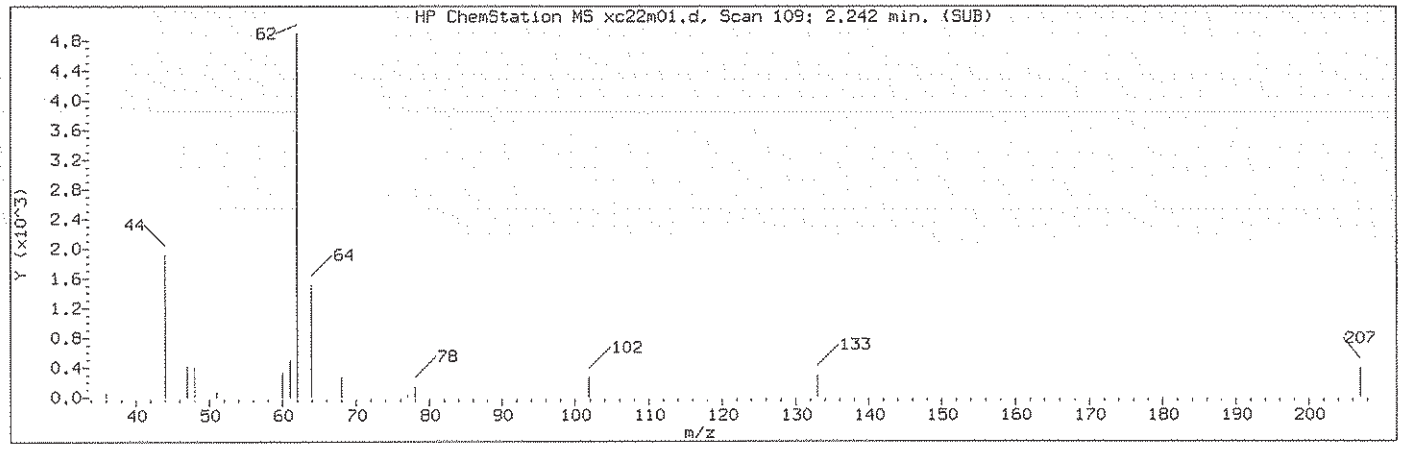
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

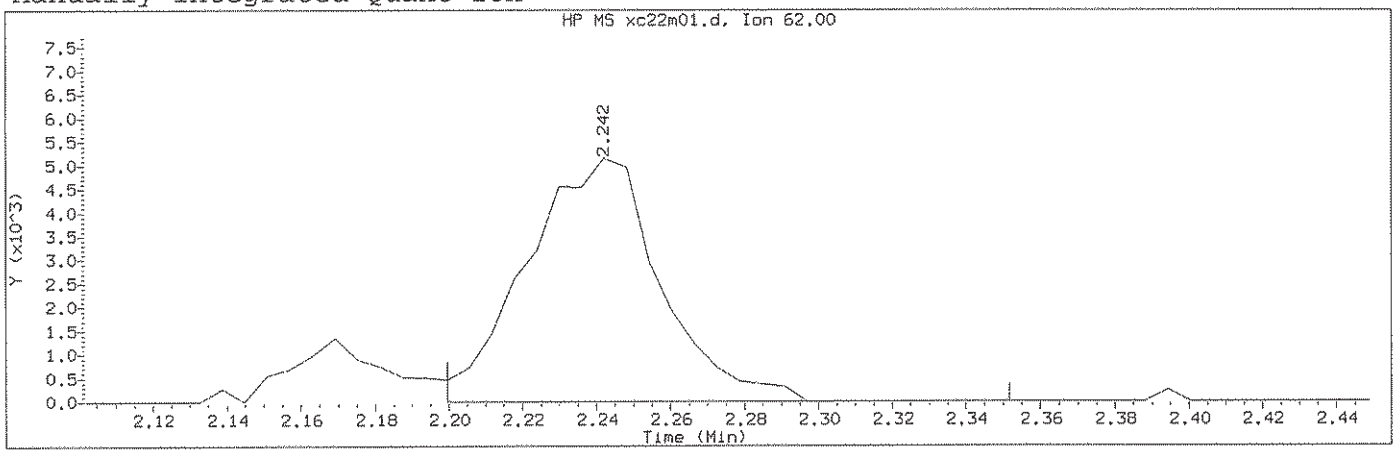
Compound Number	: 2		
Compound Name	: Dichlorodifluoromethane		
Scan Number	: 26		
Retention Time (minutes)	: 1.737		
Quant Ion	: 85.00		
Area	: 14887		
On-column Amount (ng)	: 0.8162		
Integration start scan	: 23	Integration stop scan:	83
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

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Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

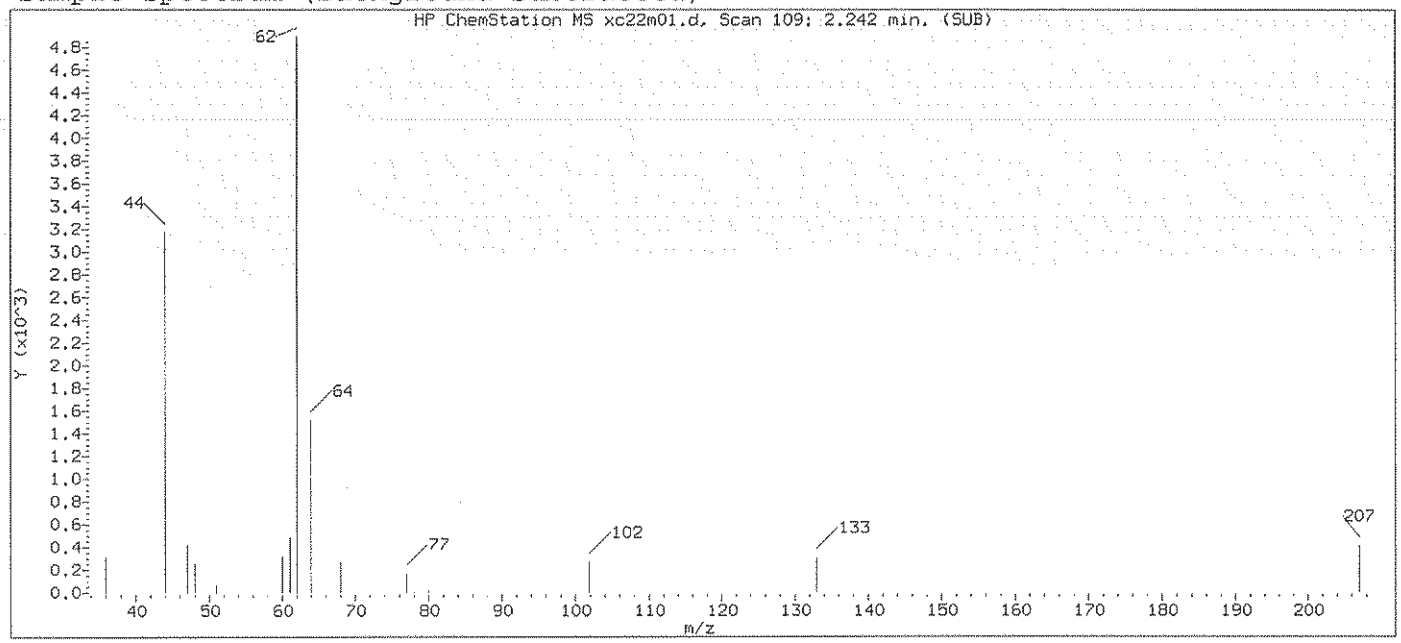
Compound Number : 5
Compound Name : Vinyl Chloride
Scan Number : 109
Retention Time (minutes): 2.242
Quant Ion : 62.00
Area (flag) : 12985M
On-Column Amount (ng) : 0.9088
Integration start scan : 101 Integration stop scan: 126
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

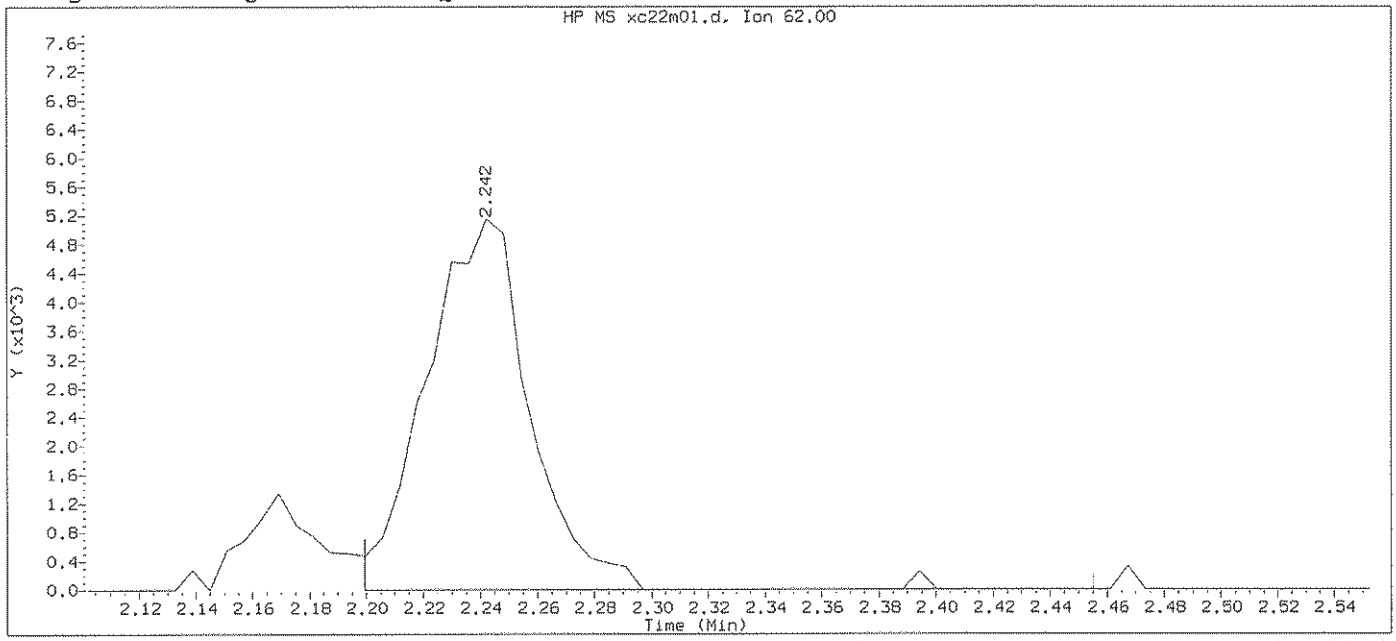
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

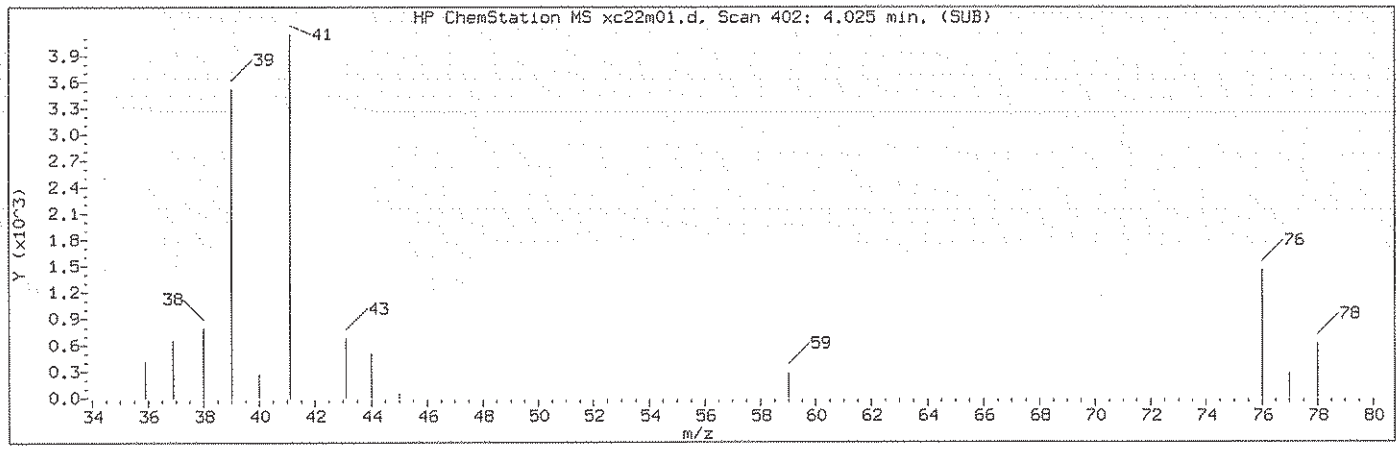
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

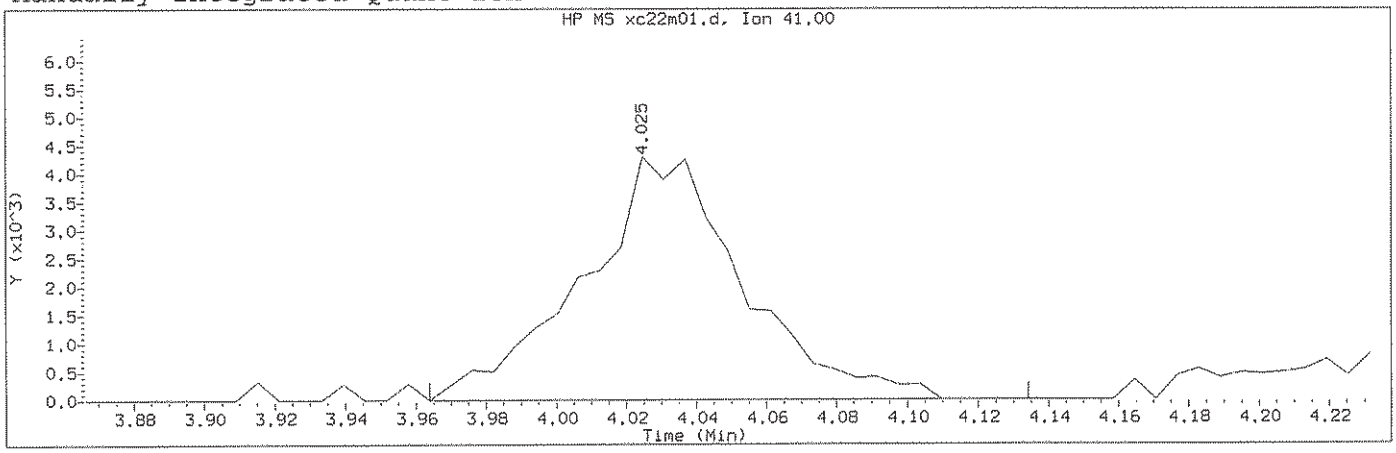
Compound Number	: 5		
Compound Name	: Vinyl Chloride		
Scan Number	: 109		
Retention Time (minutes)	: 2.242		
Quant Ion	: 62.00		
Area	: 12991		
On-column Amount (ng)	: 0.9092		
Integration start scan	: 101	Integration stop scan:	143
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

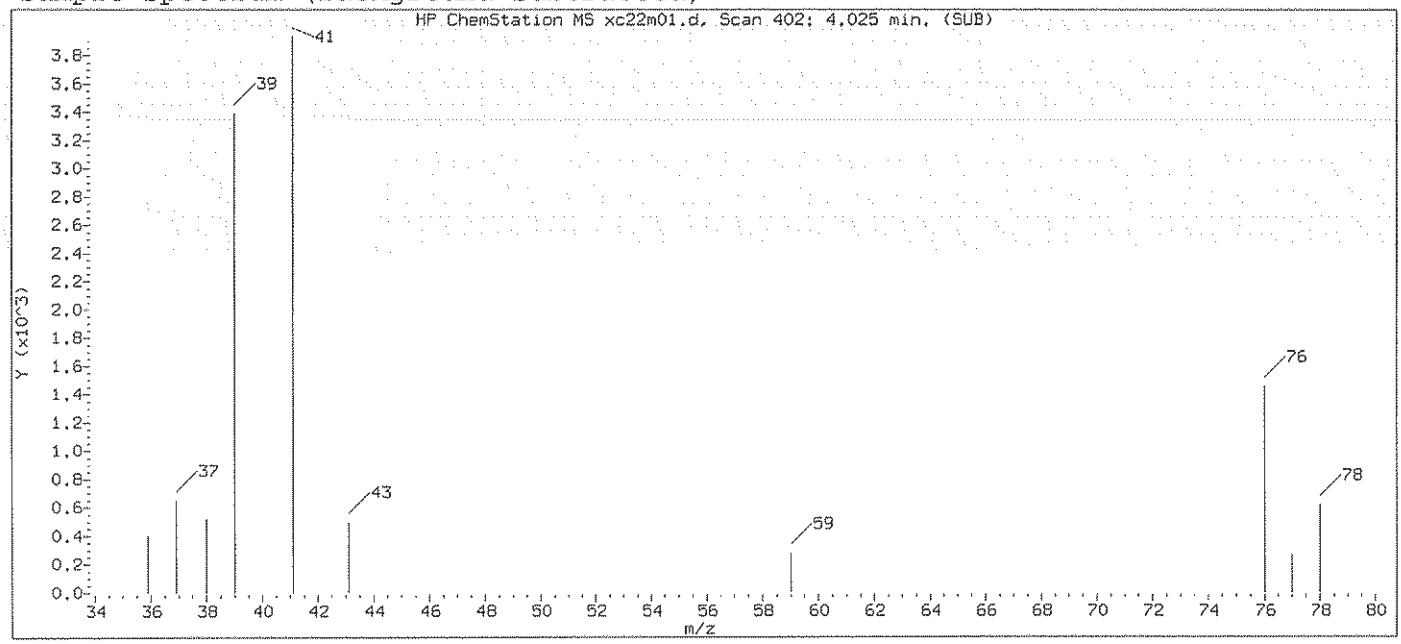
Compound Number	: 29		
Compound Name	: Allyl Chloride		
Scan Number	: 402		
Retention Time (minutes)	: 4.025		
Quant Ion	: 41.00		
Area (flag)	: 13633M		
On-Column Amount (ng)	: 0.7874		
Integration start scan	: 391	Integration stop scan:	419
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

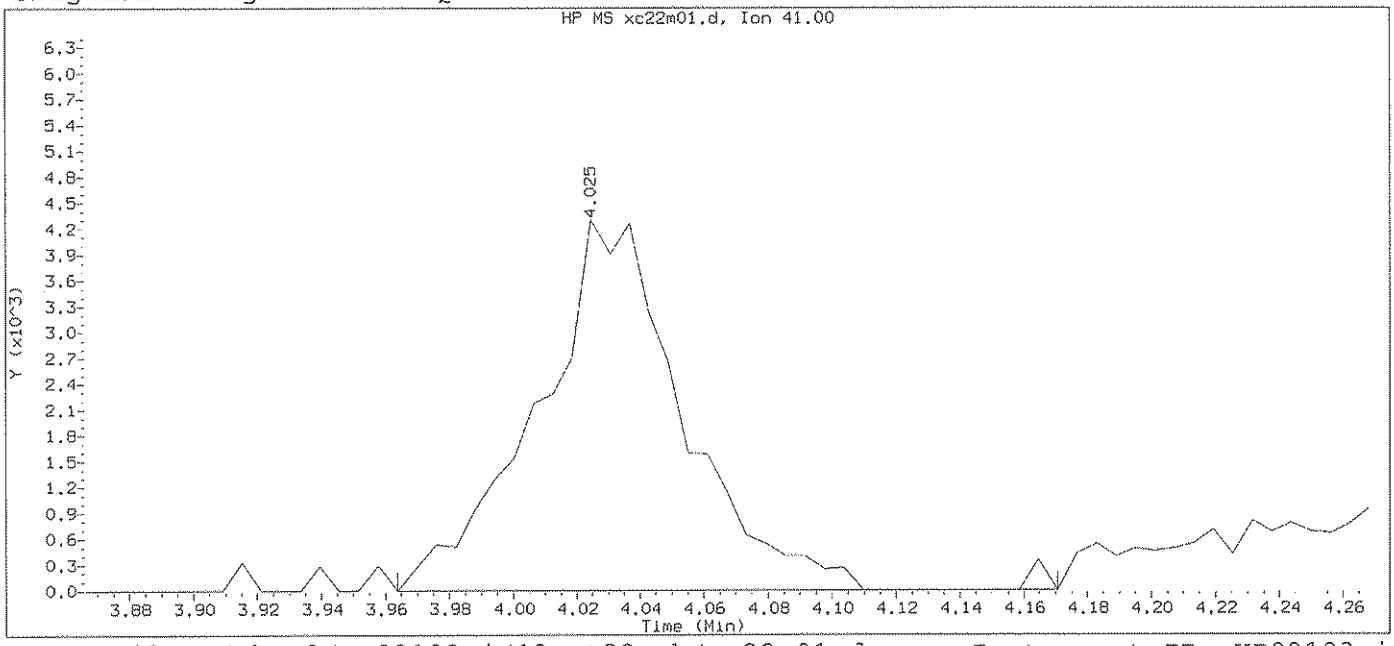
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

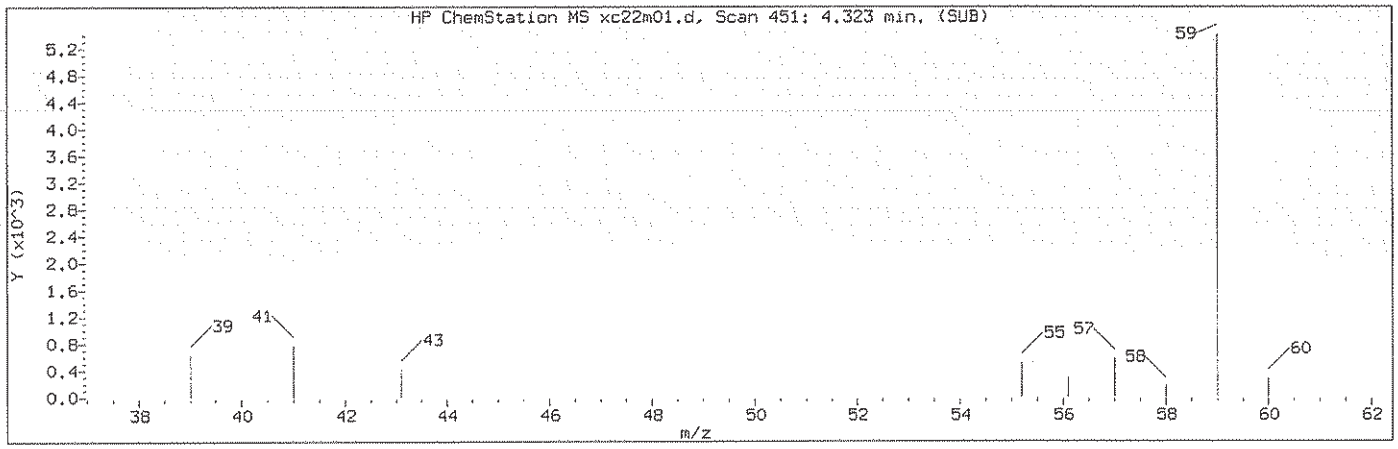
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

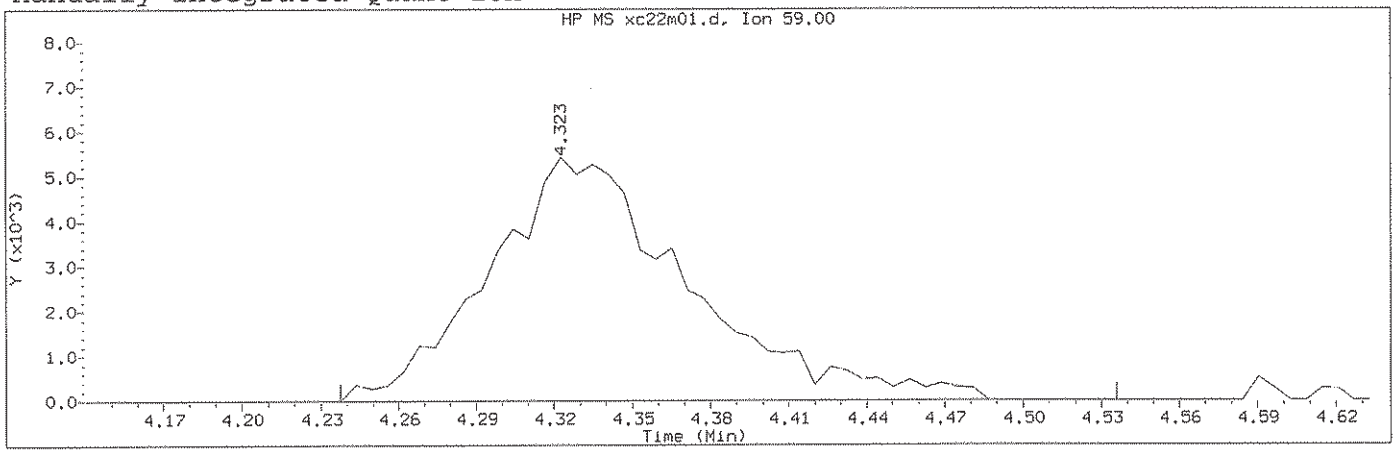
Compound Number	: 29		
Compound Name	: Allyl Chloride		
Scan Number	: 402		
Retention Time (minutes)	: 4.025		
Quant Ion	: 41.00		
Area	: 13762		
On-column Amount (ng)	: 0.7948		
Integration start scan	: 391	Integration stop scan:	425
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

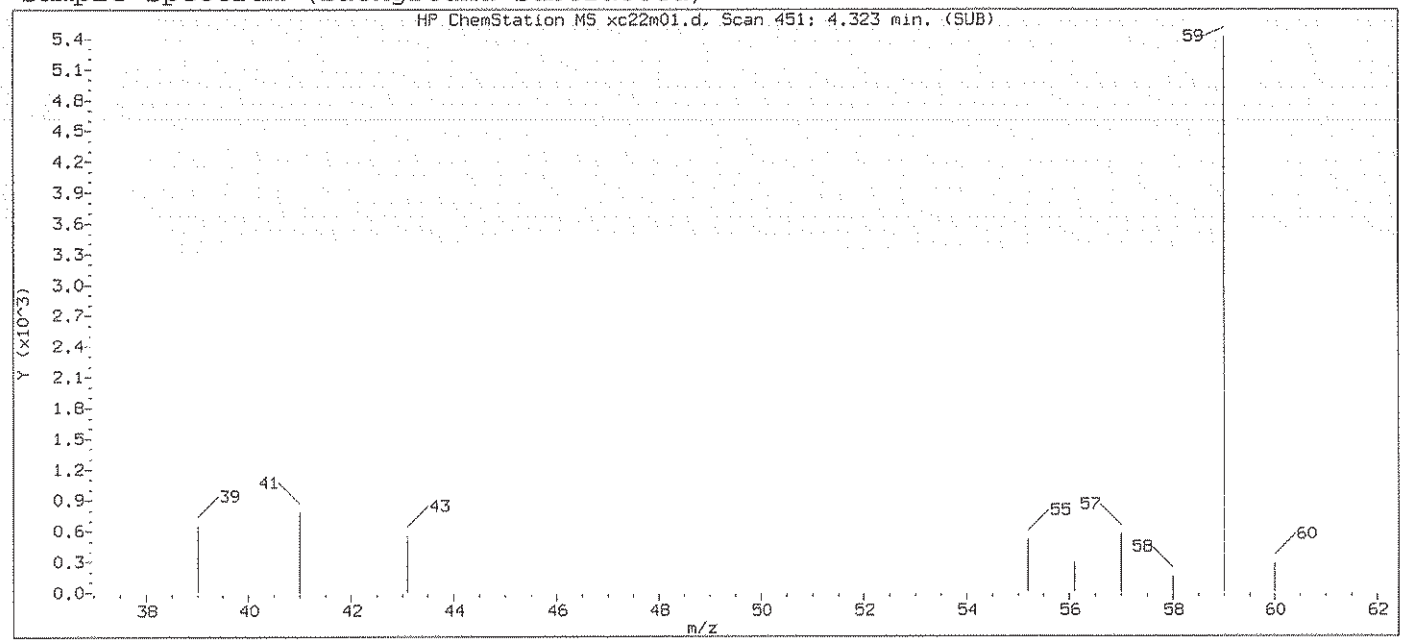
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 451		
Retention Time (minutes)	: 4.323		
Quant Ion	: 59.00		
Area (flag)	: 28971M		
On-Column Amount (ng)	: 19.3935		
Integration start scan	: 436	Integration stop scan:	485
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

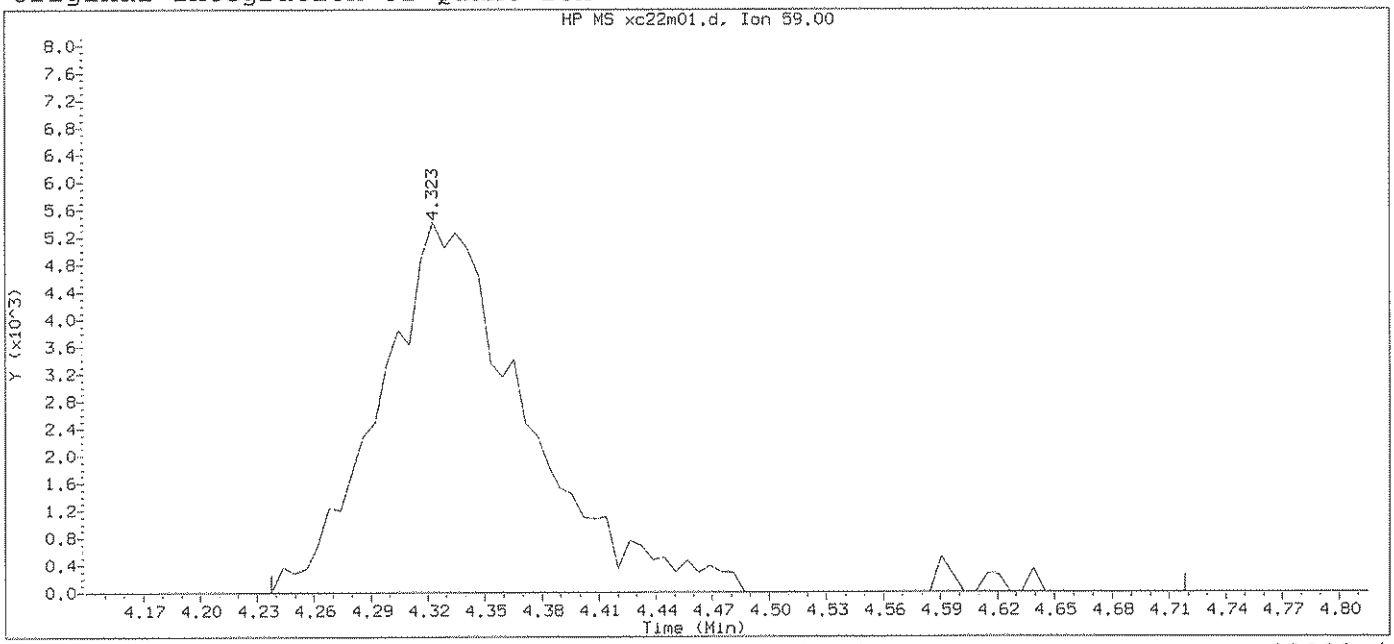
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

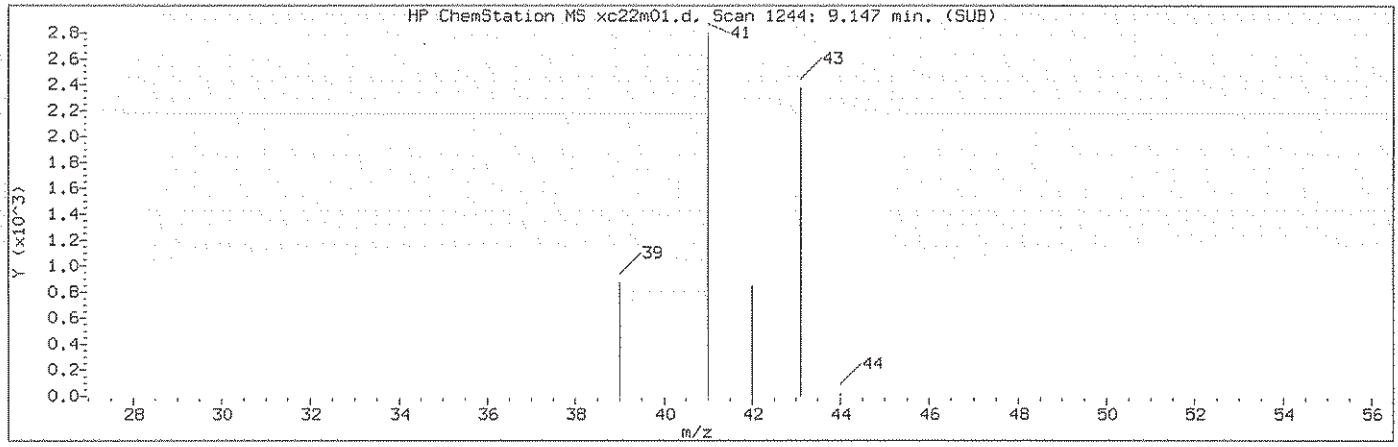
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

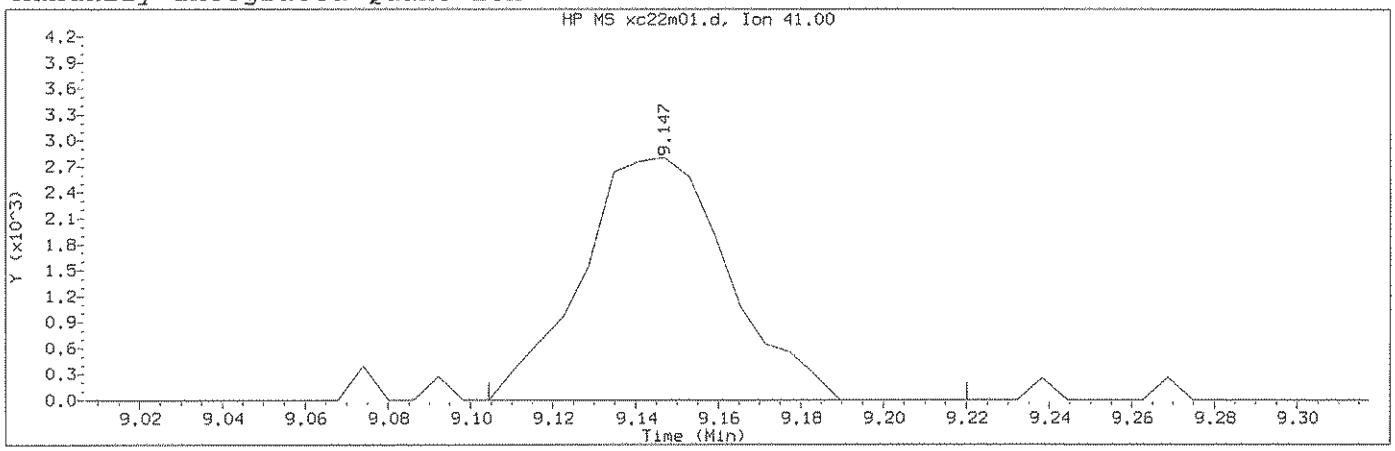
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 451		
Retention Time (minutes)	: 4.323		
Quant Ion	: 59.00		
Area	: 29576		
On-column Amount (ng)	: 19.7986		
Integration start scan	: 436	Integration stop scan:	515
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

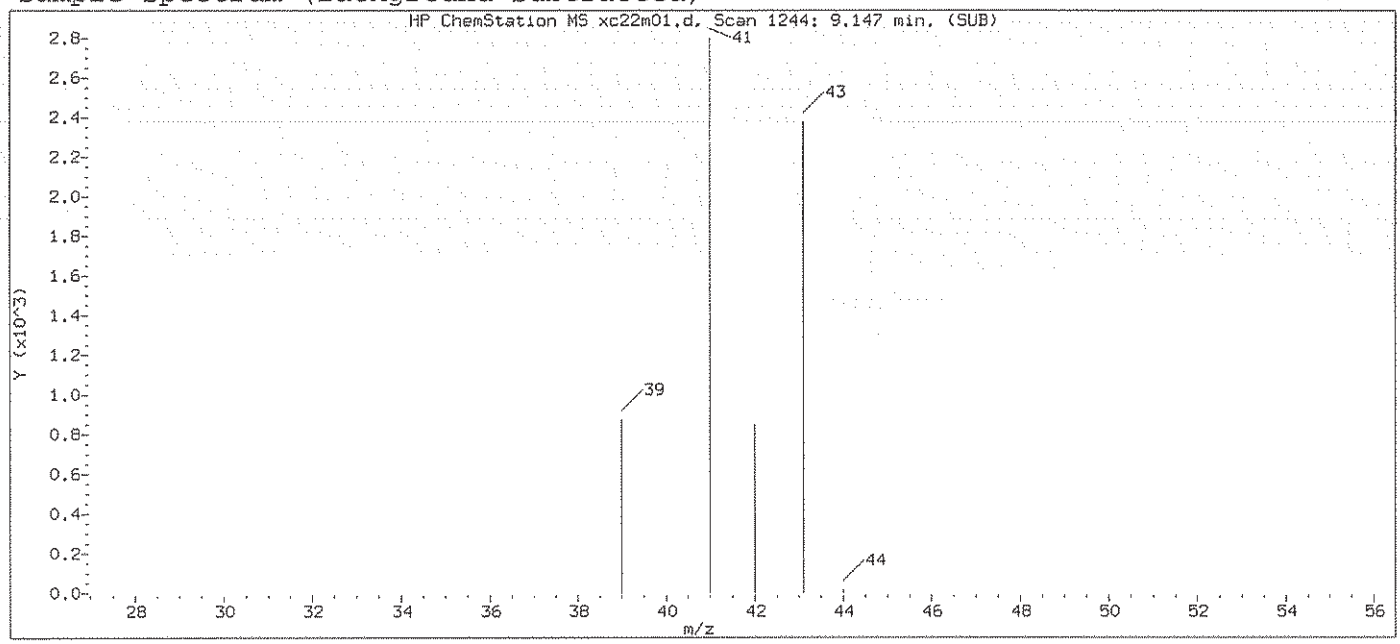
Compound Number : 84
Compound Name : 2-Nitropropane
Scan Number : 1244
Retention Time (minutes): 9.147
Quant Ion : 41.00
Area (flag) : 6866M
On-Column Amount (ng) : 1.7580
Integration start scan : 1236 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

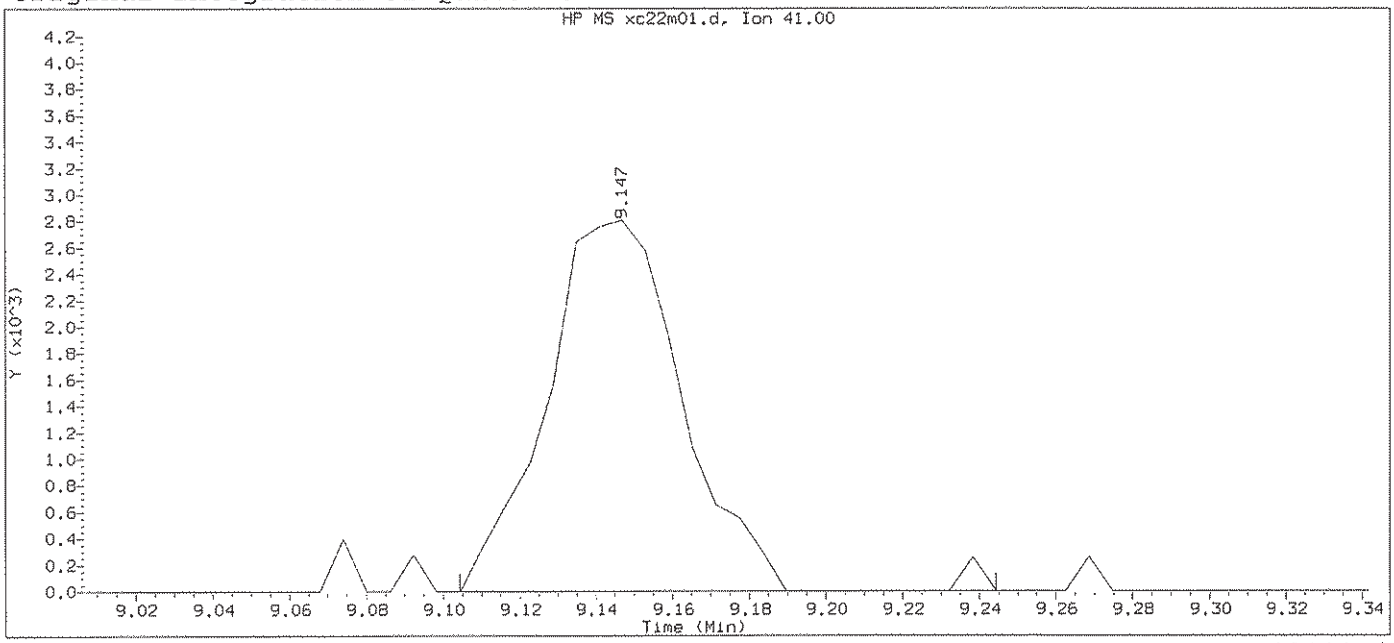
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

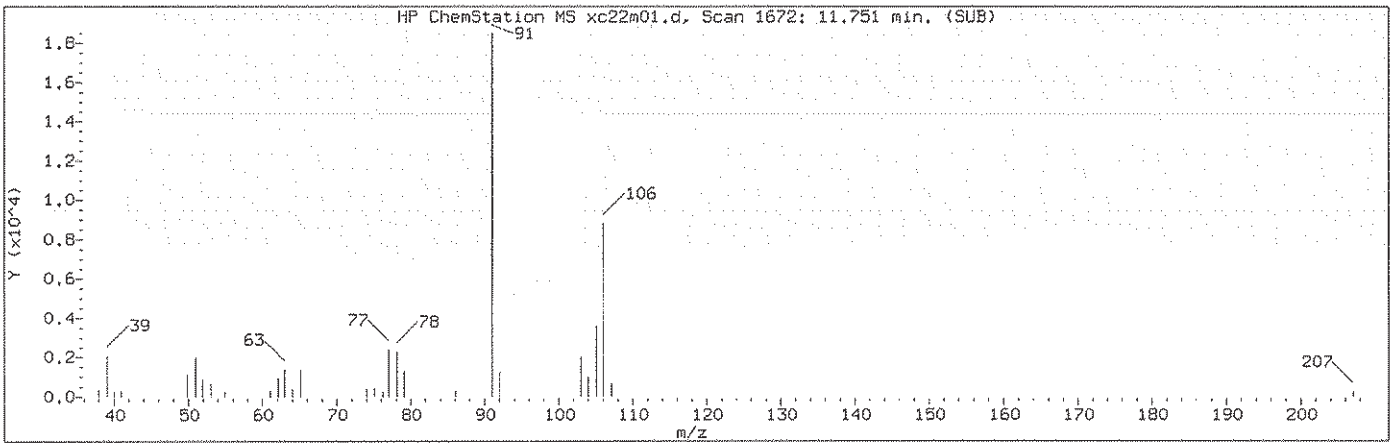
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

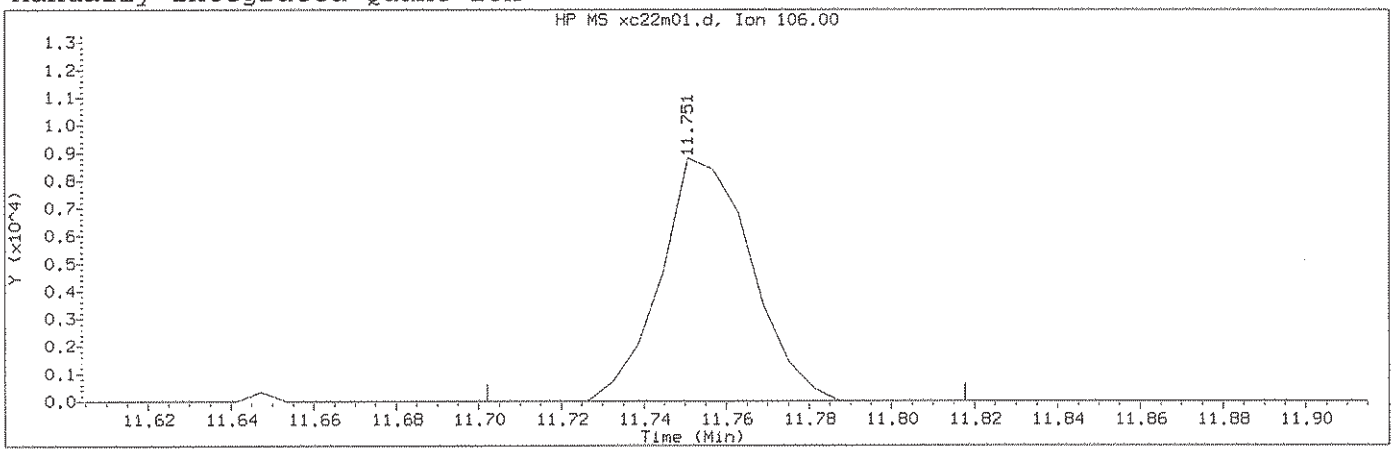
Compound Number	: 84		
Compound Name	: 2-Nitropropane		
Scan Number	: 1244		
Retention Time (minutes)	: 9.147		
Quant Ion	: 41.00		
Area	: 6960		
On-column Amount (ng)	: 1.7820		
Integration start scan	: 1236	Integration stop scan:	1259
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

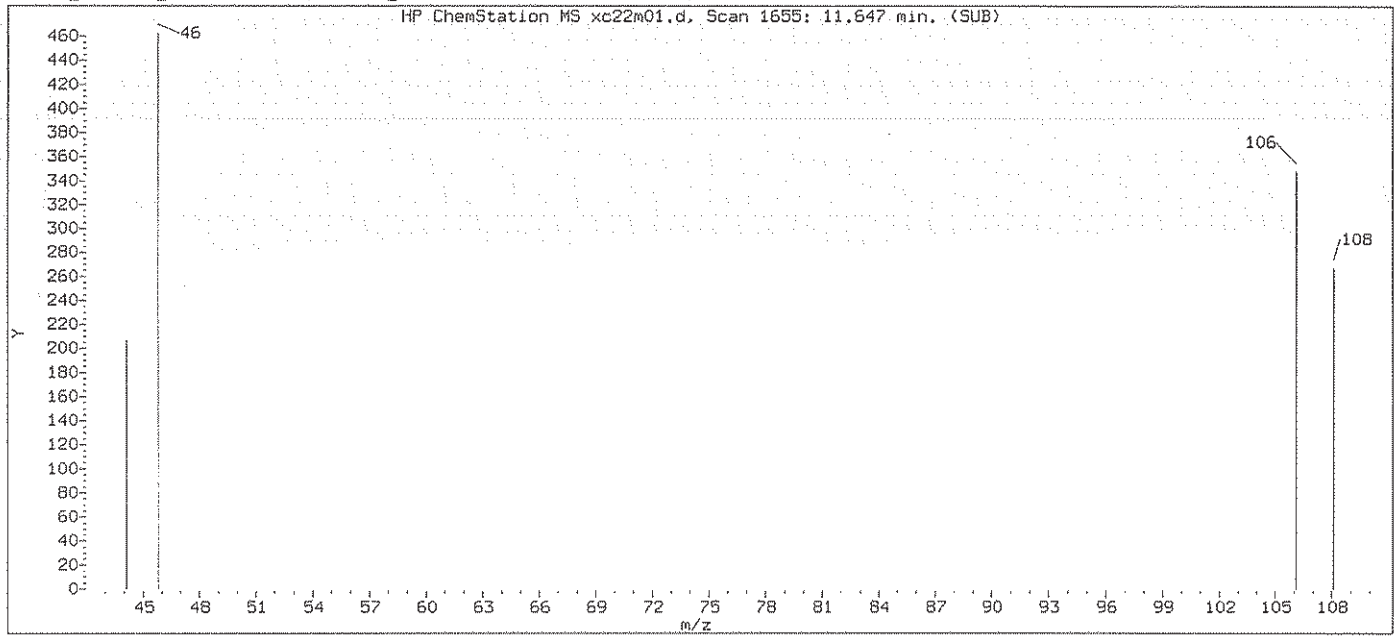
Compound Number : 106
Compound Name : o-Xylene
Scan Number : 1672
Retention Time (minutes): 11.751
Quant Ion : 106.00
Area (flag) : 13450M
On-Column Amount (ng) : 0.6319
Integration start scan : 1663 Integration stop scan: 1682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

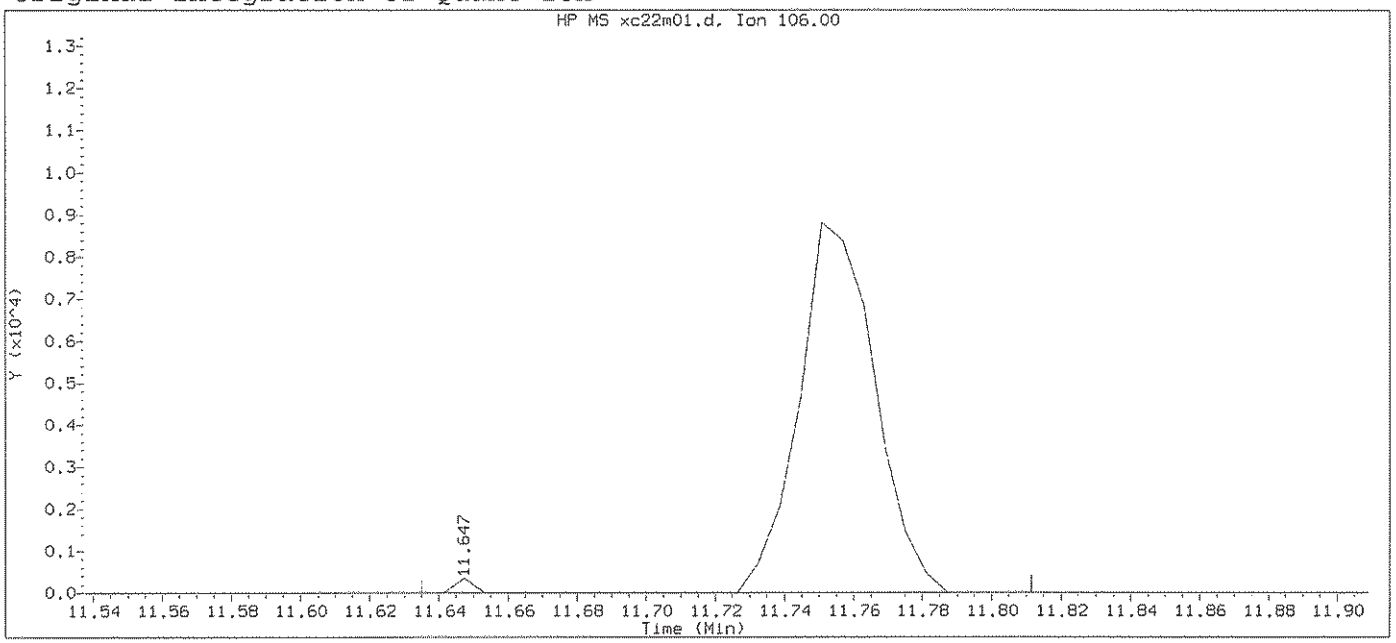
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

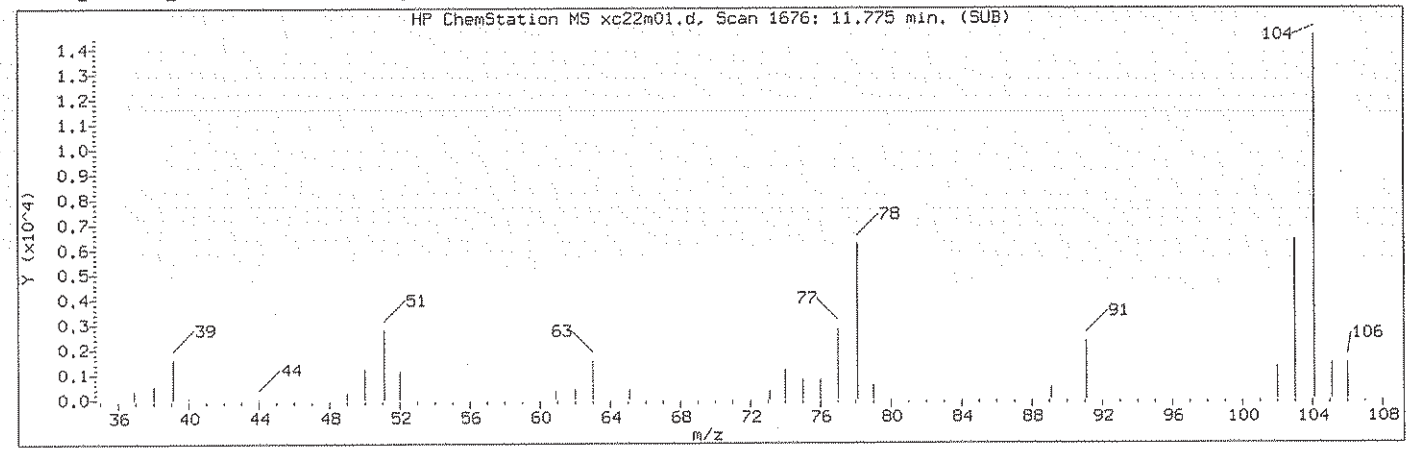
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

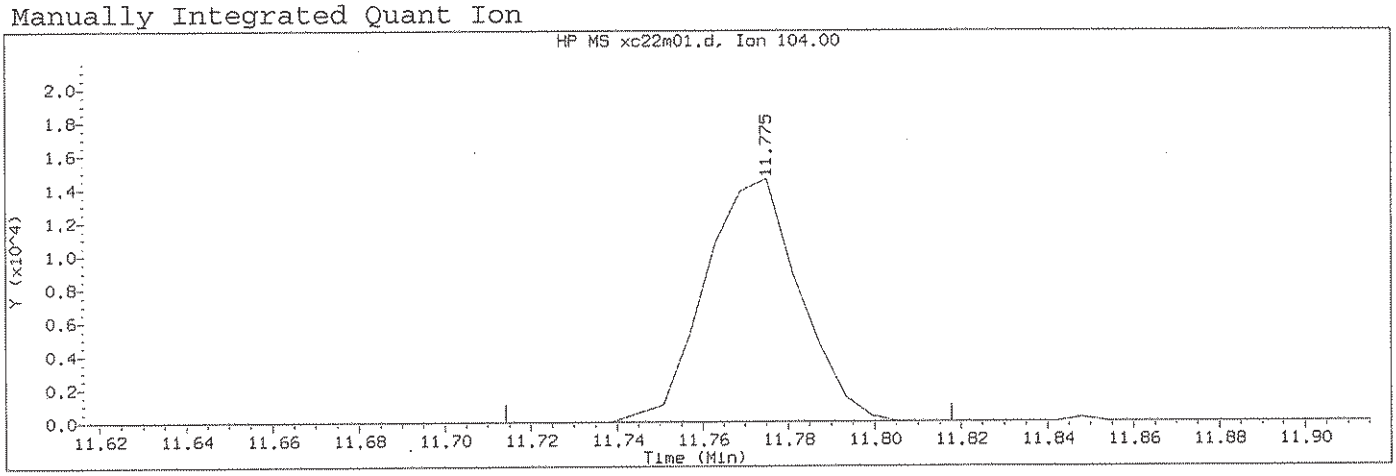
Compound Number	: 106		
Compound Name	: o-Xylene		
Scan Number	: 1655		
Retention Time (minutes)	: 11.647		
Quant Ion	: 106.00		
Area	: 13577		
On-column Amount (ng)	: 0.6379		
Integration start scan	: 1652	Integration stop scan:	1681
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

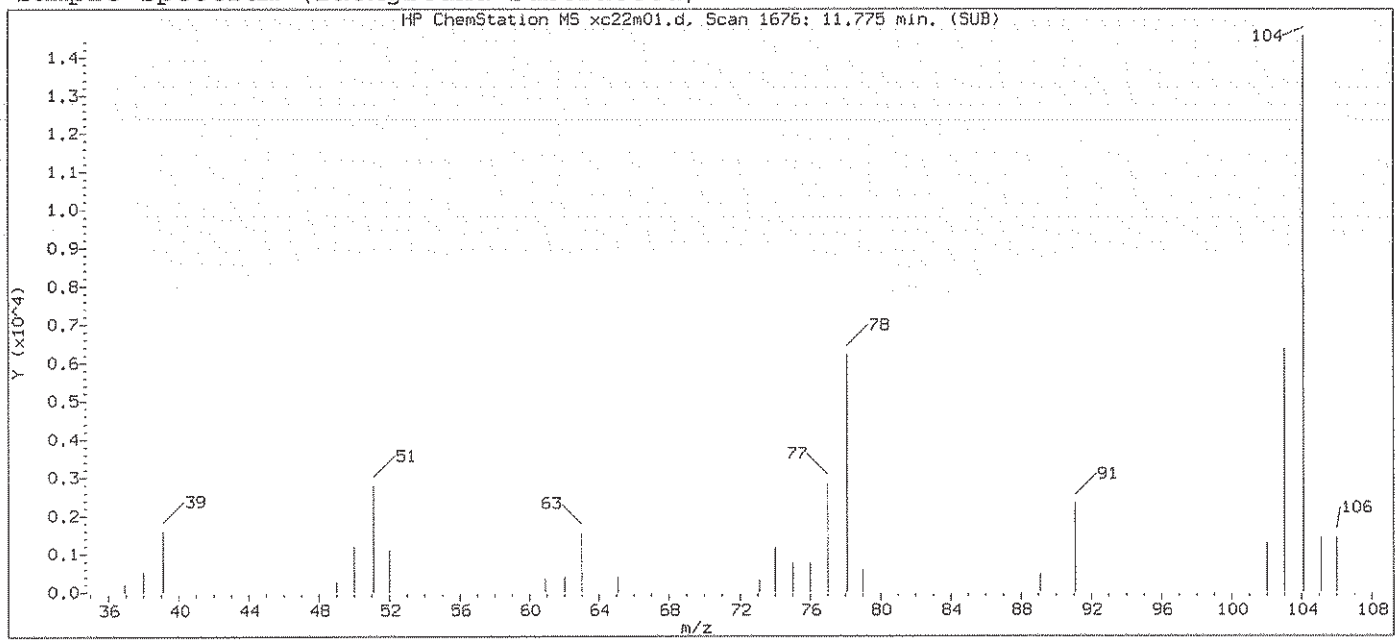
Compound Number	: 108		
Compound Name	: Styrene		
Scan Number	: 1676		
Retention Time (minutes)	: 11.775		
Quant Ion	: 104.00		
Area (flag)	: 22348M		
On-Column Amount (ng)	: 0.6204		
Integration start scan	: 1665	Integration stop scan:	1682
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

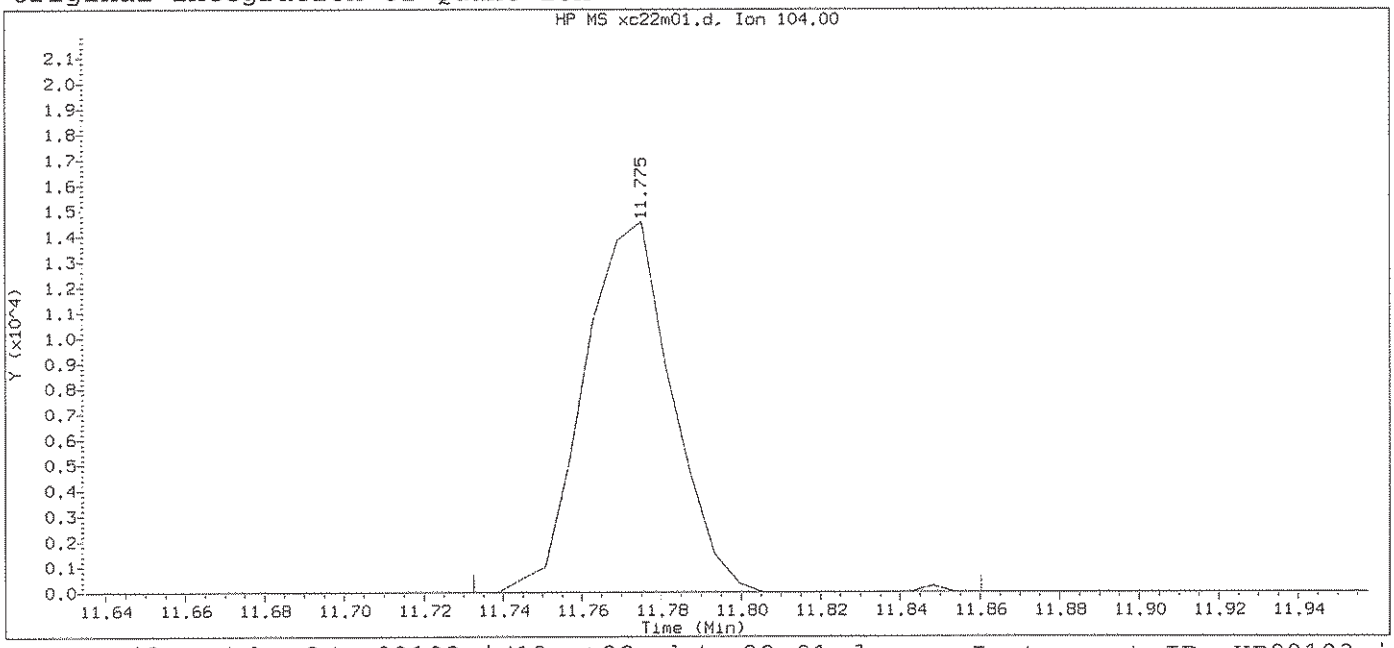
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

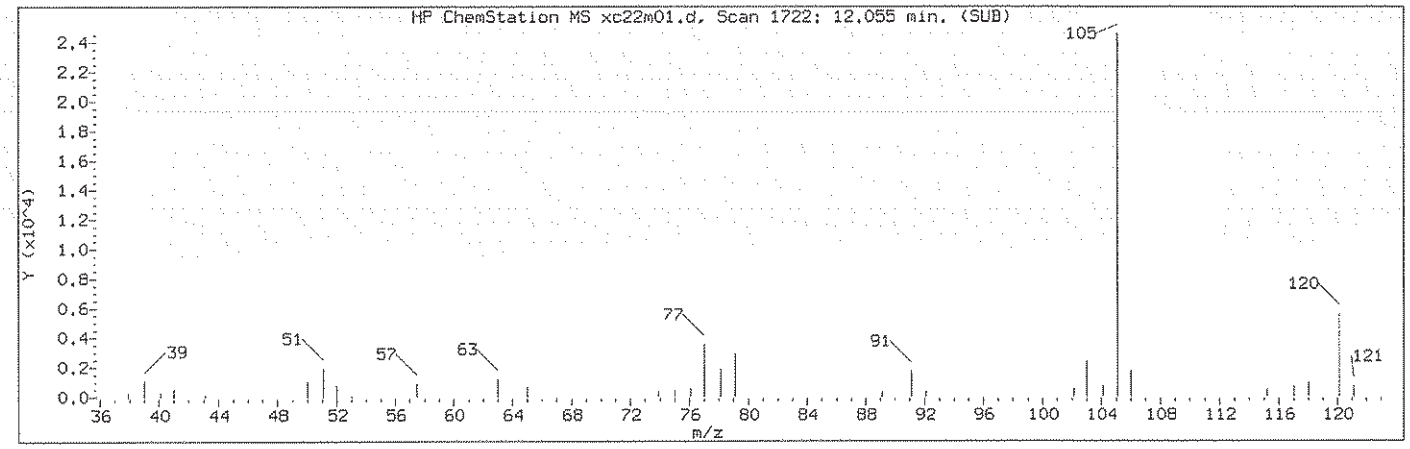
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

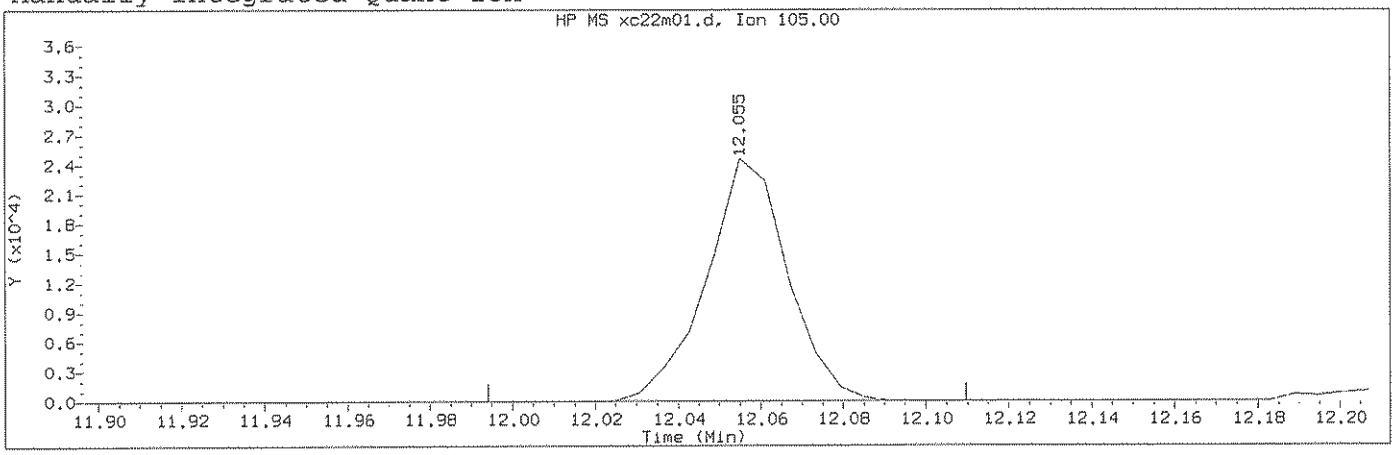
Compound Number	: 108		
Compound Name	: Styrene		
Scan Number	: 1676		
Retention Time (minutes)	: 11.775		
Quant Ion	: 104.00		
Area	: 22440		
On-column Amount (ng)	: 0.6229		
Integration start scan	: 1668	Integration stop scan:	1689
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

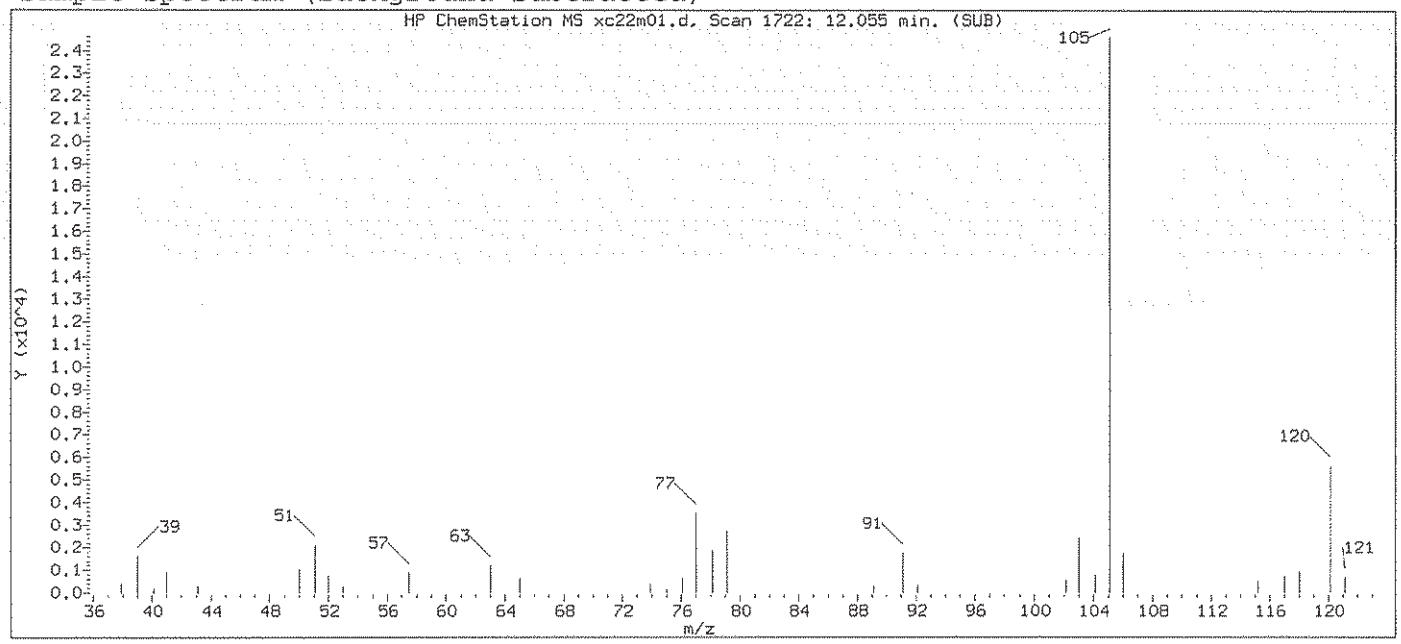
Compound Number : 110
Compound Name : Isopropylbenzene
Scan Number : 1722
Retention Time (minutes): 12.055
Quant Ion : 105.00
Area (flag) : 33402M
On-Column Amount (ng) : 0.6145
Integration start scan : 1711 Integration stop scan: 1730
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

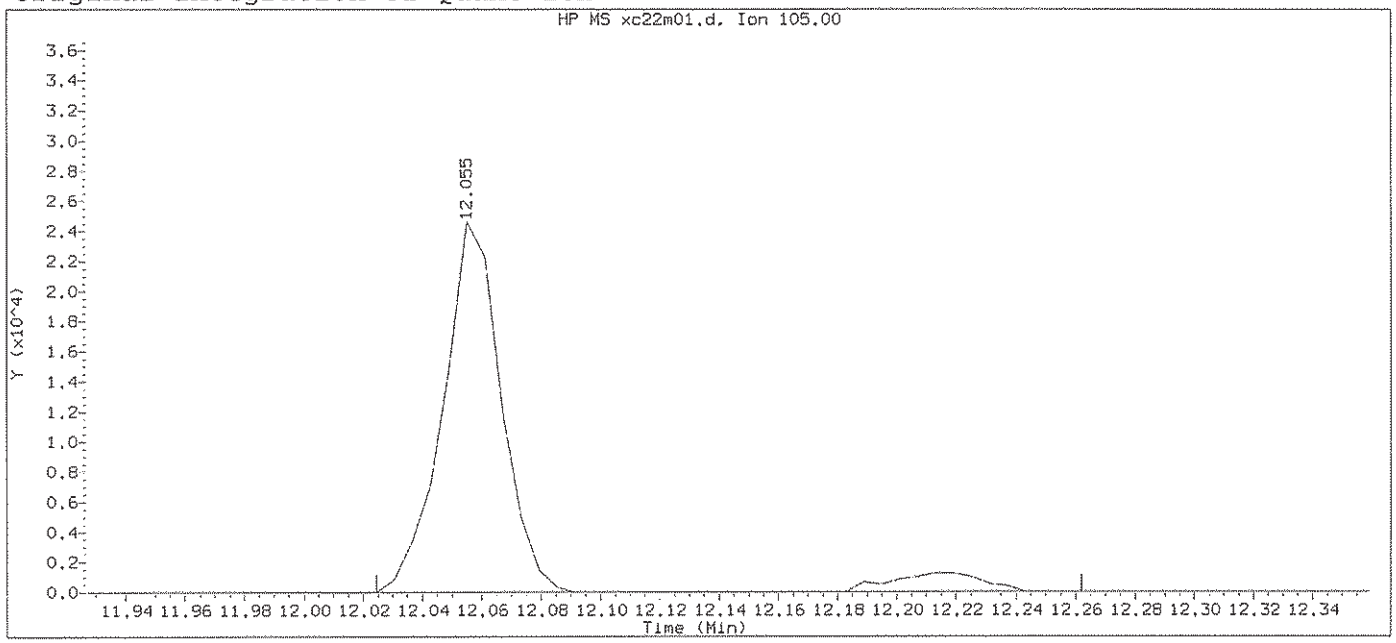
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

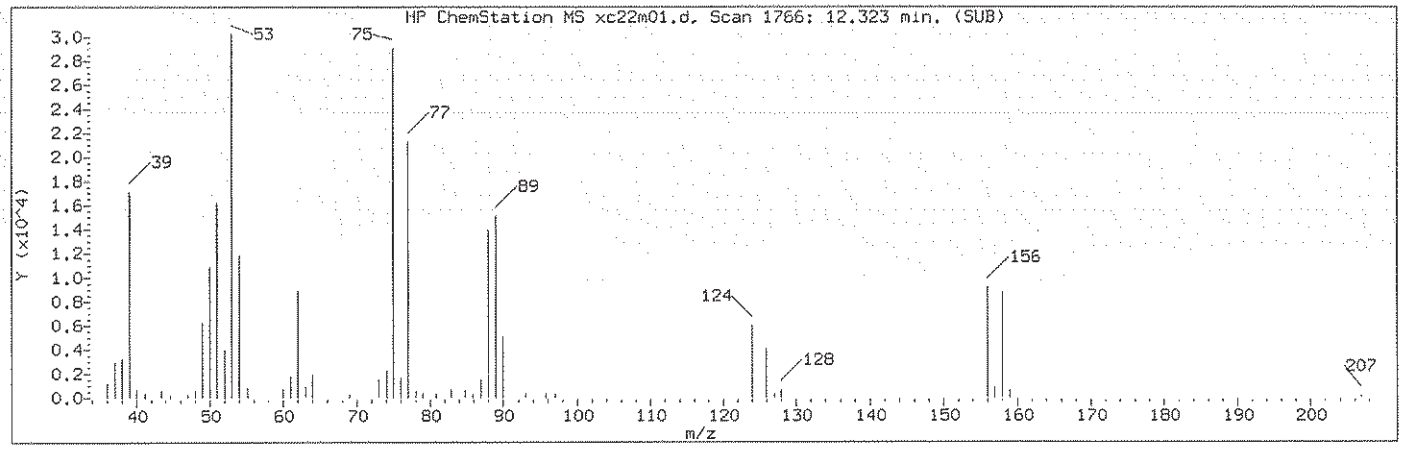
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

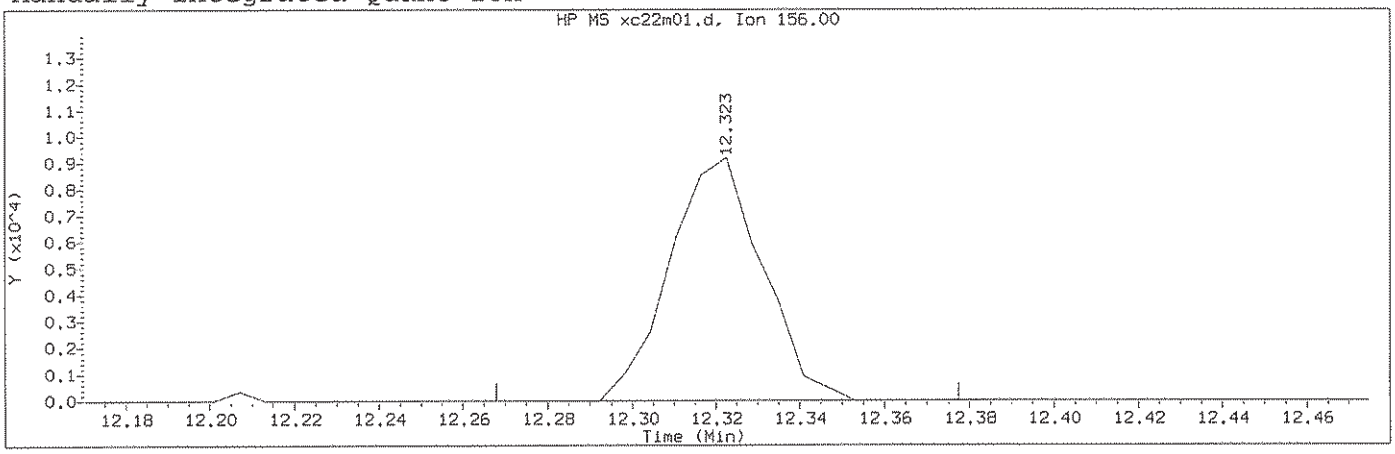
Compound Number : 110
Compound Name : Isopropylbenzene
Scan Number : 1722
Retention Time (minutes): 12.055
Quant Ion : 105.00
Area : 36107
On-column Amount (ng) : 0.6643
Integration start scan : 1716 Integration stop scan: 1755
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

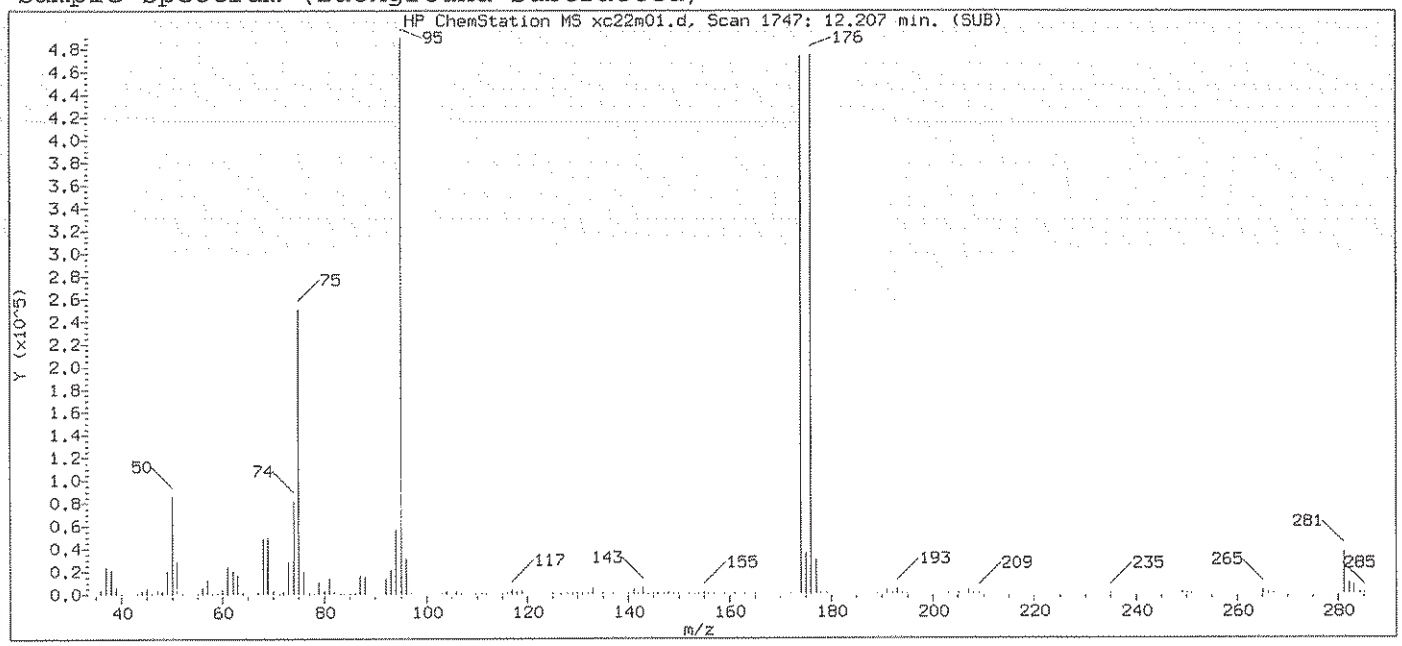
Compound Number : 116
Compound Name : Bromobenzene
Scan Number : 1766
Retention Time (minutes): 12.323
Quant Ion : 156.00
Area (flag) : 14125M
On-Column Amount (ng) : 0.9041
Integration start scan : 1756 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

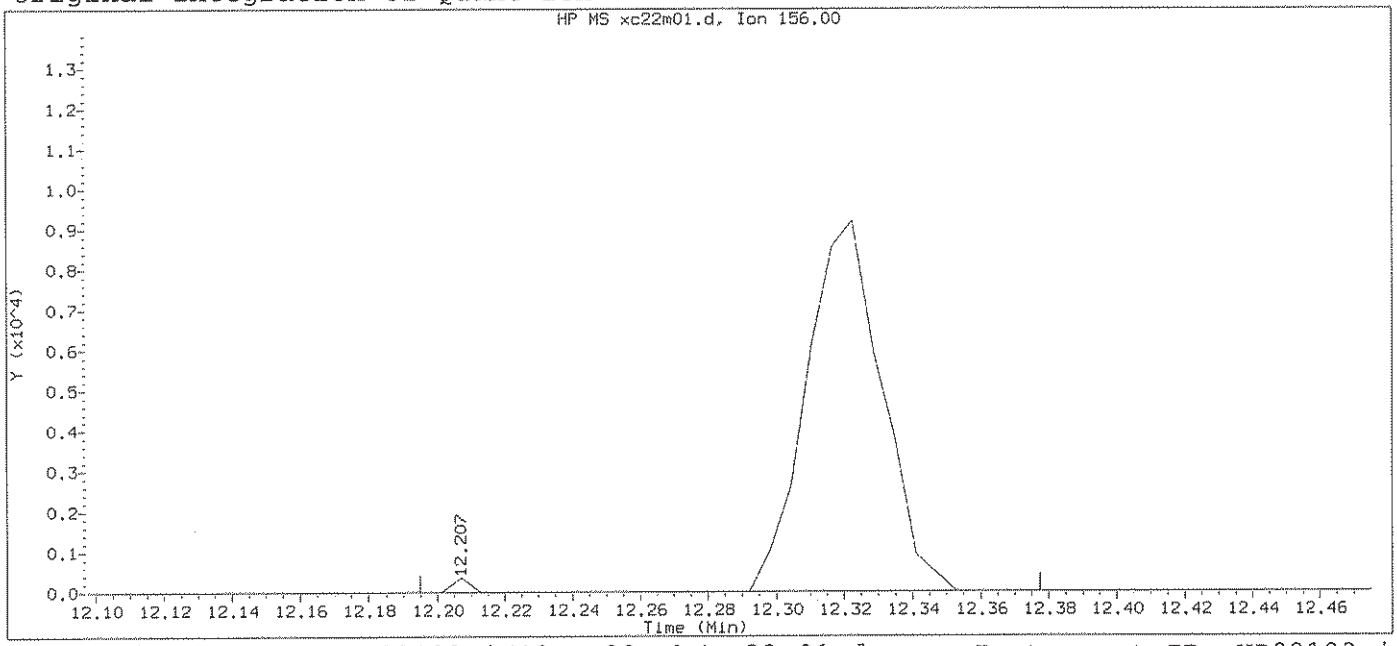
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: CTorres 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

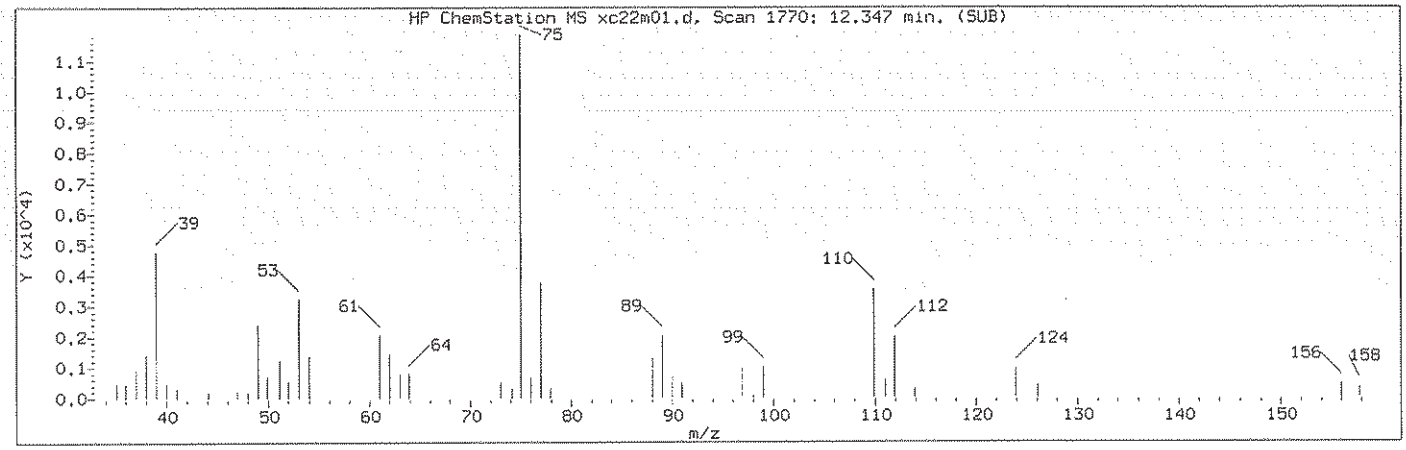
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

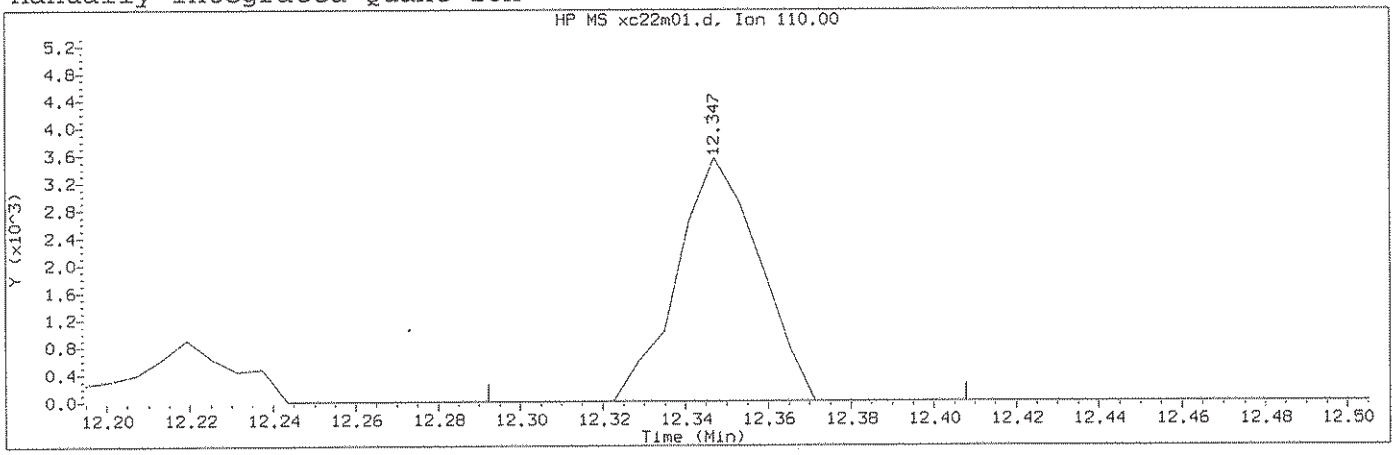
Compound Number	: 116		
Compound Name	: Bromobenzene		
Scan Number	: 1747		
Retention Time (minutes)	: 12.207		
Quant Ion	: 156.00		
Area	: 14257		
On-column Amount (ng)	: 0.8977		
Integration start scan	: 1744	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

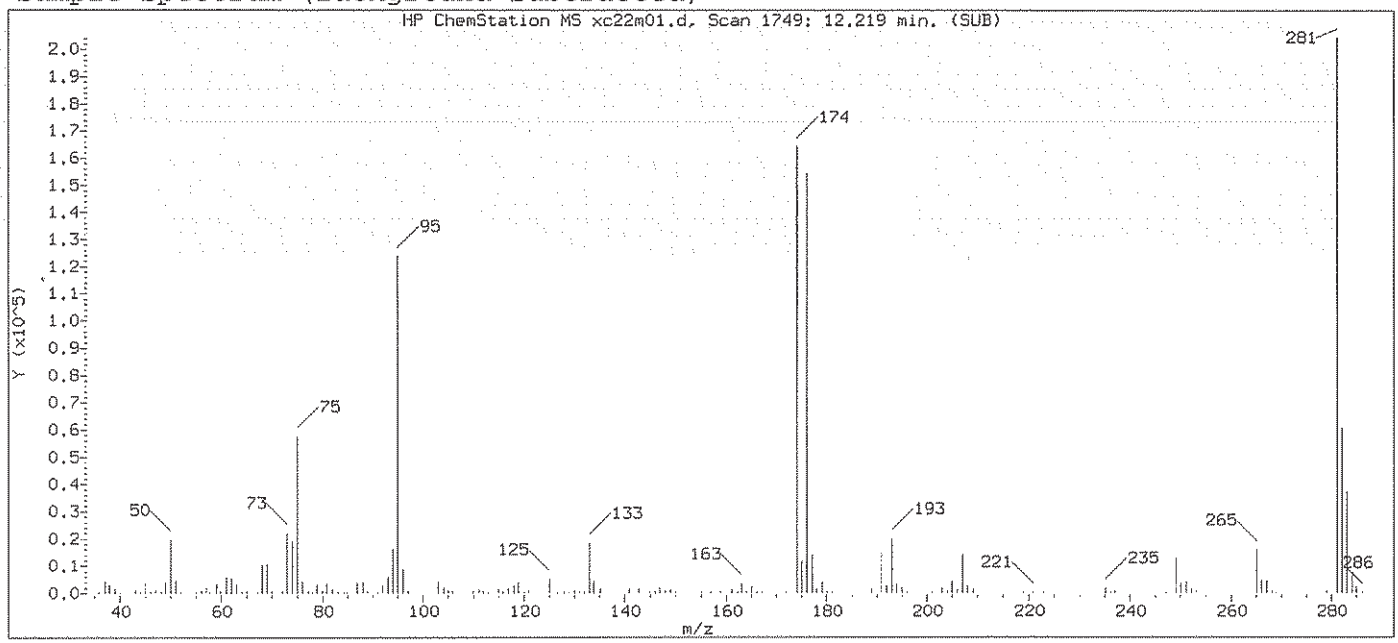
Compound Number	: 118		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1770		
Retention Time (minutes)	: 12.347		
Quant Ion	: 110.00		
Area (flag)	: 4884M		
On-Column Amount (ng)	: 0.9970		
Integration start scan	: 1760	Integration stop scan:	1779
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

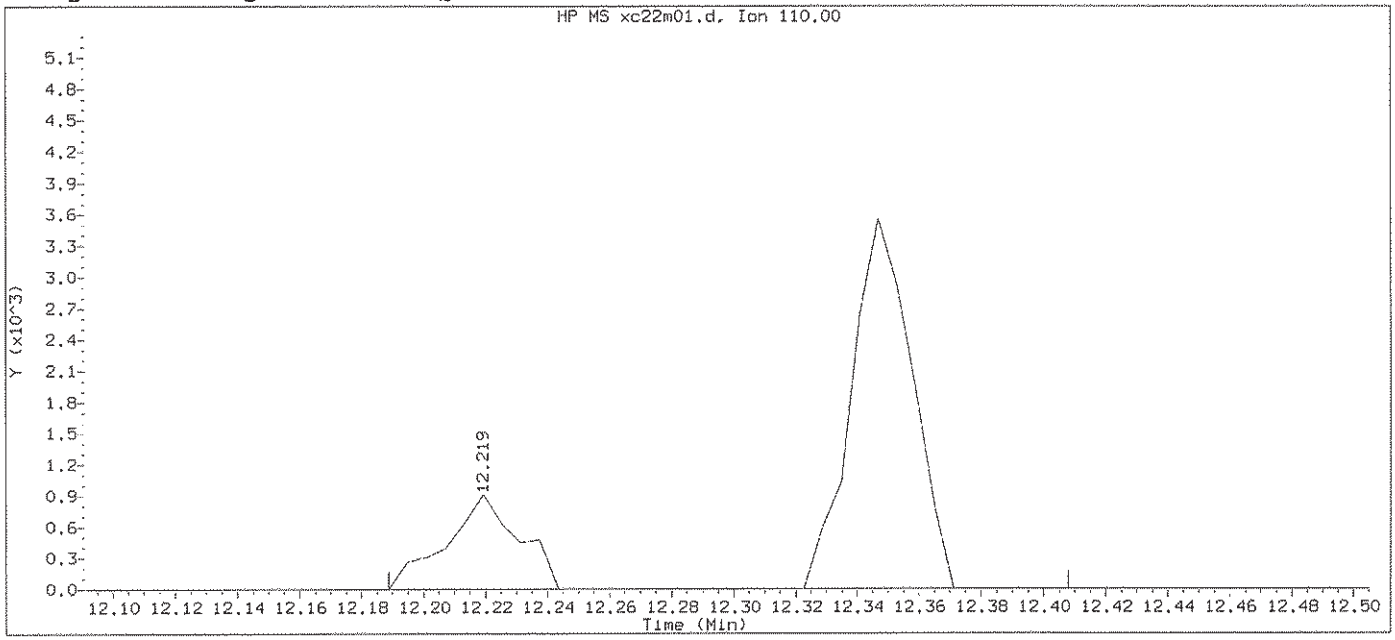
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

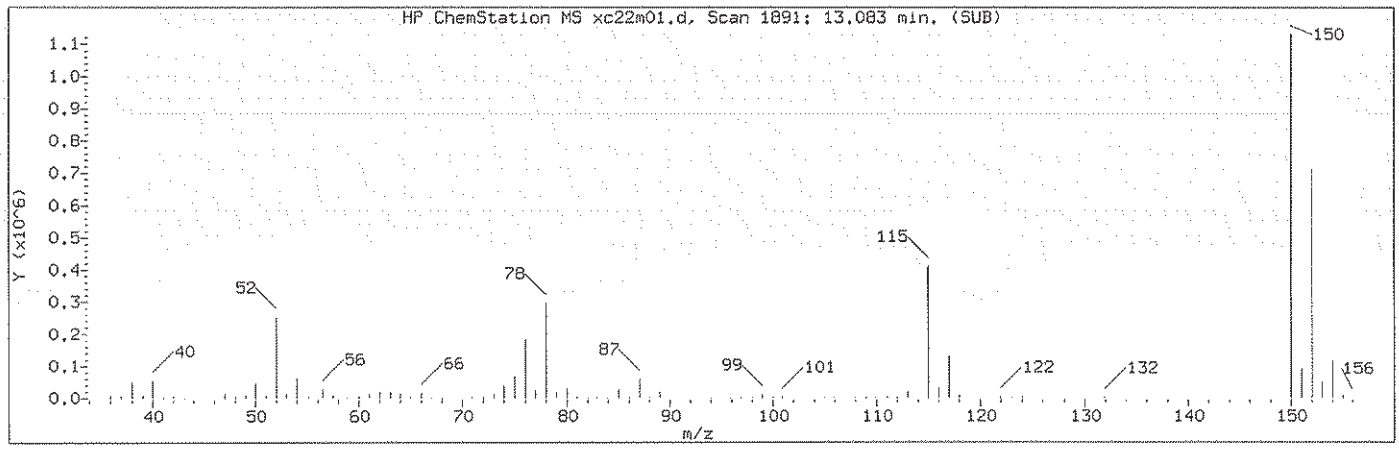
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

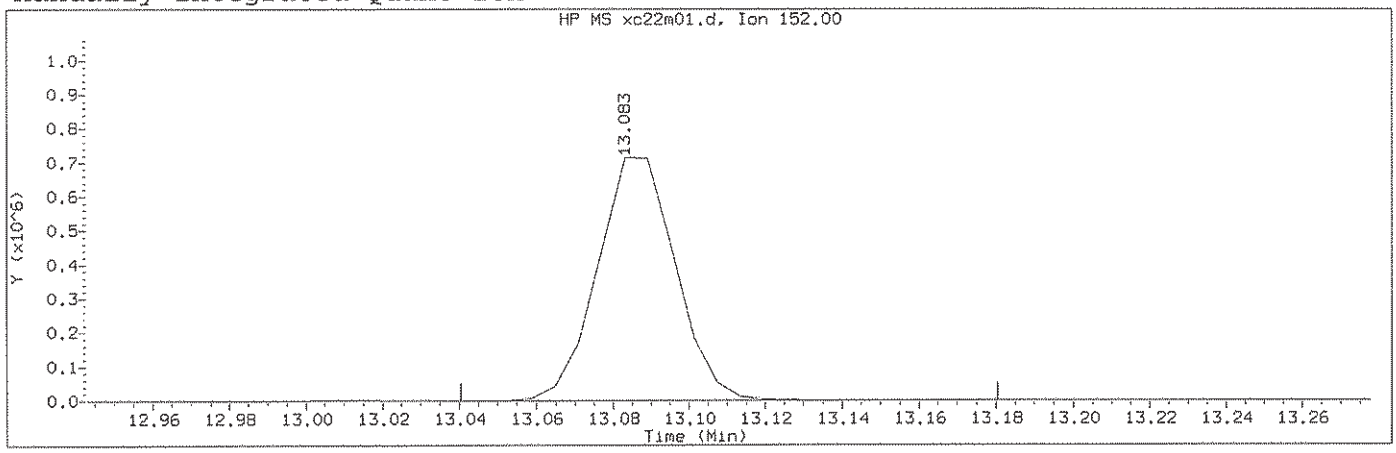
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 110.00
Area : 6358
On-column Amount (ng) : 1.2766
Integration start scan : 1743 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

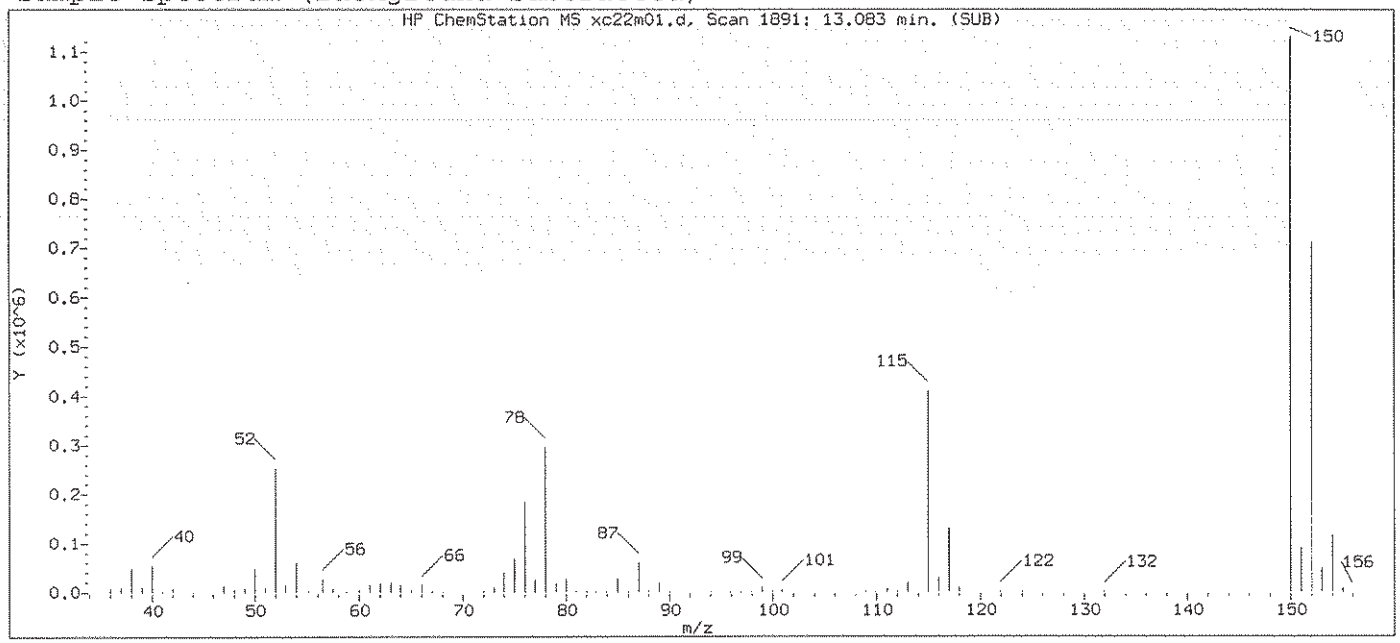
Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area (flag) : 1024041M
On-Column Amount (ng) : 50.0000
Integration start scan : 1883 Integration stop scan: 1906
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

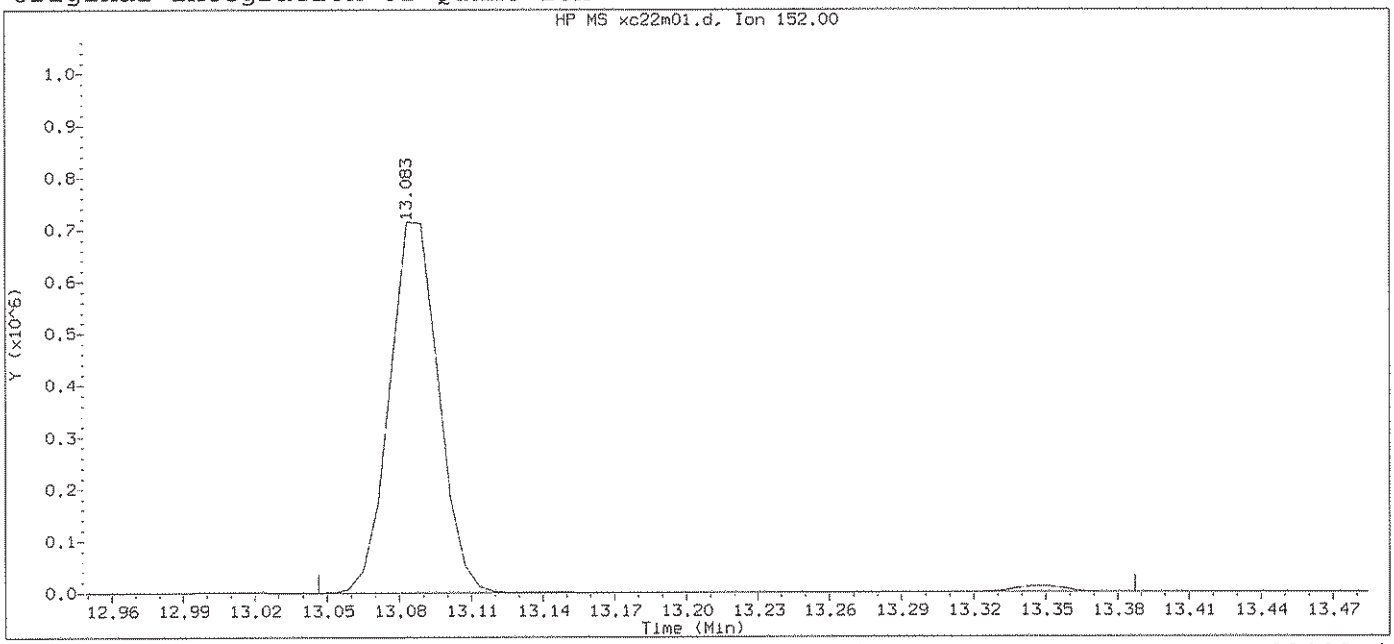
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10.22.13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

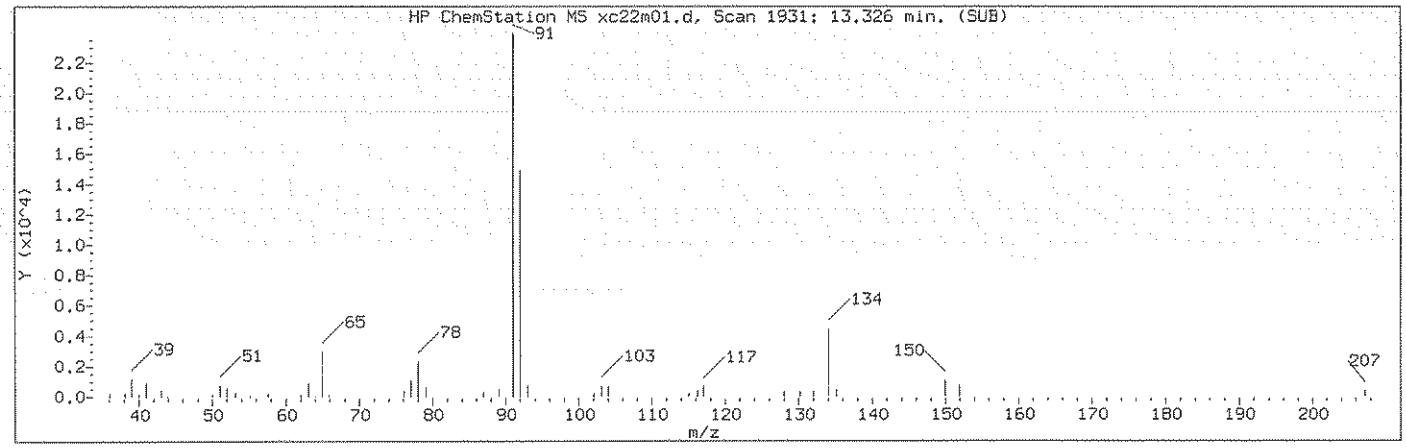
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

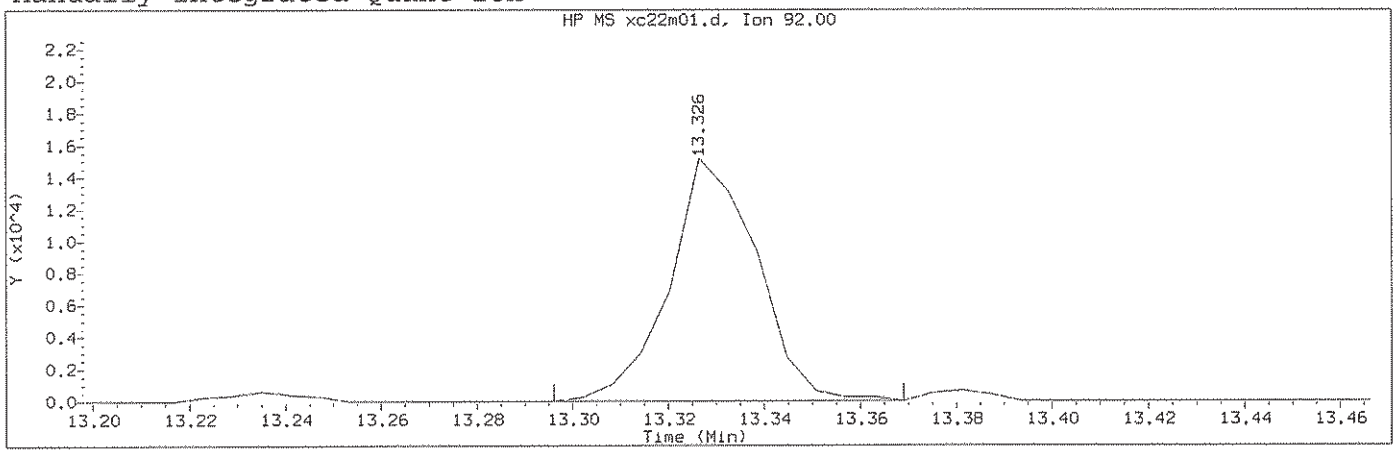
Compound Number	: 135		
Compound Name	: 1,4-Dichlorobenzene-d4		
Scan Number	: 1891		
Retention Time (minutes)	: 13.083		
Quant Ion	: 152.00		
Area	: 1040959		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 1884	Integration stop scan:	1940
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

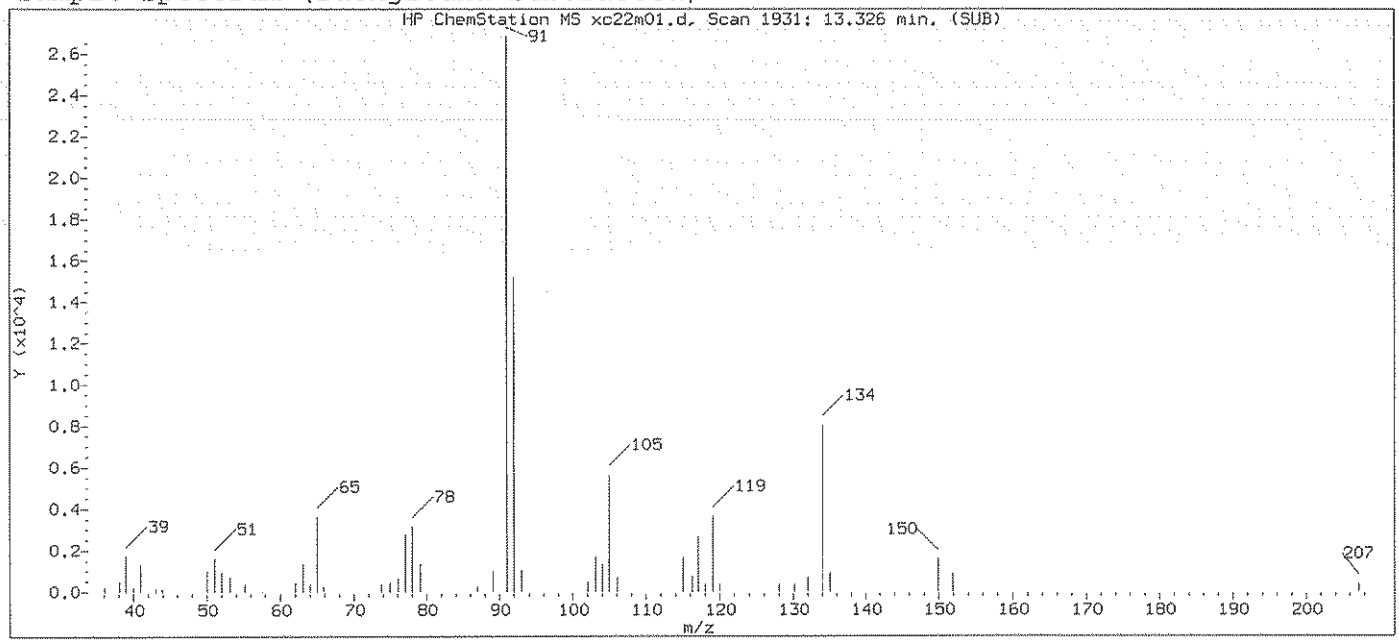
Compound Number : 141
Compound Name : n-Butylbenzene
Scan Number : 1931
Retention Time (minutes): 13.326
Quant Ion : 92.00
Area (flag) : 19249M
On-Column Amount (ng) : 0.6929
Integration start scan : 1925 Integration stop scan: 1937
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

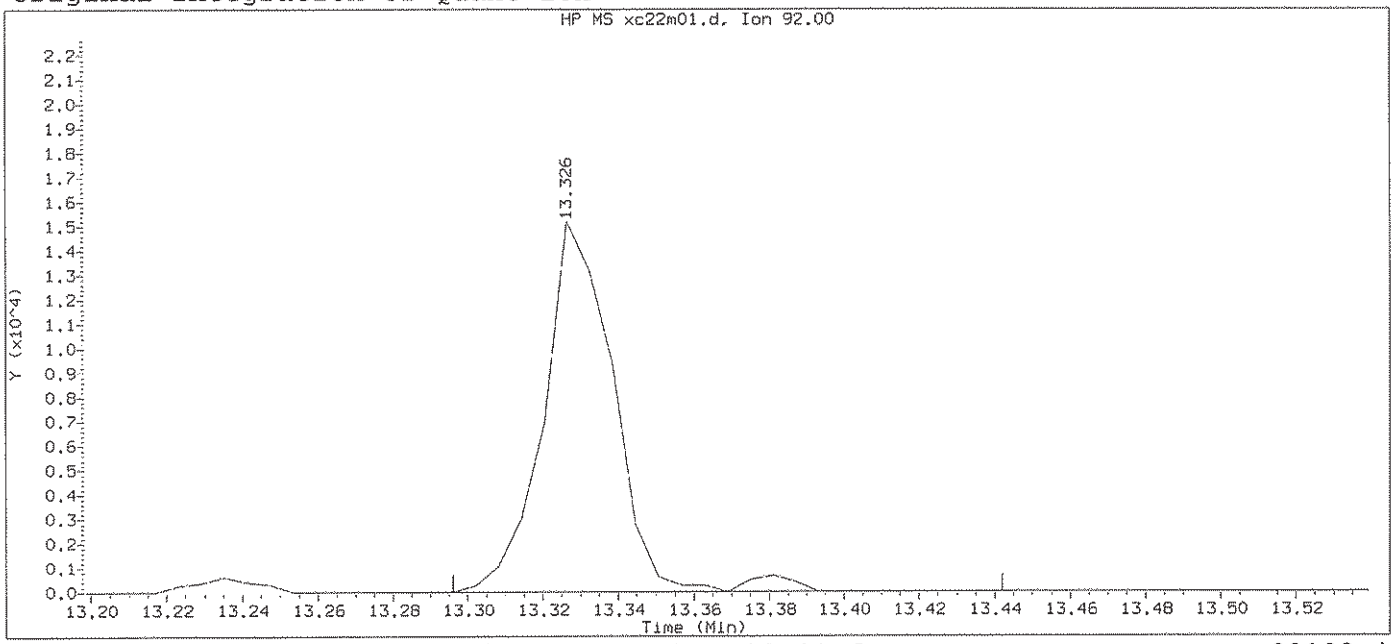
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

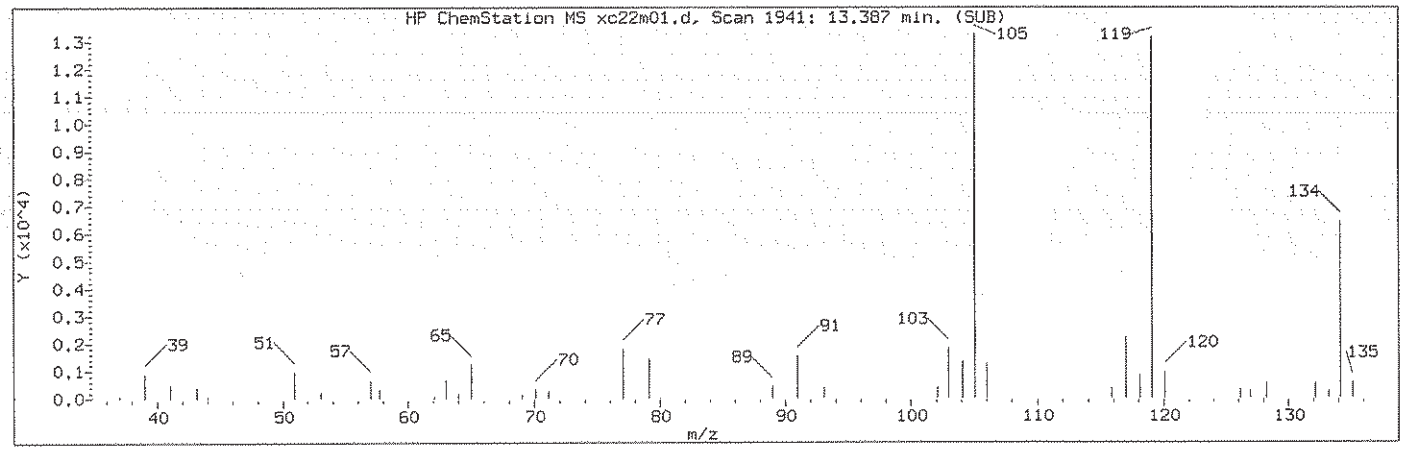
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

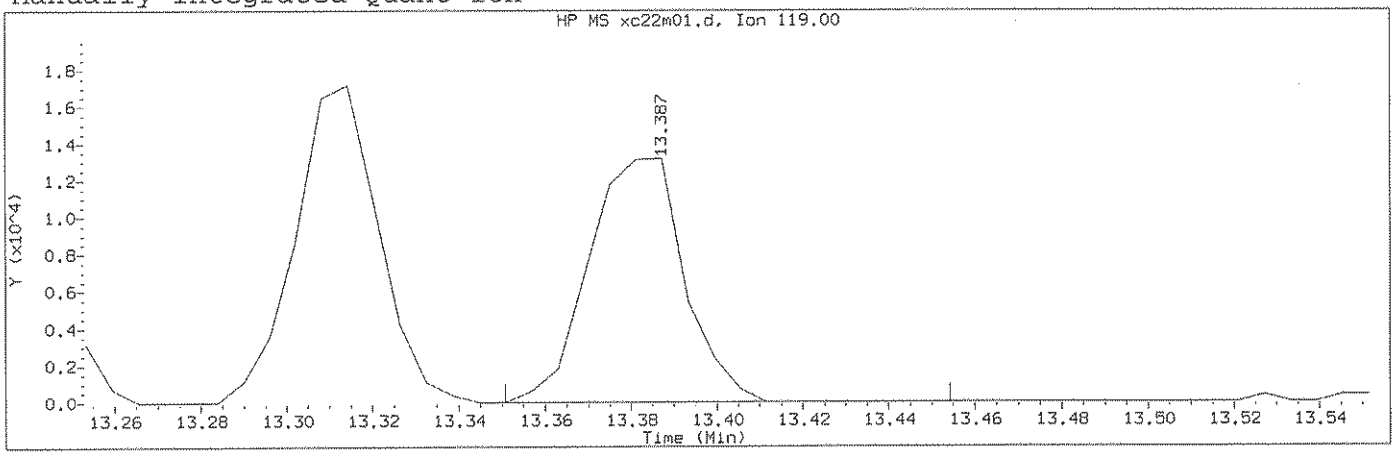
Compound Number	: 141		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.326		
Quant Ion	: 92.00		
Area	: 19826		
On-column Amount (ng)	: 0.7021		
Integration start scan	: 1925	Integration stop scan:	1949
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 05:02 cgt03258

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

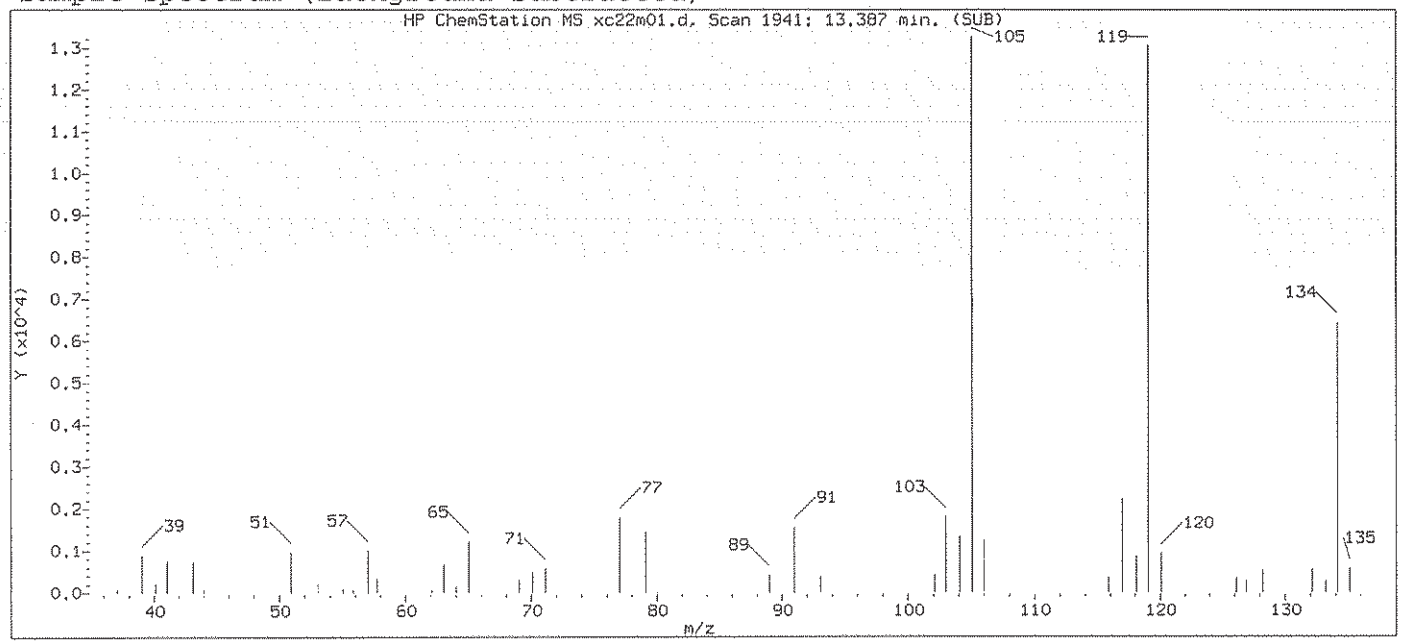
Compound Number	:	143
Compound Name	:	1,2-Diethylbenzene
Scan Number	:	1941
Retention Time (minutes)	:	13.387
Quant Ion	:	119.00
Area (flag)	:	20395M
On-Column Amount (ng)	:	0.7137
Integration start scan	:	1934 Integration stop scan: 1951
Y at integration start	:	0 Y at integration end: 0

Reason for manual integration: improper integration

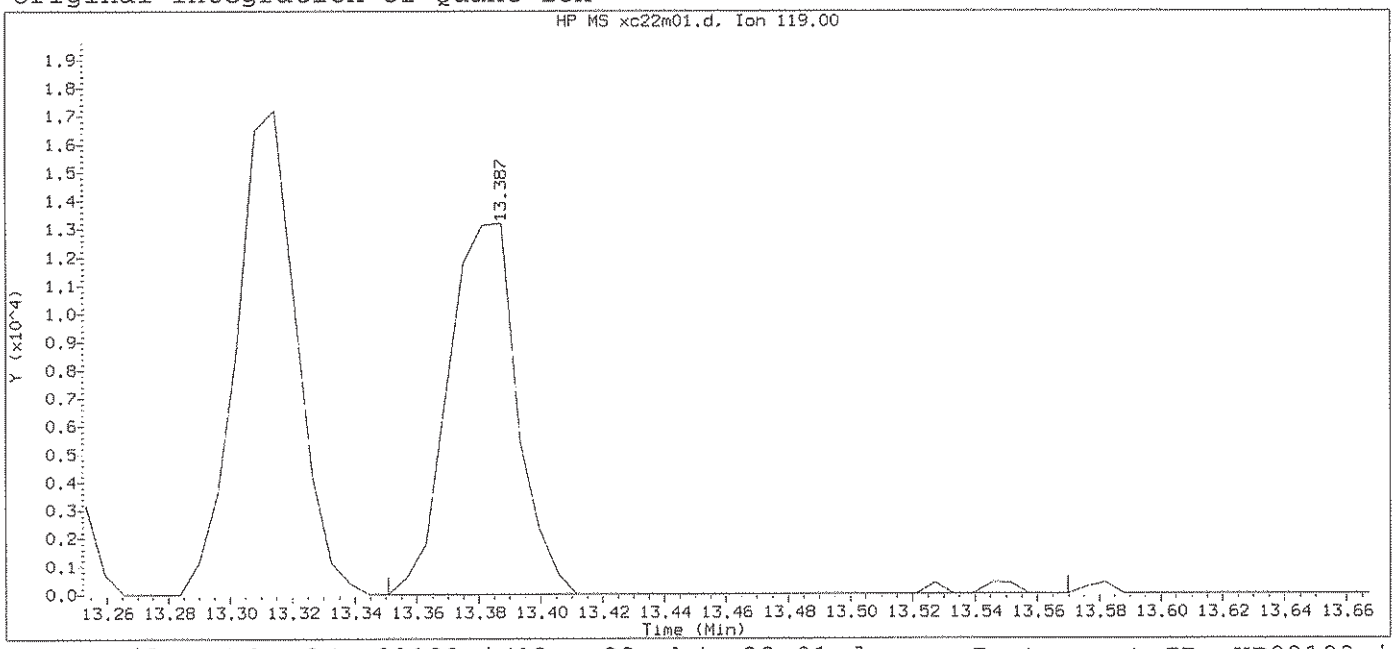
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: [signature] 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



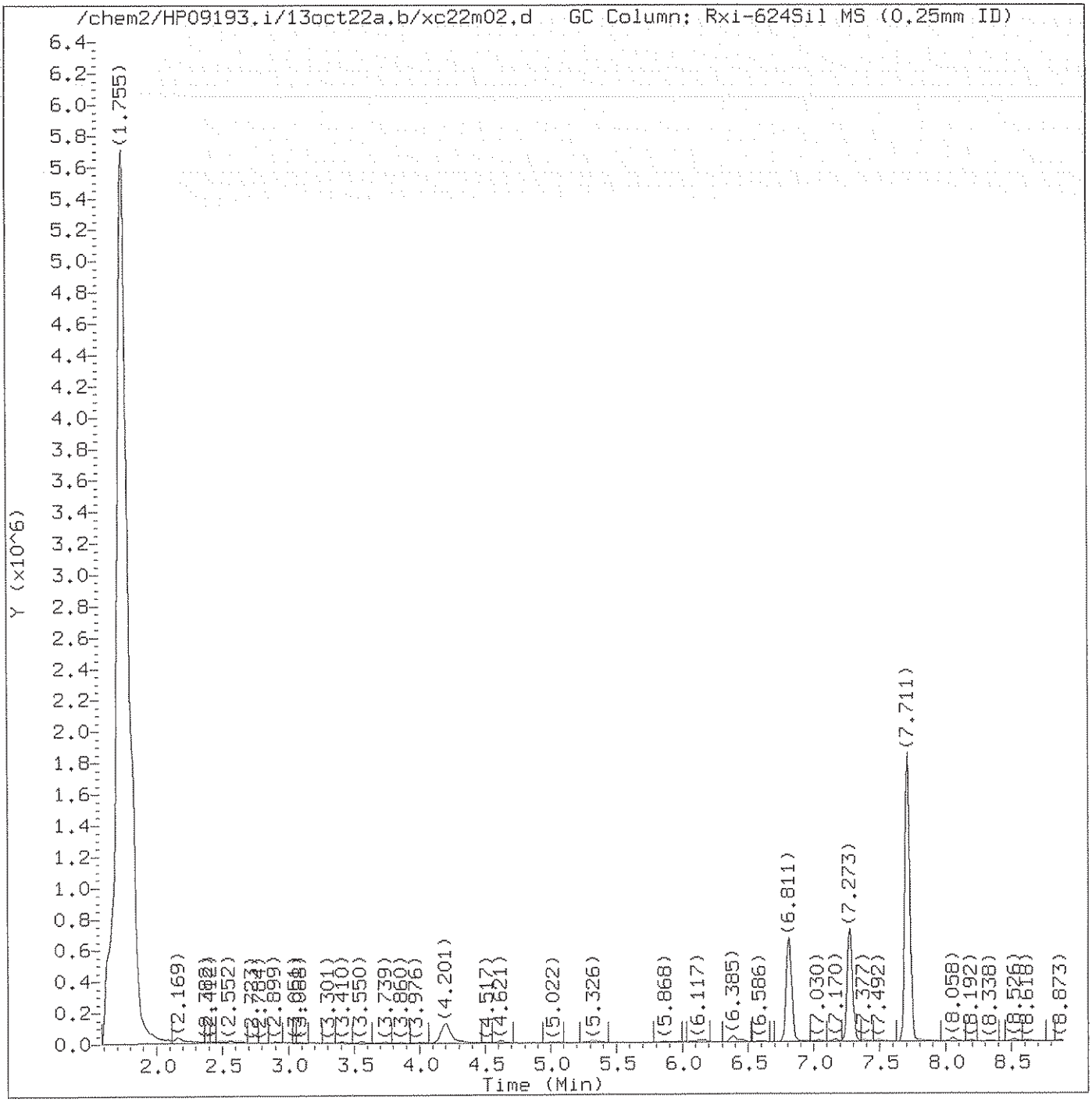
Data File: /chem2/HP09193.i/13oct22a.b/xc22m01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:33 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:37
Date, time and analyst ID of latest file update: 22-Oct-2013 04:53 Automation

Sample Name: VSTD1.0 Lab Sample ID: 1PPBMDL

Compound Number	: 143		
Compound Name	: 1,2-Diethylbenzene		
Scan Number	: 1941		
Retention Time (minutes)	: 13.387		
Quant Ion	: 119.00		
Area	: 20815		
On-column Amount (ng)	: 0.7166		
Integration start scan	: 1934	Integration stop scan:	1970
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:18.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

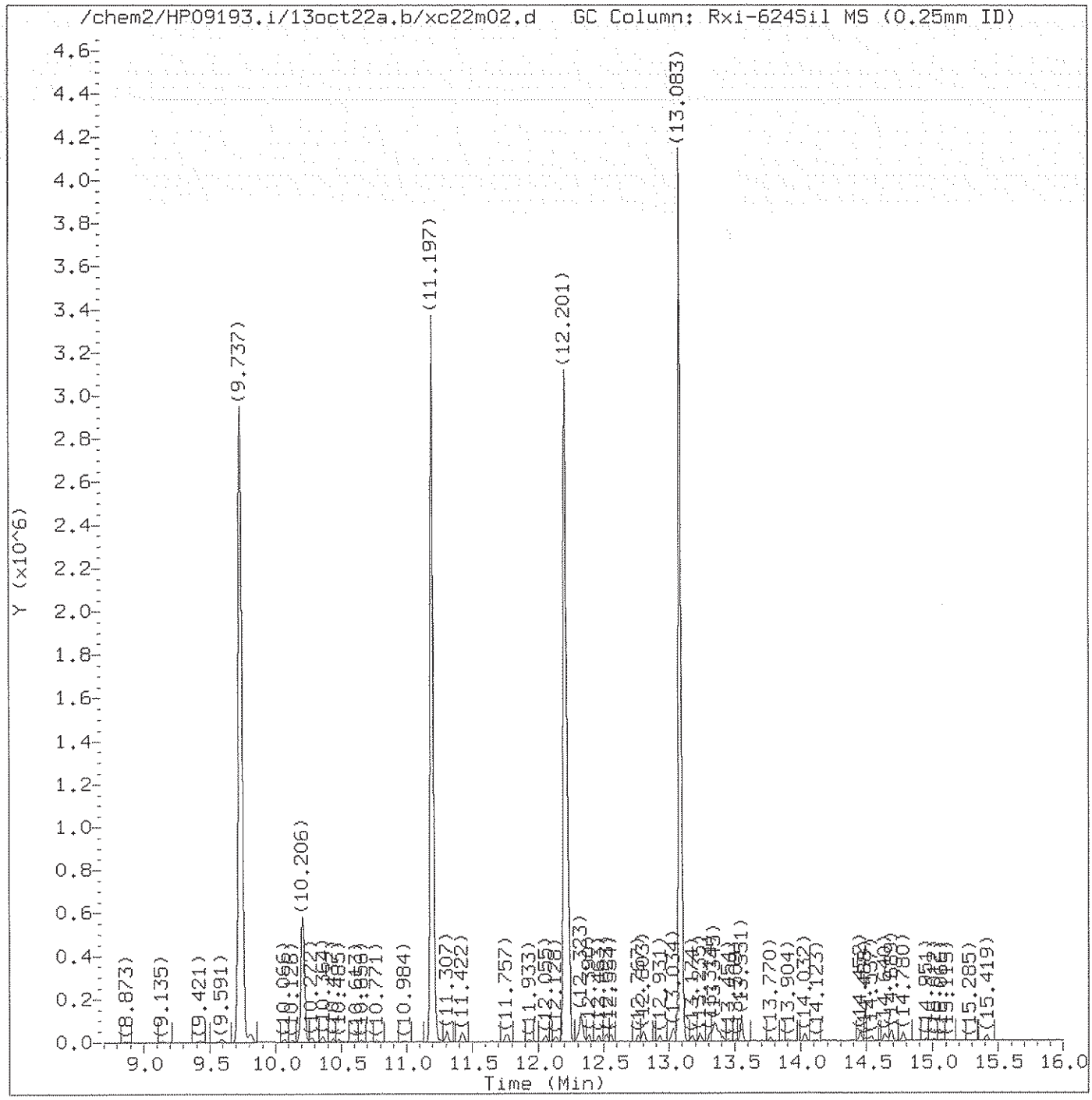
Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	6870	0.393
4) Chloromethane	(2)	2.084	50	6225MA	0.856
5) Vinyl Chloride	(2)	2.230	62	5696	0.416
9) Bromomethane	(2)	2.558	94	4623	0.440
10) Chloroethane	(2)	2.668	64	4170	0.513
11) Dichlorofluoromethane	(2)	2.899	67	8828	0.419
13) Trichlorofluoromethane	(2)	2.966	101	7825	0.376
15) Ethanol	(1)	3.088	45	13553	89.678
17) Freon 123a	(2)	3.301	67	5697	0.463
18) Acrolein	(1)	3.410	56	13361	5.415
19) 1,1-Dichloroethene	(2)	3.550	96	3079	0.340
20) Acetone	(2)	3.574	58	3412	2.952
22) Freon 113	(2)	3.574	101	2451	0.256
23) 2-Propanol	(1)	3.714	45	10964	11.740
24) Methyl Iodide	(2)	3.739	142	6608	0.354
25) Carbon Disulfide	(2)	3.848	76	14353M	0.440
27) Methyl Acetate	(2)	3.982	43	5432	0.627
29) Allyl Chloride	(2)	4.031	41	6252M	0.377
30)*t-Butyl alcohol-d10	(1)	4.201	65	318061	250.000
31) Methylene Chloride	(2)	4.201	84	6760	0.625
32) t-Butyl alcohol	(1)	4.311	59	14681M	9.725
33) Acrylonitrile	(2)	4.517	53	1944	0.436
34) Methyl Tertiary Butyl Ether	(2)	4.603	73	11329	0.380
35) trans-1,2-Dichloroethene	(2)	4.621	96	3495	0.331
38) n-Hexane	(2)	5.041	57	3040	0.231
40) 1,1-Dichloroethane	(2)	5.284	63	7354	0.368
41) di-Isopropyl ether	(2)	5.326	45	10664	0.322
42) 2-Chloro-1,3-butadiene	(2)	5.393	53	4501	0.255
44) Ethyl t-butyl ether	(2)	5.874	59	7721	0.327
45) 2-Butanone	(2)	6.075	43	7057	1.193
47) 1,2-Dichloroethene (Total)	(2)		96	7454	0.671
46) cis-1,2-Dichloroethene	(2)	6.123	96	3959	0.340
48) 2,2-Dichloropropane	(2)	6.130	77	5873	0.334
50) Propionitrile	(1)	6.172	54	16819	10.472
51) Methacrylonitrile	(2)	6.391	67	19198	3.996
52) Bromochloromethane	(2)	6.446	128	2645	0.414
53) Tetrahydrofuran	(1)	6.470	71	1427	0.905
54) Chloroform	(2)	6.586	83	7950	0.388

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	6.811	113	589856	50.768
57) 1,1,1-Trichloroethane	(2)	6.823	97	7967	0.401
58) Cyclohexane	(2)	6.933	56	3696	0.226
59) 1,1-Dichloropropene	(2)	7.036	75	4305	0.288
60) Carbon Tetrachloride	(2)	7.048	117	5111	0.316
61) Isobutyl Alcohol	(1)	7.170	41	11617	22.406
62)$1,2-Dichloroethane-d4	(2)	7.273	102	133223	50.875
63) Benzene	(2)	7.298	78	24579	0.564
66) 1,2-Dichloroethane	(2)	7.377	62	8853	0.486
67) t-Amyl methyl ether	(2)	7.492	73	5959	0.312
69)*Fluorobenzene	(2)	7.711	96	2228784	50.000
71) n-Heptane	(2)	7.717	43	4275	0.289
72) n-Butanol	(1)	8.046	56	15436M	38.730
74) Trichloroethene	(2)	8.198	95	3812	0.332
75) Methylcyclohexane	(2)	8.502	83	3998	0.230
76) 1,2-Dichloropropane	(2)	8.526	63	4379	0.398
78) Methyl Methacrylate	(2)	8.612	69	2677	0.312
79) 1,4-Dioxane	(1)	8.630	88	2395	16.472
80) Dibromomethane	(2)	8.642	93	3344	0.437
83) Bromodichloromethane	(2)	8.879	83	6289	0.391
84) 2-Nitropropane	(1)	9.135	41	3231	0.818
86) cis-1,3-Dichloropropene	(2)	9.427	75	5718	0.324
87) 4-Methyl-2-pentanone	(2)	9.585	43	9606	0.733
88)$Toluene-d8	(3)	9.737	98	2205815	48.987
89) Toluene	(3)	9.810	92	12772	0.455
90) trans-1,3-Dichloropropene	(3)	10.066	75	6736	0.363
91) Ethyl Methacrylate	(3)	10.126	69	4875	0.313
92) 1,1,2-Trichloroethane	(3)	10.272	97	4874	0.480
94) Tetrachloroethene	(3)	10.364	166	4441	0.338
95) 1,3-Dichloropropane	(3)	10.437	76	7844	0.435
97) 2-Hexanone	(3)	10.485	43	8271	0.841
99) Dibromochloromethane	(3)	10.656	129	5119	0.413
100) 1,2-Dibromoethane	(3)	10.777	107	4164	0.377
101)*Chlorobenzene-d5	(3)	11.197	117	1743638	50.000
102) Chlorobenzene	(3)	11.221	112	13620	0.414
103) 1,1,1,2-Tetrachloroethane	(3)	11.313	131	4569	0.373
104) Ethylbenzene	(3)	11.313	91	18588	0.347
105) m+p-Xylene	(3)	11.428	106	13134	0.606

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
107) Xylene (Total)	(3)		106	19672	0.921
106) o-Xylene	(3)	11.757	106	6538	0.315
108) Styrene	(3)	11.769	104	9173	0.261
109) Bromoform	(3)	11.933	173	3103	0.391
110) Isopropylbenzene	(3)	12.055	105	13406M	0.253
113) Cyclohexanone	(1)	12.128	55	7877	17.194
114)$4-Bromofluorobenzene	(3)	12.201	95	859213	48.143
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	7546	0.519
116) Bromobenzene	(4)	12.323	156	6771M	0.452
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	23736	4.543
118) 1,2,3-Trichloropropane	(4)	12.353	110	2464M	0.524
119) n-Propylbenzene	(4)	12.390	91	22193	0.363
124) 1,3,5-Trimethylbenzene	(4)	12.444	105	14838	0.325
121) 2-Chlorotoluene	(4)	12.469	126	4659	0.345
125) 4-Chlorotoluene	(4)	12.554	126	4874M	0.343
128) tert-Butylbenzene	(4)	12.767	134	3086	0.281
129) Pentachloroethane	(4)	12.803	167	3286	0.348
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	15235	0.322
131) sec-Butylbenzene	(4)	12.931	105	13912M	0.249
133) 1,3-Dichlorobenzene	(4)	13.028	146	11918	0.426
134) p-Isopropyltoluene	(4)	13.040	119	12896	0.248
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	982057M	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	15770	0.541
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	21196M	0.418
138) Benzyl Chloride	(4)	13.174	126	2318	0.353
139) 1,3-Diethylbenzene	(4)	13.235	119	9005	0.280
140) 1,4-Diethylbenzene	(4)	13.308	119	9514	0.289
141) n-Butylbenzene	(4)	13.326	92	7272	0.273
142) 1,2-Dichlorobenzene	(4)	13.363	146	13218	0.481
143) 1,2-Diethylbenzene	(4)	13.375	119	7823M	0.285
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	1587	0.457
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	10063	0.438
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	9746	0.458
149) Hexachlorobutadiene	(4)	14.537	225	3609	0.314
150) Naphthalene	(4)	14.640	128	22457M	0.436
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	9796	0.464
152) 2-Methylnaphthalene	(4)	15.413	142	13122	0.380

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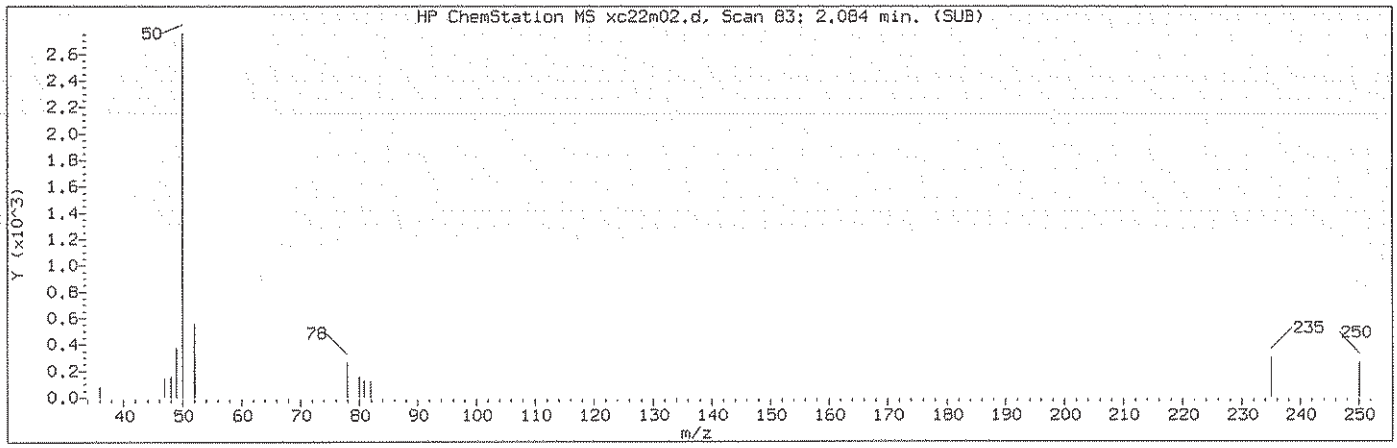
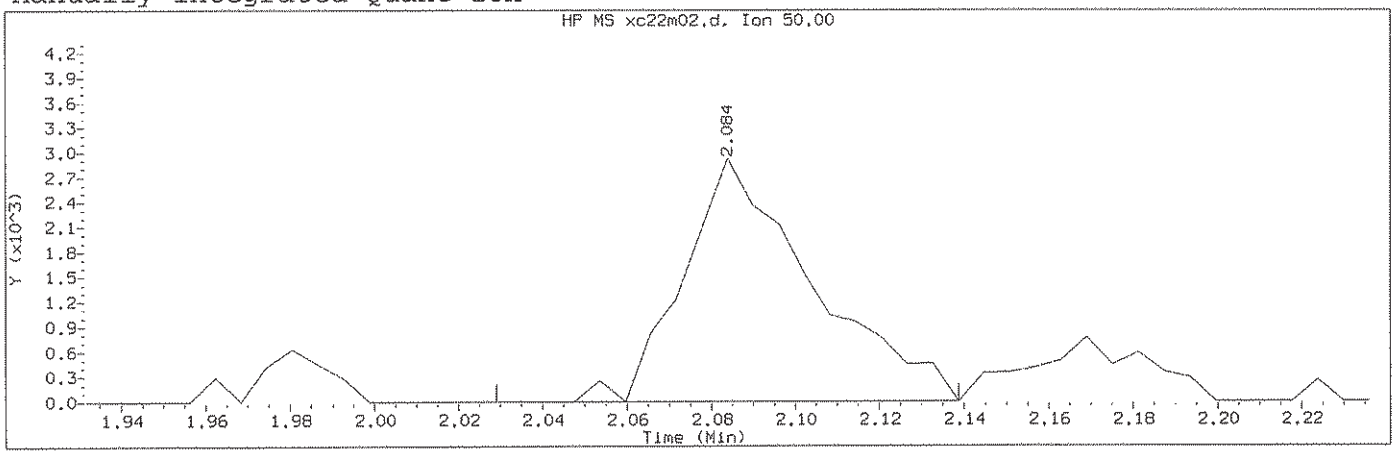
on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

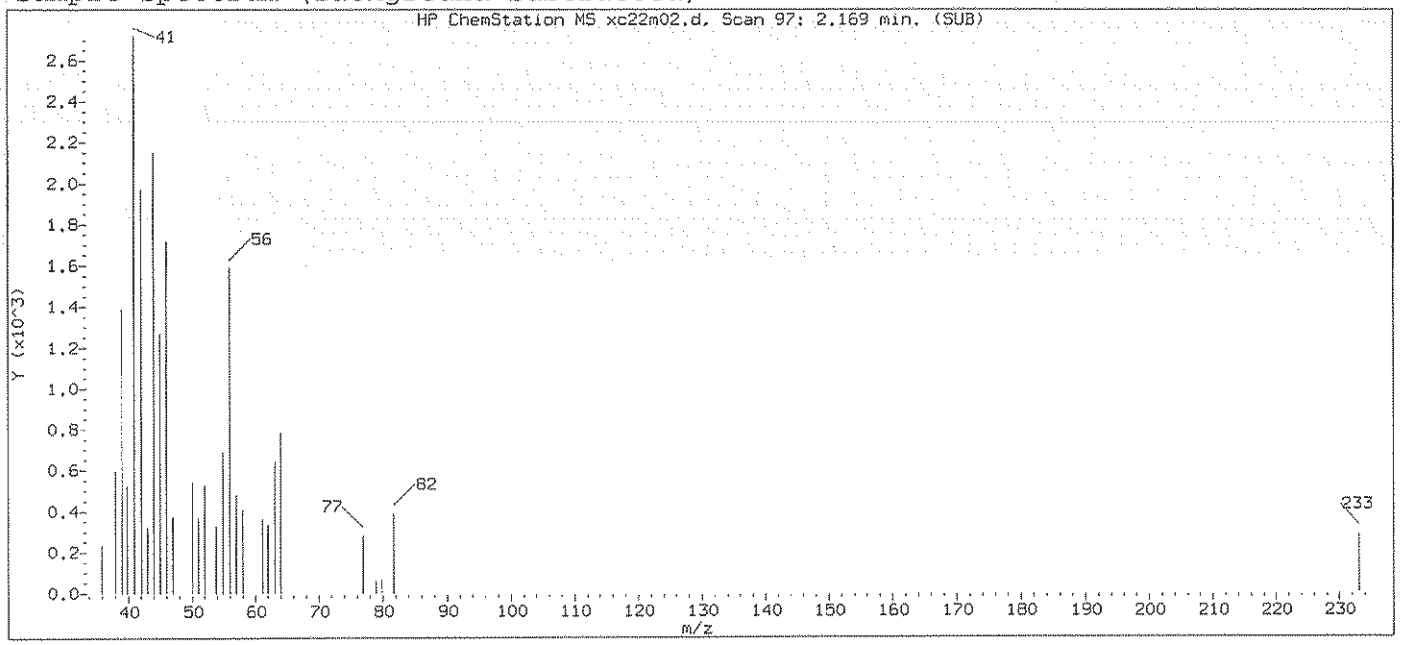
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 83		
Retention Time (minutes)	: 2.084		
Quant Ion	: 50.00		
Area (flag)	: 6225MA		
On-Column Amount (ng)	: 0.8563		
Integration start scan	: 73	Integration stop scan:	91
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

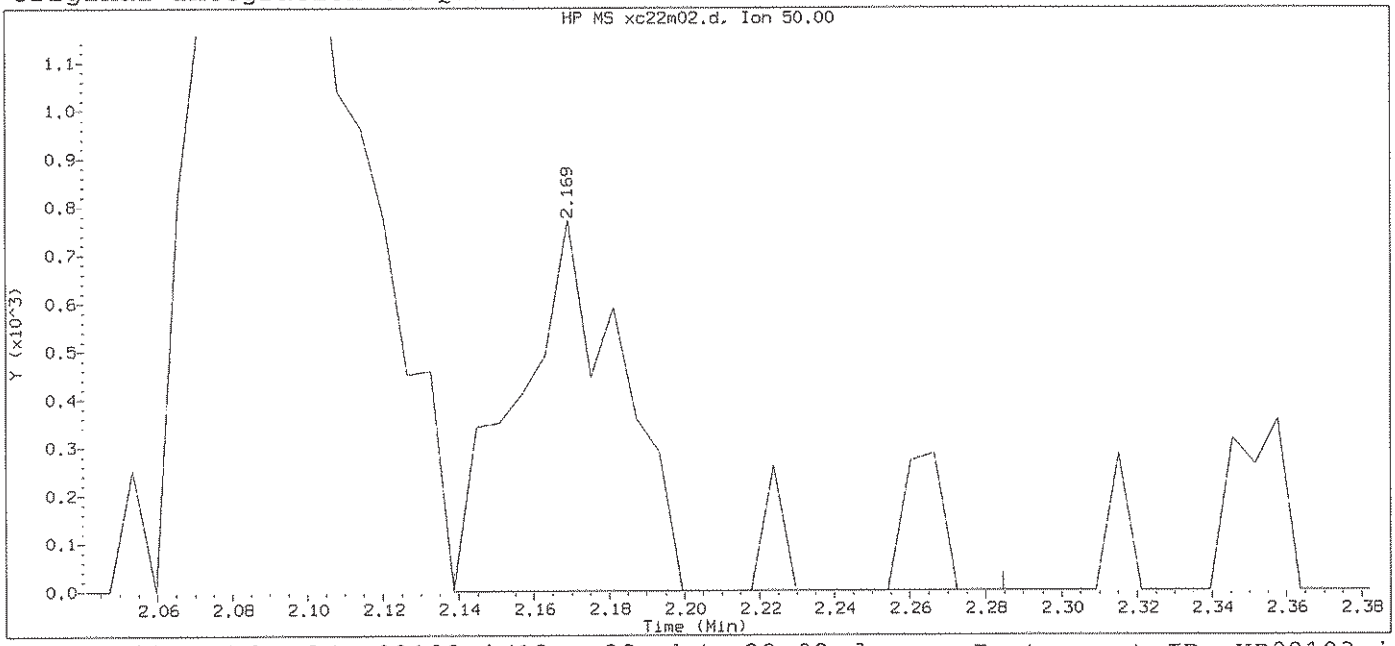
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

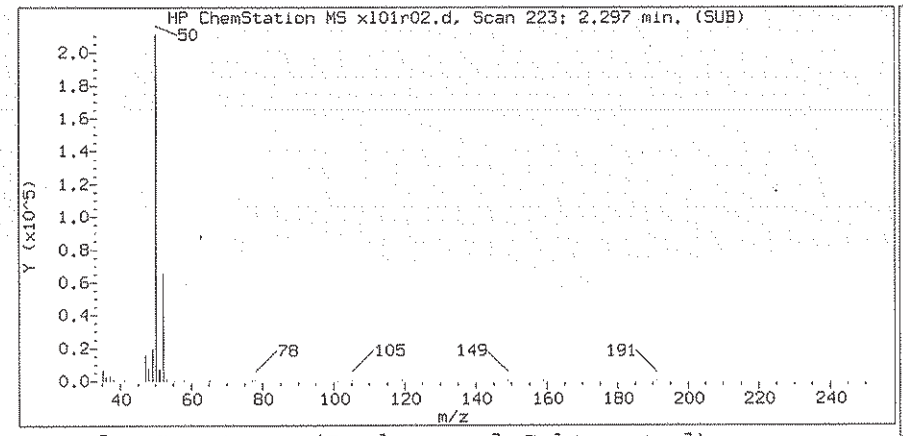
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

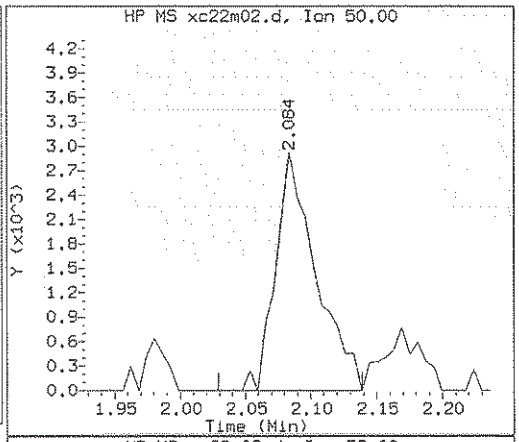
Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 97		
Retention Time (minutes)	: 2.169		
Quant Ion	: 50.00		
Area	: 1773		
On-column Amount (ng)	: 0.1188		
Integration start scan	: 91	Integration stop scan:	115
Y at integration start	: 0	Y at integration end:	0

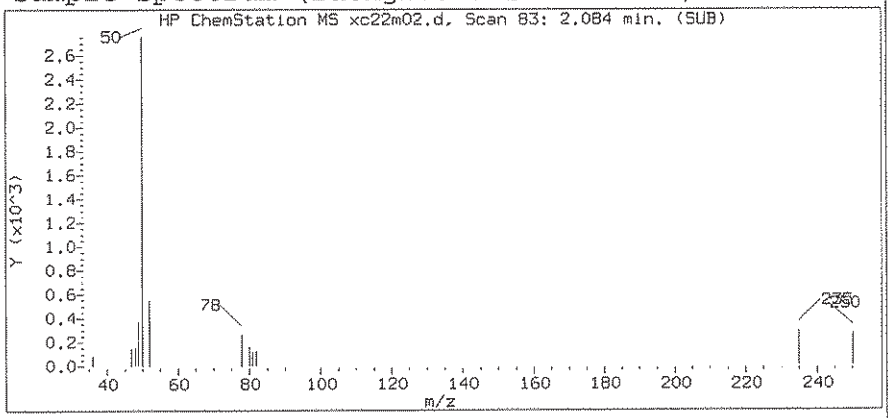
Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

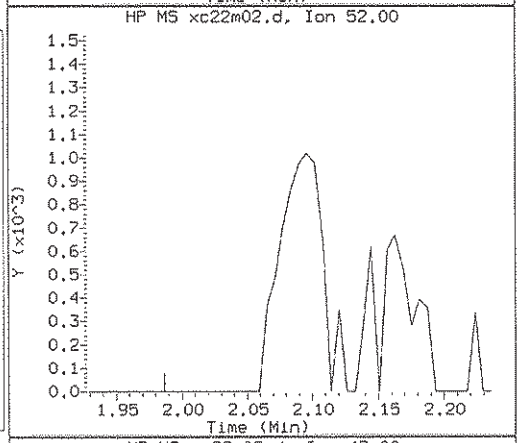
Reference Standard Spectrum for Chloromethane



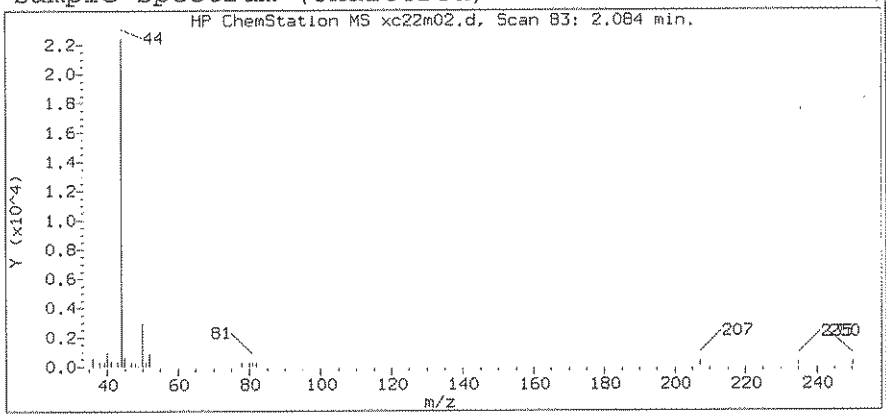


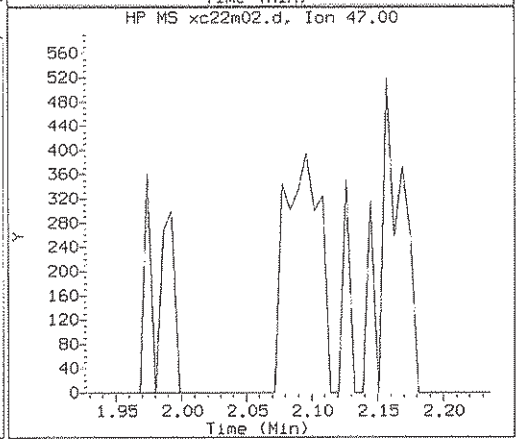
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

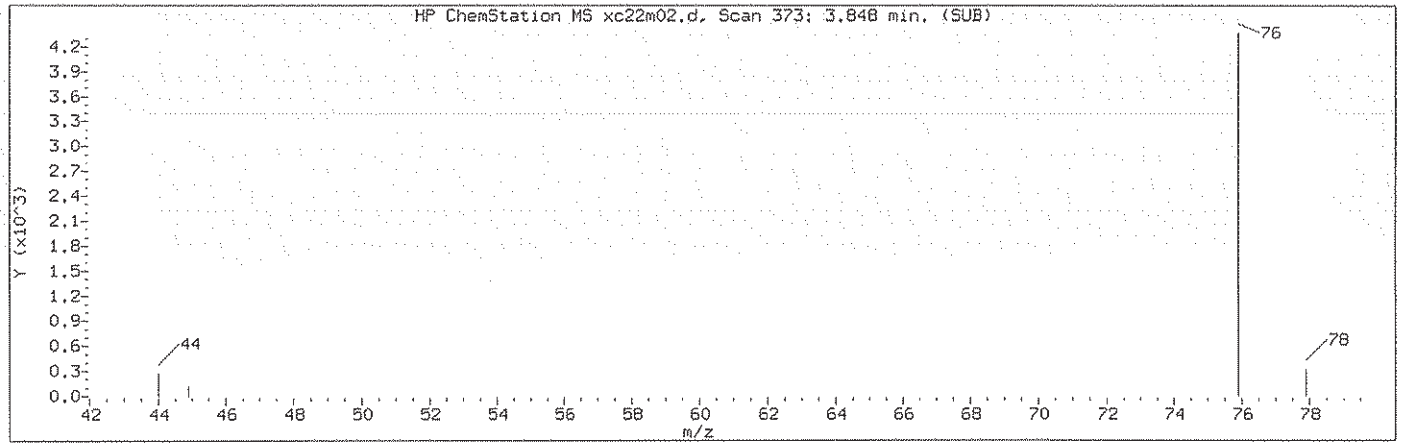
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

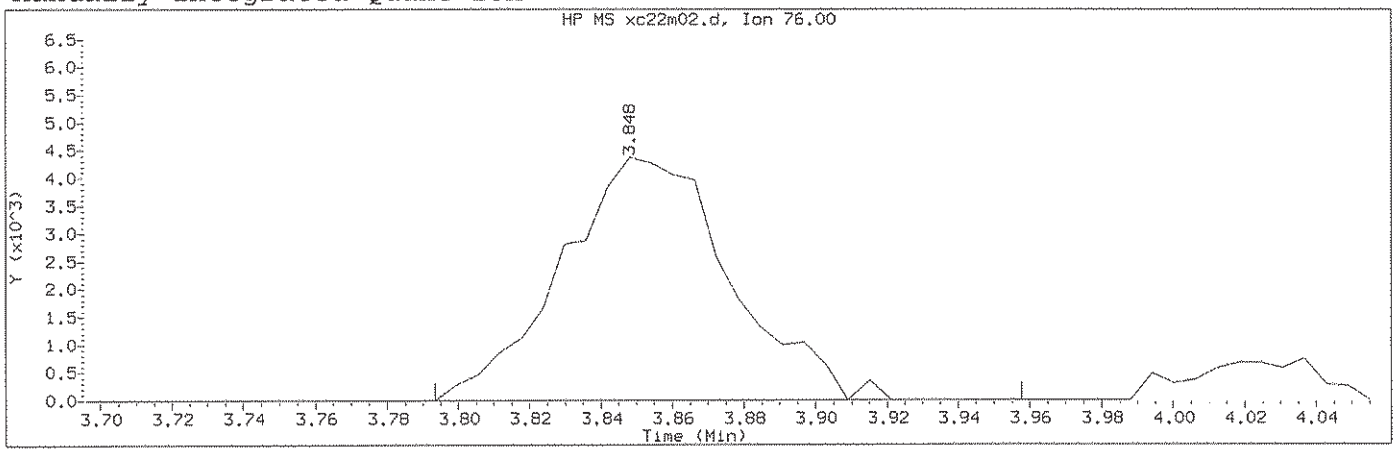
Compound Number	: 4
Compound Name	: Chloromethane
Scan Number	: 83
Retention Time (minutes)	: 2.084
Relative Retention Time	: 0.00316
Quant Ion	: 50.00
Area (flag)	: 6225AM
On-Column Amount (ng)	: 0.8563

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

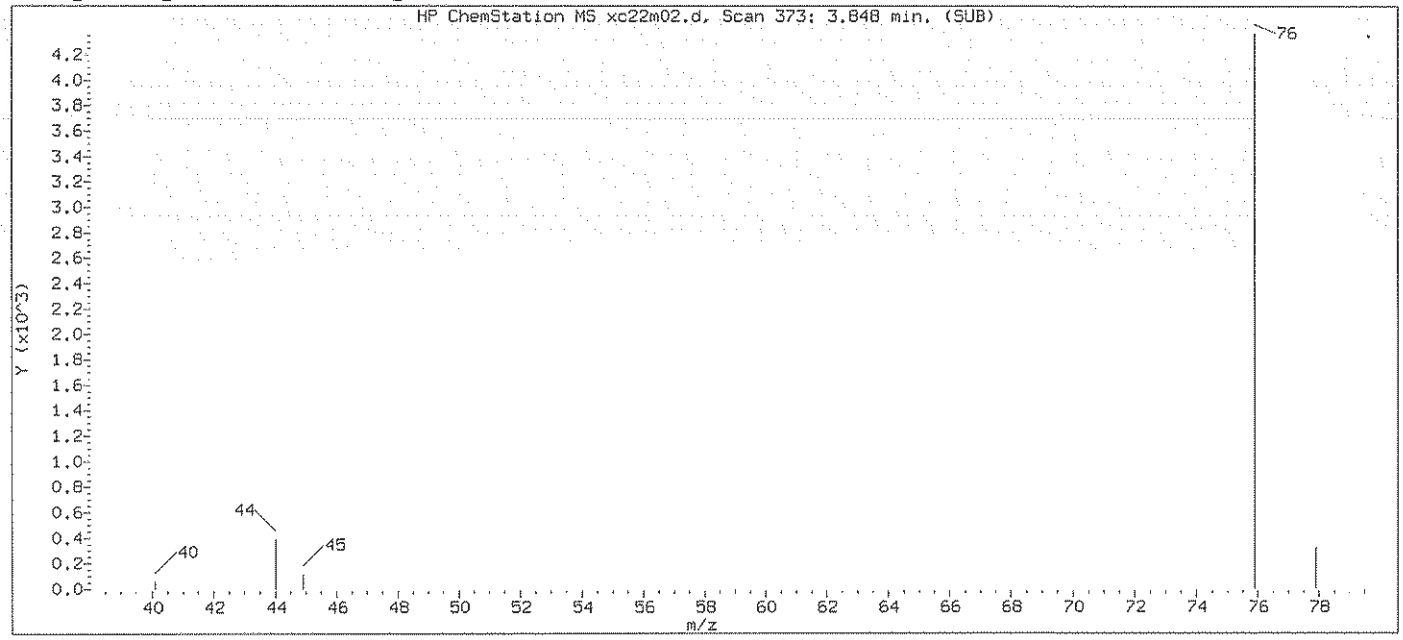
Compound Number	: 25		
Compound Name	: Carbon Disulfide		
Scan Number	: 373		
Retention Time (minutes)	: 3.848		
Quant Ion	: 76.00		
Area (flag)	: 14353M		
On-Column Amount (ng)	: 0.4402		
Integration start scan	: 363	Integration stop scan:	390
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

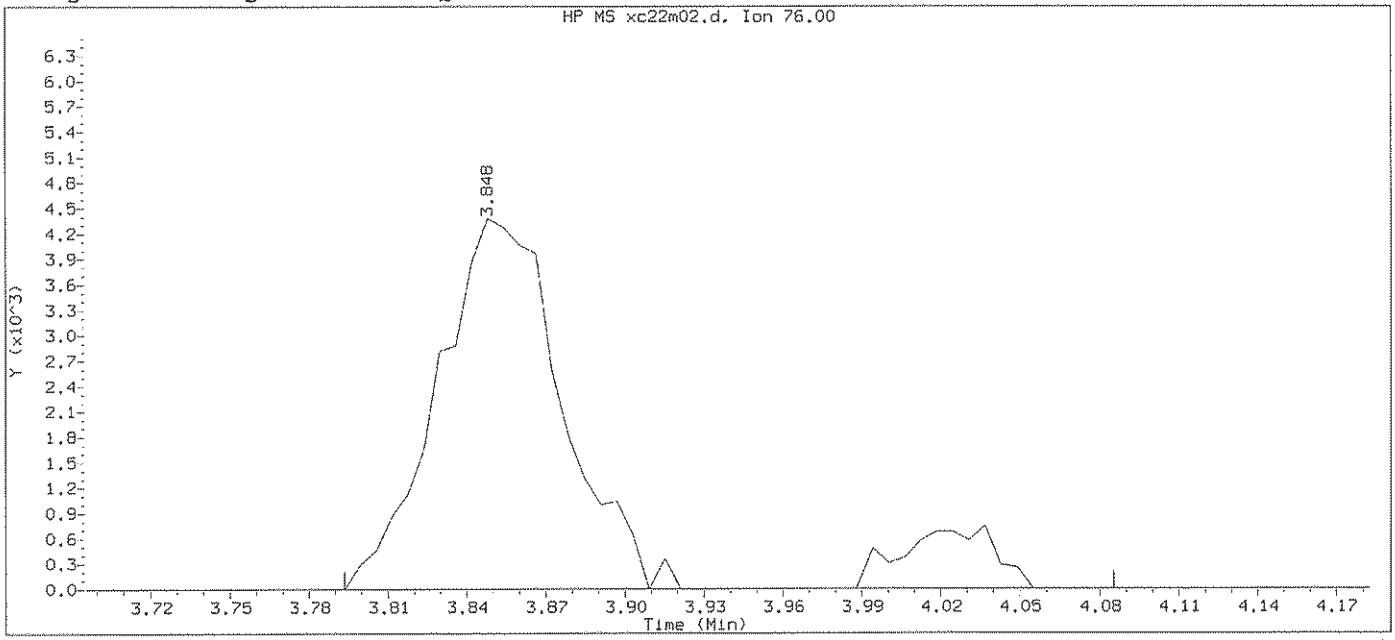
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10221

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

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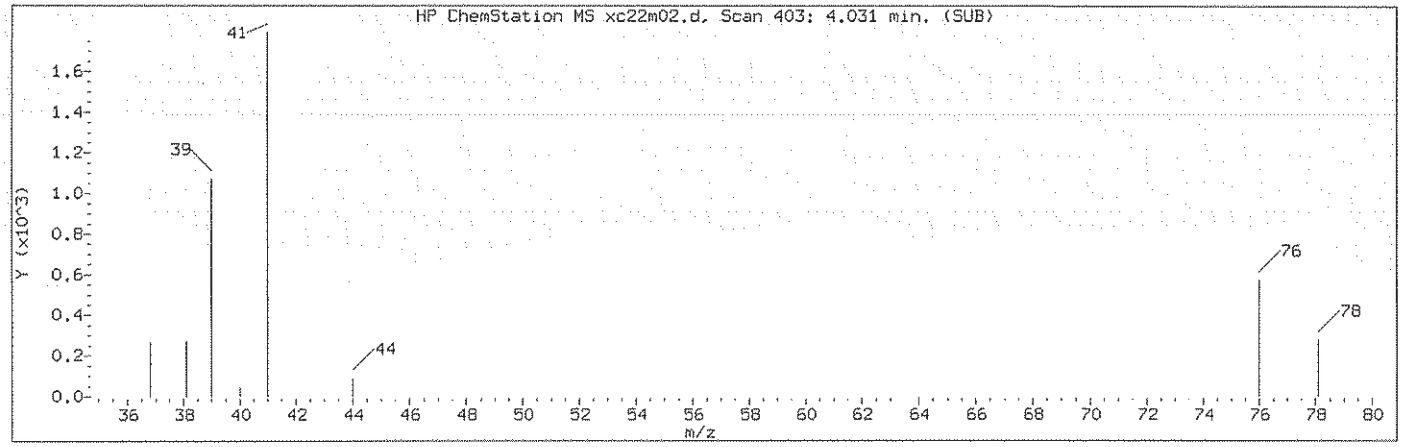
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

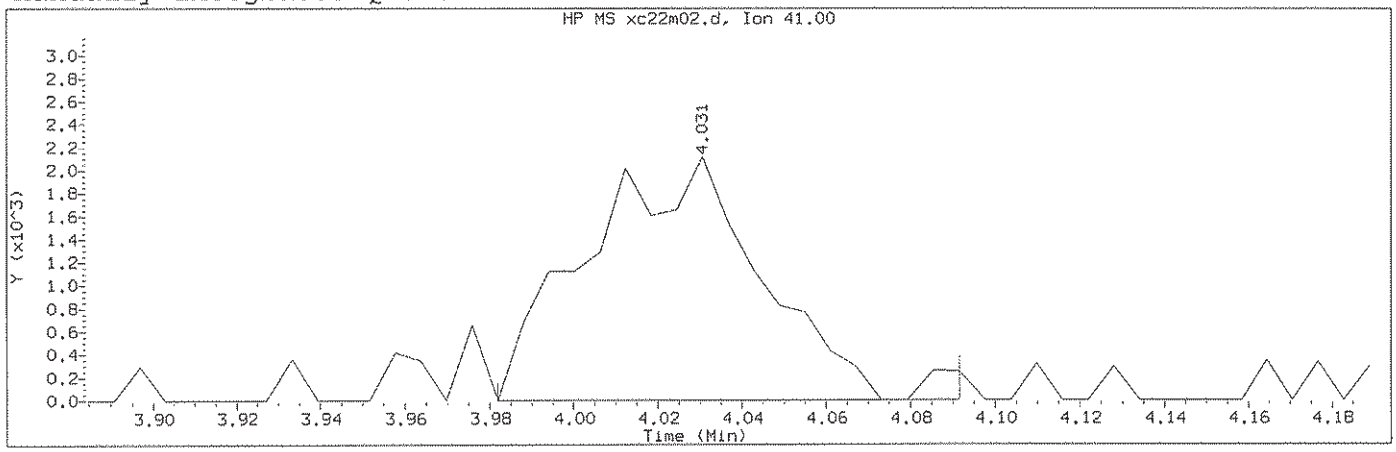
Compound Number	: 25		
Compound Name	: Carbon Disulfide		
Scan Number	: 373		
Retention Time (minutes)	: 3.848		
Quant Ion	: 76.00		
Area	: 16151		
On-column Amount (ng)	: 0.4954		
Integration start scan	: 363	Integration stop scan:	411
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

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Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

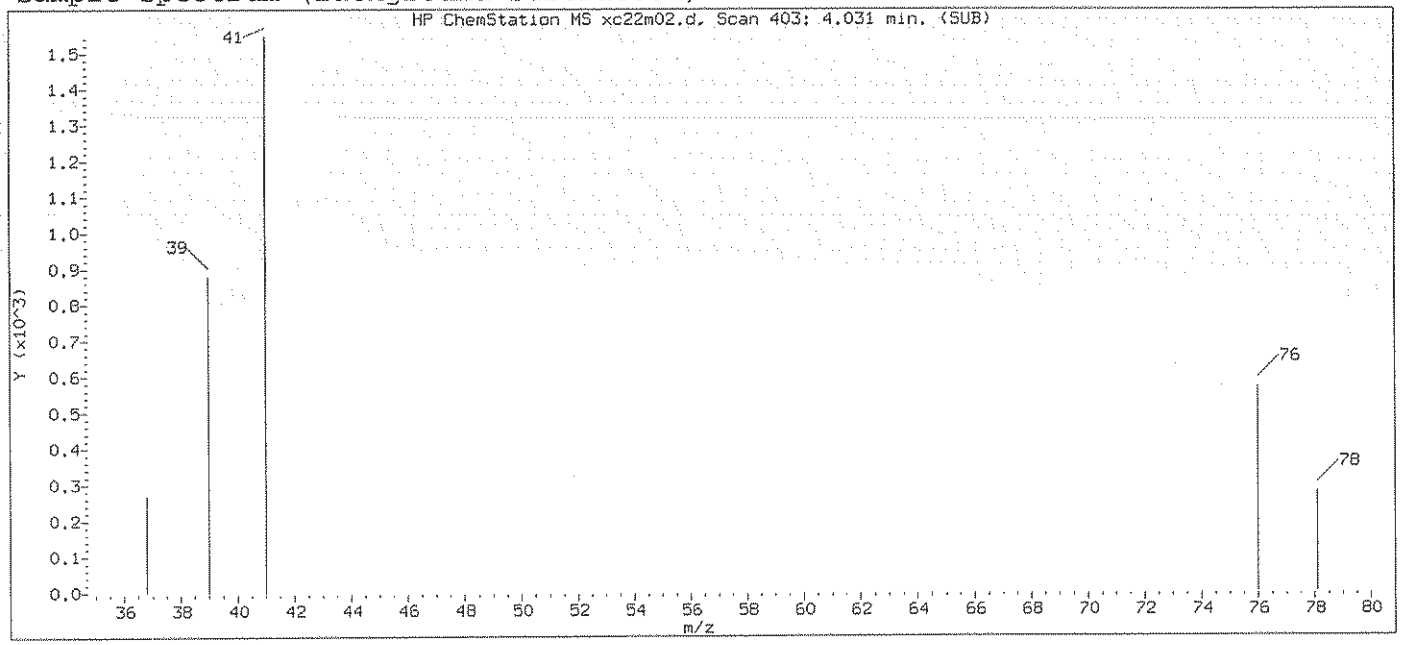
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 403
Retention Time (minutes): 4.031
Quant Ion : 41.00
Area (flag) : 6252M
On-Column Amount (ng) : 0.3770
Integration start scan : 394 Integration stop scan: 412
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

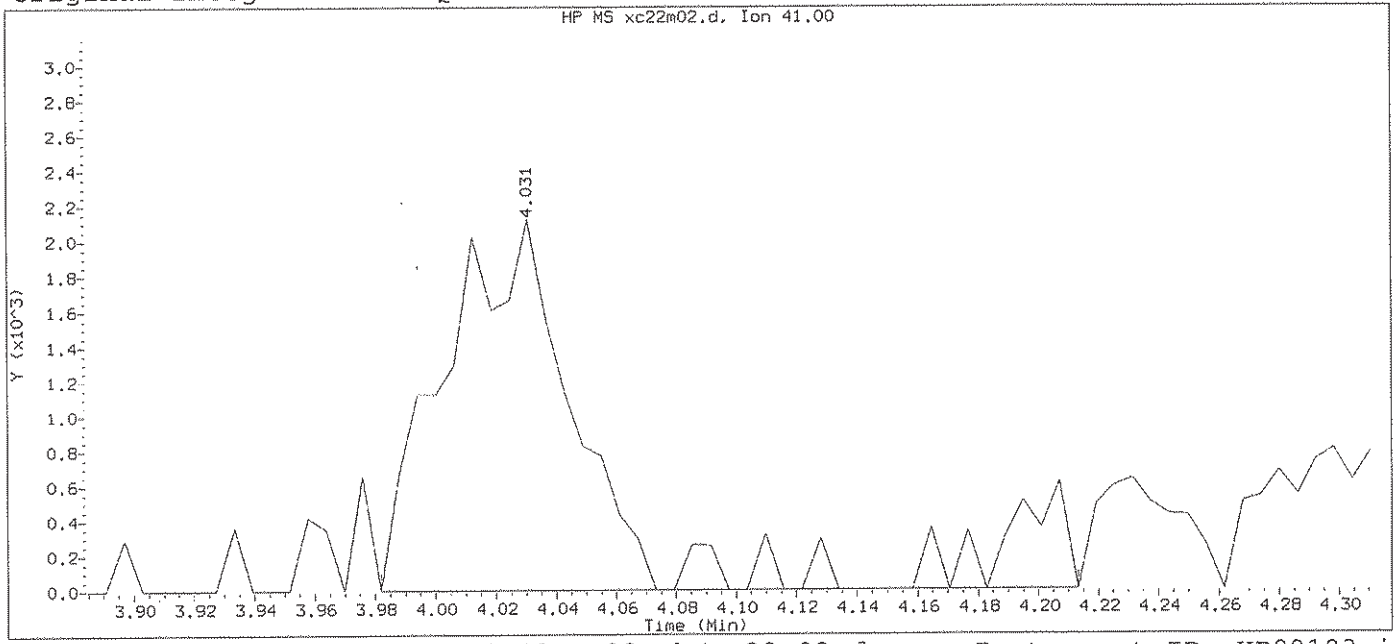
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

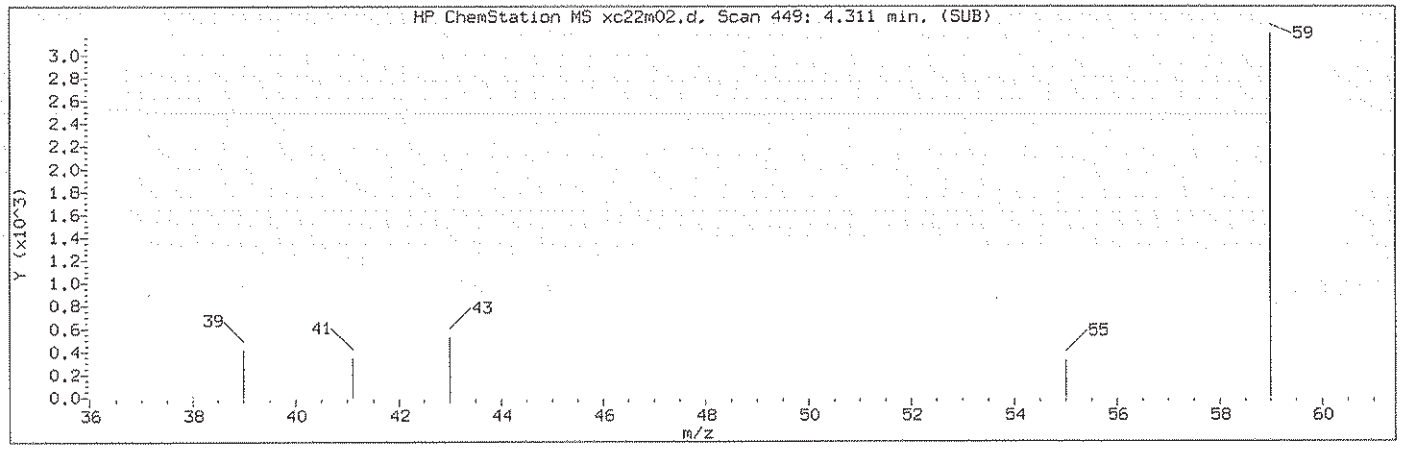
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

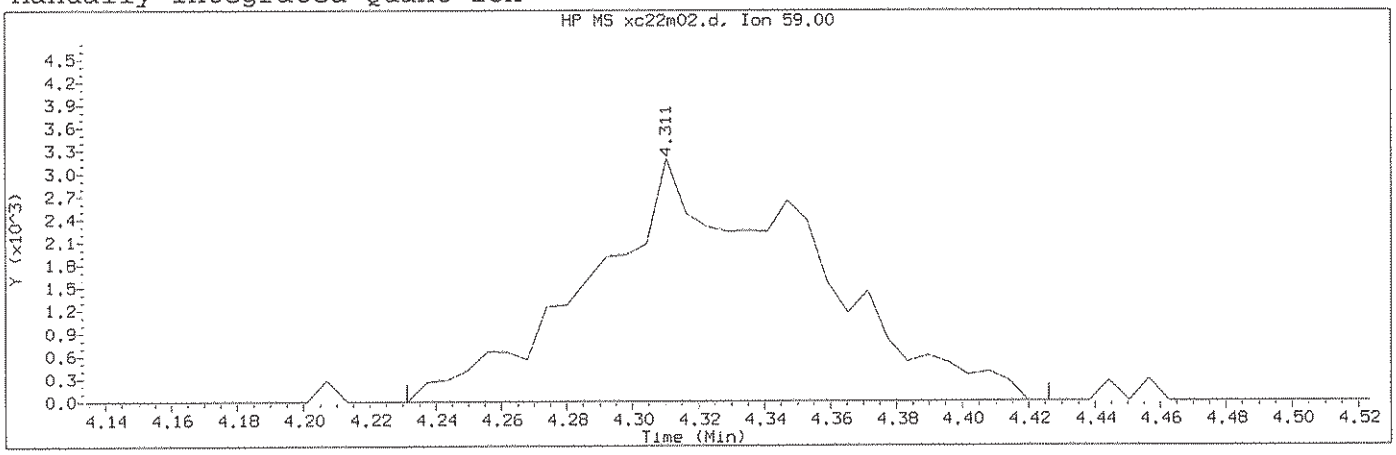
Compound Number	: 29		
Compound Name	: Allyl Chloride		
Scan Number	: 403		
Retention Time (minutes)	: 4.031		
Quant Ion	: 41.00		
Area	: 7373		
On-column Amount (ng)	: 0.4446		
Integration start scan	: 394	Integration stop scan:	432
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature used. CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

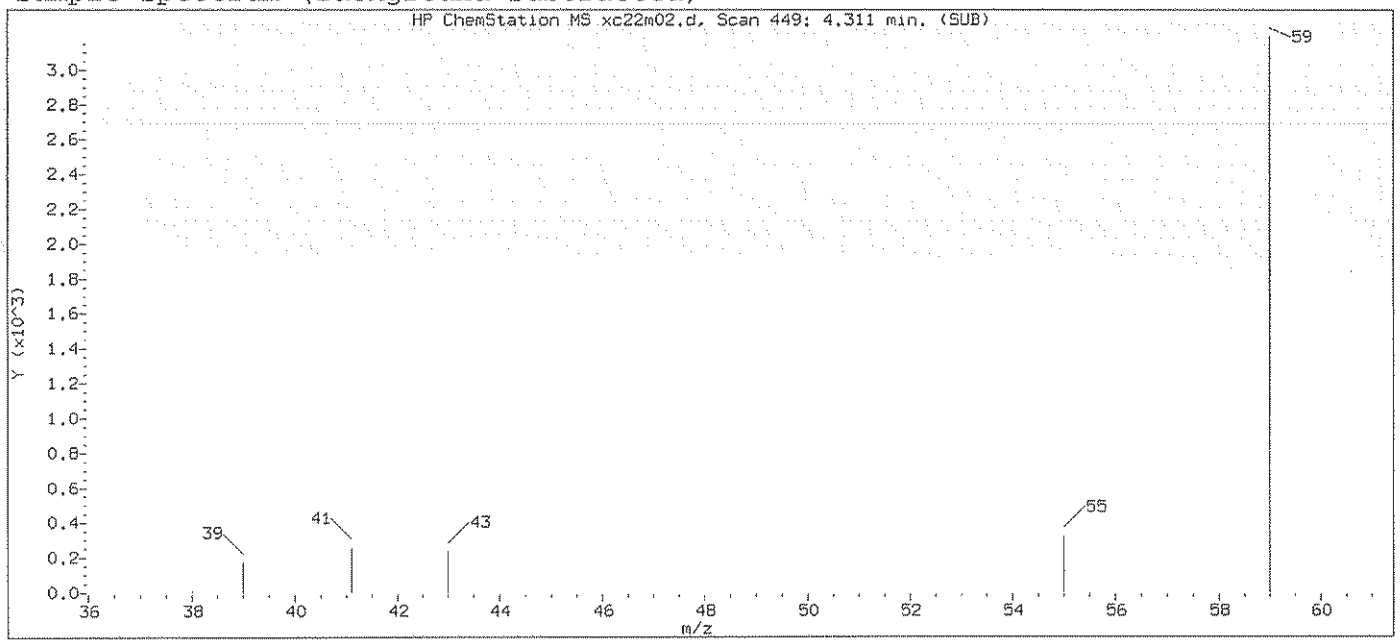
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 449		
Retention Time (minutes)	: 4.311		
Quant Ion	: 59.00		
Area (flag)	: 14681M		
On-Column Amount (ng)	: 9.7246		
Integration start scan	: 435	Integration stop scan:	467
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

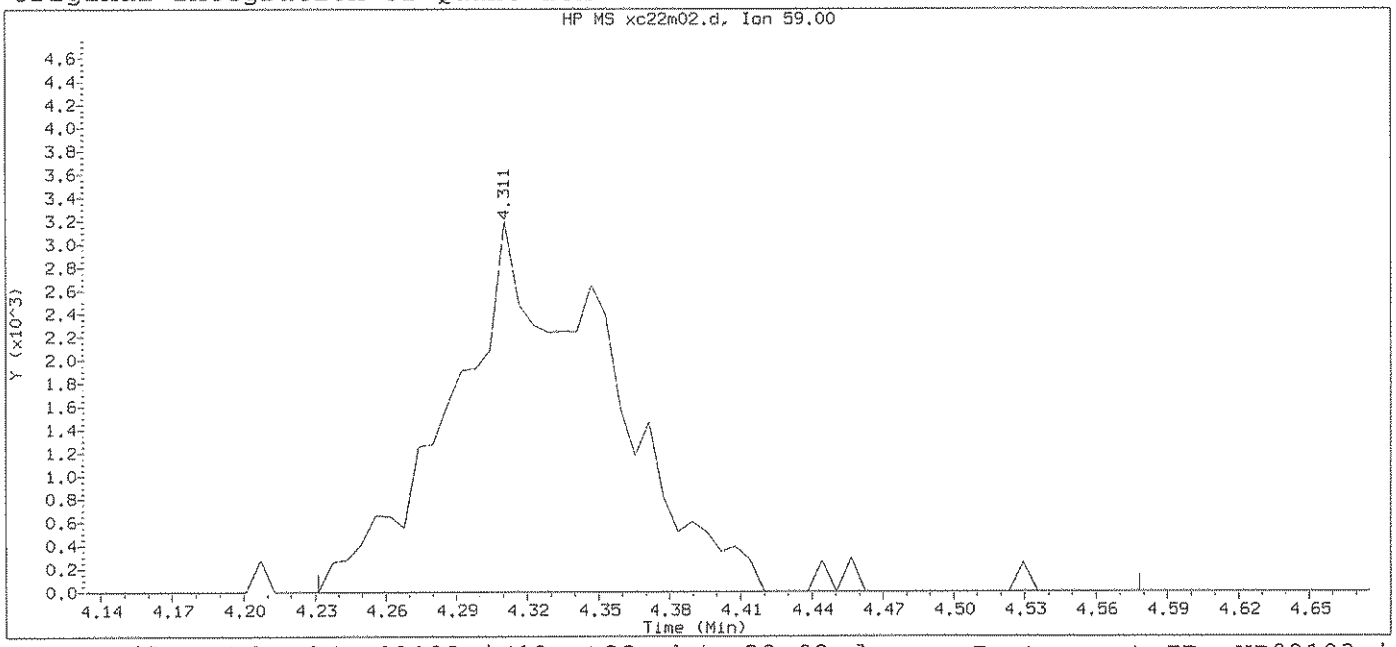
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: Christopher 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

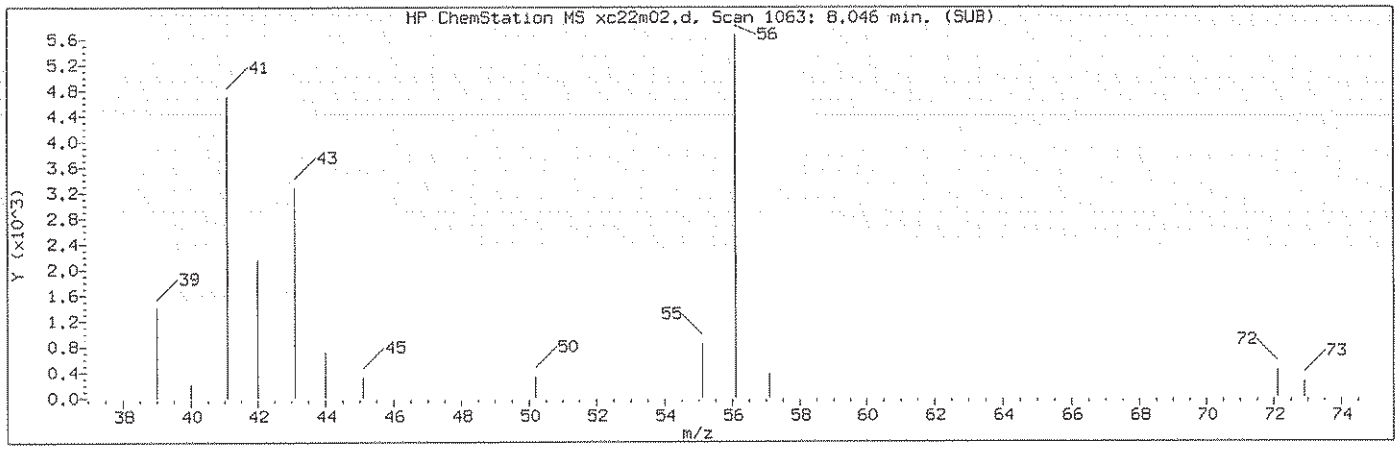
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

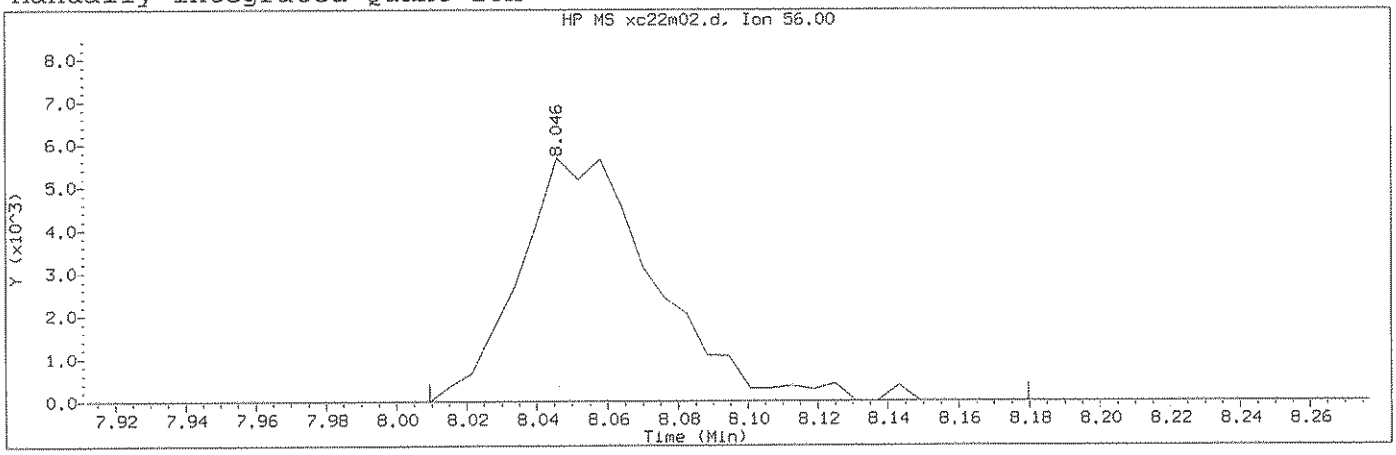
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 449		
Retention Time (minutes)	: 4.311		
Quant Ion	: 59.00		
Area	: 14976		
On-column Amount (ng)	: 9.9200		
Integration start scan	: 435	Integration stop scan:	492
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

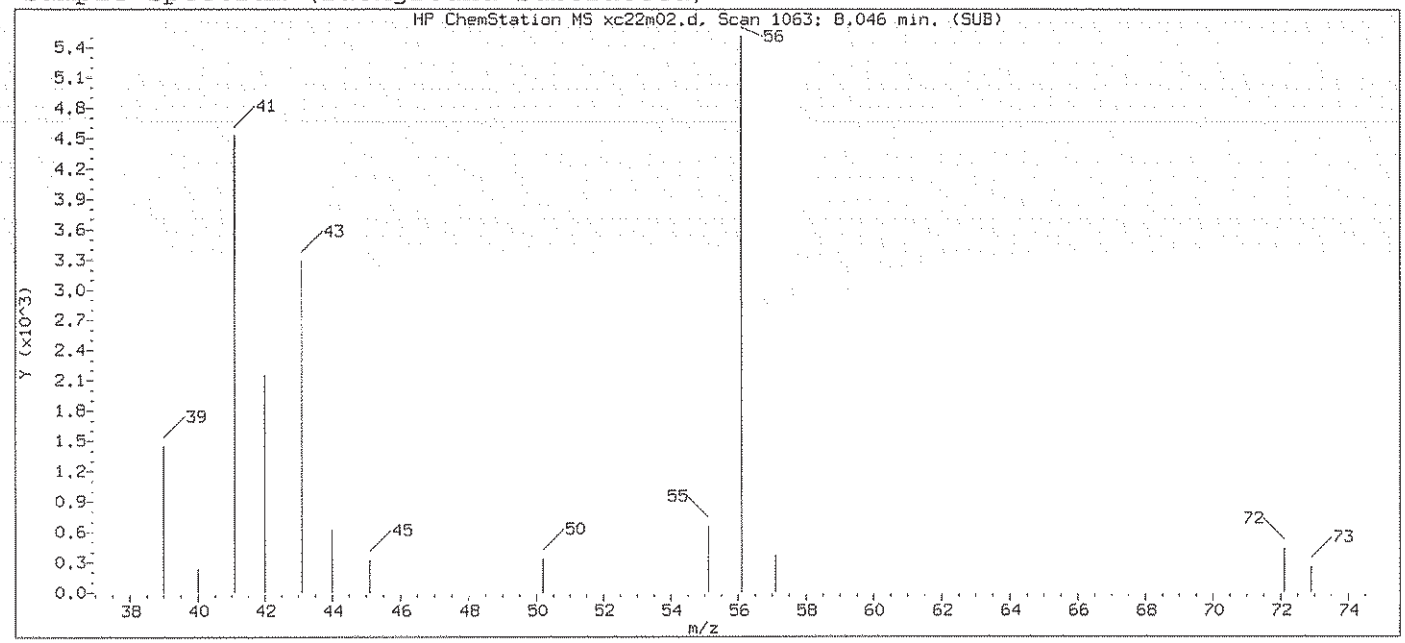
Compound Number : 72
Compound Name : n-Butanol
Scan Number : 1063
Retention Time (minutes): 8.046
Quant Ion : 56.00
Area (flag) : 15436M
On-Column Amount (ng) : 38.7297
Integration start scan : 1056 Integration stop scan: 1084
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

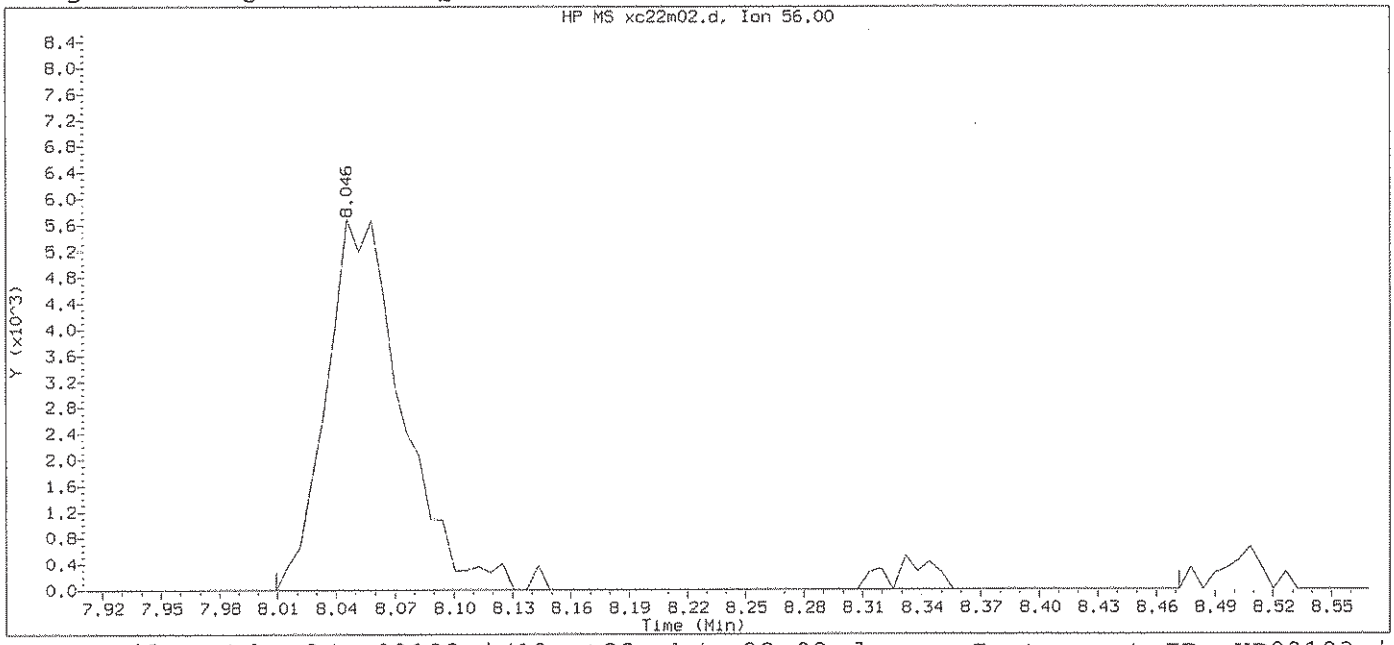
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

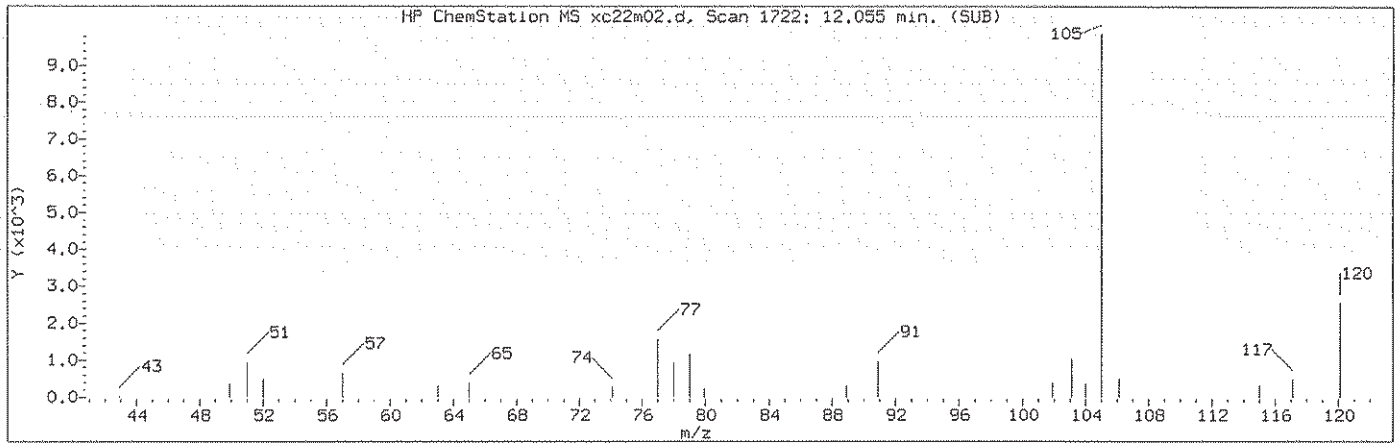
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

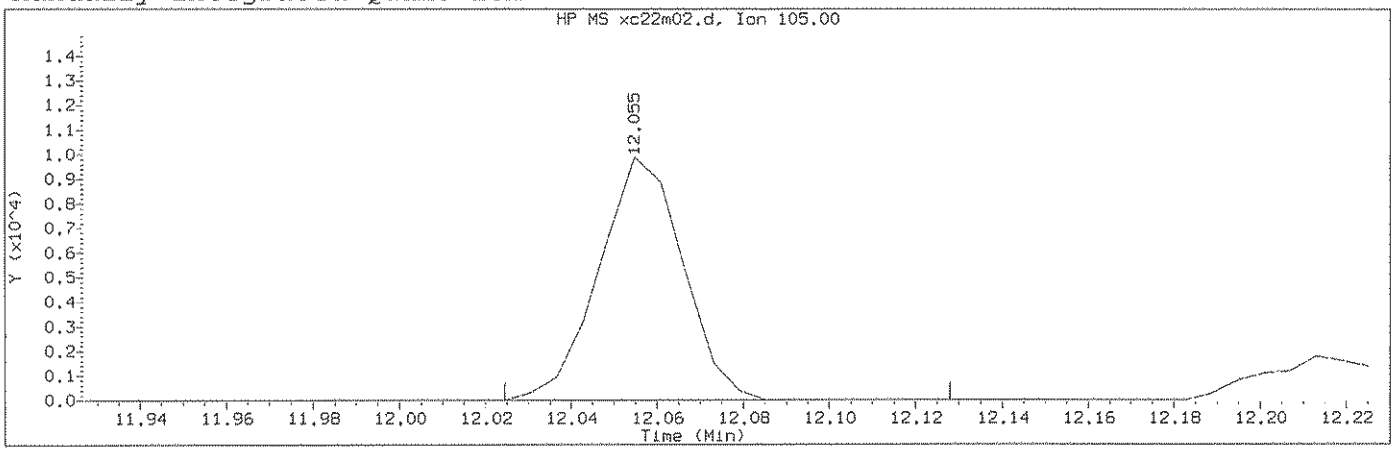
Compound Number	: 72		
Compound Name	: n-Butanol		
Scan Number	: 1063		
Retention Time (minutes)	: 8.046		
Quant Ion	: 56.00		
Area	: 16196		
On-column Amount (ng)	: 40.6374		
Integration start scan	: 1056	Integration stop scan:	1132
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

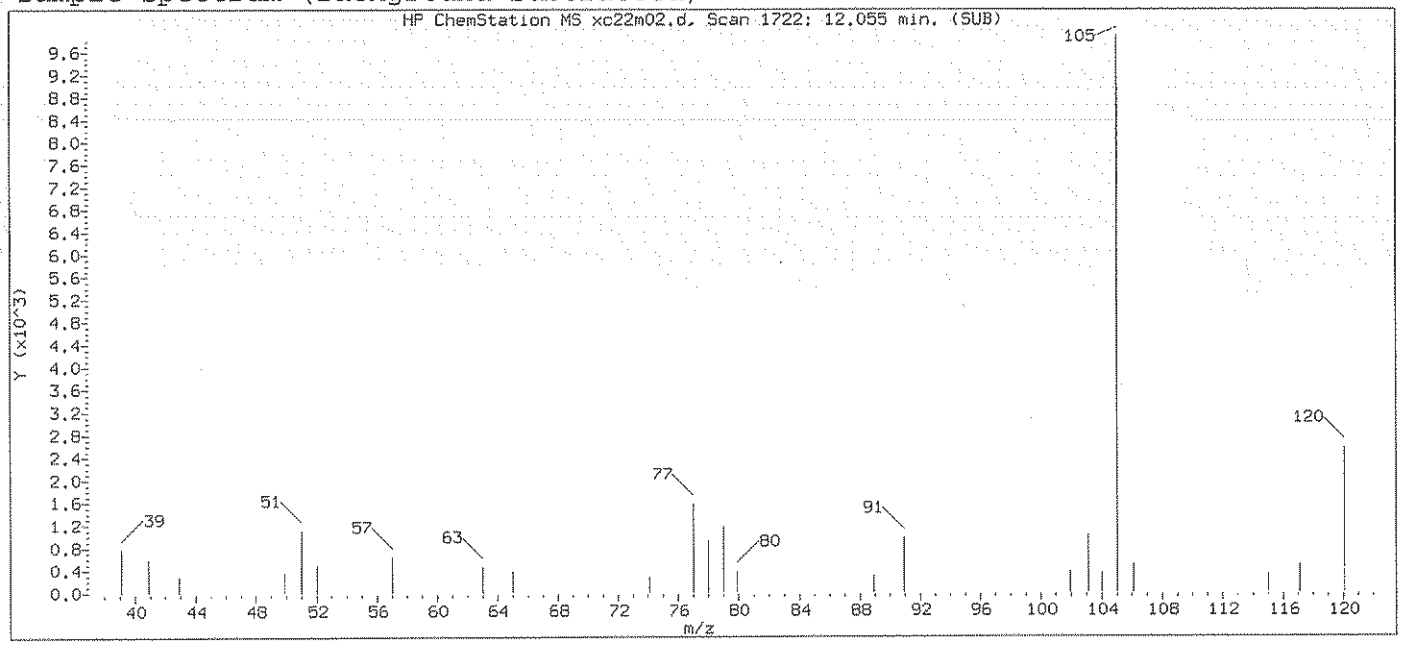
Compound Number : 110
Compound Name : Isopropylbenzene
Scan Number : 1722
Retention Time (minutes): 12.055
Quant Ion : 105.00
Area (flag) : 13406M
On-Column Amount (ng) : 0.2526
Integration start scan : 1716 Integration stop scan: 1733
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

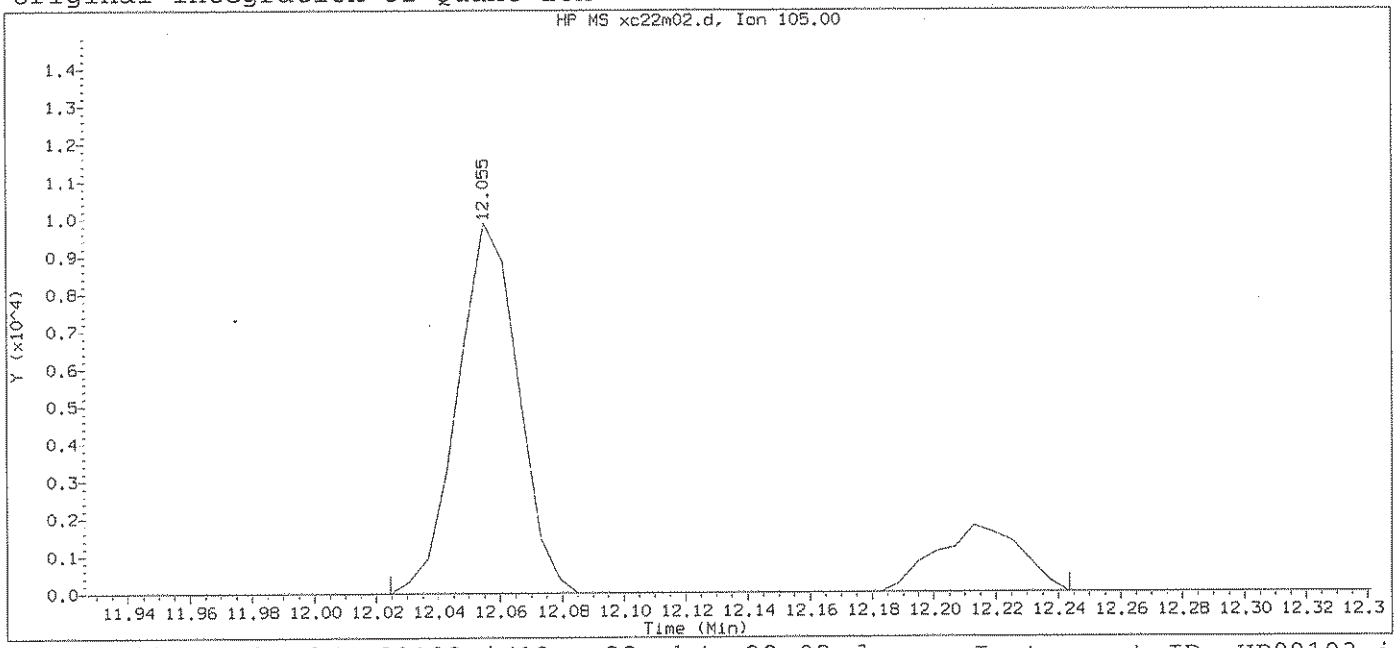
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

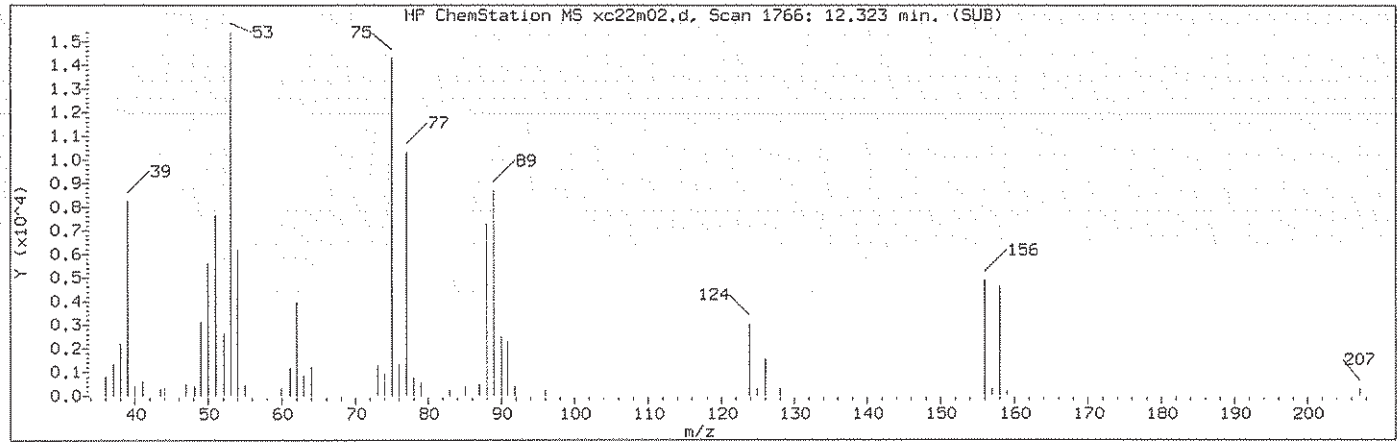
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

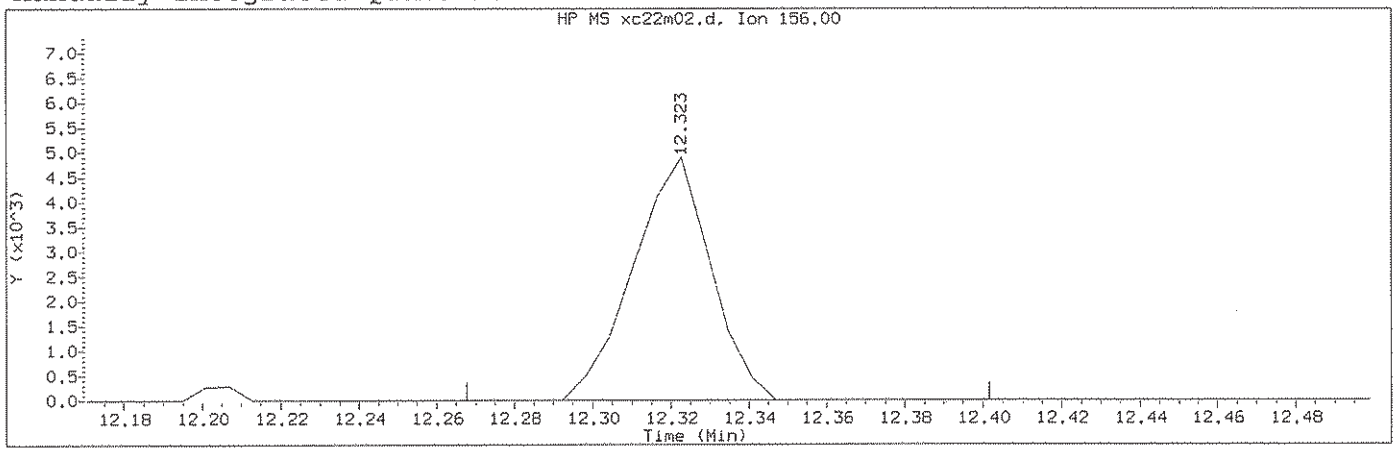
Compound Number	:	110
Compound Name	:	Isopropylbenzene
Scan Number	:	1722
Retention Time (minutes)	:	12.055
Quant Ion	:	105.00
Area	:	16767
On-column Amount (ng)	:	0.3160
Integration start scan	:	1716 Integration stop scan: 1752
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

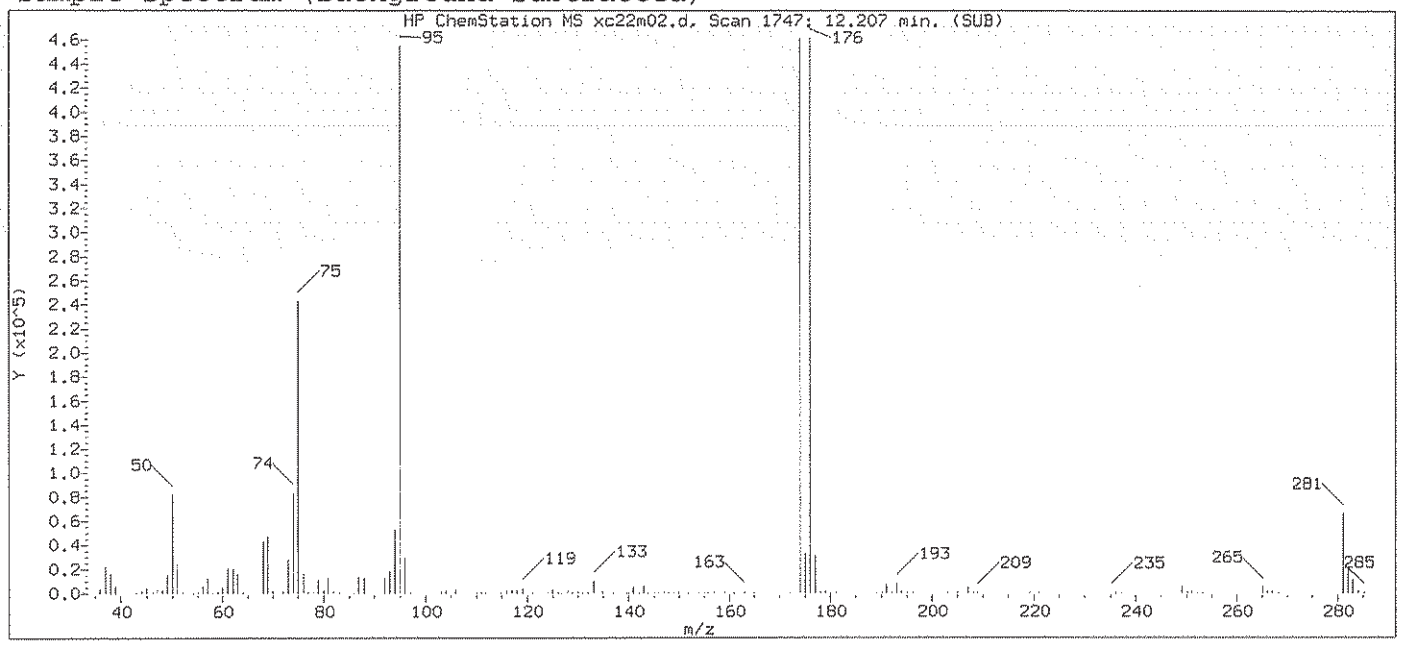
Compound Number : 116
Compound Name : Bromobenzene
Scan Number : 1766
Retention Time (minutes): 12.323
Quant Ion : 156.00
Area (flag) : 6771M
On-Column Amount (ng) : 0.4519
Integration start scan : 1756 Integration stop scan: 1778
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

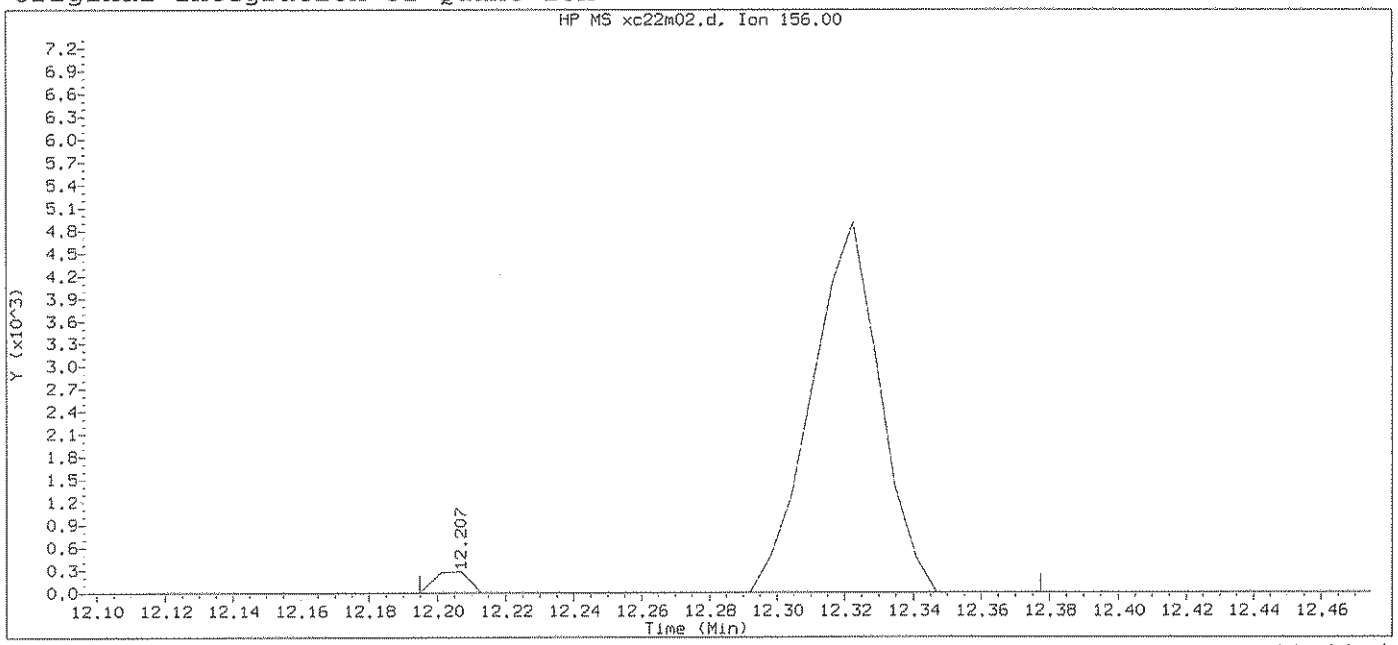
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

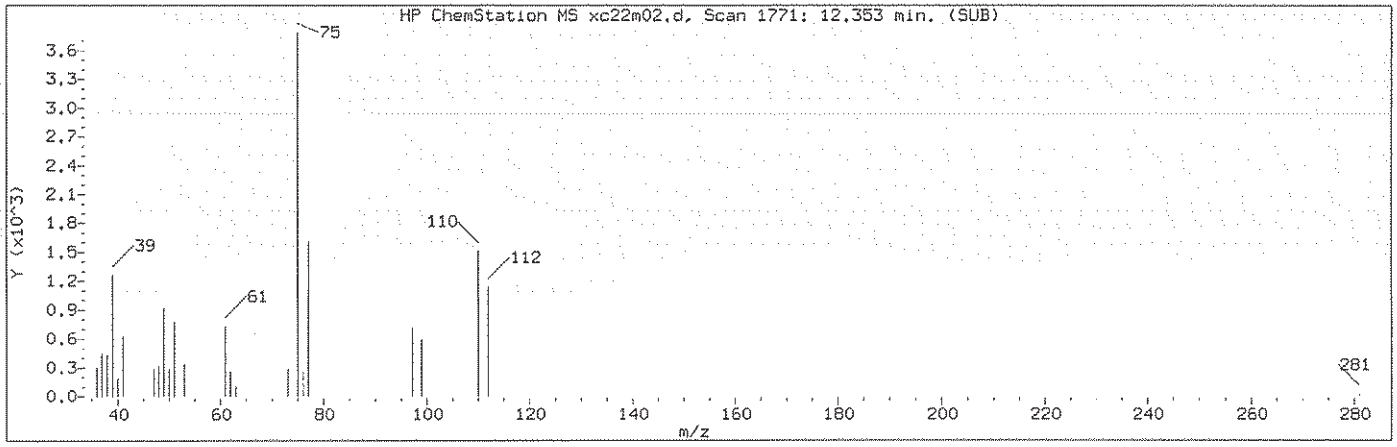
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

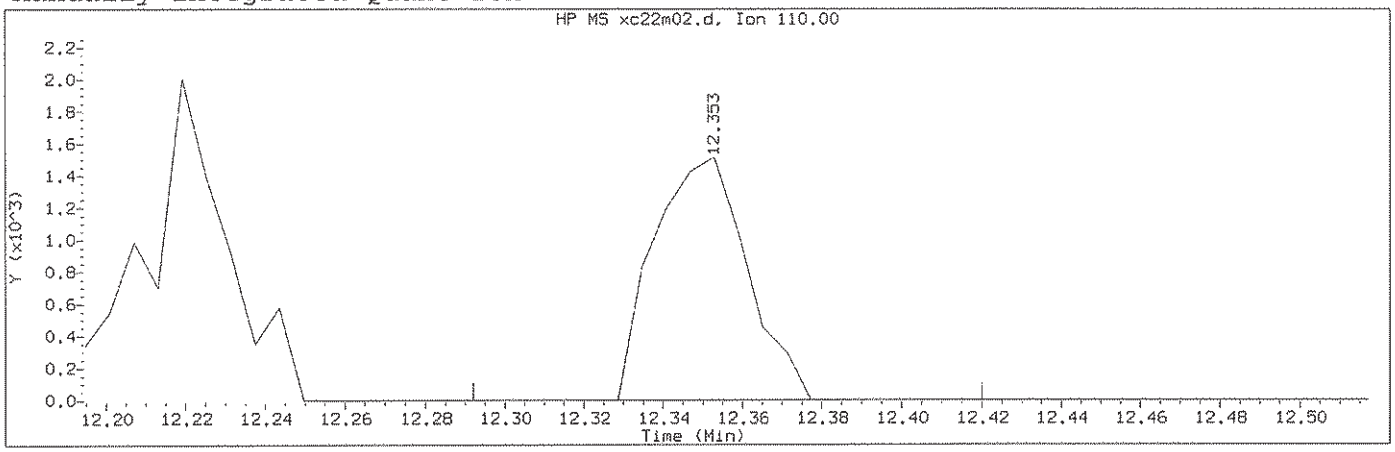
Compound Number : 116
Compound Name : Bromobenzene
Scan Number : 1747
Retention Time (minutes): 12.207
Quant Ion : 156.00
Area : 6974
On-column Amount (ng) : 0.4581
Integration start scan : 1744 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

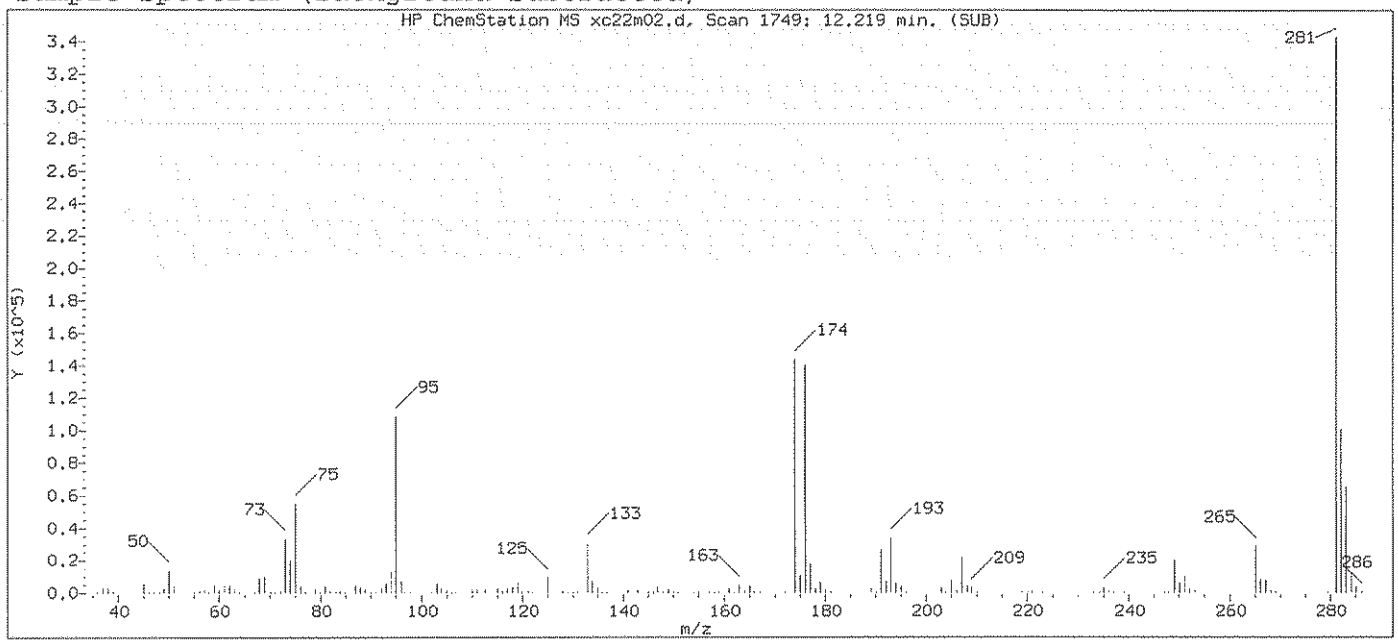
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.353
Quant Ion : 110.00
Area (flag) : 2464M
On-Column Amount (ng) : 0.5244
Integration start scan : 1760 Integration stop scan: 1781
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

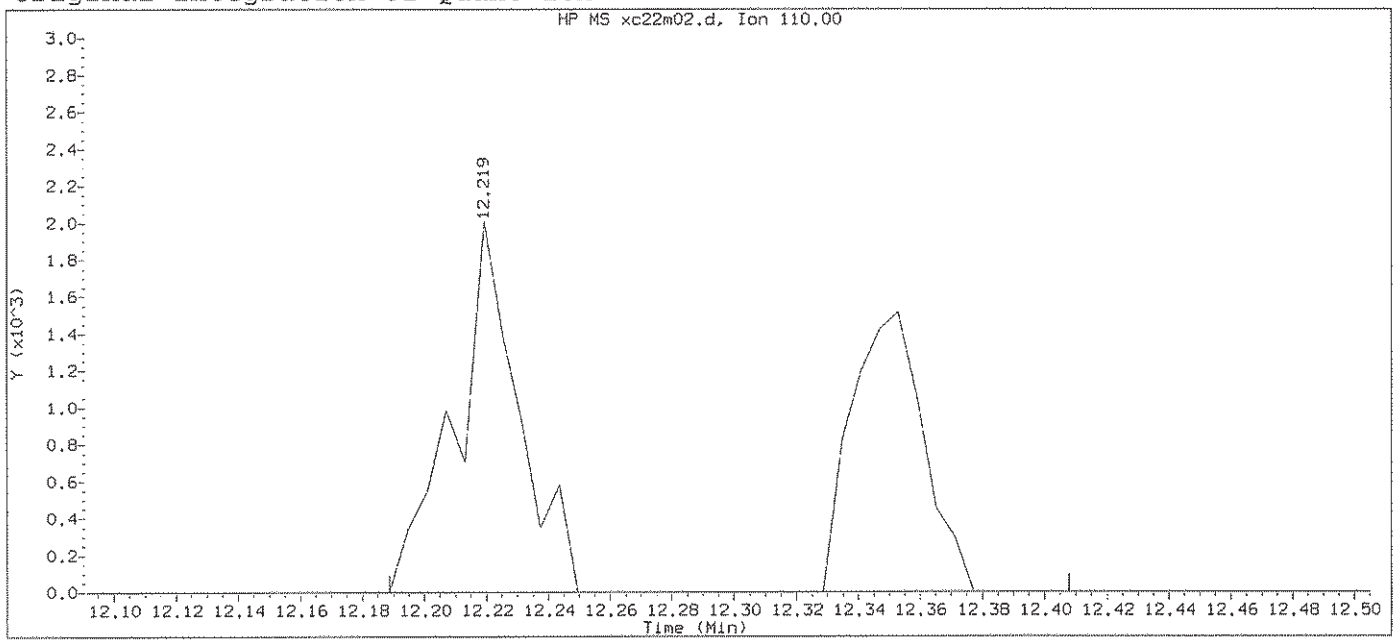
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

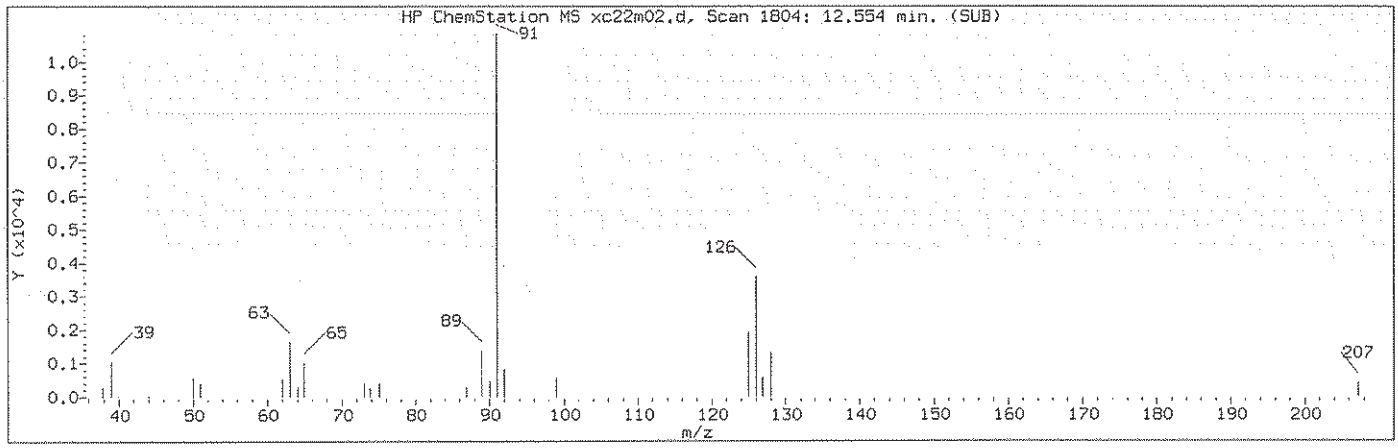
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

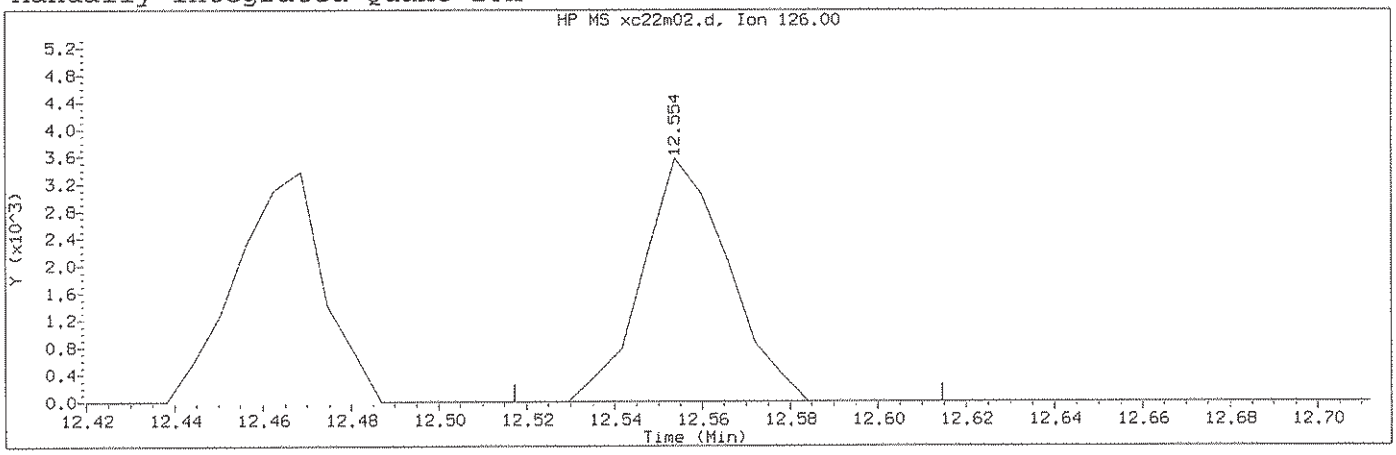
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 110.00
Area : 5319
On-column Amount (ng) : 1.1141
Integration start scan : 1743 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

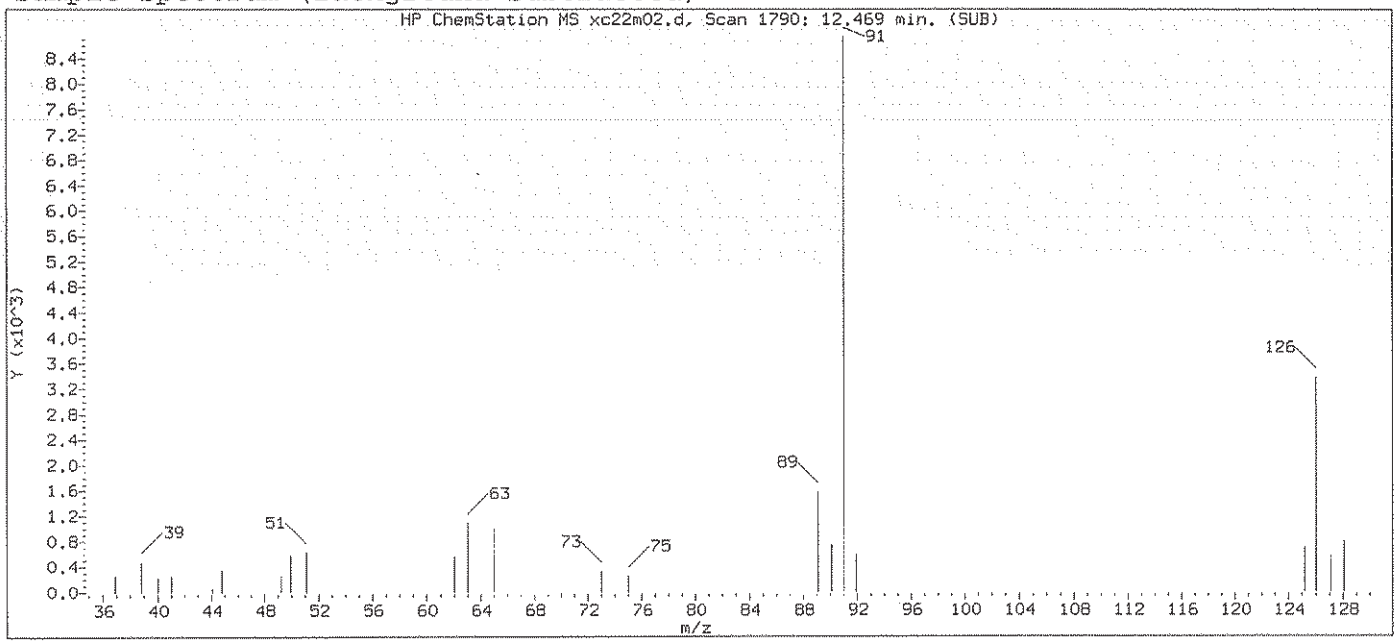
Compound Number : 125
Compound Name : 4-Chlorotoluene
Scan Number : 1804
Retention Time (minutes): 12.554
Quant Ion : 126.00
Area (flag) : 4874M
On-Column Amount (ng) : 0.3426
Integration start scan : 1797 Integration stop scan: 1813
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

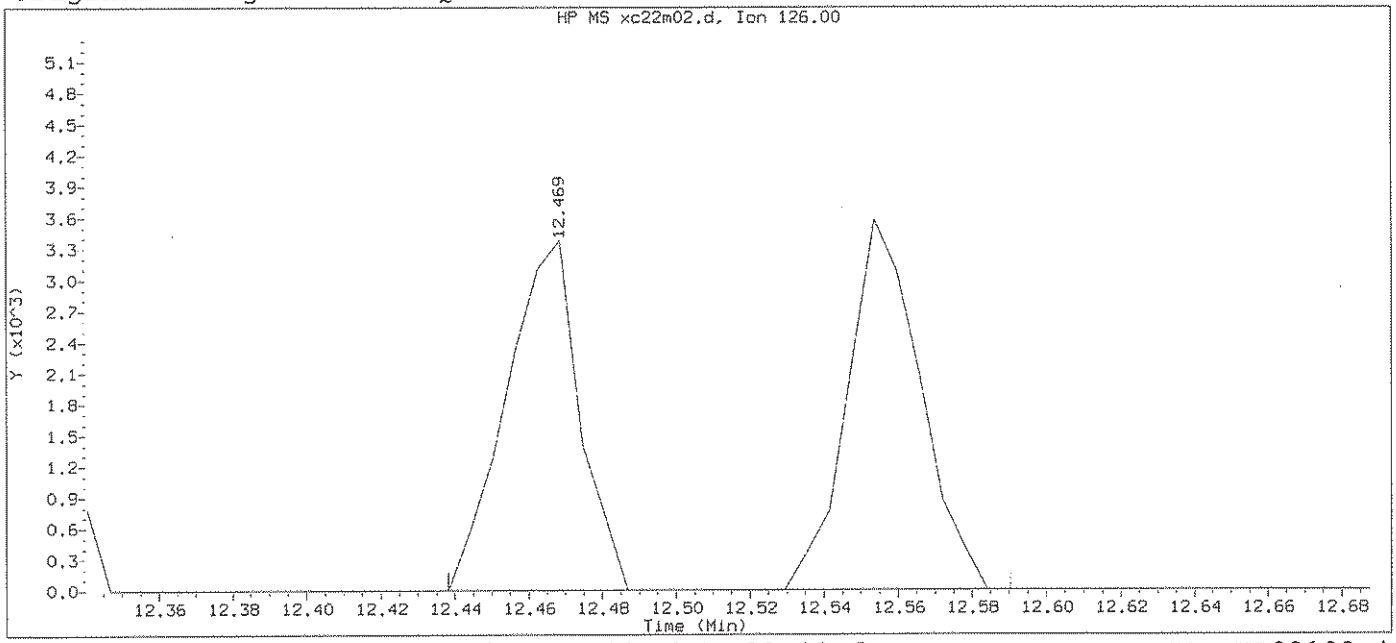
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

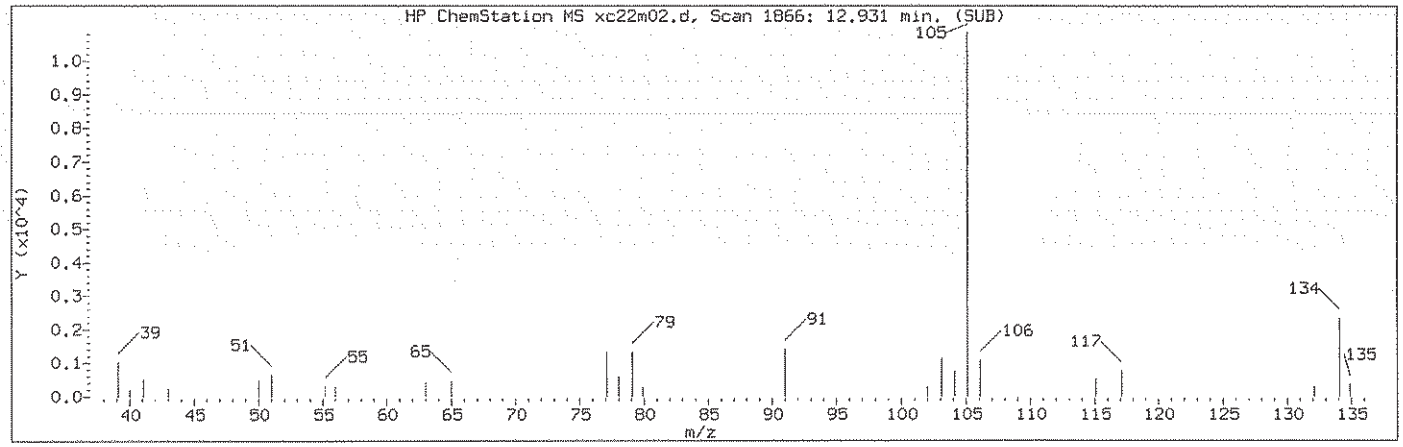
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

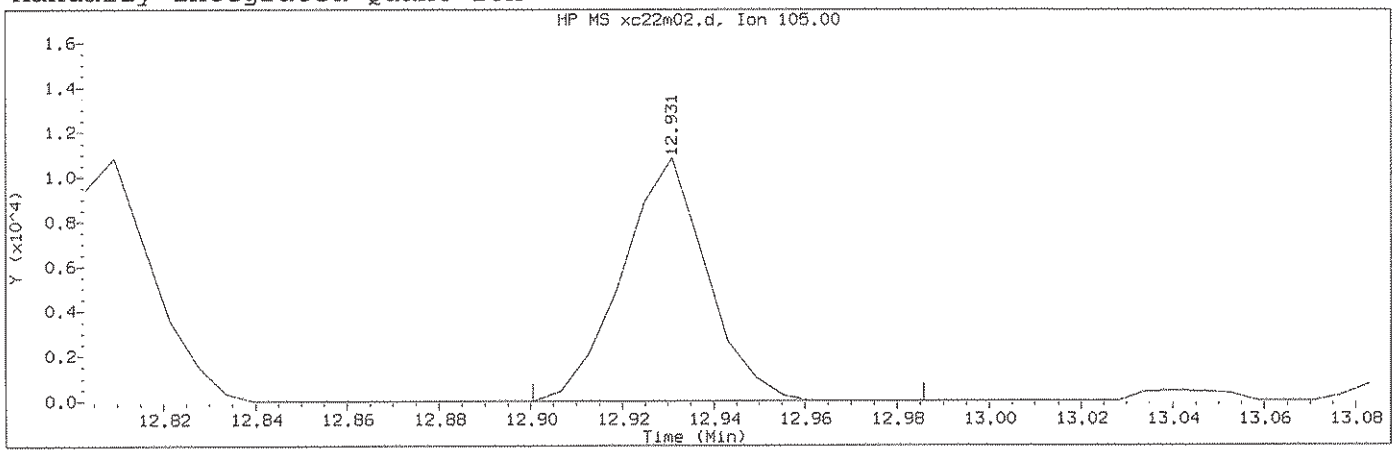
Compound Number : 125
Compound Name : 4-Chlorotoluene
Scan Number : 1790
Retention Time (minutes): 12.469
Quant Ion : 126.00
Area : 9533
On-column Amount (ng) : 0.6596
Integration start scan : 1784 Integration stop scan: 1809
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
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Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

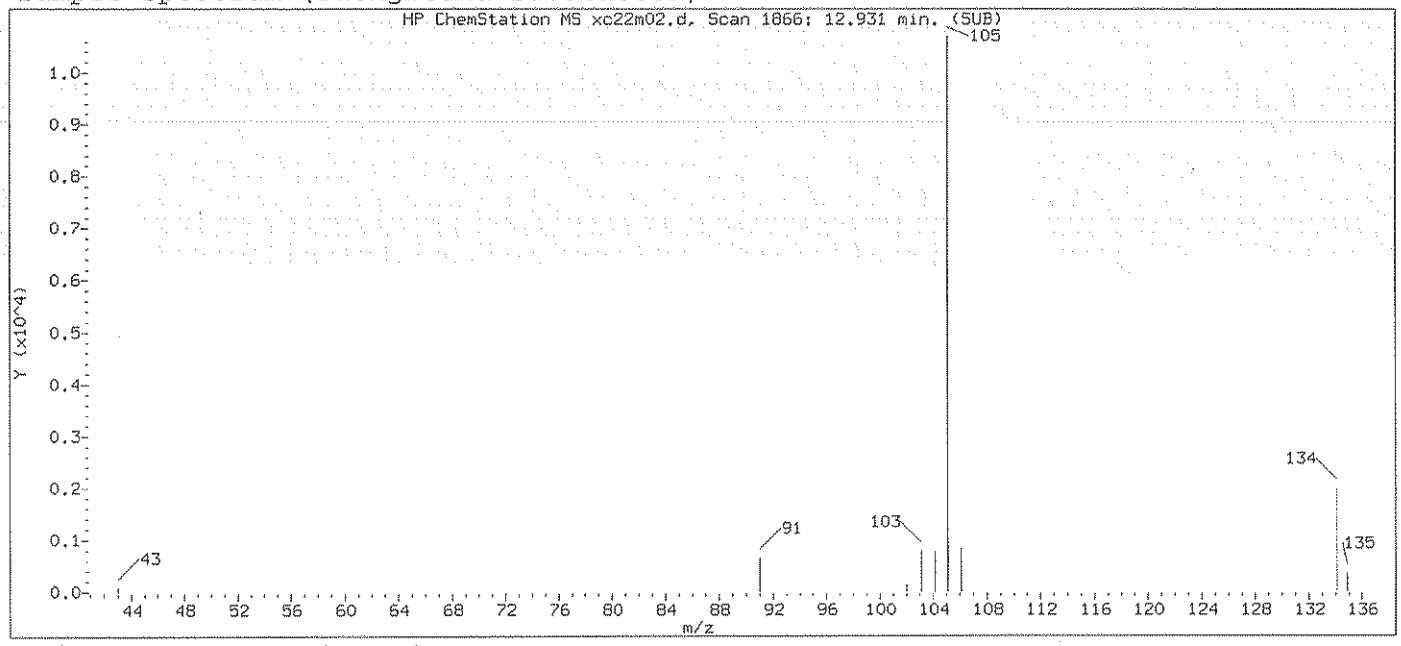
Compound Number : 131
Compound Name : sec-Butylbenzene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 105.00
Area (flag) : 13912M
On-Column Amount (ng) : 0.2488
Integration start scan : 1860 Integration stop scan: 1874
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

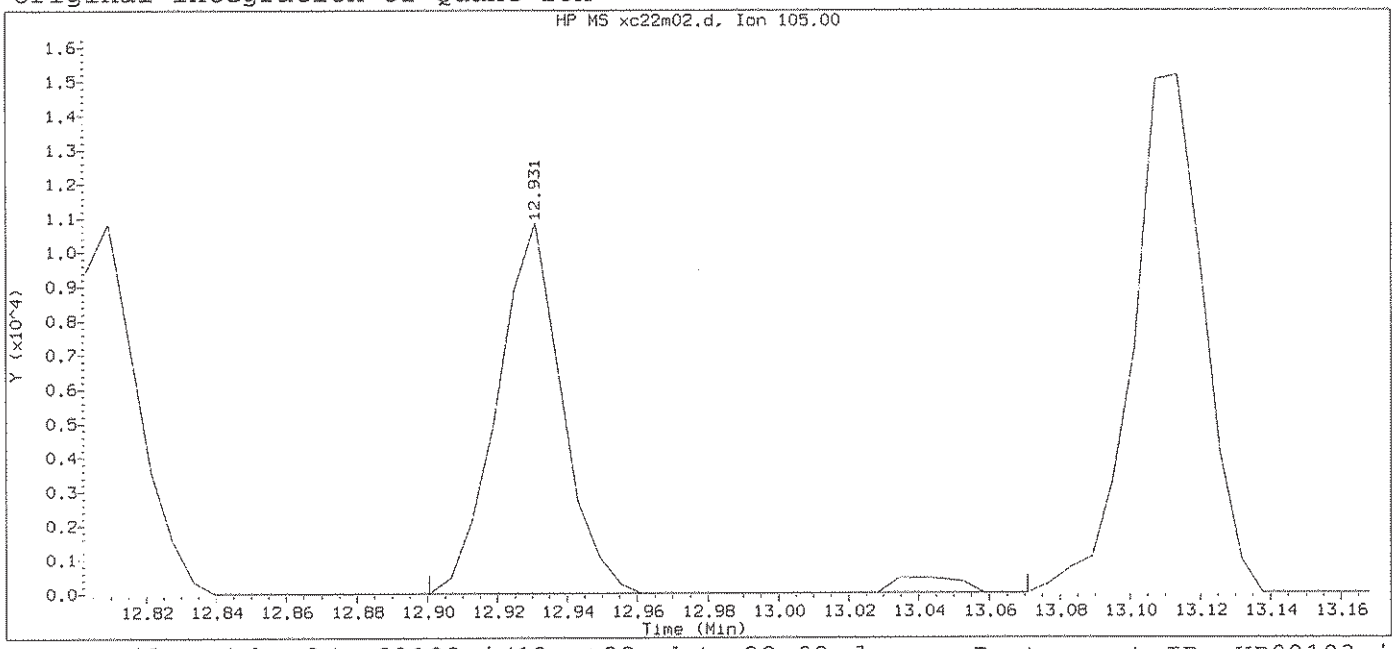
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
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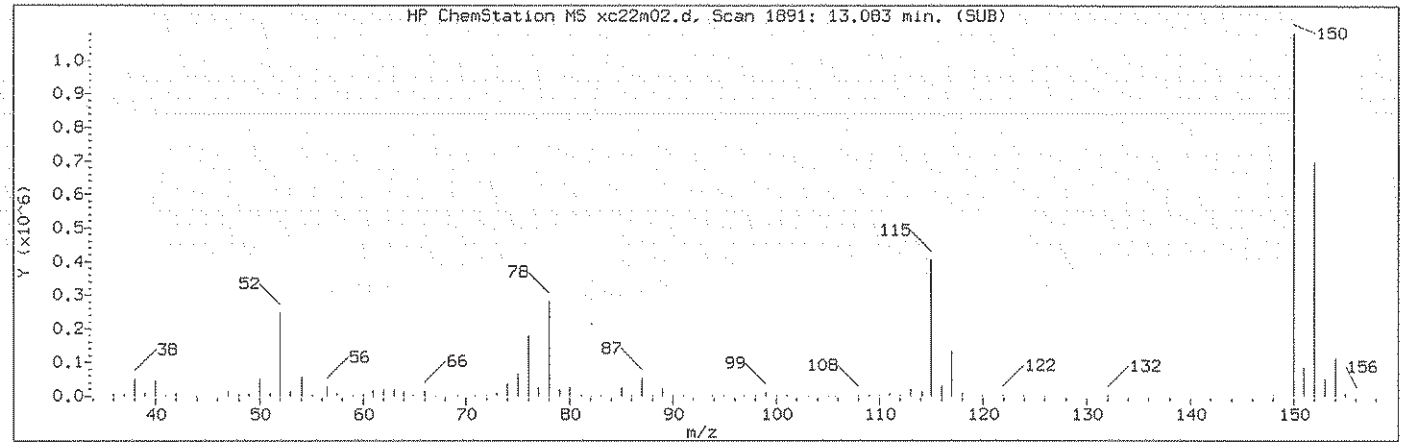
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

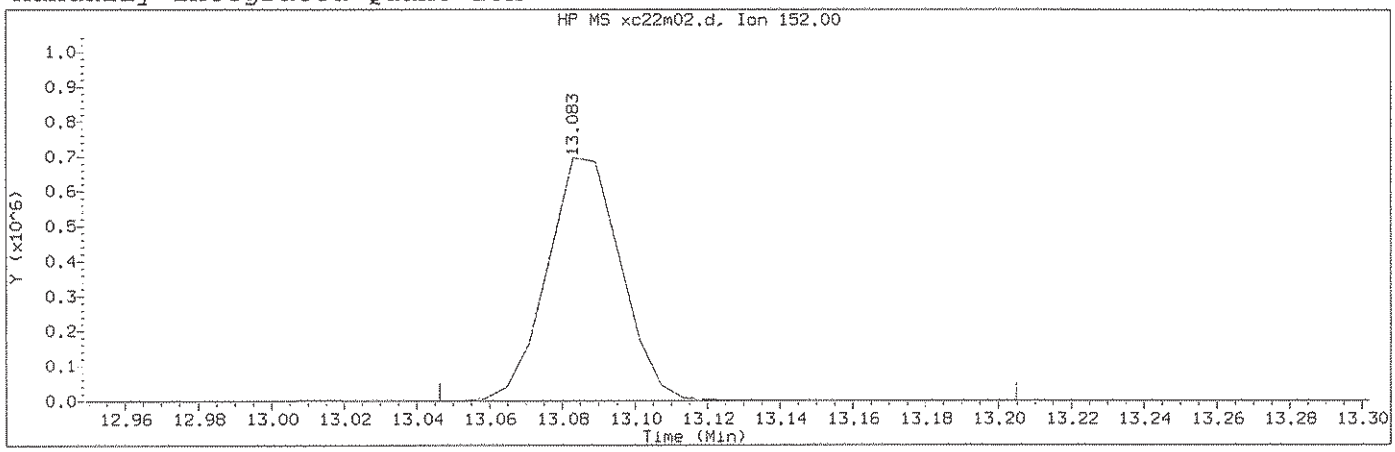
Compound Number	: 131		
Compound Name	: sec-Butylbenzene		
Scan Number	: 1866		
Retention Time (minutes)	: 12.931		
Quant Ion	: 105.00		
Area	: 14506		
On-column Amount (ng)	: 0.2553		
Integration start scan	: 1860	Integration stop scan:	1888
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature using TD cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

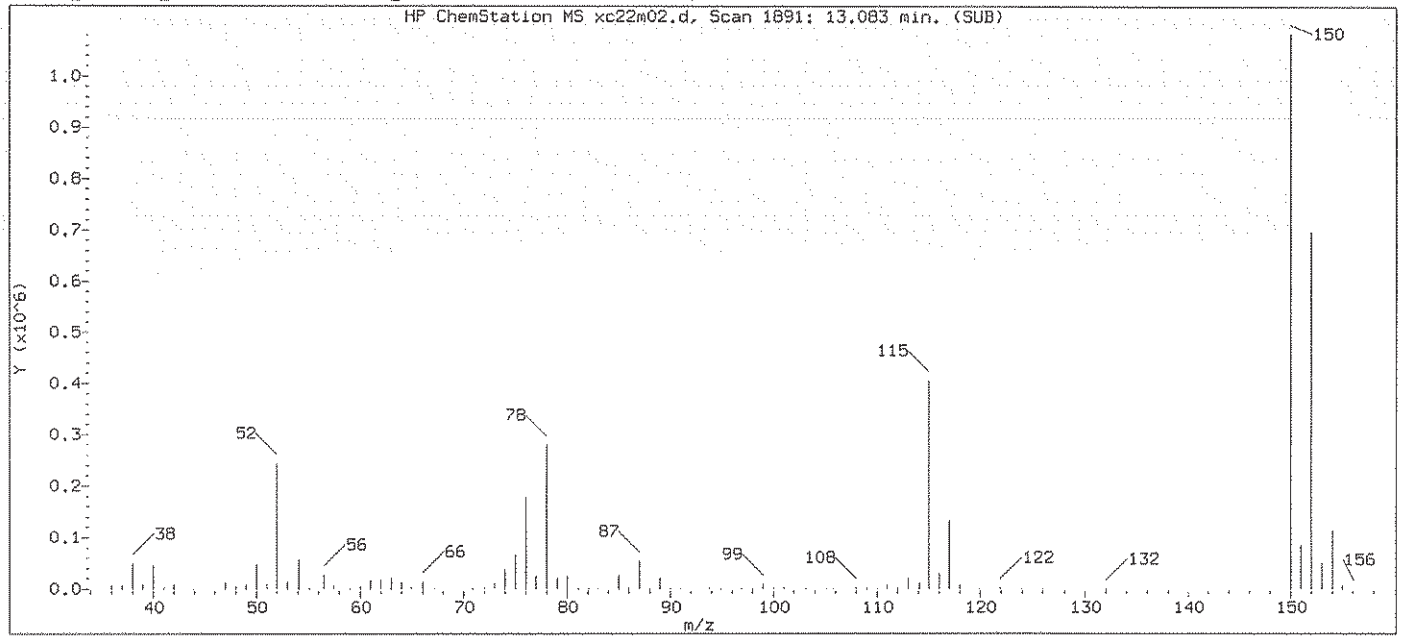
Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area (flag) : 982057M
On-Column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

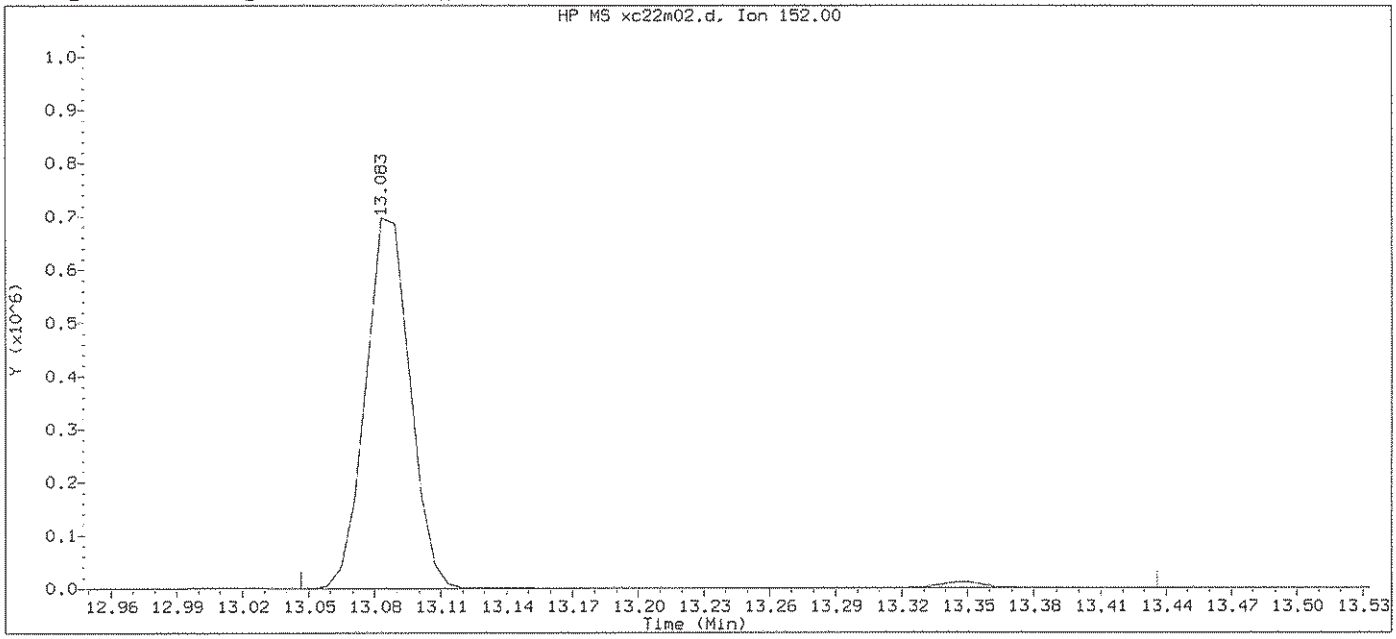
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

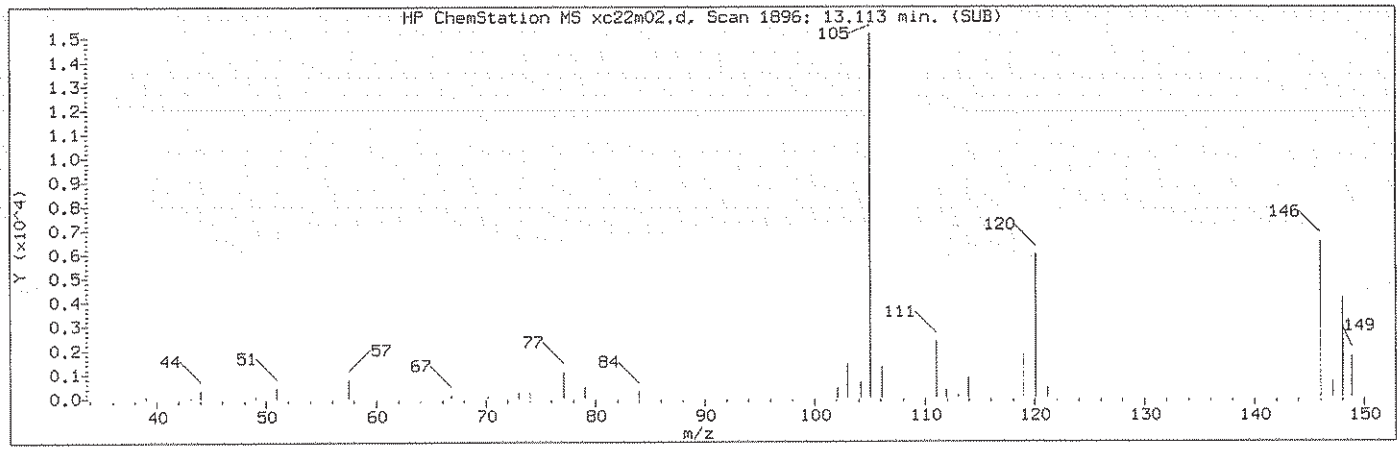
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

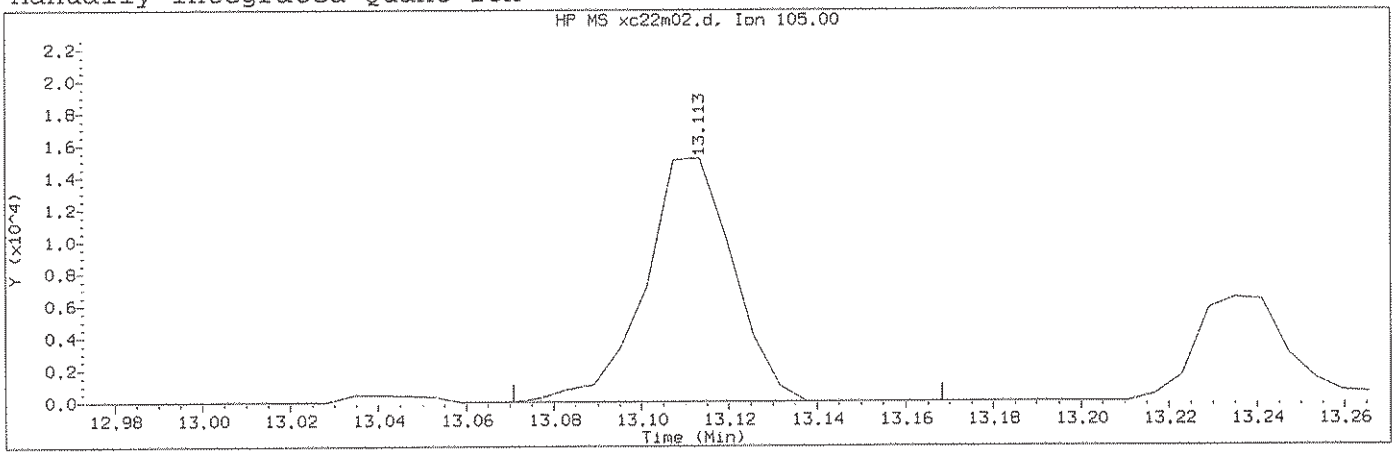
Compound Number : 135
Compound Name : 1,4-Dichlorobenzene-d4
Scan Number : 1891
Retention Time (minutes): 13.083
Quant Ion : 152.00
Area : 997810
On-column Amount (ng) : 50.0000
Integration start scan : 1884 Integration stop scan: 1948
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

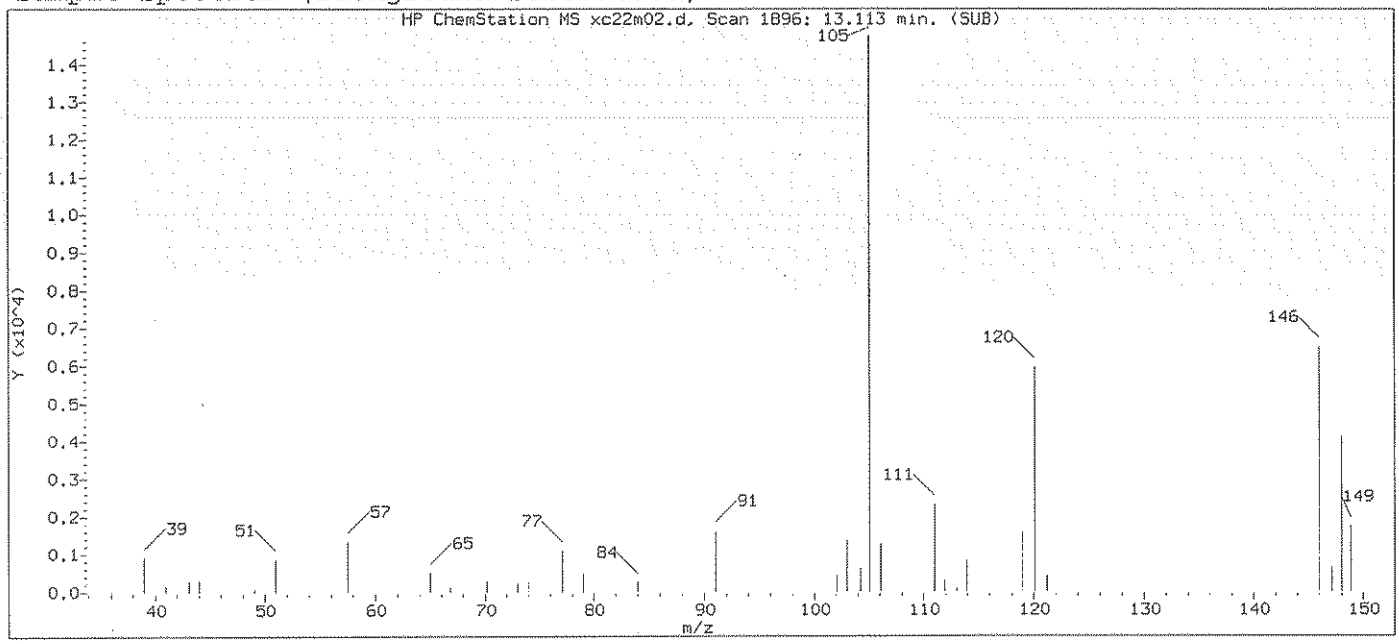
Compound Number : 137
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1896
Retention Time (minutes): 13.113
Quant Ion : 105.00
Area (flag) : 21196M
On-Column Amount (ng) : 0.4179
Integration start scan : 1888 Integration stop scan: 1904
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

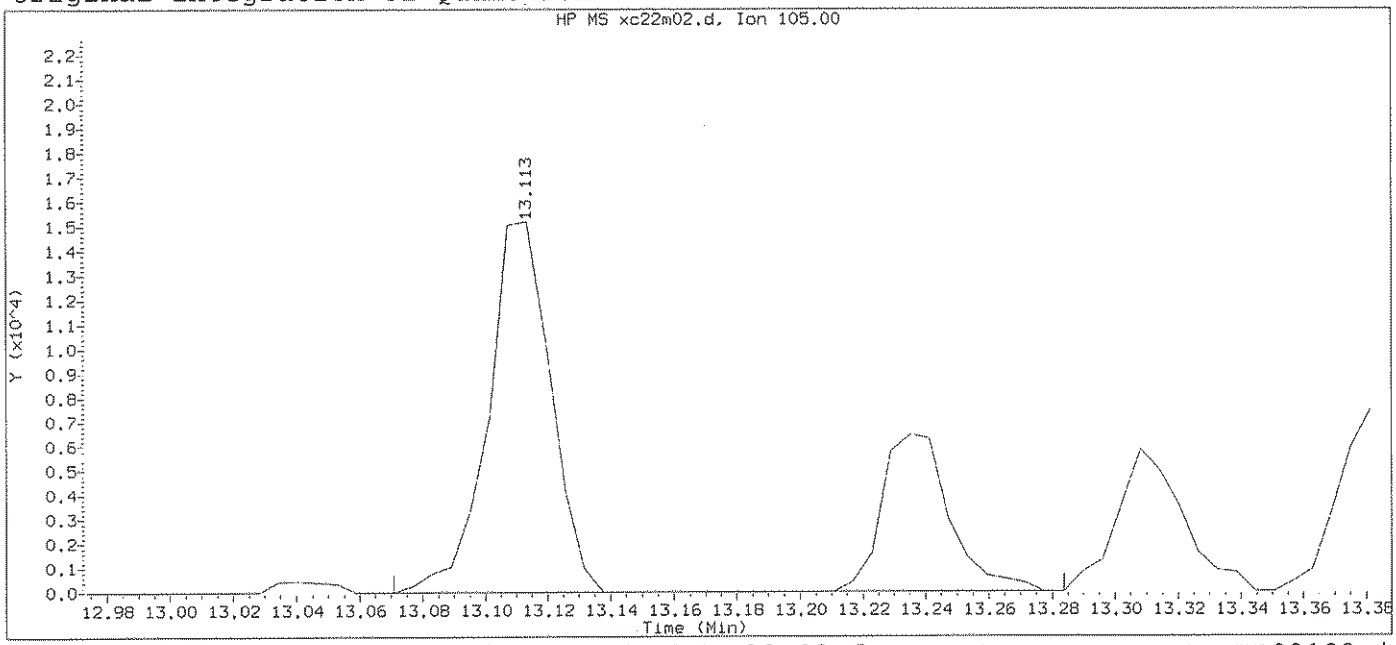
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____ 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

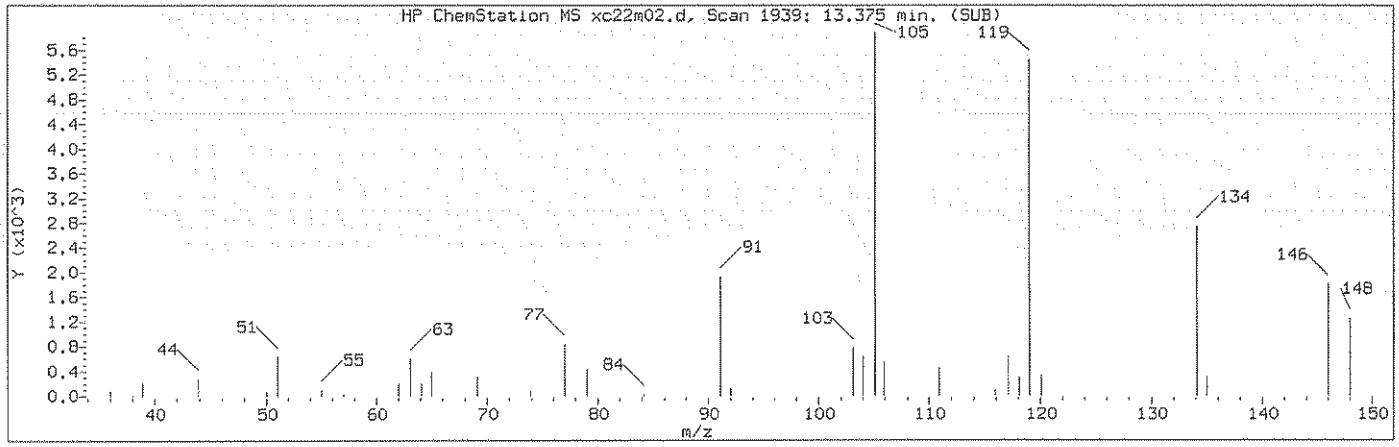
Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

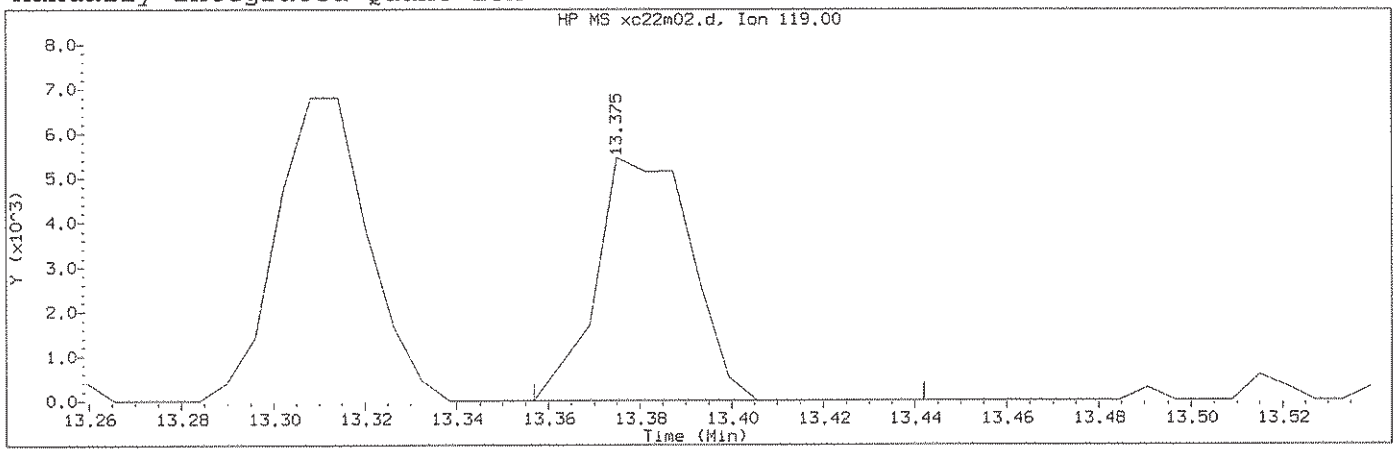
Compound Number	: 137		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1896		
Retention Time (minutes)	: 13.113		
Quant Ion	: 105.00		
Area	: 30861		
On-column Amount (ng)	: 0.5988		
Integration start scan	: 1888	Integration stop scan:	1923
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: CGT03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

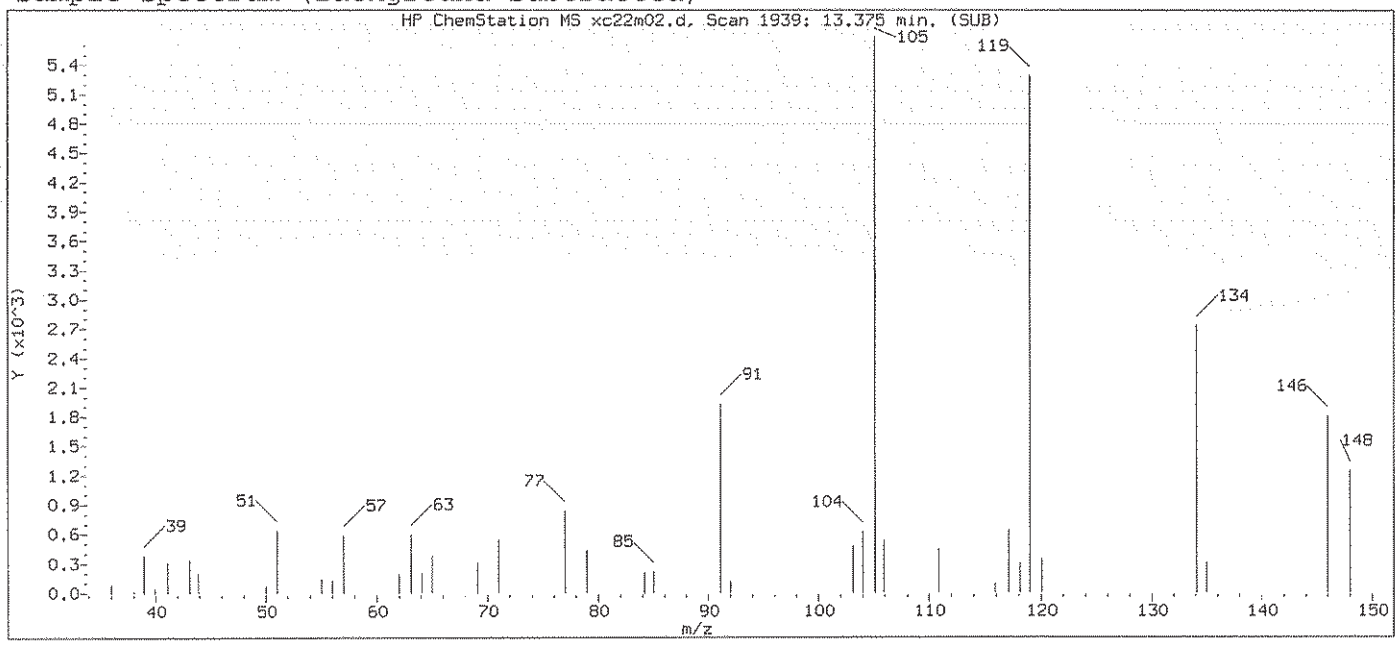
Compound Number : 143
Compound Name : 1,2-Diethylbenzene
Scan Number : 1939
Retention Time (minutes): 13.375
Quant Ion : 119.00
Area (flag) : 7823M
On-Column Amount (ng) : 0.2855
Integration start scan : 1935 Integration stop scan: 1949
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

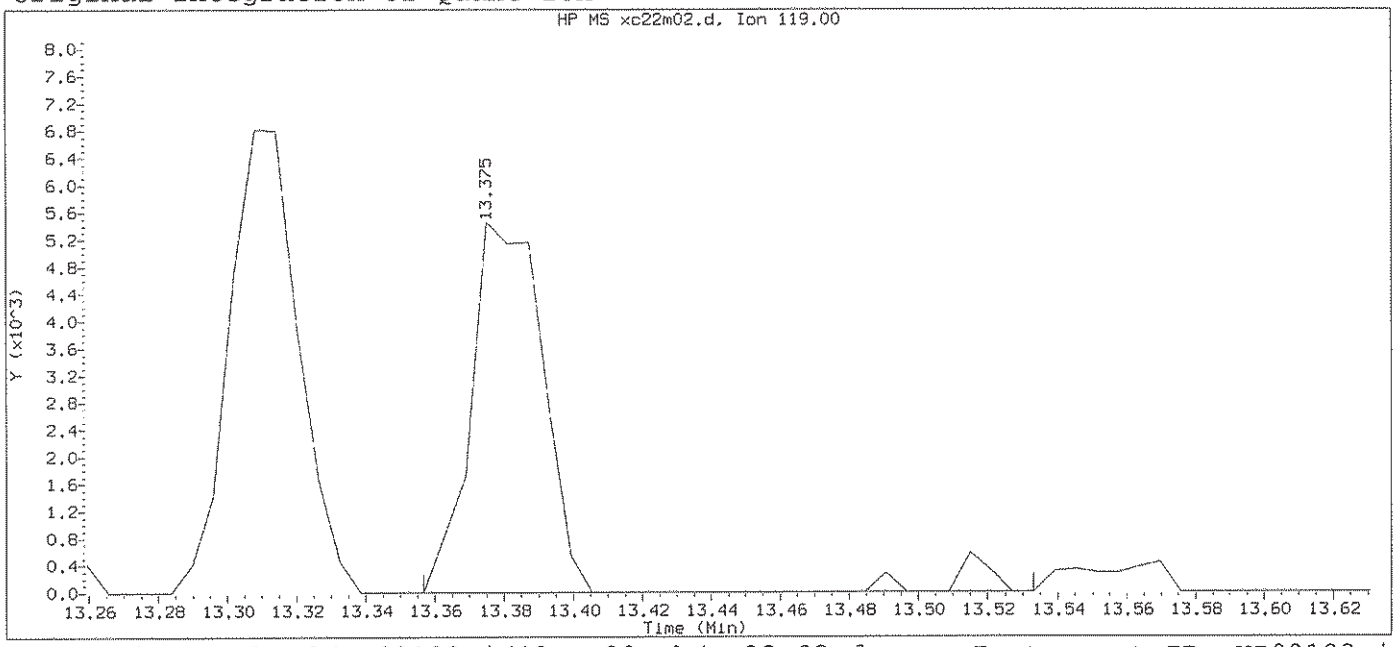
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compound Number : 143
Compound Name : 1,2-Diethylbenzene
Scan Number : 1939
Retention Time (minutes): 13.375
Quant Ion : 119.00
Area : 8249
On-column Amount (ng) : 0.2963
Integration start scan : 1935 Integration stop scan: 1964
Y at integration start : 0 Y at integration end: 0

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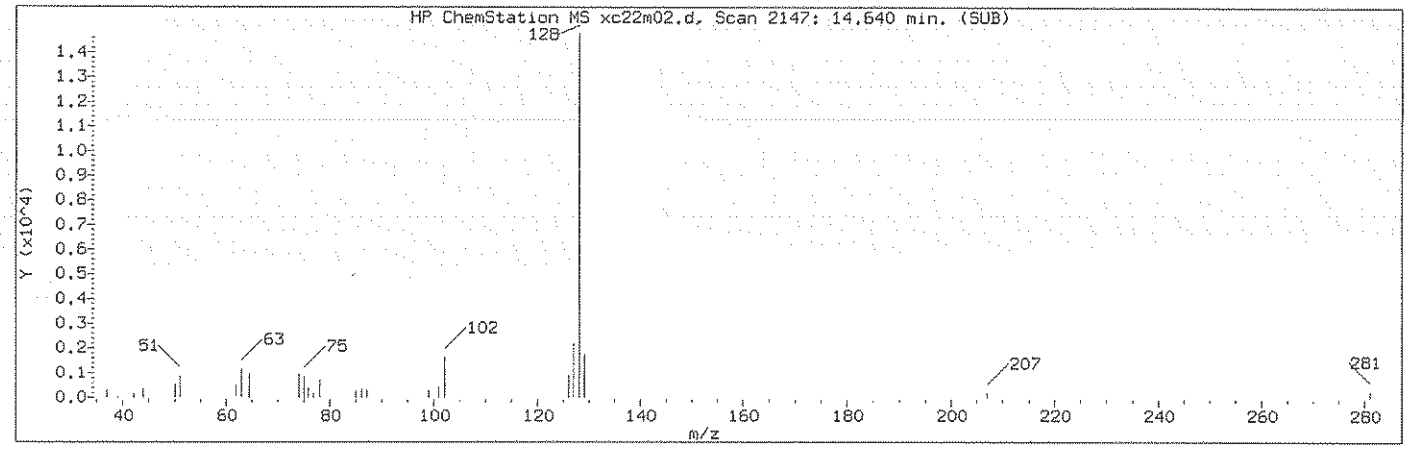
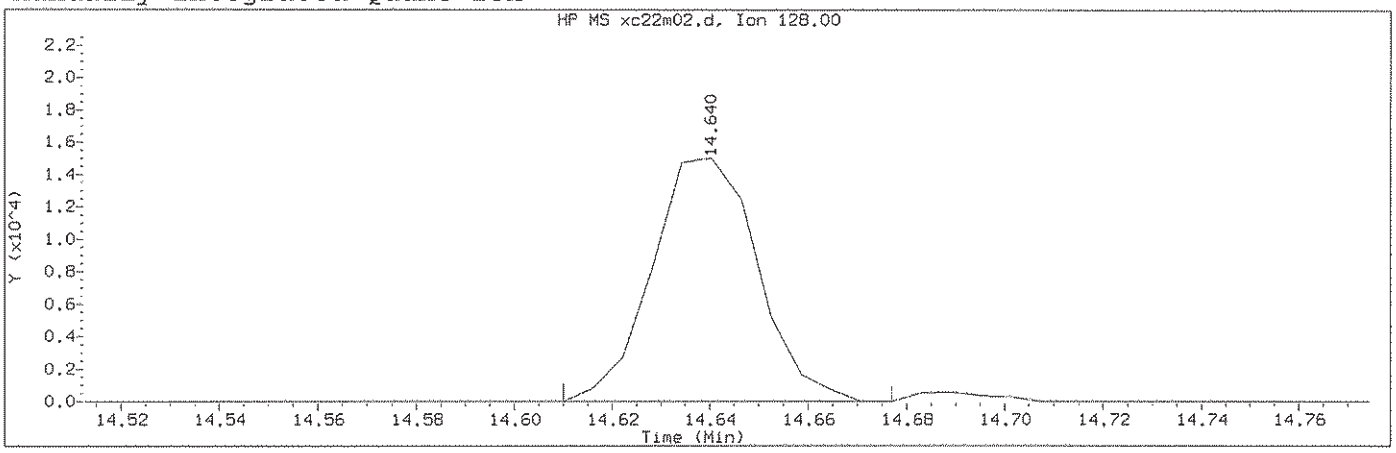
Target 3.5 esignature user ID: cgt03258

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:24 cgt03258

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

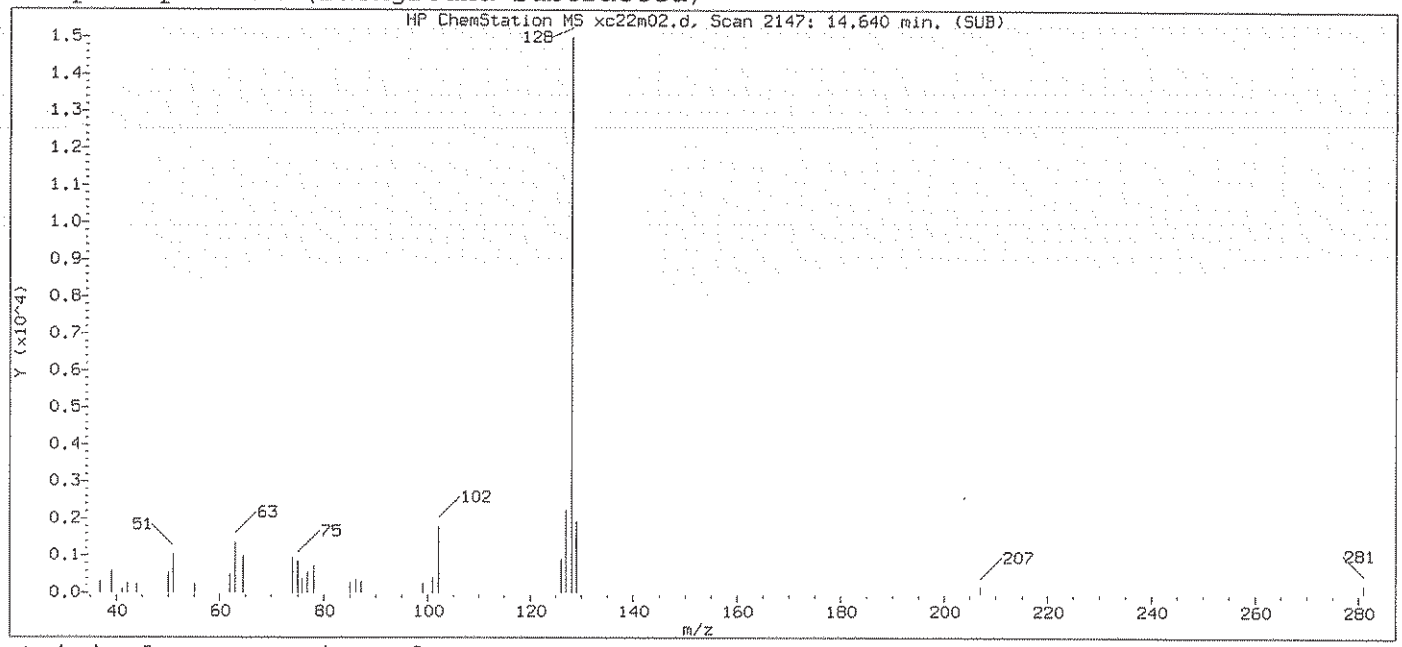
Compound Number	: 150		
Compound Name	: Naphthalene		
Scan Number	: 2147		
Retention Time (minutes)	: 14.640		
Quant Ion	: 128.00		
Area (flag)	: 22457M		
On-Column Amount (ng)	: 0.4359		
Integration start scan	: 2141	Integration stop scan:	2152
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

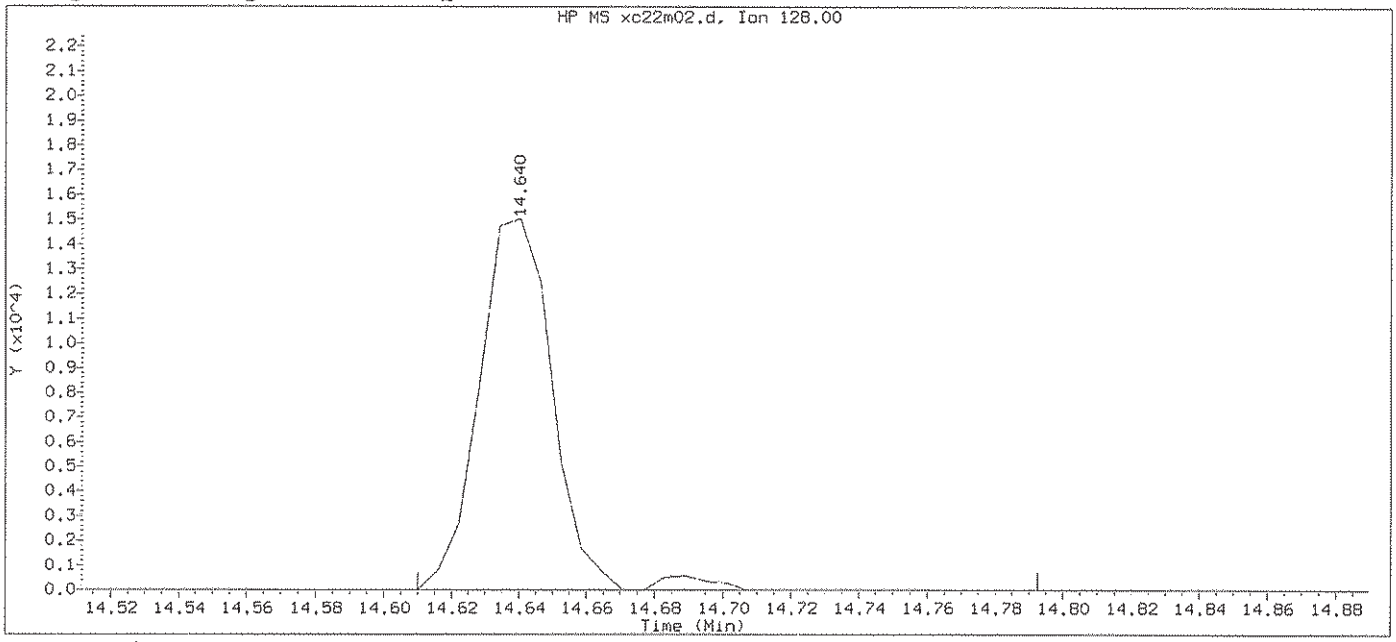
Analyst responsible for change: Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24. Target 3.5 esignature user ID: cgt03258

GC/MS audit/management approval: 10/22/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



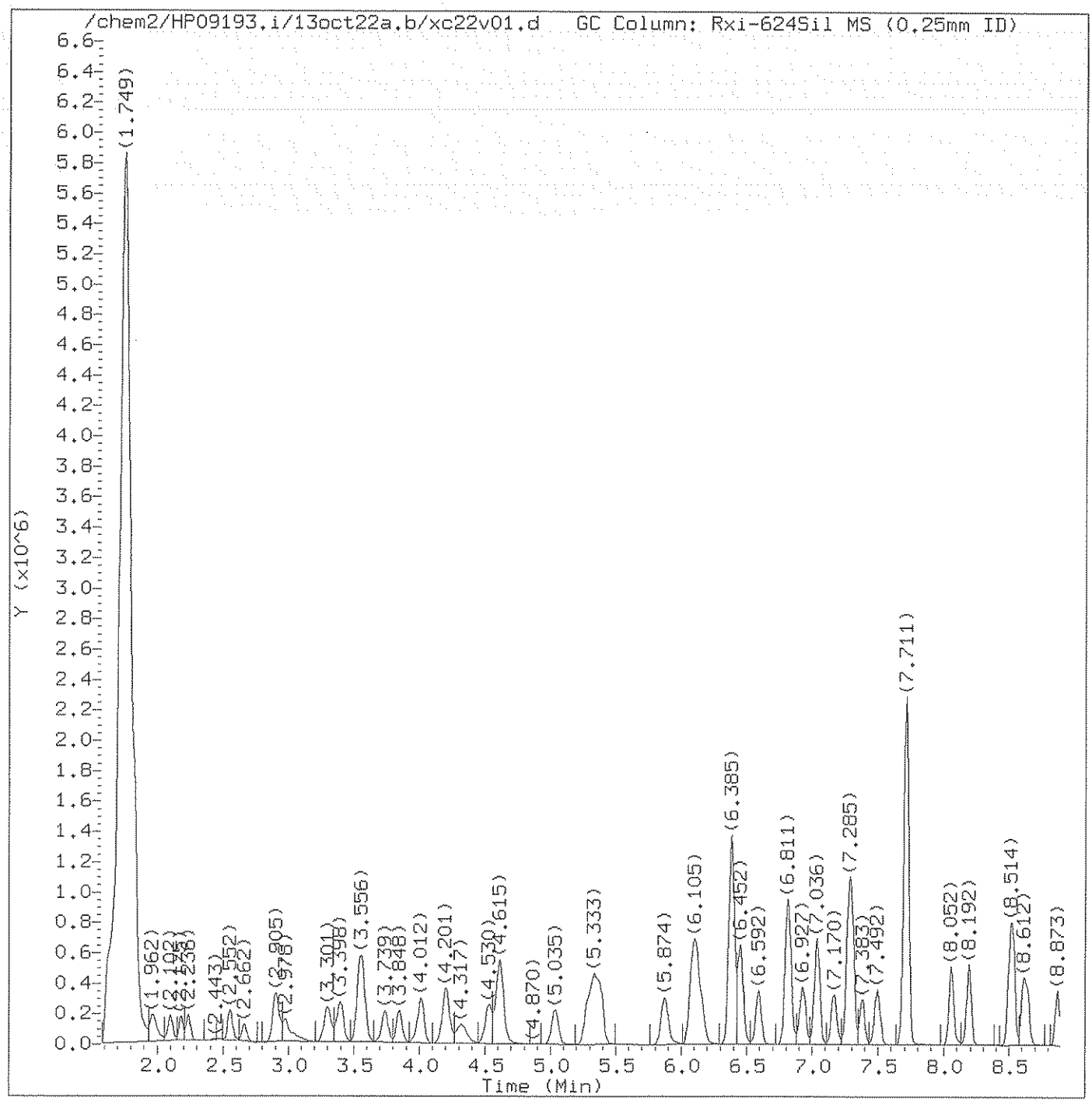
Data File: /chem2/HP09193.i/13oct22a.b/xc22m02.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 04:59 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 04:56
Date, time and analyst ID of latest file update: 22-Oct-2013 05:19 Automation

Sample Name: VSTD0.5 Lab Sample ID: 0.5PPBMDL

Compound Number : 150
Compound Name : Naphthalene
Scan Number : 2147
Retention Time (minutes): 14.640
Quant Ion : 128.00
Area : 23082
On-column Amount (ng) : 0.4410
Integration start scan : 2141 Integration stop scan: 2171
Y at integration start : 0 Y at integration end: 0

Digitally signed by Christopher G. Torres on 10/22/2013 at 05:24.
Target 3.5 esignature user ID: CGT03258



Total Ion Chromatogram (TIC)

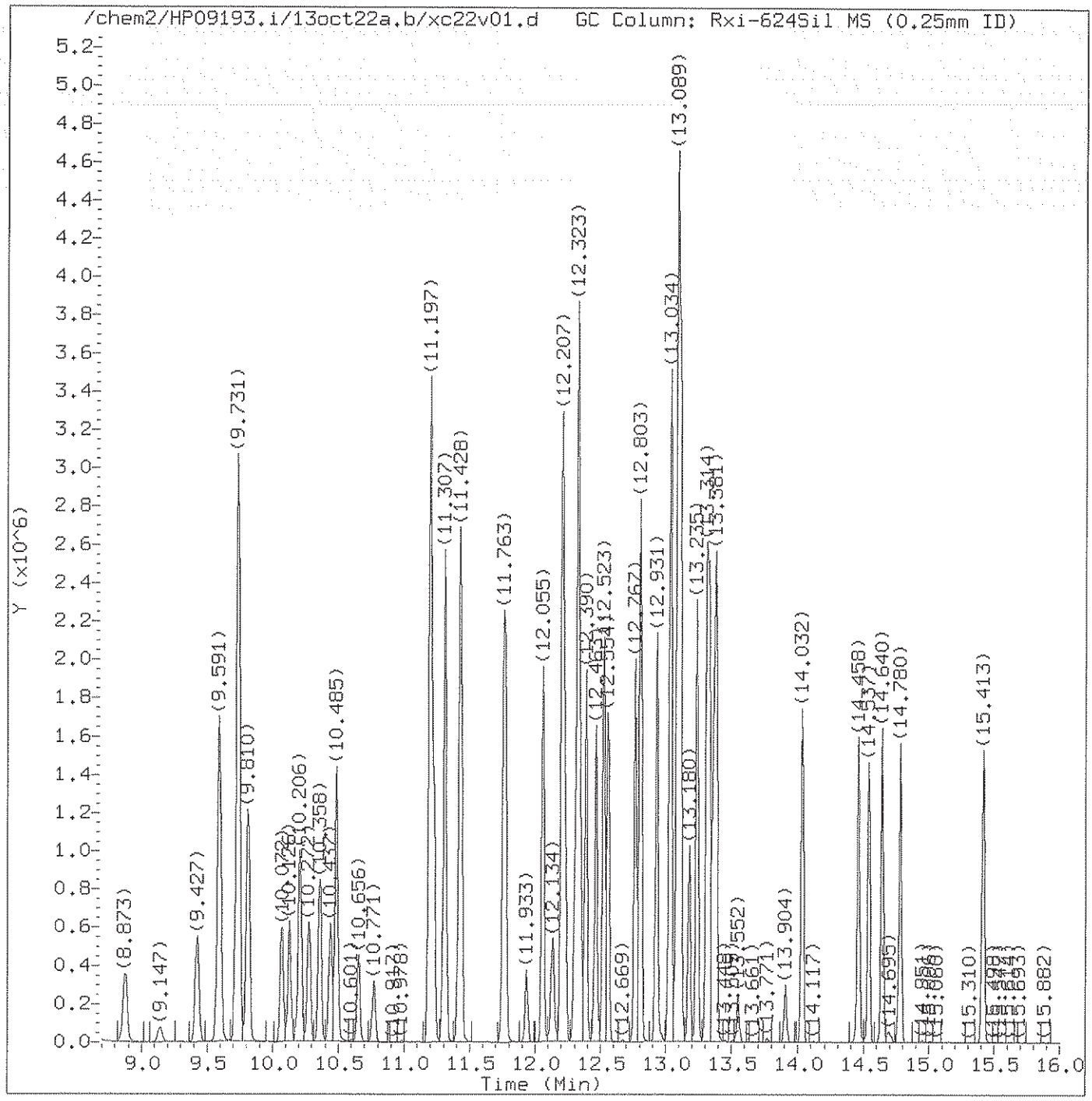
Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22v01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 05:27 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 05:30
Date, time and analyst ID of latest file update: 22-Oct-2013 05:47 Automation

Sample Name: LCSXICV Lab Sample ID: LCSXICV

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:57.
Target 3.5 esignature user ID: cgt03258



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22v01.d Instrument ID: HP09193.i
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Sample Name: LCSXICV Lab Sample ID: LCSXICV

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:57.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22v01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 05:27 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 05:30
Date, time and analyst ID of latest file update: 22-Oct-2013 05:47 Automation

Sample Name: LCSXICV Lab Sample ID: LCSXICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.968	85	291795	16.141
4) Chloromethane	(2)	2.102	50	269430	16.634
5) Vinyl Chloride	(2)	2.236	62	256446	18.109
9) Bromomethane	(2)	2.552	94	199351	18.339
10) Chloroethane	(2)	2.662	64	149503	17.768
11) Dichlorofluoromethane	(2)	2.899	67	441092	20.244
13) Trichlorofluoromethane	(2)	2.978	101	397345	18.457
15) Ethanol	(1)	3.082	45	150938	1020.119
17) Freon 123a	(2)	3.301	67	264790	20.802
18) Acrolein	(1)	3.404	56	349708	144.752
19) 1,1-Dichloroethene	(2)	3.544	96	166578	17.769
20) Acetone	(2)	3.568	58	177528	148.439
22) Freon 113	(2)	3.568	101	155111	15.668
23) 2-Propanol	(1)	3.720	45	148454	162.371
24) Methyl Iodide	(2)	3.739	142	345512	17.867
25) Carbon Disulfide	(2)	3.848	76	528780	15.674
27) Methyl Acetate	(2)	3.982	43	177295	19.784
29) Allyl Chloride	(2)	4.019	41	301022	17.541
30)*t-Butyl alcohol-d10	(1)	4.195	65	311394	250.000
31) Methylene Chloride	(2)	4.201	84	214162	19.133
32) t-Butyl alcohol	(1)	4.323	59	345012	233.414
33) Acrylonitrile	(2)	4.530	53	396777	86.071
34) Methyl Tertiary Butyl Ether	(2)	4.609	73	584526	18.965
35) trans-1,2-Dichloroethene	(2)	4.615	96	204552	18.728
38) n-Hexane	(2)	5.035	57	194748	14.330
40) 1,1-Dichloroethane	(2)	5.272	63	397181	19.229
41) di-Isopropyl ether	(2)	5.333	45	678780	19.787
42) 2-Chloro-1,3-butadiene	(2)	5.381	53	327003	17.922
44) Ethyl t-butyl ether	(2)	5.874	59	468947	19.175
45) 2-Butanone	(2)	6.075	43	823961	134.603
47) 1,2-Dichloroethene (Total)	(2)		96	435967	37.942
46) cis-1,2-Dichloroethene	(2)	6.111	96	231415	19.214
48) 2,2-Dichloropropane	(2)	6.123	77	333557	18.329
50) Propionitrile	(1)	6.166	54	238910	151.943
51) Methacrylonitrile	(2)	6.385	67	725681	145.999
52) Bromochloromethane	(2)	6.446	128	126477	19.140
53) Tetrahydrofuran	(1)	6.458	71	147230	95.394
54) Chloroform	(2)	6.592	83	414530	19.576

* = Compound is an internal standard.

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on 10/22/2013 at 05:57.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22v01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 05:27 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 05:30
Date, time and analyst ID of latest file update: 22-Oct-2013 05:47 Automation

Sample Name: LCSXICV Lab Sample ID: LCSXICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
56)$Dibromofluoromethane	(2)	6.811	113	596849	49.646
57) 1,1,1-Trichloroethane	(2)	6.829	97	372684	18.143
58) Cyclohexane	(2)	6.927	56	270939	16.012
60) Carbon Tetrachloride	(2)	7.036	117	307389	18.342
59) 1,1-Dichloropropene	(2)	7.036	75	288363	18.621
61) Isobutyl Alcohol	(1)	7.170	41	253388	499.180
62)$1,2-Dichloroethane-d4	(2)	7.273	102	134380	49.596
63) Benzene	(2)	7.298	78	857520	19.031
66) 1,2-Dichloroethane	(2)	7.383	62	361793	19.205
67) t-Amyl methyl ether	(2)	7.492	73	380031	19.239
69)*Fluorobenzene	(2)	7.711	96	2306153	50.000
71) n-Heptane	(2)	7.717	43	236270	15.452
72) n-Butanol	(1)	8.052	56	395368	1013.212
74) Trichloroethene	(2)	8.192	95	230631	19.395
75) Methylcyclohexane	(2)	8.508	83	331743	18.408
76) 1,2-Dichloropropane	(2)	8.533	63	226005	19.876
78) Methyl Methacrylate	(2)	8.606	69	167045	18.831
79) 1,4-Dioxane	(1)	8.618	88	69001	484.735
80) Dibromomethane	(2)	8.642	93	150706	19.026
83) Bromodichloromethane	(2)	8.873	83	310282	18.662
84) 2-Nitropropane	(1)	9.147	41	64584	16.710
86) cis-1,3-Dichloropropene	(2)	9.427	75	354011	19.395
87) 4-Methyl-2-pentanone	(2)	9.591	43	1252216	92.374
88)$Toluene-d8	(3)	9.731	98	2335560	50.512
89) Toluene	(3)	9.810	92	556984	19.342
90) trans-1,3-Dichloropropene	(3)	10.072	75	341020	17.887
91) Ethyl Methacrylate	(3)	10.126	69	310160	19.370
92) 1,1,2-Trichloroethane	(3)	10.279	97	201405	19.308
94) Tetrachloroethene	(3)	10.358	166	266589	19.744
95) 1,3-Dichloropropane	(3)	10.437	76	356909	19.290
97) 2-Hexanone	(3)	10.485	43	930456	92.145
99) Dibromochloromethane	(3)	10.656	129	235707	18.497
100) 1,2-Dibromoethane	(3)	10.771	107	213279	18.798
101)*Chlorobenzene-d5	(3)	11.197	117	1790484	50.000
102) Chlorobenzene	(3)	11.222	112	664706	19.682
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	234278	18.615
104) Ethylbenzene	(3)	11.307	91	1096910	19.928
105) m+p-Xylene	(3)	11.428	106	873831	39.293

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/22/2013 at 05:57.
Target 3.5 esignature user ID: cgt03258

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13oct22a.b/xc22v01.d Instrument ID: HP09193.i
Injection date and time: 22-OCT-2013 05:27 Analyst ID: CGT03258

Method used: /chem2/HP09193.i/13oct22a.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 22-OCT-2013 05:30
Date, time and analyst ID of latest file update: 22-Oct-2013 05:47 Automation

Sample Name: LCSXICV Lab Sample ID: LCSXICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
107) Xylene (Total)	(3)		106	1289247	58.760
106) o-Xylene	(3)	11.757	106	415416	19.467
108) Styrene	(3)	11.769	104	708011	19.603
109) Bromoform	(3)	11.933	173	158125	19.392
110) Isopropylbenzene	(3)	12.055	105	1084710	19.906
113) Cyclohexanone	(1)	12.134	55	220703	492.066
114)$4-Bromofluorobenzene	(3)	12.201	95	910114	49.661
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	302046	19.249
116) Bromobenzene	(4)	12.323	156	309677	19.141
117) trans-1,4-Dichloro-2-butene	(4)	12.329	53	562934	99.788
118) 1,2,3-Trichloropropane	(4)	12.347	110	95493	18.823
119) n-Propylbenzene	(4)	12.390	91	1337754	20.246
121) 2-Chlorotoluene	(4)	12.463	126	278143	19.076
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	981603	19.892
125) 4-Chlorotoluene	(4)	12.554	126	292892	19.067
128) tert-Butylbenzene	(4)	12.767	134	227697	19.192
129) Pentachloroethane	(4)	12.797	167	183708	18.015
130) 1,2,4-Trimethylbenzene	(4)	12.809	105	1023880	20.040
131) sec-Butylbenzene	(4)	12.931	105	1229825	20.367
133) 1,3-Dichlorobenzene	(4)	13.028	146	590848	19.555
134) p-Isopropyltoluene	(4)	13.041	119	1114872	19.820
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	1060357	50.000
136) 1,4-Dichlorobenzene	(4)	13.107	146	611628	19.447
137) 1,2,3-Trimethylbenzene	(4)	13.114	105	1056936	19.298
138) Benzyl Chloride	(4)	13.180	126	128851	18.160
139) 1,3-Diethylbenzene	(4)	13.235	119	653944	18.838
140) 1,4-Diethylbenzene	(4)	13.308	119	691238	19.466
141) n-Butylbenzene	(4)	13.333	92	579498	20.145
142) 1,2-Dichlorobenzene	(4)	13.363	146	574668	19.350
143) 1,2-Diethylbenzene	(4)	13.381	119	565681	19.117
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	66497	17.737
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	473743	19.082
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	433427	18.853
149) Hexachlorobutadiene	(4)	14.537	225	235718	19.000
150) Naphthalene	(4)	14.640	128	1096910	19.720
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	433969	19.031
152) 2-Methylnaphthalene	(4)	15.413	142	665076	17.816

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Christopher G. Torres
on 10/22/2013 at 05:57.
Target 3.5 esignature user ID: cgt03258

Data File: /chem2/HP09193.i/13nov11b.b/xn11t05.d

Date : 11-NOV-2013 23:10

Client ID: 50 NG BFB

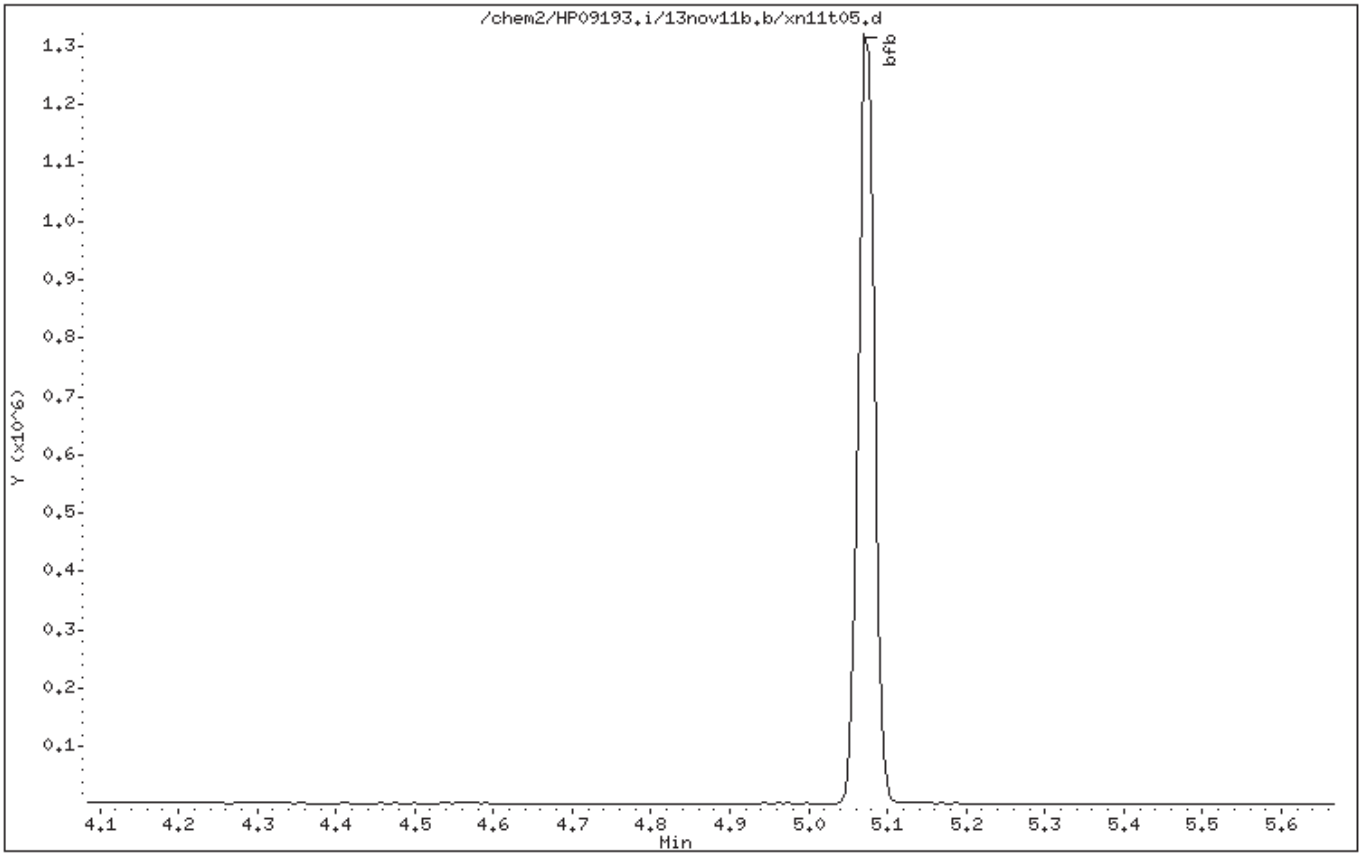
Instrument: HP09193.i

Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

Operator: SAS00403

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Data File: /chem2/HP09193.i/13nov11b.b/xn11t05.d

Date : 11-NOV-2013 23:10

Client ID: 50 NG BFB

Instrument: HP09193.i

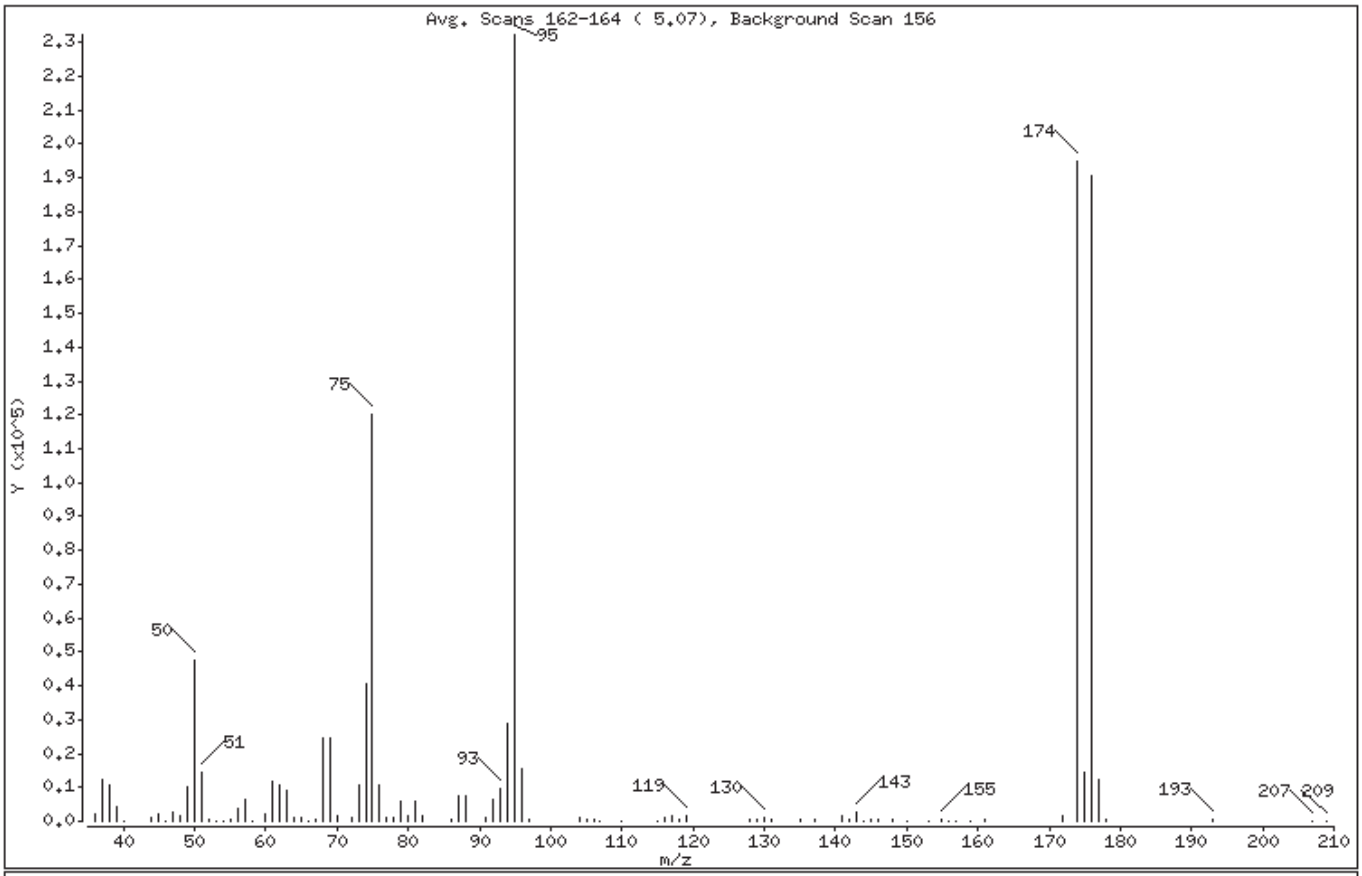
Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

Operator: SAS00403

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.43
75	30.00 - 60.00% of mass 95	51.82
96	5.00 - 9.00% of mass 95	6.77
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	83.89
175	5.00 - 9.00% of mass 174	6.28 (7.48)
176	95.00 - 101.00% of mass 174	82.14 (97.91)
177	5.00 - 9.00% of mass 176	5.20 (6.33)

Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Date : 11-NOV-2013 23:10

Client ID: 50 NG BFB Instrument: HP09193.i

Sample Info: 50 NG BFB;BFB SEP18-13;;2;3;;;;;;

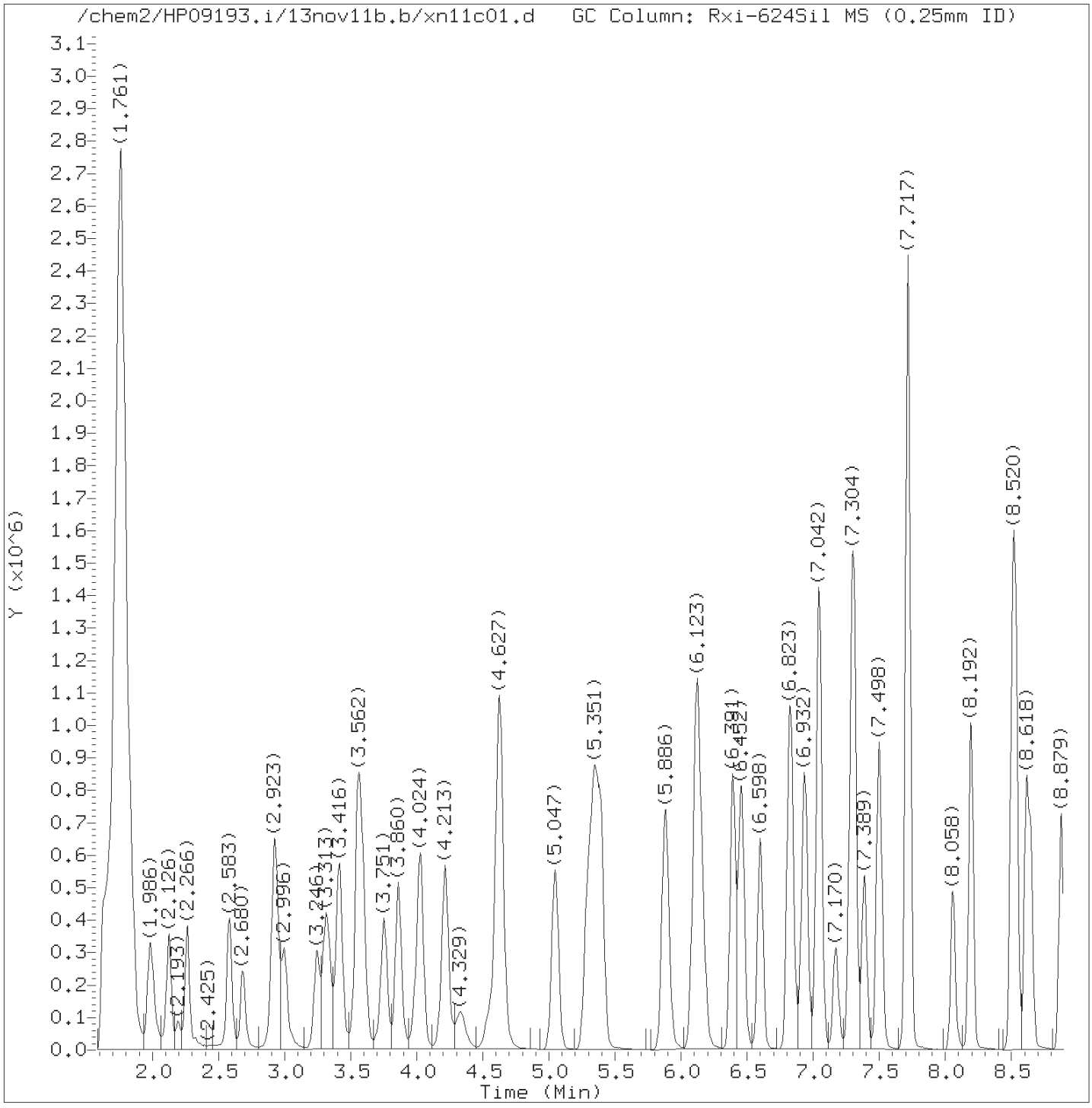
Operator: SAS00403

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: xn11t05.d
Spectrum: Avg. Scans 162-164 (5.07), Background Scan 156
Location of Maximum: 95.00
Number of points: 91

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2097	63.00	9296	92.00	6392	142.00	348
37.00	12228	64.00	1000	93.00	9824	143.00	2416
38.00	10867	65.00	1217	94.00	28840	144.00	85
39.00	4523	66.00	98	95.00	232256	145.00	333
40.00	208	67.00	731	96.00	15729	146.00	345
44.00	1032	68.00	24384	97.00	503	148.00	561
45.00	2068	69.00	24824	104.00	897	150.00	233
46.00	120	70.00	1741	105.00	314	153.00	90
47.00	2538	72.00	1251	106.00	770	155.00	488
48.00	1518	73.00	10551	107.00	168	156.00	94
49.00	9888	74.00	40832	110.00	84	157.00	261
50.00	47464	75.00	120376	115.00	247	159.00	212
51.00	14283	76.00	10763	116.00	847	161.00	279
52.00	400	77.00	1235	117.00	1401	172.00	1653
53.00	233	78.00	943	118.00	786	174.00	194816
54.00	83	79.00	6082	119.00	1416	175.00	14577
55.00	600	80.00	1754	128.00	740	176.00	190784
56.00	3493	81.00	5987	129.00	547	177.00	12082
57.00	6316	82.00	1441	130.00	808	178.00	403
58.00	122	86.00	283	131.00	338	193.00	533
60.00	2300	87.00	7311	135.00	480	207.00	50
61.00	11935	88.00	7301	137.00	477	209.00	218
62.00	10639	91.00	840	141.00	1865		

Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

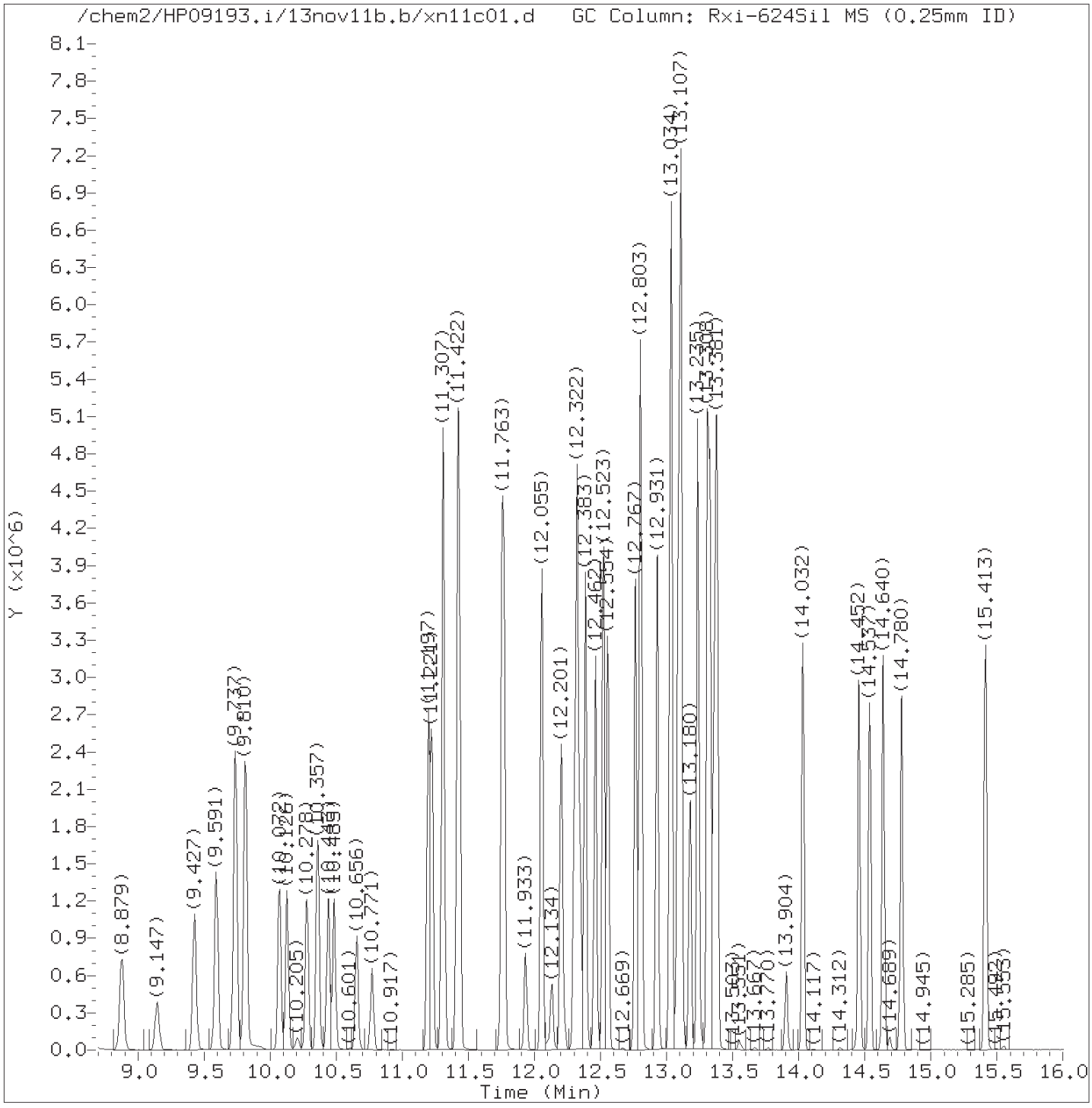
Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.986	85	661571	46.690
4) Chloromethane	(2)	2.126	50	542583	44.087
5) Vinyl Chloride	(2)	2.266	62	545577	49.153
9) Bromomethane	(2)	2.583	94	414359	48.634
10) Chloroethane	(2)	2.680	64	327243	49.619
11) Dichlorofluoromethane	(2)	2.923	67	828218	48.496
13) Trichlorofluoromethane	(2)	2.996	101	834221	49.439
15) Ethanol	(1)	3.246	45	223830	1909.923
17) Freon 123a	(2)	3.313	67	483435	48.455
18) Acrolein	(1)	3.416	56	860301	449.588
19) 1,1-Dichloroethene	(2)	3.556	96	359641	48.946
19) 1,1-Dichloroethene	(2)	3.556	63	197573	47.025
20) Acetone	(2)	3.568	58	94178	100.468
22) Freon 113	(2)	3.586	101	378902	48.830
23) 2-Propanol	(1)	3.726	45	156495	216.104
24) Methyl Iodide	(2)	3.751	142	726142	47.908
25) Carbon Disulfide	(2)	3.860	76	1305989	49.392
27) Methyl Acetate	(2)	3.994	43	310596	44.220
29) Allyl Chloride	(2)	4.031	41	623289	46.340
30)*t-Butyl alcohol-d10	(1)	4.213	65	246641	250.000
31) Methylene Chloride	(2)	4.213	84	415406	47.350
32) t-Butyl alcohol	(1)	4.335	59	295160	252.112
33) Acrylonitrile	(2)	4.548	53	165913	45.919
34) Methyl Tertiary Butyl Ether	(2)	4.621	73	1273826	52.730
35) trans-1,2-Dichloroethene	(2)	4.633	96	419364	48.987
38) n-Hexane	(2)	5.047	57	492336	46.221
40) 1,1-Dichloroethane	(2)	5.290	63	767151	47.387
41) di-Isopropyl ether	(2)	5.345	45	1271805	47.301
42) 2-Chloro-1,3-butadiene	(2)	5.393	53	682774	47.744
44) Ethyl t-butyl ether	(2)	5.880	59	1151950	60.096
45) 2-Butanone	(2)	6.087	43	436131	90.900
47) 1,2-Dichloroethene (Total)	(2)		96	881792	97.973
46) cis-1,2-Dichloroethene	(2)	6.117	96	462428	48.986
48) 2,2-Dichloropropane	(2)	6.136	77	692210	48.529
50) Propionitrile	(1)	6.172	54	300276	241.109
51) Methacrylonitrile	(2)	6.391	67	452914	116.257
52) Bromochloromethane	(2)	6.452	128	255815	49.392
53) Tetrahydrofuran	(1)	6.464	71	118869	97.238

* = Compound is an internal standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
54) Chloroform	(2)	6.598	83	790968	47.656
56)$Dibromofluoromethane	(2)	6.817	113	458934	48.705
56)$Dibromofluoromethane	(2)	6.817	111	468755	48.582
57) 1,1,1-Trichloroethane	(2)	6.835	97	699083	43.420
58) Cyclohexane	(2)	6.932	56	636782	48.013
58) Cyclohexane	(2)	6.939	84	566358	48.404
58) Cyclohexane	(2)	6.932	69	197577	47.395
59) 1,1-Dichloropropene	(2)	7.042	75	586156	48.293
60) Carbon Tetrachloride	(2)	7.048	117	634244	48.286
61) Isobutyl Alcohol	(1)	7.176	41	234282	582.713
62)$1,2-Dichloroethane-d4	(2)	7.279	102	110219	51.899
62)$1,2-Dichloroethane-d4	(2)	7.279	65	604330	47.378
62)$1,2-Dichloroethane-d4	(2)	7.285	104	68124	49.737
63) Benzene	(2)	7.310	78	1689510	47.840
66) 1,2-Dichloroethane	(2)	7.389	62	668346	45.264
66) 1,2-Dichloroethane	(2)	7.395	98	53309	49.527
67) t-Amyl methyl ether	(2)	7.498	73	1043973	67.431
69)*Fluorobenzene	(2)	7.717	96	1807540	50.000
71) n-Heptane	(2)	7.723	43	552918	46.136
72) n-Butanol	(1)	8.058	56	364031	1177.831
74) Trichloroethene	(2)	8.192	95	449193	48.195
75) Methylcyclohexane	(2)	8.508	83	687067	48.642
76) 1,2-Dichloropropane	(2)	8.539	63	425904	47.788
78) Methyl Methacrylate	(2)	8.612	69	336218	48.356
79) 1,4-Dioxane	(1)	8.624	88	67077	594.929
80) Dibromomethane	(2)	8.642	93	292900	47.178
83) Bromodichloromethane	(2)	8.879	83	625233	47.978
84) 2-Nitropropane	(1)	9.141	41	301903	98.618
86) cis-1,3-Dichloropropene	(2)	9.427	75	690096	48.238
87) 4-Methyl-2-pentanone	(2)	9.591	43	1019198	95.925
88)$Toluene-d8	(3)	9.737	98	1814155	50.575
88)$Toluene-d8	(3)	9.737	100	1187311	50.552
89) Toluene	(3)	9.810	92	1098273	49.162
90) trans-1,3-Dichloropropene	(3)	10.072	75	722686	48.862
91) Ethyl Methacrylate	(3)	10.126	69	637693	51.335
92) 1,1,2-Trichloroethane	(3)	10.278	97	392949	48.558
94) Tetrachloroethene	(3)	10.357	166	536397	51.206
95) 1,3-Dichloropropane	(3)	10.443	76	697349	48.582

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) 2-Hexanone	(3)	10.485	43	762476	97.332
99) Dibromochloromethane	(3)	10.656	129	492079	49.776
100) 1,2-Dibromoethane	(3)	10.771	107	420775	47.805
101)*Chlorobenzene-d5	(3)	11.197	117	1389041	50.000
102) Chlorobenzene	(3)	11.221	112	1272140	48.554
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	478444	49.002
104) Ethylbenzene	(3)	11.307	91	2161100	50.608
105) m+p-Xylene	(3)	11.422	106	1726898	100.095
107) Xylene (Total)	(3)		106	2557353	150.258
106) o-Xylene	(3)	11.751	106	830455	50.163
108) Styrene	(3)	11.769	104	1402674	50.061
109) Bromoform	(3)	11.933	173	329935	52.156
110) Isopropylbenzene	(3)	12.055	105	2180540	51.580
113) Cyclohexanone	(1)	12.134	55	203635	573.208
114)$4-Bromofluorobenzene	(3)	12.201	95	701838	49.364
114)$4-Bromofluorobenzene	(3)	12.201	174	621781	49.623
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	577394	47.904
116) Bromobenzene	(4)	12.316	156	602197	48.459
117) trans-1,4-Dichloro-2-butene	(4)	12.322	53	500921	115.601
118) 1,2,3-Trichloropropane	(4)	12.347	110	184036	47.226
119) n-Propylbenzene	(4)	12.383	91	2580634	50.847
121) 2-Chlorotoluene	(4)	12.462	126	547832	48.915
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	1911848	50.439
125) 4-Chlorotoluene	(4)	12.554	126	578540	49.033
128) tert-Butylbenzene	(4)	12.767	134	418528M	45.925
129) Pentachloroethane	(4)	12.797	167	389922	49.779
130) 1,2,4-Trimethylbenzene	(4)	12.803	105	1976604	50.366
131) sec-Butylbenzene	(4)	12.931	105	2388920	51.506
133) 1,3-Dichlorobenzene	(4)	13.028	146	1121658	48.331
134) p-Isopropyltoluene	(4)	13.034	119	2222019	51.427
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	814480	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	1154817	47.803
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	2189744	52.051
138) Benzyl Chloride	(4)	13.180	126	266863	48.966
139) 1,3-Diethylbenzene	(4)	13.235	119	1385783	51.972
140) 1,4-Diethylbenzene	(4)	13.308	119	1418073	51.990
141) n-Butylbenzene	(4)	13.326	92	1081914M	48.964
142) 1,2-Dichlorobenzene	(4)	13.363	146	1092243	47.881

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

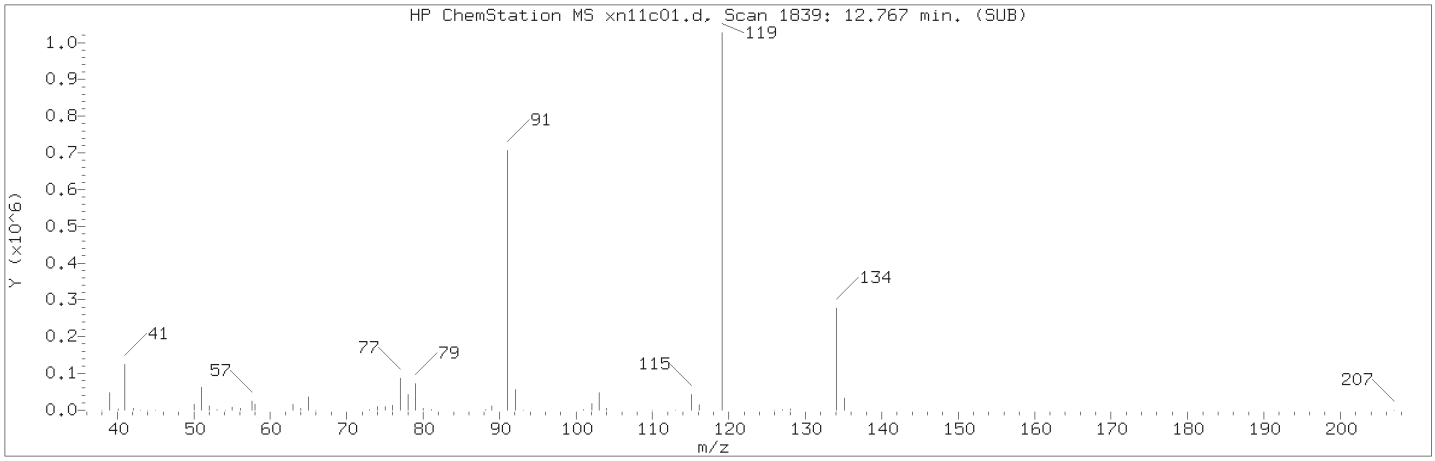
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

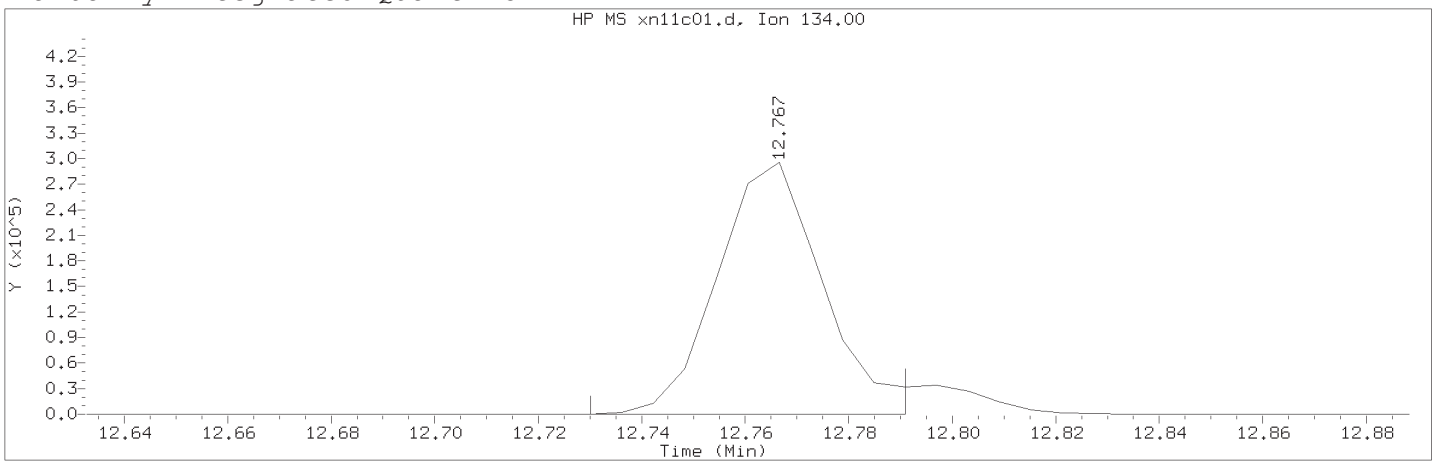
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
143) 1,2-Diethylbenzene	(4)	13.381	119	1173419	51.627
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	135895	47.191
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	905204	47.468
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	834579	47.262
149) Hexachlorobutadiene	(4)	14.537	225	461707	48.450
150) Naphthalene	(4)	14.640	128	2167473	50.730
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	817802	46.690
152) 2-Methylnaphthalene	(4)	15.413	142	1494474	52.121

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

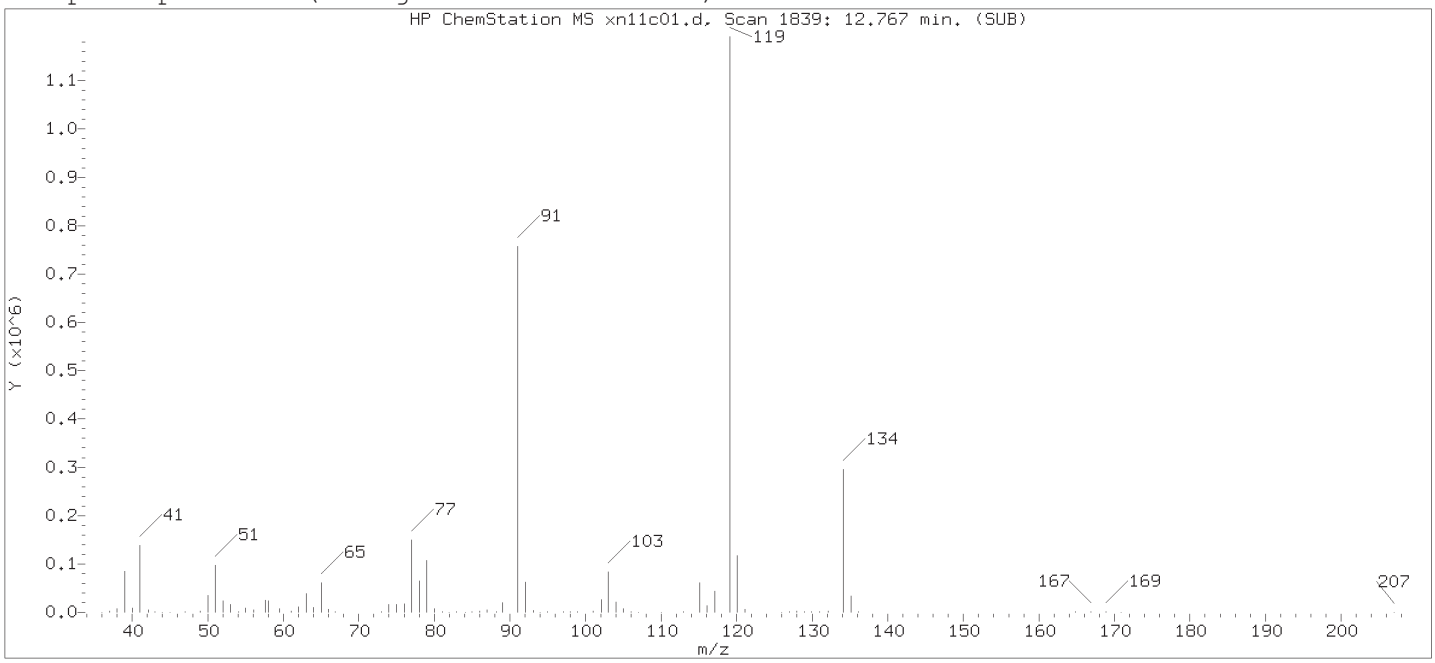
Compound Number : 128
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.767
Quant Ion : 134.00
Area (flag) : 418528M
On-Column Amount (ng) : 45.9254
Integration start scan : 1832 Integration stop scan: 1842
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

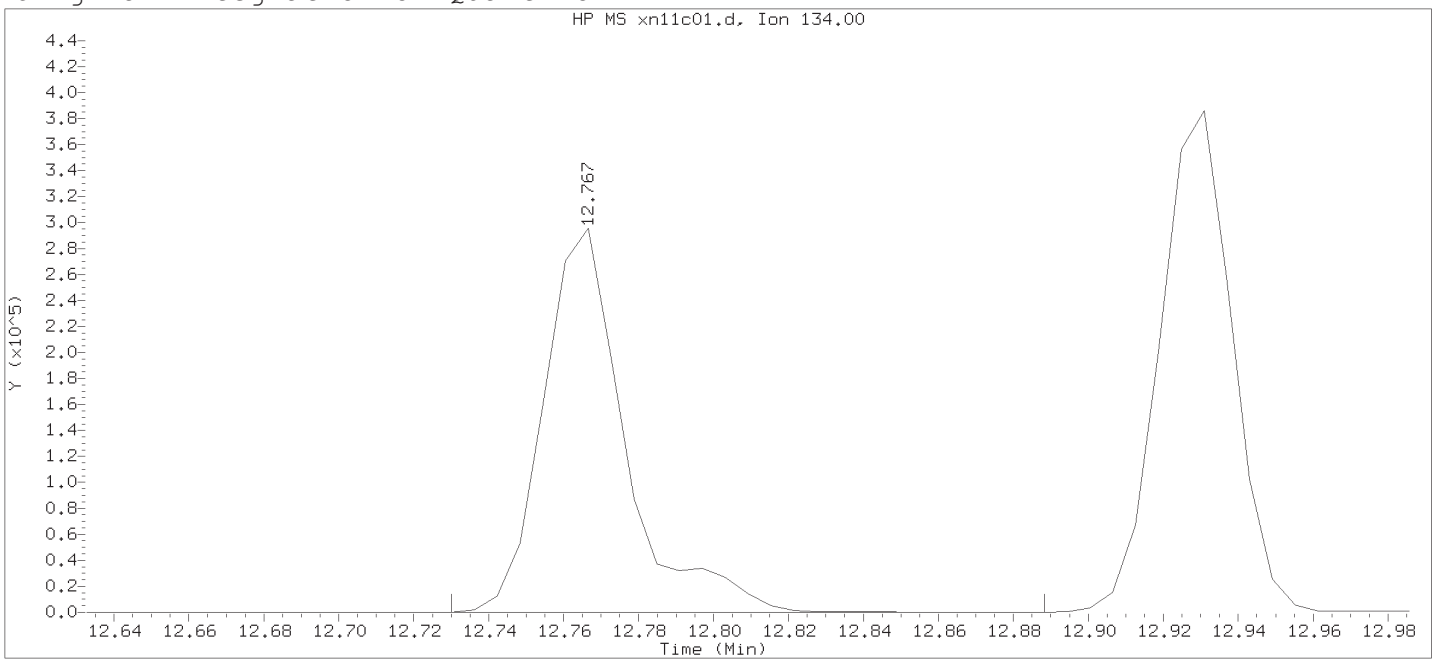
Analyst responsible for change: Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

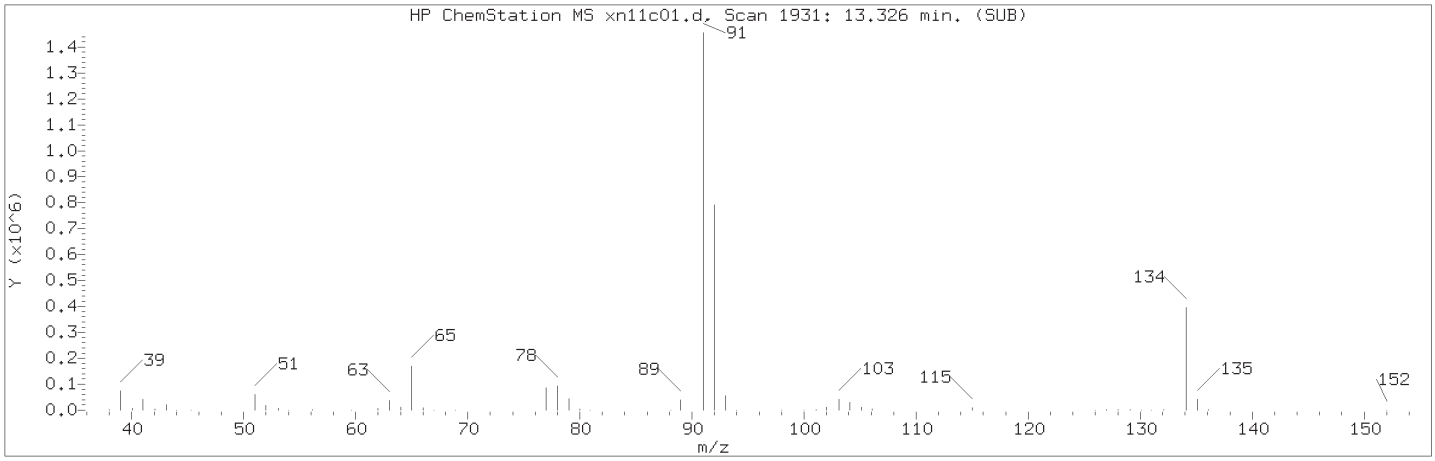
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

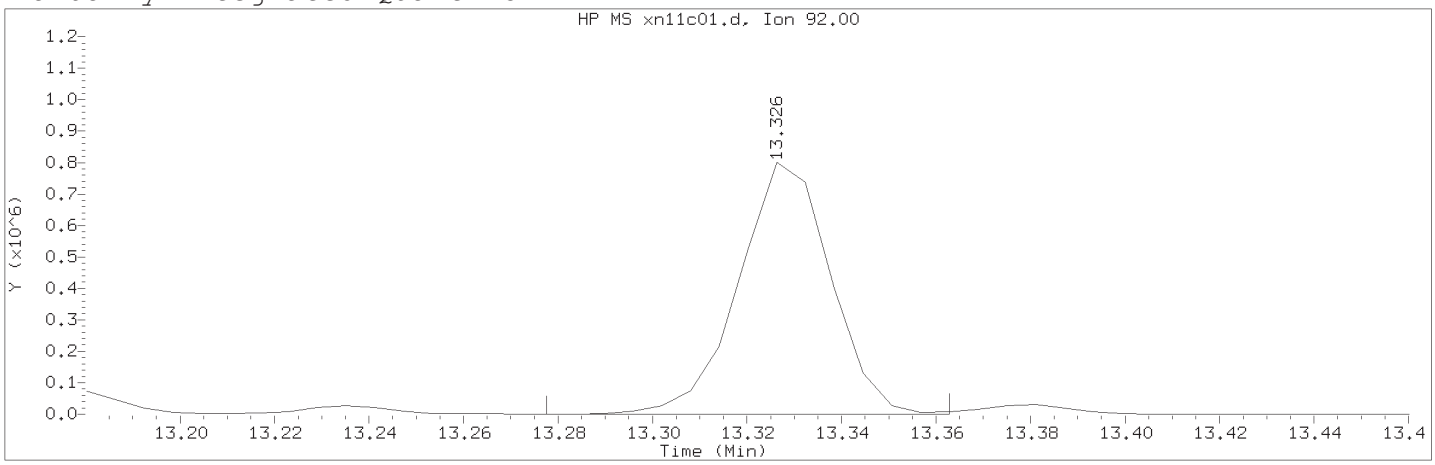
Compound Number : 128
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.767
Quant Ion : 134.00
Area : 449088
On-column Amount (ng) : 49.2788
Integration start scan : 1832 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: SAS00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:20 sas00403

Sample Name: VSTD050 Lab Sample ID: VSTD050

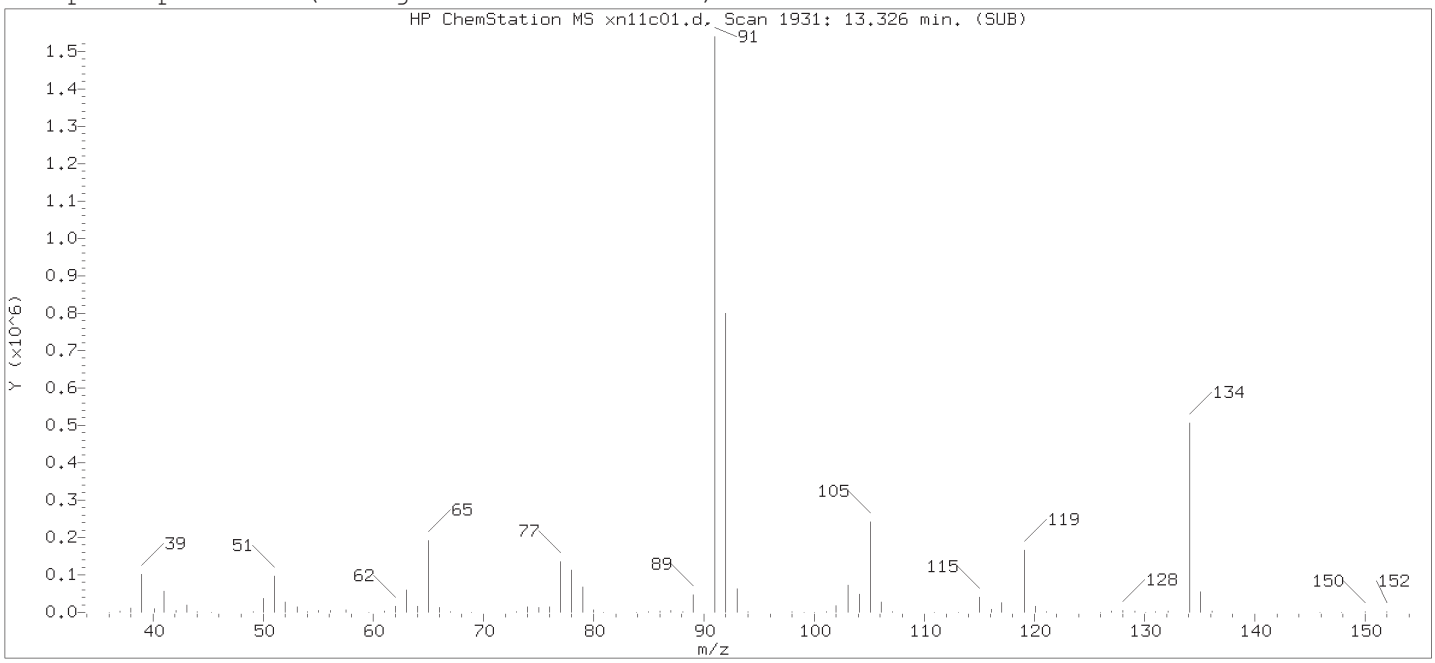
Compound Number : 141
Compound Name : n-Butylbenzene
Scan Number : 1931
Retention Time (minutes): 13.326
Quant Ion : 92.00
Area (flag) : 1081914M
On-Column Amount (ng) : 48.9643
Integration start scan : 1922 Integration stop scan: 1936
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

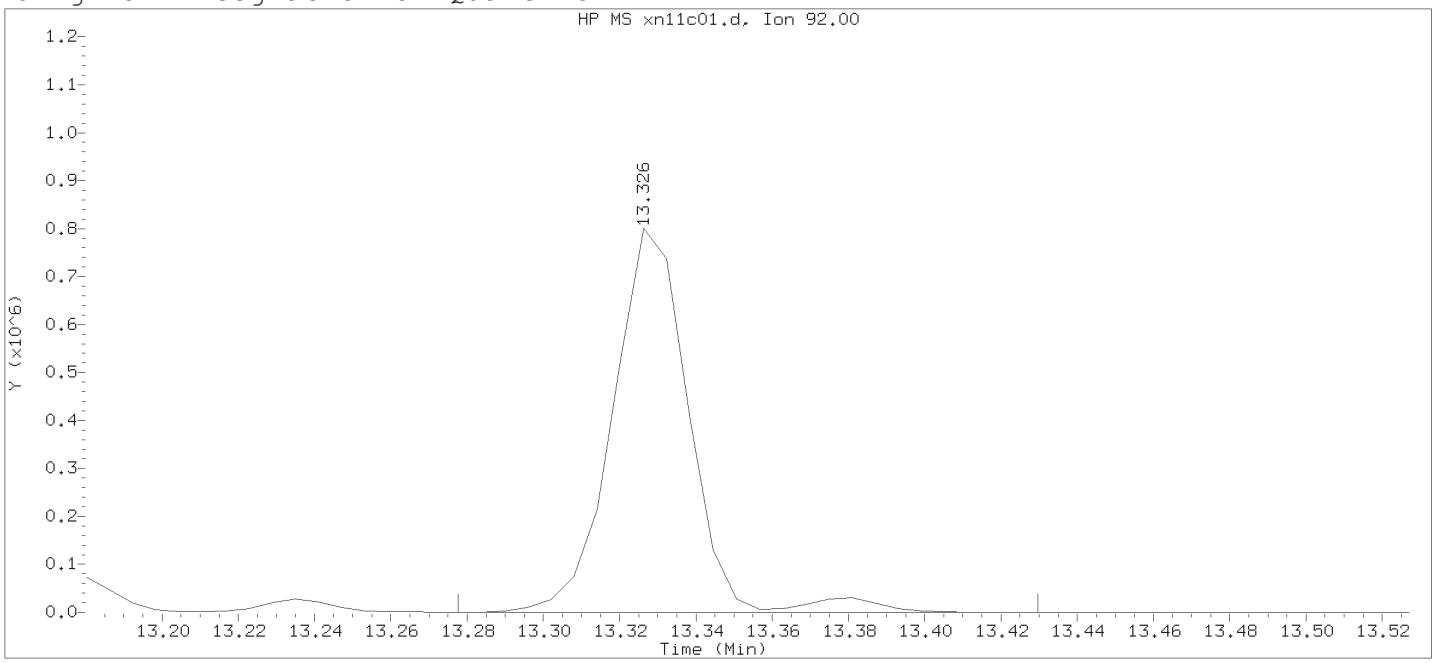
Analyst responsible for change: Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11c01.d Instrument ID: HP09193.i
Injection date and time: 11-NOV-2013 23:56 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2C
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 00:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 141
Compound Name : n-Butylbenzene
Scan Number : 1931
Retention Time (minutes): 13.326
Quant Ion : 92.00
Area : 1120150
On-column Amount (ng) : 50.6947
Integration start scan : 1922 Integration stop scan: 1947
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephanie A. Selis on 11/12/2013 at 00:21.
Target 3.5 esignature user ID: SAS00403

Data File: /chem2/HP09685.i/13oct23b.b/ac23t05.d

Date : 23-OCT-2013 18:38

Client ID: BFB SEP18-13

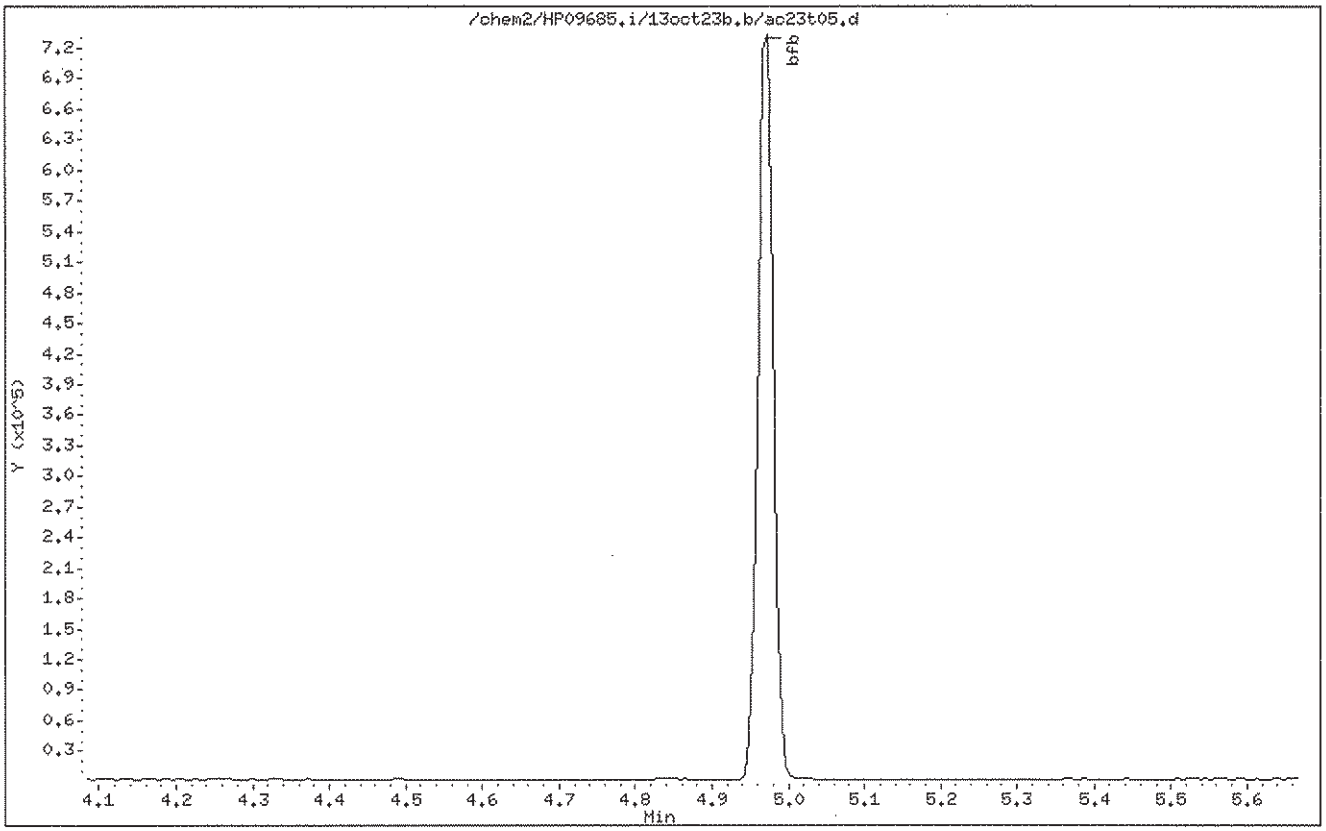
Instrument: HP09685.i

Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;

Operator: SEJ02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Sara E. Johnson on 10/23/2013 at 22:42.
Target 3.5 esignature user ID: sej02002

Data File: /chem2/HP09685.i/13oct23b.b/ac23t05.d

Date : 23-OCT-2013 18:38

Client ID: BFB SEP18-13

Instrument: HP09685.i

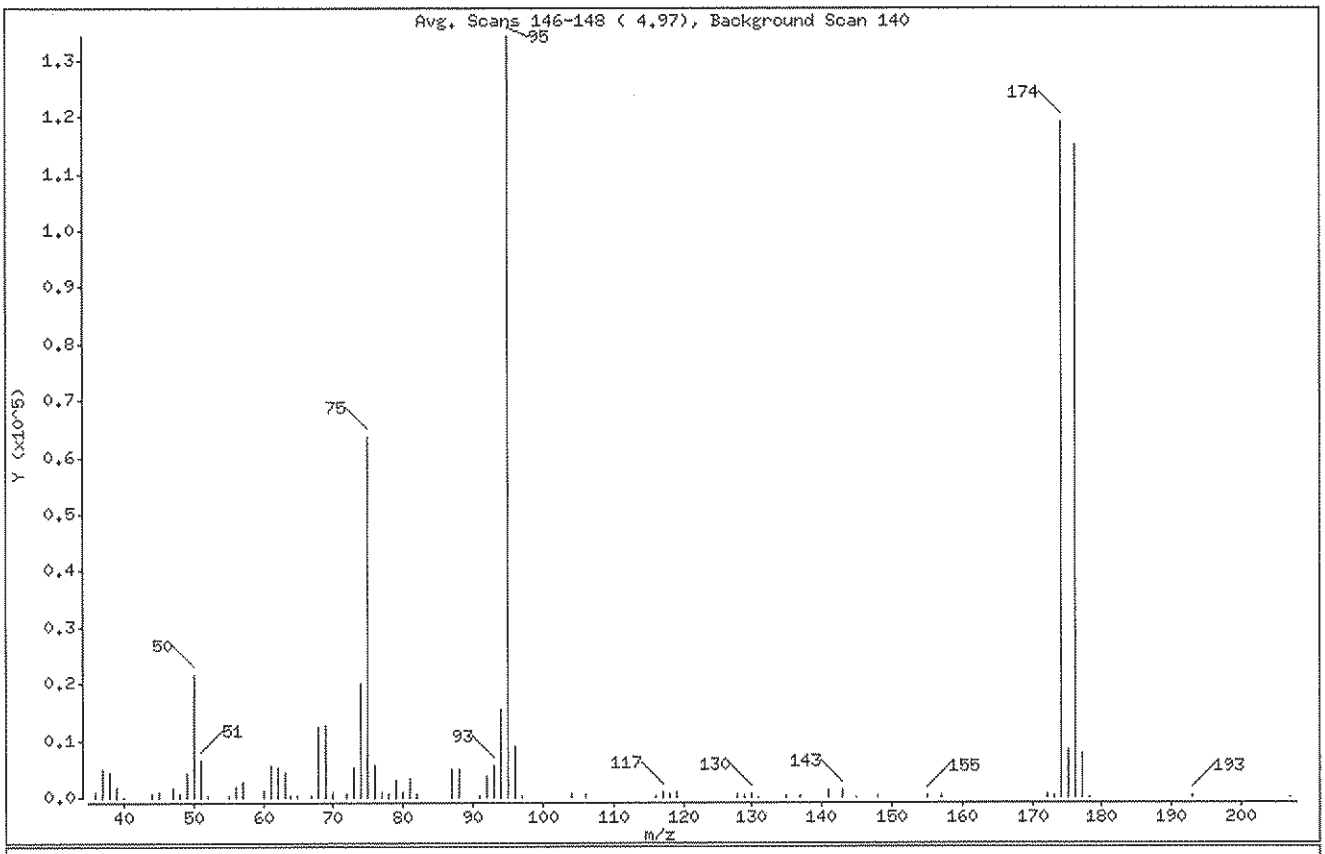
Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;;

Operator: SEJ02002

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.09
75	30.00 - 60.00% of mass 95	47.26
96	5.00 - 9.00% of mass 95	6.75
173	Less than 2.00% of mass 174	0.24 (0.27)
174	50.00 - 100.00% of mass 95	88.69
175	5.00 - 9.00% of mass 174	6.29 (7.09)
176	95.00 - 101.00% of mass 174	85.64 (96.56)
177	5.00 - 9.00% of mass 176	5.74 (6.70)

Digitally signed by Sara E. Johnson on 10/23/2013 at 22:42.
Target 3.5 esignature user ID: sej02002

Date : 23-OCT-2013 18:38

Client ID: BFB SEP18-13 Instrument: HP09685.i

Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;

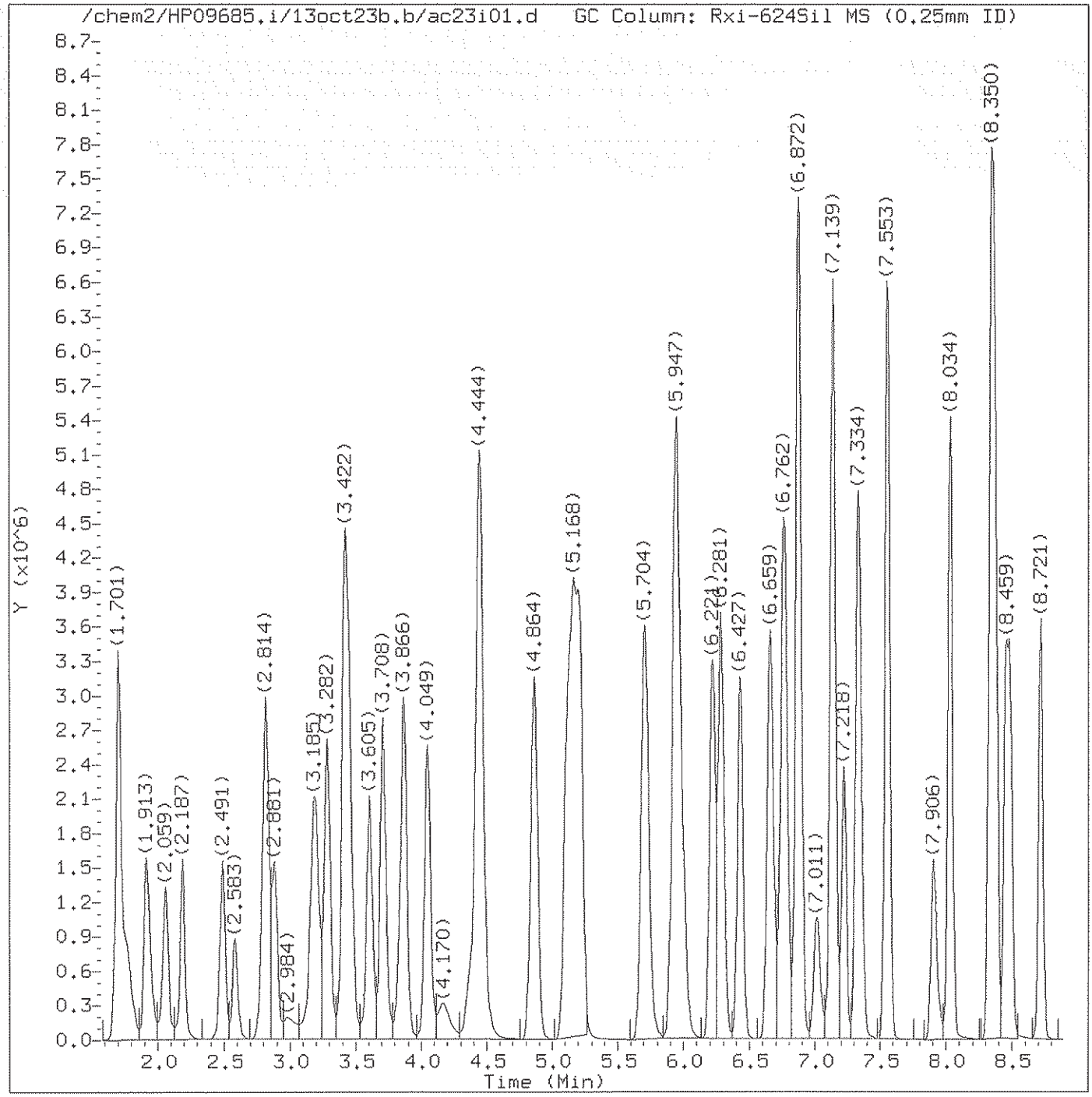
Operator: SEJ02002

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: ac23t05.d
Spectrum: Avg. Scans 146-148 (4.97), Background Scan 140
Location of Maximum: 95.00
Number of points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	940	63.00	4241	88.00	4966	137.00	192
37.00	5088	64.00	449	91.00	442	141.00	1264
38.00	4429	65.00	246	92.00	3763	143.00	1381
39.00	1838	67.00	237	93.00	5415	145.00	96
40.00	108	68.00	12253	94.00	15351	148.00	304
44.00	580	69.00	12714	95.00	134272	155.00	312
45.00	993	70.00	924	96.00	9061	157.00	196
47.00	1394	72.00	694	97.00	207	172.00	531
48.00	720	73.00	5226	104.00	545	173.00	323
49.00	4415	74.00	20144	106.00	523	174.00	119136
50.00	21608	75.00	63480	116.00	433	175.00	8444
51.00	6615	76.00	5411	117.00	848	176.00	115032
52.00	239	77.00	779	118.00	512	177.00	7709
55.00	264	78.00	488	119.00	776	178.00	103
56.00	1713	79.00	3146	128.00	491	193.00	184
57.00	2831	80.00	974	129.00	178	207.00	17
60.00	1149	81.00	3430	130.00	494		
61.00	5556	82.00	684	131.00	88		
62.00	5346	87.00	5088	135.00	223		

Digitally signed by Sara E. Johnson on 10/23/2013 at 22:42.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

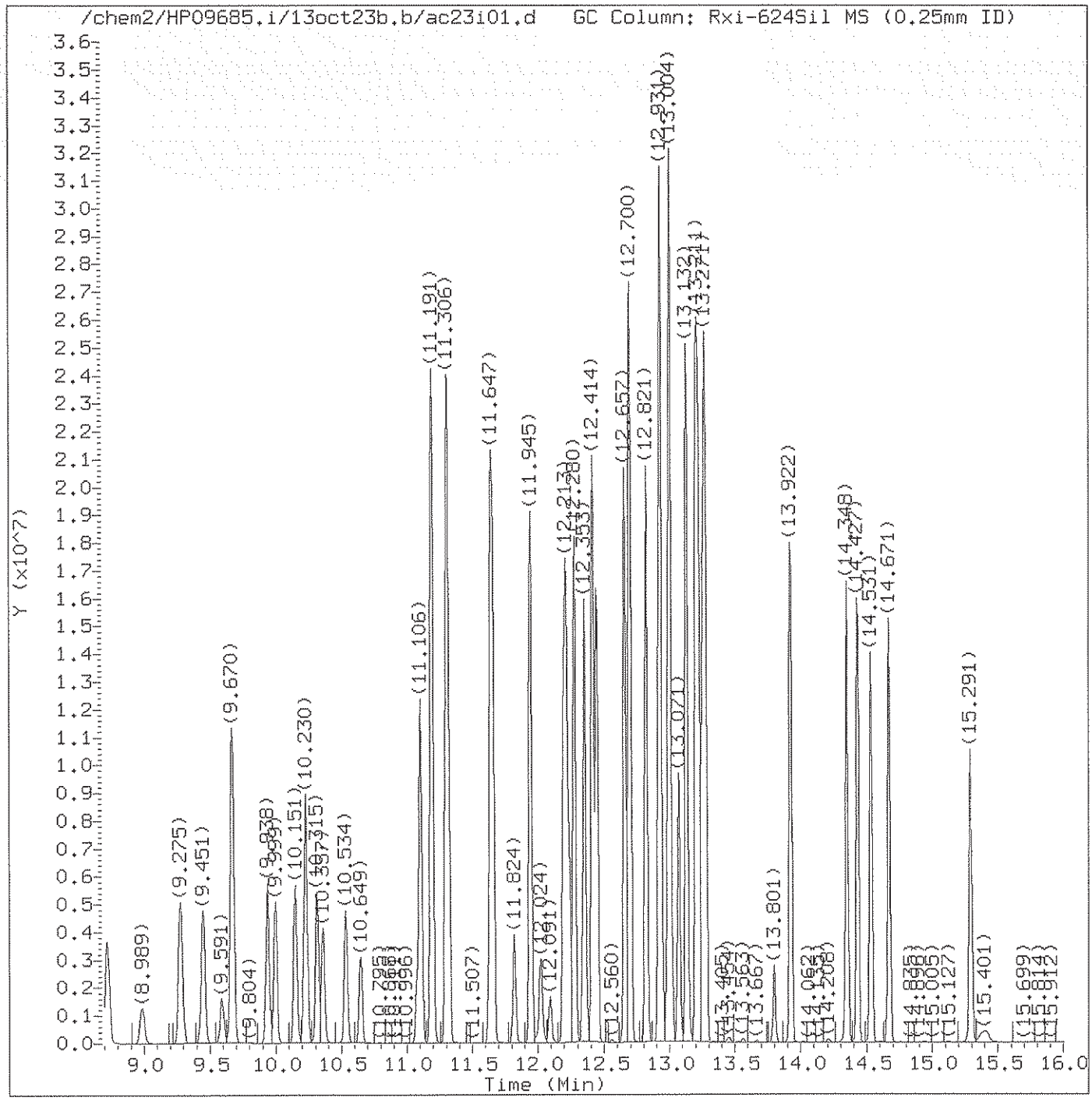
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.913	85	3393183	305.882
4) Chloromethane	(2)	2.059	50	2407597	271.290
5) Vinyl Chloride	(2)	2.187	62	2343170	275.611
9) Bromomethane	(2)	2.491	94	1613345	259.653
10) Chloroethane	(2)	2.583	64	1234819	250.055
11) Dichlorofluoromethane	(2)	2.808	67	3537305	279.594
13) Trichlorofluoromethane	(2)	2.881	101	3955538M	309.120
15) Ethanol	(1)	2.990	45	1024783M	15181.997
17) Freon 123a	(2)	3.185	67	2497644A	206.861
18) Acrolein	(1)	3.282	56	3980181	2690.875
19) 1,1-Dichloroethene	(2)	3.410	96	1862065	283.815
20) Acetone	(2)	3.440	58	376778	508.946
22) Freon 113	(2)	3.446	101	2118984	295.857
23) 2-Propanol	(1)	3.586	45	679176	1556.097
24) Methyl Iodide	(2)	3.605	142	3698238	286.755
25) Carbon Disulfide	(2)	3.708	76	6610301	286.966
27) Methyl Acetate	(2)	3.836	43	1243569	269.386
29) Allyl Chloride	(2)	3.866	41	2972504	293.189
30)*t-Butyl alcohol-d10	(1)	4.049	65	127444	250.000
31) Methylene Chloride	(2)	4.049	84	2121423	277.125
32) t-Butyl alcohol	(1)	4.170	59	1073842	1528.460
33) Acrylonitrile	(2)	4.365	53	737879	279.724
34) Methyl Tertiary Butyl Ether	(2)	4.438	73	5971176	292.436
35) trans-1,2-Dichloroethene	(2)	4.450	96	2166248	284.593
38) n-Hexane	(2)	4.864	57	3123592	308.134
40) 1,1-Dichloroethane	(2)	5.113	63	3820659	288.528
41) di-Isopropyl ether	(2)	5.162	45	6204619	289.609
42) 2-Chloro-1,3-butadiene	(2)	5.211	53	3115507	316.498
44) Ethyl t-butyl ether	(2)	5.704	59	6168749	297.701
45) 2-Butanone	(2)	5.910	43	1680145	551.028
46) cis-1,2-Dichloroethene	(2)	5.941	96	2418384	287.649
48) 2,2-Dichloropropane	(2)	5.965	77	3371324	313.119
50) Propionitrile	(1)	6.002	54	1322411	1461.217
47) 1,2-Dichloroethene (Total)	(2)		96	4584632	572.243
51) Methacrylonitrile	(2)	6.221	67	2031600	711.152
52) Bromochloromethane	(2)	6.281	128	1252790	292.560
53) Tetrahydrofuran	(1)	6.294	71	503443	587.589
54) Chloroform	(2)	6.427	83	3829204	294.633

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.653	113	322586	50.923
55)$Dibromofluoromethane	(2)	6.646	111	327838	50.750
56) 1,1,1-Trichloroethane	(2)	6.659	97	3747637	297.808
57) Cyclohexane	(2)	6.762	56	3845630	308.001
57) Cyclohexane	(2)	6.762	84	3524797	307.651
57) Cyclohexane	(2)	6.762	69	1225303	311.681
59) Carbon Tetrachloride	(2)	6.872	117	3350155	325.505
58) 1,1-Dichloropropene	(2)	6.872	75	3116763	305.552
60) Isobutyl Alcohol	(1)	7.011	41	894531	3838.983
61)$1,2-Dichloroethane-d4	(2)	7.115	102	70281	48.921
61)$1,2-Dichloroethane-d4	(2)	7.115	65	337807	51.348
61)$1,2-Dichloroethane-d4	(2)	7.115	104	45010	49.402
62) Benzene	(2)	7.139	78	8770297	282.888
64) 1,2-Dichloroethane	(2)	7.224	62	2816989	302.354
64) 1,2-Dichloroethane	(2)	7.218	98	266042	295.151
65) t-Amyl methyl ether	(2)	7.334	73	6067438	304.615
67)*Fluorobenzene	(2)	7.547	96	1295790	50.000
69) n-Heptane	(2)	7.553	43	3264947	311.387
70) n-Butanol	(1)	7.906	56	1646997	8062.345
72) Trichloroethene	(2)	8.034	95	2418650	300.747
73) Methylcyclohexane	(2)	8.344	83	4236055	314.692
74) 1,2-Dichloropropane	(2)	8.374	63	2288223	294.577
76) Methyl Methacrylate	(2)	8.453	69	1530476	316.691
77) 1,4-Dioxane	(1)	8.459	88	293761	3891.821
78) Dibromomethane	(2)	8.484	93	1452895	302.177
81) Bromodichloromethane	(2)	8.721	83	3111392	321.251
82) 2-Nitropropane	(1)	8.989	41	1031890	598.878
84) cis-1,3-Dichloropropene	(2)	9.275	75	3735081	319.349
85) 4-Methyl-2-pentanone	(2)	9.445	43	3772006	582.158
86)$Toluene-d8	(3)	9.591	98	1303442	49.178
86)$Toluene-d8	(3)	9.591	100	846800	49.099
87) Toluene	(3)	9.670	92	5830244	283.291
88) trans-1,3-Dichloropropene	(3)	9.938	75	3552290	316.482
89) Ethyl Methacrylate	(3)	9.999	69	2894276	313.857
90) 1,1,2-Trichloroethane	(3)	10.151	97	1944799	283.424
92) Tetrachloroethene	(3)	10.230	166	2874962	305.053
93) 1,3-Dichloropropane	(3)	10.315	76	3396265	285.392
95) 2-Hexanone	(3)	10.357	43	2729148	564.702

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.534	129	2595069	326.913
98) 1,2-Dibromoethane	(3)	10.649	107	2120724	296.420
99)*Chlorobenzene-d5	(3)	11.075	117	1021222	50.000
100) Chlorobenzene	(3)	11.106	112	6859343	283.118
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	2588625	308.497
102) Ethylbenzene	(3)	11.191	91	10780318	278.188
103) m+p-Xylene	(3)	11.306	106	8982449	567.211
104) o-Xylene	(3)	11.641	106	4525486	294.375
106) Styrene	(3)	11.659	104	7373397	303.780
105) Xylene (Total)	(3)		106	13507935	861.586
107) Bromoform	(3)	11.824	173	1707769	350.813
108) Isopropylbenzene	(3)	11.945	105	11309567	287.494
111) Cyclohexanone	(1)	12.024	55	1300170A	4542.010
112)$4-Bromofluorobenzene	(3)	12.091	95	504235	51.168
112)$4-Bromofluorobenzene	(3)	12.091	174	437444	51.137
113) 1,1,2,2-Tetrachloroethane	(4)	12.195	83	2622823M	262.600
114) Bromobenzene	(4)	12.207	156	3294182	284.276
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	1848724	714.384
116) 1,2,3-Trichloropropane	(4)	12.243	110	832586	270.953
117) n-Propylbenzene	(4)	12.280	91	12404317	252.173
119) 2-Chlorotoluene	(4)	12.353	126	3111399	282.013
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	10044731	276.425
123) 4-Chlorotoluene	(4)	12.450	126	3244171	284.166
126) tert-Butylbenzene	(4)	12.657	134	2456521M	296.037
127) Pentachloroethane	(4)	12.694	167	2187208	309.241
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	10220507	273.247
129) sec-Butylbenzene	(4)	12.821	105	12290452	267.555
131) 1,3-Dichlorobenzene	(4)	12.919	146	5922264	275.006
132) p-Isopropyltoluene	(4)	12.931	119	11237231	273.401
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	592349	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	6006910	271.472
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	10466836	267.604
136) Benzyl Chloride	(4)	13.077	126	1434021	340.731
137) 1,3-Diethylbenzene	(4)	13.132	119	7337013	293.038
138) 1,4-Diethylbenzene	(4)	13.205	119	7257609	290.515
139) n-Butylbenzene	(4)	13.223	92	5863698M	294.273
140) 1,2-Dichlorobenzene	(4)	13.253	146	5933074	285.459
141) 1,2-Diethylbenzene	(4)	13.278	119	6109405	289.424

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	581688	325.453
145) 1,3,5-Trichlorobenzene	(4)	13.928	180	5239734	310.800
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	4635826	320.832
147) Hexachlorobutadiene	(4)	14.433	225	2691653	329.009
148) Naphthalene	(4)	14.531	128	9607829	291.847
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	4279486	315.287
150) 2-Methylnaphthalene	(4)	15.291	142	4954616	237.932

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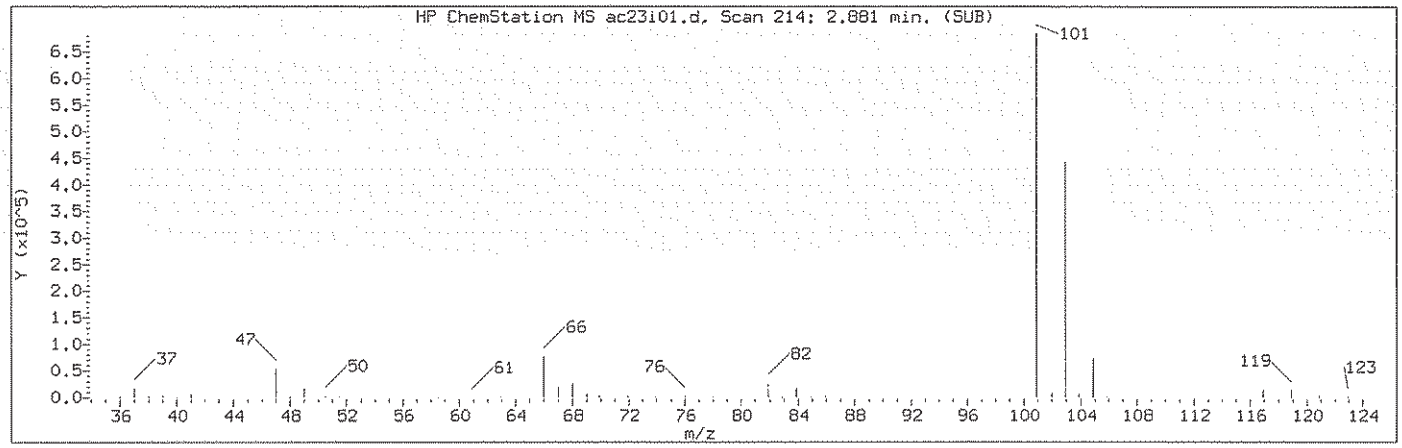
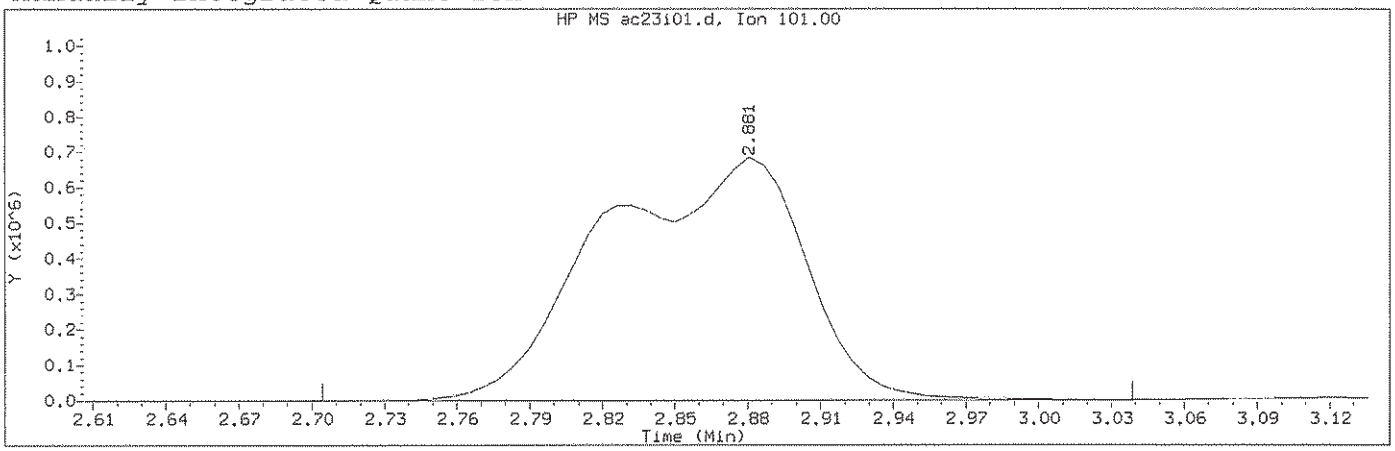
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

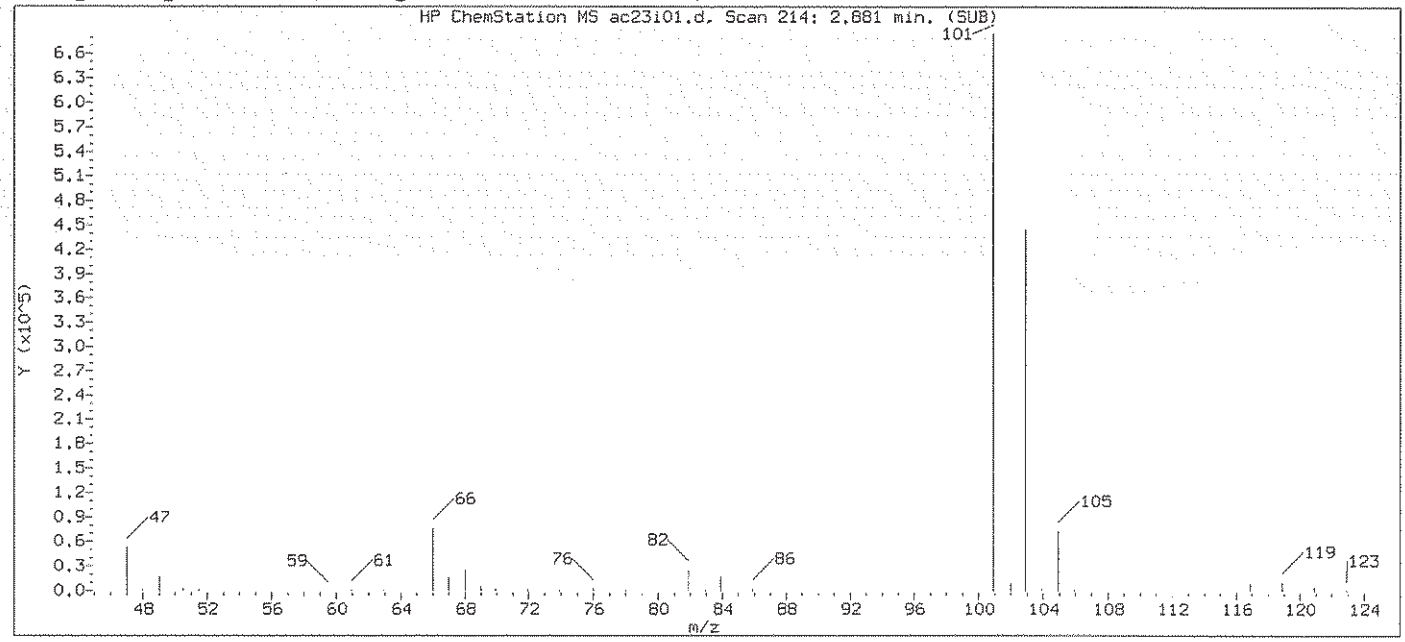
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 214
Retention Time (minutes): 2.881
Quant Ion : 101.00
Area (flag) : 3955538M
On-Column Amount (ng) : 309.1198
Integration start scan : 184 Integration stop scan: 239
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

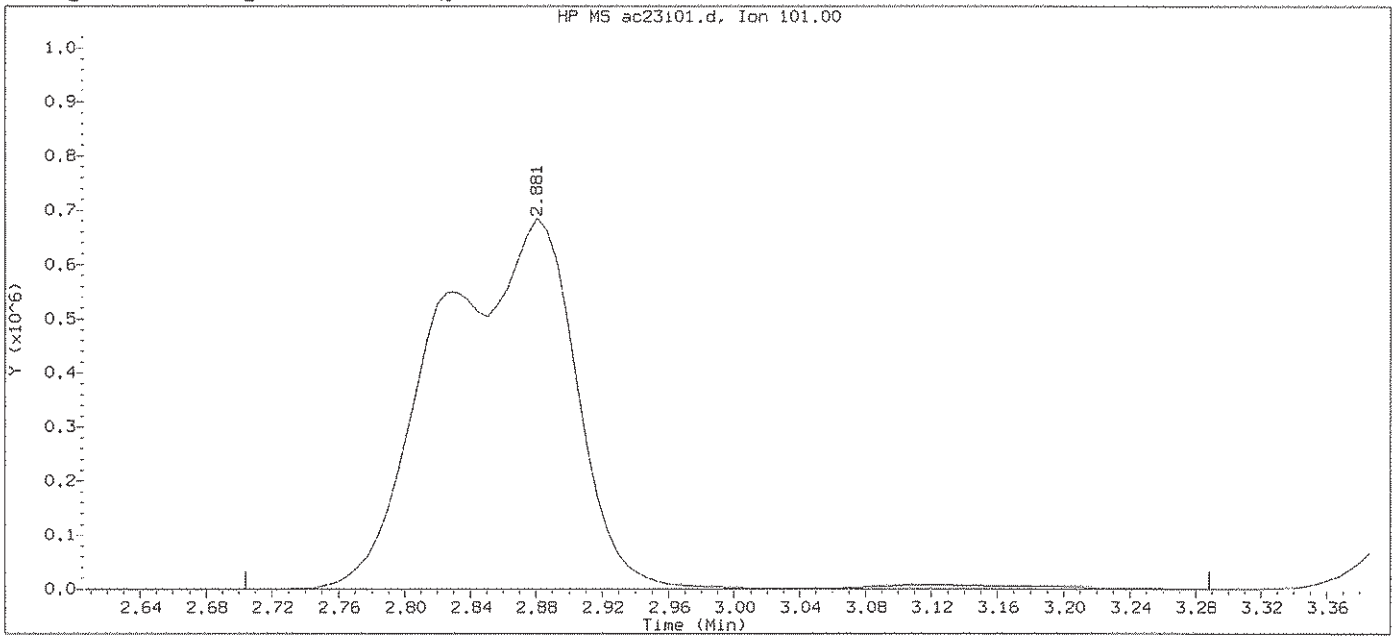
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

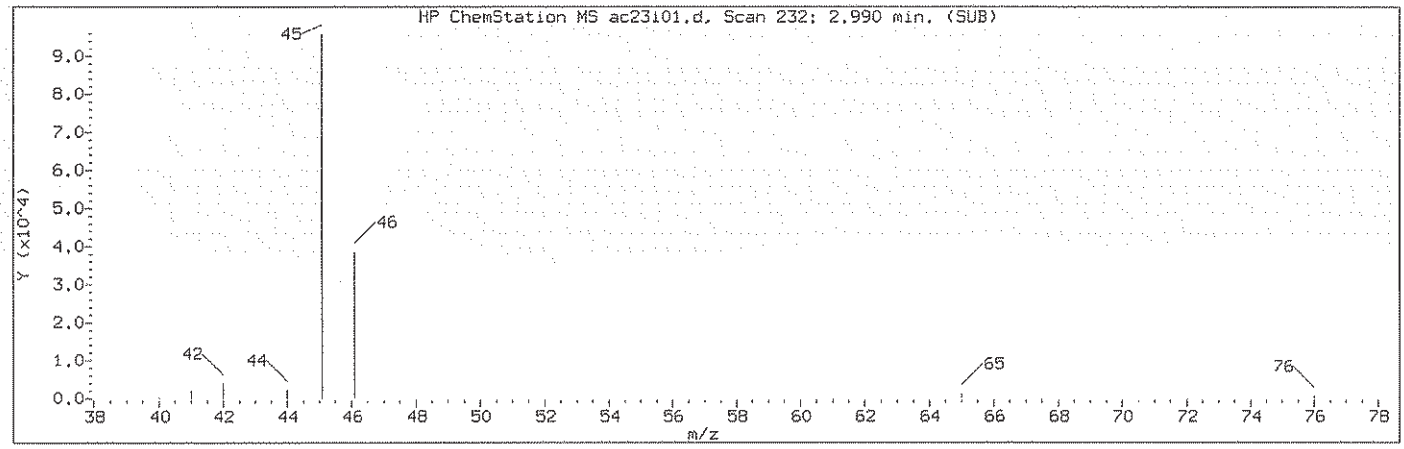
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

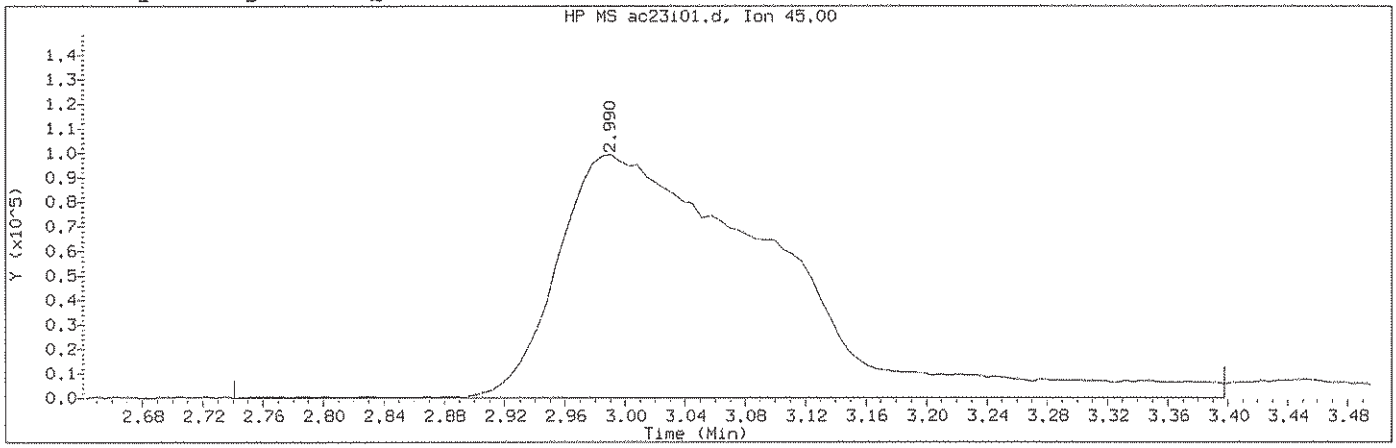
Compound Number	: 13		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 214		
Retention Time (minutes)	: 2.881		
Quant Ion	: 101.00		
Area	: 4014549		
On-column Amount (ng)	: 297.4013		
Integration start scan	: 184	Integration stop scan:	280
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature using 10/23/2013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

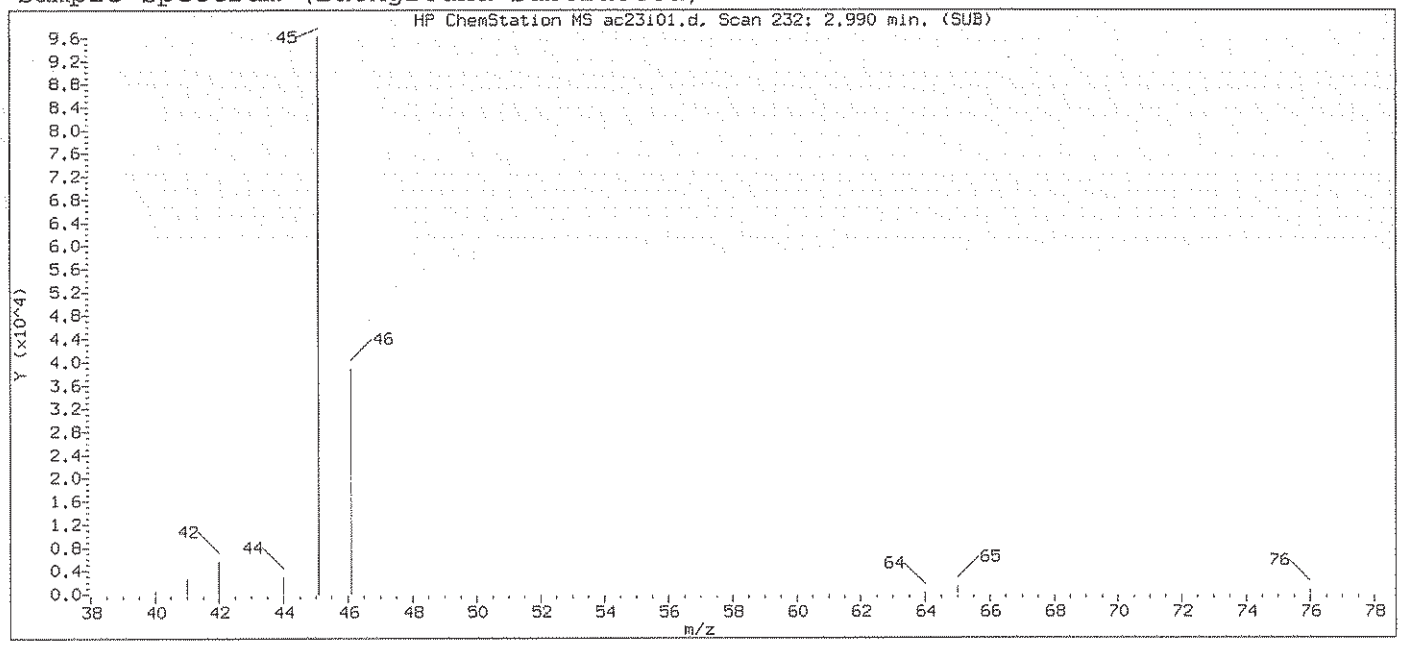
Compound Number	: 15		
Compound Name	: Ethanol		
Scan Number	: 232		
Retention Time (minutes)	: 2.990		
Quant Ion	: 45.00		
Area (flag)	: 1024783M		
On-Column Amount (ng)	: 15181.9973		
Integration start scan	: 190	Integration stop scan:	298
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

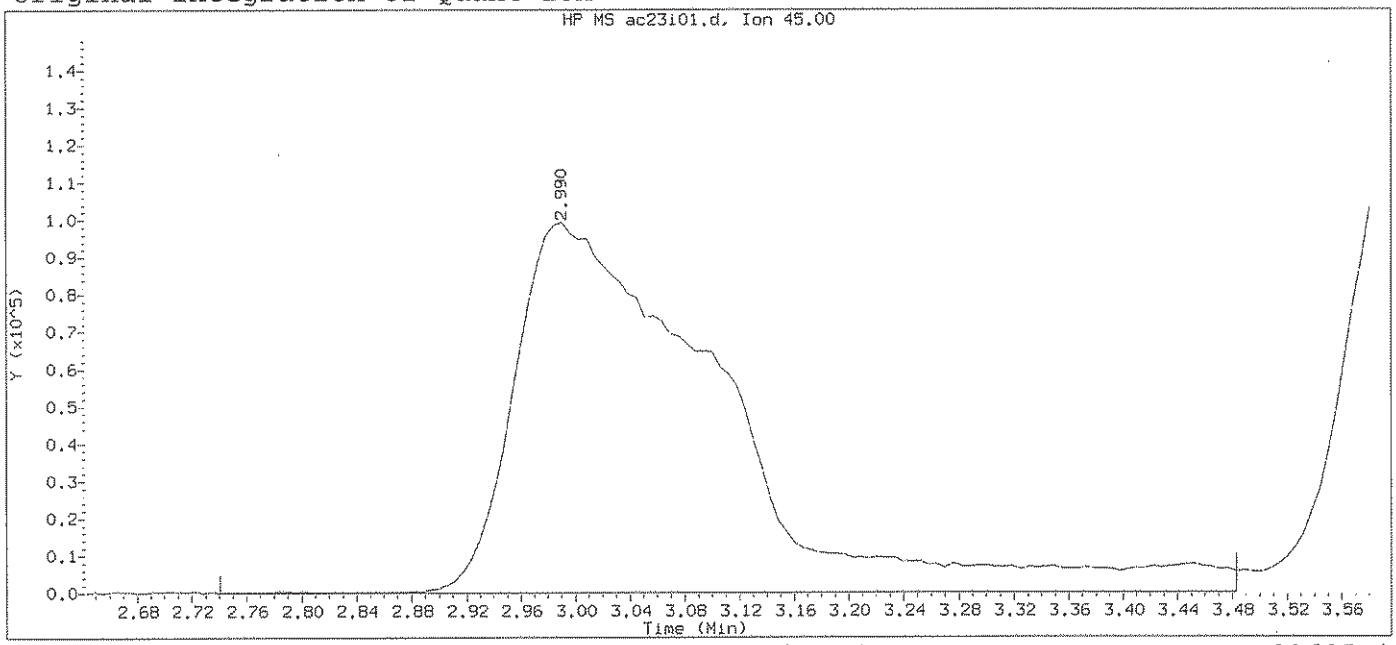
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 15		
Compound Name	: Ethanol		
Scan Number	: 232		
Retention Time (minutes)	: 2.990		
Quant Ion	: 45.00		
Area	: 1058293		
On-column Amount (ng)	: 15444.4907		
Integration start scan	: 190	Integration stop scan:	312
Y at integration start	: 0	Y at integration end:	0

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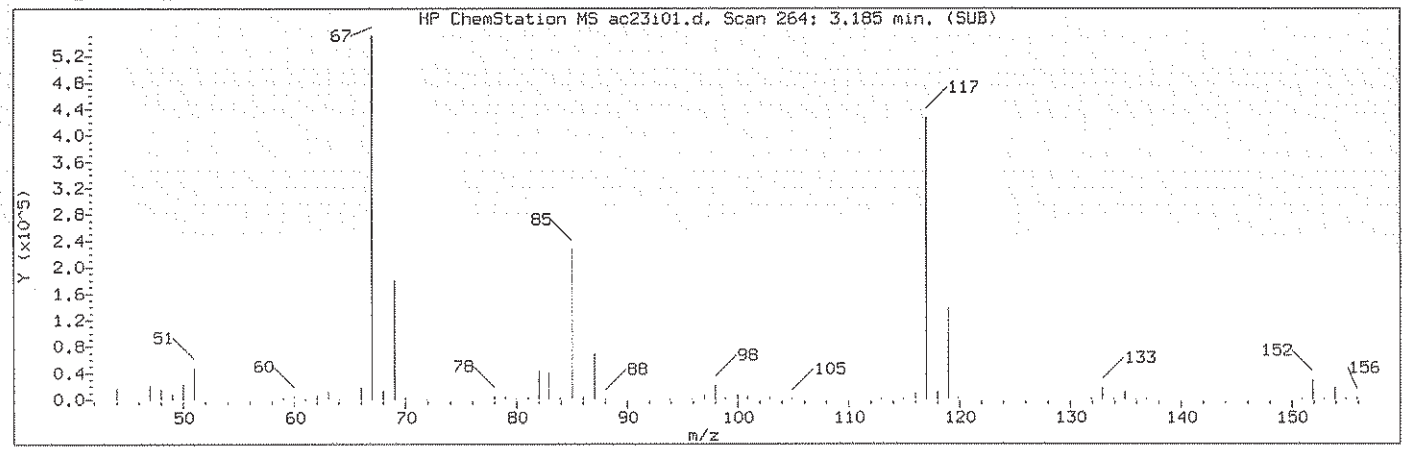
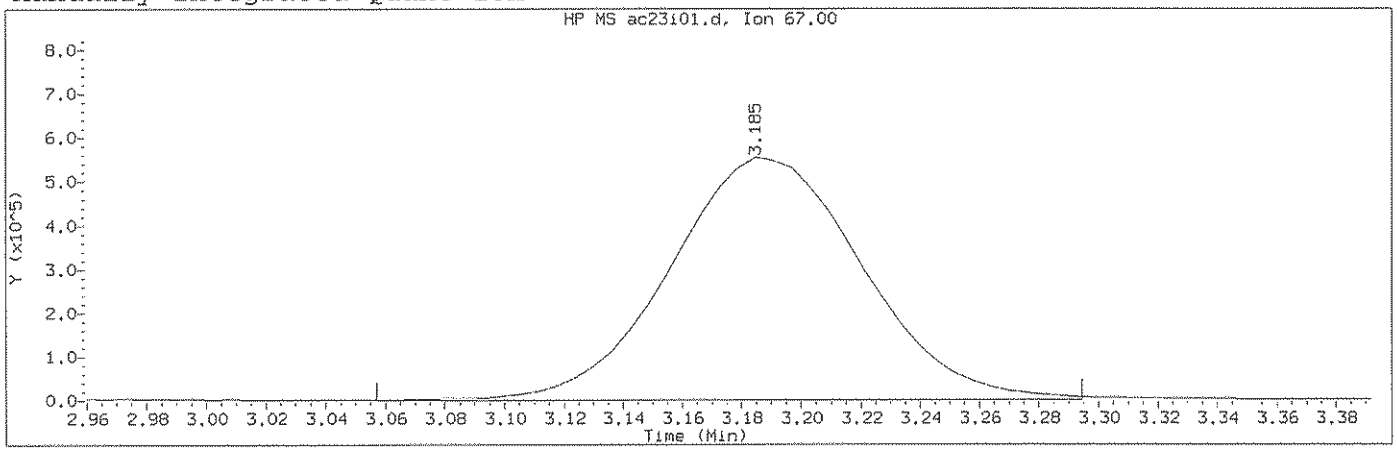
Target 3.5 esignature user ID: CBS0157

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

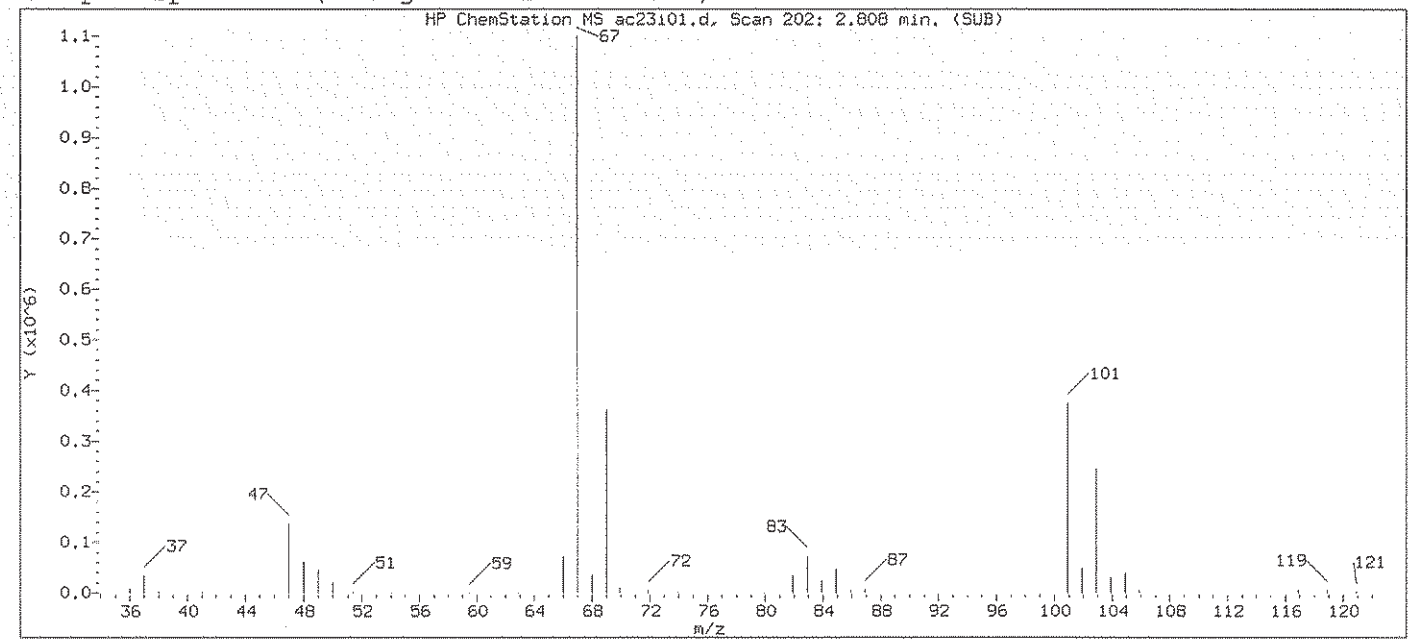
Compound Number : 17
Compound Name : Freon 123a
Scan Number : 264
Retention Time (minutes): 3.185
Quant Ion : 67.00
Area (flag) : 2497644A
On-Column Amount (ng) : 206.8615
Integration start scan : 242 Integration stop scan: 281
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

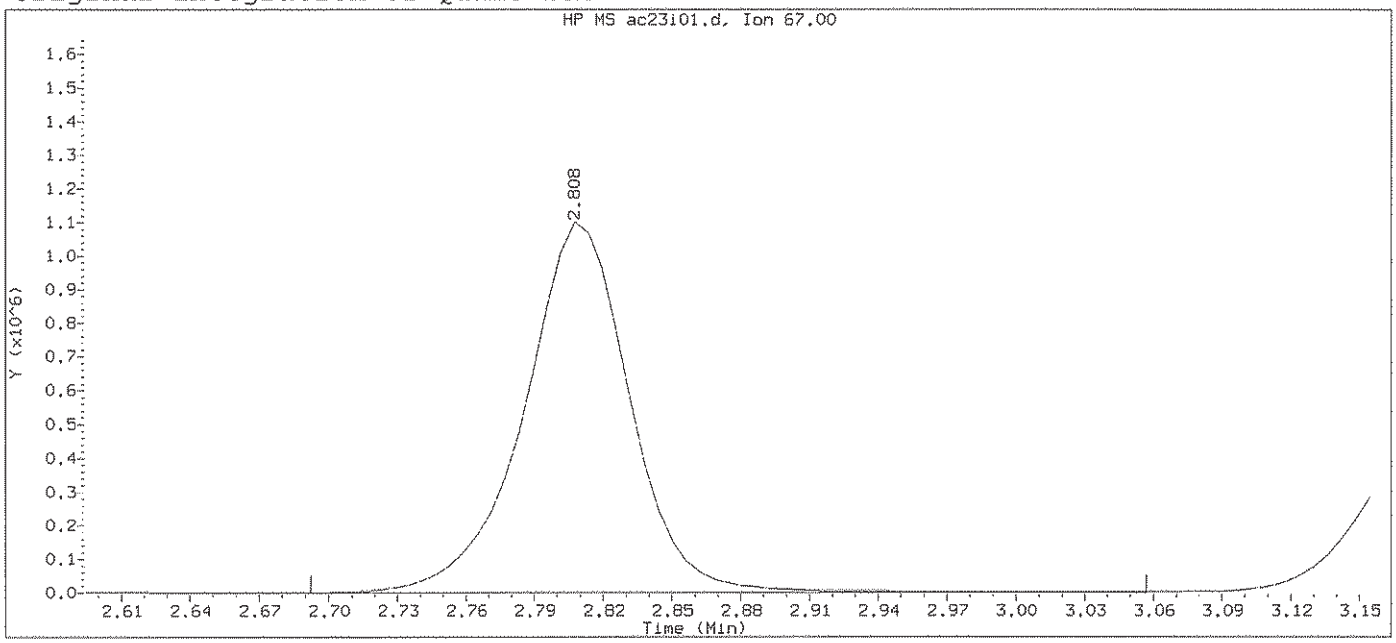
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 202		
Retention Time (minutes)	: 2.808		
Quant Ion	: 67.00		
Area	: 3537305		
On-column Amount (ng)	: 282.9683		
Integration start scan	: 182	Integration stop scan:	242
Y at integration start	: 0	Y at integration end:	0

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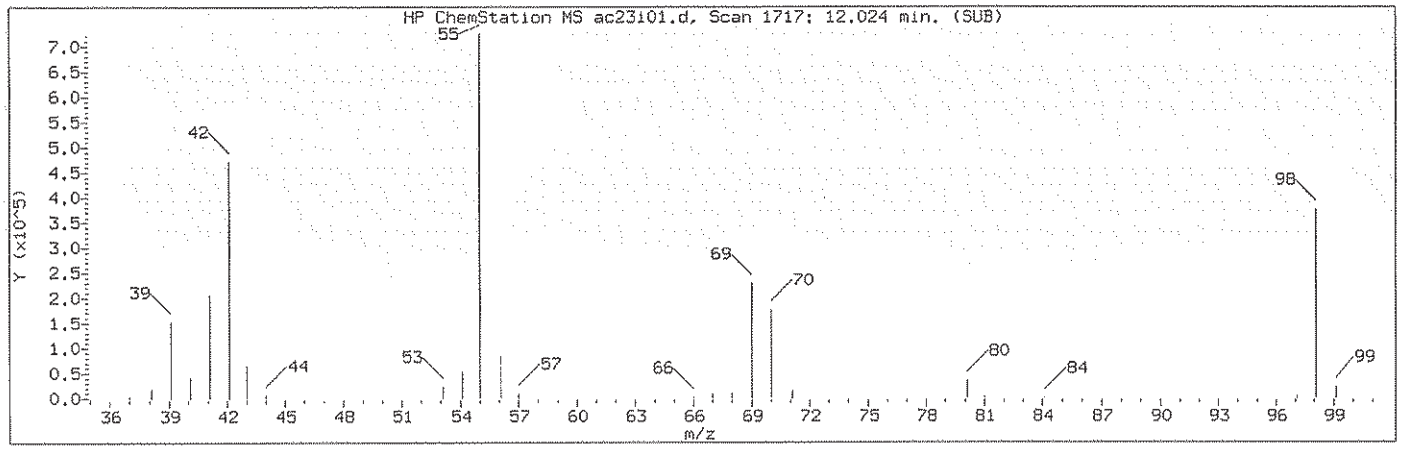
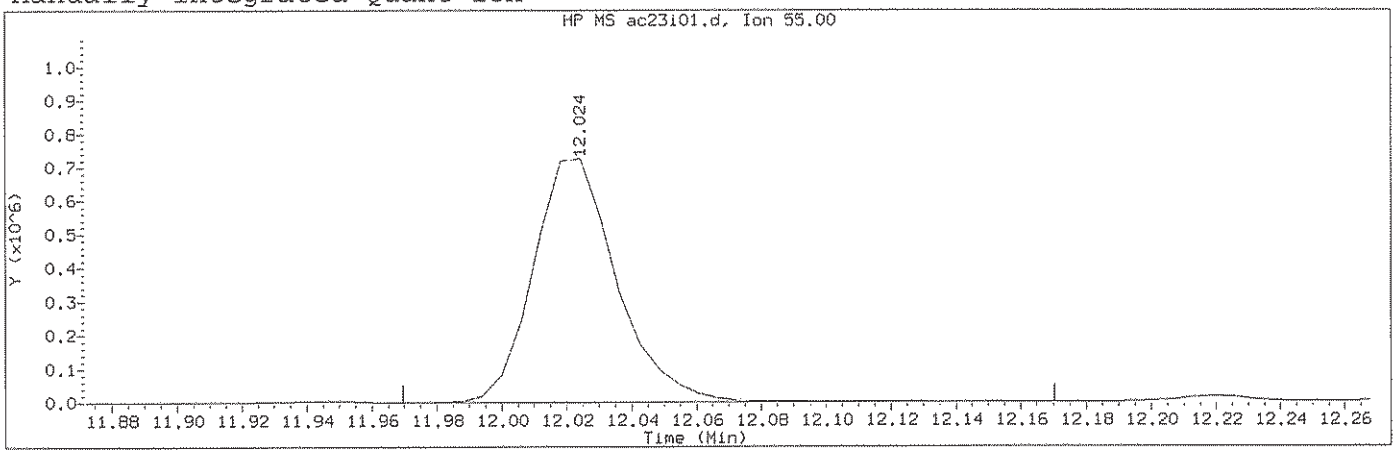
Target 3.5 esignature user ID: CBSTONG

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

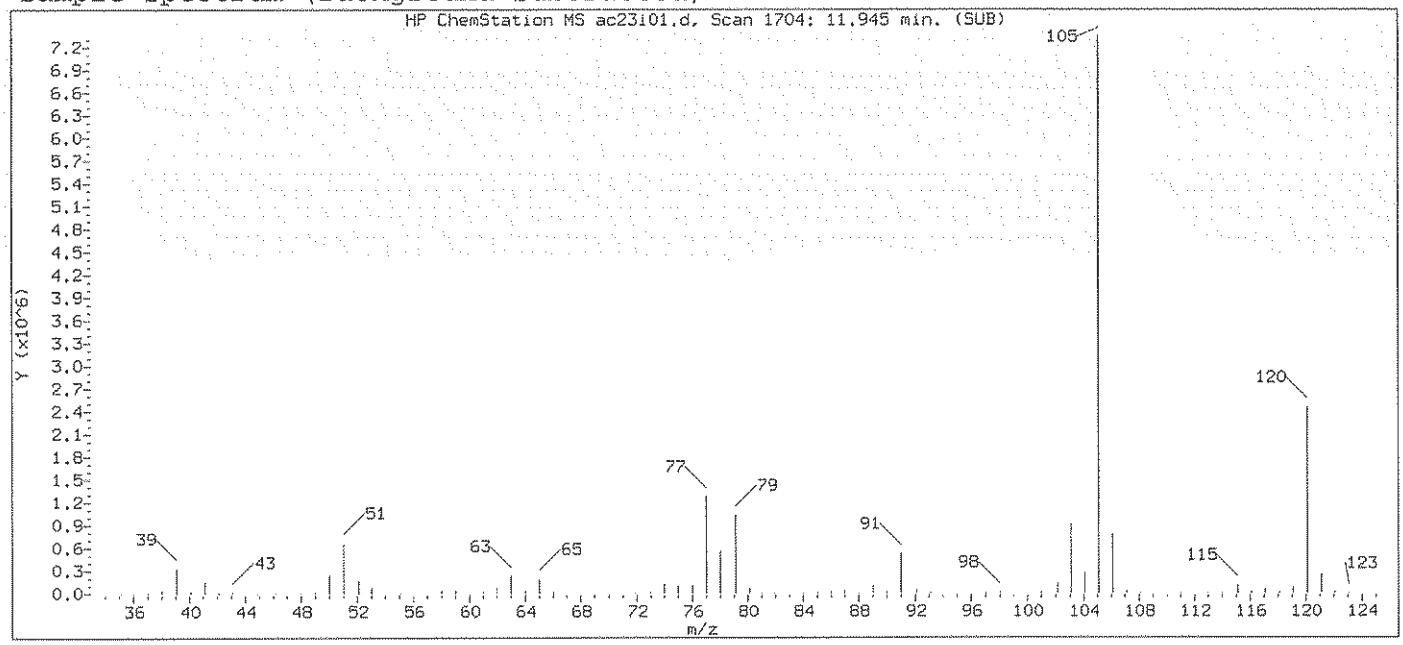
Compound Number	: 111		
Compound Name	: Cyclohexanone		
Scan Number	: 1717		
Retention Time (minutes)	: 12.024		
Quant Ion	: 55.00		
Area (flag)	: 1300170A		
On-Column Amount (ng)	: 4542.0100		
Integration start scan	: 1707	Integration stop scan:	1740
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

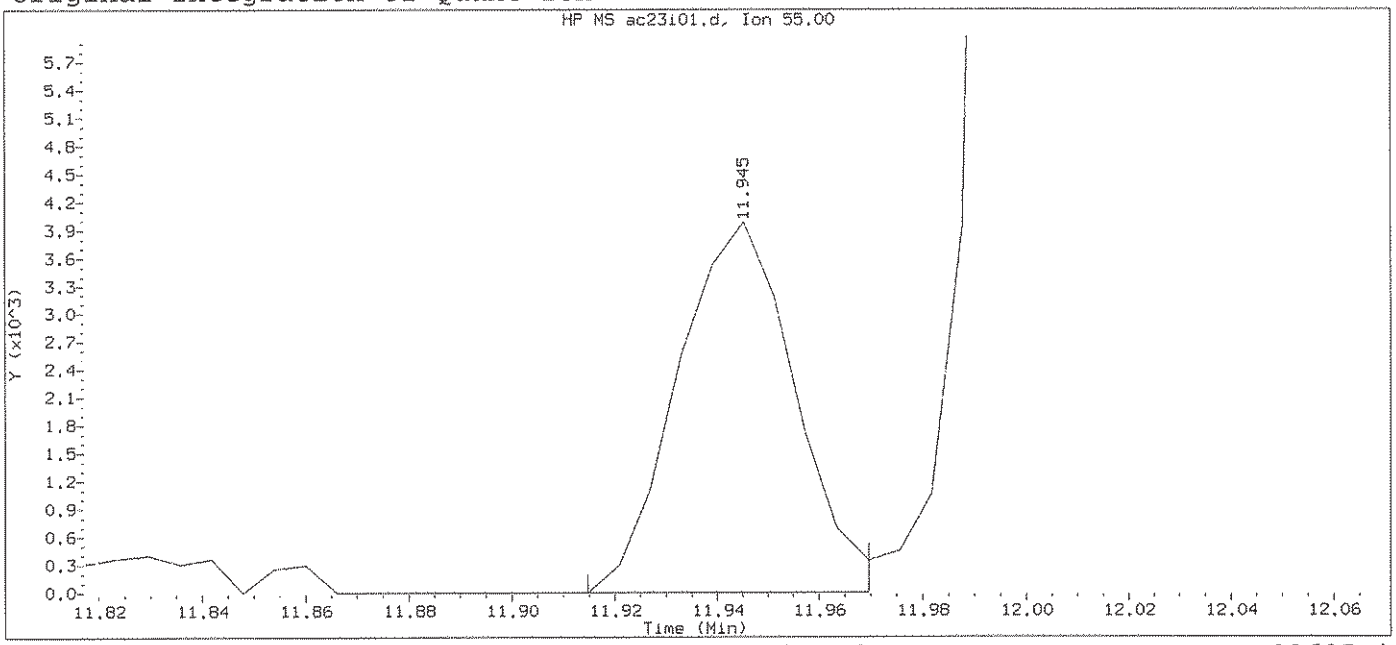
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 111		
Compound Name	: Cyclohexanone		
Scan Number	: 1704		
Retention Time (minutes)	: 11.945		
Quant Ion	: 55.00		
Area	: 6282		
On-column Amount (ng)	: 43.1343		
Integration start scan	: 1698	Integration stop scan:	1707
Y at integration start	: 0	Y at integration end:	0

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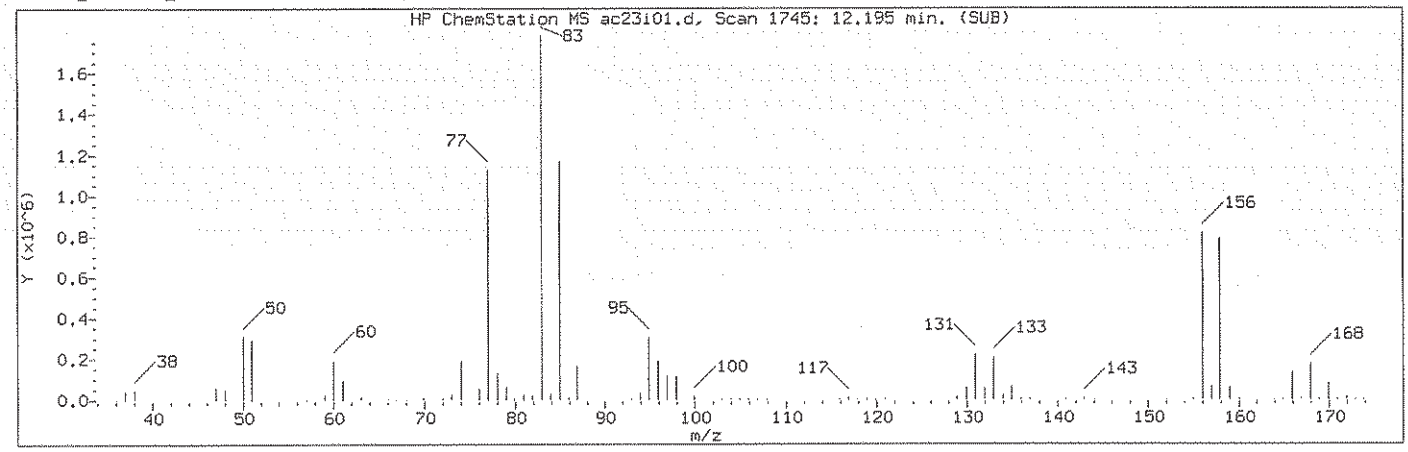
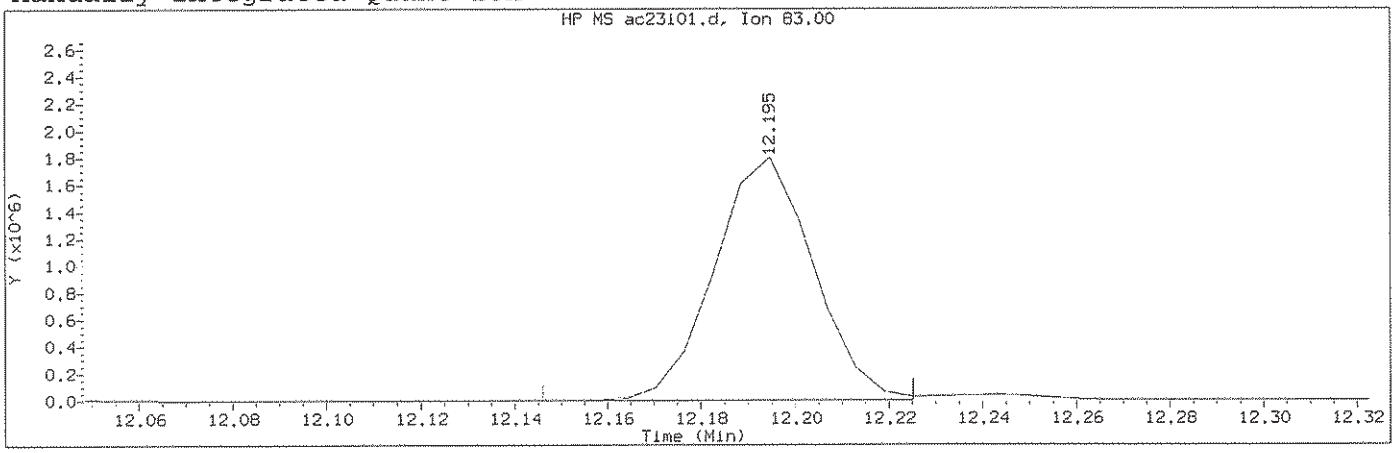
Target 3.5 esignature user ID: cstong1547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

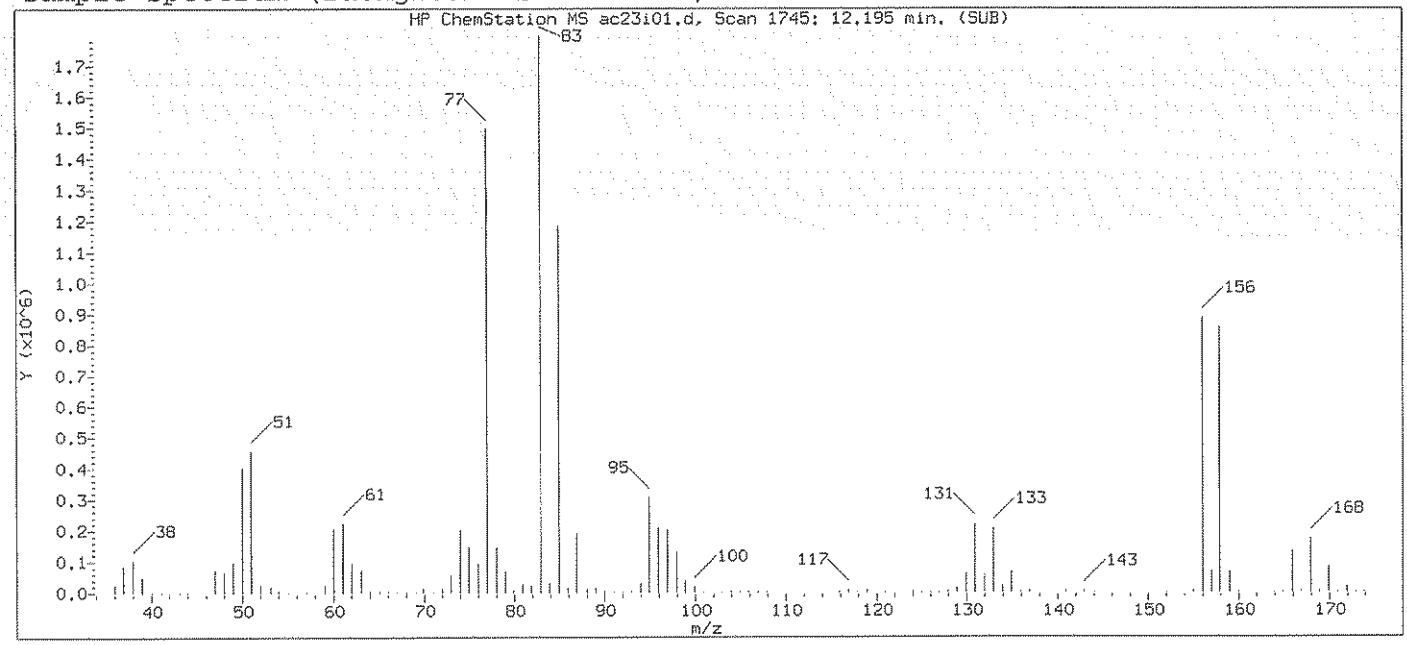
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1745
Retention Time (minutes): 12.195
Quant Ion : 83.00
Area (flag) : 2622823M
On-Column Amount (ng) : 262.5999
Integration start scan : 1736 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

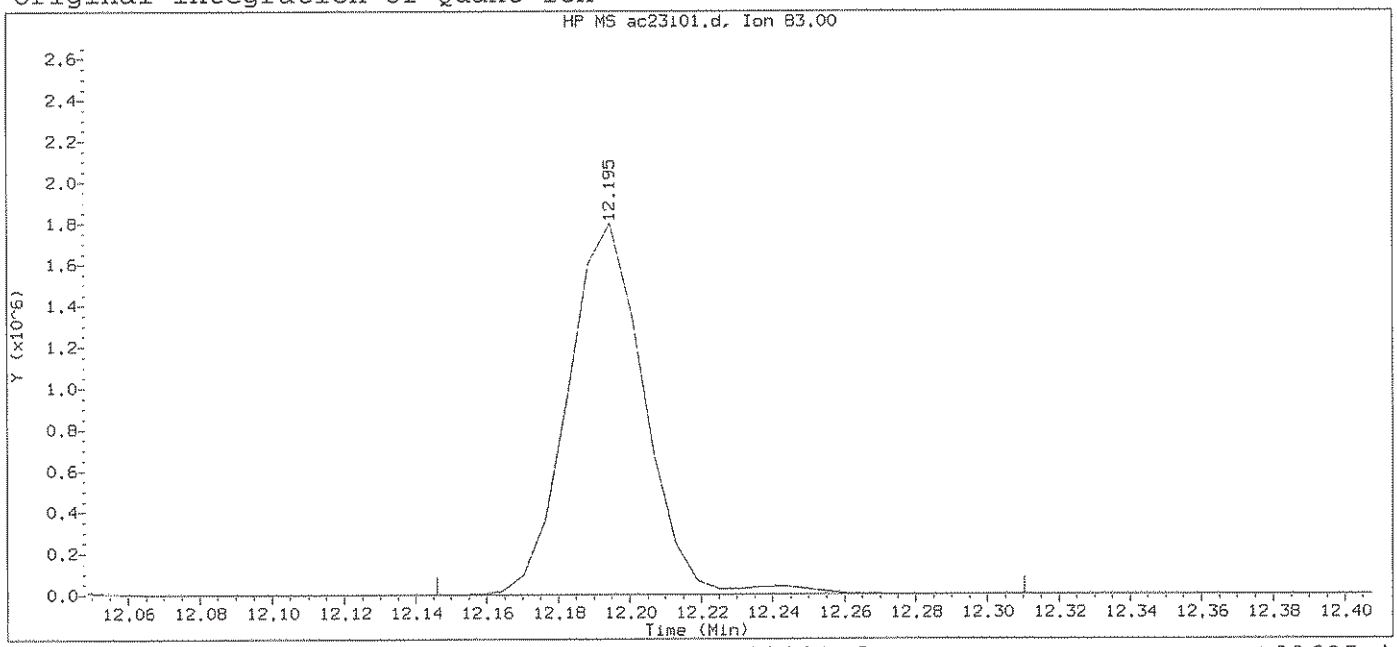
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

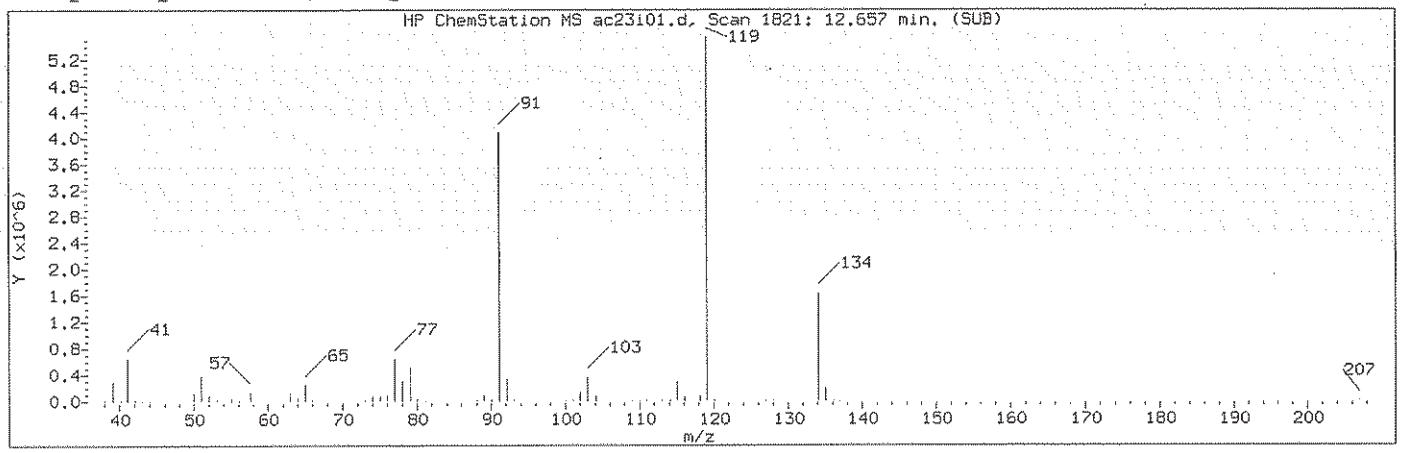
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

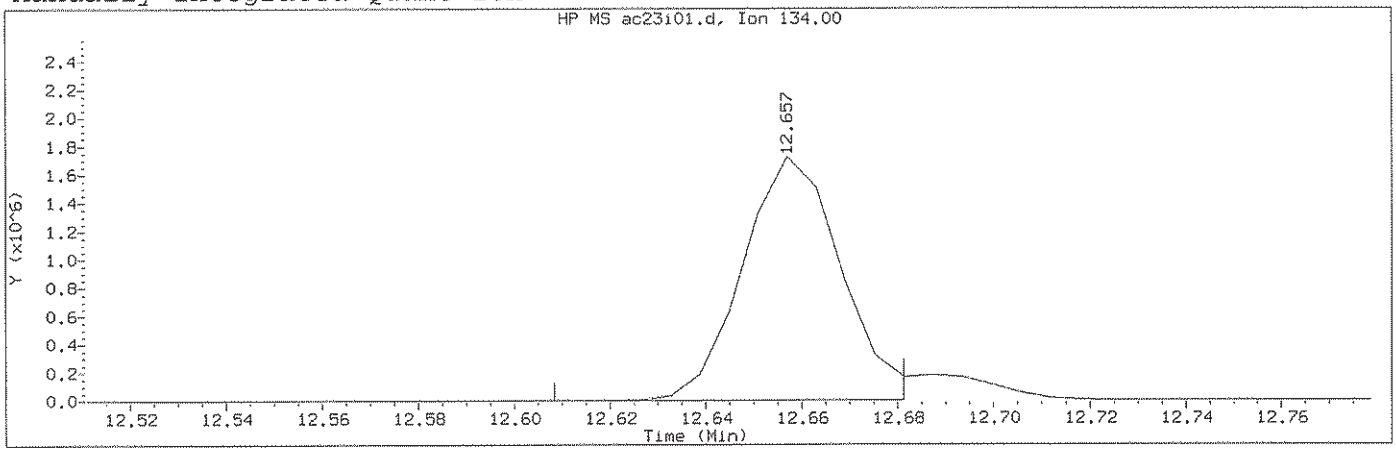
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area	: 2679601		
On-column Amount (ng)	: 277.7249		
Integration start scan	: 1736	Integration stop scan:	1763
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cstong0507

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

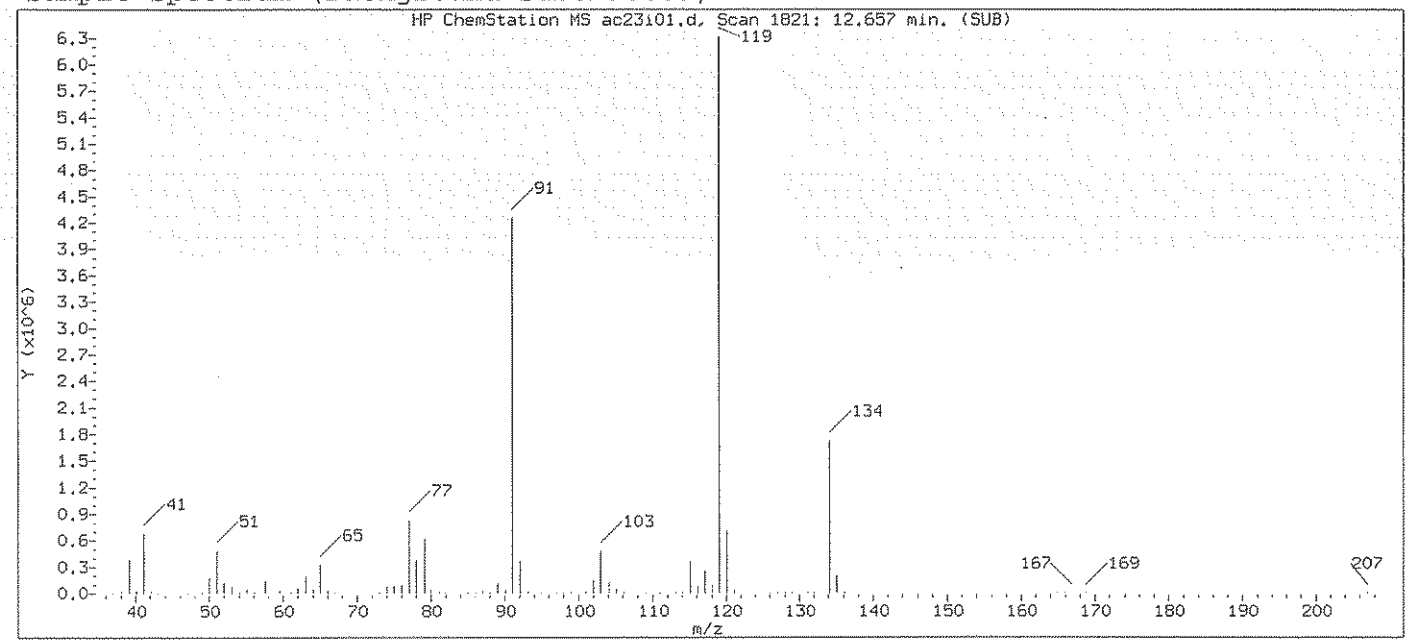
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 2456521M
On-Column Amount (ng) : 296.0373
Integration start scan : 1812 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

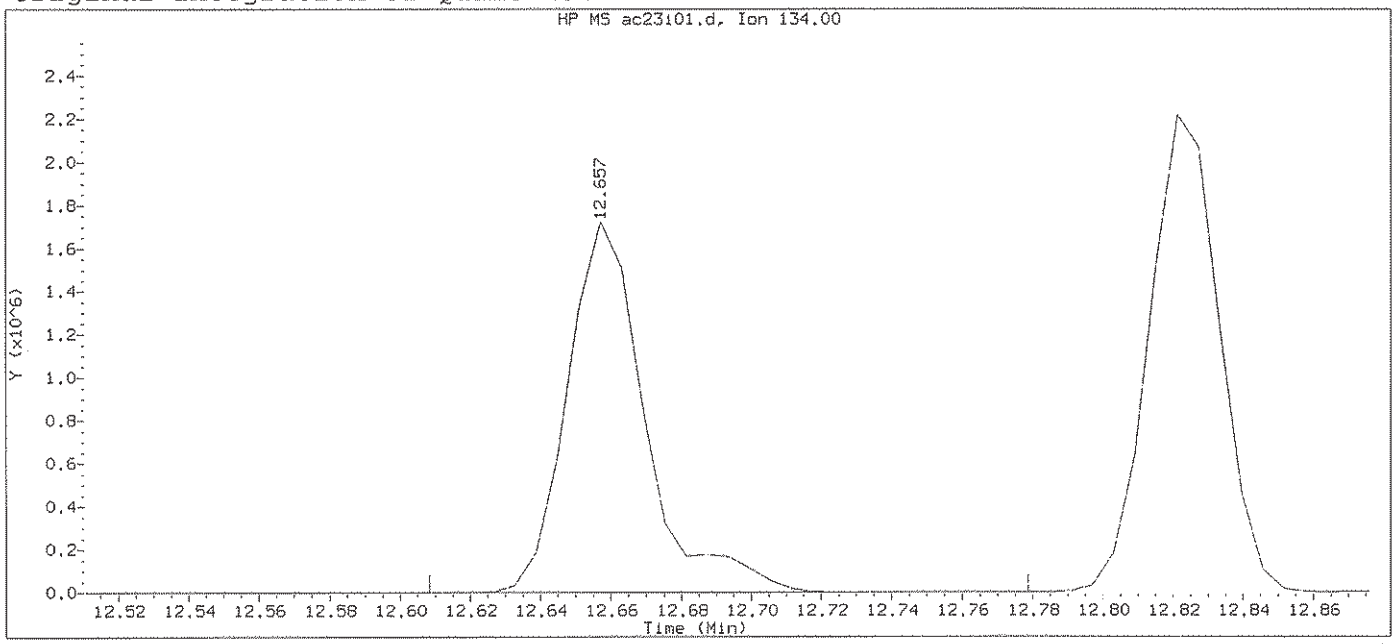
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area	: 2649273		
On-column Amount (ng)	: 291.1102		
Integration start scan	: 1812	Integration stop scan:	1840
Y at integration start	: 0	Y at integration end:	0

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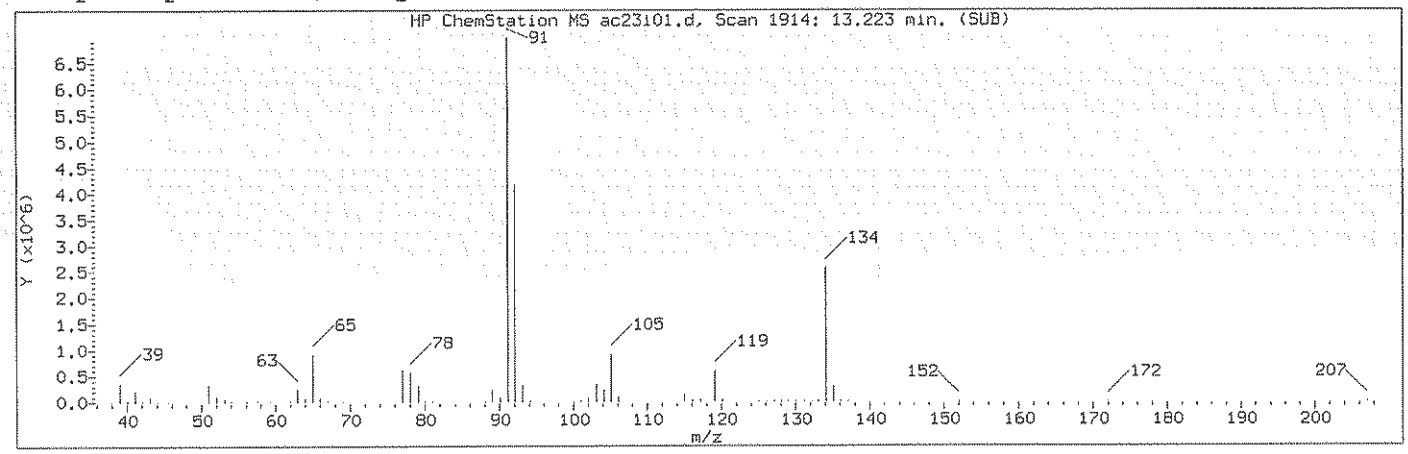
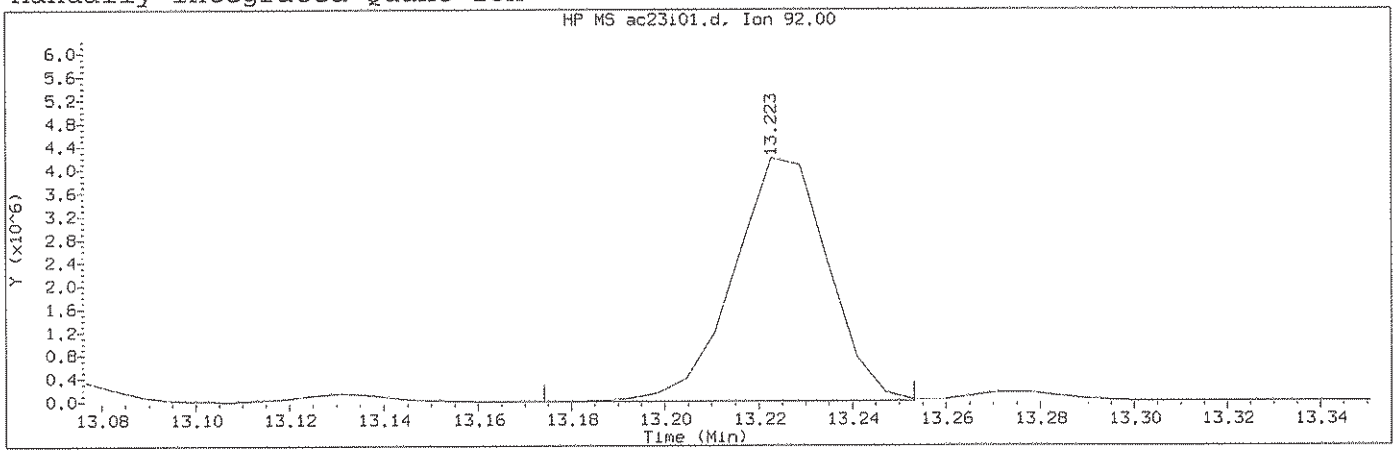
Target 3.5 esignature user ID: CBS0157

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD300 Lab Sample ID: VSTD300

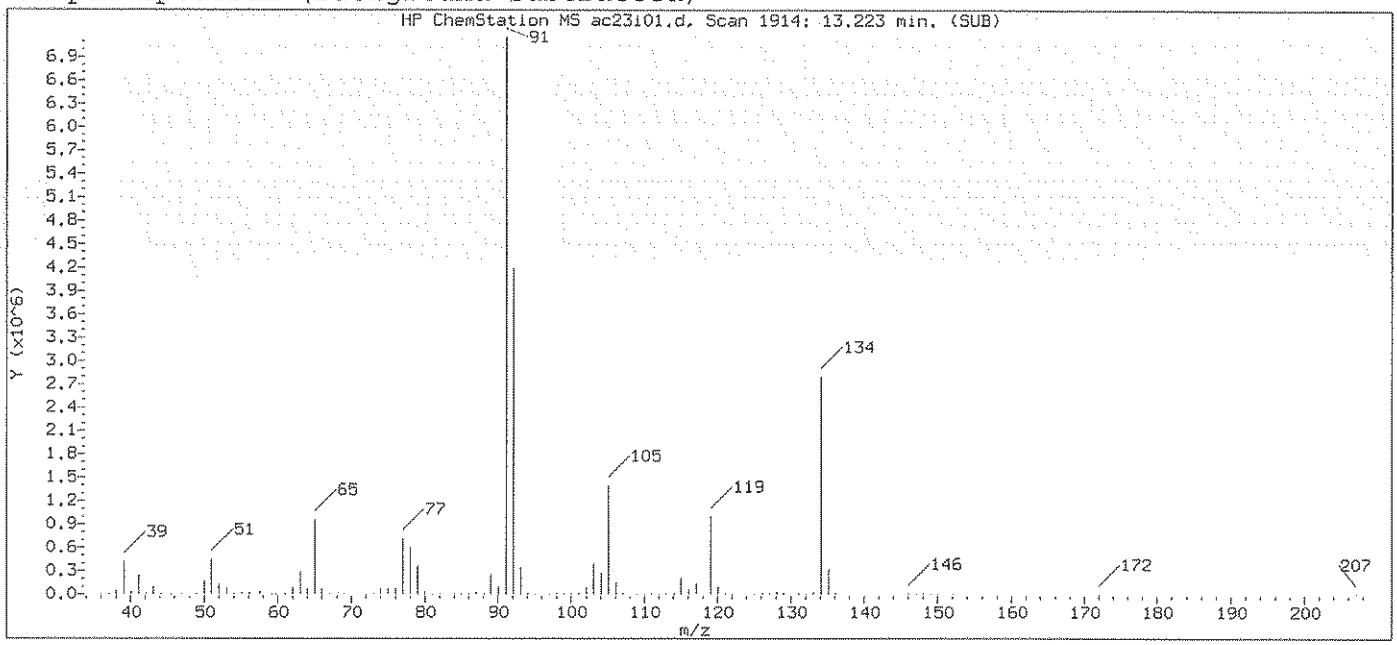
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 5863698M
On-Column Amount (ng) : 294.2729
Integration start scan : 1905 Integration stop scan: 1918
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

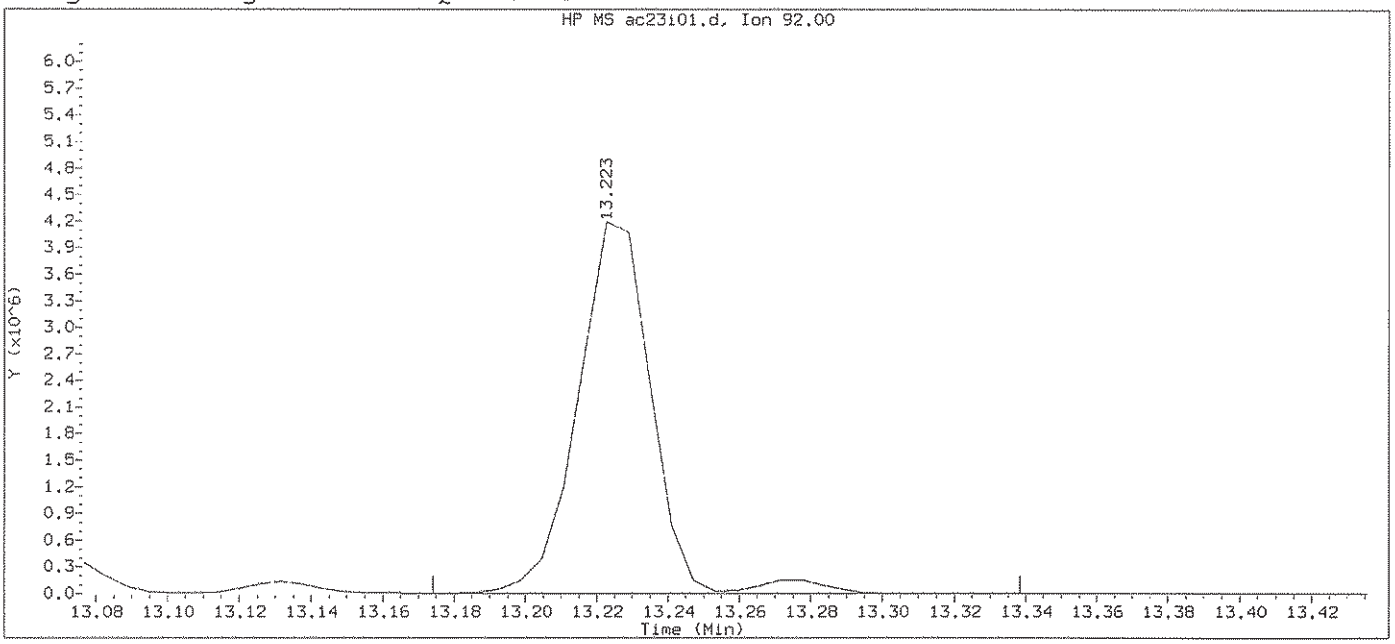
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:23 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:30
Date, time and analyst ID of latest file update: 23-Oct-2013 20:30 sej02002

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 6072101
On-column Amount (ng) : 295.2901
Integration start scan : 1905 Integration stop scan: 1932
Y at integration start : 0 Y at integration end: 0

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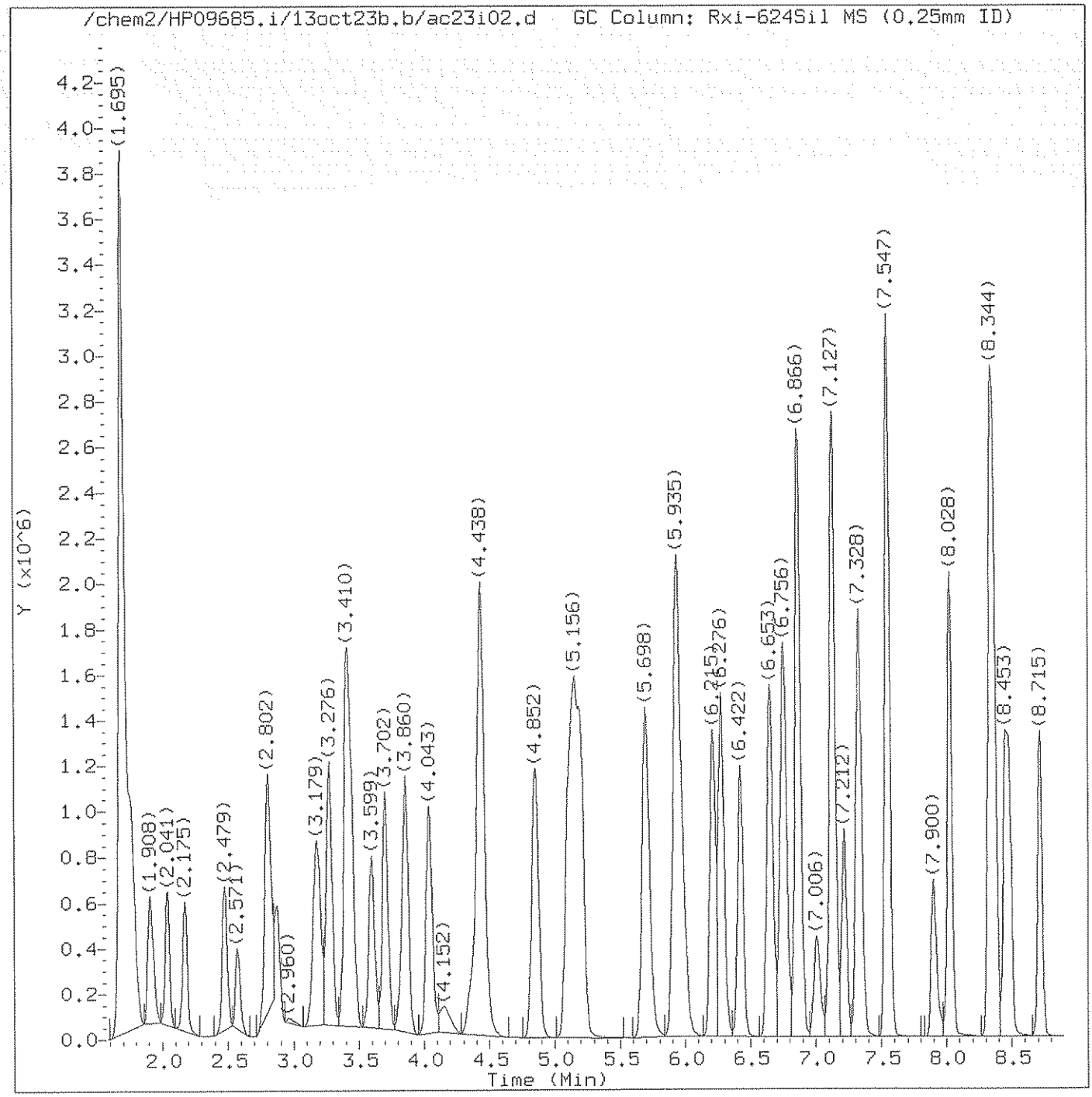
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

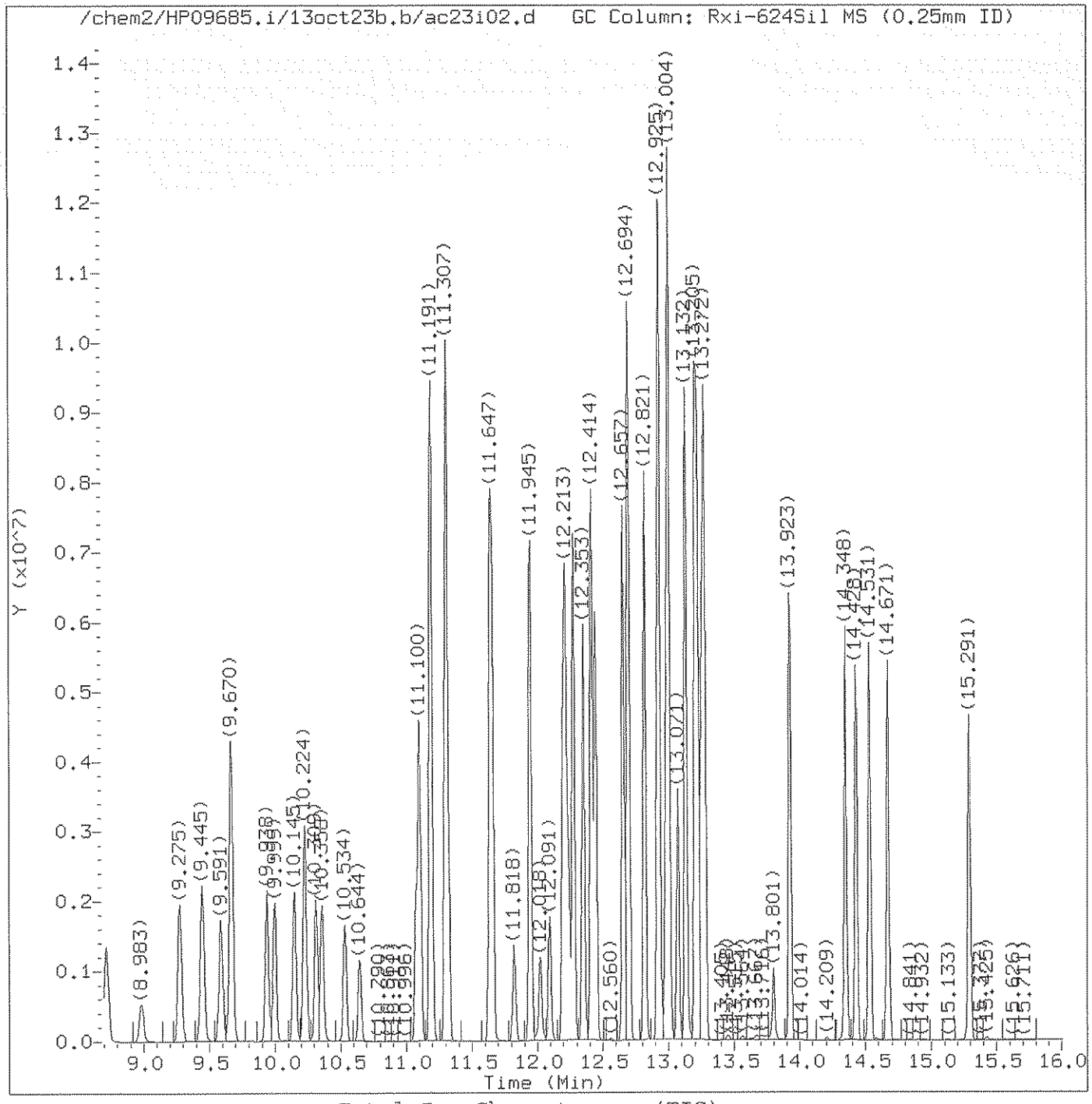
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.908	85	1299919	104.844
4) Chloromethane	(2)	2.041	50	997443	100.559
5) Vinyl Chloride	(2)	2.175	62	959191	100.944
9) Bromomethane	(2)	2.479	94	689231	99.246
10) Chloroethane	(2)	2.571	64	535983	97.110
11) Dichlorofluoromethane	(2)	2.802	67	1403893	99.282
13) Trichlorofluoromethane	(2)	2.875	101	1512532	105.757
15) Ethanol	(1)	2.966	45	462700M	5428.284
17) Freon 123a	(2)	3.179	67	1001631A	78.103
18) Acrolein	(1)	3.276	56	1886007	1005.159
19) 1,1-Dichloroethene	(2)	3.404	96	715063	97.514
20) Acetone	(2)	3.428	58	170659	206.252
22) Freon 113	(2)	3.441	101	801389	100.110
23) 2-Propanol	(1)	3.581	45	283357M	511.787
24) Methyl Iodide	(2)	3.599	142	1421656	98.626
25) Carbon Disulfide	(2)	3.702	76	2527265	98.162
27) Methyl Acetate	(2)	3.824	43	516328	100.072
29) Allyl Chloride	(2)	3.860	41	1161947	102.540
31) Methylene Chloride	(2)	4.043	84	830520	97.069
30)*t-Butyl alcohol-d10	(1)	4.049	65	161666	250.000
32) t-Butyl alcohol	(1)	4.158	59	462178	518.589
33) Acrylonitrile	(2)	4.353	53	326498	110.741
34) Methyl Tertiary Butyl Ether	(2)	4.426	73	2369959	103.847
35) trans-1,2-Dichloroethene	(2)	4.438	96	834446	98.084
38) n-Hexane	(2)	4.852	57	1177583	103.934
40) 1,1-Dichloroethane	(2)	5.101	63	1479991	99.998
41) di-Isopropyl ether	(2)	5.156	45	2466533	103.007
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	1152496	104.752
44) Ethyl t-butyl ether	(2)	5.698	59	2419594	104.474
45) 2-Butanone	(2)	5.904	43	772442	226.660
46) cis-1,2-Dichloroethene	(2)	5.935	96	940218	100.057
48) 2,2-Dichloropropane	(2)	5.953	77	1241235	103.144
50) Propionitrile	(1)	5.996	54	547752	477.126
47) 1,2-Dichloroethene (Total)	(2)		96	1774664	198.141
51) Methacrylonitrile	(2)	6.215	67	822006	257.443
52) Bromochloromethane	(2)	6.276	128	486259	101.598
53) Tetrahydrofuran	(1)	6.288	71	225441	207.423
54) Chloroform	(2)	6.422	83	1449181	99.765

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.641	113	355882	50.264
55)$Dibromofluoromethane	(2)	6.647	111	361887	50.122
56) 1,1,1-Trichloroethane	(2)	6.653	97	1357522	96.518
57) Cyclohexane	(2)	6.756	56	1448664	103.809
57) Cyclohexane	(2)	6.756	84	1320410	103.113
57) Cyclohexane	(2)	6.756	69	458526	104.355
58) 1,1-Dichloropropene	(2)	6.866	75	1156884	101.474
59) Carbon Tetrachloride	(2)	6.872	117	1176751	102.296
60) Isobutyl Alcohol	(1)	7.006	41	367919	1244.726
61)$1,2-Dichloroethane-d4	(2)	7.109	102	81174	50.554
61)$1,2-Dichloroethane-d4	(2)	7.109	65	372539	50.665
61)$1,2-Dichloroethane-d4	(2)	7.109	104	51514	50.588
62) Benzene	(2)	7.133	78	3423037	98.786
64) 1,2-Dichloroethane	(2)	7.212	62	1053823	101.200
64) 1,2-Dichloroethane	(2)	7.218	98	101377	100.627
65) t-Amyl methyl ether	(2)	7.328	73	2339570	105.091
67)*Fluorobenzene	(2)	7.541	96	1448280	50.000
69) n-Heptane	(2)	7.547	43	1203613	102.706
70) n-Butanol	(1)	7.900	56	683311	2636.864
72) Trichloroethene	(2)	8.028	95	899411	100.062
73) Methylcyclohexane	(2)	8.338	83	1582131	105.160
74) 1,2-Dichloropropane	(2)	8.368	63	878524	101.190
76) Methyl Methacrylate	(2)	8.447	69	587912	108.844
77) 1,4-Dioxane	(1)	8.460	88	120826	1261.885
78) Dibromomethane	(2)	8.478	93	544239	101.274
81) Bromodichloromethane	(2)	8.715	83	1128120	104.214
82) 2-Nitropropane	(1)	8.983	41	434623	200.739
84) cis-1,3-Dichloropropene	(2)	9.275	75	1406308	107.579
85) 4-Methyl-2-pentanone	(2)	9.445	43	1734357	239.491
86)$Toluene-d8	(3)	9.591	98	1435357	49.822
86)$Toluene-d8	(3)	9.591	100	929285	49.571
87) Toluene	(3)	9.670	92	2205528	98.592
88) trans-1,3-Dichloropropene	(3)	9.938	75	1318303	108.054
89) Ethyl Methacrylate	(3)	9.999	69	1126608	112.396
90) 1,1,2-Trichloroethane	(3)	10.145	97	743126	99.634
92) Tetrachloroethene	(3)	10.224	166	1005843	98.188
93) 1,3-Dichloropropane	(3)	10.315	76	1309446	101.231
95) 2-Hexanone	(3)	10.358	43	1258654	239.598

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.534	129	919621	106.580
98) 1,2-Dibromoethane	(3)	10.644	107	796823	102.464
99)*Chlorobenzene-d5	(3)	11.075	117	1110032	50.000
100) Chlorobenzene	(3)	11.106	112	2593723	98.490
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	946237	103.745
102) Ethylbenzene	(3)	11.191	91	4274802	101.486
103) m+p-Xylene	(3)	11.307	106	3481102	202.233
104) o-Xylene	(3)	11.641	106	1710052	102.336
106) Styrene	(3)	11.659	104	2822857	106.995
105) Xylene (Total)	(3)		106	5191154	304.569
107) Bromoform	(3)	11.818	173	585490	110.650
108) Isopropylbenzene	(3)	11.945	105	4400783	102.919
111) Cyclohexanone	(1)	12.018	55	494538	1361.910
112)$4-Bromofluorobenzene	(3)	12.091	95	540976	50.505
112)$4-Bromofluorobenzene	(3)	12.091	174	465070	50.017
113) 1,1,2,2-Tetrachloroethane	(4)	12.195	83	1031677M	99.217
114) Bromobenzene	(4)	12.207	156	1185498	98.268
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	710510M	263.723
116) 1,2,3-Trichloropropane	(4)	12.244	110	317377	99.210
117) n-Propylbenzene	(4)	12.274	91	5046718	98.549
119) 2-Chlorotoluene	(4)	12.353	126	1129128	98.305
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	3821948	101.028
123) 4-Chlorotoluene	(4)	12.444	126	1176681	99.002
126) tert-Butylbenzene	(4)	12.657	134	874534M	101.233
127) Pentachloroethane	(4)	12.688	167	774776	105.221
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	3962836	101.767
129) sec-Butylbenzene	(4)	12.821	105	4874218	101.922
131) 1,3-Dichlorobenzene	(4)	12.919	146	2244063	100.094
132) p-Isopropyltoluene	(4)	12.931	119	4457051	104.161
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	616680	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	2297374	99.729
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	4140635	101.686
136) Benzyl Chloride	(4)	13.071	126	500717	114.279
137) 1,3-Diethylbenzene	(4)	13.132	119	2716334	104.209
138) 1,4-Diethylbenzene	(4)	13.205	119	2733824	105.115
139) n-Butylbenzene	(4)	13.223	92	2129682	102.662
140) 1,2-Dichlorobenzene	(4)	13.253	146	2155432	99.613
141) 1,2-Diethylbenzene	(4)	13.278	119	2257470	102.725

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

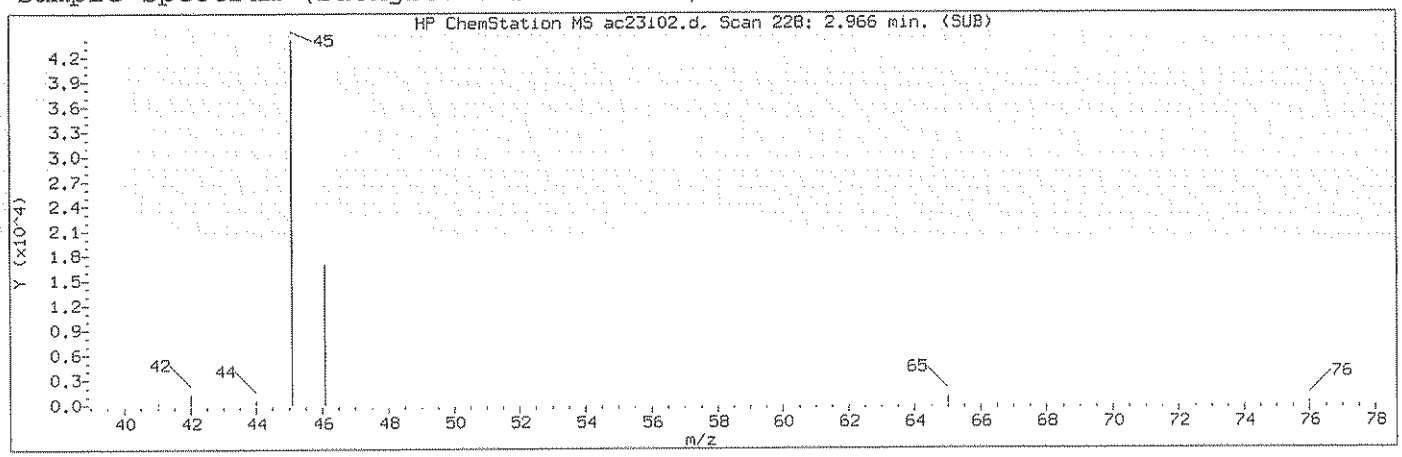
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

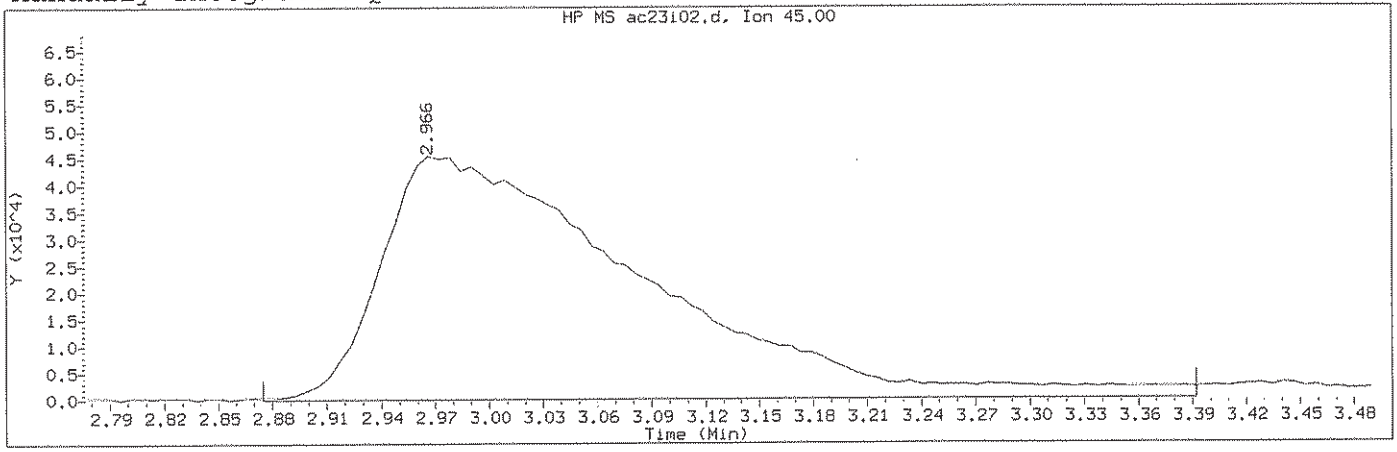
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	211337	113.577
145) 1,3,5-Trichlorobenzene	(4)	13.923	180	1821142	103.761
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	1619247	107.642
147) Hexachlorobutadiene	(4)	14.428	225	860673	101.052
148) Naphthalene	(4)	14.531	128	3857386	112.549
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	1520869	107.628
150) 2-Methylnaphthalene	(4)	15.291	142	2146410	101.228

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

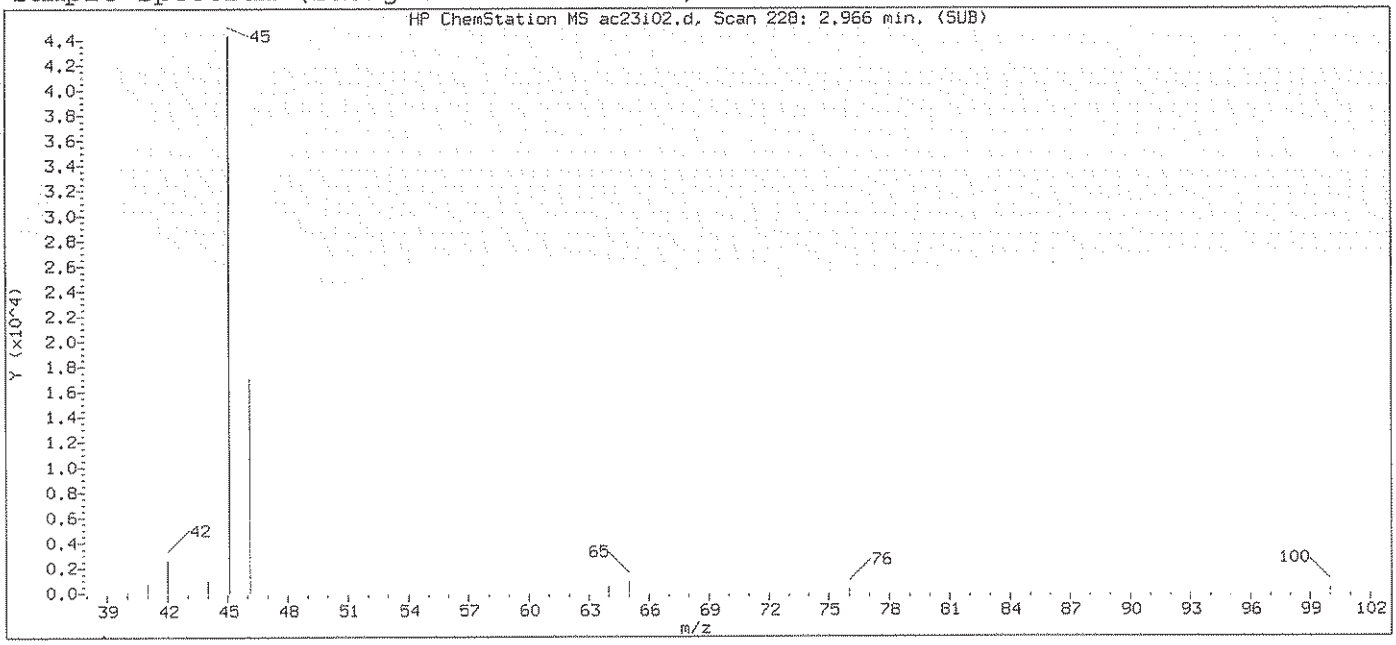
Compound Number	: 15		
Compound Name	: Ethanol		
Scan Number	: 228		
Retention Time (minutes)	: 2.966		
Quant Ion	: 45.00		
Area (flag)	: 462700M		
On-Column Amount (ng)	: 5428.2841		
Integration start scan	: 212	Integration stop scan:	297
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

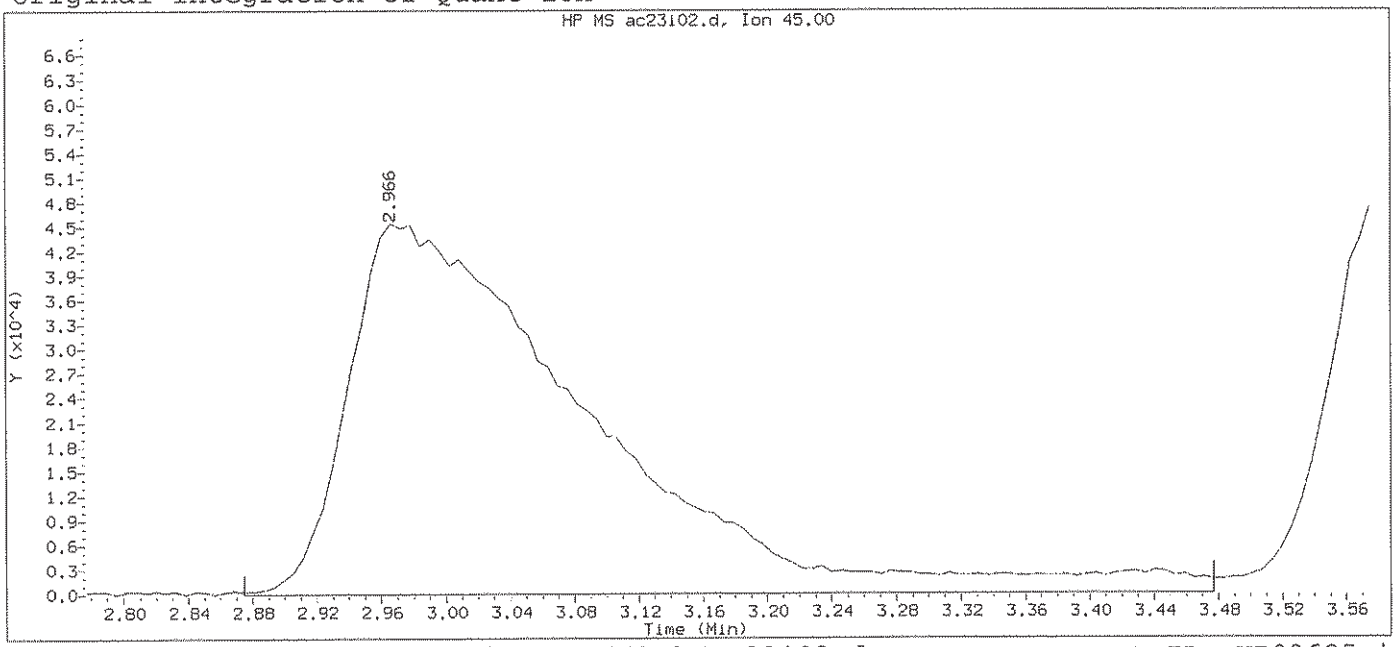
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

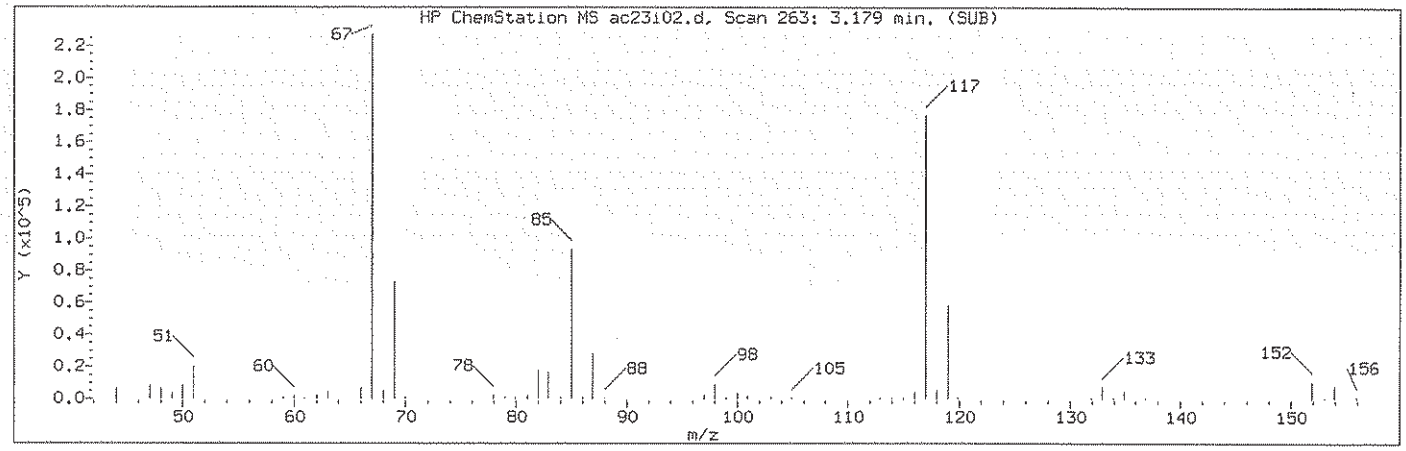
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

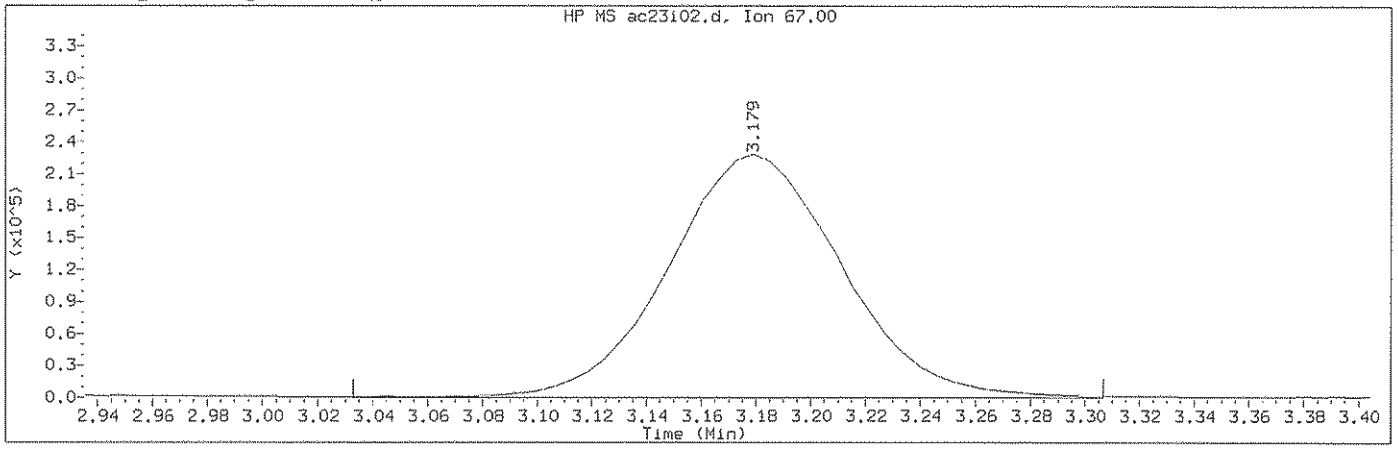
Compound Number	: 15		
Compound Name	: Ethanol		
Scan Number	: 228		
Retention Time (minutes)	: 2.966		
Quant Ion	: 45.00		
Area	: 474298		
On-column Amount (ng)	: 5295.3954		
Integration start scan	: 212	Integration stop scan:	311
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs0154.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

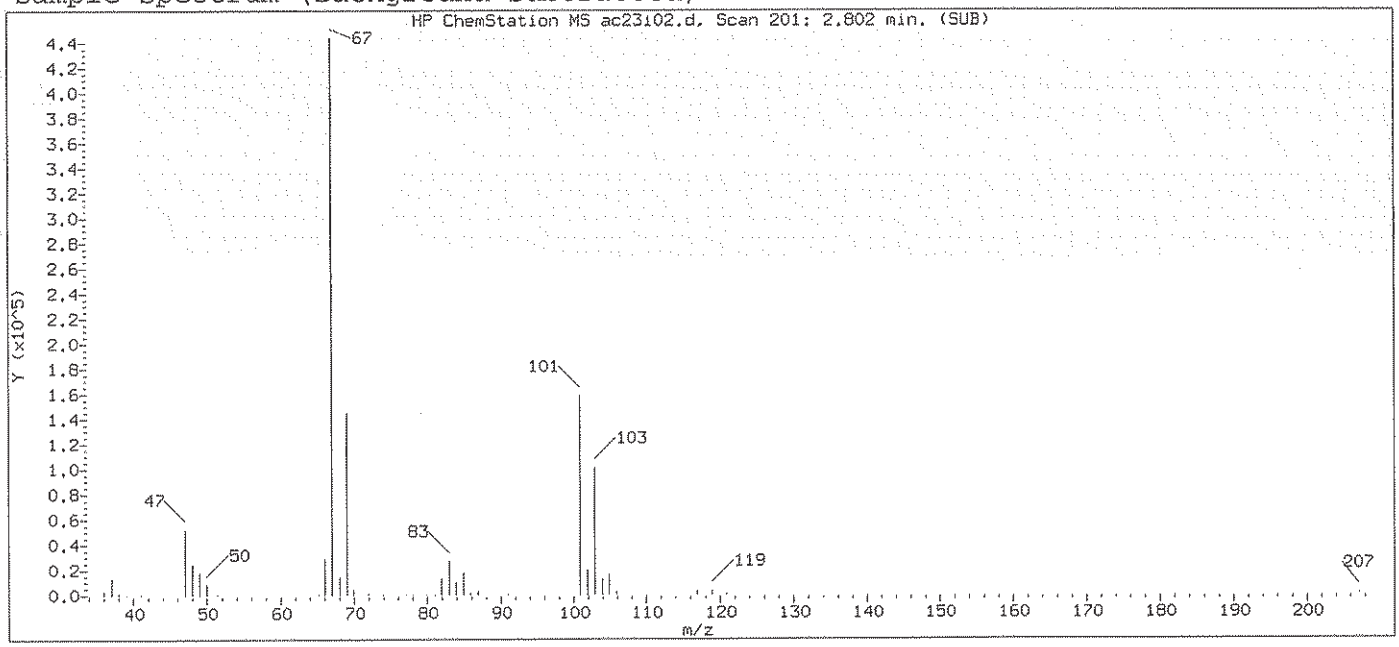
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 263		
Retention Time (minutes)	: 3.179		
Quant Ion	: 67.00		
Area (flag)	: 1001631A		
On-Column Amount (ng)	: 78.1033		
Integration start scan	: 238	Integration stop scan:	283
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

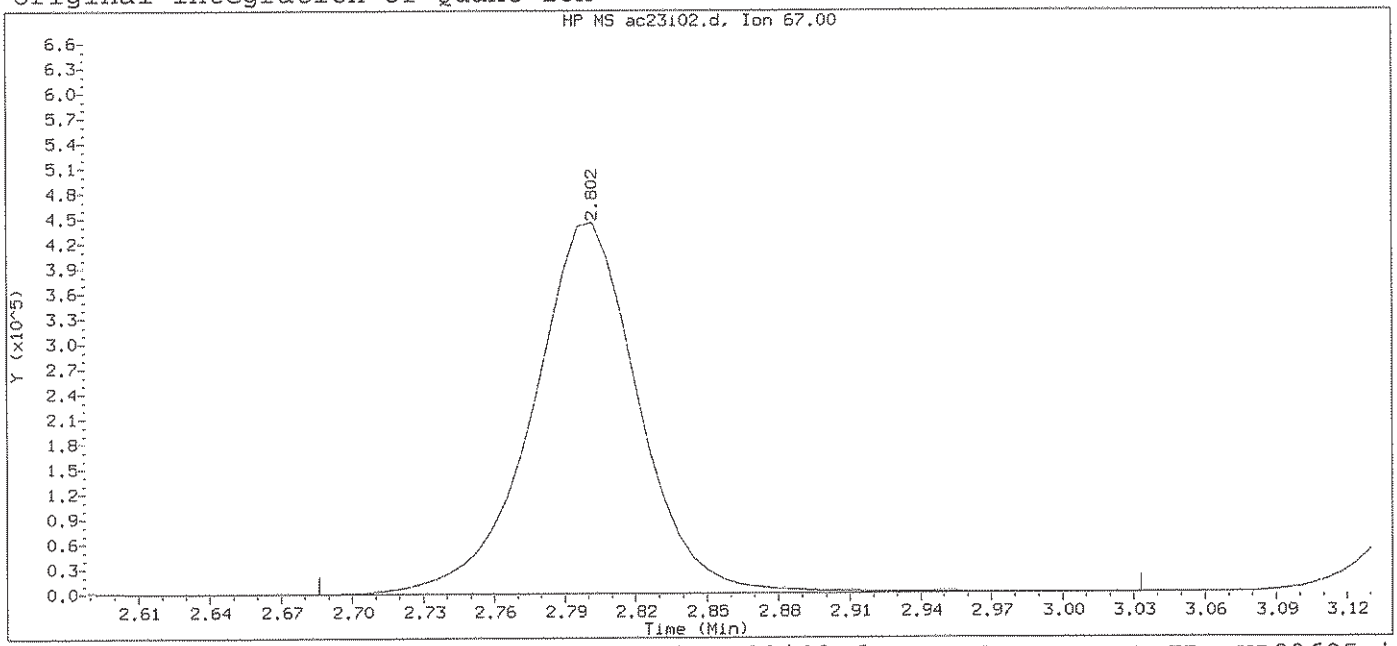
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

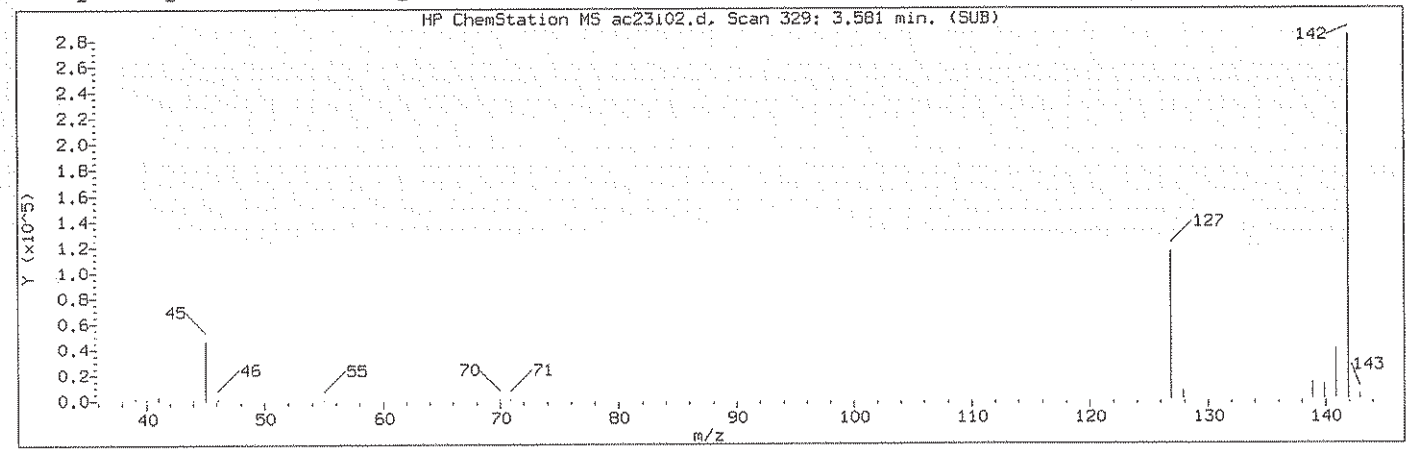
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

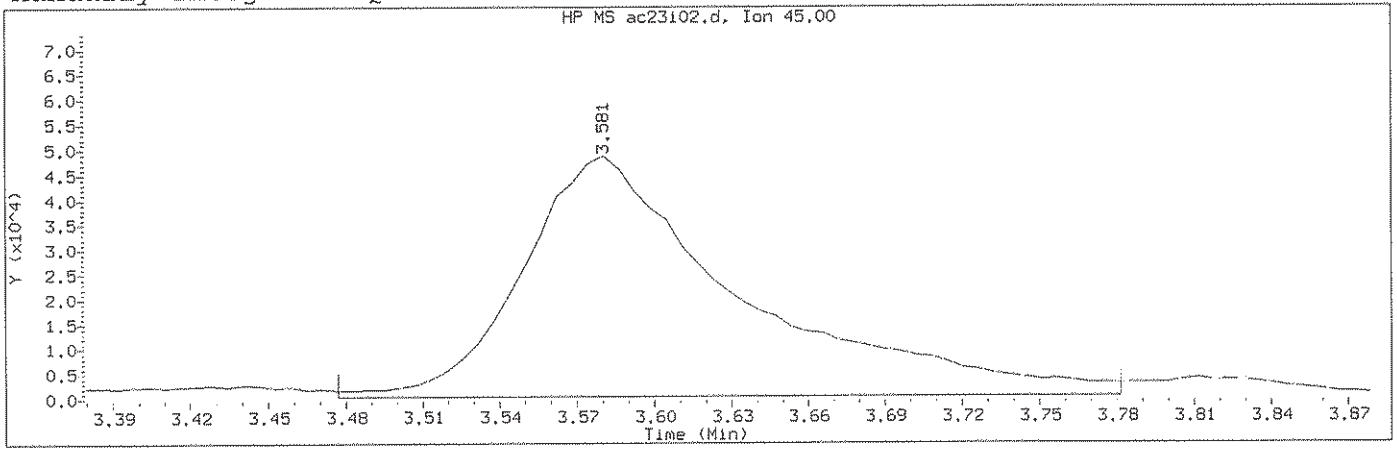
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 201		
Retention Time (minutes)	: 2.802		
Quant Ion	: 67.00		
Area	: 1403893		
On-column Amount (ng)	: 100.3197		
Integration start scan	: 181	Integration stop scan:	238
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: csj02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

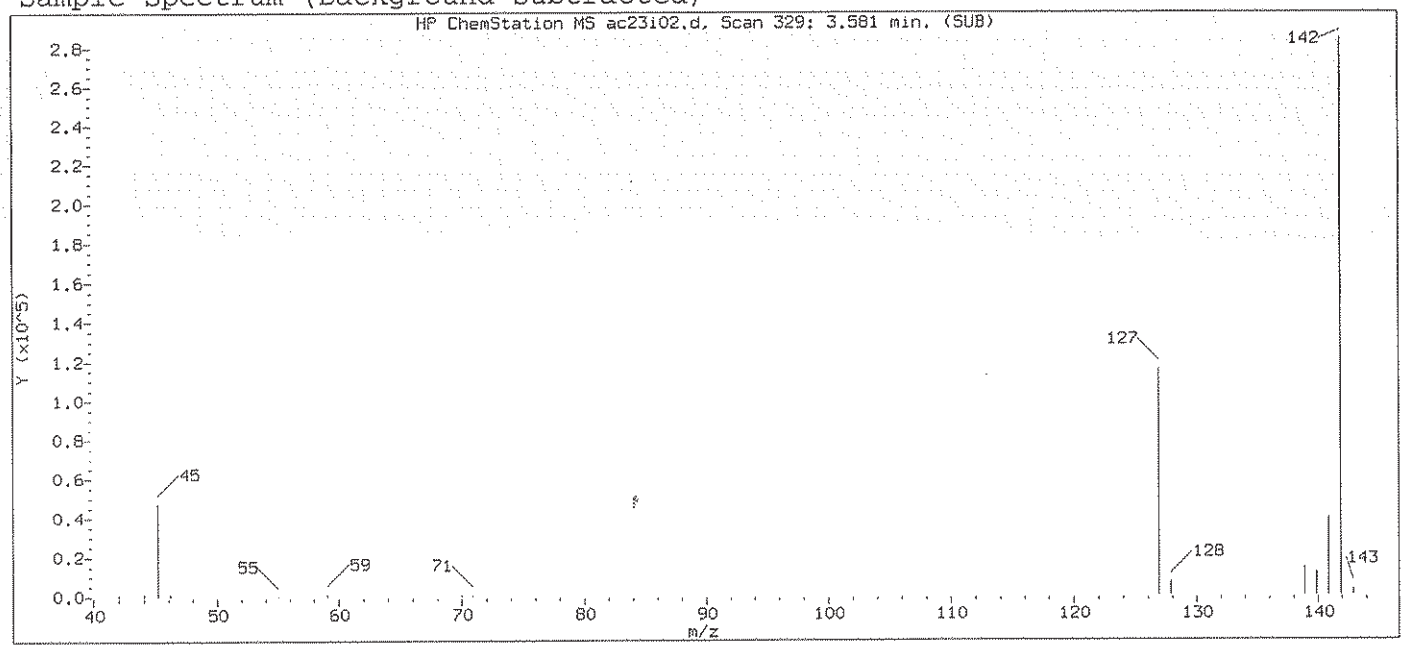
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 329		
Retention Time (minutes)	: 3.581		
Quant Ion	: 45.00		
Area (flag)	: 283357M		
On-Column Amount (ng)	: 511.7868		
Integration start scan	: 311	Integration stop scan:	361
Y at integration start	: 464	Y at integration end:	464

Reason for manual integration: improper integration

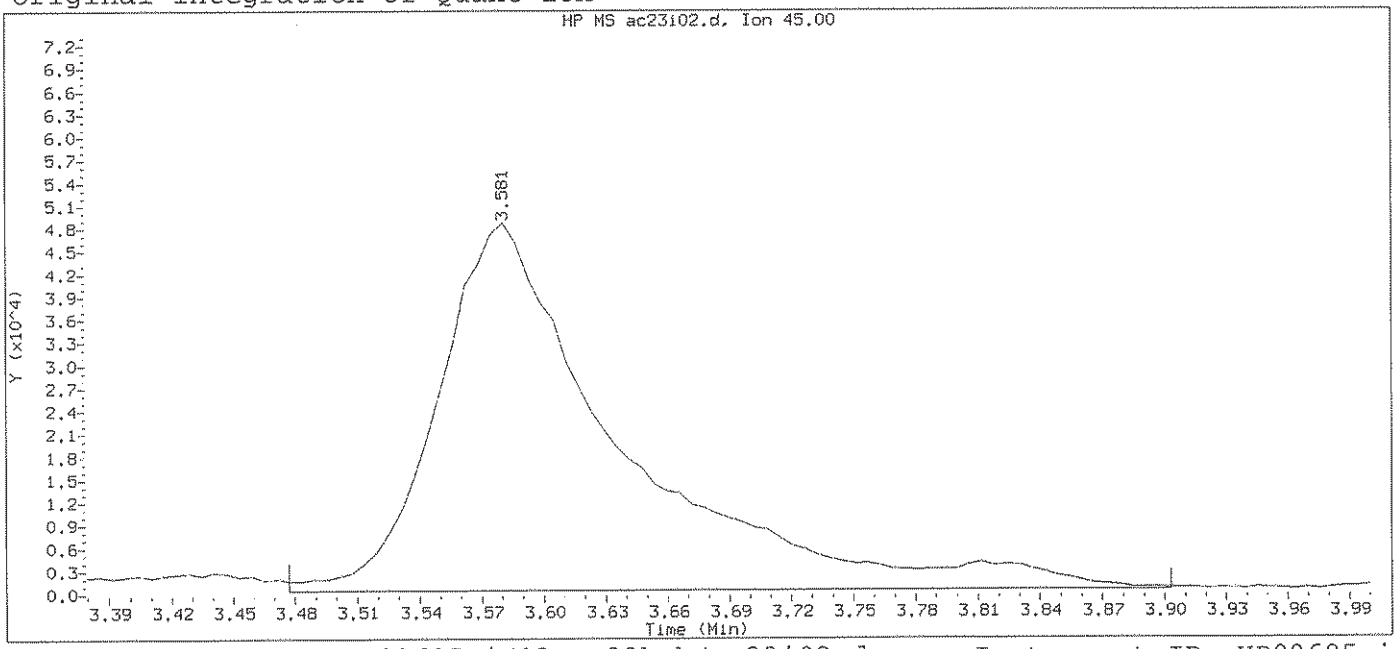
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

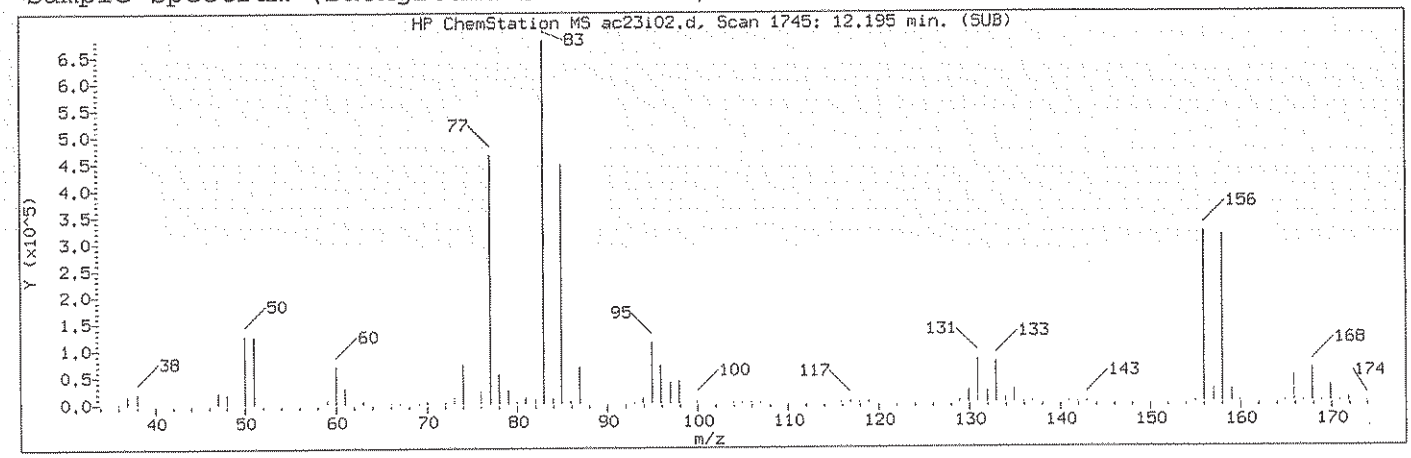
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

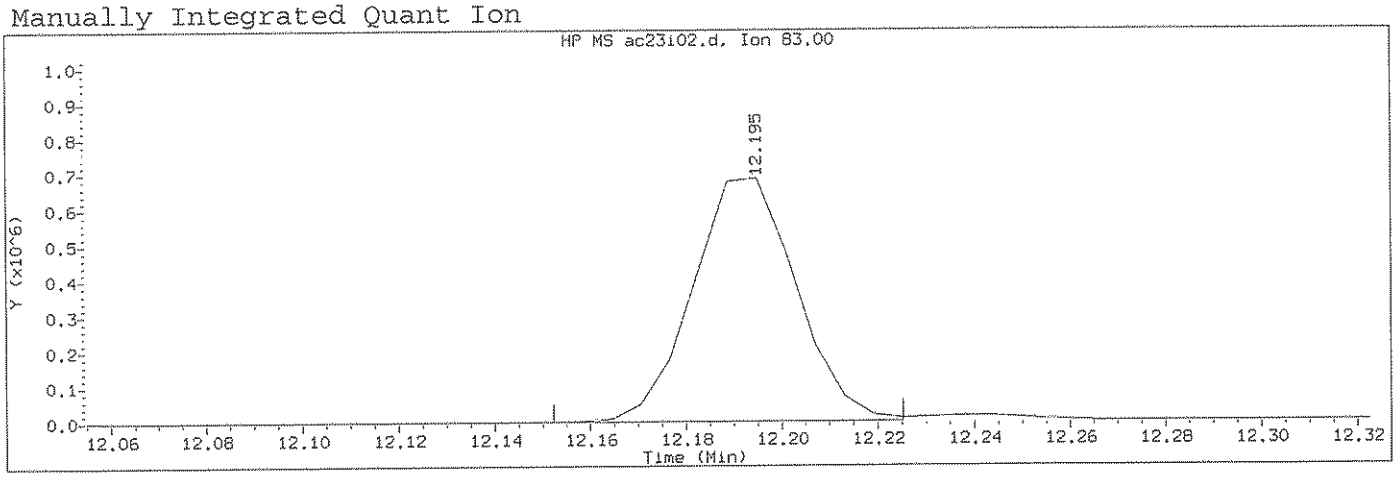
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 329		
Retention Time (minutes)	: 3.581		
Quant Ion	: 45.00		
Area	: 296934		
On-column Amount (ng)	: 502.7420		
Integration start scan	: 311	Integration stop scan:	381
Y at integration start	: 464	Y at integration end:	464

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

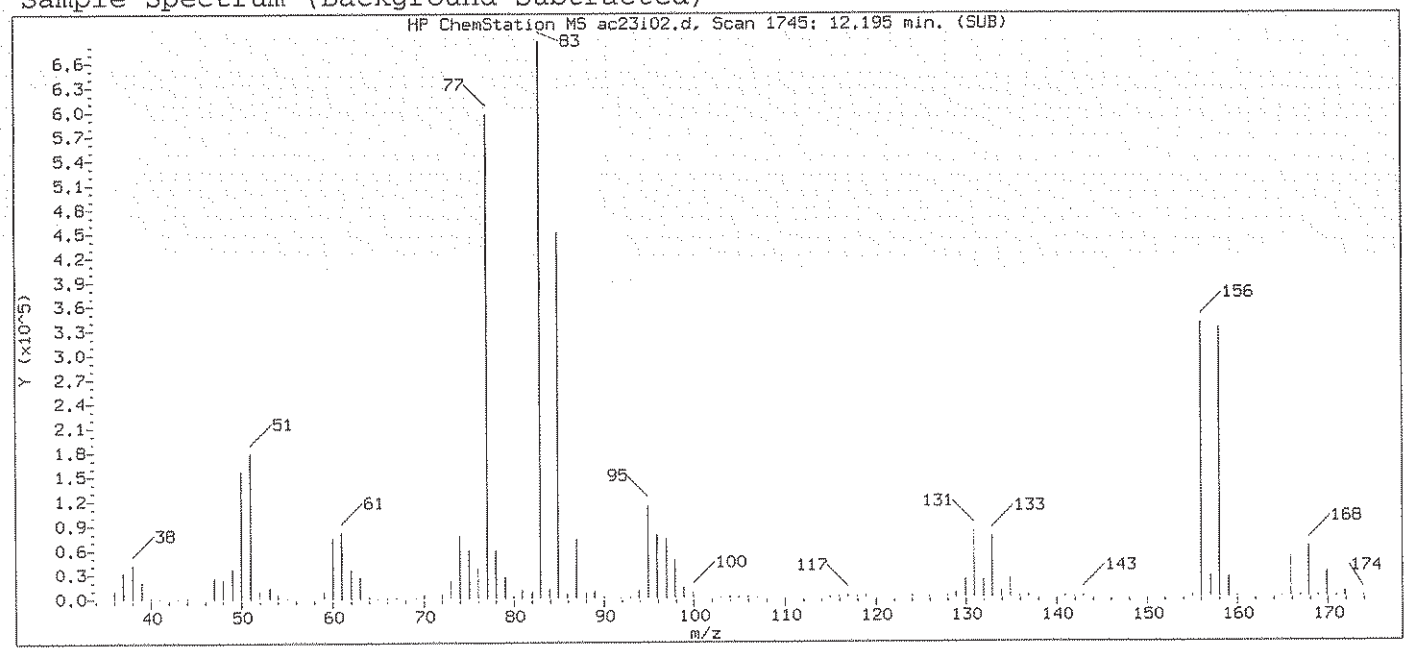
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area (flag)	: 1031677M		
On-Column Amount (ng)	: 99.2172		
Integration start scan	: 1737	Integration stop scan:	1749
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

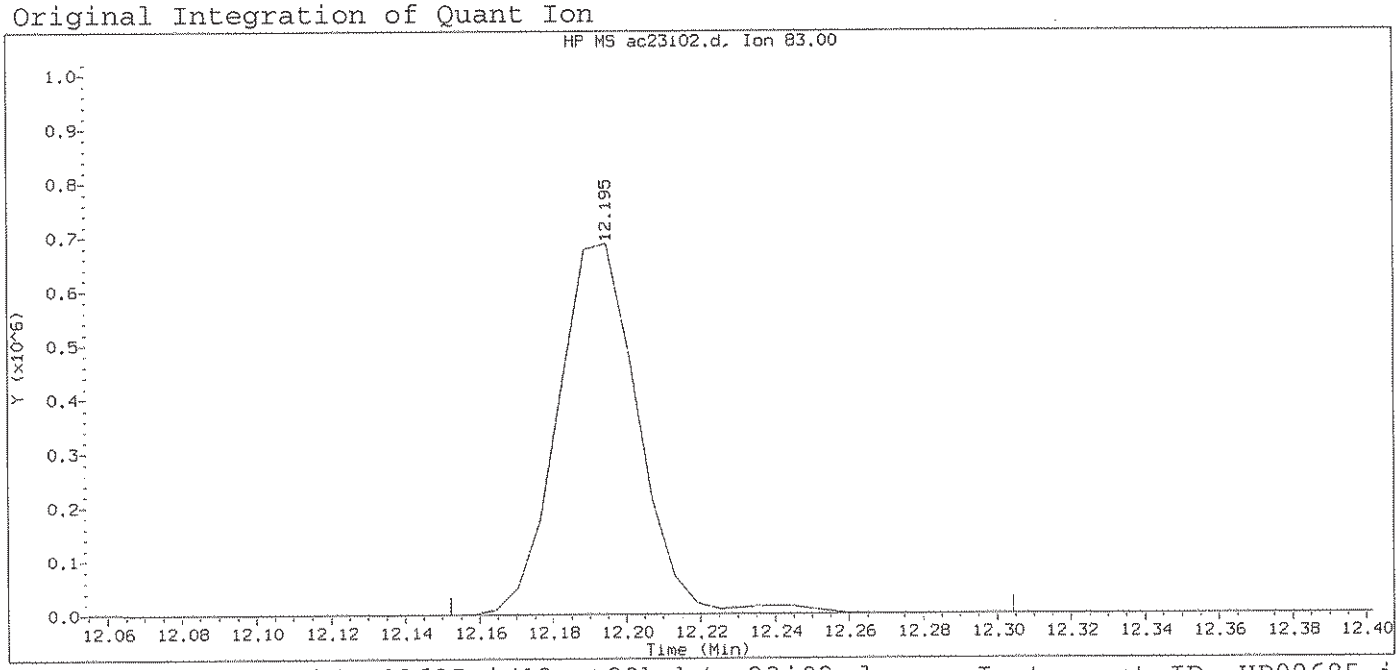
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area	: 1053131		
On-column Amount (ng)	: 103.8465		
Integration start scan	: 1737	Integration stop scan:	1762
Y at integration start	: 0	Y at integration end:	0

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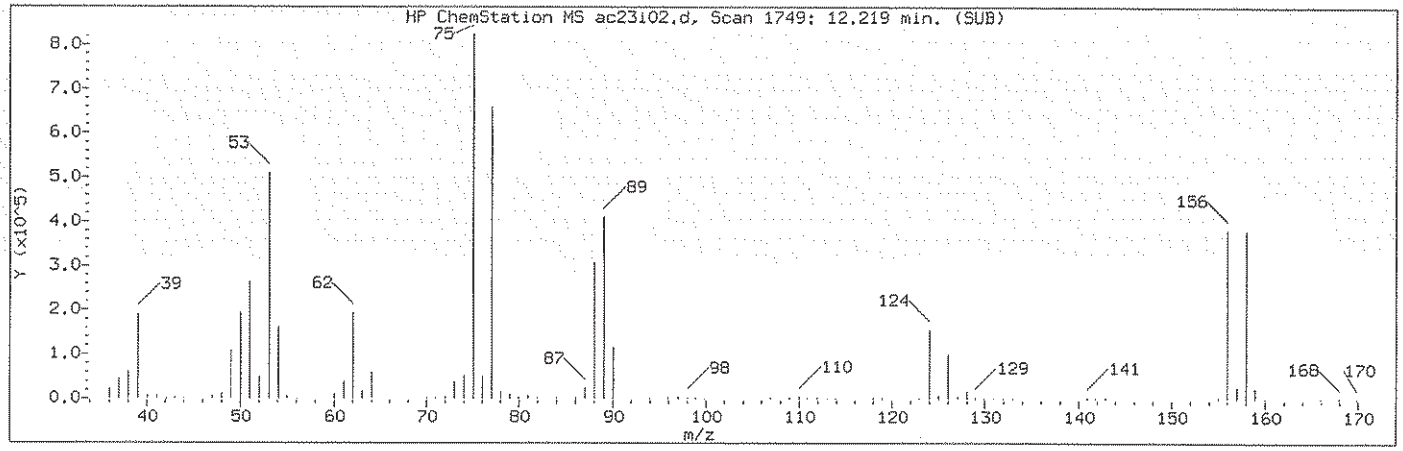
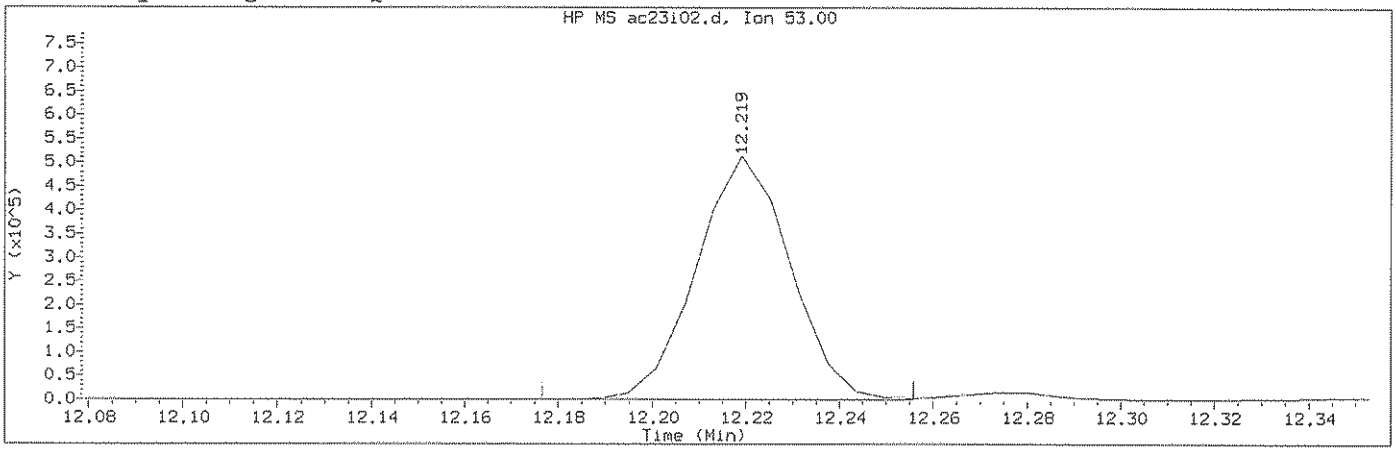
Target 3.5 esignature user ID: cbs0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

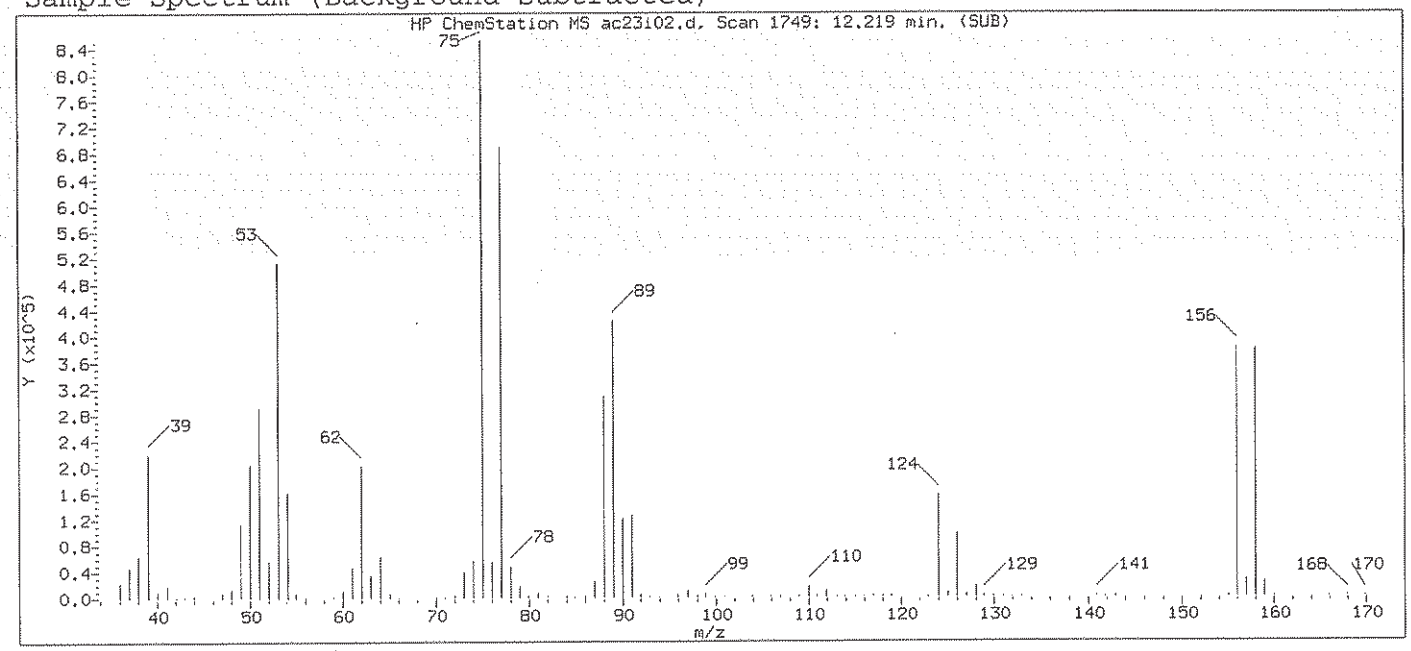
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area (flag) : 710510M
On-Column Amount (ng) : 263.7227
Integration start scan : 1741 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

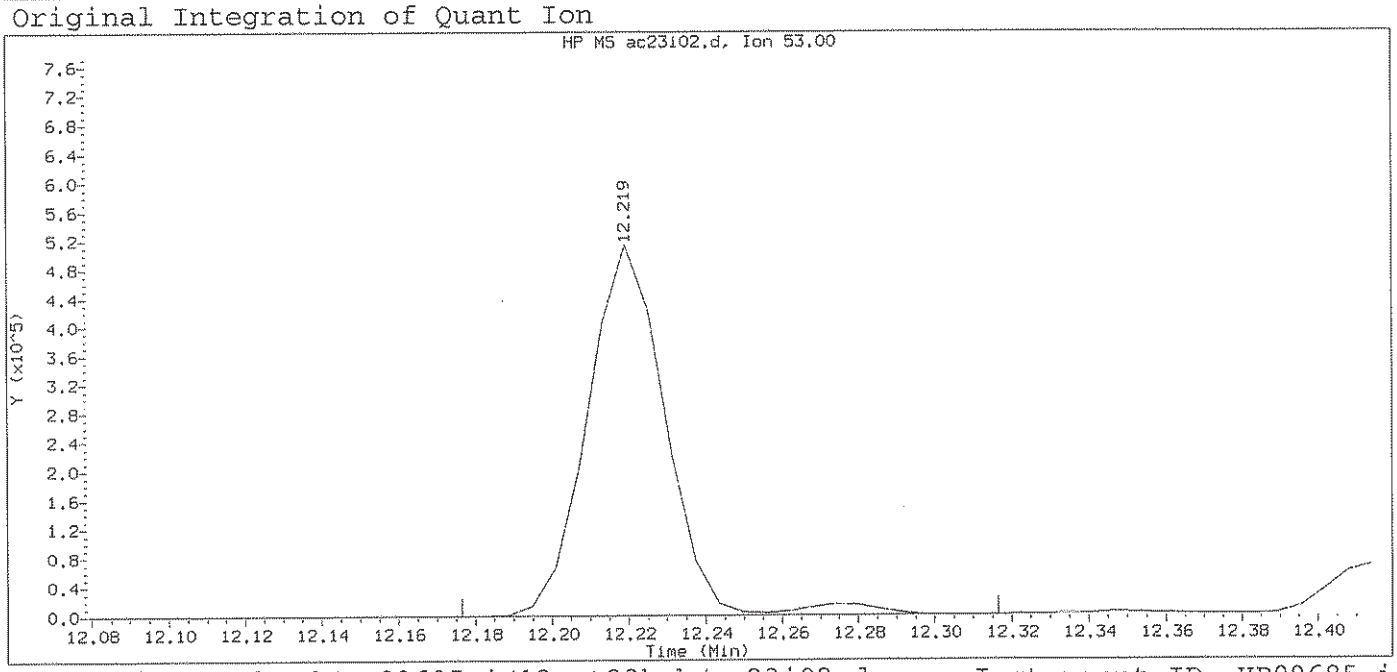
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

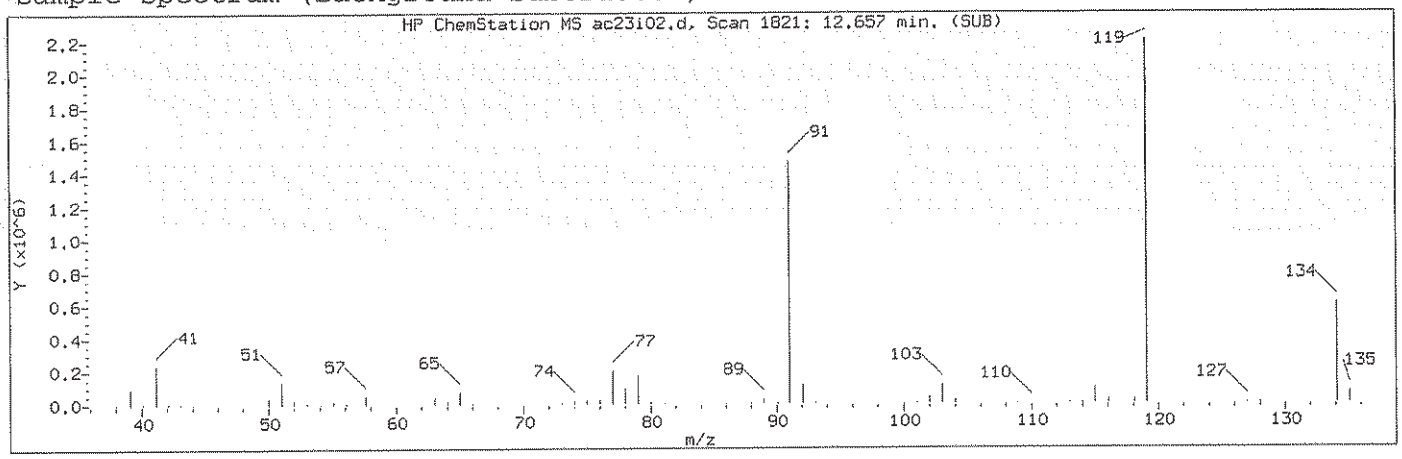
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

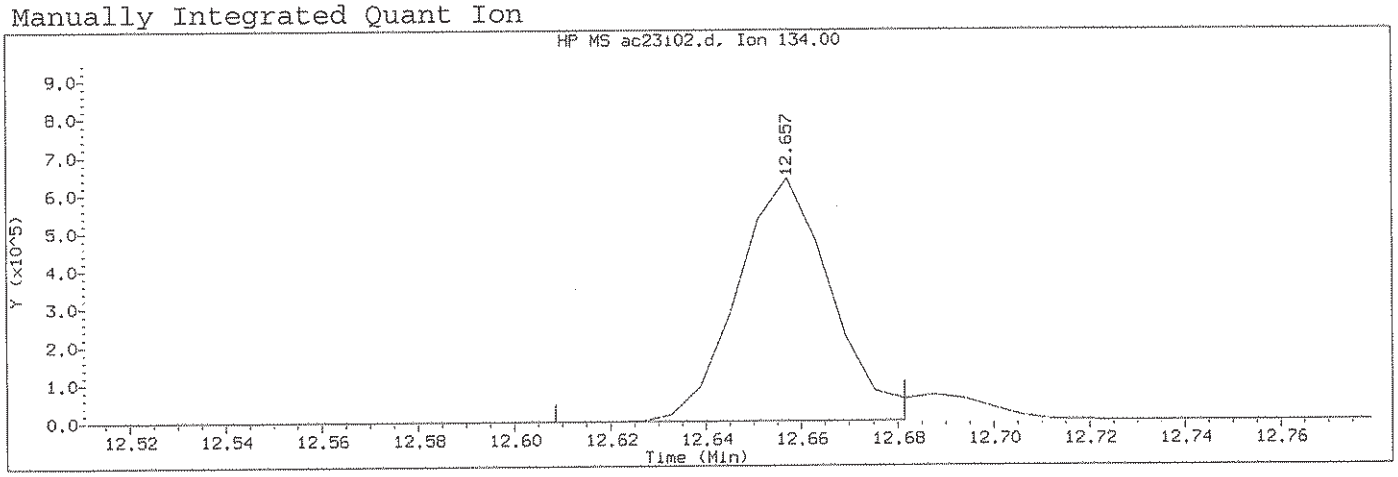
Compound Number	: 115		
Compound Name	: trans-1,4-Dichloro-2-butene		
Scan Number	: 1749		
Retention Time (minutes)	: 12.219		
Quant Ion	: 53.00		
Area	: 731847		
On-column Amount (ng)	: 262.3592		
Integration start scan	: 1741	Integration stop scan:	1764
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature user ID: CBS0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:09 cbs01947

Sample Name: VSTD100 Lab Sample ID: VSTD100

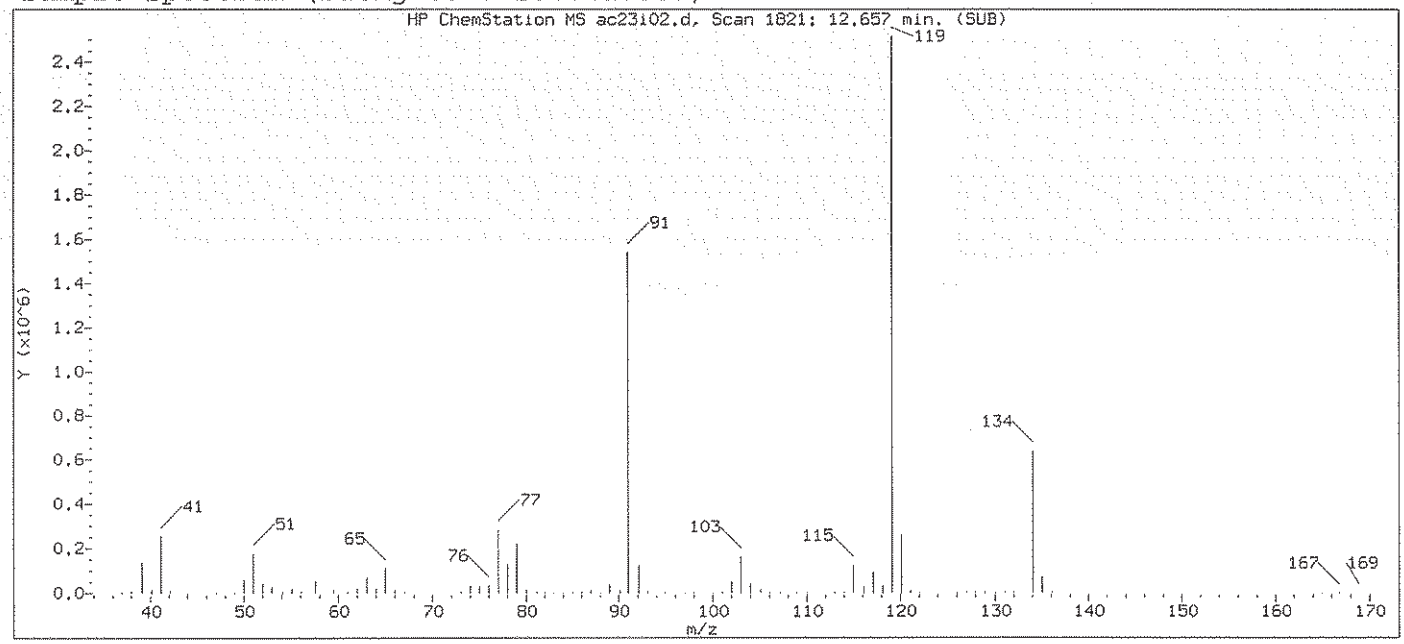
Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area (flag)	: 874534M		
On-Column Amount (ng)	: 101.2326		
Integration start scan	: 1812	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

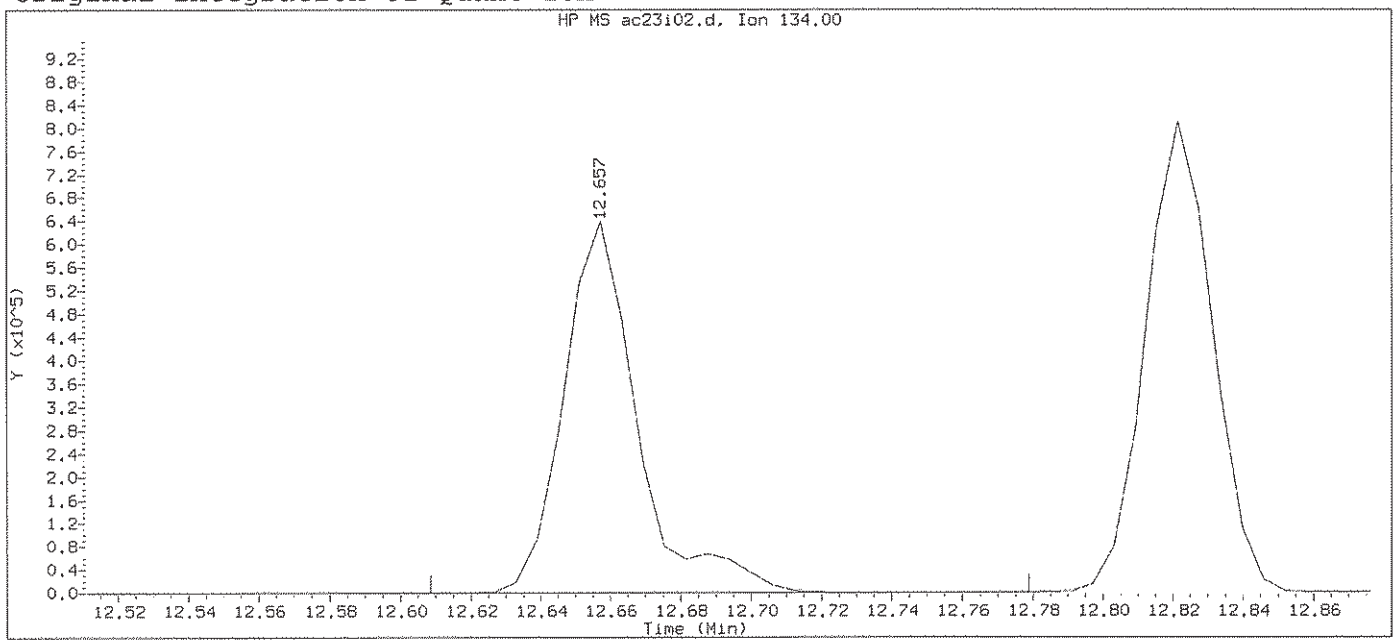
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



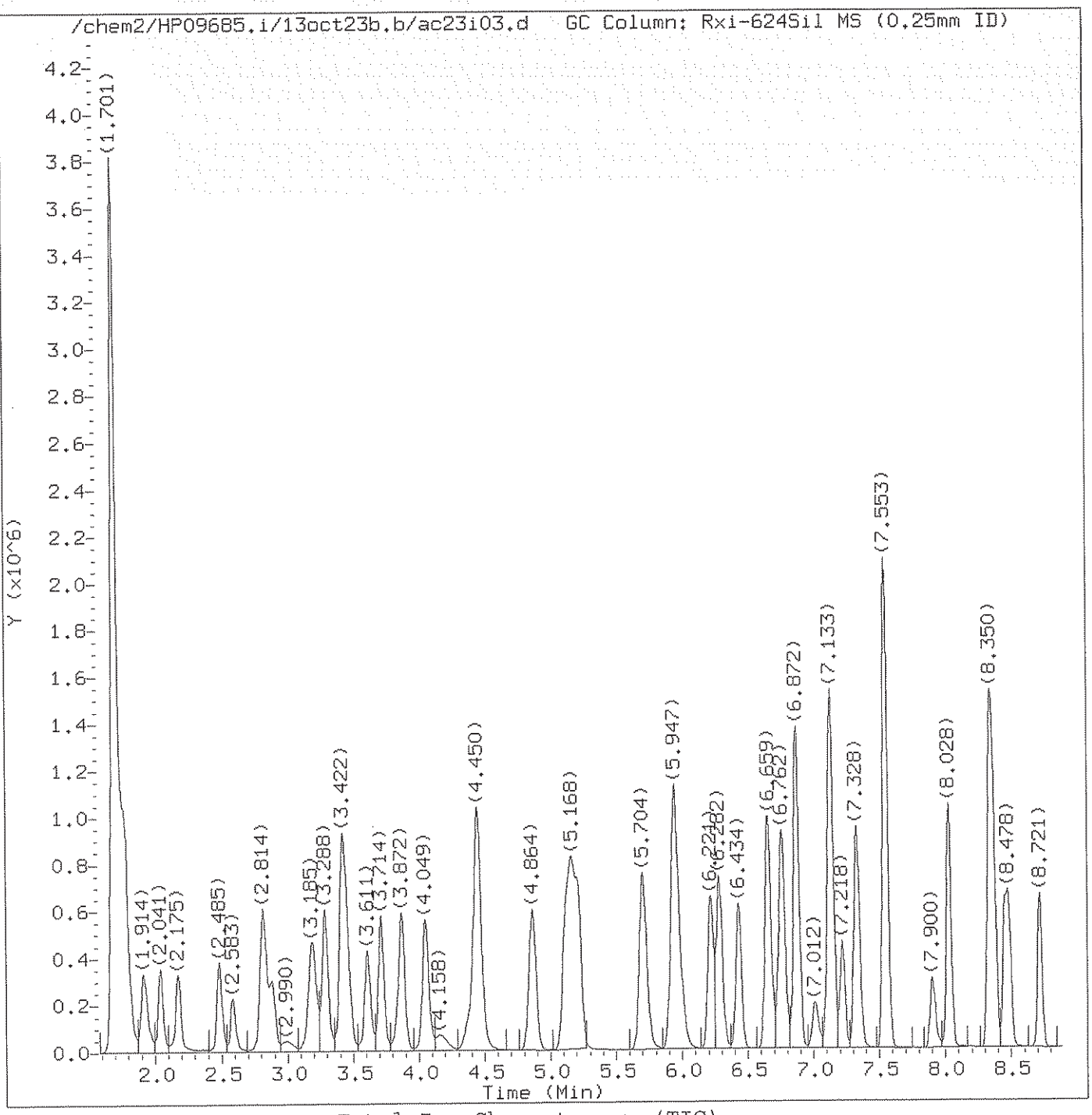
Data File: /chem2/HP09685.i/13oct23b.b/ac23i02.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 19:46 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area	: 940262		
On-column Amount (ng)	: 101.8978		
Integration start scan	: 1812	Integration stop scan:	1840
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:09.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d
Injection date and time: 23-OCT-2013 20:09

Instrument ID: HP09685.i
Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m
Calibration date and time: 23-OCT-2013 20:35

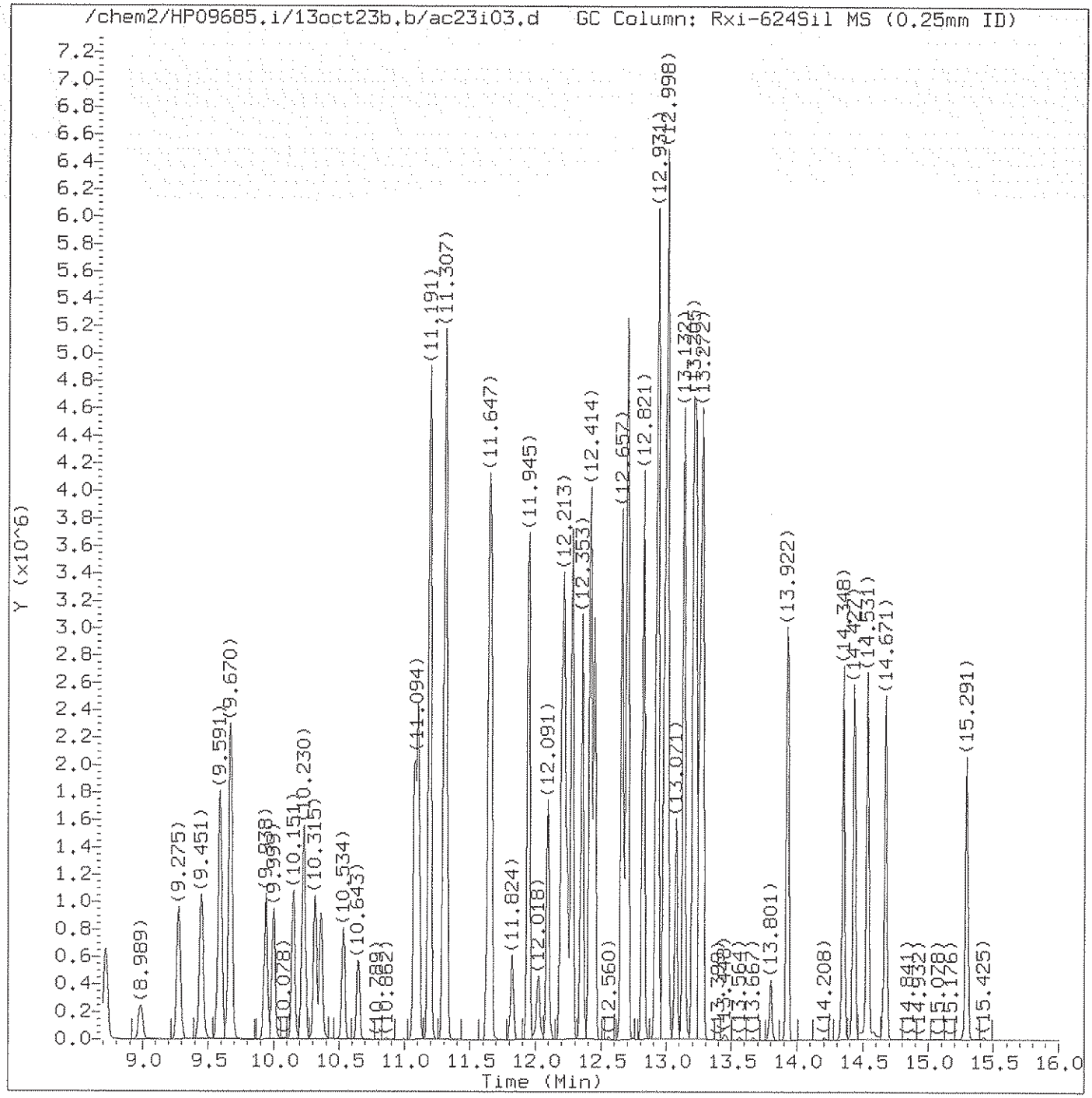
Sublist used: 8260S-2C

Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050

Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.914	85	680905	53.461
4) Chloromethane	(2)	2.041	50	535267	52.532
5) Vinyl Chloride	(2)	2.175	62	522750	53.554
9) Bromomethane	(2)	2.485	94	382392	53.602
10) Chloroethane	(2)	2.583	64	294273	51.903
11) Dichlorofluoromethane	(2)	2.808	67	758367	52.209
13) Trichlorofluoromethane	(2)	2.881	101	781634	53.202
15) Ethanol	(1)	2.996	45	181235	2371.550
17) Freon 123a	(2)	3.185	67	532199A	42.850
18) Acrolein	(1)	3.288	56	944776	561.627
19) 1,1-Dichloroethene	(2)	3.416	96	386410	51.297
20) Acetone	(2)	3.441	58	84524	99.443
22) Freon 113	(2)	3.447	101	426114	51.819
23) 2-Propanol	(1)	3.586	45	126736M	255.319
24) Methyl Iodide	(2)	3.611	142	759903	51.319
25) Carbon Disulfide	(2)	3.714	76	1354588	51.218
27) Methyl Acetate	(2)	3.842	43	261773	49.390
29) Allyl Chloride	(2)	3.872	41	598454	51.412
31) Methylene Chloride	(2)	4.049	84	442130	50.304
30)*t-Butyl alcohol-d10	(1)	4.061	65	144941	250.000
32) t-Butyl alcohol	(1)	4.158	59	203250	254.374
33) Acrylonitrile	(2)	4.365	53	159699	52.730
34) Methyl Tertiary Butyl Ether	(2)	4.438	73	1205221	51.410
35) trans-1,2-Dichloroethene	(2)	4.450	96	446831	51.129
38) n-Hexane	(2)	4.864	57	612952	52.665
40) 1,1-Dichloroethane	(2)	5.113	63	785707	51.679
41) di-Isopropyl ether	(2)	5.162	45	1293952	52.604
42) 2-Chloro-1,3-butadiene	(2)	5.217	53	600004	53.089
44) Ethyl t-butyl ether	(2)	5.704	59	1241067	52.166
45) 2-Butanone	(2)	5.917	43	371866	106.223
46) cis-1,2-Dichloroethene	(2)	5.941	96	499683	51.765
48) 2,2-Dichloropropane	(2)	5.959	77	644648	52.148
50) Propionitrile	(1)	6.002	54	269894	262.222
47) 1,2-Dichloroethene (Total)	(2)		96	946514	102.894
51) Methacrylonitrile	(2)	6.221	67	413458	126.056
52) Bromochloromethane	(2)	6.282	128	246054	50.047
53) Tetrahydrofuran	(1)	6.294	71	106655	109.454
54) Chloroform	(2)	6.434	83	760496	50.966

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.647	113	361290	49.674
55)$Dibromofluoromethane	(2)	6.653	111	368477	49.681
56) 1,1,1-Trichloroethane	(2)	6.659	97	709970	49.139
57) Cyclohexane	(2)	6.762	56	762921	53.220
57) Cyclohexane	(2)	6.762	84	692667	52.657
57) Cyclohexane	(2)	6.762	69	240634	53.313
58) 1,1-Dichloropropene	(2)	6.872	75	608917	51.993
59) Carbon Tetrachloride	(2)	6.878	117	608788	51.519
60) Isobutyl Alcohol	(1)	7.012	41	172418	650.626
61)$1,2-Dichloroethane-d4	(2)	7.115	102	81507	49.415
61)$1,2-Dichloroethane-d4	(2)	7.115	65	368778	48.824
61)$1,2-Dichloroethane-d4	(2)	7.115	104	52035	49.744
62) Benzene	(2)	7.139	78	1818474	51.087
64) 1,2-Dichloroethane	(2)	7.218	62	537114	50.212
64) 1,2-Dichloroethane	(2)	7.224	98	52884	51.100
65) t-Amyl methyl ether	(2)	7.334	73	1186439	51.880
67)*Fluorobenzene	(2)	7.547	96	1487743	50.000
69) n-Heptane	(2)	7.553	43	613560	50.967
70) n-Butanol	(1)	7.900	56	308886	1329.520
72) Trichloroethene	(2)	8.028	95	471962	51.114
73) Methylcyclohexane	(2)	8.344	83	807029	52.218
74) 1,2-Dichloropropane	(2)	8.374	63	459715	51.546
76) Methyl Methacrylate	(2)	8.453	69	290410	52.339
77) 1,4-Dioxane	(1)	8.459	88	57673	671.830
78) Dibromomethane	(2)	8.484	93	280328	50.781
81) Bromodichloromethane	(2)	8.721	83	574789	51.690
82) 2-Nitropropane	(1)	8.989	41	204796	106.847
84) cis-1,3-Dichloropropene	(2)	9.275	75	712447	53.055
85) 4-Methyl-2-pentanone	(2)	9.445	43	844949	113.581
86)$Toluene-d8	(3)	9.591	98	1463705	50.413
86)$Toluene-d8	(3)	9.591	100	958109	50.713
87) Toluene	(3)	9.670	92	1160037	51.455
88) trans-1,3-Dichloropropene	(3)	9.938	75	655790	53.336
89) Ethyl Methacrylate	(3)	9.999	69	549331	54.380
90) 1,1,2-Trichloroethane	(3)	10.151	97	379493	50.487
92) Tetrachloroethene	(3)	10.230	166	523800	50.737
93) 1,3-Dichloropropane	(3)	10.315	76	670061	51.401
95) 2-Hexanone	(3)	10.358	43	613320	115.849

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.534	129	455459	52.378
98) 1,2-Dibromoethane	(3)	10.643	107	402899	51.408
99)*Chlorobenzene-d5	(3)	11.075	117	1118683	50.000
100) Chlorobenzene	(3)	11.106	112	1352817	50.973
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	477842	51.985
102) Ethylbenzene	(3)	11.191	91	2223289	52.374
103) m+p-Xylene	(3)	11.307	106	1814886	104.619
104) o-Xylene	(3)	11.641	106	885755	52.597
106) Styrene	(3)	11.659	104	1426059	53.634
105) Xylene (Total)	(3)		106	2700641	157.217
107) Bromoform	(3)	11.824	173	276596	51.869
108) Isopropylbenzene	(3)	11.945	105	2286423	53.058
111) Cyclohexanone	(1)	12.018	55	207117	636.197
112)$4-Bromofluorobenzene	(3)	12.091	95	537586	49.800
112)$4-Bromofluorobenzene	(3)	12.091	174	464180	49.535
113) 1,1,2,2-Tetrachloroethane	(4)	12.195	83	514875M	50.860
114) Bromobenzene	(4)	12.207	156	596317	50.772
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	338584M	129.086
116) 1,2,3-Trichloropropane	(4)	12.243	110	155703	49.994
117) n-Propylbenzene	(4)	12.274	91	2625691	52.665
119) 2-Chlorotoluene	(4)	12.353	126	579494	51.822
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	1957621	53.152
123) 4-Chlorotoluene	(4)	12.444	126	593121	51.258
126) tert-Butylbenzene	(4)	12.657	134	441190M	52.457
127) Pentachloroethane	(4)	12.688	167	369033	51.478
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	2007636	52.957
129) sec-Butylbenzene	(4)	12.821	105	2505651	53.817
131) 1,3-Dichlorobenzene	(4)	12.919	146	1127614	51.662
132) p-Isopropyltoluene	(4)	12.931	119	2253294M	54.089
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	600378	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	1149401	51.250
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	2068257	52.172
136) Benzyl Chloride	(4)	13.071	126	229348	53.766
137) 1,3-Diethylbenzene	(4)	13.132	119	1341254	52.853
138) 1,4-Diethylbenzene	(4)	13.205	119	1322092	52.214
139) n-Butylbenzene	(4)	13.223	92	1058454	52.409
140) 1,2-Dichlorobenzene	(4)	13.253	146	1075034	51.032
141) 1,2-Diethylbenzene	(4)	13.278	119	1107234	51.752

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	92229	50.912
145) 1,3,5-Trichlorobenzene	(4)	13.922	180	875439	51.233
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	761432	51.992
147) Hexachlorobutadiene	(4)	14.427	225	417286	50.324
148) Naphthalene	(4)	14.531	128	1815949	54.423
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	703788	51.157
150) 2-Methylnaphthalene	(4)	15.291	142	932189	47.263

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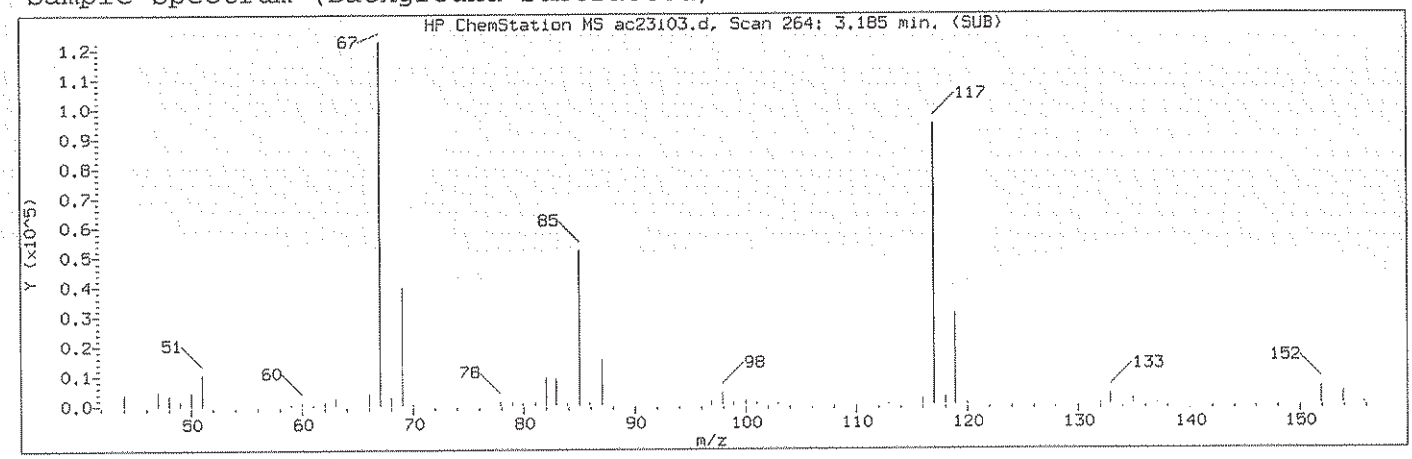
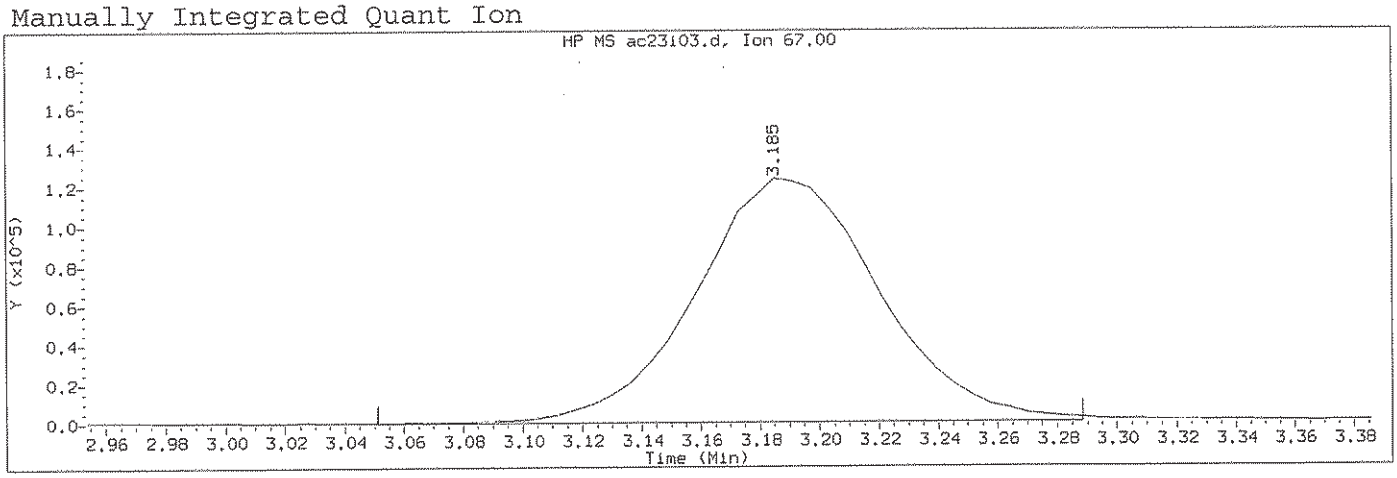
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

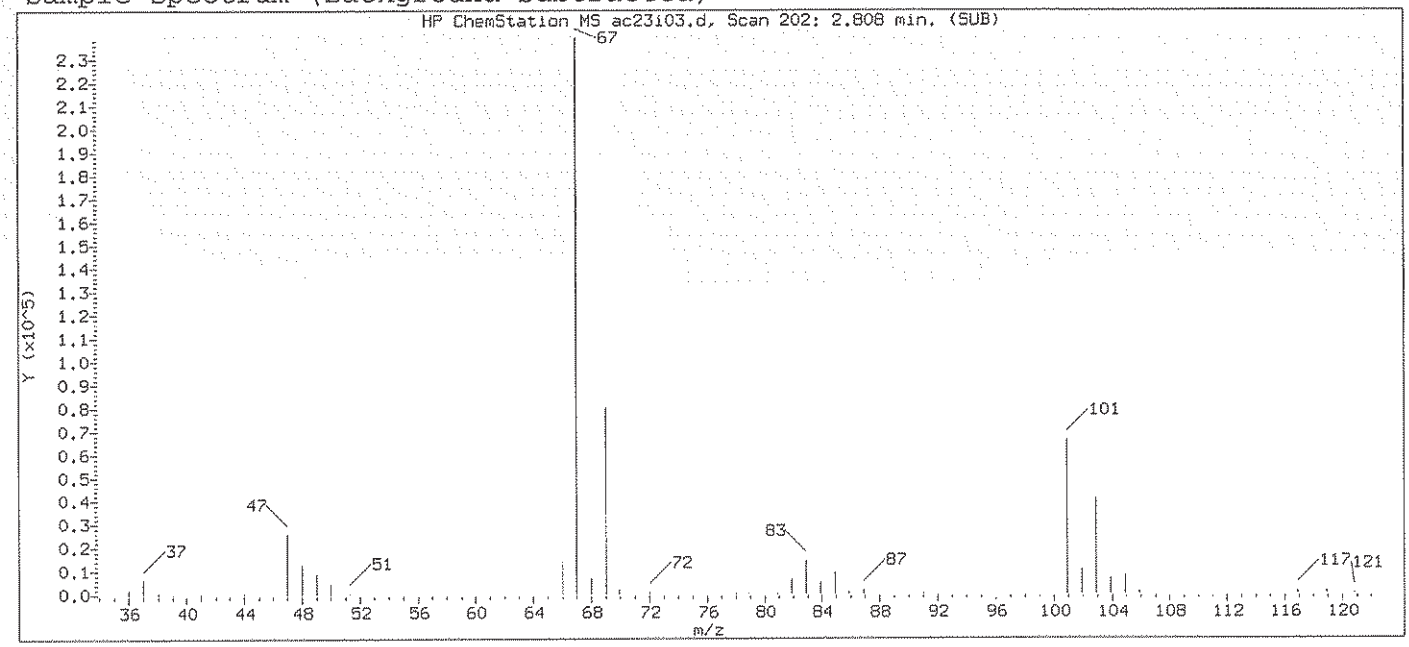
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 264		
Retention Time (minutes)	: 3.185		
Quant Ion	: 67.00		
Area (flag)	: 532199A		
On-Column Amount (ng)	: 42.8502		
Integration start scan	: 241	Integration stop scan:	280
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

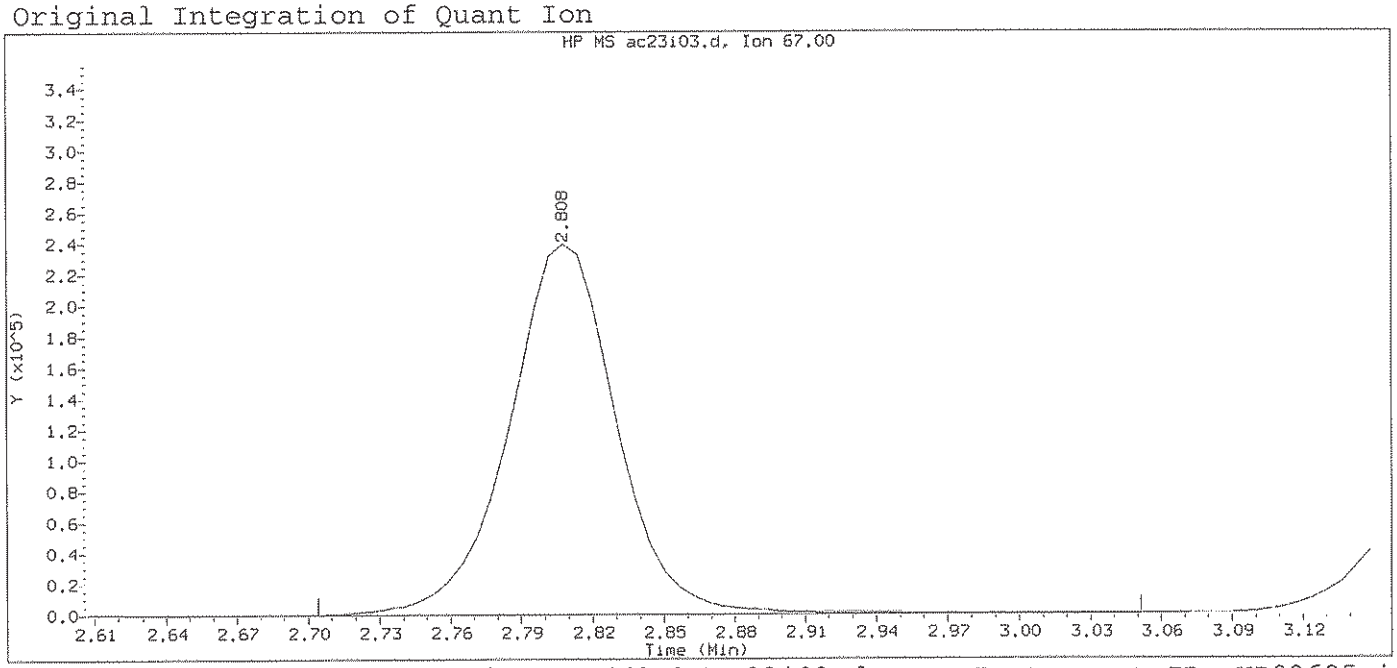
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 202		
Retention Time (minutes)	: 2.808		
Quant Ion	: 67.00		
Area	: 758367		
On-column Amount (ng)	: 52.7541		
Integration start scan	: 184	Integration stop scan:	241
Y at integration start	: 0	Y at integration end:	0

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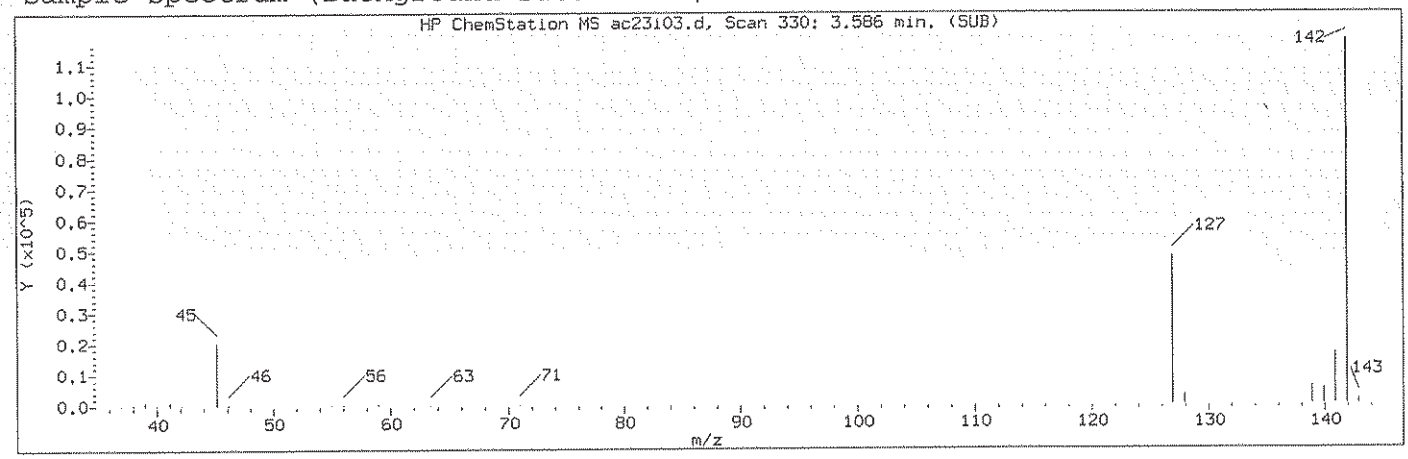
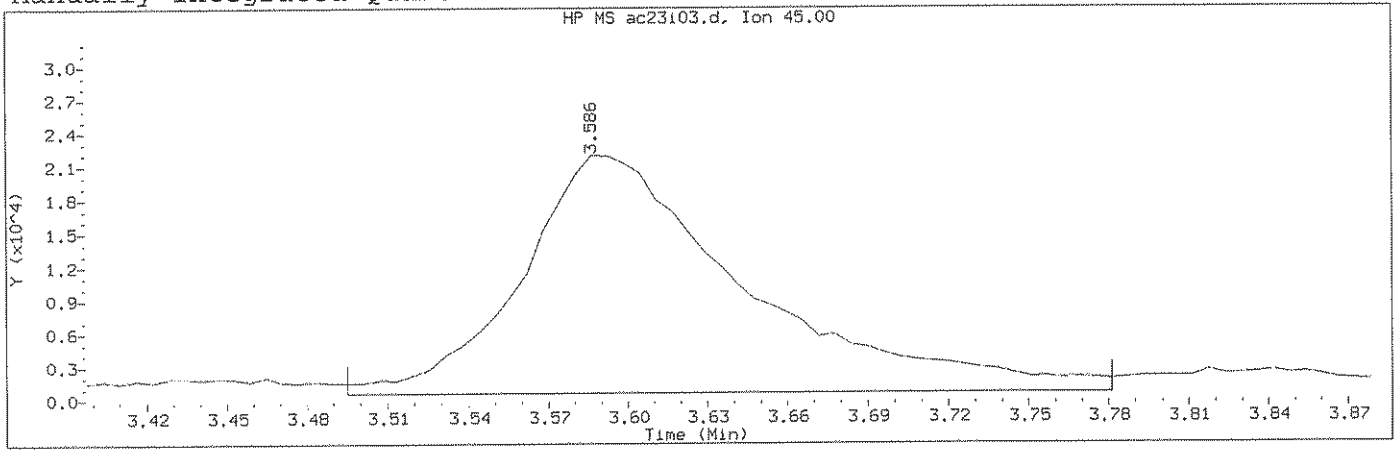
Target 3.5 esignature user ID: CBS0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

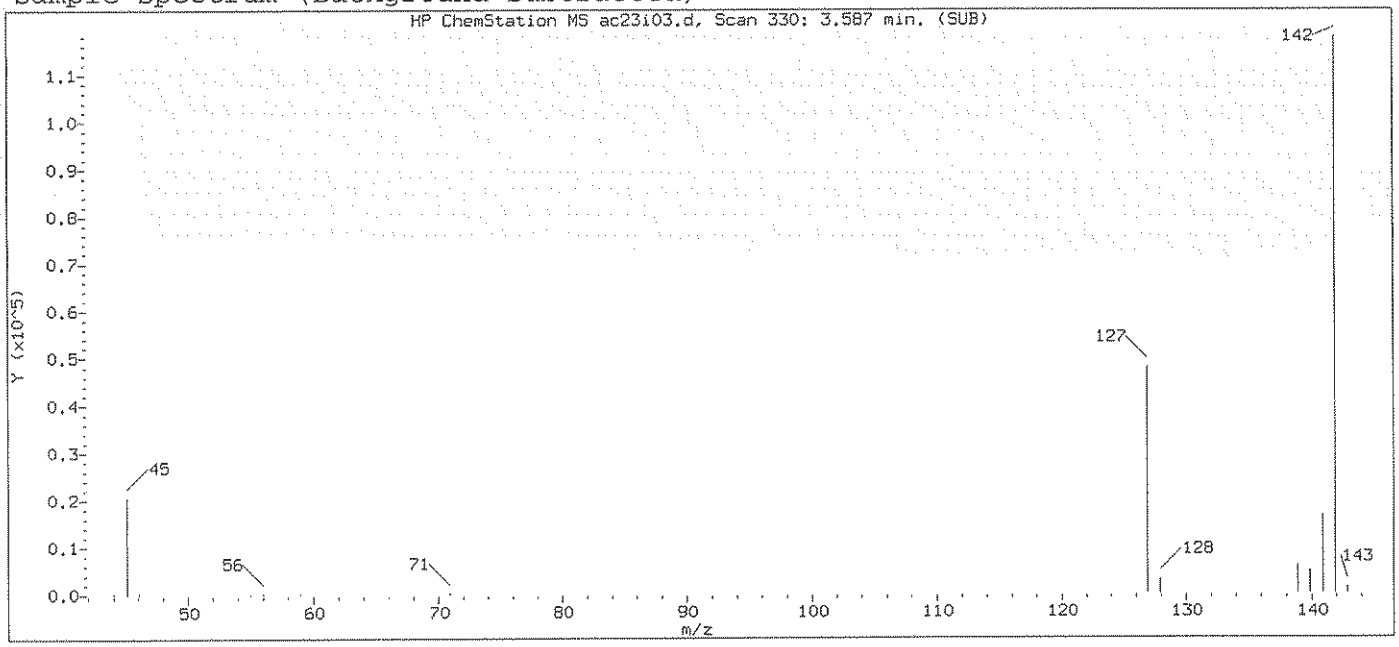
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 330		
Retention Time (minutes)	: 3.586		
Quant Ion	: 45.00		
Area (flag)	: 126736M		
On-Column Amount (ng)	: 255.3187		
Integration start scan	: 314	Integration stop scan:	361
Y at integration start	: 557	Y at integration end:	557

Reason for manual integration: improper integration

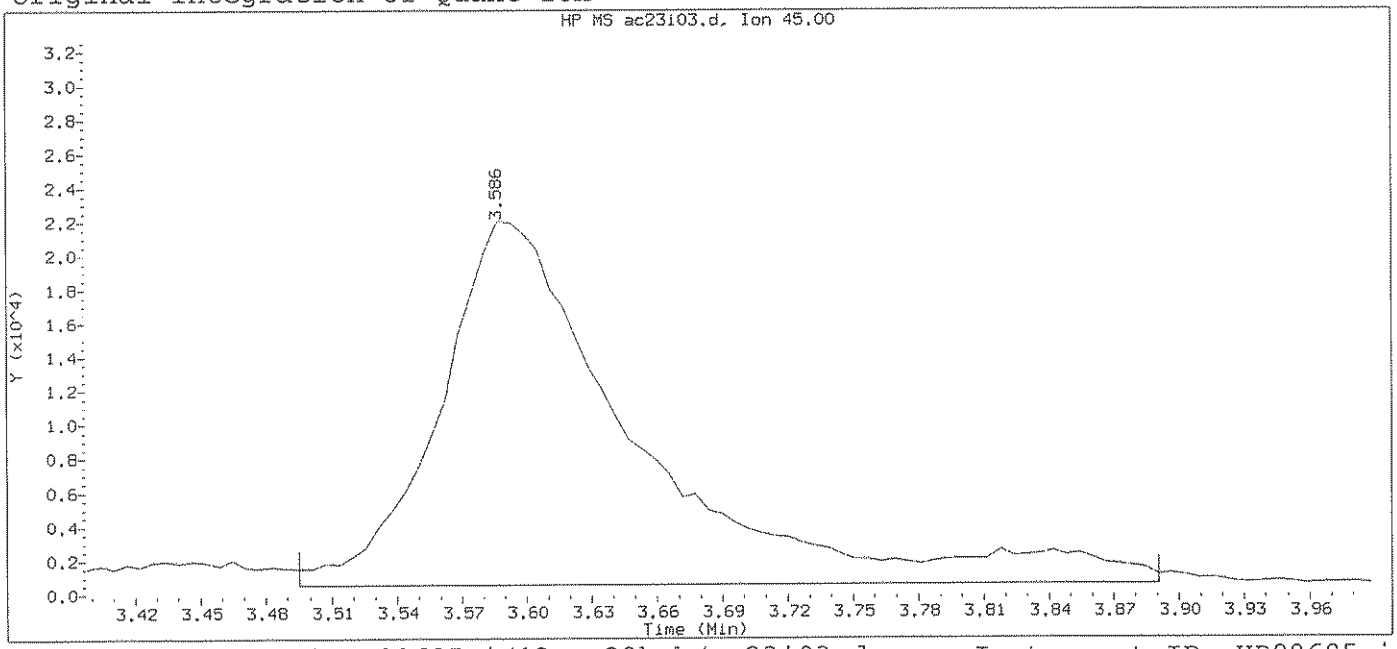
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 330		
Retention Time (minutes)	: 3.586		
Quant Ion	: 45.00		
Area	: 136126		
On-column Amount (ng)	: 256.5380		
Integration start scan	: 314	Integration stop scan:	379
Y at integration start	: 557	Y at integration end:	557

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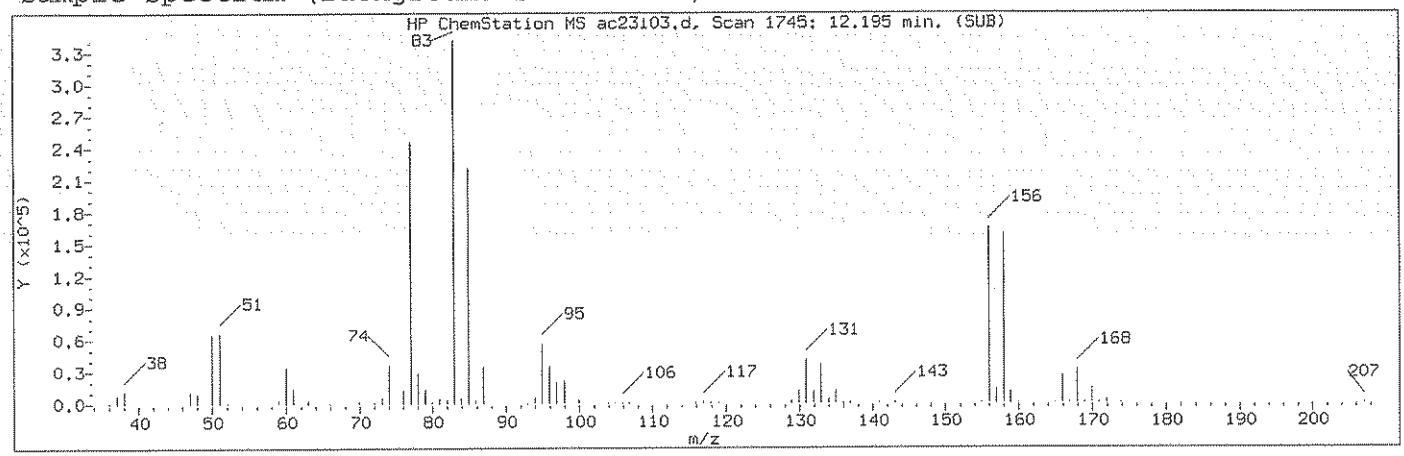
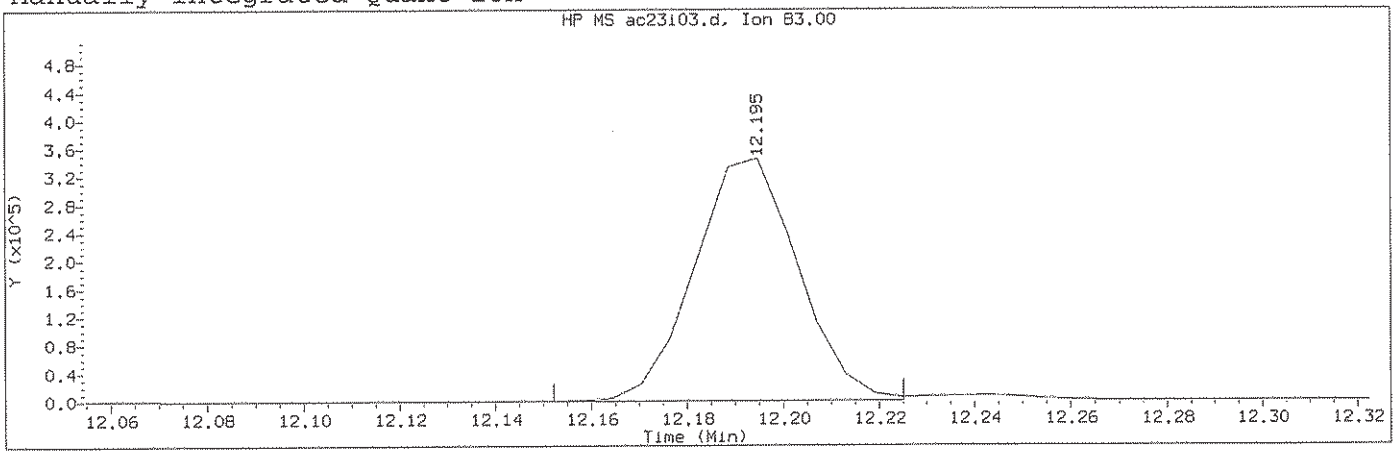
Target 3.5 esignature user ID: cbs0144

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

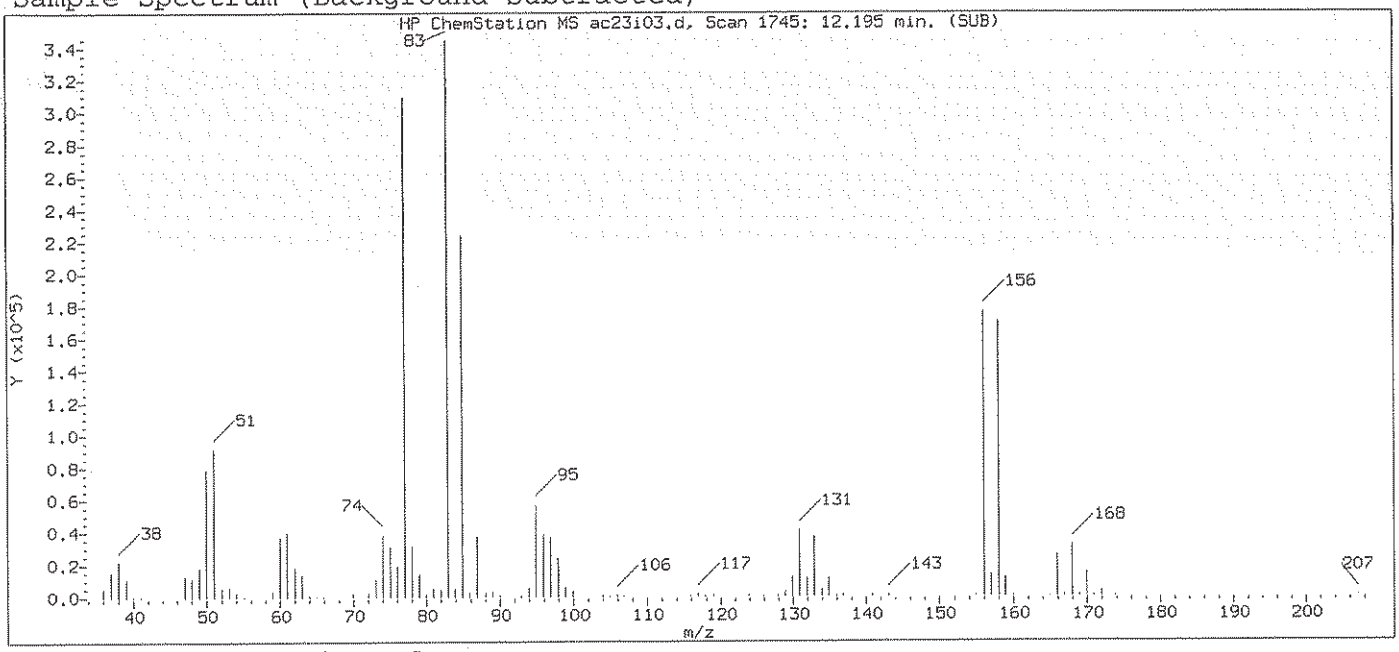
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area (flag)	: 514875M		
On-Column Amount (ng)	: 50.8605		
Integration start scan	: 1737	Integration stop scan:	1749
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

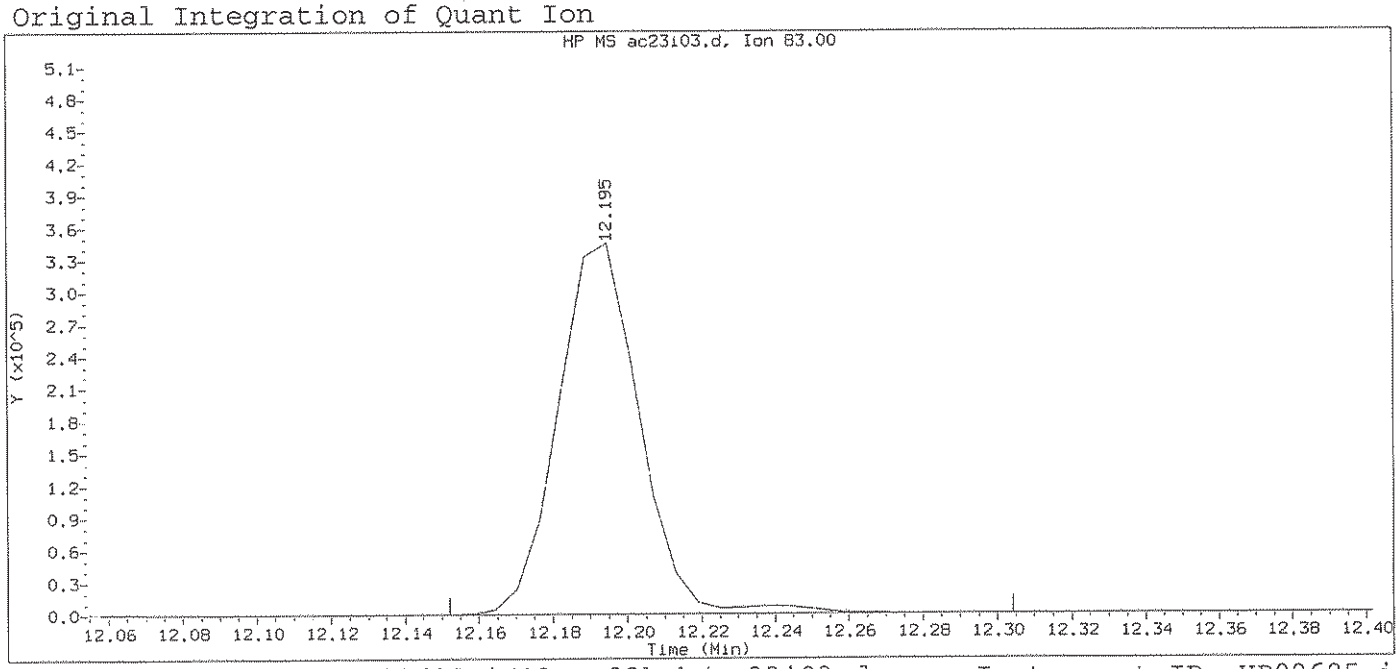
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area	: 525264		
On-column Amount (ng)	: 53.2013		
Integration start scan	: 1737	Integration stop scan:	1762
Y at integration start	: 0	Y at integration end:	0

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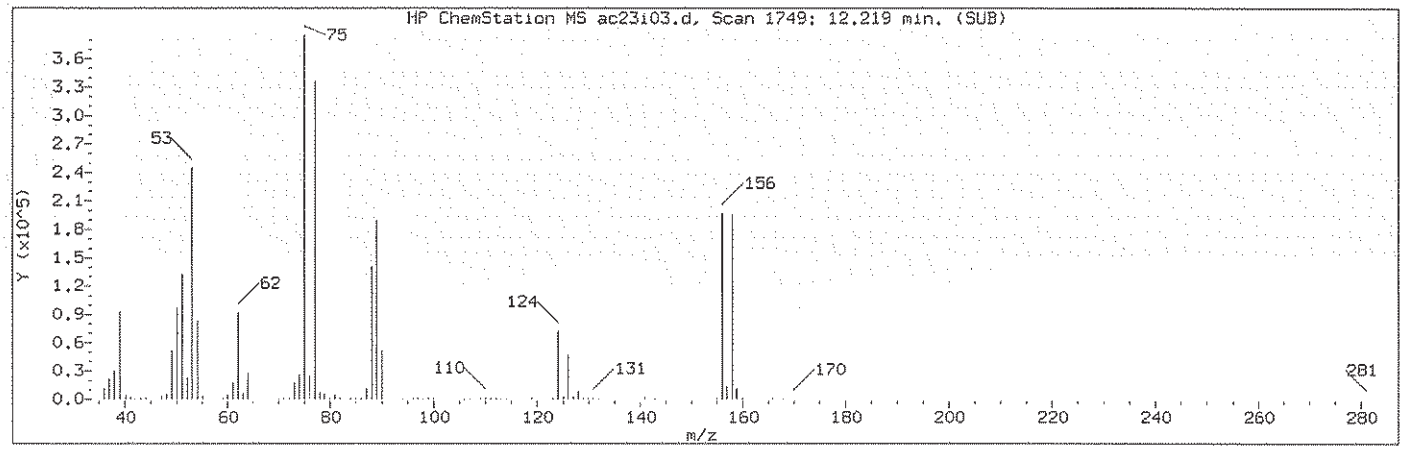
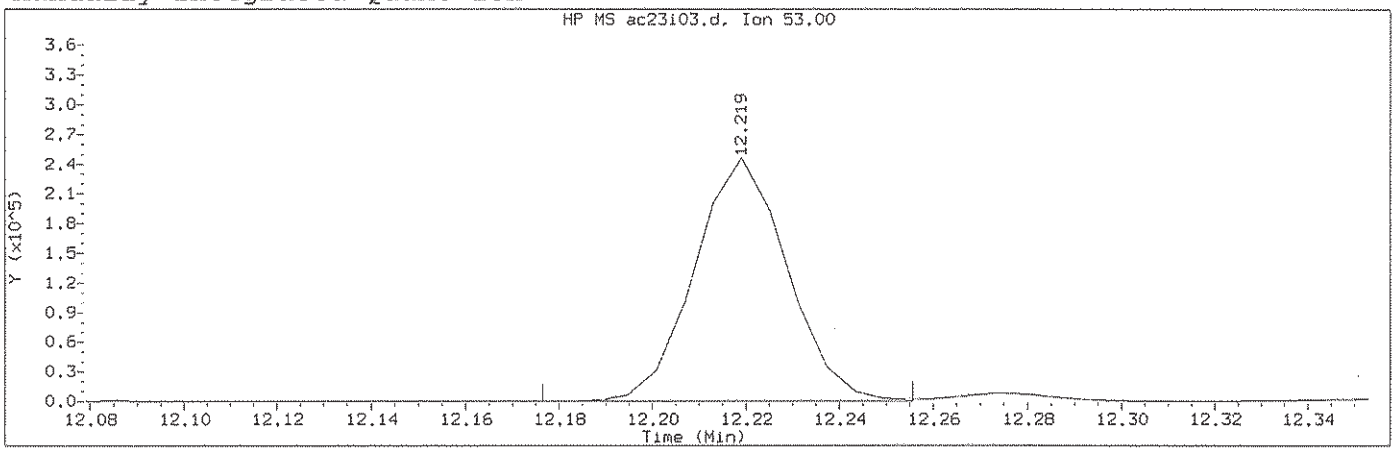
Target 3.5 esignature user ID: CBS0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

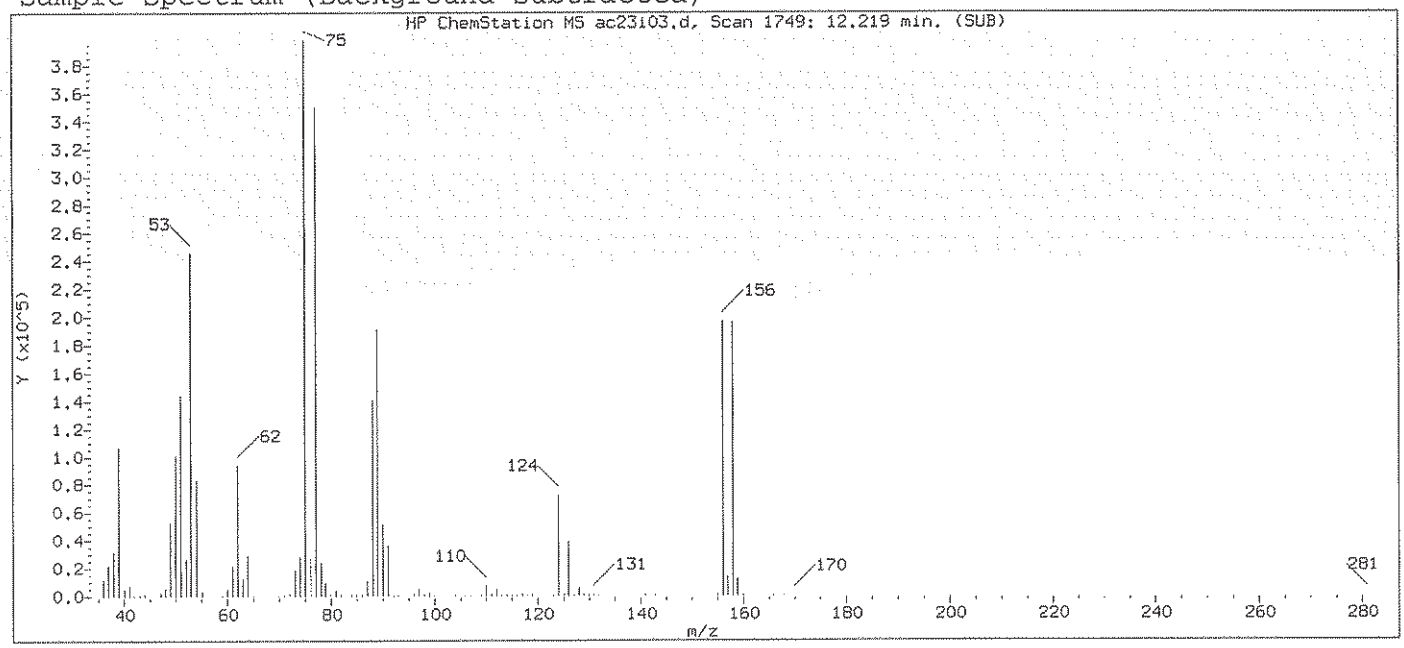
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area (flag) : 338584M
On-Column Amount (ng) : 129.0859
Integration start scan : 1741 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

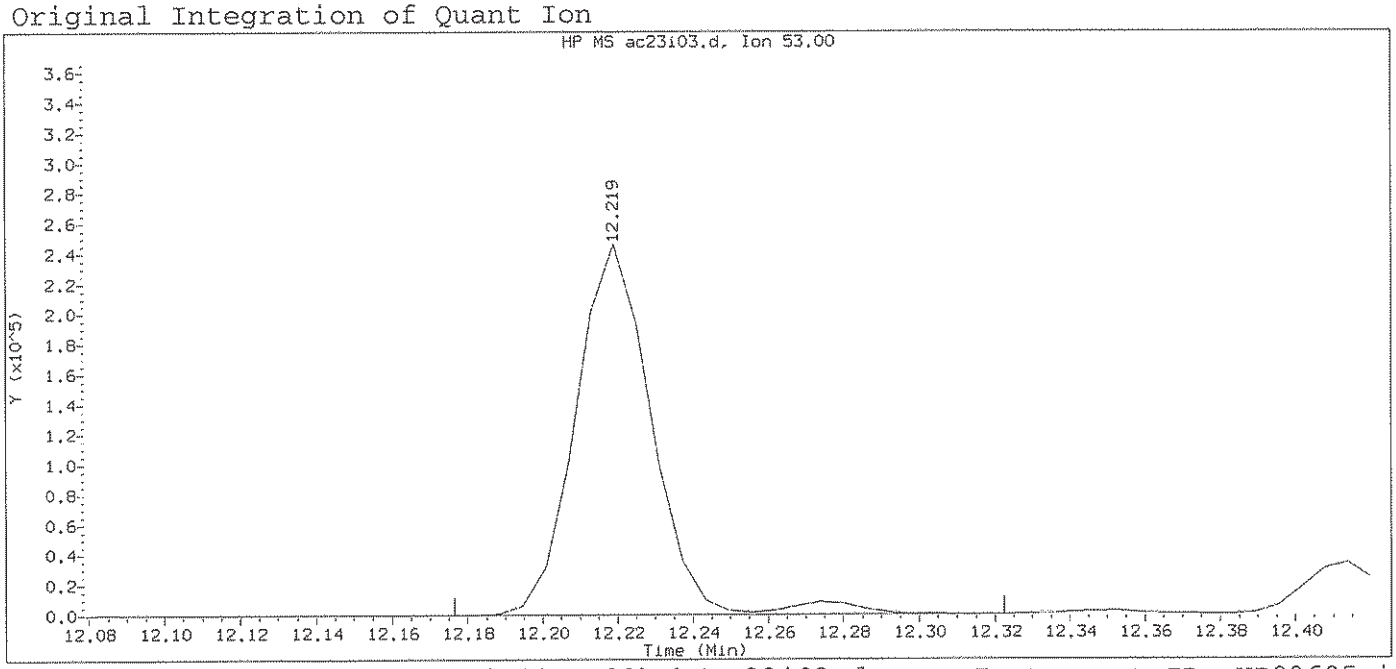
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

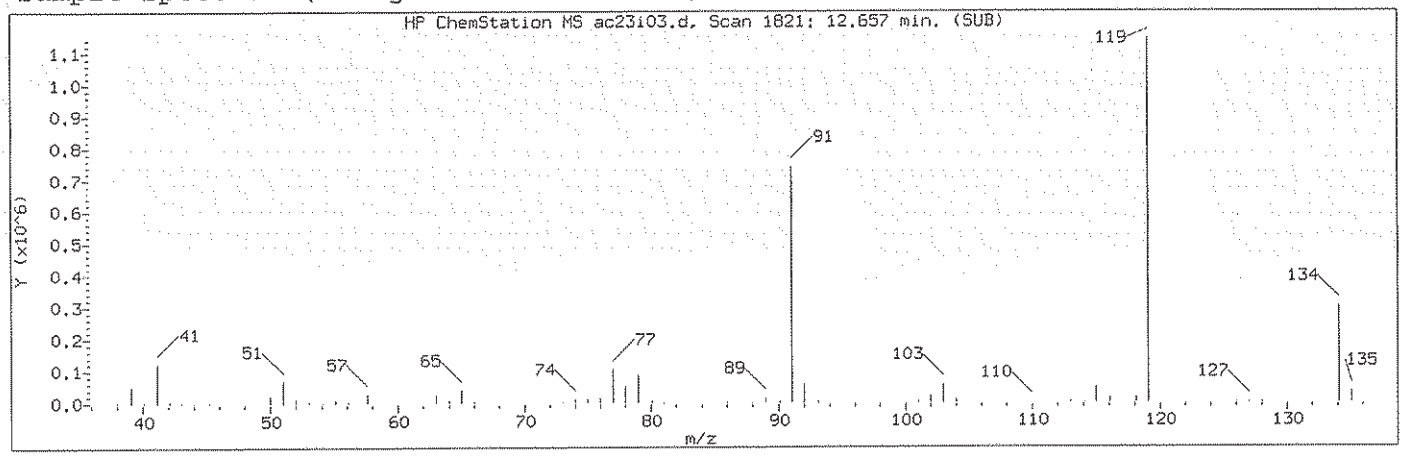
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

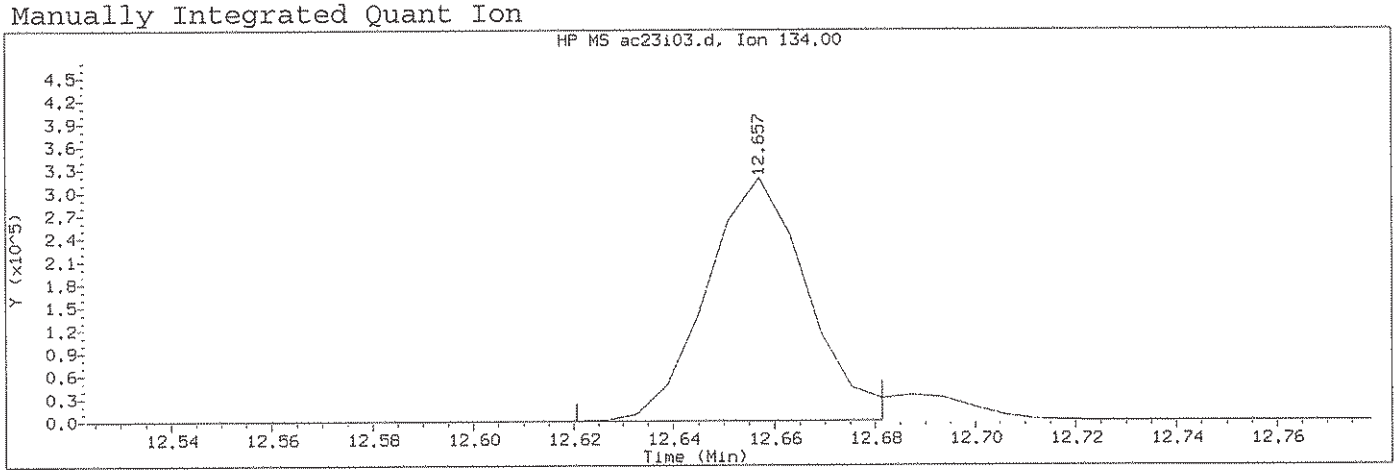
Compound Number	: 115		
Compound Name	: trans-1,4-Dichloro-2-butene		
Scan Number	: 1749		
Retention Time (minutes)	: 12.219		
Quant Ion	: 53.00		
Area	: 349857		
On-column Amount (ng)	: 128.8255		
Integration start scan	: 1741	Integration stop scan:	1765
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

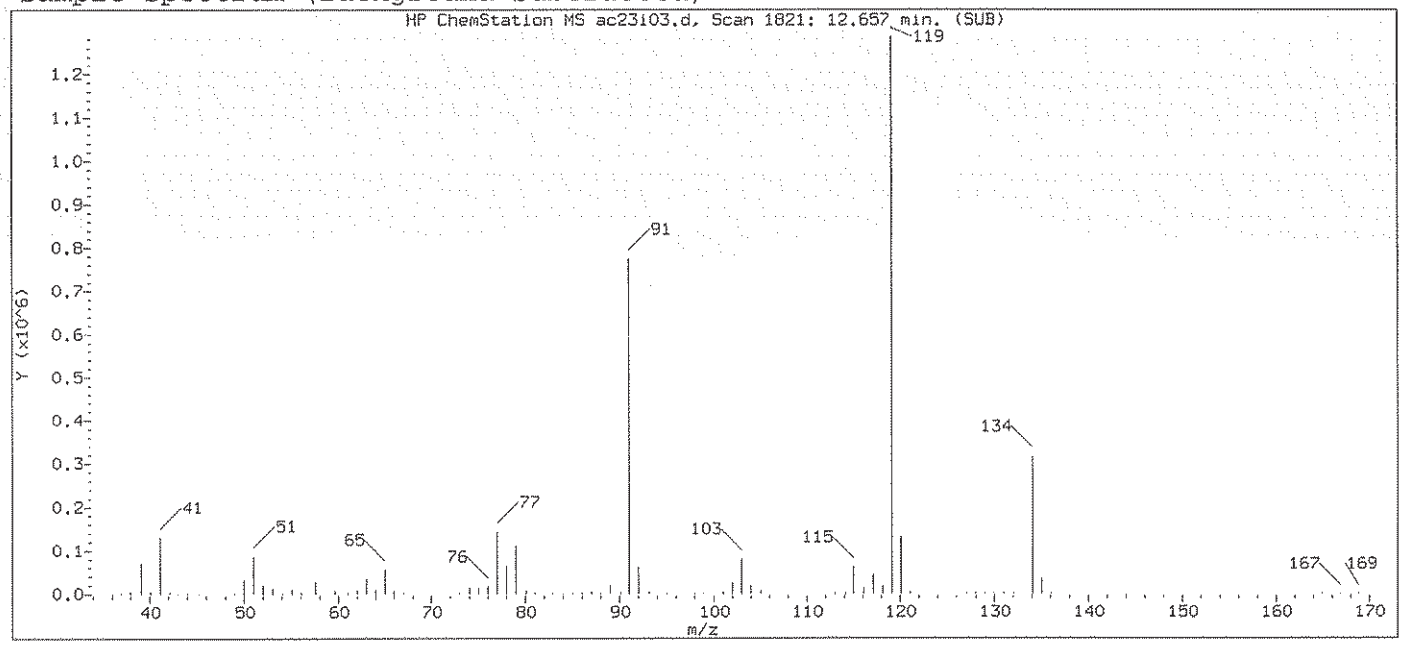
Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area (flag)	: 441190M		
On-Column Amount (ng)	: 52.4571		
Integration start scan	: 1814	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

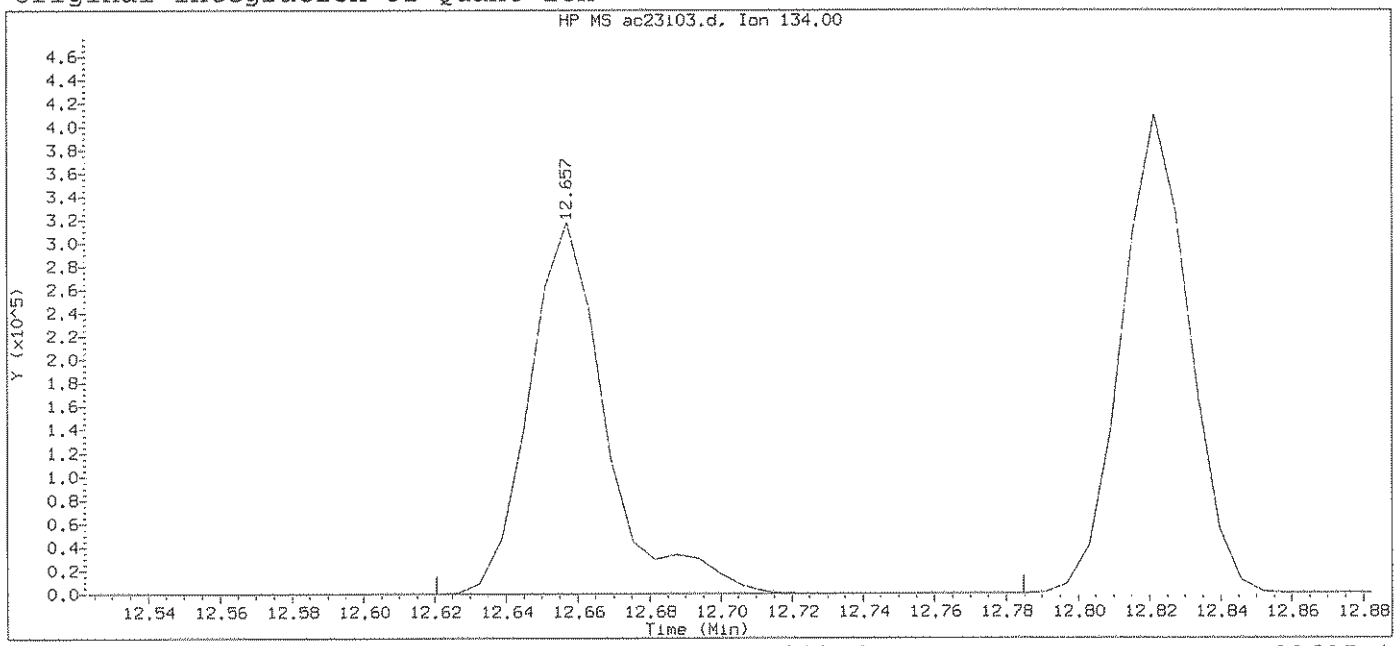
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	:	126
Compound Name	:	tert-Butylbenzene
Scan Number	:	1821
Retention Time (minutes)	:	12.657
Quant Ion	:	134.00
Area	:	474863
On-column Amount (ng)	:	52.8591
Integration start scan	:	1814 Integration stop scan: 1841
Y at integration start	:	0 Y at integration end: 0

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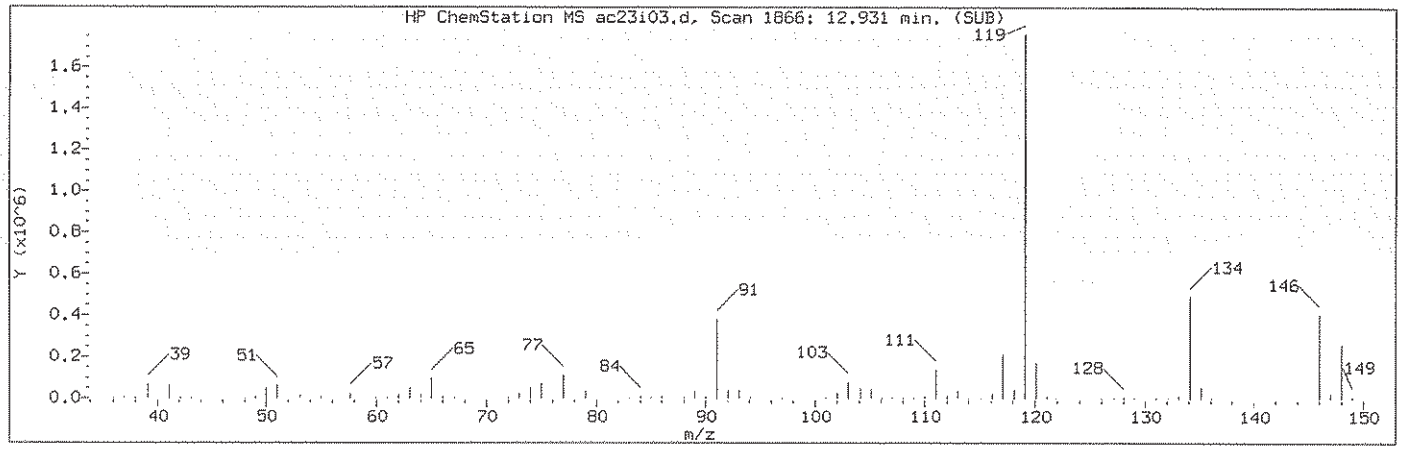
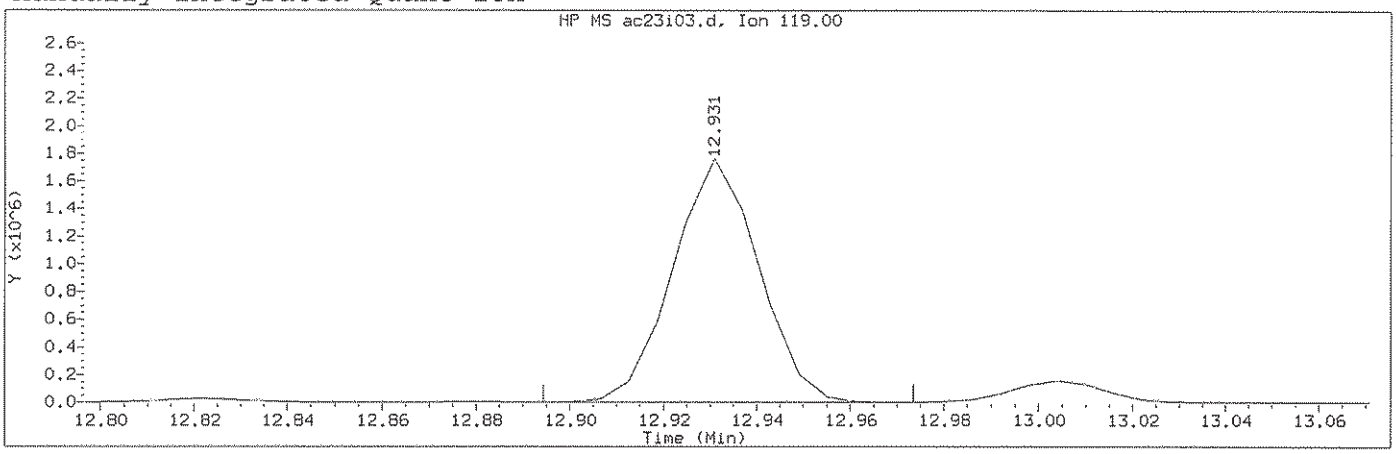
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

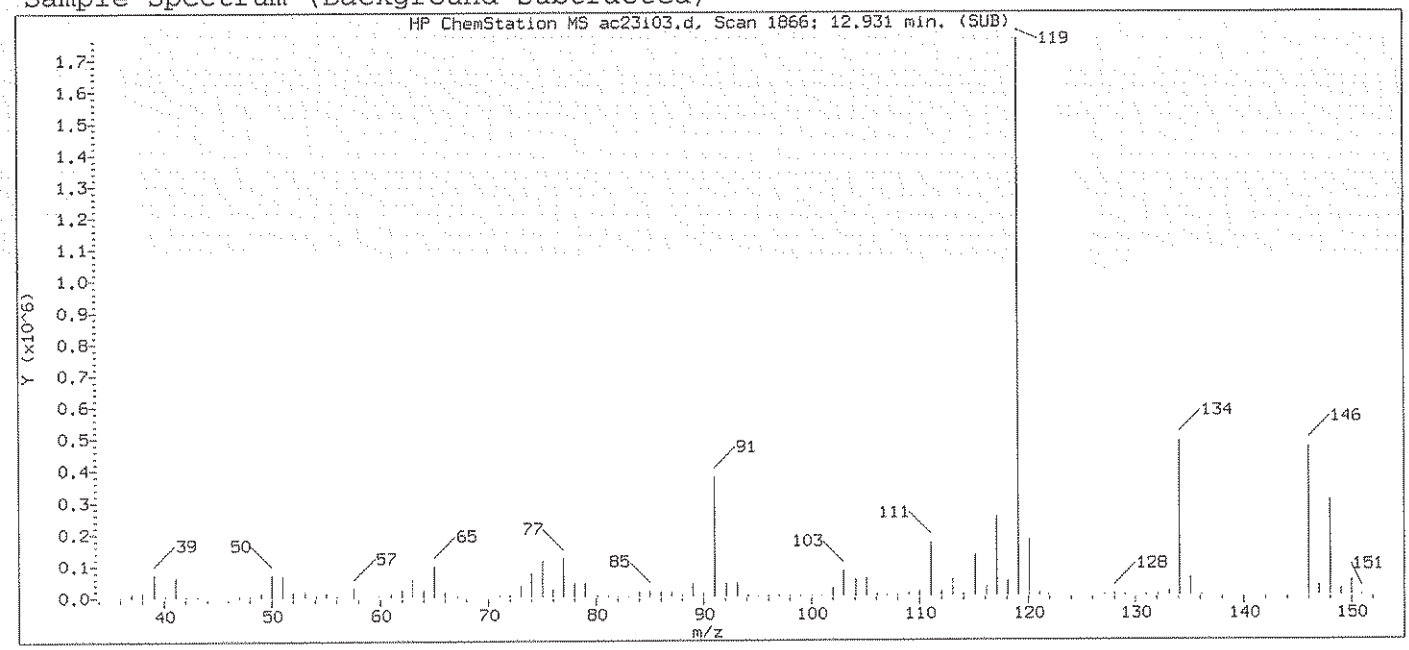
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area (flag) : 2253294M
On-Column Amount (ng) : 54.0894
Integration start scan : 1859 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

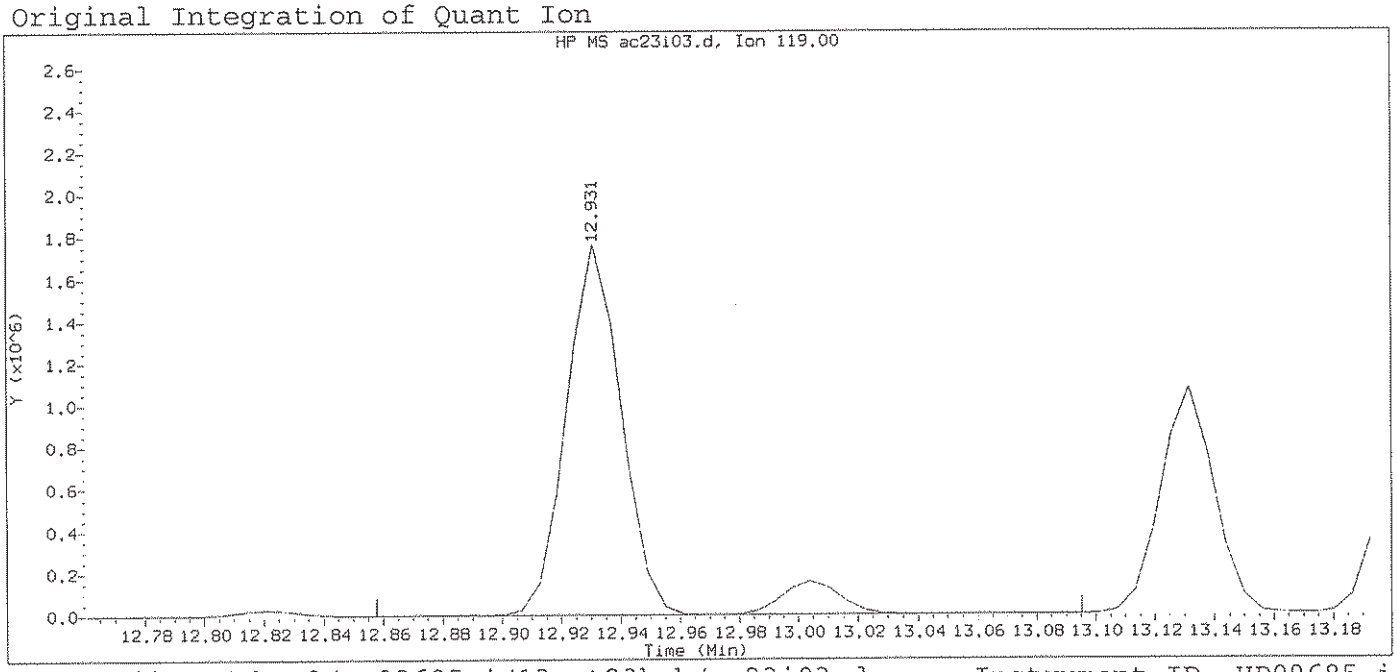
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i03.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:09 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:35
Date, time and analyst ID of latest file update: 23-Oct-2013 20:35 sej02002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 132		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1866		
Retention Time (minutes)	: 12.931		
Quant Ion	: 119.00		
Area	: 2470355		
On-column Amount (ng)	: 56.6749		
Integration start scan	: 1853	Integration stop scan:	1892
Y at integration start	: 0	Y at integration end:	0

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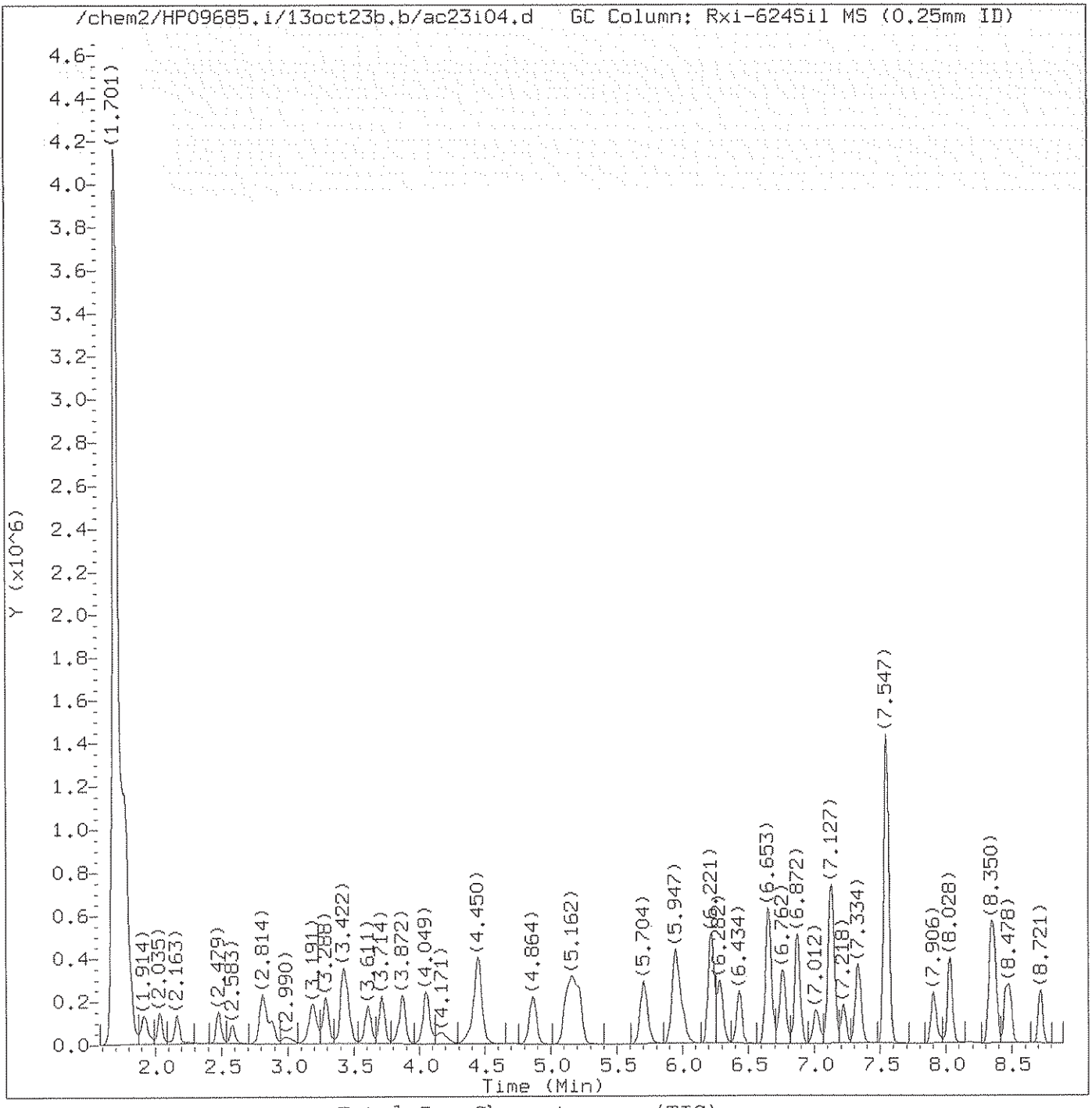
Target 3.5 esignature user ID: cbs0194



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

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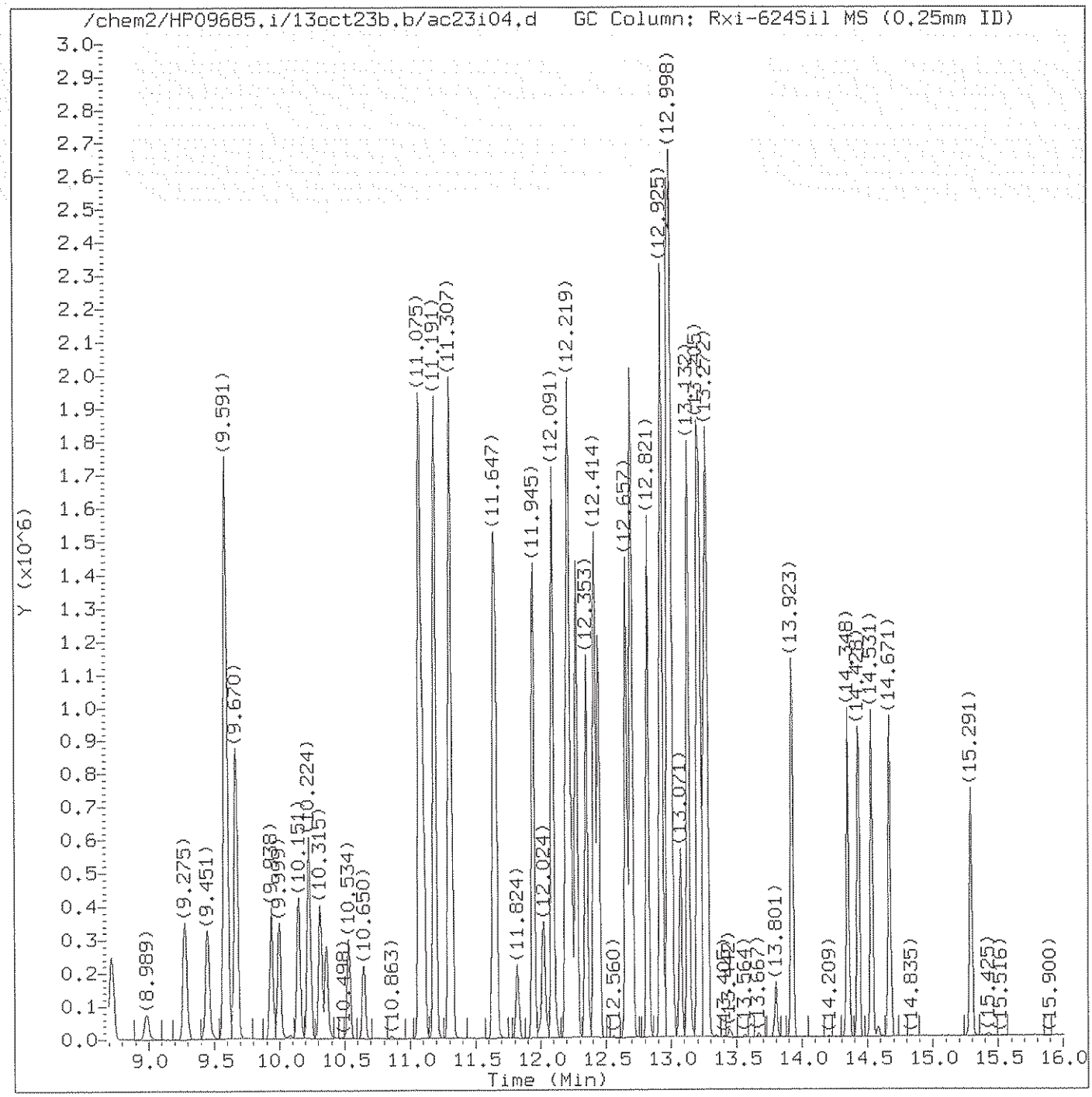
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.914	85	241005	19.227
4) Chloromethane	(2)	2.035	50	198633M	19.808
5) Vinyl Chloride	(2)	2.163	62	190495	19.829
9) Bromomethane	(2)	2.479	94	141179	20.108
10) Chloroethane	(2)	2.583	64	112058	20.082
11) Dichlorofluoromethane	(2)	2.808	67	298287	20.865
13) Trichlorofluoromethane	(2)	2.881	101	275814	19.075
15) Ethanol	(1)	2.990	45	156026	1971.898
17) Freon 123a	(2)	3.185	67	205301A	17.932
18) Acrolein	(1)	3.288	56	341125	195.853
19) 1,1-Dichloroethene	(2)	3.416	96	147777	19.933
20) Acetone	(2)	3.441	58	32198	38.490
22) Freon 113	(2)	3.441	101	157461	19.456
23) 2-Propanol	(1)	3.593	45	99316M	193.241
24) Methyl Iodide	(2)	3.611	142	294083	20.180
25) Carbon Disulfide	(2)	3.714	76	519827	19.971
27) Methyl Acetate	(2)	3.842	43	101594	19.476
29) Allyl Chloride	(2)	3.872	41	229994	20.076
30)*t-Butyl alcohol-d10	(1)	4.049	65	150070	250.000
31) Methylene Chloride	(2)	4.055	84	174843	20.213
32) t-Butyl alcohol	(1)	4.171	59	165326M	199.839
33) Acrylonitrile	(2)	4.359	53	57994	19.456
34) Methyl Tertiary Butyl Ether	(2)	4.438	73	466825	20.233
35) trans-1,2-Dichloroethene	(2)	4.450	96	171709	19.964
38) n-Hexane	(2)	4.864	57	222364	19.413
40) 1,1-Dichloroethane	(2)	5.114	63	299045	19.986
41) di-Isopropyl ether	(2)	5.162	45	492290	20.335
42) 2-Chloro-1,3-butadiene	(2)	5.217	53	218232	19.620
44) Ethyl t-butyl ether	(2)	5.704	59	474284	20.256
45) 2-Butanone	(2)	5.910	43	130640	37.917
46) cis-1,2-Dichloroethene	(2)	5.947	96	191086	20.114
48) 2,2-Dichloropropane	(2)	5.959	77	240052	19.731
50) Propionitrile	(1)	6.002	54	221911	208.235
47) 1,2-Dichloroethene (Total)	(2)		96	362795	40.078
51) Methacrylonitrile	(2)	6.221	67	333721	103.381
52) Bromochloromethane	(2)	6.282	128	97687	20.189
53) Tetrahydrofuran	(1)	6.294	71	38182	37.845
54) Chloroform	(2)	6.434	83	293539	19.988

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

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on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.653	113	355047	49.601
55)$Dibromofluoromethane	(2)	6.653	111	362822	49.705
56) 1,1,1-Trichloroethane	(2)	6.659	97	281470	19.794
57) Cyclohexane	(2)	6.756	56	272580	19.320
57) Cyclohexane	(2)	6.762	84	249499	19.272
57) Cyclohexane	(2)	6.762	69	85900	19.337
58) 1,1-Dichloropropene	(2)	6.872	75	226018	19.609
59) Carbon Tetrachloride	(2)	6.878	117	223843	19.247
60) Isobutyl Alcohol	(1)	7.012	41	138874	506.136
61)$1,2-Dichloroethane-d4	(2)	7.115	102	80880	49.823
61)$1,2-Dichloroethane-d4	(2)	7.115	65	366214	49.264
61)$1,2-Dichloroethane-d4	(2)	7.115	104	51468	49.993
62) Benzene	(2)	7.139	78	710529	20.282
64) 1,2-Dichloroethane	(2)	7.218	62	209948	19.942
64) 1,2-Dichloroethane	(2)	7.225	98	20487	20.114
65) t-Amyl methyl ether	(2)	7.334	73	455086	20.220
67)*Fluorobenzene	(2)	7.547	96	1464206	50.000
69) n-Heptane	(2)	7.553	43	229152	19.341
70) n-Butanol	(1)	7.906	56	246645	1025.337
72) Trichloroethene	(2)	8.028	95	180468	19.859
73) Methylcyclohexane	(2)	8.344	83	296462	19.491
74) 1,2-Dichloropropane	(2)	8.374	63	177164	20.184
76) Methyl Methacrylate	(2)	8.453	69	109218	20.000
77) 1,4-Dioxane	(1)	8.466	88	45399	510.776
78) Dibromomethane	(2)	8.484	93	109378	20.132
81) Bromodichloromethane	(2)	8.715	83	215581	19.698
82) 2-Nitropropane	(1)	8.989	41	65250	34.840
84) cis-1,3-Dichloropropene	(2)	9.275	75	264734	20.031
85) 4-Methyl-2-pentanone	(2)	9.451	43	268652	36.694
86)$Toluene-d8	(3)	9.591	98	1439207	50.391
86)$Toluene-d8	(3)	9.591	100	938117	50.477
87) Toluene	(3)	9.670	92	446947	20.154
88) trans-1,3-Dichloropropene	(3)	9.938	75	243928	20.168
89) Ethyl Methacrylate	(3)	9.999	69	205078	20.638
90) 1,1,2-Trichloroethane	(3)	10.151	97	152281	20.595
92) Tetrachloroethene	(3)	10.230	166	200211	19.714
93) 1,3-Dichloropropane	(3)	10.315	76	262111	20.440
95) 2-Hexanone	(3)	10.358	43	189091	36.309

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.534	129	168972	19.754
98) 1,2-Dibromoethane	(3)	10.644	107	157785	20.466
99)*Chlorobenzene-d5	(3)	11.075	117	1100451	50.000
100) Chlorobenzene	(3)	11.106	112	525873	20.143
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	182737	20.210
102) Ethylbenzene	(3)	11.191	91	856274	20.505
103) m+p-Xylene	(3)	11.307	106	696600	40.821
104) o-Xylene	(3)	11.641	106	338515	20.434
106) Styrene	(3)	11.659	104	529142	20.231
105) Xylene (Total)	(3)		106	1035115	61.255
107) Bromoform	(3)	11.824	173	101302	19.311
108) Isopropylbenzene	(3)	11.945	105	869274	20.506
111) Cyclohexanone	(1)	12.024	55	158586A	470.477
112)$4-Bromofluorobenzene	(3)	12.091	95	529949	49.906
112)$4-Bromofluorobenzene	(3)	12.091	174	458604	49.751
113) 1,1,2,2-Tetrachloroethane	(4)	12.195	83	207281M	20.855
114) Bromobenzene	(4)	12.207	156	233703	20.267
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	268112M	104.113
116) 1,2,3-Trichloropropane	(4)	12.243	110	62455	20.425
117) n-Propylbenzene	(4)	12.274	91	1018154	20.800
119) 2-Chlorotoluene	(4)	12.353	126	221066	20.136
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	746934	20.656
123) 4-Chlorotoluene	(4)	12.444	126	229334	20.187
126) tert-Butylbenzene	(4)	12.657	134	165723M	20.070
127) Pentachloroethane	(4)	12.688	167	142762	20.284
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	767380	20.617
129) sec-Butylbenzene	(4)	12.821	105	939640	20.556
131) 1,3-Dichlorobenzene	(4)	12.919	146	437377	20.410
132) p-Isopropyltoluene	(4)	12.931	119	843049M	20.612
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	589451	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	446526	20.279
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	813171	20.892
136) Benzyl Chloride	(4)	13.077	126	82524	19.705
137) 1,3-Diethylbenzene	(4)	13.132	119	513779	20.621
138) 1,4-Diethylbenzene	(4)	13.205	119	515753	20.747
139) n-Butylbenzene	(4)	13.223	92	397156M	20.029
140) 1,2-Dichlorobenzene	(4)	13.253	146	418461	20.232
141) 1,2-Diethylbenzene	(4)	13.272	119	432219	20.576

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on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

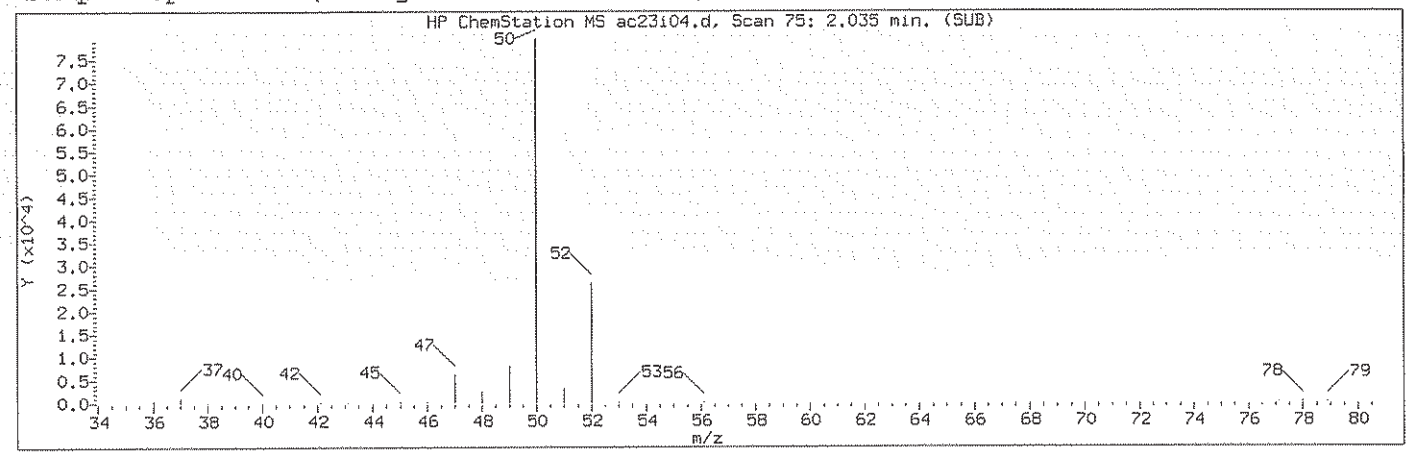
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

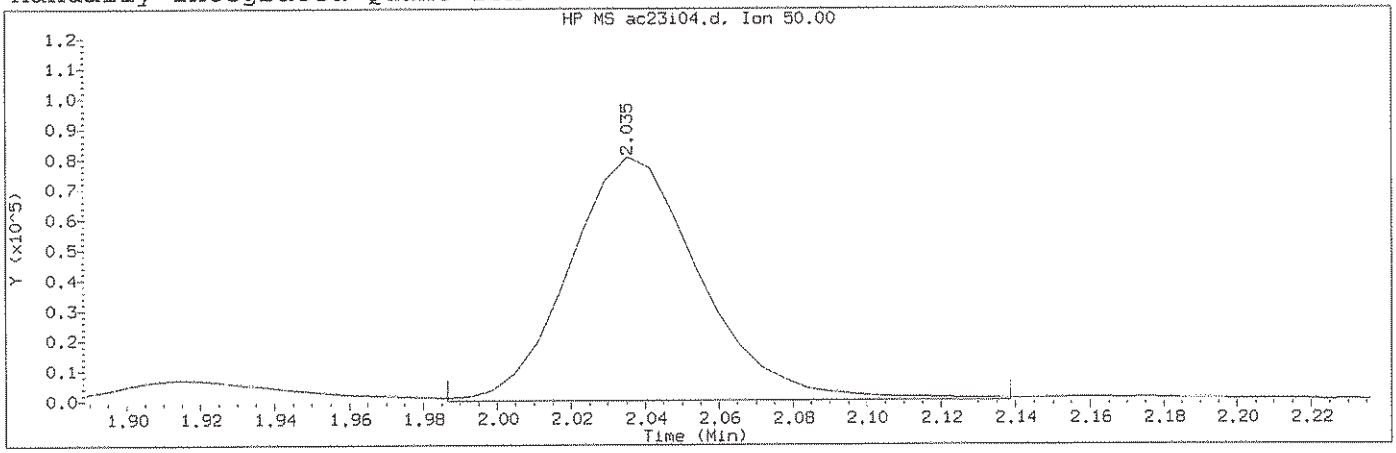
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	35425	19.918
145) 1,3,5-Trichlorobenzene	(4)	13.923	180	334903	19.963
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	284022	19.753
147) Hexachlorobutadiene	(4)	14.428	225	157847	19.389
148) Naphthalene	(4)	14.531	128	675780	20.628
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	268782	19.900
150) 2-Methylnaphthalene	(4)	15.291	142	336147	19.764

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

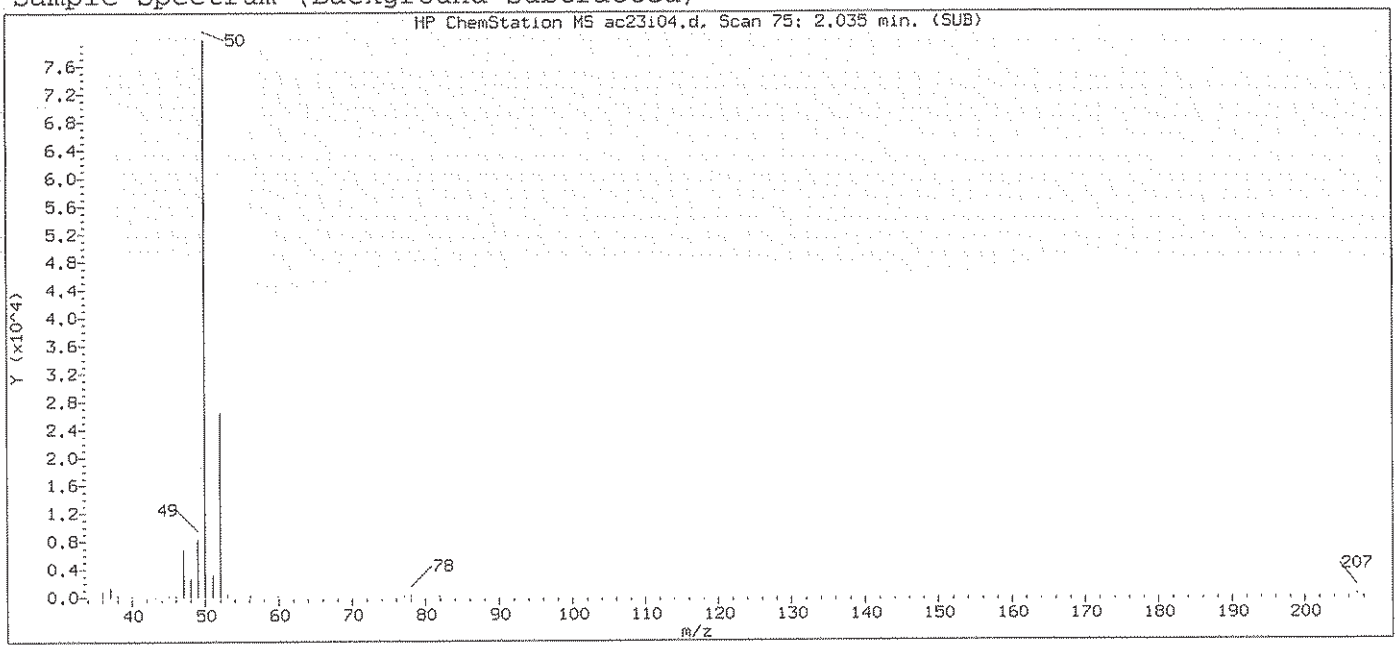
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 75		
Retention Time (minutes)	: 2.035		
Quant Ion	: 50.00		
Area (flag)	: 198633M		
On-Column Amount (ng)	: 19.8077		
Integration start scan	: 66	Integration stop scan:	91
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

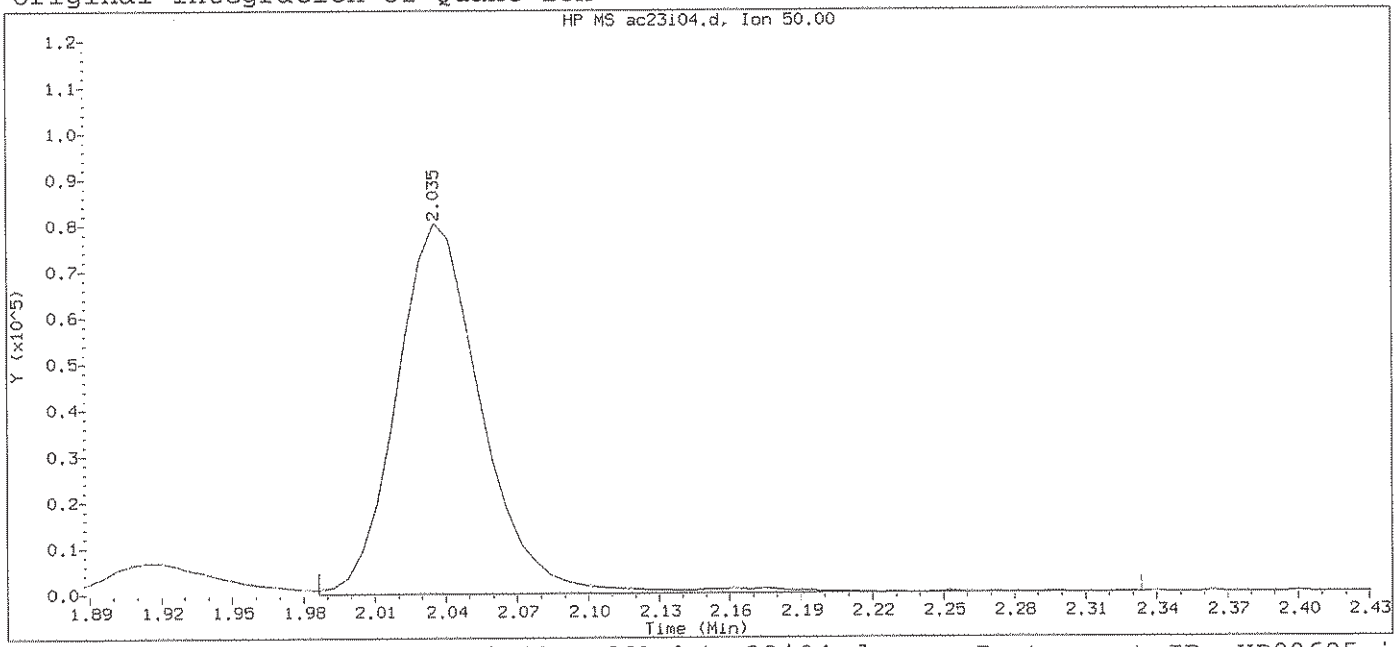
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

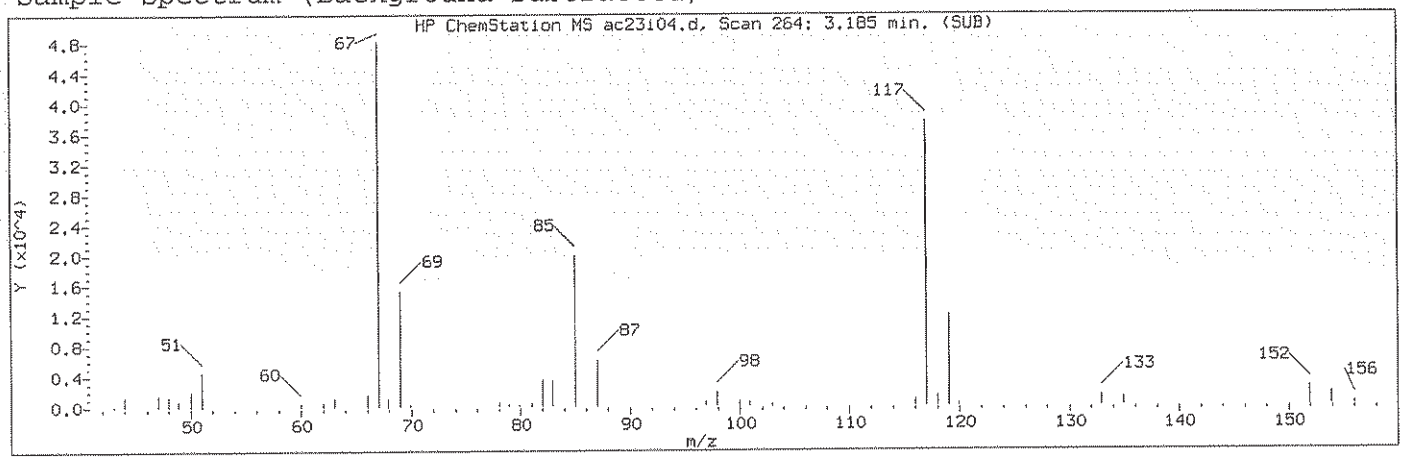
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

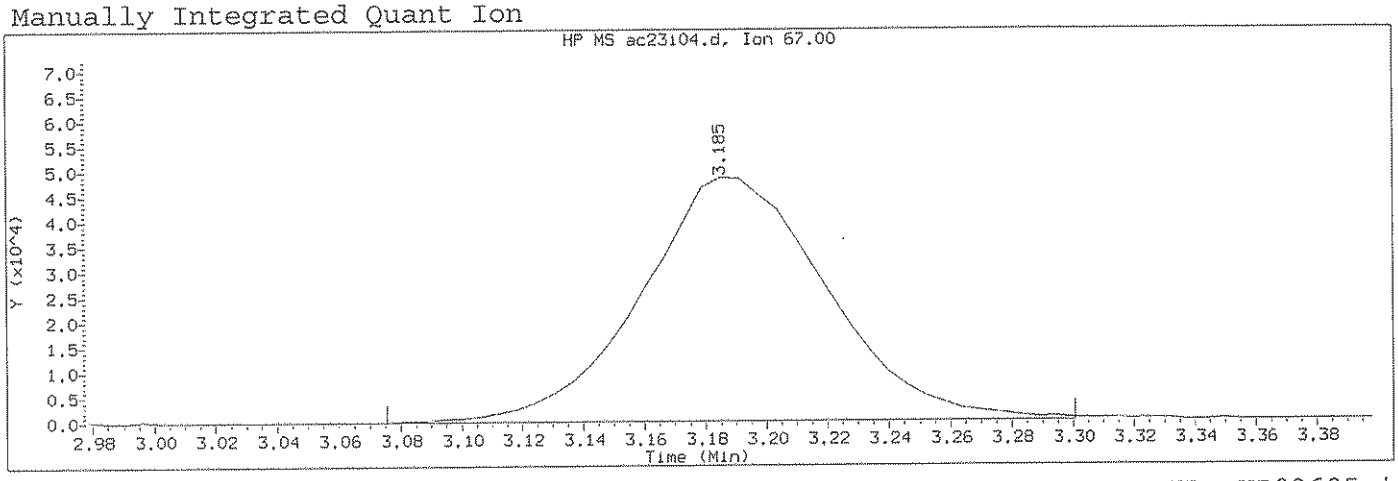
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 75		
Retention Time (minutes)	: 2.035		
Quant Ion	: 50.00		
Area	: 202251		
On-column Amount (ng)	: 20.3262		
Integration start scan	: 66	Integration stop scan:	123
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

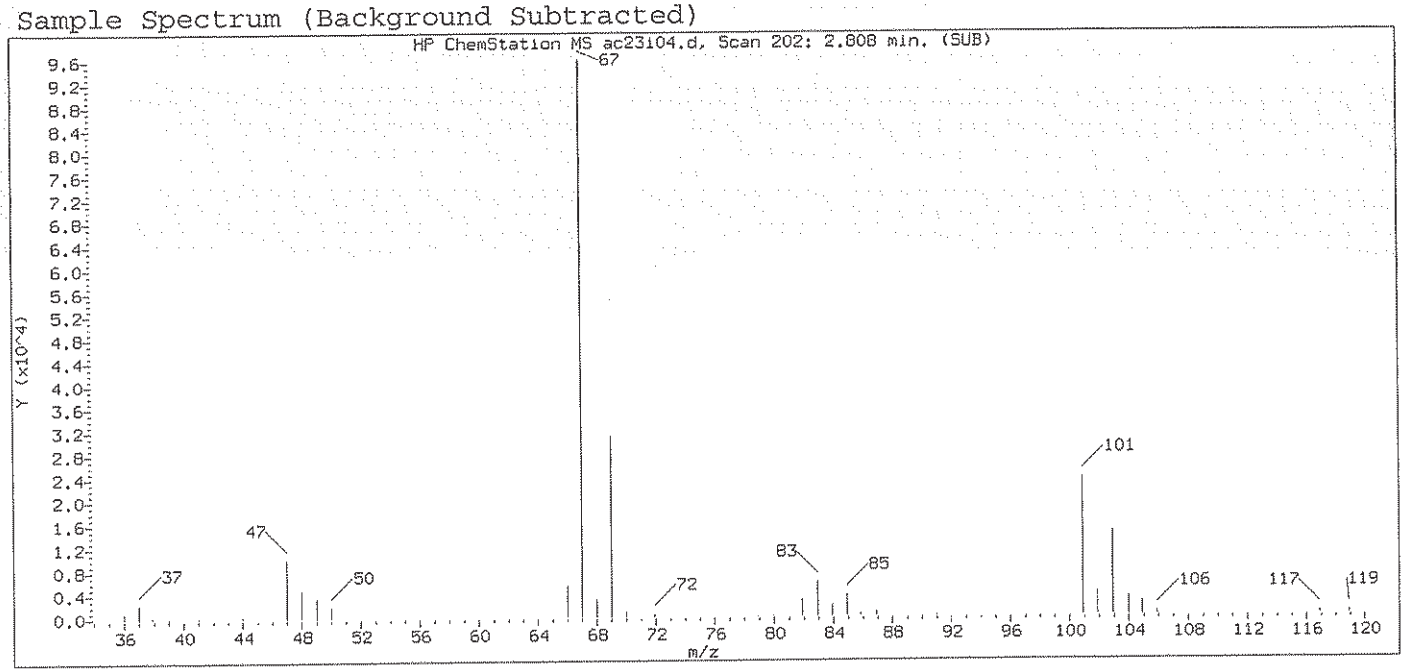
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 264		
Retention Time (minutes)	: 3.185		
Quant Ion	: 67.00		
Area (flag)	: 205301A		
On-Column Amount (ng)	: 17.9324		
Integration start scan	: 245	Integration stop scan:	282
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

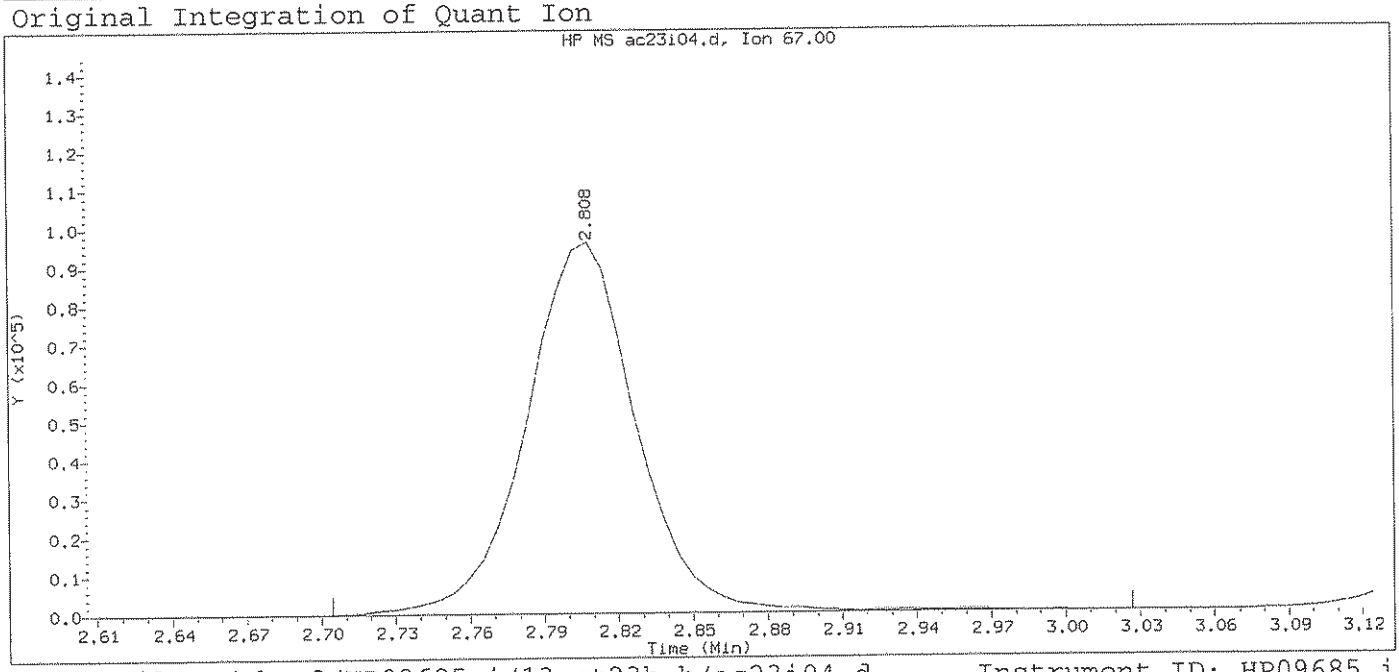
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

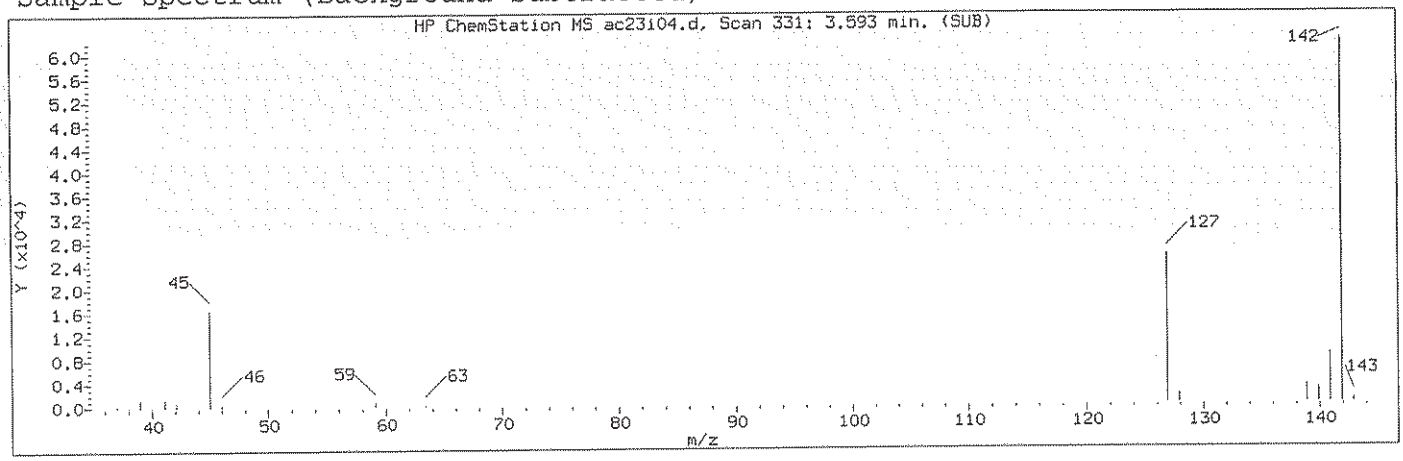
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

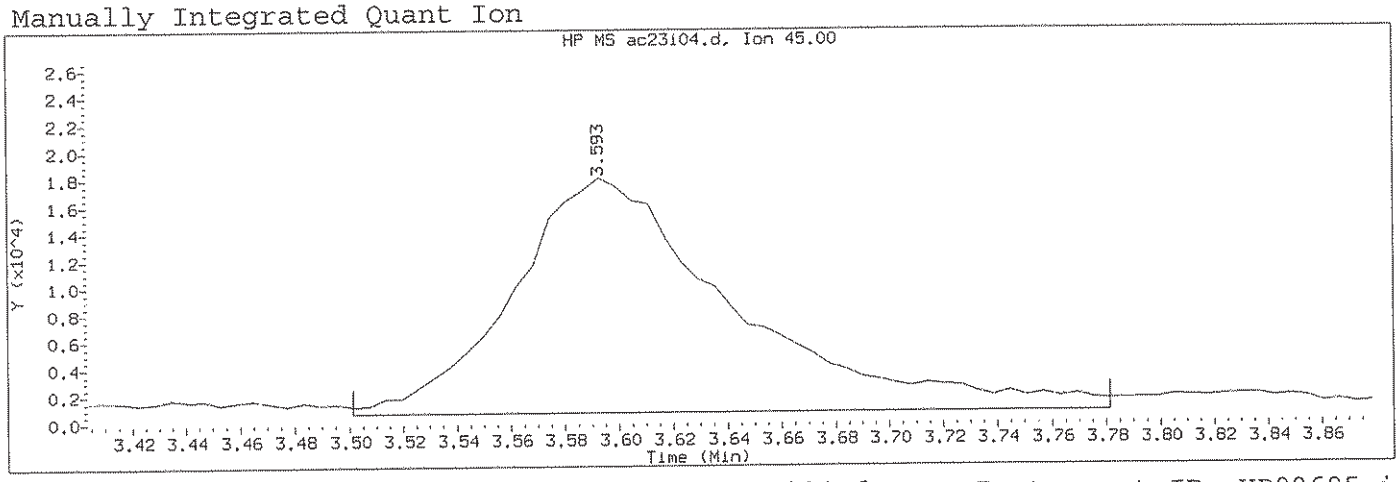
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 202		
Retention Time (minutes)	: 2.808		
Quant Ion	: 67.00		
Area	: 298287		
On-column Amount (ng)	: 20.8016		
Integration start scan	: 184	Integration stop scan:	237
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

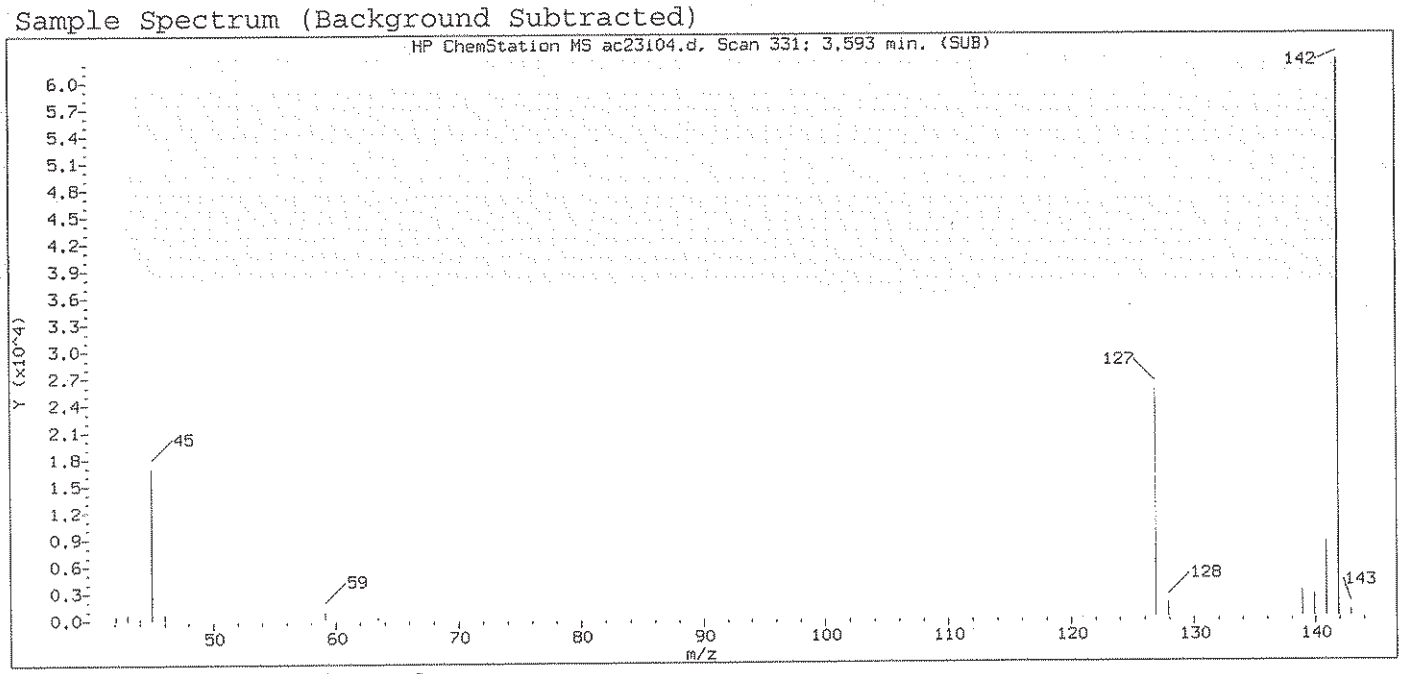
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 331		
Retention Time (minutes)	: 3.593		
Quant Ion	: 45.00		
Area (flag)	: 99316M		
On-Column Amount (ng)	: 193.2409		
Integration start scan	: 315	Integration stop scan:	361
Y at integration start	: 670	Y at integration end:	670

Reason for manual integration: improper integration

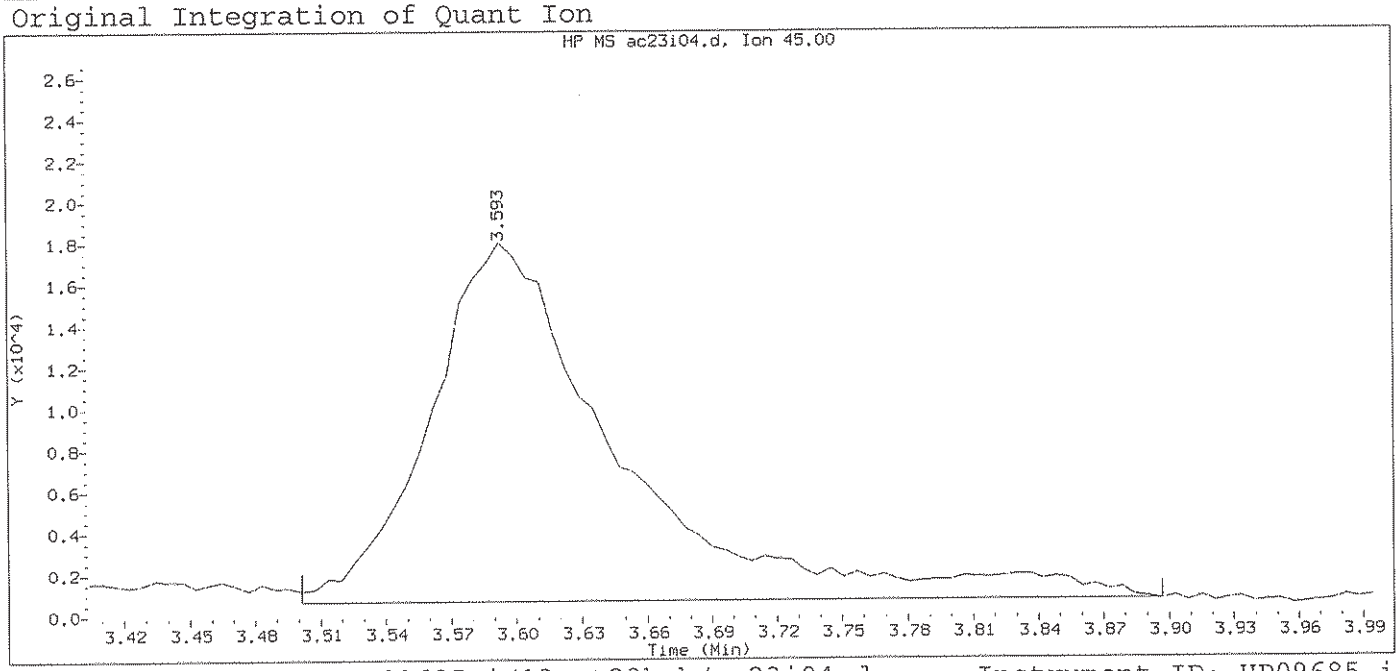
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

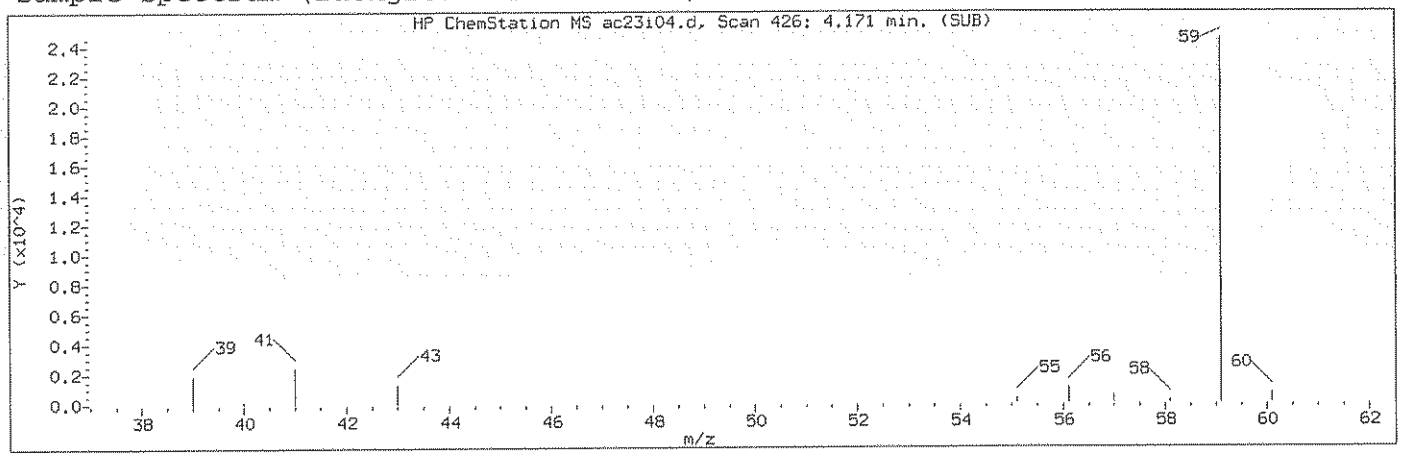
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

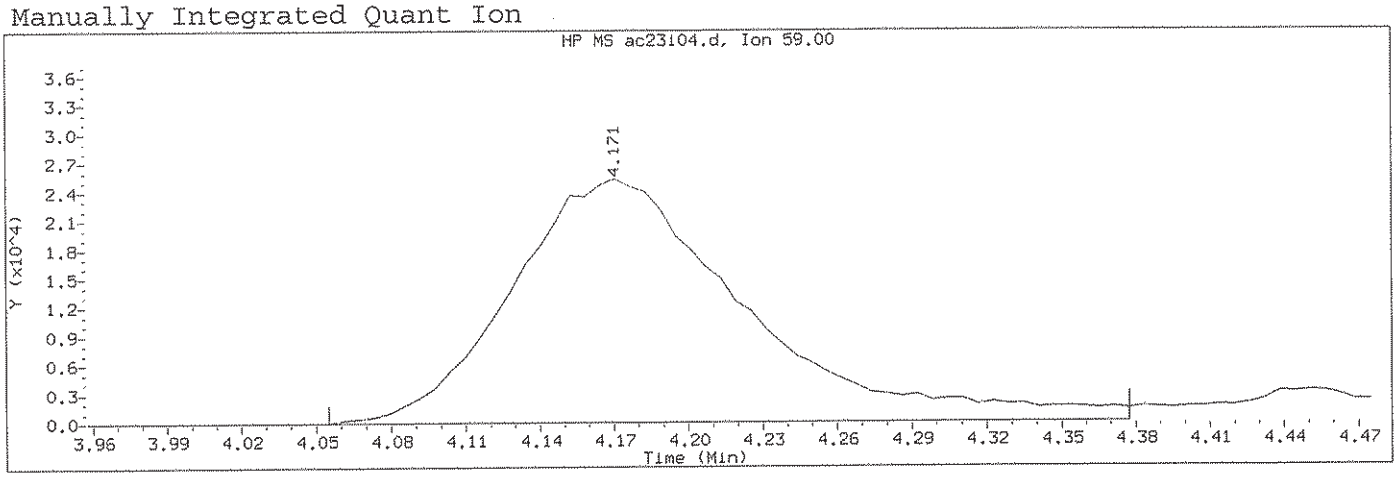
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 331		
Retention Time (minutes)	: 3.593		
Quant Ion	: 45.00		
Area	: 104854		
On-column Amount (ng)	: 198.9274		
Integration start scan	: 315	Integration stop scan:	380
Y at integration start	: 670	Y at integration end:	670

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

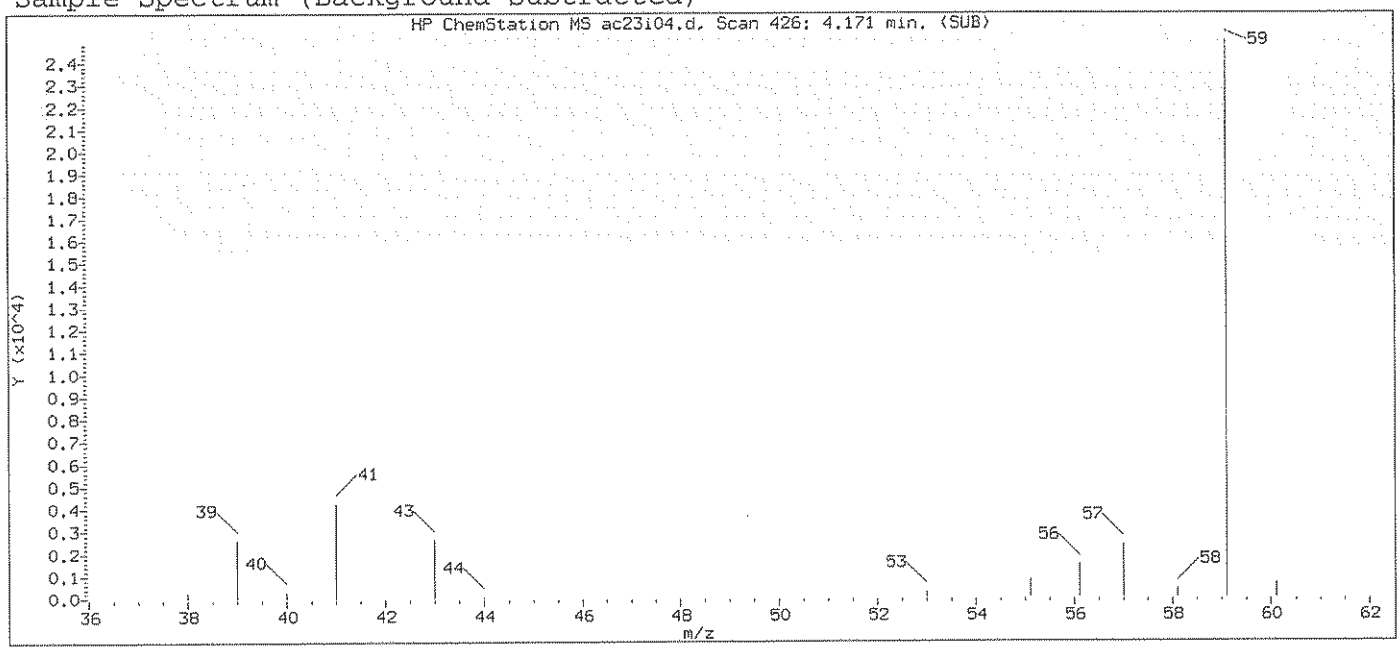
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 426		
Retention Time (minutes)	: 4.171		
Quant Ion	: 59.00		
Area (flag)	: 165326M		
On-Column Amount (ng)	: 199.8390		
Integration start scan	: 406	Integration stop scan:	459
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

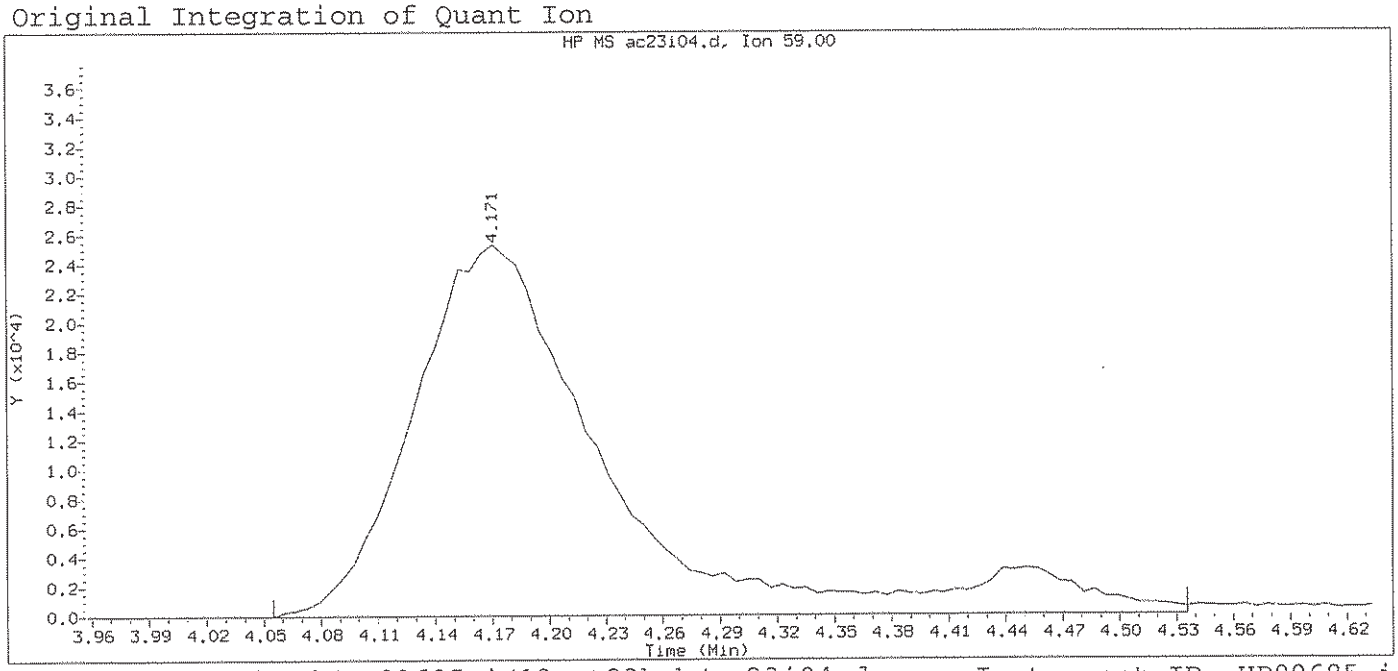
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

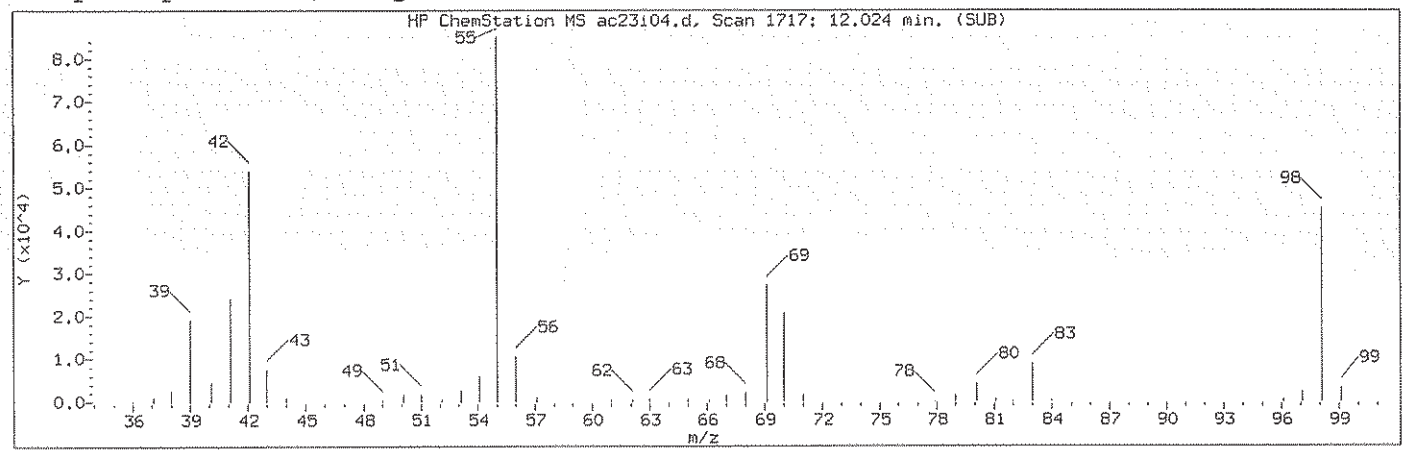
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

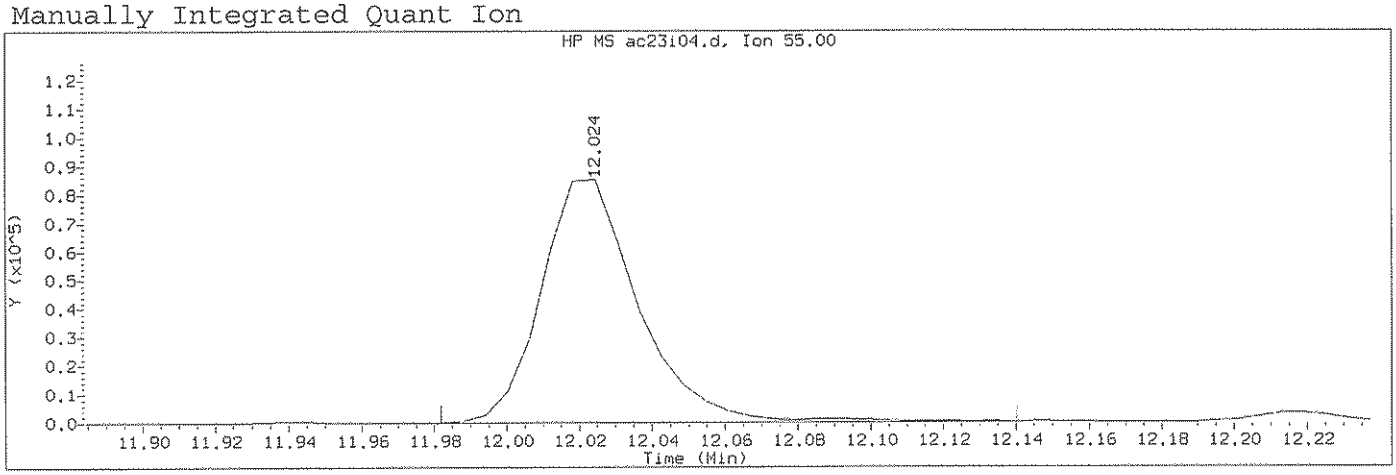
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 426		
Retention Time (minutes)	: 4.171		
Quant Ion	: 59.00		
Area	: 181434		
On-column Amount (ng)	: 210.3589		
Integration start scan	: 406	Integration stop scan:	485
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs0194

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

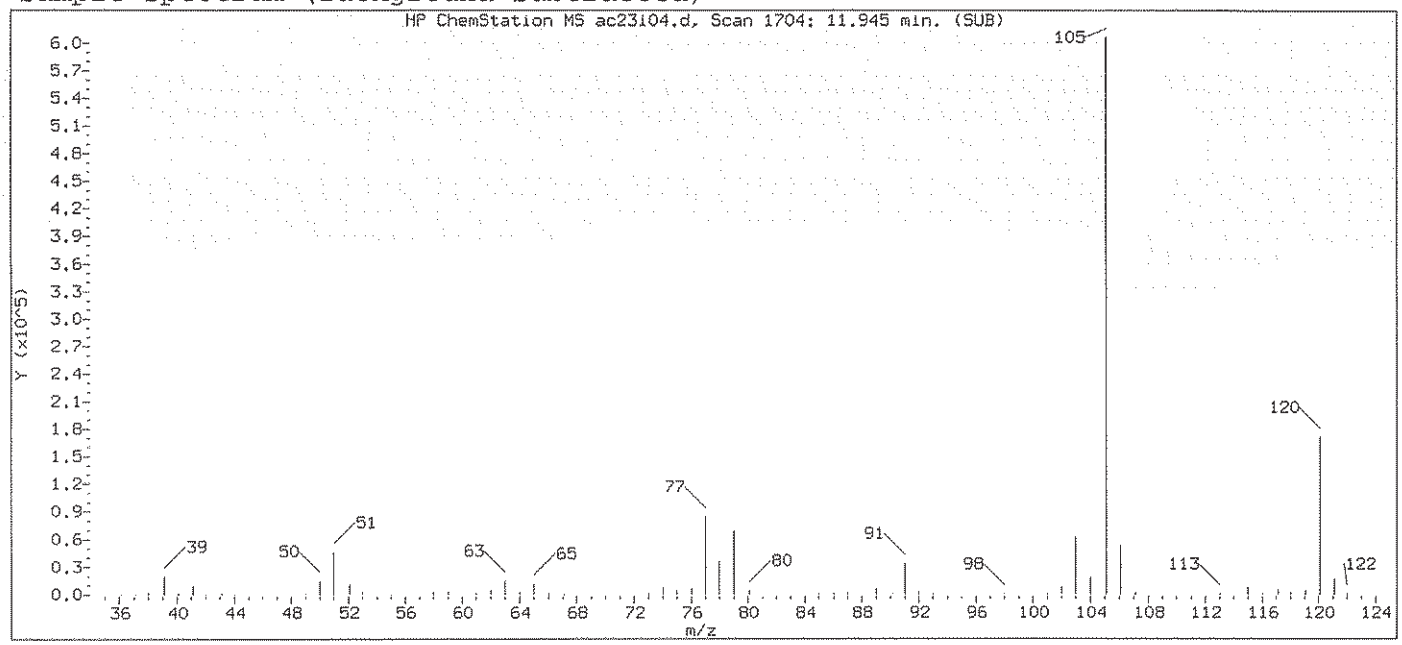
Compound Number	: 111		
Compound Name	: Cyclohexanone		
Scan Number	: 1717		
Retention Time (minutes)	: 12.024		
Quant Ion	: 55.00		
Area (flag)	: 158586A		
On-Column Amount (ng)	: 470.4769		
Integration start scan	: 1709	Integration stop scan:	1735
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

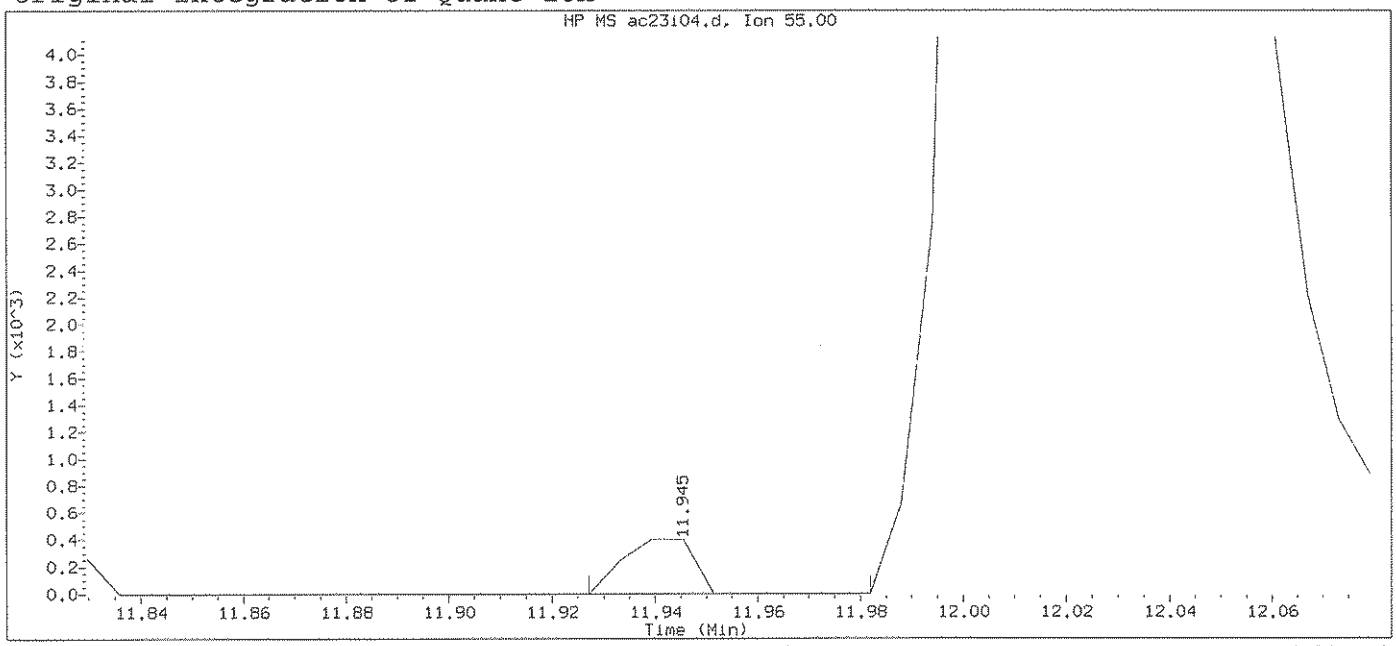
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

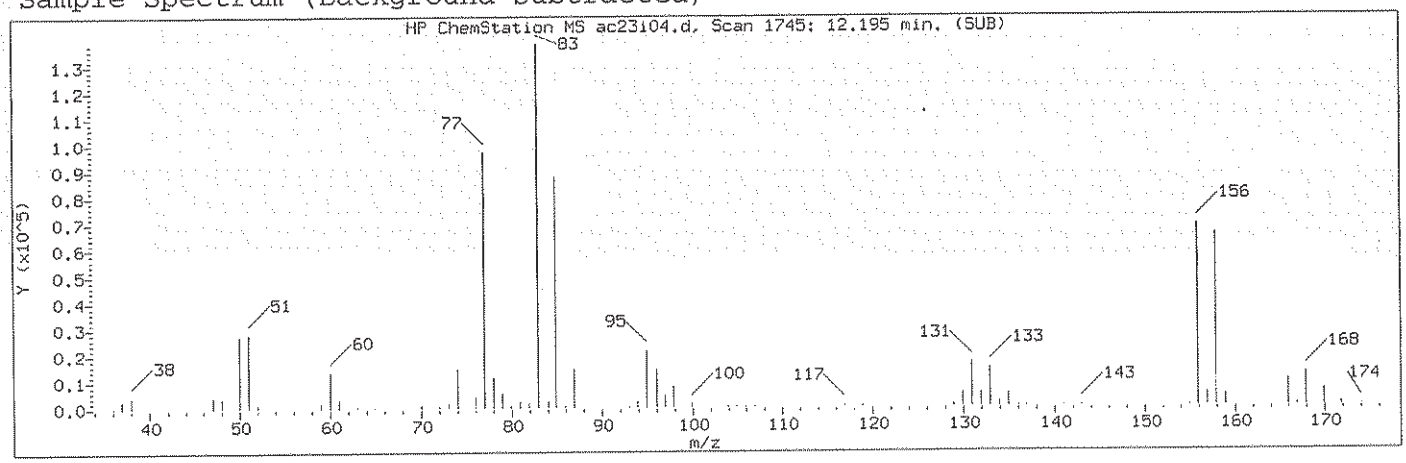
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

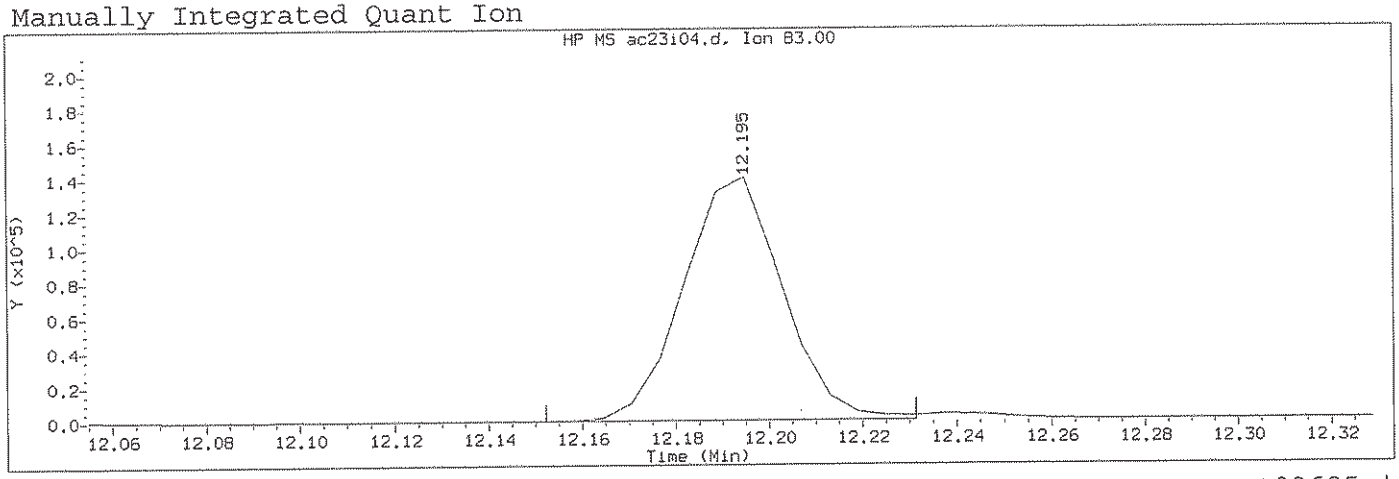
Compound Number	:	111
Compound Name	:	Cyclohexanone
Scan Number	:	1704
Retention Time (minutes)	:	11.945
Quant Ion	:	55.00
Area	:	383
On-column Amount (ng)	:	1.3709
Integration start scan	:	1700 Integration stop scan: 1709
Y at integration start	:	0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

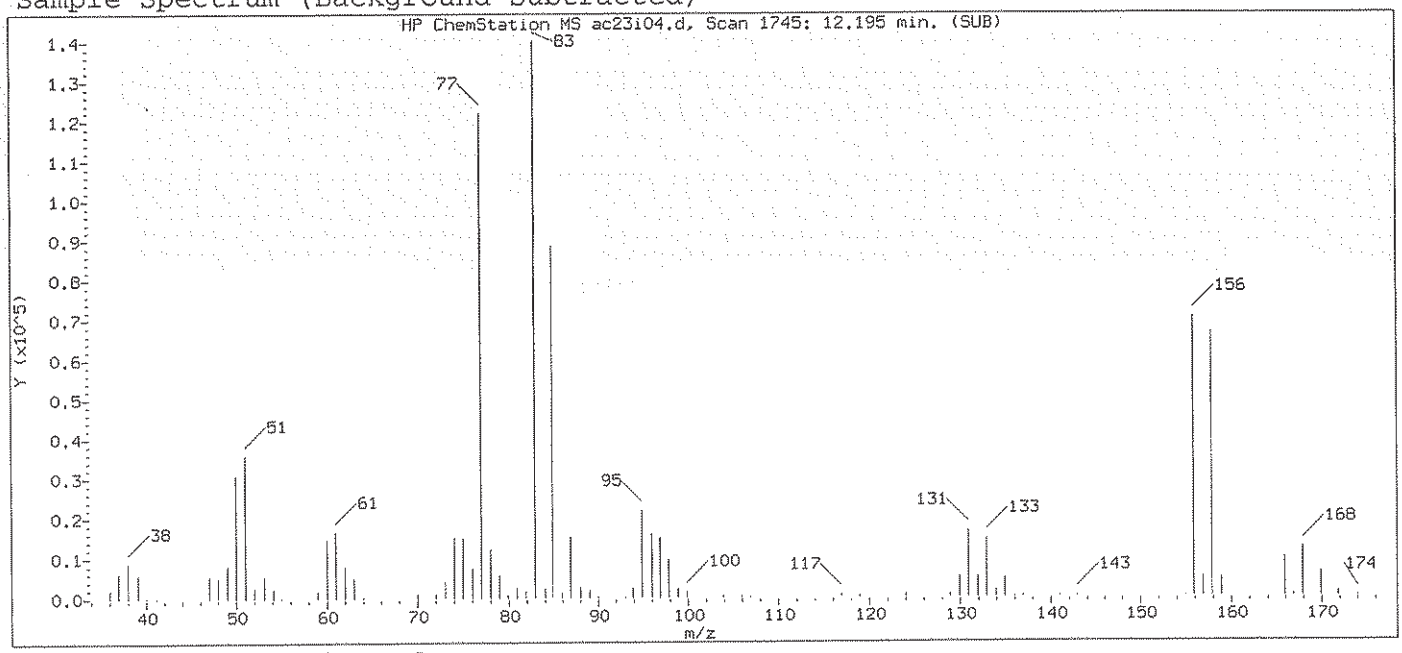
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area (flag)	: 207281M		
On-Column Amount (ng)	: 20.8552		
Integration start scan	: 1737	Integration stop scan:	1750
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

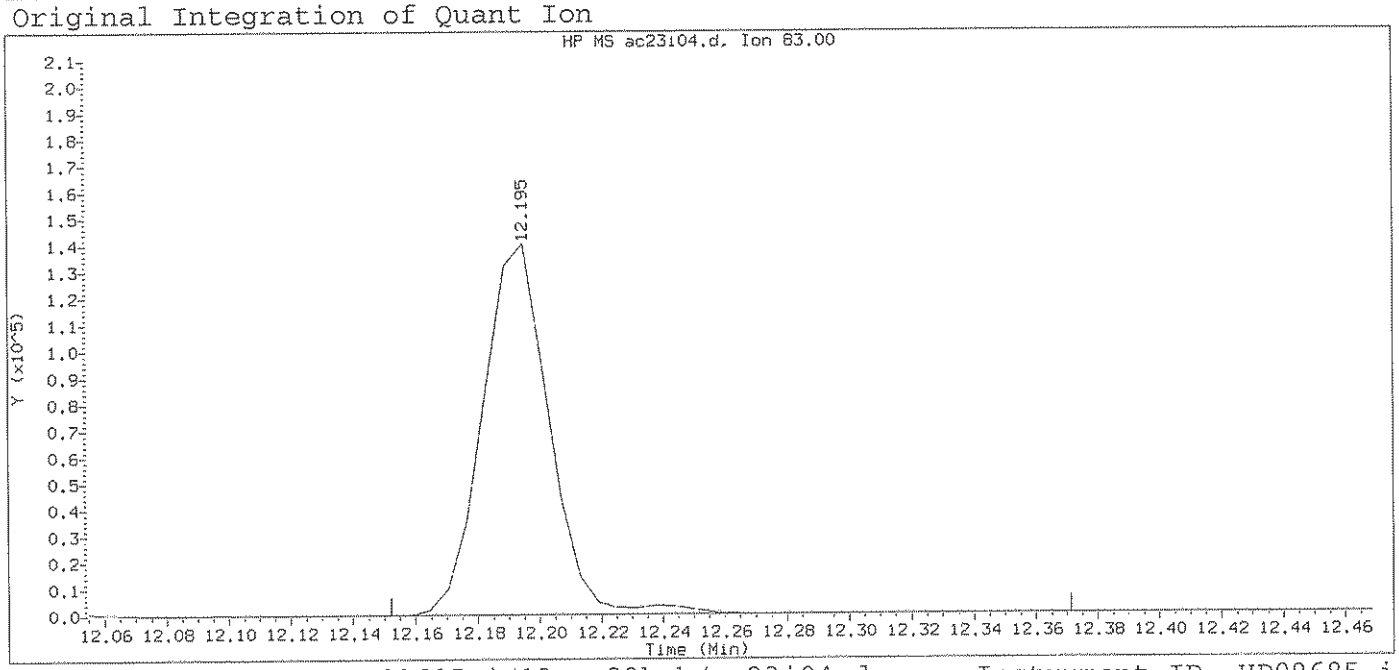
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

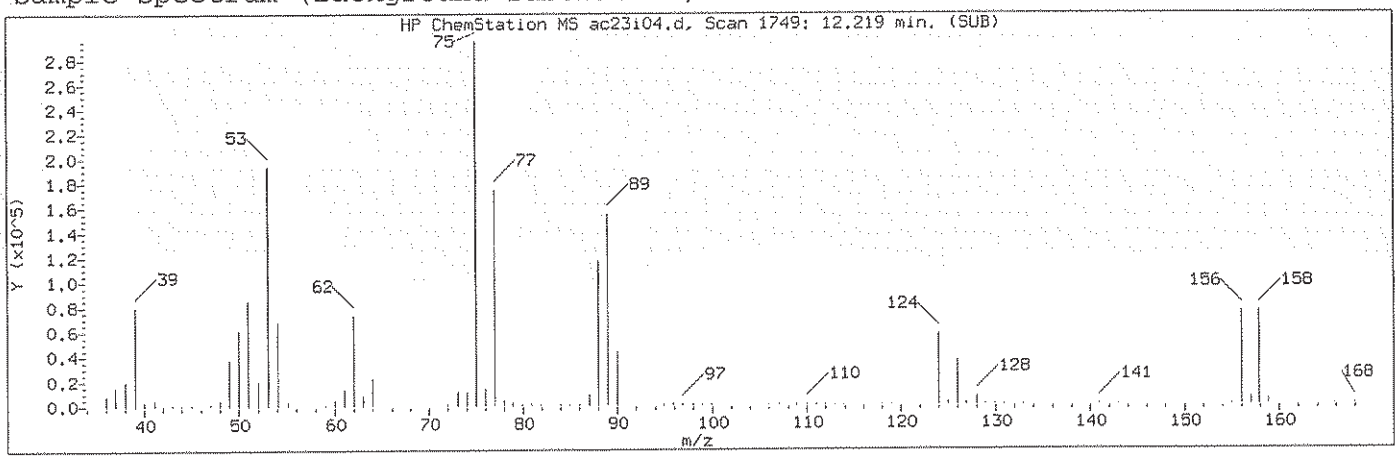
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

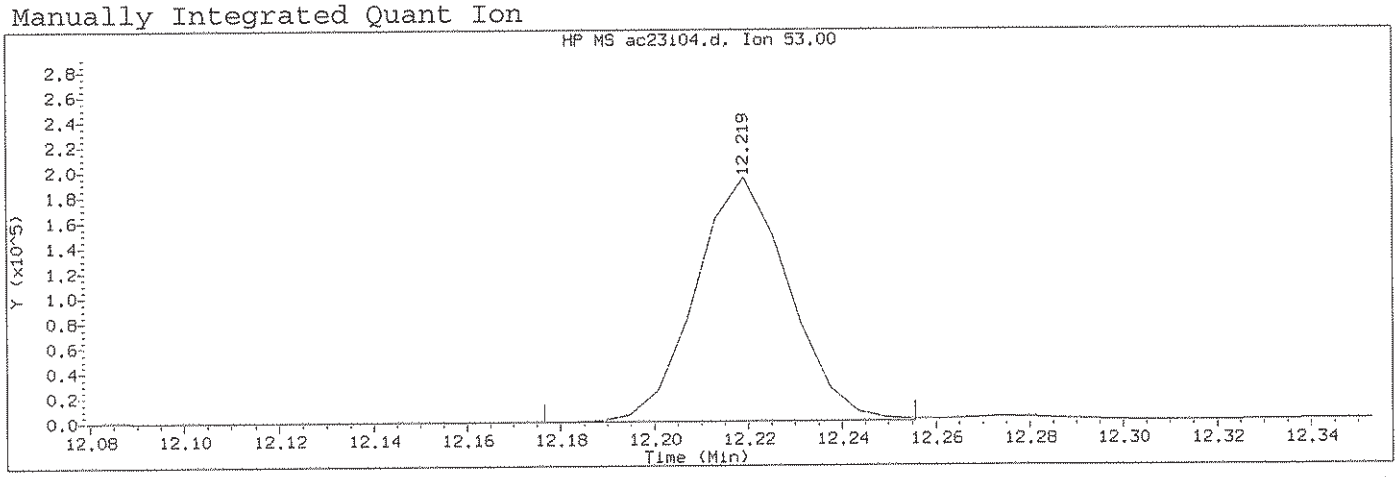
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1745		
Retention Time (minutes)	: 12.195		
Quant Ion	: 83.00		
Area	: 210757		
On-column Amount (ng)	: 21.5008		
Integration start scan	: 1737	Integration stop scan:	1773
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

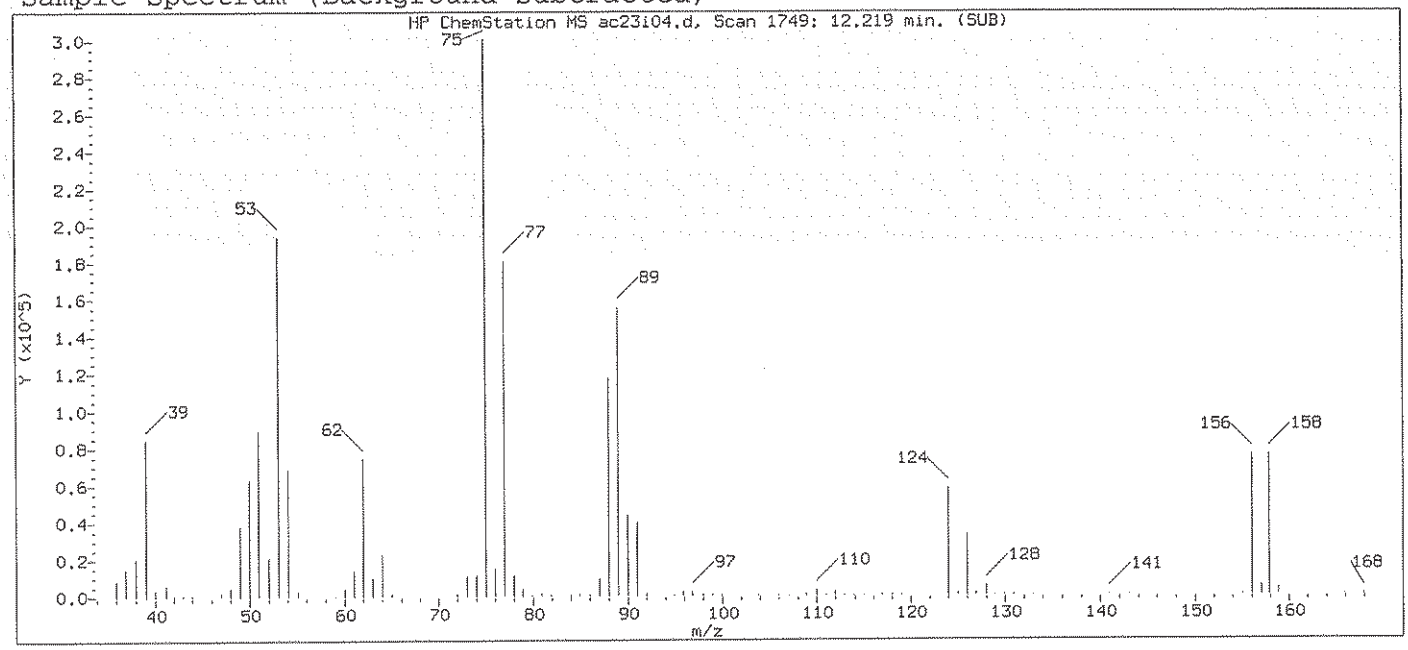
Compound Number	: 115		
Compound Name	: trans-1,4-Dichloro-2-butene		
Scan Number	: 1749		
Retention Time (minutes)	: 12.219		
Quant Ion	: 53.00		
Area (flag)	: 268112M		
On-Column Amount (ng)	: 104.1132		
Integration start scan	: 1741	Integration stop scan:	1754
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

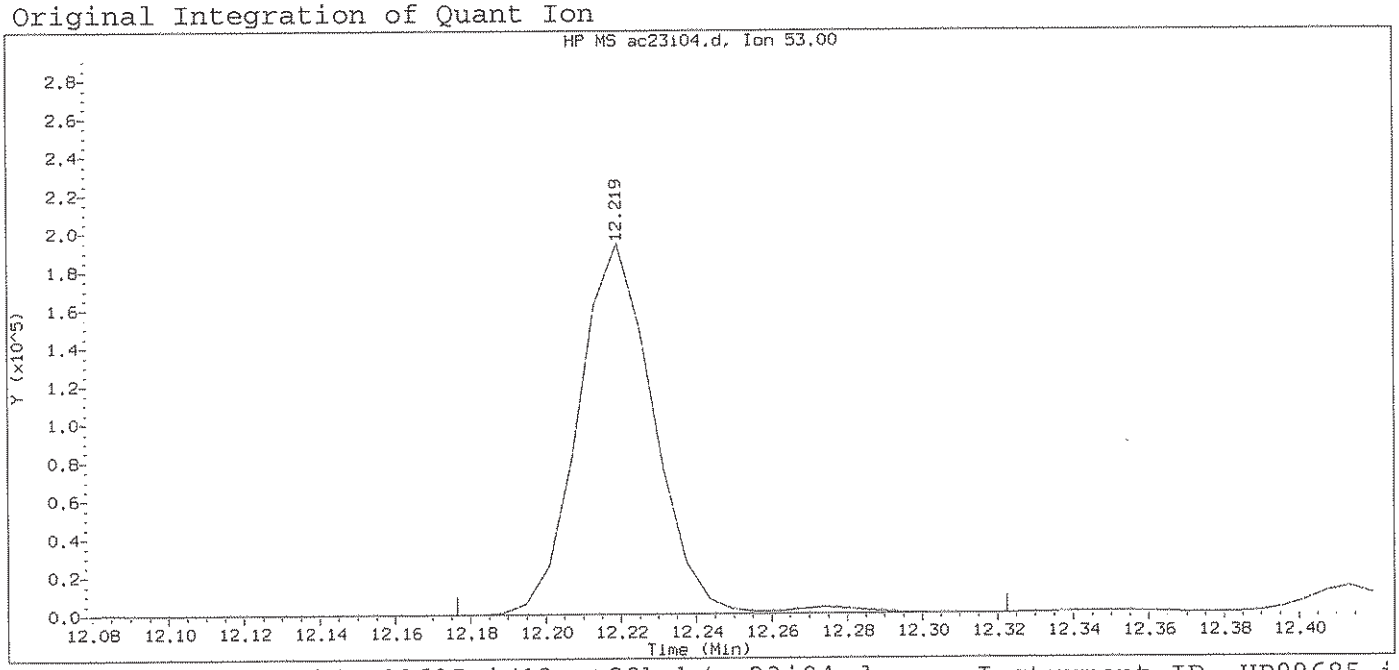
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

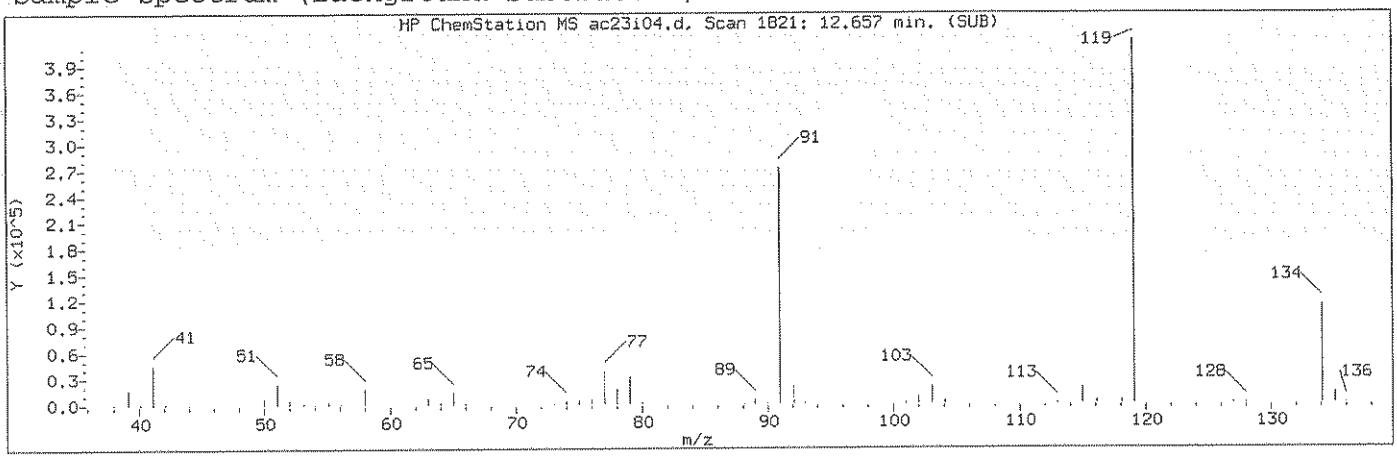
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

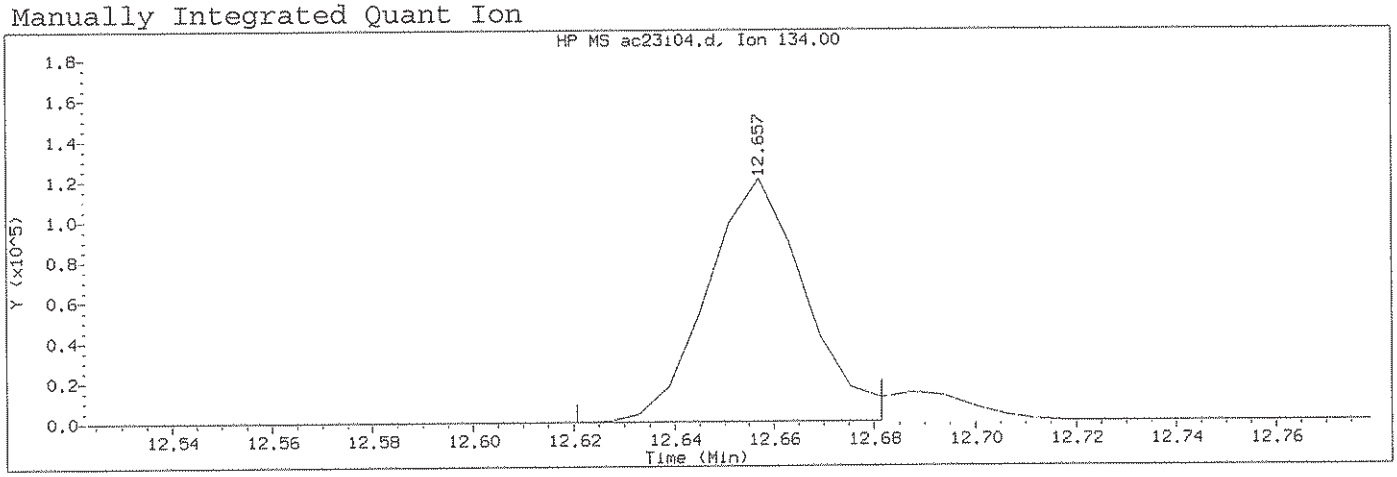
Compound Number	: 115		
Compound Name	: trans-1,4-Dichloro-2-butene		
Scan Number	: 1749		
Retention Time (minutes)	: 12.219		
Quant Ion	: 53.00		
Area	: 272821		
On-column Amount (ng)	: 103.3703		
Integration start scan	: 1741	Integration stop scan:	1765
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

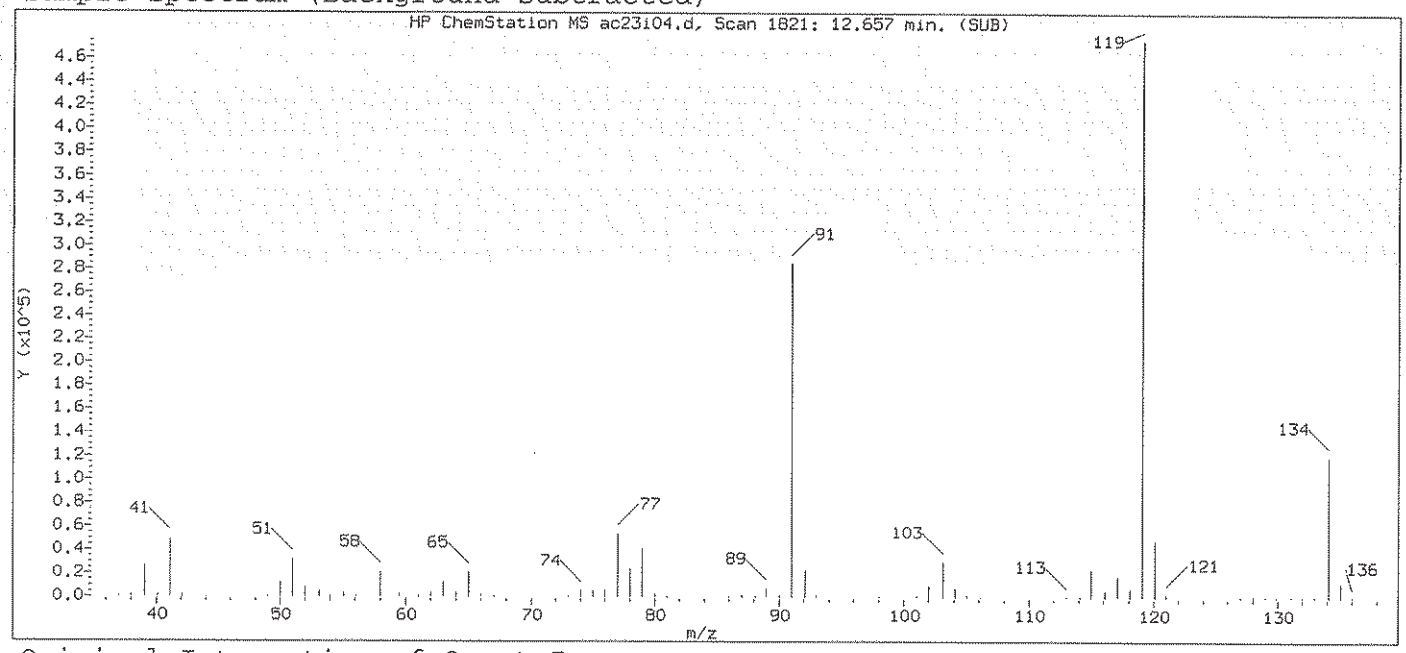
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 165723M
On-Column Amount (ng) : 20.0696
Integration start scan : 1814 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

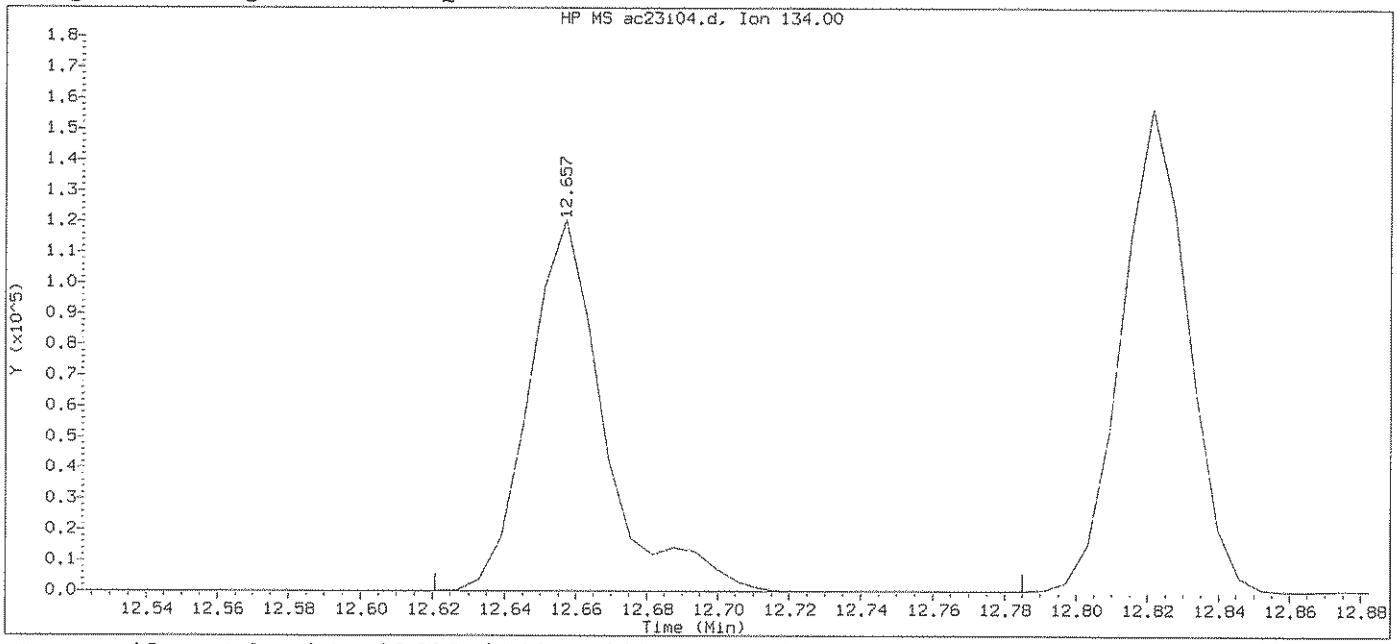
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

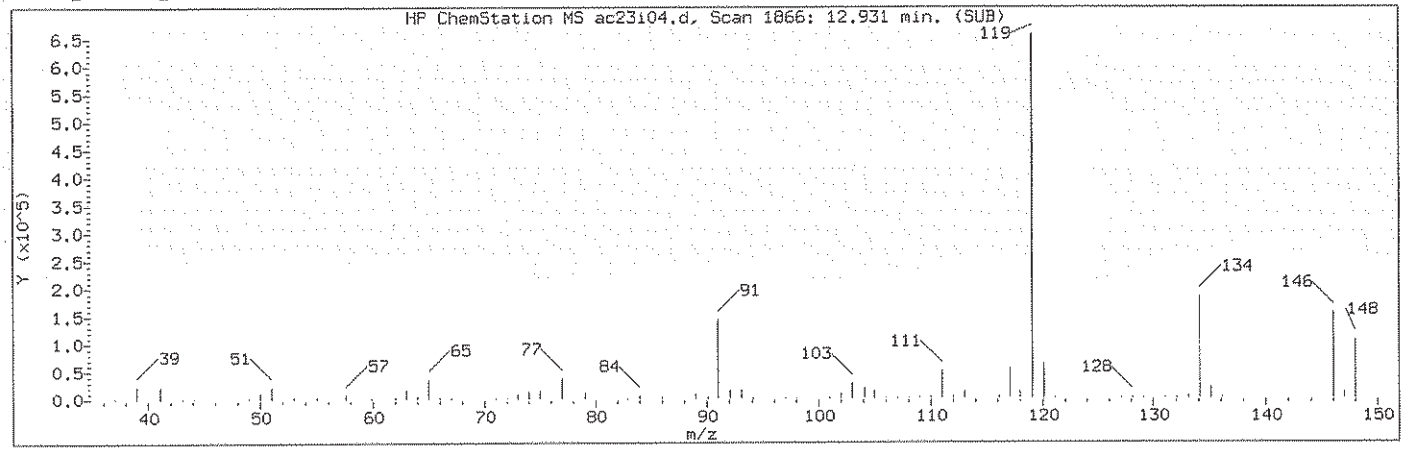
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

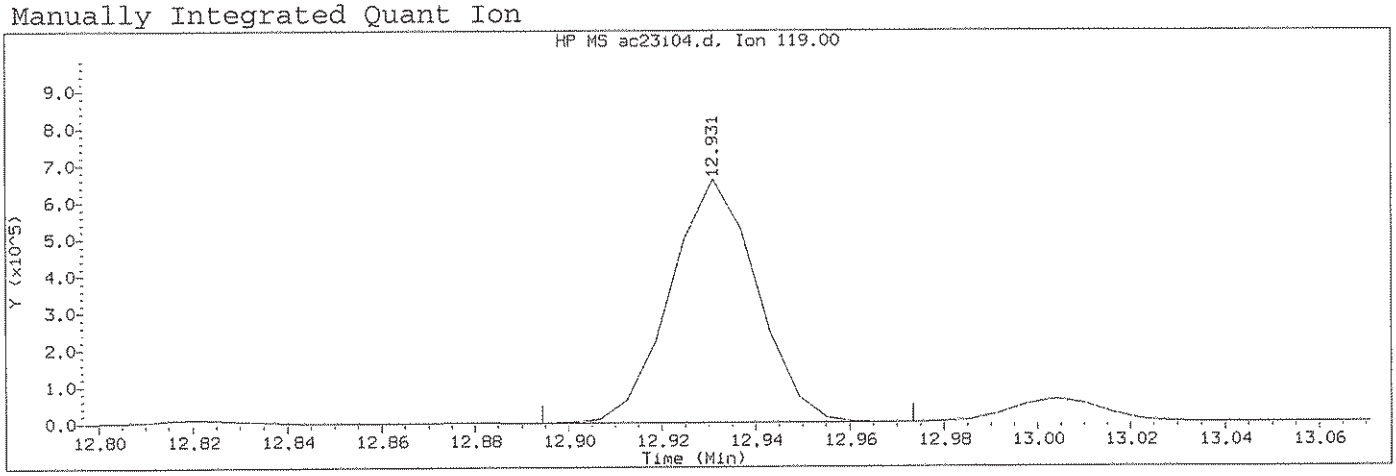
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area : 179701
On-column Amount (ng) : 21.0449
Integration start scan : 1814 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

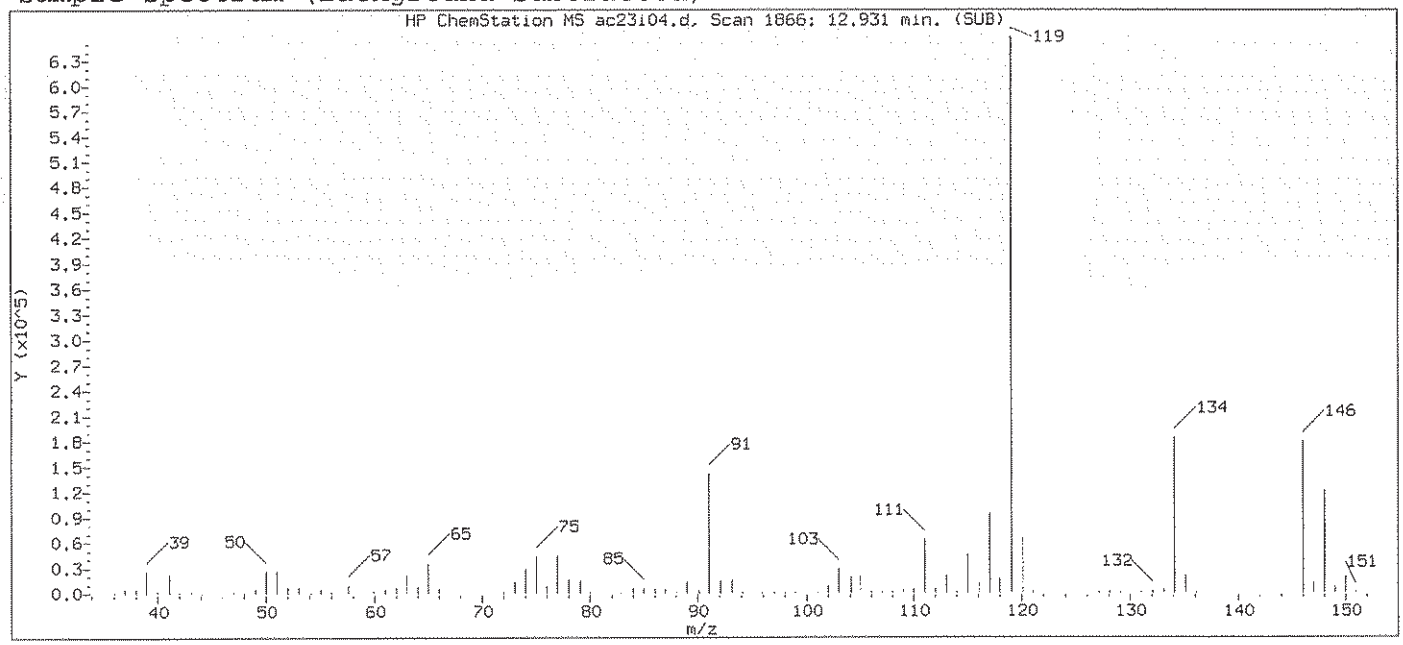
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area (flag) : 843049M
On-Column Amount (ng) : 20.6122
Integration start scan : 1859 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

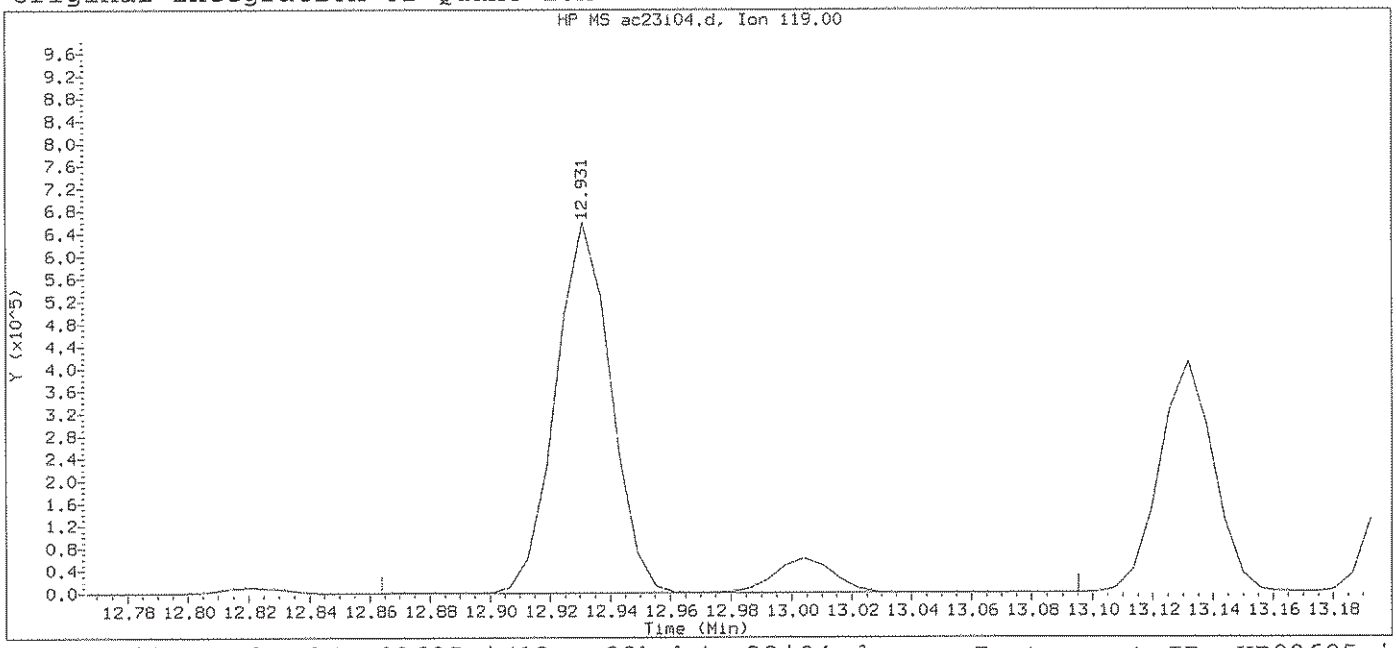
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

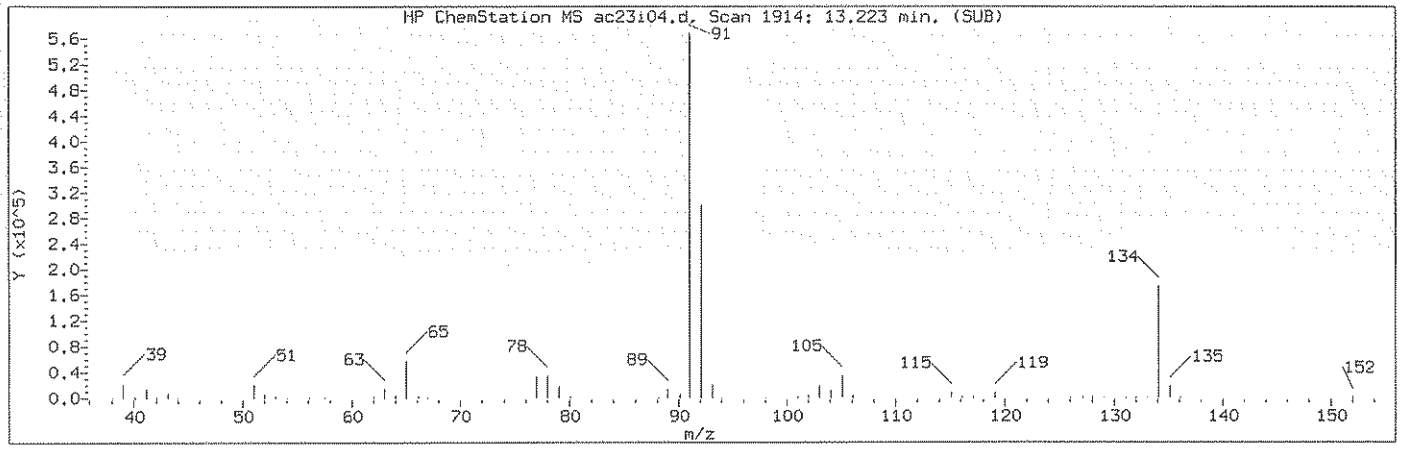
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

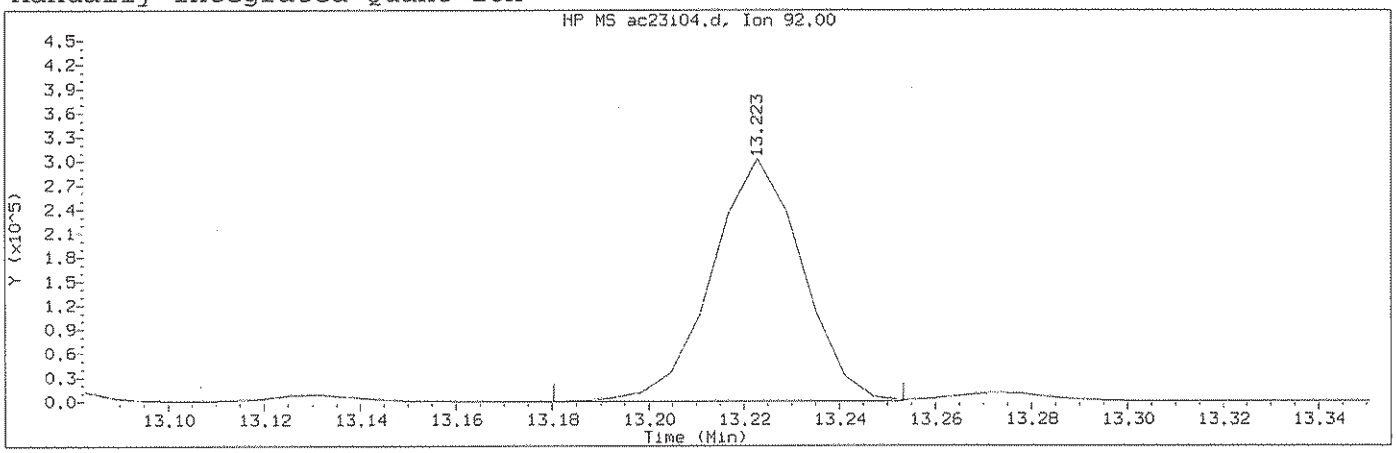
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area : 928007
On-column Amount (ng) : 21.7685
Integration start scan : 1854 Integration stop scan: 1892
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature used

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD020 Lab Sample ID: VSTD020

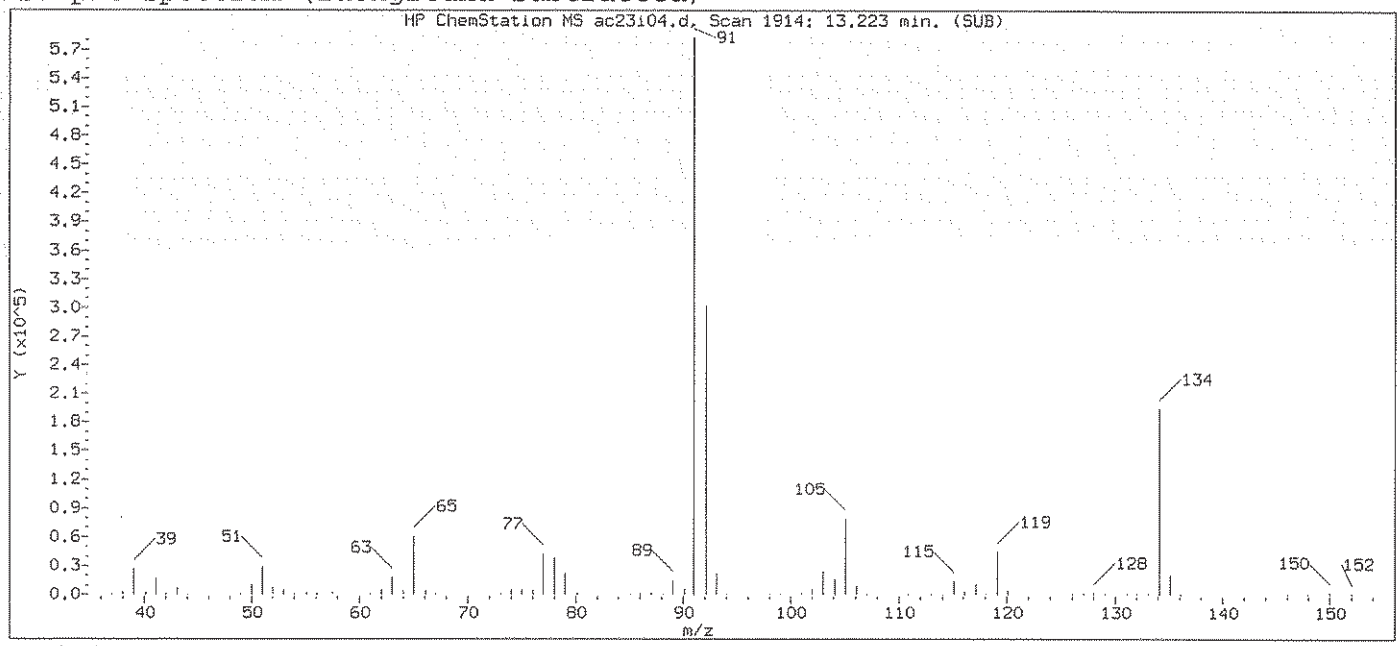
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 397156M
On-Column Amount (ng) : 20.0295
Integration start scan : 1906 Integration stop scan: 1918
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

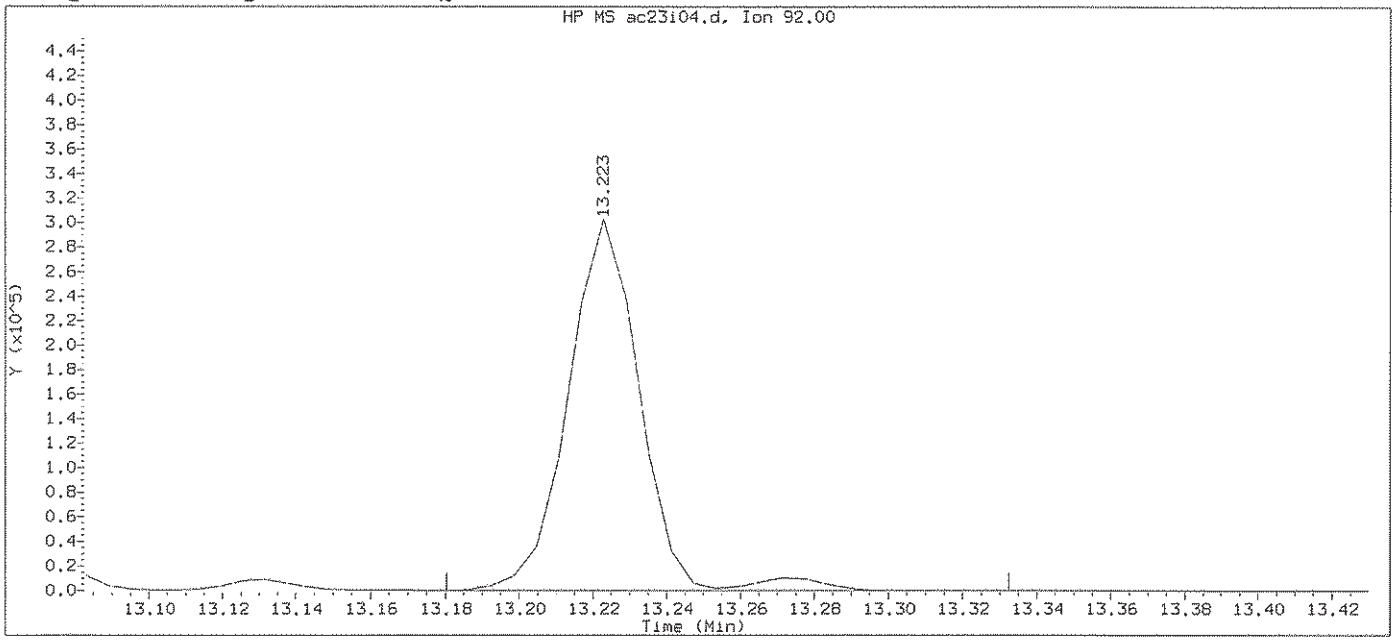
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



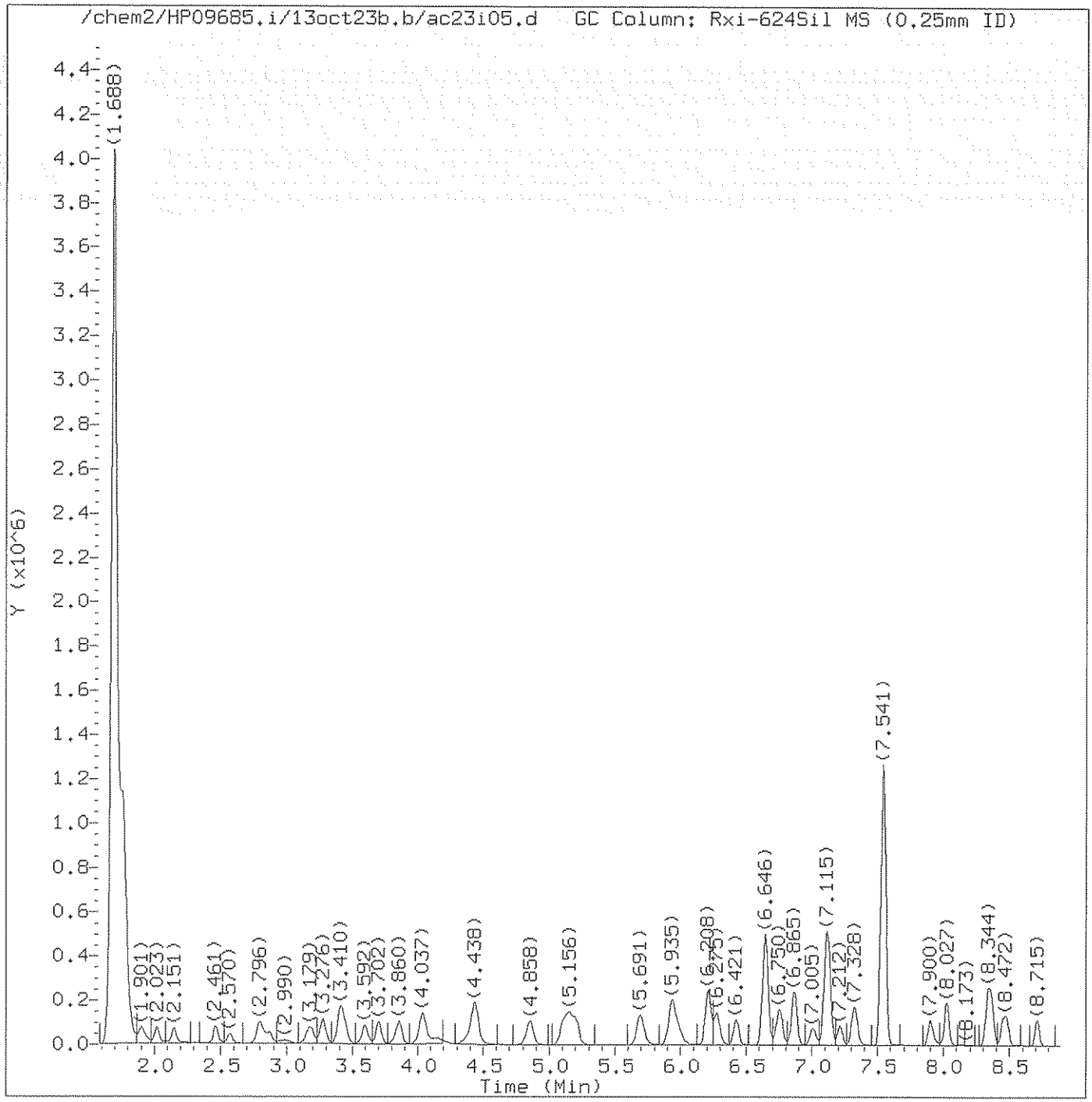
Data File: /chem2/HP09685.i/13oct23b.b/ac23i04.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:31 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 20:51
Date, time and analyst ID of latest file update: 23-Oct-2013 20:51 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 411021
On-column Amount (ng) : 20.2620
Integration start scan : 1906 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature used for Chelsea Stong



Total Ion Chromatogram (TIC)

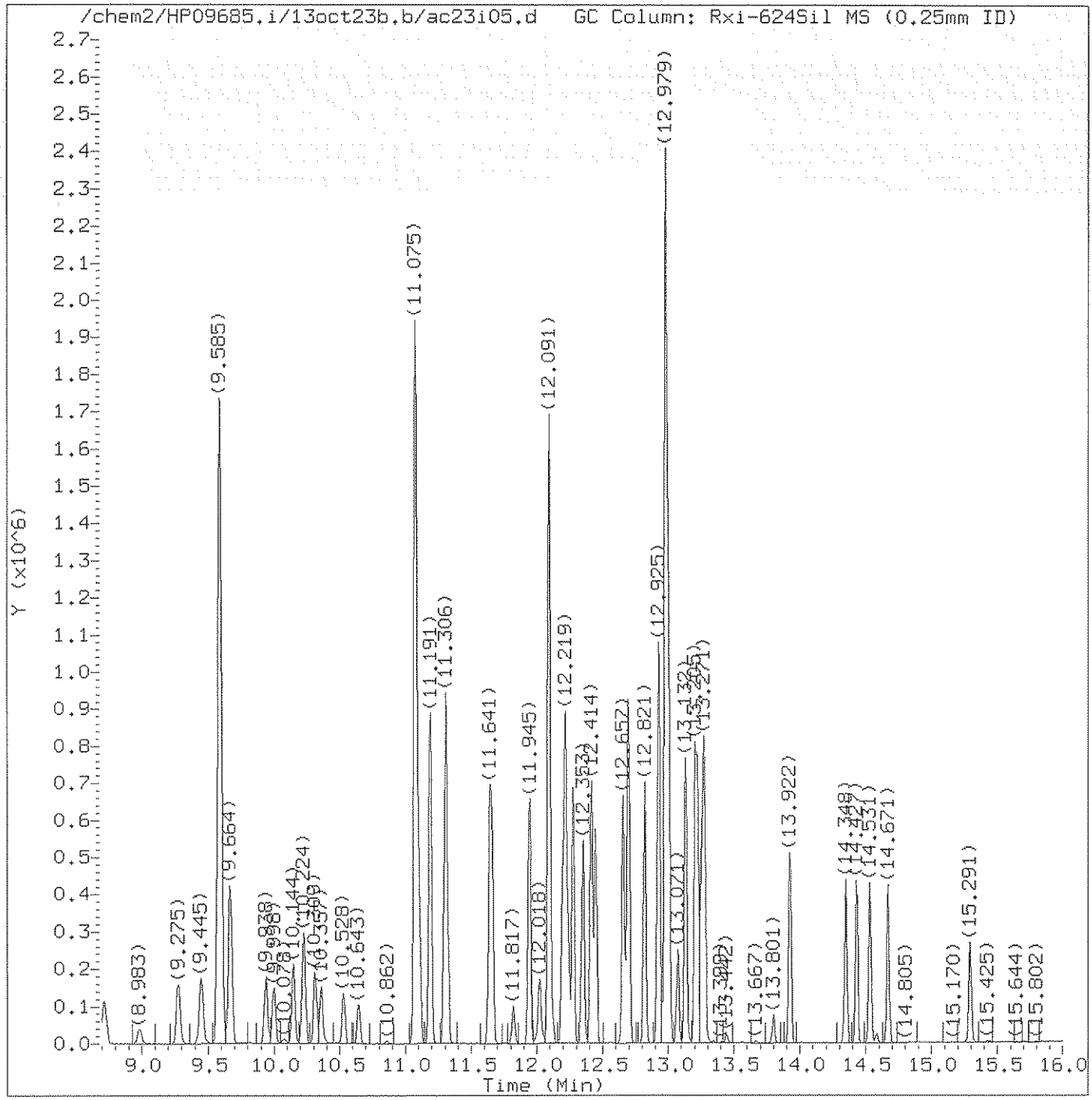
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.901	85	115296	9.238
4) Chloromethane	(2)	2.017	50	101162	10.132
5) Vinyl Chloride	(2)	2.151	62	95408	9.975
9) Bromomethane	(2)	2.461	94	72654	10.394
10) Chloroethane	(2)	2.570	64	57678M	10.382
11) Dichlorofluoromethane	(2)	2.789	67	125048	8.786
13) Trichlorofluoromethane	(2)	2.862	101	133764M	9.292
15) Ethanol	(1)	2.990	45	79694	958.414
17) Freon 123a	(2)	3.179	67	87896A	8.154
18) Acrolein	(1)	3.276	56	182440	99.673
19) 1,1-Dichloroethene	(2)	3.404	96	71015	9.621
20) Acetone	(2)	3.428	58	17571	21.097
22) Freon 113	(2)	3.428	101	75041	9.313
23) 2-Propanol	(1)	3.580	45	47308M	87.590
24) Methyl Iodide	(2)	3.599	142	140558	9.687
25) Carbon Disulfide	(2)	3.702	76	246614	9.516
27) Methyl Acetate	(2)	3.824	43	54163	10.429
29) Allyl Chloride	(2)	3.860	41	107394	9.416
30)*t-Butyl alcohol-d10	(1)	4.030	65	157708	250.000
31) Methylene Chloride	(2)	4.043	84	85548	9.933
32) t-Butyl alcohol	(1)	4.158	59	81842	94.136
33) Acrylonitrile	(2)	4.359	53	29490	9.937
34) Methyl Tertiary Butyl Ether	(2)	4.432	73	220956	9.619
35) trans-1,2-Dichloroethene	(2)	4.438	96	83246	9.721
38) n-Hexane	(2)	4.852	57	103504	9.076
40) 1,1-Dichloroethane	(2)	5.101	63	143845	9.656
41) di-Isopropyl ether	(2)	5.150	45	229659	9.528
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	98911	8.932
44) Ethyl t-butyl ether	(2)	5.691	59	220142	9.443
45) 2-Butanone	(2)	5.904	43	68627	20.006
46) cis-1,2-Dichloroethene	(2)	5.935	96	90248	9.541
48) 2,2-Dichloropropane	(2)	5.947	77	110227	9.100
50) Propionitrile	(1)	5.989	54	107048	95.586
47) 1,2-Dichloroethene (Total)	(2)		96	173494	19.263
51) Methacrylonitrile	(2)	6.215	67	158515	49.321
52) Bromochloromethane	(2)	6.275	128	47120	9.781
53) Tetrahydrofuran	(1)	6.287	71	20594	19.424
54) Chloroform	(2)	6.427	83	140022	9.577

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.646	113	355575	49.893
55)$Dibromofluoromethane	(2)	6.646	111	363061	49.957
56) 1,1,1-Trichloroethane	(2)	6.653	97	132121	9.332
57) Cyclohexane	(2)	6.756	56	126749	9.023
57) Cyclohexane	(2)	6.756	84	117023	9.079
57) Cyclohexane	(2)	6.756	69	39467	8.924
59) Carbon Tetrachloride	(2)	6.865	117	104410	9.017
58) 1,1-Dichloropropene	(2)	6.865	75	106513	9.282
60) Isobutyl Alcohol	(1)	7.005	41	69164	239.865
61)$1,2-Dichloroethane-d4	(2)	7.109	102	81584	50.478
61)$1,2-Dichloroethane-d4	(2)	7.109	65	373560	50.473
61)$1,2-Dichloroethane-d4	(2)	7.109	104	51634	50.375
62) Benzene	(2)	7.133	78	338823	9.714
64) 1,2-Dichloroethane	(2)	7.212	62	100404	9.579
64) 1,2-Dichloroethane	(2)	7.212	98	9975	9.837
65) t-Amyl methyl ether	(2)	7.328	73	210870	9.410
67)*Fluorobenzene	(2)	7.541	96	1457791	50.000
69) n-Heptane	(2)	7.547	43	107244	9.092
70) n-Butanol	(1)	7.900	56	113667	449.644
72) Trichloroethene	(2)	8.021	95	85297	9.428
73) Methylcyclohexane	(2)	8.338	83	135206	8.928
74) 1,2-Dichloropropane	(2)	8.368	63	84072	9.620
76) Methyl Methacrylate	(2)	8.447	69	49831	9.165
77) 1,4-Dioxane	(1)	8.459	88	21405	229.160
78) Dibromomethane	(2)	8.478	93	51456	9.513
81) Bromodichloromethane	(2)	8.715	83	99235	9.107
82) 2-Nitropropane	(1)	8.983	41	33107	18.286
84) cis-1,3-Dichloropropene	(2)	9.275	75	118106	8.976
85) 4-Methyl-2-pentanone	(2)	9.445	43	142614	19.565
86)$Toluene-d8	(3)	9.591	98	1439021	50.338
86)$Toluene-d8	(3)	9.585	100	931729	50.088
87) Toluene	(3)	9.664	92	212700	9.582
88) trans-1,3-Dichloropropene	(3)	9.938	75	109533	9.048
89) Ethyl Methacrylate	(3)	9.998	69	87675	8.815
90) 1,1,2-Trichloroethane	(3)	10.144	97	72277	9.766
92) Tetrachloroethene	(3)	10.224	166	94060	9.253
93) 1,3-Dichloropropane	(3)	10.309	76	124348	9.688
95) 2-Hexanone	(3)	10.357	43	103740	19.902

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.528	129	76693	8.958
98) 1,2-Dibromoethane	(3)	10.643	107	73432	9.516
99)*Chlorobenzene-d5	(3)	11.075	117	1101461	50.000
100) Chlorobenzene	(3)	11.106	112	254961	9.757
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	83096	9.181
102) Ethylbenzene	(3)	11.191	91	397998	9.522
103) m+p-Xylene	(3)	11.306	106	325440	19.053
104) o-Xylene	(3)	11.641	106	155294	9.366
106) Styrene	(3)	11.659	104	240499	9.187
105) Xylene (Total)	(3)		106	480734	28.419
107) Bromoform	(3)	11.817	173	45082	8.586
108) Isopropylbenzene	(3)	11.945	105	395237	9.315
111) Cyclohexanone	(1)	12.018	55	77183M	217.889
112)$4-Bromofluorobenzene	(3)	12.091	95	524735	49.370
112)$4-Bromofluorobenzene	(3)	12.091	174	457562	49.592
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	99204M	10.153
114) Bromobenzene	(4)	12.207	156	111396	9.827
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	123642M	48.841
116) 1,2,3-Trichloropropane	(4)	12.237	110	30352	10.097
117) n-Propylbenzene	(4)	12.274	91	469250	9.752
119) 2-Chlorotoluene	(4)	12.353	126	104733	9.704
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	337943M	9.507
123) 4-Chlorotoluene	(4)	12.444	126	107321	9.610
126) tert-Butylbenzene	(4)	12.657	134	75597M	9.313
127) Pentachloroethane	(4)	12.687	167	63838	9.227
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	352349	9.630
129) sec-Butylbenzene	(4)	12.821	105	425526	9.470
131) 1,3-Dichlorobenzene	(4)	12.919	146	202179	9.597
132) p-Isopropyltoluene	(4)	12.931	119	378391	9.411
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	579456	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	210033	9.703
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	372042	9.724
136) Benzyl Chloride	(4)	13.077	126	35805	8.697
137) 1,3-Diethylbenzene	(4)	13.132	119	223024	9.106
138) 1,4-Diethylbenzene	(4)	13.205	119	224395	9.182
139) n-Butylbenzene	(4)	13.223	92	177612	9.112
140) 1,2-Dichlorobenzene	(4)	13.253	146	197734	9.725
141) 1,2-Diethylbenzene	(4)	13.271	119	193770M	9.384

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	15711	8.986
145) 1,3,5-Trichlorobenzene	(4)	13.922	180	149029	9.036
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	125290	8.864
147) Hexachlorobutadiene	(4)	14.427	225	71624	8.950
148) Naphthalene	(4)	14.531	128	297292	9.231
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	119893	9.030
150) 2-Methylnaphthalene	(4)	15.291	142	125561	9.867

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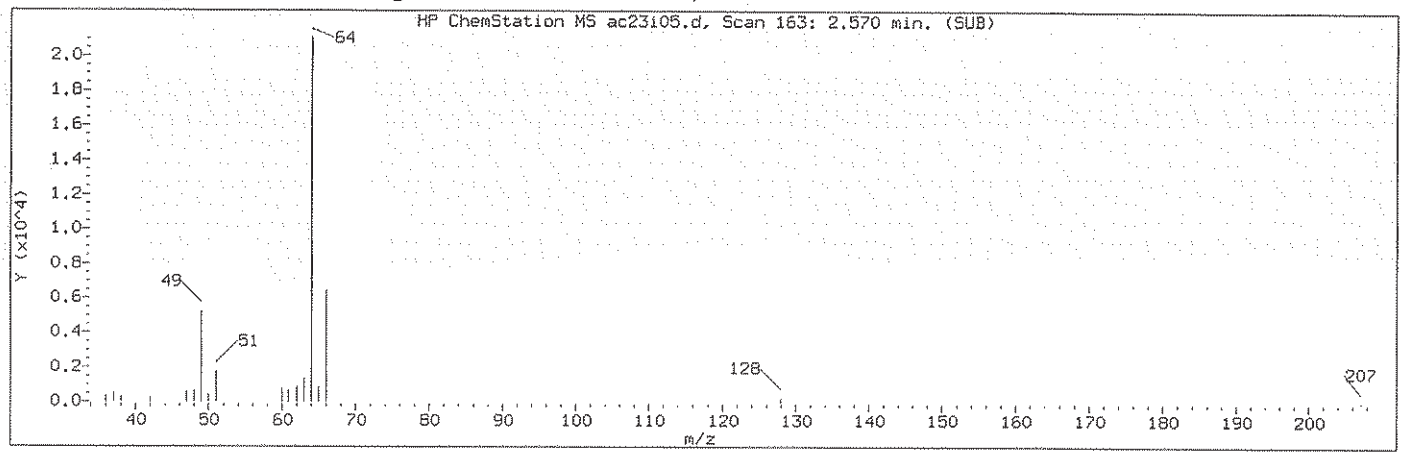
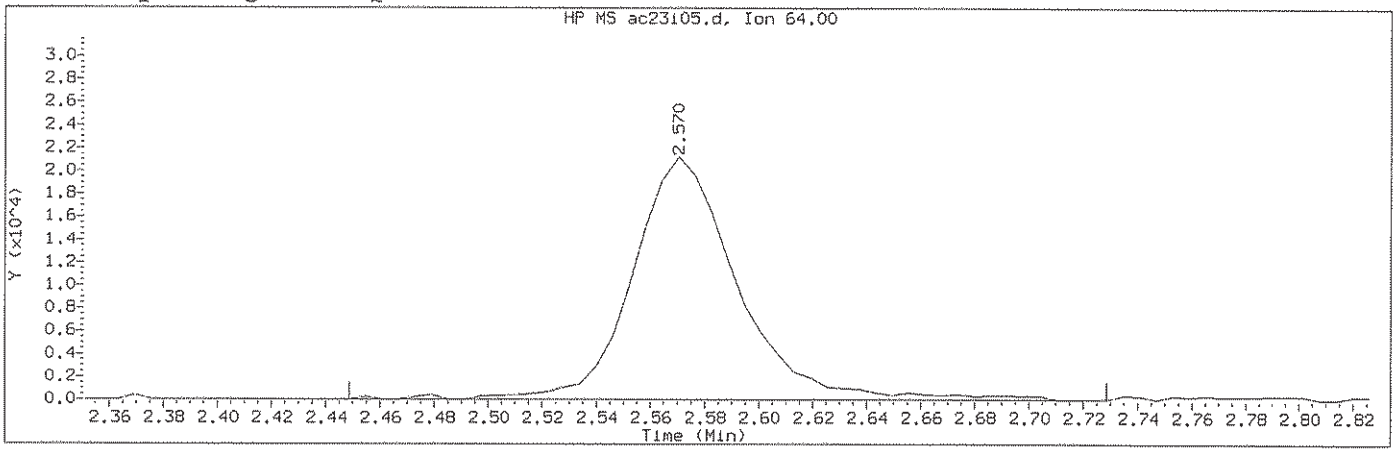
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

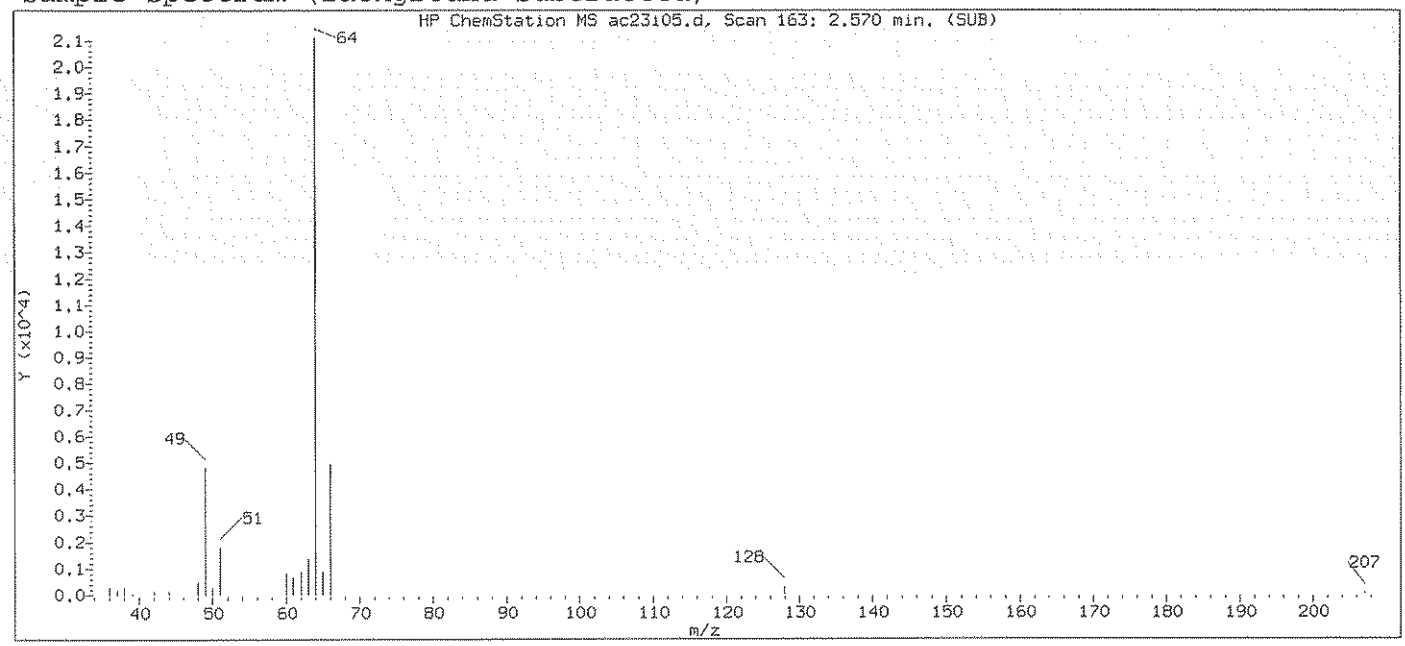
Compound Number : 10
Compound Name : Chloroethane
Scan Number : 163
Retention Time (minutes): 2.570
Quant Ion : 64.00
Area (flag) : 57678M
On-Column Amount (ng) : 10.3820
Integration start scan : 142 Integration stop scan: 188
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

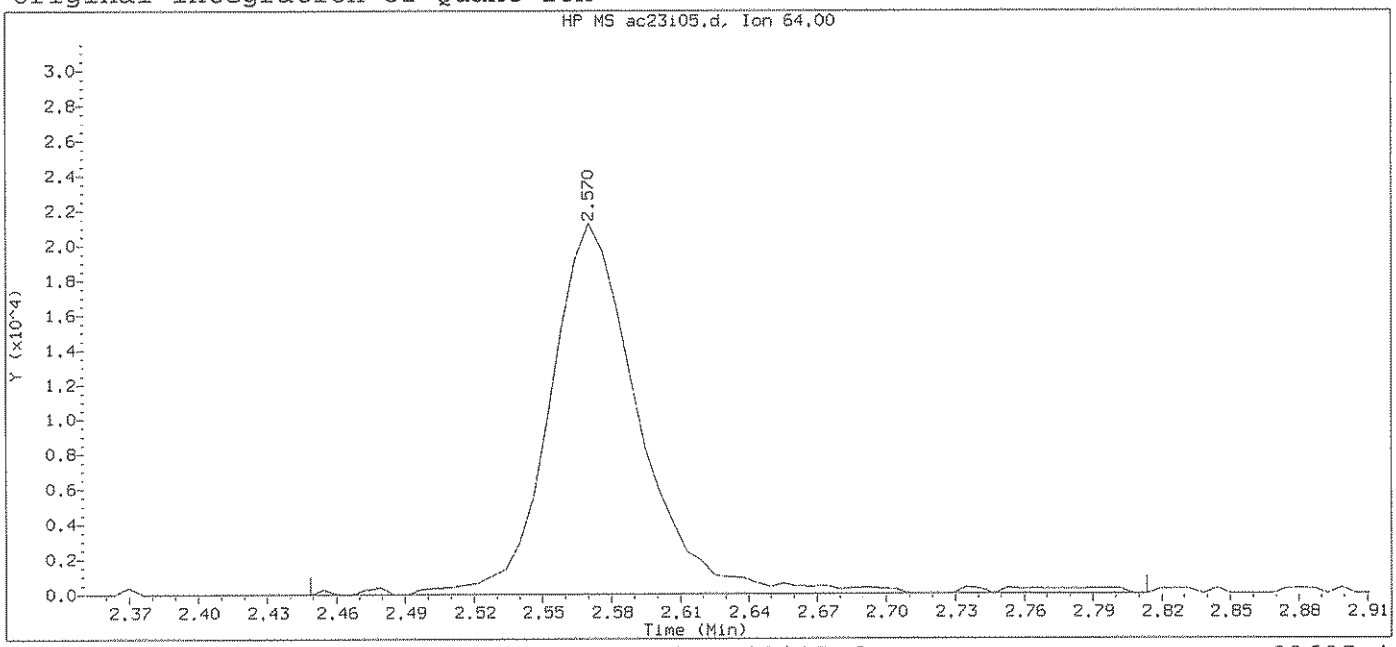
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 10		
Compound Name	: Chloroethane		
Scan Number	: 163		
Retention Time (minutes)	: 2.570		
Quant Ion	: 64.00		
Area	: 58887		
On-column Amount (ng)	: 10.8011		
Integration start scan	: 142	Integration stop scan:	202
Y at integration start	: 0	Y at integration end:	0

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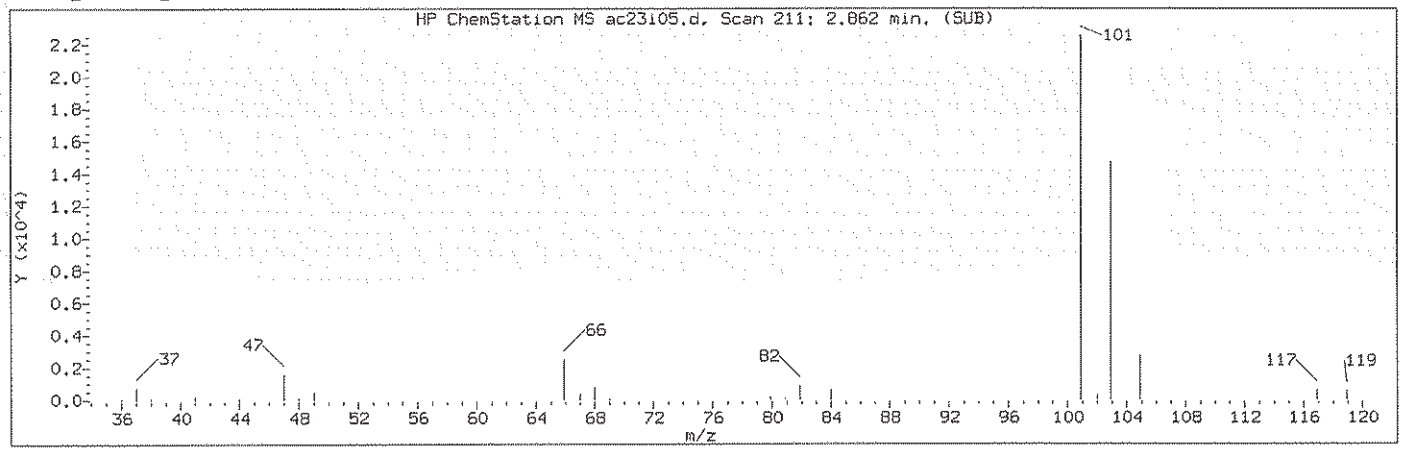
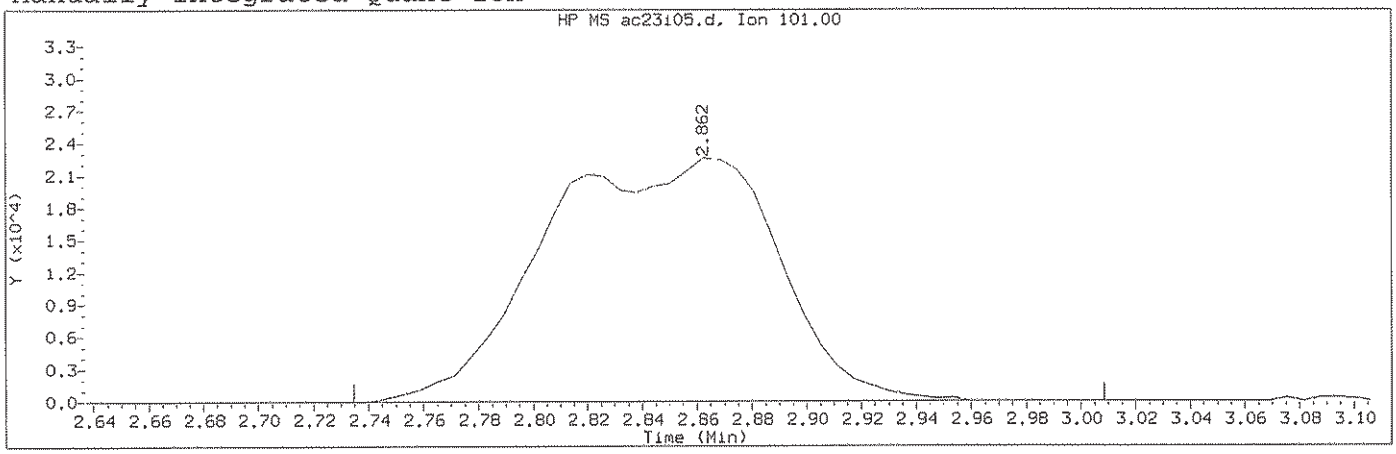
Target 3.5 esignature user ID: Chelsea B. Stong

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

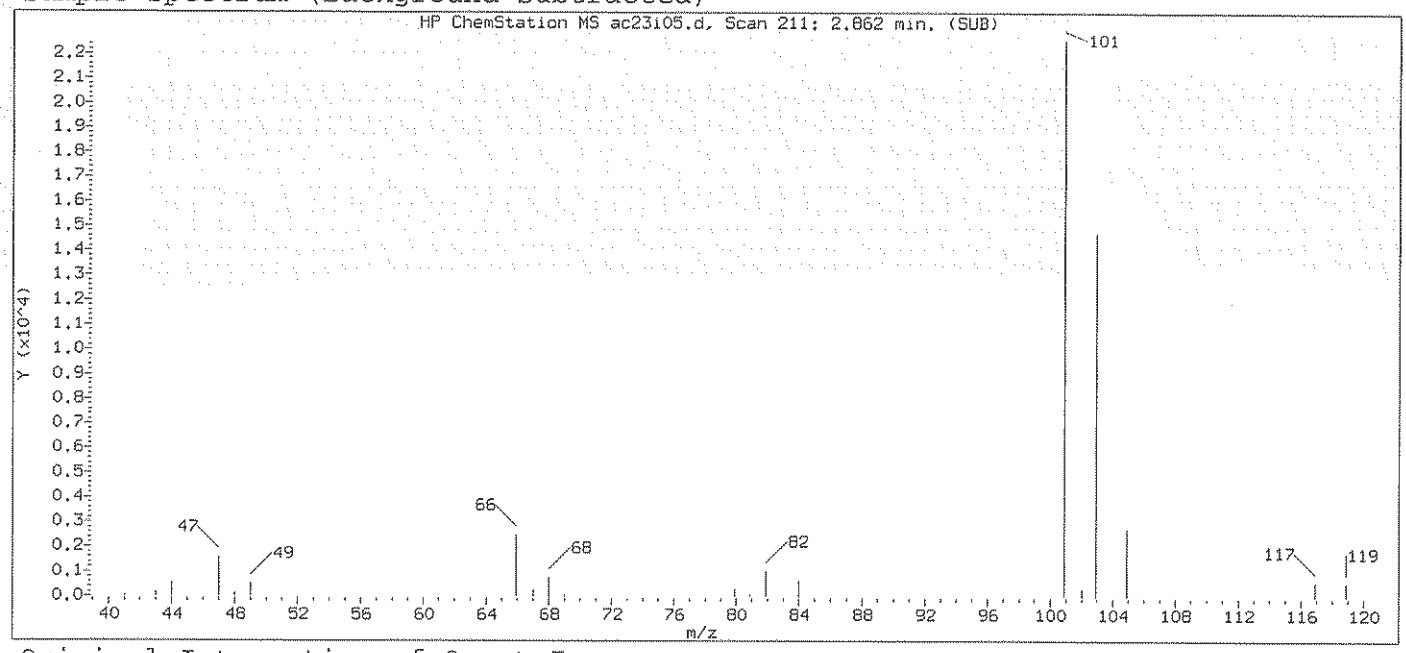
Compound Number	: 13		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 211		
Retention Time (minutes)	: 2.862		
Quant Ion	: 101.00		
Area (flag)	: 133764M		
On-Column Amount (ng)	: 9.2918		
Integration start scan	: 189	Integration stop scan:	234
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

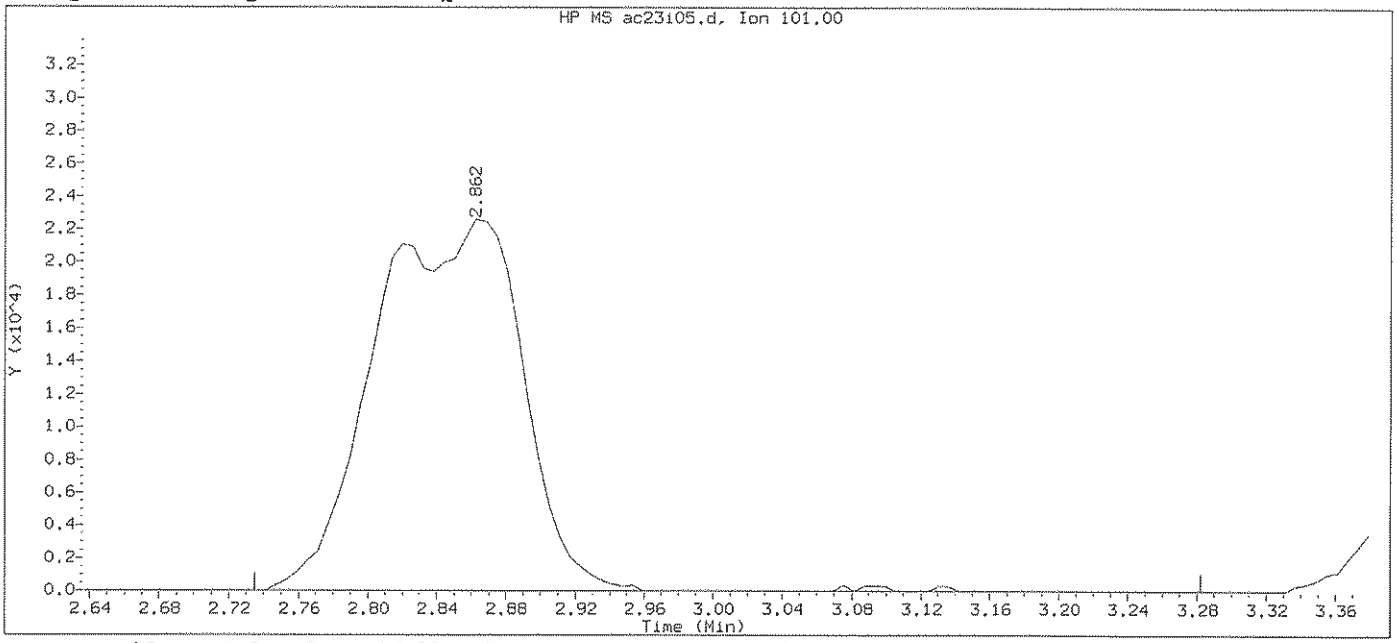
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 13		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 211		
Retention Time (minutes)	: 2.862		
Quant Ion	: 101.00		
Area	: 134416		
On-column Amount (ng)	: 9.2640		
Integration start scan	: 189	Integration stop scan:	279
Y at integration start	: 0	Y at integration end:	0

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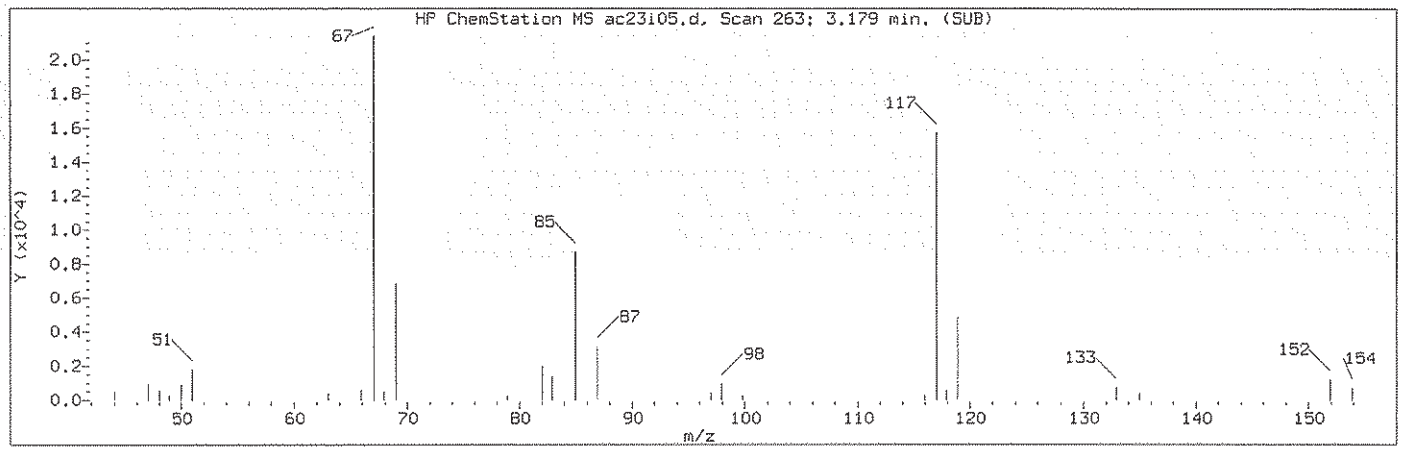
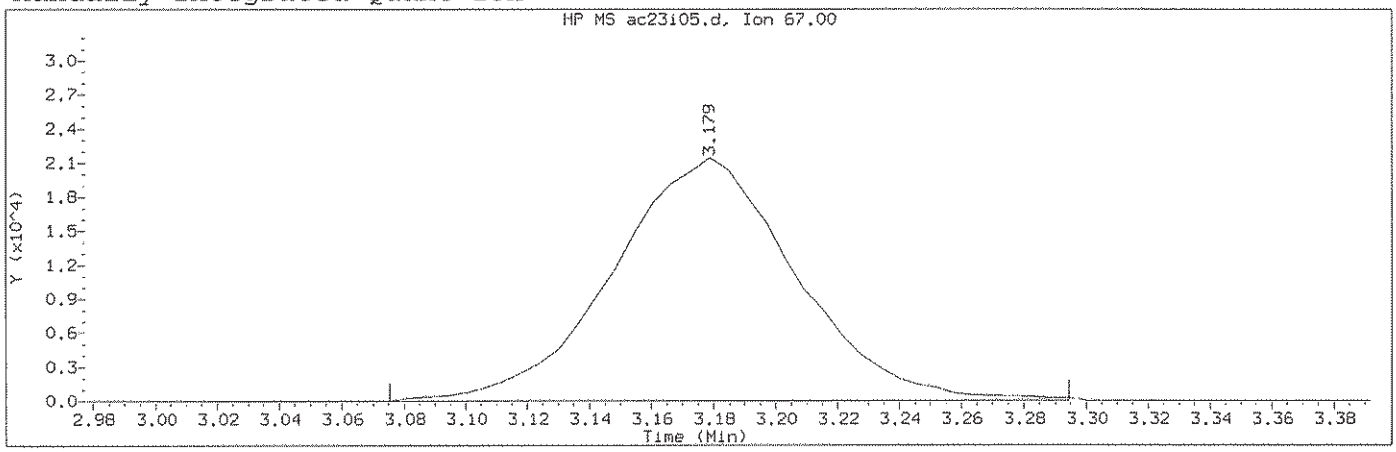
Target 3.5 esignature user ID: cbs01547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

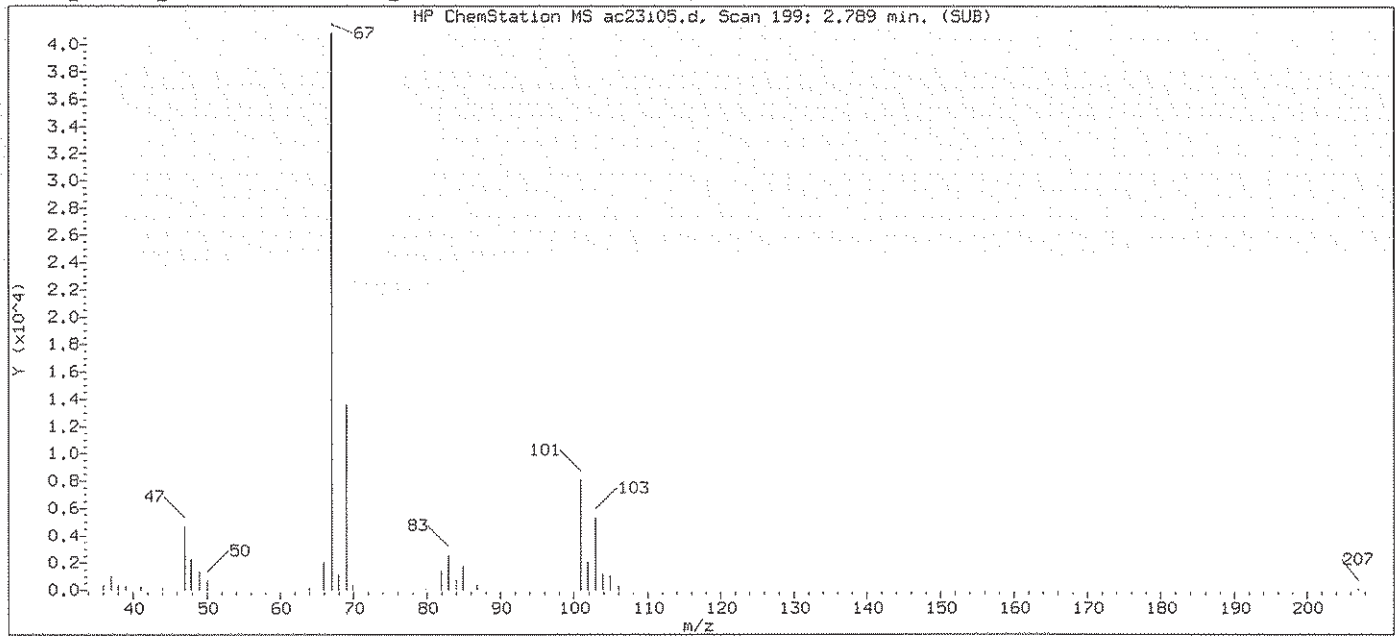
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 263		
Retention Time (minutes)	: 3.179		
Quant Ion	: 67.00		
Area (flag)	: 87896A		
On-Column Amount (ng)	: 8.1542		
Integration start scan	: 245	Integration stop scan:	281
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

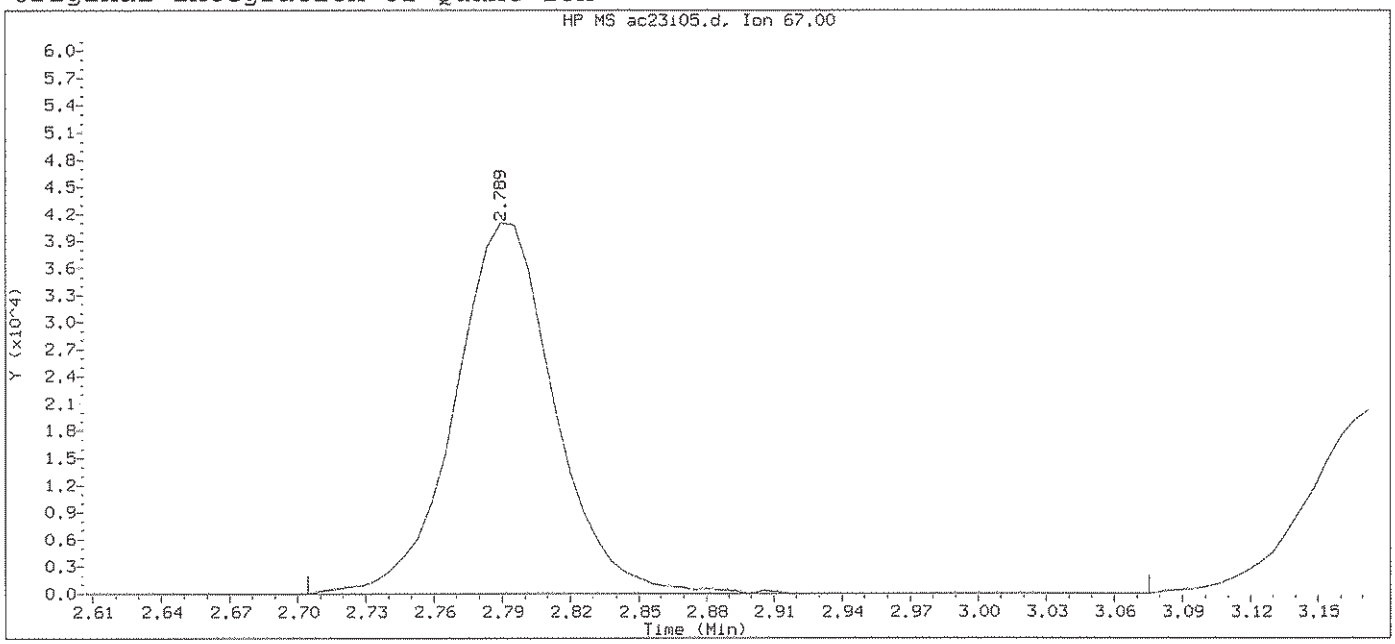
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 199		
Retention Time (minutes)	: 2.789		
Quant Ion	: 67.00		
Area	: 125048		
On-column Amount (ng)	: 8.9818		
Integration start scan	: 184	Integration stop scan:	245
Y at integration start	: 0	Y at integration end:	0

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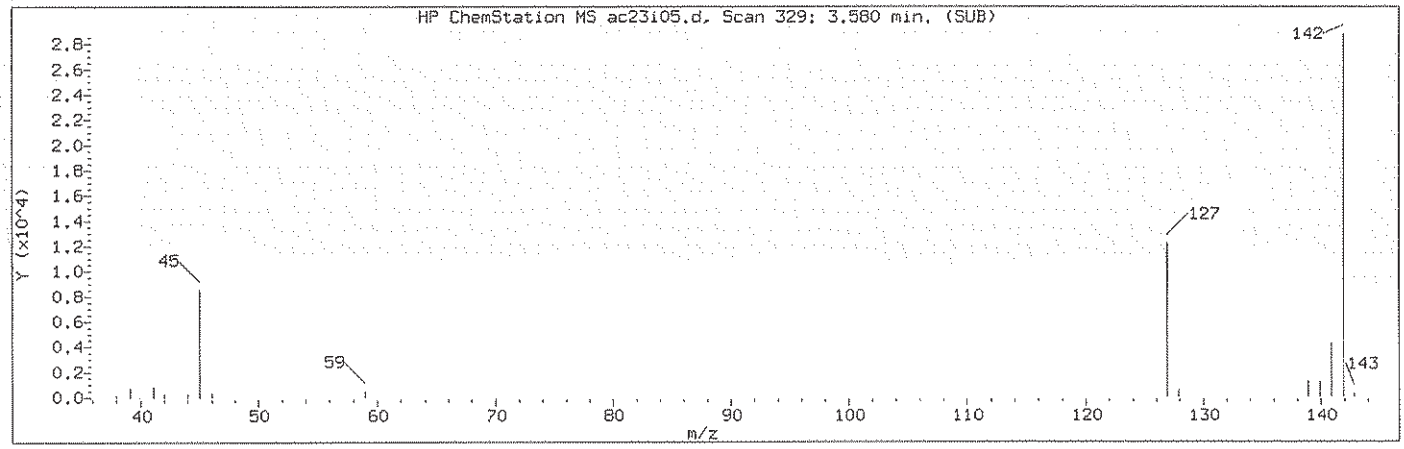
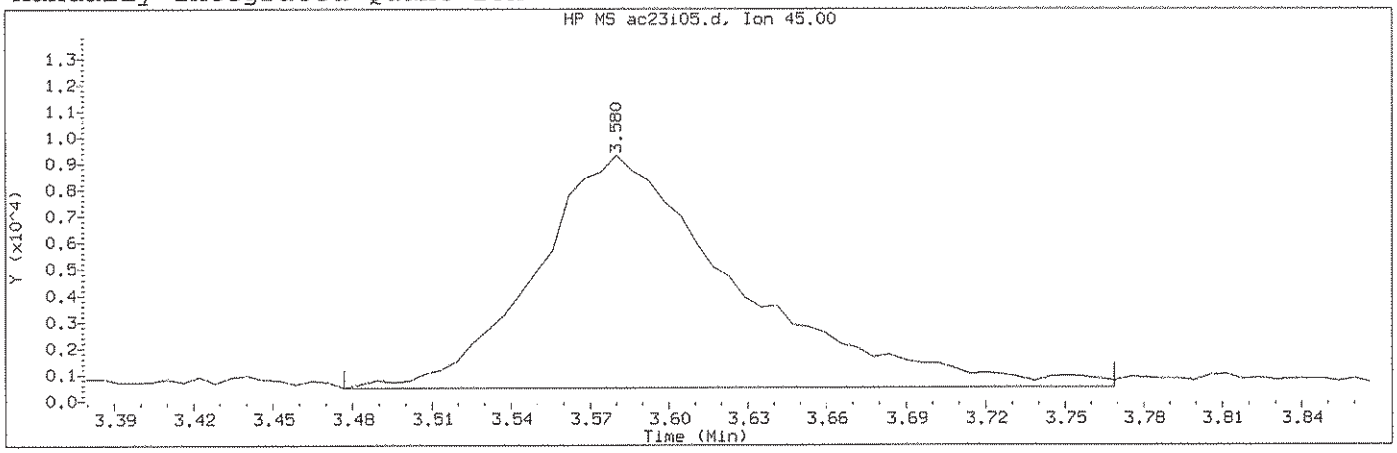
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

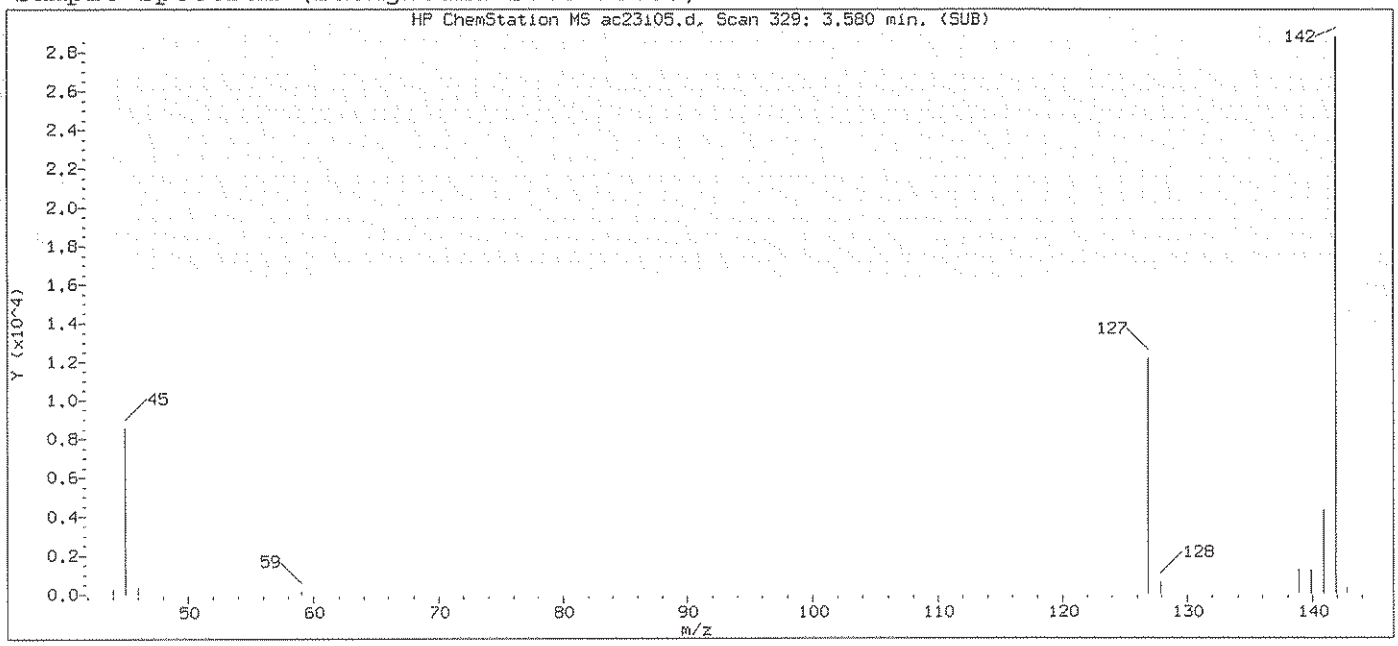
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 329		
Retention Time (minutes)	: 3.580		
Quant Ion	: 45.00		
Area (flag)	: 47308M		
On-Column Amount (ng)	: 87.5900		
Integration start scan	: 311	Integration stop scan:	359
Y at integration start	: 480	Y at integration end:	480

Reason for manual integration: improper integration

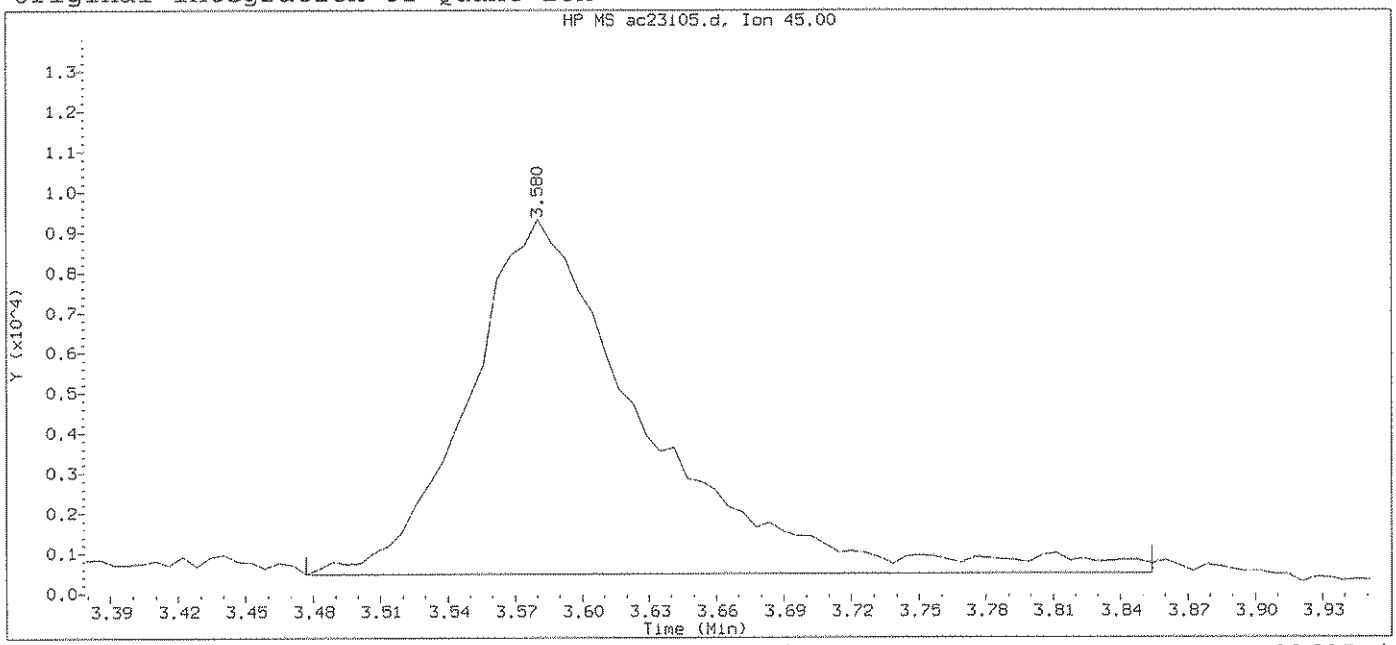
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

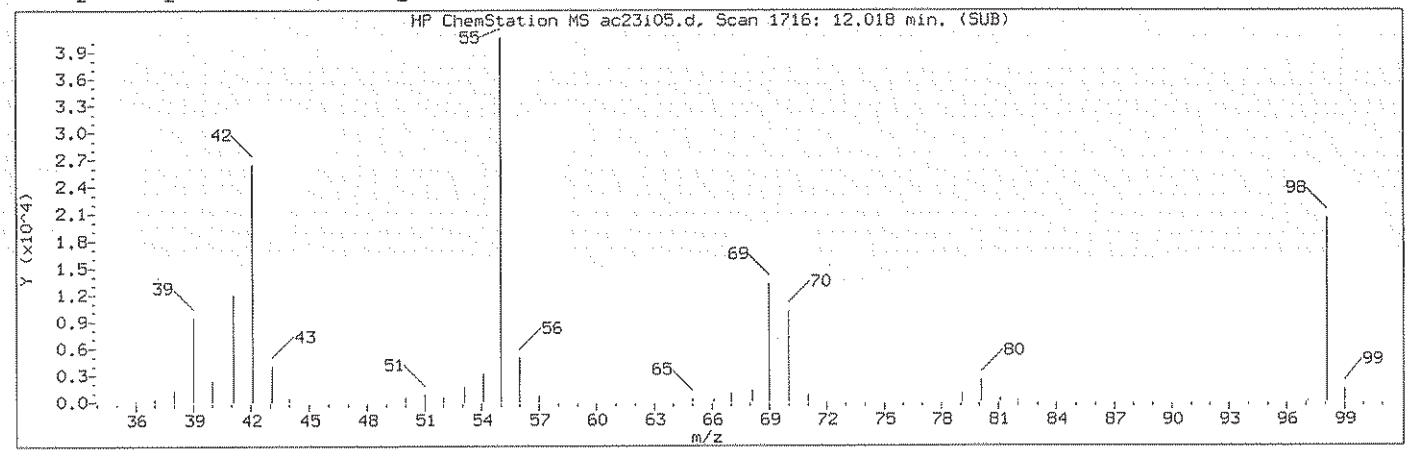
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

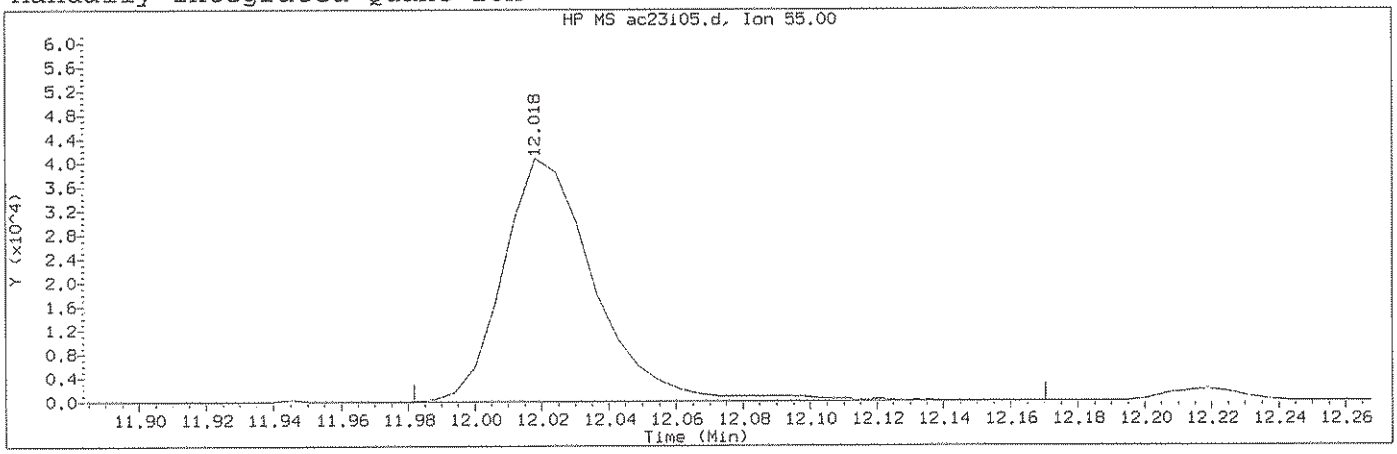
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 329		
Retention Time (minutes)	: 3.580		
Quant Ion	: 45.00		
Area	: 49066		
On-column Amount (ng)	: 90.6505		
Integration start scan	: 311	Integration stop scan:	373
Y at integration start	: 480	Y at integration end:	480

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

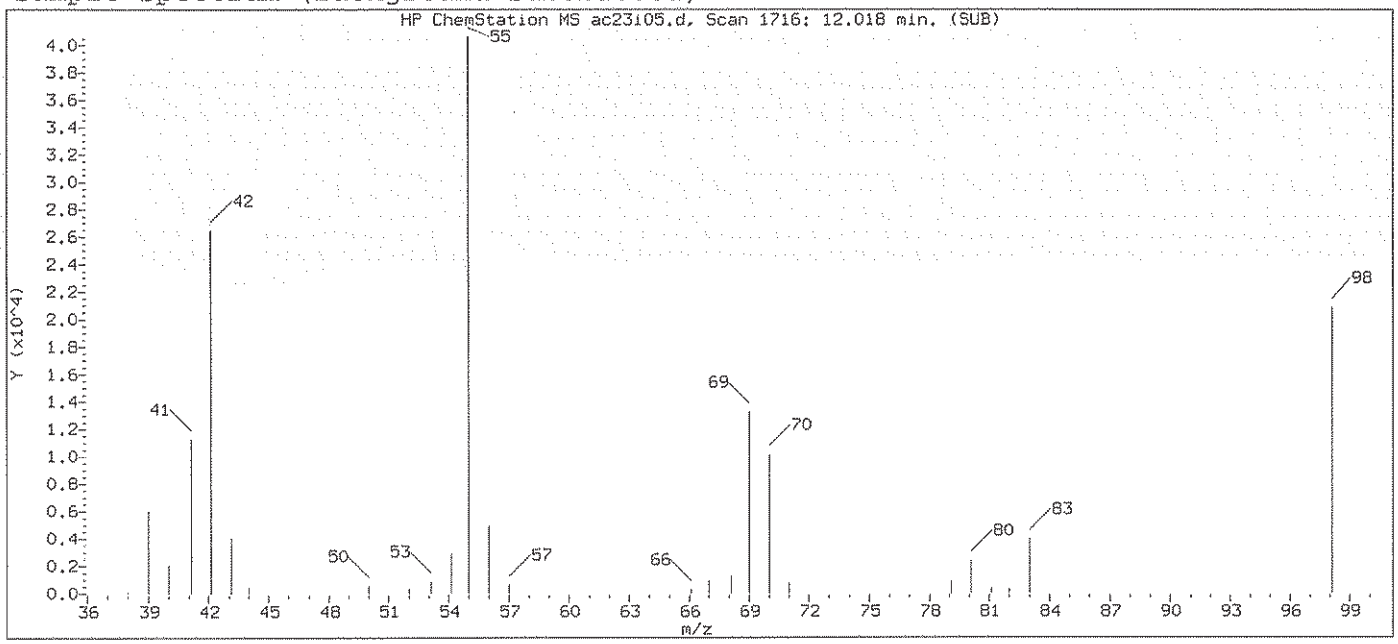
Compound Number	: 111		
Compound Name	: Cyclohexanone		
Scan Number	: 1716		
Retention Time (minutes)	: 12.018		
Quant Ion	: 55.00		
Area (flag)	: 77183M		
On-Column Amount (ng)	: 217.8890		
Integration start scan	: 1709	Integration stop scan:	1740
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

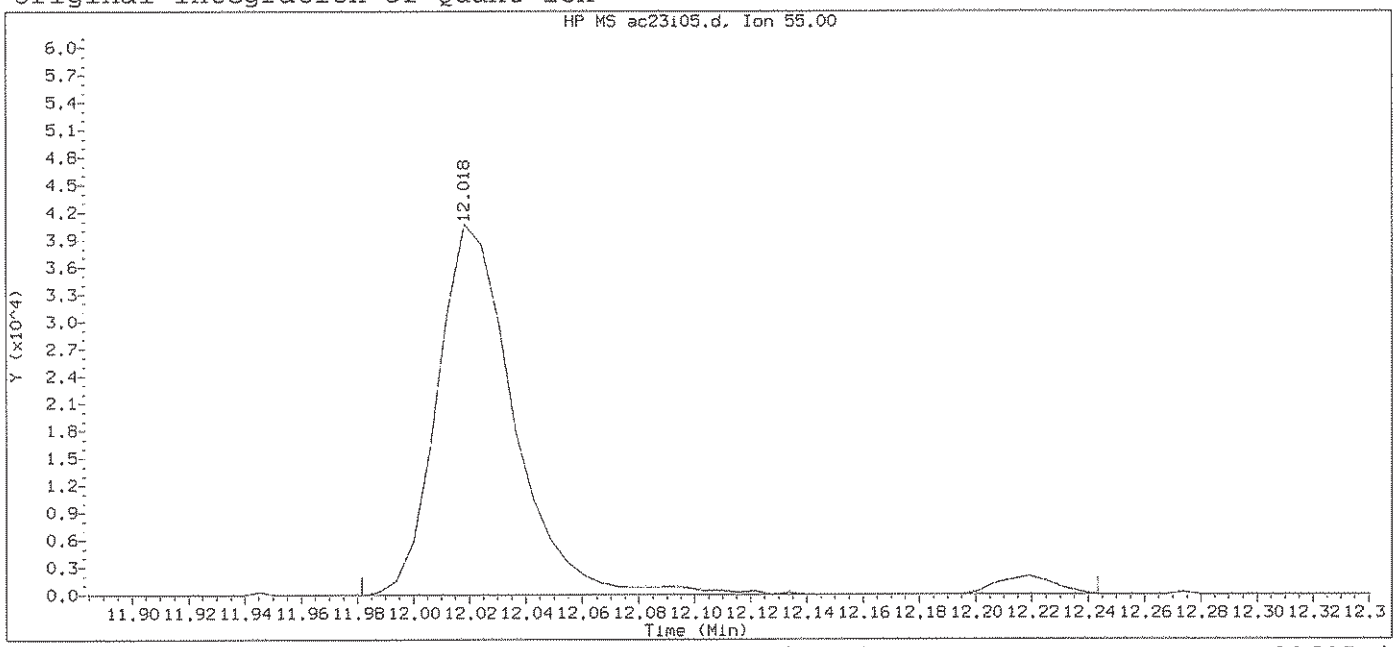
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

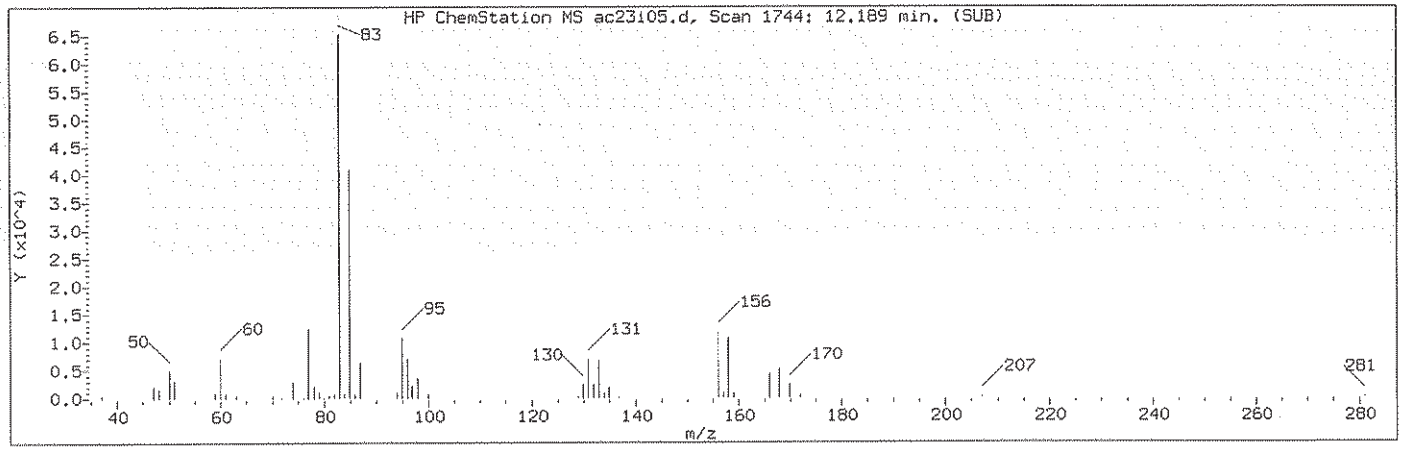
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

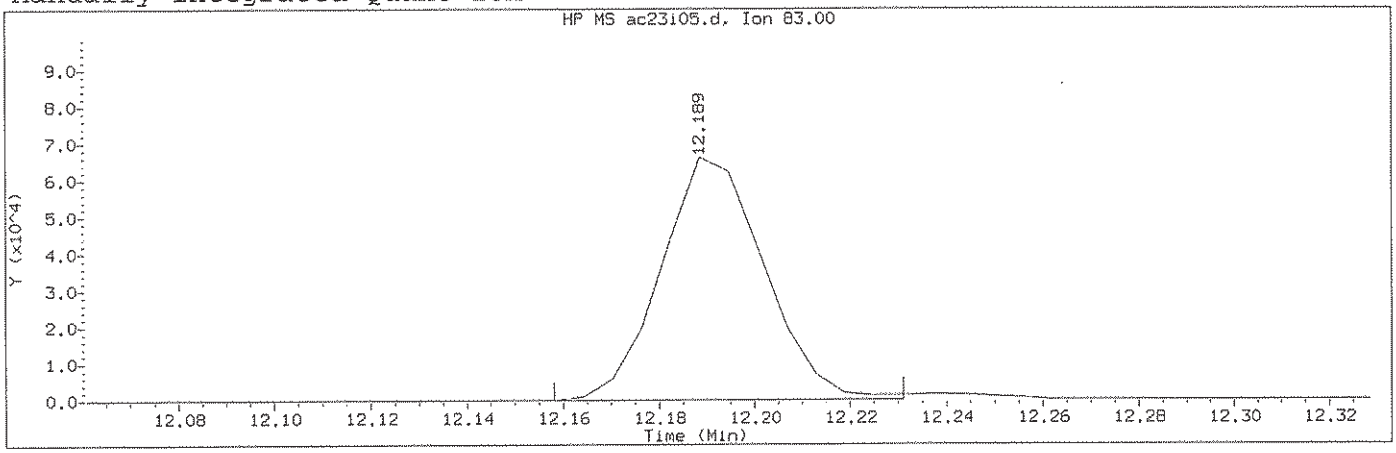
Compound Number	: 111		
Compound Name	: Cyclohexanone		
Scan Number	: 1716		
Retention Time (minutes)	: 12.018		
Quant Ion	: 55.00		
Area	: 80054		
On-column Amount (ng)	: 267.4552		
Integration start scan	: 1709	Integration stop scan:	1752
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: Chelsea

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

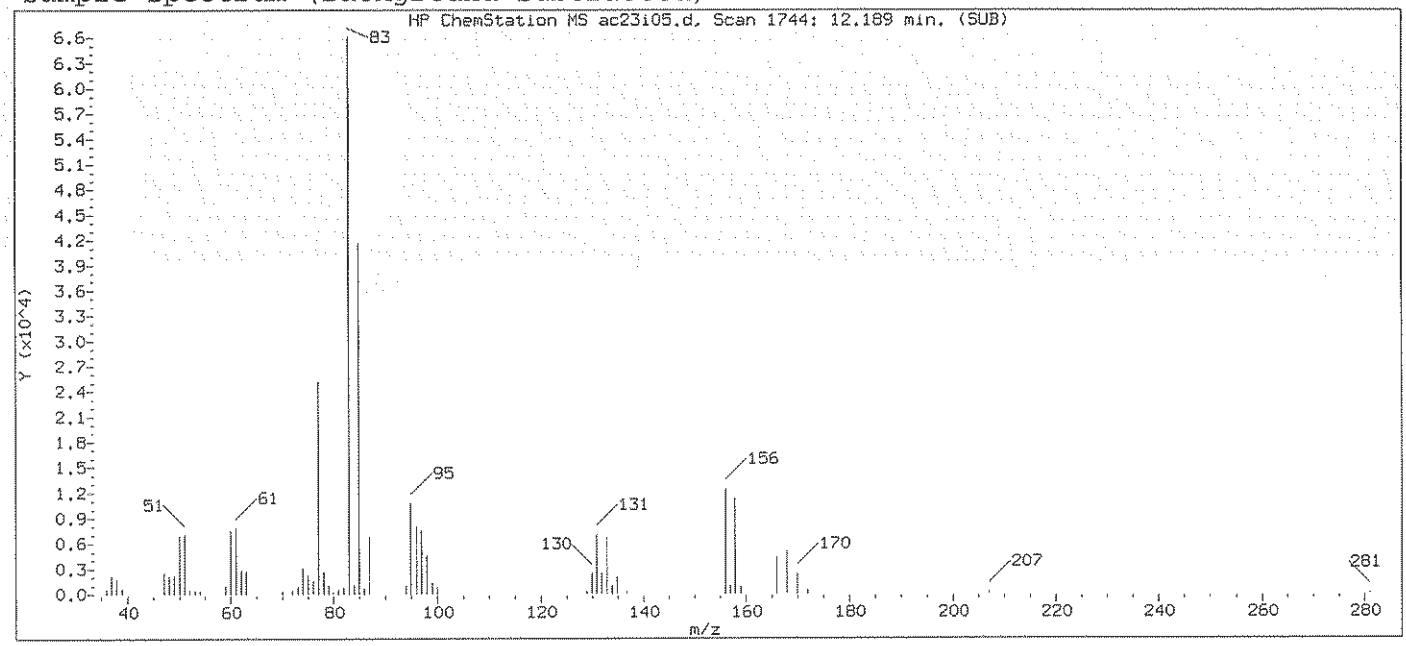
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area (flag) : 99204M
On-Column Amount (ng) : 10.1534
Integration start scan : 1738 Integration stop scan: 1750
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

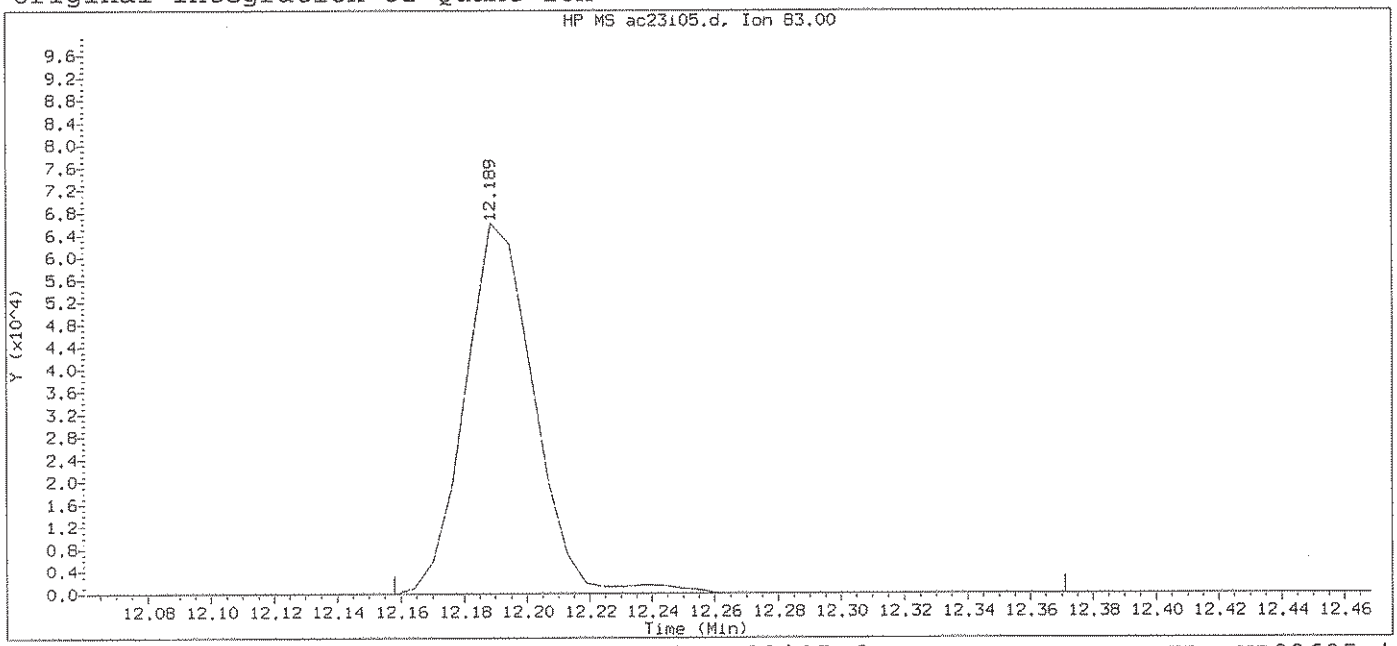
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

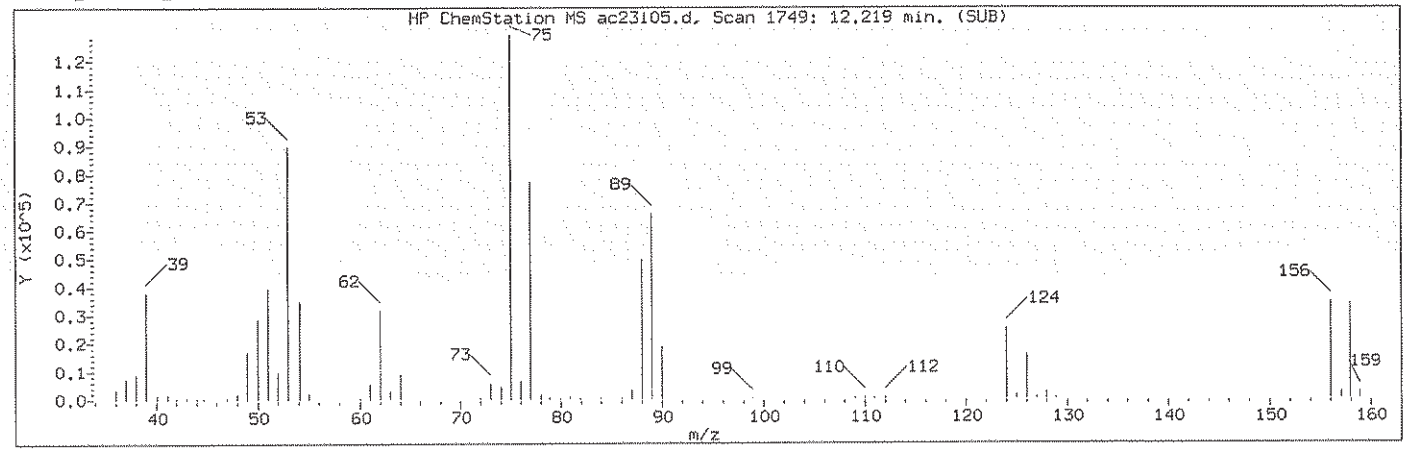
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

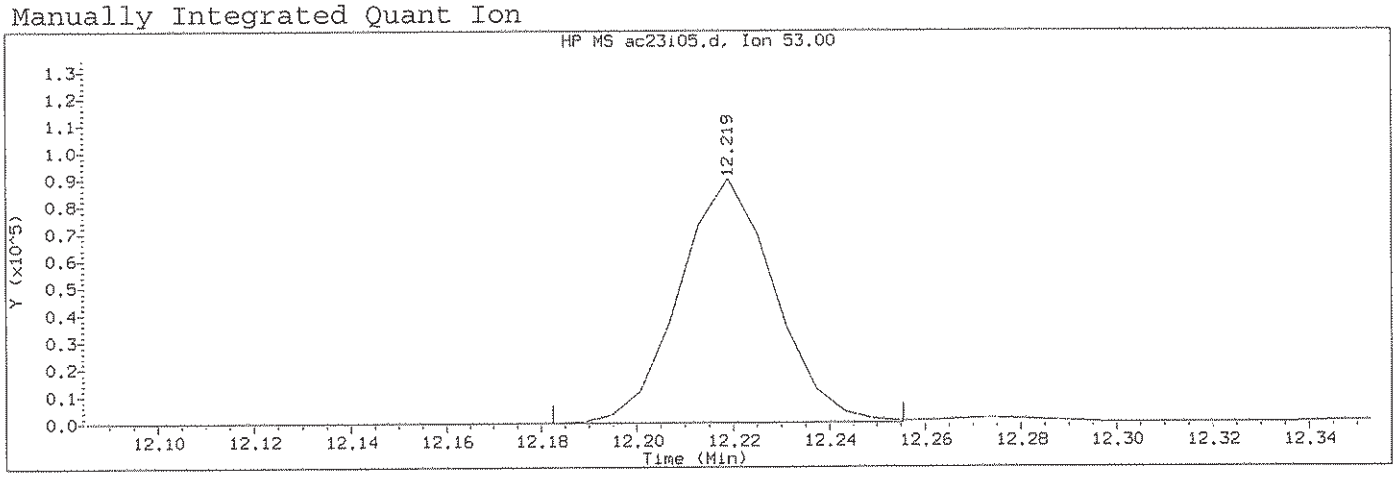
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1744		
Retention Time (minutes)	: 12.189		
Quant Ion	: 83.00		
Area	: 100853		
On-column Amount (ng)	: 10.3696		
Integration start scan	: 1738	Integration stop scan:	1773
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: CBS1547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

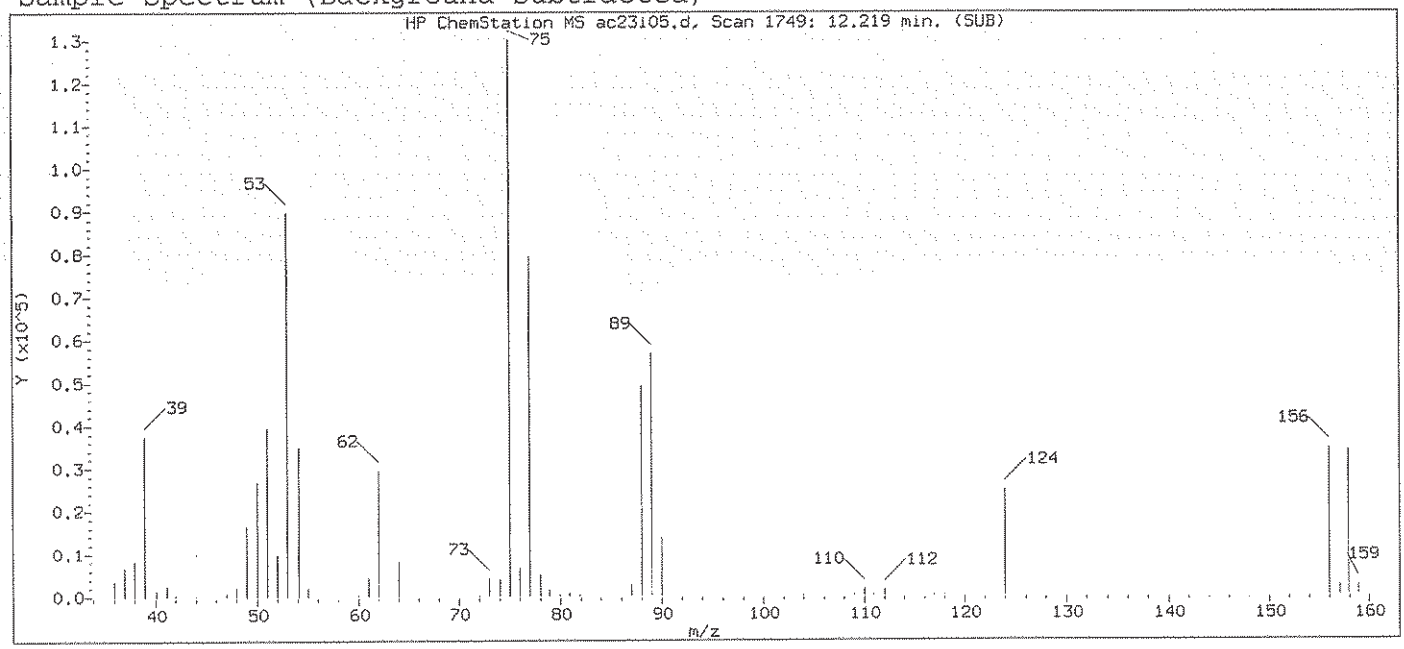
Compound Number	: 115		
Compound Name	: trans-1,4-Dichloro-2-butene		
Scan Number	: 1749		
Retention Time (minutes)	: 12.219		
Quant Ion	: 53.00		
Area (flag)	: 123642M		
On-Column Amount (ng)	: 48.8408		
Integration start scan	: 1742	Integration stop scan:	1754
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

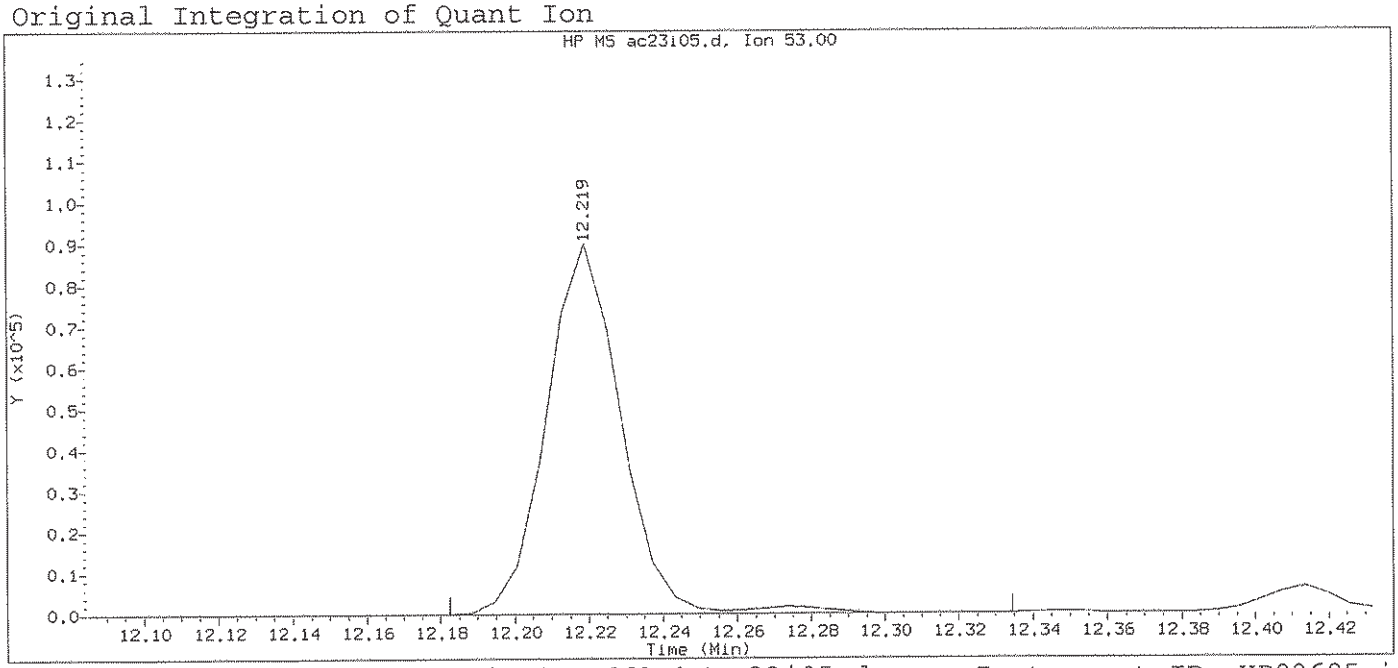
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

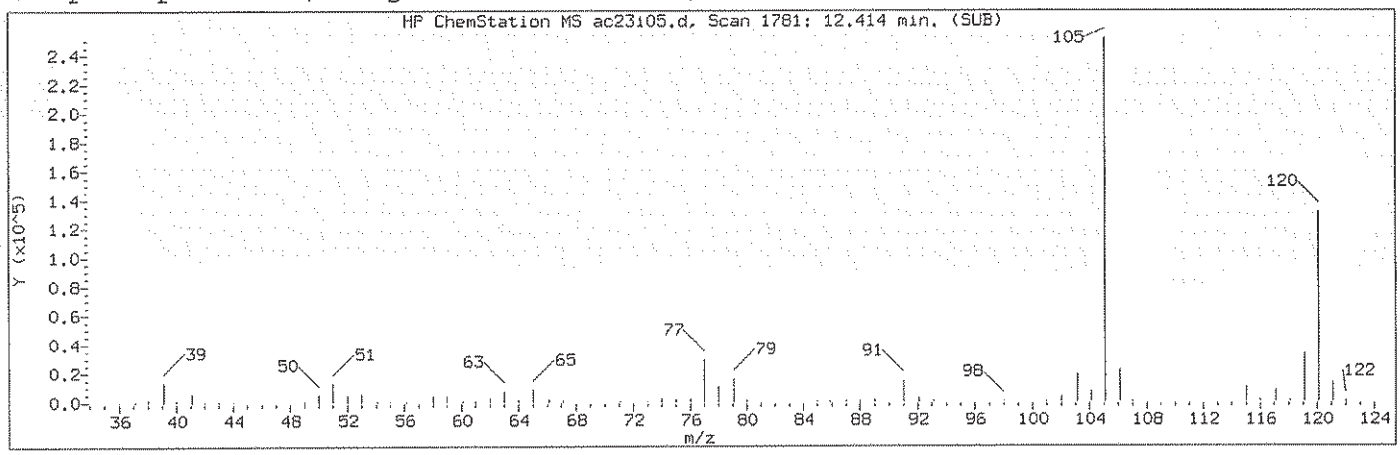
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

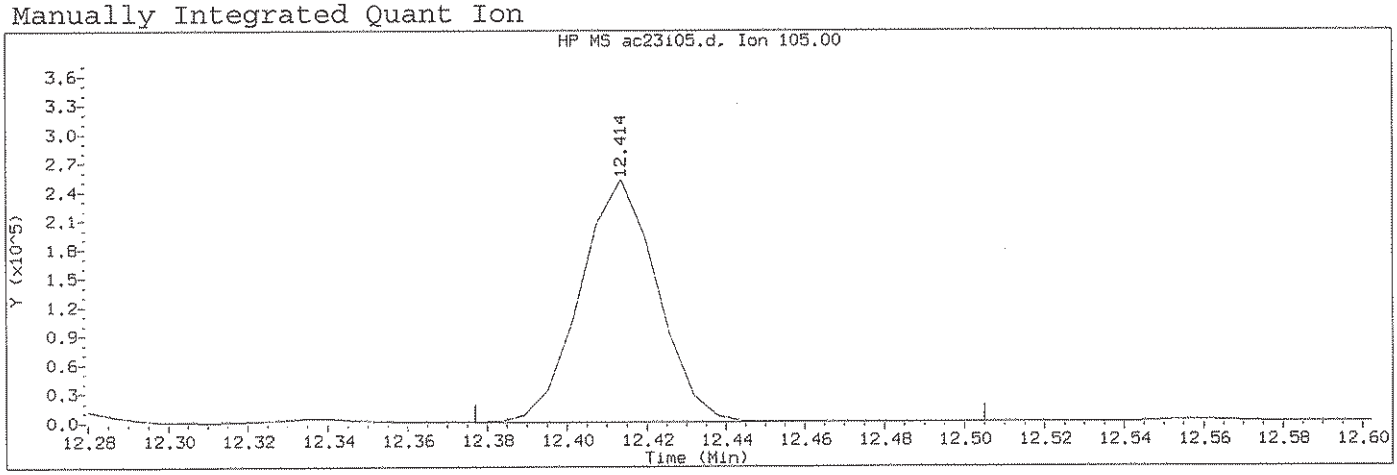
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area : 125949
On-column Amount (ng) : 48.8288
Integration start scan : 1742 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs0147

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

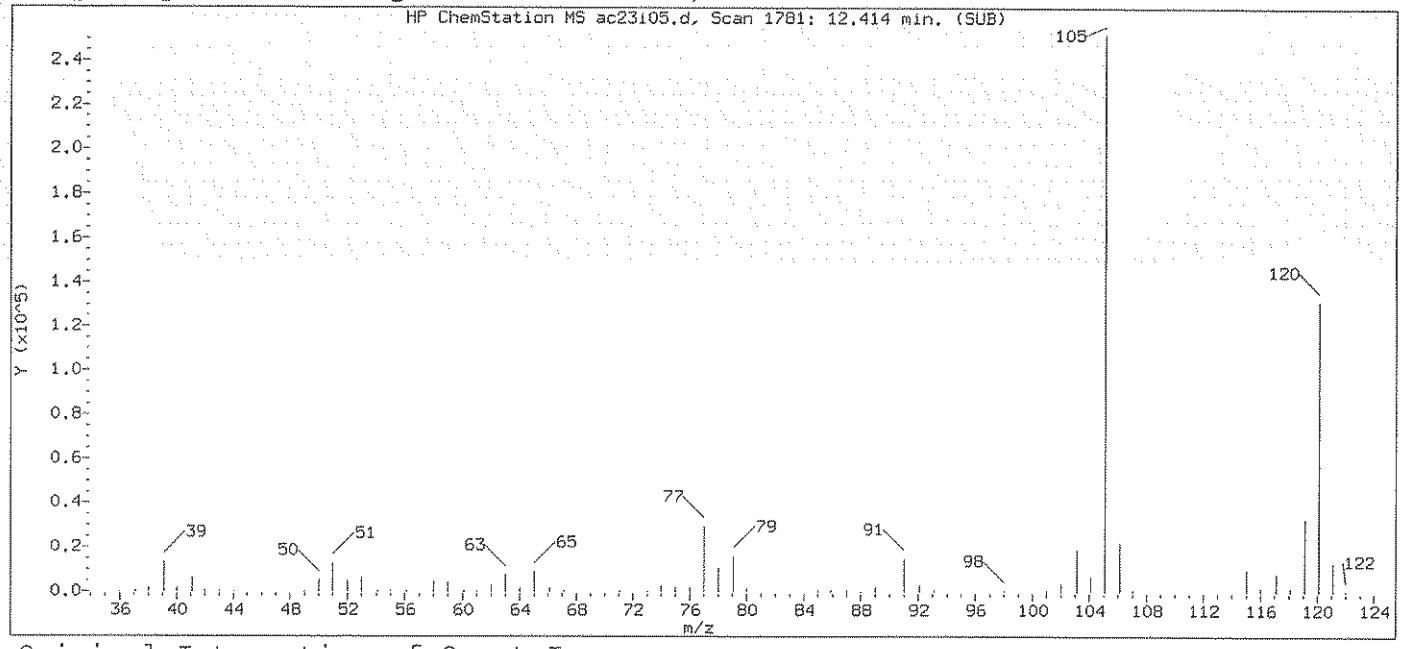
Compound Number	: 122		
Compound Name	: 1,3,5-Trimethylbenzene		
Scan Number	: 1781		
Retention Time (minutes)	: 12.414		
Quant Ion	: 105.00		
Area (flag)	: 337943M		
On-Column Amount (ng)	: 9.5069		
Integration start scan	: 1774	Integration stop scan:	1795
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

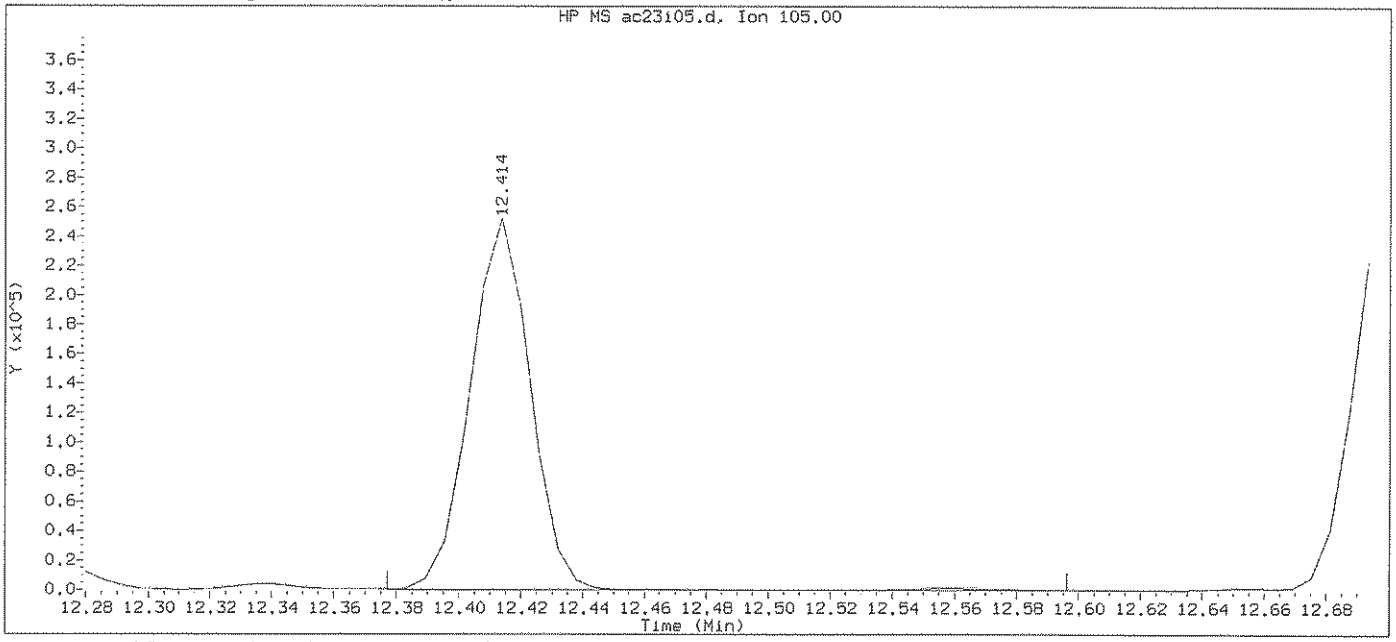
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

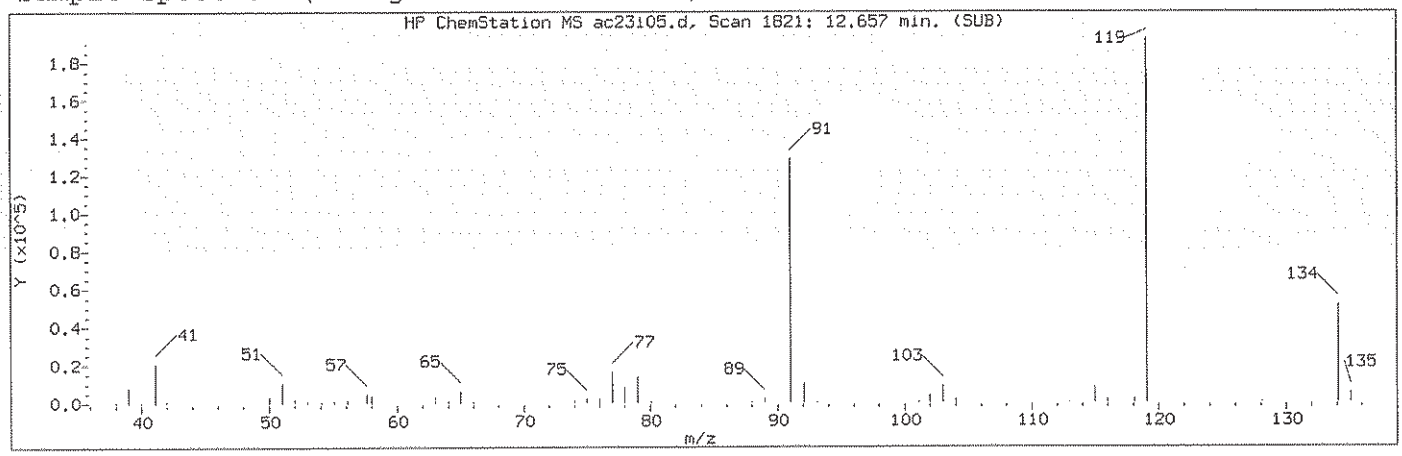
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

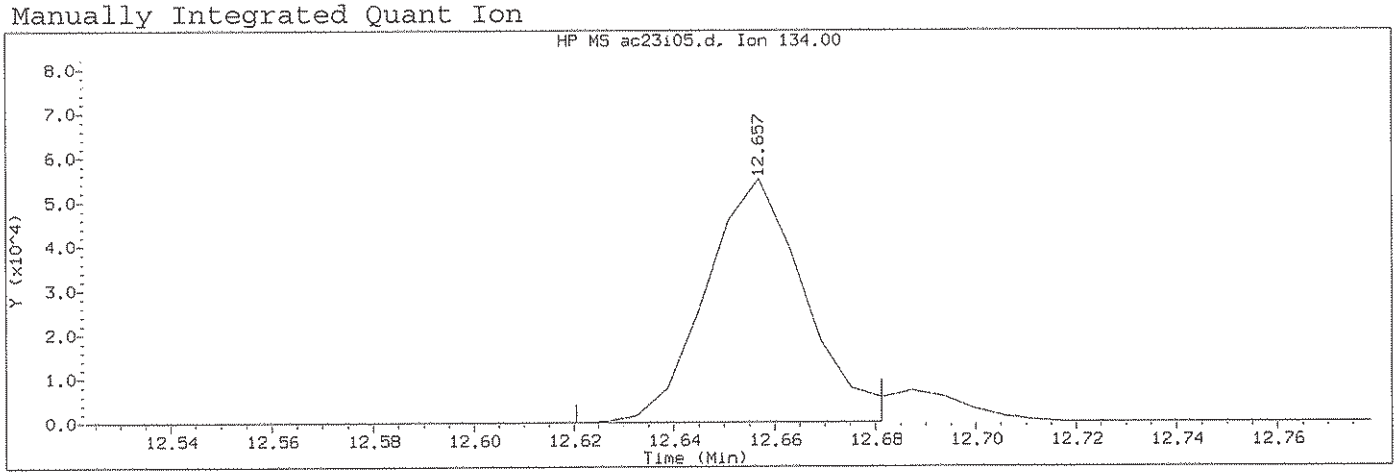
Compound Number : 122
Compound Name : 1,3,5-Trimethylbenzene
Scan Number : 1781
Retention Time (minutes): 12.414
Quant Ion : 105.00
Area : 340162
On-column Amount (ng) : 9.5991
Integration start scan : 1774 Integration stop scan: 1810
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: 01577

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

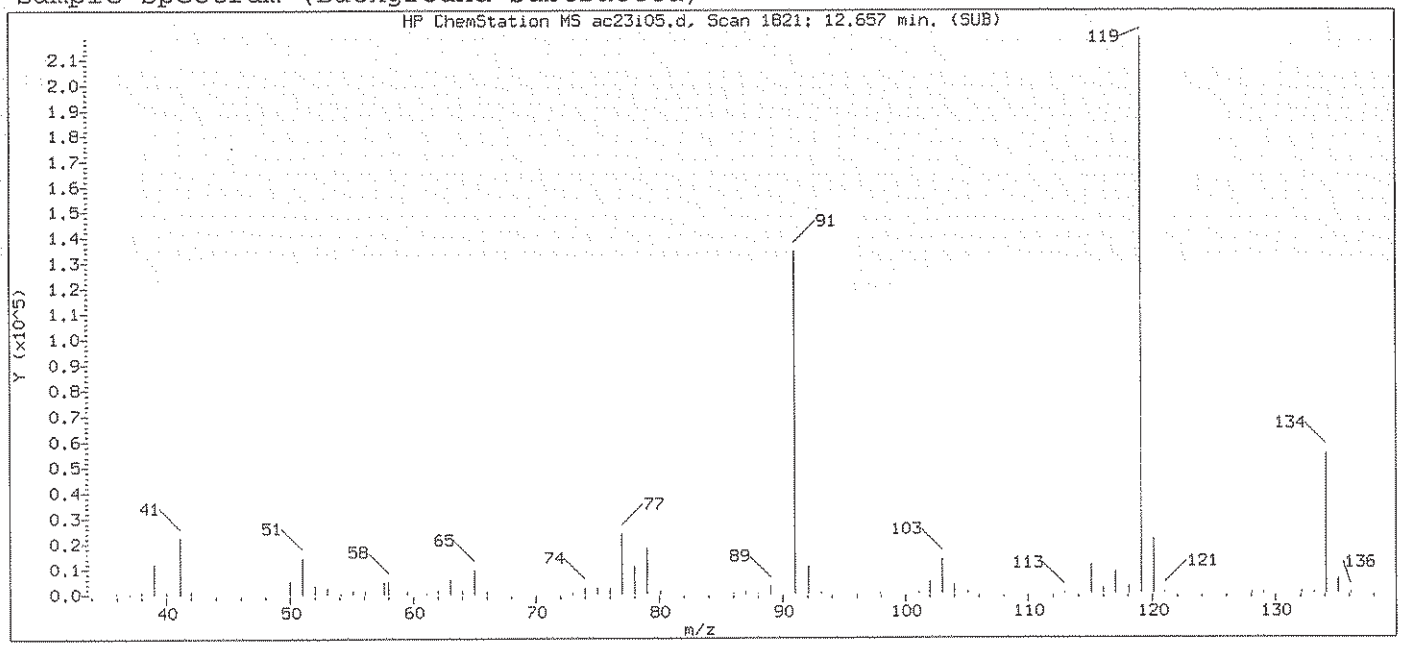
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 75597M
On-Column Amount (ng) : 9.3130
Integration start scan : 1814 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

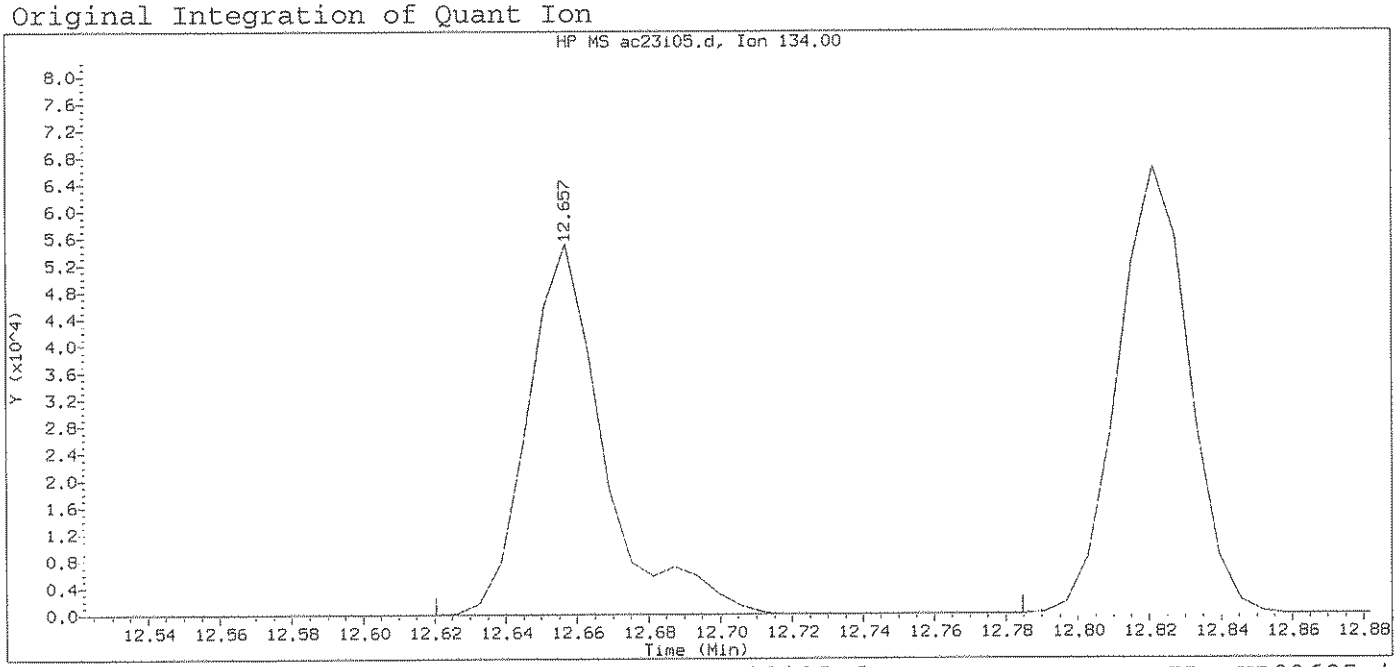
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

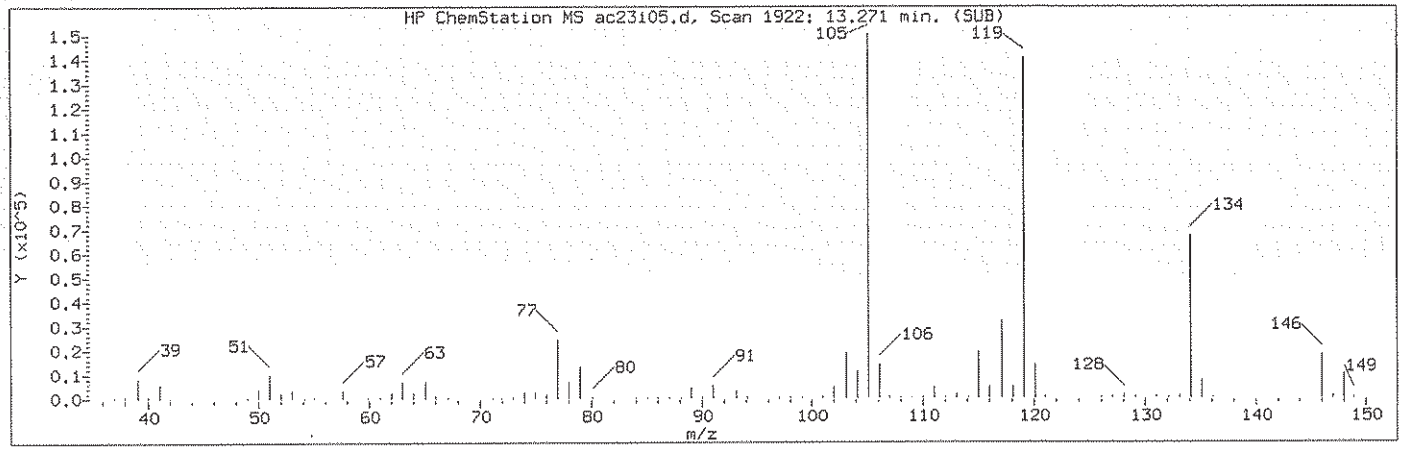
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

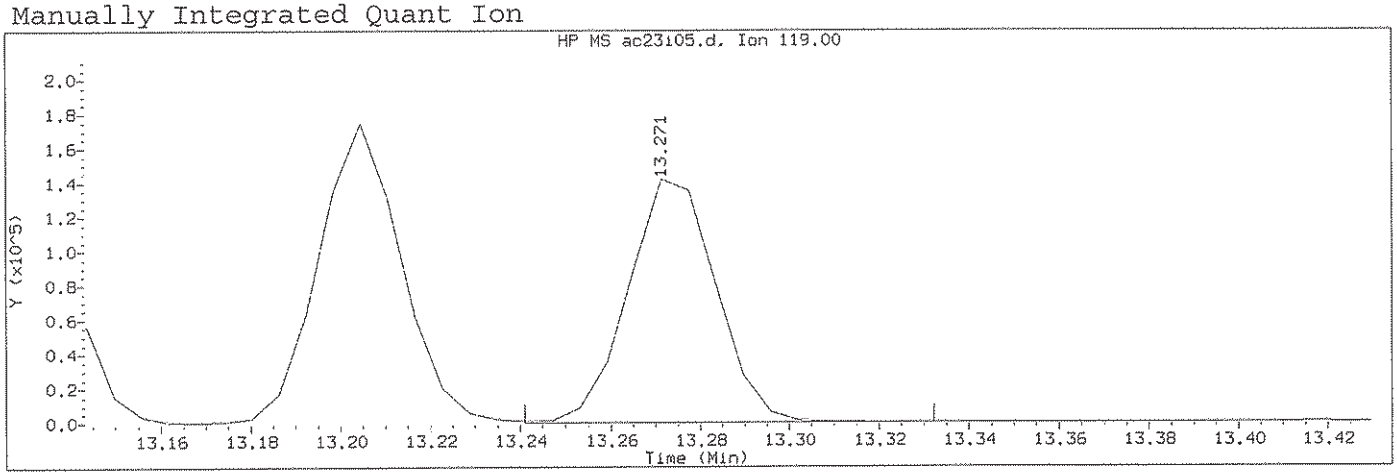
Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area	: 82027		
On-column Amount (ng)	: 9.8168		
Integration start scan	: 1814	Integration stop scan:	1841
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: CBS 1547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 24-Oct-2013 16:10 cbs01947

Sample Name: VSTD010 Lab Sample ID: VSTD010

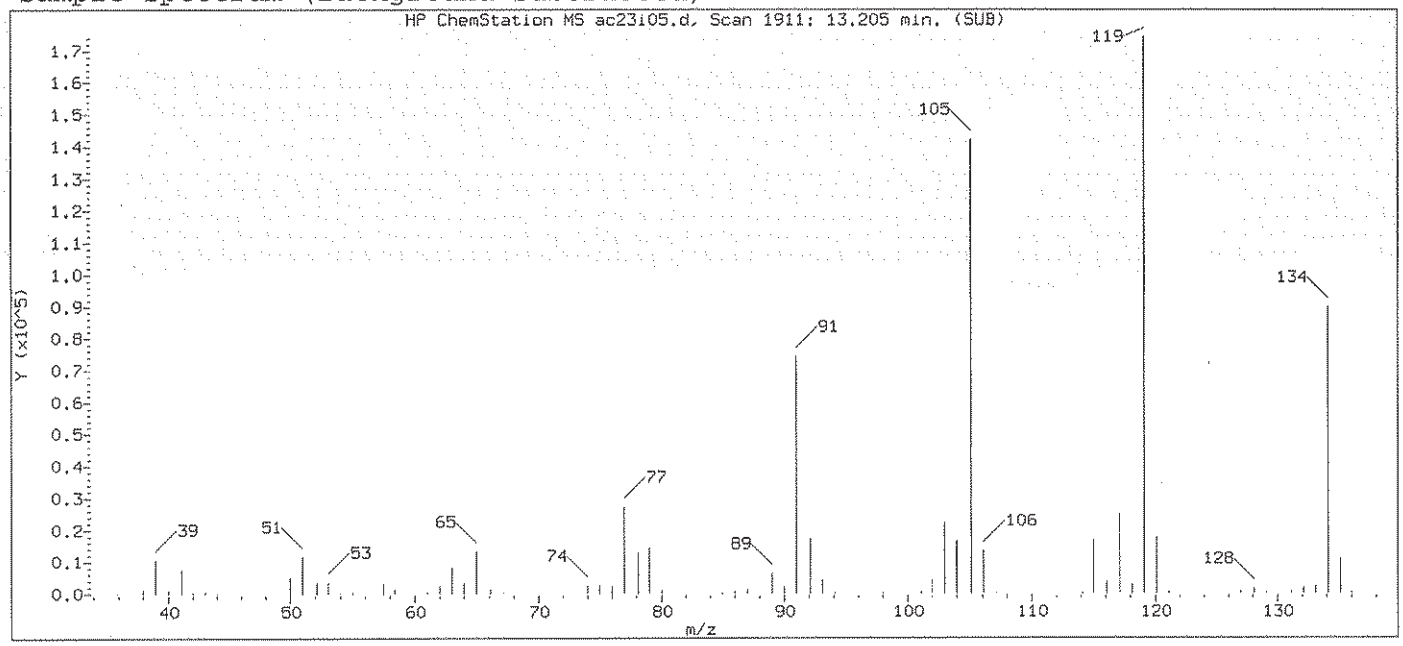
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1922
Retention Time (minutes): 13.271
Quant Ion : 119.00
Area (flag) : 193770M
On-Column Amount (ng) : 9.3838
Integration start scan : 1916 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

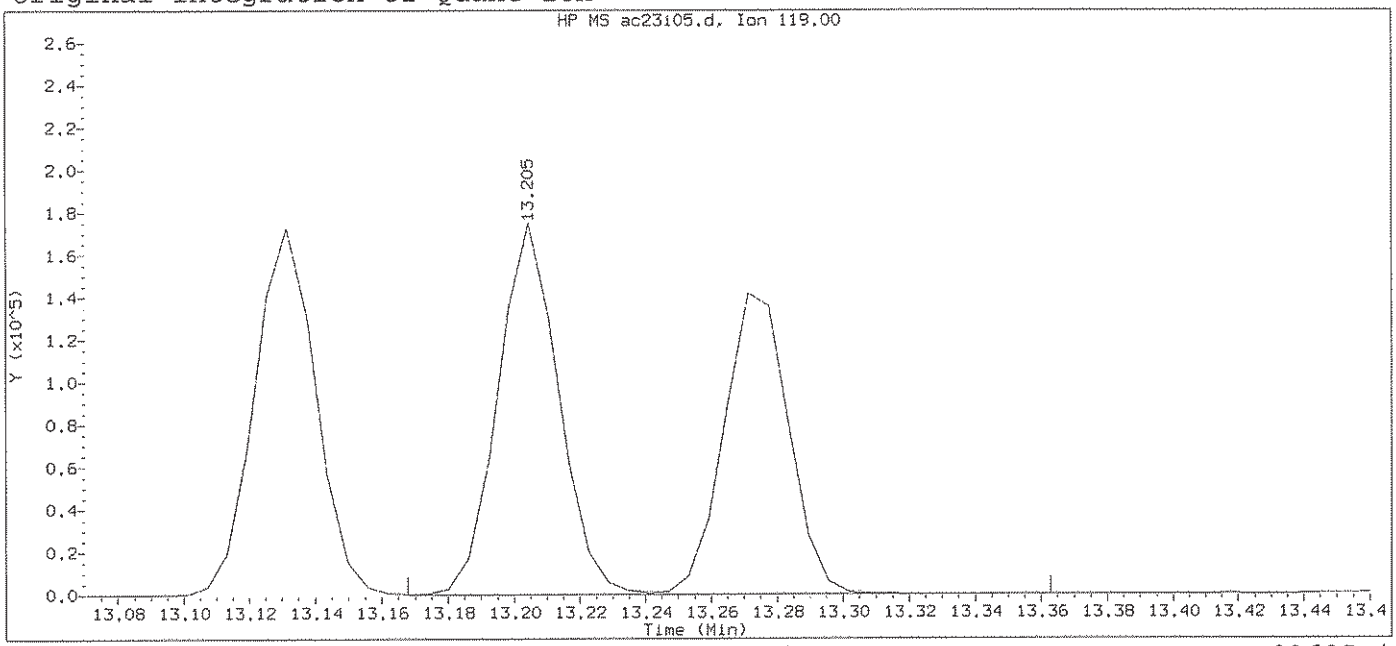
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



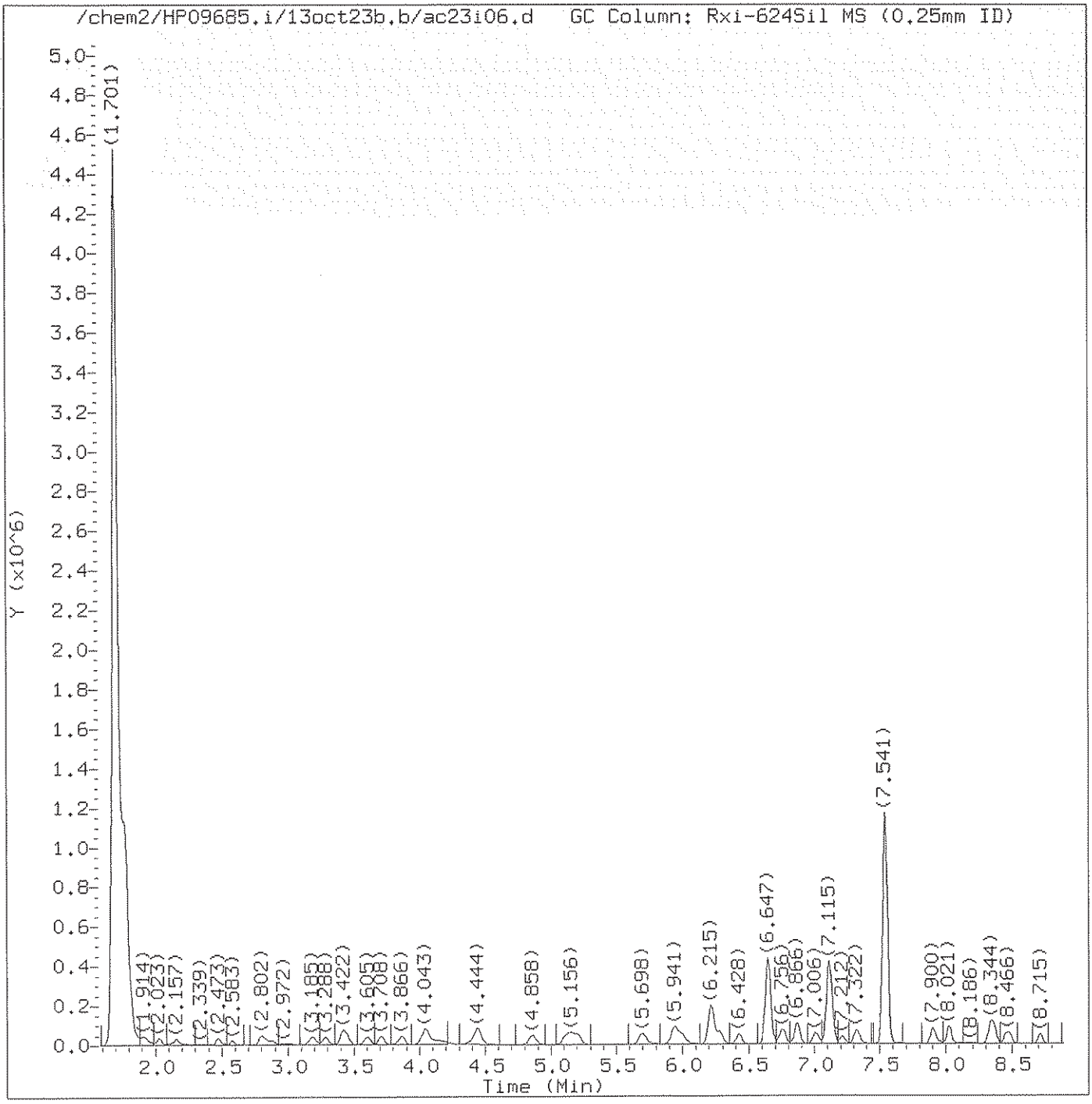
Data File: /chem2/HP09685.i/13oct23b.b/ac23i05.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 20:54 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 21:14
Date, time and analyst ID of latest file update: 23-Oct-2013 21:14 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 141		
Compound Name	: 1,2-Diethylbenzene		
Scan Number	: 1911		
Retention Time (minutes)	: 13.205		
Quant Ion	: 119.00		
Area	: 418007		
On-column Amount (ng)	: 16.6468		
Integration start scan	: 1904	Integration stop scan:	1936
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:10.
Target 3.5 esignature user ID: CBS0154



Total Ion Chromatogram (TIC)

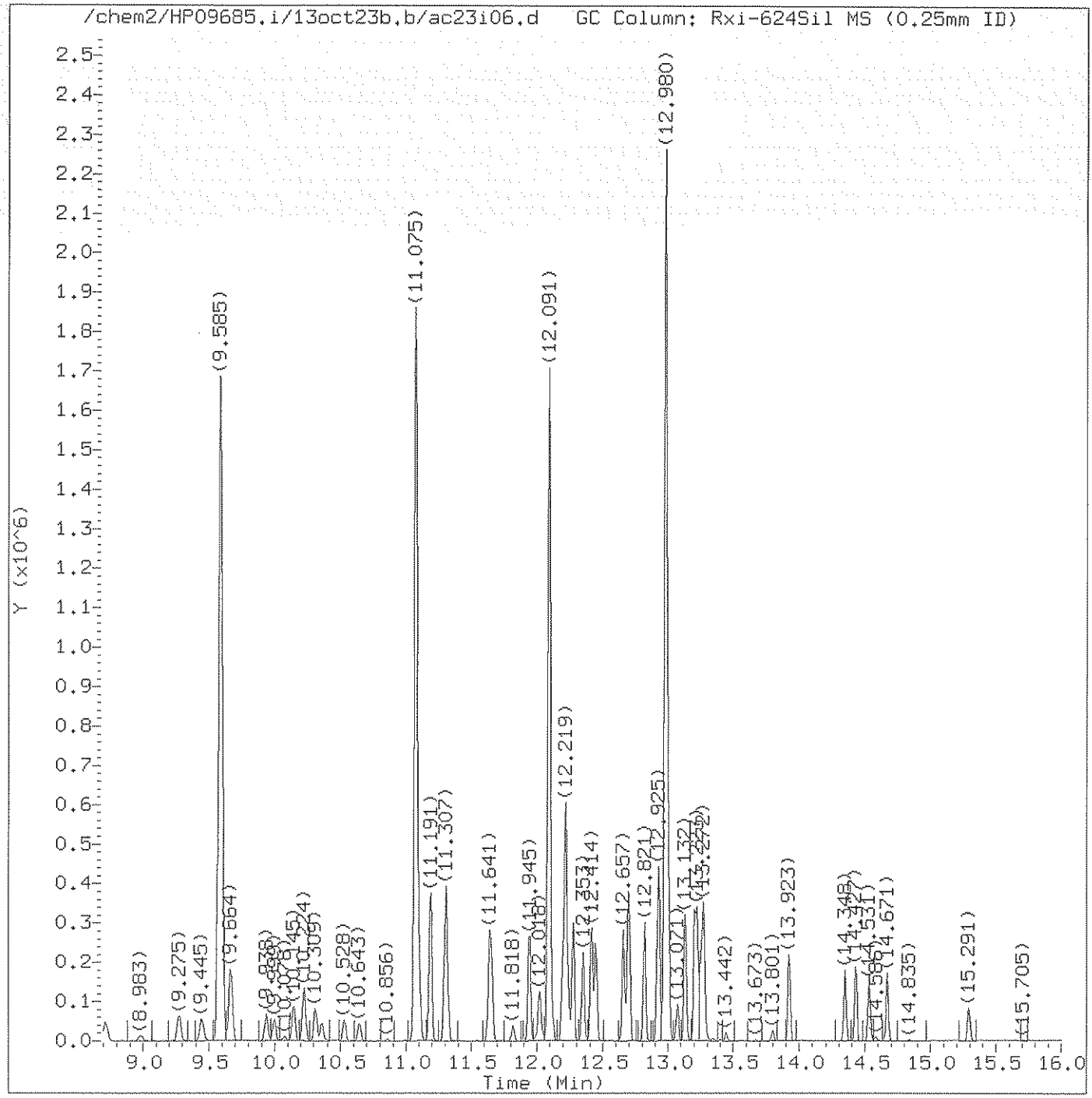
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.914	85	48495	3.910
4) Chloromethane	(2)	2.029	50	41111	4.143
5) Vinyl Chloride	(2)	2.157	62	38469	4.047
9) Bromomethane	(2)	2.473	94	28488	4.101
10) Chloroethane	(2)	2.577	64	24624	4.460
11) Dichlorofluoromethane	(2)	2.802	67	62758	4.437
13) Trichlorofluoromethane	(2)	2.875	101	55225	3.860
15) Ethanol	(1)	3.015	45	38580	502.319
17) Freon 123a	(2)	3.185	67	44198A	4.447
18) Acrolein	(1)	3.282	56	67534	39.946
19) 1,1-Dichloroethene	(2)	3.410	96	32101	4.376
20) Acetone	(2)	3.434	58	7343	8.872
22) Freon 113	(2)	3.441	101	34343	4.289
23) 2-Propanol	(1)	3.593	45	42929M	86.052
24) Methyl Iodide	(2)	3.605	142	60777	4.215
25) Carbon Disulfide	(2)	3.708	76	112008	4.349
27) Methyl Acetate	(2)	3.842	43	22643	4.387
29) Allyl Chloride	(2)	3.866	41	46416	4.095
30)*t-Butyl alcohol-d10	(1)	4.037	65	145668	250.000
31) Methylene Chloride	(2)	4.043	84	37503	4.382
32) t-Butyl alcohol	(1)	4.152	59	63330	78.864
33) Acrylonitrile	(2)	4.377	53	11078	3.756
34) Methyl Tertiary Butyl Ether	(2)	4.438	73	89948	3.940
35) trans-1,2-Dichloroethene	(2)	4.444	96	36683	4.311
38) n-Hexane	(2)	4.858	57	45427	4.008
40) 1,1-Dichloroethane	(2)	5.101	63	61577	4.159
41) di-Isopropyl ether	(2)	5.162	45	94170	3.932
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	42330	3.846
44) Ethyl t-butyl ether	(2)	5.698	59	89191	3.850
45) 2-Butanone	(2)	5.910	43	25577	7.503
46) cis-1,2-Dichloroethene	(2)	5.941	96	39307	4.182
48) 2,2-Dichloropropane	(2)	5.959	77	47444	3.941
50) Propionitrile	(1)	6.002	54	84879	82.055
47) 1,2-Dichloroethene (Total)	(2)		96	75990	8.492
51) Methacrylonitrile	(2)	6.215	67	126907	39.734
52) Bromochloromethane	(2)	6.276	128	19540	4.081
53) Tetrahydrofuran	(1)	6.288	71	7613	7.774
54) Chloroform	(2)	6.428	83	60671	4.175

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.647	113	351604	49.645
55)$Dibromofluoromethane	(2)	6.647	111	359569	49.786
56) 1,1,1-Trichloroethane	(2)	6.659	97	63953	4.546
57) Cyclohexane	(2)	6.756	56	55977	4.010
57) Cyclohexane	(2)	6.756	84	52197	4.075
57) Cyclohexane	(2)	6.762	69	17441	3.968
58) 1,1-Dichloropropene	(2)	6.866	75	46451	4.073
59) Carbon Tetrachloride	(2)	6.872	117	45915	3.990
60) Isobutyl Alcohol	(1)	7.012	41	51549	193.551
61)$1,2-Dichloroethane-d4	(2)	7.109	102	81609	50.809
61)$1,2-Dichloroethane-d4	(2)	7.109	65	363537	49.426
61)$1,2-Dichloroethane-d4	(2)	7.109	104	50829	49.900
62) Benzene	(2)	7.133	78	147228	4.248
64) 1,2-Dichloroethane	(2)	7.212	62	42537	4.084
64) 1,2-Dichloroethane	(2)	7.218	98	4025	3.994
65) t-Amyl methyl ether	(2)	7.322	73	84099	3.776
67)*Fluorobenzene	(2)	7.541	96	1448722	50.000
69) n-Heptane	(2)	7.553	43	48740	4.158
70) n-Butanol	(1)	7.900	56	82380	352.814
72) Trichloroethene	(2)	8.028	95	37364	4.156
73) Methylcyclohexane	(2)	8.338	83	59460	3.951
74) 1,2-Dichloropropane	(2)	8.368	63	34878	4.016
76) Methyl Methacrylate	(2)	8.447	69	19291	3.570
77) 1,4-Dioxane	(1)	8.460	88	16212	187.910
78) Dibromomethane	(2)	8.478	93	21642	4.026
81) Bromodichloromethane	(2)	8.715	83	41475	3.830
82) 2-Nitropropane	(1)	8.983	41	11037	8.410
84) cis-1,3-Dichloropropene	(2)	9.275	75	47047	3.598
85) 4-Methyl-2-pentanone	(2)	9.445	43	46414	6.407
86)$Toluene-d8	(3)	9.591	98	1397499	49.859
86)$Toluene-d8	(3)	9.591	100	912904	50.053
87) Toluene	(3)	9.664	92	93565	4.299
88) trans-1,3-Dichloropropene	(3)	9.938	75	42003	3.539
89) Ethyl Methacrylate	(3)	9.999	69	32333	3.316
90) 1,1,2-Trichloroethane	(3)	10.145	97	30269	4.171
92) Tetrachloroethene	(3)	10.224	166	42876	4.302
93) 1,3-Dichloropropane	(3)	10.309	76	51225	4.070
95) 2-Hexanone	(3)	10.358	43	32691M	6.396

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.528	129	30674	3.654
98) 1,2-Dibromoethane	(3)	10.643	107	29786	3.937
99)*Chlorobenzene-d5	(3)	11.075	117	1079954	50.000
100) Chlorobenzene	(3)	11.106	112	109568	4.276
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	34284	3.864
102) Ethylbenzene	(3)	11.191	91	169309	4.131
103) m+p-Xylene	(3)	11.307	106	137204	8.193
104) o-Xylene	(3)	11.641	106	64063	3.941
106) Styrene	(3)	11.653	104	93900	3.658
105) Xylene (Total)	(3)		106	201267	12.133
107) Bromoform	(3)	11.824	173	17762	3.450
108) Isopropylbenzene	(3)	11.945	105	165488	3.978
111) Cyclohexanone	(1)	12.018	55	56855	173.769
112)$4-Bromofluorobenzene	(3)	12.091	95	513259	49.252
112)$4-Bromofluorobenzene	(3)	12.091	174	452043	49.970
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	40204M	4.229
114) Bromobenzene	(4)	12.207	156	46692	4.233
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	92815M	37.678
116) 1,2,3-Trichloropropane	(4)	12.237	110	12564	4.295
117) n-Propylbenzene	(4)	12.274	91	207039	4.422
119) 2-Chlorotoluene	(4)	12.353	126	44666	4.253
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	141368	4.087
123) 4-Chlorotoluene	(4)	12.444	126	46393	4.269
126) tert-Butylbenzene	(4)	12.657	134	32131M	4.068
127) Pentachloroethane	(4)	12.688	167	25599	3.802
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	145060	4.074
129) sec-Butylbenzene	(4)	12.821	105	181523	4.151
131) 1,3-Dichlorobenzene	(4)	12.919	146	87646	4.276
132) p-Isopropyltoluene	(4)	12.931	119	155485	3.974
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	563848	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	91707	4.354
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	153498	4.123
136) Benzyl Chloride	(4)	13.071	126	12679	3.165
137) 1,3-Diethylbenzene	(4)	13.132	119	93658	3.930
138) 1,4-Diethylbenzene	(4)	13.205	119	93278	3.923
139) n-Butylbenzene	(4)	13.223	92	78269	4.127
140) 1,2-Dichlorobenzene	(4)	13.253	146	82900	4.190
141) 1,2-Diethylbenzene	(4)	13.272	119	80835M	4.023

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	5898	3.467
145) 1,3,5-Trichlorobenzene	(4)	13.923	180	64187	4.000
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	51730	3.761
147) Hexachlorobutadiene	(4)	14.427	225	31832	4.088
148) Naphthalene	(4)	14.531	128	107631	3.435
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	49184	3.807
150) 2-Methylnaphthalene	(4)	15.291	142	41849	5.879

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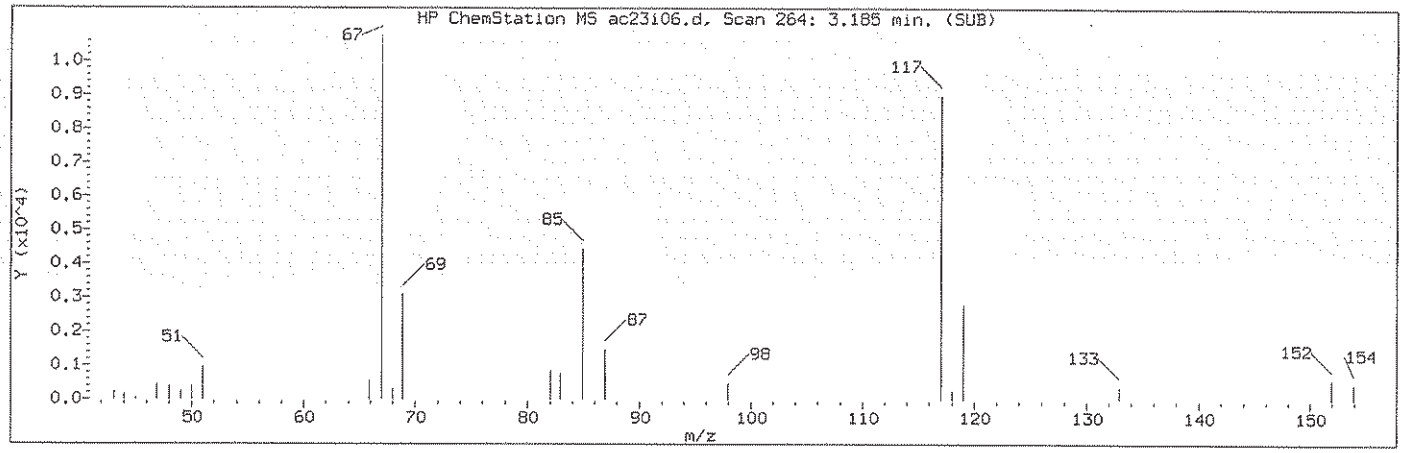
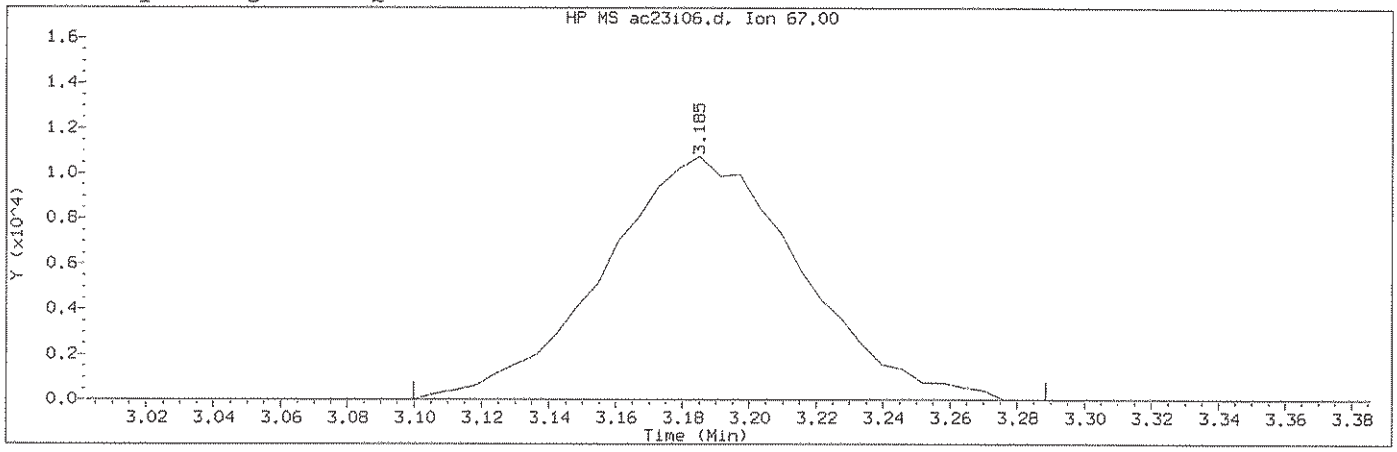
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

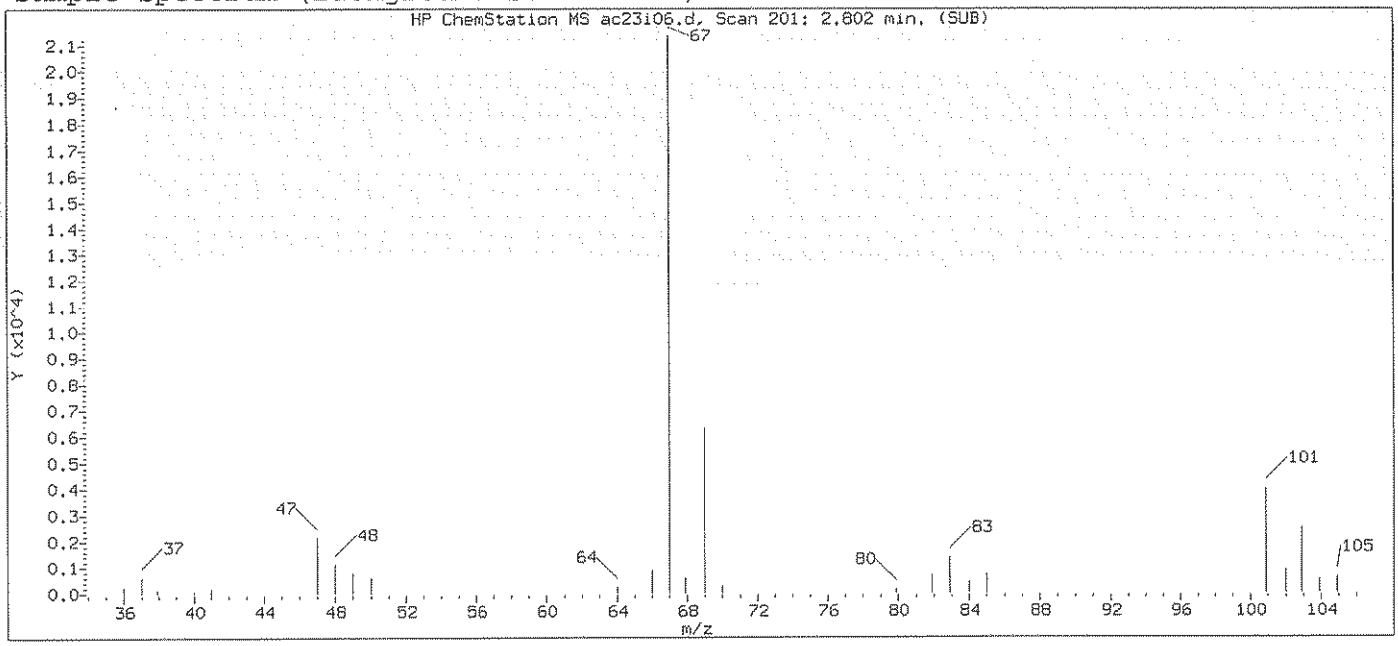
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 264		
Retention Time (minutes)	: 3.185		
Quant Ion	: 67.00		
Area (flag)	: 44198A		
On-Column Amount (ng)	: 4.4470		
Integration start scan	: 249	Integration stop scan:	280
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

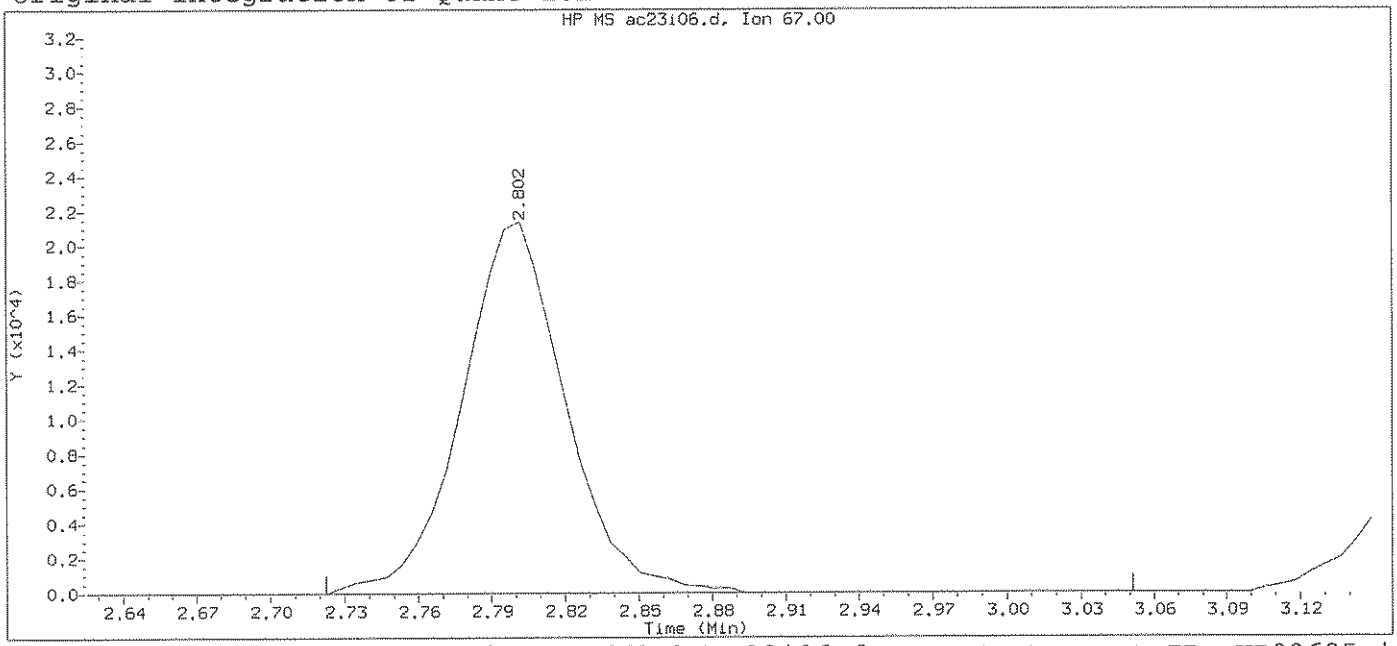
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:11. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 201		
Retention Time (minutes)	: 2.802		
Quant Ion	: 67.00		
Area	: 62758		
On-column Amount (ng)	: 4.4369		
Integration start scan	: 187	Integration stop scan:	241
Y at integration start	: 0	Y at integration end:	0

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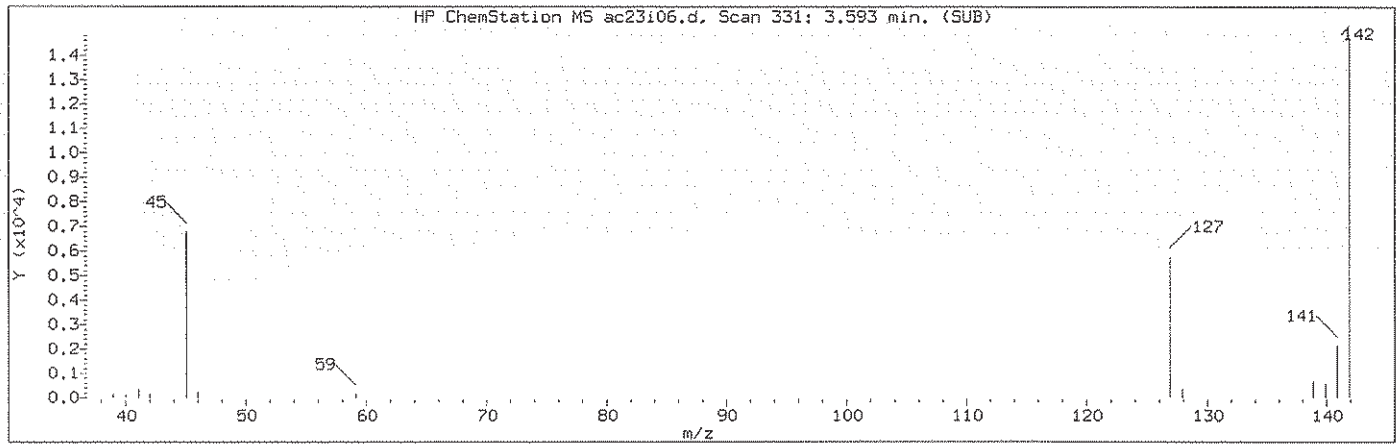
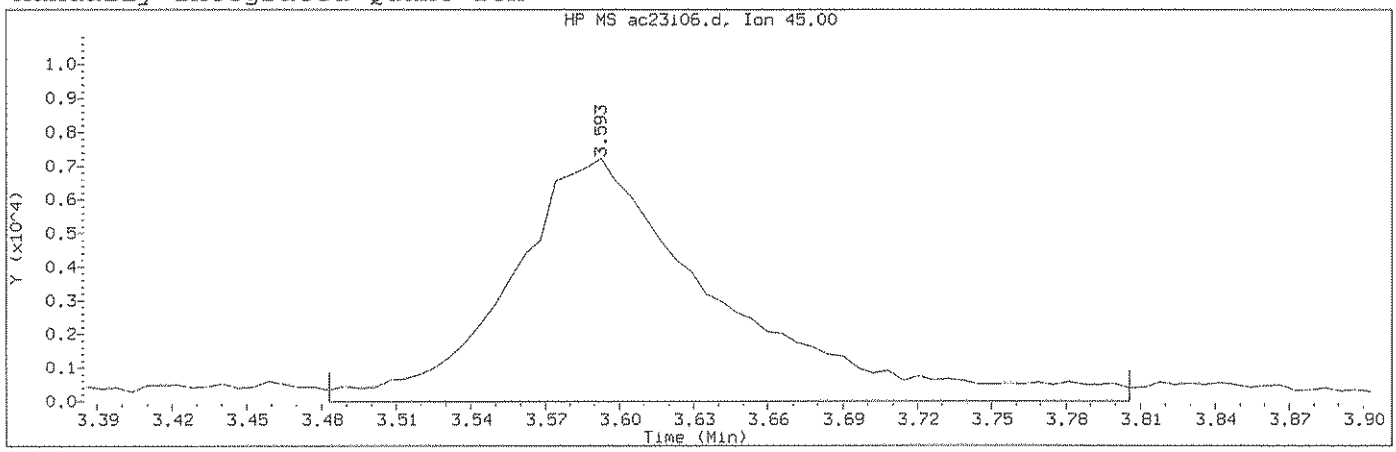
Target 3.5 esignature user ID: CBS1547

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

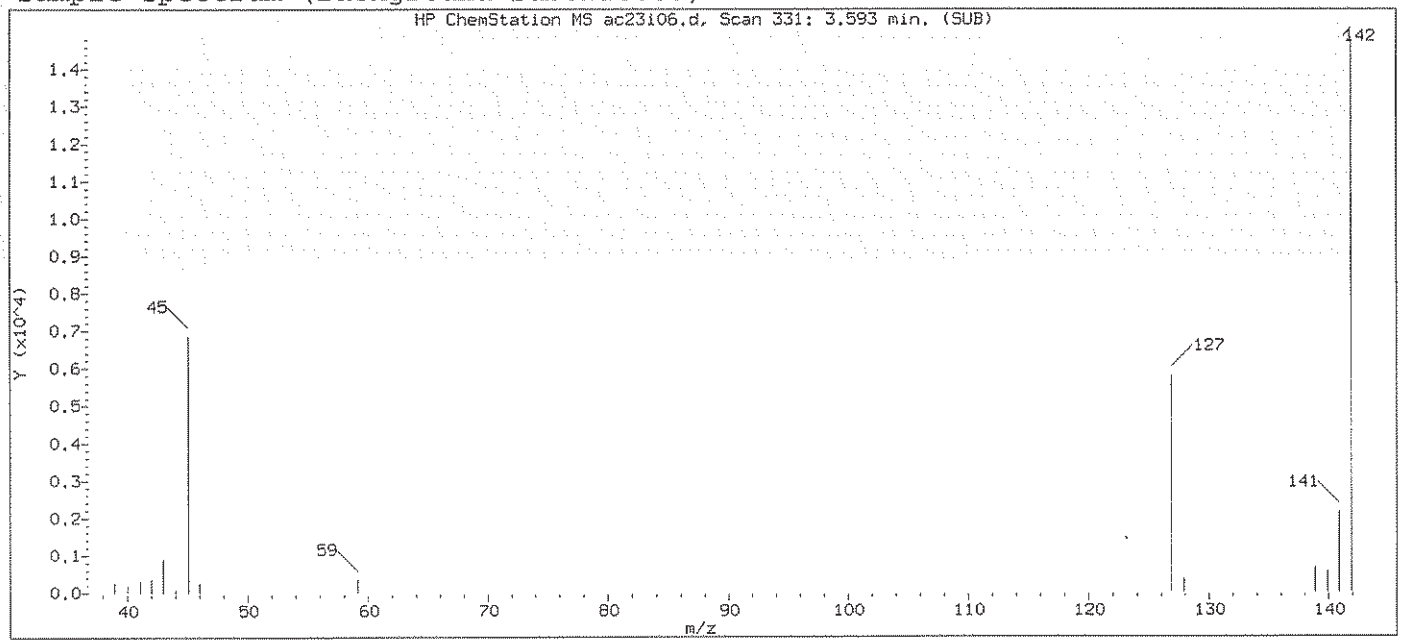
Compound Number	: 23		
Compound Name	: 2-Propanol		
Scan Number	: 331		
Retention Time (minutes)	: 3.593		
Quant Ion	: 45.00		
Area (flag)	: 42929M		
On-Column Amount (ng)	: 86.0519		
Integration start scan	: 312	Integration stop scan:	365
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

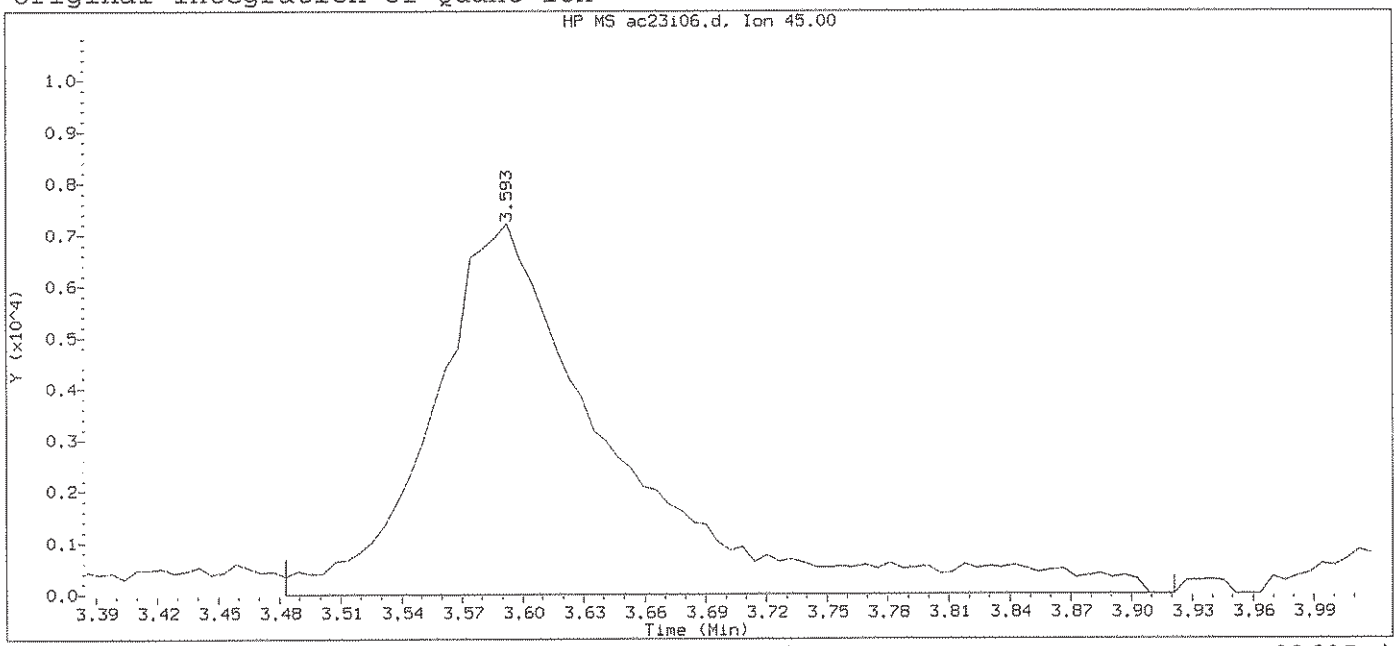
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 23
Compound Name : 2-Propanol
Scan Number : 331
Retention Time (minutes): 3.593
Quant Ion : 45.00
Area : 45420
On-column Amount (ng) : 90.1088
Integration start scan : 312 Integration stop scan: 384
Y at integration start : 0 Y at integration end: 0

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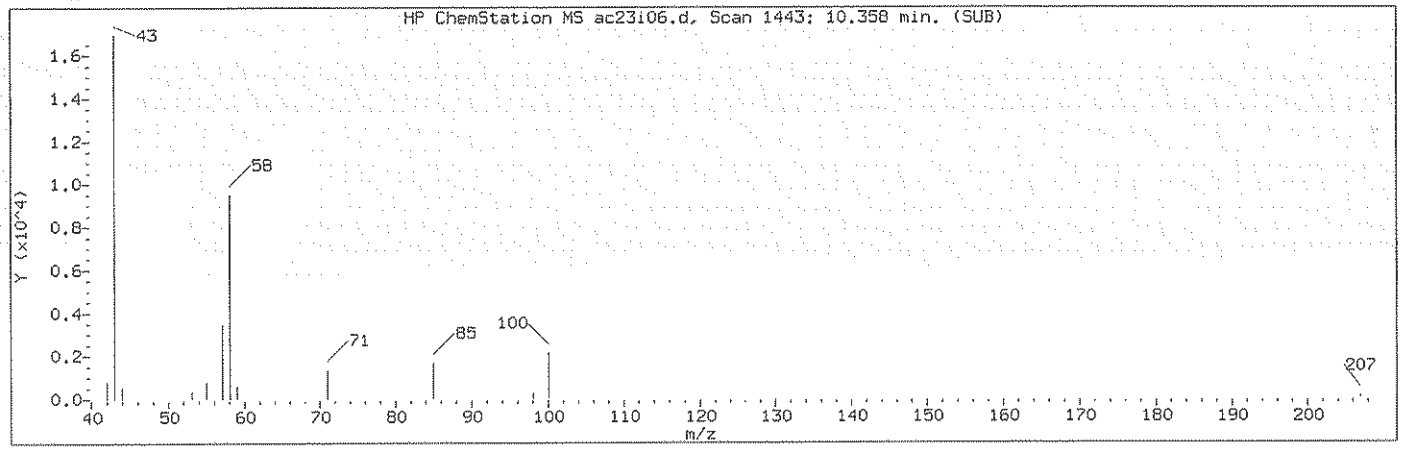
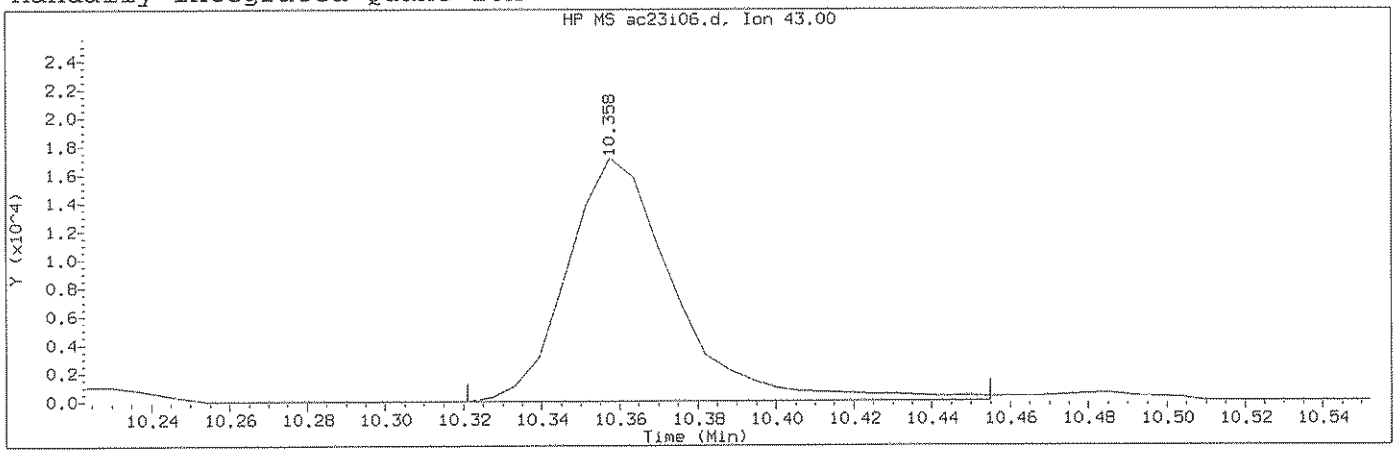
Target 3.5 esignature user ID: CBS0157/

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

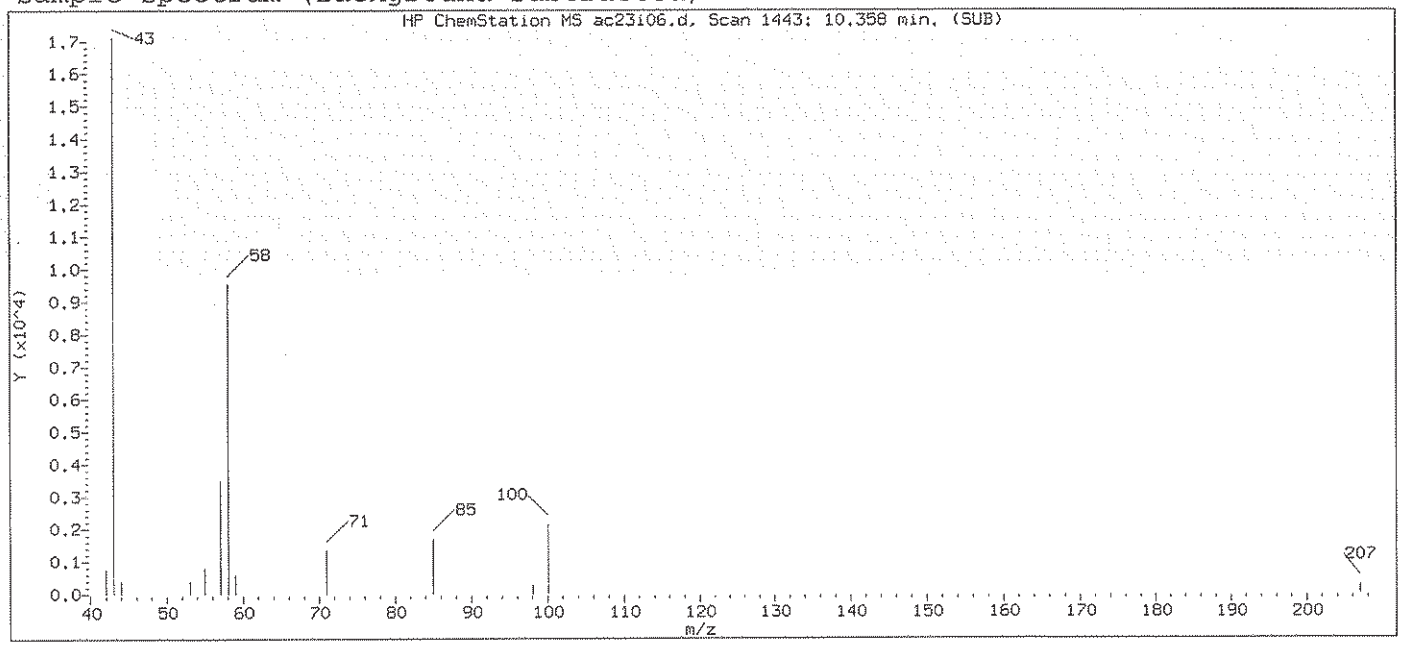
Compound Number : 95
Compound Name : 2-Hexanone
Scan Number : 1443
Retention Time (minutes): 10.358
Quant Ion : 43.00
Area (flag) : 32691M
On-Column Amount (ng) : 6.3964
Integration start scan : 1436 Integration stop scan: 1458
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

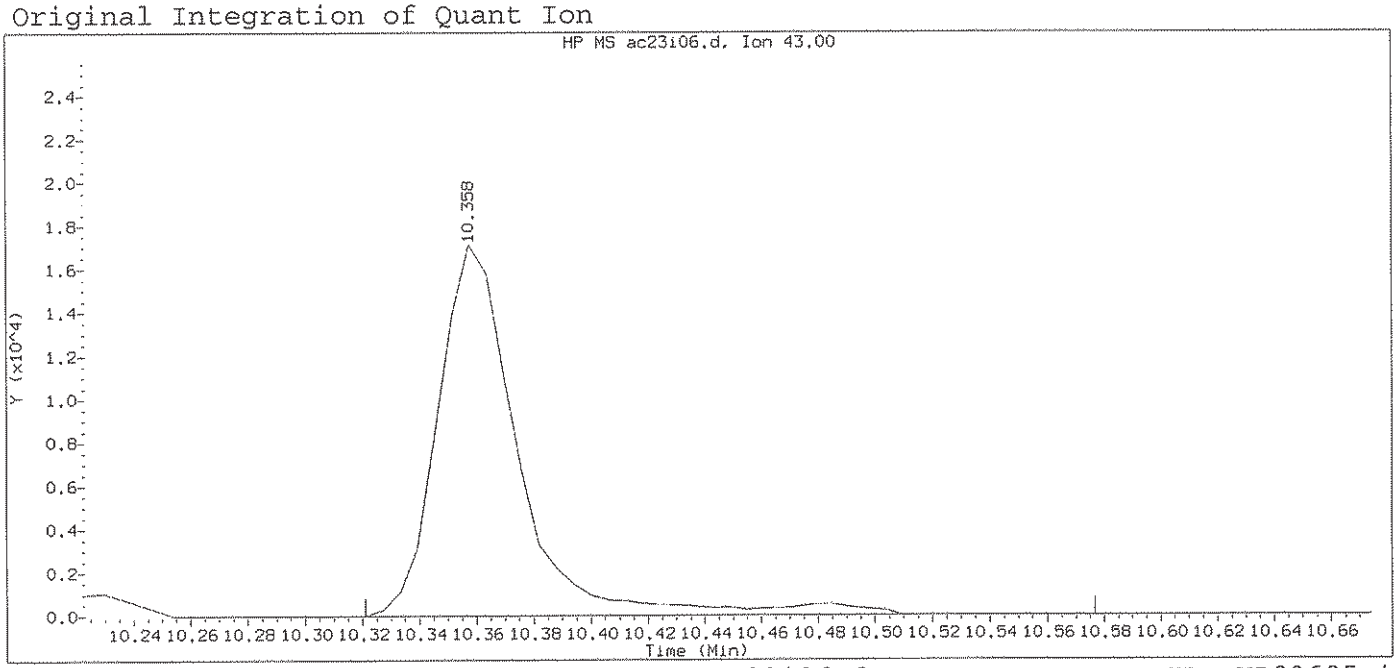
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 95		
Compound Name	: 2-Hexanone		
Scan Number	: 1443		
Retention Time (minutes)	: 10.358		
Quant Ion	: 43.00		
Area	: 33799		
On-column Amount (ng)	: 6.5835		
Integration start scan	: 1436	Integration stop scan:	1478
Y at integration start	: 0	Y at integration end:	0

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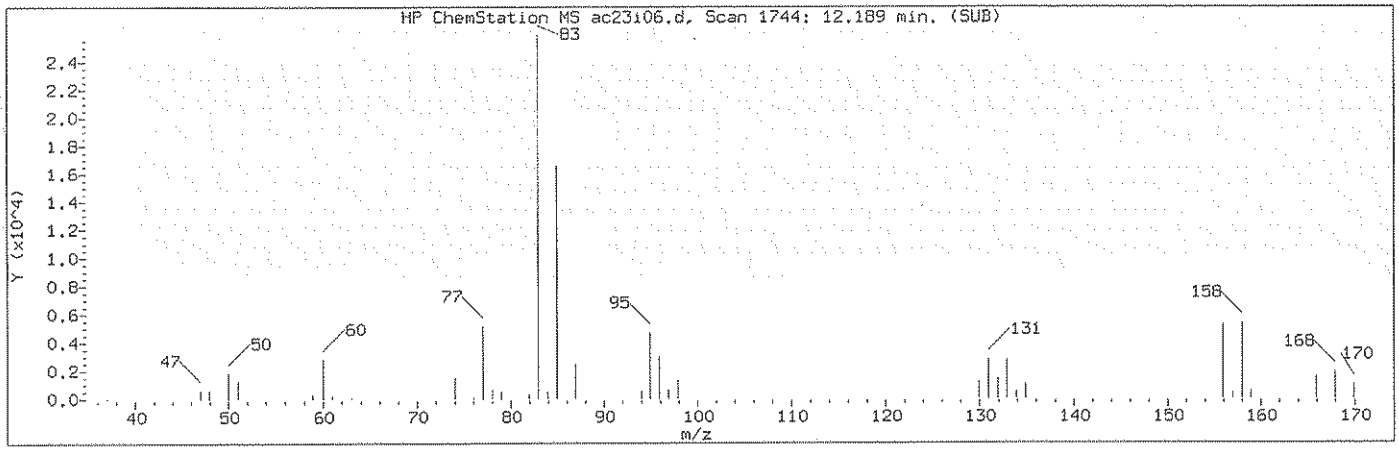
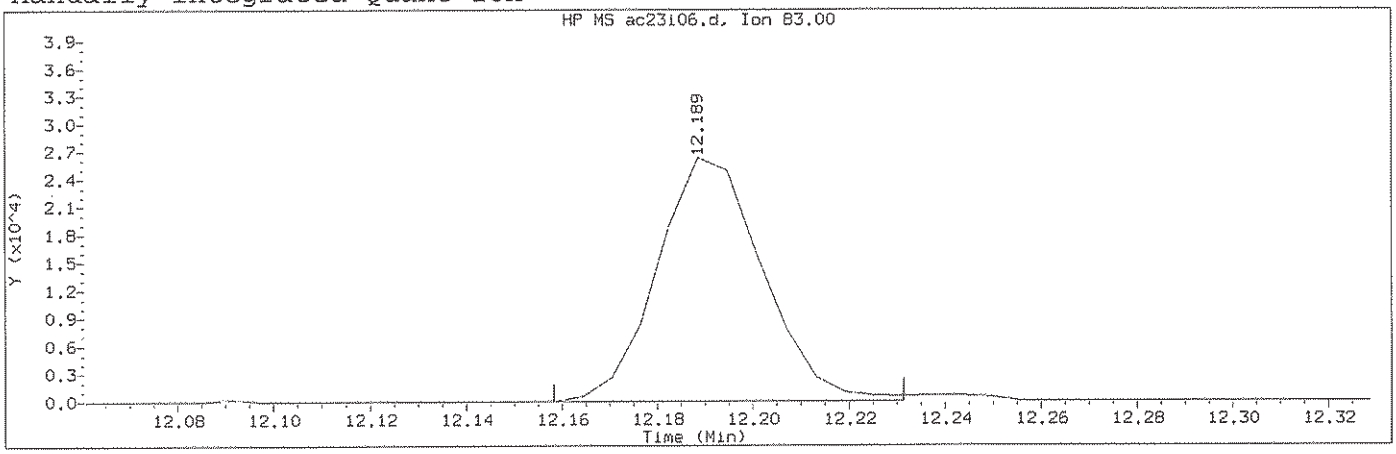
Target 3.5 esignature user ID: cbs0137

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

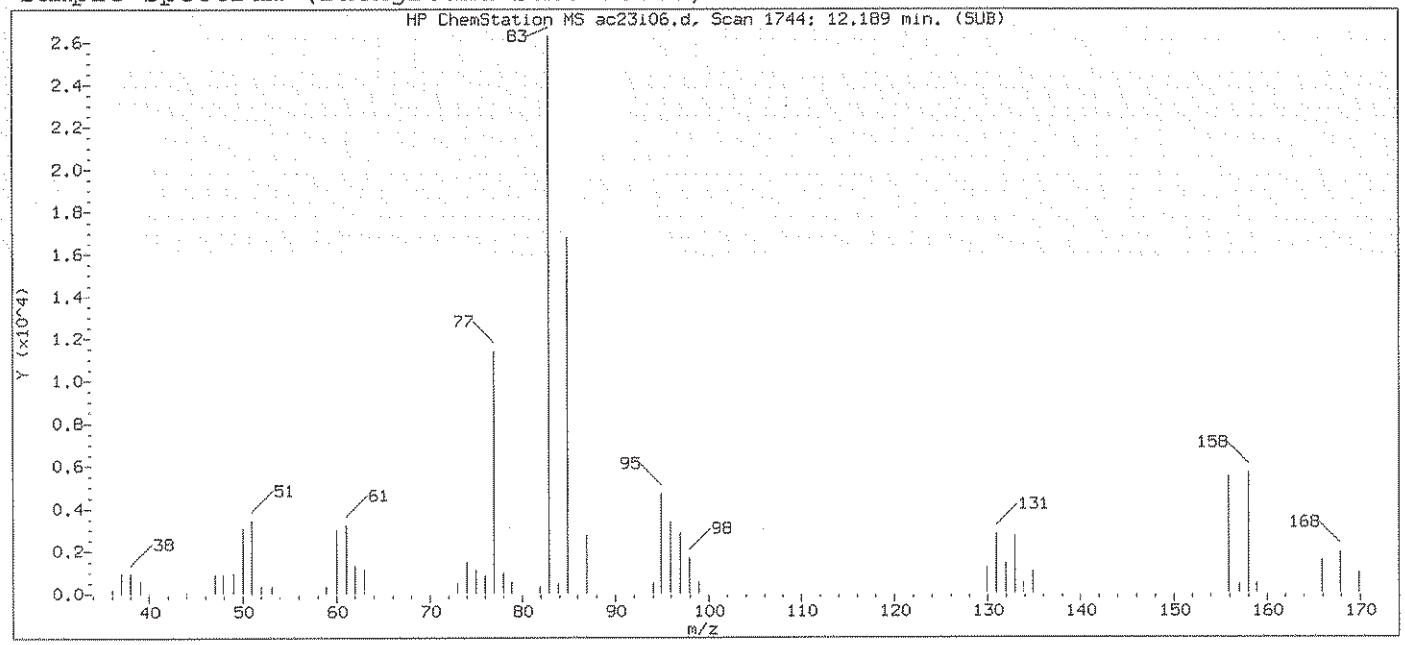
Compound Number	: 113		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1744		
Retention Time (minutes)	: 12.189		
Quant Ion	: 83.00		
Area (flag)	: 40204M		
On-Column Amount (ng)	: 4.2287		
Integration start scan	: 1738	Integration stop scan:	1750
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

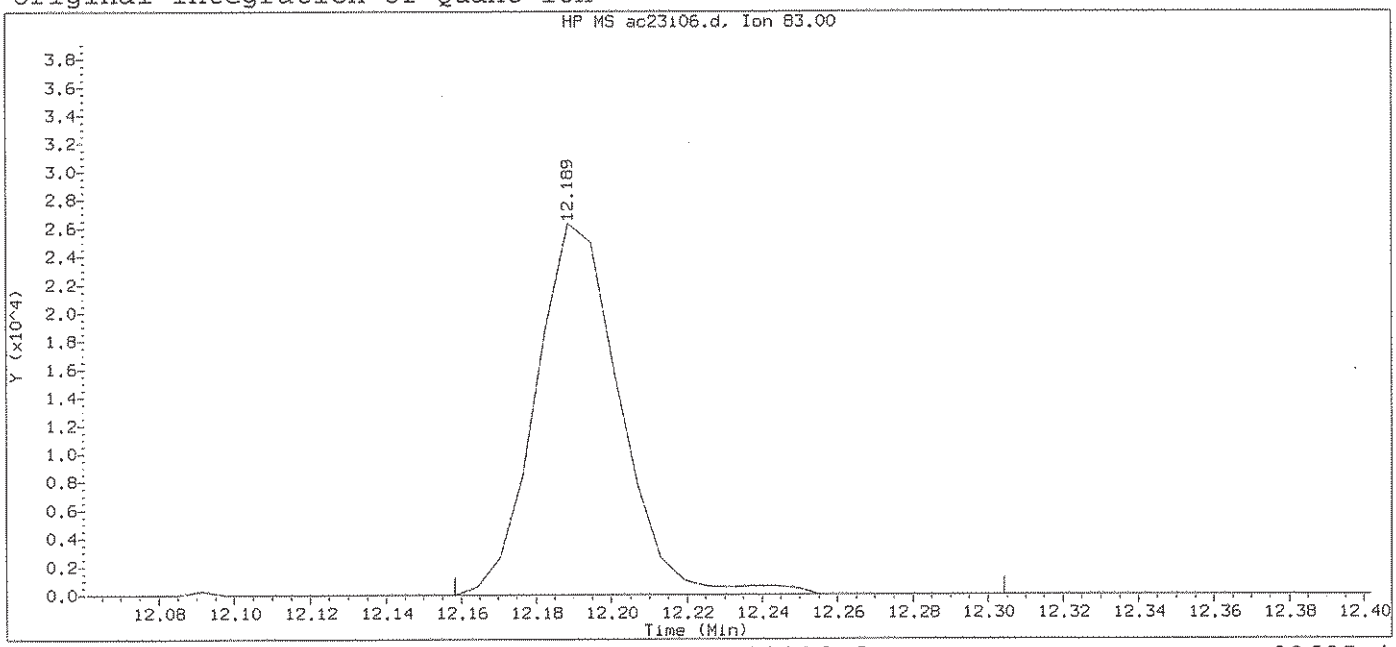
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:11. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area : 40816
On-column Amount (ng) : 4.2817
Integration start scan : 1738 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

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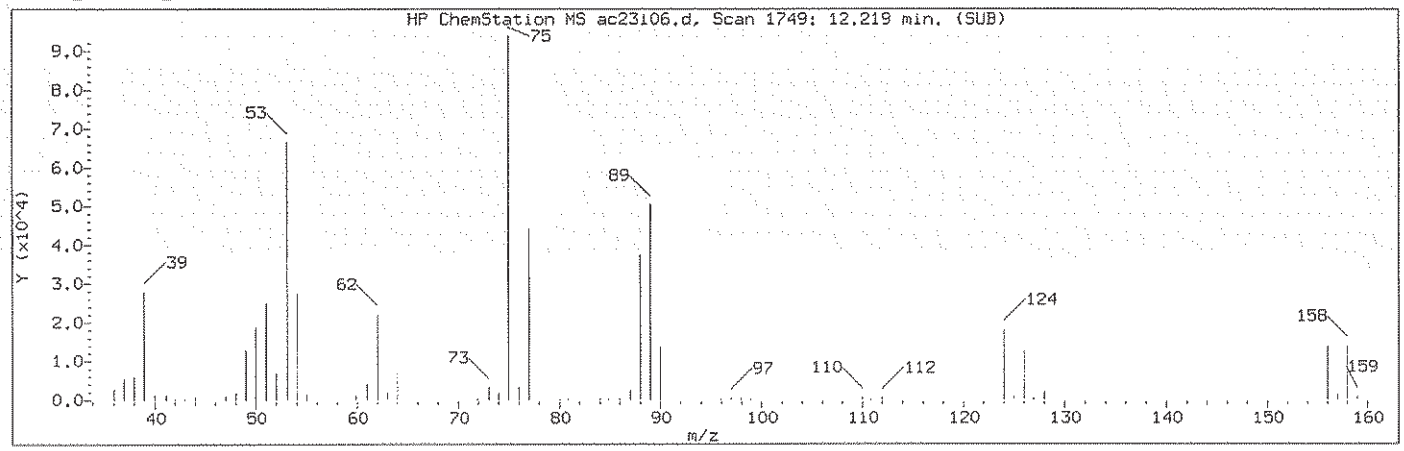
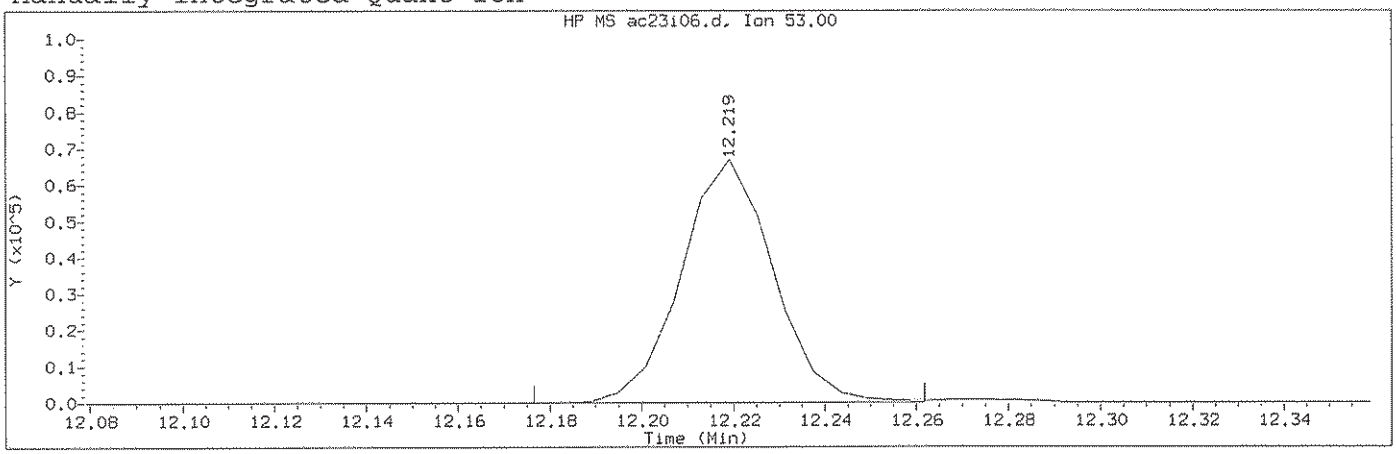
Target 3.5 esignature user ID: CBS0127

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

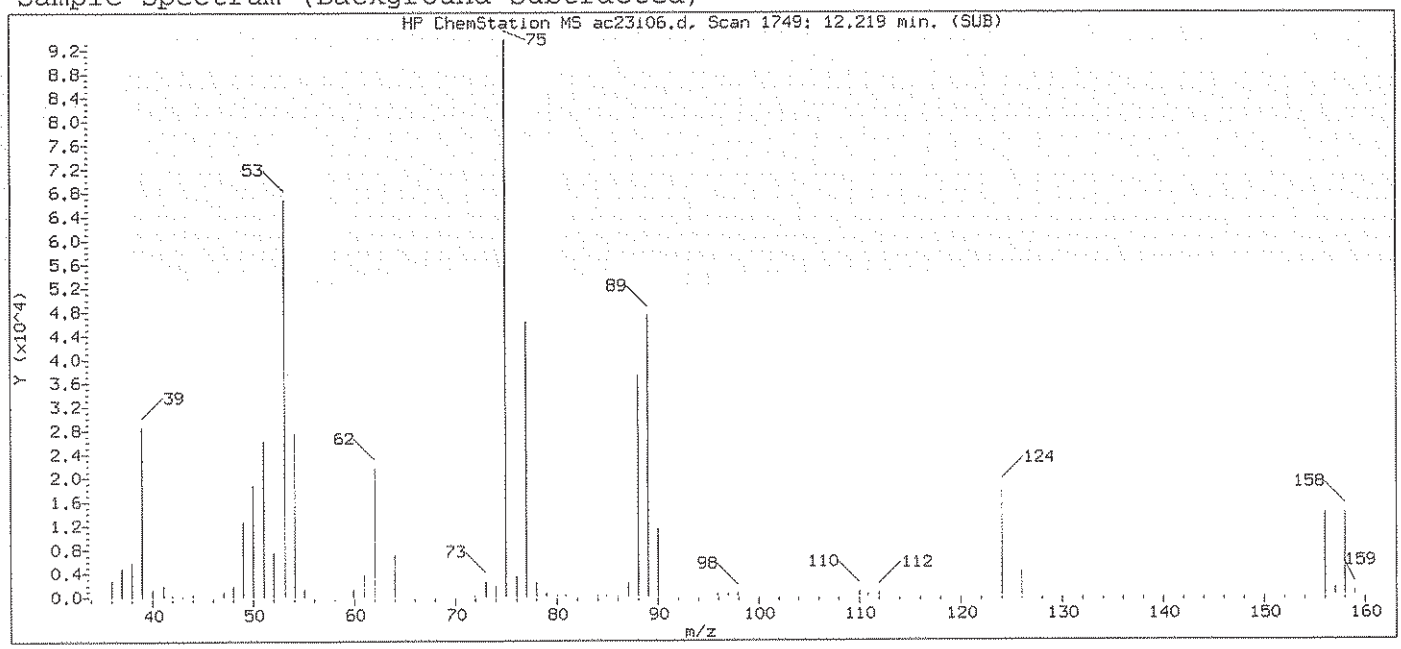
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area (flag) : 92815M
On-Column Amount (ng) : 37.6785
Integration start scan : 1741 Integration stop scan: 1755
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

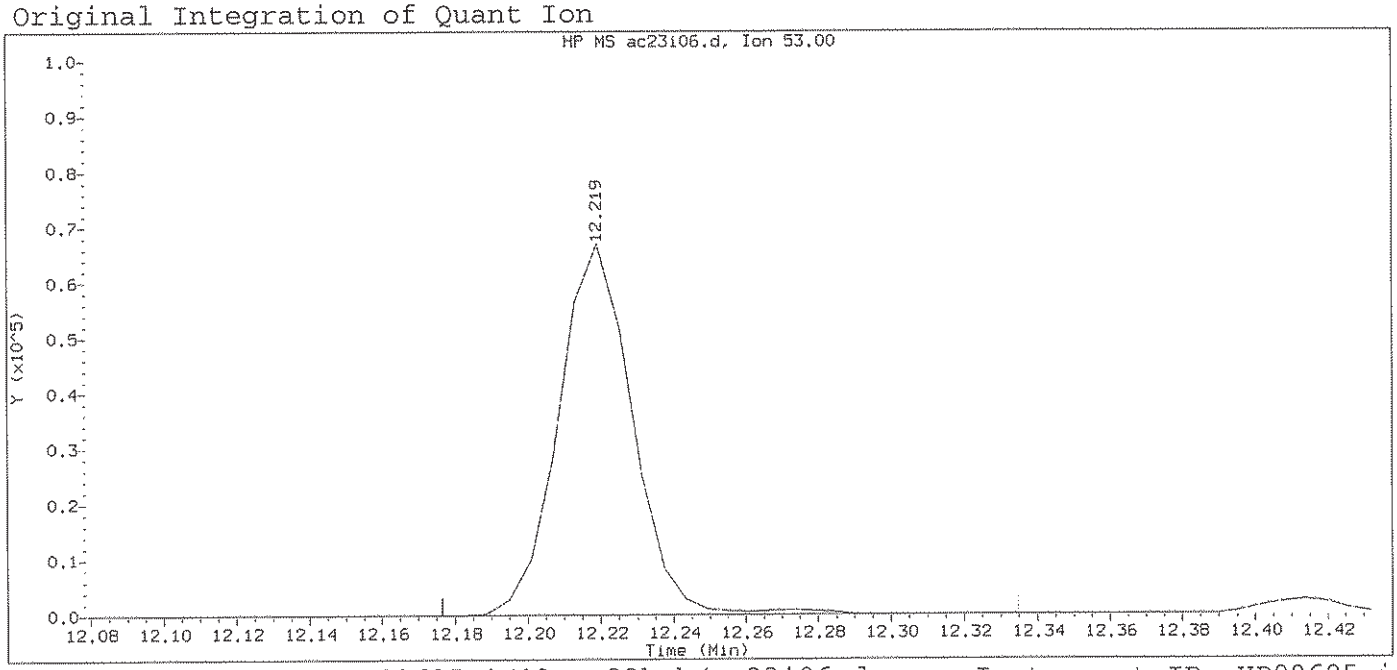
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

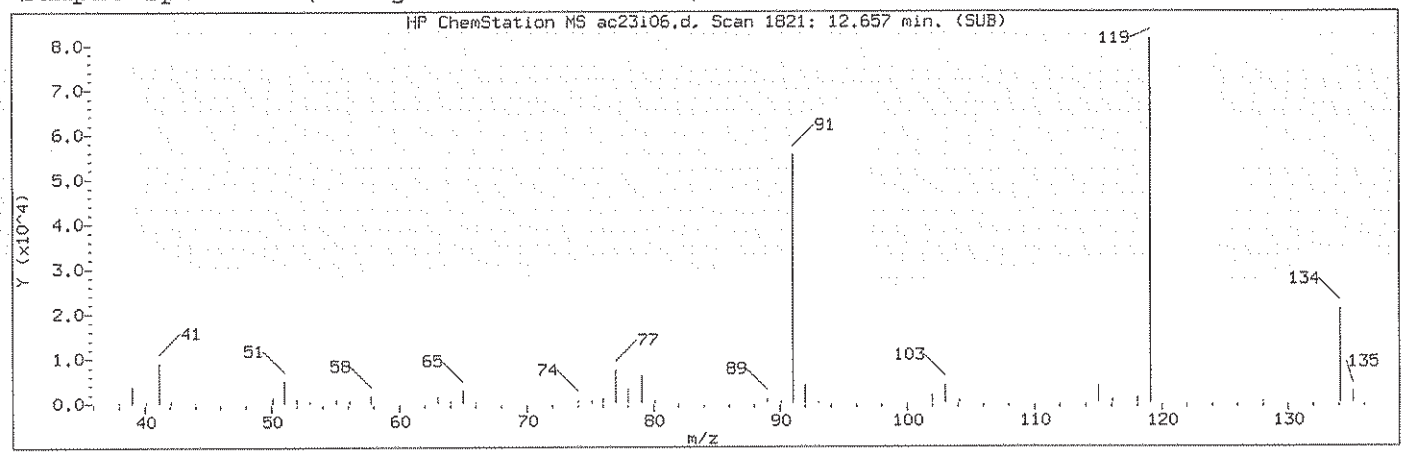
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

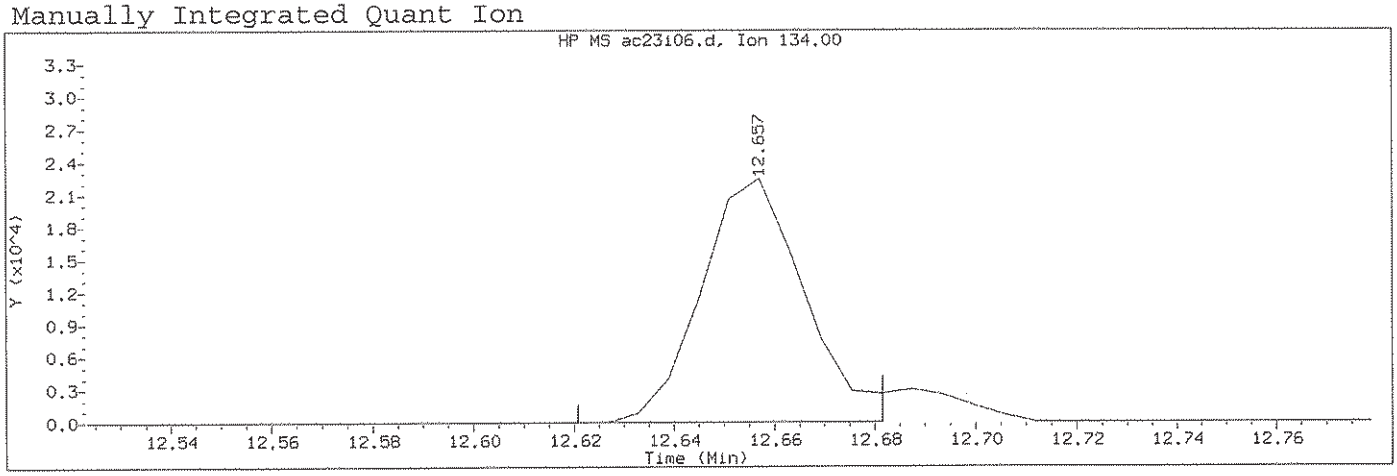
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area : 93772
On-column Amount (ng) : 38.0056
Integration start scan : 1741 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:11.
Target 3.5 esignature user ID: CBS0134

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

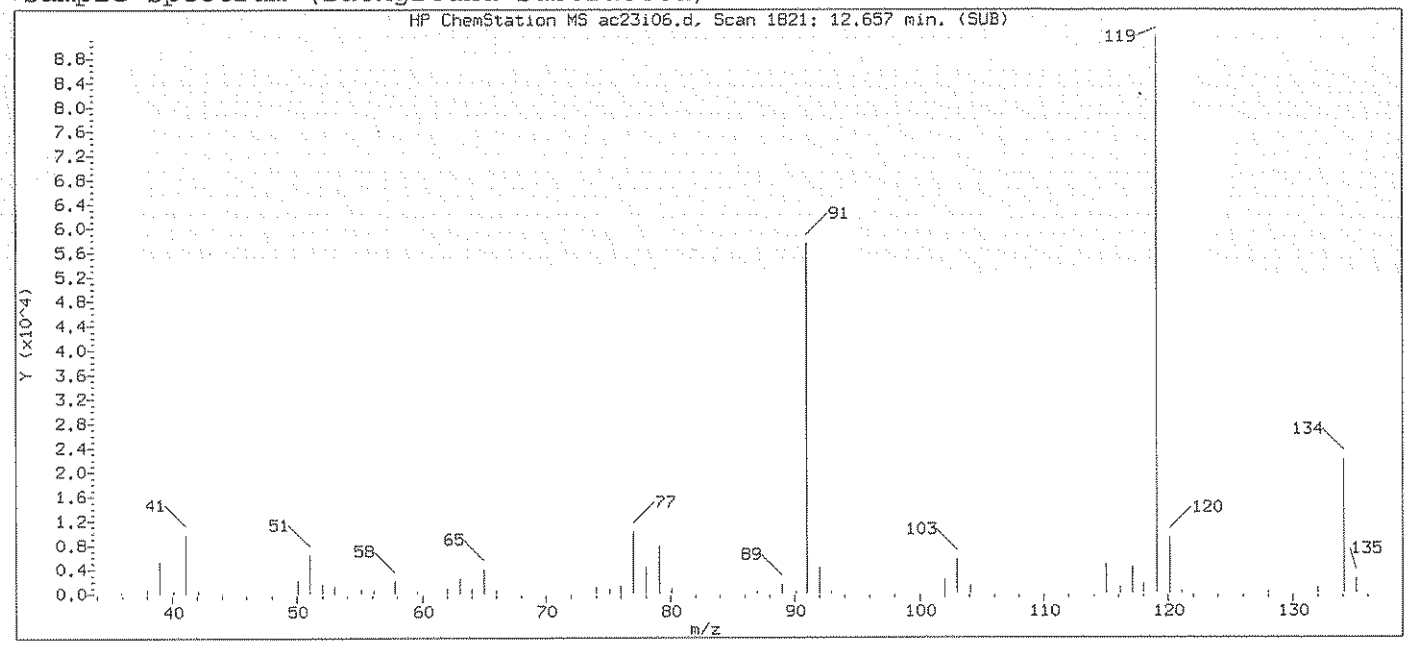
Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area (flag)	: 32131M		
On-Column Amount (ng)	: 4.0679		
Integration start scan	: 1814	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

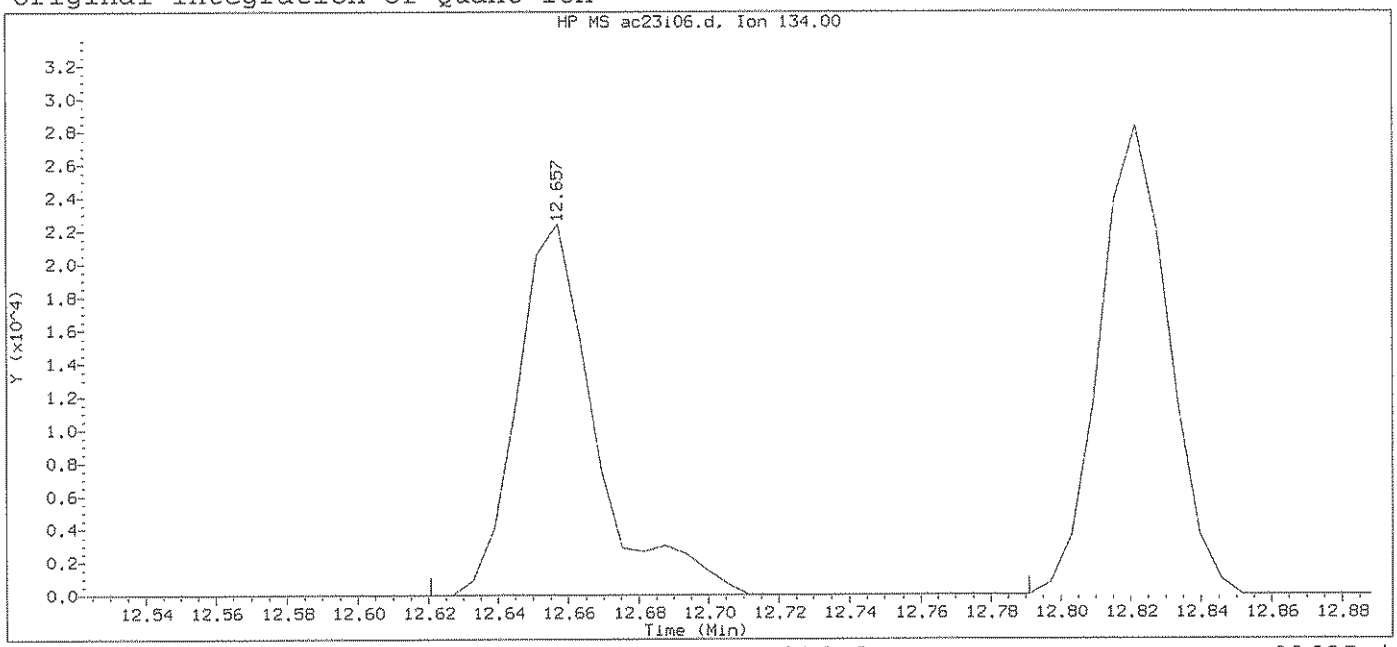
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:11. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 126		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1821		
Retention Time (minutes)	: 12.657		
Quant Ion	: 134.00		
Area	: 34932		
On-column Amount (ng)	: 4.3581		
Integration start scan	: 1814	Integration stop scan:	1842
Y at integration start	: 0	Y at integration end:	0

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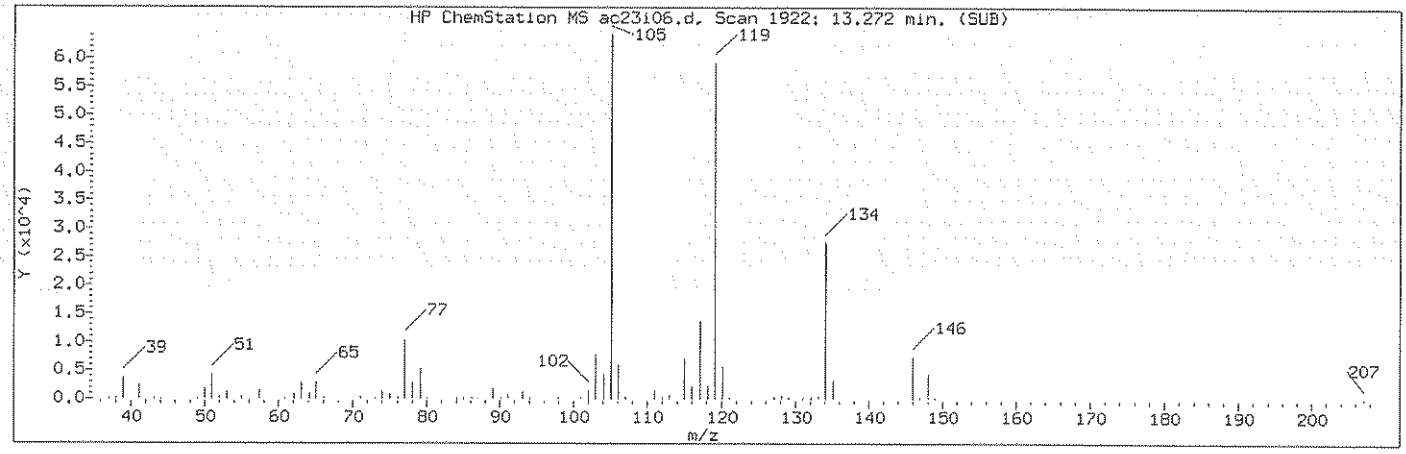
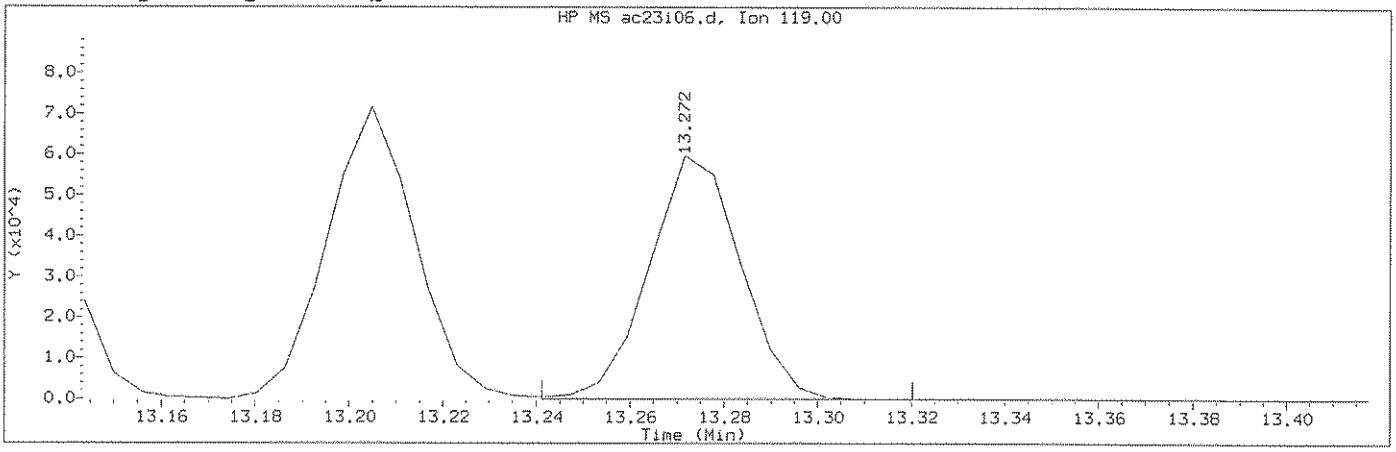
Target 3.5 esignature user ID: cbs0154

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 24-Oct-2013 16:11 cbs01947

Sample Name: VSTD004 Lab Sample ID: VSTD004

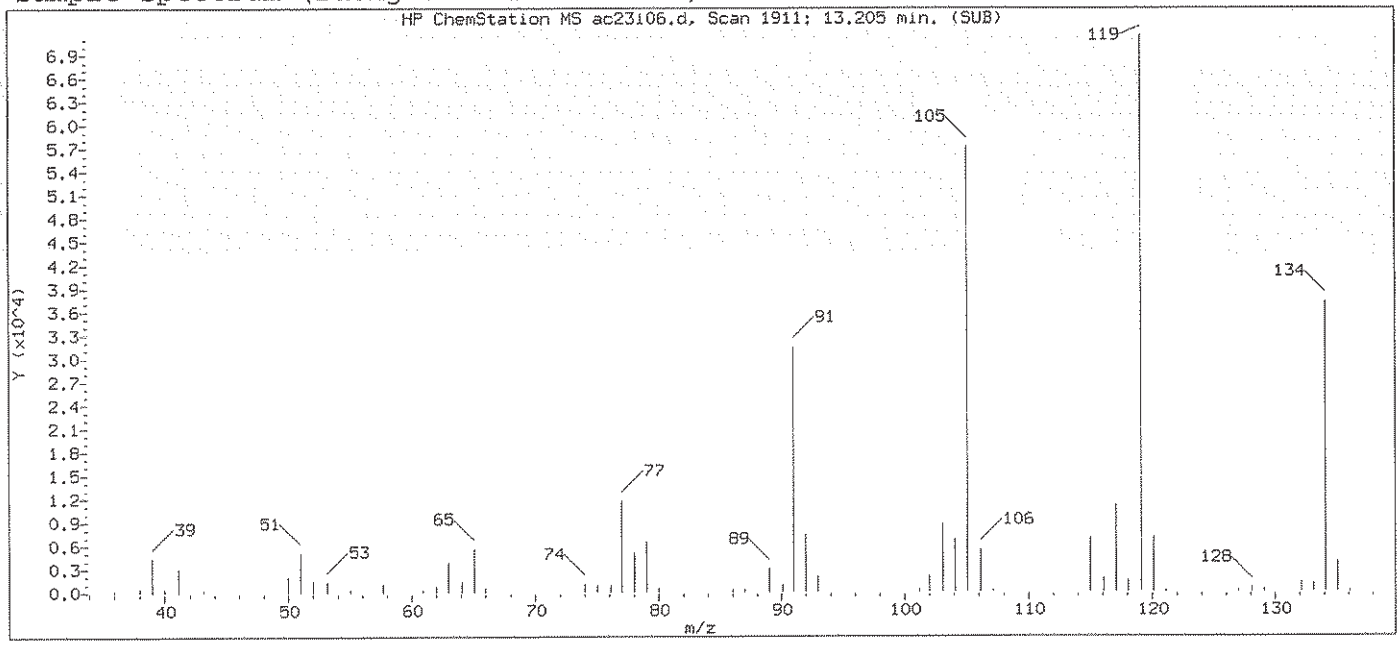
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1922
Retention Time (minutes): 13.272
Quant Ion : 119.00
Area (flag) : 80835M
On-Column Amount (ng) : 4.0230
Integration start scan : 1916 Integration stop scan: 1929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

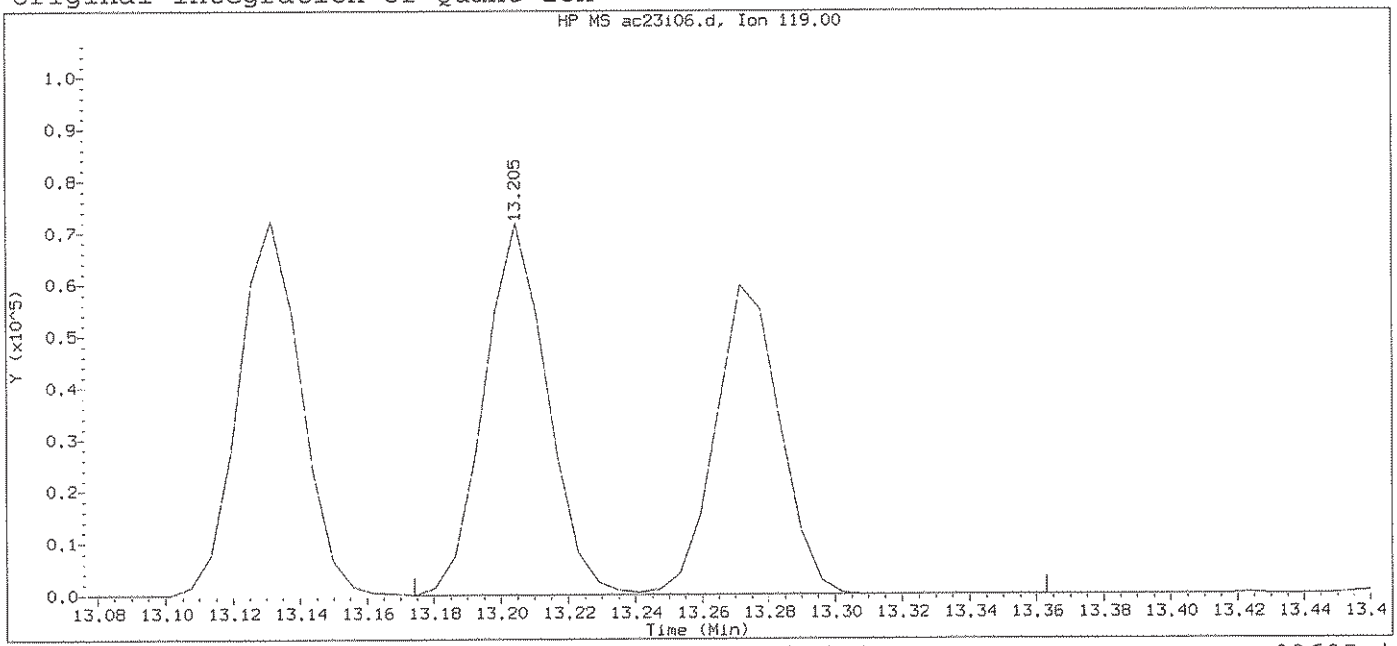
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:11. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23i06.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 21:40 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:00
Date, time and analyst ID of latest file update: 23-Oct-2013 22:00 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 141		
Compound Name	: 1,2-Diethylbenzene		
Scan Number	: 1911		
Retention Time (minutes)	: 13.205		
Quant Ion	: 119.00		
Area	: 174032		
On-column Amount (ng)	: 7.2585		
Integration start scan	: 1905	Integration stop scan:	1936
Y at integration start	: 0	Y at integration end:	0

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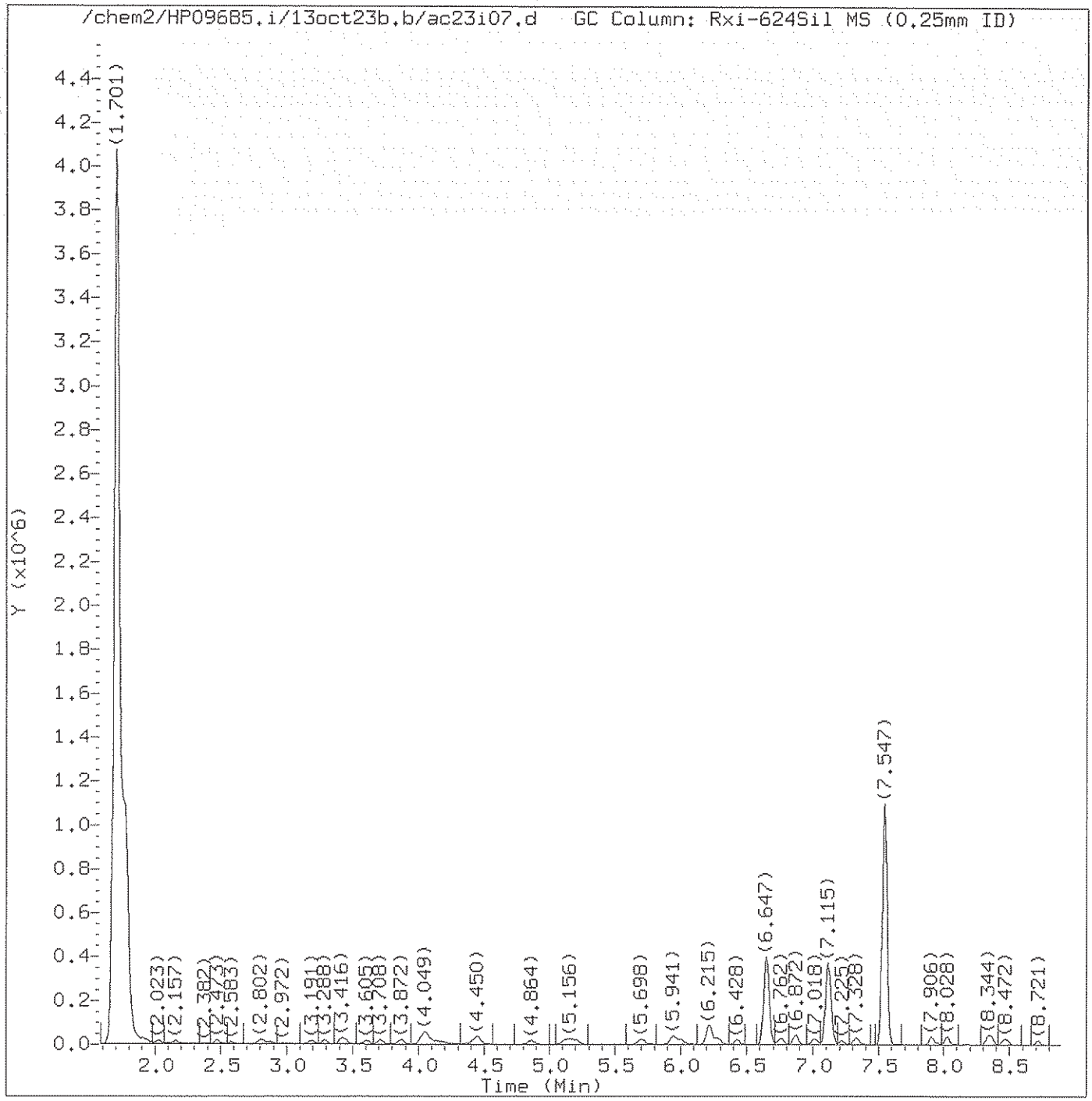
Target 3.5 esignature user ID: CBS01347



Total Ion Chromatogram (TIC)

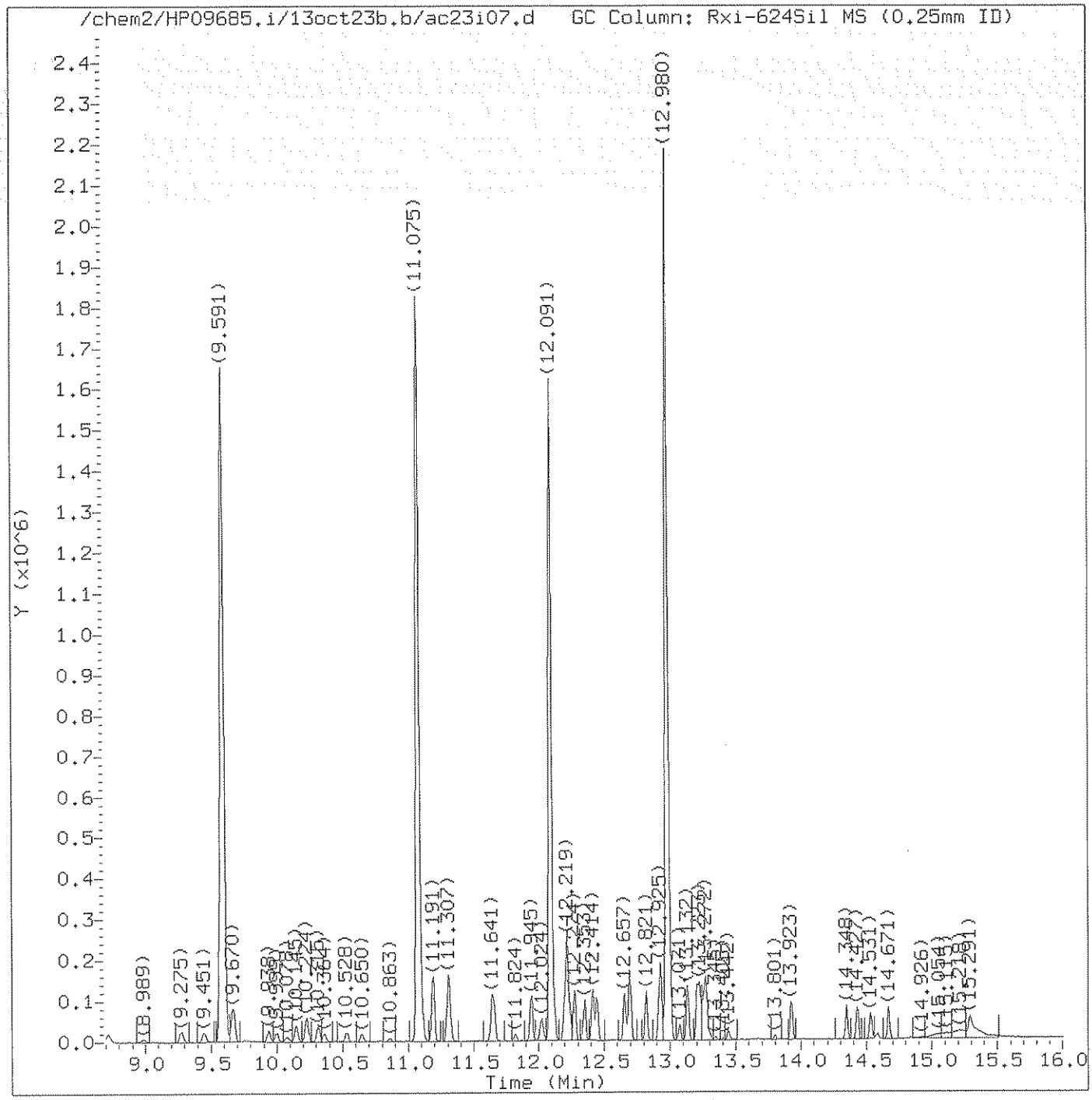
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i07.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:03 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: TBA
Calibration date and time: 24-OCT-2013 16:21
Date, time and analyst ID of latest file update: 24-Oct-2013 16:21 cbs01947

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:21.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i07.d
Injection date and time: 23-OCT-2013 22:03

Instrument ID: HP09685.i
Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m
Calibration date and time: 24-OCT-2013 16:21
Date, time and analyst ID of latest file update: 24-Oct-2013 16:21 cbs01947

Sublist used: TBA

Sample Name: VSTD002

Lab Sample ID: VSTD002

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:21.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23i07.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:03 Analyst ID: SEJ02002

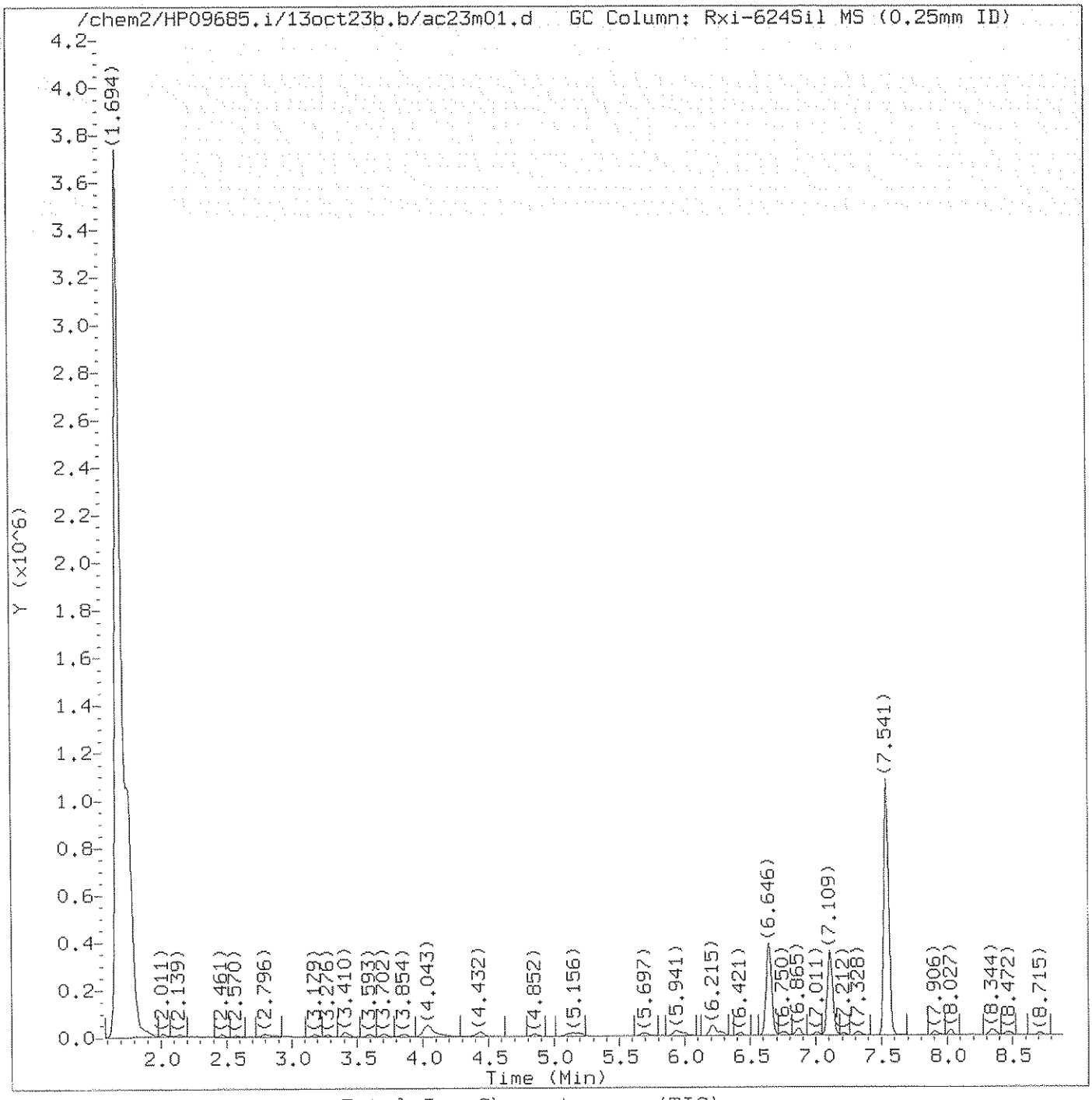
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: TBA
Calibration date and time: 24-OCT-2013 16:21
Date, time and analyst ID of latest file update: 24-Oct-2013 16:21 cbs01947

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	4.049	65	139828	250.000
32) t-Butyl alcohol	(1)	4.158	59	29726	38.703
67)*Fluorobenzene	(2)	7.547	96	1418365	50.000
99)*Chlorobenzene-d5	(3)	11.075	117	1054330	50.000
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	552277	50.000

* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:21.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

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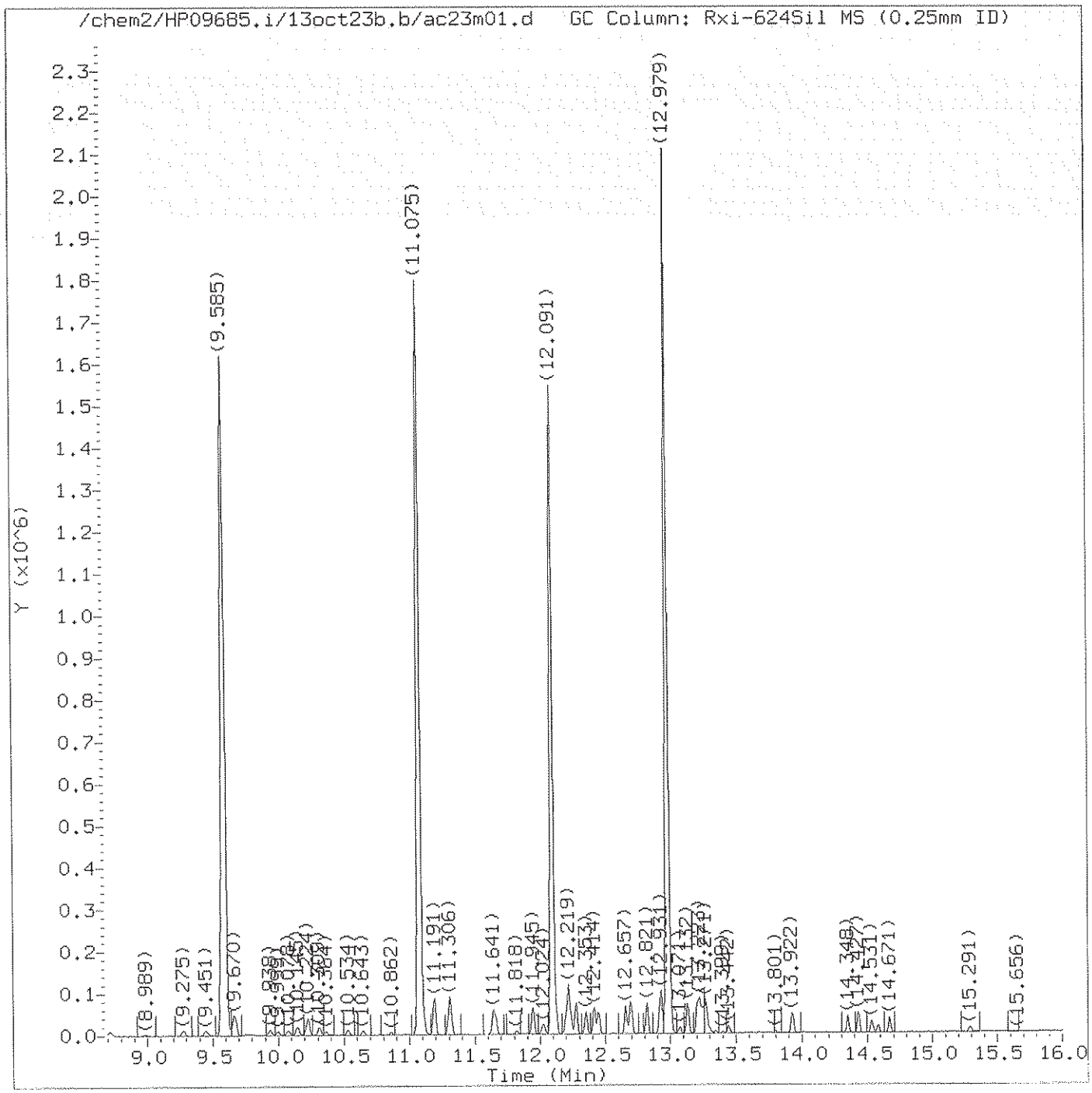
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Sara E. Johnson
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.907	85	9876	0.833
4) Chloromethane	(2)	2.017	50	11587	1.221
5) Vinyl Chloride	(2)	2.151	62	11603	1.276
9) Bromomethane	(2)	2.461	94	6939	1.044
10) Chloroethane	(2)	2.570	64	9012	1.707
11) Dichlorofluoromethane	(2)	2.789	67	16441	1.215
13) Trichlorofluoromethane	(2)	2.862	101	13174	0.963
15) Ethanol	(1)	2.984	45	10425	155.593
17) Freon 123a	(2)	3.179	67	12121A	1.275
18) Acrolein	(1)	3.276	56	15955	10.818
19) 1,1-Dichloroethene	(2)	3.404	96	8956	1.277
22) Freon 113	(2)	3.428	101	6664	0.870
20) Acetone	(2)	3.440	58	1620	2.046
23) 2-Propanol	(1)	3.593	45	9798	22.514
24) Methyl Iodide	(2)	3.599	142	14520	1.053
25) Carbon Disulfide	(2)	3.702	76	34177	1.387
27) Methyl Acetate	(2)	3.836	43	5260	1.066
29) Allyl Chloride	(2)	3.866	41	11286M	1.041
30)*t-Butyl alcohol-d10	(1)	4.037	65	127077	250.000
31) Methylene Chloride	(2)	4.049	84	10400	1.270
32) t-Butyl alcohol	(1)	4.164	59	13420M	19.226
33) Acrylonitrile	(2)	4.359	53	1733	0.614
34) Methyl Tertiary Butyl Ether	(2)	4.426	73	19288	0.883
35) trans-1,2-Dichloroethene	(2)	4.432	96	9514	1.169
38) n-Hexane	(2)	4.840	57	8291	0.765
40) 1,1-Dichloroethane	(2)	5.107	63	14691	1.037
41) di-Isopropyl ether	(2)	5.156	45	19803	0.864
42) 2-Chloro-1,3-butadiene	(2)	5.211	53	10856	1.031
44) Ethyl t-butyl ether	(2)	5.697	59	18525	0.836
45) 2-Butanone	(2)	5.904	43	6346	1.946
48) 2,2-Dichloropropane	(2)	5.941	77	12097	1.051
46) cis-1,2-Dichloroethene	(2)	5.941	96	8427	0.937
50) Propionitrile	(1)	5.996	54	18194	20.162
47) 1,2-Dichloroethene (Total)	(2)		96	17941	2.106
51) Methacrylonitrile	(2)	6.215	67	26586	8.703
52) Bromochloromethane	(2)	6.281	128	4331	0.946
53) Tetrahydrofuran	(1)	6.288	71	1730	2.025
54) Chloroform	(2)	6.421	83	13878	0.999

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Sara E. Johnson
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.646	113	335834	49.575
56) 1,1,1-Trichloroethane	(2)	6.653	97	17200	1.278
57) Cyclohexane	(2)	6.750	56	11406	0.854
59) Carbon Tetrachloride	(2)	6.865	117	12129	1.102
58) 1,1-Dichloropropene	(2)	6.865	75	12792	1.173
60) Isobutyl Alcohol	(1)	7.005	41	10846	46.681
61)$1,2-Dichloroethane-d4	(2)	7.109	102	76645	49.889
62) Benzene	(2)	7.133	78	36946	1.114
64) 1,2-Dichloroethane	(2)	7.218	62	9824	0.986
65) t-Amyl methyl ether	(2)	7.328	73	17043	0.800
67)*Fluorobenzene	(2)	7.541	96	1385690	50.000
69) n-Heptane	(2)	7.547	43	9122	0.814
70) n-Butanol	(1)	7.906	56	15035M	73.812
72) Trichloroethene	(2)	8.027	95	10011	1.164
73) Methylcyclohexane	(2)	8.338	83	10760	0.747
74) 1,2-Dichloropropane	(2)	8.368	63	7920	0.953
76) Methyl Methacrylate	(2)	8.453	69	3666	0.709
77) 1,4-Dioxane	(1)	8.472	88	2809	37.322
78) Dibromomethane	(2)	8.484	93	4514	0.878
81) Bromodichloromethane	(2)	8.715	83	8607	0.831
82) 2-Nitropropane	(1)	8.989	41	2520	4.292
84) cis-1,3-Dichloropropene	(2)	9.275	75	9310	0.744
85) 4-Methyl-2-pentanone	(2)	9.445	43	9539	1.377
86)$Toluene-d8	(3)	9.585	98	1342612	50.034
87) Toluene	(3)	9.670	92	23265	1.117
88) trans-1,3-Dichloropropene	(3)	9.938	75	8656	0.762
89) Ethyl Methacrylate	(3)	9.999	69	6271	0.672
90) 1,1,2-Trichloroethane	(3)	10.145	97	7065	1.017
92) Tetrachloroethene	(3)	10.230	166	11831	1.240
93) 1,3-Dichloropropane	(3)	10.309	76	11719	0.973
95) 2-Hexanone	(3)	10.357	43	6469M	1.322
97) Dibromochloromethane	(3)	10.528	129	6528	0.812
98) 1,2-Dibromoethane	(3)	10.643	107	6545	0.904
99)*Chlorobenzene-d5	(3)	11.075	117	1033918	50.000
100) Chlorobenzene	(3)	11.100	112	25463	1.038
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	7339	0.864
102) Ethylbenzene	(3)	11.191	91	41502	1.058
103) m+p-Xylene	(3)	11.306	106	31801	1.983

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.641	106	13268	0.852
106) Styrene	(3)	11.659	104	17891	0.728
105) Xylene (Total)	(3)		106	45069	2.836
107) Bromoform	(3)	11.824	173	3988	0.809
108) Isopropylbenzene	(3)	11.945	105	38673	0.971
111) Cyclohexanone	(1)	12.024	55	10216	35.792
112)$4-Bromofluorobenzene	(3)	12.091	95	479668	48.078
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	9068	1.016
114) Bromobenzene	(4)	12.207	156	10677	1.031
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	19651	8.497
116) 1,2,3-Trichloropropane	(4)	12.243	110	2958	1.077
117) n-Propylbenzene	(4)	12.274	91	50636	1.152
119) 2-Chlorotoluene	(4)	12.353	126	10083	1.023
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	30635	0.943
123) 4-Chlorotoluene	(4)	12.444	126	10093	0.989
126) tert-Butylbenzene	(4)	12.657	134	8118	1.095
127) Pentachloroethane	(4)	12.687	167	5175	0.819
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	29851	0.893
129) sec-Butylbenzene	(4)	12.821	105	42642M	1.039
131) 1,3-Dichlorobenzene	(4)	12.925	146	20415	1.061
132) p-Isopropyltoluene	(4)	12.931	119	34404	0.937
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	529362	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	21656	1.095
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	32719M	0.936
136) Benzyl Chloride	(4)	13.077	126	2154	0.573
137) 1,3-Diethylbenzene	(4)	13.132	119	20837	0.931
138) 1,4-Diethylbenzene	(4)	13.205	119	20856	0.934
139) n-Butylbenzene	(4)	13.223	92	17933M	1.007
140) 1,2-Dichlorobenzene	(4)	13.253	146	19147	1.031
141) 1,2-Diethylbenzene	(4)	13.271	119	18104	0.960
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	1293	0.810
145) 1,3,5-Trichlorobenzene	(4)	13.929	180	14749	0.979
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	11897	0.921
147) Hexachlorobutadiene	(4)	14.433	225	8705	1.191
148) Naphthalene	(4)	14.531	128	22439	0.763
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	10861	0.895
150) 2-Methylnaphthalene	(4)	15.291	142	7475	4.196

M = Compound was manually integrated.
* = Compound is an internal standard.
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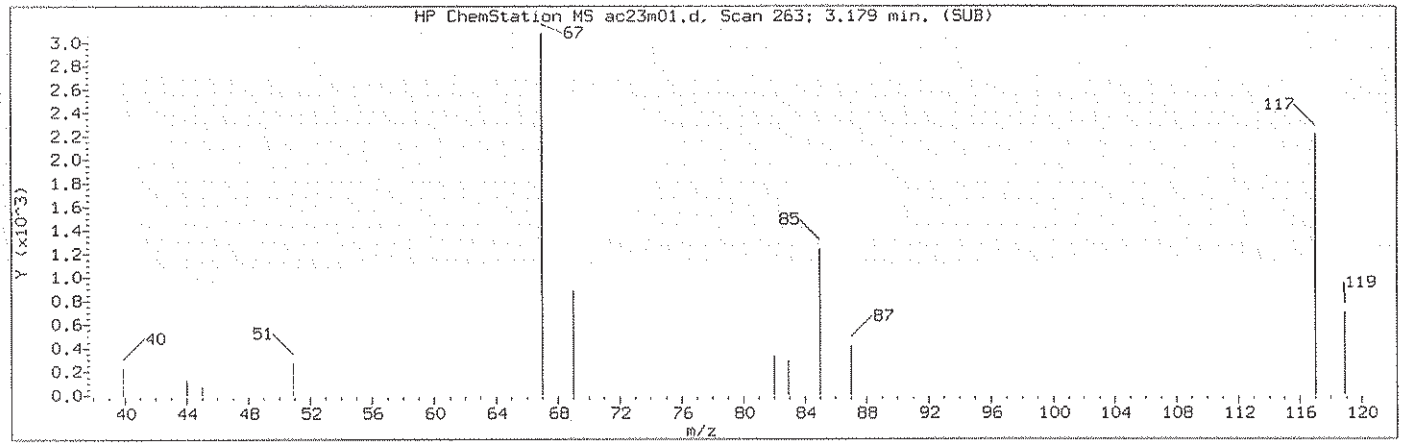
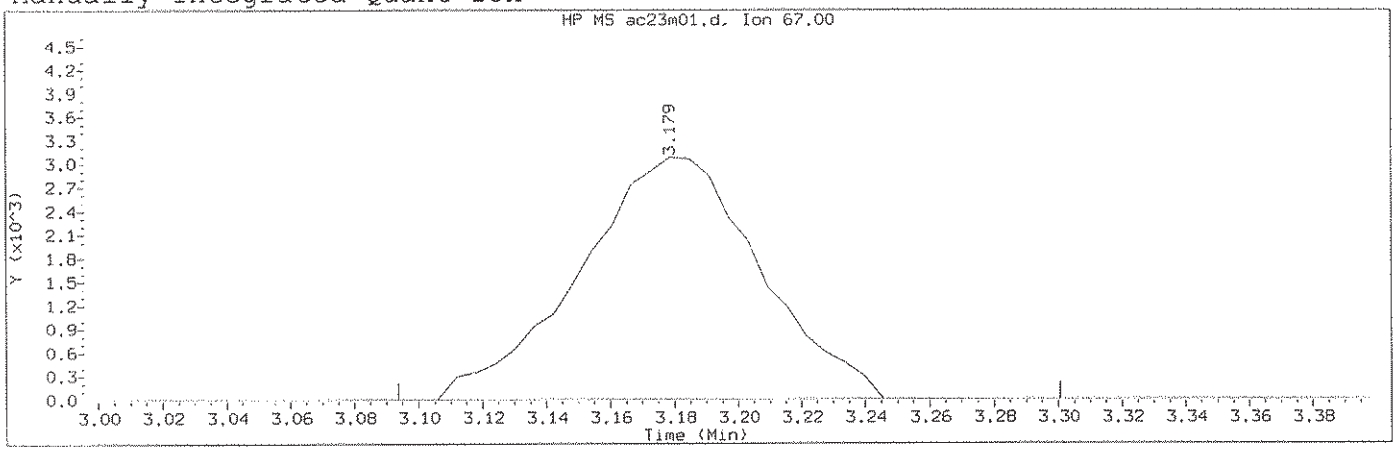
Digitally signed by Sara E. Johnson
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

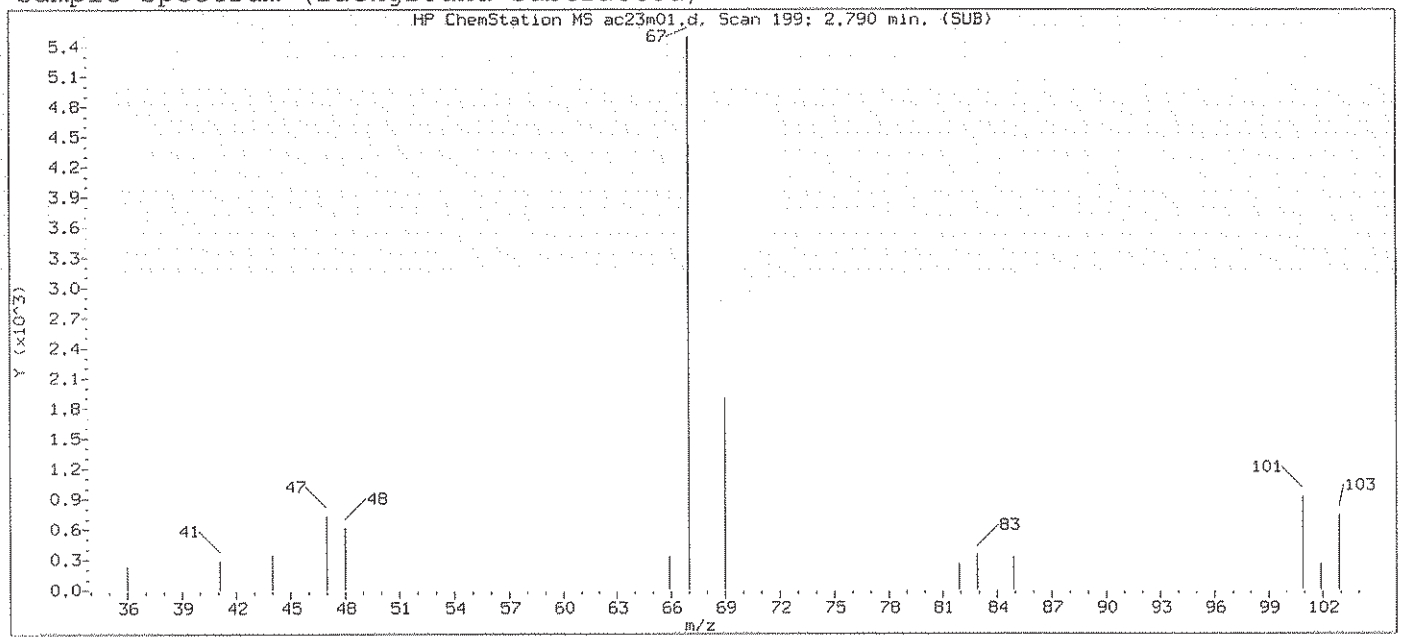
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 263		
Retention Time (minutes)	: 3.179		
Quant Ion	: 67.00		
Area (flag)	: 12121A		
On-Column Amount (ng)	: 1.2750		
Integration start scan	: 248	Integration stop scan:	282
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

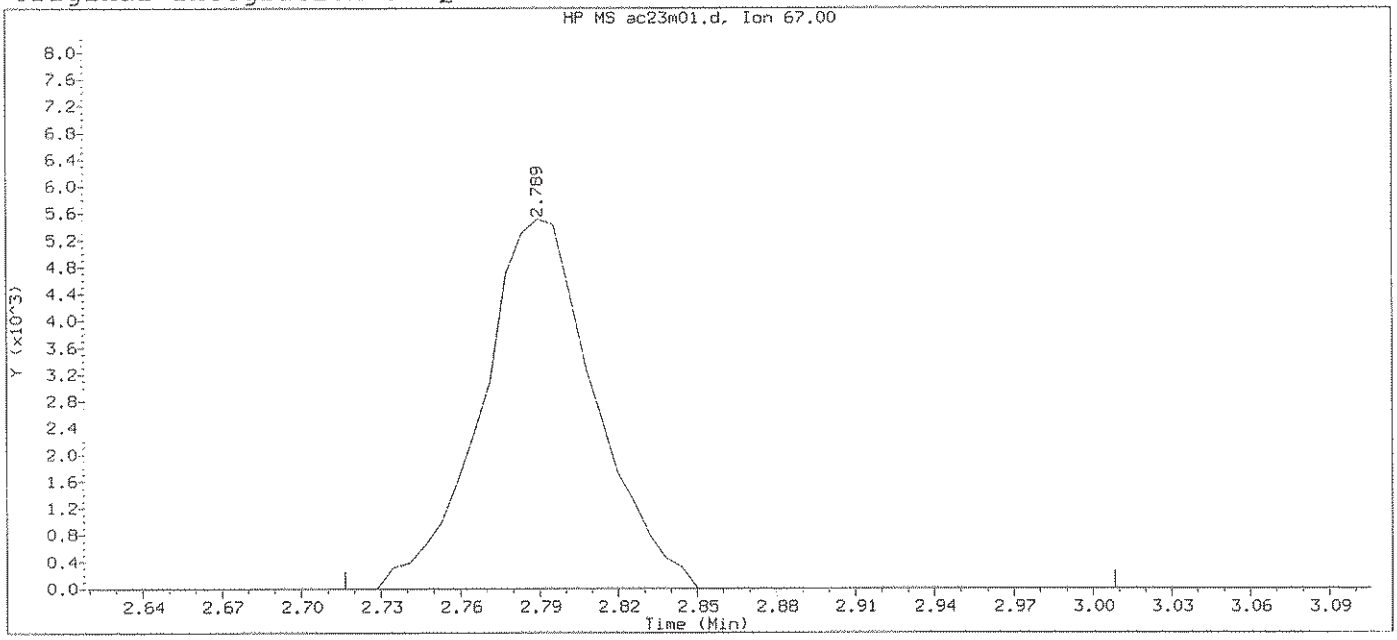
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

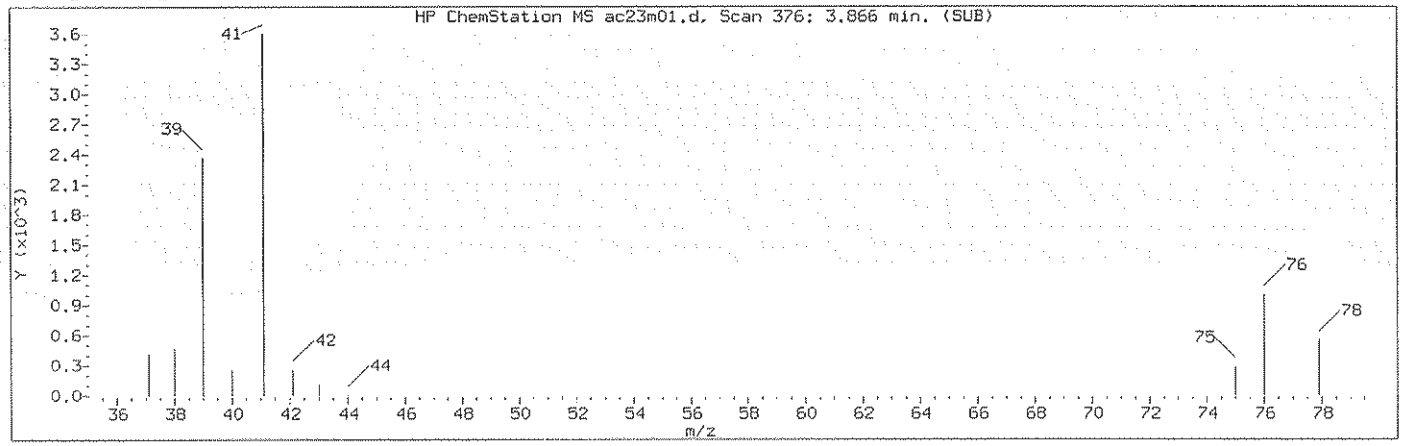
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

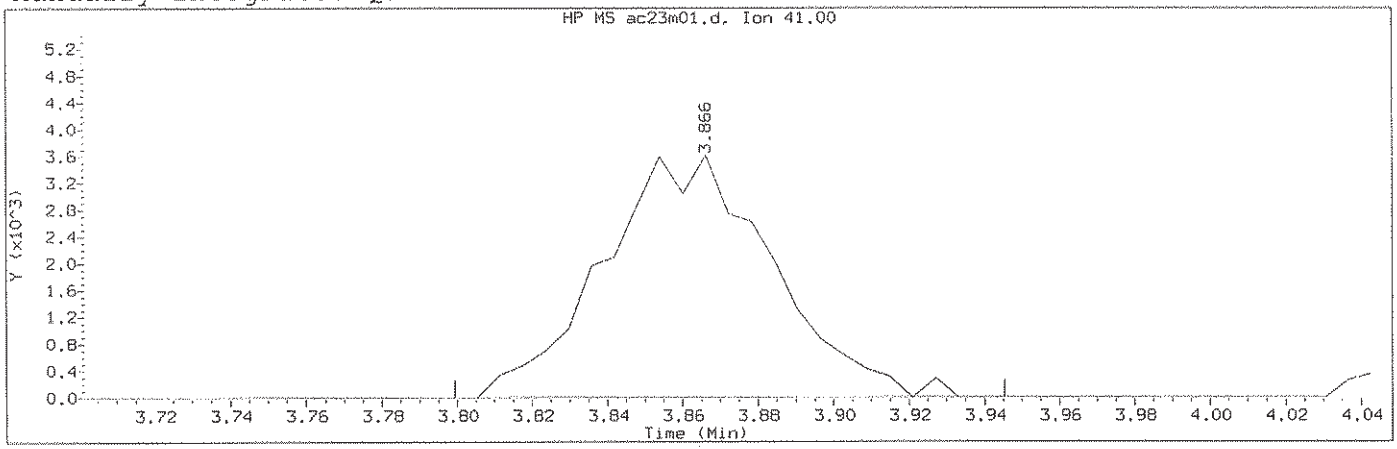
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 199		
Retention Time (minutes)	: 2.789		
Quant Ion	: 67.00		
Area	: 16441		
On-column Amount (ng)	: 1.2153		
Integration start scan	: 186	Integration stop scan:	234
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

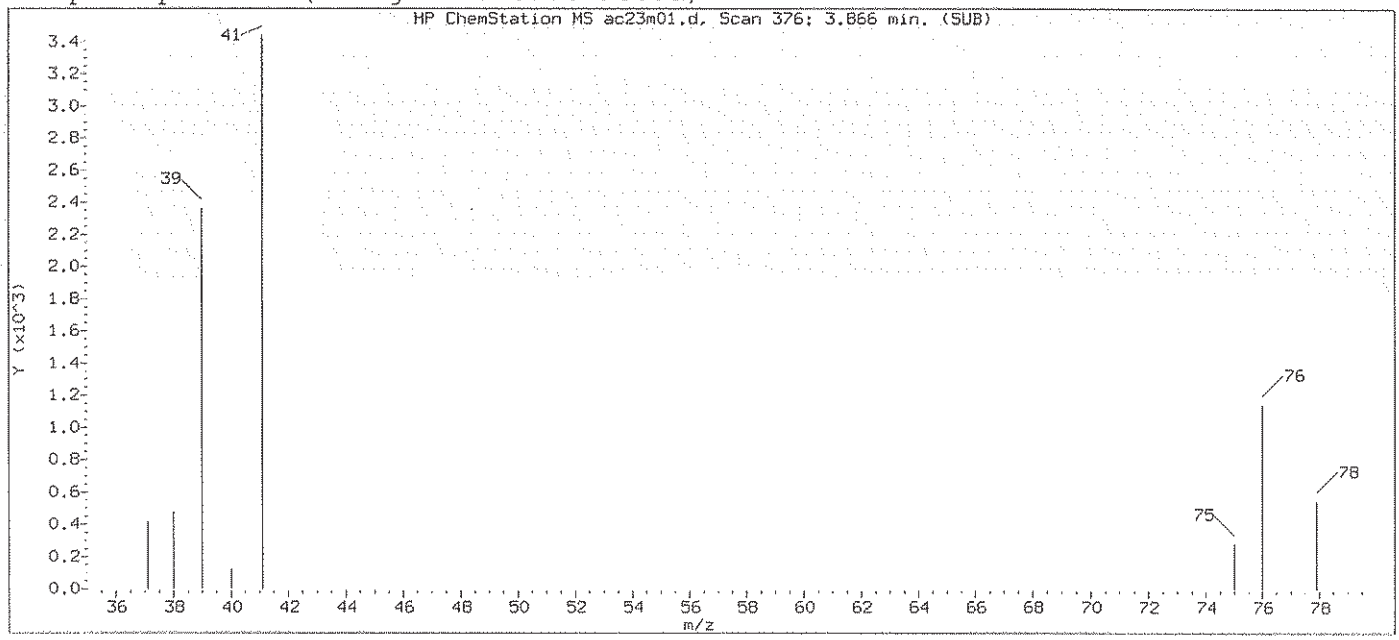
Compound Number : 29
Compound Name : Allyl Chloride
Scan Number : 376
Retention Time (minutes): 3.866
Quant Ion : 41.00
Area (flag) : 11286M
On-Column Amount (ng) : 1.0410
Integration start scan : 364 Integration stop scan: 388
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

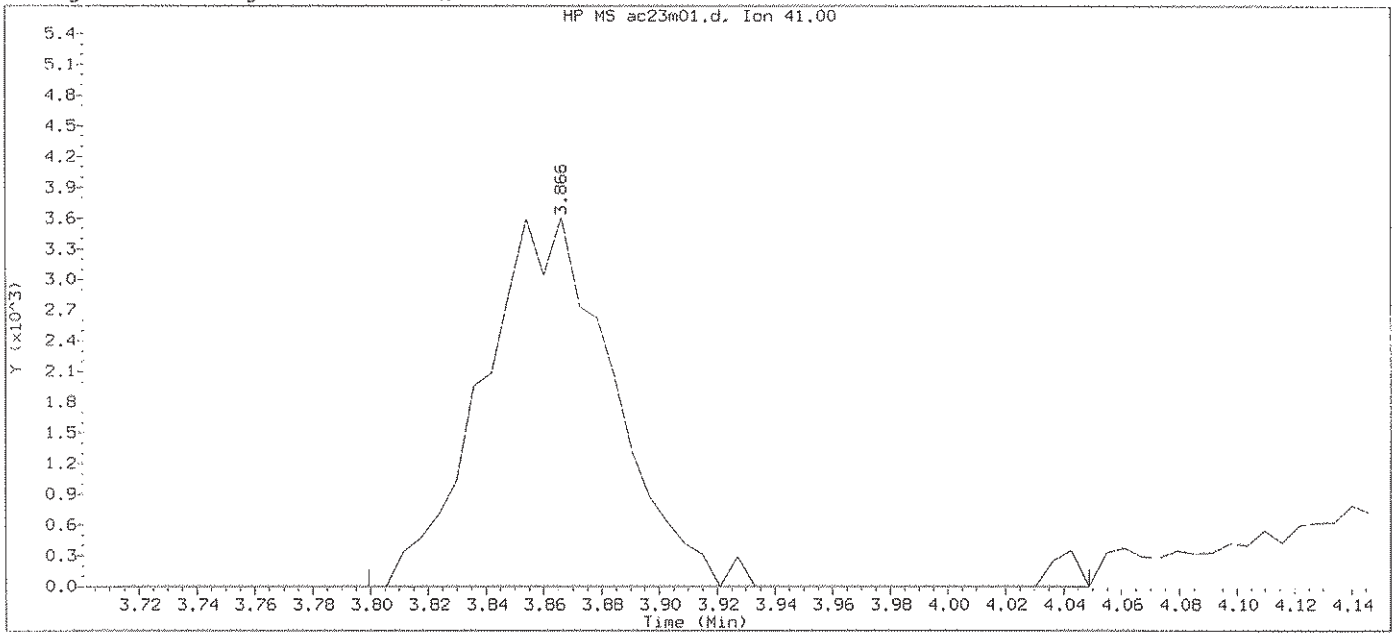
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

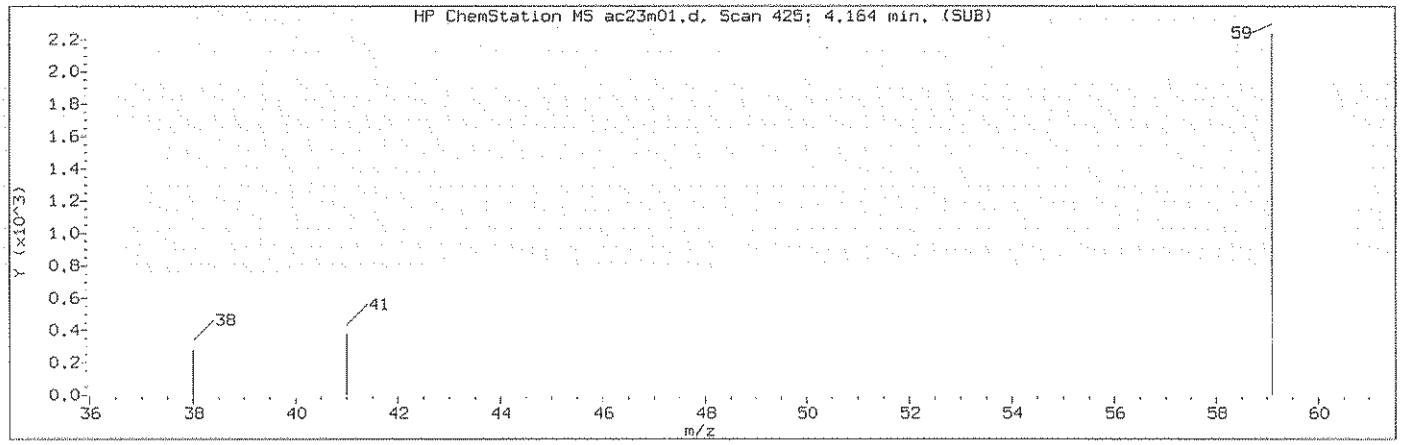
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

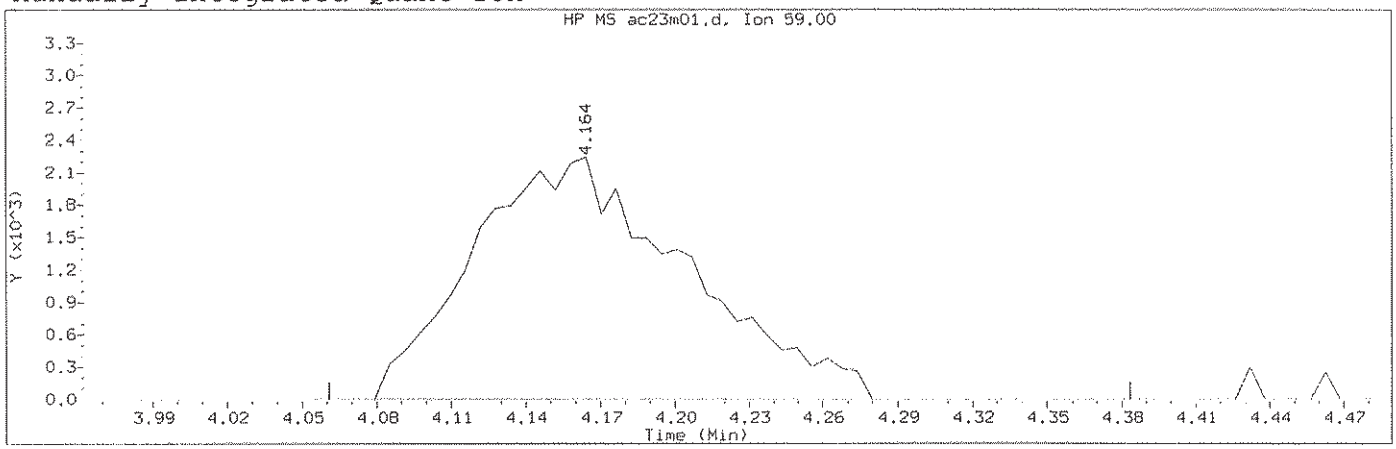
Compound Number	: 29		
Compound Name	: Allyl Chloride		
Scan Number	: 376		
Retention Time (minutes)	: 3.866		
Quant Ion	: 41.00		
Area	: 11507		
On-column Amount (ng)	: 1.0614		
Integration start scan	: 364	Integration stop scan:	405
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

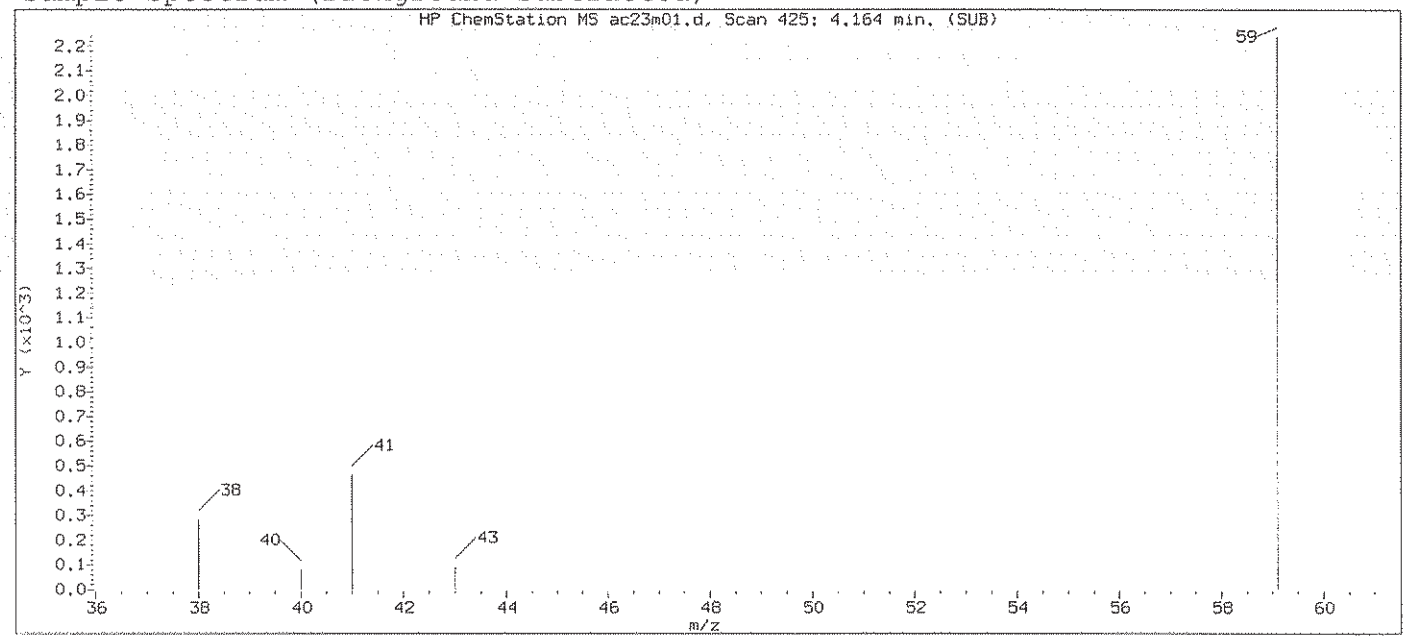
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 425		
Retention Time (minutes)	: 4.164		
Quant Ion	: 59.00		
Area (flag)	: 13420M		
On-Column Amount (ng)	: 19.2262		
Integration start scan	: 407	Integration stop scan:	460
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

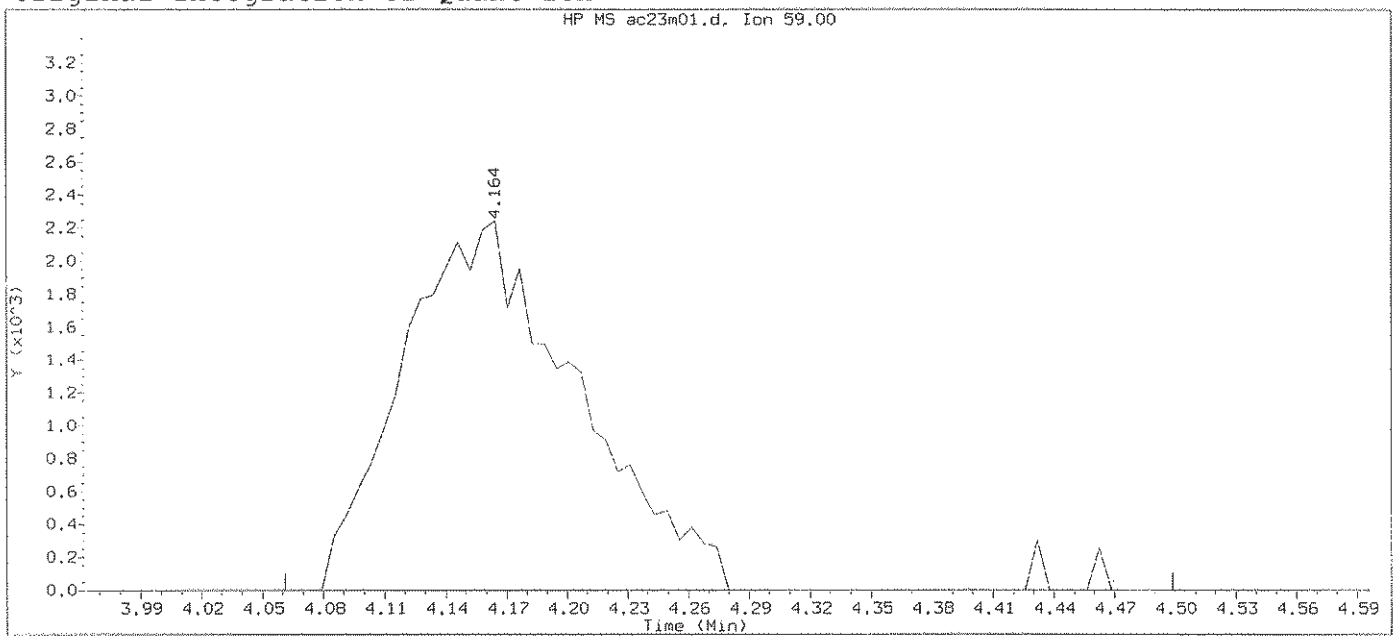
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

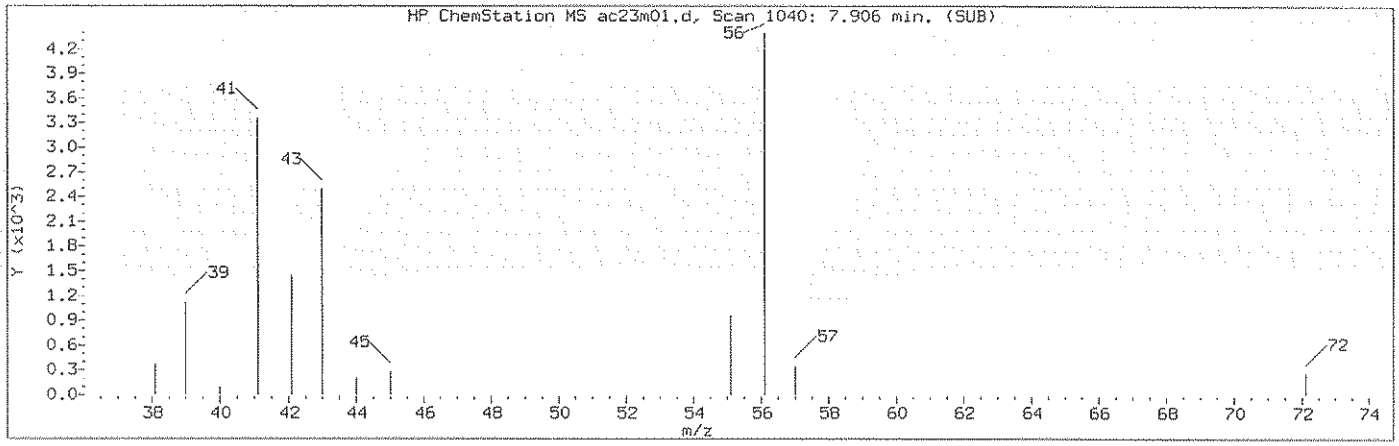
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

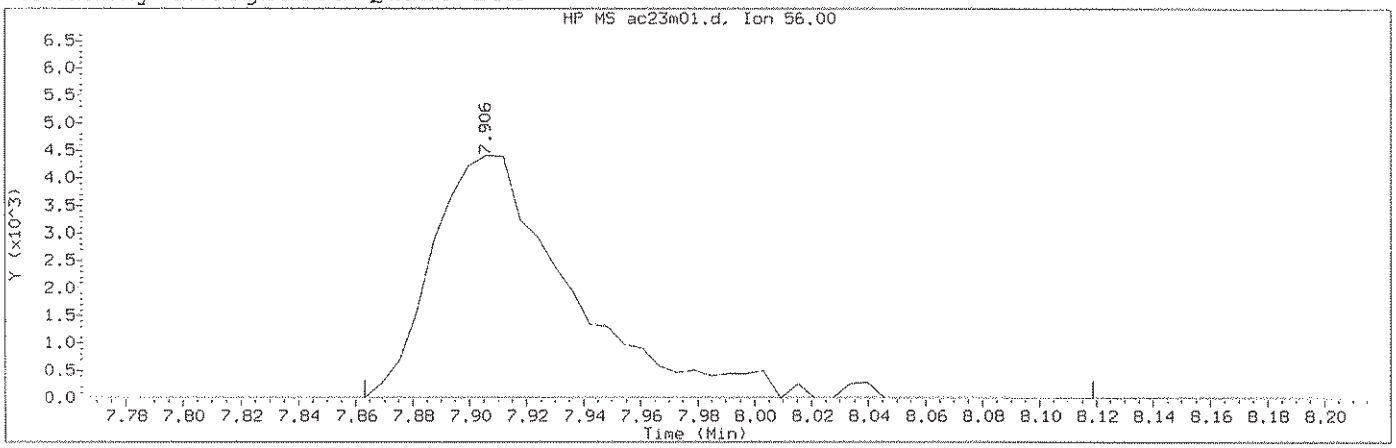
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 425		
Retention Time (minutes)	: 4.164		
Quant Ion	: 59.00		
Area	: 13624		
On-column Amount (ng)	: 19.4484		
Integration start scan	: 407	Integration stop scan:	479
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

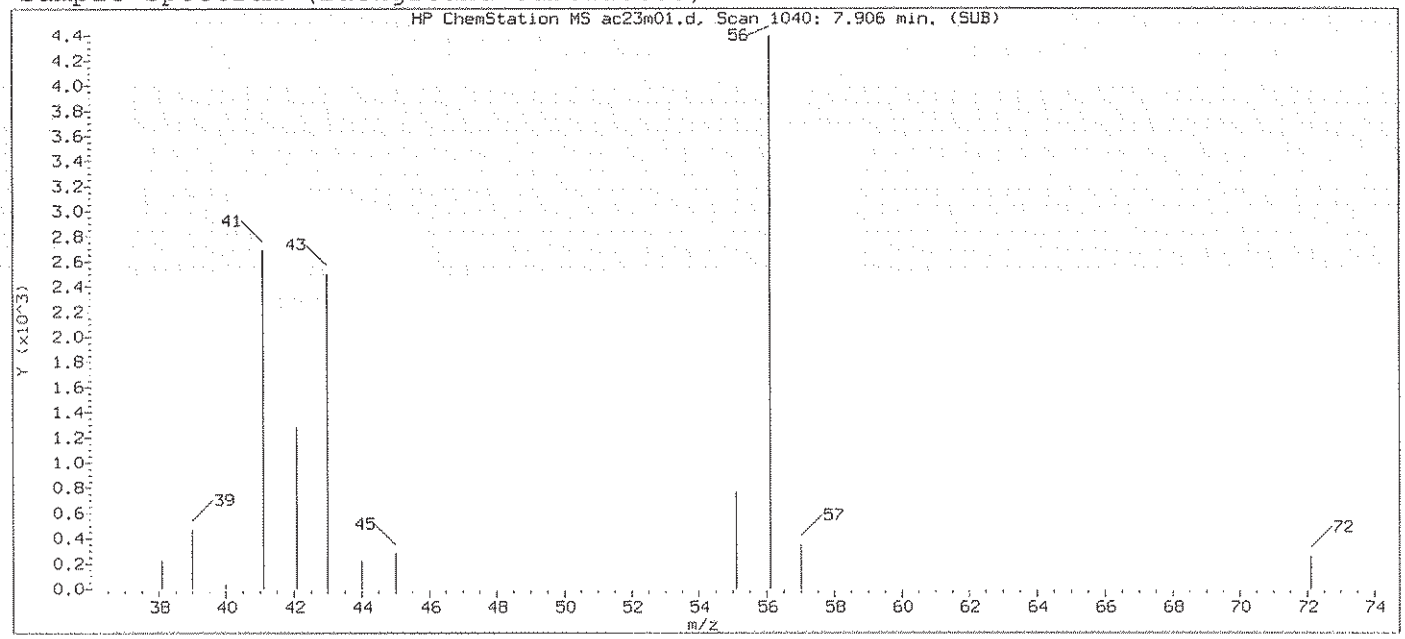
Compound Number : 70
Compound Name : n-Butanol
Scan Number : 1040
Retention Time (minutes): 7.906
Quant Ion : 56.00
Area (flag) : 15035M
On-Column Amount (ng) : 73.8116
Integration start scan : 1032 Integration stop scan: 1074
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

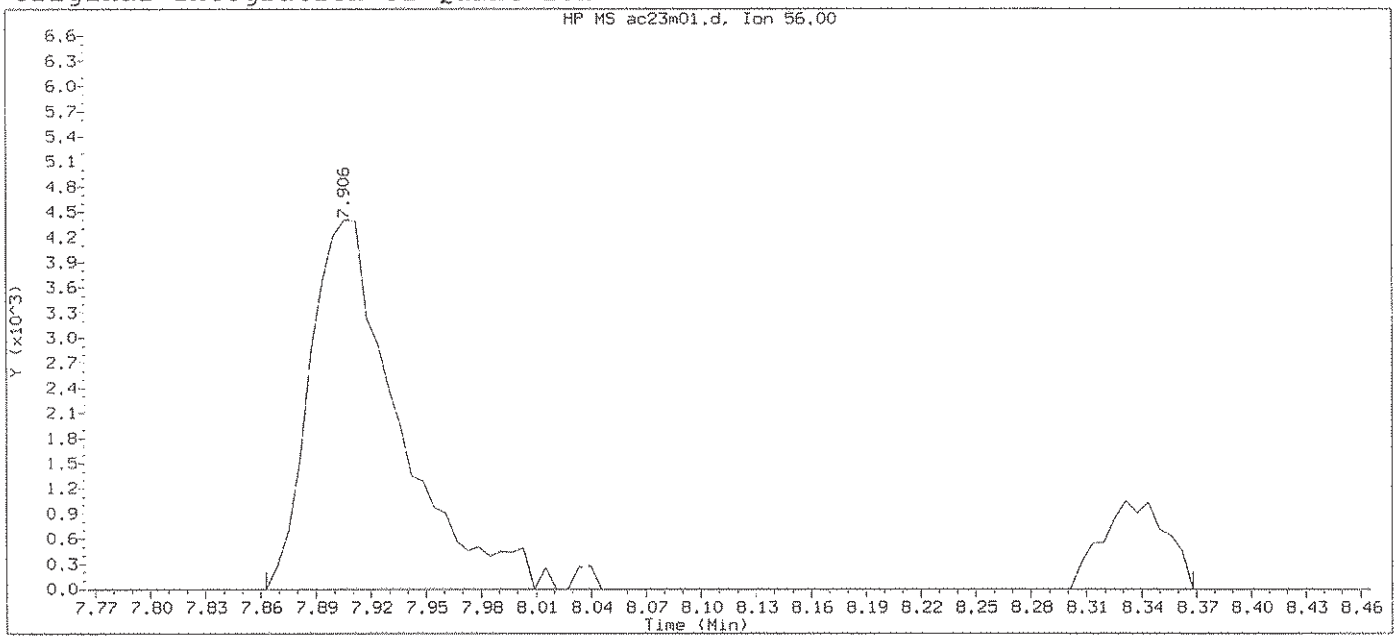
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

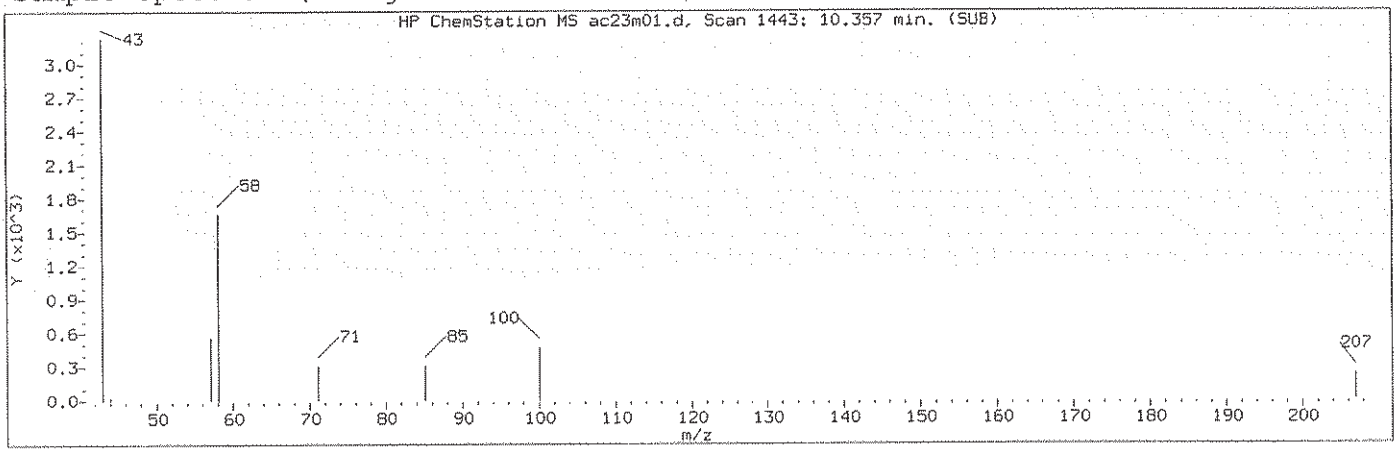
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

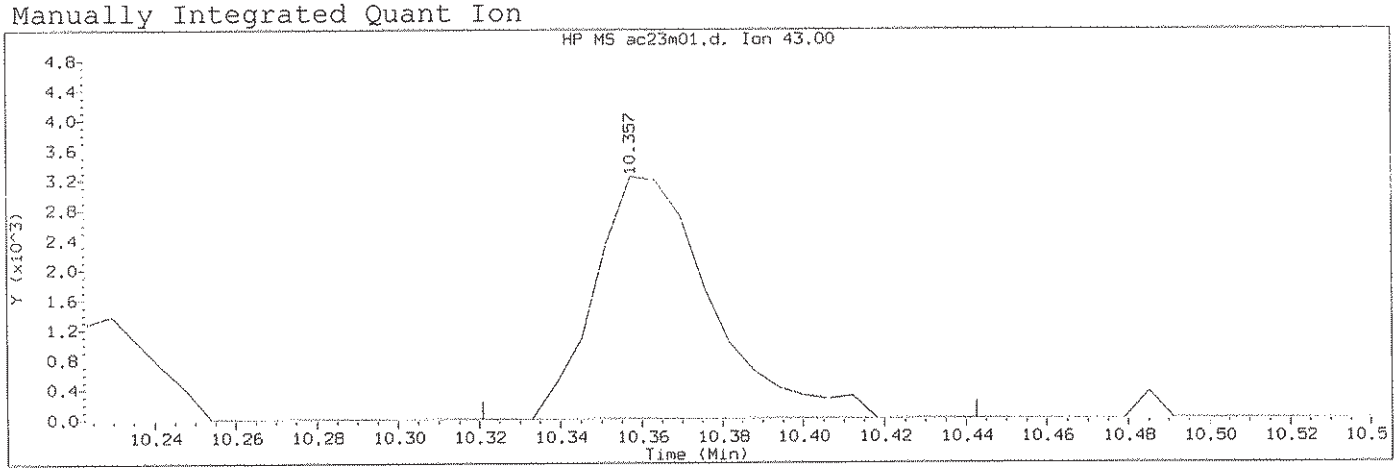
Compound Number	: 70		
Compound Name	: n-Butanol		
Scan Number	: 1040		
Retention Time (minutes)	: 7.906		
Quant Ion	: 56.00		
Area	: 17607		
On-column Amount (ng)	: 86.4382		
Integration start scan	: 1032	Integration stop scan:	1115
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

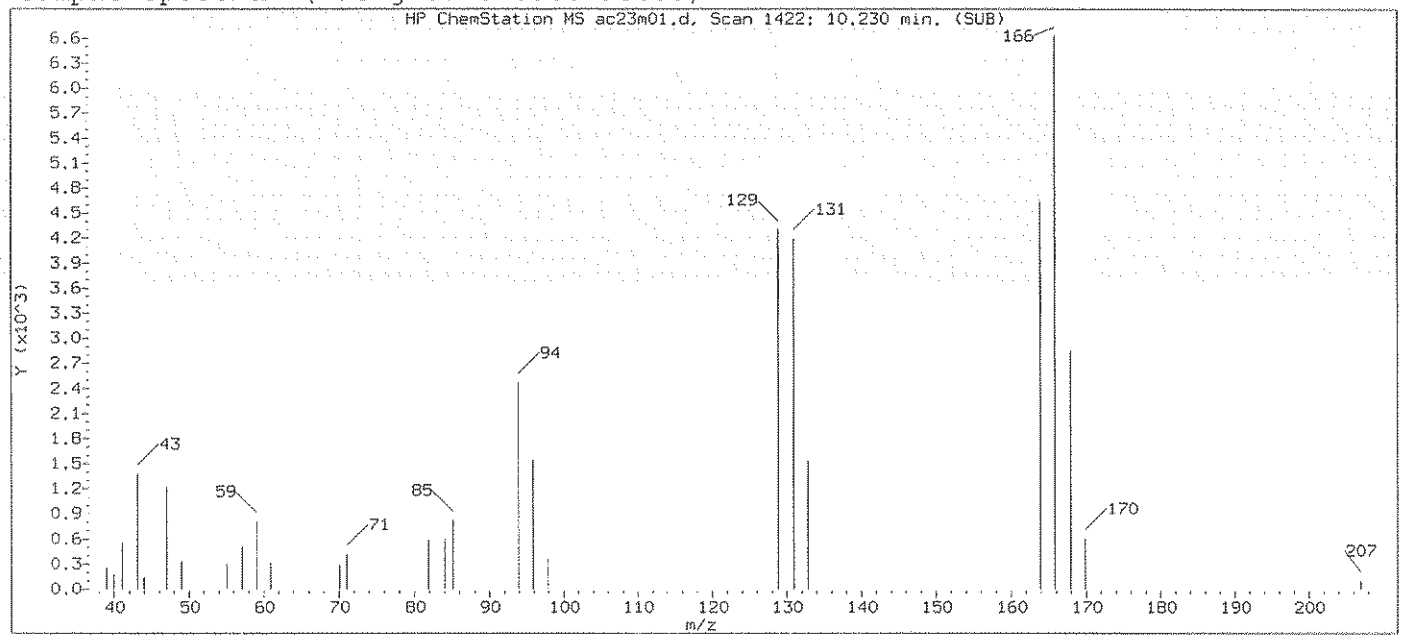
Compound Number : 95
Compound Name : 2-Hexanone
Scan Number : 1443
Retention Time (minutes): 10.357
Quant Ion : 43.00
Area (flag) : 6469M
On-Column Amount (ng) : 1.3221
Integration start scan : 1436 Integration stop scan: 1456
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

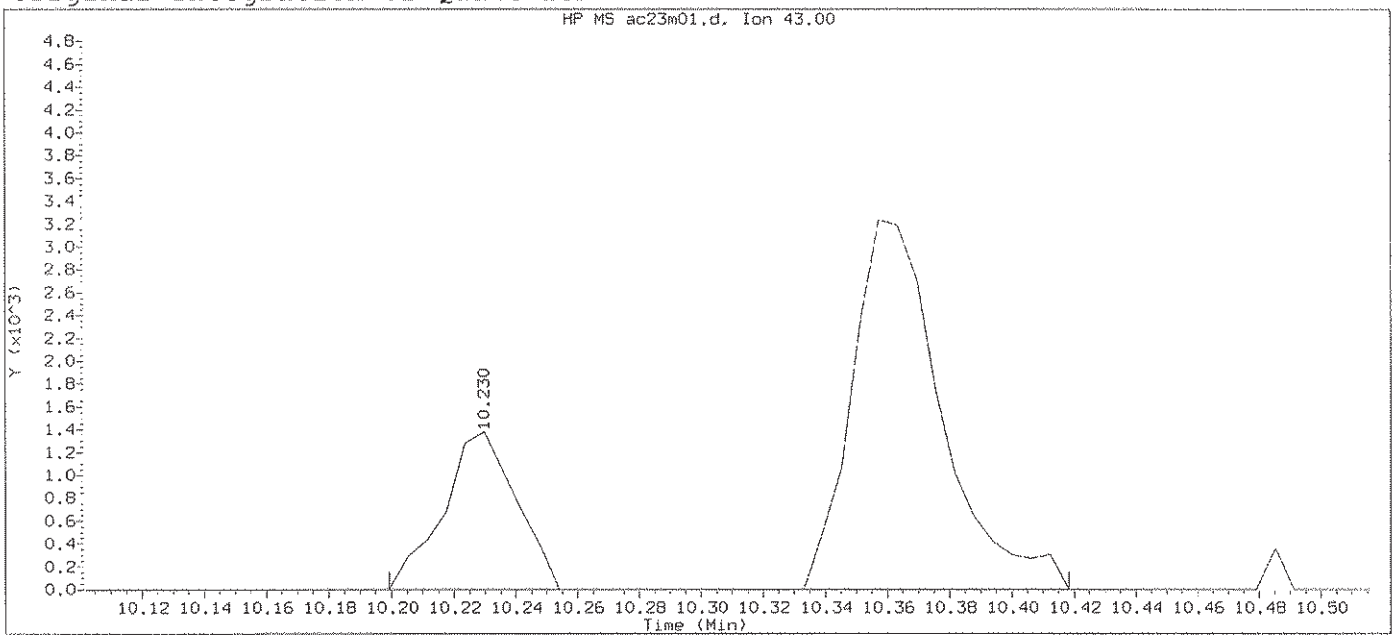
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

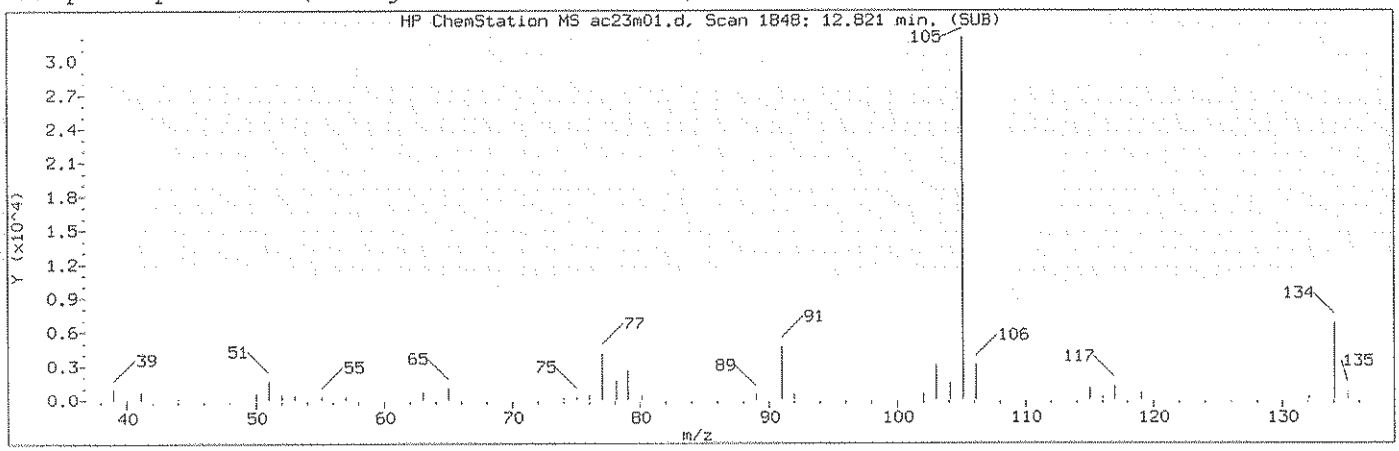
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

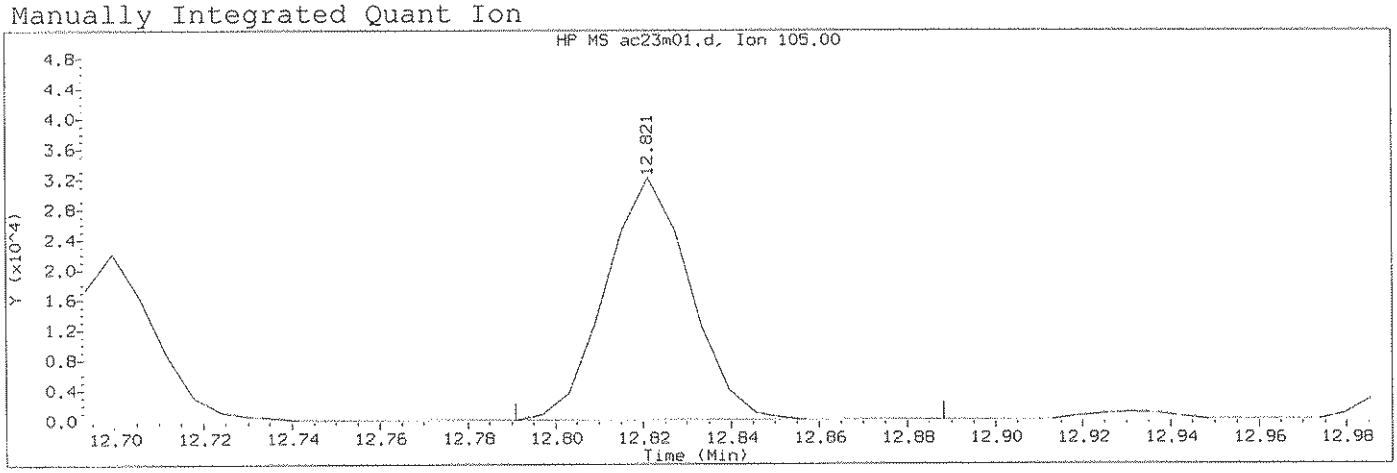
Compound Number	: 95		
Compound Name	: 2-Hexanone		
Scan Number	: 1422		
Retention Time (minutes)	: 10.230		
Quant Ion	: 43.00		
Area	: 8726		
On-column Amount (ng)	: 1.7834		
Integration start scan	: 1416	Integration stop scan:	1452
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

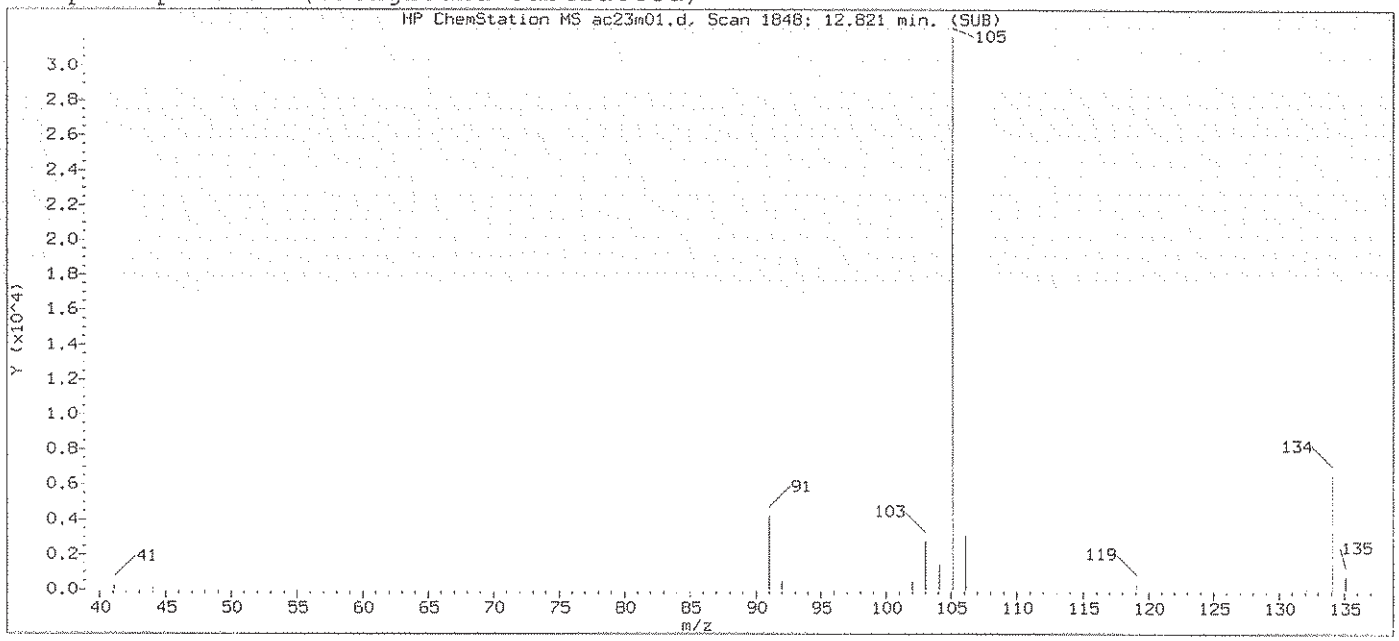
Compound Number : 129
Compound Name : sec-Butylbenzene
Scan Number : 1848
Retention Time (minutes): 12.821
Quant Ion : 105.00
Area (flag) : 42642M
On-Column Amount (ng) : 1.0387
Integration start scan : 1842 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

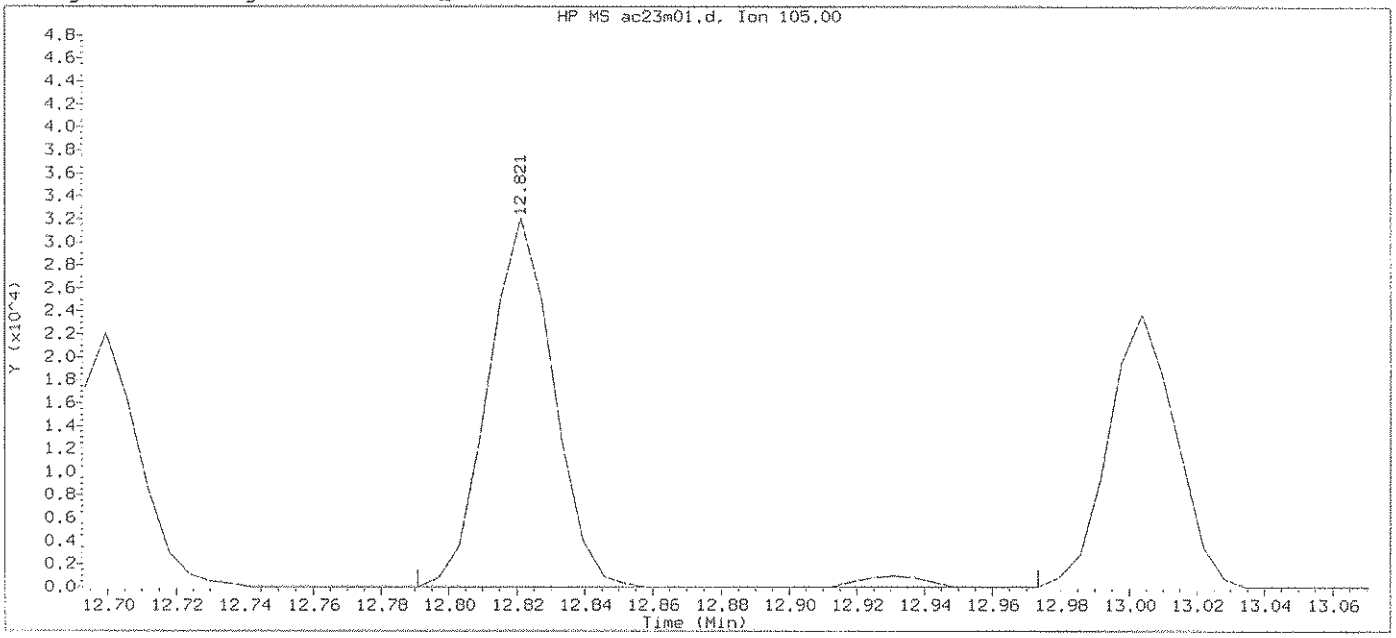
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

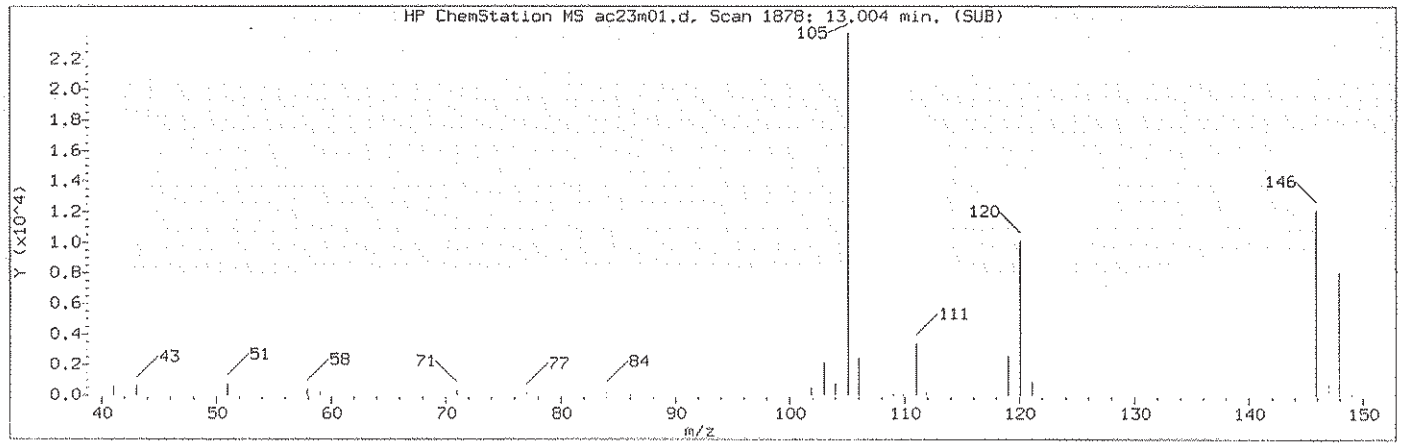
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

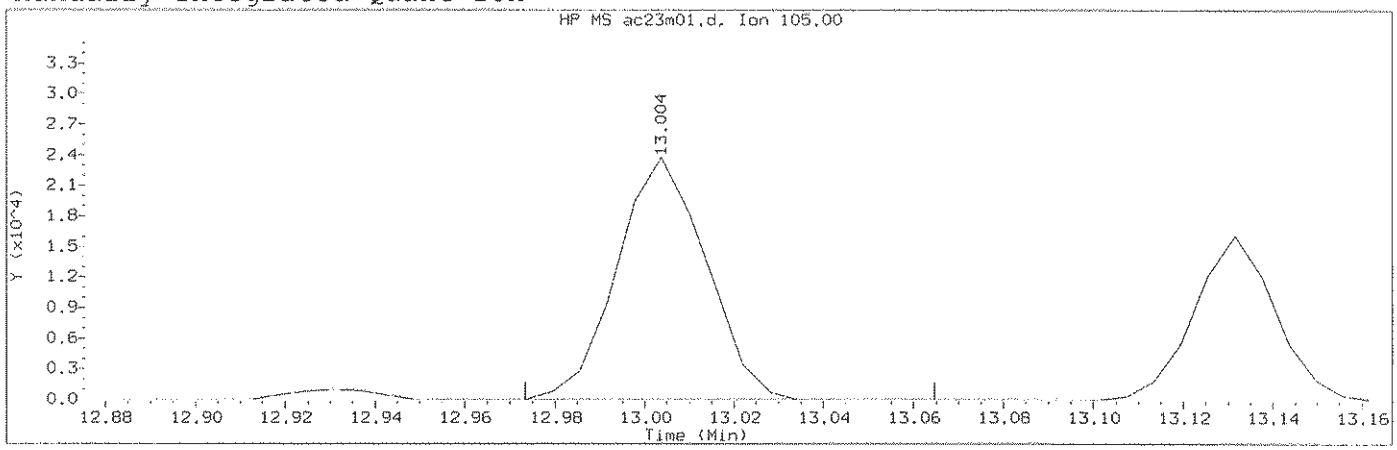
Compound Number	: 129		
Compound Name	: sec-Butylbenzene		
Scan Number	: 1848		
Retention Time (minutes)	: 12.821		
Quant Ion	: 105.00		
Area	: 43911		
On-column Amount (ng)	: 1.0697		
Integration start scan	: 1842	Integration stop scan:	1872
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

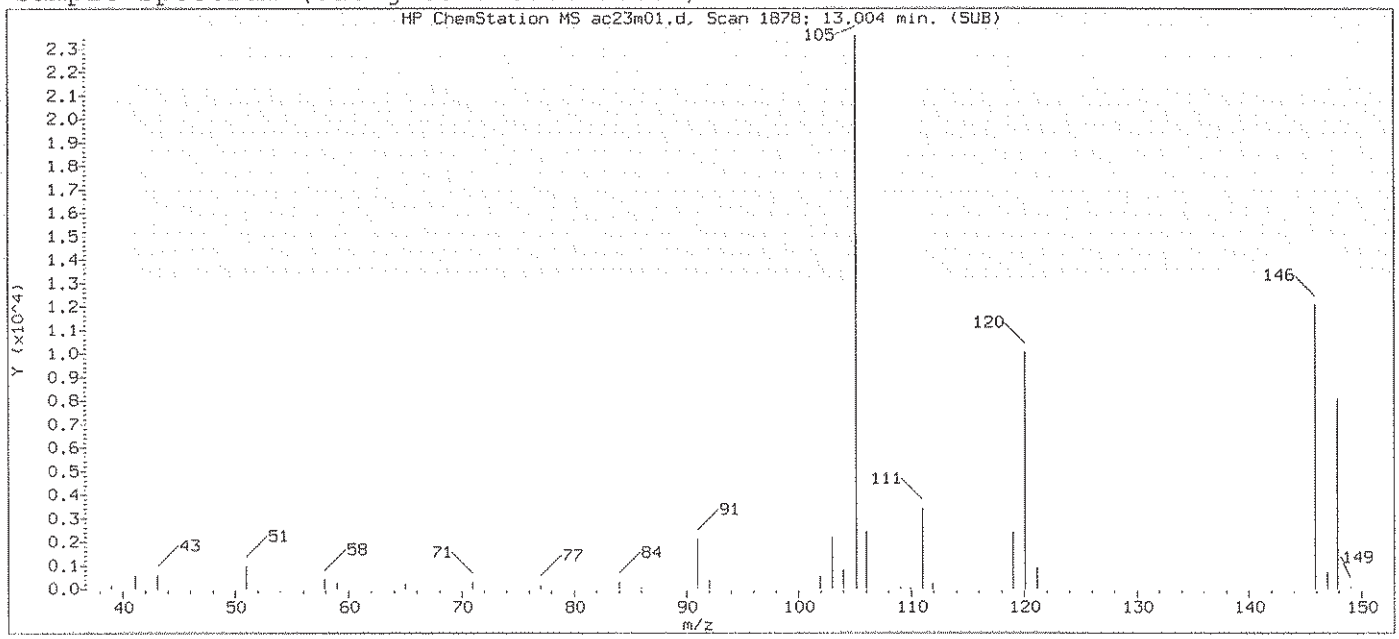
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1878
Retention Time (minutes): 13.004
Quant Ion : 105.00
Area (flag) : 32719M
On-Column Amount (ng) : 0.9361
Integration start scan : 1872 Integration stop scan: 1887
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

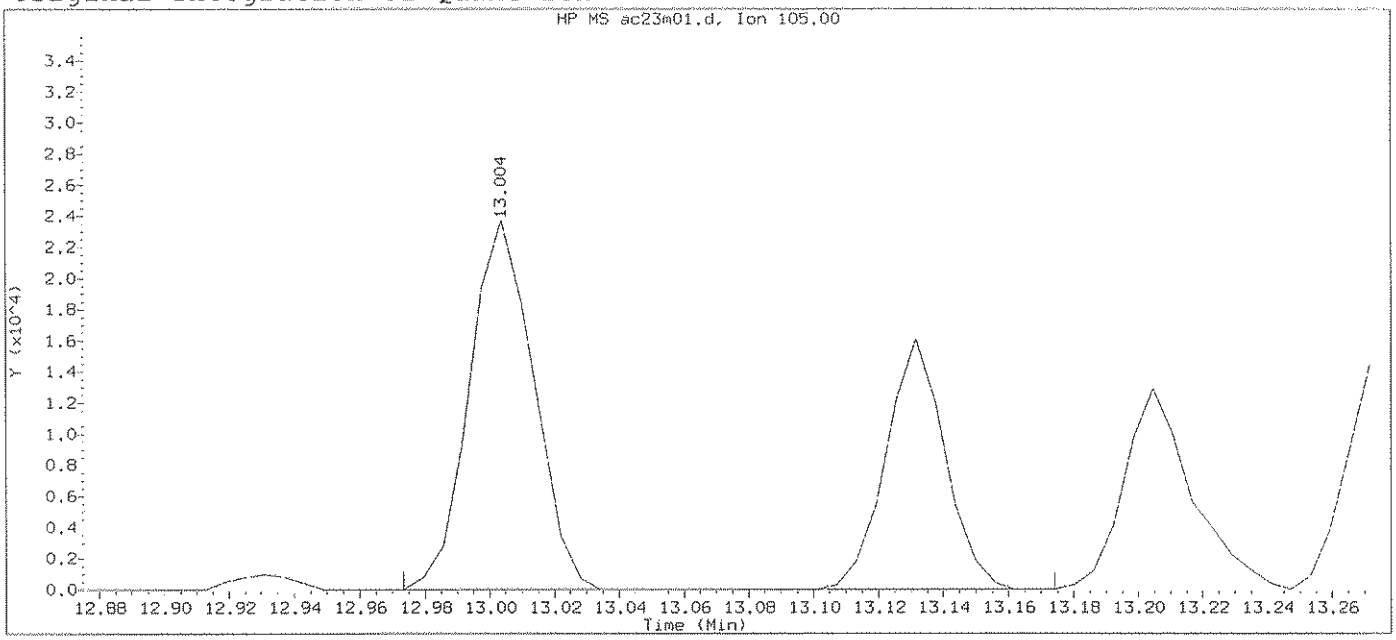
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

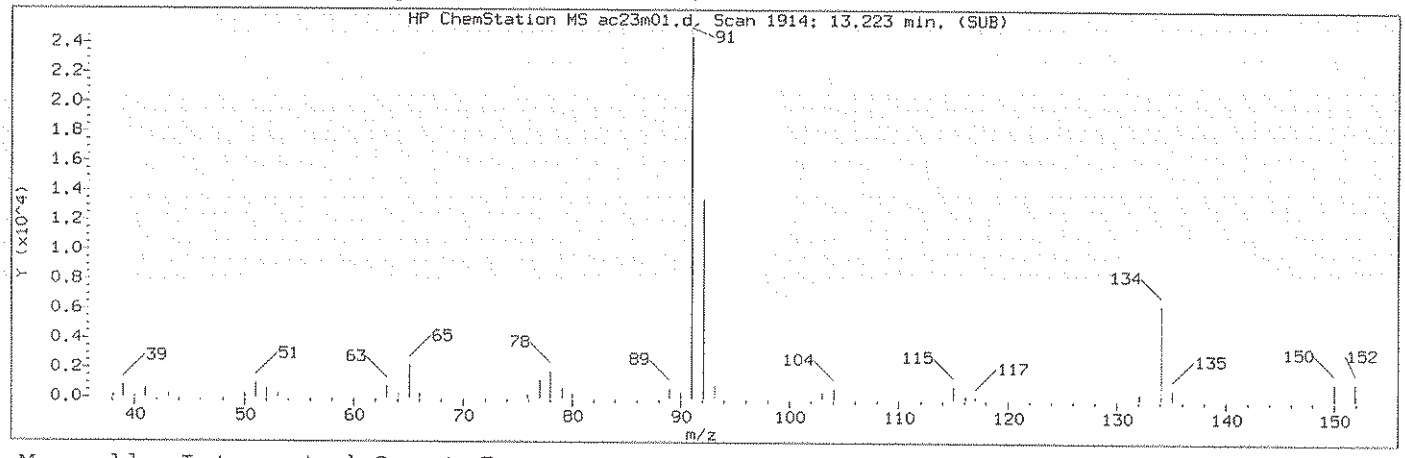
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

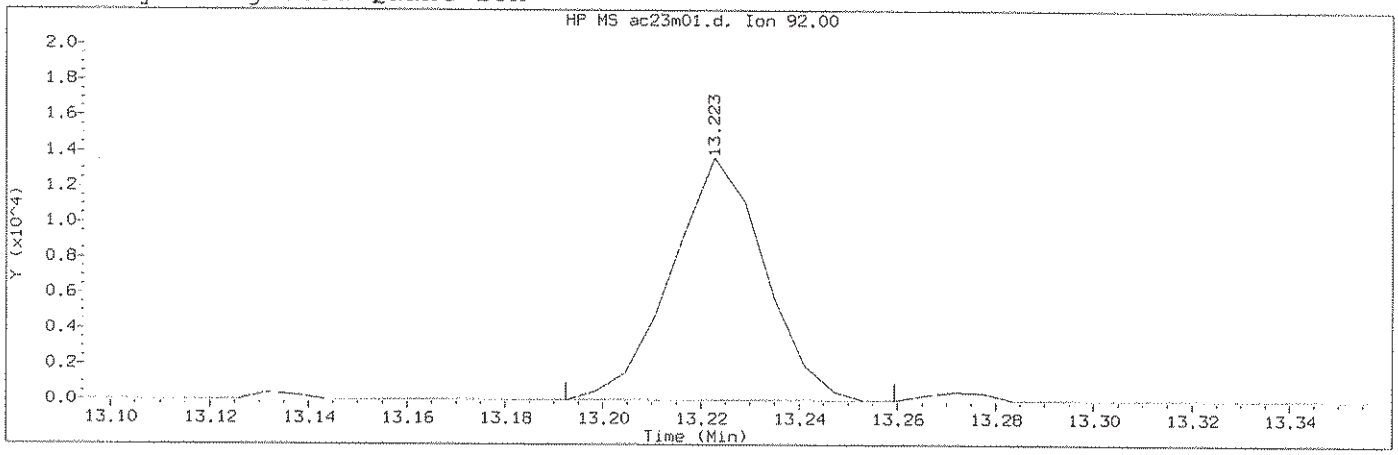
Compound Number	: 135		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1878		
Retention Time (minutes)	: 13.004		
Quant Ion	: 105.00		
Area	: 52976		
On-column Amount (ng)	: 1.5156		
Integration start scan	: 1872	Integration stop scan:	1905
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:32 cbs01947

Sample Name: VSTD001 Lab Sample ID: VSTD001

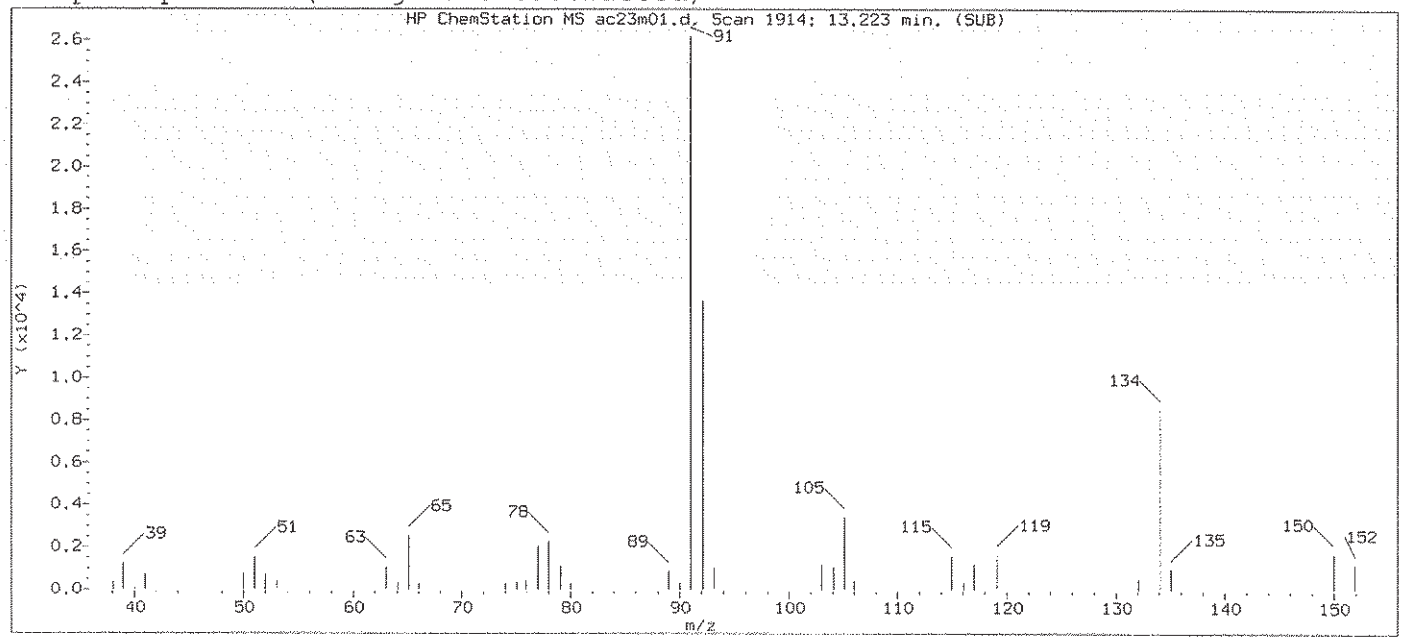
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 17933M
On-Column Amount (ng) : 1.0071
Integration start scan : 1908 Integration stop scan: 1919
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

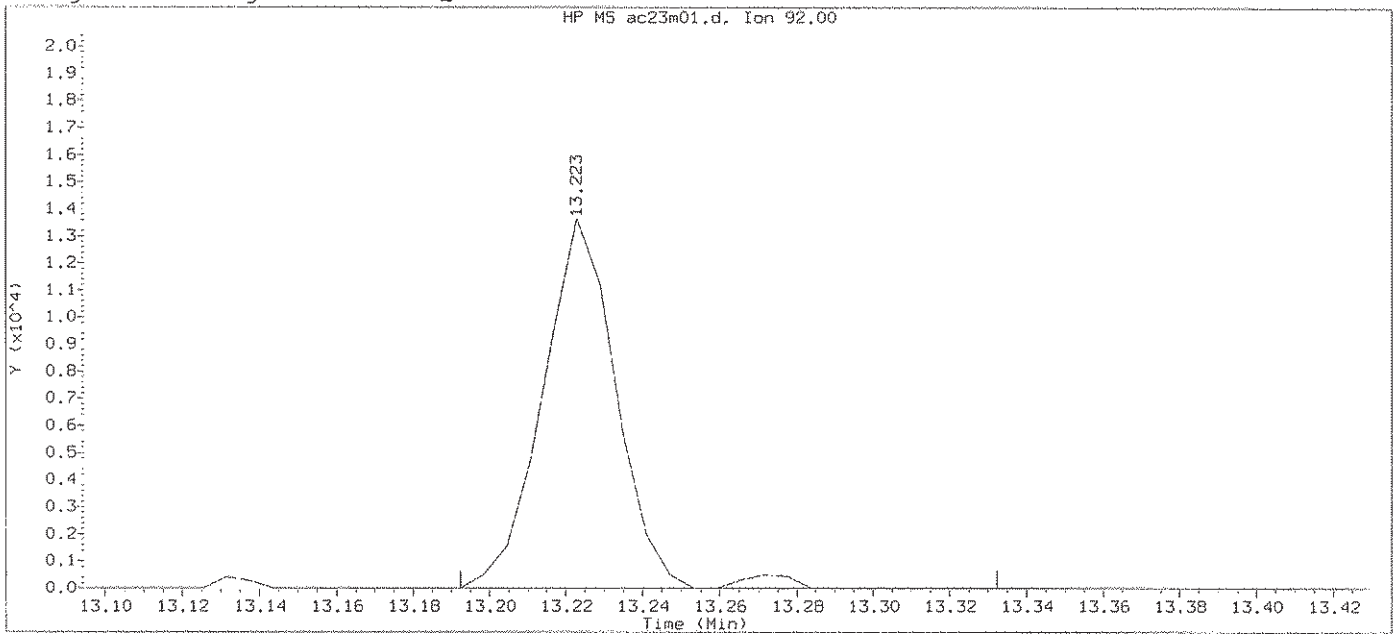
Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00. Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



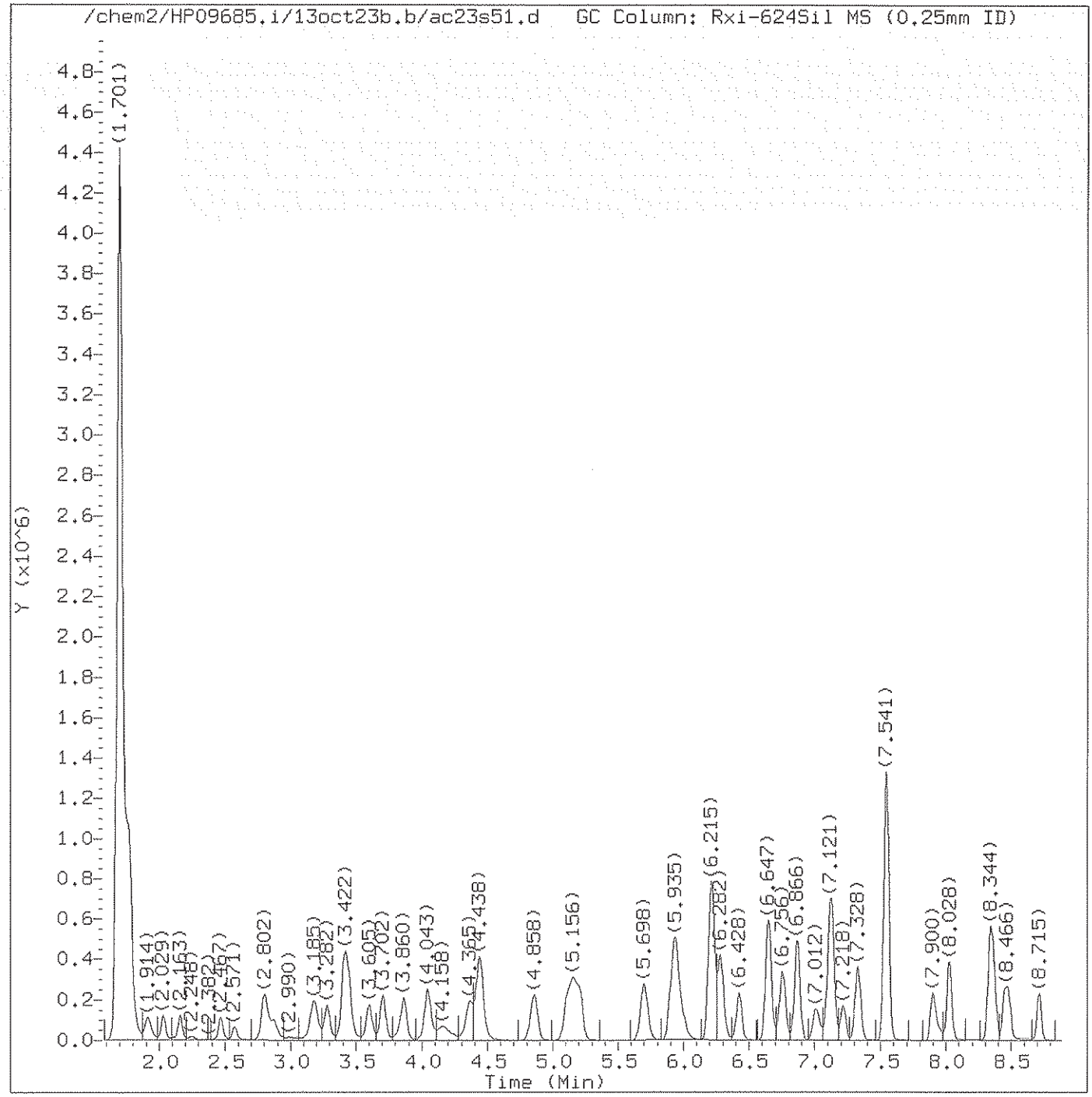
Data File: /chem2/HP09685.i/13oct23b.b/ac23m01.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 22:25 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 22:46 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 18379
On-column Amount (ng) : 1.0321
Integration start scan : 1908 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Digitally signed by Sara E. Johnson on 10/24/2013 at 19:00.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

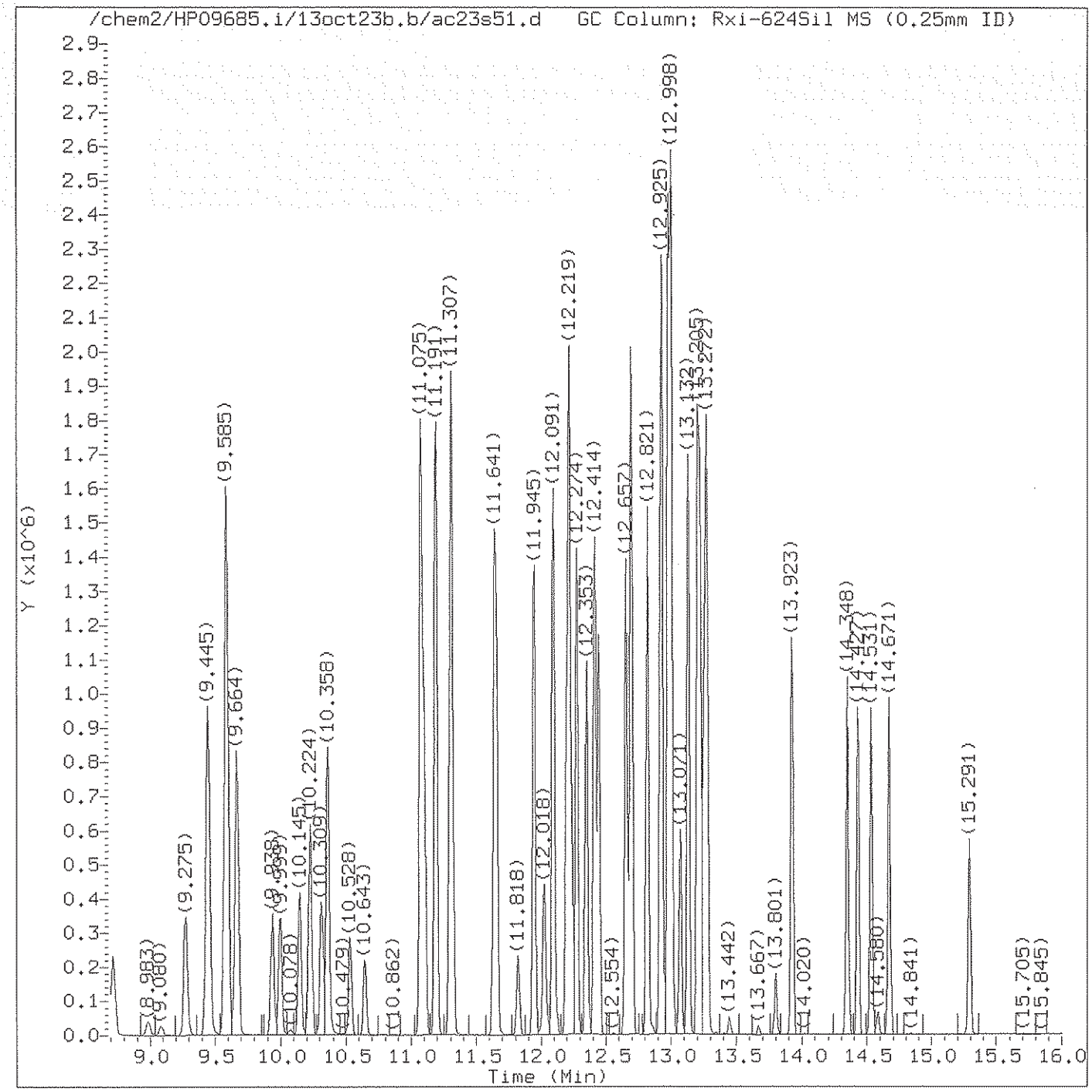
Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.914	85	209524	18.108
4) Chloromethane	(2)	2.029	50	173144	18.704
5) Vinyl Chloride	(2)	2.157	62	171987	19.394
9) Bromomethane	(2)	2.467	94	96904	14.952
10) Chloroethane	(2)	2.571	64	80293	15.588
11) Dichlorofluoromethane	(2)	2.796	67	299701	22.710
13) Trichlorofluoromethane	(2)	2.869	101	260244	19.498
15) Ethanol	(1)	3.009	45	101158M	1068.212
17) Freon 123a	(2)	3.185	67	210174A	22.666
18) Acrolein	(1)	3.282	56	262249	125.805
19) 1,1-Dichloroethene	(2)	3.404	96	152704	22.314
20) Acetone	(2)	3.434	58	131098	169.771
22) Freon 113	(2)	3.434	101	162092	21.697
23) 2-Propanol	(1)	3.593	45	88263	143.492
24) Methyl Iodide	(2)	3.605	142	297278	22.098
25) Carbon Disulfide	(2)	3.702	76	514864	21.428
27) Methyl Acetate	(2)	3.830	43	114451	23.769
29) Allyl Chloride	(2)	3.860	41	204015	19.292
31) Methylene Chloride	(2)	4.043	84	176042	22.047
30)*t-Butyl alcohol-d10	(1)	4.049	65	179608	250.000
32) t-Butyl alcohol	(1)	4.158	59	215560M	218.499
33) Acrylonitrile	(2)	4.359	53	299216	108.745
34) Methyl Tertiary Butyl Ether	(2)	4.432	73	464842	21.825
35) trans-1,2-Dichloroethene	(2)	4.444	96	170095	21.423
38) n-Hexane	(2)	4.858	57	228909	21.649
40) 1,1-Dichloroethane	(2)	5.107	63	295525	21.396
41) di-Isopropyl ether	(2)	5.156	45	481838	21.562
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	215392	20.977
44) Ethyl t-butyl ether	(2)	5.698	59	446119	20.640
45) 2-Butanone	(2)	5.910	43	548158	172.351
46) cis-1,2-Dichloroethene	(2)	5.941	96	186394	21.255
48) 2,2-Dichloropropane	(2)	5.953	77	230591	20.532
50) Propionitrile	(1)	6.002	54	178990	140.337
47) 1,2-Dichloroethene (Total)	(2)		96	356489	42.678
51) Methacrylonitrile	(2)	6.215	67	526843	176.802
52) Bromochloromethane	(2)	6.282	128	93174	20.860
53) Tetrahydrofuran	(1)	6.288	71	108068	89.498
54) Chloroform	(2)	6.428	83	283337	20.901

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.647	113	333155	50.419
56) 1,1,1-Trichloroethane	(2)	6.659	97	271304	20.669
57) Cyclohexane	(2)	6.756	56	271844	20.873
59) Carbon Tetrachloride	(2)	6.866	117	222103	20.688
58) 1,1-Dichloropropene	(2)	6.866	75	221108	20.781
60) Isobutyl Alcohol	(1)	7.005	41	159228	484.880
61)$1,2-Dichloroethane-d4	(2)	7.115	102	76228	50.869
62) Benzene	(2)	7.133	78	679643	21.017
64) 1,2-Dichloroethane	(2)	7.218	62	207331	21.334
65) t-Amyl methyl ether	(2)	7.328	73	434938	20.934
67)*Fluorobenzene	(2)	7.541	96	1351617	50.000
69) n-Heptane	(2)	7.547	43	225673	20.634
70) n-Butanol	(1)	7.900	56	272904	947.921
72) Trichloroethene	(2)	8.028	95	176070	20.989
73) Methylcyclohexane	(2)	8.338	83	293547	20.907
74) 1,2-Dichloropropane	(2)	8.368	63	171402	21.154
76) Methyl Methacrylate	(2)	8.447	69	110952	22.010
77) 1,4-Dioxane	(1)	8.459	88	53007	498.294
78) Dibromomethane	(2)	8.478	93	105940	21.124
81) Bromodichloromethane	(2)	8.715	83	197829	19.582
82) 2-Nitropropane	(1)	8.983	41	33761	16.670
84) cis-1,3-Dichloropropene	(2)	9.275	75	254744	20.881
85) 4-Methyl-2-pentanone	(2)	9.445	43	759463	112.372
86)$Toluene-d8	(3)	9.585	98	1336714	50.556
87) Toluene	(3)	9.664	92	425528	20.727
88) trans-1,3-Dichloropropene	(3)	9.938	75	221417	19.775
89) Ethyl Methacrylate	(3)	9.999	69	204155	22.193
90) 1,1,2-Trichloroethane	(3)	10.145	97	147079	21.487
92) Tetrachloroethene	(3)	10.224	166	201420	21.424
93) 1,3-Dichloropropane	(3)	10.309	76	251291	21.168
95) 2-Hexanone	(3)	10.358	43	557174	115.569
97) Dibromochloromethane	(3)	10.528	129	161944	20.451
98) 1,2-Dibromoethane	(3)	10.643	107	152772	21.405
99)*Chlorobenzene-d5	(3)	11.075	117	1018740	50.000
100) Chlorobenzene	(3)	11.106	112	506269	20.947
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	169553	20.256
102) Ethylbenzene	(3)	11.191	91	815270	21.089
103) m+p-Xylene	(3)	11.307	106	666812	42.209

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

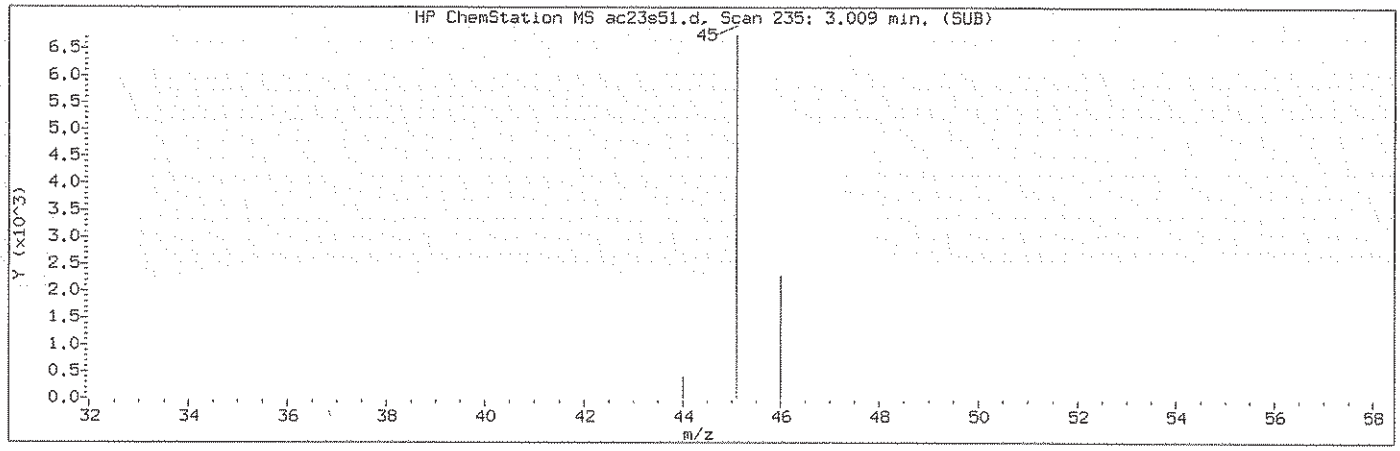
Sample Name: LCSA96 Lab Sample ID: LCSA96

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.641	106	322293	21.016
106) Styrene	(3)	11.659	104	507919	20.977
105) Xylene (Total)	(3)		106	989105	63.225
107) Bromoform	(3)	11.818	173	103179	21.247
108) Isopropylbenzene	(3)	11.945	105	827074	21.076
111) Cyclohexanone	(1)	12.018	55	196455	486.973
112)$4-Bromofluorobenzene	(3)	12.091	95	499081	50.769
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	213409	22.564
114) Bromobenzene	(4)	12.207	156	224545	20.463
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	285829	116.638
116) 1,2,3-Trichloropropane	(4)	12.237	110	64447	22.148
117) n-Propylbenzene	(4)	12.274	91	984161	21.128
119) 2-Chlorotoluene	(4)	12.353	126	214042	20.487
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	717795	20.860
123) 4-Chlorotoluene	(4)	12.444	126	222193	20.553
126) tert-Butylbenzene	(4)	12.657	134	173792	22.117
127) Pentachloroethane	(4)	12.688	167	133720	19.965
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	743471	20.990
129) sec-Butylbenzene	(4)	12.821	105	914439	21.022
131) 1,3-Dichlorobenzene	(4)	12.919	146	431036	21.137
132) p-Isopropyltoluene	(4)	12.931	119	823652M	21.162
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	560922	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	441490	21.070
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	770089	20.792
136) Benzyl Chloride	(4)	13.071	126	85386	21.425
137) 1,3-Diethylbenzene	(4)	13.132	119	493868	20.830
138) 1,4-Diethylbenzene	(4)	13.205	119	519580	21.964
139) n-Butylbenzene	(4)	13.223	92	398759M	21.133
140) 1,2-Dichlorobenzene	(4)	13.253	146	412832	20.976
141) 1,2-Diethylbenzene	(4)	13.272	119	416566M	20.840
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	37200	21.979
145) 1,3,5-Trichlorobenzene	(4)	13.923	180	336765	21.095
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	289153	21.133
147) Hexachlorobutadiene	(4)	14.427	225	157022	20.269
148) Naphthalene	(4)	14.531	128	660708	21.194
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	276636	21.523
150) 2-Methylnaphthalene	(4)	15.291	142	258302	16.691

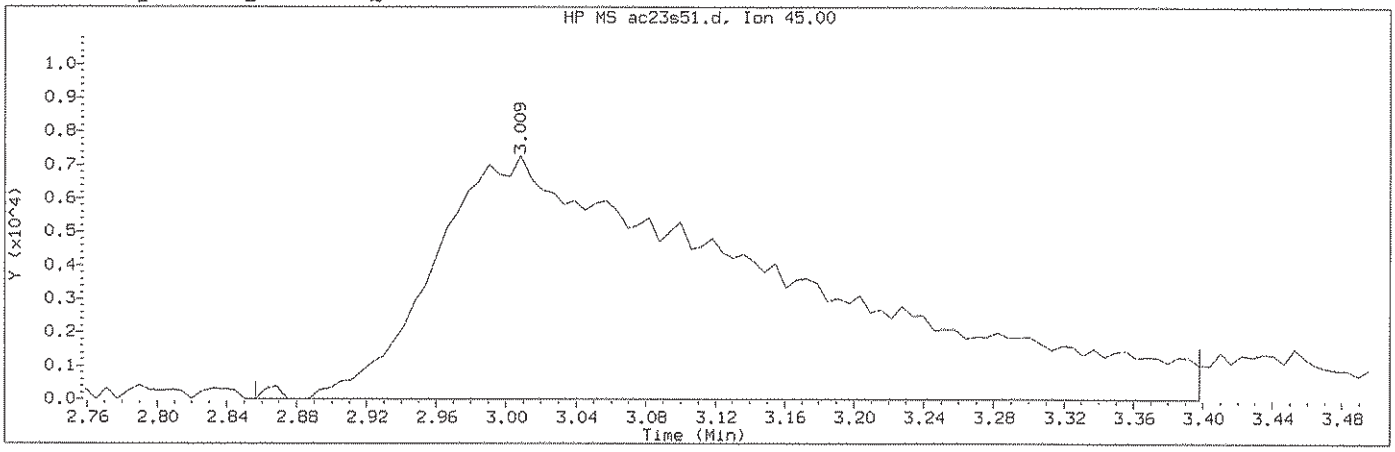
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

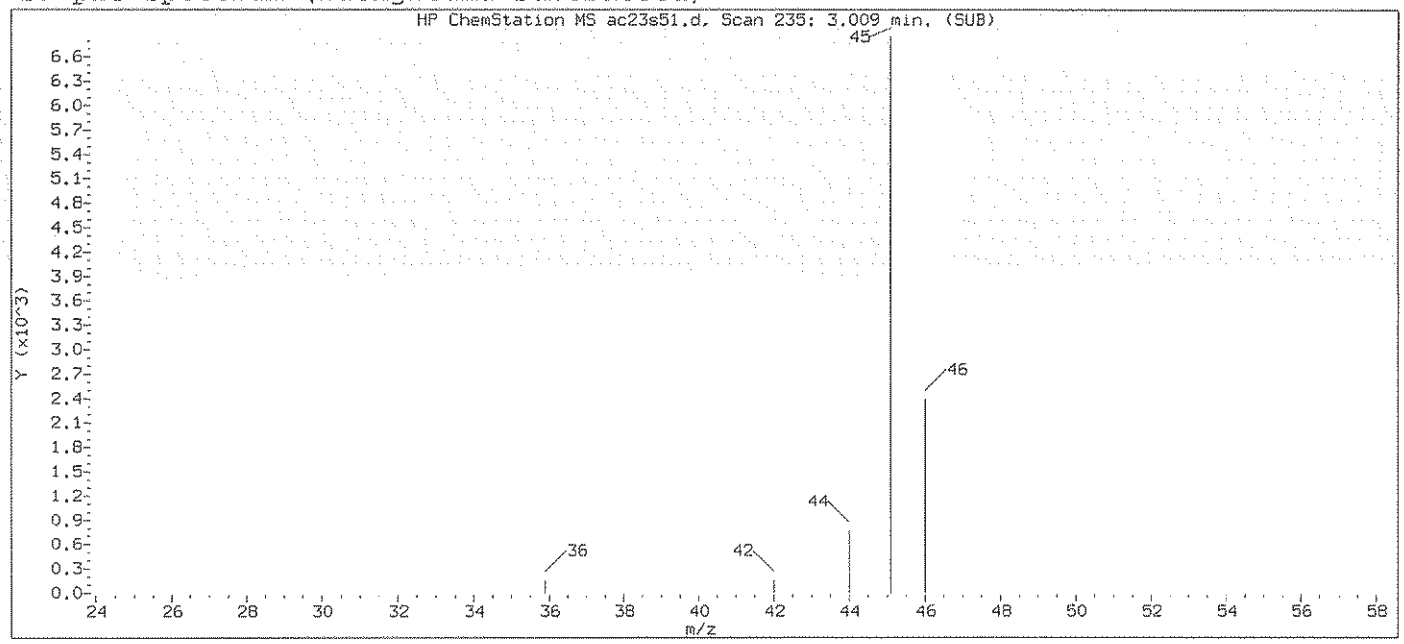
Compound Number : 15
Compound Name : Ethanol
Scan Number : 235
Retention Time (minutes): 3.009
Quant Ion : 45.00
Area (flag) : 101158M
On-Column Amount (ng) : 1068.2124
Integration start scan : 209 Integration stop scan: 298
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

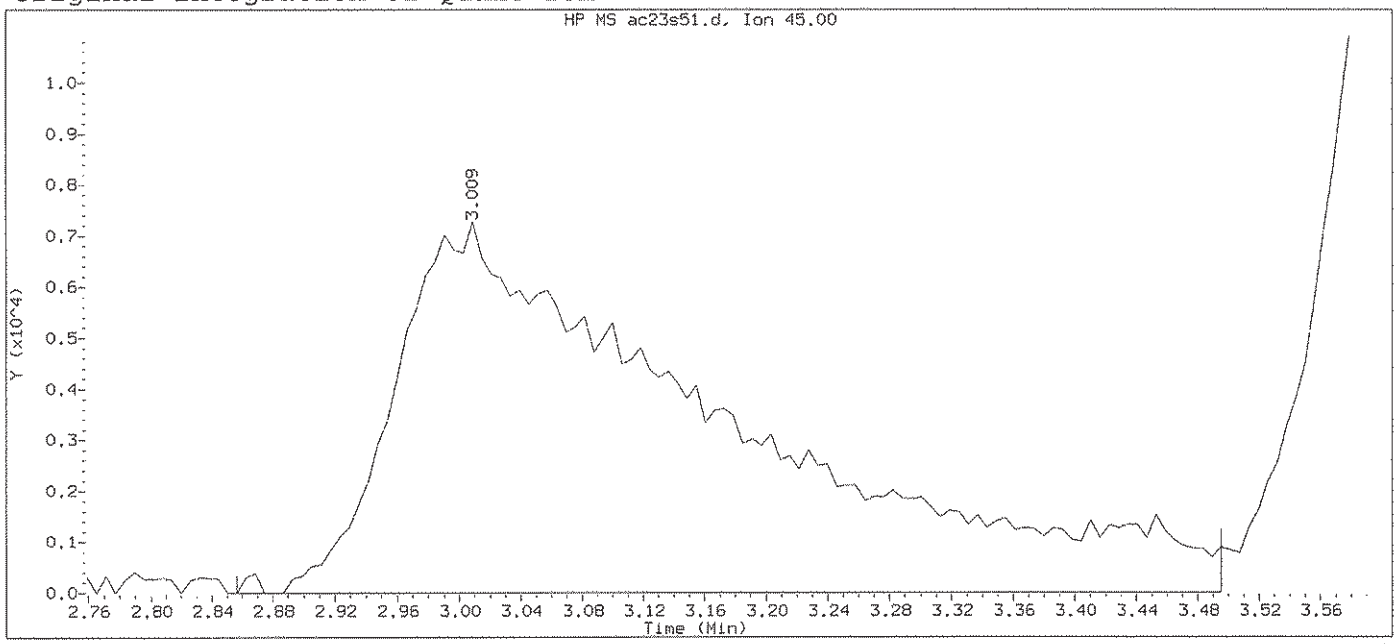
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

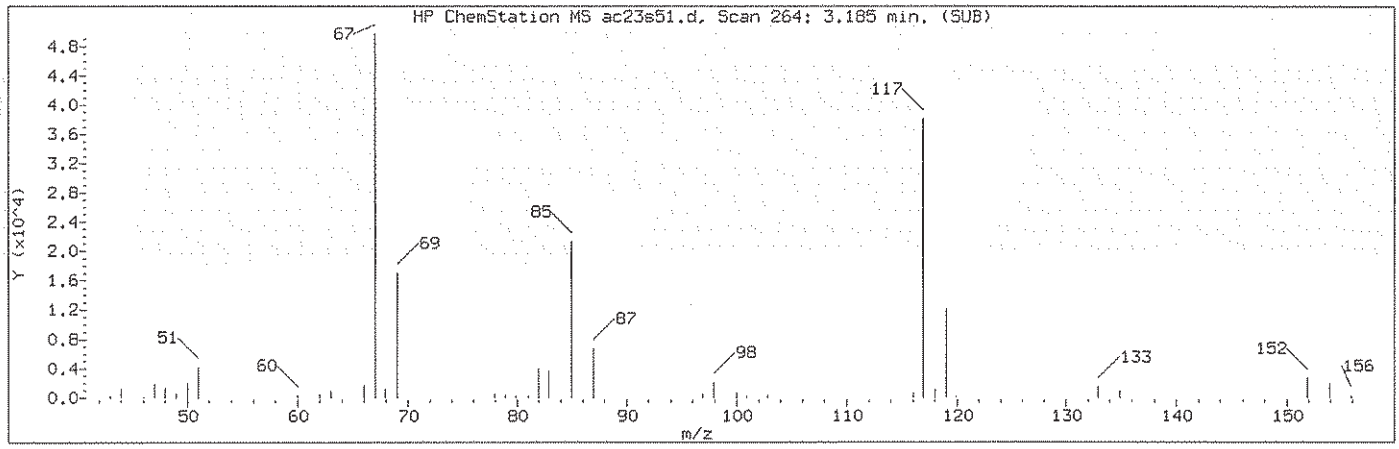
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

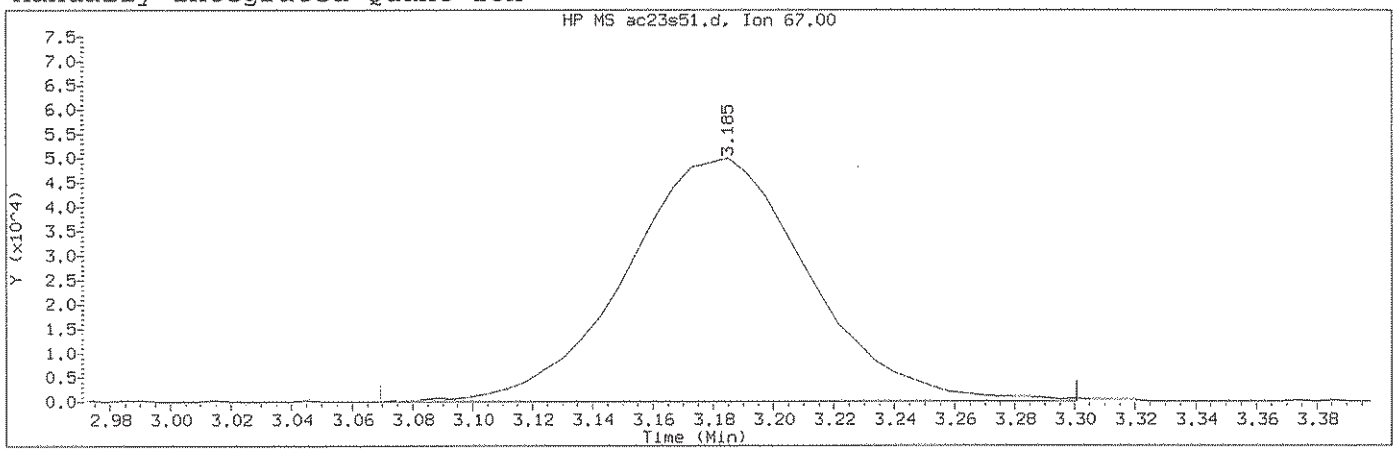
Compound Number	: 15		
Compound Name	: Ethanol		
Scan Number	: 235		
Retention Time (minutes)	: 3.009		
Quant Ion	: 45.00		
Area	: 107504		
On-column Amount (ng)	: 1123.8984		
Integration start scan	: 209	Integration stop scan:	314
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature us[illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

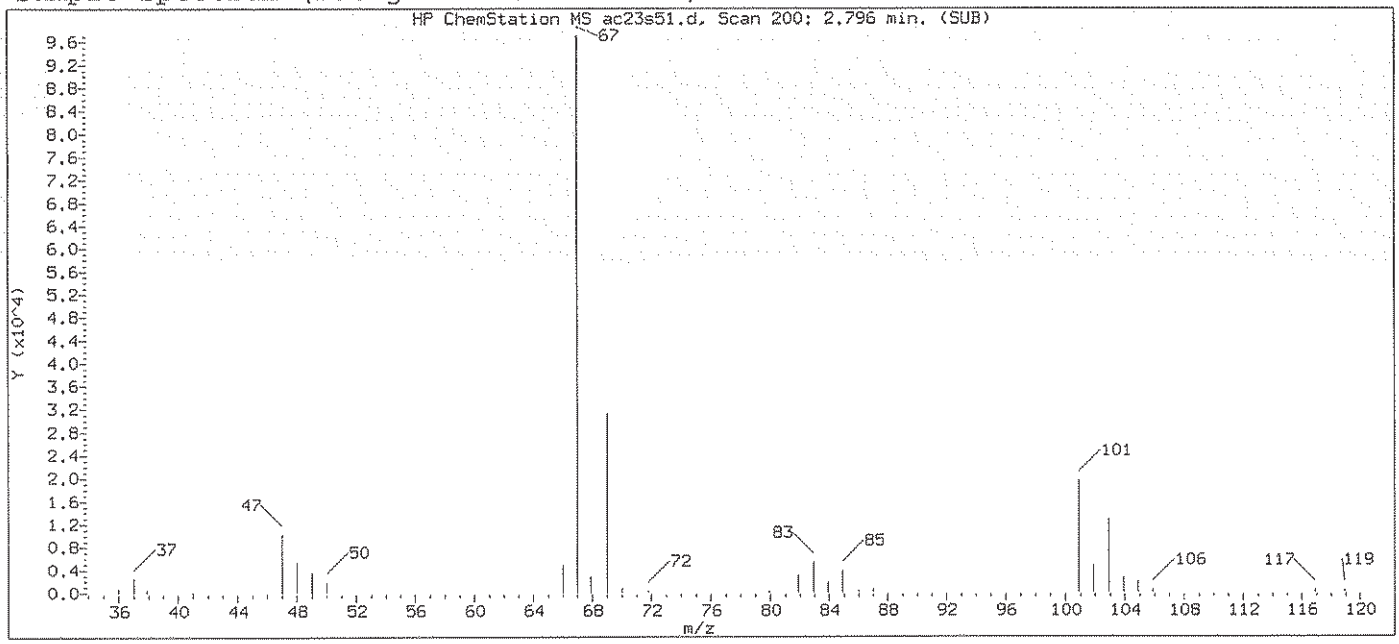
Compound Number : 17
Compound Name : Freon 123a
Scan Number : 264
Retention Time (minutes): 3.185
Quant Ion : 67.00
Area (flag) : 210174A
On-Column Amount (ng) : 22.6659
Integration start scan : 244 Integration stop scan: 282
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

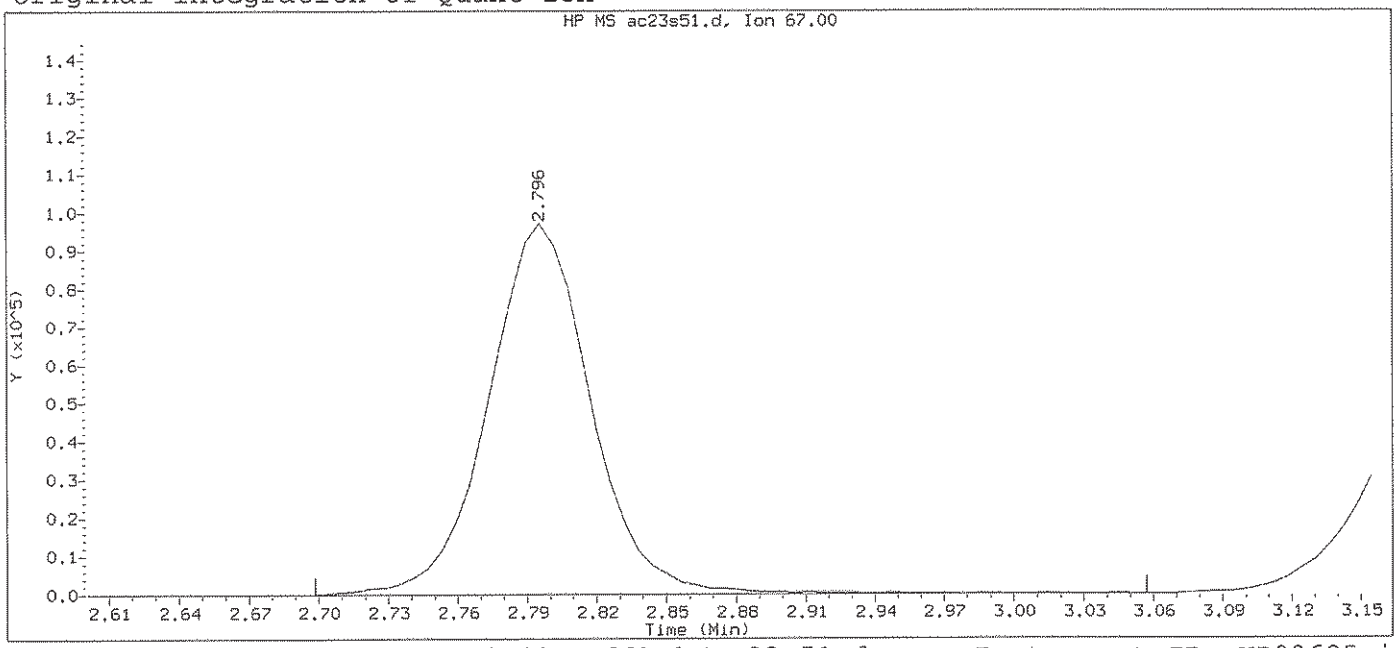
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

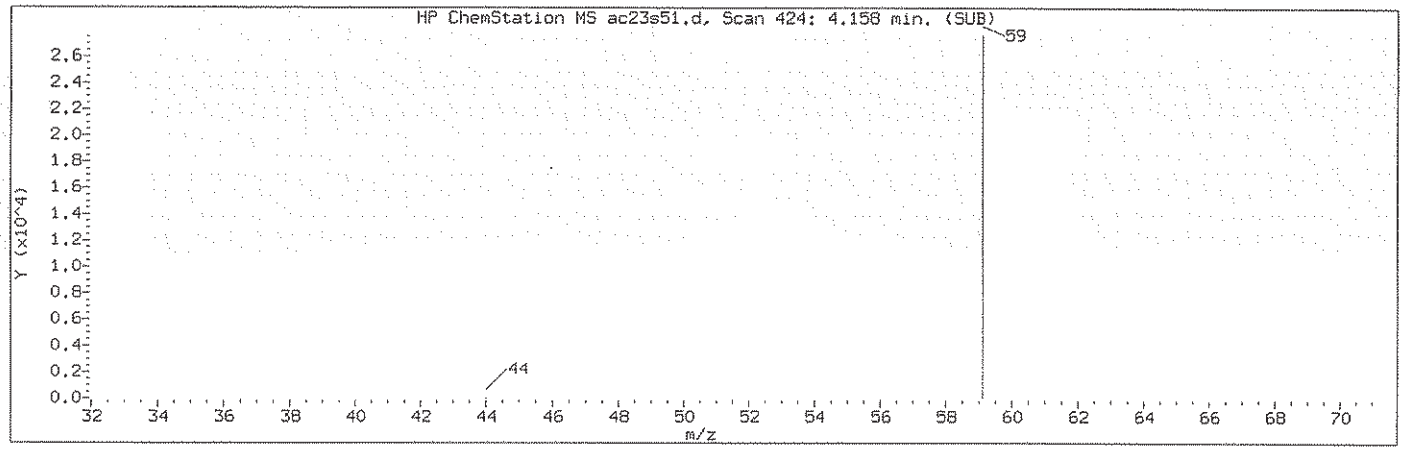
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

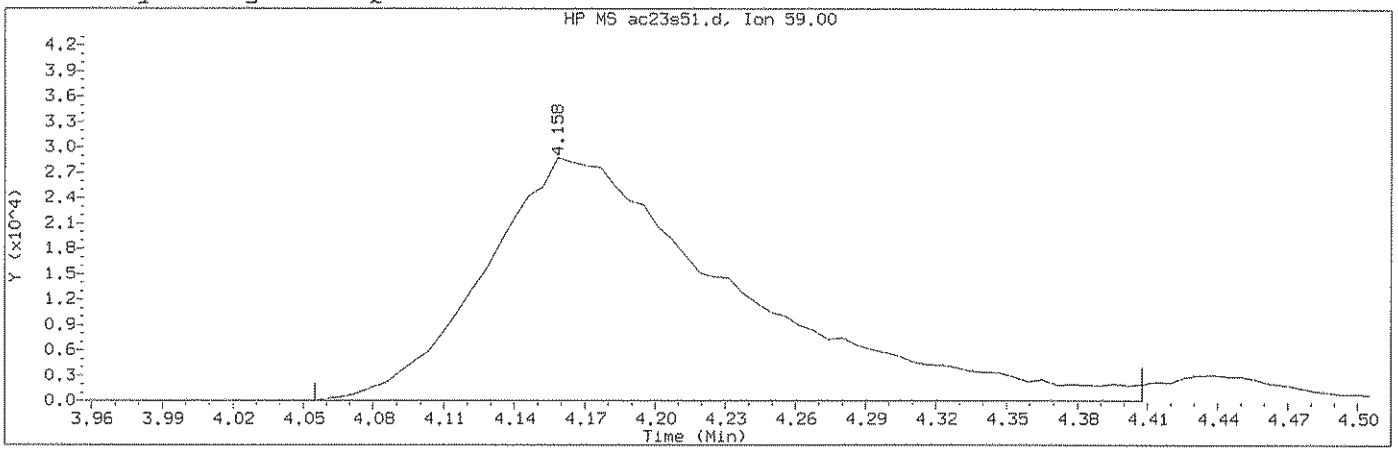
Compound Number	: 17		
Compound Name	: Freon 123a		
Scan Number	: 200		
Retention Time (minutes)	: 2.796		
Quant Ion	: 67.00		
Area	: 299701		
On-column Amount (ng)	: 22.7104		
Integration start scan	: 183	Integration stop scan:	242
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: CBSTONG

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

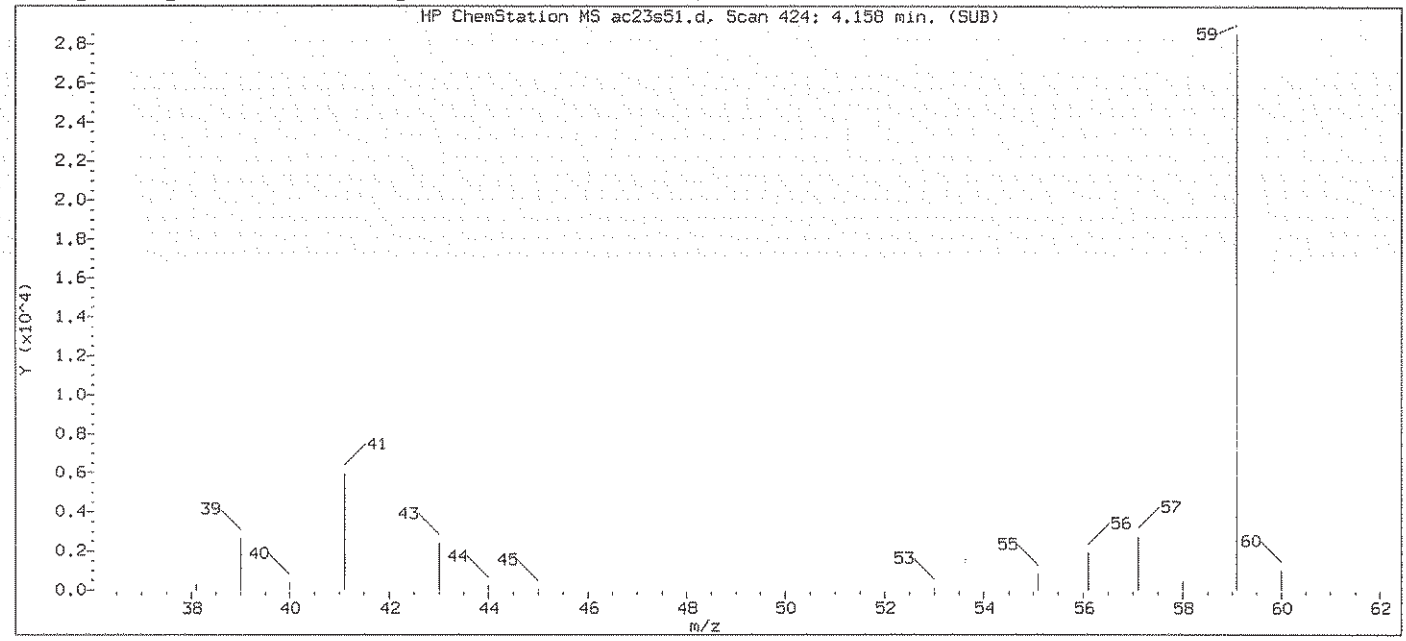
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 424
Retention Time (minutes): 4.158
Quant Ion : 59.00
Area (flag) : 215560M
On-Column Amount (ng) : 218.4993
Integration start scan : 406 Integration stop scan: 464
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

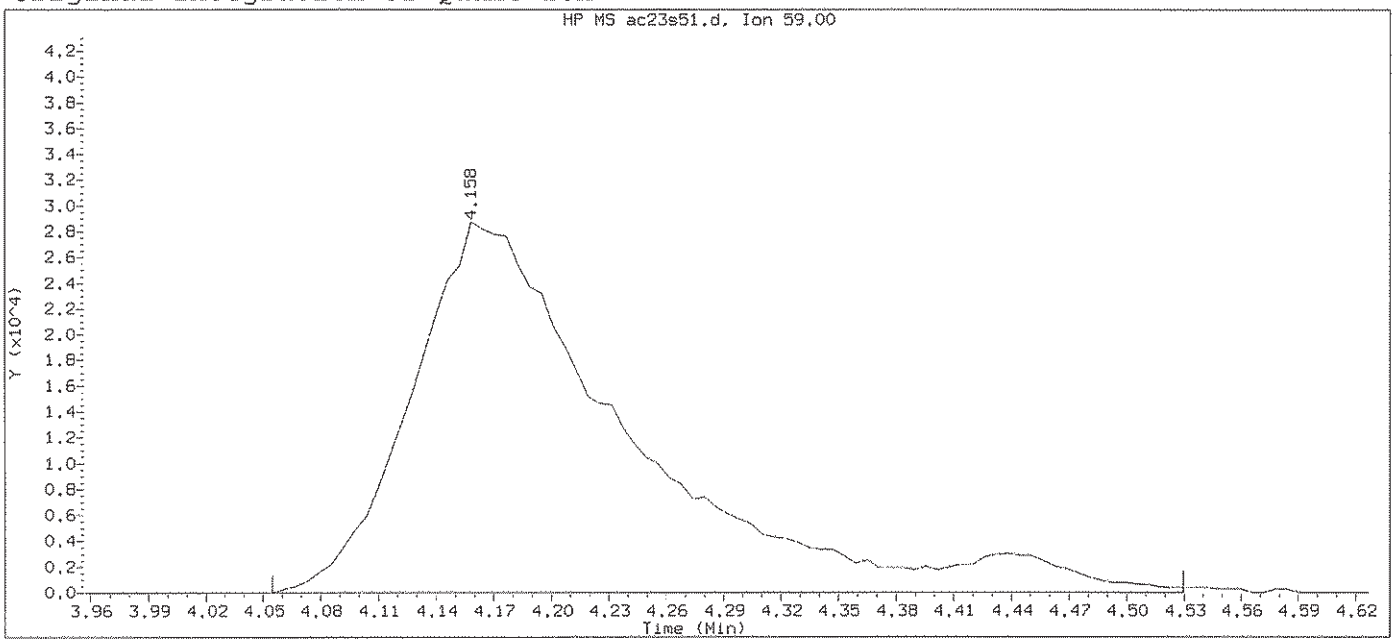
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

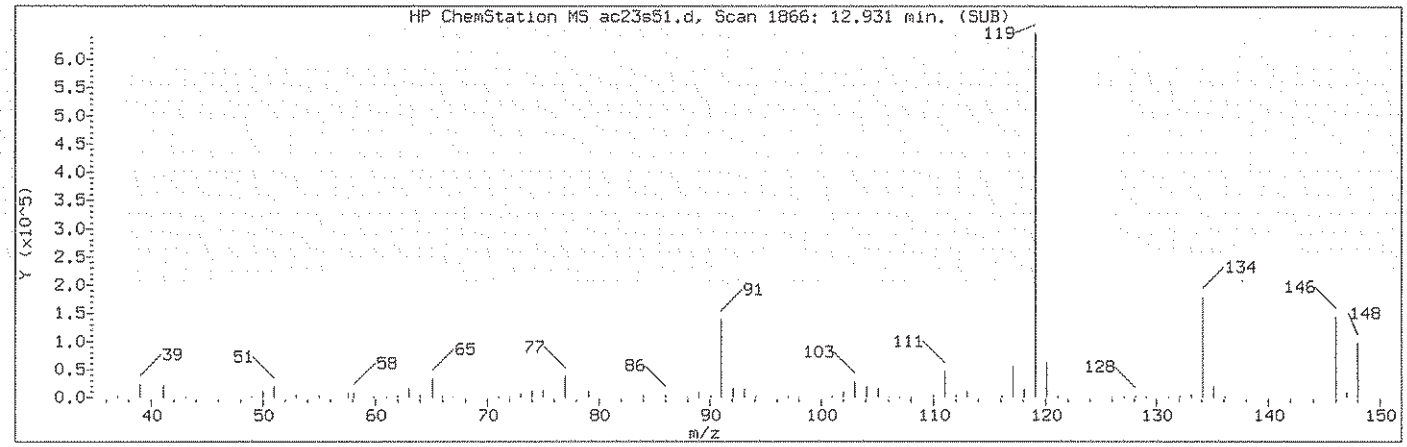
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

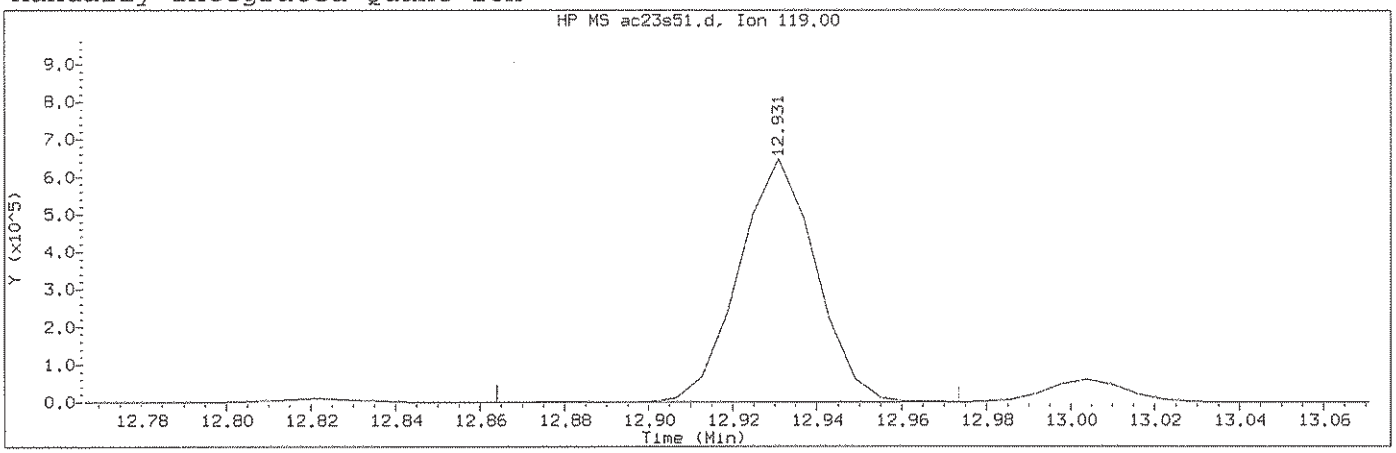
Compound Number	: 32		
Compound Name	: t-Butyl alcohol		
Scan Number	: 424		
Retention Time (minutes)	: 4.158		
Quant Ion	: 59.00		
Area	: 227451		
On-column Amount (ng)	: 229.7179		
Integration start scan	: 406	Integration stop scan:	484
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

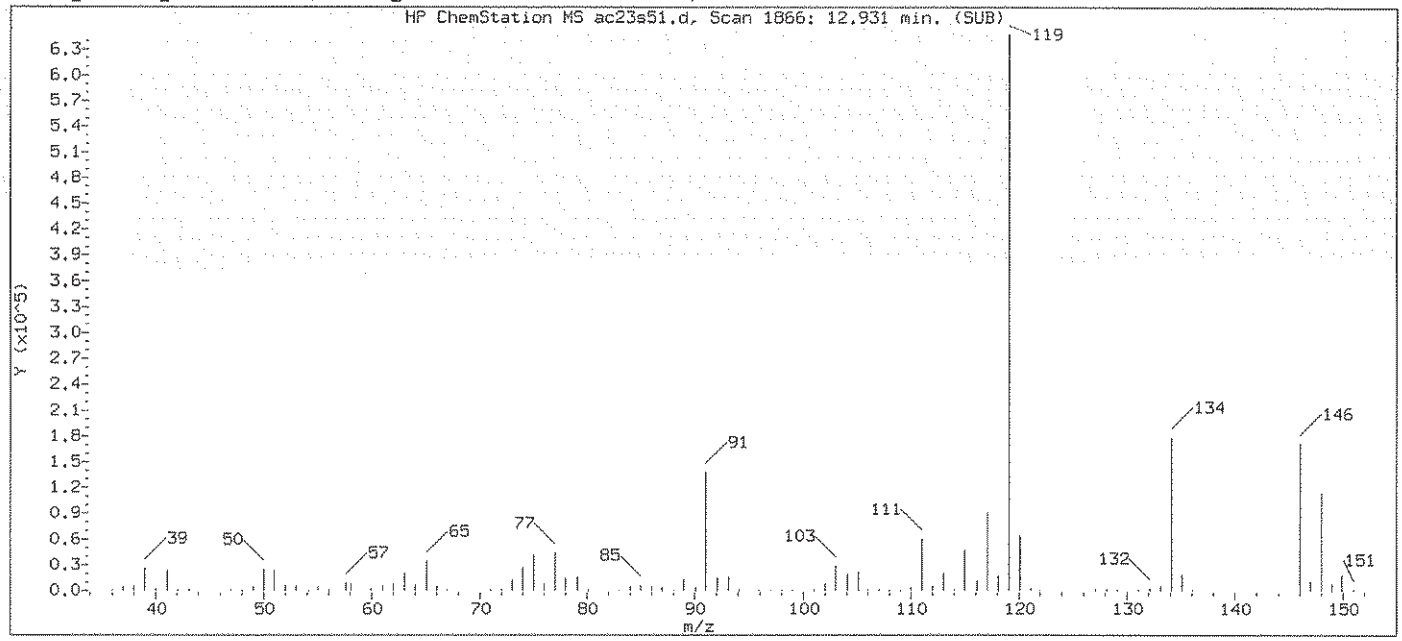
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area (flag) : 823652M
On-Column Amount (ng) : 21.1622
Integration start scan : 1854 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

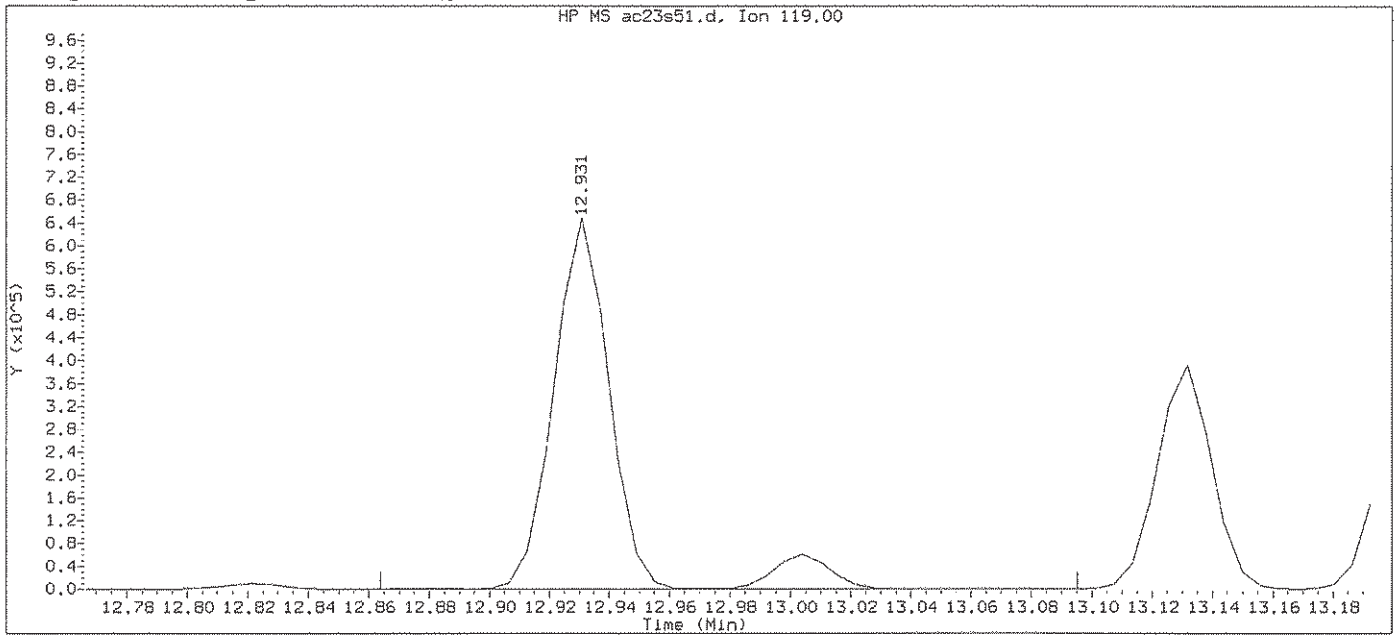
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

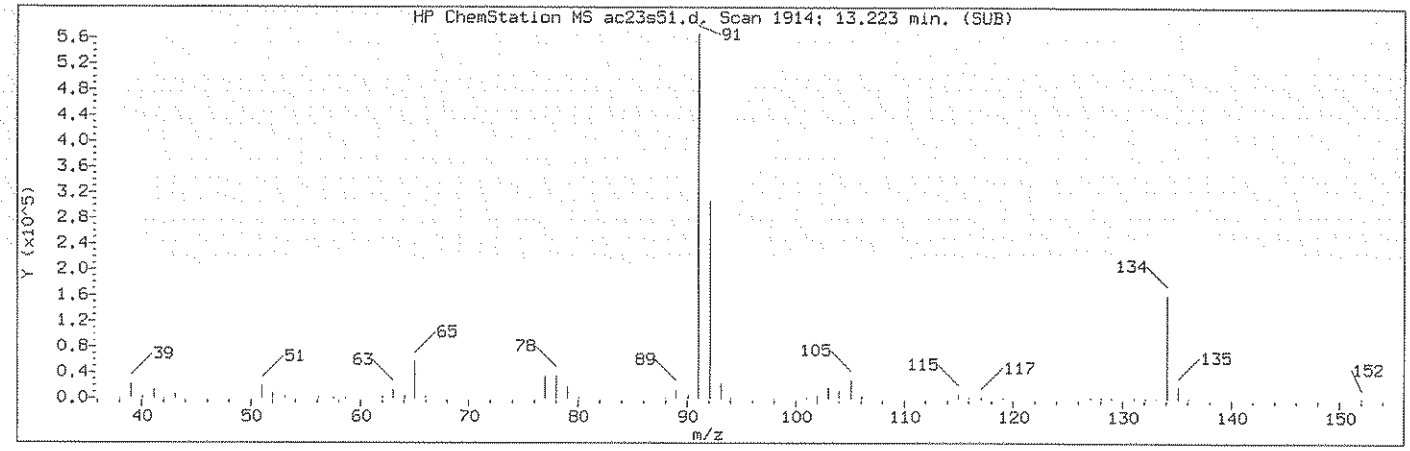
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

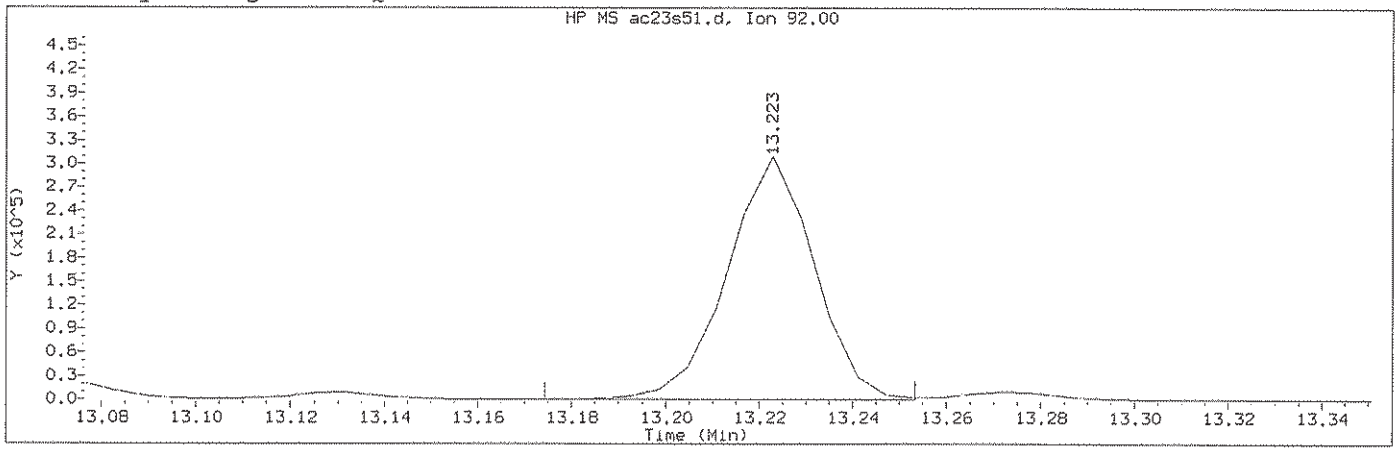
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area : 903399
On-column Amount (ng) : 23.2111
Integration start scan : 1854 Integration stop scan: 1892
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

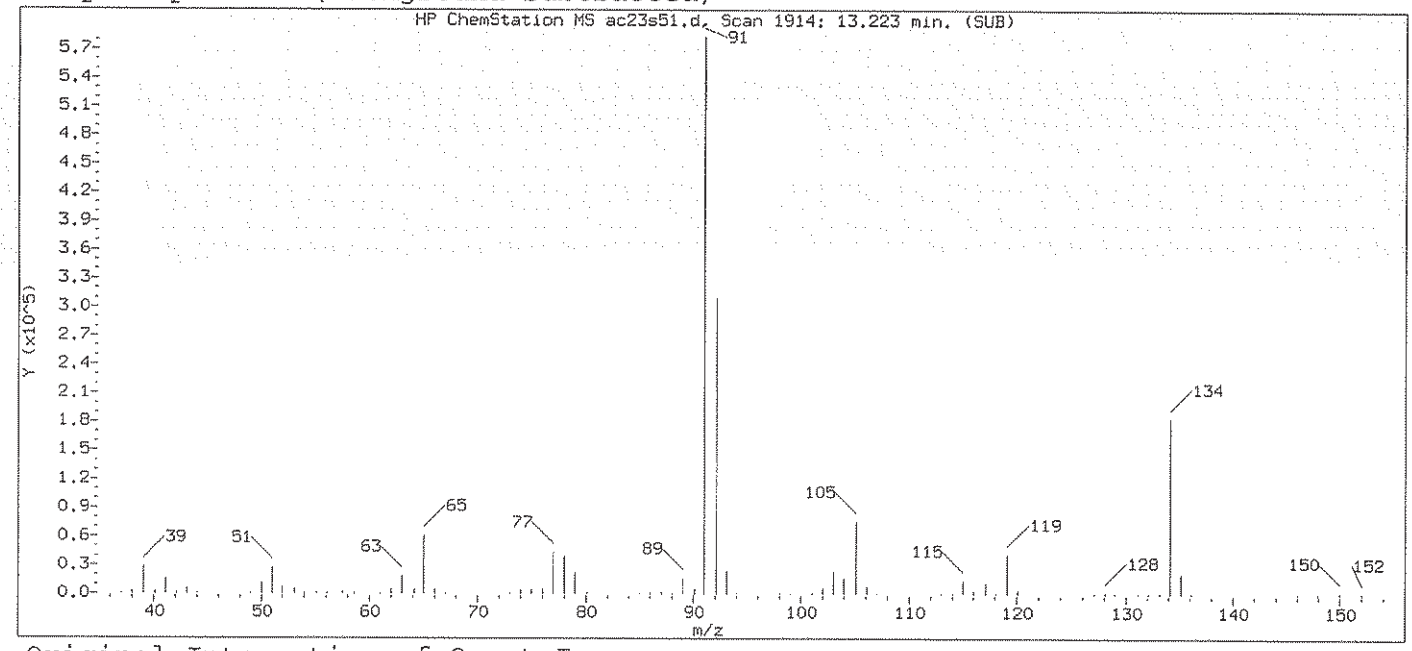
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 398759M
On-Column Amount (ng) : 21.1332
Integration start scan : 1905 Integration stop scan: 1918
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

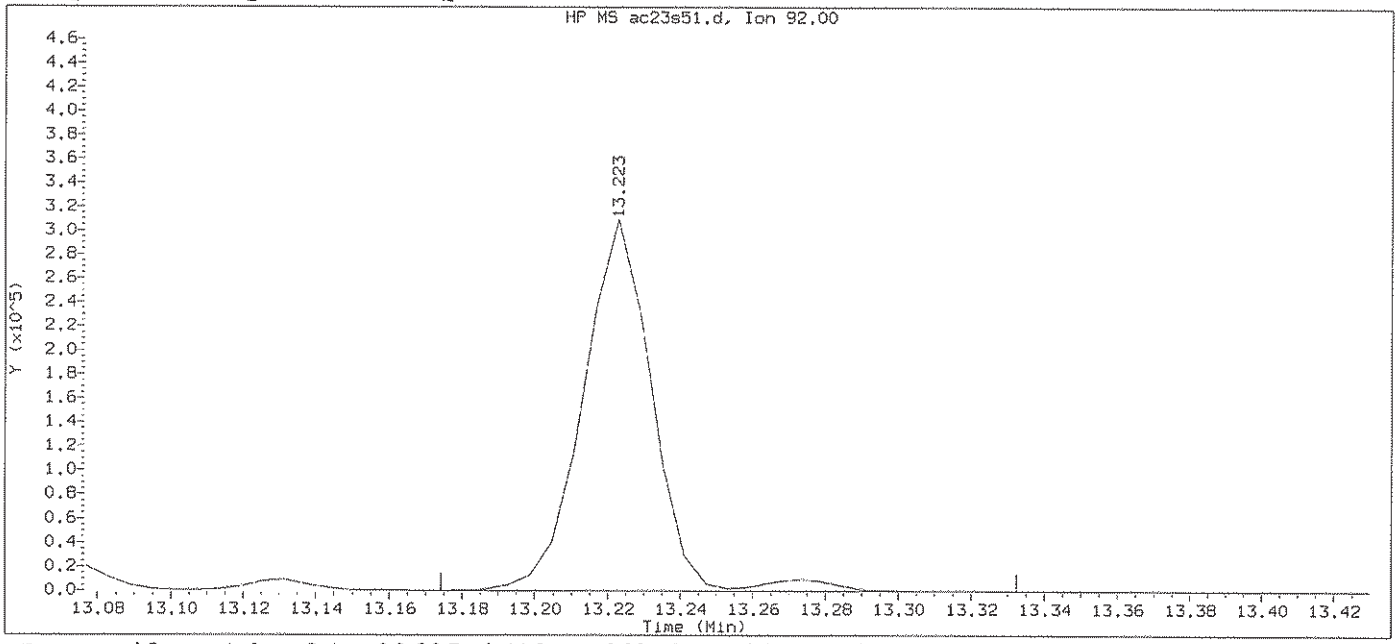
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

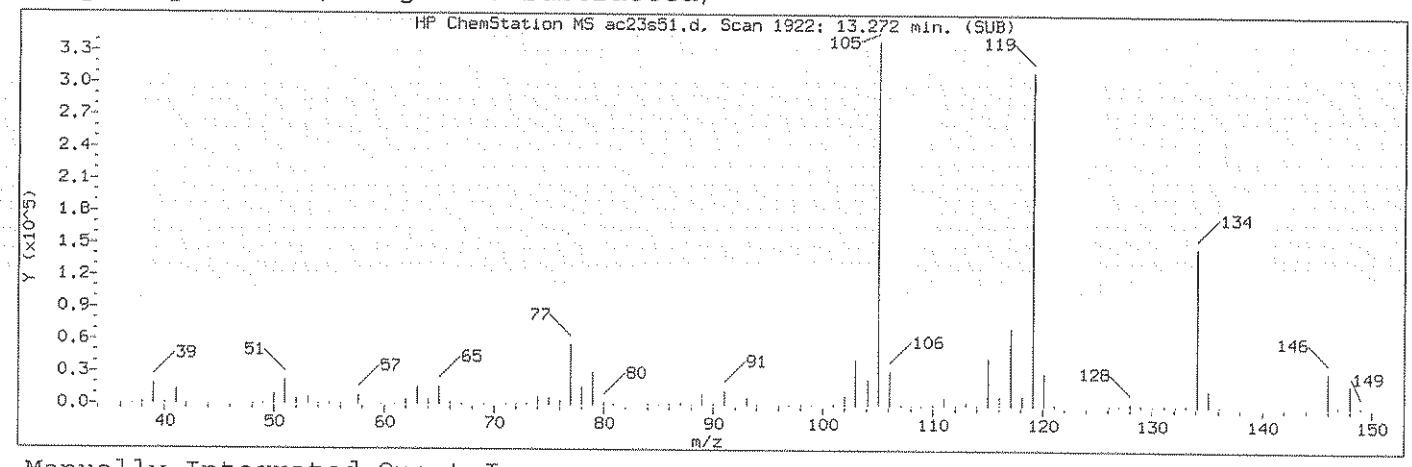
Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

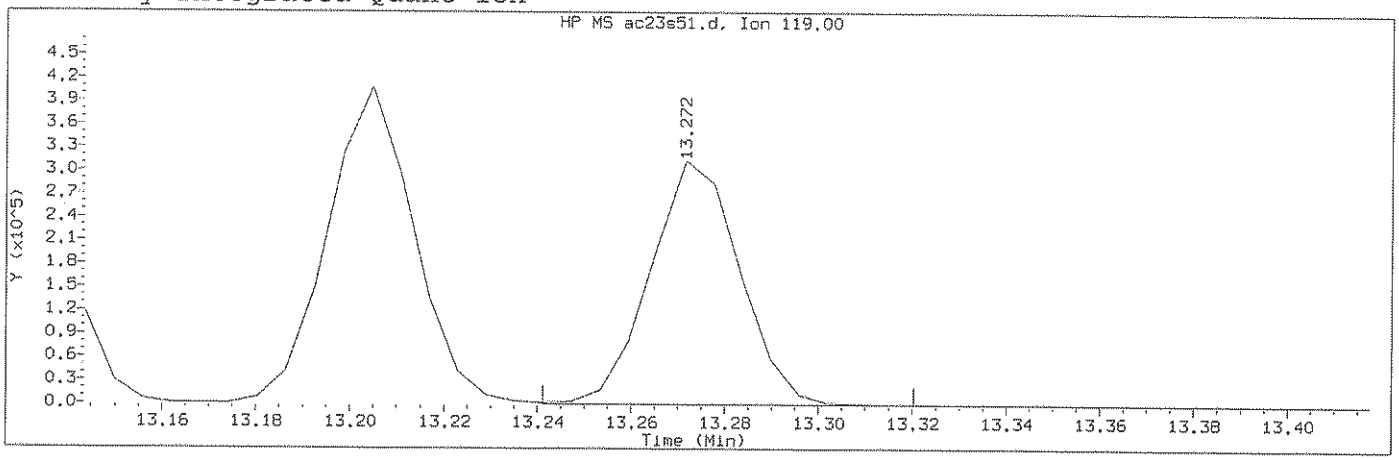
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 411826
On-column Amount (ng) : 21.8257
Integration start scan : 1905 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature user ID: cbs0127

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 24-OCT-2013 16:24
Date, time and analyst ID of latest file update: 24-Oct-2013 16:31 cbs01947

Sample Name: LCSA96 Lab Sample ID: LCSA96

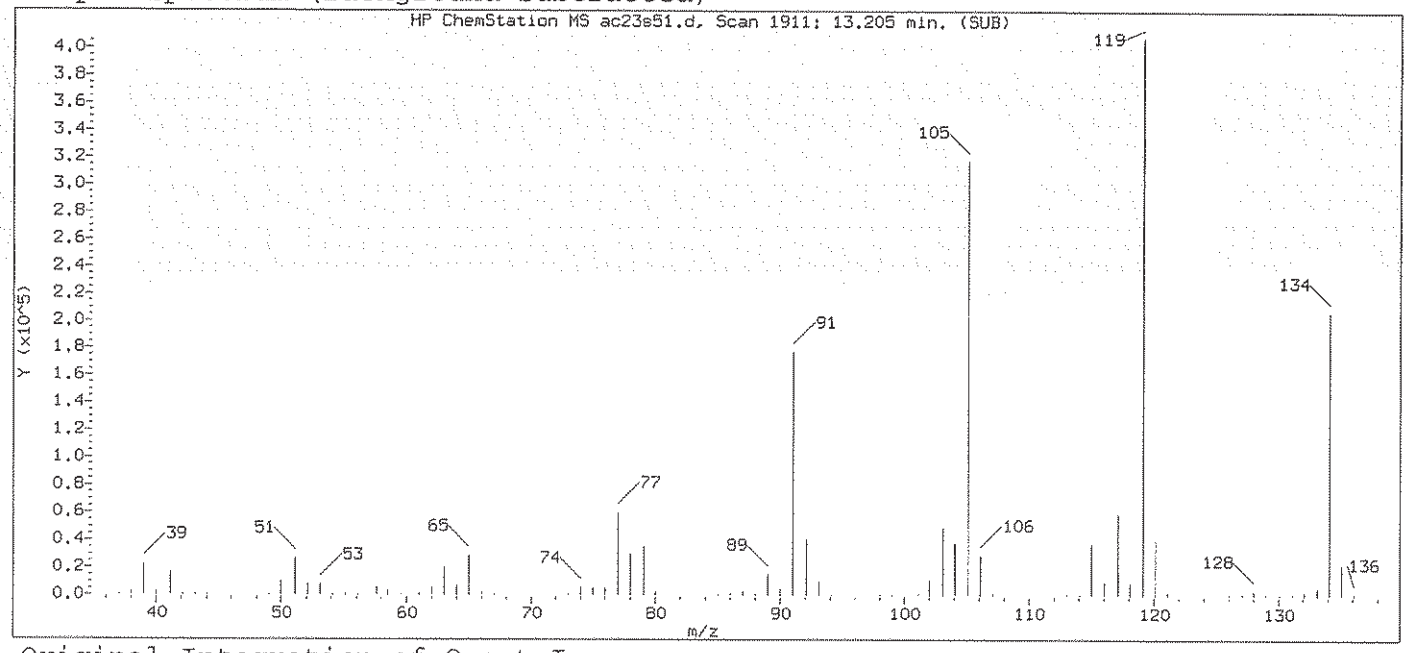
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1922
Retention Time (minutes): 13.272
Quant Ion : 119.00
Area (flag) : 416566M
On-Column Amount (ng) : 20.8399
Integration start scan : 1916 Integration stop scan: 1929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

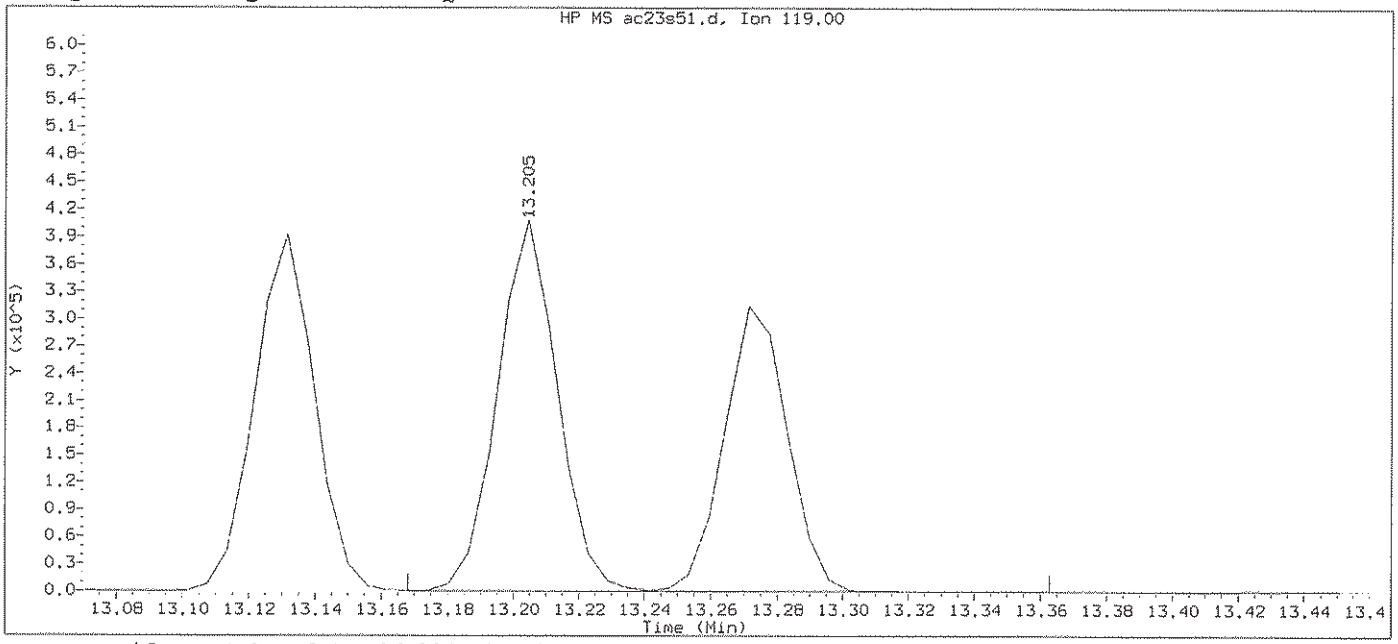
Analyst responsible for change: Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32. Target 3.5 esignature user ID: cbs01947

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13oct23b.b/ac23s51.d Instrument ID: HP09685.i
Injection date and time: 23-OCT-2013 23:17 Analyst ID: SEJ02002

Method used: /chem2/HP09685.i/13oct23b.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 23-OCT-2013 22:41
Date, time and analyst ID of latest file update: 23-Oct-2013 23:37 Automation

Sample Name: LCSA96 Lab Sample ID: LCSA96

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1911
Retention Time (minutes): 13.205
Quant Ion : 119.00
Area : 935891
On-column Amount (ng) : 46.8205
Integration start scan : 1904 Integration stop scan: 1936
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 10/24/2013 at 16:32.
Target 3.5 esignature used: [illegible]

Data File: /chem2/HP09685.i/13nov11a.b/an11t01.d

Date : 11-NOV-2013 10:29

Client ID: BFB SEP18-13

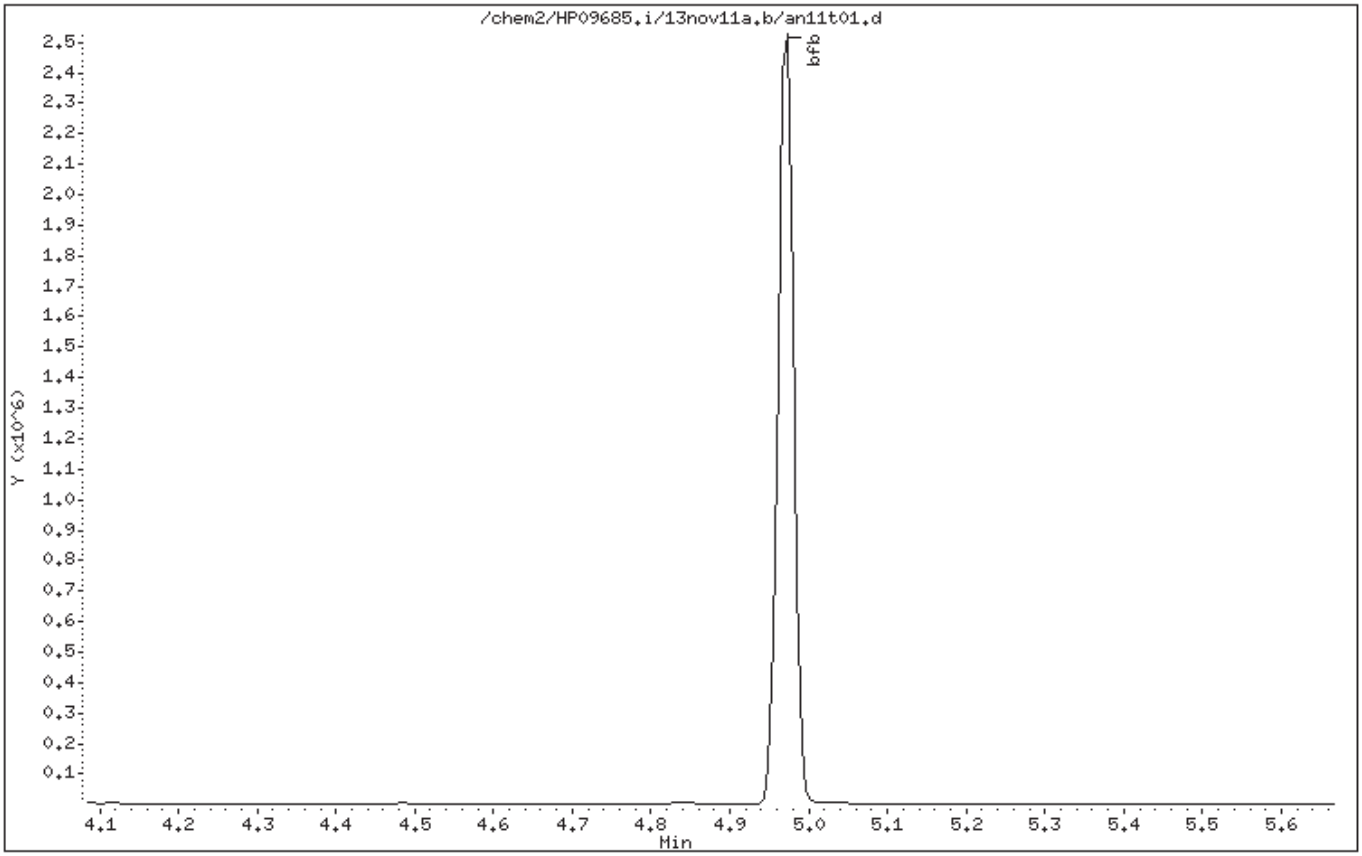
Instrument: HP09685.i

Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;

Operator: CBS01947

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Chelsea B. Stong on 11/11/2013 at 10:37.
Target 3.5 esignature user ID: cbs01947

Data File: /chem2/HP09685.i/13nov11a.b/an11t01.d

Date : 11-NOV-2013 10:29

Client ID: BFB SEP18-13

Instrument: HP09685.i

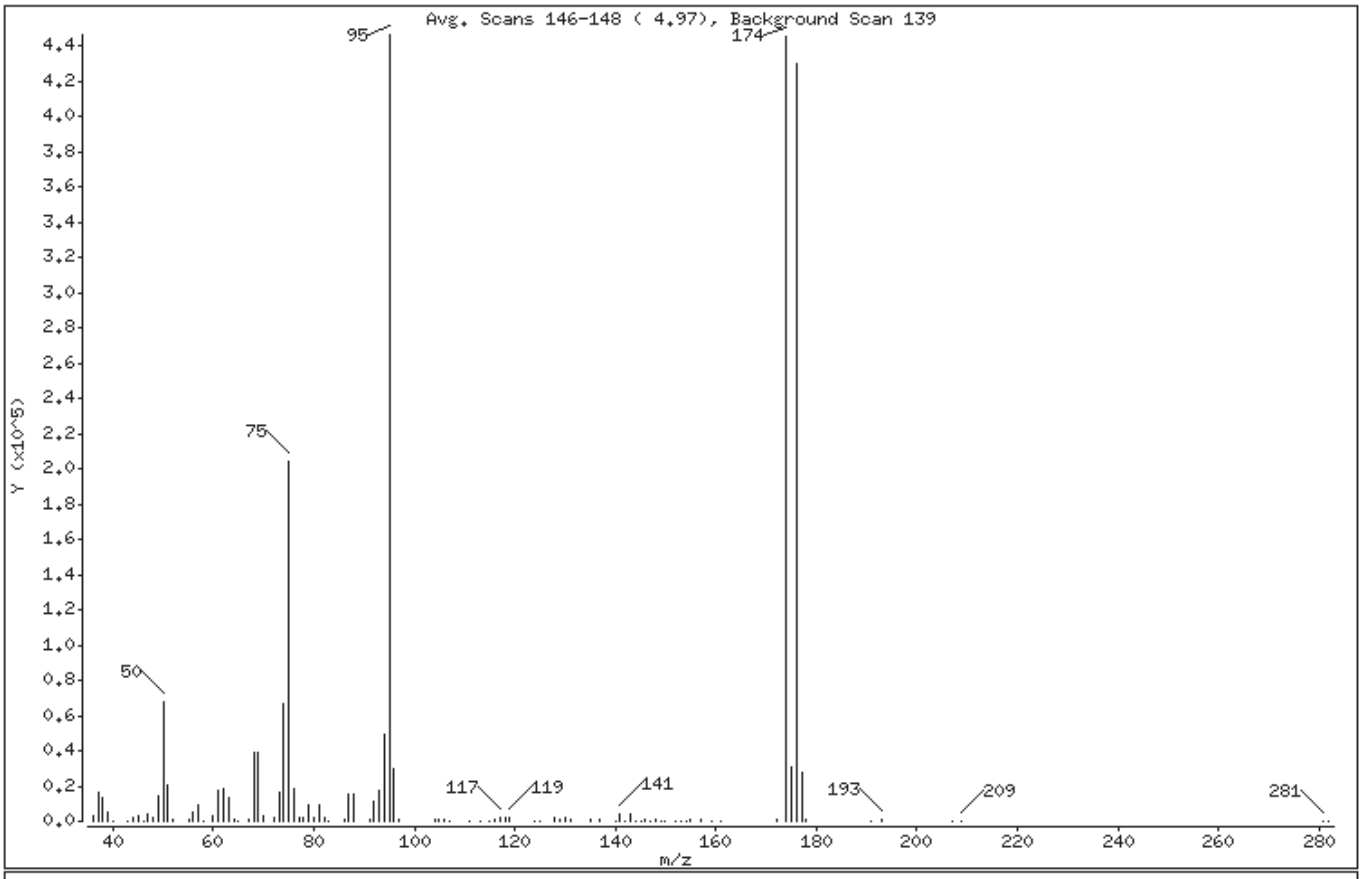
Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;

Operator: CBS01947

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.15
75	30.00 - 60.00% of mass 95	45.70
96	5.00 - 9.00% of mass 95	6.63
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	99.77
175	5.00 - 9.00% of mass 174	6.90 (6.92)
176	95.00 - 101.00% of mass 174	96.37 (96.59)
177	5.00 - 9.00% of mass 176	6.29 (6.53)

Digitally signed by Chelsea B. Stong on 11/11/2013 at 10:37.
Target 3.5 esignature user ID: cbs01947

Date : 11-NOV-2013 10:29

Client ID: BFB SEP18-13 Instrument: HP09685.i

Sample Info: BFB SEP18-13;50NGBFB;2;3;;;;;;

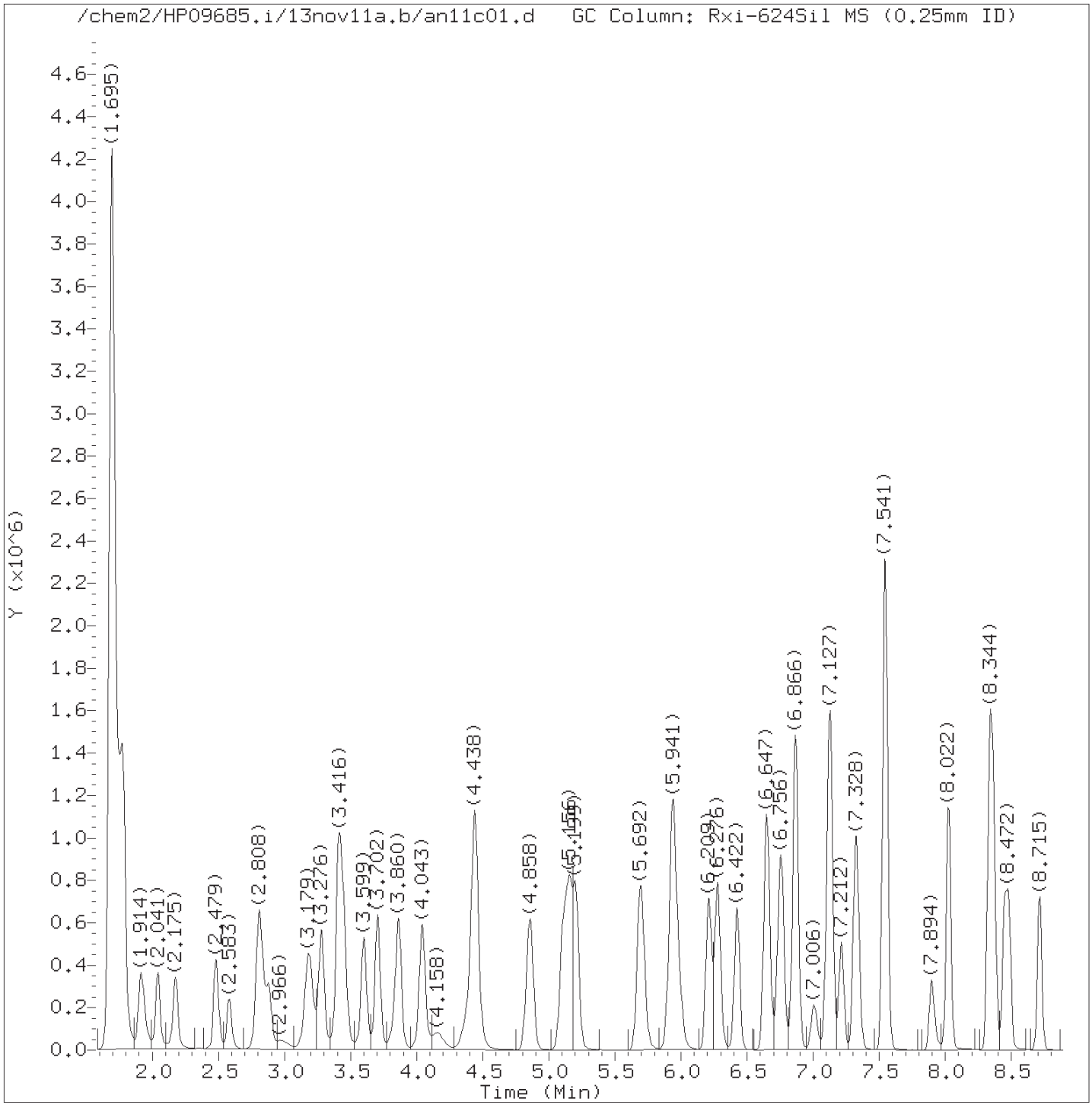
Operator: CBS01947

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: an11t01.d
Spectrum: Avg. Scans 146-148 (4.97), Background Scan 139
Location of Maximum: 95.00
Number of points: 100

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3022	68.00	39080	105.00	607	148.00	1067
37.00	16345	69.00	39152	106.00	1426	149.00	337
38.00	13576	70.00	2829	107.00	413	150.00	437
39.00	5288	72.00	1868	111.00	214	152.00	102
40.00	140	73.00	16824	113.00	251	153.00	412
43.00	202	74.00	66408	115.00	472	154.00	118
44.00	1671	75.00	203968	116.00	1434	155.00	1360
45.00	2843	76.00	18000	117.00	2514	157.00	848
46.00	134	77.00	2333	118.00	1547	159.00	481
47.00	3839	78.00	1565	119.00	1924	161.00	506
48.00	2008	79.00	8995	124.00	298	172.00	746
49.00	14523	80.00	2530	125.00	92	174.00	445376
50.00	67616	81.00	9074	128.00	1633	175.00	30816
51.00	21024	82.00	1964	129.00	703	176.00	430208
52.00	791	83.00	90	130.00	1627	177.00	28072
55.00	945	86.00	547	131.00	645	178.00	758
56.00	5103	87.00	15895	135.00	629	191.00	89
57.00	9673	88.00	15104	137.00	652	193.00	648
58.00	427	91.00	1340	140.00	217	207.00	295
60.00	3520	92.00	11261	141.00	3930	209.00	404
61.00	17192	93.00	17208	142.00	441	281.00	205
62.00	18000	94.00	48776	143.00	3810	282.00	86
63.00	13016	95.00	446400	144.00	201		
64.00	1396	96.00	29576	145.00	316		
65.00	434	97.00	1001	146.00	640		
67.00	1021	104.00	1468	147.00	315		

Digitally signed by Chelsea B. Stong on 11/11/2013 at 10:37.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

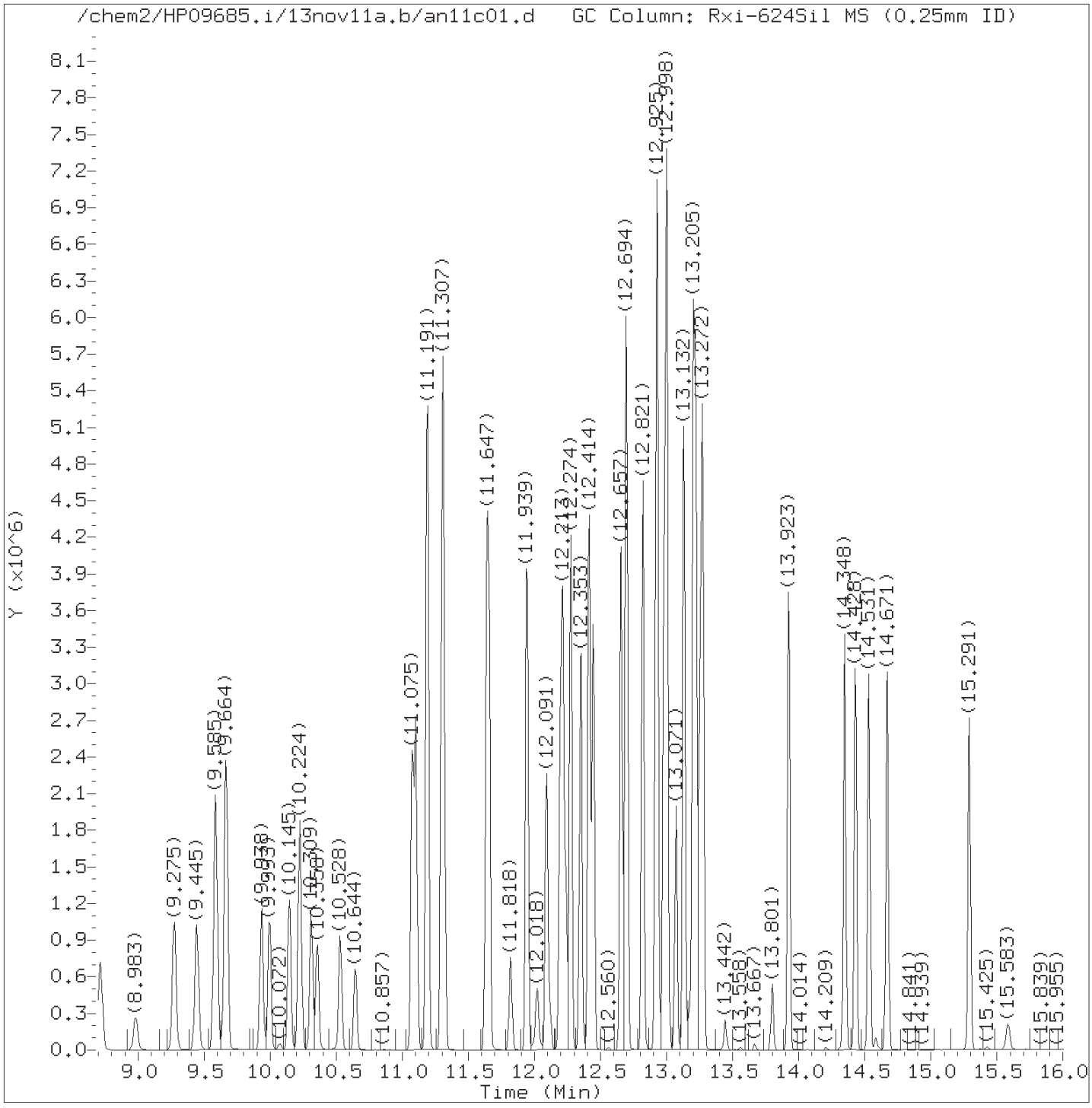
Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.914	85	750117	51.121
4) Chloromethane	(2)	2.041	50	550460	46.892
5) Vinyl Chloride	(2)	2.175	62	561716	49.949
9) Bromomethane	(2)	2.479	94	438951	53.408
10) Chloroethane	(2)	2.583	64	321394	49.203
11) Dichlorofluoromethane	(2)	2.802	67	835459	49.923
13) Trichlorofluoromethane	(2)	2.832	101	874903	51.689
15) Ethanol	(1)	2.966	45	183641M	1846.684
17) Freon 123a	(2)	3.179	67	470675	40.027
18) Acrolein	(1)	3.282	56	844314	385.704
19) 1,1-Dichloroethene	(2)	3.404	96	433515	49.953
20) Acetone	(2)	3.435	58	86079	87.903
22) Freon 113	(2)	3.441	101	493037	52.042
23) 2-Propanol	(1)	3.581	45	137058	212.187
24) Methyl Iodide	(2)	3.599	142	925485	54.251
25) Carbon Disulfide	(2)	3.702	76	1441371	47.305
27) Methyl Acetate	(2)	3.830	43	272456	44.619
29) Allyl Chloride	(2)	3.860	41	580532	43.288
31) Methylene Chloride	(2)	4.043	84	468894	46.307
30)*t-Butyl alcohol-d10	(1)	4.049	65	188608	250.000
32) t-Butyl alcohol	(1)	4.158	59	244109	235.630
33) Acrylonitrile	(2)	4.359	53	150075	43.010
34) Methyl Tertiary Butyl Ether	(2)	4.426	73	1332100	49.321
35) trans-1,2-Dichloroethene	(2)	4.444	96	486894	48.358
38) n-Hexane	(2)	4.852	57	607196	45.283
40) 1,1-Dichloroethane	(2)	5.101	63	785047	44.819
41) di-Isopropyl ether	(2)	5.156	45	1218546	42.999
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	653645	50.200
44) Ethyl t-butyl ether	(2)	5.698	59	1275726	46.544
45) 2-Butanone	(2)	5.904	43	349290	86.603
46) cis-1,2-Dichloroethene	(2)	5.935	96	537362	48.320
48) 2,2-Dichloropropane	(2)	5.953	77	716662	50.320
50) Propionitrile	(1)	5.996	54	289613	216.235
47) 1,2-Dichloroethene (Total)	(2)		96	1024256	96.678
51) Methacrylonitrile	(2)	6.209	67	442382	117.069
52) Bromochloromethane	(2)	6.276	128	289410	51.094
53) Tetrahydrofuran	(1)	6.288	71	108692	85.720
54) Chloroform	(2)	6.422	83	818047	47.585

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.641	113	438674	52.352
55)$Dibromofluoromethane	(2)	6.641	111	449413	52.594
56) 1,1,1-Trichloroethane	(2)	6.653	97	745620	44.794
57) Cyclohexane	(2)	6.756	56	717332	43.434
57) Cyclohexane	(2)	6.756	84	716483	47.277
57) Cyclohexane	(2)	6.756	69	238536	45.871
58) 1,1-Dichloropropene	(2)	6.866	75	630032	46.694
59) Carbon Tetrachloride	(2)	6.872	117	676449	49.688
60) Isobutyl Alcohol	(1)	7.006	41	189515	549.571
61)$1,2-Dichloroethane-d4	(2)	7.109	102	97938	51.538
61)$1,2-Dichloroethane-d4	(2)	7.109	65	466639	53.624
61)$1,2-Dichloroethane-d4	(2)	7.109	104	62549	51.901
62) Benzene	(2)	7.133	78	1876193	45.751
64) 1,2-Dichloroethane	(2)	7.212	62	618184	50.161
64) 1,2-Dichloroethane	(2)	7.212	98	58890	49.392
65) t-Amyl methyl ether	(2)	7.328	73	1246876	47.325
67)*Fluorobenzene	(2)	7.541	96	1714015	50.000
69) n-Heptane	(2)	7.547	43	598135	43.126
70) n-Butanol	(1)	7.894	56	320177	1059.054
72) Trichloroethene	(2)	8.028	95	502423	47.230
73) Methylcyclohexane	(2)	8.338	83	858824	48.233
74) 1,2-Dichloropropane	(2)	8.368	63	442586	43.074
76) Methyl Methacrylate	(2)	8.447	69	312203	48.839
77) 1,4-Dioxane	(1)	8.460	88	64541	577.768
78) Dibromomethane	(2)	8.478	93	308279	48.472
81) Bromodichloromethane	(2)	8.715	83	625305	48.809
82) 2-Nitropropane	(1)	8.983	41	217156	87.590
84) cis-1,3-Dichloropropene	(2)	9.275	75	727341	47.014
85) 4-Methyl-2-pentanone	(2)	9.445	43	753260	87.889
86)$Toluene-d8	(3)	9.585	98	1716203	47.697
86)$Toluene-d8	(3)	9.585	100	1138240	48.615
87) Toluene	(3)	9.664	92	1240212	44.390
88) trans-1,3-Dichloropropene	(3)	9.938	75	702668	46.114
89) Ethyl Methacrylate	(3)	9.993	69	586625	46.859
90) 1,1,2-Trichloroethane	(3)	10.145	97	422000	45.302
92) Tetrachloroethene	(3)	10.224	166	624533	48.814
93) 1,3-Dichloropropane	(3)	10.309	76	699622	43.306
95) 2-Hexanone	(3)	10.358	43	539182	82.181

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
97) Dibromochloromethane	(3)	10.528	129	518040	48.072
98) 1,2-Dibromoethane	(3)	10.644	107	454019	46.746
99)*Chlorobenzene-d5	(3)	11.075	117	1386357	50.000
100) Chlorobenzene	(3)	11.100	112	1487782	45.234
101) 1,1,1,2-Tetrachloroethane	(3)	11.185	131	543646	47.725
102) Ethylbenzene	(3)	11.191	91	2403036	45.679
103) m+p-Xylene	(3)	11.307	106	1959638	91.153
104) o-Xylene	(3)	11.635	106	946419	45.349
106) Styrene	(3)	11.660	104	1588659	48.213
105) Xylene (Total)	(3)		106	2906057	136.502
107) Bromoform	(3)	11.818	173	338966	51.292
108) Isopropylbenzene	(3)	11.939	105	2482872	46.492
111) Cyclohexanone	(1)	12.018	55	210112	495.973
112)$4-Bromofluorobenzene	(3)	12.091	95	656507	49.074
112)$4-Bromofluorobenzene	(3)	12.091	174	638944	55.020
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	550963M	41.194
114) Bromobenzene	(4)	12.207	156	703053	45.307
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	399377	115.246
116) 1,2,3-Trichloropropane	(4)	12.237	110	181733MA	44.165
117) n-Propylbenzene	(4)	12.274	91	2868757	43.552
119) 2-Chlorotoluene	(4)	12.353	126	654480	44.299
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	2163665	44.465
123) 4-Chlorotoluene	(4)	12.444	126	672703	44.002
126) tert-Butylbenzene	(4)	12.657	134	505436M	45.486
127) Pentachloroethane	(4)	12.688	167	432744	45.690
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	2206092	44.044
129) sec-Butylbenzene	(4)	12.821	105	2780224	45.197
131) 1,3-Dichlorobenzene	(4)	12.919	146	1294285	44.882
132) p-Isopropyltoluene	(4)	12.931	119	2609633	47.414
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	793219	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	1323586	44.669
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	2284103	43.609
136) Benzyl Chloride	(4)	13.071	126	283975	50.387
137) 1,3-Diethylbenzene	(4)	13.132	119	1547187	46.146
138) 1,4-Diethylbenzene	(4)	13.205	119	1563102	46.725
139) n-Butylbenzene	(4)	13.223	92	1194955	44.783
140) 1,2-Dichlorobenzene	(4)	13.253	146	1247423	44.819
141) 1,2-Diethylbenzene	(4)	13.272	119	1281323	45.329

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

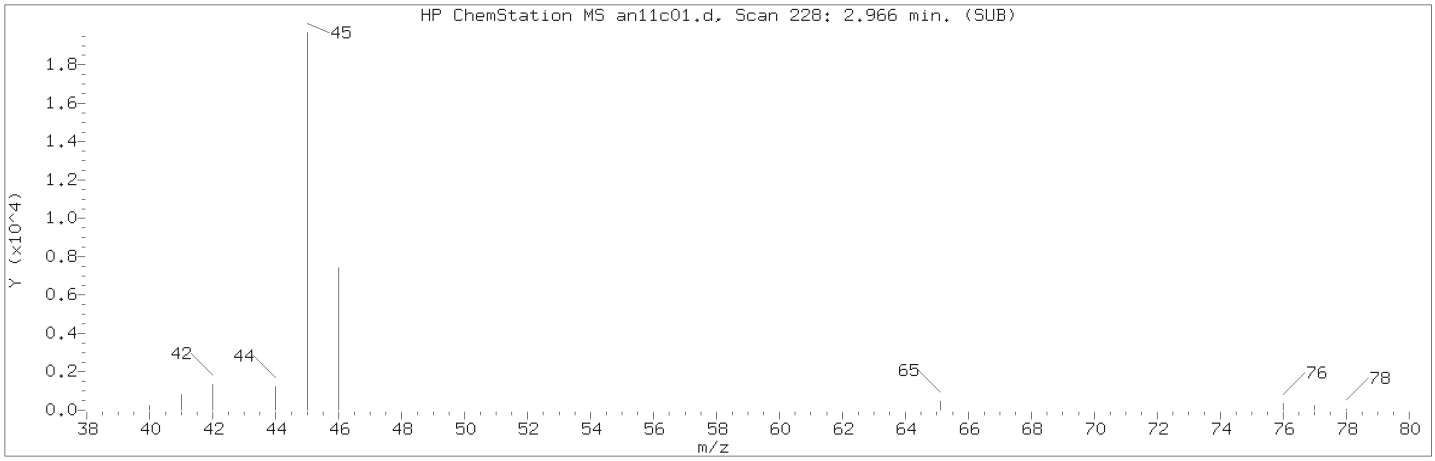
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

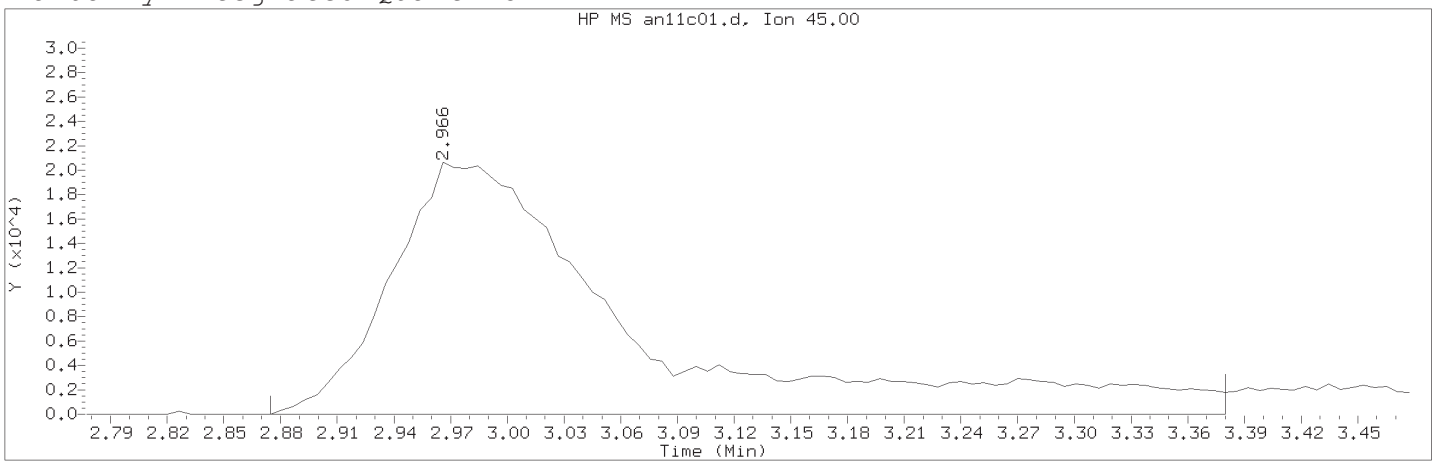
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	109936	45.933
145) 1,3,5-Trichlorobenzene	(4)	13.923	180	1106291	49.003
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	985580	50.936
147) Hexachlorobutadiene	(4)	14.428	225	520757	47.534
148) Naphthalene	(4)	14.531	128	2192045	49.724
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	938665	51.643
150) 2-Methylnaphthalene	(4)	15.291	142	1256267	48.133

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

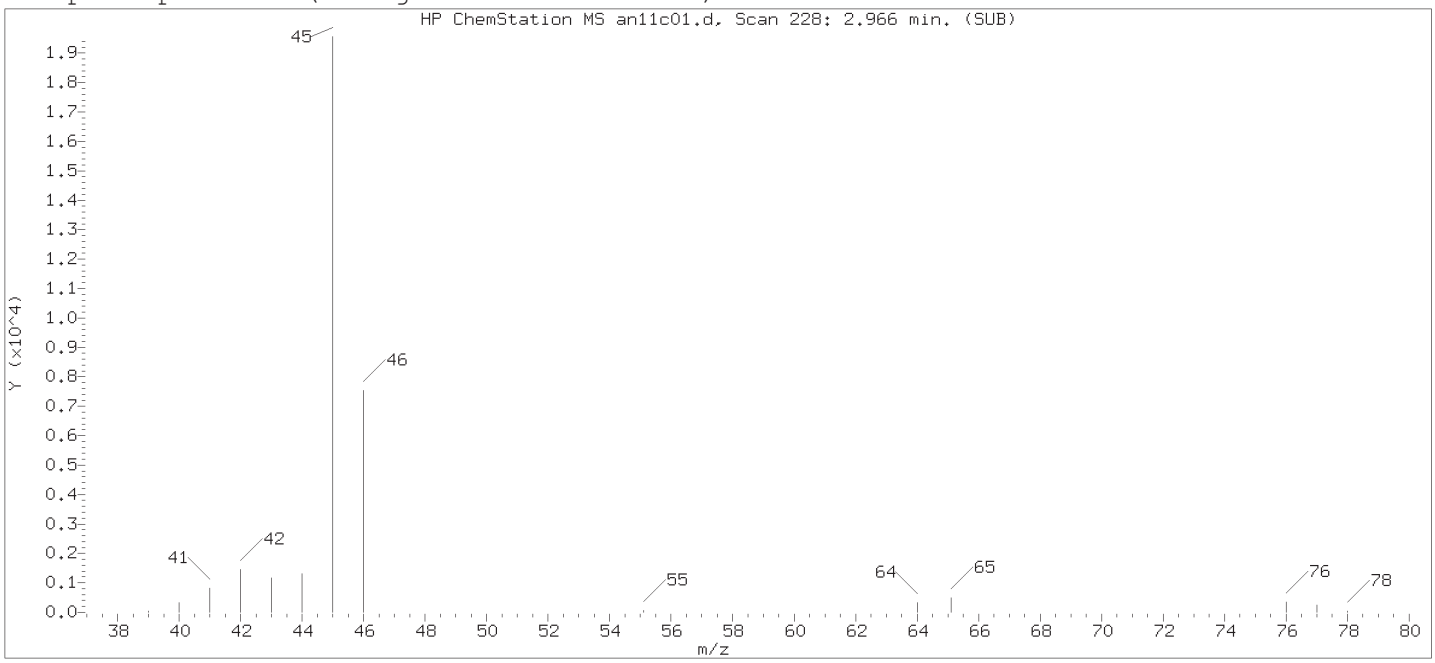
Compound Number : 15
Compound Name : Ethanol
Scan Number : 228
Retention Time (minutes): 2.966
Quant Ion : 45.00
Area (flag) : 183641M
On-Column Amount (ng) : 1846.6839
Integration start scan : 212 Integration stop scan: 295
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

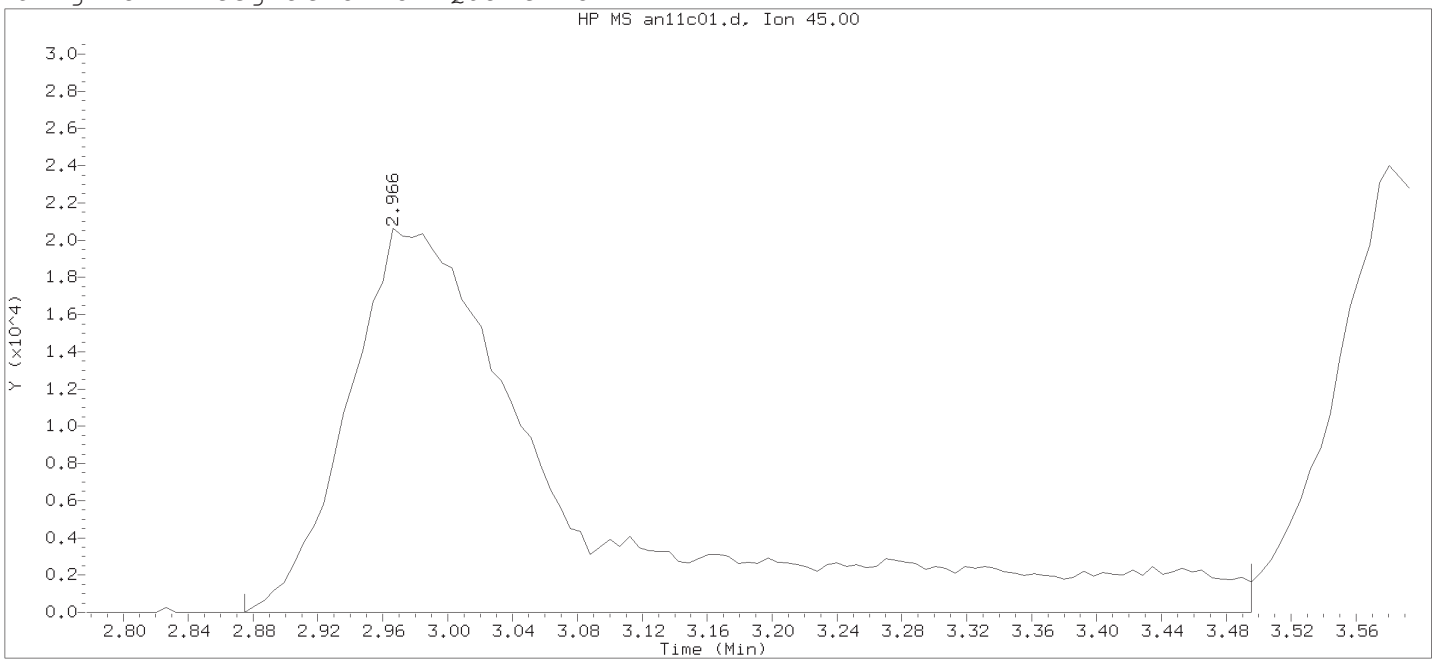
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:31.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

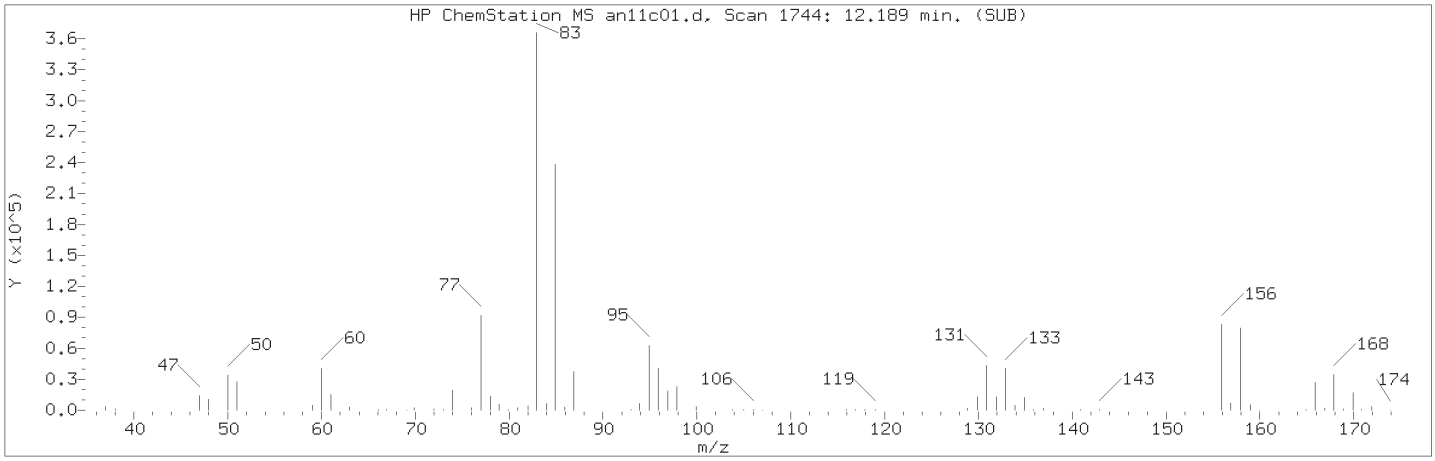
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

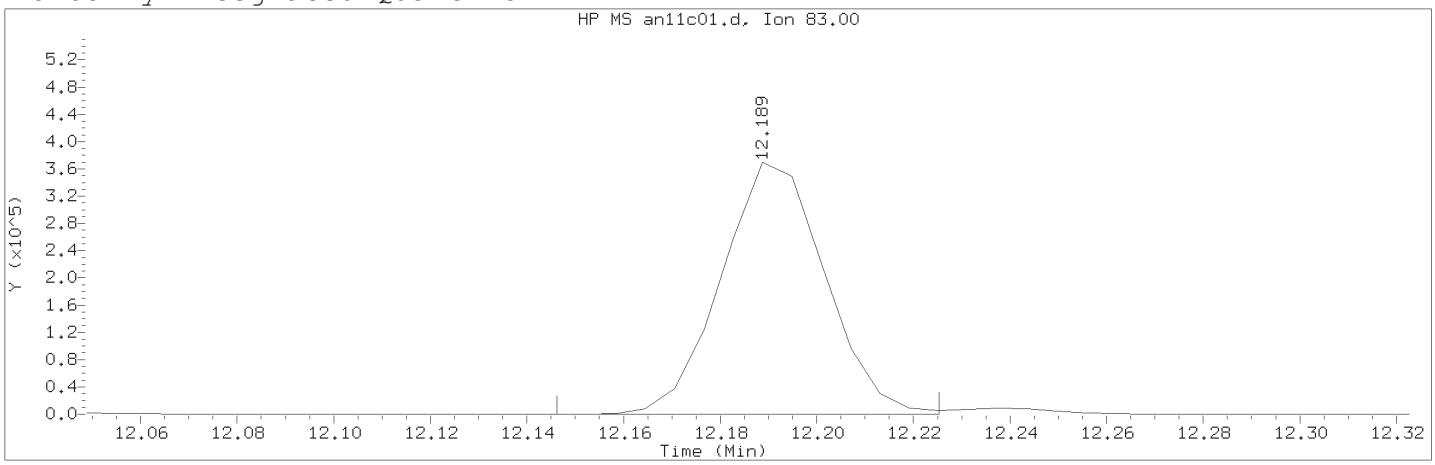
Compound Number : 15
Compound Name : Ethanol
Scan Number : 228
Retention Time (minutes): 2.966
Quant Ion : 45.00
Area : 197502
On-column Amount (ng) : 1986.0629
Integration start scan : 212 Integration stop scan: 314
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

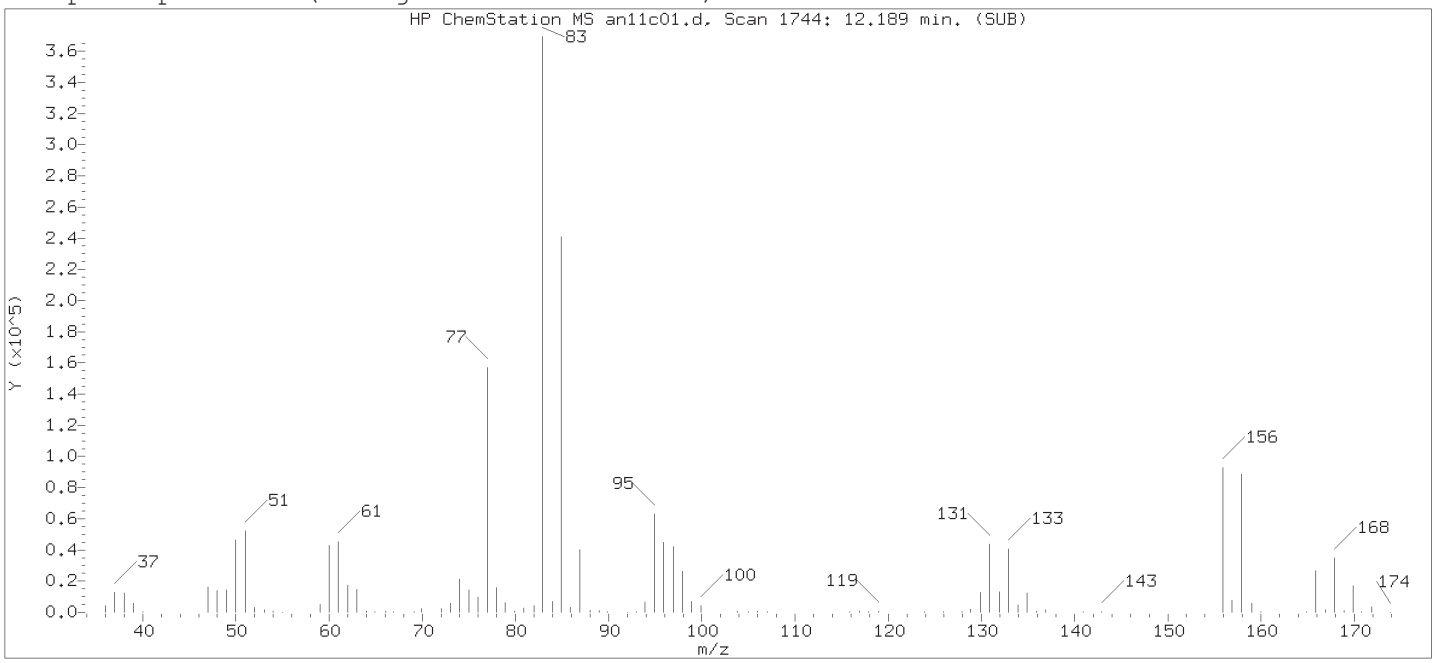
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area (flag) : 550963M
On-Column Amount (ng) : 41.1939
Integration start scan : 1736 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

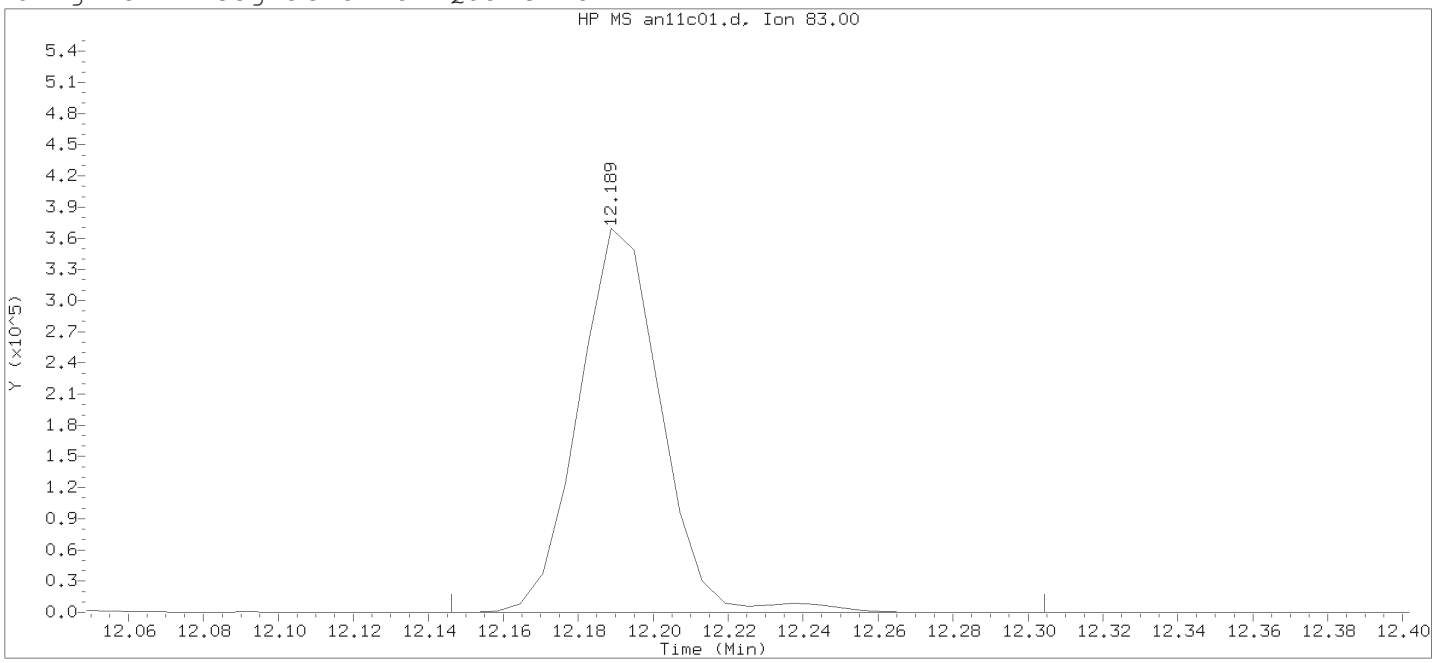
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:31.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

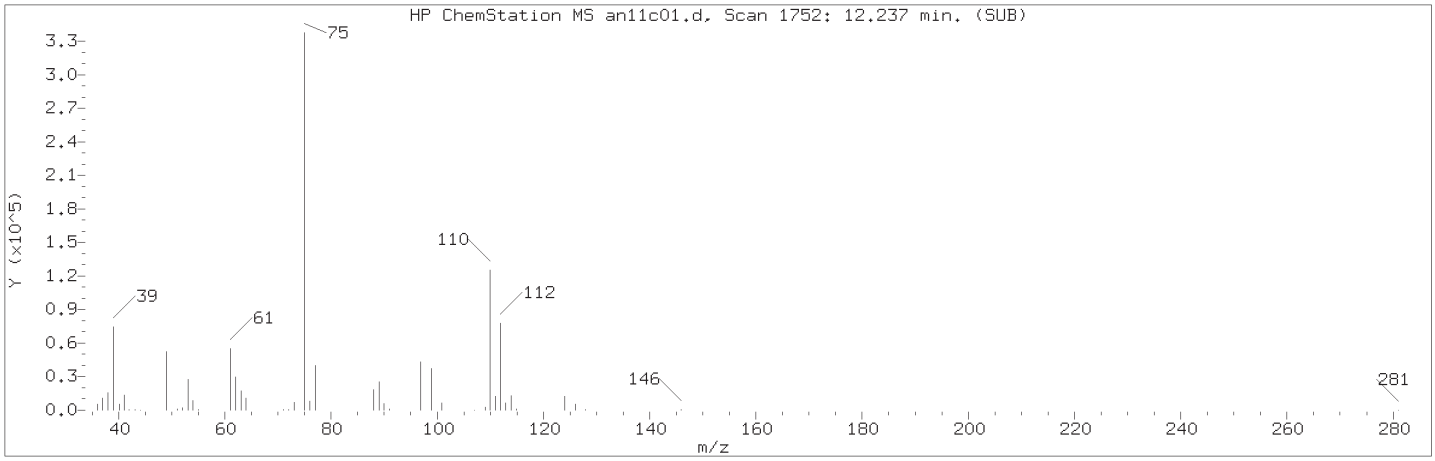
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

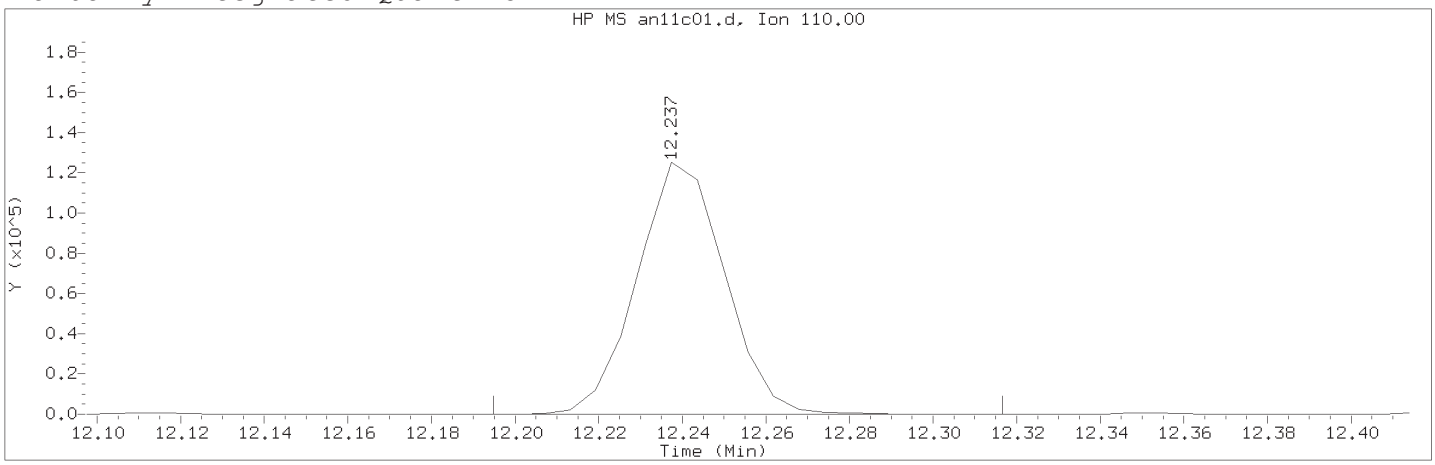
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area : 562239
On-column Amount (ng) : 42.0369
Integration start scan : 1736 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
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Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

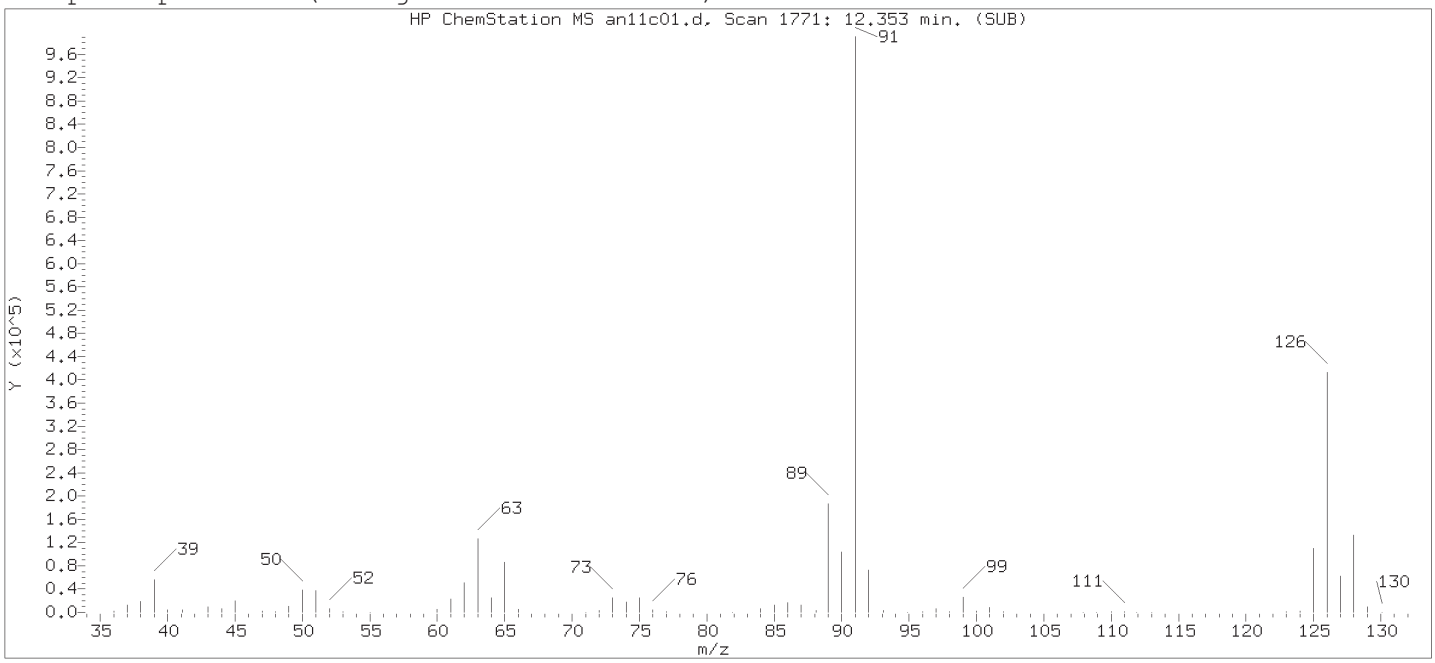
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1752
Retention Time (minutes): 12.237
Quant Ion : 110.00
Area (flag) : 181733MA
On-Column Amount (ng) : 44.1655
Integration start scan : 1744 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

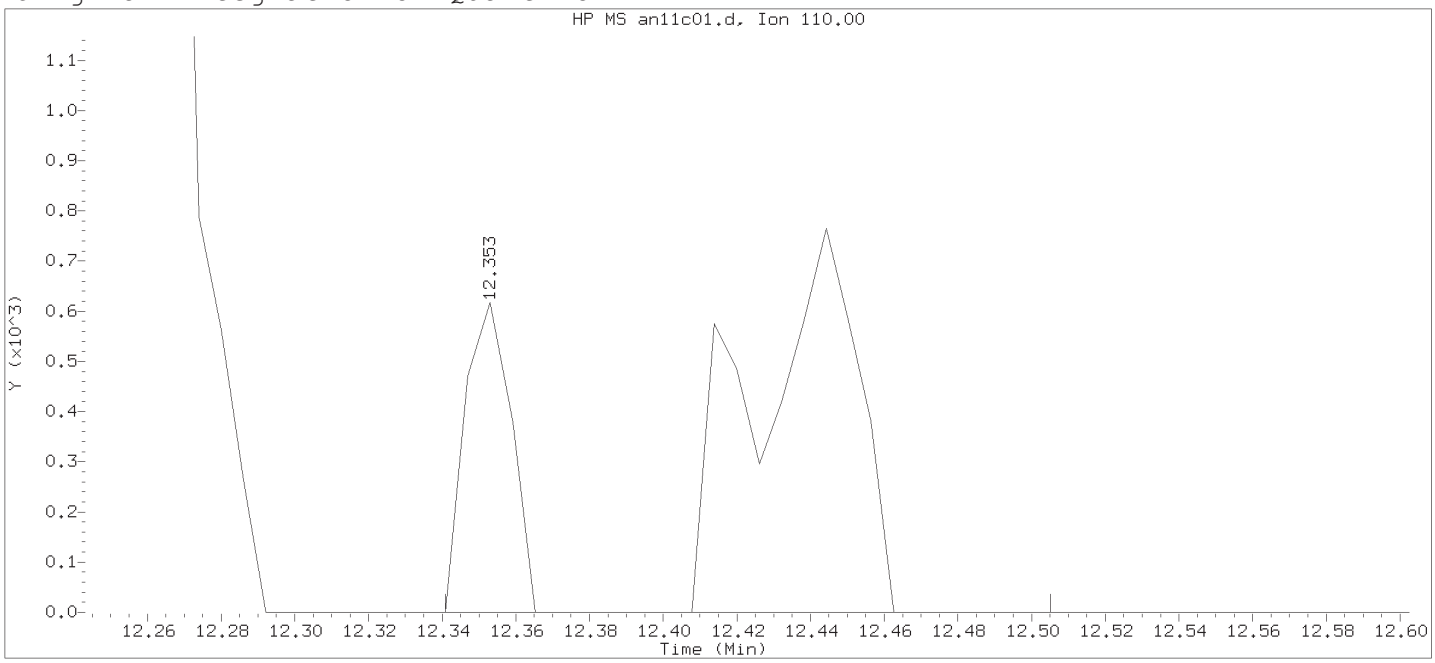
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:31.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

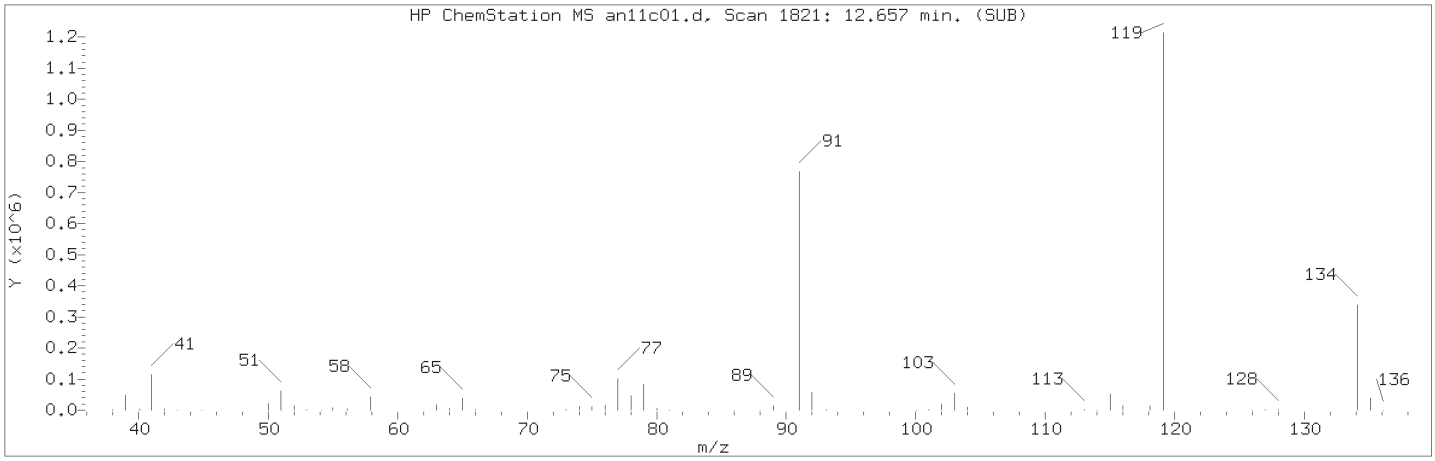
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

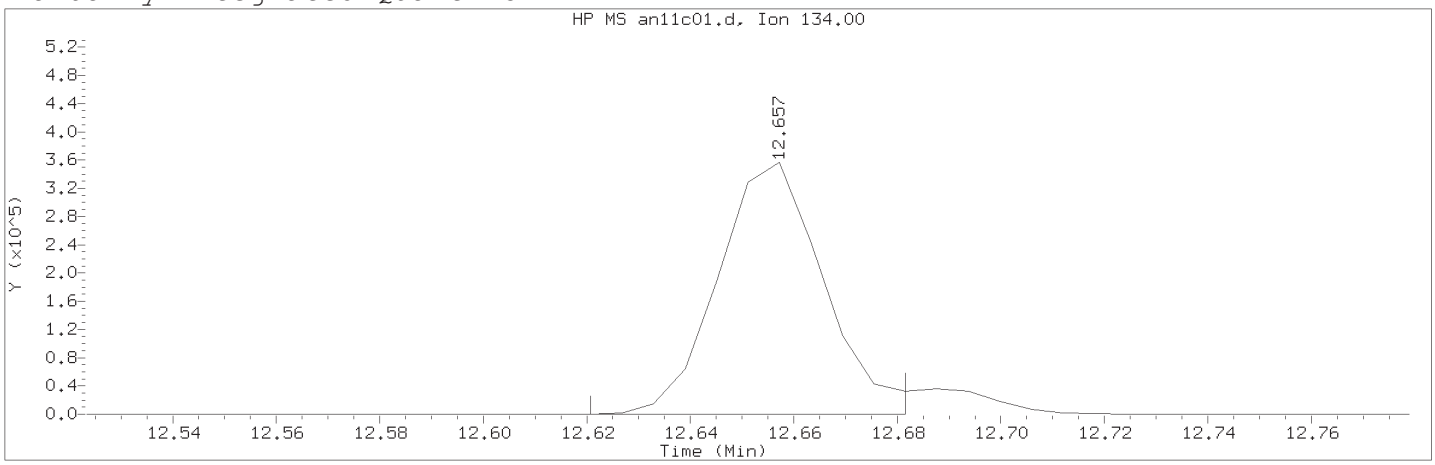
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1771
Retention Time (minutes): 12.353
Quant Ion : 110.00
Area : 2026
On-column Amount (ng) : 0.4926
Integration start scan : 1768 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:19 cbs01947

Sample Name: VSTD050 Lab Sample ID: VSTD050

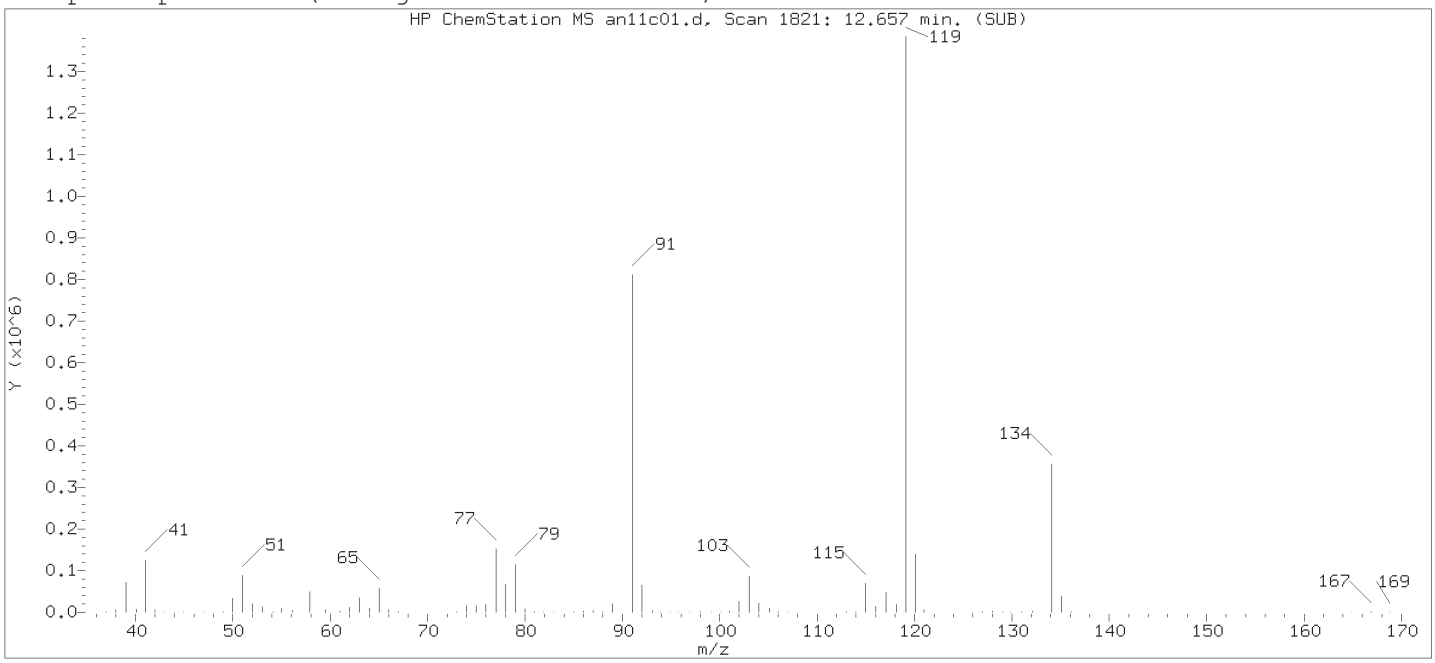
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 505436M
On-Column Amount (ng) : 45.4859
Integration start scan : 1814 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

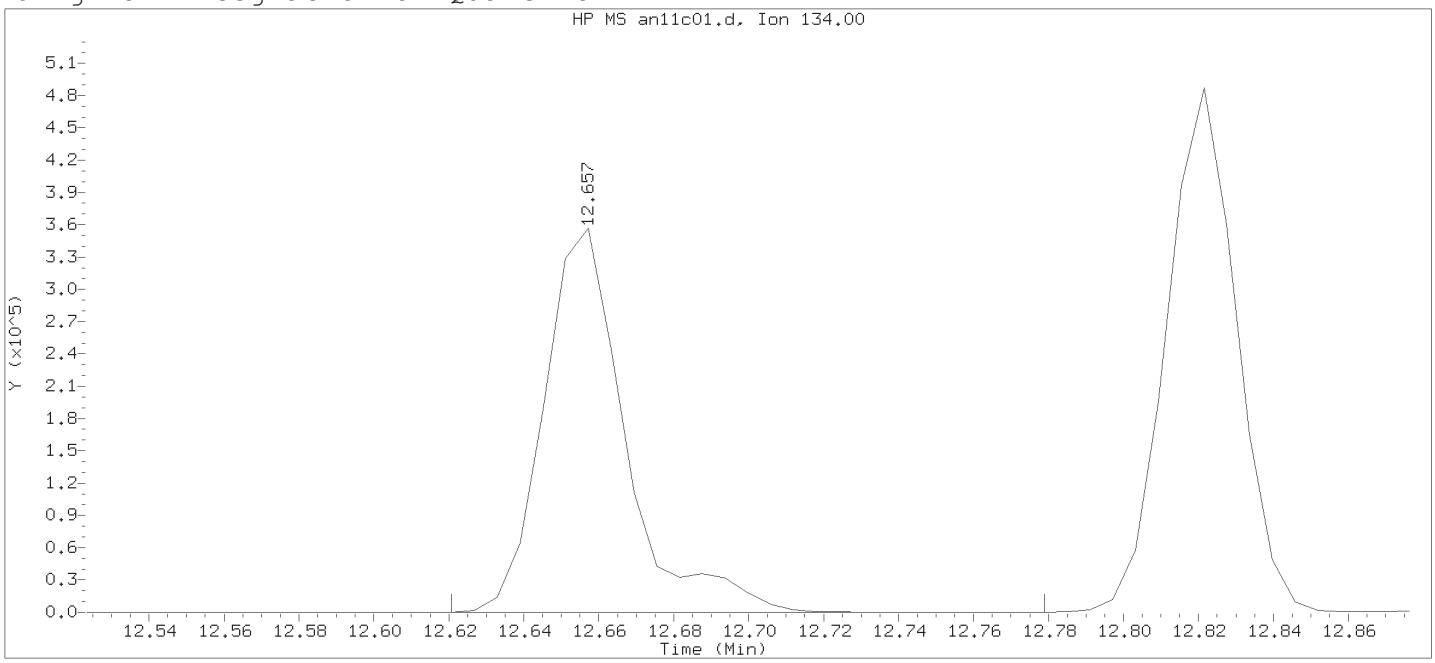
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:31.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11c01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 10:56 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 11:16 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area : 540506
On-column Amount (ng) : 48.6420
Integration start scan : 1814 Integration stop scan: 1840
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 11:19.
Target 3.5 esignature user ID: CBS01947

Data File: /chem2/HP09355.i/13oct23a.b/yc23t01.d

Date : 23-OCT-2013 11:28

Client ID: 50ng BFB

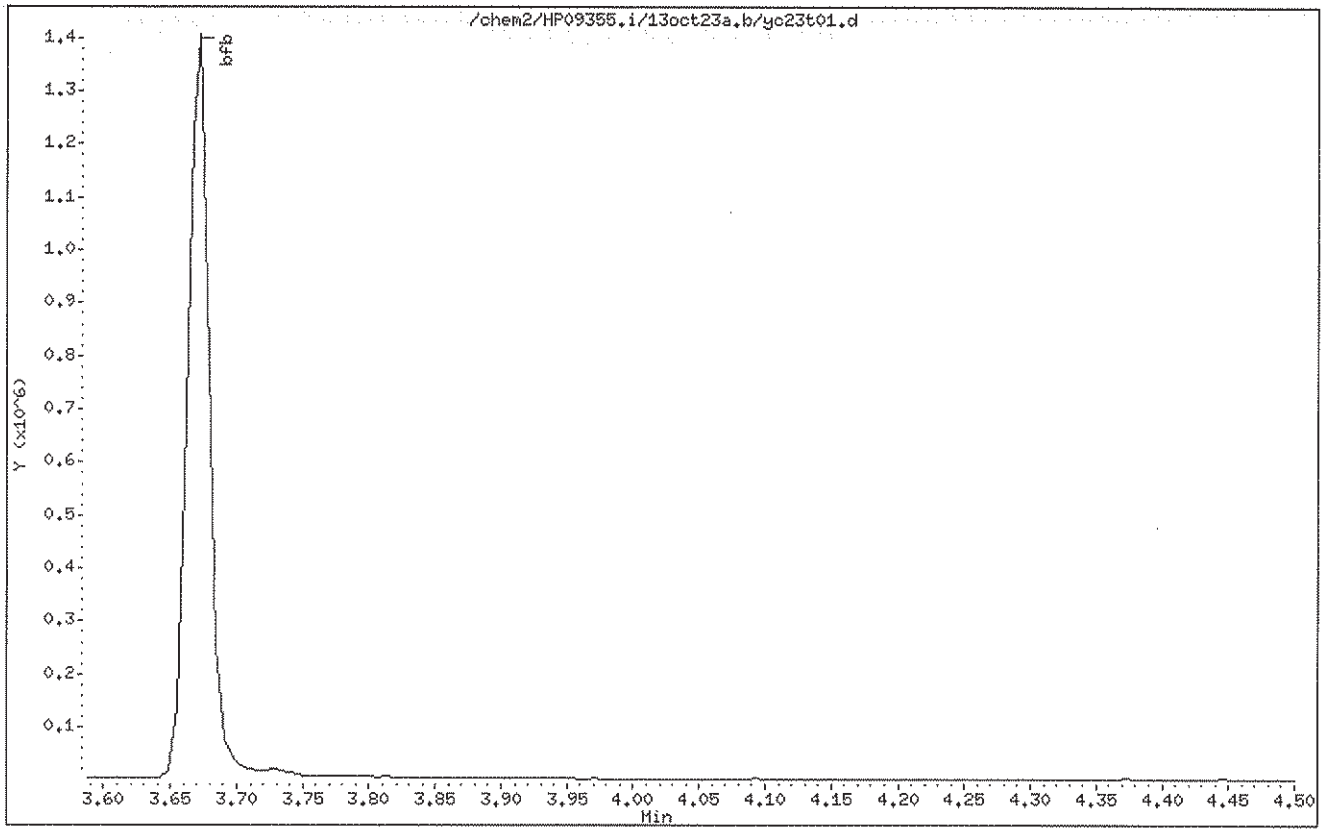
Instrument: HP09355.i

Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ads01731

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:56.
Target 3.5 esignature user ID: ads01731

Data File: /chem2/HP09355.i/13oct23a.b/yc23t01.d

Date : 23-OCT-2013 11:28

Client ID: 50ng BFB

Instrument: HP09355.i

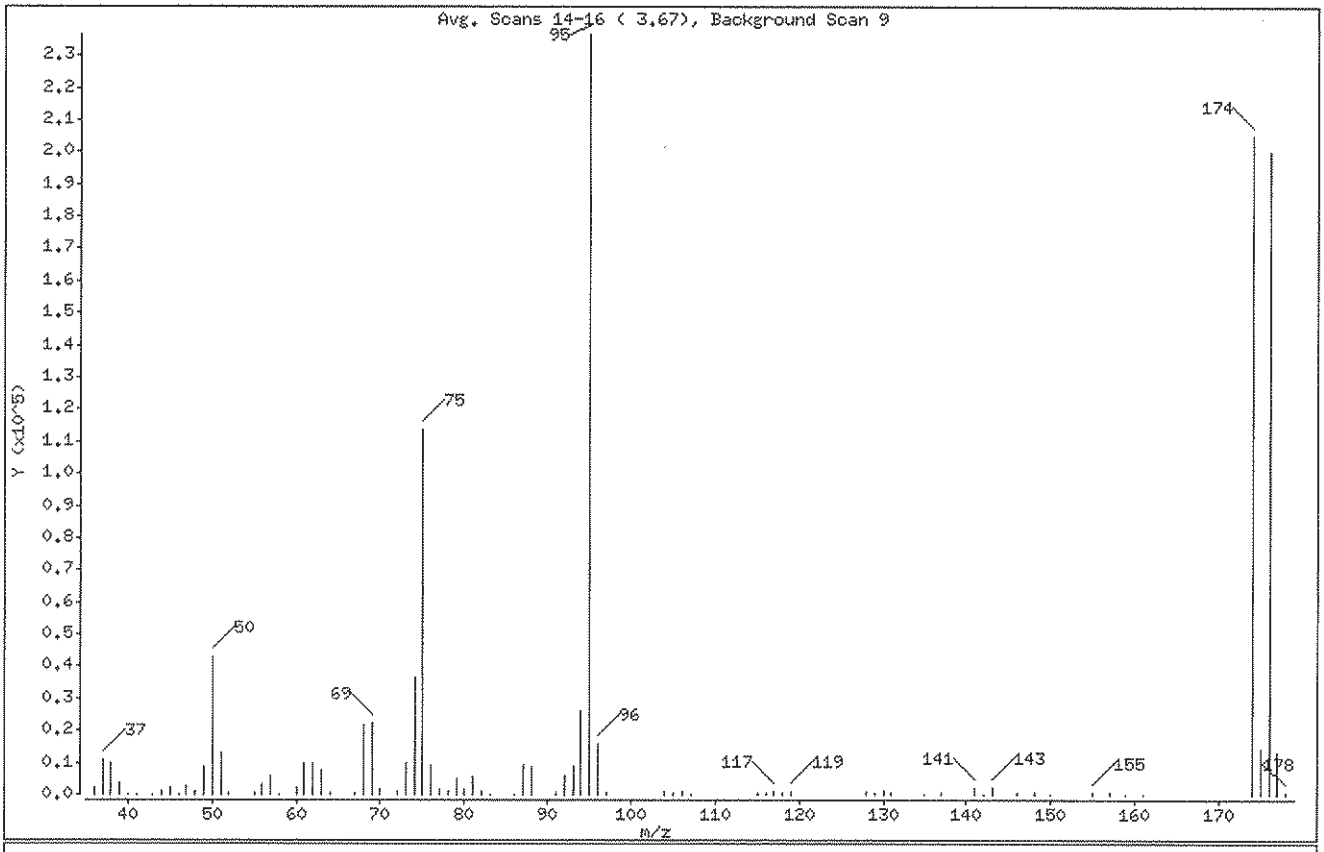
Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ads01731

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.25
75	30.00 - 60.00% of mass 95	48.00
96	5.00 - 9.00% of mass 95	6.65
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	86.66
175	5.00 - 9.00% of mass 174	6.07 (7.01)
176	95.00 - 101.00% of mass 174	84.51 (97.52)
177	5.00 - 9.00% of mass 176	5.56 (6.57)

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:56.
Target 3.5 esignature user ID: ads01731

Data File: /chem2/HP09355.i/13oct23a.b/yc23t01.d

Date : 23-OCT-2013 11:28

Client ID: 50ng BFB

Instrument: HP09355.i

Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ads01731

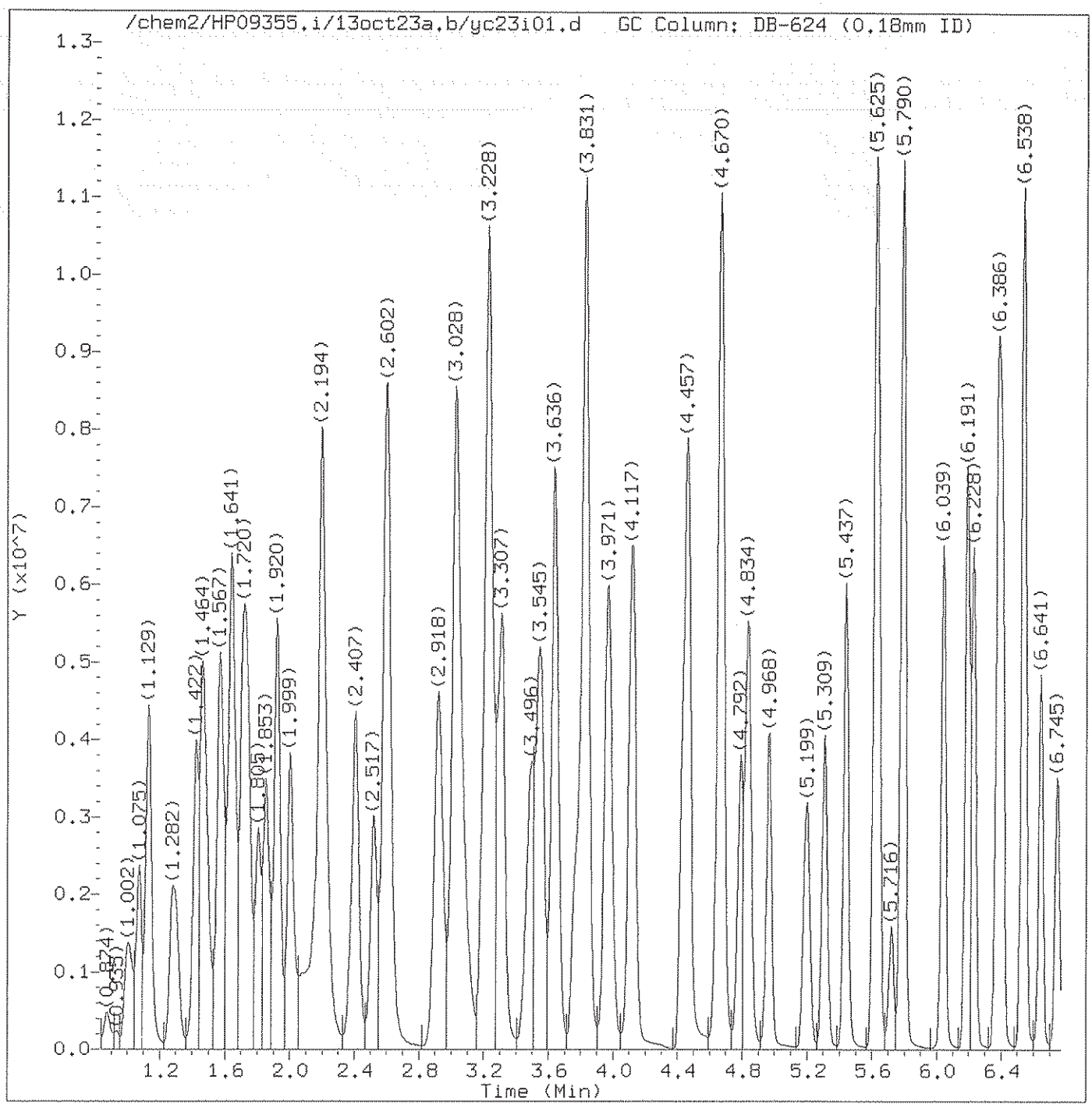
Column phase: DB-624

Column diameter: 0.18

Data File: yc23t01.d
Spectrum: Avg. Scans 14-16 (3.67), Background Scan 9
Location of Maximum: 95.00
Number of points: 81

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2045	61.00	9826	87.00	9180	131.00	347
37.00	10895	62.00	9755	88.00	8735	135.00	271
38.00	9922	63.00	7505	91.00	697	137.00	378
39.00	3606	64.00	721	92.00	6204	141.00	1944
40.00	112	67.00	648	93.00	8902	142.00	121
41.00	65	68.00	21688	94.00	25840	143.00	2188
43.00	187	69.00	22168	95.00	236608	146.00	374
44.00	1086	70.00	1816	96.00	15740	148.00	566
45.00	2073	72.00	1053	97.00	567	150.00	112
46.00	94	73.00	9584	104.00	902	155.00	612
47.00	2642	74.00	36488	105.00	394	157.00	428
48.00	1335	75.00	113560	106.00	838	159.00	128
49.00	8895	76.00	9517	107.00	197	161.00	217
50.00	43176	77.00	1403	115.00	313	174.00	204992
51.00	12791	78.00	1067	116.00	777	175.00	14368
52.00	616	79.00	5136	117.00	1319	176.00	199936
55.00	450	80.00	1640	118.00	788	177.00	13144
56.00	3022	81.00	5260	119.00	1094	178.00	371
57.00	5742	82.00	1252	128.00	835		
58.00	233	83.00	96	129.00	424		
60.00	1976	86.00	99	130.00	834		

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:56.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

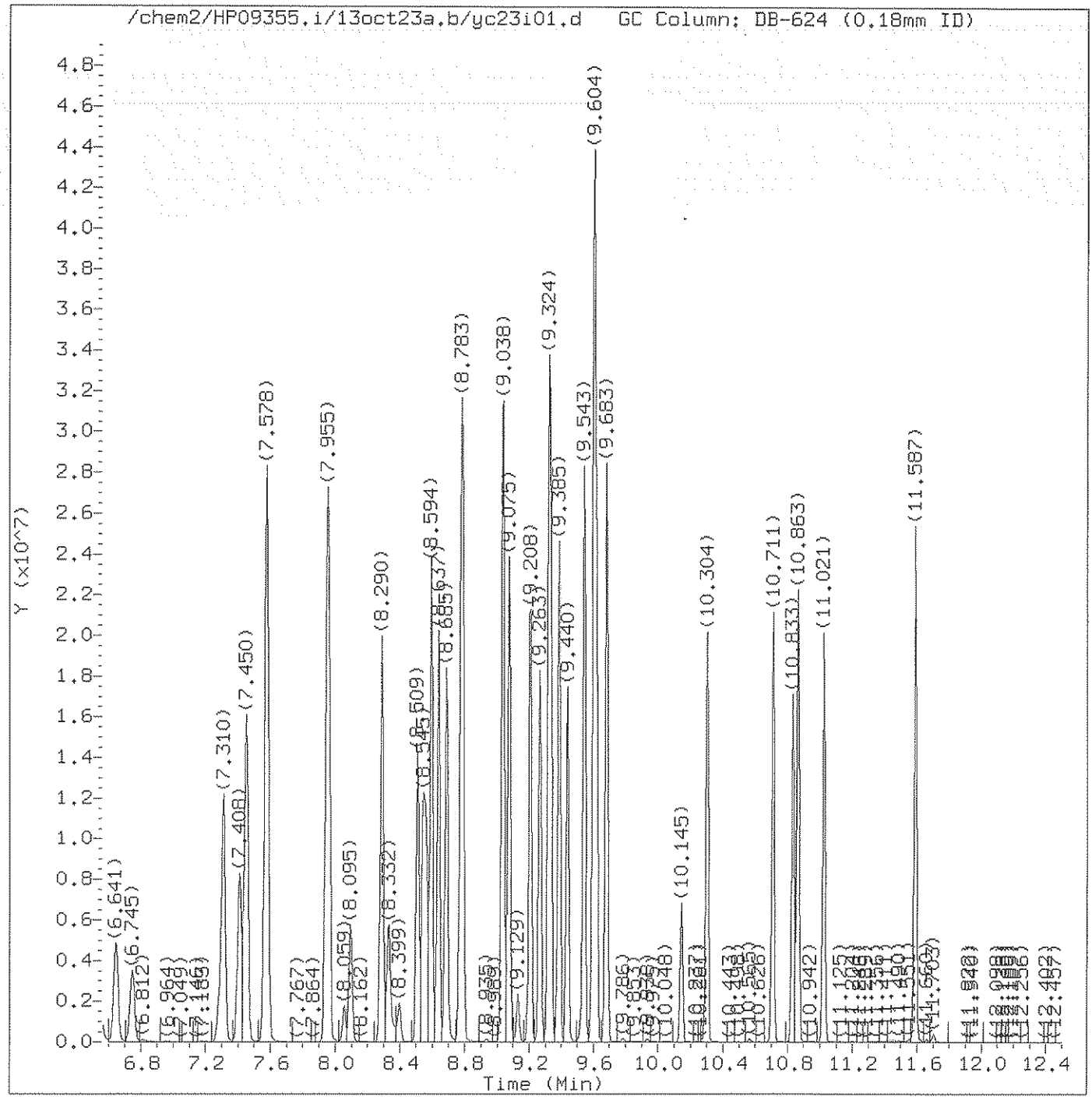
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.002	85	2949843	283.072
4) Chloromethane	(2)	1.075	50	3370739M	266.756
5) 1,3-Butadiene	(2)	1.123	39	1709645	278.352
6) Vinyl Chloride	(2)	1.142	62	2901887	268.912
8) Bromomethane	(2)	1.275	94	1730072	247.177
9) Chloroethane	(2)	1.306	64	1585451	254.941
10) Dichlorofluoromethane	(2)	1.422	67	3940485	262.393
11) n-Pentane	(2)	1.464	43	3693325M	256.709
12) Trichlorofluoromethane	(2)	1.482	101	3397057	273.090
14) Ethyl ether	(2)	1.567	59	2197495	268.246
15) Freon 123a	(2)	1.580	67	2430784	259.702
16) Acrolein	(1)	1.641	56	9691161	3086.432
17) 1,1-Dichloroethene	(2)	1.714	96	1788315	273.973
17) 1,1-Dichloroethene	(2)	1.707	63	903798	264.200
18) Acetone	(2)	1.726	58	962770	544.033
19) Freon 113	(2)	1.738	101	1885141	275.879
21) 2-Propanol	(1)	1.805	45	1541456	1349.649
22) Methyl Iodide	(2)	1.805	142	3501327	281.096
23) Carbon Disulfide	(2)	1.853	76	6485821M	284.074
25) Allyl Chloride	(2)	1.920	41	3352996	264.361
27) Methyl Acetate	(2)	1.926	43	2928951	288.977
28) Methylene Chloride	(2)	1.999	84	2152159	269.782
29)*t-Butyl alcohol-d10	(1)	2.030	65	359640M	250.000
30) t-Butyl alcohol	(1)	2.091	59	3151774	1403.023
31) Acrylonitrile	(2)	2.164	53	1923666M	284.868
32) trans-1,2-Dichloroethene	(2)	2.194	96	2127930	280.015
33) Methyl Tertiary Butyl Ether	(2)	2.206	73	7622722	276.562
34) n-Hexane	(2)	2.407	57	3523939	275.775
36) 1,1-Dichloroethane	(2)	2.517	63	4145822	287.011
38) di-Isopropyl ether	(2)	2.596	45	8246669	273.609
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	3654560	280.724
40) Ethyl t-butyl ether	(2)	2.918	59	7822636	277.660
42) cis-1,2-Dichloroethene	(2)	3.021	96	2501556	292.076
44) 2-Butanone	(2)	3.034	43	6096230	616.968
45) 2,2-Dichloropropane	(2)	3.040	77	3330420	289.918
43) 1,2-Dichloroethene (Total)	(2)		96	4629486	572.091
47) Propionitrile	(1)	3.082	54	3651398	1491.515
48) Methacrylonitrile	(2)	3.222	67	4598285	703.699

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.234	128	1291052	295.100
50) Tetrahydrofuran	(1)	3.283	71	1549038	687.359
51) Chloroform	(2)	3.313	83	3892071	286.647
52)$Dibromofluoromethane	(2)	3.459	113	301855	49.838
52)$Dibromofluoromethane	(2)	3.459	111	309550	50.111
53) 1,1,1-Trichloroethane	(2)	3.490	97	3592949	273.518
54) Cyclohexane	(2)	3.551	56	4386713	283.342
54) Cyclohexane	(2)	3.551	84	3509487	272.505
54) Cyclohexane	(2)	3.551	69	1325336	285.304
55) 1,1-Dichloropropene	(2)	3.636	75	3161270	295.813
56) Carbon Tetrachloride	(2)	3.648	117	3007556	303.613
57)$1,2-Dichloroethane-d4	(2)	3.770	102	76938	49.004
57)$1,2-Dichloroethane-d4	(2)	3.770	65	378999	47.614
57)$1,2-Dichloroethane-d4	(2)	3.770	104	49267	49.939
58) Isobutyl Alcohol	(1)	3.788	41	2685464	3485.481
60) Benzene	(2)	3.831	78	9553374	286.464
61) 1,2-Dichloroethane	(2)	3.837	62	3340479	281.809
61) 1,2-Dichloroethane	(2)	3.843	98	310186	288.865
65) t-Amyl methyl ether	(2)	3.971	73	7556313	283.124
66)*Fluorobenzene	(2)	4.098	96	1297379	50.000
67) n-Heptane	(2)	4.123	43	4366804	279.033
69) n-Butanol	(1)	4.433	56	4395035M	6967.606
71) Trichloroethene	(2)	4.463	95	2431552	291.648
72) Methylcyclohexane	(2)	4.664	83	4222346	293.516
72) Methylcyclohexane	(2)	4.664	98	1859366	295.750
73) 1,2-Dichloropropane	(2)	4.676	63	2612184	293.194
74) Dibromomethane	(2)	4.792	93	1721601	291.071
75) 1,4-Dioxane	(1)	4.810	88	489835M	3594.262
76) Methyl Methacrylate	(2)	4.834	69	2927977	279.533
78) Bromodichloromethane	(2)	4.968	83	3256389	302.655
79) 2-Nitropropane	(2)	5.199	41	3052480	670.553
80) 2-Chloroethyl Vinyl Ether	(2)	5.309	63	2350342	301.833
81) cis-1,3-Dichloropropene	(2)	5.437	75	4140551	300.445
82) 4-Methyl-2-pentanone	(2)	5.625	43	11430196M	613.751
83)$Toluene-d8	(3)	5.716	98	1273203	49.570
83)$Toluene-d8	(3)	5.716	100	851268	50.975
88) Toluene	(3)	5.790	92	6076515	283.366
89) trans-1,3-Dichloropropene	(3)	6.039	75	4164371	303.427

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	8304922	603.872
91) Ethyl Methacrylate	(3)	6.185	69	4691010	277.803
92) 1,1,2-Trichloroethane	(3)	6.228	97	2447711	280.496
93) Tetrachloroethene	(3)	6.380	166	2749011	295.121
94) 1,3-Dichloropropane	(3)	6.404	76	4291483	285.100
96) 2-Hexanone	(3)	6.538	43	9245755	596.337
97) Dibromochloromethane	(3)	6.641	129	2835319	321.062
99) 1,2-Dibromoethane	(3)	6.745	107	2767416	290.261
100)*Chlorobenzene-d5	(3)	7.280	117	964966	50.000
102) Chlorobenzene	(3)	7.310	112	6696777	280.710
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	2475100	303.175
104) Ethylbenzene	(3)	7.450	91	11321330	270.389
106) m+p-Xylene	(3)	7.578	106	8908797	537.975
107) o-Xylene	(3)	7.949	106	4505063	276.005
109) Styrene	(3)	7.961	104	7607764	274.703
108) Xylene (Total)	(3)		106	13413860	813.980
110) Bromoform	(3)	8.095	173	2283456	332.308
111) Isopropylbenzene	(3)	8.290	105	10819096	258.240
112) Cyclohexanone	(1)	8.326	55	2560567	3868.418
114)$4-Bromofluorobenzene	(3)	8.399	95	490682	50.203
114)$4-Bromofluorobenzene	(3)	8.399	174	419099	49.795
115) Bromobenzene	(4)	8.509	156	3202609	285.594
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	4308741	276.769
117) 1,2,3-Trichloropropane	(4)	8.564	110	1337300	274.828
118) trans-1,4-Dichloro-2-butene	(4)	8.594	53	3756659	677.487
119) n-Propylbenzene	(4)	8.637	91	11361957	232.392
120) 2-Chlorotoluene	(4)	8.685	126	2900669	283.194
121) 4-Chlorotoluene	(4)	8.777	126	3022211	281.462
122) 1,3,5-Trimethylbenzene	(4)	8.789	105	9350975	255.956
125) Pentachloroethane	(4)	9.032	167	2080555	299.446
124) tert-Butylbenzene	(4)	9.038	134	2286585	277.491
126) 1,2,4-Trimethylbenzene	(4)	9.075	105	9629160	258.462
127) sec-Butylbenzene	(4)	9.208	105	10823319	238.723
129) 1,3-Dichlorobenzene	(4)	9.263	146	5812336	279.270
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	543016	50.000
130) p-Isopropyltoluene	(4)	9.324	119	10004593	242.018
133) 1,4-Dichlorobenzene	(4)	9.336	146	5823053	265.457
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	9636834	250.617

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

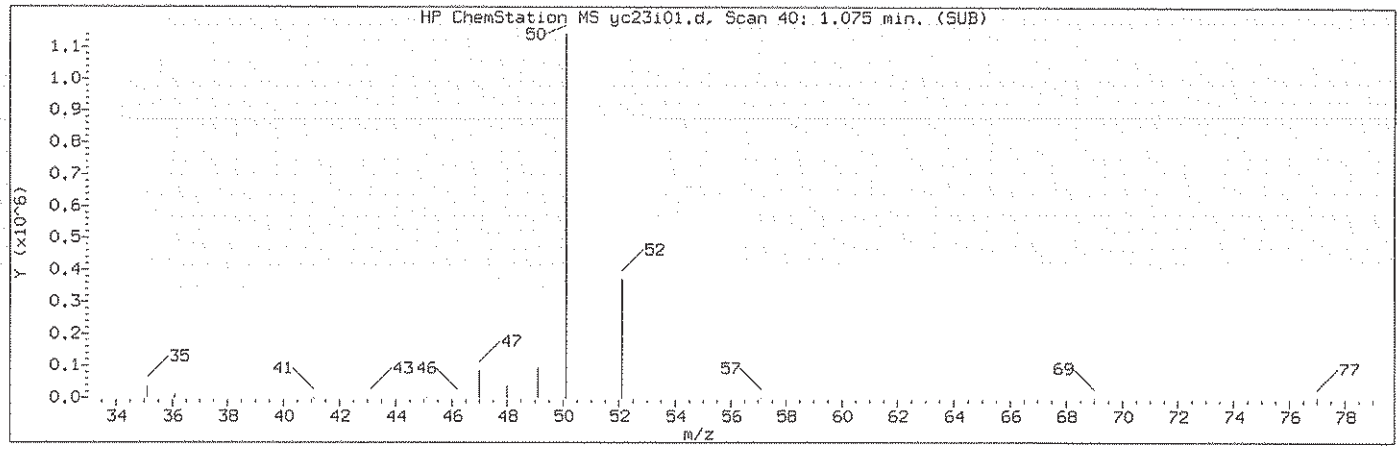
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

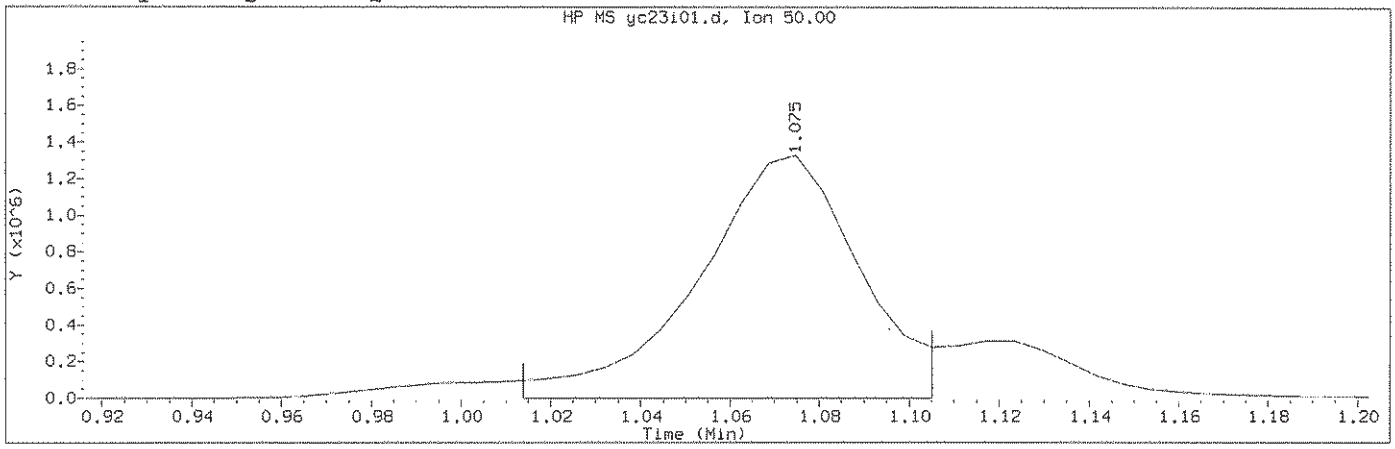
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.440	91	8588090	277.540
136) 1,3-Diethylbenzene	(4)	9.543	119	6802876	272.814
138) 1,2-Dichlorobenzene	(4)	9.604	146	5293446	255.418
137) 1,4-Diethylbenzene	(4)	9.604	119	6683405	262.816
139) n-Butylbenzene	(4)	9.622	92	5562295	268.700
140) 1,2-Diethylbenzene	(4)	9.683	119	5639566	273.207
141) Diethylbenzene (total)	(4)		100	19125847	808.838
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	1172749	295.765
144) 1,3,5-Trichlorobenzene	(4)	10.304	180	4733350	274.864
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	4488403	272.813
147) Hexachlorobutadiene	(4)	10.833	225	2294161	280.868
148) Naphthalene	(4)	10.863	128	11148559	212.037
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	4322631	272.234
150) 2-Methylnaphthalene	(4)	11.587	142	8091532	248.291

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

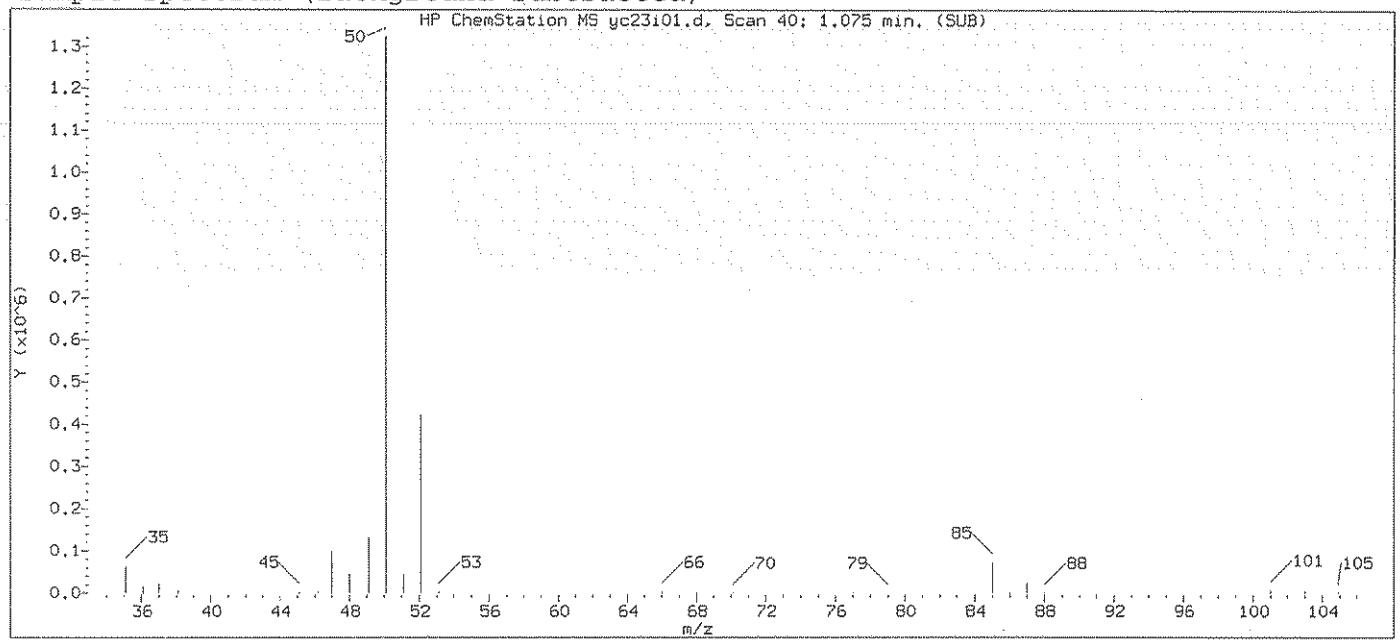
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 40
Retention Time (minutes): 1.075
Quant Ion : 50.00
Area (flag) : 3370739M
On-Column Amount (ng) : 266.7560
Integration start scan : 29 Integration stop scan: 44
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

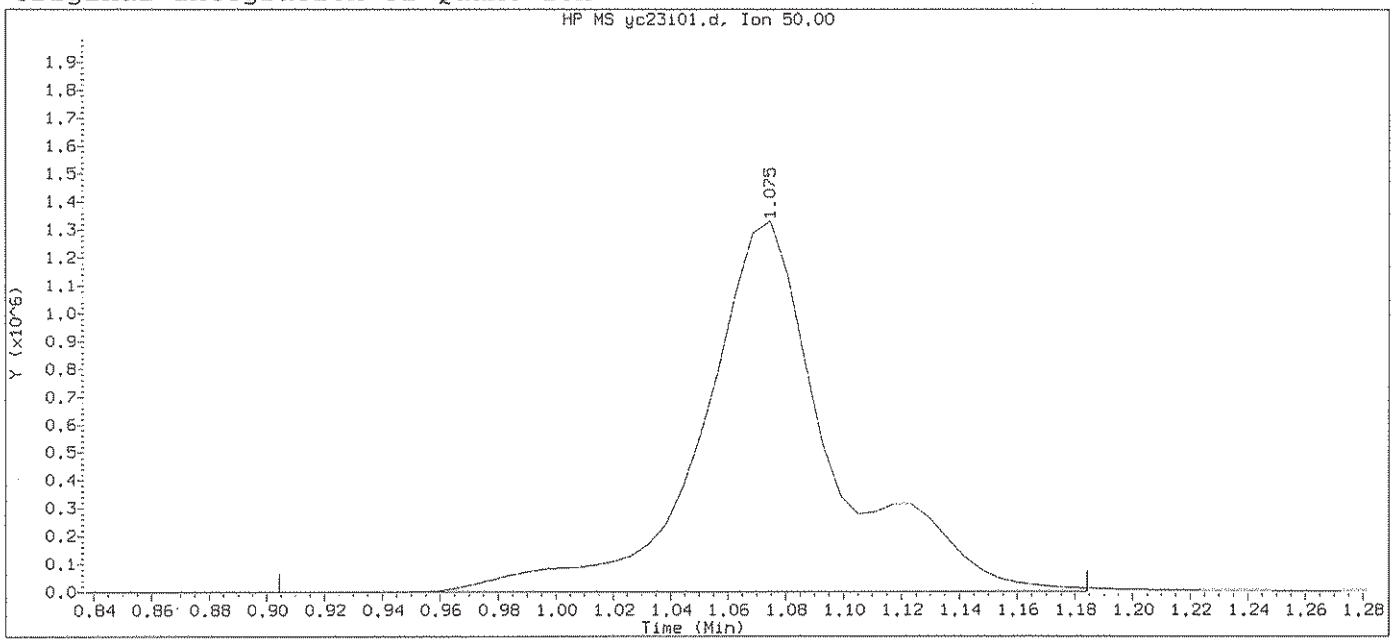
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

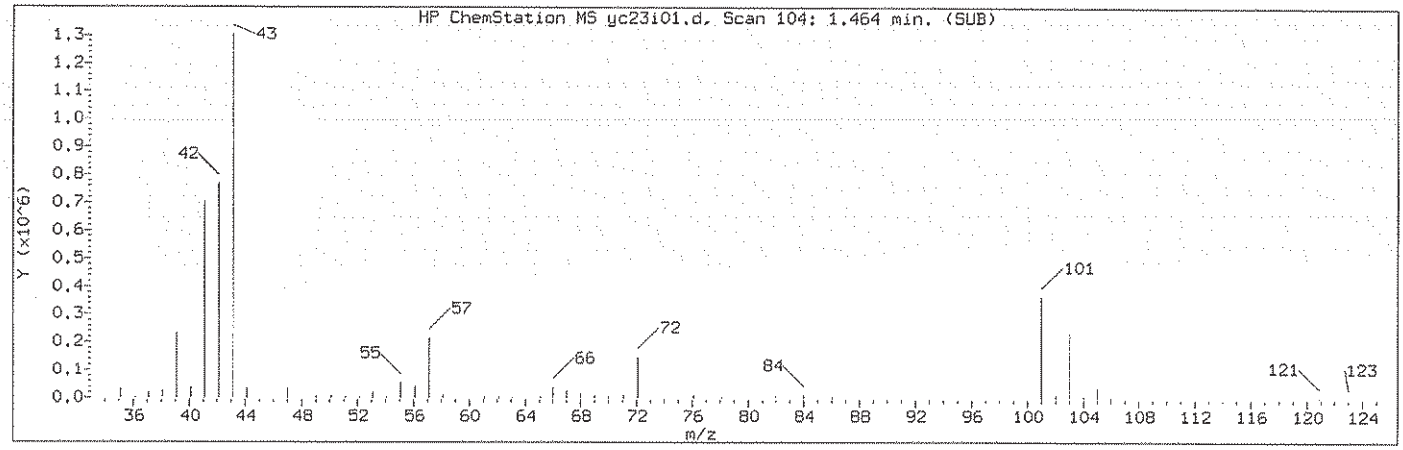
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

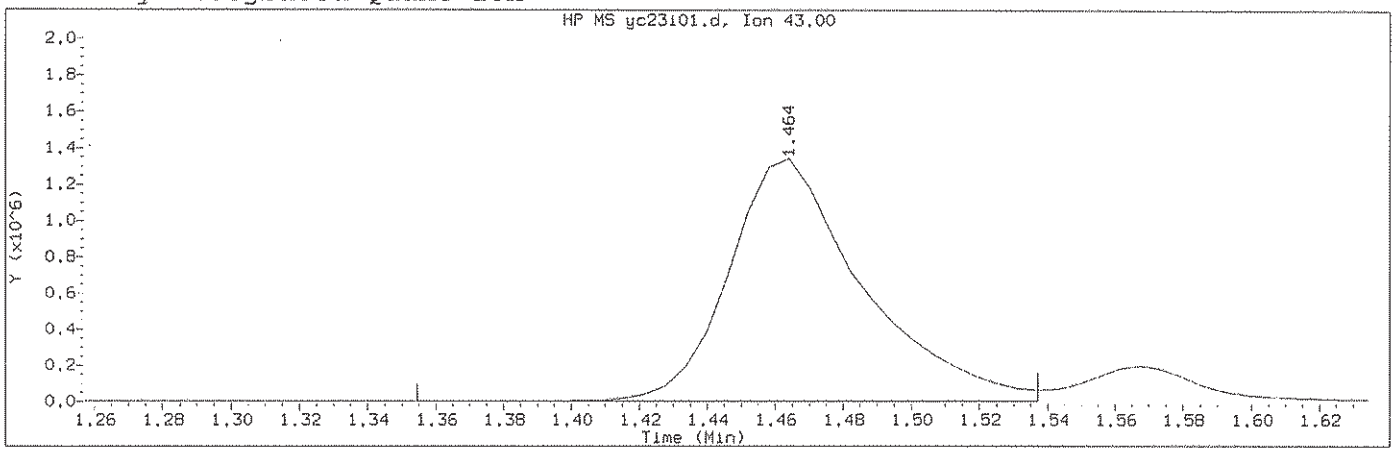
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 40		
Retention Time (minutes)	: 1.075		
Quant Ion	: 50.00		
Area	: 4173780		
On-column Amount (ng)	: 360.8784		
Integration start scan	: 11	Integration stop scan:	57
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

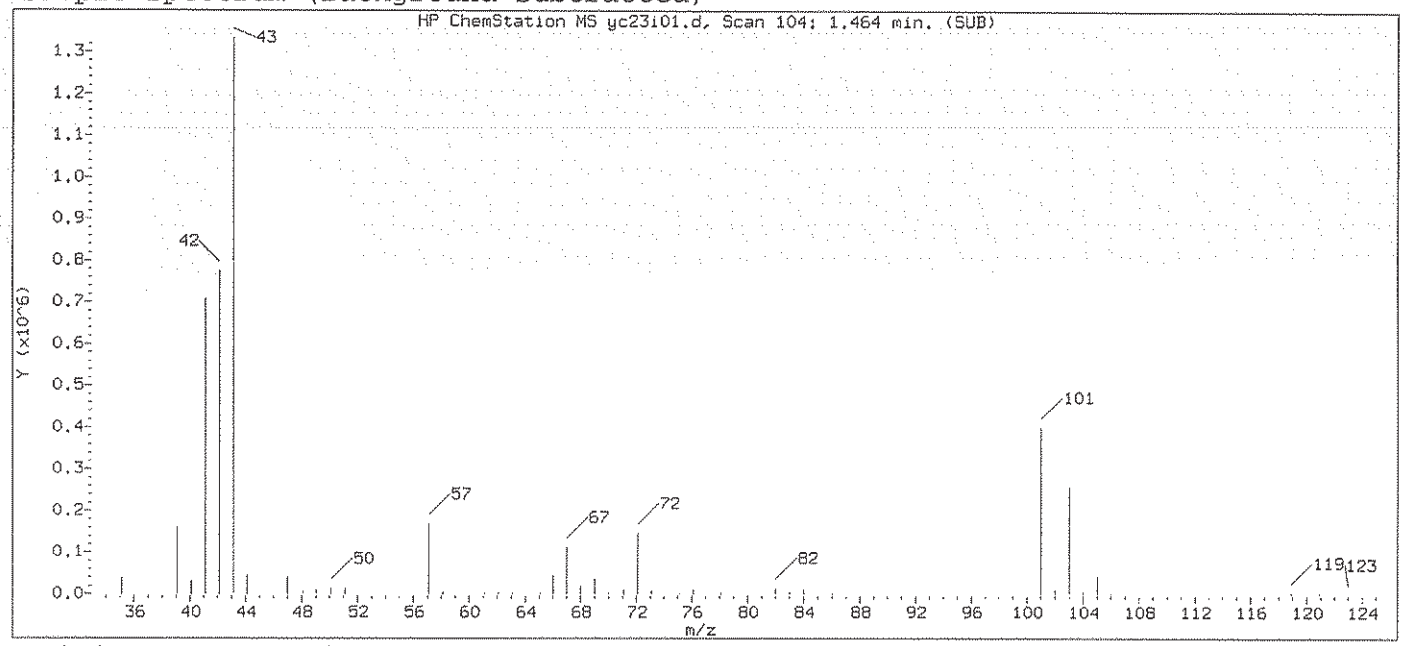
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 104
Retention Time (minutes): 1.464
Quant Ion : 43.00
Area (flag) : 3693325M
On-Column Amount (ng) : 256.7091
Integration start scan : 85 Integration stop scan: 115
Y at integration start : 1726 Y at integration end: 1726

Reason for manual integration: improper integration

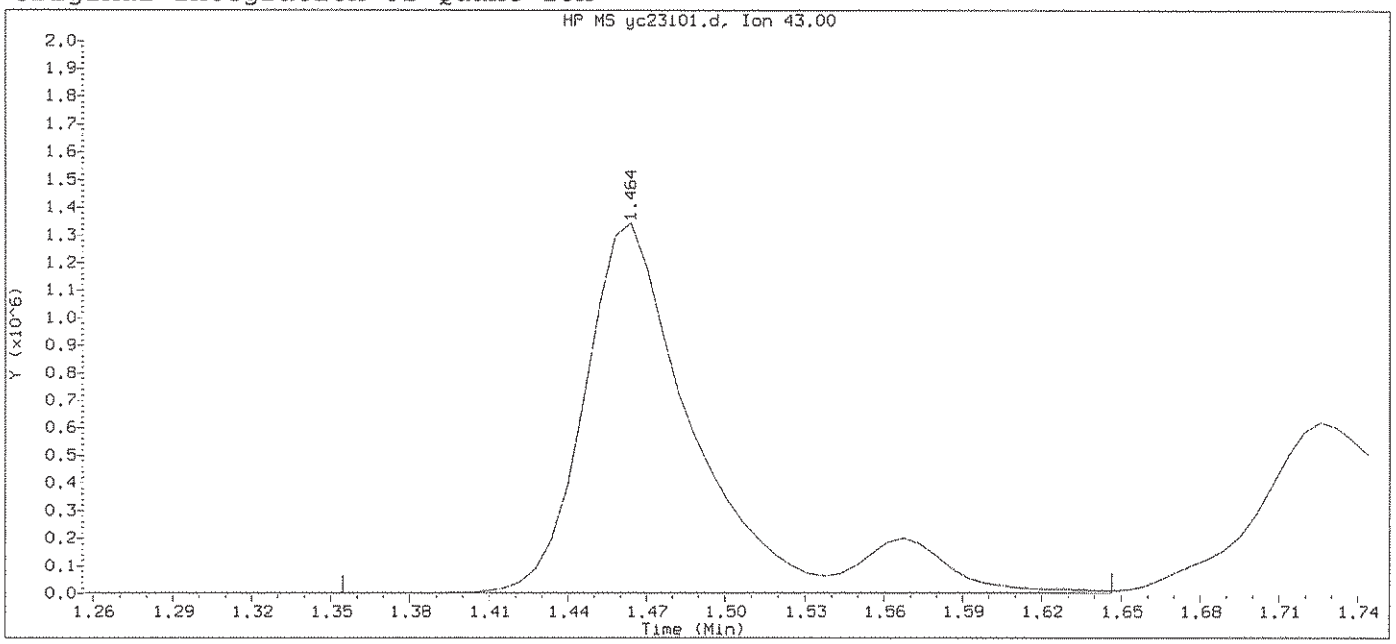
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

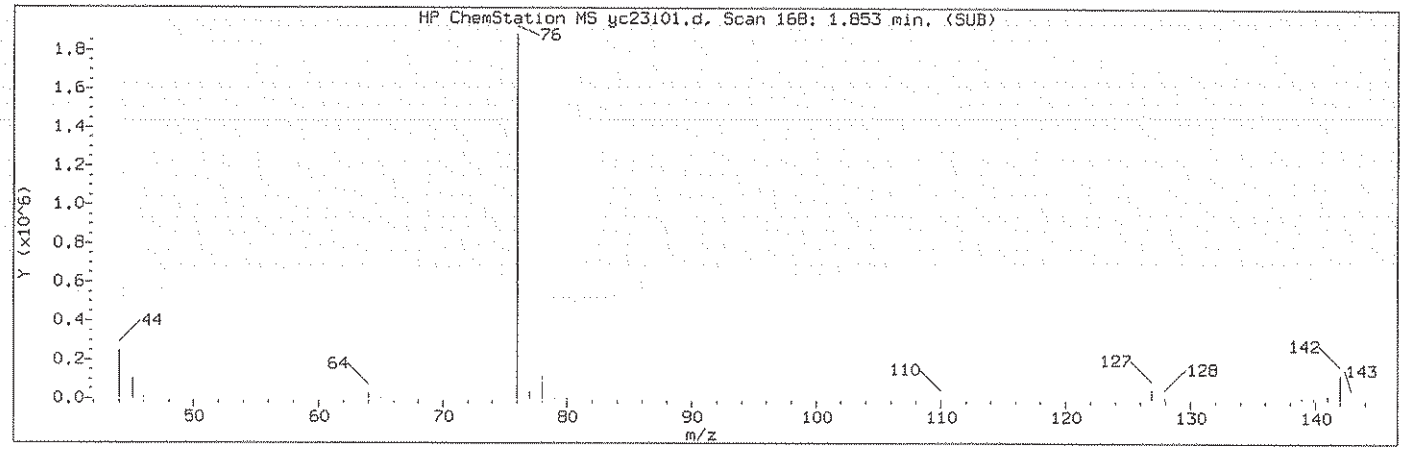
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

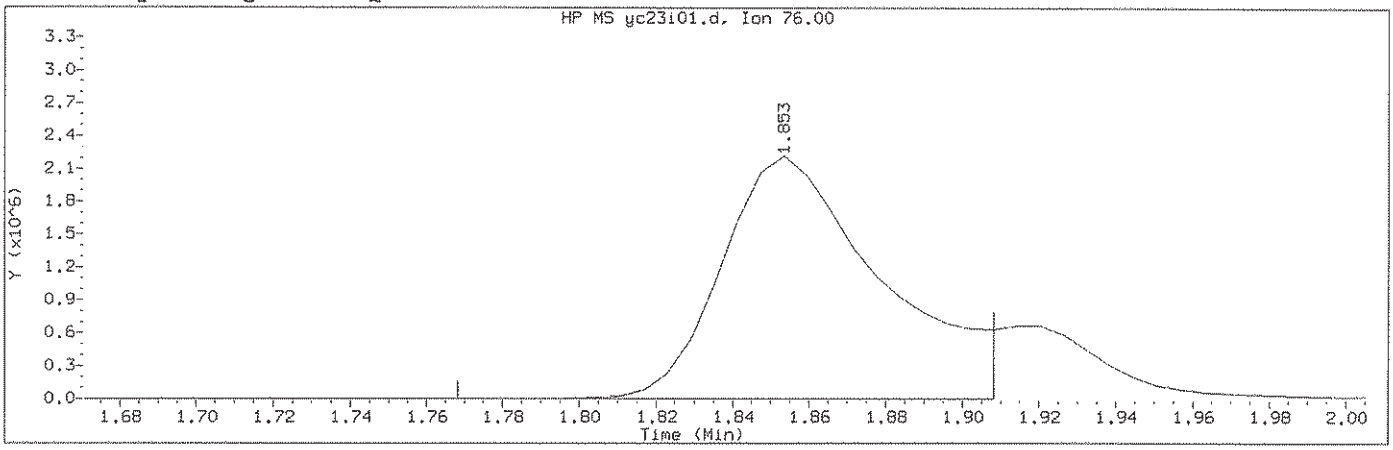
Compound Number	: 11
Compound Name	: n-Pentane
Scan Number	: 104
Retention Time (minutes)	: 1.464
Quant Ion	: 43.00
Area	: 4168194
On-column Amount (ng)	: 324.7733
Integration start scan	: 85 Integration stop scan: 133
Y at integration start	: 1726 Y at integration end: 1726

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

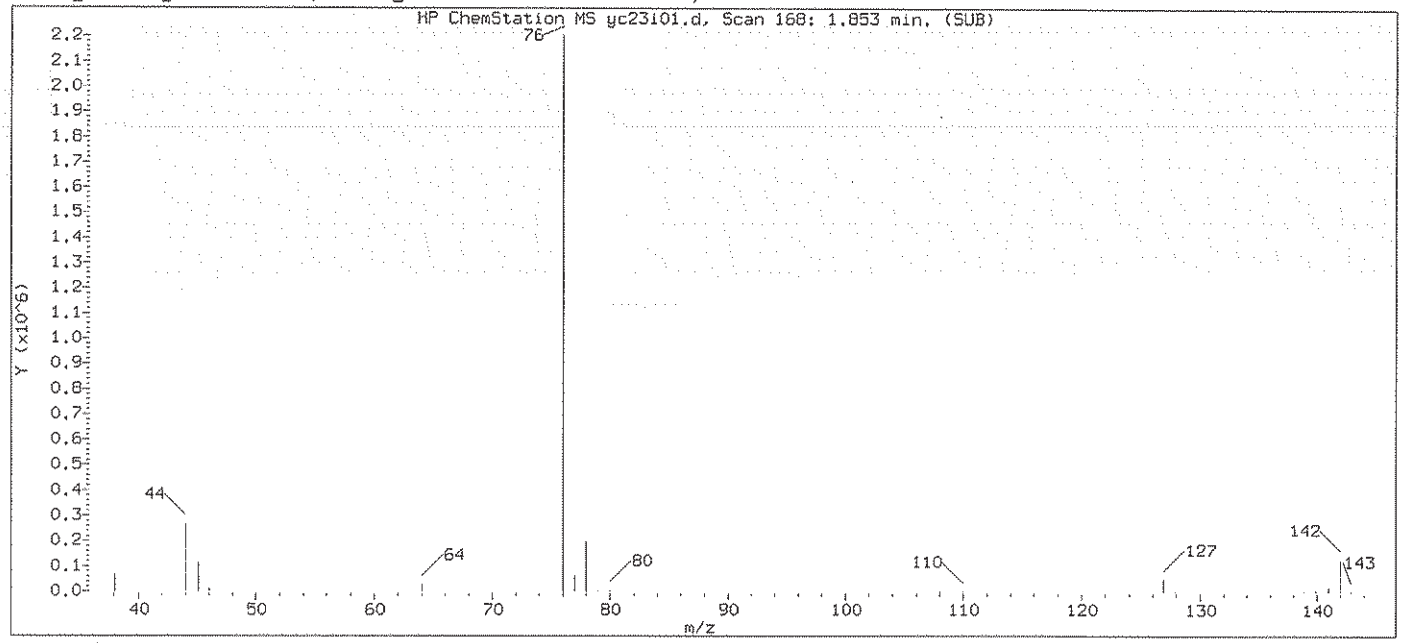
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 168
Retention Time (minutes): 1.853
Quant Ion : 76.00
Area (flag) : 6485821M
On-Column Amount (ng) : 284.0744
Integration start scan : 153 Integration stop scan: 176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

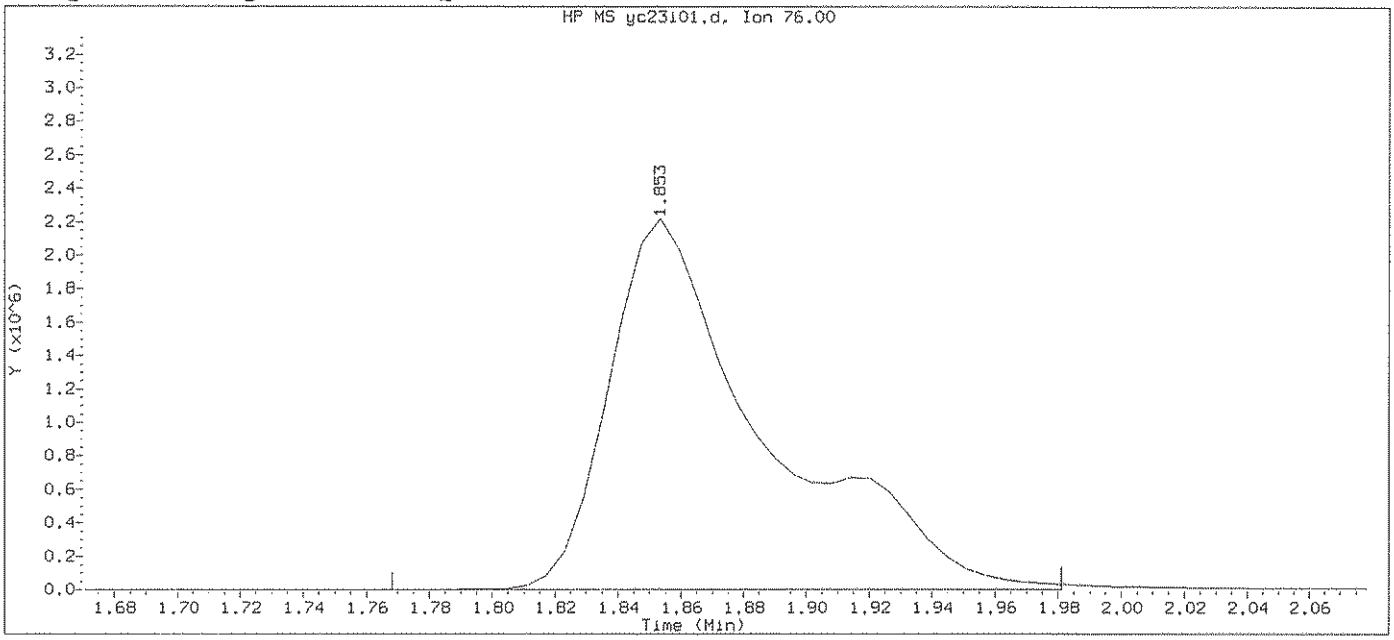
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

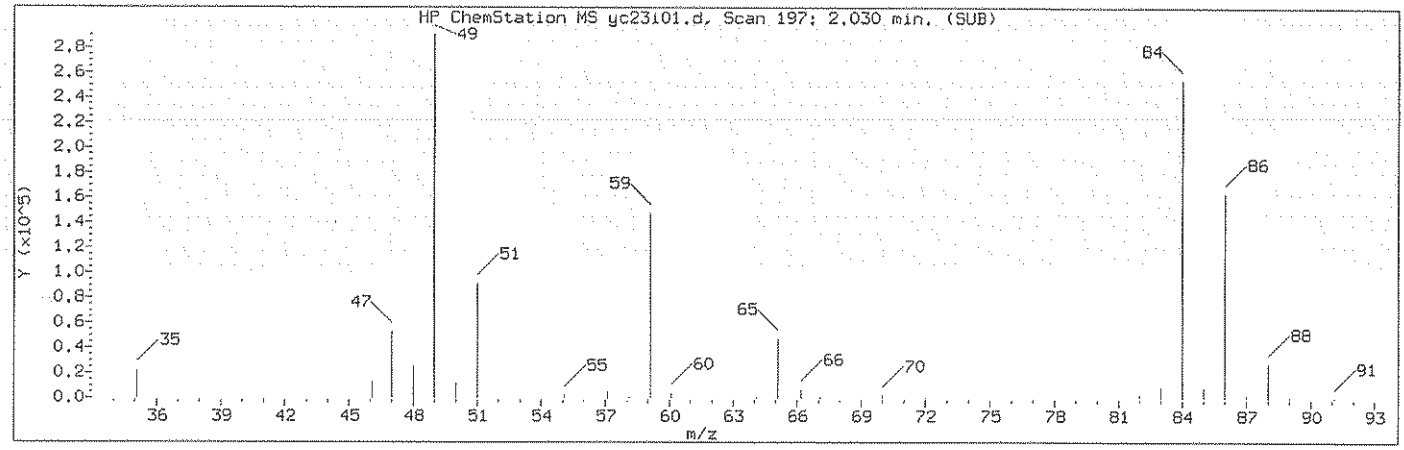
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

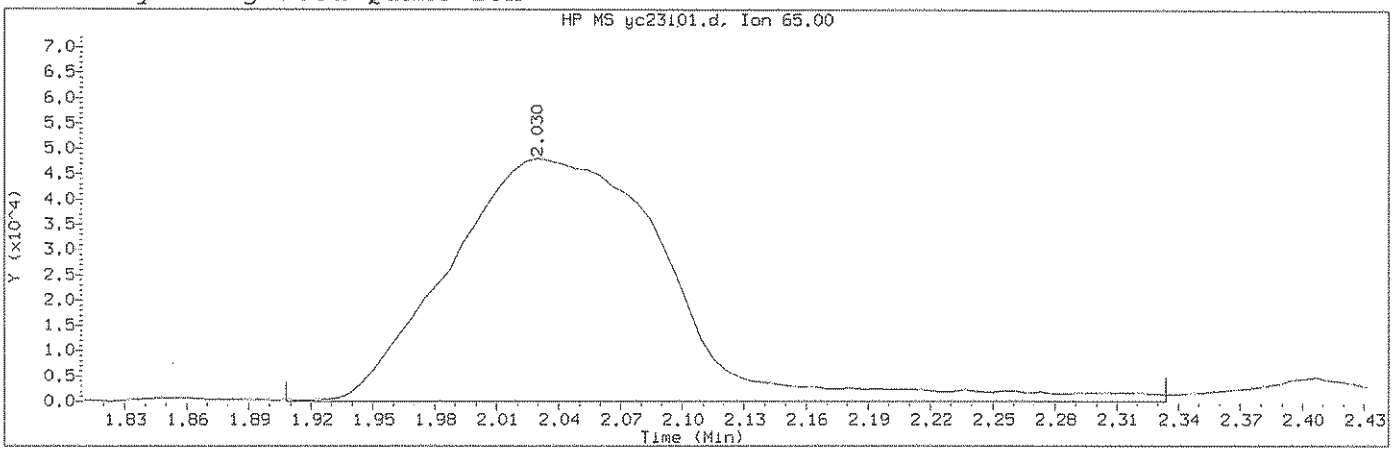
Compound Number	: 23		
Compound Name	: Carbon Disulfide		
Scan Number	: 168		
Retention Time (minutes)	: 1.853		
Quant Ion	: 76.00		
Area	: 7664398		
On-column Amount (ng)	: 294.3961		
Integration start scan	: 153	Integration stop scan:	188
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

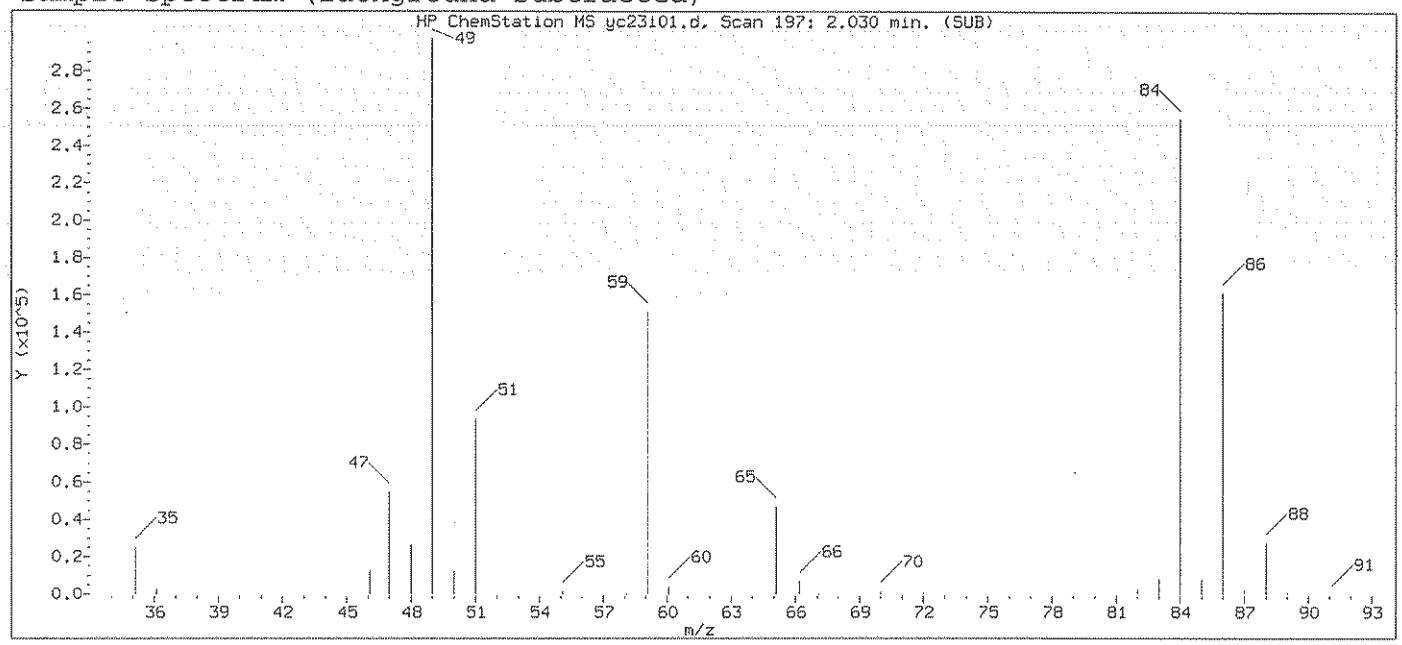
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 197
Retention Time (minutes): 2.030
Quant Ion : 65.00
Area (flag) : 359640M
On-Column Amount (ng) : 250.0000
Integration start scan : 176 Integration stop scan: 246
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

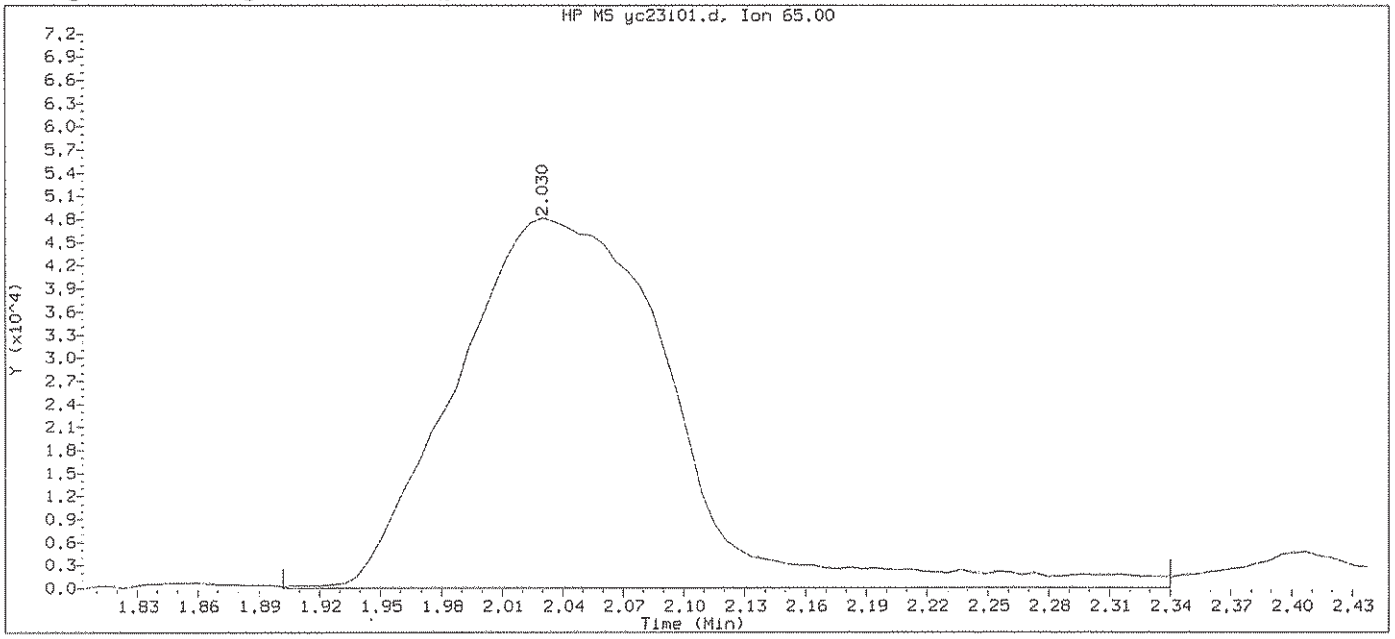
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

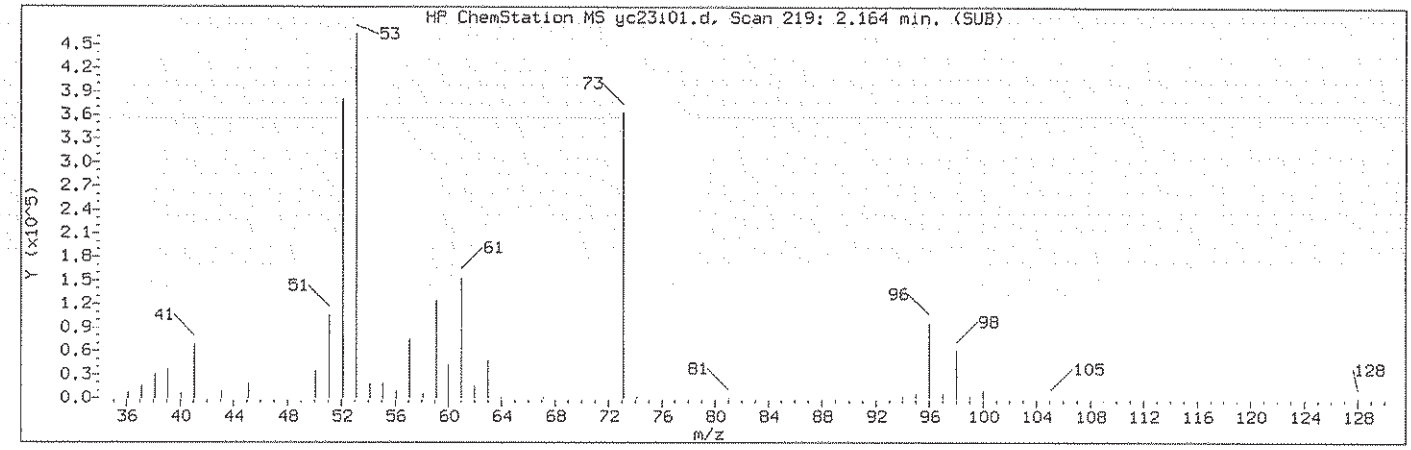
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

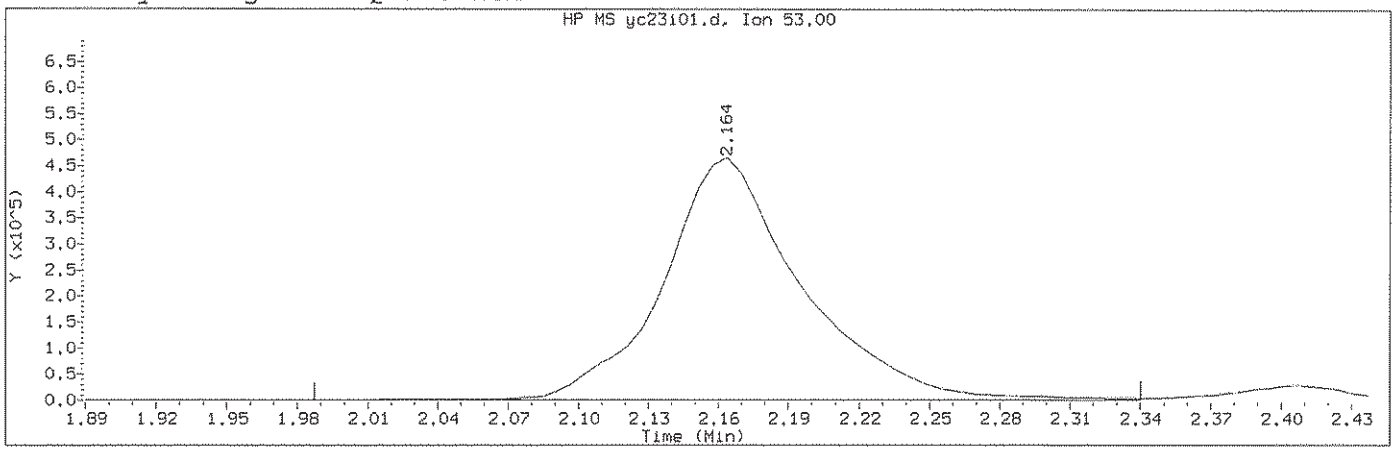
Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 197		
Retention Time (minutes)	: 2.030		
Quant Ion	: 65.00		
Area	: 359944		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 175	Integration stop scan:	247
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

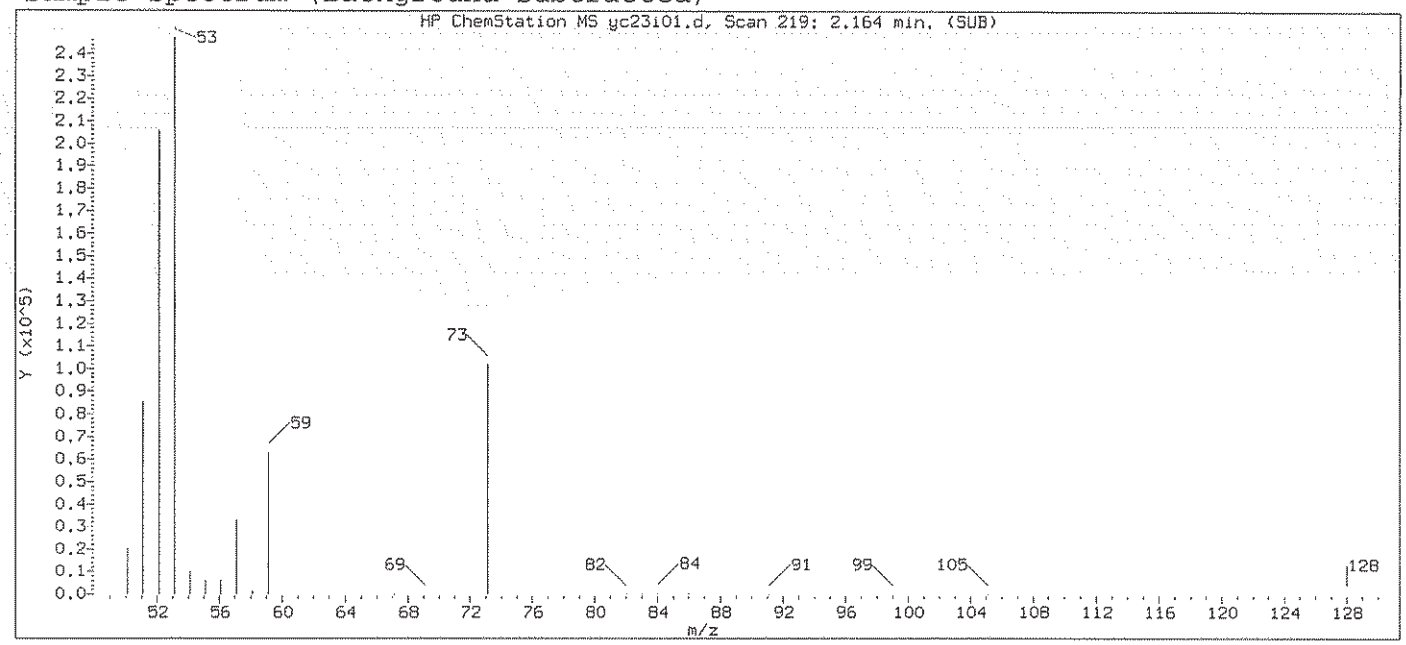
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 219
Retention Time (minutes): 2.164
Quant Ion : 53.00
Area (flag) : 1923666M
On-Column Amount (ng) : 284.8676
Integration start scan : 189 Integration stop scan: 247
Y at integration start : 812 Y at integration end: 812

Reason for manual integration: improper integration

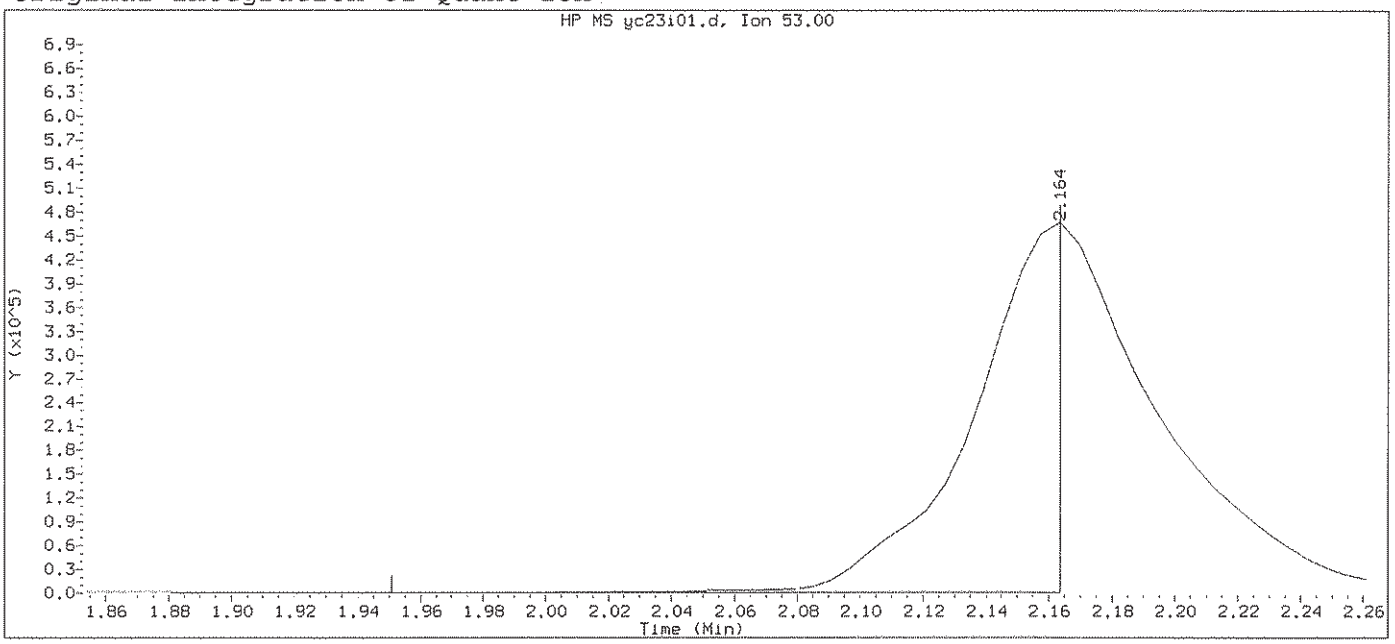
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

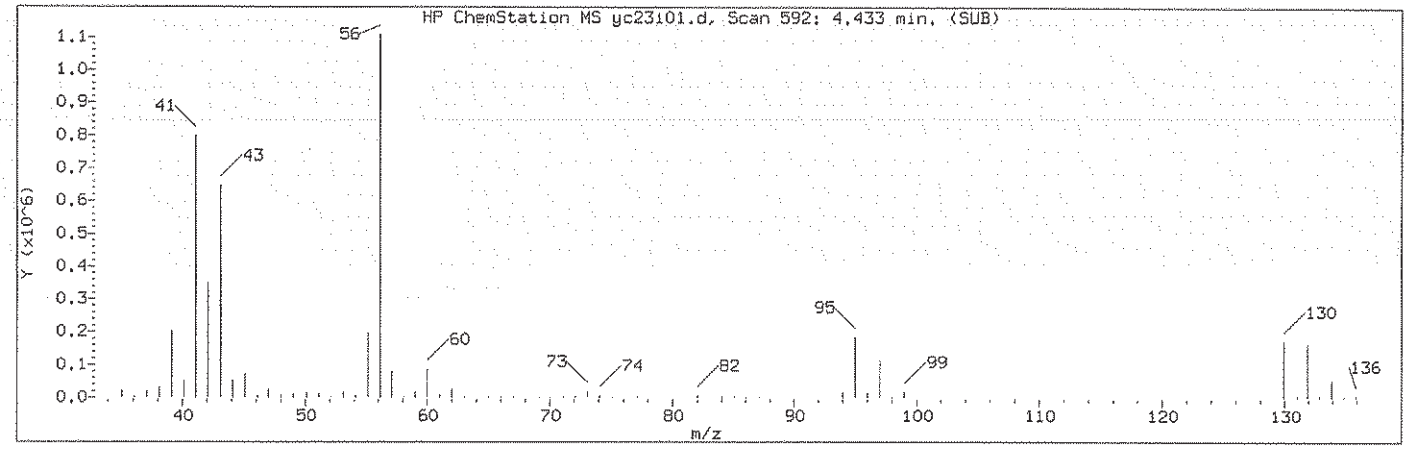
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

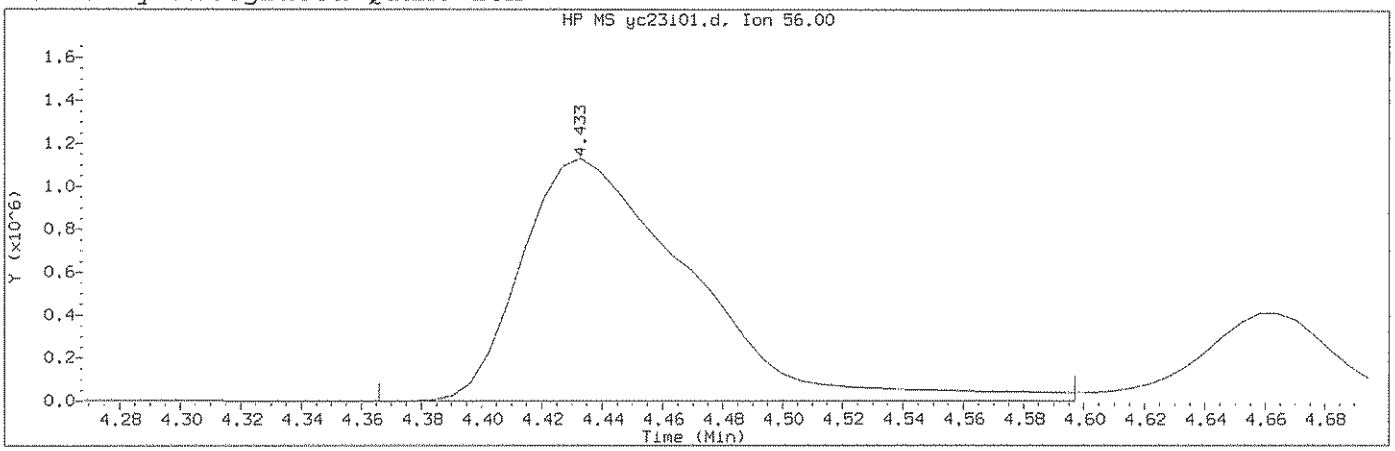
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 219
Retention Time (minutes): 2.164
Quant Ion : 53.00
Area : 875347
On-column Amount (ng) : 158.4541
Integration start scan : 183 Integration stop scan: 218
Y at integration start : 786 Y at integration end: 786

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

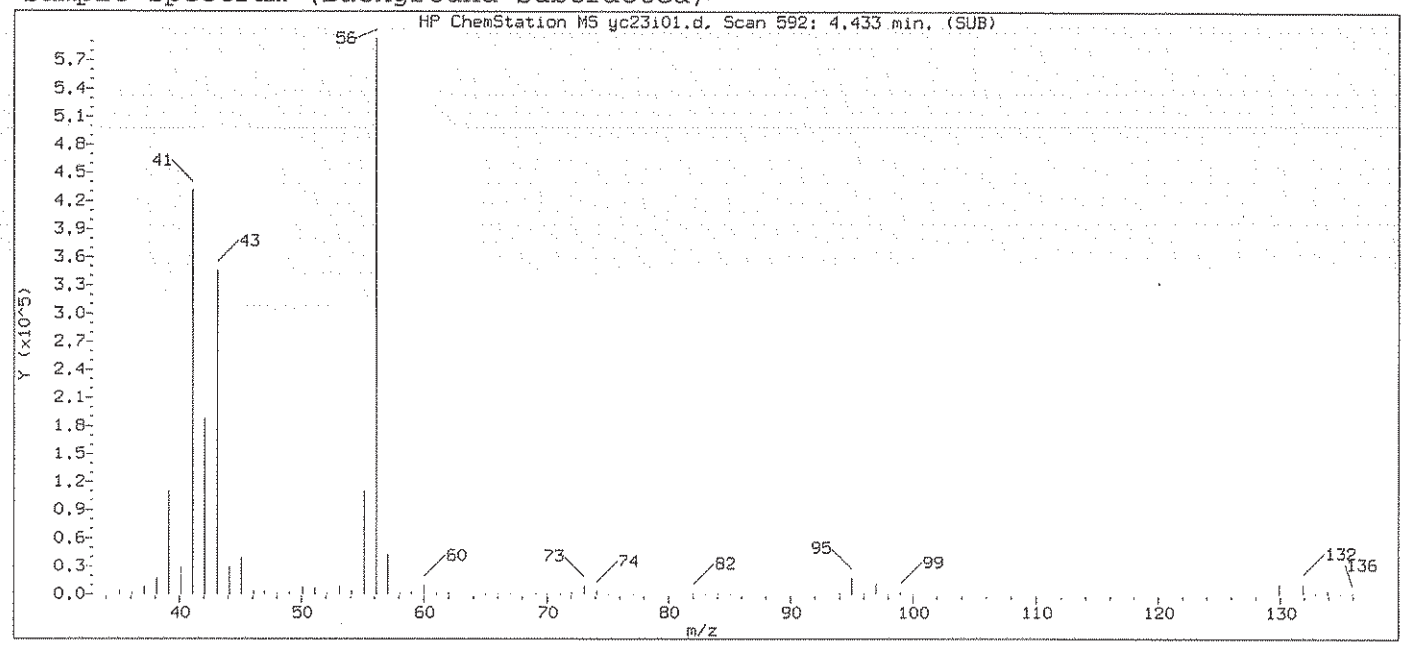
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 592
Retention Time (minutes): 4.433
Quant Ion : 56.00
Area (flag) : 4395035M
On-Column Amount (ng) : 6967.6056
Integration start scan : 580 Integration stop scan: 618
Y at integration start : 597 Y at integration end: 597

Reason for manual integration: improper integration

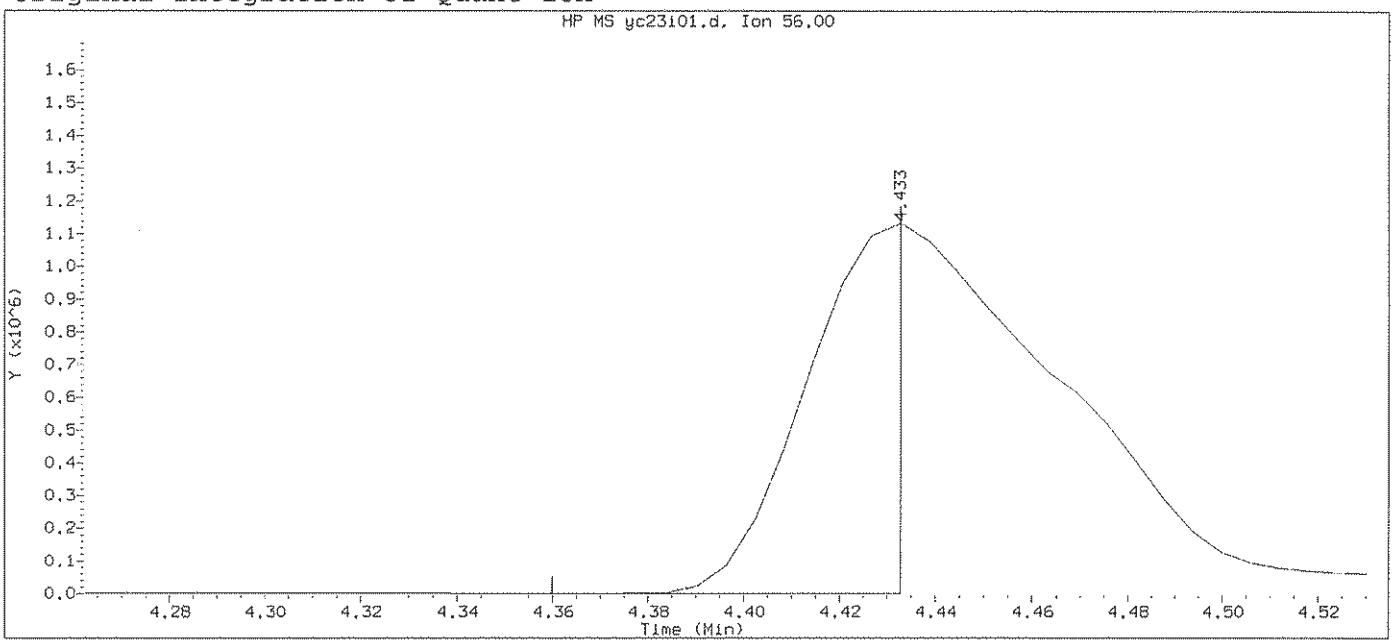
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

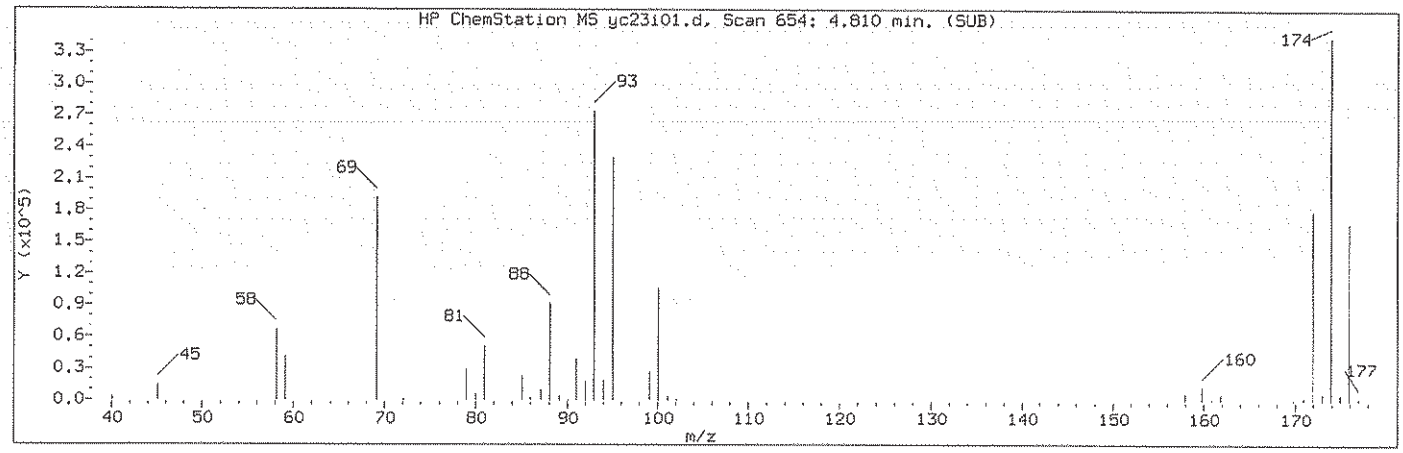
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

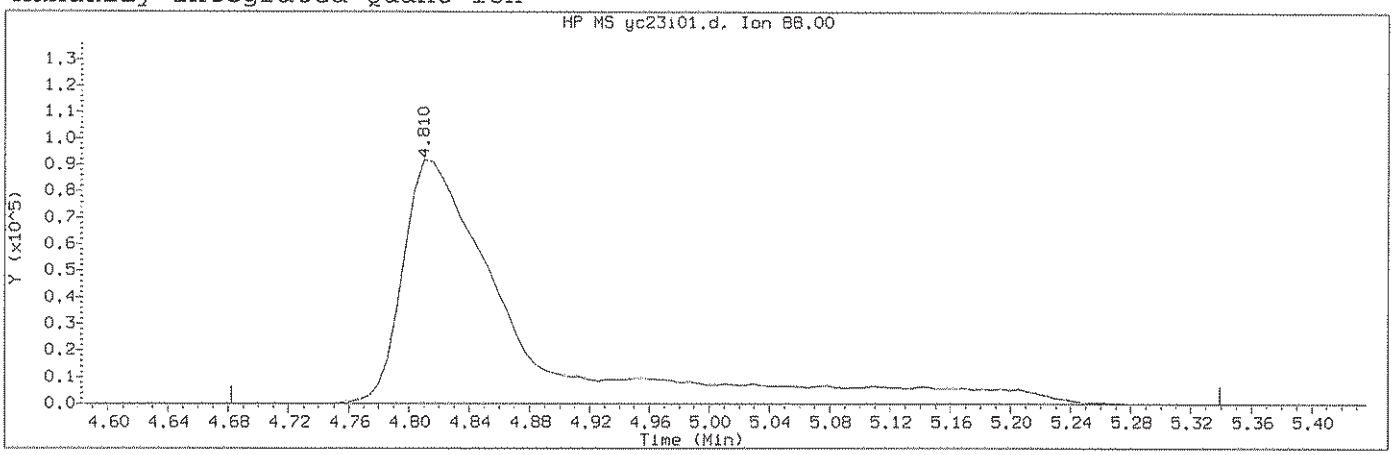
Compound Number : 69
Compound Name : n-Butanol
Scan Number : 592
Retention Time (minutes): 4.433
Quant Ion : 56.00
Area : 1497251
On-column Amount (ng) : 3590.8686
Integration start scan : 579 Integration stop scan: 591
Y at integration start : 640 Y at integration end: 640

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

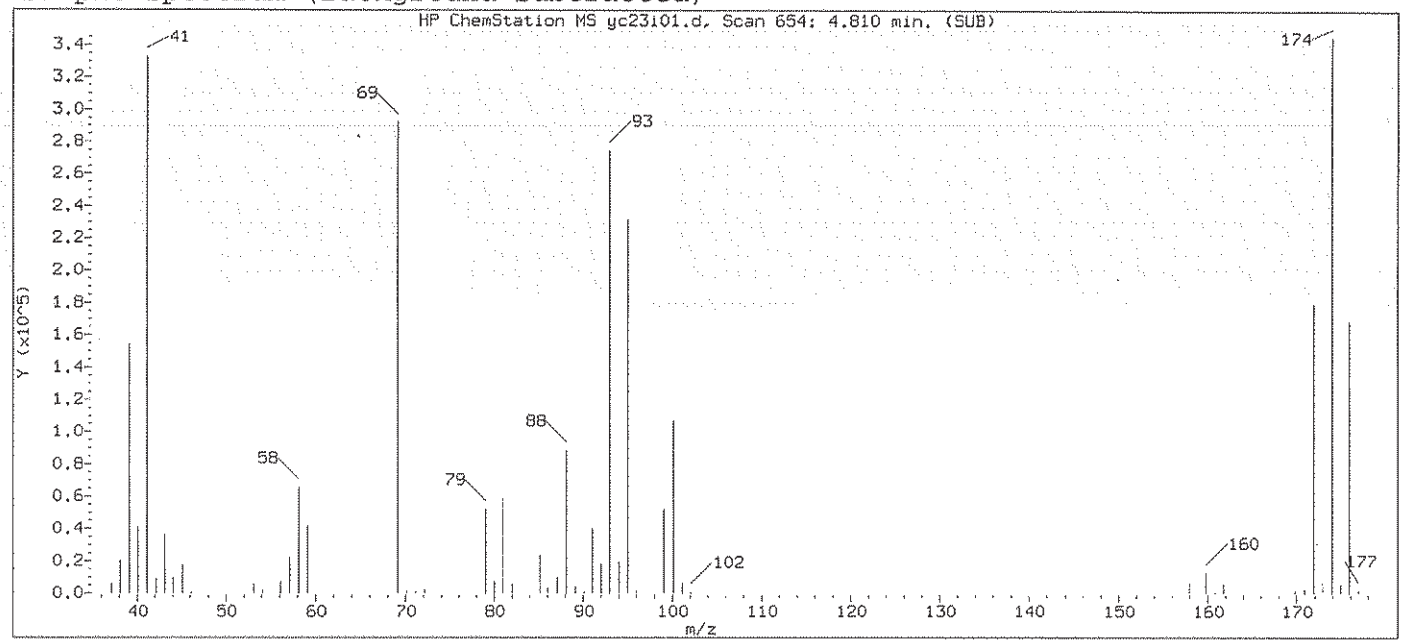
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 654
Retention Time (minutes): 4.810
Quant Ion : 88.00
Area (flag) : 489835M
On-Column Amount (ng) : 3594.2624
Integration start scan : 632 Integration stop scan: 740
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

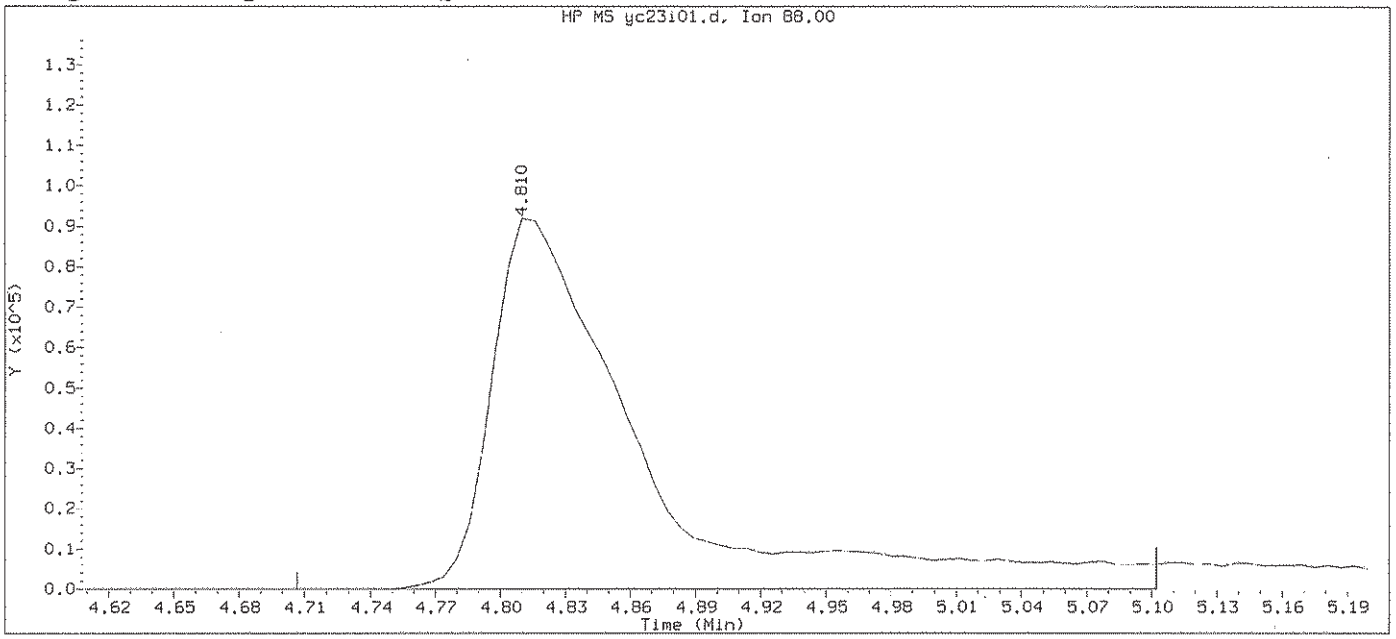
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: [signature] 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

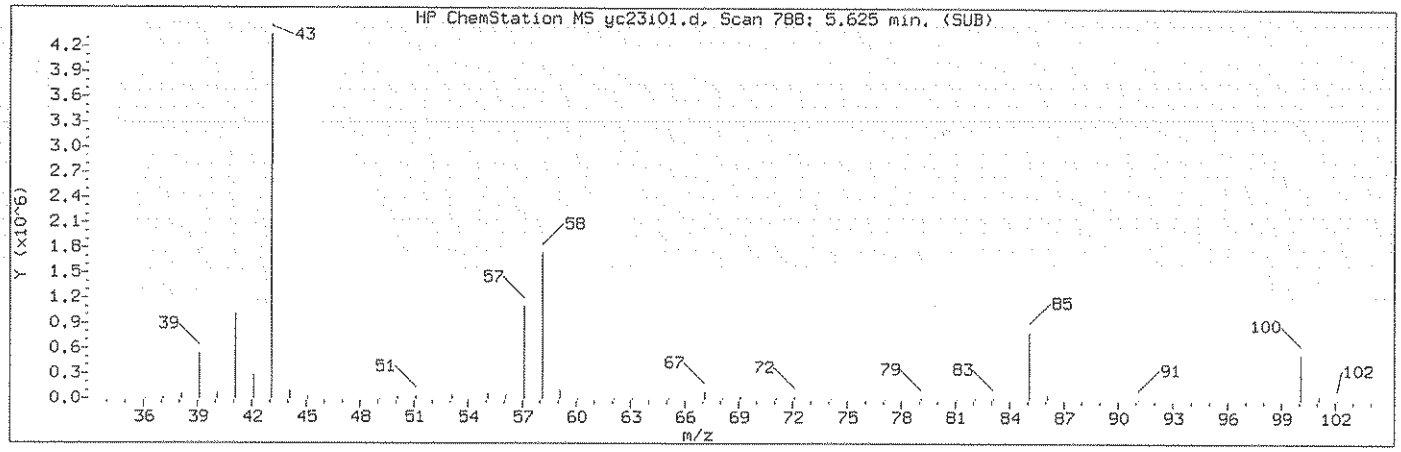
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

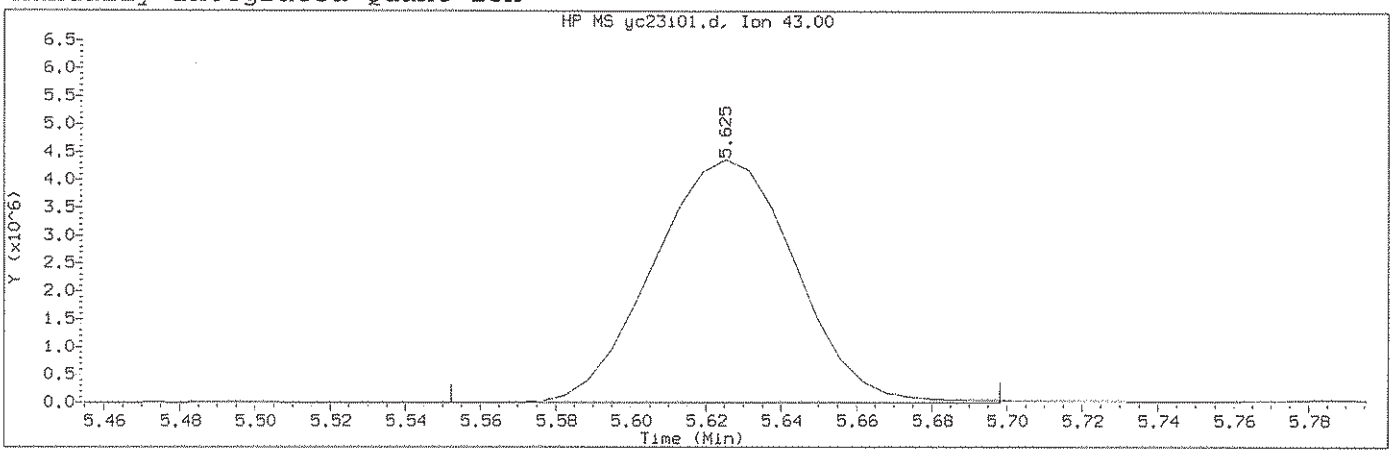
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 654
Retention Time (minutes): 4.810
Quant Ion : 88.00
Area : 445485
On-column Amount (ng) : 2981.5775
Integration start scan : 636 Integration stop scan: 701
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 22:15 kas02648

Sample Name: VSTD300 Lab Sample ID: VSTD300

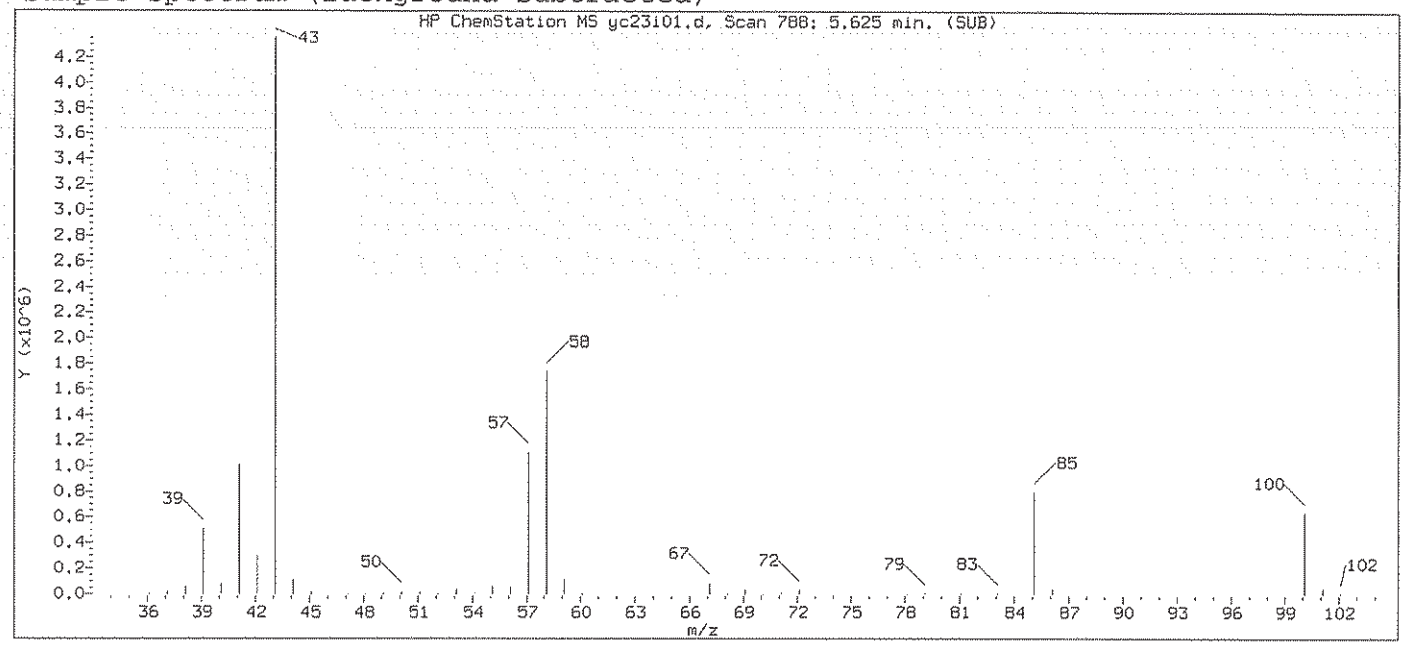
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 788
Retention Time (minutes): 5.625
Quant Ion : 43.00
Area (flag) : 11430196M
On-Column Amount (ng) : 613.7509
Integration start scan : 775 Integration stop scan: 799
Y at integration start : 1990 Y at integration end: 1990

Reason for manual integration: improper integration

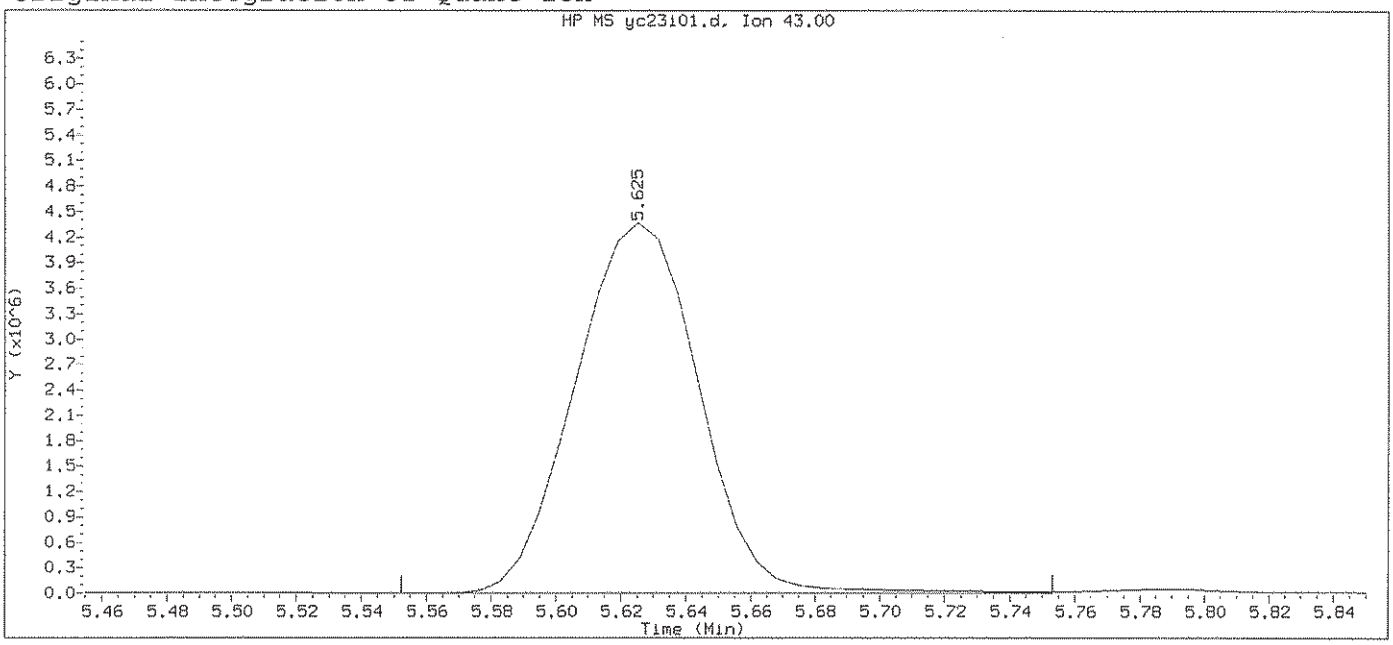
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



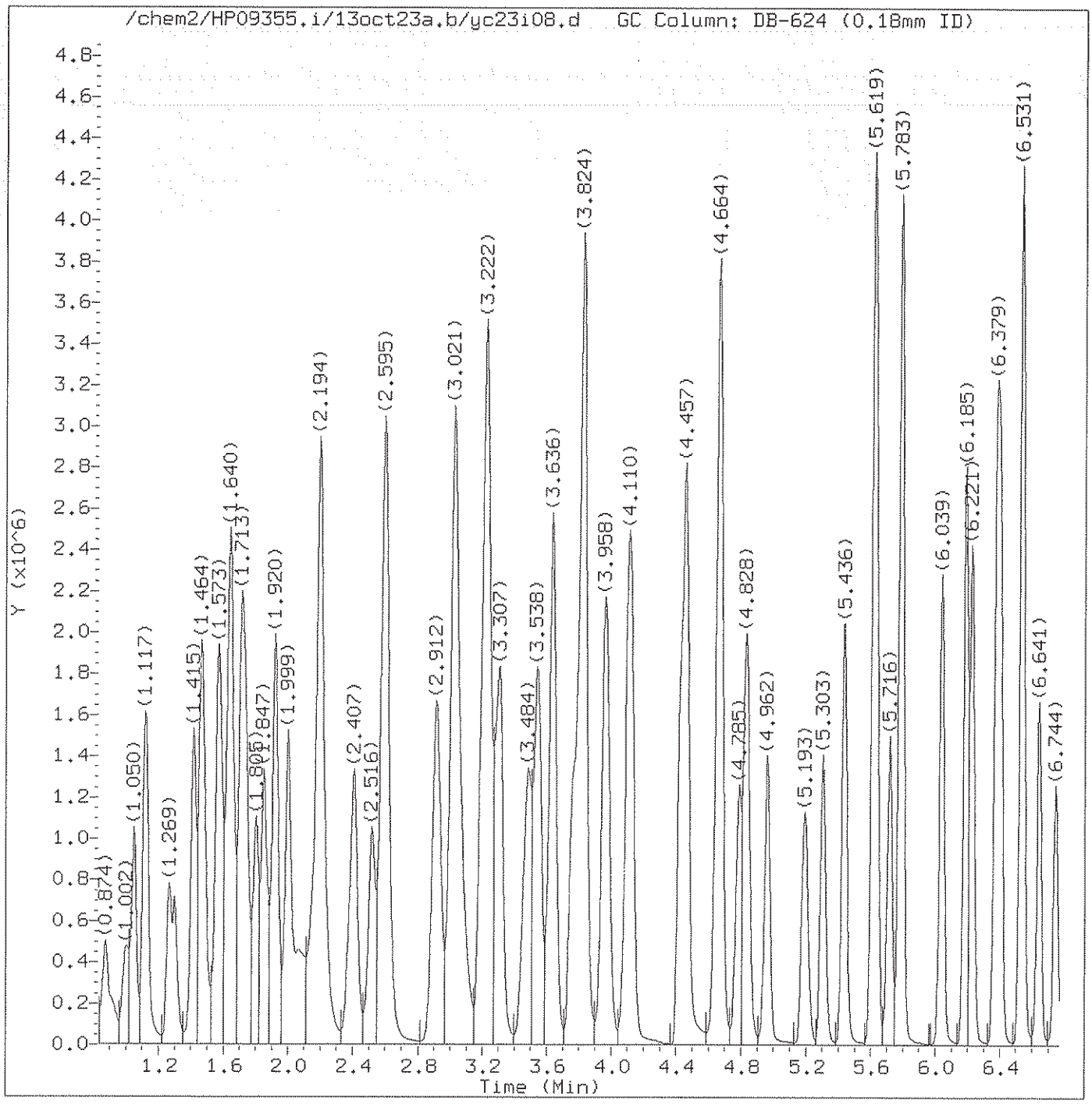
Data File: /chem2/HP09355.i/13oct23a.b/yc23i01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:11 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 12:27
Date, time and analyst ID of latest file update: 23-Oct-2013 12:27 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 788
Retention Time (minutes): 5.625
Quant Ion : 43.00
Area : 11507361
On-column Amount (ng) : 823.2283
Integration start scan : 775 Integration stop scan: 808
Y at integration start : 1990 Y at integration end: 1990

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

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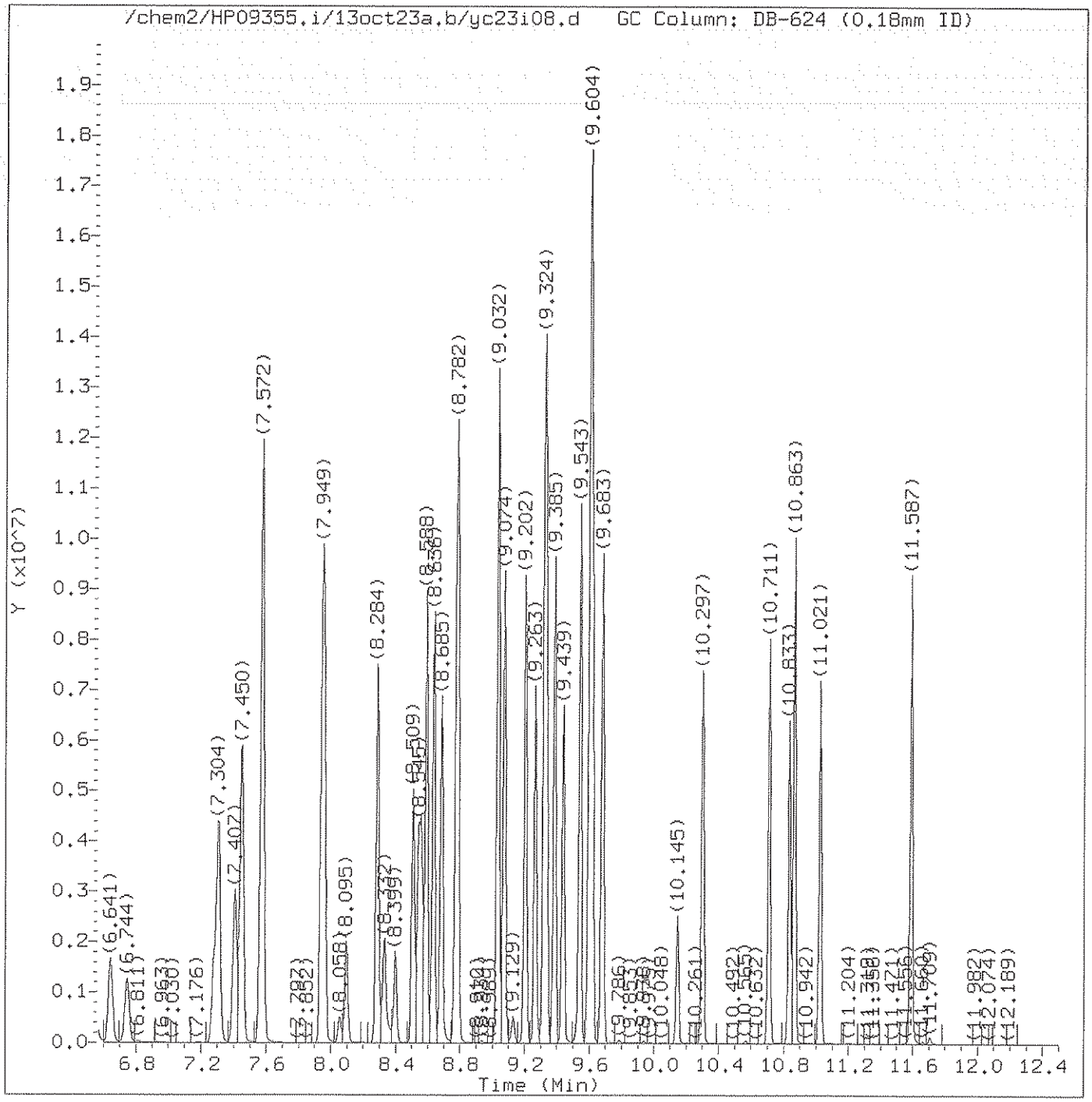
on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.002	85	992189	98.742
4) Chloromethane	(2)	1.050	50	1221216M	100.228
5) 1,3-Butadiene	(2)	1.111	39	549492	92.781
6) Vinyl Chloride	(2)	1.129	62	1068525	102.689
8) Bromomethane	(2)	1.263	94	665696	98.634
9) Chloroethane	(2)	1.300	64	600008	100.058
10) Dichlorofluoromethane	(2)	1.415	67	1448483	100.029
11) n-Pentane	(2)	1.464	43	1312784	94.629
12) Trichlorofluoromethane	(2)	1.482	101	1208104	100.720
14) Ethyl ether	(2)	1.567	59	806586	102.109
15) Freon 123a	(2)	1.579	67	870479	96.448
16) Acrolein	(1)	1.640	56	3693097	1114.489
17) 1,1-Dichloroethene	(2)	1.707	96	648787	103.080
17) 1,1-Dichloroethene	(2)	1.707	63	334935	101.538
18) Acetone	(2)	1.725	58	358018	209.805
19) Freon 113	(2)	1.738	101	637607	96.769
21) 2-Propanol	(1)	1.798	45	666183	552.104
22) Methyl Iodide	(2)	1.805	142	1264118	105.249
23) Carbon Disulfide	(2)	1.853	76	2259580	102.637
25) Allyl Chloride	(2)	1.920	41	1234074	100.905
27) Methyl Acetate	(2)	1.926	43	1044887	106.913
28) Methylene Chloride	(2)	1.999	84	780310	101.441
29)*t-Butyl alcohol-d10	(1)	2.017	65	382800	250.000
30) t-Butyl alcohol	(1)	2.078	59	1333502	561.418
31) Acrylonitrile	(2)	2.157	53	664885	102.110
32) trans-1,2-Dichloroethene	(2)	2.194	96	762319	104.033
33) Methyl Tertiary Butyl Ether	(2)	2.200	73	2735214	102.916
34) n-Hexane	(2)	2.407	57	1171630	95.088
36) 1,1-Dichloroethane	(2)	2.516	63	1451473	104.209
38) di-Isopropyl ether	(2)	2.595	45	2976551	102.417
39) 2-Chloro-1,3-butadiene	(2)	2.595	53	1302707	103.777
40) Ethyl t-butyl ether	(2)	2.912	59	2783637	102.466
42) cis-1,2-Dichloroethene	(2)	3.021	96	876037	106.076
44) 2-Butanone	(2)	3.027	43	2125040	223.037
45) 2,2-Dichloropropane	(2)	3.033	77	1171271	105.741
43) 1,2-Dichloroethene (Total)	(2)		96	1638356	210.108
47) Propionitrile	(1)	3.070	54	1386135	536.356
48) Methacrylonitrile	(2)	3.216	67	1647837	261.525

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.228	128	441096	104.560
50) Tetrahydrofuran	(1)	3.277	71	522214	219.785
51) Chloroform	(2)	3.313	83	1374594	104.990
52)$Dibromofluoromethane	(2)	3.453	113	292991	50.168
52)$Dibromofluoromethane	(2)	3.453	111	299968	50.360
53) 1,1,1-Trichloroethane	(2)	3.484	97	1242216	98.071
54) Cyclohexane	(2)	3.544	56	1457746	97.648
54) Cyclohexane	(2)	3.544	84	1157759	93.230
54) Cyclohexane	(2)	3.538	69	435694	97.268
55) 1,1-Dichloropropene	(2)	3.630	75	1100931	106.838
56) Carbon Tetrachloride	(2)	3.642	117	1041100	108.995
57)$1,2-Dichloroethane-d4	(2)	3.763	102	74184	49.002
57)$1,2-Dichloroethane-d4	(2)	3.763	65	376382	49.038
57)$1,2-Dichloroethane-d4	(2)	3.763	104	47664	50.105
58) Isobutyl Alcohol	(1)	3.776	41	1124341	1381.613
60) Benzene	(2)	3.824	78	3380968	105.139
61) 1,2-Dichloroethane	(2)	3.836	62	1191425	104.237
61) 1,2-Dichloroethane	(2)	3.836	98	109330	105.589
65) t-Amyl methyl ether	(2)	3.964	73	2660513	103.381
66)*Fluorobenzene	(2)	4.098	96	1251004	50.000
67) n-Heptane	(2)	4.116	43	1493155	98.947
69) n-Butanol	(1)	4.420	56	1823082	2736.344
71) Trichloroethene	(2)	4.457	95	848793	105.581
72) Methylcyclohexane	(2)	4.658	83	1380156	99.498
72) Methylcyclohexane	(2)	4.658	98	608477	100.372
73) 1,2-Dichloropropane	(2)	4.670	63	912909	106.264
74) Dibromomethane	(2)	4.785	93	601970	105.548
75) 1,4-Dioxane	(1)	4.810	88	187019M	1317.815
76) Methyl Methacrylate	(2)	4.834	69	1055367	104.491
78) Bromodichloromethane	(2)	4.962	83	1139583	109.841
79) 2-Nitropropane	(2)	5.193	41	1051383	214.208
80) 2-Chloroethyl Vinyl Ether	(2)	5.303	63	805658	107.299
81) cis-1,3-Dichloropropene	(2)	5.436	75	1459518	109.831
82) 4-Methyl-2-pentanone	(2)	5.619	43	4211794	246.598
83)$Toluene-d8	(3)	5.716	98	1233185	49.825
83)$Toluene-d8	(3)	5.716	100	802838	49.890
88) Toluene	(3)	5.783	92	2169842	105.006
89) trans-1,3-Dichloropropene	(3)	6.039	75	1465569	110.816

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	2925087	220.647
91) Ethyl Methacrylate	(3)	6.185	69	1707146	104.914
92) 1,1,2-Trichloroethane	(3)	6.221	97	884511	105.187
93) Tetrachloroethene	(3)	6.373	166	949708	105.805
94) 1,3-Dichloropropane	(3)	6.398	76	1522767	104.982
96) 2-Hexanone	(3)	6.531	43	3445114	230.592
97) Dibromochloromethane	(3)	6.641	129	987270	116.015
99) 1,2-Dibromoethane	(3)	6.744	107	988815	107.627
100)*Chlorobenzene-d5	(3)	7.280	117	929866	50.000
102) Chlorobenzene	(3)	7.310	112	2422307	105.369
103) 1,1,1,2-Tetrachloroethane	(3)	7.407	131	864884	109.939
104) Ethylbenzene	(3)	7.450	91	4243510	105.174
106) m+p-Xylene	(3)	7.572	106	3372863	211.365
107) o-Xylene	(3)	7.943	106	1654942	105.218
109) Styrene	(3)	7.955	104	2864112	107.322
108) Xylene (Total)	(3)		106	5027805	316.583
110) Bromoform	(3)	8.095	173	785475	118.624
111) Isopropylbenzene	(3)	8.290	105	4256215	105.426
112) Cyclohexanone	(1)	8.326	55	906709	1296.422
114)$4-Bromofluorobenzene	(3)	8.399	95	472465	50.163
114)$4-Bromofluorobenzene	(3)	8.399	174	408707	50.393
115) Bromobenzene	(4)	8.509	156	1148194	103.086
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	1596167	103.225
117) 1,2,3-Trichloropropane	(4)	8.557	110	495559	102.533
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	1434153	260.395
119) n-Propylbenzene	(4)	8.636	91	5040140	103.788
120) 2-Chlorotoluene	(4)	8.685	126	1041042	102.328
121) 4-Chlorotoluene	(4)	8.776	126	1099777	103.119
122) 1,3,5-Trimethylbenzene	(4)	8.782	105	3765140	103.760
125) Pentachloroethane	(4)	9.032	167	720574	104.414
124) tert-Butylbenzene	(4)	9.032	134	852045	104.103
126) 1,2,4-Trimethylbenzene	(4)	9.074	105	3844241	103.886
127) sec-Butylbenzene	(4)	9.202	105	4669562	103.693
129) 1,3-Dichlorobenzene	(4)	9.263	146	2145495	103.786
130) p-Isopropyltoluene	(4)	9.318	119	4303374	104.808
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	539354	50.000
133) 1,4-Dichlorobenzene	(4)	9.336	146	2261788	103.809
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	3823662	100.114

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

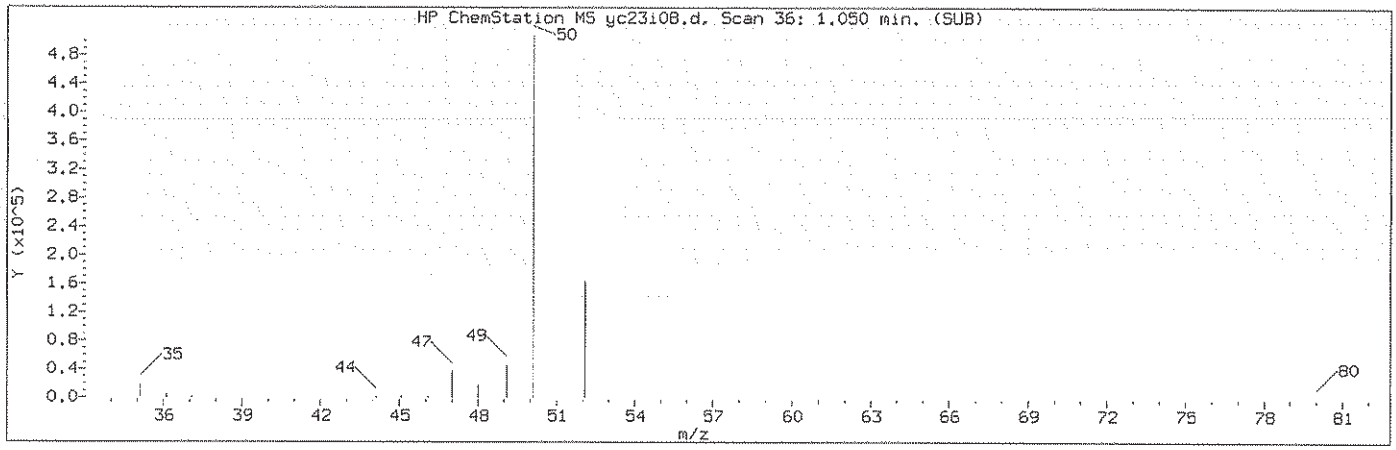
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

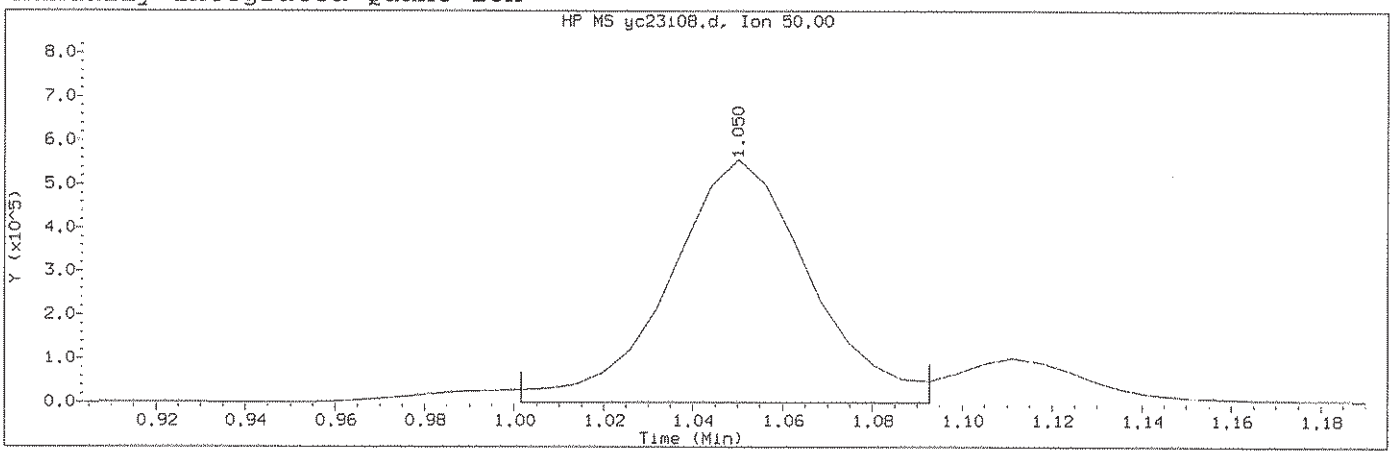
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.439	91	3438730	111.883
136) 1,3-Diethylbenzene	(4)	9.543	119	2502238	101.028
138) 1,2-Dichlorobenzene	(4)	9.604	146	2152534	104.569
137) 1,4-Diethylbenzene	(4)	9.604	119	2591136	102.585
139) n-Butylbenzene	(4)	9.616	92	2141680	104.162
140) 1,2-Diethylbenzene	(4)	9.683	119	2044998	99.742
141) Diethylbenzene (total)	(4)		100	7138372	303.355
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	435630	110.611
144) 1,3,5-Trichlorobenzene	(4)	10.303	180	1786121	104.423
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	1685148	103.122
147) Hexachlorobutadiene	(4)	10.833	225	857331	105.673
148) Naphthalene	(4)	10.863	128	5476100	104.858
149) 1,2,3-Trichlorobenzene	(4)	11.027	180	1626018	103.100
150) 2-Methylnaphthalene	(4)	11.587	142	3160032	97.625

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 15:58.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

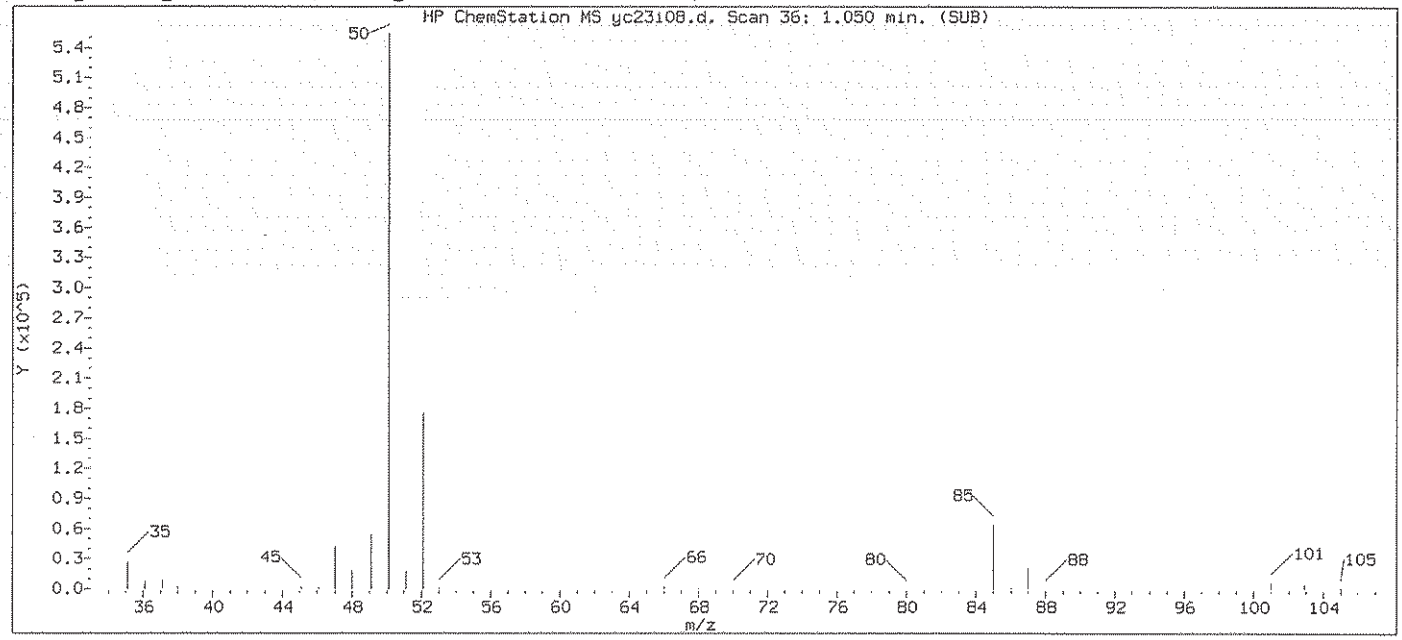
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 36
Retention Time (minutes): 1.050
Quant Ion : 50.00
Area (flag) : 1221216M
On-Column Amount (ng) : 100.2281
Integration start scan : 27 Integration stop scan: 42
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

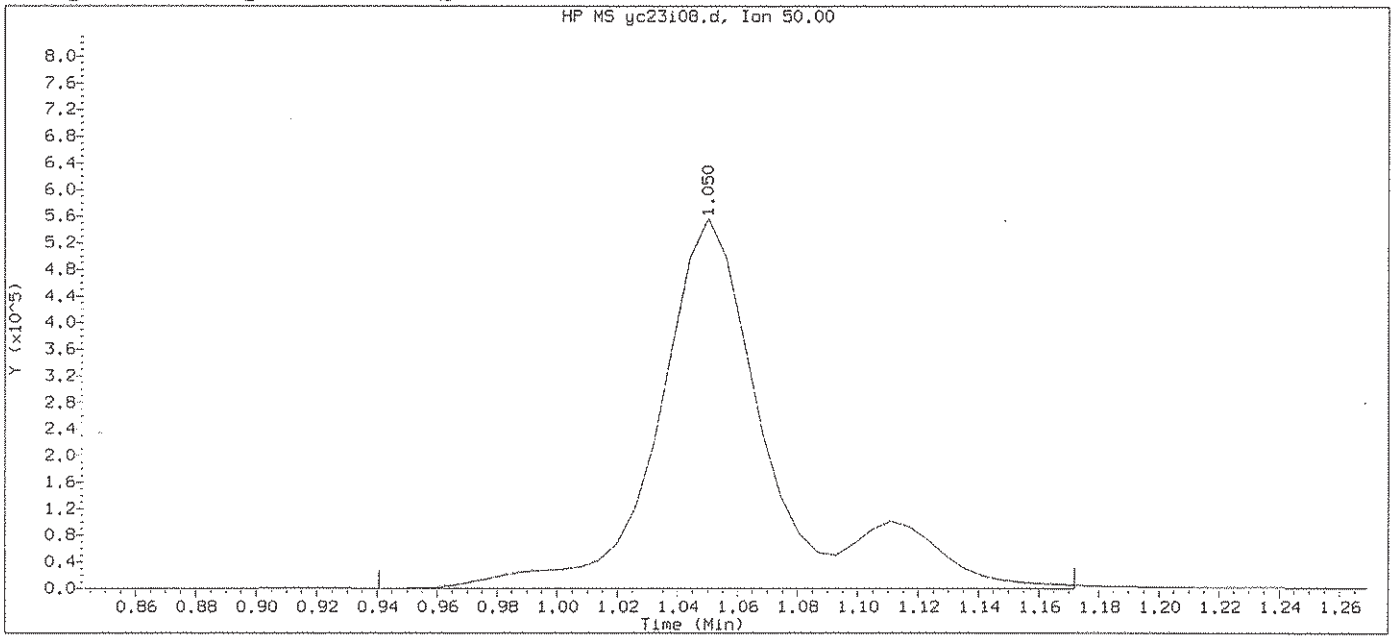
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 15:58. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:54
Date, time and analyst ID of latest file update: 23-Oct-2013 15:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 36		
Retention Time (minutes)	: 1.050		
Quant Ion	: 50.00		
Area	: 1464148		
On-column Amount (ng)	: 116.8383		
Integration start scan	: 17	Integration stop scan:	55
Y at integration start	: 0	Y at integration end:	0

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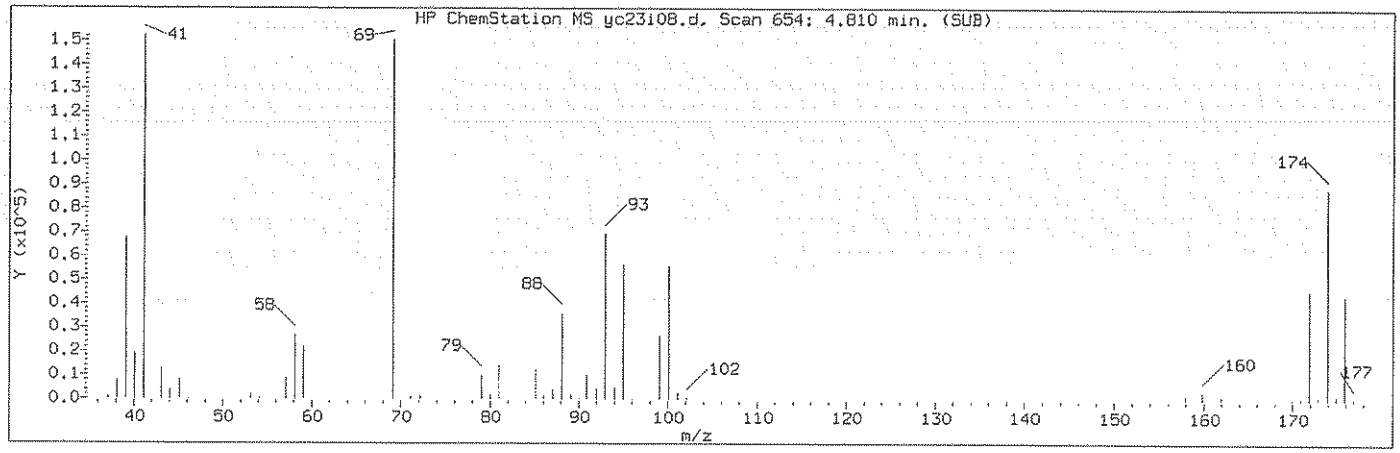
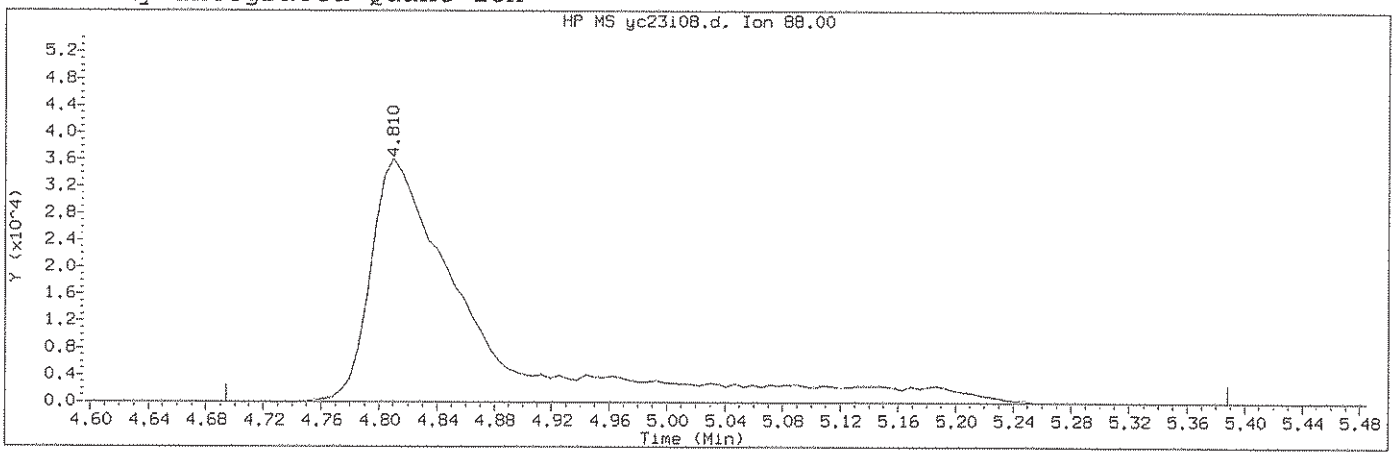
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:56
Date, time and analyst ID of latest file update: 23-Oct-2013 15:56 ads01731

Sample Name: VSTD100 Lab Sample ID: VSTD100

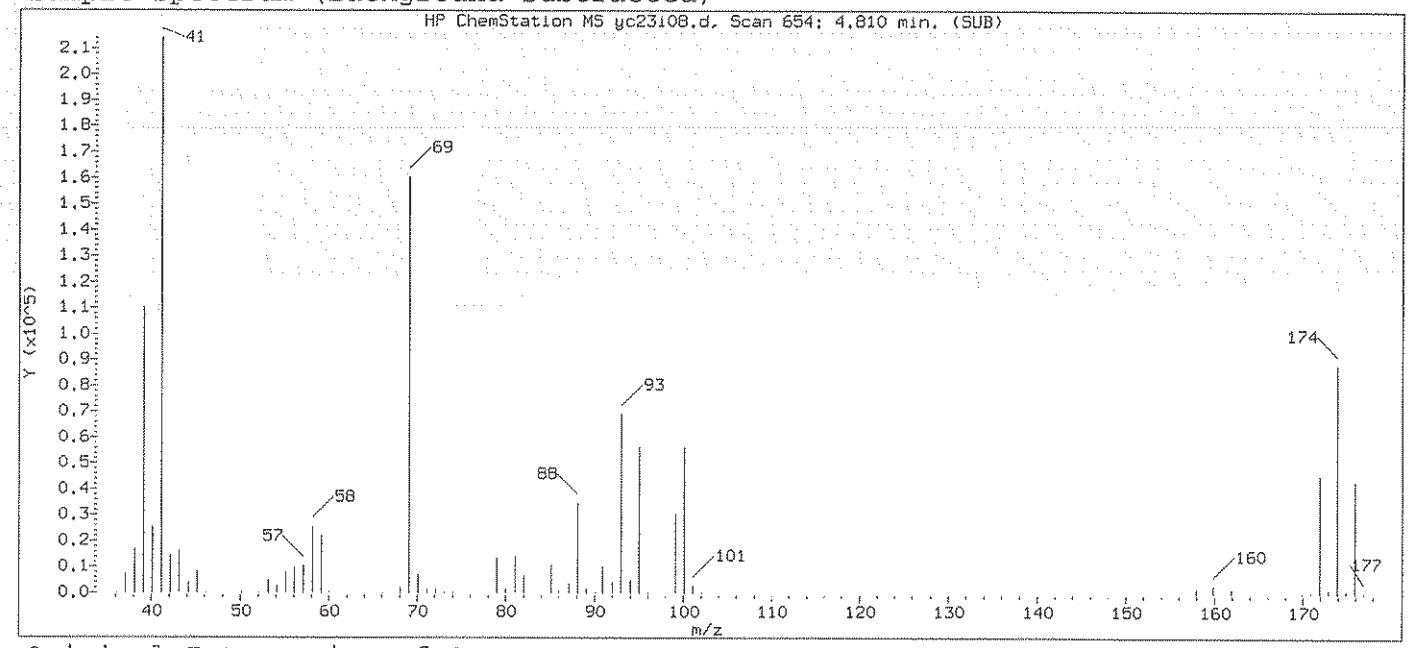
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 654		
Retention Time (minutes)	: 4.810		
Quant Ion	: 88.00		
Area (flag)	: 187019M		
On-Column Amount (ng)	: 1317.8152		
Integration start scan	: 634	Integration stop scan:	748
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

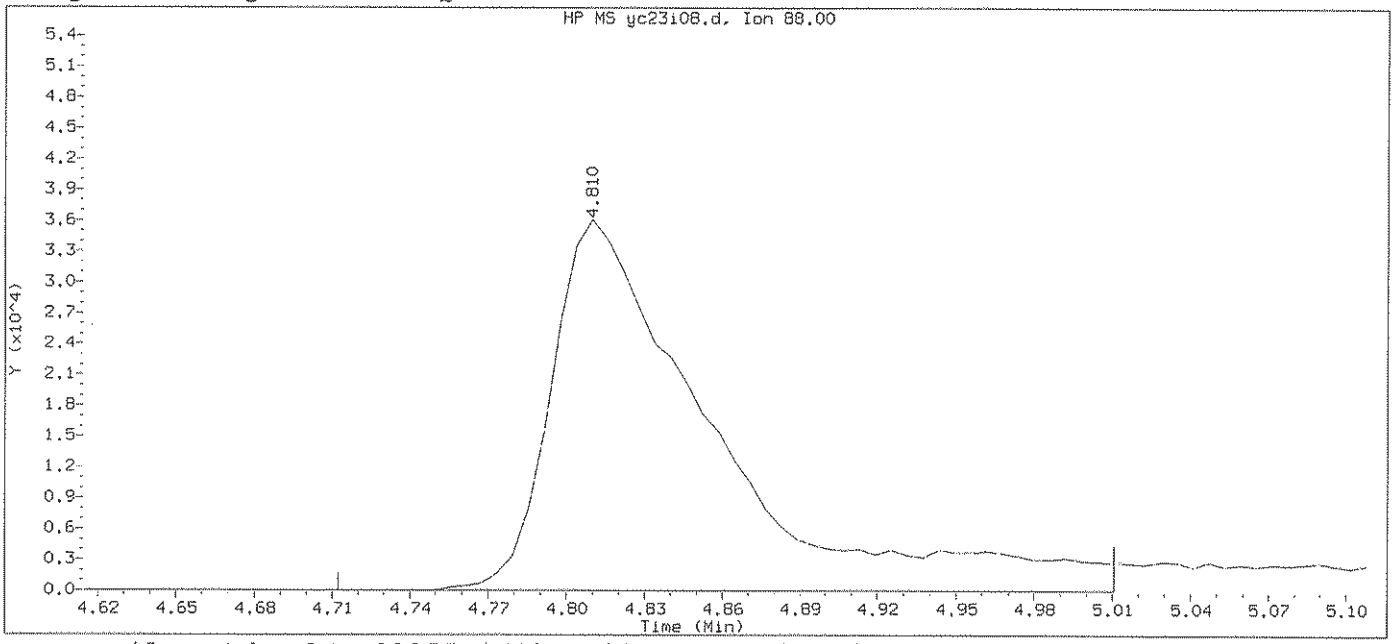
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 15:58. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i08.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:38 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:54
Date, time and analyst ID of latest file update: 23-Oct-2013 15:54 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number	: 75
Compound Name	: 1,4-Dioxane
Scan Number	: 654
Retention Time (minutes)	: 4.810
Quant Ion	: 88.00
Area	: 156684
On-column Amount (ng)	: 1136.4568
Integration start scan	: 637 Integration stop scan: 686
Y at integration start	: 0 Y at integration end: 0

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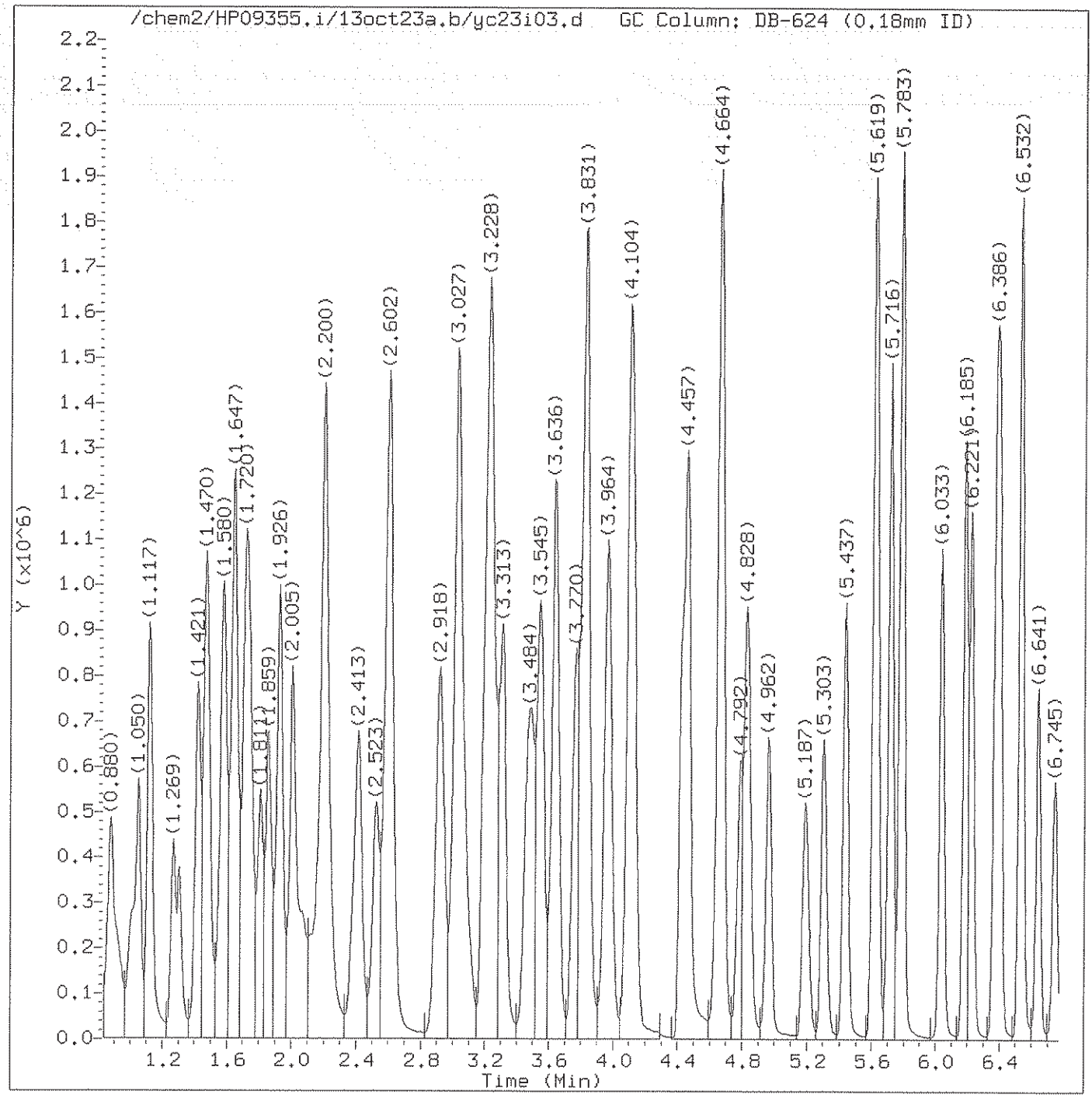
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

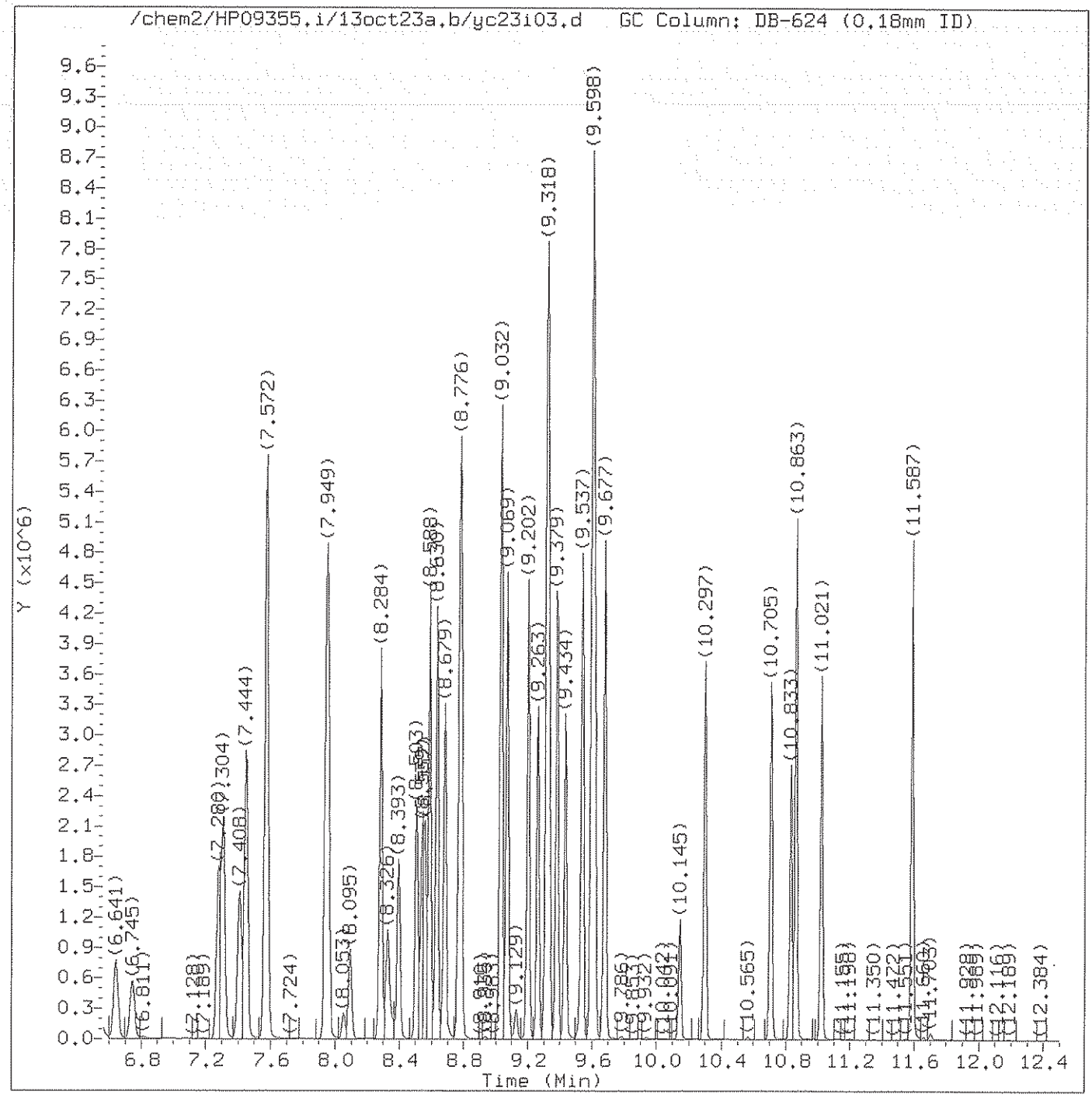
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	534821	50.039
4) Chloromethane	(2)	1.050	50	609668M	49.093
5) 1,3-Butadiene	(2)	1.117	39	309373	50.220
6) Vinyl Chloride	(2)	1.129	62	541620	50.118
8) Bromomethane	(2)	1.269	94	351332	50.845
9) Chloroethane	(2)	1.306	64	311923	50.439
10) Dichlorofluoromethane	(2)	1.421	67	731309	49.588
11) n-Pentane	(2)	1.470	43	727156M	50.880
12) Trichlorofluoromethane	(2)	1.488	101	633189	50.261
14) Ethyl ether	(2)	1.574	59	412070	51.170
15) Freon 123a	(2)	1.586	67	448095	48.471
16) Acrolein	(1)	1.647	56	1844888	541.892
17) 1,1-Dichloroethene	(2)	1.713	96	321134	49.602
17) 1,1-Dichloroethene	(2)	1.713	63	162672	48.463
18) Acetone	(2)	1.726	58	179803	102.587
19) Freon 113	(2)	1.744	101	343679	50.760
21) 2-Propanol	(1)	1.805	45	308708	255.147
22) Methyl Iodide	(2)	1.811	142	618027	49.959
23) Carbon Disulfide	(2)	1.859	76	1108584	49.423
25) Allyl Chloride	(2)	1.926	41	612886	49.356
27) Methyl Acetate	(2)	1.932	43	512818	51.519
28) Methylene Chloride	(2)	2.005	84	382538	49.290
29)*t-Butyl alcohol-d10	(1)	2.030	65	386848M	250.000
30) t-Butyl alcohol	(1)	2.078	59	558485	233.444
31) Acrylonitrile	(2)	2.164	53	341156	50.384
32) trans-1,2-Dichloroethene	(2)	2.200	96	370056	49.295
33) Methyl Tertiary Butyl Ether	(2)	2.212	73	1360461	50.046
34) n-Hexane	(2)	2.413	57	618006	48.848
36) 1,1-Dichloroethane	(2)	2.523	63	713262	49.418
38) di-Isopropyl ether	(2)	2.602	45	1470303	49.441
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	636112	49.790
40) Ethyl t-butyl ether	(2)	2.918	59	1391907	49.701
42) cis-1,2-Dichloroethene	(2)	3.027	96	426566	49.845
45) 2,2-Dichloropropane	(2)	3.034	77	574297	50.228
44) 2-Butanone	(2)	3.034	43	1017507	101.917
43) 1,2-Dichloroethene (Total)	(2)		96	796622	99.140
47) Propionitrile	(1)	3.076	54	669702	255.949
48) Methacrylonitrile	(2)	3.216	67	817775	126.617

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.234	128	215168	50.050
50) Tetrahydrofuran	(1)	3.283	71	262326	106.183
51) Chloroform	(2)	3.313	83	674781	49.820
52)$Dibromofluoromethane	(2)	3.459	113	297372	49.706
52)$Dibromofluoromethane	(2)	3.459	111	304278	49.865
53) 1,1,1-Trichloroethane	(2)	3.490	97	621580	48.044
54) Cyclohexane	(2)	3.545	56	768265	50.044
54) Cyclohexane	(2)	3.551	84	706732	54.024
54) Cyclohexane	(2)	3.545	69	230361	50.005
55) 1,1-Dichloropropene	(2)	3.636	75	533387	49.486
56) Carbon Tetrachloride	(2)	3.648	117	510728	50.674
57)$1,2-Dichloroethane-d4	(2)	3.770	102	81148	52.032
57)$1,2-Dichloroethane-d4	(2)	3.770	65	412461	52.358
57)$1,2-Dichloroethane-d4	(2)	3.770	104	48793	50.016
58) Isobutyl Alcohol	(1)	3.776	41	514367	627.395
60) Benzene	(2)	3.824	78	1646275	49.825
61) 1,2-Dichloroethane	(2)	3.837	62	589843	50.086
61) 1,2-Dichloroethane	(2)	3.837	98	52991	50.222
65) t-Amyl methyl ether	(2)	3.964	73	1326309	50.028
66)*Fluorobenzene	(2)	4.098	96	1282627	50.000
67) n-Heptane	(2)	4.123	43	760747	49.145
69) n-Butanol	(1)	4.421	56	865117	1283.839
71) Trichloroethene	(2)	4.463	95	414483	49.861
72) Methylcyclohexane	(2)	4.658	83	723995	50.937
72) Methylcyclohexane	(2)	4.664	98	316546	51.015
73) 1,2-Dichloropropane	(2)	4.670	63	445243	49.824
74) Dibromomethane	(2)	4.786	93	294995	49.926
75) 1,4-Dioxane	(1)	4.810	88	100105M	687.976
76) Methyl Methacrylate	(2)	4.834	69	515964	49.830
78) Bromodichloromethane	(2)	4.962	83	553720	50.916
79) 2-Nitropropane	(2)	5.187	41	483284	104.144
80) 2-Chloroethyl Vinyl Ether	(2)	5.297	63	398279	52.060
81) cis-1,3-Dichloropropene	(2)	5.437	75	707265	50.681
82) 4-Methyl-2-pentanone	(2)	5.619	43	1922027M	101.775
83)$Toluene-d8	(3)	5.716	98	1258031	50.136
83)$Toluene-d8	(3)	5.716	100	816194	49.953
88) Toluene	(3)	5.783	92	1053539	49.932
89) trans-1,3-Dichloropropene	(3)	6.033	75	705131	50.970

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	1412396	101.651
91) Ethyl Methacrylate	(3)	6.185	69	821687	49.907
92) 1,1,2-Trichloroethane	(3)	6.221	97	428014	49.639
93) Tetrachloroethene	(3)	6.373	166	456697	49.653
94) 1,3-Dichloropropane	(3)	6.398	76	734682	49.415
96) 2-Hexanone	(3)	6.532	43	1548332	99.453
97) Dibromochloromethane	(3)	6.641	129	464106	51.418
99) 1,2-Dibromoethane	(3)	6.745	107	473581	49.973
100)*Chlorobenzene-d5	(3)	7.280	117	941147	50.000
102) Chlorobenzene	(3)	7.304	112	1168385	49.766
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	412526	50.762
104) Ethylbenzene	(3)	7.444	91	2037767	50.279
106) m+p-Xylene	(3)	7.572	106	1620806	101.133
107) o-Xylene	(3)	7.943	106	795119	50.338
109) Styrene	(3)	7.955	104	1363127	50.827
108) Xylene (Total)	(3)		106	2415925	151.472
110) Bromoform	(3)	8.095	173	353369	52.887
111) Isopropylbenzene	(3)	8.284	105	2047752	50.557
112) Cyclohexanone	(1)	8.326	55	494005	669.727
114)$4-Bromofluorobenzene	(3)	8.393	95	474771	49.700
114)$4-Bromofluorobenzene	(3)	8.399	174	407018	49.692
115) Bromobenzene	(4)	8.509	156	541129	49.350
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	759730	49.187
117) 1,2,3-Trichloropropane	(4)	8.557	110	233914	49.032
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	676333	124.347
119) n-Propylbenzene	(4)	8.630	91	2429482	50.939
120) 2-Chlorotoluene	(4)	8.679	126	492373	49.228
121) 4-Chlorotoluene	(4)	8.770	126	517335	49.337
122) 1,3,5-Trimethylbenzene	(4)	8.783	105	1804070	50.596
125) Pentachloroethane	(4)	9.032	167	337572	49.463
124) tert-Butylbenzene	(4)	9.032	134	402054	50.081
126) 1,2,4-Trimethylbenzene	(4)	9.069	105	1836388	50.496
127) sec-Butylbenzene	(4)	9.202	105	2255324	51.072
129) 1,3-Dichlorobenzene	(4)	9.263	146	1012907	49.826
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	533348	50.000
130) p-Isopropyltoluene	(4)	9.318	119	2065881	51.316
133) 1,4-Dichlorobenzene	(4)	9.330	146	1061859	49.611
134) 1,2,3-Trimethylbenzene	(4)	9.379	105	1860716	49.395

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

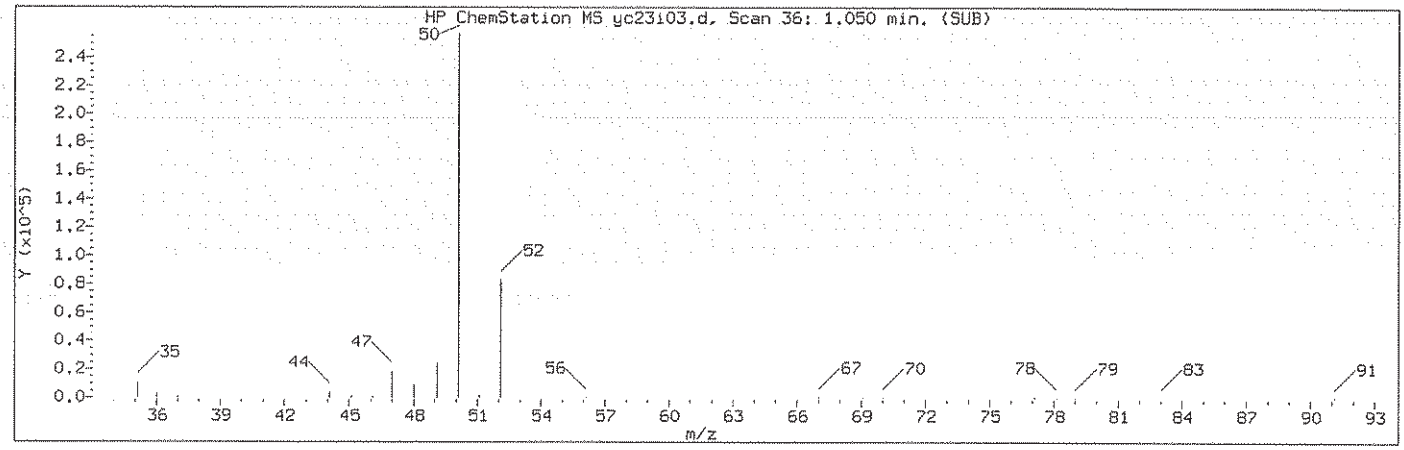
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

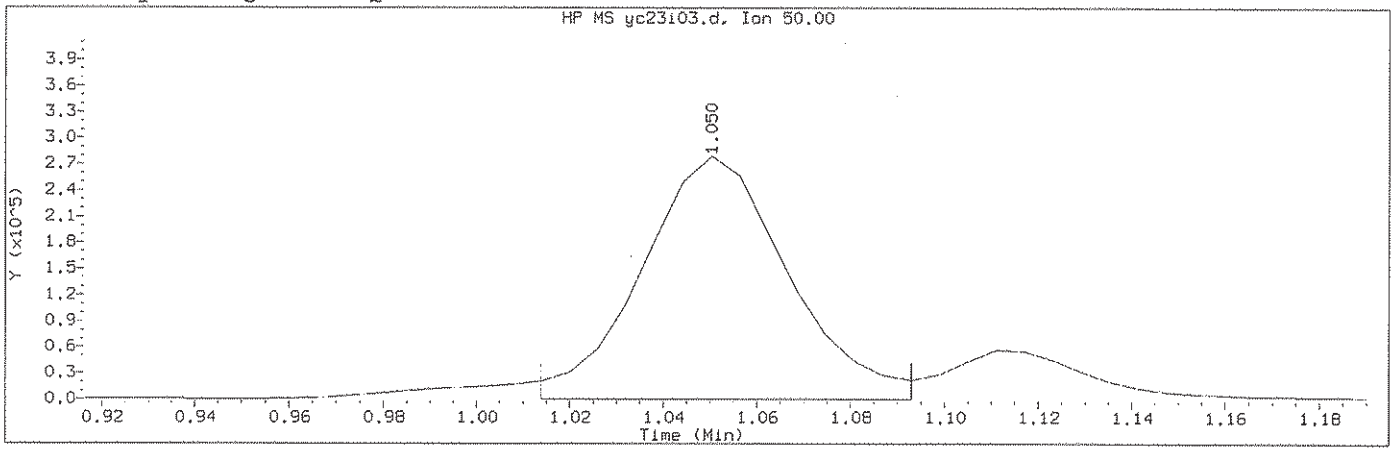
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.434	91	1586428	52.442
136) 1,3-Diethylbenzene	(4)	9.537	119	1199741	49.256
138) 1,2-Dichlorobenzene	(4)	9.598	146	1026132	50.662
137) 1,4-Diethylbenzene	(4)	9.598	119	1227590	49.477
139) n-Butylbenzene	(4)	9.616	92	999928	49.617
140) 1,2-Diethylbenzene	(4)	9.677	119	988654	49.003
141) Diethylbenzene (total)	(4)		100	3415985	147.736
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	202581	52.164
144) 1,3,5-Trichlorobenzene	(4)	10.297	180	827939	49.400
146) 1,2,4-Trichlorobenzene	(4)	10.705	180	796523	49.615
147) Hexachlorobutadiene	(4)	10.833	225	382371	48.369
148) Naphthalene	(4)	10.863	128	2689487	52.202
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	759593	49.063
150) 2-Methylnaphthalene	(4)	11.587	142	1600770	49.752

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

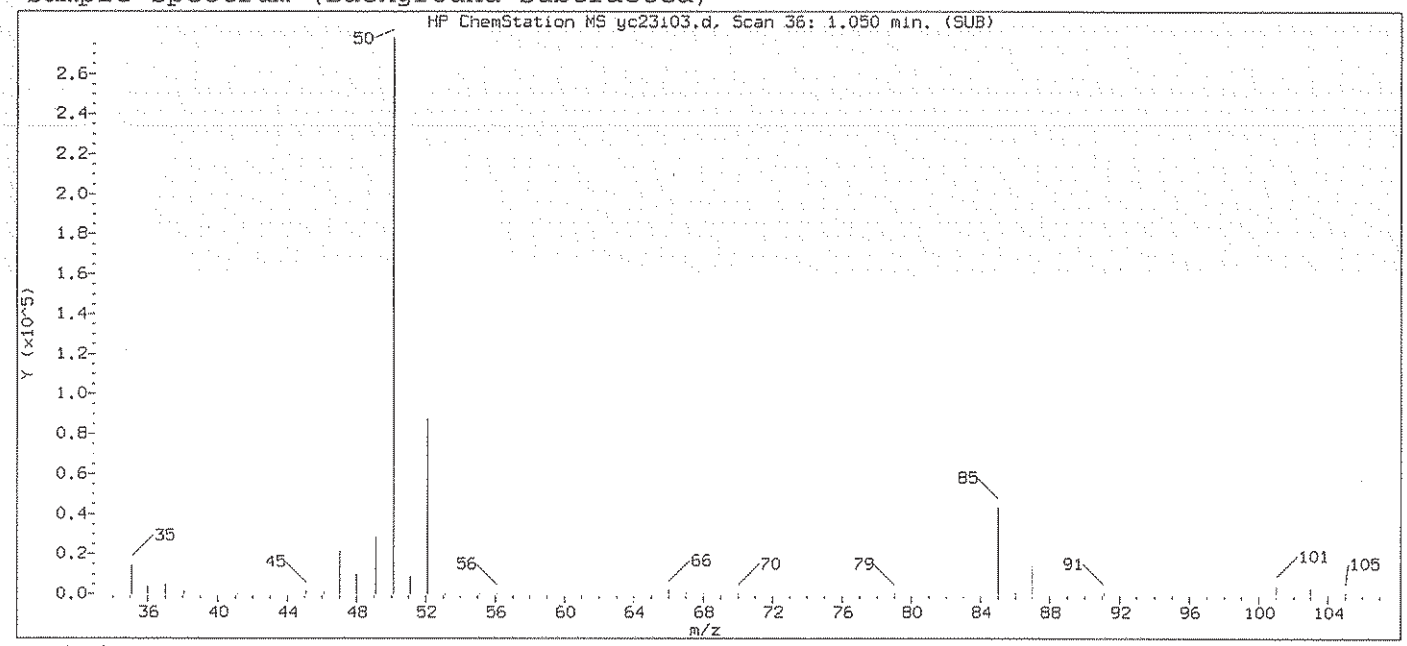
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 36		
Retention Time (minutes)	: 1.050		
Quant Ion	: 50.00		
Area (flag)	: 609668M		
On-Column Amount (ng)	: 49.0934		
Integration start scan	: 29	Integration stop scan:	42
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

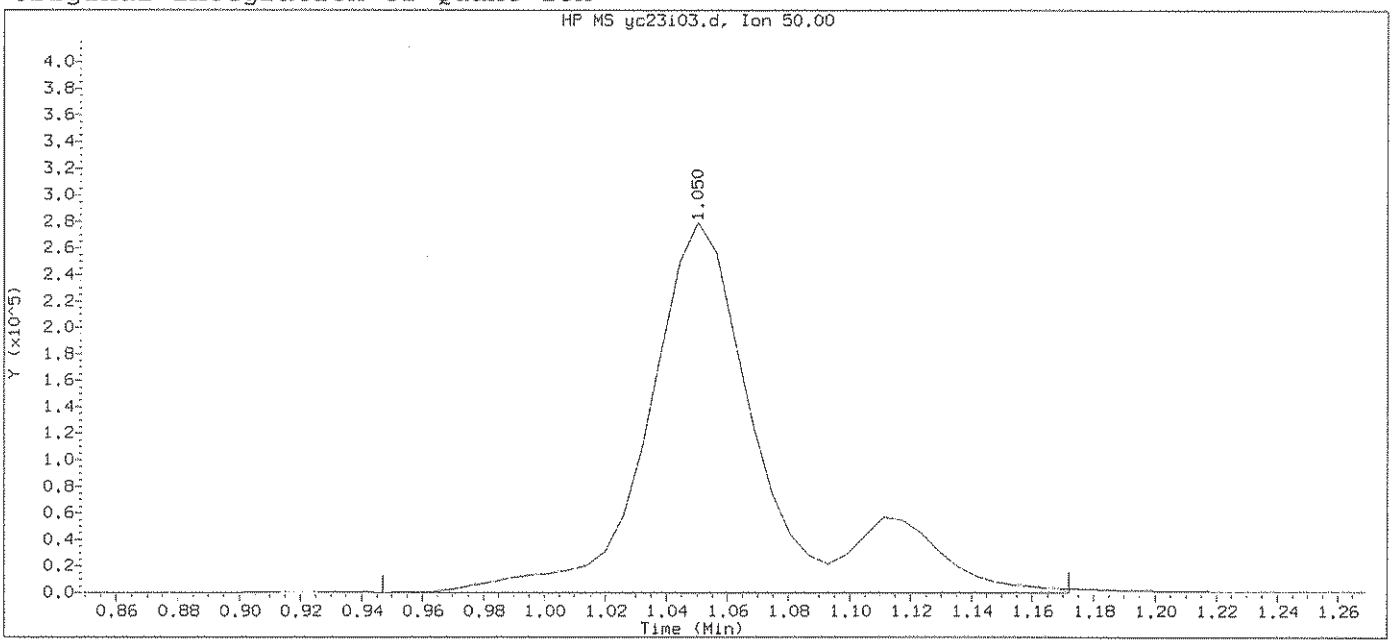
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: ADS 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

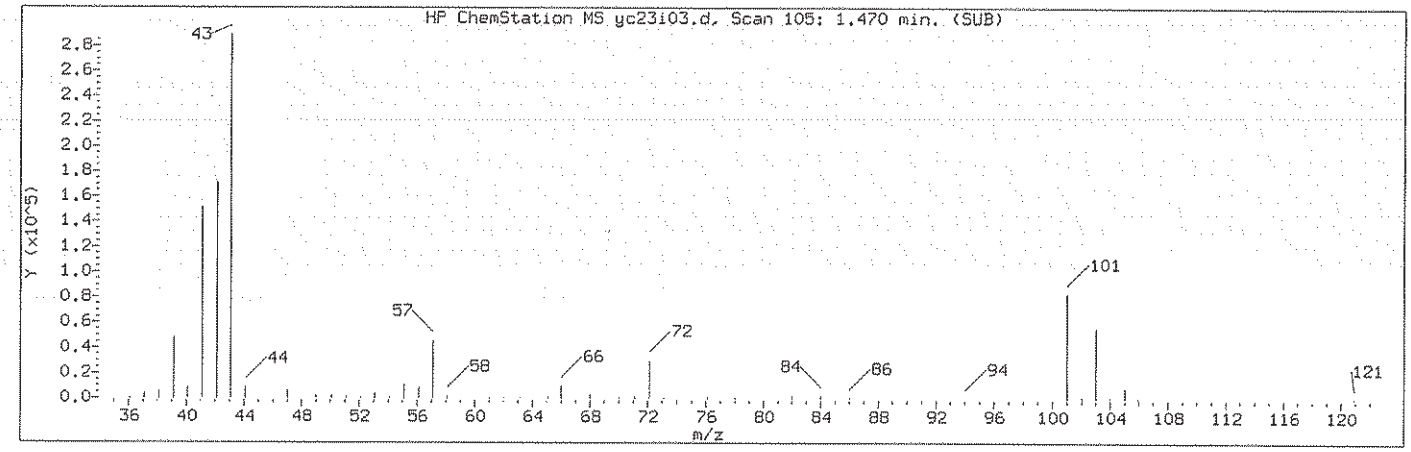
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:09
Date, time and analyst ID of latest file update: 23-Oct-2013 13:09 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

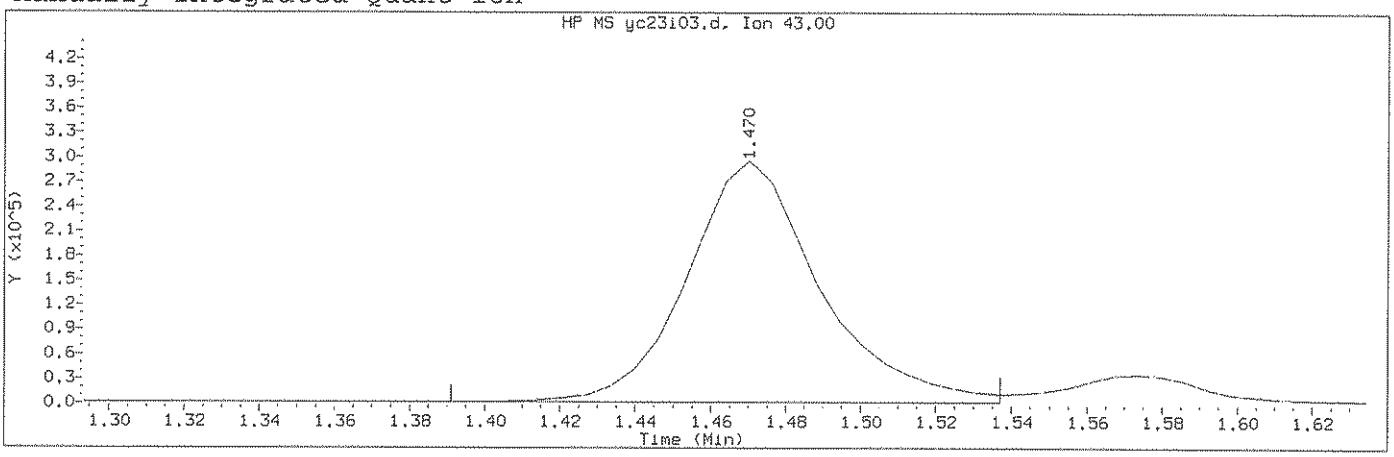
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 36		
Retention Time (minutes)	: 1.050		
Quant Ion	: 50.00		
Area	: 752945		
On-column Amount (ng)	: 54.6908		
Integration start scan	: 18	Integration stop scan:	55
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

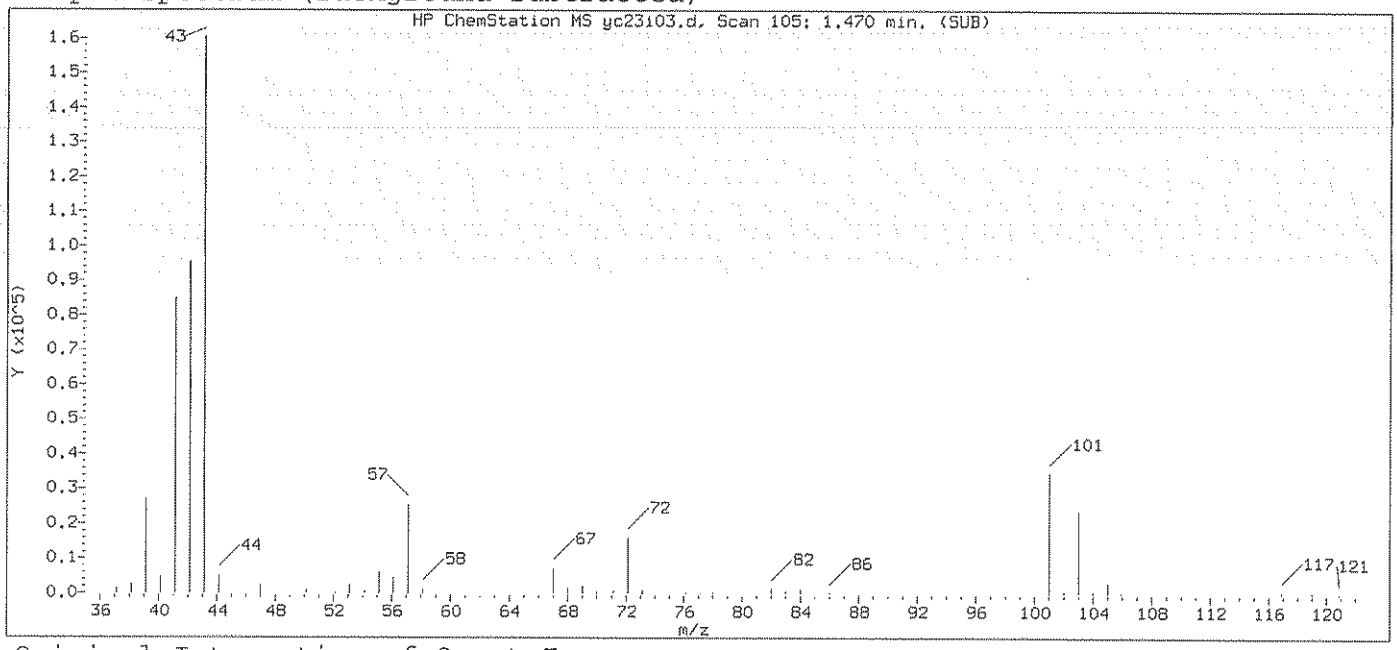
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 105
Retention Time (minutes): 1.470
Quant Ion : 43.00
Area (flag) : 727156M
On-Column Amount (ng) : 50.8800
Integration start scan : 91 Integration stop scan: 115
Y at integration start : 1281 Y at integration end: 1281

Reason for manual integration: improper integration

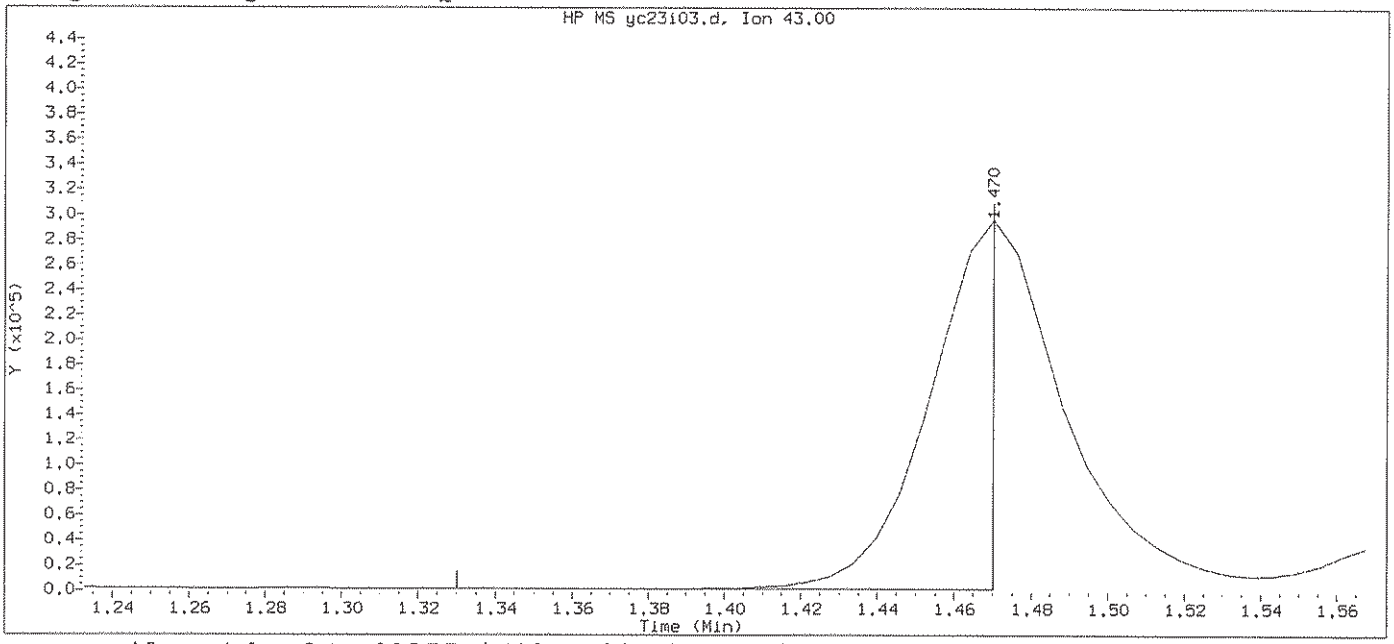
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:09
Date, time and analyst ID of latest file update: 23-Oct-2013 13:09 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 11
Compound Name : n-Pentane
Scan Number : 105
Retention Time (minutes): 1.470
Quant Ion : 43.00
Area : 332738
On-column Amount (ng) : 32.4270
Integration start scan : 81 Integration stop scan: 104
Y at integration start : 1393 Y at integration end: 1393

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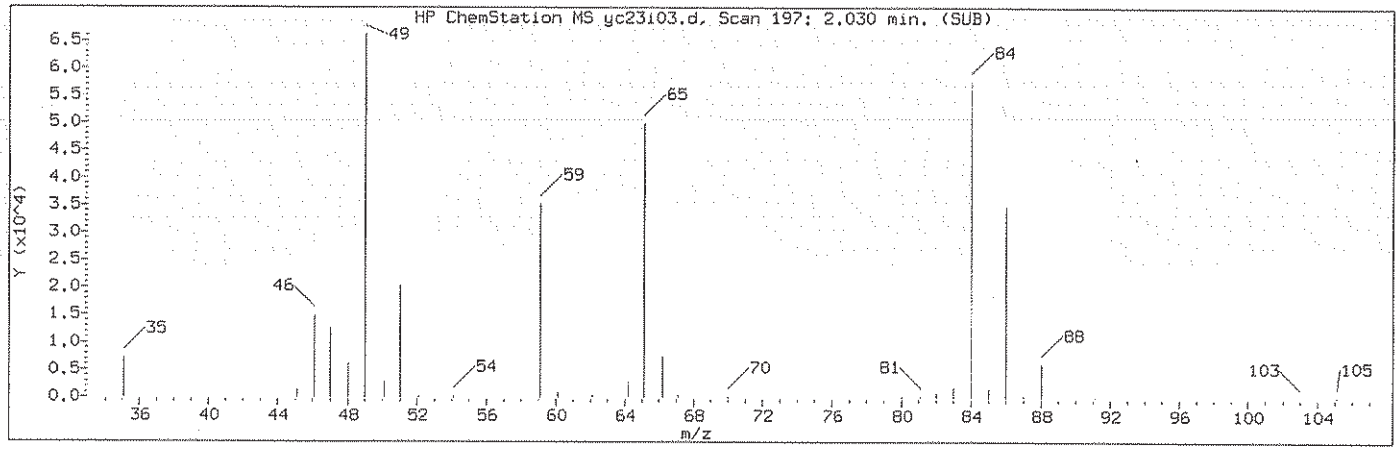
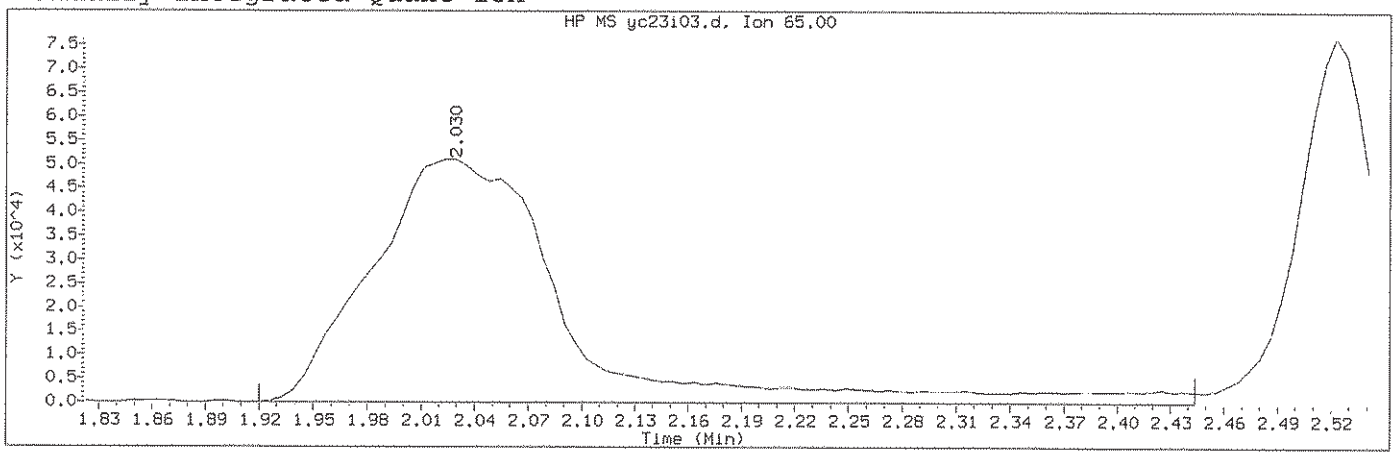
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

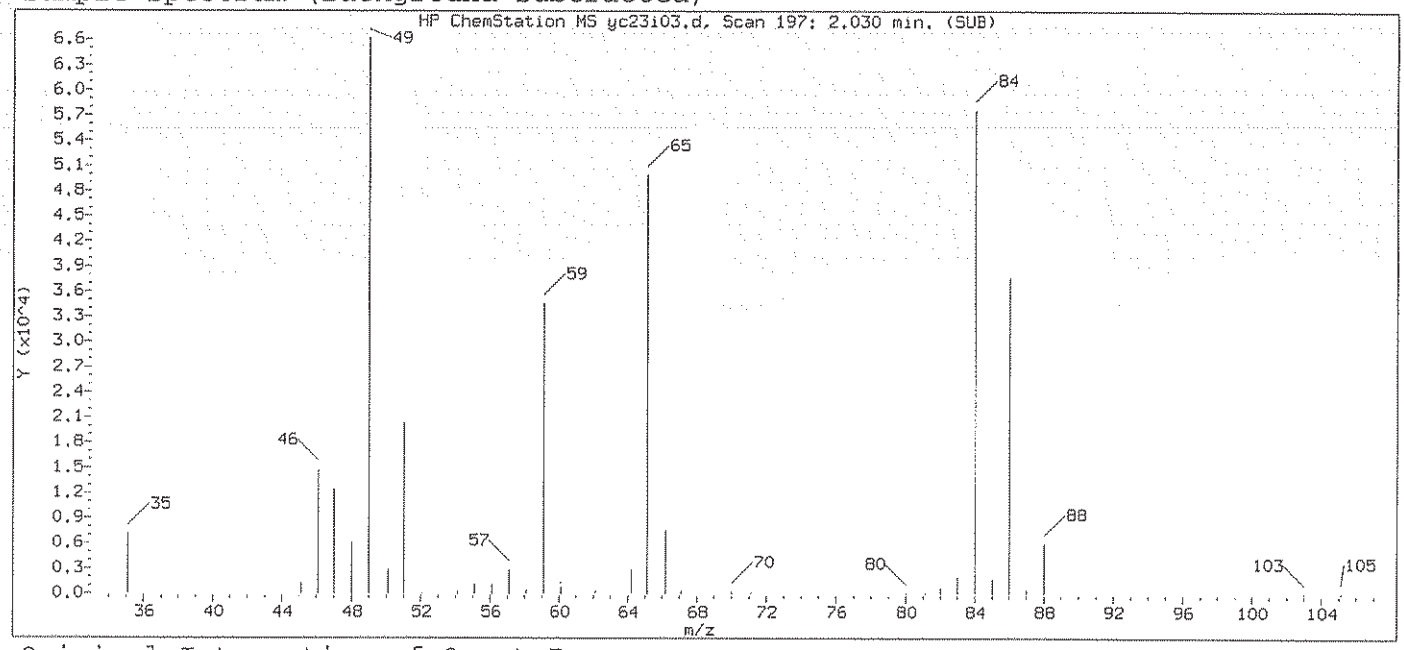
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 197
Retention Time (minutes): 2.030
Quant Ion : 65.00
Area (flag) : 386848M
On-Column Amount (ng) : 250.0000
Integration start scan : 178 Integration stop scan: 264
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

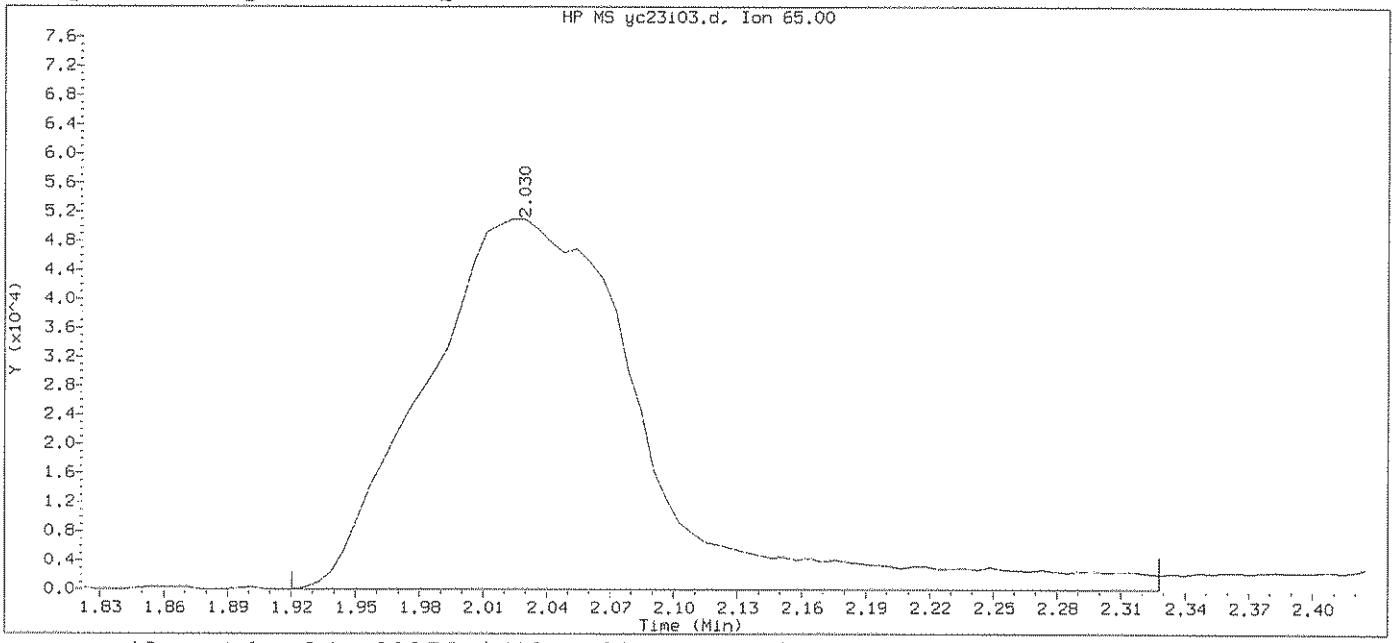
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:09
Date, time and analyst ID of latest file update: 23-Oct-2013 13:09 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 197		
Retention Time (minutes)	: 2.030		
Quant Ion	: 65.00		
Area	: 370243		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 178	Integration stop scan:	245
Y at integration start	: 0	Y at integration end:	0

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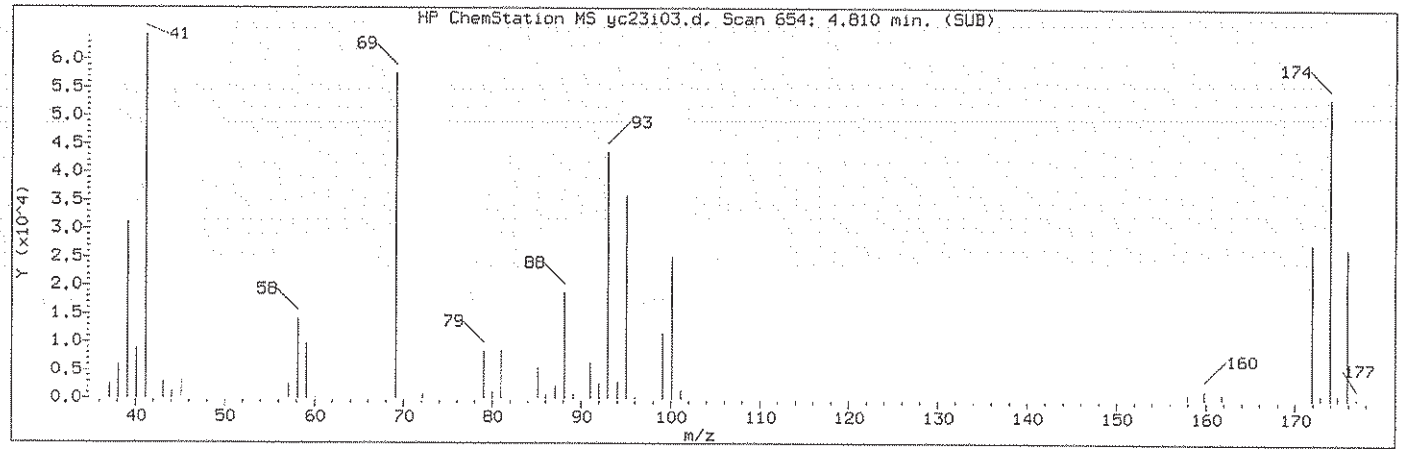
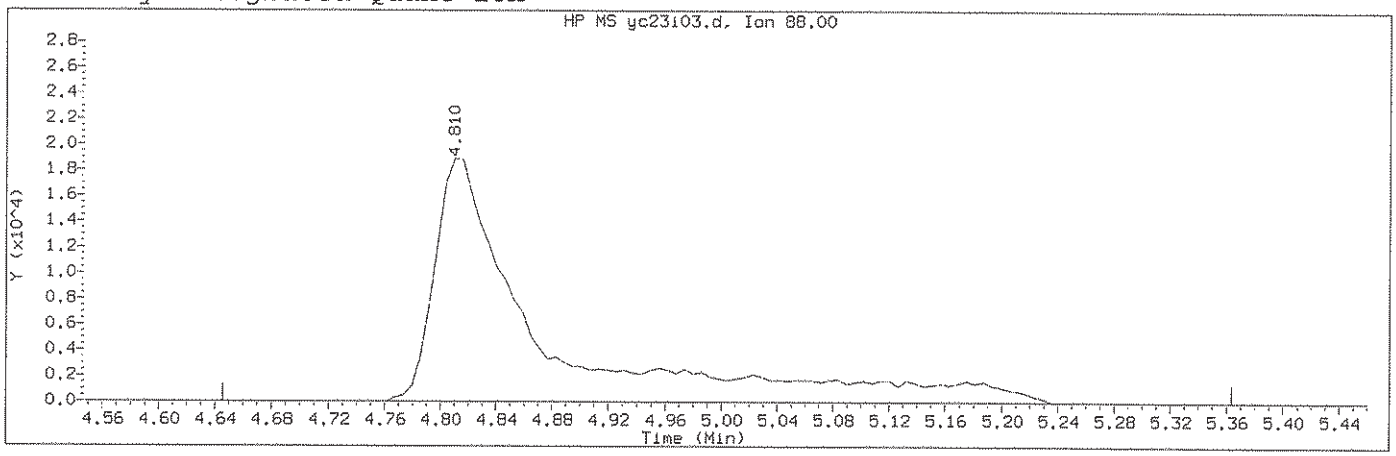
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

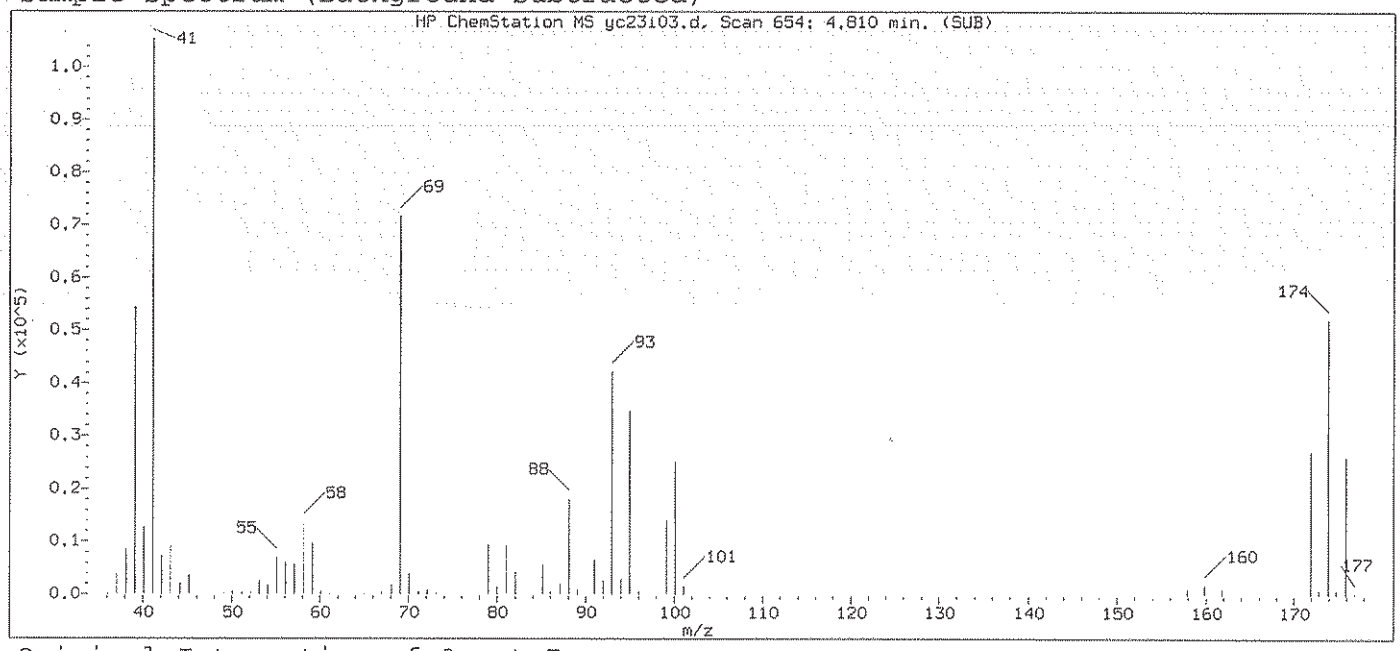
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 654		
Retention Time (minutes)	: 4.810		
Quant Ion	: 88.00		
Area (flag)	: 100105M		
On-Column Amount (ng)	: 687.9764		
Integration start scan	: 626	Integration stop scan:	744
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

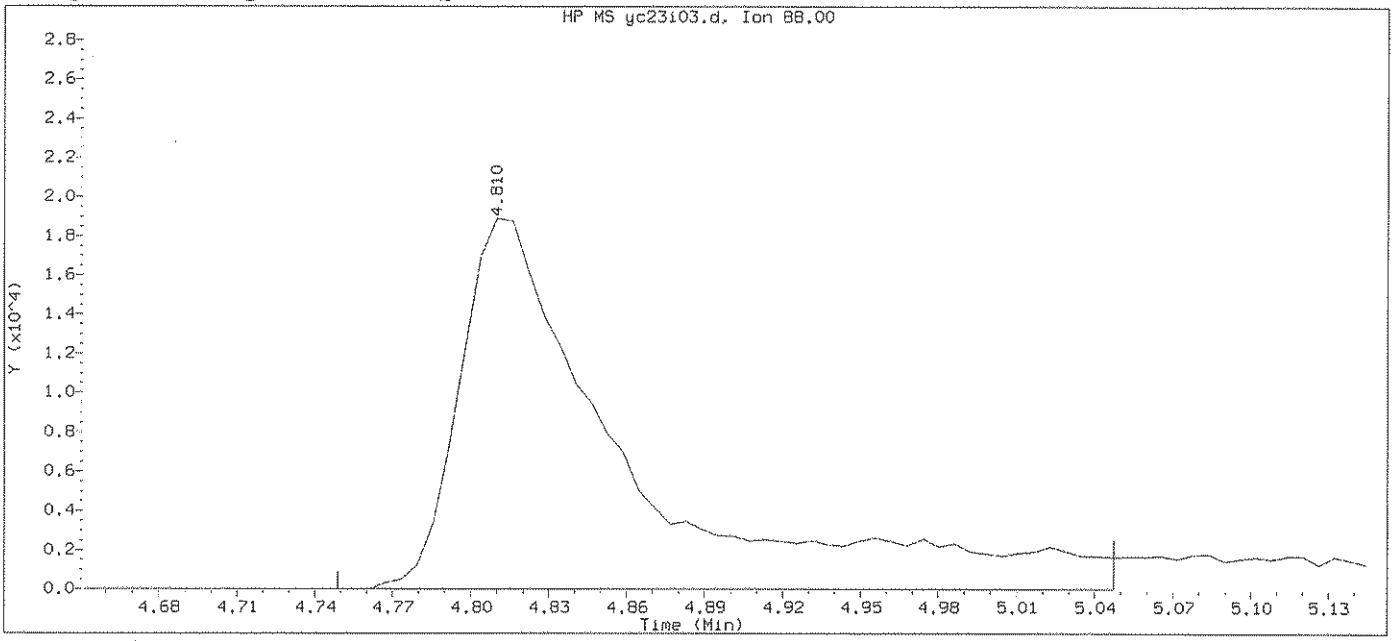
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:09
Date, time and analyst ID of latest file update: 23-Oct-2013 13:09 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 654		
Retention Time (minutes)	: 4.810		
Quant Ion	: 88.00		
Area	: 84835		
On-column Amount (ng)	: 618.2289		
Integration start scan	: 643	Integration stop scan:	692
Y at integration start	: 0	Y at integration end:	0

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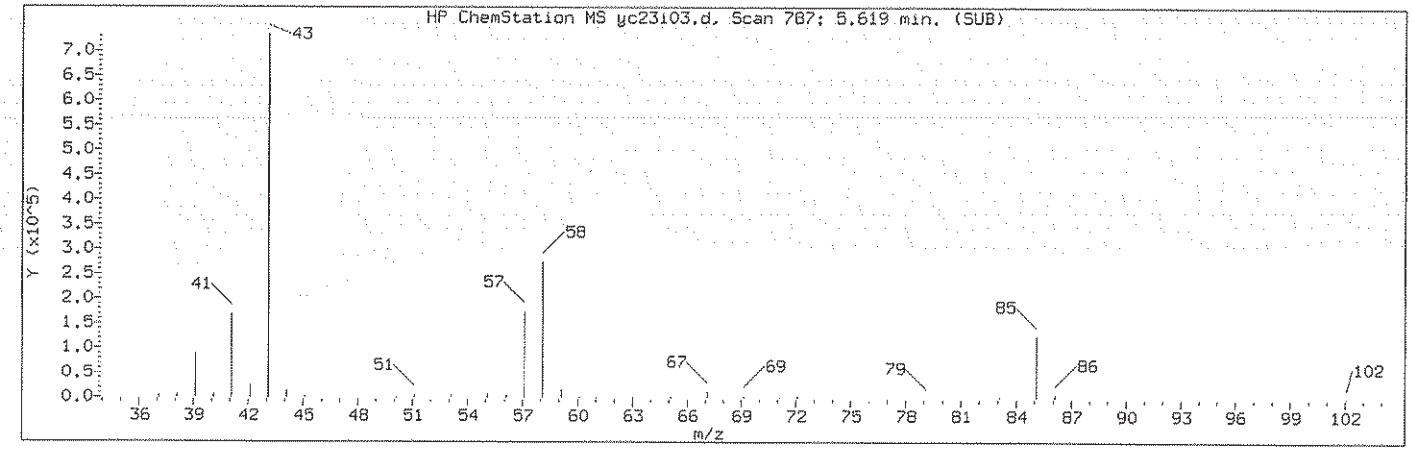
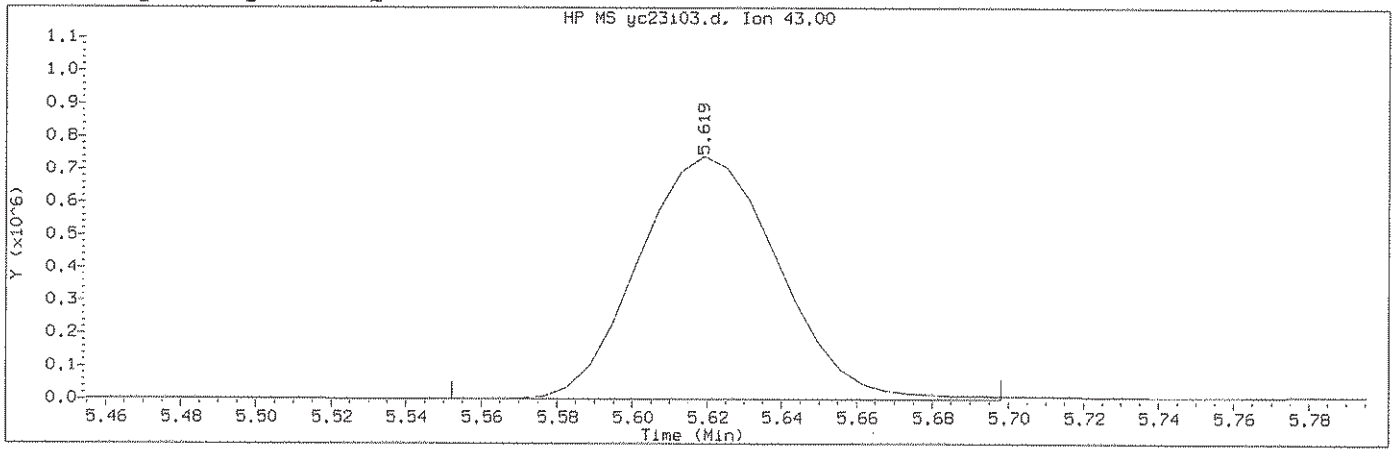
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

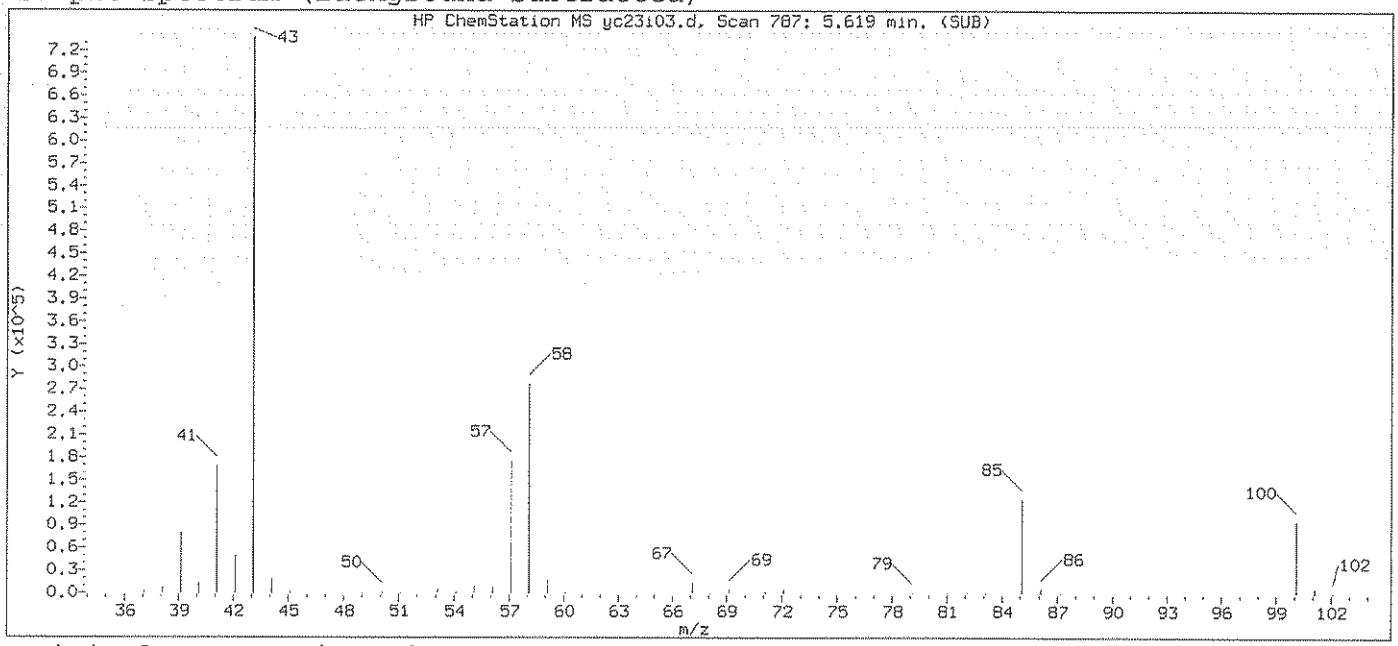
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 787
Retention Time (minutes): 5.619
Quant Ion : 43.00
Area (flag) : 1922027M
On-Column Amount (ng) : 101.7751
Integration start scan : 775 Integration stop scan: 799
Y at integration start : 651 Y at integration end: 651

Reason for manual integration: improper integration

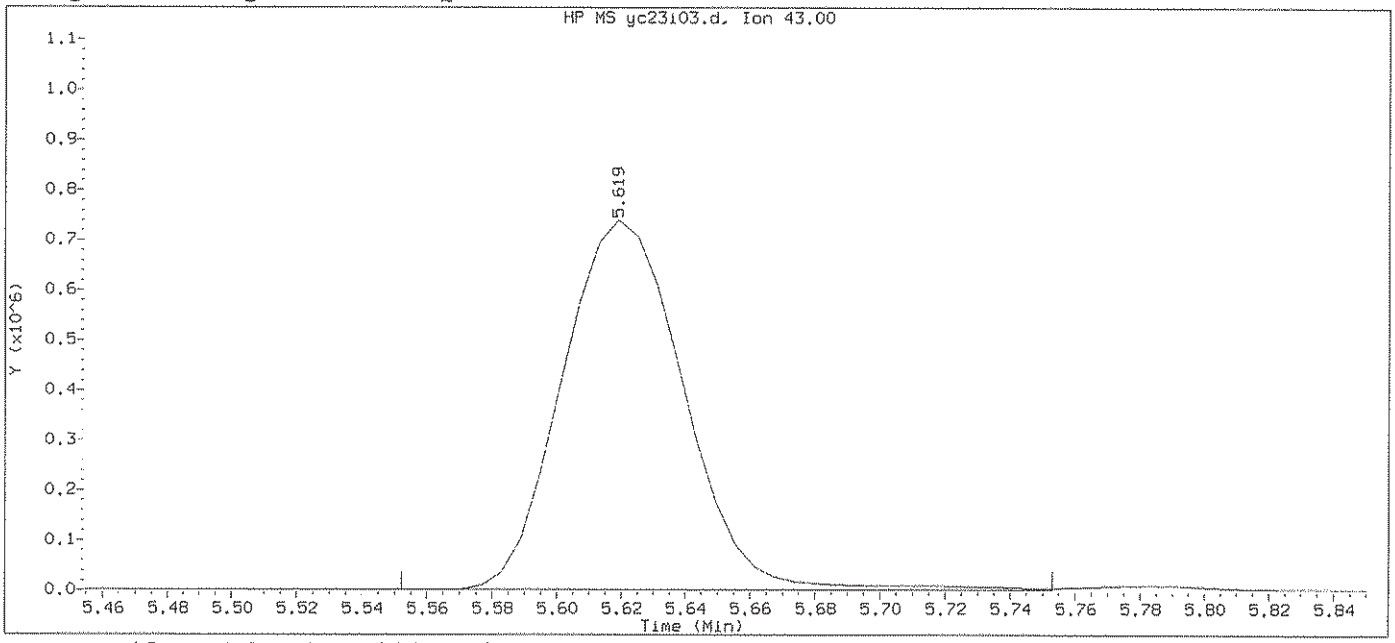
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: [signature] 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



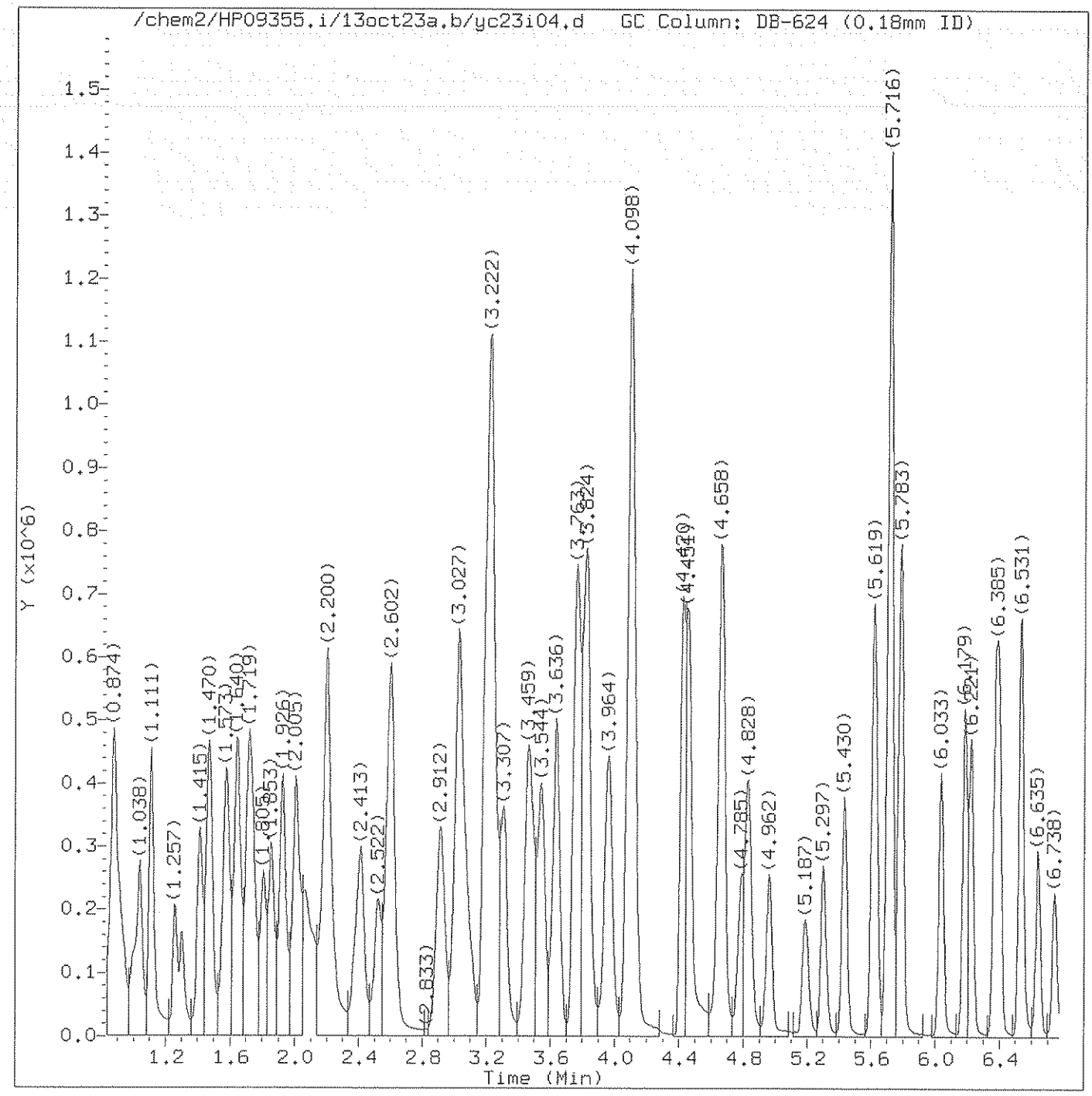
Data File: /chem2/HP09355.i/13oct23a.b/yc23i03.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 12:53 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:09
Date, time and analyst ID of latest file update: 23-Oct-2013 13:09 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 787
Retention Time (minutes): 5.619
Quant Ion : 43.00
Area : 1942386
On-column Amount (ng) : 88.1912
Integration start scan : 775 Integration stop scan: 808
Y at integration start : 651 Y at integration end: 651

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

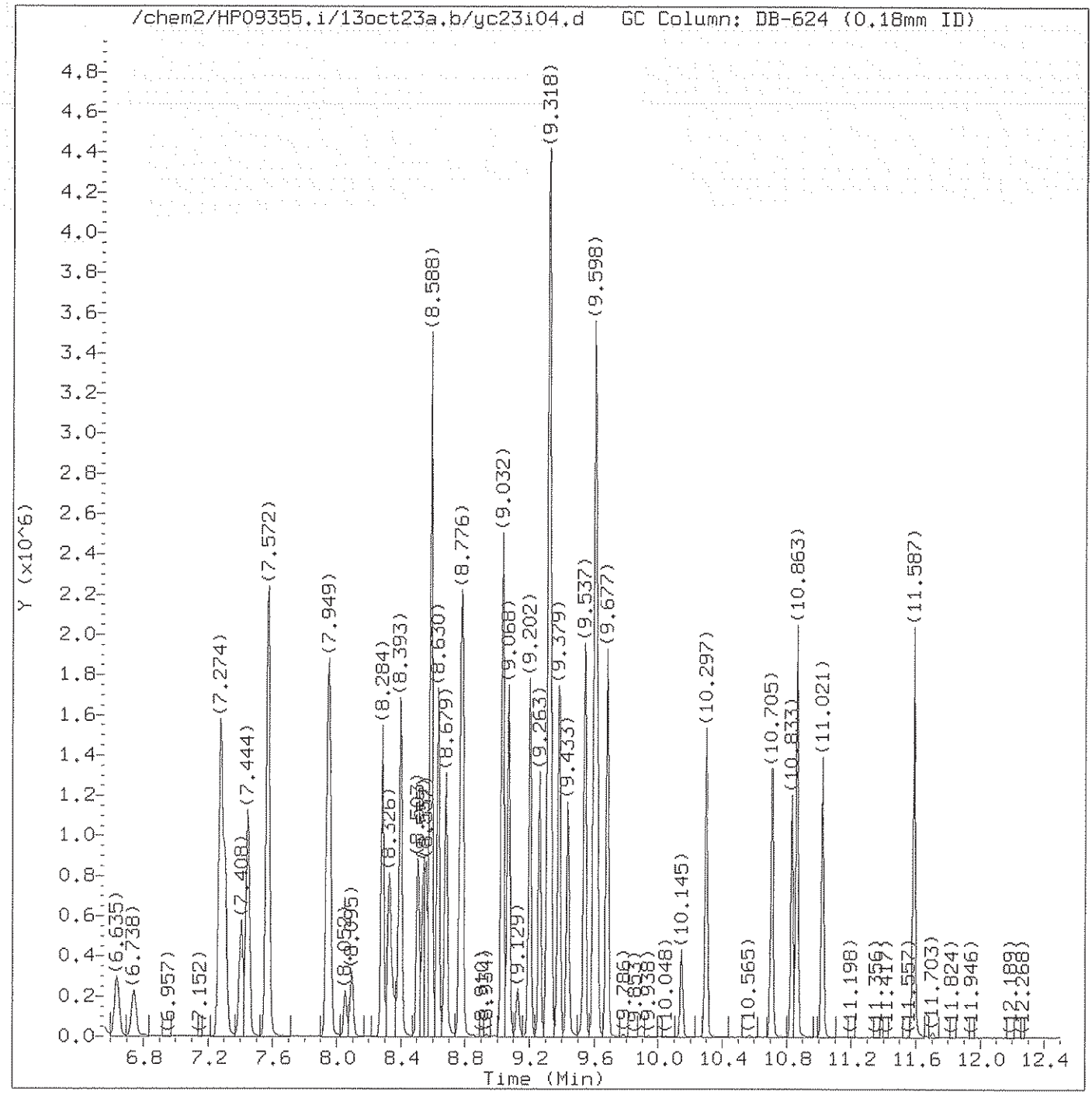
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	218970	20.814
4) Chloromethane	(2)	1.038	50	260368M	21.300
5) 1,3-Butadiene	(2)	1.111	39	125395	20.679
6) Vinyl Chloride	(2)	1.111	62	231029	21.718
8) Bromomethane	(2)	1.257	94	147786	21.729
9) Chloroethane	(2)	1.306	64	131843	21.659
10) Dichlorofluoromethane	(2)	1.409	67	302926	20.868
11) n-Pentane	(2)	1.470	43	300655	21.373
12) Trichlorofluoromethane	(2)	1.482	101	263492	21.249
14) Ethyl ether	(2)	1.573	59	163299	20.601
15) Freon 123a	(2)	1.579	67	187788	20.637
16) Acrolein	(1)	1.640	56	675692	192.783
17) 1,1-Dichloroethene	(2)	1.713	96	132247	20.752
17) 1,1-Dichloroethene	(2)	1.713	63	70734	21.409
18) Acetone	(2)	1.732	58	68051	39.445
19) Freon 113	(2)	1.738	101	139171	20.883
21) 2-Propanol	(1)	1.805	45	243729	195.672
22) Methyl Iodide	(2)	1.811	142	252312	20.721
23) Carbon Disulfide	(2)	1.853	76	466494M	21.129
25) Allyl Chloride	(2)	1.926	41	255133	20.873
27) Methyl Acetate	(2)	1.926	43	197600	20.168
28) Methylene Chloride	(2)	2.005	84	157096	20.564
29)*t-Butyl alcohol-d10	(1)	2.017	65	398256M	250.000
30) t-Butyl alcohol	(1)	2.072	59	488976	198.535
31) Acrylonitrile	(2)	2.157	53	128412	19.267
32) trans-1,2-Dichloroethene	(2)	2.200	96	152114	20.586
33) Methyl Tertiary Butyl Ether	(2)	2.206	73	543528	20.313
34) n-Hexane	(2)	2.413	57	256500	20.597
36) 1,1-Dichloroethane	(2)	2.522	63	292908	20.617
38) di-Isopropyl ether	(2)	2.595	45	600415	20.512
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	265447	21.108
40) Ethyl t-butyl ether	(2)	2.918	59	560183	20.322
42) cis-1,2-Dichloroethene	(2)	3.021	96	171076	20.309
45) 2,2-Dichloropropane	(2)	3.027	77	230193	20.454
44) 2-Butanone	(2)	3.027	43	370258	37.677
43) 1,2-Dichloroethene (Total)	(2)		96	323190	40.895
47) Propionitrile	(1)	3.076	54	540198	200.541
48) Methacrylonitrile	(2)	3.216	67	649265	102.129

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.234	128	86705	20.490
50) Tetrahydrofuran	(1)	3.277	71	95090	37.388
51) Chloroform	(2)	3.313	83	269679	20.228
52)$Dibromofluoromethane	(2)	3.459	113	293238	49.797
52)$Dibromofluoromethane	(2)	3.459	111	300162	49.975
53) 1,1,1-Trichloroethane	(2)	3.484	97	262070	20.579
54) Cyclohexane	(2)	3.544	56	310362	20.539
54) Cyclohexane	(2)	3.544	84	244183	18.963
54) Cyclohexane	(2)	3.544	69	93237	20.562
55) 1,1-Dichloropropene	(2)	3.636	75	216716	20.427
56) Carbon Tetrachloride	(2)	3.642	117	201844	20.346
58) Isobutyl Alcohol	(1)	3.757	41	416983	494.043
57)$1,2-Dichloroethane-d4	(2)	3.763	102	77069	50.204
57)$1,2-Dichloroethane-d4	(2)	3.763	65	394872	50.924
57)$1,2-Dichloroethane-d4	(2)	3.763	104	47952	49.938
60) Benzene	(2)	3.824	78	665463	20.461
61) 1,2-Dichloroethane	(2)	3.836	62	235113	20.283
61) 1,2-Dichloroethane	(2)	3.843	98	20952	20.174
65) t-Amyl methyl ether	(2)	3.964	73	523956	20.078
66)*Fluorobenzene	(2)	4.098	96	1262505	50.000
67) n-Heptane	(2)	4.122	43	311022	20.413
69) n-Butanol	(1)	4.420	56	701003	1010.494
71) Trichloroethene	(2)	4.457	95	167181	20.432
72) Methylcyclohexane	(2)	4.658	83	294879	21.077
72) Methylcyclohexane	(2)	4.658	98	126855	20.770
73) 1,2-Dichloropropane	(2)	4.670	63	177267	20.153
74) Dibromomethane	(2)	4.785	93	116020	19.949
75) 1,4-Dioxane	(1)	4.810	88	80284M	535.951
76) Methyl Methacrylate	(2)	4.828	69	205255	20.139
78) Bromodichloromethane	(2)	4.962	83	216686	20.242
79) 2-Nitropropane	(2)	5.187	41	165815	36.301
80) 2-Chloroethyl Vinyl Ether	(2)	5.297	63	159580	21.191
81) cis-1,3-Dichloropropene	(2)	5.430	75	276106	20.101
82) 4-Methyl-2-pentanone	(2)	5.619	43	691076M	37.177
83)$Toluene-d8	(3)	5.716	98	1231176	50.155
83)$Toluene-d8	(3)	5.716	100	792839	49.601
88) Toluene	(3)	5.783	92	424715	20.576
89) trans-1,3-Dichloropropene	(3)	6.033	75	274332	20.270

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	550438	40.371
91) Ethyl Methacrylate	(3)	6.179	69	331313	20.570
92) 1,1,2-Trichloroethane	(3)	6.221	97	172295	20.426
93) Tetrachloroethene	(3)	6.373	166	184084	20.458
94) 1,3-Dichloropropane	(3)	6.398	76	297298	20.440
96) 2-Hexanone	(3)	6.531	43	569534	37.395
97) Dibromochloromethane	(3)	6.635	129	179359	20.312
99) 1,2-Dibromoethane	(3)	6.738	107	190179	20.513
100)*Chlorobenzene-d5	(3)	7.274	117	920704	50.000
102) Chlorobenzene	(3)	7.304	112	467391	20.350
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	160452	20.182
104) Ethylbenzene	(3)	7.444	91	817842	20.627
106) m+p-Xylene	(3)	7.572	106	647477	41.298
107) o-Xylene	(3)	7.943	106	315312	20.405
109) Styrene	(3)	7.955	104	540860	20.615
108) Xylene (Total)	(3)		106	962789	61.703
110) Bromoform	(3)	8.095	173	130195	19.918
111) Isopropylbenzene	(3)	8.284	105	825790	20.841
112) Cyclohexanone	(1)	8.326	55	407851	537.088
114)$4-Bromofluorobenzene	(3)	8.393	95	470618M	50.359
114)$4-Bromofluorobenzene	(3)	8.399	174	403845	50.399
115) Bromobenzene	(4)	8.509	156	216268	20.446
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	305111	20.478
117) 1,2,3-Trichloropropane	(4)	8.557	110	95098	20.665
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	562216	107.156
119) n-Propylbenzene	(4)	8.630	91	974250	21.176
120) 2-Chlorotoluene	(4)	8.679	126	197888	20.510
121) 4-Chlorotoluene	(4)	8.770	126	208154	20.579
122) 1,3,5-Trimethylbenzene	(4)	8.782	105	717143	20.850
125) Pentachloroethane	(4)	9.032	167	131753	20.013
124) tert-Butylbenzene	(4)	9.032	134	157955	20.397
126) 1,2,4-Trimethylbenzene	(4)	9.068	105	736793	21.003
127) sec-Butylbenzene	(4)	9.202	105	906068	21.270
129) 1,3-Dichlorobenzene	(4)	9.263	146	403334	20.568
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	514483	50.000
130) p-Isopropyltoluene	(4)	9.318	119	822892	21.190
133) 1,4-Dichlorobenzene	(4)	9.330	146	424474	20.559
134) 1,2,3-Trimethylbenzene	(4)	9.379	105	757227	20.839

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.433	91	606461	20.783
136) 1,3-Diethylbenzene	(4)	9.543	119	489883	20.850
138) 1,2-Dichlorobenzene	(4)	9.598	146	406686	20.815
137) 1,4-Diethylbenzene	(4)	9.598	119	500546	20.914
139) n-Butylbenzene	(4)	9.616	92	406379	20.904
140) 1,2-Diethylbenzene	(4)	9.677	119	402571	20.685
141) Diethylbenzene (total)	(4)		100	1393000	62.449
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	77141	20.592
144) 1,3,5-Trichlorobenzene	(4)	10.297	180	333379	20.621
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	318897	20.592
147) Hexachlorobutadiene	(4)	10.833	225	162211	21.272
148) Naphthalene	(4)	10.863	128	1070191	21.534
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	307638	20.599
150) 2-Methylnaphthalene	(4)	11.587	142	659398	21.245

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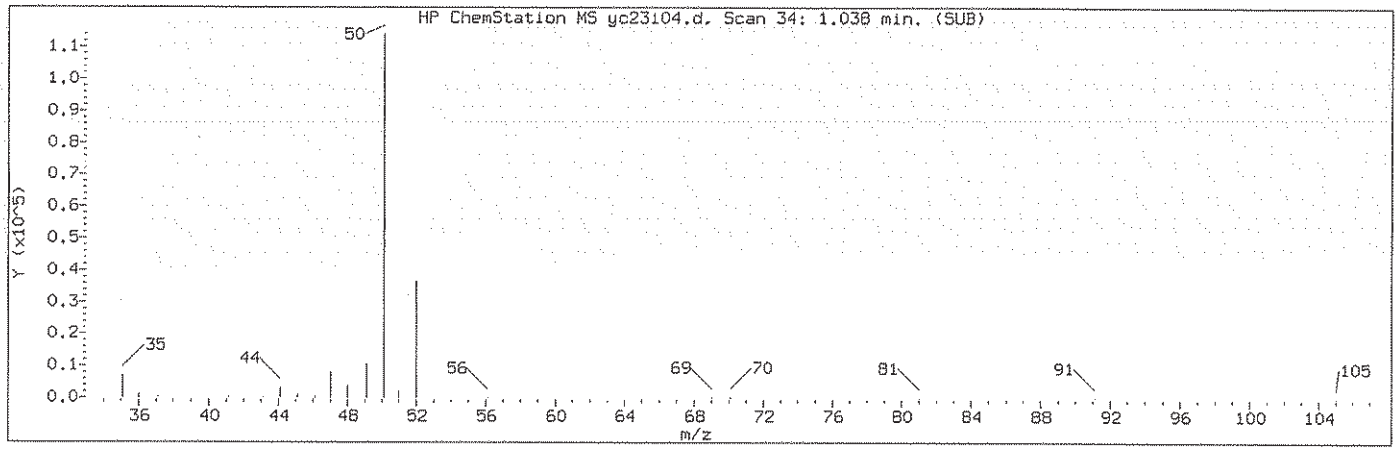
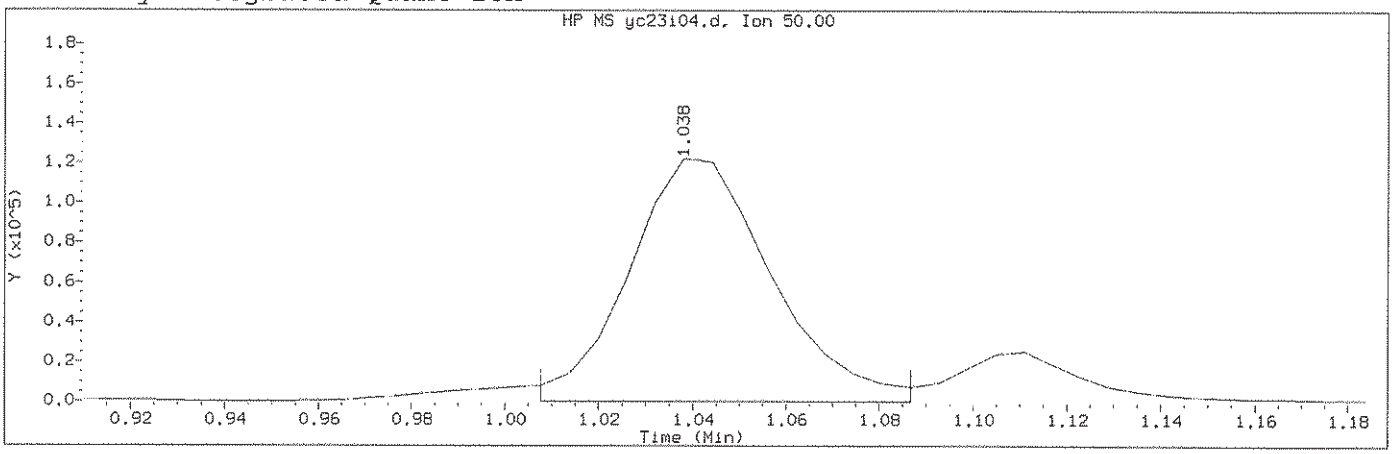
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

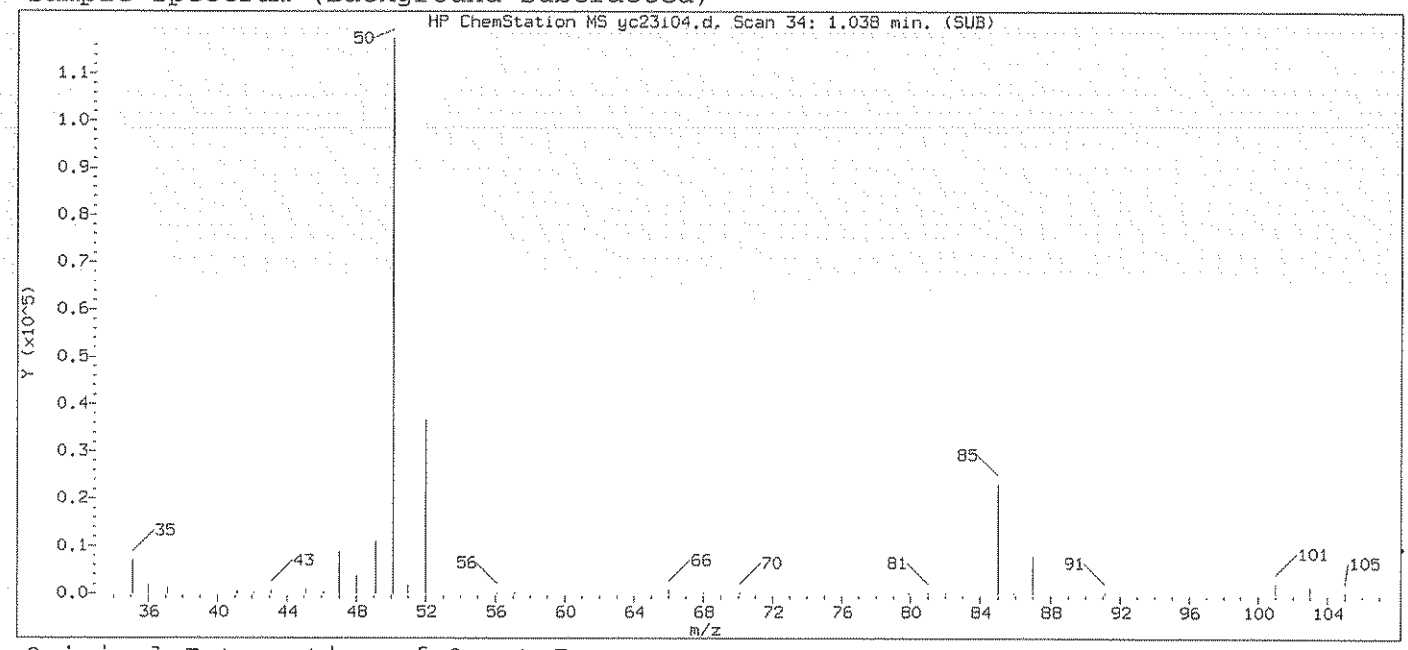
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 34		
Retention Time (minutes)	: 1.038		
Quant Ion	: 50.00		
Area (flag)	: 260368M		
On-Column Amount (ng)	: 21.3002		
Integration start scan	: 28	Integration stop scan:	41
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

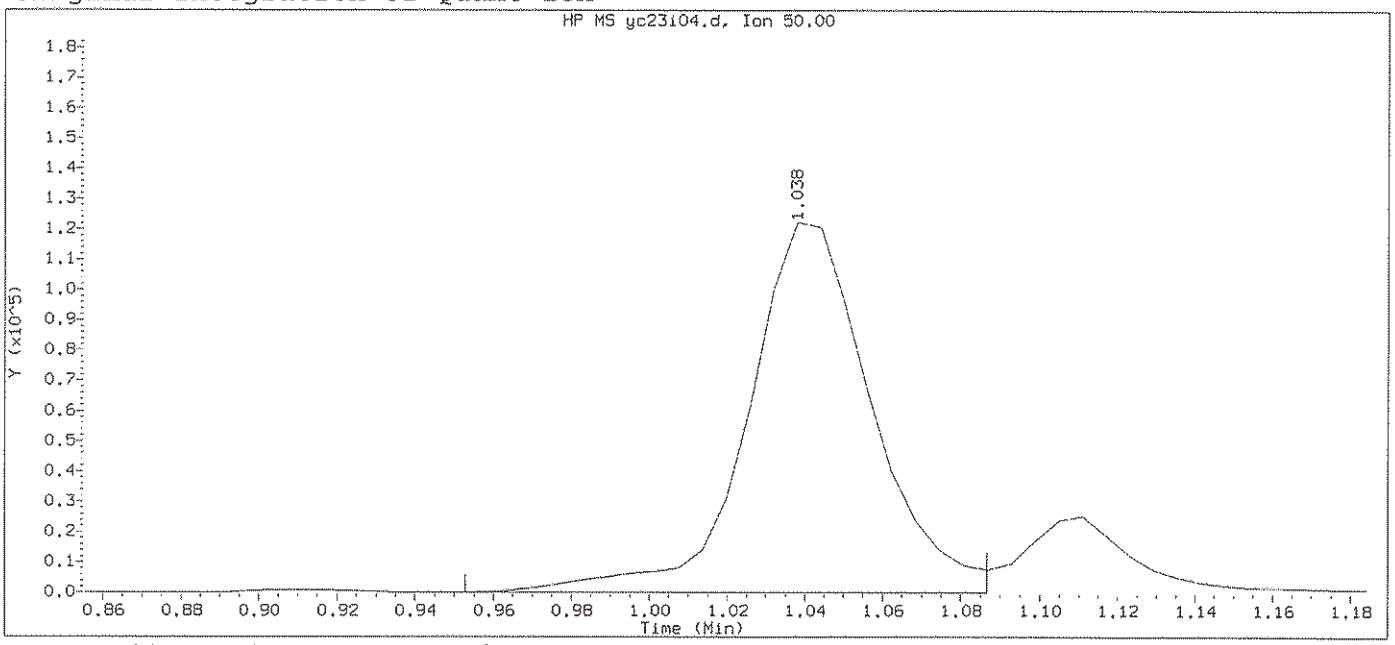
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 34		
Retention Time (minutes)	: 1.038		
Quant Ion	: 50.00		
Area	: 269260		
On-column Amount (ng)	: 21.1343		
Integration start scan	: 19	Integration stop scan:	41
Y at integration start	: 0	Y at integration end:	0

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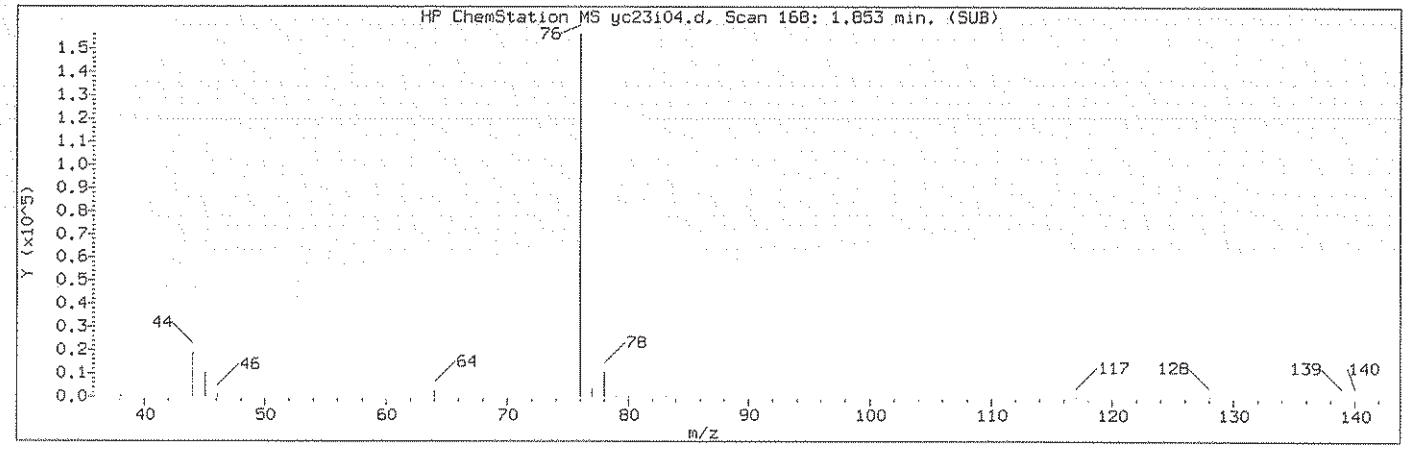
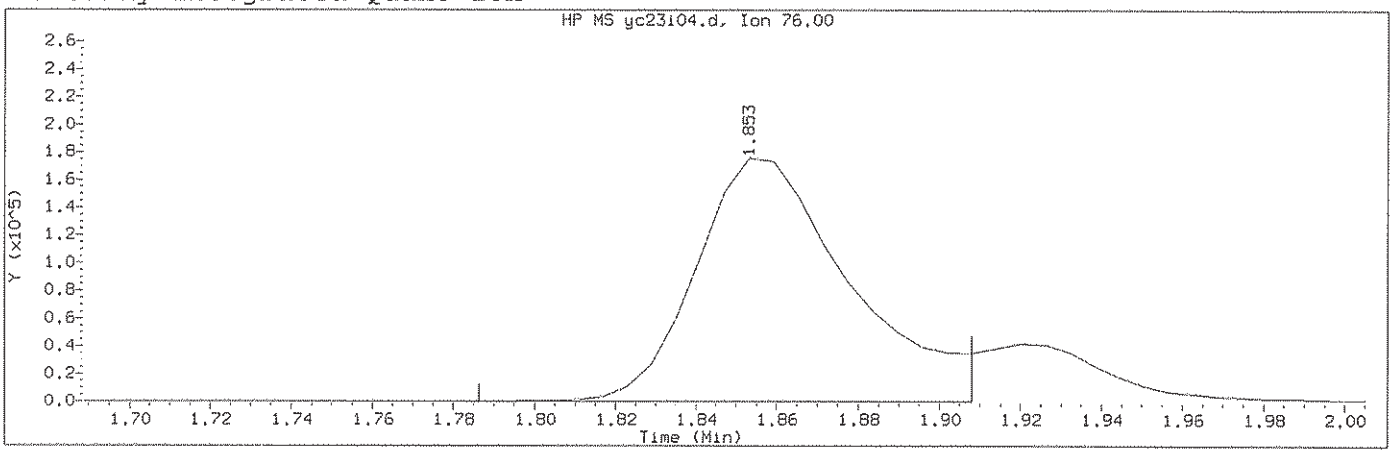
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

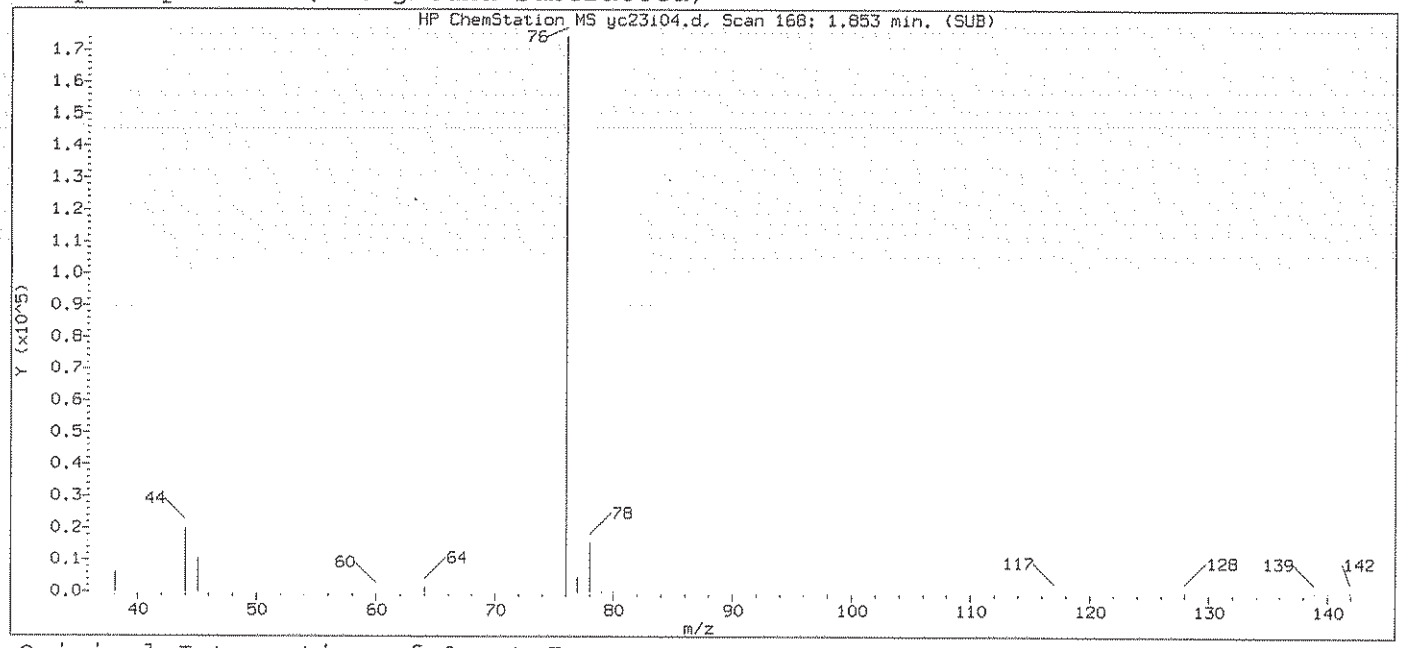
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 168
Retention Time (minutes): 1.853
Quant Ion : 76.00
Area (flag) : 466494M
On-Column Amount (ng) : 21.1286
Integration start scan : 156 Integration stop scan: 176
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

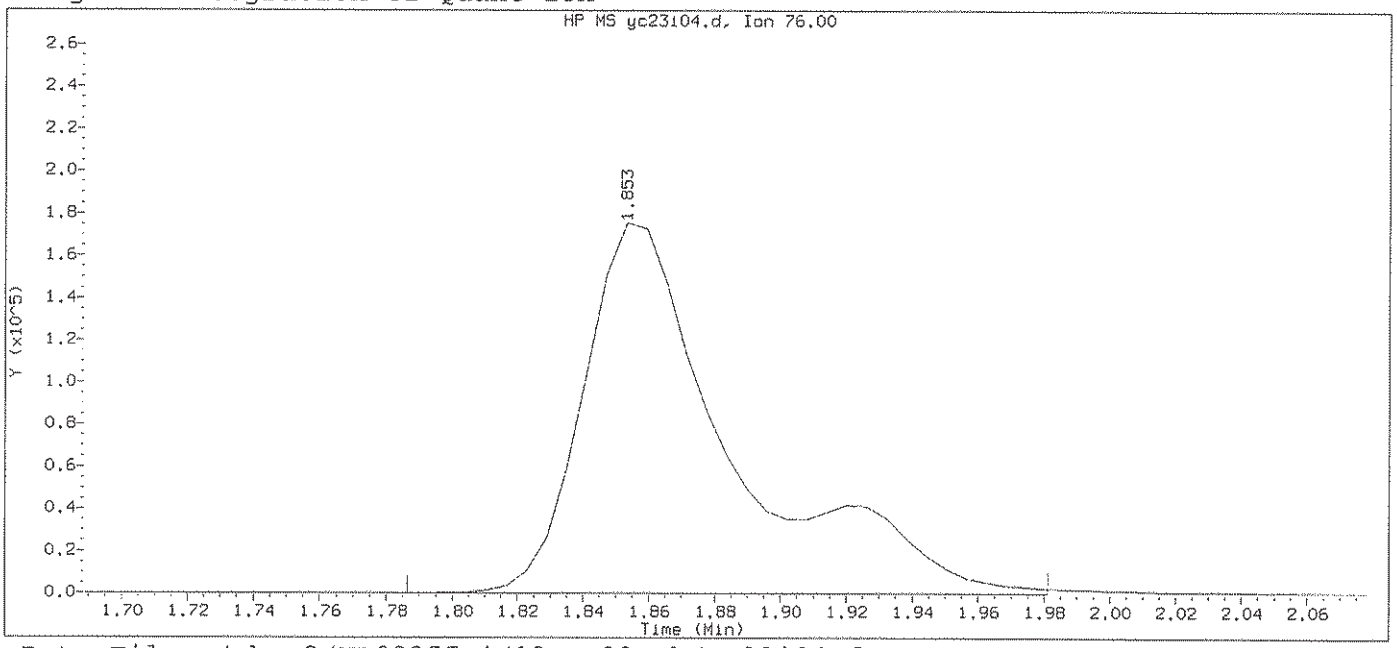
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 23		
Compound Name	: Carbon Disulfide		
Scan Number	: 168		
Retention Time (minutes)	: 1.853		
Quant Ion	: 76.00		
Area	: 551199		
On-column Amount (ng)	: 23.8634		
Integration start scan	: 156	Integration stop scan:	188
Y at integration start	: 0	Y at integration end:	0

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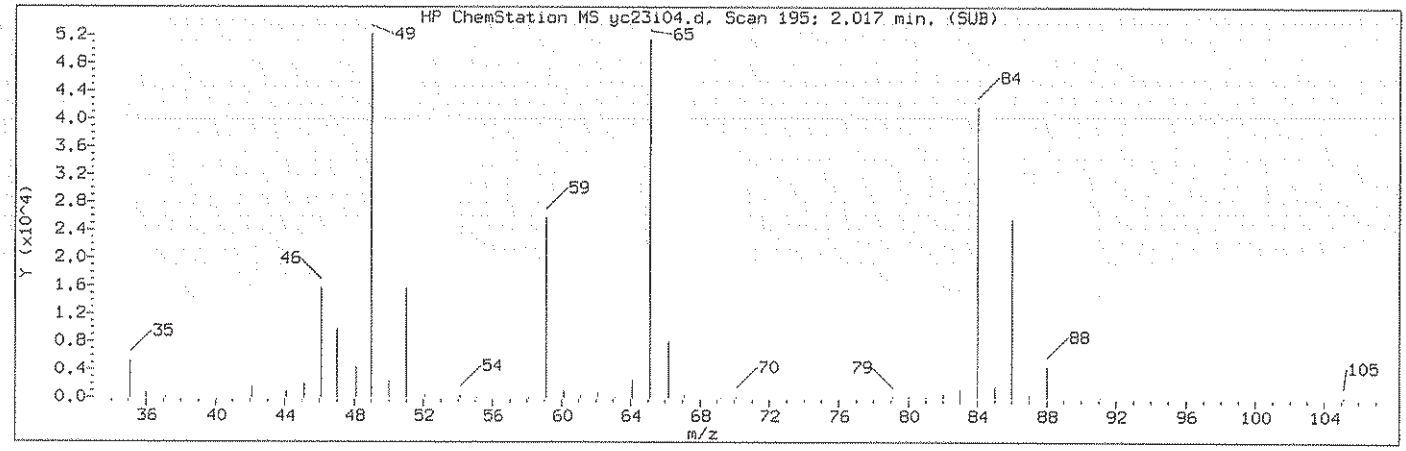
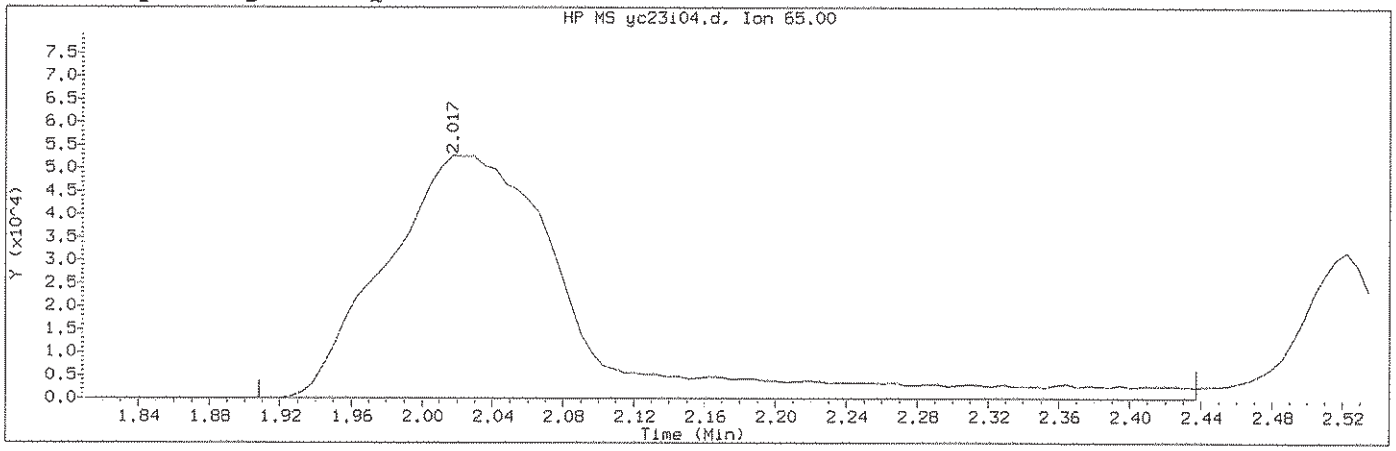
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

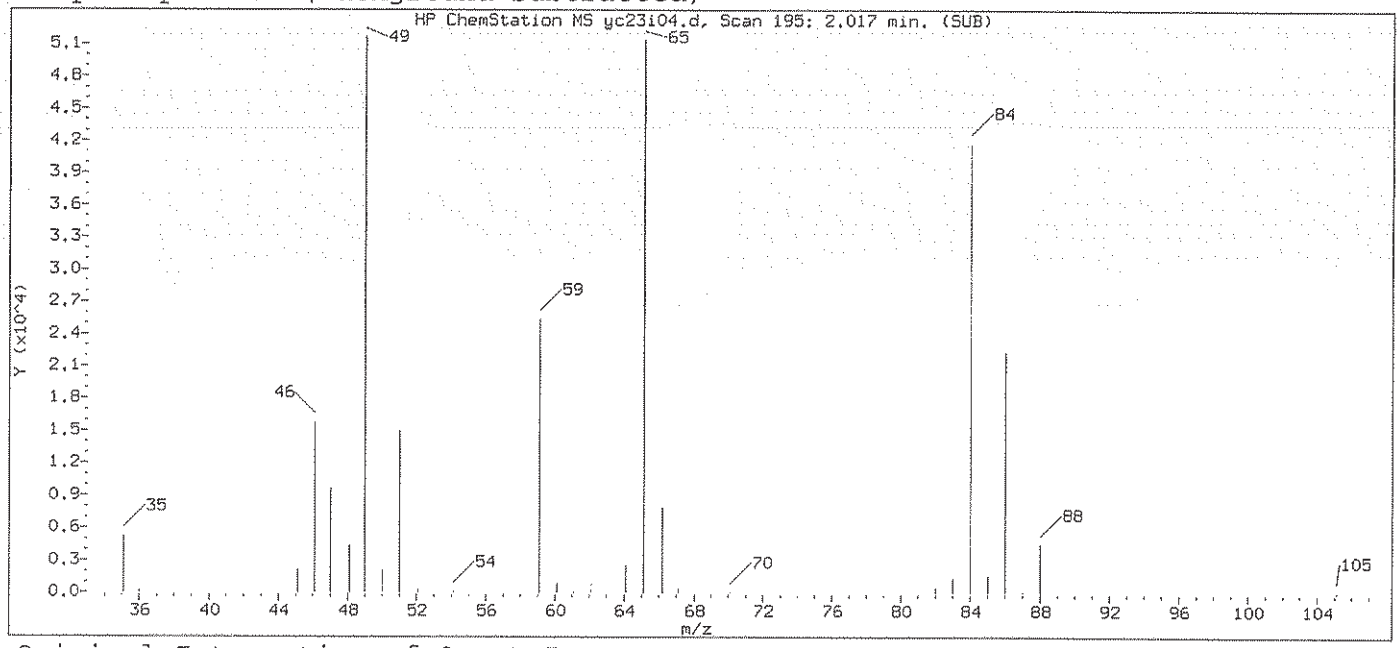
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 195
Retention Time (minutes): 2.017
Quant Ion : 65.00
Area (flag) : 398256M
On-Column Amount (ng) : 250.0000
Integration start scan : 176 Integration stop scan: 263
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

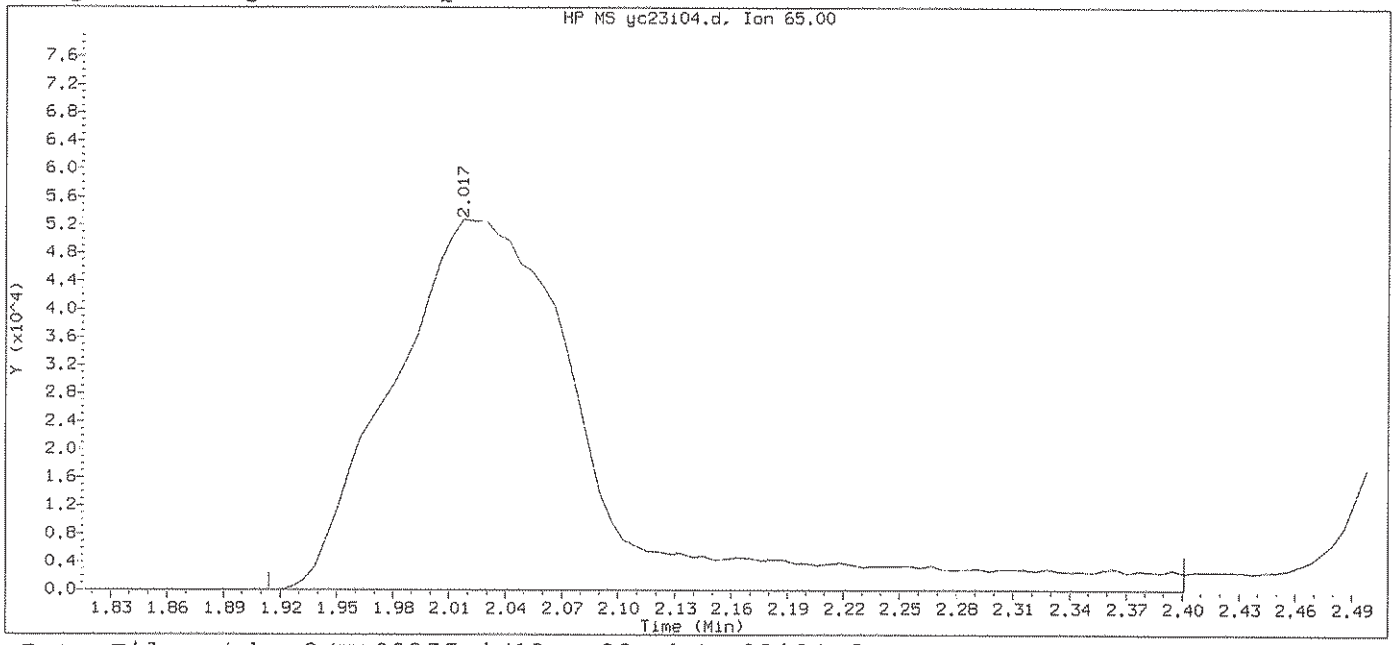
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: ads 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 29		
Compound Name	: t-Butyl alcohol-d10		
Scan Number	: 195		
Retention Time (minutes)	: 2.017		
Quant Ion	: 65.00		
Area	: 392140		
On-column Amount (ng)	: 250.0000		
Integration start scan	: 177	Integration stop scan:	257
Y at integration start	: 0	Y at integration end:	0

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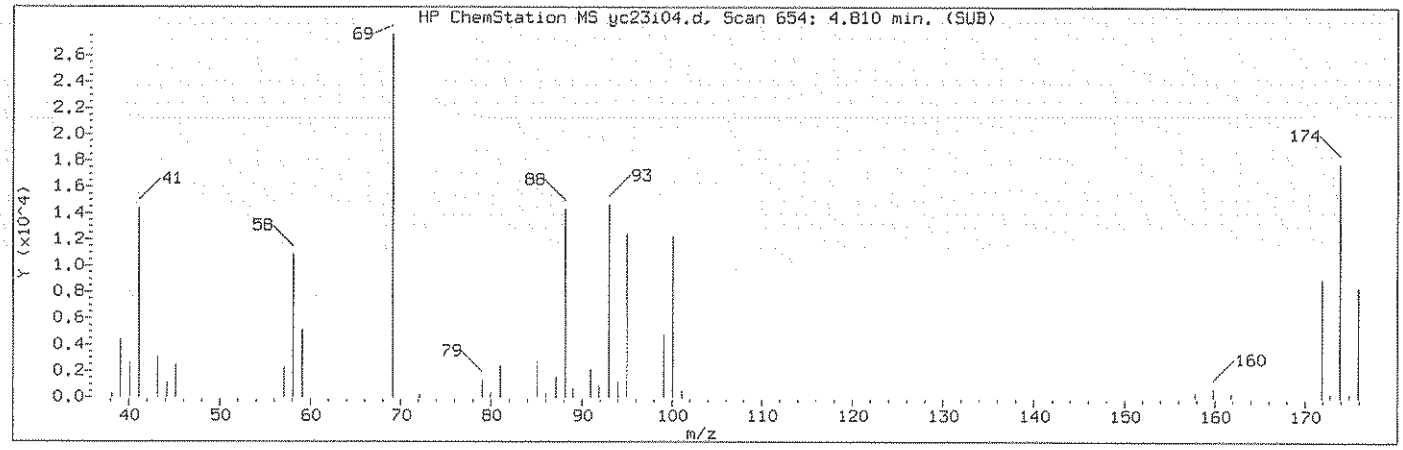
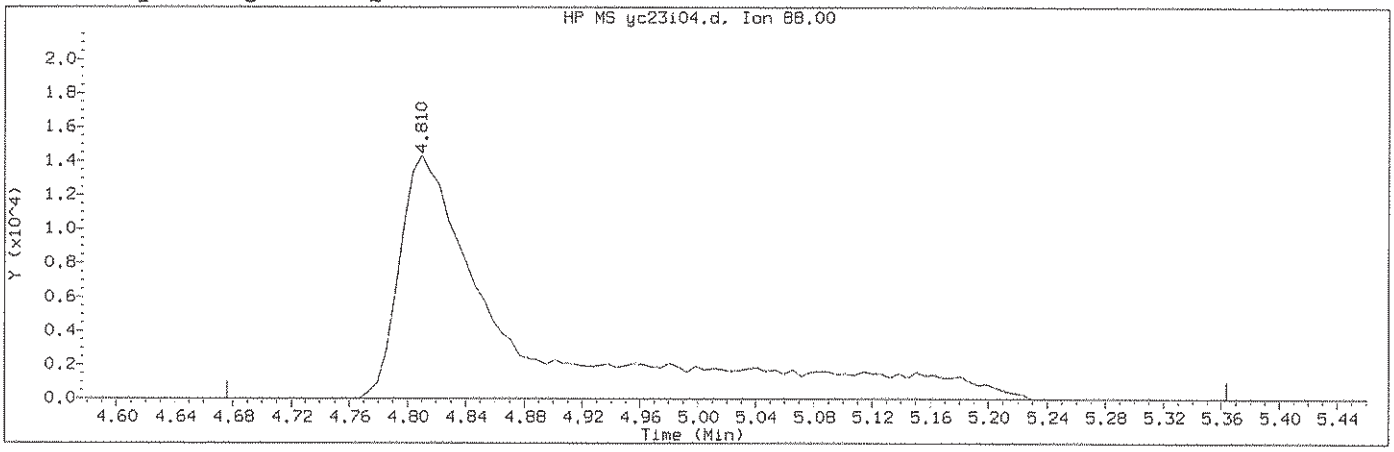
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

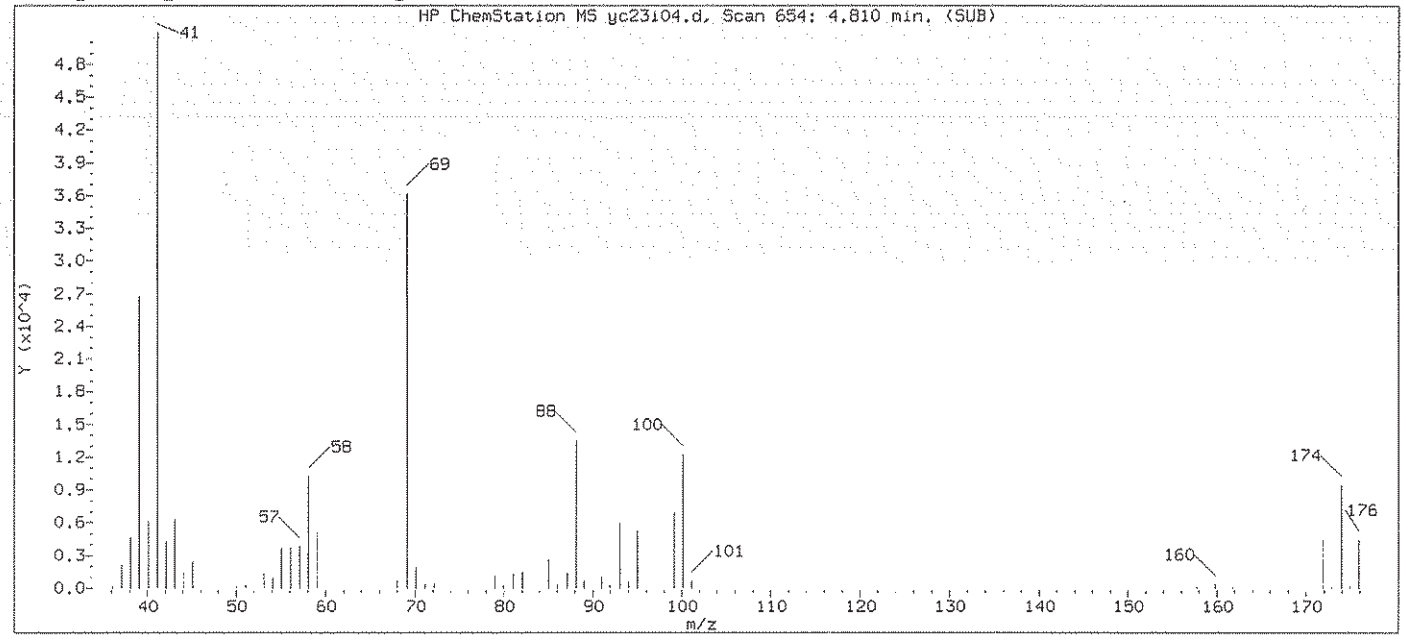
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 654
Retention Time (minutes): 4.810
Quant Ion : 88.00
Area (flag) : 80284M
On-Column Amount (ng) : 535.9506
Integration start scan : 631 Integration stop scan: 744
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

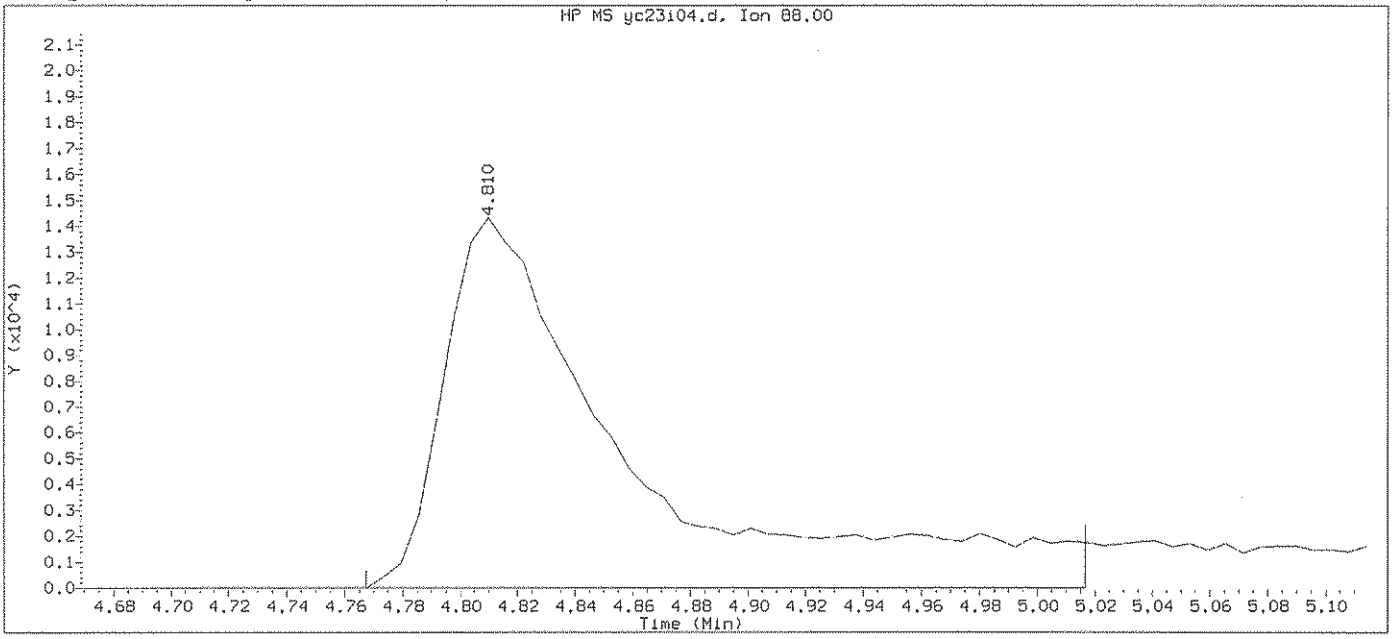
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 654		
Retention Time (minutes)	: 4.810		
Quant Ion	: 88.00		
Area	: 63496		
On-column Amount (ng)	: 442.7672		
Integration start scan	: 646	Integration stop scan:	687
Y at integration start	: 0	Y at integration end:	0

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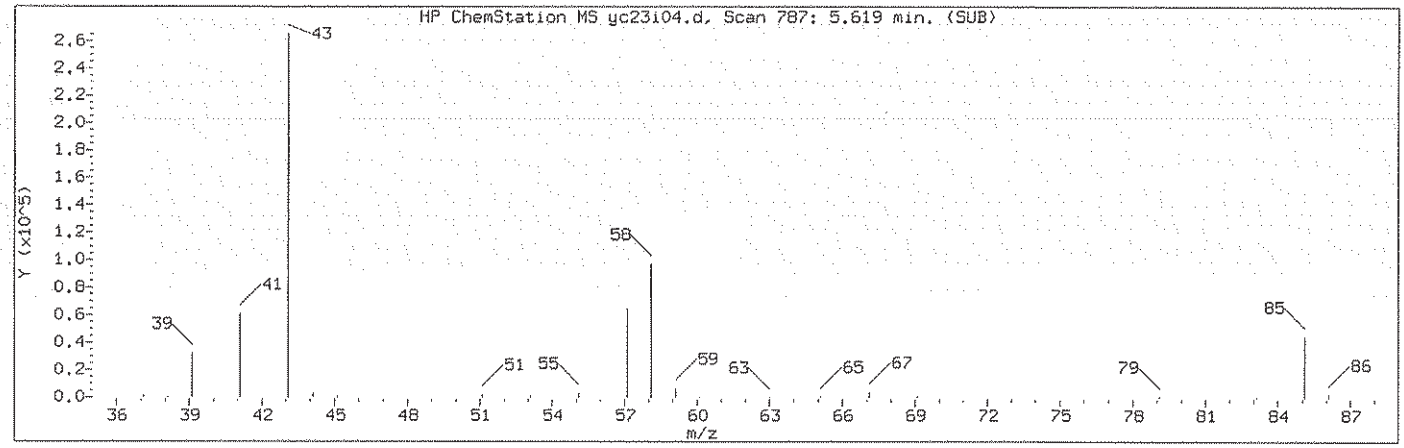
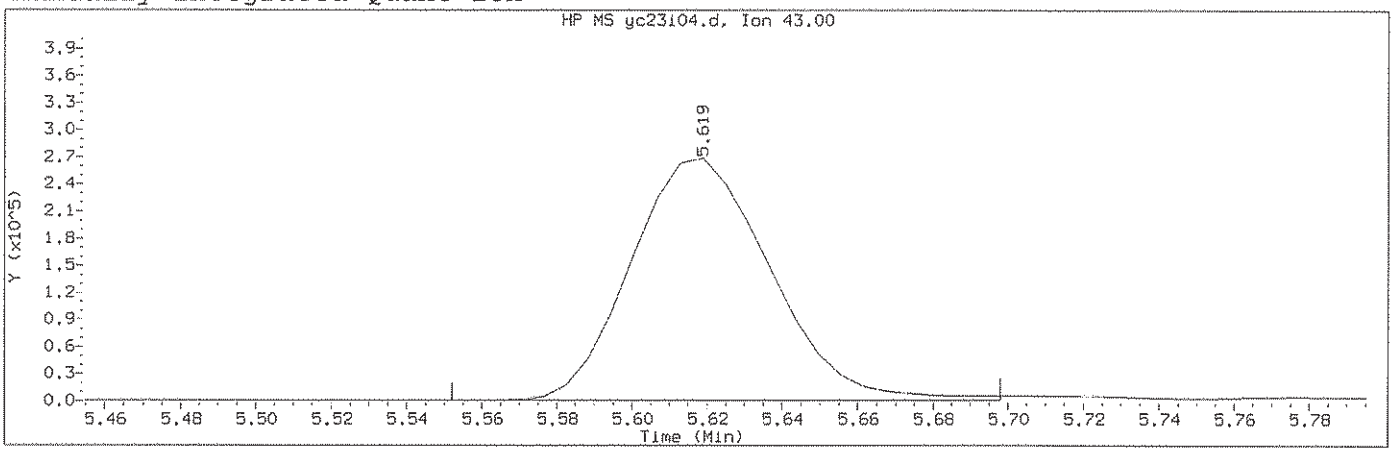
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

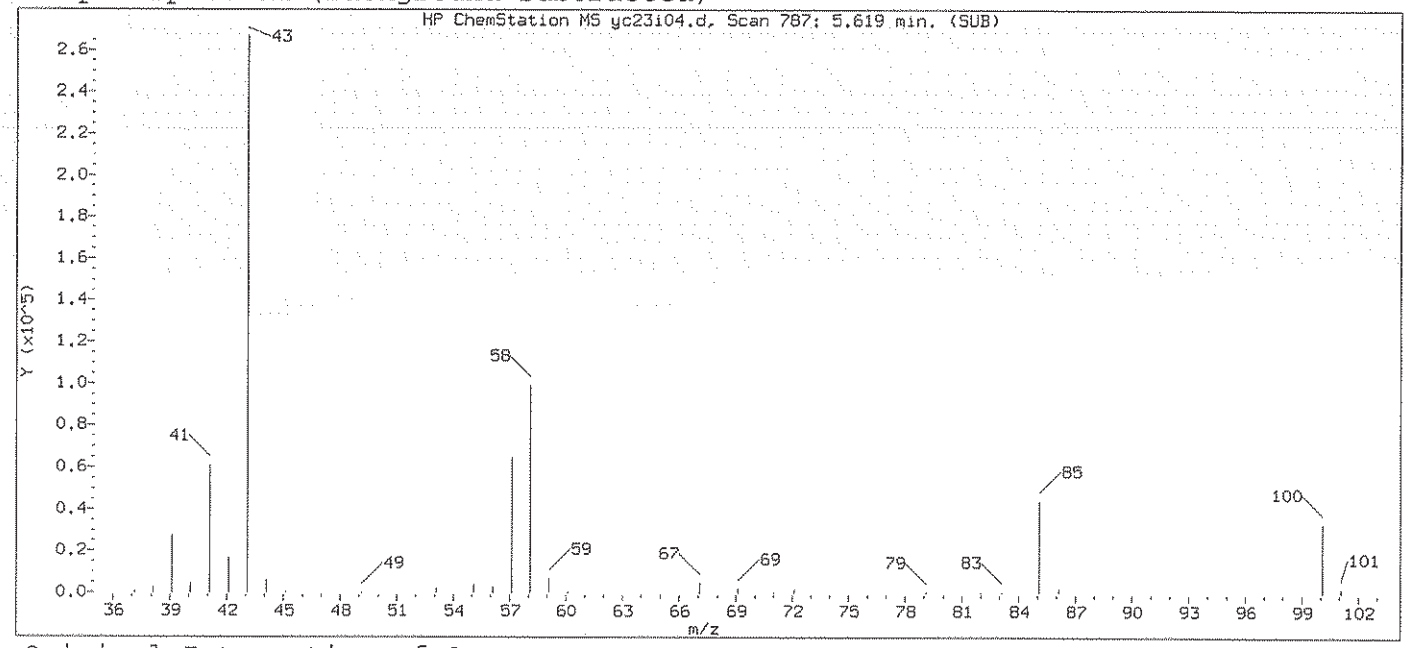
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 787
Retention Time (minutes): 5.619
Quant Ion : 43.00
Area (flag) : 691076M
On-Column Amount (ng) : 37.1771
Integration start scan : 775 Integration stop scan: 799
Y at integration start : 444 Y at integration end: 444

Reason for manual integration: improper integration

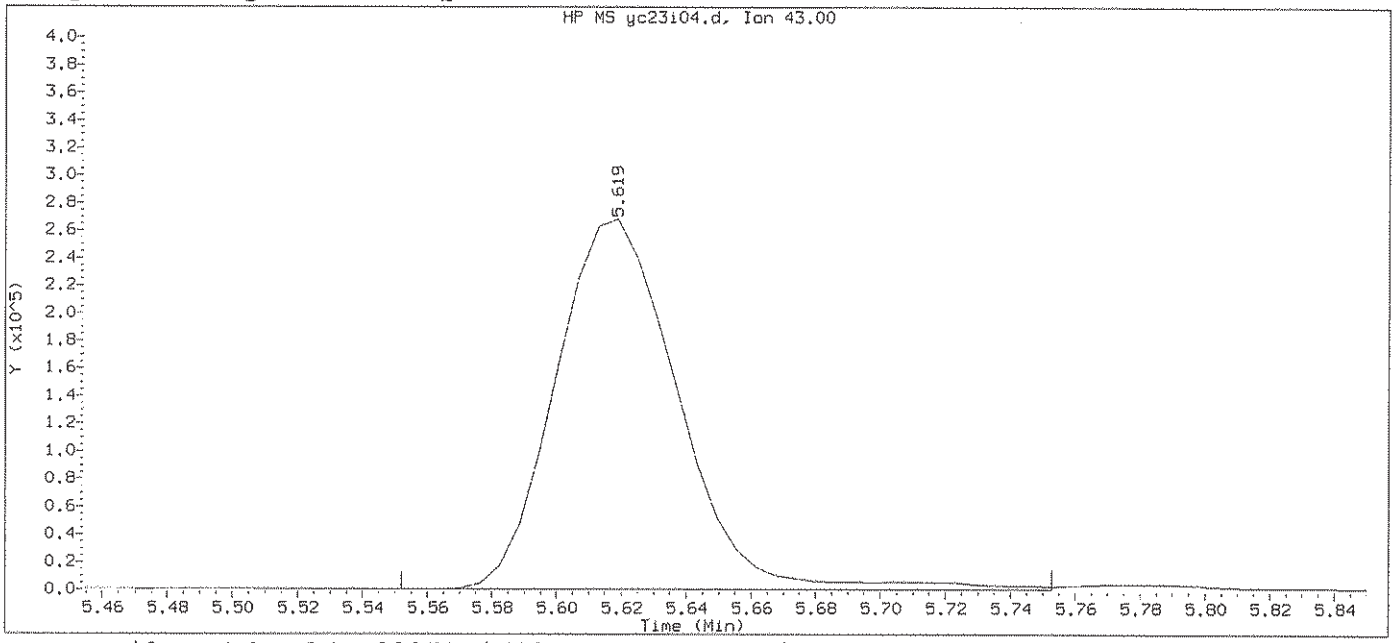
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

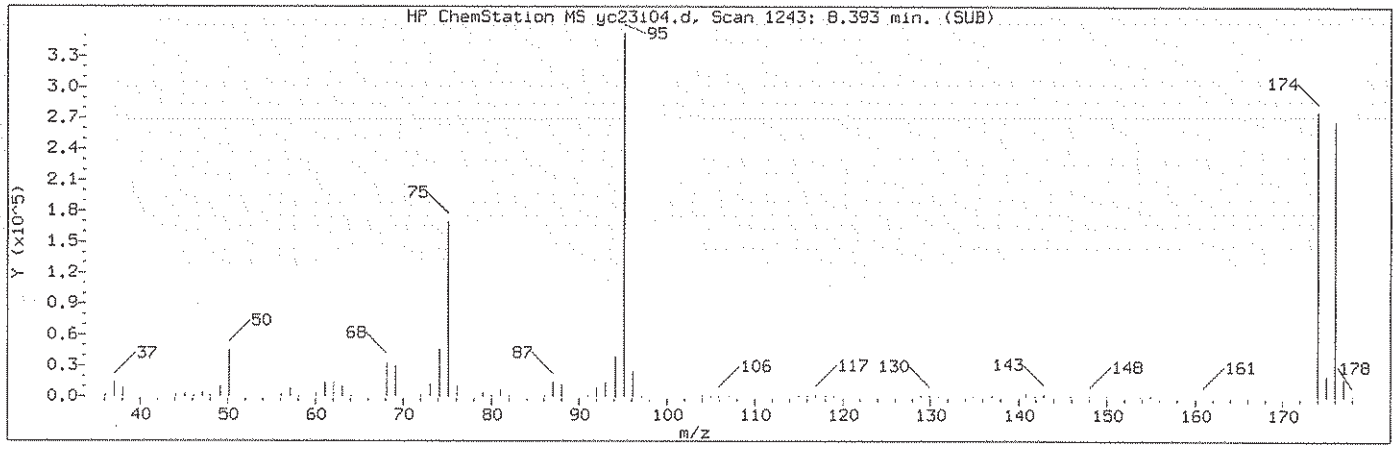
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

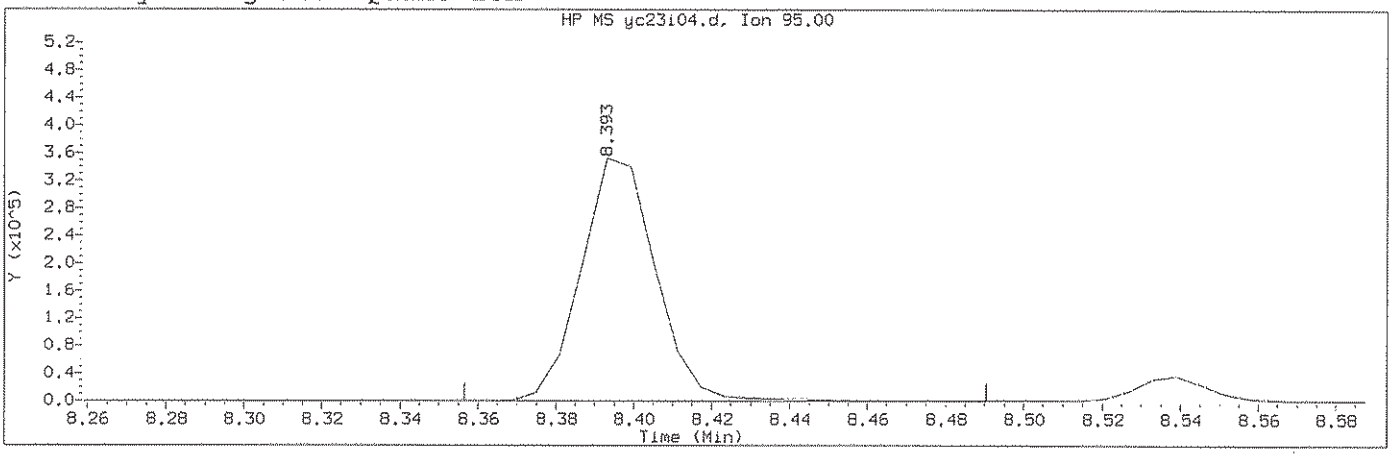
Compound Number	: 82		
Compound Name	: 4-Methyl-2-pentanone		
Scan Number	: 787		
Retention Time (minutes)	: 5.619		
Quant Ion	: 43.00		
Area	: 703463		
On-column Amount (ng)	: 35.3462		
Integration start scan	: 775	Integration stop scan:	808
Y at integration start	: 444	Y at integration end:	444

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD020 Lab Sample ID: VSTD020

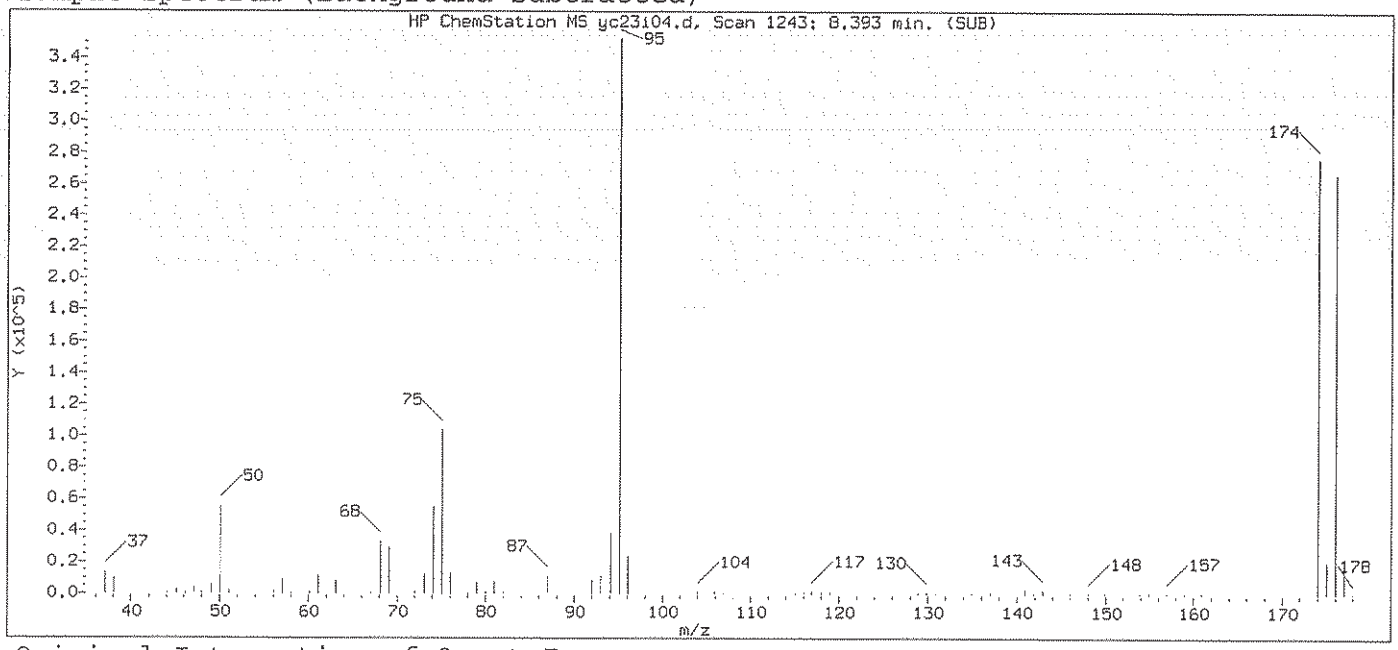
Compound Number : 114
Compound Name : 4-Bromofluorobenzene
Scan Number : 1243
Retention Time (minutes): 8.393
Quant Ion : 95.00
Area (flag) : 470618M
On-Column Amount (ng) : 50.3587
Integration start scan : 1236 Integration stop scan: 1258
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

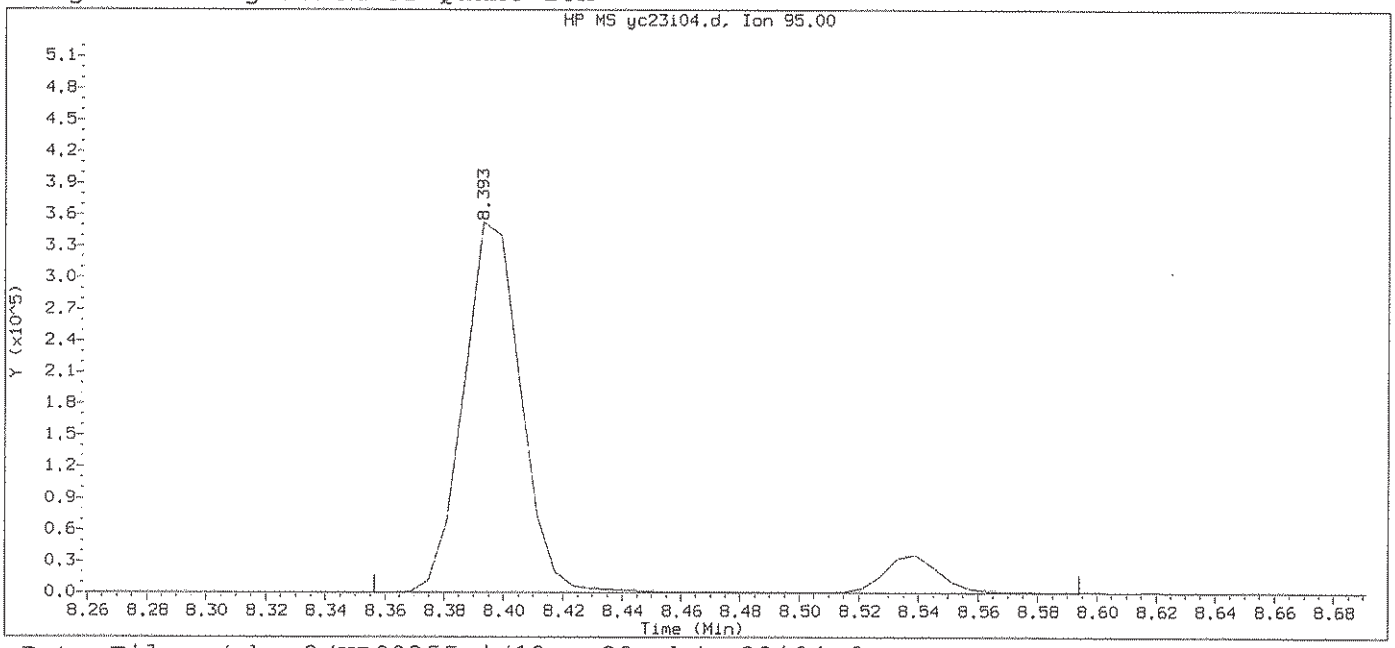
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



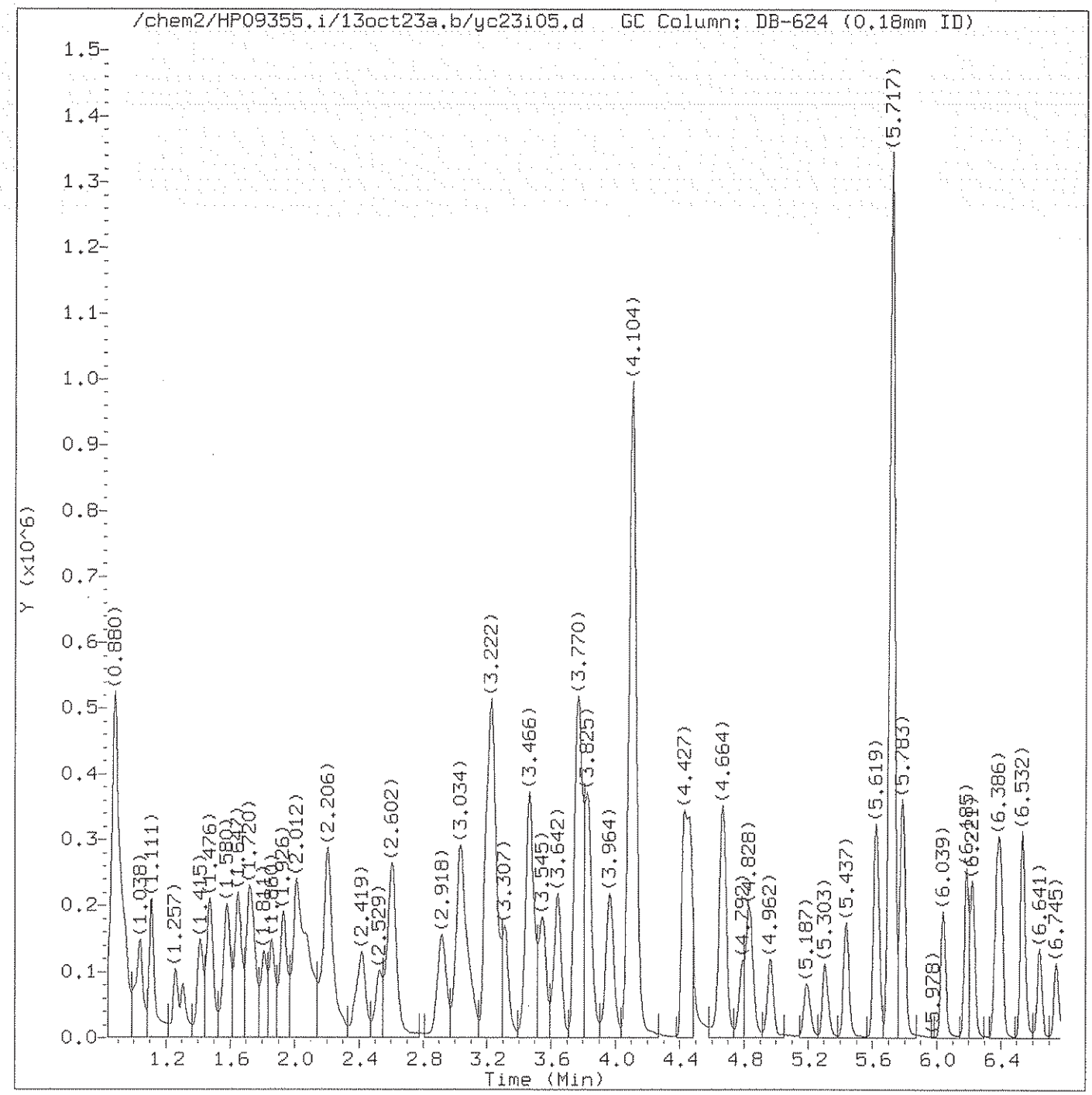
Data File: /chem2/HP09355.i/13oct23a.b/yc23i04.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:18 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:34
Date, time and analyst ID of latest file update: 23-Oct-2013 13:34 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 114
Compound Name : 4-Bromofluorobenzene
Scan Number : 1243
Retention Time (minutes): 8.393
Quant Ion : 95.00
Area : 519497
On-column Amount (ng) : 54.1177
Integration start scan : 1236 Integration stop scan: 1275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

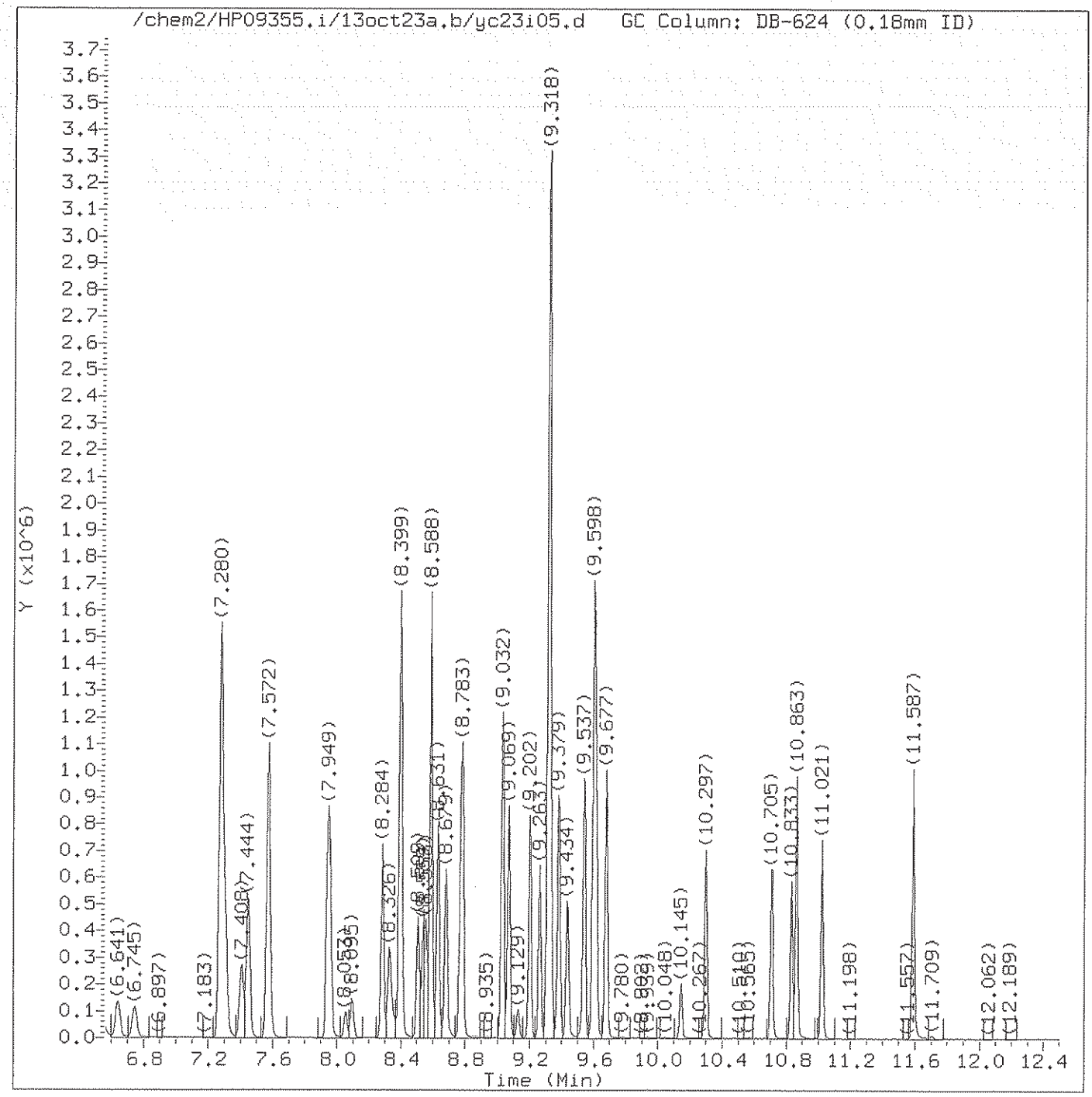
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	98763	9.597
4) Chloromethane	(2)	1.038	50	113453M	9.488
6) Vinyl Chloride	(2)	1.105	62	98725	9.488
5) 1,3-Butadiene	(2)	1.111	39	54907	9.257
8) Bromomethane	(2)	1.257	94	64289	9.663
9) Chloroethane	(2)	1.306	64	57538	9.663
10) Dichlorofluoromethane	(2)	1.409	67	141962	9.998
11) n-Pentane	(2)	1.470	43	129555	9.415
12) Trichlorofluoromethane	(2)	1.488	101	116423	9.598
14) Ethyl ether	(2)	1.574	59	73766	9.514
15) Freon 123a	(2)	1.586	67	86478	9.715
16) Acrolein	(1)	1.653	56	313790	95.310
17) 1,1-Dichloroethene	(2)	1.720	96	60385	9.687
17) 1,1-Dichloroethene	(2)	1.714	63	31903	9.871
18) Acetone	(2)	1.732	58	31953	18.934
19) Freon 113	(2)	1.738	101	63466	9.735
22) Methyl Iodide	(2)	1.811	142	115963	9.736
21) 2-Propanol	(1)	1.817	45	124305	106.240
23) Carbon Disulfide	(2)	1.860	76	206470M	9.560
25) Allyl Chloride	(2)	1.926	41	120505	10.079
27) Methyl Acetate	(2)	1.933	43	90658	9.459
28) Methylene Chloride	(2)	2.006	84	73953	9.897
29)*t-Butyl alcohol-d10	(1)	2.030	65	374096	250.000
30) t-Butyl alcohol	(1)	2.085	59	257176	111.163
31) Acrylonitrile	(2)	2.164	53	61121	9.375
32) trans-1,2-Dichloroethene	(2)	2.206	96	70997	9.822
33) Methyl Tertiary Butyl Ether	(2)	2.212	73	265553	10.146
34) n-Hexane	(2)	2.413	57	119610	9.819
36) 1,1-Dichloroethane	(2)	2.529	63	135531	9.752
38) di-Isopropyl ether	(2)	2.602	45	290794	10.156
39) 2-Chloro-1,3-butadiene	(2)	2.608	53	118101	9.601
40) Ethyl t-butyl ether	(2)	2.918	59	276127	10.240
44) 2-Butanone	(2)	3.009	43	168693	17.549
42) cis-1,2-Dichloroethene	(2)	3.028	96	79498	9.648
45) 2,2-Dichloropropane	(2)	3.034	77	105635	9.595
43) 1,2-Dichloroethene (Total)	(2)		96	150495	19.470
47) Propionitrile	(1)	3.082	54	267316	105.646
48) Methacrylonitrile	(2)	3.222	67	319343	51.352

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.234	128	41397	10.001
50) Tetrahydrofuran	(1)	3.289	71	42604	17.833
51) Chloroform	(2)	3.313	83	129263	9.912
52)$Dibromofluoromethane	(2)	3.460	113	291426	50.592
52)$Dibromofluoromethane	(2)	3.460	111	293499	49.955
53) 1,1,1-Trichloroethane	(2)	3.490	97	120443	9.669
54) Cyclohexane	(2)	3.551	56	142247	9.623
54) Cyclohexane	(2)	3.551	84	129221	10.259
54) Cyclohexane	(2)	3.545	69	42031	9.476
55) 1,1-Dichloropropene	(2)	3.636	75	98780	9.518
56) Carbon Tetrachloride	(2)	3.648	117	91410	9.420
58) Isobutyl Alcohol	(1)	3.758	41	215956	272.390
57)$1,2-Dichloroethane-d4	(2)	3.770	102	75265	50.122
57)$1,2-Dichloroethane-d4	(2)	3.770	65	380085	50.110
57)$1,2-Dichloroethane-d4	(2)	3.770	104	47122	50.167
60) Benzene	(2)	3.831	78	310512	9.760
61) 1,2-Dichloroethane	(2)	3.843	62	115477	10.184
61) 1,2-Dichloroethane	(2)	3.837	98	10072	9.914
65) t-Amyl methyl ether	(2)	3.964	73	261040	10.226
66)*Fluorobenzene	(2)	4.104	96	1234976	50.000
67) n-Heptane	(2)	4.123	43	150780	10.116
69) n-Butanol	(1)	4.421	56	351804	539.876
71) Trichloroethene	(2)	4.463	95	79153	9.889
72) Methylcyclohexane	(2)	4.664	83	131433	9.604
72) Methylcyclohexane	(2)	4.658	98	57025	9.545
73) 1,2-Dichloropropane	(2)	4.670	63	84703	9.844
74) Dibromomethane	(2)	4.786	93	57979	10.191
75) 1,4-Dioxane	(1)	4.810	88	36337M	258.240
76) Methyl Methacrylate	(2)	4.834	69	103505	10.382
78) Bromodichloromethane	(2)	4.962	83	103566	9.891
79) 2-Nitropropane	(2)	5.187	41	75042	16.795
80) 2-Chloroethyl Vinyl Ether	(2)	5.303	63	67795	9.204
81) cis-1,3-Dichloropropene	(2)	5.437	75	132334	9.849
82) 4-Methyl-2-pentanone	(2)	5.619	43	331451M	18.228
83)$Toluene-d8	(3)	5.717	98	1218235	50.073
83)$Toluene-d8	(3)	5.717	100	783013	49.425
88) Toluene	(3)	5.783	92	202151	9.881
89) trans-1,3-Dichloropropene	(3)	6.039	75	133591	9.960

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	265925	19.808
91) Ethyl Methacrylate	(3)	6.185	69	164890	10.329
92) 1,1,2-Trichloroethane	(3)	6.221	97	86955	10.401
93) Tetrachloroethene	(3)	6.374	166	87139	9.771
94) 1,3-Dichloropropane	(3)	6.398	76	149318	10.358
96) 2-Hexanone	(3)	6.532	43	280551	18.586
97) Dibromochloromethane	(3)	6.641	129	84361	9.639
99) 1,2-Dibromoethane	(3)	6.745	107	94261	10.259
100)*Chlorobenzene-d5	(3)	7.280	117	912520	50.000
102) Chlorobenzene	(3)	7.310	112	229249	10.071
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	77656	9.855
104) Ethylbenzene	(3)	7.444	91	390879	9.947
106) m+p-Xylene	(3)	7.572	106	310388	19.975
107) o-Xylene	(3)	7.943	106	152000	9.925
109) Styrene	(3)	7.955	104	258767	9.951
108) Xylene (Total)	(3)		106	462388	29.900
110) Bromoform	(3)	8.095	173	58104	8.969
111) Isopropylbenzene	(3)	8.284	105	399229	10.166
112) Cyclohexanone	(1)	8.326	55	169084	237.042
114)$4-Bromofluorobenzene	(3)	8.399	95	461819	49.860
114)$4-Bromofluorobenzene	(3)	8.399	174	398357	50.160
115) Bromobenzene	(4)	8.509	156	105447	10.098
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	153128	10.410
117) 1,2,3-Trichloropropane	(4)	8.558	110	47458	10.446
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	274307	52.956
119) n-Propylbenzene	(4)	8.631	91	474461	10.446
120) 2-Chlorotoluene	(4)	8.679	126	95997	10.078
121) 4-Chlorotoluene	(4)	8.770	126	100951	10.109
122) 1,3,5-Trimethylbenzene	(4)	8.783	105	348464	10.262
125) Pentachloroethane	(4)	9.032	167	67401	10.370
124) tert-Butylbenzene	(4)	9.032	134	76894	10.057
126) 1,2,4-Trimethylbenzene	(4)	9.069	105	354642	10.240
127) sec-Butylbenzene	(4)	9.202	105	438353	10.423
129) 1,3-Dichlorobenzene	(4)	9.263	146	194489	10.046
130) p-Isopropyltoluene	(4)	9.318	119	398330	10.390
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	507935	50.000
133) 1,4-Dichlorobenzene	(4)	9.330	146	208874	10.247
134) 1,2,3-Trimethylbenzene	(4)	9.379	105	394897	11.007

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

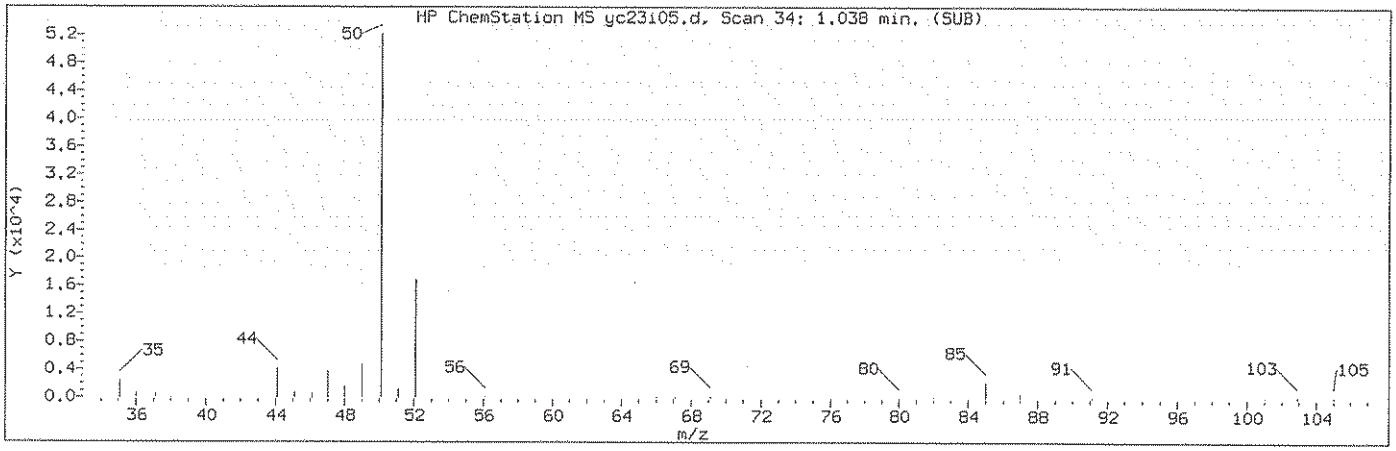
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

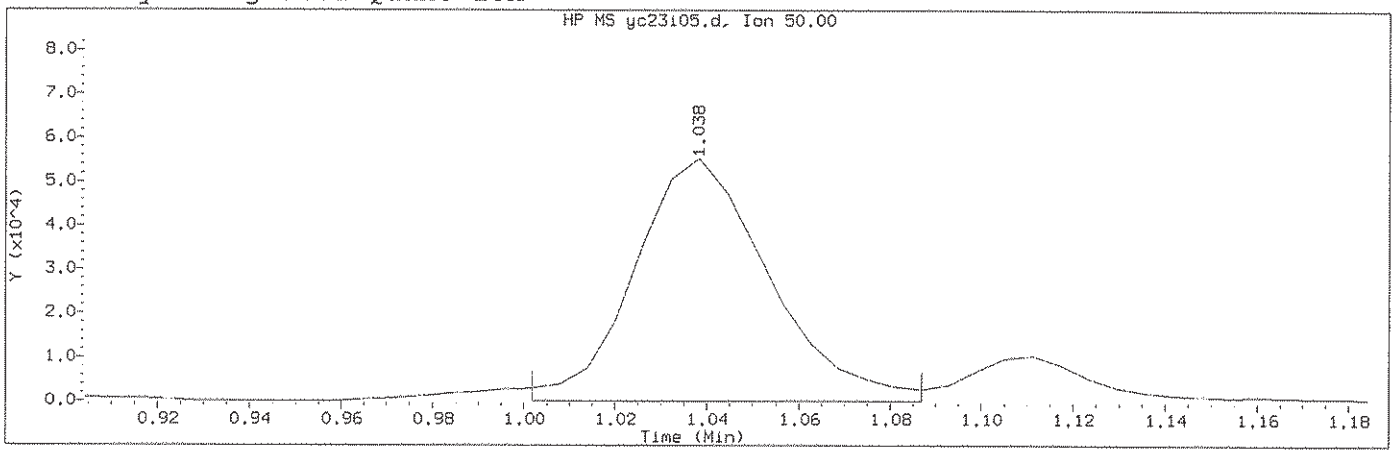
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.434	91	284239	9.866
136) 1,3-Diethylbenzene	(4)	9.543	119	247618	10.675
138) 1,2-Dichlorobenzene	(4)	9.598	146	199583	10.347
137) 1,4-Diethylbenzene	(4)	9.598	119	252482	10.685
139) n-Butylbenzene	(4)	9.616	92	195478	10.185
140) 1,2-Diethylbenzene	(4)	9.677	119	207554	10.802
141) Diethylbenzene (total)	(4)		100	707654	32.162
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	35647	9.638
144) 1,3,5-Trichlorobenzene	(4)	10.297	180	163961	10.272
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	157801	10.321
147) Hexachlorobutadiene	(4)	10.833	225	75468	10.024
148) Naphthalene	(4)	10.863	128	530345	10.809
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	153278	10.396
150) 2-Methylnaphthalene	(4)	11.587	142	336237	10.973

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

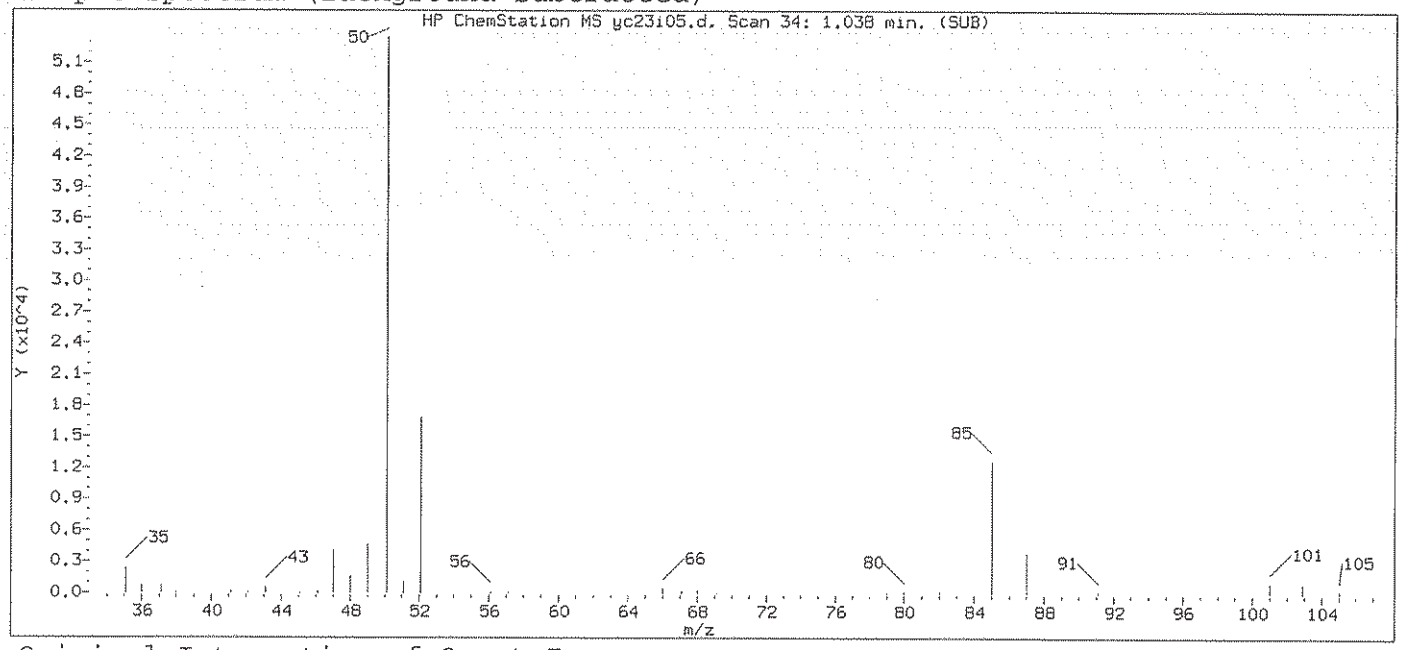
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 34		
Retention Time (minutes)	: 1.038		
Quant Ion	: 50.00		
Area (flag)	: 113453M		
On-Column Amount (ng)	: 9.4883		
Integration start scan	: 27	Integration stop scan:	41
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

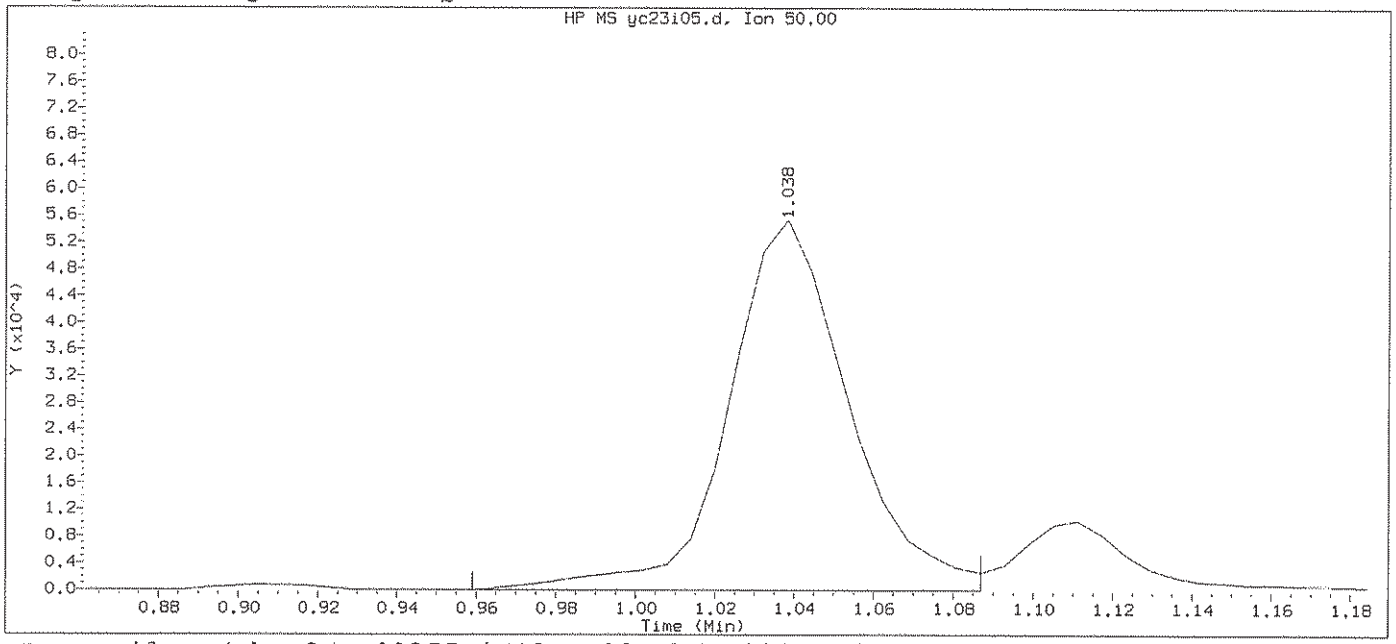
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

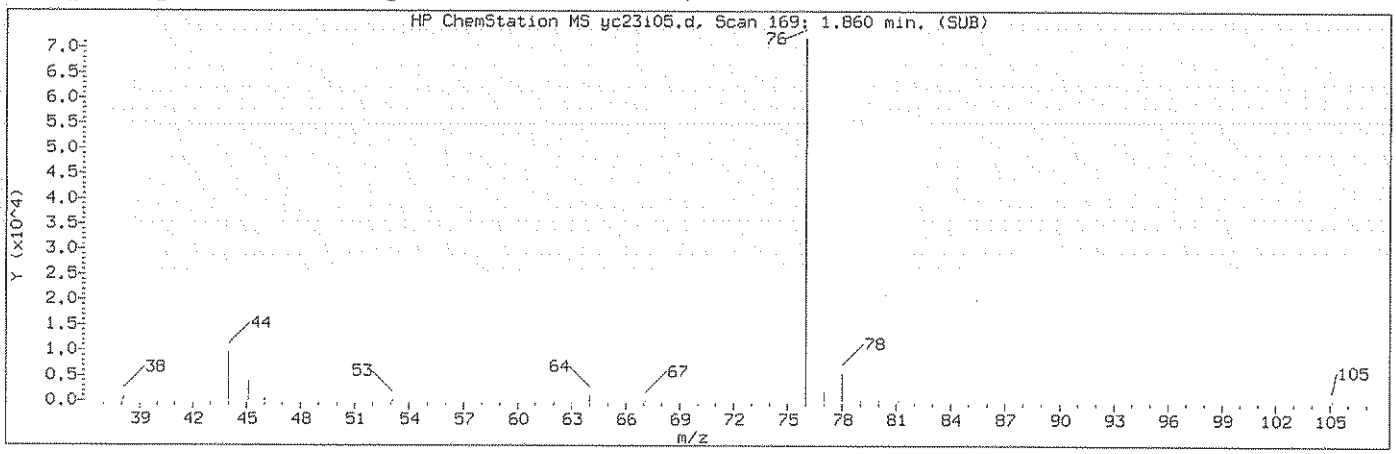
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:55
Date, time and analyst ID of latest file update: 23-Oct-2013 13:56 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

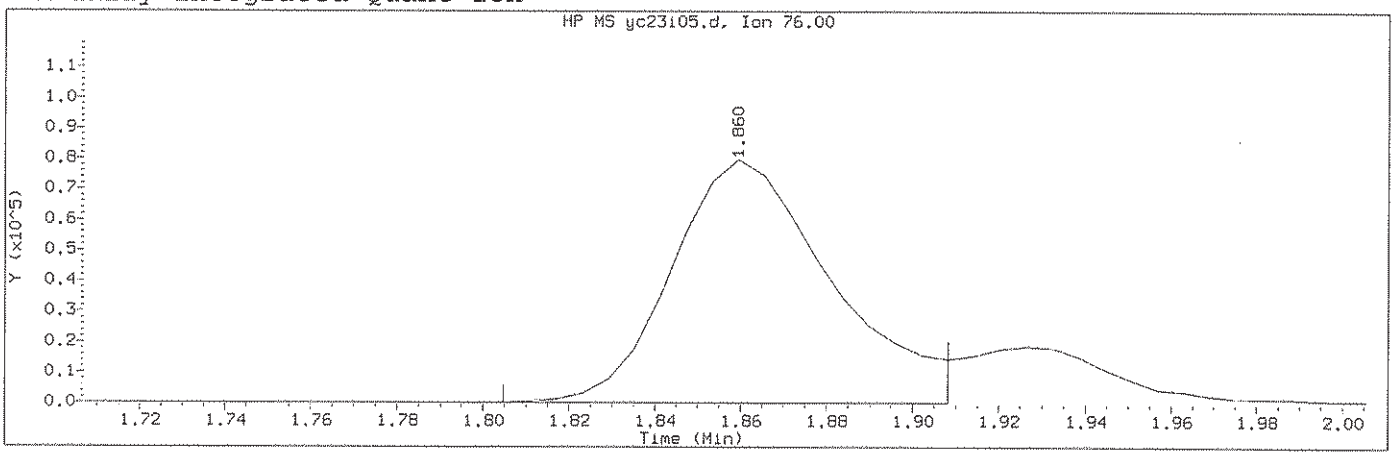
Compound Number	: 4		
Compound Name	: Chloromethane		
Scan Number	: 34		
Retention Time (minutes)	: 1.038		
Quant Ion	: 50.00		
Area	: 116135		
On-column Amount (ng)	: 9.9653		
Integration start scan	: 20	Integration stop scan:	41
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

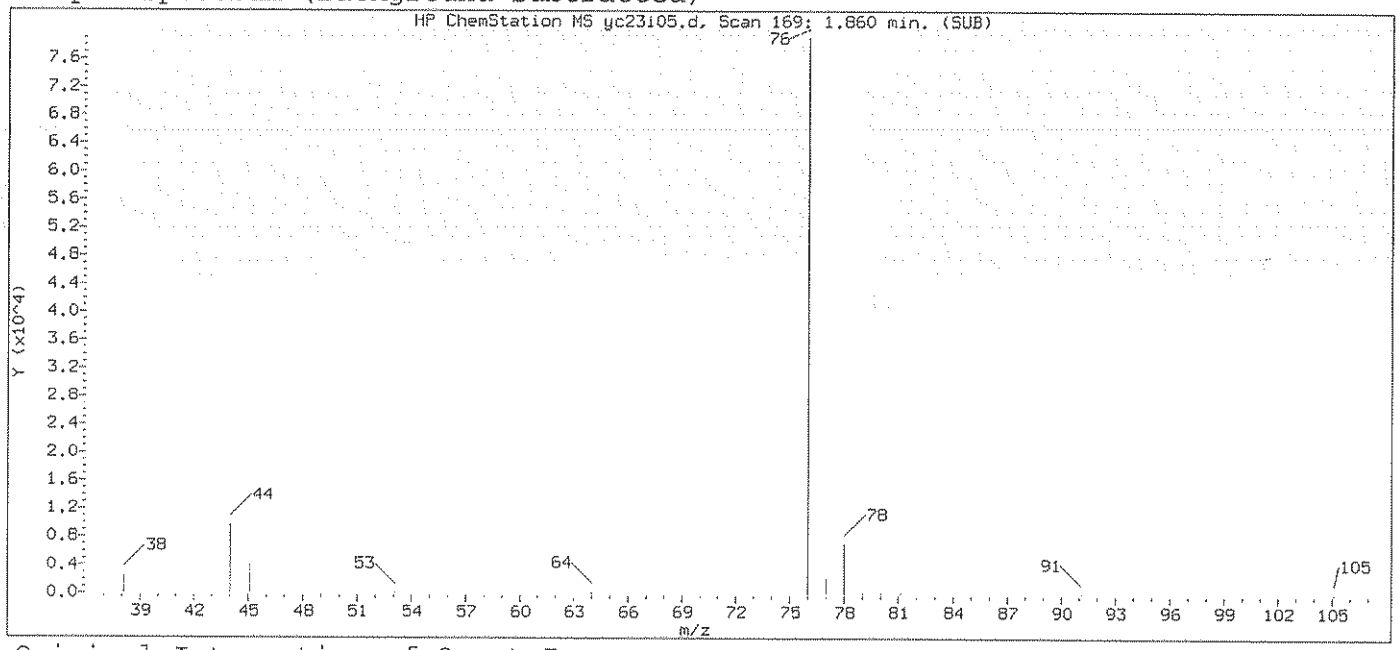
Compound Number	: 23		
Compound Name	: Carbon Disulfide		
Scan Number	: 169		
Retention Time (minutes)	: 1.860		
Quant Ion	: 76.00		
Area (flag)	: 206470M		
On-Column Amount (ng)	: 9.5600		
Integration start scan	: 159	Integration stop scan:	176
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

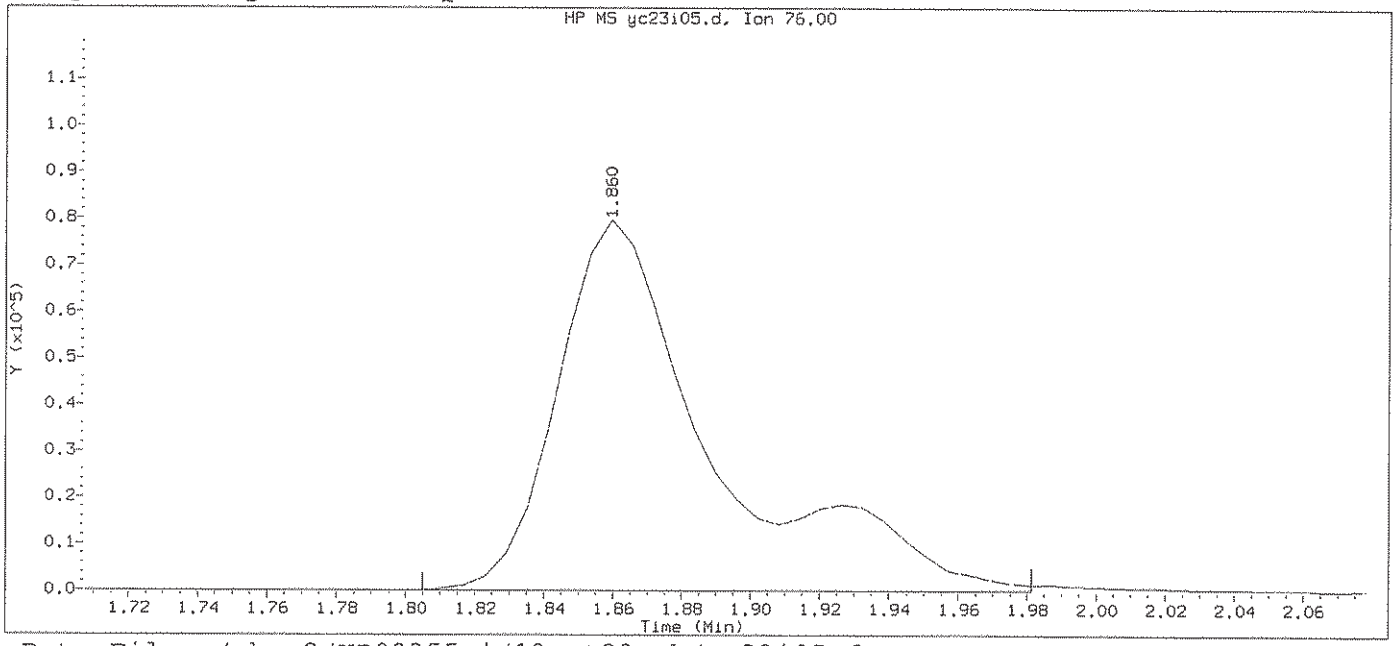
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: ADS01731 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:55
Date, time and analyst ID of latest file update: 23-Oct-2013 13:56 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 23		
Compound Name	: Carbon Disulfide		
Scan Number	: 169		
Retention Time (minutes)	: 1.860		
Quant Ion	: 76.00		
Area	: 248719		
On-column Amount (ng)	: 11.1928		
Integration start scan	: 159	Integration stop scan:	188
Y at integration start	: 0	Y at integration end:	0

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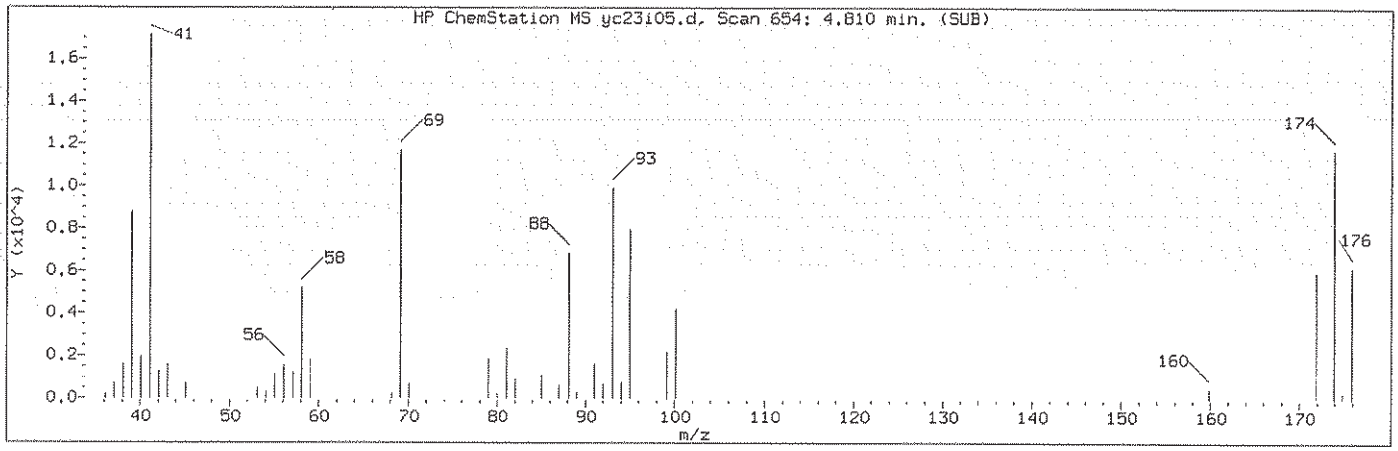
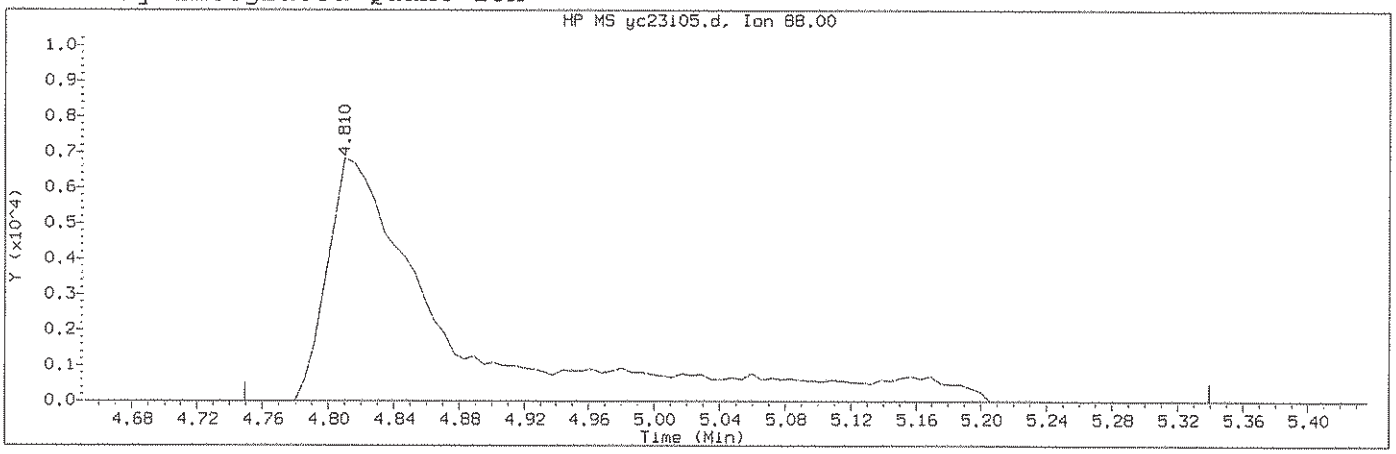
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

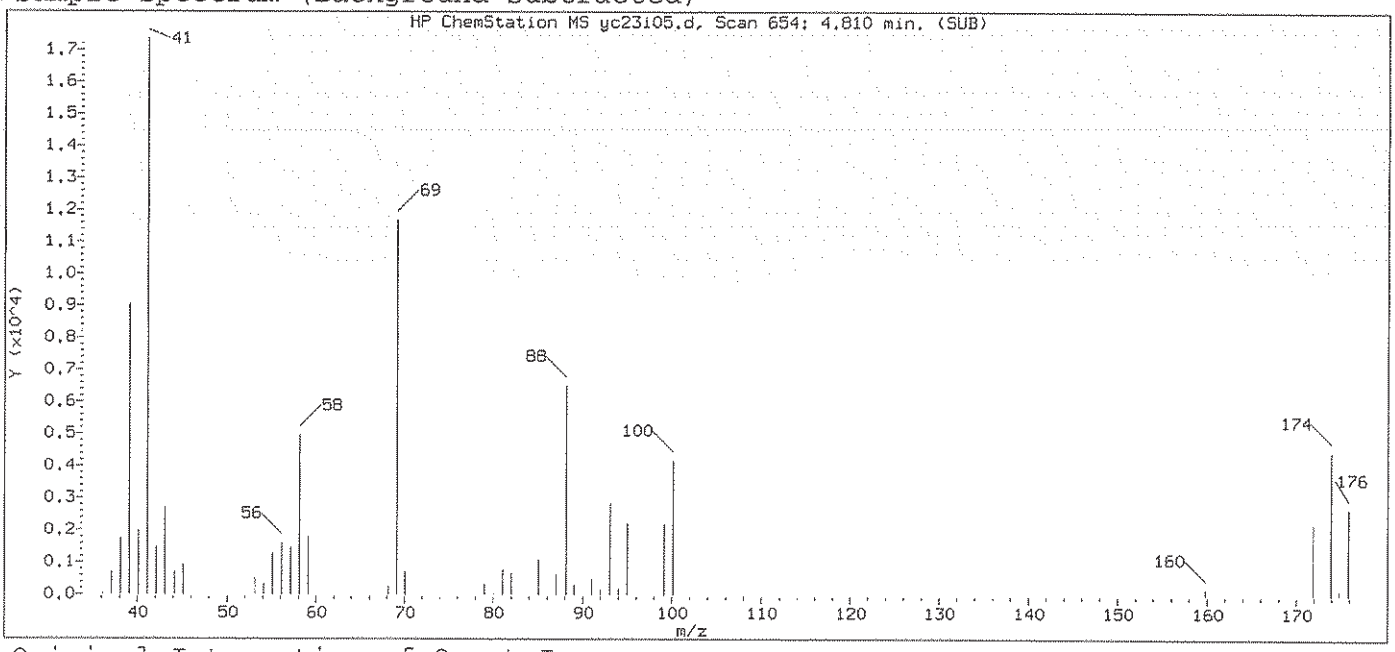
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 654		
Retention Time (minutes)	: 4.810		
Quant Ion	: 88.00		
Area (flag)	: 36337M		
On-Column Amount (ng)	: 258.2404		
Integration start scan	: 643	Integration stop scan:	740
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

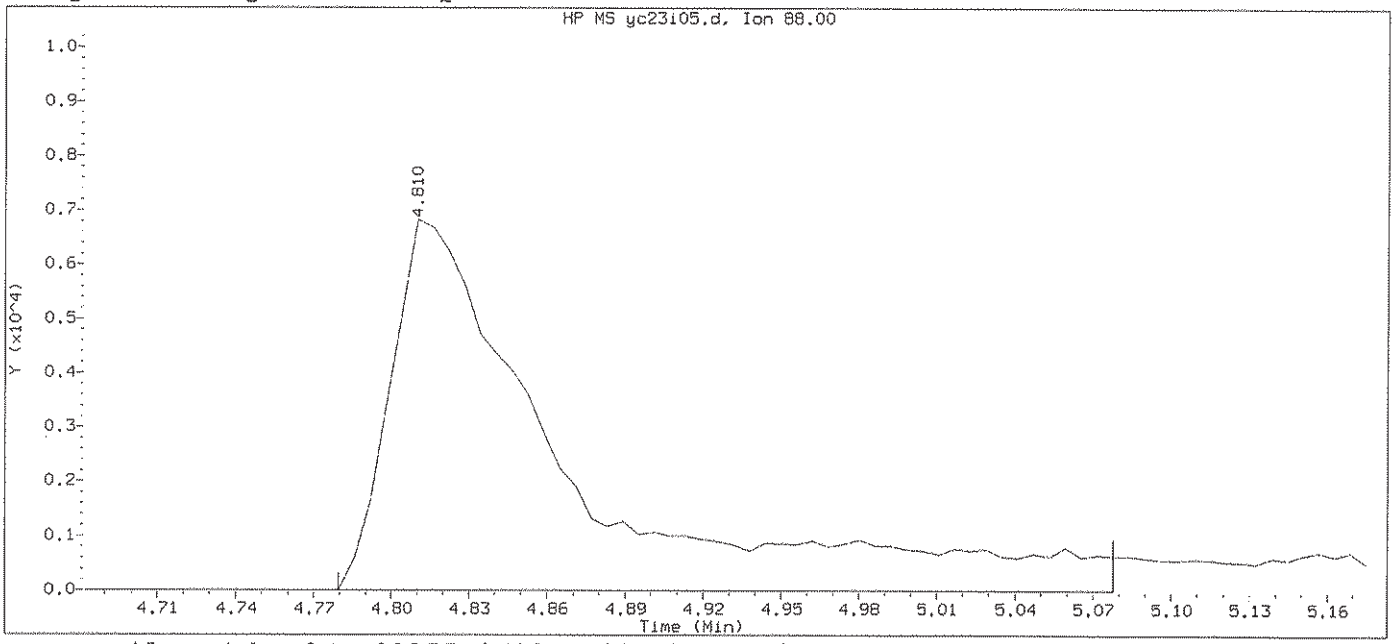
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: [signature] 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:55
Date, time and analyst ID of latest file update: 23-Oct-2013 13:56 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 654
Retention Time (minutes): 4.810
Quant Ion : 88.00
Area : 32184
On-column Amount (ng) : 219.6292
Integration start scan : 648 Integration stop scan: 697
Y at integration start : 0 Y at integration end: 0

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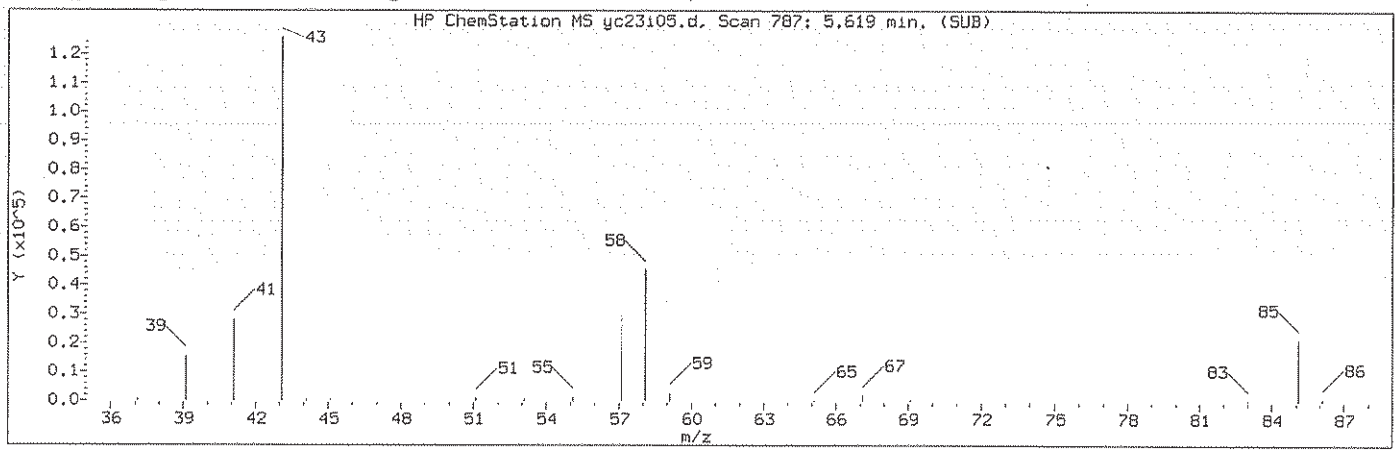
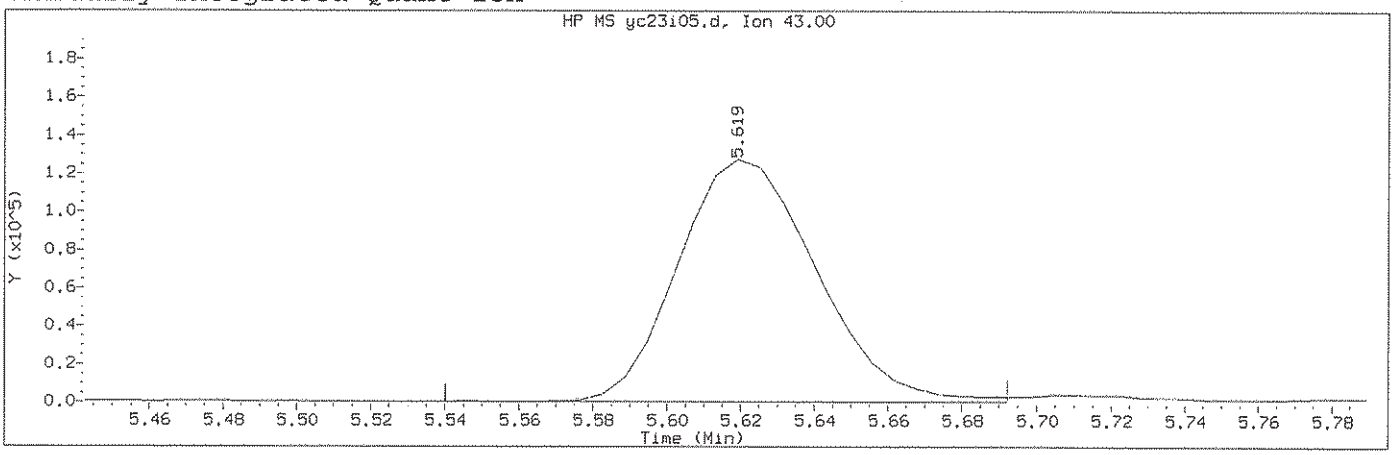
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD010 Lab Sample ID: VSTD010

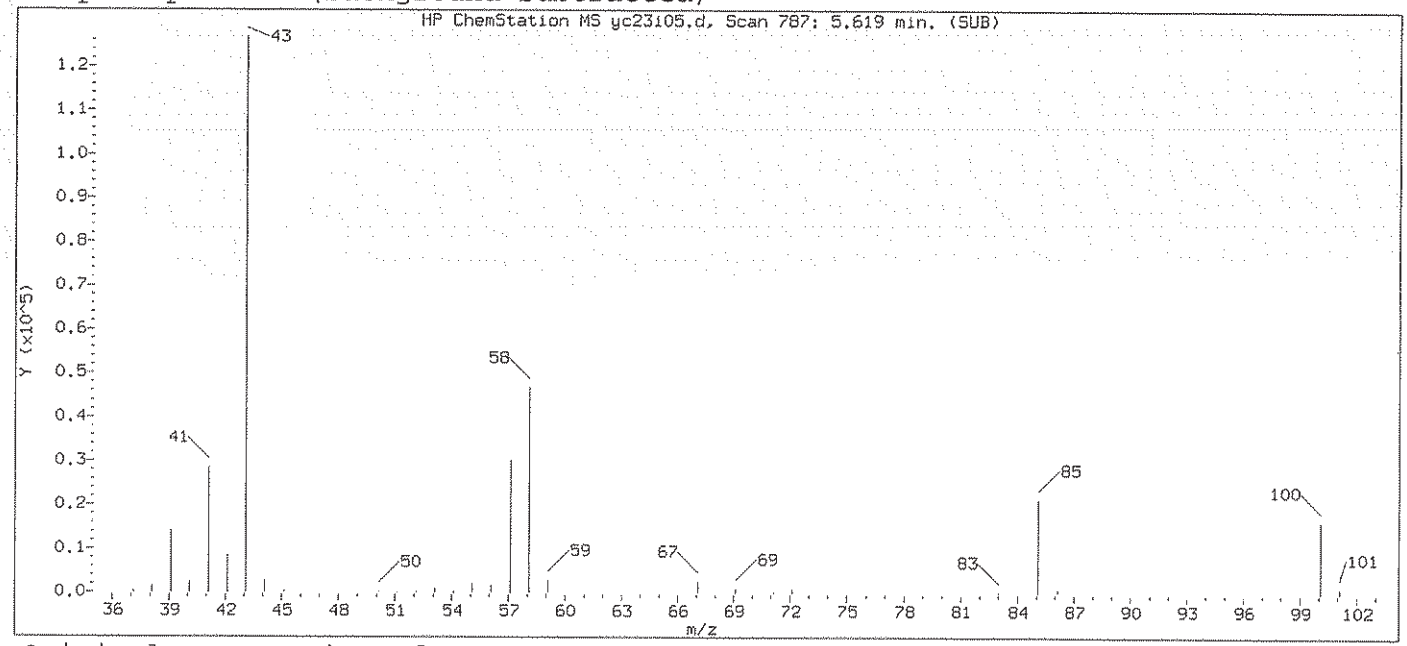
Compound Number	: 82		
Compound Name	: 4-Methyl-2-pentanone		
Scan Number	: 787		
Retention Time (minutes)	: 5.619		
Quant Ion	: 43.00		
Area (flag)	: 331451M		
On-Column Amount (ng)	: 18.2282		
Integration start scan	: 773	Integration stop scan:	798
Y at integration start	: 348	Y at integration end:	348

Reason for manual integration: improper integration

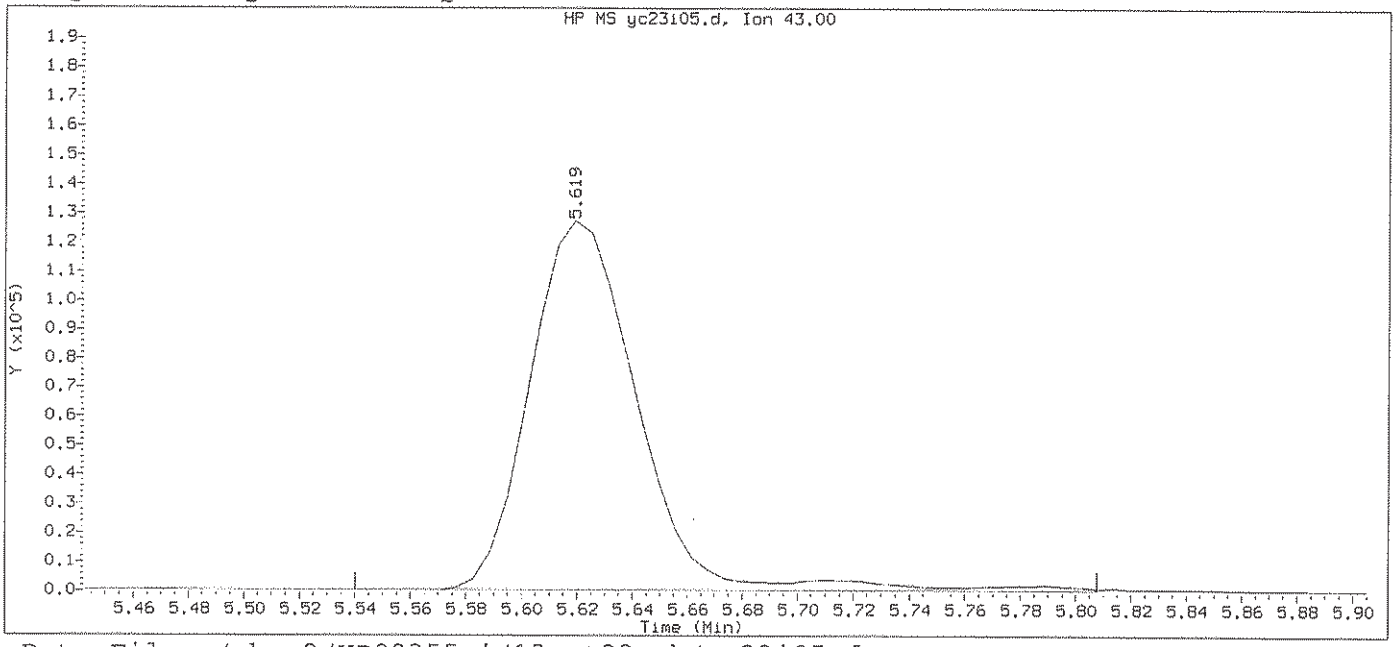
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: Wthnd1251 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i05.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 13:39 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 13:55
Date, time and analyst ID of latest file update: 23-Oct-2013 13:56 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 787
Retention Time (minutes): 5.619
Quant Ion : 43.00
Area : 344890
On-column Amount (ng) : 18.1298
Integration start scan : 773 Integration stop scan: 817
Y at integration start : 348 Y at integration end: 348

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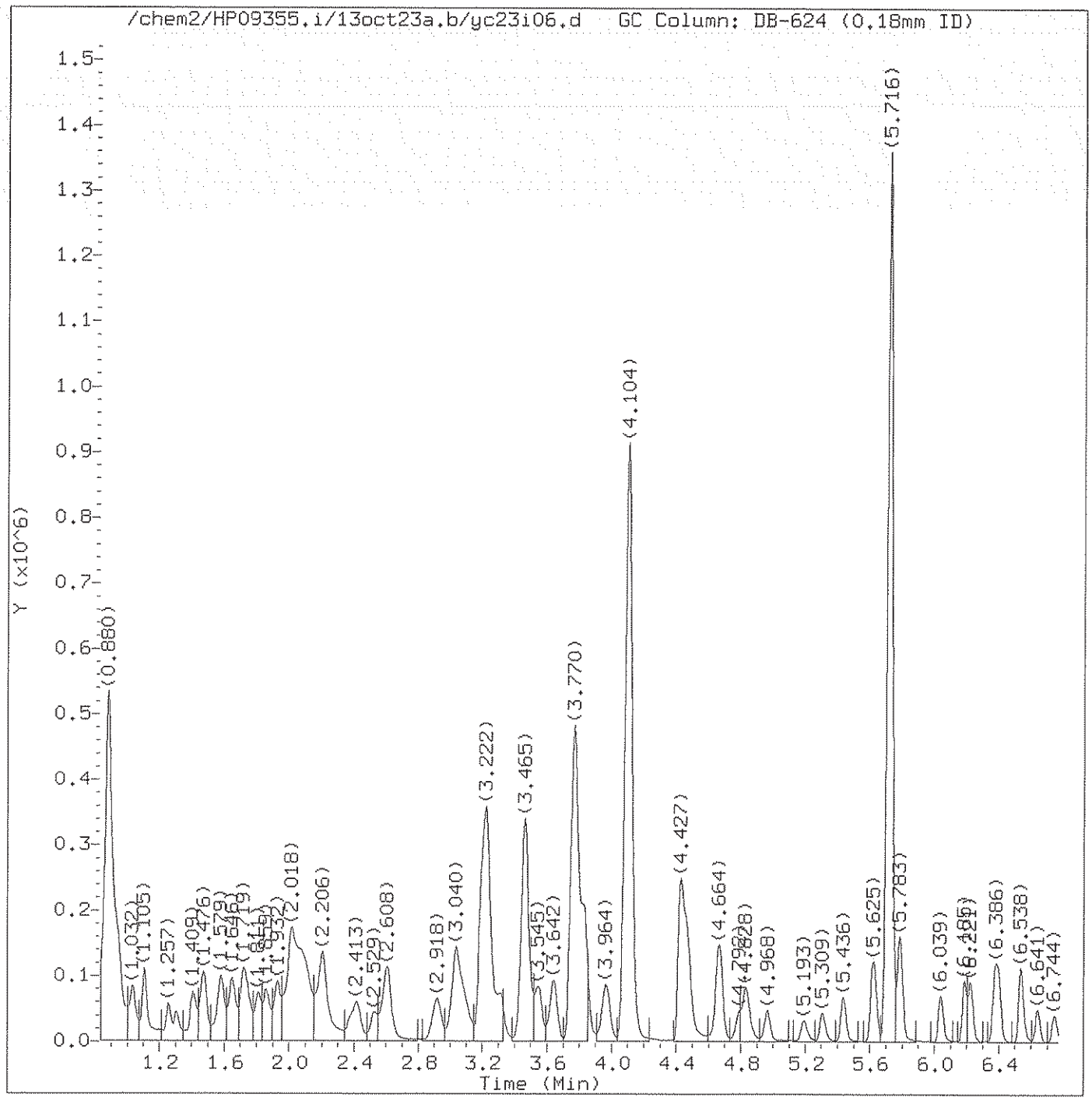
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

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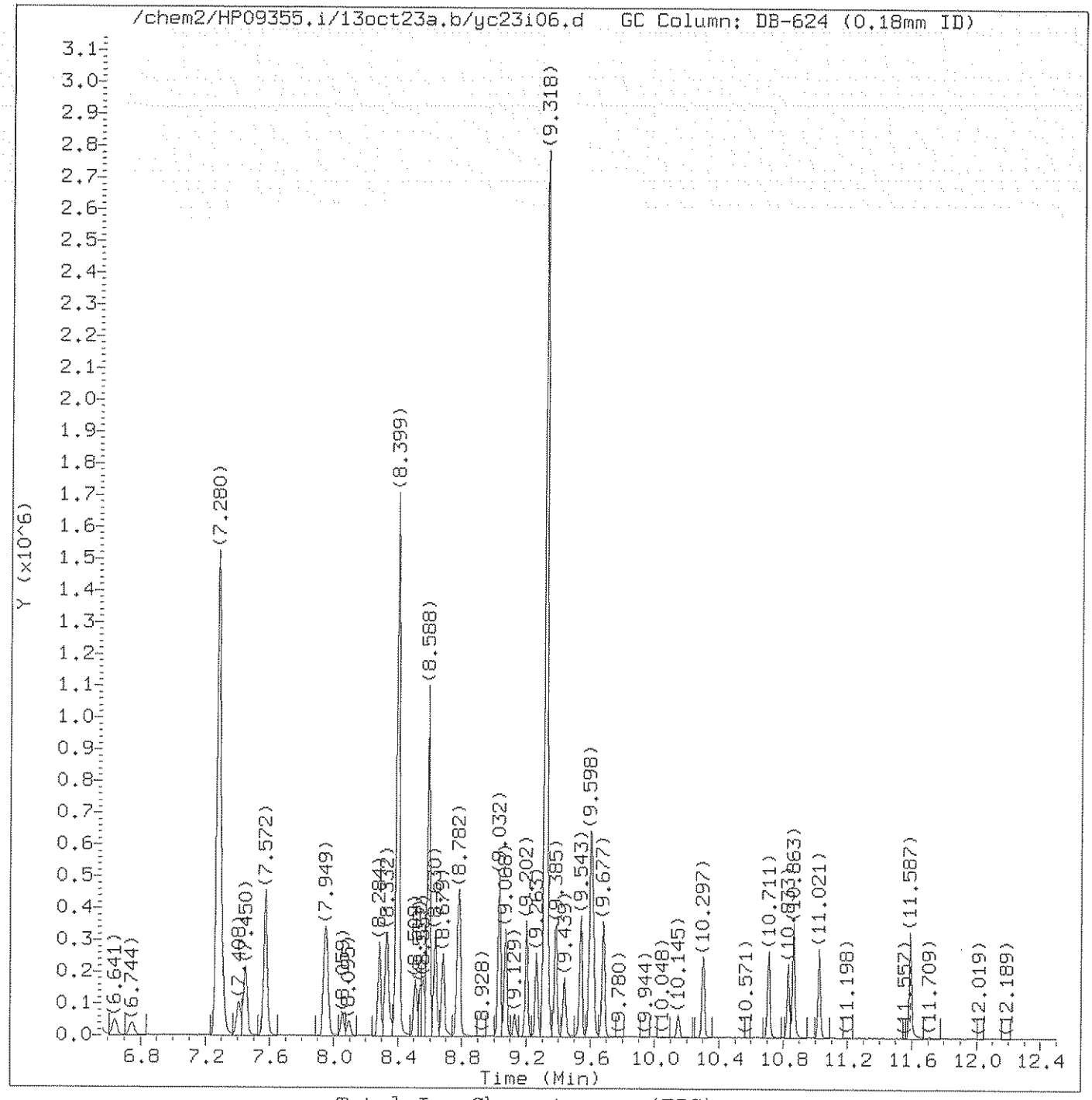
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	45785	4.458
4) Chloromethane	(2)	1.032	50	54855	4.597
6) Vinyl Chloride	(2)	1.105	62	45512M	4.383
5) 1,3-Butadiene	(2)	1.111	39	26543M	4.484
8) Bromomethane	(2)	1.257	94	29920	4.506
9) Chloroethane	(2)	1.306	64	26530	4.465
10) Dichlorofluoromethane	(2)	1.409	67	62776	4.430
11) n-Pentane	(2)	1.476	43	63190	4.601
12) Trichlorofluoromethane	(2)	1.482	101	53494	4.419
14) Ethyl ether	(2)	1.579	59	34149	4.413
15) Freon 123a	(2)	1.586	67	42677	4.804
16) Acrolein	(1)	1.646	56	127900	33.385
17) 1,1-Dichloroethene	(2)	1.719	96	27745	4.460
17) 1,1-Dichloroethene	(2)	1.713	63	14297	4.433
18) Acetone	(2)	1.732	58	14529	8.627
19) Freon 113	(2)	1.738	101	27863	4.283
21) 2-Propanol	(1)	1.811	45	109402	80.355
22) Methyl Iodide	(2)	1.811	142	50676	4.263
23) Carbon Disulfide	(2)	1.859	76	90628	4.205
25) Allyl Chloride	(2)	1.926	41	53041	4.445
27) Methyl Acetate	(2)	1.932	43	38619	4.038
28) Methylene Chloride	(2)	2.005	84	32574	4.368
29)*t-Butyl alcohol-d10	(1)	2.024	65	435307	250.000
30) t-Butyl alcohol	(1)	2.084	59	211202	78.454
31) Acrylonitrile	(2)	2.164	53	27698	4.257
32) trans-1,2-Dichloroethene	(2)	2.206	96	30914	4.286
33) Methyl Tertiary Butyl Ether	(2)	2.212	73	108504	4.154
34) n-Hexane	(2)	2.419	57	55198	4.540
36) 1,1-Dichloroethane	(2)	2.522	63	58480	4.217
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	51314	4.180
38) di-Isopropyl ether	(2)	2.608	45	120749	4.225
40) Ethyl t-butyl ether	(2)	2.918	59	111421	4.140
44) 2-Butanone	(2)	3.027	43	71752	7.479
42) cis-1,2-Dichloroethene	(2)	3.027	96	34338	4.176
45) 2,2-Dichloropropane	(2)	3.033	77	46010	4.188
43) 1,2-Dichloroethene (Total)	(2)		96	65252	8.461
47) Propionitrile	(1)	3.076	54	208237	70.725
48) Methacrylonitrile	(2)	3.222	67	237153	38.212

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.240	128	16017	3.877
50) Tetrahydrofuran	(1)	3.283	71	17947	6.456
51) Chloroform	(2)	3.319	83	54299	4.172
52)$Dibromofluoromethane	(2)	3.459	113	288320	50.154
52)$Dibromofluoromethane	(2)	3.459	111	292589	49.900
53) 1,1,1-Trichloroethane	(2)	3.496	97	58271	4.687
54) Cyclohexane	(2)	3.545	56	63535	4.307
54) Cyclohexane	(2)	3.551	84	49962	3.974
54) Cyclohexane	(2)	3.551	69	19264	4.352
55) 1,1-Dichloropropene	(2)	3.642	75	44229	4.270
56) Carbon Tetrachloride	(2)	3.648	117	39407	4.069
58) Isobutyl Alcohol	(1)	3.764	41	172602	187.093
57)$1,2-Dichloroethane-d4	(2)	3.770	102	74432	49.667
57)$1,2-Dichloroethane-d4	(2)	3.770	65	376537	49.742
57)$1,2-Dichloroethane-d4	(2)	3.770	104	46675	49.791
60) Benzene	(2)	3.830	78	132580	4.176
61) 1,2-Dichloroethane	(2)	3.843	62	45967	4.062
61) 1,2-Dichloroethane	(2)	3.843	98	4060	4.004
65) t-Amyl methyl ether	(2)	3.964	73	102975	4.042
66)*Fluorobenzene	(2)	4.098	96	1232499	50.000
67) n-Heptane	(2)	4.122	43	63259	4.253
69) n-Butanol	(1)	4.427	56	271467	358.012
71) Trichloroethene	(2)	4.463	95	32605	4.082
72) Methylcyclohexane	(2)	4.664	83	54414	3.984
72) Methylcyclohexane	(2)	4.664	98	23944	4.016
73) 1,2-Dichloropropane	(2)	4.670	63	35379	4.120
74) Dibromomethane	(2)	4.792	93	22470	3.958
75) 1,4-Dioxane	(1)	4.816	88	27325M	166.887
76) Methyl Methacrylate	(2)	4.834	69	39081	3.928
78) Bromodichloromethane	(2)	4.968	83	39076	3.739
79) 2-Nitropropane	(2)	5.193	41	27997	6.279
80) 2-Chloroethyl Vinyl Ether	(2)	5.303	63	27181	3.697
81) cis-1,3-Dichloropropene	(2)	5.436	75	51873	3.868
82) 4-Methyl-2-pentanone	(2)	5.619	43	123466	6.804
83)$Toluene-d8	(3)	5.716	98	1200282	50.020
83)$Toluene-d8	(3)	5.716	100	773821	49.523
88) Toluene	(3)	5.789	92	84236	4.175
89) trans-1,3-Dichloropropene	(3)	6.039	75	48337	3.654

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	100210	7.522
91) Ethyl Methacrylate	(3)	6.185	69	60871	3.866
92) 1,1,2-Trichloroethane	(3)	6.221	97	32716	3.968
93) Tetrachloroethene	(3)	6.373	166	36257	4.122
94) 1,3-Dichloropropane	(3)	6.398	76	56133	3.948
96) 2-Hexanone	(3)	6.538	43	105271	7.071
97) Dibromochloromethane	(3)	6.641	129	29937	3.468
99) 1,2-Dibromoethane	(3)	6.744	107	34547	3.812
100)*Chlorobenzene-d5	(3)	7.280	117	900030	50.000
102) Chlorobenzene	(3)	7.310	112	93597	4.169
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	29440	3.788
104) Ethylbenzene	(3)	7.450	91	162176	4.184
106) m+p-Xylene	(3)	7.572	106	126964	8.284
107) o-Xylene	(3)	7.943	106	62833	4.160
109) Styrene	(3)	7.961	104	102321	3.990
108) Xylene (Total)	(3)		106	189797	12.444
110) Bromoform	(3)	8.095	173	19598	3.067
111) Isopropylbenzene	(3)	8.284	105	162876	4.205
112) Cyclohexanone	(1)	8.326	55	150212	180.974
114)$4-Bromofluorobenzene	(3)	8.399	95	456154	49.932
114)$4-Bromofluorobenzene	(3)	8.399	174	391639	49.999
115) Bromobenzene	(4)	8.509	156	42207	4.064
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	59393	4.060
117) 1,2,3-Trichloropropane	(4)	8.557	110	18209	4.030
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	192664	37.400
119) n-Propylbenzene	(4)	8.630	91	197674	4.376
120) 2-Chlorotoluene	(4)	8.685	126	39347	4.154
121) 4-Chlorotoluene	(4)	8.776	126	40809	4.109
122) 1,3,5-Trimethylbenzene	(4)	8.782	105	142475	4.219
125) Pentachloroethane	(4)	9.032	167	24059	3.722
124) tert-Butylbenzene	(4)	9.032	134	31621	4.159
126) 1,2,4-Trimethylbenzene	(4)	9.068	105	143420	4.164
127) sec-Butylbenzene	(4)	9.202	105	179861	4.300
129) 1,3-Dichlorobenzene	(4)	9.263	146	78878	4.097
130) p-Isopropyltoluene	(4)	9.318	119	161037	4.224
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	505140	50.000
133) 1,4-Dichlorobenzene	(4)	9.330	146	85885	4.237
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	148946	4.175

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

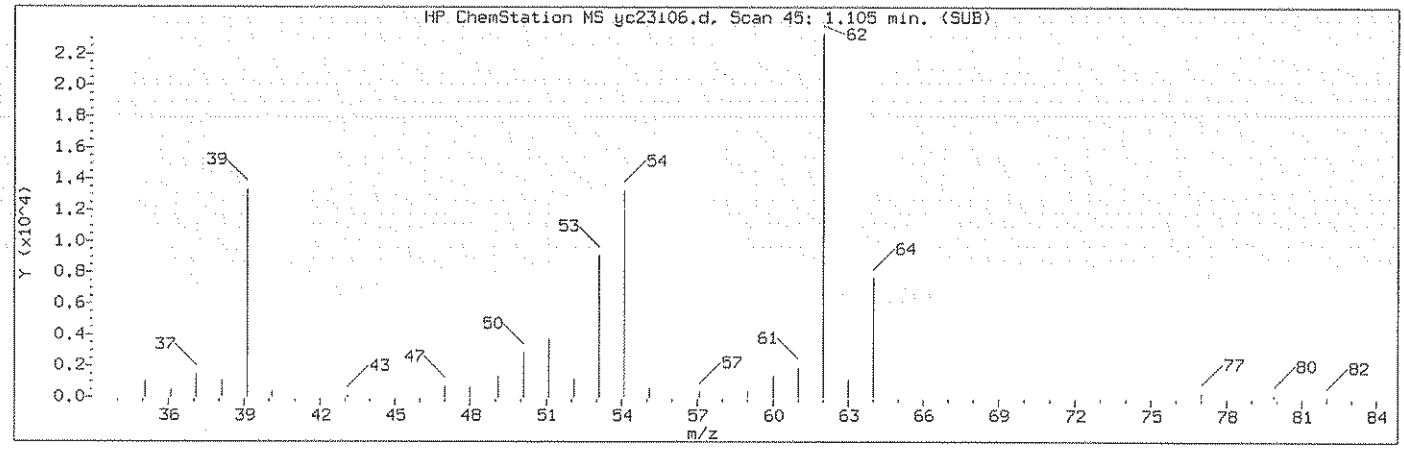
Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.439	91	103141	3.600
136) 1,3-Diethylbenzene	(4)	9.543	119	92998	4.031
138) 1,2-Dichlorobenzene	(4)	9.598	146	79399	4.139
137) 1,4-Diethylbenzene	(4)	9.598	119	96040	4.087
139) n-Butylbenzene	(4)	9.616	92	79616M	4.171
140) 1,2-Diethylbenzene	(4)	9.677	119	77768	4.070
141) Diethylbenzene (total)	(4)		100	266806	12.188
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	12982	3.530
144) 1,3,5-Trichlorobenzene	(4)	10.303	180	65427	4.122
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	62767	4.128
147) Hexachlorobutadiene	(4)	10.833	225	30942	4.133
148) Naphthalene	(4)	10.863	128	205535	4.212
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	61032	4.162
150) 2-Methylnaphthalene	(4)	11.587	142	124307	4.079

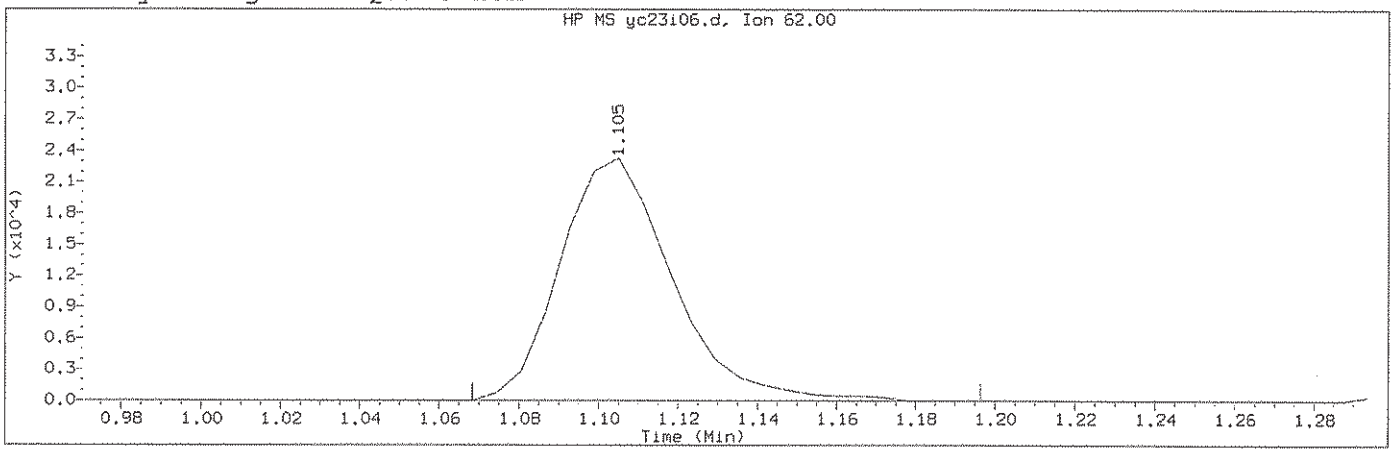
M = Compound was manually integrated.

Digitally signed by Angela D. Sneeringer
on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

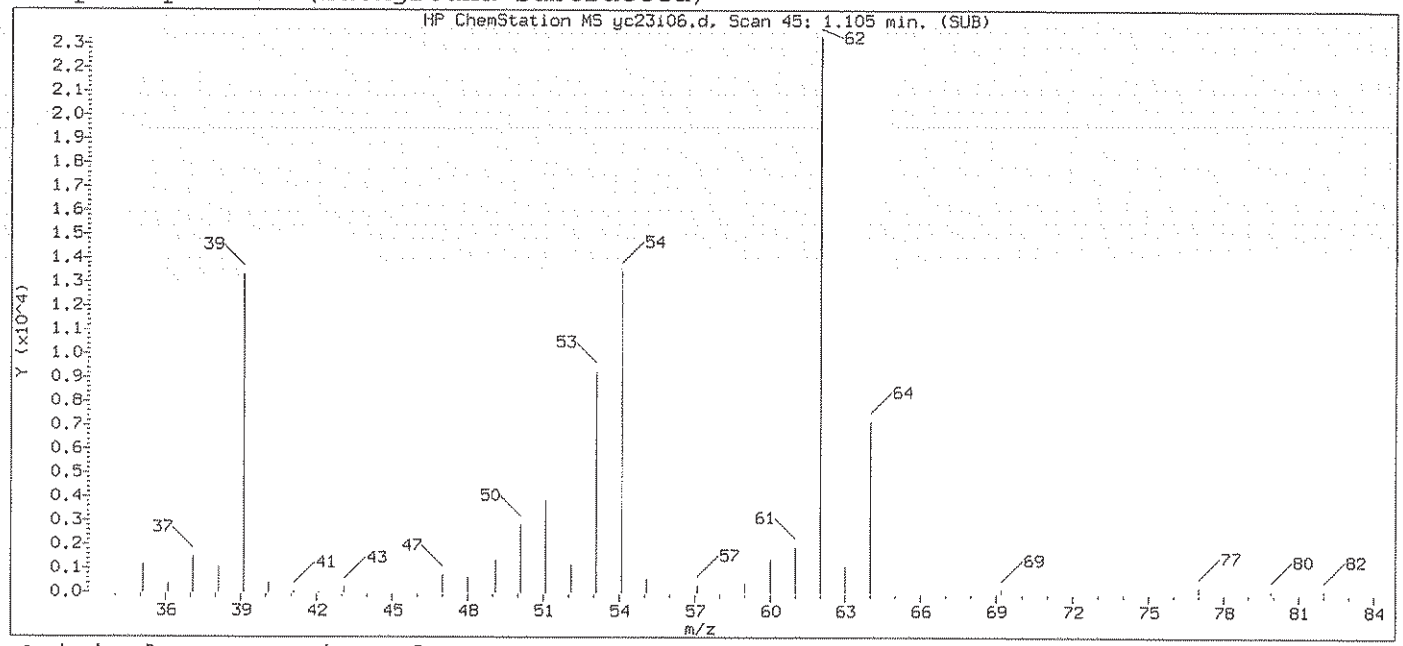
Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 45
Retention Time (minutes): 1.105
Quant Ion : 62.00
Area (flag) : 45512M
On-Column Amount (ng) : 4.3826
Integration start scan : 38 Integration stop scan: 59
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

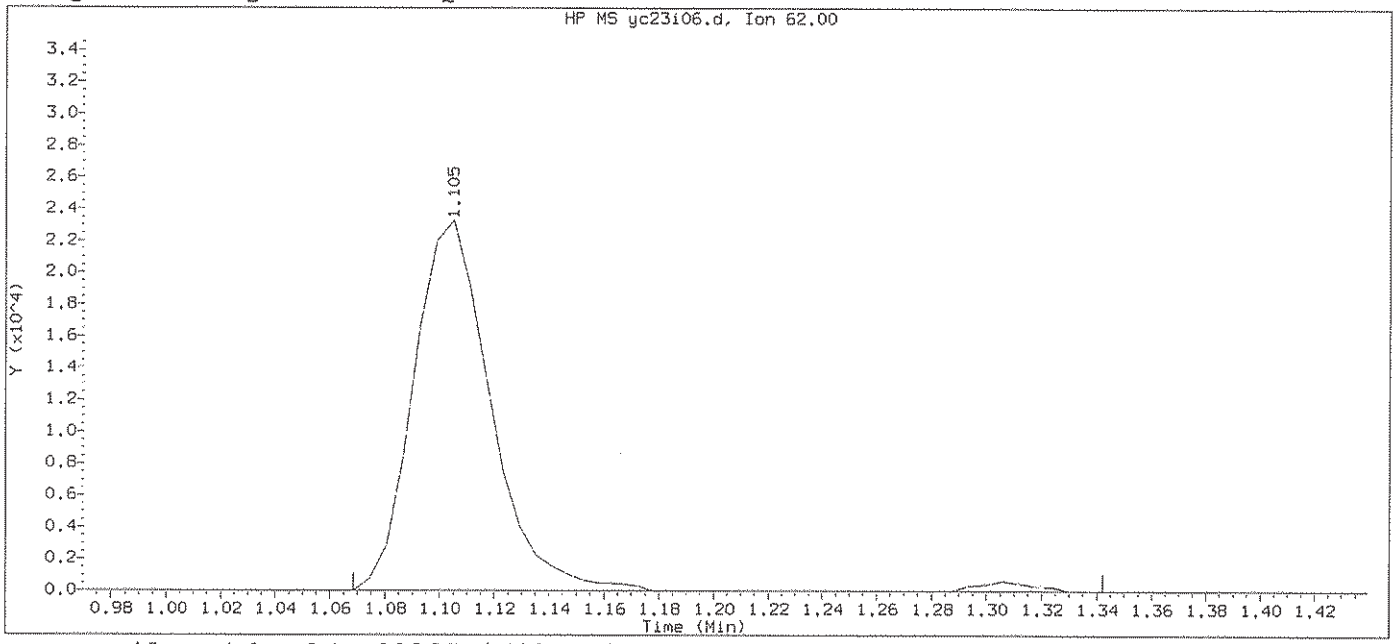
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: Ads01731 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

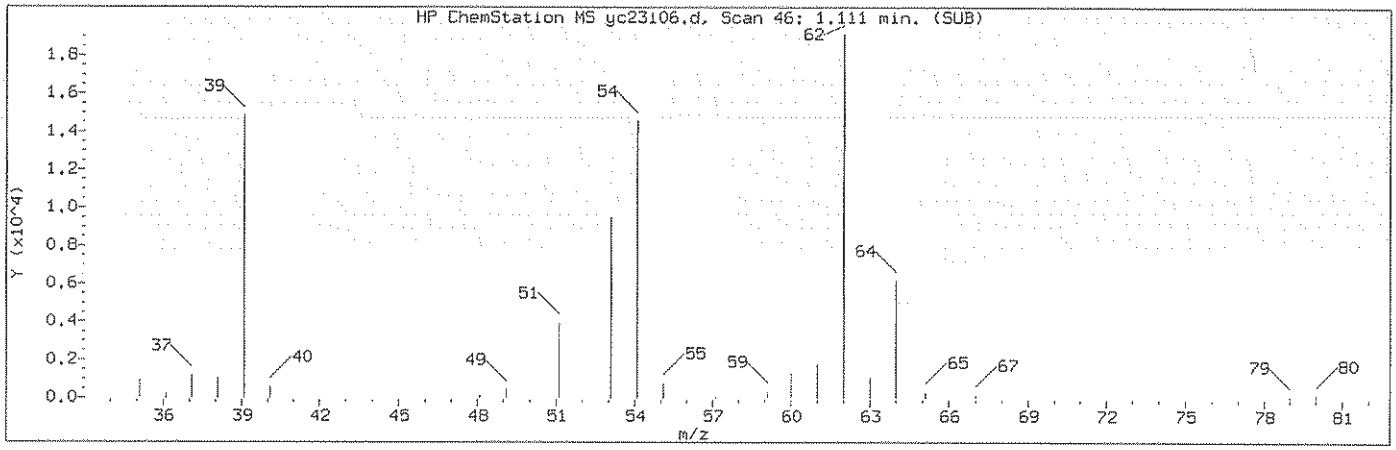
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:17
Date, time and analyst ID of latest file update: 23-Oct-2013 14:17 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

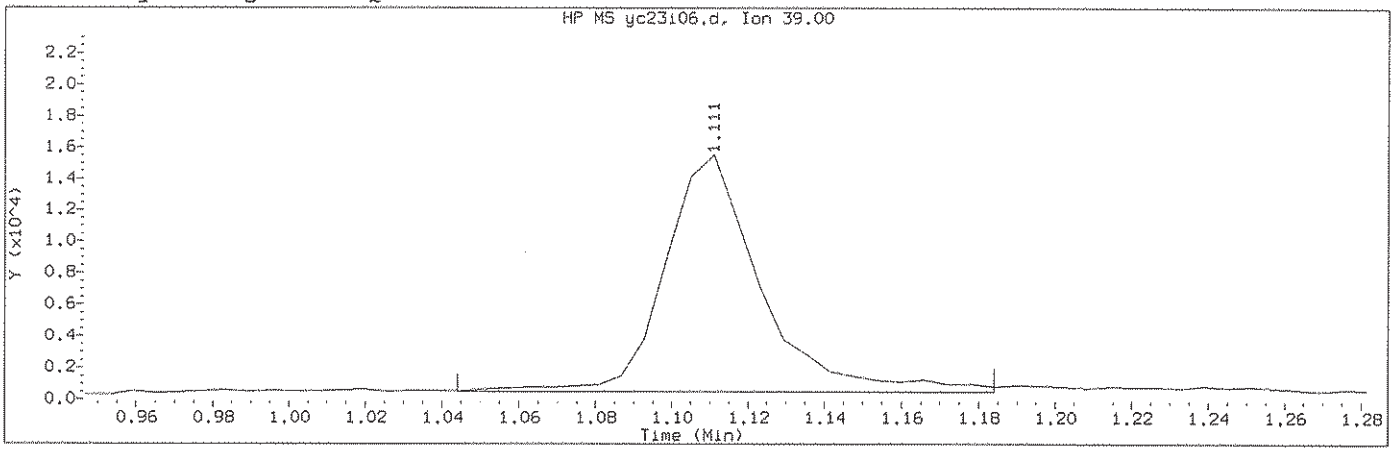
Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 45		
Retention Time (minutes)	: 1.105		
Quant Ion	: 62.00		
Area	: 46411		
On-column Amount (ng)	: 4.4532		
Integration start scan	: 38	Integration stop scan:	83
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

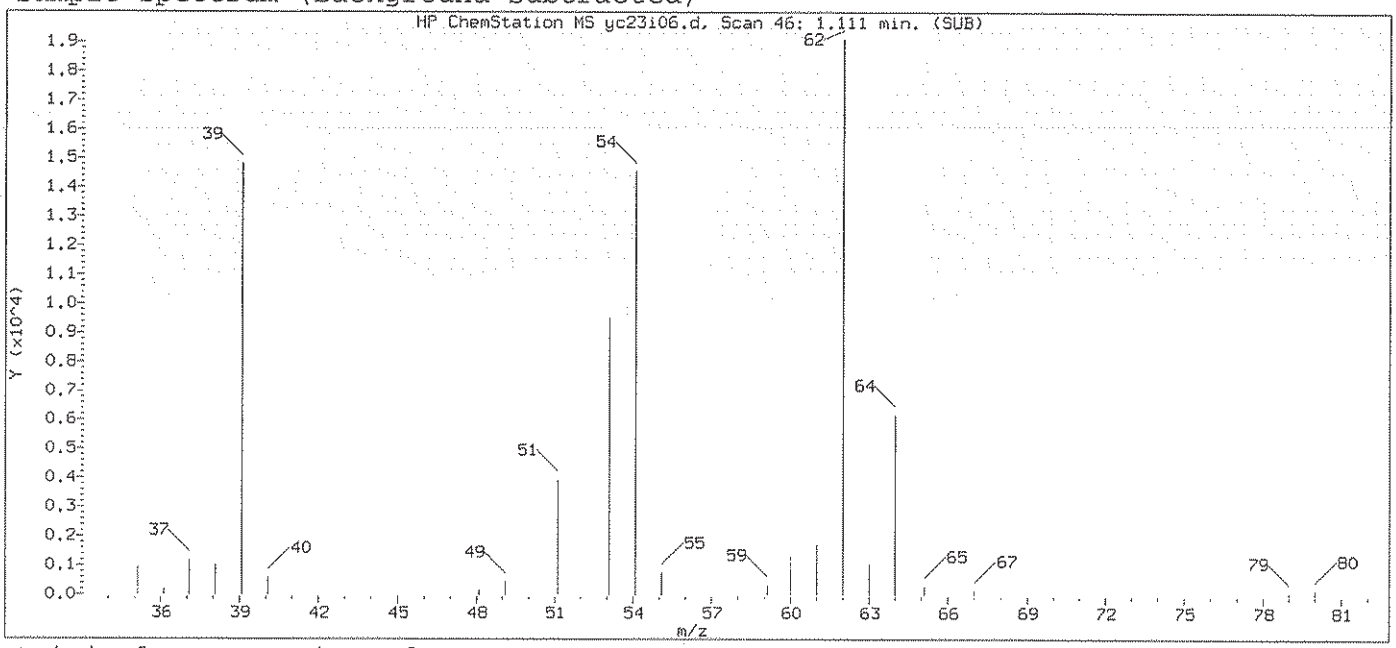
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 46		
Retention Time (minutes)	: 1.111		
Quant Ion	: 39.00		
Area (flag)	: 26543M		
On-Column Amount (ng)	: 4.4839		
Integration start scan	: 34	Integration stop scan:	57
Y at integration start	: 471	Y at integration end:	471

Reason for manual integration: improper integration

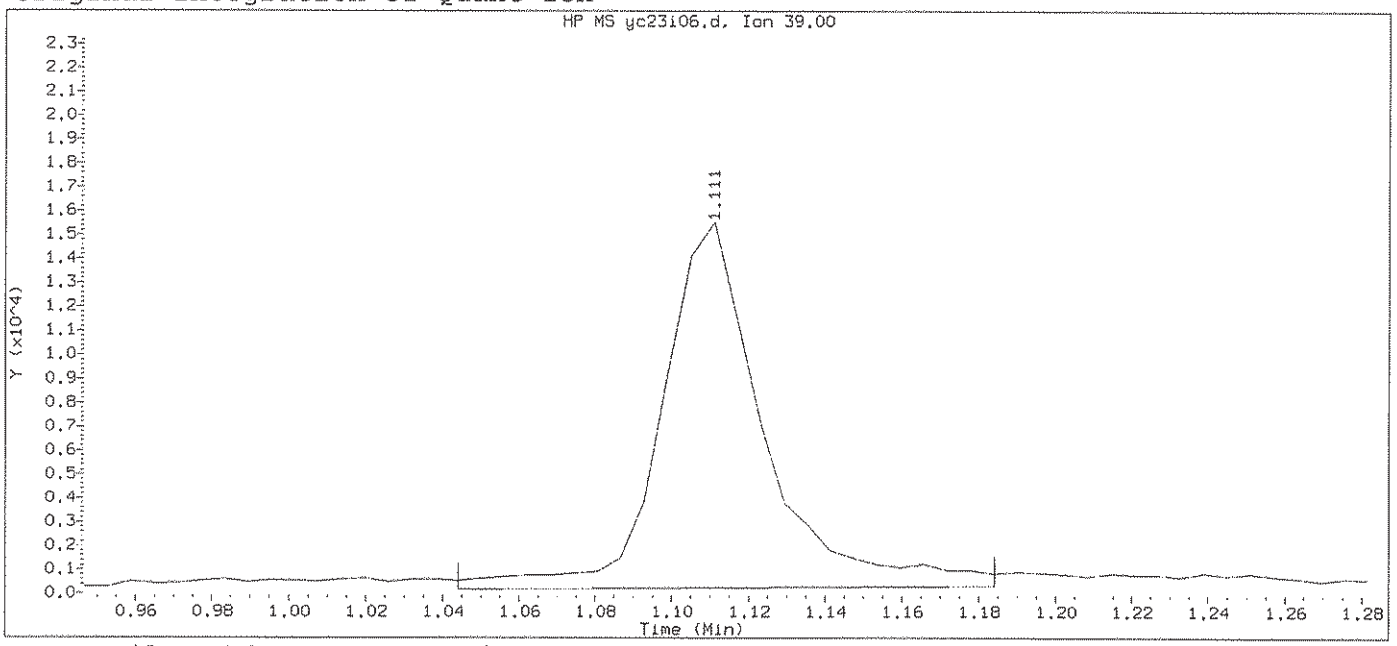
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:17
Date, time and analyst ID of latest file update: 23-Oct-2013 14:17 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 46		
Retention Time (minutes)	: 1.111		
Quant Ion	: 39.00		
Area	: 28437		
On-column Amount (ng)	: 4.7408		
Integration start scan	: 34	Integration stop scan:	57
Y at integration start	: 159	Y at integration end:	314

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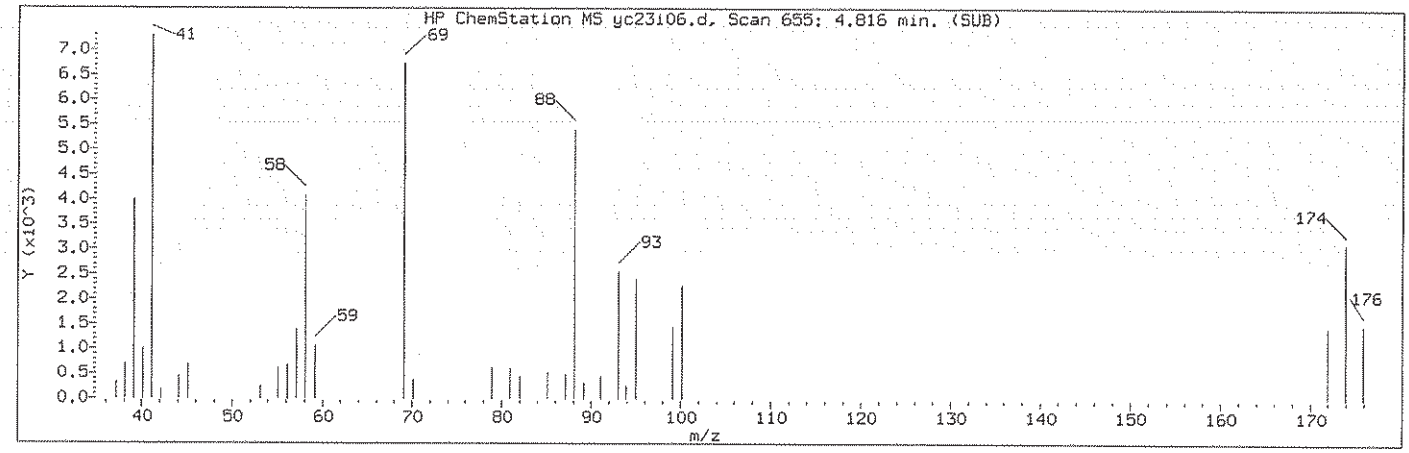
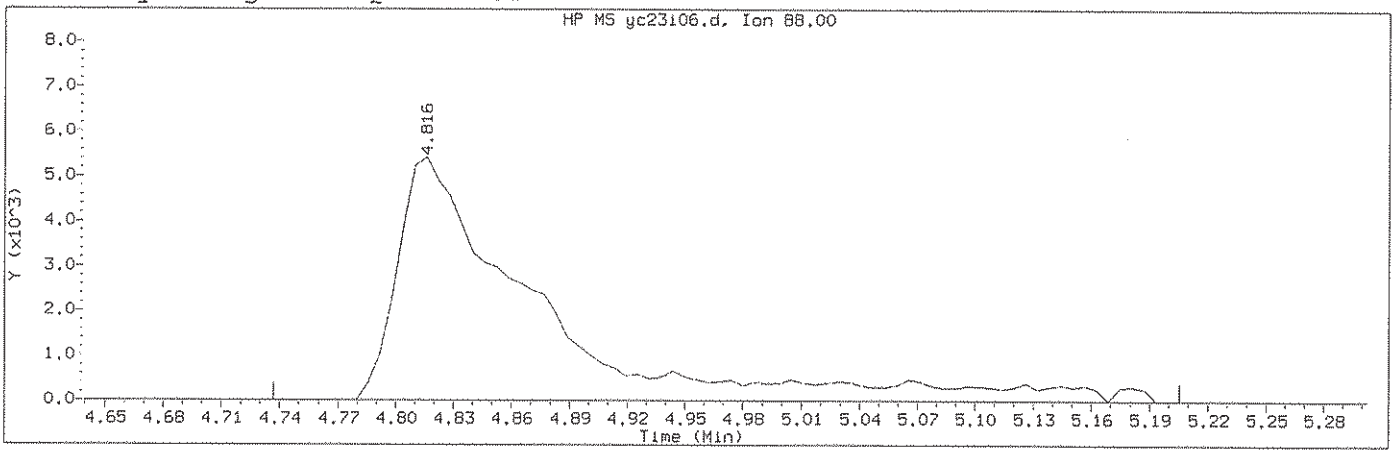
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

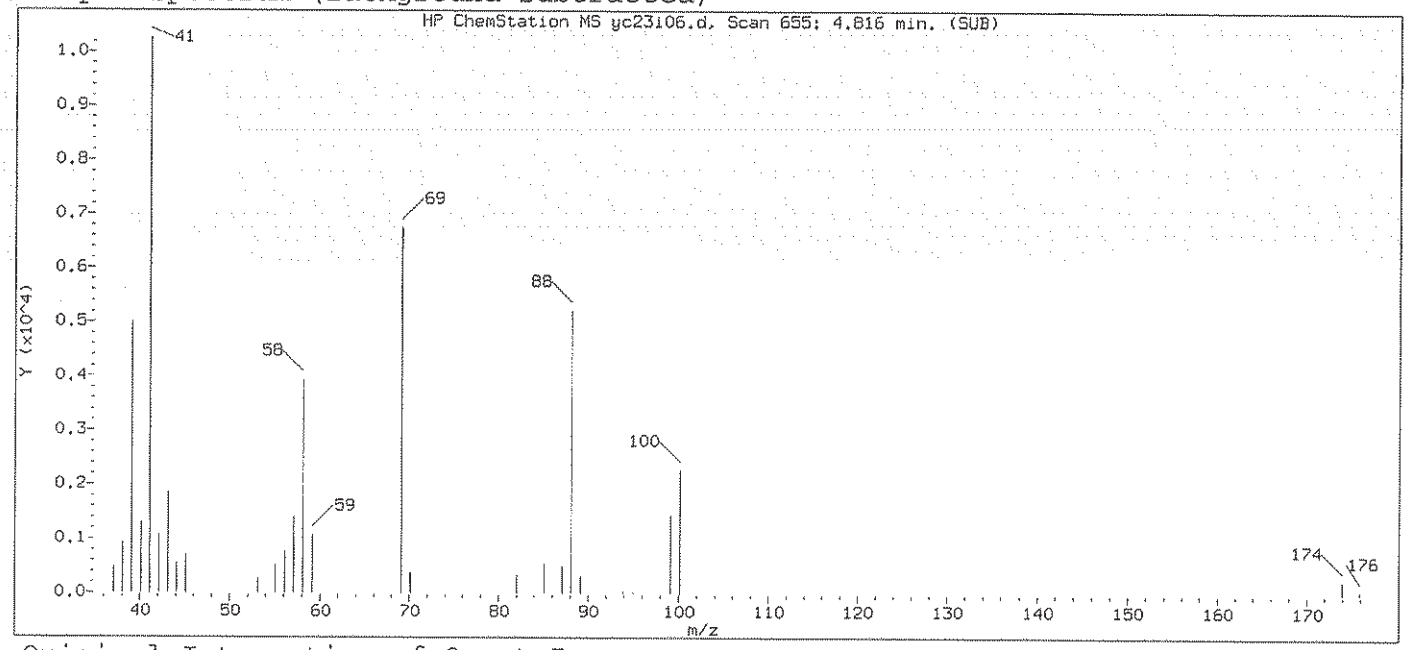
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 655		
Retention Time (minutes)	: 4.816		
Quant Ion	: 88.00		
Area (flag)	: 27325M		
On-Column Amount (ng)	: 166.8871		
Integration start scan	: 641	Integration stop scan:	718
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

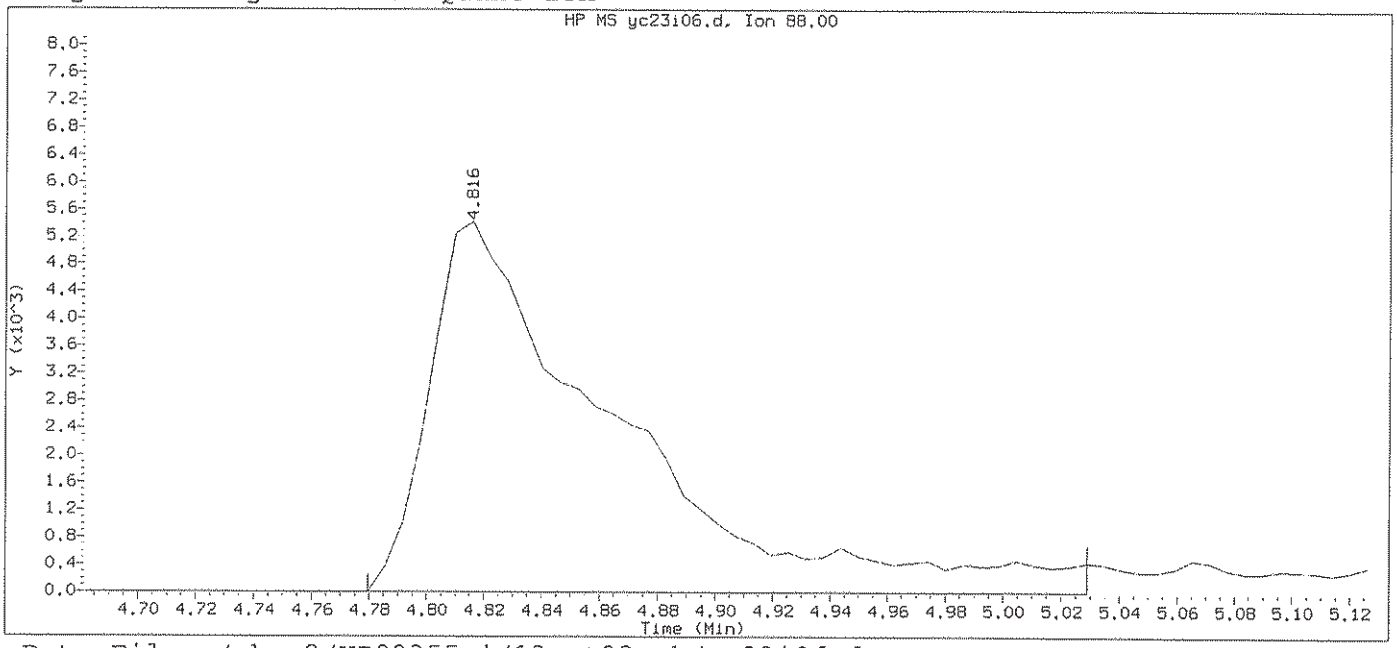
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

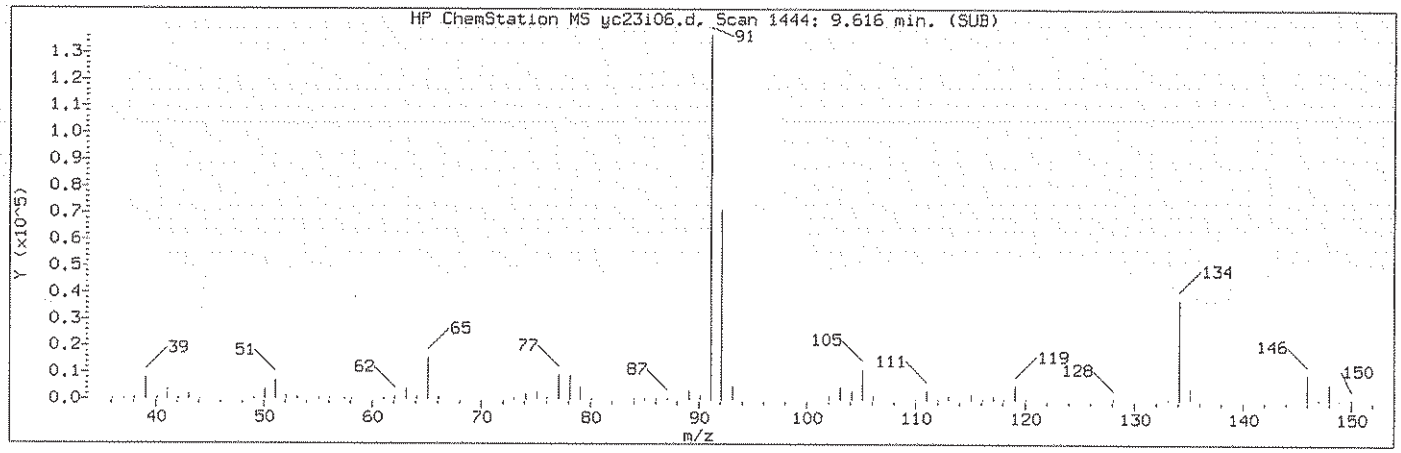
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:17
Date, time and analyst ID of latest file update: 23-Oct-2013 14:17 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

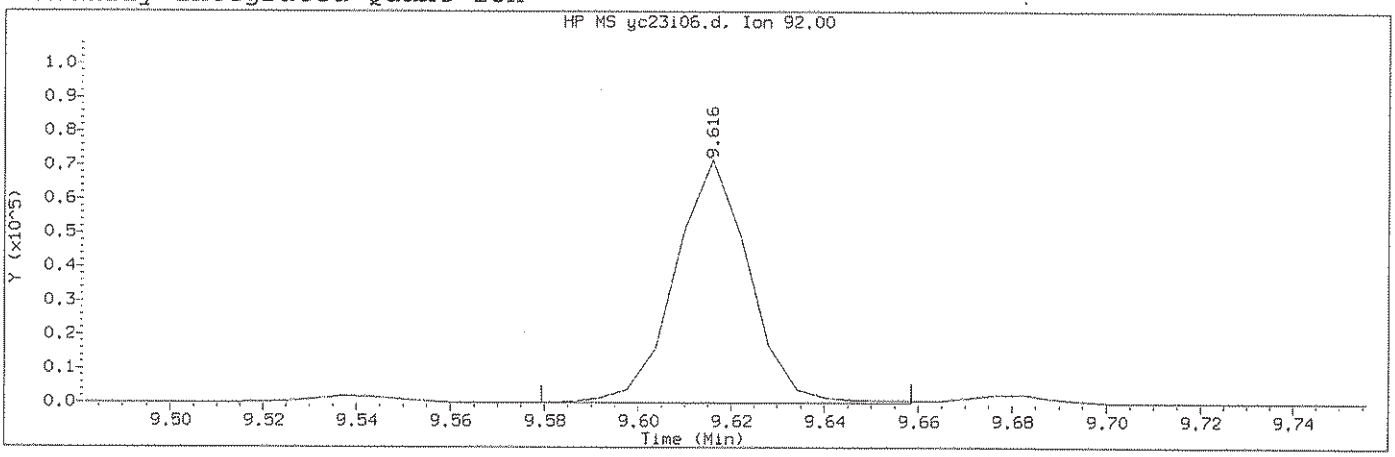
Compound Number	: 75		
Compound Name	: 1,4-Dioxane		
Scan Number	: 655		
Retention Time (minutes)	: 4.816		
Quant Ion	: 88.00		
Area	: 24291		
On-column Amount (ng)	: 149.6361		
Integration start scan	: 648	Integration stop scan:	689
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:43
Date, time and analyst ID of latest file update: 23-Oct-2013 14:43 ads01731

Sample Name: VSTD004 Lab Sample ID: VSTD004

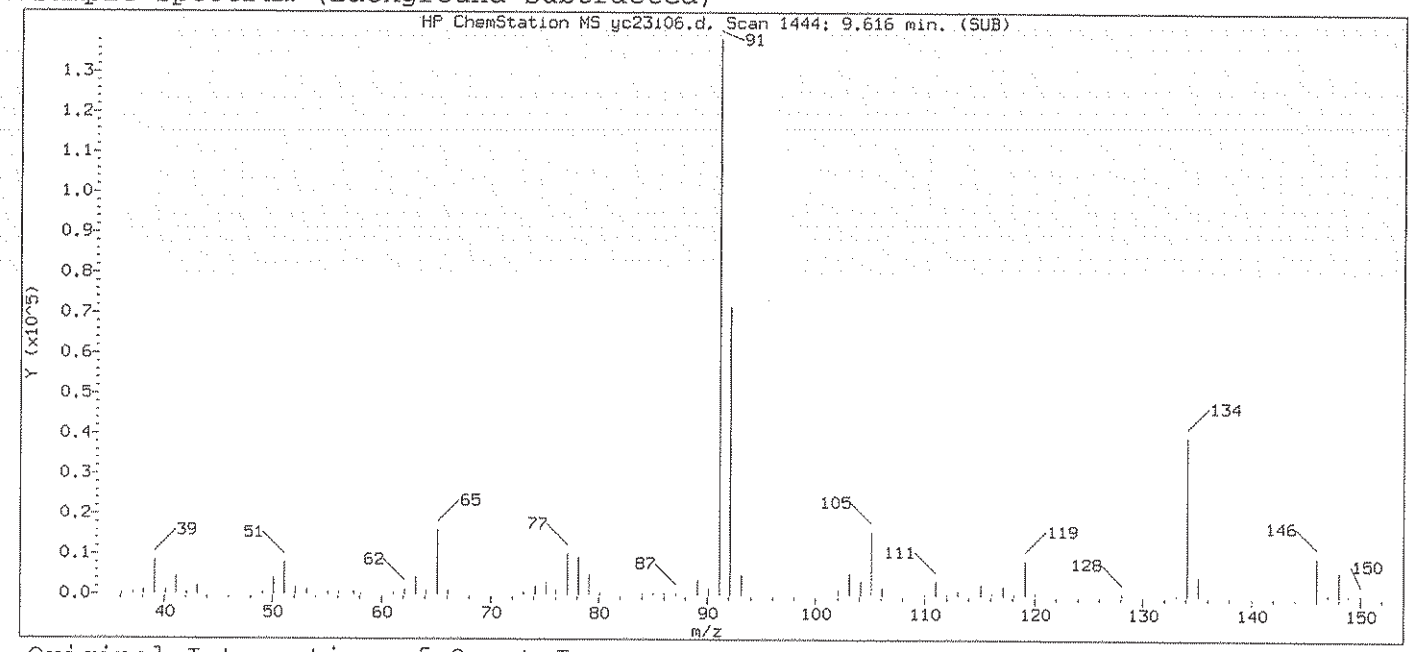
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1444
Retention Time (minutes): 9.616
Quant Ion : 92.00
Area (flag) : 79616M
On-Column Amount (ng) : 4.1712
Integration start scan : 1437 Integration stop scan: 1450
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

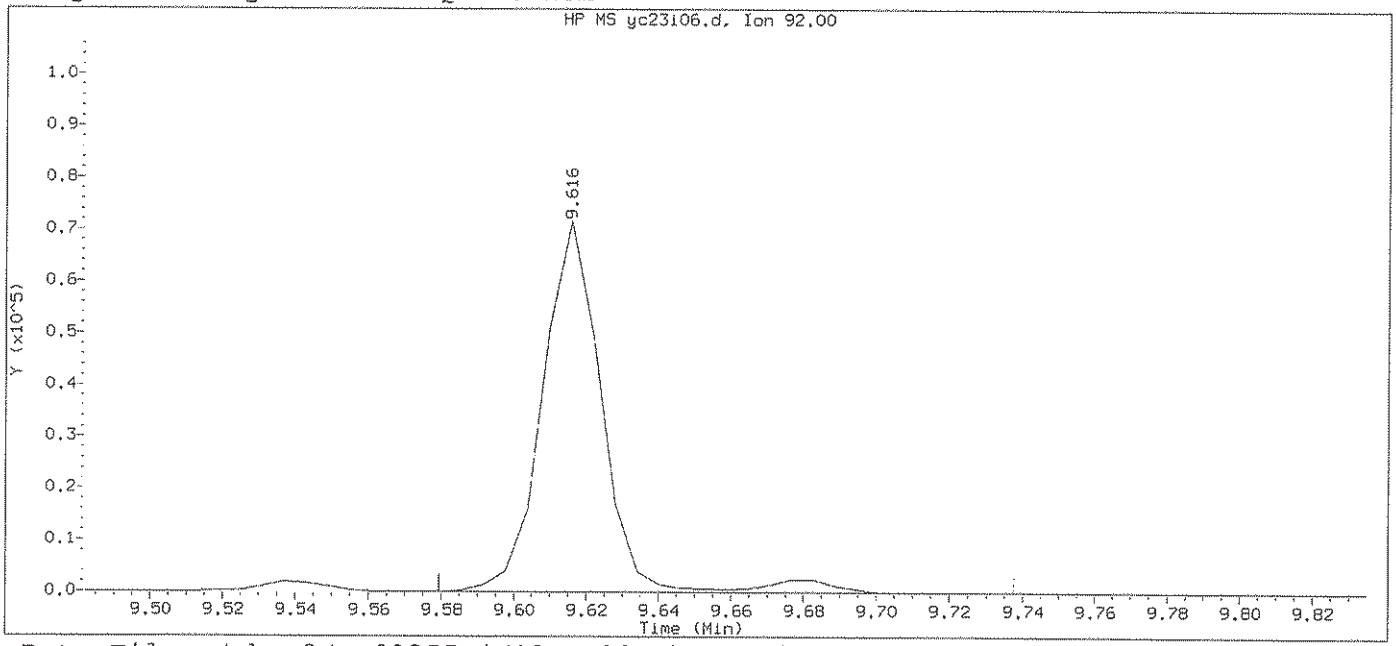
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55. Target 3.5 esignature user ID: ads01731

GC/MS audit/management approval: 10/23/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



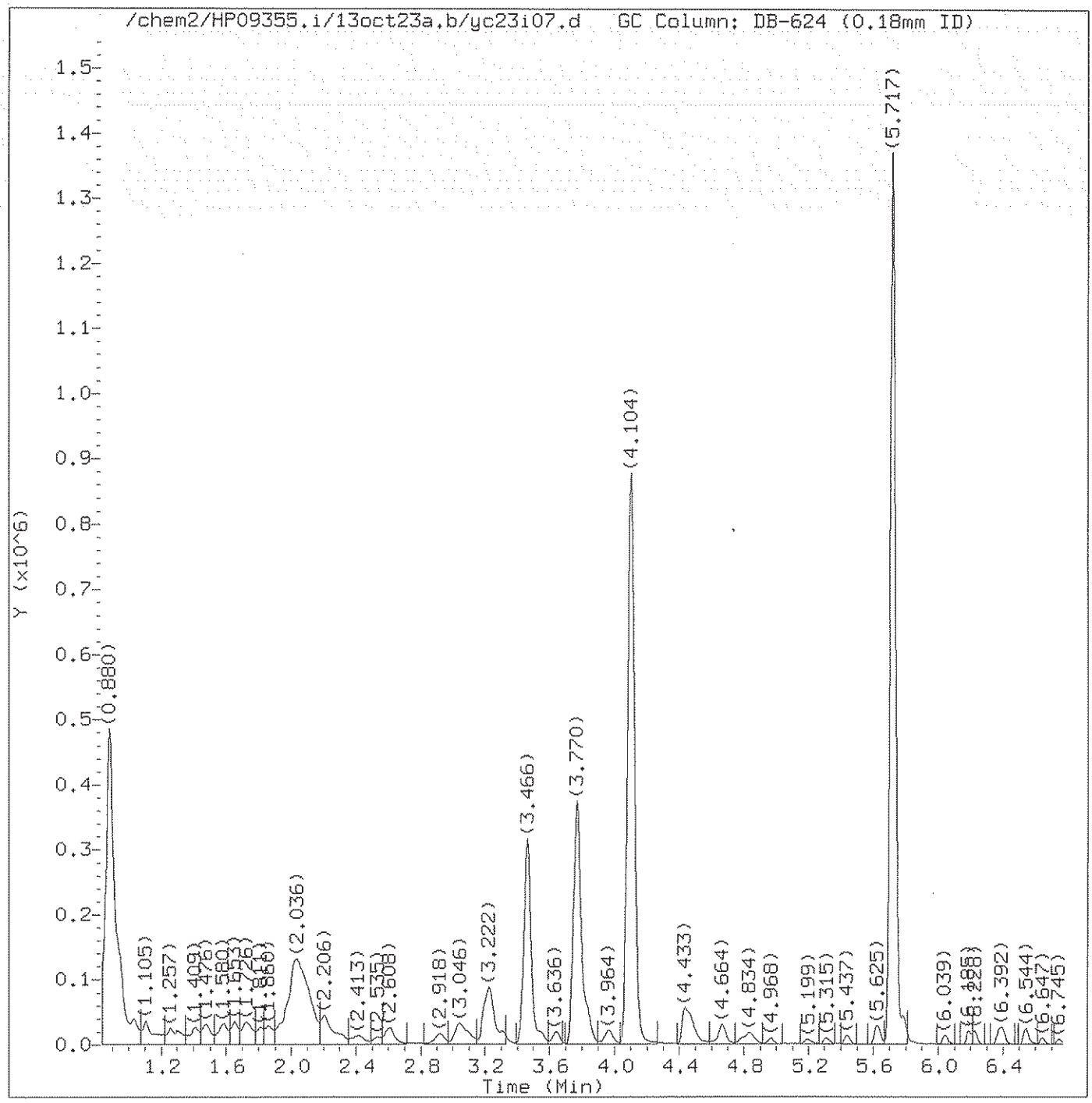
Data File: /chem2/HP09355.i/13oct23a.b/yc23i06.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:01 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:17
Date, time and analyst ID of latest file update: 23-Oct-2013 14:17 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number	: 139		
Compound Name	: n-Butylbenzene		
Scan Number	: 1444		
Retention Time (minutes)	: 9.616		
Quant Ion	: 92.00		
Area	: 82844		
On-column Amount (ng)	: 4.3100		
Integration start scan	: 1437	Integration stop scan:	1463
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Angela D. Sneeringer on 10/23/2013 at 14:55.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

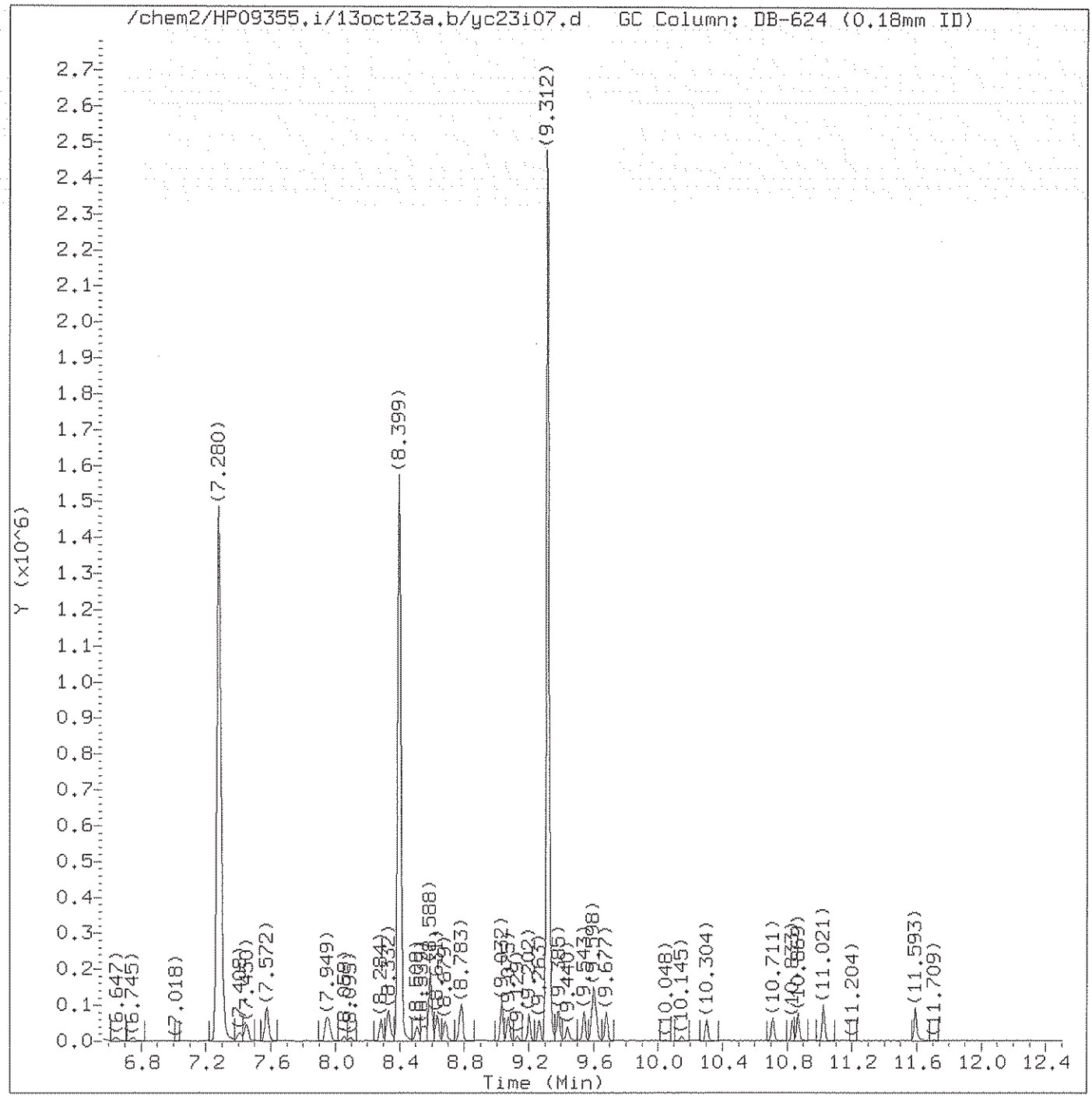
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	7882	0.799
4) Chloromethane	(2)	1.032	50	11816	0.988
6) Vinyl Chloride	(2)	1.099	62	9093	0.890
5) 1,3-Butadiene	(2)	1.111	39	5085M	0.875
8) Bromomethane	(2)	1.257	94	6621	1.000
9) Chloroethane	(2)	1.312	64	5597	0.951
10) Dichlorofluoromethane	(2)	1.409	67	14359	1.010
11) n-Pentane	(2)	1.476	43	11595	0.852
12) Trichlorofluoromethane	(2)	1.482	101	10000	0.849
14) Ethyl ether	(2)	1.580	59	7817	1.008
15) Freon 123a	(2)	1.586	67	11291M	1.275
16) Acrolein	(1)	1.653	56	31924	7.903
17) 1,1-Dichloroethene	(2)	1.720	96	5740	0.929
17) 1,1-Dichloroethene	(2)	1.720	63	3156	0.975
18) Acetone	(2)	1.738	58	4315	2.576
19) Freon 113	(2)	1.738	101	5048	0.781
21) 2-Propanol	(1)	1.805	45	30461	20.730
22) Methyl Iodide	(2)	1.811	142	10813	0.917
23) Carbon Disulfide	(2)	1.860	76	20759M	0.961
25) Allyl Chloride	(2)	1.933	41	12527	1.044
27) Methyl Acetate	(2)	1.945	43	11193	1.167
28) Methylene Chloride	(2)	2.012	84	7972	1.056
29)*t-Butyl alcohol-d10	(1)	2.036	65	462697	250.000
30) t-Butyl alcohol	(1)	2.091	59	56092	19.408
31) Acrylonitrile	(2)	2.170	53	7325MA	1.146
32) trans-1,2-Dichloroethene	(2)	2.206	96	6909	0.961
33) Methyl Tertiary Butyl Ether	(2)	2.218	73	25799	0.989
34) n-Hexane	(2)	2.419	57	11535	0.954
36) 1,1-Dichloroethane	(2)	2.529	63	12430	0.909
38) di-Isopropyl ether	(2)	2.602	45	28112	0.986
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	10646	0.864
40) Ethyl t-butyl ether	(2)	2.918	59	25551	0.958
44) 2-Butanone	(2)	3.028	43	21620	2.312
42) cis-1,2-Dichloroethene	(2)	3.034	96	7308	0.902
45) 2,2-Dichloropropane	(2)	3.040	77	9949	0.915
43) 1,2-Dichloroethene (Total)	(2)		96	14217	1.862
47) Propionitrile	(1)	3.088	54	51468	16.341
48) Methacrylonitrile	(2)	3.228	67	56525	9.141

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	3.234	128	3463	0.836
50) Tetrahydrofuran	(1)	3.277	71	4829	1.666
51) Chloroform	(2)	3.314	83	11773	0.916
52)$Dibromofluoromethane	(2)	3.466	113	286134	49.921
52)$Dibromofluoromethane	(2)	3.466	111	292481	50.032
53) 1,1,1-Trichloroethane	(2)	3.496	97	12365	0.995
54) Cyclohexane	(2)	3.551	56	12629M	0.862
54) Cyclohexane	(2)	3.545	84	9421	0.773
54) Cyclohexane	(2)	3.557	69	3903	0.888
55) 1,1-Dichloropropene	(2)	3.648	75	8432	0.834
56) Carbon Tetrachloride	(2)	3.648	117	7422	0.792
57)$1,2-Dichloroethane-d4	(2)	3.776	102	72811	49.005
57)$1,2-Dichloroethane-d4	(2)	3.770	65	372557	49.457
57)$1,2-Dichloroethane-d4	(2)	3.770	104	46772	50.097
58) Isobutyl Alcohol	(1)	3.776	41	47105	47.521
60) Benzene	(2)	3.831	78	29840	0.945
61) 1,2-Dichloroethane	(2)	3.843	62	10641	0.949
61) 1,2-Dichloroethane	(2)	3.849	98	555	0.546
65) t-Amyl methyl ether	(2)	3.971	73	24387	0.966
66)*Fluorobenzene	(2)	4.104	96	1227784	50.000
67) n-Heptane	(2)	4.123	43	15319	1.034
69) n-Butanol	(1)	4.433	56	67751	83.485
71) Trichloroethene	(2)	4.469	95	7176	0.909
72) Methylcyclohexane	(2)	4.664	83	10295	0.756
72) Methylcyclohexane	(2)	4.664	98	4289	0.721
73) 1,2-Dichloropropane	(2)	4.676	63	7445	0.883
74) Dibromomethane	(2)	4.792	93	5194	0.928
75) 1,4-Dioxane	(1)	4.816	88	5963	34.009
76) Methyl Methacrylate	(2)	4.834	69	8861	0.894
78) Bromodichloromethane	(2)	4.968	83	8654	0.850
79) 2-Nitropropane	(2)	5.199	41	9132	2.120
80) 2-Chloroethyl Vinyl Ether	(2)	5.309	63	6056	0.822
81) cis-1,3-Dichloropropene	(2)	5.437	75	10868	0.833
82) 4-Methyl-2-pentanone	(2)	5.619	43	30507	1.731
83)$Toluene-d8	(3)	5.717	98	1198706	49.887
83)$Toluene-d8	(3)	5.717	100	769285	49.242
88) Toluene	(3)	5.783	92	18261	0.910
89) trans-1,3-Dichloropropene	(3)	6.045	75	10349	0.806

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	21217	1.639
91) Ethyl Methacrylate	(3)	6.191	69	13526	0.856
92) 1,1,2-Trichloroethane	(3)	6.228	97	7462	0.914
93) Tetrachloroethene	(3)	6.374	166	7709	0.885
94) 1,3-Dichloropropane	(3)	6.398	76	12891	0.915
96) 2-Hexanone	(3)	6.544	43	27028	1.863
97) Dibromochloromethane	(3)	6.647	129	5856	0.709
99) 1,2-Dibromoethane	(3)	6.751	107	7810	0.876
100)*Chlorobenzene-d5	(3)	7.280	117	902733	50.000
102) Chlorobenzene	(3)	7.310	112	20351	0.912
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	6503	0.851
104) Ethylbenzene	(3)	7.450	91	35000	0.894
106) m+p-Xylene	(3)	7.572	106	26849	1.733
107) o-Xylene	(3)	7.943	106	13319	0.872
109) Styrene	(3)	7.961	104	21710	0.838
108) Xylene (Total)	(3)		106	40168	2.605
110) Bromoform	(3)	8.095	173	3584	0.558
111) Isopropylbenzene	(3)	8.284	105	33676	0.859
112) Cyclohexanone	(1)	8.332	55	33899M	39.807
114)$4-Bromofluorobenzene	(3)	8.399	95	451364	49.363
114)$4-Bromofluorobenzene	(3)	8.399	174	389056	49.412
115) Bromobenzene	(4)	8.509	156	9569	0.925
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	13498	0.940
117) 1,2,3-Trichloropropane	(4)	8.564	110	4816	1.073
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	40318	7.886
119) n-Propylbenzene	(4)	8.631	91	40956	0.909
120) 2-Chlorotoluene	(4)	8.685	126	8515	0.902
121) 4-Chlorotoluene	(4)	8.777	126	8833	0.892
122) 1,3,5-Trimethylbenzene	(4)	8.783	105	29556	0.877
125) Pentachloroethane	(4)	9.032	167	4952	0.773
124) tert-Butylbenzene	(4)	9.032	134	6731	0.886
126) 1,2,4-Trimethylbenzene	(4)	9.075	105	30498	0.888
127) sec-Butylbenzene	(4)	9.202	105	37825	0.905
129) 1,3-Dichlorobenzene	(4)	9.263	146	17925	0.934
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	500668	50.000
130) p-Isopropyltoluene	(4)	9.318	119	34446	0.904
133) 1,4-Dichlorobenzene	(4)	9.330	146	19260	0.952
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	33127	0.934

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on 10/23/2013 at 22:16.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	9.440	91	21841	0.766
136) 1,3-Diethylbenzene	(4)	9.543	119	19440	0.846
137) 1,4-Diethylbenzene	(4)	9.598	119	20848	0.889
138) 1,2-Dichlorobenzene	(4)	9.604	146	17948	0.939
139) n-Butylbenzene	(4)	9.616	92	15896	0.833
140) 1,2-Diethylbenzene	(4)	9.683	119	17291	0.909
141) Diethylbenzene (total)	(4)		100	57579	2.643
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	2525	0.691
144) 1,3,5-Trichlorobenzene	(4)	10.304	180	15659	0.986
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	16552	1.091
147) Hexachlorobutadiene	(4)	10.833	225	7884	1.047
148) Naphthalene	(4)	10.869	128	53439	1.102
149) 1,2,3-Trichlorobenzene	(4)	11.027	180	16510	1.128
150) 2-Methylnaphthalene	(4)	11.593	142	41006	1.365

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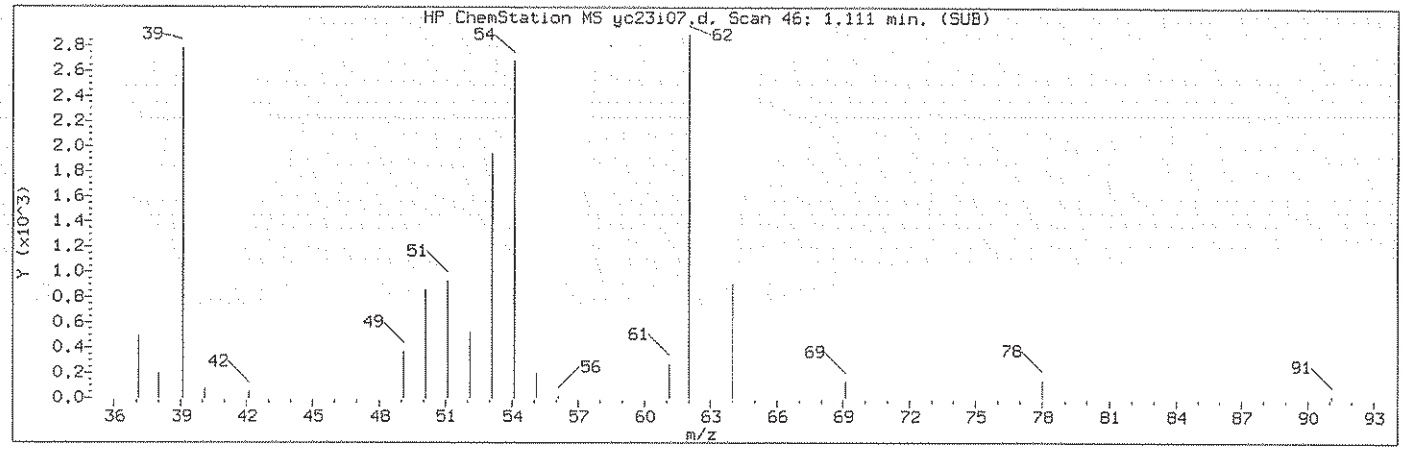
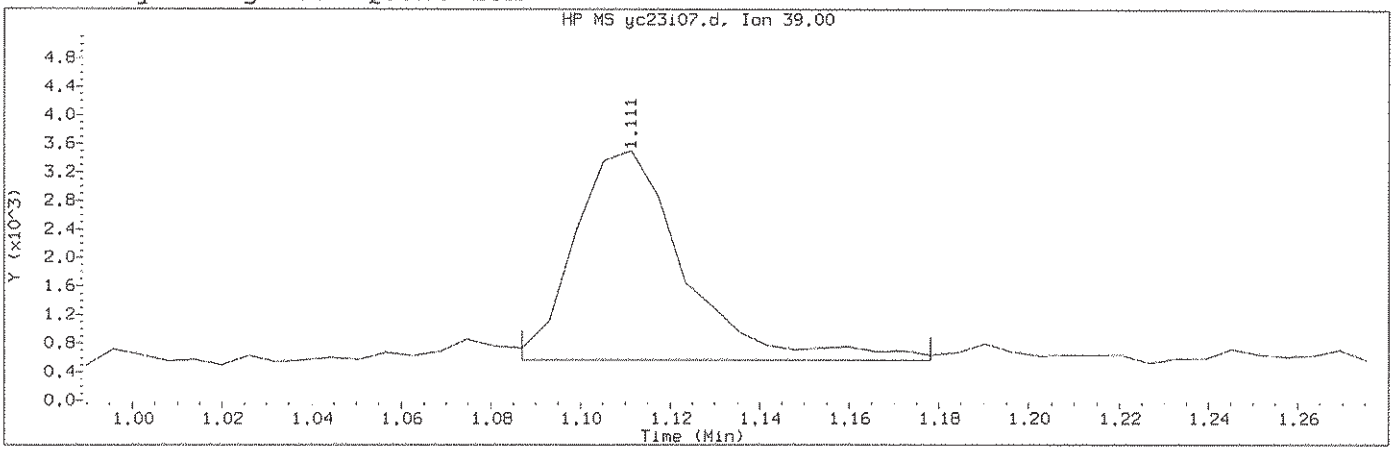
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

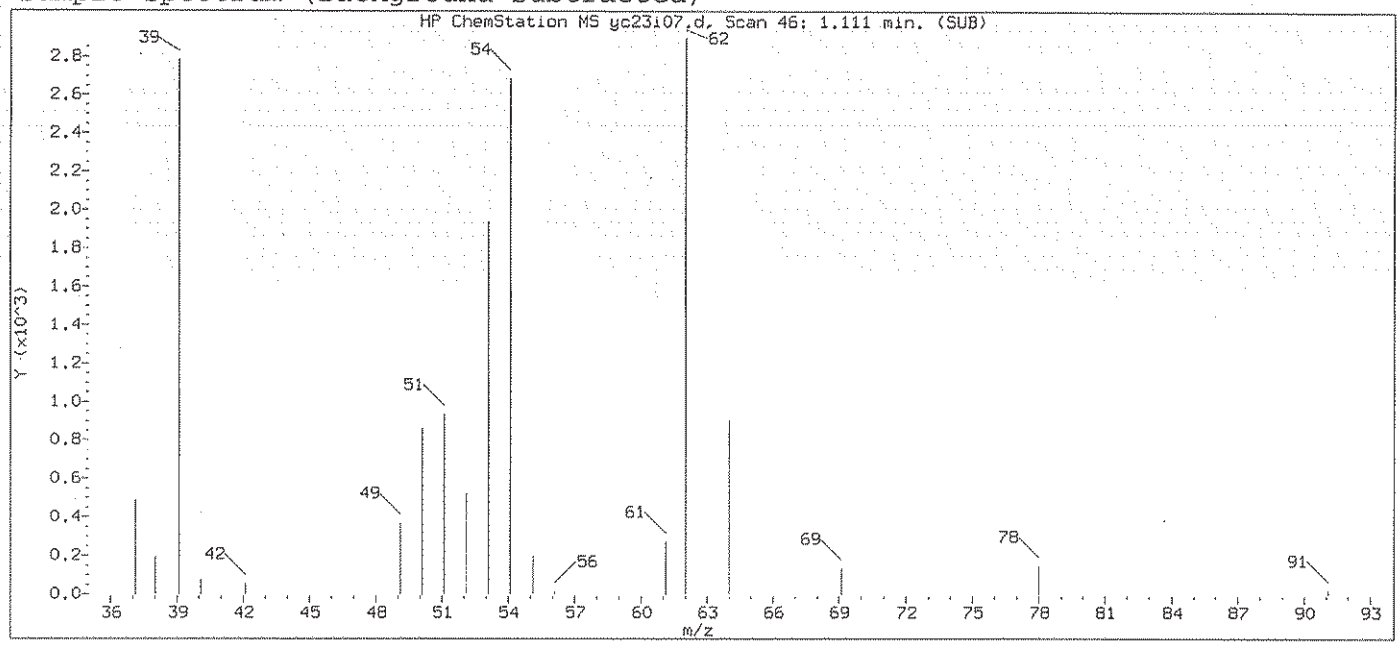
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 46		
Retention Time (minutes)	: 1.111		
Quant Ion	: 39.00		
Area (flag)	: 5085M		
On-Column Amount (ng)	: 0.8748		
Integration start scan	: 41	Integration stop scan:	56
Y at integration start	: 561	Y at integration end:	561

Reason for manual integration: improper integration

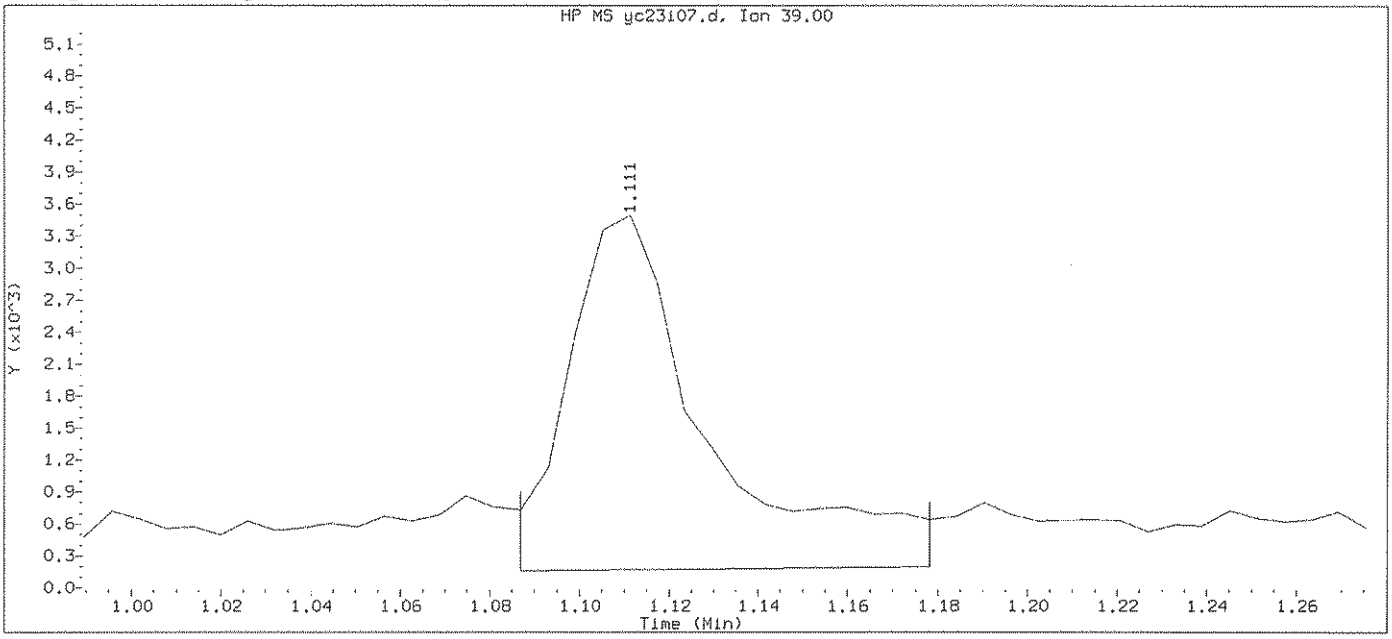
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 46
Retention Time (minutes): 1.111
Quant Ion : 39.00
Area : 7145
On-column Amount (ng) : 1.2117
Integration start scan : 41 Integration stop scan: 56
Y at integration start : 158 Y at integration end: 195

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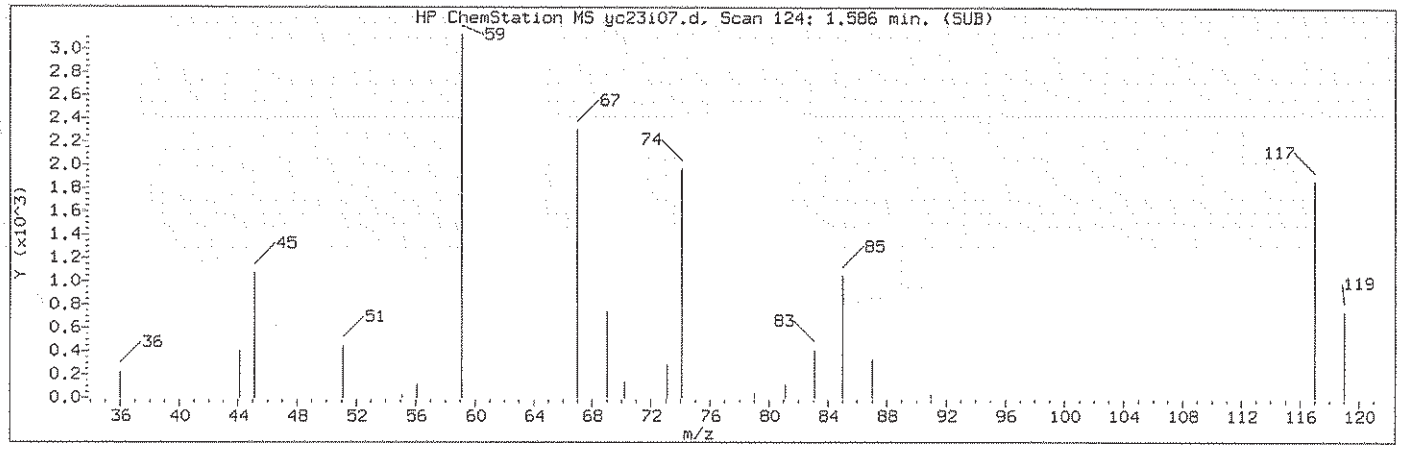
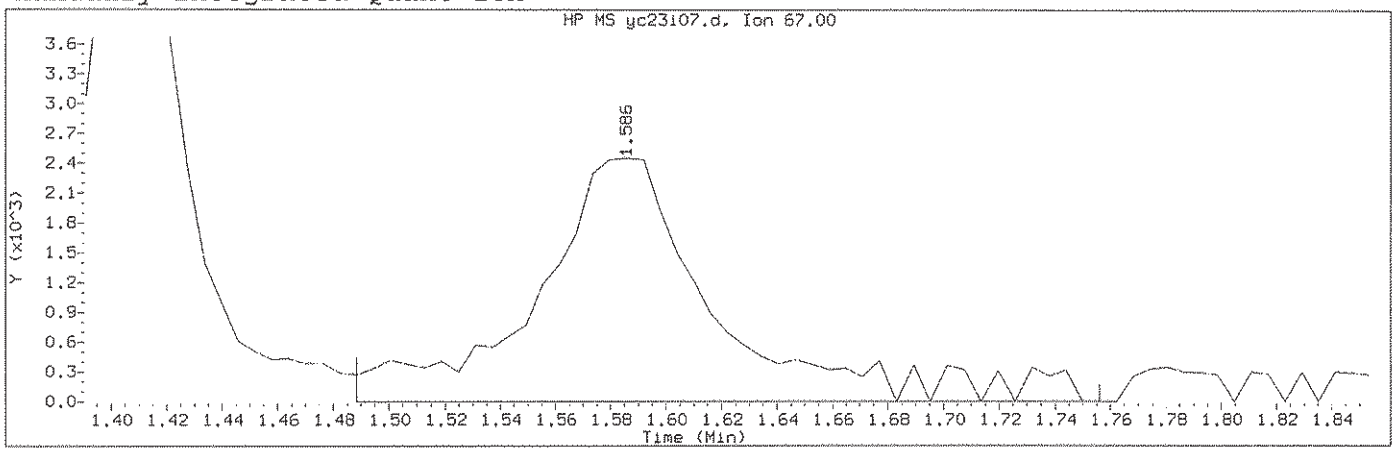
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

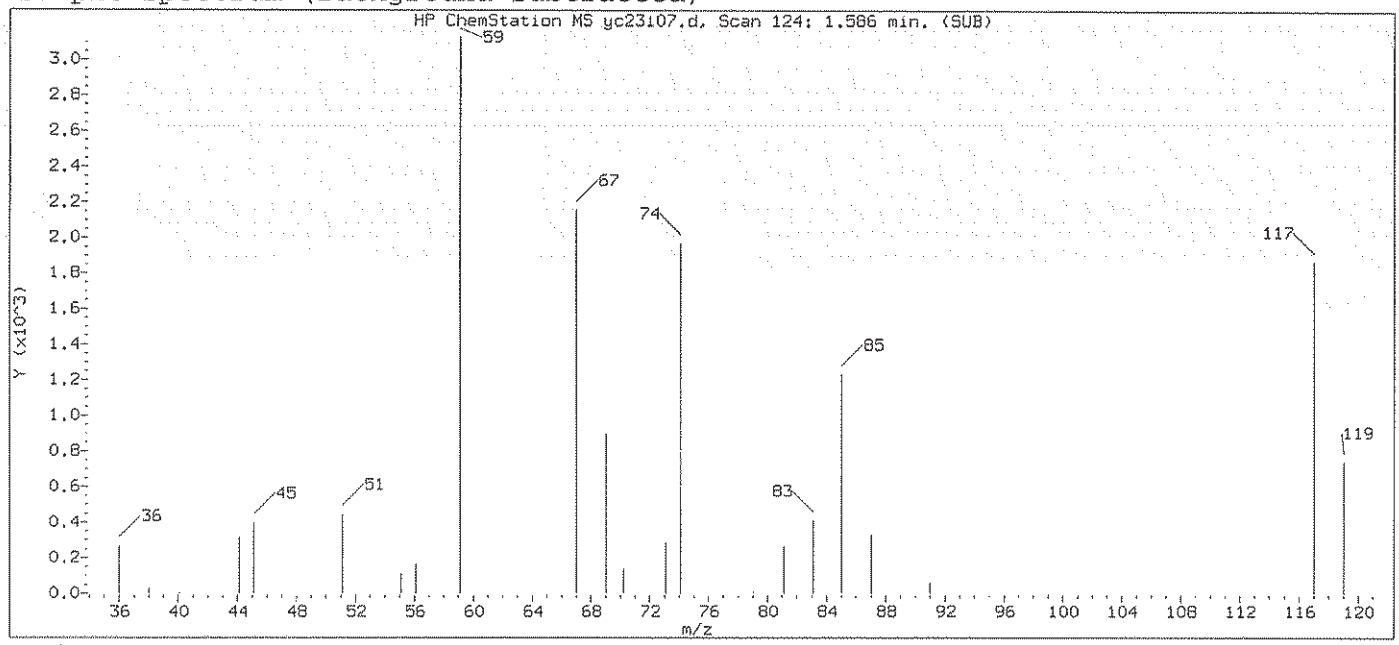
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 124
Retention Time (minutes): 1.586
Quant Ion : 67.00
Area (flag) : 11291M
On-Column Amount (ng) : 1.2747
Integration start scan : 107 Integration stop scan: 151
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

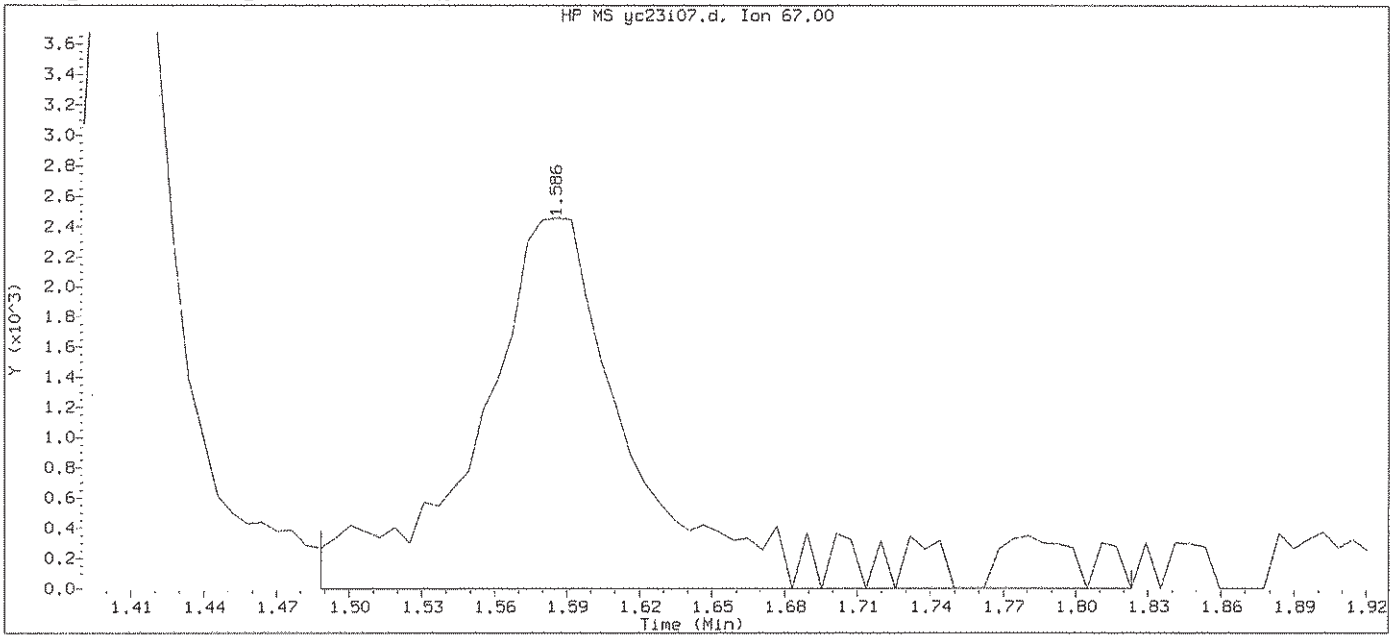
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 124
Retention Time (minutes): 1.586
Quant Ion : 67.00
Area : 12109
On-column Amount (ng) : 1.3684
Integration start scan : 107 Integration stop scan: 162
Y at integration start : 0 Y at integration end: 0

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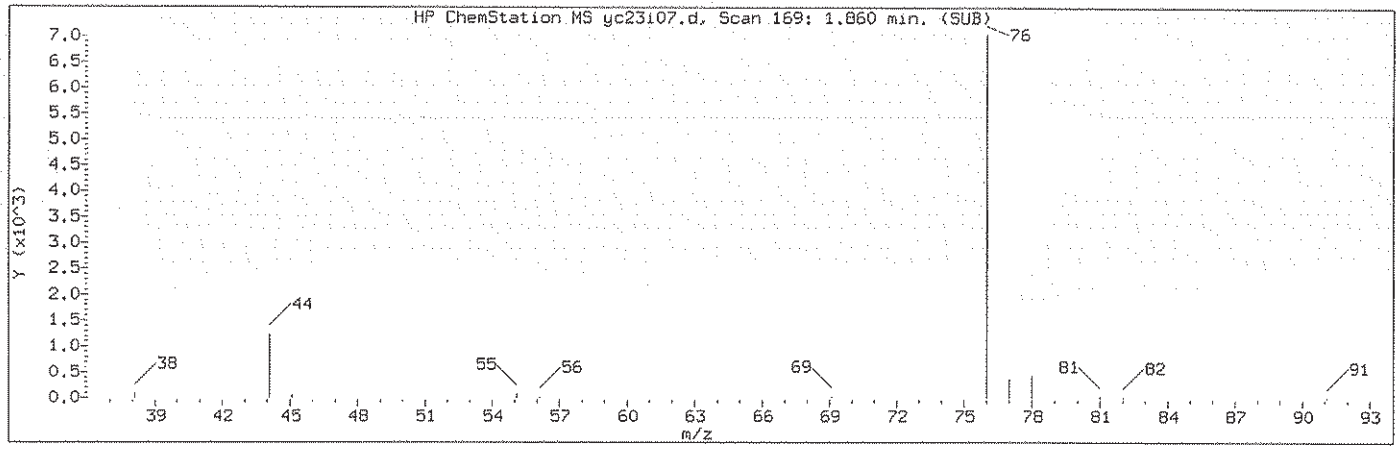
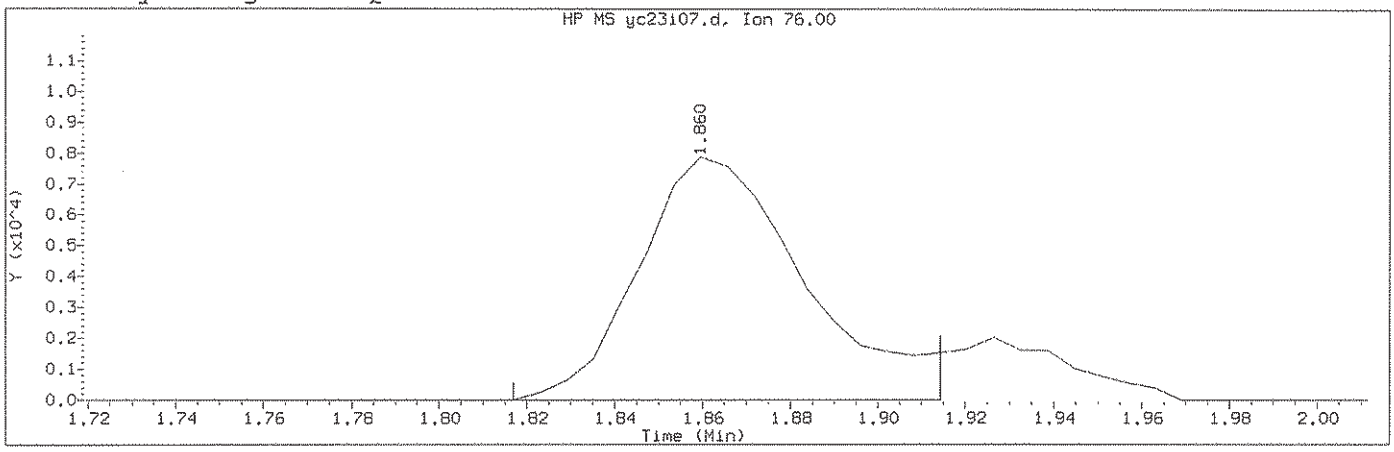
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

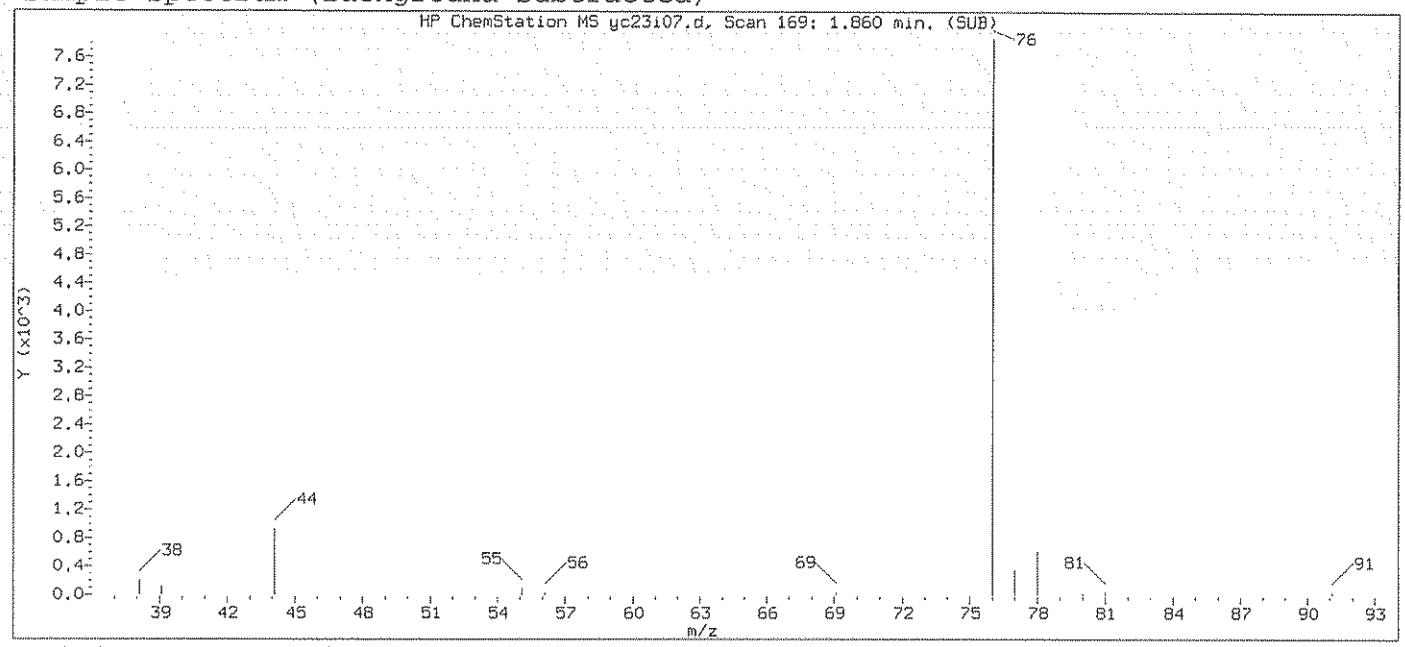
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 169
Retention Time (minutes): 1.860
Quant Ion : 76.00
Area (flag) : 20759M
On-Column Amount (ng) : 0.9608
Integration start scan : 161 Integration stop scan: 177
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

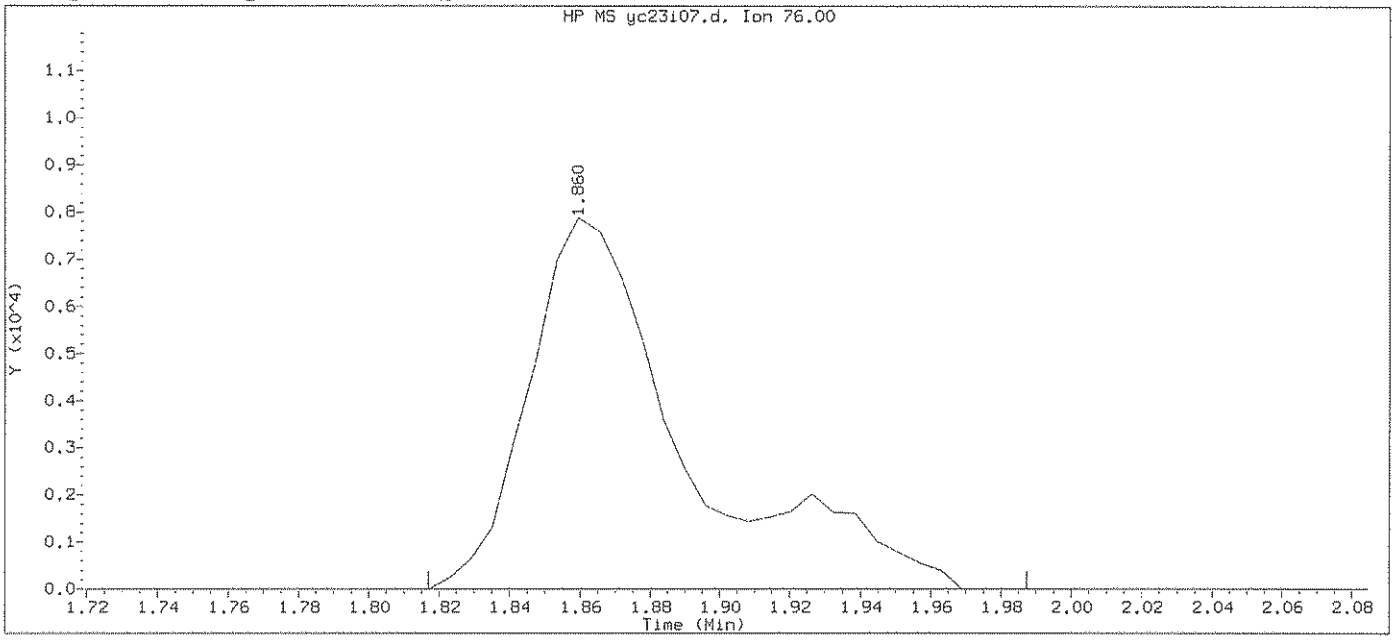
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 169
Retention Time (minutes): 1.860
Quant Ion : 76.00
Area : 24276
On-column Amount (ng) : 1.1306
Integration start scan : 161 Integration stop scan: 189
Y at integration start : 0 Y at integration end: 0

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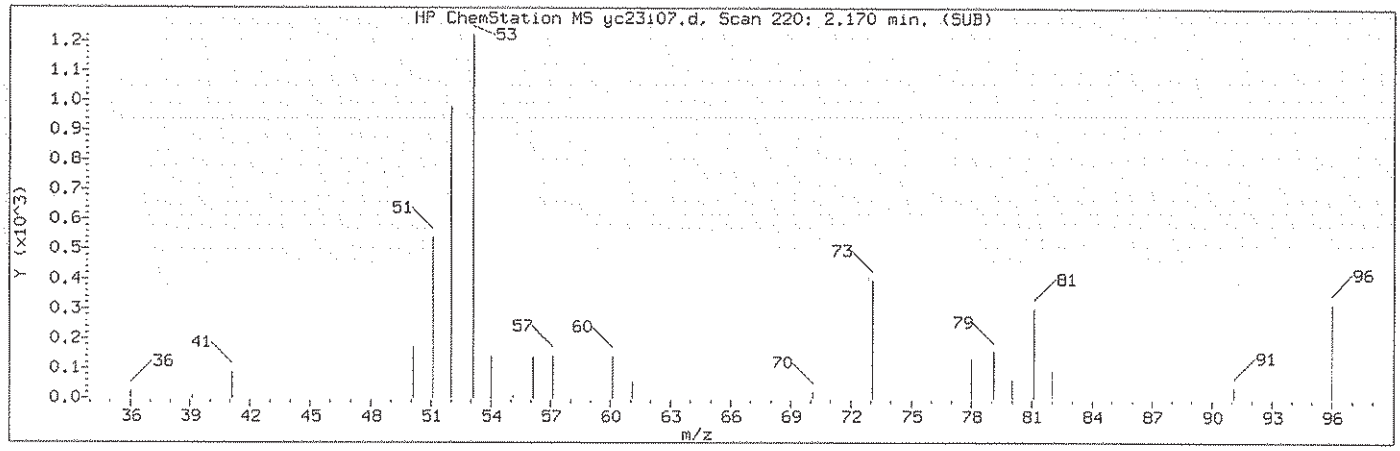
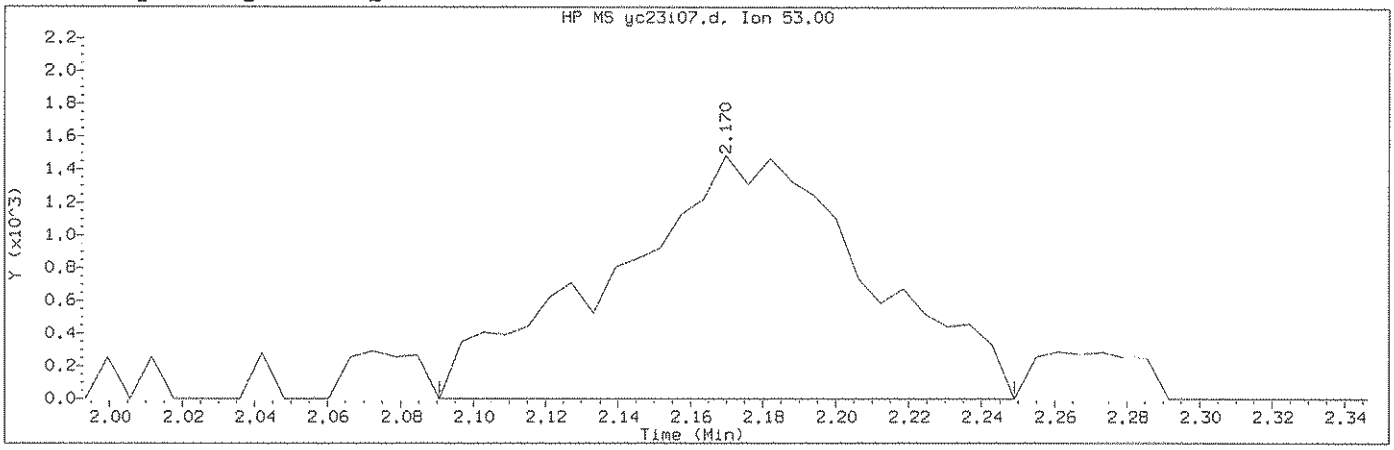
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

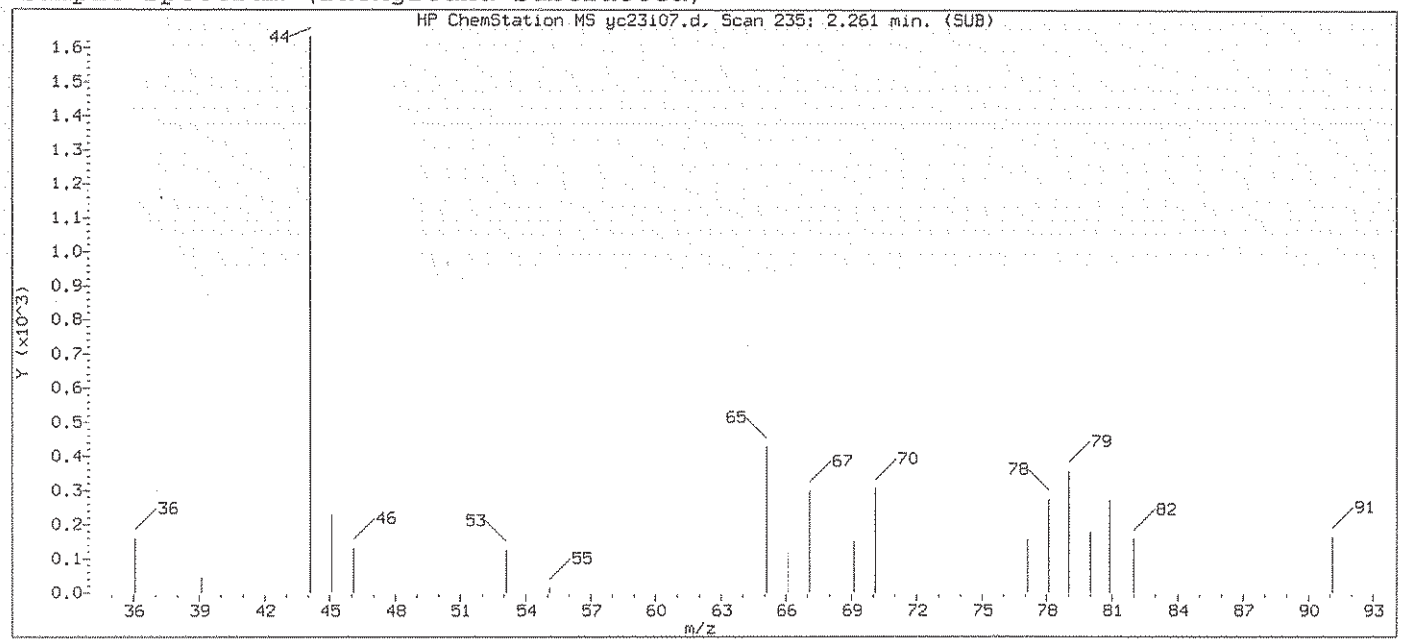
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 220
Retention Time (minutes): 2.170
Quant Ion : 53.00
Area (flag) : 7325MA
On-Column Amount (ng) : 1.1463
Integration start scan : 206 Integration stop scan: 232
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

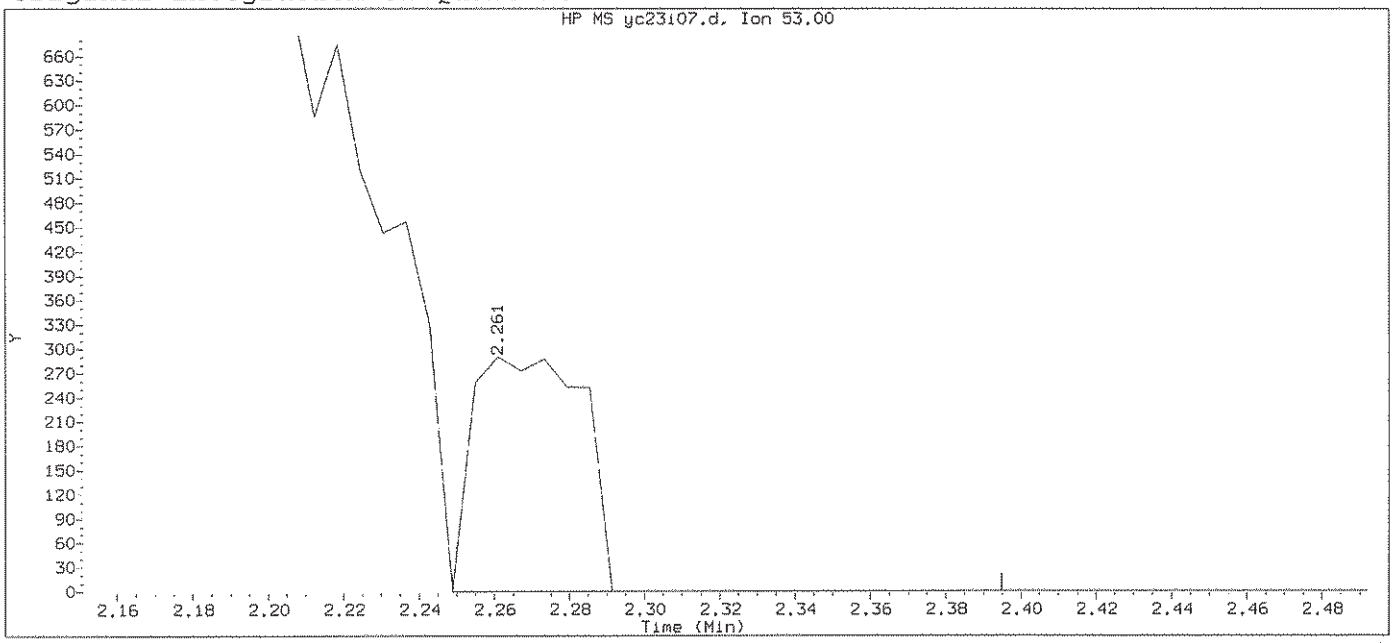
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: KVM 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 235
Retention Time (minutes): 2.261
Quant Ion : 53.00
Area : 588
On-column Amount (ng) : 0.0908
Integration start scan : 232 Integration stop scan: 256
Y at integration start : 0 Y at integration end: 0

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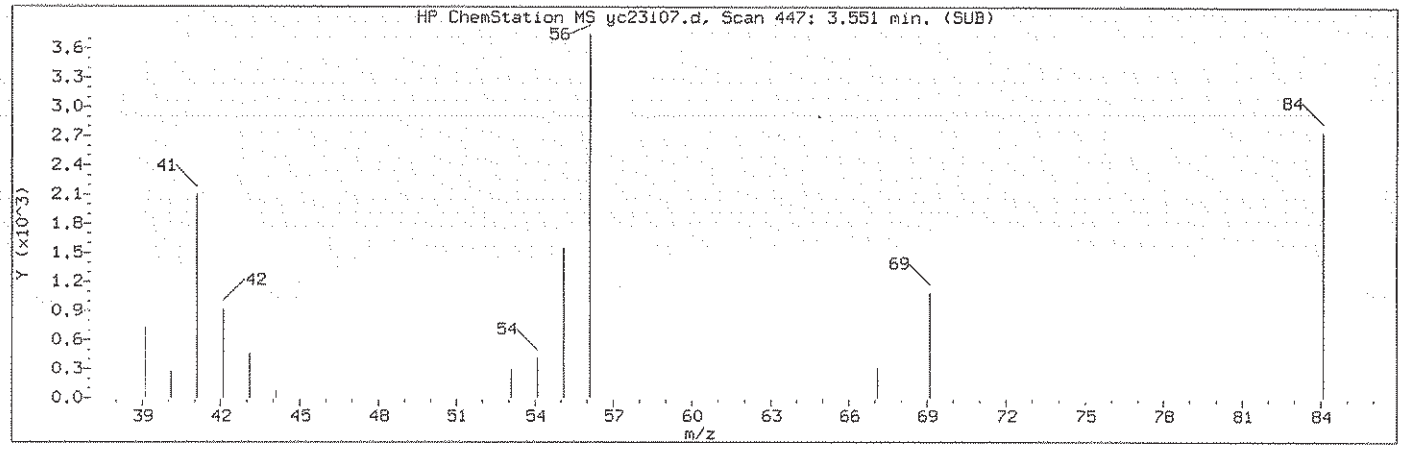
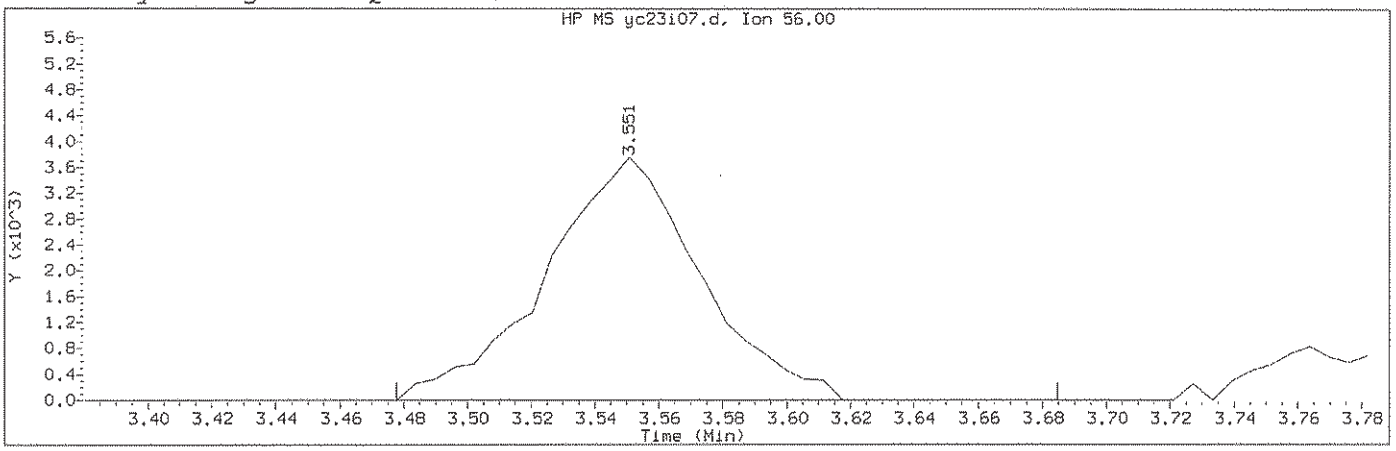
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

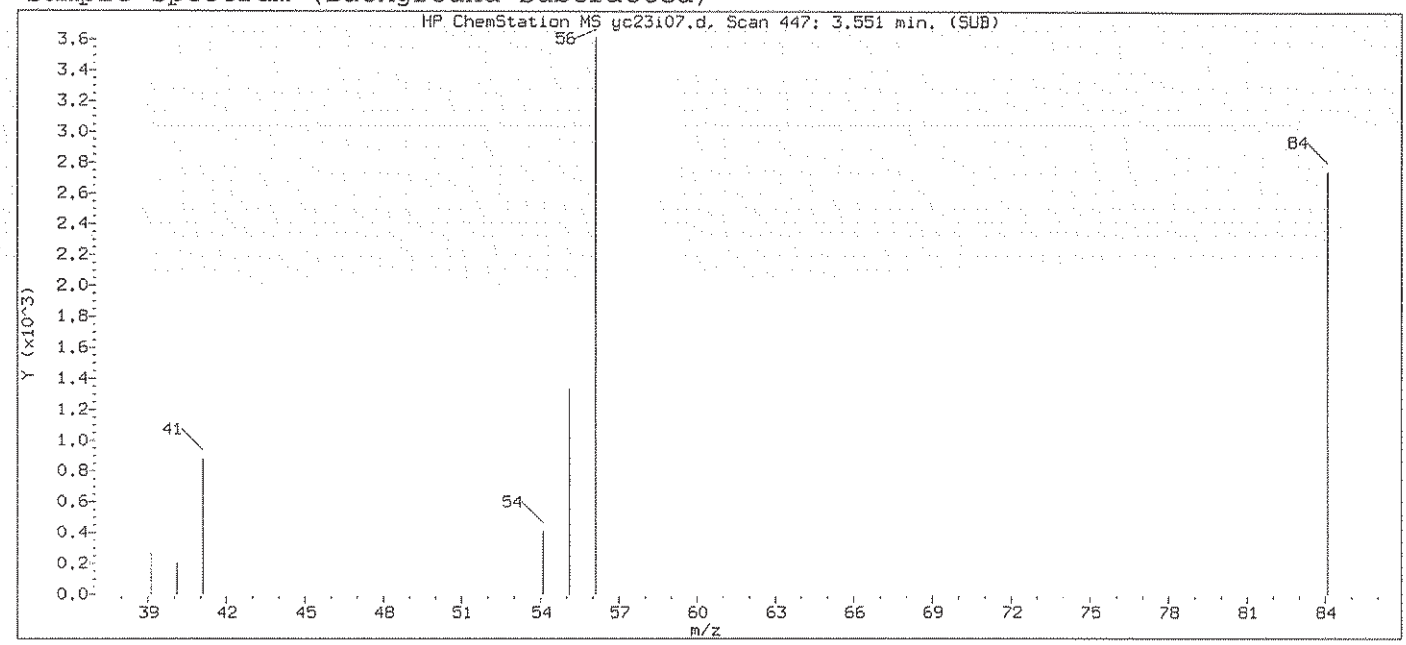
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 447
Retention Time (minutes): 3.551
Quant Ion : 56.00
Area (flag) : 12629M
On-Column Amount (ng) : 0.8620
Integration start scan : 434 Integration stop scan: 468
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

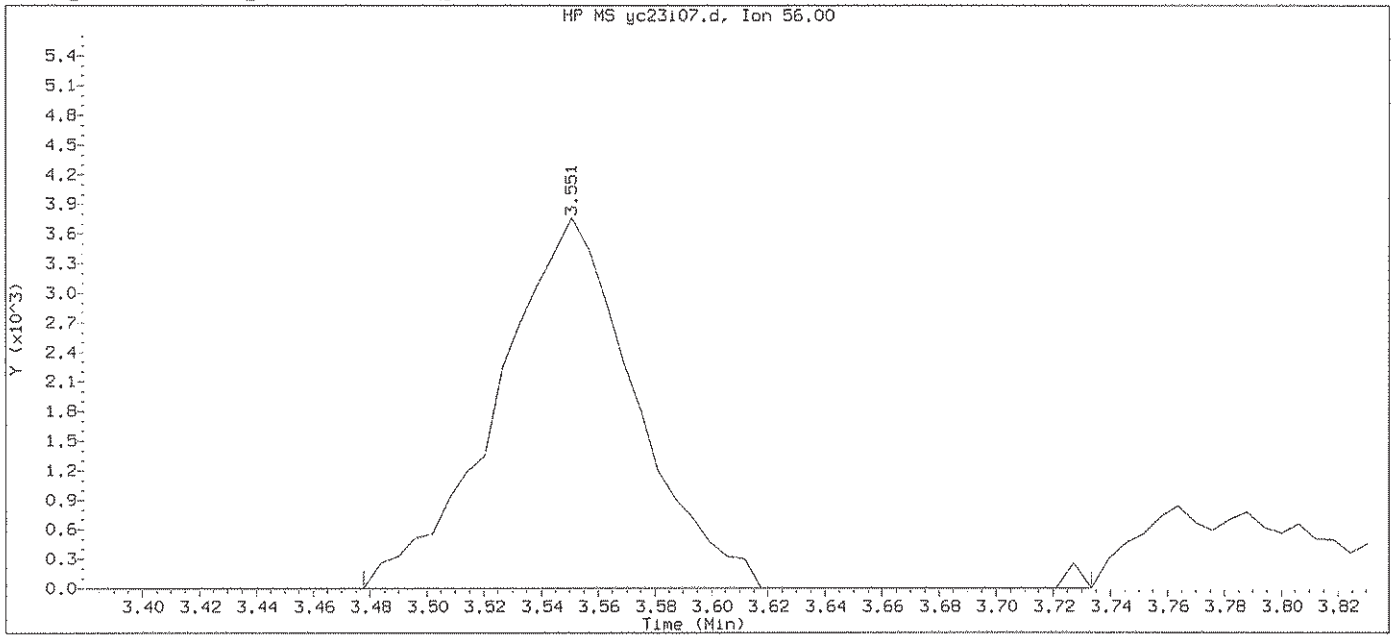
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 54		
Compound Name	: Cyclohexane		
Scan Number	: 447		
Retention Time (minutes)	: 3.551		
Quant Ion	: 56.00		
Area	: 12721		
On-column Amount (ng)	: 0.8657		
Integration start scan	: 434	Integration stop scan:	476
Y at integration start	: 0	Y at integration end:	0

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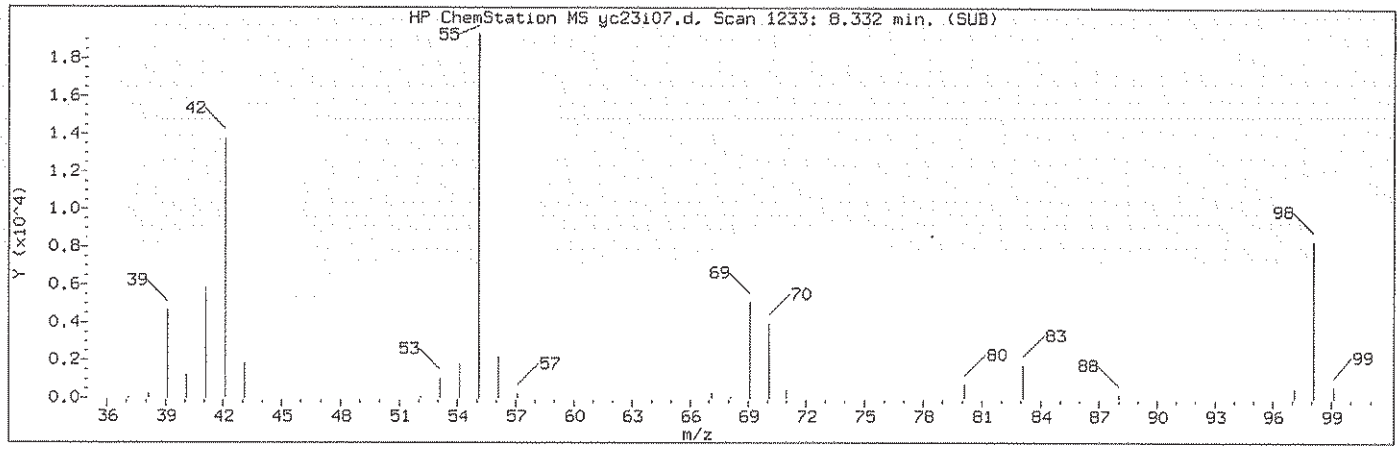
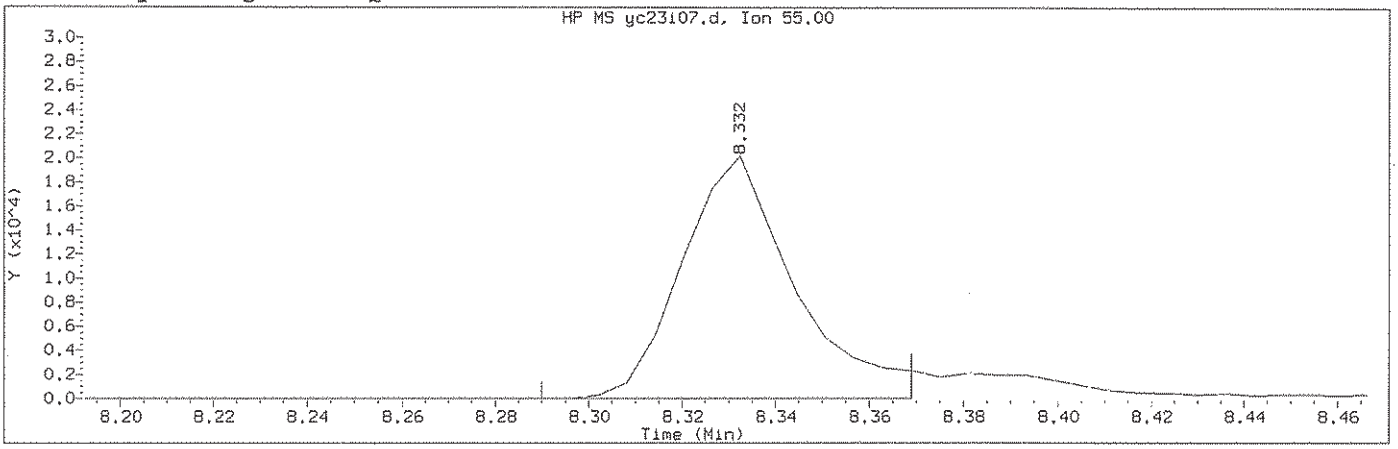
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 22:16 kas02648

Sample Name: VSTD001 Lab Sample ID: VSTD001

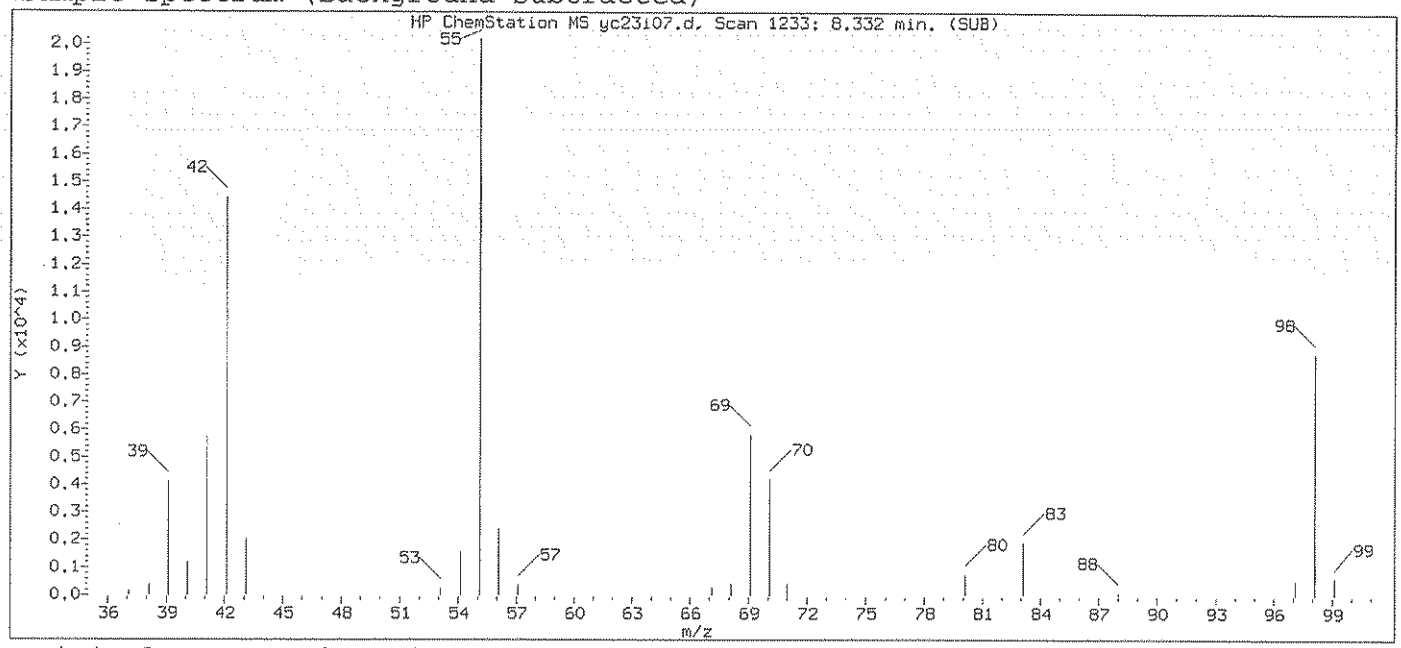
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1233
Retention Time (minutes): 8.332
Quant Ion : 55.00
Area (flag) : 33899M
On-Column Amount (ng) : 39.8067
Integration start scan : 1225 Integration stop scan: 1238
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

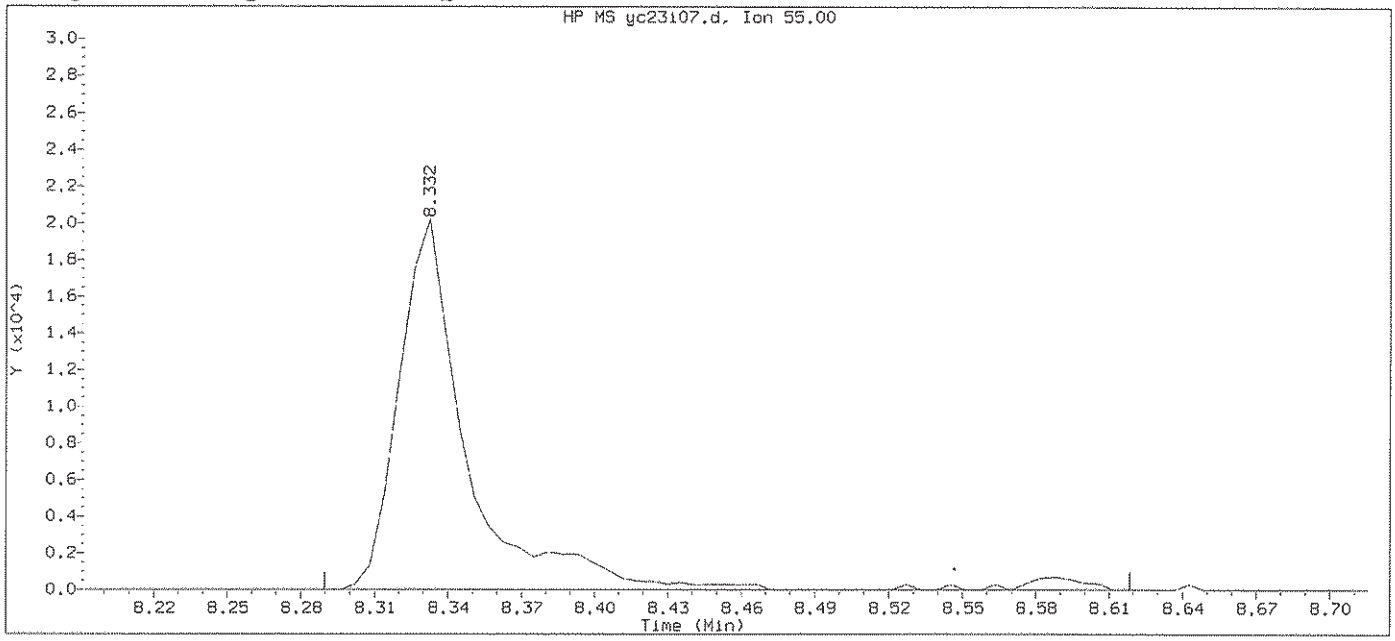
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:16. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23i07.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:22 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 14:38
Date, time and analyst ID of latest file update: 23-Oct-2013 14:38 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1233		
Retention Time (minutes)	: 8.332		
Quant Ion	: 55.00		
Area	: 40340		
On-column Amount (ng)	: 45.3445		
Integration start scan	: 1225	Integration stop scan:	1279
Y at integration start	: 0	Y at integration end:	0

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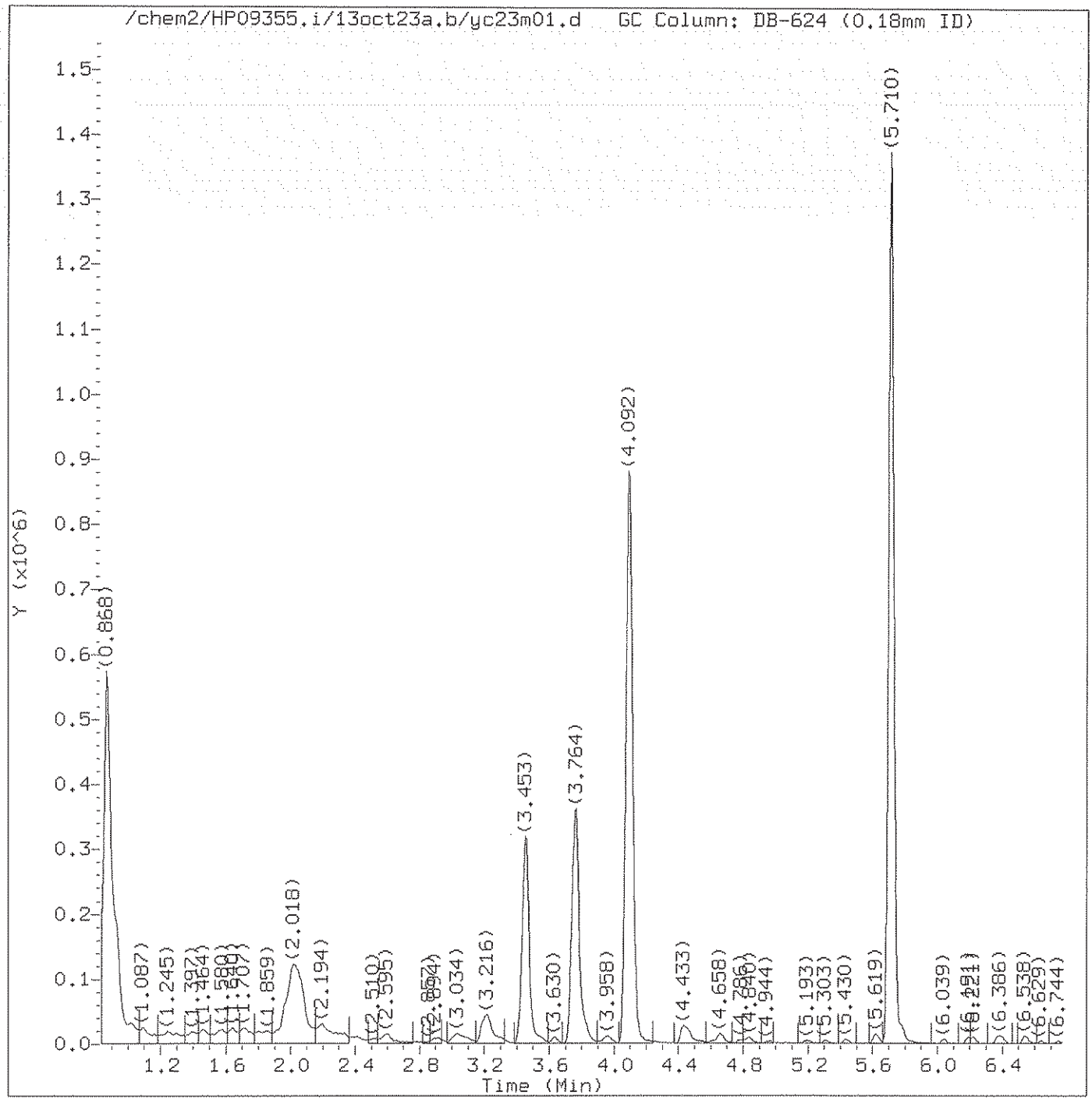
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

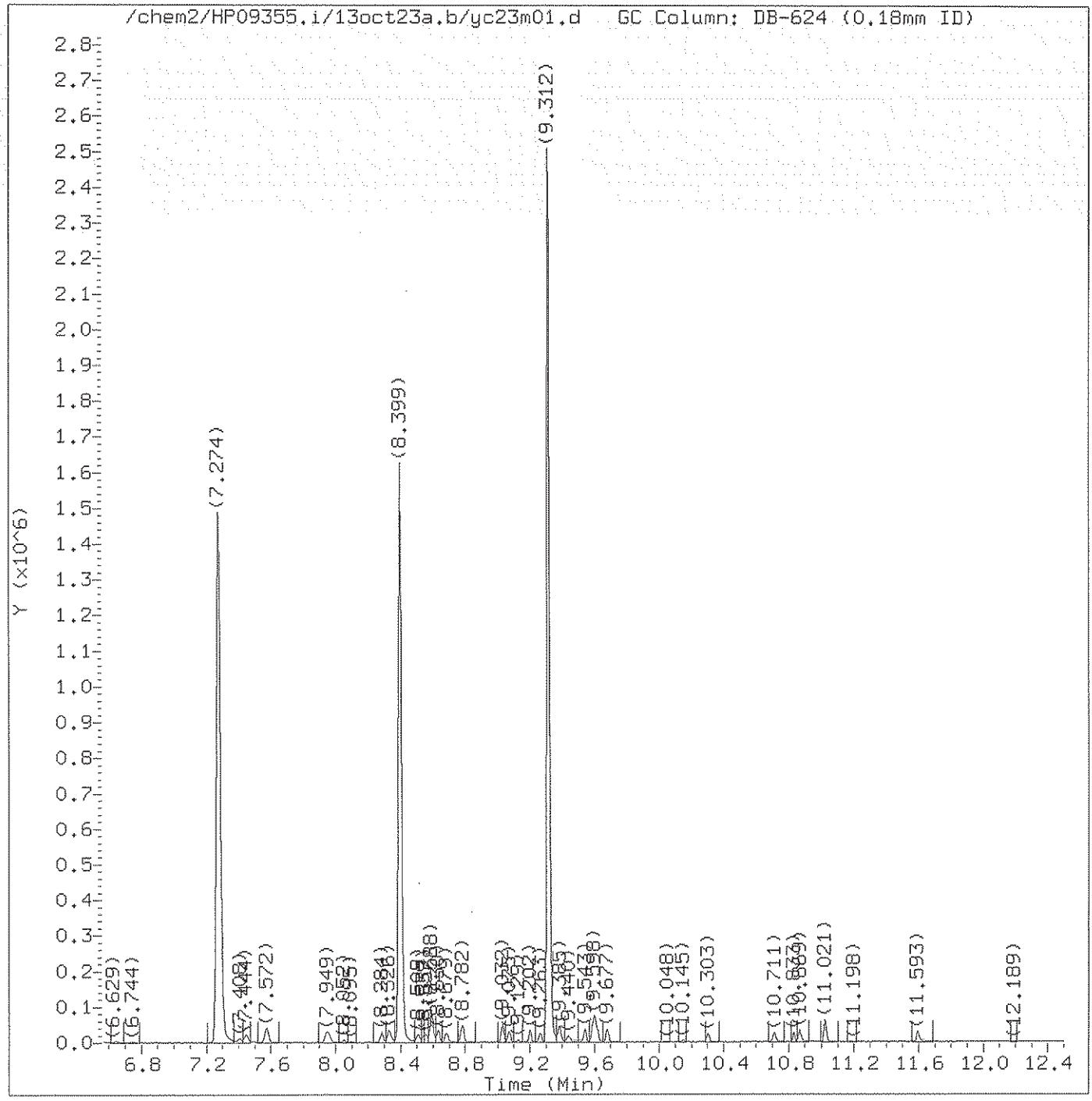
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	0.989	85	4069	0.411
4) Chloromethane	(2)	1.020	50	6273	0.522
6) Vinyl Chloride	(2)	1.087	62	4149	0.404
5) 1,3-Butadiene	(2)	1.099	39	2930M	0.502
8) Bromomethane	(2)	1.245	94	3235	0.486
9) Chloroethane	(2)	1.300	64	2752	0.465
10) Dichlorofluoromethane	(2)	1.391	67	7901	0.553
11) n-Pentane	(2)	1.458	43	6955M	0.508
12) Trichlorofluoromethane	(2)	1.464	101	4789	0.405
14) Ethyl ether	(2)	1.567	59	3727	0.478
15) Freon 123a	(2)	1.580	67	5750M	0.646
16) Acrolein	(1)	1.646	56	17428	4.899
17) 1,1-Dichloroethene	(2)	1.701	96	2754	0.444
19) Freon 113	(2)	1.726	101	2362	0.363
18) Acetone	(2)	1.744	58	1950	1.158
21) 2-Propanol	(1)	1.805	45	12915	9.980
22) Methyl Iodide	(2)	1.805	142	5375	0.454
23) Carbon Disulfide	(2)	1.853	76	10183	0.469
25) Allyl Chloride	(2)	1.920	41	6603	0.547
27) Methyl Acetate	(2)	1.932	43	5324	0.552
28) Methylene Chloride	(2)	1.999	84	4390	0.579
31) Acrylonitrile	(2)	2.018	53	4363	0.679
29)*t-Butyl alcohol-d10	(1)	2.030	65	407504	250.000
30) t-Butyl alcohol	(1)	2.084	59	25193	9.898
32) trans-1,2-Dichloroethene	(2)	2.188	96	3418	0.473
33) Methyl Tertiary Butyl Ether	(2)	2.194	73	12483	0.476
34) n-Hexane	(2)	2.413	57	6195	0.510
36) 1,1-Dichloroethane	(2)	2.522	63	5941	0.432
38) di-Isopropyl ether	(2)	2.595	45	14017	0.489
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	5131	0.414
40) Ethyl t-butyl ether	(2)	2.912	59	12619	0.471
44) 2-Butanone	(2)	3.015	43	12673	1.348
42) cis-1,2-Dichloroethene	(2)	3.021	96	3353	0.412
45) 2,2-Dichloropropane	(2)	3.034	77	4807	0.440
43) 1,2-Dichloroethene (Total)	(2)		96	6771	0.884
47) Propionitrile	(1)	3.076	54	24591	8.865
48) Methacrylonitrile	(2)	3.210	67	28630	4.606
49) Bromochloromethane	(2)	3.234	128	1595	0.383

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.277	71	2600	1.018
51) Chloroform	(2)	3.313	83	5674	0.439
52)$Dibromofluoromethane	(2)	3.453	113	283949	49.287
53) 1,1,1-Trichloroethane	(2)	3.490	97	5641	0.451
54) Cyclohexane	(2)	3.545	56	6177	0.419
55) 1,1-Dichloropropene	(2)	3.636	75	4314	0.424
56) Carbon Tetrachloride	(2)	3.642	117	3383M	0.359
58) Isobutyl Alcohol	(1)	3.757	41	20744	23.761
57)$1,2-Dichloroethane-d4	(2)	3.764	102	73521	49.230
60) Benzene	(2)	3.818	78	14535	0.458
61) 1,2-Dichloroethane	(2)	3.837	62	5472M	0.485
65) t-Amyl methyl ether	(2)	3.958	73	11826	0.466
66)*Fluorobenzene	(2)	4.092	96	1234066	50.000
67) n-Heptane	(2)	4.116	43	8016	0.538
69) n-Butanol	(1)	4.433	56	29928	41.873
71) Trichloroethene	(2)	4.457	95	3220	0.406
72) Methylcyclohexane	(2)	4.658	83	5217	0.381
73) 1,2-Dichloropropane	(2)	4.676	63	3713	0.438
74) Dibromomethane	(2)	4.786	93	2479	0.441
75) 1,4-Dioxane	(1)	4.816	88	1955	12.660
76) Methyl Methacrylate	(2)	4.840	69	4562	0.458
78) Bromodichloromethane	(2)	4.956	83	4220	0.412
79) 2-Nitropropane	(2)	5.181	41	6161	1.423
80) 2-Chloroethyl Vinyl Ether	(2)	5.303	63	2831	0.382
81) cis-1,3-Dichloropropene	(2)	5.430	75	5117	0.390
82) 4-Methyl-2-pentanone	(2)	5.613	43	15168	0.856
83)$Toluene-d8	(3)	5.710	98	1212175	50.051
88) Toluene	(3)	5.783	92	8975	0.444
89) trans-1,3-Dichloropropene	(3)	6.045	75	4815	0.372
90) 1,3-Dichloropropene (total)	(3)		100	9932	0.762
91) Ethyl Methacrylate	(3)	6.185	69	6556	0.412
92) 1,1,2-Trichloroethane	(3)	6.215	97	3831	0.466
93) Tetrachloroethene	(3)	6.373	166	3478	0.396
94) 1,3-Dichloropropane	(3)	6.398	76	6477	0.456
96) 2-Hexanone	(3)	6.544	43	14844	1.015
97) Dibromochloromethane	(3)	6.641	129	2743	0.329
99) 1,2-Dibromoethane	(3)	6.751	107	3588	0.399
100)*Chlorobenzene-d5	(3)	7.280	117	909900	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	7.304	112	9875	0.439
103) 1,1,1,2-Tetrachloroethane	(3)	7.402	131	3005	0.390
104) Ethylbenzene	(3)	7.450	91	16694	0.423
106) m+p-Xylene	(3)	7.572	106	12606	0.807
107) o-Xylene	(3)	7.943	106	6360	0.413
109) Styrene	(3)	7.961	104	10000	0.383
108) Xylene (Total)	(3)		106	18966	1.221
110) Bromoform	(3)	8.095	173	1320	0.204
111) Isopropylbenzene	(3)	8.284	105	16380	0.415
112) Cyclohexanone	(1)	8.326	55	15478M	20.637
114)$4-Bromofluorobenzene	(3)	8.399	95	456116	49.490
115) Bromobenzene	(4)	8.509	156	4732	0.455
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	6536	0.452
117) 1,2,3-Trichloropropane	(4)	8.563	110	2320	0.514
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	20230	3.932
119) n-Propylbenzene	(4)	8.630	91	20259	0.447
120) 2-Chlorotoluene	(4)	8.685	126	4019	0.423
121) 4-Chlorotoluene	(4)	8.776	126	4016	0.403
122) 1,3,5-Trimethylbenzene	(4)	8.782	105	14357	0.424
125) Pentachloroethane	(4)	9.032	167	2155	0.334
124) tert-Butylbenzene	(4)	9.032	134	3193	0.418
126) 1,2,4-Trimethylbenzene	(4)	9.075	105	14464	0.418
127) sec-Butylbenzene	(4)	9.202	105	18100	0.430
129) 1,3-Dichlorobenzene	(4)	9.263	146	8789	0.455
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	503876	50.000
130) p-Isopropyltoluene	(4)	9.318	119	16183	0.422
133) 1,4-Dichlorobenzene	(4)	9.330	146	9417	0.463
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	15399	0.432
135) Benzyl Chloride	(4)	9.440	91	9955	0.347
136) 1,3-Diethylbenzene	(4)	9.543	119	9223	0.399
137) 1,4-Diethylbenzene	(4)	9.598	119	9482	0.402
138) 1,2-Dichlorobenzene	(4)	9.604	146	8356	0.435
139) n-Butylbenzene	(4)	9.616	92	7709	0.401
140) 1,2-Diethylbenzene	(4)	9.677	119	8267	0.432
141) Diethylbenzene (total)	(4)		100	26972	1.232
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	1080	0.294
144) 1,3,5-Trichlorobenzene	(4)	10.303	180	7337	0.459
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	7495	0.491

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

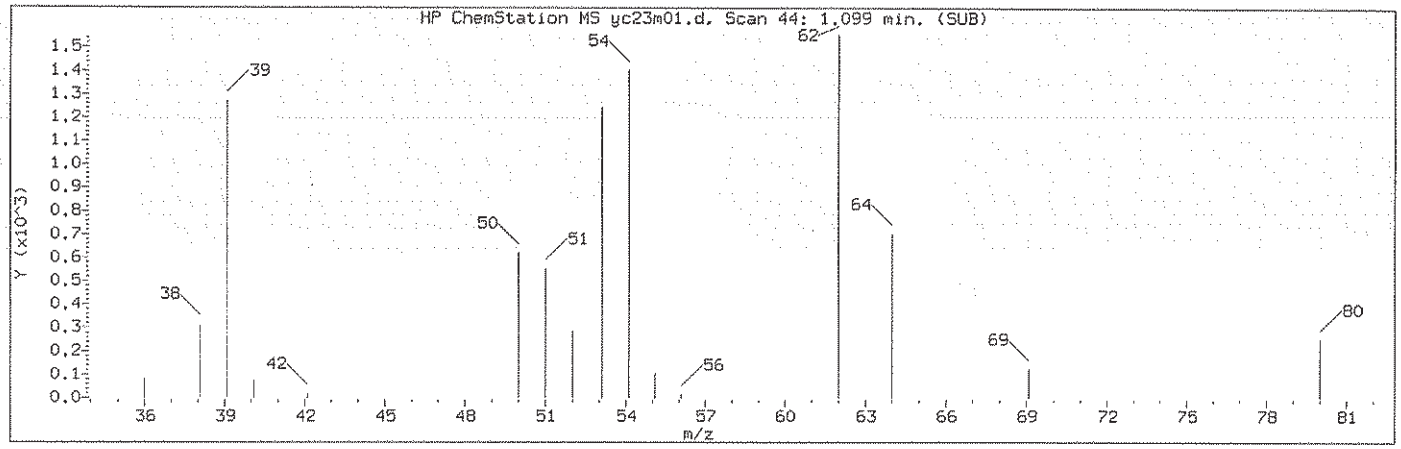
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

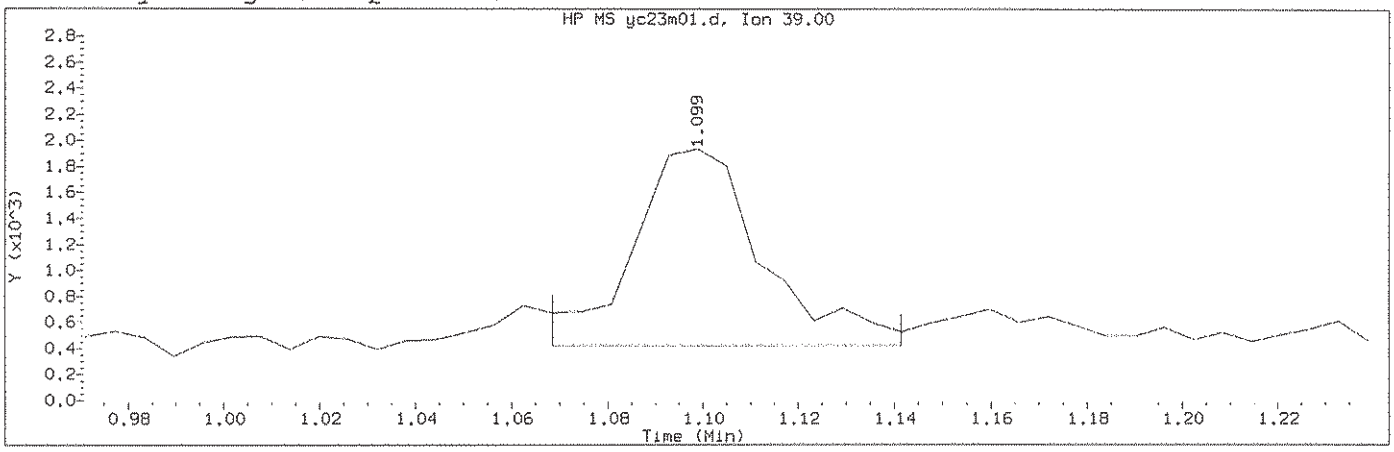
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	10.833	225	3658	0.483
148) Naphthalene	(4)	10.869	128	26625	0.546
149) 1,2,3-Trichlorobenzene	(4)	11.027	180	7753	0.526
150) 2-Methylnaphthalene	(4)	11.593	142	16122	0.533

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

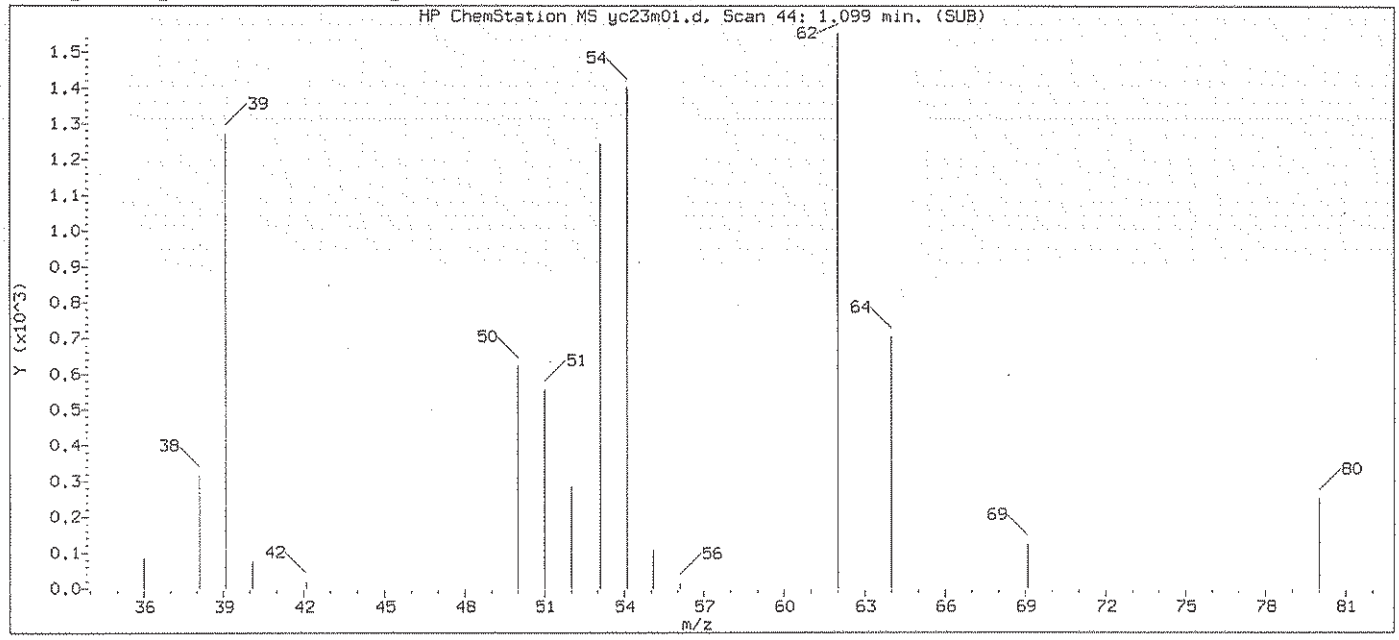
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 44
Retention Time (minutes): 1.099
Quant Ion : 39.00
Area (flag) : 2930M
On-Column Amount (ng) : 0.5015
Integration start scan : 38 Integration stop scan: 50
Y at integration start : 421 Y at integration end: 421

Reason for manual integration: improper integration

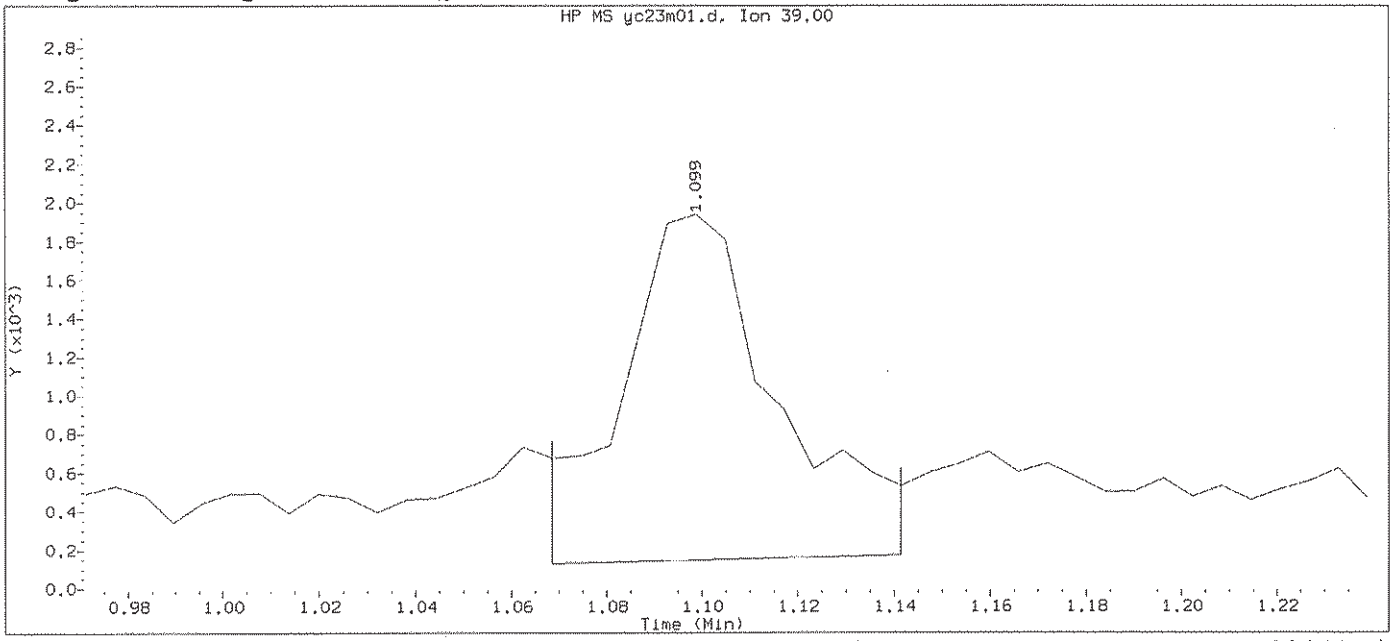
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

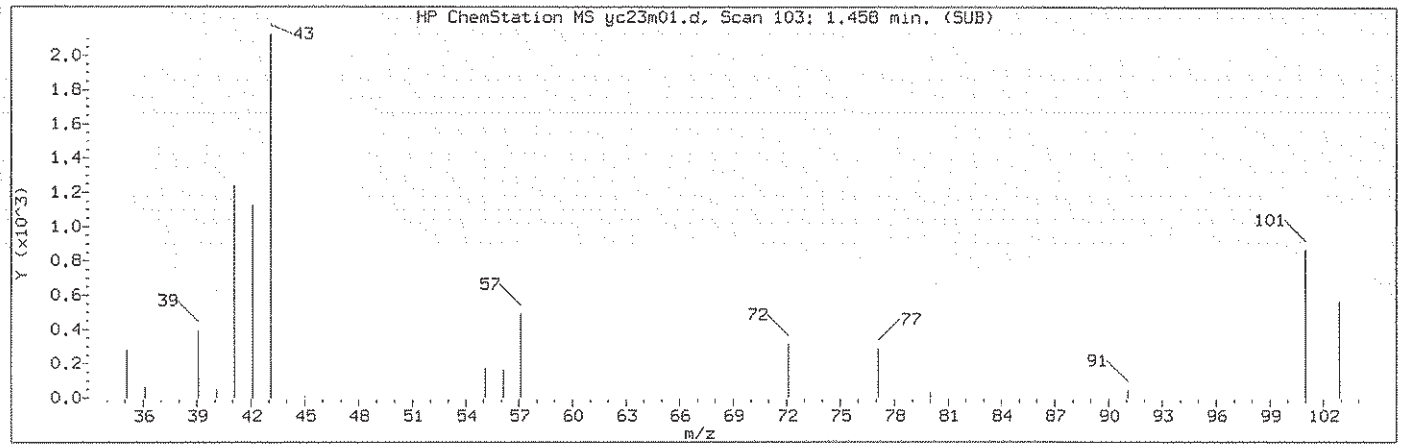
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

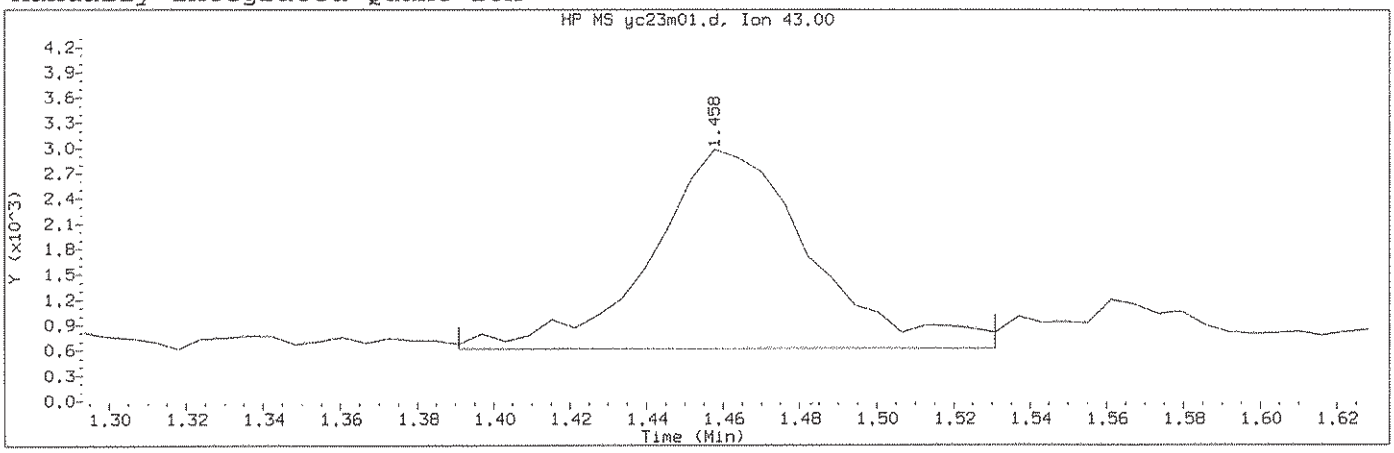
Compound Number	: 5		
Compound Name	: 1,3-Butadiene		
Scan Number	: 44		
Retention Time (minutes)	: 1.099		
Quant Ion	: 39.00		
Area	: 4046		
On-column Amount (ng)	: 0.6927		
Integration start scan	: 38	Integration stop scan:	50
Y at integration start	: 131	Y at integration end:	171

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

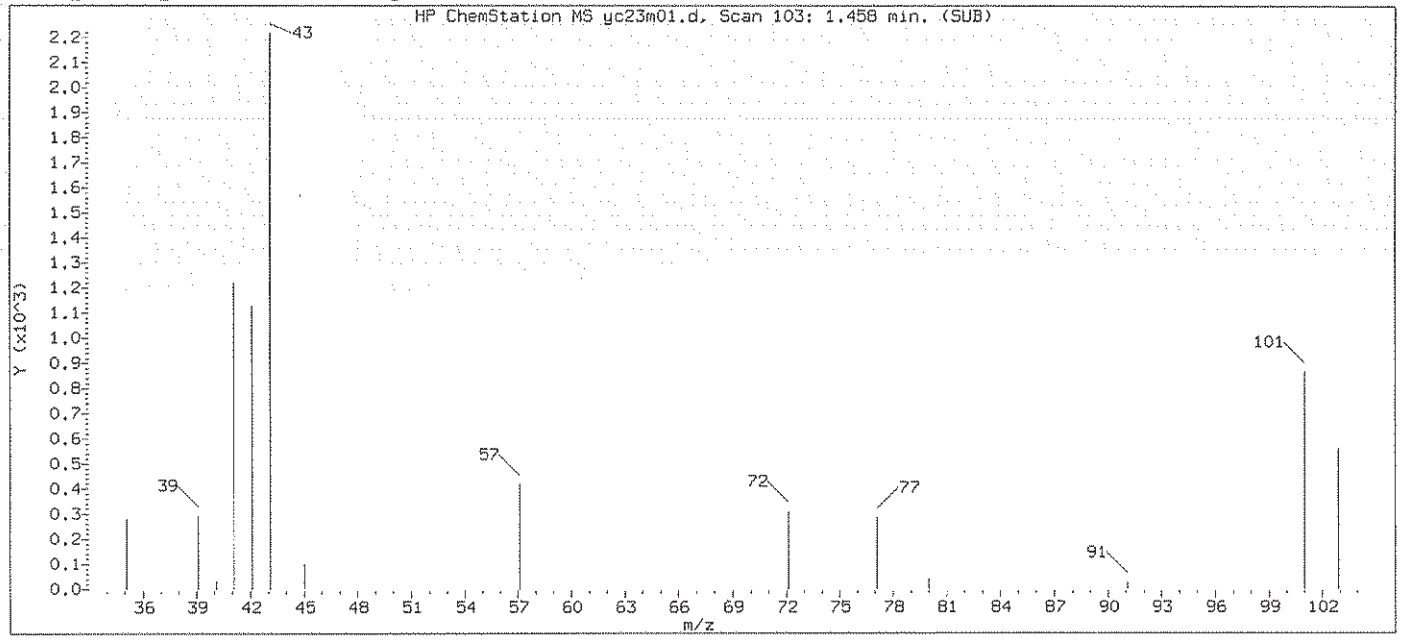
Compound Number	: 11		
Compound Name	: n-Pentane		
Scan Number	: 103		
Retention Time (minutes)	: 1.458		
Quant Ion	: 43.00		
Area (flag)	: 6955M		
On-Column Amount (ng)	: 0.5082		
Integration start scan	: 91	Integration stop scan:	114
Y at integration start	: 615	Y at integration end:	615

Reason for manual integration: improper integration

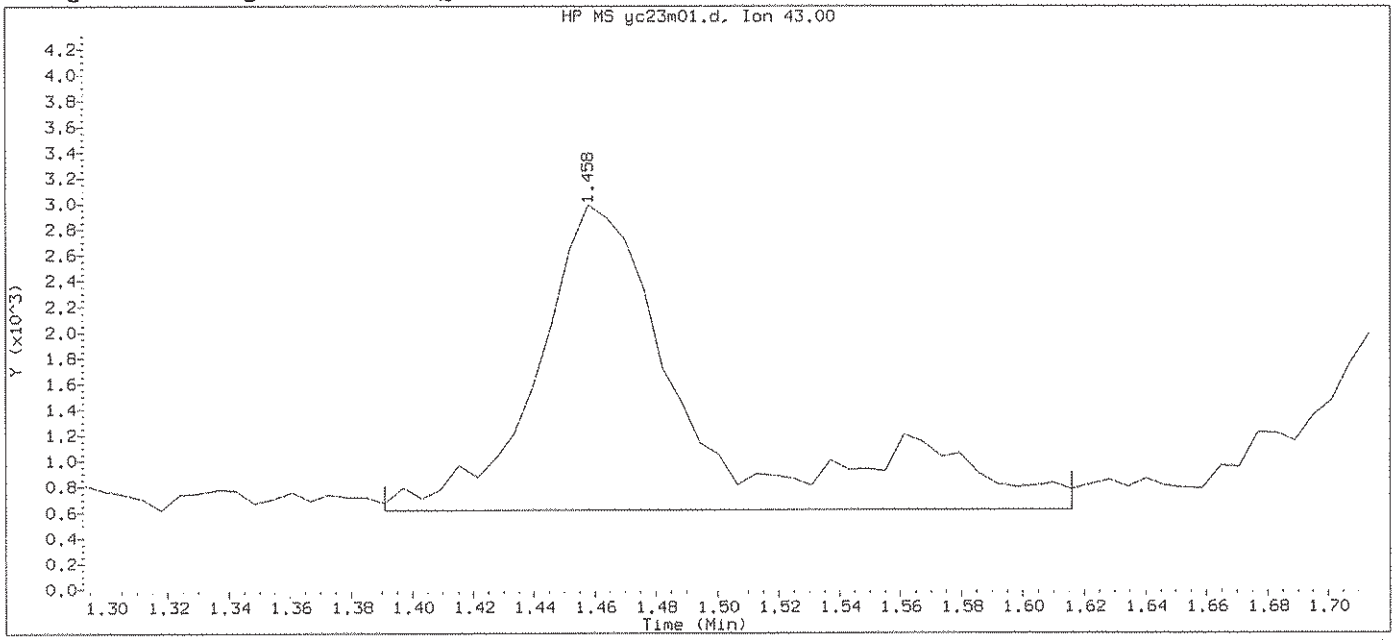
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: Kevin Sposito 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

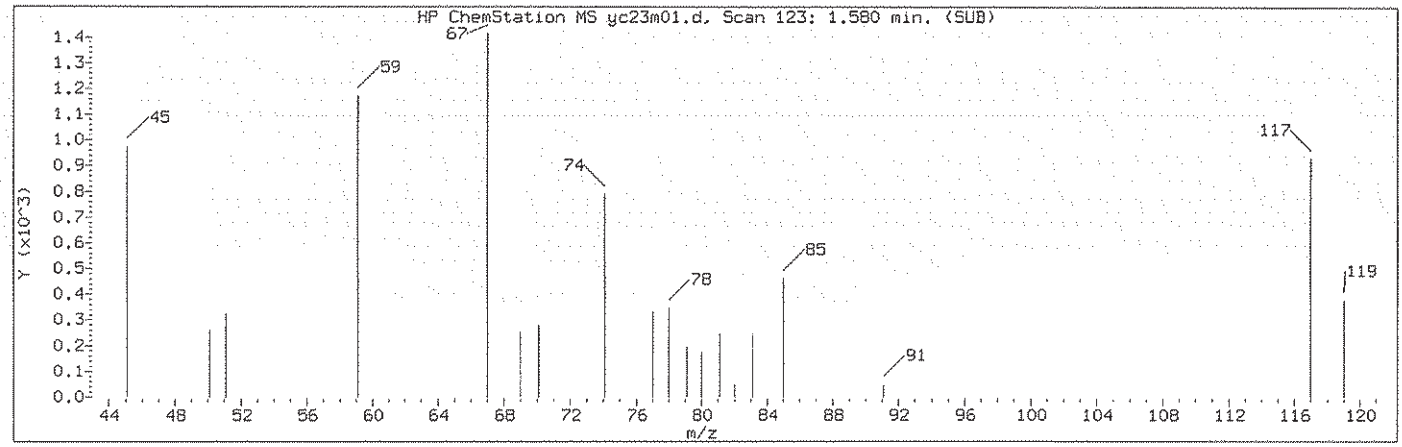
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

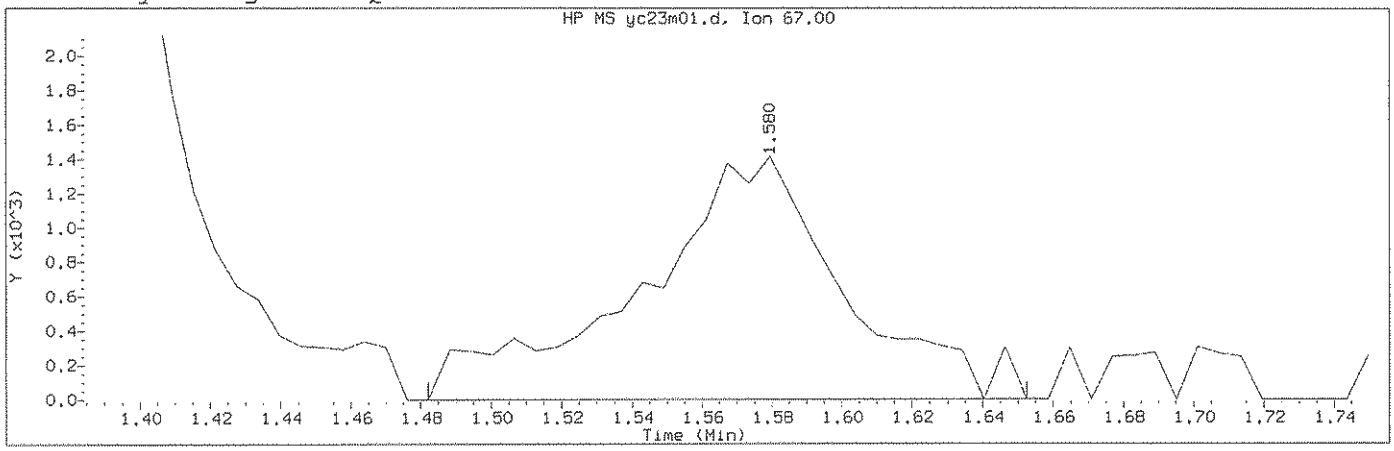
Compound Number	: 11		
Compound Name	: n-Pentane		
Scan Number	: 103		
Retention Time (minutes)	: 1.458		
Quant Ion	: 43.00		
Area	: 8564		
On-column Amount (ng)	: 0.6258		
Integration start scan	: 91	Integration stop scan:	128
Y at integration start	: 615	Y at integration end:	615

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

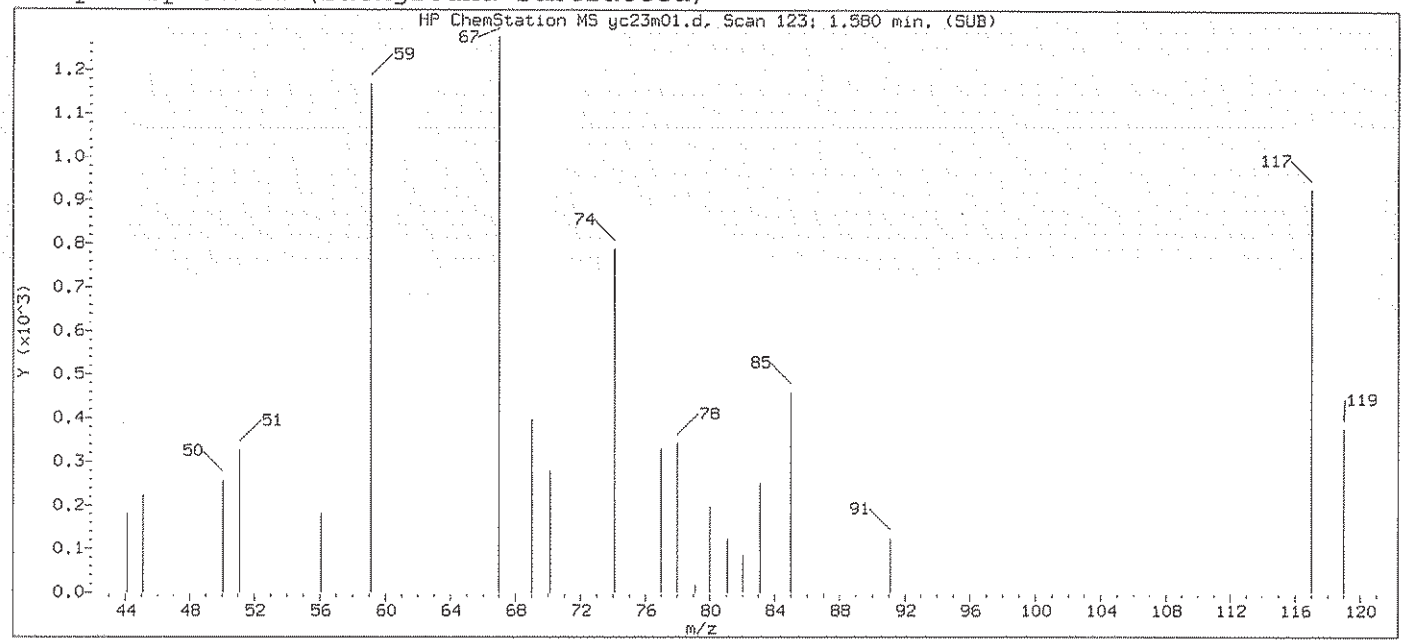
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 123
Retention Time (minutes): 1.580
Quant Ion : 67.00
Area (flag) : 5750M
On-Column Amount (ng) : 0.6458
Integration start scan : 106 Integration stop scan: 134
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

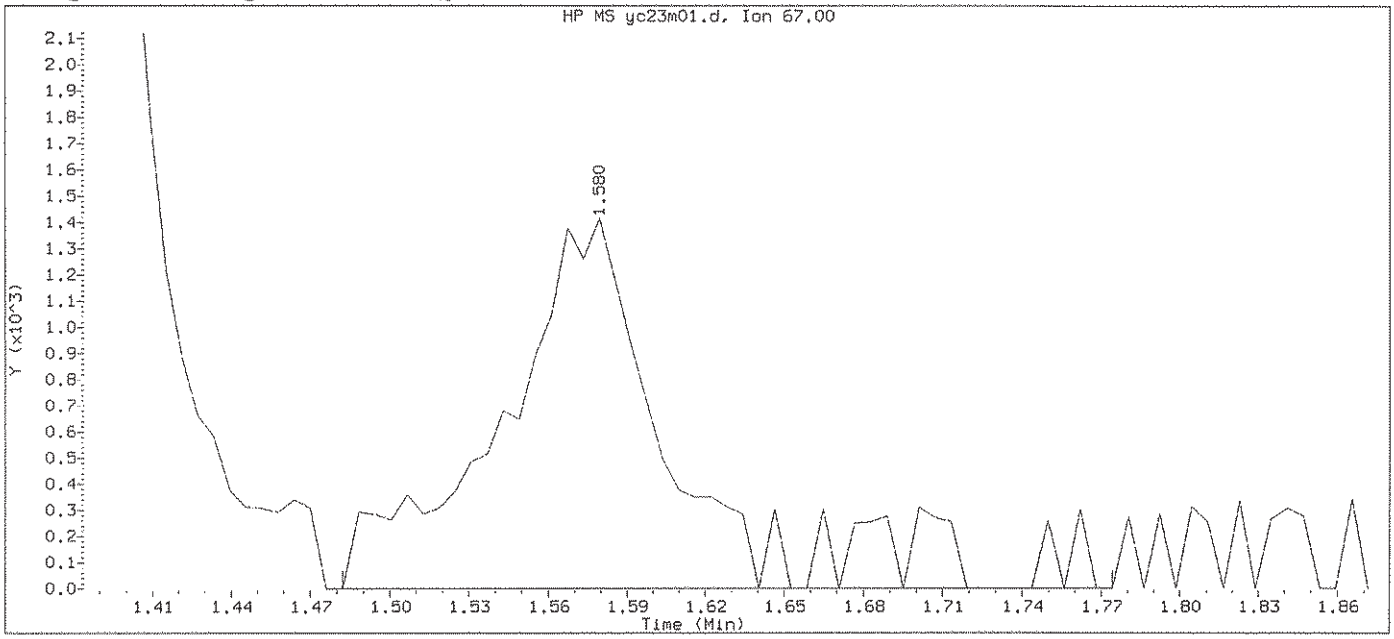
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

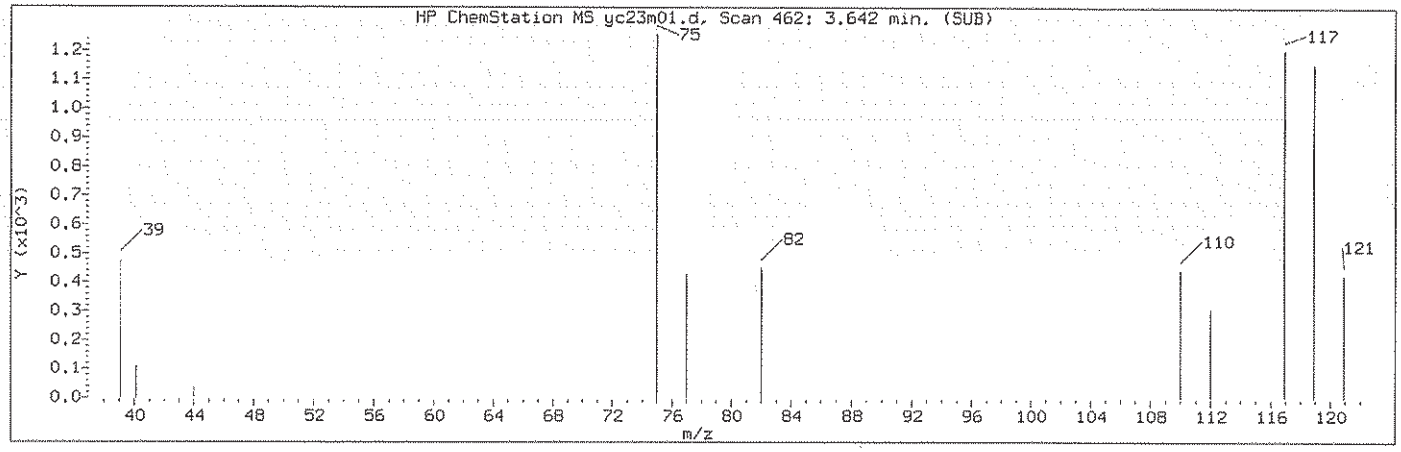
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

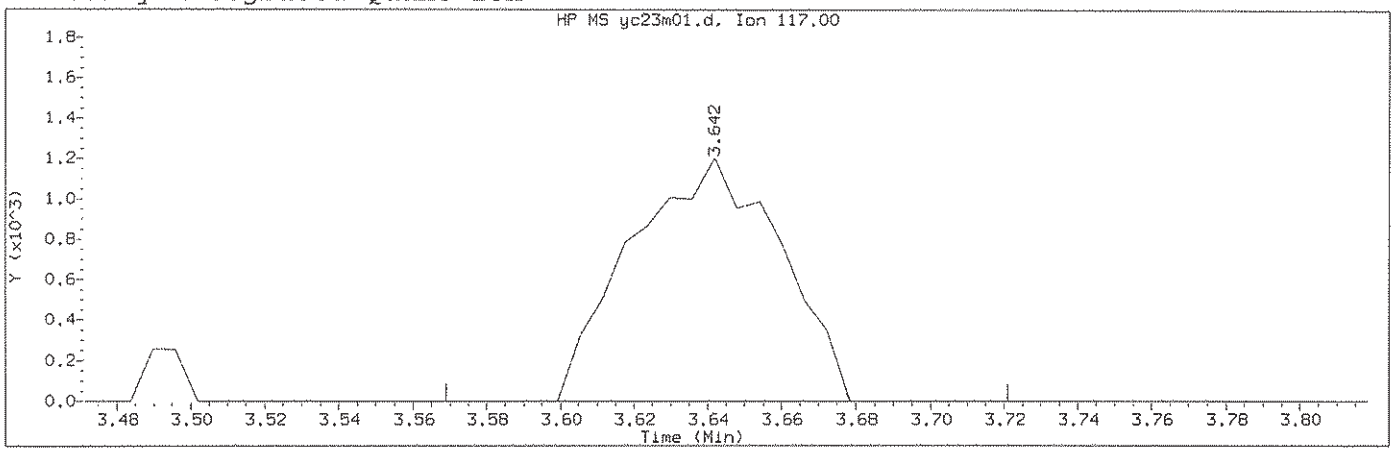
Compound Number	: 15		
Compound Name	: Freon 123a		
Scan Number	: 123		
Retention Time (minutes)	: 1.580		
Quant Ion	: 67.00		
Area	: 6653		
On-column Amount (ng)	: 0.7473		
Integration start scan	: 106	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

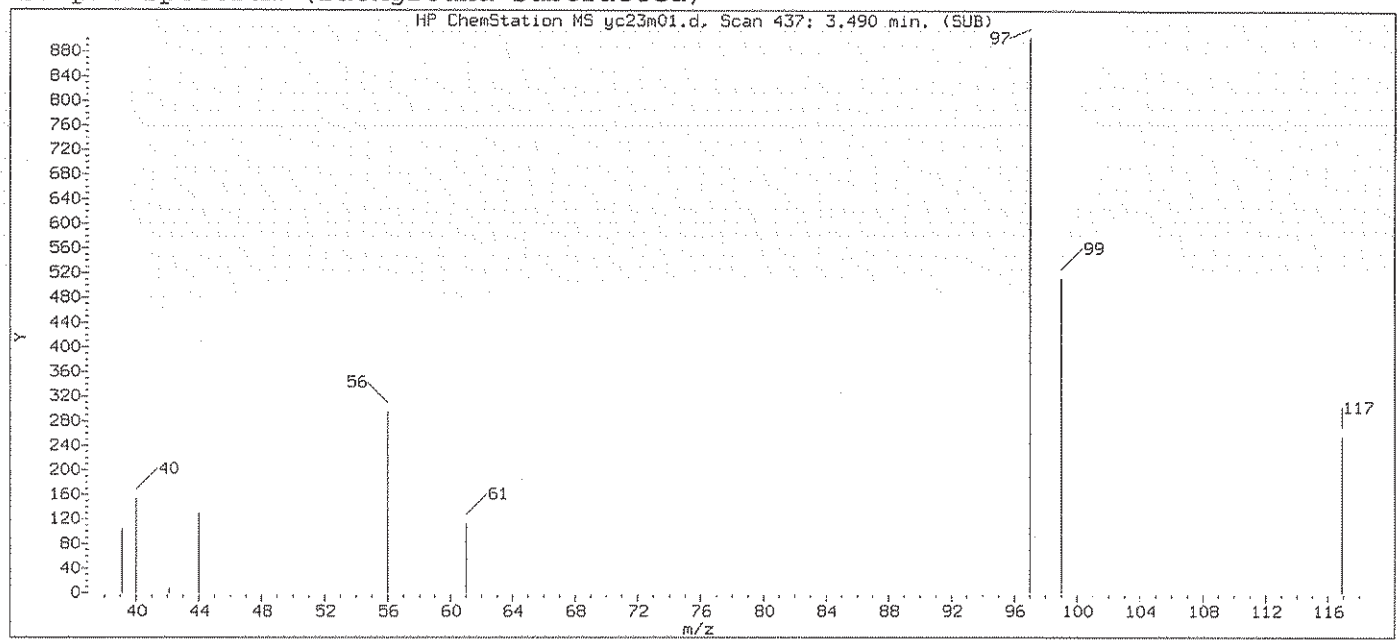
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 462
Retention Time (minutes): 3.642
Quant Ion : 117.00
Area (flag) : 3383M
On-Column Amount (ng) : 0.3590
Integration start scan : 449 Integration stop scan: 474
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

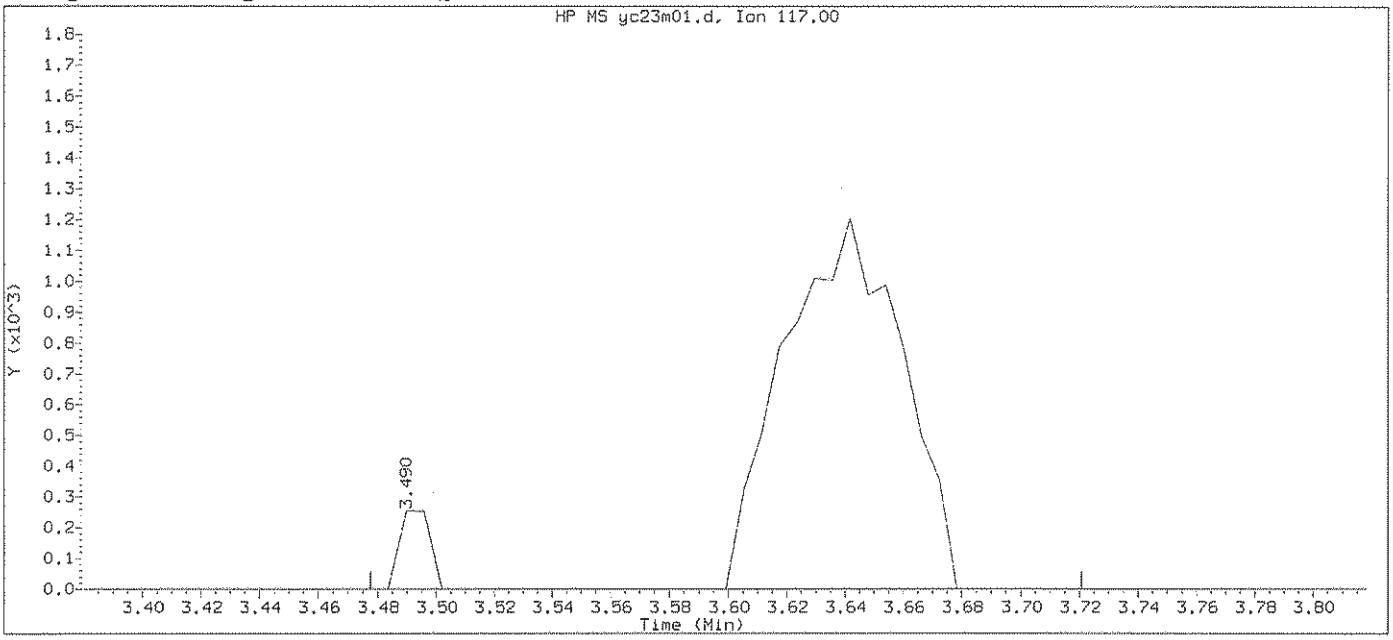
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: KAS 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

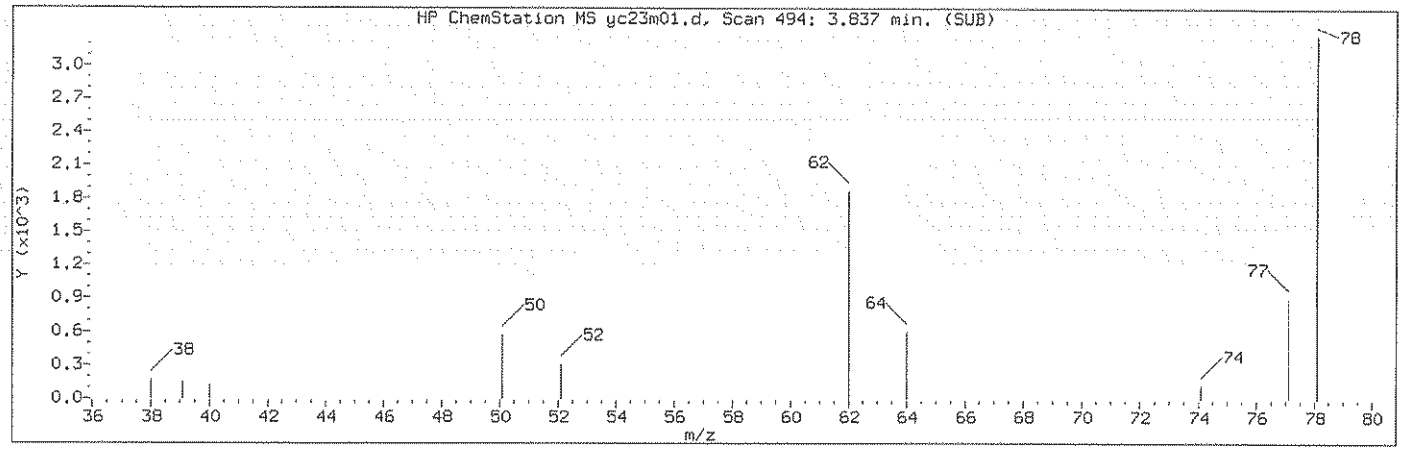
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

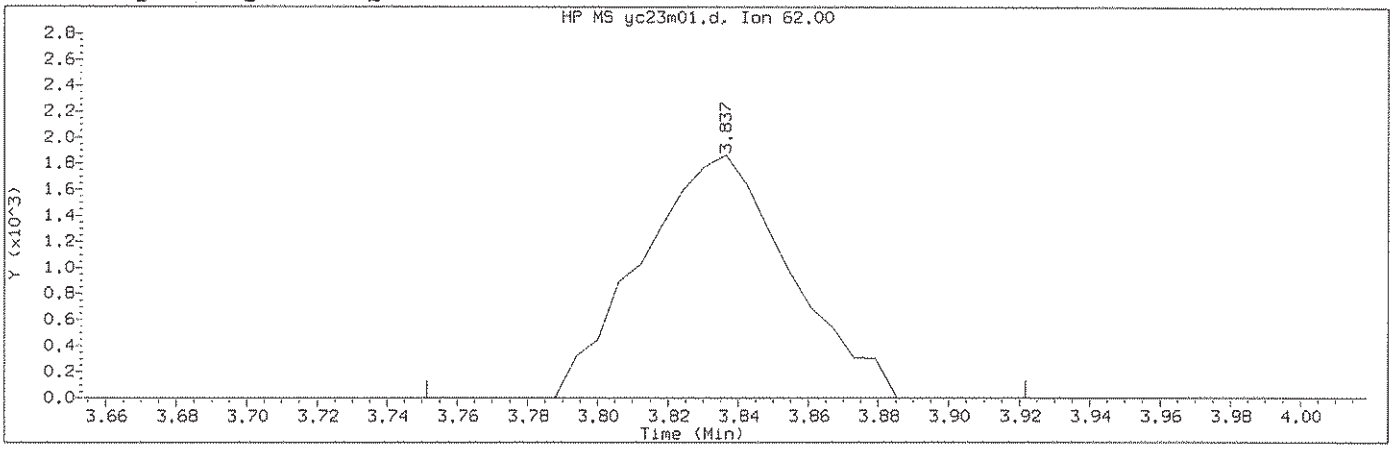
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 437
Retention Time (minutes): 3.490
Quant Ion : 117.00
Area : 3569
On-column Amount (ng) : 0.3788
Integration start scan : 434 Integration stop scan: 474
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

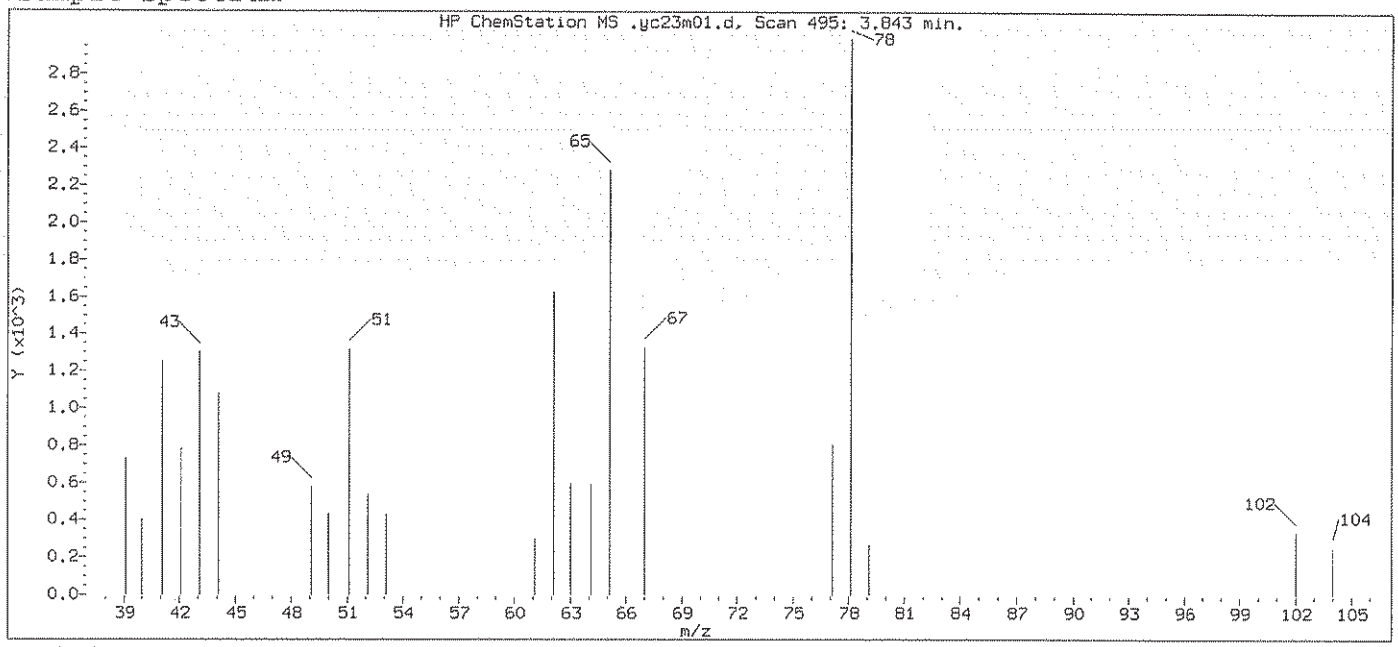
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Scan Number : 494
Retention Time (minutes): 3.837
Quant Ion : 62.00
Area (flag) : 5472M
On-Column Amount (ng) : 0.4853
Integration start scan : 479 Integration stop scan: 507
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

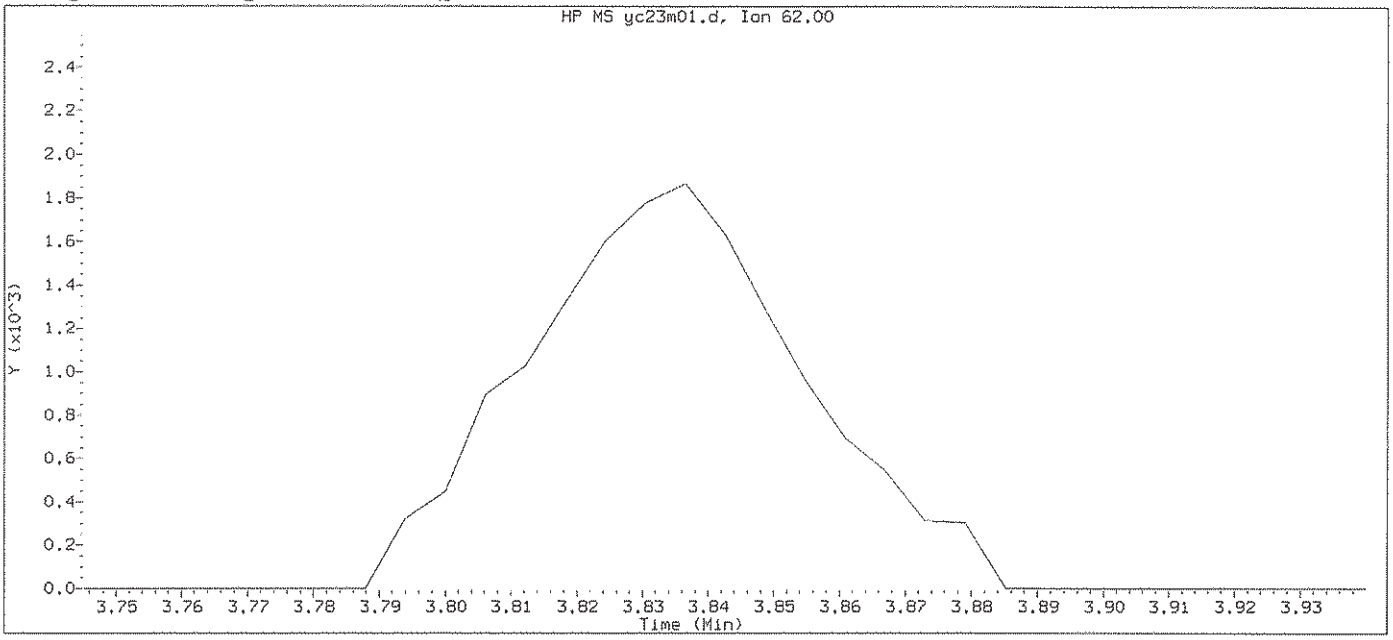
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: Whendrson 10/24/13

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

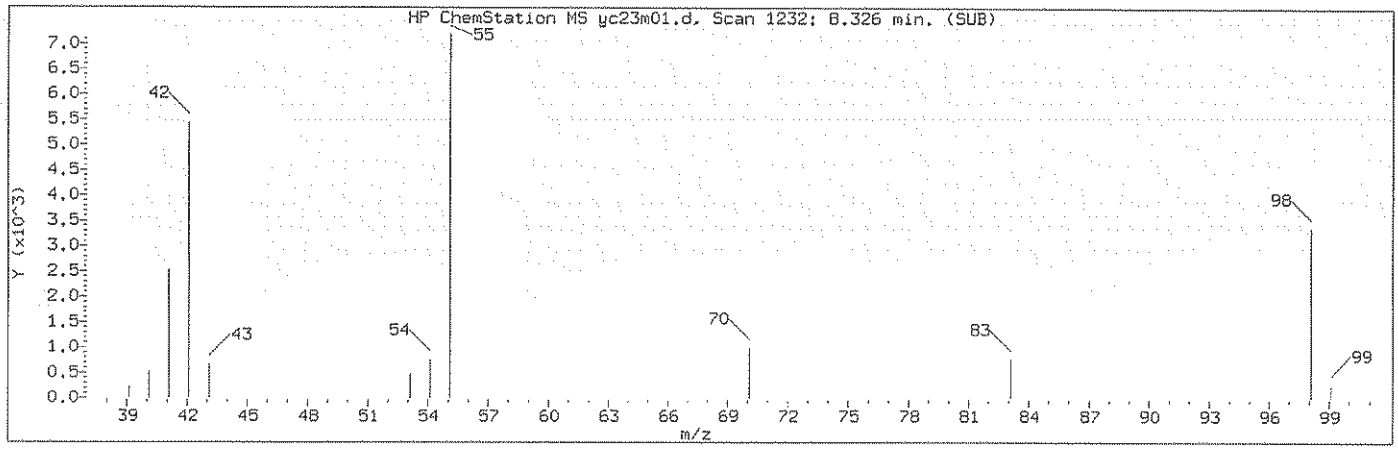
Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

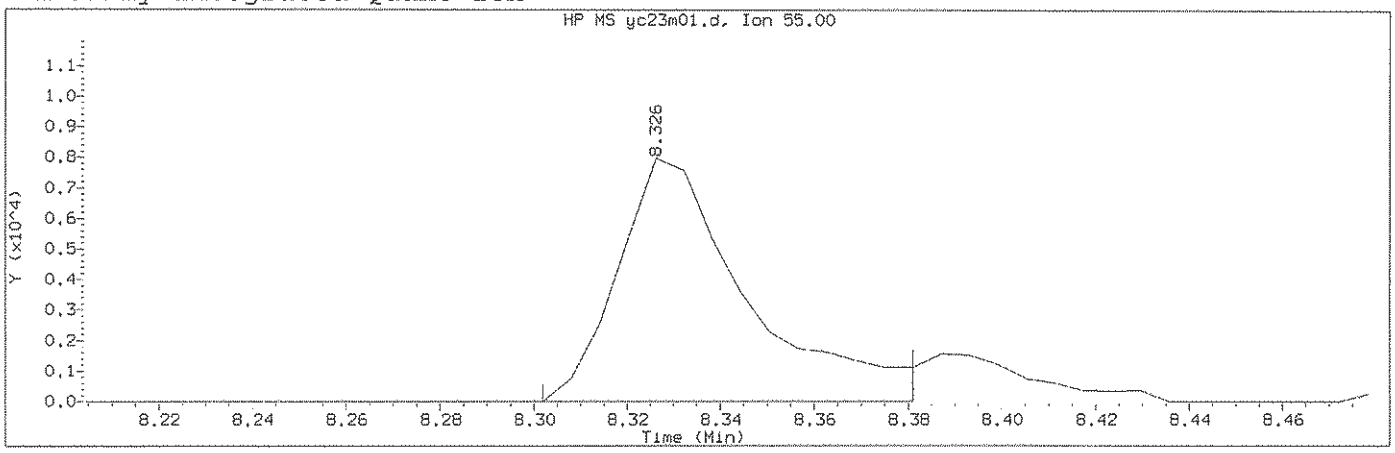
Compound Number : 61
Compound Name : 1,2-Dichloroethane
Expected RT (minutes) : 3.843
Quant Ion : 62.00

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

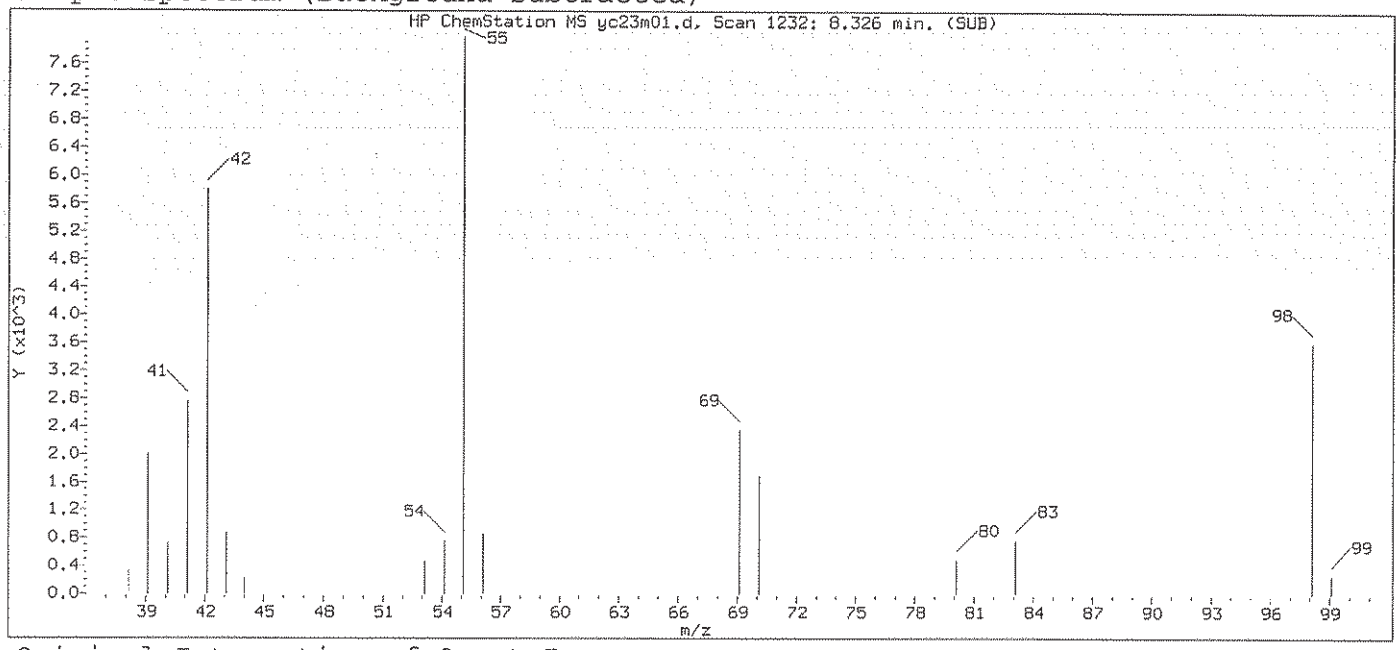
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1232
Retention Time (minutes): 8.326
Quant Ion : 55.00
Area (flag) : 15478M
On-Column Amount (ng) : 20.6371
Integration start scan : 1227 Integration stop scan: 1240
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

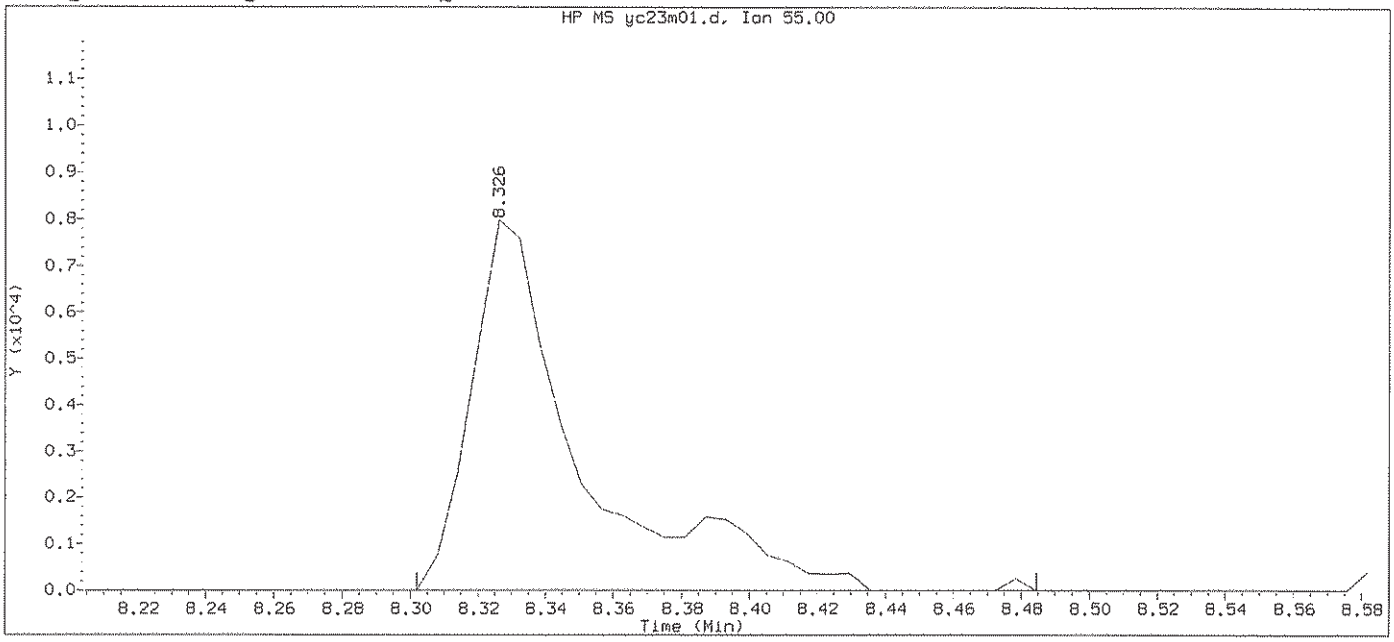
Analyst responsible for change: Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17. Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: Whodson 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



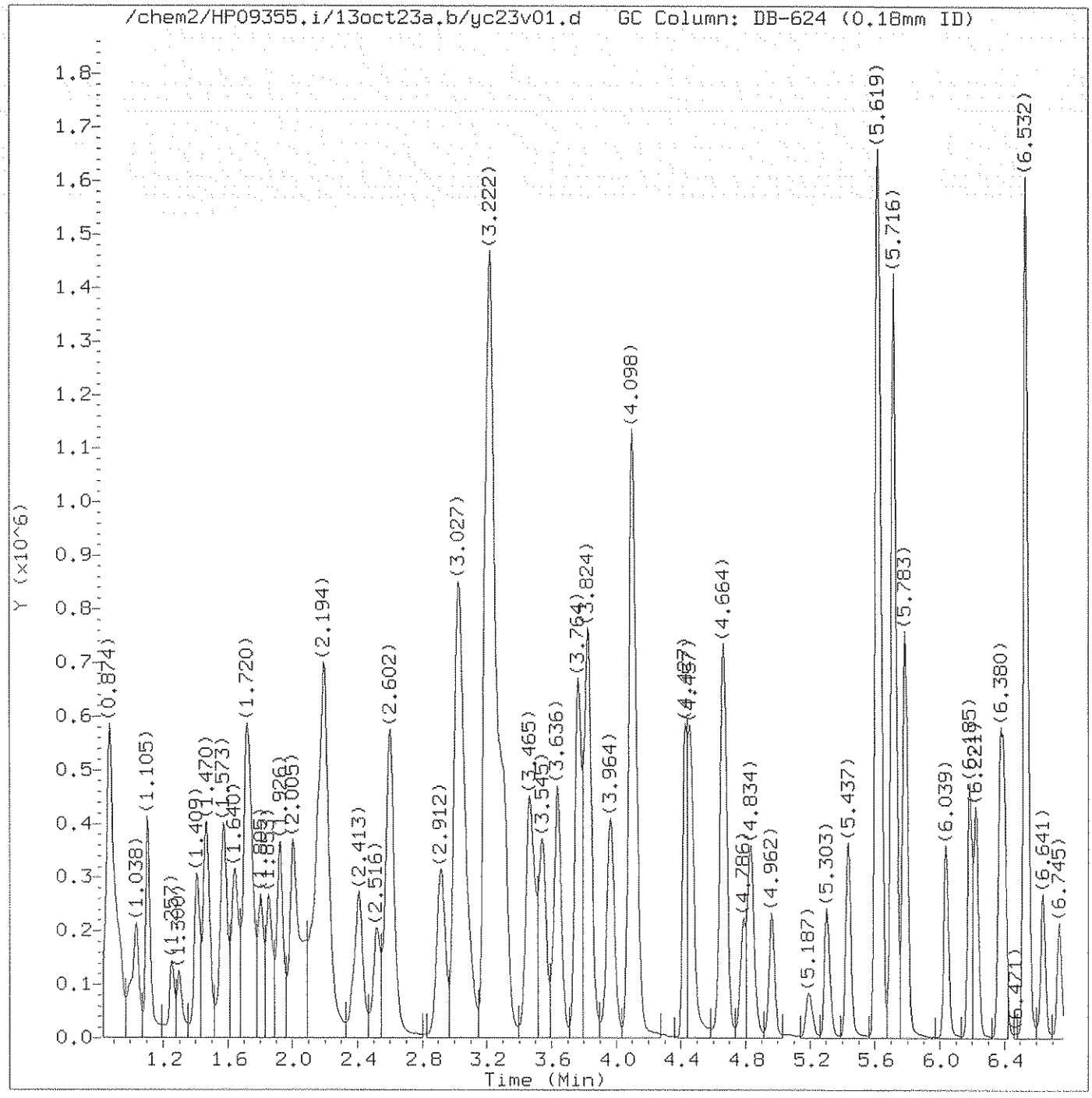
Data File: /chem2/HP09355.i/13oct23a.b/yc23m01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 14:43 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: MDL0.5 Lab Sample ID: MDL0.5

Compound Number	: 112
Compound Name	: Cyclohexanone
Scan Number	: 1232
Retention Time (minutes)	: 8.326
Quant Ion	: 55.00
Area	: 18042
On-column Amount (ng)	: 24.2330
Integration start scan	: 1227 Integration stop scan: 1257
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:17.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

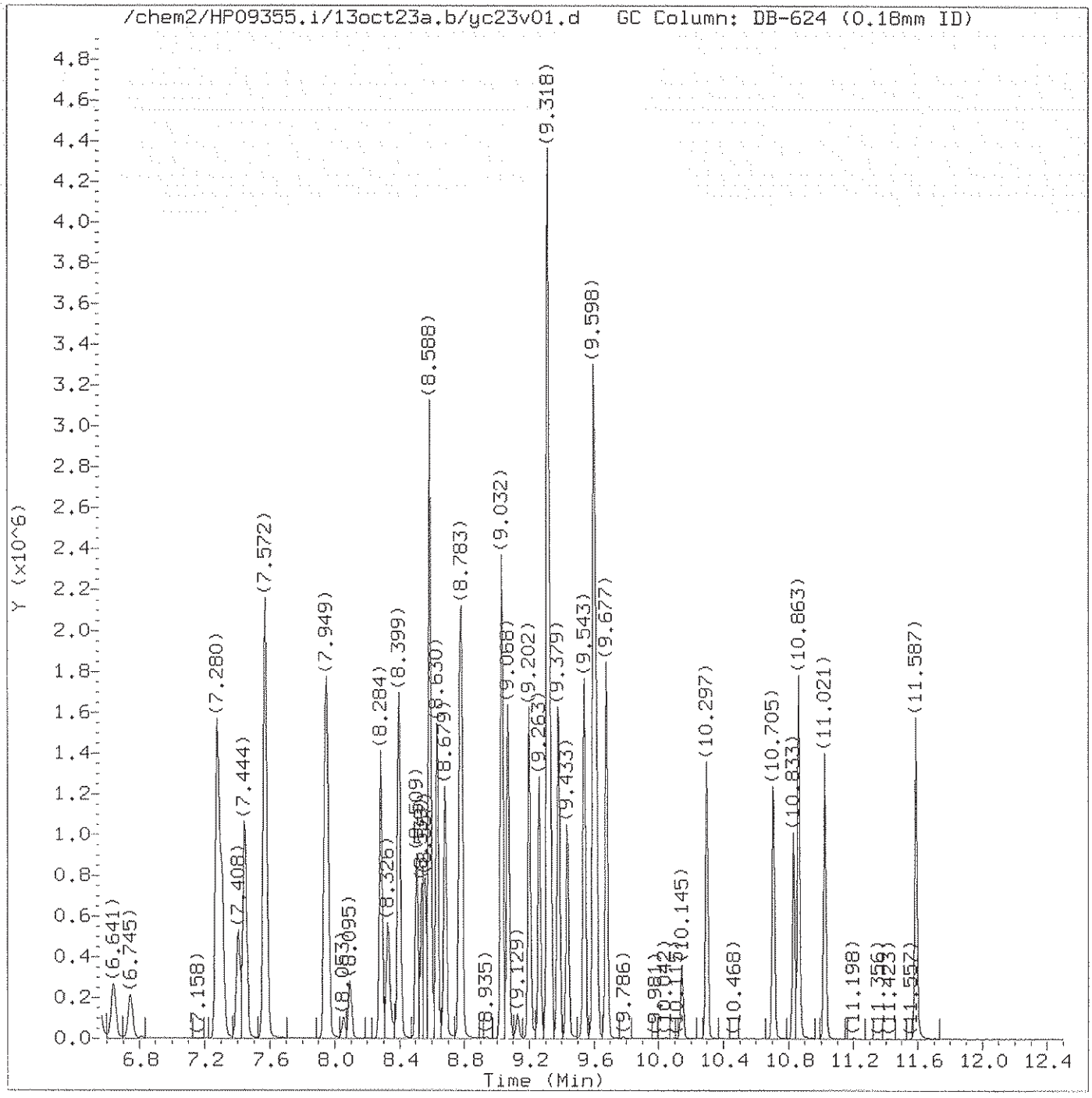
Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.008	85	164959	16.832
4) Chloromethane	(2)	1.038	50	213370	17.955
5) 1,3-Butadiene	(2)	1.105	39	111180	19.248
6) Vinyl Chloride	(2)	1.105	62	188014	18.526
8) Bromomethane	(2)	1.257	94	95407	14.494
9) Chloroethane	(2)	1.300	64	94105	16.090
10) Dichlorofluoromethane	(2)	1.409	67	299687	21.220
11) n-Pentane	(2)	1.464	43	258333	19.093
12) Trichlorofluoromethane	(2)	1.482	101	213817	18.277
14) Ethyl ether	(2)	1.573	59	147679	19.169
15) Freon 123a	(2)	1.586	67	176310	20.030
16) Acrolein	(1)	1.647	56	454315	154.827
17) 1,1-Dichloroethene	(2)	1.713	96	130713	21.294
18) Acetone	(2)	1.732	58	213753	128.434
19) Freon 113	(2)	1.732	101	127620	19.859
22) Methyl Iodide	(2)	1.805	142	252148	21.525
21) 2-Propanol	(1)	1.811	45	142139	133.171
23) Carbon Disulfide	(2)	1.853	76	421982	19.653
25) Allyl Chloride	(2)	1.926	41	219215	18.378
27) Methyl Acetate	(2)	1.932	43	188978	19.826
28) Methylene Chloride	(2)	2.005	84	154863	20.642
29)*t-Butyl alcohol-d10	(1)	2.024	65	336094	250.000
30) t-Butyl alcohol	(1)	2.085	59	401354	191.181
31) Acrylonitrile	(2)	2.164	53	576776	90.821
32) trans-1,2-Dichloroethene	(2)	2.200	96	148323	20.754
33) Methyl Tertiary Butyl Ether	(2)	2.206	73	516945	19.943
34) n-Hexane	(2)	2.407	57	232374	19.337
36) 1,1-Dichloroethane	(2)	2.516	63	282587	20.802
38) di-Isopropyl ether	(2)	2.602	45	576820	20.350
39) 2-Chloro-1,3-butadiene	(2)	2.602	53	242408	19.800
40) Ethyl t-butyl ether	(2)	2.912	59	527180	19.897
44) 2-Butanone	(2)	3.015	43	1315468	141.562
42) cis-1,2-Dichloroethene	(2)	3.021	96	164511	20.424
45) 2,2-Dichloropropane	(2)	3.034	77	214885	19.891
43) 1,2-Dichloroethene (Total)	(2)		96	312834	41.178
47) Propionitrile	(1)	3.076	54	349688	152.847
48) Methacrylonitrile	(2)	3.216	67	888250	144.541
49) Bromochloromethane	(2)	3.234	128	83834	20.376

* = Compound is an internal standard.

Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	3.283	71	222191	105.501
51) Chloroform	(2)	3.313	83	256978	20.125
52)$Dibromofluoromethane	(2)	3.459	113	284675	49.978
53) 1,1,1-Trichloroethane	(2)	3.484	97	247174	20.008
54) Cyclohexane	(2)	3.545	56	283547	19.474
55) 1,1-Dichloropropene	(2)	3.636	75	201592	20.058
56) Carbon Tetrachloride	(2)	3.642	117	188765	20.263
58) Isobutyl Alcohol	(1)	3.764	41	326967	454.104
57)$1,2-Dichloroethane-d4	(2)	3.770	102	75641	51.229
60) Benzene	(2)	3.824	78	628976	20.055
61) 1,2-Dichloroethane	(2)	3.837	62	223778	20.074
65) t-Amyl methyl ether	(2)	3.964	73	492176	19.609
66)*Fluorobenzene	(2)	4.098	96	1220116	50.000
67) n-Heptane	(2)	4.123	43	271580	18.452
69) n-Butanol	(1)	4.427	56	523776	888.535
71) Trichloroethene	(2)	4.463	95	158848	20.259
72) Methylcyclohexane	(2)	4.658	83	272537	20.145
73) 1,2-Dichloropropane	(2)	4.670	63	170651	20.367
74) Dibromomethane	(2)	4.786	93	107173	19.267
75) 1,4-Dioxane	(1)	4.816	88	56394M	442.792
76) Methyl Methacrylate	(2)	4.834	69	181163	18.391
78) Bromodichloromethane	(2)	4.962	83	190811	18.857
79) 2-Nitropropane	(2)	5.193	41	74896	17.495
80) 2-Chloroethyl Vinyl Ether	(2)	5.303	63	142816	19.502
81) cis-1,3-Dichloropropene	(2)	5.437	75	261791	20.199
82) 4-Methyl-2-pentanone	(2)	5.619	43	1667602	95.213
83)$Toluene-d8	(3)	5.716	98	1209184	50.343
88) Toluene	(3)	5.783	92	397672	19.831
89) trans-1,3-Dichloropropene	(3)	6.039	75	239206	18.638
90) 1,3-Dichloropropene (total)	(3)		100	500997	38.837
91) Ethyl Methacrylate	(3)	6.185	69	294924	18.677
92) 1,1,2-Trichloroethane	(3)	6.221	97	156371	19.162
93) Tetrachloroethene	(3)	6.373	166	175548	20.153
94) 1,3-Dichloropropane	(3)	6.398	76	269015	19.111
96) 2-Hexanone	(3)	6.532	43	1319299	90.994
97) Dibromochloromethane	(3)	6.641	129	156510	18.952
99) 1,2-Dibromoethane	(3)	6.745	107	170132	19.082
100)*Chlorobenzene-d5	(3)	7.280	117	902383	50.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	7.304	112	447812	20.073
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	147628	19.337
104) Ethylbenzene	(3)	7.444	91	762817	19.482
106) m+p-Xylene	(3)	7.572	106	607066	39.201
107) o-Xylene	(3)	7.943	106	295444	19.356
109) Styrene	(3)	7.955	104	507815	19.608
108) Xylene (Total)	(3)		106	902510	58.557
110) Bromoform	(3)	8.095	173	111881	17.411
111) Isopropylbenzene	(3)	8.284	105	763672	19.492
112) Cyclohexanone	(1)	8.326	55	247617	400.300
114)$4-Bromofluorobenzene	(3)	8.399	95	455885	49.877
115) Bromobenzene	(4)	8.509	156	201076	19.147
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	274272	18.813
117) 1,2,3-Trichloropropane	(4)	8.557	110	83604	18.347
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	497046	95.718
119) n-Propylbenzene	(4)	8.630	91	912461	19.929
120) 2-Chlorotoluene	(4)	8.679	126	184225	19.206
121) 4-Chlorotoluene	(4)	8.770	126	193162	19.209
122) 1,3,5-Trimethylbenzene	(4)	8.783	105	665422	19.449
125) Pentachloroethane	(4)	9.032	167	121558	18.682
124) tert-Butylbenzene	(4)	9.032	134	147300	19.088
126) 1,2,4-Trimethylbenzene	(4)	9.068	105	681607	19.536
127) sec-Butylbenzene	(4)	9.202	105	843864	19.875
129) 1,3-Dichlorobenzene	(4)	9.263	146	386031	19.806
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	508528	50.000
130) p-Isopropyltoluene	(4)	9.318	119	755234	19.509
133) 1,4-Dichlorobenzene	(4)	9.330	146	406064	19.767
134) 1,2,3-Trimethylbenzene	(4)	9.379	105	703335	19.532
135) Benzyl Chloride	(4)	9.433	91	536848	18.526
136) 1,3-Diethylbenzene	(4)	9.543	119	444104	19.018
138) 1,2-Dichlorobenzene	(4)	9.598	146	385615	19.868
137) 1,4-Diethylbenzene	(4)	9.598	119	477160	20.036
139) n-Butylbenzene	(4)	9.616	92	369182	19.044
140) 1,2-Diethylbenzene	(4)	9.677	119	377658	19.536
141) Diethylbenzene (total)	(4)		100	1298922	58.590
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	61273	16.501
144) 1,3,5-Trichlorobenzene	(4)	10.297	180	304209	18.863
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	286684	18.607

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	10.833	225	136446	17.838
148) Naphthalene	(4)	10.863	128	944042	19.173
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	277262	18.646
150) 2-Methylnaphthalene	(4)	11.587	142	538888	17.657

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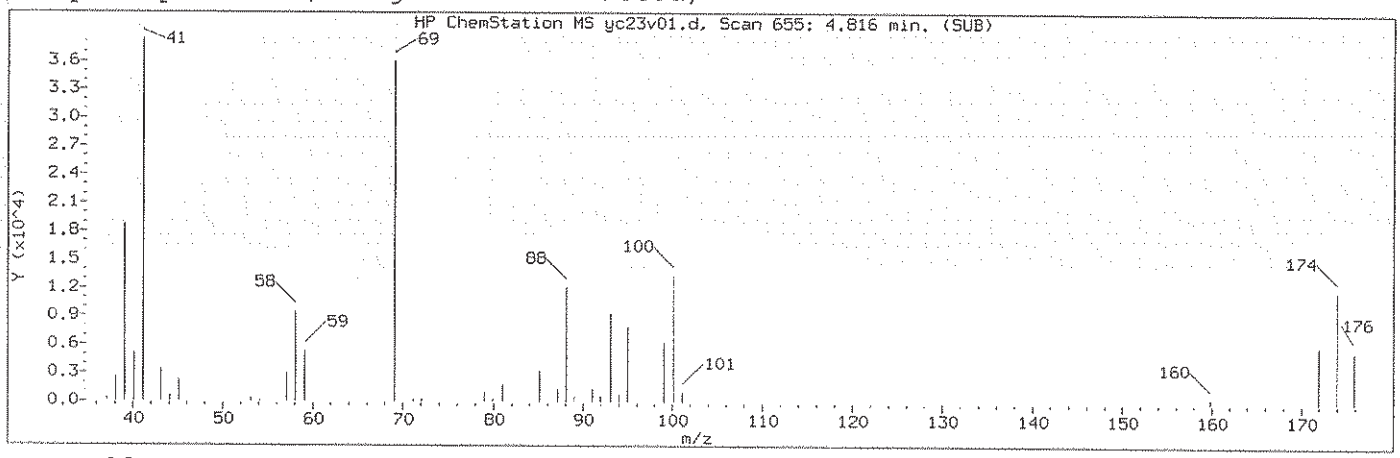
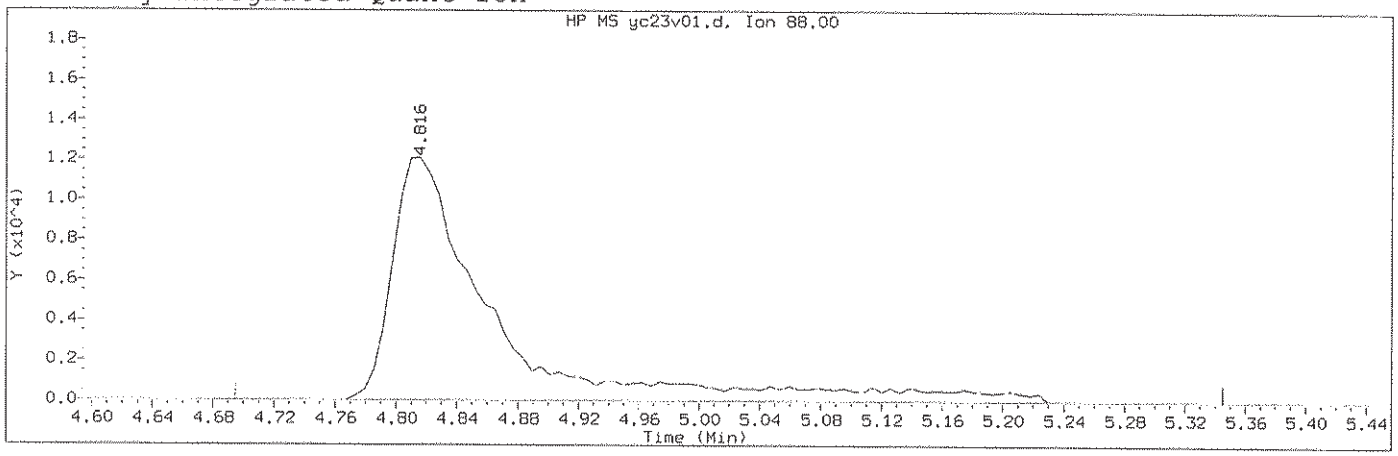
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 22:13
Date, time and analyst ID of latest file update: 23-Oct-2013 22:17 kas02648

Sample Name: YLGICV Lab Sample ID: YLGICV

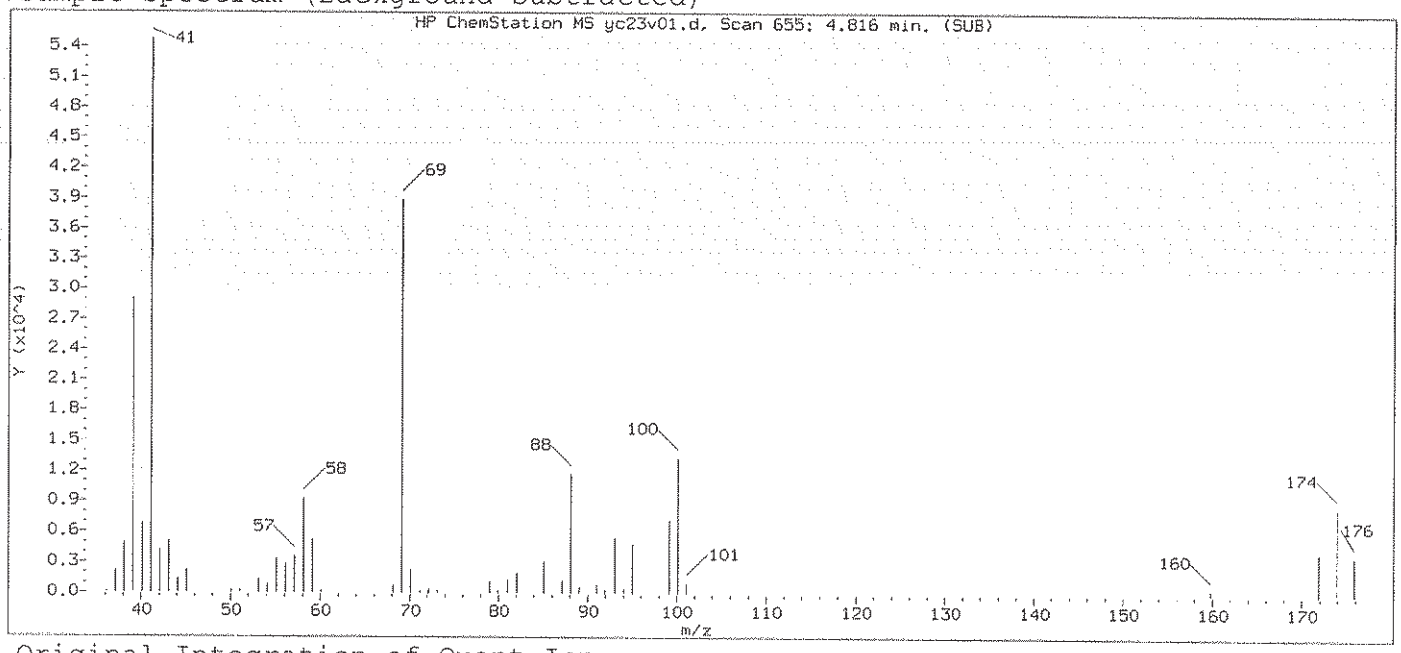
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 655
Retention Time (minutes): 4.816
Quant Ion : 88.00
Area (flag) : 56394M
On-Column Amount (ng) : 442.7921
Integration start scan : 634 Integration stop scan: 741
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

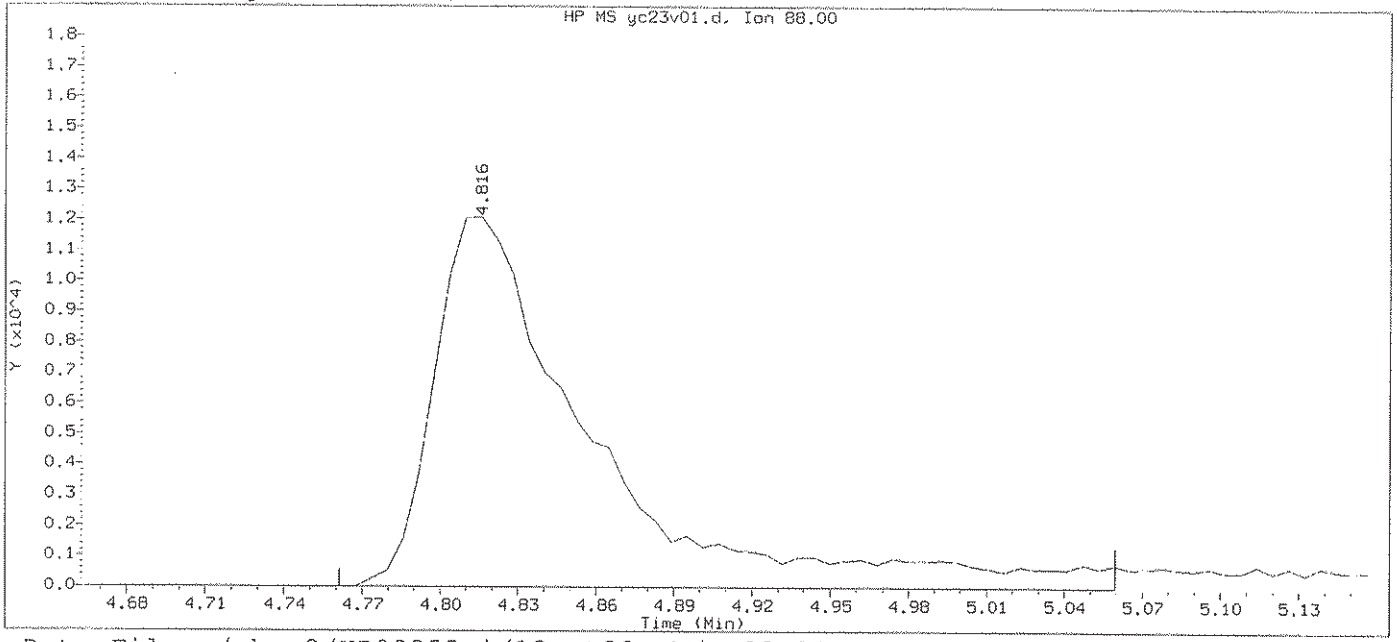
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

GC/MS audit/management approval: 10/24/13

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13oct23a.b/yc23v01.d Instrument ID: HP09355.i
Injection date and time: 23-OCT-2013 15:04 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13oct23a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 23-OCT-2013 15:58
Date, time and analyst ID of latest file update: 23-Oct-2013 15:58 ads01731

Sample Name: YLGICV Lab Sample ID: YLGICV

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 655
Retention Time (minutes): 4.816
Quant Ion : 88.00
Area : 50931
On-column Amount (ng) : 408.7579
Integration start scan : 645 Integration stop scan: 694
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin A. Sposito on 10/23/2013 at 22:23.
Target 3.5 esignature user ID: kas02648

Data File: /chem2/HP09355.i/13nov07a.b/yn07t01.d

Date : 07-NOV-2013 09:09

Client ID: 50ng BFB

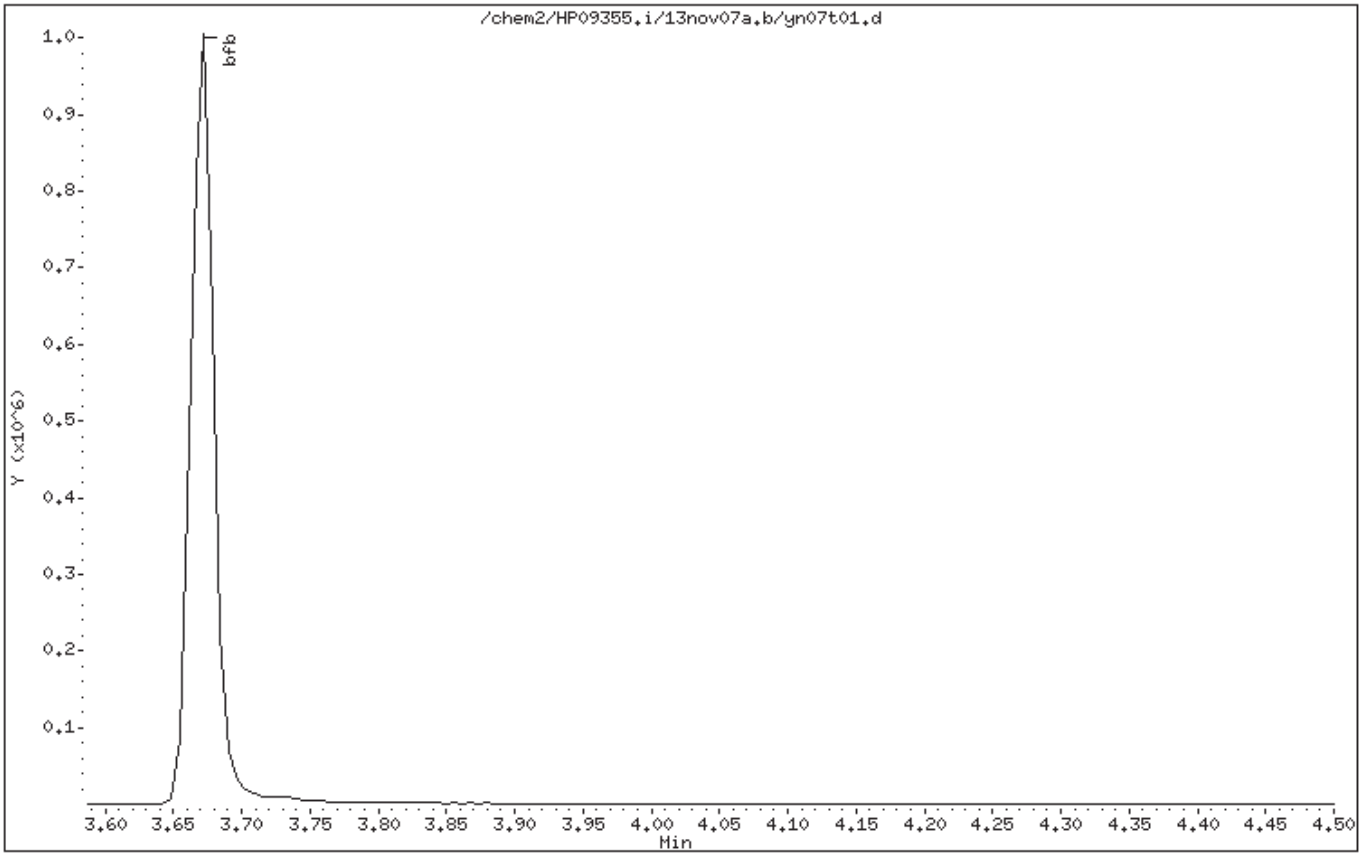
Instrument: HP09355.i

Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ADS01731

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Angela D. Sneeringer on 11/07/2013 at 09:12.
Target 3.5 esignature user ID: ads01731

Data File: /chem2/HP09355.i/13nov07a.b/yn07t01.d

Date : 07-NOV-2013 09:09

Client ID: 50ng BFB

Instrument: HP09355.i

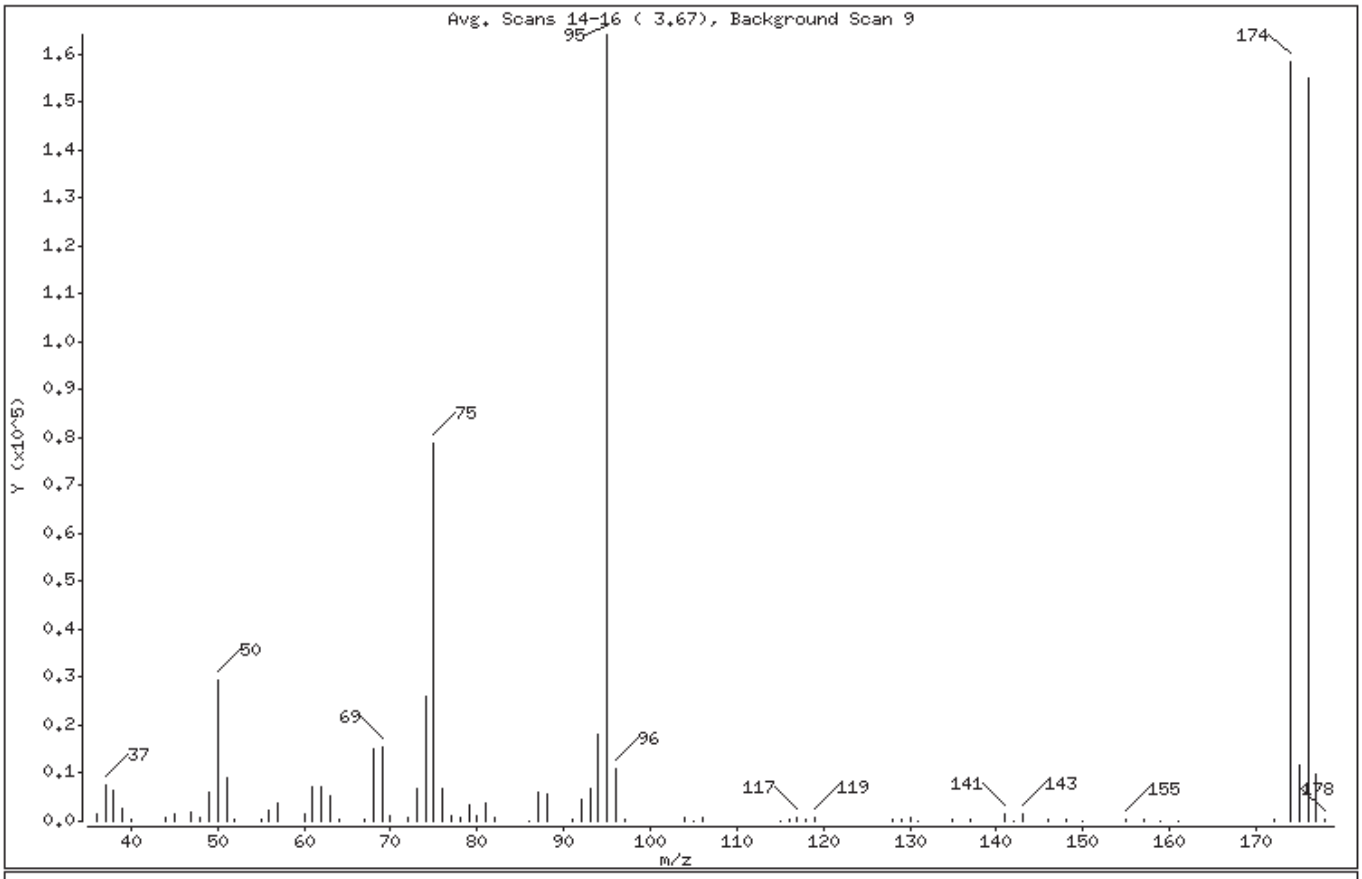
Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ADS01731

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.95
75	30.00 - 60.00% of mass 95	48.11
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	96.46
175	5.00 - 9.00% of mass 174	7.11 (7.37)
176	95.00 - 101.00% of mass 174	94.46 (97.92)
177	5.00 - 9.00% of mass 176	6.01 (6.36)

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 09:12.
Target 3.5 esignature user ID: ads01731

Date : 07-NOV-2013 09:09

Client ID: 50ng BFB Instrument: HP09355.i

Sample Info: 50ng BFB;BFB SEP18-13;1;3;;;;;;

Operator: ADS01731

Column phase: DB-624 Column diameter: 0.18

Data File: yn07t01.d
Spectrum: Avg. Scans 14-16 (3.67), Background Scan 9
Location of Maximum: 95.00
Number of points: 76

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1554	64.00	519	92.00	4534	141.00	1514
37.00	7390	67.00	444	93.00	6701	142.00	107
38.00	6409	68.00	15222	94.00	18152	143.00	1569
39.00	2597	69.00	15322	95.00	163968	146.00	212
40.00	205	70.00	1235	96.00	11008	148.00	375
44.00	680	72.00	735	97.00	257	150.00	113
45.00	1346	73.00	6789	104.00	611	155.00	512
47.00	1855	74.00	25864	105.00	94	157.00	319
48.00	934	75.00	78872	106.00	596	159.00	86
49.00	6007	76.00	6872	115.00	83	161.00	101
50.00	29424	77.00	954	116.00	537	172.00	209
51.00	9096	78.00	589	117.00	928	174.00	158144
52.00	426	79.00	3525	118.00	535	175.00	11651
55.00	365	80.00	995	119.00	793	176.00	154880
56.00	2274	81.00	3721	128.00	565	177.00	9858
57.00	3821	82.00	870	129.00	236	178.00	217
60.00	1475	86.00	90	130.00	588		
61.00	7014	87.00	6158	131.00	104		
62.00	7222	88.00	5813	135.00	331		
63.00	5244	91.00	480	137.00	219		

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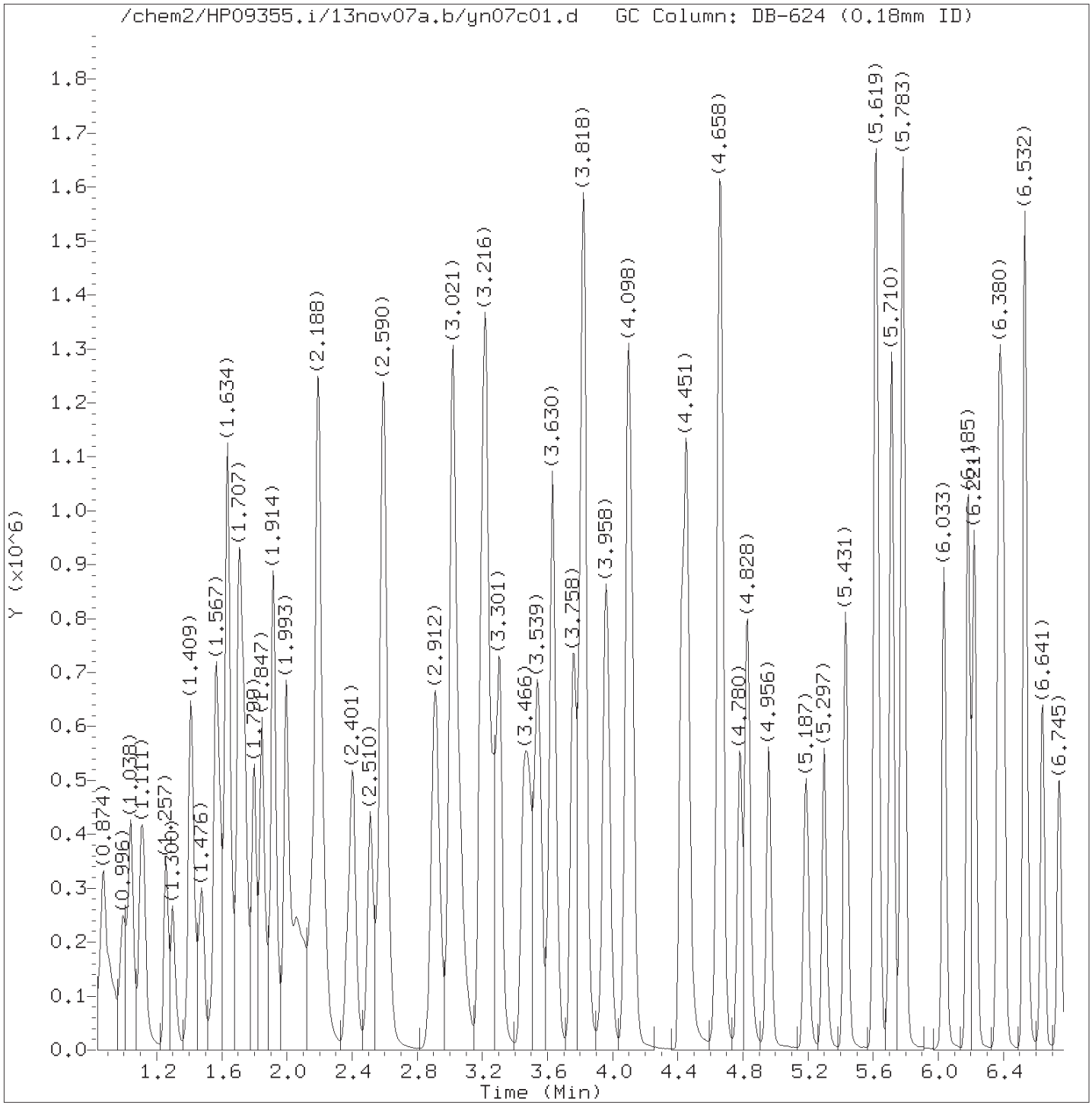
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

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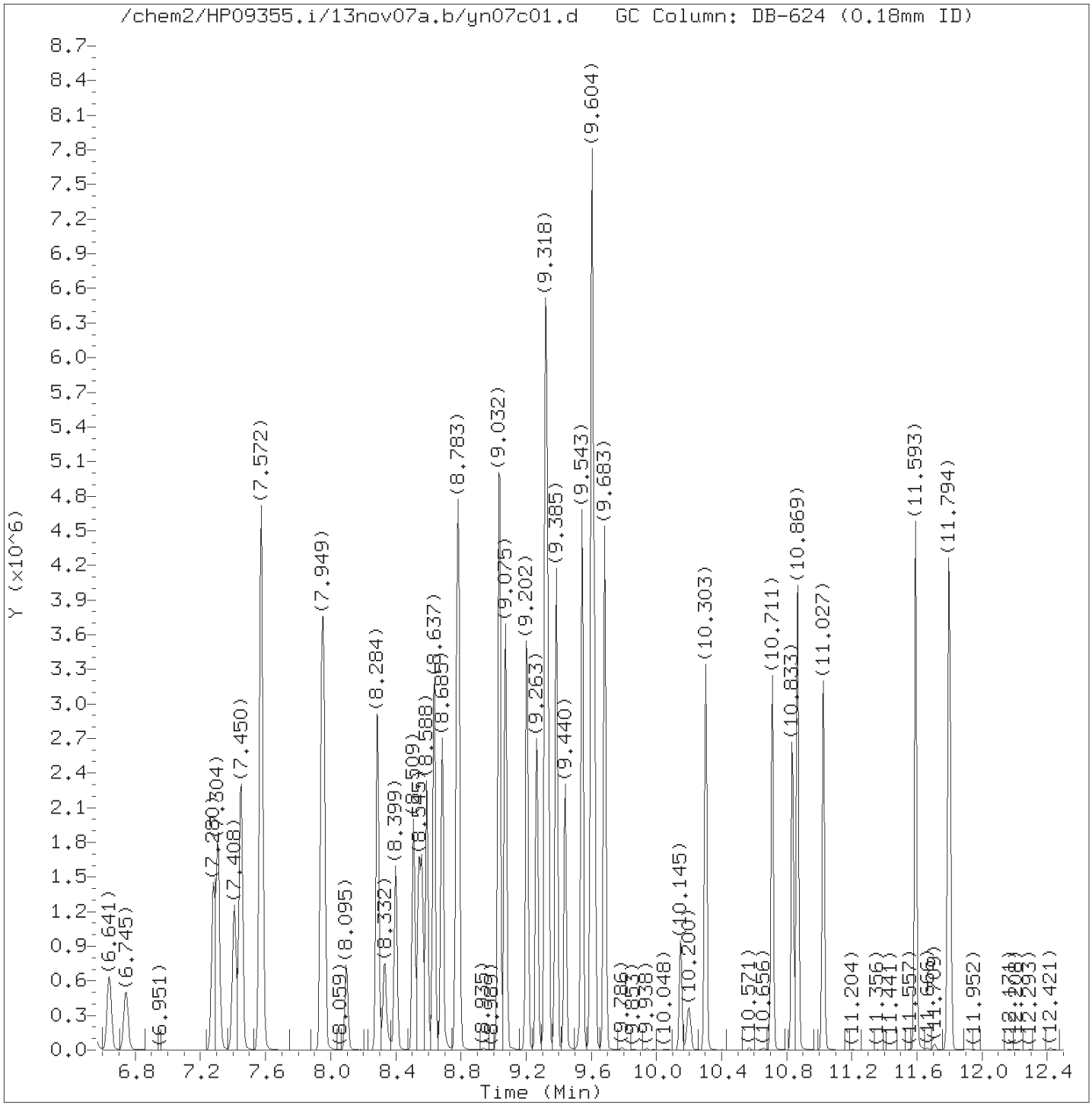
on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	0.996	85	474497	57.124
4) Chloromethane	(2)	1.044	50	465213M	46.188
6) Vinyl Chloride	(2)	1.117	62	418124	48.609
8) Bromomethane	(2)	1.257	94	279513	50.099
9) Chloroethane	(2)	1.300	64	228398	46.075
10) Dichlorofluoromethane	(2)	1.409	67	601238	50.227
12) Trichlorofluoromethane	(2)	1.476	101	563442	56.825
14) Ethyl ether	(2)	1.561	59	241791	37.028
15) Freon 123a	(2)	1.574	67	351974	47.176
16) Acrolein	(1)	1.634	56	1276287	389.659
17) 1,1-Dichloroethene	(2)	1.707	96	258651	49.712
17) 1,1-Dichloroethene	(2)	1.701	63	134964	49.495
18) Acetone	(2)	1.720	58	140159	99.359
19) Freon 113	(2)	1.732	101	273053	50.131
21) 2-Propanol	(1)	1.799	45	291540	244.705
22) Methyl Iodide	(2)	1.799	142	551278	55.524
23) Carbon Disulfide	(2)	1.847	76	840378	46.177
25) Allyl Chloride	(2)	1.914	41	459640	45.464
27) Methyl Acetate	(2)	1.920	43	409101	50.637
28) Methylene Chloride	(2)	1.993	84	306128	48.142
29)*t-Butyl alcohol-d10	(1)	2.024	65	375157	250.000
30) t-Butyl alcohol	(1)	2.072	59	551270	235.250
31) Acrylonitrile	(2)	2.151	53	254444	47.271
32) trans-1,2-Dichloroethene	(2)	2.188	96	302484	49.936
33) Methyl Tertiary Butyl Ether	(2)	2.200	73	1099664	50.053
34) n-Hexane	(2)	2.401	57	423597	41.588
36) 1,1-Dichloroethane	(2)	2.510	63	562109	48.820
38) di-Isopropyl ether	(2)	2.590	45	1056339	43.968
39) 2-Chloro-1,3-butadiene	(2)	2.596	53	501403	48.319
40) Ethyl t-butyl ether	(2)	2.912	59	1025745	45.676
44) 2-Butanone	(2)	3.015	43	766669	97.341
42) cis-1,2-Dichloroethene	(2)	3.015	96	343292	50.284
45) 2,2-Dichloropropane	(2)	3.028	77	440860	48.146
43) 1,2-Dichloroethene (Total)	(2)		96	645776	100.220
47) Propionitrile	(1)	3.064	54	513185	200.954
48) Methacrylonitrile	(2)	3.204	67	581687	111.678
49) Bromochloromethane	(2)	3.228	128	195777	56.140
50) Tetrahydrofuran	(1)	3.271	71	199288	84.773

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	3.307	83	553576	51.148
52)$Dibromofluoromethane	(2)	3.453	113	255649	52.953
52)$Dibromofluoromethane	(2)	3.453	111	260010	52.805
53) 1,1,1-Trichloroethane	(2)	3.484	97	480127	45.854
54) Cyclohexane	(2)	3.539	56	517563	41.939
54) Cyclohexane	(2)	3.545	84	435927	42.465
54) Cyclohexane	(2)	3.539	69	156783	42.342
55) 1,1-Dichloropropene	(2)	3.630	75	424793	49.868
56) Carbon Tetrachloride	(2)	3.642	117	421600	53.394
57)$1,2-Dichloroethane-d4	(2)	3.758	102	63869	51.035
57)$1,2-Dichloroethane-d4	(2)	3.758	65	325472	51.297
57)$1,2-Dichloroethane-d4	(2)	3.758	104	40410	51.387
58) Isobutyl Alcohol	(1)	3.764	41	419358	521.775
60) Benzene	(2)	3.818	78	1279753	48.142
61) 1,2-Dichloroethane	(2)	3.831	62	499835	52.900
61) 1,2-Dichloroethane	(2)	3.831	98	42757	49.953
65) t-Amyl methyl ether	(2)	3.958	73	962528	45.245
66)*Fluorobenzene	(2)	4.092	96	1034145	50.000
67) n-Heptane	(2)	4.116	43	487620	39.089
69) n-Butanol	(1)	4.421	56	690918	1050.033
71) Trichloroethene	(2)	4.451	95	334217	50.291
72) Methylcyclohexane	(2)	4.658	83	585213	51.036
72) Methylcyclohexane	(2)	4.658	98	262220	52.325
73) 1,2-Dichloropropane	(2)	4.664	63	328259	46.222
74) Dibromomethane	(2)	4.780	93	232738	49.365
75) 1,4-Dioxane	(1)	4.810	88	89633	630.496
76) Methyl Methacrylate	(2)	4.828	69	361696	43.321
78) Bromodichloromethane	(2)	4.956	83	429365	50.064
79) 2-Nitropropane	(2)	5.187	41	383504	105.690
80) 2-Chloroethyl Vinyl Ether	(2)	5.297	63	285490	45.995
81) cis-1,3-Dichloropropene	(2)	5.431	75	523004	47.610
82) 4-Methyl-2-pentanone	(2)	5.619	43	1455893	98.074
83)$Toluene-d8	(3)	5.710	98	1041935	48.890
83)$Toluene-d8	(3)	5.710	100	673261	48.588
88) Toluene	(3)	5.783	92	836862	47.033
89) trans-1,3-Dichloropropene	(3)	6.033	75	524584	46.065
90) 1,3-Dichloropropene (total)	(3)		100	1047588	93.675
91) Ethyl Methacrylate	(3)	6.185	69	586075	41.829

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
92) 1,1,2-Trichloroethane	(3)	6.221	97	336722	46.504
93) Tetrachloroethene	(3)	6.373	166	403496	52.206
94) 1,3-Dichloropropane	(3)	6.398	76	566709	45.374
96) 2-Hexanone	(3)	6.532	43	1142210	88.787
97) Dibromochloromethane	(3)	6.641	129	374813	51.151
99) 1,2-Dibromoethane	(3)	6.745	107	381302	48.199
100)*Chlorobenzene-d5	(3)	7.280	117	800676	50.000
102) Chlorobenzene	(3)	7.310	112	967288	48.866
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	343825	50.757
104) Ethylbenzene	(3)	7.450	91	1623419	46.728
106) m+p-Xylene	(3)	7.572	106	1307112	95.129
107) o-Xylene	(3)	7.943	106	636708	47.012
109) Styrene	(3)	7.955	104	1086174	47.267
108) Xylene (Total)	(3)		106	1943820	142.141
110) Bromoform	(3)	8.095	173	287865	50.488
111) Isopropylbenzene	(3)	8.290	105	1664572	47.884
112) Cyclohexanone	(1)	8.332	55	312206	452.162
114)$4-Bromofluorobenzene	(3)	8.399	95	395137	48.722
114)$4-Bromofluorobenzene	(3)	8.399	174	386015	55.275
115) Bromobenzene	(4)	8.509	156	479632	48.027
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	580544	41.873
117) 1,2,3-Trichloropropane	(4)	8.564	110	193301	44.606
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	382085	77.373
119) n-Propylbenzene	(4)	8.637	91	1937985	44.509
120) 2-Chlorotoluene	(4)	8.685	126	412331	45.202
121) 4-Chlorotoluene	(4)	8.777	126	436478	45.644
122) 1,3,5-Trimethylbenzene	(4)	8.789	105	1470343	45.192
125) Pentachloroethane	(4)	9.032	167	309157	49.963
124) tert-Butylbenzene	(4)	9.038	134	338829	46.171
126) 1,2,4-Trimethylbenzene	(4)	9.075	105	1513629	45.620
127) sec-Butylbenzene	(4)	9.202	105	1844111	45.672
129) 1,3-Dichlorobenzene	(4)	9.263	146	884350	47.712
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	483597	50.000
130) p-Isopropyltoluene	(4)	9.324	119	1720695	46.739
133) 1,4-Dichlorobenzene	(4)	9.336	146	930513	47.632
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	1673193	48.860
135) Benzyl Chloride	(4)	9.440	91	1129674	40.993
136) 1,3-Diethylbenzene	(4)	9.543	119	1107302	49.862

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
138) 1,2-Dichlorobenzene	(4)	9.604	146	897023	48.601
137) 1,4-Diethylbenzene	(4)	9.604	119	1130458	49.916
139) n-Butylbenzene	(4)	9.616	92	818251	44.384
140) 1,2-Diethylbenzene	(4)	9.683	119	902329	49.084
141) Diethylbenzene (total)	(4)		100	3140089	148.862
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	161744	45.804
144) 1,3,5-Trichlorobenzene	(4)	10.303	180	789044	51.449
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	752066	51.328
147) Hexachlorobutadiene	(4)	10.833	225	383625	52.737
148) Naphthalene	(4)	10.869	128	2315359	49.447
149) 1,2,3-Trichlorobenzene	(4)	11.027	180	729793	51.609
150) 2-Methylnaphthalene	(4)	11.593	142	1516179	52.241

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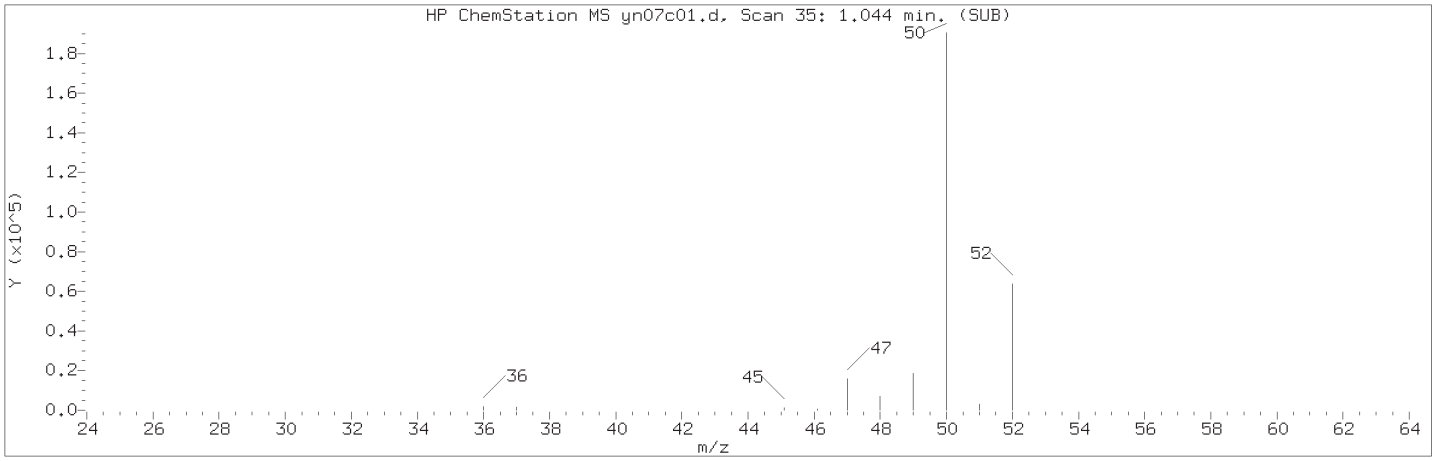
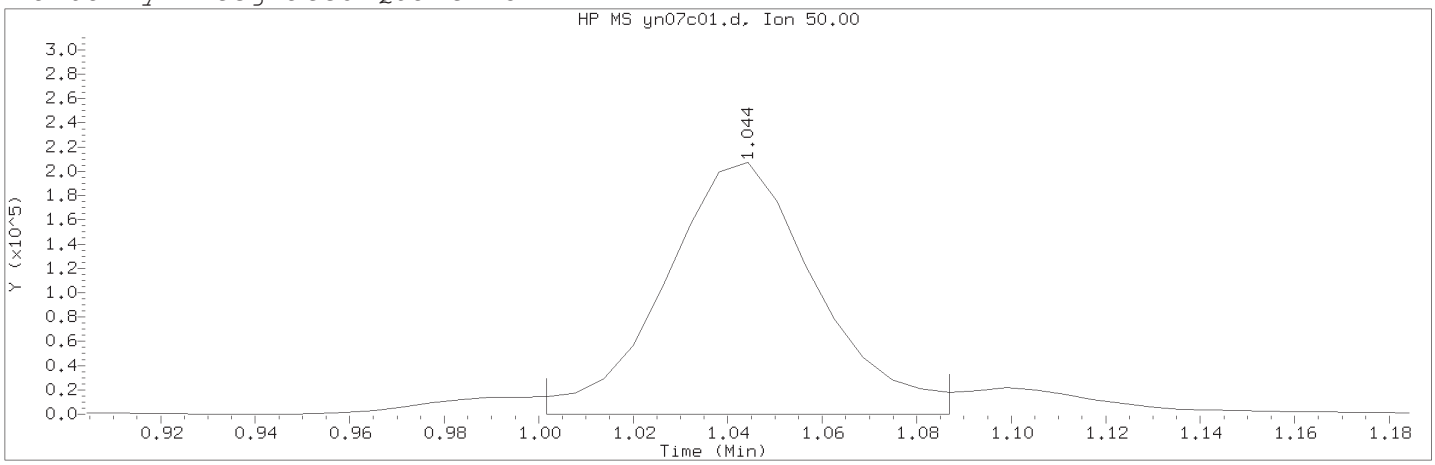
on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 11:20 ads01731

Sample Name: VSTD050 Lab Sample ID: VSTD050

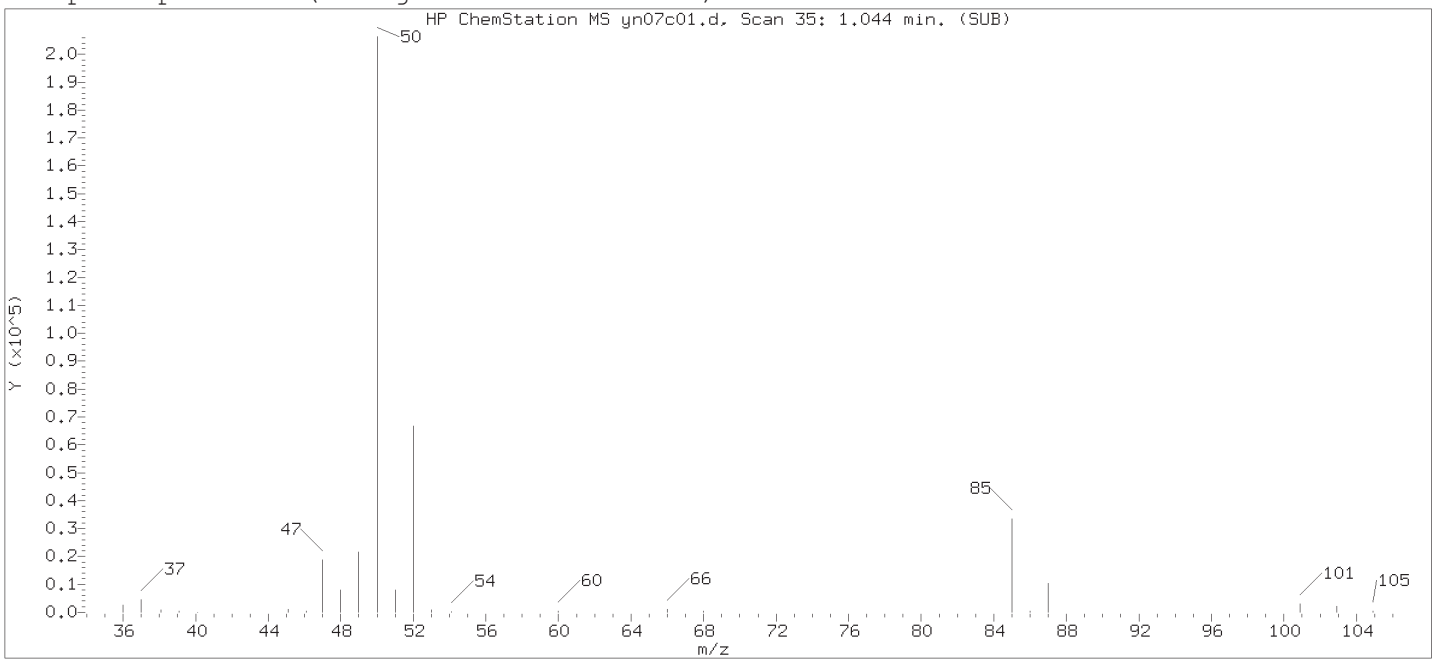
Compound Number : 4
Compound Name : Chloromethane
Scan Number : 35
Retention Time (minutes): 1.044
Quant Ion : 50.00
Area (flag) : 465213M
On-Column Amount (ng) : 46.1878
Integration start scan : 27 Integration stop scan: 41
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

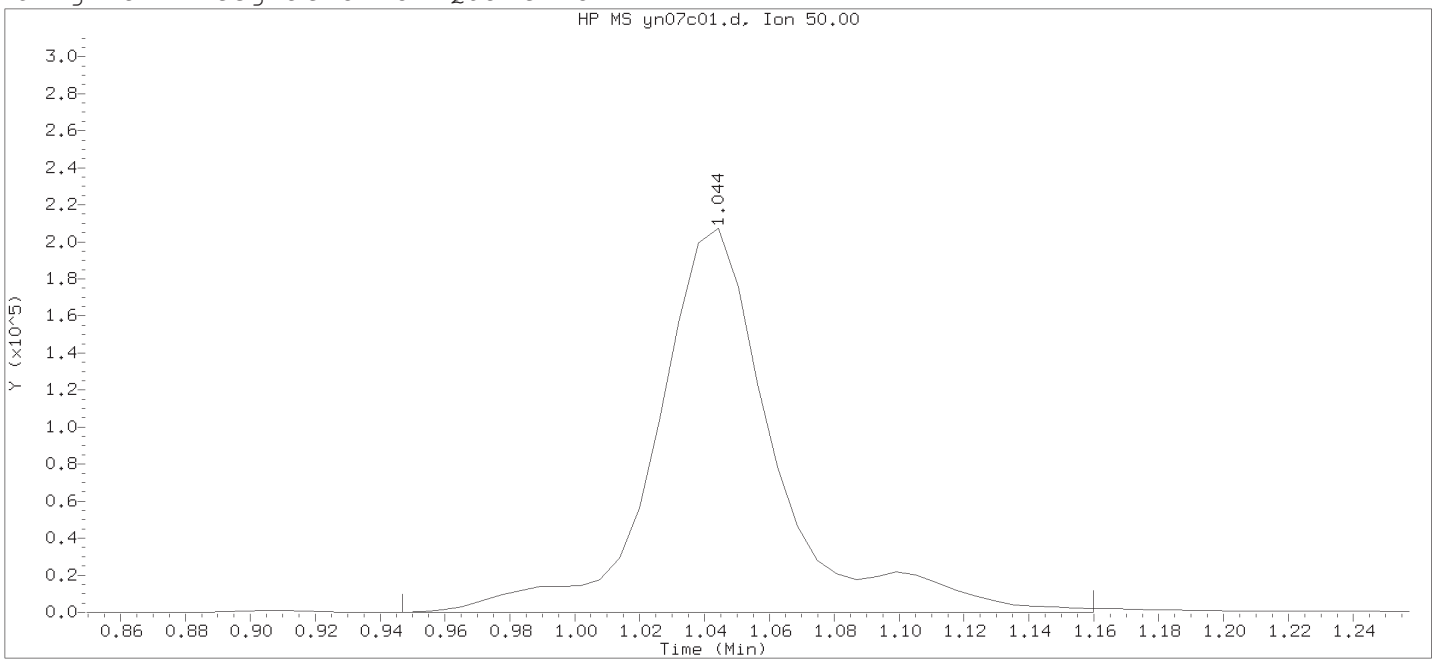
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ads01731

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07c01.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 09:26 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-1
Calibration date and time: 07-NOV-2013 09:42
Date, time and analyst ID of latest file update: 07-Nov-2013 09:42 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 4
Compound Name : Chloromethane
Scan Number : 35
Retention Time (minutes): 1.044
Quant Ion : 50.00
Area : 530275
On-column Amount (ng) : 52.6473
Integration start scan : 18 Integration stop scan: 53
Y at integration start : 0 Y at integration end: 0

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 11:22.
Target 3.5 esignature user ID: ADS01731

Raw QC Data

Volatiles by GC/MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11b02.d Injection date and time: **11-NOV-2013 11:43**
Data file Sample Info. Line: VBLKA26;VBLKA26;2;3;;;;;; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.055(-0.006)	407	65	189339 (0)	250.00	
67) Fluorobenzene	7.547(-0.006)	981	96	1561978 (-9)	50.00	
99) Chlorobenzene-d5	11.075(0.000)	1561	117	1277520 (-8)	50.00	
133) 1,4-Dichlorobenzene-d4	12.980(0.000)	1874	152	708260 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
55) Dibromofluoromethane	(2)	6.647(0.000)	113	402197	52.671	105%		50 - 141
61) 1,2-Dichloroethane-d4	(2)	7.115(0.000)	102	92789	53.581	107%		54 - 135
86) Toluene-d8	(3)	9.591(-0.001)	98	1546064	46.629	93%		52 - 141
112) 4-Bromofluorobenzene	(3)	12.091(0.000)	95	574094	46.570	93%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					2	5
5) Vinyl Chloride	(2)			Not Detected					1	5
9) Bromomethane	(2)			Not Detected					2	5
10) Chloroethane	(2)			Not Detected					2	5
11) Dichlorofluoromethane	(2)			Not Detected					2	5
13) Trichlorofluoromethane	(2)			Not Detected					2	5
15) Ethanol	(1)			Not Detected					100	500
17) Freon 123a	(2)			Not Detected					2	5
18) Acrolein	(1)			Not Detected					20	100
19) 1,1-Dichloroethene	(2)			Not Detected					1	5
20) Acetone	(2)			Not Detected					7	20
22) Freon 113	(2)			Not Detected					2	10
23) 2-Propanol	(1)			Not Detected					60	100
24) Methyl Iodide	(2)			Not Detected					3	5
25) Carbon Disulfide	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					2	5
29) Allyl Chloride	(2)			Not Detected					1	5
31) Methylene Chloride	(2)			Not Detected					2	5
32) t-Butyl alcohol	(1)			Not Detected					20	100
33) Acrylonitrile	(2)			Not Detected					4	20
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)			Not Detected					1	5
38) n-Hexane	(2)			Not Detected					1	5
40) 1,1-Dichloroethane	(2)			Not Detected					1	5
41) di-Isopropyl ether	(2)			Not Detected					1	5
42) 2-Chloro-1,3-butadiene	(2)			Not Detected					1	5
44) Ethyl t-butyl ether	(2)			Not Detected					1	5
45) 2-Butanone	(2)			Not Detected					4	10
46) cis-1,2-Dichloroethene	(2)			Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11b02.d Injection date and time: **11-NOV-2013 11:43**
Data file Sample Info. Line: VBLKA26;VBLKA26;2;3;;;;;; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
47) 1,2-Dichloroethene (Total)	(2)			Not Detected					1	5
48) 2,2-Dichloropropane	(2)			Not Detected					1	5
50) Propionitrile	(1)			Not Detected					30	100
51) Methacrylonitrile	(2)			Not Detected					5	50
52) Bromochloromethane	(2)			Not Detected					1	5
53) Tetrahydrofuran	(1)			Not Detected					4	5
54) Chloroform	(2)			Not Detected					1	5
56) 1,1,1-Trichloroethane	(2)			Not Detected					1	5
57) Cyclohexane	(2)			Not Detected					1	5
58) 1,1-Dichloropropene	(2)			Not Detected					1	5
59) Carbon Tetrachloride	(2)			Not Detected					1	5
60) Isobutyl Alcohol	(1)			Not Detected					100	250
62) Benzene	(2)			Not Detected					0.5	5
64) 1,2-Dichloroethane	(2)			Not Detected					1	5
65) t-Amyl methyl ether	(2)			Not Detected					1	5
69) n-Heptane	(2)			Not Detected					3	5
70) n-Butanol	(1)			Not Detected					110	250
72) Trichloroethene	(2)			Not Detected					1	5
73) Methylcyclohexane	(2)			Not Detected					1	5
74) 1,2-Dichloropropane	(2)			Not Detected					1	5
76) Methyl Methacrylate	(2)			Not Detected					1	5
77) 1,4-Dioxane	(1)			Not Detected					70	250
78) Dibromomethane	(2)			Not Detected					1	5
81) Bromodichloromethane	(2)			Not Detected					1	5
82) 2-Nitropropane	(1)			Not Detected					3	10
84) cis-1,3-Dichloropropene	(2)			Not Detected					1	5
85) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
87) Toluene	(3)			Not Detected					1	5
88) trans-1,3-Dichloropropene	(3)			Not Detected					1	5
89) Ethyl Methacrylate	(3)			Not Detected					1	5
90) 1,1,2-Trichloroethane	(3)			Not Detected					1	5
92) Tetrachloroethene	(3)			Not Detected					1	5
93) 1,3-Dichloropropane	(3)			Not Detected					1	5
95) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					1	5
98) 1,2-Dibromoethane	(3)			Not Detected					1	5
100) Chlorobenzene	(3)			Not Detected					1	5
101) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					1	5
102) Ethylbenzene	(3)			Not Detected					1	5
103) m+p-Xylene	(3)			Not Detected					1	5
104) o-Xylene	(3)			Not Detected					1	5
105) Xylene (Total)	(3)			Not Detected					1	5
106) Styrene	(3)			Not Detected					1	5
107) Bromoform	(3)			Not Detected					1	5
108) Isopropylbenzene	(3)			Not Detected					1	5
111) Cyclohexanone	(1)			Not Detected					25	250
113) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					1	5
114) Bromobenzene	(4)			Not Detected					1	5
115) trans-1,4-Dichloro-2-butene	(4)			Not Detected					10	50
116) 1,2,3-Trichloropropane	(4)			Not Detected					1	5
117) n-Propylbenzene	(4)			Not Detected					1	5
119) 2-Chlorotoluene	(4)			Not Detected					1	5
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11b02.d Injection date and time: **11-NOV-2013 11:43**
Data file Sample Info. Line: VBLKA26;VBLKA26;2;3;;;;;; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

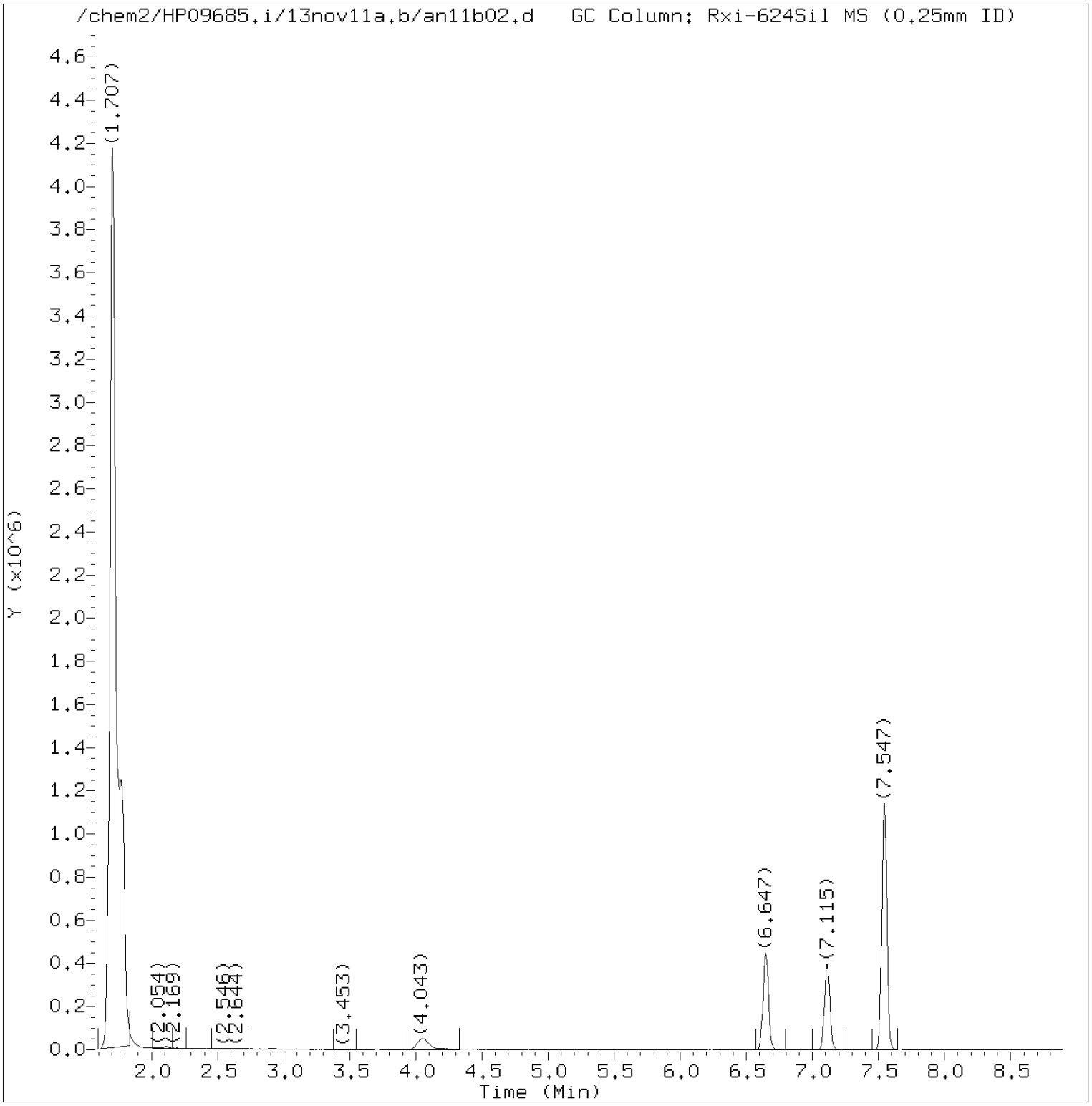
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
123) 4-Chlorotoluene	(4)			Not Detected					1	5
126) tert-Butylbenzene	(4)			Not Detected					1	5
127) Pentachloroethane	(4)			Not Detected					1	5
128) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
129) sec-Butylbenzene	(4)			Not Detected					1	5
131) 1,3-Dichlorobenzene	(4)			Not Detected					1	5
132) p-Isopropyltoluene	(4)			Not Detected					1	5
134) 1,4-Dichlorobenzene	(4)			Not Detected					1	5
135) 1,2,3-Trimethylbenzene	(4)			Not Detected					1	5
136) Benzyl Chloride	(4)			Not Detected					1	4
137) 1,3-Diethylbenzene	(4)			Not Detected					1	5
138) 1,4-Diethylbenzene	(4)			Not Detected					1	5
139) n-Butylbenzene	(4)			Not Detected					1	5
140) 1,2-Dichlorobenzene	(4)			Not Detected					1	5
141) 1,2-Diethylbenzene	(4)			Not Detected					1	5
144) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					2	5
145) 1,3,5-Trichlorobenzene	(4)			Not Detected					1	5
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					1	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)			Not Detected					1	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	5

Total number of targets = 105

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29. Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:42. Parallax ID: ads01731



Total Ion Chromatogram (TIC)

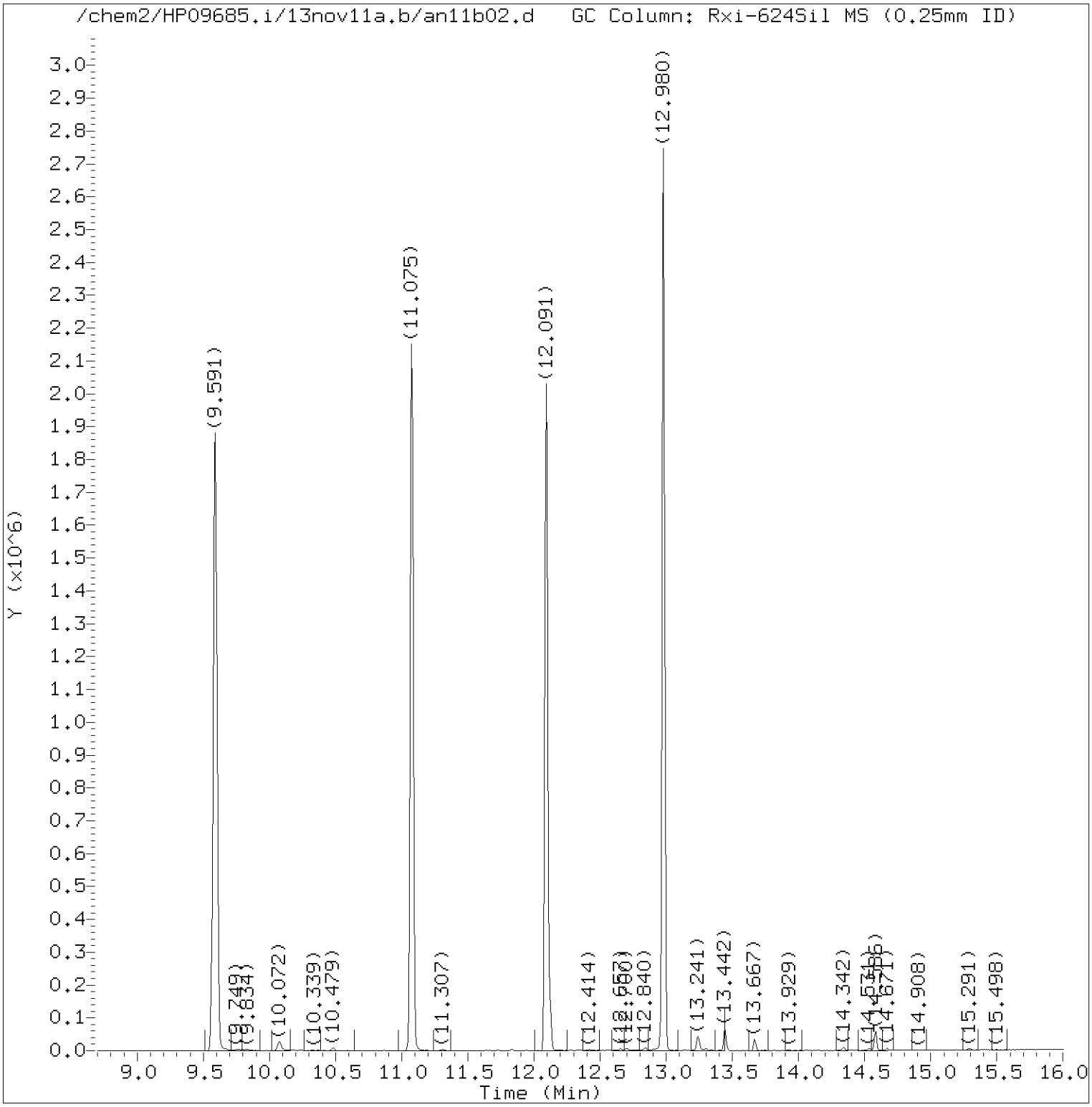
Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	4.055	65	189339	250.000
55)$Dibromofluoromethane	(2)	6.647	113	402197	52.671
61)$1,2-Dichloroethane-d4	(2)	7.115	102	92789	53.581
67)*Fluorobenzene	(2)	7.547	96	1561978	50.000
86)$Toluene-d8	(3)	9.591	98	1546064	46.629
99)*Chlorobenzene-d5	(3)	11.075	117	1277520	50.000
112)$4-Bromofluorobenzene	(3)	12.091	95	574094	46.570
133)*1,4-Dichlorobenzene-d4	(4)	12.980	152	708260	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKA26

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) SOIL Lab Sample ID: VBLKA26

Sample wt/vol: 5.0 (g/mL) g Lab File ID: HP09685.i/13nov11a.b/an11b02.d

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/11/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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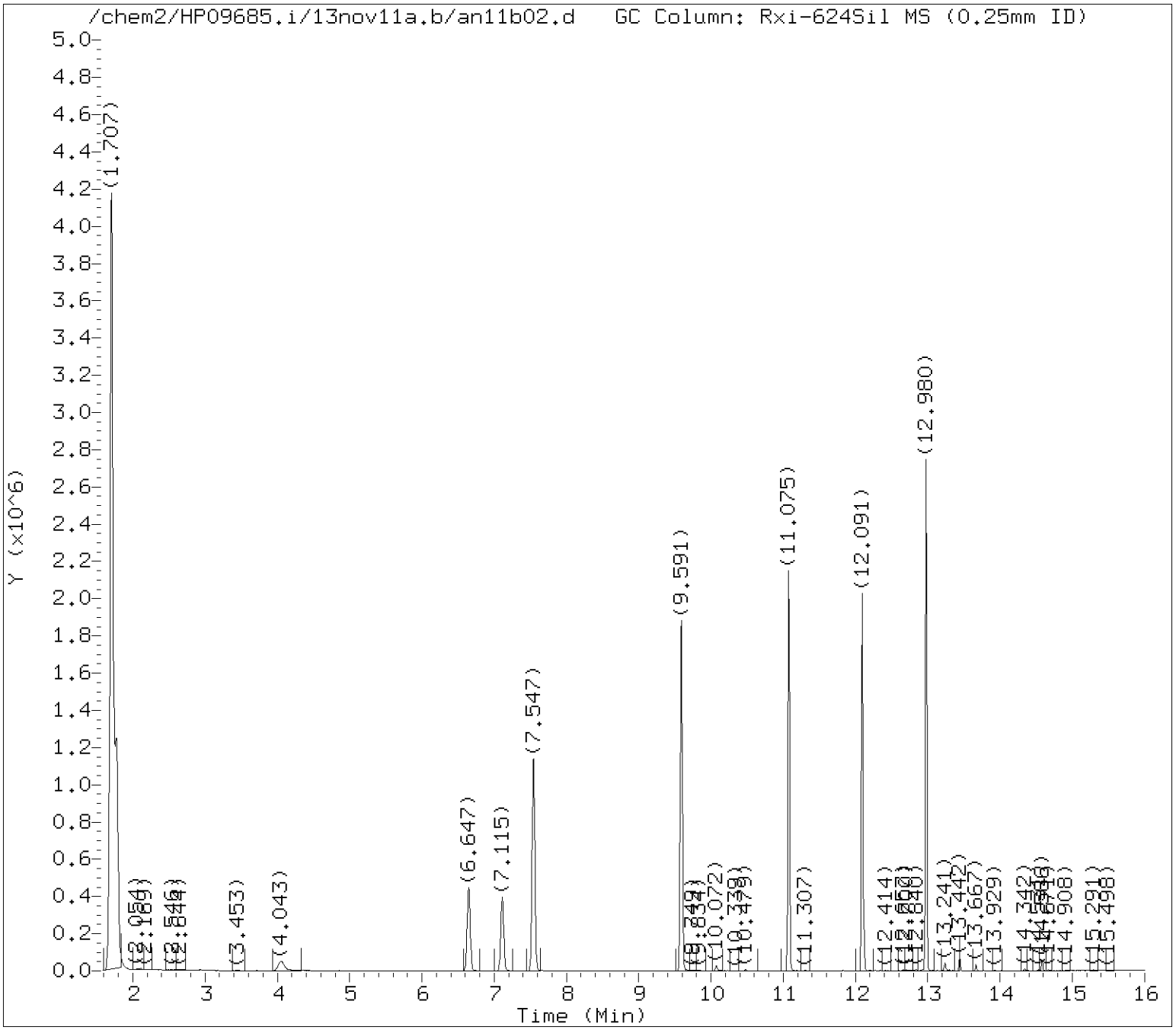
27.					
28.					
29.					
30.					

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

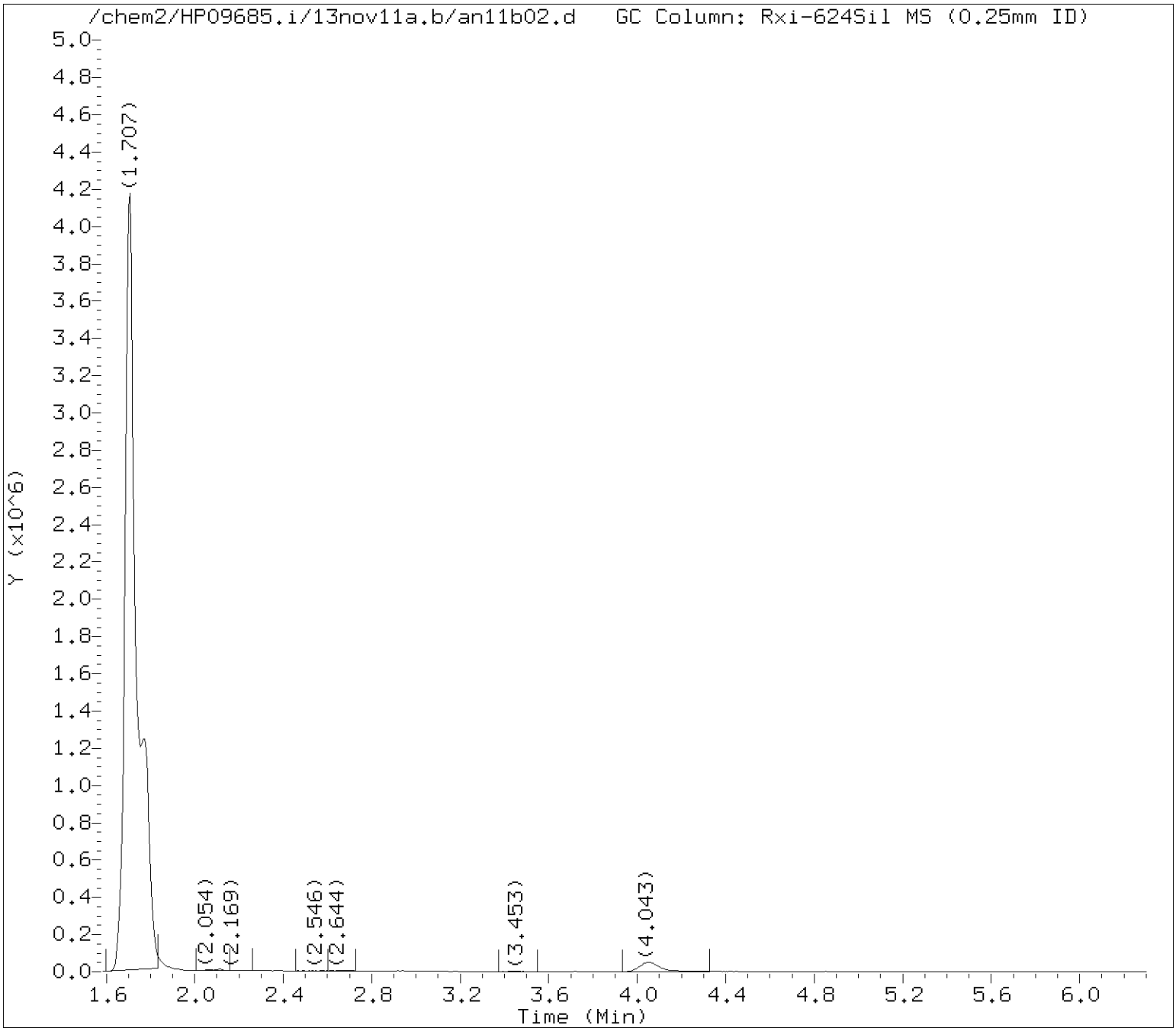
Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 16.003

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

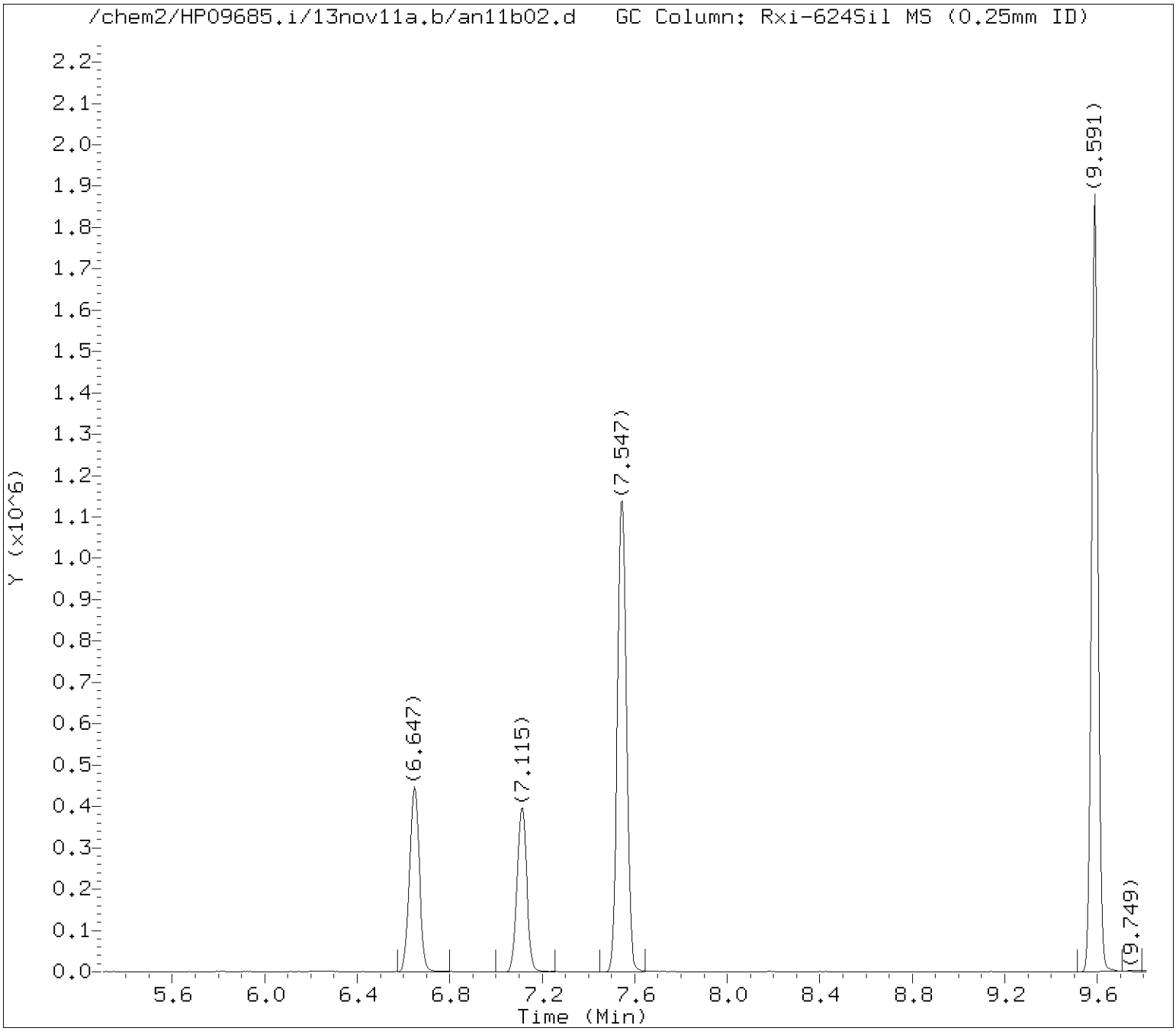
Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Internal Standard referenced: t-Butyl alcohol-d10 at 4.055 minutes
Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 5.801

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

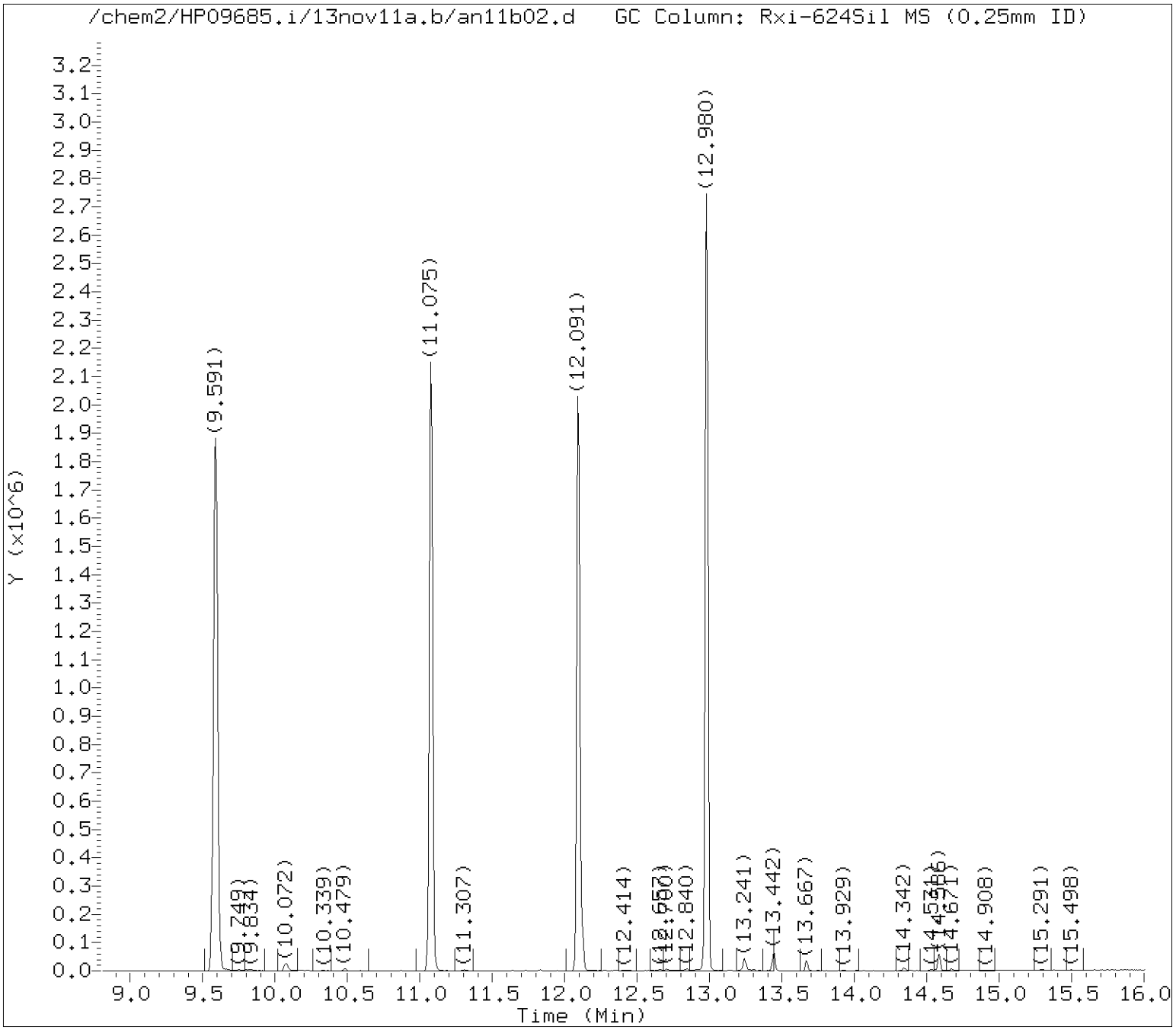
Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Internal Standard referenced: Fluorobenzene at 7.547 minutes
Chromatogram Start Time (min.): 5.801
Chromatogram End Time (min.): 9.311

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

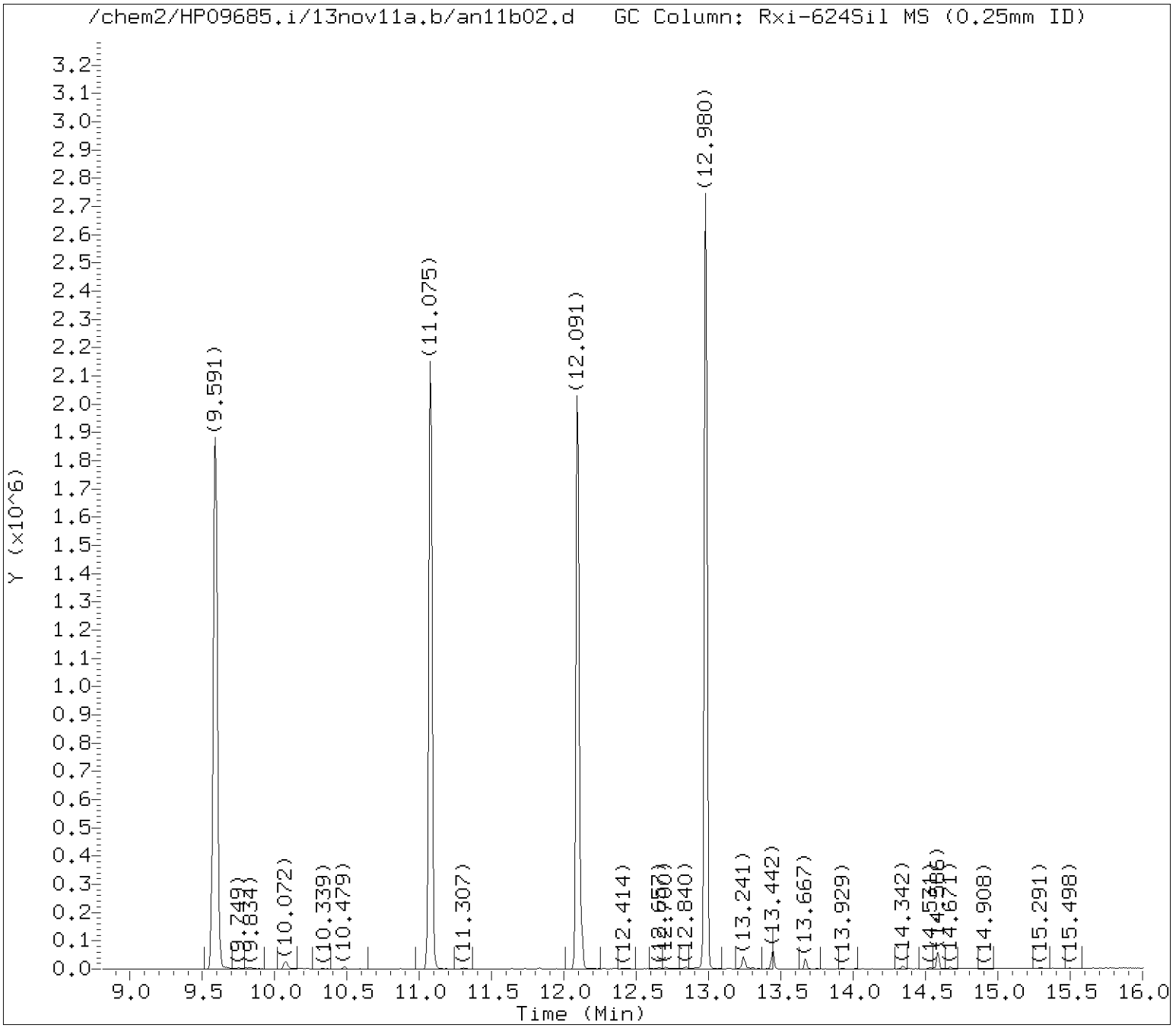
Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Internal Standard referenced: Chlorobenzene-d5 at 11.075 minutes
Chromatogram Start Time (min.): 9.311
Chromatogram End Time (min.): 12.028

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11b02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:29 cbs01947

Sample Name: VBLKA26 Lab Sample ID: VBLKA26

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 12.980 minutes
Chromatogram Start Time (min.): 12.028
Chromatogram End Time (min.): 16.003

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947

Lancaster Laboratories

Data file : /chem2/HP09685.i/13nov11a.b/an11b02.d
Lab Smp Id: VBLKA26 Client Smp ID: VBLKA26
Inj Date : 11-NOV-2013 11:43
Operator : CBS01947 Inst ID: HP09685.i
Smp Info : VBLKA26;VBLKA26;2;3;;;;;;
Misc Info : 8260S-2C.sub;A133151AA;5;;5;;;
Comment : Max. number of TICs to report is 16, 1 TICs were found initially.
Method : /chem2/HP09685.i/13nov11a.b/di8260b.m
Meth Date : 11-Nov-2013 11:16 chemist Quant Type: ISTD
Cal Date : 29-OCT-2013 01:46 Cal File: ac28i06.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8260S-2C.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	Purge Volume
Ws	5.00000	Weight of soil sample

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 30 t-Butyl alcohol-d10	4.055	344784	250.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/Kg)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report					CAS #:		
1.707	16021316	11616.9123	11616.9123	0		0	30

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:29.
Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11b05.d Injection date and time: **12-NOV-2013 00:46**
Data file Sample Info. Line: VBLKX48;VBLKX48;2;3;;;;;; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.213(0.000)	433	65	231152 (-6)	250.00	
69) Fluorobenzene	7.711(0.006)	1008	96	1648673 (-9)	50.00	
101) Chlorobenzene-d5	11.197(0.000)	1581	117	1284556 (-8)	50.00	
135) 1,4-Dichlorobenzene-d4	13.083(0.000)	1891	152	725598 (-11)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	6.811(0.000)	113	433734	50.466	101%		50 - 141
62) 1,2-Dichloroethane-d4	(2)	7.279(-0.001)	102	97538	50.354	101%		54 - 135
88) Toluene-d8	(3)	9.737(0.000)	98	1613495	48.639	97%		52 - 141
114) 4-Bromofluorobenzene	(3)	12.201(0.000)	95	610709	46.448	93%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					2	5
5) Vinyl Chloride	(2)			Not Detected					1	5
9) Bromomethane	(2)			Not Detected					2	5
10) Chloroethane	(2)			Not Detected					2	5
11) Dichlorofluoromethane	(2)			Not Detected					2	5
13) Trichlorofluoromethane	(2)			Not Detected					2	5
17) Freon 123a	(2)			Not Detected					2	5
18) Acrolein	(1)			Not Detected					20	100
19) 1,1-Dichloroethene	(2)			Not Detected					1	5
20) Acetone	(2)			Not Detected					7	20
22) Freon 113	(2)			Not Detected					2	10
23) 2-Propanol	(1)			Not Detected					60	100
24) Methyl Iodide	(2)			Not Detected					3	5
25) Carbon Disulfide	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					2	5
29) Allyl Chloride	(2)			Not Detected					1	5
31) Methylene Chloride	(2)			Not Detected					2	5
32) t-Butyl alcohol	(1)			Not Detected					20	100
33) Acrylonitrile	(2)			Not Detected					4	20
34) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
35) trans-1,2-Dichloroethene	(2)			Not Detected					1	5
38) n-Hexane	(2)			Not Detected					1	5
40) 1,1-Dichloroethane	(2)			Not Detected					1	5
41) di-Isopropyl ether	(2)			Not Detected					1	5
42) 2-Chloro-1,3-butadiene	(2)			Not Detected					1	5
44) Ethyl t-butyl ether	(2)			Not Detected					1	5
45) 2-Butanone	(2)			Not Detected					4	10
46) cis-1,2-Dichloroethene	(2)			Not Detected					1	5
47) 1,2-Dichloroethene (Total)	(2)			Not Detected					1	5

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11b05.d Injection date and time: **12-NOV-2013 00:46**
Data file Sample Info. Line: VBLKX48;VBLKX48;2;3;;;;;; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
48) 2,2-Dichloropropane	(2)				Not Detected					1	5
50) Propionitrile	(1)				Not Detected					30	100
51) Methacrylonitrile	(2)				Not Detected					5	50
52) Bromochloromethane	(2)				Not Detected					1	5
53) Tetrahydrofuran	(1)				Not Detected					4	5
54) Chloroform	(2)				Not Detected					1	5
57) 1,1,1-Trichloroethane	(2)				Not Detected					1	5
58) Cyclohexane	(2)				Not Detected					1	5
59) 1,1-Dichloropropene	(2)				Not Detected					1	5
60) Carbon Tetrachloride	(2)				Not Detected					1	5
61) Isobutyl Alcohol	(1)				Not Detected					100	250
63) Benzene	(2)				Not Detected					0.5	5
66) 1,2-Dichloroethane	(2)				Not Detected					1	5
67) t-Amyl methyl ether	(2)				Not Detected					1	5
71) n-Heptane	(2)				Not Detected					3	5
72) n-Butanol	(1)				Not Detected					110	250
74) Trichloroethene	(2)				Not Detected					1	5
75) Methylcyclohexane	(2)				Not Detected					1	5
76) 1,2-Dichloropropane	(2)				Not Detected					1	5
78) Methyl Methacrylate	(2)				Not Detected					1	5
79) 1,4-Dioxane	(1)				Not Detected					70	250
80) Dibromomethane	(2)				Not Detected					1	5
83) Bromodichloromethane	(2)				Not Detected					1	5
84) 2-Nitropropane	(1)				Not Detected					3	10
86) cis-1,3-Dichloropropene	(2)				Not Detected					1	5
87) 4-Methyl-2-pentanone	(2)				Not Detected					3	10
89) Toluene	(3)				Not Detected					1	5
90) trans-1,3-Dichloropropene	(3)				Not Detected					1	5
91) Ethyl Methacrylate	(3)				Not Detected					1	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					1	5
94) Tetrachloroethene	(3)				Not Detected					1	5
95) 1,3-Dichloropropane	(3)				Not Detected					1	5
97) 2-Hexanone	(3)				Not Detected					3	10
99) Dibromochloromethane	(3)				Not Detected					1	5
100) 1,2-Dibromoethane	(3)				Not Detected					1	5
102) Chlorobenzene	(3)				Not Detected					1	5
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	5
104) Ethylbenzene	(3)				Not Detected					1	5
105) m+p-Xylene	(3)				Not Detected					1	5
106) o-Xylene	(3)				Not Detected					1	5
107) Xylene (Total)	(3)				Not Detected					1	5
108) Styrene	(3)				Not Detected					1	5
109) Bromoform	(3)				Not Detected					1	5
110) Isopropylbenzene	(3)				Not Detected					1	5
113) Cyclohexanone	(1)				Not Detected					25	250
115) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					1	5
116) Bromobenzene	(4)				Not Detected					1	5
117) trans-1,4-Dichloro-2-butene	(4)				Not Detected					10	50
118) 1,2,3-Trichloropropane	(4)				Not Detected					1	5
119) n-Propylbenzene	(4)				Not Detected					1	5
121) 2-Chlorotoluene	(4)				Not Detected					1	5
124) 1,3,5-Trimethylbenzene	(4)				Not Detected					1	5
125) 4-Chlorotoluene	(4)				Not Detected					1	5

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11b05.d Injection date and time: **12-NOV-2013 00:46**
Data file Sample Info. Line: VBLKX48;VBLKX48;2;3;;;;;; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

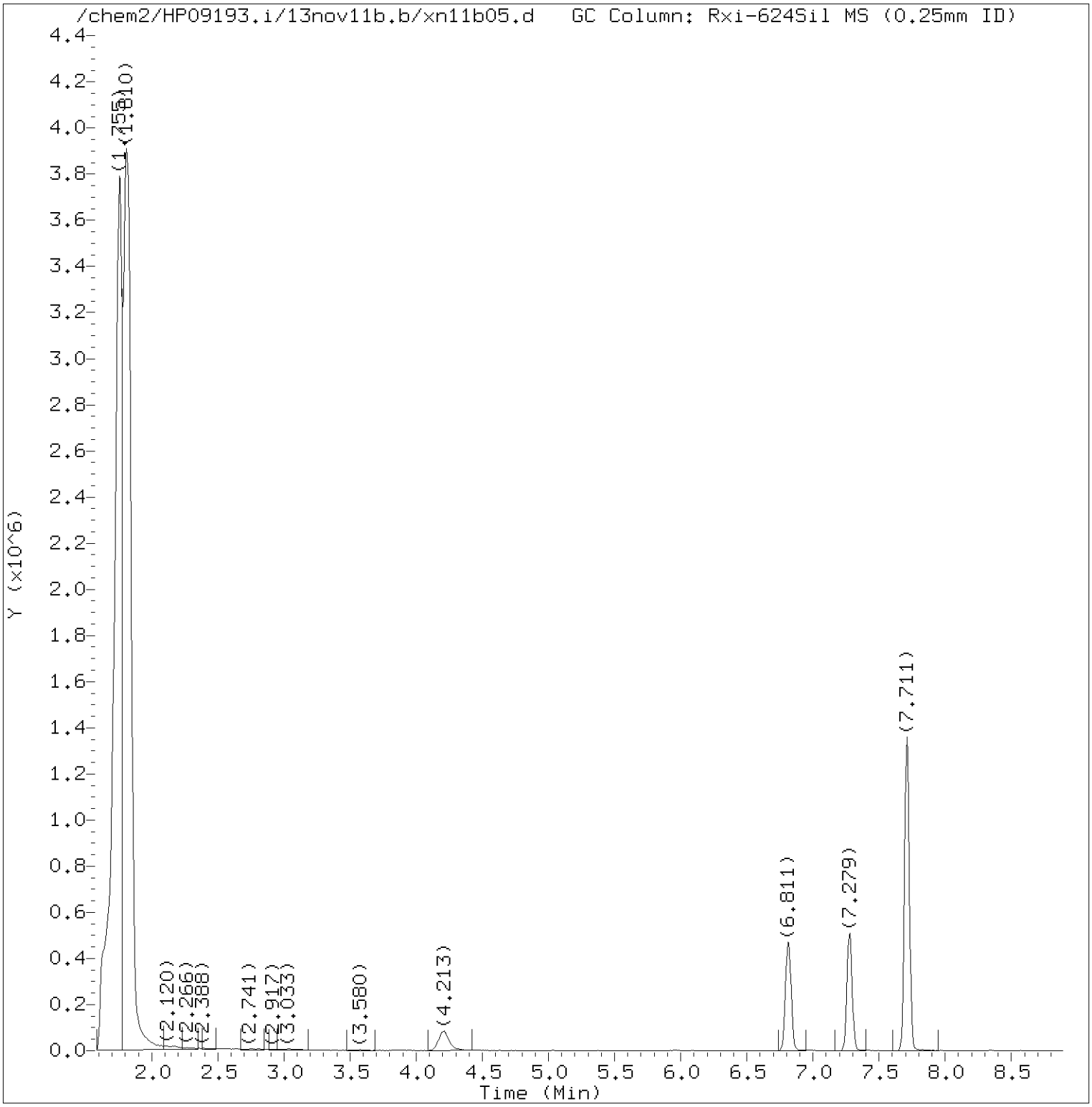
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
128) tert-Butylbenzene	(4)				Not Detected					1	5
129) Pentachloroethane	(4)				Not Detected					1	5
130) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
131) sec-Butylbenzene	(4)				Not Detected					1	5
133) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
134) p-Isopropyltoluene	(4)				Not Detected					1	5
136) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
137) 1,2,3-Trimethylbenzene	(4)				Not Detected					1	5
138) Benzyl Chloride	(4)				Not Detected					1	4
139) 1,3-Diethylbenzene	(4)				Not Detected					1	5
140) 1,4-Diethylbenzene	(4)				Not Detected					1	5
141) n-Butylbenzene	(4)				Not Detected					1	5
142) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
143) 1,2-Diethylbenzene	(4)				Not Detected					1	5
146) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
147) 1,3,5-Trichlorobenzene	(4)				Not Detected					1	5
148) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5
149) Hexachlorobutadiene	(4)				Not Detected					2	5
150) Naphthalene	(4)				Not Detected					1	5
151) 1,2,3-Trichlorobenzene	(4)				Not Detected					1	5
152) 2-Methylnaphthalene	(4)				Not Detected					2	5

Total number of targets = 104

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

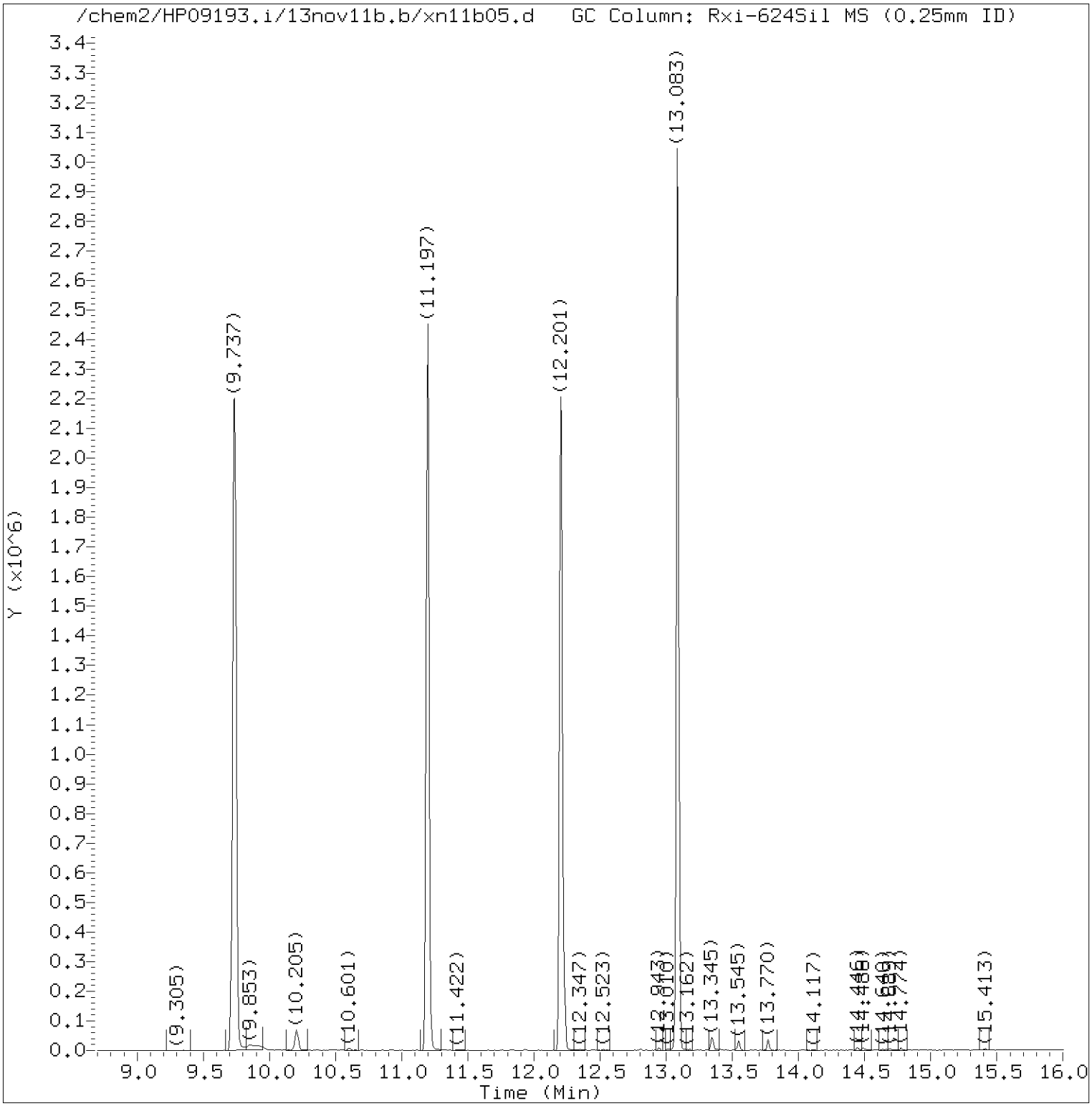
Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:15 sas00403

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
30)*t-Butyl alcohol-d10	(1)	4.213	65	231152	250.000
56)$Dibromofluoromethane	(2)	6.811	113	433734	50.466
62)$1,2-Dichloroethane-d4	(2)	7.279	102	97538	50.354
69)*Fluorobenzene	(2)	7.711	96	1648673	50.000
88)$Toluene-d8	(3)	9.737	98	1613495	48.639
101)*Chlorobenzene-d5	(3)	11.197	117	1284556	50.000
114)$4-Bromofluorobenzene	(3)	12.201	95	610709	46.448
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	725598	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKX48

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) SOIL Lab Sample ID: VBLKX48

Sample wt/vol: 5.0 (g/mL) g Lab File ID: HP09193.i/13nov11b.b/xn11b05.d

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/12/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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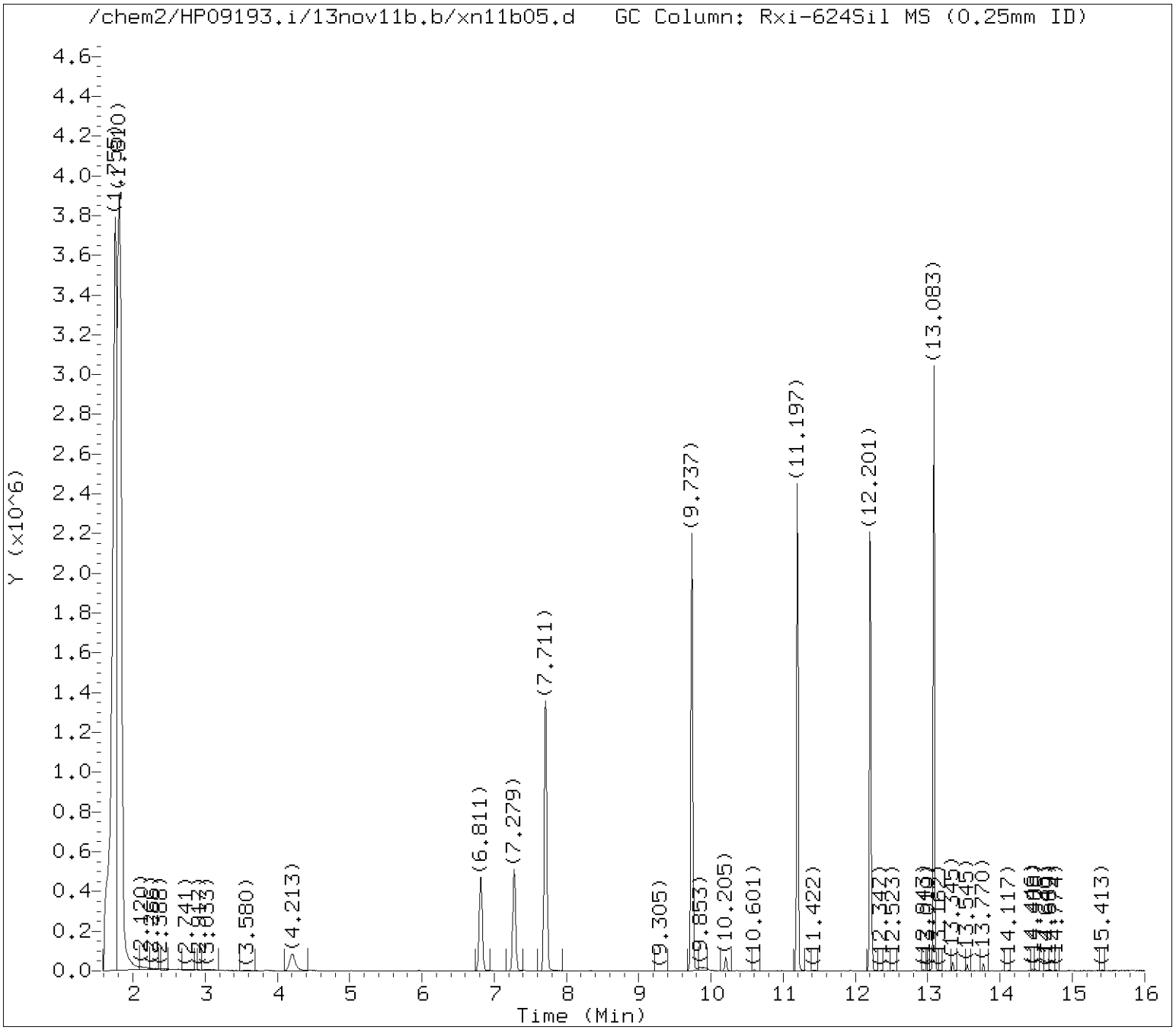
29.					
30.					

FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

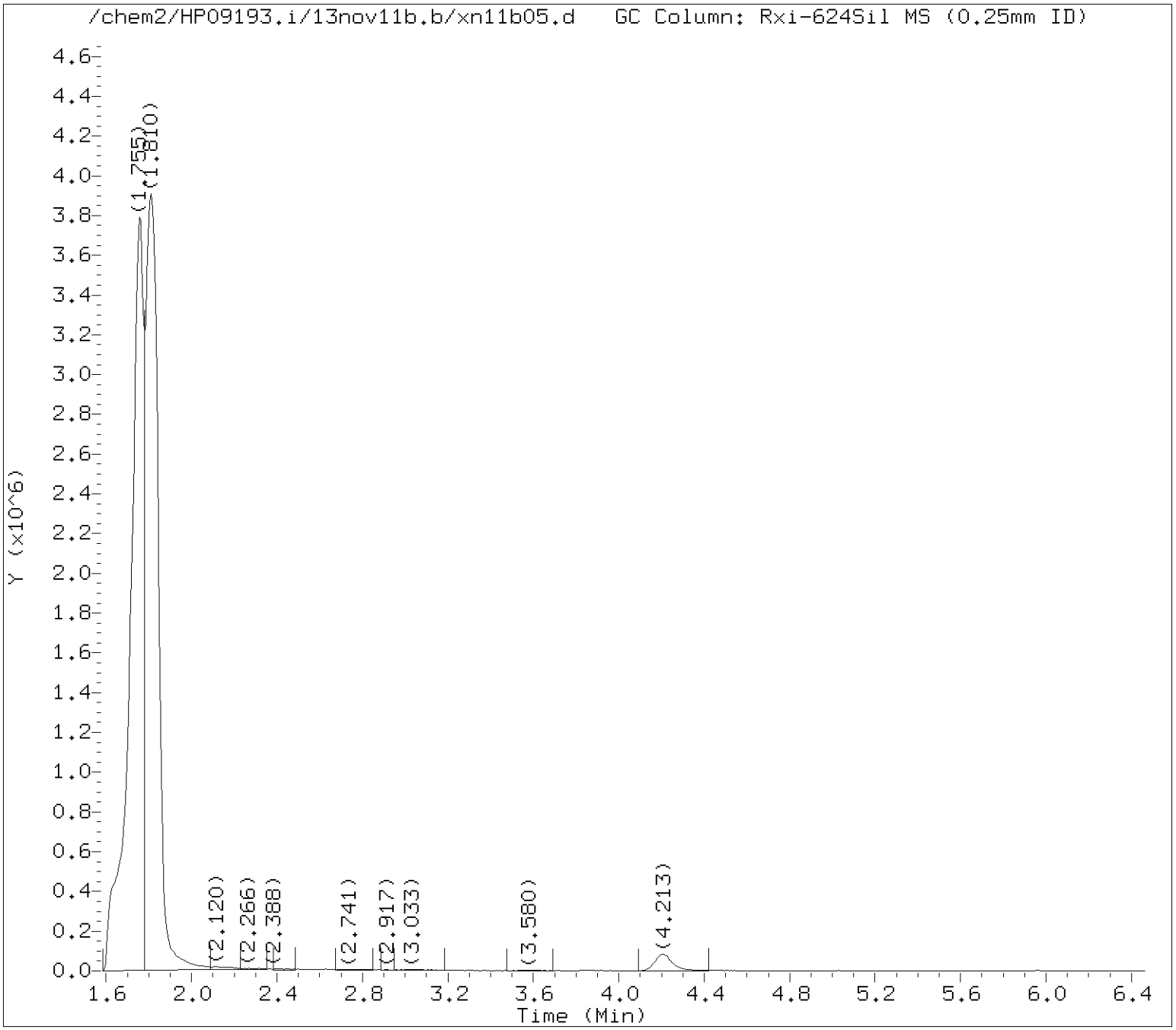
Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 17:10
Date, time and analyst ID of latest file update: 12-Nov-2013 17:11 sej02002

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 16.003

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

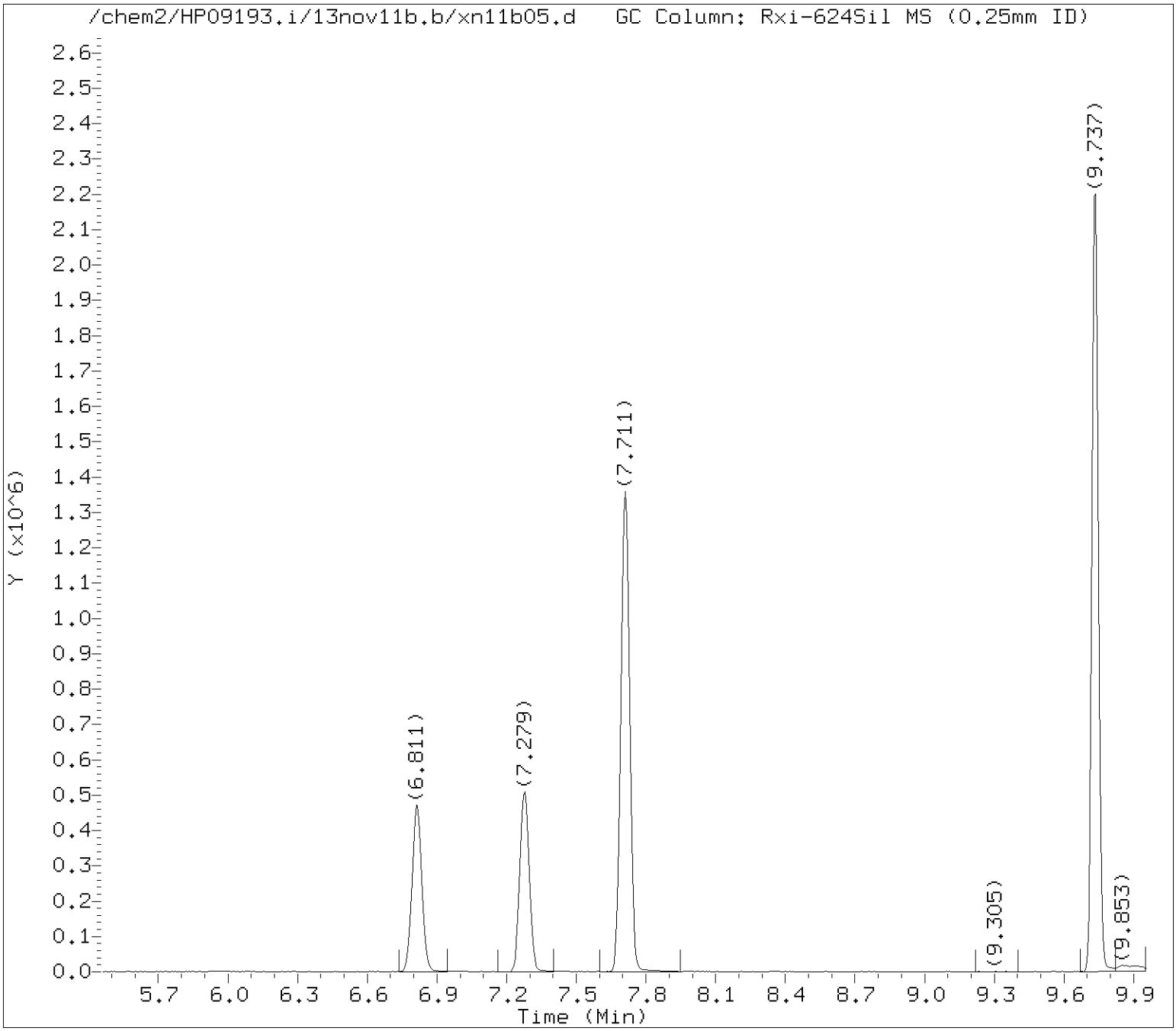
Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 17:10
Date, time and analyst ID of latest file update: 12-Nov-2013 17:11 sej02002

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Internal Standard referenced: t-Butyl alcohol-d10 at 4.213 minutes
Chromatogram Start Time (min.): 1.585
Chromatogram End Time (min.): 5.962

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

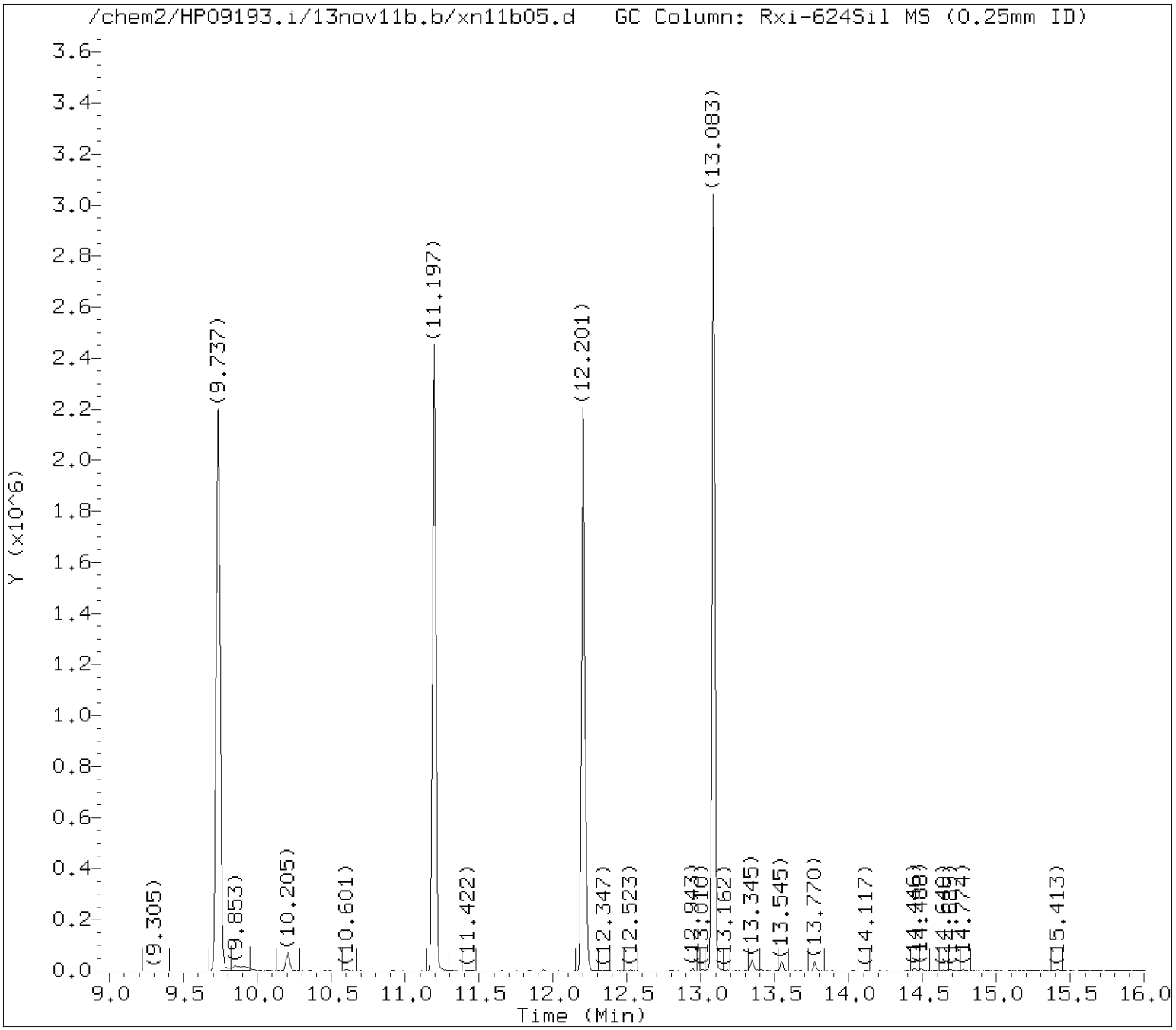
Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 17:10
Date, time and analyst ID of latest file update: 12-Nov-2013 17:11 sej02002

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Internal Standard referenced: Fluorobenzene at 7.711 minutes
Chromatogram Start Time (min.): 5.962
Chromatogram End Time (min.): 9.454

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

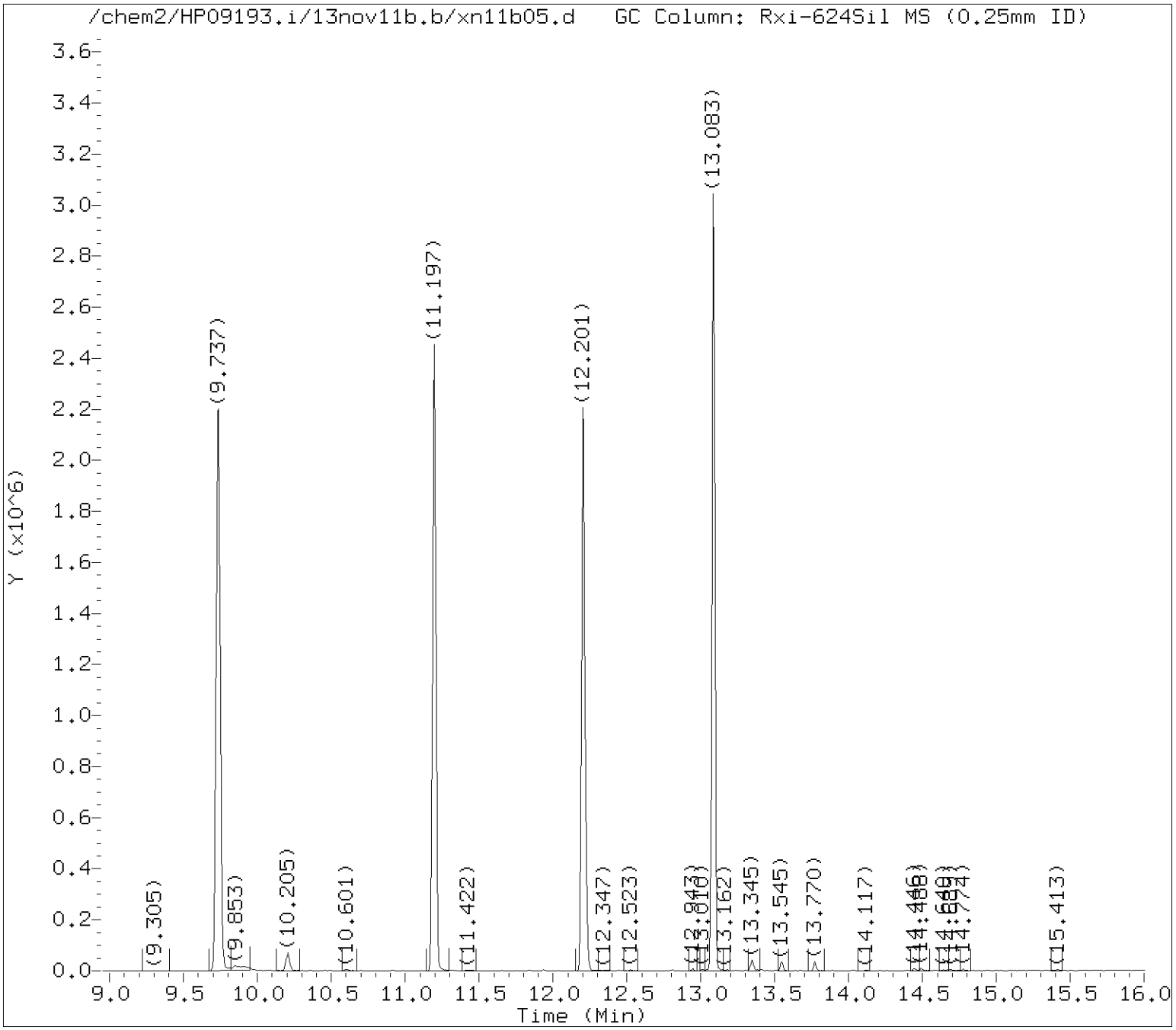
Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 17:10
Date, time and analyst ID of latest file update: 12-Nov-2013 17:11 sej02002

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Internal Standard referenced: Chlorobenzene-d5 at 11.197 minutes
Chromatogram Start Time (min.): 9.454
Chromatogram End Time (min.): 12.140

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11b05.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 00:46 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 17:10
Date, time and analyst ID of latest file update: 12-Nov-2013 17:11 sej02002

Sample Name: VBLKX48 Lab Sample ID: VBLKX48

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 13.083 minutes
Chromatogram Start Time (min.): 12.140
Chromatogram End Time (min.): 16.003

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861

Lancaster Laboratories

Data file : /chem2/HP09193.i/13nov11b.b/xn11b05.d
Lab Smp Id: VBLKX48 Client Smp ID: VBLKX48
Inj Date : 12-NOV-2013 00:46
Operator : SAS00403 Inst ID: HP09193.i
Smp Info : VBLKX48;VBLKX48;2;3;;;;;;
Misc Info : 8260S-2CE.sub;X133152AA;5;;5;;;
Comment : Max. number of TICs to report is 11, 1 TICs were found initially.
Method : /chem2/HP09193.i/13nov11b.b/na8260b.m
Meth Date : 12-Nov-2013 17:10 sej02002 Quant Type: ISTD
Cal Date : 22-OCT-2013 04:08 Cal File: xc22i06.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8260S-2CE.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	Purge Volume
Ws	5.00000	Weight of soil sample

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 30 t-Butyl alcohol-d10	4.213	476997	250.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ug/Kg)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report					CAS #:		
1.755	16489967	8642.58643	8642.58643	0		0	30

Digitally signed by Andrea E. Lando on 11/12/2013 at 17:16.
Target 3.5 esignature user ID: ael02861

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07b05.d Injection date and time: **07-NOV-2013 10:09**
Data file Sample Info. Line: VBLKY34;VBLKY34;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC+SM**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.030(-0.006)	197	65	343322 (-8)	250.00	
66) Fluorobenzene	4.092(0.000)	536	96	1007749 (-3)	50.00	
100) Chlorobenzene-d5	7.280(0.000)	1060	117	763409 (-5)	50.00	
131) 1,4-Dichlorobenzene-d4	9.318(0.000)	1395	152	442222 (-9)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	3.459(-0.001)	113	244166	51.900	104%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	3.764(-0.001)	102	62246	51.042	102%		77 - 113
83) Toluene-d8	(3)	5.716(-0.001)	98	987423	48.594	97%		80 - 113
114) 4-Bromofluorobenzene	(3)	8.399(0.000)	95	363196	46.970	94%		78 - 113

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Chlorotrifluoroethene	(2)			Not Detected					2	5
3) Dichlorodifluoromethane	(2)			Not Detected					2	5
4) Chloromethane	(2)			Not Detected					1	5
6) Vinyl Chloride	(2)			Not Detected					1	5
7) Freon 133a	(2)			Not Detected					2	5
8) Bromomethane	(2)			Not Detected					1	5
9) Chloroethane	(2)			Not Detected					1	5
10) Dichlorofluoromethane	(2)			Not Detected					2	5
12) Trichlorofluoromethane	(2)			Not Detected					2	5
14) Ethyl ether	(2)			Not Detected					2	5
15) Freon 123a	(2)			Not Detected					2	5
16) Acrolein	(1)			Not Detected					40	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.8	5
18) Acetone	(2)			Not Detected					6	20
19) Freon 113	(2)			Not Detected					2	10
21) 2-Propanol	(1)			Not Detected					50	100
22) Methyl Iodide	(2)			Not Detected					1	5
23) Carbon Disulfide	(2)			Not Detected					1	5
24) Acetonitrile	(1)			Not Detected					25	100
25) Allyl Chloride	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					2	5
30) t-Butyl alcohol	(1)			Not Detected					10	80
31) Acrylonitrile	(2)			Not Detected					4	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.8	5
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	5
34) n-Hexane	(2)			Not Detected					2	5
36) 1,1-Dichloroethane	(2)			Not Detected					1	5
37) Vinyl Acetate	(2)			Not Detected					2	10
38) di-Isopropyl ether	(2)			Not Detected					0.8	5
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					1	5

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:31. Target 3.5 esignature user ID: ads01731

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07b05.d Injection date and time: **07-NOV-2013 10:09**
Data file Sample Info. Line: VBLKY34;VBLKY34;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC+SM**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
40) Ethyl t-butyl ether	(2)				Not Detected					0.8	5
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.8	5
43) 1,2-Dichloroethene (Total)	(2)				Not Detected					0.8	5
44) 2-Butanone	(2)				Not Detected					3	10
45) 2,2-Dichloropropane	(2)				Not Detected					1	5
46) Ethyl Acetate	(2)				Not Detected					1	5
47) Propionitrile	(1)				Not Detected					30	100
48) Methacrylonitrile	(2)				Not Detected					10	50
49) Bromochloromethane	(2)				Not Detected					1	5
50) Tetrahydrofuran	(1)				Not Detected					4	10
51) Chloroform	(2)				Not Detected					0.8	5
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.8	5
54) Cyclohexane	(2)				Not Detected					2	5
55) 1,1-Dichloropropene	(2)				Not Detected					1	5
56) Carbon Tetrachloride	(2)				Not Detected					1	5
58) Isobutyl Alcohol	(1)				Not Detected					100	250
60) Benzene	(2)				Not Detected					0.5	5
61) 1,2-Dichloroethane	(2)				Not Detected					1	5
62) Isopropyl acetate	(2)				Not Detected					1	5
65) t-Amyl methyl ether	(2)				Not Detected					0.8	5
67) n-Heptane	(2)				Not Detected					2	5
69) n-Butanol	(1)				Not Detected					100	250
71) Trichloroethene	(2)				Not Detected					1	5
72) Methylcyclohexane	(2)				Not Detected					1	5
73) 1,2-Dichloropropane	(2)				Not Detected					1	5
74) Dibromomethane	(2)				Not Detected					1	5
75) 1,4-Dioxane	(1)				Not Detected					70	250
76) Methyl Methacrylate	(2)				Not Detected					1	5
77) n-Propyl acetate	(2)				Not Detected					1	5
78) Bromodichloromethane	(2)				Not Detected					1	5
79) 2-Nitropropane	(2)				Not Detected					2	10
80) 2-Chloroethyl Vinyl Ether	(2)				Not Detected					2	10
81) cis-1,3-Dichloropropene	(2)				Not Detected					1	5
82) 4-Methyl-2-pentanone	(2)				Not Detected					3	10
88) Toluene	(3)				Not Detected					0.7	5
89) trans-1,3-Dichloropropene	(3)				Not Detected					1	5
90) 1,3-Dichloropropene (total)	(3)				Not Detected					1	5
91) Ethyl Methacrylate	(3)				Not Detected					1	5
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.8	5
93) Tetrachloroethene	(3)				Not Detected					0.8	5
94) 1,3-Dichloropropane	(3)				Not Detected					1	5
96) 2-Hexanone	(3)				Not Detected					3	10
97) Dibromochloromethane	(3)				Not Detected					1	5
98) Butyl acetate	(3)				Not Detected					2	10
99) 1,2-Dibromoethane	(3)				Not Detected					1	5
102) Chlorobenzene	(3)				Not Detected					0.8	5
103) 1,1,1,2-Tetrachloroethane	(3)				Not Detected					1	5
104) Ethylbenzene	(3)				Not Detected					0.8	5
106) m+p-Xylene	(3)				Not Detected					0.8	5
107) o-Xylene	(3)				Not Detected					0.8	5
108) Xylene (Total)	(3)				Not Detected					0.8	5
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					1	5
111) Isopropylbenzene	(3)				Not Detected					1	5

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:31. Target 3.5 esignature user ID: ads01731

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07b05.d Injection date and time: **07-NOV-2013 10:09**
Data file Sample Info. Line: VBLKY34;VBLKY34;1;3;;;;;; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC+SM**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

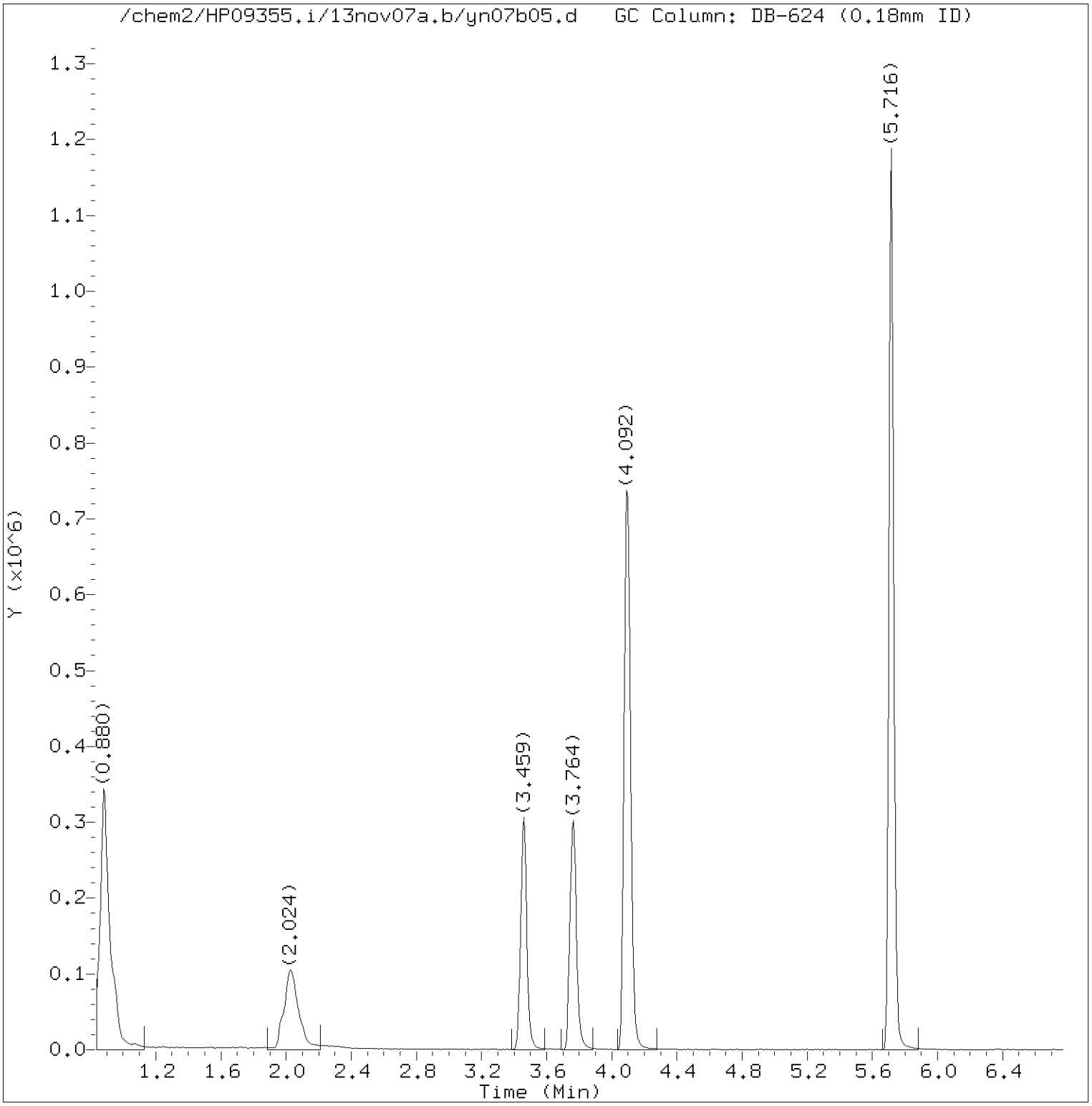
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
112) Cyclohexanone	(1)				Not Detected					55	250
115) Bromobenzene	(4)				Not Detected					1	5
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					1	5
117) 1,2,3-Trichloropropane	(4)				Not Detected					1	5
118) trans-1,4-Dichloro-2-butene	(4)				Not Detected					15	50
119) n-Propylbenzene	(4)				Not Detected					1	5
120) 2-Chlorotoluene	(4)				Not Detected					1	5
121) 4-Chlorotoluene	(4)				Not Detected					1	5
122) 1,3,5-Trimethylbenzene	(4)				Not Detected					1	5
124) tert-Butylbenzene	(4)				Not Detected					1	5
125) Pentachloroethane	(4)				Not Detected					1	5
126) 1,2,4-Trimethylbenzene	(4)				Not Detected					1	5
127) sec-Butylbenzene	(4)				Not Detected					1	5
129) 1,3-Dichlorobenzene	(4)				Not Detected					1	5
130) p-Isopropyltoluene	(4)				Not Detected					1	5
133) 1,4-Dichlorobenzene	(4)				Not Detected					1	5
134) 1,2,3-Trimethylbenzene	(4)				Not Detected					1	5
135) Benzyl Chloride	(4)				Not Detected					1	5
136) 1,3-Diethylbenzene	(4)				Not Detected					1	5
137) 1,4-Diethylbenzene	(4)				Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)				Not Detected					1	5
139) n-Butylbenzene	(4)				Not Detected					1	5
140) 1,2-Diethylbenzene	(4)				Not Detected					1	5
141) Diethylbenzene (total)	(4)				Not Detected					1	5
142) 1,2-Dibromo-3-chloropropane	(4)				Not Detected					2	5
144) 1,3,5-Trichlorobenzene	(4)				Not Detected					1	5
146) 1,2,4-Trichlorobenzene	(4)				Not Detected					1	5
147) Hexachlorobutadiene	(4)				Not Detected					2	5
148) Naphthalene	(4)				Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)				Not Detected					1	5
150) 2-Methylnaphthalene	(4)				Not Detected					2	5

Total number of targets = 116

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:31. Target 3.5 esignature user ID: ads01731

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10. Parallax ID: rcr00559



Total Ion Chromatogram (TIC)

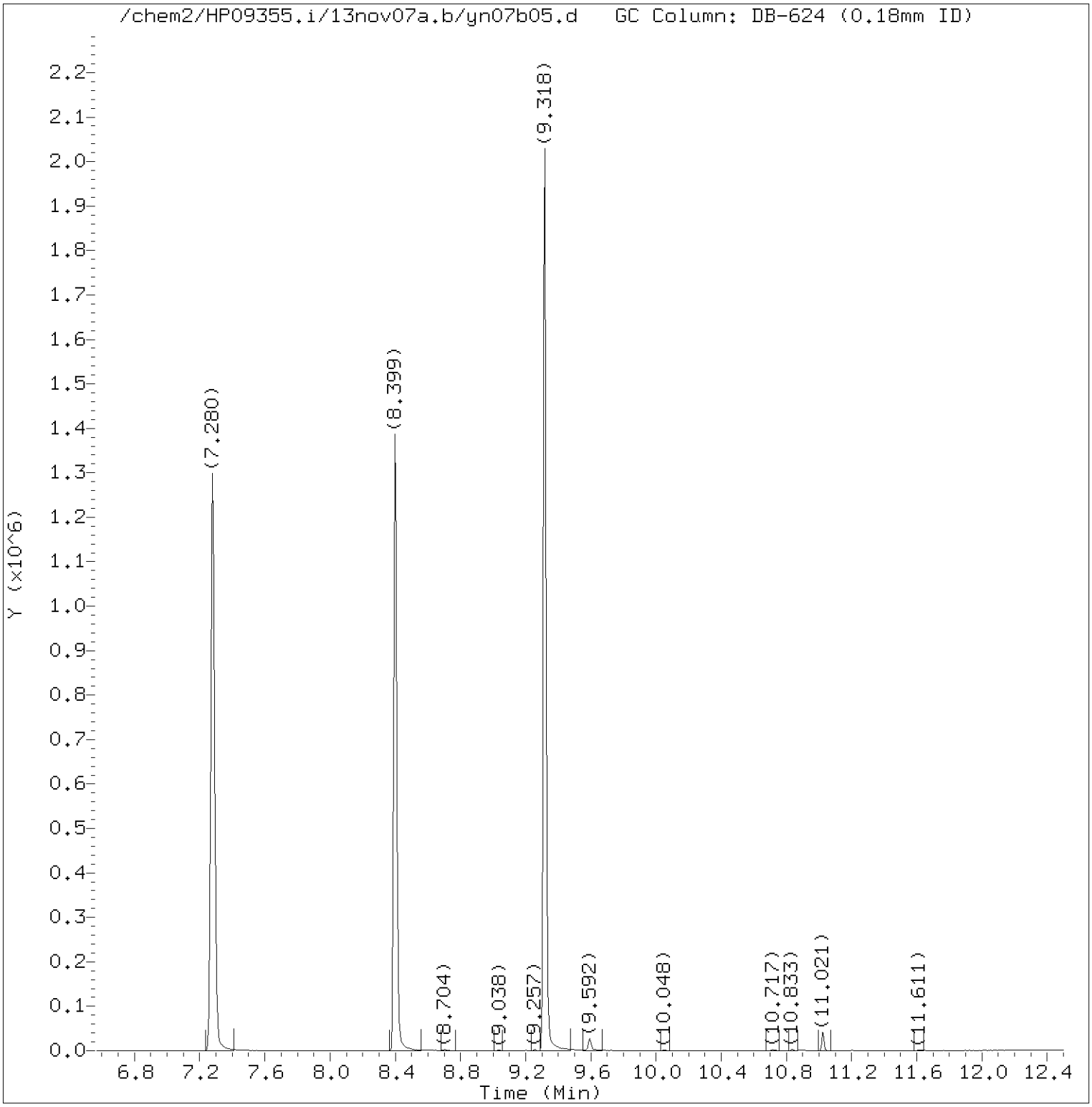
Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 12:31.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 12:31.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:25 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.030	65	343322	250.000
52)$Dibromofluoromethane	(2)	3.459	113	244166	51.900
57)$1,2-Dichloroethane-d4	(2)	3.764	102	62246	51.042
66)*Fluorobenzene	(2)	4.092	96	1007749	50.000
83)$Toluene-d8	(3)	5.716	98	987423	48.594
100)*Chlorobenzene-d5	(3)	7.280	117	763409	50.000
114)$4-Bromofluorobenzene	(3)	8.399	95	363196	46.970
131)*1,4-Dichlorobenzene-d4	(4)	9.318	152	442222	50.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 12:31.
Target 3.5 esignature user ID: ads01731

1E

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

VBLKY34

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKY34

Sample wt/vol: 5.0 (g/mL)mL Lab File ID:HP09355.i/13nov07a.b/yn07b05.d

Level: (low/med) LOW Date Received:

% Moisture: not dec. Date Analyzed: 11/07/13

Column: (pack/cap) CAP Dilution Factor: 1.0

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	VOCTIC	Total VOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
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12.					
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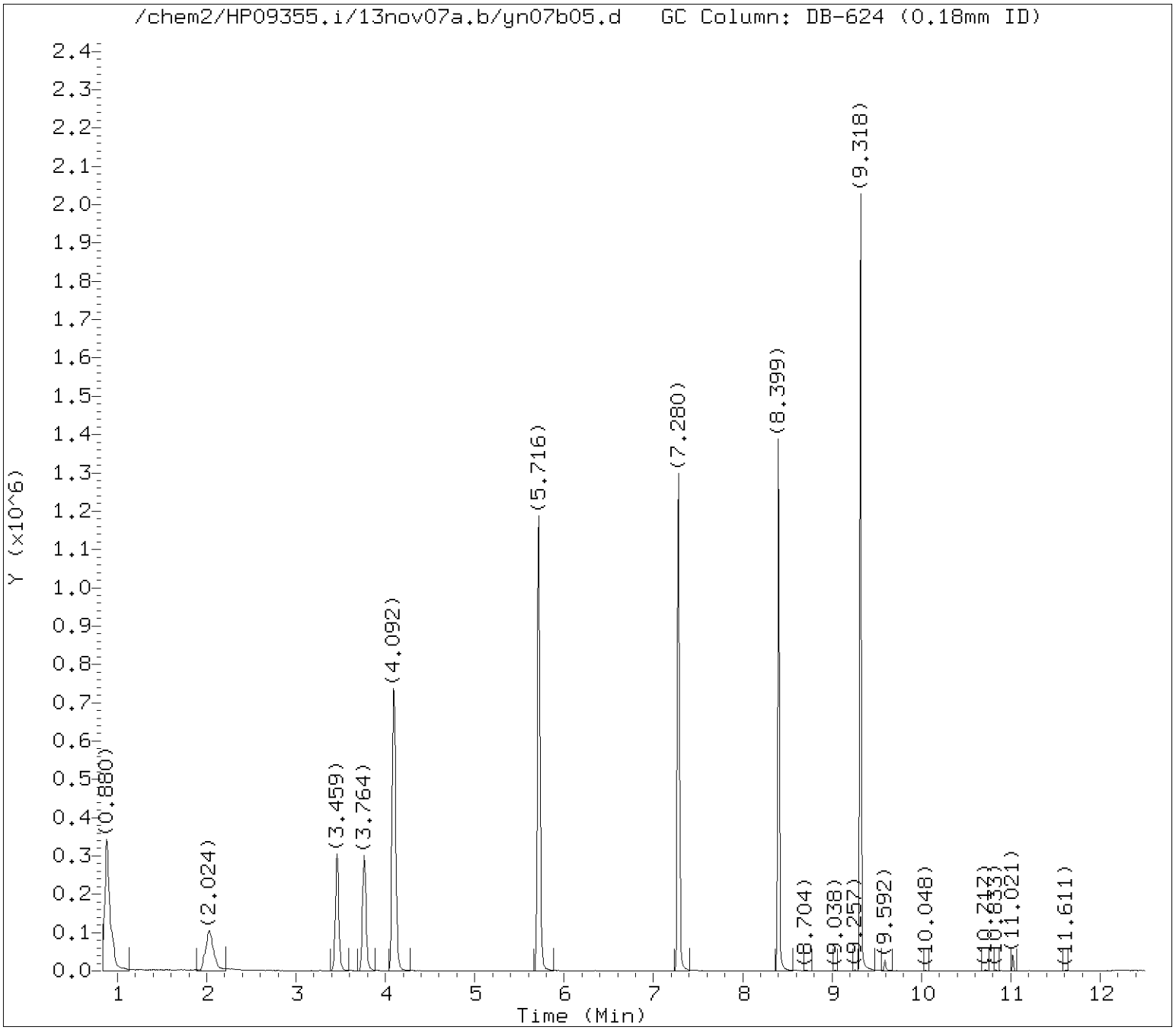
FORM I VOA-TIC



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

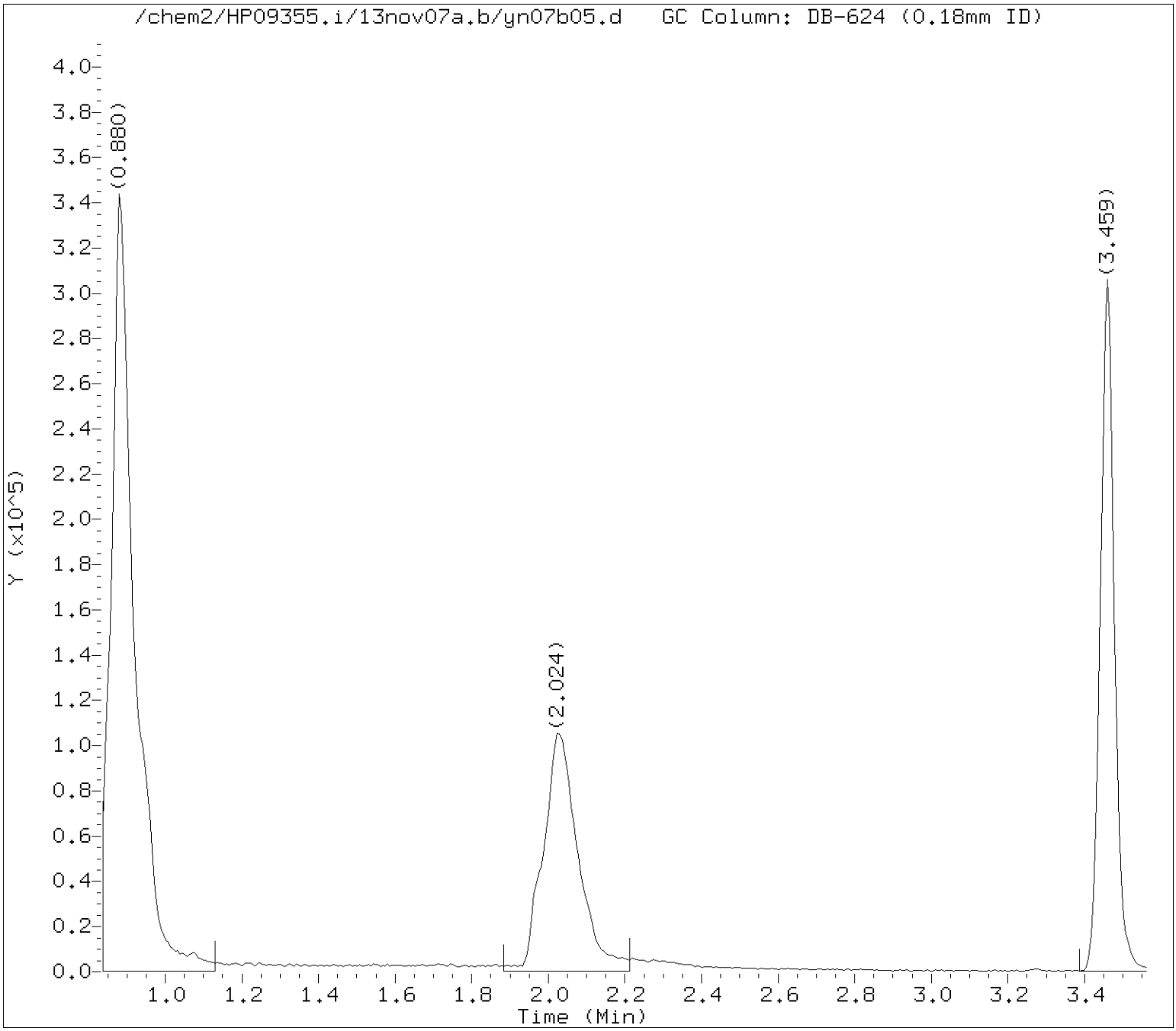
Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 15:08
Date, time and analyst ID of latest file update: 07-Nov-2013 15:11 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 12.500

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

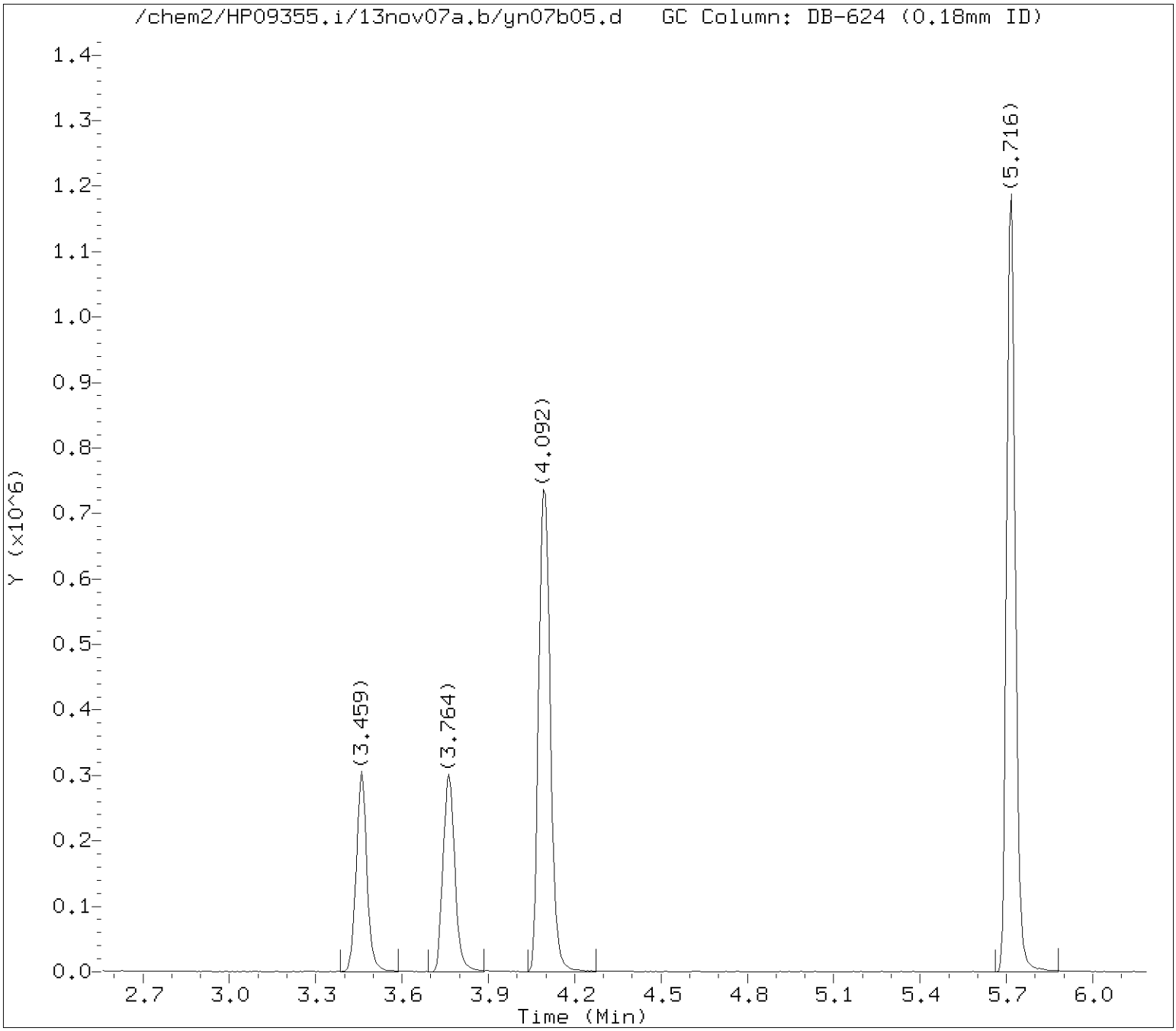
Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 15:08
Date, time and analyst ID of latest file update: 07-Nov-2013 15:11 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Internal Standard referenced: t-Butyl alcohol-d10 at 2.030 minutes
Chromatogram Start Time (min.): 0.837
Chromatogram End Time (min.): 3.061

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

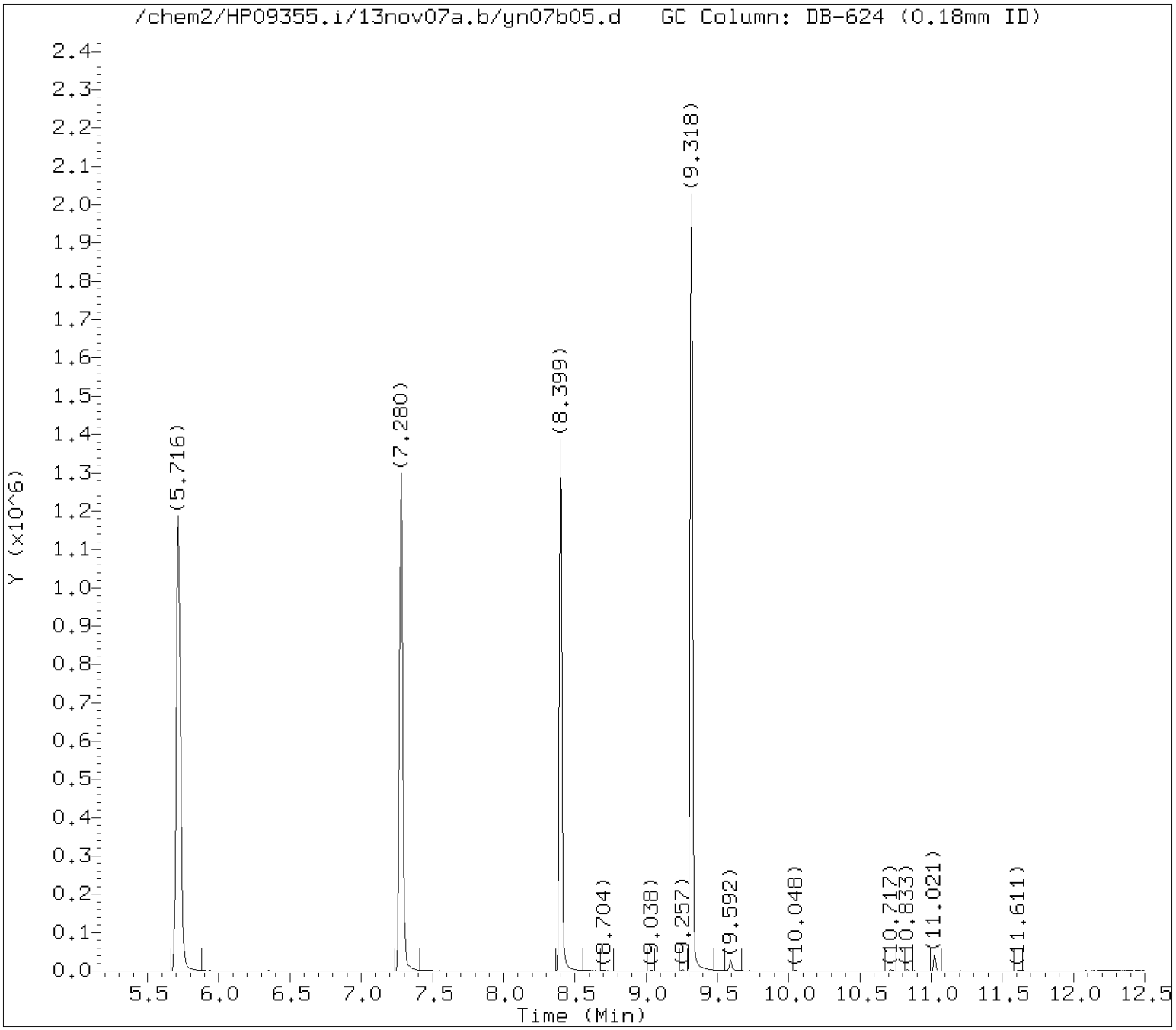
Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 15:08
Date, time and analyst ID of latest file update: 07-Nov-2013 15:11 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Internal Standard referenced: Fluorobenzene at 4.092 minutes
Chromatogram Start Time (min.): 3.061
Chromatogram End Time (min.): 5.686

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

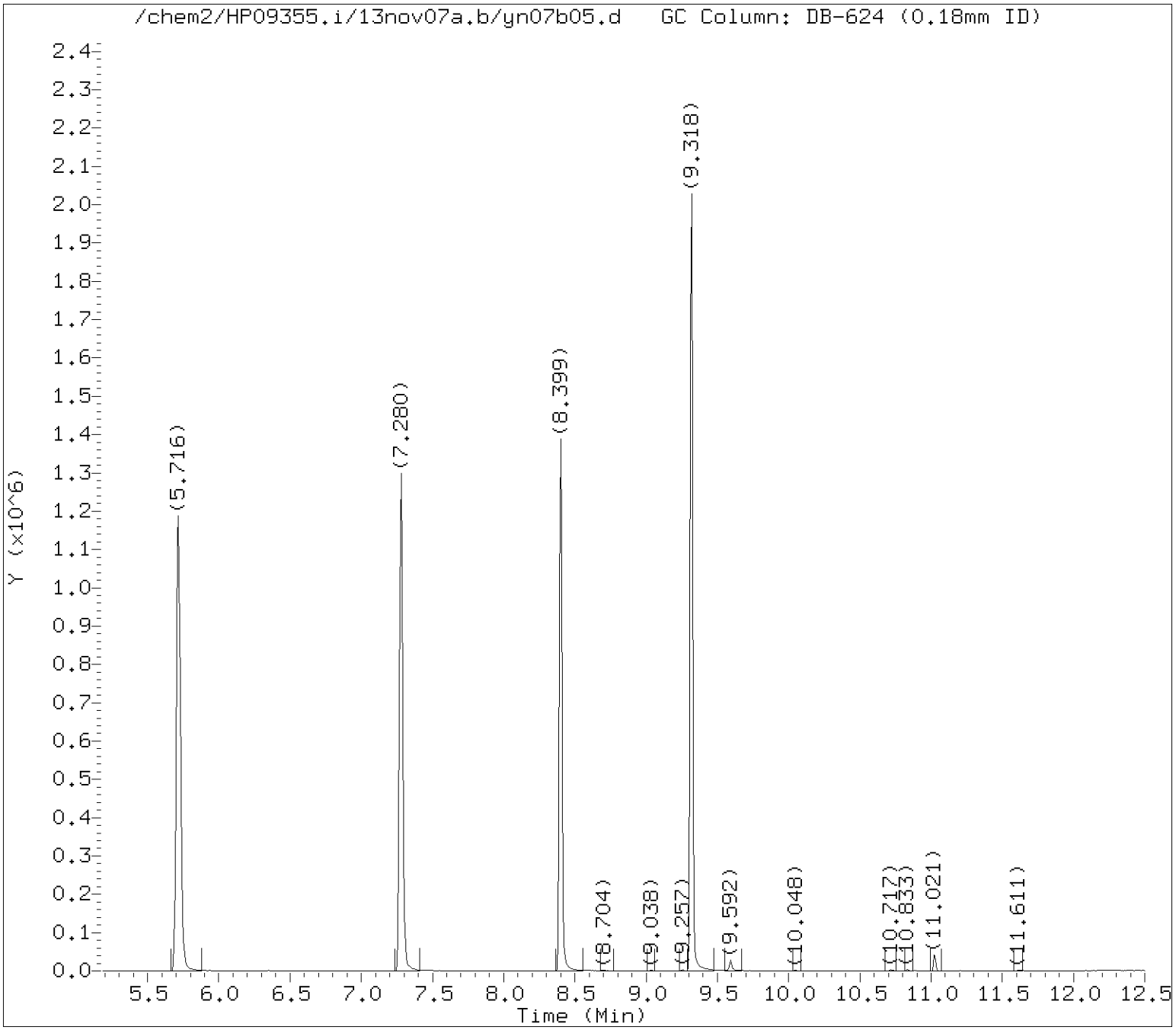
Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 15:08
Date, time and analyst ID of latest file update: 07-Nov-2013 15:11 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Internal Standard referenced: Chlorobenzene-d5 at 7.280 minutes
Chromatogram Start Time (min.): 5.686
Chromatogram End Time (min.): 8.299

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07b05.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:09 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC+SM
Calibration date and time: 07-NOV-2013 15:08
Date, time and analyst ID of latest file update: 07-Nov-2013 15:11 ads01731

Sample Name: VBLKY34 Lab Sample ID: VBLKY34

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 9.318 minutes
Chromatogram Start Time (min.): 8.299
Chromatogram End Time (min.): 12.500

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731

Lancaster Laboratories

Data file : /chem2/HP09355.i/13nov07a.b/yn07b05.d
Lab Smp Id: VBLKY34 Client Smp ID: VBLKY34
Inj Date : 07-NOV-2013 10:09
Operator : ADS01731 Inst ID: HP09355.i
Smp Info : VBLKY34;VBLKY34;1;3;;;;;;
Misc Info : 11031.sub;Y133112AA;;5;5;;;
Comment : Max. number of TICs to report is 16, 1 TICs were found initially.
Method : /chem2/HP09355.i/13nov07a.b/m8260b5.m
Meth Date : 07-Nov-2013 15:10 ads01731 Quant Type: ISTD
Cal Date : 23-OCT-2013 14:22 Cal File: yc23i07.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8260W-BNC+SM.sub
Target Version: 3.50
Processing Host: d21cs04

Concentration Formula: Amt * DF * (Vt/Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	5.00000	normal purge volume
Vo	5.00000	sample volume

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 29 t-Butyl alcohol-d10	2.030	669141	250.000

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ug/L)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Air Peak - Do not report					CAS #:		
0.880	1460993	545.845797	545.845797	0	0	29(L)	

QC Flag Legend

L - Operator selected an alternate library search match.

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 15:11.
Target 3.5 esignature user ID: ads01731

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l01.d Injection date and time: **11-NOV-2013 12:06**
Data file Sample Info. Line: LCSA26;LCSA26;2;3;LCS;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.037(0.012)	404	65	169762 (-10)	250.00	
67) Fluorobenzene	7.541(0.000)	980	96	1627719 (-5)	50.00	
99) Chlorobenzene-d5	11.075(0.000)	1561	117	1308157 (-6)	50.00	
133) 1,4-Dichlorobenzene-d4	12.979(0.000)	1874	152	751016 (-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
55) Dibromofluoromethane	(2)	6.646(-0.001)	113	412451	51.832	104%		50 - 141
61) 1,2-Dichloroethane-d4	(2)	7.109(0.000)	102	90814M	50.323	101%		54 - 135
86) Toluene-d8	(3)	9.585(0.000)	98	1638162	48.250	96%		52 - 141
112) 4-Bromofluorobenzene	(3)	12.091(0.000)	95	616524	48.840	98%		50 - 131

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
2) Dichlorodifluoromethane	(2)	1.907(0.000)	85	250238	17.958	17.96			2	5
4) Chloromethane	(2)	2.023(0.002)	50	193506	17.358	17.36			2	5
5) Vinyl Chloride	(2)	2.151(0.003)	62	197108	18.457	18.46			1	5
9) Bromomethane	(2)	2.461(0.002)	94	158355	20.289	20.29			2	5
10) Chloroethane	(2)	2.564(0.002)	64	112792	18.183	18.18			2	5
11) Dichlorofluoromethane	(2)	2.789(0.001)	67	321192	20.210	20.21			2	5
13) Trichlorofluoromethane	(2)	2.820(0.001)	101	311886M	19.403	19.40			2	5
15) Ethanol	(1)	2.972(-0.003)	45	62874	702.444	702.44			100	500
17) Freon 123a	(2)	3.173(0.000)	67	188311	16.863	16.86			2	5
18) Acrolein	(1)	3.270(0.000)	56	236717	120.143	120.14			20	100
19) 1,1-Dichloroethene	(2)	3.404(0.000)	96	158571	19.241	19.24			1	5
20) Acetone	(2)	3.428(0.000)	58	111883	120.311	120.31			7	20
22) Freon 113	(2)	3.434(0.000)	101	174055	19.346	19.35			2	10
23) 2-Propanol	(1)	3.574(-0.001)	45	67667M	116.389	116.39			60	100
24) Methyl Iodide	(2)	3.592(0.000)	142	348487	21.511	21.51			3	5
25) Carbon Disulfide	(2)	3.696(0.000)	76	514118	17.768	17.77			1	5
27) Methyl Acetate	(2)	3.824(0.000)	43	102755	17.720	17.72			2	5
29) Allyl Chloride	(2)	3.854(0.000)	41	200977	15.781	15.78			1	5
31) Methylene Chloride	(2)	4.036(0.000)	84	184006	19.135	19.14			2	5
32) t-Butyl alcohol	(1)	4.146(-0.000)	59	171393M	183.807	183.81			20	100
33) Acrylonitrile	(2)	4.353(0.000)	53	262184	79.124	79.12			4	20
34) Methyl Tertiary Butyl Ether	(2)	4.432(-0.000)	73	487200	18.995	18.99			0.5	5
35) trans-1,2-Dichloroethene	(2)	4.438(0.000)	96	191661	20.045	20.04			1	5
38) n-Hexane	(2)	4.852(0.000)	57	211319	16.595	16.60			1	5
40) 1,1-Dichloroethane	(2)	5.101(0.000)	63	297706	17.898	17.90			1	5
41) di-Isopropyl ether	(2)	5.150(0.000)	45	460744	17.120	17.12			1	5
42) 2-Chloro-1,3-butadiene	(2)	5.204(0.000)	53	230931	18.676	18.68			1	5
44) Ethyl t-butyl ether	(2)	5.691(0.000)	59	460808	17.703	17.70			1	5
45) 2-Butanone	(2)	5.898(0.000)	43	480981	125.577	125.58			4	10

M = Compound was manually integrated.

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34. Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l01.d Injection date and time: **11-NOV-2013 12:06**
Data file Sample Info. Line: LCSA26;LCSA26;2;3;LCS;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
46) cis-1,2-Dichloroethene	(2)	5.935(0.000)	96	201594	19.088	19.09			1	5
47) 1,2-Dichloroethene (Total)	(2)		96	393255	39.133	39.13			1	5
48) 2,2-Dichloropropane	(2)	5.953(0.000)	77	260347	19.249	19.25			1	5
50) Propionitrile	(1)	5.989(-0.002)	54	158285	131.301	131.30			30	100
51) Methacrylonitrile	(2)	6.208(0.000)	67	491335	136.917	136.92			5	50
52) Bromochloromethane	(2)	6.275(0.000)	128	108766	20.220	20.22			1	5
53) Tetrahydrofuran	(1)	6.287(-0.004)	71	99554	87.229	87.23			4	5
54) Chloroform	(2)	6.421(0.000)	83	315695	19.337	19.34			1	5
56) 1,1,1-Trichloroethane	(2)	6.652(0.000)	97	275966	17.458	17.46			1	5
57) Cyclohexane	(2)	6.750(0.000)	56	249734	15.923	15.92			1	5
58) 1,1-Dichloropropene	(2)	6.865(0.000)	75	241614	18.856	18.86			1	5
59) Carbon Tetrachloride	(2)	6.865(0.000)	117	249658	19.311	19.31			1	5
60) Isobutyl Alcohol	(1)	7.005(-0.005)	41	131551	423.832	423.83			100	250
62) Benzene	(2)	7.127(0.000)	78	707448	18.166	18.17			0.5	5
64) 1,2-Dichloroethane	(2)	7.212(0.000)	62	239193	20.438	20.44			1	5
65) t-Amyl methyl ether	(2)	7.328(-0.000)	73	446703	17.853	17.85			1	5
69) n-Heptane	(2)	7.547(-0.000)	43	207410	15.747	15.75			3	5
70) n-Butanol	(1)	7.894(-0.005)	56	215360	791.430	791.43			110	250
72) Trichloroethene	(2)	8.027(-0.000)	95	196738	19.475	19.47			1	5
73) Methylcyclohexane	(2)	8.338(-0.000)	83	304317	17.997	18.00			1	5
74) 1,2-Dichloropropane	(2)	8.368(-0.000)	63	170729	17.497	17.50			1	5
76) Methyl Methacrylate	(2)	8.447(-0.000)	69	105389	17.360	17.36			1	5
77) 1,4-Dioxane	(1)	8.459(-0.006)	88	41734	415.076	415.08			70	250
78) Dibromomethane	(2)	8.478(-0.000)	93	111054	18.387	18.39			1	5
81) Bromodichloromethane	(2)	8.715(-0.000)	83	222743	18.308	18.31			1	5
82) 2-Nitropropane	(1)	8.982(-0.006)	41	35906	18.403	18.40			3	10
84) cis-1,3-Dichloropropene	(2)	9.274(-0.000)	75	265977	18.104	18.10			1	5
85) 4-Methyl-2-pentanone	(2)	9.445(-0.000)	43	675352	82.976	82.98			3	10
87) Toluene	(3)	9.664(0.000)	92	468545	17.773	17.77			1	5
88) trans-1,3-Dichloropropene	(3)	9.938(0.000)	75	244723	17.021	17.02			1	5
89) Ethyl Methacrylate	(3)	9.998(-0.000)	69	199467	16.886	16.89			1	5
90) 1,1,2-Trichloroethane	(3)	10.144(0.000)	97	160785	18.292	18.29			1	5
92) Tetrachloroethene	(3)	10.230(-0.000)	166	238071	19.720	19.72			1	5
93) 1,3-Dichloropropane	(3)	10.315(-0.000)	76	256523	16.828	16.83			1	5
95) 2-Hexanone	(3)	10.357(0.000)	43	492890	79.616	79.62			3	10
97) Dibromochloromethane	(3)	10.534(-0.000)	129	180981	17.798	17.80			1	5
98) 1,2-Dibromoethane	(3)	10.643(0.000)	107	168490	18.385	18.38			1	5
100) Chlorobenzene	(3)	11.100(-0.000)	112	570457	18.381	18.38			1	5
101) 1,1,1,2-Tetrachloroethane	(3)	11.185(0.000)	131	197740	18.397	18.40			1	5
102) Ethylbenzene	(3)	11.191(0.000)	91	887772	17.884	17.88			1	5
103) m+p-Xylene	(3)	11.306(0.000)	106	738258	36.393	36.39			1	5
104) o-Xylene	(3)	11.641(-0.000)	106	352735	17.912	17.91			1	5
105) Xylene (Total)	(3)		106	1090993	54.305	54.31			1	5
106) Styrene	(3)	11.659(0.000)	104	582494	18.735	18.73			1	5
107) Bromoform	(3)	11.817(-0.000)	173	115206	18.475	18.47			1	5
108) Isopropylbenzene	(3)	11.945(-0.000)	105	911995	18.098	18.10			1	5
111) Cyclohexanone	(1)	12.024(-0.010)	55	134000A	351.424	351.42			25	250
113) 1,1,2,2-Tetrachloroethane	(4)	12.188(0.000)	83	206707M	16.323	16.32			1	5
114) Bromobenzene	(4)	12.207(0.000)	156	264437	17.999	18.00			1	5
115) trans-1,4-Dichloro-2-butene	(4)	12.219(0.000)	53	295365M	90.022	90.02			10	50
116) 1,2,3-Trichloropropane	(4)	12.237(0.000)	110	66426M	17.050	17.05			1	5
117) n-Propylbenzene	(4)	12.274(0.000)	91	1071626	17.183	17.18			1	5
119) 2-Chlorotoluene	(4)	12.353(-0.000)	126	243956	17.440	17.44			1	5

A = User selected an alternate peak. M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l01.d Injection date and time: **11-NOV-2013 12:06**
Data file Sample Info. Line: LCSA26;LCSA26;2;3;LCS;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)	12.414(-0.000)	105	796583	17.290	17.29			1	5
123) 4-Chlorotoluene	(4)	12.444(-0.000)	126	251875	17.401	17.40			1	5
126) tert-Butylbenzene	(4)	12.657(0.000)	134	186097M	17.689	17.69			1	5
127) Pentachloroethane	(4)	12.687(0.000)	167	157918	17.610	17.61			1	5
128) 1,2,4-Trimethylbenzene	(4)	12.700(0.000)	105	825603	17.409	17.41			1	5
129) sec-Butylbenzene	(4)	12.821(-0.000)	105	1005798	17.270	17.27			1	5
131) 1,3-Dichlorobenzene	(4)	12.918(0.000)	146	503156	18.428	18.43			1	5
132) p-Isopropyltoluene	(4)	12.931(0.000)	119	916673M	17.591	17.59			1	5
134) 1,4-Dichlorobenzene	(4)	12.998(-0.000)	146	514357	18.334	18.33			1	5
135) 1,2,3-Trimethylbenzene	(4)	13.004(-0.000)	105	848436	17.109	17.11			1	5
136) Benzyl Chloride	(4)	13.071(-0.000)	126	93637	17.548	17.55			1	4
137) 1,3-Diethylbenzene	(4)	13.131(-0.000)	119	552455	17.403	17.40			1	5
138) 1,4-Diethylbenzene	(4)	13.204(-0.000)	119	584939	18.468	18.47			1	5
139) n-Butylbenzene	(4)	13.223(-0.000)	92	430043M	17.022	17.02			1	5
140) 1,2-Dichlorobenzene	(4)	13.253(-0.000)	146	484724	18.394	18.39			1	5
141) 1,2-Diethylbenzene	(4)	13.271(-0.000)	119	472643M	17.660	17.66			1	5
144) 1,2-Dibromo-3-chloropropane	(4)	13.801(-0.000)	75	38295	16.899	16.90			2	5
145) 1,3,5-Trichlorobenzene	(4)	13.922(-0.000)	180	404380	18.919	18.92			1	5
146) 1,2,4-Trichlorobenzene	(4)	14.348(-0.000)	180	346630	18.921	18.92			1	5
147) Hexachlorobutadiene	(4)	14.427(-0.000)	225	184273	17.766	17.77			2	5
148) Naphthalene	(4)	14.531(-0.000)	128	746744	17.891	17.89			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.671(-0.000)	180	329453	19.144	19.14			1	5
150) 2-Methylnaphthalene	(4)	15.291(-0.000)	142	338866	16.431	16.43			2	5

M = Compound was manually integrated.

Total number of targets = 105

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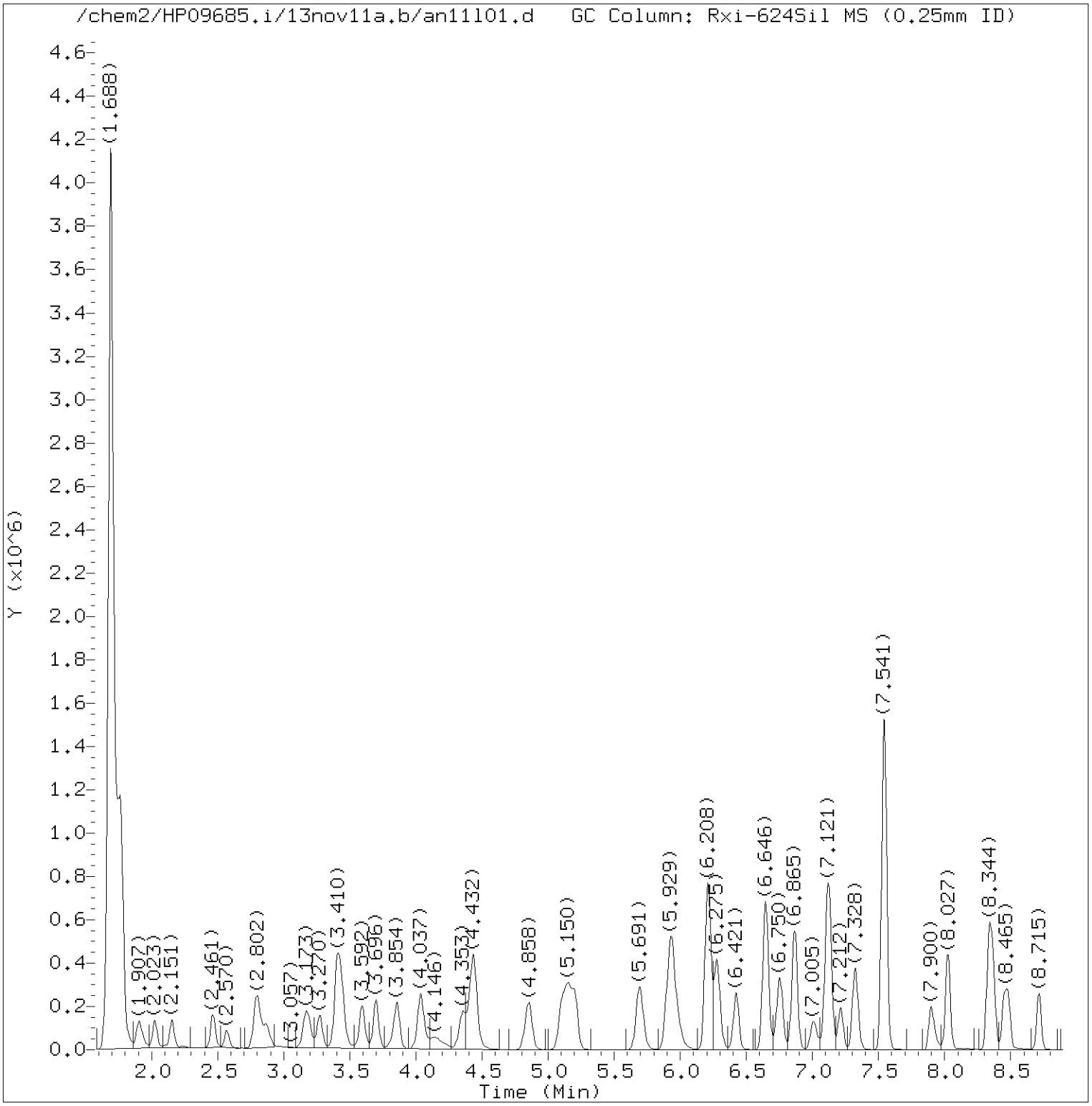
Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49. Parallax ID: ads01731



Total Ion Chromatogram (TIC)

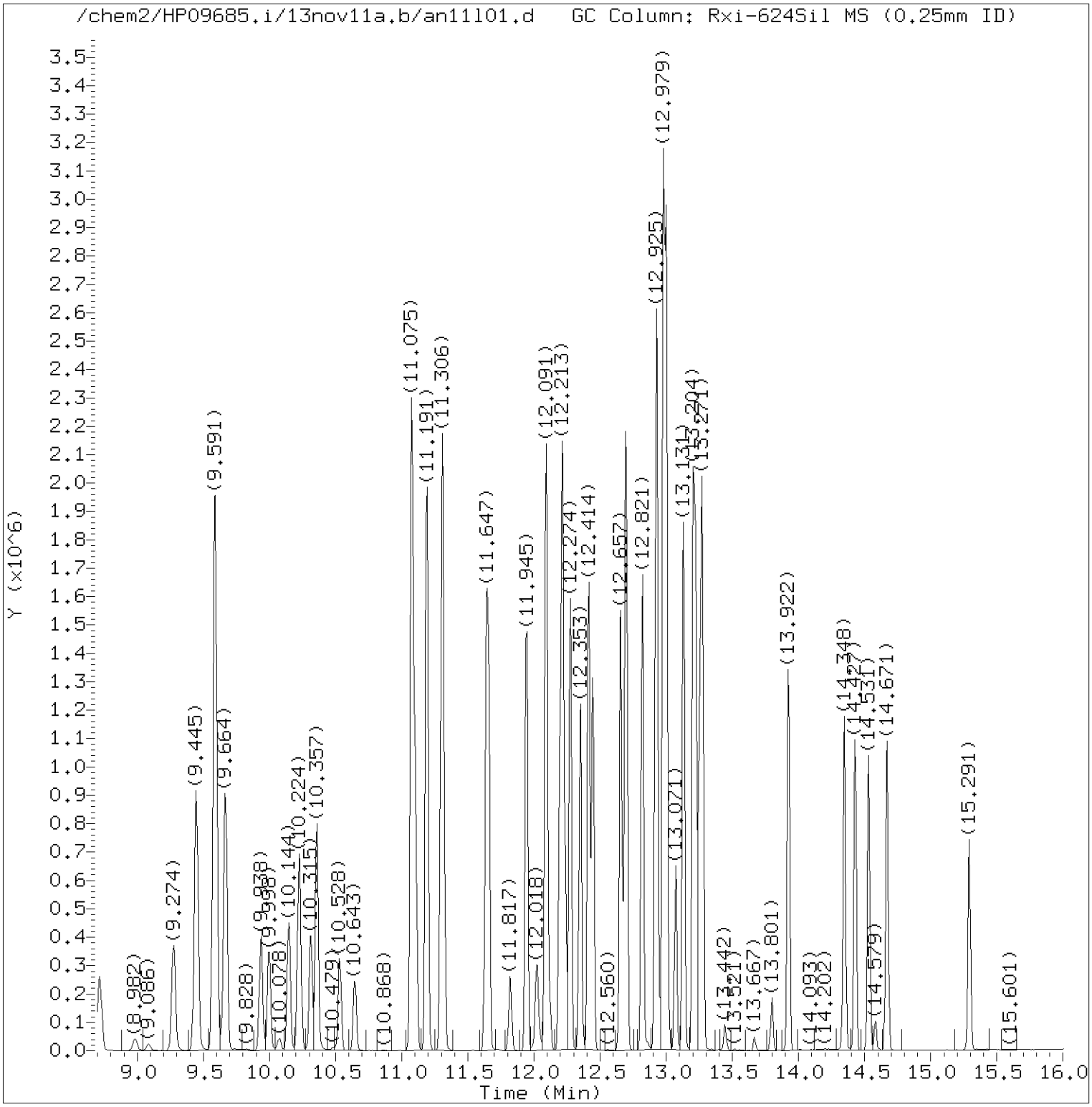
Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.907	85	250238	17.958
4) Chloromethane	(2)	2.023	50	193506	17.358
5) Vinyl Chloride	(2)	2.151	62	197108	18.457
9) Bromomethane	(2)	2.461	94	158355	20.289
10) Chloroethane	(2)	2.564	64	112792	18.183
11) Dichlorofluoromethane	(2)	2.789	67	321192	20.210
13) Trichlorofluoromethane	(2)	2.820	101	311886M	19.403
15) Ethanol	(1)	2.972	45	62874	702.444
17) Freon 123a	(2)	3.173	67	188311	16.863
18) Acrolein	(1)	3.270	56	236717	120.143
19) 1,1-Dichloroethene	(2)	3.404	96	158571	19.241
20) Acetone	(2)	3.428	58	111883	120.311
22) Freon 113	(2)	3.434	101	174055	19.346
23) 2-Propanol	(1)	3.574	45	67667M	116.389
24) Methyl Iodide	(2)	3.592	142	348487	21.511
25) Carbon Disulfide	(2)	3.696	76	514118	17.768
27) Methyl Acetate	(2)	3.824	43	102755	17.720
29) Allyl Chloride	(2)	3.854	41	200977	15.781
30)*t-Butyl alcohol-d10	(1)	4.037	65	169762	250.000
31) Methylene Chloride	(2)	4.037	84	184006	19.135
32) t-Butyl alcohol	(1)	4.146	59	171393M	183.807
33) Acrylonitrile	(2)	4.353	53	262184	79.124
34) Methyl Tertiary Butyl Ether	(2)	4.432	73	487200	18.995
35) trans-1,2-Dichloroethene	(2)	4.438	96	191661	20.045
38) n-Hexane	(2)	4.852	57	211319	16.595
40) 1,1-Dichloroethane	(2)	5.101	63	297706	17.898
41) di-Isopropyl ether	(2)	5.150	45	460744	17.120
42) 2-Chloro-1,3-butadiene	(2)	5.205	53	230931	18.676
44) Ethyl t-butyl ether	(2)	5.691	59	460808	17.703
45) 2-Butanone	(2)	5.898	43	480981	125.577
46) cis-1,2-Dichloroethene	(2)	5.935	96	201594	19.088
48) 2,2-Dichloropropane	(2)	5.953	77	260347	19.249
50) Propionitrile	(1)	5.989	54	158285	131.301
47) 1,2-Dichloroethene (Total)	(2)		96	393255	39.133
51) Methacrylonitrile	(2)	6.208	67	491335	136.917
52) Bromochloromethane	(2)	6.275	128	108766	20.220
53) Tetrahydrofuran	(1)	6.287	71	99554	87.229
54) Chloroform	(2)	6.421	83	315695	19.337

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.646	113	412451	51.832
56) 1,1,1-Trichloroethane	(2)	6.652	97	275966	17.458
57) Cyclohexane	(2)	6.750	56	249734	15.923
59) Carbon Tetrachloride	(2)	6.865	117	249658	19.311
58) 1,1-Dichloropropene	(2)	6.865	75	241614	18.856
60) Isobutyl Alcohol	(1)	7.005	41	131551	423.832
61)$1,2-Dichloroethane-d4	(2)	7.109	102	90814M	50.323
62) Benzene	(2)	7.127	78	707448	18.166
64) 1,2-Dichloroethane	(2)	7.212	62	239193	20.438
65) t-Amyl methyl ether	(2)	7.328	73	446703	17.853
67)*Fluorobenzene	(2)	7.541	96	1627719	50.000
69) n-Heptane	(2)	7.547	43	207410	15.747
70) n-Butanol	(1)	7.894	56	215360	791.430
72) Trichloroethene	(2)	8.027	95	196738	19.475
73) Methylcyclohexane	(2)	8.338	83	304317	17.997
74) 1,2-Dichloropropane	(2)	8.368	63	170729	17.497
76) Methyl Methacrylate	(2)	8.447	69	105389	17.360
77) 1,4-Dioxane	(1)	8.459	88	41734	415.076
78) Dibromomethane	(2)	8.478	93	111054	18.387
81) Bromodichloromethane	(2)	8.715	83	222743	18.308
82) 2-Nitropropane	(1)	8.982	41	35906	18.403
84) cis-1,3-Dichloropropene	(2)	9.274	75	265977	18.104
85) 4-Methyl-2-pentanone	(2)	9.445	43	675352	82.976
86)$Toluene-d8	(3)	9.585	98	1638162	48.250
87) Toluene	(3)	9.664	92	468545	17.773
88) trans-1,3-Dichloropropene	(3)	9.938	75	244723	17.021
89) Ethyl Methacrylate	(3)	9.998	69	199467	16.886
90) 1,1,2-Trichloroethane	(3)	10.144	97	160785	18.292
92) Tetrachloroethene	(3)	10.230	166	238071	19.720
93) 1,3-Dichloropropane	(3)	10.315	76	256523	16.828
95) 2-Hexanone	(3)	10.357	43	492890	79.616
97) Dibromochloromethane	(3)	10.534	129	180981	17.798
98) 1,2-Dibromoethane	(3)	10.643	107	168490	18.385
99)*Chlorobenzene-d5	(3)	11.075	117	1308157	50.000
100) Chlorobenzene	(3)	11.100	112	570457	18.381
101) 1,1,1,2-Tetrachloroethane	(3)	11.185	131	197740	18.397
102) Ethylbenzene	(3)	11.191	91	887772	17.884
103) m+p-Xylene	(3)	11.306	106	738258	36.393

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

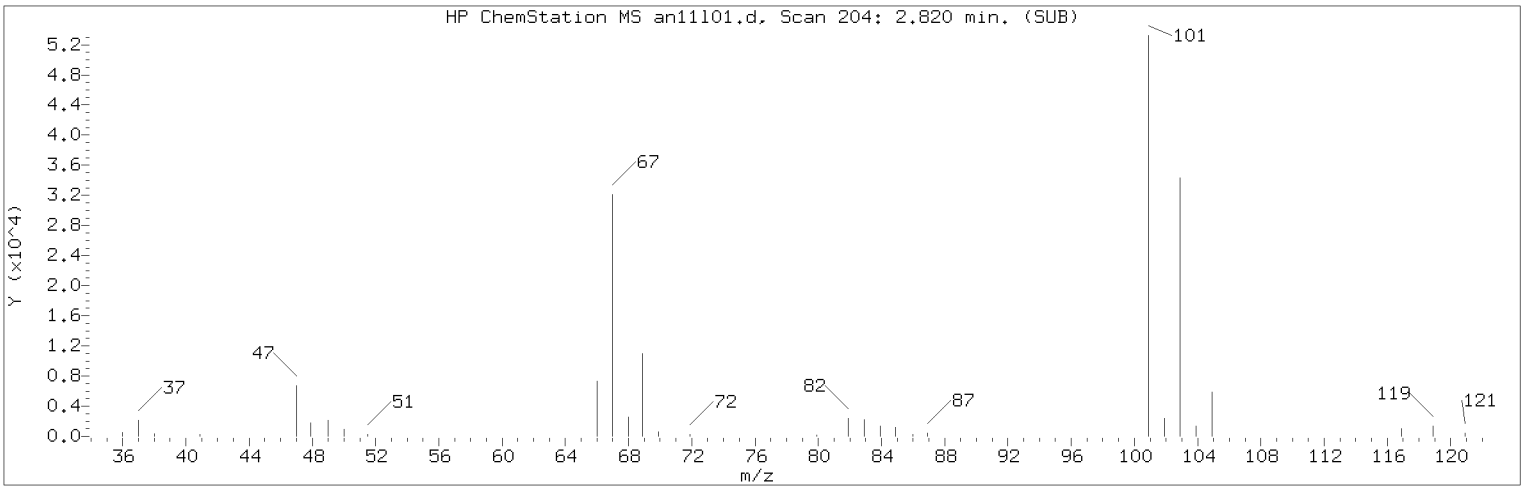
Sample Name: LCSA26 Lab Sample ID: LCSA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.641	106	352735	17.912
106) Styrene	(3)	11.659	104	582494	18.735
105) Xylene (Total)	(3)		106	1090993	54.305
107) Bromoform	(3)	11.817	173	115206	18.475
108) Isopropylbenzene	(3)	11.945	105	911995	18.098
111) Cyclohexanone	(1)	12.024	55	134000A	351.424
112)$4-Bromofluorobenzene	(3)	12.091	95	616524	48.840
113) 1,1,2,2-Tetrachloroethane	(4)	12.189	83	206707M	16.323
114) Bromobenzene	(4)	12.207	156	264437	17.999
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	295365M	90.022
116) 1,2,3-Trichloropropane	(4)	12.237	110	66426M	17.050
117) n-Propylbenzene	(4)	12.274	91	1071626	17.183
119) 2-Chlorotoluene	(4)	12.353	126	243956	17.440
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	796583	17.290
123) 4-Chlorotoluene	(4)	12.444	126	251875	17.401
126) tert-Butylbenzene	(4)	12.657	134	186097M	17.689
127) Pentachloroethane	(4)	12.687	167	157918	17.610
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	825603	17.409
129) sec-Butylbenzene	(4)	12.821	105	1005798	17.270
131) 1,3-Dichlorobenzene	(4)	12.919	146	503156	18.428
132) p-Isopropyltoluene	(4)	12.931	119	916673M	17.591
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	751016	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	514357	18.334
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	848436	17.109
136) Benzyl Chloride	(4)	13.071	126	93637	17.548
137) 1,3-Diethylbenzene	(4)	13.131	119	552455	17.403
138) 1,4-Diethylbenzene	(4)	13.204	119	584939	18.468
139) n-Butylbenzene	(4)	13.223	92	430043M	17.022
140) 1,2-Dichlorobenzene	(4)	13.253	146	484724	18.394
141) 1,2-Diethylbenzene	(4)	13.271	119	472643M	17.660
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	38295	16.899
145) 1,3,5-Trichlorobenzene	(4)	13.922	180	404380	18.919
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	346630	18.921
147) Hexachlorobutadiene	(4)	14.427	225	184273	17.766
148) Naphthalene	(4)	14.531	128	746744	17.891
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	329453	19.144
150) 2-Methylnaphthalene	(4)	15.291	142	338866	16.431

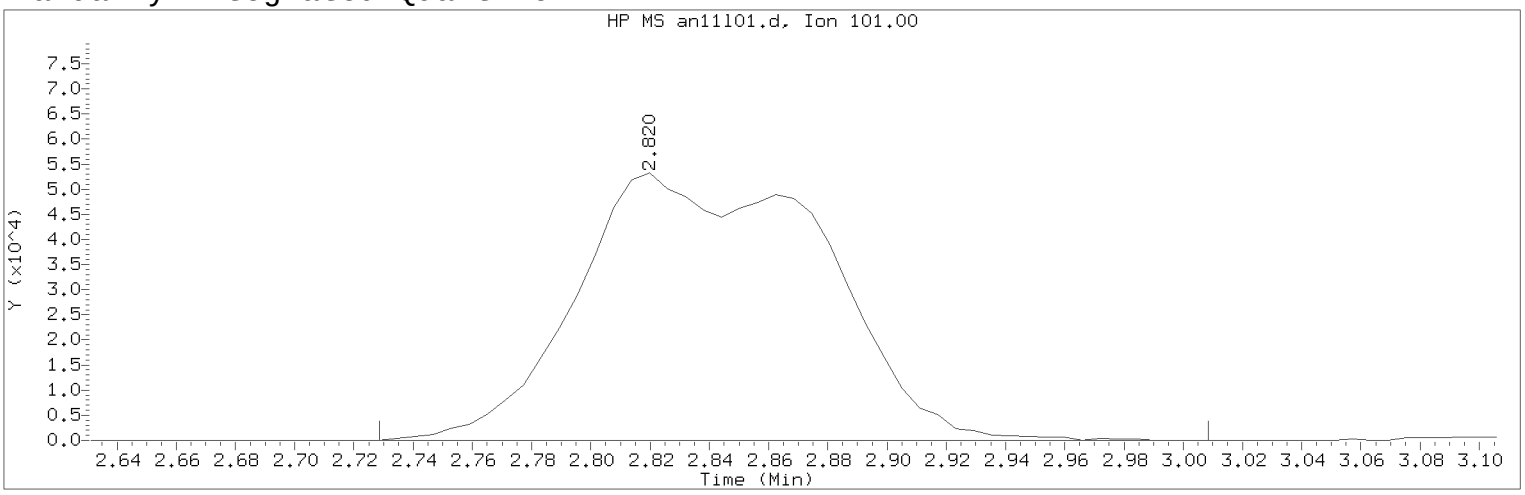
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

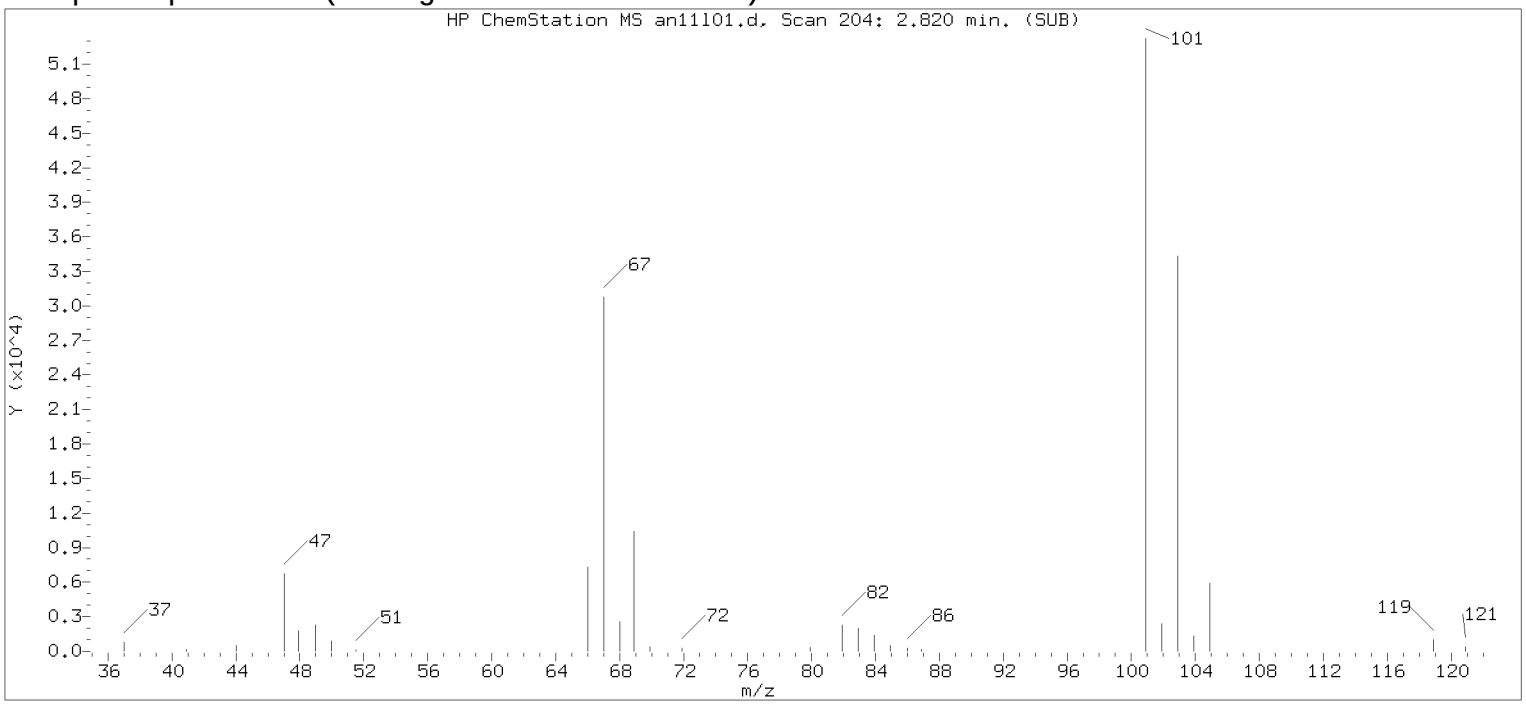
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 204
Retention Time (minutes): 2.820
Quant Ion : 101.00
Area (flag) : 311886M
On-Column Amount (ng) : 19.4032
Integration start scan : 188 Integration stop scan: 234
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

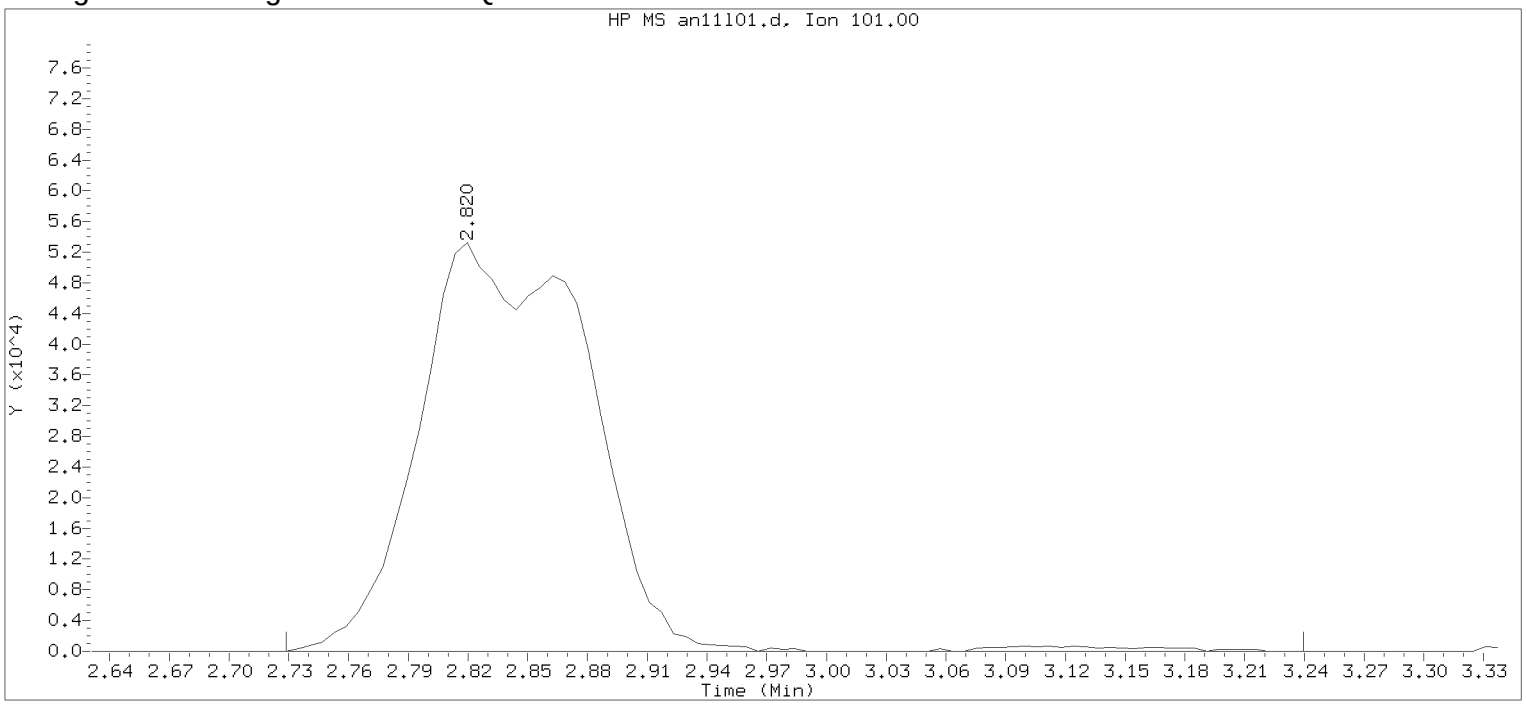
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

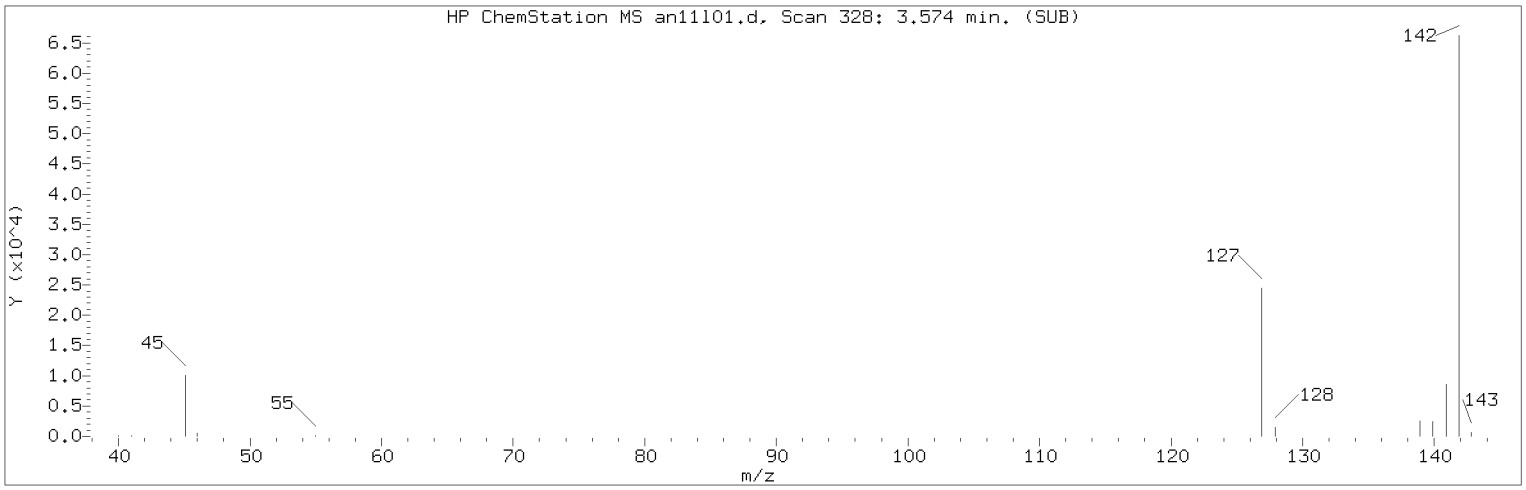
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

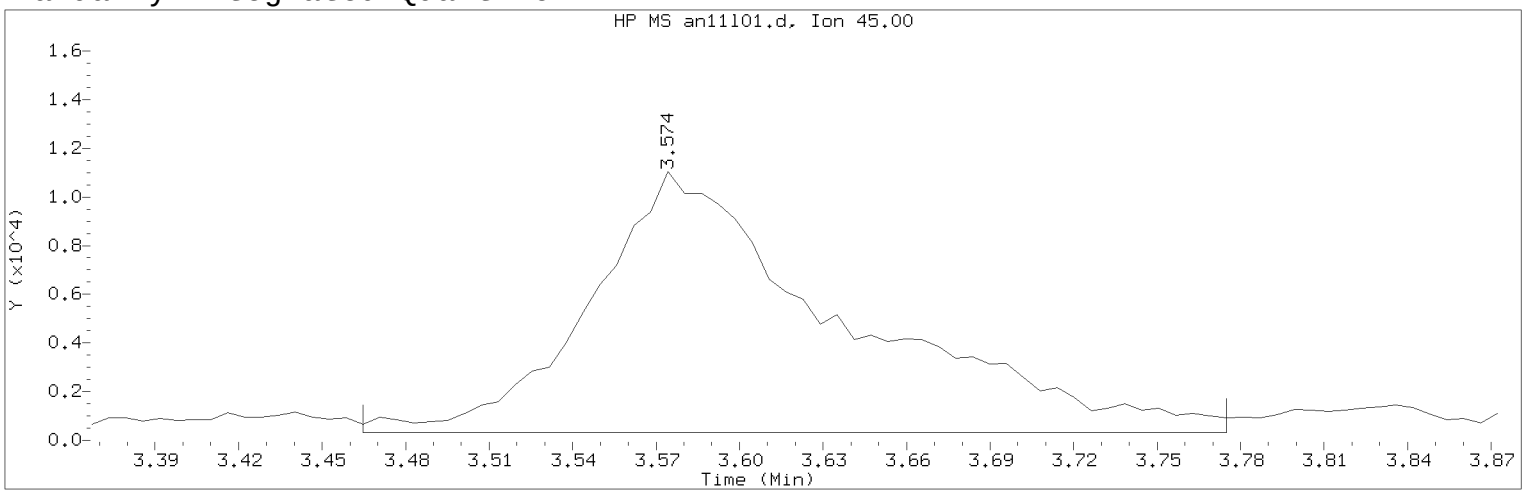
Compound Number : 13
Compound Name : Trichlorofluoromethane
Scan Number : 204
Retention Time (minutes): 2.820
Quant Ion : 101.00
Area : 315952
On-column Amount (ng) : 19.6561
Integration start scan : 188 Integration stop scan: 272
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

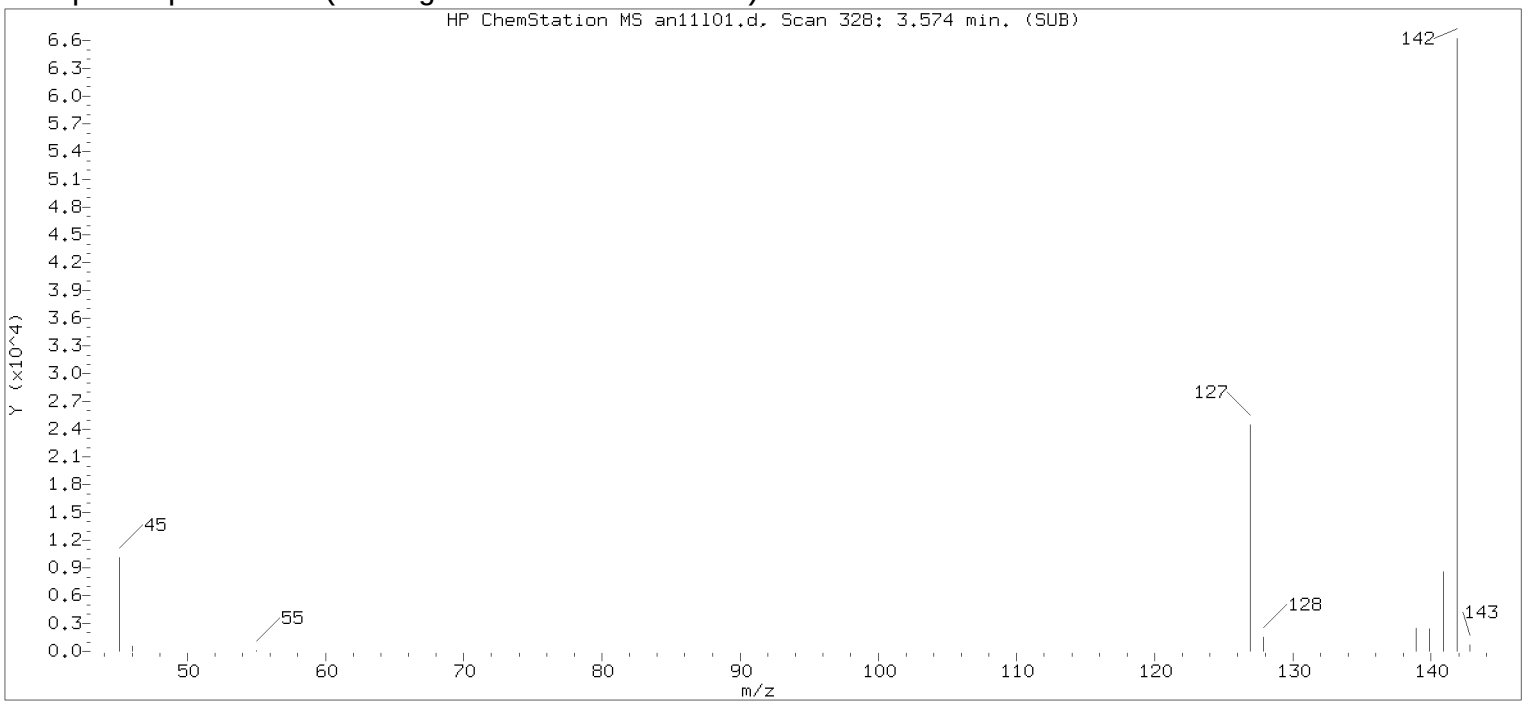
Compound Number : 23
Compound Name : 2-Propanol
Scan Number : 328
Retention Time (minutes): 3.574
Quant Ion : 45.00
Area (flag) : 67667M
On-Column Amount (ng) : 116.3887
Integration start scan : 309 Integration stop scan: 360
Y at integration start : 314 Y at integration end: 314

Reason for manual integration: improper integration

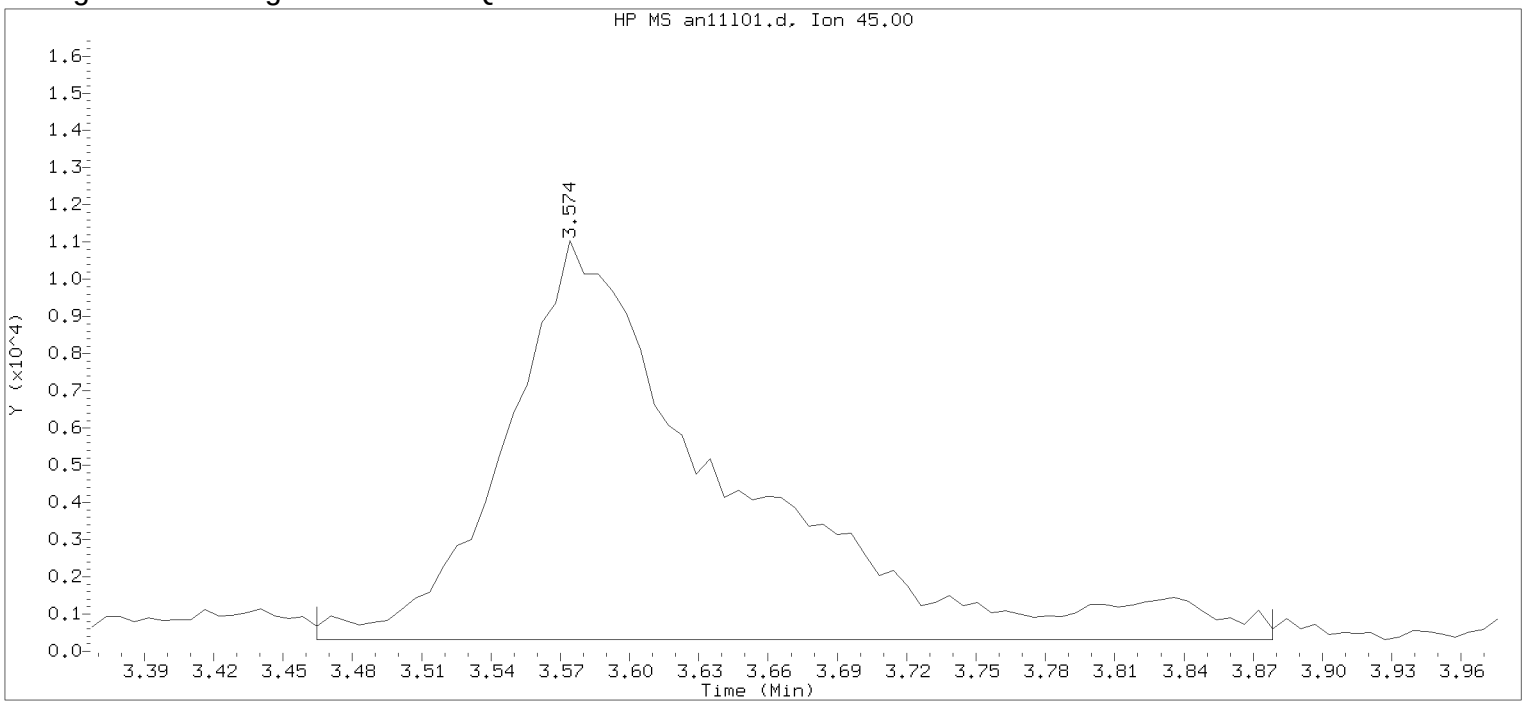
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

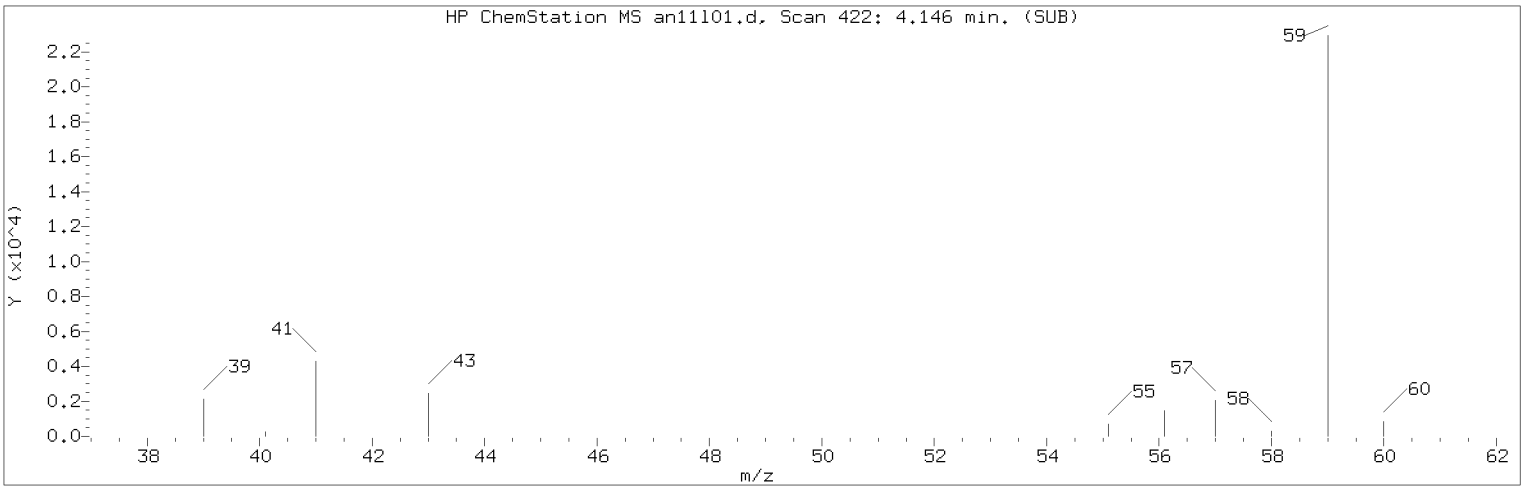
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

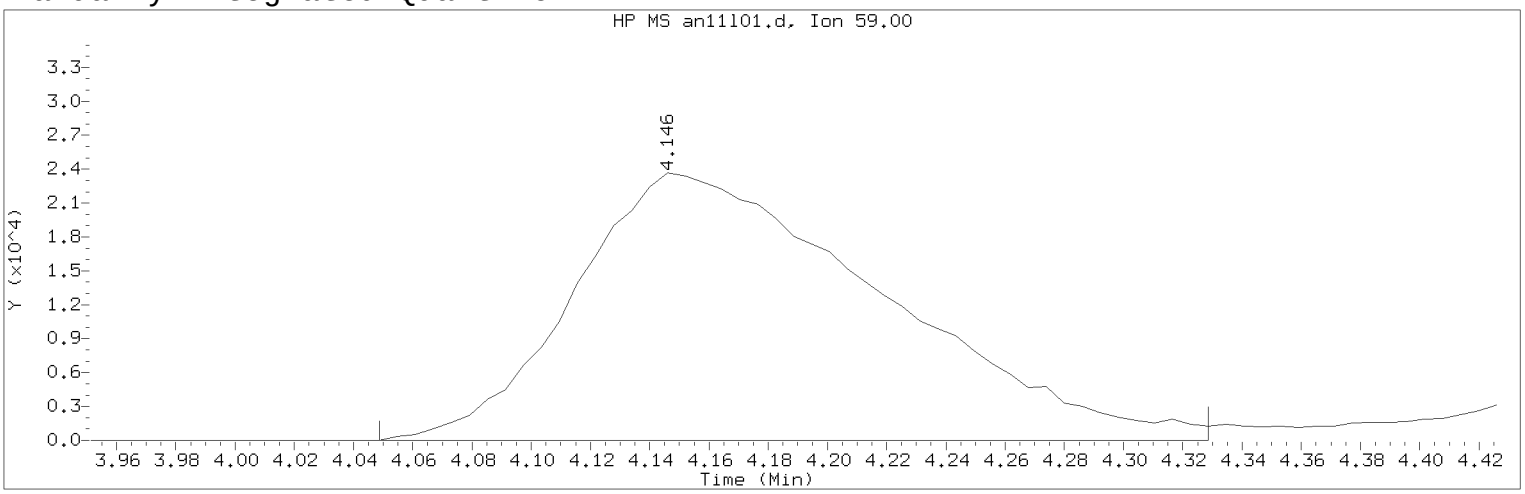
Compound Number : 23
Compound Name : 2-Propanol
Scan Number : 328
Retention Time (minutes): 3.574
Quant Ion : 45.00
Area : 72393
On-column Amount (ng) : 124.5180
Integration start scan : 309 Integration stop scan: 377
Y at integration start : 314 Y at integration end: 314

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

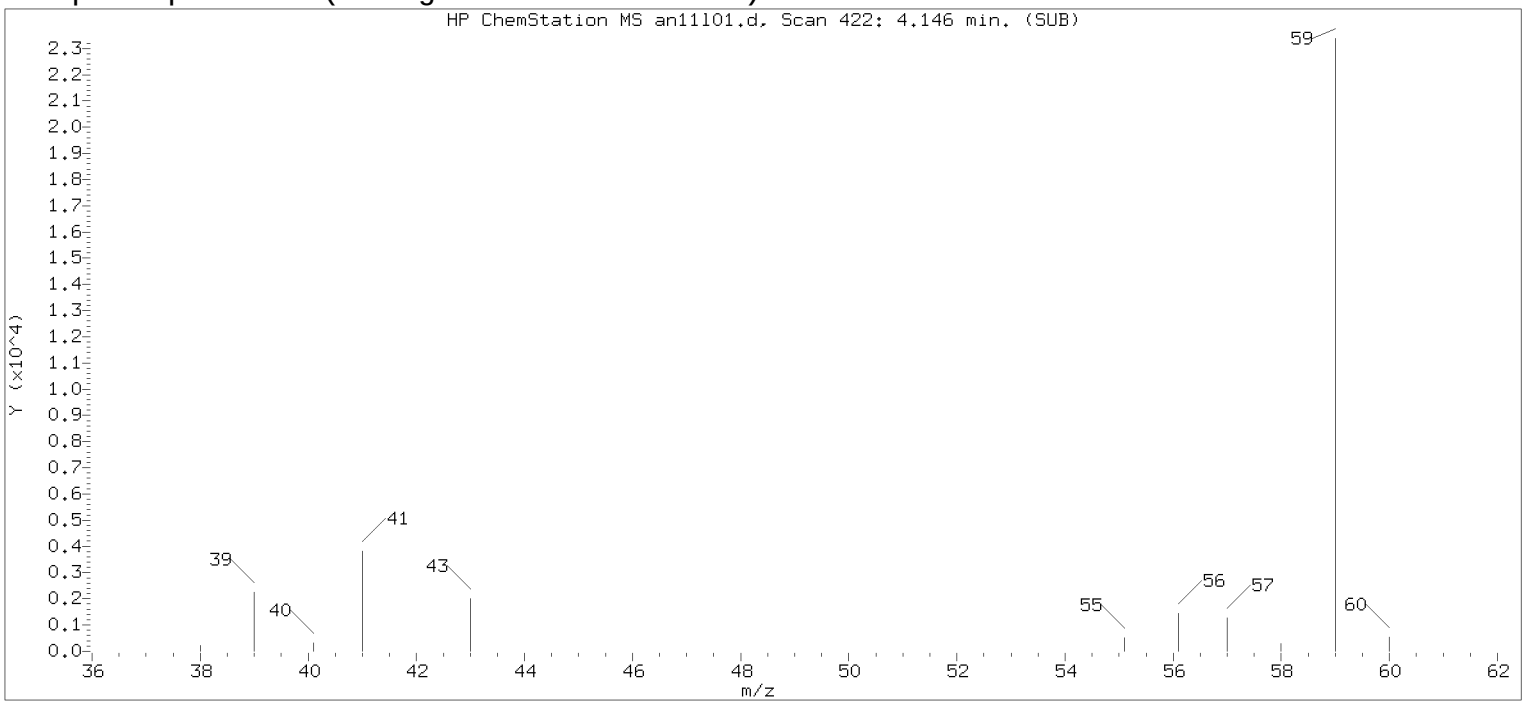
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 422
Retention Time (minutes): 4.146
Quant Ion : 59.00
Area (flag) : 171393M
On-Column Amount (ng) : 183.8069
Integration start scan : 405 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

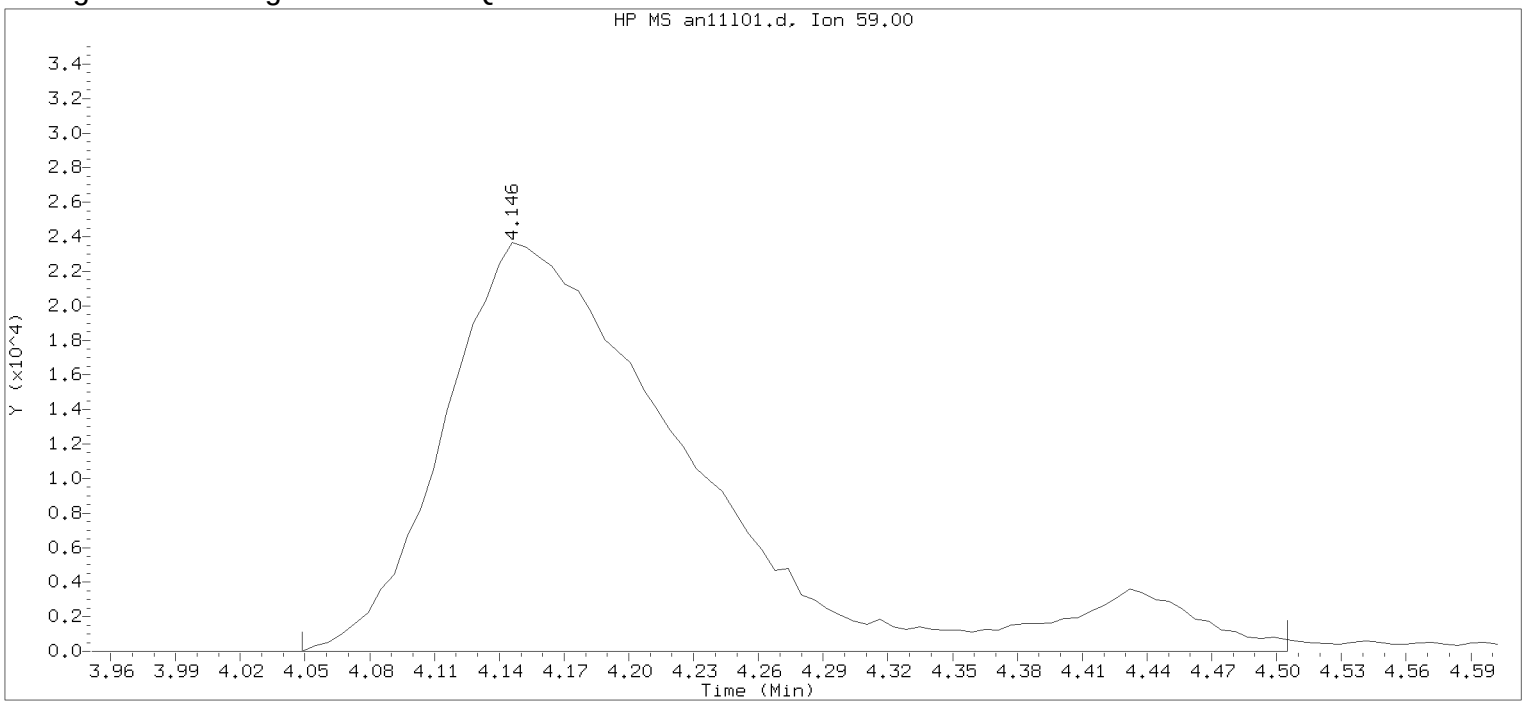
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

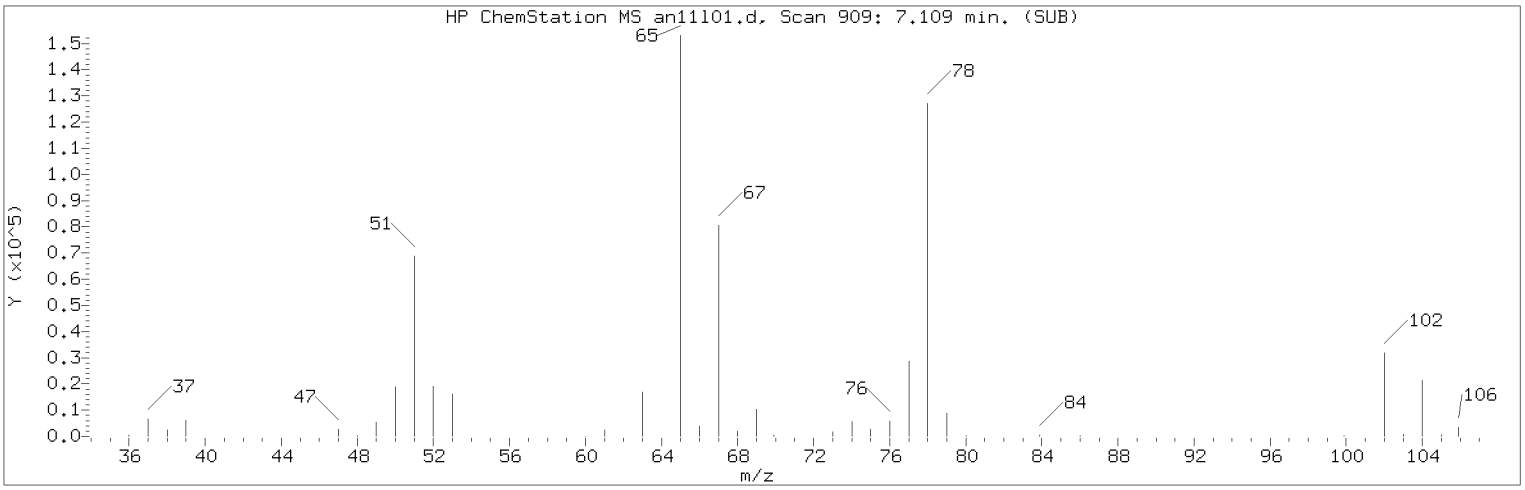
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

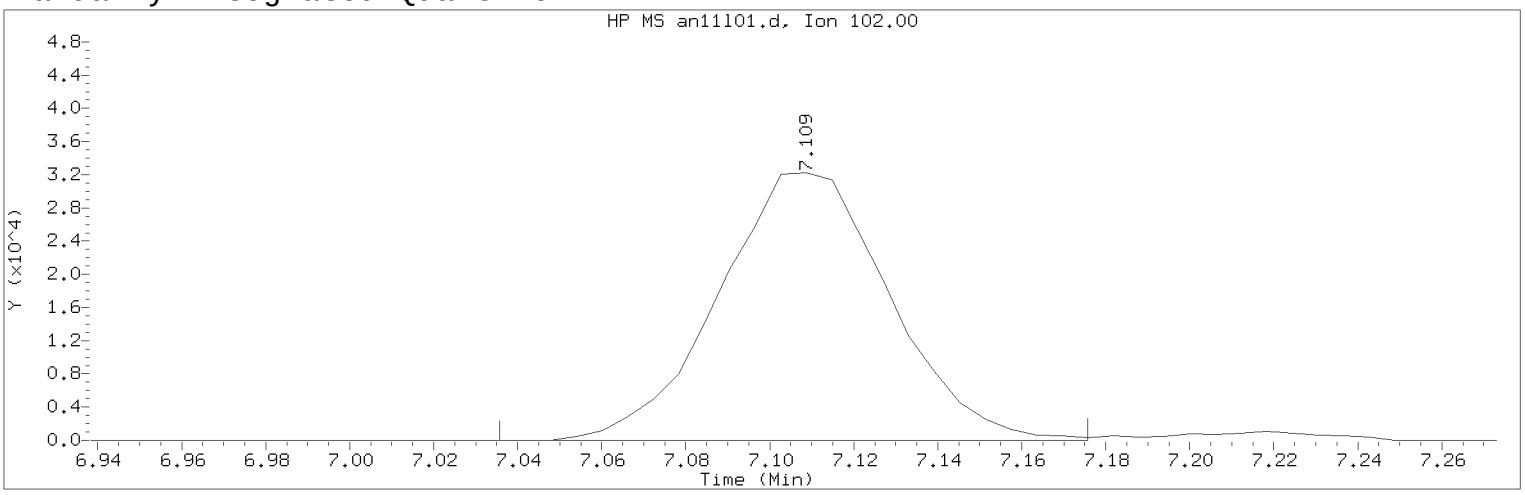
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 422
Retention Time (minutes): 4.146
Quant Ion : 59.00
Area : 189995
On-column Amount (ng) : 203.7556
Integration start scan : 405 Integration stop scan: 480
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

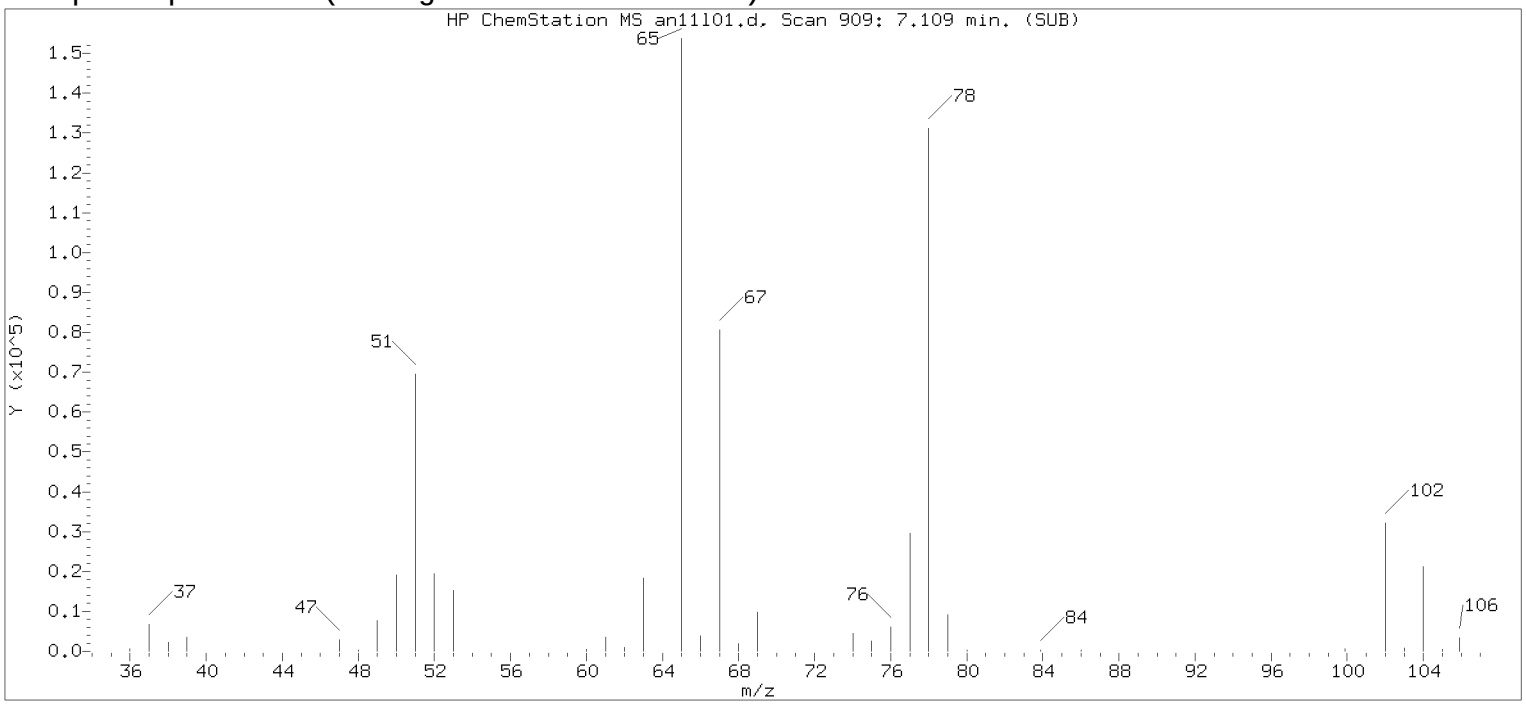
Compound Number : 61
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 909
Retention Time (minutes): 7.109
Quant Ion : 102.00
Area (flag) : 90814M
On-Column Amount (ng) : 50.3229
Integration start scan : 896 Integration stop scan: 919
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

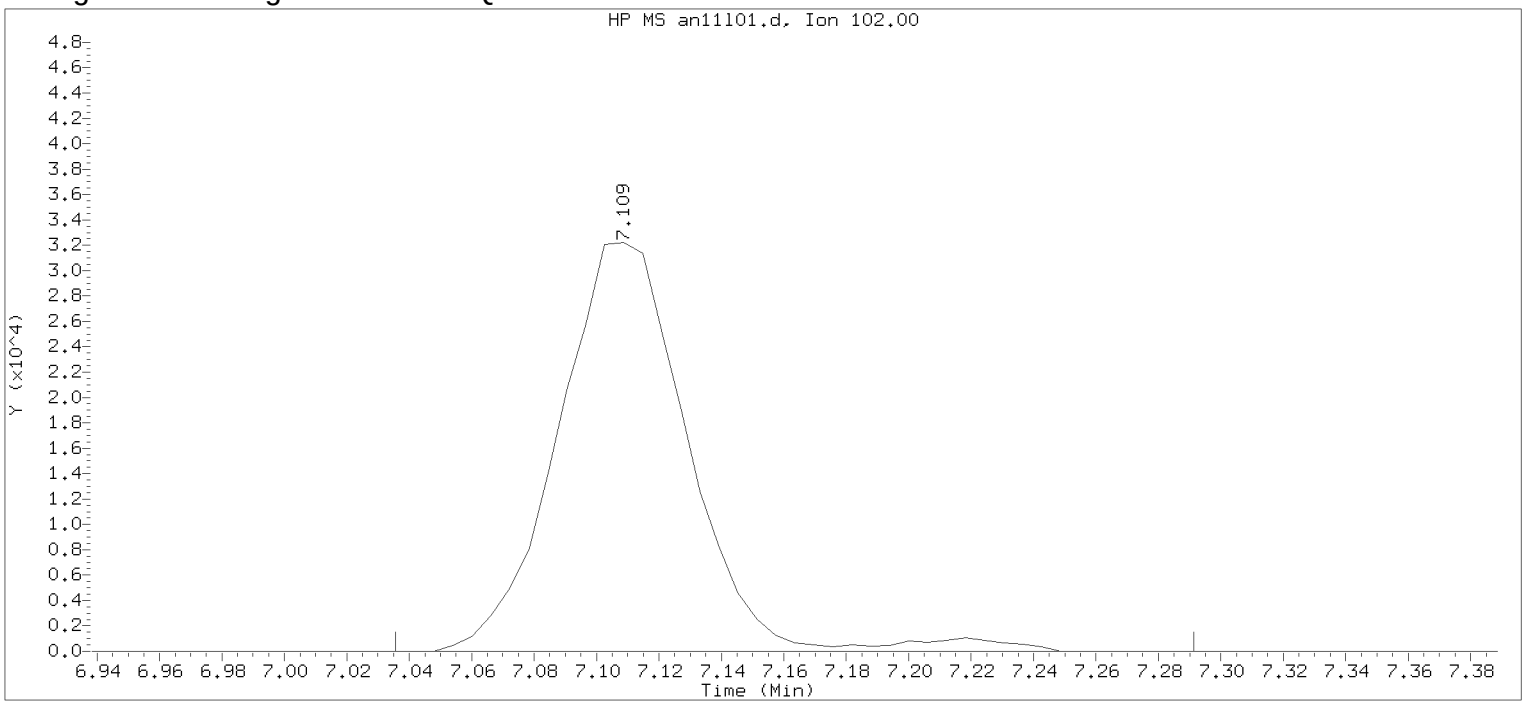
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

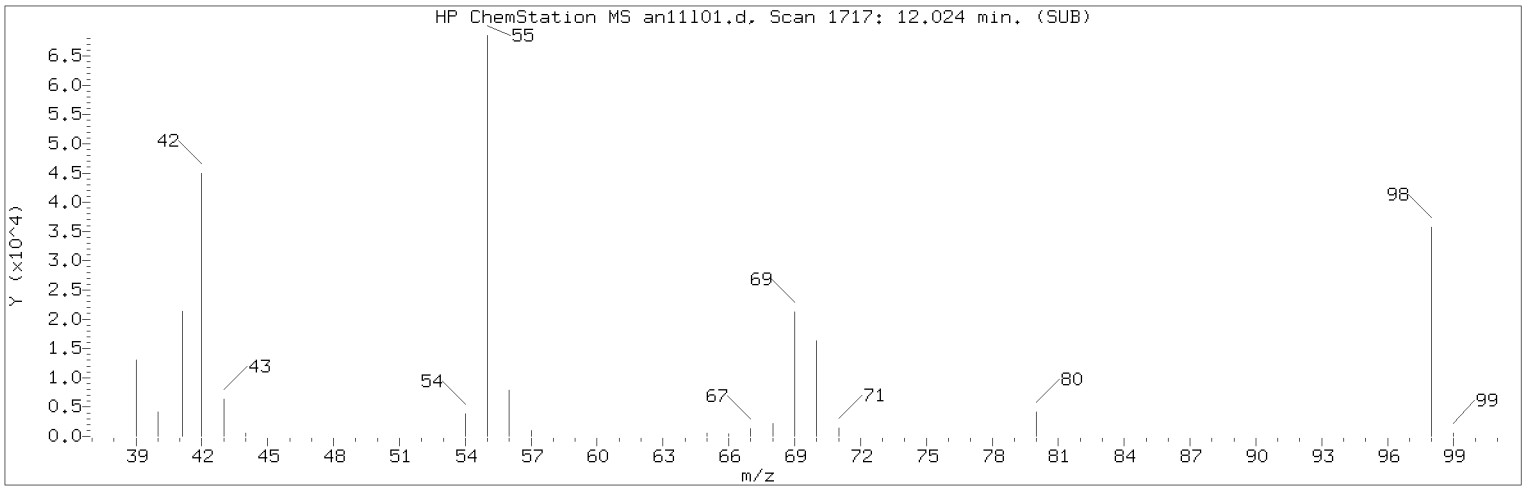
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

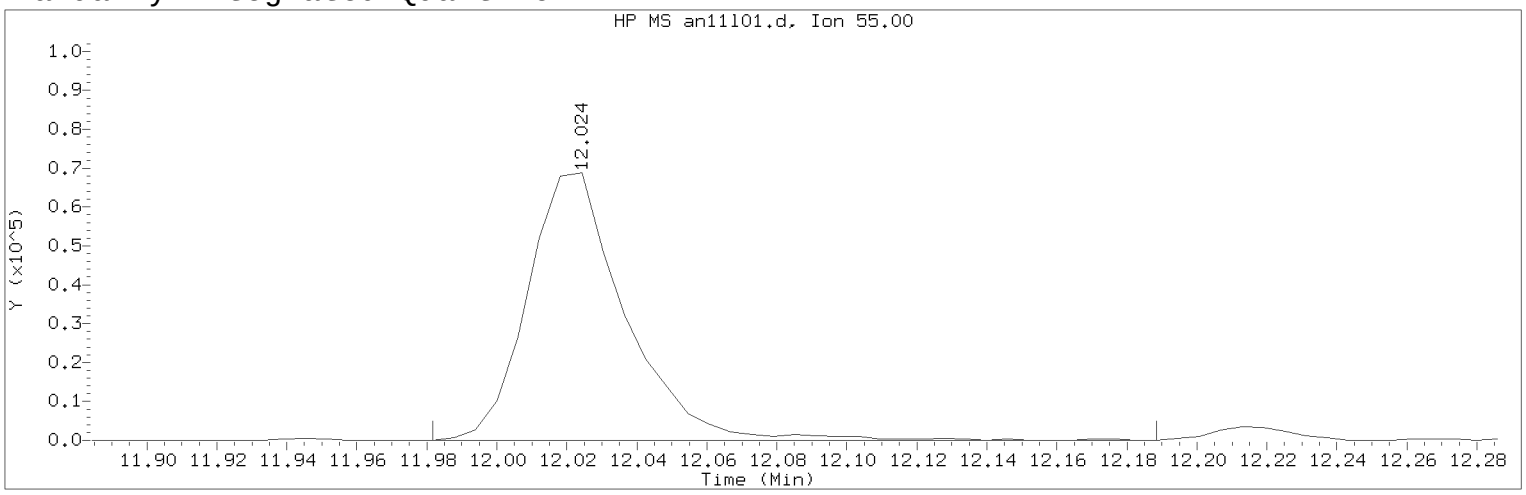
Compound Number : 61
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 909
Retention Time (minutes): 7.109
Quant Ion : 102.00
Area : 93453
On-column Amount (ng) : 51.7855
Integration start scan : 896 Integration stop scan: 938
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

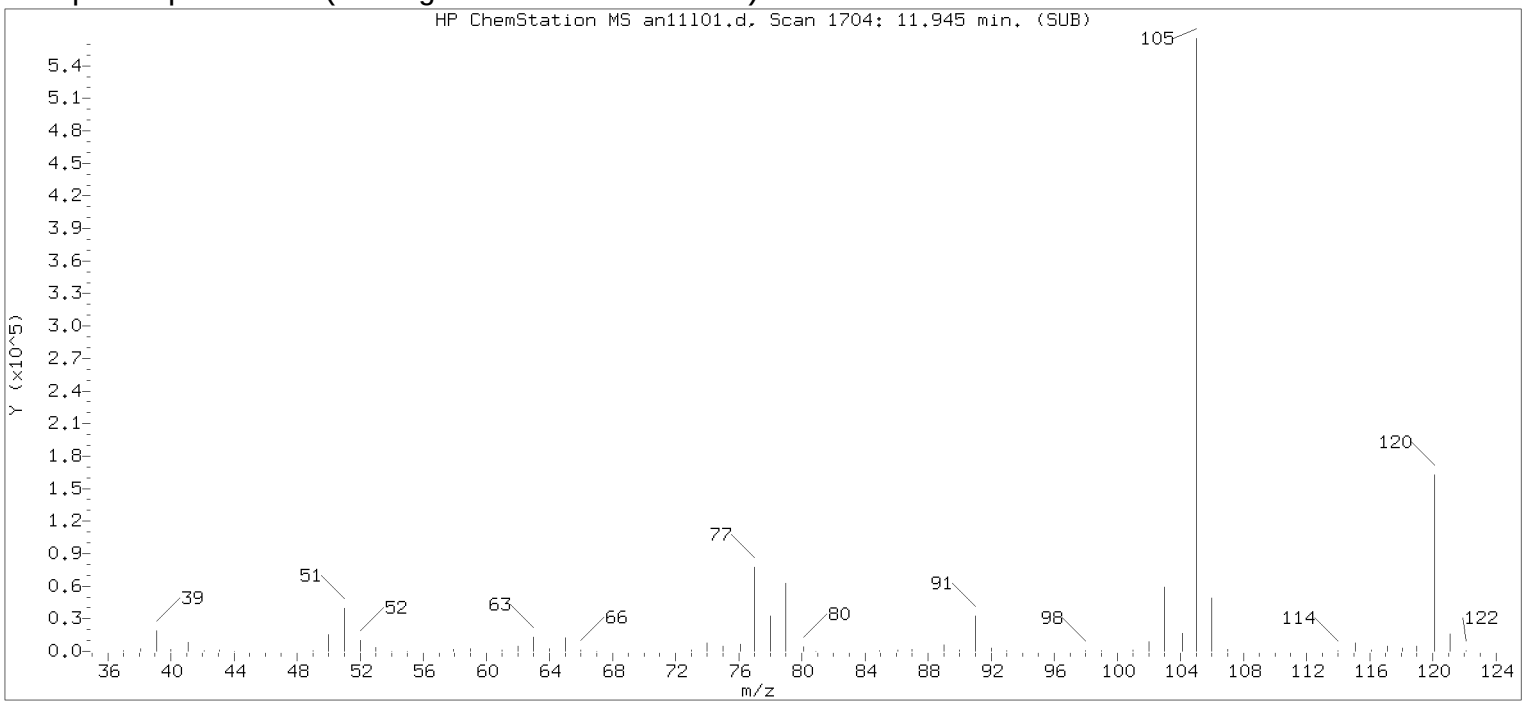
Compound Number : 111
Compound Name : Cyclohexanone
Scan Number : 1717
Retention Time (minutes): 12.024
Quant Ion : 55.00
Area (flag) : 134000A
On-Column Amount (ng) : 351.4242
Integration start scan : 1709 Integration stop scan: 1743
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

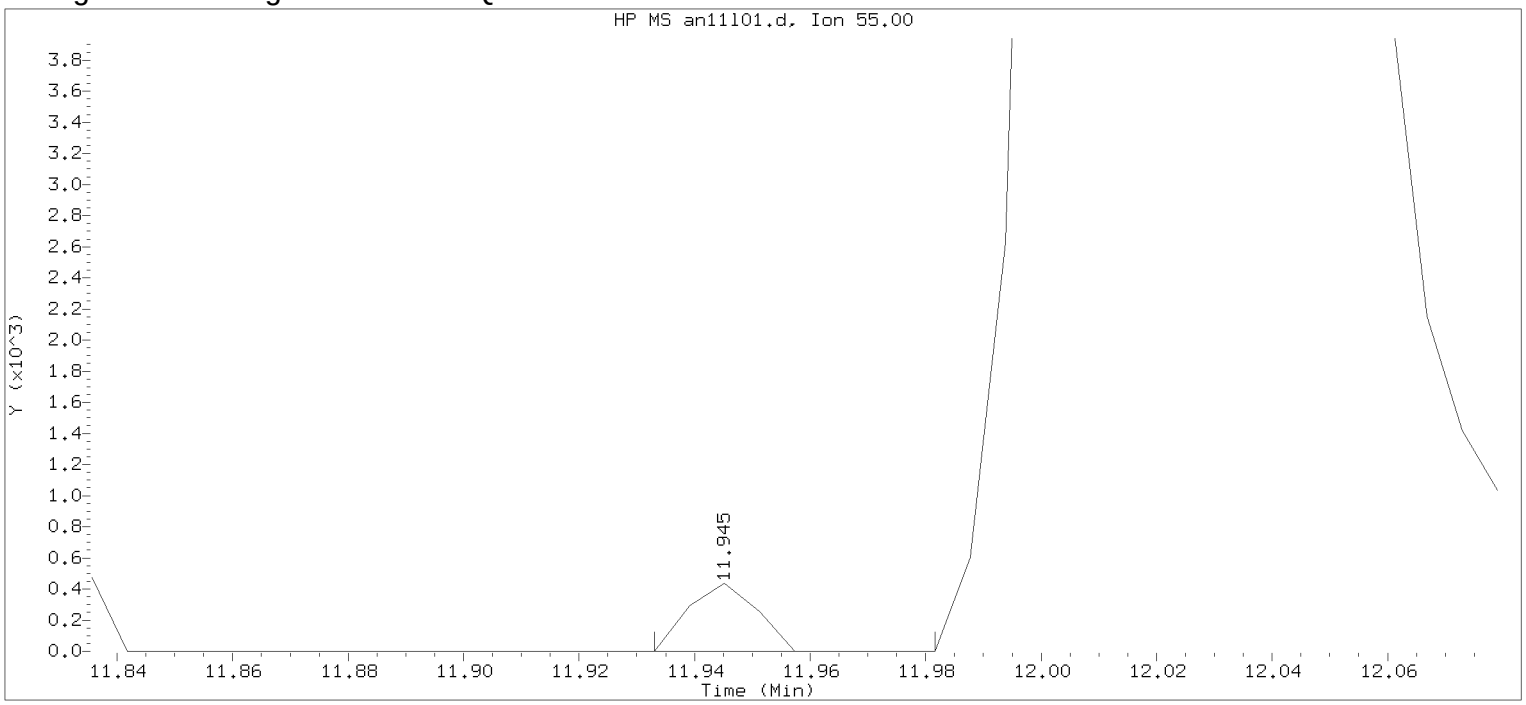
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

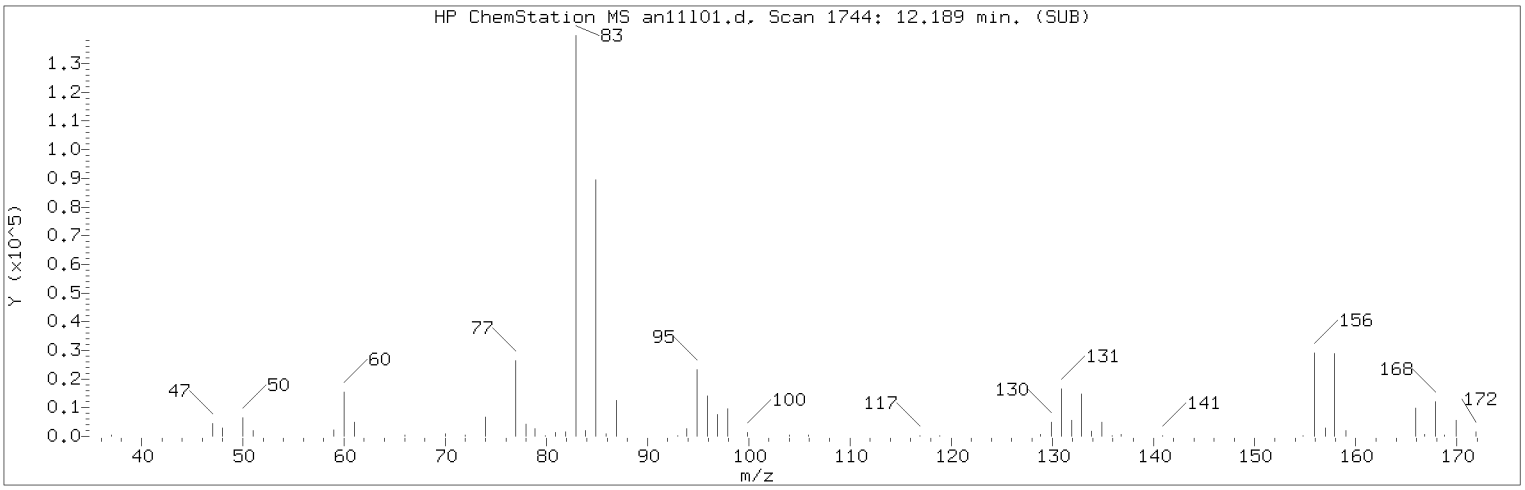
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

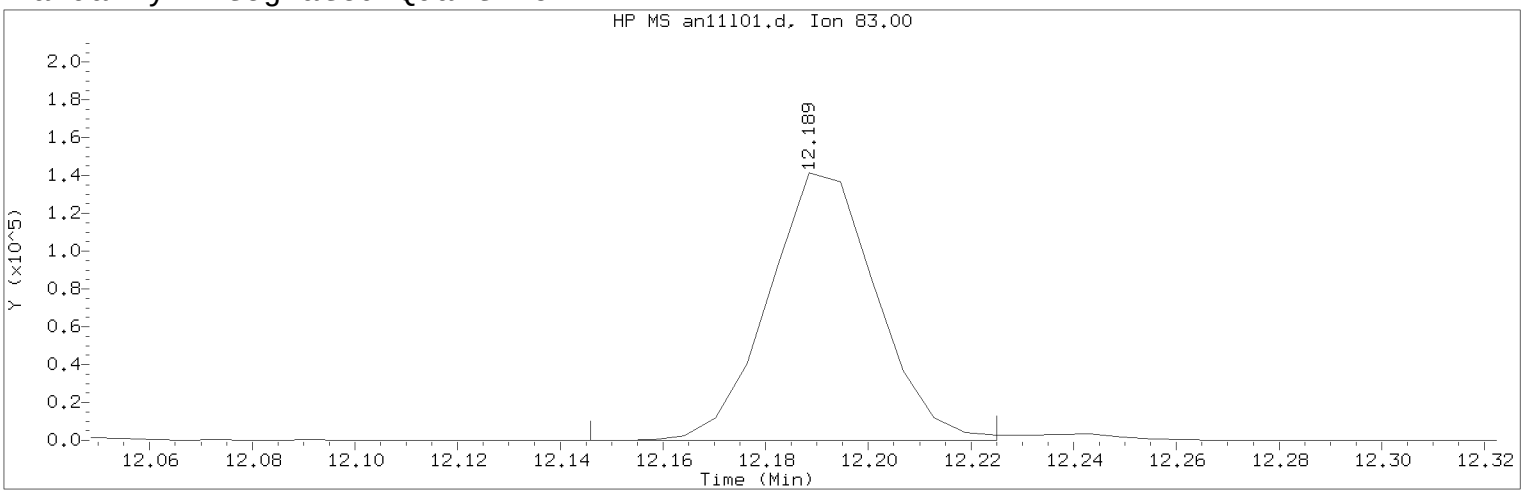
Compound Number : 111
Compound Name : Cyclohexanone
Scan Number : 1704
Retention Time (minutes): 11.945
Quant Ion : 55.00
Area : 358
On-column Amount (ng) : 0.9391
Integration start scan : 1701 Integration stop scan: 1709
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

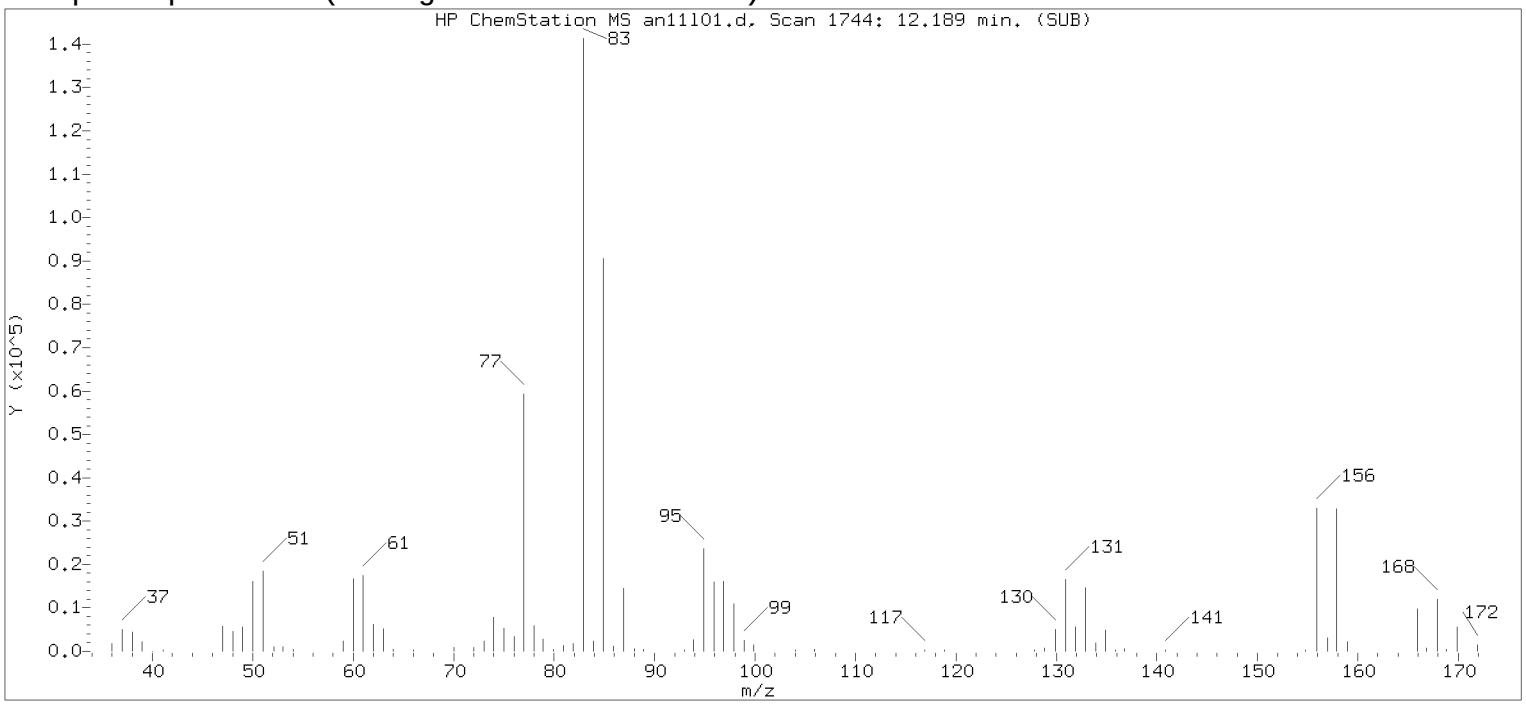
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area (flag) : 206707M
On-Column Amount (ng) : 16.3234
Integration start scan : 1736 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

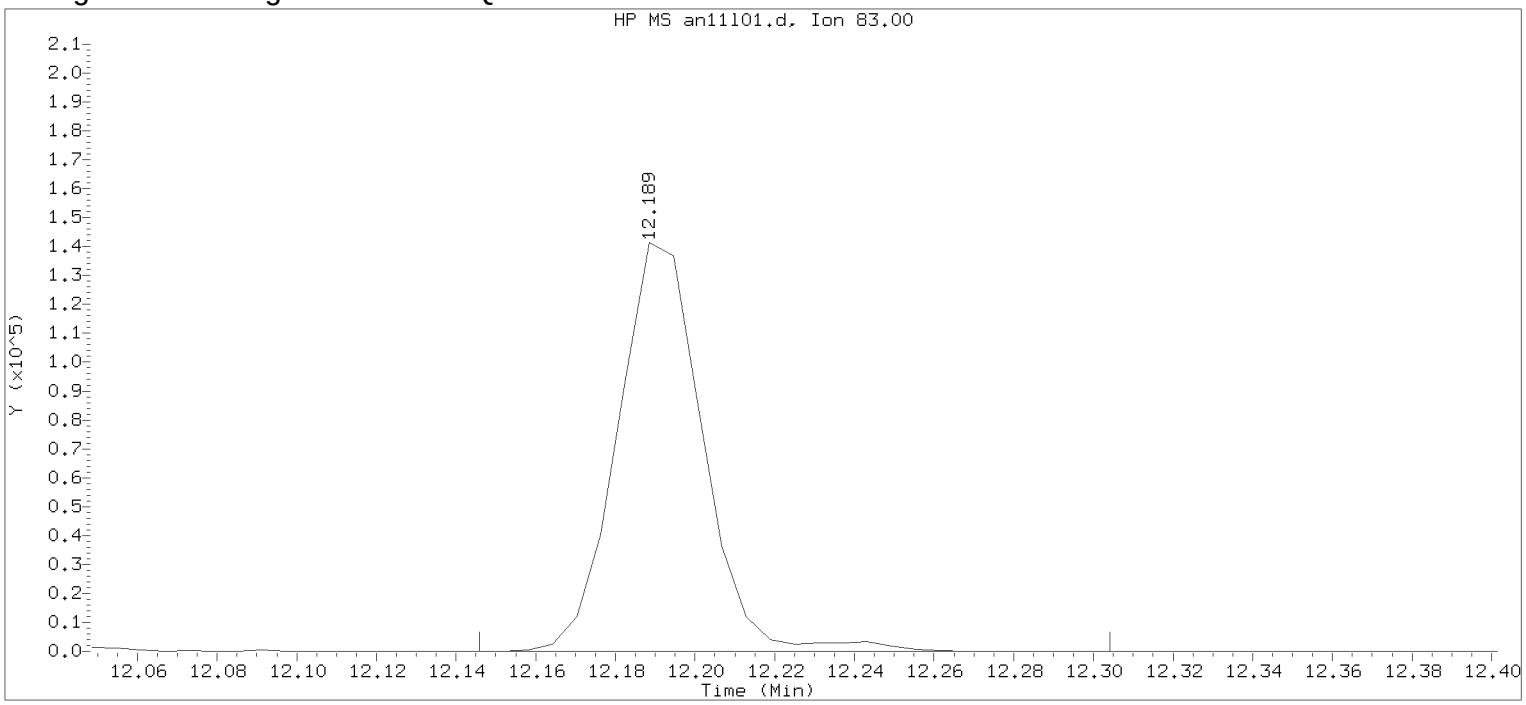
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

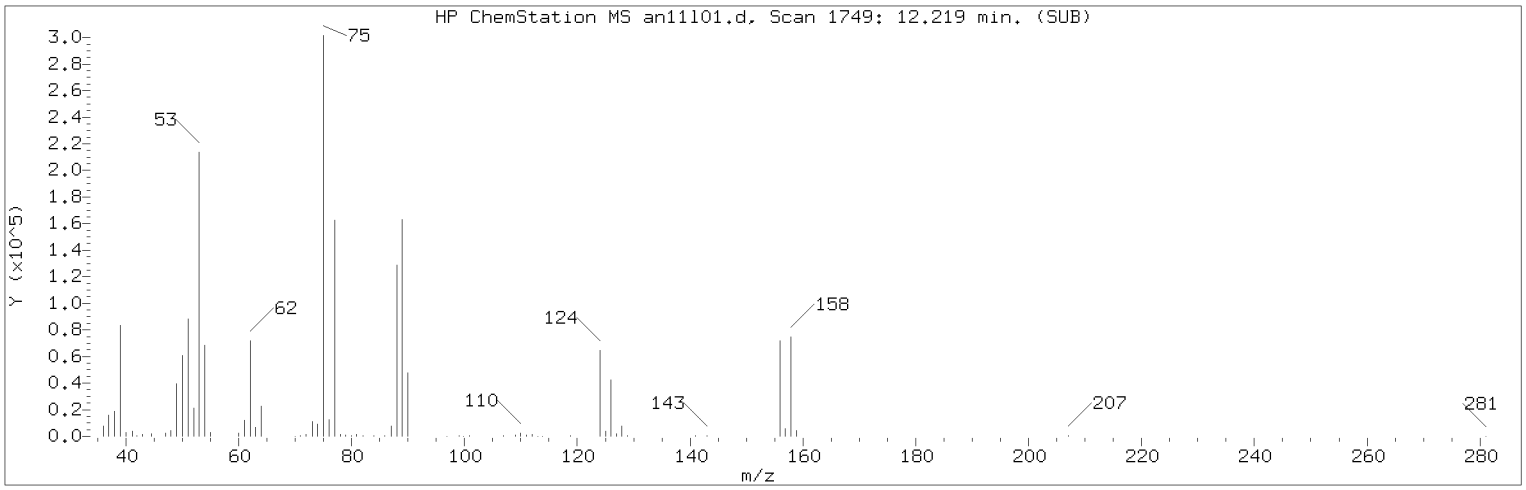
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

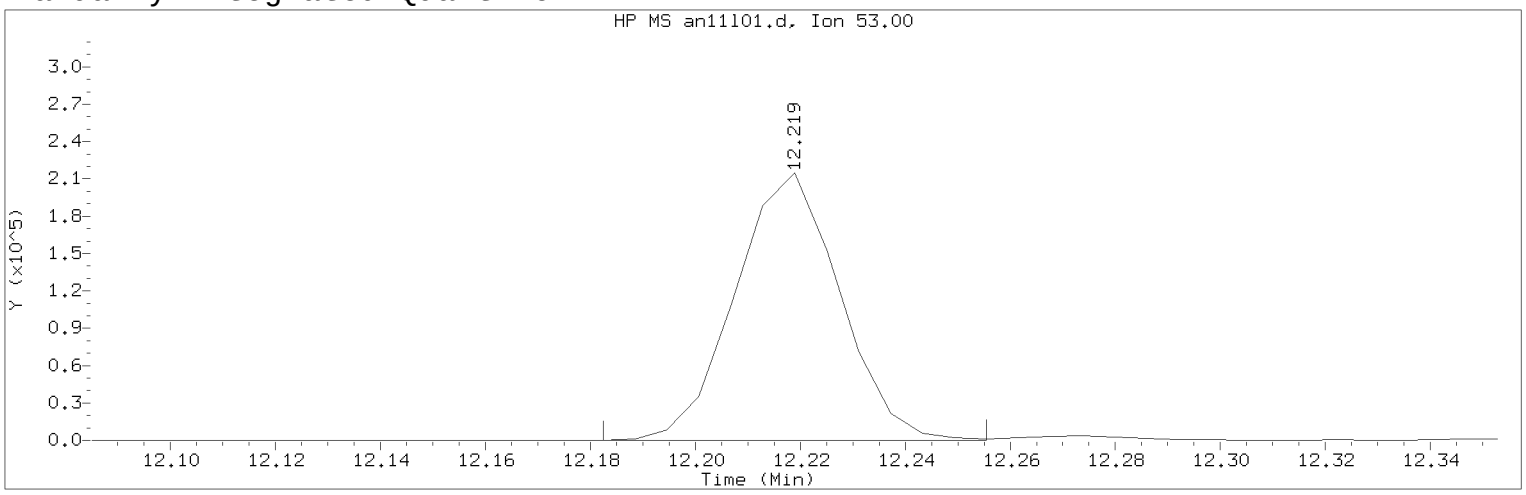
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1744
Retention Time (minutes): 12.189
Quant Ion : 83.00
Area : 211055
On-column Amount (ng) : 16.6668
Integration start scan : 1736 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

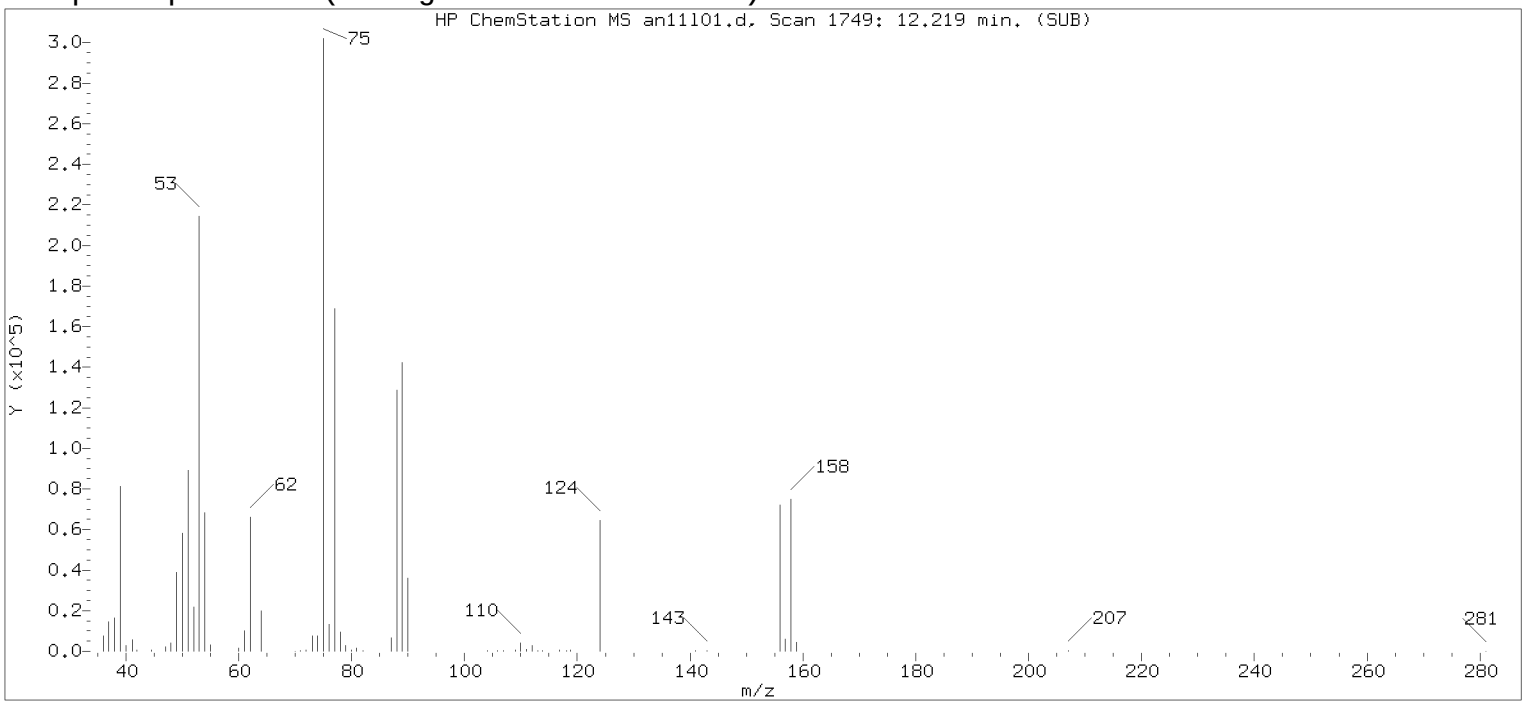
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area (flag) : 295365M
On-Column Amount (ng) : 90.0219
Integration start scan : 1742 Integration stop scan: 1754
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

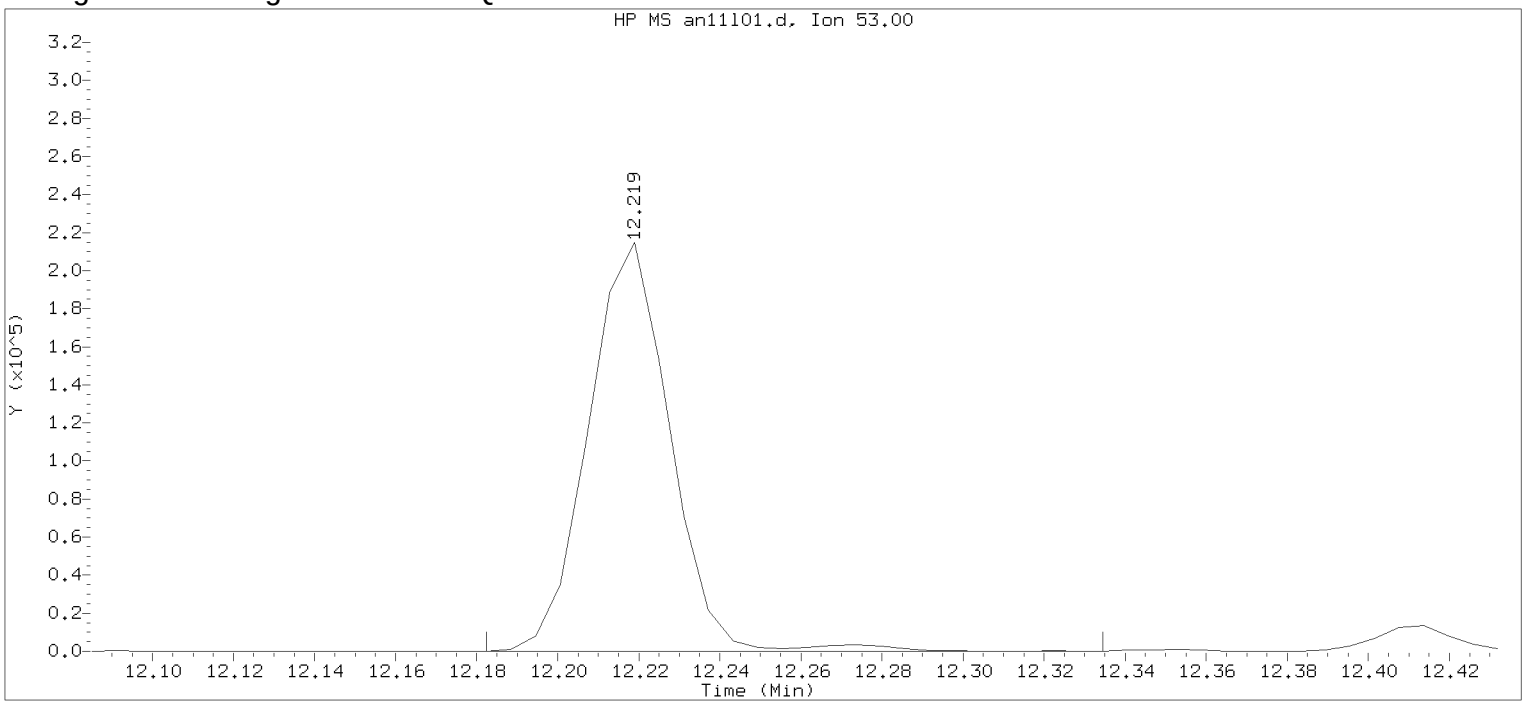
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

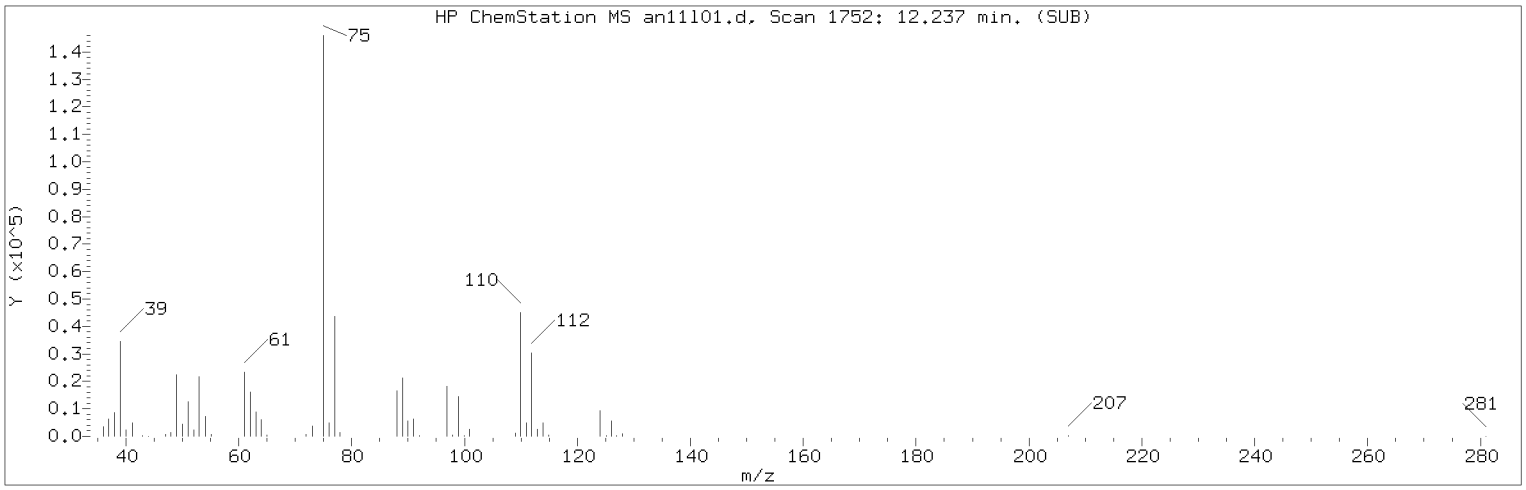
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

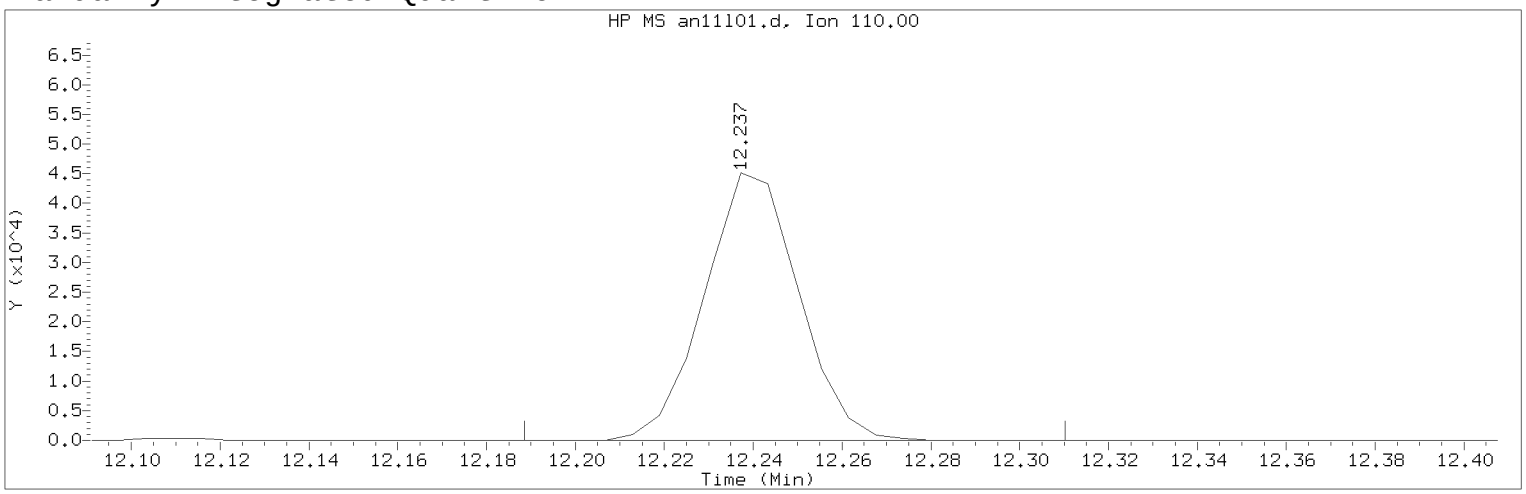
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1749
Retention Time (minutes): 12.219
Quant Ion : 53.00
Area : 300342
On-column Amount (ng) : 91.5388
Integration start scan : 1742 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

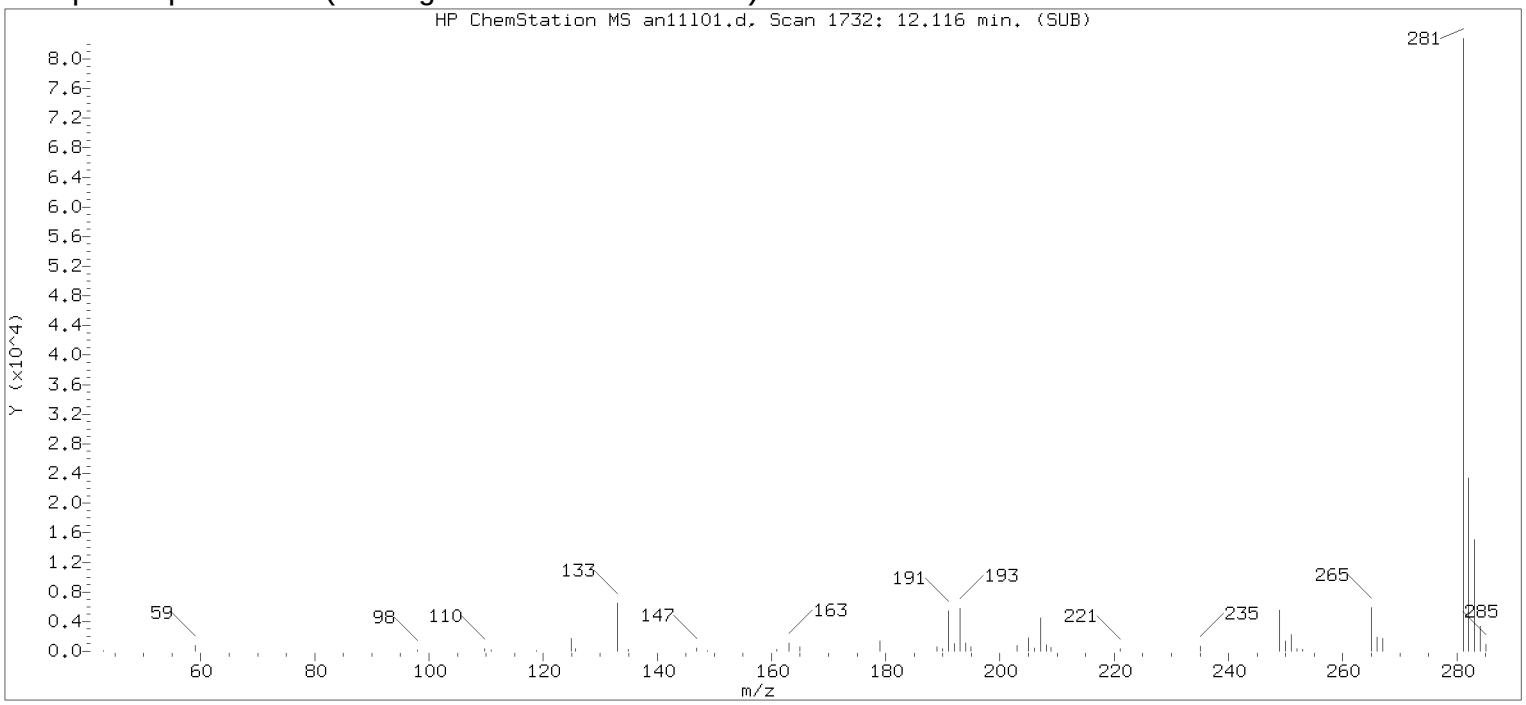
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1752
Retention Time (minutes): 12.237
Quant Ion : 110.00
Area (flag) : 66426M
On-Column Amount (ng) : 17.0504
Integration start scan : 1743 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

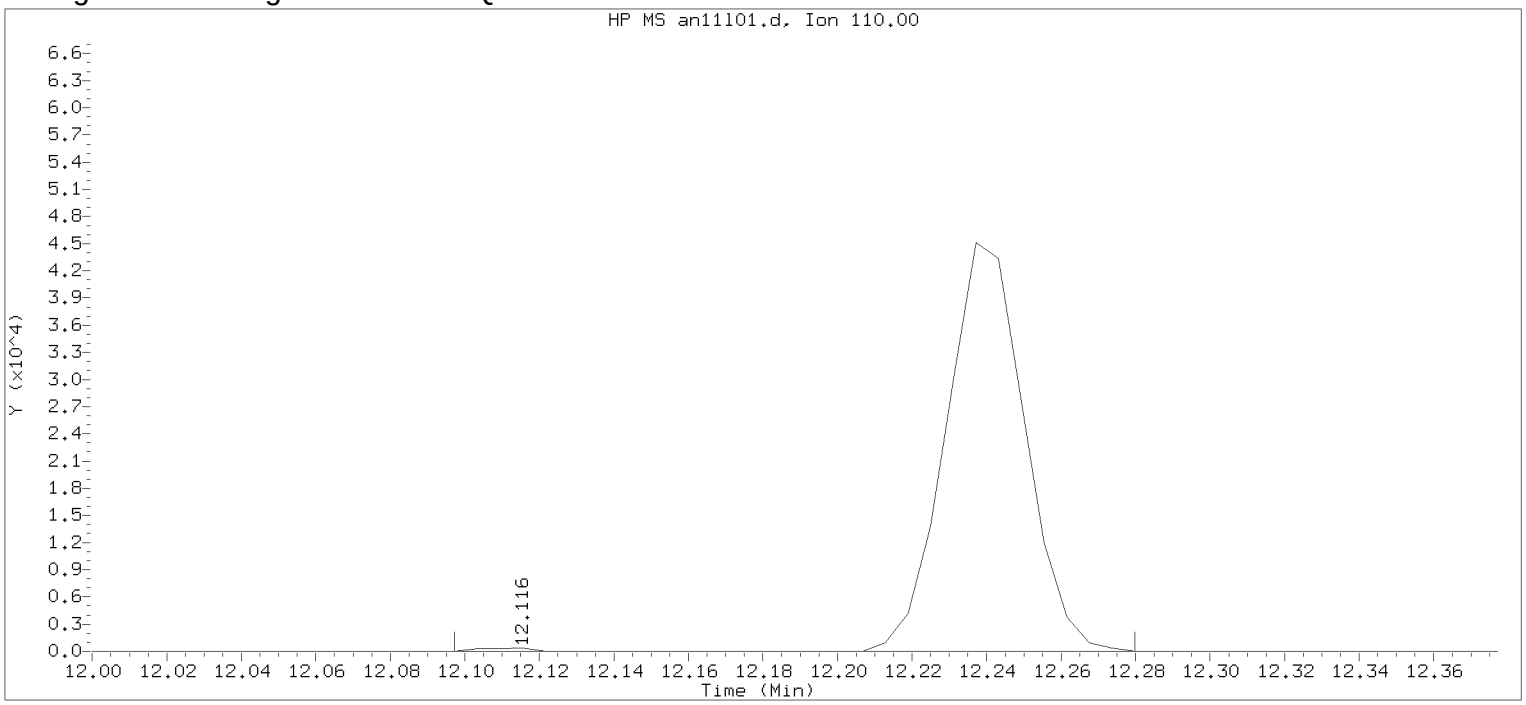
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

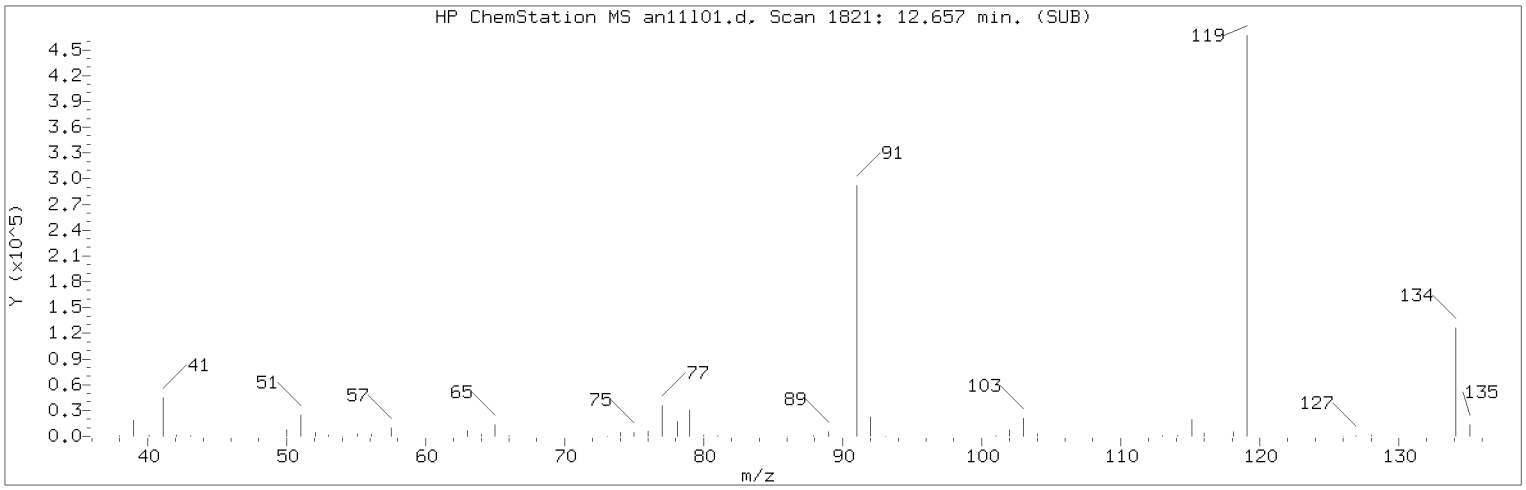
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

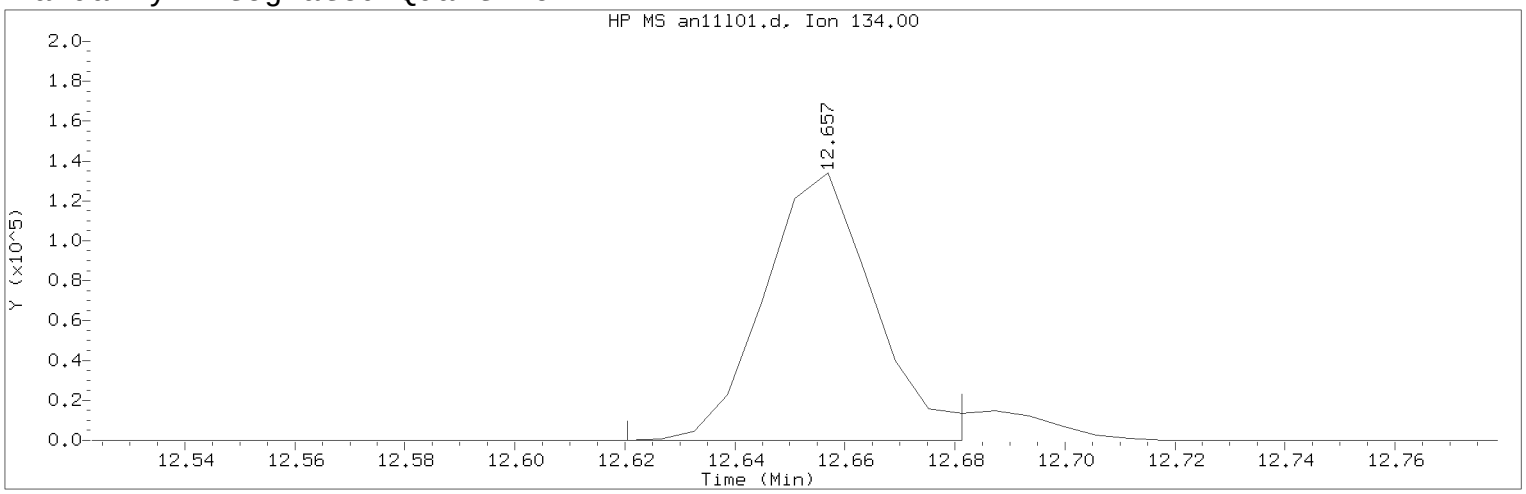
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1732
Retention Time (minutes): 12.116
Quant Ion : 110.00
Area : 66782
On-column Amount (ng) : 17.1419
Integration start scan : 1728 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

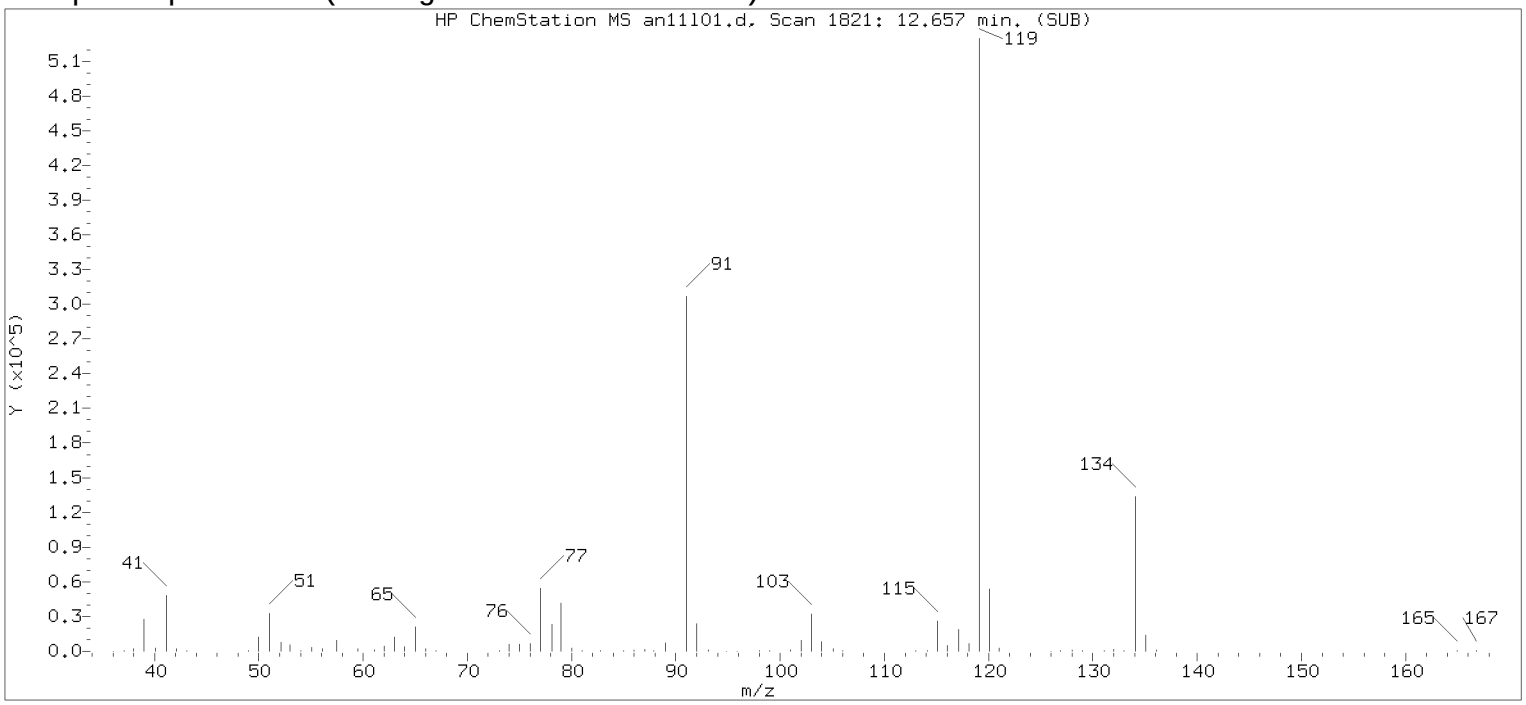
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 186097M
On-Column Amount (ng) : 17.6887
Integration start scan : 1814 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

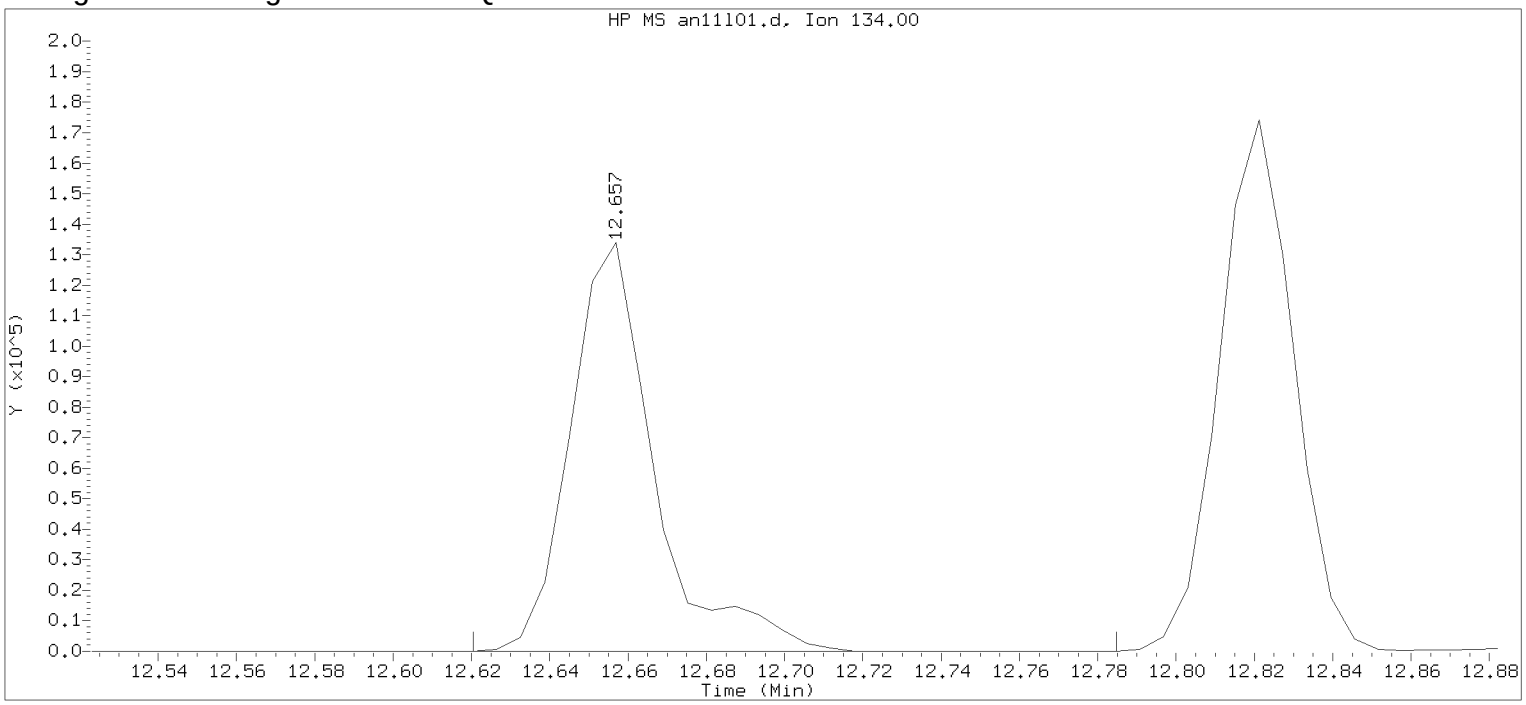
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

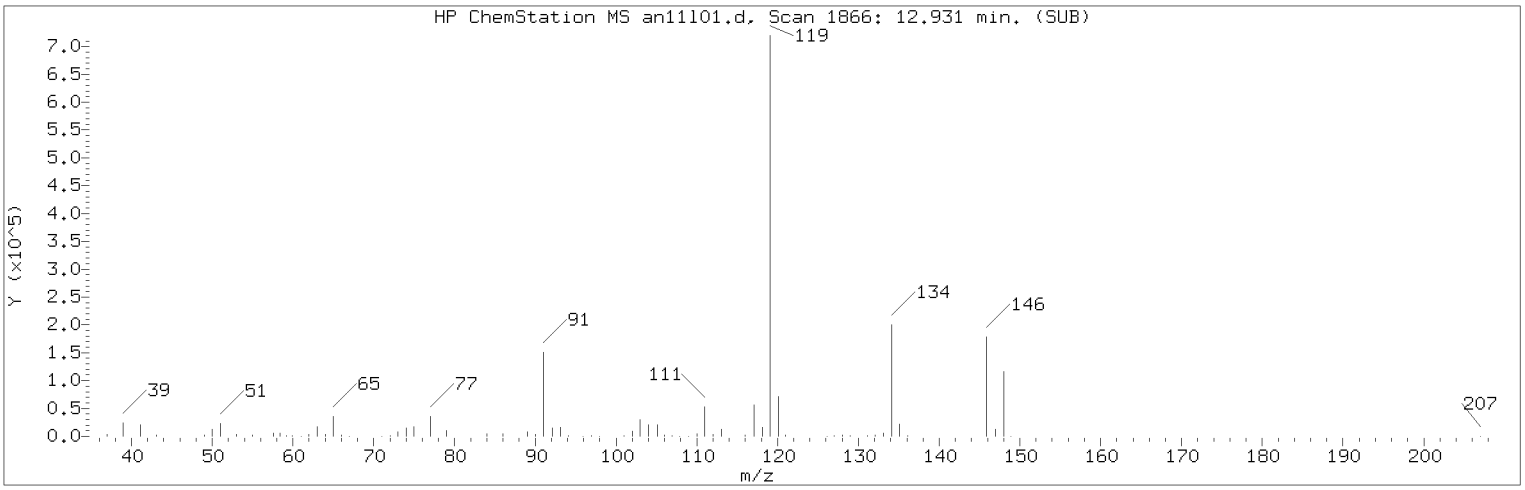
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

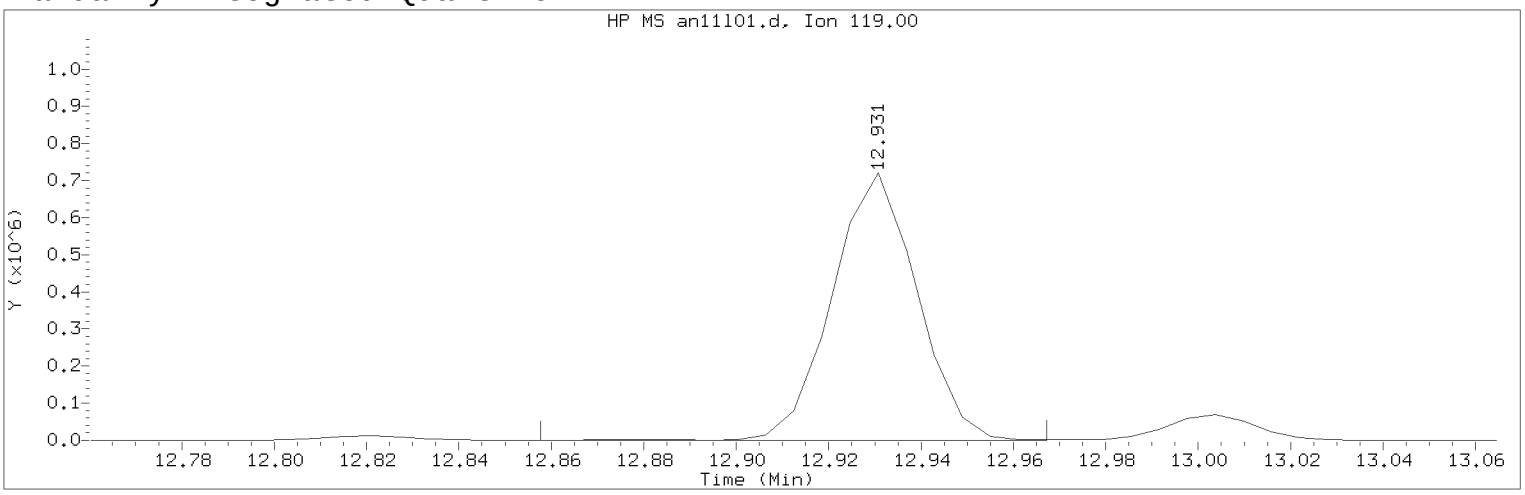
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area : 199756
On-column Amount (ng) : 18.9870
Integration start scan : 1814 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

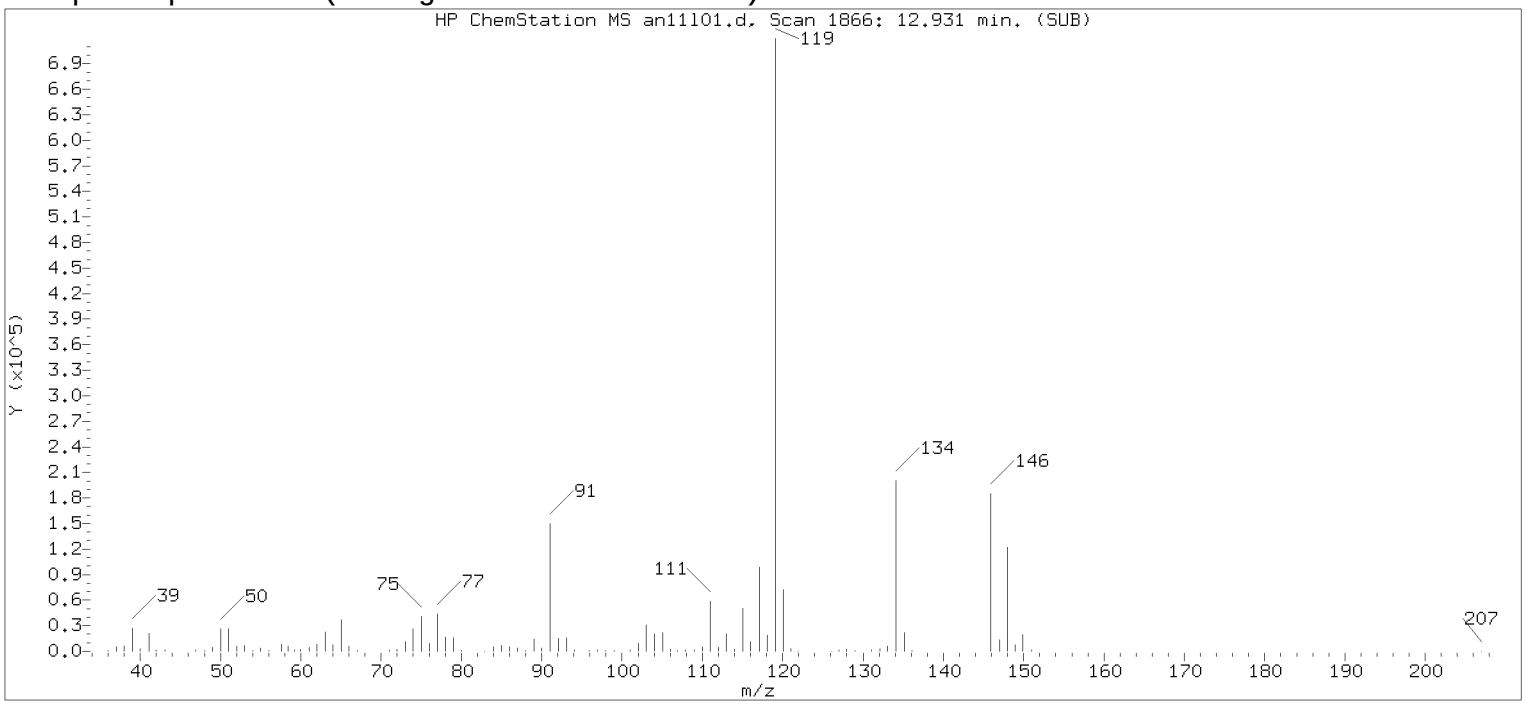
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area (flag) : 916673M
On-Column Amount (ng) : 17.5908
Integration start scan : 1853 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

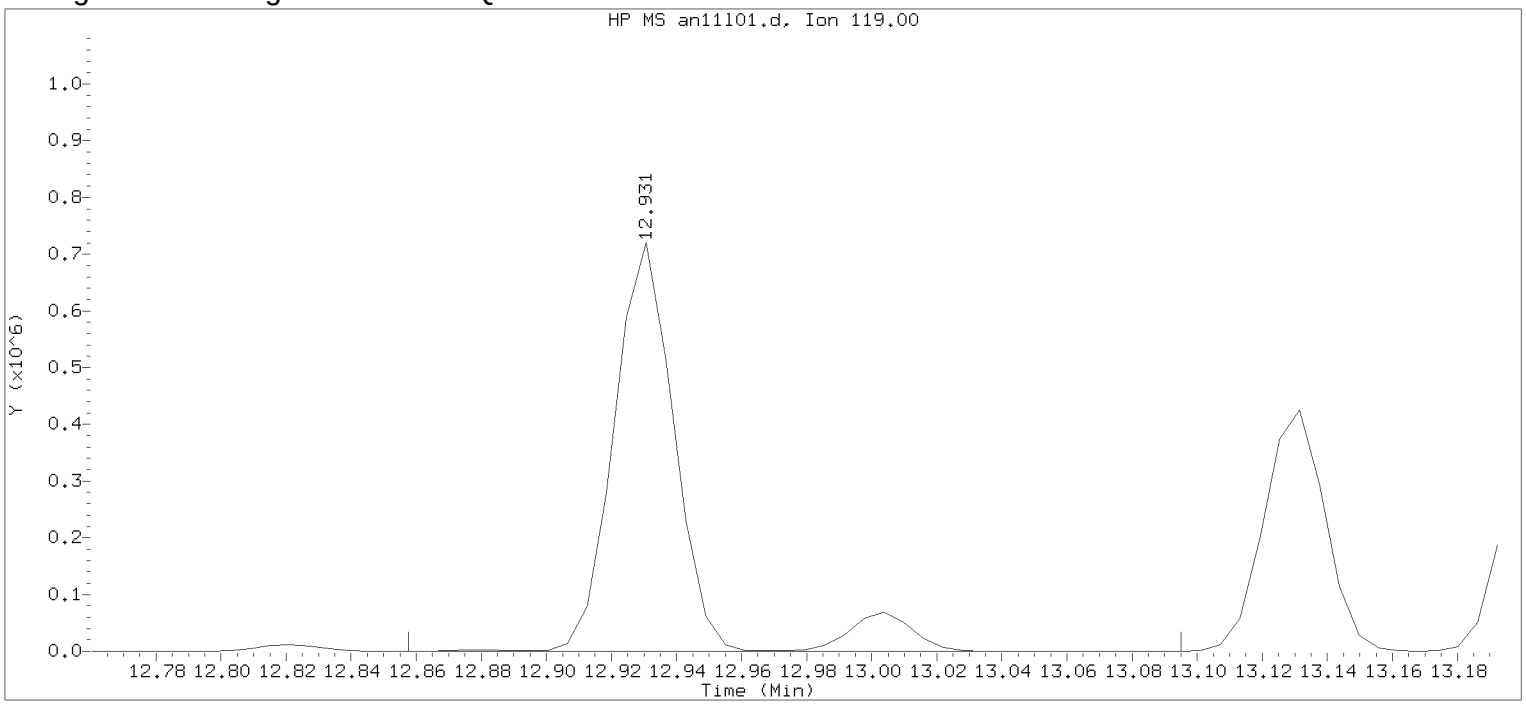
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

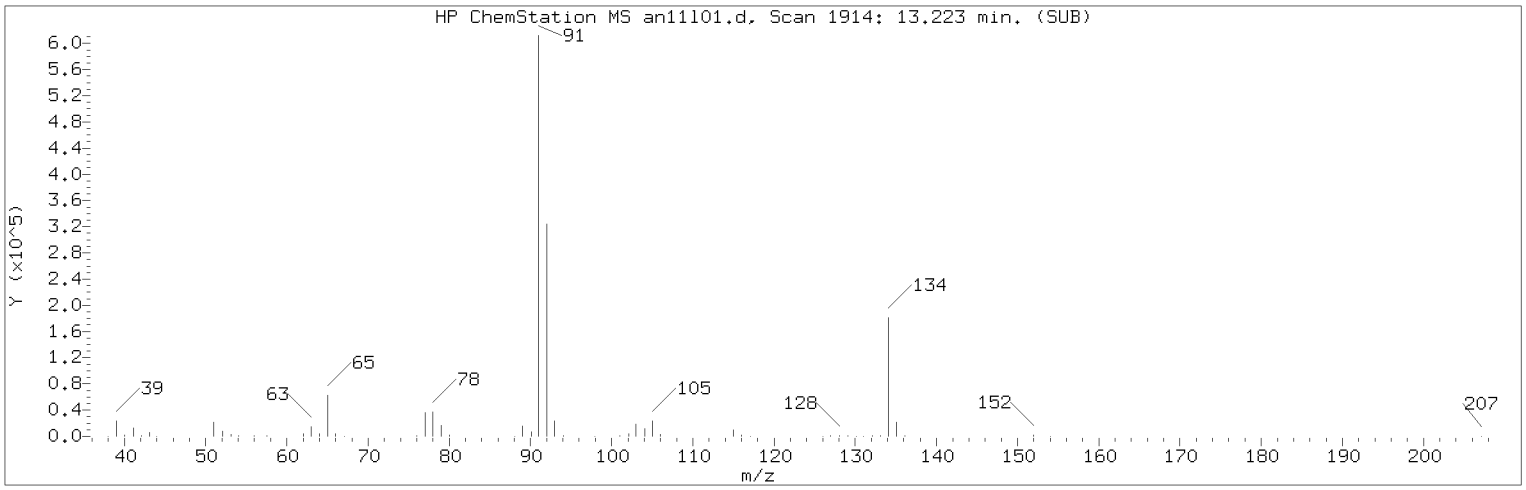
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

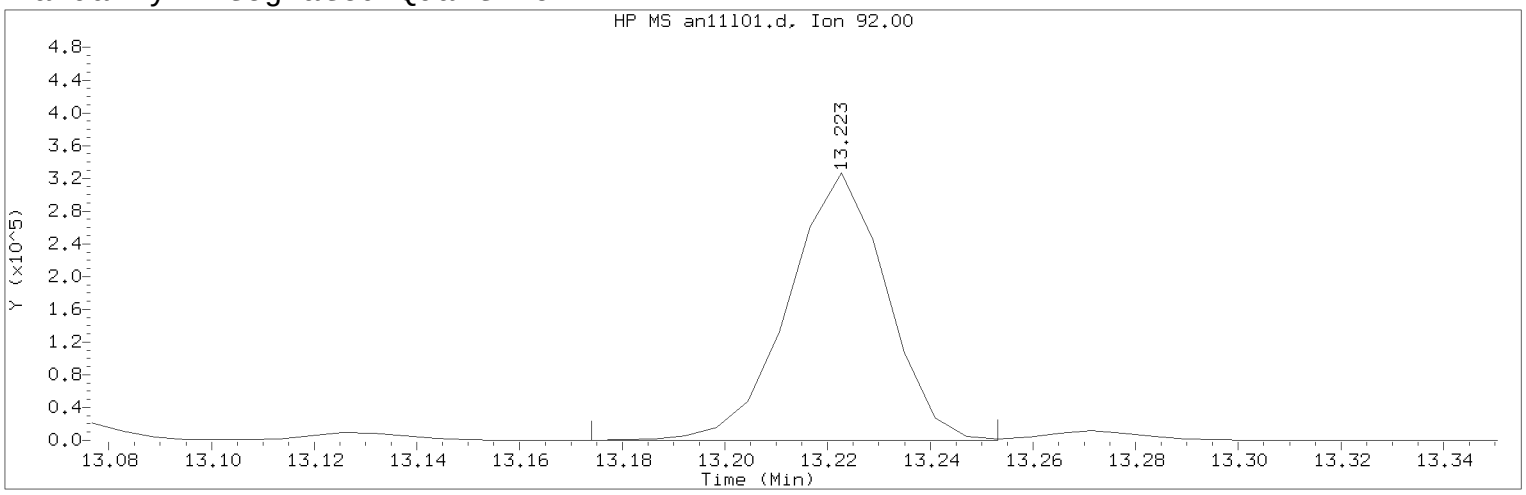
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area : 1008937
On-column Amount (ng) : 19.3613
Integration start scan : 1853 Integration stop scan: 1892
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

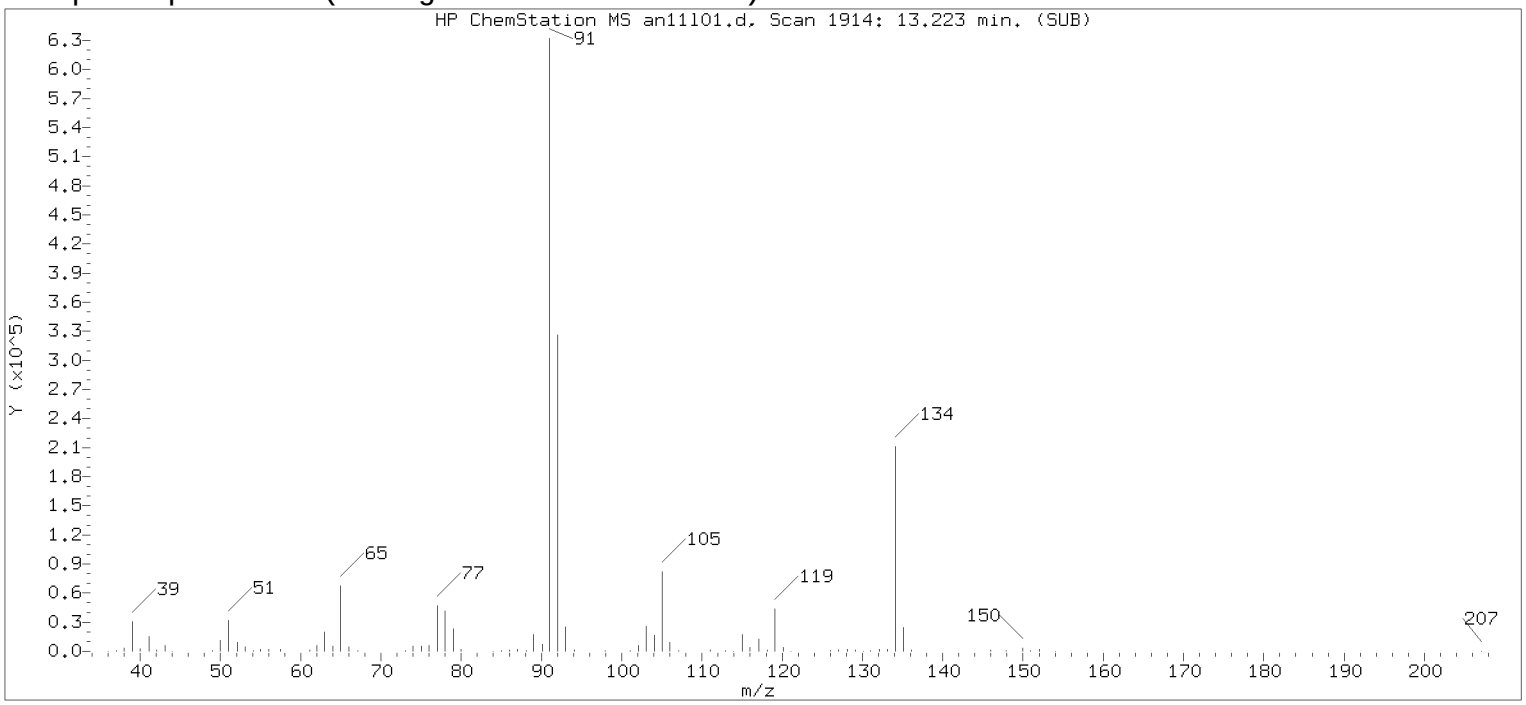
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 430043M
On-Column Amount (ng) : 17.0223
Integration start scan : 1905 Integration stop scan: 1918
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

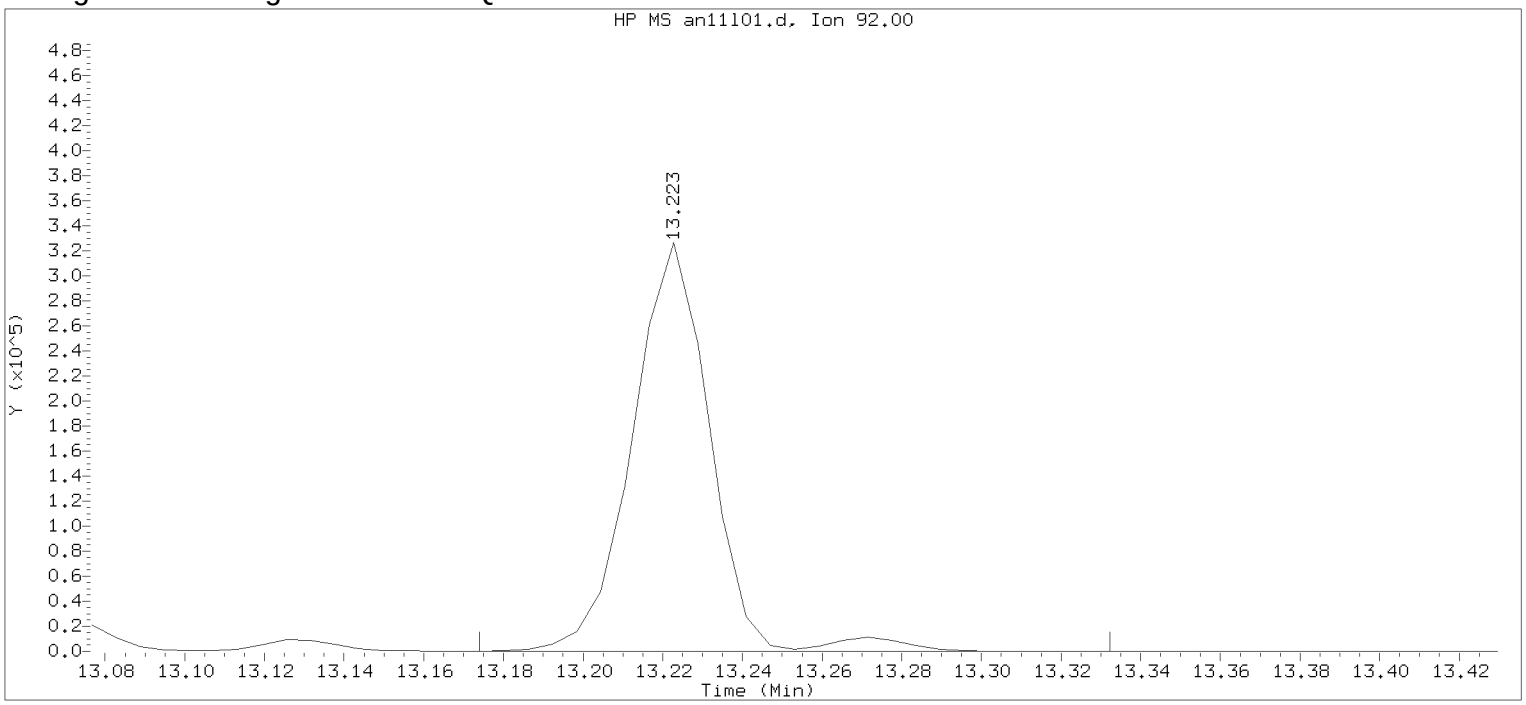
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

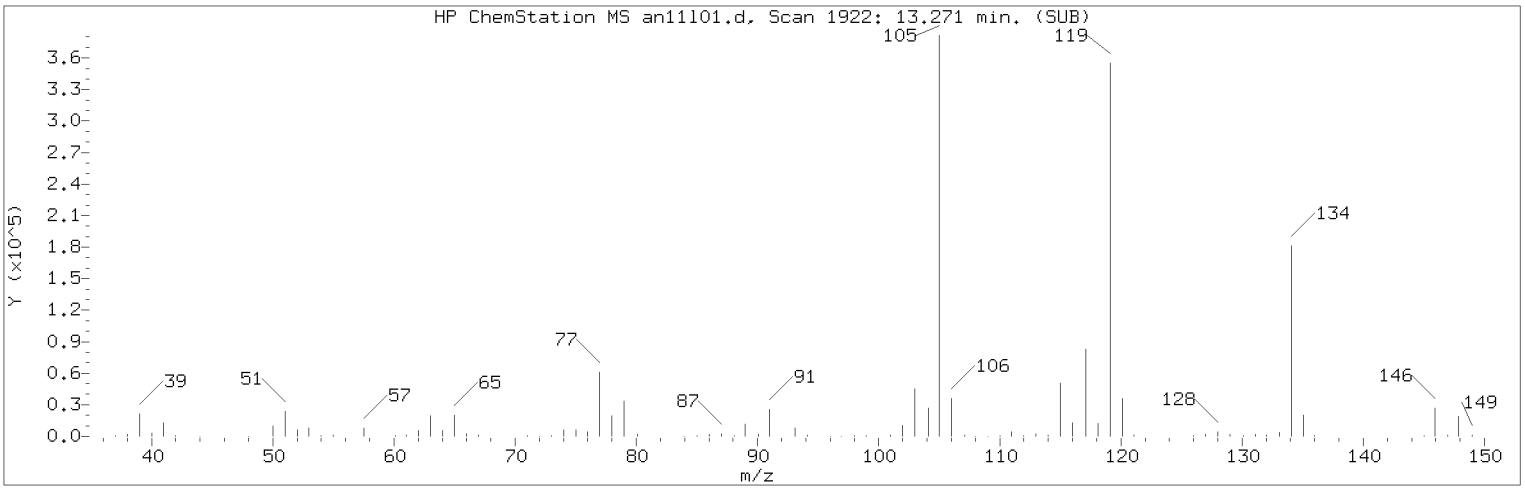
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

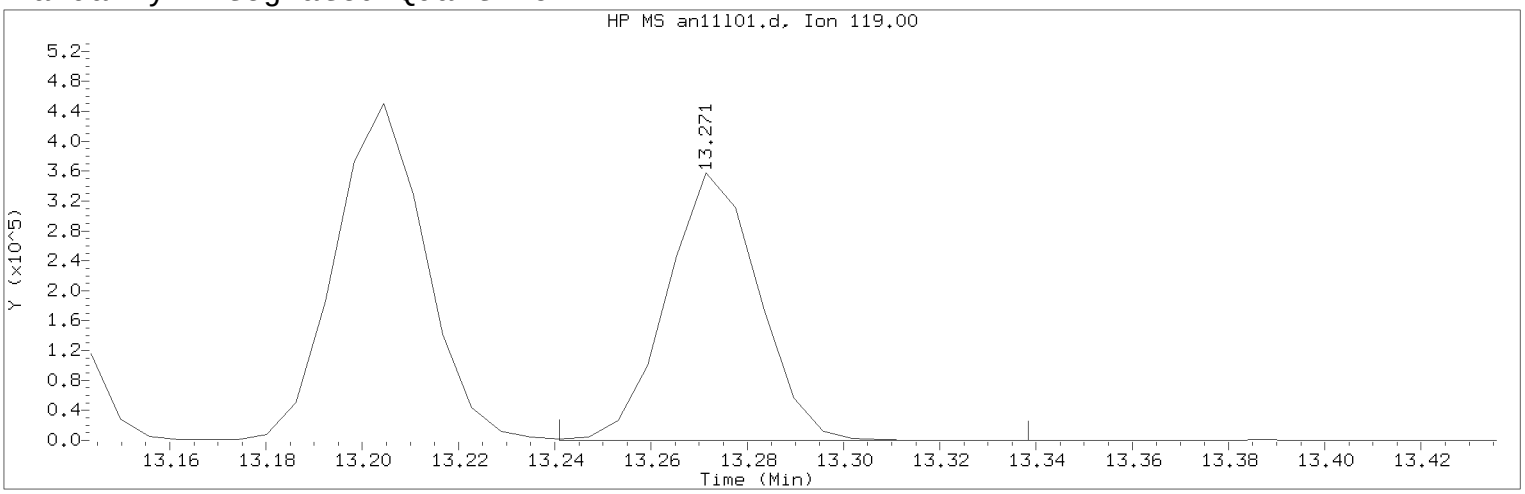
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 444461
On-column Amount (ng) : 17.5931
Integration start scan : 1905 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:33 cbs01947

Sample Name: LCSA26 Lab Sample ID: LCSA26

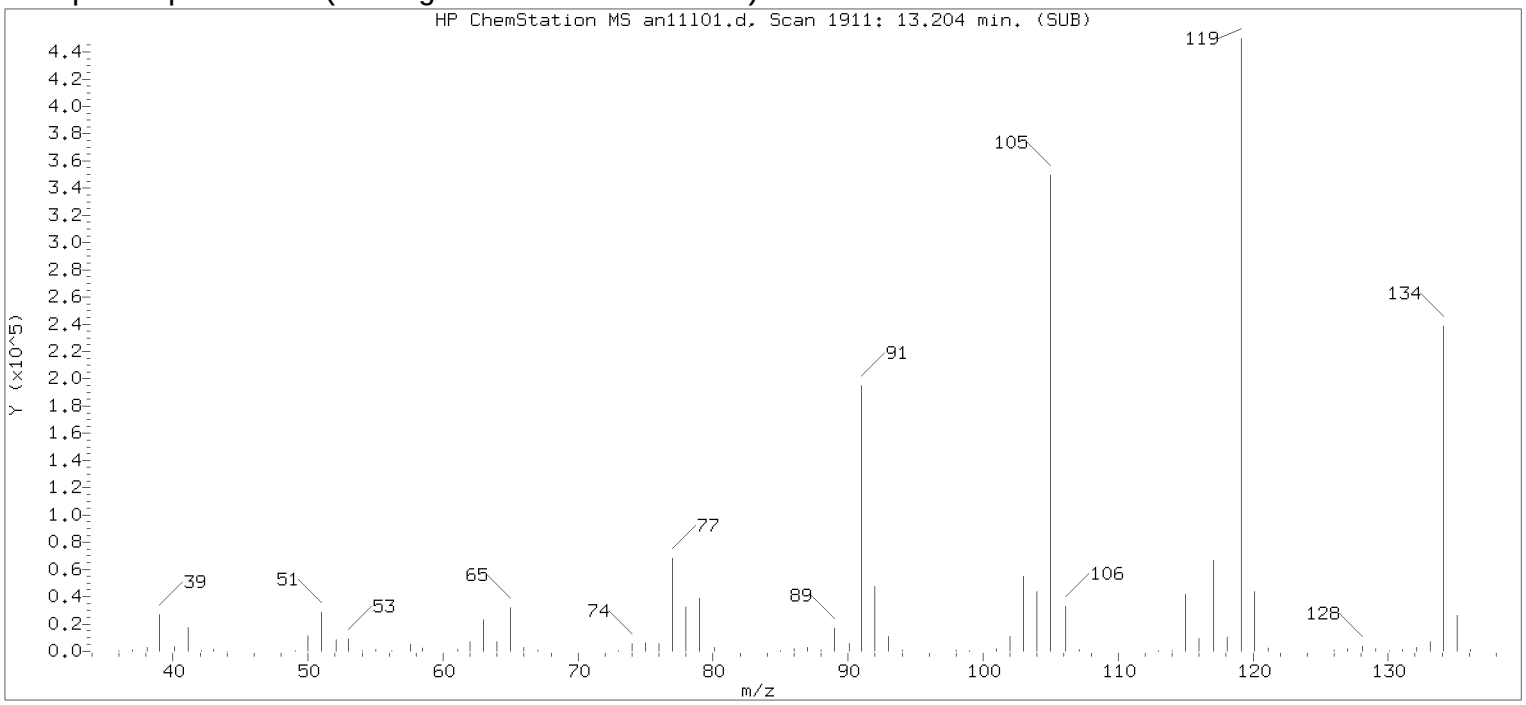
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1922
Retention Time (minutes): 13.271
Quant Ion : 119.00
Area (flag) : 472643M
On-Column Amount (ng) : 17.6603
Integration start scan : 1916 Integration stop scan: 1932
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

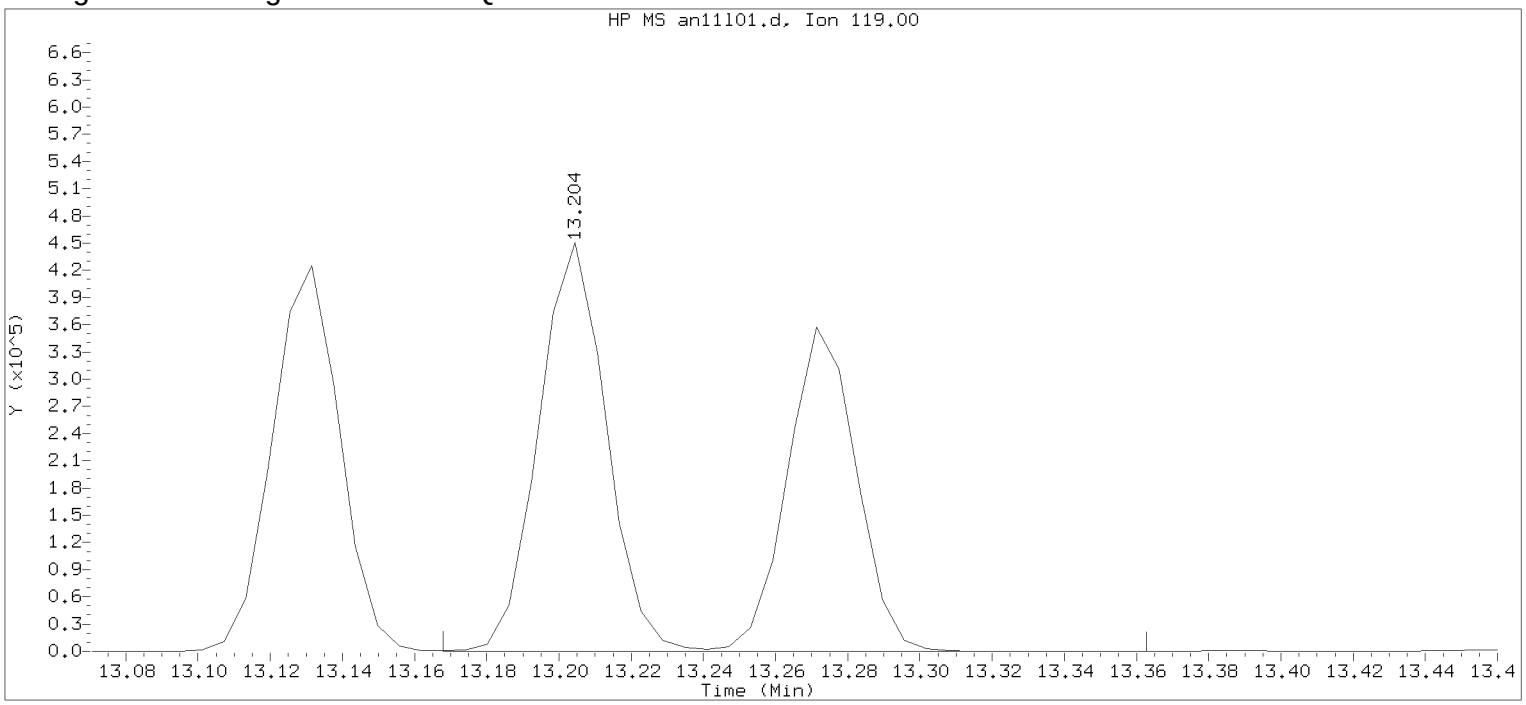
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l01.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:06 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:26 Automation

Sample Name: LCSA26 Lab Sample ID: LCSA26

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1911
Retention Time (minutes): 13.204
Quant Ion : 119.00
Area : 1057199
On-column Amount (ng) : 39.5022
Integration start scan : 1904 Integration stop scan: 1936
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:34.
Target 3.5 esignature user ID: cbs01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l02.d Injection date and time: **11-NOV-2013 12:29**
Data file Sample Info. Line: LCDA26;LCDA26;2;3;LCSD;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.043(0.006)	405	65	162463 (-14)	250.00	
67) Fluorobenzene	7.547(-0.006)	981	96	1618341 (-6)	50.00	
99) Chlorobenzene-d5	11.075(0.000)	1561	117	1305455 (-6)	50.00	
133) 1,4-Dichlorobenzene-d4	12.979(0.000)	1874	152	743157 (-6)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
55) Dibromofluoromethane	(2)	6.646(0.000)	113	409967	51.818	104%		50 - 141
61) 1,2-Dichloroethane-d4	(2)	7.109(0.001)	102	90407	50.388	101%		54 - 135
86) Toluene-d8	(3)	9.591(-0.001)	98	1638882	48.371	97%		52 - 141
112) 4-Bromofluorobenzene	(3)	12.091(0.000)	95	609008	48.345	97%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
2) Dichlorodifluoromethane	(2)	1.919(-0.000)	85	238823	17.238	17.24			2	5
4) Chloromethane	(2)	2.035(0.001)	50	190627	17.199	17.20			2	5
5) Vinyl Chloride	(2)	2.169(0.001)	62	189406	17.838	17.84			1	5
9) Bromomethane	(2)	2.473(0.001)	94	153024	19.719	19.72			2	5
10) Chloroethane	(2)	2.576(0.001)	64	108773	17.637	17.64			2	5
11) Dichlorofluoromethane	(2)	2.802(0.000)	67	314387	19.897	19.90			2	5
13) Trichlorofluoromethane	(2)	2.832(0.000)	101	298905	18.703	18.70			2	5
15) Ethanol	(1)	2.978(-0.004)	45	59007	688.859	688.86			100	500
17) Freon 123a	(2)	3.185(-0.000)	67	178398	16.068	16.07			2	5
18) Acrolein	(1)	3.282(-0.001)	56	227363	120.580	120.58			20	100
19) 1,1-Dichloroethene	(2)	3.410(-0.000)	96	152245	18.580	18.58			1	5
20) Acetone	(2)	3.434(0.000)	58	105203	113.783	113.78			7	20
22) Freon 113	(2)	3.440(0.000)	101	161465	18.051	18.05			2	10
23) 2-Propanol	(1)	3.586(-0.002)	45	59390M	106.741	106.74			60	100
24) Methyl Iodide	(2)	3.604(-0.000)	142	342100	21.239	21.24			3	5
25) Carbon Disulfide	(2)	3.708(-0.000)	76	487649	16.950	16.95			1	5
27) Methyl Acetate	(2)	3.836(-0.000)	43	100126	17.367	17.37			2	5
29) Allyl Chloride	(2)	3.872(-0.001)	41	196482	15.517	15.52			1	5
31) Methylene Chloride	(2)	4.049(-0.000)	84	183080	19.149	19.15			2	5
32) t-Butyl alcohol	(1)	4.170(-0.004)	59	161875	181.398	181.40			20	100
33) Acrylonitrile	(2)	4.365(-0.000)	53	257785	78.247	78.25			4	20
34) Methyl Tertiary Butyl Ether	(2)	4.438(-0.001)	73	480117	18.827	18.83			0.5	5
35) trans-1,2-Dichloroethene	(2)	4.450(-0.000)	96	182379	19.185	19.18			1	5
38) n-Hexane	(2)	4.864(-0.001)	57	199613	15.767	15.77			1	5
40) 1,1-Dichloroethane	(2)	5.113(-0.001)	63	290260	17.551	17.55			1	5
41) di-Isopropyl ether	(2)	5.162(-0.000)	45	459914	17.189	17.19			1	5
42) 2-Chloro-1,3-butadiene	(2)	5.217(-0.001)	53	222073	18.064	18.06			1	5
44) Ethyl t-butyl ether	(2)	5.703(-0.000)	59	464012	17.930	17.93			1	5
45) 2-Butanone	(2)	5.910(-0.000)	43	460952	121.045	121.05			4	10
46) cis-1,2-Dichloroethene	(2)	5.941(-0.000)	96	197409	18.801	18.80			1	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l02.d Injection date and time: **11-NOV-2013 12:29**
Data file Sample Info. Line: LCDA26;LCDA26;2;3;LCSD;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
47) 1,2-Dichloroethene (Total)	(2)		96	379788	37.985	37.99			1	5
48) 2,2-Dichloropropane	(2)	5.965(-0.000)	77	252432	18.772	18.77			1	5
50) Propionitrile	(1)	5.995(-0.002)	54	150698	130.623	130.62			30	100
51) Methacrylonitrile	(2)	6.214(-0.000)	67	478710	134.172	134.17			5	50
52) Bromochloromethane	(2)	6.281(-0.000)	128	108325	20.255	20.25			1	5
53) Tetrahydrofuran	(1)	6.294(-0.003)	71	95195	87.157	87.16			4	5
54) Chloroform	(2)	6.427(-0.000)	83	311858	19.213	19.21			1	5
56) 1,1,1-Trichloroethane	(2)	6.665(-0.000)	97	269619	17.155	17.16			1	5
57) Cyclohexane	(2)	6.762(-0.000)	56	238169	15.273	15.27			1	5
58) 1,1-Dichloropropene	(2)	6.871(-0.000)	75	230571	18.099	18.10			1	5
59) Carbon Tetrachloride	(2)	6.871(0.000)	117	239655	18.644	18.64			1	5
60) Isobutyl Alcohol	(1)	7.011(-0.004)	41	122699	413.073	413.07			100	250
62) Benzene	(2)	7.133(0.000)	78	687791	17.763	17.76			0.5	5
64) 1,2-Dichloroethane	(2)	7.218(-0.000)	62	234853	20.183	20.18			1	5
65) t-Amyl methyl ether	(2)	7.328(0.000)	73	447998	18.009	18.01			1	5
69) n-Heptane	(2)	7.553(0.000)	43	198279	15.141	15.14			3	5
70) n-Butanol	(1)	7.900(-0.004)	56	203926	783.080	783.08			110	250
72) Trichloroethene	(2)	8.027(0.000)	95	190630	18.979	18.98			1	5
73) Methylcyclohexane	(2)	8.344(0.000)	83	289989	17.249	17.25			1	5
74) 1,2-Dichloropropane	(2)	8.374(0.000)	63	167634	17.279	17.28			1	5
76) Methyl Methacrylate	(2)	8.453(0.000)	69	102624	17.003	17.00			1	5
77) 1,4-Dioxane	(1)	8.459(-0.003)	88	42499	441.675	441.67			70	250
78) Dibromomethane	(2)	8.484(0.000)	93	110063	18.329	18.33			1	5
81) Bromodichloromethane	(2)	8.721(0.000)	83	219332	18.132	18.13			1	5
82) 2-Nitropropane	(1)	8.982(-0.003)	41	33252	17.900	17.90			3	10
84) cis-1,3-Dichloropropene	(2)	9.274(0.000)	75	262915	17.999	18.00			1	5
85) 4-Methyl-2-pentanone	(2)	9.445(0.000)	43	657655	81.270	81.27			3	10
87) Toluene	(3)	9.670(-0.000)	92	459682	17.473	17.47			1	5
88) trans-1,3-Dichloropropene	(3)	9.938(0.000)	75	247520	17.251	17.25			1	5
89) Ethyl Methacrylate	(3)	9.998(-0.000)	69	196564	16.675	16.67			1	5
90) 1,1,2-Trichloroethane	(3)	10.150(-0.000)	97	156597	17.853	17.85			1	5
92) Tetrachloroethene	(3)	10.230(-0.000)	166	230159	19.104	19.10			1	5
93) 1,3-Dichloropropane	(3)	10.315(-0.000)	76	252643	16.608	16.61			1	5
95) 2-Hexanone	(3)	10.357(0.000)	43	472110	76.418	76.42			3	10
97) Dibromochloromethane	(3)	10.534(-0.000)	129	179044	17.644	17.64			1	5
98) 1,2-Dibromoethane	(3)	10.649(-0.000)	107	166885	18.247	18.25			1	5
100) Chlorobenzene	(3)	11.106(-0.000)	112	558922	18.047	18.05			1	5
101) 1,1,1,2-Tetrachloroethane	(3)	11.191(-0.000)	131	194229	18.107	18.11			1	5
102) Ethylbenzene	(3)	11.191(0.000)	91	867687	17.516	17.52			1	5
103) m+p-Xylene	(3)	11.306(0.000)	106	714001	35.270	35.27			1	5
104) o-Xylene	(3)	11.641(-0.000)	106	343675	17.488	17.49			1	5
105) Xylene (Total)	(3)		106	1057676	52.758	52.76			1	5
106) Styrene	(3)	11.659(0.000)	104	575743	18.556	18.56			1	5
107) Bromoform	(3)	11.823(-0.000)	173	112377	18.059	18.06			1	5
108) Isopropylbenzene	(3)	11.945(-0.000)	105	886375	17.626	17.63			1	5
111) Cyclohexanone	(1)	12.024(-0.006)	55	132562	363.272	363.27			25	250
113) 1,1,2,2-Tetrachloroethane	(4)	12.194(-0.000)	83	200727M	16.019	16.02			1	5
114) Bromobenzene	(4)	12.207(0.000)	156	263553	18.128	18.13			1	5
115) trans-1,4-Dichloro-2-butene	(4)	12.219(0.000)	53	289045	89.027	89.03			10	50
116) 1,2,3-Trichloropropane	(4)	12.243(-0.000)	110	66854M	17.342	17.34			1	5
117) n-Propylbenzene	(4)	12.274(0.000)	91	1031853	16.720	16.72			1	5
119) 2-Chlorotoluene	(4)	12.353(-0.000)	126	240105	17.346	17.35			1	5
122) 1,3,5-Trimethylbenzene	(4)	12.414(-0.000)	105	772342	16.941	16.94			1	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09685.i/13nov11a.b/an11l02.d Injection date and time: **11-NOV-2013 12:29**
Data file Sample Info. Line: LCDA26;LCDA26;2;3;LCSD;;;;an11b02; Instrument ID: **HP09685.i** Batch: **A133151AA**
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Blank Data file reference: **/chem2/HP09685.i/13nov11a.b/an11b02.d**

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: **8260S-2C**
Calibration date and time (Last Method Edit): 11-NOV-2013 11:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09685.i/13nov11a.b/an11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
123) 4-Chlorotoluene	(4)	12.444(-0.000)	126	248251	17.332	17.33			1	5
126) tert-Butylbenzene	(4)	12.657(0.000)	134	176070M	16.913	16.91			1	5
127) Pentachloroethane	(4)	12.687(0.000)	167	154923	17.459	17.46			1	5
128) 1,2,4-Trimethylbenzene	(4)	12.700(0.000)	105	799503	17.037	17.04			1	5
129) sec-Butylbenzene	(4)	12.821(-0.000)	105	970521	16.840	16.84			1	5
131) 1,3-Dichlorobenzene	(4)	12.918(0.000)	146	485614	17.974	17.97			1	5
132) p-Isopropyltoluene	(4)	12.931(0.000)	119	881994M	17.104	17.10			1	5
134) 1,4-Dichlorobenzene	(4)	12.998(-0.000)	146	501519	18.066	18.07			1	5
135) 1,2,3-Trimethylbenzene	(4)	13.004(-0.000)	105	836778	17.052	17.05			1	5
136) Benzyl Chloride	(4)	13.071(-0.000)	126	90626M	17.164	17.16			1	4
137) 1,3-Diethylbenzene	(4)	13.131(-0.000)	119	533233	16.975	16.98			1	5
138) 1,4-Diethylbenzene	(4)	13.204(-0.000)	119	563465	17.978	17.98			1	5
139) n-Butylbenzene	(4)	13.223(-0.000)	92	415700M	16.629	16.63			1	5
140) 1,2-Dichlorobenzene	(4)	13.253(-0.000)	146	476358	18.268	18.27			1	5
141) 1,2-Diethylbenzene	(4)	13.271(-0.000)	119	461588M	17.430	17.43			1	5
144) 1,2-Dibromo-3-chloropropane	(4)	13.801(-0.000)	75	35169	15.684	15.68			2	5
145) 1,3,5-Trichlorobenzene	(4)	13.922(-0.000)	180	391089	18.490	18.49			1	5
146) 1,2,4-Trichlorobenzene	(4)	14.348(-0.000)	180	334856	18.472	18.47			1	5
147) Hexachlorobutadiene	(4)	14.427(-0.000)	225	175398	17.089	17.09			2	5
148) Naphthalene	(4)	14.531(-0.000)	128	721861	17.478	17.48			1	5
149) 1,2,3-Trichlorobenzene	(4)	14.671(-0.000)	180	319244	18.747	18.75			1	5
150) 2-Methylnaphthalene	(4)	15.291(-0.000)	142	338958	16.568	16.57			2	5

M = Compound was manually integrated.

Total number of targets = 105

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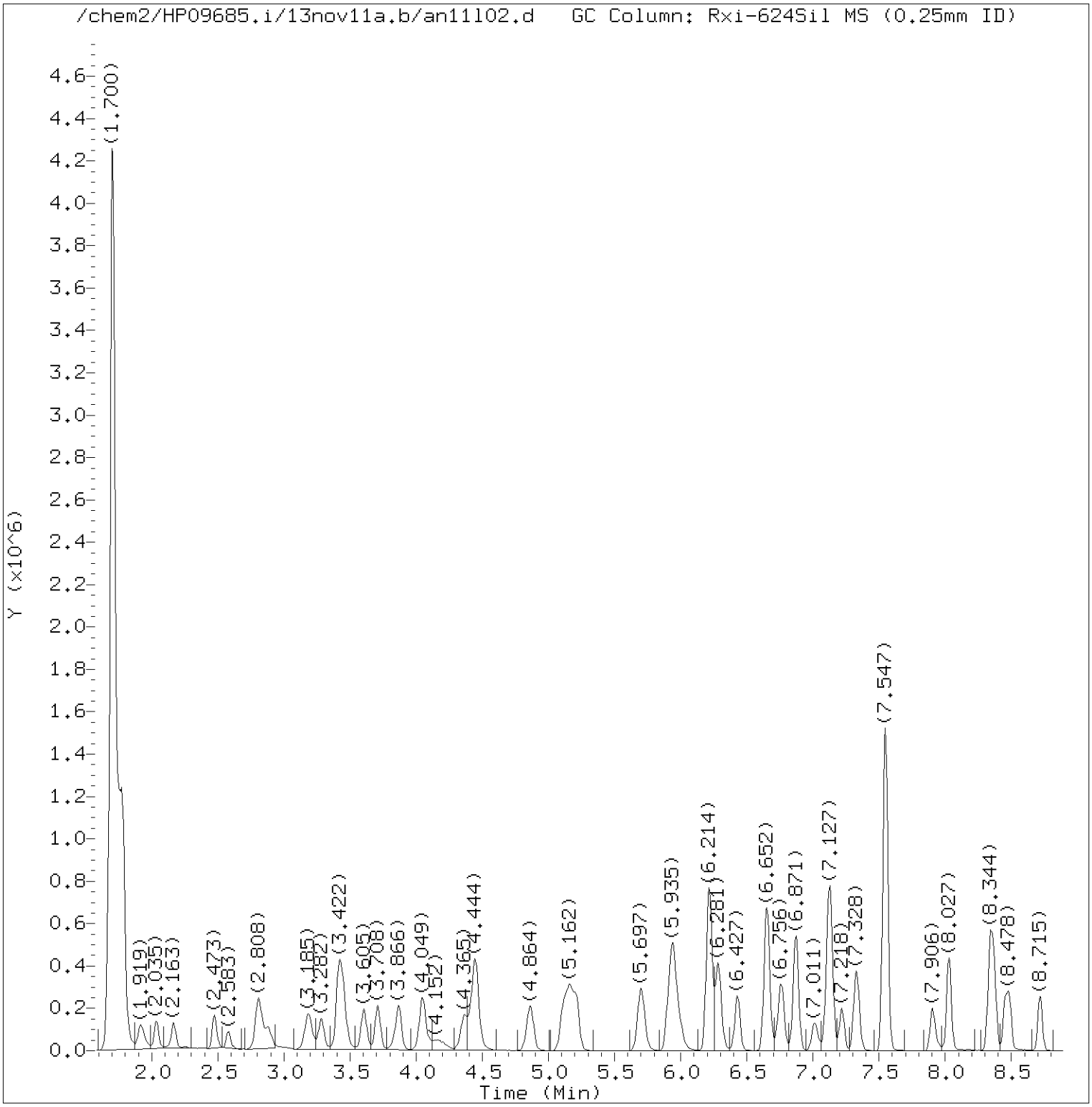
Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49. Parallax ID: ads01731



Total Ion Chromatogram (TIC)

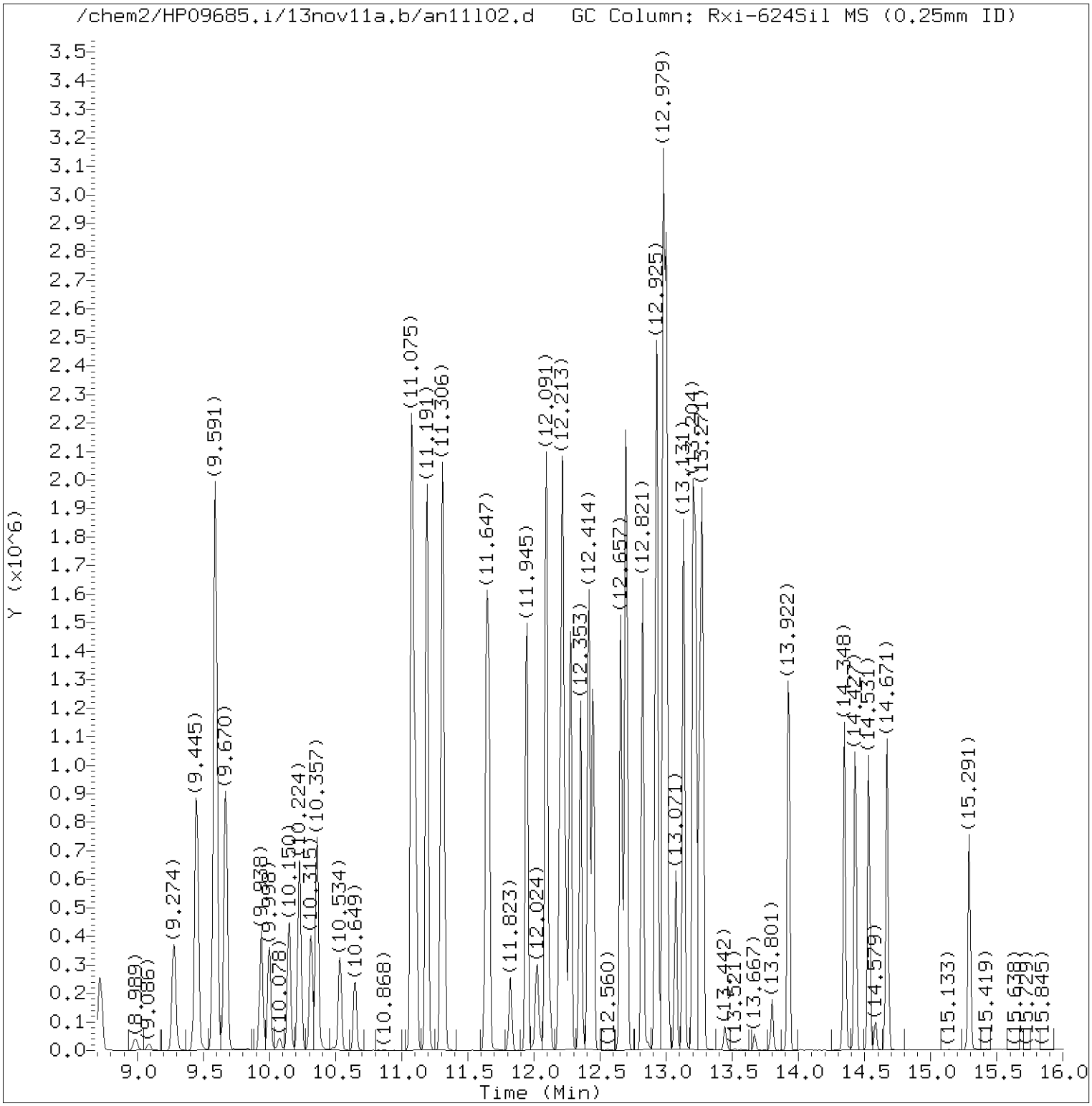
Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.919	85	238823	17.238
4) Chloromethane	(2)	2.035	50	190627	17.199
5) Vinyl Chloride	(2)	2.169	62	189406	17.838
9) Bromomethane	(2)	2.473	94	153024	19.719
10) Chloroethane	(2)	2.576	64	108773	17.637
11) Dichlorofluoromethane	(2)	2.802	67	314387	19.897
13) Trichlorofluoromethane	(2)	2.832	101	298905	18.703
15) Ethanol	(1)	2.978	45	59007	688.859
17) Freon 123a	(2)	3.185	67	178398	16.068
18) Acrolein	(1)	3.282	56	227363	120.580
19) 1,1-Dichloroethene	(2)	3.410	96	152245	18.580
20) Acetone	(2)	3.434	58	105203	113.783
22) Freon 113	(2)	3.440	101	161465	18.051
23) 2-Propanol	(1)	3.586	45	59390M	106.741
24) Methyl Iodide	(2)	3.605	142	342100	21.239
25) Carbon Disulfide	(2)	3.708	76	487649	16.950
27) Methyl Acetate	(2)	3.836	43	100126	17.367
29) Allyl Chloride	(2)	3.872	41	196482	15.517
30)*t-Butyl alcohol-d10	(1)	4.043	65	162463	250.000
31) Methylene Chloride	(2)	4.049	84	183080	19.149
32) t-Butyl alcohol	(1)	4.170	59	161875	181.398
33) Acrylonitrile	(2)	4.365	53	257785	78.247
34) Methyl Tertiary Butyl Ether	(2)	4.438	73	480117	18.827
35) trans-1,2-Dichloroethene	(2)	4.450	96	182379	19.185
38) n-Hexane	(2)	4.864	57	199613	15.767
40) 1,1-Dichloroethane	(2)	5.113	63	290260	17.551
41) di-Isopropyl ether	(2)	5.162	45	459914	17.189
42) 2-Chloro-1,3-butadiene	(2)	5.217	53	222073	18.064
44) Ethyl t-butyl ether	(2)	5.703	59	464012	17.930
45) 2-Butanone	(2)	5.910	43	460952	121.045
46) cis-1,2-Dichloroethene	(2)	5.941	96	197409	18.801
48) 2,2-Dichloropropane	(2)	5.965	77	252432	18.772
50) Propionitrile	(1)	5.995	54	150698	130.623
47) 1,2-Dichloroethene (Total)	(2)		96	379788	37.985
51) Methacrylonitrile	(2)	6.214	67	478710	134.172
52) Bromochloromethane	(2)	6.281	128	108325	20.255
53) Tetrahydrofuran	(1)	6.294	71	95195	87.157
54) Chloroform	(2)	6.427	83	311858	19.213

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
55)$Dibromofluoromethane	(2)	6.646	113	409967	51.818
56) 1,1,1-Trichloroethane	(2)	6.665	97	269619	17.155
57) Cyclohexane	(2)	6.762	56	238169	15.273
59) Carbon Tetrachloride	(2)	6.871	117	239655	18.644
58) 1,1-Dichloropropene	(2)	6.871	75	230571	18.099
60) Isobutyl Alcohol	(1)	7.011	41	122699	413.073
61)$1,2-Dichloroethane-d4	(2)	7.109	102	90407	50.388
62) Benzene	(2)	7.133	78	687791	17.763
64) 1,2-Dichloroethane	(2)	7.218	62	234853	20.183
65) t-Amyl methyl ether	(2)	7.328	73	447998	18.009
67)*Fluorobenzene	(2)	7.547	96	1618341	50.000
69) n-Heptane	(2)	7.553	43	198279	15.141
70) n-Butanol	(1)	7.900	56	203926	783.080
72) Trichloroethene	(2)	8.027	95	190630	18.979
73) Methylcyclohexane	(2)	8.344	83	289989	17.249
74) 1,2-Dichloropropane	(2)	8.374	63	167634	17.279
76) Methyl Methacrylate	(2)	8.453	69	102624	17.003
77) 1,4-Dioxane	(1)	8.459	88	42499	441.675
78) Dibromomethane	(2)	8.484	93	110063	18.329
81) Bromodichloromethane	(2)	8.721	83	219332	18.132
82) 2-Nitropropane	(1)	8.982	41	33252	17.900
84) cis-1,3-Dichloropropene	(2)	9.274	75	262915	17.999
85) 4-Methyl-2-pentanone	(2)	9.445	43	657655	81.270
86)$Toluene-d8	(3)	9.591	98	1638882	48.371
87) Toluene	(3)	9.670	92	459682	17.473
88) trans-1,3-Dichloropropene	(3)	9.938	75	247520	17.251
89) Ethyl Methacrylate	(3)	9.998	69	196564	16.675
90) 1,1,2-Trichloroethane	(3)	10.150	97	156597	17.853
92) Tetrachloroethene	(3)	10.230	166	230159	19.104
93) 1,3-Dichloropropane	(3)	10.315	76	252643	16.608
95) 2-Hexanone	(3)	10.357	43	472110	76.418
97) Dibromochloromethane	(3)	10.534	129	179044	17.644
98) 1,2-Dibromoethane	(3)	10.649	107	166885	18.247
99)*Chlorobenzene-d5	(3)	11.075	117	1305455	50.000
100) Chlorobenzene	(3)	11.106	112	558922	18.047
101) 1,1,1,2-Tetrachloroethane	(3)	11.191	131	194229	18.107
102) Ethylbenzene	(3)	11.191	91	867687	17.516
103) m+p-Xylene	(3)	11.306	106	714001	35.270

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Quant Report

Target Revision 3.5

Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) o-Xylene	(3)	11.641	106	343675	17.488
106) Styrene	(3)	11.659	104	575743	18.556
105) Xylene (Total)	(3)		106	1057676	52.758
107) Bromoform	(3)	11.823	173	112377	18.059
108) Isopropylbenzene	(3)	11.945	105	886375	17.626
111) Cyclohexanone	(1)	12.024	55	132562	363.272
112)$4-Bromofluorobenzene	(3)	12.091	95	609008	48.345
113) 1,1,2,2-Tetrachloroethane	(4)	12.195	83	200727M	16.019
114) Bromobenzene	(4)	12.207	156	263553	18.128
115) trans-1,4-Dichloro-2-butene	(4)	12.219	53	289045	89.027
116) 1,2,3-Trichloropropane	(4)	12.243	110	66854M	17.342
117) n-Propylbenzene	(4)	12.274	91	1031853	16.720
119) 2-Chlorotoluene	(4)	12.353	126	240105	17.346
122) 1,3,5-Trimethylbenzene	(4)	12.414	105	772342	16.941
123) 4-Chlorotoluene	(4)	12.444	126	248251	17.332
126) tert-Butylbenzene	(4)	12.657	134	176070M	16.913
127) Pentachloroethane	(4)	12.687	167	154923	17.459
128) 1,2,4-Trimethylbenzene	(4)	12.700	105	799503	17.037
129) sec-Butylbenzene	(4)	12.821	105	970521	16.840
131) 1,3-Dichlorobenzene	(4)	12.919	146	485614	17.974
132) p-Isopropyltoluene	(4)	12.931	119	881994M	17.104
133)*1,4-Dichlorobenzene-d4	(4)	12.979	152	743157	50.000
134) 1,4-Dichlorobenzene	(4)	12.998	146	501519	18.066
135) 1,2,3-Trimethylbenzene	(4)	13.004	105	836778	17.052
136) Benzyl Chloride	(4)	13.071	126	90626M	17.164
137) 1,3-Diethylbenzene	(4)	13.131	119	533233	16.975
138) 1,4-Diethylbenzene	(4)	13.204	119	563465	17.978
139) n-Butylbenzene	(4)	13.223	92	415700M	16.629
140) 1,2-Dichlorobenzene	(4)	13.253	146	476358	18.268
141) 1,2-Diethylbenzene	(4)	13.271	119	461588M	17.430
144) 1,2-Dibromo-3-chloropropane	(4)	13.801	75	35169	15.684
145) 1,3,5-Trichlorobenzene	(4)	13.922	180	391089	18.490
146) 1,2,4-Trichlorobenzene	(4)	14.348	180	334856	18.472
147) Hexachlorobutadiene	(4)	14.427	225	175398	17.089
148) Naphthalene	(4)	14.531	128	721861	17.478
149) 1,2,3-Trichlorobenzene	(4)	14.671	180	319244	18.747
150) 2-Methylnaphthalene	(4)	15.291	142	338958	16.568

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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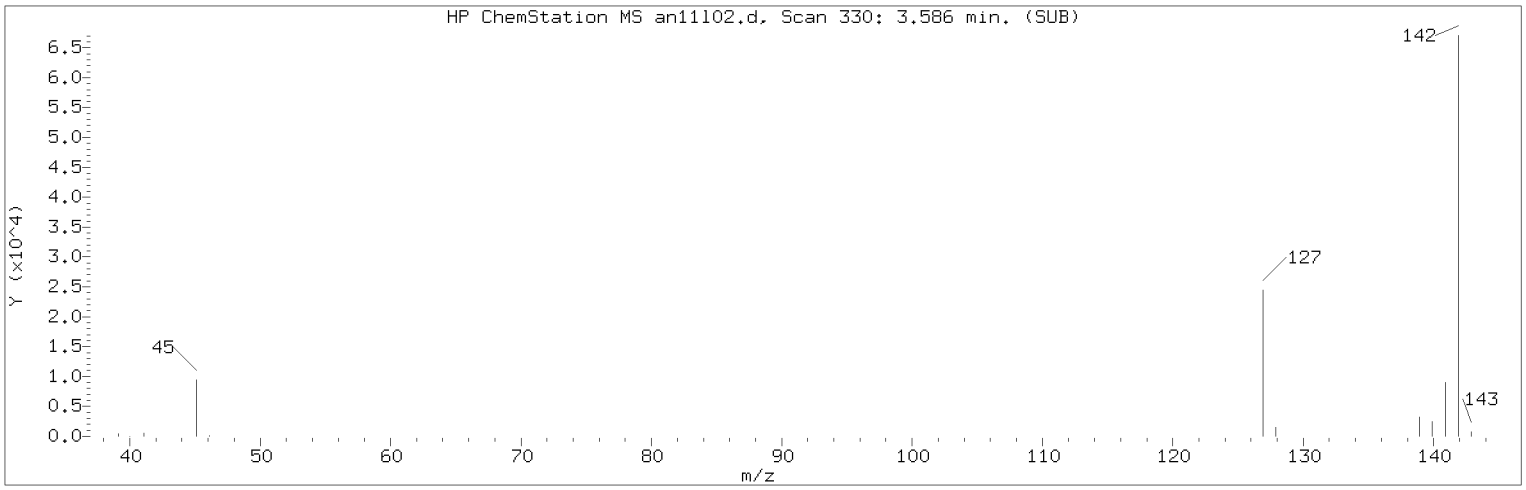
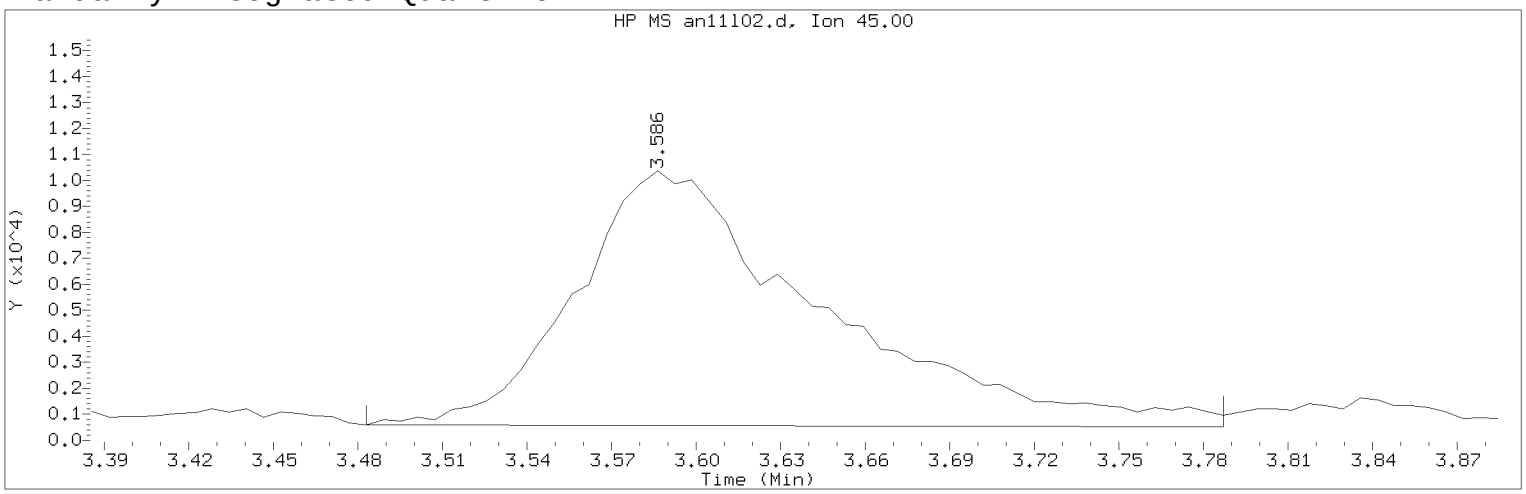
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

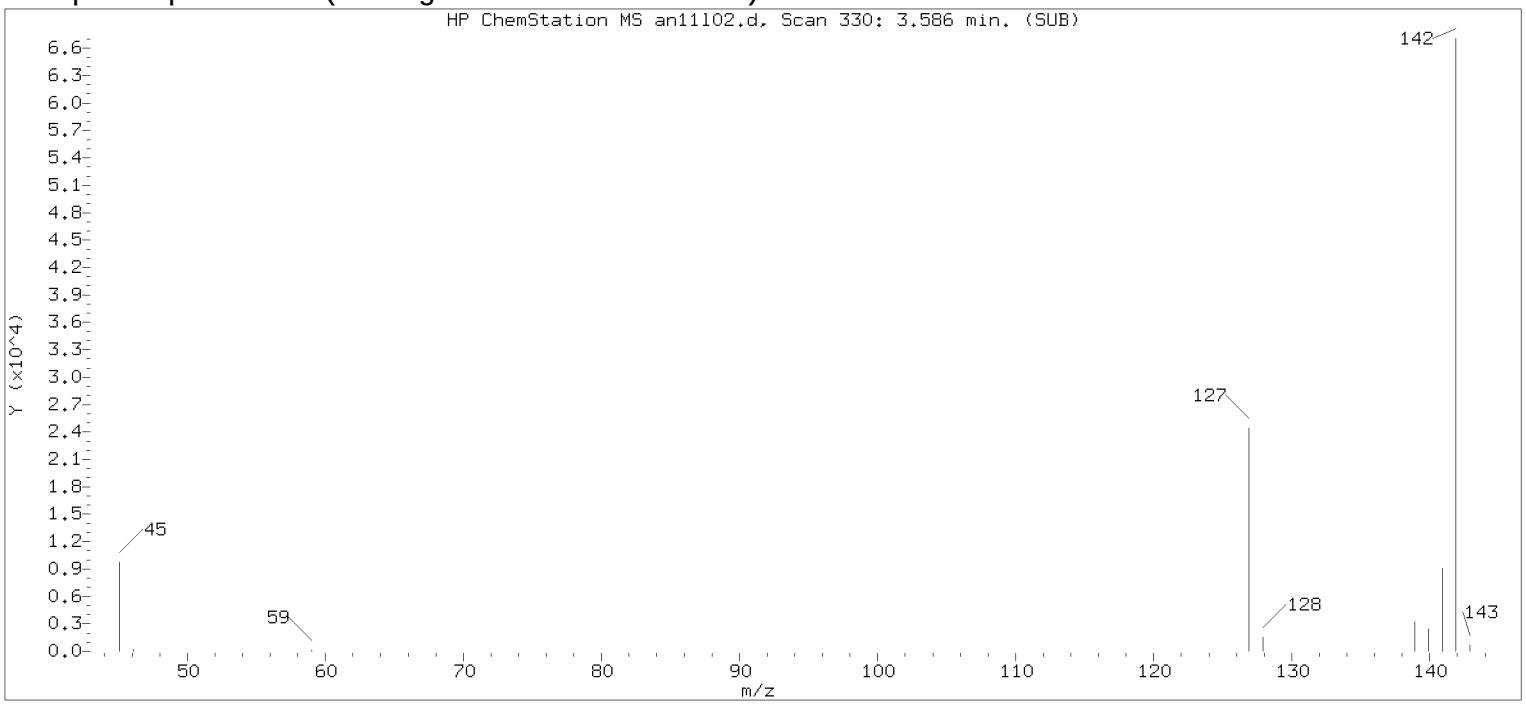
Compound Number : 23
Compound Name : 2-Propanol
Scan Number : 330
Retention Time (minutes): 3.586
Quant Ion : 45.00
Area (flag) : 59390M
On-Column Amount (ng) : 106.7414
Integration start scan : 312 Integration stop scan: 362
Y at integration start : 584 Y at integration end: 526

Reason for manual integration: improper integration

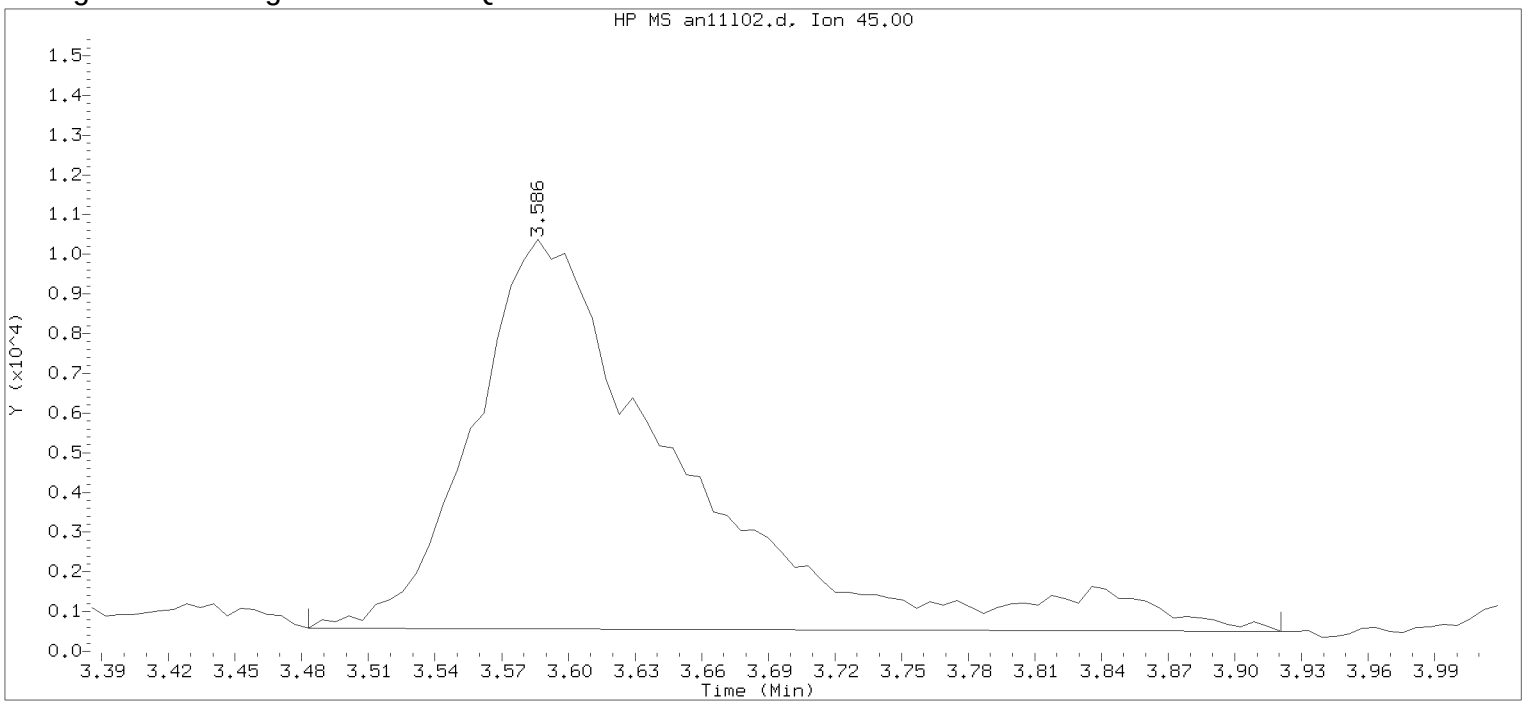
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

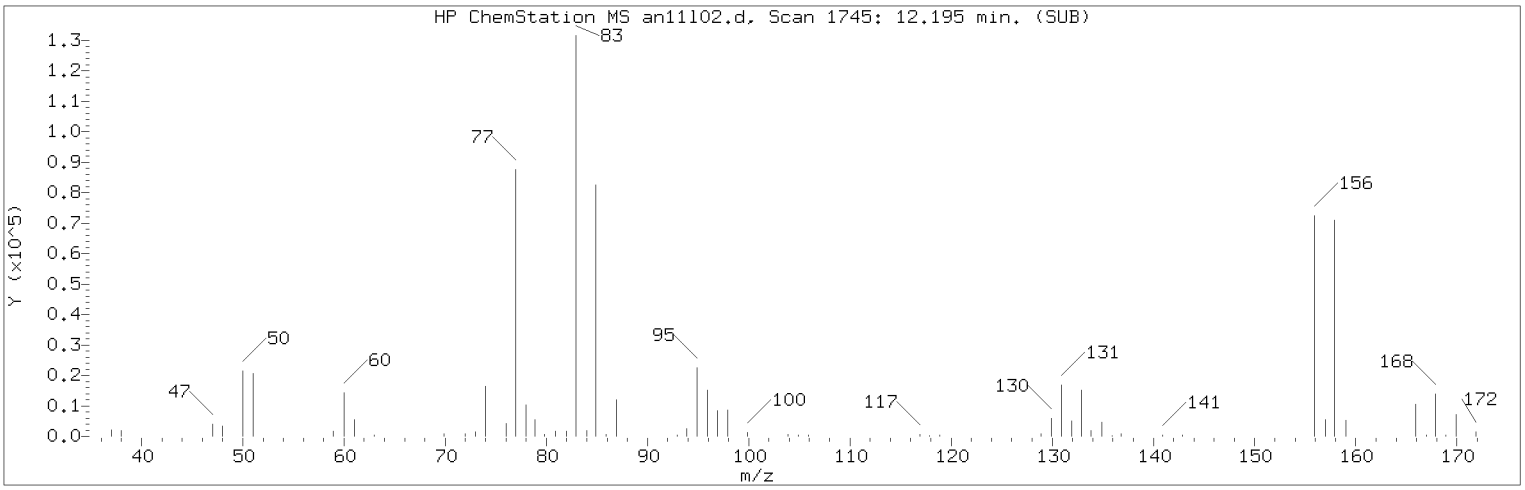
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

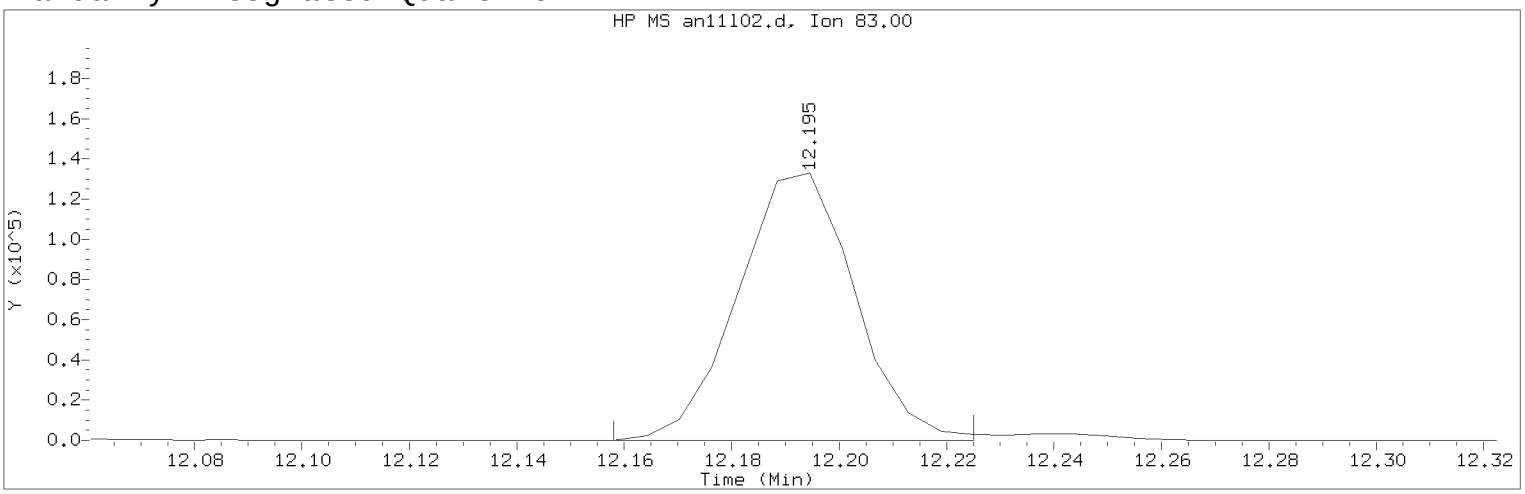
Compound Number : 23
Compound Name : 2-Propanol
Scan Number : 330
Retention Time (minutes): 3.586
Quant Ion : 45.00
Area : 63795
On-column Amount (ng) : 114.6593
Integration start scan : 312 Integration stop scan: 384
Y at integration start : 584 Y at integration end: 500

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

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Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

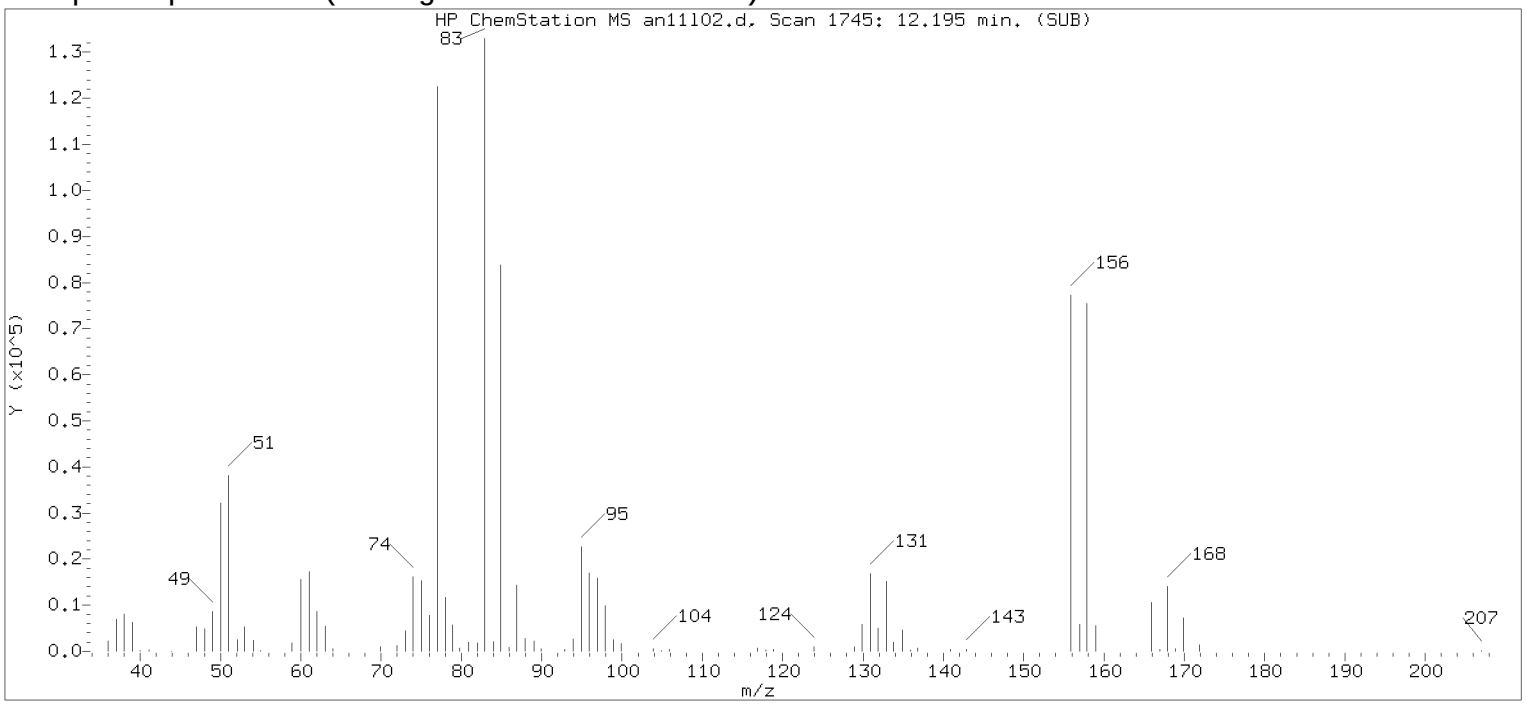
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1745
Retention Time (minutes): 12.195
Quant Ion : 83.00
Area (flag) : 200727M
On-Column Amount (ng) : 16.0188
Integration start scan : 1738 Integration stop scan: 1749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

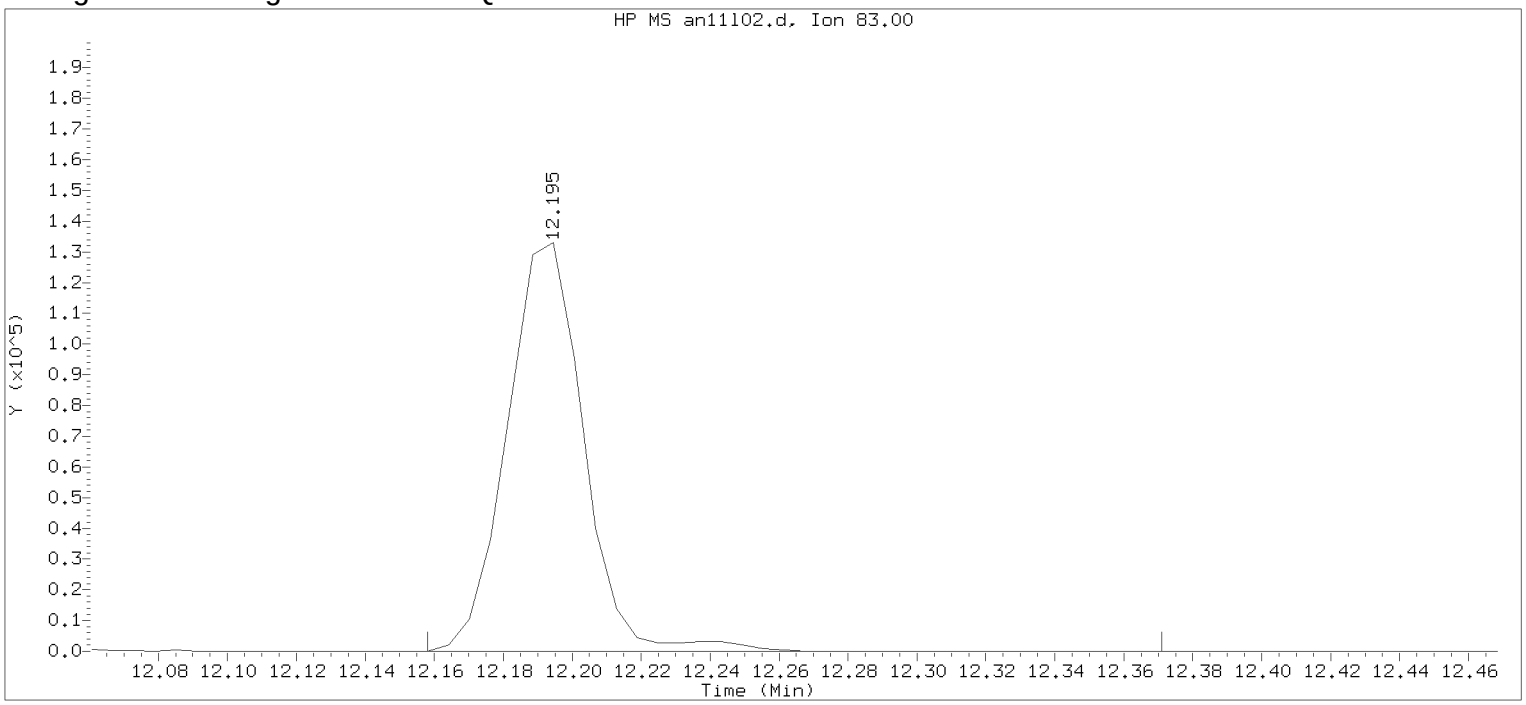
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

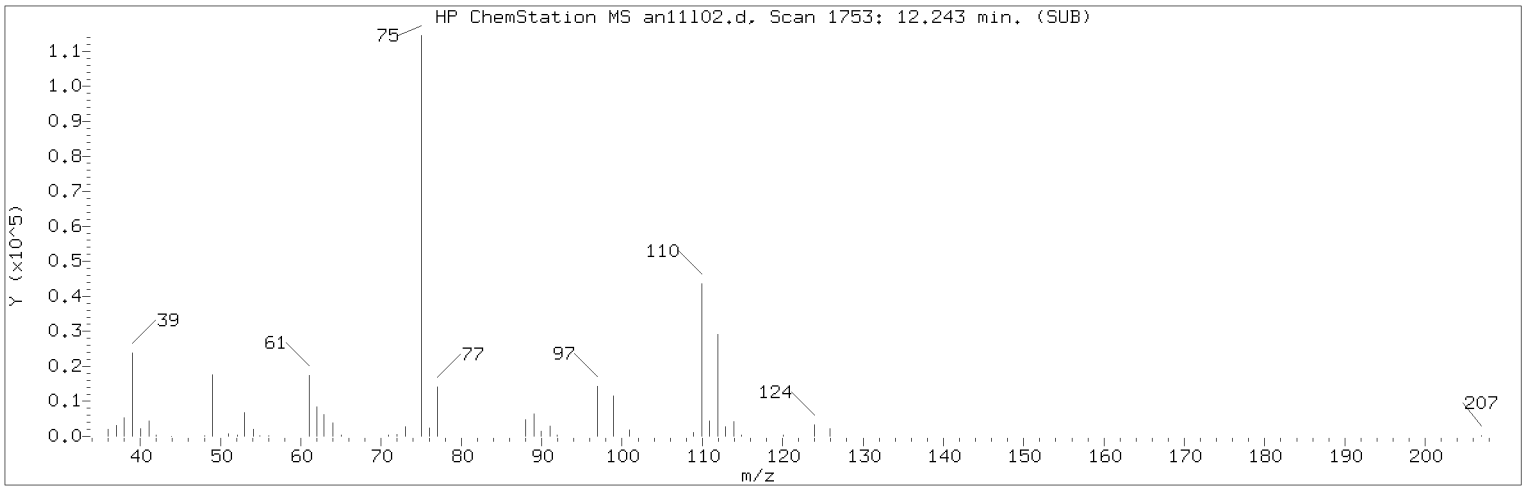
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

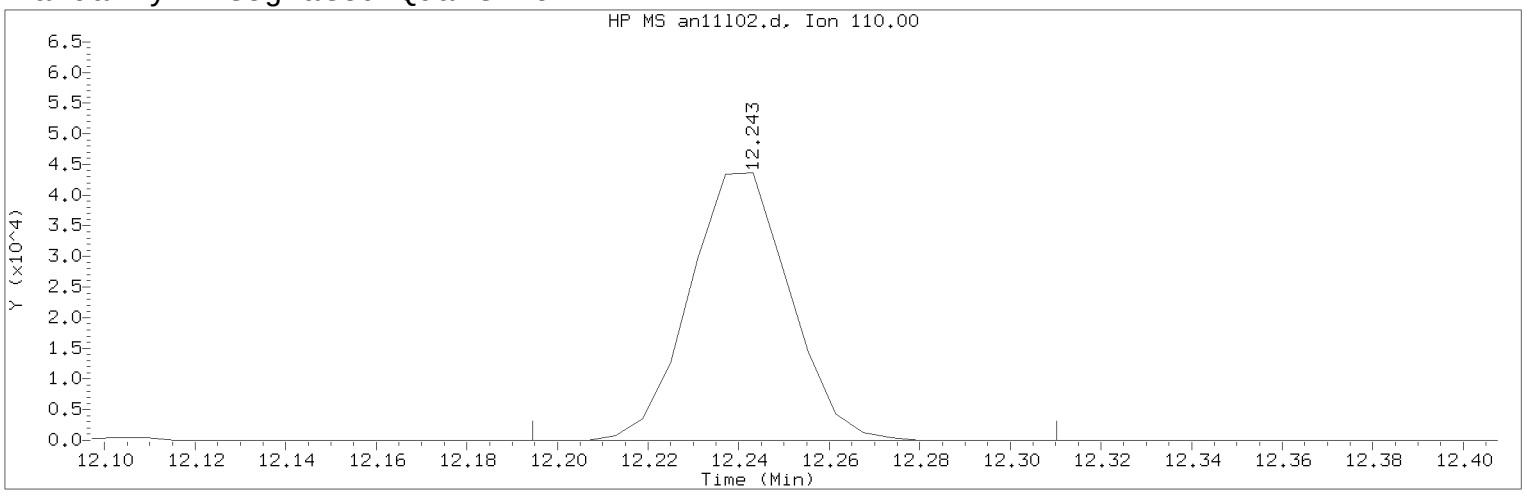
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1745
Retention Time (minutes): 12.195
Quant Ion : 83.00
Area : 205198
On-column Amount (ng) : 16.3756
Integration start scan : 1738 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

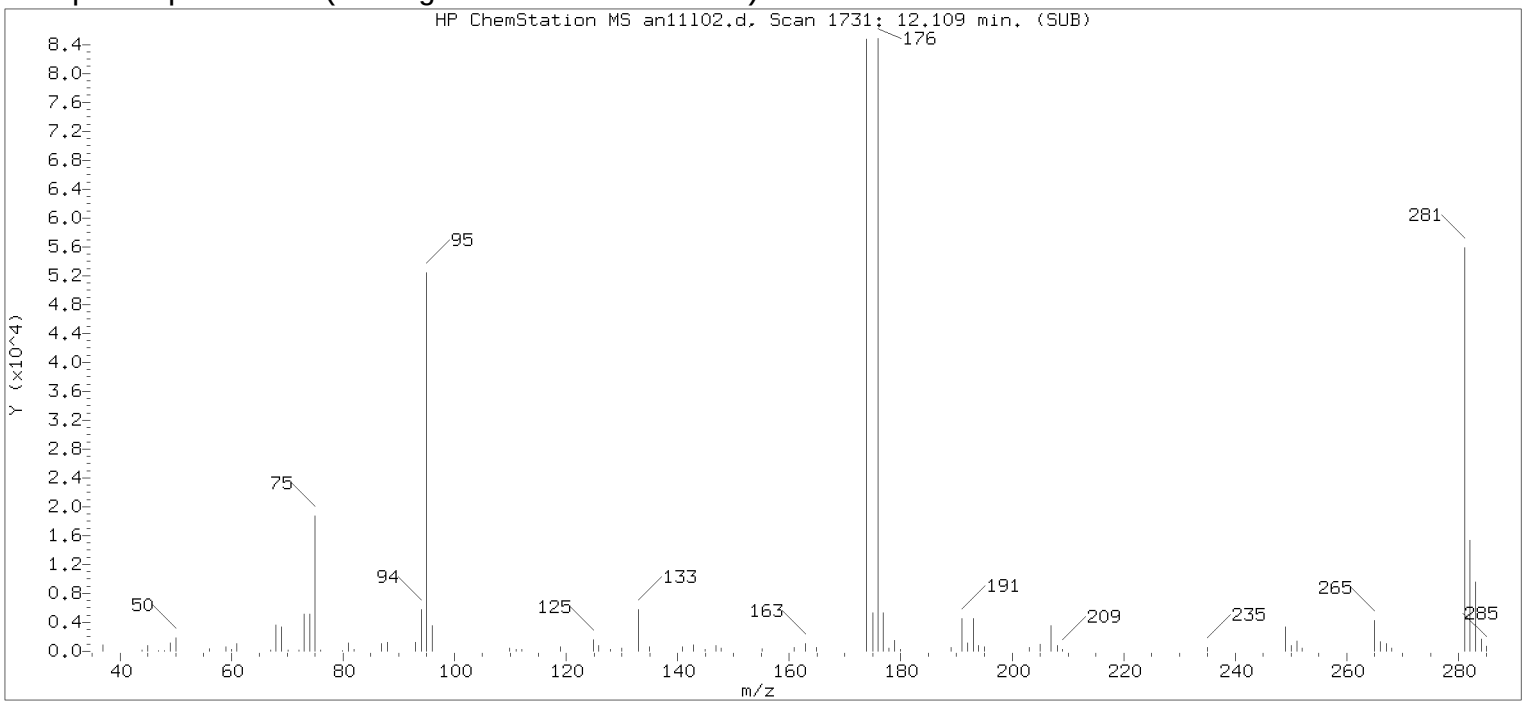
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1753
Retention Time (minutes): 12.243
Quant Ion : 110.00
Area (flag) : 66854M
On-Column Amount (ng) : 17.3418
Integration start scan : 1744 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

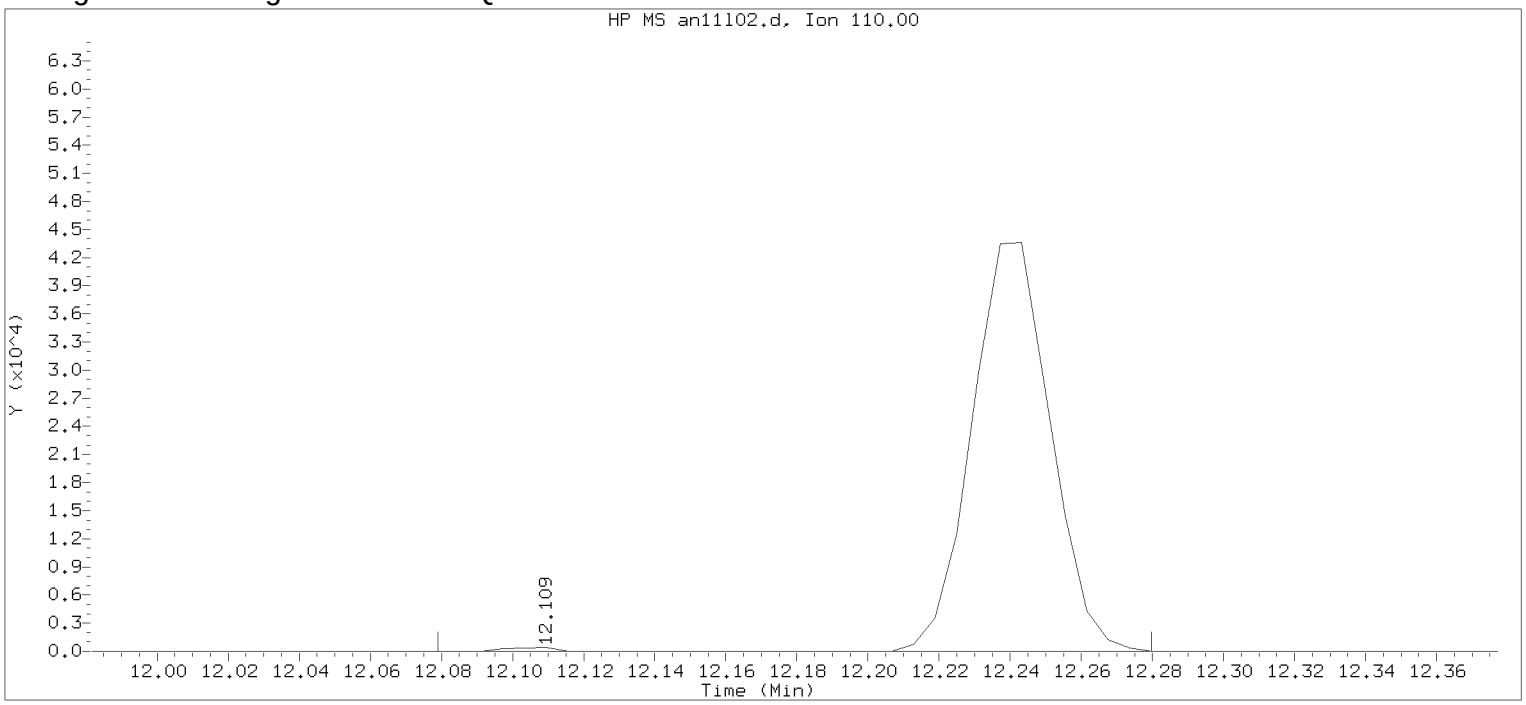
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

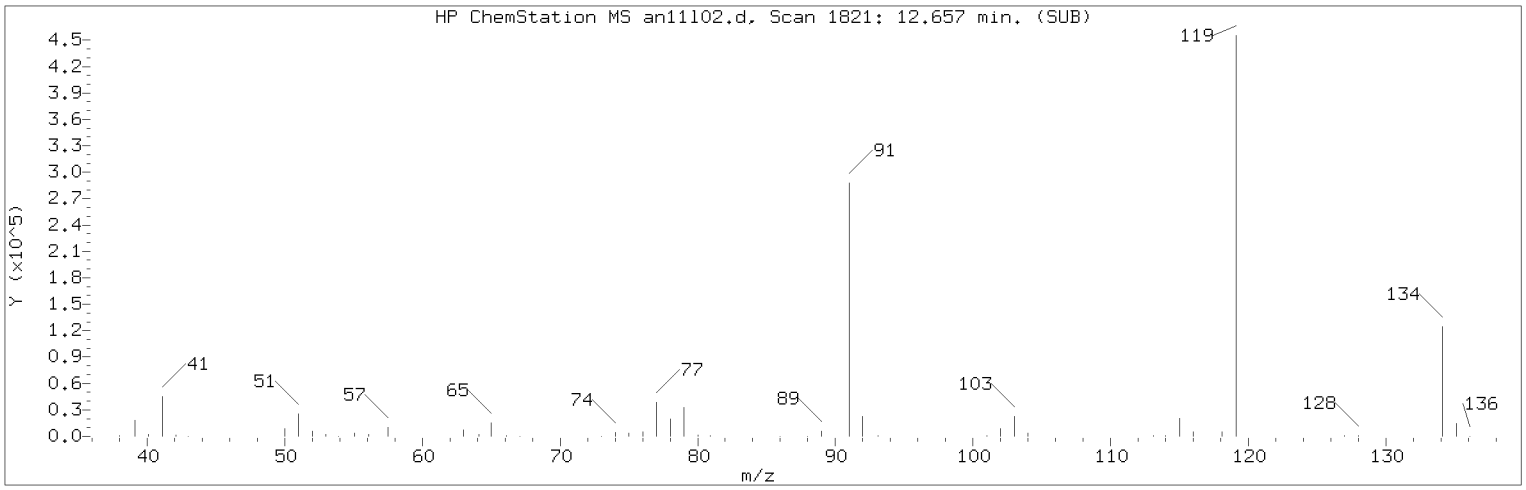
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

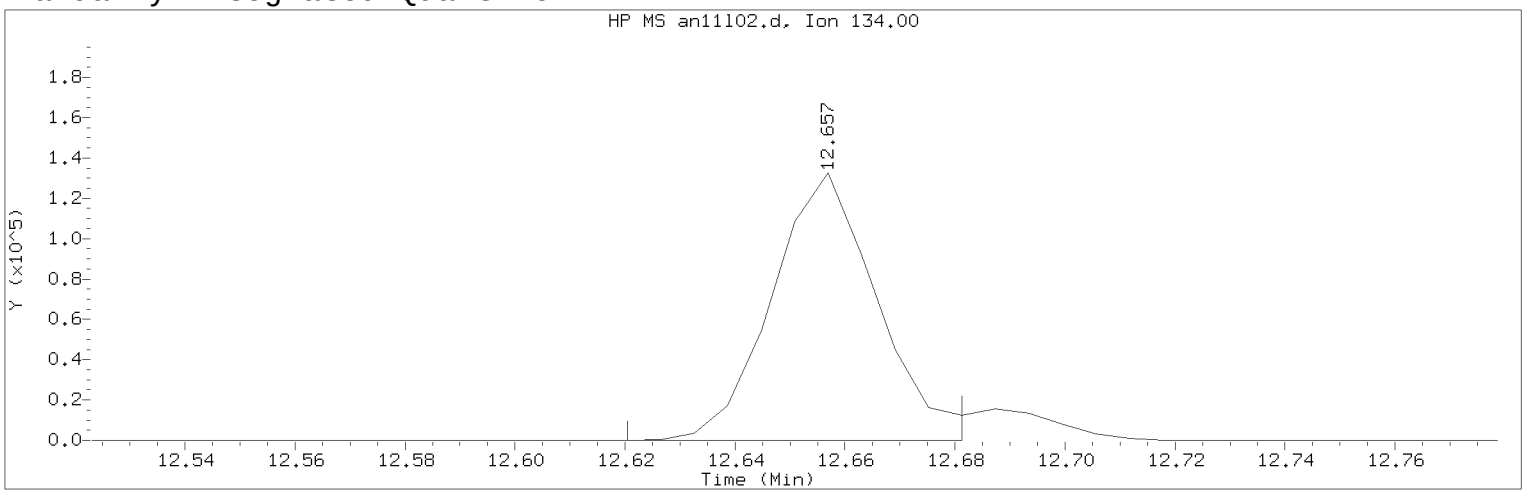
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1731
Retention Time (minutes): 12.109
Quant Ion : 110.00
Area : 67245
On-column Amount (ng) : 17.4431
Integration start scan : 1725 Integration stop scan: 1758
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

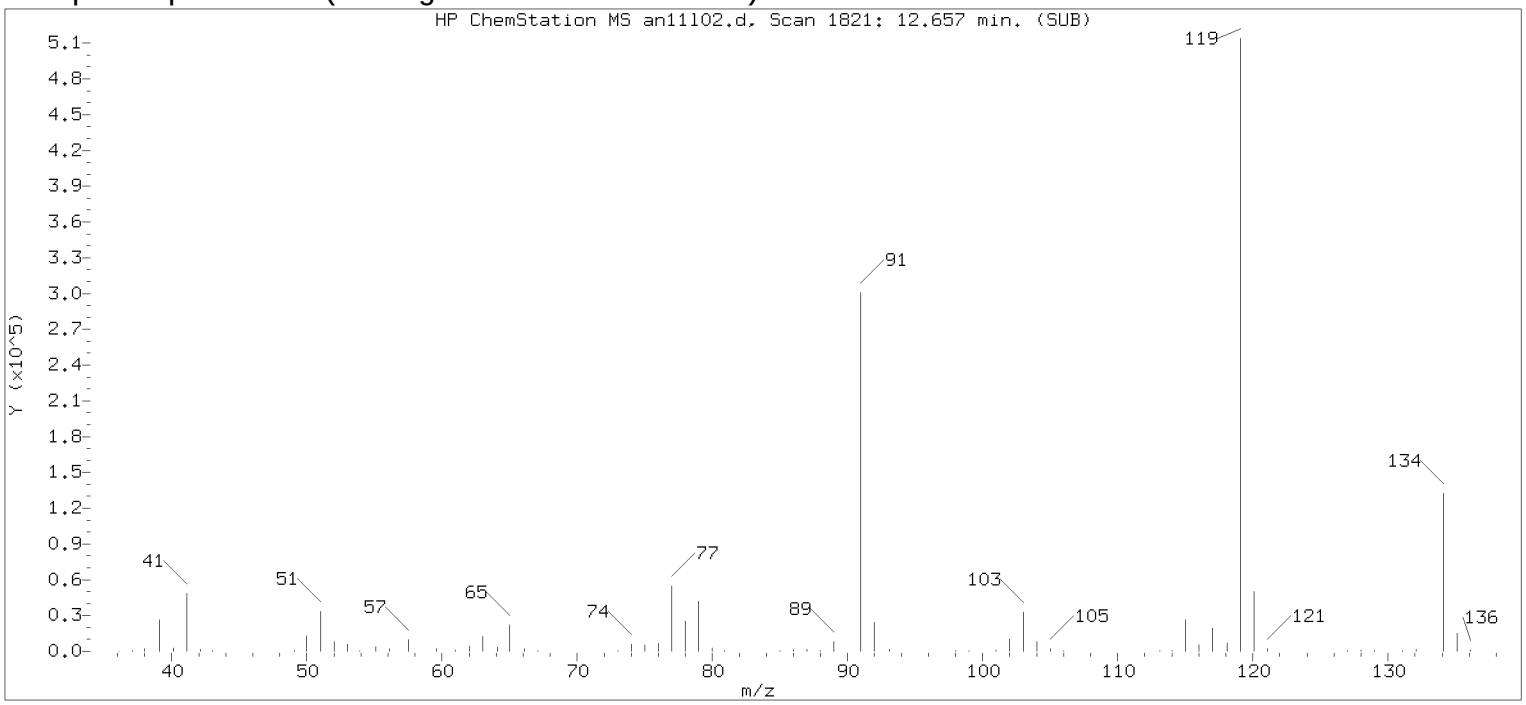
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area (flag) : 176070M
On-Column Amount (ng) : 16.9126
Integration start scan : 1814 Integration stop scan: 1824
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

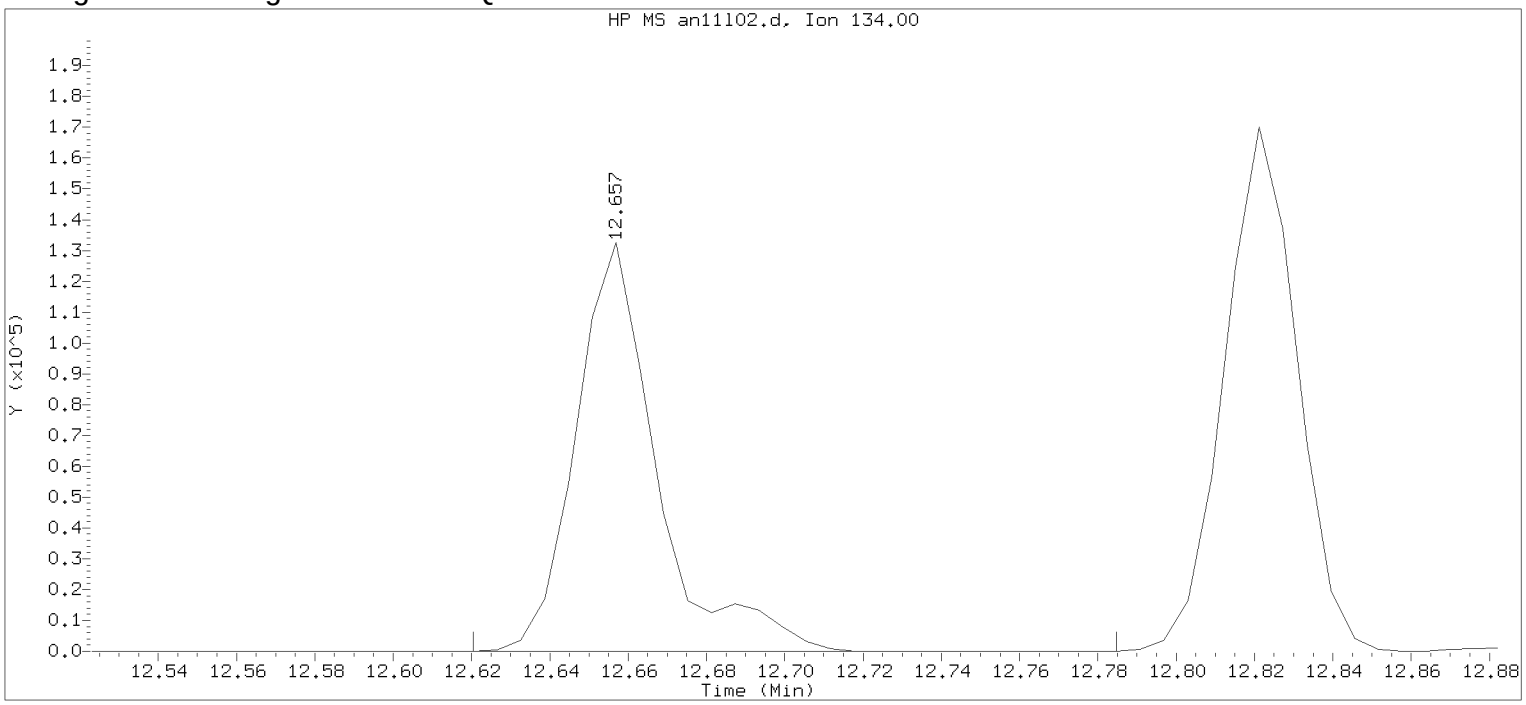
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

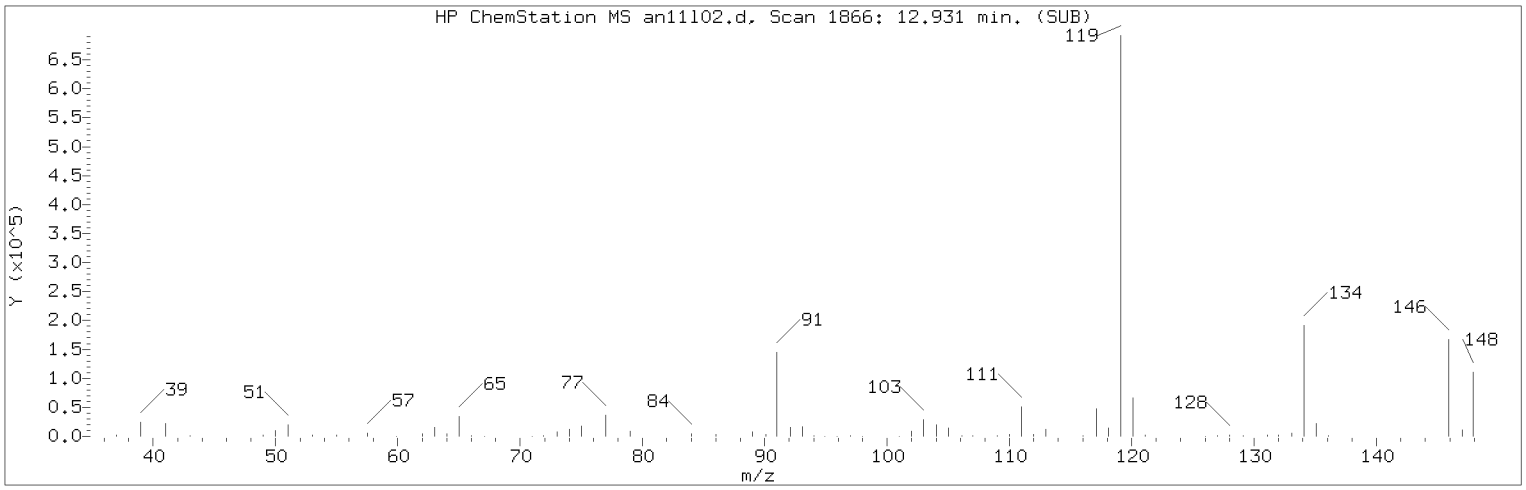
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

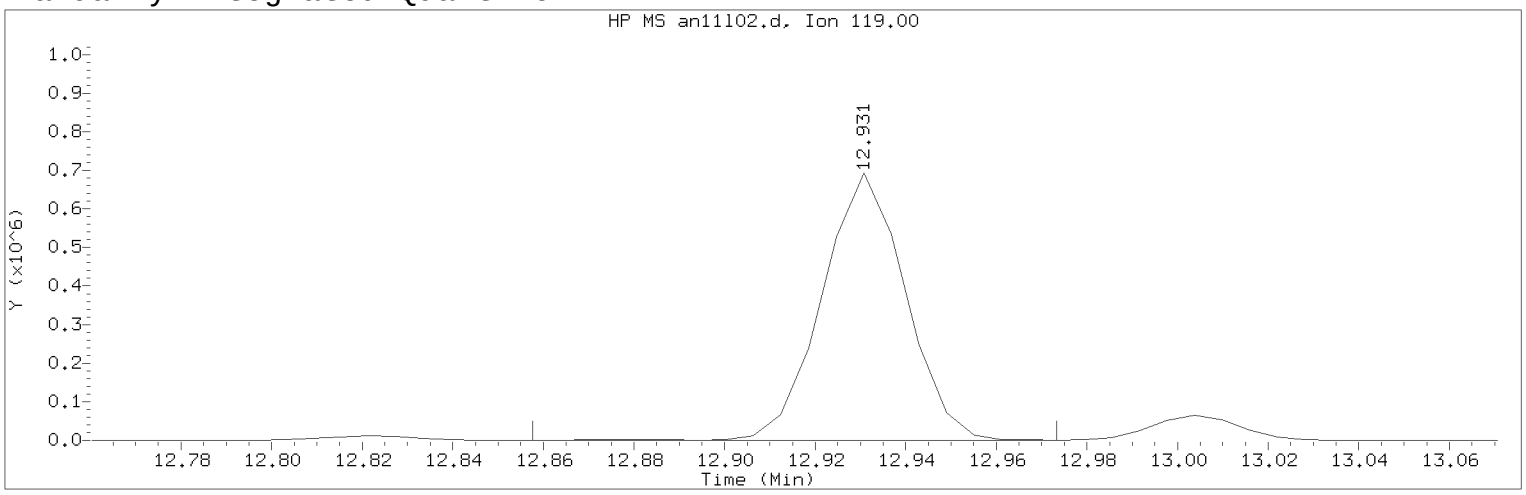
Compound Number : 126
Compound Name : tert-Butylbenzene
Scan Number : 1821
Retention Time (minutes): 12.657
Quant Ion : 134.00
Area : 190989
On-column Amount (ng) : 18.3456
Integration start scan : 1814 Integration stop scan: 1841
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
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Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

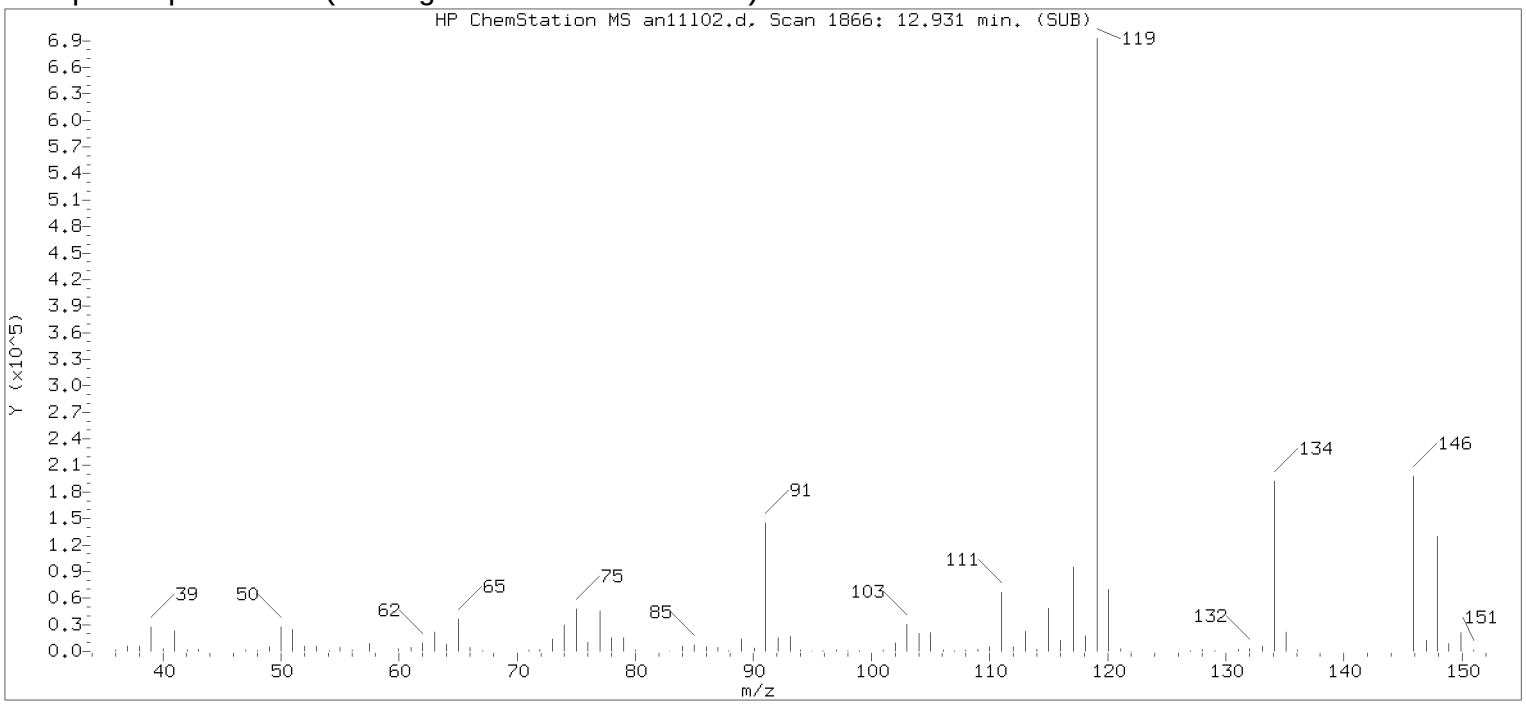
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area (flag) : 881994M
On-Column Amount (ng) : 17.1043
Integration start scan : 1853 Integration stop scan: 1872
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

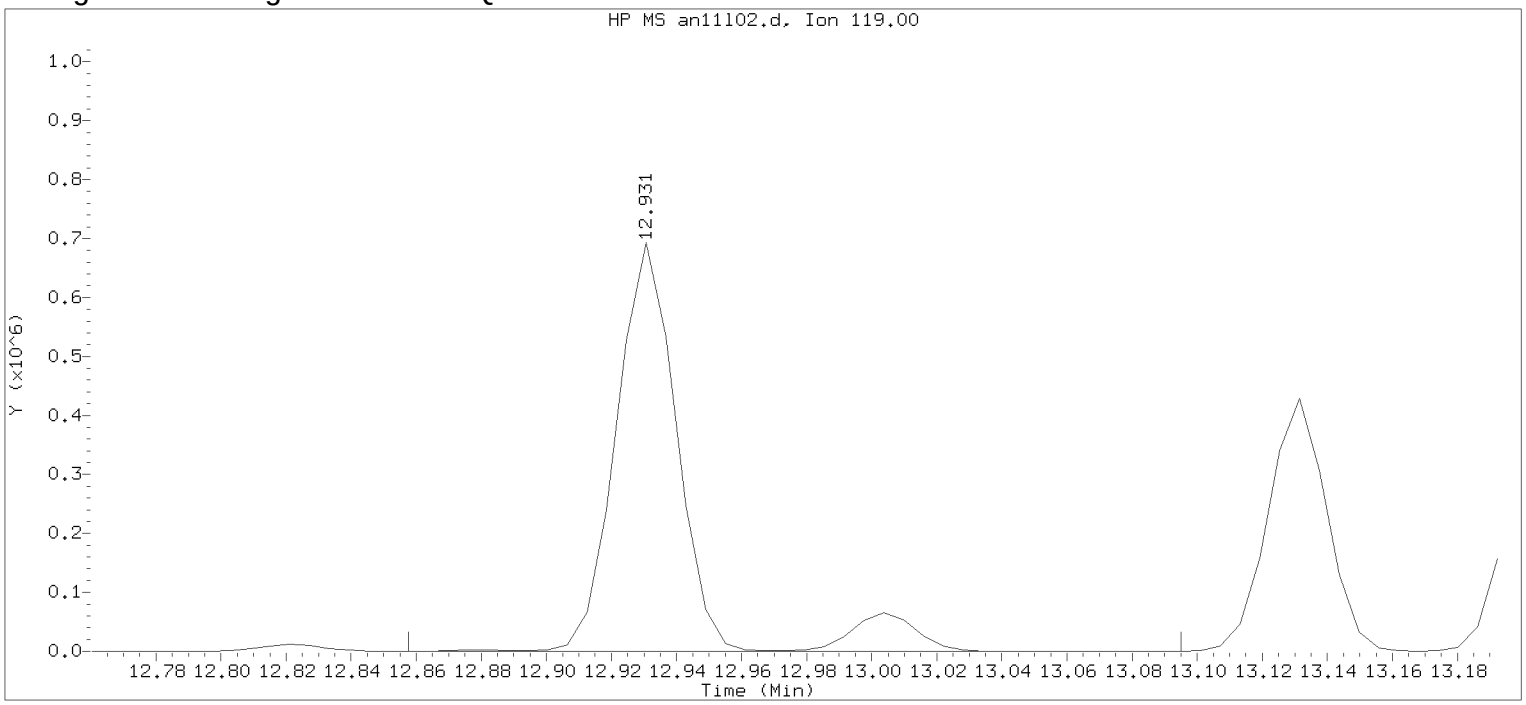
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

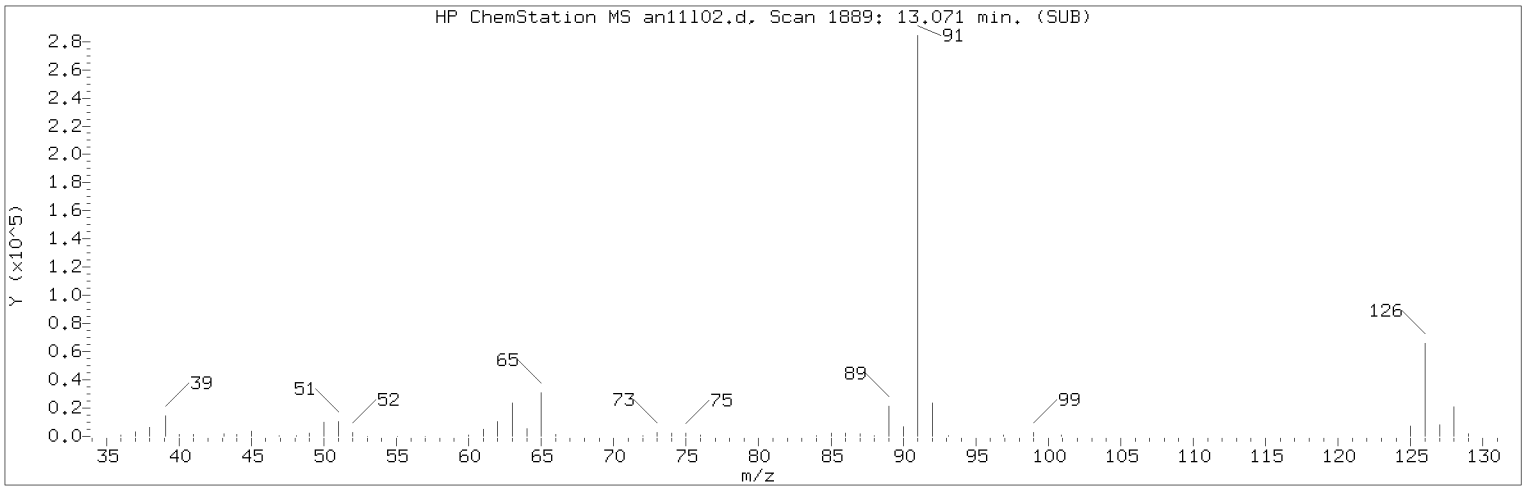
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

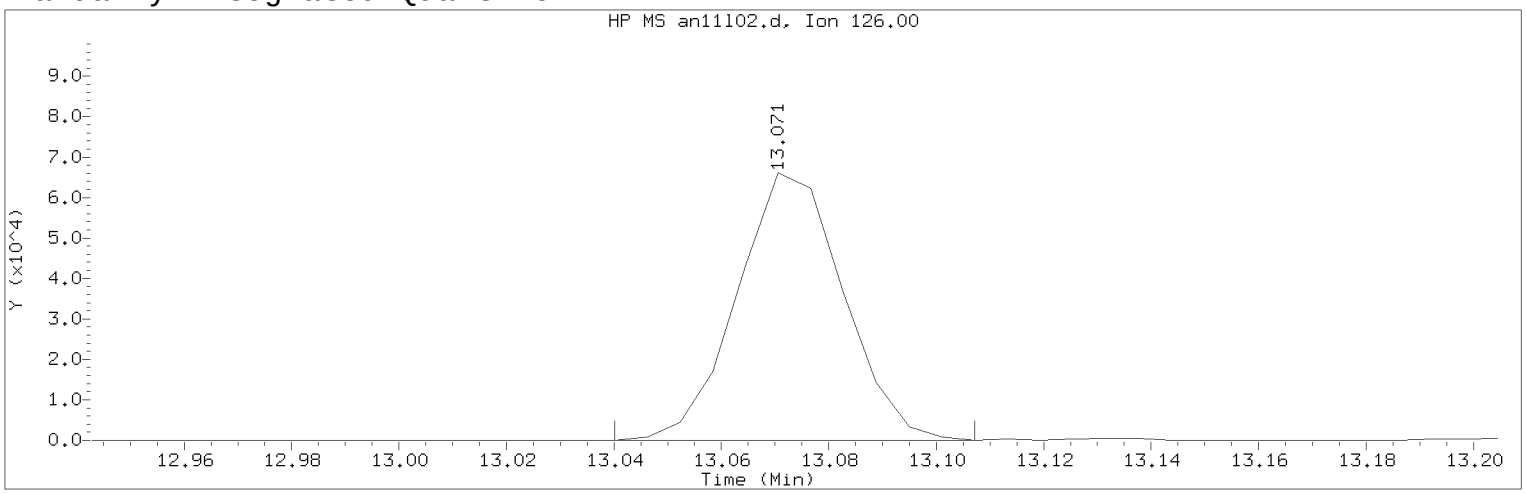
Compound Number : 132
Compound Name : p-Isopropyltoluene
Scan Number : 1866
Retention Time (minutes): 12.931
Quant Ion : 119.00
Area : 970618
On-column Amount (ng) : 18.8229
Integration start scan : 1853 Integration stop scan: 1892
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

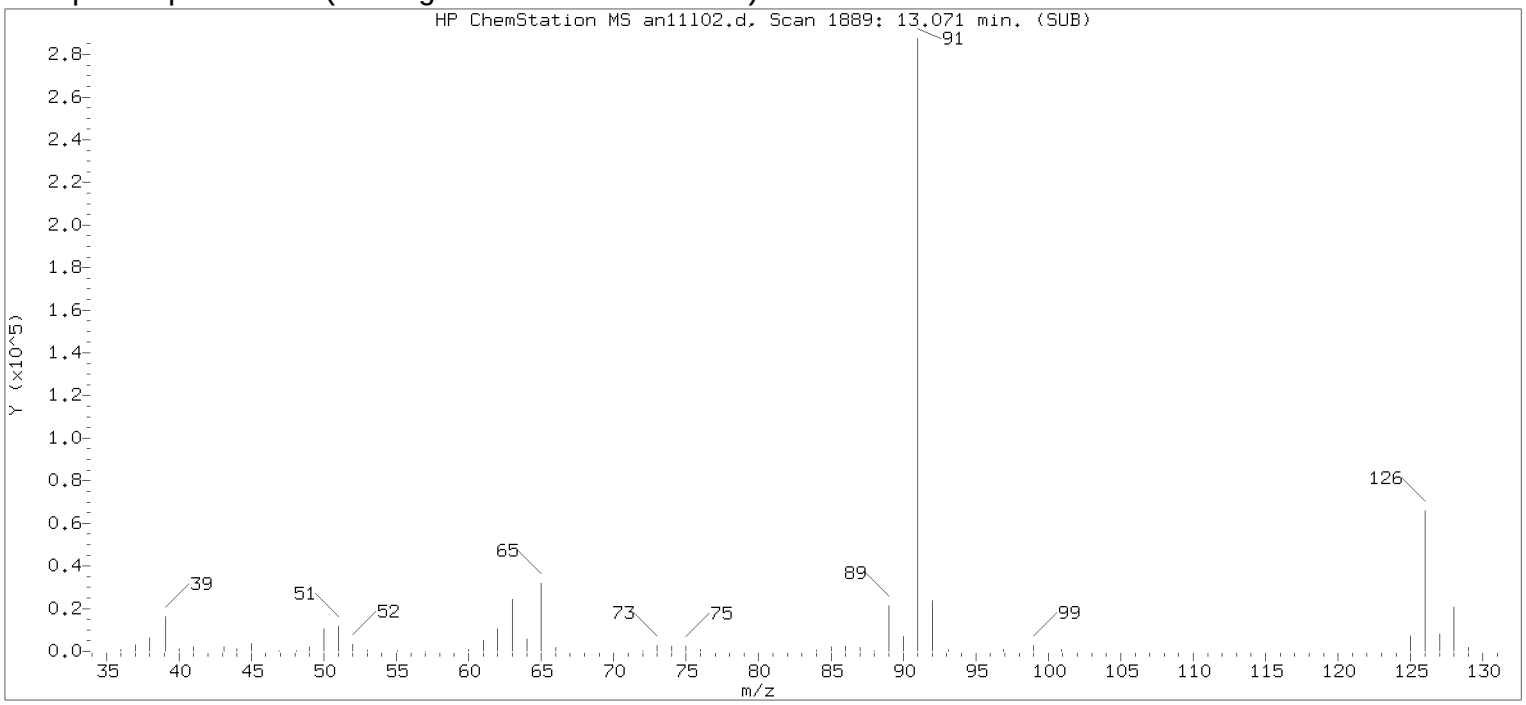
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1889
Retention Time (minutes): 13.071
Quant Ion : 126.00
Area (flag) : 90626M
On-Column Amount (ng) : 17.1637
Integration start scan : 1883 Integration stop scan: 1894
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

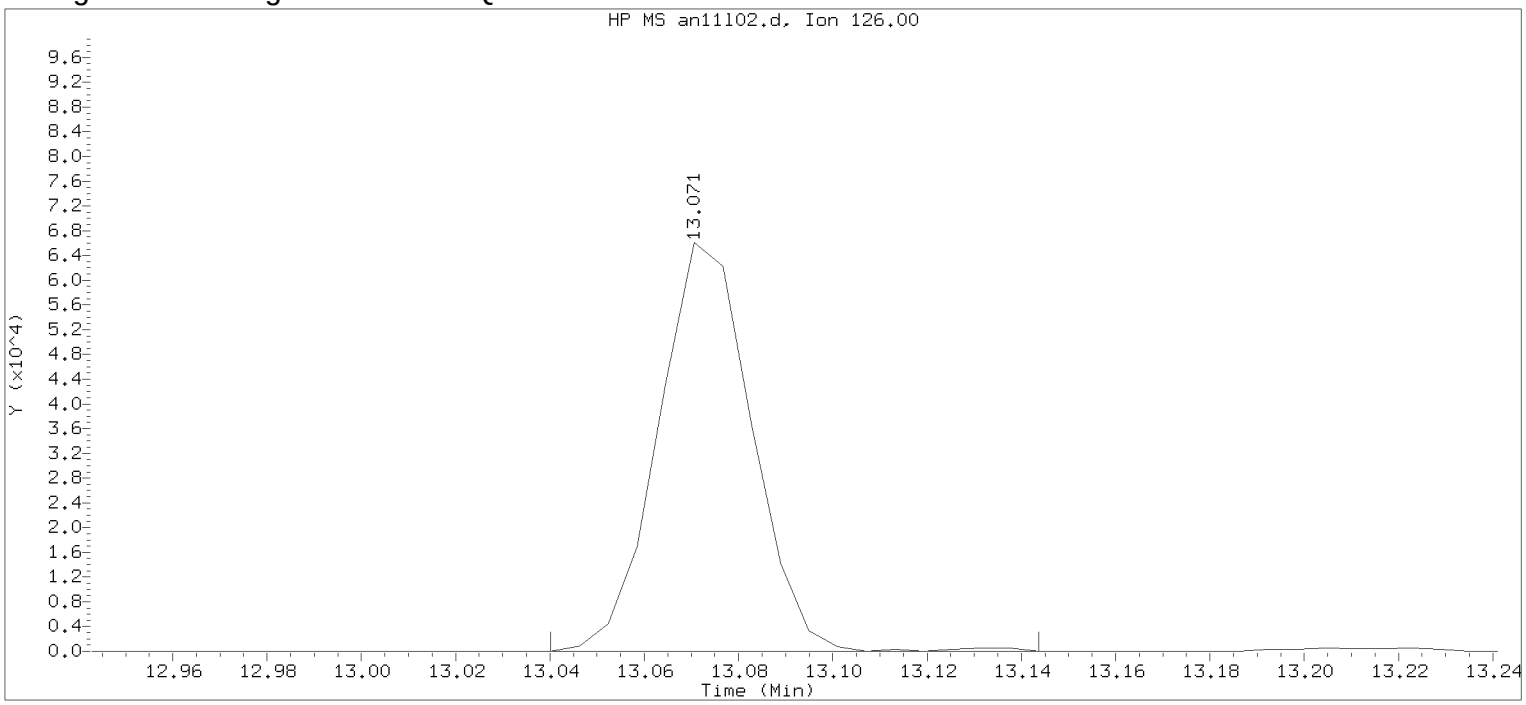
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

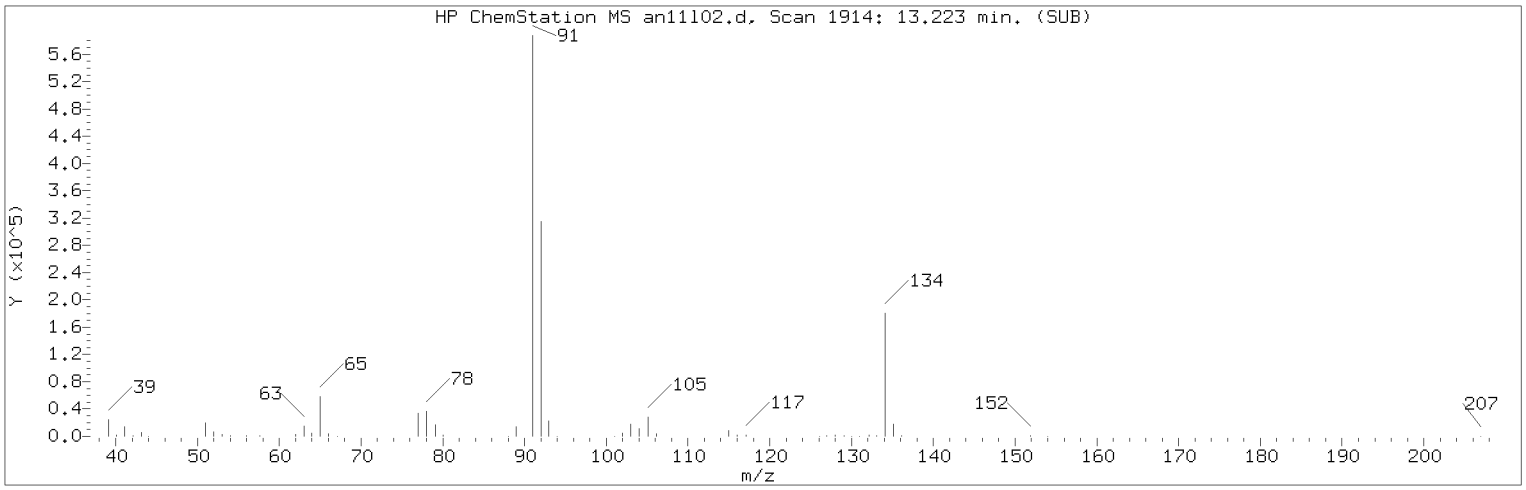
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

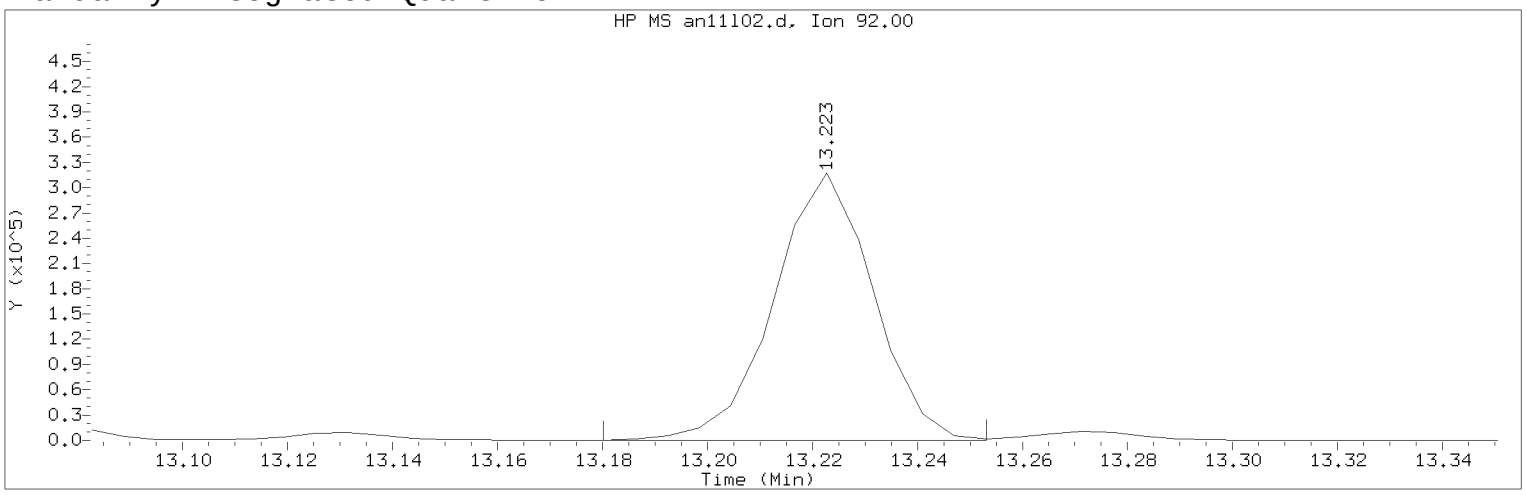
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1889
Retention Time (minutes): 13.071
Quant Ion : 126.00
Area : 91232
On-column Amount (ng) : 17.2783
Integration start scan : 1883 Integration stop scan: 1900
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

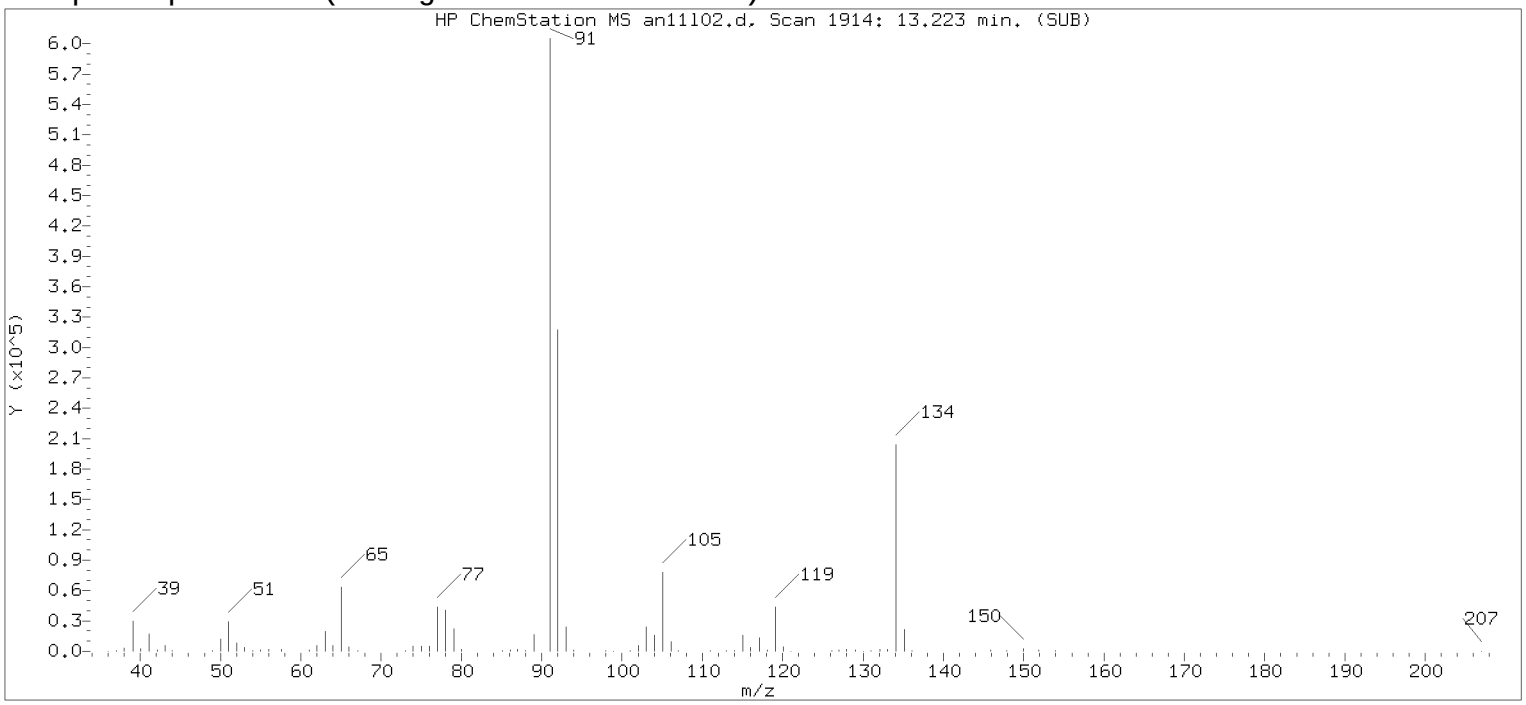
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area (flag) : 415700M
On-Column Amount (ng) : 16.6286
Integration start scan : 1906 Integration stop scan: 1918
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

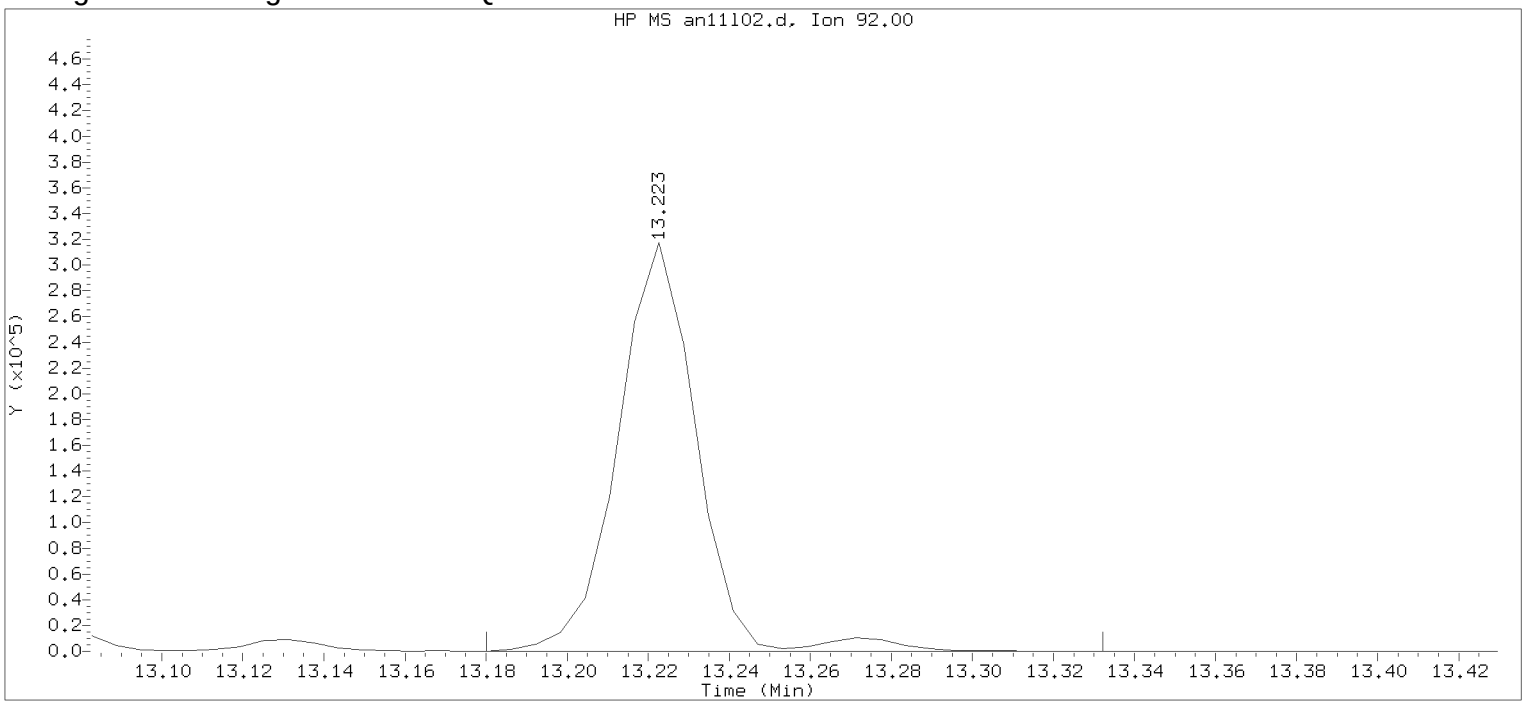
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

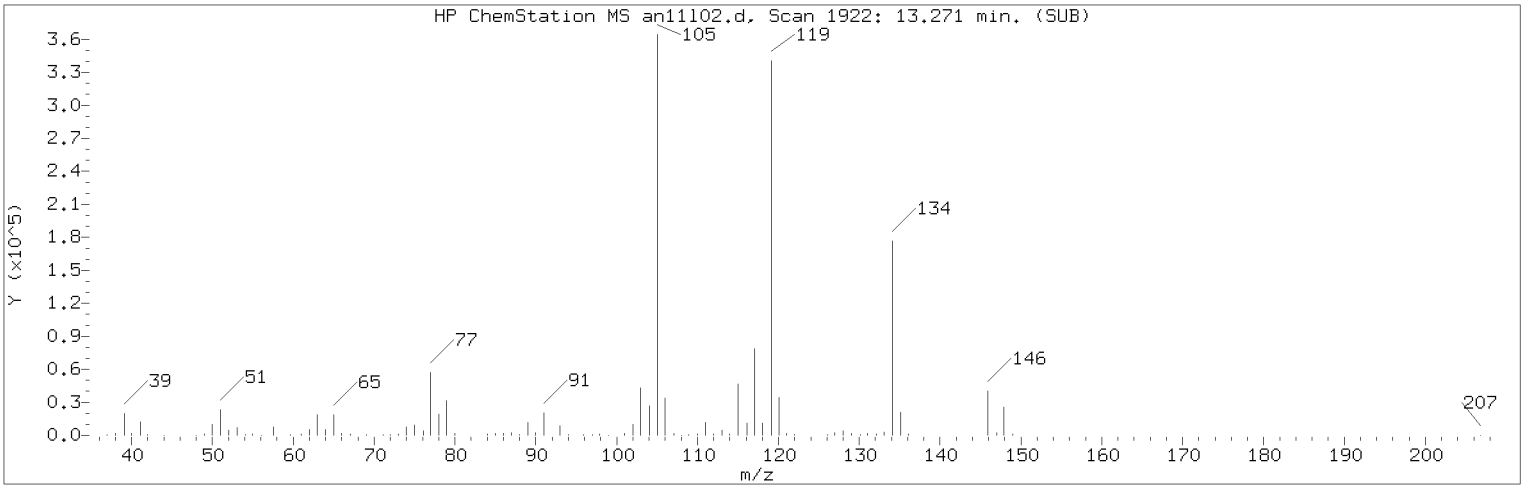
Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

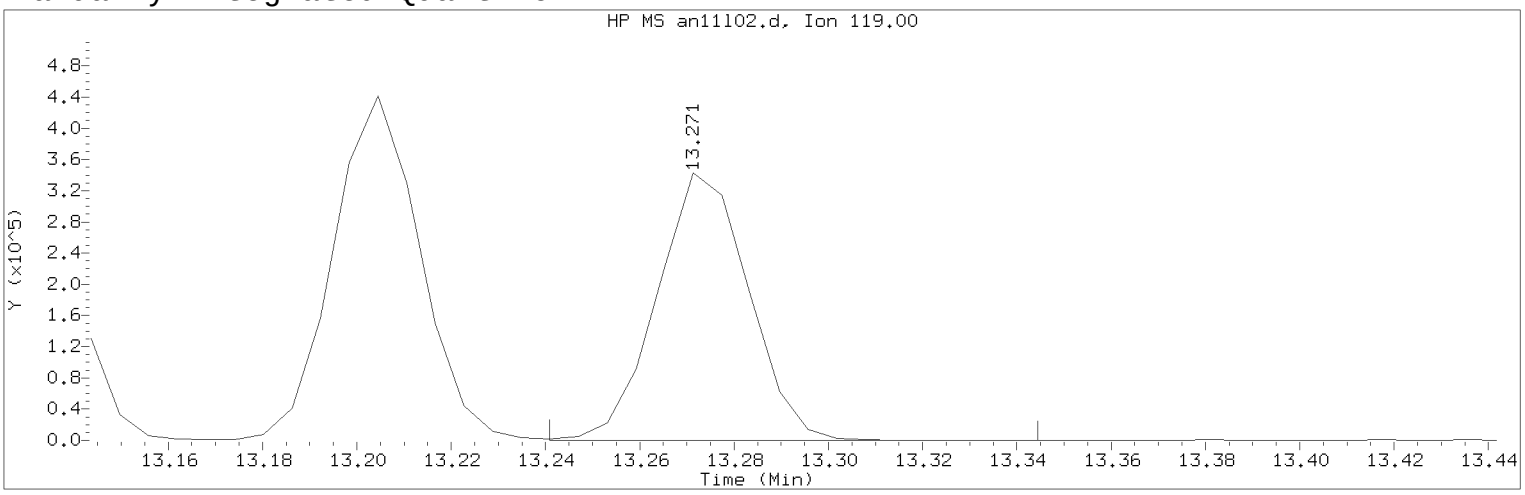
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 1914
Retention Time (minutes): 13.223
Quant Ion : 92.00
Area : 429557
On-column Amount (ng) : 17.1829
Integration start scan : 1906 Integration stop scan: 1931
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:51 cbs01947

Sample Name: LCDA26 Lab Sample ID: LCDA26

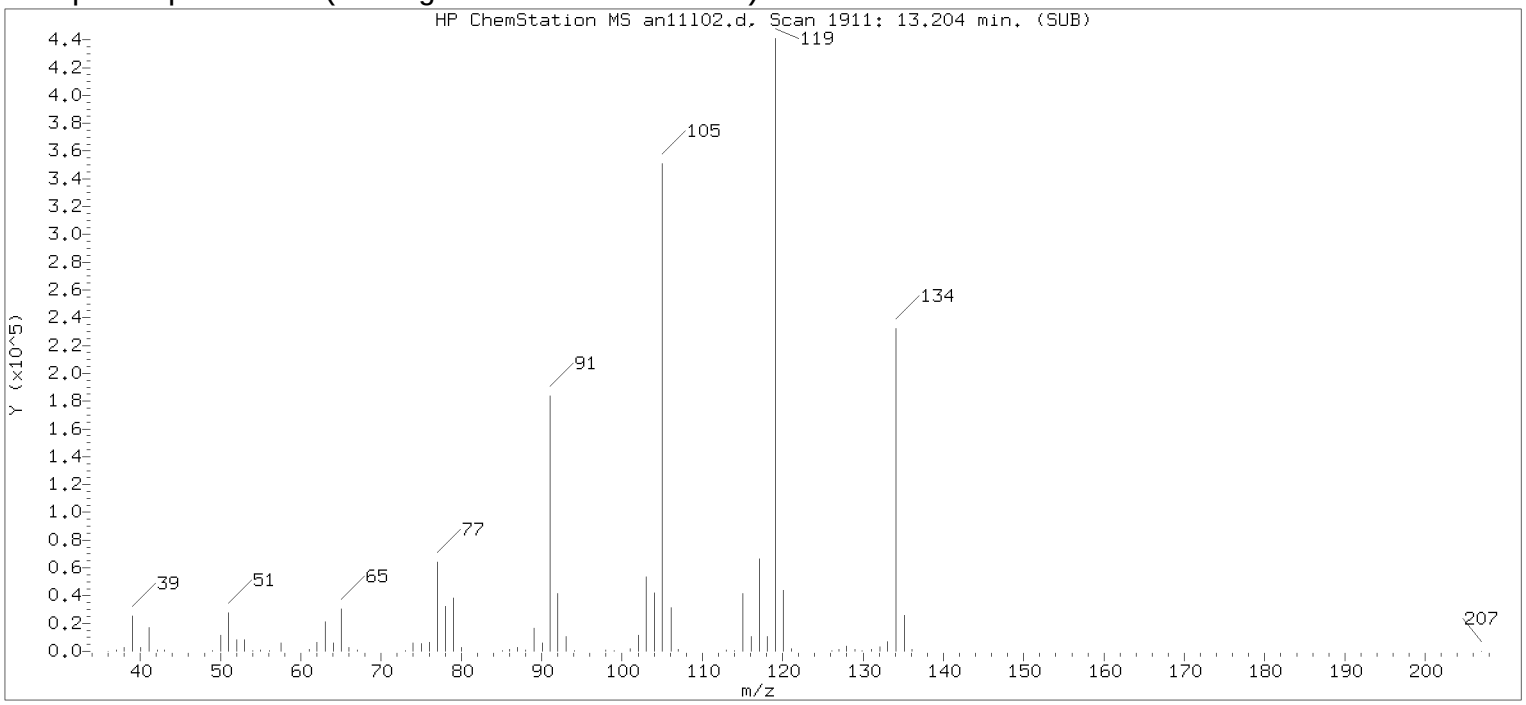
Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1922
Retention Time (minutes): 13.271
Quant Ion : 119.00
Area (flag) : 461588M
On-Column Amount (ng) : 17.4296
Integration start scan : 1916 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

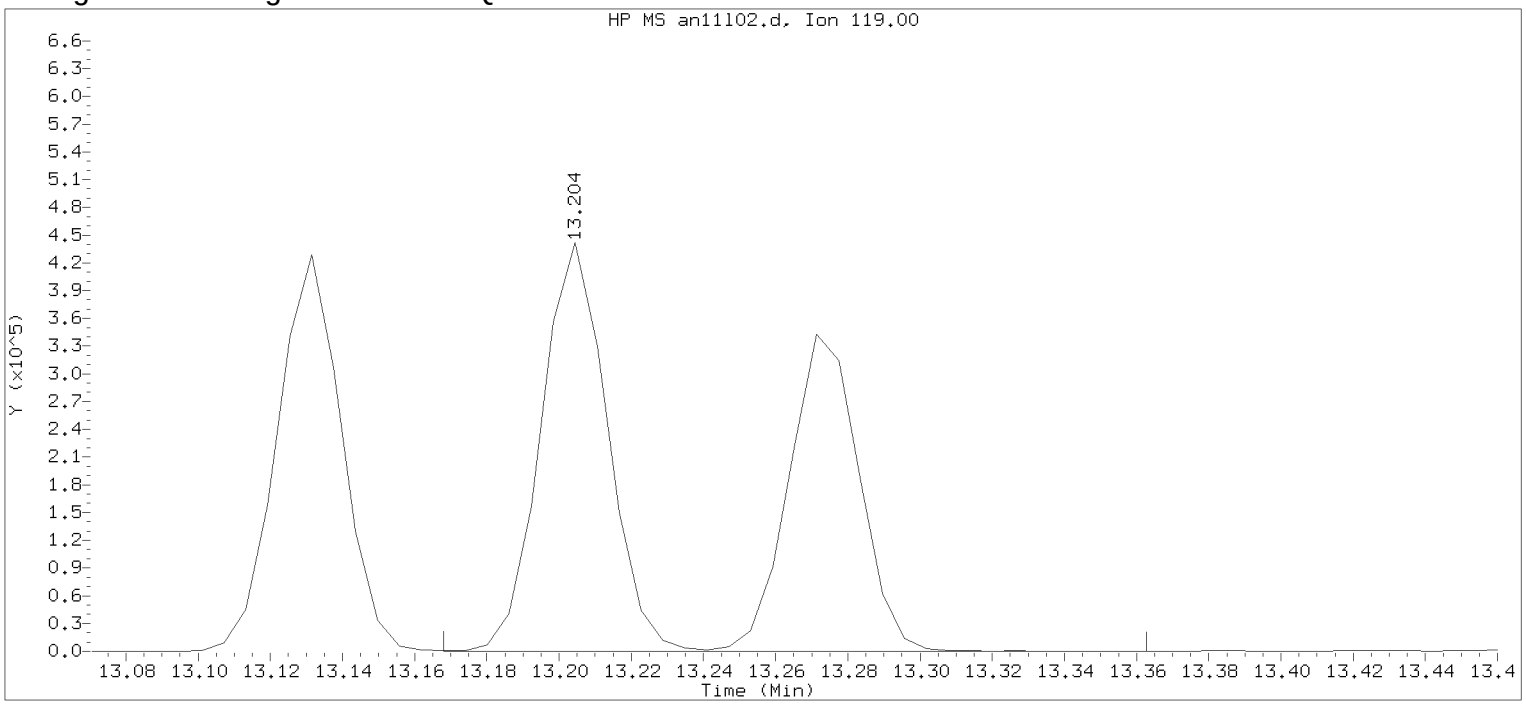
Analyst responsible for change: Digitally signed by Chelsea B. Stong
on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: cbs01947

Secondary review performed and digitally signed by Angela D. Sneeringer on 11/14/2013 at 07:49.
Parallax ID: ads01731

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09685.i/13nov11a.b/an11l02.d Instrument ID: HP09685.i
Injection date and time: 11-NOV-2013 12:29 Analyst ID: CBS01947

Method used: /chem2/HP09685.i/13nov11a.b/di8260b.m Sublist used: 8260S-2C
Calibration date and time: 11-NOV-2013 11:16
Date, time and analyst ID of latest file update: 11-Nov-2013 12:49 Automation

Sample Name: LCDA26 Lab Sample ID: LCDA26

Compound Number : 141
Compound Name : 1,2-Diethylbenzene
Scan Number : 1911
Retention Time (minutes): 13.204
Quant Ion : 119.00
Area : 1024776
On-column Amount (ng) : 38.6956
Integration start scan : 1904 Integration stop scan: 1936
Y at integration start : 0 Y at integration end: 0

Digitally signed by Chelsea B. Stong on 11/11/2013 at 12:52.
Target 3.5 esignature user ID: CBS01947

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l31.d Injection date and time: **12-NOV-2013 01:08**
Data file Sample Info. Line: LCSX48;LCSX48;2;3;LCS;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.207	(0.006)	432	65	209590	(-15)	250.00	
69) Fluorobenzene	7.711	(0.006)	1008	96	1759543	(-3)	50.00	
101) Chlorobenzene-d5	11.197	(0.000)	1581	117	1336957	(-4)	50.00	
135) 1,4-Dichlorobenzene-d4	13.083	(0.000)	1891	152	788067	(-3)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	6.817	(-0.001)	113	444310	48.439	97%		50 - 141
62) 1,2-Dichloroethane-d4	(2)	7.279	(-0.001)	102	101166	48.936	98%		54 - 135
88) Toluene-d8	(3)	9.737	(0.000)	98	1758318	50.928	102%		52 - 141
114) 4-Bromofluorobenzene	(3)	12.201	(0.000)	95	671978	49.105	98%		50 - 131

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	1.974	(0.001)	85	198342	14.380	14.38			2	5
4) Chloromethane	(2)	2.114	(0.001)	50	186273	15.073	15.07			2	5
5) Vinyl Chloride	(2)	2.254	(0.001)	62	184834	17.106	17.11			1	5
9) Bromomethane	(2)	2.564	(0.002)	94	146982	17.722	17.72			2	5
10) Chloroethane	(2)	2.674	(0.000)	64	115587	18.004	18.00			2	5
11) Dichlorofluoromethane	(2)	2.911	(0.001)	67	350425	21.079	21.08			2	5
13) Trichlorofluoromethane	(2)	2.990	(0.000)	101	290936	17.712	17.71			2	5
17) Freon 123a	(2)	3.313	(-0.000)	67	194032	19.978	19.98			2	5
18) Acrolein	(1)	3.410	(0.000)	56	211224	129.898	129.90			20	100
19) 1,1-Dichloroethene	(2)	3.550	(0.000)	96	138792	19.405	19.40			1	5
20) Acetone	(2)	3.580	(-0.001)	58	105672	115.805	115.81			7	20
22) Freon 113	(2)	3.580	(0.000)	101	139217	18.431	18.43			2	10
23) 2-Propanol	(1)	3.732	(-0.002)	45	88385	143.627	143.63			60	100
24) Methyl Iodide	(2)	3.751	(-0.000)	142	284780	19.301	19.30			3	5
25) Carbon Disulfide	(2)	3.854	(0.000)	76	475672	18.480	18.48			1	5
27) Methyl Acetate	(2)	3.994	(-0.000)	43	111072	16.245	16.24			2	5
29) Allyl Chloride	(2)	4.024	(0.000)	41	213717	16.323	16.32			1	5
31) Methylene Chloride	(2)	4.213	(-0.000)	84	165410	19.369	19.37			2	5
32) t-Butyl alcohol	(1)	4.329	(-0.000)	59	202306M	203.349	203.35			20	100
33) Acrylonitrile	(2)	4.536	(0.001)	53	267561	76.071	76.07			4	20
34) Methyl Tertiary Butyl Ether	(2)	4.621	(-0.000)	73	464191	19.739	19.74			0.5	5
35) trans-1,2-Dichloroethene	(2)	4.633	(-0.000)	96	165537	19.864	19.86			1	5
38) n-Hexane	(2)	5.046	(-0.000)	57	171775	16.566	16.57			1	5
40) 1,1-Dichloroethane	(2)	5.290	(-0.000)	63	294191	18.668	18.67			1	5
41) di-Isopropyl ether	(2)	5.338	(0.000)	45	481791	18.408	18.41			1	5
42) 2-Chloro-1,3-butadiene	(2)	5.387	(0.000)	53	252515	18.139	18.14			1	5
44) Ethyl t-butyl ether	(2)	5.880	(-0.000)	59	420550	22.538	22.54			1	5
45) 2-Butanone	(2)	6.081	(0.000)	43	541057	115.846	115.85			4	10
46) cis-1,2-Dichloroethene	(2)	6.117	(-0.000)	96	181578	19.760	19.76			1	5
47) 1,2-Dichloroethene (Total)	(2)			96	347115	39.624	39.62			1	5

M = Compound was manually integrated.

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l31.d Injection date and time: **12-NOV-2013 01:08**
Data file Sample Info. Line: LCSX48;LCSX48;2;3;LCS;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
48) 2,2-Dichloropropane	(2)	6.135(-0.000)	77	257406	18.538	18.54			1	5
50) Propionitrile	(1)	6.172(-0.002)	54	160770	151.912	151.91			30	100
51) Methacrylonitrile	(2)	6.391(-0.000)	67	500005	131.846	131.85			5	50
52) Bromochloromethane	(2)	6.458(-0.001)	128	93830	18.611	18.61			1	5
53) Tetrahydrofuran	(1)	6.464(-0.002)	71	97336	93.699	93.70			4	5
54) Chloroform	(2)	6.598(-0.000)	83	311990	19.310	19.31			1	5
57) 1,1,1-Trichloroethane	(2)	6.829(0.000)	97	286044	18.251	18.25			1	5
58) Cyclohexane	(2)	6.932(-0.000)	56	220832	17.105	17.10			1	5
59) 1,1-Dichloropropene	(2)	7.042(-0.000)	75	232291	19.660	19.66			1	5
60) Carbon Tetrachloride	(2)	7.048(-0.000)	117	244437	19.117	19.12			1	5
61) Isobutyl Alcohol	(1)	7.170(-0.001)	41	162793	476.482	476.48			100	250
63) Benzene	(2)	7.310(-0.000)	78	662276	19.264	19.26			0.5	5
66) 1,2-Dichloroethane	(2)	7.389(-0.000)	62	266805	18.562	18.56			1	5
67) t-Amyl methyl ether	(2)	7.498(-0.000)	73	382058	25.350	25.35			1	5
71) n-Heptane	(2)	7.717(-0.000)	43	200703	17.204	17.20			3	5
72) n-Butanol	(1)	8.058(-0.002)	56	245737	935.643	935.64			110	250
74) Trichloroethene	(2)	8.198(-0.001)	95	181256	19.978	19.98			1	5
75) Methylcyclohexane	(2)	8.508(-0.000)	83	242979	17.671	17.67			1	5
76) 1,2-Dichloropropane	(2)	8.538(-0.000)	63	167549	19.313	19.31			1	5
78) Methyl Methacrylate	(2)	8.612(-0.000)	69	115062	17.000	17.00			1	5
79) 1,4-Dioxane	(1)	8.624(-0.002)	88	46756	488.004	488.00			70	250
80) Dibromomethane	(2)	8.642(-0.000)	93	108047M	17.878	17.88			1	5
83) Bromodichloromethane	(2)	8.879(-0.000)	83	235527	18.567	18.57			1	5
84) 2-Nitropropane	(1)	9.141(-0.003)	41	45499	17.490	17.49			3	10
86) cis-1,3-Dichloropropene	(2)	9.427(-0.000)	75	253445	18.199	18.20			1	5
87) 4-Methyl-2-pentanone	(2)	9.591(-0.000)	43	815349	78.832	78.83			3	10
89) Toluene	(3)	9.810(0.000)	92	424577	19.746	19.75			1	5
90) trans-1,3-Dichloropropene	(3)	10.072(0.000)	75	262962	18.472	18.47			1	5
91) Ethyl Methacrylate	(3)	10.126(0.000)	69	214405	17.932	17.93			1	5
92) 1,1,2-Trichloroethane	(3)	10.278(0.000)	97	148567	19.074	19.07			1	5
94) Tetrachloroethene	(3)	10.364(-0.000)	166	204061	20.239	20.24			1	5
95) 1,3-Dichloropropane	(3)	10.443(0.000)	76	255633	18.503	18.50			1	5
97) 2-Hexanone	(3)	10.485(0.000)	43	617268	81.866	81.87			3	10
99) Dibromochloromethane	(3)	10.656(0.000)	129	182531	19.183	19.18			1	5
100) 1,2-Dibromoethane	(3)	10.771(0.000)	107	157948	18.644	18.64			1	5
102) Chlorobenzene	(3)	11.221(0.000)	112	501341	19.880	19.88			1	5
103) 1,1,1,2-Tetrachloroethane	(3)	11.306(0.000)	131	183934	19.572	19.57			1	5
104) Ethylbenzene	(3)	11.306(0.000)	91	815282	19.836	19.84			1	5
105) m+p-Xylene	(3)	11.422(-0.000)	106	662816	39.915	39.91			1	5
106) o-Xylene	(3)	11.751(0.000)	106	304990	19.141	19.14			1	5
107) Xylene (Total)	(3)		106	967806	59.055	59.06			1	5
108) Styrene	(3)	11.769(0.000)	104	517565	19.191	19.19			1	5
109) Bromoform	(3)	11.933(-0.000)	173	121073	19.885	19.88			1	5
110) Isopropylbenzene	(3)	12.055(0.000)	105	823699	20.244	20.24			1	5
113) Cyclohexanone	(1)	12.128(-0.002)	55	136518	452.214	452.21			25	250
115) 1,1,2,2-Tetrachloroethane	(4)	12.298(0.000)	83	213982	18.348	18.35			1	5
116) Bromobenzene	(4)	12.316(0.000)	156	232912	19.371	19.37			1	5
117) trans-1,4-Dichloro-2-butene	(4)	12.322(0.000)	53	367197	87.581	87.58			10	50
118) 1,2,3-Trichloropropane	(4)	12.347(0.000)	110	66922M	17.749	17.75			1	5
119) n-Propylbenzene	(4)	12.383(0.000)	91	992194	20.205	20.20			1	5
121) 2-Chlorotoluene	(4)	12.462(0.000)	126	210492	19.424	19.42			1	5
124) 1,3,5-Trimethylbenzene	(4)	12.523(0.000)	105	728319	19.859	19.86			1	5
125) 4-Chlorotoluene	(4)	12.554(0.000)	126	219510	19.228	19.23			1	5

M = Compound was manually integrated.

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l31.d Injection date and time: **12-NOV-2013 01:08**
Data file Sample Info. Line: LCSX48;LCSX48;2;3;LCS;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

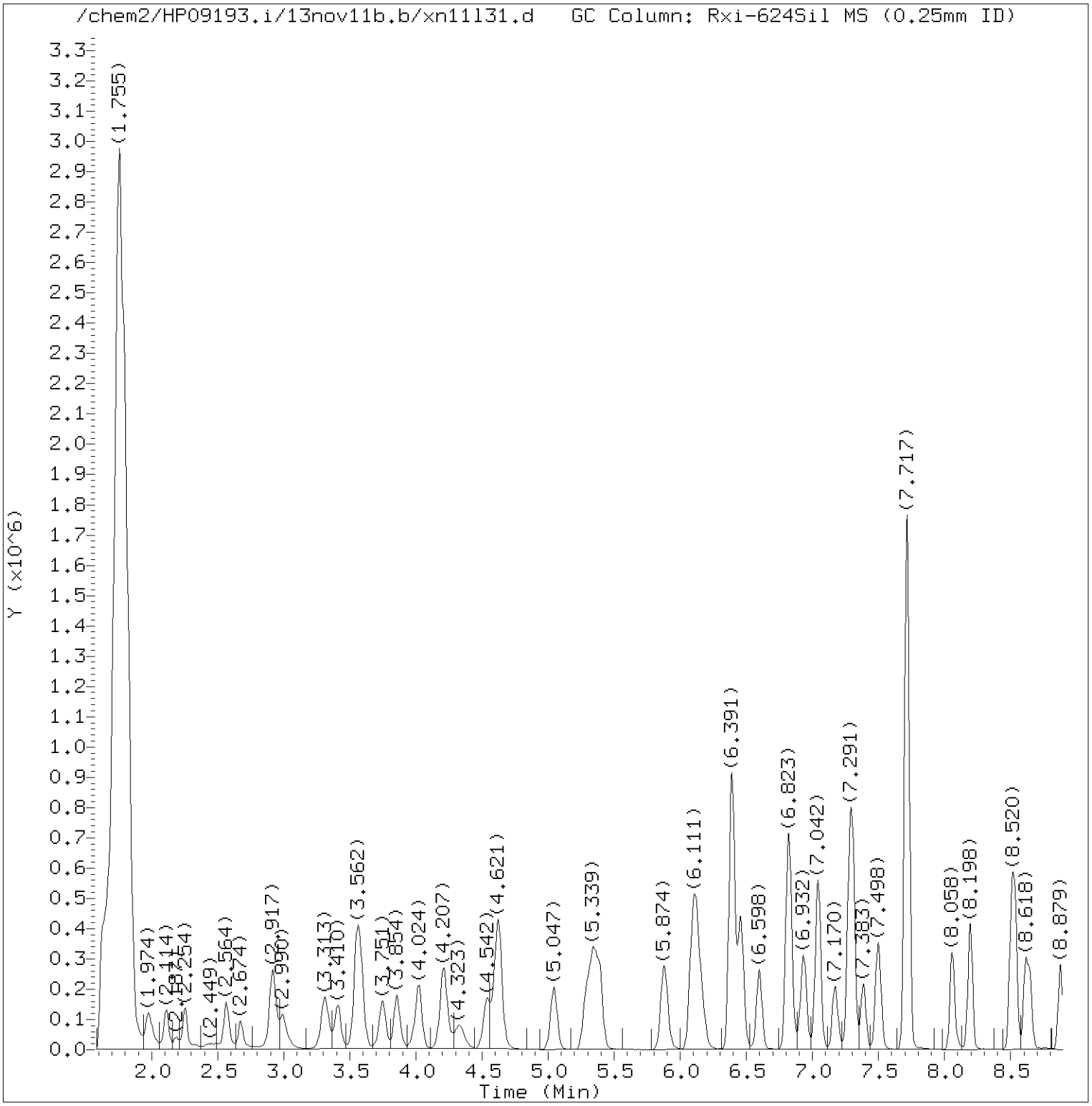
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
128) tert-Butylbenzene	(4)	12.766(0.000)	134	169430	19.215	19.21			1	5
129) Pentachloroethane	(4)	12.797(0.000)	167	143684	18.958	18.96			1	5
130) 1,2,4-Trimethylbenzene	(4)	12.803(0.000)	105	754297	19.864	19.86			1	5
131) sec-Butylbenzene	(4)	12.931(0.000)	105	905846	20.185	20.19			1	5
133) 1,3-Dichlorobenzene	(4)	13.028(0.000)	146	439443	19.570	19.57			1	5
134) p-Isopropyltoluene	(4)	13.034(0.000)	119	815283	19.502	19.50			1	5
136) 1,4-Dichlorobenzene	(4)	13.101(-0.000)	146	456647	19.536	19.54			1	5
137) 1,2,3-Trimethylbenzene	(4)	13.107(0.000)	105	793914	19.504	19.50			1	5
138) Benzyl Chloride	(4)	13.180(-0.000)	126	87161	16.529	16.53			1	4
139) 1,3-Diethylbenzene	(4)	13.235(-0.000)	119	499431	19.358	19.36			1	5
140) 1,4-Diethylbenzene	(4)	13.308(0.000)	119	533504	20.215	20.22			1	5
141) n-Butylbenzene	(4)	13.326(0.000)	92	411136	19.230	19.23			1	5
142) 1,2-Dichlorobenzene	(4)	13.363(0.000)	146	429801	19.473	19.47			1	5
143) 1,2-Diethylbenzene	(4)	13.381(0.000)	119	437057	19.874	19.87			1	5
146) 1,2-Dibromo-3-chloropropane	(4)	13.904(-0.000)	75	47415	17.017	17.02			2	5
147) 1,3,5-Trichlorobenzene	(4)	14.032(-0.000)	180	342703	18.573	18.57			1	5
148) 1,2,4-Trichlorobenzene	(4)	14.458(-0.000)	180	307088	17.973	17.97			1	5
149) Hexachlorobutadiene	(4)	14.537(-0.000)	225	173377	18.803	18.80			2	5
150) Naphthalene	(4)	14.640(0.000)	128	733863	17.752	17.75			1	5
151) 1,2,3-Trichlorobenzene	(4)	14.780(-0.000)	180	304041	17.940	17.94			1	5
152) 2-Methylnaphthalene	(4)	15.413(0.000)	142	432526	15.590	15.59			2	5

Total number of targets = 104

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00. Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

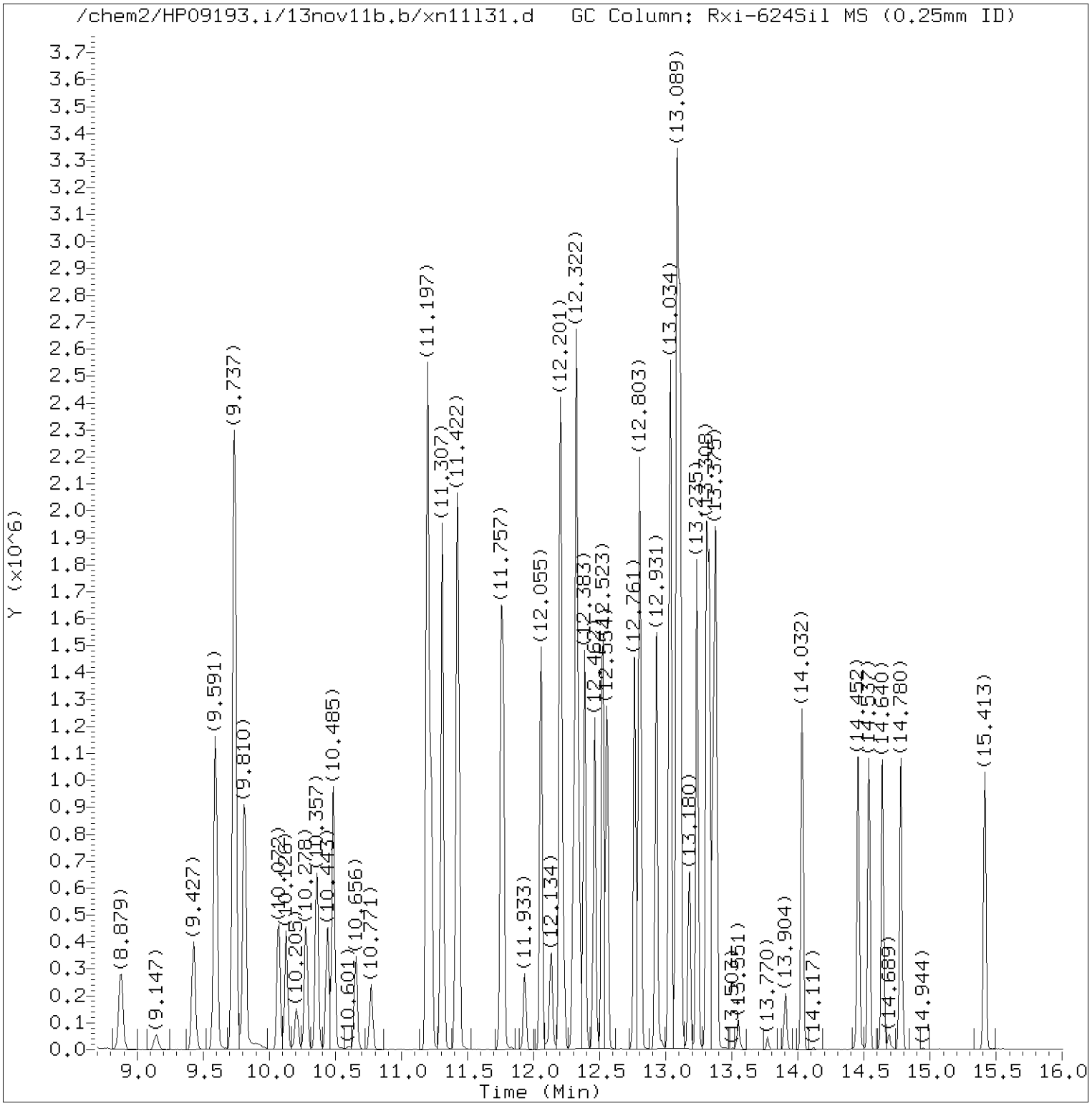
Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.974	85	198342	14.380
4) Chloromethane	(2)	2.114	50	186273	15.073
5) Vinyl Chloride	(2)	2.254	62	184834	17.106
9) Bromomethane	(2)	2.564	94	146982	17.722
10) Chloroethane	(2)	2.674	64	115587	18.004
11) Dichlorofluoromethane	(2)	2.911	67	350425	21.079
13) Trichlorofluoromethane	(2)	2.990	101	290936	17.712
17) Freon 123a	(2)	3.313	67	194032	19.978
18) Acrolein	(1)	3.410	56	211224	129.898
19) 1,1-Dichloroethene	(2)	3.550	96	138792	19.405
20) Acetone	(2)	3.580	58	105672	115.805
22) Freon 113	(2)	3.580	101	139217	18.431
23) 2-Propanol	(1)	3.732	45	88385	143.627
24) Methyl Iodide	(2)	3.751	142	284780	19.301
25) Carbon Disulfide	(2)	3.854	76	475672	18.480
27) Methyl Acetate	(2)	3.994	43	111072	16.245
29) Allyl Chloride	(2)	4.024	41	213717	16.323
30)*t-Butyl alcohol-d10	(1)	4.207	65	209590	250.000
31) Methylene Chloride	(2)	4.213	84	165410	19.369
32) t-Butyl alcohol	(1)	4.329	59	202306M	203.349
33) Acrylonitrile	(2)	4.535	53	267561	76.071
34) Methyl Tertiary Butyl Ether	(2)	4.621	73	464191	19.739
35) trans-1,2-Dichloroethene	(2)	4.633	96	165537	19.864
38) n-Hexane	(2)	5.047	57	171775	16.566
40) 1,1-Dichloroethane	(2)	5.290	63	294191	18.668
41) di-Isopropyl ether	(2)	5.339	45	481791	18.408
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	252515	18.139
44) Ethyl t-butyl ether	(2)	5.880	59	420550	22.538
45) 2-Butanone	(2)	6.081	43	541057	115.846
47) 1,2-Dichloroethene (Total)	(2)		96	347115	39.624
46) cis-1,2-Dichloroethene	(2)	6.117	96	181578	19.760
48) 2,2-Dichloropropane	(2)	6.135	77	257406	18.538
50) Propionitrile	(1)	6.172	54	160770	151.912
51) Methacrylonitrile	(2)	6.391	67	500005	131.846
52) Bromochloromethane	(2)	6.458	128	93830	18.611
53) Tetrahydrofuran	(1)	6.464	71	97336	93.699
54) Chloroform	(2)	6.598	83	311990	19.310
56)$Dibromofluoromethane	(2)	6.817	113	444310	48.439

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
57) 1,1,1-Trichloroethane	(2)	6.829	97	286044	18.251
58) Cyclohexane	(2)	6.932	56	220832	17.105
59) 1,1-Dichloropropene	(2)	7.042	75	232291	19.660
60) Carbon Tetrachloride	(2)	7.048	117	244437	19.117
61) Isobutyl Alcohol	(1)	7.170	41	162793	476.482
62)$1,2-Dichloroethane-d4	(2)	7.279	102	101166	48.936
63) Benzene	(2)	7.310	78	662276	19.264
66) 1,2-Dichloroethane	(2)	7.389	62	266805	18.562
67) t-Amyl methyl ether	(2)	7.498	73	382058	25.350
69)*Fluorobenzene	(2)	7.711	96	1759543	50.000
71) n-Heptane	(2)	7.717	43	200703	17.204
72) n-Butanol	(1)	8.058	56	245737	935.643
74) Trichloroethene	(2)	8.198	95	181256	19.978
75) Methylcyclohexane	(2)	8.508	83	242979	17.671
76) 1,2-Dichloropropane	(2)	8.539	63	167549	19.313
78) Methyl Methacrylate	(2)	8.611	69	115062	17.000
79) 1,4-Dioxane	(1)	8.624	88	46756	488.004
80) Dibromomethane	(2)	8.642	93	108047M	17.878
83) Bromodichloromethane	(2)	8.879	83	235527	18.567
84) 2-Nitropropane	(1)	9.141	41	45499	17.490
86) cis-1,3-Dichloropropene	(2)	9.427	75	253445	18.199
87) 4-Methyl-2-pentanone	(2)	9.591	43	815349	78.832
88)$Toluene-d8	(3)	9.737	98	1758318	50.928
89) Toluene	(3)	9.810	92	424577	19.746
90) trans-1,3-Dichloropropene	(3)	10.072	75	262962	18.472
91) Ethyl Methacrylate	(3)	10.126	69	214405	17.932
92) 1,1,2-Trichloroethane	(3)	10.278	97	148567	19.074
94) Tetrachloroethene	(3)	10.364	166	204061	20.239
95) 1,3-Dichloropropane	(3)	10.443	76	255633	18.503
97) 2-Hexanone	(3)	10.485	43	617268	81.866
99) Dibromochloromethane	(3)	10.656	129	182531	19.183
100) 1,2-Dibromoethane	(3)	10.771	107	157948	18.644
101)*Chlorobenzene-d5	(3)	11.197	117	1336957	50.000
102) Chlorobenzene	(3)	11.221	112	501341	19.880
103) 1,1,1,2-Tetrachloroethane	(3)	11.307	131	183934	19.572
104) Ethylbenzene	(3)	11.307	91	815282	19.836
105) m+p-Xylene	(3)	11.422	106	662816	39.915
107) Xylene (Total)	(3)		106	967806	59.055

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Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

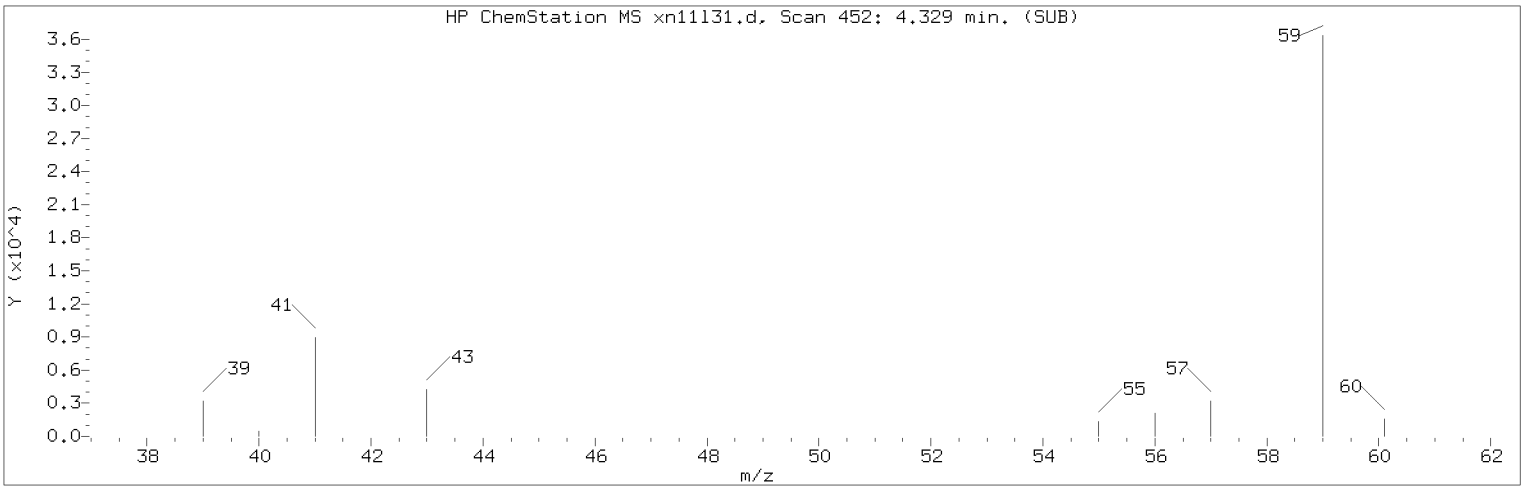
Sample Name: LCSX48 Lab Sample ID: LCSX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
106) o-Xylene	(3)	11.751	106	304990	19.141
108) Styrene	(3)	11.769	104	517565	19.191
109) Bromoform	(3)	11.933	173	121073	19.885
110) Isopropylbenzene	(3)	12.055	105	823699	20.244
113) Cyclohexanone	(1)	12.128	55	136518	452.214
114)$4-Bromofluorobenzene	(3)	12.201	95	671978	49.105
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	213982	18.348
116) Bromobenzene	(4)	12.316	156	232912	19.371
117) trans-1,4-Dichloro-2-butene	(4)	12.322	53	367197	87.581
118) 1,2,3-Trichloropropane	(4)	12.347	110	66922M	17.749
119) n-Propylbenzene	(4)	12.383	91	992194	20.205
121) 2-Chlorotoluene	(4)	12.462	126	210492	19.424
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	728319	19.859
125) 4-Chlorotoluene	(4)	12.554	126	219510	19.228
128) tert-Butylbenzene	(4)	12.767	134	169430	19.215
129) Pentachloroethane	(4)	12.797	167	143684	18.958
130) 1,2,4-Trimethylbenzene	(4)	12.803	105	754297	19.864
131) sec-Butylbenzene	(4)	12.931	105	905846	20.185
133) 1,3-Dichlorobenzene	(4)	13.028	146	439443	19.570
134) p-Isopropyltoluene	(4)	13.034	119	815283	19.502
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	788067	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	456647	19.536
137) 1,2,3-Trimethylbenzene	(4)	13.107	105	793914	19.504
138) Benzyl Chloride	(4)	13.180	126	87161	16.529
139) 1,3-Diethylbenzene	(4)	13.235	119	499431	19.358
140) 1,4-Diethylbenzene	(4)	13.308	119	533504	20.215
141) n-Butylbenzene	(4)	13.326	92	411136	19.230
142) 1,2-Dichlorobenzene	(4)	13.363	146	429801	19.473
143) 1,2-Diethylbenzene	(4)	13.381	119	437057	19.874
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	47415	17.017
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	342703	18.573
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	307088	17.973
149) Hexachlorobutadiene	(4)	14.537	225	173377	18.803
150) Naphthalene	(4)	14.640	128	733863	17.752
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	304041	17.940
152) 2-Methylnaphthalene	(4)	15.413	142	432526	15.590

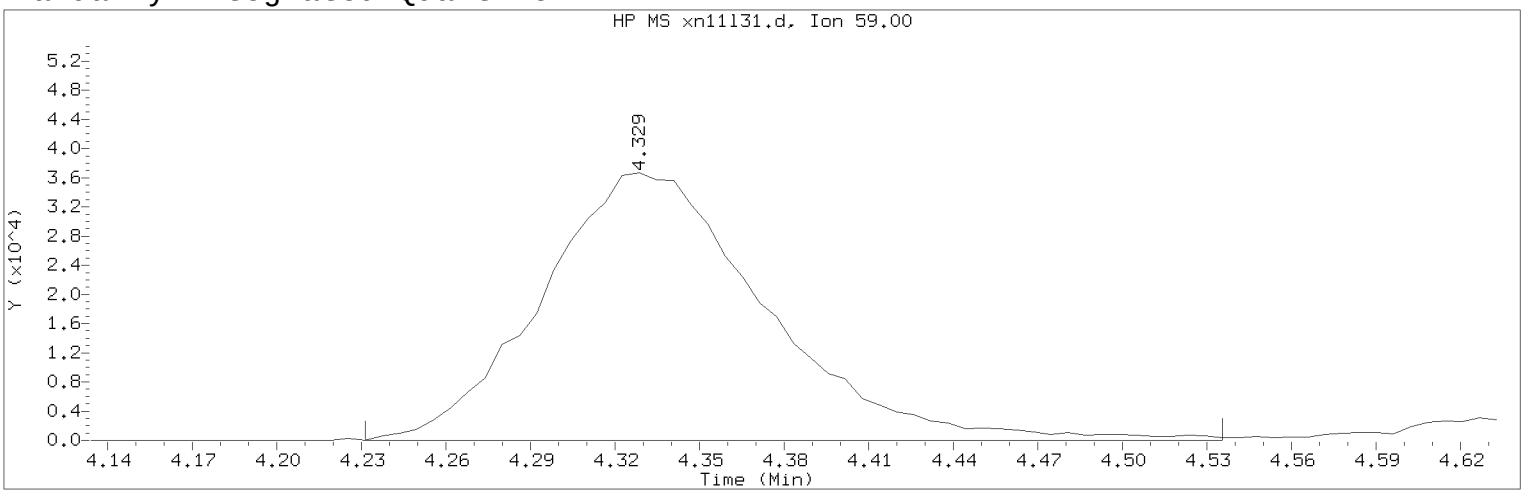
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

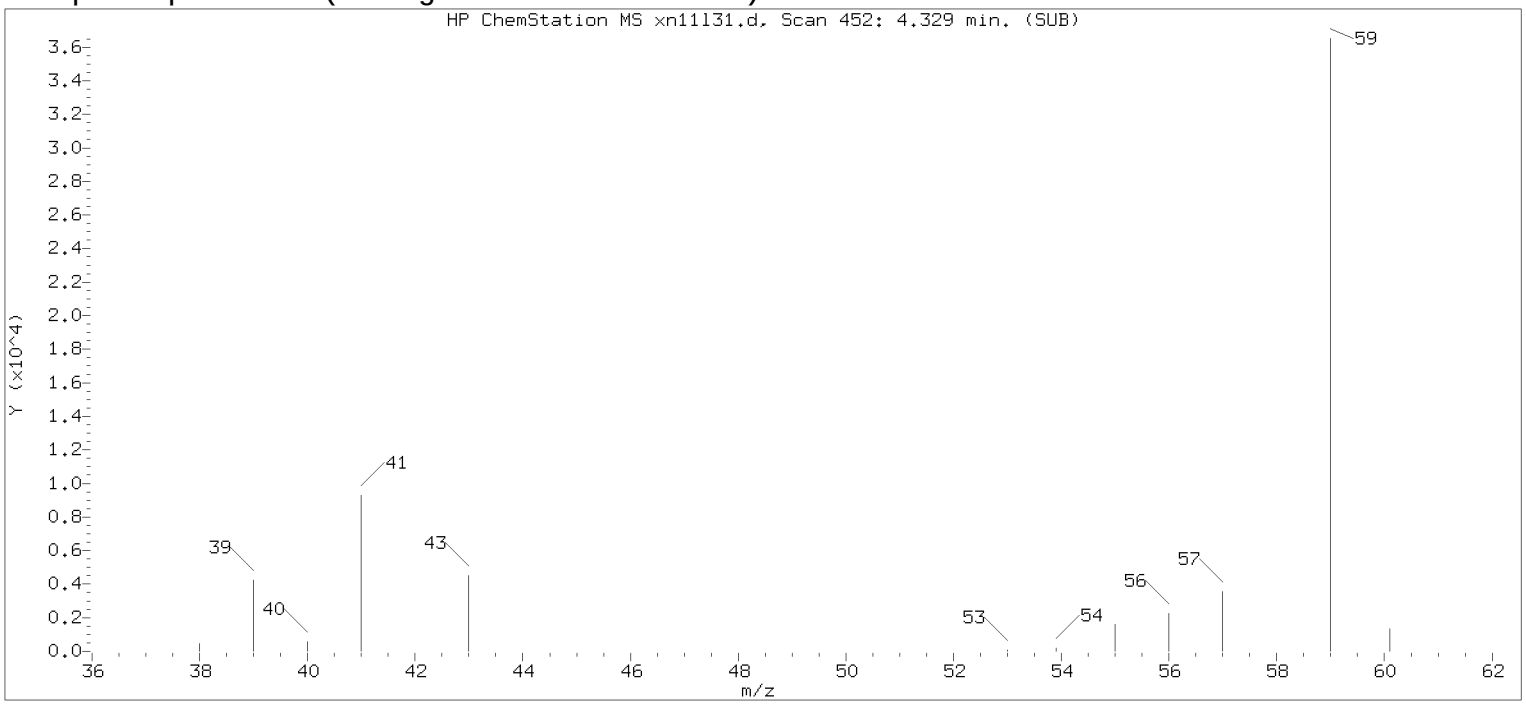
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 452
Retention Time (minutes): 4.329
Quant Ion : 59.00
Area (flag) : 202306M
On-Column Amount (ng) : 203.3488
Integration start scan : 435 Integration stop scan: 485
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

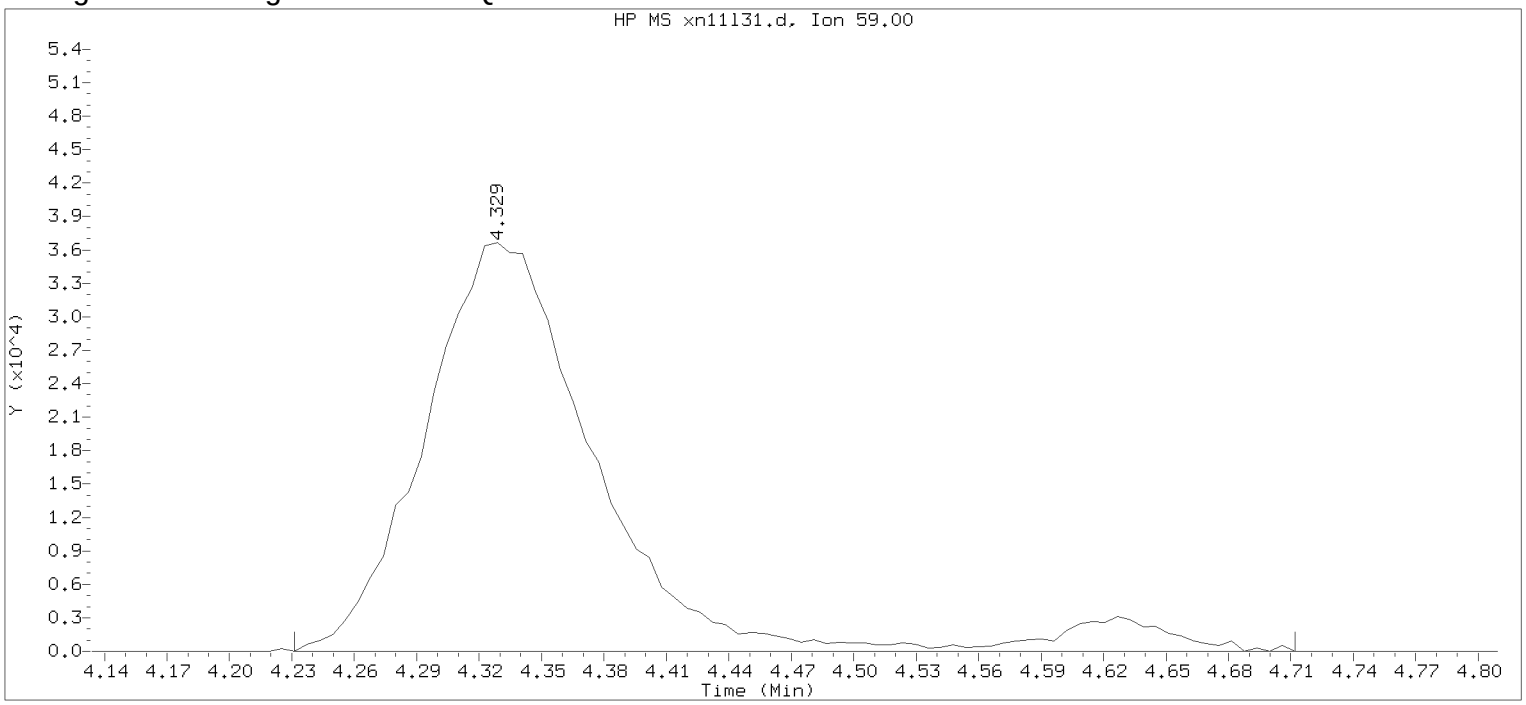
Analyst responsible for change: Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

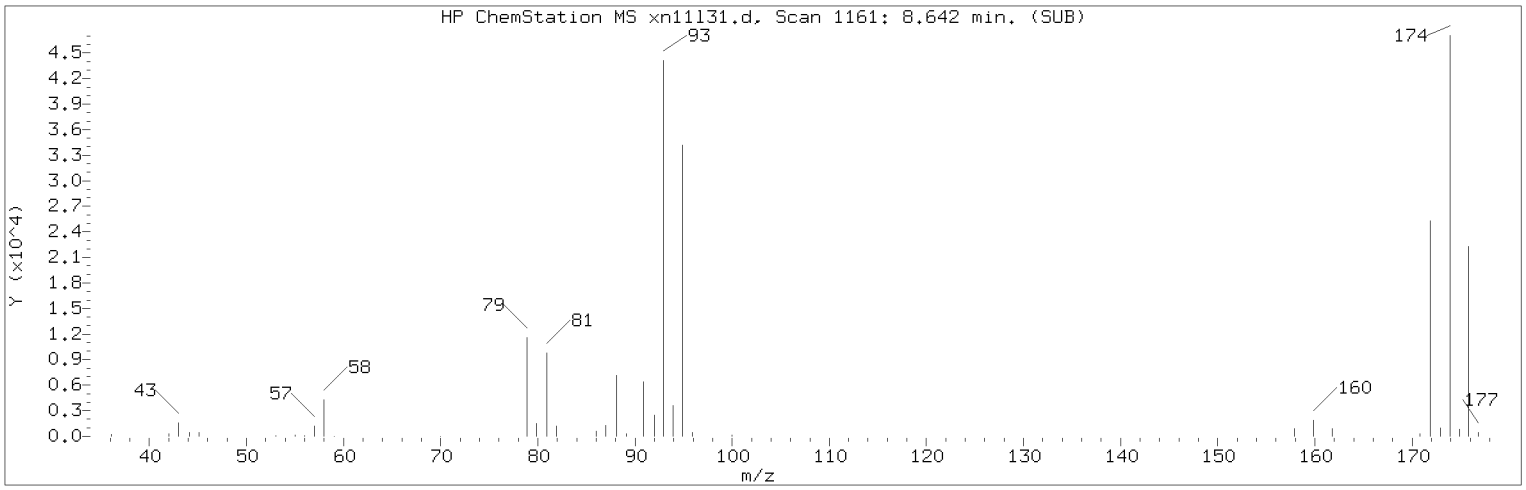
Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:29 Automation

Sample Name: LCSX48 Lab Sample ID: LCSX48

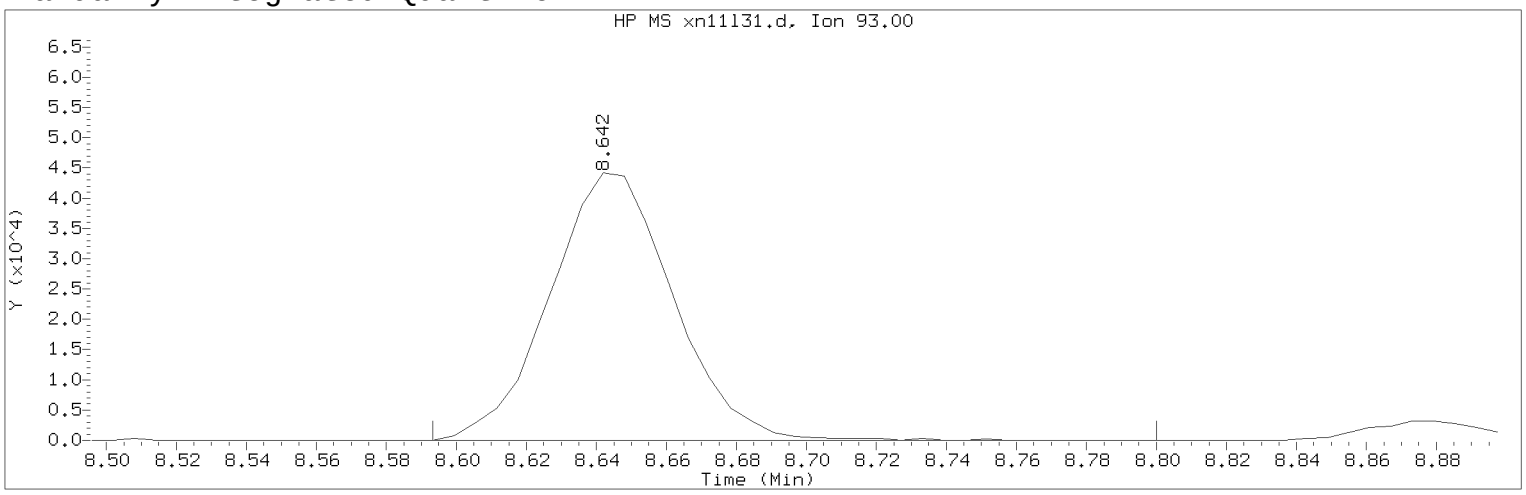
Compound Number : 32
Compound Name : t-Butyl alcohol
Scan Number : 452
Retention Time (minutes): 4.329
Quant Ion : 59.00
Area : 214590
On-column Amount (ng) : 215.6961
Integration start scan : 435 Integration stop scan: 514
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: SAS00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

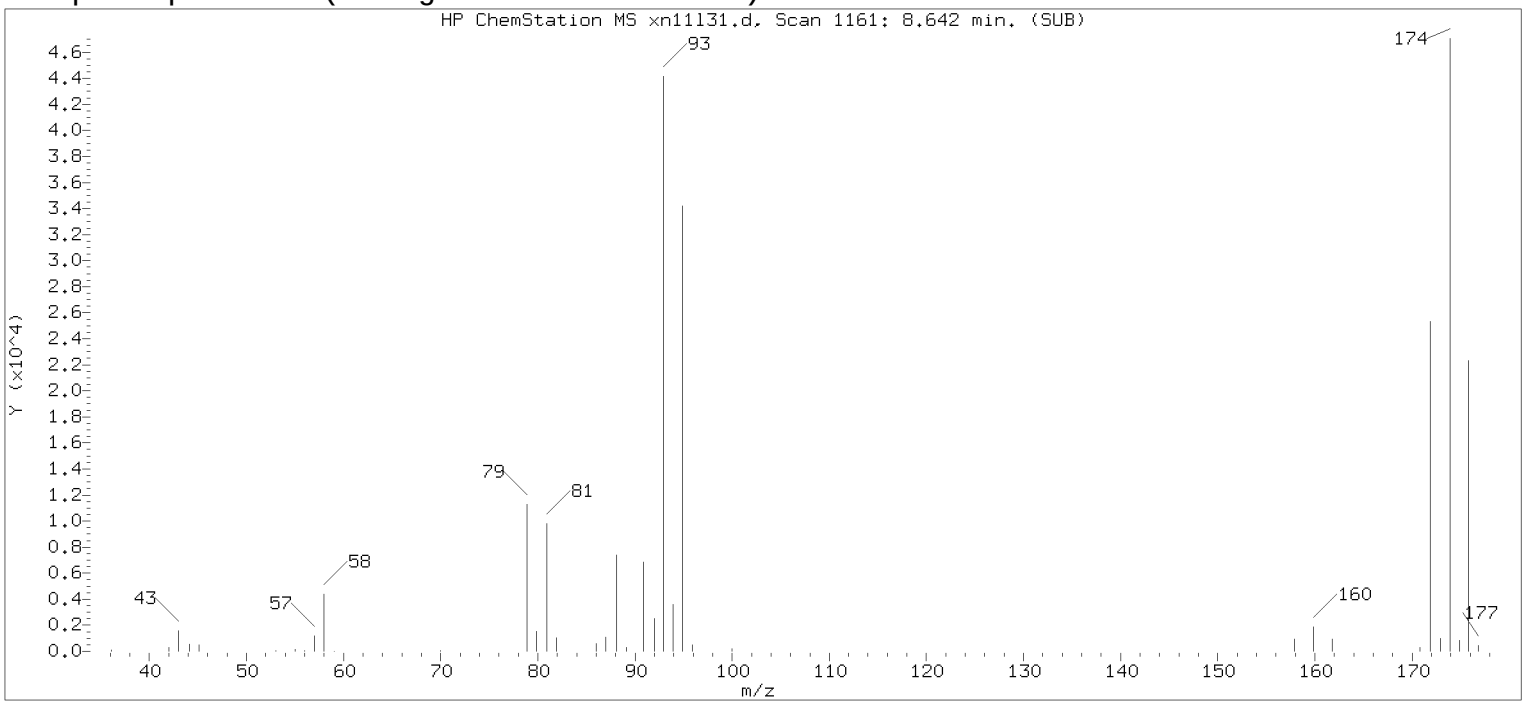
Compound Number : 80
Compound Name : Dibromomethane
Scan Number : 1161
Retention Time (minutes): 8.642
Quant Ion : 93.00
Area (flag) : 108047M
On-Column Amount (ng) : 17.8781
Integration start scan : 1152 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

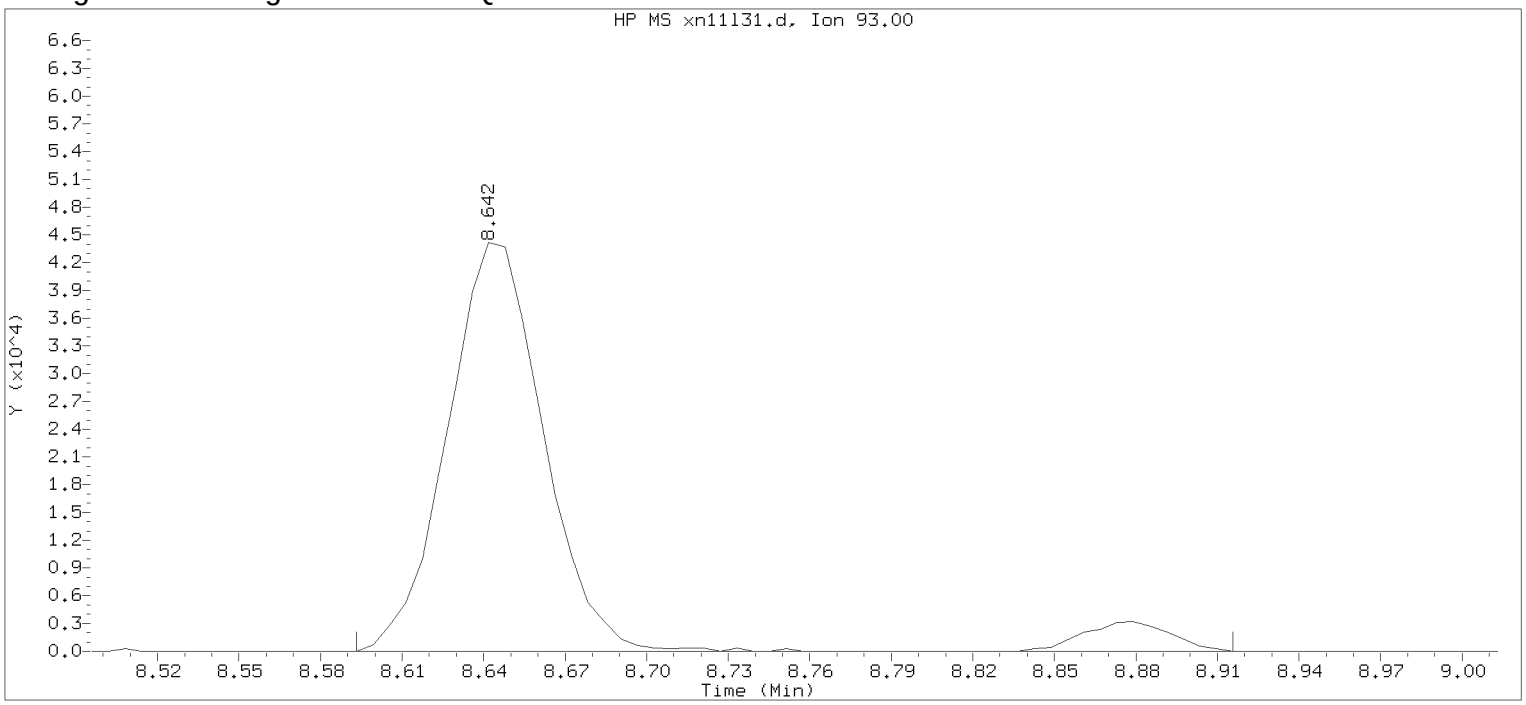
Analyst responsible for change: Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:29 Automation

Sample Name: LCSX48 Lab Sample ID: LCSX48

Compound Number : 80
Compound Name : Dibromomethane
Scan Number : 1161
Retention Time (minutes): 8.642
Quant Ion : 93.00
Area : 115235
On-column Amount (ng) : 19.0675
Integration start scan : 1152 Integration stop scan: 1205
Y at integration start : 0 Y at integration end: 0

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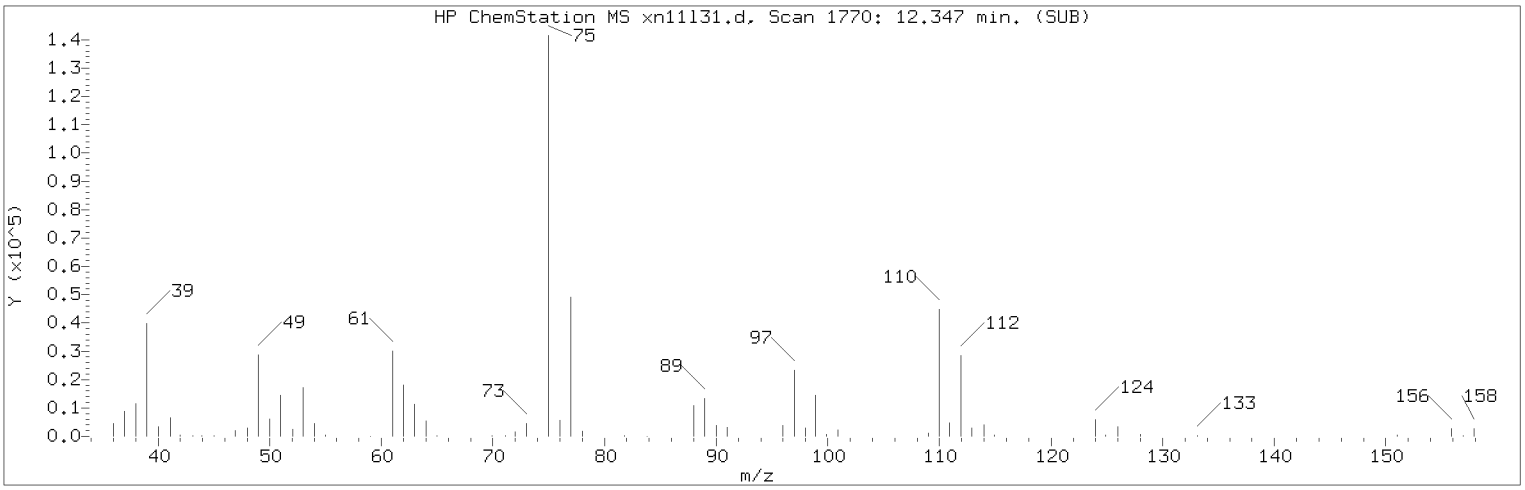
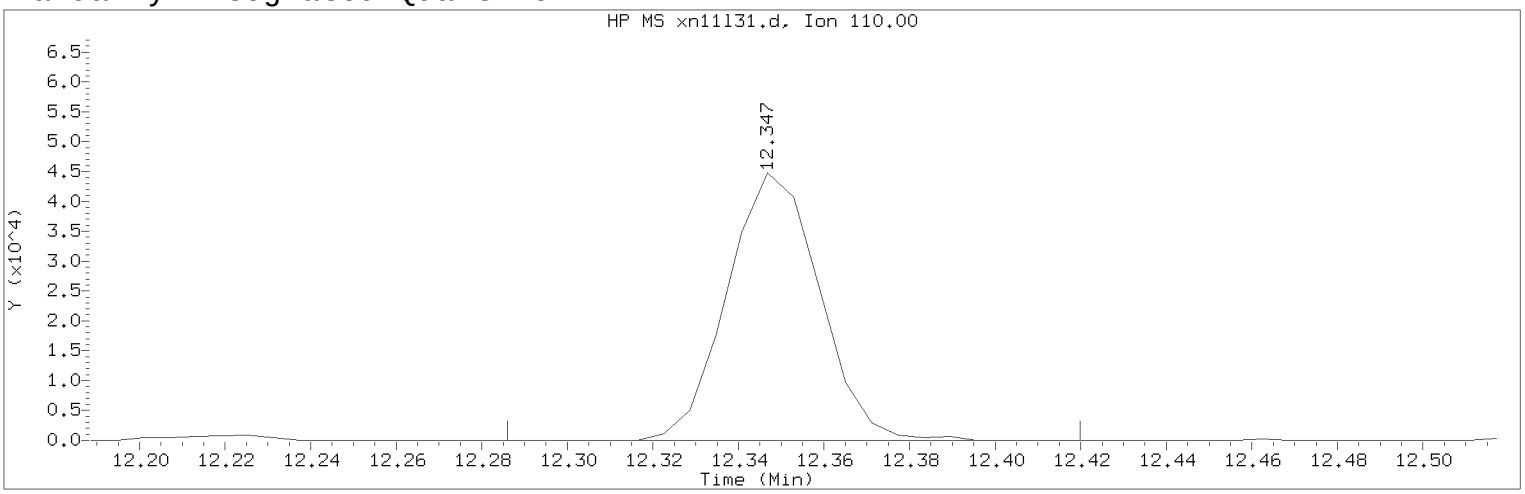
Target 3.5 esignature user ID: KVM04 Page 416 of 3494

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:58 sas00403

Sample Name: LCSX48 Lab Sample ID: LCSX48

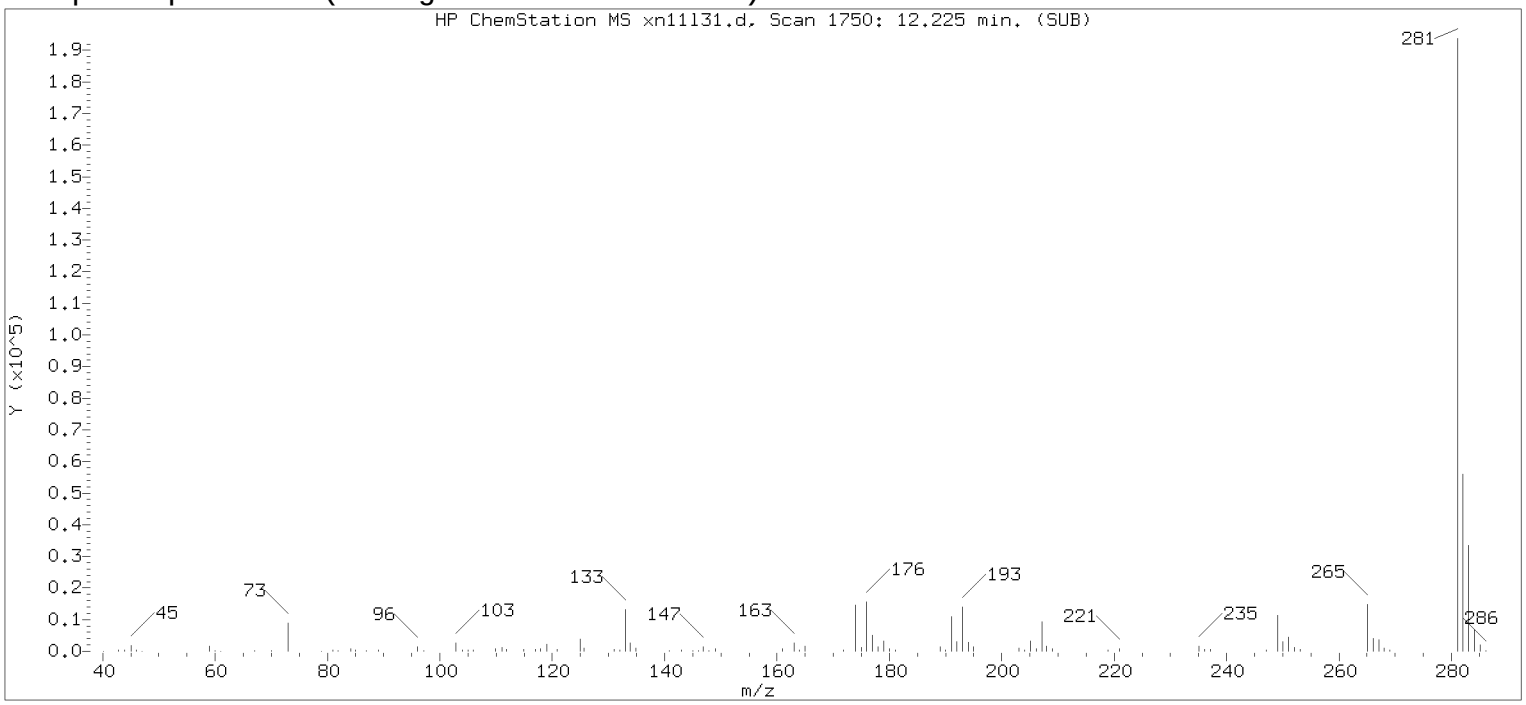
Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1770
Retention Time (minutes): 12.347
Quant Ion : 110.00
Area (flag) : 66922M
On-Column Amount (ng) : 17.7488
Integration start scan : 1759 Integration stop scan: 1781
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

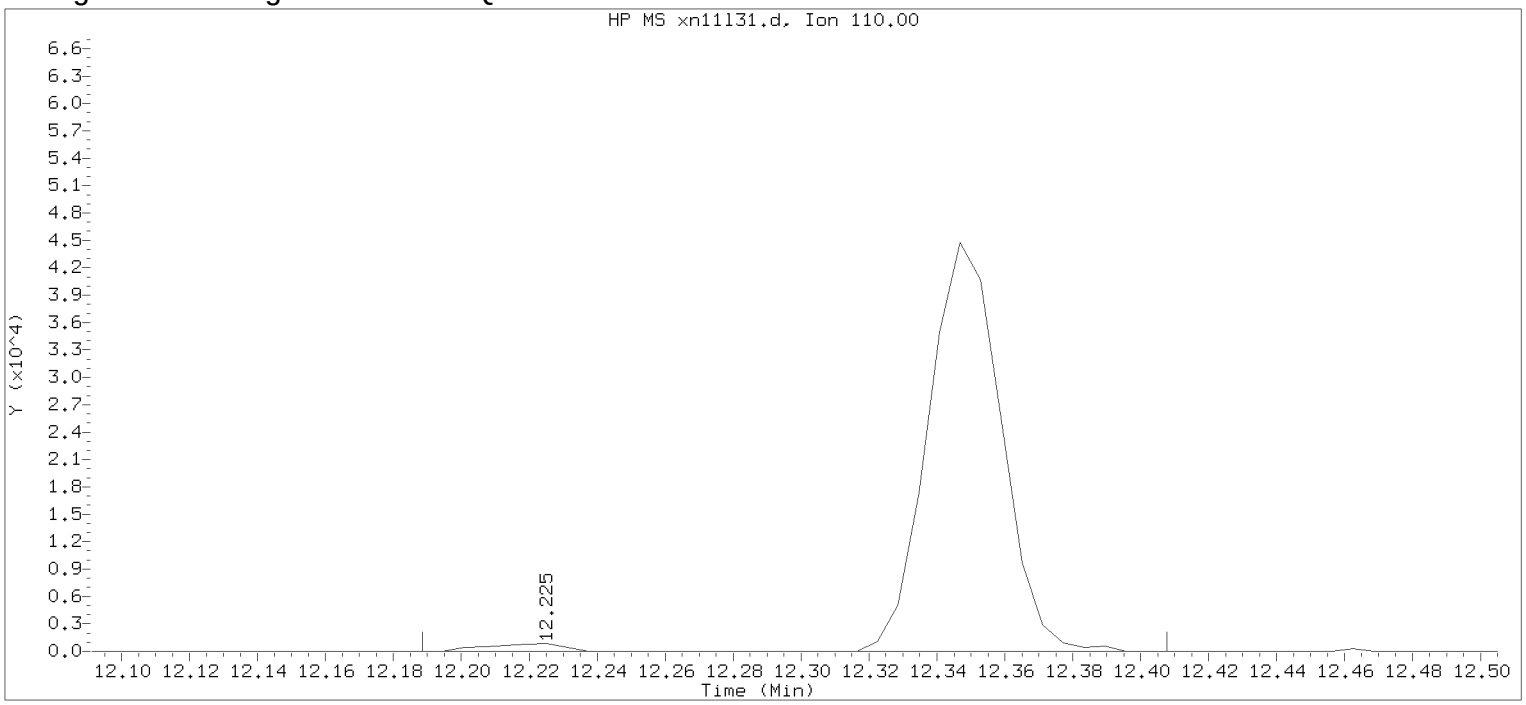
Analyst responsible for change: Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11.
Parallax ID: ahu01800

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09193.i/13nov11b.b/xn11l31.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:08 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:29 Automation

Sample Name: LCSX48 Lab Sample ID: LCSX48

Compound Number : 118
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1750
Retention Time (minutes): 12.225
Quant Ion : 110.00
Area : 68233
On-column Amount (ng) : 18.0965
Integration start scan : 1743 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:00.
Target 3.5 esignature user ID: KVM04 Page 418 of 3494

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l32.d Injection date and time: **12-NOV-2013 01:31**
Data file Sample Info. Line: LCDX48;LCDX48;2;3;LCSD;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
30) t-Butyl alcohol-d10	4.207(0.006)	432	65	231536 (-6)	250.00	
69) Fluorobenzene	7.711(0.006)	1008	96	1775605 (-2)	50.00	
101) Chlorobenzene-d5	11.197(0.000)	1581	117	1363495 (-2)	50.00	
135) 1,4-Dichlorobenzene-d4	13.083(0.000)	1891	152	805337 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
56) Dibromofluoromethane	(2)	6.817(-0.001)	113	452516	48.888	98%		50 - 141
62) 1,2-Dichloroethane-d4	(2)	7.285(-0.002)	102	104698	50.187	100%		54 - 135
88) Toluene-d8	(3)	9.737(0.000)	98	1785744	50.715	101%		52 - 141
114) 4-Bromofluorobenzene	(3)	12.201(0.000)	95	686546	49.193	98%		50 - 131

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
2) Dichlorodifluoromethane	(2)	1.980(0.000)	85	204240	14.673	14.67			2	5
4) Chloromethane	(2)	2.120(0.000)	50	191824	15.381	15.38			2	5
5) Vinyl Chloride	(2)	2.260(0.000)	62	190658	17.486	17.49			1	5
9) Bromomethane	(2)	2.570(0.001)	94	149869	17.907	17.91			2	5
10) Chloroethane	(2)	2.674(0.000)	64	120363	18.579	18.58			2	5
11) Dichlorofluoromethane	(2)	2.917(0.000)	67	356202	21.233	21.23			2	5
13) Trichlorofluoromethane	(2)	2.990(0.000)	101	288272	17.391	17.39			2	5
17) Freon 123a	(2)	3.306(0.000)	67	193806	19.775	19.77			2	5
18) Acrolein	(1)	3.416(-0.001)	56	223921	124.654	124.65			20	100
19) 1,1-Dichloroethene	(2)	3.550(0.000)	96	140632	19.484	19.48			1	5
20) Acetone	(2)	3.574(-0.001)	58	116183	126.173	126.17			7	20
22) Freon 113	(2)	3.586(-0.000)	101	143947	18.884	18.88			2	10
23) 2-Propanol	(1)	3.738(-0.004)	45	91125	134.045	134.04			60	100
24) Methyl Iodide	(2)	3.750(-0.000)	142	286703	19.256	19.26			3	5
25) Carbon Disulfide	(2)	3.860(-0.000)	76	486288	18.722	18.72			1	5
27) Methyl Acetate	(2)	3.988(0.000)	43	121280	17.577	17.58			2	5
29) Allyl Chloride	(2)	4.024(0.000)	41	220172	16.664	16.66			1	5
31) Methylene Chloride	(2)	4.213(-0.000)	84	169599	19.679	19.68			2	5
32) t-Butyl alcohol	(1)	4.334(-0.001)	59	225785	205.437	205.44			20	100
33) Acrylonitrile	(2)	4.541(0.000)	53	287539	81.012	81.01			4	20
34) Methyl Tertiary Butyl Ether	(2)	4.620(-0.000)	73	491778	20.723	20.72			0.5	5
35) trans-1,2-Dichloroethene	(2)	4.633(-0.000)	96	168372	20.022	20.02			1	5
38) n-Hexane	(2)	5.046(-0.000)	57	175727	16.794	16.79			1	5
40) 1,1-Dichloroethane	(2)	5.290(-0.000)	63	302614	19.029	19.03			1	5
41) di-Isopropyl ether	(2)	5.338(0.000)	45	507263	19.206	19.21			1	5
42) 2-Chloro-1,3-butadiene	(2)	5.387(0.000)	53	252365	17.964	17.96			1	5
44) Ethyl t-butyl ether	(2)	5.880(-0.000)	59	440360	23.386	23.39			1	5
45) 2-Butanone	(2)	6.086(-0.000)	43	583437	123.790	123.79			4	10
46) cis-1,2-Dichloroethene	(2)	6.117(-0.000)	96	183690	19.809	19.81			1	5
47) 1,2-Dichloroethene (Total)	(2)		96	352062	39.830	39.83			1	5

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:01. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l32.d Injection date and time: **12-NOV-2013 01:31**
Data file Sample Info. Line: LCDX48;LCDX48;2;3;LCSD;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
48) 2,2-Dichloropropane	(2)	6.141(-0.001)	77	263987	18.840	18.84			1	5
50) Propionitrile	(1)	6.172(-0.002)	54	173289	148.221	148.22			30	100
51) Methacrylonitrile	(2)	6.385(0.000)	67	531826	138.968	138.97			5	50
52) Bromochloromethane	(2)	6.452(-0.000)	128	97381	19.140	19.14			1	5
53) Tetrahydrofuran	(1)	6.458(-0.000)	71	106547	92.845	92.84			4	5
54) Chloroform	(2)	6.598(-0.000)	83	319528	19.598	19.60			1	5
57) 1,1,1-Trichloroethane	(2)	6.835(-0.000)	97	291233	18.414	18.41			1	5
58) Cyclohexane	(2)	6.926(0.000)	56	227596	17.469	17.47			1	5
59) 1,1-Dichloropropene	(2)	7.048(-0.001)	75	233158	19.555	19.56			1	5
60) Carbon Tetrachloride	(2)	7.042(0.000)	117	247264	19.163	19.16			1	5
61) Isobutyl Alcohol	(1)	7.169(-0.001)	41	181220	480.142	480.14			100	250
63) Benzene	(2)	7.309(-0.000)	78	672495	19.385	19.38			0.5	5
66) 1,2-Dichloroethane	(2)	7.382(0.000)	62	265913	18.333	18.33			1	5
67) t-Amyl methyl ether	(2)	7.498(-0.000)	73	400914	26.361	26.36			1	5
71) n-Heptane	(2)	7.723(-0.000)	43	202500	17.201	17.20			3	5
72) n-Butanol	(1)	8.058(-0.002)	56	273453	942.486	942.49			110	250
74) Trichloroethene	(2)	8.192(-0.000)	95	182205	19.901	19.90			1	5
75) Methylcyclohexane	(2)	8.508(-0.000)	83	248435	17.905	17.90			1	5
76) 1,2-Dichloropropane	(2)	8.532(-0.000)	63	172578	19.712	19.71			1	5
78) Methyl Methacrylate	(2)	8.611(-0.000)	69	121711	17.820	17.82			1	5
79) 1,4-Dioxane	(1)	8.623(-0.003)	88	50324	475.465	475.46			70	250
80) Dibromomethane	(2)	8.642(-0.000)	93	111841	18.338	18.34			1	5
83) Bromodichloromethane	(2)	8.873(-0.000)	83	237062	18.519	18.52			1	5
84) 2-Nitropropane	(1)	9.147(-0.004)	41	48804	16.982	16.98			3	10
86) cis-1,3-Dichloropropene	(2)	9.426(-0.000)	75	260211	18.516	18.52			1	5
87) 4-Methyl-2-pentanone	(2)	9.591(-0.000)	43	891069	85.374	85.37			3	10
89) Toluene	(3)	9.816(-0.000)	92	440294	20.078	20.08			1	5
90) trans-1,3-Dichloropropene	(3)	10.071(0.000)	75	268020	18.461	18.46			1	5
91) Ethyl Methacrylate	(3)	10.126(0.000)	69	228384	18.730	18.73			1	5
92) 1,1,2-Trichloroethane	(3)	10.278(0.000)	97	154804	19.488	19.49			1	5
94) Tetrachloroethene	(3)	10.363(-0.000)	166	206517	20.084	20.08			1	5
95) 1,3-Dichloropropane	(3)	10.442(0.000)	76	266069	18.884	18.88			1	5
97) 2-Hexanone	(3)	10.485(0.000)	43	670866	87.242	87.24			3	10
99) Dibromochloromethane	(3)	10.655(0.000)	129	188356	19.410	19.41			1	5
100) 1,2-Dibromoethane	(3)	10.771(0.000)	107	163870	18.966	18.97			1	5
102) Chlorobenzene	(3)	11.227(-0.000)	112	514542	20.007	20.01			1	5
103) 1,1,1,2-Tetrachloroethane	(3)	11.306(0.000)	131	185592	19.364	19.36			1	5
104) Ethylbenzene	(3)	11.306(0.000)	91	826305	19.713	19.71			1	5
105) m+p-Xylene	(3)	11.422(0.000)	106	674759	39.843	39.84			1	5
106) o-Xylene	(3)	11.756(-0.000)	106	316152	19.455	19.45			1	5
107) Xylene (Total)	(3)		106	990911	59.298	59.30			1	5
108) Styrene	(3)	11.769(0.000)	104	526483	19.142	19.14			1	5
109) Bromoform	(3)	11.933(0.000)	173	122338	19.701	19.70			1	5
110) Isopropylbenzene	(3)	12.054(-0.000)	105	830524	20.014	20.01			1	5
113) Cyclohexanone	(1)	12.134(-0.004)	55	143013	428.829	428.83			25	250
115) 1,1,2,2-Tetrachloroethane	(4)	12.298(0.000)	83	225314	18.906	18.91			1	5
116) Bromobenzene	(4)	12.322(-0.000)	156	233354	18.991	18.99			1	5
117) trans-1,4-Dichloro-2-butene	(4)	12.322(0.000)	53	394709	92.124	92.12			10	50
118) 1,2,3-Trichloropropane	(4)	12.346(0.000)	110	72603	18.842	18.84			1	5
119) n-Propylbenzene	(4)	12.383(-0.000)	91	1005097	20.029	20.03			1	5
121) 2-Chlorotoluene	(4)	12.462(-0.000)	126	215544	19.464	19.46			1	5
124) 1,3,5-Trimethylbenzene	(4)	12.523(0.000)	105	741387	19.782	19.78			1	5
125) 4-Chlorotoluene	(4)	12.553(0.000)	126	226979	19.456	19.46			1	5

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:01. Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09193.i/13nov11b.b/xn11l32.d Injection date and time: **12-NOV-2013 01:31**
Data file Sample Info. Line: LCDX48;LCDX48;2;3;LCSD;;;;xn11b05; Instrument ID: **HP09193.i** Batch: **X133152AA**
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Blank Data file reference: **/chem2/HP09193.i/13nov11b.b/xn11b05.d**

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: **8260S-2CE**
Calibration date and time (Last Method Edit): 12-NOV-2013 00:16
Mid Level Daily Calibration Standard Reference: **/chem2/HP09193.i/13nov11b.b/xn11c01.d**

Bottle Code: Matrix: SOIL Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * (Vt/Ws) VOA Prep Factor: **1.00**

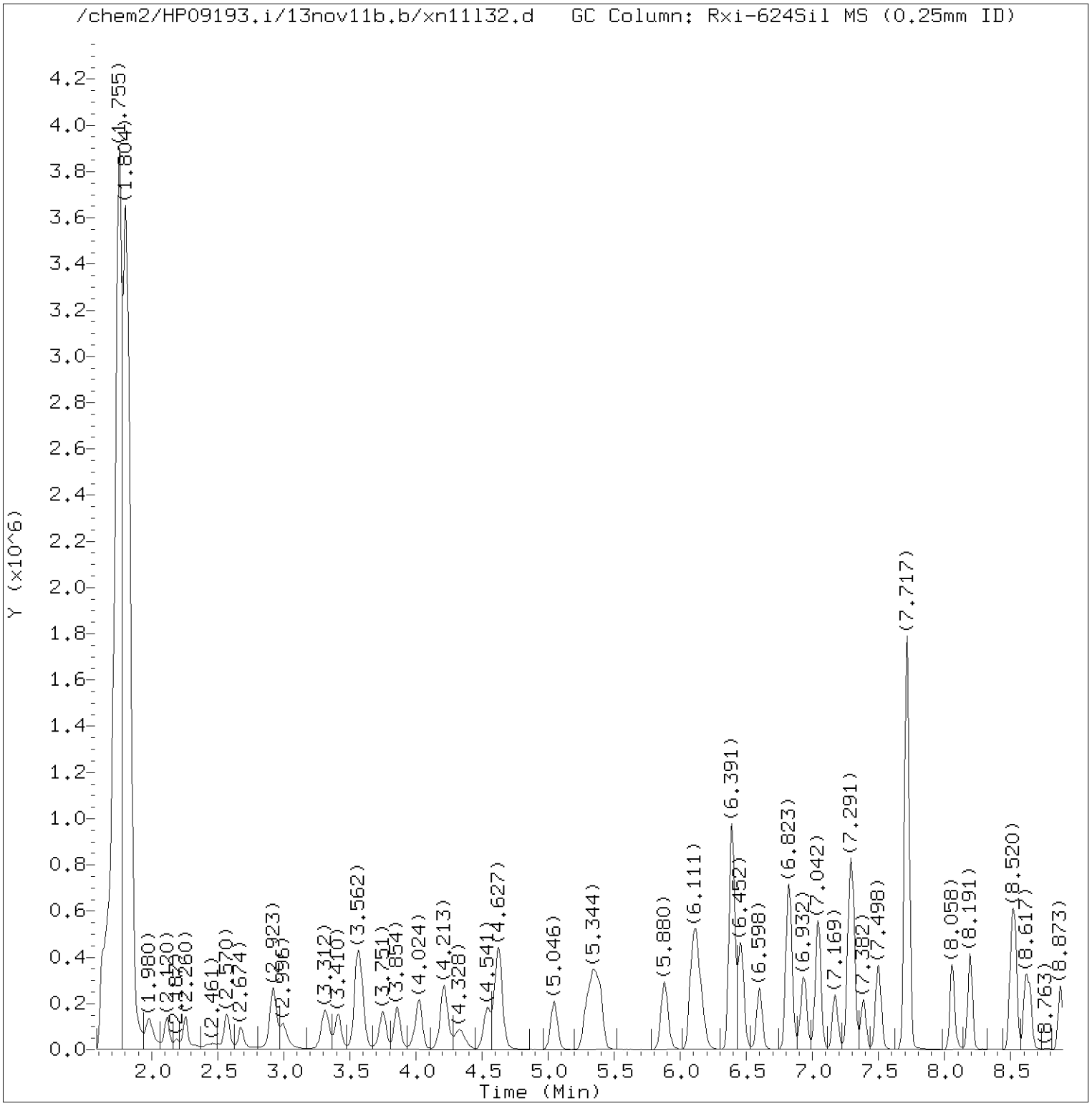
Volume Purged (Vt): 5 ml Sample Weight (Ws): 5 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
128) tert-Butylbenzene	(4)	12.766(0.000)	134	172195	19.110	19.11			1	5
129) Pentachloroethane	(4)	12.797(-0.000)	167	146928	18.971	18.97			1	5
130) 1,2,4-Trimethylbenzene	(4)	12.803(-0.000)	105	769427	19.828	19.83			1	5
131) sec-Butylbenzene	(4)	12.931(0.000)	105	925870	20.189	20.19			1	5
133) 1,3-Dichlorobenzene	(4)	13.028(0.000)	146	446388	19.453	19.45			1	5
134) p-Isopropyltoluene	(4)	13.034(0.000)	119	832567	19.488	19.49			1	5
136) 1,4-Dichlorobenzene	(4)	13.101(-0.000)	146	467873	19.587	19.59			1	5
137) 1,2,3-Trimethylbenzene	(4)	13.113(-0.000)	105	819676	19.705	19.71			1	5
138) Benzyl Chloride	(4)	13.180(-0.000)	126	91992	17.071	17.07			1	4
139) 1,3-Diethylbenzene	(4)	13.235(-0.000)	119	507961	19.267	19.27			1	5
140) 1,4-Diethylbenzene	(4)	13.308(-0.000)	119	536039	19.876	19.88			1	5
141) n-Butylbenzene	(4)	13.326(-0.000)	92	416997	19.086	19.09			1	5
142) 1,2-Dichlorobenzene	(4)	13.362(-0.000)	146	440263	19.519	19.52			1	5
143) 1,2-Diethylbenzene	(4)	13.381(-0.000)	119	442729	19.700	19.70			1	5
146) 1,2-Dibromo-3-chloropropane	(4)	13.904(-0.000)	75	50441	17.715	17.72			2	5
147) 1,3,5-Trichlorobenzene	(4)	14.032(-0.000)	180	355143	18.835	18.83			1	5
148) 1,2,4-Trichlorobenzene	(4)	14.458(-0.000)	180	316715	18.139	18.14			1	5
149) Hexachlorobutadiene	(4)	14.537(-0.000)	225	177470	18.835	18.83			2	5
150) Naphthalene	(4)	14.640(-0.000)	128	796824	18.861	18.86			1	5
151) 1,2,3-Trichlorobenzene	(4)	14.780(-0.000)	180	315253	18.203	18.20			1	5
152) 2-Methylnaphthalene	(4)	15.413(-0.000)	142	482384	17.014	17.01			2	5

Total number of targets = 104

Digitally signed by Stephanie A. Selis on 11/12/2013 at 02:01. Target 3.5 esignature user ID: sas00403

Secondary review performed and digitally signed by Abraham H. Uysal on 11/12/2013 at 14:11. Parallax ID: ahu01800



Total Ion Chromatogram (TIC)

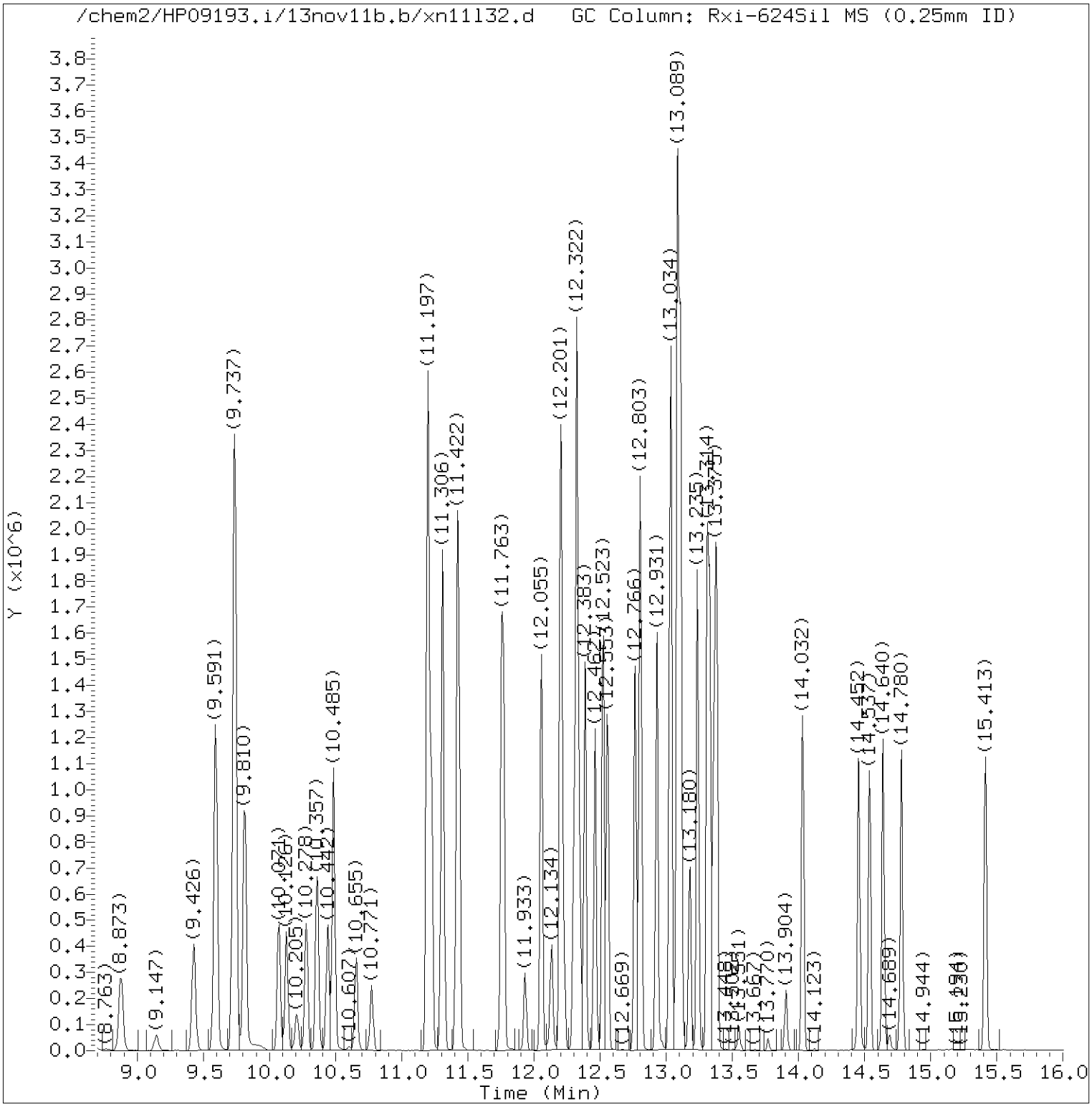
Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l32.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:31 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Sample Name: LCDX48 Lab Sample ID: LCDX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:01.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l32.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:31 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Sample Name: LCDX48 Lab Sample ID: LCDX48

Digitally signed by Stephanie A. Selis
on 11/12/2013 at 02:01.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l32.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:31 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Sample Name: LCDX48 Lab Sample ID: LCDX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(2)	1.980	85	204240	14.673
4) Chloromethane	(2)	2.120	50	191824	15.381
5) Vinyl Chloride	(2)	2.260	62	190658	17.486
9) Bromomethane	(2)	2.570	94	149869	17.907
10) Chloroethane	(2)	2.674	64	120363	18.579
11) Dichlorofluoromethane	(2)	2.917	67	356202	21.233
13) Trichlorofluoromethane	(2)	2.990	101	288272	17.391
17) Freon 123a	(2)	3.306	67	193806	19.775
18) Acrolein	(1)	3.416	56	223921	124.654
19) 1,1-Dichloroethene	(2)	3.550	96	140632	19.484
20) Acetone	(2)	3.574	58	116183	126.173
22) Freon 113	(2)	3.586	101	143947	18.884
23) 2-Propanol	(1)	3.738	45	91125	134.045
24) Methyl Iodide	(2)	3.751	142	286703	19.256
25) Carbon Disulfide	(2)	3.860	76	486288	18.722
27) Methyl Acetate	(2)	3.988	43	121280	17.577
29) Allyl Chloride	(2)	4.024	41	220172	16.664
30)*t-Butyl alcohol-d10	(1)	4.207	65	231536	250.000
31) Methylene Chloride	(2)	4.213	84	169599	19.679
32) t-Butyl alcohol	(1)	4.335	59	225785	205.437
33) Acrylonitrile	(2)	4.541	53	287539	81.012
34) Methyl Tertiary Butyl Ether	(2)	4.620	73	491778	20.723
35) trans-1,2-Dichloroethene	(2)	4.633	96	168372	20.022
38) n-Hexane	(2)	5.046	57	175727	16.794
40) 1,1-Dichloroethane	(2)	5.290	63	302614	19.029
41) di-Isopropyl ether	(2)	5.338	45	507263	19.206
42) 2-Chloro-1,3-butadiene	(2)	5.387	53	252365	17.964
44) Ethyl t-butyl ether	(2)	5.880	59	440360	23.386
45) 2-Butanone	(2)	6.087	43	583437	123.790
47) 1,2-Dichloroethene (Total)	(2)		96	352062	39.830
46) cis-1,2-Dichloroethene	(2)	6.117	96	183690	19.809
48) 2,2-Dichloropropane	(2)	6.141	77	263987	18.840
50) Propionitrile	(1)	6.172	54	173289	148.221
51) Methacrylonitrile	(2)	6.385	67	531826	138.968
52) Bromochloromethane	(2)	6.452	128	97381	19.140
53) Tetrahydrofuran	(1)	6.458	71	106547	92.845
54) Chloroform	(2)	6.598	83	319528	19.598
56)$Dibromofluoromethane	(2)	6.817	113	452516	48.888

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 02:01.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l32.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:31 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Sample Name: LCDX48 Lab Sample ID: LCDX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
57) 1,1,1-Trichloroethane	(2)	6.835	97	291233	18.414
58) Cyclohexane	(2)	6.926	56	227596	17.469
60) Carbon Tetrachloride	(2)	7.042	117	247264	19.163
59) 1,1-Dichloropropene	(2)	7.048	75	233158	19.555
61) Isobutyl Alcohol	(1)	7.169	41	181220	480.142
62)$1,2-Dichloroethane-d4	(2)	7.285	102	104698	50.187
63) Benzene	(2)	7.309	78	672495	19.385
66) 1,2-Dichloroethane	(2)	7.382	62	265913	18.333
67) t-Amyl methyl ether	(2)	7.498	73	400914	26.361
69)*Fluorobenzene	(2)	7.711	96	1775605	50.000
71) n-Heptane	(2)	7.723	43	202500	17.201
72) n-Butanol	(1)	8.058	56	273453	942.486
74) Trichloroethene	(2)	8.191	95	182205	19.901
75) Methylcyclohexane	(2)	8.508	83	248435	17.905
76) 1,2-Dichloropropane	(2)	8.532	63	172578	19.712
78) Methyl Methacrylate	(2)	8.611	69	121711	17.820
79) 1,4-Dioxane	(1)	8.623	88	50324	475.465
80) Dibromomethane	(2)	8.642	93	111841	18.338
83) Bromodichloromethane	(2)	8.873	83	237062	18.519
84) 2-Nitropropane	(1)	9.147	41	48804	16.982
86) cis-1,3-Dichloropropene	(2)	9.426	75	260211	18.516
87) 4-Methyl-2-pentanone	(2)	9.591	43	891069	85.374
88)$Toluene-d8	(3)	9.737	98	1785744	50.715
89) Toluene	(3)	9.816	92	440294	20.078
90) trans-1,3-Dichloropropene	(3)	10.071	75	268020	18.461
91) Ethyl Methacrylate	(3)	10.126	69	228384	18.730
92) 1,1,2-Trichloroethane	(3)	10.278	97	154804	19.488
94) Tetrachloroethene	(3)	10.363	166	206517	20.084
95) 1,3-Dichloropropane	(3)	10.442	76	266069	18.884
97) 2-Hexanone	(3)	10.485	43	670866	87.242
99) Dibromochloromethane	(3)	10.655	129	188356	19.410
100) 1,2-Dibromoethane	(3)	10.771	107	163870	18.966
101)*Chlorobenzene-d5	(3)	11.197	117	1363495	50.000
102) Chlorobenzene	(3)	11.227	112	514542	20.007
103) 1,1,1,2-Tetrachloroethane	(3)	11.306	131	185592	19.364
104) Ethylbenzene	(3)	11.306	91	826305	19.713
105) m+p-Xylene	(3)	11.422	106	674759	39.843
107) Xylene (Total)	(3)		106	990911	59.298

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 02:01.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP09193.i/13nov11b.b/xn11l32.d Instrument ID: HP09193.i
Injection date and time: 12-NOV-2013 01:31 Analyst ID: SAS00403

Method used: /chem2/HP09193.i/13nov11b.b/na8260b.m Sublist used: 8260S-2CE
Calibration date and time: 12-NOV-2013 00:16
Date, time and analyst ID of latest file update: 12-Nov-2013 01:51 Automation

Sample Name: LCDX48 Lab Sample ID: LCDX48

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
106) o-Xylene	(3)	11.756	106	316152	19.455
108) Styrene	(3)	11.769	104	526483	19.142
109) Bromoform	(3)	11.933	173	122338	19.701
110) Isopropylbenzene	(3)	12.055	105	830524	20.014
113) Cyclohexanone	(1)	12.134	55	143013	428.829
114)$4-Bromofluorobenzene	(3)	12.201	95	686546	49.193
115) 1,1,2,2-Tetrachloroethane	(4)	12.298	83	225314	18.906
116) Bromobenzene	(4)	12.322	156	233354	18.991
117) trans-1,4-Dichloro-2-butene	(4)	12.322	53	394709	92.124
118) 1,2,3-Trichloropropane	(4)	12.347	110	72603	18.842
119) n-Propylbenzene	(4)	12.383	91	1005097	20.029
121) 2-Chlorotoluene	(4)	12.462	126	215544	19.464
124) 1,3,5-Trimethylbenzene	(4)	12.523	105	741387	19.782
125) 4-Chlorotoluene	(4)	12.553	126	226979	19.456
128) tert-Butylbenzene	(4)	12.766	134	172195	19.110
129) Pentachloroethane	(4)	12.797	167	146928	18.971
130) 1,2,4-Trimethylbenzene	(4)	12.803	105	769427	19.828
131) sec-Butylbenzene	(4)	12.931	105	925870	20.189
133) 1,3-Dichlorobenzene	(4)	13.028	146	446388	19.453
134) p-Isopropyltoluene	(4)	13.034	119	832567	19.488
135)*1,4-Dichlorobenzene-d4	(4)	13.083	152	805337	50.000
136) 1,4-Dichlorobenzene	(4)	13.101	146	467873	19.587
137) 1,2,3-Trimethylbenzene	(4)	13.113	105	819676	19.705
138) Benzyl Chloride	(4)	13.180	126	91992	17.071
139) 1,3-Diethylbenzene	(4)	13.235	119	507961	19.267
140) 1,4-Diethylbenzene	(4)	13.308	119	536039	19.876
141) n-Butylbenzene	(4)	13.326	92	416997	19.086
142) 1,2-Dichlorobenzene	(4)	13.363	146	440263	19.519
143) 1,2-Diethylbenzene	(4)	13.381	119	442729	19.700
146) 1,2-Dibromo-3-chloropropane	(4)	13.904	75	50441	17.715
147) 1,3,5-Trichlorobenzene	(4)	14.032	180	355143	18.835
148) 1,2,4-Trichlorobenzene	(4)	14.458	180	316715	18.139
149) Hexachlorobutadiene	(4)	14.537	225	177470	18.835
150) Naphthalene	(4)	14.640	128	796824	18.861
151) 1,2,3-Trichlorobenzene	(4)	14.780	180	315253	18.203
152) 2-Methylnaphthalene	(4)	15.413	142	482384	17.014

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 02:01.
Target 3.5 esignature user ID: sas00403

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s31.d Injection date and time: **07-NOV-2013 10:36**
Data file Sample Info. Line: LCSY34;LCSY34;1;3;LCS;;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.018(0.006)	195	65	343515 (-8)	250.00	
66) Fluorobenzene	4.092(0.000)	536	96	1021402 (-1)	50.00	
100) Chlorobenzene-d5	7.274(0.006)	1059	117	776682 (-3)	50.00	
131) 1,4-Dichlorobenzene-d4	9.312(0.006)	1394	152	467739 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	3.453(0.000)	113	248220	52.056	104%		80 - 116
57) 1,2-Dichloroethane-d4	(2)	3.757(0.000)	102	63060	51.017	102%		77 - 113
83) Toluene-d8	(3)	5.710(-0.001)	98	1021120	49.394	99%		80 - 113
114) 4-Bromofluorobenzene	(3)	8.393(0.000)	95	385275M	48.974	98%		78 - 113

M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ (in sample)
3) Dichlorodifluoromethane	(2)	1.002(-0.001)	85	187792	22.890	22.89			2	5
4) Chloromethane	(2)	1.038(0.001)	50	187484	18.846	18.85			1	5
6) Vinyl Chloride	(2)	1.105(0.002)	62	164278	19.337	19.34			1	5
8) Bromomethane	(2)	1.251(0.001)	94	99126	17.989	17.99			1	5
9) Chloroethane	(2)	1.300(0.000)	64	76395	15.604	15.60			1	5
10) Dichlorofluoromethane	(2)	1.403(0.001)	67	258205	21.839	21.84			2	5
12) Trichlorofluoromethane	(2)	1.476(0.000)	101	215824	22.038	22.04			2	5
14) Ethyl ether	(2)	1.567(-0.001)	59	80634	12.502	12.50			2	5
15) Freon 123a	(2)	1.573(0.000)	67	149422	20.277	20.28			2	5
16) Acrolein	(1)	1.634(-0.002)	56	308448	102.846	102.85			40	100
17) 1,1-Dichloroethene	(2)	1.707(0.000)	96	109394	21.288	21.29			0.8	5
18) Acetone	(2)	1.726(-0.001)	58	178176	127.886	127.89			6	20
19) Freon 113	(2)	1.738(-0.001)	101	112738	20.956	20.96			2	10
21) 2-Propanol	(1)	1.798(-0.002)	45	152299	139.608	139.61			50	100
22) Methyl Iodide	(2)	1.798(0.000)	142	222194	22.658	22.66			1	5
23) Carbon Disulfide	(2)	1.847(0.000)	76	318912M	17.742	17.74			1	5
25) Allyl Chloride	(2)	1.914(0.000)	41	171670	17.192	17.19			1	5
27) Methyl Acetate	(2)	1.926(-0.001)	43	158486	19.862	19.86			1	5
28) Methylene Chloride	(2)	1.999(-0.001)	84	126642	20.164	20.16			2	5
30) t-Butyl alcohol	(1)	2.078(-0.006)	59	417478	194.566	194.57			10	80
31) Acrylonitrile	(2)	2.158(-0.001)	53	436735	82.149	82.15			4	20
32) trans-1,2-Dichloroethene	(2)	2.188(0.000)	96	123480	20.639	20.64			0.8	5
33) Methyl Tertiary Butyl Ether	(2)	2.206(-0.001)	73	445553	20.533	20.53			0.5	5
34) n-Hexane	(2)	2.401(0.000)	57	178598	17.753	17.75			2	5
36) 1,1-Dichloroethane	(2)	2.510(0.000)	63	239039	21.020	21.02			1	5
38) di-Isopropyl ether	(2)	2.596(-0.001)	45	444091	18.715	18.72			0.8	5
39) 2-Chloro-1,3-butadiene	(2)	2.596(0.000)	53	200662	19.579	19.58			1	5
40) Ethyl t-butyl ether	(2)	2.912(0.000)	59	416181	18.763	18.76			0.8	5
42) cis-1,2-Dichloroethene	(2)	3.015(0.000)	96	139054	20.622	20.62			0.8	5
43) 1,2-Dichloroethene (Total)	(2)		96	262534	41.261	41.26			0.8	5

M = Compound was manually integrated.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s31.d Injection date and time: **07-NOV-2013 10:36**
Data file Sample Info. Line: LCSY34;LCSY34;1;3;LCS;;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.003(0.002)	43	1001418	128.732	128.73			3	10
45) 2,2-Dichloropropane	(2)	3.027(0.000)	77	174522	19.297	19.30			1	5
47) Propionitrile	(1)	3.070(-0.007)	54	294113	125.778	125.78			30	100
48) Methacrylonitrile	(2)	3.210(-0.001)	67	683801	132.920	132.92			10	50
49) Bromochloromethane	(2)	3.228(0.000)	128	75583	21.944	21.94			1	5
50) Tetrahydrofuran	(1)	3.271(-0.004)	71	170892	79.390	79.39			4	10
51) Chloroform	(2)	3.307(0.000)	83	225262	21.073	21.07			0.8	5
53) 1,1,1-Trichloroethane	(2)	3.484(-0.000)	97	210950	20.398	20.40			0.8	5
54) Cyclohexane	(2)	3.538(-0.000)	56	219141	17.979	17.98			2	5
55) 1,1-Dichloropropene	(2)	3.630(0.000)	75	173437	20.614	20.61			1	5
56) Carbon Tetrachloride	(2)	3.636(0.001)	117	164752	21.126	21.13			1	5
58) Isobutyl Alcohol	(1)	3.764(-0.005)	41	302296	410.770	410.77			100	250
60) Benzene	(2)	3.818(-0.000)	78	521210	19.852	19.85			0.5	5
61) 1,2-Dichloroethane	(2)	3.830(-0.000)	62	201680	21.611	21.61			1	5
65) t-Amyl methyl ether	(2)	3.958(0.000)	73	387078	18.422	18.42			0.8	5
67) n-Heptane	(2)	4.110(0.001)	43	214417	17.403	17.40			2	5
69) n-Butanol	(1)	4.420(-0.006)	56	492944	818.166	818.17			100	250
71) Trichloroethene	(2)	4.451(-0.000)	95	135667	20.669	20.67			1	5
72) Methylcyclohexane	(2)	4.658(-0.000)	83	237845	21.001	21.00			1	5
73) 1,2-Dichloropropane	(2)	4.664(-0.000)	63	134738	19.209	19.21			1	5
74) Dibromomethane	(2)	4.780(-0.000)	93	90113	19.352	19.35			1	5
75) 1,4-Dioxane	(1)	4.810(-0.007)	88	63833	490.374	490.37			70	250
76) Methyl Methacrylate	(2)	4.828(-0.000)	69	132976	16.125	16.13			1	5
78) Bromodichloromethane	(2)	4.956(-0.000)	83	154089	18.191	18.19			1	5
79) 2-Nitropropane	(2)	5.187(-0.000)	41	51611	14.401	14.40			2	10
80) 2-Chloroethyl Vinyl Ether	(2)	5.297(-0.000)	63	102779	16.765	16.77			2	10
81) cis-1,3-Dichloropropene	(2)	5.430(-0.000)	75	203612	18.766	18.77			1	5
82) 4-Methyl-2-pentanone	(2)	5.613(0.001)	43	1240127	84.581	84.58			3	10
88) Toluene	(3)	5.777(0.000)	92	334857	19.401	19.40			0.7	5
89) trans-1,3-Dichloropropene	(3)	6.033(-0.000)	75	181418	16.423	16.42			1	5
90) 1,3-Dichloropropene (total)	(3)		100	385030	35.189	35.19			1	5
91) Ethyl Methacrylate	(3)	6.179(0.000)	69	215652	15.867	15.87			1	5
92) 1,1,2-Trichloroethane	(3)	6.221(-0.000)	97	131796	18.765	18.76			0.8	5
93) Tetrachloroethene	(3)	6.367(0.000)	166	167063	22.283	22.28			0.8	5
94) 1,3-Dichloropropane	(3)	6.398(-0.000)	76	222736	18.384	18.38			1	5
96) 2-Hexanone	(3)	6.532(-0.000)	43	956708	76.665	76.67			3	10
97) Dibromochloromethane	(3)	6.635(0.000)	129	130338	18.337	18.34			1	5
99) 1,2-Dibromoethane	(3)	6.738(0.000)	107	145173	18.918	18.92			1	5
102) Chlorobenzene	(3)	7.304(-0.000)	112	389759	20.298	20.30			0.8	5
103) 1,1,1,2-Tetrachloroethane	(3)	7.408(-0.000)	131	127736	19.439	19.44			1	5
104) Ethylbenzene	(3)	7.444(-0.000)	91	648663	19.248	19.25			0.8	5
106) m+p-Xylene	(3)	7.572(-0.000)	106	522057	39.168	39.17			0.8	5
107) o-Xylene	(3)	7.943(-0.000)	106	251379	19.134	19.13			0.8	5
108) Xylene (Total)	(3)		106	773436	58.302	58.30			0.8	5
109) Styrene	(3)	7.955(-0.000)	104	415762	18.652	18.65			1	5
110) Bromoform	(3)	8.095(-0.000)	173	95861	17.332	17.33			1	5
111) Isopropylbenzene	(3)	8.284(-0.000)	105	674064	19.990	19.99			1	5
112) Cyclohexanone	(1)	8.326(-0.009)	55	292181	462.138	462.14			55	250
115) Bromobenzene	(4)	8.509(-0.000)	156	188862	19.552	19.55			1	5
116) 1,1,2,2-Tetrachloroethane	(4)	8.539(-0.000)	83	219450	16.365	16.36			1	5
117) 1,2,3-Trichloropropane	(4)	8.557(0.000)	110	72065	17.194	17.19			1	5
118) trans-1,4-Dichloro-2-butene	(4)	8.588(-0.000)	53	245976	51.499	51.50			15	50
119) n-Propylbenzene	(4)	8.630(0.000)	91	790931	18.781	18.78			1	5
120) 2-Chlorotoluene	(4)	8.679(0.000)	126	166436	18.864	18.86			1	5

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09355.i/13nov07a.b/yn07s31.d Injection date and time: **07-NOV-2013 10:36**
Data file Sample Info. Line: LCSY34;LCSY34;1;3;LCS;;;;yn07b05; Instrument ID: **HP09355.i** Batch: **Y133112AA**
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Blank Data file reference: **/chem2/HP09355.i/13nov07a.b/yn07b05.d**

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: **8260W-BNC**
Calibration date and time (Last Method Edit): 07-NOV-2013 12:24
Mid Level Daily Calibration Standard Reference: **/chem2/HP09355.i/13nov07a.b/yn07c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)	8.770(0.000)	126	170930	18.481	18.48			1	5
122) 1,3,5-Trimethylbenzene	(4)	8.782(0.000)	105	591570	18.799	18.80			1	5
124) tert-Butylbenzene	(4)	9.032(0.000)	134	135694	19.117	19.12			1	5
125) Pentachloroethane	(4)	9.032(-0.000)	167	110720	18.500	18.50			1	5
126) 1,2,4-Trimethylbenzene	(4)	9.068(0.000)	105	607156	18.920	18.92			1	5
127) sec-Butylbenzene	(4)	9.202(-0.000)	105	747739	19.147	19.15			1	5
129) 1,3-Dichlorobenzene	(4)	9.263(-0.000)	146	359118	20.032	20.03			1	5
130) p-Isopropyltoluene	(4)	9.318(-0.000)	119	680202	19.103	19.10			1	5
133) 1,4-Dichlorobenzene	(4)	9.330(-0.000)	146	374518	19.821	19.82			1	5
134) 1,2,3-Trimethylbenzene	(4)	9.385(-0.000)	105	632065	19.083	19.08			1	5
135) Benzyl Chloride	(4)	9.433(-0.000)	91	377817	14.175	14.17			1	5
136) 1,3-Diethylbenzene	(4)	9.543(-0.000)	119	404325	18.824	18.82			1	5
137) 1,4-Diethylbenzene	(4)	9.598(-0.000)	119	439026	20.043	20.04			1	5
138) 1,2-Dichlorobenzene	(4)	9.598(-0.000)	146	357517	20.027	20.03			1	5
139) n-Butylbenzene	(4)	9.616(-0.000)	92	328885	18.445	18.44			1	5
140) 1,2-Diethylbenzene	(4)	9.683(-0.000)	119	346444	19.484	19.48			1	5
141) Diethylbenzene (total)	(4)		100	1189795	58.351	58.35			1	5
142) 1,2-Dibromo-3-chloropropane	(4)	10.145(-0.000)	75	53828	15.760	15.76			2	5
144) 1,3,5-Trichlorobenzene	(4)	10.297(-0.000)	180	306370	20.654	20.65			1	5
146) 1,2,4-Trichlorobenzene	(4)	10.711(-0.000)	180	288412	20.351	20.35			1	5
147) Hexachlorobutadiene	(4)	10.833(-0.000)	225	144191	20.494	20.49			2	5
148) Naphthalene	(4)	10.863(-0.000)	128	866210	19.126	19.13			1	5
149) 1,2,3-Trichlorobenzene	(4)	11.021(-0.000)	180	282113	20.627	20.63			1	5
150) 2-Methylnaphthalene	(4)	11.587(-0.000)	142	514710	18.336	18.34			2	5

Total number of targets = 108

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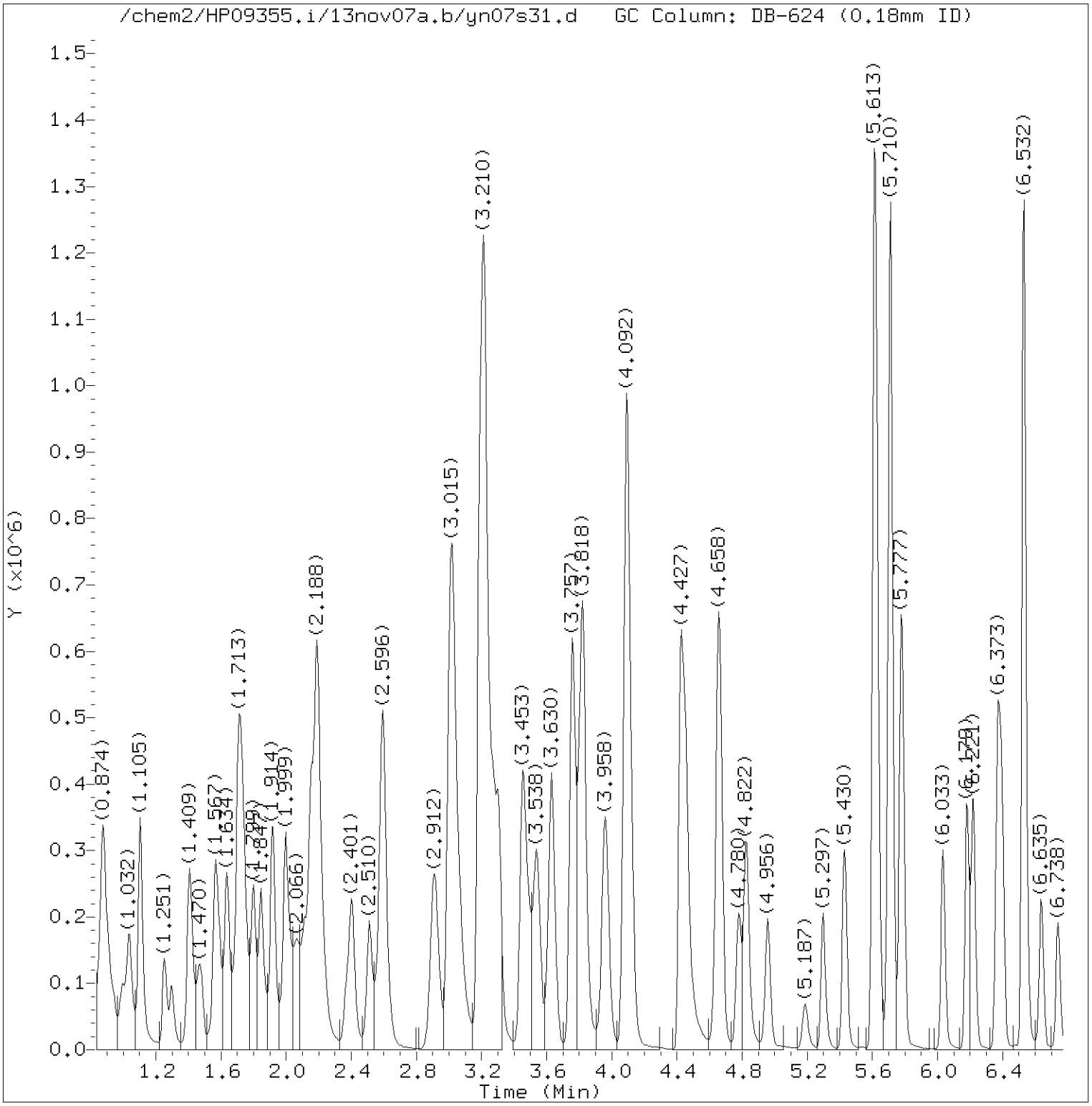
Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10. Parallax ID: rcr00559



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

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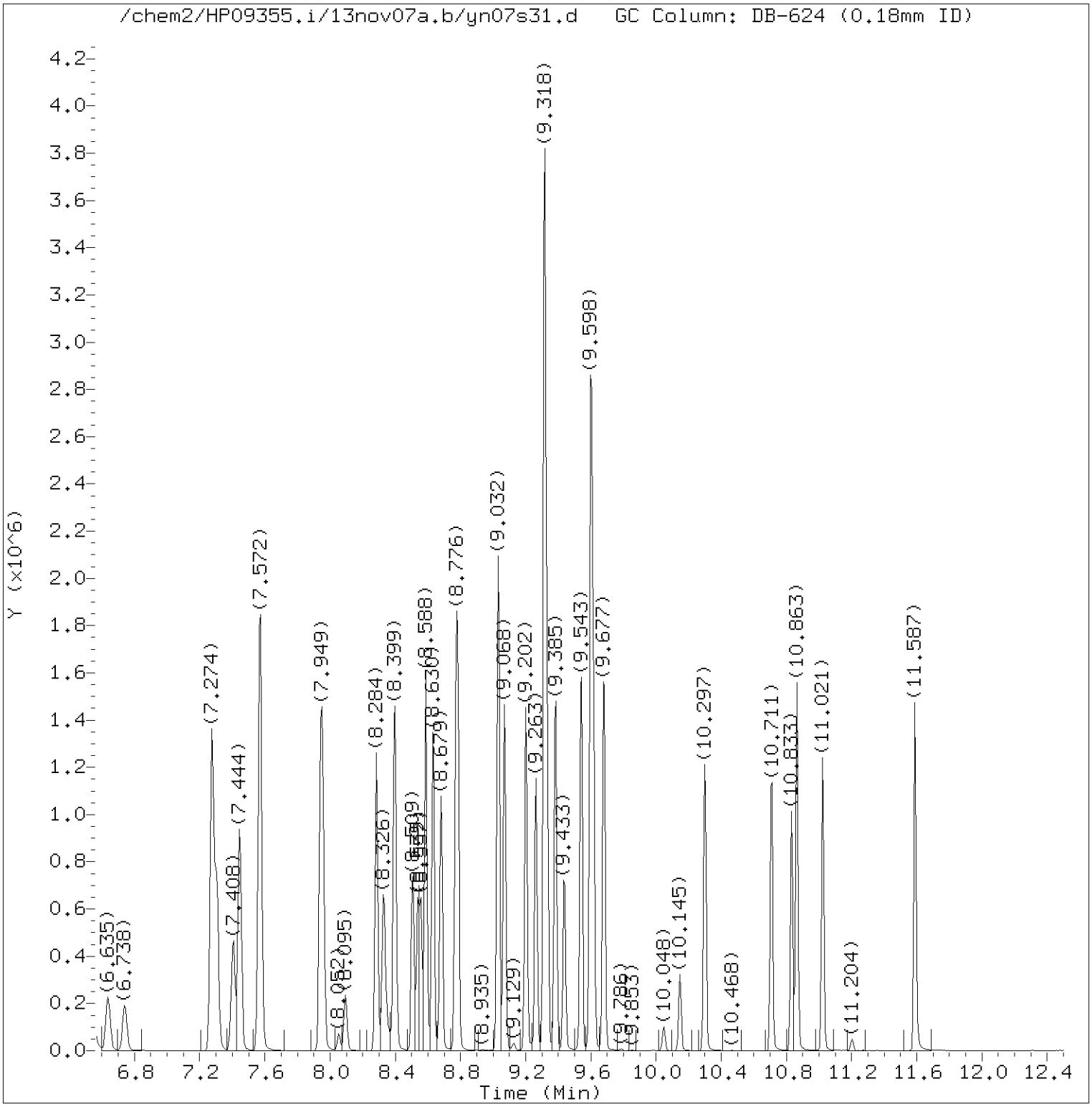
on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Digitally signed by Angela D. Sneeringer
on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.002	85	187792	22.890
4) Chloromethane	(2)	1.038	50	187484	18.846
6) Vinyl Chloride	(2)	1.105	62	164278	19.337
8) Bromomethane	(2)	1.251	94	99126	17.989
9) Chloroethane	(2)	1.300	64	76395	15.604
10) Dichlorofluoromethane	(2)	1.403	67	258205	21.839
12) Trichlorofluoromethane	(2)	1.476	101	215824	22.038
14) Ethyl ether	(2)	1.567	59	80634	12.502
15) Freon 123a	(2)	1.573	67	149422	20.277
16) Acrolein	(1)	1.634	56	308448	102.846
17) 1,1-Dichloroethene	(2)	1.707	96	109394	21.288
18) Acetone	(2)	1.726	58	178176	127.886
19) Freon 113	(2)	1.738	101	112738	20.956
21) 2-Propanol	(1)	1.799	45	152299	139.608
22) Methyl Iodide	(2)	1.799	142	222194	22.658
23) Carbon Disulfide	(2)	1.847	76	318912M	17.742
25) Allyl Chloride	(2)	1.914	41	171670	17.192
27) Methyl Acetate	(2)	1.926	43	158486	19.862
28) Methylene Chloride	(2)	1.999	84	126642	20.164
29)*t-Butyl alcohol-d10	(1)	2.018	65	343515	250.000
30) t-Butyl alcohol	(1)	2.078	59	417478	194.566
31) Acrylonitrile	(2)	2.158	53	436735	82.149
32) trans-1,2-Dichloroethene	(2)	2.188	96	123480	20.639
33) Methyl Tertiary Butyl Ether	(2)	2.206	73	445553	20.533
34) n-Hexane	(2)	2.401	57	178598	17.753
36) 1,1-Dichloroethane	(2)	2.510	63	239039	21.020
38) di-Isopropyl ether	(2)	2.596	45	444091	18.715
39) 2-Chloro-1,3-butadiene	(2)	2.596	53	200662	19.579
40) Ethyl t-butyl ether	(2)	2.912	59	416181	18.763
44) 2-Butanone	(2)	3.003	43	1001418	128.732
42) cis-1,2-Dichloroethene	(2)	3.015	96	139054	20.622
45) 2,2-Dichloropropane	(2)	3.027	77	174522	19.297
43) 1,2-Dichloroethene (Total)	(2)		96	262534	41.261
47) Propionitrile	(1)	3.070	54	294113	125.778
48) Methacrylonitrile	(2)	3.210	67	683801	132.920
49) Bromochloromethane	(2)	3.228	128	75583	21.944
50) Tetrahydrofuran	(1)	3.271	71	170892	79.390
51) Chloroform	(2)	3.307	83	225262	21.073

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	3.453	113	248220	52.056
53) 1,1,1-Trichloroethane	(2)	3.484	97	210950	20.398
54) Cyclohexane	(2)	3.538	56	219141	17.979
55) 1,1-Dichloropropene	(2)	3.630	75	173437	20.614
56) Carbon Tetrachloride	(2)	3.636	117	164752	21.126
57)$1,2-Dichloroethane-d4	(2)	3.757	102	63060	51.017
58) Isobutyl Alcohol	(1)	3.764	41	302296	410.770
60) Benzene	(2)	3.818	78	521210	19.852
61) 1,2-Dichloroethane	(2)	3.830	62	201680	21.611
65) t-Amyl methyl ether	(2)	3.958	73	387078	18.422
66)*Fluorobenzene	(2)	4.092	96	1021402	50.000
67) n-Heptane	(2)	4.110	43	214417	17.403
69) n-Butanol	(1)	4.421	56	492944	818.166
71) Trichloroethene	(2)	4.451	95	135667	20.669
72) Methylcyclohexane	(2)	4.658	83	237845	21.001
73) 1,2-Dichloropropane	(2)	4.664	63	134738	19.209
74) Dibromomethane	(2)	4.780	93	90113	19.352
75) 1,4-Dioxane	(1)	4.810	88	63833	490.374
76) Methyl Methacrylate	(2)	4.828	69	132976	16.125
78) Bromodichloromethane	(2)	4.956	83	154089	18.191
79) 2-Nitropropane	(2)	5.187	41	51611	14.401
80) 2-Chloroethyl Vinyl Ether	(2)	5.297	63	102779	16.765
81) cis-1,3-Dichloropropene	(2)	5.430	75	203612	18.766
82) 4-Methyl-2-pentanone	(2)	5.613	43	1240127	84.581
83)$Toluene-d8	(3)	5.710	98	1021120	49.394
88) Toluene	(3)	5.777	92	334857	19.401
89) trans-1,3-Dichloropropene	(3)	6.033	75	181418	16.423
90) 1,3-Dichloropropene (total)	(3)		100	385030	35.189
91) Ethyl Methacrylate	(3)	6.179	69	215652	15.867
92) 1,1,2-Trichloroethane	(3)	6.221	97	131796	18.765
93) Tetrachloroethene	(3)	6.367	166	167063	22.283
94) 1,3-Dichloropropane	(3)	6.398	76	222736	18.384
96) 2-Hexanone	(3)	6.532	43	956708	76.665
97) Dibromochloromethane	(3)	6.635	129	130338	18.337
99) 1,2-Dibromoethane	(3)	6.738	107	145173	18.918
100)*Chlorobenzene-d5	(3)	7.274	117	776682	50.000
102) Chlorobenzene	(3)	7.304	112	389759	20.298
103) 1,1,1,2-Tetrachloroethane	(3)	7.408	131	127736	19.439

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) Ethylbenzene	(3)	7.444	91	648663	19.248
106) m+p-Xylene	(3)	7.572	106	522057	39.168
107) o-Xylene	(3)	7.943	106	251379	19.134
109) Styrene	(3)	7.955	104	415762	18.652
108) Xylene (Total)	(3)		106	773436	58.302
110) Bromoform	(3)	8.095	173	95861	17.332
111) Isopropylbenzene	(3)	8.284	105	674064	19.990
112) Cyclohexanone	(1)	8.326	55	292181	462.138
114)$4-Bromofluorobenzene	(3)	8.393	95	385275M	48.974
115) Bromobenzene	(4)	8.509	156	188862	19.552
116) 1,1,2,2-Tetrachloroethane	(4)	8.539	83	219450	16.365
117) 1,2,3-Trichloropropane	(4)	8.557	110	72065	17.194
118) trans-1,4-Dichloro-2-butene	(4)	8.588	53	245976	51.499
119) n-Propylbenzene	(4)	8.630	91	790931	18.781
120) 2-Chlorotoluene	(4)	8.679	126	166436	18.864
121) 4-Chlorotoluene	(4)	8.770	126	170930	18.481
122) 1,3,5-Trimethylbenzene	(4)	8.783	105	591570	18.799
125) Pentachloroethane	(4)	9.032	167	110720	18.500
124) tert-Butylbenzene	(4)	9.032	134	135694	19.117
126) 1,2,4-Trimethylbenzene	(4)	9.068	105	607156	18.920
127) sec-Butylbenzene	(4)	9.202	105	747739	19.147
129) 1,3-Dichlorobenzene	(4)	9.263	146	359118	20.032
131)*1,4-Dichlorobenzene-d4	(4)	9.312	152	467739	50.000
130) p-Isopropyltoluene	(4)	9.318	119	680202	19.103
133) 1,4-Dichlorobenzene	(4)	9.330	146	374518	19.821
134) 1,2,3-Trimethylbenzene	(4)	9.385	105	632065	19.083
135) Benzyl Chloride	(4)	9.433	91	377817	14.175
136) 1,3-Diethylbenzene	(4)	9.543	119	404325	18.824
138) 1,2-Dichlorobenzene	(4)	9.598	146	357517	20.027
137) 1,4-Diethylbenzene	(4)	9.598	119	439026	20.043
139) n-Butylbenzene	(4)	9.616	92	328885	18.445
140) 1,2-Diethylbenzene	(4)	9.683	119	346444	19.484
141) Diethylbenzene (total)	(4)		100	1189795	58.351
142) 1,2-Dibromo-3-chloropropane	(4)	10.145	75	53828	15.760
144) 1,3,5-Trichlorobenzene	(4)	10.297	180	306370	20.654
146) 1,2,4-Trichlorobenzene	(4)	10.711	180	288412	20.351
147) Hexachlorobutadiene	(4)	10.833	225	144191	20.494
148) Naphthalene	(4)	10.863	128	866210	19.126

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Quant Report

Target Revision 3.5

Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
149) 1,2,3-Trichlorobenzene	(4)	11.021	180	282113	20.627
150) 2-Methylnaphthalene	(4)	11.587	142	514710	18.336

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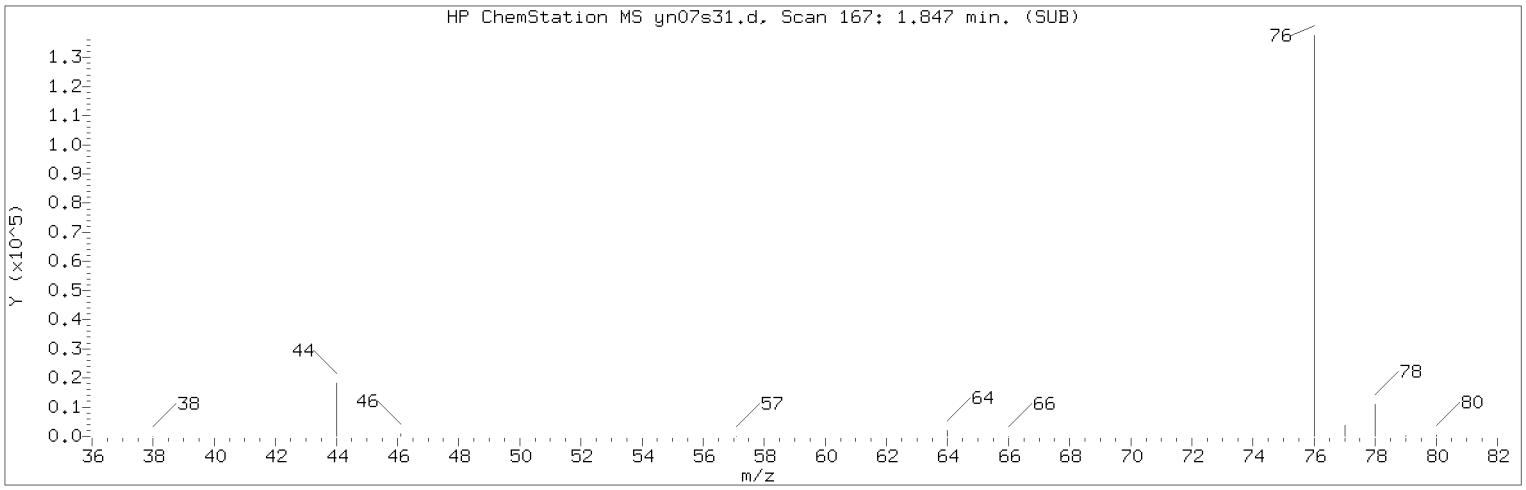
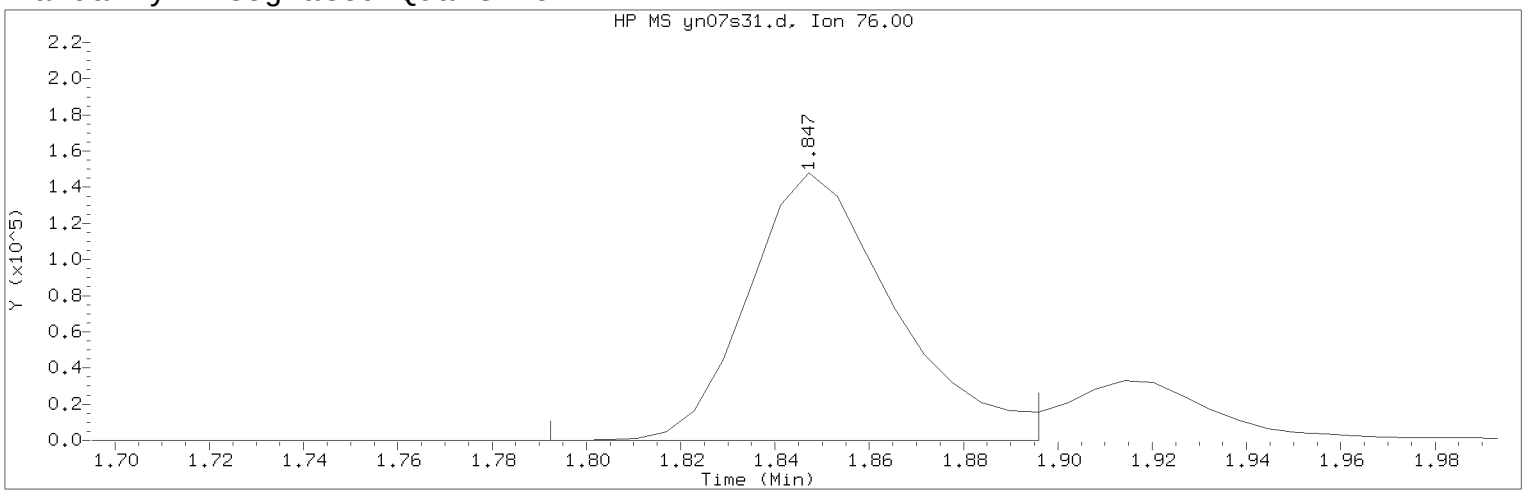
on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

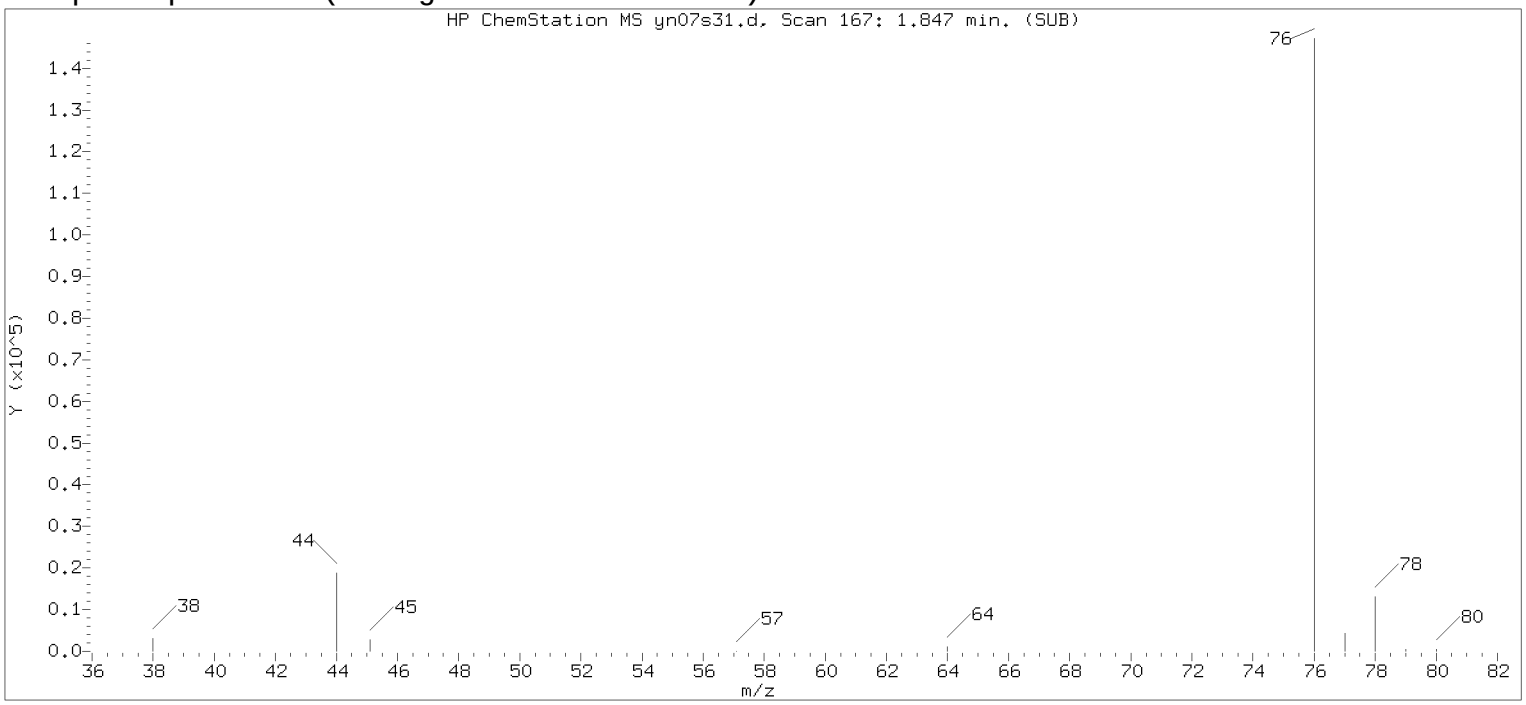
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 167
Retention Time (minutes): 1.847
Quant Ion : 76.00
Area (flag) : 318912M
On-Column Amount (ng) : 17.7422
Integration start scan : 157 Integration stop scan: 174
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

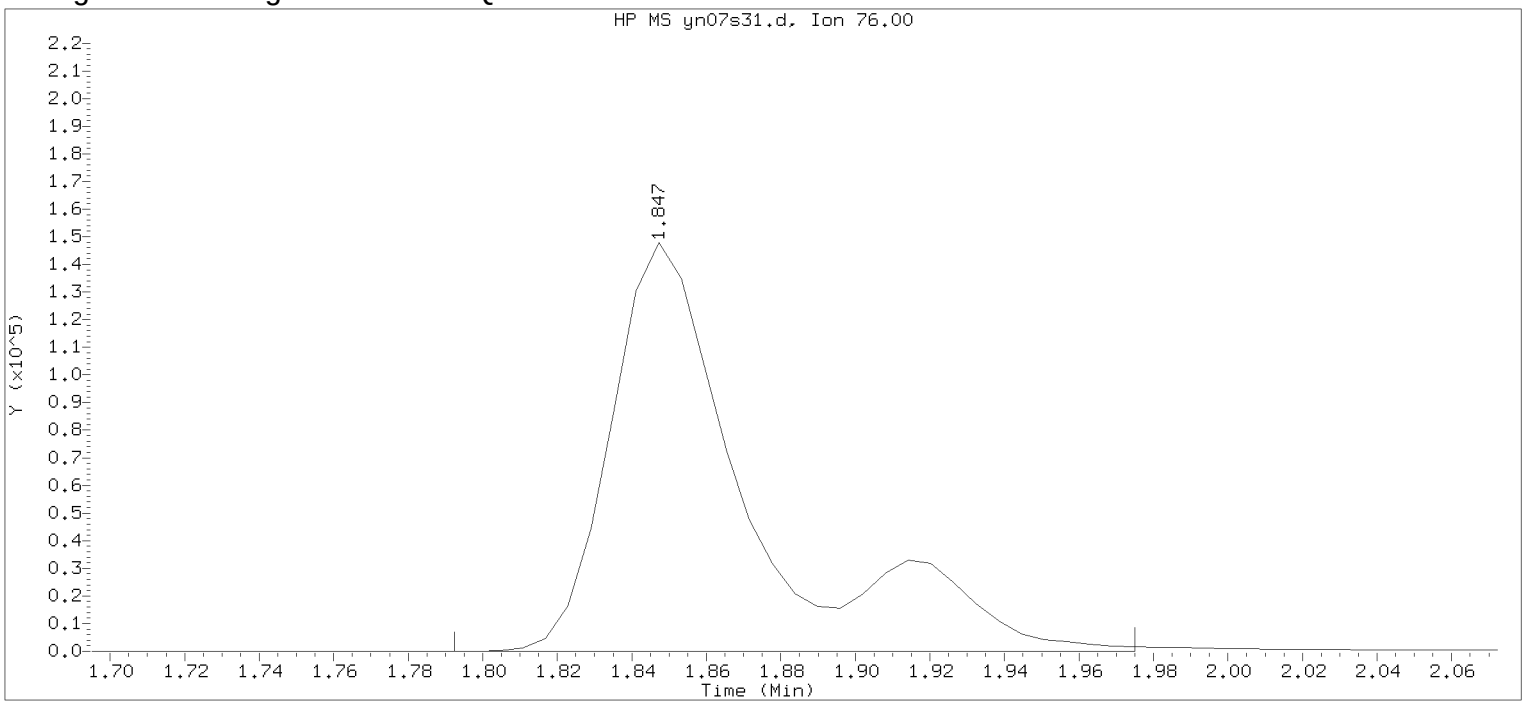
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

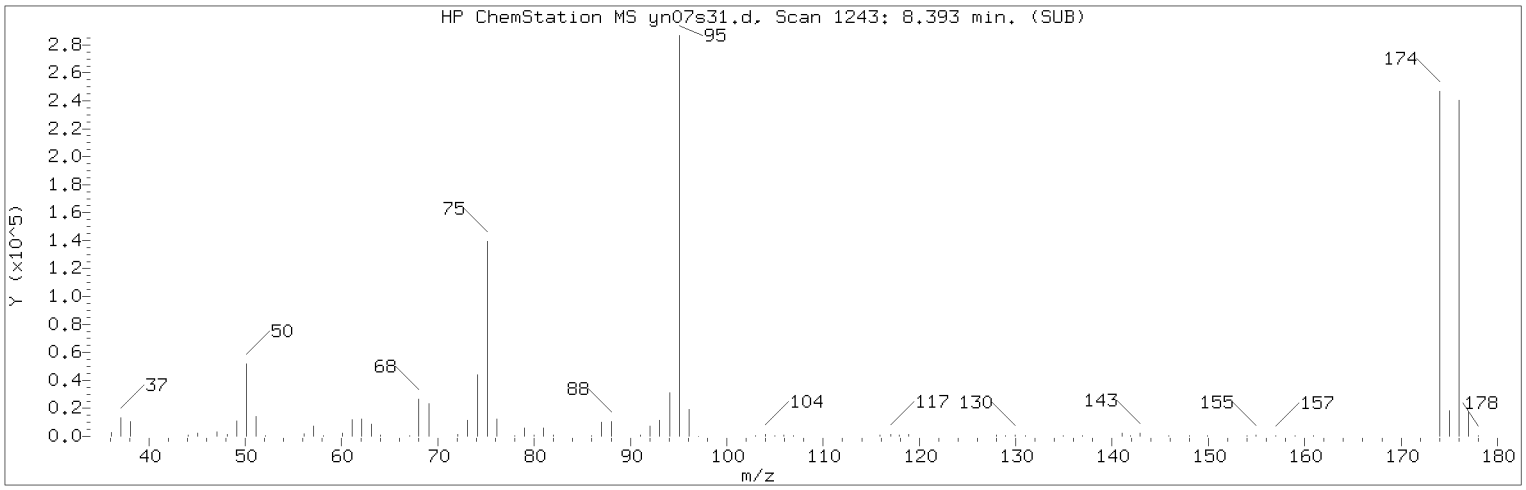
Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:28 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

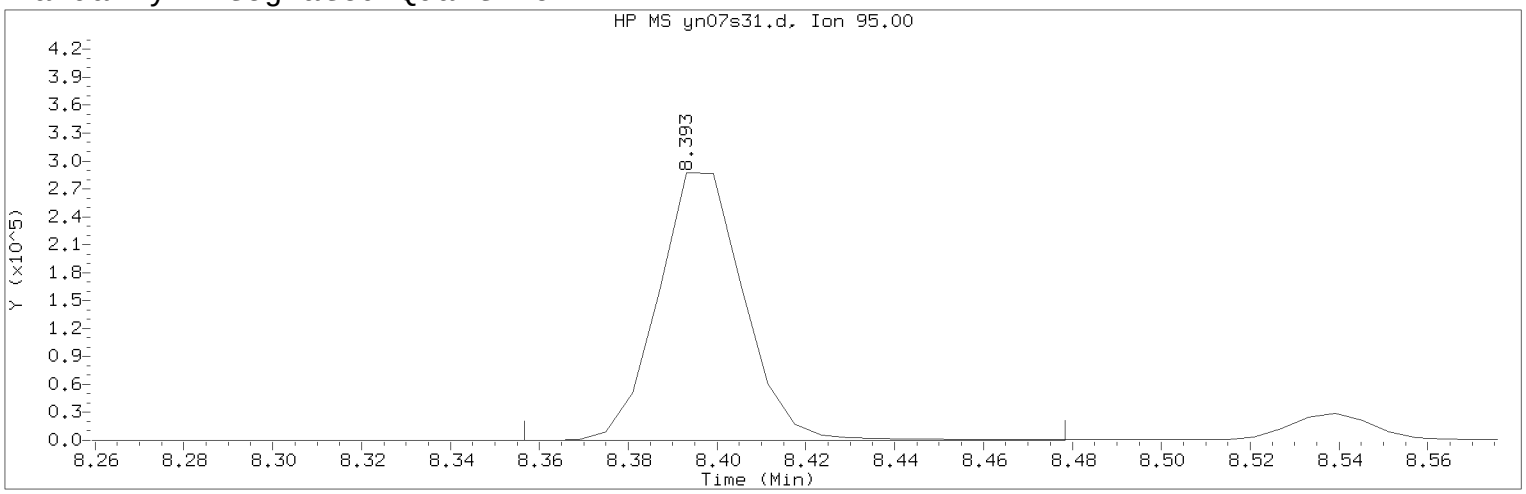
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 167
Retention Time (minutes): 1.847
Quant Ion : 76.00
Area : 386628
On-column Amount (ng) : 21.5096
Integration start scan : 157 Integration stop scan: 187
Y at integration start : 0 Y at integration end: 0

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:30 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

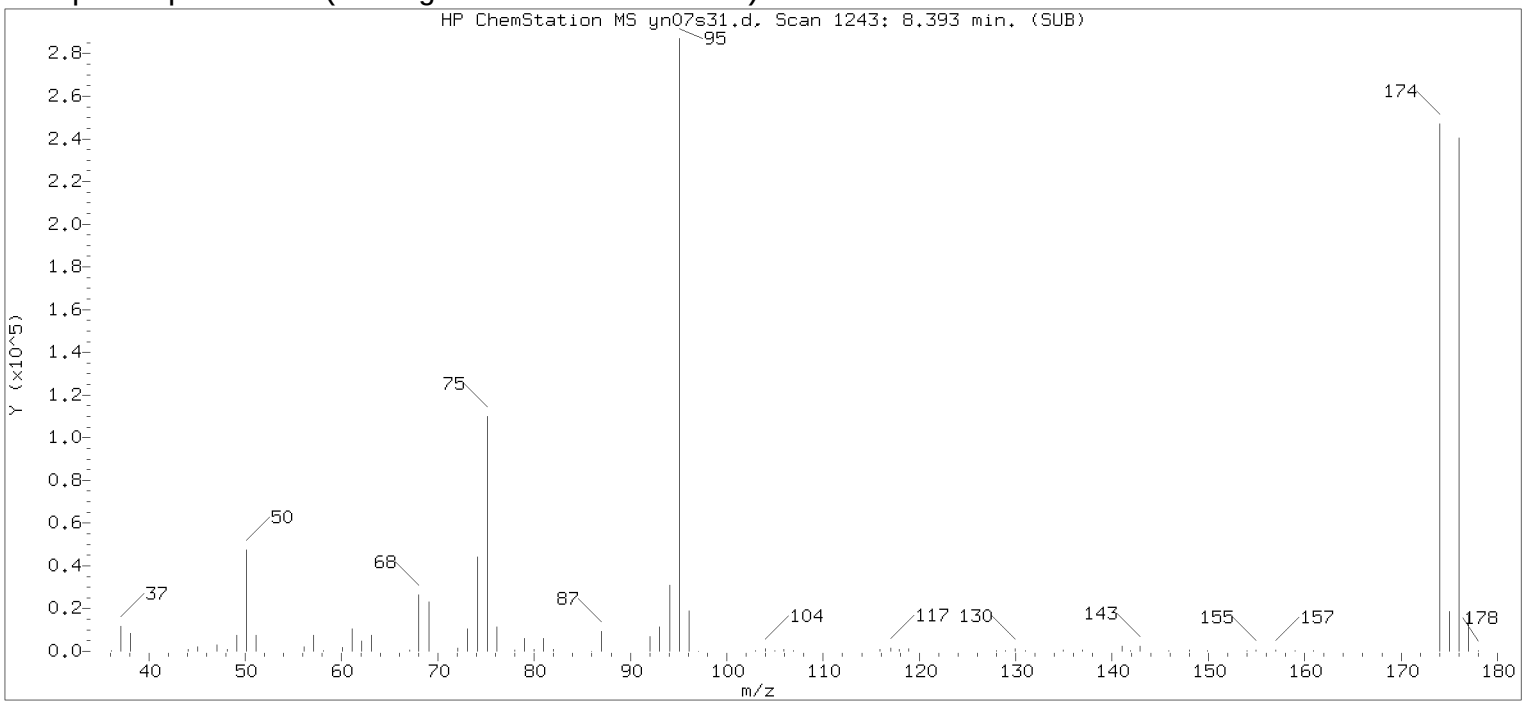
Compound Number : 114
Compound Name : 4-Bromofluorobenzene
Scan Number : 1243
Retention Time (minutes): 8.393
Quant Ion : 95.00
Area (flag) : 385275M
On-Column Amount (ng) : 48.9740
Integration start scan : 1236 Integration stop scan: 1256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

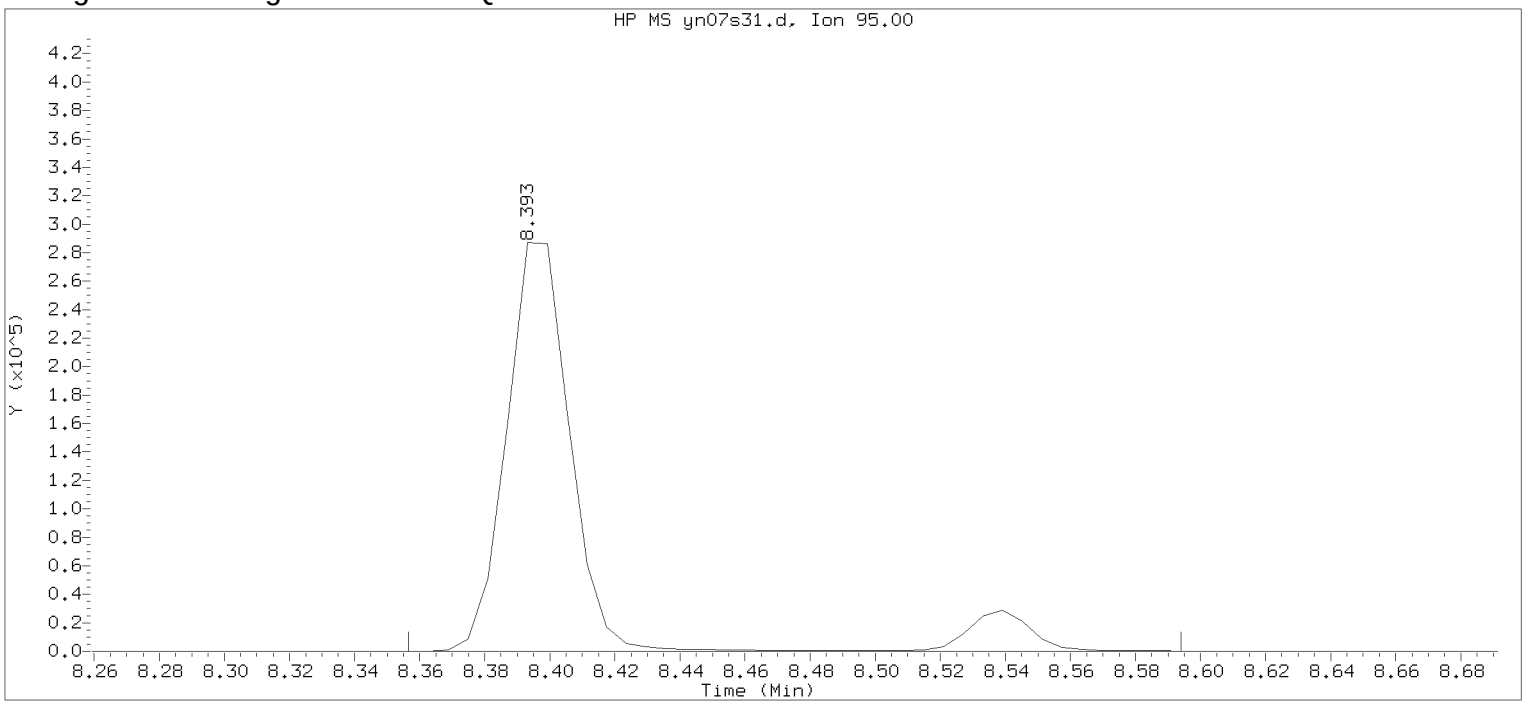
Analyst responsible for change: Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Secondary review performed and digitally signed by Robin C. Runkle on 11/08/2013 at 09:10.
Parallax ID: rcr00559

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09355.i/13nov07a.b/yn07s31.d Instrument ID: HP09355.i
Injection date and time: 07-NOV-2013 10:36 Analyst ID: ADS01731

Method used: /chem2/HP09355.i/13nov07a.b/m8260b5.m Sublist used: 8260W-BNC
Calibration date and time: 07-NOV-2013 12:24
Date, time and analyst ID of latest file update: 07-Nov-2013 12:28 ads01731

Sample Name: LCSY34 Lab Sample ID: LCSY34

Compound Number : 114
Compound Name : 4-Bromofluorobenzene
Scan Number : 1243
Retention Time (minutes): 8.393
Quant Ion : 95.00
Area : 424652
On-column Amount (ng) : 53.9793
Integration start scan : 1236 Integration stop scan: 1275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Angela D. Sneeringer on 11/07/2013 at 12:32.
Target 3.5 esignature user ID: ads01731

Preparation Logs

Volatiles by GC/MS

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VOA Prep Summary by SDG: KVM04

21 - GC/MS Volatiles

Sample Number	Bottle Code	Prep Analysis#	Vial ID	Used for Analysis?	Collected	Prepared	Initial Weight	Final Weight	Net soil weight	Weight requirement	Meets require-ments?	Preserv. lot #	Preservative (volume)	Final Extraction Vol (mL)	Problem Codes
7265236	169A	07578	13526159	N	11/05/13 12:05	11/06/13 09:25	29.94 g	35.42 g	5.48 g	4.50 g - 5.50 g	Y	13263	MeOH w/surrogate (5 mL)	5.000	
7265236	193A	08389	13526623	N	11/05/13 12:05	11/06/13 09:26	33.53 g	38.93 g	5.40 g	4.50 g - 5.50 g	Y	1328801	NaHSO4 (5 mL)	5.000	
7265236	193B	08389	13526631	Y	11/05/13 12:05	11/06/13 09:26	33.46 g	39.40 g	5.94 g	4.50 g - 5.50 g	N	1328801	NaHSO4 (5 mL)	5.000	A
7265237	150A	00374	13531699	Y	11/05/13 12:15	11/06/13 00:55	0.00 g	5.01 g	5.01 g	4.50 g - 5.50 g	Y	1330601	DI Water (5 mL)	5.000	
7265237	150B	00374	13531700	N	11/05/13 12:15	11/06/13 00:55	0.00 g	4.65 g	4.65 g	4.50 g - 5.50 g	Y	1330601	DI Water (5 mL)	5.000	
7265237	169A	06646	13531701	N	11/05/13 12:15	11/06/13 00:35	0.00 g	4.77 g	4.77 g	4.50 g - 5.50 g	Y	1330401	MeOH w/surrogate (5 mL)	5.000	
7262294	014A	07579	13529658	N	10/29/13 11:45	10/29/13 11:45	29.81 g	35.47 g	5.66 g	4.50 g - 5.50 g	N	0000038701	MeOH (5 mL)	5.000	A
7262294	093A	02392	13528966	N	10/29/13 11:45	10/29/13 11:45	33.40 g	38.76 g	5.36 g	4.50 g - 5.50 g	Y	1329401	NaHSO4 (5 mL)	5.000	
7262294	093B	02392	13528919	Y	10/29/13 11:45	10/29/13 11:45	33.35 g	38.55 g	5.20 g	4.50 g - 5.50 g	Y	1329401	NaHSO4 (5 mL)	5.000	

Final Extraction Vol (mL) = Preservative Vol + Added MeOH (if applicable)

KEY to problem codes:

A = wt. does not meet requirements B = vial leaked C# where # = volume of MeOH added in mL due to sample not covered/matrix (lot #)
D = sampler not full E = effervescence observed F = pH >= 2 G = headspace in container

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7265223	SW-R2-N-5-1	X		1	
7265224	SW-R2-N-5-2	X		1	
7265225	SD-R2-0-4-1		X	5	
7265226	SD-R2-0-4-2		X	1	
7265227	SD-R2-0-4-3		X	1	
7265228	SW-R2-M-6-1	X		1	
7265229	SD-R2-M-7-01D		X	10	
7265230	SW-R2-E-16-3	X		1	Unspiked
7265231	SW-R2-E-16-3_MS	X		1	Matrix Spike
7265232	SW-R2-E-16-3_MSD	X		1	Matrix Spike Duplicate
7265234	SD-R2-E16-3		X	1	
7265235	SW-R2-E-16-1	X		1	
7265236	SD-R2-E-16-1		X	10	
7265237	SD-R2-E-16-1D		X	1	
7265238	SW-R2-F-14-1	X		1	
7265239	SD-R2-F-14-1		X	5	
7265240	SW-R2-F-14-2	X		1	
7265241	SD-R2-F-14-2		X	1	
7265242	SD-R2-G-12-1		X	5	
7265243	SW-R2-G-12-2	X		1	
7265244	SD-R2-G-12-3		X	1	
7265245	SD-R2-D-14-1		X	1	
7265246	DUP-02		X	1	Field Duplicate Sample
7265247	FB-01_11052013	X		1	Field Blank
7265248	FB-02_11052013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

(Sample number(s): 7265225-7265227, 7265234, 7265239, 7265241-7265242, 7265244-7265246: Analysis: 10724)
Reporting limits were raised due to interference from the sample matrix.

(Sample number(s): 7265229, 7265236-7265237: Analysis: 10727)
Reporting limits were raised due to interference from the sample matrix.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Ashland, Inc.
SDG: KVM04

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
PAH 8270 (microwave)	13310SLF026	SBLKLF310	11/13/2013 13:20:00
		310LFLCS	11/13/2013 13:44:00
		7265225	11/13/2013 19:04:00
		7265226	11/14/2013 05:01:00
		7265227	11/13/2013 19:54:00
		7265234	11/13/2013 20:18:00
		7265241	11/14/2013 02:58:00
		7265242	11/14/2013 03:23:00
		7265244	11/14/2013 03:47:00
		7265245	11/14/2013 04:12:00
		7265246	11/14/2013 04:36:00
PAH 8270 (microwave)	13316SLC026	SBLKLC316	11/18/2013 06:14:00
		316LCLCS	11/18/2013 06:38:00
		7265239	11/18/2013 11:10:00
TCL 8270 (microwave)	13314SLD026	SBLKLD314	11/15/2013 01:06:00
		314LDLCS	11/15/2013 01:31:00
		7265229	11/15/2013 10:10:00
		7265236	11/15/2013 10:35:00
		7265237	11/15/2013 01:55:00
TCL SW846 Semivolatiles/Waters	13312WAD026	SBLKWD312	11/11/2013 05:02:00
		312WDLCS	11/11/2013 05:29:00
		7265223	11/11/2013 11:16:00
		7265224	11/11/2013 11:43:00
		7265228	11/11/2013 12:10:00
		7265230 UNSPK	11/11/2013 05:55:00
		7265231 MS	11/11/2013 06:22:00
		7265232 MSD	11/11/2013 06:49:00
		7265235	11/11/2013 12:37:00
		7265238	11/11/2013 13:03:00
		7265240	11/11/2013 13:30:00
		7265243	11/11/2013 13:57:00
		7265247	11/11/2013 14:24:00
		7265248	11/11/2013 14:51:00

Fraction: Semivolatiles by GC/MS

13312WAD026 / SBLKWD312 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/11/13	N.D.	ug/l	1	5
Phenol	11/11/13	N.D.	ug/l	0.5	1
bis(2-Chloroethyl)ether	11/11/13	N.D.	ug/l	0.5	1
2-Chlorophenol	11/11/13	N.D.	ug/l	0.5	1
2-Methylphenol	11/11/13	N.D.	ug/l	0.5	1
2,2'-oxybis(1-Chloropropane)	11/11/13	N.D.	ug/l	0.5	1
4-Methylphenol	11/11/13	N.D.	ug/l	0.5	1
N-Nitroso-di-n-propylamine	11/11/13	N.D.	ug/l	0.5	1
Acetophenone	11/11/13	N.D.	ug/l	0.5	1
Hexachloroethane	11/11/13	N.D.	ug/l	1	5
Nitrobenzene	11/11/13	N.D.	ug/l	0.5	1
Isophorone	11/11/13	N.D.	ug/l	0.5	1
2-Nitrophenol	11/11/13	N.D.	ug/l	0.5	1
2,4-Dimethylphenol	11/11/13	N.D.	ug/l	0.5	1
bis(2-Chloroethoxy)methane	11/11/13	N.D.	ug/l	0.5	1
2,4-Dichlorophenol	11/11/13	N.D.	ug/l	0.5	1
Naphthalene	11/11/13	N.D.	ug/l	0.1	0.5
4-Chloroaniline	11/11/13	N.D.	ug/l	0.5	1
Hexachlorobutadiene	11/11/13	N.D.	ug/l	0.5	1
Caprolactam	11/11/13	N.D.	ug/l	5	15
4-Chloro-3-methylphenol	11/11/13	N.D.	ug/l	0.5	1
2-Methylnaphthalene	11/11/13	N.D.	ug/l	0.1	0.5
Hexachlorocyclopentadiene	11/11/13	N.D.	ug/l	5	15
2,4,6-Trichlorophenol	11/11/13	N.D.	ug/l	0.5	1
2,4,5-Trichlorophenol	11/11/13	N.D.	ug/l	0.5	1
1,1'-Biphenyl	11/11/13	N.D.	ug/l	0.5	1
2-Chloronaphthalene	11/11/13	N.D.	ug/l	0.4	1
2-Nitroaniline	11/11/13	N.D.	ug/l	0.5	1
Dimethylphthalate	11/11/13	N.D.	ug/l	2	5
2,6-Dinitrotoluene	11/11/13	N.D.	ug/l	0.5	1
Acenaphthylene	11/11/13	N.D.	ug/l	0.1	0.5
3-Nitroaniline	11/11/13	N.D.	ug/l	0.5	1
Acenaphthene	11/11/13	N.D.	ug/l	0.1	0.5
2,4-Dinitrophenol	11/11/13	N.D.	ug/l	10	30
4-Nitrophenol	11/11/13	N.D.	ug/l	10	30
2,4-Dinitrotoluene	11/11/13	N.D.	ug/l	1	5
Dibenzofuran	11/11/13	N.D.	ug/l	0.5	1
Diethylphthalate	11/11/13	N.D.	ug/l	2	5
Fluorene	11/11/13	N.D.	ug/l	0.1	0.5
4-Chlorophenyl-phenylether	11/11/13	N.D.	ug/l	0.5	1
4-Nitroaniline	11/11/13	N.D.	ug/l	0.5	1
4,6-Dinitro-2-methylphenol	11/11/13	N.D.	ug/l	5	15
N-Nitrosodiphenylamine	11/11/13	N.D.	ug/l	0.5	1
4-Bromophenyl-phenylether	11/11/13	N.D.	ug/l	0.5	1
Hexachlorobenzene	11/11/13	N.D.	ug/l	0.1	0.5

Fraction: Semivolatiles by GC/MS

13312WAD026 / SBLKWD312 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Atrazine	11/11/13	N.D.	ug/l	2	5
Pentachlorophenol	11/11/13	N.D.	ug/l	1	5
Phenanthrene	11/11/13	N.D.	ug/l	0.1	0.5
Anthracene	11/11/13	N.D.	ug/l	0.1	0.5
Carbazole	11/11/13	N.D.	ug/l	0.5	1
Di-n-butylphthalate	11/11/13	N.D.	ug/l	2	5
Fluoranthene	11/11/13	N.D.	ug/l	0.1	0.5
Pyrene	11/11/13	N.D.	ug/l	0.1	0.5
Butylbenzylphthalate	11/11/13	N.D.	ug/l	2	5
bis(2-Ethylhexyl)phthalate	11/11/13	N.D.	ug/l	2	5
3,3'-Dichlorobenzidine	11/11/13	N.D.	ug/l	2	5
Benzo(a)anthracene	11/11/13	N.D.	ug/l	0.1	0.5
Chrysene	11/11/13	N.D.	ug/l	0.1	0.5
Di-n-octylphthalate	11/11/13	N.D.	ug/l	2	5
Benzo(b)fluoranthene	11/11/13	N.D.	ug/l	0.1	0.5
Benzo(k)fluoranthene	11/11/13	N.D.	ug/l	0.1	0.5
Benzo(a)pyrene	11/11/13	N.D.	ug/l	0.1	0.5
Indeno(1,2,3-cd)pyrene	11/11/13	N.D.	ug/l	0.1	0.5
Dibenz(a,h)anthracene	11/11/13	N.D.	ug/l	0.1	0.5
Benzo(g,h,i)perylene	11/11/13	N.D.	ug/l	0.1	0.5

1F

EPA SAMPLE NO.

SBLKWD3124

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: SBLKWD312

Sample wt/vol: 250 (g/mL) mL Lab File ID: dk0322.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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16.					
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19.					
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26.					
27.					
28.					
29.					
30.					

FORM I SV-1

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: KVM04
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13310SLF026 / SBLKLF310 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Naphthalene	11/13/13	N.D.	ug/kg	3	17
2-Methylnaphthalene	11/13/13	N.D.	ug/kg	3	17
1-Methylnaphthalene	11/13/13	N.D.	ug/kg	3	17
Acenaphthylene	11/13/13	N.D.	ug/kg	3	17
Acenaphthene	11/13/13	N.D.	ug/kg	3	17
Fluorene	11/13/13	N.D.	ug/kg	3	17
Phenanthrene	11/13/13	N.D.	ug/kg	3	17
Anthracene	11/13/13	N.D.	ug/kg	3	17
Fluoranthene	11/13/13	N.D.	ug/kg	3	17
Pyrene	11/13/13	N.D.	ug/kg	3	17
Benzo(a)anthracene	11/13/13	N.D.	ug/kg	3	17
Chrysene	11/13/13	N.D.	ug/kg	3	17
Benzo(b)fluoranthene	11/13/13	N.D.	ug/kg	3	17
Benzo(k)fluoranthene	11/13/13	N.D.	ug/kg	3	17
Benzo(a)pyrene	11/13/13	N.D.	ug/kg	3	17
Indeno(1,2,3-cd)pyrene	11/13/13	N.D.	ug/kg	3	17
Dibenz(a,h)anthracene	11/13/13	N.D.	ug/kg	3	17
Benzo(g,h,i)perylene	11/13/13	N.D.	ug/kg	3	17

13314SLD026 / SBLKLD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/15/13	N.D.	ug/kg	67	170
Phenol	11/15/13	N.D.	ug/kg	17	33
bis(2-Chloroethyl)ether	11/15/13	N.D.	ug/kg	17	33
2-Chlorophenol	11/15/13	N.D.	ug/kg	17	33
2-Methylphenol	11/15/13	N.D.	ug/kg	17	33
4-Methylphenol	11/15/13	N.D.	ug/kg	17	33
N-Nitroso-di-n-propylamine	11/15/13	N.D.	ug/kg	17	33
Acetophenone	11/15/13	N.D.	ug/kg	17	33
Hexachloroethane	11/15/13	N.D.	ug/kg	33	170
Nitrobenzene	11/15/13	N.D.	ug/kg	17	33
Isophorone	11/15/13	N.D.	ug/kg	17	33
2-Nitrophenol	11/15/13	N.D.	ug/kg	17	33
2,4-Dimethylphenol	11/15/13	N.D.	ug/kg	17	33
2,2'-oxybis(1-Chloropropane)	11/15/13	N.D.	ug/kg	17	33
bis(2-Chloroethoxy)methane	11/15/13	N.D.	ug/kg	17	33
2,4-Dichlorophenol	11/15/13	N.D.	ug/kg	17	33
Naphthalene	11/15/13	N.D.	ug/kg	3	17
4-Chloroaniline	11/15/13	N.D.	ug/kg	17	33
Hexachlorobutadiene	11/15/13	N.D.	ug/kg	17	33
Caprolactam	11/15/13	N.D.	ug/kg	33	170
4-Chloro-3-methylphenol	11/15/13	N.D.	ug/kg	17	33
2-Methylnaphthalene	11/15/13	N.D.	ug/kg	3	17
Hexachlorocyclopentadiene	11/15/13	N.D.	ug/kg	170	500
2,4,6-Trichlorophenol	11/15/13	N.D.	ug/kg	17	33

Fraction: Semivolatiles by GC/MS

13314SLD026 / SBLKLD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,4,5-Trichlorophenol	11/15/13	N.D.	ug/kg	17	33
1,1'-Biphenyl	11/15/13	N.D.	ug/kg	17	33
2-Chloronaphthalene	11/15/13	N.D.	ug/kg	7	33
2-Nitroaniline	11/15/13	N.D.	ug/kg	17	33
Dimethylphthalate	11/15/13	N.D.	ug/kg	67	170
2,6-Dinitrotoluene	11/15/13	N.D.	ug/kg	17	33
Acenaphthylene	11/15/13	N.D.	ug/kg	3	17
3-Nitroaniline	11/15/13	N.D.	ug/kg	67	170
Acenaphthene	11/15/13	N.D.	ug/kg	3	17
2,4-Dinitrophenol	11/15/13	N.D.	ug/kg	300	1000
4-Nitrophenol	11/15/13	N.D.	ug/kg	170	500
2,4-Dinitrotoluene	11/15/13	N.D.	ug/kg	67	170
Dibenzofuran	11/15/13	N.D.	ug/kg	17	33
Diethylphthalate	11/15/13	N.D.	ug/kg	67	170
Fluorene	11/15/13	N.D.	ug/kg	3	17
4-Chlorophenyl-phenylether	11/15/13	N.D.	ug/kg	17	33
4-Nitroaniline	11/15/13	N.D.	ug/kg	67	170
4,6-Dinitro-2-methylphenol	11/15/13	N.D.	ug/kg	170	500
N-Nitrosodiphenylamine	11/15/13	N.D.	ug/kg	17	33
4-Bromophenyl-phenylether	11/15/13	N.D.	ug/kg	17	33
Hexachlorobenzene	11/15/13	N.D.	ug/kg	3	17
Atrazine	11/15/13	N.D.	ug/kg	33	170
Pentachlorophenol	11/15/13	N.D.	ug/kg	33	170
Phenanthrene	11/15/13	N.D.	ug/kg	3	17
Anthracene	11/15/13	N.D.	ug/kg	3	17
Carbazole	11/15/13	N.D.	ug/kg	17	33
Di-n-butylphthalate	11/15/13	N.D.	ug/kg	67	170
Fluoranthene	11/15/13	N.D.	ug/kg	3	17
Pyrene	11/15/13	N.D.	ug/kg	3	17
Butylbenzylphthalate	11/15/13	N.D.	ug/kg	67	170
bis(2-Ethylhexyl)phthalate	11/15/13	N.D.	ug/kg	67	170
3,3'-Dichlorobenzidine	11/15/13	N.D.	ug/kg	100	330
Benzo(a)anthracene	11/15/13	N.D.	ug/kg	3	17
Chrysene	11/15/13	N.D.	ug/kg	3	17
Di-n-octylphthalate	11/15/13	N.D.	ug/kg	67	170
Benzo(b)fluoranthene	11/15/13	N.D.	ug/kg	3	17
Benzo(k)fluoranthene	11/15/13	N.D.	ug/kg	3	17
Benzo(a)pyrene	11/15/13	N.D.	ug/kg	3	17
Indeno(1,2,3-cd)pyrene	11/15/13	N.D.	ug/kg	3	17
Dibenz(a,h)anthracene	11/15/13	N.D.	ug/kg	3	17
Benzo(g,h,i)perylene	11/15/13	N.D.	ug/kg	3	17

Fraction: Semivolatiles by GC/MS

13316SLC026 / SBLKLC316 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Naphthalene	11/18/13	N.D.	ug/kg	3	17
2-Methylnaphthalene	11/18/13	N.D.	ug/kg	3	17
1-Methylnaphthalene	11/18/13	N.D.	ug/kg	3	17
Acenaphthylene	11/18/13	N.D.	ug/kg	3	17
Acenaphthene	11/18/13	N.D.	ug/kg	3	17
Fluorene	11/18/13	N.D.	ug/kg	3	17
Phenanthrene	11/18/13	N.D.	ug/kg	3	17
Anthracene	11/18/13	N.D.	ug/kg	3	17
Fluoranthene	11/18/13	N.D.	ug/kg	3	17
Pyrene	11/18/13	N.D.	ug/kg	3	17
Benzo(a)anthracene	11/18/13	N.D.	ug/kg	3	17
Chrysene	11/18/13	N.D.	ug/kg	3	17
Benzo(b)fluoranthene	11/18/13	N.D.	ug/kg	3	17
Benzo(k)fluoranthene	11/18/13	N.D.	ug/kg	3	17
Benzo(a)pyrene	11/18/13	N.D.	ug/kg	3	17
Indeno(1,2,3-cd)pyrene	11/18/13	N.D.	ug/kg	3	17
Dibenz(a,h)anthracene	11/18/13	N.D.	ug/kg	3	17
Benzo(g,h,i)perylene	11/18/13	N.D.	ug/kg	3	17

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKLD3143

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: SBLKLD314

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ck0542.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13

Injection Volume: 1 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.133	210	J
2.	123-42-2	2-Pentanone, 4-hydroxy-4-met	3.467	990	JA
3.	6311-48-4	Dibenzylidene 4,4'-biphenyle	13.348	260	J
4.					
5.	SVOCTIC	Total SVOC TICs		1500	JA
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FORM I SV-1

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM04
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

13312WAD026	2-Fluorophenol		Phenol-d6		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	200 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWD312	74	10 - 107	54	10 - 83	124	22 - 150	88	60 - 123	97	63 - 121	116	47 - 146
312WDLCS	74	10 - 107	54	10 - 83	126	22 - 150	94	60 - 123	102	63 - 121	114	47 - 146
7265223	75	10 - 107	56	10 - 83	133	22 - 150	90	60 - 123	100	63 - 121	114	47 - 146
7265224	59	10 - 107	42	10 - 83	96	22 - 150	83	60 - 123	92	63 - 121	93	47 - 146
7265228	61	10 - 107	43	10 - 83	111	22 - 150	76	60 - 123	78	63 - 121	104	47 - 146
7265230	56	10 - 107	41	10 - 83	96	22 - 150	90	60 - 123	99	63 - 121	115	47 - 146
7265231 MS	63	10 - 107	48	10 - 83	106	22 - 150	95	60 - 123	103	63 - 121	113	47 - 146
7265232 MSD	63	10 - 107	47	10 - 83	108	22 - 150	96	60 - 123	105	63 - 121	116	47 - 146
7265235	55	10 - 107	40	10 - 83	93	22 - 150	89	60 - 123	97	63 - 121	111	47 - 146
7265238	57	10 - 107	40	10 - 83	106	22 - 150	77	60 - 123	85	63 - 121	101	47 - 146
7265240	63	10 - 107	44	10 - 83	114	22 - 150	80	60 - 123	87	63 - 121	111	47 - 146
7265243	66	10 - 107	48	10 - 83	117	22 - 150	87	60 - 123	95	63 - 121	113	47 - 146
7265247	70	10 - 107	49	10 - 83	114	22 - 150	88	60 - 123	95	63 - 121	112	47 - 146
7265248	70	10 - 107	49	10 - 83	117	22 - 150	89	60 - 123	98	63 - 121	115	47 - 146

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM04
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13310SLF026	Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLF310	81	60 - 120	100	69 - 120	108	66 - 137
310LFLCS	82	60 - 120	98	69 - 120	101	66 - 137
7265225	82	60 - 120	93	69 - 120	94	66 - 137
7265226	88	60 - 120	96	69 - 120	103	66 - 137
7265227	83	60 - 120	90	69 - 120	95	66 - 137
7265234	87	60 - 120	97	69 - 120	101	66 - 137
7265241	88	60 - 120	99	69 - 120	105	66 - 137
7265242	82	60 - 120	93	69 - 120	96	66 - 137
7265244	87	60 - 120	97	69 - 120	103	66 - 137
7265245	83	60 - 120	93	69 - 120	97	66 - 137
7265246	85	60 - 120	95	69 - 120	99	66 - 137

13314SLD026	Phenol-d6		2-Fluorophenol		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	6666.667 ug/kg	Spike Added	6666.667 ug/kg	Spike Added	6666.667 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLD314	90	61 - 120	97	63 - 126	110	42 - 134	86	60 - 120	97	69 - 120	100	66 - 137
314LDLCS	89	61 - 120	93	63 - 126	112	42 - 134	83	60 - 120	91	69 - 120	96	66 - 137
7265229	91	61 - 120	93	63 - 126	108	42 - 134	83	60 - 120	92	69 - 120	95	66 - 137
7265236	93	61 - 120	96	63 - 126	108	42 - 134	83	60 - 120	92	69 - 120	95	66 - 137
7265237	87	61 - 120	92	63 - 126	105	42 - 134	84	60 - 120	92	69 - 120	95	66 - 137

13316SLC026	Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLC316	89	60 - 120	100	69 - 120	101	66 - 137
316LCLCS	88	60 - 120	98	69 - 120	98	66 - 137
7265239	79	60 - 120	87	69 - 120	88	66 - 137

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM04
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 7265230 MS: 7265231 MSD: 7265232 **Analyte**	Batch: **13312WAD026** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	51.23	N.D.	35.68	35.87	70	70	10-77	1	30
Phenol	51.23	N.D.	24.78	24.45	48	48	10-83	1	30
bis(2-Chloroethyl)ether	51.23	N.D.	45.52	45.09	89	88	71-115	1	30
2-Chlorophenol	51.23	N.D.	43.85	43.78	86	86	27-146	0	30
2-Methylphenol	51.23	N.D.	37.14	37.11	72	73	19-136	0	30
2,2'-oxybis(1-Chloropropane)	51.23	N.D.	38.46	38.12	75	75	59-117	1	30
4-Methylphenol	51.23	N.D.	33.24	33.49	65	66	13-128	1	30
N-Nitroso-di-n-propylamine	51.23	N.D.	44.67	44.36	87	87	66-117	1	30
Acetophenone	51.23	N.D.	46.61	46.88	91	92	48-135	1	30
Hexachloroethane	51.23	N.D.	44.49	45.76	87	90	48-125	3	30
Nitrobenzene	51.23	N.D.	47.34	47.73	92	94	75-121	1	30
Isophorone	51.23	N.D.	48.14	48.68	94	95	73-114	1	30
2-Nitrophenol	51.23	N.D.	56.32	56.63	110	111	54-142	1	30
2,4-Dimethylphenol	51.23	N.D.	38.43	37.85	75	74	36-143	2	30
bis(2-Chloroethoxy)methane	51.23	N.D.	45.15	45.65	88	89	73-115	1	30
2,4-Dichlorophenol	51.23	N.D.	47.31	47.69	92	93	31-147	1	30
Naphthalene	51.23	N.D.	50.5	51.29	99	101	53-131	2	30
4-Chloroaniline	51.23	N.D.	38.53	42.06	75	82	30-117	9	30
Hexachlorobutadiene	51.23	N.D.	54.33	56.7	106	111	64-115	4	30
Caprolactam	51.23	N.D.	18.9	19.87	37	39	10-44	5	30
4-Chloro-3-methylphenol	51.23	N.D.	43.17	43.02	84	84	19-155	0	30
2-Methylnaphthalene	51.23	N.D.	48.55	48.89	95	96	77-118	1	30
Hexachlorocyclopentadiene	102.46	N.D.	103.1	109.49	101	107	26-142	6	30
2,4,6-Trichlorophenol	51.23	N.D.	46.75	46.69	91	92	19-162	0	30
2,4,5-Trichlorophenol	51.23	N.D.	51.84	51.62	101	101	37-141	0	30
1,1'-Biphenyl	51.23	N.D.	48.75	49.27	95	97	67-114	1	30
2-Chloronaphthalene	51.23	N.D.	48.87	50.24	95	98	55-139	3	30
2-Nitroaniline	51.23	N.D.	55.43	56.14	108	110	63-141	1	30
Dimethylphthalate	51.23	N.D.	46.69	47.22	91	93	42-132	1	30
2,6-Dinitrotoluene	51.23	N.D.	55.79	56.33	109	110	74-123	1	30
Acenaphthylene	51.23	N.D.	53.93	54.51	105	107	75-124	1	30
3-Nitroaniline	51.23	N.D.	44.46	47.08	87	92	40-151	6	30
Acenaphthene	51.23	N.D.	48.7	49.7	95	97	71-115	2	30
2,4-Dinitrophenol	102.46	N.D.	91.77	91.1	90	89	20-168	1	30
4-Nitrophenol	51.23	N.D.	29.77	30.43	58	60	10-109	2	30
2,4-Dinitrotoluene	51.23	N.D.	55.6	56.39	109	111	55-141	1	30
Dibenzofuran	51.23	N.D.	50.44	51.25	98	100	71-116	2	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 7265230 MS: 7265231 MSD: 7265232 **Analyte**	Batch: **13312WAD026** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Diethylphthalate	51.23	N.D.	48.12	48.41	94	95	69-118	1	30
Fluorene	51.23	N.D.	50.86	51.36	99	101	71-123	1	30
4-Chlorophenyl-phenylether	51.23	N.D.	52.39	53.08	102	104	73-117	1	30
4-Nitroaniline	51.23	N.D.	42.74	44.37	83	87	33-132	4	30
4,6-Dinitro-2-methylphenol	51.23	N.D.	49.11	48.93	96	96	44-154	0	30
N-Nitrosodiphenylamine	51.23	N.D.	51.58	52.04	101	102	60-136	1	30
4-Bromophenyl-phenylether	51.23	N.D.	53.99	53.97	105	106	79-118	0	30
Hexachlorobenzene	51.23	N.D.	56.27	56.18	110	110	72-119	0	30
Atrazine	51.23	N.D.	56.18	56.63	110	111	28-150	1	30
Pentachlorophenol	51.23	N.D.	39.51	39.55	77	78	23-133	0	30
Phenanthrene	51.23	N.D.	49.68	49.82	97	98	76-112	0	30
Anthracene	51.23	N.D.	51.19	51.54	100	101	78-114	1	30
Carbazole	51.23	N.D.	51.93	51.96	101	102	72-122	0	30
Di-n-butylphthalate	51.23	N.D.	50.53	50.39	99	99	79-118	0	30
Fluoranthene	51.23	N.D.	54.54	54.88	106	108	78-122	1	30
Pyrene	51.23	N.D.	49.96	51.13	98	100	77-117	2	30
Butylbenzylphthalate	51.23	N.D.	47.71	48.46	93	95	76-124	2	30
bis(2-Ethylhexyl)phthalate	51.23	N.D.	48.22	49.83	94	98	73-129	3	30
3,3'-Dichlorobenzidine	51.23	N.D.	32.22	36.82	63	72	16-128	13	30
Benzo(a)anthracene	51.23	N.D.	53.03	54.21	104	106	77-122	2	30
Chrysene	51.23	N.D.	52.22	52.86	102	104	70-116	1	30
Di-n-octylphthalate	51.23	N.D.	46.49	47.06	91	92	71-137	1	30
Benzo(b)fluoranthene	51.23	N.D.	51.26	52.39	100	103	78-120	2	30
Benzo(k)fluoranthene	51.23	N.D.	53.61	54.03	105	106	77-120	1	30
Benzo(a)pyrene	51.23	N.D.	50.94	51.79	99	102	82-119	2	30
Indeno(1,2,3-cd)pyrene	51.23	N.D.	53.3	55.42	104	109	82-121	4	30
Dibenz(a,h)anthracene	51.23	N.D.	54.36	56.44	106	111	82-124	4	30
Benzo(g,h,i)perylene	51.23	N.D.	48.81	51.93	95	102	81-120	6	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 312WDLCS	Batch: **13312WAD026** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	50	33.57	NA	67	NA	19-100	NA	NA
Phenol	50	26.62	NA	53	NA	23-82	NA	NA
bis(2-Chloroethyl)ether	50	43.02	NA	86	NA	73-112	NA	NA
2-Chlorophenol	50	46.07	NA	92	NA	76-111	NA	NA
2-Methylphenol	50	43.71	NA	87	NA	61-118	NA	NA
2,2'-oxybis(1-Chloropropane)	50	36.51	NA	73	NA	55-123	NA	NA
4-Methylphenol	50	40.98	NA	82	NA	54-112	NA	NA
N-Nitroso-di-n-propylamine	50	41.93	NA	84	NA	71-117	NA	NA
Acetophenone	50	44.2	NA	88	NA	71-110	NA	NA
Hexachloroethane	50	42.85	NA	86	NA	55-109	NA	NA
Nitrobenzene	50	45.2	NA	90	NA	67-123	NA	NA
Isophorone	50	46.19	NA	92	NA	68-124	NA	NA
2-Nitrophenol	50	53.11	NA	106	NA	84-118	NA	NA
2,4-Dimethylphenol	50	47.1	NA	94	NA	66-125	NA	NA
bis(2-Chloroethoxy)methane	50	43.28	NA	87	NA	65-125	NA	NA
2,4-Dichlorophenol	50	51.22	NA	102	NA	84-114	NA	NA
Naphthalene	50	47.66	NA	95	NA	75-108	NA	NA
4-Chloroaniline	50	39.82	NA	80	NA	46-112	NA	NA
Hexachlorobutadiene	50	52.68	NA	105	NA	56-119	NA	NA
Caprolactam	50	18.16	NA	36	NA	14-46	NA	NA
4-Chloro-3-methylphenol	50	48.3	NA	97	NA	67-131	NA	NA
2-Methylnaphthalene	50	46.35	NA	93	NA	63-120	NA	NA
Hexachlorocyclopentadiene	100	95	NA	95	NA	21-126	NA	NA
2,4,6-Trichlorophenol	50	50.63	NA	101	NA	84-119	NA	NA
2,4,5-Trichlorophenol	50	52.18	NA	104	NA	81-121	NA	NA
1,1'-Biphenyl	50	46.98	NA	94	NA	60-120	NA	NA
2-Chloronaphthalene	50	47.37	NA	95	NA	60-138	NA	NA
2-Nitroaniline	50	52.52	NA	105	NA	84-122	NA	NA
Dimethylphthalate	50	45.41	NA	91	NA	50-127	NA	NA
2,6-Dinitrotoluene	50	53.2	NA	106	NA	81-124	NA	NA
Acenaphthylene	50	51.81	NA	104	NA	84-125	NA	NA
3-Nitroaniline	50	44.47	NA	89	NA	70-118	NA	NA
Acenaphthene	50	47.09	NA	94	NA	69-122	NA	NA
2,4-Dinitrophenol	100	79.07	NA	79	NA	43-137	NA	NA
4-Nitrophenol	50	28.15	NA	56	NA	16-91	NA	NA
2,4-Dinitrotoluene	50	53.55	NA	107	NA	81-120	NA	NA
Dibenzofuran	50	48.28	NA	97	NA	81-110	NA	NA
Diethylphthalate	50	46.52	NA	93	NA	60-121	NA	NA
Fluorene	50	48.36	NA	97	NA	71-126	NA	NA
4-Chlorophenyl-phenylether	50	49.75	NA	99	NA	77-114	NA	NA
4-Nitroaniline	50	41.97	NA	84	NA	61-110	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 312WDLCS	Batch: **13312WAD026** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
4,6-Dinitro-2-methylphenol	50	44.29	NA	89	NA	68-131	NA	NA
N-Nitrosodiphenylamine	50	49.3	NA	99	NA	80-115	NA	NA
4-Bromophenyl-phenylether	50	51.66	NA	103	NA	75-115	NA	NA
Hexachlorobenzene	50	53.32	NA	107	NA	74-126	NA	NA
Atrazine	50	53.8	NA	108	NA	67-127	NA	NA
Pentachlorophenol	50	40.09	NA	80	NA	50-129	NA	NA
Phenanthrene	50	47.78	NA	96	NA	68-127	NA	NA
Anthracene	50	49.32	NA	99	NA	82-116	NA	NA
Carbazole	50	49.66	NA	99	NA	70-128	NA	NA
Di-n-butylphthalate	50	48.34	NA	97	NA	72-120	NA	NA
Fluoranthene	50	52.34	NA	105	NA	71-129	NA	NA
Pyrene	50	47.63	NA	95	NA	81-112	NA	NA
Butylbenzylphthalate	50	46.37	NA	93	NA	70-122	NA	NA
bis(2-Ethylhexyl)phthalate	50	47.49	NA	95	NA	78-117	NA	NA
3,3'-Dichlorobenzidine	50	35.27	NA	71	NA	47-108	NA	NA
Benzo(a)anthracene	50	50.75	NA	101	NA	84-121	NA	NA
Chrysene	50	49.68	NA	99	NA	81-120	NA	NA
Di-n-octylphthalate	50	43.79	NA	88	NA	72-129	NA	NA
Benzo(b)fluoranthene	50	48.7	NA	97	NA	82-121	NA	NA
Benzo(k)fluoranthene	50	50	NA	100	NA	81-122	NA	NA
Benzo(a)pyrene	50	49.03	NA	98	NA	82-116	NA	NA
Indeno(1,2,3-cd)pyrene	50	50.52	NA	101	NA	83-121	NA	NA
Dibenz(a,h)anthracene	50	53.18	NA	106	NA	83-124	NA	NA
Benzo(g,h,i)perylene	50	48.79	NA	98	NA	81-121	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 310LFLCS	Batch: **13310SLF026** (Sample number(s): 7265225-7265227, 7265234, 7265241-7265242, 7265244-7265246)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	1666.67	1577.64	NA	95	NA	77-115	NA	NA
2-Methylnaphthalene	1666.67	1525.83	NA	92	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1678.43	NA	101	NA	77-115	NA	NA
Acenaphthylene	1666.67	1800.23	NA	108	NA	83-127	NA	NA
Acenaphthene	1666.67	1630.27	NA	98	NA	83-111	NA	NA
Fluorene	1666.67	1651.5	NA	99	NA	86-118	NA	NA
Phenanthrene	1666.67	1657.55	NA	99	NA	85-116	NA	NA
Anthracene	1666.67	1673.99	NA	100	NA	82-118	NA	NA
Fluoranthene	1666.67	1664.89	NA	100	NA	79-123	NA	NA
Pyrene	1666.67	1683.45	NA	101	NA	81-114	NA	NA
Benzo(a)anthracene	1666.67	1598.49	NA	96	NA	81-117	NA	NA
Chrysene	1666.67	1612.59	NA	97	NA	77-116	NA	NA
Benzo(b)fluoranthene	1666.67	1659.95	NA	100	NA	76-124	NA	NA
Benzo(k)fluoranthene	1666.67	1784.46	NA	107	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1636.6	NA	98	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1620.16	NA	97	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1637.18	NA	98	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1607.4	NA	96	NA	77-122	NA	NA

LCS: 314LDLCS	Batch: **13314SLD026** (Sample number(s): 7265229, 7265236-7265237)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	1666.67	925.61	NA	56	NA	10-97	NA	NA
Phenol	1666.67	1462.85	NA	88	NA	76-124	NA	NA
bis(2-Chloroethyl)ether	1666.67	1398.09	NA	84	NA	77-115	NA	NA
2-Chlorophenol	1666.67	1560.75	NA	94	NA	80-122	NA	NA
2-Methylphenol	1666.67	1527.24	NA	92	NA	82-125	NA	NA
4-Methylphenol	1666.67	1451.97	NA	87	NA	73-124	NA	NA
N-Nitroso-di-n-propylamine	1666.67	1328.69	NA	80	NA	70-113	NA	NA
Acetophenone	1666.67	1388.16	NA	83	NA	70-116	NA	NA
Hexachloroethane	1666.67	1421.4	NA	85	NA	76-109	NA	NA
Nitrobenzene	1666.67	1411.26	NA	85	NA	73-118	NA	NA
Isophorone	1666.67	1461.94	NA	88	NA	77-119	NA	NA
2-Nitrophenol	1666.67	1642.22	NA	99	NA	83-125	NA	NA
2,4-Dimethylphenol	1666.67	1544.54	NA	93	NA	83-120	NA	NA
2,2'-oxybis(1-Chloropropane)	1666.67	1268.36	NA	76	NA	61-120	NA	NA
bis(2-Chloroethoxy)methane	1666.67	1382.81	NA	83	NA	71-121	NA	NA
2,4-Dichlorophenol	1666.67	1723.73	NA	103	NA	81-123	NA	NA
Naphthalene	1666.67	1514.16	NA	91	NA	83-112	NA	NA
4-Chloroaniline	1666.67	392.12	NA	24	NA	10-100	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314LDLCS	Batch: **13314SLD026** (Sample number(s): 7265229, 7265236-7265237)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Hexachlorobutadiene	1666.67	1542.35	NA	93	NA	76-115	NA	NA
Caprolactam	1666.67	1539.6	NA	92	NA	67-117	NA	NA
4-Chloro-3-methylphenol	1666.67	1659.89	NA	100	NA	80-124	NA	NA
2-Methylnaphthalene	1666.67	1489.57	NA	89	NA	80-114	NA	NA
Hexachlorocyclopentadiene	3333.33	3844.51	NA	115	NA	70-138	NA	NA
2,4,6-Trichlorophenol	1666.67	1706.23	NA	102	NA	81-123	NA	NA
2,4,5-Trichlorophenol	1666.67	1753.1	NA	105	NA	86-123	NA	NA
1,1'-Biphenyl	1666.67	1456.19	NA	87	NA	76-117	NA	NA
2-Chloronaphthalene	1666.67	1774.76	NA	106	NA	56-144	NA	NA
2-Nitroaniline	1666.67	1656.61	NA	99	NA	84-126	NA	NA
Dimethylphthalate	1666.67	1598.72	NA	96	NA	82-113	NA	NA
2,6-Dinitrotoluene	1666.67	1734.63	NA	104	NA	83-120	NA	NA
Acenaphthylene	1666.67	1677.36	NA	101	NA	83-127	NA	NA
3-Nitroaniline	1666.67	1425.66	NA	86	NA	69-122	NA	NA
Acenaphthene	1666.67	1538.44	NA	92	NA	83-111	NA	NA
2,4-Dinitrophenol	3333.33	3793.57	NA	114	NA	24-136	NA	NA
4-Nitrophenol	1666.67	1396.12	NA	84	NA	55-133	NA	NA
2,4-Dinitrotoluene	1666.67	1800.14	NA	108	NA	81-122	NA	NA
Dibenzofuran	1666.67	1561.96	NA	94	NA	85-115	NA	NA
Diethylphthalate	1666.67	1602.97	NA	96	NA	82-113	NA	NA
Fluorene	1666.67	1573.73	NA	94	NA	86-118	NA	NA
4-Chlorophenyl-phenylether	1666.67	1598.02	NA	96	NA	83-115	NA	NA
4-Nitroaniline	1666.67	1123.79	NA	67	NA	51-107	NA	NA
4,6-Dinitro-2-methylphenol	1666.67	1823.94	NA	109	NA	56-132	NA	NA
N-Nitrosodiphenylamine	1666.67	1615.07	NA	97	NA	83-118	NA	NA
4-Bromophenyl-phenylether	1666.67	1670.51	NA	100	NA	84-120	NA	NA
Hexachlorobenzene	1666.67	1624.16	NA	97	NA	80-121	NA	NA
Atrazine	1666.67	1577.46	NA	95	NA	69-145	NA	NA
Pentachlorophenol	1666.67	1853.82	NA	111	NA	57-120	NA	NA
Phenanthrene	1666.67	1570.21	NA	94	NA	85-116	NA	NA
Anthracene	1666.67	1599.07	NA	96	NA	82-118	NA	NA
Carbazole	1666.67	1566.34	NA	94	NA	84-119	NA	NA
Di-n-butylphthalate	1666.67	1575.32	NA	95	NA	84-120	NA	NA
Fluoranthene	1666.67	1590.99	NA	95	NA	79-123	NA	NA
Pyrene	1666.67	1590.47	NA	95	NA	81-114	NA	NA
Butylbenzylphthalate	1666.67	1457.78	NA	87	NA	80-118	NA	NA
bis(2-Ethylhexyl)phthalate	1666.67	1480.37	NA	89	NA	81-121	NA	NA
3,3'-Dichlorobenzidine	1666.67	880.64	NA	53	NA	10-119	NA	NA
Benzo(a)anthracene	1666.67	1499.31	NA	90	NA	81-117	NA	NA
Chrysene	1666.67	1467.78	NA	88	NA	77-116	NA	NA
Di-n-octylphthalate	1666.67	1643.84	NA	99	NA	80-139	NA	NA
Benzo(b)fluoranthene	1666.67	1659.78	NA	100	NA	76-124	NA	NA

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314LDLCS	Batch: **13314SLD026** (Sample number(s): 7265229, 7265236-7265237)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzo(k)fluoranthene	1666.67	1571.22	NA	94	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1549.14	NA	93	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1507.13	NA	90	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1534.8	NA	92	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1488.41	NA	89	NA	77-122	NA	NA

LCS: 316LCLCS	Batch: **13316SLC026** (Sample number(s): 7265239)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	1666.67	1633.88	NA	98	NA	77-115	NA	NA
2-Methylnaphthalene	1666.67	1562.65	NA	94	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1682.53	NA	101	NA	77-115	NA	NA
Acenaphthylene	1666.67	1770.63	NA	106	NA	83-127	NA	NA
Acenaphthene	1666.67	1624.66	NA	97	NA	83-111	NA	NA
Fluorene	1666.67	1620.64	NA	97	NA	86-118	NA	NA
Phenanthrene	1666.67	1642.21	NA	99	NA	85-116	NA	NA
Anthracene	1666.67	1655.7	NA	99	NA	82-118	NA	NA
Fluoranthene	1666.67	1635.57	NA	98	NA	79-123	NA	NA
Pyrene	1666.67	1681.91	NA	101	NA	81-114	NA	NA
Benzo(a)anthracene	1666.67	1577.57	NA	95	NA	81-117	NA	NA
Chrysene	1666.67	1619.81	NA	97	NA	77-116	NA	NA
Benzo(b)fluoranthene	1666.67	1646.64	NA	99	NA	76-124	NA	NA
Benzo(k)fluoranthene	1666.67	1658.14	NA	99	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1607.8	NA	96	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1647.27	NA	99	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1662.96	NA	100	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1653.05	NA	99	NA	77-122	NA	NA

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0400y.d DFTPP Injection Date: 11/12/13

Instrument ID: HP10623 DFTPP Injection Time: 09:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.3
68	Less than 2.0% of mass 69	0.74 (1.28)1
69	Mass 69 relative abundance	57.9
70	Less than 2.0% of mass 69	0.39 (0.67)1
127	40.0 - 60.0% of mass 198	56.1
197	Less than 1.0% of mass 198	0.33
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.85
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 1.00% of mass 198	2.68
441	Present, and less than mass 443	8.26
442	Greater than 40.0 % of mass 198	50.1
443	17.0 - 23.0% of mass 442	8.79 (17.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ck0401.d	11/12/13	09:38
02	STD3083 - SSTD.5	ck0402.d	11/12/13	10:10
03	STD3083 - SSTD1	ck0403.d	11/12/13	10:35
04	STD3083 - SSTD120	ck0404.d	11/12/13	10:59
05	STD3083 - SSTD80	ck0405.d	11/12/13	11:24
06	STD3083 - SSTD50	ck0406.d	11/12/13	11:49
07	STD3083 - SSTD15	ck0407.d	11/12/13	12:13
08	STD3083 - SSTD5	ck0408.d	11/12/13	12:38
09	8270MDL3083 - SSTD0.50	ck0409.d	11/12/13	13:03
10	PAHMDL3083 - SSTD0.10	ck0410.d	11/12/13	13:27
11	8270ICV2463 - SSTD050	ck0411.d	11/12/13	13:52
12	BASICV2463 - SSTD050	ck0412.d	11/12/13	14:17

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0460.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 08:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.2
68	Less than 2.0% of mass 69	0.6 (1.46)1
69	Mass 69 relative abundance	41.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.93
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.76
441	Present, and less than mass 443	9.51
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	10.9 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD030 - SSTD3083	ck0461.d	11/13/13	08:44
02	SBLKWA316	ck0462.d	11/13/13	09:13
03	316WALCS	ck0463.d	11/13/13	09:37
04	316WALCSD	ck0464.d	11/13/13	10:02
05	7273602	ck0468.d	11/13/13	11:40
06	7272361	ck0465a.d	11/13/13	12:05
07	7272362	ck0466a.d	11/13/13	12:30
08	7272363	ck0467a.d	11/13/13	12:55
09	SBLKLF310	ck0469.d	11/13/13	13:20
10	310LFLCS	ck0470.d	11/13/13	13:44
11	7262294	ck0474.d	11/13/13	14:09
12	7262294MS	ck0475.d	11/13/13	14:34
13	7262294MSD	ck0476.d	11/13/13	14:58
14	7262296	ck0477.d	11/13/13	15:23
15	7262298	ck0478.d	11/13/13	15:48
16	7262300	ck0479.d	11/13/13	16:12
17	7262302	ck0480.d	11/13/13	16:37
18	7262304	ck0481.d	11/13/13	17:02

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0460.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 08:29

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.2
68	Less than 2.0% of mass 69	0.6 (1.46)1
69	Mass 69 relative abundance	41.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	40.0 - 60.0% of mass 198	48.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.93
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.76
441	Present, and less than mass 443	9.51
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	10.9 (18.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7262306	ck0482.d	11/13/13	17:26
20	7262308	ck0483.d	11/13/13	17:51
21	7263054	ck0484.d	11/13/13	18:15
22	7263055	ck0485.d	11/13/13	18:40
23	7265225	ck0486.d	11/13/13	19:04
24	7265227	ck0488.d	11/13/13	19:54
25	7265234	ck0489.d	11/13/13	20:18

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0500.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 23:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.2
68	Less than 2.0% of mass 69	0.62 (1.44)1
69	Mass 69 relative abundance	42.9
70	Less than 2.0% of mass 69	0.19 (0.45)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.75
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.18
441	Present, and less than mass 443	8.06
442	Greater than 40.0 % of mass 198	51.8
443	17.0 - 23.0% of mass 442	9.9 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ck0501.d	11/14/13	00:13
02	SBLKLB311	ck0502.d	11/14/13	00:55
03	311LBLCS	ck0503.d	11/14/13	01:20
04	7260896	ck0519.d	11/14/13	01:45
05	7260897	ck0520.d	11/14/13	02:09
06	7260899	ck0521.d	11/14/13	02:34
07	7265241	ck0522.d	11/14/13	02:58
08	7265242	ck0523.d	11/14/13	03:23
09	7265244	ck0524.d	11/14/13	03:47
10	7265245	ck0525.d	11/14/13	04:12
11	7265246	ck0526.d	11/14/13	04:36
12	7265226	ck0527.d	11/14/13	05:01
13	7262344	ck0504.d	11/14/13	05:25
14	7262345MS	ck0505.d	11/14/13	05:50
15	7262346MSD	ck0506.d	11/14/13	06:14
16	7262333	ck0507.d	11/14/13	06:39
17	7262335	ck0508.d	11/14/13	07:04
18	7262336	ck0509.d	11/14/13	07:28

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0500.d DFTPP Injection Date: 11/13/13

Instrument ID: HP10623 DFTPP Injection Time: 23:59

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	33.2
68	Less than 2.0% of mass 69	0.62 (1.44)1
69	Mass 69 relative abundance	42.9
70	Less than 2.0% of mass 69	0.19 (0.45)1
127	40.0 - 60.0% of mass 198	50.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.75
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.18
441	Present, and less than mass 443	8.06
442	Greater than 40.0 % of mass 198	51.8
443	17.0 - 23.0% of mass 442	9.9 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7262337	ck0510.d	11/14/13	07:53
20	7262339	ck0512.d	11/14/13	08:42
21	7262340	ck0513.d	11/14/13	09:07
22	7262342	ck0514.d	11/14/13	09:32
23	7262343	ck0515.d	11/14/13	09:57
24	7262348	ck0516.d	11/14/13	10:21
25	7262349	ck0517.d	11/14/13	10:46
26	7262351	ck0518.d	11/14/13	11:11
27	7262338	ck0511a.d	11/14/13	11:35

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0540.d DFTPP Injection Date: 11/15/13

Instrument ID: HP10623 DFTPP Injection Time: 00:17

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.75 (1.91)1
69	Mass 69 relative abundance	39.2
70	Less than 2.0% of mass 69	0.14 (0.35)1
127	40.0 - 60.0% of mass 198	48.3
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.62
275	10.0 - 30.0% of mass 198	23.3
365	Greater than 1.00% of mass 198	2.62
441	Present, and less than mass 443	9.11
442	Greater than 40.0 % of mass 198	58.1
443	17.0 - 23.0% of mass 442	11.2 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ck0541.d	11/15/13	00:32
02	SBLKLD314	ck0542.d	11/15/13	01:06
03	314LDLCS	ck0543.d	11/15/13	01:31
04	7265237	ck0559.d	11/15/13	01:55
05	7266676	ck0560.d	11/15/13	02:20
06	7266677	ck0561.d	11/15/13	02:45
07	7266678	ck0562.d	11/15/13	03:09
08	7266679	ck0563.d	11/15/13	03:34
09	7266681	ck0564.d	11/15/13	03:59
10	7266682	ck0565.d	11/15/13	04:23
11	7265020	ck0544.d	11/15/13	04:48
12	7265020MS	ck0545.d	11/15/13	05:13
13	7265020MSD	ck0546.d	11/15/13	05:38
14	7265022	ck0547.d	11/15/13	06:03
15	7265024	ck0548.d	11/15/13	06:27
16	7265026	ck0549.d	11/15/13	06:52
17	7265028	ck0550.d	11/15/13	07:17
18	7265030	ck0551.d	11/15/13	07:41

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0540.d DFTPP Injection Date: 11/15/13

Instrument ID: HP10623 DFTPP Injection Time: 00:17

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.75 (1.91)1
69	Mass 69 relative abundance	39.2
70	Less than 2.0% of mass 69	0.14 (0.35)1
127	40.0 - 60.0% of mass 198	48.3
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.62
275	10.0 - 30.0% of mass 198	23.3
365	Greater than 1.00% of mass 198	2.62
441	Present, and less than mass 443	9.11
442	Greater than 40.0 % of mass 198	58.1
443	17.0 - 23.0% of mass 442	11.2 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7265032	ck0552.d	11/15/13	08:06
20	7265034	ck0553.d	11/15/13	08:31
21	7265036	ck0554.d	11/15/13	08:56
22	7265038	ck0555.d	11/15/13	09:21
23	7265040	ck0556.d	11/15/13	09:45
24	7265229	ck0557.d	11/15/13	10:10
25	7265236	ck0558.d	11/15/13	10:35

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0620y.d DFTPP Injection Date: 11/18/13

Instrument ID: HP10623 DFTPP Injection Time: 05:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.74 (1.9)1
69	Mass 69 relative abundance	38.7
70	Less than 2.0% of mass 69	0.12 (0.3)1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.78
441	Present, and less than mass 443	8.9
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	11.1 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD030 - SSTD3213	ck0621.d	11/18/13	05:29
02	SBLKLC316	ck0622.d	11/18/13	06:14
03	316LCLCS	ck0623.d	11/18/13	06:38
04	SBLKWA320	ck0624.d	11/18/13	07:03
05	320WALCS	ck0625.d	11/18/13	07:27
06	320WALCSD	ck0626.d	11/18/13	07:52
07	7279095	ck0627.d	11/18/13	08:17
08	7279096	ck0628.d	11/18/13	08:42
09	7279097	ck0629.d	11/18/13	09:07
10	7266814	ck0630.d	11/18/13	09:31
11	7266815MS	ck0631.d	11/18/13	09:56
12	7266816MSD	ck0632.d	11/18/13	10:21
13	7259331	ck0633.d	11/18/13	10:45
14	7265239	ck0634.d	11/18/13	11:10
15	7266809	ck0635.d	11/18/13	11:35
16	7266812	ck0636.d	11/18/13	12:00
17	7266813	ck0637.d	11/18/13	12:25
18	7266818	ck0638.d	11/18/13	12:50

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0620y.d DFTPP Injection Date: 11/18/13

Instrument ID: HP10623 DFTPP Injection Time: 05:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.74 (1.9)1
69	Mass 69 relative abundance	38.7
70	Less than 2.0% of mass 69	0.12 (0.3)1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.78
441	Present, and less than mass 443	8.9
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	11.1 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7270464	ck0639.d	11/18/13	13:14
20	7270465	ck0640.d	11/18/13	13:39
21	7270466	ck0641.d	11/18/13	14:04
22	7270467	ck0642.d	11/18/13	14:29
23	7270468	ck0643.d	11/18/13	14:54
24	7270469	ck0644.d	11/18/13	15:19
25	7270470	ck0645.d	11/18/13	15:43
26	7270471	ck0646.d	11/18/13	16:08
27	7270472	ck0647.d	11/18/13	16:33

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dj1150.d DFTPP Injection Date: 10/29/13

Instrument ID: HP19760 DFTPP Injection Time: 07:25

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.0
68	Less than 2.0% of mass 69	0.85 (1.72)1
69	Mass 69 relative abundance	49.5
70	Less than 2.0% of mass 69	0.24 (0.48)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.75
275	10.0 - 30.0% of mass 198	19.9
365	Greater than 1.00% of mass 198	2.21
441	Present, and less than mass 443	7.23
442	Greater than 40.0 % of mass 198	47.3
443	17.0 - 23.0% of mass 442	9.02 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	dj1181.d	10/29/13	11:28
02	STD2813 - SSTD.125	dj1182.d	10/29/13	11:55
03	STD2813 - SSTD30	dj1183.d	10/29/13	12:21
04	STD2813 - SSTD.25	dj1184.d	10/29/13	12:48
05	STD2813 - SSTD1.25	dj1185.d	10/29/13	13:15
06	STD2813 - SSTD3.75	dj1186.d	10/29/13	13:42
07	STD2813 - SSTD12.5	dj1187.d	10/29/13	14:08
08	STD2813 - SSTD20	dj1188.d	10/29/13	14:35
09	MDL2813 - SSTD0.125	dj1189.d	10/29/13	15:02
10	PAH2813 - SSTD0.025	dj1190.d	10/29/13	15:28
11	ICV2463 - SSTD12.5	dj1191.d	10/29/13	15:55
12	BASICV2463 - SSTD12.5	dj1192.d	10/29/13	16:22

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0320.d DFTPP Injection Date: 11/11/13

Instrument ID: HP19760 DFTPP Injection Time: 04:04

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.6
68	Less than 2.0% of mass 69	0.68 (1.8)1
69	Mass 69 relative abundance	37.9
70	Less than 2.0% of mass 69	0.19 (0.49)1
127	40.0 - 60.0% of mass 198	42.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.79
275	10.0 - 30.0% of mass 198	23.4
365	Greater than 1.00% of mass 198	2.53
441	Present, and less than mass 443	11.5
442	Greater than 40.0 % of mass 198	77.0
443	17.0 - 23.0% of mass 442	14.7 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD12	dk0321.d	11/11/13	04:17
02	SBLKWD312	dk0322.d	11/11/13	05:02
03	312WDLCS	dk0323.d	11/11/13	05:29
04	7265230	dk0324.d	11/11/13	05:55
05	7265231MS	dk0325.d	11/11/13	06:22
06	7265232MSD	dk0326.d	11/11/13	06:49
07	7264723RE	dk0327.d	11/11/13	07:16
08	7264727RE	dk0328.d	11/11/13	07:42
09	7264728	dk0329.d	11/11/13	08:09
10	7265142	dk0330.d	11/11/13	08:36
11	7265217	dk0331.d	11/11/13	09:03
12	7265218	dk0332.d	11/11/13	09:29
13	7265219	dk0333.d	11/11/13	09:56
14	7265220	dk0334.d	11/11/13	10:23
15	7265221	dk0335.d	11/11/13	10:50
16	7265223	dk0336.d	11/11/13	11:16
17	7265224	dk0337.d	11/11/13	11:43
18	7265228	dk0338.d	11/11/13	12:10

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0320.d DFTPP Injection Date: 11/11/13

Instrument ID: HP19760 DFTPP Injection Time: 04:04

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	31.6
68	Less than 2.0% of mass 69	0.68 (1.8)1
69	Mass 69 relative abundance	37.9
70	Less than 2.0% of mass 69	0.19 (0.49)1
127	40.0 - 60.0% of mass 198	42.2
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.79
275	10.0 - 30.0% of mass 198	23.4
365	Greater than 1.00% of mass 198	2.53
441	Present, and less than mass 443	11.5
442	Greater than 40.0 % of mass 198	77.0
443	17.0 - 23.0% of mass 442	14.7 (19.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7265235	dk0339.d	11/11/13	12:37
20	7265238	dk0340.d	11/11/13	13:03
21	7265240	dk0341.d	11/11/13	13:30
22	7265243	dk0342.d	11/11/13	13:57
23	7265247	dk0343.d	11/11/13	14:24
24	7265248	dk0344.d	11/11/13	14:51
25	7265741	dk0345.d	11/11/13	15:17

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane				0.657	0.613	0.705	0.685	0.626	0.639	0.654	5	AVG	
N-Nitrosodimethylamine				1.169	1.124	1.349	1.264	1.171	1.190	1.211	7	AVG	
Pyridine				1.771	1.771	2.170	1.861	1.763	1.931	1.878	8	AVG	
2-Picoline				1.780	1.854	2.053	2.016	1.883	1.910	1.916	5	AVG	
N-Nitrosomethylethylamine				0.957	0.853	0.992	0.934	0.873	0.887	0.916	6	AVG	
Methyl methanesulfonate				0.869	0.861	0.998	0.971	0.908	0.919	0.921	6	AVG	
N-Nitrosodiethylamine			1.050	0.813	0.847	0.958	0.936	0.885	0.881	0.910	9	AVG	
Ethyl methanesulfonate			0.793	0.846	0.803	0.851	0.871	0.816	0.821	0.829	3	AVG	
Benzaldehyde			1.762	1.612	0.983	0.860	0.939			1.231	34	1STDEG	
Aniline			3.265	2.842	2.785	3.206	3.146	2.976	3.105	3.046	6	AVG	
Phenol	*		2.706	2.274	2.388	2.705	2.714	2.571	2.623	2.569	7	AVG	*
bis(2-Chloroethyl)ether			1.846	1.786	1.745	1.930	1.856	1.797	1.804	1.824	3	AVG	
2-Chlorophenol			1.914	1.515	1.493	1.568	1.642	1.536	1.548	1.602	9	AVG	
1,3-Dichlorobenzene			1.764	1.586	1.547	1.600	1.696	1.556	1.570	1.617	5	AVG	
1,4-Dichlorobenzene	*		1.784	1.613	1.608	1.607	1.724	1.607	1.609	1.650	4	AVG	*
Benzyl alcohol				1.268	1.199	1.338	1.295	1.223	1.194	1.253	5	AVG	
1,2-Dichlorobenzene			1.614	1.478	1.523	1.535	1.630	1.527	1.535	1.549	3	AVG	
2-Methylphenol			1.837	1.594	1.633	1.754	1.782	1.660	1.674	1.705	5	AVG	
2,2'-oxybis(1-Chloropropane)			2.619	2.137	2.057	2.529	2.208	2.054	2.105	2.244	10	AVG	
bis(2-Chloroisopropyl)ether			2.659	2.137	2.057	2.529	2.208	2.054	2.105	2.250	11	AVG	
N-Nitrosopyrrolidine			1.051	0.919	0.953	1.092	1.077	1.017	1.033	1.021	6	AVG	
Acetophenone			2.701	2.655	2.490	2.566	2.587	2.428	2.366	2.542	5	AVG	
N-Nitroso-di-n-propylamine	#		1.822	1.452	1.478	1.765	1.648	1.582	1.642	1.627	8	AVG	#
N-Nitrosomorpholine				1.097	1.102	1.290	1.188	1.125	1.155	1.159	6	AVG	
4-Methylphenol			2.162	1.857	1.876	2.053	2.121	1.998	2.059	2.018	6	AVG	
o-Toluidine			3.019	2.713	2.775	3.006	3.029	2.880	2.960	2.912	4	AVG	
Hexachloroethane				0.636	0.597	0.629	0.657	0.624	0.625	0.628	3	AVG	
Nitrobenzene			0.492	0.415	0.421	0.493	0.474	0.449	0.455	0.457	7	AVG	
N-Nitrosopiperidine			0.223	0.188	0.196	0.208	0.210	0.197	0.196	0.203	6	AVG	
Isophorone			0.931	0.758	0.781	0.891	0.847	0.797	0.806	0.830	8	AVG	
2-Nitrophenol	*		0.156	0.134	0.153	0.162	0.172	0.167	0.167	0.159	8	AVG	*
2,4-Dimethylphenol			0.456	0.377	0.383	0.419	0.421	0.397	0.406	0.408	7	AVG	
O,O,O-triethylphosphorothioate				0.171	0.171	0.167	0.181	0.166	0.166	0.170	3	AVG	
bis(2-Chloroethoxy)methane			0.575	0.482	0.471	0.500	0.516	0.460	0.527	0.504	8	AVG	
Benzoic acid				0.212	0.269	0.291	0.250	0.288	0.279	0.265	11	AVG	
2,4-Dichlorophenol	*		0.279	0.263	0.274	0.274	0.297	0.277	0.281	0.278	4	AVG	*
1,2,4-Trichlorobenzene				0.289	0.294	0.283	0.313	0.290	0.287	0.293	4	AVG	
Naphthalene		1.110	1.082	1.019	1.026	1.050	1.112	1.038	1.052	1.061	3	AVG	
4-Chloroaniline			0.515	0.447	0.444	0.458	0.479	0.444	0.451	0.462	6	AVG	
2,6-Dichlorophenol			0.256	0.249	0.258	0.262	0.280	0.263	0.264	0.262	4	AVG	
Hexachloropropene				0.155	0.162	0.159	0.179	0.169	0.170	0.166	5	AVG	
Hexachlorobutadiene	*		0.158	0.150	0.149	0.136	0.155	0.141	0.138	0.147	6	AVG	*
Caprolactam				0.164	0.151	0.159	0.157	0.149	0.143	0.154	5	AVG	
N-Nitrosodi-n-butylamine				0.305	0.401	0.453	0.431	0.404	0.404	0.400	13	AVG	
4-Chloro-3-methylphenol	*		0.363	0.333	0.345	0.372	0.371	0.348	0.355	0.355	4	AVG	*
Safrole				0.269	0.281	0.277	0.298	0.281	0.280	0.281	3	AVG	
2-Methylnaphthalene		0.741	0.775	0.730	0.746	0.751	0.786	0.742	0.753	0.753	2	AVG	
1-Methylnaphthalene		0.698	0.707	0.665	0.682	0.684	0.725	0.675	0.677	0.689	3	AVG	
Hexachlorocyclopentadiene	#			0.182	0.195	0.198	0.226	0.218	0.218	0.206	8	AVG	#
1,2,4,5-Tetrachlorobenzene			0.495	0.475	0.472	0.446	0.509	0.474	0.468	0.477	4	AVG	
cis-Isosafrole				0.768	0.730	0.764	0.816	0.759	0.757	0.766	4	AVG	
2,4,6-Trichlorophenol	*		0.315	0.291	0.306	0.297	0.336	0.317	0.315	0.311	5	AVG	*

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

11-13-13

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
2,4,5-Trichlorophenol			0.343	0.304	0.333	0.330	0.375	0.345	0.348	0.339	6	AVG	
trans-Isosafrole				0.527	0.529	0.544	0.574	0.539	0.539	0.542	3	AVG	
Isosafrole				0.469	0.471	0.485	0.511	0.480	0.480	0.483	3	AVG	
1,1'-Biphenyl			1.727	1.642	1.490	1.465	1.575	1.506	1.441	1.550	7	AVG	
2-Chloronaphthalene			1.288	1.072	1.025	1.006	1.351	1.014	1.146	1.129	12	AVG	
Diphenyl ether			0.776	0.766	0.756	0.756	0.809	0.771	0.769	0.772	2	AVG	
2-Nitroaniline			0.373	0.312	0.344	0.374	0.403	0.387	0.384	0.368	8	AVG	
1,4-Naphthoquinone				0.430	0.467	0.480	0.517	0.480	0.475	0.475	6	AVG	
1,4-Dinitrobenzene				0.104	0.127	0.133	0.165	0.166	0.164	0.143	18	1STDEG	
Dimethylphthalate				1.336	1.342	1.332	1.426	1.307	1.315	1.343	3	AVG	
1,3-Dinitrobenzene				0.140	0.181	0.183	0.223	0.220	0.220	0.195	17	1STDEG	
2,6-Dinitrotoluene			0.256	0.234	0.279	0.274	0.314	0.305	0.296	0.280	10	AVG	
Acenaphthylene		1.861	1.795	1.656	1.684	1.752	1.856	1.741	1.751	1.762	4	AVG	
3-Nitroaniline			0.322	0.302	0.331	0.341	0.378	0.359	0.357	0.342	7	AVG	
Acenaphthene	*	1.221	1.280	1.163	1.188	1.205	1.281	1.211	1.206	1.220	3	AVG	*
2,4-Dinitrophenol	#			0.062	0.081	0.081	0.102	0.111	0.108	0.091	21	1STDEG	#
Pentachlorobenzene			0.415	0.422	0.410	0.390	0.440	0.407	0.402	0.412	4	AVG	
4-Nitrophenol	#			0.185	0.200	0.215	0.229	0.221	0.220	0.212	8	AVG	#
Dibenzofuran			1.808	1.622	1.608	1.631	1.752	1.633	1.640	1.671	5	AVG	
2,4-Dinitrotoluene				0.282	0.337	0.349	0.414	0.393	0.394	0.361	14	AVG	
1-Naphthylamine				1.279	1.324	1.409	1.477	1.369	1.378	1.373	5	AVG	
2,3,4,6-Tetrachlorophenol			0.213	0.217	0.237	0.231	0.270	0.251	0.254	0.239	9	AVG	
2-Naphthylamine				1.303	1.365	1.448	1.513	1.400	1.398	1.404	5	AVG	
Diethylphthalate				1.367	1.361	1.401	1.470	1.366	1.359	1.387	3	AVG	
Thionazin				0.283	0.283	0.311	0.326	0.314	0.317	0.306	6	AVG	
Fluorene		1.462	1.494	1.376	1.379	1.413	1.507	1.439	1.429	1.437	3	AVG	
4-Chlorophenyl-phenylether			0.692	0.641	0.624	0.608	0.670	0.617	0.625	0.639	5	AVG	
5-Nitro-o-toluidine			0.339	0.320	0.362	0.390	0.428	0.408	0.410	0.380	11	AVG	
4-Nitroaniline			0.420	0.328	0.371	0.394	0.413	0.383	0.380	0.384	8	AVG	
4,6-Dinitro-2-methylphenol				0.055	0.066	0.067	0.088	0.093	0.094	0.077	21	1STDEG	
N-Nitrosodiphenylamine (1)	*		0.661	0.642	0.652	0.668	0.706	0.678	0.685	0.670	3	AVG	*
1,2-Diphenylhydrazine			0.950	0.861	0.900	1.052	0.980	0.971	1.008	0.960	7	AVG	
Tetraethyldithiopyrophosphate				0.127	0.129	0.147	0.141	0.136	0.141	0.137	6	AVG	
1,3,5-Trinitrobenzene				0.029	0.041	0.043	0.060	0.065	0.067	0.051	30	1STDEG	
Diallate (peak 1)				0.457	0.457	0.529	0.503	0.490	0.511	0.491	6	AVG	
Phorate			0.592	0.500	0.530	0.650	0.601	0.579	0.688	0.592	11	AVG	
Phenacetin			0.485	0.410	0.434	0.491	0.484	0.464	0.474	0.463	7	AVG	
4-Bromophenyl-phenylether				0.187	0.183	0.177	0.194	0.182	0.185	0.185	3	AVG	
Diallate (peak 2)				0.221	0.195	0.223	0.216	0.212	0.214	0.213	5	AVG	
Hexachlorobenzene		0.198	0.191	0.180	0.182	0.166	0.190	0.175	0.177	0.182	6	AVG	
Dimethoate				0.320	0.351	0.405	0.381	0.356	0.358	0.362	8	AVG	
Diallate TRANS/CIS				0.398	0.392	0.453	0.431	0.421	0.437	0.422	6	AVG	
Atrazine			0.249	0.230	0.207	0.201	0.186			0.215	12	AVG	
Pentachlorophenol	*			0.086	0.095	0.094	0.111	0.110	0.111	0.101	11	AVG	*
Pentachloronitrobenzene				0.070	0.077	0.076	0.087	0.082	0.084	0.079	8	AVG	
4-Aminobiphenyl			0.821	0.718	0.815	0.747	0.728	0.632	0.613	0.725	11	AVG	
Pronamide			0.355	0.321	0.337	0.356	0.370	0.350	0.356	0.349	5	AVG	
Dinoseb				0.057	0.085	0.090	0.124	0.132	0.138	0.104	30	1STDEG	
Phenanthrene		1.228	1.173	1.120	1.111	1.139	1.209	1.157	1.166	1.163	3	AVG	
Anthracene		1.244	1.182	1.124	1.160	1.189	1.238	1.214	1.224	1.197	3	AVG	
Carbazole			1.194	1.119	1.123	1.164	1.230	1.169	1.178	1.168	3	AVG	
Methyl parathion				0.141	0.196	0.226	0.251	0.242	0.245	0.217	19	1STDEG	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

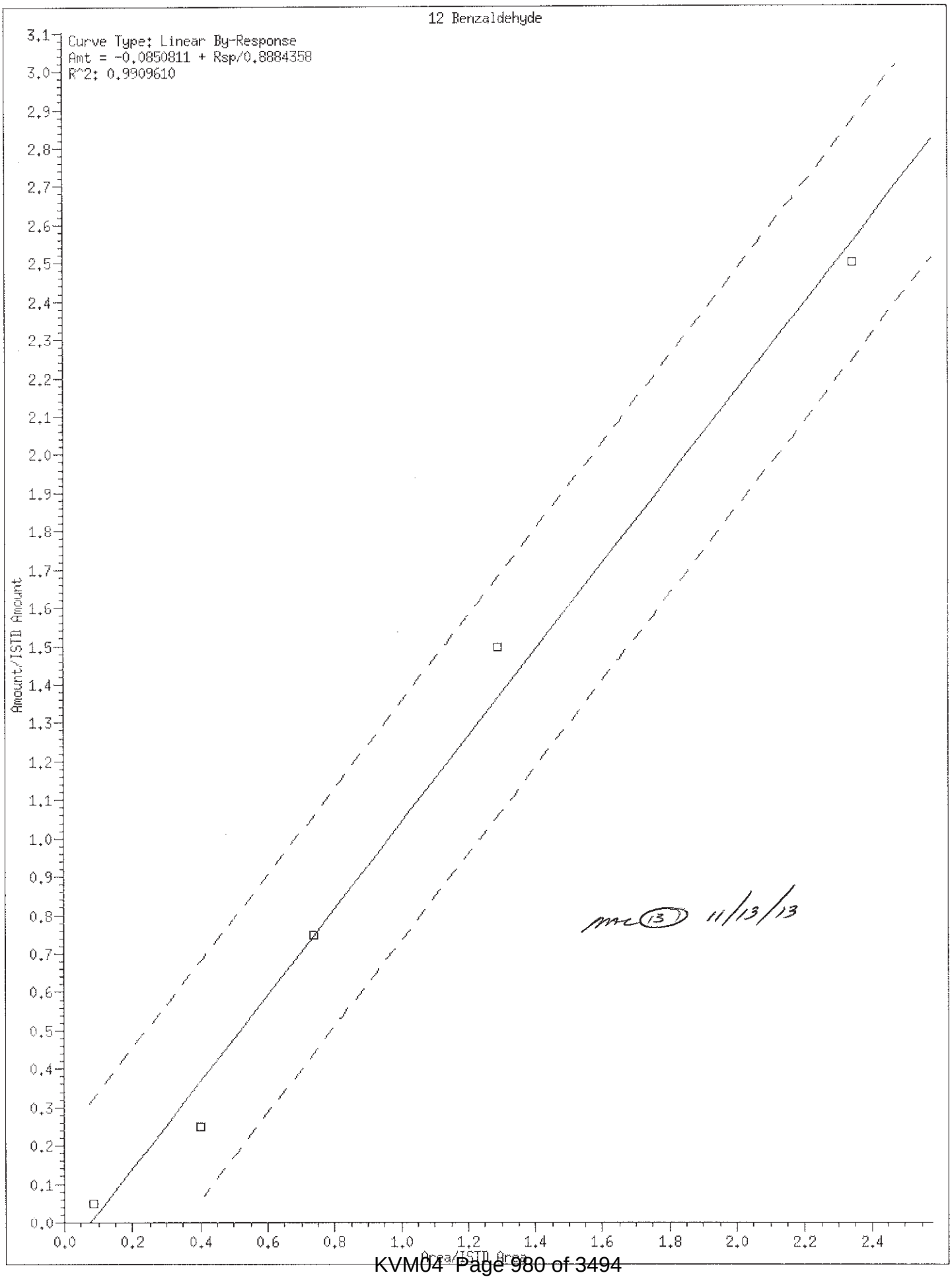
Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

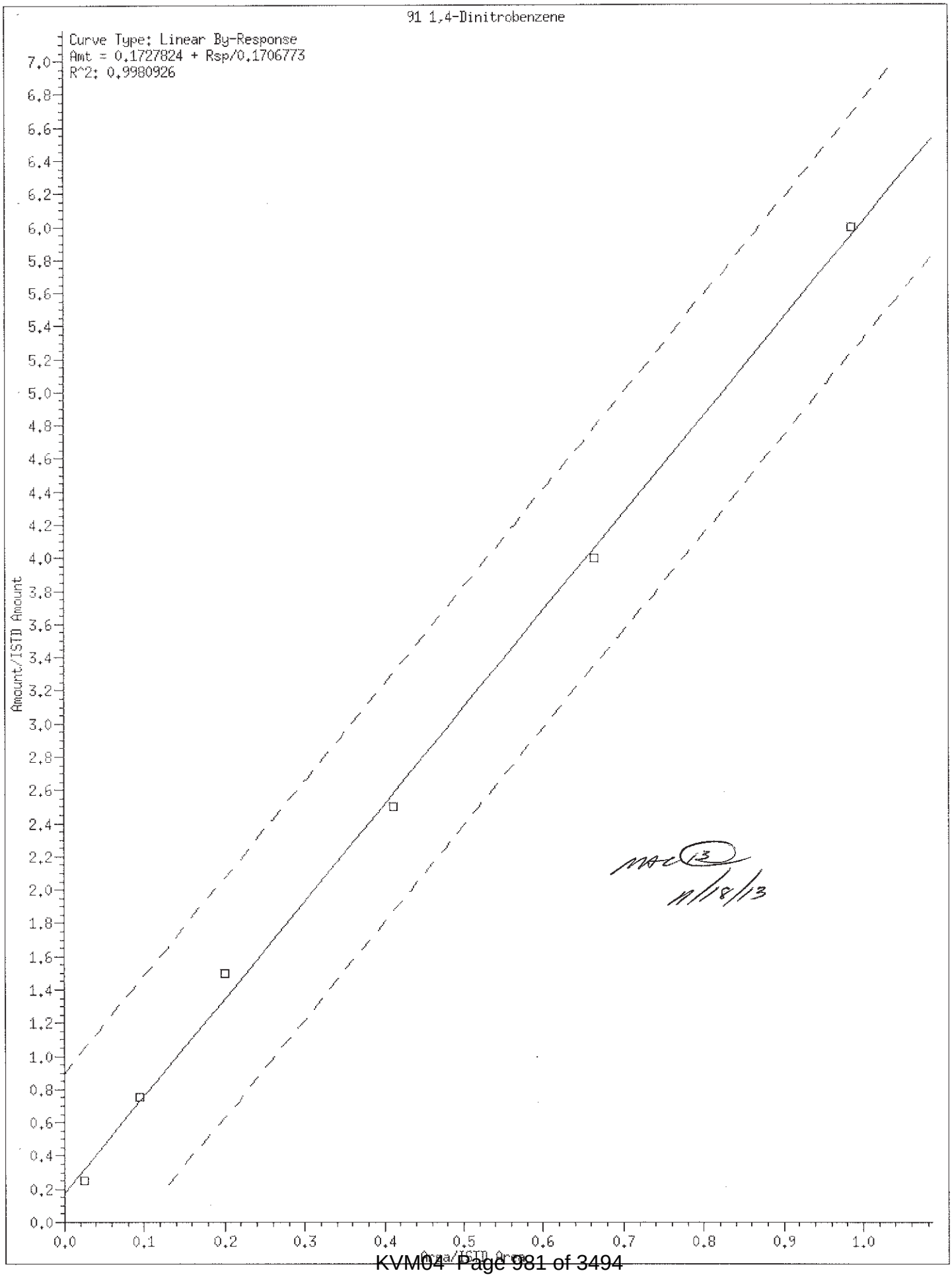
LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD		CAL. METHOD
Di-n-butylphthalate				1.313	1.349	1.410	1.447	1.367	1.383	1.378	3		AVG
Parathion				0.112	0.144	0.165	0.178	0.175	0.183	0.160	17		1STDEG
4-Nitroquinoline-1-oxide				0.040	0.062	0.072	0.095	0.099	0.105	0.079	32		1STDEG
Isodrin			0.161	0.125	0.125	0.126	0.131	0.127	0.126	0.131	10		AVG
Fluoranthene	*	1.258	1.298	1.252	1.277	1.276	1.380	1.331	1.330	1.300	3		AVG
Benzidine				0.811	0.780	0.835	0.908	0.795	0.783	0.819	6		AVG
Pyrene		1.166	1.117	1.058	1.078	1.074	1.171	1.101	1.122	1.111	4		AVG
p-Dimethylaminoazobenzene			0.200	0.198	0.220	0.217	0.237	0.218	0.225	0.216	6		AVG
Chlorobenzilate			0.317	0.298	0.331	0.352	0.364	0.342	0.354	0.337	7		AVG
3,3'-Dimethylbenzidine				0.652	0.660	0.698	0.759	0.662	0.675	0.684	6		AVG
Butylbenzylphthalate				0.499	0.518	0.540	0.565	0.523	0.535	0.530	4		AVG
2-Acetylaminofluorene				0.381	0.439	0.505	0.543	0.499	0.512	0.480	12		AVG
3,3'-Dichlorobenzidine				0.374	0.378	0.385	0.423	0.377	0.380	0.386	5		AVG
4,4'-Methylenebis(2-Chloroanil				0.168	0.179	0.190	0.210	0.192	0.192	0.189	8		AVG
Benzo(a)anthracene		0.985	1.028	0.967	1.002	1.004	1.129	1.036	1.045	1.024	5		AVG
Chrysene		0.994	1.036	0.976	0.959	0.948	1.046	0.971	0.973	0.988	4		AVG
bis(2-Ethylhexyl)phthalate				0.692	0.705	0.755	0.783	0.732	0.746	0.735	5		AVG
6-Methylchrysene				0.702	0.714	0.727	0.788	0.721	0.721	0.729	4		AVG
Di-n-octylphthalate	*			1.275	1.416	1.600	1.573	1.563	1.630	1.510	9		AVG
Dibenz(a,h)acridine				0.765	0.827	0.889	0.929	0.880	0.905	0.866	7		AVG
Dibenz(a,j)acridine				0.994	0.993	0.979	1.070	0.975	0.964	0.996	4		AVG
7,12-Dimethylbenz[a]anthracene			0.502	0.513	0.549	0.573	0.617	0.601	0.617	0.567	8		AVG
Benzo(b)fluoranthene		1.087	1.183	1.104	1.217	1.174	1.251	1.361	1.393	1.221	9		AVG
Quinoline				0.726	0.729	0.733	0.771	0.714	0.716	0.731	3		AVG
Benzo(k)fluoranthene		1.265	1.229	1.232	1.213	1.268	1.392	1.174	1.194	1.246	5		AVG
Benzo(a)pyrene	*	1.311	1.234	1.066	1.135	1.169	1.241	1.179	1.199	1.192	6		AVG
3-Methylcholanthrene			0.599	0.565	0.589	0.596	0.636	0.598	0.601	0.597	4		AVG
NDPA as diphenylamine				0.642	0.652	0.668	0.706	0.678	0.685	0.672	3		AVG
Indeno(1,2,3-cd)pyrene		1.224	1.259	1.239	1.260	1.269	1.361	1.260	1.274	1.268	3		AVG
Dibenz(a,h)anthracene		0.989	1.038	1.029	1.062	1.077	1.161	1.055	1.075	1.061	5		AVG
Benzo(g,h,i)perylene		1.077	1.136	1.073	1.048	1.069	1.143	1.043	1.054	1.080	4		AVG
Indene				3.591	3.362	3.575	3.518	3.354	3.360	3.460	3		AVG
1-Chloronaphthalene			1.189	1.047	1.106	1.115	1.167	1.146	1.005	1.111	6		AVG
2-Fluorophenol				1.464	1.443	1.524	1.573	1.476	1.498	1.496	3		AVG
Phenol-d5				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6		AVG
Phenol-d6				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6		AVG
Nitrobenzene-d5				0.389	0.404	0.466	0.452	0.434	0.440	0.431	7		AVG
2-Fluorobiphenyl				1.233	1.224	1.239	1.338	1.256	1.255	1.258	3		AVG
2,4,6-Tribromophenol				0.117	0.118	0.114	0.131	0.122	0.123	0.121	5		AVG
Terphenyl-d14				0.705	0.702	0.685	0.758	0.713	0.727	0.715	4		AVG
									Average %RSD	7			

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


12 Benzaldehyde
Curve Type: Linear By-Response
Amt = -0.0850811 + Rsp/0.8884358
R^2: 0.9909610
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1

mc (13) 11/13/13


91 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1727824 + Rsp/0.1706773
R^2: 0.9980926
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
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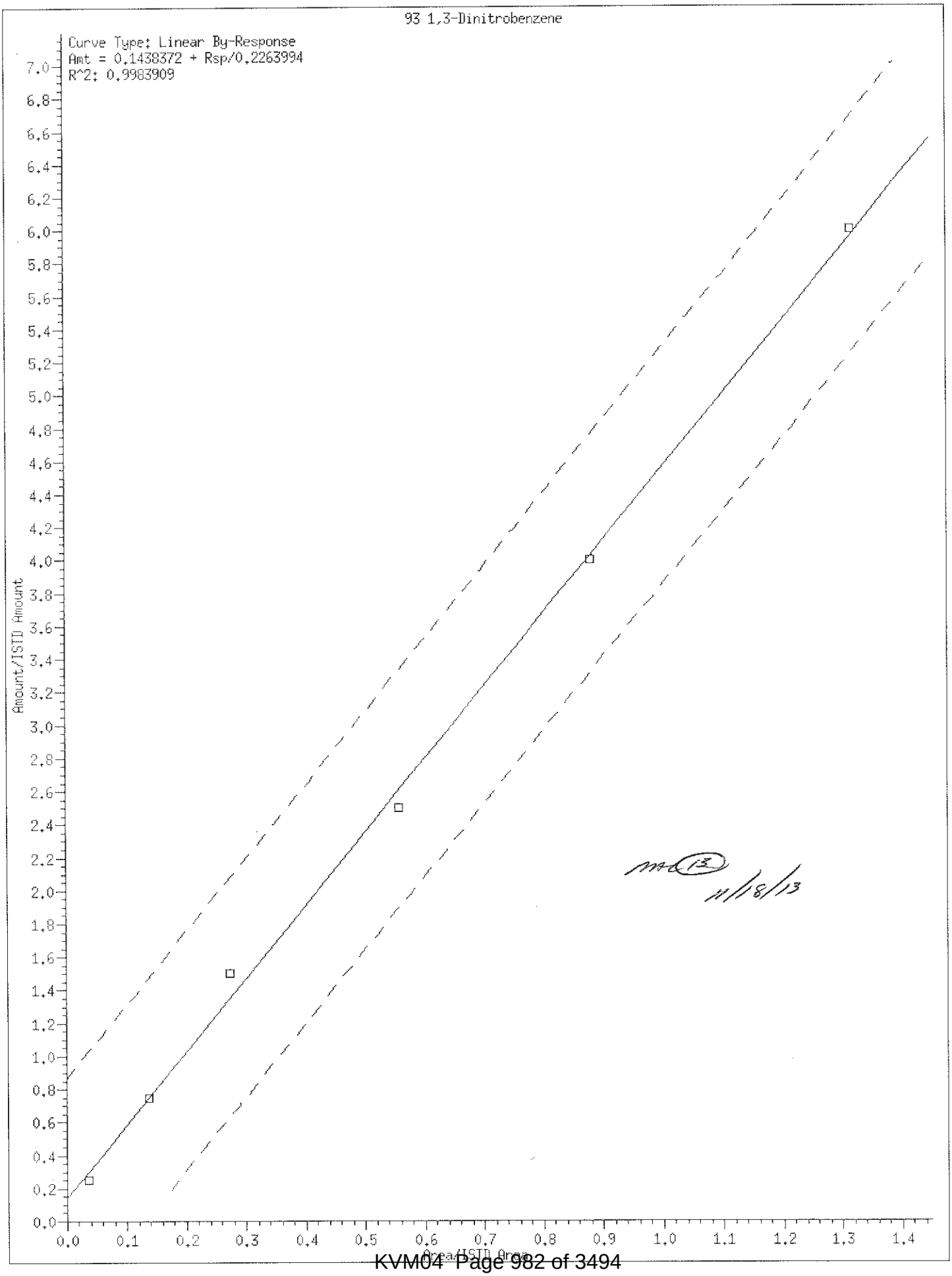
6.6
6.8
7.0
0.1
0.3
0.5
0.7
0.9
11/18/13


93 1,3-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1438372 + Rsp/0.2263994
R^2: 0.9983909
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
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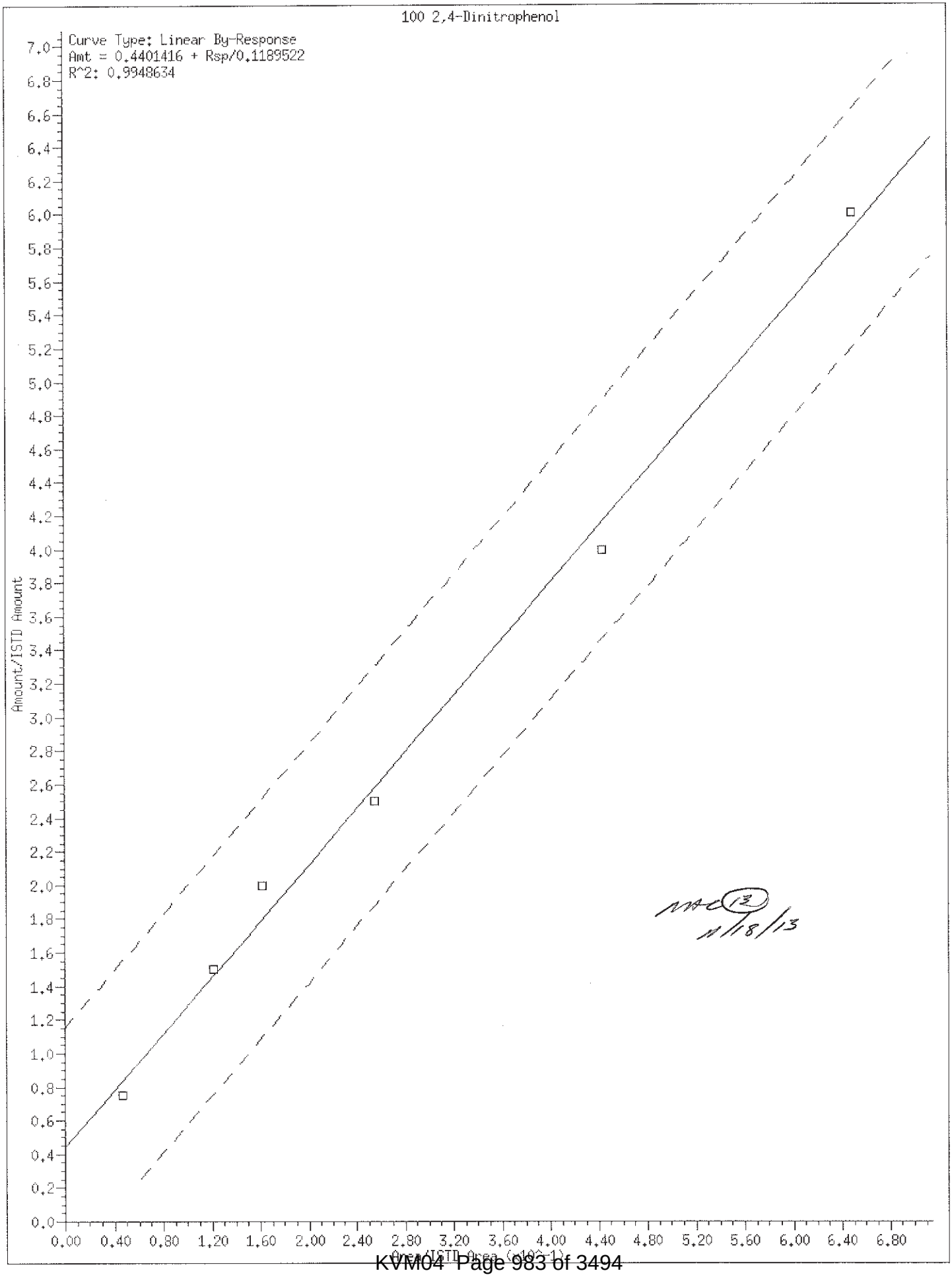
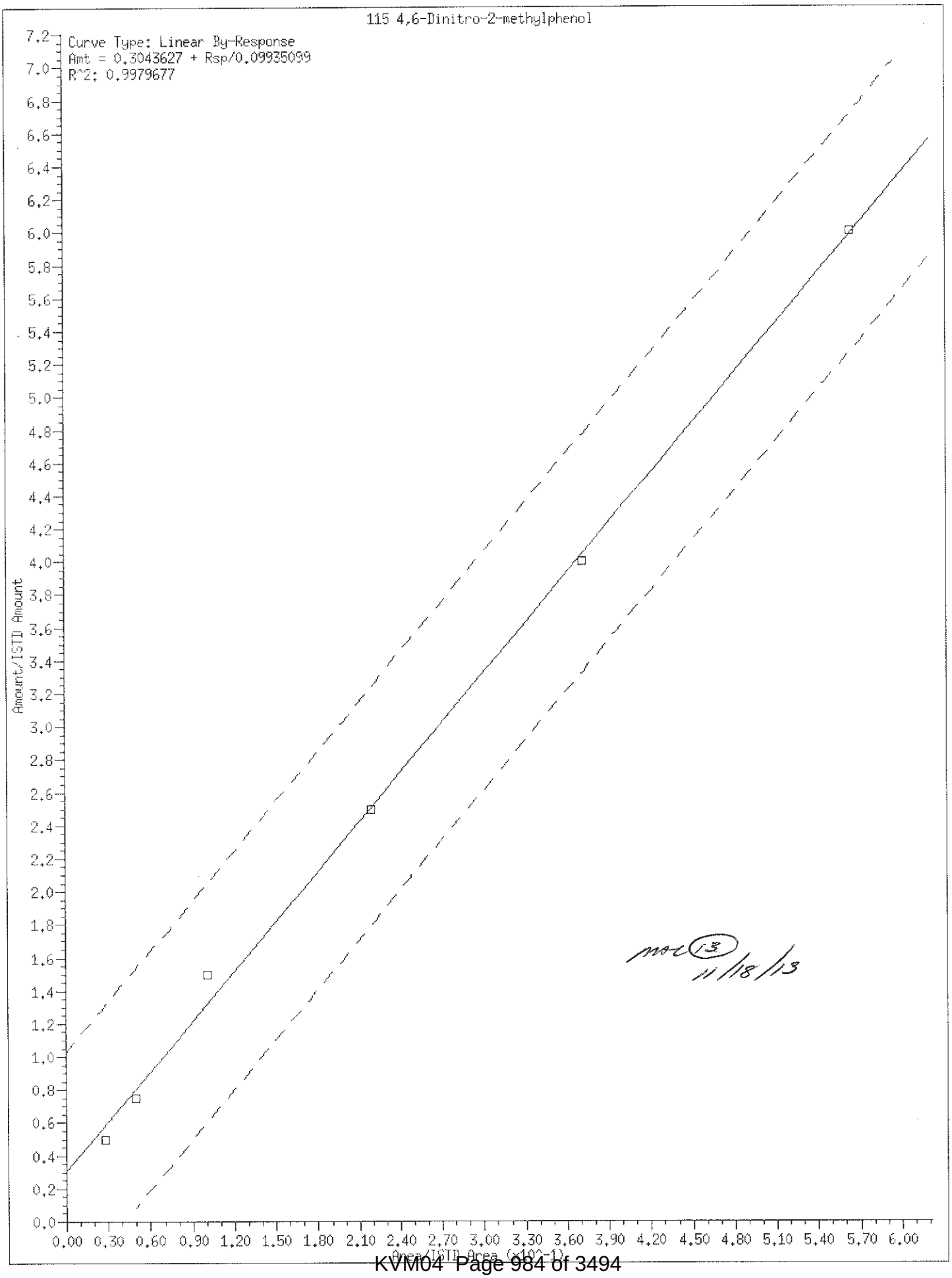
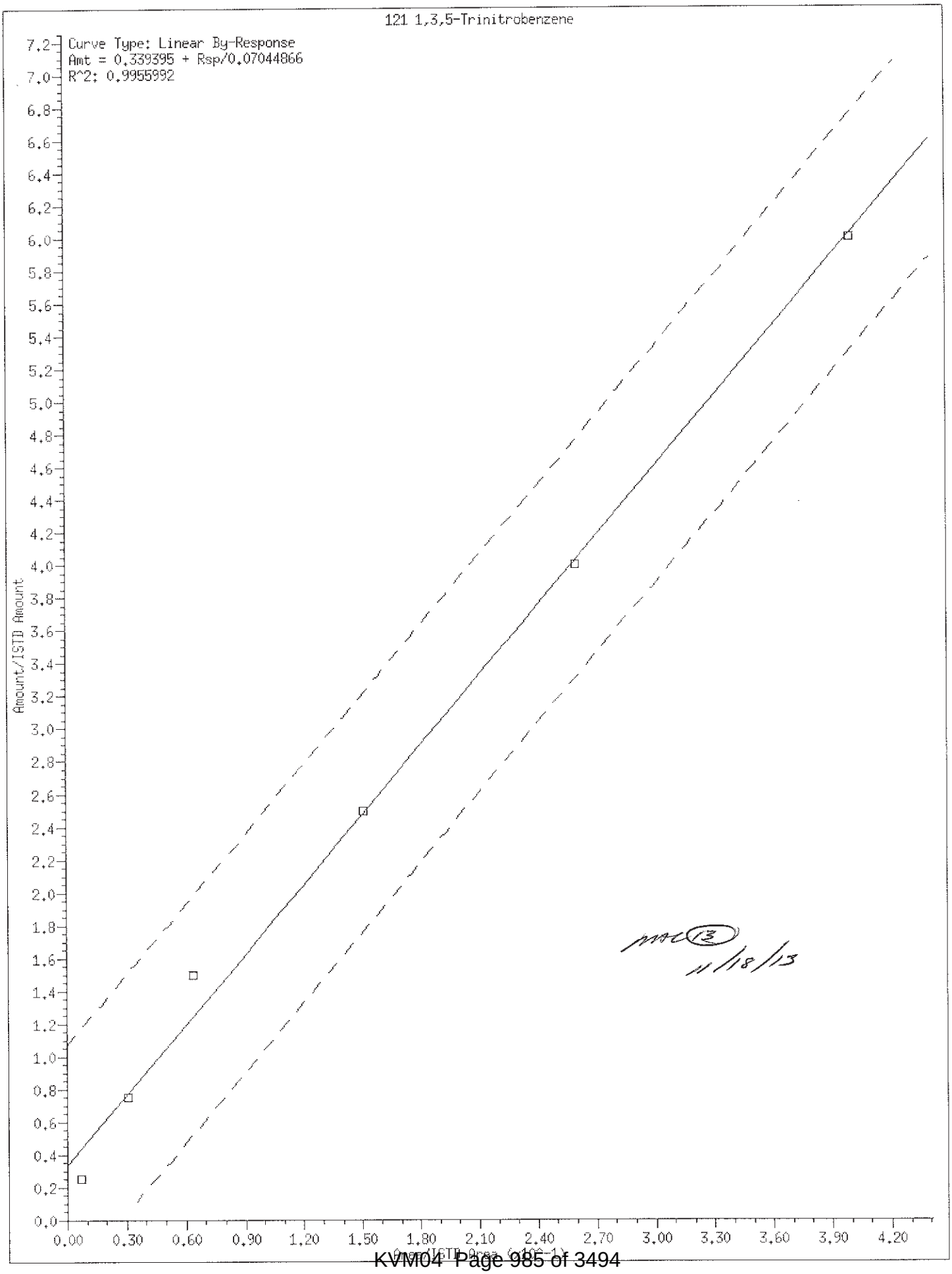
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.4

11/18/13

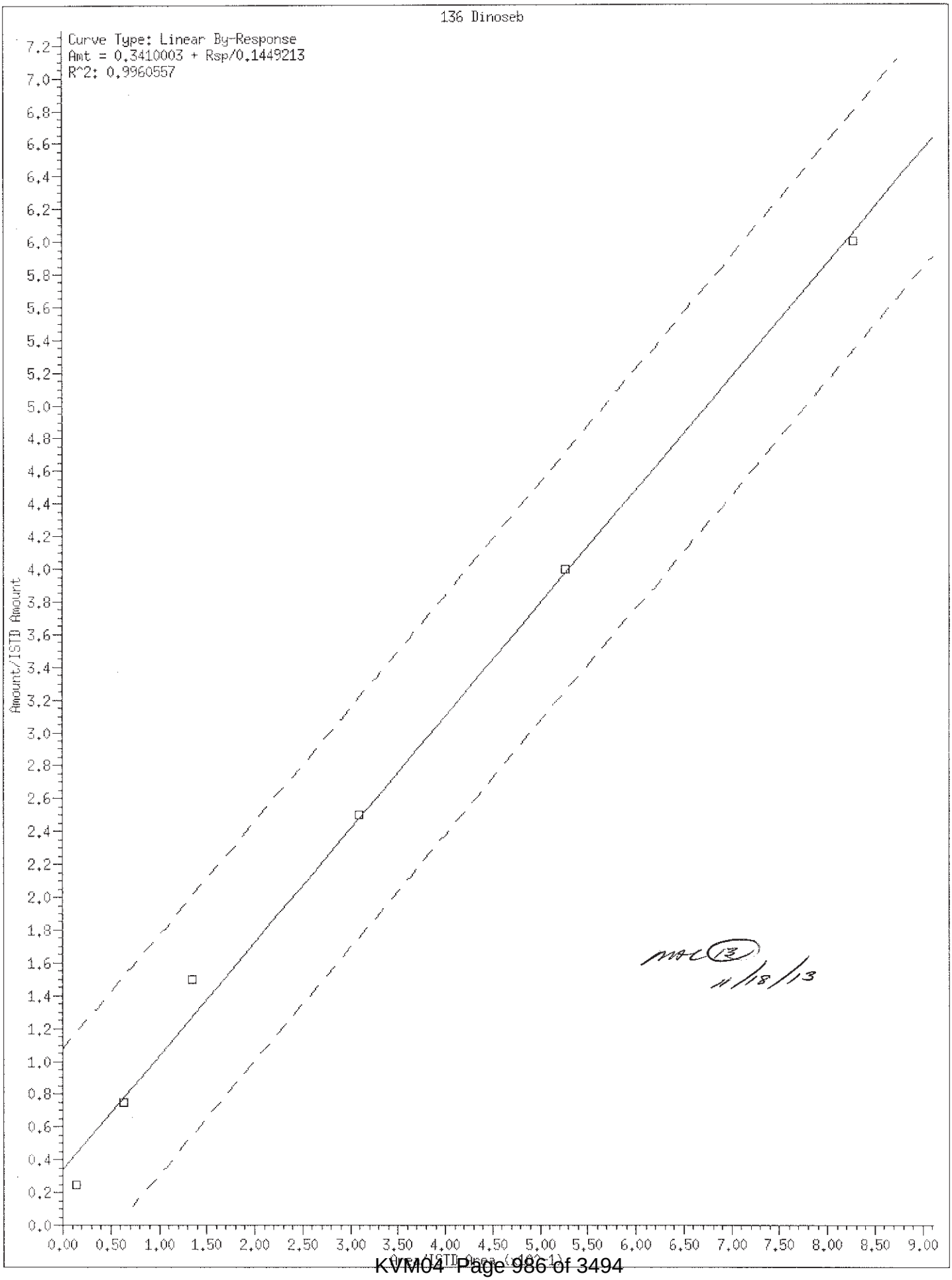


MAC (12) 11/18/13

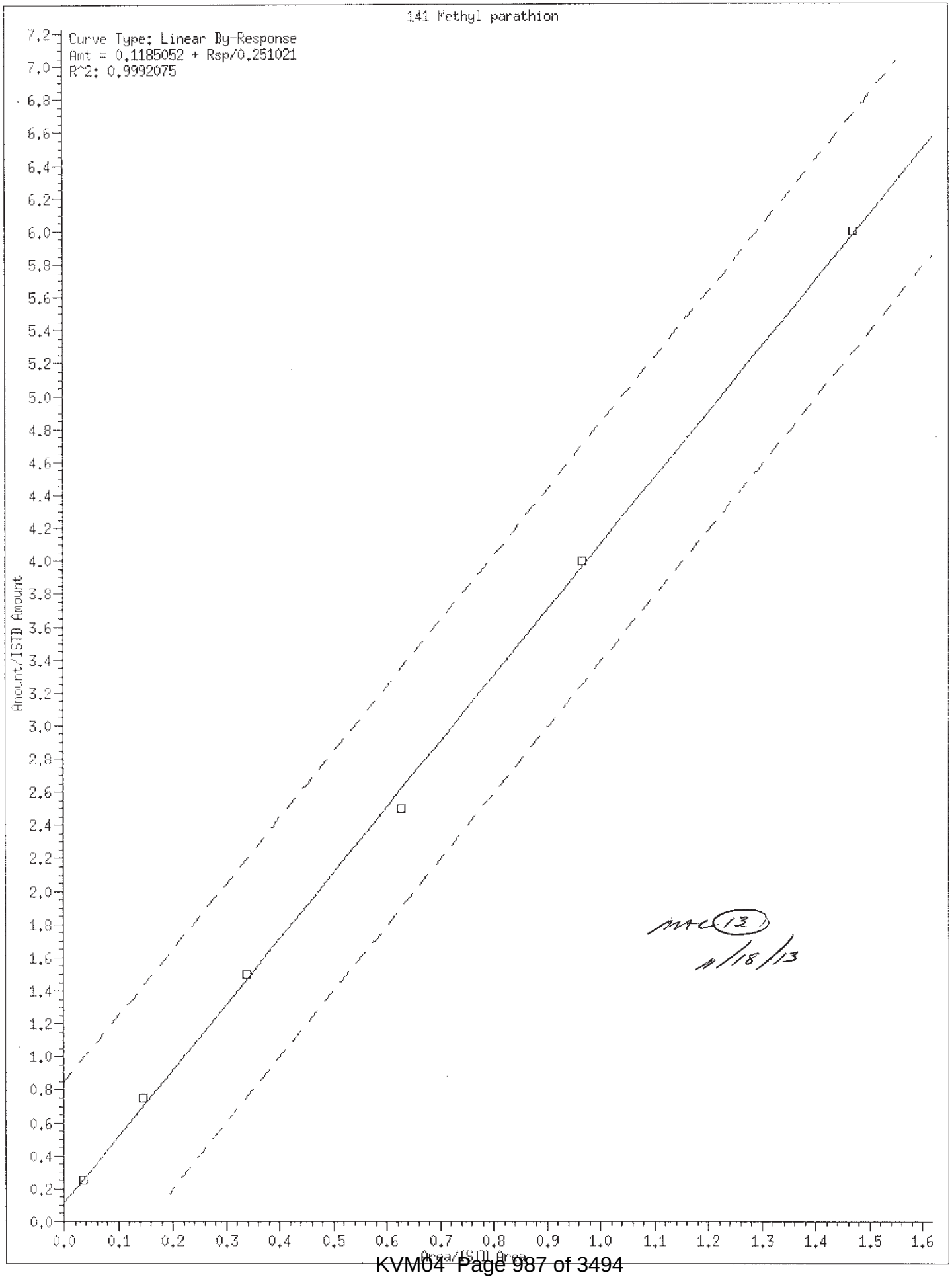

115 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3043627 + Rsp/0.09935099
R^2: 0.9979677
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
mac 13
11/18/13



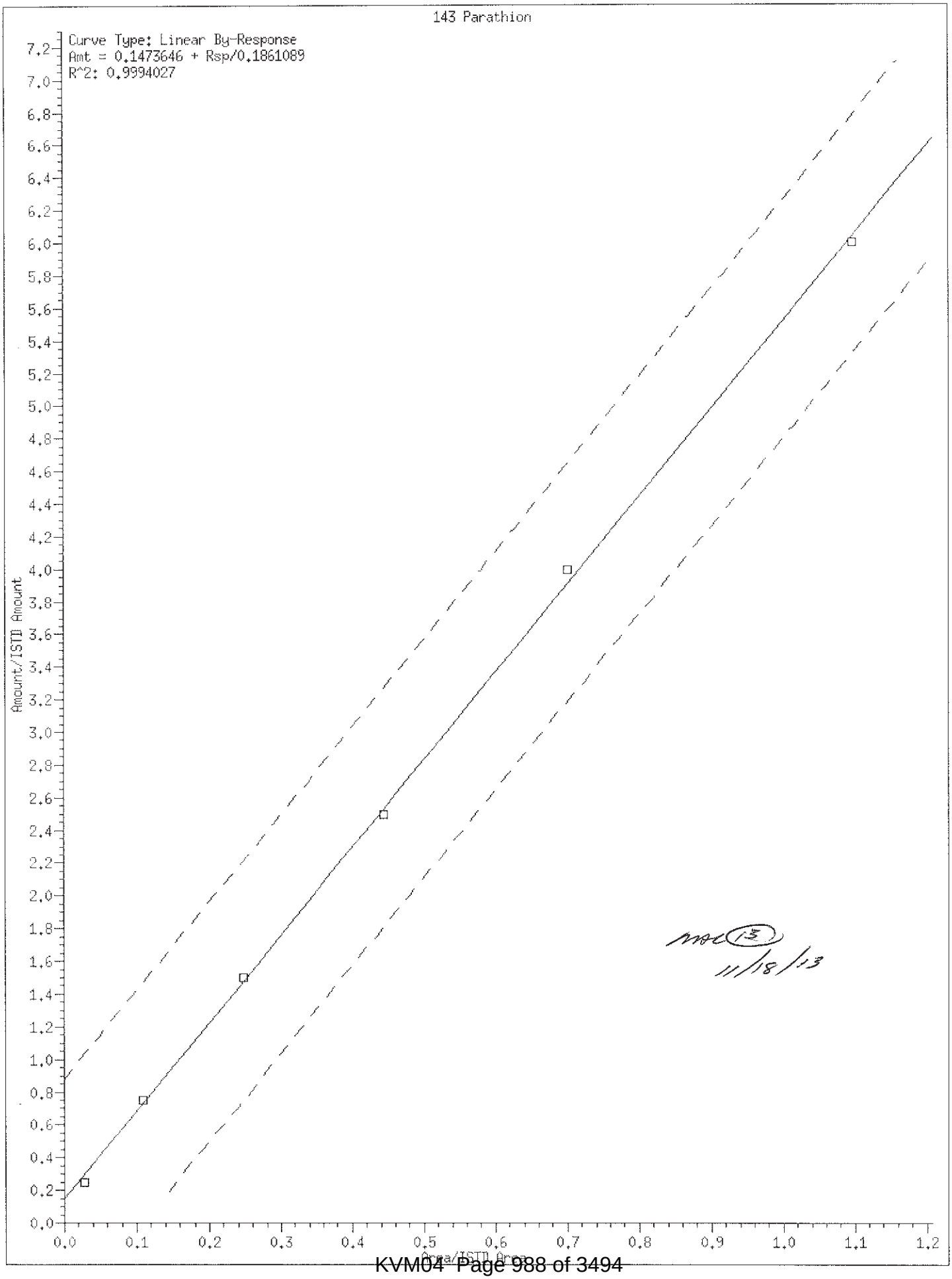
mac (13) 11/18/13



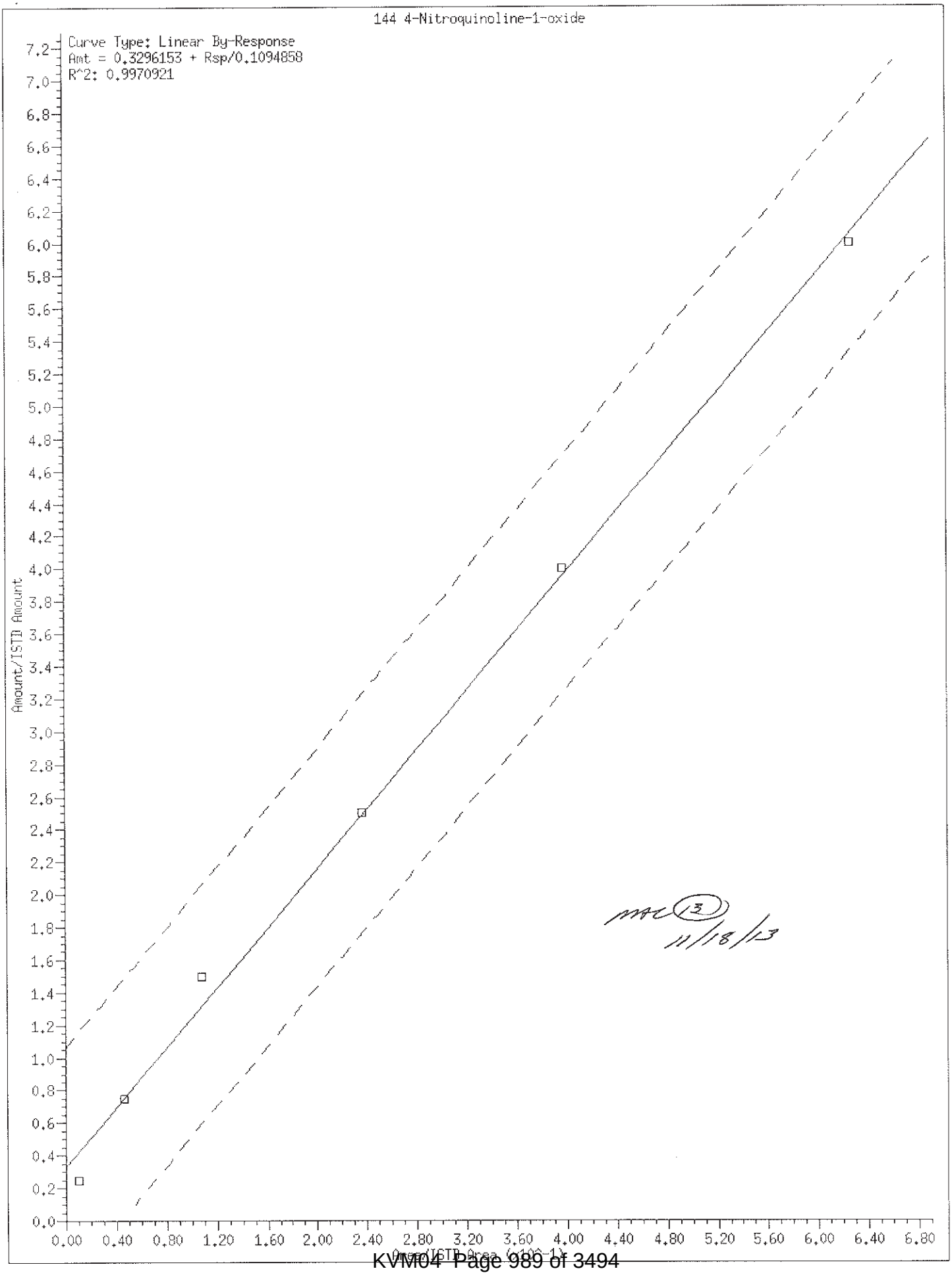
MAC 13
11/18/13


141 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.1185052 + Rsp/0.251021
R^2: 0.9992075
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2

MC (13.)
11/18/13


143 Parathion
Curve Type: Linear By-Response
Amt = 0.1473646 + Rsp/0.1861089
R^2: 0.9994027
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2

11/18/13


144 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.3296153 + Rsp/0.1094858
R^2: 0.9970921
Amount/ISTD Amount
Amount/ISTD Area (x10E-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80

MAC (3) 11/18/13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d SSTD030
/chem/HP10623.i/13nov12a.b/ck0402.d SSTD0.50
/chem/HP10623.i/13nov12a.b/ck0403.d SSTD001
/chem/HP10623.i/13nov12a.b/ck0404.d SSTD120
/chem/HP10623.i/13nov12a.b/ck0405.d SSTD080
/chem/HP10623.i/13nov12a.b/ck0406.d SSTD050
/chem/HP10623.i/13nov12a.b/ck0407.d SSTD015
/chem/HP10623.i/13nov12a.b/ck0408.d SSTD005

Area Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	77457	114510	75301	103965	112327	97224	131335	105420	102192	18
Naphthalene-d8	361204	513472	339882	487375	520142	451858	603190	484406	470191	18
Acenaphthene-d10	222517	310493	207488	296224	313745	275969	377352	296800	287574	19
Phenanthrene-d10	404202	571166	383931	530074	570162	513309	694958	547696	526937	19
Pyrene-d10	503289	702415	473300	657394	718943	638551	855313	679864	653634	19
Perylene-d12	430377	629898	429576	539486	595376	568380	733981	600759	565979	18

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d
1,4-Dichlorobenzene-d4	5.225	5.225	5.225	5.226	5.226	5.226	5.226	5.226
Naphthalene-d8	6.461	6.461	6.461	6.468	6.468	6.468	6.461	6.461
Acenaphthene-d10	8.177	8.171	8.171	8.177	8.177	8.177	8.177	8.171
Phenanthrene-d10	9.622	9.616	9.616	9.628	9.622	9.622	9.622	9.616
Pyrene-d10	10.999	10.999	10.999	11.005	11.005	10.999	10.999	10.999
Perylene-d12	13.606	13.606	13.606	13.612	13.612	13.612	13.606	13.606

Comments: MAC (B) 11/13/13

Report generated on 11/13/2013 at 00:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	47.96	-4	20	YES
N-Nitrosodimethylamine	50.00	43.72	-13	20	YES
Pyridine	50.00	47.53	-5	20	YES
2-Picoline	50.00	47.33	-5	20	YES
N-Nitrosomethylethylamine	50.00	47.41	-5	20	YES
Methyl methanesulfonate	50.00	54.11	8	20	YES
N-Nitrosodiethylamine	50.00	47.99	-4	20	YES
Ethyl methanesulfonate	50.00	51.16	2	20	YES
Aniline	50.00	49.00	-2	20	YES
Phenol	50.00	48.07	-4	20	YES
bis(2-Chloroethyl)ether	50.00	48.26	-3	20	YES
2-Chlorophenol	50.00	48.77	-2	20	YES
1,3-Dichlorobenzene	50.00	50.29	1	20	YES
1,4-Dichlorobenzene	50.00	50.27	1	20	YES
Benzyl alcohol	50.00	49.43	-1	20	YES
1,2-Dichlorobenzene	50.00	50.86	2	20	YES
2-Methylphenol	50.00	49.03	-2	20	YES
2,2'-oxybis(1-Chloropropane	50.00	44.07	-12	20	YES
bis(2-Chloroisopropyl)ether	50.00	43.96	-12	20	YES
N-Nitrosopyrrolidine	50.00	49.78	0	20	YES
Acetophenone	50.00	48.21	-4	20	YES
N-Nitroso-di-n-propylamine	50.00	45.85	-8	20	YES
N-Nitrosomorpholine	50.00	47.57	-5	20	YES
4-Methylphenol	50.00	48.84	-2	20	YES
o-Toluidine	50.00	48.77	-2	20	YES
Hexachloroethane	50.00	49.32	-1	20	YES
Nitrobenzene	50.00	44.62	-11	20	YES
N-Nitrosopiperidine	50.00	49.77	0	20	YES
Isophorone	50.00	48.53	-3	20	YES
2-Nitrophenol	50.00	49.37	-1	20	YES
2,4-Dimethylphenol	50.00	48.25	-3	20	YES
O,O,O-triethylphosphorothio	50.00	50.74	1	20	YES
bis(2-Chloroethoxy)methane	50.00	47.27	-5	20	YES
Benzoic acid	100.00	100.04	0	20	YES
2,4-Dichlorophenol	50.00	51.53	3	20	YES
1,2,4-Trichlorobenzene	50.00	53.64	7	20	YES
Naphthalene	50.00	49.91	0	20	YES

NC = Could not calculate

Comments: MC (12) 11/13/13

HIGH- 4-AMINOBIPHENYL 4-NITROQUINOLINE-1-OXIDE BENZALDEHYDE

LOW- NITROSODI-N-BUTYLAMINE INDENE

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
4-Chloroaniline	50.00	51.73	3	20	YES
2,6-Dichlorophenol	50.00	51.88	4	20	YES
Hexachloropropene	50.00	51.99	4	20	YES
Hexachlorobutadiene	50.00	51.57	3	20	YES
N-Nitrosodi-n-butylamine	50.00	38.17	-24	20	NO ★
4-Chloro-3-methylphenol	50.00	50.50	1	20	YES
Safrole	50.00	51.53	3	20	YES
2-Methylnaphthalene	50.00	49.27	-1	20	YES
1-Methylnaphthalene	50.00	50.86	2	20	YES
Hexachlorocyclopentadiene	100.00	114.67	15	20	YES
1,2,4,5-Tetrachlorobenzene	50.00	49.72	-1	20	YES
cis-Isosafrole	5.50	5.67	3	20	YES
2,4,6-Trichlorophenol	50.00	50.84	2	20	YES
2,4,5-Trichlorophenol	50.00	53.22	6	20	YES
trans-Isosafrole	44.50	45.97	3	20	YES
Isosafrole	50.00	51.65	3	20	YES
1,1'-Biphenyl	50.00	47.21	-6	20	YES
2-Chloronaphthalene	50.00	58.78	18	20	YES
Diphenyl ether	50.00	50.47	1	20	YES
2-Nitroaniline	50.00	51.09	2	20	YES
1,4-Naphthoquinone	62.50	62.63	0	20	YES
1,4-Dinitrobenzene	50.00	46.69	-7	20	YES
Dimethylphthalate	50.00	51.10	2	20	YES
1,3-Dinitrobenzene	50.00	47.86	-4	20	YES
2,6-Dinitrotoluene	50.00	54.31	9	20	YES
Acenaphthylene	50.00	53.72	7	20	YES
3-Nitroaniline	50.00	54.04	8	20	YES
Acenaphthene	50.00	49.66	-1	20	YES
2,4-Dinitrophenol	100.00	99.41	-1	20	YES
Pentachlorobenzene	50.00	51.87	4	20	YES
4-Nitrophenol	50.00	52.41	5	20	YES
Dibenzofuran	50.00	49.40	-1	20	YES
2,4-Dinitrotoluene	50.00	55.30	11	20	YES
1-Naphthylamine	100.00	105.26	5	20	YES
2,3,4,6-Tetrachlorophenol	50.00	58.60	17	20	YES
2-Naphthylamine	100.00	102.68	3	20	YES
Diethylphthalate	50.00	50.91	2	20	YES

NC = Could not calculate

Comments:

★ Non-CCC compound, all ≤ ±50%

VS (11/7)

11/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Thionazin	50.00	47.52	-5	20	YES
Fluorene	50.00	51.14	2	20	YES
4-Chlorophenyl-phenylether	50.00	50.27	1	20	YES
5-Nitro-o-toluidine	50.00	55.72	11	20	YES
4-Nitroaniline	50.00	53.30	7	20	YES
4,6-Dinitro-2-methylphenol	50.00	49.87	0	20	YES
N-Nitrosodiphenylamine	50.00	51.00	2	20	YES
1,2-Diphenylhydrazine	50.00	47.81	-4	20	YES
Tetraethyldithiopyrophospha	50.00	46.11	-8	20	YES
1,3,5-Trinitrobenzene	50.00	48.72	-3	20	YES
Diallate (peak 1)	37.50	33.99	-9	20	YES
Phorate	50.00	44.71	-11	20	YES
Phenacetin	50.00	50.51	1	20	YES
4-Bromophenyl-phenylether	50.00	51.35	3	20	YES
Diallate (peak 2)	12.50	11.31	-10	20	YES
Hexachlorobenzene	50.00	50.51	1	20	YES
Dimethoate	50.00	47.93	-4	20	YES
Diallate TRANS/CIS	50.00	45.30	-9	20	YES
Pentachlorophenol	50.00	53.73	7	20	YES
Pentachloronitrobenzene	50.00	51.93	4	20	YES
4-Aminobiphenyl	50.00	66.98	34	20	NO *
Pronamide	50.00	49.24	-2	20	YES
Dinoseb	50.00	48.62	-3	20	YES
Phenanthrene	50.00	49.88	0	20	YES
Anthracene	50.00	51.31	3	20	YES
Carbazole	50.00	52.05	4	20	YES
Methyl parathion	50.00	48.83	-2	20	YES
Di-n-butylphthalate	50.00	50.47	1	20	YES
Parathion	50.00	51.49	3	20	YES
4-Nitroquinoline-1-oxide	600.00	770.33	28	20	NO P
Isodrin	50.00	48.07	-4	20	YES
Fluoranthene	50.00	52.98	6	20	YES
Benzidine	250.00	246.85	-1	20	YES
Pyrene	50.00	50.02	0	20	YES
p-Dimethylaminoazobenzene	50.00	53.06	6	20	YES
Chlorobenzilate	50.00	47.58	-5	20	YES
3,3'-Dimethylbenzidine	100.00	102.46	2	20	YES

NC = Could not calculate

Comments:

* NON-CCC compound, ok if < ±50% CS (95)

4/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Butylbenzylphthalate	50.00	49.18	-2	20	YES
2-Acetylaminofluorene	50.00	51.65	3	20	YES
3,3'-Dichlorobenzidine	50.00	49.72	-1	20	YES
4,4'-Methylenebis(2-Chloroa	50.00	49.37	-1	20	YES
Benzo(a)anthracene	50.00	52.16	4	20	YES
Chrysene	50.00	50.52	1	20	YES
bis(2-Ethylhexyl)phthalate	50.00	48.64	-3	20	YES
Di-n-octylphthalate	50.00	49.02	-2	20	YES
7,12-Dimethylbenz[a]anthrac	50.00	53.57	7	20	YES
Benzo(b)fluoranthene	50.00	49.93	0	20	YES
Benzo(k)fluoranthene	50.00	54.82	10	20	YES
Benzo(a)pyrene	50.00	50.56	1	20	YES
3-Methylcholanthrene	50.00	50.48	1	20	YES
Indeno(1,2,3-cd)pyrene	50.00	51.91	4	20	YES
Dibenz(a,h)anthracene	50.00	52.34	5	20	YES
Benzo(g,h,i)perylene	50.00	51.23	2	20	YES
6-Methylchrysene	50.00	49.68	-1	20	YES
Dibenz(a,h)acridine	50.00	49.96	0	20	YES
Dibenz(a,j)acridine	50.00	50.79	2	20	YES
Quinoline	50.00	50.58	1	20	YES
Indene	50.00	36.40	-27	20	NO ☆

NC = Could not calculate

Comments:

☆ Non-cc compound, o/c of ± 50%.

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP10623

Method: SW-846 8270C | File ID: ck0412.d

ICV SAMPLE ID: BASICV2463 | BATCH: 13NOV12A026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	79.82	60	20	NO
Caprolactam	50.00	48.35	-3	20	YES
Atrazine	50.00	52.72	5	20	YES

NC = Could not calculate

Comments: MAC (3) 11/13/13

* non-CCC compound, ok if < ± 50%

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.644	0.649	0.605	0.626	0.603	0.650	0.629	3	AVG
N-Nitrosodimethylamine		0.980	1.115	1.001	1.178	1.168	1.164	1.172	1.111	8	AVG
Pyridine			1.951	1.687	1.897	1.953	1.913	1.970	1.895	6	AVG
2-Picoline		2.157	1.905	1.890	2.018	2.008	1.988	2.008	1.996	4	AVG
N-Nitrosomethylethylamine		0.801	0.829	0.828	0.913	0.870	0.874	0.891	0.858	5	AVG
Methyl methanesulfonate		1.005	0.942	0.944	1.027	0.976	0.980	0.991	0.981	3	AVG
N-Nitrosodiethylamine		0.833	0.774	0.791	0.866	0.829	0.833	0.841	0.824	4	AVG
Ethyl methanesulfonate		0.845	0.764	0.765	0.817	0.787	0.795	0.790	0.795	4	AVG
Benzaldehyde			1.591	1.577	1.533	1.435	1.282	1.140	1.426	13	AVG
Aniline		3.071	2.865	2.832	3.030	2.871	2.852	2.825	2.907	3	AVG
Phenol		2.550	2.375	2.318	2.444	2.314	2.282	2.240	2.360	5	AVG
bis(2-Chloroethyl)ether		2.016	1.840	1.825	1.915	1.837	1.807	1.796	1.862	4	AVG
2-Chlorophenol		1.504	1.404	1.405	1.541	1.455	1.464	1.447	1.460	3	AVG
1,3-Dichlorobenzene		1.672	1.589	1.550	1.593	1.543	1.534	1.512	1.570	3	AVG
1,4-Dichlorobenzene		1.739	1.598	1.562	1.600	1.559	1.551	1.511	1.588	5	AVG
Benzyl alcohol			1.015	1.013	1.052	1.035	1.033	1.047	1.033	2	AVG
1,2-Dichlorobenzene		1.581	1.532	1.470	1.503	1.469	1.453	1.393	1.486	4	AVG
Indene		2.774	2.562	2.417	2.569	2.474	2.458	2.319	2.510	6	AVG
2-Methylphenol		1.536	1.430	1.441	1.531	1.447	1.446	1.424	1.465	3	AVG
2,2'-oxybis(1-Chloropropane)		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
bis(2-Chloroisopropyl)ether		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
N-Nitrosopyrrolidine		0.815	0.766	0.817	0.905	0.848	0.857	0.858	0.838	5	AVG
Acetophenone		2.429	2.337	2.282	2.249	2.241	2.257	2.241	2.291	3	AVG
N-Nitroso-di-n-propylamine		1.433	1.348	1.319	1.401	1.290	1.243	1.197	1.319	6	AVG
N-Nitrosomorpholine		1.186	1.089	1.039	1.078	0.994	0.961	0.931	1.040	8	AVG
4-Methylphenol		1.739	1.655	1.630	1.732	1.618	1.576	1.507	1.637	5	AVG
o-Toluidine		2.746	2.533	2.502	2.629	2.490	2.433	2.351	2.526	5	AVG
Hexachloroethane		0.722	0.667	0.657	0.690	0.659	0.660	0.646	0.671	4	AVG
Nitrobenzene		0.513	0.494	0.479	0.504	0.487	0.474	0.467	0.488	3	AVG
N-Nitrosopiperidine		0.202	0.194	0.197	0.209	0.203	0.199	0.197	0.200	3	AVG
Isophorone		0.853	0.815	0.807	0.874	0.843	0.821	0.815	0.832	3	AVG
2-Nitrophenol		0.143	0.146	0.155	0.192	0.178	0.180	0.180	0.168	12	AVG
2,4-Dimethylphenol		0.418	0.396	0.400	0.424	0.414	0.404	0.395	0.407	3	AVG
O,O,O-triethylphosphorothioate		0.188	0.177	0.179	0.181	0.184	0.180	0.175	0.181	3	AVG
bis(2-Chloroethoxy)methane		0.581	0.558	0.537	0.550	0.524	0.534	0.518	0.543	4	AVG
Benzoic acid				0.183	0.294	0.257	0.287	0.330	0.270	20	1STDEG
2,4-Dichlorophenol		0.287	0.271	0.283	0.299	0.297	0.291	0.283	0.287	3	AVG
1,2,4-Trichlorobenzene		0.355	0.328	0.312	0.317	0.320	0.314	0.300	0.321	5	AVG
Naphthalene	1.011	1.213	1.102	1.061	1.069	1.065	1.024	0.984	1.066	7	AVG
4-Chloroaniline		0.483	0.439	0.432	0.459	0.441	0.425	0.413	0.442	5	AVG
2,6-Dichlorophenol		0.274	0.274	0.277	0.286	0.282	0.275	0.264	0.276	3	AVG
Hexachloropropene		0.194	0.178	0.194	0.211	0.211	0.216	0.213	0.203	7	AVG
Hexachlorobutadiene		0.201	0.190	0.183	0.183	0.188	0.186	0.179	0.187	4	AVG
Quinoline		0.771	0.704	0.685	0.721	0.697	0.691	0.674	0.706	5	AVG
Caprolactam			0.118	0.127	0.134	0.131	0.130	0.129	0.128	5	AVG
N-Nitrosodi-n-butylamine			0.297	0.300	0.320	0.305	0.382	0.377	0.330	12	AVG
4-Chloro-3-methylphenol		0.339	0.321	0.335	0.371	0.353	0.350	0.346	0.345	5	AVG
Safrole		0.267	0.271	0.266	0.280	0.278	0.274	0.264	0.271	2	AVG
2-Methylnaphthalene	0.703	0.762	0.734	0.709	0.725	0.712	0.684	0.654	0.710	5	AVG
1-Methylnaphthalene	0.644	0.686	0.654	0.644	0.660	0.645	0.627	0.598	0.645	4	AVG
Hexachlorocyclopentadiene			0.229	0.245	0.293	0.281	0.297	0.297	0.273	11	AVG
1,2,4,5-Tetrachlorobenzene		0.626	0.594	0.571	0.579	0.568	0.566	0.552	0.580	4	AVG

BCM 10-29-13

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
cis-Isosafrole		0.081	0.079	0.081	0.091	0.087	0.087	0.089	0.085	6	AVG
2,4,6-Trichlorophenol		0.332	0.337	0.354	0.399	0.378	0.381	0.378	0.366	7	AVG
2,4,5-Trichlorophenol		0.361	0.336	0.361	0.415	0.390	0.397	0.384	0.378	7	AVG
trans-Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
1,1'-Biphenyl		1.619	1.541	1.485	1.433	1.403	1.369	1.314	1.452	7	AVG
2-Chloronaphthalene		1.255	1.171	1.079	1.151	1.074	1.101	0.966	1.114	8	AVG
1-Chloronaphthalene		1.202	1.152	1.116	1.110	1.071	0.994	1.043	1.098	6	AVG
Diphenyl ether		0.844	0.835	0.802	0.829	0.786	0.782	0.747	0.803	4	AVG
2-Nitroaniline		0.286	0.305	0.340	0.405	0.367	0.369	0.358	0.347	12	AVG
1,4-Naphthoquinone			0.407	0.460	0.526	0.501	0.500	0.482	0.479	9	AVG
1,4-Dinitrobenzene			0.122	0.151	0.211	0.184	0.192	0.198	0.176	19	1STDEG
Dimethylphthalate			1.320	1.297	1.315	1.247	1.216	1.162	1.260	5	AVG
1,3-Dinitrobenzene			0.182	0.200	0.246	0.222	0.224	0.224	0.216	10	AVG
2,6-Dinitrotoluene		0.229	0.260	0.281	0.317	0.291	0.293	0.283	0.279	10	AVG
Acenaphthylene	1.693	1.708	1.693	1.689	1.783	1.684	1.675	1.601	1.691	3	AVG
3-Nitroaniline		0.252	0.294	0.321	0.365	0.335	0.337	0.339	0.320	12	AVG
Acenaphthene	1.224	1.268	1.181	1.154	1.194	1.121	1.110	1.053	1.163	6	AVG
2,4-Dinitrophenol				0.095	0.147	0.121	0.154	0.172	0.138	22	1STDEG
Pentachlorobenzene		0.525	0.460	0.452	0.466	0.452	0.456	0.439	0.464	6	AVG
4-Nitrophenol			0.158	0.192	0.231	0.212	0.215	0.217	0.204	13	AVG
Dibenzofuran		1.817	1.713	1.662	1.696	1.611	1.583	1.497	1.654	6	AVG
2,4-Dinitrotoluene		0.297	0.323	0.359	0.393	0.373	0.381	0.378	0.358	10	AVG
2,4_2,6-Dinitrotoluenes		0.527	0.583	0.640	0.710	0.664	0.674		0.633	11	AVG
1-Naphthylamine		1.203	1.209	1.214	1.240	1.193	1.197	1.160	1.202	2	AVG
2,3,4,6-Tetrachlorophenol		0.273	0.260	0.298	0.327	0.302	0.315	0.313	0.298	8	AVG
2-Naphthylamine		1.246	1.260	1.259	1.281	1.206	1.215	1.168	1.234	3	AVG
Diethylphthalate			1.251	1.221	1.296	1.222	1.239	1.217	1.241	2	AVG
Thionazin		0.281	0.274	0.274	0.284	0.265	0.257	0.242	0.268	6	AVG
Fluorene	1.345	1.412	1.371	1.346	1.392	1.318	1.268	1.199	1.331	5	AVG
4-Chlorophenyl-phenylether		0.724	0.695	0.663	0.663	0.636	0.631	0.610	0.660	6	AVG
5-Nitro-o-toluidine		0.322	0.361	0.369	0.384	0.355	0.359	0.355	0.358	5	AVG
4-Nitroaniline		0.293	0.324	0.337	0.349	0.338	0.333	0.333	0.330	5	AVG
4,6-Dinitro-2-methylphenol				0.086	0.126	0.119	0.133	0.139	0.121	17	1STDEG
N-Nitrosodiphenylamine (1)		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
1,2-Diphenylhydrazine		1.031	1.032	1.003	1.050	0.978	0.916	0.888	0.985	6	AVG
Tetraethyldithiopyrophosphate		0.142	0.134	0.142	0.154	0.144	0.141	0.139	0.142	4	AVG
1,3,5-Trinitrobenzene			0.043	0.062	0.094	0.088	0.099	0.103	0.081	29	1STDEG
Diallate (peak 1)		0.497	0.508	0.502	0.530	0.489	0.461	0.450	0.491	6	AVG
Phorate		0.549	0.588	0.593	0.635	0.582	0.546		0.582	6	AVG
Phenacetin		0.330	0.373	0.405	0.474	0.442	0.439	0.438	0.414	12	AVG
4-Bromophenyl-phenylether		0.202	0.202	0.195	0.203	0.197	0.192	0.191	0.197	3	AVG
Diallate (peak 2)		0.196	0.199	0.206	0.227	0.212	0.211	0.215	0.209	5	AVG
Hexachlorobenzene	0.200	0.211	0.198	0.190	0.197	0.190	0.188	0.187	0.195	4	AVG
Dimethoate			0.322	0.367	0.433	0.393	0.383	0.382	0.380	10	AVG
Atrazine		0.196	0.210	0.216	0.209	0.204	0.198	0.185	0.203	5	AVG
Pentachlorophenol			0.097	0.119	0.149	0.144	0.150	0.153	0.135	17	1STDEG
Pentachloronitrobenzene		0.071	0.085	0.093	0.098	0.097	0.096	0.093	0.091	10	AVG
4-Aminobiphenyl		0.743	0.765	0.784	0.837	0.804	0.776	0.742	0.779	4	AVG
Pronamide		0.263	0.300	0.331	0.369	0.354	0.348	0.341	0.329	11	AVG
Phenanthrene	1.182	1.238	1.172	1.109	1.117	1.074	1.033	0.997	1.115	7	AVG
Dinoseb			0.078	0.123	0.184	0.178	0.197	0.205	0.161	31	1STDEG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

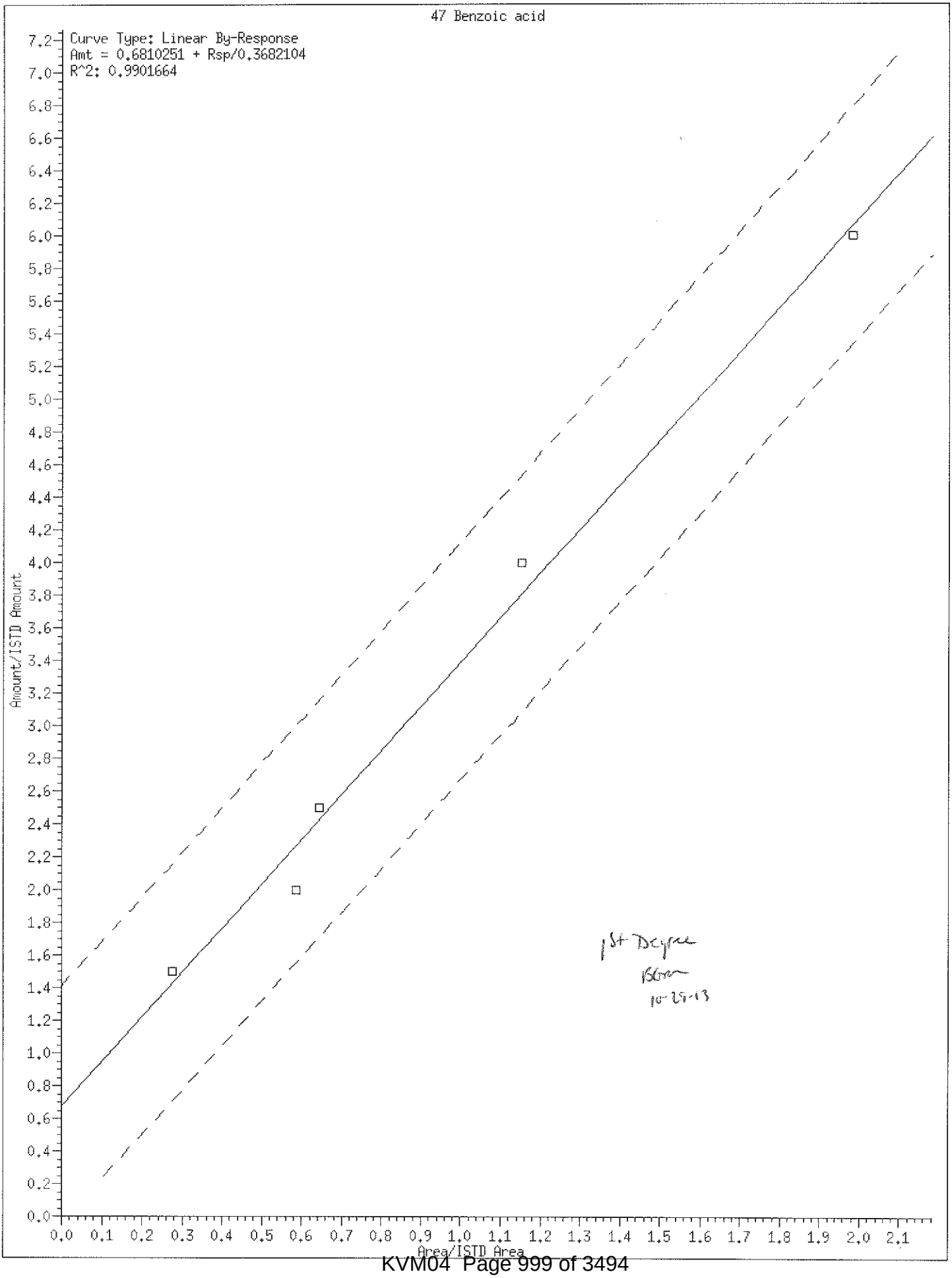
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

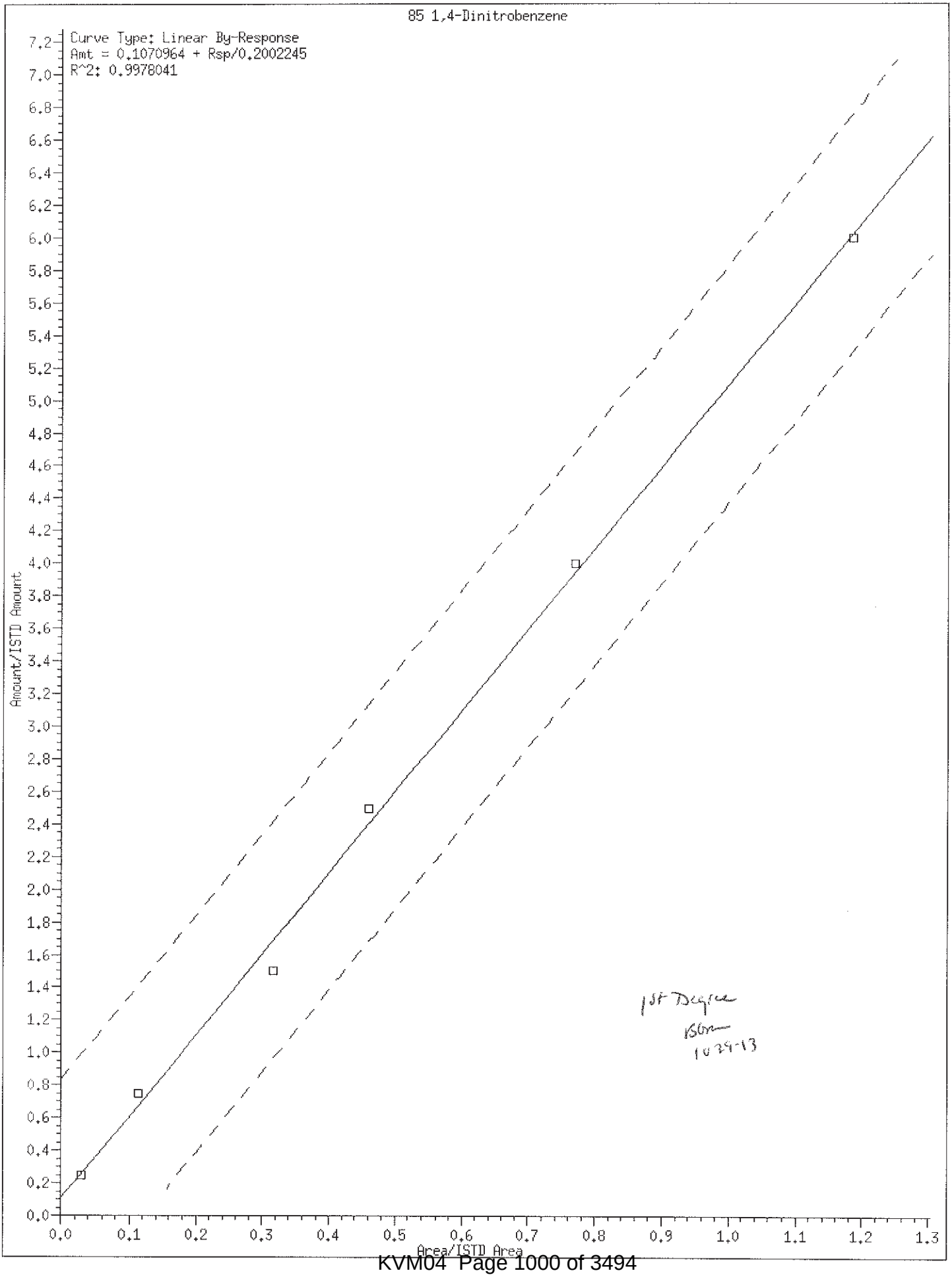
LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

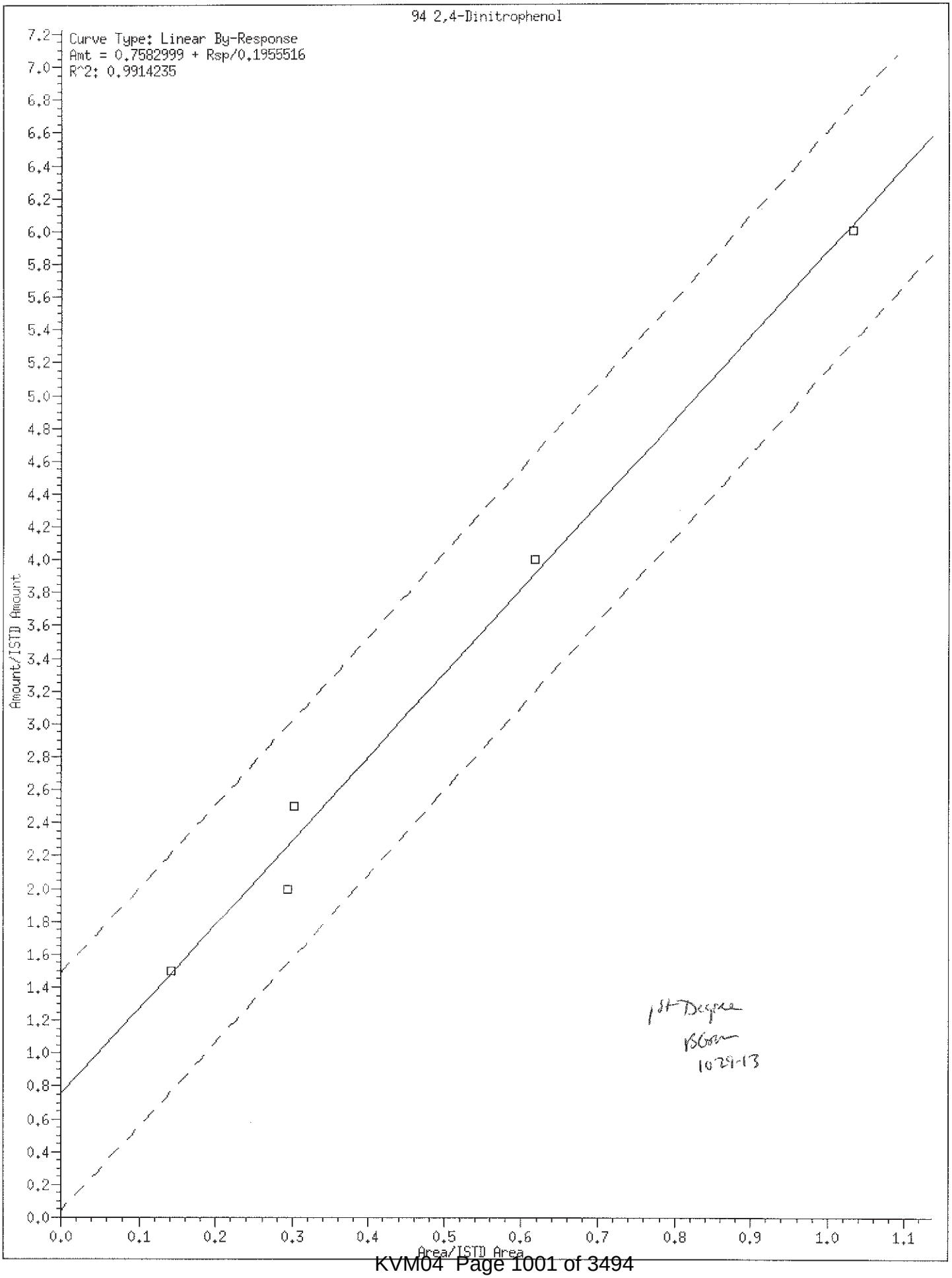
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Anthracene	1.117	1.108	1.139	1.122	1.170	1.118	1.072	1.049	1.112	3	AVG
Carbazole		1.086	1.072	1.083	1.145	1.085	1.046	1.015	1.076	4	AVG
Methyl parathion			0.186	0.238	0.313	0.282	0.286	0.285	0.265	17	1STDEG
Di-n-butylphthalate			1.169	1.259	1.410	1.310	1.270	1.227	1.274	6	AVG
Parathion			0.124	0.162	0.200	0.183	0.182	0.181	0.172	15	1STDEG
4-Nitroquinoline-1-oxide			0.031	0.053	0.101	0.095	0.118	0.130	0.088	43	1STDEG
Isodrin		0.125	0.127	0.133	0.142	0.138	0.136	0.134	0.134	4	AVG
Fluoranthene	1.229	1.221	1.220	1.264	1.329	1.285	1.257	1.228	1.254	3	AVG
Benzidine			0.559	0.651	0.702	0.675	0.646	0.617	0.642	8	AVG
Pyrene	1.163	1.156	1.080	1.034	1.057	1.037	0.996	0.969	1.062	7	AVG
p-Dimethylaminoazobenzene		0.126	0.155	0.184	0.220	0.213	0.214	0.216	0.190	19	1STDEG
Chlorobenzilate			0.264	0.285	0.330	0.308	0.304	0.302	0.299	8	AVG
3,3'-Dimethylbenzidine			0.461	0.592	0.722	0.695	0.667	0.644	0.630	15	AVG
Butylbenzylphthalate			0.403	0.443	0.498	0.470	0.454	0.443	0.452	7	AVG
2-Acetylaminofluorene			0.209	0.291	0.434	0.385	0.397	0.421	0.356	25	1STDEG
Benzo(a)anthracene	0.865	0.782	0.857	0.904	0.975	0.954	0.933	0.936	0.901	7	AVG
3,3'-Dichlorobenzidine			0.272	0.308	0.348	0.345	0.337	0.343	0.325	9	AVG
4,4'-Methylenebis(2-Chloroanil			0.138	0.163	0.188	0.184	0.178	0.180	0.172	11	AVG
Chrysene	0.884	0.883	0.909	0.896	0.914	0.895	0.858	0.847	0.886	3	AVG
bis(2-Ethylhexyl)phthalate			0.492	0.563	0.682	0.624	0.601	0.604	0.594	11	AVG
6-Methylchrysene		0.554	0.580	0.612	0.668	0.657	0.641	0.646	0.623	7	AVG
Dibenz(a,h)acridine			0.535	0.637	0.767	0.762	0.791	0.798	0.715	15	AVG
Di-n-octylphthalate			0.965	1.220	1.588	1.494	1.476	1.477	1.370	17	1STDEG
Dibenz(a,j)acridine			0.621	0.736	0.790	0.823	0.829	0.803	0.767	10	AVG
7,12-Dimethylbenz[a]anthracene		0.431	0.484	0.527	0.494	0.570	0.575	0.578	0.523	11	AVG
Benzo(b)fluoranthene	1.110	1.157	1.127	1.166	1.208	1.215	1.237	1.202	1.178	4	AVG
Benzo(k)fluoranthene	1.192	1.174	1.167	1.199	1.202	1.233	1.168	1.168	1.188	2	AVG
Benzo(a)pyrene	1.047	1.096	1.029	1.032	1.124	1.128	1.102	1.090	1.081	4	AVG
3-Methylcholanthrene		0.432	0.456	0.496	0.548	0.552	0.556	0.559	0.515	10	AVG
NDPA as diphenylamine		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
Indeno(1,2,3-cd)pyrene	0.806	0.767	0.875	0.959	1.037	1.052	1.061	1.030	0.948	12	AVG
Dibenz(a,h)anthracene	0.686	0.626	0.738	0.803	0.873	0.909	0.906	0.883	0.803	14	AVG
Benzo(g,h,i)perylene	0.723	0.759	0.749	0.785	0.841	0.859	0.857	0.821	0.799	7	AVG
Diallate TRANS/CIS		0.422	0.431	0.428	0.454	0.420	0.399	0.391	0.421	5	AVG
2-Fluorophenol		1.513	1.464	1.431	1.556	1.478	1.481	1.469	1.485	3	AVG
Phenol-d5		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Phenol-d6		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Nitrobenzene-d5		0.483	0.457	0.451	0.479	0.461	0.449	0.441	0.460	3	AVG
2-Fluorobiphenyl		1.405	1.305	1.252	1.266	1.212	1.179	1.122	1.249	7	AVG
2,4,6-Tribromophenol		0.111	0.120	0.128	0.141	0.132	0.141	0.147	0.131	10	AVG
Terphenyl-d14		0.646	0.625	0.614	0.642	0.618	0.610	0.609	0.623	2	AVG

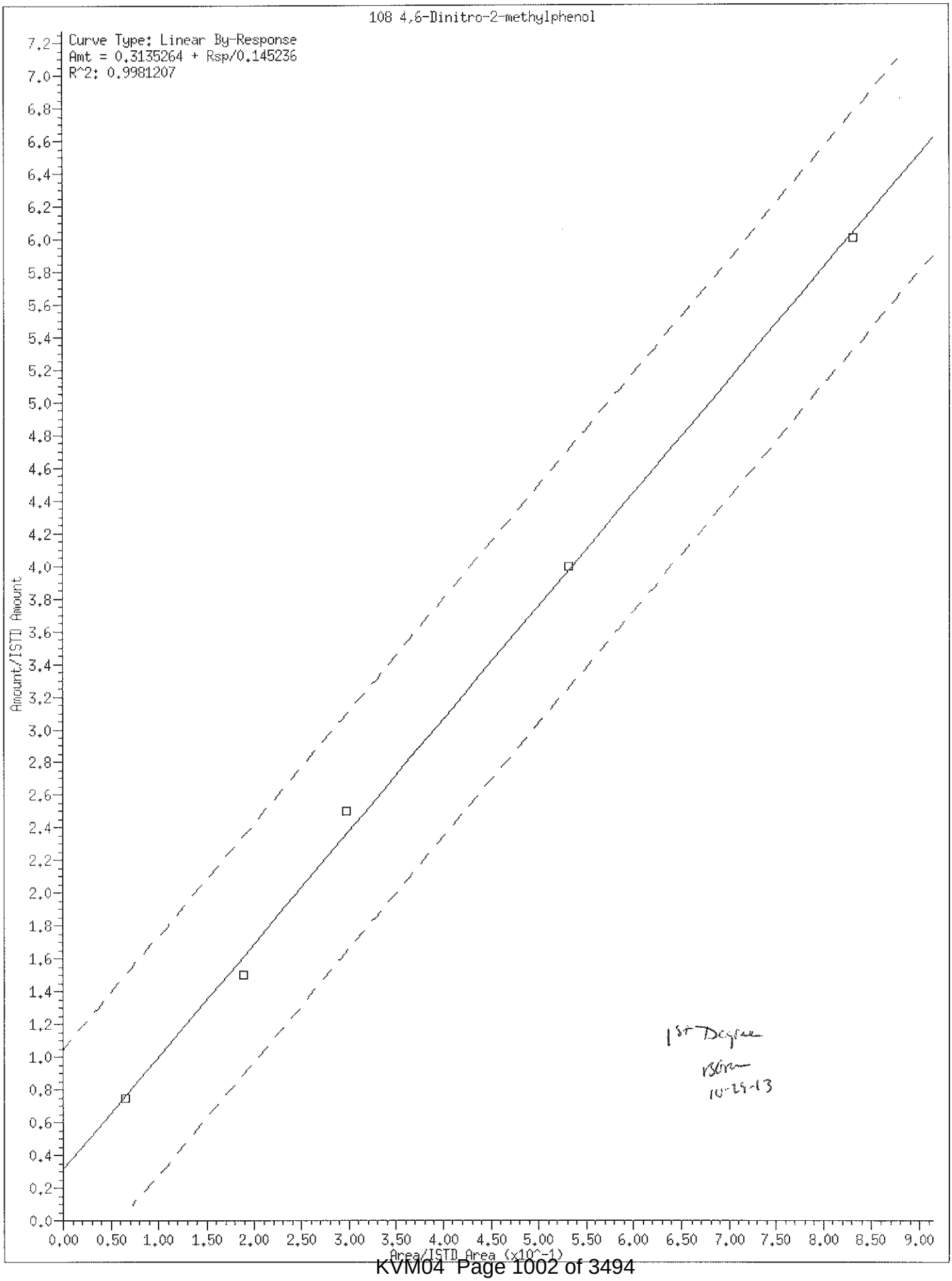
Average %RSD 7

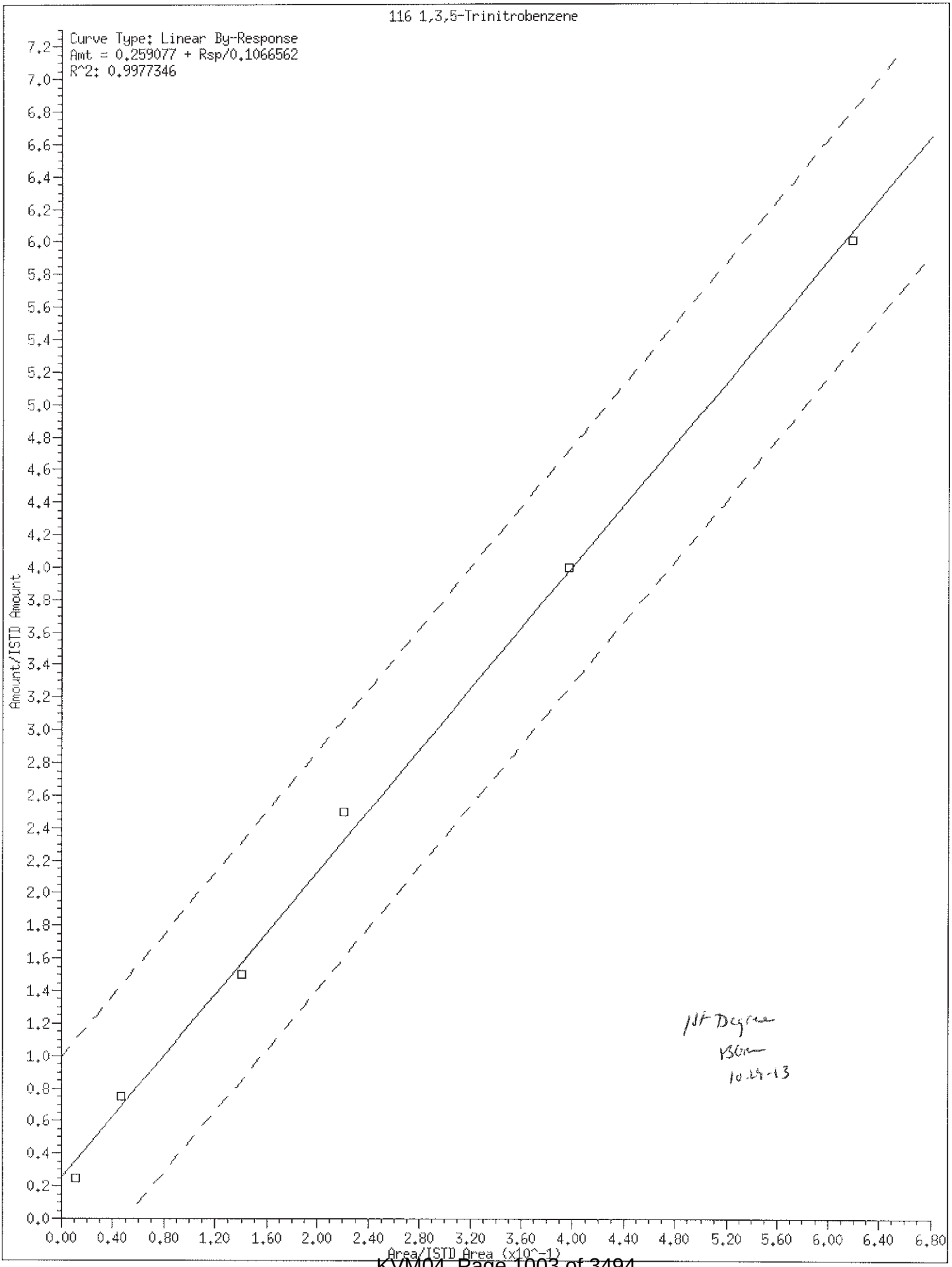
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

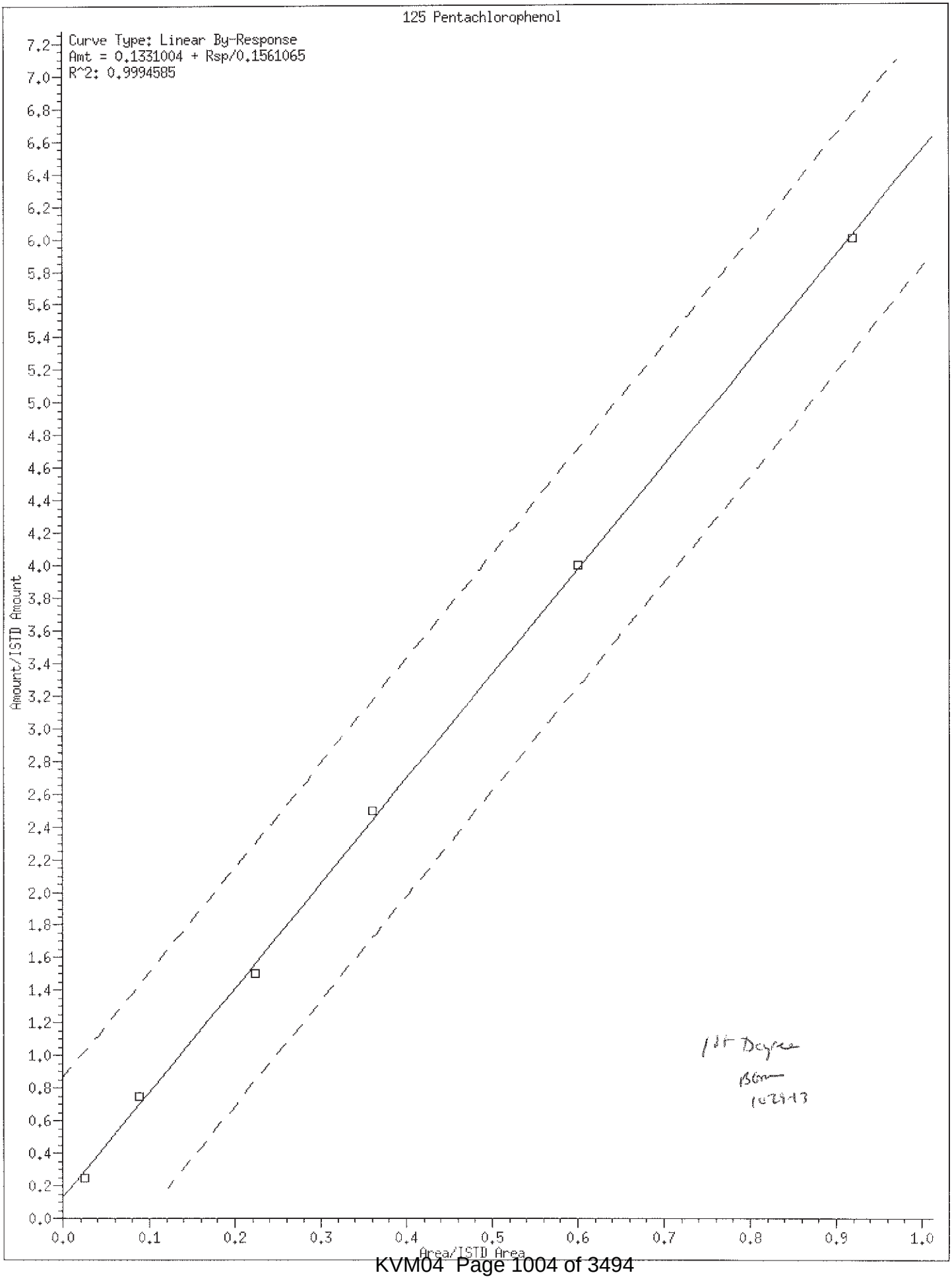

47 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.6810251 + Rsp/0.3682104
R^2: 0.9901664
Amount/ISTD Amount
Area/ISTD Area
1st Degree
10-25-13

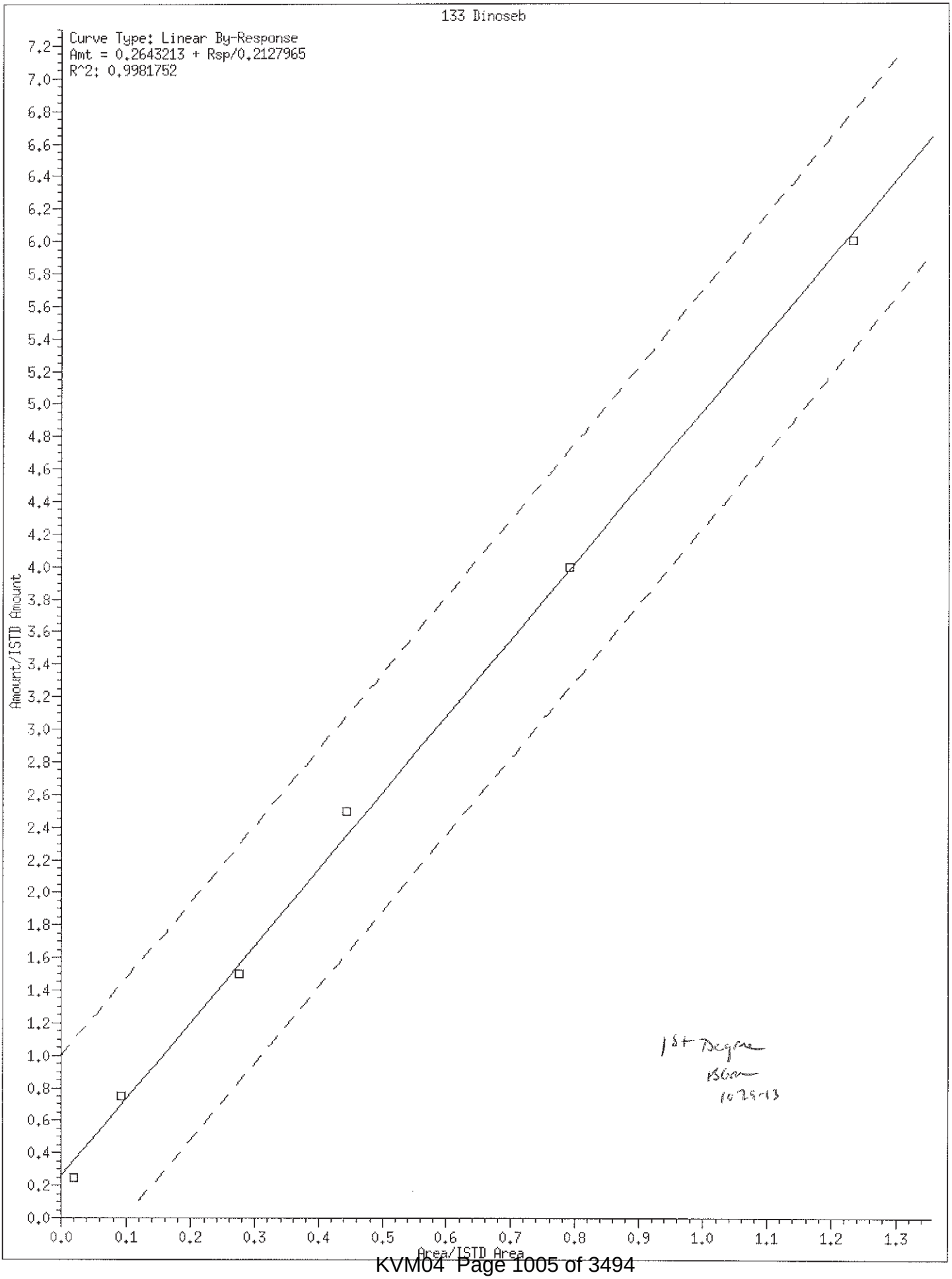

85 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1070964 + Rsp/0.2002245
R^2: 0.9978041
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BSM
10-29-13

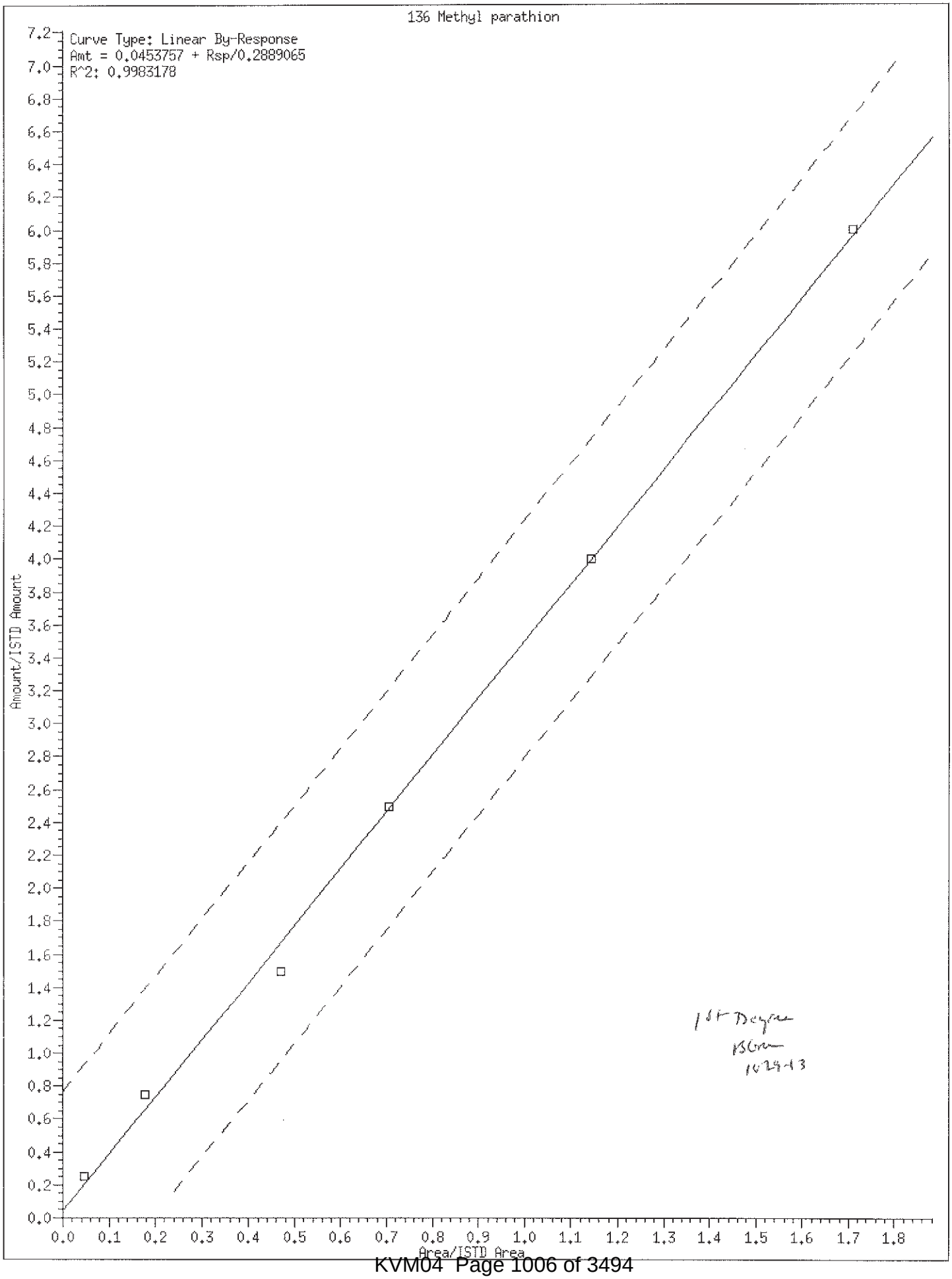

94 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0.7582999 + Rsp/0.1955516
R^2: 0.9914235
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-29-13

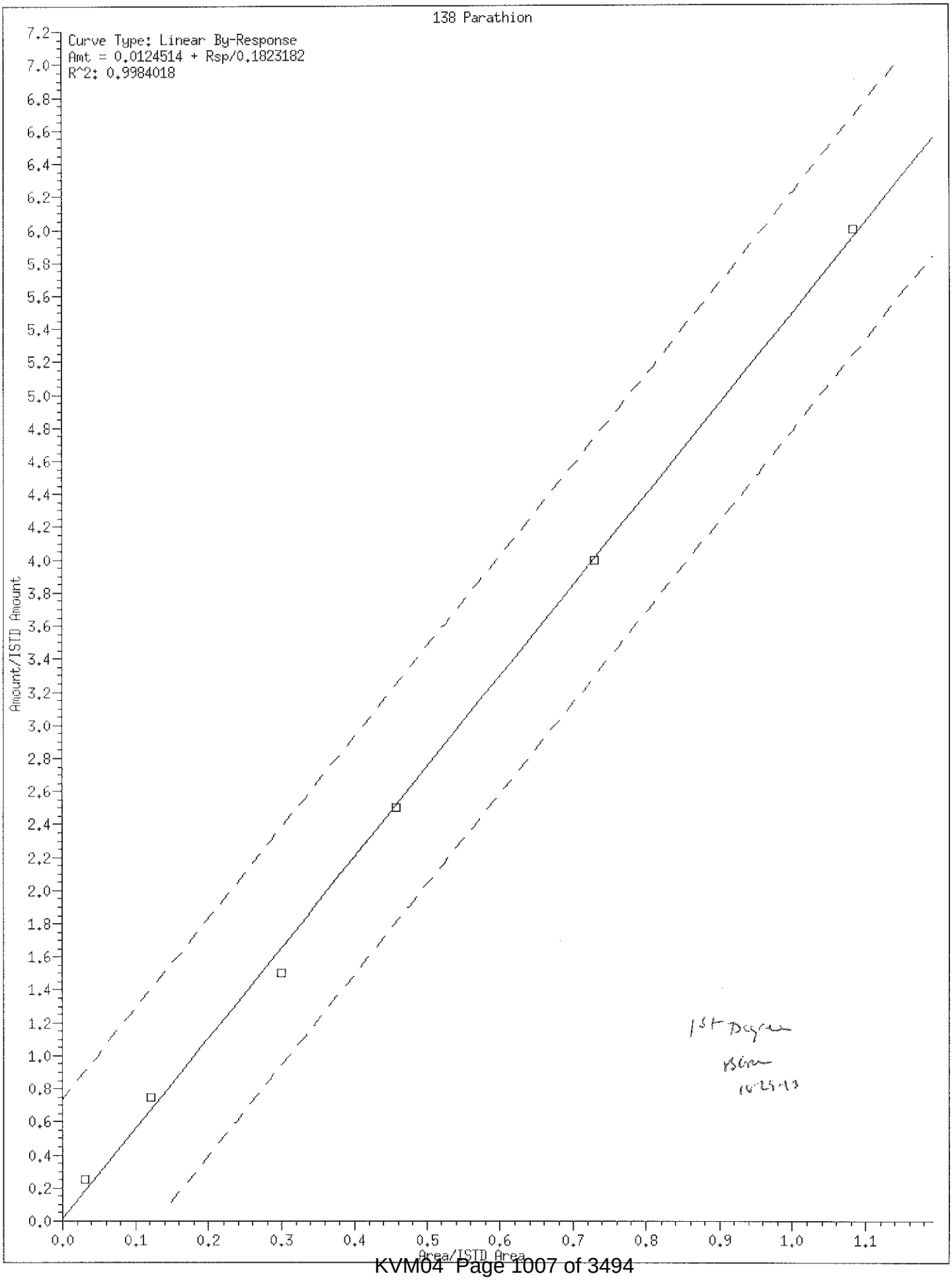

108 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3135264 + Rsp/0.145236
R^2: 0.9981207
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
10-29-13

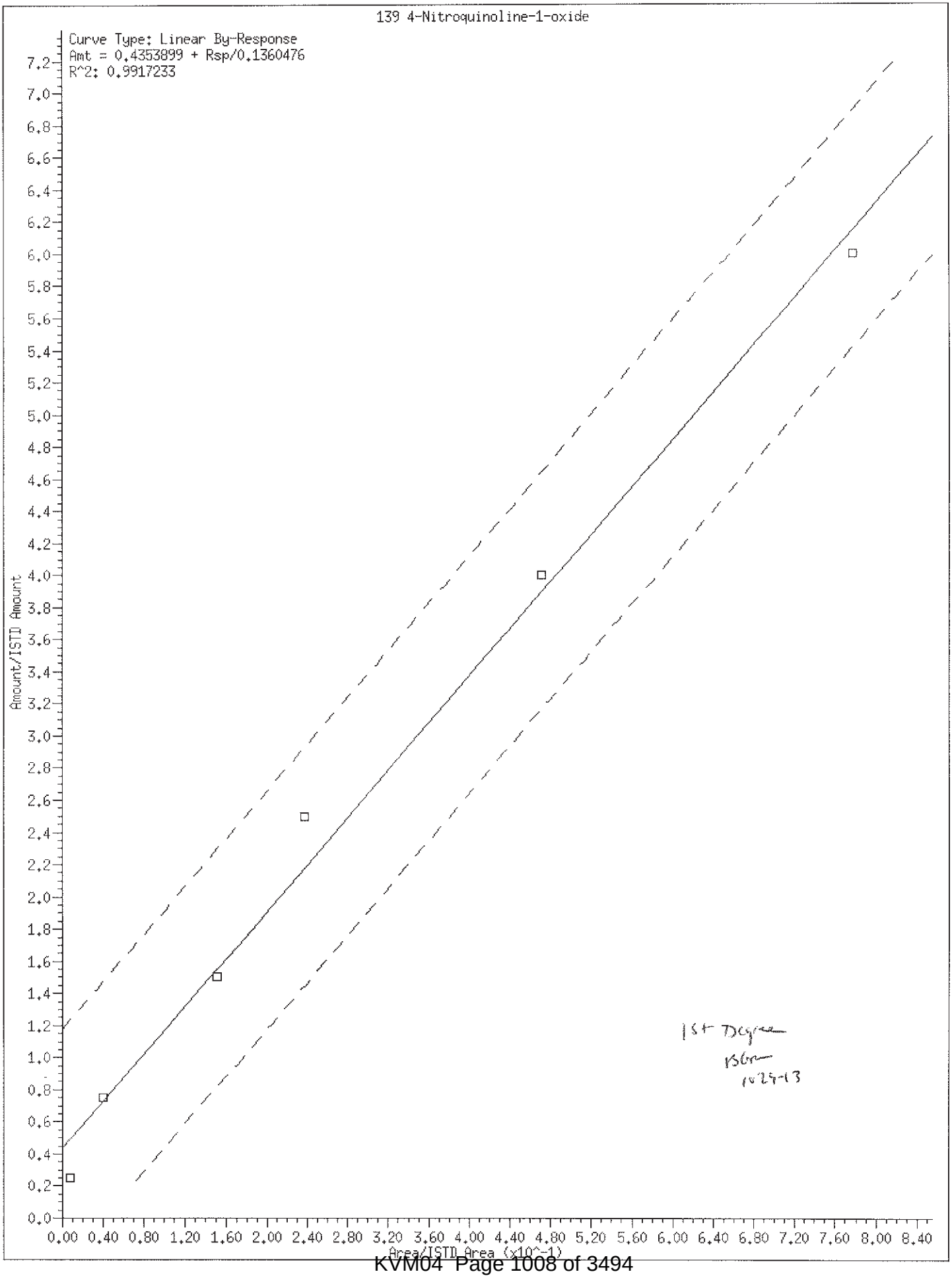

116 1,3,5-Trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.259077 + Rsp/0.1066562
R^2: 0.9977346
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
1st Degree
RSD
10-24-13

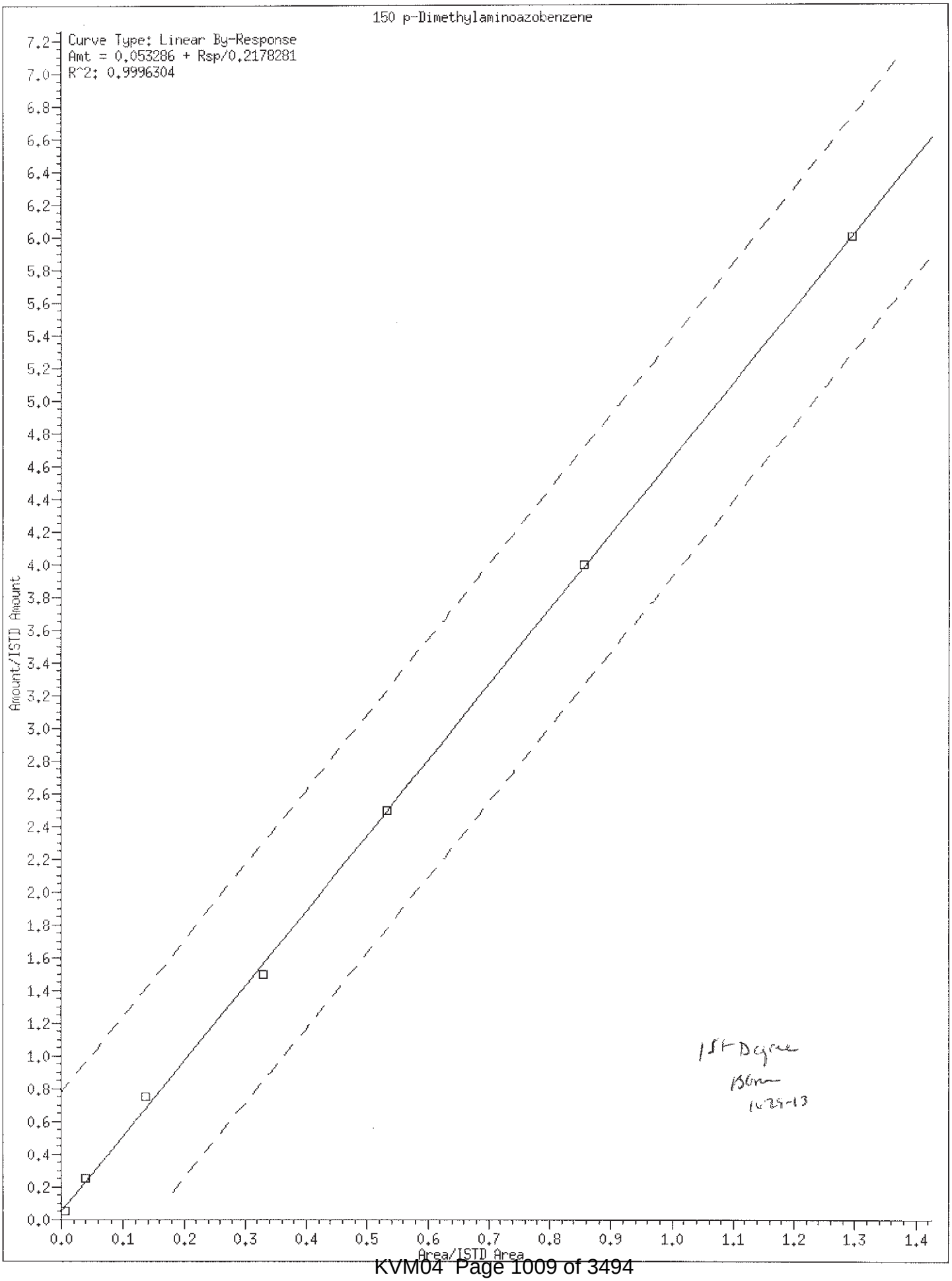

125 Pentachlorophenol
Curve Type: Linear By-Response
Amt = 0.1331004 + Rsp/0.1561065
R^2: 0.9994585
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9

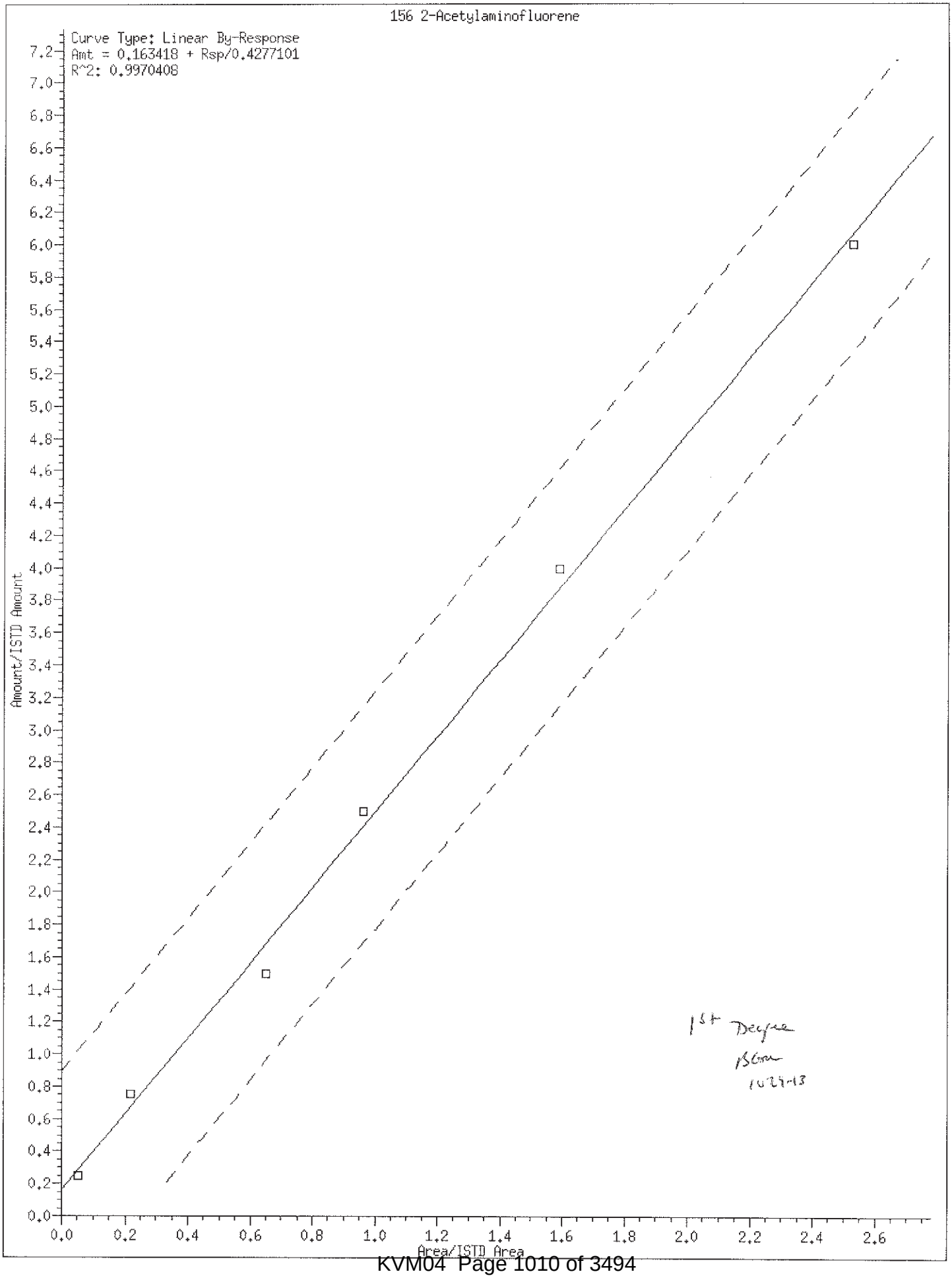

133 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2643213 + Rsp/0.2127965
R^2: 0.9981752
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGA
10-29-13

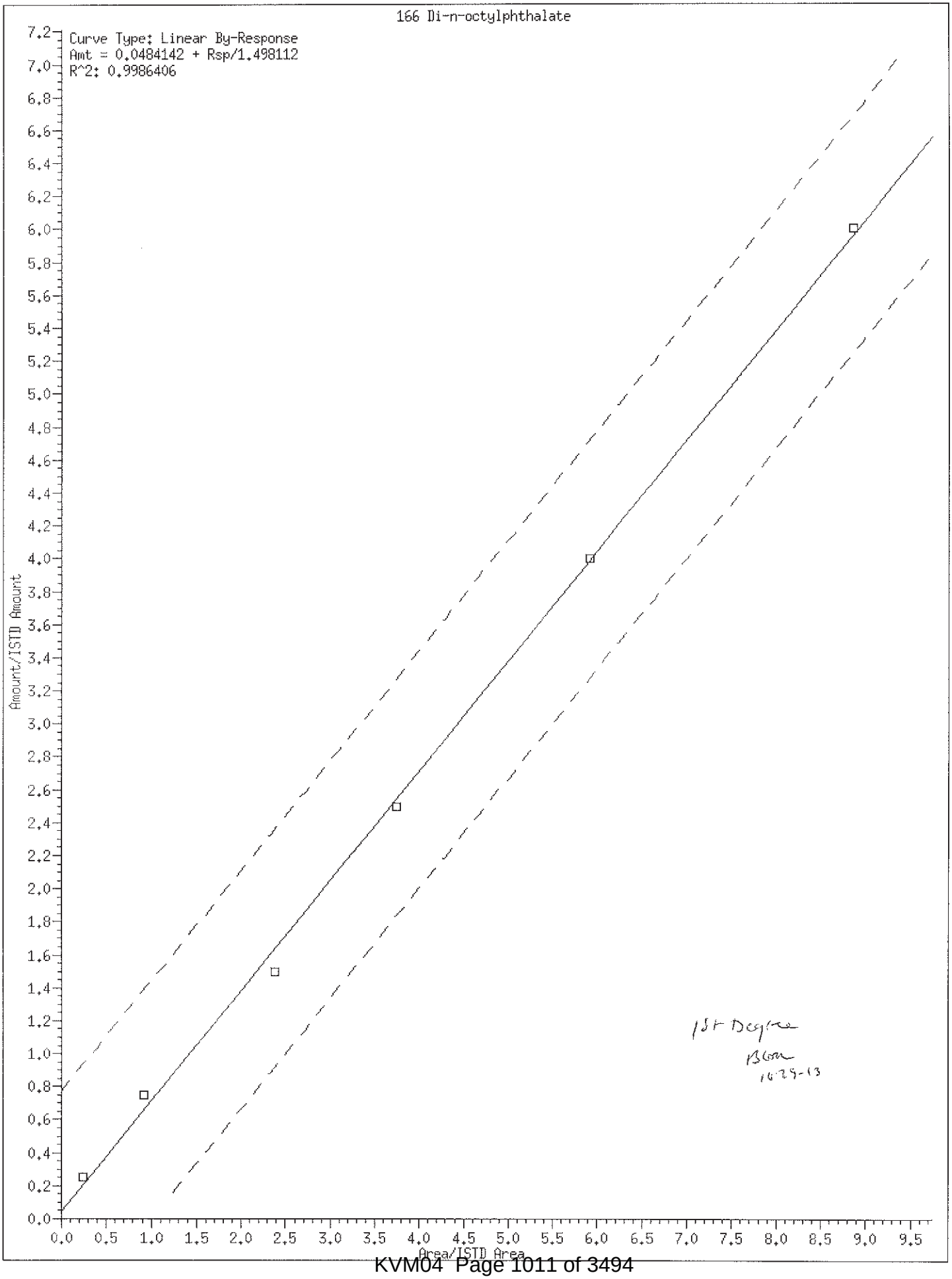

136 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.0453757 + Rsp/0.2889065
R^2: 0.9983178
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BCm
10-29-13


138 Parathion
Curve Type: Linear By-Response
Amt = 0.0124514 + Rsp/0.1823182
R^2: 0.9984018
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-25-13


139 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.4353899 + Rsp/0.1360476
R^2: 0.9917233
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
BSm
10-29-13


150 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.053286 + Rsp/0.2178281
R^2: 0.9996304
Amount/ISTD Amount
Area/ISTD Area
1st Degree
150ml
10-29-13


156 2-Acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.163418 + Rsp/0.4277101
R^2: 0.9970408
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1st Degree
BCom
10-23-13


166 Di-n-octylphthalate
Curve Type: Linear By-Response
Amt = 0.0484142 + Rsp/1.498112
R^2: 0.9986406
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
1629-13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d SSTD7.5
/chem/HP19760.i/13oct29.b/dj1182.d SSTD0.125
/chem/HP19760.i/13oct29.b/dj1183.d SSTD30
/chem/HP19760.i/13oct29.b/dj1184.d SSTD0.25
/chem/HP19760.i/13oct29.b/dj1185.d SSTD1.25
/chem/HP19760.i/13oct29.b/dj1186.d SSTD3.75
/chem/HP19760.i/13oct29.b/dj1187.d SSTD12.5
/chem/HP19760.i/13oct29.b/dj1188.d SSTD20

Area Summary

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d	Avg. Area	%RSD
	File ID:									
1,4-Dichlorobenzene-d4	151909	172486	136880	126889	138331	140563	139035	134726	142602	10
Naphthalene-d8	608104	675195	543087	495519	535285	552831	538194	531119	559917	10
Acenaphthene-d10	340173	386904	309287	282862	303956	315878	311099	302476	319079	10
Phenanthrene-d10	574655	662675	533001	486096	512509	538913	522070	525961	544485	10
Pyrene-d10	743541	830589	680467	607939	649692	695223	668822	677846	694265	10
Perylene-d12	528760	590527	487829	409698	447306	486848	459604	467732	484788	11

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

BSG 10-29-13

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d
	File ID:							
1,4-Dichlorobenzene-d4	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029
Naphthalene-d8	7.987	7.987	7.993	7.987	7.987	7.987	7.993	7.993
Acenaphthene-d10	10.797	10.791	10.797	10.791	10.791	10.791	10.797	10.797
Phenanthrene-d10	12.691	12.685	12.697	12.685	12.685	12.685	12.691	12.691
Pyrene-d10	14.649	14.644	14.649	14.644	14.644	14.644	14.644	14.650
Perylene-d12	19.120	19.114	19.126	19.114	19.114	19.114	19.114	19.120

Comments: _____

Report generated on 10/29/2013 at 21:53

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.81	3	30	YES
N-Nitrosodimethylamine	12.50	13.15	5	30	YES
Pyridine	12.50	11.90	-5	30	YES
2-Picoline	12.50	12.58	1	30	YES
N-Nitrosomethylethylamine	12.50	12.97	4	30	YES
Methyl methanesulfonate	12.50	13.65	9	30	YES
N-Nitrosodiethylamine	12.50	12.86	3	30	YES
Ethyl methanesulfonate	12.50	13.05	4	30	YES
Phenol	12.50	12.63	1	30	YES
Aniline	12.50	12.94	4	30	YES
bis(2-Chloroethyl)ether	12.50	12.52	0	30	YES
2-Chlorophenol	12.50	12.95	4	30	YES
1,3-Dichlorobenzene	12.50	12.74	2	30	YES
1,4-Dichlorobenzene	12.50	12.73	2	30	YES
Benzyl alcohol	12.50	13.05	4	30	YES
1,2-Dichlorobenzene	12.50	12.66	1	30	YES
Indene	12.50	11.89	-5	30	YES
2-Methylphenol	12.50	12.66	1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	11.85	-5	30	YES
bis(2-Chloroisopropyl)ether	12.50	11.85	-5	30	YES
N-Nitrosopyrrolidine	12.50	13.14	5	30	YES
Acetophenone	12.50	12.38	-1	30	YES
N-Nitroso-di-n-propylamine	12.50	12.45	0	30	YES
N-Nitrosomorpholine	12.50	12.33	-1	30	YES
4-Methylphenol	12.50	12.58	1	30	YES
o-Toluidine	12.50	12.43	-1	30	YES
Hexachloroethane	12.50	12.67	1	30	YES
Nitrobenzene	12.50	12.46	0	30	YES
N-Nitrosopiperidine	12.50	13.34	7	30	YES
Isophorone	12.50	13.18	5	30	YES
2-Nitrophenol	12.50	13.55	8	30	YES
2,4-Dimethylphenol	12.50	12.95	4	30	YES
O,O,O-triethylphosphorothio	12.50	12.83	3	30	YES
Benzoic acid	25.00	22.14	-11	30	YES
bis(2-Chloroethoxy)methane	12.50	12.79	2	30	YES
2,4-Dichlorophenol	12.50	13.47	8	30	YES
1,2,4-Trichlorobenzene	12.50	13.27	6	30	YES

NC = Could not calculate

BSon 10-29-13

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	12.50	12.69	2	30	YES
4-Chloroaniline	12.50	13.20	6	30	YES
2,6-Dichlorophenol	12.50	13.42	7	30	YES
Hexachloropropene	12.50	14.21	14	30	YES
Hexachlorobutadiene	12.50	13.04	4	30	YES
Quinoline	12.50	12.68	1	30	YES
N-Nitrosodi-n-butylamine	12.50	12.00	-4	30	YES
4-Chloro-3-methylphenol	12.50	13.26	6	30	YES
Safrole	12.50	13.42	7	30	YES
2-Methylnaphthalene	12.50	12.56	0	30	YES
1-Methylnaphthalene	12.50	13.06	5	30	YES
Hexachlorocyclopentadiene	25.00	32.20	29	30	NO
1,2,4,5-Tetrachlorobenzene	12.50	12.53	0	30	YES
2,4,6-Trichlorophenol	12.50	13.16	5	30	YES
2,4,5-Trichlorophenol	12.50	13.20	6	30	YES
Isosafrole	12.50	13.37	7	30	YES
1,1'-Biphenyl	12.50	12.23	-2	30	YES
2-Chloronaphthalene	12.50	12.29	-2	30	YES
Diphenyl ether	12.50	12.54	0	30	YES
2-Nitroaniline	12.50	13.42	7	30	YES
1,4-Naphthoquinone	15.63	15.93	2	30	YES
1,4-Dinitrobenzene	12.50	12.46	0	30	YES
Dimethylphthalate	12.50	12.57	1	30	YES
1,3-Dinitrobenzene	12.50	13.22	6	30	YES
2,6-Dinitrotoluene	12.50	13.50	8	30	YES
Acenaphthylene	12.50	13.55	8	30	YES
3-Nitroaniline	12.50	13.57	9	30	YES
Acenaphthene	12.50	12.33	-1	30	YES
2,4-Dinitrophenol	25.00	24.19	-3	30	YES
Pentachlorobenzene	12.50	12.67	1	30	YES
4-Nitrophenol	12.50	13.36	7	30	YES
Dibenzofuran	12.50	12.48	0	30	YES
2,4-Dinitrotoluene	12.50	13.66	9	30	YES
1-Naphthylamine	25.00	24.62	-2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.94	12	30	YES
2-Naphthylamine	25.00	24.01	-4	30	YES
Diethylphthalate	12.50	12.76	2	30	YES

→ OK TO USE, NOT A CC
< 50%
[illegible]
10-29-13

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluorene	12.50	12.62	1	30	YES
Thionazin	12.50	11.96	-4	30	YES
4-Chlorophenyl-phenylether	12.50	12.40	-1	30	YES
5-Nitro-o-toluidine	12.50	13.20	6	30	YES
4-Nitroaniline	12.50	12.89	3	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.86	3	30	YES
N-Nitrosodiphenylamine	12.50	13.29	6	30	YES
1,2-Diphenylhydrazine	12.50	12.44	0	30	YES
Tetraethyldithiopyrophospha	12.50	12.48	0	30	YES
1,3,5-Trinitrobenzene	12.50	12.77	2	30	YES
Diallate (peak 1)	9.38	9.16	-2	30	YES
Phorate	12.50	12.15	-3	30	YES
Phenacetin	12.50	13.76	10	30	YES
4-Bromophenyl-phenylether	12.50	12.70	2	30	YES
Diallate (peak 2)	3.13	3.10	-1	30	YES
Hexachlorobenzene	12.50	12.53	0	30	YES
Dimethoate	12.50	13.02	4	30	YES
Pentachlorophenol	12.50	12.57	1	30	YES
Pentachloronitrobenzene	12.50	13.79	10	30	YES
4-Aminobiphenyl	12.50	14.36	15	30	YES
Pronamide	12.50	12.93	3	30	YES
Phenanthrene	12.50	12.27	-2	30	YES
Dinoseb	12.50	13.11	5	30	YES
Anthracene	12.50	12.90	3	30	YES
Carbazole	12.50	13.08	5	30	YES
Methyl parathion	12.50	13.14	5	30	YES
Di-n-butylphthalate	12.50	13.10	5	30	YES
Parathion	12.50	12.45	0	30	YES
4-Nitroquinoline-1-oxide	150.00	168.75	13	30	YES
Isodrin	12.50	12.54	0	30	YES
Fluoranthene	12.50	13.25	6	30	YES
Benzidine	62.50	60.48	-3	30	YES
Pyrene	12.50	12.38	-1	30	YES
p-Dimethylaminoazobenzene	12.50	13.36	7	30	YES
Chlorobenzilate	12.50	12.37	-1	30	YES
3,3'-Dimethylbenzidine	25.00	25.93	4	30	YES
Butylbenzylphthalate	12.50	13.20	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Acetylaminofluorene	12.50	12.60	1	30	YES
Benzo(a)anthracene	12.50	13.47	8	30	YES
3,3'-Dichlorobenzidine	12.50	12.82	3	30	YES
4,4'-Methylenebis(2-Chloroa	12.50	12.73	2	30	YES
Chrysene	12.50	12.86	3	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.24	6	30	YES
6-Methylchrysene	12.50	12.50	0	30	YES
Di-n-octylphthalate	12.50	13.15	5	30	YES
Benzo(b)fluoranthene	12.50	13.52	8	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.66	9	30	YES
Benzo(k)fluoranthene	12.50	13.14	5	30	YES
Benzo(a)pyrene	12.50	13.57	9	30	YES
3-Methylcholanthrene	12.50	13.83	11	30	YES
Dibenz(a,h)acridine	12.50	13.41	7	30	YES
Dibenz(a,j)acridine	12.50	13.26	6	30	YES
Indeno(1,2,3-cd)pyrene	12.50	14.40	15	30	YES
Dibenz(a,h)anthracene	12.50	14.44	16	30	YES
Benzo(g,h,i)perylene	12.50	13.92	11	30	YES
Diallate TRANS/CIS	12.50	12.24	-2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1192.d

ICV SAMPLE ID: BASICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.17	5	30	YES
Caprolactam	12.50	13.12	5	30	YES
Atrazine	12.50	13.46	8	30	YES

BGM 10-29-13

NC = Could not calculate

Comments:

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.654	0.612	28.080	30.0	-6
	N-Nitrosodimethylamine	1.211	1.085	26.880	30.0	-10
	Pyridine	1.878	1.761	28.130	30.0	-6
	2-Picoline	1.916	1.841	28.820	30.0	-4
	N-Nitrosomethylethylamine	0.916	0.836	27.380	30.0	-9
	Methyl methanesulfonate	0.921	0.881	28.710	30.0	-4
	N-Nitrosodiethylamine	0.910	0.855	28.200	30.0	-6
	Ethyl methanesulfonate	0.829	0.821	29.730	30.0	-1
	Benzaldehyde	1.231	0.783	24.720	30.0	-18
	Aniline	3.046	2.892	28.480	30.0	-5
*	Phenol	2.569	2.405	28.090	30.0	-6*
	bis(2-Chloroethyl)ether	1.824	1.720	28.290	30.0	-6
	2-Chlorophenol	1.602	1.538	28.790	30.0	-4
	1,3-Dichlorobenzene	1.617	1.586	29.430	30.0	-2
*	1,4-Dichlorobenzene	1.650	1.605	29.170	30.0	-3*
	Benzyl alcohol	1.253	1.230	29.450	30.0	-2
	1,2-Dichlorobenzene	1.549	1.534	29.720	30.0	-1
	2-Methylphenol	1.705	1.641	28.870	30.0	-4
	2,2'-oxybis(1-Chloropropane)	2.244	1.987	26.560	30.0	-11
	bis(2-Chloroisopropyl)ether	2.250	1.987	26.490	30.0	-12
	N-Nitrosopyrrolidine	1.020	1.008	29.620	30.0	-1
	Acetophenone	2.542	2.460	29.030	30.0	-3
#	N-Nitroso-di-n-propylamine	1.627	1.458	26.890	30.0	-10#
	N-Nitrosomorpholine	1.159	1.093	28.270	30.0	-6
	4-Methylphenol	2.018	1.919	28.530	30.0	-5
	o-Toluidine	2.912	2.863	29.500	30.0	-2
	Hexachloroethane	0.628	0.602	28.760	30.0	-4
	Nitrobenzene	0.457	0.373	24.510	30.0	-18
	N-Nitrosopiperidine	0.203	0.199	29.370	30.0	-2
	Isophorone	0.830	0.771	27.870	30.0	-7
*	2-Nitrophenol	0.159	0.112	21.090	30.0	-30*
	2,4-Dimethylphenol	0.408	0.383	28.160	30.0	-6
	O,O,O-triethylphosphorothioate	0.170	0.171	30.040	30.0	0
	bis(2-Chloroethoxy)methane	0.504	0.448	26.680	30.0	-11
	Benzoic acid	0.265	0.183	27.710	40.0	-31
*	2,4-Dichlorophenol	0.278	0.277	29.940	30.0	0*

JM6/546
PAH : HCB ONLY
11-13-13

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,2,4-Trichlorobenzene	0.292	0.290	29.710	30.0	-1
	Naphthalene	1.061	1.026	29.020	30.0	-3
	4-Chloroaniline	0.462	0.456	29.610	30.0	-1
	2,6-Dichlorophenol	0.262	0.267	30.580	30.0	2
	Hexachloropropene	0.166	0.163	29.610	30.0	-1
*	Hexachlorobutadiene	0.147	0.146	29.900	30.0	0*
	Caprolactam	0.154	0.155	30.300	30.0	1
	N-Nitrosodi-n-butylamine	0.400	0.389	29.230	30.0	-3
*	4-Chloro-3-methylphenol	0.355	0.340	28.730	30.0	-4*
	Safrole	0.281	0.278	29.630	30.0	-1
	2-Methylnaphthalene	0.753	0.739	29.440	30.0	-2
	1-Methylnaphthalene	0.689	0.680	29.600	30.0	-1
#	Hexachlorocyclopentadiene	0.206	0.197	28.670	30.0	-4#
	1,2,4,5-Tetrachlorobenzene	0.477	0.464	29.170	30.0	-3
	cis-Isosafrole	0.766	0.740	3.190	3.3	-3
*	2,4,6-Trichlorophenol	0.311	0.311	29.930	30.0	0*
	2,4,5-Trichlorophenol	0.339	0.332	29.380	30.0	-2
	trans-Isosafrole	0.542	0.527	25.930	26.7	-3
	Isosafrole	0.483	0.469	29.140	30.0	-3
	1,1'-Biphenyl	1.550	1.447	28.020	30.0	-7
	2-Chloronaphthalene	1.129	0.997	26.510	30.0	-12
	Diphenyl ether	0.772	0.757	29.410	30.0	-2
	2-Nitroaniline	0.368	0.280	22.790	30.0	-24
	1,4-Naphthoquinone	0.475	0.470	29.660	30.0	-1
	1,4-Dinitrobenzene	0.143	0.090	19.240	30.0	-36
	Dimethylphthalate	1.343	1.340	29.940	30.0	0
	1,3-Dinitrobenzene	0.194	0.128	19.800	30.0	-34
	2,6-Dinitrotoluene	0.280	0.226	24.190	30.0	-19
	Acenaphthylene	1.762	1.701	28.960	30.0	-3
	3-Nitroaniline	0.342	0.295	25.920	30.0	-14
*	Acenaphthene	1.219	1.168	28.740	30.0	-4*
#	2,4-Dinitrophenol	0.091	0.059	28.750	40.0	-28#
	Pentachlorobenzene	0.412	0.424	30.880	30.0	3
#	4-Nitrophenol	0.212	0.186	26.430	30.0	-12#
	Dibenzofuran	1.671	1.614	28.990	30.0	-3
	2,4-Dinitrotoluene	0.361	0.265	22.000	30.0	-27

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.373	1.369	29.910	30.0	0
	2,3,4,6-Tetrachlorophenol	0.239	0.242	30.380	30.0	1
	2-Naphthylamine	1.405	1.392	29.740	30.0	-1
	Diethylphthalate	1.387	1.372	29.660	30.0	-1
	Thionazin	0.306	0.278	27.240	30.0	-9
	Fluorene	1.437	1.374	28.670	30.0	-4
	4-Chlorophenyl-phenylether	0.639	0.638	29.950	30.0	0
	5-Nitro-o-toluidine	0.380	0.329	26.020	30.0	-13
	4-Nitroaniline	0.384	0.367	28.670	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.051	21.520	30.0	-28
*	N-Nitrosodiphenylamine (1)	0.670	0.645	28.880	30.0	-4*
	1,2-Diphenylhydrazine	0.960	0.838	26.180	30.0	-13
	Tetraethyldithiopyrophosphate	0.137	0.120	26.280	30.0	-12
	1,3,5-Trinitrobenzene	0.051	0.028	18.560	30.0	-38
	Diallate (peak 1)	0.491	0.430	19.690	22.5	-12
	Phorate	0.592	0.496	25.160	30.0	-16
	Phenacetin	0.463	0.404	26.160	30.0	-13
	4-Bromophenyl-phenylether	0.185	0.185	30.130	30.0	0
	Diallate (peak 2)	0.213	0.187	6.570	7.5	-12
	Hexachlorobenzene	0.182	0.183	30.180	30.0	1
	Dimethoate	0.362	0.317	26.320	30.0	-12
	Diallate TRANS/CIS	0.422	0.369	26.260	30.0	-12
	Atrazine	0.215	0.191	26.700	30.0	-11
*	Pentachlorophenol	0.101	0.099	29.330	30.0	-2*
	Pentachloronitrobenzene	0.079	0.070	26.690	30.0	-11
	4-Aminobiphenyl	0.725	0.692	28.630	30.0	-5
	Pronamide	0.349	0.332	28.470	30.0	-5
	Dinoseb	0.104	0.063	19.880	30.0	-34
	Phenanthrene	1.163	1.107	28.570	30.0	-5
	Anthracene	1.197	1.143	28.640	30.0	-5
	Carbazole	1.168	1.108	28.470	30.0	-5
	Methyl parathion	0.217	0.145	19.670	30.0	-34
	Di-n-butylphthalate	1.378	1.278	27.810	30.0	-7
	Parathion	0.160	0.109	20.550	30.0	-32
	4-Nitroquinoline-1-oxide	0.079	0.047	19.500	30.0	-35
	Isodrin	0.131	0.121	27.720	30.0	-8

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
* Fluoranthene	1.300	1.244	28.690	30.0	-4*
Benzidine	0.819	0.774	85.060	90.0	-5
Pyrene	1.111	1.060	28.620	30.0	-5
p-Dimethylaminoazobenzene	0.216	0.212	29.450	30.0	-2
Chlorobenzilate	0.337	0.312	27.770	30.0	-7
3,3'-Dimethylbenzidine	0.684	0.648	28.390	30.0	-5
Butylbenzylphthalate	0.530	0.493	27.900	30.0	-7
2-Acetylaminofluorene	0.480	0.394	24.650	30.0	-18
3,3'-Dichlorobenzidine	0.386	0.372	28.900	30.0	-4
4,4'-Methylenebis(2-Chloroanil	0.189	0.179	28.400	30.0	-5
Benzo(a)anthracene	1.024	0.981	28.720	30.0	-4
Chrysene	0.988	0.924	28.060	30.0	-6
bis(2-Ethylhexyl)phthalate	0.735	0.674	27.510	30.0	-8
6-Methylchrysene	0.729	0.696	28.650	30.0	-4
Dibenz(a,h)acridine	0.866	0.841	29.120	30.0	-3
* Di-n-octylphthalate	1.510	1.379	27.410	30.0	-9*
Dibenz(a,j)acridine	0.996	0.986	29.710	30.0	-1
7,12-Dimethylbenz[a]anthracene	0.567	0.575	30.420	30.0	1
Quinoline	0.731	0.736	30.190	30.0	1
Benzo(b)fluoranthene	1.221	1.263	31.030	30.0	3
Benzo(k)fluoranthene	1.246	1.169	28.140	30.0	-6
* Benzo(a)pyrene	1.192	1.139	28.670	30.0	-4*
3-Methylcholanthrene	0.597	0.578	29.010	30.0	-3
NDPA as diphenylamine	0.672	0.645	28.810	30.0	-4
Indeno(1,2,3-cd)pyrene	1.268	1.244	29.440	30.0	-2
Dibenz(a,h)anthracene	1.061	1.053	29.770	30.0	-1
Benzo(g,h,i)perylene	1.080	1.047	29.080	30.0	-3
Indene	3.460	3.409	29.560	30.0	-1
1-Chloronaphthalene	1.111	1.115	30.120	30.0	0
2-Fluorophenol	1.496	1.441	57.780	60.0	-4
Phenol-d5	2.202	2.126	57.940	60.0	-3
Phenol-d6	2.202	2.126	57.940	60.0	-3
Nitrobenzene-d5	0.431	0.339	47.240	60.0	-21
2-Fluorobiphenyl	1.258	1.208	57.640	60.0	-4
2,4,6-Tribromophenol	0.121	0.129	64.120	60.0	7

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/13/13 Time: 08:44

Lab File ID: ck0461.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF308	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.715	0.697	58.490	60.0	-3
			Average %Drift:		8

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov13a.b/ck0461.d

Area Summary

File ID:

Internal Standard Name	ck0461.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	119096	131335	65668	262670	Yes
Naphthalene-d8	567152	603190	301595	1206380	Yes
Acenaphthene-d10	363022	377352	188676	754704	Yes
Phenanthrene-d10	690322	694958	347479	1389916	Yes
Pyrene-d10	847467	855313	427656	1710626	Yes
Perylene-d12	700104	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0461.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.201	5.226	Yes
Naphthalene-d8	6.437	6.461	Yes
Acenaphthene-d10	8.146	8.177	Yes
Phenanthrene-d10	9.591	9.622	Yes
Pyrene-d10	10.974	10.999	Yes
Perylene-d12	13.575	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-13-13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/14/13 Time: 00:13

Lab File ID: ck0501.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.654	0.588	26.970	30.0	-10
	N-Nitrosodimethylamine	1.211	1.041	25.790	30.0	-14
	Pyridine	1.878	1.650	26.360	30.0	-12
	2-Picoline	1.916	1.772	27.750	30.0	-8
	N-Nitrosomethylethylamine	0.916	0.808	26.460	30.0	-12
	Methyl methanesulfonate	0.921	0.860	28.030	30.0	-7
	N-Nitrosodiethylamine	0.910	0.863	28.440	30.0	-5
	Ethyl methanesulfonate	0.829	0.815	29.510	30.0	-2
	Benzaldehyde	1.231	0.686	21.470	30.0	-28
	Aniline	3.046	2.826	27.840	30.0	-7
*	Phenol	2.569	2.403	28.070	30.0	-6*
	bis(2-Chloroethyl)ether	1.824	1.685	27.720	30.0	-8
	2-Chlorophenol	1.602	1.552	29.050	30.0	-3
	1,3-Dichlorobenzene	1.617	1.561	28.960	30.0	-3
*	1,4-Dichlorobenzene	1.650	1.609	29.250	30.0	-2*
	Benzyl alcohol	1.253	1.215	29.100	30.0	-3
	1,2-Dichlorobenzene	1.549	1.543	29.870	30.0	0
	2-Methylphenol	1.705	1.632	28.720	30.0	-4
	2,2'-oxybis(1-Chloropropane)	2.244	1.969	26.330	30.0	-12
	bis(2-Chloroisopropyl)ether	2.250	1.969	26.260	30.0	-12
	N-Nitrosopyrrolidine	1.020	0.994	29.210	30.0	-3
	Acetophenone	2.542	2.461	29.040	30.0	-3
#	N-Nitroso-di-n-propylamine	1.627	1.443	26.610	30.0	-11#
	N-Nitrosomorpholine	1.159	1.072	27.750	30.0	-8
	4-Methylphenol	2.018	1.936	28.780	30.0	-4
	o-Toluidine	2.912	2.831	29.170	30.0	-3
	Hexachloroethane	0.628	0.618	29.540	30.0	-2
	Nitrobenzene	0.457	0.404	26.500	30.0	-12
	N-Nitrosopiperidine	0.203	0.195	28.850	30.0	-4
	Isophorone	0.830	0.750	27.100	30.0	-10
*	2-Nitrophenol	0.159	0.164	30.980	30.0	3*
	2,4-Dimethylphenol	0.408	0.381	28.000	30.0	-7
	O,O,O-triethylphosphorothioate	0.170	0.175	30.840	30.0	3
	bis(2-Chloroethoxy)methane	0.504	0.466	27.740	30.0	-8
	Benzoic acid	0.265	0.267	40.370	40.0	1
*	2,4-Dichlorophenol	0.278	0.285	30.790	30.0	3*

mac (13) 11/14/13

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/14/13 Time: 00:13

Lab File ID: ck0501.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,2,4-Trichlorobenzene	0.292	0.293	30.090	30.0	0
	Naphthalene	1.061	1.027	29.020	30.0	-3
	4-Chloroaniline	0.462	0.453	29.370	30.0	-2
	2,6-Dichlorophenol	0.262	0.269	30.790	30.0	3
	Hexachloropropene	0.166	0.175	31.710	30.0	6
*	Hexachlorobutadiene	0.147	0.148	30.340	30.0	1*
	Caprolactam	0.154	0.149	29.070	30.0	-3
	N-Nitrosodi-n-butylamine	0.400	0.381	28.600	30.0	-5
*	4-Chloro-3-methylphenol	0.355	0.341	28.850	30.0	-4*
	Safrole	0.281	0.279	29.760	30.0	-1
	2-Methylnaphthalene	0.753	0.738	29.400	30.0	-2
	1-Methylnaphthalene	0.689	0.674	29.360	30.0	-2
#	Hexachlorocyclopentadiene	0.206	0.220	32.070	30.0	7#
	1,2,4,5-Tetrachlorobenzene	0.477	0.472	29.680	30.0	-1
	cis-Isosafrole	0.766	0.736	3.170	3.3	-4
*	2,4,6-Trichlorophenol	0.311	0.326	31.410	30.0	5*
	2,4,5-Trichlorophenol	0.339	0.358	31.620	30.0	5
	trans-Isosafrole	0.542	0.534	26.320	26.7	-1
	Isosafrole	0.483	0.476	29.570	30.0	-1
	1,1'-Biphenyl	1.550	1.455	28.170	30.0	-6
	2-Chloronaphthalene	1.129	1.024	27.220	30.0	-9
	Diphenyl ether	0.772	0.750	29.160	30.0	-3
	2-Nitroaniline	0.368	0.374	30.490	30.0	2
	1,4-Naphthoquinone	0.475	0.476	30.070	30.0	0
	1,4-Dinitrobenzene	0.143	0.153	30.320	30.0	1
	Dimethylphthalate	1.343	1.323	29.550	30.0	-2
	1,3-Dinitrobenzene	0.194	0.203	29.810	30.0	-1
	2,6-Dinitrotoluene	0.280	0.287	30.810	30.0	3
	Acenaphthylene	1.762	1.684	28.670	30.0	-4
	3-Nitroaniline	0.342	0.356	31.310	30.0	4
*	Acenaphthene	1.219	1.161	28.570	30.0	-5*
#	2,4-Dinitrophenol	0.091	0.115	47.390	40.0	18#
	Pentachlorobenzene	0.412	0.418	30.390	30.0	1
#	4-Nitrophenol	0.212	0.209	29.660	30.0	-1#
	Dibenzofuran	1.671	1.598	28.690	30.0	-4
	2,4-Dinitrotoluene	0.361	0.376	31.190	30.0	4

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/14/13 Time: 00:13

Lab File ID: ck0501.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.373	1.351	29.520	30.0	-2
	2,3,4,6-Tetrachlorophenol	0.239	0.265	33.270	30.0	11
	2-Naphthylamine	1.405	1.386	29.600	30.0	-1
	Diethylphthalate	1.387	1.346	29.110	30.0	-3
	Thionazin	0.306	0.276	27.030	30.0	-10
	Fluorene	1.437	1.377	28.740	30.0	-4
	4-Chlorophenyl-phenylether	0.639	0.630	29.570	30.0	-1
	5-Nitro-o-toluidine	0.380	0.392	30.950	30.0	3
	4-Nitroaniline	0.384	0.371	28.950	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.090	33.340	30.0	11
*	N-Nitrosodiphenylamine (1)	0.670	0.657	29.380	30.0	-2*
	1,2-Diphenylhydrazine	0.960	0.852	26.620	30.0	-11
	Tetraethyldithiopyrophosphate	0.137	0.123	26.920	30.0	-10
	1,3,5-Trinitrobenzene	0.051	0.055	30.350	30.0	1
	Diallate (peak 1)	0.491	0.435	19.900	22.5	-12
	Phorate	0.592	0.515	26.130	30.0	-13
	Phenacetin	0.463	0.426	27.570	30.0	-8
	4-Bromophenyl-phenylether	0.185	0.191	31.050	30.0	3
	Diallate (peak 2)	0.213	0.181	6.360	7.5	-15
	Hexachlorobenzene	0.182	0.189	31.050	30.0	4
	Dimethoate	0.362	0.334	27.700	30.0	-8
	Diallate TRANS/CIS	0.422	0.371	26.400	30.0	-12
	Atrazine	0.215	0.191	26.680	30.0	-11
*	Pentachlorophenol	0.101	0.114	33.880	30.0	13*
	Pentachloronitrobenzene	0.079	0.081	30.790	30.0	3
	4-Aminobiphenyl	0.725	0.705	29.180	30.0	-3
	Pronamide	0.349	0.336	28.820	30.0	-4
	Dinoseb	0.104	0.124	32.530	30.0	8
	Phenanthrene	1.163	1.112	28.690	30.0	-4
	Anthracene	1.197	1.146	28.730	30.0	-4
	Carbazole	1.168	1.123	28.830	30.0	-4
	Methyl parathion	0.217	0.221	28.800	30.0	-4
	Di-n-butylphthalate	1.378	1.297	28.240	30.0	-6
	Parathion	0.160	0.152	27.460	30.0	-8
	4-Nitroquinoline-1-oxide	0.079	0.081	28.890	30.0	-4
	Isodrin	0.131	0.123	27.970	30.0	-7

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/14/13 Time: 00:13

Lab File ID: ck0501.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
* Fluoranthene	1.300	1.255	28.960	30.0	-3*
Benzidine	0.819	0.784	86.140	90.0	-4
Pyrene	1.111	1.062	28.670	30.0	-4
p-Dimethylaminoazobenzene	0.216	0.213	29.480	30.0	-2
Chlorobenzilate	0.337	0.325	28.950	30.0	-3
3,3'-Dimethylbenzidine	0.684	0.665	29.160	30.0	-3
Butylbenzylphthalate	0.530	0.495	28.010	30.0	-7
2-Acetylaminofluorene	0.480	0.444	27.740	30.0	-8
3,3'-Dichlorobenzidine	0.386	0.384	29.860	30.0	0
4,4'-Methylenebis(2-Chloroanil	0.189	0.185	29.350	30.0	-2
Benzo(a)anthracene	1.024	0.990	28.980	30.0	-3
Chrysene	0.988	0.940	28.540	30.0	-5
bis(2-Ethylhexyl)phthalate	0.735	0.683	27.850	30.0	-7
6-Methylchrysene	0.729	0.694	28.550	30.0	-5
Dibenz(a,h)acridine	0.866	0.839	29.070	30.0	-3
* Di-n-octylphthalate	1.510	1.402	27.850	30.0	-7*
Dibenz(a,j)acridine	0.996	0.972	29.290	30.0	-2
7,12-Dimethylbenz[a]anthracene	0.567	0.581	30.690	30.0	2
Quinoline	0.731	0.724	29.710	30.0	-1
Benzo(b)fluoranthene	1.221	1.268	31.150	30.0	4
Benzo(k)fluoranthene	1.246	1.164	28.030	30.0	-7
* Benzo(a)pyrene	1.192	1.123	28.260	30.0	-6*
3-Methylcholanthrene	0.597	0.580	29.140	30.0	-3
NDPA as diphenylamine	0.672	0.657	29.320	30.0	-2
Indeno(1,2,3-cd)pyrene	1.268	1.229	29.080	30.0	-3
Dibenz(a,h)anthracene	1.061	1.030	29.140	30.0	-3
Benzo(g,h,i)perylene	1.080	1.042	28.930	30.0	-4
Indene	3.460	3.324	28.820	30.0	-4
1-Chloronaphthalene	1.111	1.080	29.170	30.0	-3
2-Fluorophenol	1.496	1.455	58.350	60.0	-3
Phenol-d5	2.202	2.090	56.960	60.0	-5
Phenol-d6	2.202	2.090	56.960	60.0	-5
Nitrobenzene-d5	0.431	0.398	55.410	60.0	-8
2-Fluorobiphenyl	1.258	1.231	58.750	60.0	-2
2,4,6-Tribromophenol	0.121	0.133	66.270	60.0	10

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/14/13 Time: 00:13

Lab File ID: ck0501.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.715	0.706	59.230	60.0	-1

Average %Drift: 5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov14.b/ck0501.d

Area Summary

File ID:

Internal Standard Name	ck0501.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	148700	131335	65668	262670	Yes
Naphthalene-d8	708022	603190	301595	1206380	Yes
Acenaphthene-d10	447321	377352	188676	754704	Yes
Phenanthrene-d10	825922	694958	347479	1389916	Yes
Pyrene-d10	1031121	855313	427656	1710626	Yes
Perylene-d12	863964	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0501.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.164	5.226	Yes
Naphthalene-d8	6.400	6.461	Yes
Acenaphthene-d10	8.109	8.177	Yes
Phenanthrene-d10	9.554	9.622	Yes
Pyrene-d10	10.931	10.999	Yes
Perylene-d12	13.532	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: mc (13) 11/14/13

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/15/13 Time: 00:32

Lab File ID: ck0541.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.654	0.046	2.120	30.0	-93
	N-Nitrosodimethylamine	1.211	1.088	26.960	30.0	-10
	Pyridine	1.878	1.782	28.470	30.0	-5
	2-Picoline	1.916	1.851	28.980	30.0	-3
	N-Nitrosomethylethylamine	0.916	0.821	26.890	30.0	-10
	Methyl methanesulfonate	0.921	0.852	27.740	30.0	-8
	N-Nitrosodiethylamine	0.910	0.846	27.900	30.0	-7
	Ethyl methanesulfonate	0.829	0.807	29.230	30.0	-3
	Benzaldehyde	1.231	0.694	21.730	30.0	-28
	Aniline	3.046	2.831	27.880	30.0	-7
*	Phenol	2.569	2.494	29.130	30.0	-3*
	bis(2-Chloroethyl)ether	1.824	1.733	28.500	30.0	-5
	2-Chlorophenol	1.602	1.570	29.400	30.0	-2
	1,3-Dichlorobenzene	1.617	1.559	28.920	30.0	-4
*	1,4-Dichlorobenzene	1.650	1.587	28.840	30.0	-4*
	Benzyl alcohol	1.253	1.232	29.500	30.0	-2
	1,2-Dichlorobenzene	1.549	1.536	29.750	30.0	-1
	2-Methylphenol	1.705	1.648	28.990	30.0	-3
	2,2'-oxybis(1-Chloropropane)	2.244	1.950	26.070	30.0	-13
	bis(2-Chloroisopropyl)ether	2.250	1.950	26.000	30.0	-13
	N-Nitrosopyrrolidine	1.020	0.987	29.010	30.0	-3
	Acetophenone	2.542	2.404	28.370	30.0	-5
#	N-Nitroso-di-n-propylamine	1.627	1.444	26.620	30.0	-11#
	N-Nitrosomorpholine	1.159	1.043	26.990	30.0	-10
	4-Methylphenol	2.018	1.962	29.170	30.0	-3
	o-Toluidine	2.912	2.847	29.330	30.0	-2
	Hexachloroethane	0.628	0.608	29.030	30.0	-3
	Nitrobenzene	0.457	0.410	26.920	30.0	-10
	N-Nitrosopiperidine	0.203	0.196	29.060	30.0	-3
	Isophorone	0.830	0.756	27.310	30.0	-9
*	2-Nitrophenol	0.159	0.170	32.140	30.0	7*
	2,4-Dimethylphenol	0.408	0.386	28.360	30.0	-5
	O,O,O-triethylphosphorothioate	0.170	0.176	30.960	30.0	3
	bis(2-Chloroethoxy)methane	0.504	0.468	27.820	30.0	-7
	Benzoic acid	0.265	0.267	40.410	40.0	1
*	2,4-Dichlorophenol	0.278	0.288	31.150	30.0	4*

FORM VII SV-1

mrc (13) 11/15/13

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/15/13 Time: 00:32

Lab File ID: ck0541.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,2,4-Trichlorobenzene	0.292	0.292	29.920	30.0	0
	Naphthalene	1.061	1.023	28.920	30.0	-4
	4-Chloroaniline	0.462	0.448	29.080	30.0	-3
	2,6-Dichlorophenol	0.262	0.276	31.630	30.0	5
	Hexachloropropene	0.166	0.173	31.320	30.0	4
*	Hexachlorobutadiene	0.147	0.146	29.940	30.0	0*
	Caprolactam	0.154	0.146	28.440	30.0	-5
	N-Nitrosodi-n-butylamine	0.400	0.383	28.770	30.0	-4
*	4-Chloro-3-methylphenol	0.355	0.343	28.960	30.0	-3*
	Safrole	0.281	0.283	30.250	30.0	1
	2-Methylnaphthalene	0.753	0.746	29.710	30.0	-1
	1-Methylnaphthalene	0.689	0.675	29.390	30.0	-2
#	Hexachlorocyclopentadiene	0.206	0.211	30.670	30.0	2#
	1,2,4,5-Tetrachlorobenzene	0.477	0.480	30.210	30.0	1
	cis-Isosafrole	0.766	0.744	3.200	3.3	-3
*	2,4,6-Trichlorophenol	0.311	0.339	32.640	30.0	9*
	2,4,5-Trichlorophenol	0.339	0.363	32.100	30.0	7
	trans-Isosafrole	0.542	0.536	26.400	26.7	-1
	Isosafrole	0.483	0.477	29.660	30.0	-1
	1,1'-Biphenyl	1.550	1.469	28.440	30.0	-5
	2-Chloronaphthalene	1.129	1.275	33.900	30.0	13
	Diphenyl ether	0.772	0.766	29.760	30.0	-1
	2-Nitroaniline	0.368	0.379	30.860	30.0	3
	1,4-Naphthoquinone	0.475	0.460	29.070	30.0	-3
	1,4-Dinitrobenzene	0.143	0.159	31.470	30.0	5
	Dimethylphthalate	1.343	1.314	29.360	30.0	-2
	1,3-Dinitrobenzene	0.194	0.210	30.740	30.0	2
	2,6-Dinitrotoluene	0.280	0.293	31.400	30.0	5
	Acenaphthylene	1.762	1.711	29.130	30.0	-3
	3-Nitroaniline	0.342	0.347	30.450	30.0	2
*	Acenaphthene	1.219	1.176	28.940	30.0	-4*
#	2,4-Dinitrophenol	0.091	0.121	49.370	40.0	23#
	Pentachlorobenzene	0.412	0.425	30.930	30.0	3
#	4-Nitrophenol	0.212	0.200	28.410	30.0	-5#
	Dibenzofuran	1.671	1.614	28.980	30.0	-3
	2,4-Dinitrotoluene	0.361	0.379	31.430	30.0	5

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/15/13 Time: 00:32

Lab File ID: ck0541.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.373	1.342	29.330	30.0	-2
	2,3,4,6-Tetrachlorophenol	0.239	0.271	34.030	30.0	13
	2-Naphthylamine	1.405	1.376	29.380	30.0	-2
	Diethylphthalate	1.387	1.340	28.970	30.0	-3
	Thionazin	0.306	0.272	26.660	30.0	-11
	Fluorene	1.437	1.390	29.020	30.0	-3
	4-Chlorophenyl-phenylether	0.639	0.637	29.880	30.0	0
	5-Nitro-o-toluidine	0.380	0.394	31.110	30.0	4
	4-Nitroaniline	0.384	0.368	28.730	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.096	35.160	30.0	17
*	N-Nitrosodiphenylamine (1)	0.670	0.673	30.110	30.0	0*
	1,2-Diphenylhydrazine	0.960	0.857	26.760	30.0	-11
	Tetraethyldithiopyrophosphate	0.137	0.124	27.240	30.0	-9
	1,3,5-Trinitrobenzene	0.051	0.058	31.410	30.0	5
	Diallate (peak 1)	0.491	0.441	20.180	22.5	-10
	Phorate	0.592	0.655	33.240	30.0	11
	Phenacetin	0.463	0.418	27.100	30.0	-10
	4-Bromophenyl-phenylether	0.185	0.193	31.370	30.0	5
	Diallate (peak 2)	0.213	0.185	6.490	7.5	-14
	Hexachlorobenzene	0.182	0.186	30.670	30.0	2
	Dimethoate	0.362	0.336	27.880	30.0	-7
	Diallate TRANS/CIS	0.422	0.377	26.780	30.0	-11
	Atrazine	0.215	0.190	26.490	30.0	-12
*	Pentachlorophenol	0.101	0.111	32.880	30.0	10*
	Pentachloronitrobenzene	0.079	0.079	29.820	30.0	-1
	4-Aminobiphenyl	0.725	0.700	28.960	30.0	-3
	Pronamide	0.349	0.340	29.180	30.0	-3
	Dinoseb	0.104	0.131	34.000	30.0	13
	Phenanthrene	1.163	1.115	28.770	30.0	-4
	Anthracene	1.197	1.164	29.180	30.0	-3
	Carbazole	1.168	1.105	28.380	30.0	-5
	Methyl parathion	0.217	0.227	29.550	30.0	-1
	Di-n-butylphthalate	1.378	1.296	28.210	30.0	-6
	Parathion	0.160	0.153	27.620	30.0	-8
	4-Nitroquinoline-1-oxide	0.079	0.076	27.410	30.0	-9
	Isodrin	0.131	0.121	27.680	30.0	-8

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/15/13 Time: 00:32

Lab File ID: ck0541.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

			ACTUAL	TRUE	%
COMPOUND	RRF	RRF30	CONC.	CONC.	DRIFT
* Fluoranthene	1.300	1.243	28.680	30.0	-4*
Benzidine	0.819	0.760	83.500	90.0	-7
Pyrene	1.111	1.074	29.010	30.0	-3
p-Dimethylaminoazobenzene	0.216	0.210	29.120	30.0	-3
Chlorobenzilate	0.337	0.324	28.840	30.0	-4
3,3'-Dimethylbenzidine	0.684	0.656	28.760	30.0	-4
Butylbenzylphthalate	0.530	0.486	27.530	30.0	-8
2-Acetylaminofluorene	0.480	0.450	28.130	30.0	-6
3,3'-Dichlorobenzidine	0.386	0.368	28.560	30.0	-5
4,4'-Methylenebis(2-Chloroanil	0.189	0.178	28.260	30.0	-6
Benzo(a)anthracene	1.024	0.953	27.920	30.0	-7
Chrysene	0.988	0.907	27.560	30.0	-8
bis(2-Ethylhexyl)phthalate	0.735	0.667	27.210	30.0	-9
6-Methylchrysene	0.729	0.674	27.750	30.0	-8
Dibenz(a,h)acridine	0.866	0.868	30.060	30.0	0
* Di-n-octylphthalate	1.510	1.463	29.070	30.0	-3*
Dibenz(a,j)acridine	0.996	0.953	28.710	30.0	-4
7,12-Dimethylbenz[a]anthracene	0.567	0.571	30.190	30.0	1
Quinoline	0.731	0.718	29.440	30.0	-2
Benzo(b)fluoranthene	1.221	1.238	30.420	30.0	1
Benzo(k)fluoranthene	1.246	1.210	29.140	30.0	-3
* Benzo(a)pyrene	1.192	1.138	28.640	30.0	-5*
3-Methylcholanthrene	0.597	0.589	29.560	30.0	-1
NDPA as diphenylamine	0.672	0.673	30.040	30.0	0
Indeno(1,2,3-cd)pyrene	1.268	1.247	29.490	30.0	-2
Dibenz(a,h)anthracene	1.061	1.045	29.560	30.0	-1
Benzo(g,h,i)perylene	1.080	1.044	29.000	30.0	-3
Indene	3.460	3.309	28.690	30.0	-4
1-Chloronaphthalene	1.111	1.077	29.100	30.0	-3
2-Fluorophenol	1.496	1.457	58.440	60.0	-3
Phenol-d5	2.202	2.134	58.150	60.0	-3
Phenol-d6	2.202	2.134	58.150	60.0	-3
Nitrobenzene-d5	0.431	0.399	55.620	60.0	-7
2-Fluorobiphenyl	1.258	1.240	59.150	60.0	-1
2,4,6-Tribromophenol	0.121	0.137	67.960	60.0	13

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/15/13 Time: 00:32

Lab File ID: ck0541.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
Terphenyl-d14	0.715	0.705	59.150	60.0	-1

Average %Drift: 6

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov15.b/ck0541.d

Area Summary

Internal Standard Name	File ID: ck0541.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	173359	131335	65668	262670	Yes
Naphthalene-d8	822933	603190	301595	1206380	Yes
Acenaphthene-d10	510651	377352	188676	754704	Yes
Phenanthrene-d10	921704	694958	347479	1389916	Yes
Pyrene-d10	1114013	855313	427656	1710626	Yes
Perylene-d12	888410	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

Internal Standard Name	File ID: ck0541.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.133	5.226	Yes
Naphthalene-d8	6.375	6.461	Yes
Acenaphthene-d10	8.085	8.177	Yes
Phenanthrene-d10	9.530	9.622	Yes
Pyrene-d10	10.907	10.999	Yes
Perylene-d12	13.508	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: MC (3) 11/15/13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	N-Nitrosodimethylamine	1.211	1.007	24.940	30.0	-17
	Pyridine	1.878	1.557	24.870	30.0	-17
	2-Picoline	1.916	1.806	28.280	30.0	-6
	N-Nitrosomethylethylamine	0.916	0.833	27.270	30.0	-9
	Methyl methanesulfonate	0.921	0.835	27.200	30.0	-9
	N-Nitrosodiethylamine	0.910	0.823	27.120	30.0	-10
	Ethyl methanesulfonate	0.829	0.795	28.800	30.0	-4
	Benzaldehyde	1.231	1.283	41.620	30.0	39
	Aniline	3.046	2.829	27.860	30.0	-7
*	Phenol	2.569	2.454	28.660	30.0	-4*
	bis(2-Chloroethyl)ether	1.824	1.707	28.080	30.0	-6
	2-Chlorophenol	1.602	1.495	27.980	30.0	-7
	1,3-Dichlorobenzene	1.617	1.574	29.210	30.0	-3
*	1,4-Dichlorobenzene	1.650	1.596	29.020	30.0	-3*
	Benzyl alcohol	1.253	1.148	27.490	30.0	-8
	1,2-Dichlorobenzene	1.549	1.525	29.540	30.0	-2
	2-Methylphenol	1.705	1.620	28.500	30.0	-5
	2,2'-oxybis(1-Chloropropane)	2.244	1.914	25.590	30.0	-15
	bis(2-Chloroisopropyl)ether	2.250	1.914	25.520	30.0	-15
	N-Nitrosopyrrolidine	1.020	0.990	29.090	30.0	-3
	Acetophenone	2.542	2.346	27.680	30.0	-8
#	N-Nitroso-di-n-propylamine	1.627	1.421	26.200	30.0	-13#
	N-Nitrosomorpholine	1.159	0.992	25.660	30.0	-14
	4-Methylphenol	2.018	1.872	27.830	30.0	-7
	o-Toluidine	2.912	2.768	28.510	30.0	-5
	Hexachloroethane	0.628	0.594	28.380	30.0	-5
	Nitrobenzene	0.457	0.402	26.390	30.0	-12
	N-Nitrosopiperidine	0.203	0.193	28.600	30.0	-5
	Isophorone	0.830	0.744	26.880	30.0	-10
*	2-Nitrophenol	0.159	0.167	31.470	30.0	5*
	2,4-Dimethylphenol	0.408	0.378	27.770	30.0	-7
	O,O,O-triethylphosphorothioate	0.170	0.171	30.190	30.0	1
	bis(2-Chloroethoxy)methane	0.504	0.442	26.280	30.0	-12
	Benzoic acid	0.265	0.243	36.790	40.0	-8
*	2,4-Dichlorophenol	0.278	0.284	30.720	30.0	2*
	1,2,4-Trichlorobenzene	0.292	0.289	29.660	30.0	-1

11-18-2013

FORM VII SV-1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Naphthalene	1.061	1.026	29.000	30.0	-3
	4-Chloroaniline	0.462	0.440	28.520	30.0	-5
	2,6-Dichlorophenol	0.262	0.269	30.890	30.0	3
	Hexachloropropene	0.166	0.162	29.400	30.0	-2
*	Hexachlorobutadiene	0.147	0.141	28.790	30.0	-4*
	Caprolactam	0.154	0.147	28.760	30.0	-4
	N-Nitrosodi-n-butylamine	0.400	0.376	28.220	30.0	-6
*	4-Chloro-3-methylphenol	0.355	0.342	28.930	30.0	-4*
	Safrole	0.281	0.283	30.210	30.0	1
	2-Methylnaphthalene	0.753	0.739	29.450	30.0	-2
	1-Methylnaphthalene	0.689	0.667	29.050	30.0	-3
#	Hexachlorocyclopentadiene	0.206	0.178	25.860	30.0	-14#
	1,2,4,5-Tetrachlorobenzene	0.477	0.476	29.960	30.0	0
	cis-Isosafrole	0.766	0.710	3.060	3.3	-7
*	2,4,6-Trichlorophenol	0.311	0.324	31.220	30.0	4*
	2,4,5-Trichlorophenol	0.339	0.361	31.920	30.0	6
	trans-Isosafrole	0.542	0.512	25.230	26.7	-6
	Isosafrole	0.483	0.456	28.350	30.0	-6
	1,1'-Biphenyl	1.550	1.449	28.040	30.0	-7
	2-Chloronaphthalene	1.129	1.234	32.800	30.0	9
	Diphenyl ether	0.772	0.757	29.440	30.0	-2
	2-Nitroaniline	0.368	0.365	29.730	30.0	-1
	1,4-Naphthoquinone	0.475	0.458	28.910	30.0	-4
	1,4-Dinitrobenzene	0.143	0.158	31.170	30.0	4
	Dimethylphthalate	1.343	1.292	28.850	30.0	-4
	1,3-Dinitrobenzene	0.194	0.205	29.990	30.0	0
	2,6-Dinitrotoluene	0.280	0.286	30.630	30.0	2
	Acenaphthylene	1.762	1.681	28.620	30.0	-5
	3-Nitroaniline	0.342	0.350	30.770	30.0	3
*	Acenaphthene	1.219	1.154	28.400	30.0	-5*
#	2,4-Dinitrophenol	0.091	0.109	45.340	40.0	13#
	Pentachlorobenzene	0.412	0.420	30.600	30.0	2
#	4-Nitrophenol	0.212	0.207	29.310	30.0	-2#
	Dibenzofuran	1.671	1.615	29.010	30.0	-3
	2,4-Dinitrotoluene	0.361	0.374	31.070	30.0	4
	1-Naphthylamine	1.373	1.312	28.660	30.0	-4

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	2,3,4,6-Tetrachlorophenol	0.239	0.260	32.650	30.0	9
	2-Naphthylamine	1.405	1.359	29.020	30.0	-3
	Diethylphthalate	1.387	1.309	28.310	30.0	-6
	Thionazin	0.306	0.269	26.400	30.0	-12
	Fluorene	1.437	1.380	28.800	30.0	-4
	4-Chlorophenyl-phenylether	0.639	0.632	29.650	30.0	-1
	5-Nitro-o-toluidine	0.380	0.395	31.200	30.0	4
	4-Nitroaniline	0.384	0.368	28.720	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.090	33.190	30.0	11
*	N-Nitrosodiphenylamine (1)	0.670	0.655	29.320	30.0	-2*
	1,2-Diphenylhydrazine	0.960	0.820	25.610	30.0	-15
	Tetraethyldithiopyrophosphate	0.137	0.114	25.060	30.0	-16
	1,3,5-Trinitrobenzene	0.051	0.053	29.460	30.0	-2
	Diallate (peak 1)	0.491	0.426	19.520	22.5	-13
	Phorate	0.592	0.502	25.430	30.0	-15
	Phenacetin	0.463	0.406	26.260	30.0	-12
	4-Bromophenyl-phenylether	0.185	0.186	30.260	30.0	1
	Diallate (peak 2)	0.213	0.182	6.410	7.5	-15
	Hexachlorobenzene	0.182	0.185	30.480	30.0	2
	Dimethoate	0.362	0.324	26.870	30.0	-10
	Diallate TRANS/CIS	0.422	0.365	25.980	30.0	-13
	Atrazine	0.215	0.196	27.340	30.0	-9
*	Pentachlorophenol	0.101	0.109	32.340	30.0	8*
	Pentachloronitrobenzene	0.079	0.076	28.730	30.0	-4
	4-Aminobiphenyl	0.725	0.727	30.100	30.0	0
	Pronamide	0.349	0.321	27.550	30.0	-8
	Dinoseb	0.104	0.116	30.730	30.0	2
	Phenanthrene	1.163	1.109	28.610	30.0	-5
	Anthracene	1.197	1.152	28.860	30.0	-4
	Carbazole	1.168	1.111	28.520	30.0	-5
	Methyl parathion	0.217	0.218	28.370	30.0	-5
	Di-n-butylphthalate	1.378	1.233	26.830	30.0	-11
	Parathion	0.160	0.147	26.720	30.0	-11
	4-Nitroquinoline-1-oxide	0.079	0.064	24.150	30.0	-20
	Isodrin	0.131	0.119	27.240	30.0	-9
*	Fluoranthene	1.300	1.244	28.690	30.0	-4*

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Benzidine	0.819	0.802	88.200	90.0	-2
	Pyrene	1.111	1.080	29.180	30.0	-3
	p-Dimethylaminoazobenzene	0.216	0.208	28.780	30.0	-4
	Chlorobenzilate	0.337	0.312	27.790	30.0	-7
	3,3'-Dimethylbenzidine	0.684	0.726	31.820	30.0	6
	Butylbenzylphthalate	0.530	0.482	27.290	30.0	-9
	2-Acetylaminofluorene	0.480	0.451	28.170	30.0	-6
	3,3'-Dichlorobenzidine	0.386	0.385	29.870	30.0	0
	4,4'-Methylenebis(2-Chloroanil	0.189	0.189	30.130	30.0	0
	Benzo(a)anthracene	1.024	0.988	28.930	30.0	-4
	Chrysene	0.988	0.971	29.480	30.0	-2
	bis(2-Ethylhexyl)phthalate	0.735	0.650	26.530	30.0	-12
	6-Methylchrysene	0.729	0.712	29.310	30.0	-2
	Dibenz(a,h)acridine	0.866	0.843	29.220	30.0	-3
*	Di-n-octylphthalate	1.510	1.248	24.790	30.0	-17*
	Dibenz(a,j)acridine	0.996	1.009	30.410	30.0	1
	7,12-Dimethylbenz[a]anthracene	0.567	0.554	29.270	30.0	-2
	Quinoline	0.731	0.717	29.420	30.0	-2
	Benzo(b)fluoranthene	1.221	1.224	30.070	30.0	0
	Benzo(k)fluoranthene	1.246	1.163	28.010	30.0	-7
*	Benzo(a)pyrene	1.192	1.124	28.290	30.0	-6*
	3-Methylcholanthrene	0.597	0.575	28.860	30.0	-4
	NDPA as diphenylamine	0.672	0.655	29.250	30.0	-3
	Indeno(1,2,3-cd)pyrene	1.268	1.275	30.170	30.0	1
	Dibenz(a,h)anthracene	1.061	1.081	30.570	30.0	2
	Benzo(g,h,i)perylene	1.080	1.098	30.480	30.0	2
	Indene	3.460	3.159	27.390	30.0	-9
	1-Chloronaphthalene	1.111	1.087	29.360	30.0	-2
	2-Fluorophenol	1.496	1.444	57.900	60.0	-4
	Phenol-d5	2.202	2.101	57.250	60.0	-5
	Phenol-d6	2.202	2.101	57.250	60.0	-5
	Nitrobenzene-d5	0.431	0.396	55.200	60.0	-8
	2-Fluorobiphenyl	1.258	1.223	58.370	60.0	-3
	2,4,6-Tribromophenol	0.121	0.134	66.520	60.0	11
	Terphenyl-d14	0.715	0.692	58.100	60.0	-3

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov18.b/ck0621.d

Area Summary

File ID:

Internal Standard Name	ck0621.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	99797	131335	65668	262670	Yes
Naphthalene-d8	463147	603190	301595	1206380	Yes
Acenaphthene-d10	289780	377352	188676	754704	Yes
Phenanthrene-d10	532095	694958	347479	1389916	Yes
Pyrene-d10	648763	855313	427656	1710626	Yes
Perylene-d12	579092	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0621.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.053	5.226	Yes
Naphthalene-d8	6.289	6.461	Yes
Acenaphthene-d10	7.998	8.177	Yes
Phenanthrene-d10	9.437	9.622	Yes
Pyrene-d10	10.808	10.999	Yes
Perylene-d12	13.391	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-18-2013

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/11/13 Time: 04:17

Lab File ID: dk0321.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.629	0.606	12.040	12.5	-4
N-Nitrosodimethylamine	1.111	0.939	10.560	12.5	-16
Pyridine	1.895	1.652	10.900	12.5	-13
2-Picoline	1.996	1.830	11.460	12.5	-8
N-Nitrosomethylethylamine	0.858	0.779	11.350	12.5	-9
Methyl methanesulfonate	0.981	0.915	11.660	12.5	-7
N-Nitrosodiethylamine	0.824	0.767	11.630	12.5	-7
Ethyl methanesulfonate	0.795	0.754	11.870	12.5	-5
Benzaldehyde	1.426	1.294	11.340	12.5	-9
Aniline	2.907	2.663	11.450	12.5	-8
Phenol	2.360	2.162	11.450	12.5	-8
bis(2-Chloroethyl)ether	1.862	1.700	11.410	12.5	-9
2-Chlorophenol	1.460	1.442	12.350	12.5	-1
1,3-Dichlorobenzene	1.570	1.558	12.400	12.5	-1
1,4-Dichlorobenzene	1.589	1.578	12.420	12.5	-1
Benzyl alcohol	1.033	0.979	11.850	12.5	-5
1,2-Dichlorobenzene	1.486	1.476	12.420	12.5	-1
Indene	2.510	2.433	14.540	15.0	-3
2-Methylphenol	1.465	1.418	12.090	12.5	-3
2,2'-oxybis(1-Chloropropane)	2.312	1.854	10.030	12.5	-20
bis(2-Chloroisopropyl)ether	2.312	1.854	10.030	12.5	-20
N-Nitrosopyrrolidine	0.838	0.752	11.220	12.5	-10
Acetophenone	2.291	2.183	11.910	12.5	-5
N-Nitroso-di-n-propylamine	1.319	1.158	10.980	12.5	-12
N-Nitrosomorpholine	1.040	0.868	10.440	12.5	-17
4-Methylphenol	1.637	1.549	11.830	12.5	-5
o-Toluidine	2.526	2.378	11.770	12.5	-6
Hexachloroethane	0.671	0.641	11.940	12.5	-4
Nitrobenzene	0.488	0.460	11.760	12.5	-6
N-Nitrosopiperidine	0.200	0.196	12.230	12.5	-2
Isophorone	0.832	0.792	11.900	12.5	-5
2-Nitrophenol	0.168	0.190	14.180	12.5	13
2,4-Dimethylphenol	0.407	0.405	12.430	12.5	-1
O,O,O-triethylphosphorothioate	0.181	0.197	13.650	12.5	9
bis(2-Chloroethoxy)methane	0.543	0.501	11.530	12.5	-8
Benzoic acid	0.270	0.125	7.660	12.5	-39

11-11-13

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/11/13 Time: 04:17

Lab File ID: dk0321.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dichlorophenol	0.287	0.308	13.420	12.5	7
1,2,4-Trichlorobenzene	0.321	0.337	13.110	12.5	5
Naphthalene	1.066	1.060	12.430	12.5	-1
4-Chloroaniline	0.442	0.439	12.420	12.5	-1
2,6-Dichlorophenol	0.276	0.295	13.360	12.5	7
Hexachloropropene	0.203	0.230	14.220	12.5	14
Hexachlorobutadiene	0.187	0.210	14.030	12.5	12
Quinoline	0.706	0.706	12.490	12.5	0
Caprolactam	0.128	0.129	12.610	12.5	1
N-Nitrosodi-n-butylamine	0.330	0.366	13.870	12.5	11
4-Chloro-3-methylphenol	0.345	0.357	12.940	12.5	4
Safrole	0.271	0.289	13.330	12.5	7
2-Methylnaphthalene	0.710	0.714	12.560	12.5	0
1-Methylnaphthalene	0.645	0.652	12.650	12.5	1
Hexachlorocyclopentadiene	0.273	0.252	11.520	12.5	-8
1,2,4,5-Tetrachlorobenzene	0.580	0.597	12.880	12.5	3
cis-Isosafrole	0.085	0.083	12.250	12.5	-2
2,4,6-Trichlorophenol	0.366	0.399	13.630	12.5	9
2,4,5-Trichlorophenol	0.378	0.407	13.460	12.5	8
trans-Isosafrole	0.478	0.482	12.610	12.5	1
Isosafrole	0.478	0.482	12.610	12.5	1
1,1'-Biphenyl	1.452	1.400	12.060	12.5	-4
2-Chloronaphthalene	1.114	1.055	11.840	12.5	-5
1-Chloronaphthalene	1.098	1.122	12.770	12.5	2
Diphenyl ether	0.803	0.809	12.580	12.5	1
2-Nitroaniline	0.347	0.384	13.840	12.5	11
1,4-Naphthoquinone	0.479	0.482	12.570	12.5	1
1,4-Dinitrobenzene	0.176	0.206	13.400	12.5	7
Dimethylphthalate	1.260	1.271	12.610	12.5	1
1,3-Dinitrobenzene	0.216	0.237	13.680	12.5	9
2,6-Dinitrotoluene	0.279	0.304	13.630	12.5	9
Acenaphthylene	1.691	1.693	12.510	12.5	0
3-Nitroaniline	0.320	0.333	13.000	12.5	4
Acenaphthene	1.163	1.128	12.130	12.5	-3
2,4-Dinitrophenol	0.138	0.140	12.760	12.5	2
Pentachlorobenzene	0.464	0.505	13.600	12.5	9

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/11/13 Time: 04:17

Lab File ID: dk0321.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.204	0.211	12.910	12.5	3
Dibenzofuran	1.654	1.650	12.470	12.5	0
2,4-Dinitrotoluene	0.358	0.401	14.020	12.5	12
2,4_2,6-Dinitrotoluenes	0.633	0.706	27.650	12.5	121
1-Naphthylamine	1.202	1.158	12.040	12.5	-4
2,3,4,6-Tetrachlorophenol	0.298	0.326	13.650	12.5	9
2-Naphthylamine	1.234	1.168	11.840	12.5	-5
Diethylphthalate	1.241	1.242	12.510	12.5	0
Thionazin	0.268	0.247	11.530	12.5	-8
Fluorene	1.331	1.323	12.420	12.5	-1
4-Chlorophenyl-phenylether	0.660	0.689	13.040	12.5	4
5-Nitro-o-toluidine	0.358	0.372	12.980	12.5	4
4-Nitroaniline	0.330	0.335	12.710	12.5	2
4,6-Dinitro-2-methylphenol	0.120	0.123	12.190	12.5	-2
N-Nitrosodiphenylamine (1)	0.622	0.599	12.020	12.5	-4
1,2-Diphenylhydrazine	0.985	0.836	10.610	12.5	-15
Tetraethyldithiopyrophosphate	0.142	0.132	11.580	12.5	-7
1,3,5-Trinitrobenzene	0.082	0.097	12.700	12.5	2
Diallate (peak 1)	0.491	0.435	8.300	9.4	-12
Phorate	0.582	0.493	10.590	12.5	-15
Phenacetin	0.414	0.411	12.390	12.5	-1
4-Bromophenyl-phenylether	0.197	0.205	12.990	12.5	4
Diallate (peak 2)	0.209	0.185	2.760	3.1	-12
Hexachlorobenzene	0.195	0.212	13.590	12.5	9
Dimethoate	0.380	0.344	11.300	12.5	-10
Atrazine	0.203	0.216	13.300	12.5	6
Pentachlorophenol	0.135	0.131	11.130	12.5	-11
Pentachloronitrobenzene	0.091	0.101	13.960	12.5	12
4-Aminobiphenyl	0.779	0.775	12.440	12.5	0
Pronamide	0.329	0.351	13.310	12.5	6
Phenanthrene	1.115	1.061	11.890	12.5	-5
Dinoseb	0.161	0.179	11.820	12.5	-5
Anthracene	1.112	1.105	12.430	12.5	-1
Carbazole	1.076	1.049	12.180	12.5	-3
Methyl parathion	0.265	0.270	11.890	12.5	-5
Di-n-butylphthalate	1.275	1.251	12.270	12.5	-2

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/11/13 Time: 04:17

Lab File ID: dk0321.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Parathion	0.172	0.173	11.920	12.5	-5
4-Nitroquinoline-1-oxide	0.088	0.072	8.790	12.5	-30
Isodrin	0.134	0.137	12.840	12.5	3
Fluoranthene	1.254	1.306	13.010	12.5	4
Benzidine	0.642	0.635	37.090	37.5	-1
Pyrene	1.061	1.023	12.040	12.5	-4
p-Dimethylaminoazobenzene	0.190	0.209	12.280	12.5	-2
Chlorobenzilate	0.299	0.295	12.340	12.5	-1
3,3'-Dimethylbenzidine	0.630	0.665	13.190	12.5	5
Butylbenzylphthalate	0.452	0.436	12.060	12.5	-4
2-Acetylaminofluorene	0.356	0.395	12.370	12.5	-1
Benzo(a)anthracene	0.901	0.959	13.300	12.5	6
3,3'-Dichlorobenzidine	0.325	0.360	13.840	12.5	11
4,4'-Methylenebis(2-Chloroanil	0.172	0.183	13.340	12.5	7
Chrysene	0.886	0.901	12.710	12.5	2
bis(2-Ethylhexyl)phthalate	0.594	0.590	12.400	12.5	-1
6-Methylchrysene	0.623	0.690	13.850	12.5	11
Dibenz(a,h)acridine	0.715	0.743	12.990	12.5	4
Di-n-octylphthalate	1.370	1.349	11.500	12.5	-8
Dibenz(a,j)acridine	0.767	0.892	14.540	12.5	16
7,12-Dimethylbenz[a]anthracene	0.523	0.550	13.150	12.5	5
Benzo(b)fluoranthene	1.178	1.193	12.660	12.5	1
Benzo(k)fluoranthene	1.188	1.203	12.660	12.5	1
Benzo(a)pyrene	1.081	1.108	12.810	12.5	3
3-Methylcholanthrene	0.515	0.545	13.250	12.5	6
NDPA as diphenylamine	0.622	0.599	12.020	12.5	-4
Indeno(1,2,3-cd)pyrene	0.948	1.043	13.750	12.5	10
Dibenz(a,h)anthracene	0.803	0.915	14.240	12.5	14
Benzo(g,h,i)perylene	0.799	0.863	13.490	12.5	8
Diallate TRANS/CIS	0.421	0.372	11.060	12.5	-12
2-Fluorophenol	1.485	1.424	23.990	25.0	-4
Phenol-d5	2.039	1.907	23.380	25.0	-6
Phenol-d6	2.039	1.907	23.380	25.0	-6
Nitrobenzene-d5	0.460	0.438	23.780	25.0	-5
2-Fluorobiphenyl	1.249	1.234	24.700	25.0	-1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/11/13 Time: 04:17

Lab File ID: dk0321.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4,6-Tribromophenol	0.131	0.158	30.120	25.0	20
Terphenyl-d14	0.623	0.645	25.880	25.0	4

Average %Drift: 7

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d **
/chem/HP19760.i/13oct29.b/dj1182.d
/chem/HP19760.i/13oct29.b/dj1183.d
/chem/HP19760.i/13oct29.b/dj1184.d
/chem/HP19760.i/13oct29.b/dj1185.d
/chem/HP19760.i/13oct29.b/dj1186.d
/chem/HP19760.i/13oct29.b/dj1187.d
/chem/HP19760.i/13oct29.b/dj1188.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/13nov11.b/dk0321.d

Area Summary

File ID:

Internal Standard Name	dk0321.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	141874	151909	75954	303818	Yes
Naphthalene-d8	545396	608104	304052	1216208	Yes
Acenaphthene-d10	326350	340173	170086	680346	Yes
Phenanthrene-d10	574495	574655	287328	1149310	Yes
Pyrene-d10	742674	743541	371770	1487082	Yes
Perylene-d12	559319	528760	264380	1057520	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dk0321.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.953	6.029	Yes
Naphthalene-d8	7.912	7.987	Yes
Acenaphthene-d10	10.715	10.797	Yes
Phenanthrene-d10	12.621	12.691	Yes
Pyrene-d10	14.562	14.649	Yes
Perylene-d12	19.027	19.120	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11/11/2013

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	119096		5.201		567152		6.437		363022		8.146	
	UPPER LIMIT	238192		5.701		1134304		6.937		726044		8.646	
	LOWER LIMIT	59548		4.701		283576		5.937		181511		7.646	
	LLI SAMPLE NO.												
01	SBLKWA316	108499		5.201		477413		6.437		294988		8.146	
02	316WALCS	132168		5.201		622633		6.437		380050		8.152	
03	316WALCSD	122539		5.201		559633		6.437		352032		8.152	
04	7273602	114459		5.201		522448		6.437		331637		8.146	
05	7272361	102890		5.201		462059		6.437		298049		8.146	
06	7272362	110178		5.201		493303		6.437		319940		8.146	
07	7272363	101914		5.201		456233		6.437		291724		8.146	
08	SBLKLF310	105657		5.201		452226		6.437		267135		8.146	
09	310LFLCS	105509		5.201		488949		6.437		300041		8.152	
10	7262294	107819		5.201		483470		6.437		306099		8.146	
11	7262294MS	116109		5.201		528113		6.437		333829		8.152	
12	7262294MSD	115340		5.201		533954		6.437		334320		8.152	
13	7262296	117170		5.201		516989		6.437		317343		8.146	
14	7262298	111806		5.201		500131		6.437		308260		8.146	
15	7262300	114343		5.201		503451		6.437		313944		8.146	
16	7262302	113960		5.201		519904		6.437		332035		8.146	
17	7262304	136583		5.201		611077		6.437		380442		8.146	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	690322	9.591	847467	10.974	700104	13.575
	UPPER LIMIT	1380644	10.091	1694934	11.474	1400208	14.075
	LOWER LIMIT	345161	9.091	423734	10.474	350052	13.075
	LLI SAMPLE NO.						
01	SBLKWA316	556278	9.591	678386	10.968	558704	13.575
02	316WALCS	661811	9.591	786591	10.974	635368	13.575
03	316WALCSD	638901	9.591	764110	10.974	622281	13.575
04	7273602	621775	9.591	764895	10.968	624757	13.575
05	7272361	579432	9.591	688484	10.968	569427	13.575
06	7272362	616911	9.591	740672	10.968	596235	13.575
07	7272363	569936	9.591	684449	10.968	564411	13.575
08	SBLKLF310	507161	9.591	608615	10.968	488624	13.575
09	310LFLCS	546606	9.591	671064	10.975	522975	13.575
10	7262294	561081	9.591	675043	10.968	527228	13.575
11	7262294MS	615094	9.591	734498	10.975	568678	13.575
12	7262294MSD	602598	9.591	717939	10.975	516868	13.575
13	7262296	594457	9.591	716469	10.968	516634	13.575
14	7262298	578214	9.591	696992	10.968	502578	13.575
15	7262300	599543	9.591	731625	10.968	516679	13.575
16	7262302	607498	9.591	722453	10.968	510944	13.575
17	7262304	683335	9.591	784645	10.975	572887	13.575

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	119096		5.201		567152		6.437		363022		8.146	
	UPPER LIMIT	238192		5.701		1134304		6.937		726044		8.646	
	LOWER LIMIT	59548		4.701		283576		5.937		181511		7.646	
	LLI SAMPLE NO.												
18	7262306	122955		5.201		576716		6.437		358322		8.146	
19	7262308	119792		5.201		545379		6.437		334021		8.146	
20	7263054	135704		5.201		615207		6.437		364026		8.152	
21	7263055	139978		5.201		636301		6.437		381609		8.152	
22	7265225	138554		5.201		646752		6.437		393344		8.152	
23	7265227	121409		5.201		546826		6.437		339475		8.152	
24	7265234	127658		5.201		576833		6.437		351478		8.152	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0461.d Date Analyzed: 11/13/13

Instrument ID: HP10623 Time Analyzed: 08:44

	IS4(PHN)			IS5(PYR)			IS6(PRY)		
	AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
12 HOUR STD	690322		9.591		847467		10.974		700104		13.575	
UPPER LIMIT	1380644		10.091		1694934		11.474		1400208		14.075	
LOWER LIMIT	345161		9.091		423734		10.474		350052		13.075	
LLI SAMPLE NO.												
18 7262306	649399		9.591		786063		10.968		589108		13.575	
19 7262308	601831		9.591		693969		10.974		504889		13.575	
20 7263054	647452		9.591		744662		10.975		562679		13.582	
21 7263055	648178		9.591		737970		10.974		559637		13.581	
22 7265225	698742		9.591		803275		10.975		575274		13.575	
23 7265227	612465		9.591		718080		10.974		548469		13.581	
24 7265234	623707		9.591		732409		10.975		541194		13.582	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0501.d Date Analyzed: 11/14/13

Instrument ID: HP10623 Time Analyzed: 00:13

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	
	12 HOUR STD	148700		5.164		708022		6.400		447321		8.109	
	UPPER LIMIT	297400		5.664		1416044		6.900		894642		8.609	
	LOWER LIMIT	74350		4.664		354011		5.900		223661		7.609	
	LLI SAMPLE NO.												
01	SBLKLB311	129337		5.158		577901		6.400		350794		8.109	
02	311LBLCS	131504		5.164		612265		6.400		391721		8.115	
03	7260896	113752		5.158		532981		6.400		340830		8.109	
04	7260897	122961		5.158		565028		6.400		352518		8.109	
05	7260899	127130		5.158		599962		6.400		372706		8.109	
06	7265241	151093		5.164		682956		6.400		413146		8.109	
07	7265242	132274		5.164		609486		6.400		377960		8.109	
08	7265244	140941		5.164		661569		6.400		418254		8.109	
09	7265245	133074		5.164		627023		6.400		394715		8.109	
10	7265246	150209		5.164		713802		6.400		450774		8.109	
11	7265226	146673		5.164		700999		6.400		451996		8.109	
12	7262344	133631		5.164		631431		6.400		401268		8.109	
13	7262345MS	148847		5.164		697444		6.400		433137		8.115	
14	7262346MSD	145114		5.164		684817		6.400		425703		8.115	
15	7262333	144654		5.164		676031		6.400		423762		8.115	
16	7262335	145383		5.164		679018		6.406		420112		8.115	
17	7262336	181187		5.164		846948		6.406		497059		8.115	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0501.d Date Analyzed: 11/14/13

Instrument ID: HP10623 Time Analyzed: 00:13

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	825922	9.554	1031121	10.931	863964	13.532
UPPER LIMIT	1651844	10.054	2062242	11.431	1727928	14.032
LOWER LIMIT	412961	9.054	515561	10.431	431982	13.032
LLI SAMPLE NO.						
01 SBLKLB311	677796	9.554	826213	10.931	671225	13.532
02 311LBLCS	710895	9.554	861877	10.931	656776	13.532
03 7260896	651653	9.548	808141	10.931	681949	13.532
04 7260897	644762	9.554	816157	10.931	687601	13.532
05 7260899	695861	9.554	835073	10.931	630178	13.532
06 7265241	734774	9.554	829724	10.932	544782	13.532
07 7265242	690842	9.554	808958	10.931	623029	13.532
08 7265244	735674	9.554	828416	10.932	553460	13.532
09 7265245	689281	9.554	796409	10.932	582331	13.532
10 7265246	785962	9.554	870819	10.931	577258	13.532
11 7265226	773336	9.554	863501	10.932	595232	13.532
12 7262344	708643	9.554	858872	10.938	639051	13.545
13 7262345MS	764009	9.554	912767	10.938	643104	13.545
14 7262346MSD	750635	9.554	877194	10.938	617431	13.545
15 7262333	750574	9.554	897970	10.938	616223	13.545
16 7262335	736624	9.560	856662	10.938	610519	13.545
17 7262336	805073	9.560	846712	10.944	582501	13.545

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0501.d Date Analyzed: 11/14/13

Instrument ID: HP10623 Time Analyzed: 00:13

	IS1(DCB) AREA	#	IS1(DCB) RT	#	IS2(NPT) AREA	#	IS2(NPT) RT	#	IS3(ANT) AREA	#	IS3(ANT) RT	#
	12 HOUR STD		148700		5.164		708022		6.400		447321		8.109	
	UPPER LIMIT		297400		5.664		1416044		6.900		894642		8.609	
	LOWER LIMIT		74350		4.664		354011		5.900		223661		7.609	
	LLI SAMPLE NO.													
18	7262337		156569		5.170		707841		6.412		445936		8.134	
19	7262339		173839		5.183		804912		6.425		471902		8.134	
20	7262340		180074		5.182		795939		6.418		457321		8.134	
21	7262342		162074		5.176		738786		6.418		437995		8.134	
22	7262343		171010		5.176		777863		6.418		456851		8.134	
23	7262348		156125		5.176		706554		6.418		428428		8.134	
24	7262349		159048		5.176		722926		6.418		426995		8.134	
25	7262351		185328		5.176		846444		6.418		492152		8.134	
26	7262338		149532		5.176		677866		6.418		412496		8.134	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0501.d Date Analyzed: 11/14/13

Instrument ID: HP10623 Time Analyzed: 00:13

	IS4(PHN) AREA	#	RT	#	IS5(PYR) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD		825922		9.554		1031121		10.931		863964		13.532	
	UPPER LIMIT		1651844		10.054		2062242		11.431		1727928		14.032	
	LOWER LIMIT		412961		9.054		515561		10.431		431982		13.032	
	LLI SAMPLE NO.													
18	7262337		699090		9.591		894030		10.981		746890		13.612	
19	7262339		765624		9.585		824761		10.968		636686		13.582	
20	7262340		761114		9.585		823414		10.968		609588		13.581	
21	7262342		724638		9.579		795318		10.962		578436		13.581	
22	7262343		759582		9.579		813172		10.968		607649		13.594	
23	7262348		715950		9.579		794803		10.962		568300		13.588	
24	7262349		719761		9.579		788271		10.962		572979		13.582	
25	7262351		801941		9.579		877669		10.962		634569		13.581	
26	7262338		696869		9.579		757778		10.962		554561		13.575	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0541.d Date Analyzed: 11/15/13

Instrument ID: HP10623 Time Analyzed: 00:32

	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD		173359		5.133		822933		6.375		510651		8.085	
	UPPER LIMIT		346718		5.633		1645866		6.875		1021302		8.585	
	LOWER LIMIT		86680		4.633		411467		5.875		255326		7.585	
	LLI SAMPLE NO.													
01	SBLKLD314		135401		5.133		599140		6.369		363372		8.079	
02	314LDLCS		130149		5.133		596570		6.369		384587		8.085	
03	7265237		135449		5.133		603780		6.369		394648		8.079	
04	7266676		128197		5.133		583531		6.369		376734		8.078	
05	7266677		129245		5.127		584603		6.369		384615		8.079	
06	7266678		123684		5.127		570436		6.369		373042		8.078	
07	7266679		135330		5.127		638026		6.369		414911		8.079	
08	7266681		141073		5.127		649137		6.369		415050		8.078	
09	7266682		137773		5.127		652088		6.369		421168		8.079	
10	7265020		121057		5.127		587467		6.369		381879		8.078	
11	7265020MS		119859		5.127		581459		6.369		380275		8.079	
12	7265020MSD		118930		5.127		584920		6.369		389897		8.078	
13	7265022		130566		5.127		634111		6.369		426053		8.079	
14	7265024		122151		5.127		582614		6.369		384045		8.078	
15	7265026		126118		5.127		609872		6.369		394912		8.078	
16	7265028		138943		5.127		672577		6.369		435685		8.078	
17	7265030		132378		5.127		640260		6.369		407306		8.079	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0541.d Date Analyzed: 11/15/13

Instrument ID: HP10623 Time Analyzed: 00:32

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	921704	9.530	1114013	10.907	888410	13.508
UPPER LIMIT	1843408	10.030	2228026	11.407	1776820	14.008
LOWER LIMIT	460852	9.030	557007	10.407	444205	13.008
LLI SAMPLE NO.						
01 SBLKLD314	715257	9.523	879248	10.907	711818	13.508
02 314LDLCS	713310	9.524	880012	10.907	669874	13.508
03 7265237	741347	9.523	904643	10.901	650793	13.502
04 7266676	721489	9.523	871525	10.901	653558	13.502
05 7266677	733837	9.523	884735	10.901	647881	13.502
06 7266678	712441	9.523	852816	10.901	623533	13.502
07 7266679	742930	9.523	854702	10.901	603994	13.502
08 7266681	766572	9.523	900786	10.901	634632	13.501
09 7266682	781530	9.517	908559	10.901	623419	13.502
10 7265020	714705	9.517	877537	10.901	684369	13.502
11 7265020MS	723276	9.517	883750	10.901	668748	13.502
12 7265020MSD	728444	9.523	886141	10.901	667442	13.501
13 7265022	787507	9.517	951054	10.901	718223	13.502
14 7265024	723550	9.517	876487	10.901	637237	13.502
15 7265026	741708	9.517	880467	10.901	654295	13.501
16 7265028	807507	9.517	959365	10.901	706572	13.495
17 7265030	738609	9.517	879182	10.901	638422	13.496

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0541.d Date Analyzed: 11/15/13

Instrument ID: HP10623 Time Analyzed: 00:32

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	173359	5.133	822933	6.375	510651	8.085
	UPPER LIMIT	346718	5.633	1645866	6.875	1021302	8.585
	LOWER LIMIT	86680	4.633	411467	5.875	255326	7.585
	LLI SAMPLE NO.						
18	7265032	126755	5.127	622637	6.369	400687	8.079
19	7265034	139953	5.127	684827	6.369	438958	8.079
20	7265036	128421	5.127	625887	6.369	400678	8.078
21	7265038	137216	5.127	644106	6.369	412120	8.078
22	7265040	136020	5.127	677479	6.369	442700	8.079
23	7265229	134085	5.127	625498	6.369	397779	8.079
24	7265236	134680	5.127	640501	6.369	413105	8.078

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0541.d Date Analyzed: 11/15/13

Instrument ID: HP10623 Time Analyzed: 00:32

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	921704		9.530		1114013		10.907		888410		13.508	
	UPPER LIMIT	1843408		10.030		2228026		11.407		1776820		14.008	
	LOWER LIMIT	460852		9.030		557007		10.407		444205		13.008	
	LLI SAMPLE NO.												
18	7265032	736599		9.517		876494		10.901		628874		13.495	
19	7265034	802970		9.517		961976		10.901		706893		13.496	
20	7265036	747152		9.517		891258		10.901		629549		13.502	
21	7265038	760890		9.517		911261		10.901		655418		13.495	
22	7265040	810551		9.517		967850		10.901		709837		13.495	
23	7265229	735598		9.517		881711		10.901		638854		13.495	
24	7265236	764239		9.517		914828		10.901		650336		13.495	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	99797		5.053		463147		6.289		289780		7.998	
	UPPER LIMIT	199594		5.553		926294		6.789		579560		8.498	
	LOWER LIMIT	49899		4.553		231574		5.789		144890		7.498	
	LLI SAMPLE NO.												
01	SBLKLC316	108136		5.053		457604		6.289		265192		7.992	
02	316LCLCS	107514		5.053		479532		6.289		297174		7.999	
03	SBLKWA320	107098		5.053		471092		6.289		293127		7.992	
04	320WALCS	105154		5.053		481398		6.289		300062		7.999	
05	320WALCSD	109600		5.053		511168		6.289		325233		7.999	
06	7279095	98433		5.047		433035		6.289		266611		7.992	
07	7279096	110213		5.047		483390		6.289		299695		7.992	
08	7279097	100835		5.047		455467		6.289		280262		7.992	
09	7266814	107025		5.053		477427		6.289		283446		7.999	
10	7266815MS	107594		5.047		502594		6.289		307763		7.998	
11	7266816MSD	96370		5.053		449143		6.289		282789		7.999	
12	7259331	108584		5.053		500712		6.295		357640		8.036	
13	7265239	101238		5.053		477699		6.289		303269		7.999	
14	7266809	112909		5.053		516746		6.289		319287		7.999	
15	7266812	106039		5.053		488759		6.289		300832		7.998	
16	7266813	97550		5.053		447911		6.289		282132		7.999	
17	7266818	105111		5.053		493164		6.289		298644		7.999	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	532095		9.437		648763		10.808		579092		13.391	
	UPPER LIMIT	1064190		9.937		1297526		11.308		1158184		13.891	
	LOWER LIMIT	266048		8.937		324382		10.308		289546		12.891	
	LLI SAMPLE NO.												
01	SBLKLC316	484724		9.431		573380		10.808		460346		13.385	
02	316LCLCS	531149		9.437		638813		10.808		518634		13.391	
03	SBLKWA320	534982		9.431		632296		10.808		543491		13.385	
04	320WALCS	528313		9.437		633982		10.808		570997		13.391	
05	320WALCSD	565610		9.437		675402		10.808		590988		13.391	
06	7279095	488611		9.431		583798		10.809		502501		13.385	
07	7279096	550286		9.431		654017		10.808		554705		13.385	
08	7279097	516643		9.431		613181		10.809		509896		13.385	
09	7266814	527791		9.431		656881		10.809		554023		13.385	
10	7266815MS	559040		9.437		684320		10.808		625511		13.391	
11	7266816MSD	505364		9.437		626815		10.809		586929		13.385	
12	7259331	405796		9.511		807046		10.876		591307		13.403	
13	7265239	542724		9.437		654957		10.809		596890		13.391	
14	7266809	564292		9.437		638376		10.809		523780		13.391	
15	7266812	536413		9.437		645374		10.808		569208		13.391	
16	7266813	524209		9.437		654292		10.809		577522		13.391	
17	7266818	547847		9.437		676438		10.809		577510		13.391	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS1(DCB)			IS2(NPT)			IS3(ANT)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	99797		5.053		463147		6.289		289780		7.998	
	UPPER LIMIT	199594		5.553		926294		6.789		579560		8.498	
	LOWER LIMIT	49899		4.553		231574		5.789		144890		7.498	
	LLI SAMPLE NO.												
18	7270464	121628		5.053		548418		6.289		331623		7.998	
19	7270465	116333		5.053		533434		6.289		326266		7.999	
20	7270466	105411		5.053		470761		6.289		288937		7.998	
21	7270467	117554		5.053		535445		6.289		320683		7.999	
22	7270468	102947		5.053		462924		6.289		292969		7.999	
23	7270469	118207		5.053		527814		6.289		323539		7.999	
24	7270470	114806		5.053		510477		6.289		309039		7.999	
25	7270471	107235		5.053		467781		6.289		291596		7.999	
26	7270472	111164		5.053		502357		6.289		308577		7.999	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	532095	9.437	648763	10.808	579092	13.391
UPPER LIMIT	1064190	9.937	1297526	11.308	1158184	13.891
LOWER LIMIT	266048	8.937	324382	10.308	289546	12.891
LLI SAMPLE NO.						
18 7270464	572668	9.437	640560	10.808	513324	13.391
19 7270465	570643	9.437	633022	10.809	499007	13.391
20 7270466	527365	9.437	618613	10.808	510117	13.391
21 7270467	554239	9.437	634000	10.809	500133	13.391
22 7270468	526471	9.437	618384	10.809	504897	13.391
23 7270469	567281	9.437	646552	10.809	511387	13.391
24 7270470	544787	9.437	612317	10.808	491550	13.391
25 7270471	524293	9.437	610266	10.809	486174	13.391
26 7270472	540102	9.437	618807	10.808	501578	13.391

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0321.d Date Analyzed: 11/11/13

Instrument ID: HP19760 Time Analyzed: 04:17

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	141874	5.953	545396	7.912	326350	10.715
	UPPER LIMIT	283748	6.453	1090792	8.412	652700	11.215
	LOWER LIMIT	70937	5.453	272698	7.412	163175	10.215
	LLI SAMPLE NO.						
01	SBLKWD312	122707	5.947	478261	7.906	278262	10.715
02	312WDLCS	122044	5.953	460480	7.912	276053	10.715
03	7265230	123825	5.953	476307	7.912	279937	10.709
04	7265231MS	125517	5.953	479874	7.912	290162	10.715
05	7265232MSD	118659	5.953	449330	7.912	270647	10.715
06	7264723RE	124197	5.953	410588	7.923	254060	10.733
07	7264727RE	112776	5.953	425009	7.912	246054	10.721
08	7264728	114344	5.953	439386	7.912	262915	10.715
09	7265142	104610	5.953	403672	7.912	244701	10.715
10	7265217	116570	5.953	444325	7.912	270037	10.715
11	7265218	117214	5.953	450809	7.912	269004	10.715
12	7265219	117027	5.953	452838	7.912	266660	10.715
13	7265220	123528	5.947	476495	7.912	283068	10.715
14	7265221	127940	5.953	488298	7.912	290248	10.715
15	7265223	127512	5.953	493191	7.911	292731	10.715
16	7265224	121471	5.947	477117	7.912	282171	10.709
17	7265228	136191	5.953	525098	7.912	310249	10.715

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0321.d Date Analyzed: 11/11/13

Instrument ID: HP19760 Time Analyzed: 04:17

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	574495	12.621	742674	14.562	559319	19.027
	UPPER LIMIT	1148990	13.121	1485348	15.062	1118638	19.527
	LOWER LIMIT	287248	12.121	371337	14.062	279660	18.527
	LLI SAMPLE NO.						
01	SBLKWD312	492102	12.615	613470	14.562	446101	19.021
02	312WDLCS	471129	12.615	628484	14.556	467828	19.021
03	7265230	497684	12.615	627315	14.556	436407	19.021
04	7265231MS	498431	12.615	662891	14.562	480737	19.021
05	7265232MSD	466942	12.615	617608	14.562	453070	19.021
06	7264723RE	456555	12.633	599079	14.597	346958	19.050
07	7264727RE	442522	12.627	590389	14.580	328738	19.038
08	7264728	466648	12.615	608873	14.562	417516	19.021
09	7265142	438096	12.615	574144	14.562	392328	19.021
10	7265217	488737	12.615	622364	14.556	410092	19.021
11	7265218	488846	12.615	634324	14.556	425036	19.021
12	7265219	478360	12.615	622020	14.556	421607	19.021
13	7265220	513986	12.615	662560	14.556	428693	19.021
14	7265221	517997	12.615	663210	14.556	430212	19.021
15	7265223	526587	12.615	682252	14.556	461767	19.021
16	7265224	510074	12.615	658285	14.556	438852	19.021
17	7265228	558338	12.615	726320	14.556	462907	19.021

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0321.d Date Analyzed: 11/11/13

Instrument ID: HP19760 Time Analyzed: 04:17

	IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD		141874		5.953		545396		7.912		326350		10.715	
	UPPER LIMIT		283748		6.453		1090792		8.412		652700		11.215	
	LOWER LIMIT		70937		5.453		272698		7.412		163175		10.215	
	LLI SAMPLE NO.													
18	7265235		126031		5.953		485096		7.911		283812		10.709	
19	7265238		137095		5.947		527221		7.912		306935		10.715	
20	7265240		132999		5.953		517025		7.912		306351		10.715	
21	7265243		138624		5.953		526779		7.912		311161		10.709	
22	7265247		141842		5.947		547426		7.912		323034		10.715	
23	7265248		135564		5.947		517198		7.911		300296		10.715	
24	7265741		132511		5.953		496476		7.911		293552		10.715	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0321.d Date Analyzed: 11/11/13

Instrument ID: HP19760 Time Analyzed: 04:17

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	574495		12.621		742674		14.562		559319		19.027	
	UPPER LIMIT	1148990		13.121		1485348		15.062		1118638		19.527	
	LOWER LIMIT	287248		12.121		371337		14.062		279660		18.527	
	LLI SAMPLE NO.												
18	7265235	513567		12.615		643375		14.556		419692		19.021	
19	7265238	552314		12.615		708280		14.556		445966		19.021	
20	7265240	544533		12.615		691135		14.556		418622		19.021	
21	7265243	554874		12.615		690550		14.556		433782		19.021	
22	7265247	574305		12.615		727931		14.556		448072		19.021	
23	7265248	535467		12.615		674073		14.556		402660		19.021	
24	7265741	525641		12.615		677807		14.562		451834		19.021	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10724: PAH 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Naphthalene	3	17	ug/kg
2-Methylnaphthalene	3	17	ug/kg
1-Methylnaphthalene	3	17	ug/kg
Acenaphthylene	3	17	ug/kg
Acenaphthene	3	17	ug/kg
Fluorene	3	17	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

10727: TCL 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Benzaldehyde	67	170	ug/kg
Phenol	17	33	ug/kg
bis(2-Chloroethyl)ether	17	33	ug/kg
2-Chlorophenol	17	33	ug/kg
2-Methylphenol	17	33	ug/kg
4-Methylphenol	17	33	ug/kg
N-Nitroso-di-n-propylamine	17	33	ug/kg
Acetophenone	17	33	ug/kg
Hexachloroethane	33	170	ug/kg
Nitrobenzene	17	33	ug/kg
Isophorone	17	33	ug/kg
2-Nitrophenol	17	33	ug/kg
2,4-Dimethylphenol	17	33	ug/kg
2,2'-oxybis(1-Chloropropane)	17	33	ug/kg
bis(2-Chloroethoxy)methane	17	33	ug/kg
2,4-Dichlorophenol	17	33	ug/kg
Naphthalene	3	17	ug/kg
4-Chloroaniline	17	33	ug/kg
Hexachlorobutadiene	17	33	ug/kg
Caprolactam	33	170	ug/kg
4-Chloro-3-methylphenol	17	33	ug/kg
2-Methylnaphthalene	3	17	ug/kg
Hexachlorocyclopentadiene	170	500	ug/kg
2,4,6-Trichlorophenol	17	33	ug/kg
2,4,5-Trichlorophenol	17	33	ug/kg
1,1'-Biphenyl	17	33	ug/kg

Fraction: Semivolatiles by GC/MS

10727: TCL 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
2-Chloronaphthalene	7	33	ug/kg
2-Nitroaniline	17	33	ug/kg
Dimethylphthalate	67	170	ug/kg
2,6-Dinitrotoluene	17	33	ug/kg
Acenaphthylene	3	17	ug/kg
3-Nitroaniline	67	170	ug/kg
Acenaphthene	3	17	ug/kg
2,4-Dinitrophenol	300	1,000	ug/kg
4-Nitrophenol	170	500	ug/kg
2,4-Dinitrotoluene	67	170	ug/kg
Dibenzofuran	17	33	ug/kg
Diethylphthalate	67	170	ug/kg
Fluorene	3	17	ug/kg
4-Chlorophenyl-phenylether	17	33	ug/kg
4-Nitroaniline	67	170	ug/kg
4,6-Dinitro-2-methylphenol	170	500	ug/kg
N-Nitrosodiphenylamine	17	33	ug/kg
4-Bromophenyl-phenylether	17	33	ug/kg
Hexachlorobenzene	3	17	ug/kg
Atrazine	33	170	ug/kg
Pentachlorophenol	33	170	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Carbazole	17	33	ug/kg
Di-n-butylphthalate	67	170	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Butylbenzylphthalate	67	170	ug/kg
bis(2-Ethylhexyl)phthalate	67	170	ug/kg
3,3'-Dichlorobenzidine	100	330	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Di-n-octylphthalate	67	170	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Benzaldehyde	1	5	ug/l
Phenol	0.5	1	ug/l
bis(2-Chloroethyl)ether	0.5	1	ug/l
2-Chlorophenol	0.5	1	ug/l
2-Methylphenol	0.5	1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
2,2'-oxybis(1-Chloropropane)	0.5	1	ug/l
4-Methylphenol	0.5	1	ug/l
N-Nitroso-di-n-propylamine	0.5	1	ug/l
Acetophenone	0.5	1	ug/l
Hexachloroethane	1	5	ug/l
Nitrobenzene	0.5	1	ug/l
Isophorone	0.5	1	ug/l
2-Nitrophenol	0.5	1	ug/l
2,4-Dimethylphenol	0.5	1	ug/l
bis(2-Chloroethoxy)methane	0.5	1	ug/l
2,4-Dichlorophenol	0.5	1	ug/l
Naphthalene	0.1	0.5	ug/l
4-Chloroaniline	0.5	1	ug/l
Hexachlorobutadiene	0.5	1	ug/l
Caprolactam	5	15	ug/l
4-Chloro-3-methylphenol	0.5	1	ug/l
2-Methylnaphthalene	0.1	0.5	ug/l
Hexachlorocyclopentadiene	5	15	ug/l
2,4,6-Trichlorophenol	0.5	1	ug/l
2,4,5-Trichlorophenol	0.5	1	ug/l
1,1'-Biphenyl	0.5	1	ug/l
2-Chloronaphthalene	0.4	1	ug/l
2-Nitroaniline	0.5	1	ug/l
Dimethylphthalate	2	5	ug/l
2,6-Dinitrotoluene	0.5	1	ug/l
Acenaphthylene	0.1	0.5	ug/l
3-Nitroaniline	0.5	1	ug/l
Acenaphthene	0.1	0.5	ug/l
2,4-Dinitrophenol	10	30	ug/l
4-Nitrophenol	10	30	ug/l
2,4-Dinitrotoluene	1	5	ug/l
Dibenzofuran	0.5	1	ug/l
Diethylphthalate	2	5	ug/l
Fluorene	0.1	0.5	ug/l
4-Chlorophenyl-phenylether	0.5	1	ug/l
4-Nitroaniline	0.5	1	ug/l
4,6-Dinitro-2-methylphenol	5	15	ug/l
N-Nitrosodiphenylamine	0.5	1	ug/l
4-Bromophenyl-phenylether	0.5	1	ug/l
Hexachlorobenzene	0.1	0.5	ug/l
Atrazine	2	5	ug/l
Pentachlorophenol	1	5	ug/l
Phenanthrene	0.1	0.5	ug/l
Anthracene	0.1	0.5	ug/l
Carbazole	0.5	1	ug/l
Di-n-butylphthalate	2	5	ug/l
Fluoranthene	0.1	0.5	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Pyrene	0.1	0.5	ug/l
Butylbenzylphthalate	2	5	ug/l
bis(2-Ethylhexyl)phthalate	2	5	ug/l
3,3'-Dichlorobenzidine	2	5	ug/l
Benzo(a)anthracene	0.1	0.5	ug/l
Chrysene	0.1	0.5	ug/l
Di-n-octylphthalate	2	5	ug/l
Benzo(b)fluoranthene	0.1	0.5	ug/l
Benzo(k)fluoranthene	0.1	0.5	ug/l
Benzo(a)pyrene	0.1	0.5	ug/l
Indeno(1,2,3-cd)pyrene	0.1	0.5	ug/l
Dibenz(a,h)anthracene	0.1	0.5	ug/l
Benzo(g,h,i)perylene	0.1	0.5	ug/l

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0336.d
Injection date and time: **11-NOV-2013 11:16**
Data file Sample Info. Line: R2N51;7265223;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 234 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	127512 (-10)	5.00	
52) Naphthalene-d8	7.911(0.000)	1128	136	493191 (-10)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	292731 (-10)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	526587 (-8)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	682252 (-8)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	461767 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.000(0.000)	112	1412763	37.315	75%		10 - 107
13) Phenol-d6	(1)	5.434(0.000)	99	1455013	27.983	56%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	1018215	22.434	90%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1823805	24.949	100%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	510511	66.400	133%		22 - 150
149) Terphenyl-d14	(5)	14.883(0.000)	244	2419974	28.443	114%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)	6.618(-0.000)	108	44536	1.067	4.56			0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:14. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0336.d Injection date and time: **11-NOV-2013 11:16**
Data file Sample Info. Line: R2N51;7265223;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

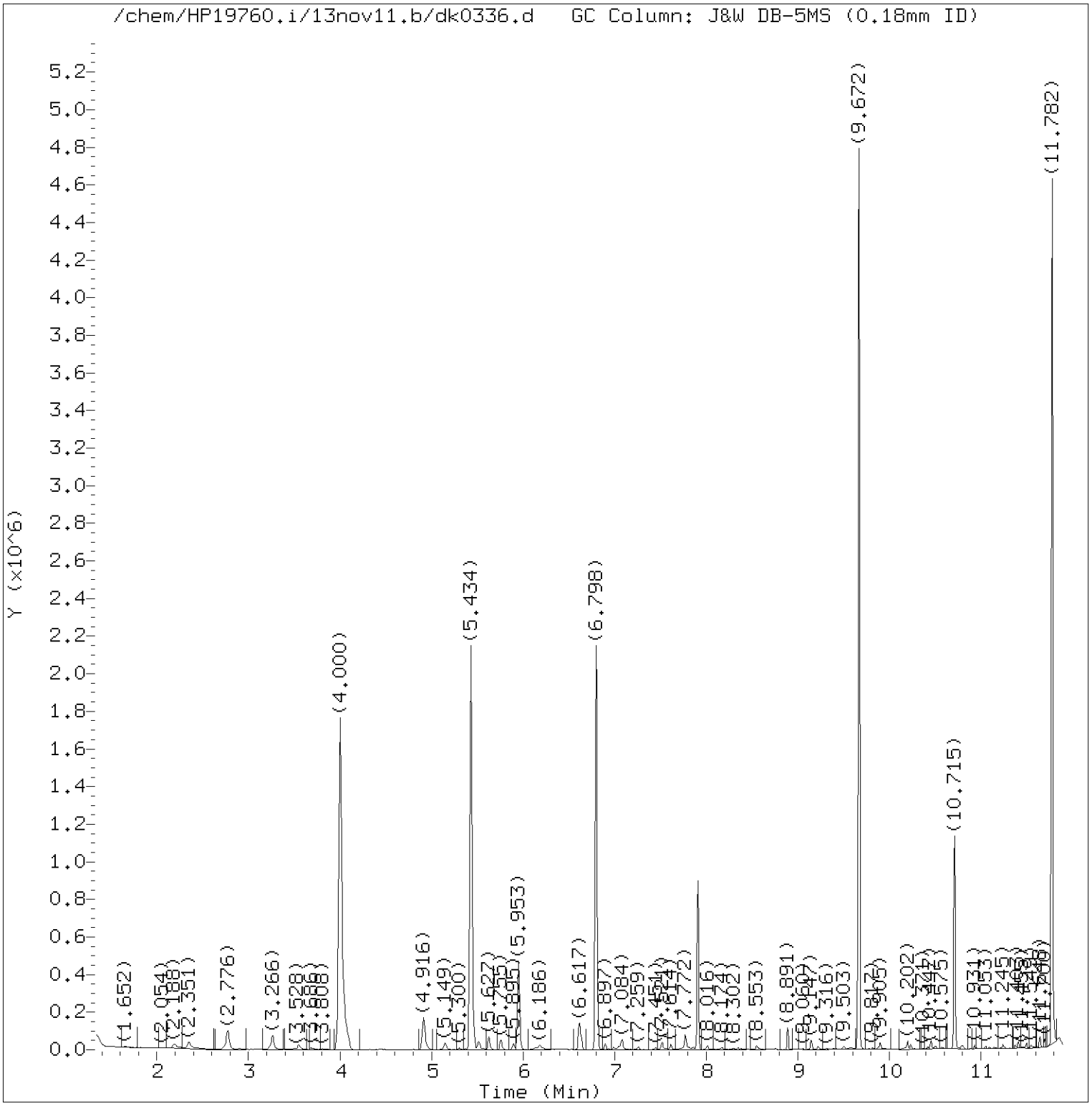
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 234 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:14. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:39. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

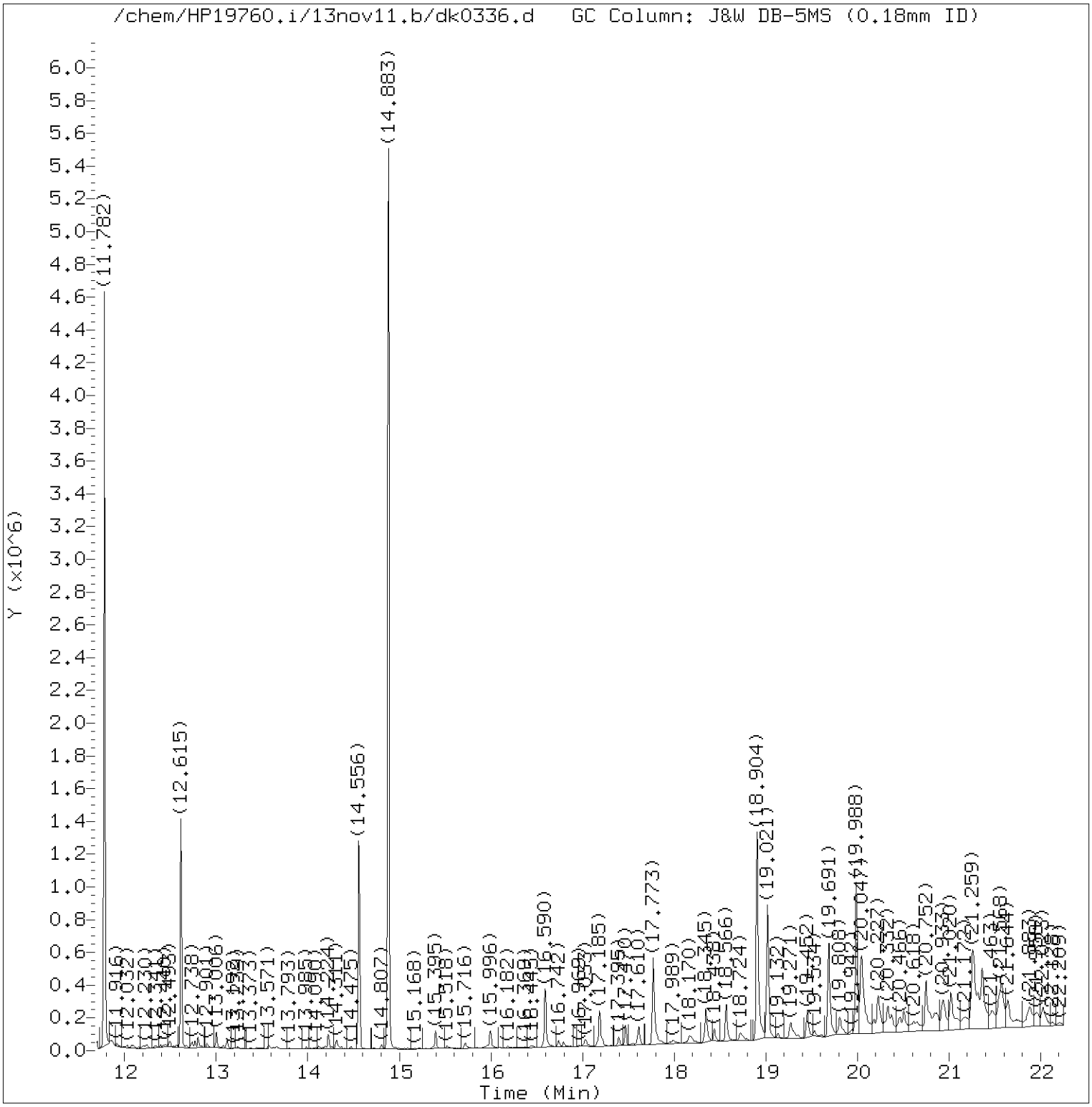
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:14.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:14.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.000	112	1412763	37.315
13)$Phenol-d6	(1)	5.434	99	1455013	27.983
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	127512	5.000
33) 4-Methylphenol	(1)	6.617	108	44536	1.067
36)$Nitrobenzene-d5	(2)	6.798	82	1018215	22.434
52)*Naphthalene-d8	(2)	7.911	136	493191	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1823805	24.949
92)*Acenaphthene-d10	(3)	10.715	164	292731	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	510511	66.400
130)*Phenanthrene-d10	(4)	12.615	188	526587	5.000
145)*Pyrene-d10	(5)	14.556	212	682252	5.000
149)$Terphenyl-d14	(5)	14.883	244	2419974	28.443
172)*Perylene-d12	(6)	19.021	264	461767	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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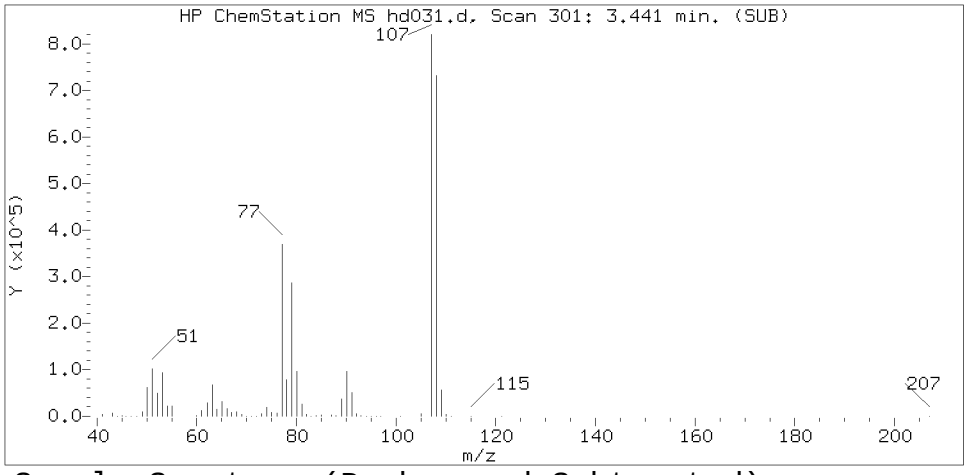
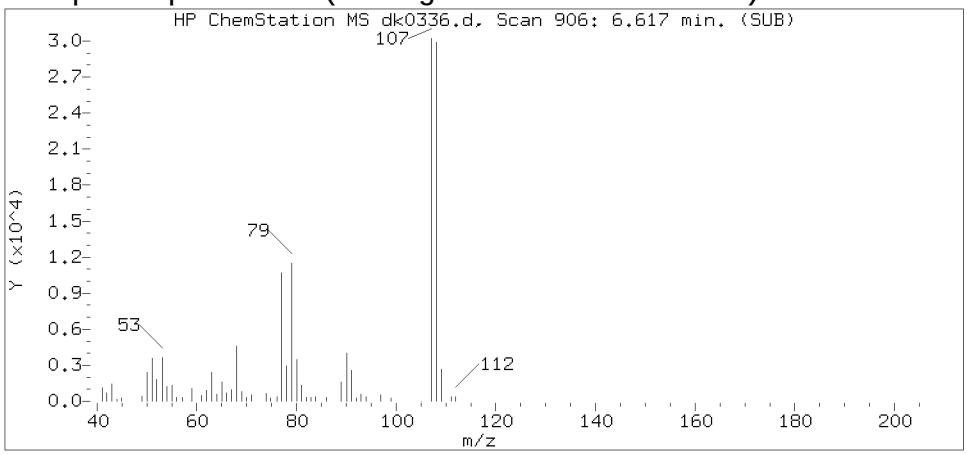
on 11/12/2013 at 07:14.
Target 3.5 esignature user ID: jmg00346

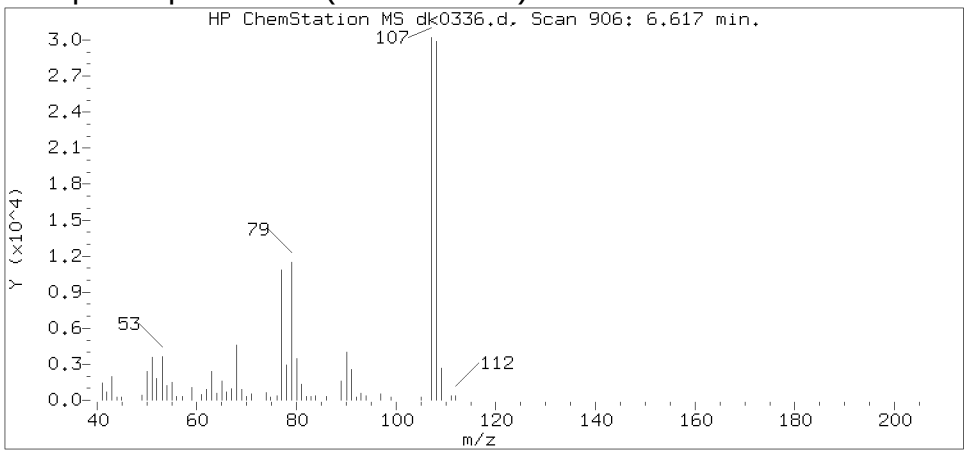
Reference Standard Spectrum for 4-Methylphenol

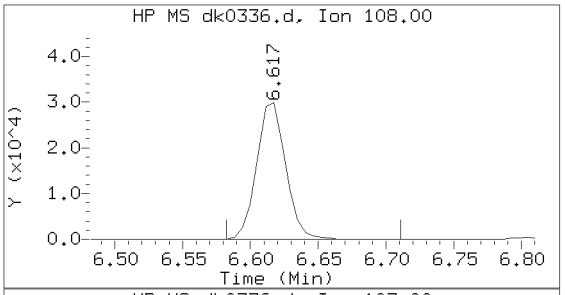


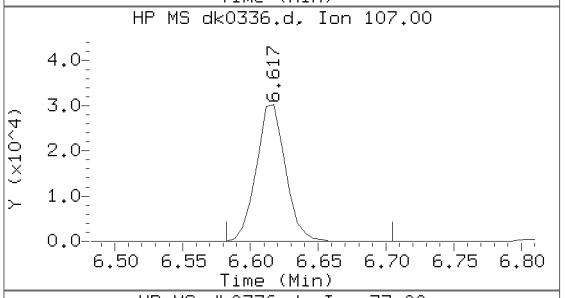
Sample Spectrum (Background Subtracted)

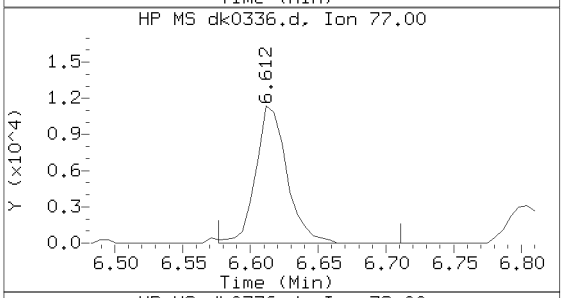


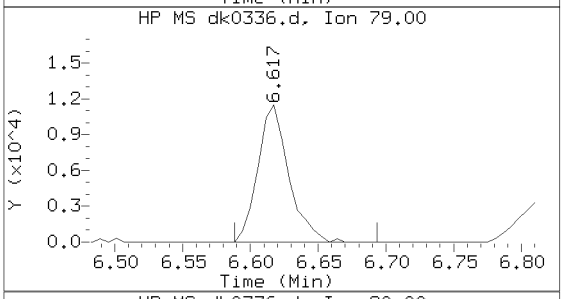
Sample Spectrum (Unaltered)

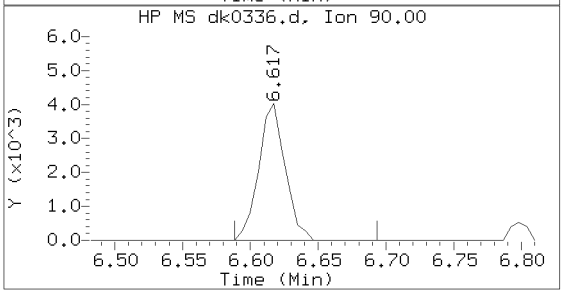












Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Compound Number : 33
Compound Name : 4-Methylphenol
Scan Number : 906
Retention Time (minutes) : 6.617
Relative Retention Time :-0.00000
Quant Ion : 108.00
Area (flag) : 44536
On-column Amount (ng/ul) : 1.0668

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:14.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2N51

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7265223

Sample wt/vol: 234 (g/mL) mL Lab File ID: dk0336.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

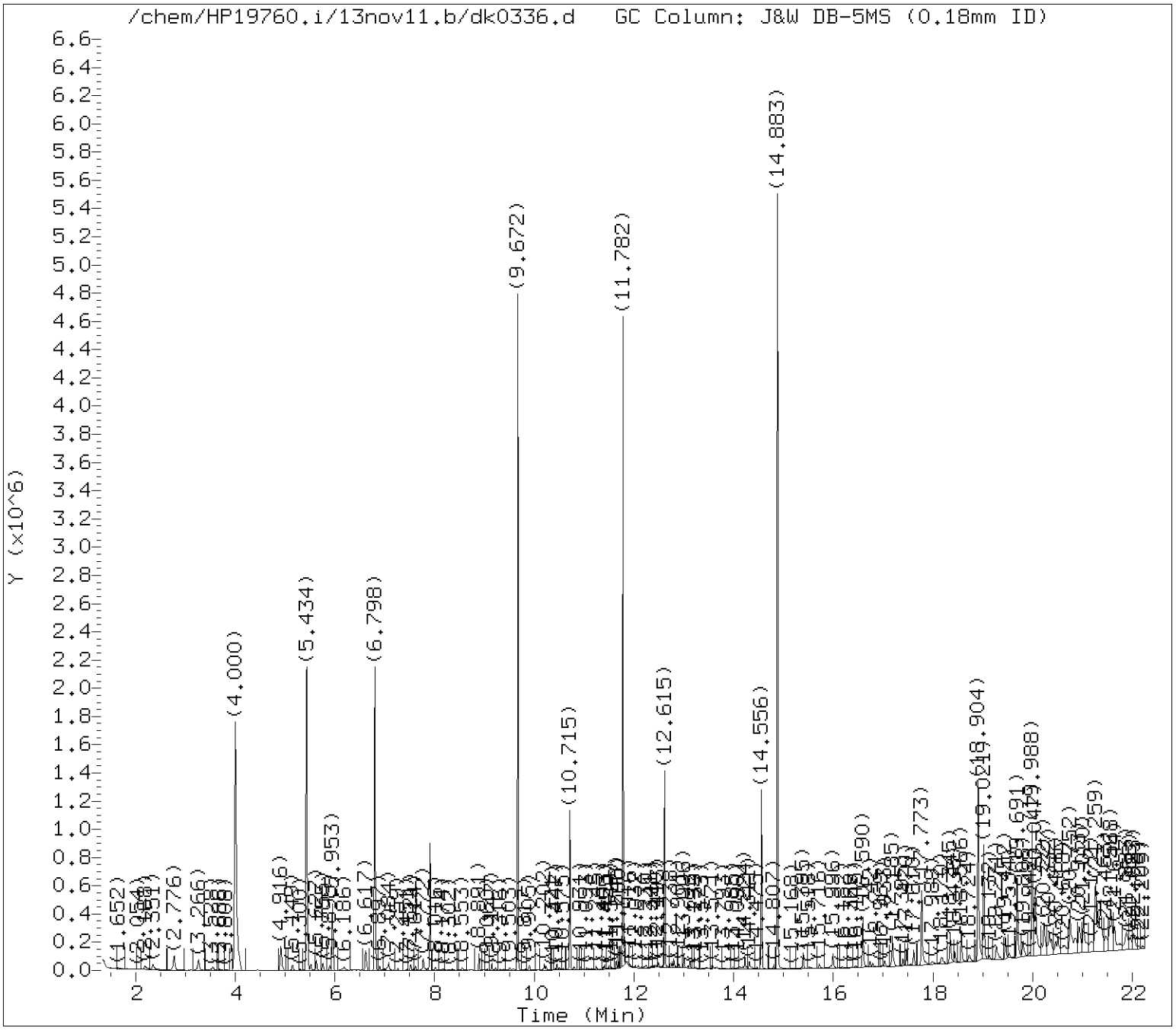
Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 20 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.772	33	J
2.		Unknown	16.590	8	J
3.		Unknown	17.185	7	J
4.		Unknown	17.774	16	J
5.		Unknown	18.904	35	J
6.		Unknown	19.691	16	J
7.		Unknown	19.988	24	J
8.		Unknown	20.047	26	J
9.		Unknown	20.227	12	J
10.		Unknown	20.332	11	J
11.		Unknown	20.466	9	J
12.		Unknown	20.618	7	J
13.		Unknown	20.752	20	J
14.		Unknown	20.933	10	J
15.		Unknown	21.020	13	J
16.		Unknown	21.259	47	J
17.		Unknown	21.463	6	J
18.		Unknown	21.568	18	J
19.		Unknown	21.644	11	J
20.		Unknown	21.883	9	J
21.					
22.	SVOCTIC	Total SVOC TICs		340	J
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

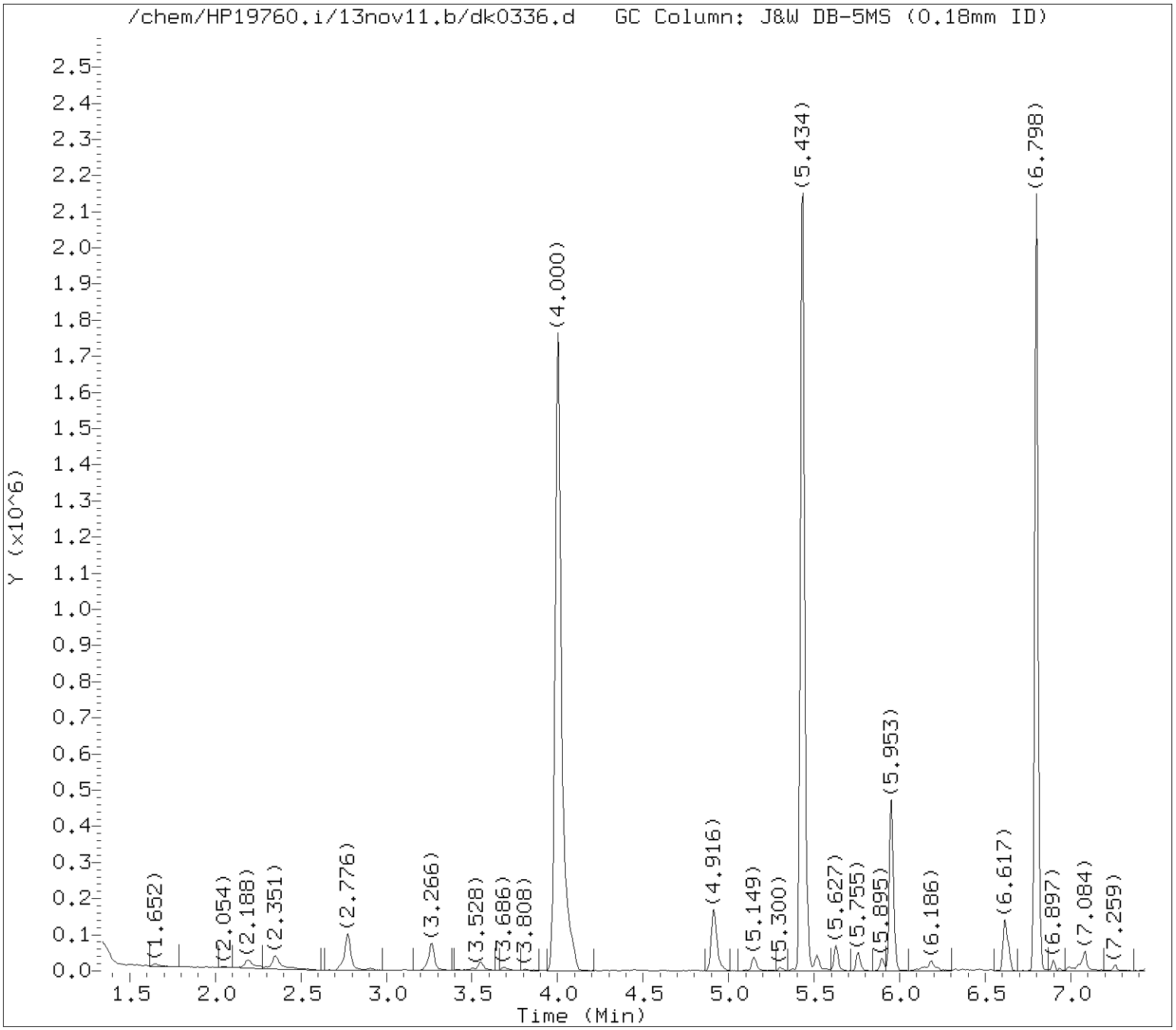
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

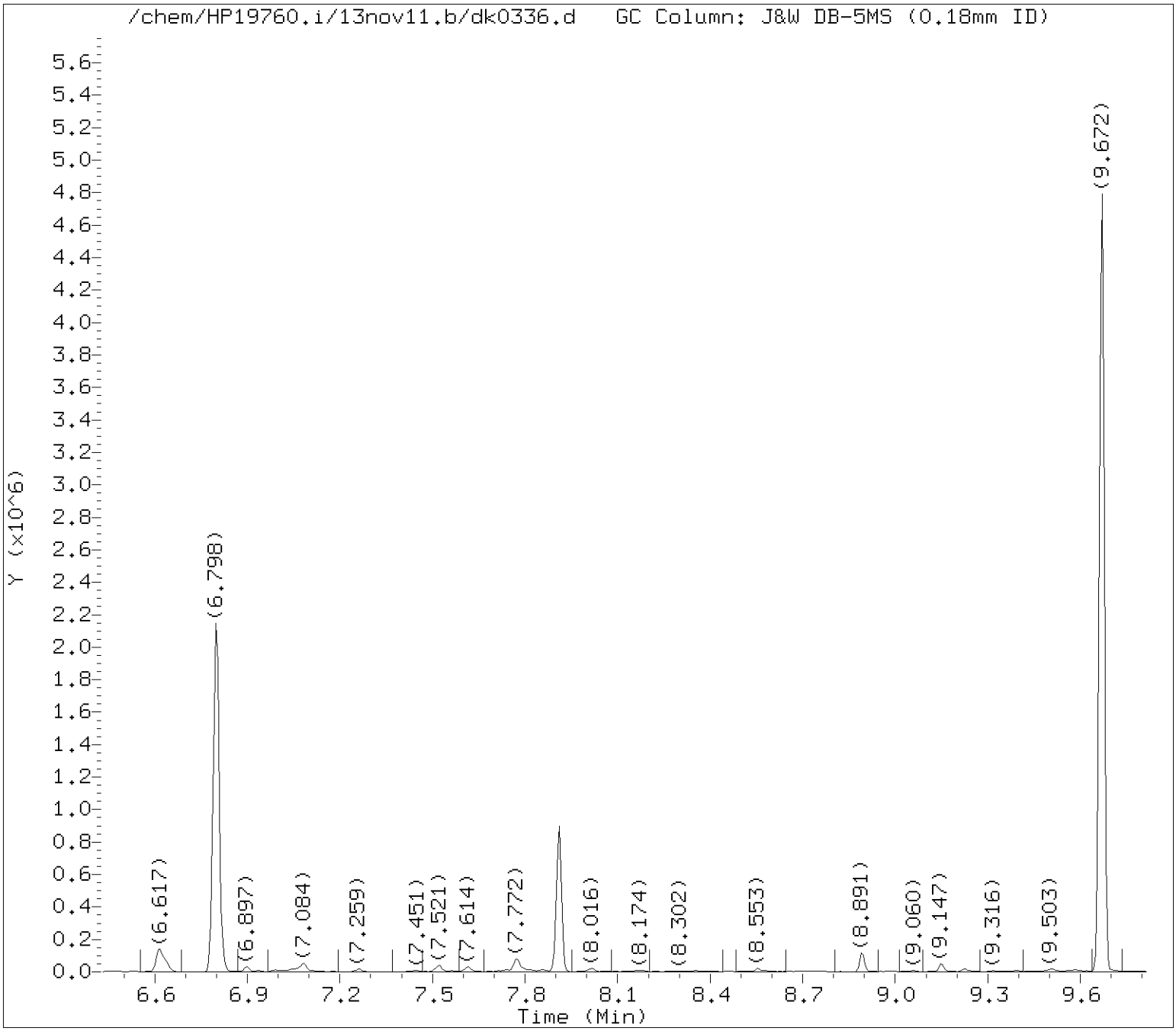
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

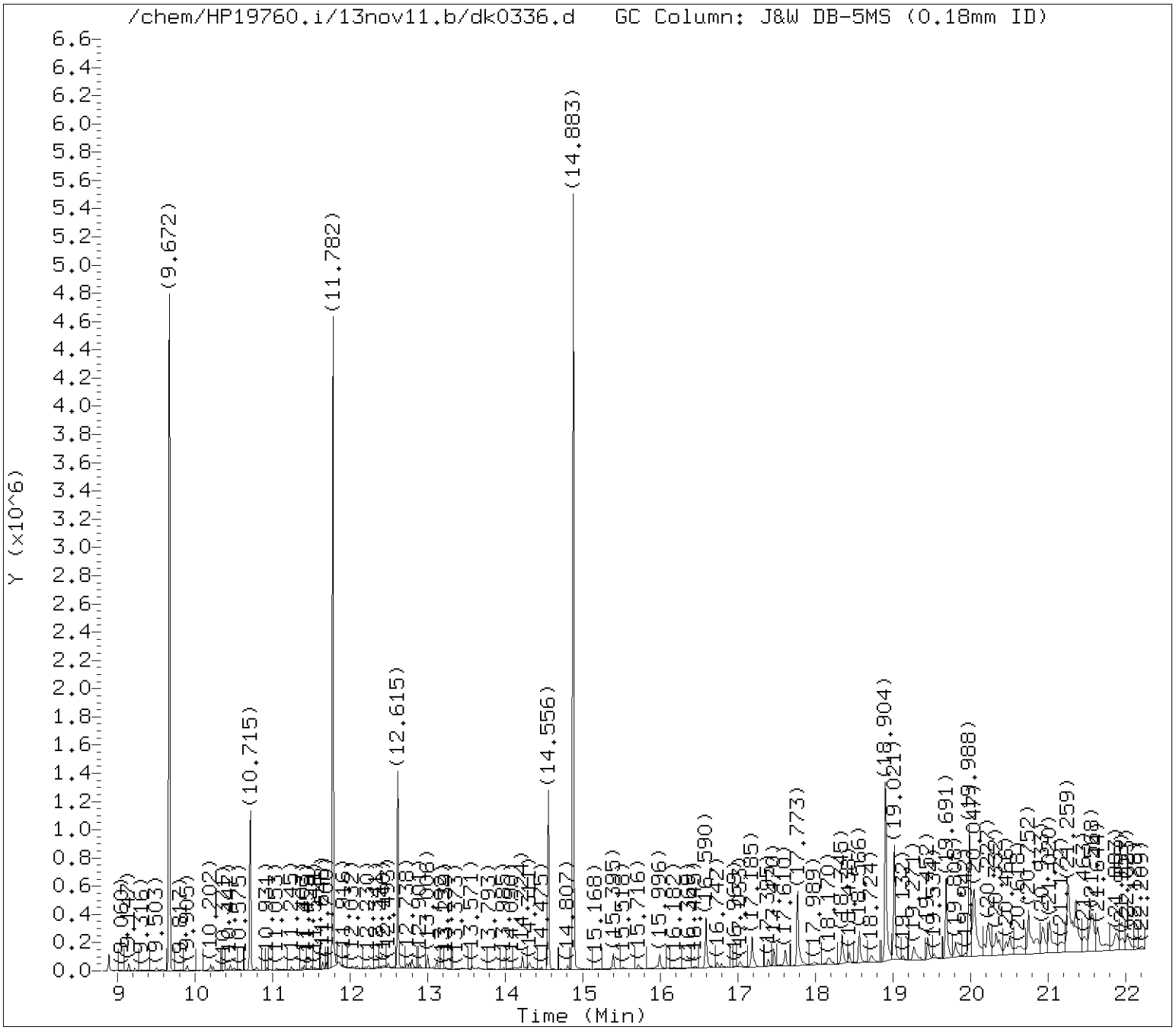
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: Naphthalene-d8 at 7.911 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

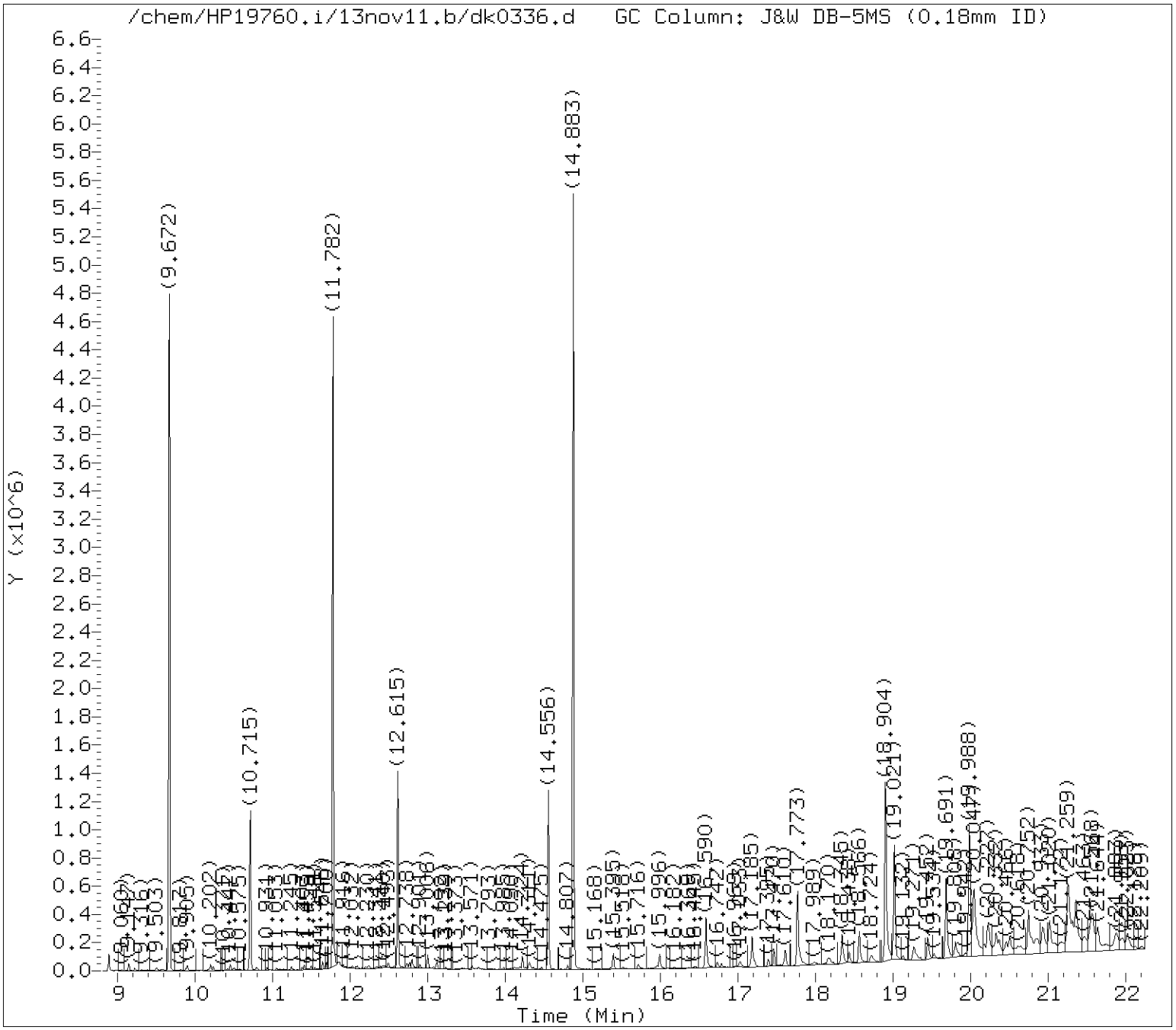
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

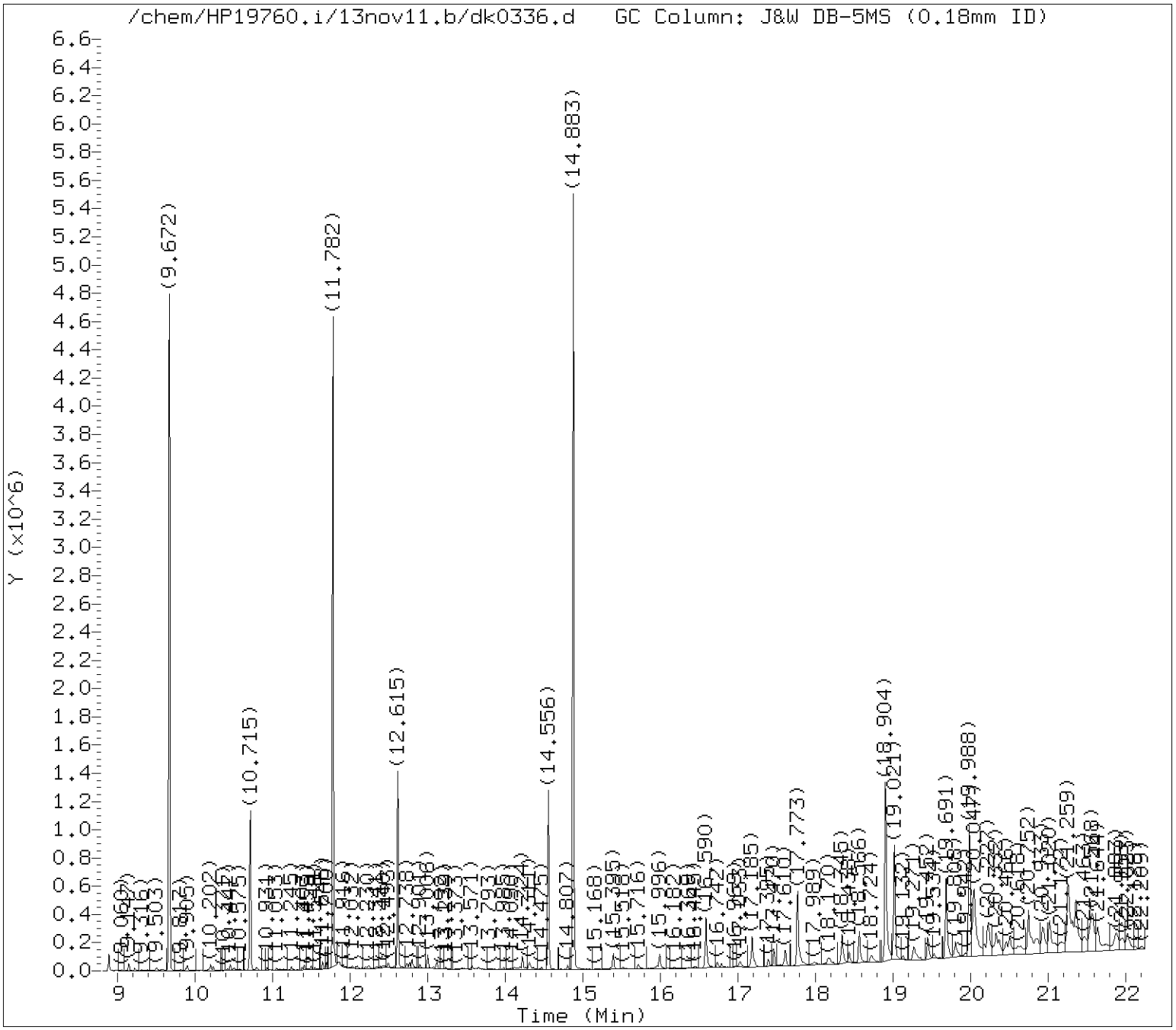
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

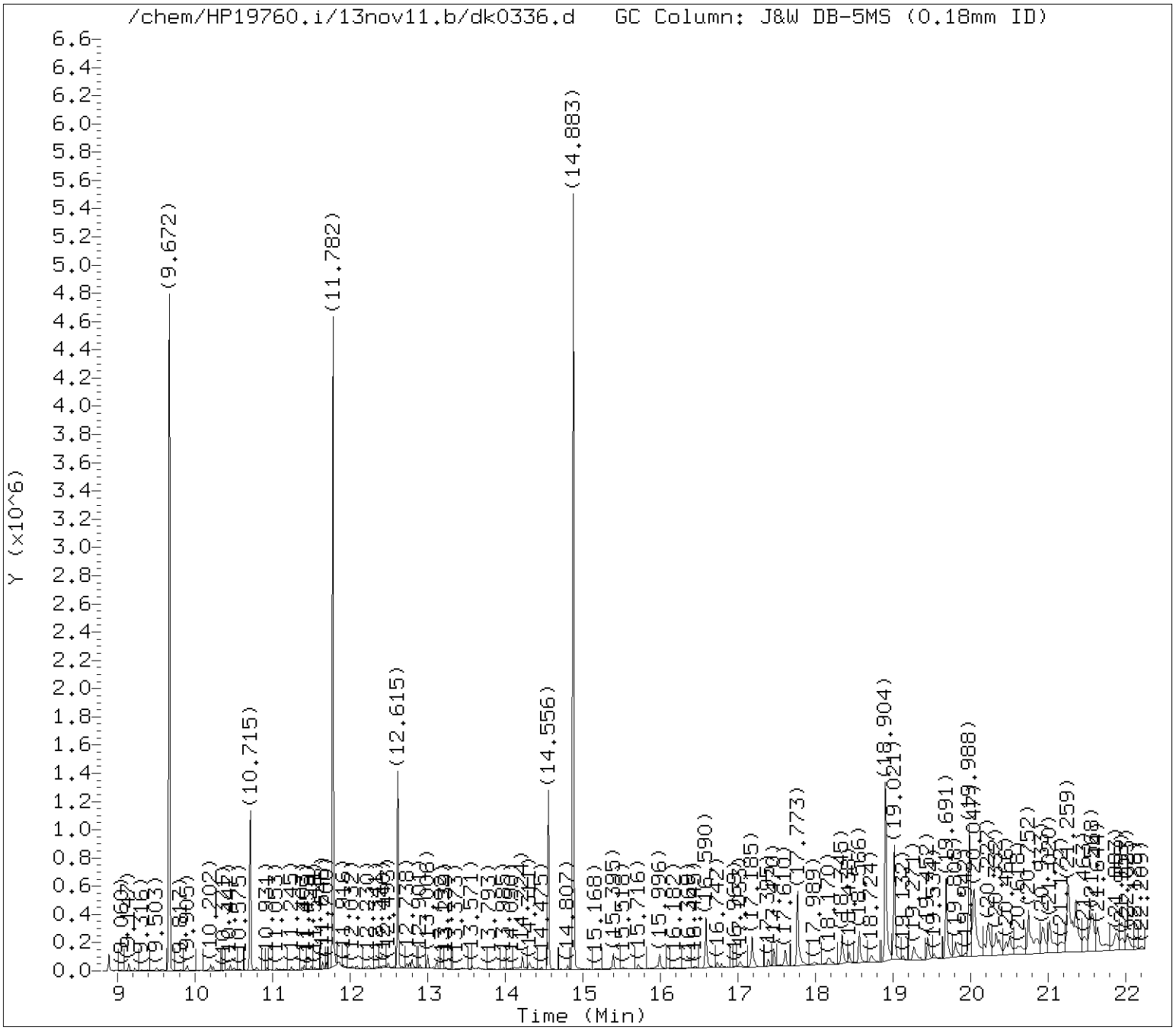
Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.788

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0336.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:16 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:46 jmg00346

Sample Name: R2N51 Lab Sample ID: 7265223

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.788
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0336.d
Lab Smp Id: 7265223 Client Smp ID: R2N51
Inj Date : 11-NOV-2013 11:16
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2N51;7265223;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;234;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 20 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 17
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	234.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.953	820608	5.000
* 145 Pyrene-d10	14.556	1605476	5.000
* 172 Perylene-d12	19.021	1346004	5.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
7.772	1280190	7.80024530	33.33438	0	0		19

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
16.590	588698	1.83340521	7.83506	0		0	145
Unknown				CAS #:			
17.185	427987	1.58984125	6.79419	0		0	172
Unknown				CAS #:			
17.773	989430	3.67543501	15.70698	0		0	172
Unknown				CAS #:			
18.904	2227139	8.27314842	35.35533	0		0	172
Unknown				CAS #:			
19.691	1032748	3.83634602	16.39464	0		0	172
Unknown				CAS #:			
19.988	1519605	5.64487615	24.12340	0		0	172
Unknown				CAS #:			
20.047	1635197	6.07426233	25.95838	0		0	172
Unknown				CAS #:			
20.227	776869	2.88583461	12.33262	0		0	172
Unknown				CAS #:			
20.332	713092	2.64892134	11.32017	0		0	172
Unknown				CAS #:			
20.466	574504	2.13410796	9.12011	0		0	172
Unknown				CAS #:			
20.618	418526	1.55469674	6.64400	0		0	172
Unknown				CAS #:			
20.752	1286295	4.77819670	20.41964	0		0	172
Unknown				CAS #:			
20.933	642074	2.38511048	10.19277	0		0	172
Unknown				CAS #:			
21.020	804993	2.99030712	12.77909	0		0	172
Unknown				CAS #:			
21.259	2985319	11.0895606	47.39128	0		0	172

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
21.463	415671	1.54409326	6.59868	0		0	172
Unknown				CAS #:			
21.568	1147167	4.26137942	18.21102	0		0	172
Unknown				CAS #:			
21.644	706472	2.62432981	11.21508	0		0	172
Unknown				CAS #:			
21.883	542258	2.01432373	8.60822	0		0	172

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Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

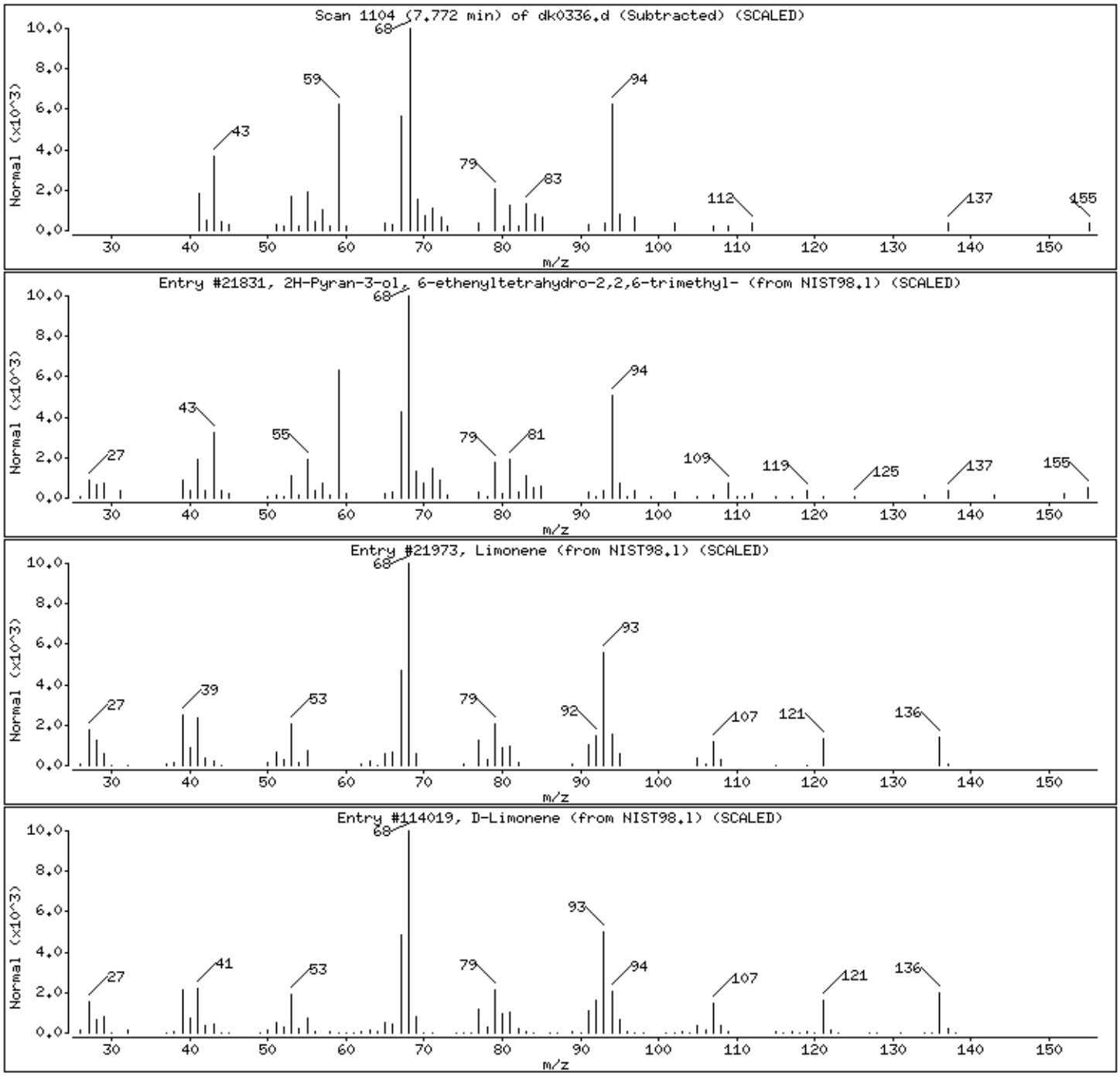
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2H-Pyran-3-ol, 6-ethenyltetrahydro-2,2,6	14049-11-7	NIST98.l	21831	64	C10H18O2	170
Limonene	138-86-3	NIST98.l	21973	38	C10H16	136
D-Limonene	5989-27-5	NIST98.l	114019	38	C10H16	136



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Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

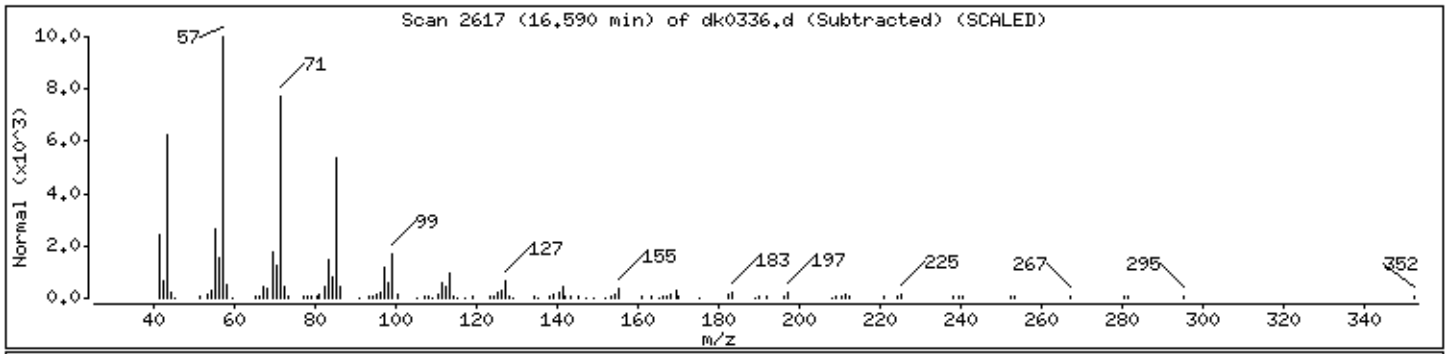
Client ID: R2N51 Instrument: HP19760.i

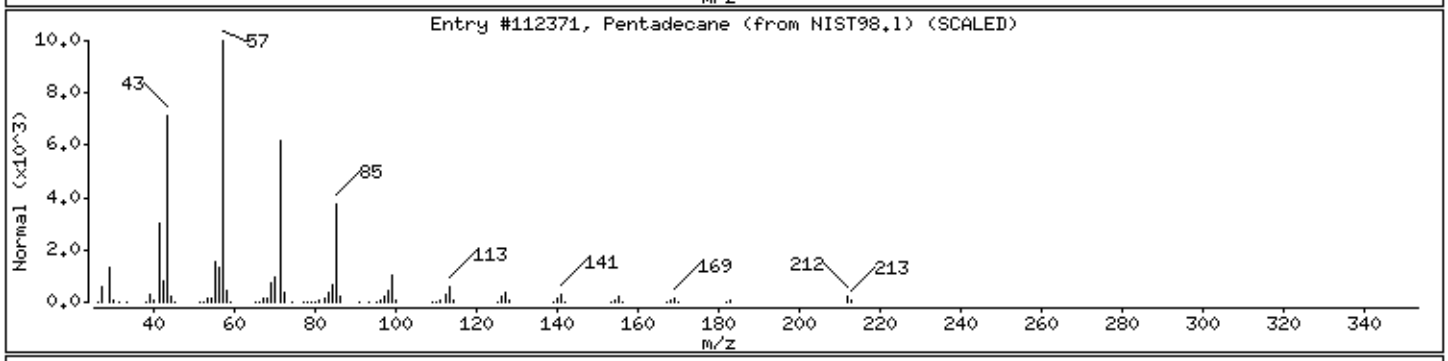
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

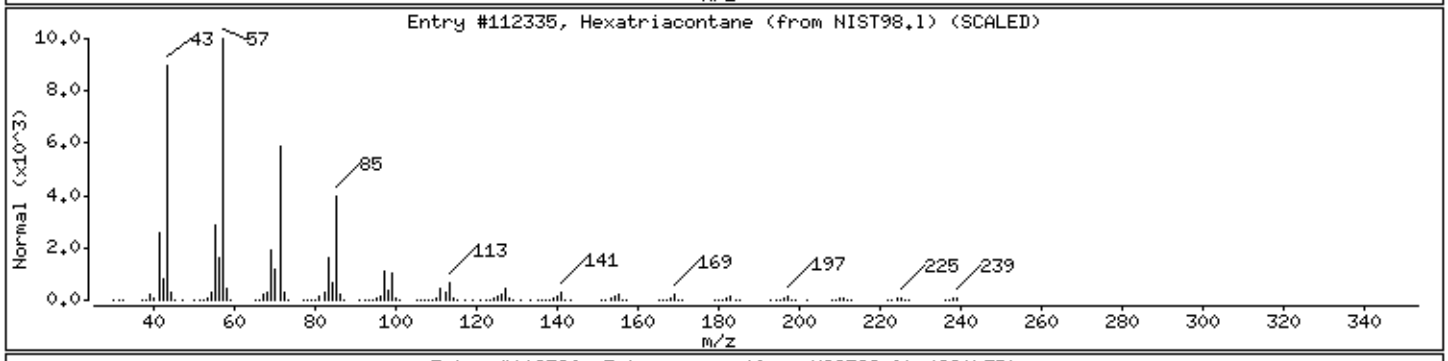
Volume Injected (uL): 0.5 Operator: jmg00346

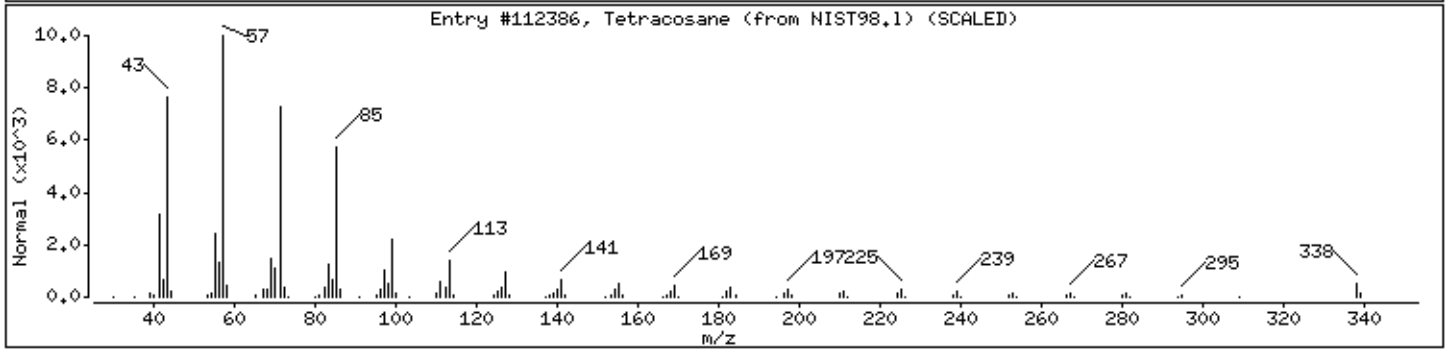
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pentadecane	629-62-9	NIST98.1	112371	94	C15H32	212
Hexatriacontane	630-06-8	NIST98.1	112335	94	C36H74	507
Tetracosane	646-31-1	NIST98.1	112386	91	C24H50	338









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Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

Client ID: R2N51

Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

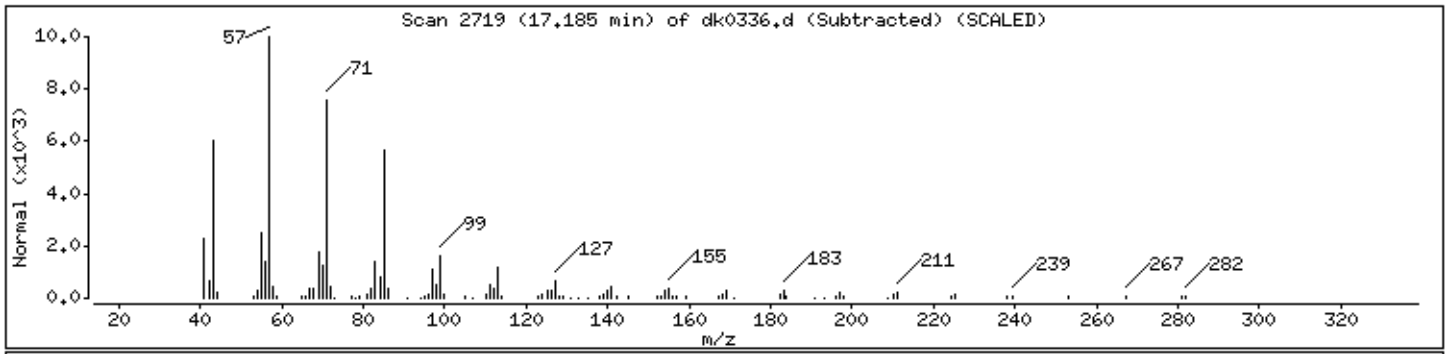
Volume Injected (uL): 0.5

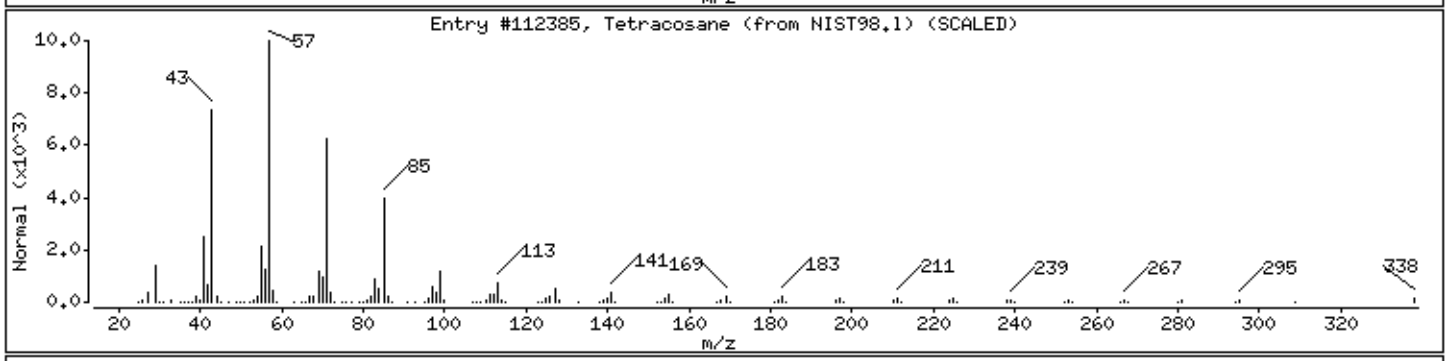
Operator: jmg00346

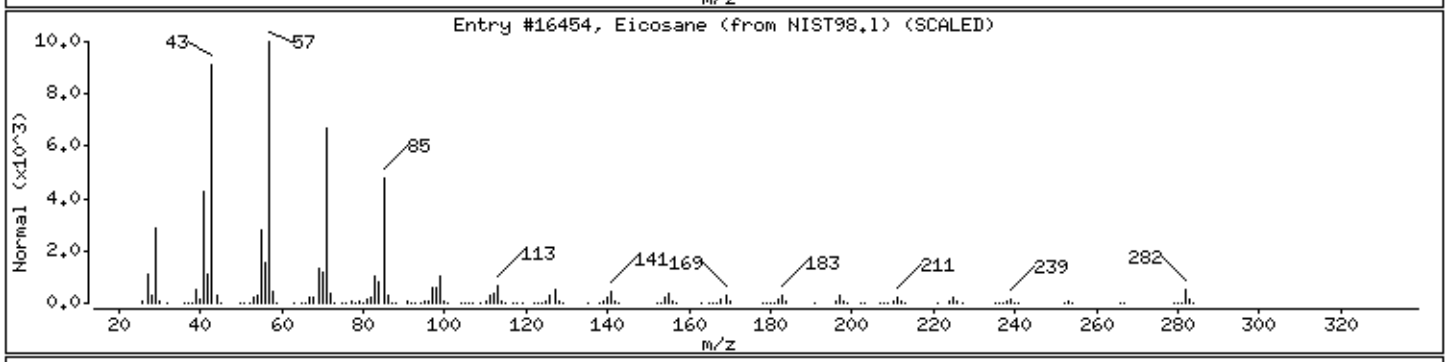
Column phase: J&W DB-5MS

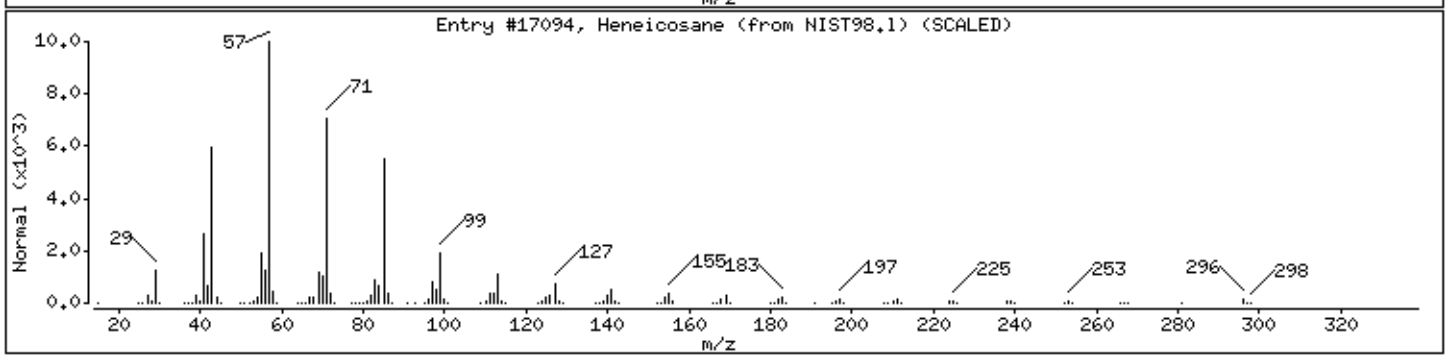
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tetracosane	646-31-1	NIST98.1	112385	91	C24H50	338
Eicosane	112-95-8	NIST98.1	16454	91	C20H42	282
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296









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Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

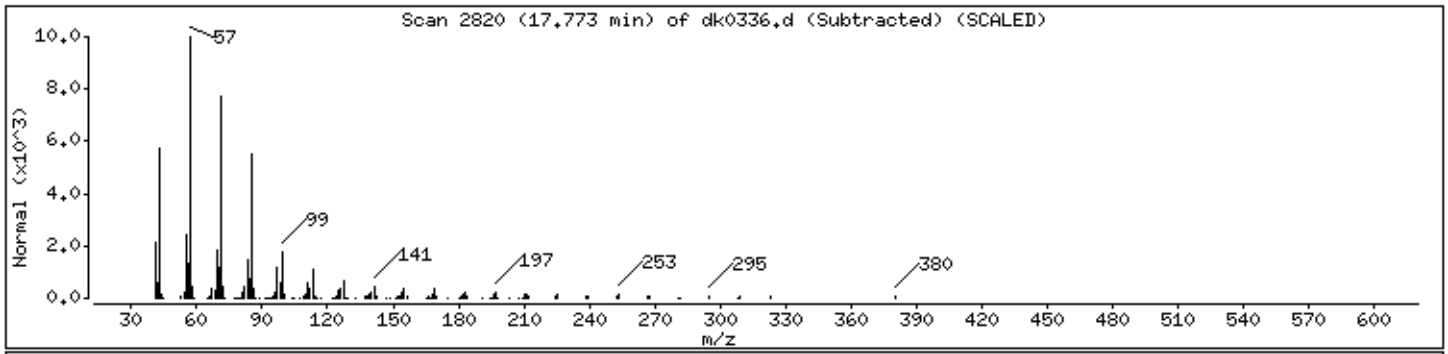
Client ID: R2N51 Instrument: HP19760.i

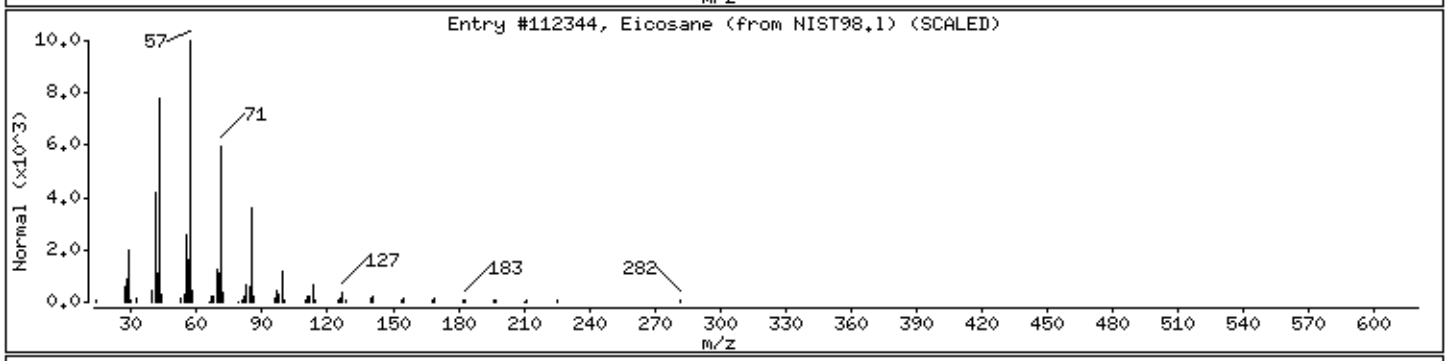
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

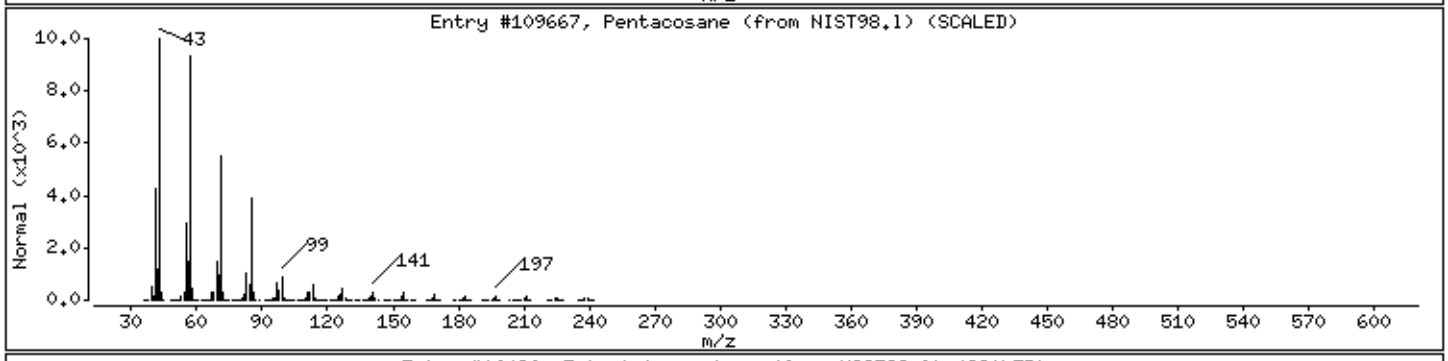
Volume Injected (uL): 0.5 Operator: jmg00346

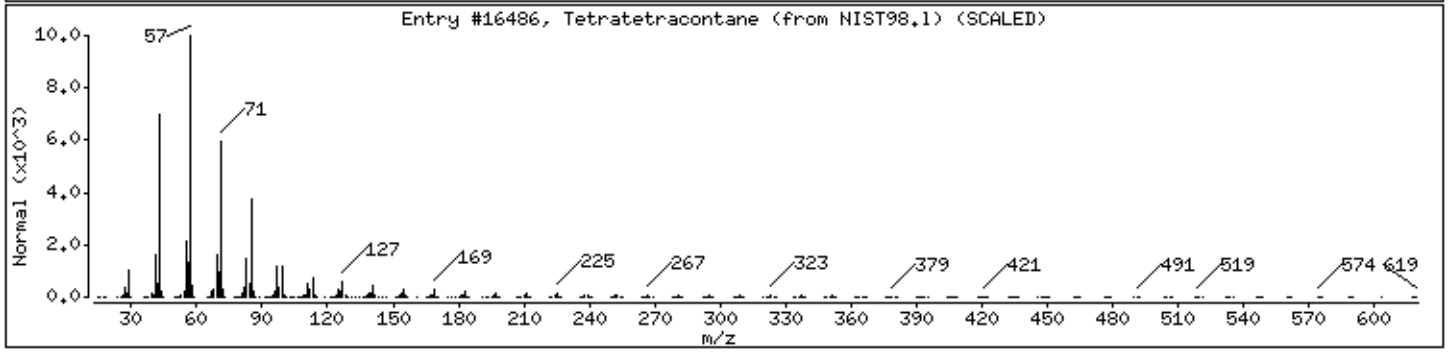
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST98.1	112344	96	C20H42	282
Pentacosane	629-99-2	NIST98.1	109667	91	C25H52	352
Tetratetracontane	7098-22-8	NIST98.1	16486	91	C44H90	619









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Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

Client ID: R2N51

Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

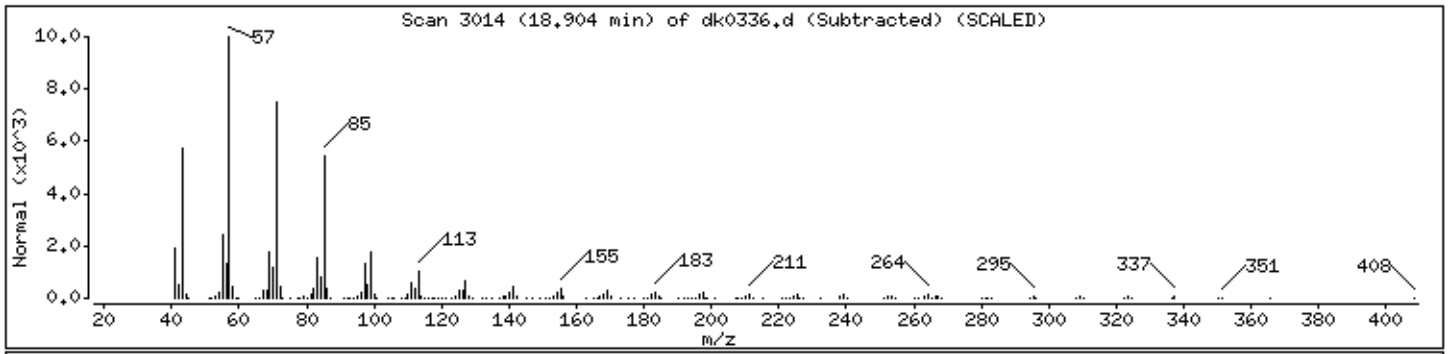
Volume Injected (uL): 0.5

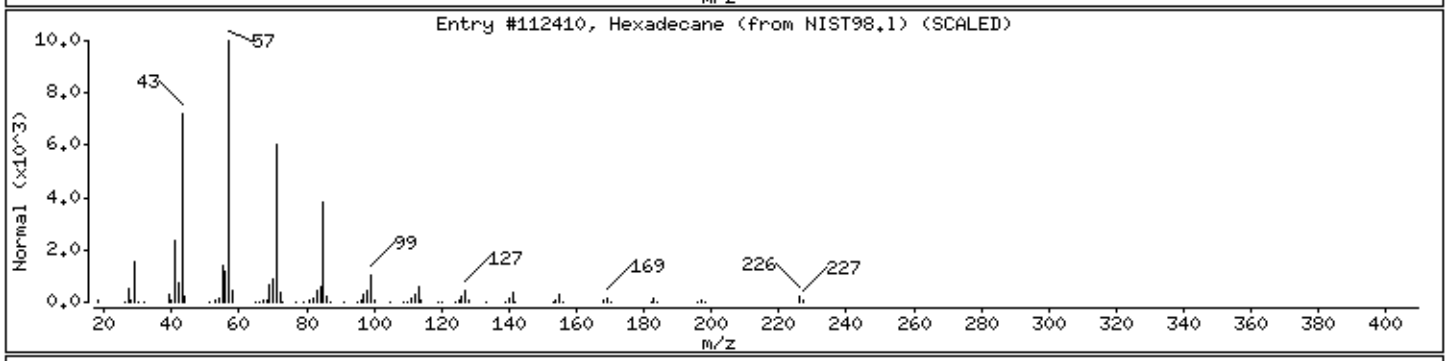
Operator: jmg00346

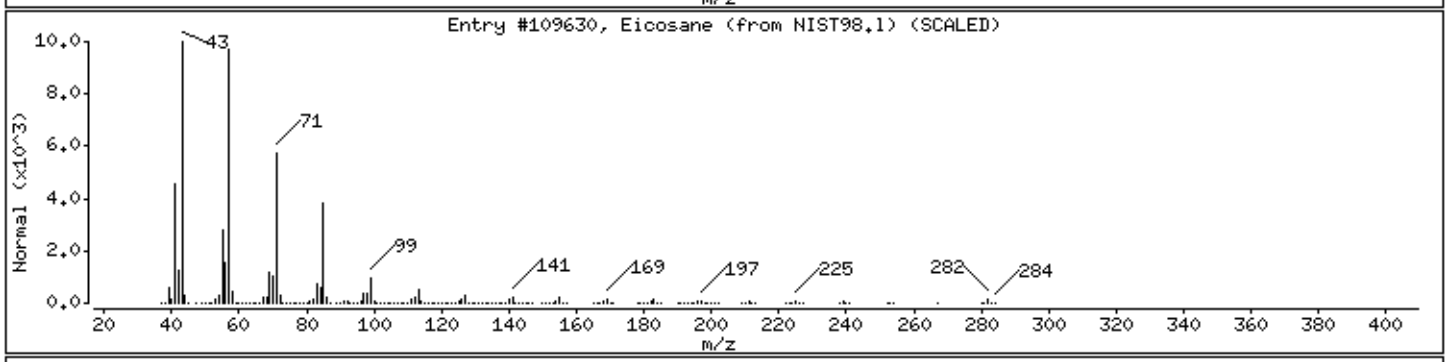
Column phase: J&W DB-5MS

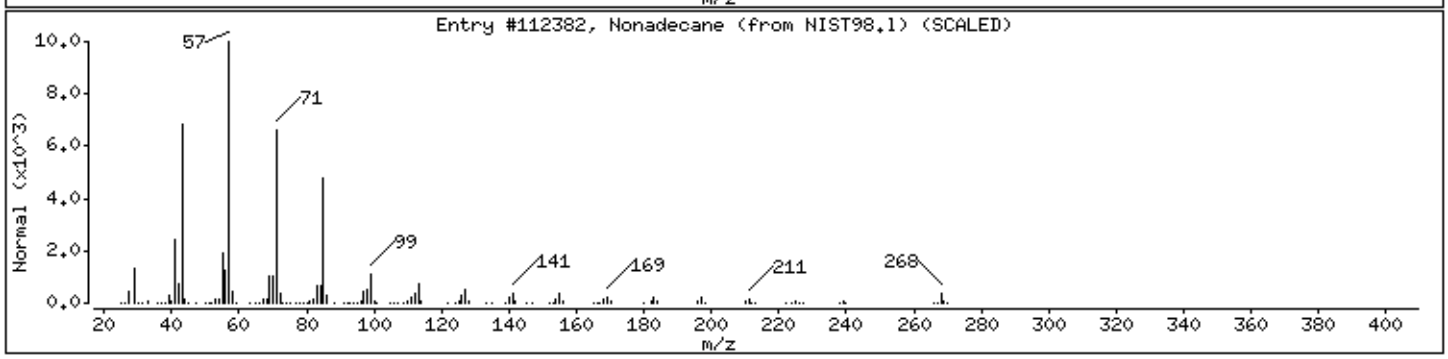
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexadecane	544-76-3	NIST98.1	112410	97	C16H34	226
Eicosane	112-95-8	NIST98.1	109630	96	C20H42	282
Nonadecane	629-92-5	NIST98.1	112382	94	C19H40	268









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Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

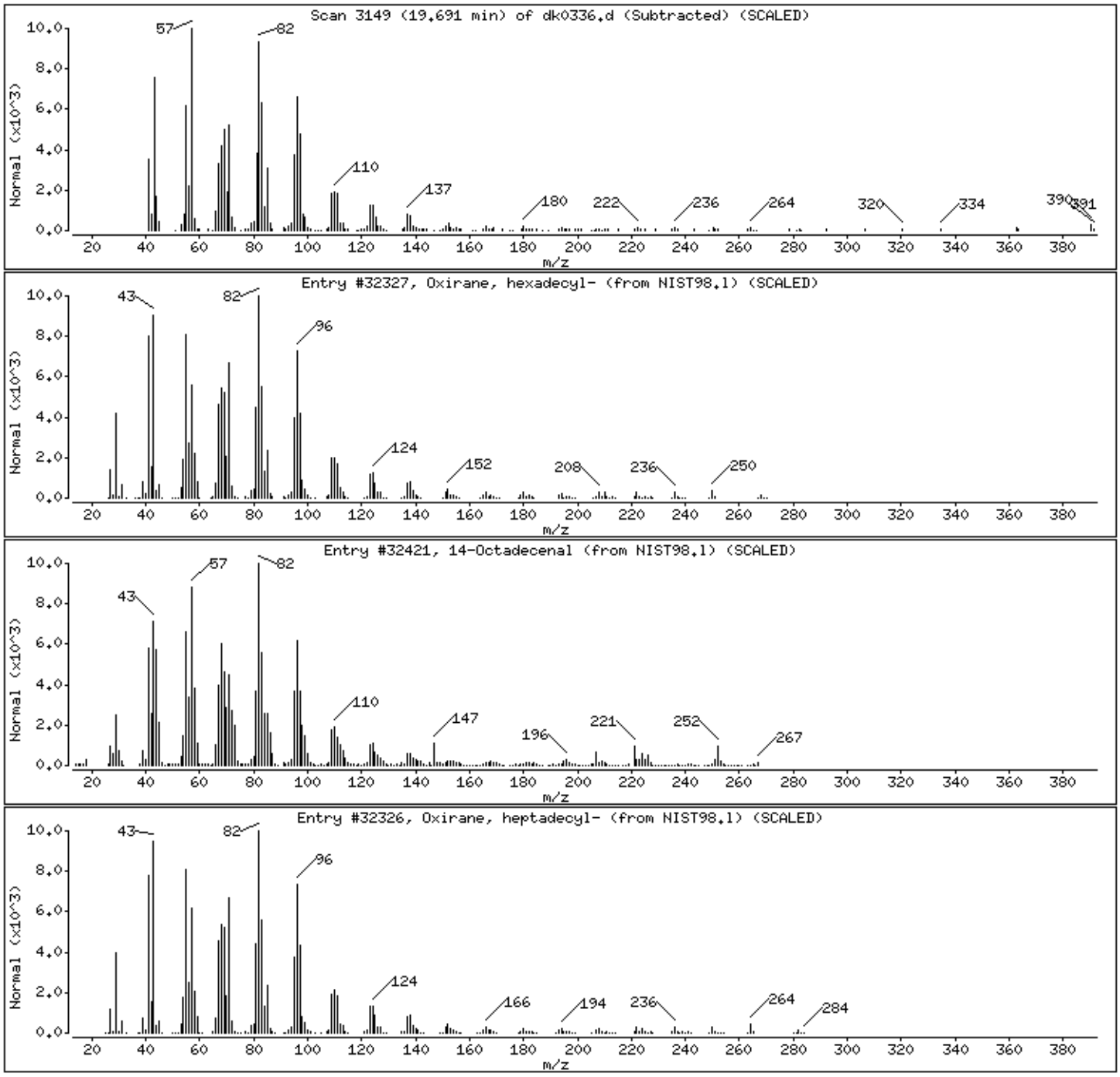
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Oxirane, hexadecyl-	7390-81-0	NIST98.1	32327	91	C18H36O	268
14-Octadecenal	56554-89-3	NIST98.1	32421	91	C18H34O	266
Oxirane, heptadecyl-	67860-04-2	NIST98.1	32326	91	C19H38O	282



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Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

Client ID: R2N51

Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

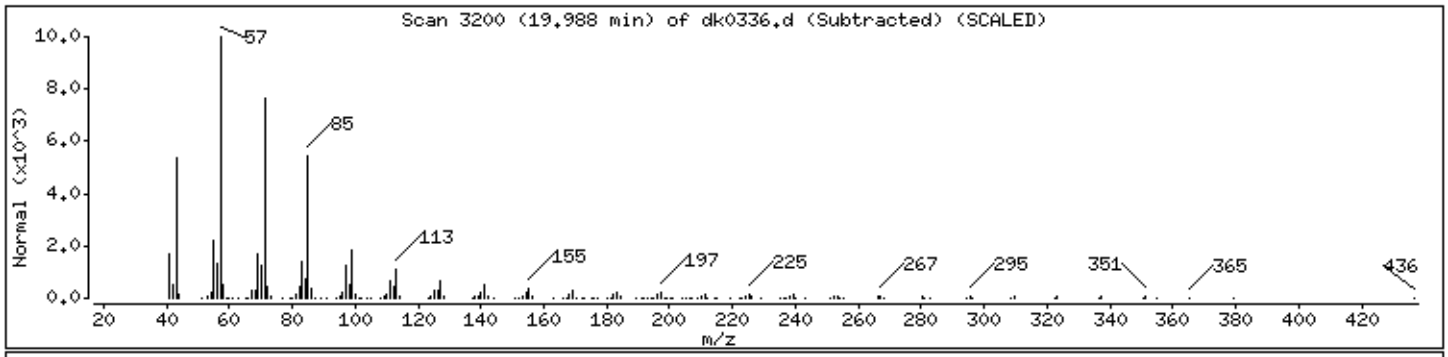
Volume Injected (uL): 0.5

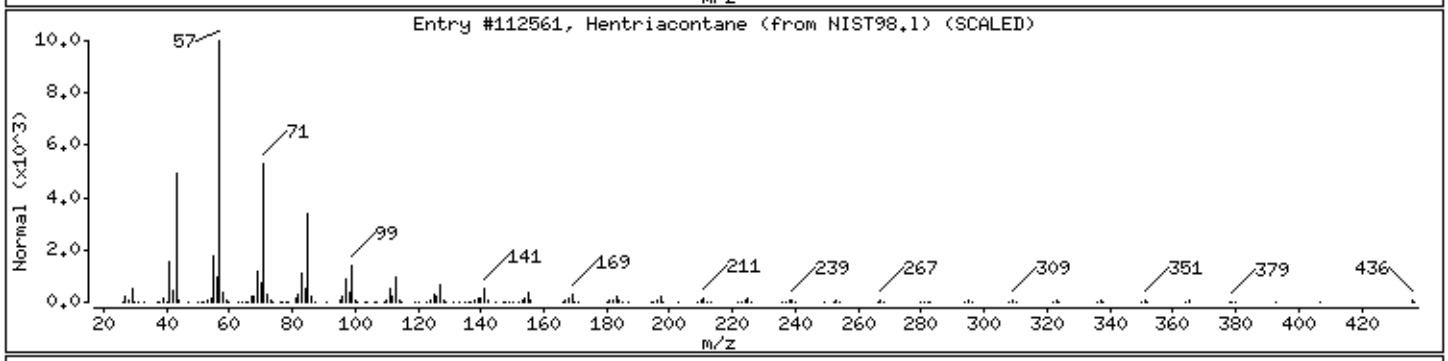
Operator: jmg00346

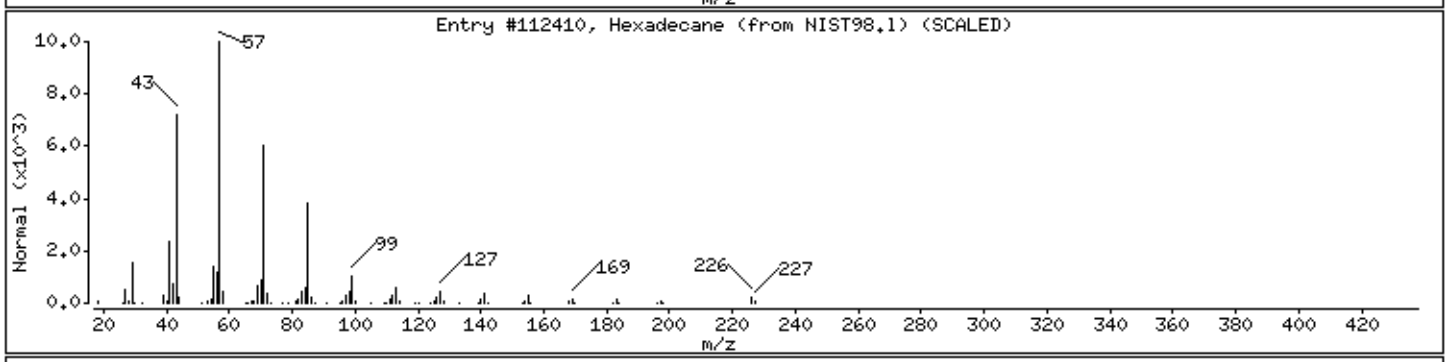
Column phase: J&W DB-5MS

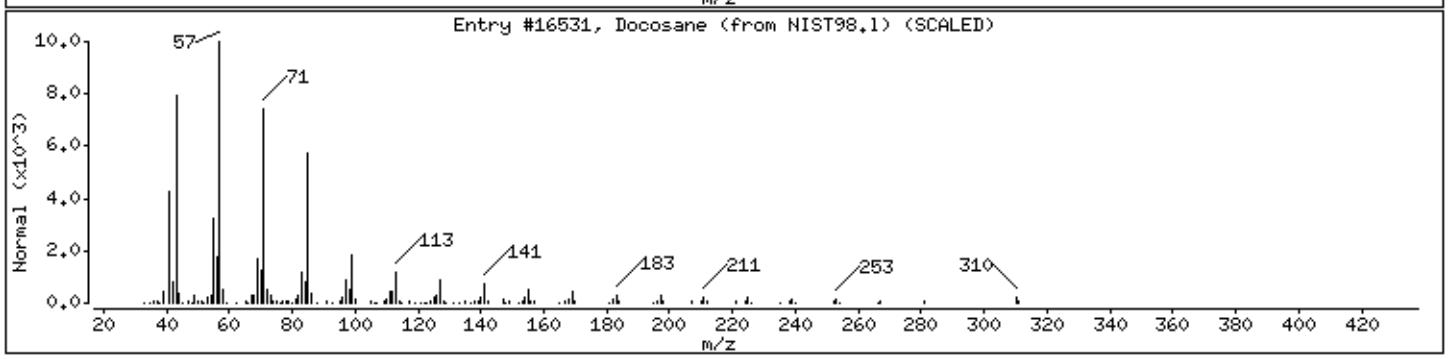
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hentriacontane	630-04-6	NIST98.1	112561	96	C31H64	437
Hexadecane	544-76-3	NIST98.1	112410	95	C16H34	226
Docosane	629-97-0	NIST98.1	16531	94	C22H46	310









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Date : 11-NOV-2013 11:16

Client ID: R2N51

Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

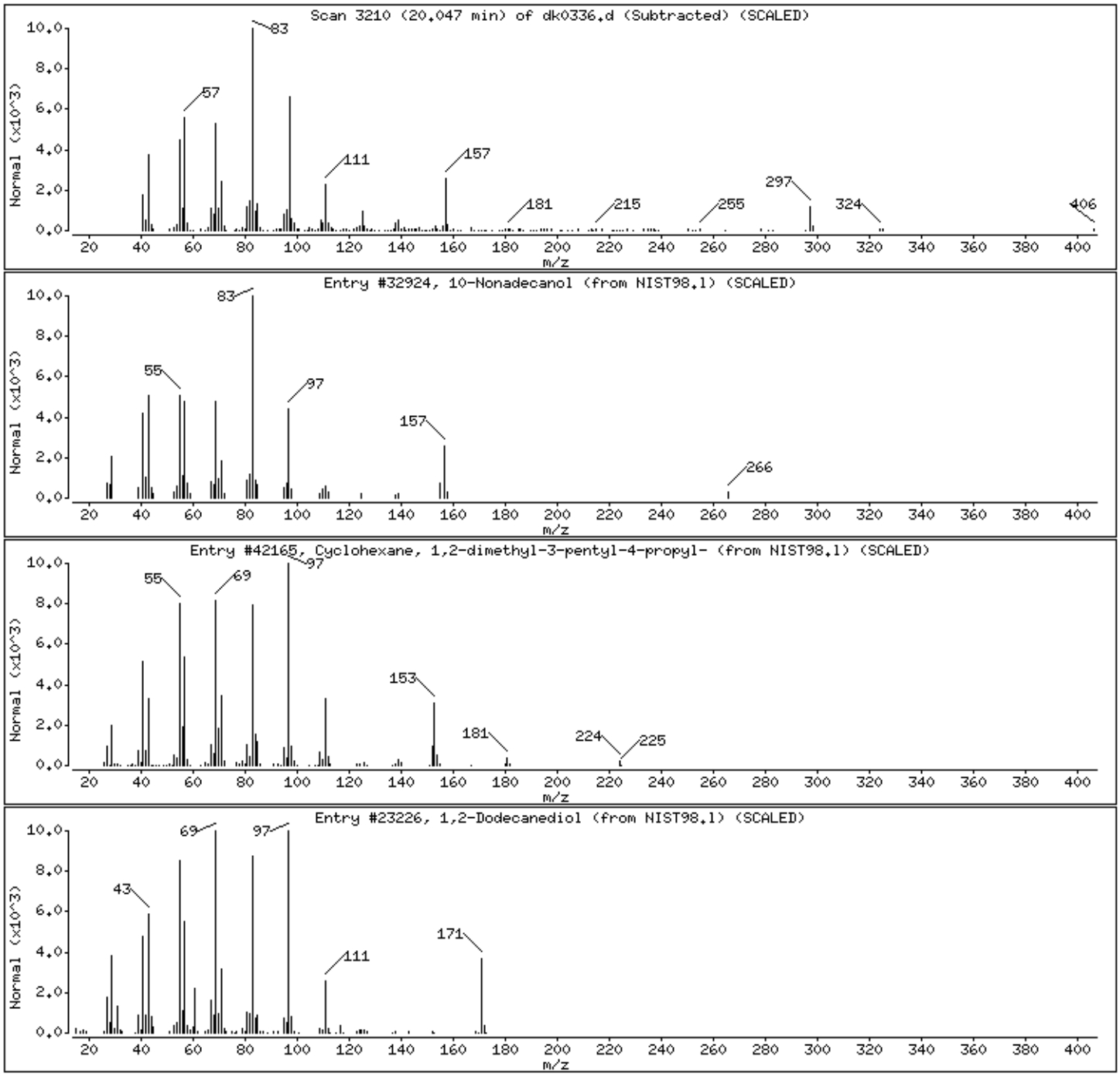
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
10-Nonadecanol	16840-84-9	NIST98.1	32924	80	C19H40O	284
Cyclohexane, 1,2-dimethyl-3-pentyl-4-pro	62376-17-4	NIST98.1	42165	49	C16H32	224
1,2-Dodecanediol	1119-87-5	NIST98.1	23226	38	C12H26O2	202



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Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

Client ID: R2N51

Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

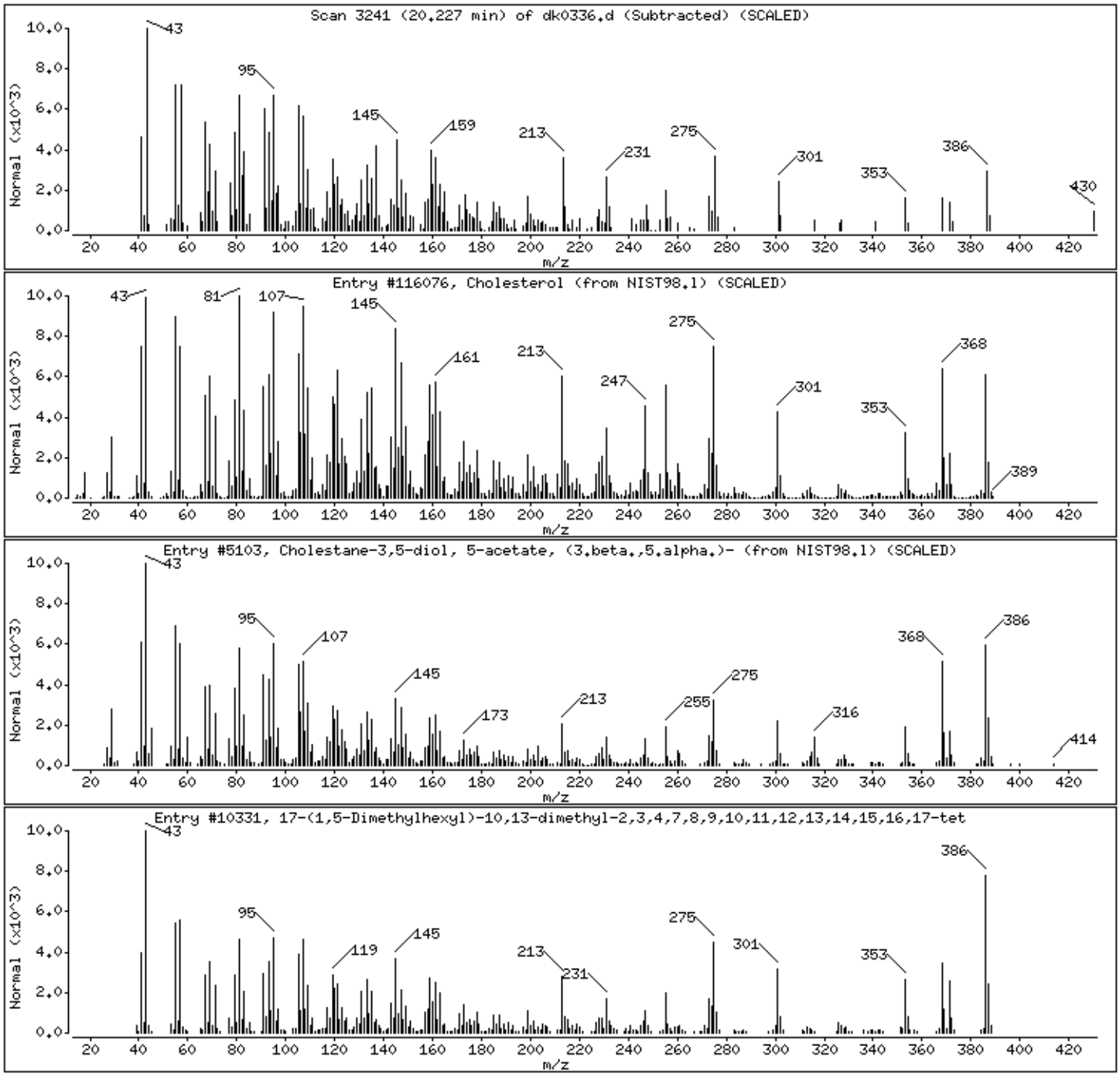
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cholesterol	57-88-5	NIST98.1	116076	68	C27H46O	386
Cholestane-3,5-diol, 5-acetate, (3.beta.	41721-93-1	NIST98.1	5103	60	C29H50O3	446
17-(1,5-Dimethylhexyl)-10,13-dimethyl-2,	1000210-38-4	NIST98.1	10331	58	C27H46O	386



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Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

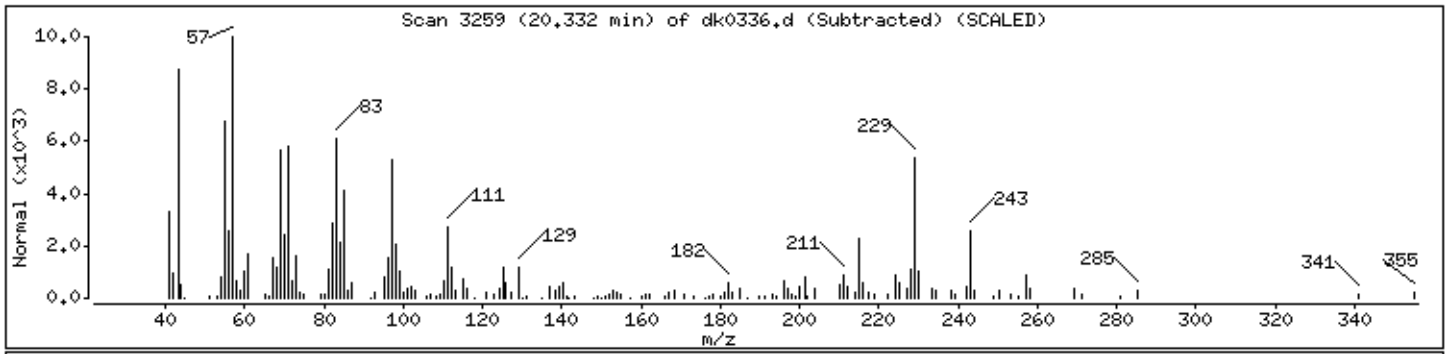
Client ID: R2N51 Instrument: HP19760.i

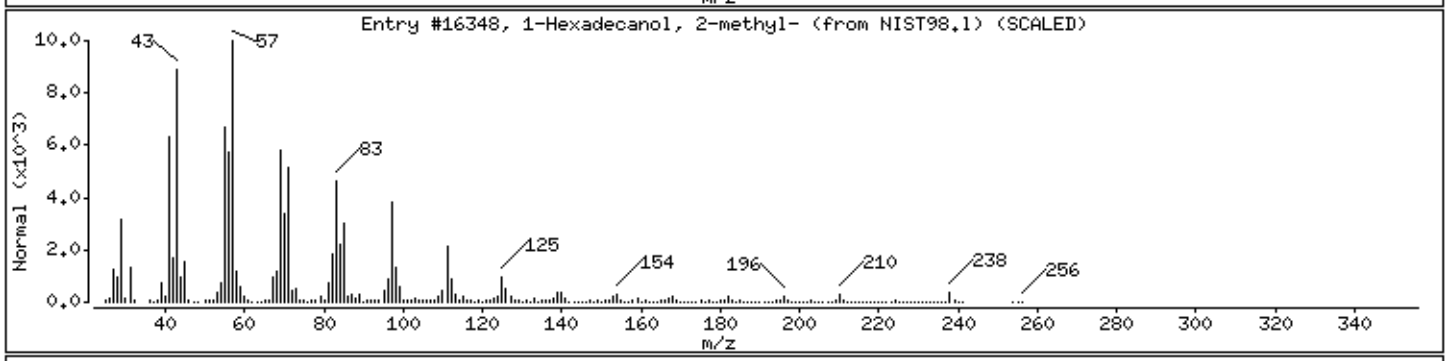
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

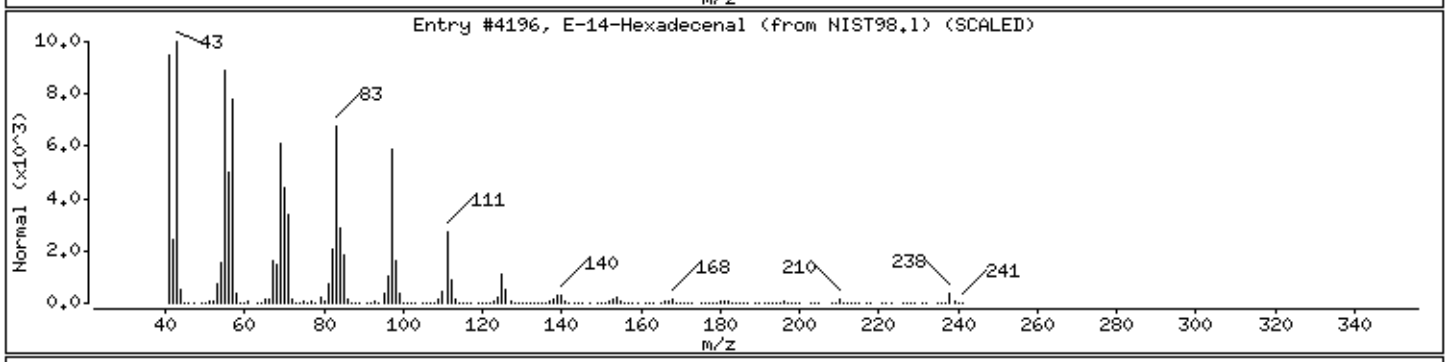
Volume Injected (uL): 0.5 Operator: jmg00346

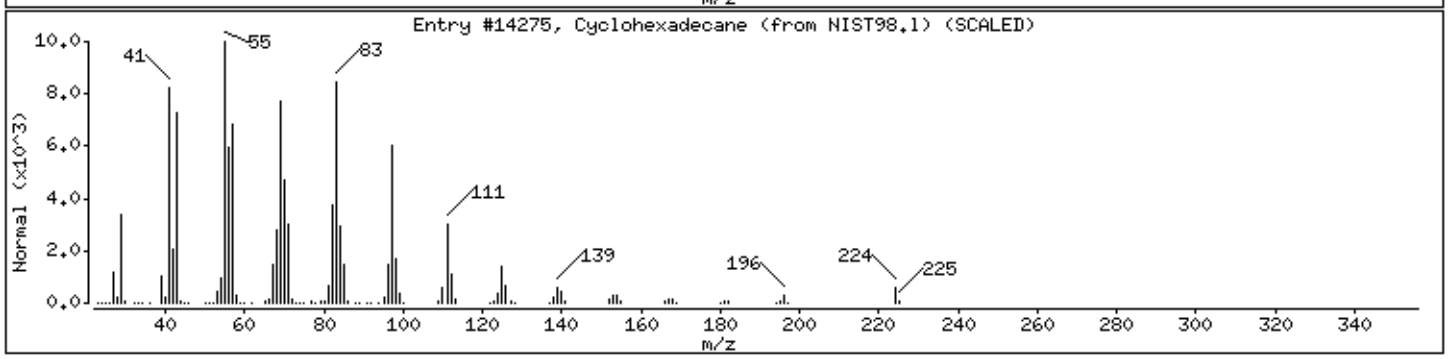
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Hexadecanol, 2-methyl-	2490-48-4	NIST98.1	16348	49	C17H36O	256
E-14-Hexadecenal	1000130-98-0	NIST98.1	4196	42	C16H30O	238
Cyclohexadecane	295-65-8	NIST98.1	14275	41	C16H32	224









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Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

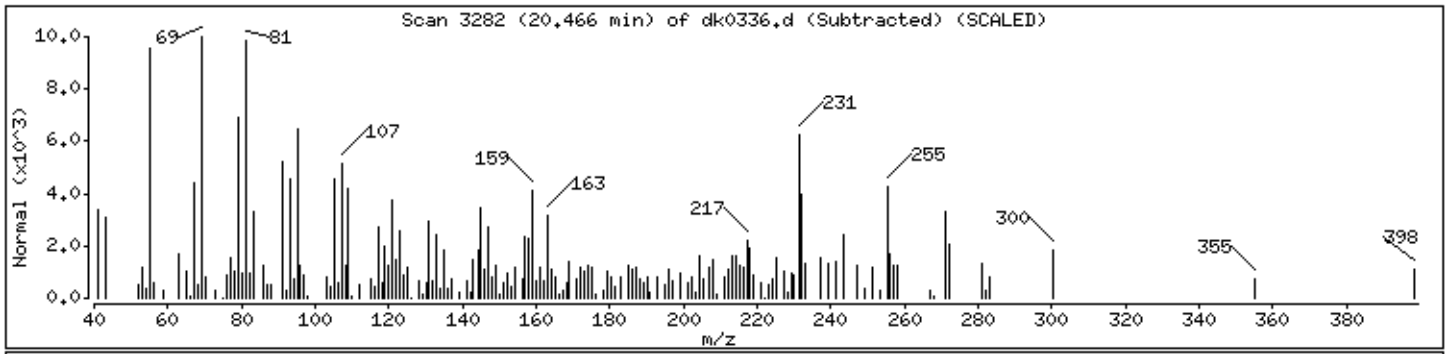
Client ID: R2N51 Instrument: HP19760.i

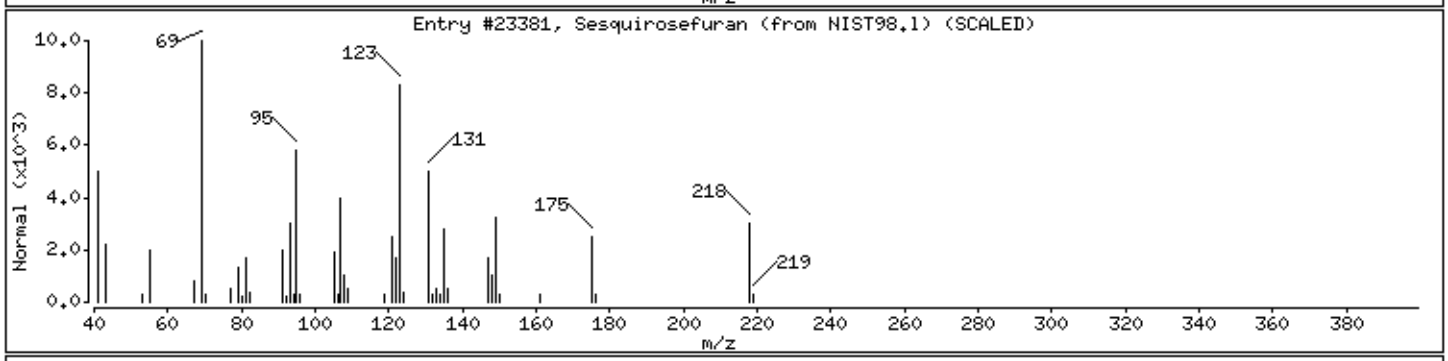
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

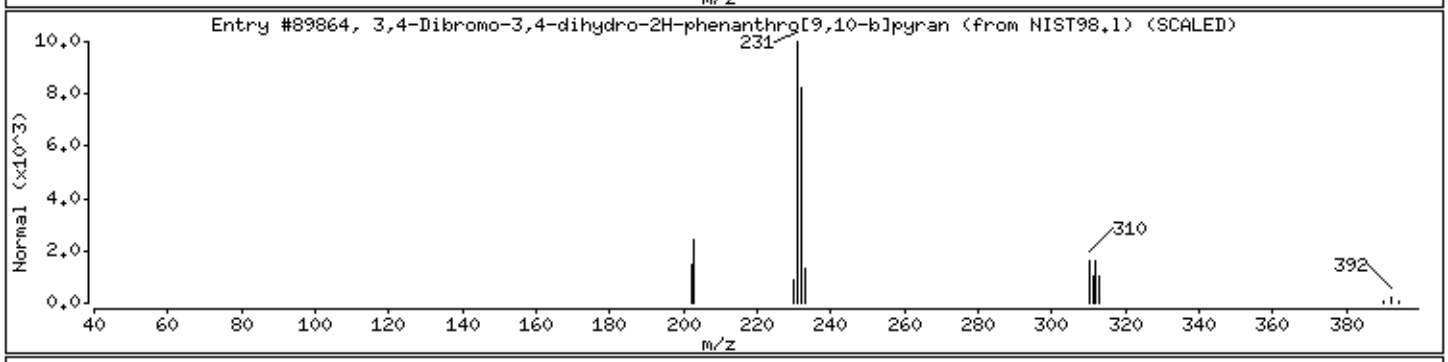
Volume Injected (uL): 0.5 Operator: jmg00346

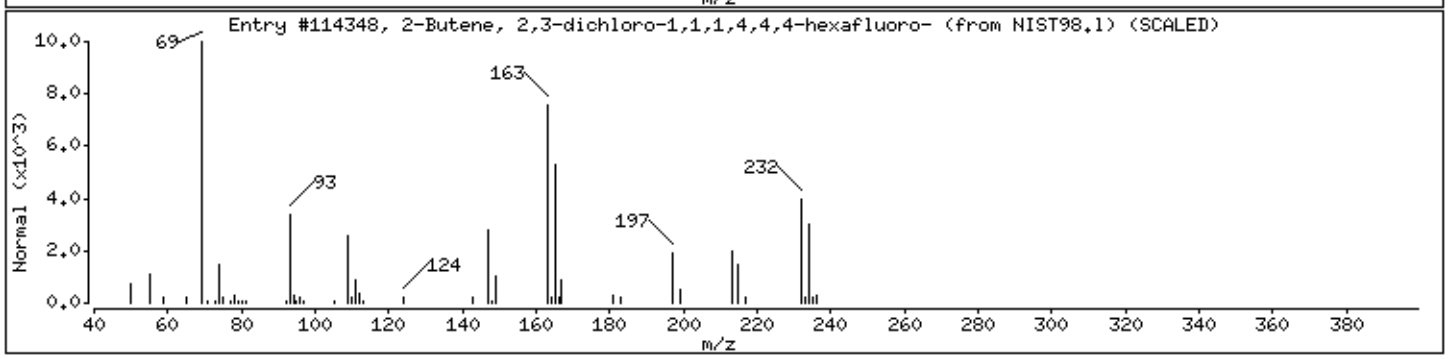
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Sesquirosefuran	39007-93-7	NIST98.1	23381	35	C15H22O	218
3,4-Dibromo-3,4-dihydro-2H-phenanthro[9,	96862-50-9	NIST98.1	89864	25	C17H12Br2O	390
2-Butene, 2,3-dichloro-1,1,1,4,4,4-hexaf	303-04-8	NIST98.1	114348	14	C4Cl2F6	232









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

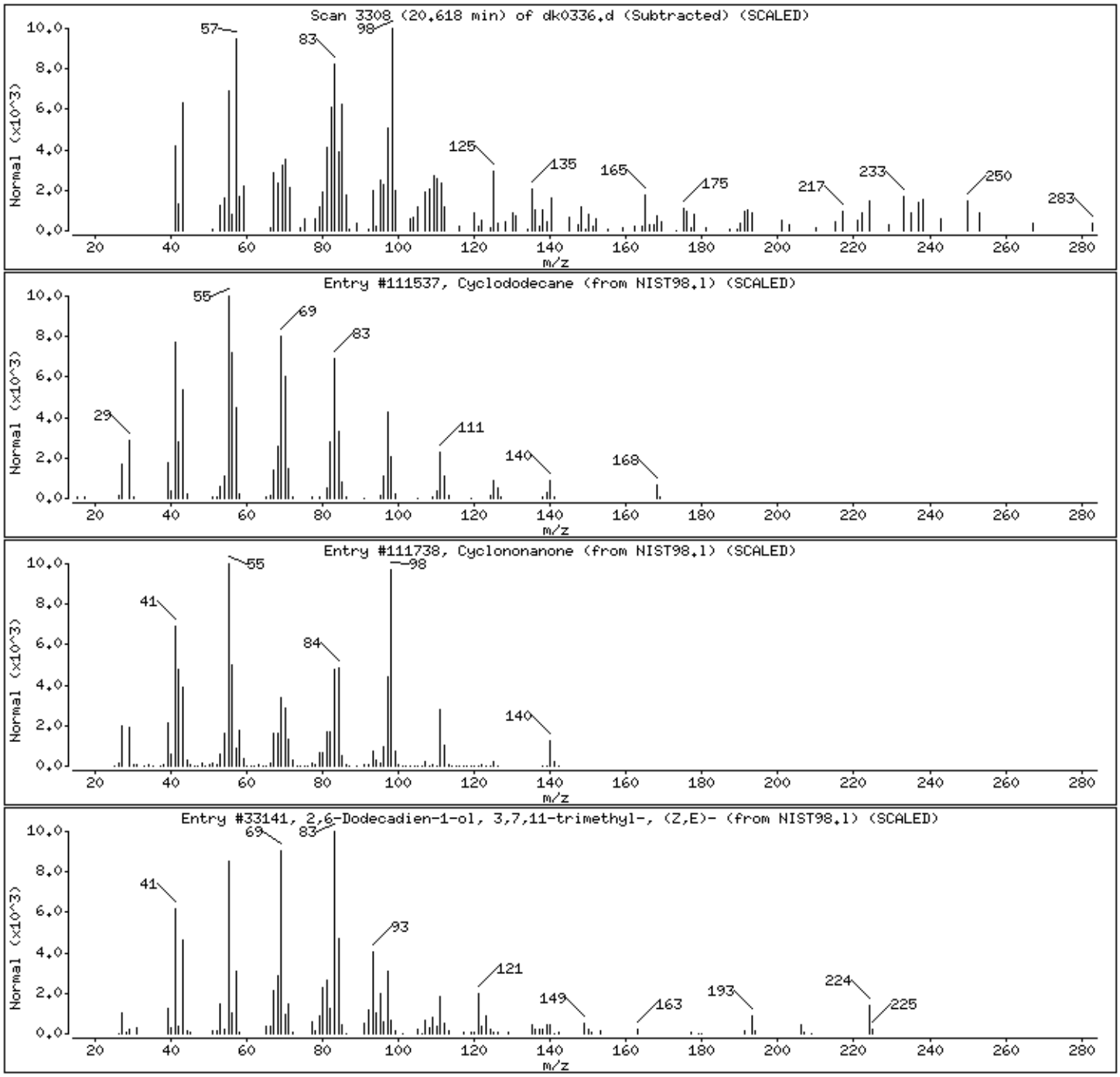
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclododecane	294-62-2	NIST98.l	111537	43	C12H24	168
Cyclononanone	3350-30-9	NIST98.l	111738	38	C9H16O	140
2,6-Dodecadien-1-ol, 3,7,11-trimethyl-,	20576-58-3	NIST98.l	33141	38	C15H28O	224



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

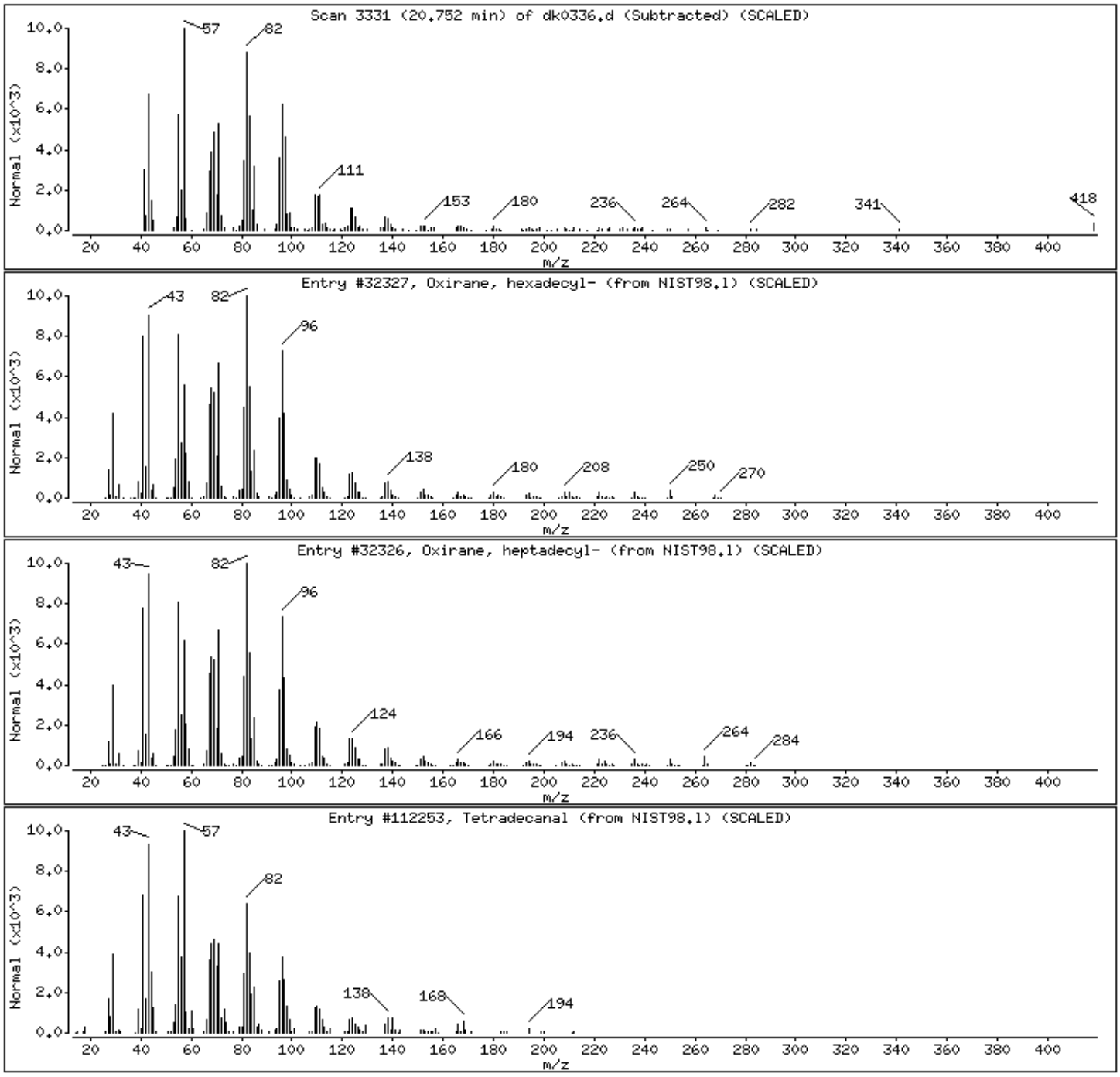
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Oxirane, hexadecyl-	7390-81-0	NIST98.1	32327	91	C18H36O	268
Oxirane, heptadecyl-	67860-04-2	NIST98.1	32326	91	C19H38O	282
Tetradecanal	124-25-4	NIST98.1	112253	81	C14H28O	212



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

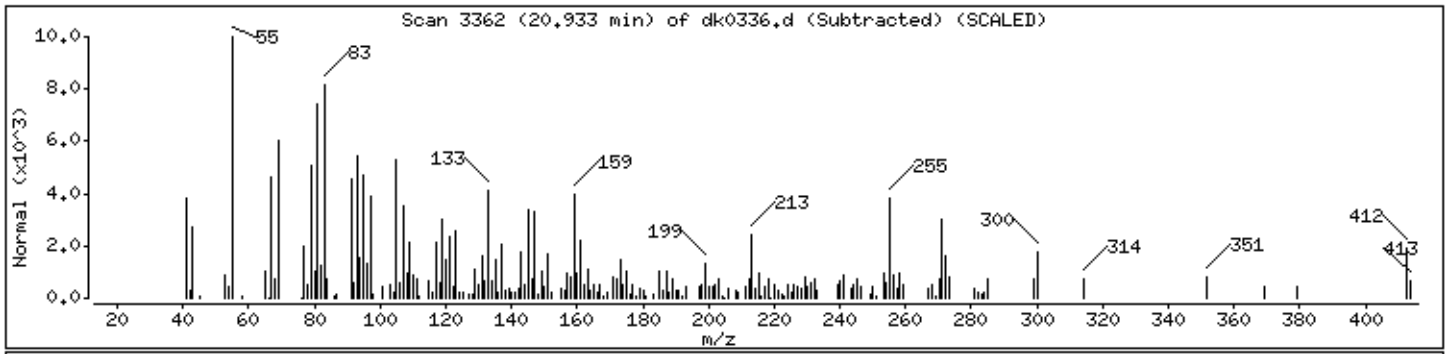
Client ID: R2N51 Instrument: HP19760.i

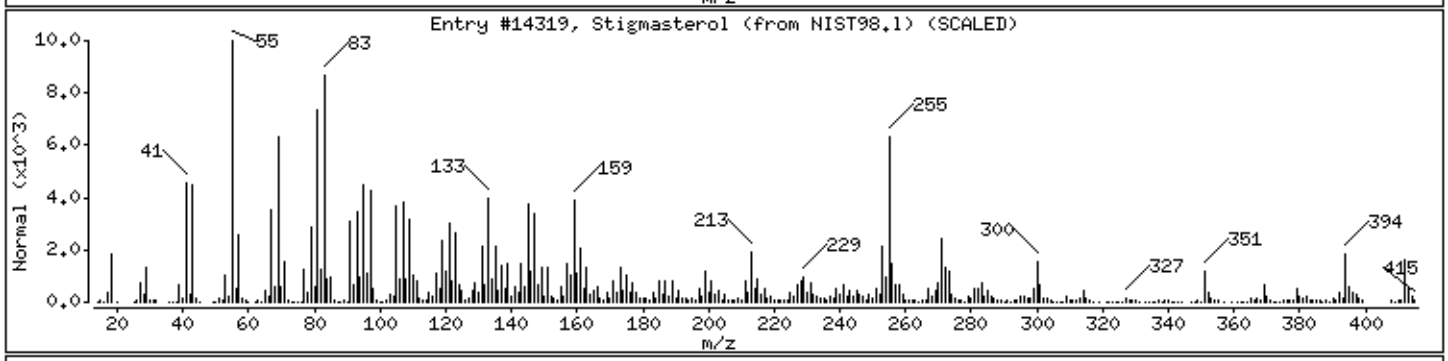
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

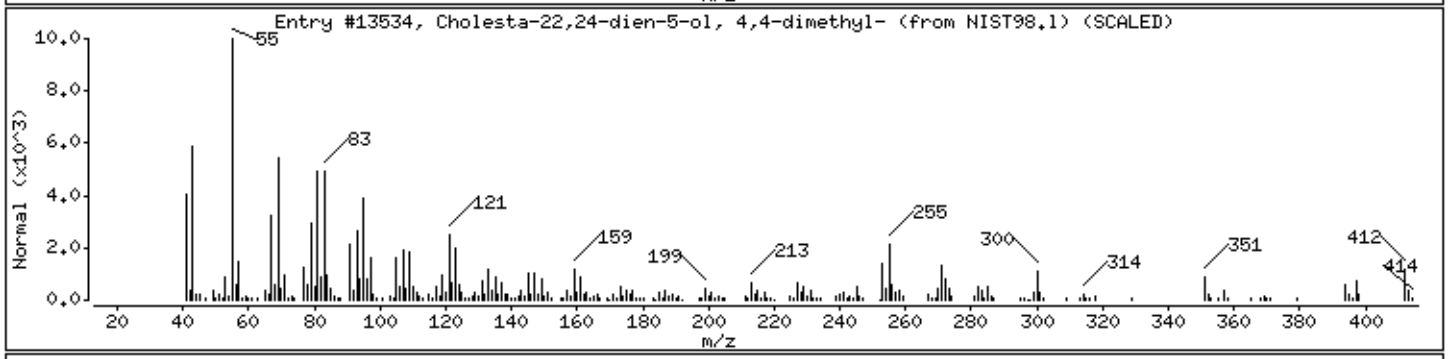
Volume Injected (uL): 0.5 Operator: jmg00346

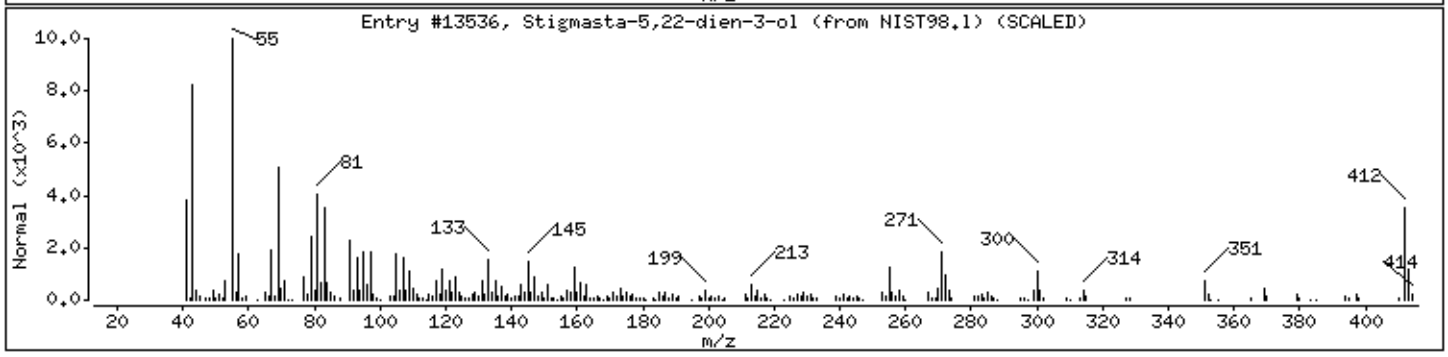
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Stigmasterol	83-48-7	NIST98.1	14319	91	C29H48O	412
Cholesta-22,24-dien-5-ol, 4,4-dimethyl-	1000128-66-1	NIST98.1	13534	64	C29H48O	412
Stigmasta-5,22-dien-3-ol	1000214-19-8	NIST98.1	13536	41	C29H48O	412









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

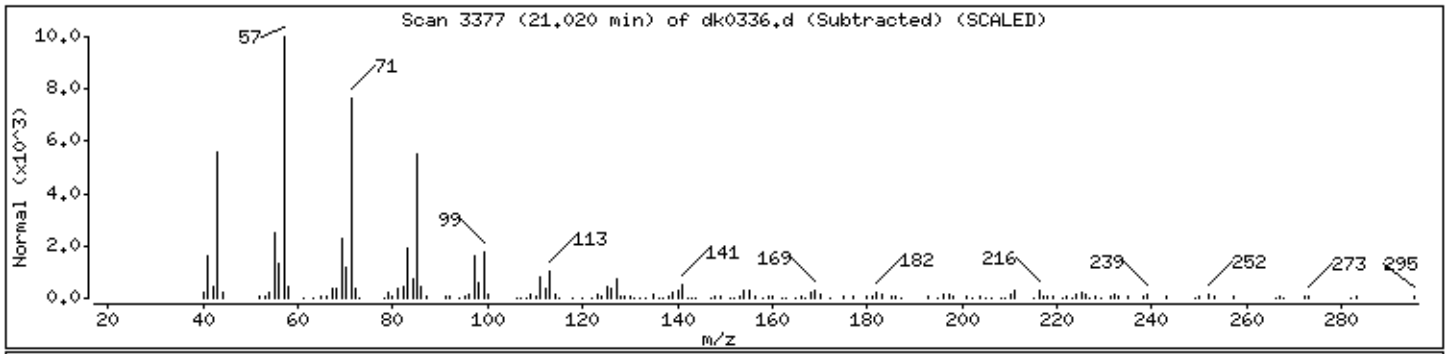
Client ID: R2N51 Instrument: HP19760.i

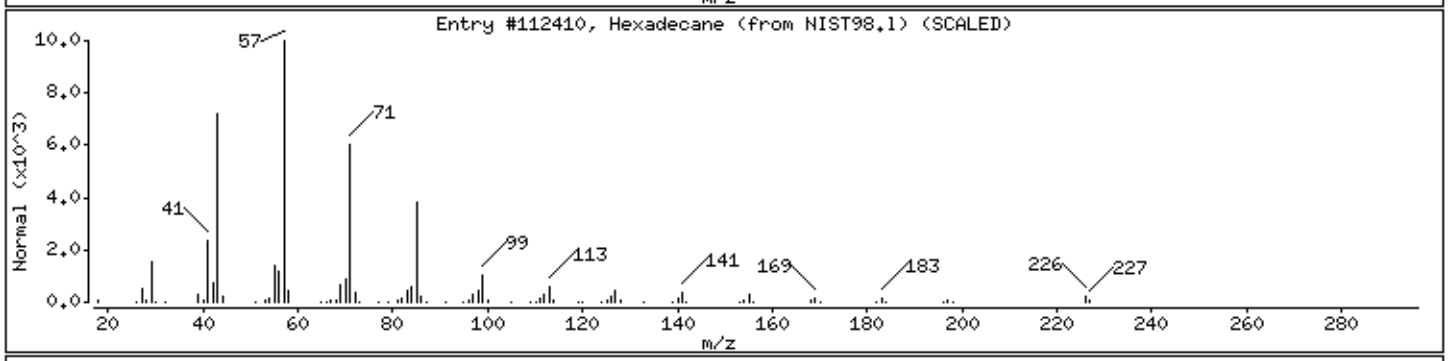
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

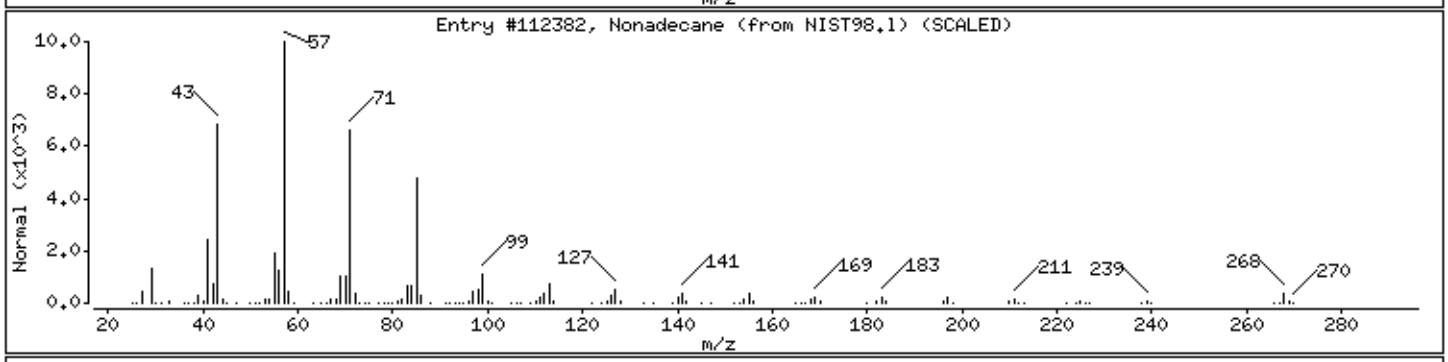
Volume Injected (uL): 0.5 Operator: jmg00346

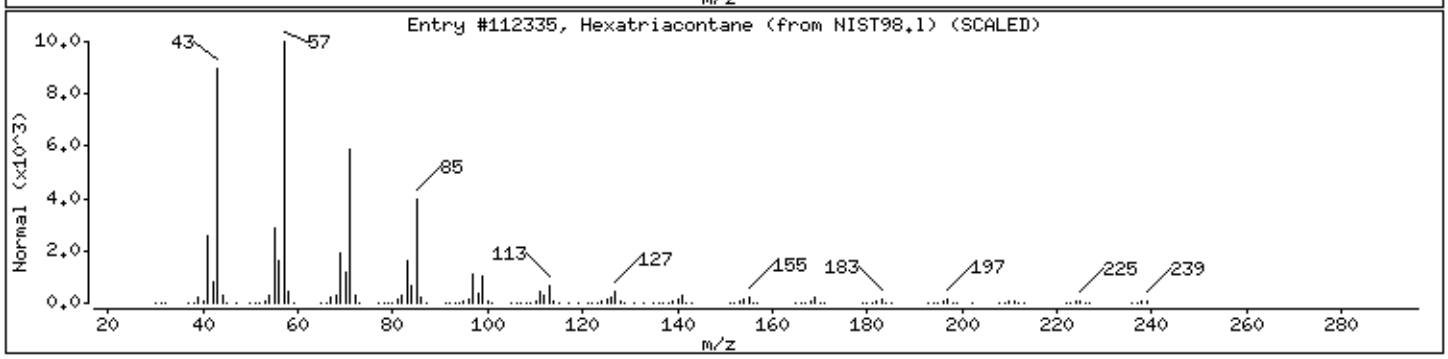
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexadecane	544-76-3	NIST98.1	112410	95	C16H34	226
Nonadecane	629-92-5	NIST98.1	112382	93	C19H40	268
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

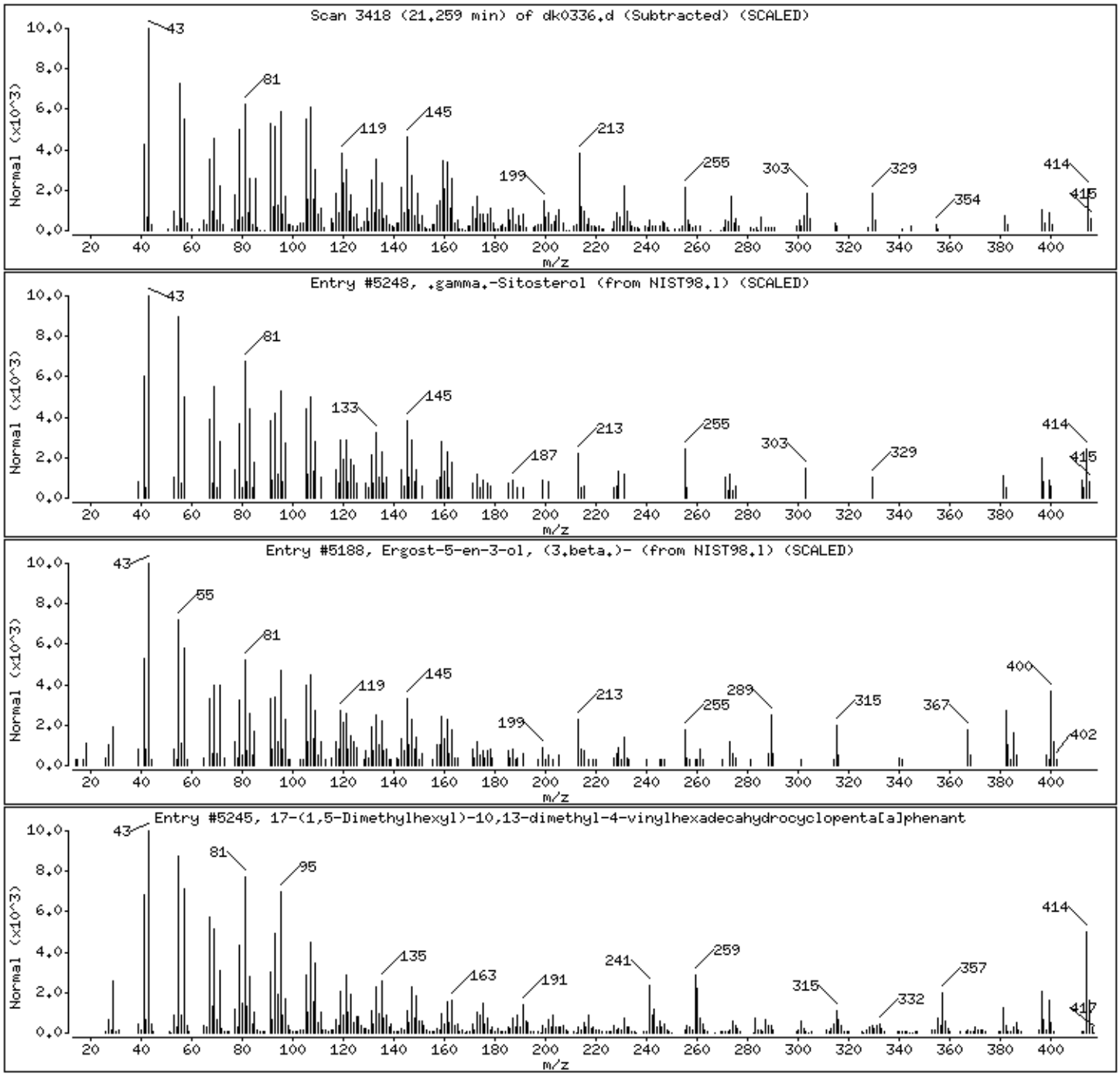
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.gamma.-Sitosterol	83-47-6	NIST98.l	5248	83	C29H50O	414
Ergost-5-en-3-ol, (3.beta.)-	4651-51-8	NIST98.l	5188	70	C28H48O	400
17-(1,5-Dimethylhexyl)-10,13-dimethyl-4-	1000210-86-9	NIST98.l	5245	60	C29H50O	414



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

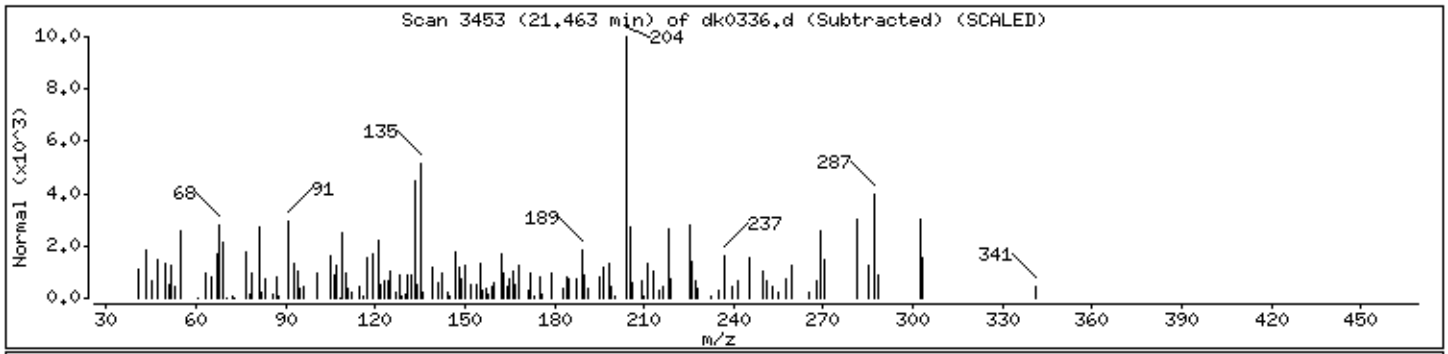
Client ID: R2N51 Instrument: HP19760.i

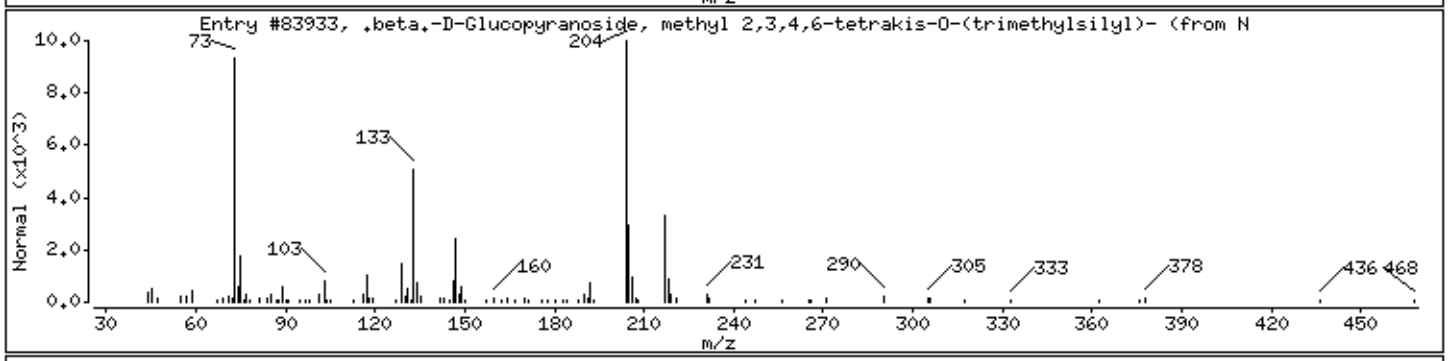
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

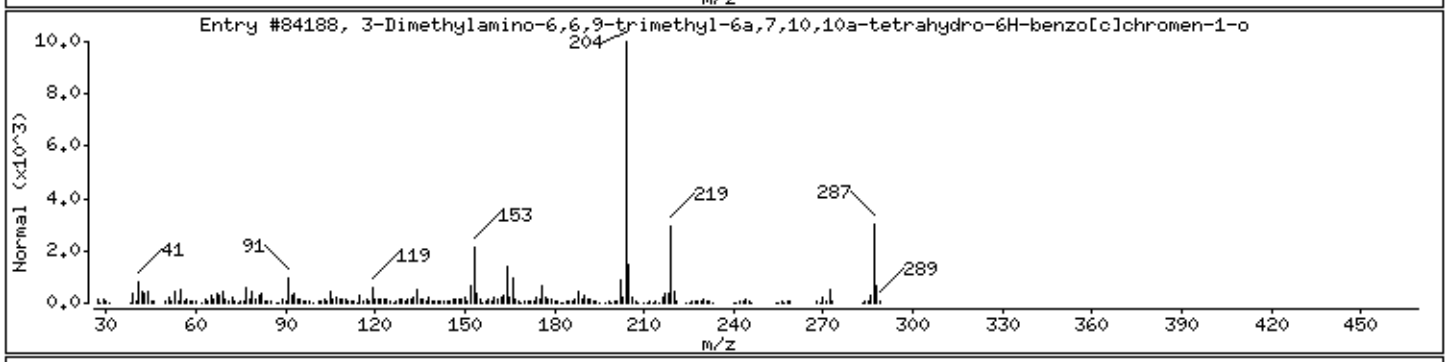
Volume Injected (uL): 0.5 Operator: jmg00346

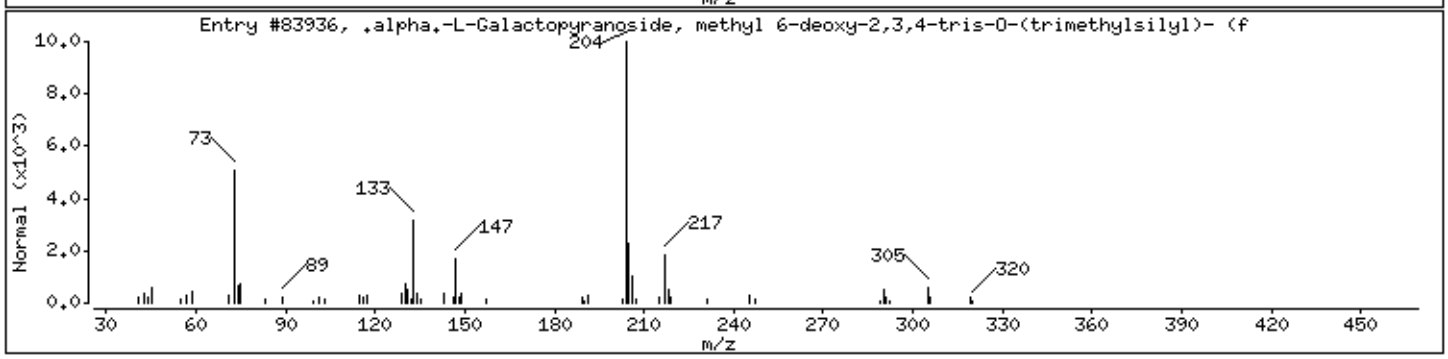
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.beta.-D-Glucopyranoside, methyl 2,3,4,6	2296-40-4	NIST98.1	83933	27	C19H46O6Si4	482
3-Dimethylamino-6,6,9-trimethyl-6a,7,10,	1000192-45-6	NIST98.1	84188	25	C18H25NO2	287
.alpha.-L-Galactopyranoside, methyl 6-de	56271-58-0	NIST98.1	83936	16	C16H38O5Si3	394









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

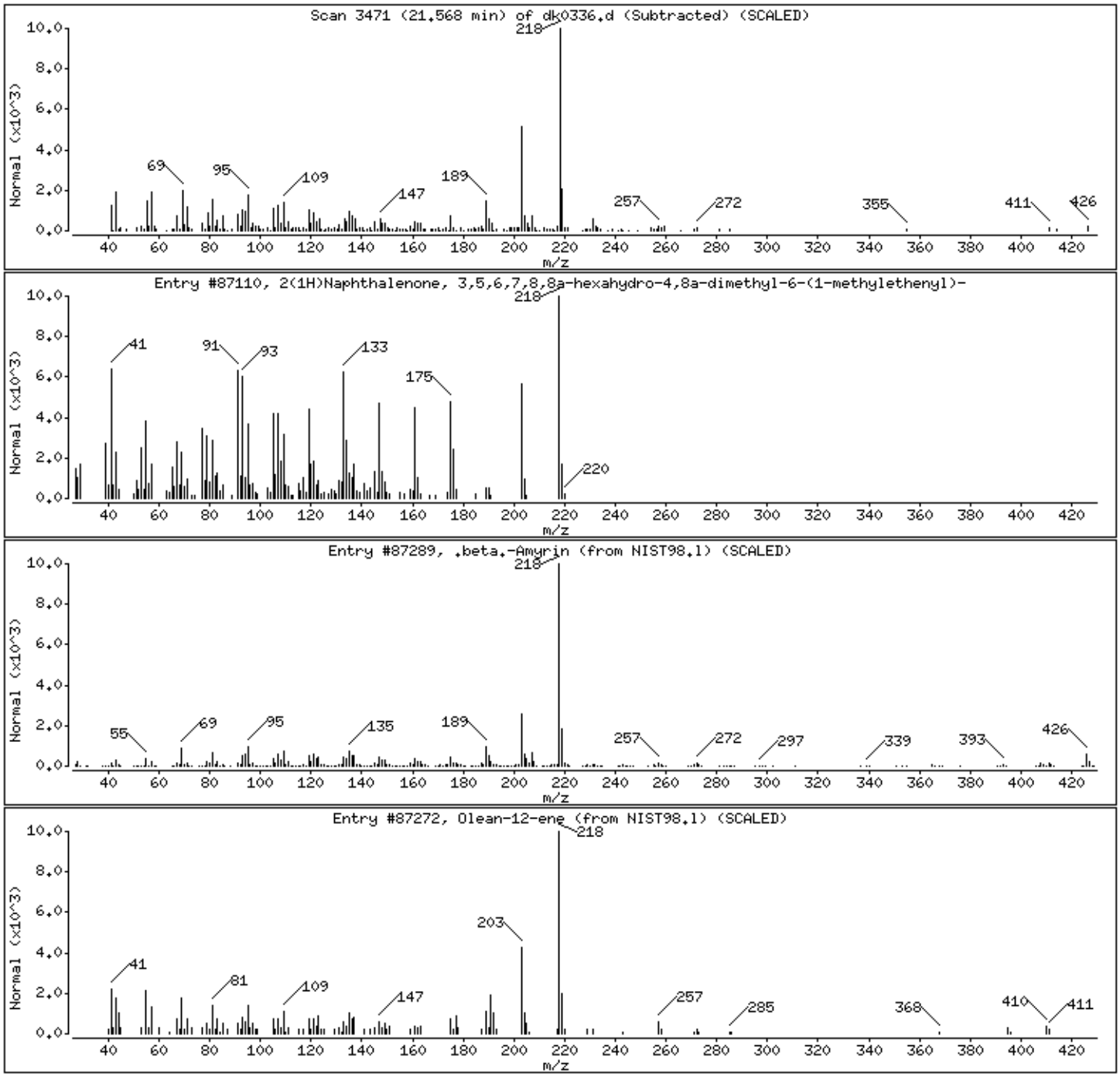
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	86941-63-1	NIST98.l	87110	83	C15H22O	218
.beta.-Amyrin	559-70-6	NIST98.l	87289	70	C30H50O	426
Olean-12-ene	471-68-1	NIST98.l	87272	68	C30H50	410



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

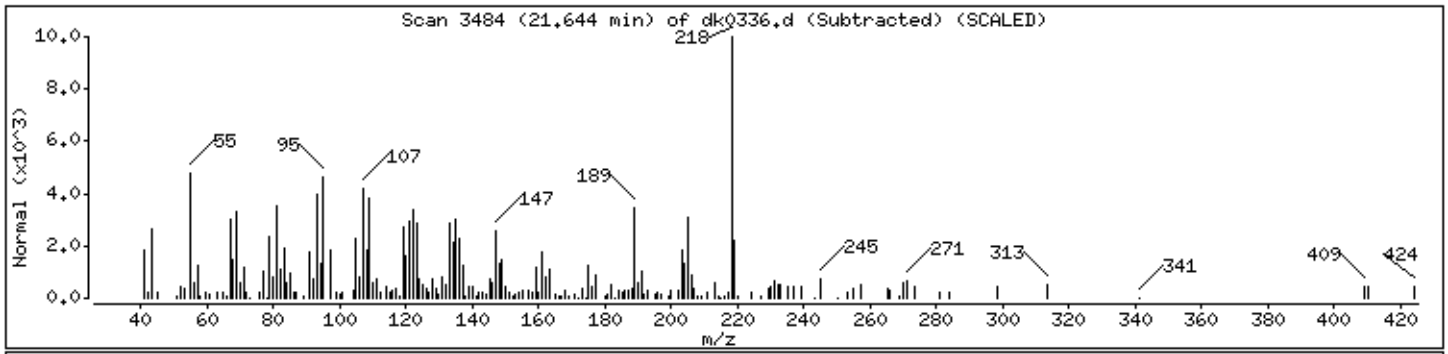
Client ID: R2N51 Instrument: HP19760.i

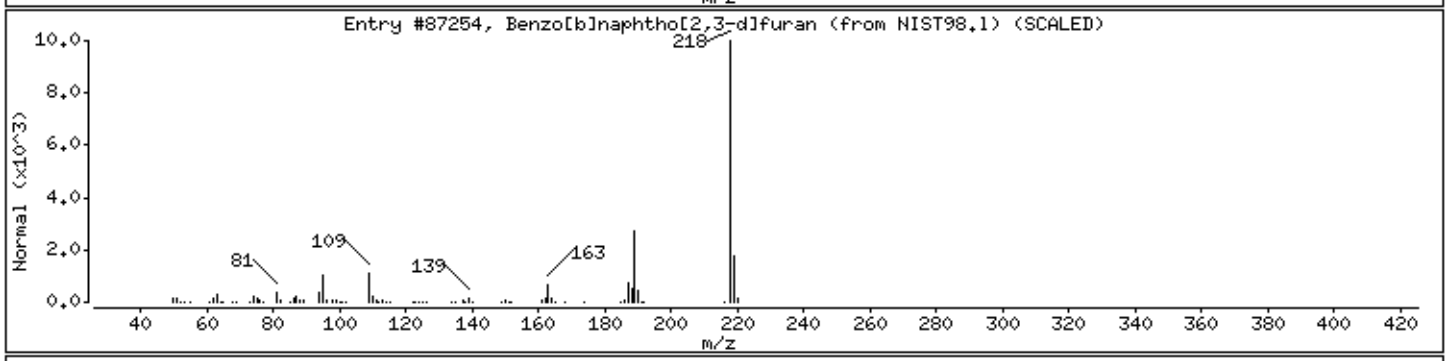
Sample Info: R2N51;7265223;1;0;SAMPLE;;;

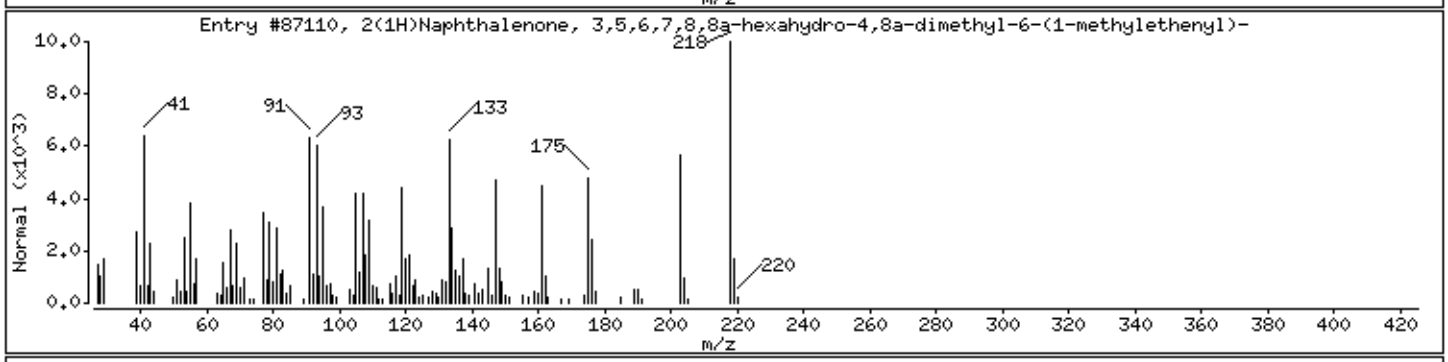
Volume Injected (uL): 0.5 Operator: jmg00346

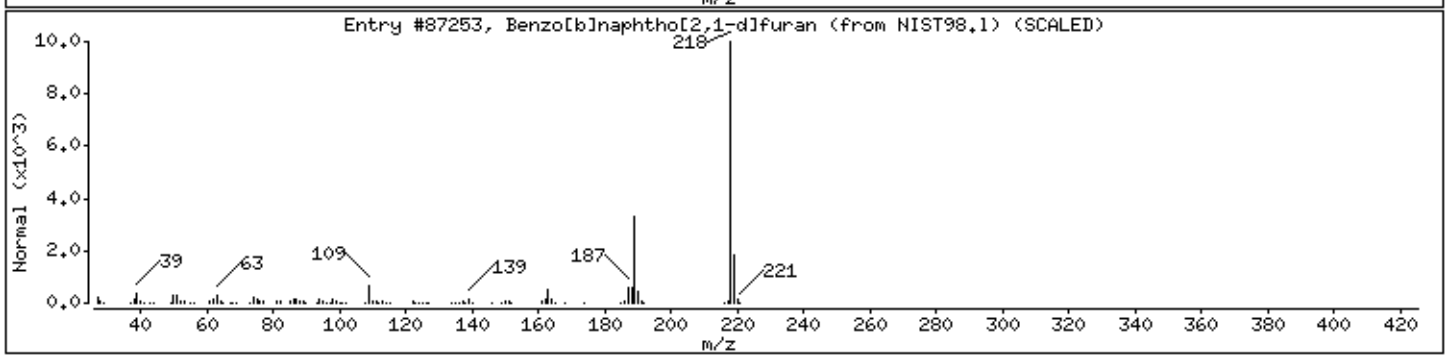
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzo[b]naphtho[2,3-d]furan	243-42-5	NIST98.1	87254	70	C16H10O	218
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	86941-63-1	NIST98.1	87110	58	C15H22O	218
Benzo[b]naphtho[2,1-d]furan	239-30-5	NIST98.1	87253	38	C16H10O	218









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0336.d

Date : 11-NOV-2013 11:16

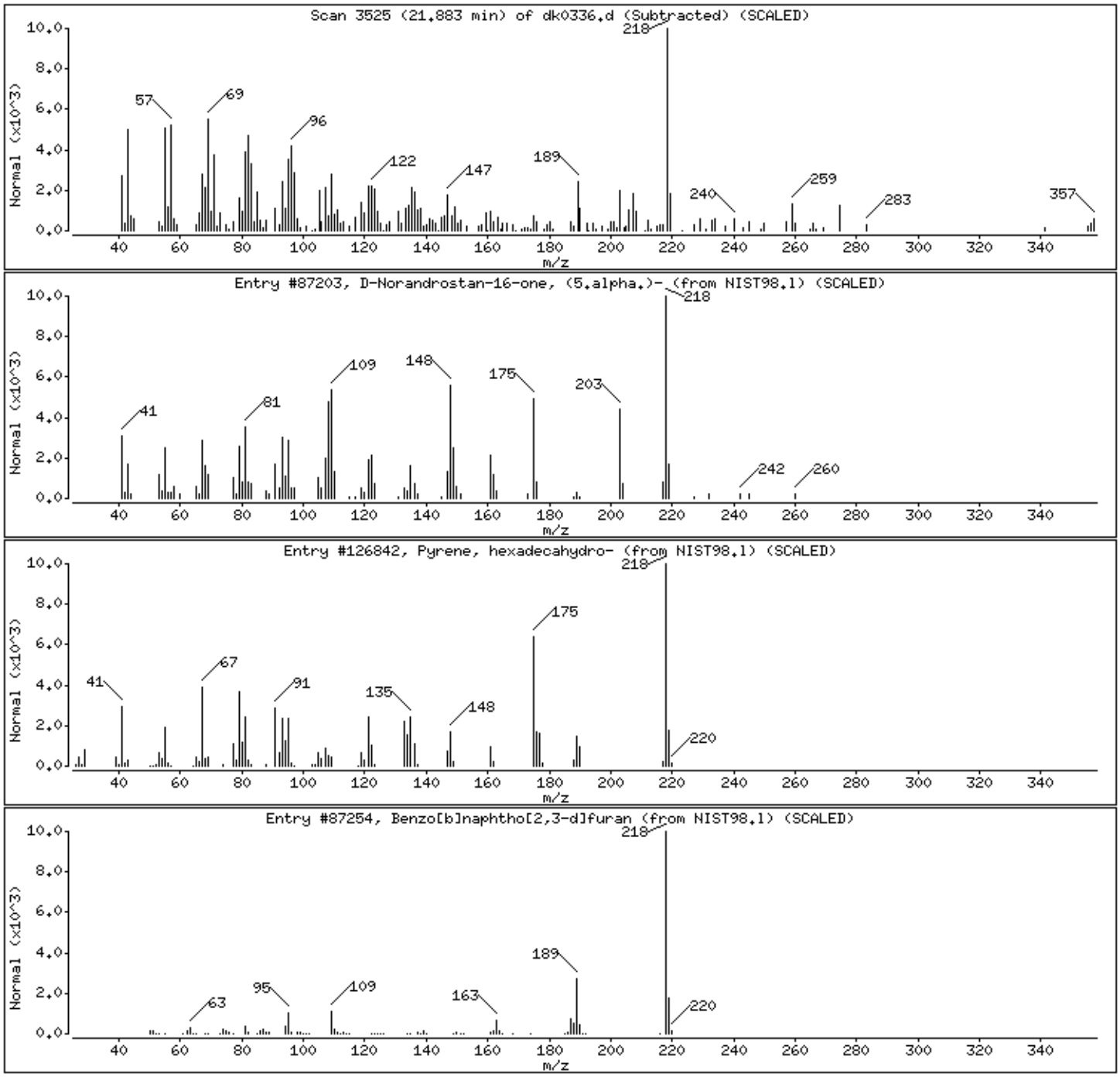
Client ID: R2N51 Instrument: HP19760.i

Sample Info: R2N51;7265223;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
D-Norandrostan-16-one, (5.alpha.)-	32319-06-5	NIST98.1	87203	60	C18H28O	260
Pyrene, hexadecahydro-	2435-85-0	NIST98.1	126842	53	C16H26	218
Benzo[b]naphtho[2,3-d]furan	243-42-5	NIST98.1	87254	38	C16H10O	218



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0337.d
Data file Sample Info. Line: R2N52;7265224;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Injection date and time: **11-NOV-2013 11:43**
Instrument ID: **HP19760.i** Batch: **13312WAD**

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.947(0.006)	791	152	121471 (-14)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	477117 (-13)	5.00	
92) Acenaphthene-d10	10.709(0.006)	1608	164	282171 (-14)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	510074 (-11)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	658285 (-11)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	438852 (-22)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.001(-0.001)	112	1056558	29.294	59%		10 - 107
13) Phenol-d6	(1)	5.429(0.000)	99	1051932	21.237	42%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	906825	20.653	83%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(-0.001)	172	1617644	22.957	92%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(-0.001)	330	354793	47.873	96%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	1900457	23.150	93%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:16. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0337.d Injection date and time: **11-NOV-2013 11:43**
Data file Sample Info. Line: R2N52;7265224;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

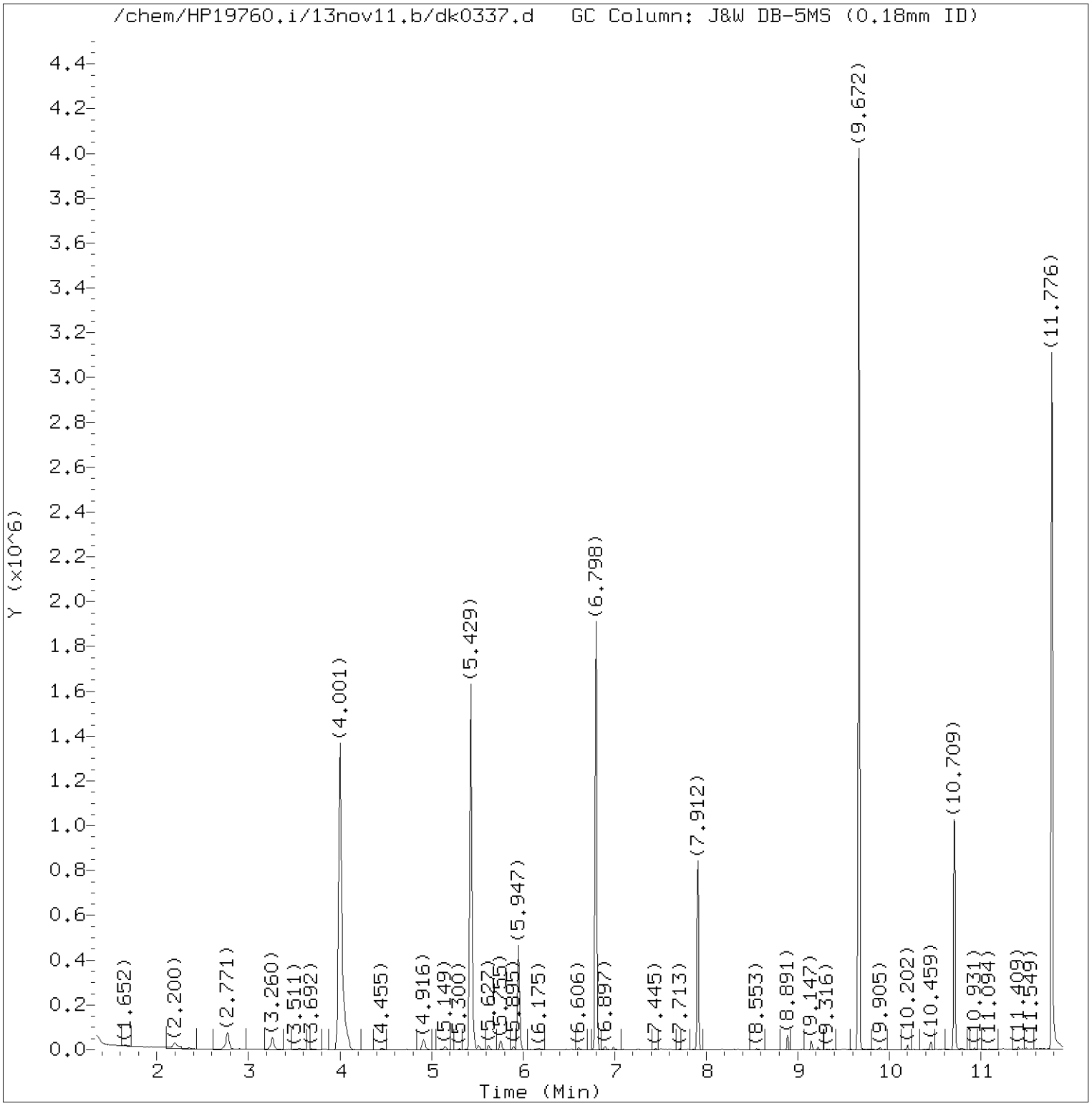
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:16. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:39. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

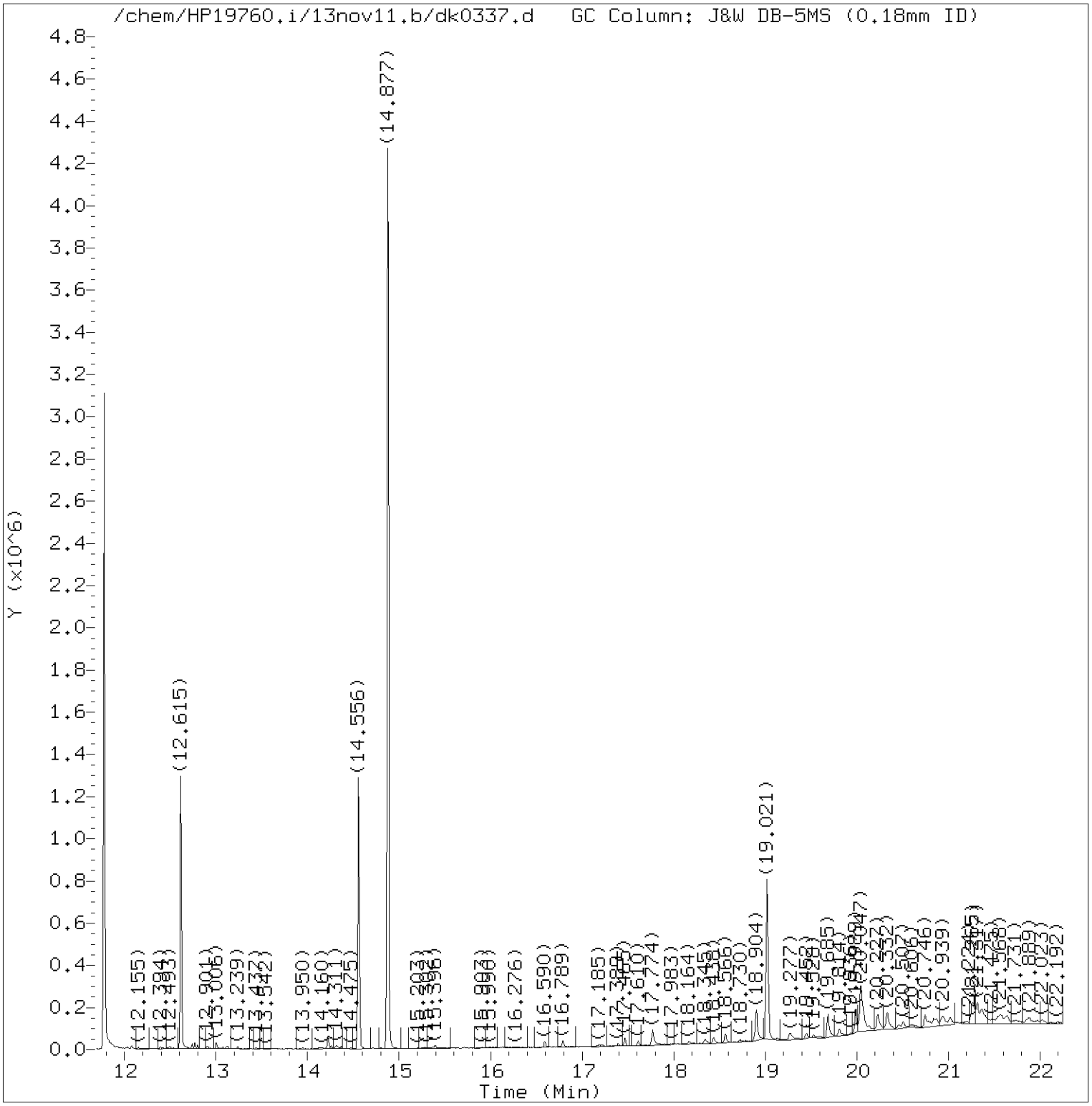
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:16.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.001	112	1056558	29.294
13)$Phenol-d6	(1)	5.429	99	1051932	21.237
19)*1,4-Dichlorobenzene-d4	(1)	5.947	152	121471	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	906825	20.653
52)*Naphthalene-d8	(2)	7.912	136	477117	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1617644	22.957
92)*Acenaphthene-d10	(3)	10.709	164	282171	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	354793	47.873
130)*Phenanthrene-d10	(4)	12.615	188	510074	5.000
145)*Pyrene-d10	(5)	14.556	212	658285	5.000
149)$Terphenyl-d14	(5)	14.877	244	1900457	23.150
172)*Perylene-d12	(6)	19.021	264	438852	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:16.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2N52

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265224

Sample wt/vol: 240 (g/mL) mL Lab File ID: dk0337.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 8 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.771	6	J
2.		Unknown	18.904	5	J
3.		Unknown	20.047	11	J
4.		Unknown	20.746	5	J
5.		Unknown	20.939	4	J
6.		Unknown	21.265	5	J
7.		Unknown	21.317	8	J
8.		Unknown	21.568	6	J
9.					
10.	SVOCTIC	Total SVOC TICs		51	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
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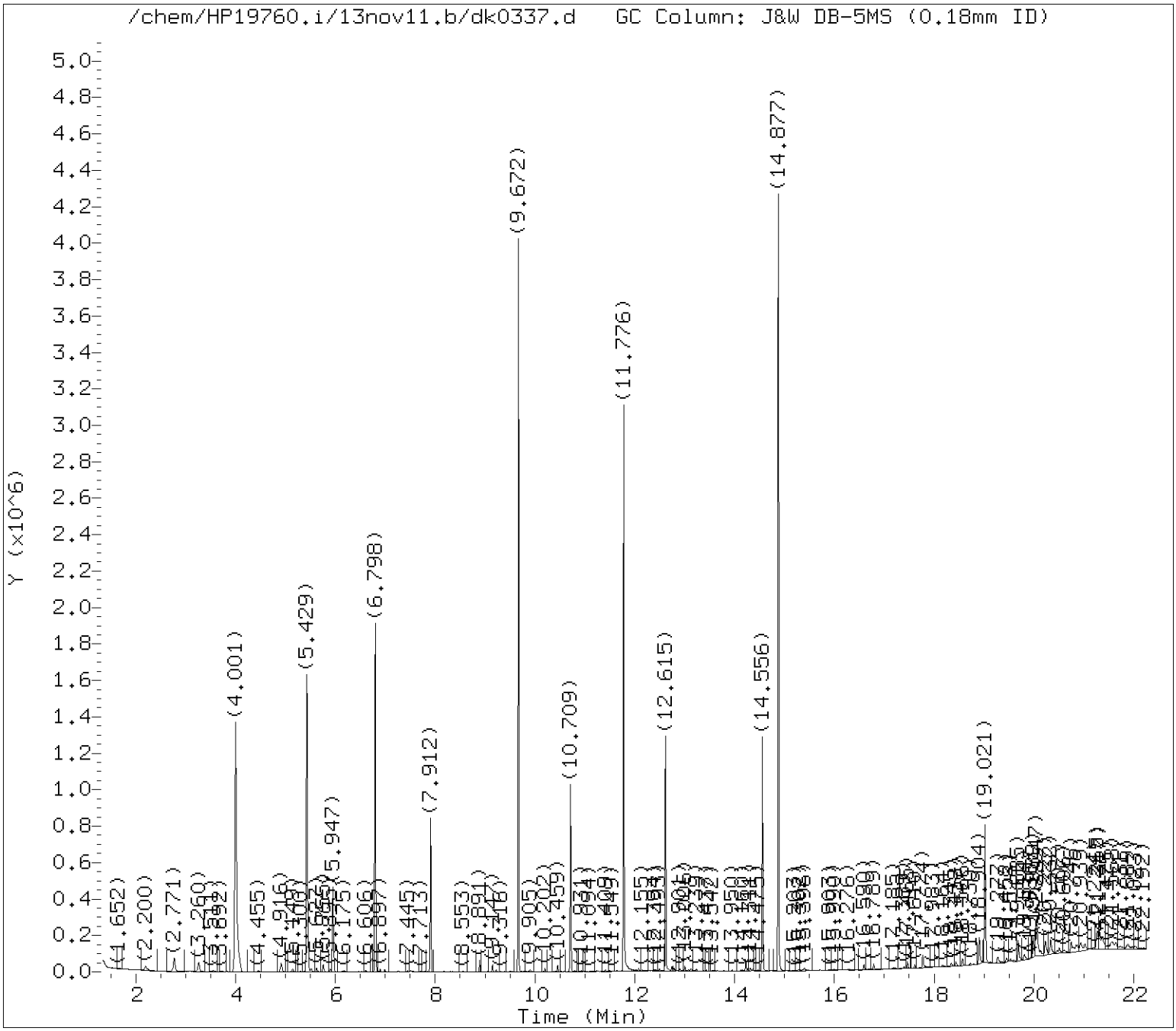
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

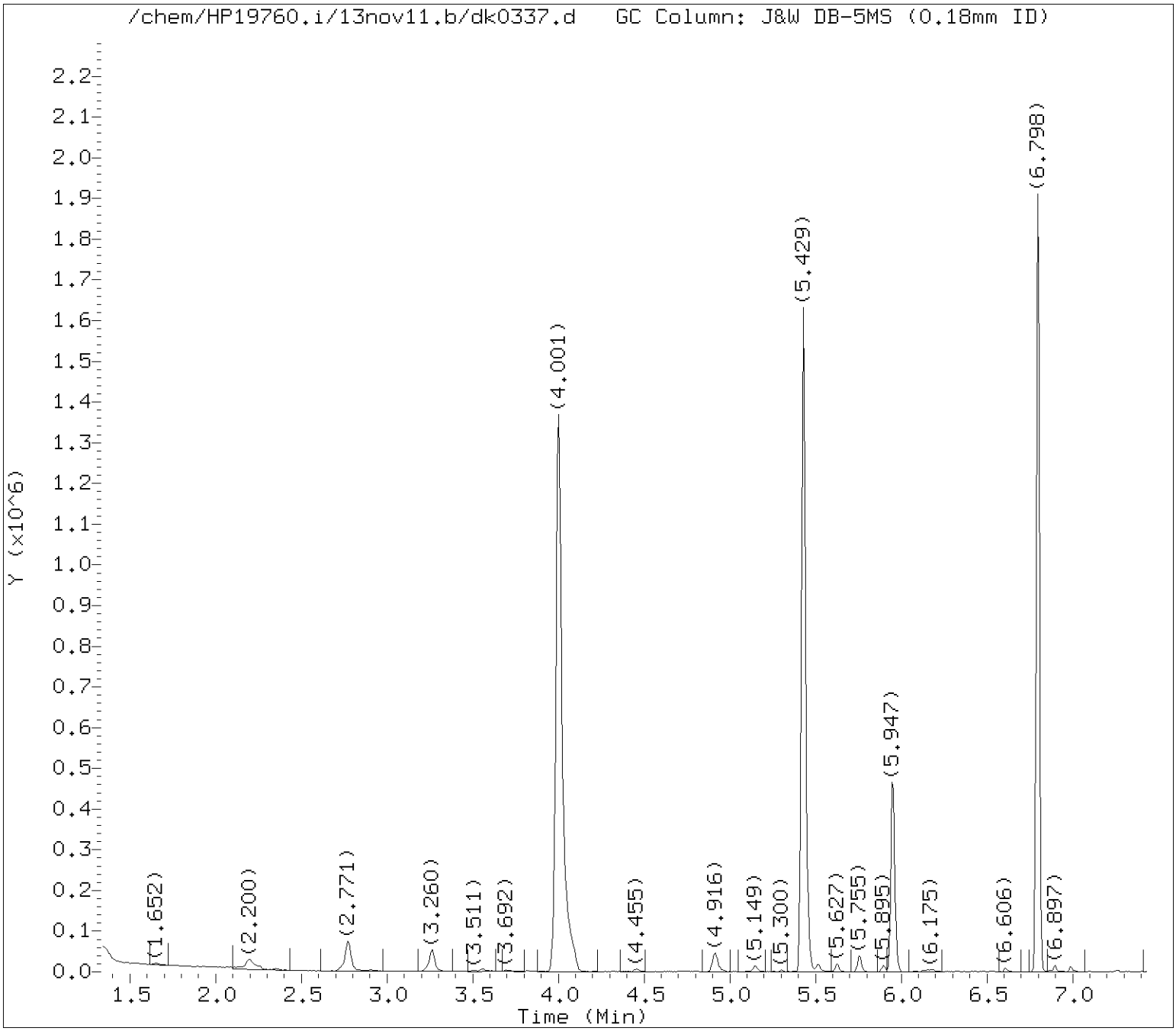
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

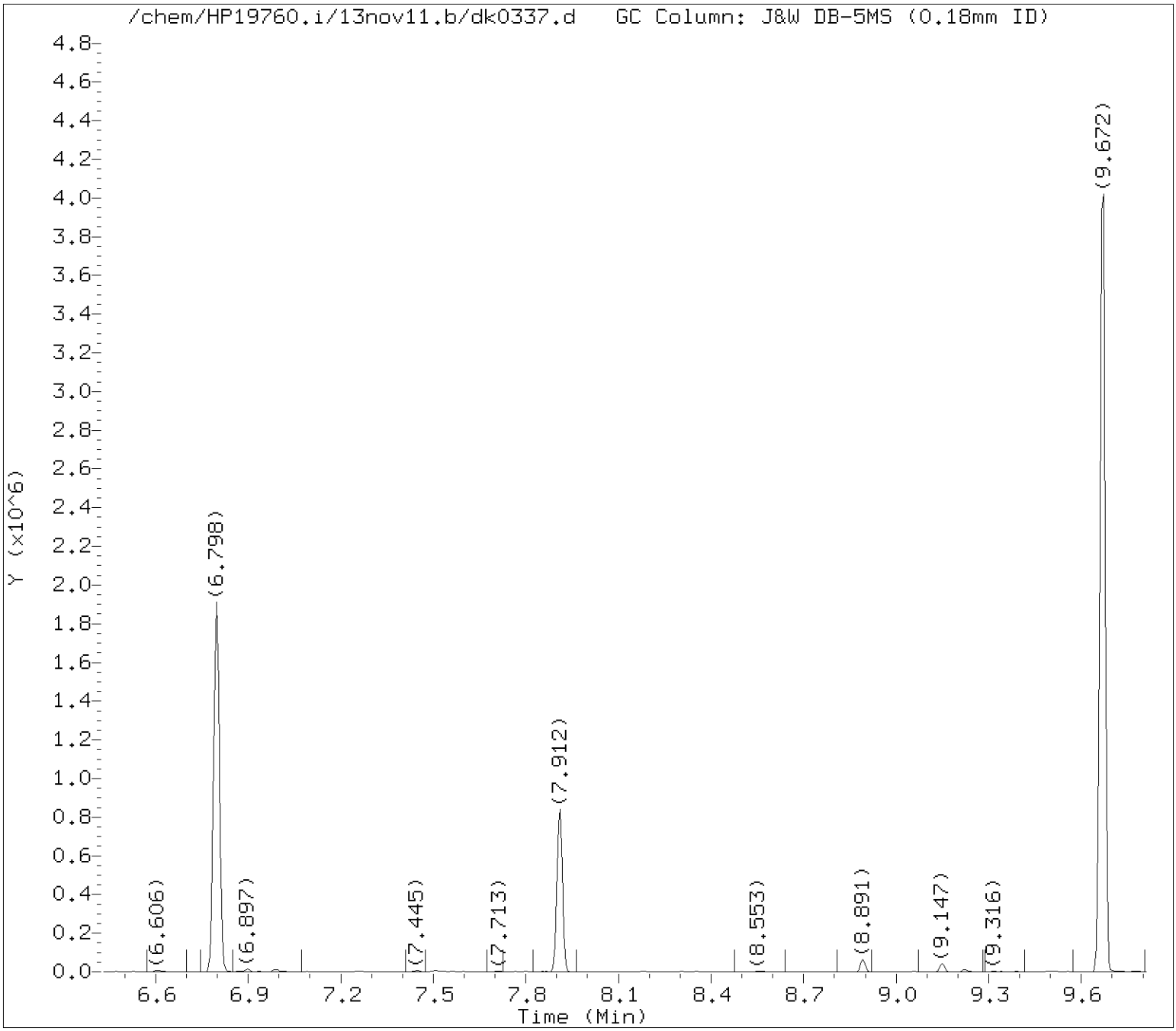
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.947 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.929

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

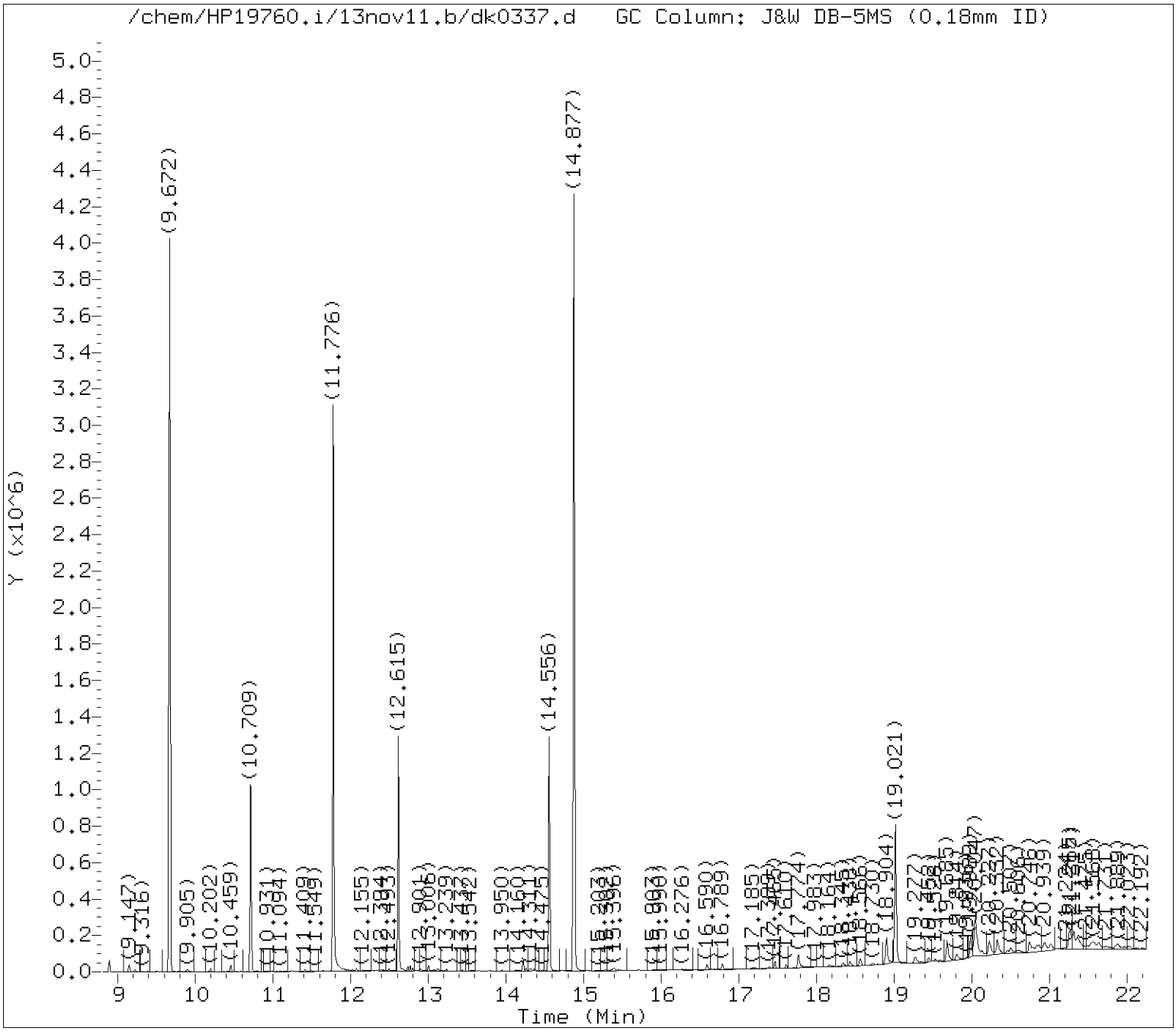
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.929
Chromatogram End Time (min.): 9.310

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

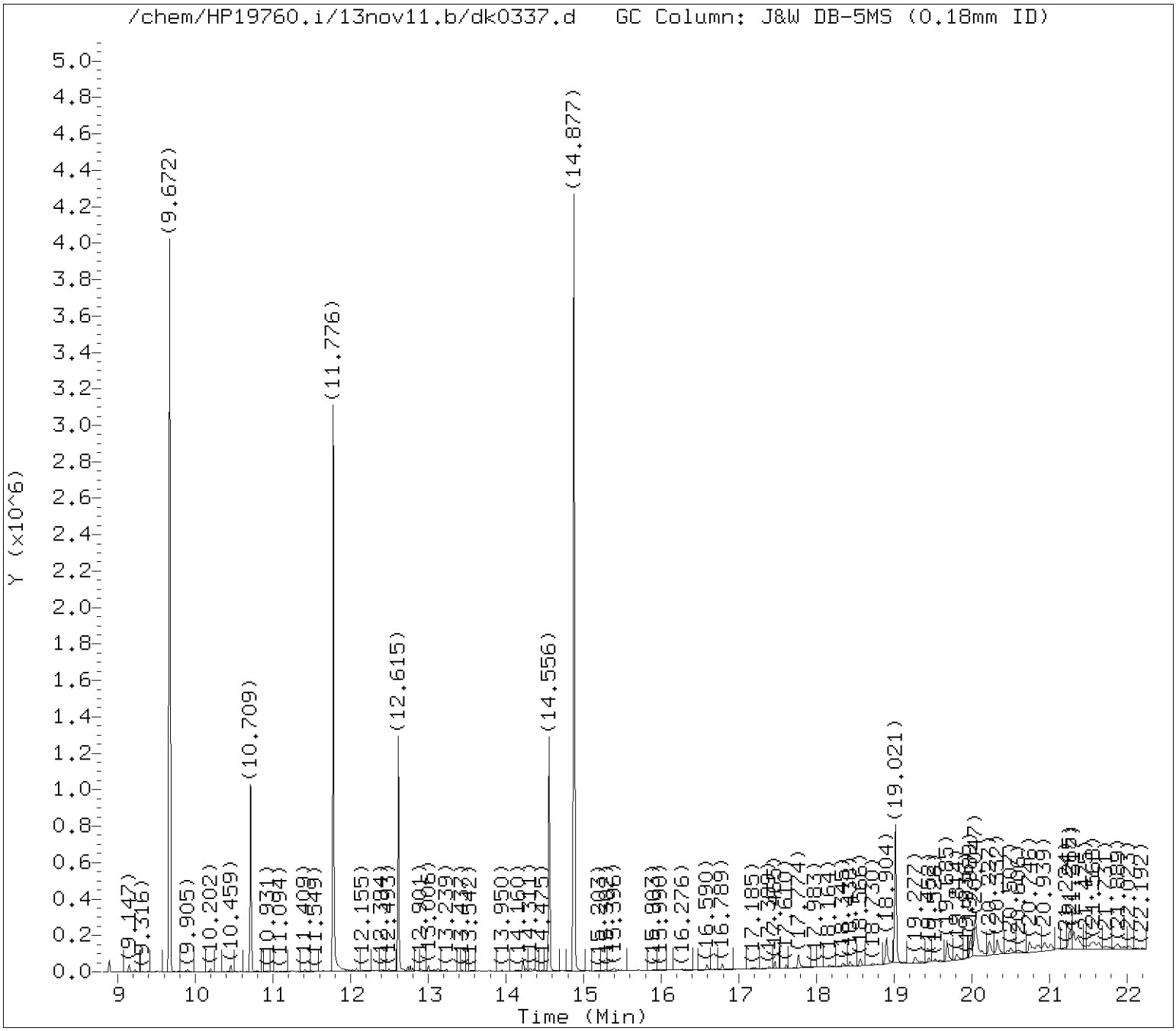
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: Acenaphthene-d10 at 10.709 minutes
Chromatogram Start Time (min.): 9.310
Chromatogram End Time (min.): 11.662

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

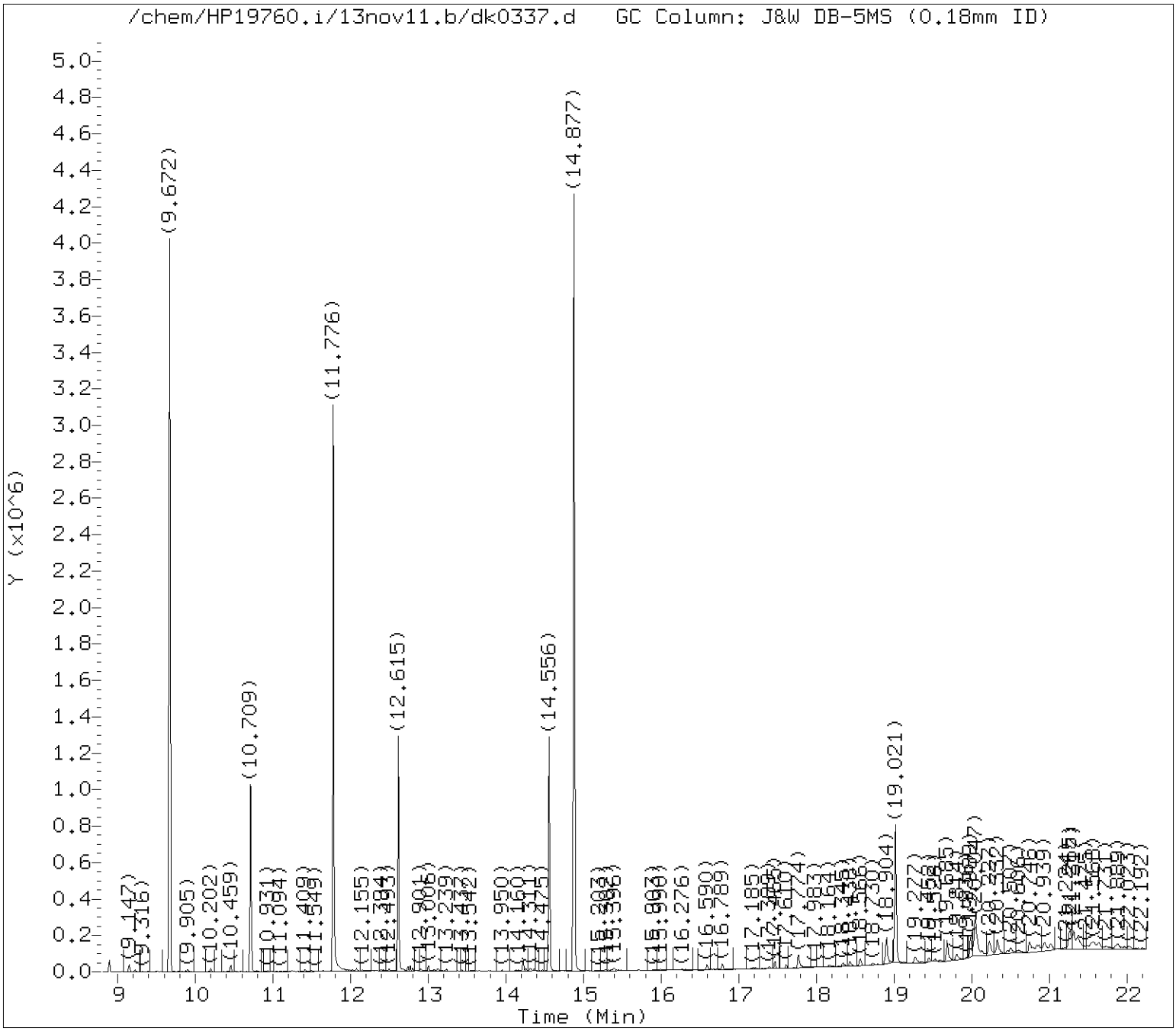
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.662
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

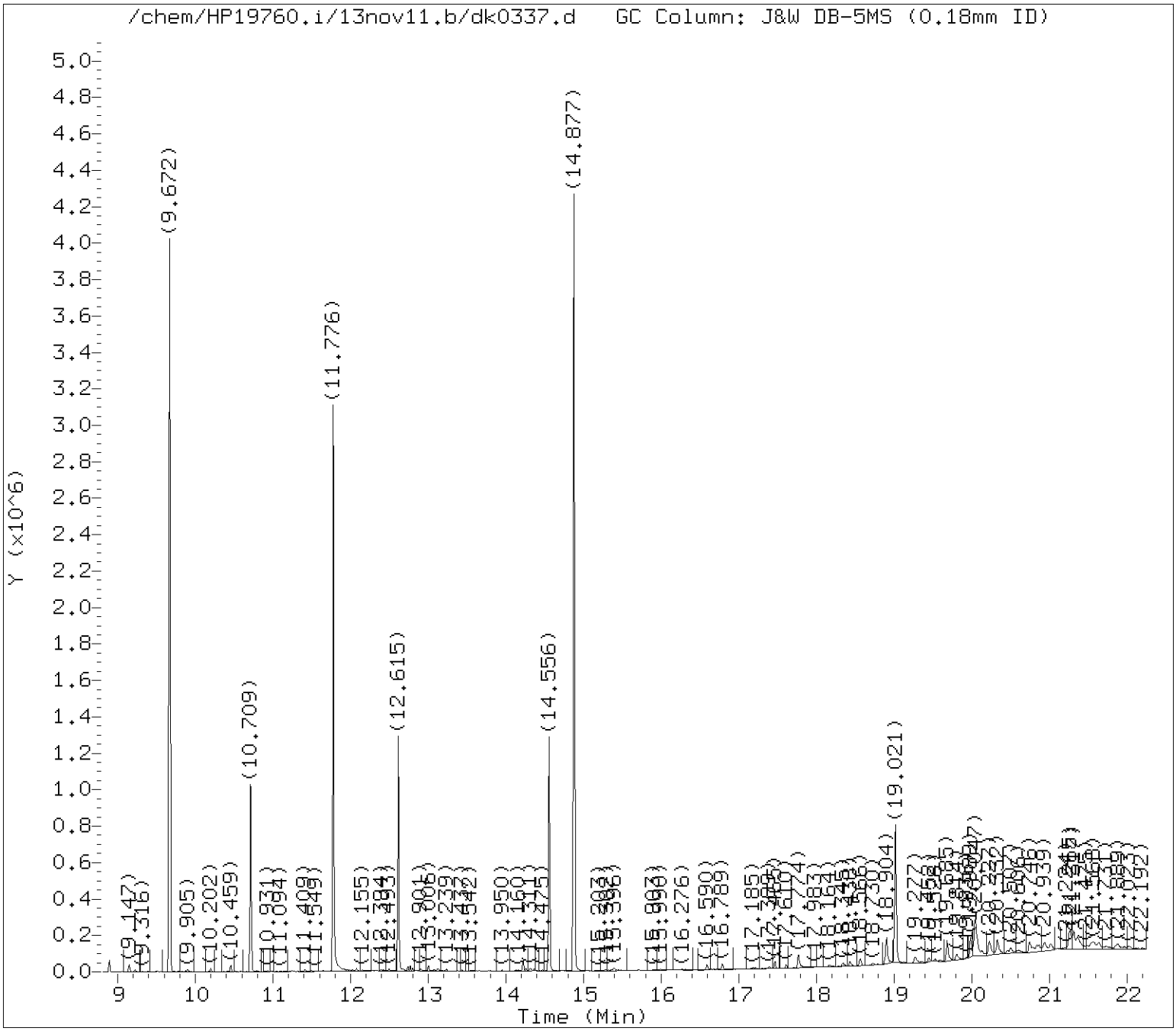
Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0337.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 11:43 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:47 jmg00346

Sample Name: R2N52 Lab Sample ID: 7265224

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0337.d
Lab Smp Id: 7265224 Client Smp ID: R2N52
Inj Date : 11-NOV-2013 11:43
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2N52;7265224;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;240;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 8 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 18
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	240.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.947	779505	5.000
* 172 Perylene-d12	19.021	1228676	5.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
2.771	215574	1.38276336	5.76151	0		0	19
Unknown					CAS #:		
18.904	283724	1.15459294	4.81080	0		0	172

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
20.047	672831	2.73803274	11.40846	0		0	172
Unknown				CAS #:			
20.746	319968	1.30208261	5.42534	0		0	172
Unknown				CAS #:			
20.939	247829	1.00852021	4.20216	0		0	172
Unknown				CAS #:			
21.265	282757	1.15065639	4.79440	0		0	172
Unknown				CAS #:			
21.317	484135	1.97014867	8.20895	0		0	172
Unknown				CAS #:			
21.568	358863	1.46036296	6.08484	0		0	172

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

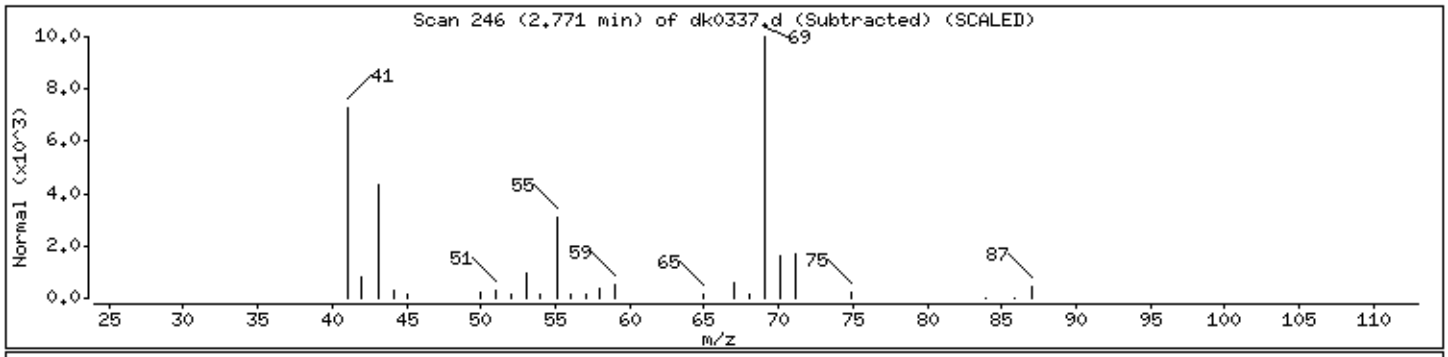
Client ID: R2N52 Instrument: HP19760.i

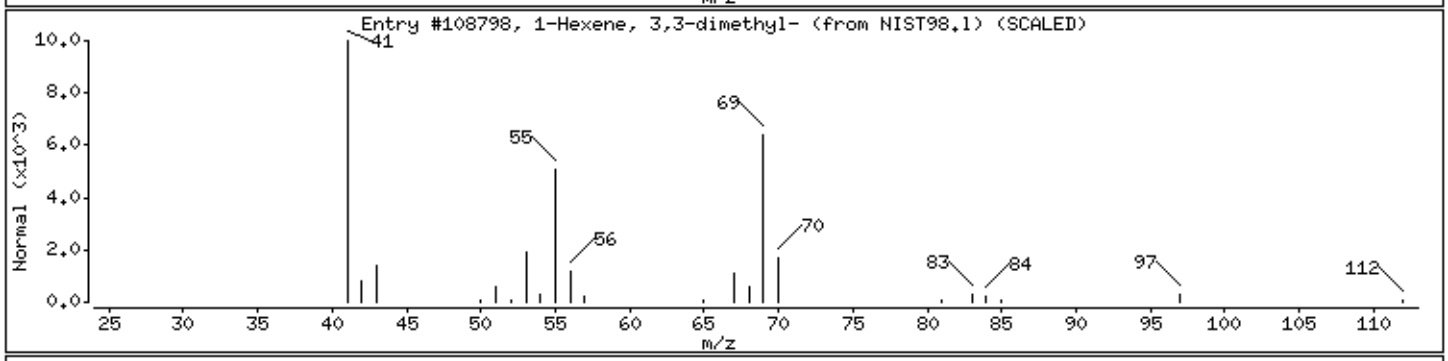
Sample Info: R2N52;7265224;1;0;SAMPLE;;;

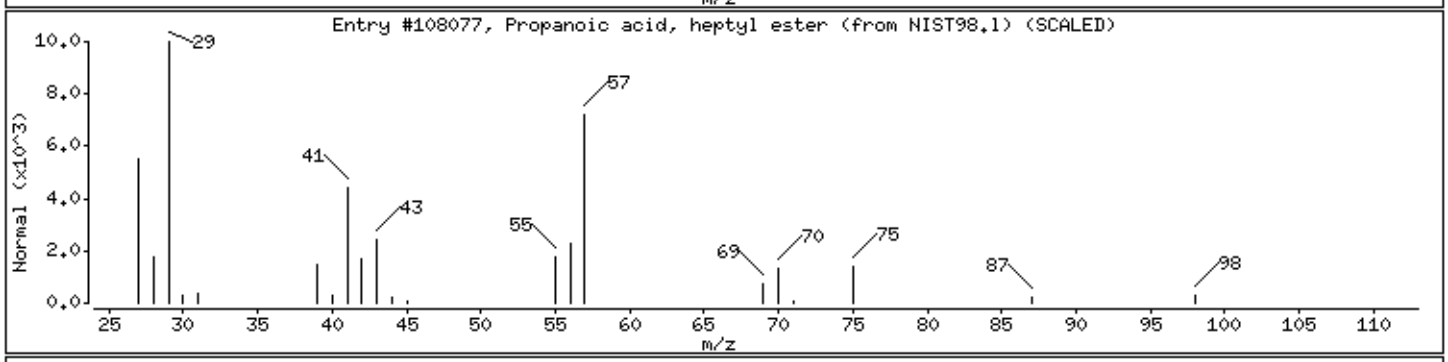
Volume Injected (uL): 0.5 Operator: jmg00346

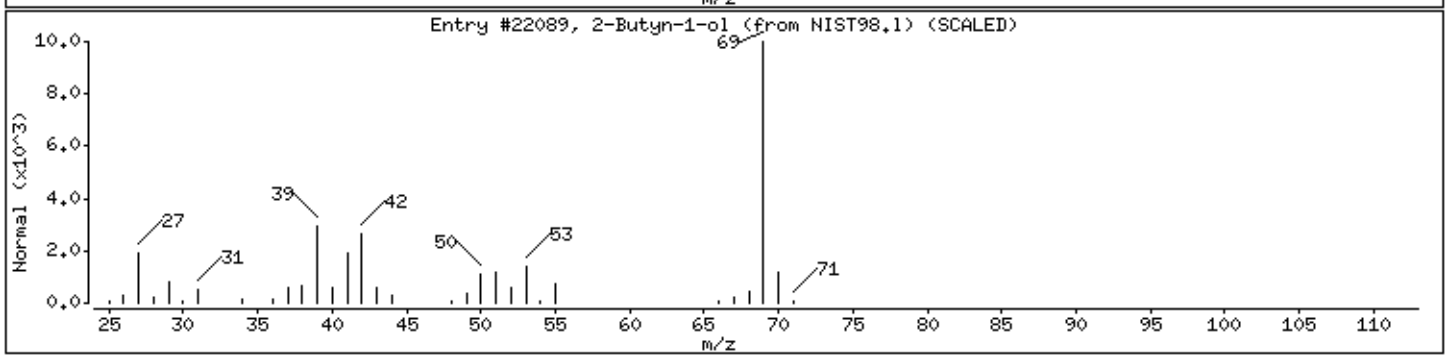
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1-Hexene, 3,3-dimethyl-	3404-77-1	NIST98.1	108798	10	C8H16	112
Propanoic acid, heptyl ester	2216-81-1	NIST98.1	108077	9	C10H20O2	172
2-Butyn-1-ol	764-01-2	NIST98.1	22089	7	C4H6O	70









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

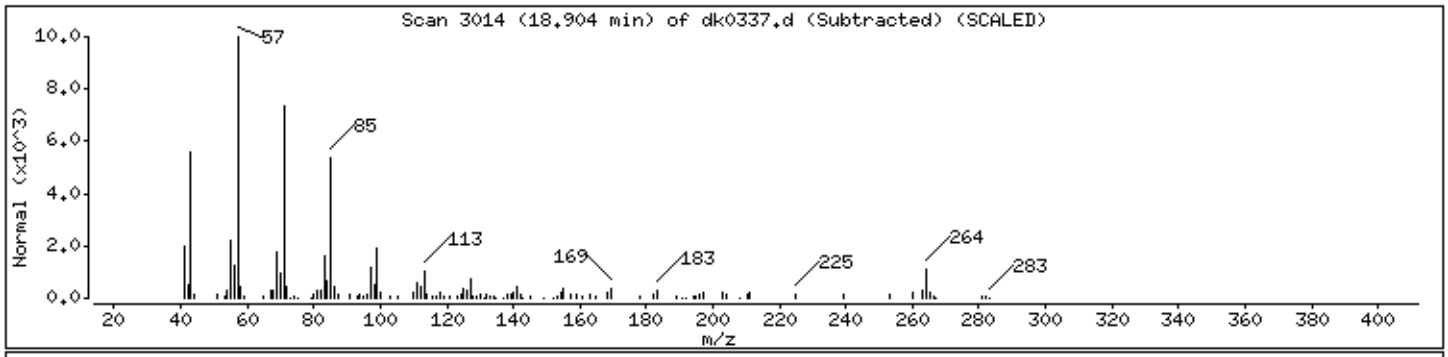
Client ID: R2N52 Instrument: HP19760.i

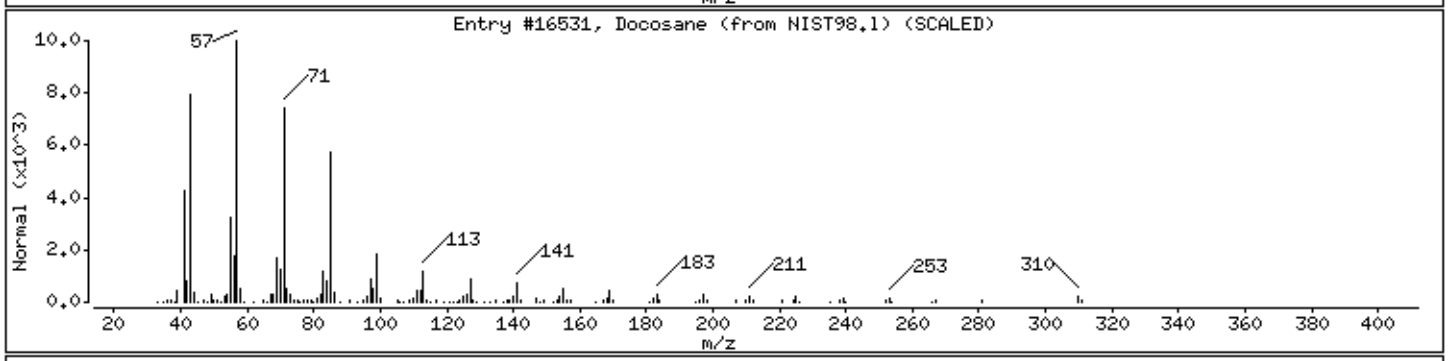
Sample Info: R2N52;7265224;1;0;SAMPLE;;;

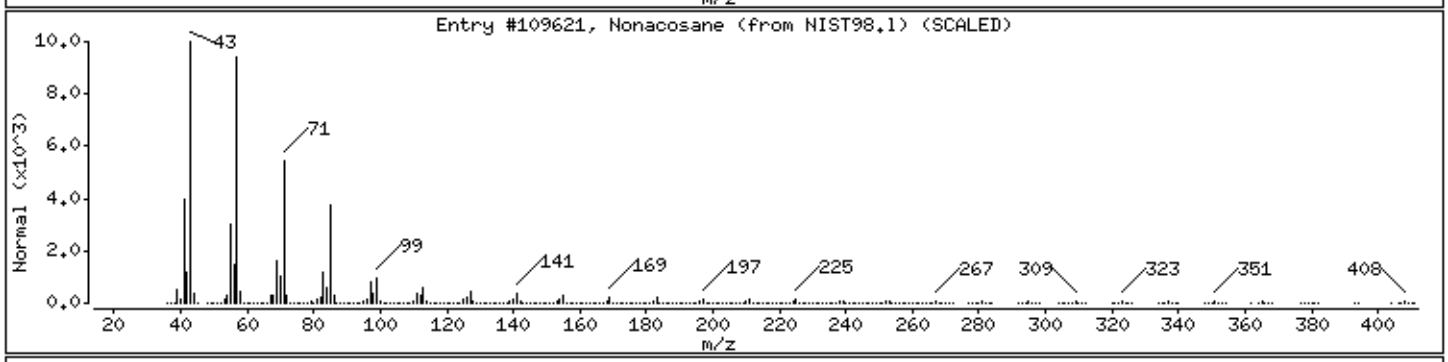
Volume Injected (uL): 0.5 Operator: jmg00346

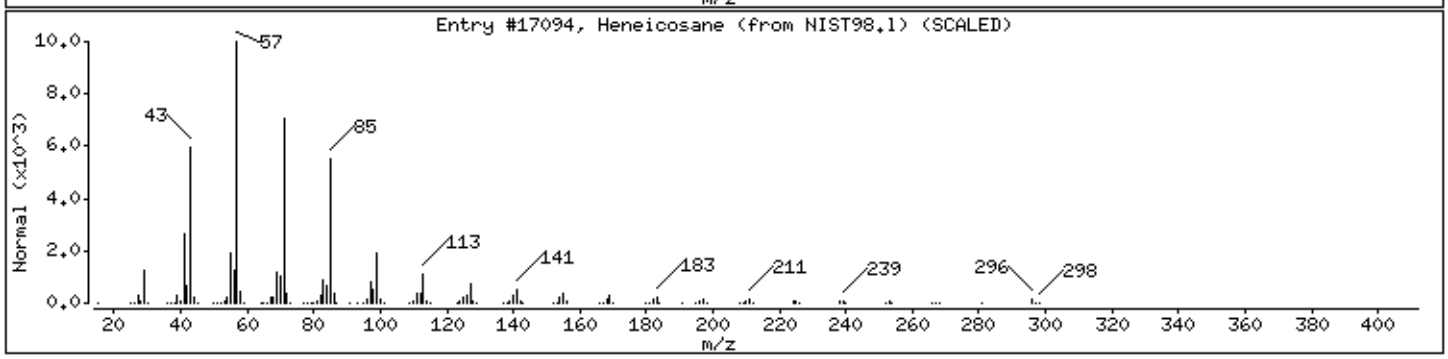
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Docosane	629-97-0	NIST98.1	16531	90	C22H46	310
Nonacosane	630-03-5	NIST98.1	109621	90	C29H60	408
Heneicosane	629-94-7	NIST98.1	17094	90	C21H44	296









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

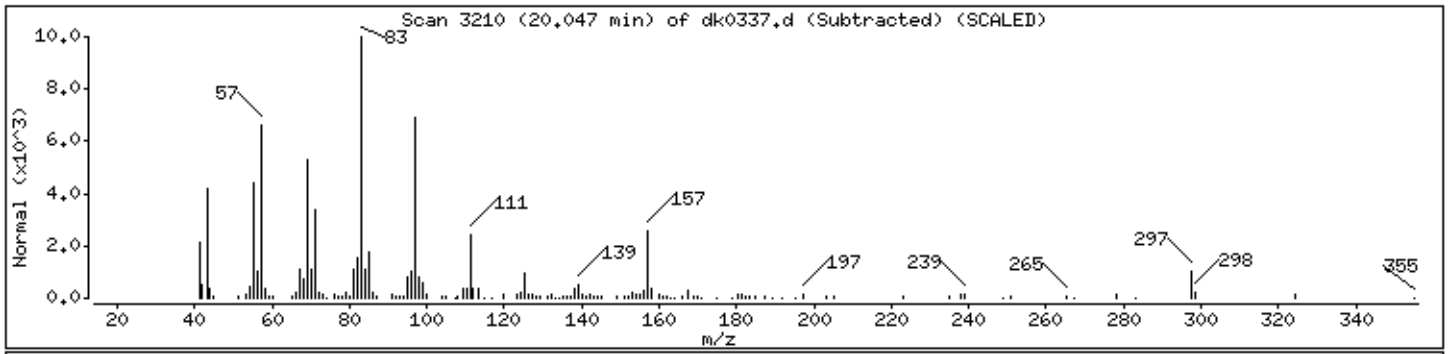
Client ID: R2N52 Instrument: HP19760.i

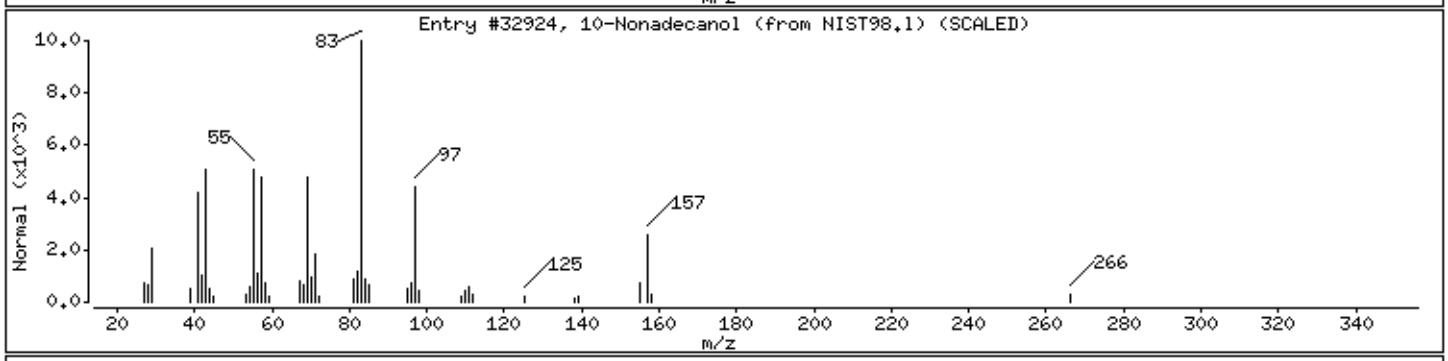
Sample Info: R2N52;7265224;1;0;SAMPLE;;;

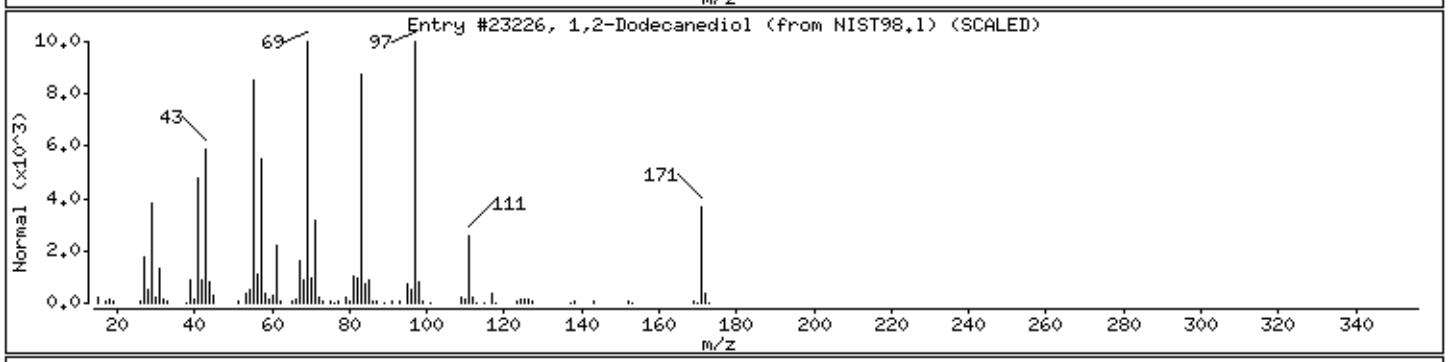
Volume Injected (uL): 0.5 Operator: jmg00346

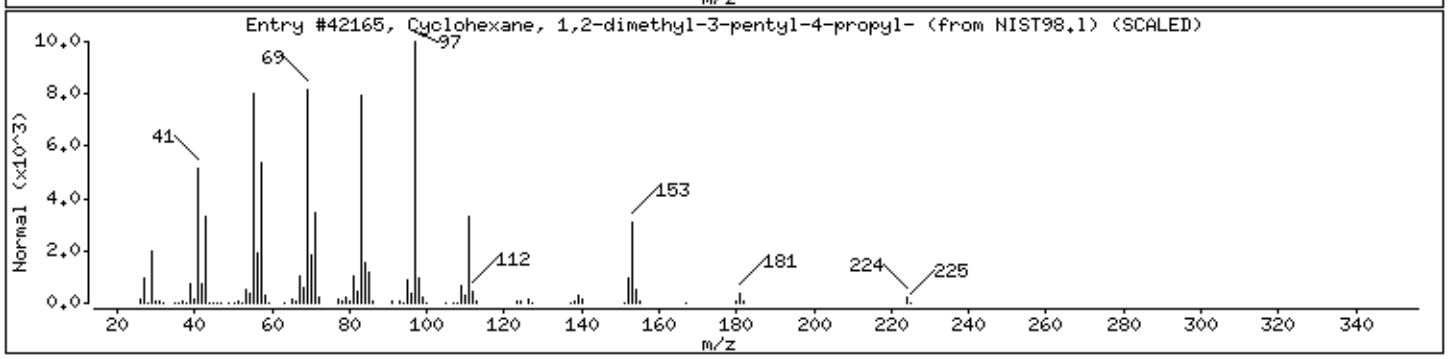
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
10-Nonadecanol	16840-84-9	NIST98.1	32924	58	C19H40O	284
1,2-Dodecanediol	1119-87-5	NIST98.1	23226	43	C12H26O2	202
Cyclohexane, 1,2-dimethyl-3-pentyl-4-pro	62376-17-4	NIST98.1	42165	38	C16H32	224









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

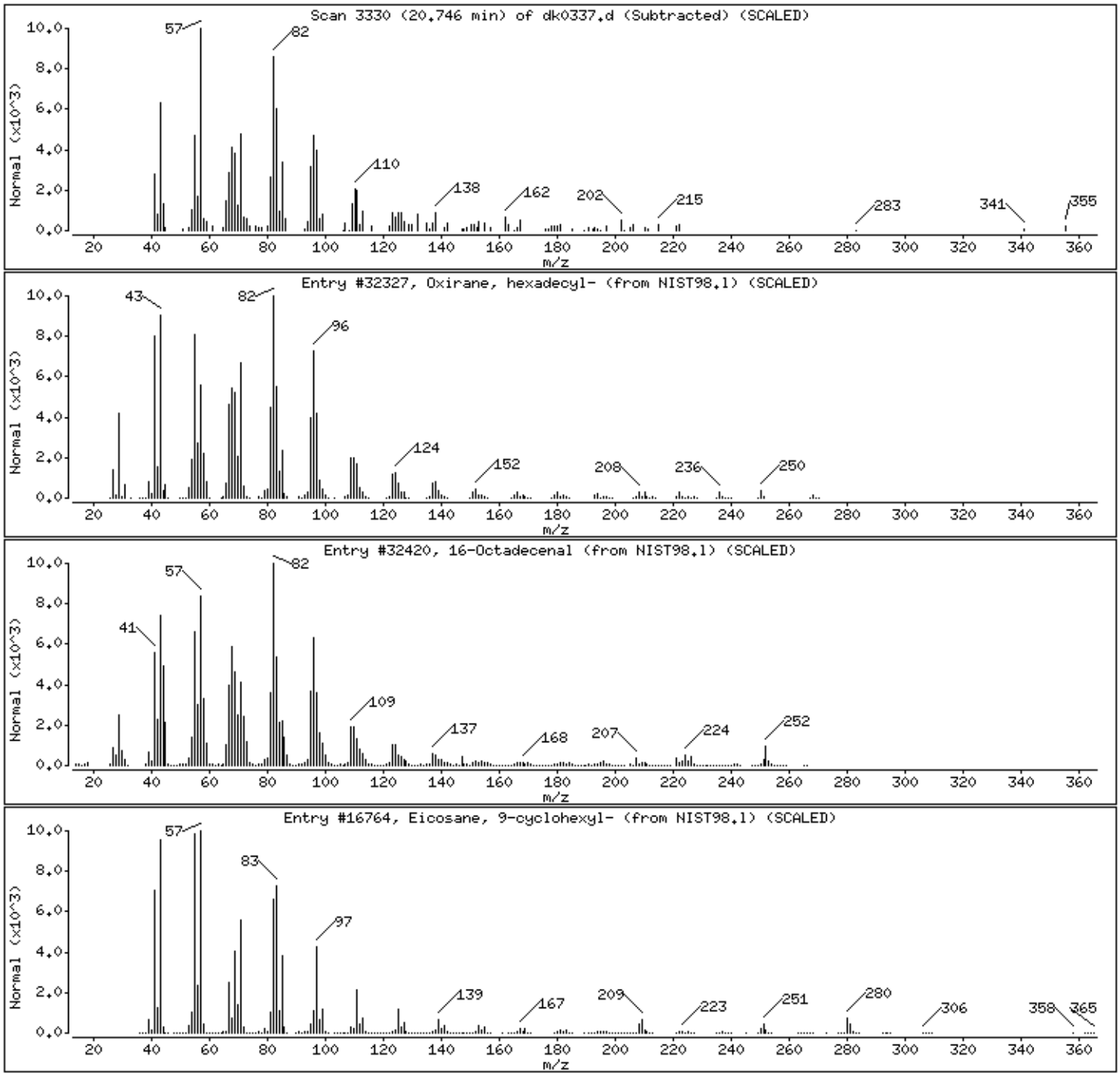
Client ID: R2N52 Instrument: HP19760.i

Sample Info: R2N52;7265224;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Oxirane, hexadecyl-	7390-81-0	NIST98.1	32327	58	C18H36O	268
16-Octadecenal	56554-87-1	NIST98.1	32420	53	C18H34O	266
Eicosane, 9-cyclohexyl-	4443-61-2	NIST98.1	16764	43	C26H52	364



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

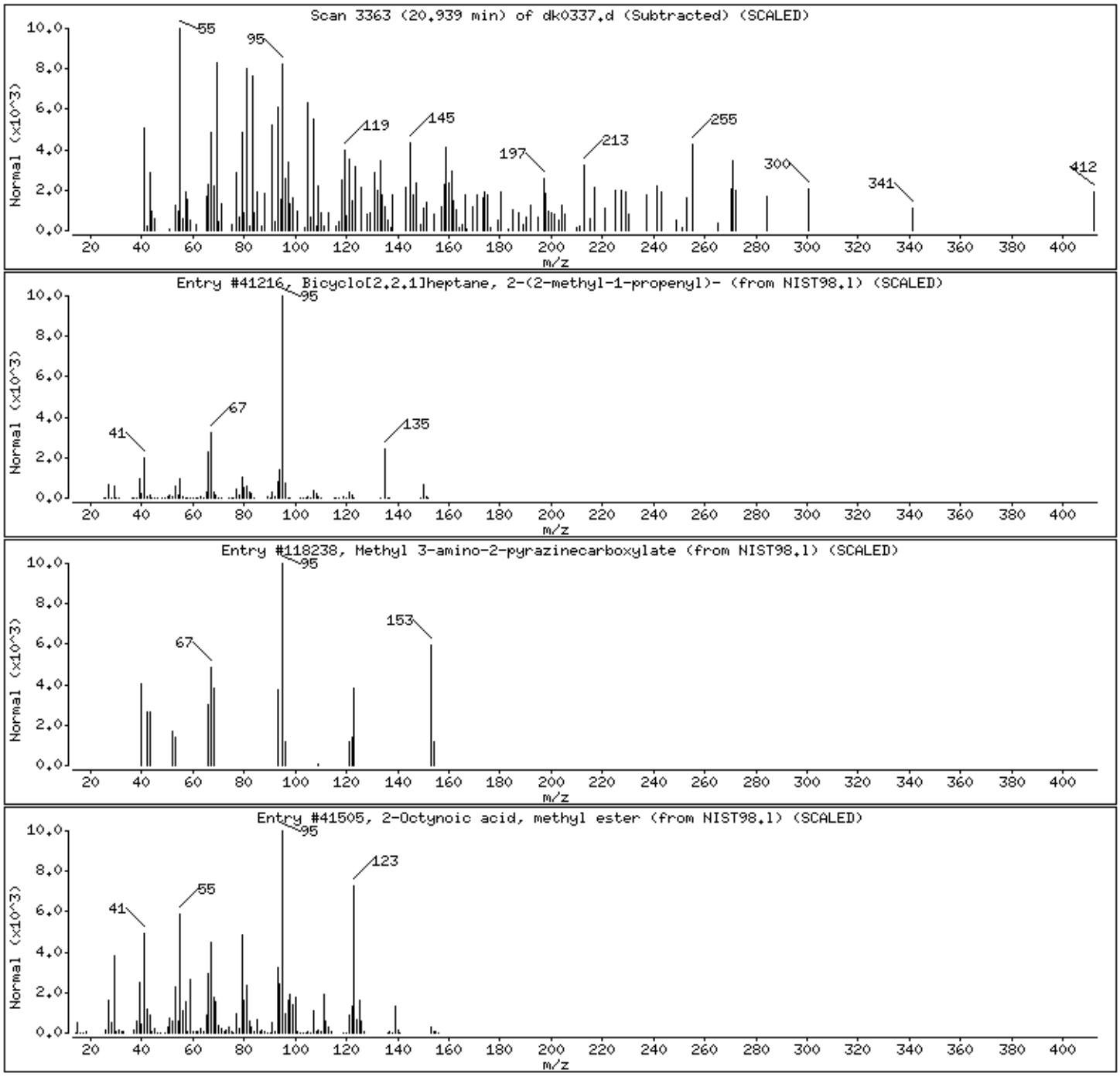
Client ID: R2N52 Instrument: HP19760.i

Sample Info: R2N52;7265224;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Bicyclo[2.2.1]heptane, 2-(2-methyl-1-pro	61142-27-6	NIST98.1	41216	27	C11H18	150
Methyl 3-amino-2-pyrazinecarboxylate	16298-03-6	NIST98.1	118238	27	C6H7N3O2	153
2-Octynoic acid, methyl ester	111-12-6	NIST98.1	41505	27	C9H14O2	154



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

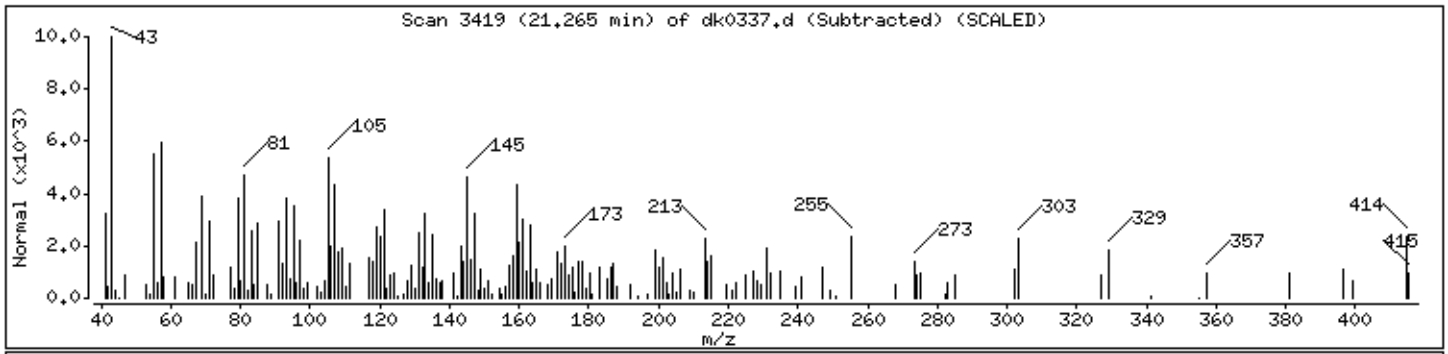
Client ID: R2N52 Instrument: HP19760.i

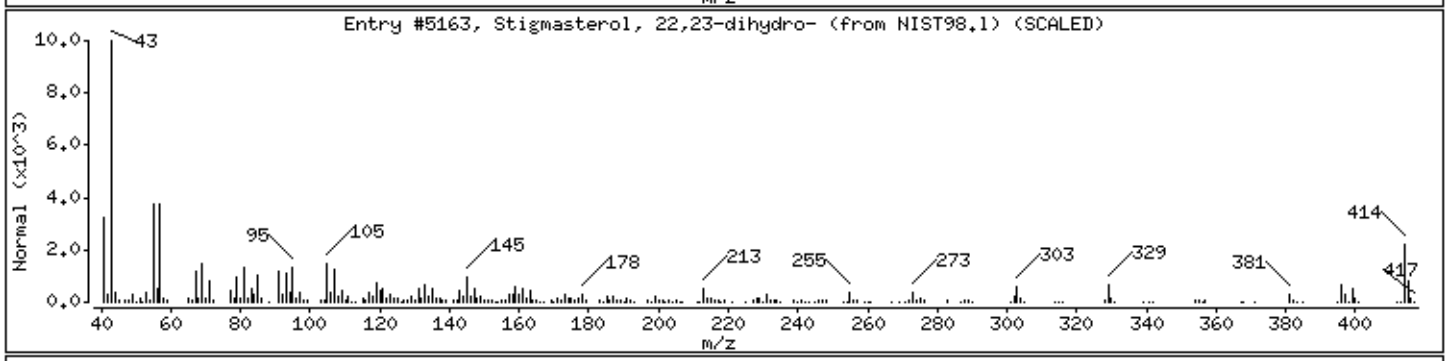
Sample Info: R2N52;7265224;1;0;SAMPLE;;;

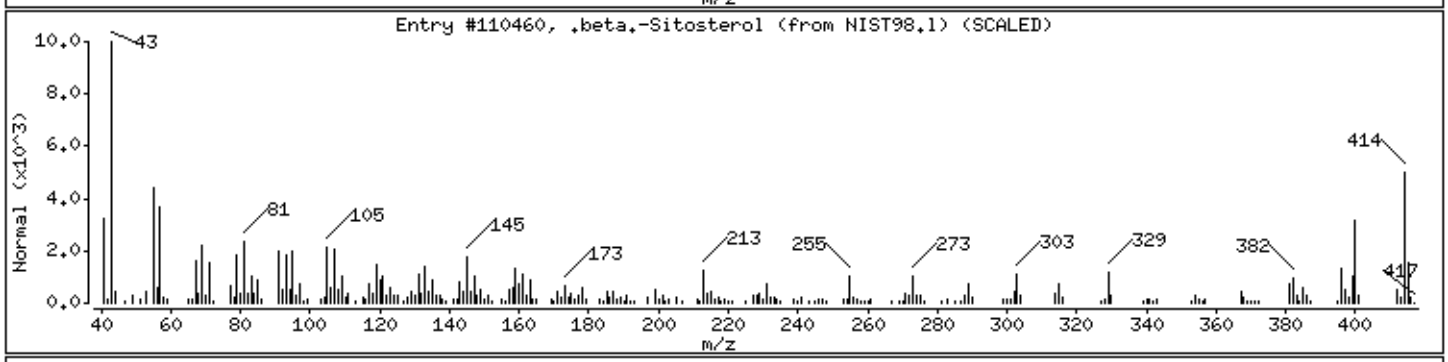
Volume Injected (uL): 0.5 Operator: jmg00346

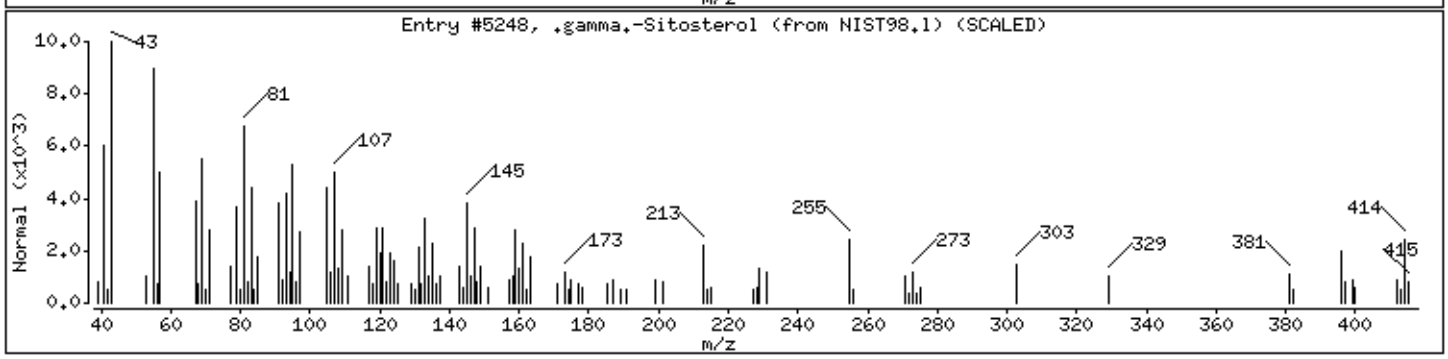
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST98.1	5163	97	C29H50O	414
.beta.-Sitosterol	83-46-5	NIST98.1	110460	70	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST98.1	5248	68	C29H50O	414









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

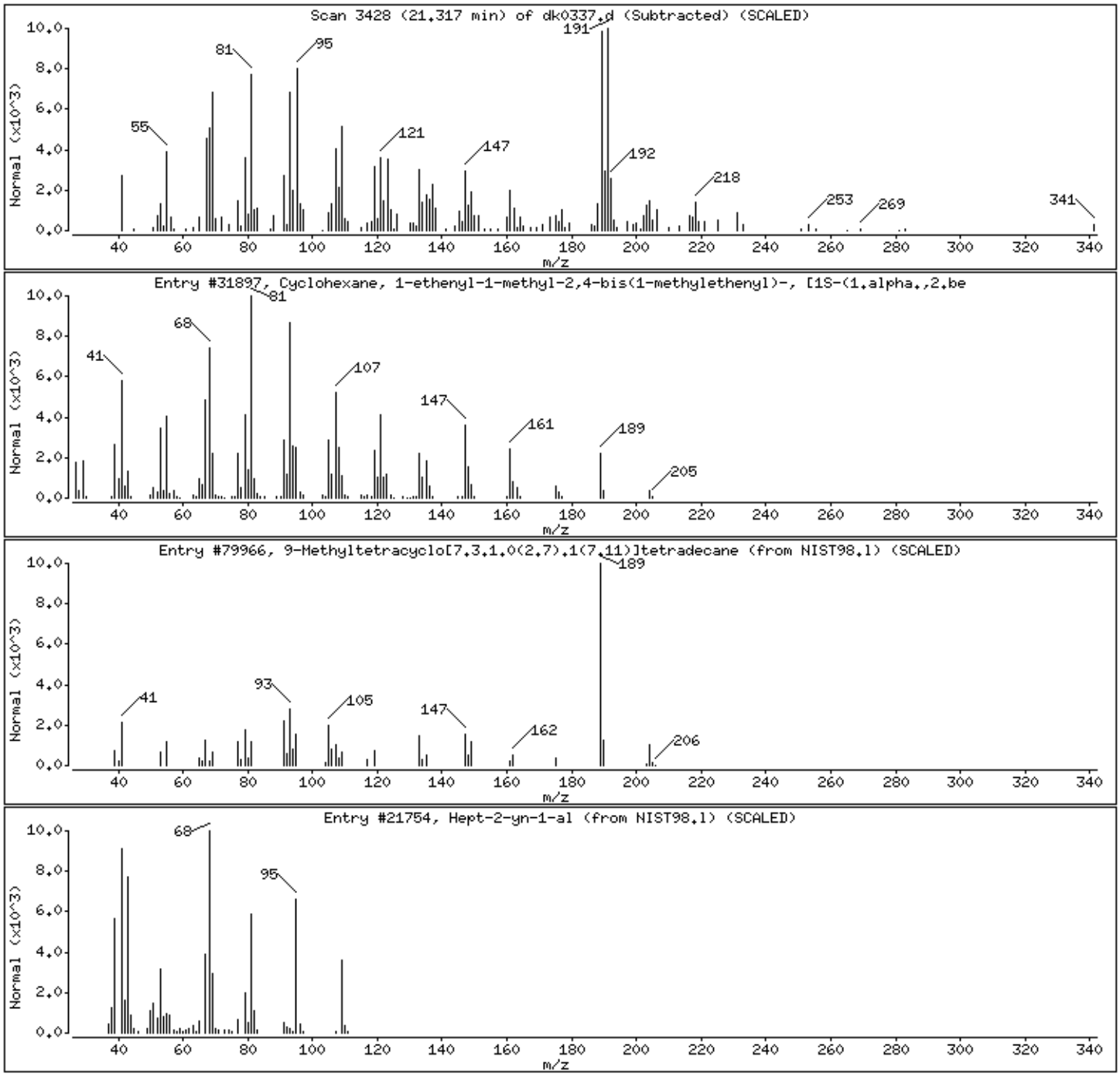
Client ID: R2N52 Instrument: HP19760.i

Sample Info: R2N52;7265224;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Cyclohexane, 1-ethenyl-1-methyl-2,4-bis(	515-13-9	NIST98.1	31897	35	C15H24	204
9-Methyltetracyclo[7.3.1.0(2.7).1(7.11)]	1000215-30-5	NIST98.1	79966	35	C15H24	204
Hept-2-yn-1-al	1846-67-9	NIST98.1	21754	27	C7H10O	110



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0337.d

Date : 11-NOV-2013 11:43

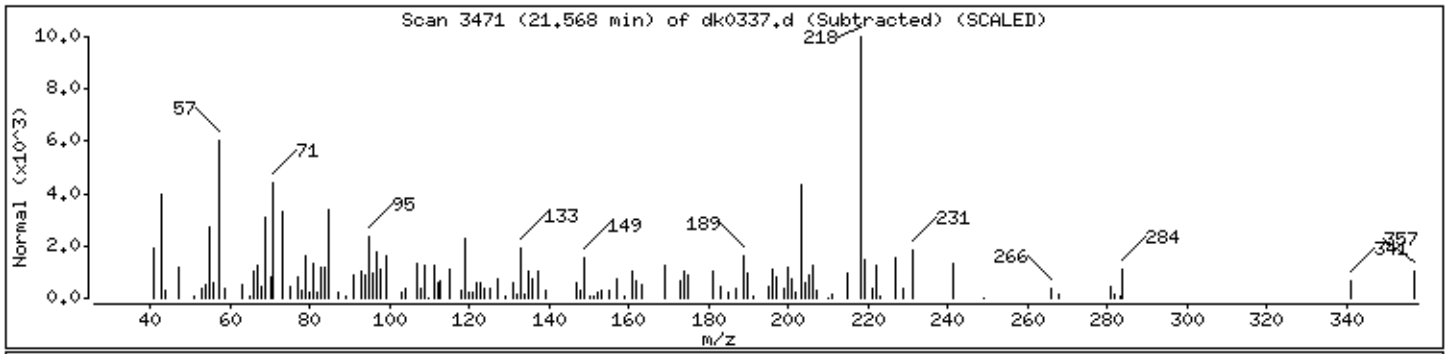
Client ID: R2N52 Instrument: HP19760.i

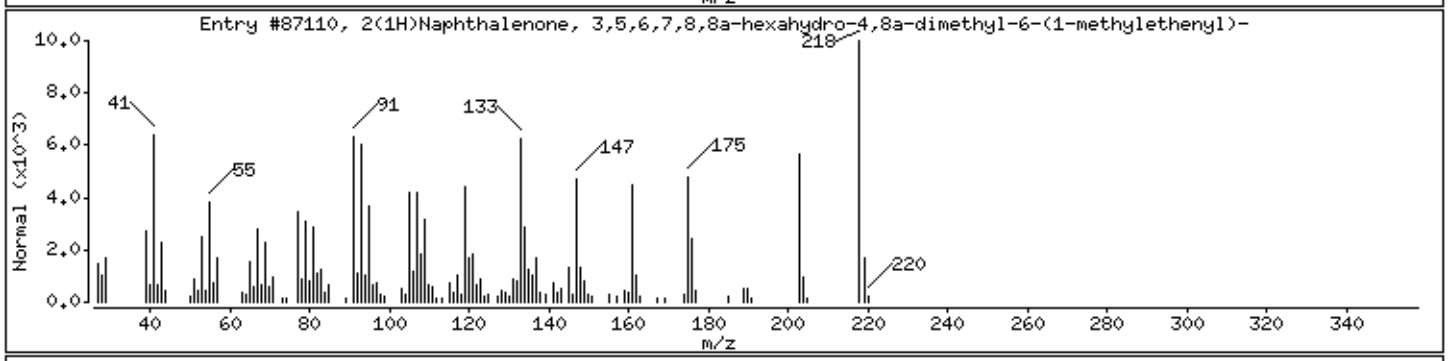
Sample Info: R2N52;7265224;1;0;SAMPLE;;;

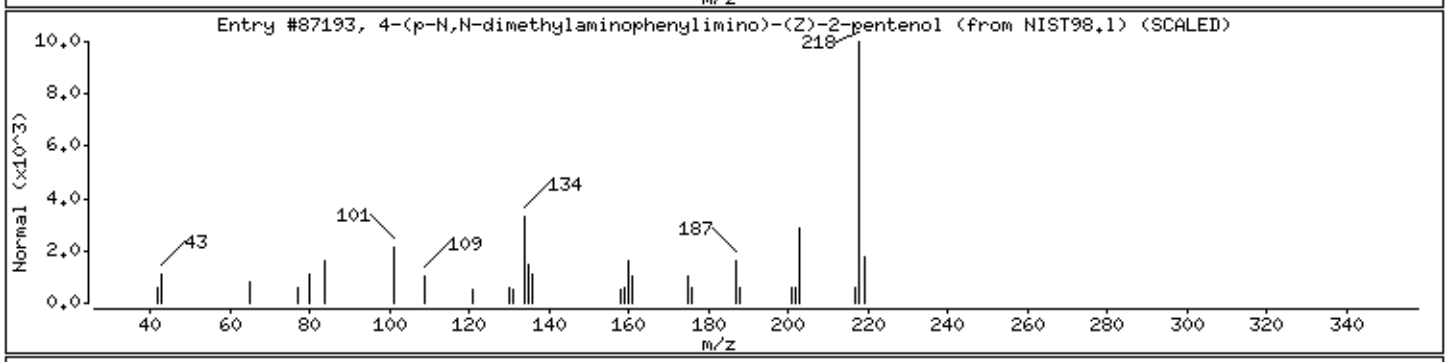
Volume Injected (uL): 0.5 Operator: jmg00346

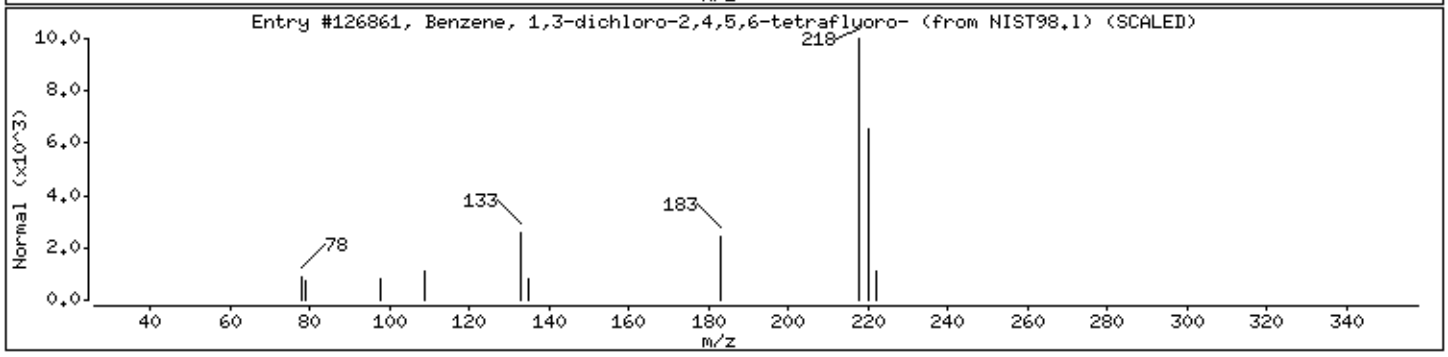
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2(1H)Naphthalenone, 3,5,6,7,8,8a-hexahyd	86941-63-1	NIST98.1	87110	47	C15H22O	218
4-(p-N,N-dimethylaminophenylimino)-(Z)-2	1000100-07-8	NIST98.1	87193	42	C13H18N2O	218
Benzene, 1,3-dichloro-2,4,5,6-tetrafluor	1198-61-4	NIST98.1	126861	38	C6Cl2F4	218









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:56.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0486.d
Data file Sample Info. Line: R2041;7265225;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Injection date and time: **13-NOV-2013 19:04**
Instrument ID: **HP10623.i** Batch: **13310SLF**

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201(0.000)	540	152	138554 (16)	20.00	
52) Naphthalene-d8	6.437(0.000)	741	136	646752 (14)	20.00	
98) Acenaphthene-d10	8.152(-0.006)	1020	164	393344 (8)	20.00	
135) Phenanthrene-d10	9.591(0.000)	1254	188	698742 (1)	20.00	
167) Pyrene-d10	10.975(0.000)	1479	212	803275 (-5)	20.00	
175) Perylene-d12	13.575(0.000)	1902	264	575274 (-18)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742(0.000)	82	228028	16.365	82%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.507(0.001)	172	460287	18.611	93%		69 - 120
156) Terphenyl-d14	(5)	11.171(0.000)	244	541854	18.869	94%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.616(-0.000)	178	4448M	0.109	109.50			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.772(-0.000)	202	5006M	0.110	110.21			0.1
154) Pyrene	(5)	10.993(0.000)	202	4769	0.107	106.91			0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)			Not Detected					0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0486.d Injection date and time: **13-NOV-2013 19:04**
Data file Sample Info. Line: R2041;7265225;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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BLANK INTENTIONALLY

Total number of targets = 18

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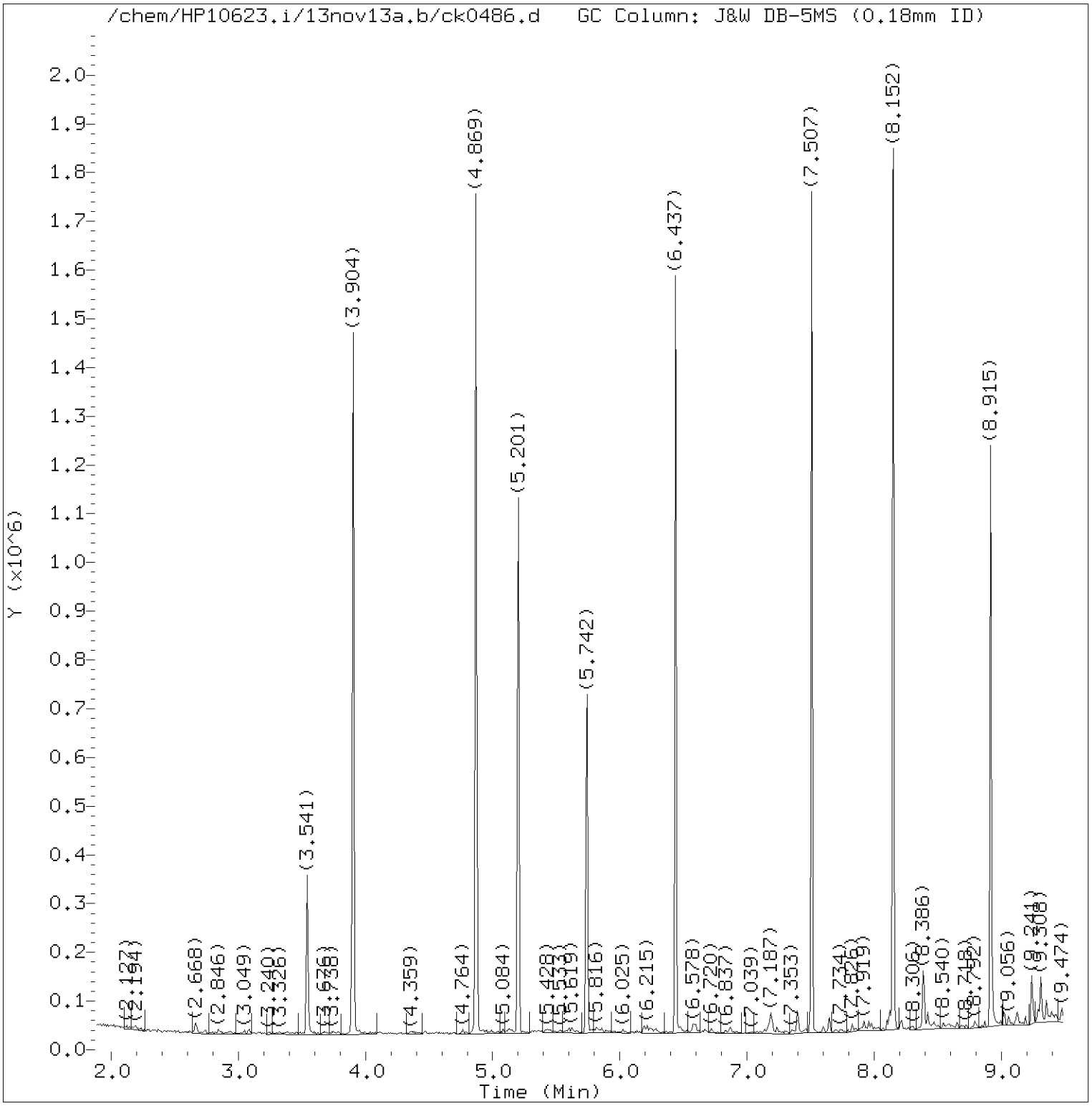
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:31. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

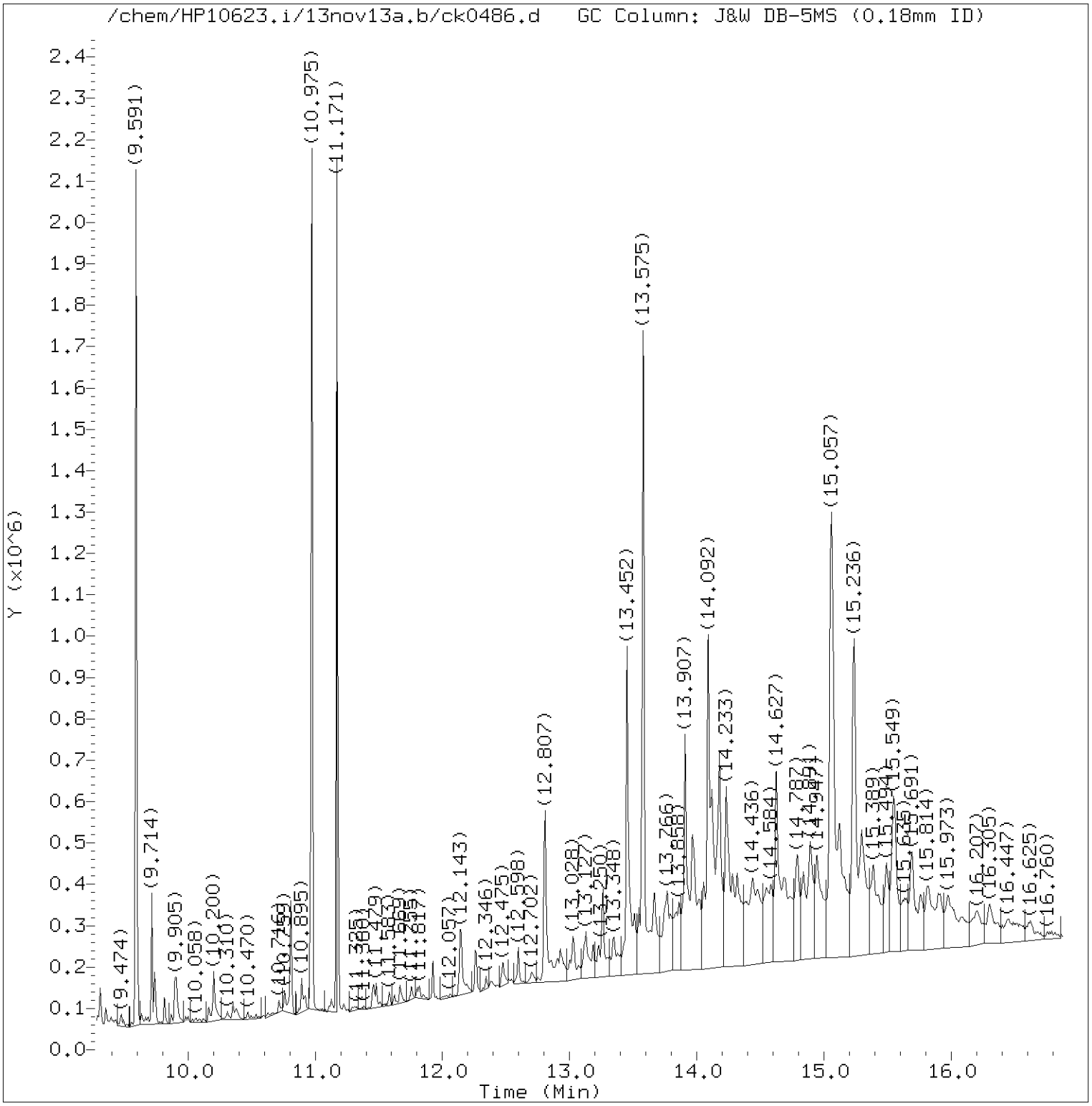
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	138554	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	228028	16.365
52)*Naphthalene-d8	(2)	6.437	136	646752	20.000
78)$2-Fluorobiphenyl	(3)	7.507	172	460287	18.611
98)*Acenaphthene-d10	(3)	8.152	164	393344	20.000
135)*Phenanthrene-d10	(4)	9.591	188	698742	20.000
137) Phenanthrene	(4)	9.616	178	4448M	0.109
147) Fluoranthene	(4)	10.772	202	5006M	0.110
167)*Pyrene-d10	(5)	10.975	212	803275	20.000
154) Pyrene	(5)	10.993	202	4769	0.107
156)$Terphenyl-d14	(5)	11.171	244	541854	18.869
175)*Perylene-d12	(6)	13.575	264	575274	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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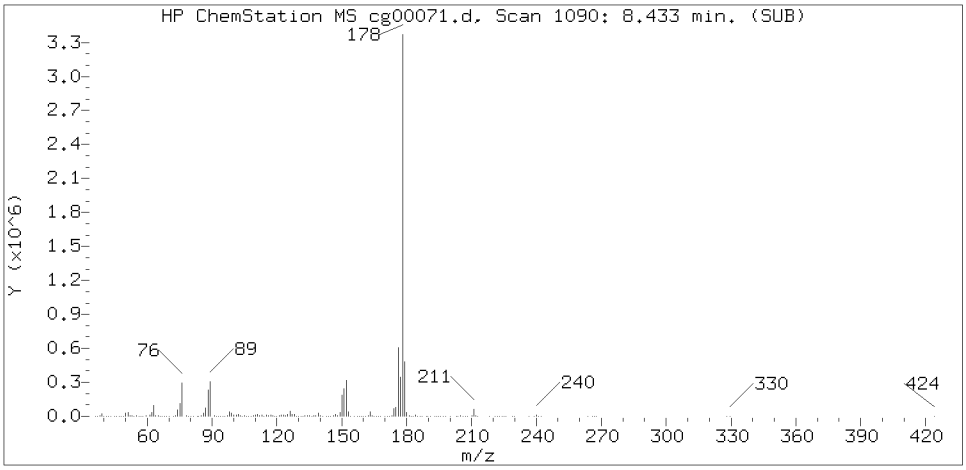
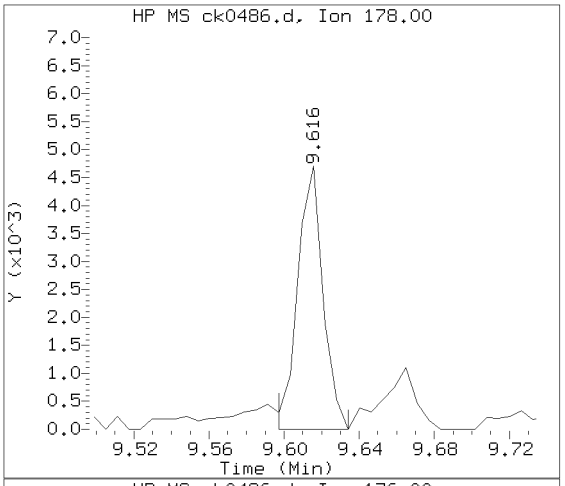
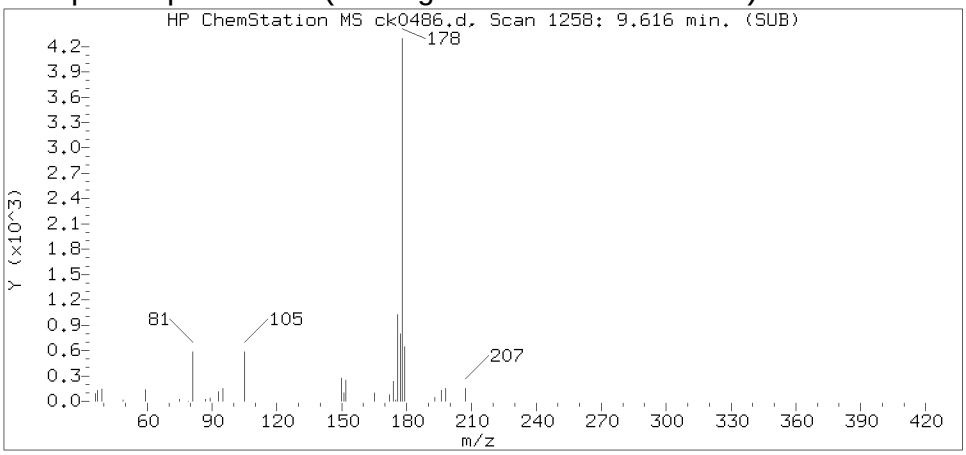
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

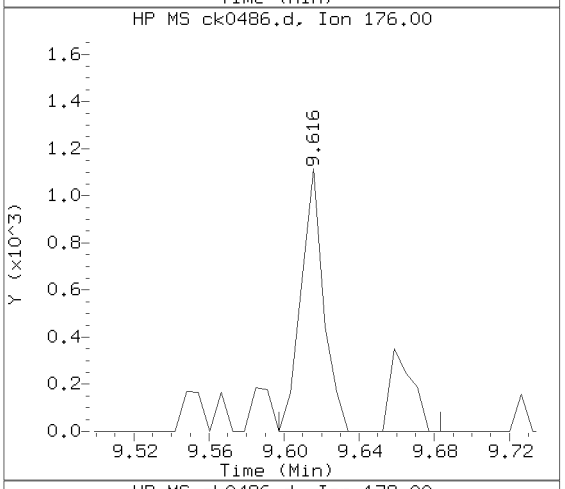
Reference Standard Spectrum for Phenanthrene



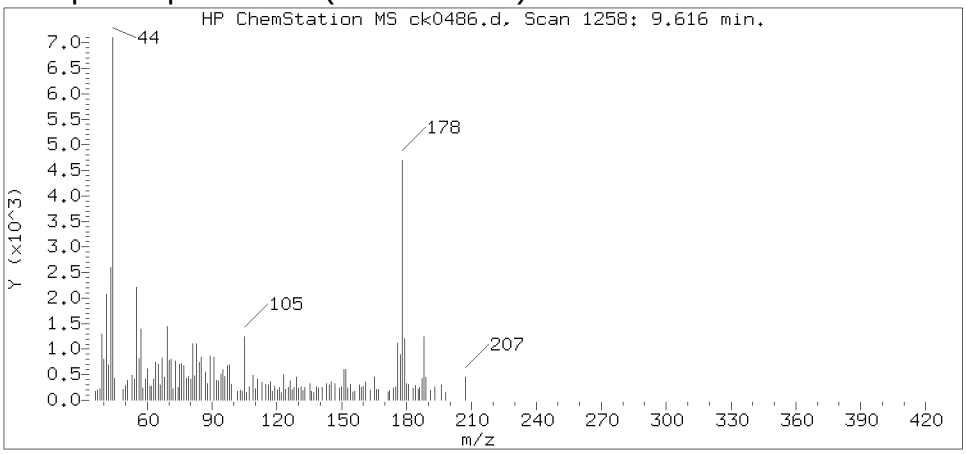


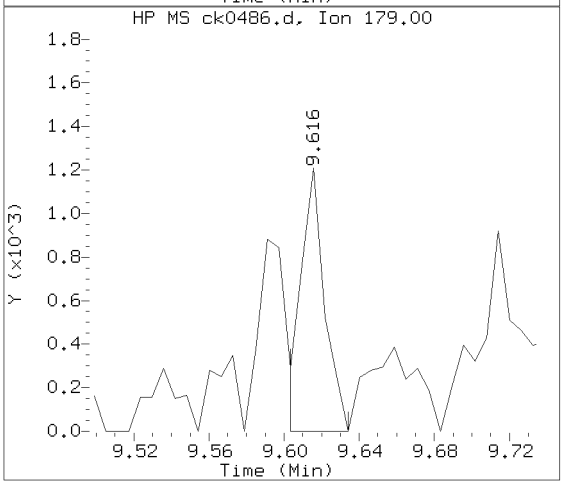
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

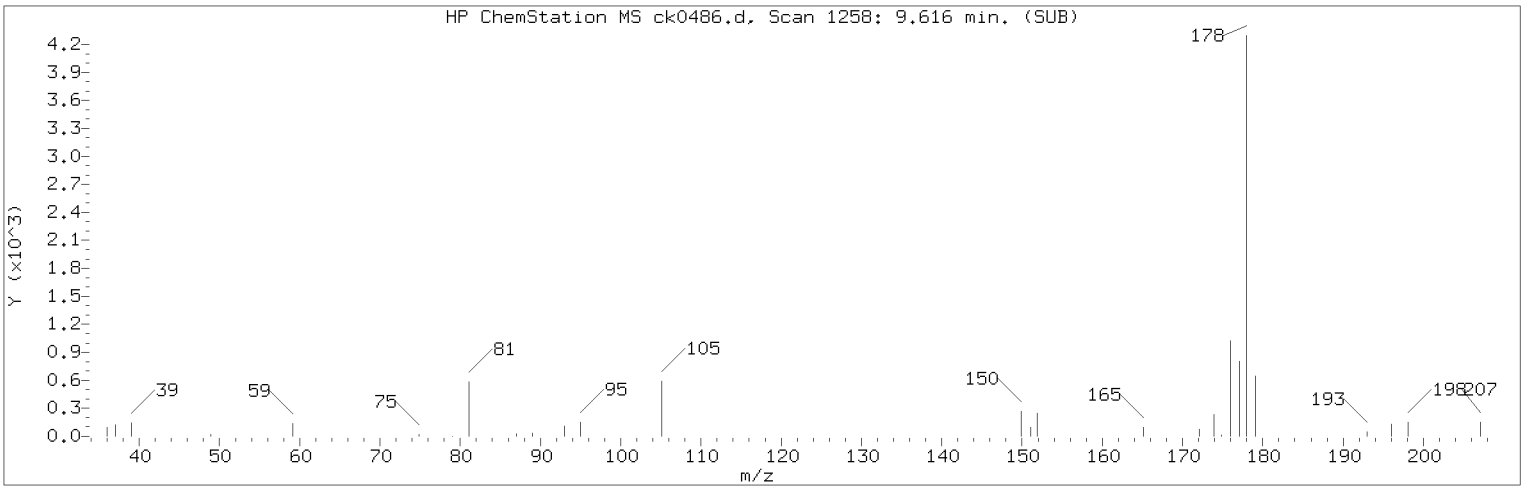
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

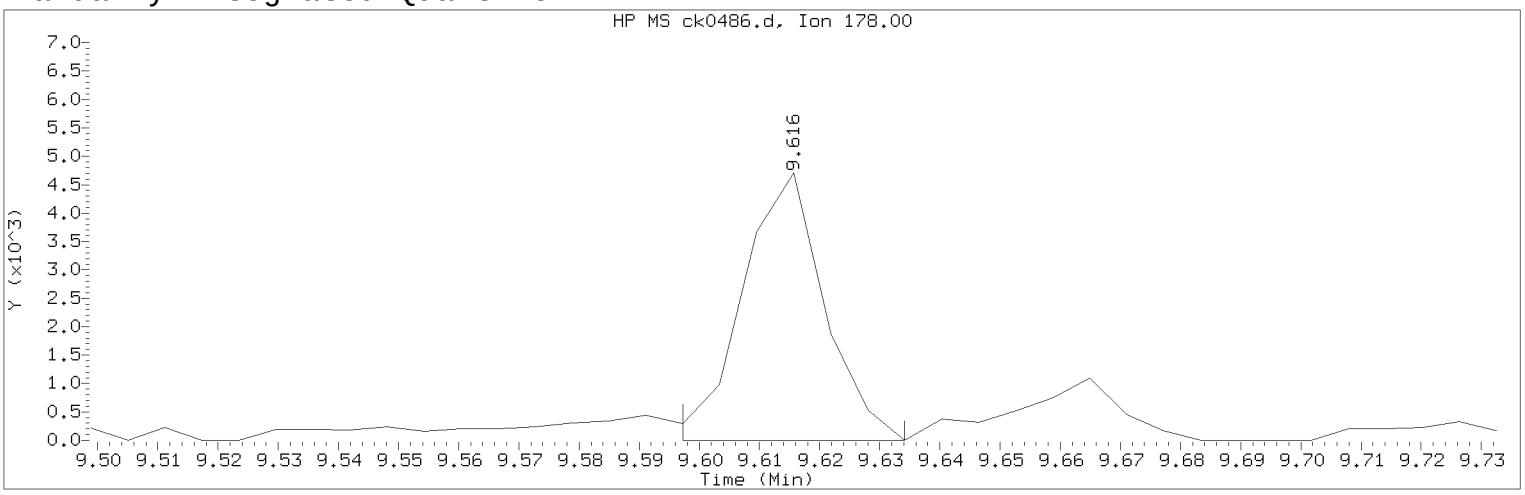
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 4448M
On-column Amount (ng/ul) : 0.1095

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

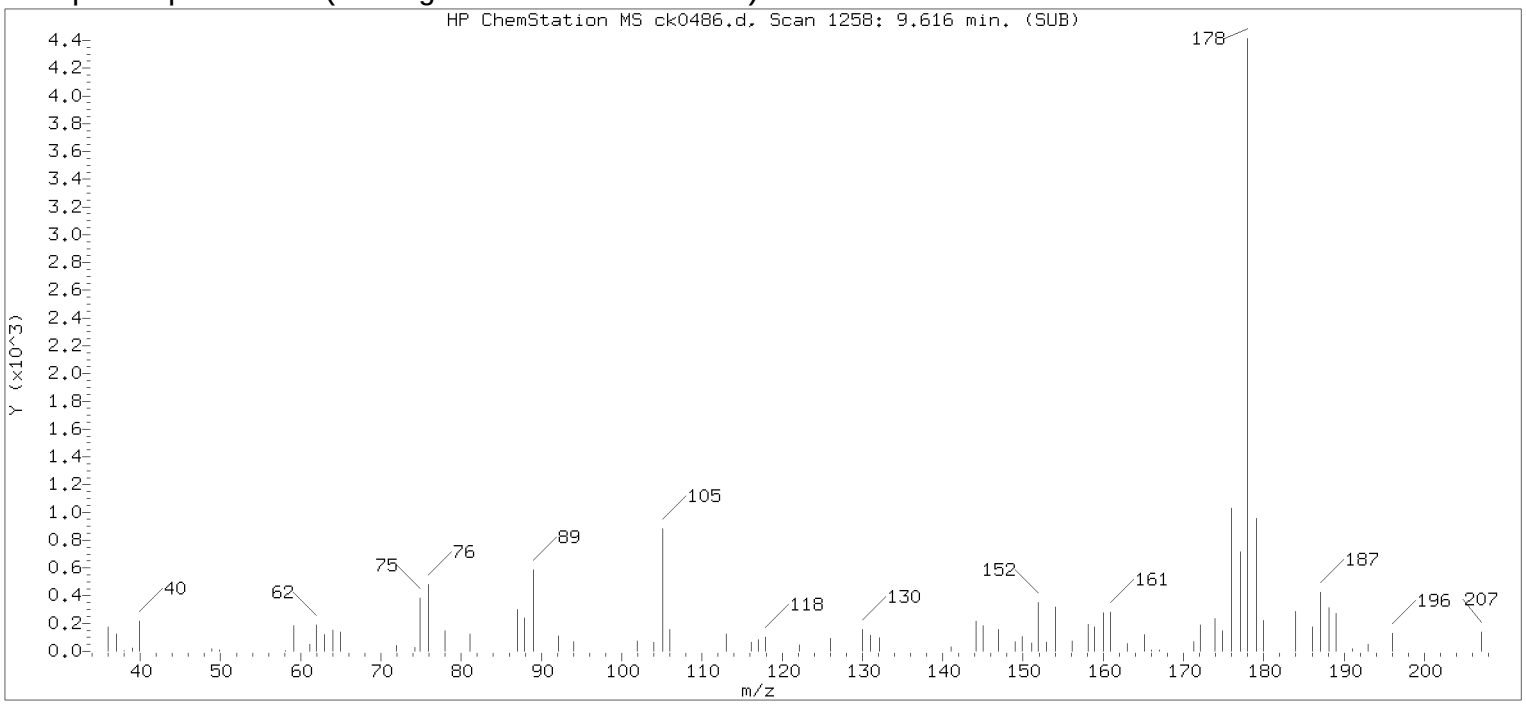
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Quant Ion : 178.00
Area (flag) : 4448M
On-column Amount (ng/ul) : 0.1095
Integration start scan : 1254 Integration stop scan: 1260
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

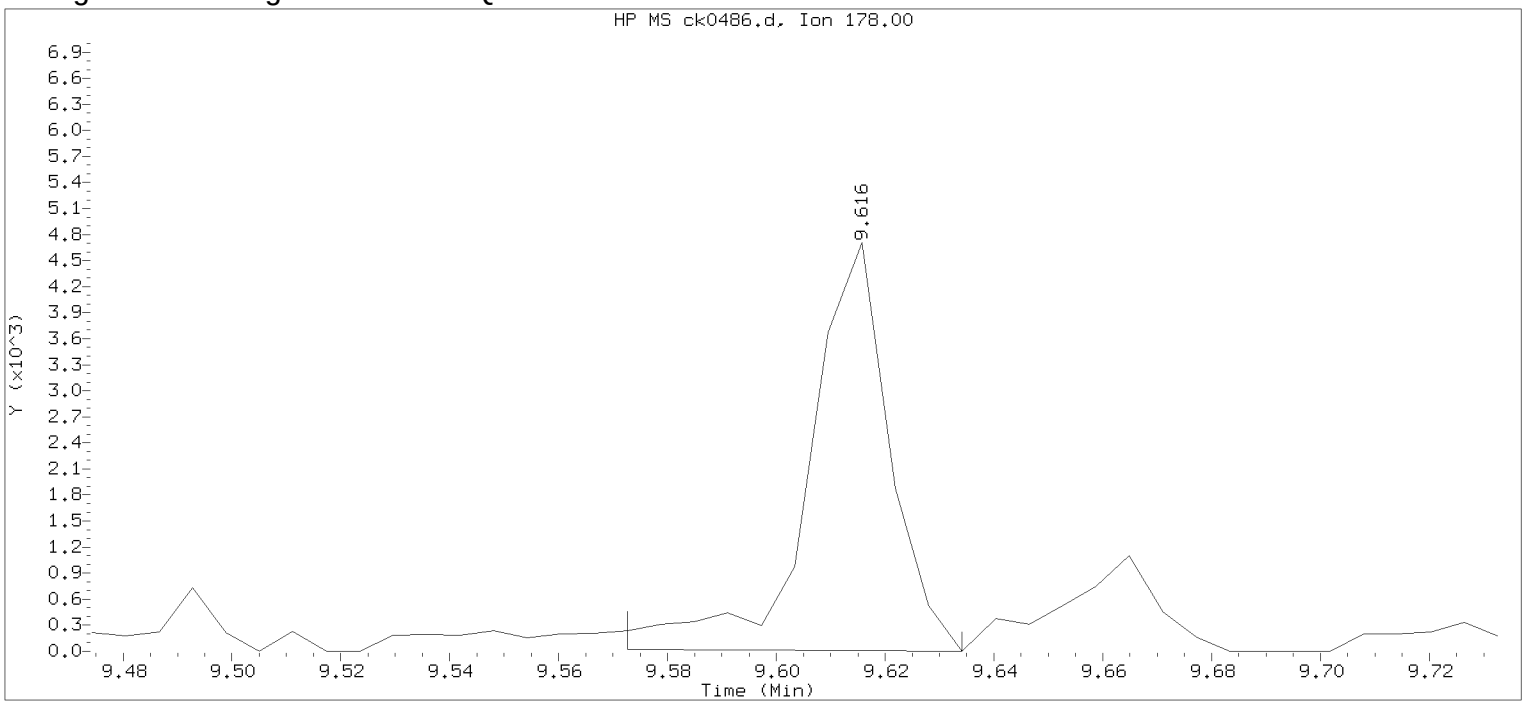
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

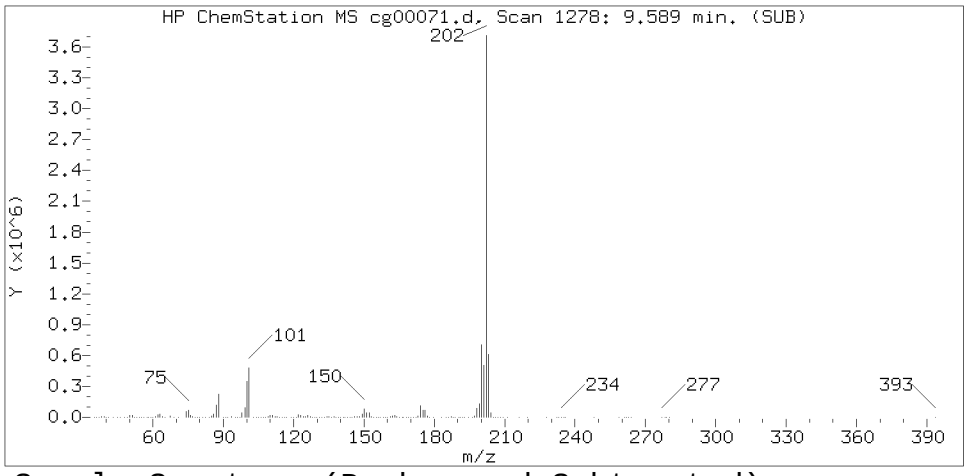
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:30 Automation

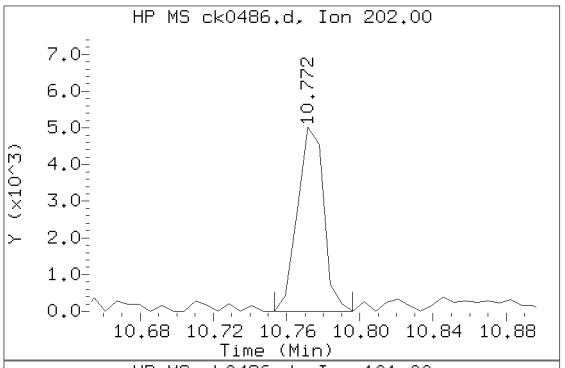
Sample Name: R2041 Lab Sample ID: 7265225

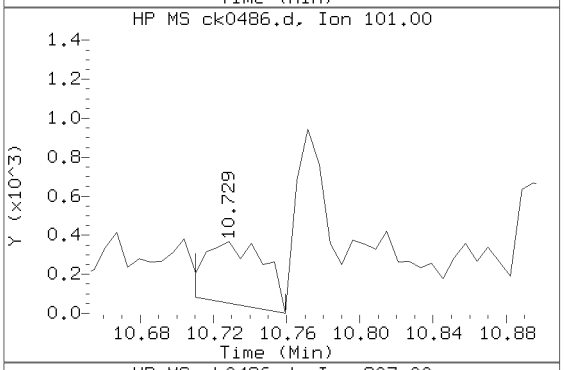
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Quant Ion : 178.00
Area : 4857
On-column Amount (ng/ul) : 0.1196
Integration start scan : 1250 Integration stop scan: 1260
Y at integration start : 20 Y at integration end: 0

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature used: 1.4 mar 2013

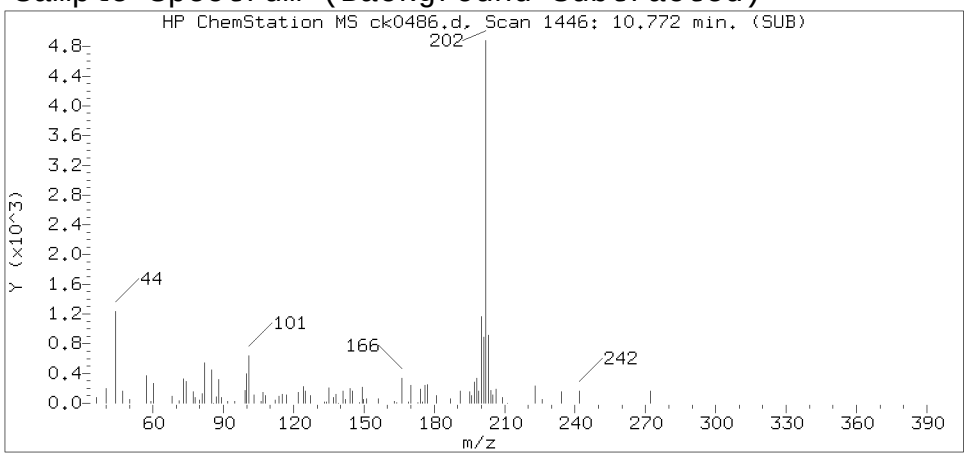
Reference Standard Spectrum for Fluoranthene

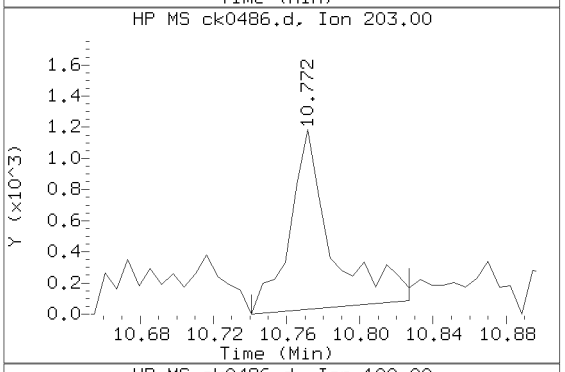




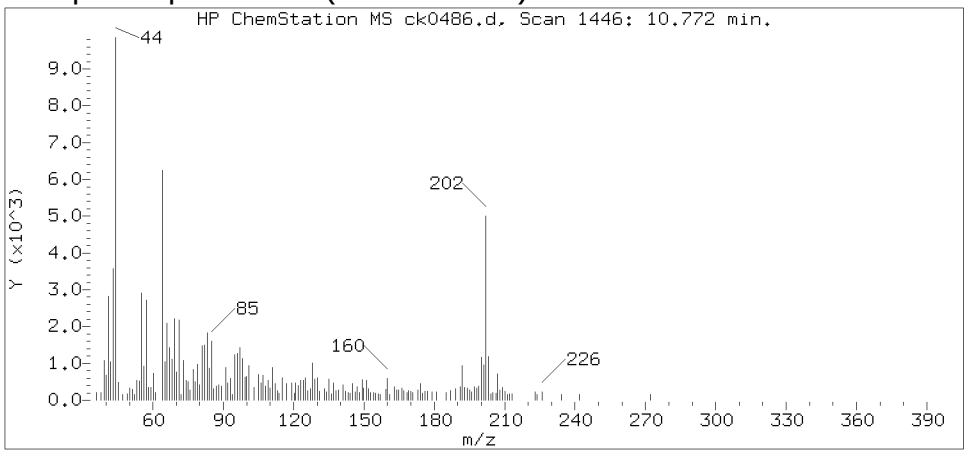


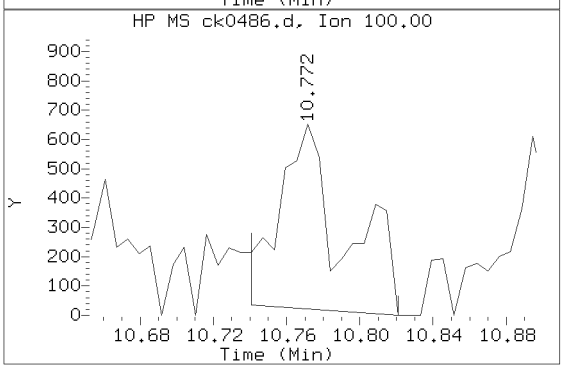
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

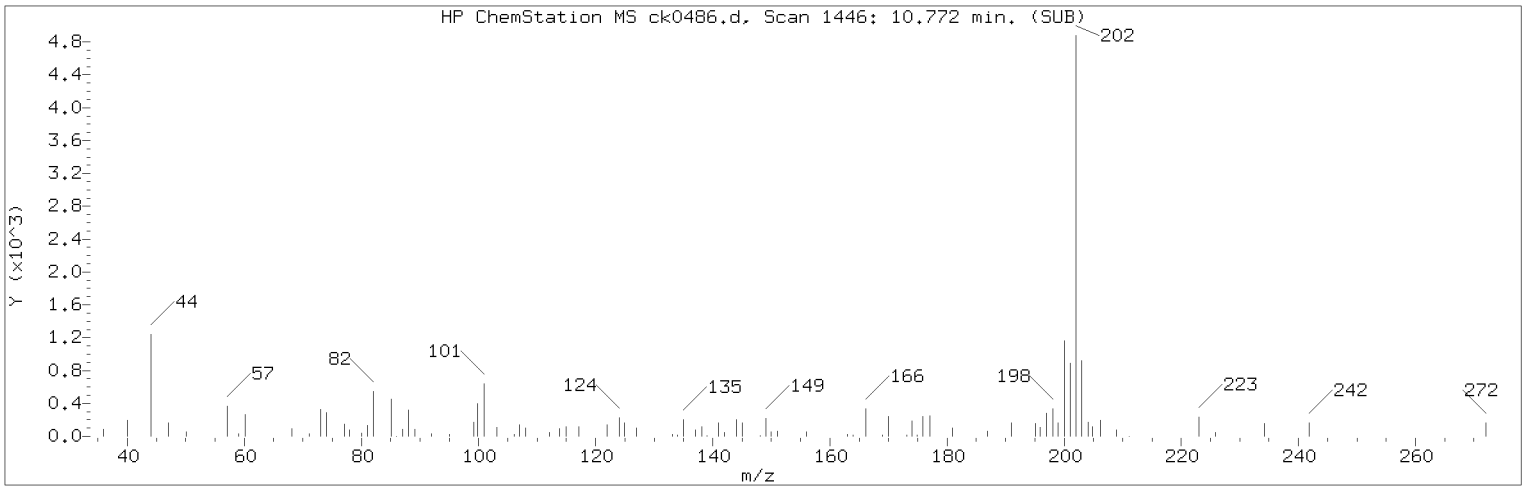
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

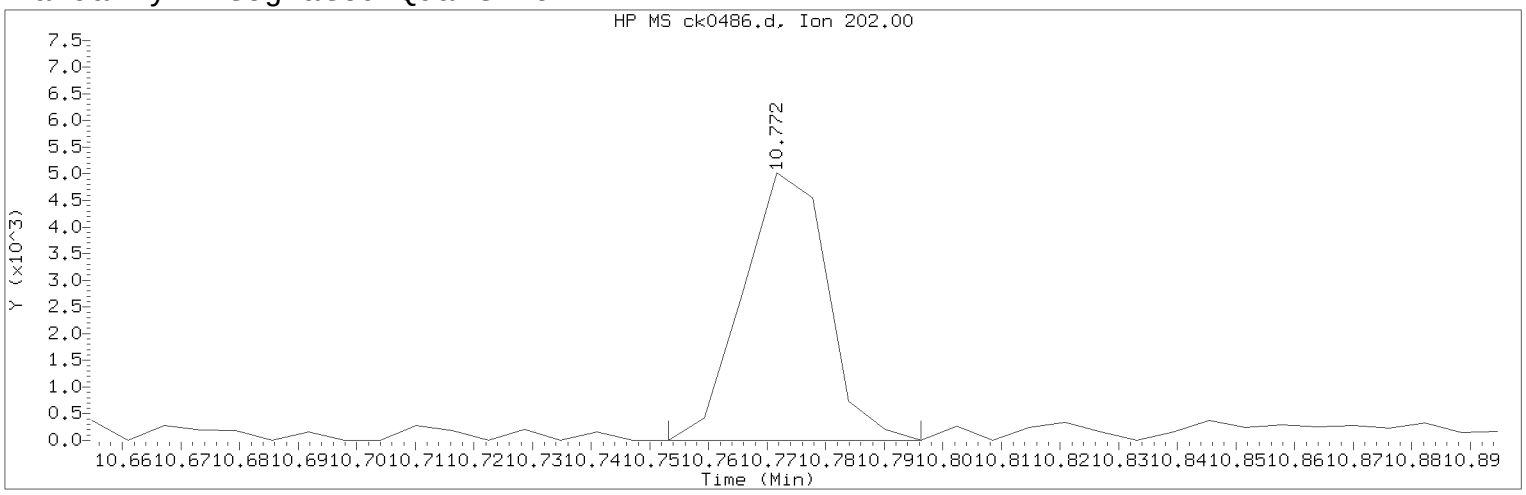
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.772
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 5006M
On-column Amount (ng/ul) : 0.1102

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

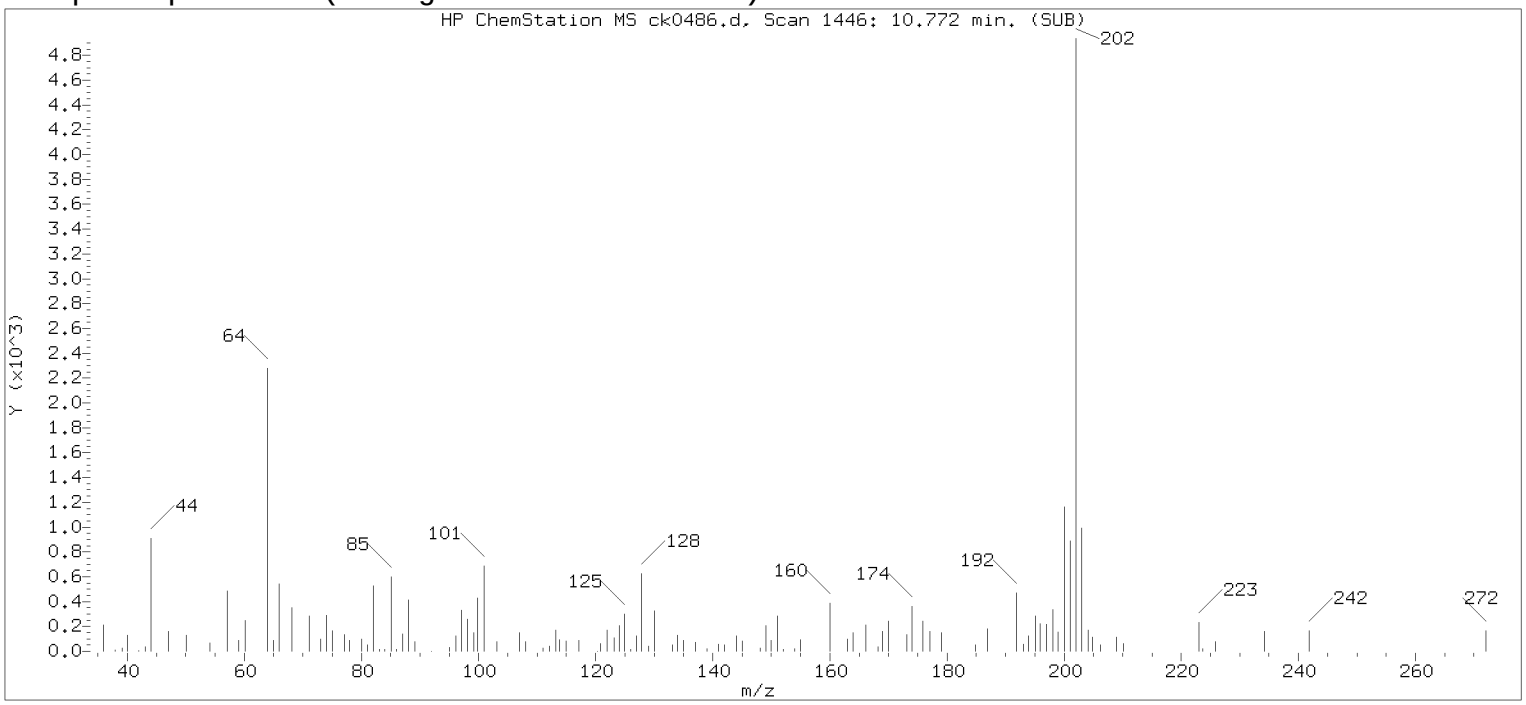
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.772
Quant Ion : 202.00
Area (flag) : 5006M
On-column Amount (ng/ul) : 0.1102
Integration start scan : 1442 Integration stop scan: 1449
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: improper integration

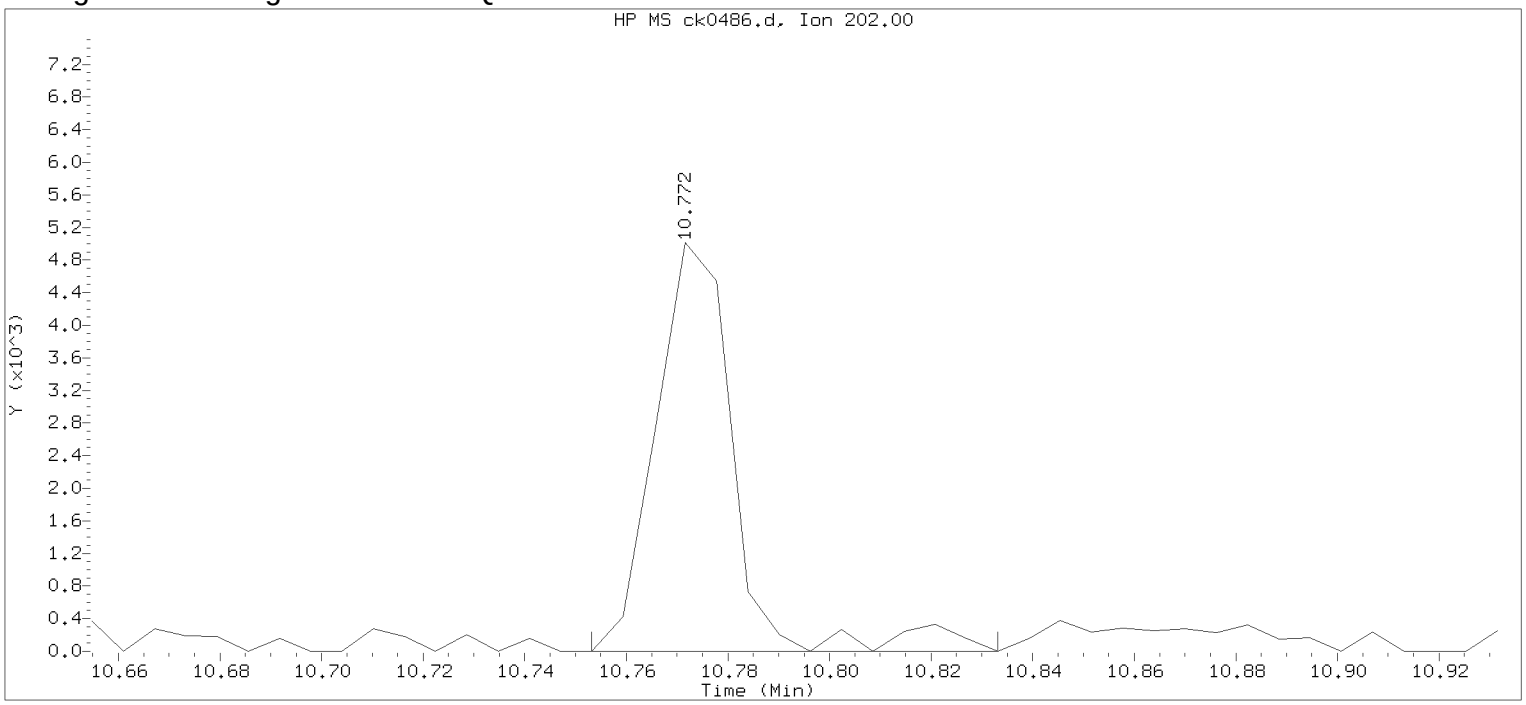
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

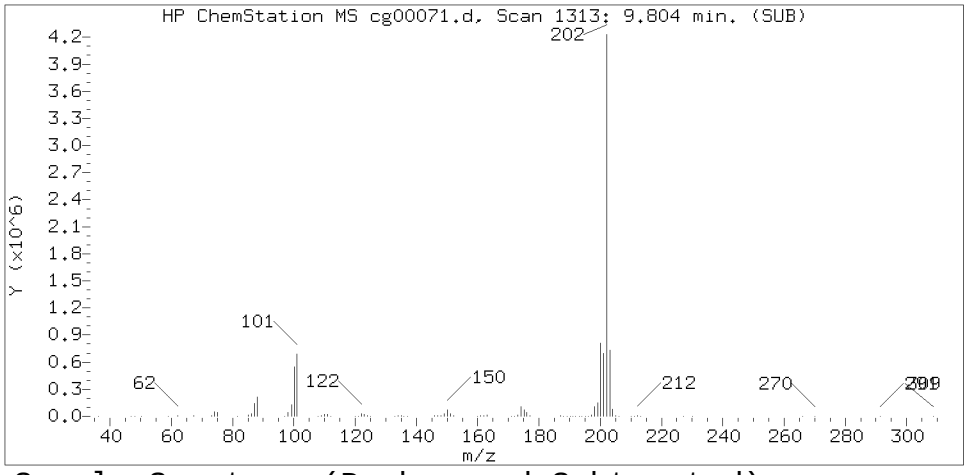
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 19:30 Automation

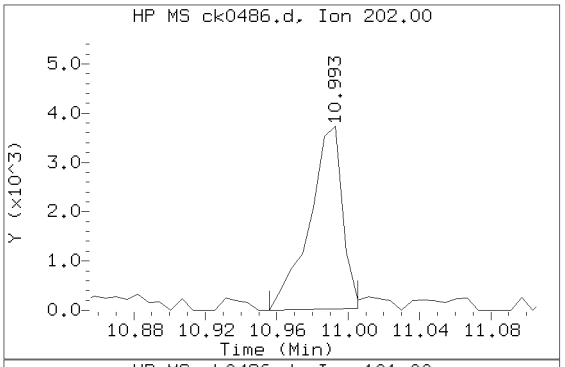
Sample Name: R2041 Lab Sample ID: 7265225

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.772
Quant Ion : 202.00
Area : 5378
On-column Amount (ng/ul) : 0.1184
Integration start scan : 1442 Integration stop scan: 1455
Y at integration start : 0 Y at integration end: 0

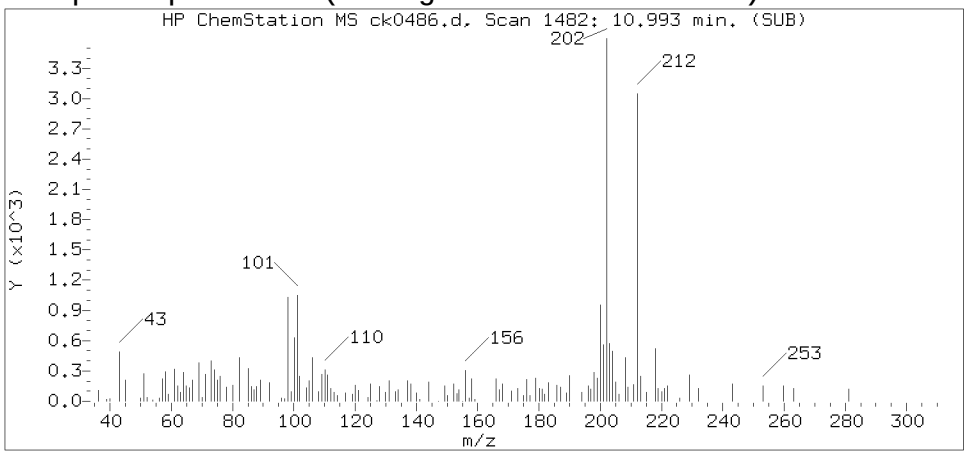
Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature used: VD4 Page 1143 of 3494

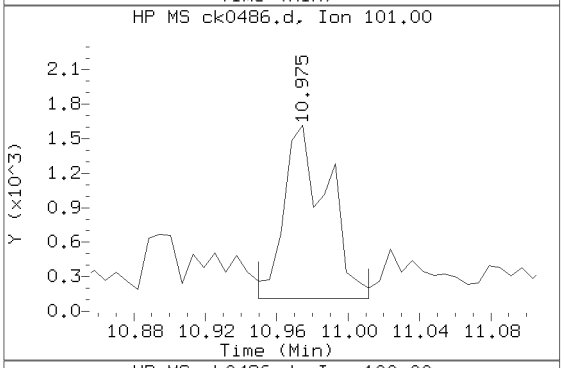
Reference Standard Spectrum for Pyrene

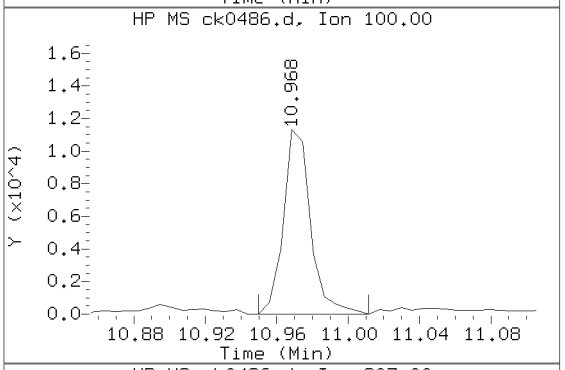




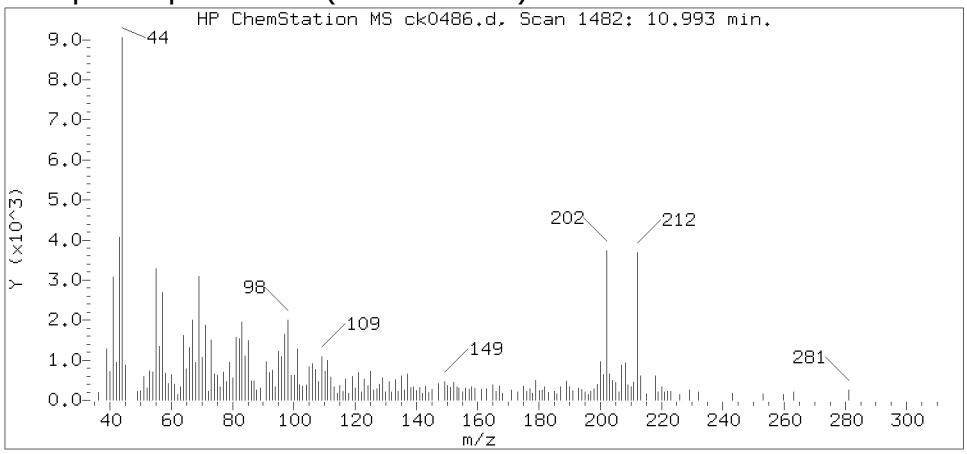
Sample Spectrum (Background Subtracted)

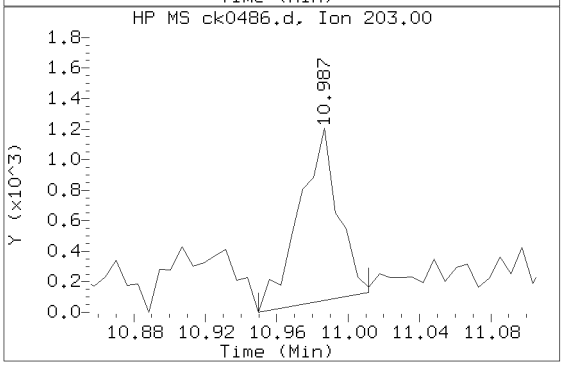






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0486.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:04 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:53 mac00013

Sample Name: R2041 Lab Sample ID: 7265225

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1482
Retention Time (minutes)	: 10.993
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 4769
On-column Amount (ng/ul)	: 0.1069

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0527.d Injection date and time: **14-NOV-2013 05:01**
Data file Sample Info. Line: R2042;7265226;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	146673 (-1)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	700999 (-1)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	451996 (1)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	773336 (-6)	20.00	
167) Pyrene-d10	10.932(0.000)	1472	212	863501 (-16)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	595232 (-31)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.705(0.000)	82	1323016	87.600	88%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.476(-0.001)	172	2740205	96.418	96%		69 - 120
156) Terphenyl-d14	(5)	11.141(-0.001)	244	3174547	102.839	103%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.418(0.000)	128	6250	0.168	33.61			0.1
70) 2-Methylnaphthalene	(2)	7.101(0.000)	142	3101	0.117	23.50			0.1
71) 1-Methylnaphthalene	(2)	7.193(0.000)	142	3720	0.154	30.80			0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.573(0.000)	178	16869	0.375	75.03			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.735(0.000)	202	17068	0.339	67.89			0.1
154) Pyrene	(5)	10.950(0.000)	202	13866	0.289	57.83			0.1
166) Benzo(a)anthracene	(5)	12.124(0.000)	228	4701	0.106	21.26			0.1
168) Chrysene	(5)	12.155(0.000)	228	8980	0.211	42.12			0.1
172) Benzo(b)fluoranthene	(6)	13.176(-0.000)	252	8196M	0.226	45.10			0.1
173) Benzo(k)fluoranthene	(6)	13.194(0.000)	252	4050MA	0.109	21.85			0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.528(0.000)	276	4516	0.120	23.93			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.805(0.000)	276	5144M	0.160	32.00			0.1

M = Compound was manually integrated. A = User selected an alternate peak.

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0527.d Injection date and time: **14-NOV-2013 05:01**
Data file Sample Info. Line: R2042;7265226;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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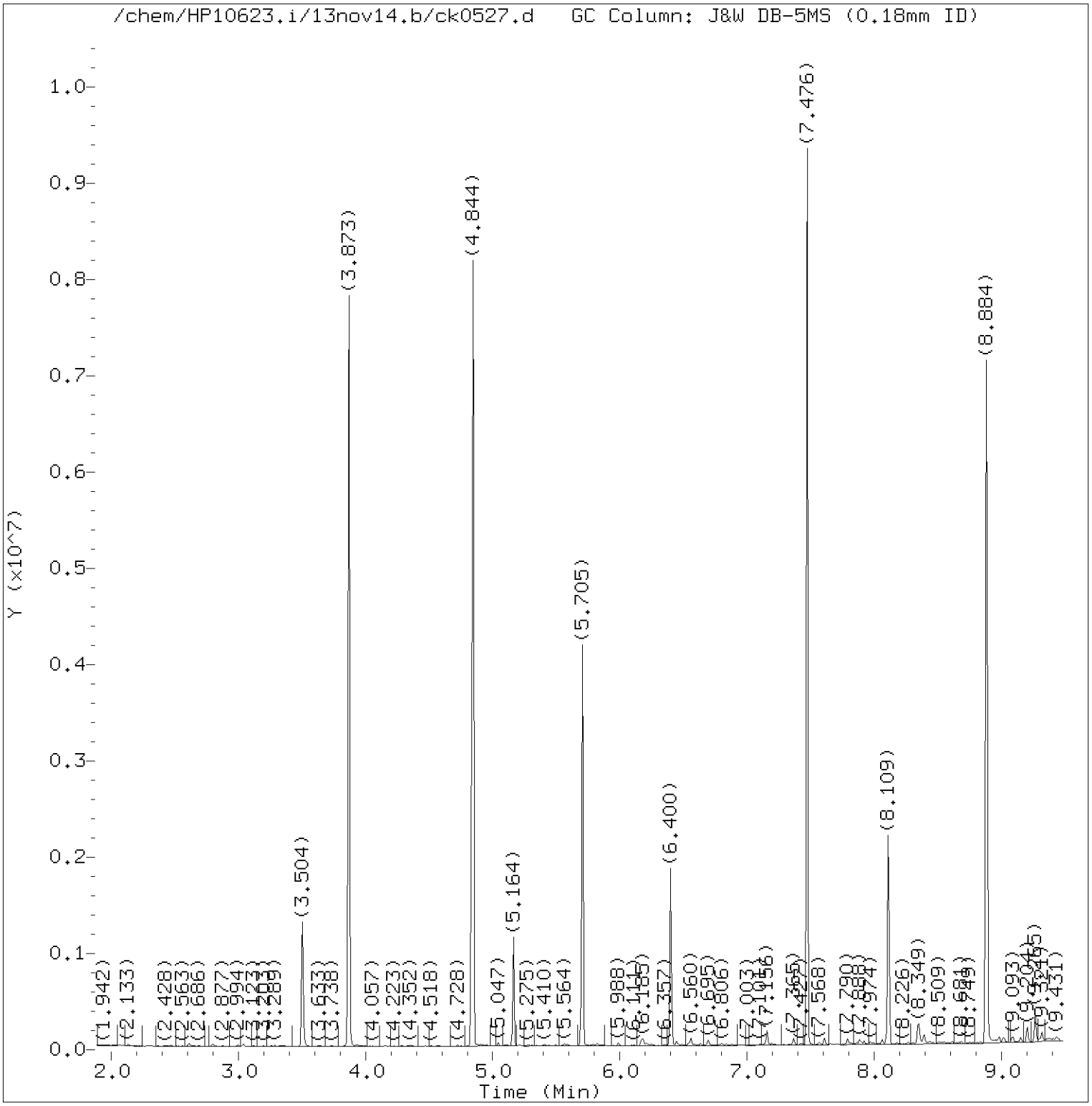
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:38. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

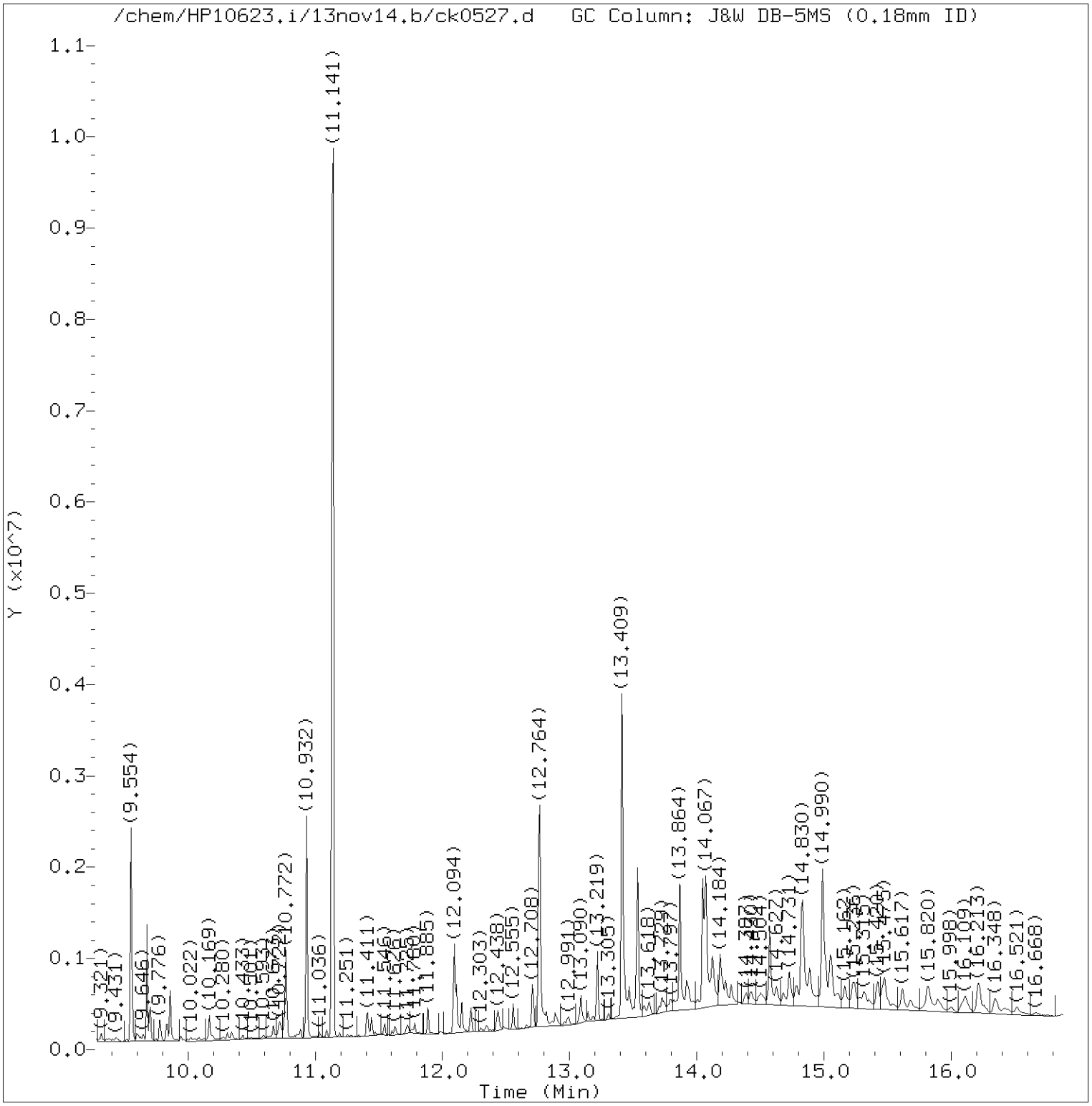
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Digitally signed by Mark A. Clark
on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Digitally signed by Mark A. Clark
on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	146673	20.000
38)$Nitrobenzene-d5	(2)	5.705	82	1323016	87.600
52)*Naphthalene-d8	(2)	6.400	136	700999	20.000
53) Naphthalene	(2)	6.418	128	6250	0.168
70) 2-Methylnaphthalene	(2)	7.101	142	3101	0.117
71) 1-Methylnaphthalene	(2)	7.193	142	3720	0.154
78)$2-Fluorobiphenyl	(3)	7.476	172	2740205	96.418
98)*Acenaphthene-d10	(3)	8.109	164	451996	20.000
135)*Phenanthrene-d10	(4)	9.554	188	773336	20.000
137) Phenanthrene	(4)	9.573	178	16869	0.375
147) Fluoranthene	(4)	10.735	202	17068	0.339
167)*Pyrene-d10	(5)	10.932	212	863501	20.000
154) Pyrene	(5)	10.950	202	13866	0.289
156)$Terphenyl-d14	(5)	11.141	244	3174547	102.839
166) Benzo(a)anthracene	(5)	12.124	228	4701	0.106
168) Chrysene	(5)	12.155	228	8980	0.211
172) Benzo(b)fluoranthene	(6)	13.176	252	8196M	0.226
173) Benzo(k)fluoranthene	(6)	13.194	252	4050MA	0.109
175)*Perylene-d12	(6)	13.532	264	595232	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.528	276	4516	0.120
179) Benzo(g,h,i)perylene	(6)	14.805	276	5144M	0.160

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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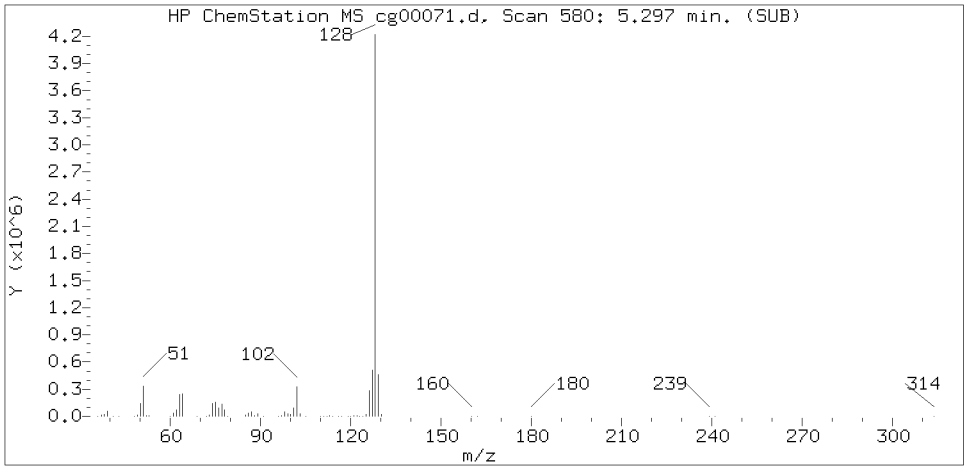
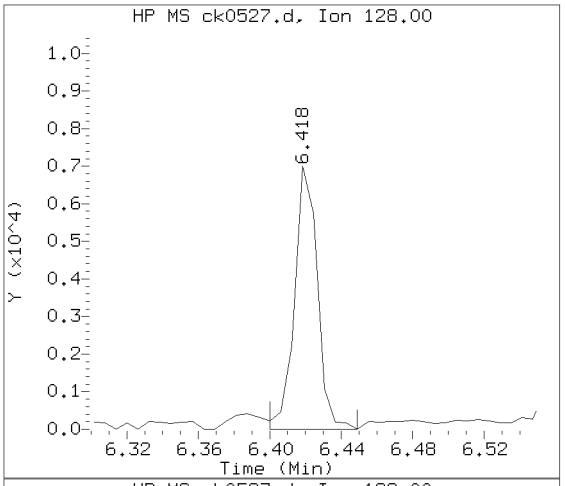
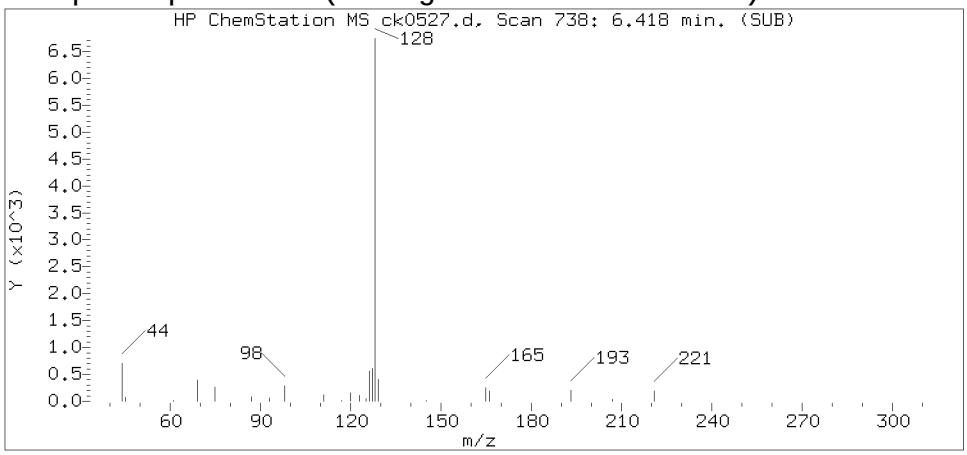
Target 3.5 esignature user ID: mac00013

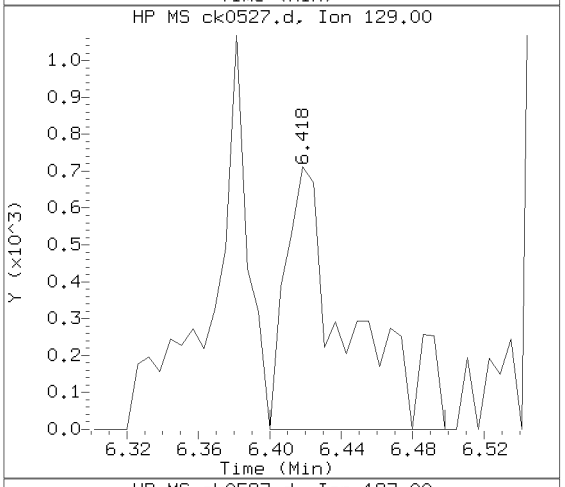
Reference Standard Spectrum for Naphthalene



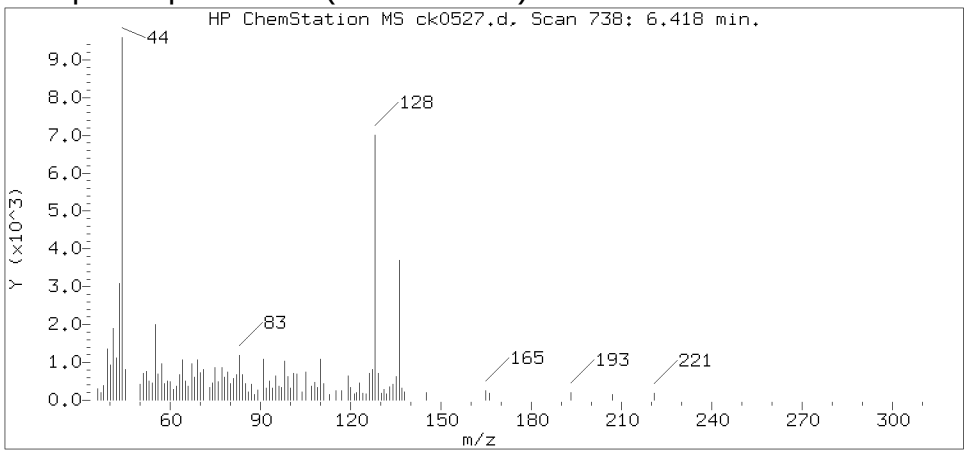


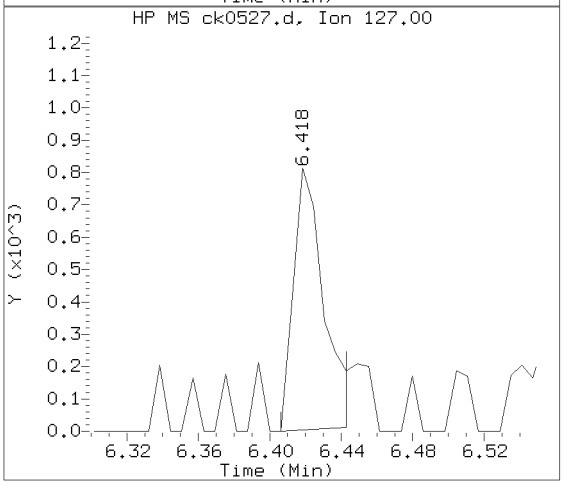
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 53
Compound Name	: Naphthalene
Scan Number	: 738
Retention Time (minutes)	: 6.418
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 6250
On-column Amount (ng/ul)	: 0.1680

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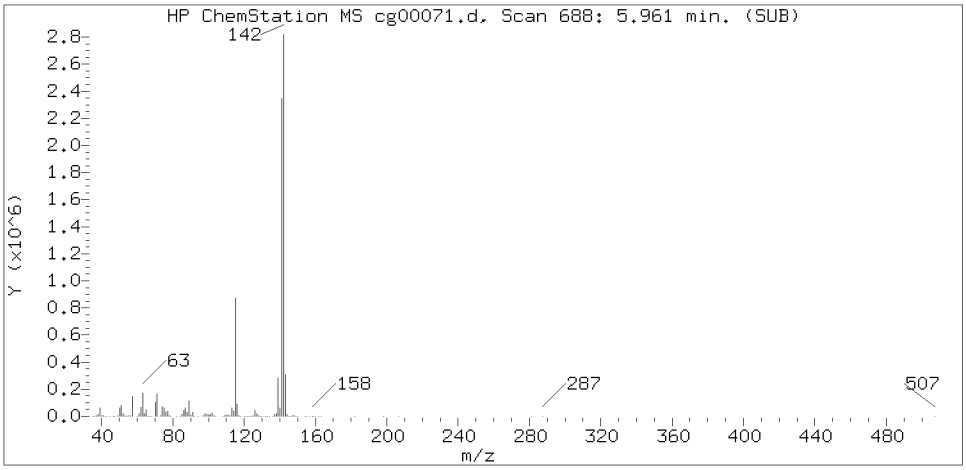
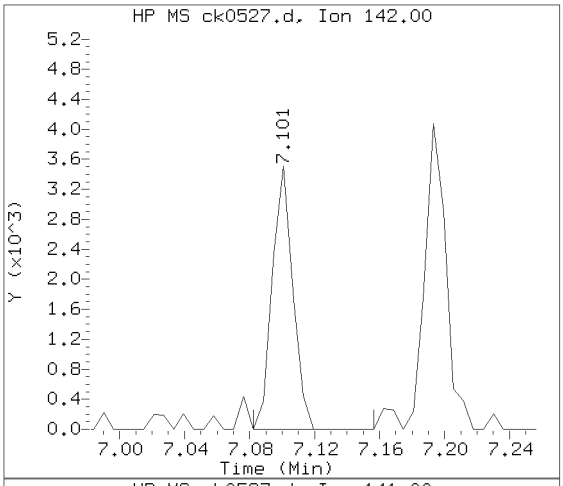
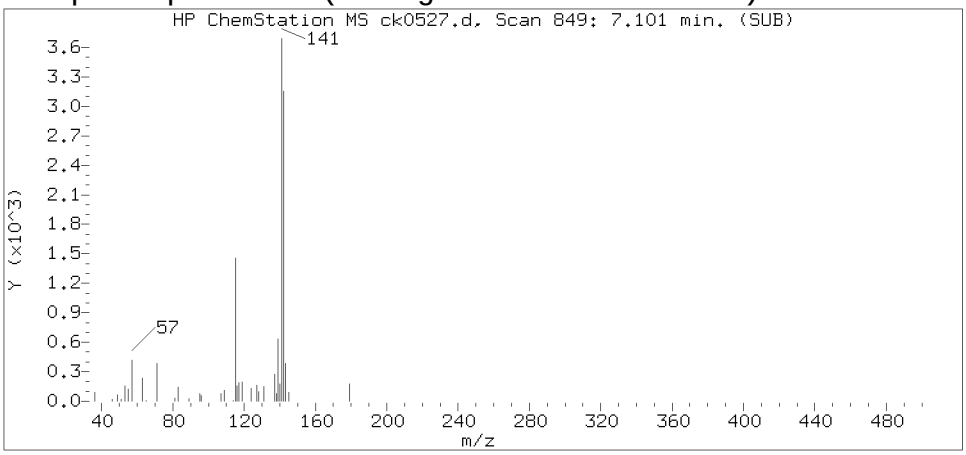
Target 3.5 esignature user ID: mac00013

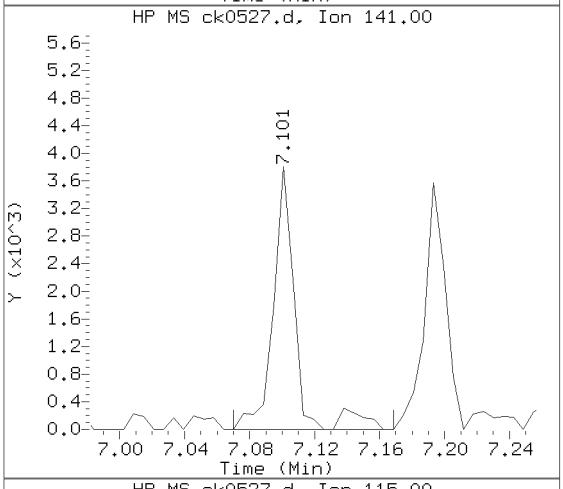
Reference Standard Spectrum for 2-Methylnaphthalene



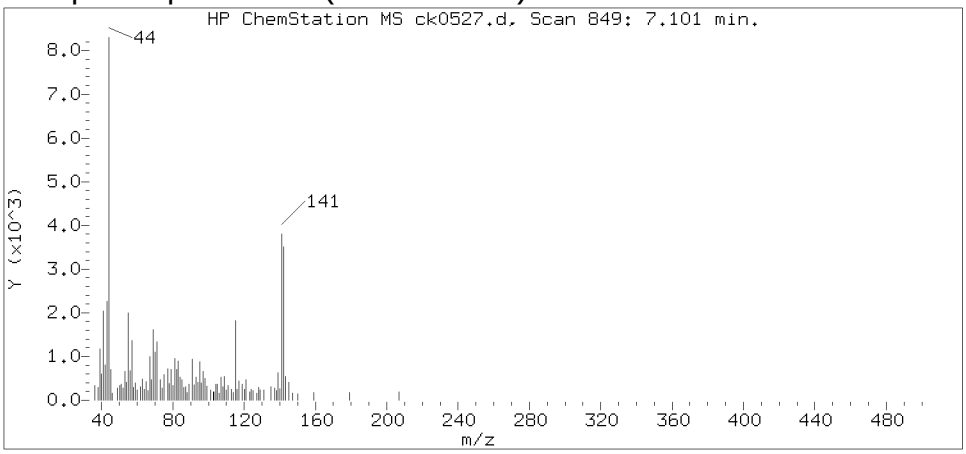


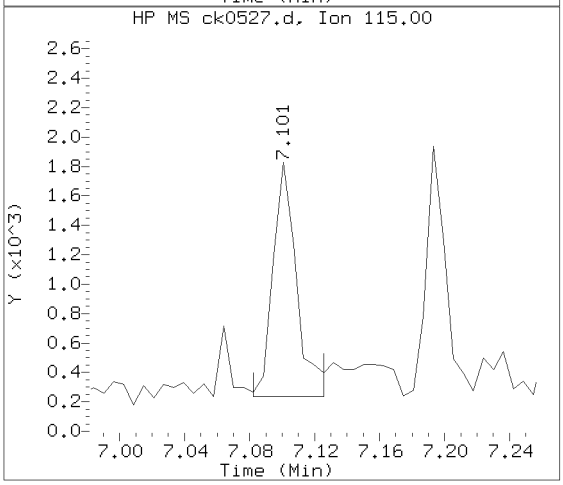
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 70
Compound Name	: 2-Methylnaphthalene
Scan Number	: 849
Retention Time (minutes)	: 7.101
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 3101
On-column Amount (ng/ul)	: 0.1175

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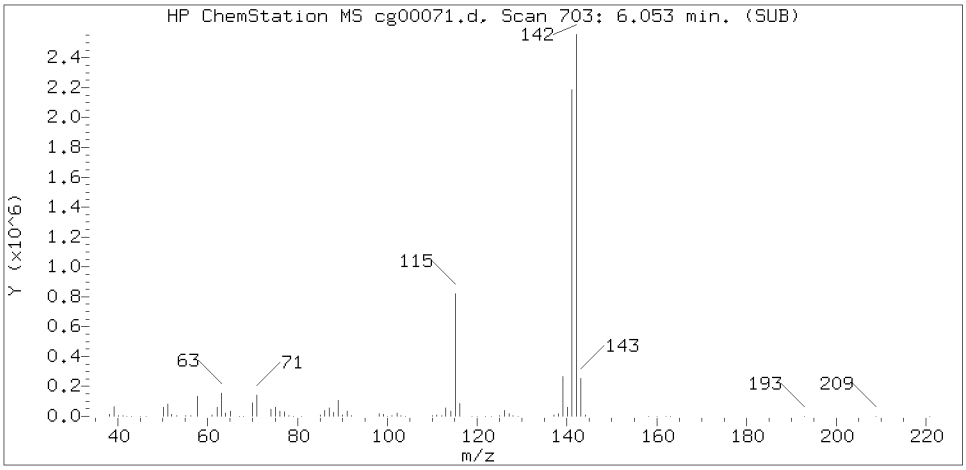
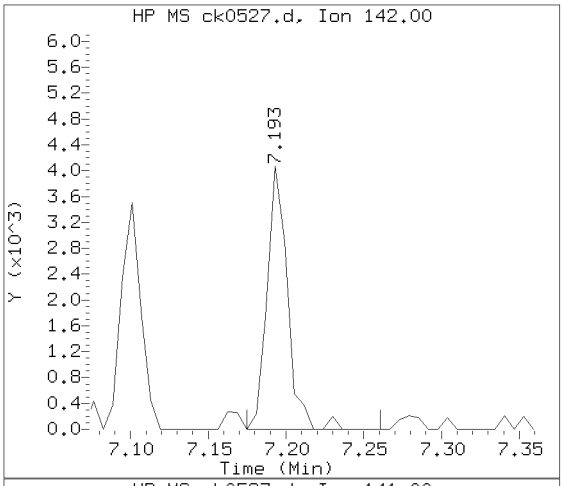
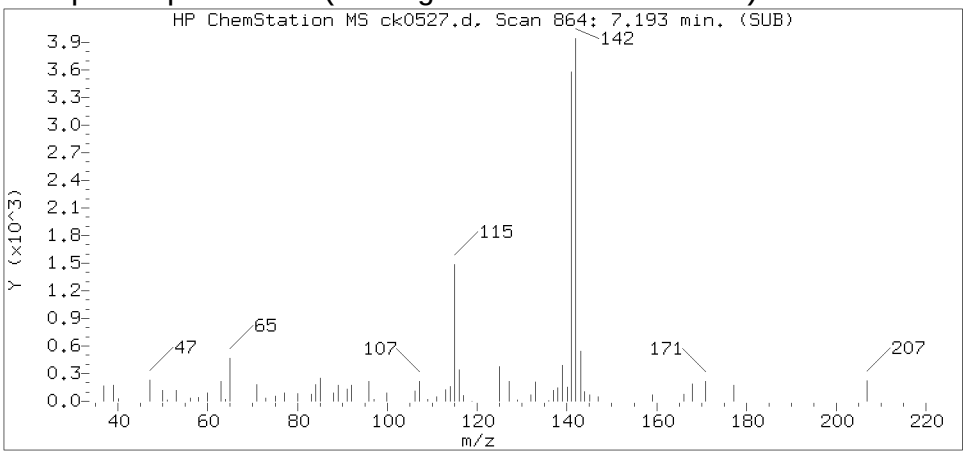
Target 3.5 esignature user ID: mac00013

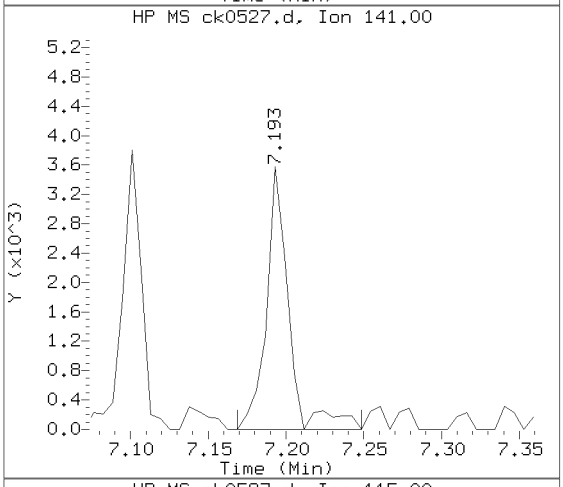
Reference Standard Spectrum for 1-Methylnaphthalene



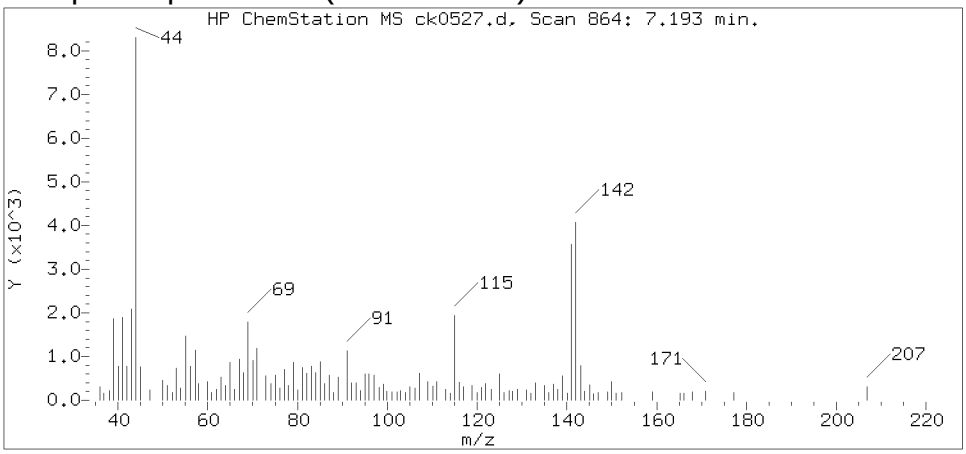


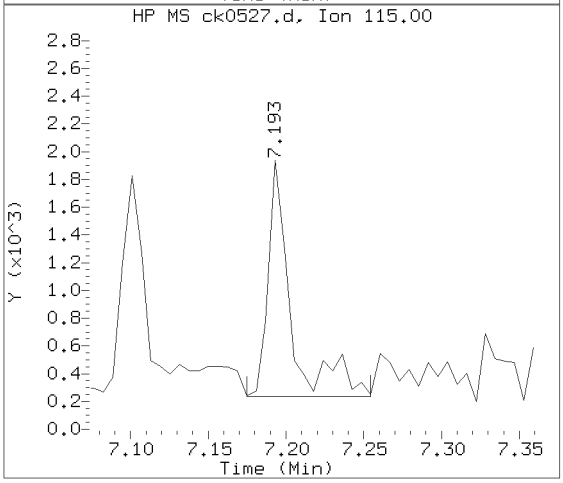
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 864
Retention Time (minutes)	: 7.193
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 3720
On-column Amount (ng/ul)	: 0.1540

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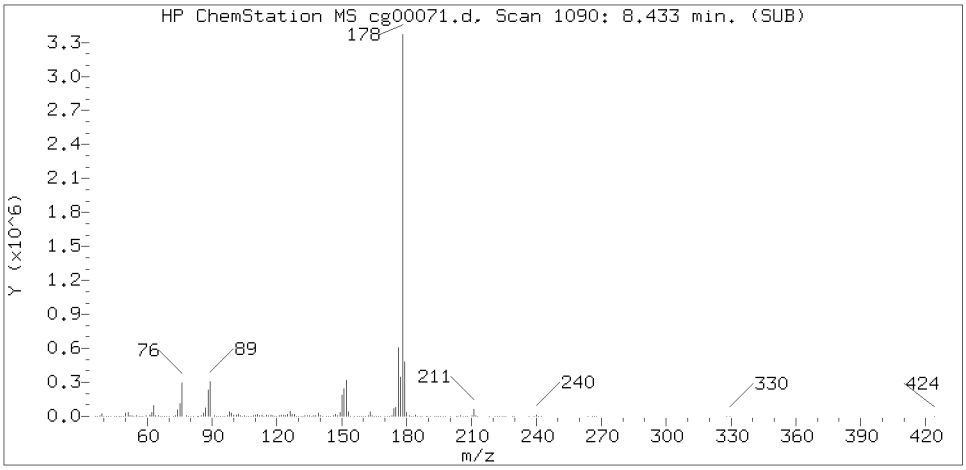
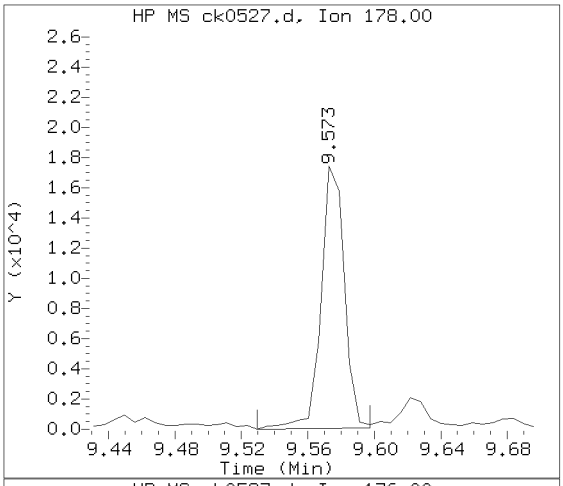
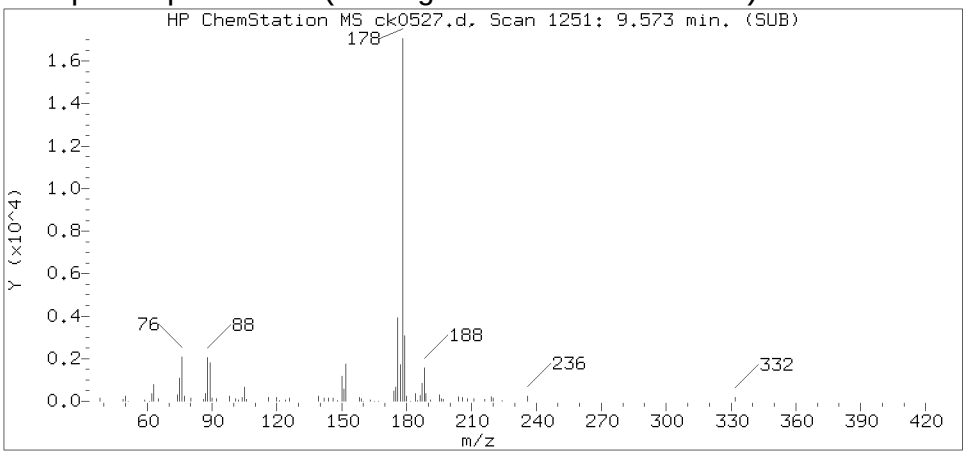
Target 3.5 esignature user ID: mac00013

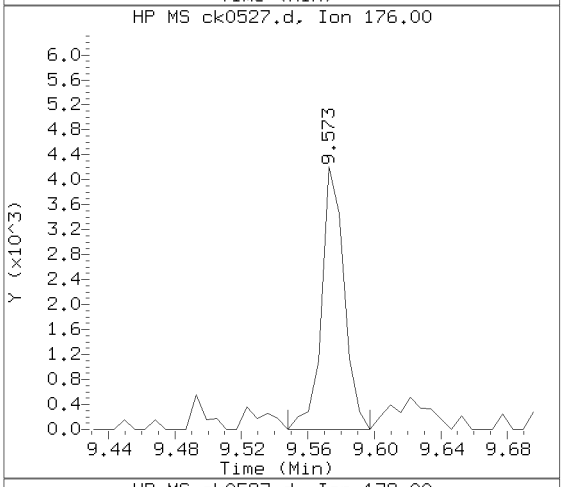
Reference Standard Spectrum for Phenanthrene



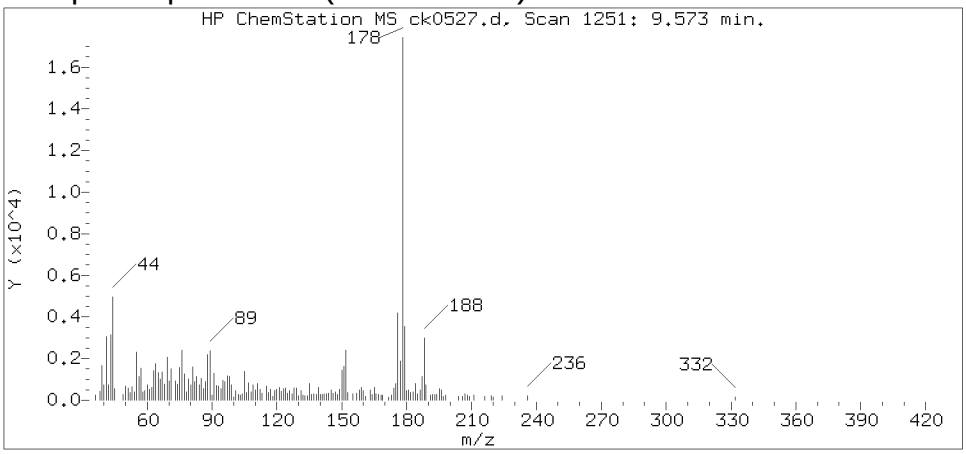


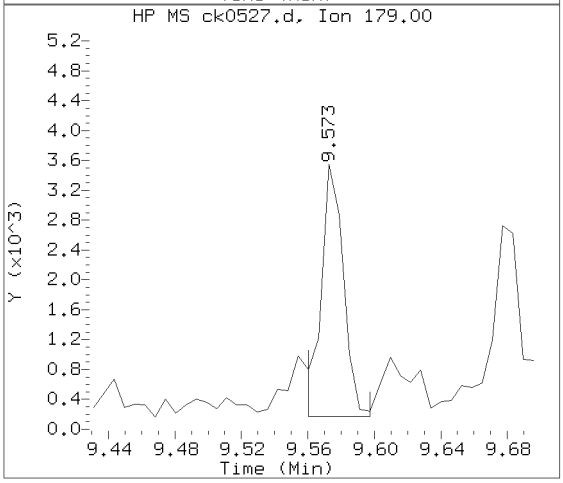
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1251
Retention Time (minutes) : 9.573
Relative Retention Time : 0.00064
Quant Ion : 178.00
Area (flag) : 16869
On-column Amount (ng/ul) : 0.3751

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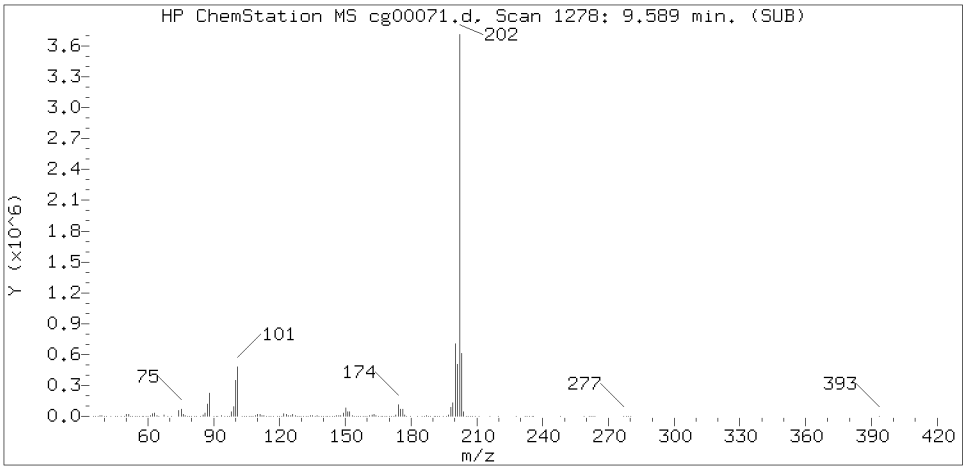
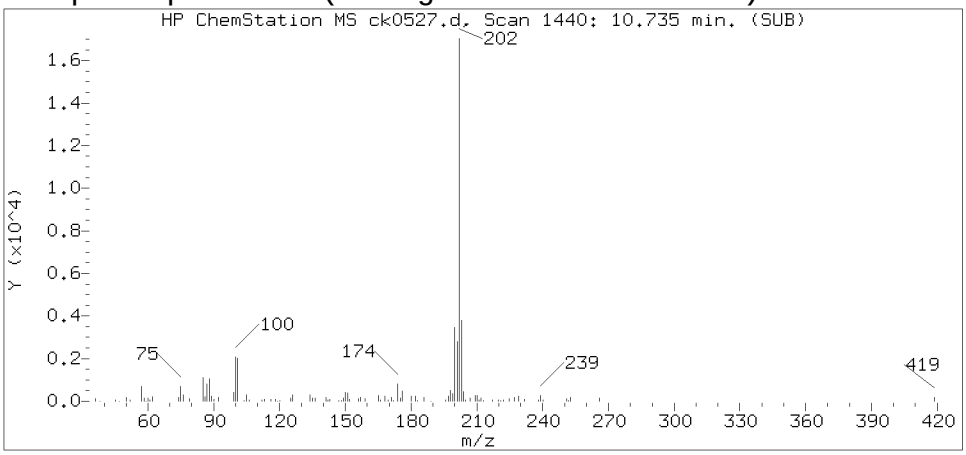
Target 3.5 esignature user ID: mac00013

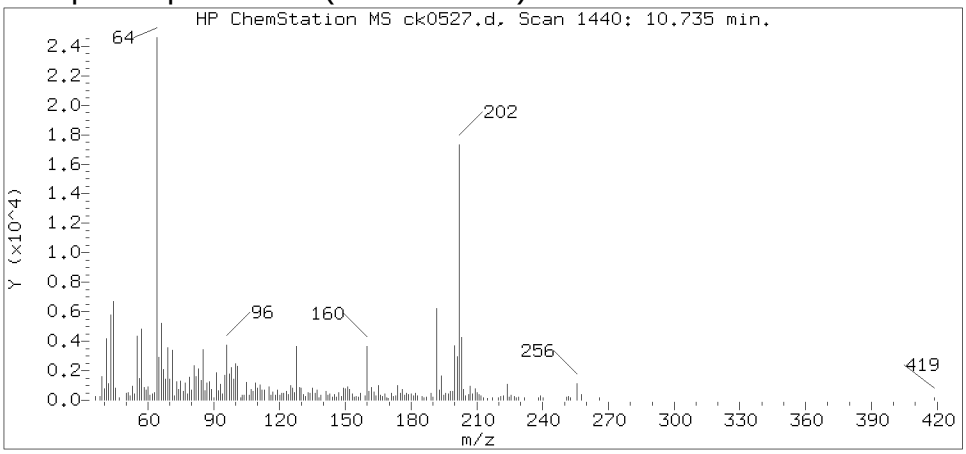
Reference Standard Spectrum for Fluoranthene

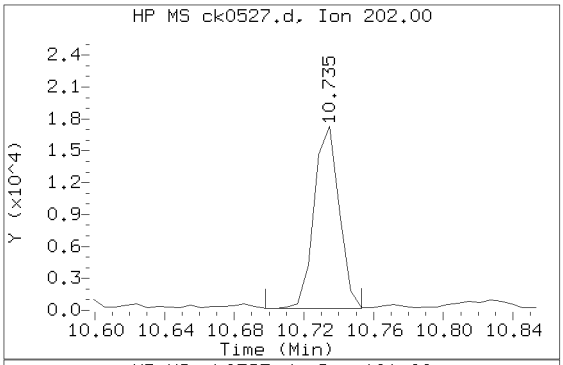


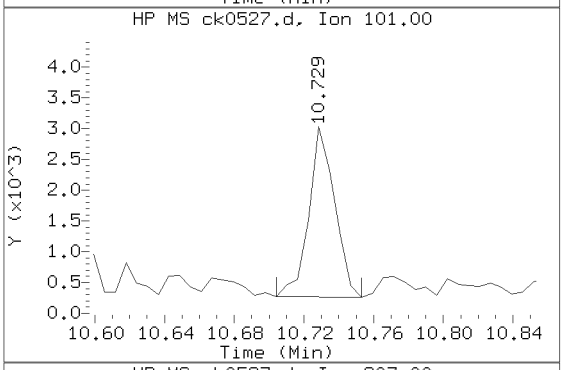
Sample Spectrum (Background Subtracted)

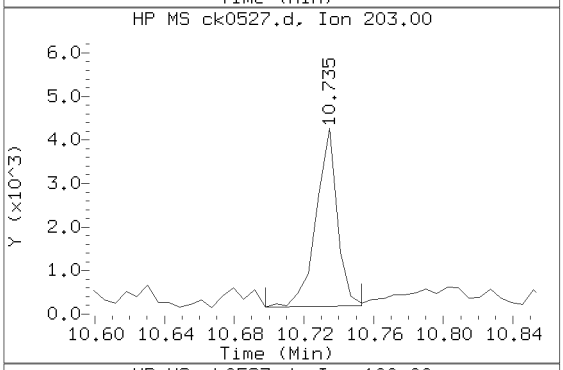


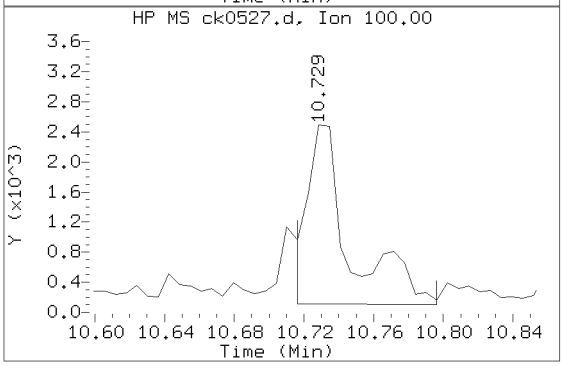
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1440
Retention Time (minutes)	: 10.735
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 17068
On-column Amount (ng/ul)	: 0.3395

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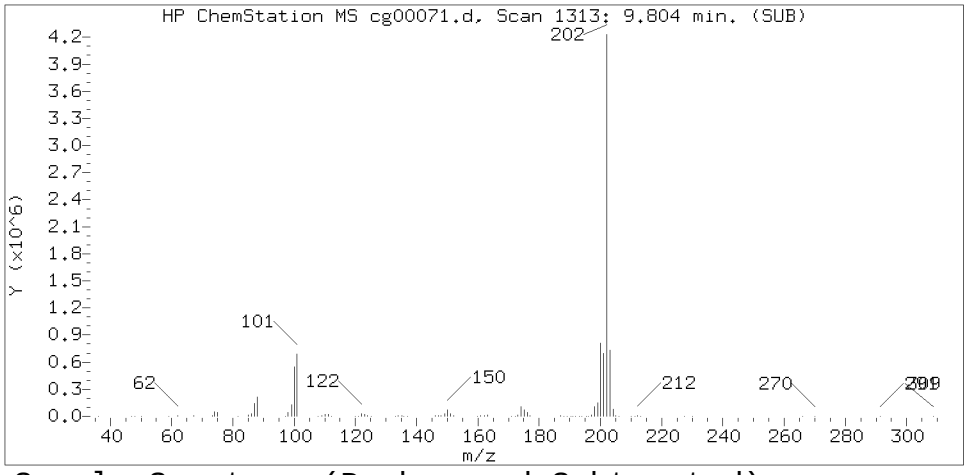
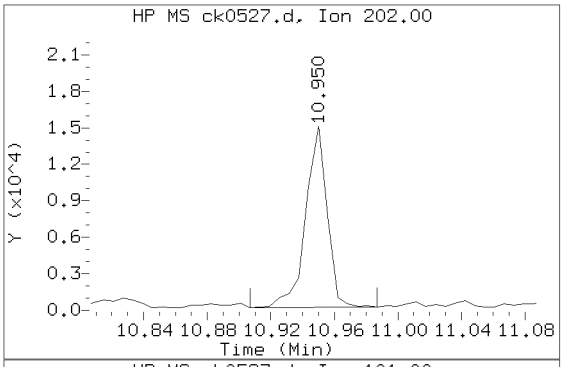
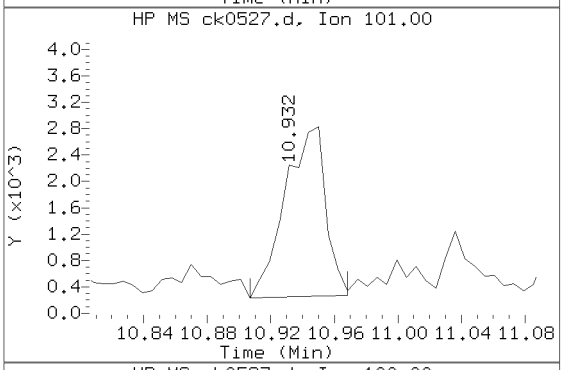
Target 3.5 esignature user ID: mac00013

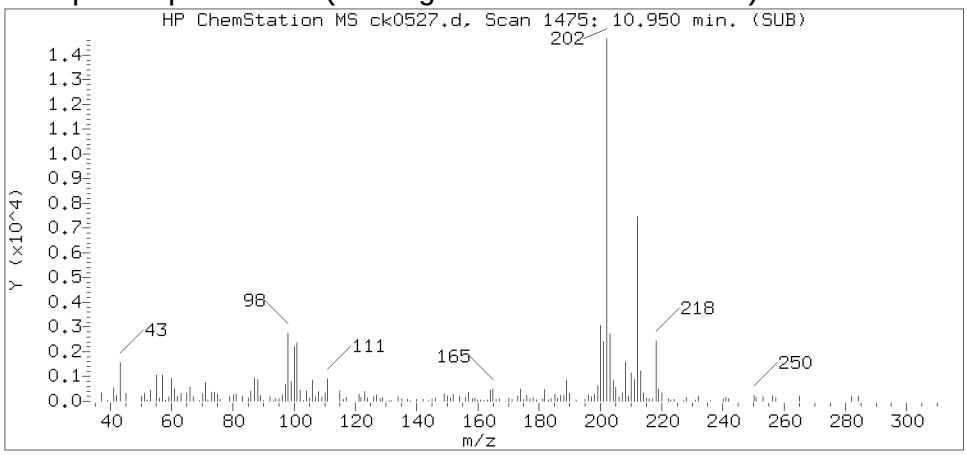
Reference Standard Spectrum for Pyrene

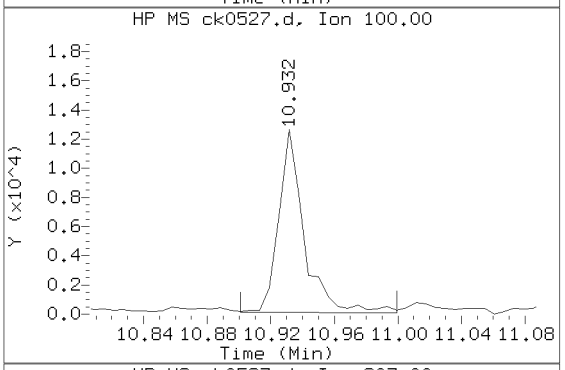




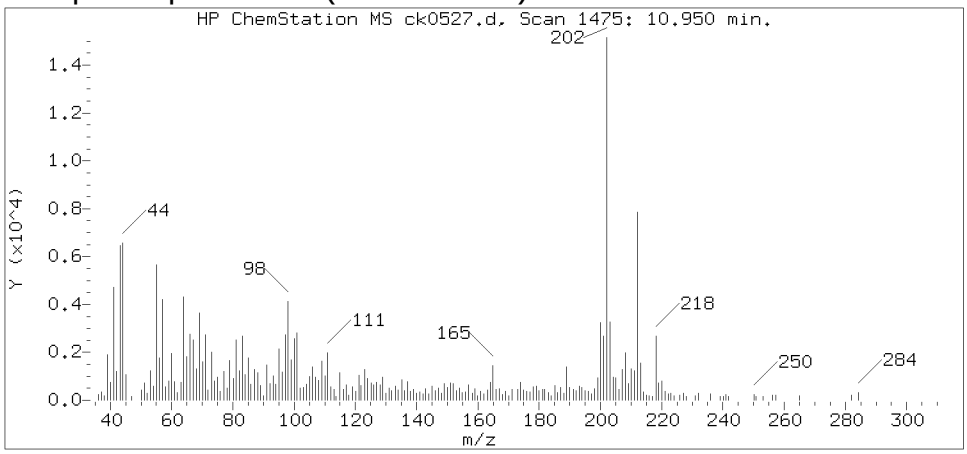


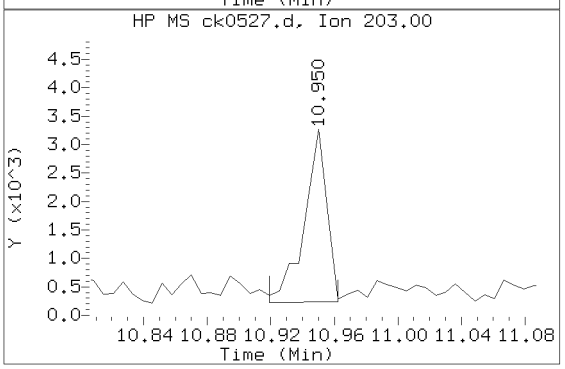
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 13866
On-column Amount (ng/ul)	: 0.2892

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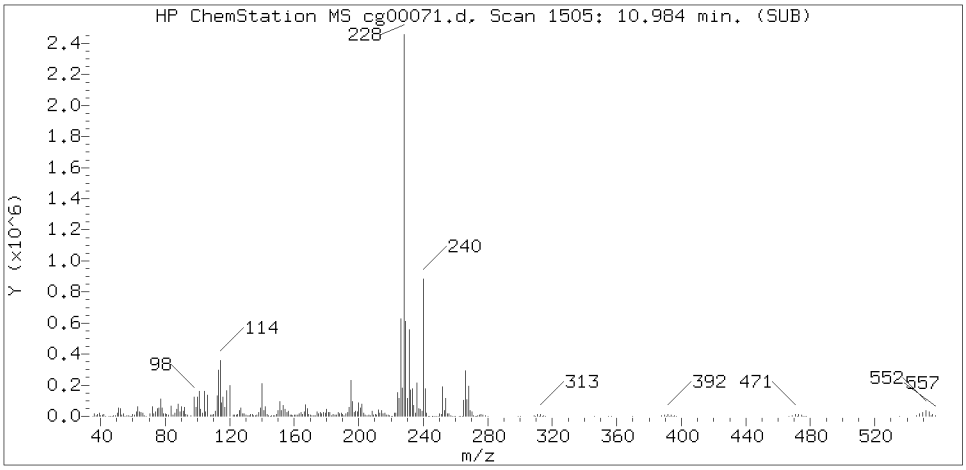
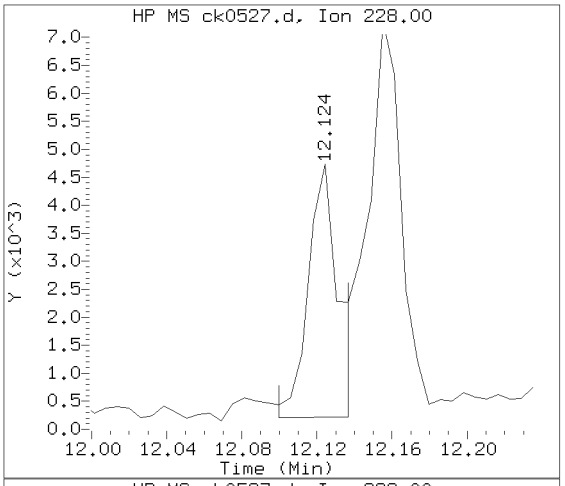
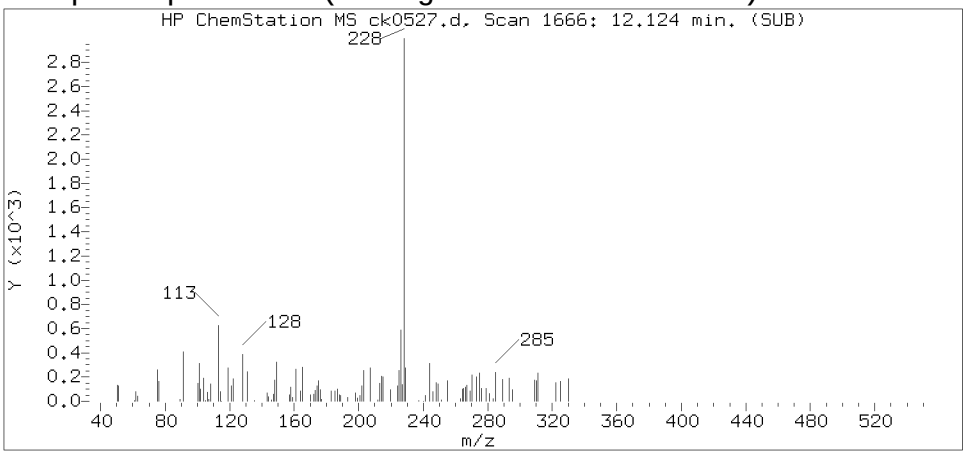
Target 3.5 esignature user ID: mac00013

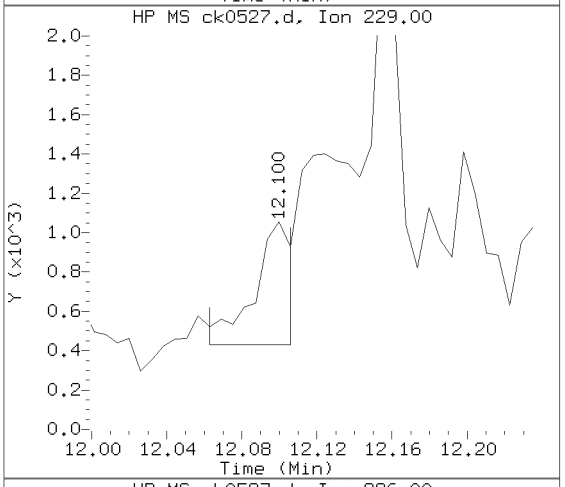
Reference Standard Spectrum for Benzo(a)anthracene



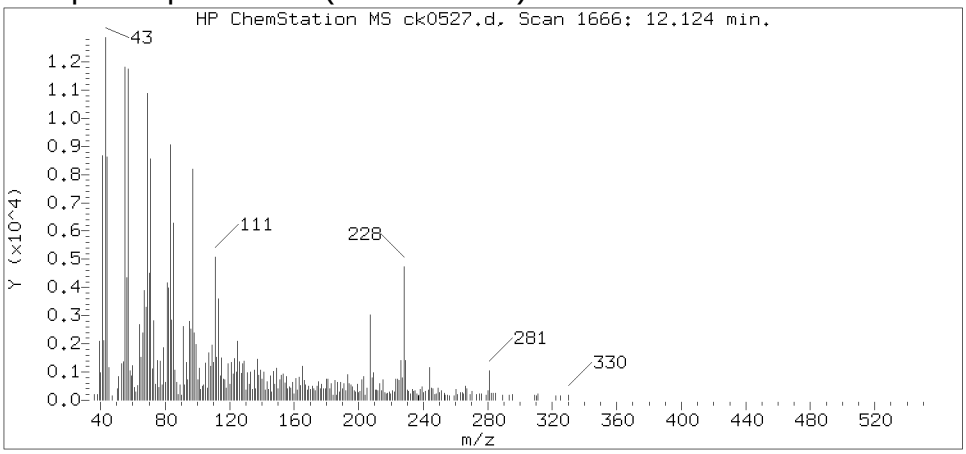


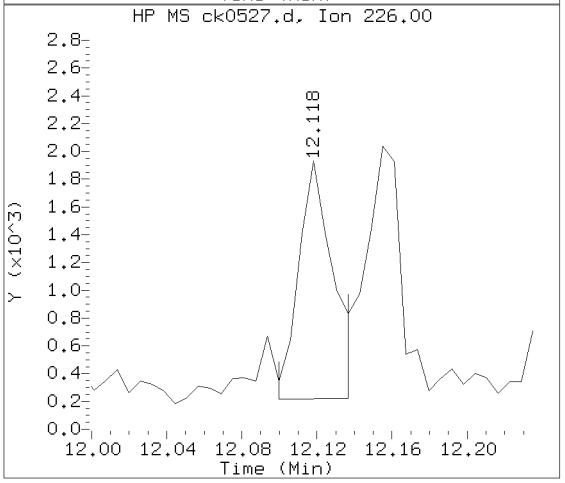
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

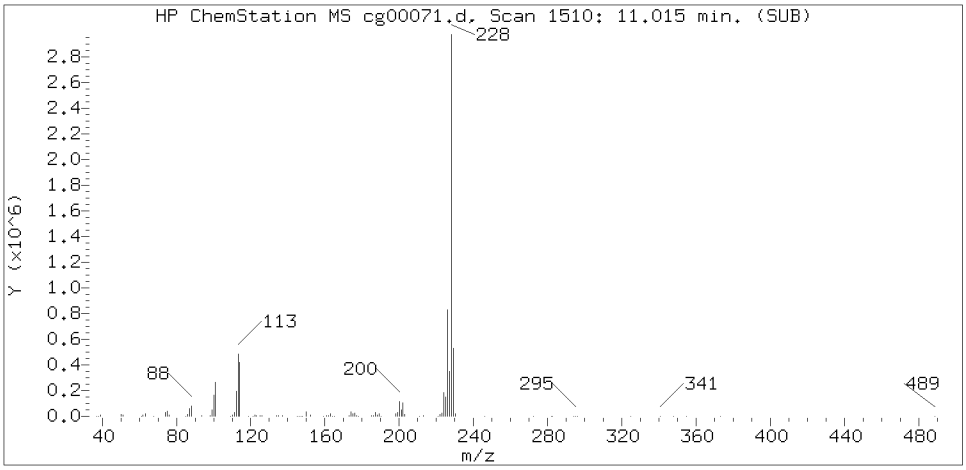
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

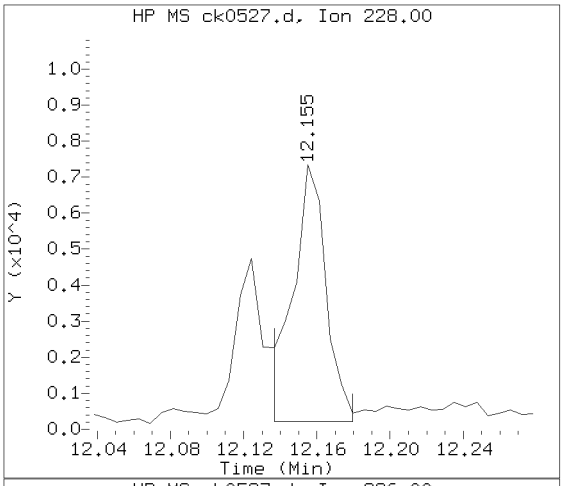
Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1666
Retention Time (minutes)	: 12.124
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 4701
On-column Amount (ng/ul)	: 0.1063

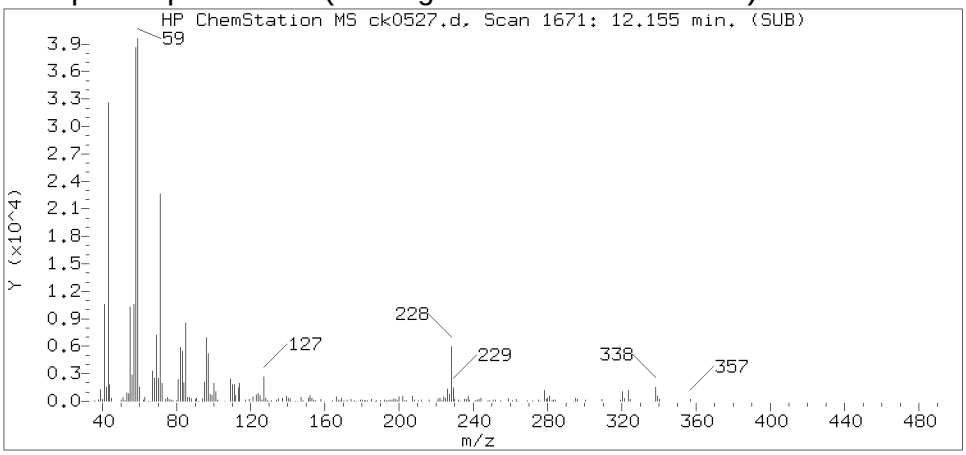
Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

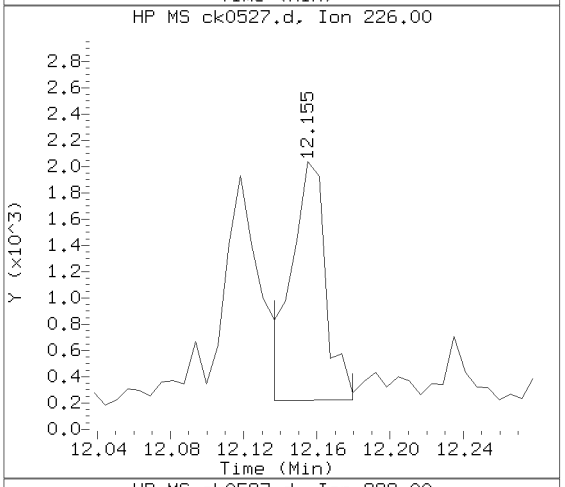
Reference Standard Spectrum for Chrysene



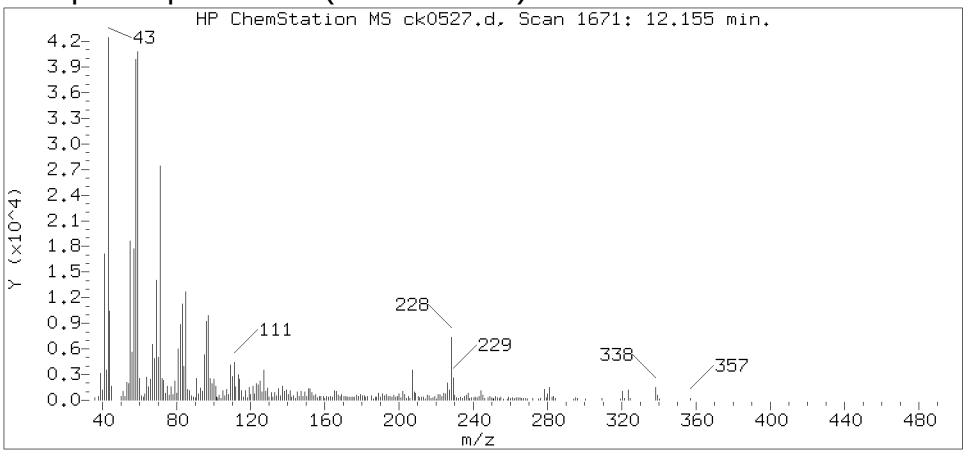


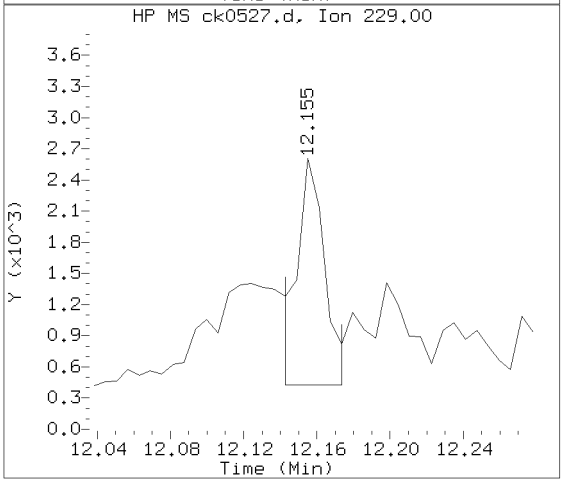
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

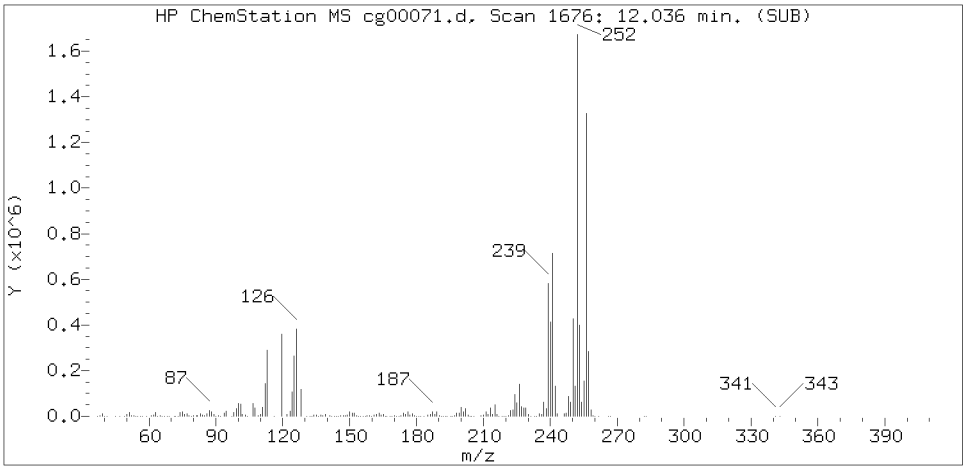
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

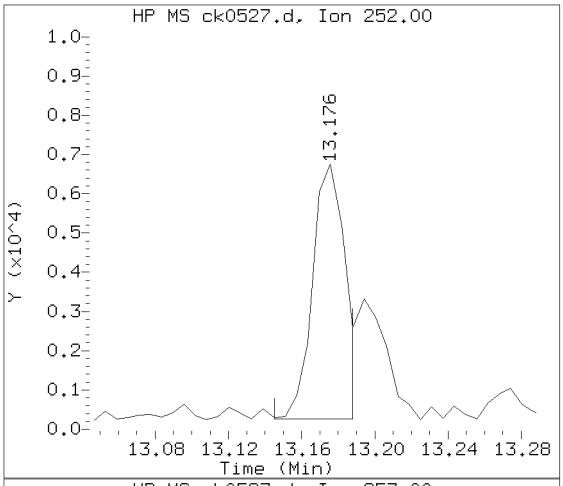
Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1671
Retention Time (minutes)	: 12.155
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 8980
On-column Amount (ng/ul)	: 0.2106

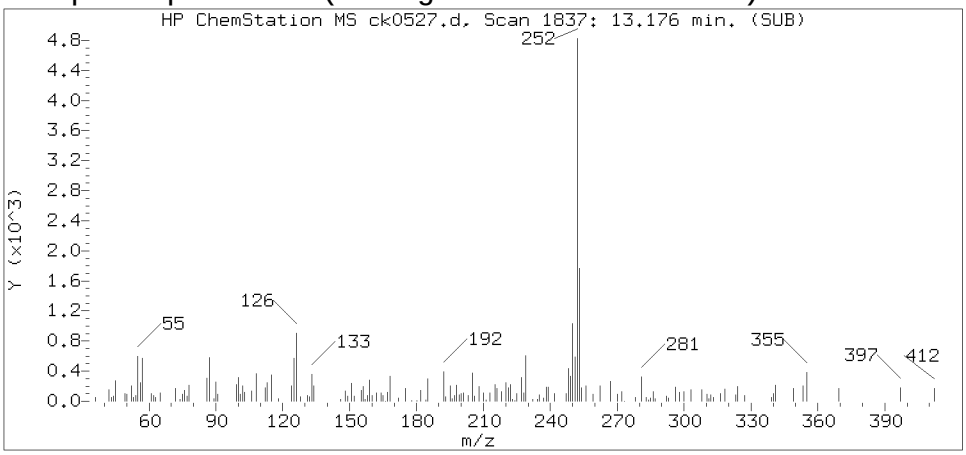
Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

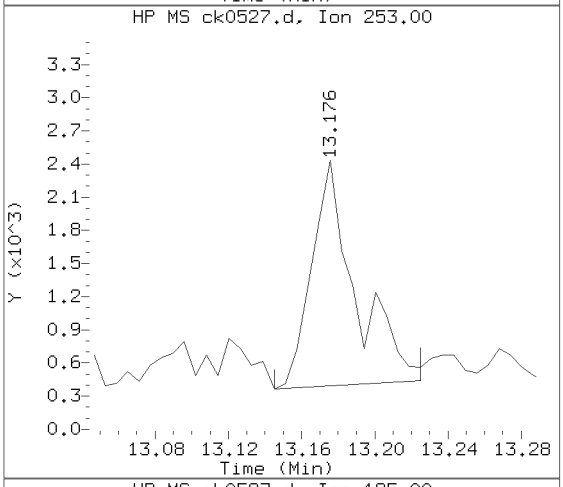
Reference Standard Spectrum for Benzo(b)fluoranthene



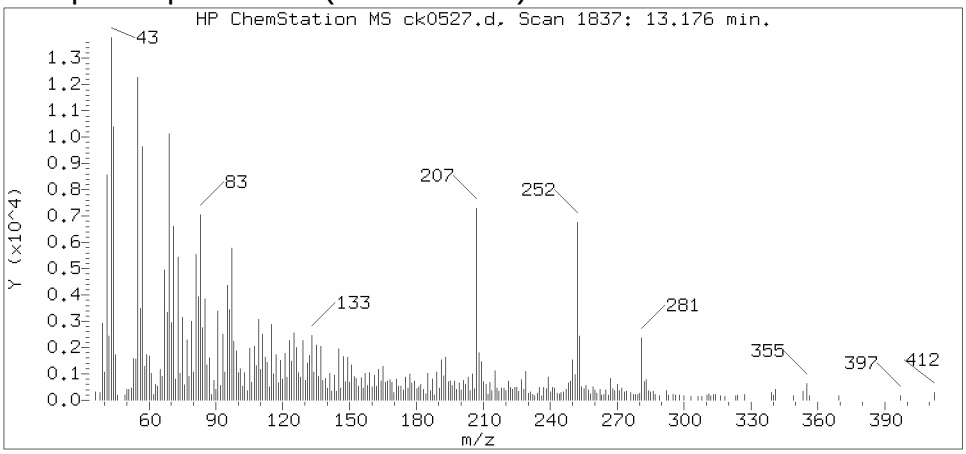


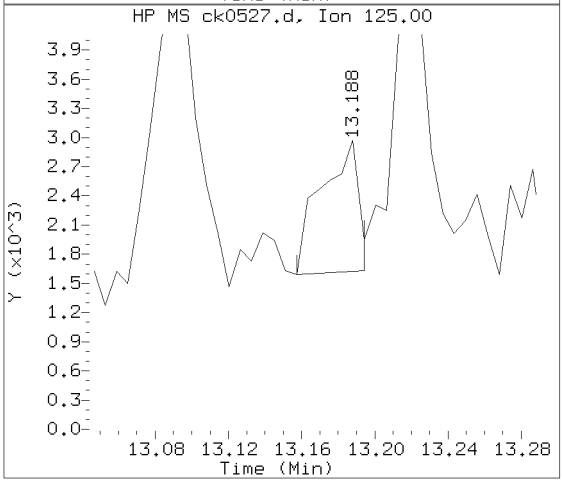
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

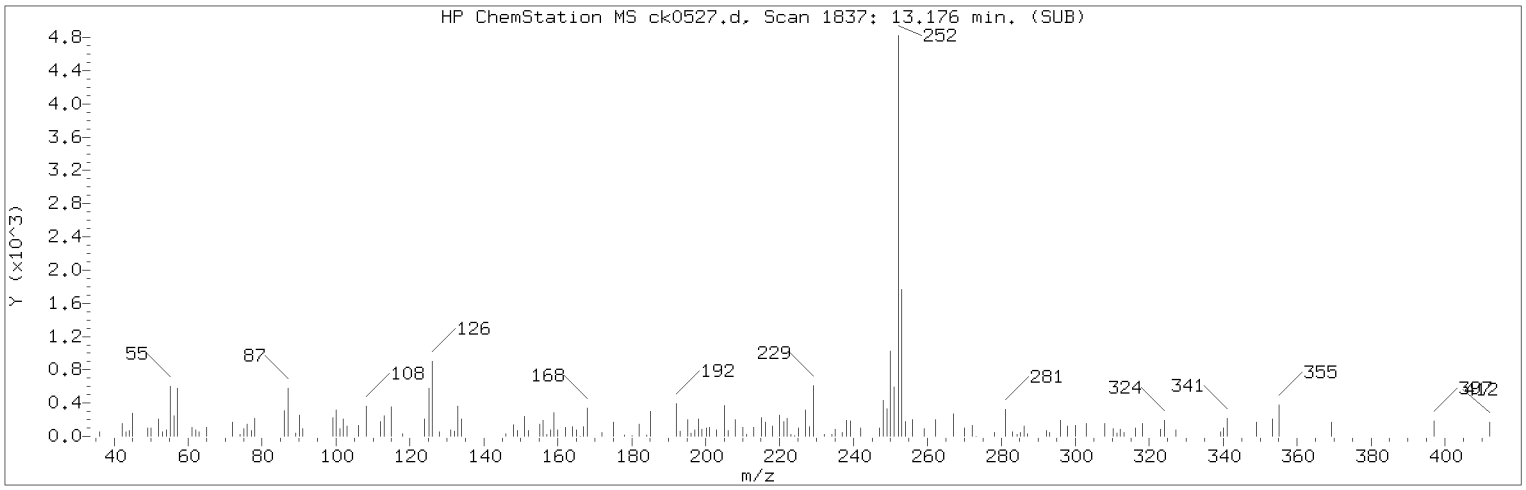
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

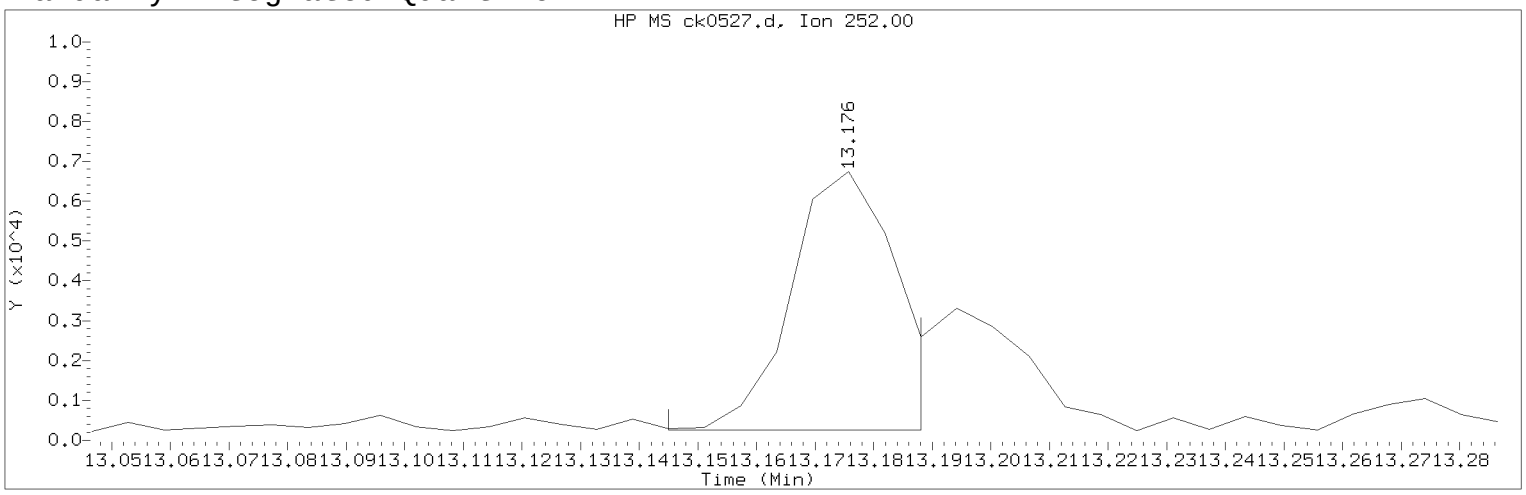
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 8196M
On-column Amount (ng/ul) : 0.2255

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

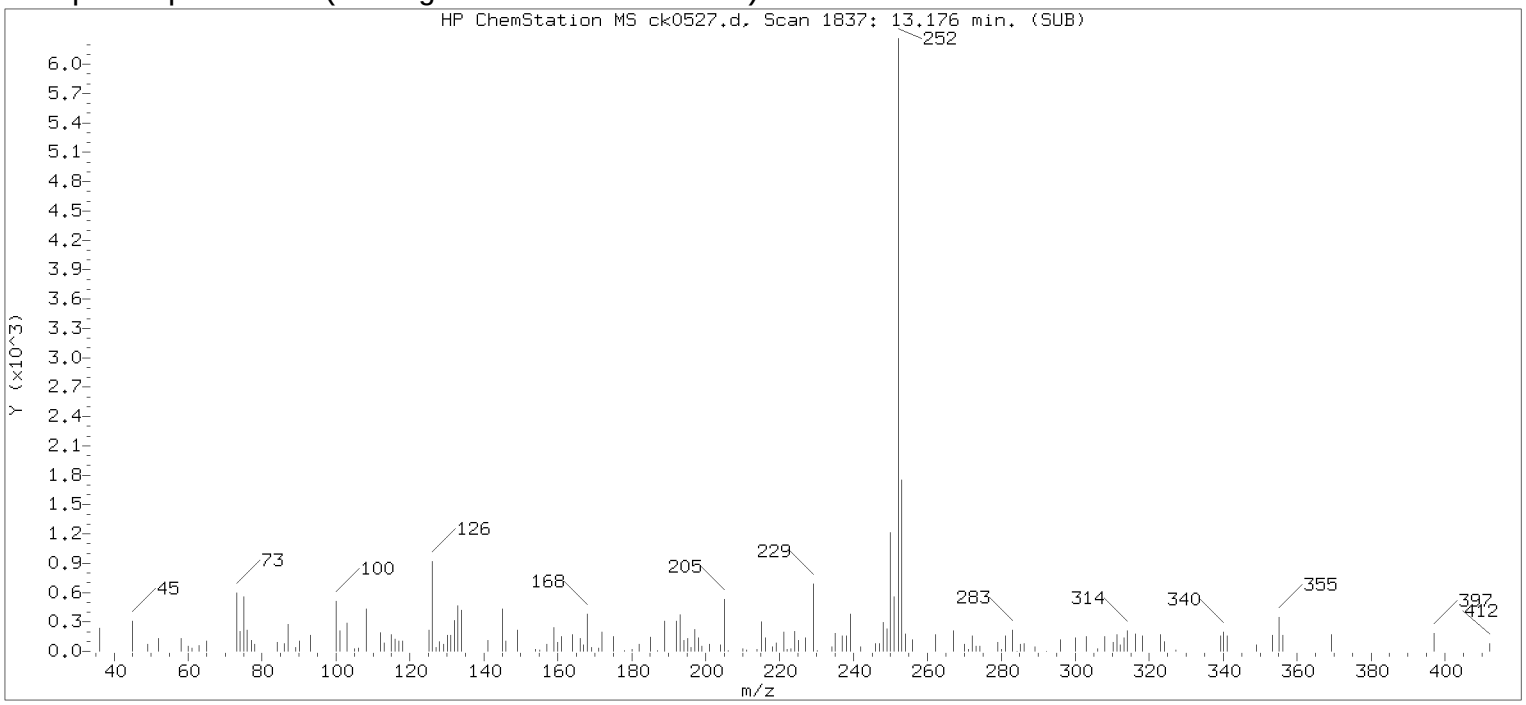
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area (flag) : 8196M
On-column Amount (ng/ul) : 0.2255
Integration start scan : 1831 Integration stop scan: 1838
Y at integration start : 260 Y at integration end: 260

Reason for manual integration: improper integration

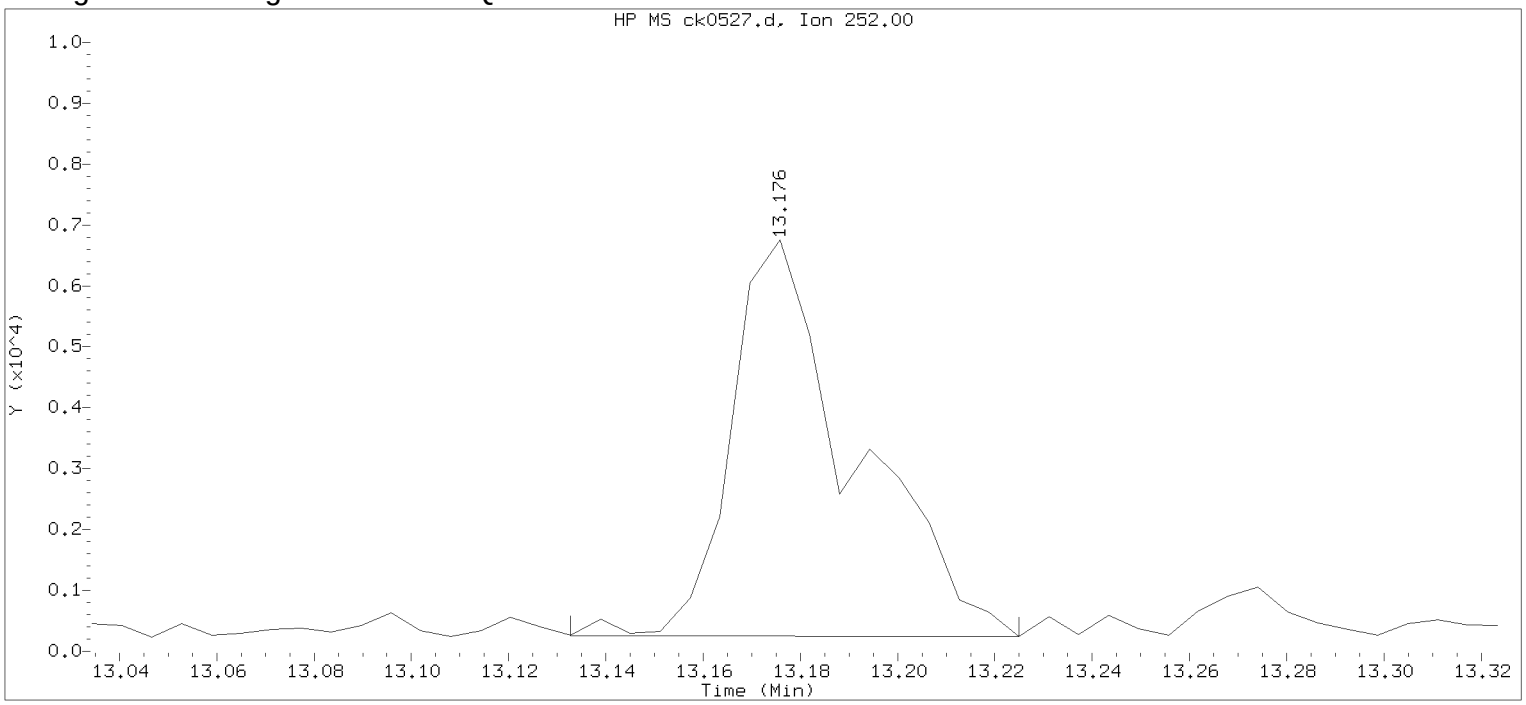
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:38.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

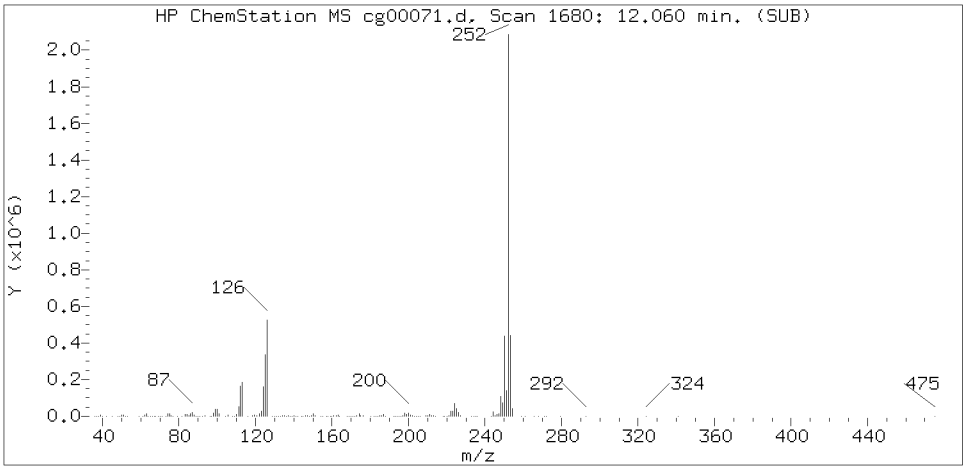
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:27 Automation

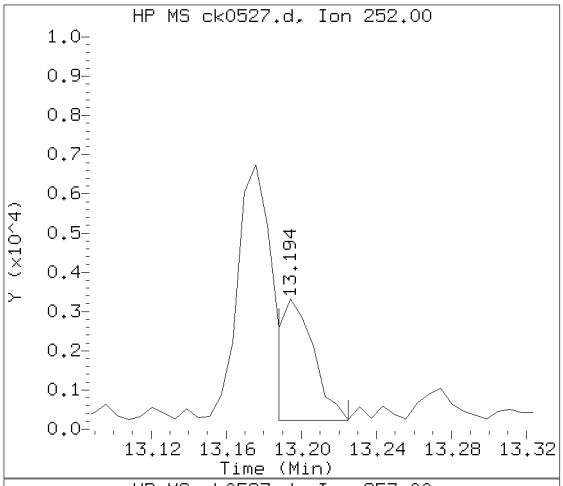
Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	:	172
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1837
Retention Time (minutes)	:	13.176
Quant Ion	:	252.00
Area	:	11477
On-column Amount (ng/ul)	:	0.3158
Integration start scan	:	1829 Integration stop scan: 1844
Y at integration start	:	249 Y at integration end: 247

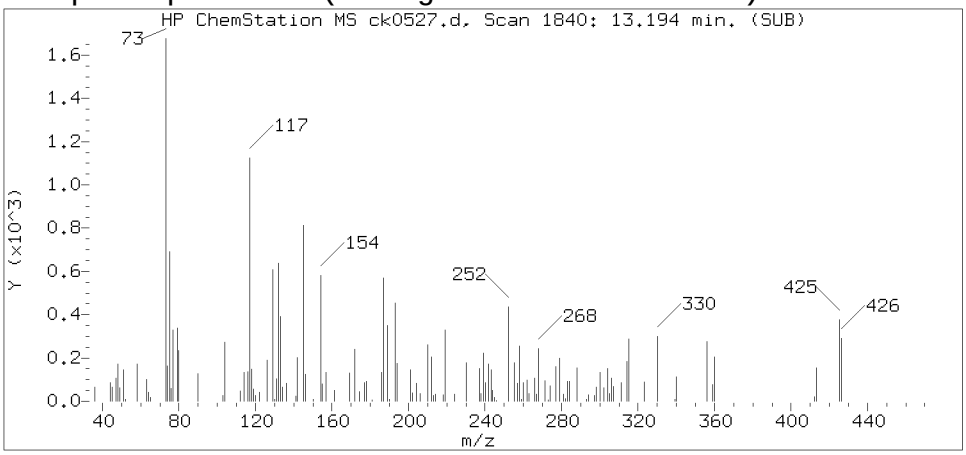
Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

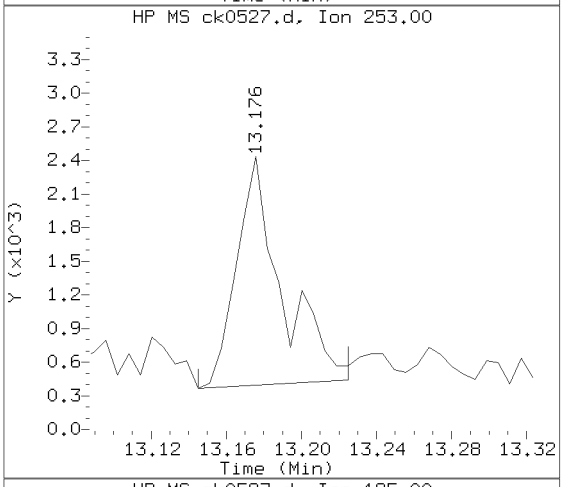
Reference Standard Spectrum for Benzo(k)fluoranthene



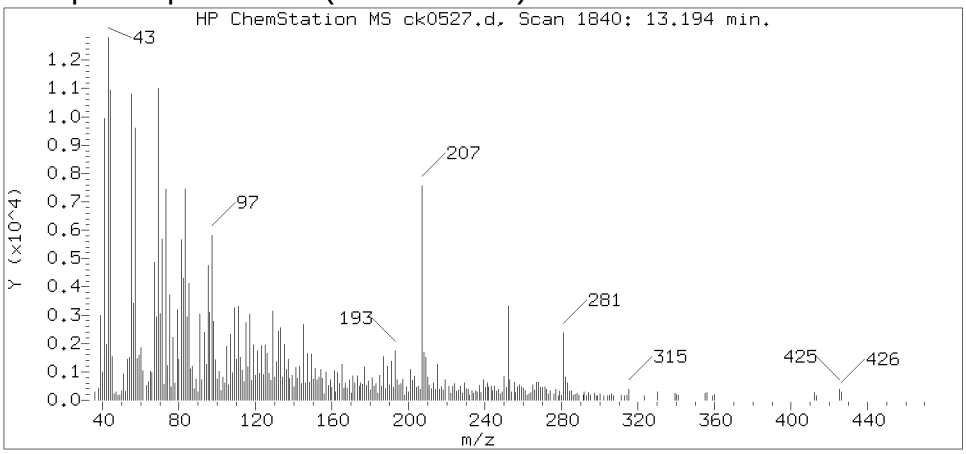


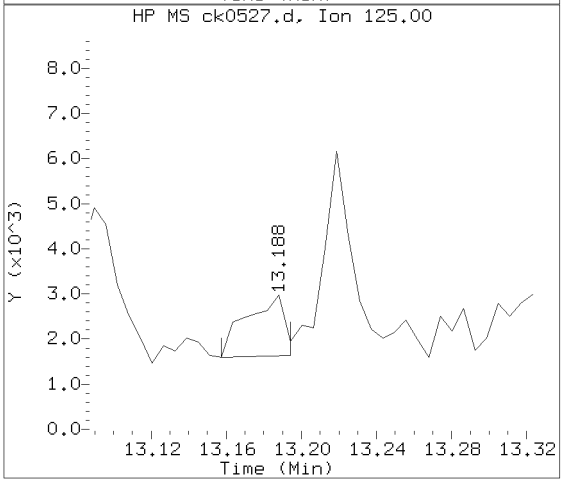
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

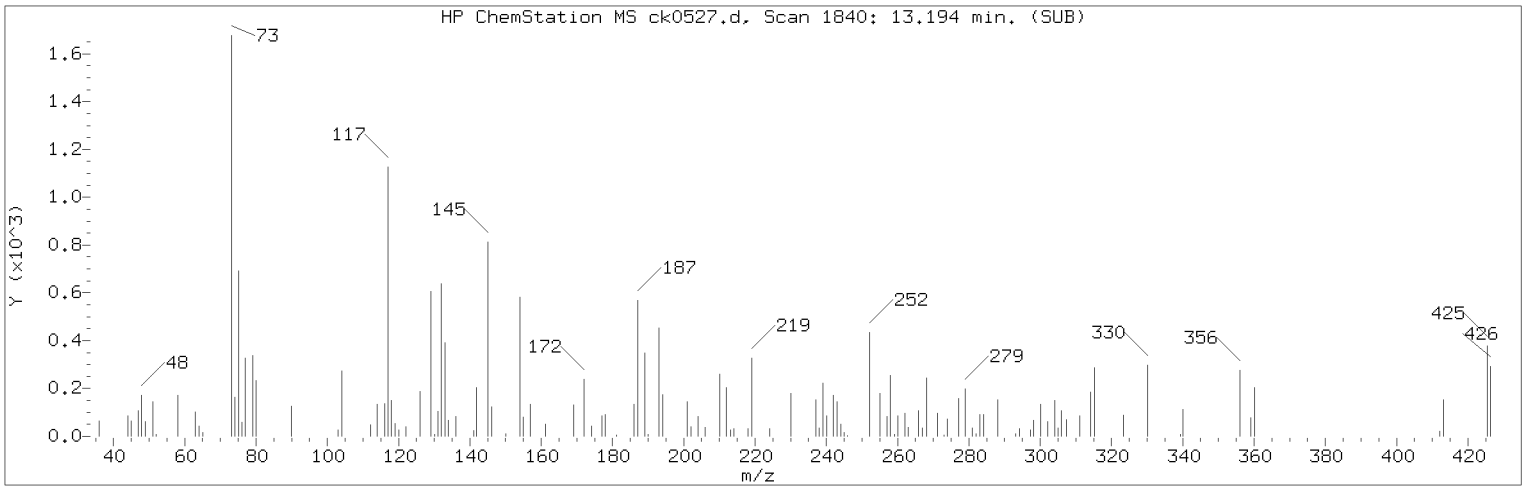
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

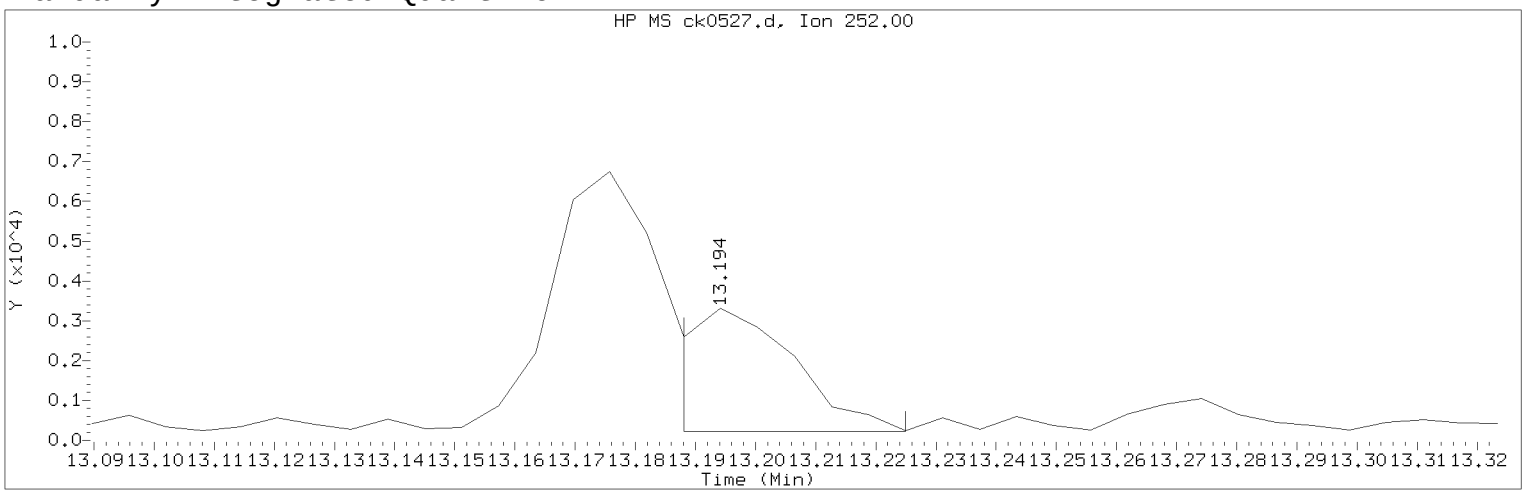
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Relative Retention Time : 0.00091
Quant Ion : 252.00
Area (flag) : 4050AM
On-column Amount (ng/ul) : 0.1092

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

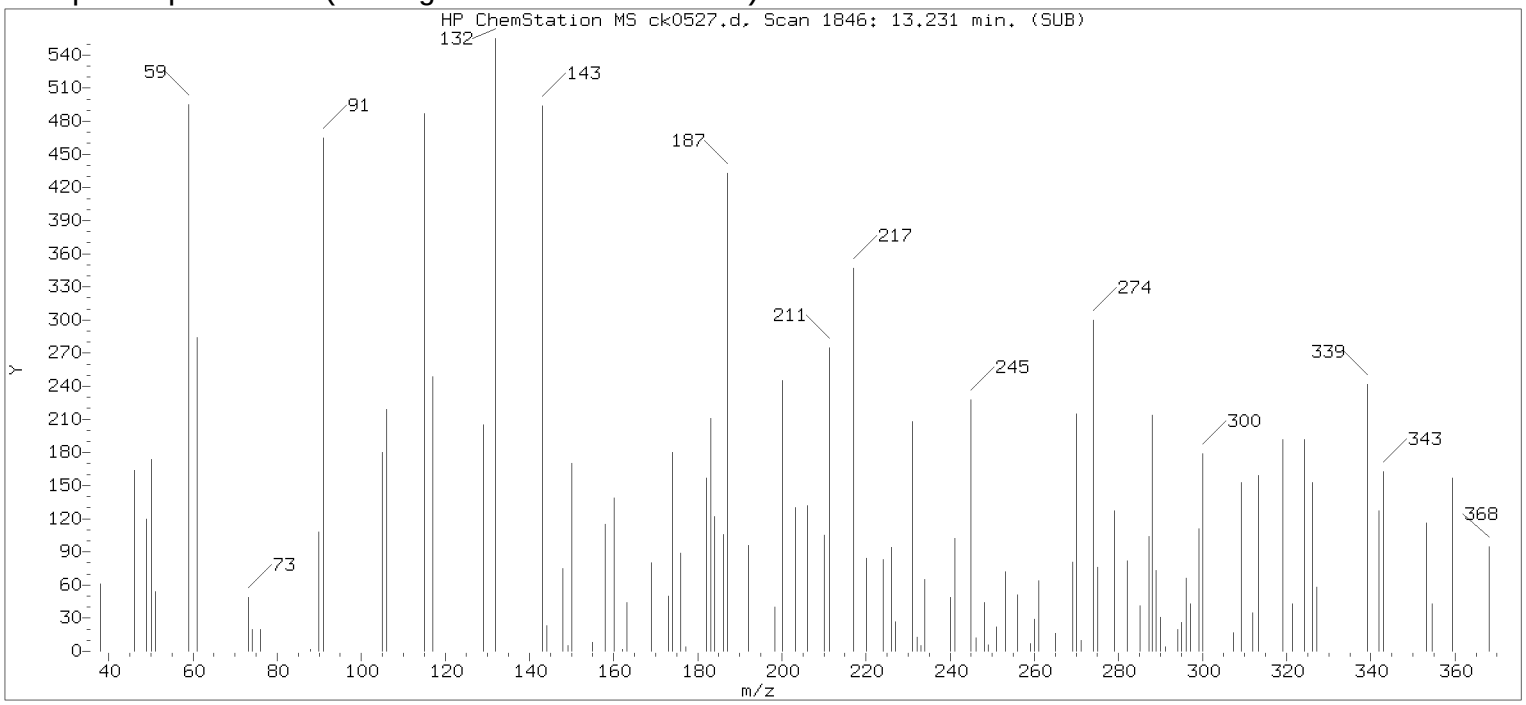
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Quant Ion : 252.00
Area (flag) : 4050AM
On-column Amount (ng/ul) : 0.1092
Integration start scan : 1838 Integration stop scan: 1844
Y at integration start : 229 Y at integration end: 229

Reason for manual integration: improper integration

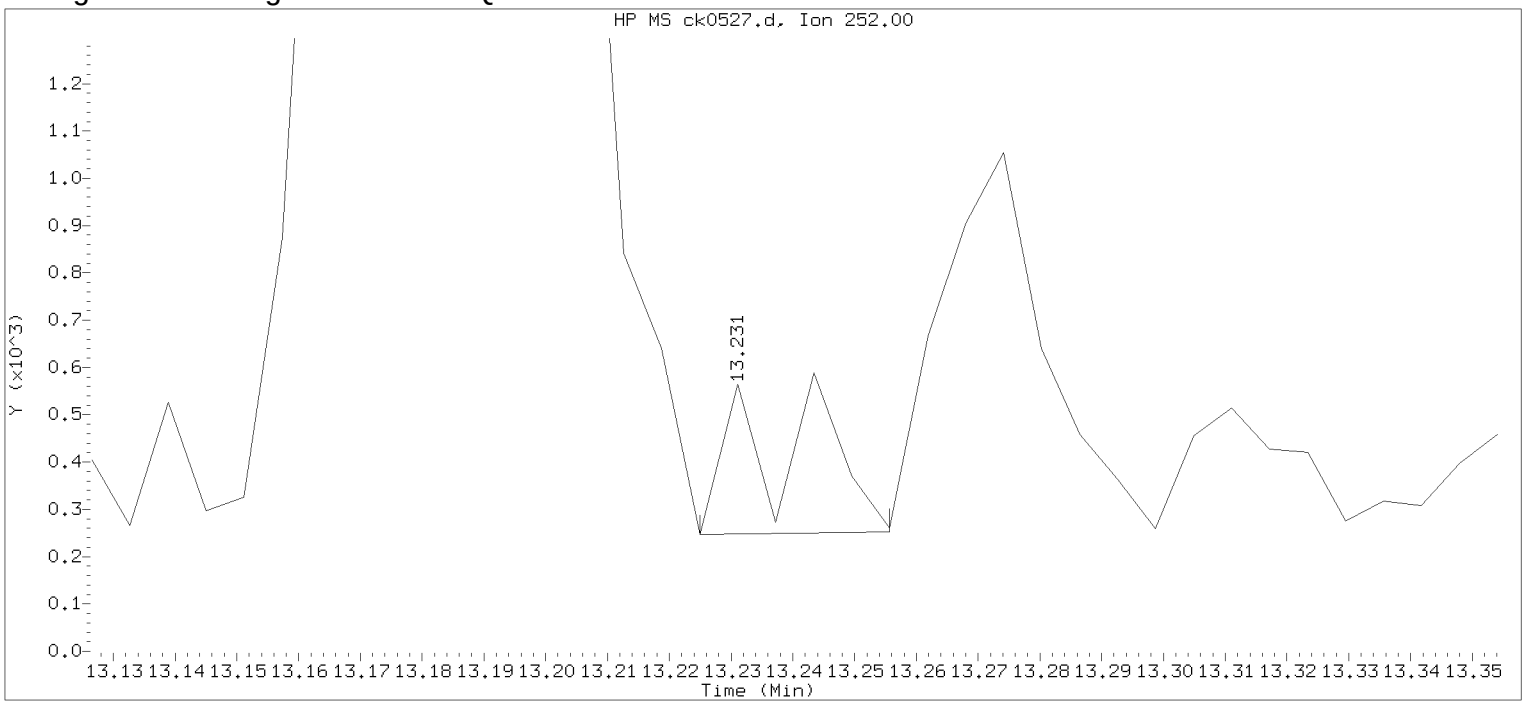
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:38.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

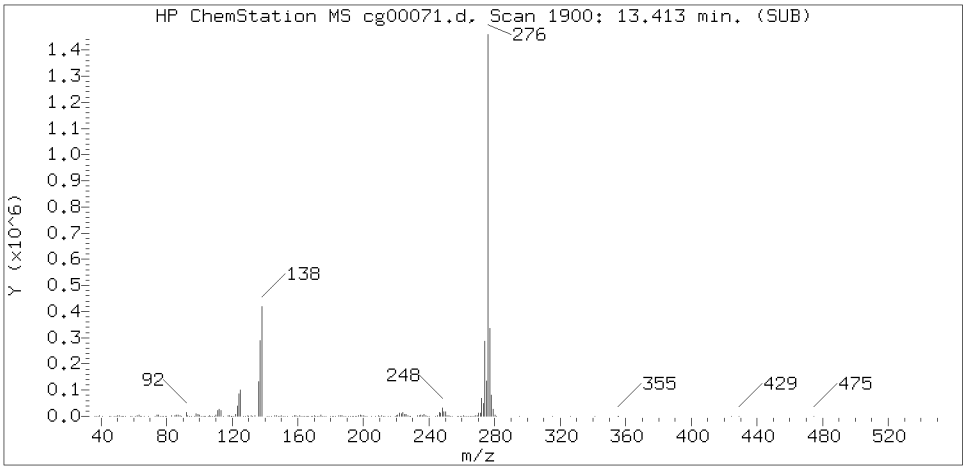
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:27 Automation

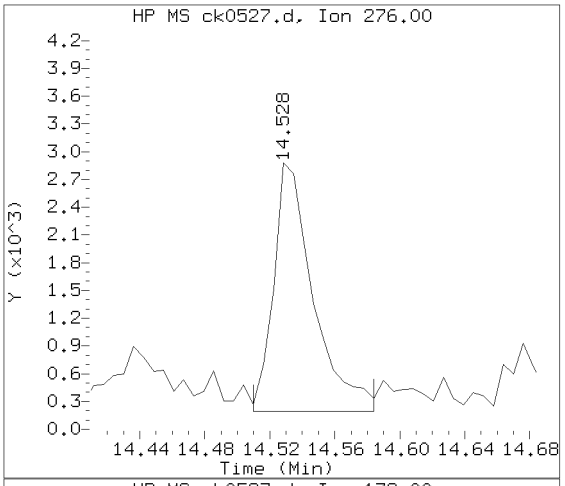
Sample Name: R2042 Lab Sample ID: 7265226

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1846
Retention Time (minutes) : 13.231
Quant Ion : 252.00
Area : 295
On-column Amount (ng/ul) : 0.0080
Integration start scan : 1844 Integration stop scan: 1849
Y at integration start : 247 Y at integration end: 253

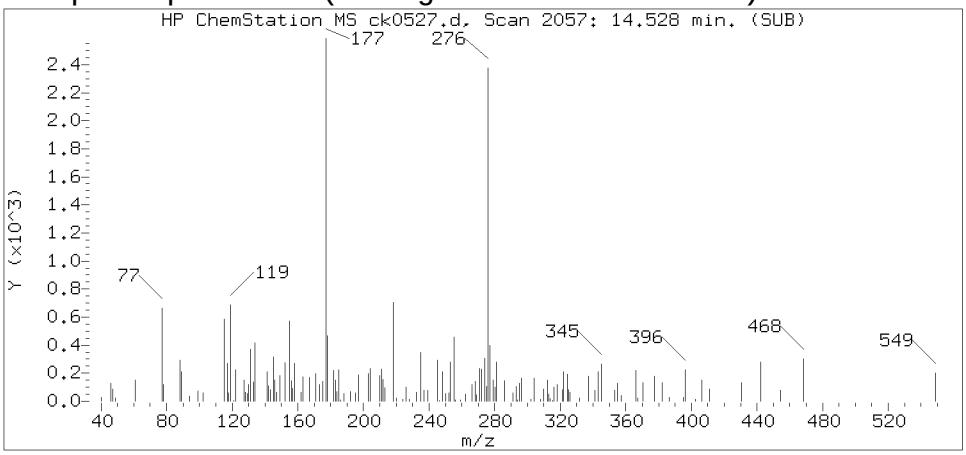
Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

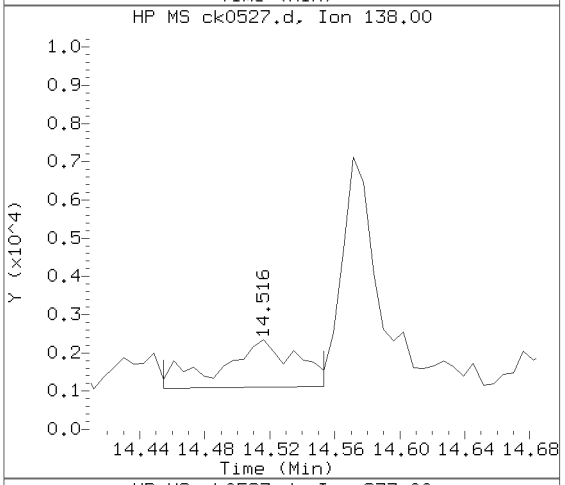
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



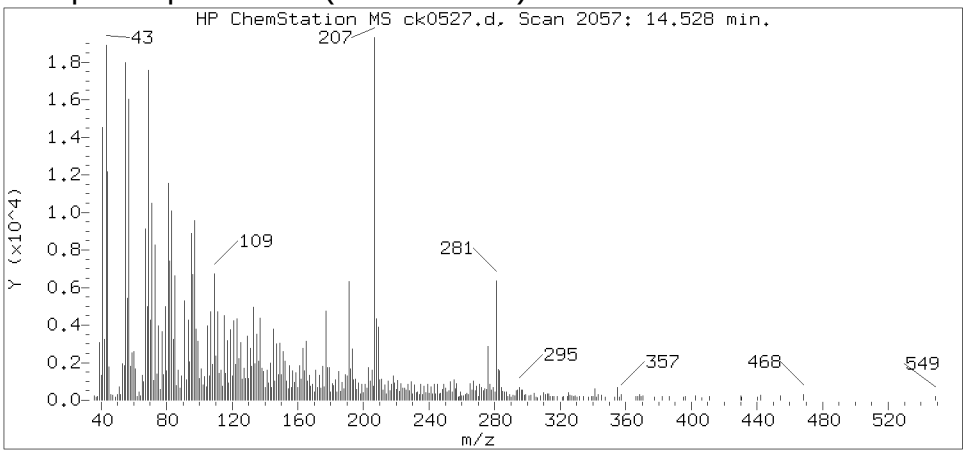


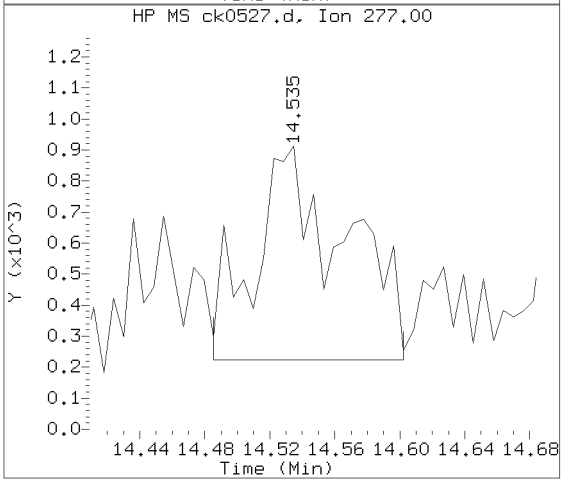
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

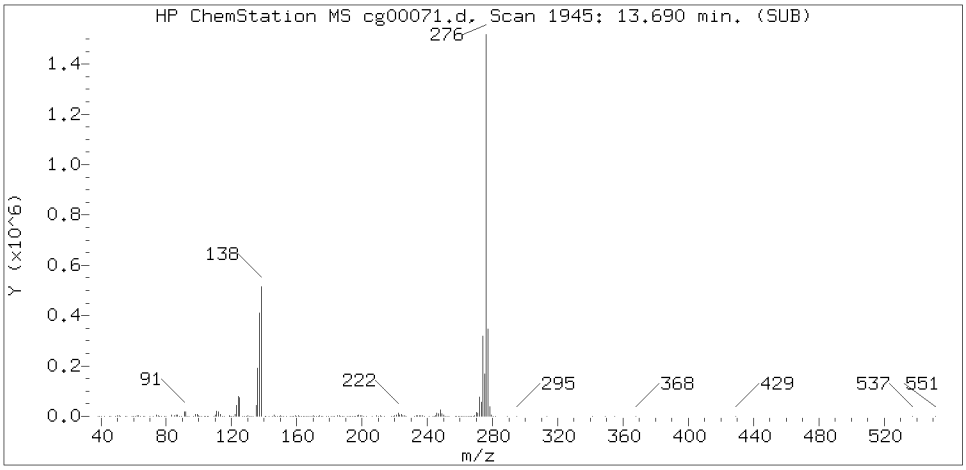
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

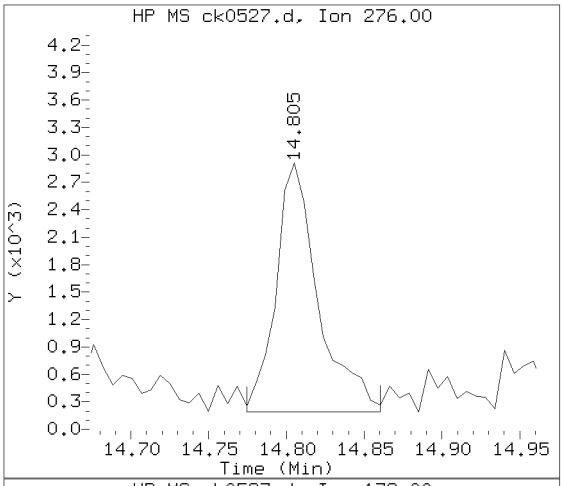
Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2057
Retention Time (minutes)	: 14.528
Relative Retention Time	: 0.00091
Quant Ion	: 276.00
Area (flag)	: 4516
On-column Amount (ng/ul)	: 0.1197

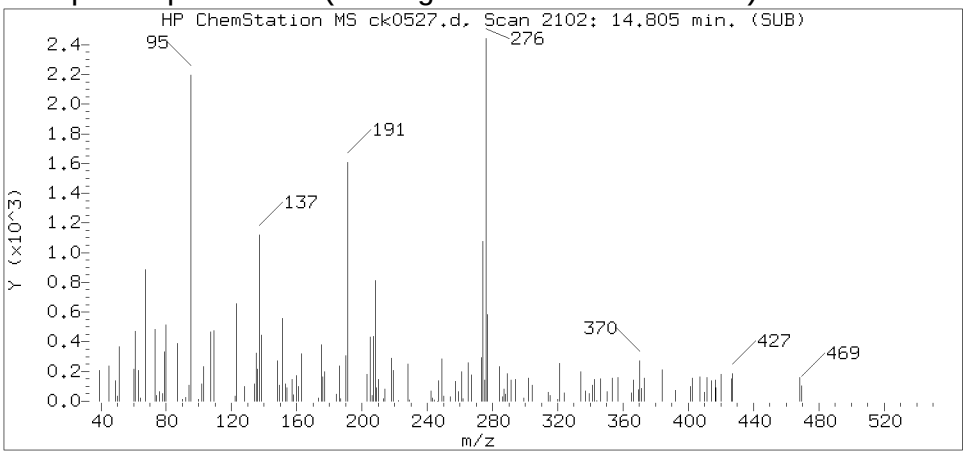
Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

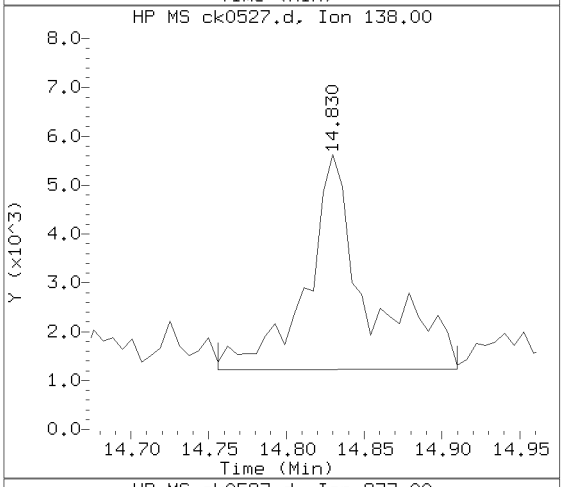
Reference Standard Spectrum for Benzo(g,h,i)perylene



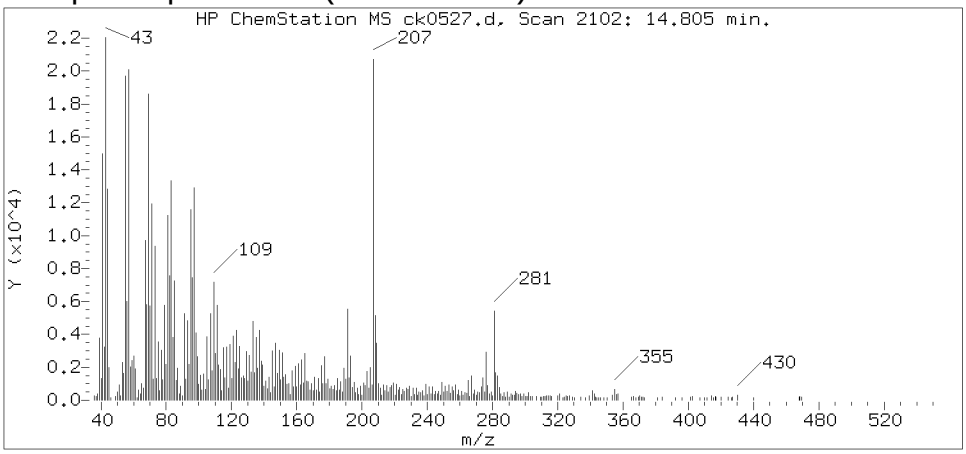


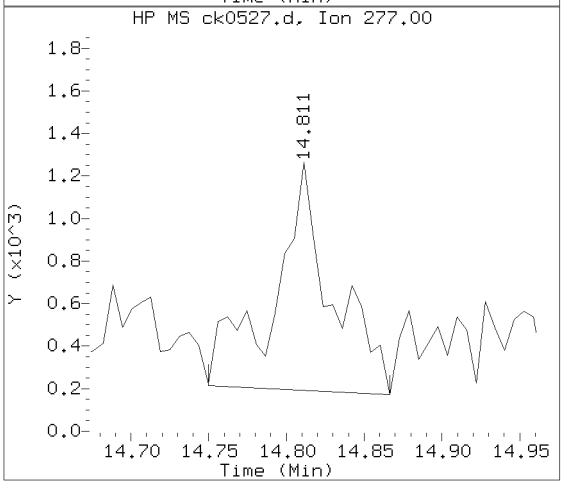
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

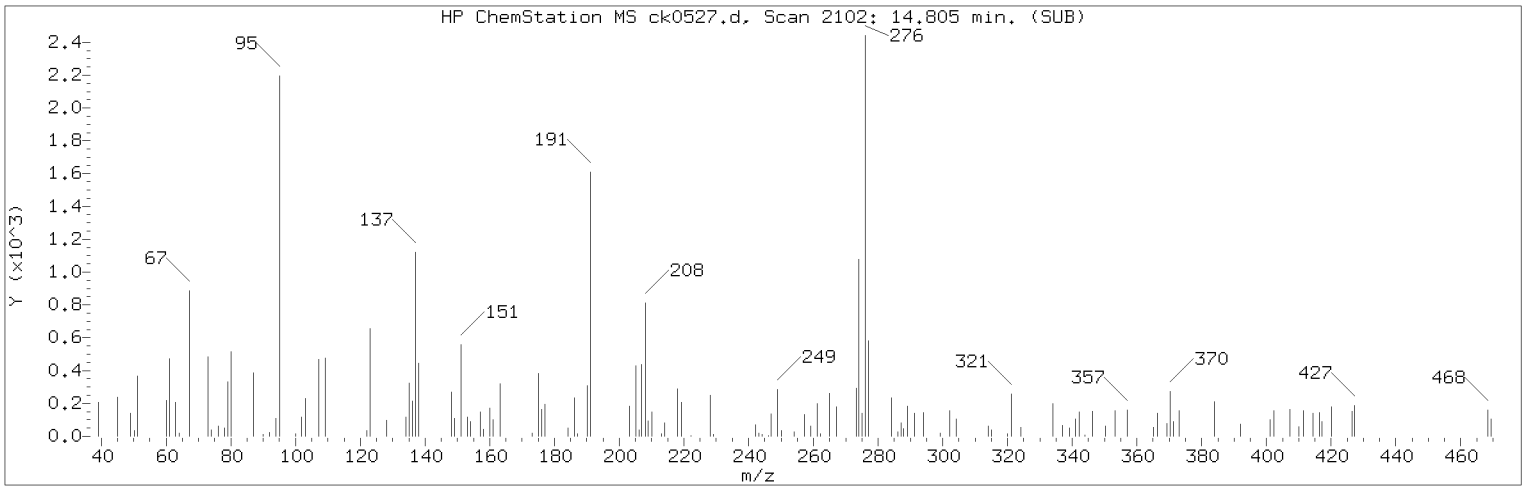
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

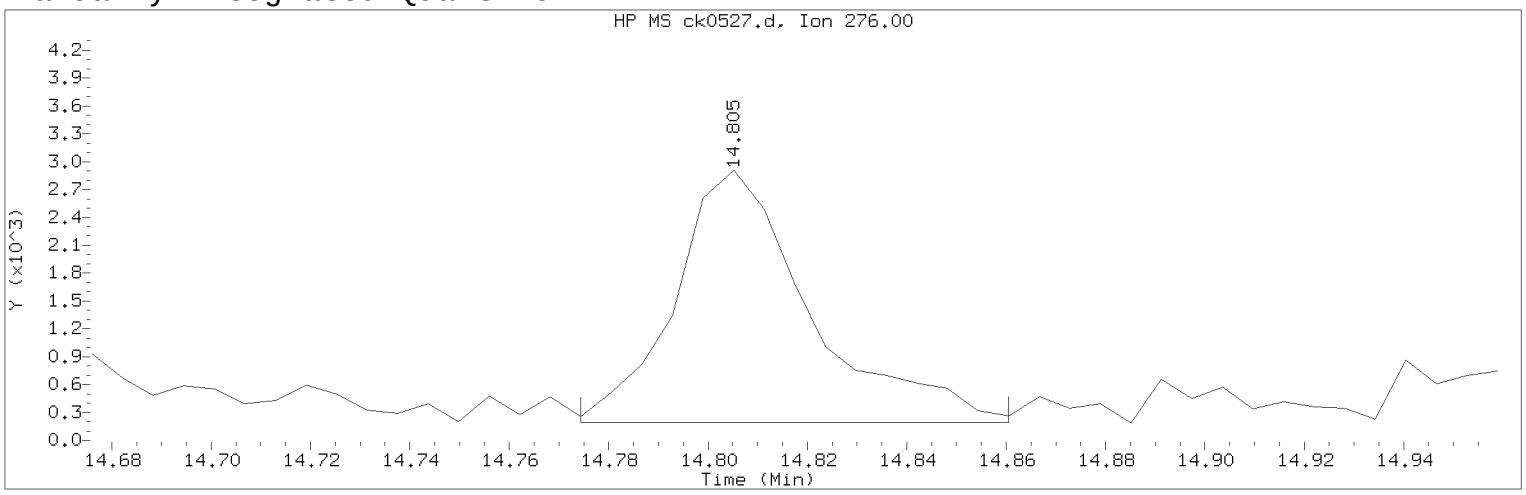
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2102
Retention Time (minutes)	: 14.805
Relative Retention Time	: 0.00045
Quant Ion	: 276.00
Area (flag)	: 5144M
On-column Amount (ng/ul)	: 0.1600

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:15 mac00013

Sample Name: R2042 Lab Sample ID: 7265226

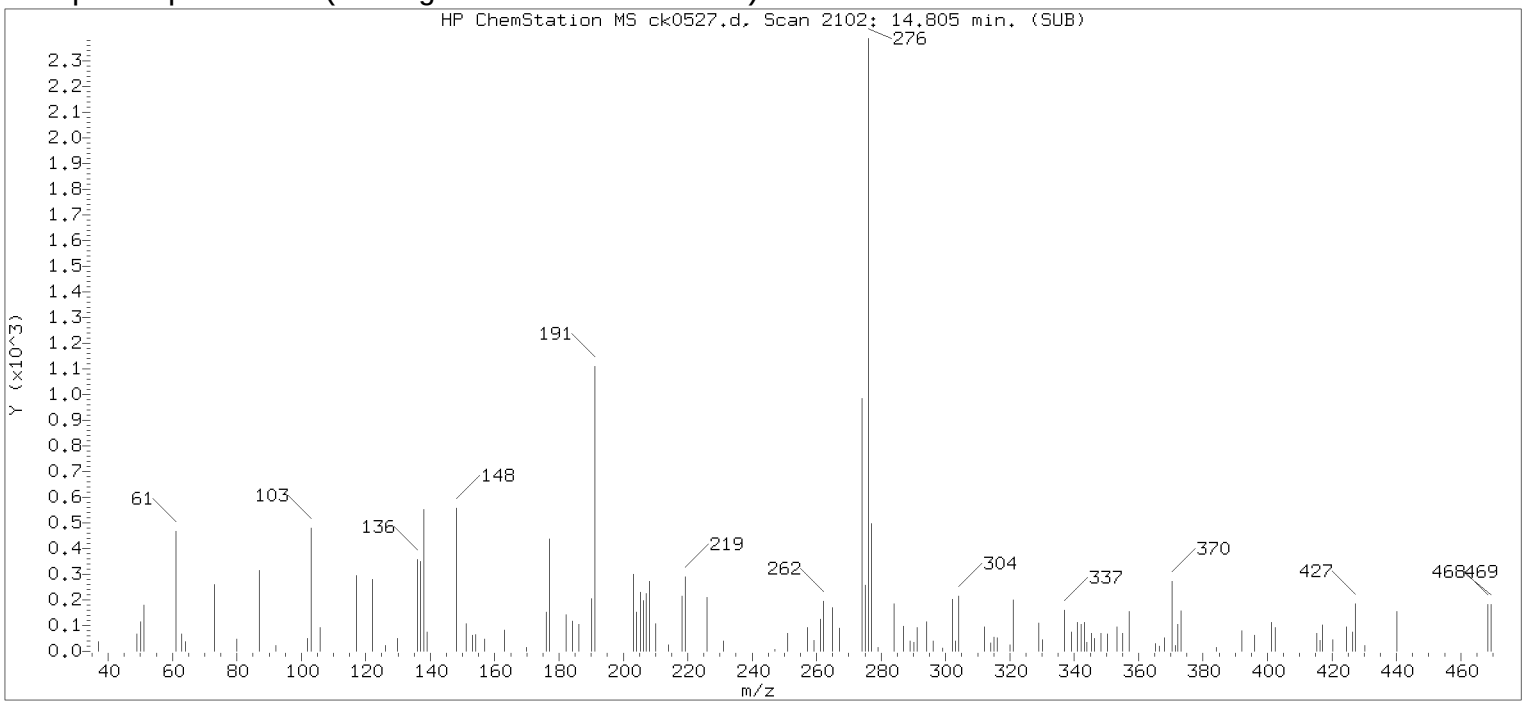
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2102
Retention Time (minutes) : 14.805
Quant Ion : 276.00
Area (flag) : 5144M
On-column Amount (ng/ul) : 0.1600
Integration start scan : 2096 Integration stop scan: 2110
Y at integration start : 193 Y at integration end: 193

Reason for manual integration: improper integration

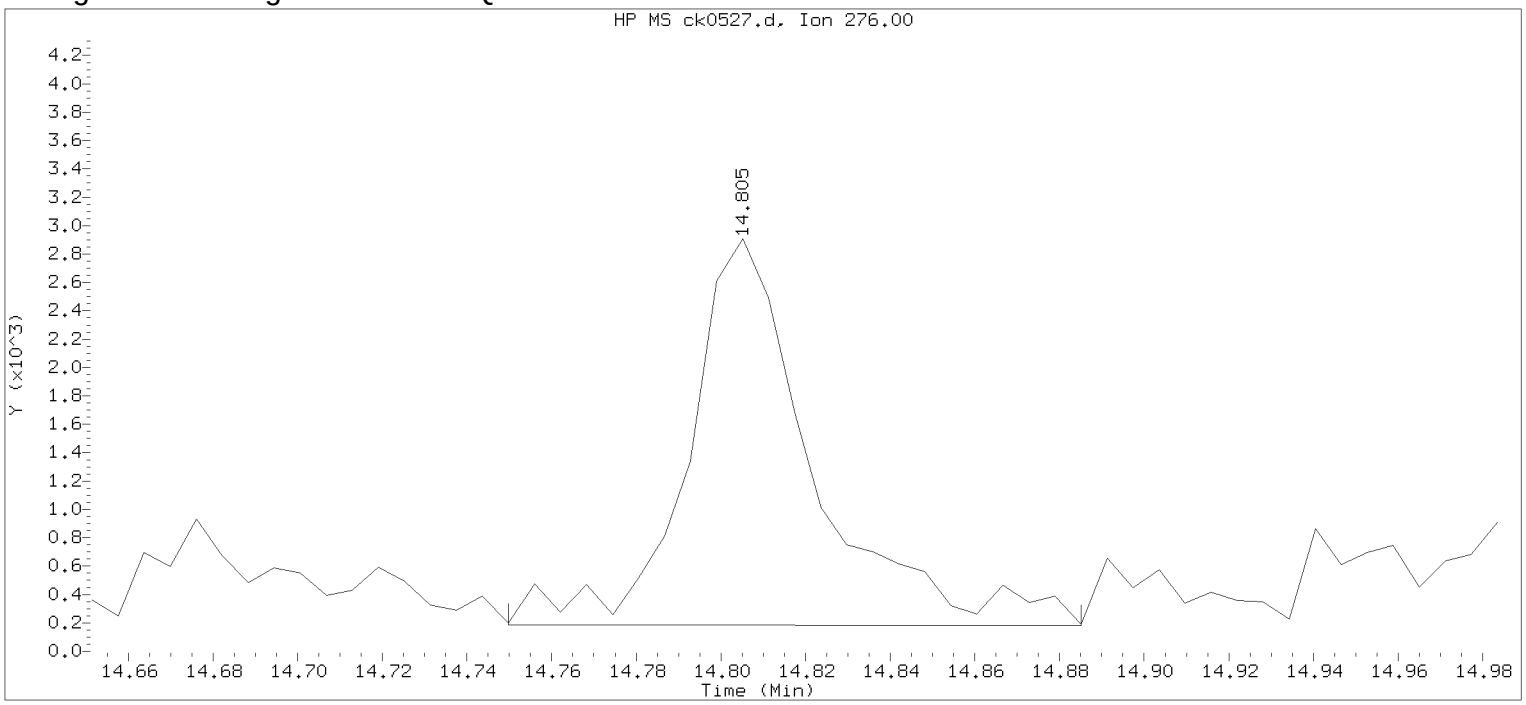
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:38.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0527.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 05:01 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:27 Automation

Sample Name: R2042 Lab Sample ID: 7265226

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2102		
Retention Time (minutes)	: 14.805		
Quant Ion	: 276.00		
Area	: 5690		
On-column Amount (ng/ul)	: 0.1770		
Integration start scan	: 2092	Integration stop scan:	2114
Y at integration start	: 186	Y at integration end:	181

Digitally signed by Mark A. Clark on 11/14/2013 at 06:22.
Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0488.d Injection date and time: **13-NOV-2013 19:54**
Data file Sample Info. Line: R2043;7265227;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201(0.000)	540	152	121409 (2)	20.00	
52) Naphthalene-d8	6.437(0.000)	741	136	546826 (-4)	20.00	
98) Acenaphthene-d10	8.152(-0.006)	1020	164	339475 (-6)	20.00	
135) Phenanthrene-d10	9.591(0.000)	1254	188	612465 (-11)	20.00	
167) Pyrene-d10	10.974(0.000)	1479	212	718080 (-15)	20.00	
175) Perylene-d12	13.581(-0.006)	1903	264	548469 (-22)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742(0.000)	82	982485	83.394	83%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513(0.000)	172	1918114	89.862	90%		69 - 120
156) Terphenyl-d14	(5)	11.177(-0.001)	244	2443574	95.190	95%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.616(-0.000)	178	4764	0.134	26.75			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.771(-0.000)	202	6081M	0.153	30.55			0.1
154) Pyrene	(5)	10.987(0.000)	202	6149M	0.154	30.84			0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)	12.198(0.000)	228	3991	0.113	22.51			0.1
172) Benzo(b)fluoranthene	(6)	13.219(0.000)	252	4481M	0.134	26.76			0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0488.d Injection date and time: **13-NOV-2013 19:54**
Data file Sample Info. Line: R2043;7265227;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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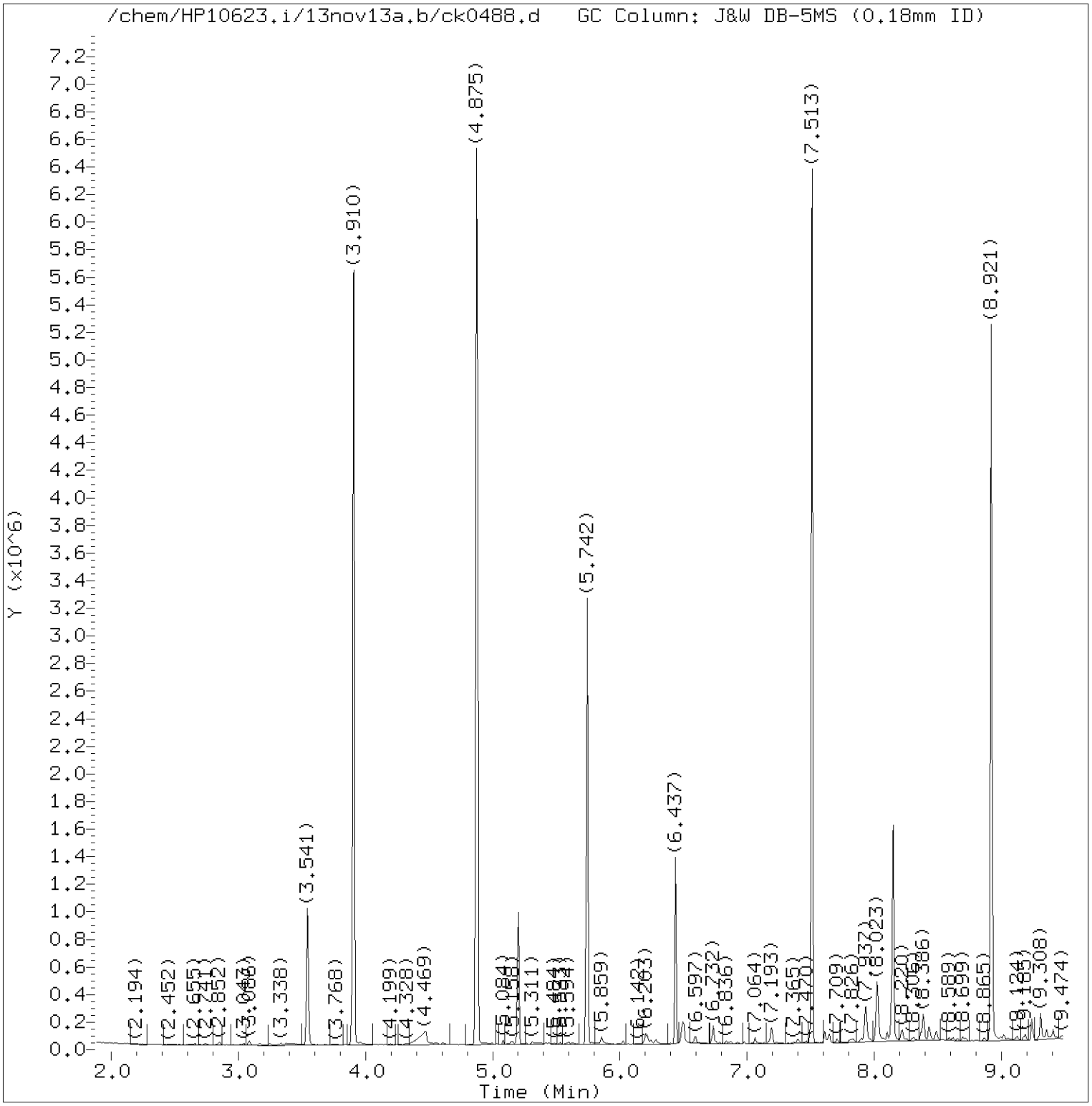
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:32. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

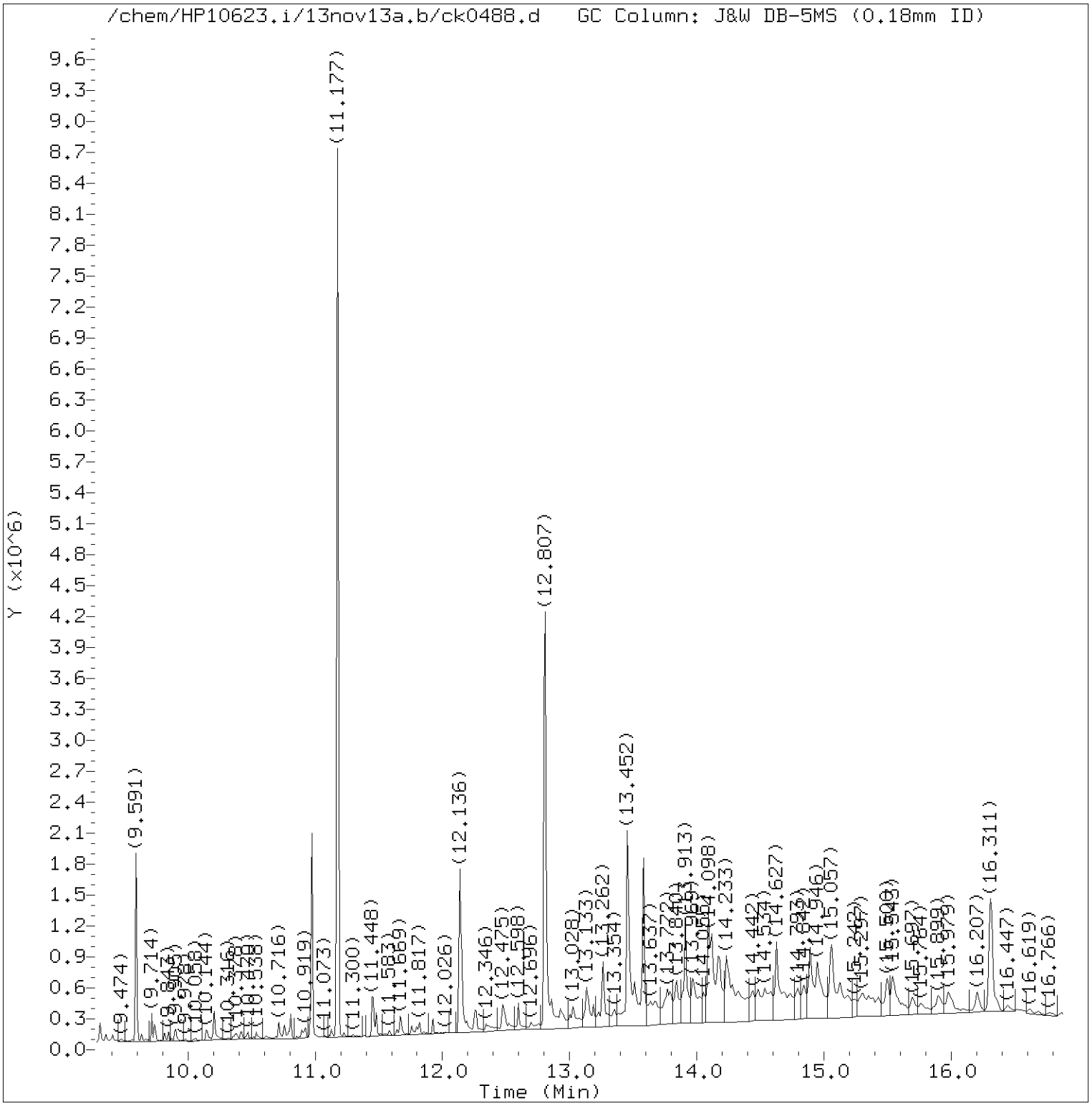
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

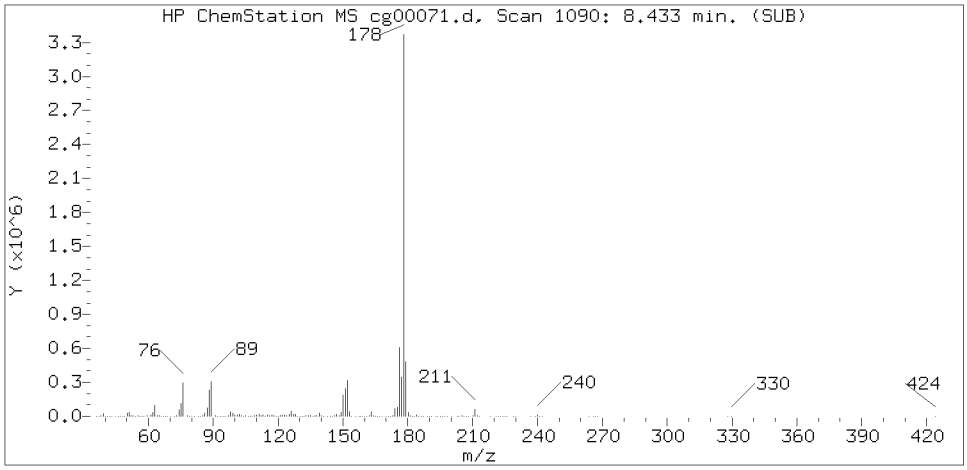
Sample Name: R2043 Lab Sample ID: 7265227

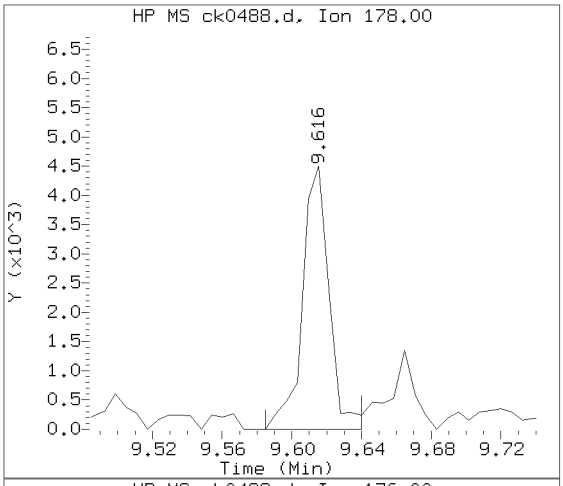
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	121409	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	982485	83.394
52)*Naphthalene-d8	(2)	6.437	136	546826	20.000
78)$2-Fluorobiphenyl	(3)	7.513	172	1918114	89.862
98)*Acenaphthene-d10	(3)	8.152	164	339475	20.000
135)*Phenanthrene-d10	(4)	9.591	188	612465	20.000
137) Phenanthrene	(4)	9.616	178	4764	0.134
147) Fluoranthene	(4)	10.771	202	6081M	0.153
167)*Pyrene-d10	(5)	10.974	212	718080	20.000
154) Pyrene	(5)	10.987	202	6149M	0.154
156)$Terphenyl-d14	(5)	11.177	244	2443574	95.190
168) Chrysene	(5)	12.198	228	3991	0.113
172) Benzo(b)fluoranthene	(6)	13.219	252	4481M	0.134
175)*Perylene-d12	(6)	13.581	264	548469	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

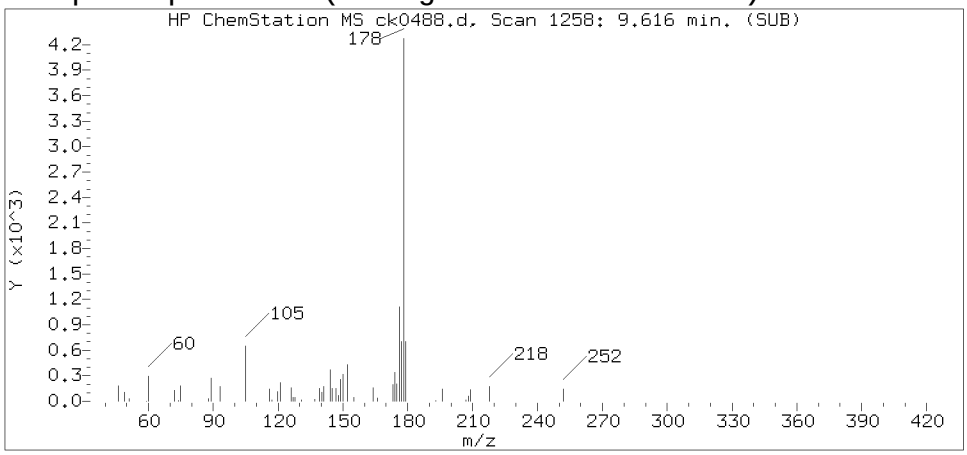
Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

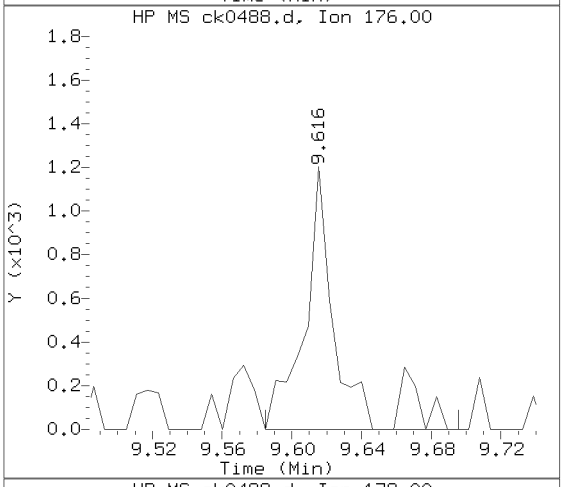
Reference Standard Spectrum for Phenanthrene



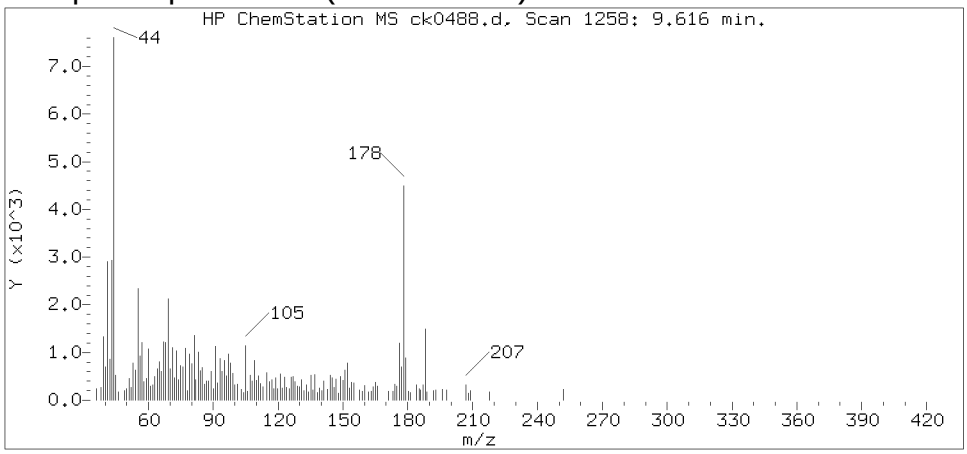


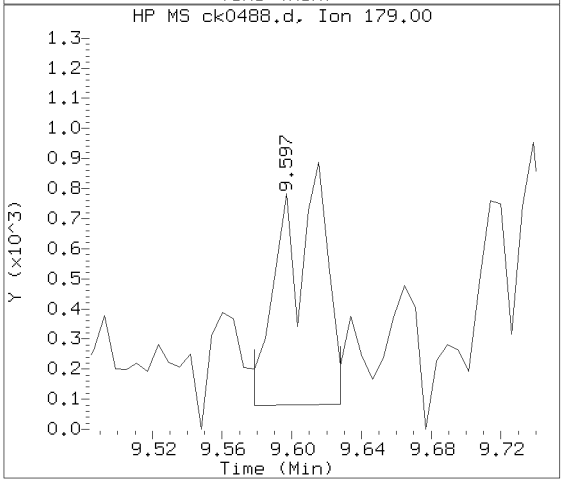
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

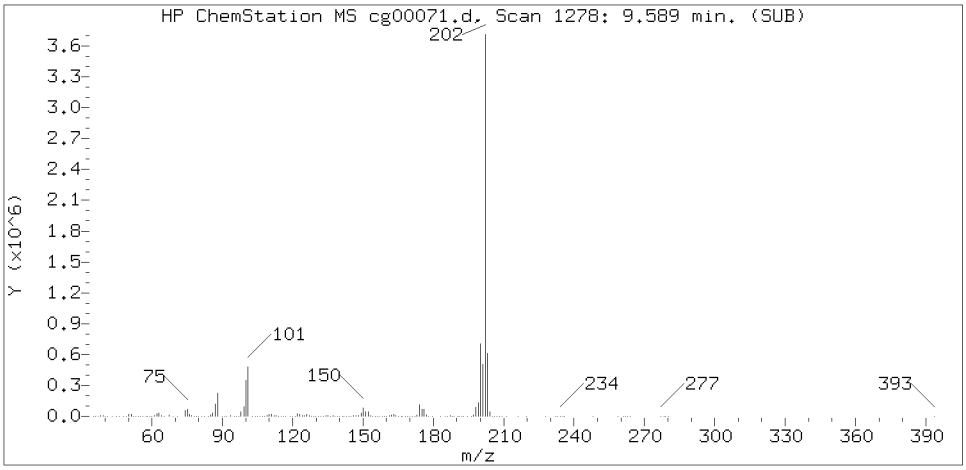
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

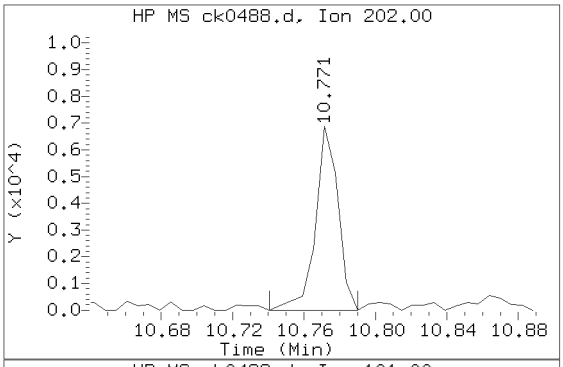
Sample Name: R2043 Lab Sample ID: 7265227

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 4764
On-column Amount (ng/ul) : 0.1338

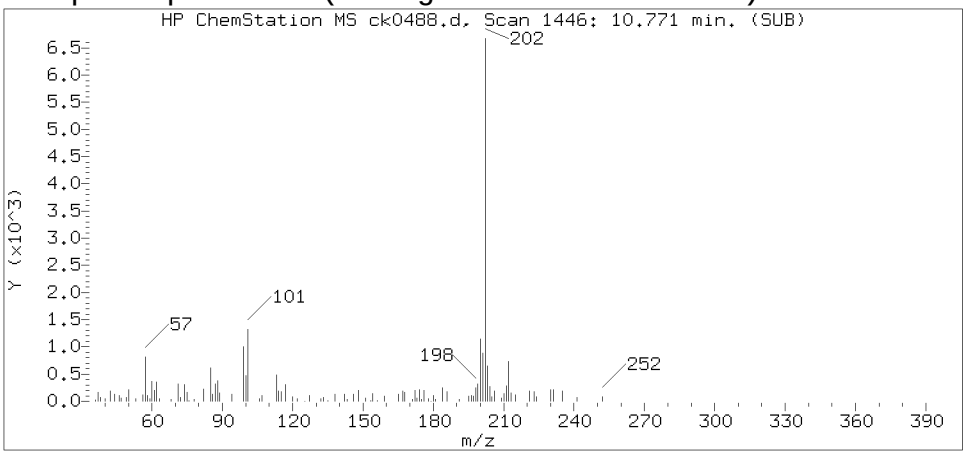
Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

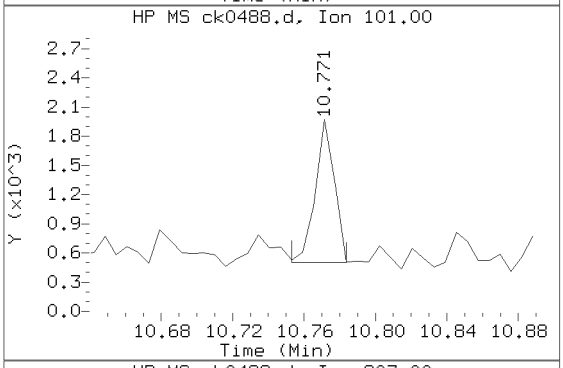
Reference Standard Spectrum for Fluoranthene

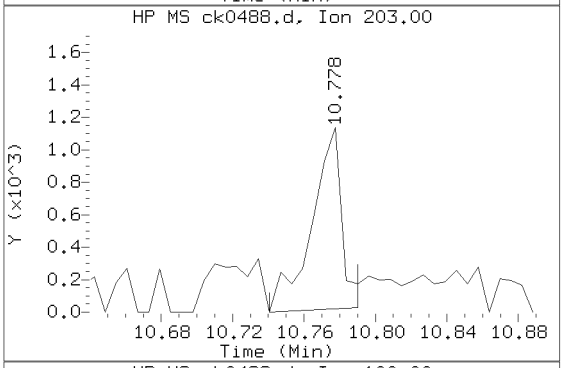




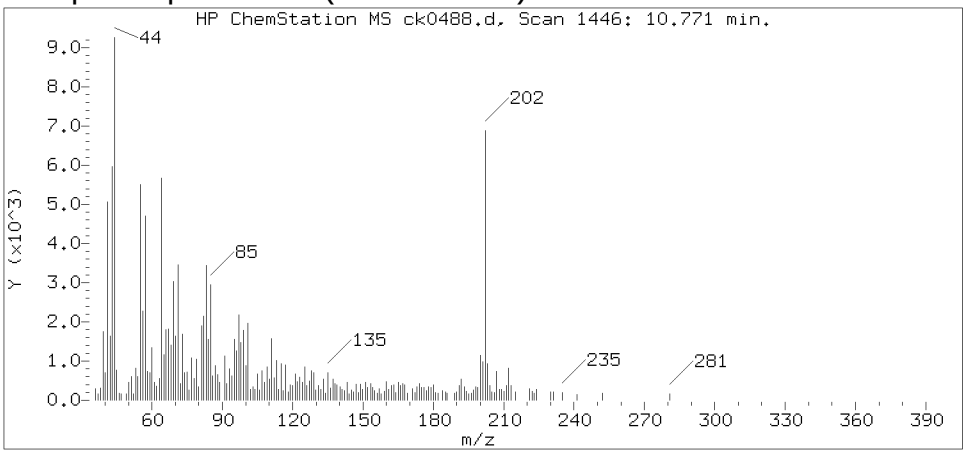
Sample Spectrum (Background Subtracted)

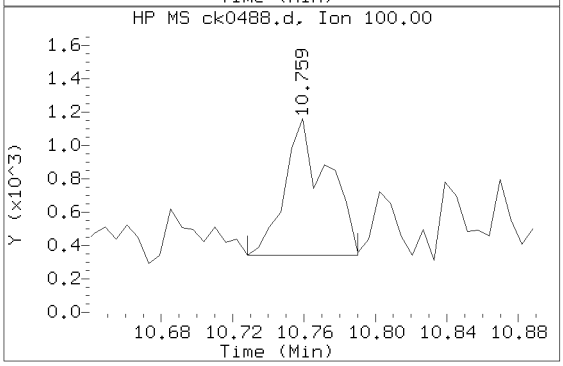






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

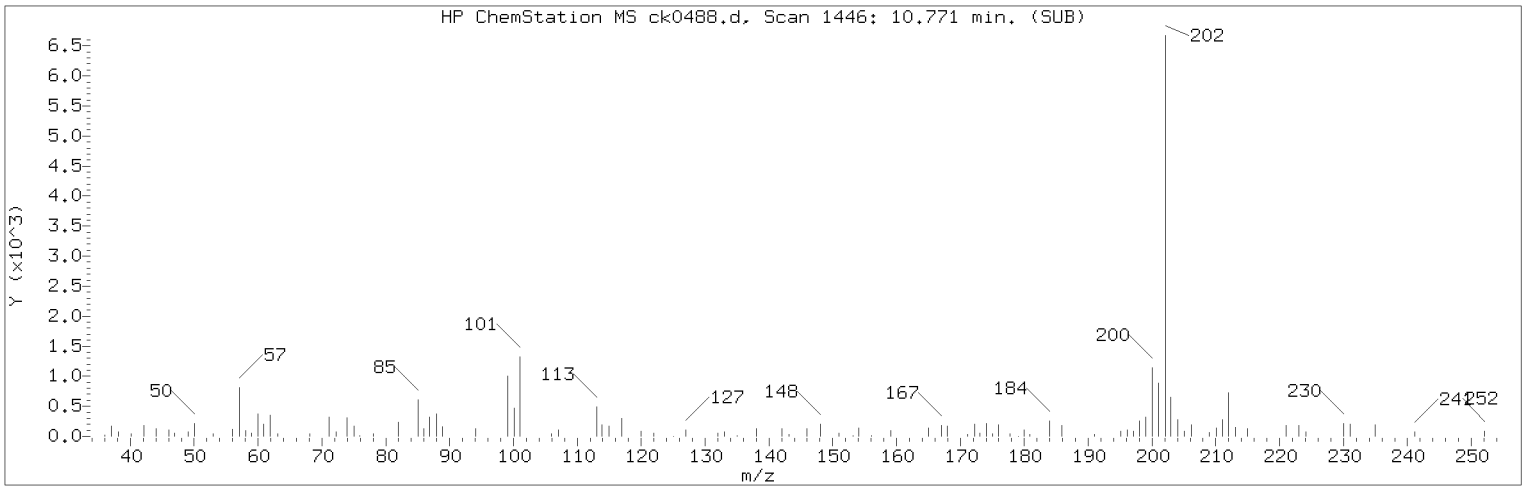
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

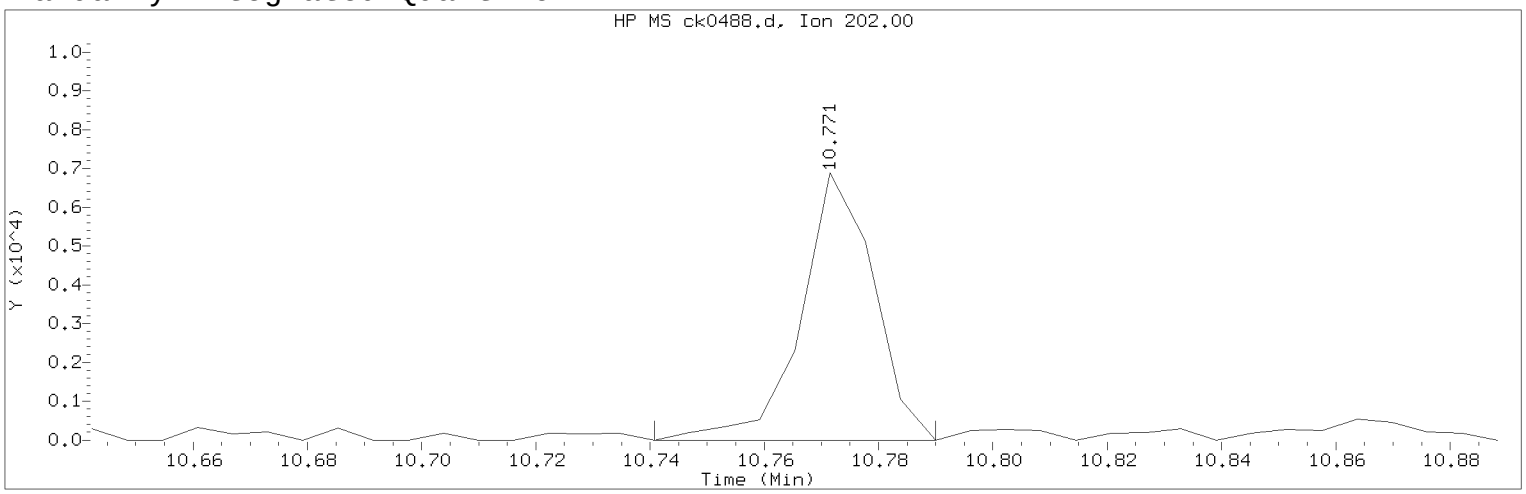
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.771
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 6081M
On-column Amount (ng/ul) : 0.1527

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

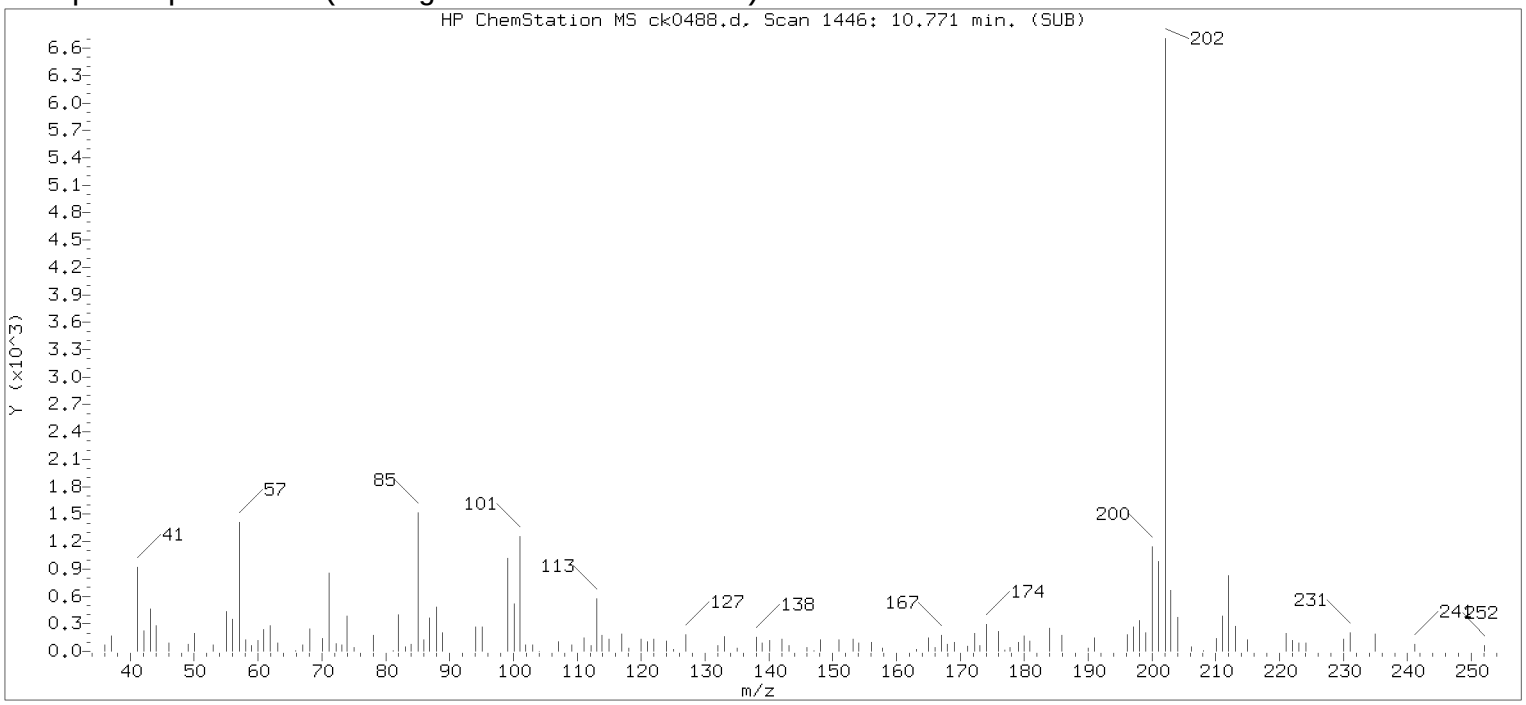
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.771
Quant Ion : 202.00
Area (flag) : 6081M
On-column Amount (ng/ul) : 0.1527
Integration start scan : 1440 Integration stop scan: 1448
Y at integration start : -7 Y at integration end: -7

Reason for manual integration: improper integration

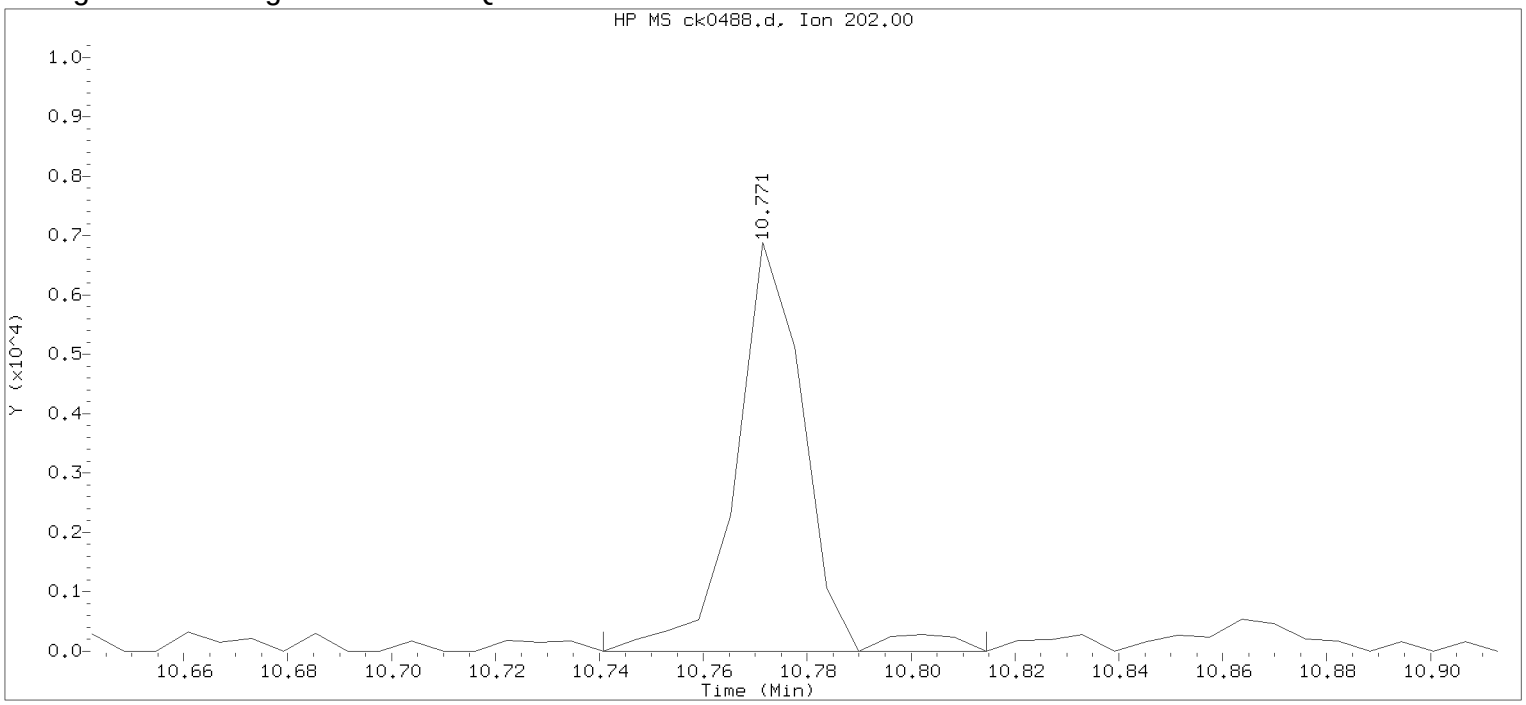
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:32.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

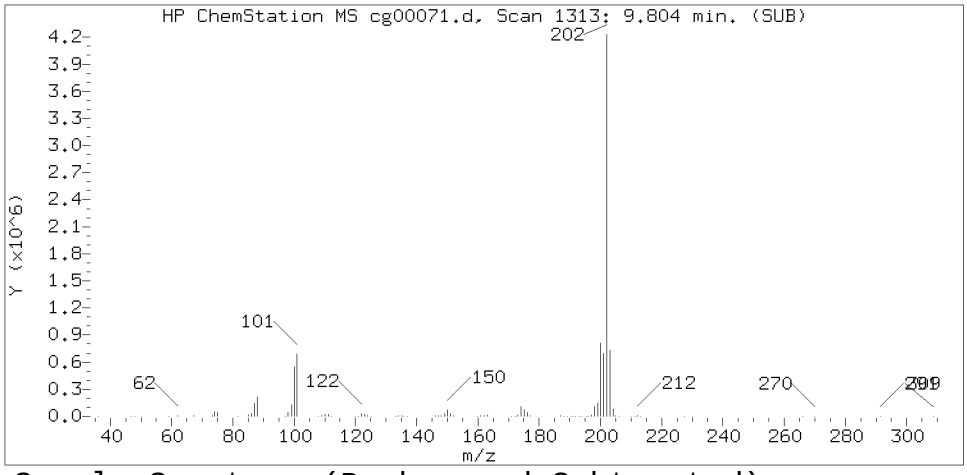
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:20 Automation

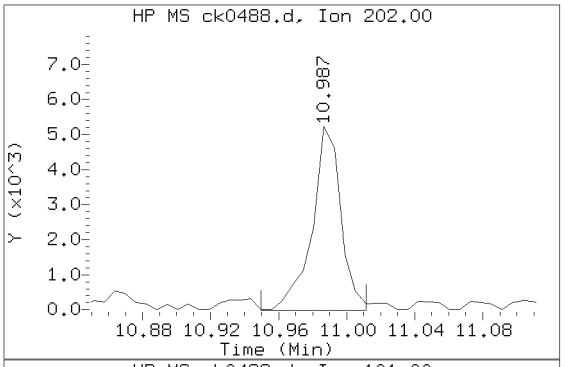
Sample Name: R2043 Lab Sample ID: 7265227

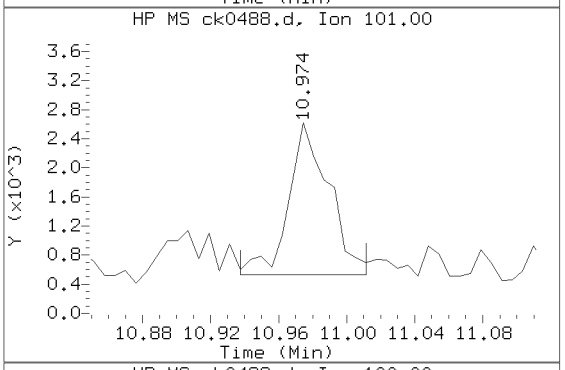
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1446
Retention Time (minutes) : 10.771
Quant Ion : 202.00
Area : 6340
On-column Amount (ng/ul) : 0.1592
Integration start scan : 1440 Integration stop scan: 1452
Y at integration start : 0 Y at integration end: 0

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature used: 1104 Page 1175 of 3494

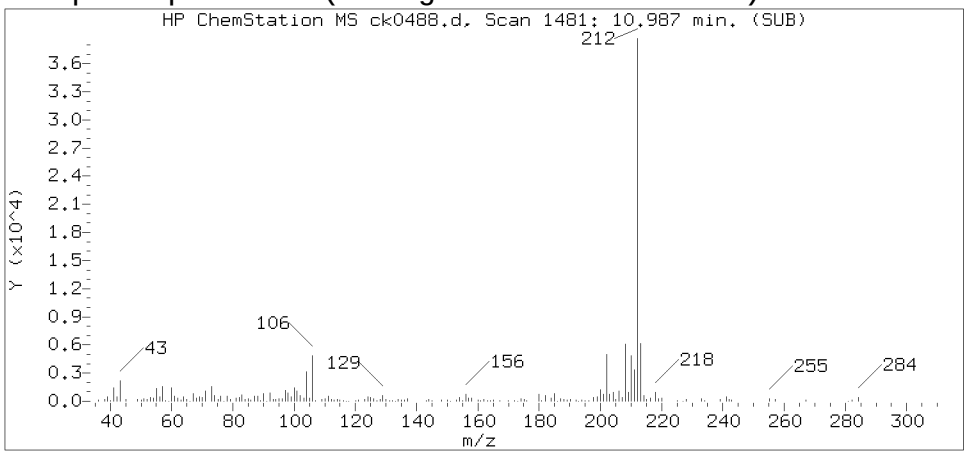
Reference Standard Spectrum for Pyrene

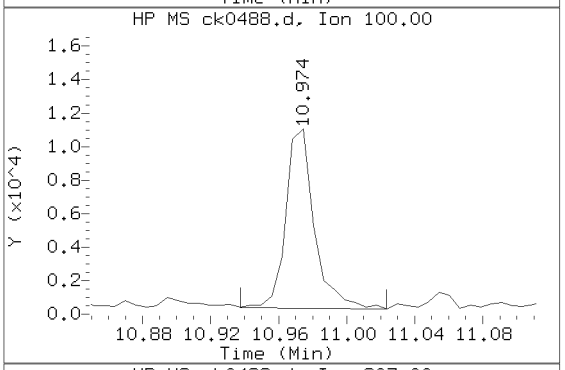




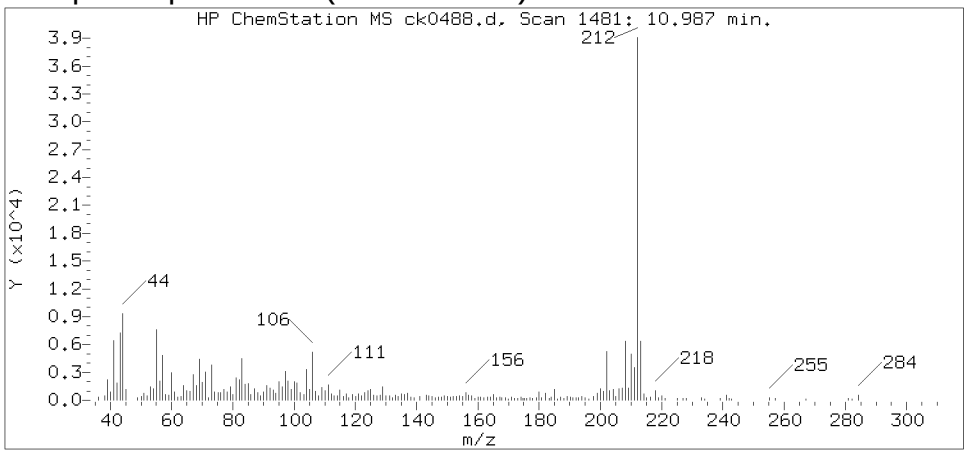


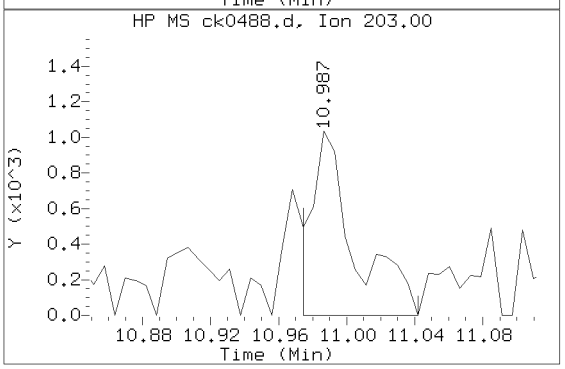
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

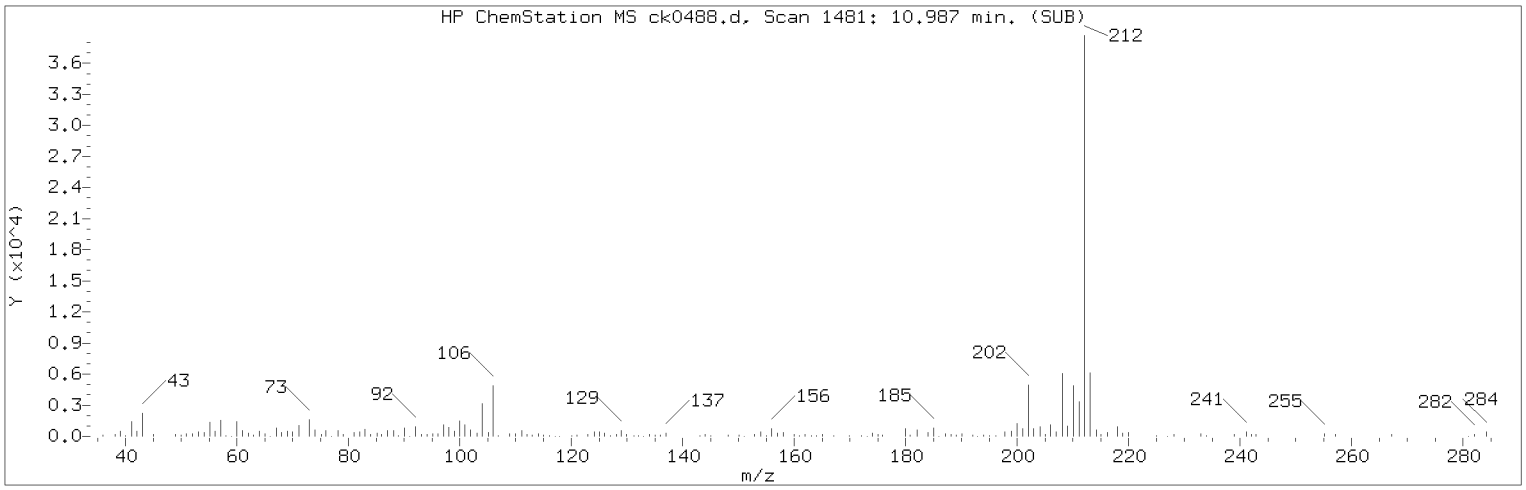
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

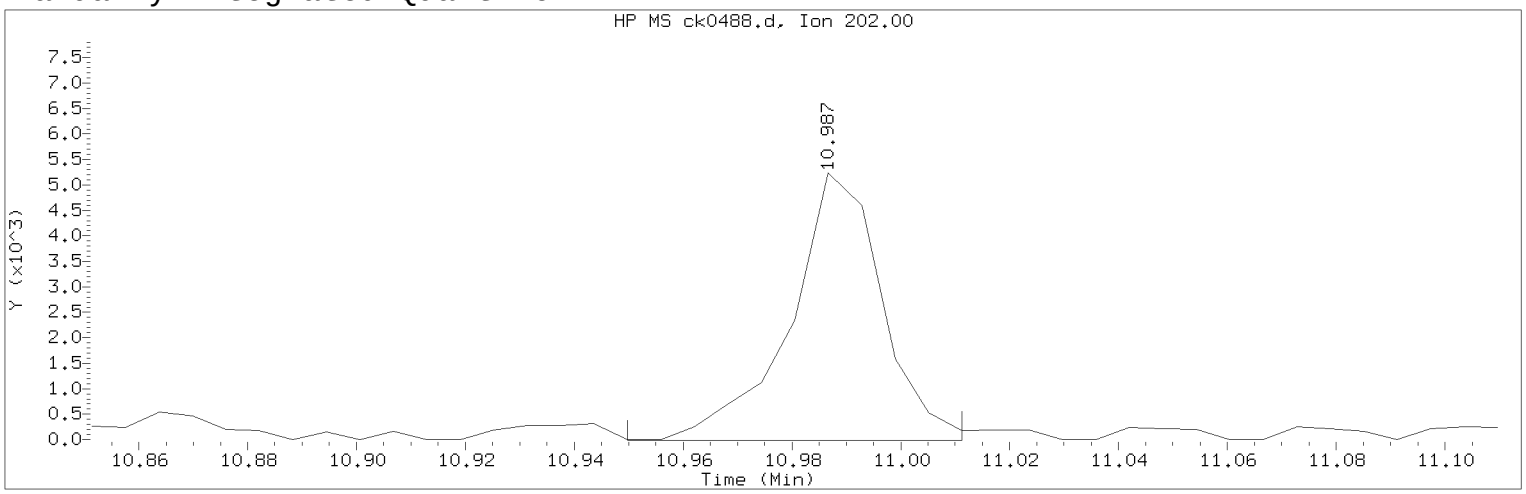
Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1481
Retention Time (minutes)	: 10.987
Relative Retention Time	: 0.00056
Quant Ion	: 202.00
Area (flag)	: 6149M
On-column Amount (ng/ul)	: 0.1542

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

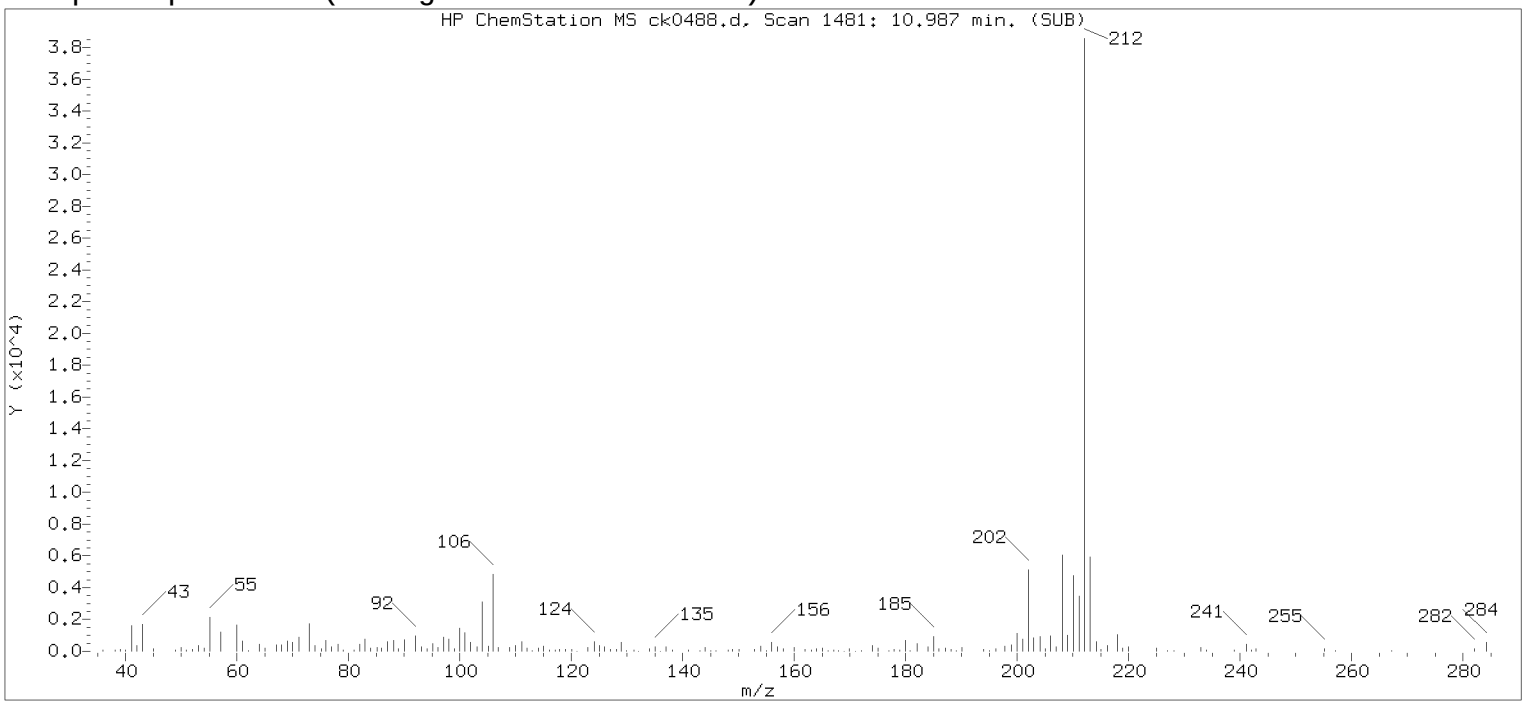
Compound Number	: 154		
Compound Name	: Pyrene		
Scan Number	: 1481		
Retention Time (minutes)	: 10.987		
Quant Ion	: 202.00		
Area (flag)	: 6149M		
On-column Amount (ng/ul)	: 0.1542		
Integration start scan	: 1474	Integration stop scan:	1484
Y at integration start	: -12	Y at integration end:	-12

Reason for manual integration: improper integration

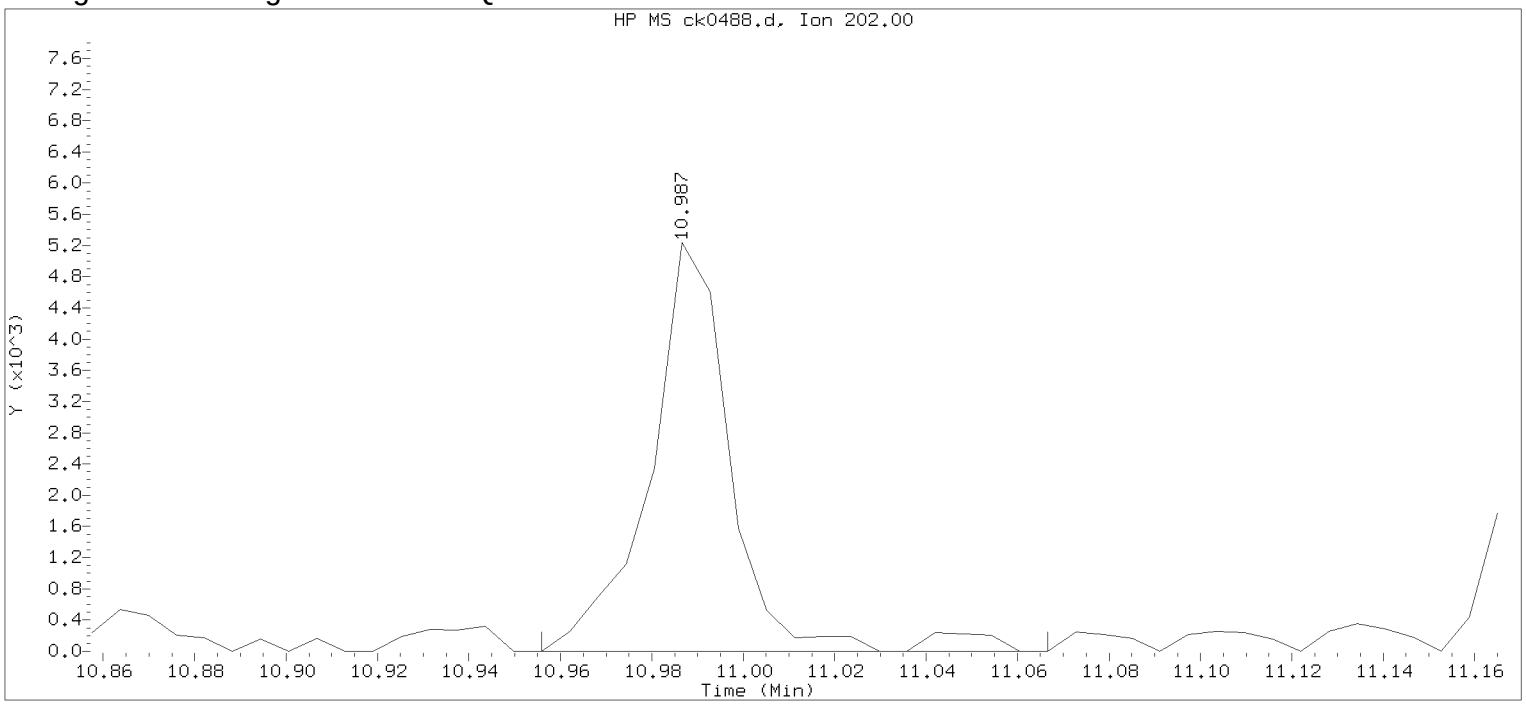
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:32.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

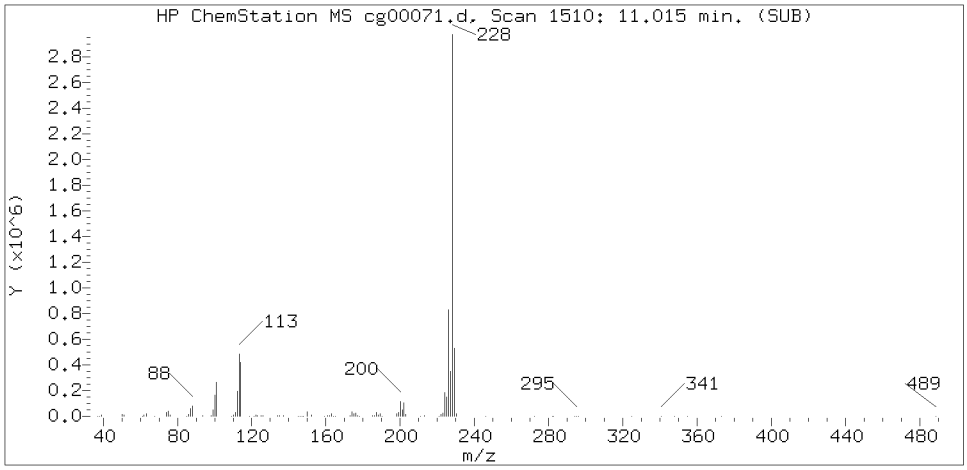
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:20 Automation

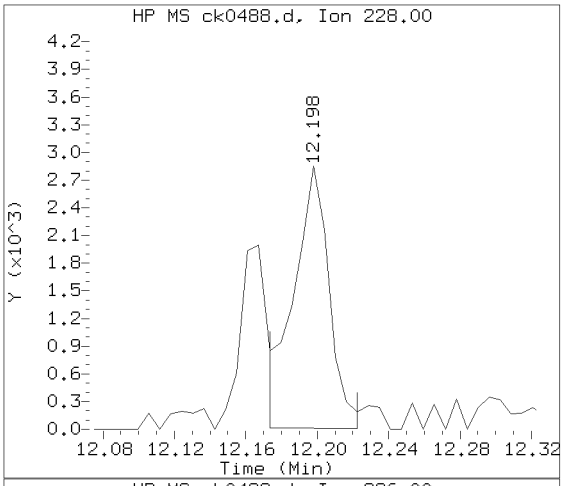
Sample Name: R2043 Lab Sample ID: 7265227

Compound Number	: 154		
Compound Name	: Pyrene		
Scan Number	: 1481		
Retention Time (minutes)	: 10.987		
Quant Ion	: 202.00		
Area	: 6486		
On-column Amount (ng/ul)	: 0.1627		
Integration start scan	: 1475	Integration stop scan:	1493
Y at integration start	: 0	Y at integration end:	0

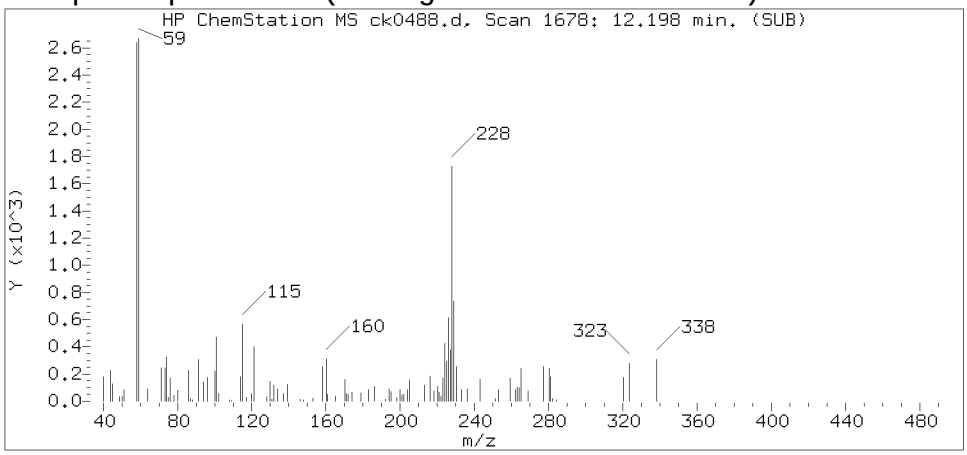
Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac0173

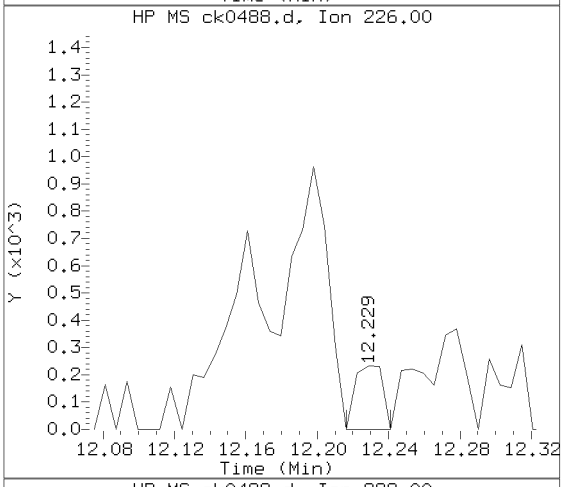
Reference Standard Spectrum for Chrysene



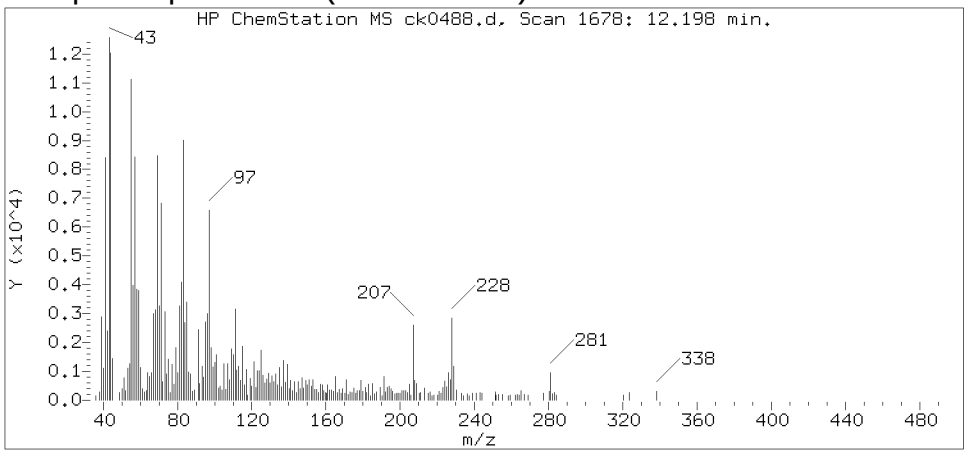


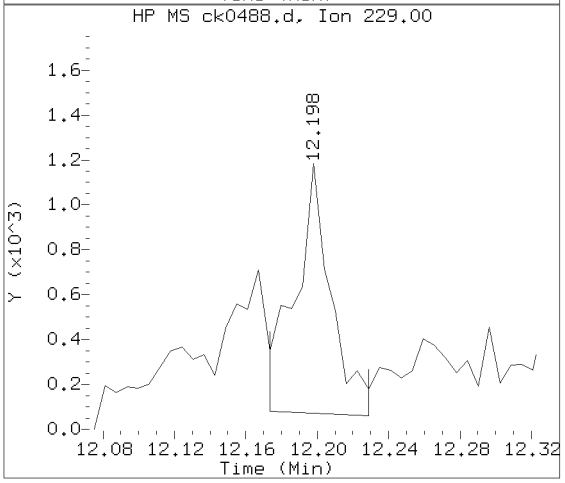
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

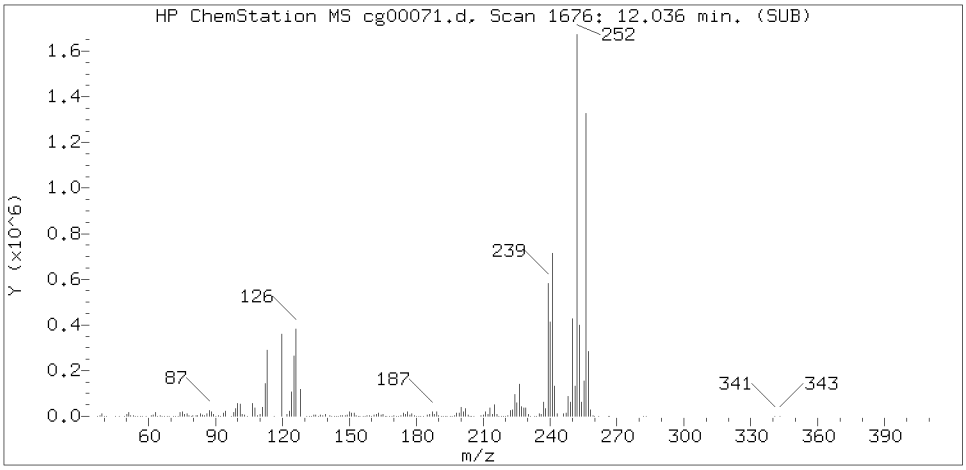
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

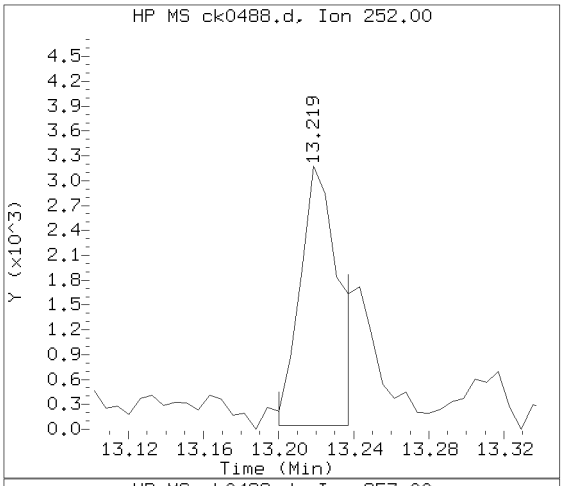
Sample Name: R2043 Lab Sample ID: 7265227

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1678
Retention Time (minutes)	: 12.198
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 3991
On-column Amount (ng/ul)	: 0.1125

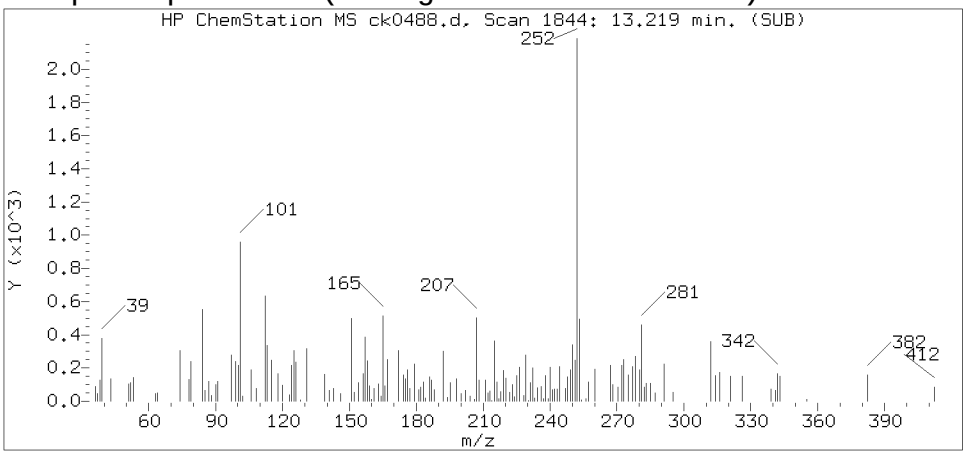
Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

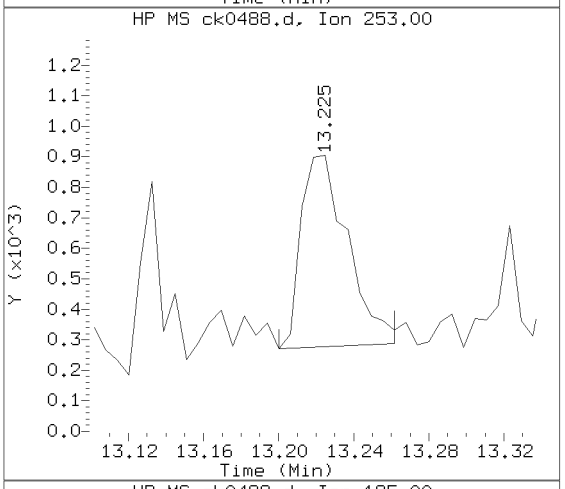
Reference Standard Spectrum for Benzo(b)fluoranthene



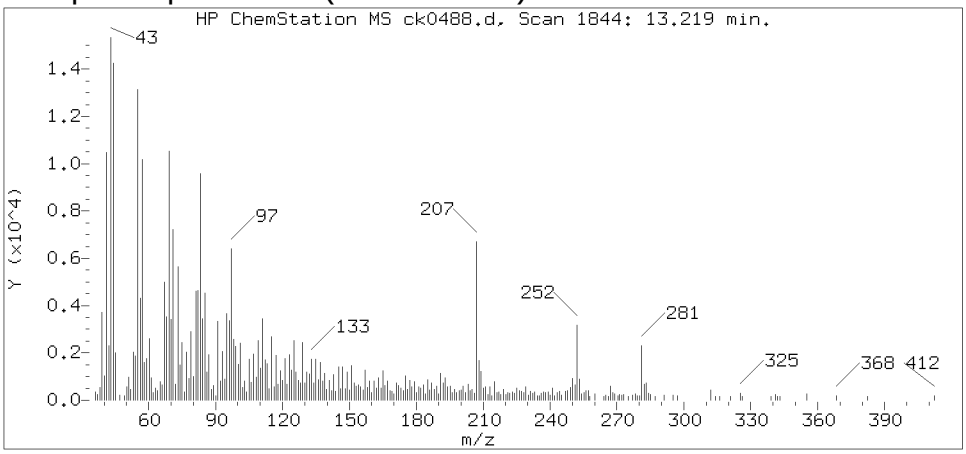


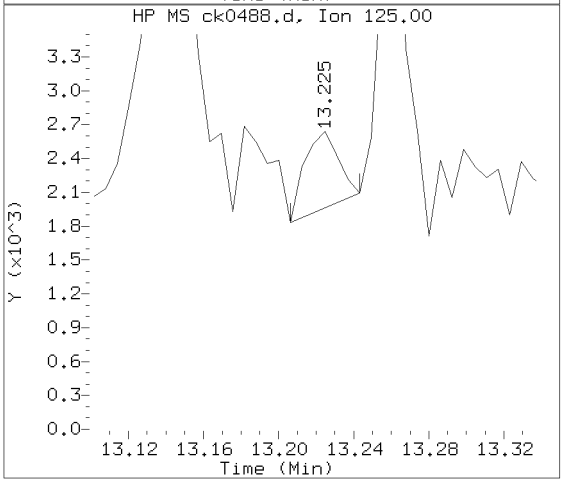
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

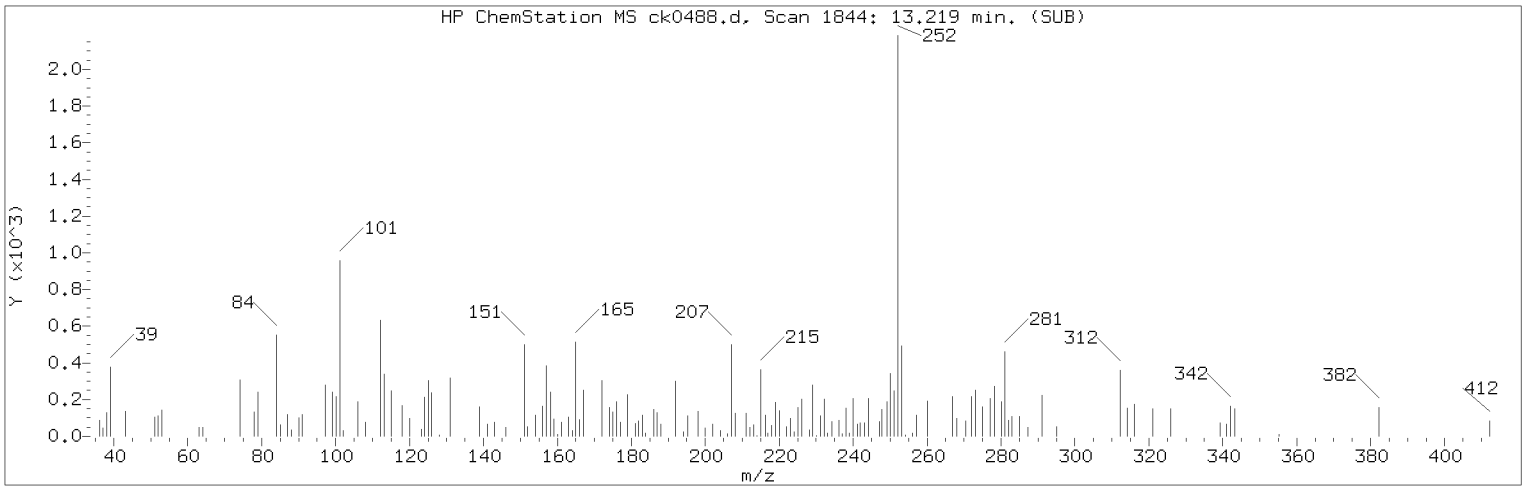
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

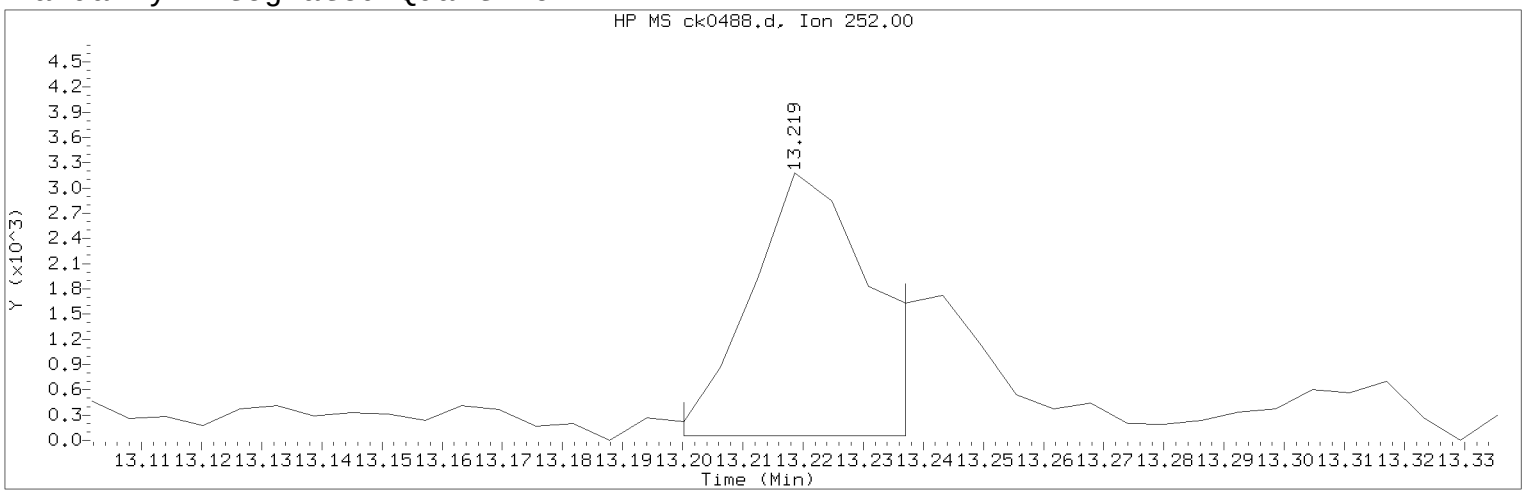
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Relative Retention Time : 0.00044
Quant Ion : 252.00
Area (flag) : 4481M
On-column Amount (ng/ul) : 0.1338

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 23:57 mac00013

Sample Name: R2043 Lab Sample ID: 7265227

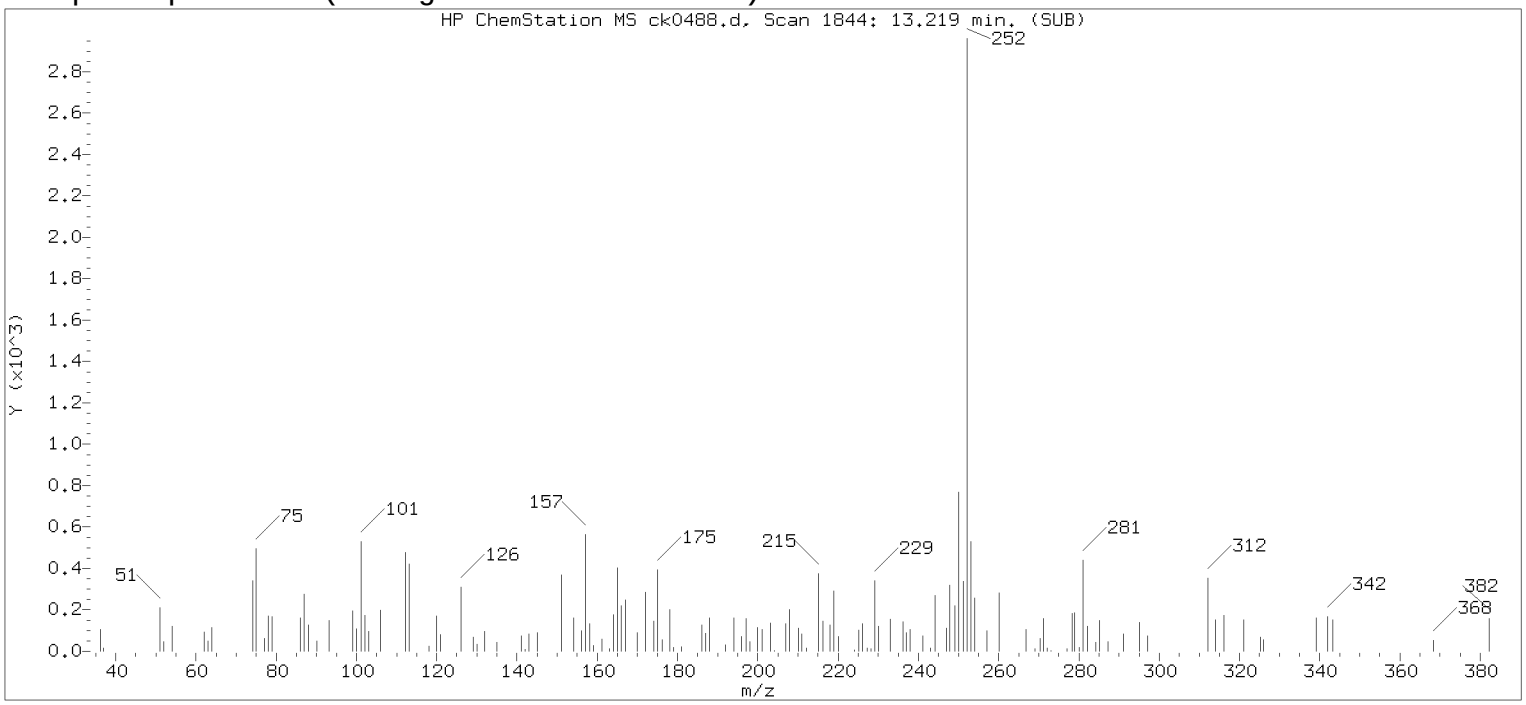
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area (flag) : 4481M
On-column Amount (ng/ul) : 0.1338
Integration start scan : 1840 Integration stop scan: 1846
Y at integration start : 50 Y at integration end: 50

Reason for manual integration: improper integration

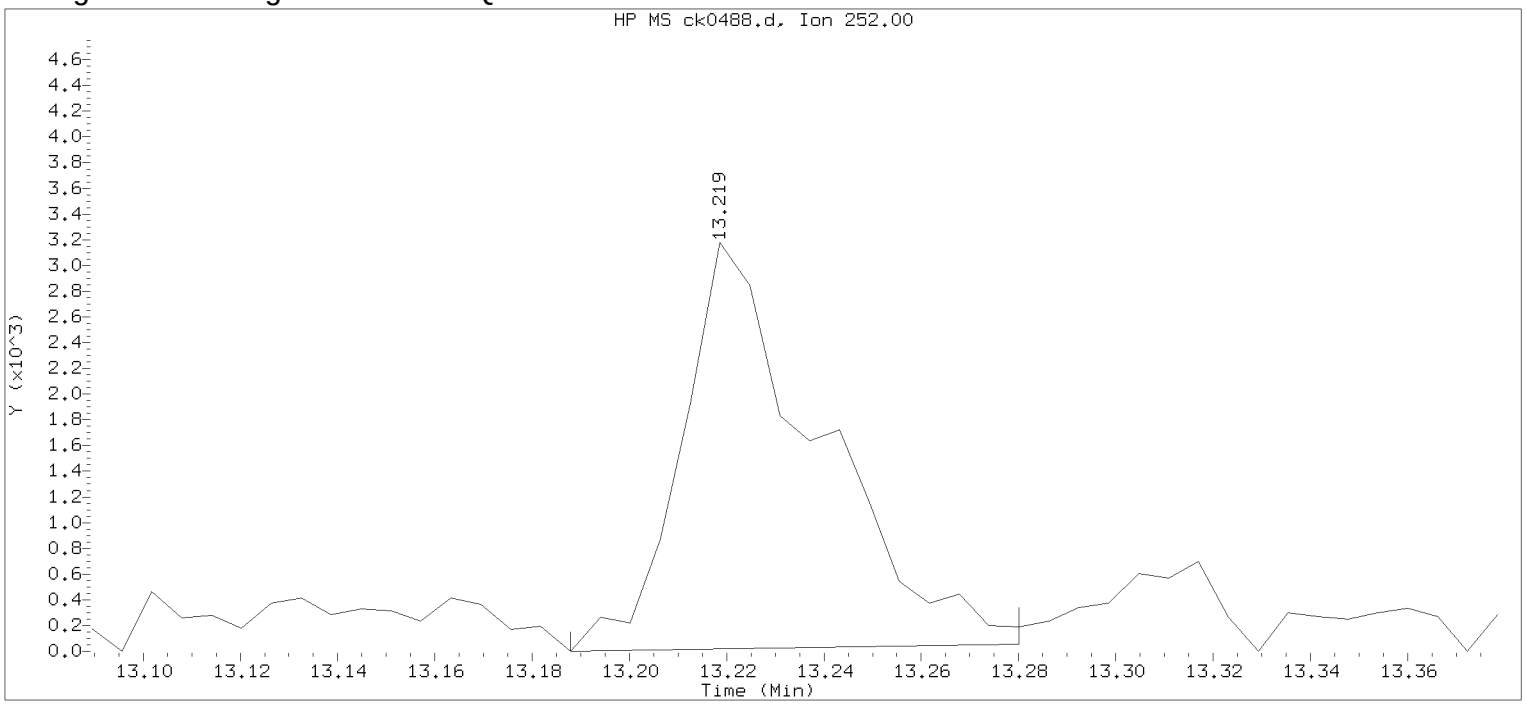
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:32.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0488.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 19:54 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:20 Automation

Sample Name: R2043 Lab Sample ID: 7265227

Compound Number	:	172
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	1844
Retention Time (minutes)	:	13.219
Quant Ion	:	252.00
Area	:	6221
On-column Amount (ng/ul)	:	0.1858
Integration start scan	:	1838 Integration stop scan: 1853
Y at integration start	:	0 Y at integration end: 57

Digitally signed by Mark A. Clark on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac0113 of 3494

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0338.d
Data file Sample Info. Line: R2M61;7265228;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Injection date and time: **11-NOV-2013 12:10**
Instrument ID: **HP19760.i** Batch: **13312WAD**

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	136191 (-4)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	525098 (-4)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	310249 (-5)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	558338 (-3)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	726320 (-2)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	462907 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.001(0.000)	112	1232719	30.484	61%		10 - 107
13) Phenol-d6	(1)	5.429(0.001)	99	1206957	21.733	43%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	917785	18.992	76%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1516582	19.575	78%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	454100	55.728	111%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2350490	25.950	104%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:17. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0338.d Injection date and time: **11-NOV-2013 12:10**
Data file Sample Info. Line: R2M61;7265228;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

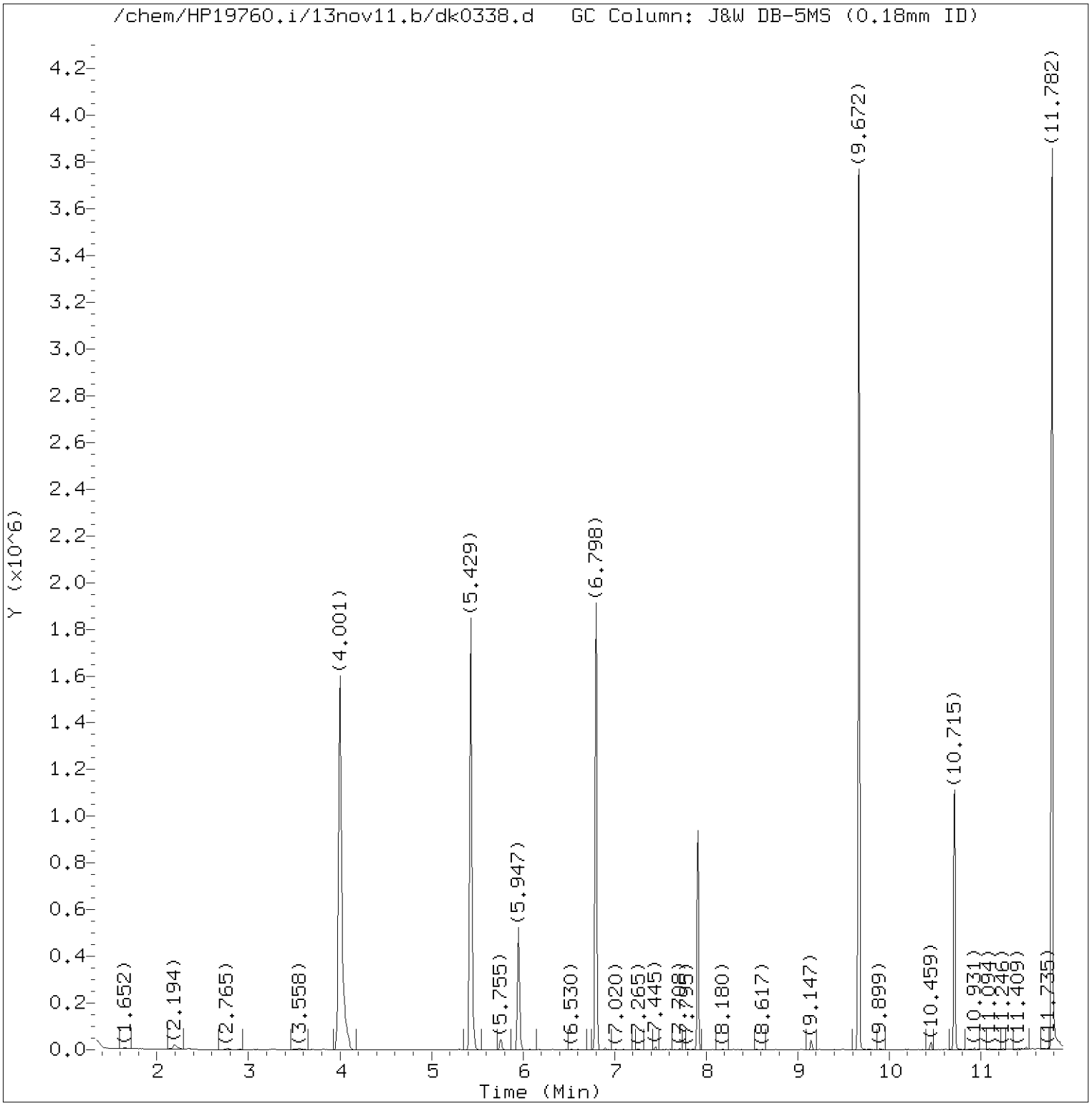
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:17. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

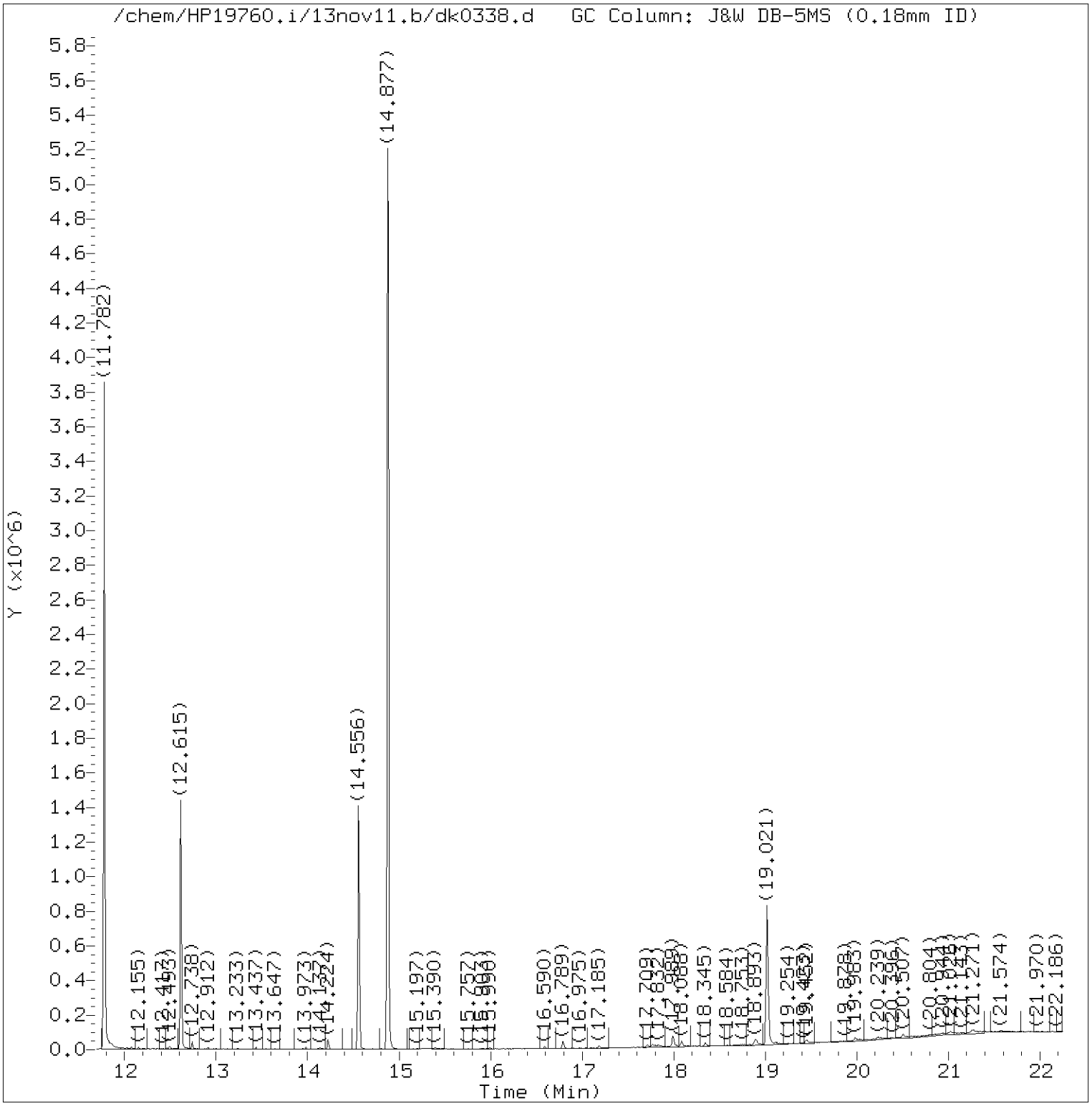
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:17.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:17.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.001	112	1232719	30.484
13)$Phenol-d6	(1)	5.429	99	1206957	21.733
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	136191	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	917785	18.992
52)*Naphthalene-d8	(2)	7.912	136	525098	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1516582	19.575
92)*Acenaphthene-d10	(3)	10.715	164	310249	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	454100	55.728
130)*Phenanthrene-d10	(4)	12.615	188	558338	5.000
145)*Pyrene-d10	(5)	14.556	212	726320	5.000
149)$Terphenyl-d14	(5)	14.877	244	2350490	25.950
172)*Perylene-d12	(6)	19.021	264	462907	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:17.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2M61

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7265228

Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0338.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	7.795	27	J
2.					
3.	SVOCTIC	Total SVOC TICs		27	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
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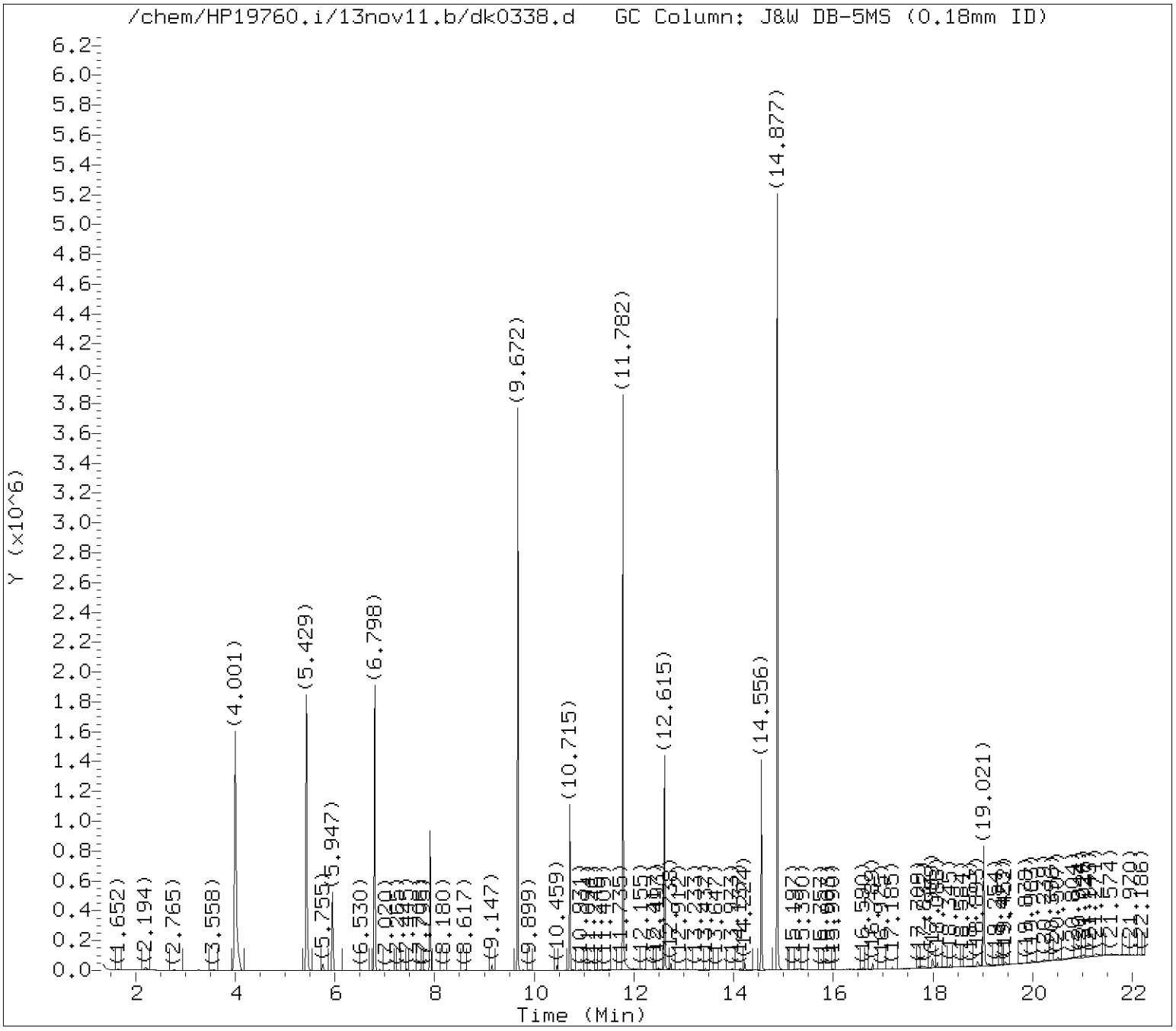
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

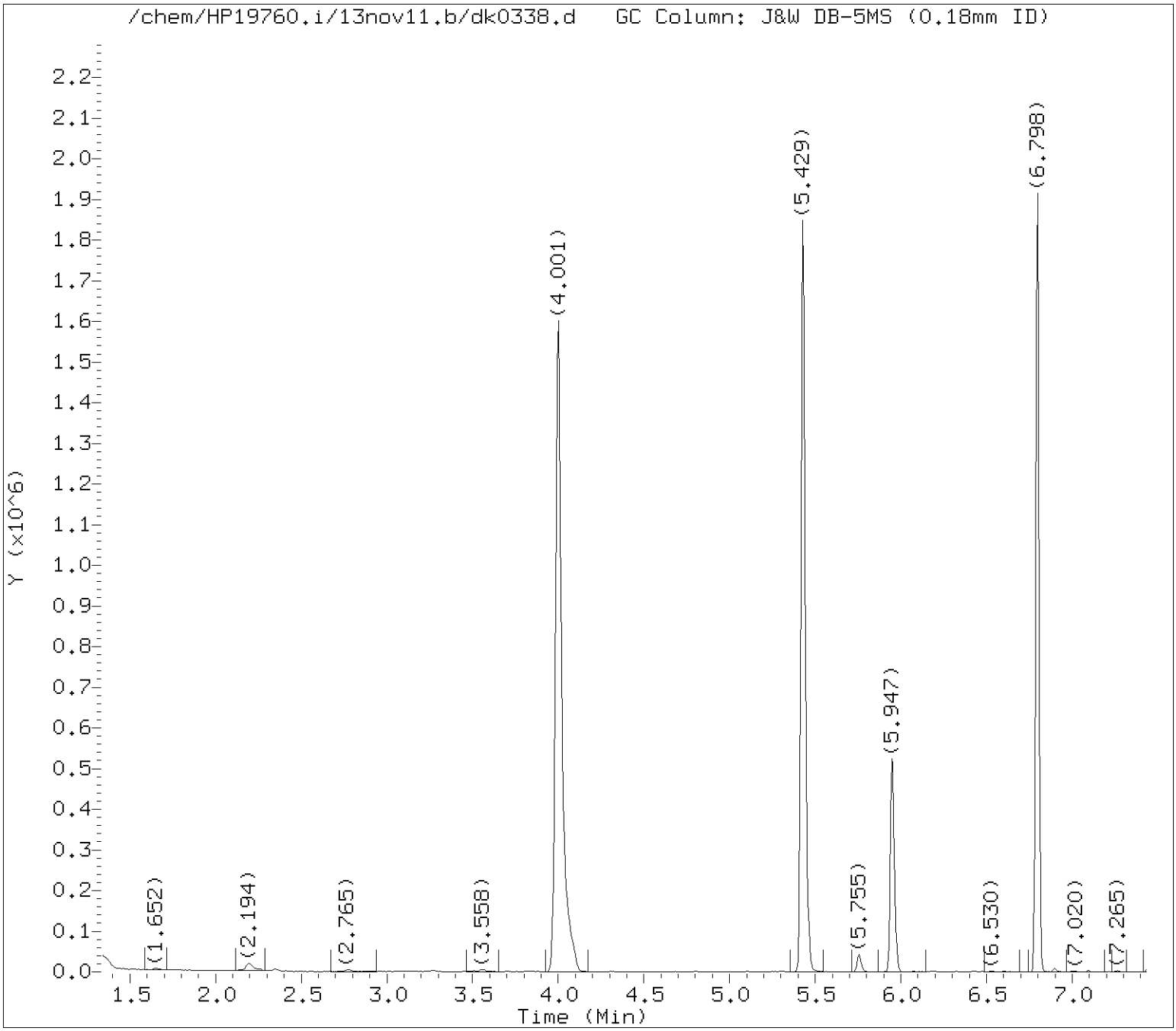
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

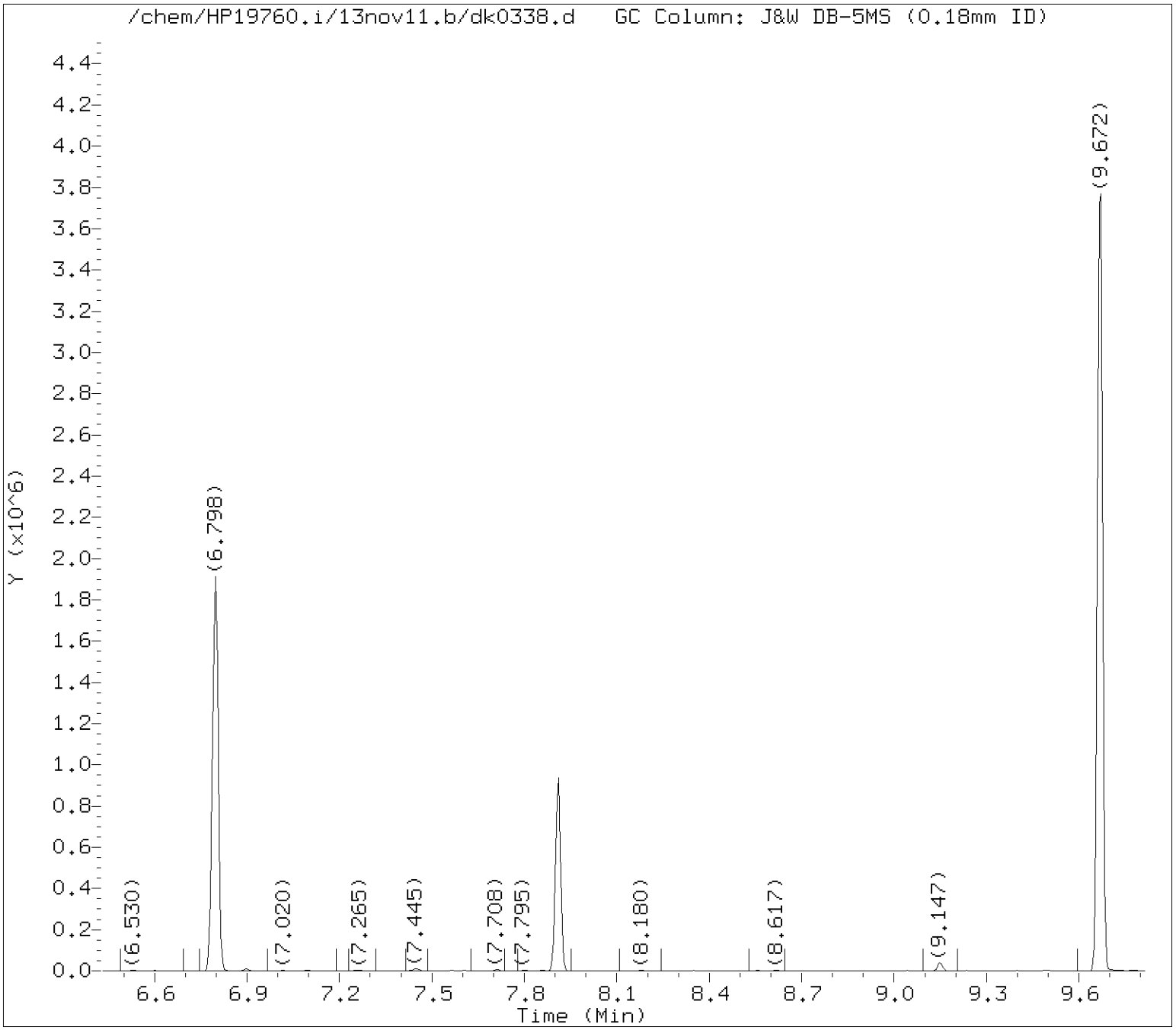
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

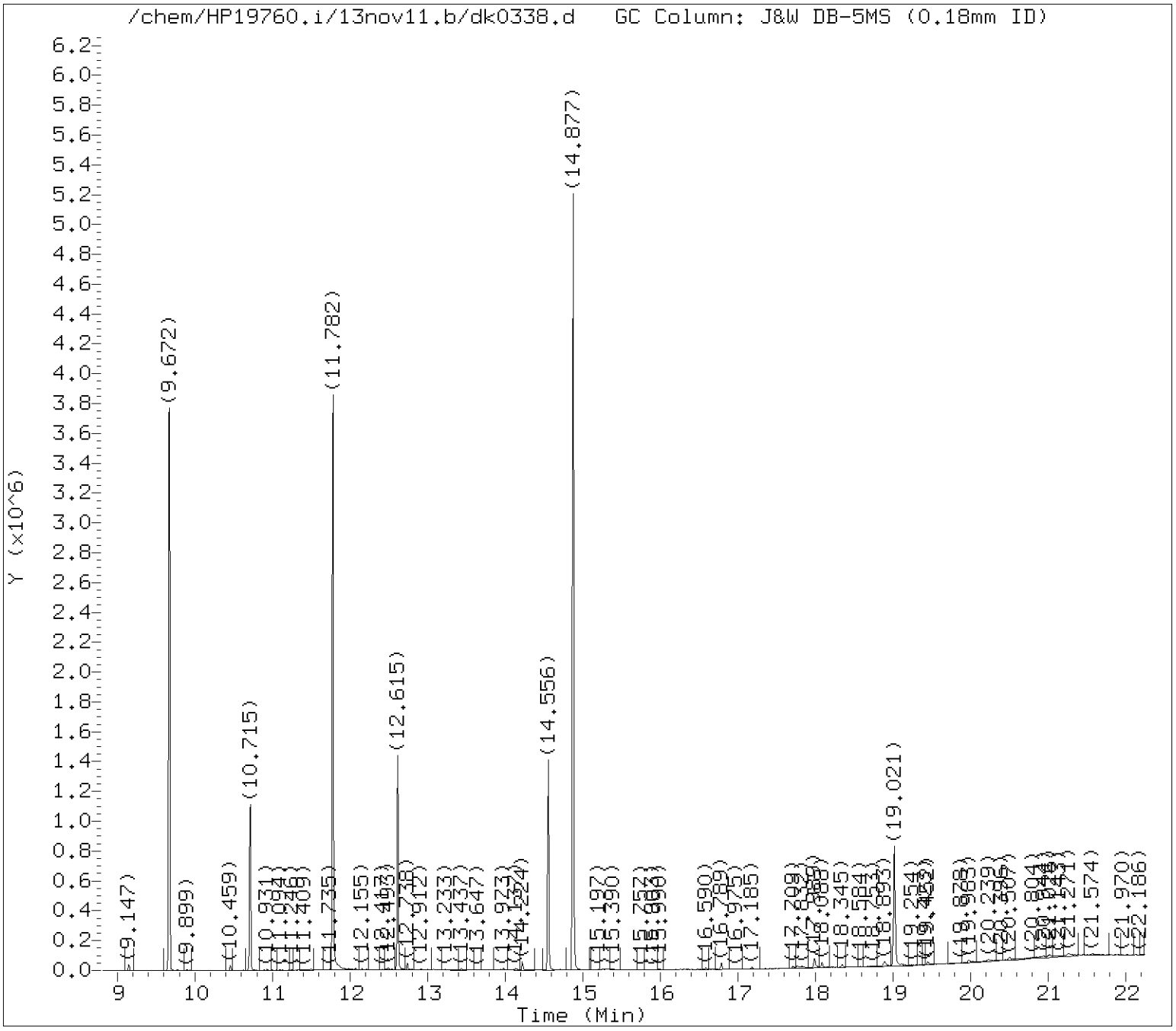
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

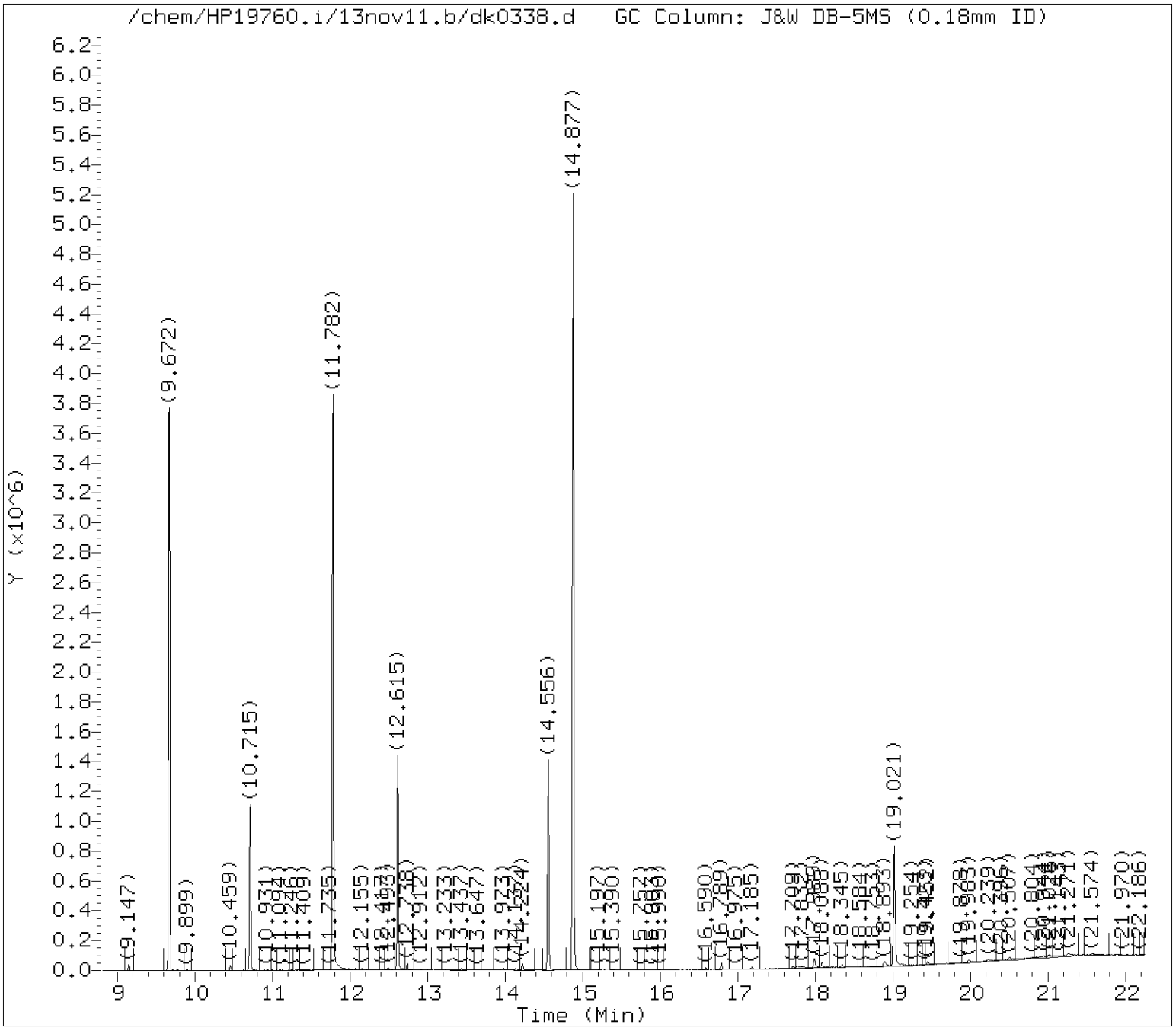
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

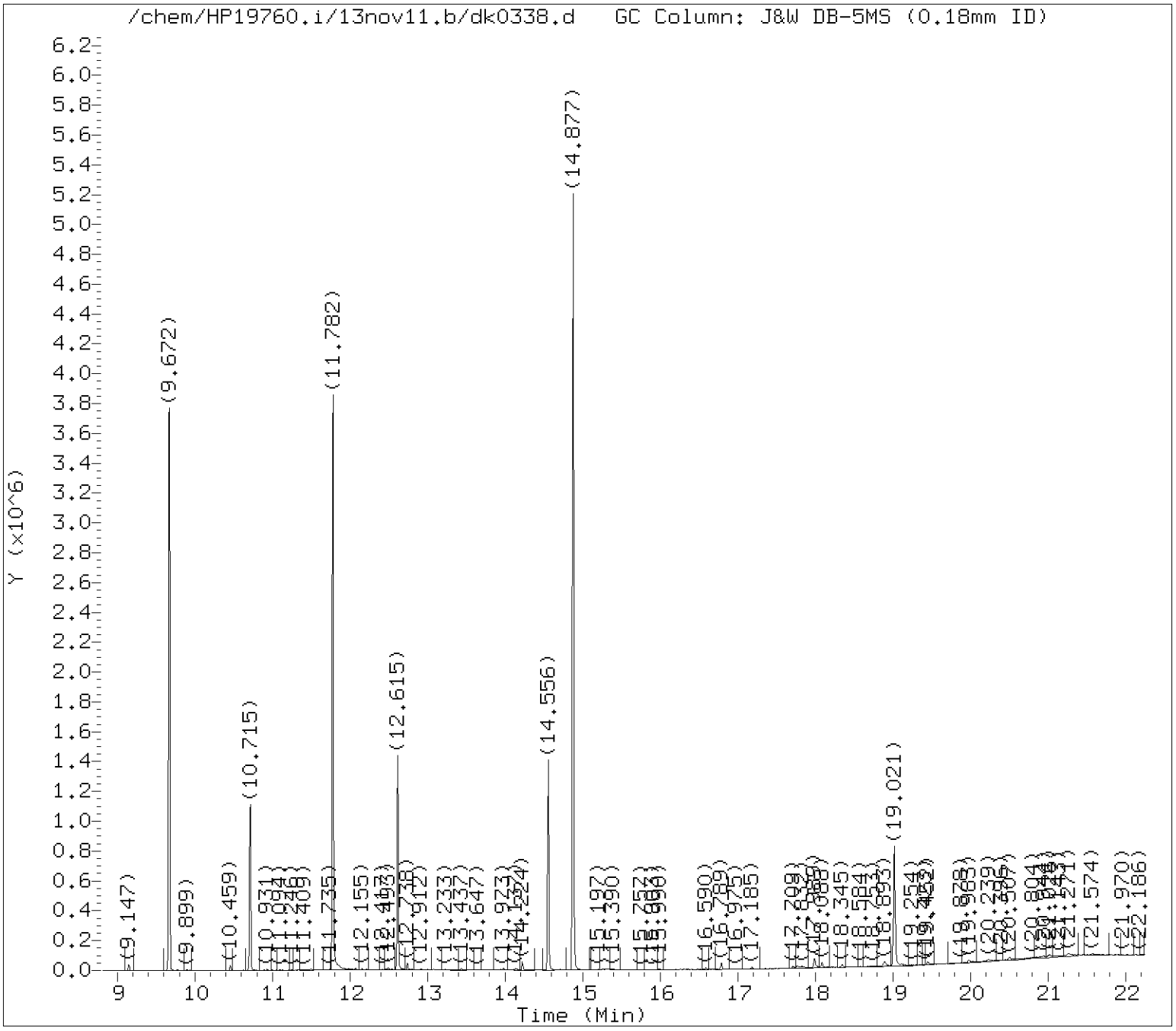
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

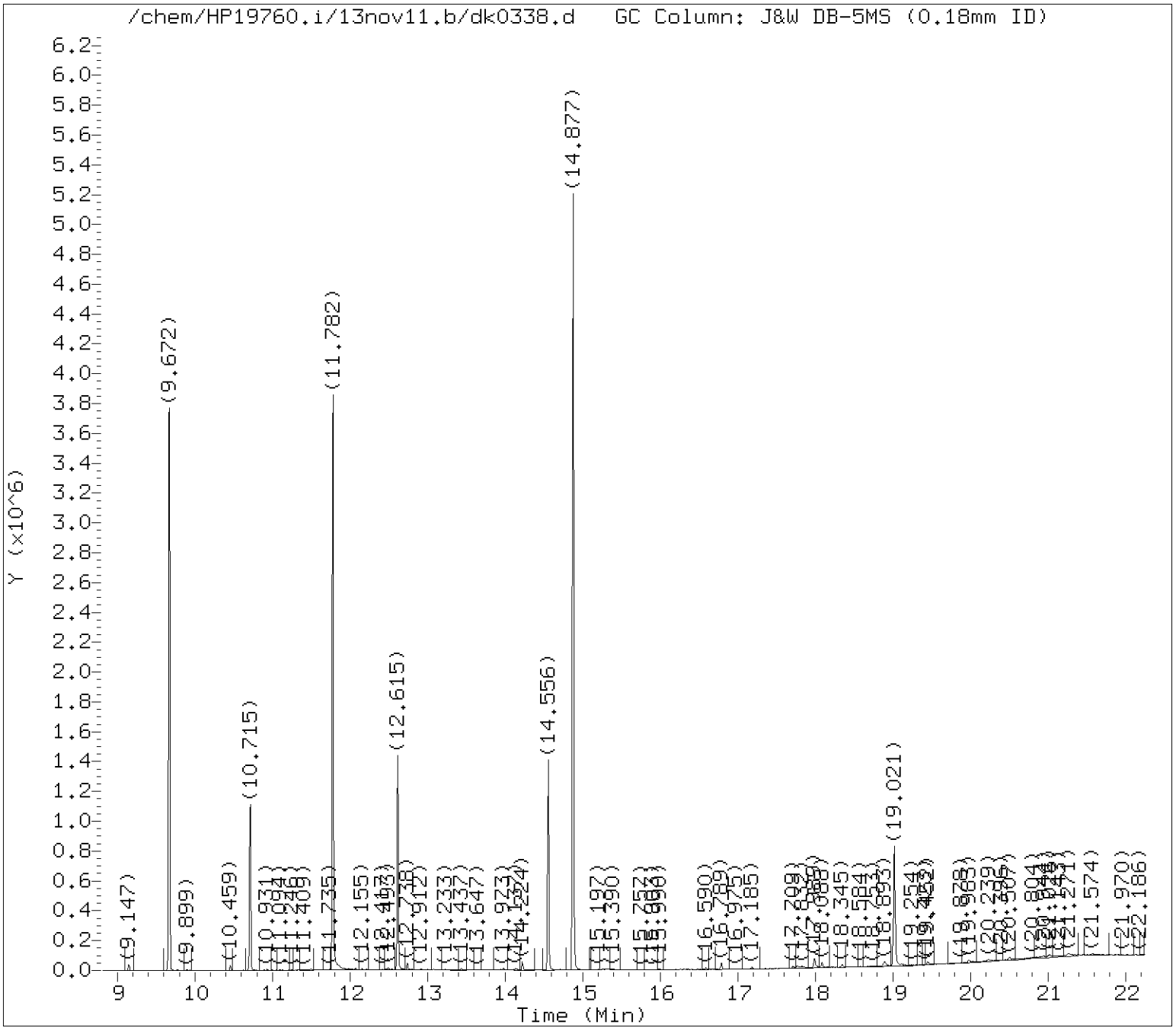
Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0338.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:10 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:49 jmg00346

Sample Name: R2M61 Lab Sample ID: 7265228

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0338.d
Lab Smp Id: 7265228 Client Smp ID: R2M61
Inj Date : 11-NOV-2013 12:10
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2M61;7265228;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;245;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 1 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	245.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.953	878293	5.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
7.795	1150394	6.54902820	26.73072	0		0	19

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0338.d

Date : 11-NOV-2013 12:10

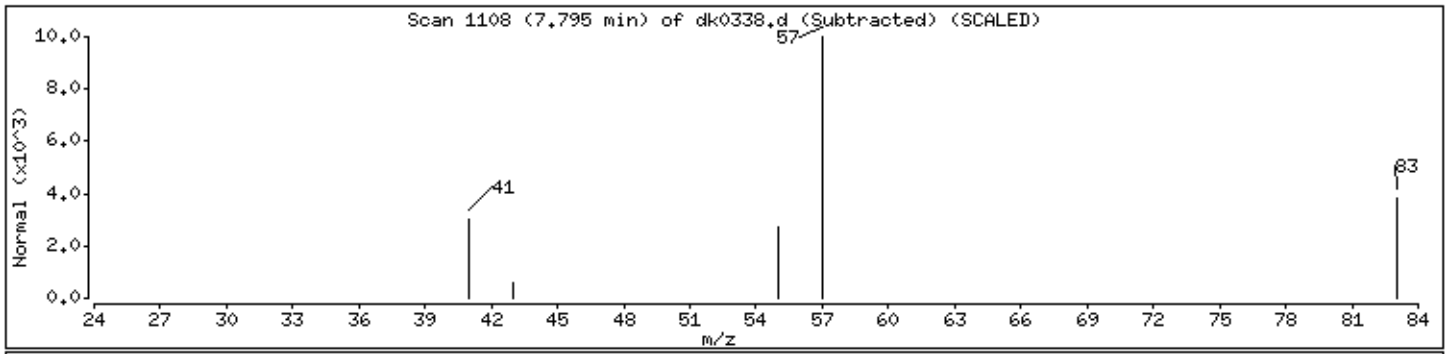
Client ID: R2M61 Instrument: HP19760.i

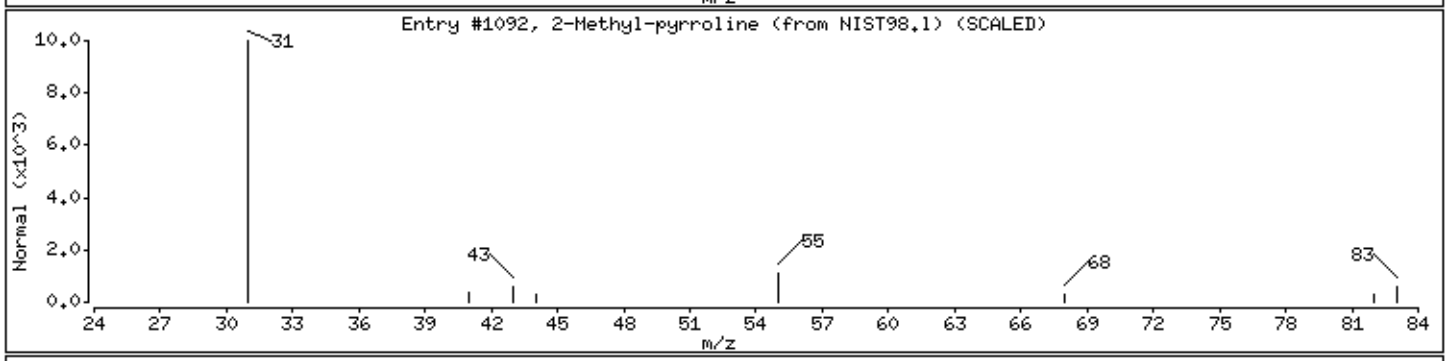
Sample Info: R2M61;7265228;1;0;SAMPLE;;;

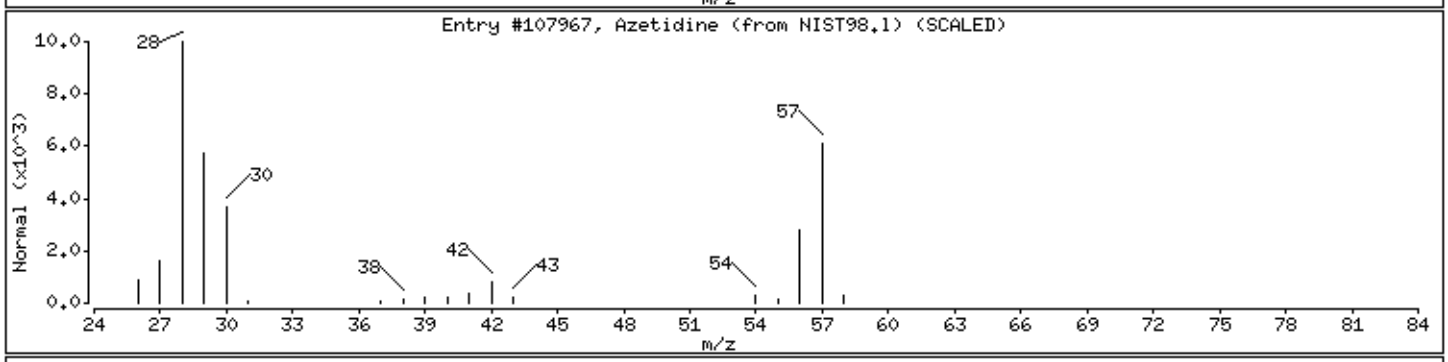
Volume Injected (uL): 0.5 Operator: jmg00346

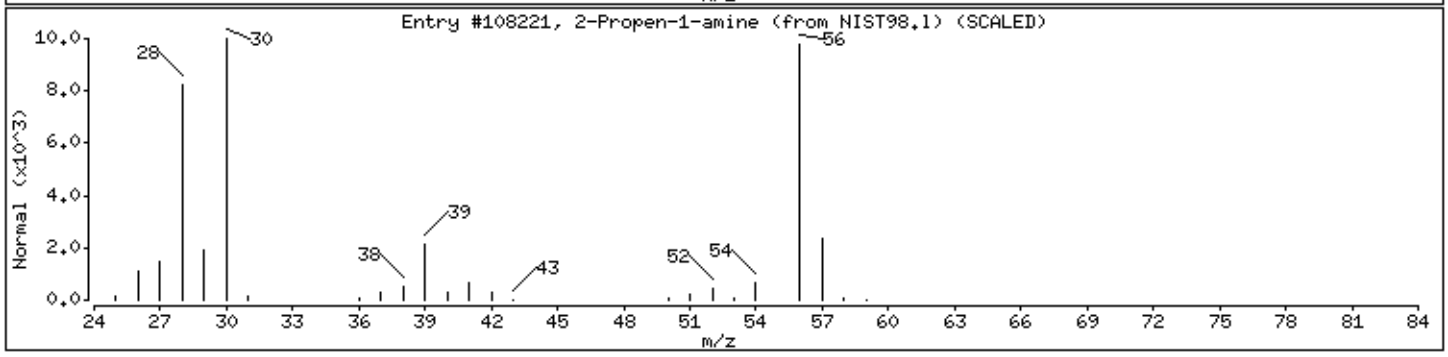
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Methyl-pyrroline	1000143-24-0	NIST98.1	1092	2	C5H9N	83
Azetidine	503-29-7	NIST98.1	107967	2	C3H7N	57
2-Propen-1-amine	107-11-9	NIST98.1	108221	2	C3H7N	57









Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov15.b/ck0557.d
Data file Sample Info. Line: R2M71;7265229;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Injection date and time: **15-NOV-2013 10:10**
Instrument ID: **HP10623.i** Batch: **13314SLD**

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.127(0.006)	528	152	134085 (-23)	20.00	
52) Naphthalene-d8	6.369(0.006)	730	136	625498 (-24)	20.00	
98) Acenaphthene-d10	8.079(0.006)	1008	164	397779 (-22)	20.00	
135) Phenanthrene-d10	9.517(0.012)	1242	188	735598 (-20)	20.00	
167) Pyrene-d10	10.901(0.006)	1467	212	881711 (-21)	20.00	
175) Perylene-d12	13.495(0.012)	1889	264	638854 (-28)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
9) 2-Fluorophenol	(1)	3.830(0.000)	112	187360	18.677	93%		63 - 126
15) Phenol-d6	(1)	4.807(0.000)	99	268061	18.159	91%		61 - 120
38) Nitrobenzene-d5	(2)	5.668(0.001)	82	111729	8.291	83%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.439(0.000)	172	230062	9.198	92%		69 - 120
119) 2,4,6-Tribromophenol	(3)	8.847(0.000)	330	51874	21.595	108%		42 - 134
156) Terphenyl-d14	(5)	11.097(0.001)	244	300633	9.538	95%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
12) Benzaldehyde	(1)			Not Detected					2
16) Phenol	(1)			Not Detected					0.5
18) bis(2-Chloroethyl)ether	(1)			Not Detected					0.5
19) 2-Chlorophenol	(1)			Not Detected					0.5
26) 2-Methylphenol	(1)			Not Detected					0.5
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.5
30) Acetophenone	(1)			Not Detected					0.5
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.5
33) 4-Methylphenol	(1)			Not Detected					0.5
37) Hexachloroethane	(1)			Not Detected					1
39) Nitrobenzene	(2)			Not Detected					0.5
41) Isophorone	(2)			Not Detected					0.5
42) 2-Nitrophenol	(2)			Not Detected					0.5
44) 2,4-Dimethylphenol	(2)			Not Detected					0.5
46) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.5
49) 2,4-Dichlorophenol	(2)			Not Detected					0.5
53) Naphthalene	(2)			Not Detected					0.1
56) 4-Chloroaniline	(2)			Not Detected					0.5
60) Hexachlorobutadiene	(2)			Not Detected					0.5
63) Caprolactam	(2)			Not Detected					1
68) 4-Chloro-3-methylphenol	(2)			Not Detected					0.5
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
72) Hexachlorocyclopentadiene	(3)			Not Detected					5
75) 2,4,6-Trichlorophenol	(3)			Not Detected					0.5
77) 2,4,5-Trichlorophenol	(3)			Not Detected					0.5
83) 1,1'-Biphenyl	(3)			Not Detected					0.5
84) 2-Chloronaphthalene	(3)			Not Detected					0.2

Digitally signed by Mark A. Clark on 11/18/2013 at 10:43. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov15.b/ck0557.d Injection date and time: **15-NOV-2013 10:10**
Data file Sample Info. Line: R2M71;7265229;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

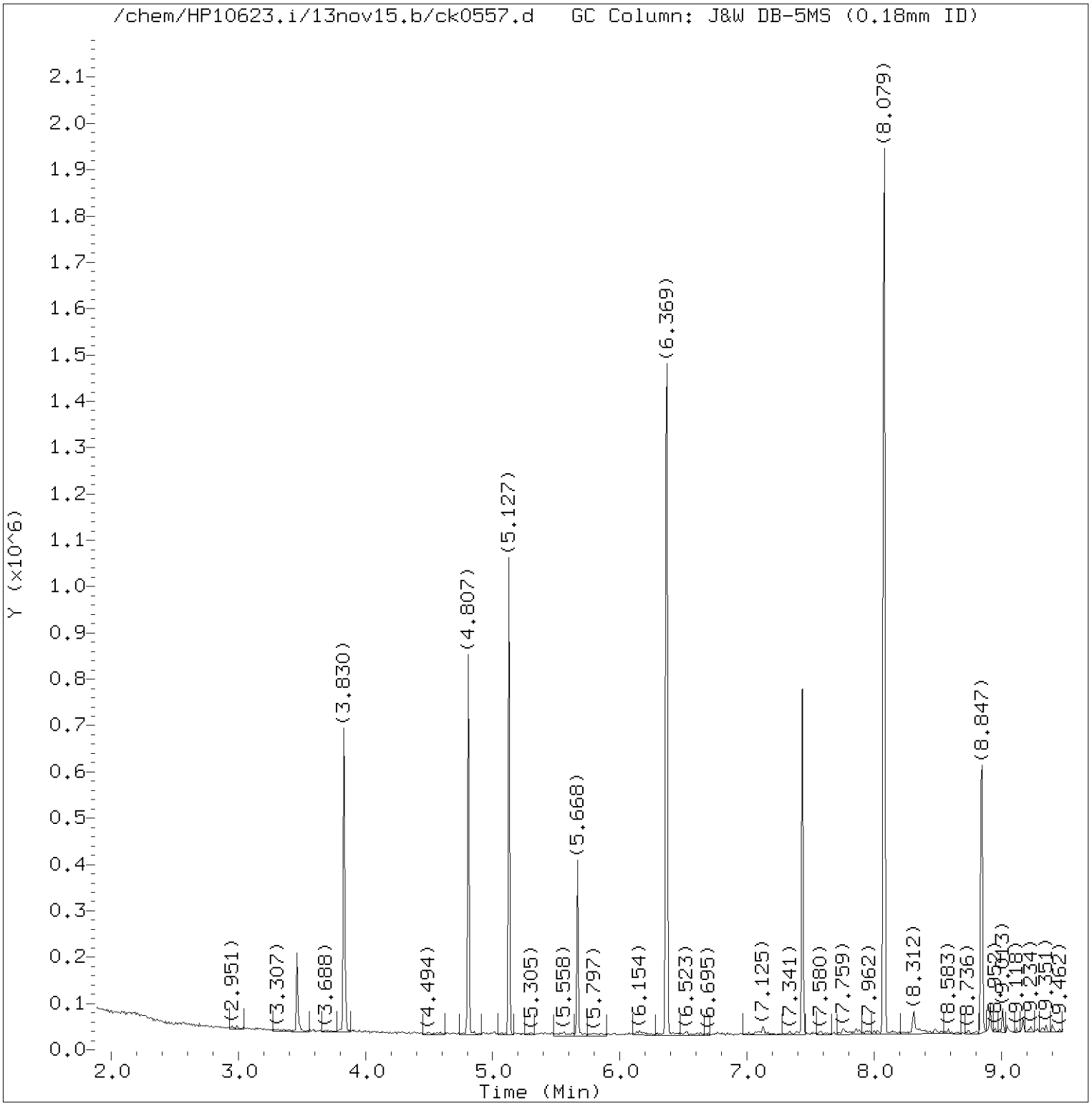
Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
89) 2-Nitroaniline	(3)				Not Detected					0.5
92) Dimethylphthalate	(3)				Not Detected					2
94) 2,6-Dinitrotoluene	(3)				Not Detected					0.5
95) Acenaphthylene	(3)				Not Detected					0.1
97) 3-Nitroaniline	(3)				Not Detected					2
99) Acenaphthene	(3)				Not Detected					0.1
100) 2,4-Dinitrophenol	(3)				Not Detected					9
103) 4-Nitrophenol	(3)				Not Detected					5
104) Dibenzofuran	(3)				Not Detected					0.5
105) 2,4-Dinitrotoluene	(3)				Not Detected					2
109) Diethylphthalate	(3)				Not Detected					2
111) Fluorene	(3)				Not Detected					0.1
112) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
114) 4-Nitroaniline	(3)				Not Detected					2
115) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
117) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
125) 4-Bromophenyl-phenylether	(4)				Not Detected					0.5
127) Hexachlorobenzene	(4)				Not Detected					0.1
130) Atrazine	(4)				Not Detected					1
131) Pentachlorophenol	(4)				Not Detected					1
137) Phenanthrene	(4)				Not Detected					0.1
138) Anthracene	(4)				Not Detected					0.1
140) Carbazole	(4)				Not Detected					0.5
142) Di-n-butylphthalate	(4)				Not Detected					2
147) Fluoranthene	(4)				Not Detected					0.1
154) Pyrene	(5)				Not Detected					0.1
161) Butylbenzylphthalate	(5)				Not Detected					2
164) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
166) Benzo(a)anthracene	(5)				Not Detected					0.1
168) Chrysene	(5)				Not Detected					0.1
169) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					2
170) Di-n-octylphthalate	(6)				Not Detected					2
172) Benzo(b)fluoranthene	(6)				Not Detected					0.1
173) Benzo(k)fluoranthene	(6)				Not Detected					0.1
174) Benzo(a)pyrene	(6)				Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Total number of targets = 65

Digitally signed by Mark A. Clark on 11/18/2013 at 10:43. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:22. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

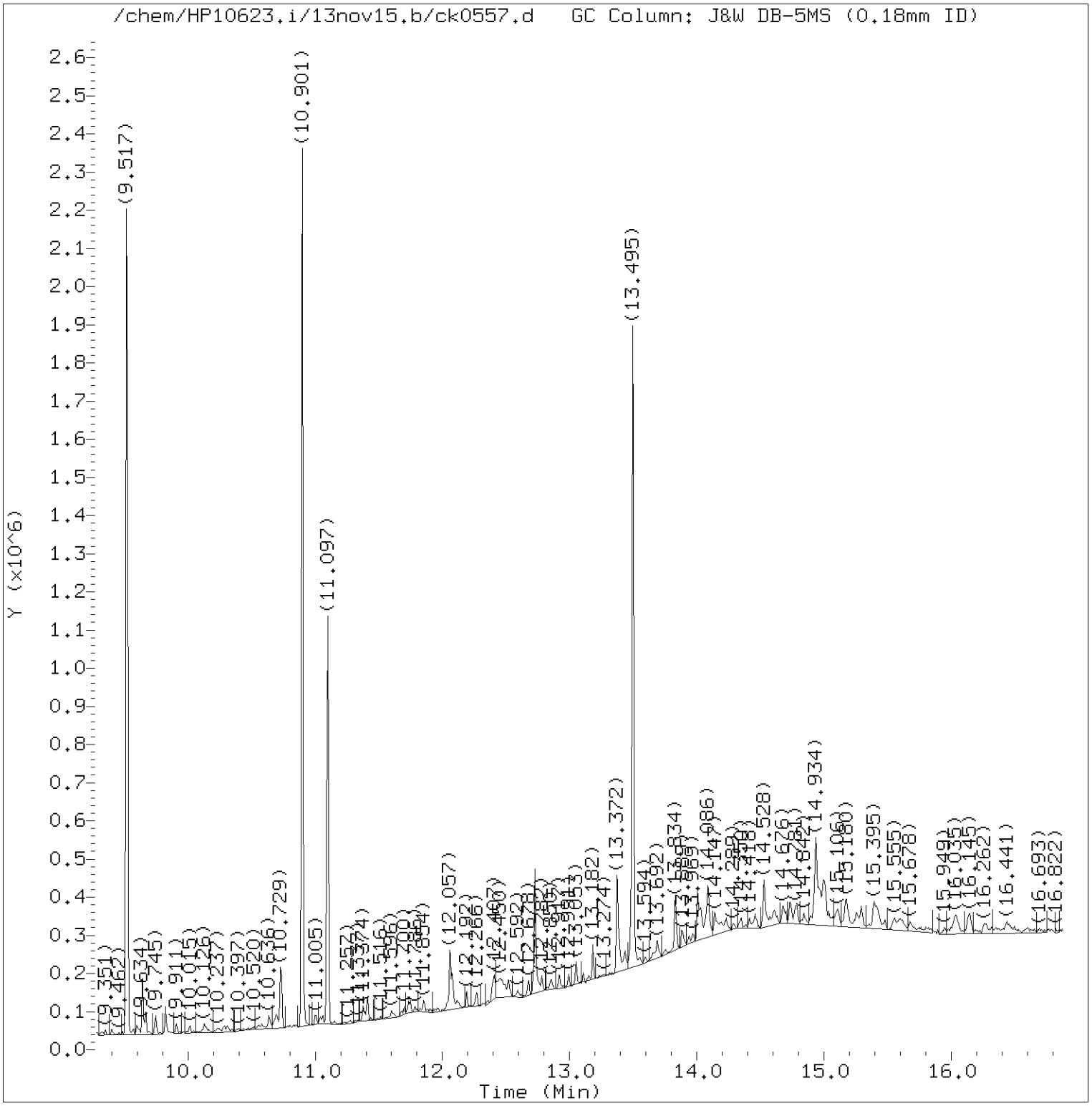
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:43.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:43.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.830	112	187360	18.677
15)$Phenol-d6	(1)	4.807	99	268061	18.159
21)*1,4-Dichlorobenzene-d4	(1)	5.127	152	134085	20.000
38)$Nitrobenzene-d5	(2)	5.668	82	111729	8.291
52)*Naphthalene-d8	(2)	6.369	136	625498	20.000
78)$2-Fluorobiphenyl	(3)	7.439	172	230062	9.198
98)*Acenaphthene-d10	(3)	8.079	164	397779	20.000
119)$2,4,6-Tribromophenol	(3)	8.847	330	51874	21.595
135)*Phenanthrene-d10	(4)	9.517	188	735598	20.000
167)*Pyrene-d10	(5)	10.901	212	881711	20.000
156)$Terphenyl-d14	(5)	11.097	244	300633	9.538
175)*Perylene-d12	(6)	13.495	264	638854	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/18/2013 at 10:43.
Target 3.5 esignature user ID: mac00013

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

R2M71

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 7265229

Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0557.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: 35 Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13

Injection Volume: 1 (uL) Dilution Factor: 10

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 6 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.307	7300	J
2.		Unknown	7.341	13000	J
3.		Unknown	12.782	7300	J
4.		Unknown	13.372	7000	J
5.		Unknown	14.086	8600	J
6.		Unknown	14.934	14000	J
7.					
8.	SVOCTIC	Total SVOC TICs		57000	J
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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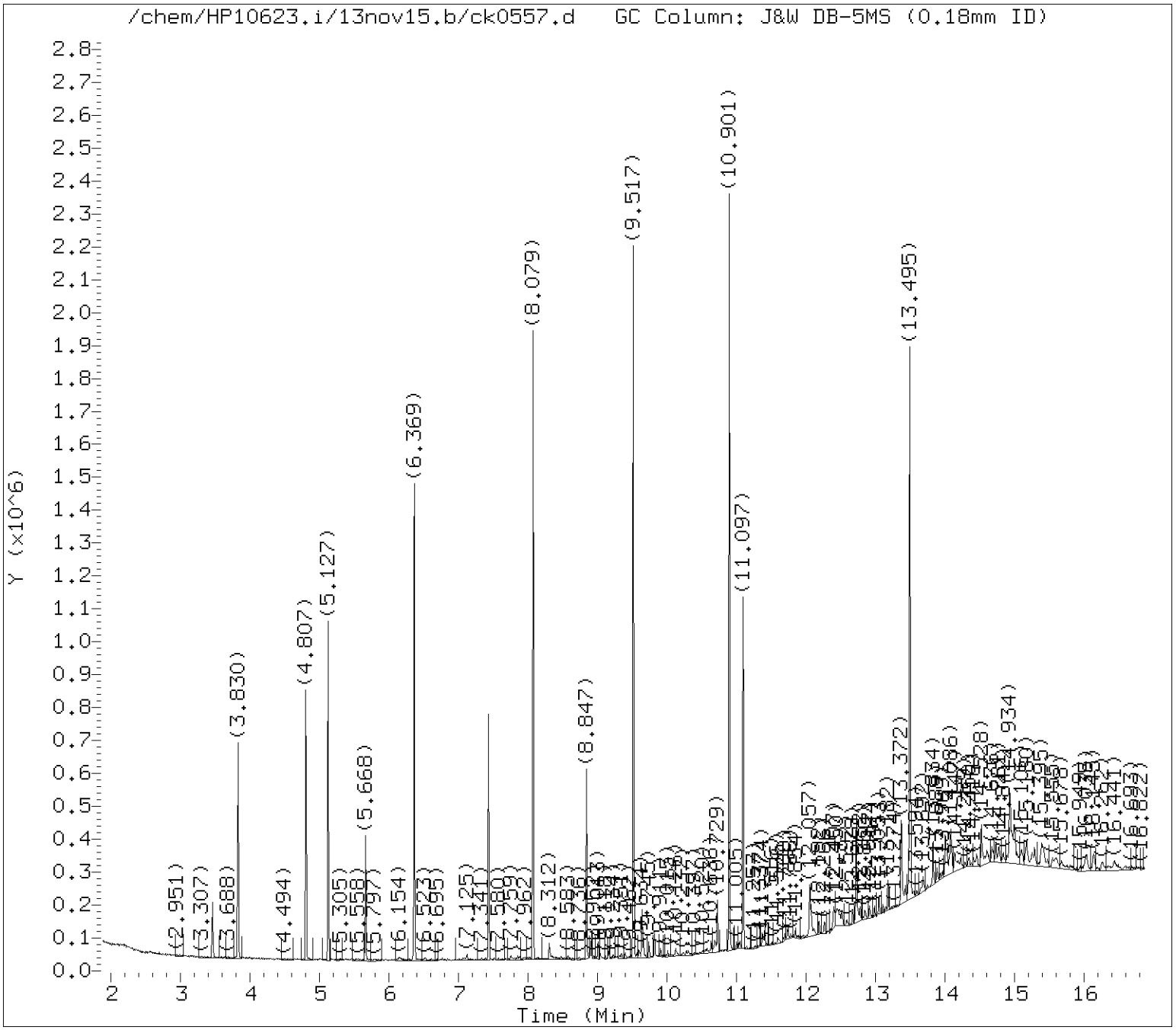
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

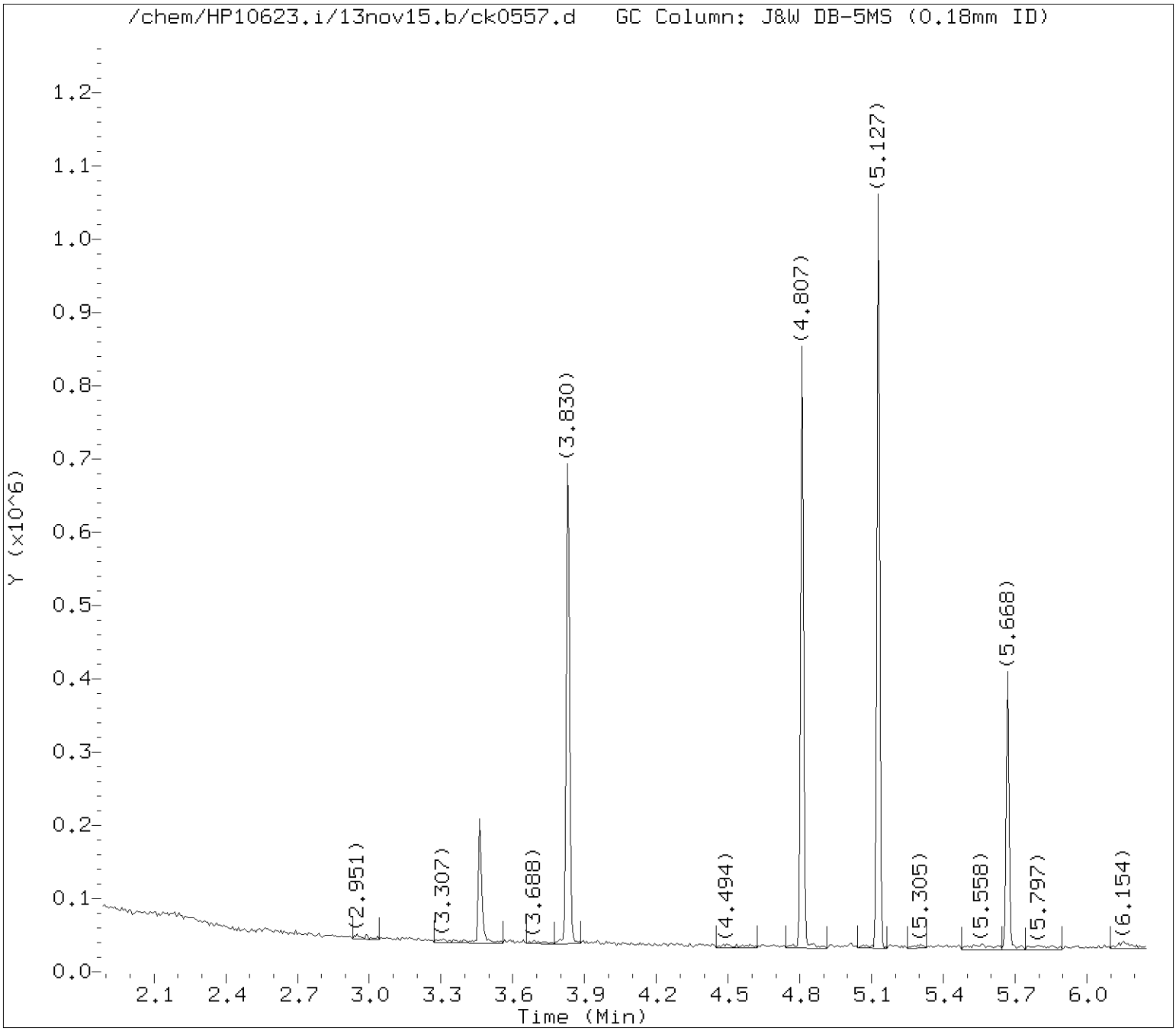
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

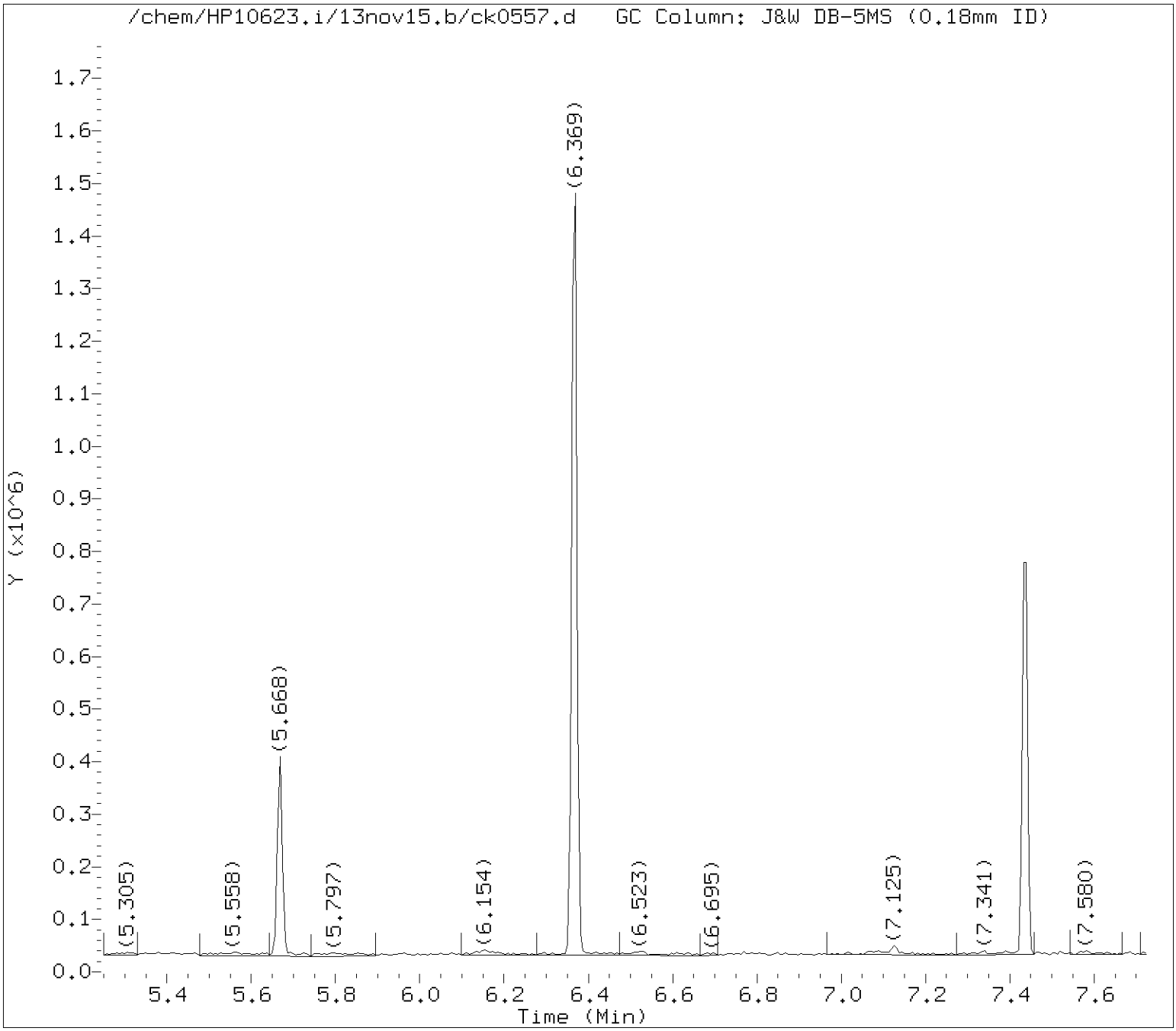
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.127 minutes
Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 5.748

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

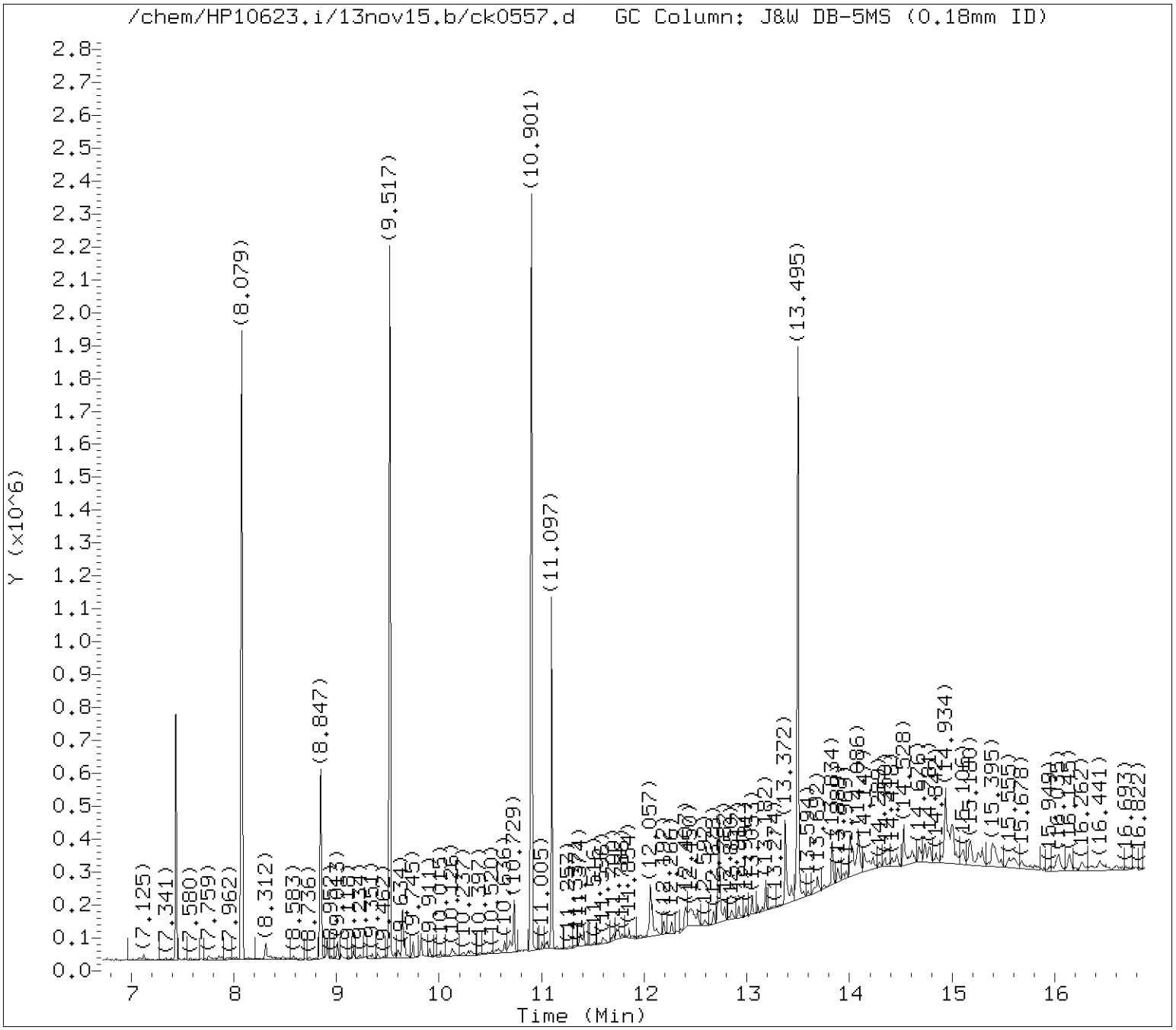
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: Naphthalene-d8 at 6.369 minutes
Chromatogram Start Time (min.): 5.748
Chromatogram End Time (min.): 7.224

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

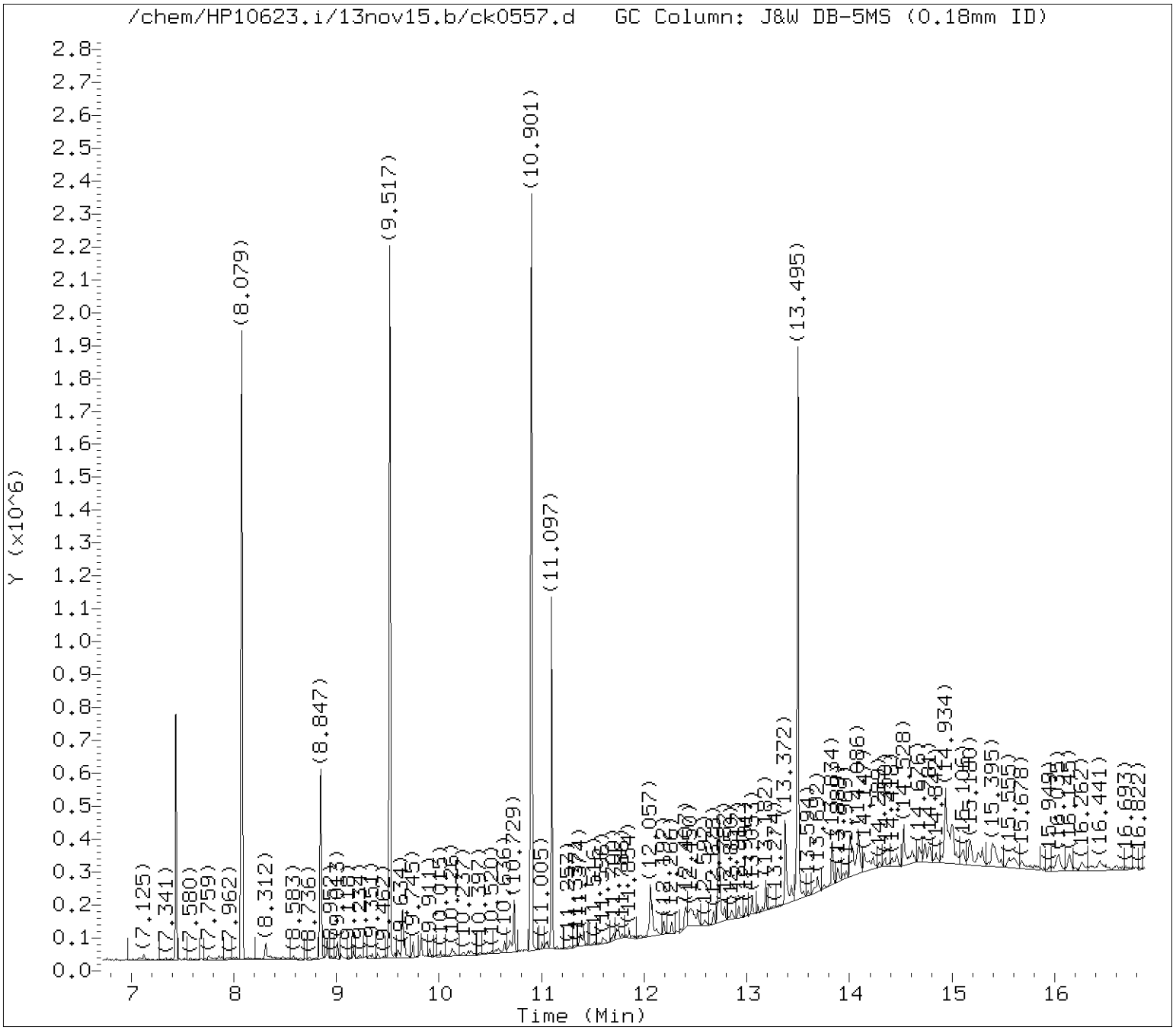
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: Acenaphthene-d10 at 8.079 minutes
Chromatogram Start Time (min.): 7.224
Chromatogram End Time (min.): 8.798

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

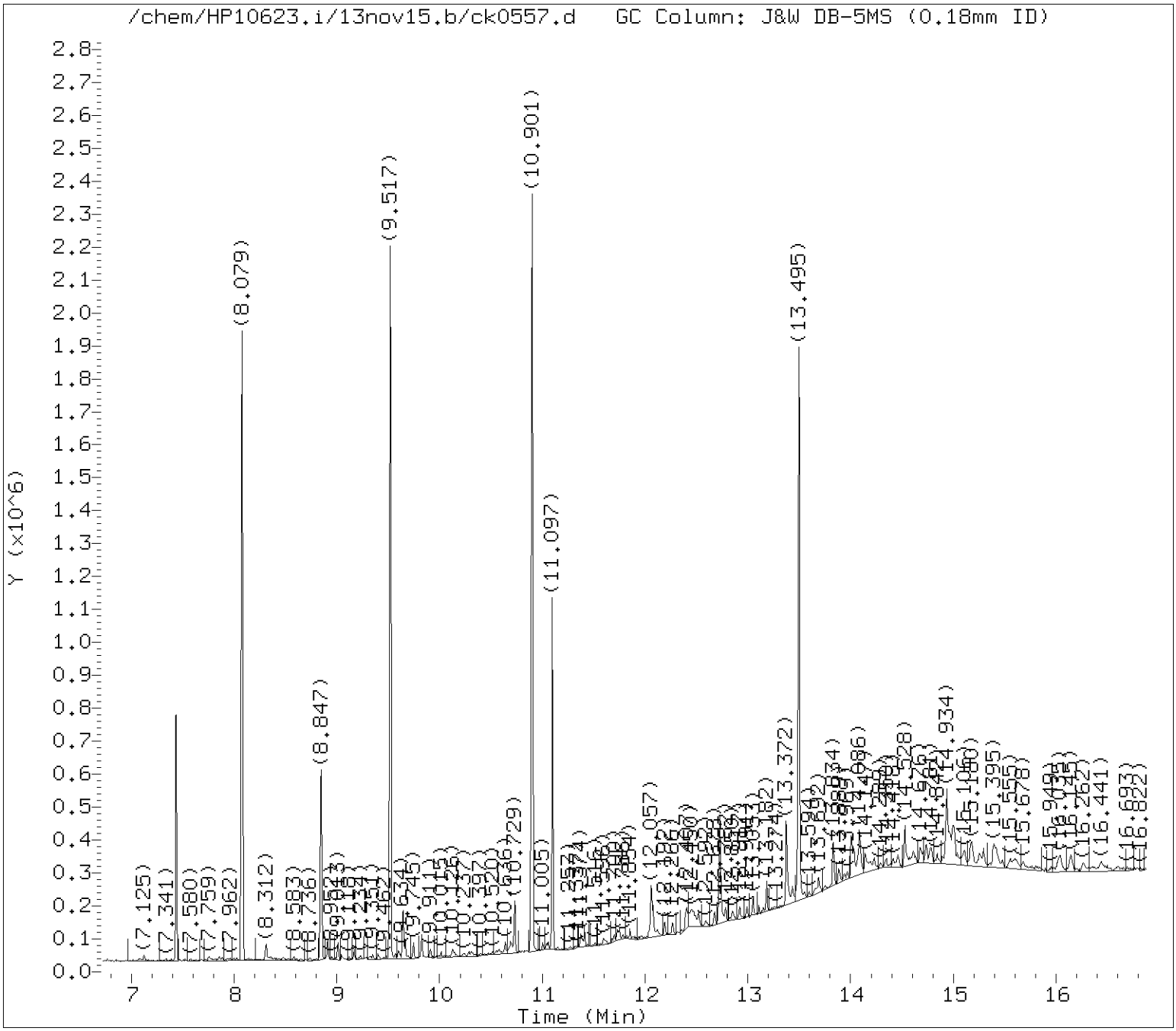
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: Phenanthrene-d10 at 9.517 minutes
Chromatogram Start Time (min.): 8.798
Chromatogram End Time (min.): 10.209

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

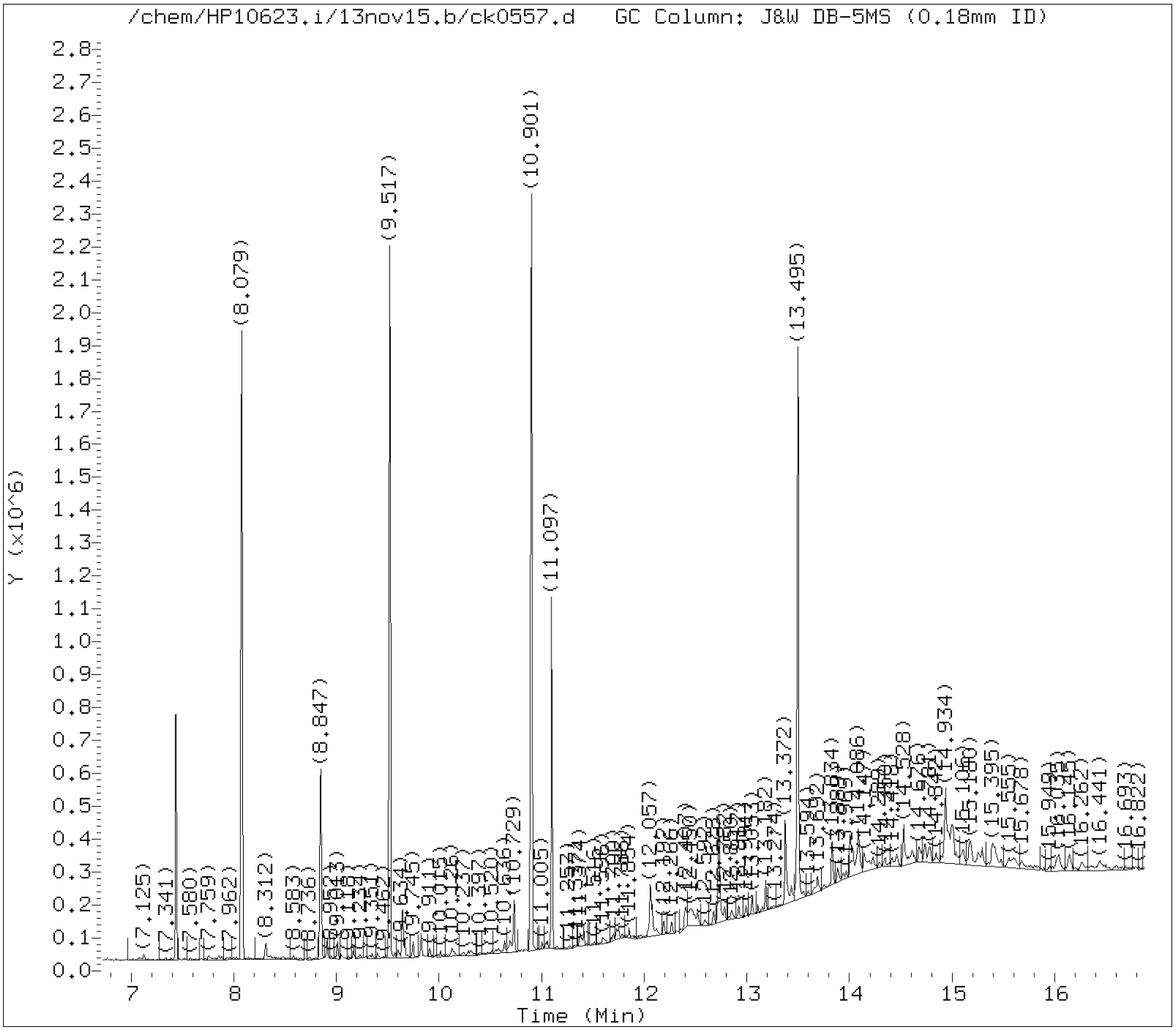
Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: Pyrene-d10 at 10.901 minutes
Chromatogram Start Time (min.): 10.209
Chromatogram End Time (min.): 12.198

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0557.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:10 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:06 mac00013

Sample Name: R2M71 Lab Sample ID: 7265229

Internal Standard referenced: Perylene-d12 at 13.495 minutes
Chromatogram Start Time (min.): 12.198
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Lancaster Labs

Data file : /chem/HP10623.i/13nov15.b/ck0557.d
Lab Smp Id: 7265229 Client Smp ID: R2M71
Inj Date : 15-NOV-2013 10:10
Operator : mac00013 Inst ID: HP10623.i
Smp Info : R2M71;7265229;2;0;SAMPLE;;;
Misc Info : 13314SLD;all1.sub;10;;1000;0;ck0542;10727;
Comment : Max. number of TICs to report is 25, 6 TICs were found initially.
Method : /chem/HP10623.i/13nov15.b/m8270.m
Meth Date : 18-Nov-2013 04:21 mac00013 Quant Type: ISTD
Cal Date : 12-NOV-2013 12:38 Cal File: ck0408.d
Als bottle: 26
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	10.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 21 1,4-Dichlorobenzene-d4	5.127	860439	20.000
* 98 Acenaphthene-d10	8.079	1731695	20.000
* 175 Perylene-d12	13.495	1875682	20.000

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.307	204282	4.74832586	4748.32586	0		0	21
Unknown				CAS #:			
7.341	709891	8.19880107	8198.80106	0		0	98
Unknown				CAS #:			
12.782	444954	4.74444576	4744.44576	0		0	175
Unknown				CAS #:			
13.372	424201	4.52316604	4523.16603	0		0	175
Unknown				CAS #:			
14.086	526116	5.60986768	5609.86768	0		0	175
Unknown				CAS #:			
14.934	856334	9.13090657	9130.90656	0		0	175

Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

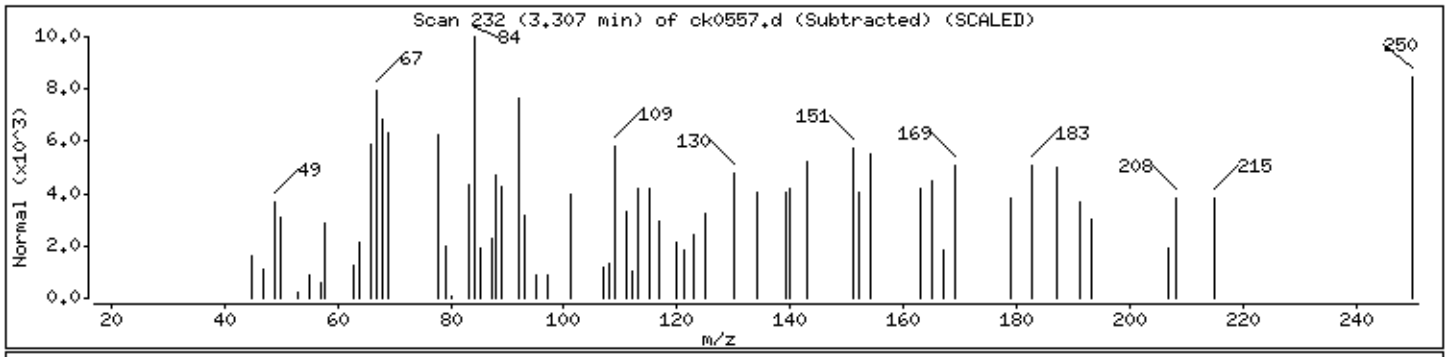
Client ID: R2M71 Instrument: HP10623.i

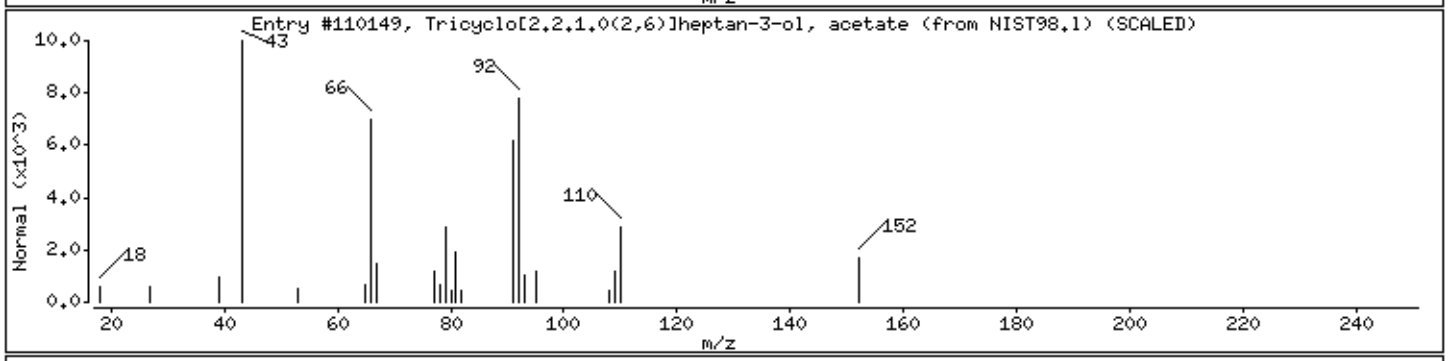
Sample Info: R2M71;7265229;2;0;SAMPLE;;;

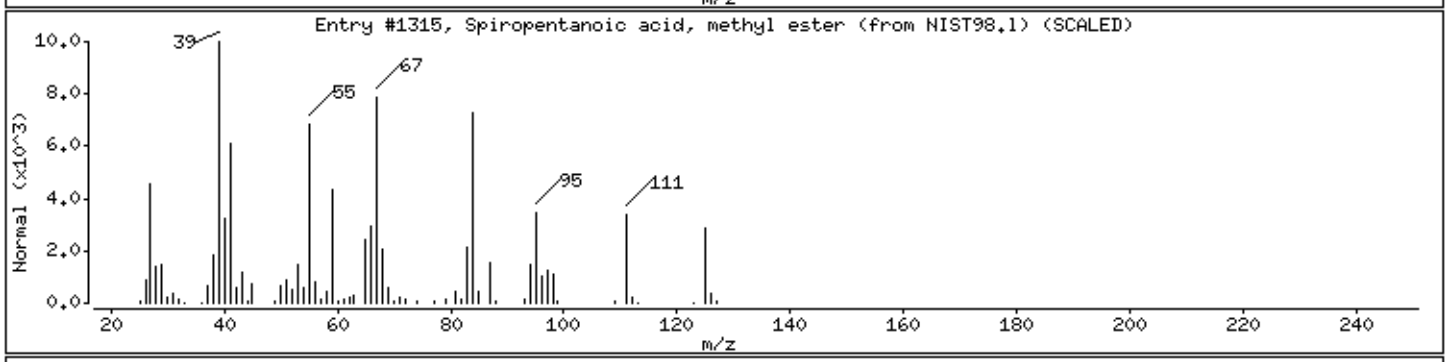
Volume Injected (uL): 1.0 Operator: mac00013

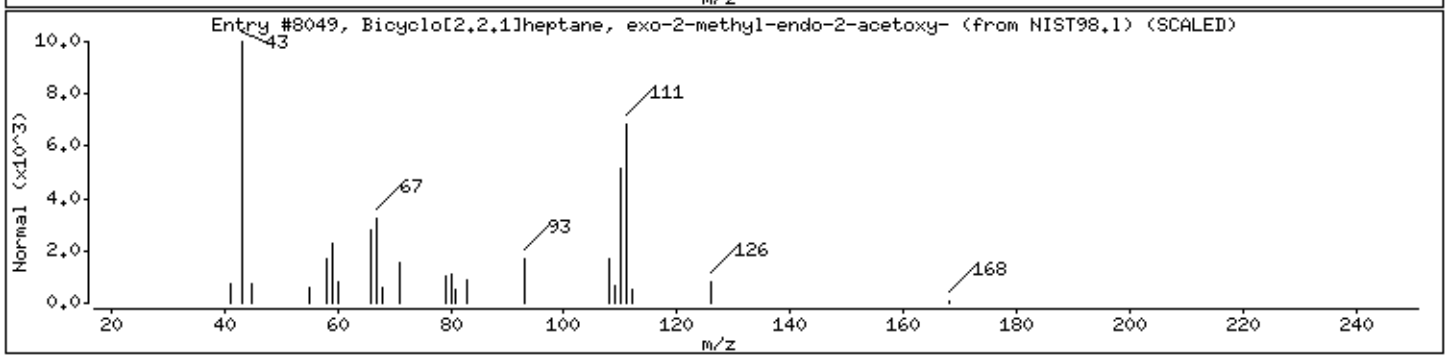
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Tricyclo[2.2.1.0(2,6)]heptan-3-ol, aceta	6555-48-2	NIST98.1	110149	10	C9H12O2	152
Spiropentanoic acid, methyl ester	1000221-99-0	NIST98.1	1315	10	C7H10O2	126
Bicyclo[2.2.1]heptane, exo-2-methyl-endo	1000138-90-3	NIST98.1	8049	10	C10H16O2	168









Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

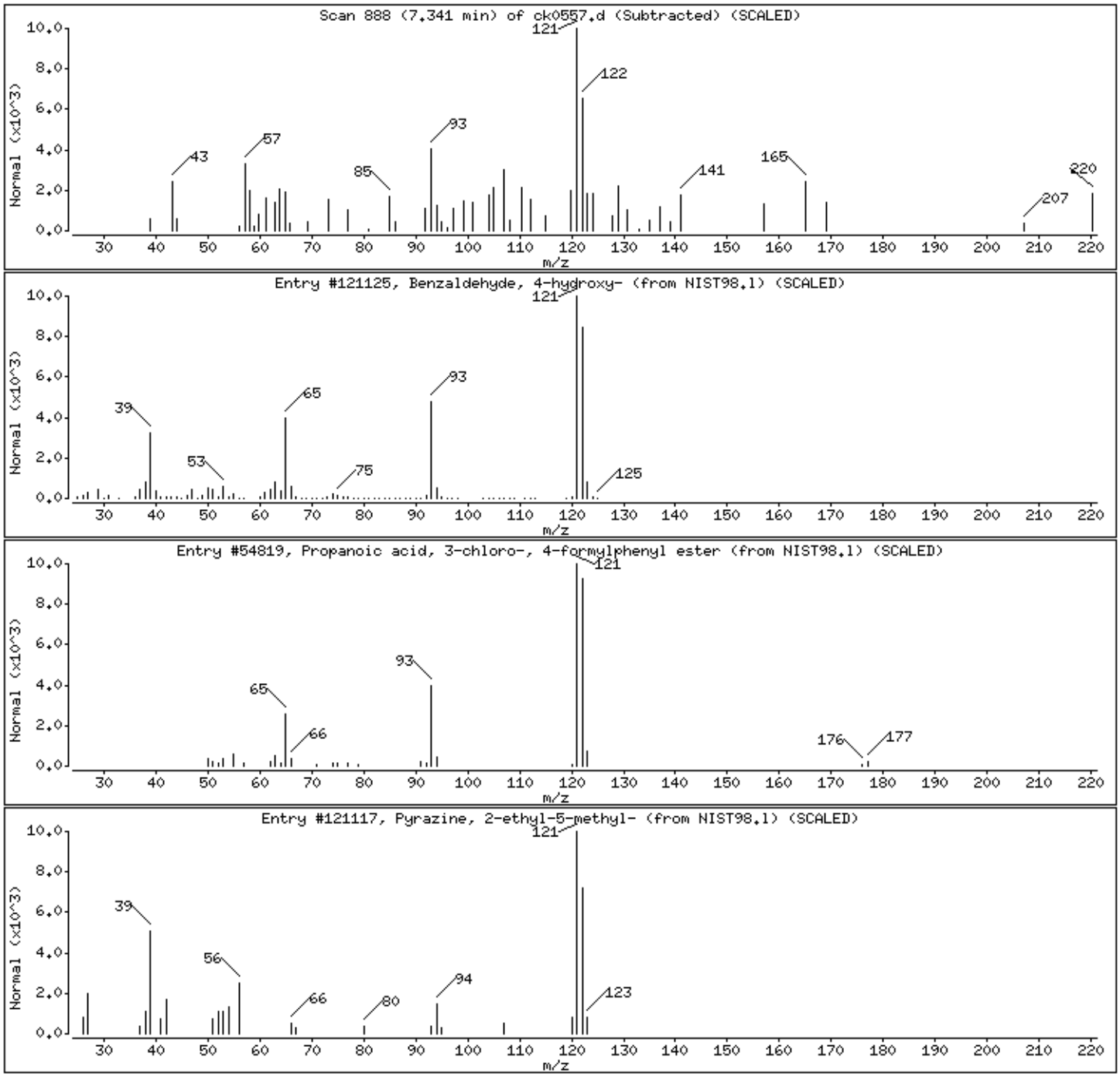
Client ID: R2M71 Instrument: HP10623.i

Sample Info: R2M71;7265229;2;0;SAMPLE;;;

Volume Injected (uL): 1.0 Operator: mac00013

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Benzaldehyde, 4-hydroxy-	123-08-0	NIST98.1	121125	43	C7H6O2	122
Propanoic acid, 3-chloro-, 4-formylpheny	1000142-41-5	NIST98.1	54819	37	C10H9ClO3	212
Pyrazine, 2-ethyl-5-methyl-	13360-64-0	NIST98.1	121117	35	C7H10N2	122



Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

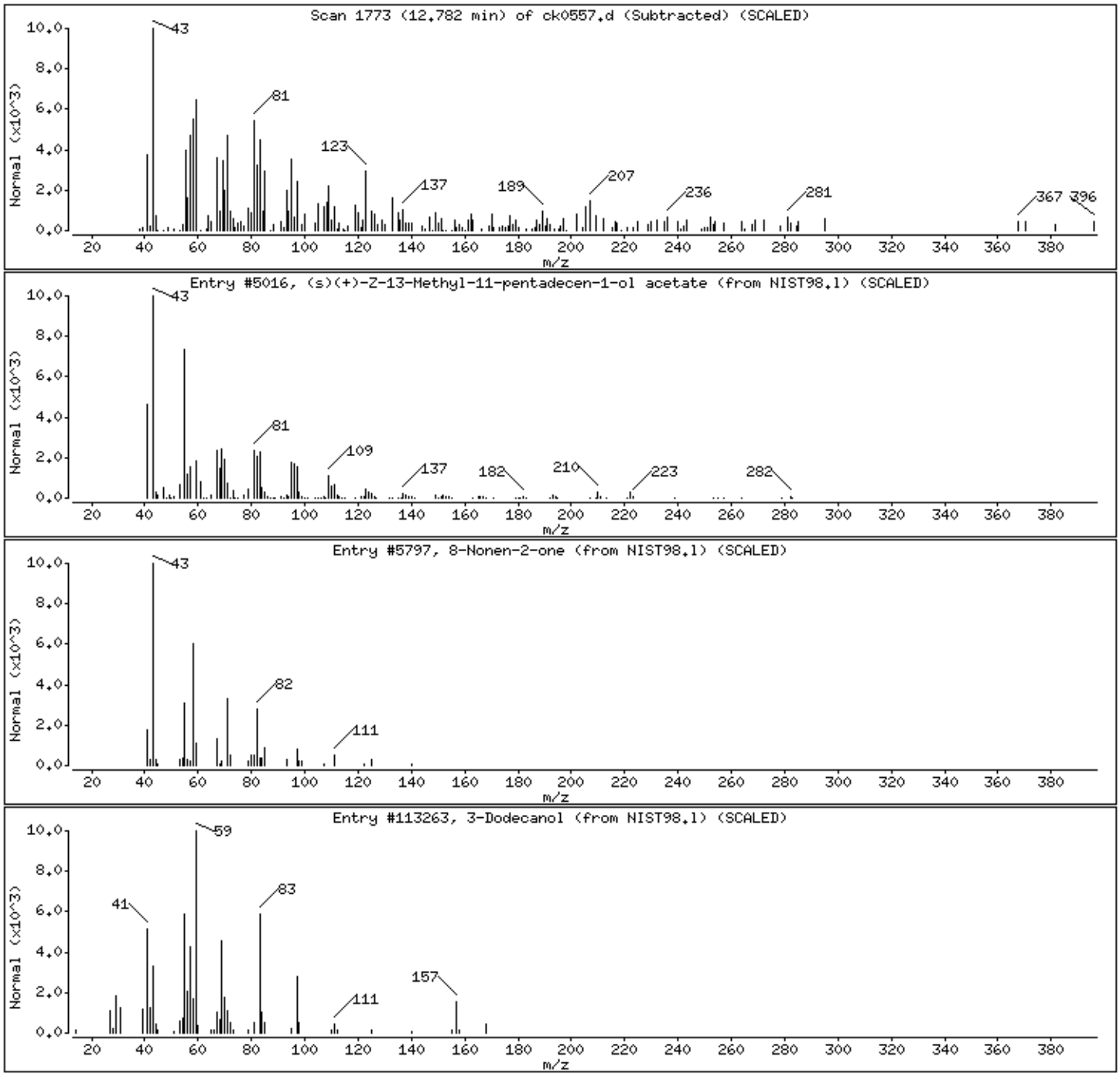
Client ID: R2M71 Instrument: HP10623.i

Sample Info: R2M71;7265229;2;0;SAMPLE;;;

Volume Injected (uL): 1.0 Operator: mac00013

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
(s)(+)-Z-13-Methyl-11-pentadecen-1-ol ac	1000130-84-8	NIST98.1	5016	46	C18H34O2	282
8-Nonen-2-one	5009-32-5	NIST98.1	5797	42	C9H16O	140
3-Dodecanol	10203-30-2	NIST98.1	113263	35	C12H26O	186



Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

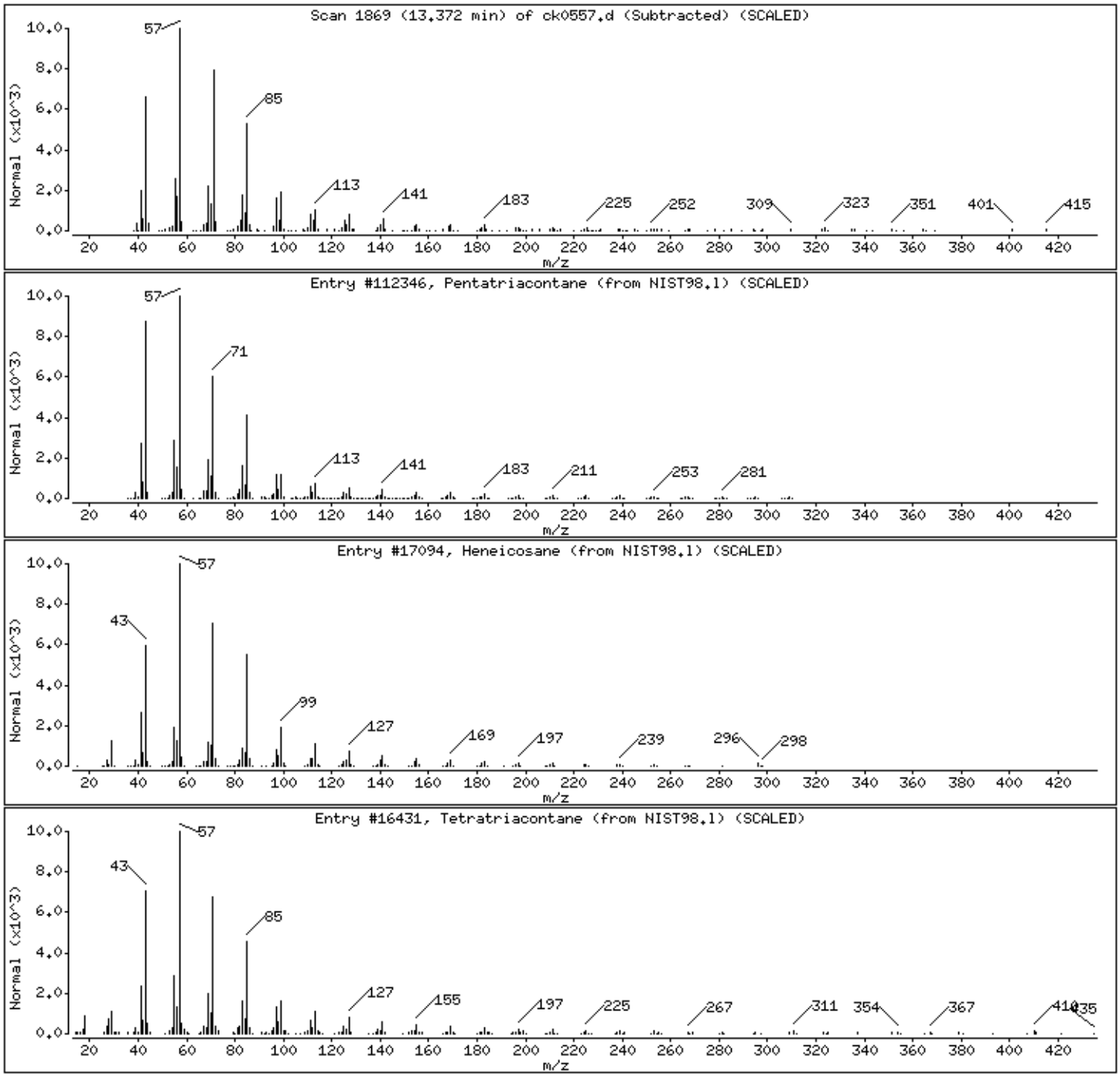
Client ID: R2M71 Instrument: HP10623.i

Sample Info: R2M71;7265229;2;0;SAMPLE;;;

Volume Injected (uL): 1.0 Operator: mac00013

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pentatriacontane	630-07-9	NIST98.1	112346	91	C35H72	493
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296
Tetratriacontane	14167-59-0	NIST98.1	16431	91	C34H70	479



Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

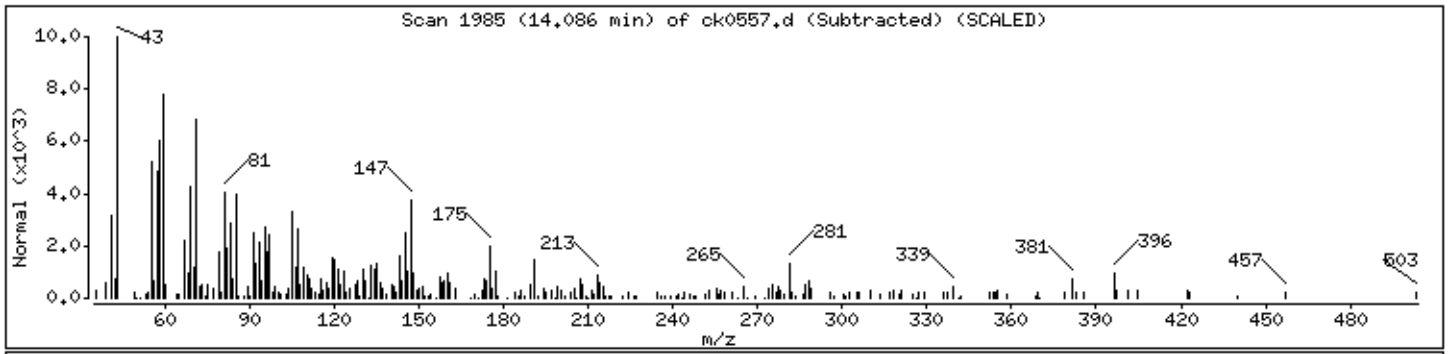
Client ID: R2M71 Instrument: HP10623.i

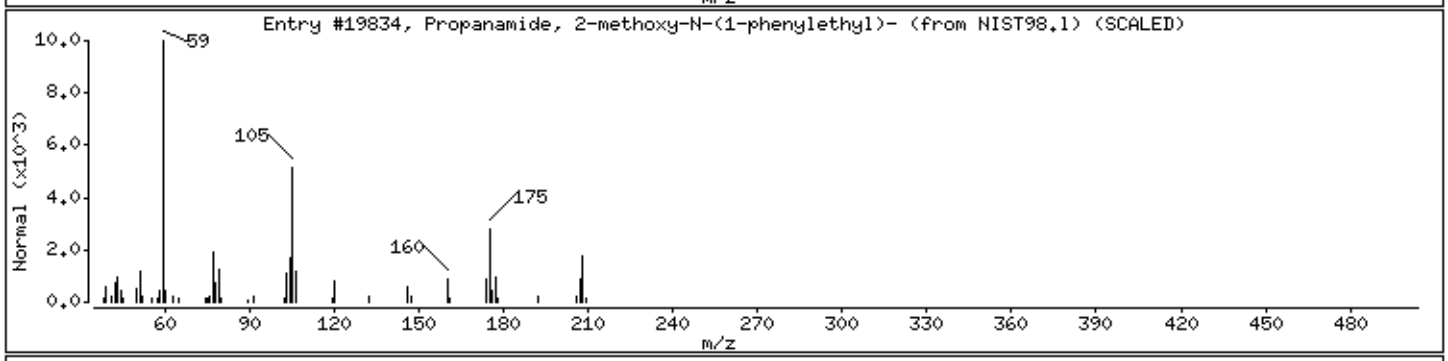
Sample Info: R2M71;7265229;2;0;SAMPLE;;;

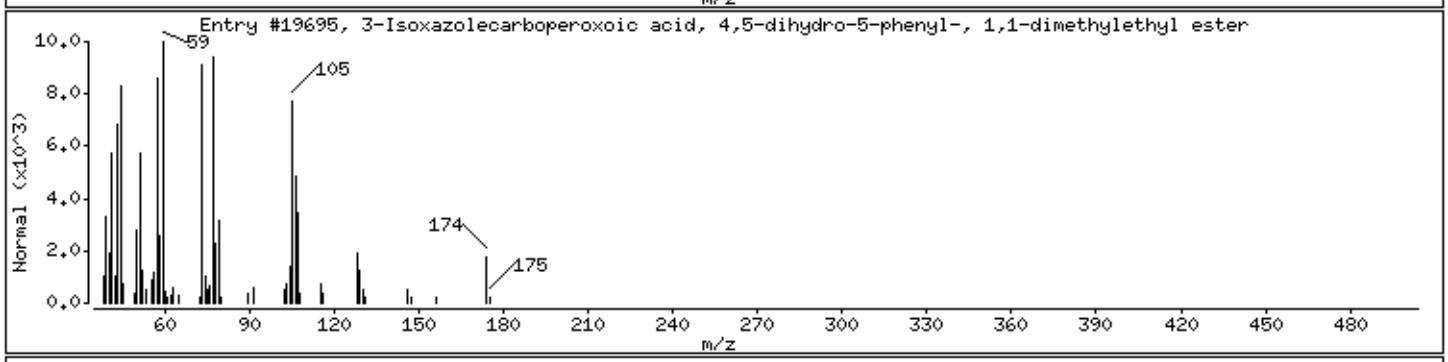
Volume Injected (uL): 1.0 Operator: mac00013

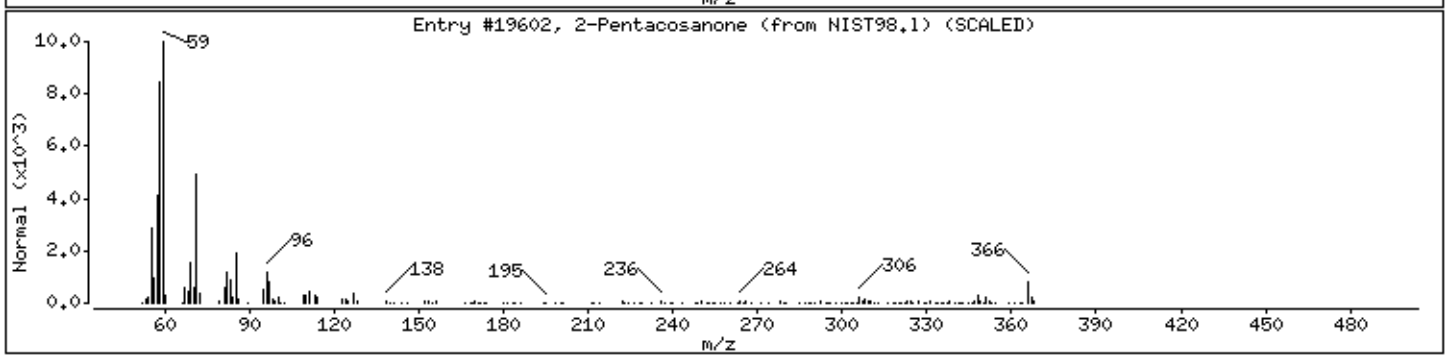
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Propanamide, 2-methoxy-N-(1-phenylethyl)	1000142-13-8	NIST98.1	19834	38	C12H17NO2	207
3-Isoxazolecarboperoxoic acid, 4,5-dihyd	35145-84-7	NIST98.1	19695	27	C14H17NO4	263
2-Pentacosanone	75207-54-4	NIST98.1	19602	27	C25H50O	366









Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0557.d

Date : 15-NOV-2013 10:10

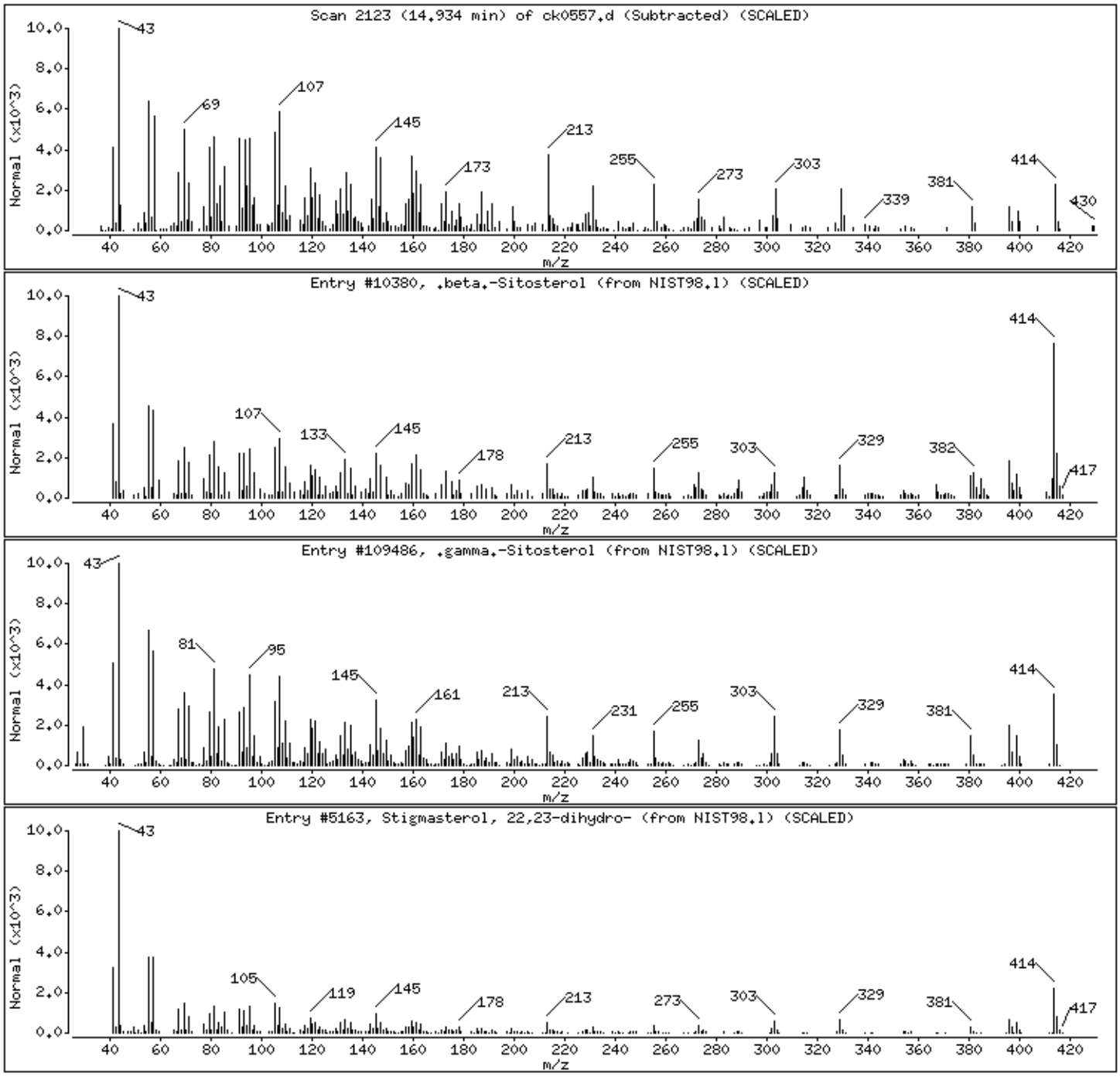
Client ID: R2M71 Instrument: HP10623.i

Sample Info: R2M71;7265229;2;0;SAMPLE;;;

Volume Injected (uL): 1.0 Operator: mac00013

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.beta.-Sitosterol	83-46-5	NIST98.1	10380	91	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST98.1	109486	91	C29H50O	414
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST98.1	5163	68	C29H50O	414



Digitally signed by Mark A. Clark on 11/18/2013 at 09:51.
Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0324.d Injection date and time: **11-NOV-2013 05:55**
Data file Sample Info. Line: R2163;7265230;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 243 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	123825 (-13)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	476307 (-13)	5.00	
92) Acenaphthene-d10	10.709(0.006)	1608	164	279937 (-14)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	497684 (-13)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	627315 (-16)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	436407 (-22)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.001(0.000)	112	1030598	28.031	56%		10 - 107
13) Phenol-d6	(1)	5.429(0.001)	99	1043833	20.673	41%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	989108	22.565	90%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(-0.001)	172	1734158	24.807	99%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.776(0.000)	330	351198	47.767	96%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2246338	28.714	115%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:38. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0324.d Injection date and time: **11-NOV-2013 05:55**
Data file Sample Info. Line: R2163;7265230;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 243 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

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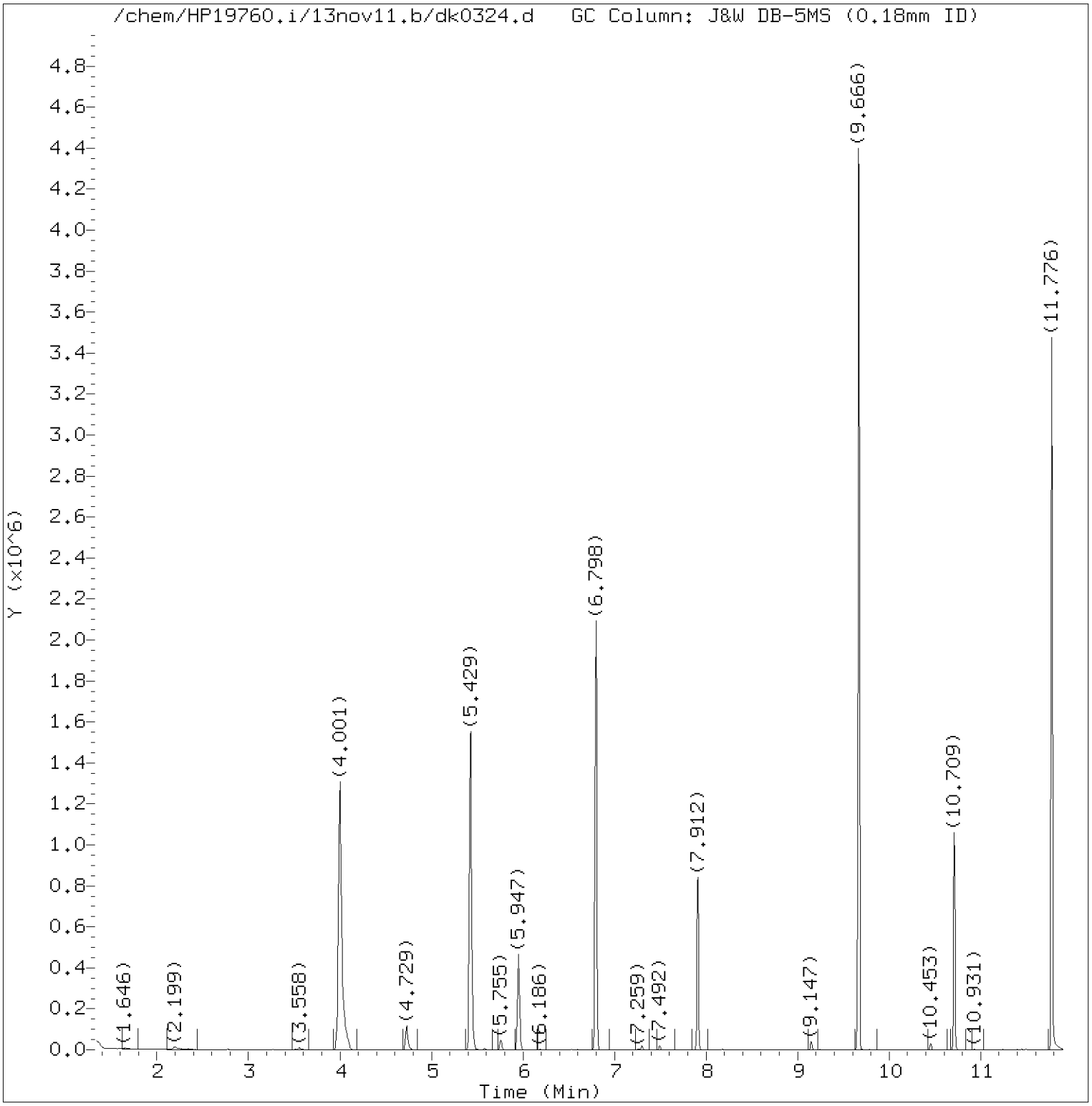
Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

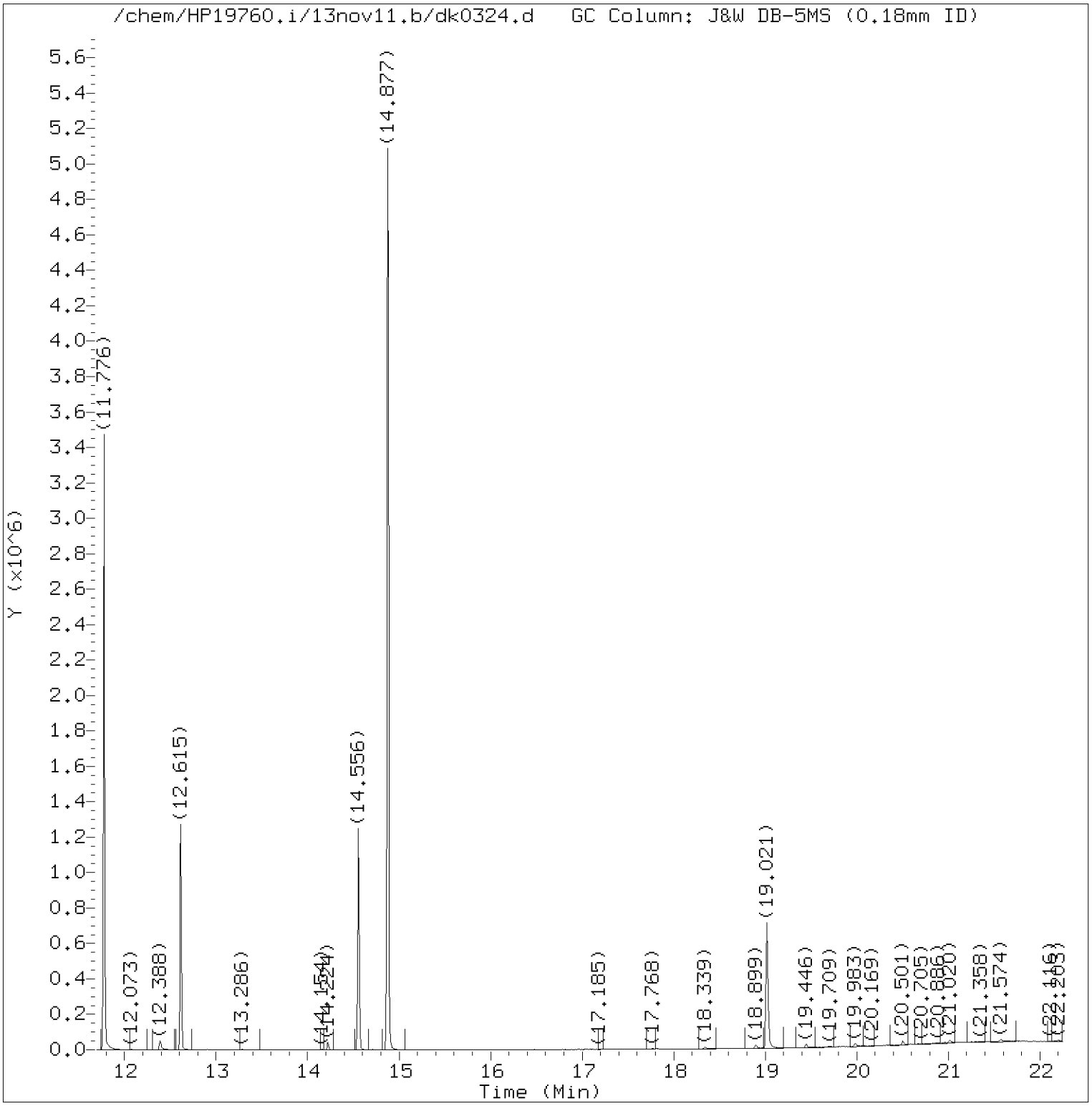
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:38.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:38.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.001	112	1030598	28.031
13)$Phenol-d6	(1)	5.429	99	1043833	20.673
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	123825	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	989108	22.565
52)*Naphthalene-d8	(2)	7.912	136	476307	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1734158	24.807
92)*Acenaphthene-d10	(3)	10.709	164	279937	5.000
112)$2,4,6-Tribromophenol	(3)	11.776	330	351198	47.767
130)*Phenanthrene-d10	(4)	12.615	188	497684	5.000
145)*Pyrene-d10	(5)	14.556	212	627315	5.000
149)$Terphenyl-d14	(5)	14.877	244	2246338	28.714
172)*Perylene-d12	(6)	19.021	264	436407	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:38.
Target 3.5 esignature user ID: jmg00346

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

R2163

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265230

Sample wt/vol: 243 (g/mL) mL Lab File ID: dk0324.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: _____ Decanted: (Y/N) _____ Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: _____ Extraction: Sepf

CONCENTRATION UNITS:
Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	4.729	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
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10.					
11.					
12.					
13.					
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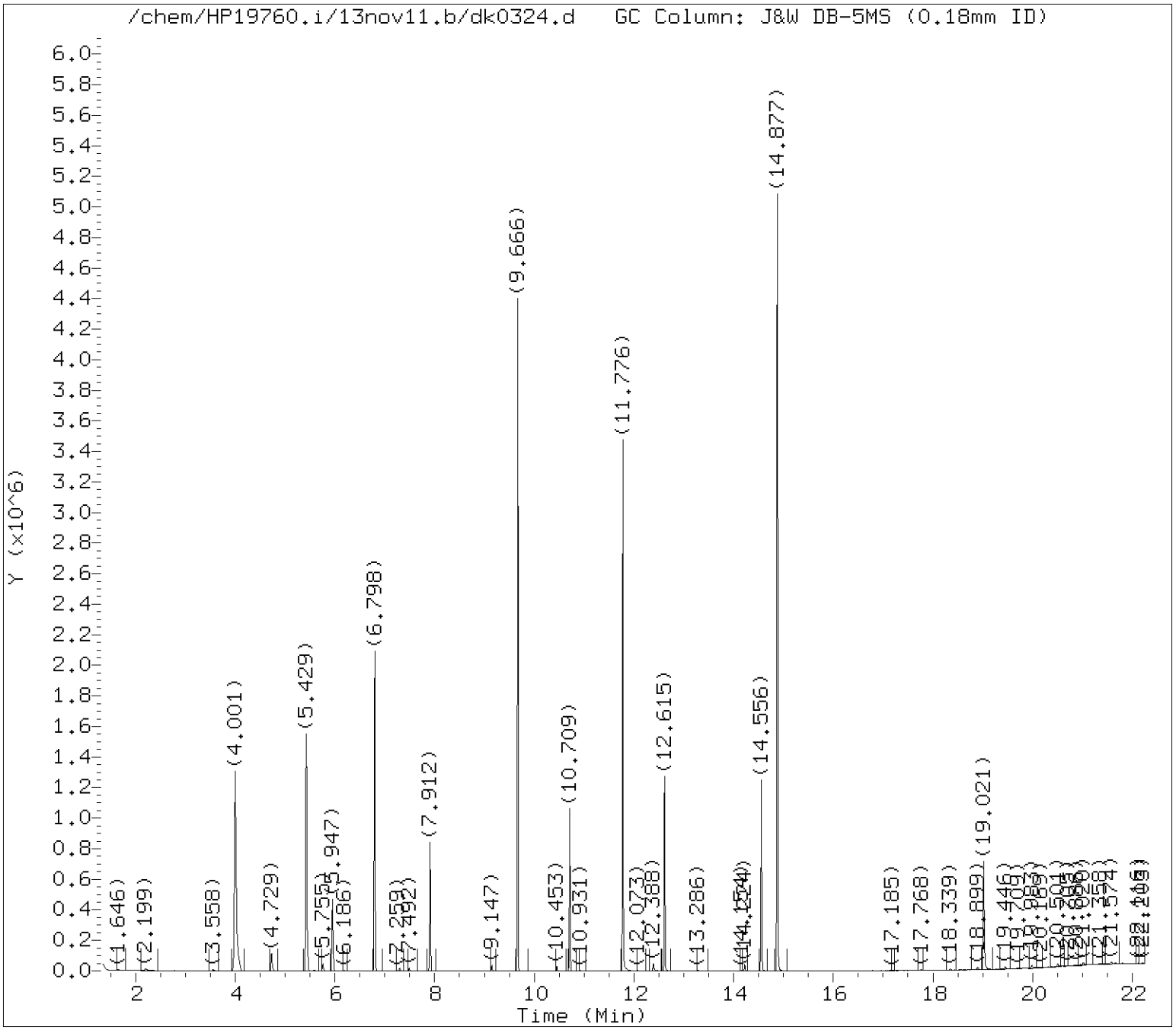
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

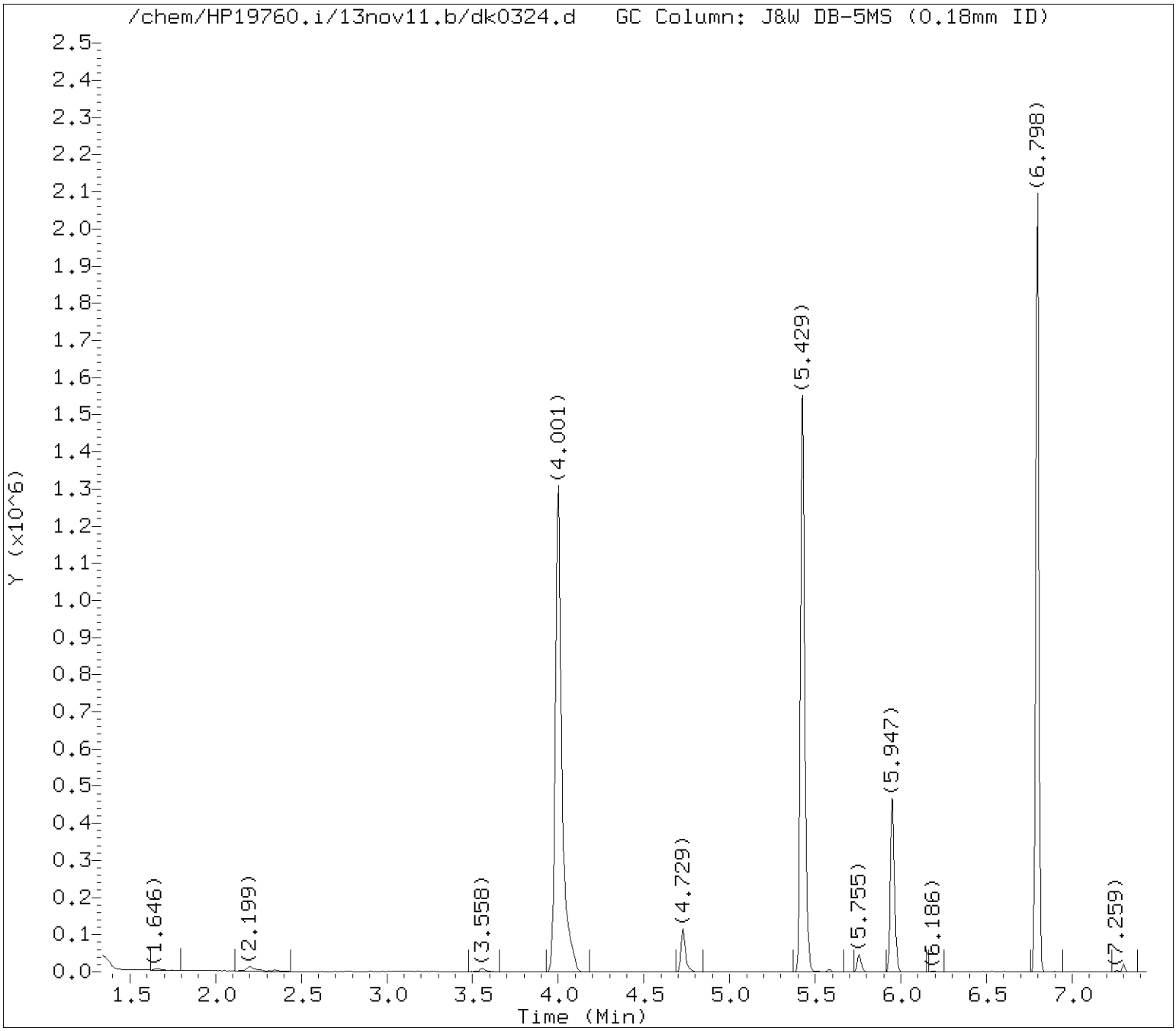
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

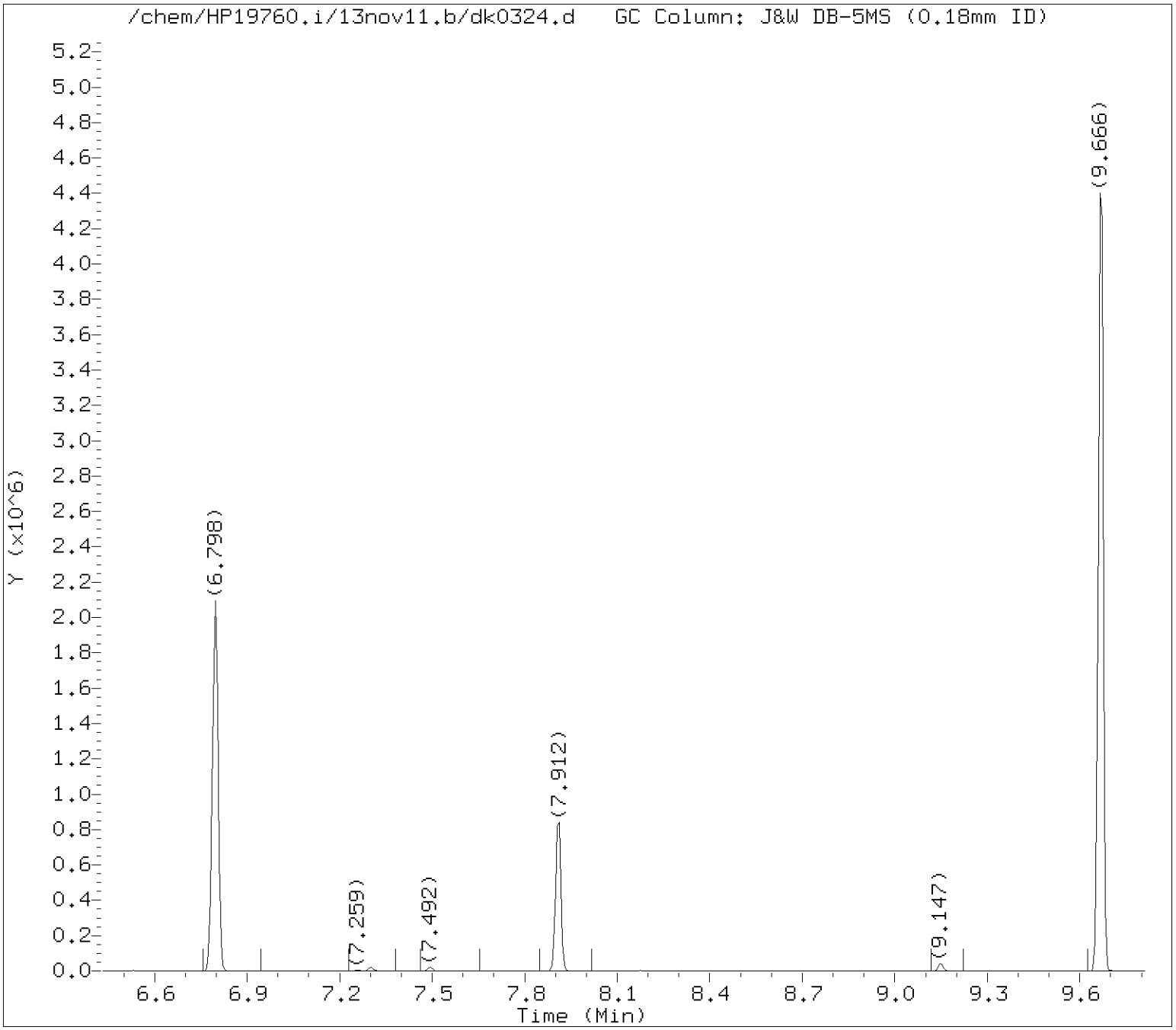
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

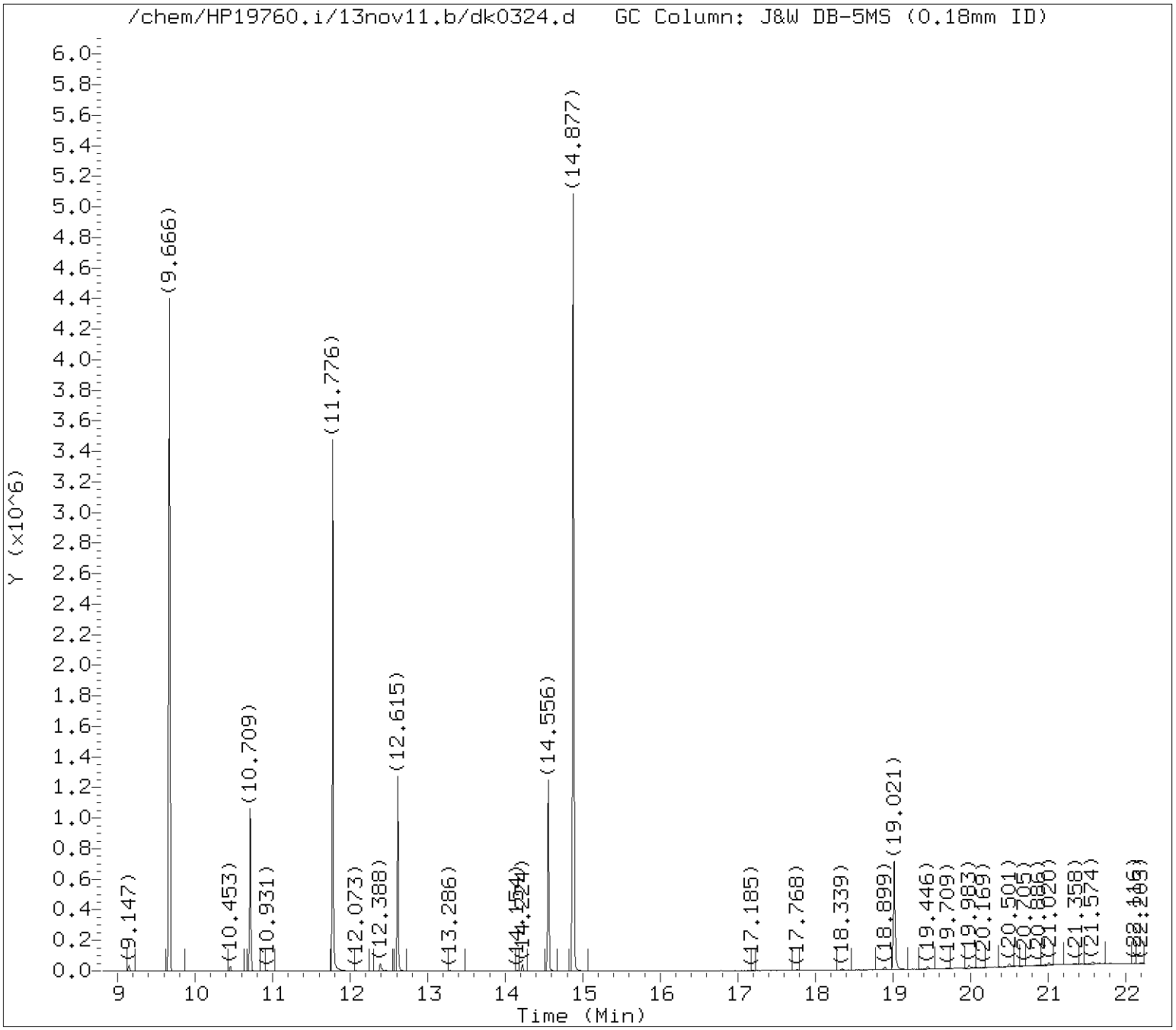
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.310

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

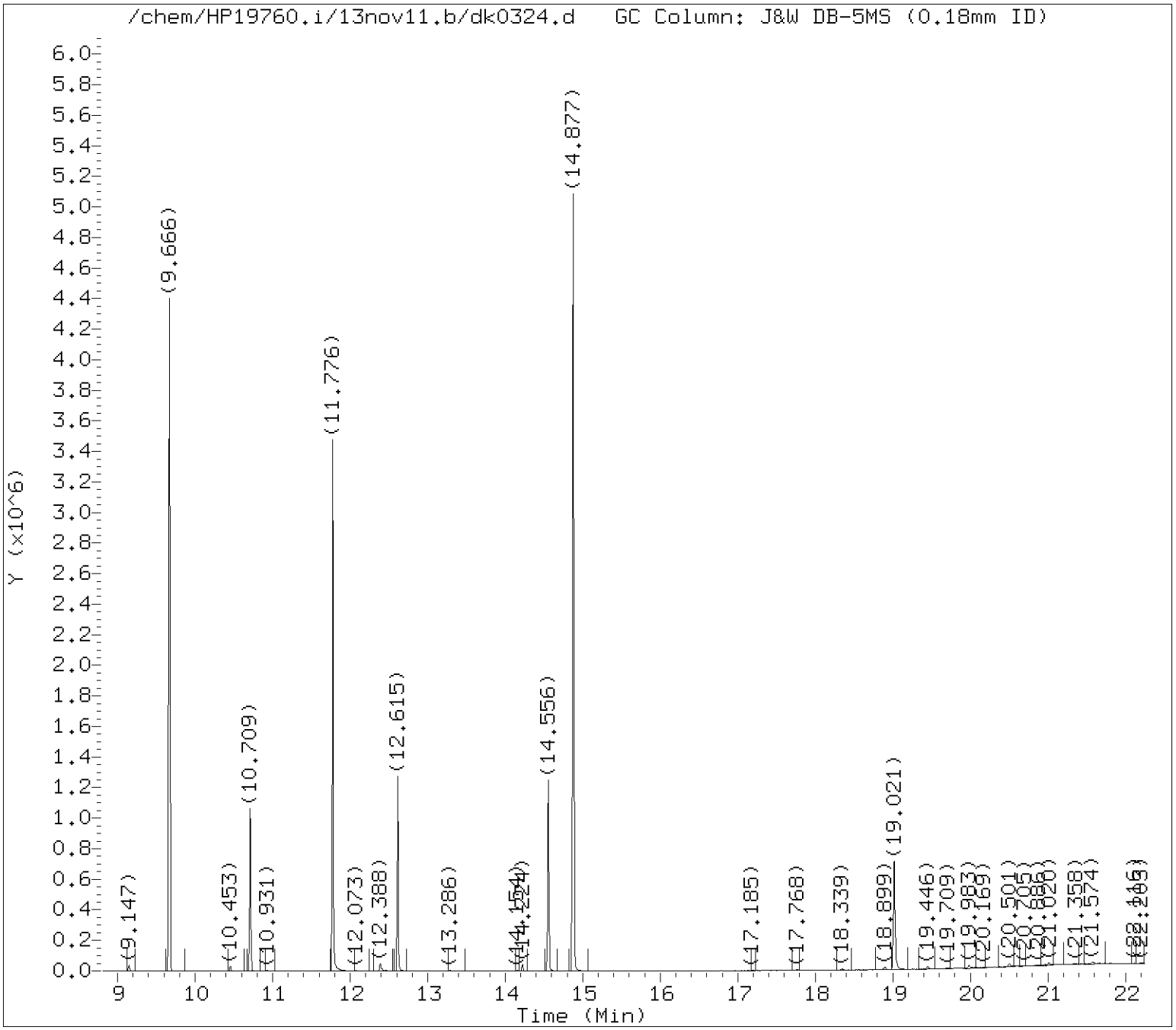
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: Acenaphthene-d10 at 10.709 minutes
Chromatogram Start Time (min.): 9.310
Chromatogram End Time (min.): 11.662

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

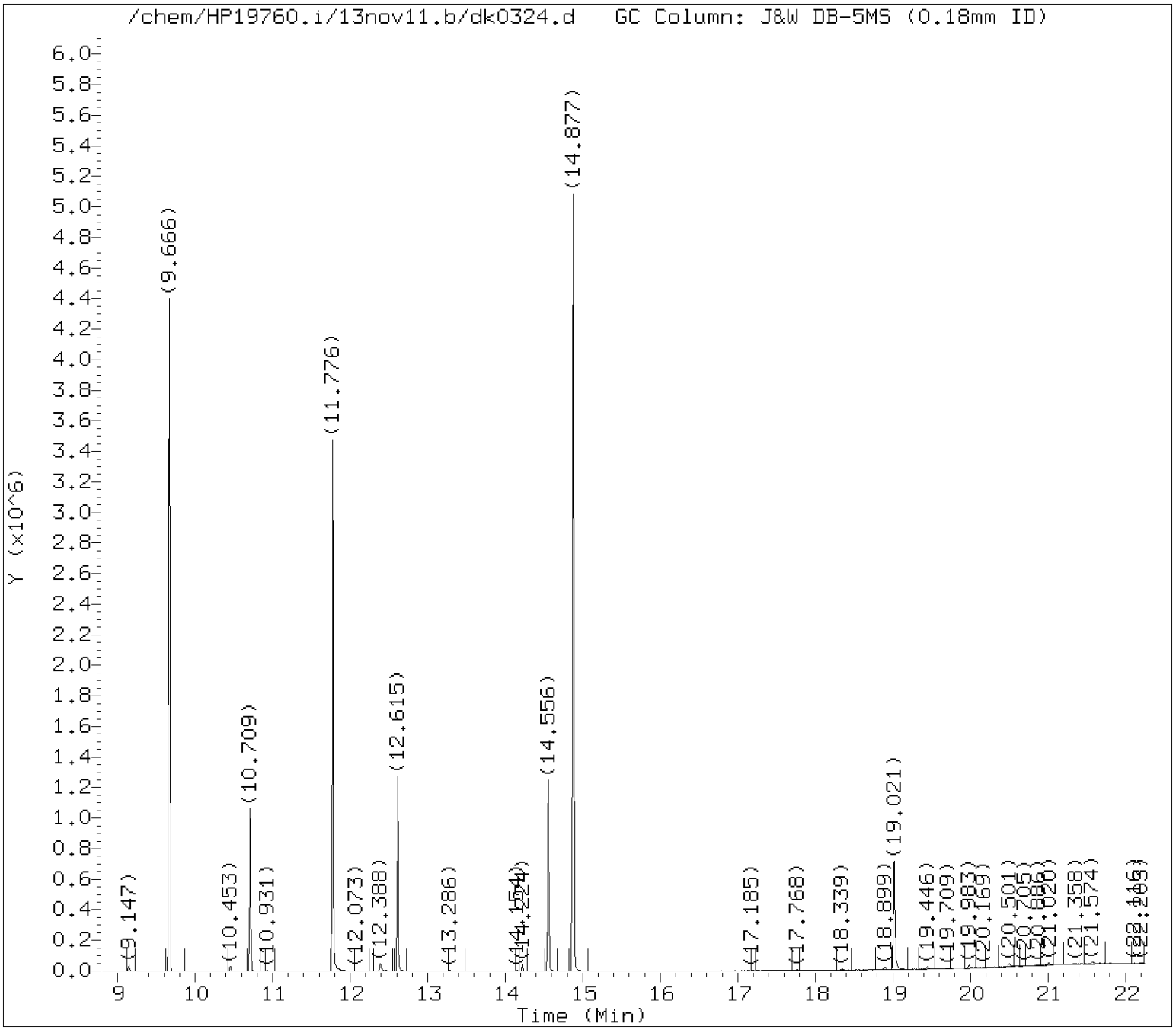
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.662
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

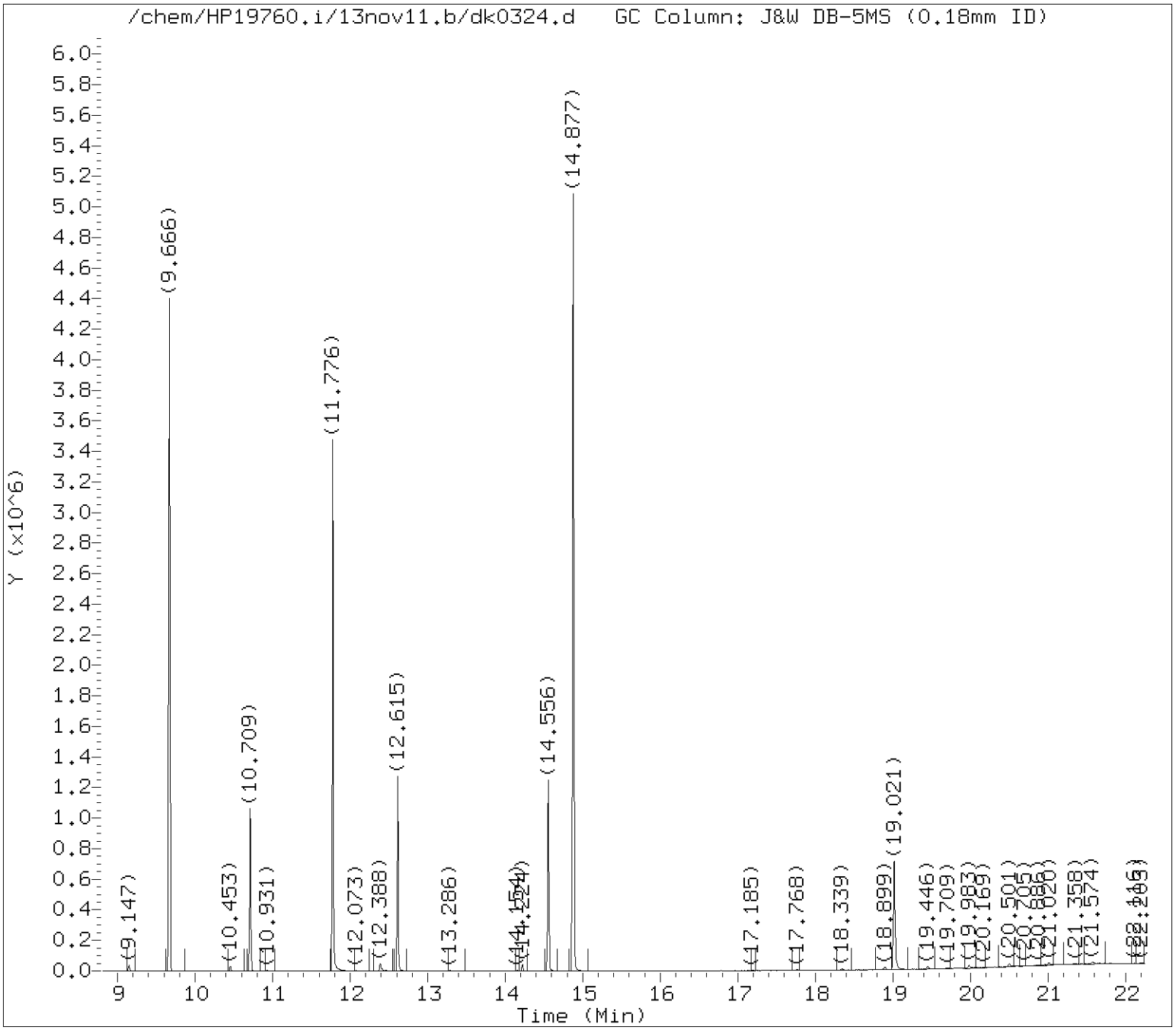
Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0324.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:33 jmg00346

Sample Name: R2163 Lab Sample ID: 7265230

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0324.d
Lab Smp Id: 7265230 Client Smp ID: R2163
Inj Date : 11-NOV-2013 05:55
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2163;7265230;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;243;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 16, 1 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 11-Nov-2013 05:30 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 312WAD.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	243.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.953	781237	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
4.729	212804	1.36196868	5.60480	0		0	19

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0324.d

Date : 11-NOV-2013 05:55

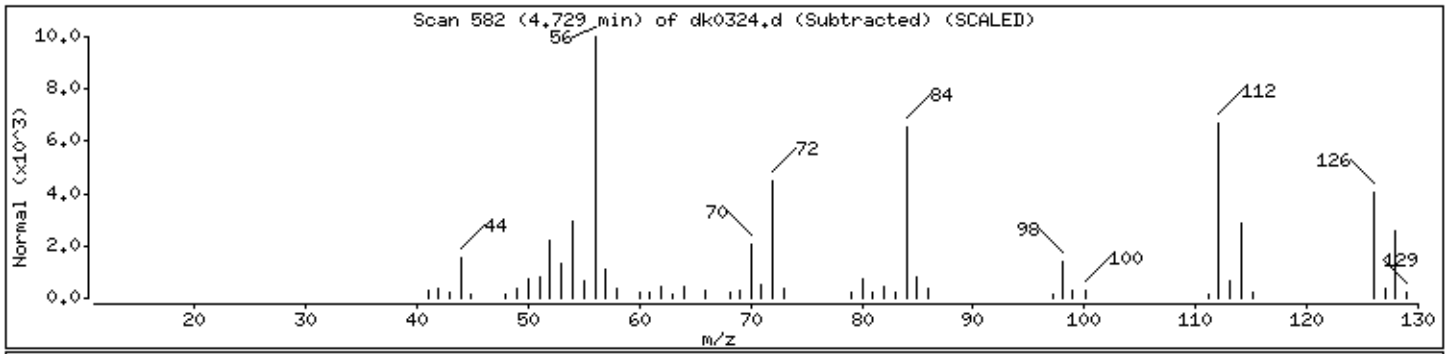
Client ID: R2163 Instrument: HP19760.i

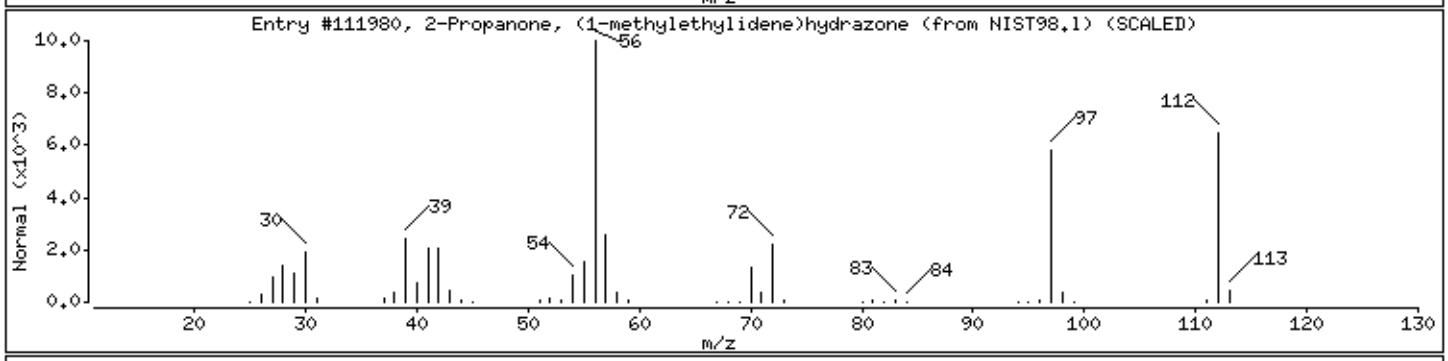
Sample Info: R2163;7265230;1;0;SAMPLE;;;

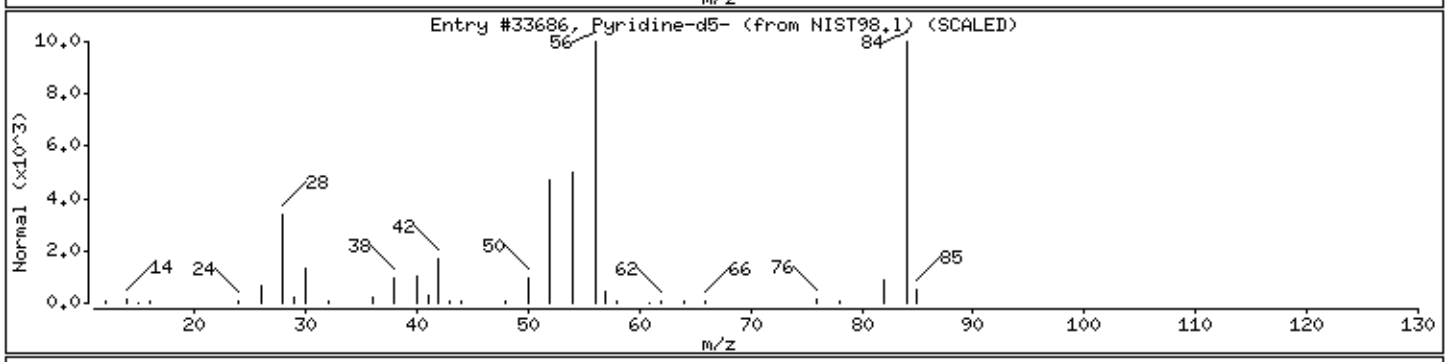
Volume Injected (uL): 0.5 Operator: jmg00346

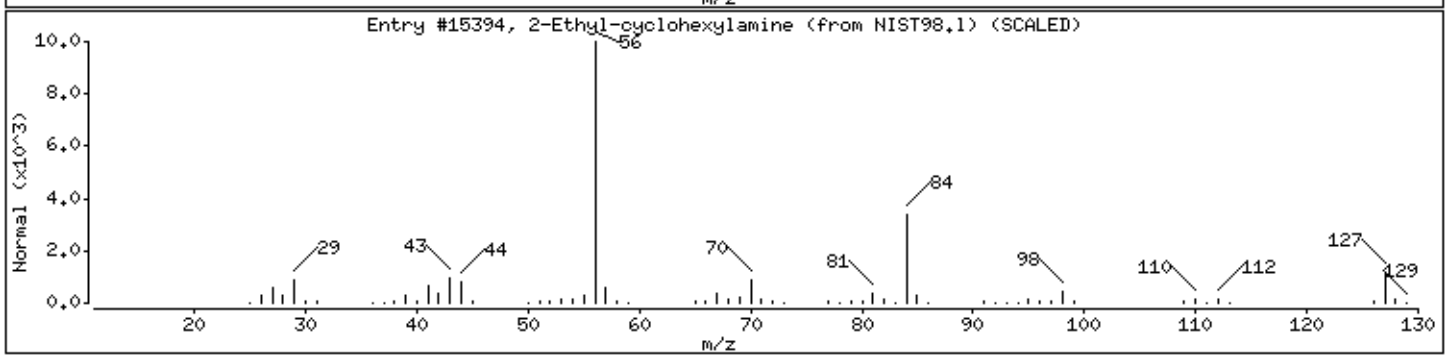
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Propanone, (1-methylethylidene)hydrazo	627-70-3	NIST98.1	111980	30	C6H12N2	112
Pyridine-d5-	7291-22-7	NIST98.1	33686	27	C5D5N	84
2-Ethyl-cyclohexylamine	24216-90-8	NIST98.1	15394	16	C8H17N	127









Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:34.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0489.d
Data file Sample Info. Line: R2E16;7265234;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Injection date and time: **13-NOV-2013 20:18**
Instrument ID: **HP10623.i** Batch: **13310SLF**

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201(0.000)	540	152	127658 (7)	20.00	
52) Naphthalene-d8	6.437(0.000)	741	136	576833 (2)	20.00	
98) Acenaphthene-d10	8.152(-0.006)	1020	164	351478 (-3)	20.00	
135) Phenanthrene-d10	9.591(0.000)	1254	188	623707 (-10)	20.00	
167) Pyrene-d10	10.975(0.000)	1479	212	732409 (-14)	20.00	
175) Perylene-d12	13.582(-0.006)	1903	264	541194 (-23)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742(0.000)	82	1078544	86.785	87%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513(0.000)	172	2149785	97.276	97%		69 - 120
156) Terphenyl-d14	(5)	11.177(-0.001)	244	2634750	100.629	101%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)	8.011(0.000)	152	4806	0.155	31.04			0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.616(-0.000)	178	13381	0.369	73.79			0.1
138) Anthracene	(4)	9.665(0.000)	178	5457	0.146	29.24			0.1
147) Fluoranthene	(4)	10.778(-0.000)	202	27928	0.689	137.74			0.1
154) Pyrene	(5)	10.993(0.000)	202	33014	0.812	162.34			0.1
166) Benzo(a)anthracene	(5)	12.167(0.000)	228	13187	0.352	70.30			0.1
168) Chrysene	(5)	12.198(0.000)	228	16291	0.450	90.08			0.1
172) Benzo(b)fluoranthene	(6)	13.219(0.000)	252	19056M	0.577	115.33			0.1
173) Benzo(k)fluoranthene	(6)	13.243(0.000)	252	8583M	0.255	50.92			0.1
174) Benzo(a)pyrene	(6)	13.526(0.000)	252	13814M	0.428	85.66			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.590(0.000)	276	8072M	0.235	47.05			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.867(0.000)	276	11079M	0.379	75.80			0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov13a.b/ck0489.d Injection date and time: **13-NOV-2013 20:18**
Data file Sample Info. Line: R2E16;7265234;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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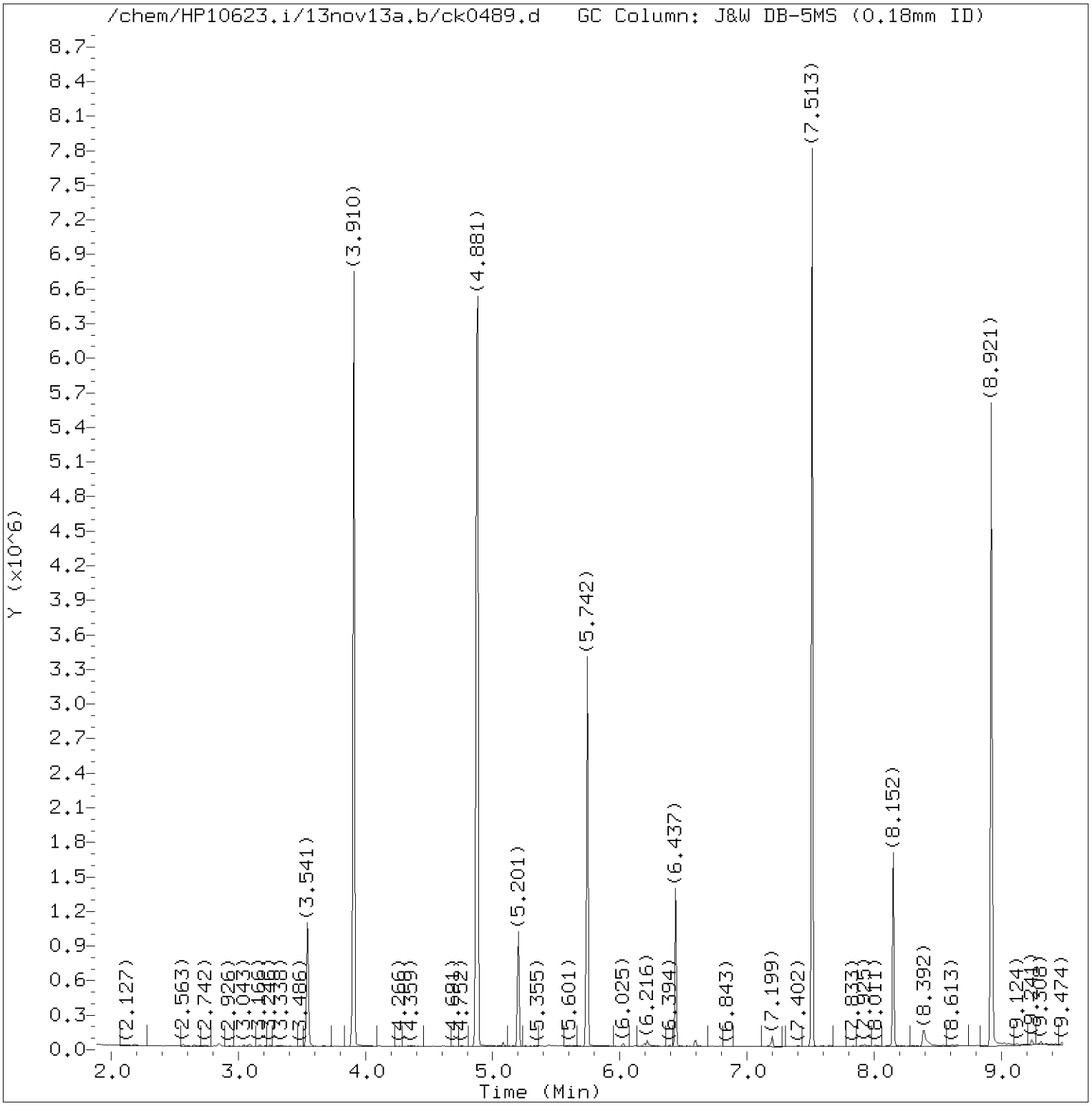
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

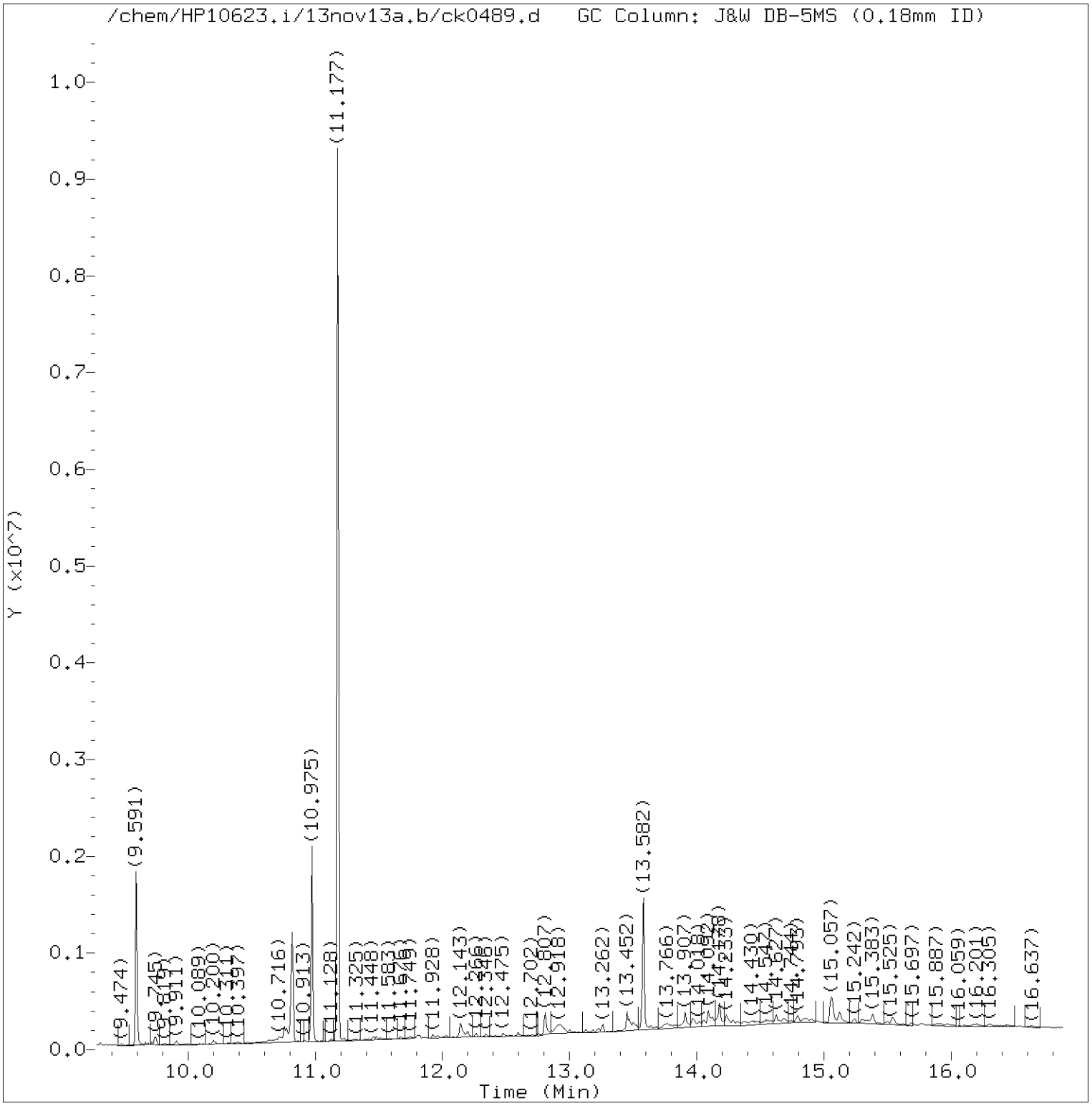
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:21.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

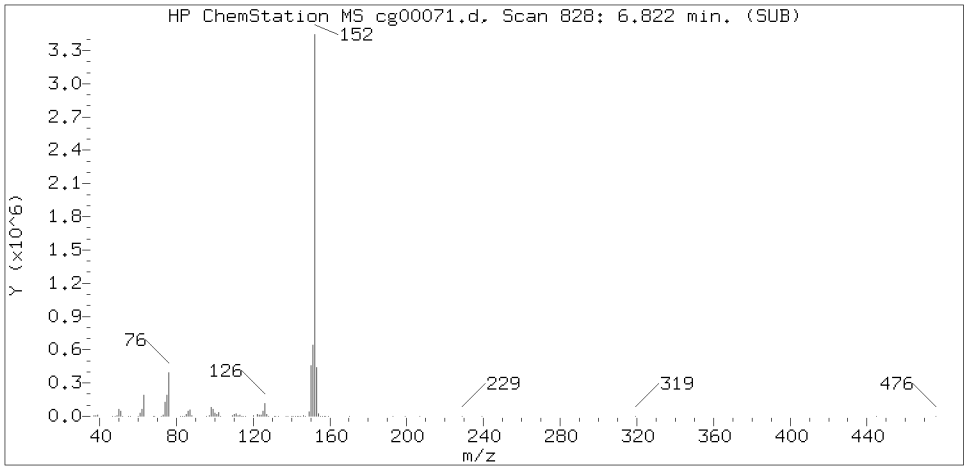
Sample Name: R2E16 Lab Sample ID: 7265234

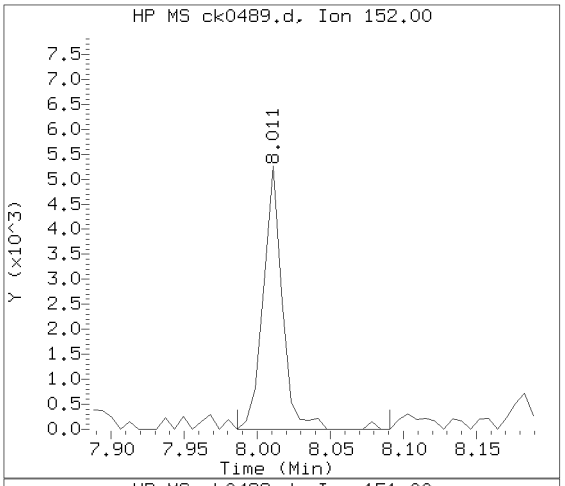
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	127658	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	1078544	86.785
52)*Naphthalene-d8	(2)	6.437	136	576833	20.000
78)$2-Fluorobiphenyl	(3)	7.513	172	2149785	97.276
95) Acenaphthylene	(3)	8.011	152	4806	0.155
98)*Acenaphthene-d10	(3)	8.152	164	351478	20.000
135)*Phenanthrene-d10	(4)	9.591	188	623707	20.000
137) Phenanthrene	(4)	9.616	178	13381	0.369
138) Anthracene	(4)	9.665	178	5457	0.146
147) Fluoranthene	(4)	10.778	202	27928	0.689
167)*Pyrene-d10	(5)	10.975	212	732409	20.000
154) Pyrene	(5)	10.993	202	33014	0.812
156)$Terphenyl-d14	(5)	11.177	244	2634750	100.629
166) Benzo(a)anthracene	(5)	12.167	228	13187	0.352
168) Chrysene	(5)	12.198	228	16291	0.450
172) Benzo(b)fluoranthene	(6)	13.219	252	19056M	0.577
173) Benzo(k)fluoranthene	(6)	13.243	252	8583M	0.255
174) Benzo(a)pyrene	(6)	13.526	252	13814M	0.428
175)*Perylene-d12	(6)	13.582	264	541194	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.590	276	8072M	0.235
179) Benzo(g,h,i)perylene	(6)	14.867	276	11079M	0.379

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

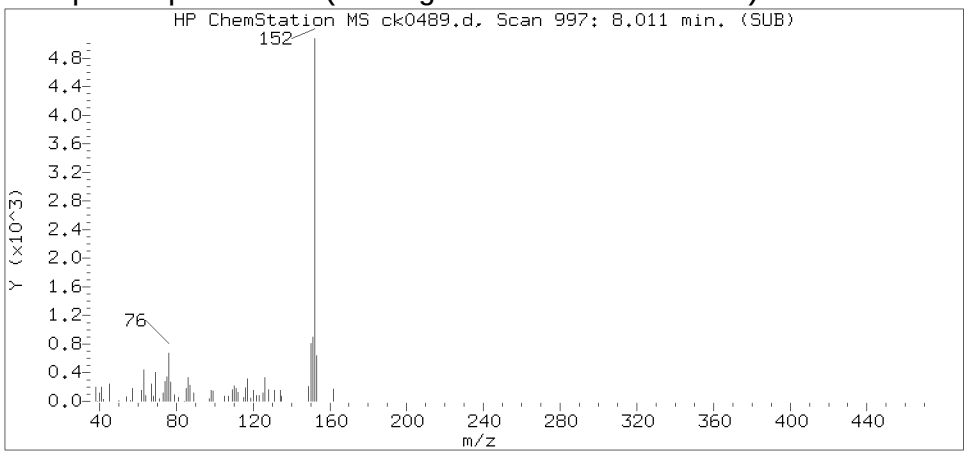
Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

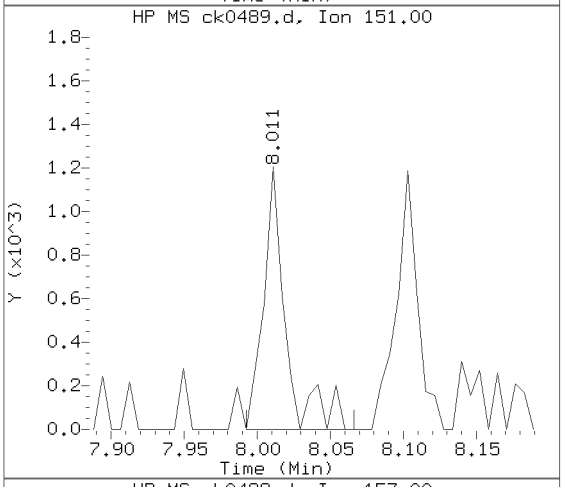
Reference Standard Spectrum for Acenaphthylene



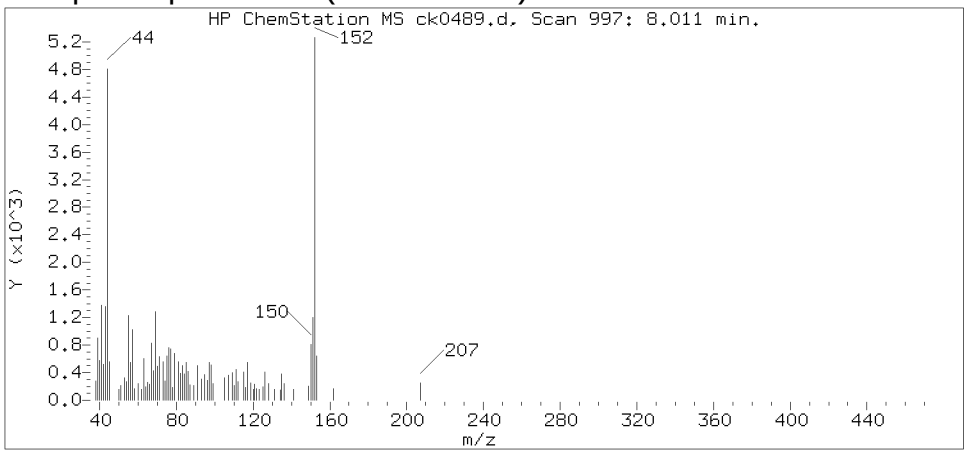


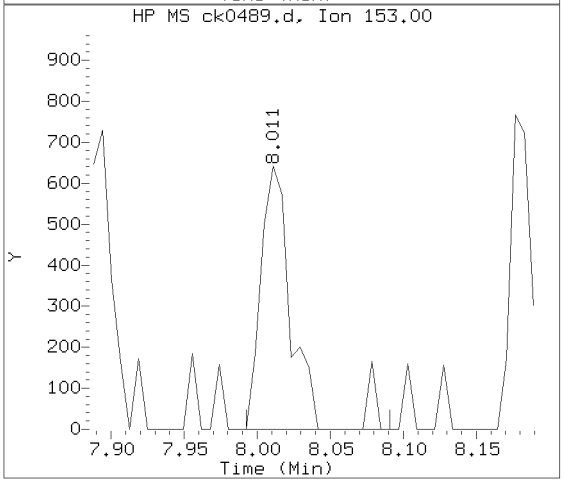
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 95
Compound Name	: Acenaphthylene
Scan Number	: 997
Retention Time (minutes)	: 8.011
Relative Retention Time	: 0.00074
Quant Ion	: 152.00
Area (flag)	: 4806
On-column Amount (ng/ul)	: 0.1552

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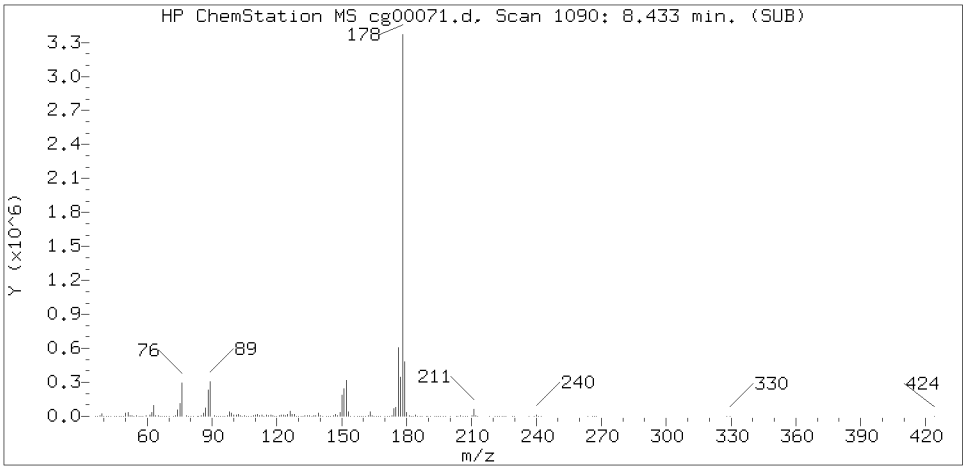
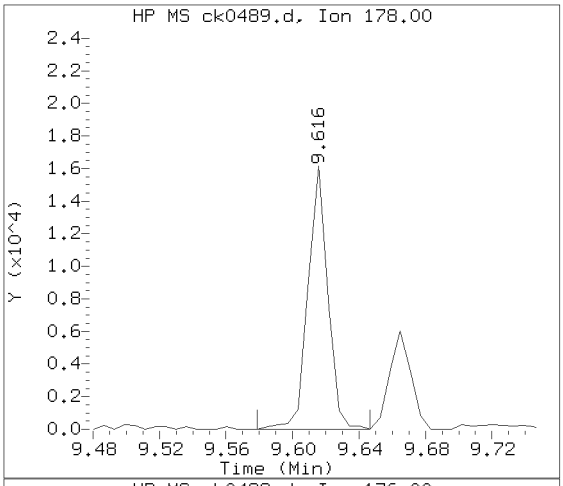
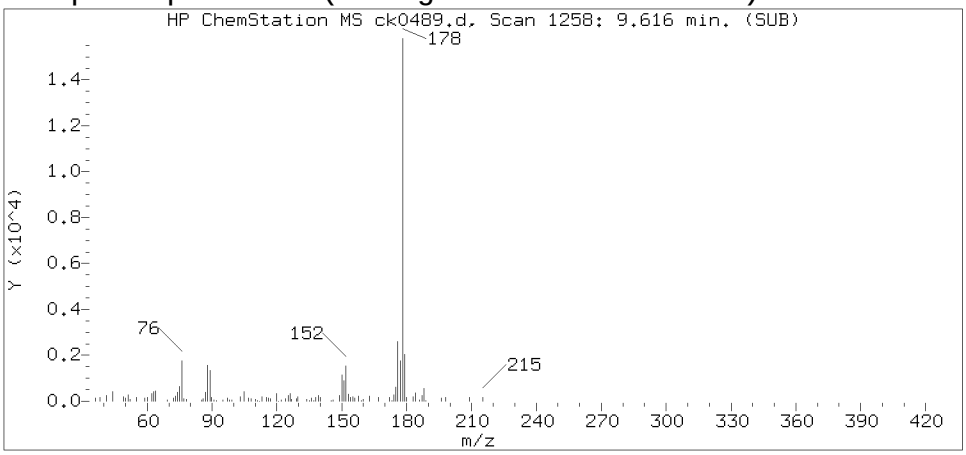
Target 3.5 esignature user ID: mac00013

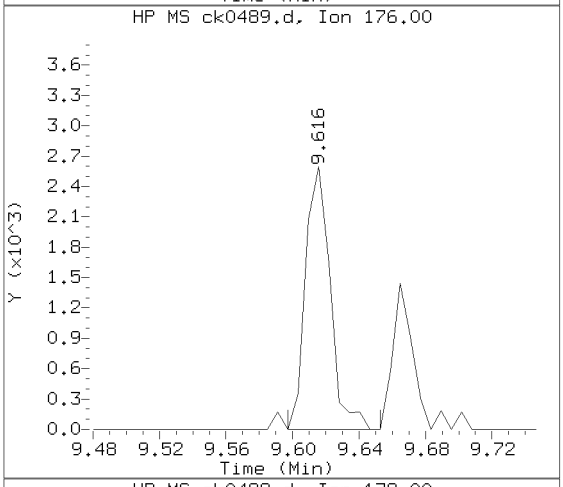
Reference Standard Spectrum for Phenanthrene



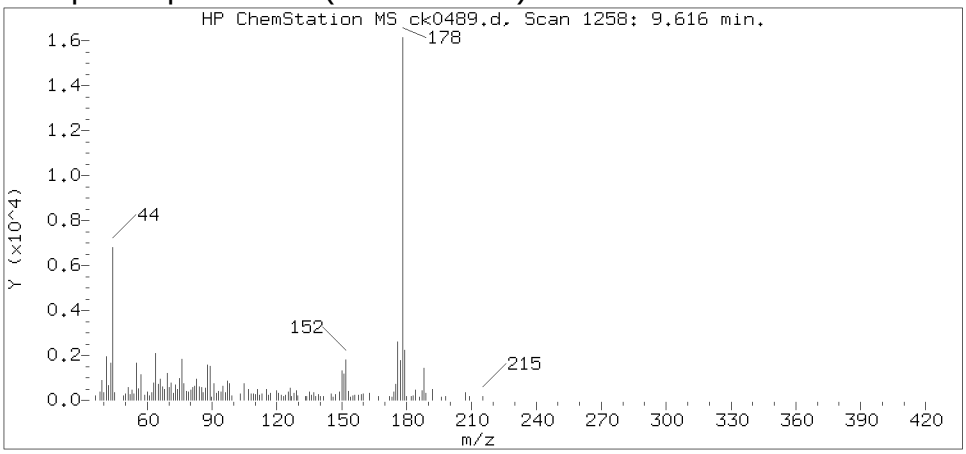


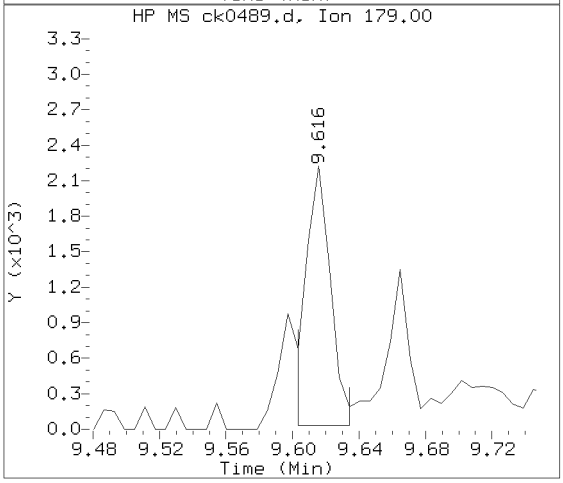
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1258
Retention Time (minutes) : 9.616
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 13381
On-column Amount (ng/ul) : 0.3690

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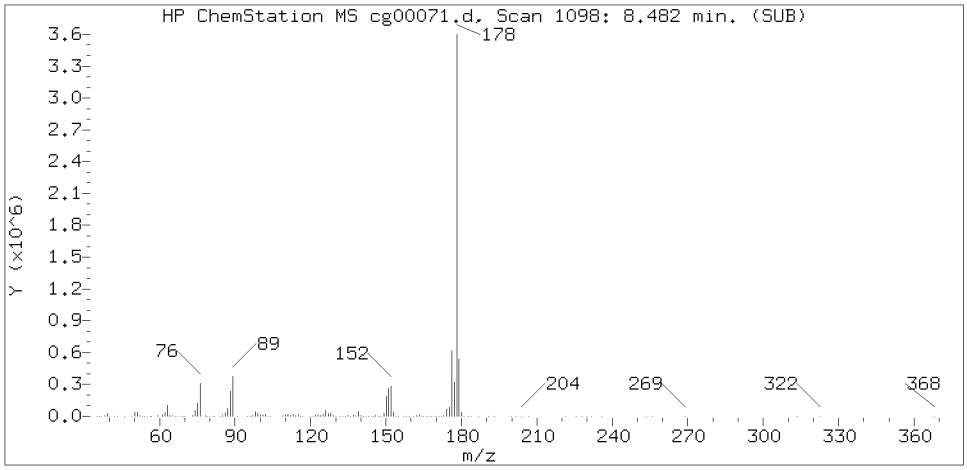
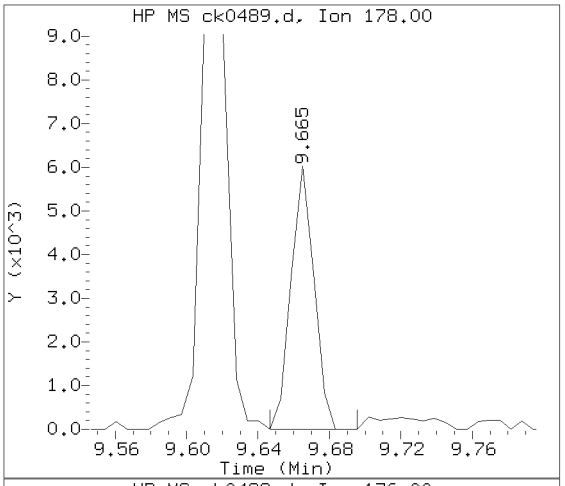
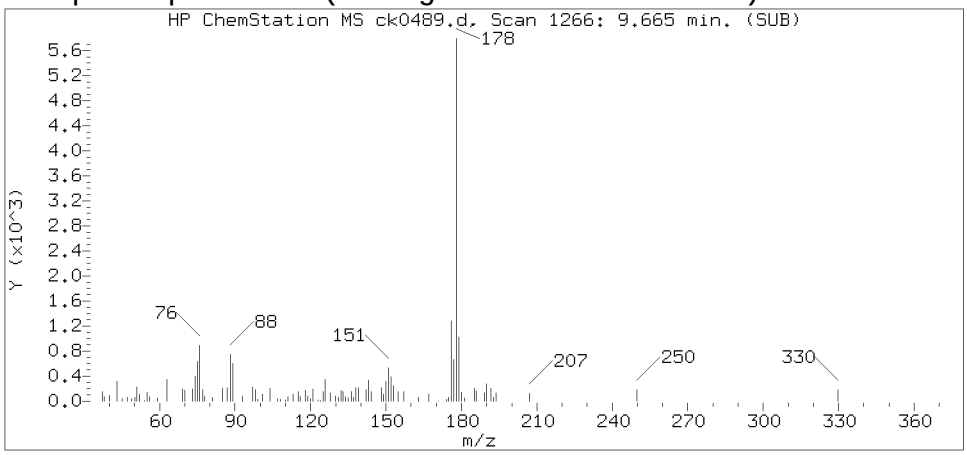
Target 3.5 esignature user ID: mac00013

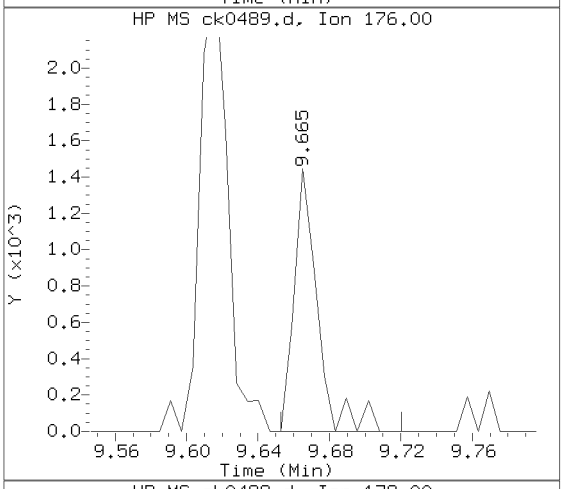
Reference Standard Spectrum for Anthracene



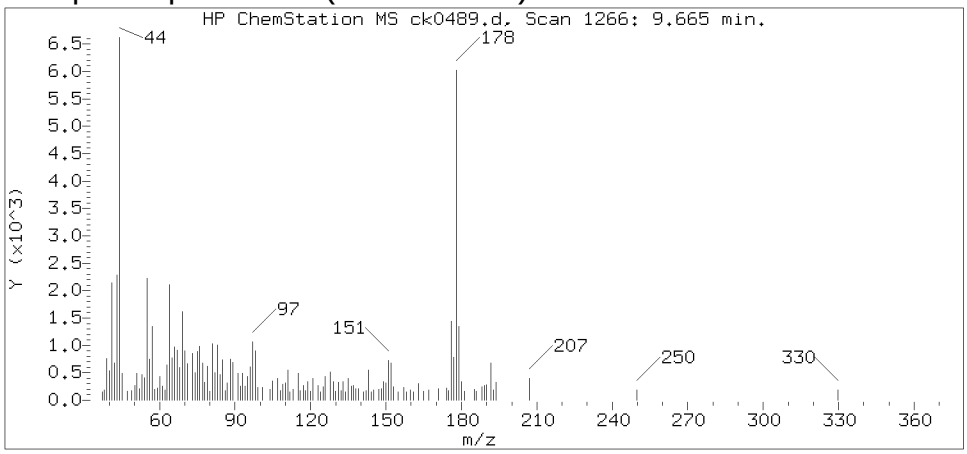


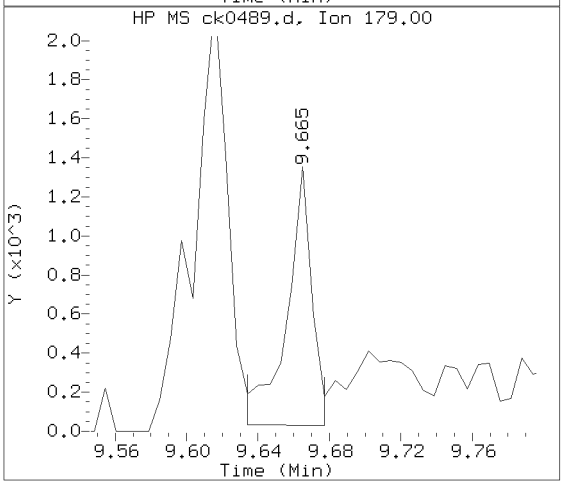
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 138
Compound Name	: Anthracene
Scan Number	: 1266
Retention Time (minutes)	: 9.665
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 5457
On-column Amount (ng/ul)	: 0.1462

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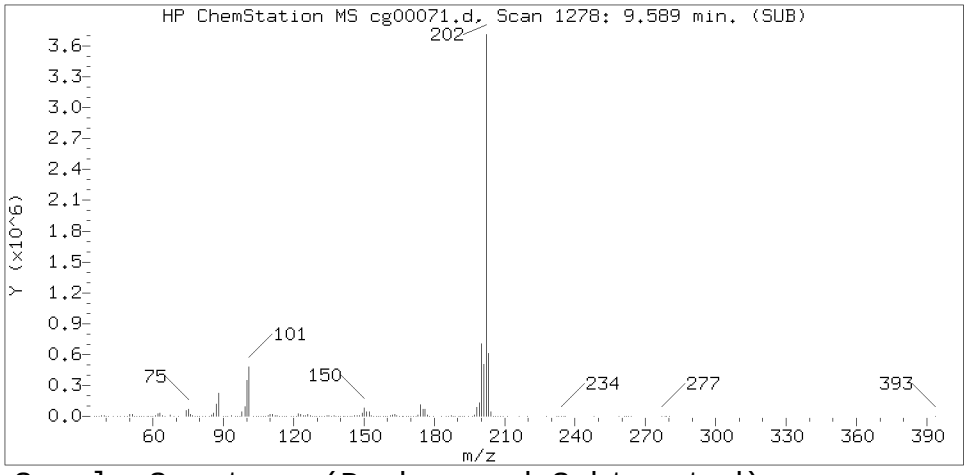
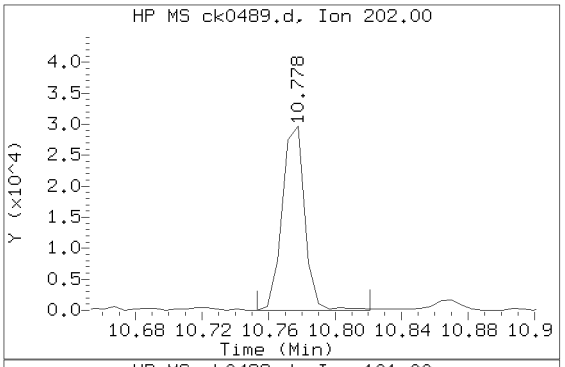
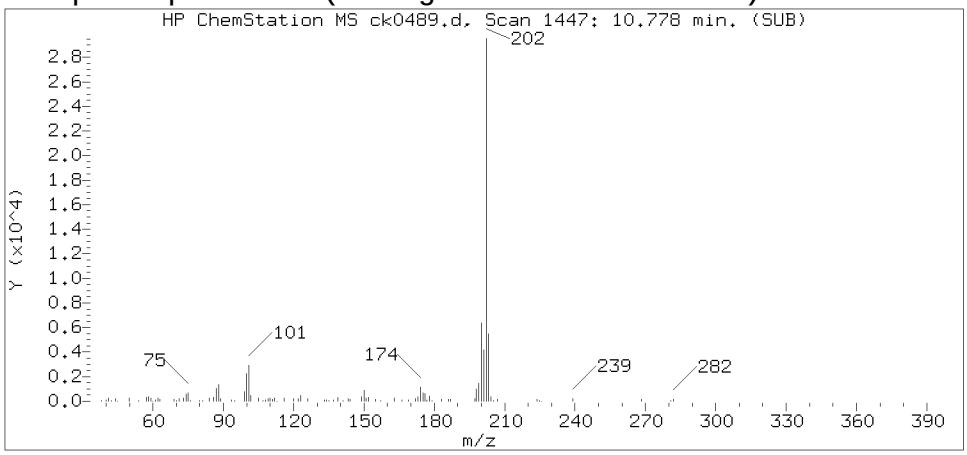
Target 3.5 esignature user ID: mac00013

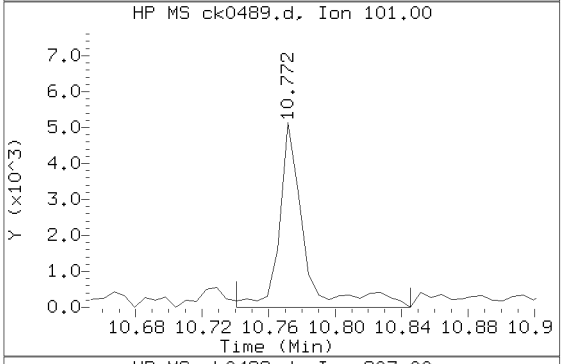
Reference Standard Spectrum for Fluoranthene

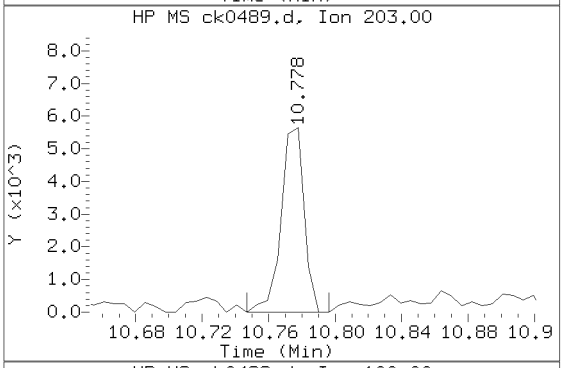




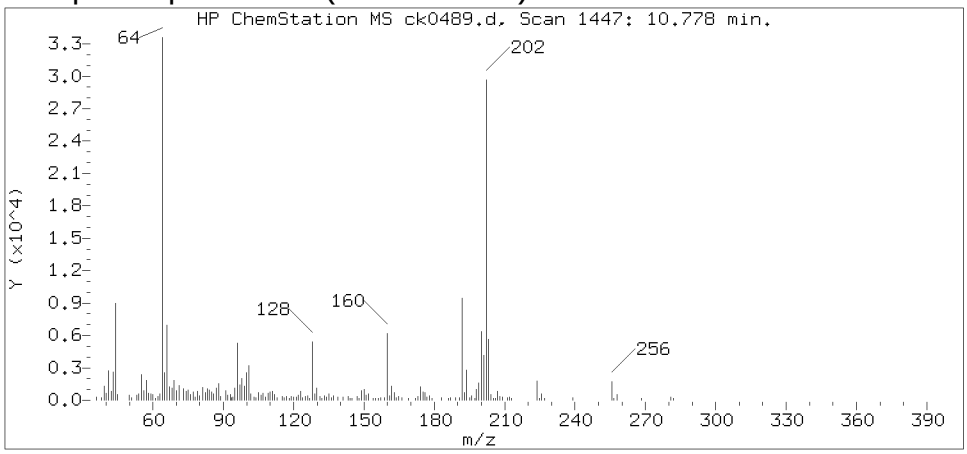
Sample Spectrum (Background Subtracted)

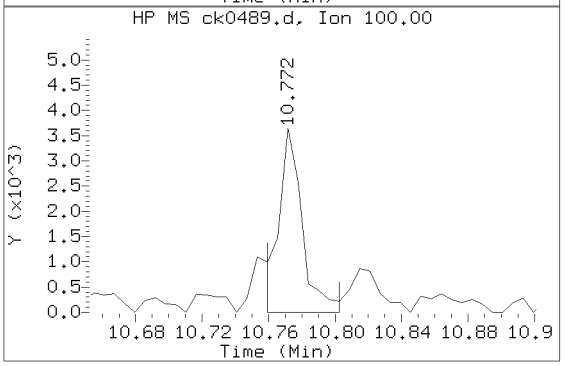






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1447
Retention Time (minutes)	: 10.778
Relative Retention Time	:-0.00064
Quant Ion	: 202.00
Area (flag)	: 27928
On-column Amount (ng/ul)	: 0.6887

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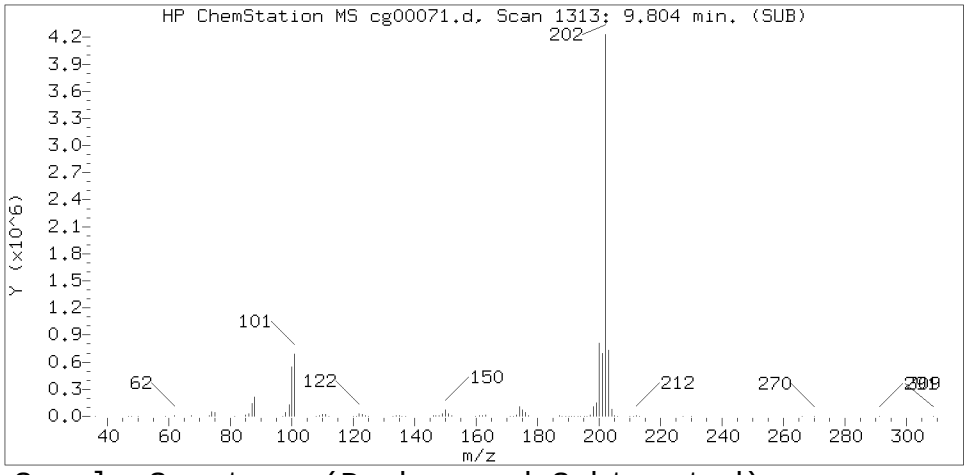
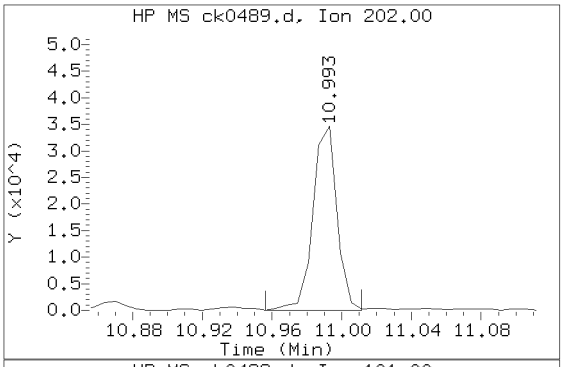
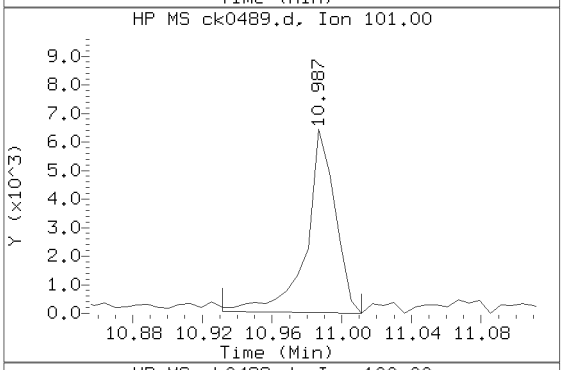
Target 3.5 esignature user ID: mac00013

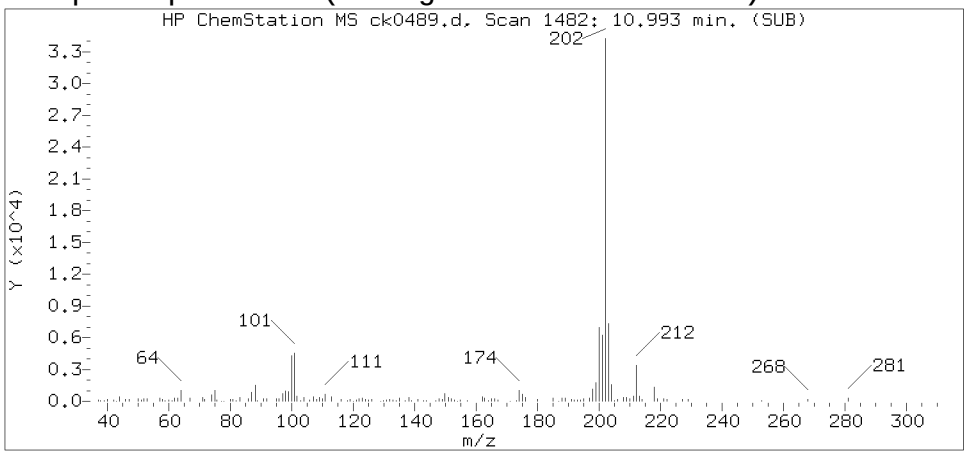
Reference Standard Spectrum for Pyrene

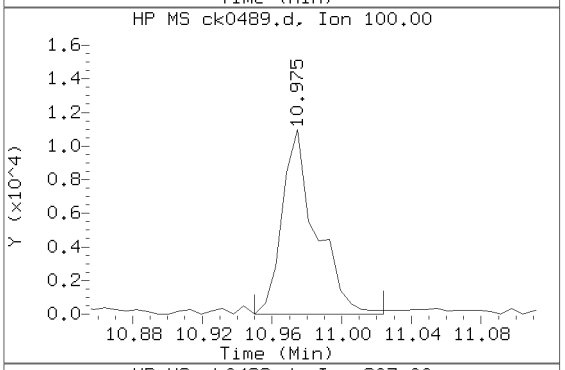




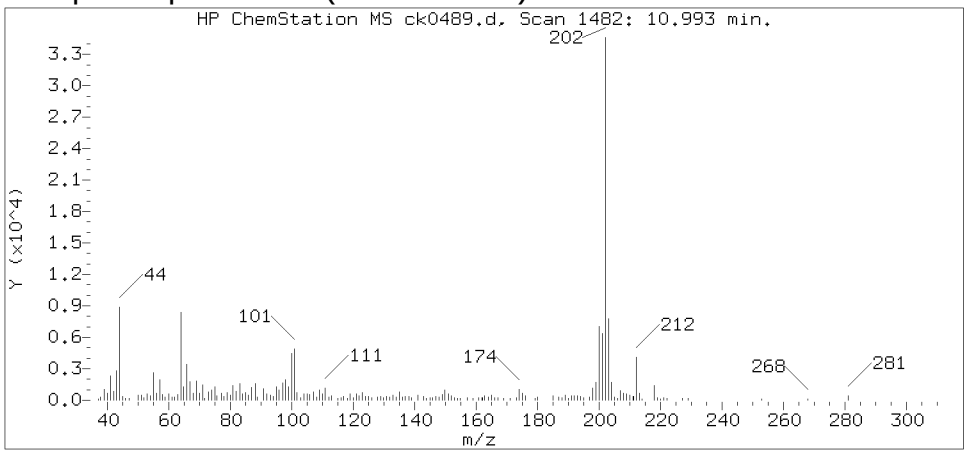


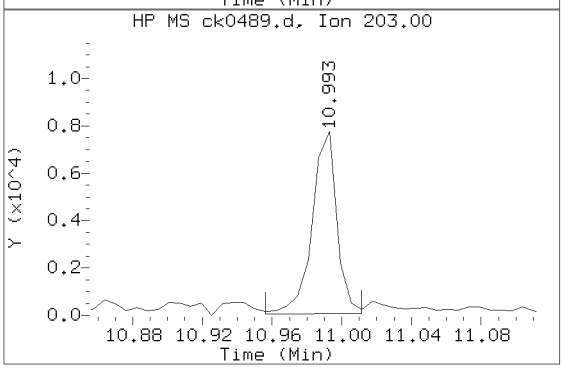
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1482
Retention Time (minutes)	: 10.993
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 33014
On-column Amount (ng/ul)	: 0.8117

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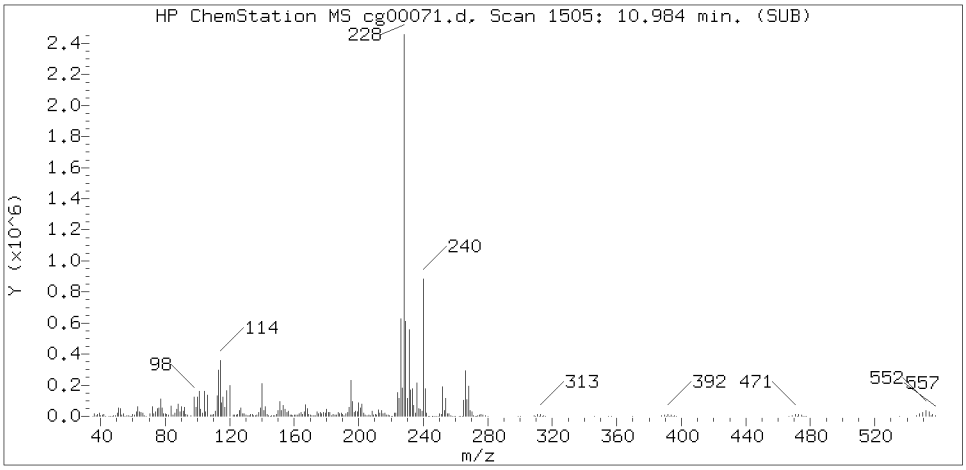
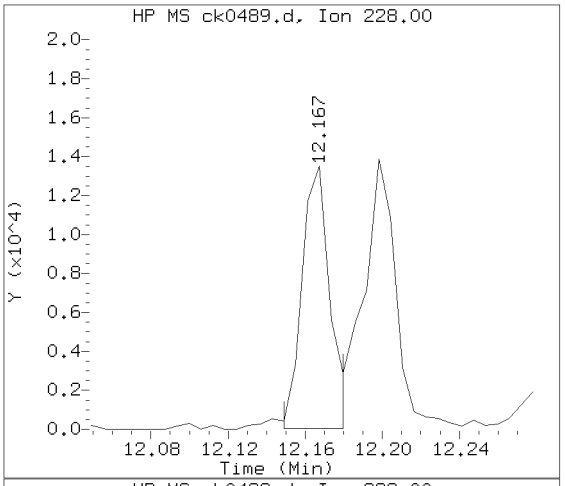
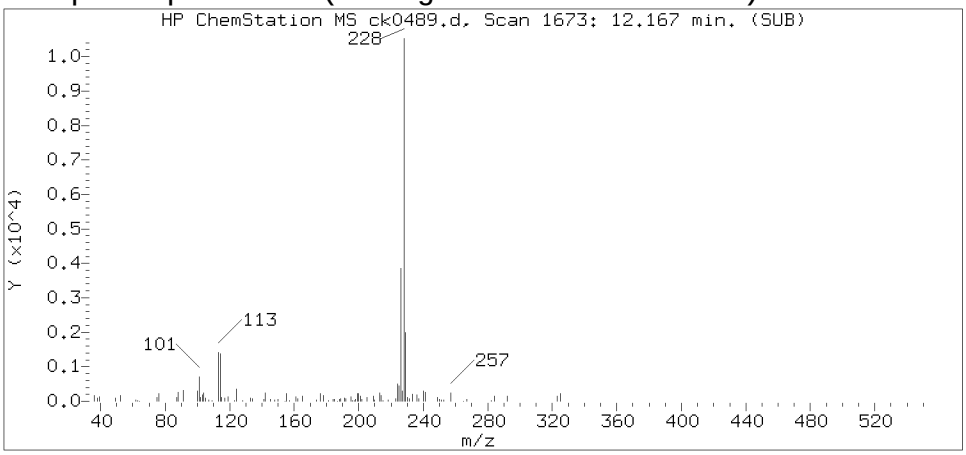
Target 3.5 esignature user ID: mac00013

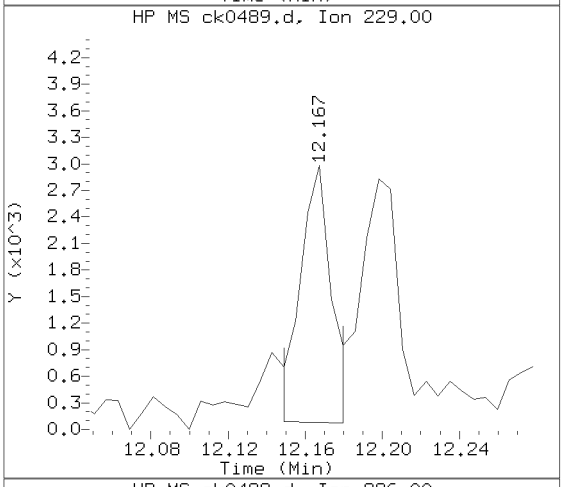
Reference Standard Spectrum for Benzo(a)anthracene



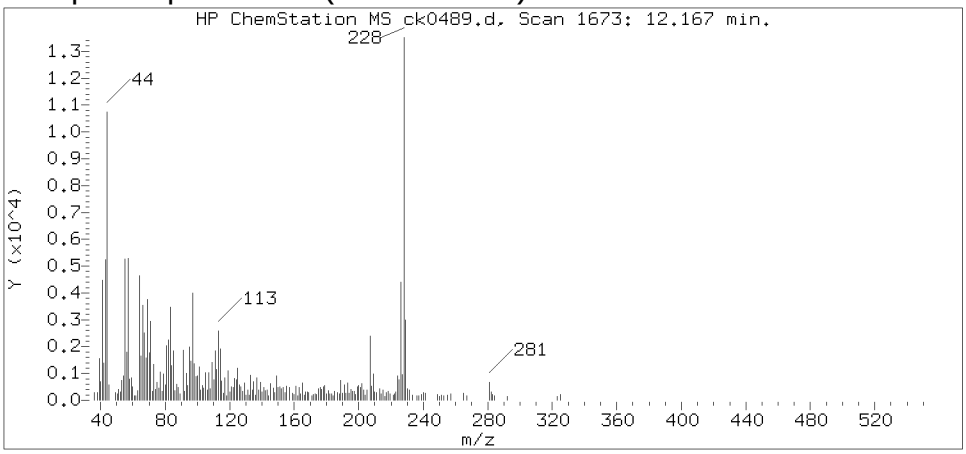


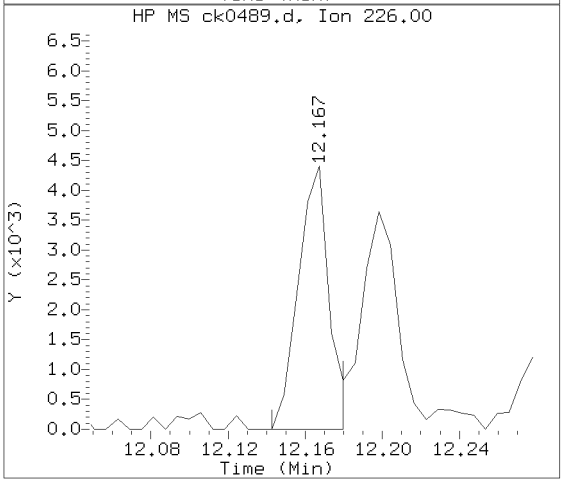
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1673
Retention Time (minutes)	: 12.167
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 13187
On-column Amount (ng/ul)	: 0.3515

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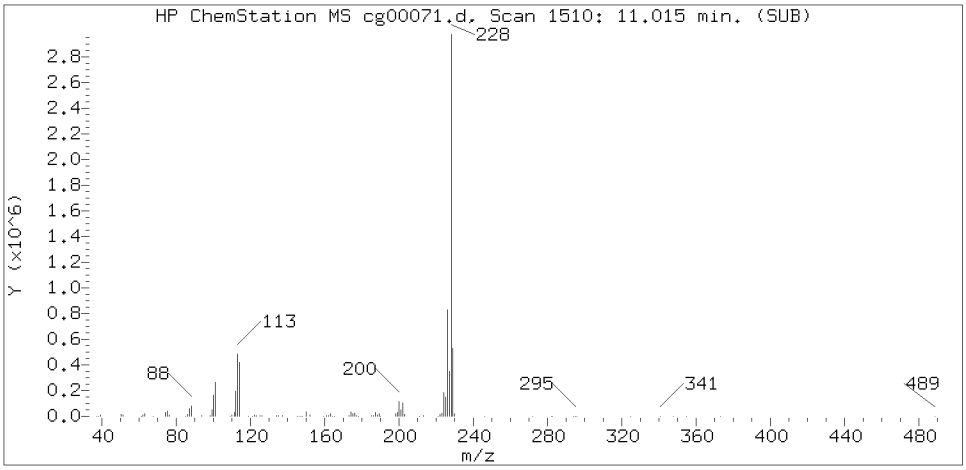
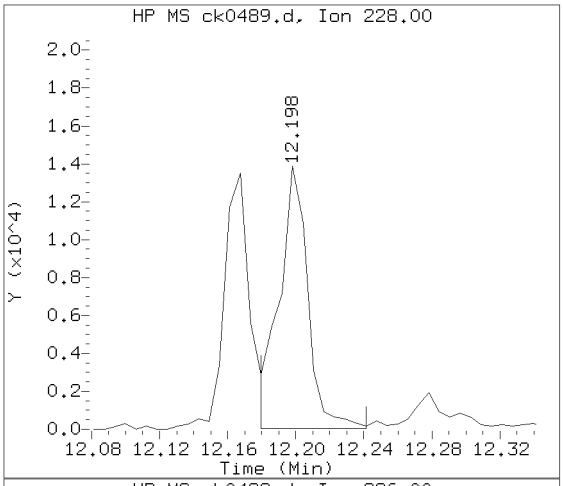
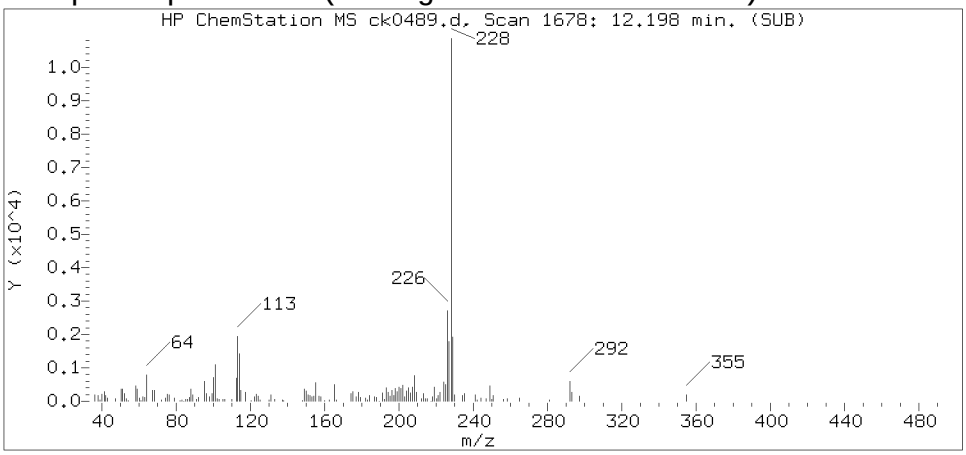
Target 3.5 esignature user ID: mac00013

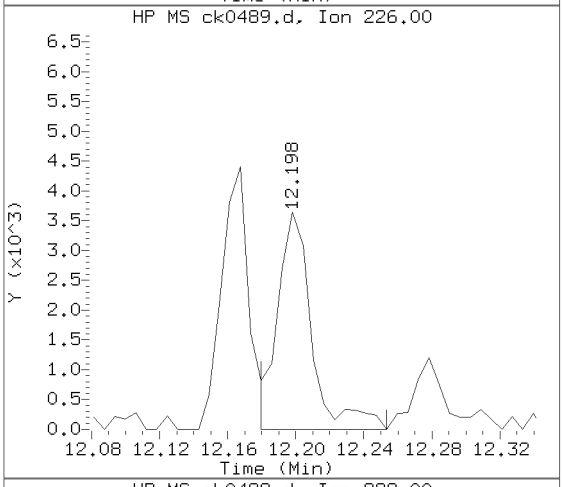
Reference Standard Spectrum for Chrysene



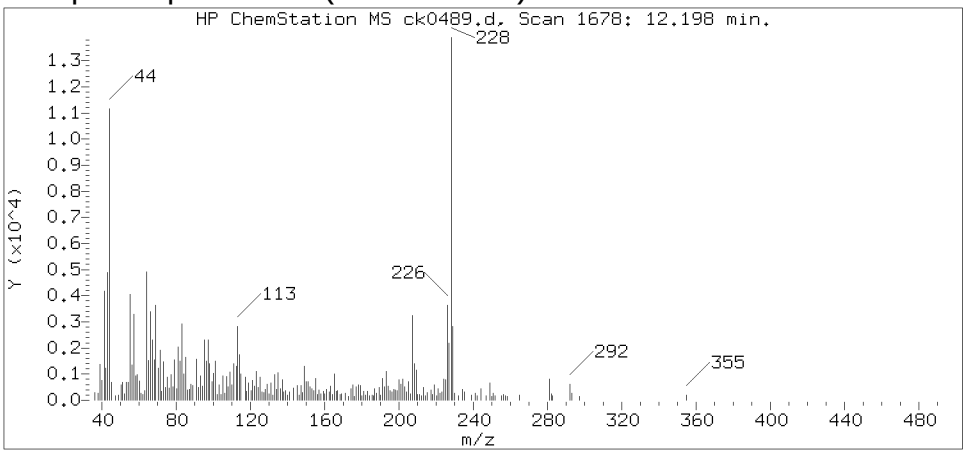


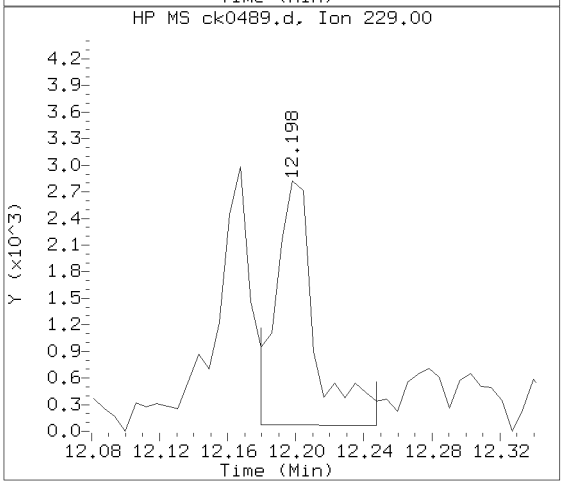
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1678
Retention Time (minutes)	: 12.198
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 16291
On-column Amount (ng/ul)	: 0.4504

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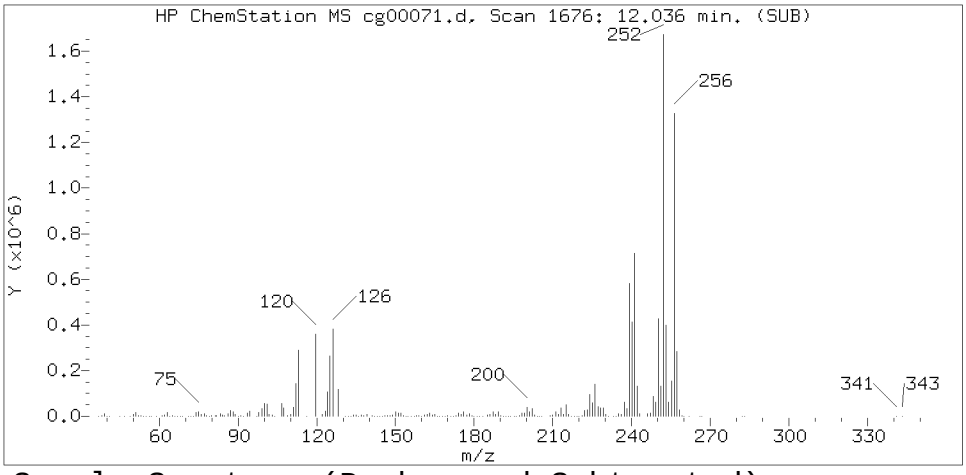
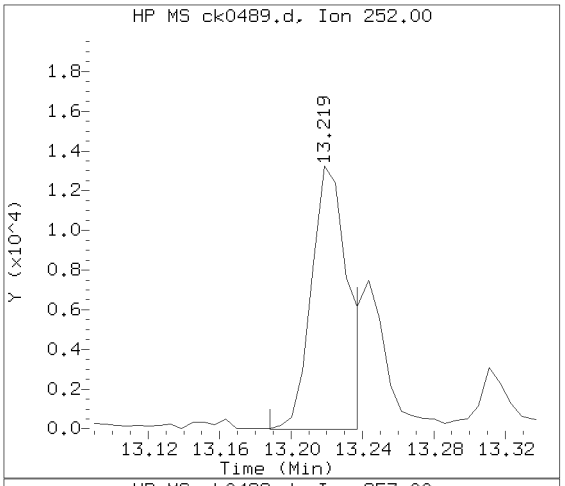
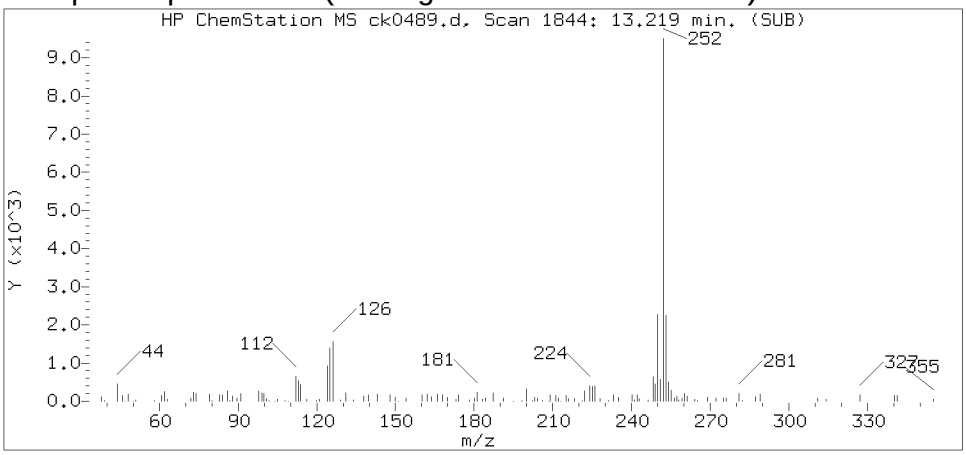
Target 3.5 esignature user ID: mac00013

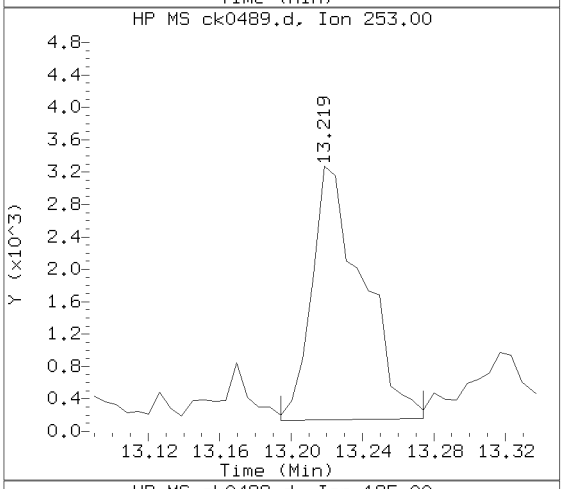
Reference Standard Spectrum for Benzo(b)fluoranthene



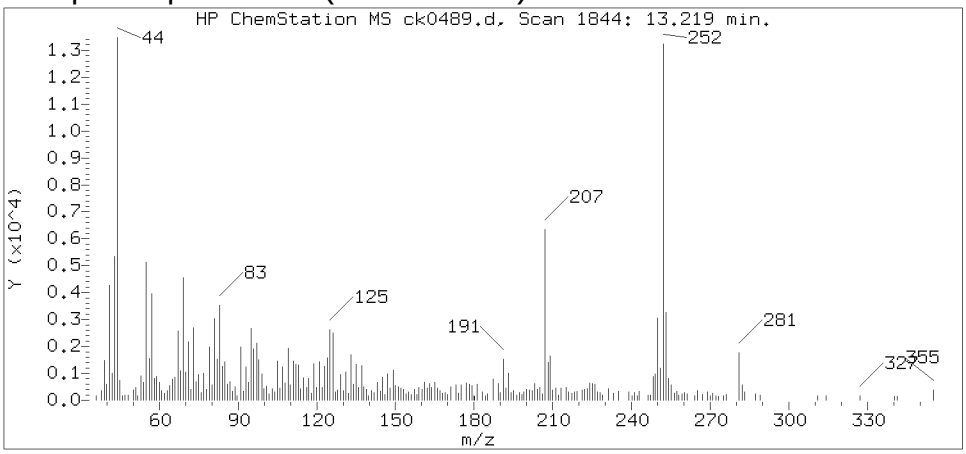


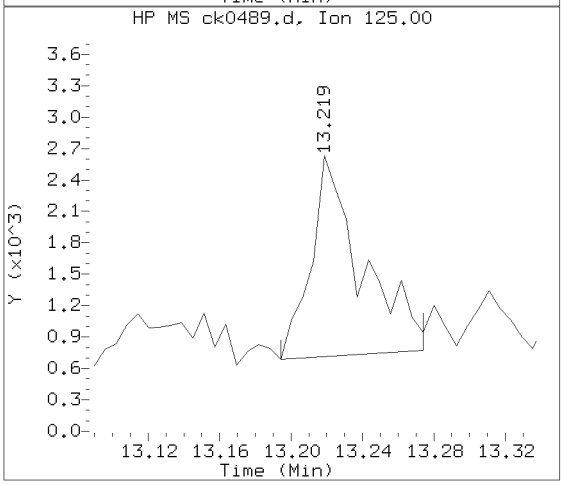
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

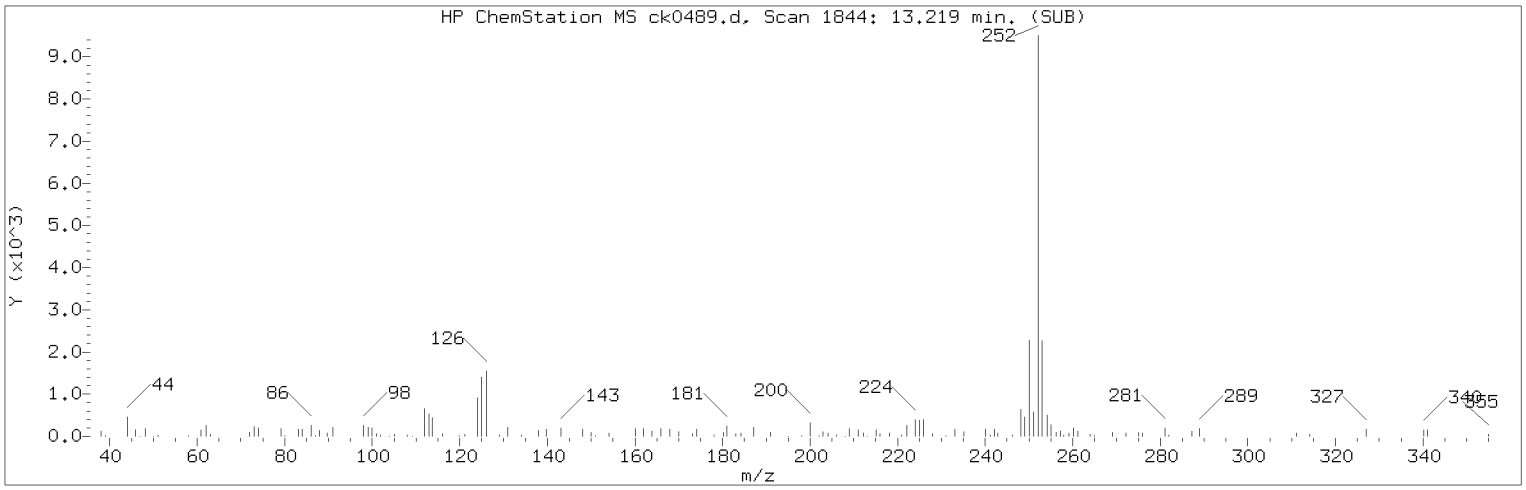
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

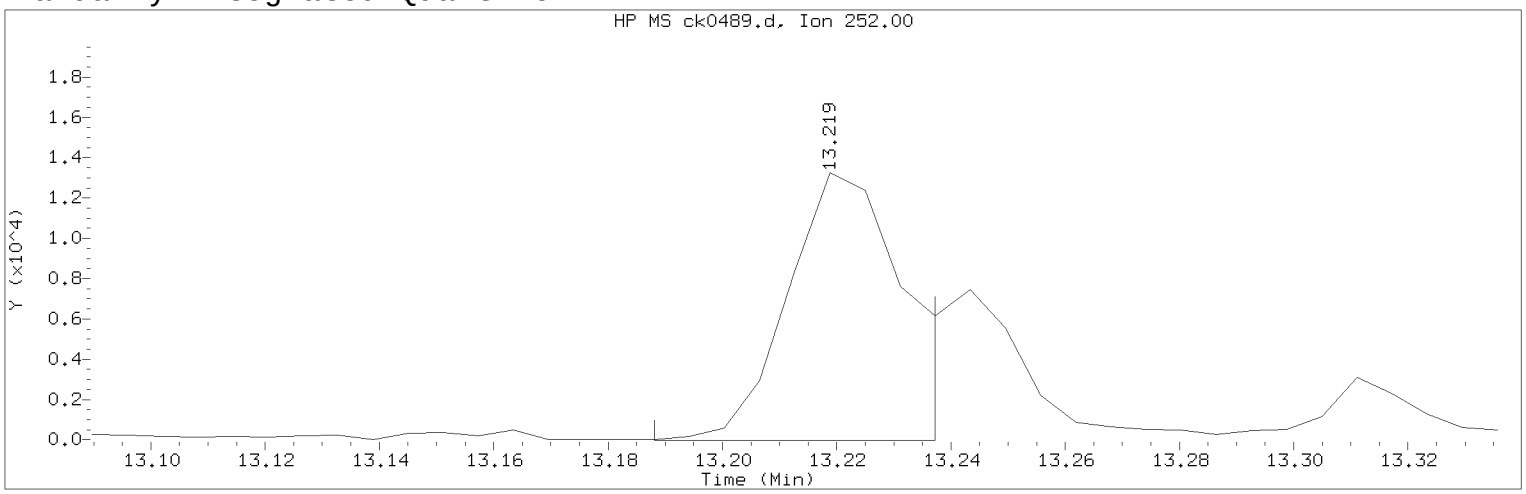
Compound Number	: 172
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1844
Retention Time (minutes)	: 13.219
Relative Retention Time	: 0.00044
Quant Ion	: 252.00
Area (flag)	: 19056M
On-column Amount (ng/ul)	: 0.5766

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

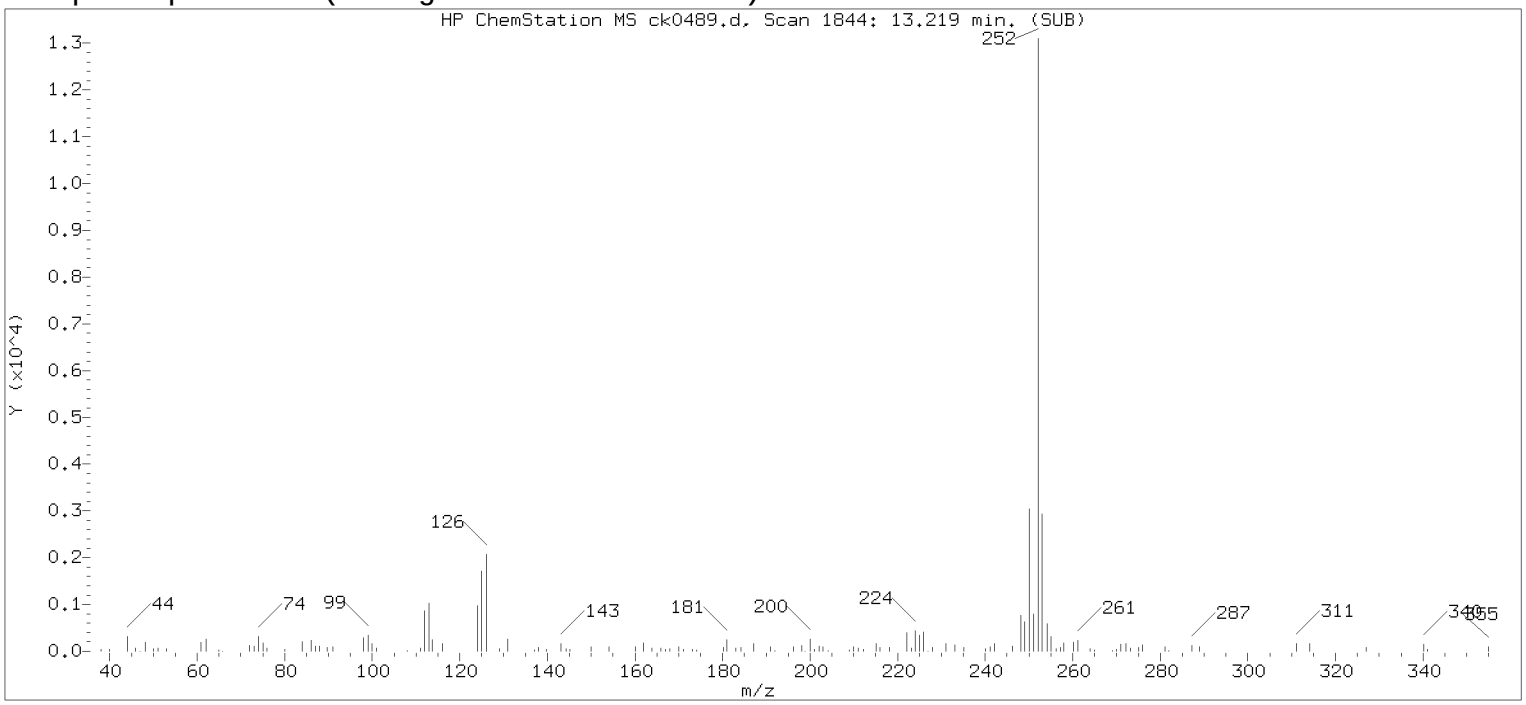
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area (flag) : 19056M
On-column Amount (ng/ul) : 0.5766
Integration start scan : 1838 Integration stop scan: 1846
Y at integration start : -18 Y at integration end: -18

Reason for manual integration: improper integration

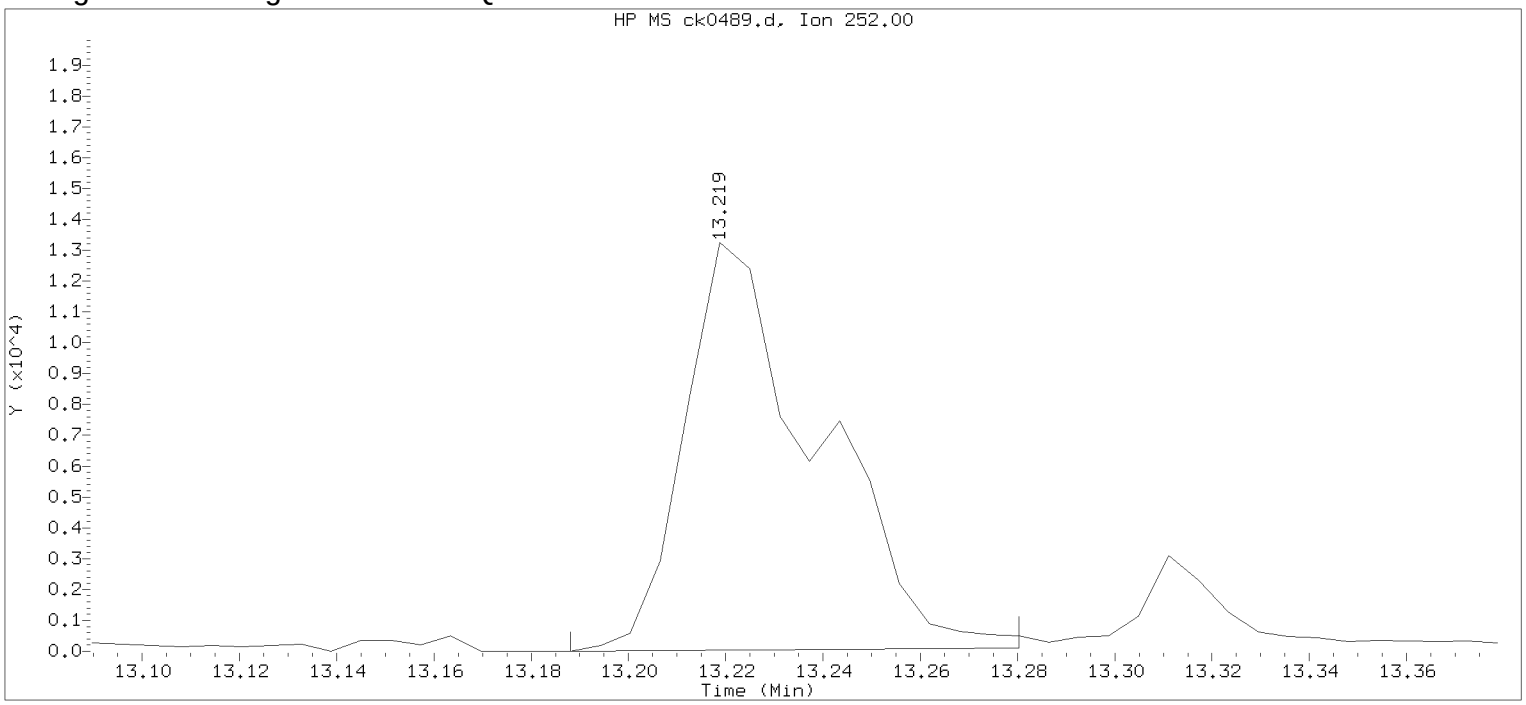
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

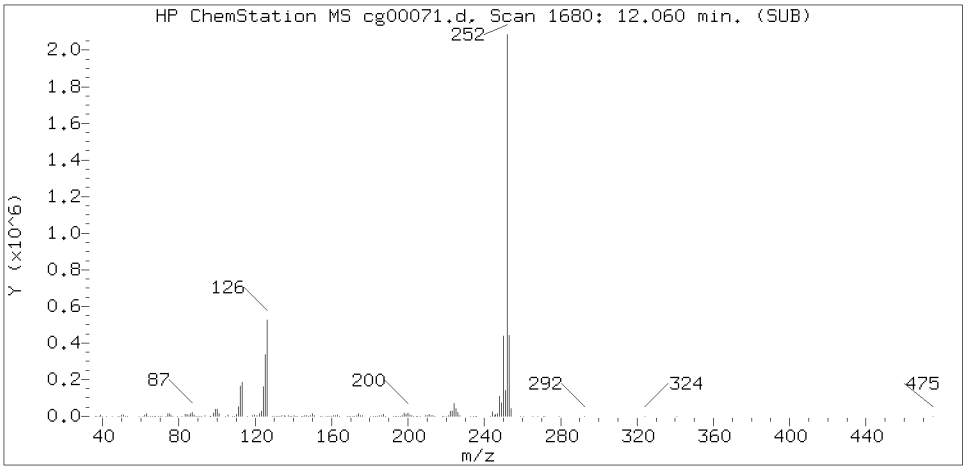
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:44 Automation

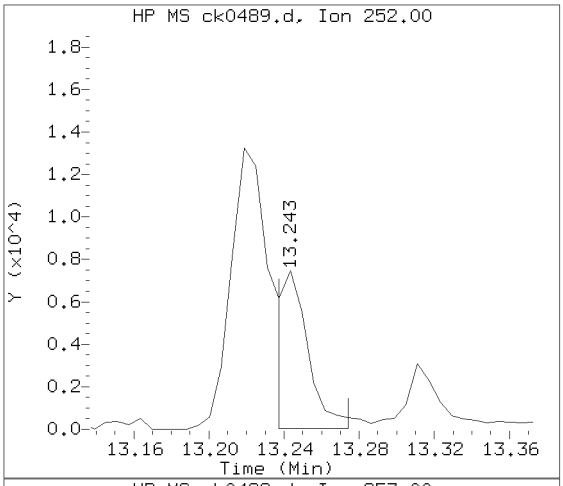
Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1844
Retention Time (minutes) : 13.219
Quant Ion : 252.00
Area : 25209
On-column Amount (ng/ul) : 0.7628
Integration start scan : 1838 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 95

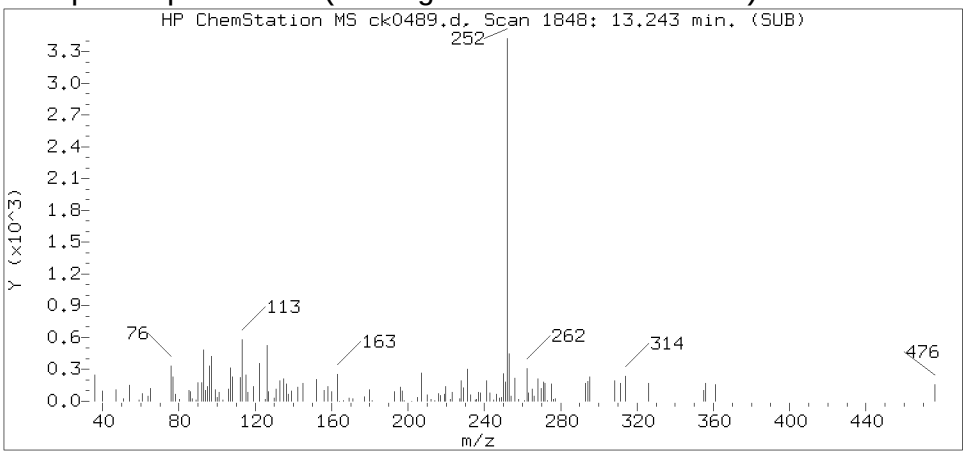
Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature used: 1 Page 1243 of 3494

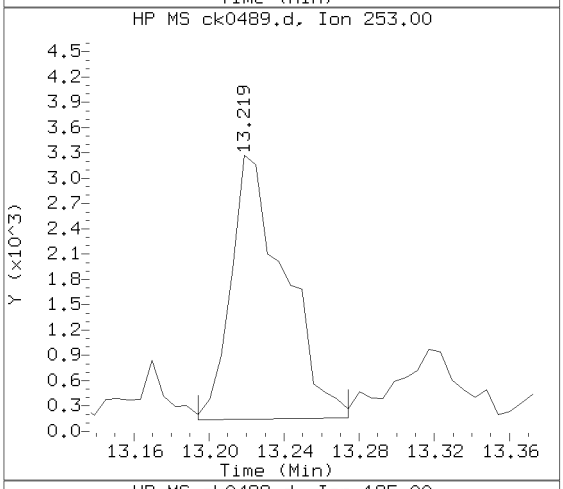
Reference Standard Spectrum for Benzo(k)fluoranthene



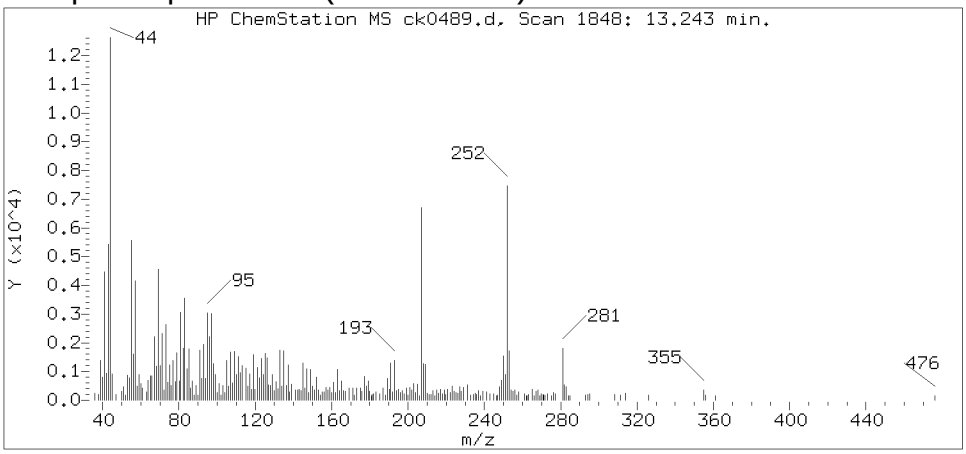


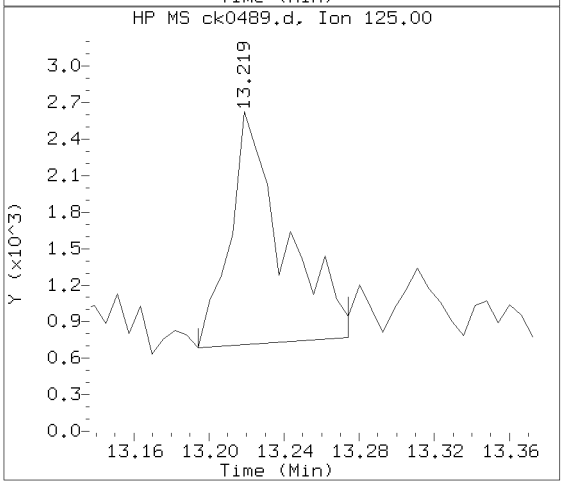
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

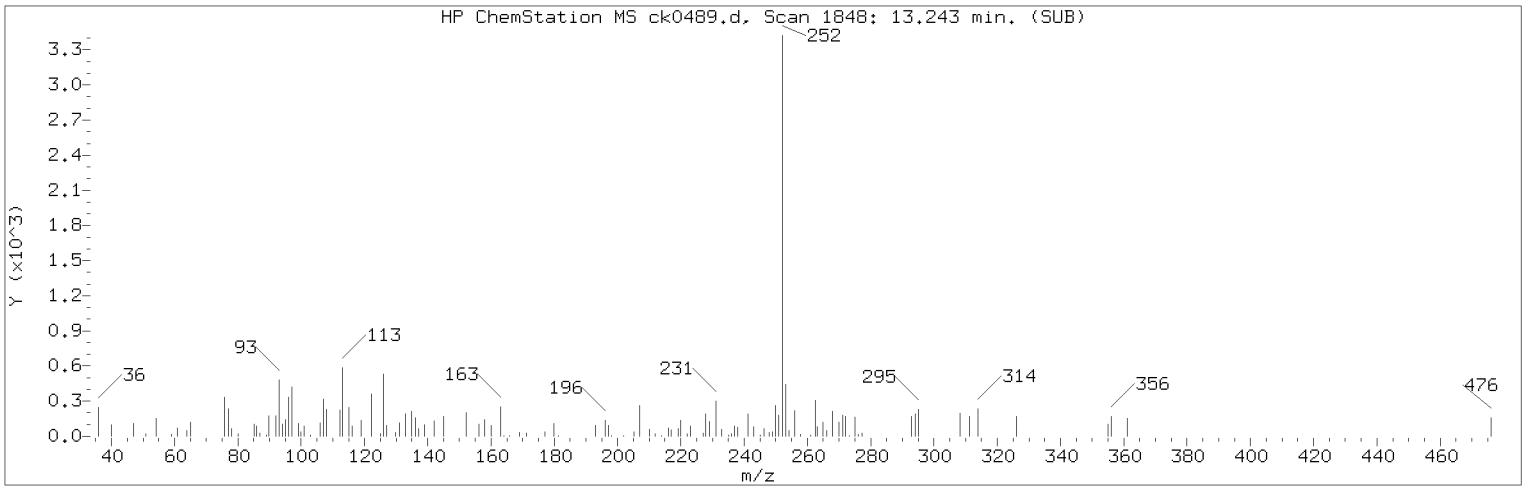
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

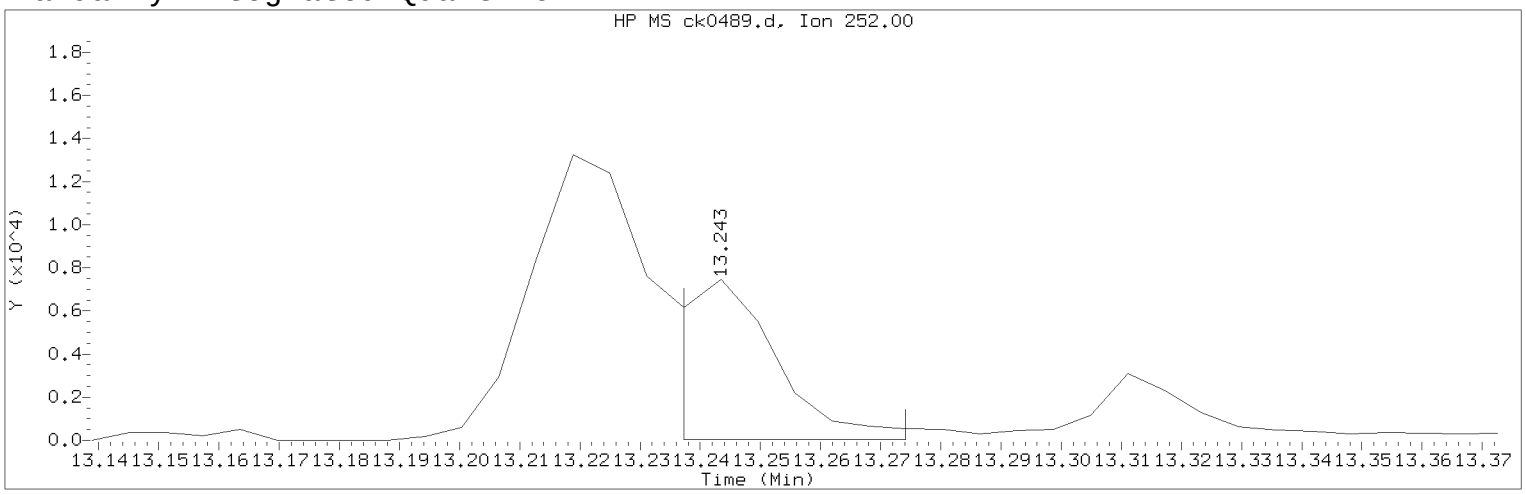
Compound Number	: 173
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1848
Retention Time (minutes)	: 13.243
Relative Retention Time	: 0.00089
Quant Ion	: 252.00
Area (flag)	: 8583M
On-column Amount (ng/ul)	: 0.2546

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

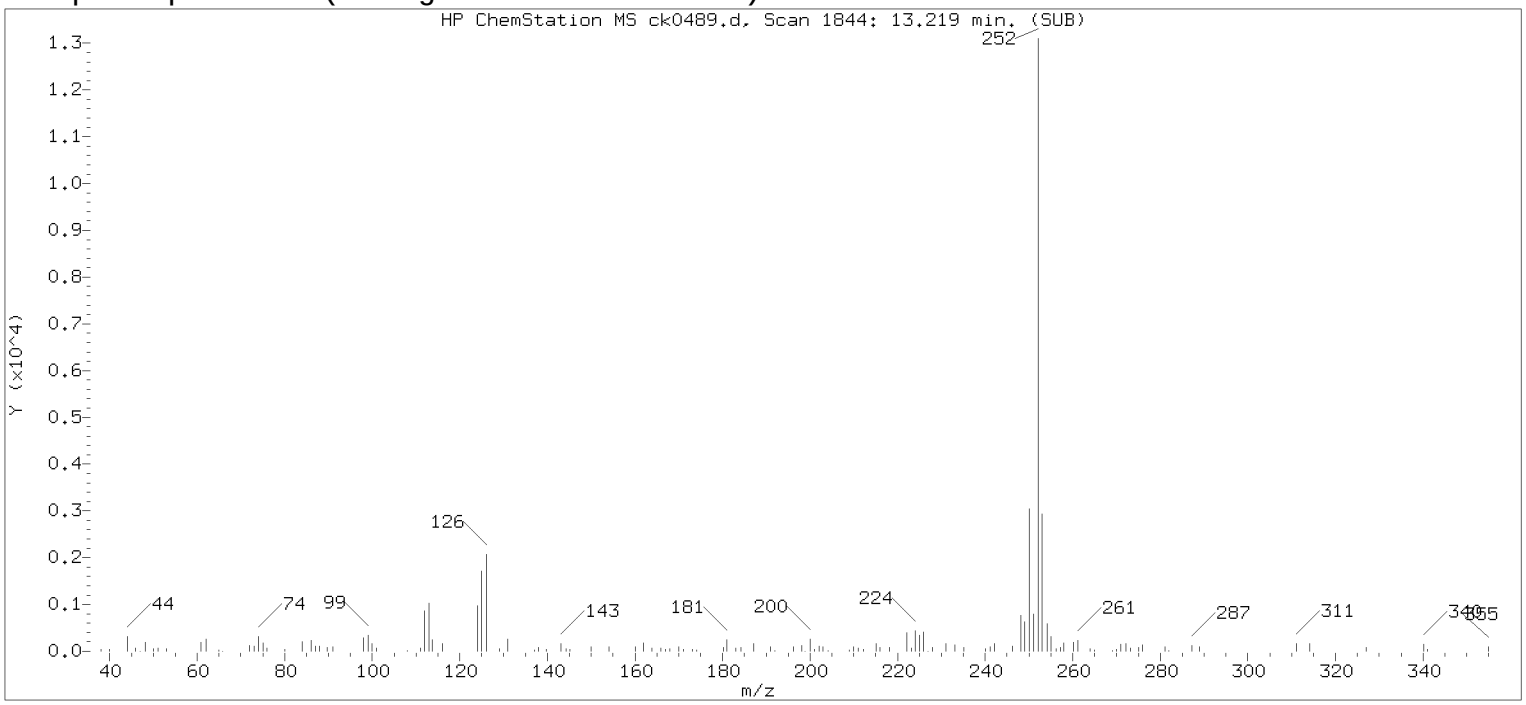
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1848
Retention Time (minutes) : 13.243
Quant Ion : 252.00
Area (flag) : 8583M
On-column Amount (ng/ul) : 0.2546
Integration start scan : 1846 Integration stop scan: 1852
Y at integration start : 28 Y at integration end: 28

Reason for manual integration: improper integration

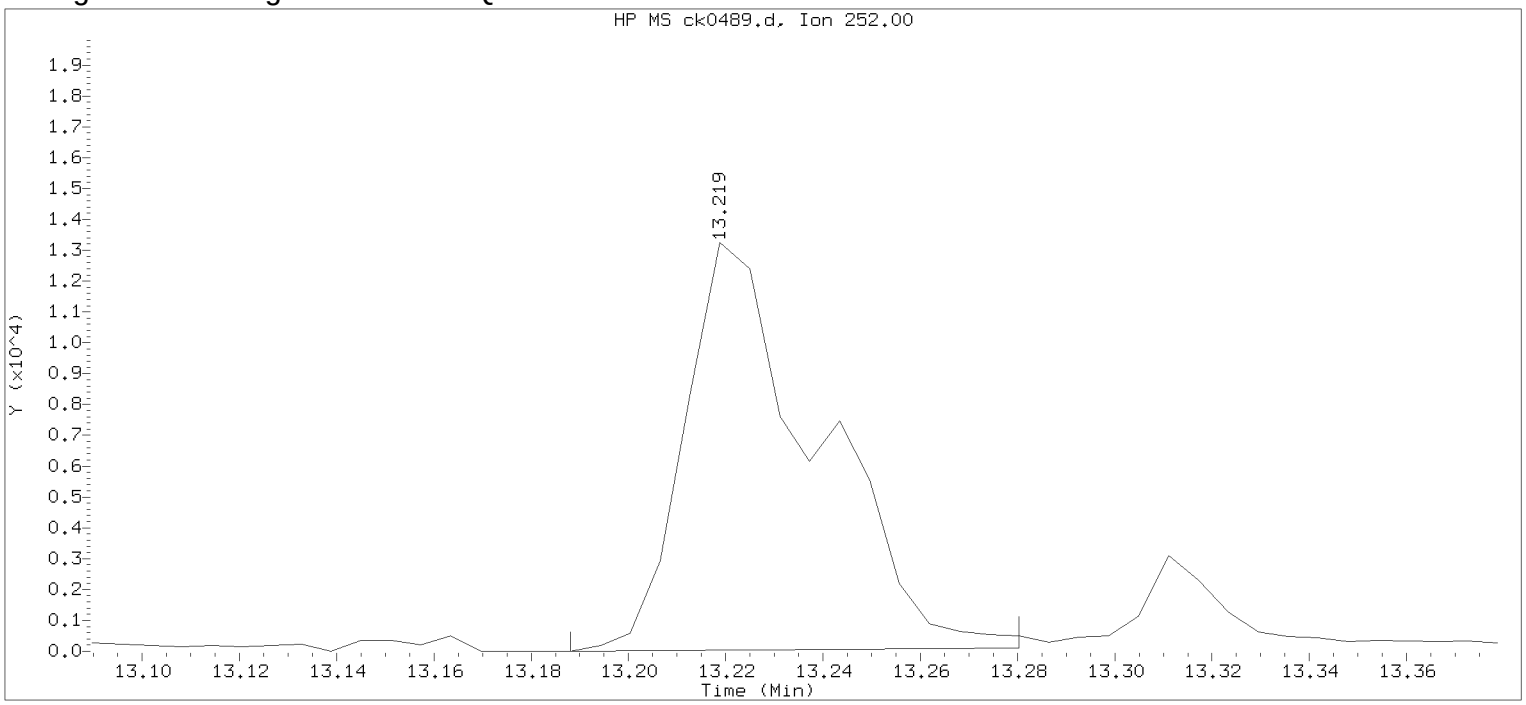
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

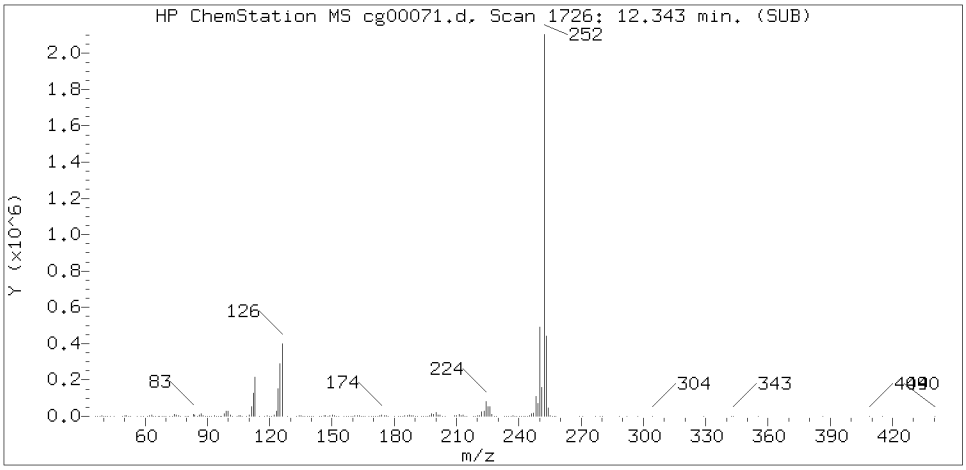
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:44 Automation

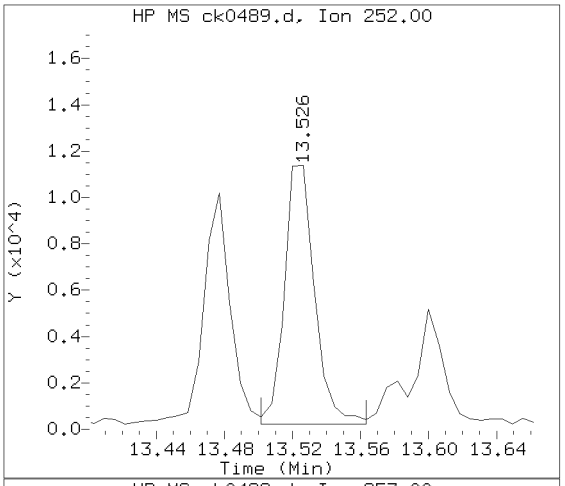
Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	:	173
Compound Name	:	Benzo(k)fluoranthene
Scan Number	:	1844
Retention Time (minutes)	:	13.219
Quant Ion	:	252.00
Area	:	25208
On-column Amount (ng/ul)	:	0.7477
Integration start scan	:	1838 Integration stop scan: 1853
Y at integration start	:	0 Y at integration end: 95

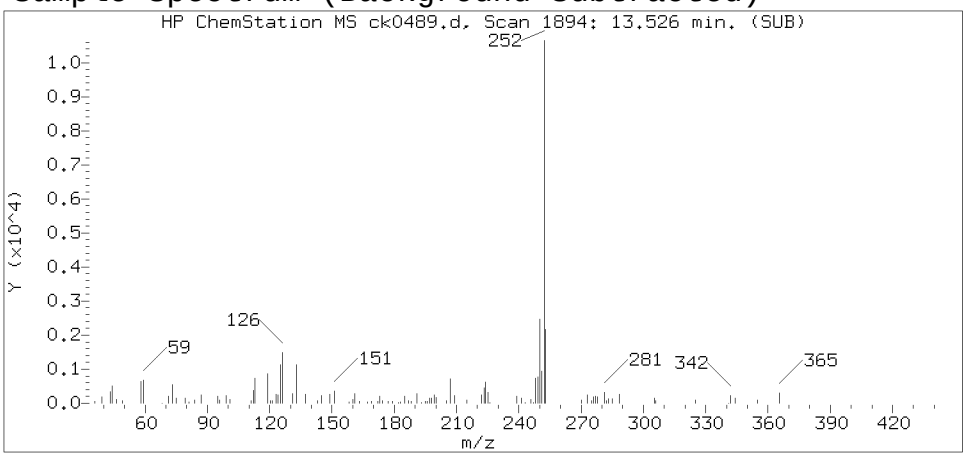
Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac0013

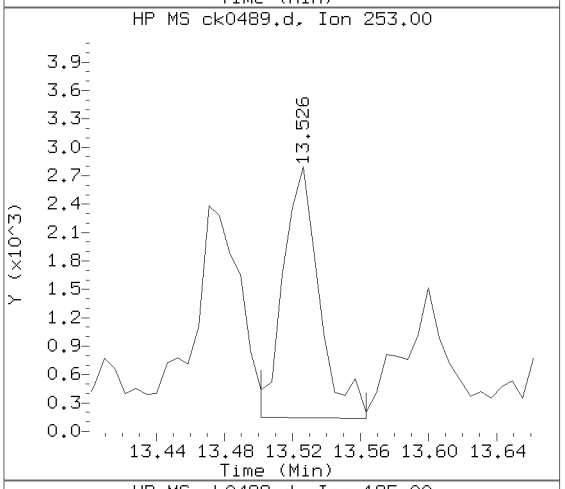
Reference Standard Spectrum for Benzo(a)pyrene



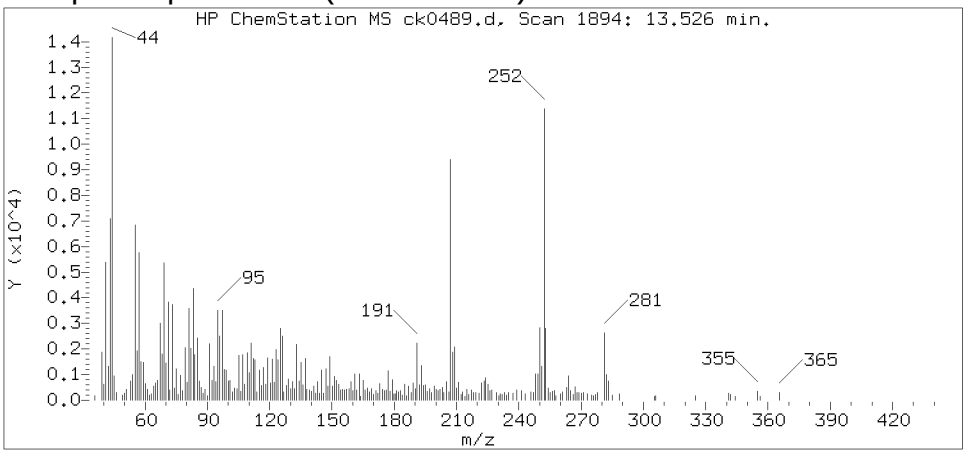


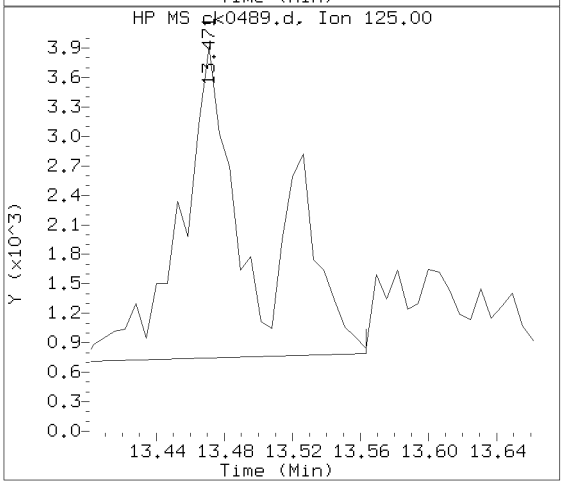
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

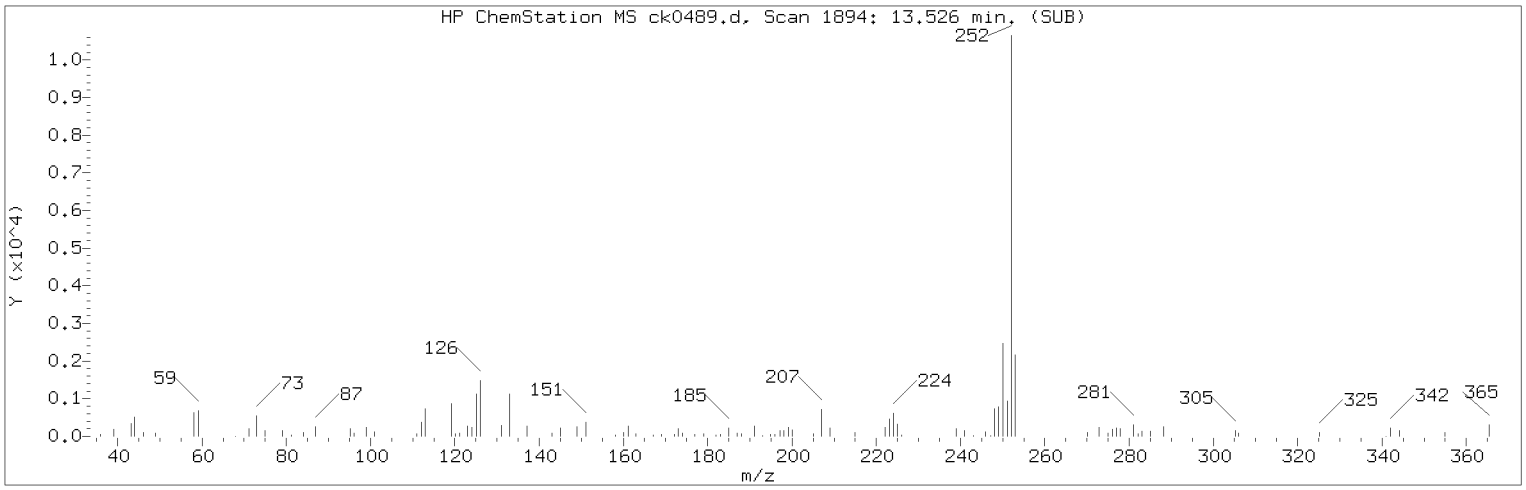
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

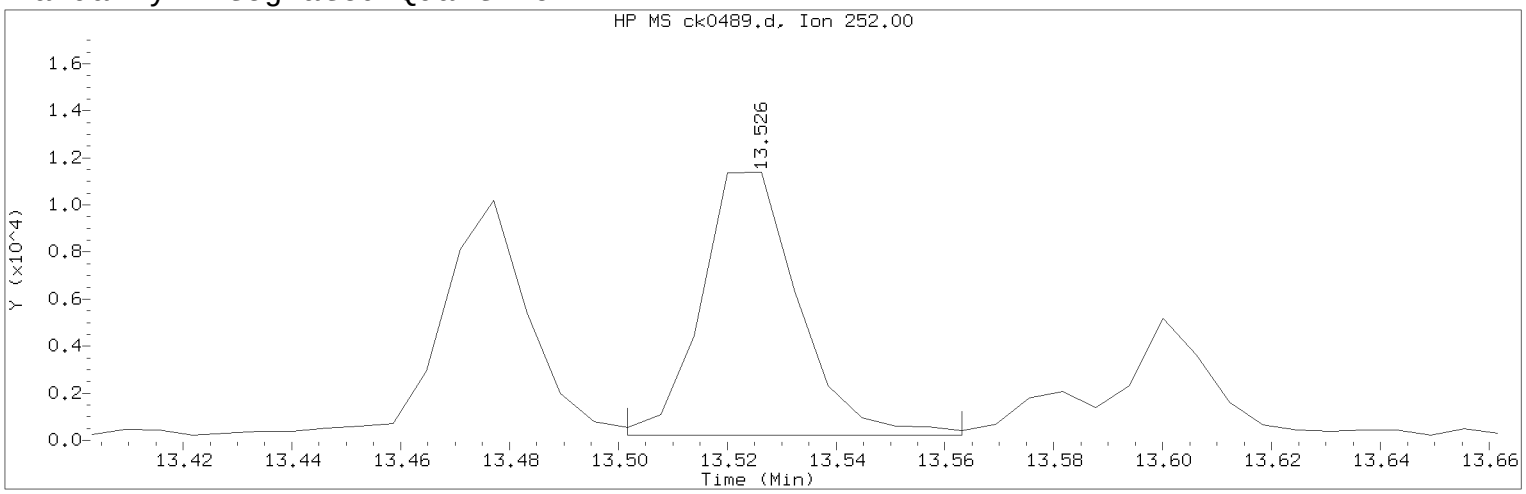
Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1894
Retention Time (minutes)	: 13.526
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 13814M
On-column Amount (ng/ul)	: 0.4283

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

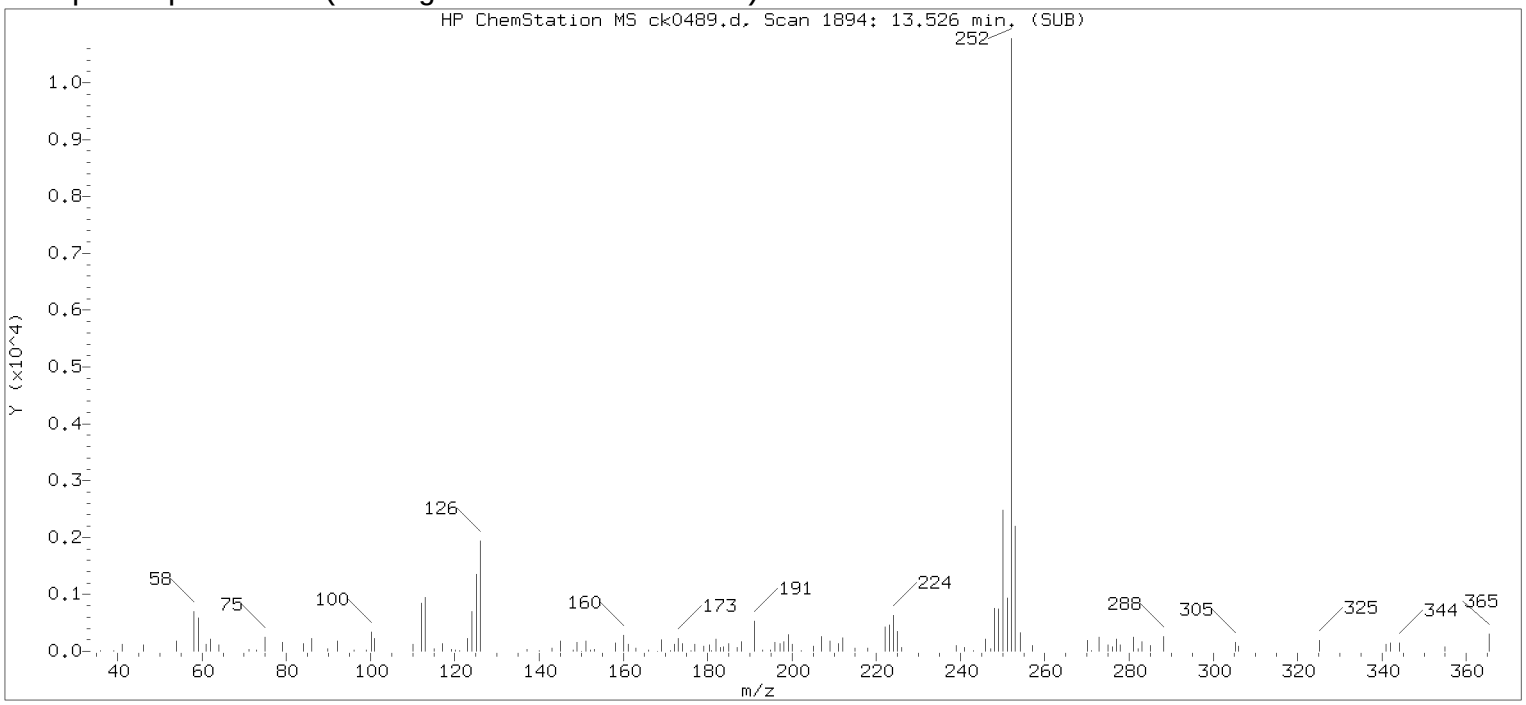
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1894
Retention Time (minutes) : 13.526
Quant Ion : 252.00
Area (flag) : 13814M
On-column Amount (ng/ul) : 0.4283
Integration start scan : 1889 Integration stop scan: 1899
Y at integration start : 231 Y at integration end: 231

Reason for manual integration: improper integration

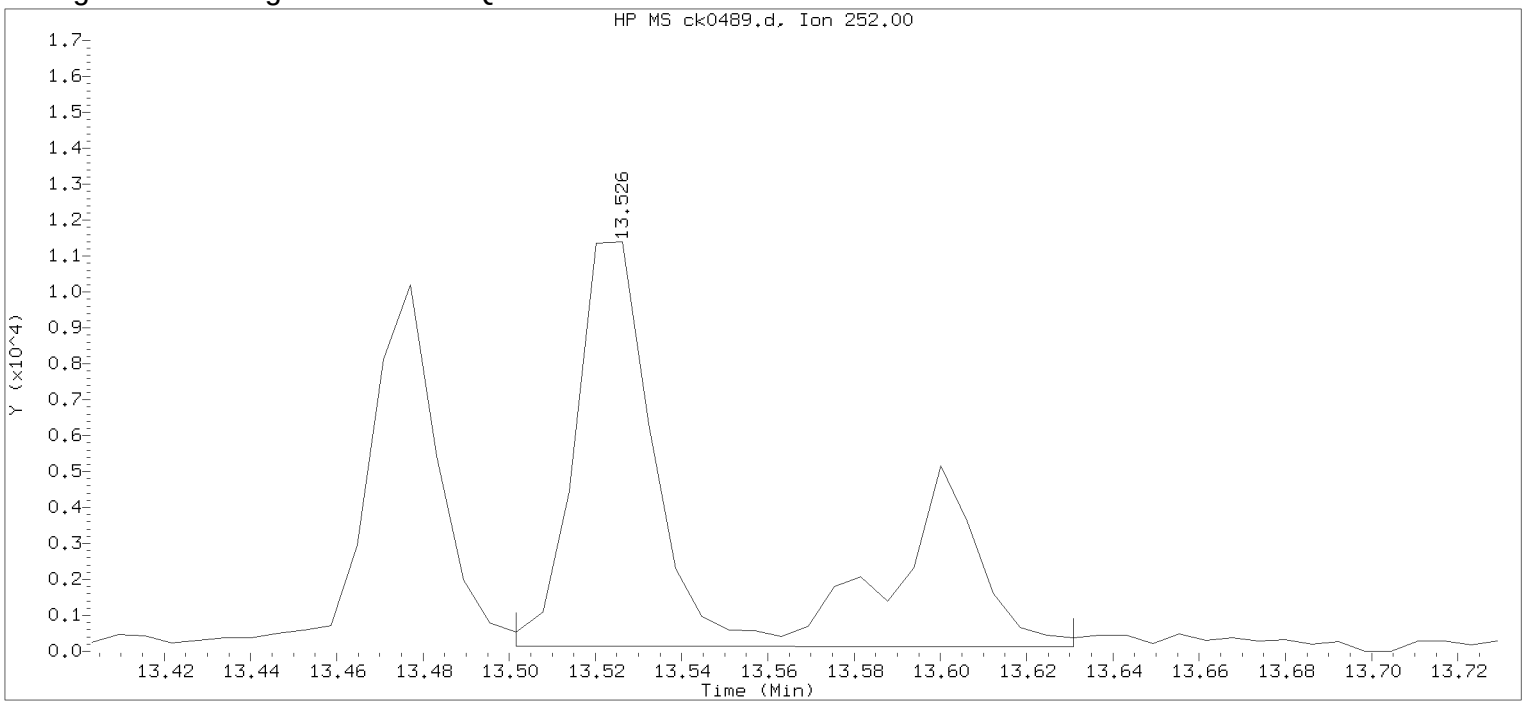
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

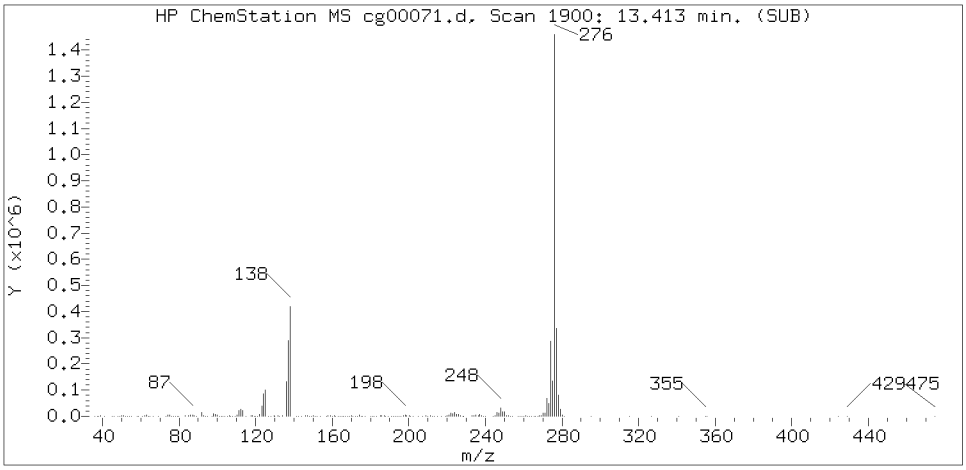
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:44 Automation

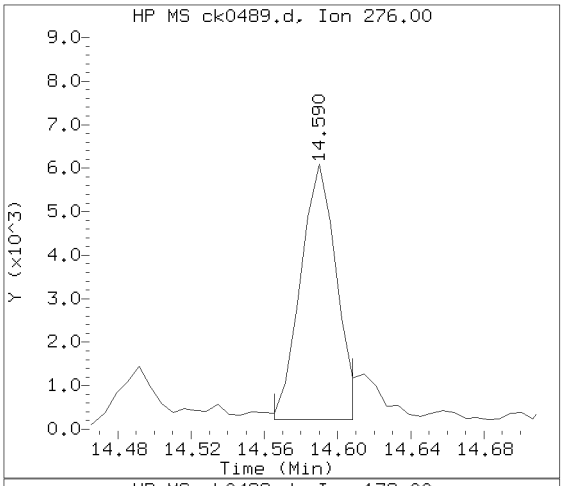
Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1894		
Retention Time (minutes)	: 13.526		
Quant Ion	: 252.00		
Area	: 20932		
On-column Amount (ng/ul)	: 0.6490		
Integration start scan	: 1889	Integration stop scan:	1910
Y at integration start	: 151	Y at integration end:	133

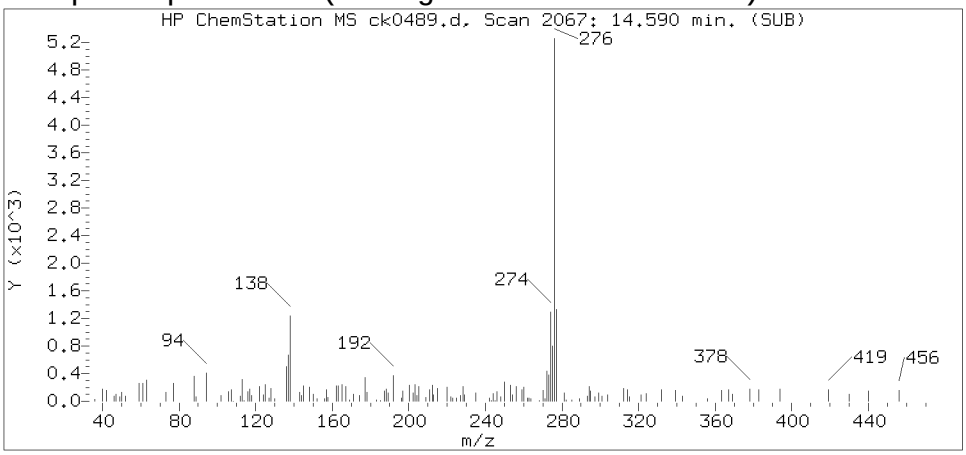
Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00154

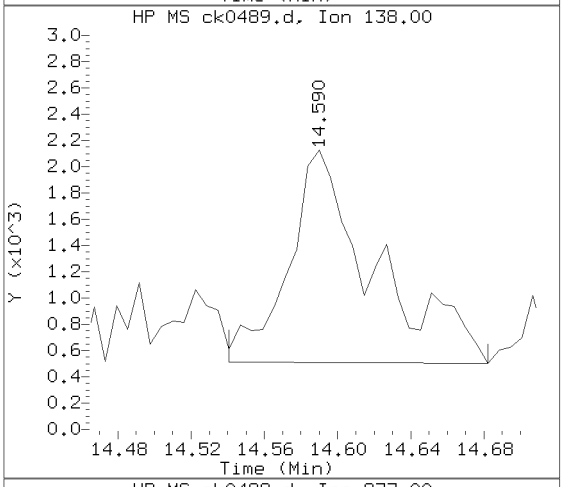
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



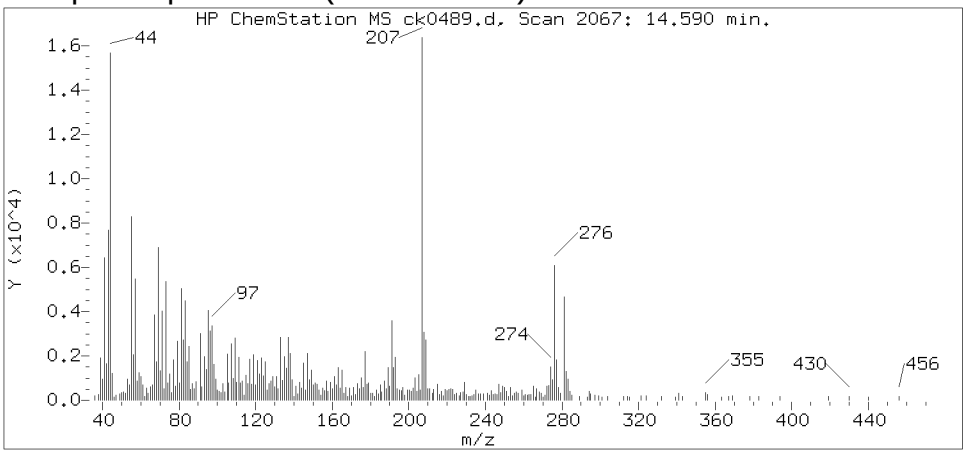


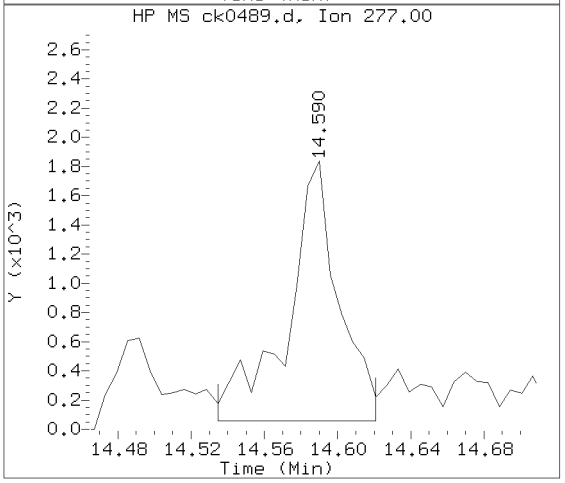
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

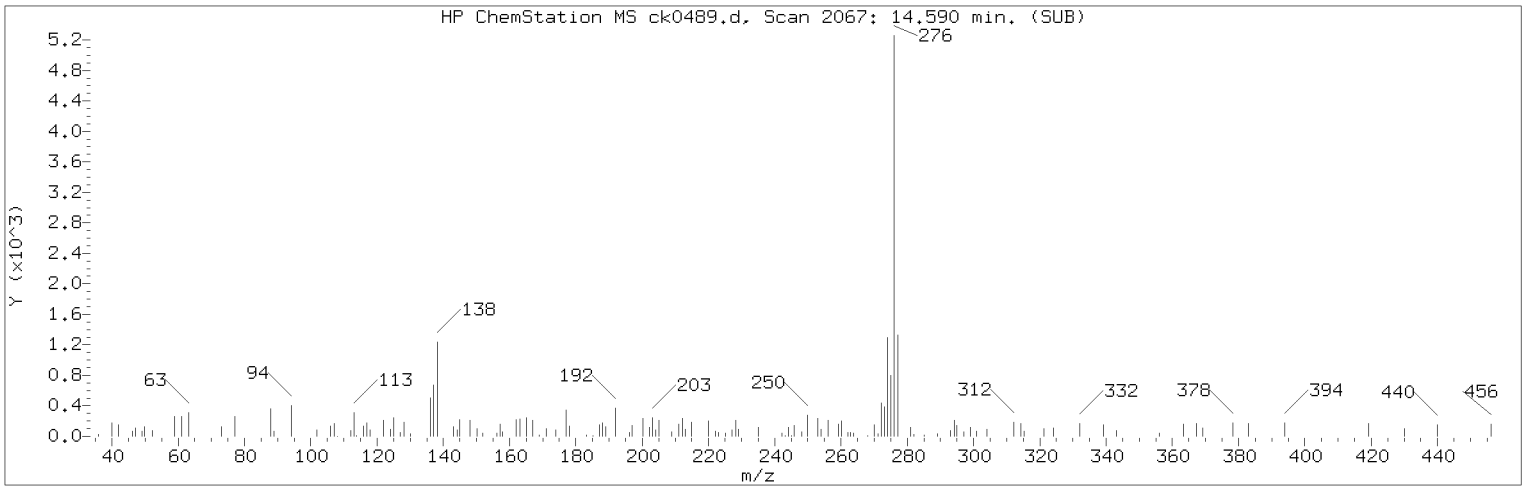
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

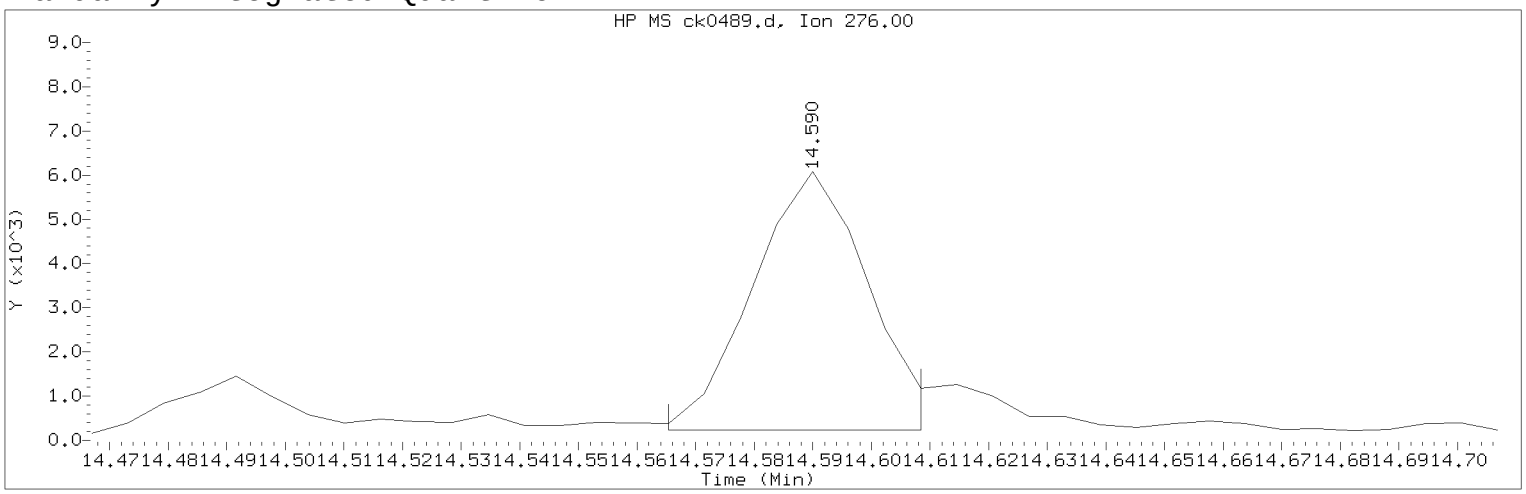
Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2067
Retention Time (minutes)	: 14.590
Relative Retention Time	: 0.00094
Quant Ion	: 276.00
Area (flag)	: 8072M
On-column Amount (ng/ul)	: 0.2352

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

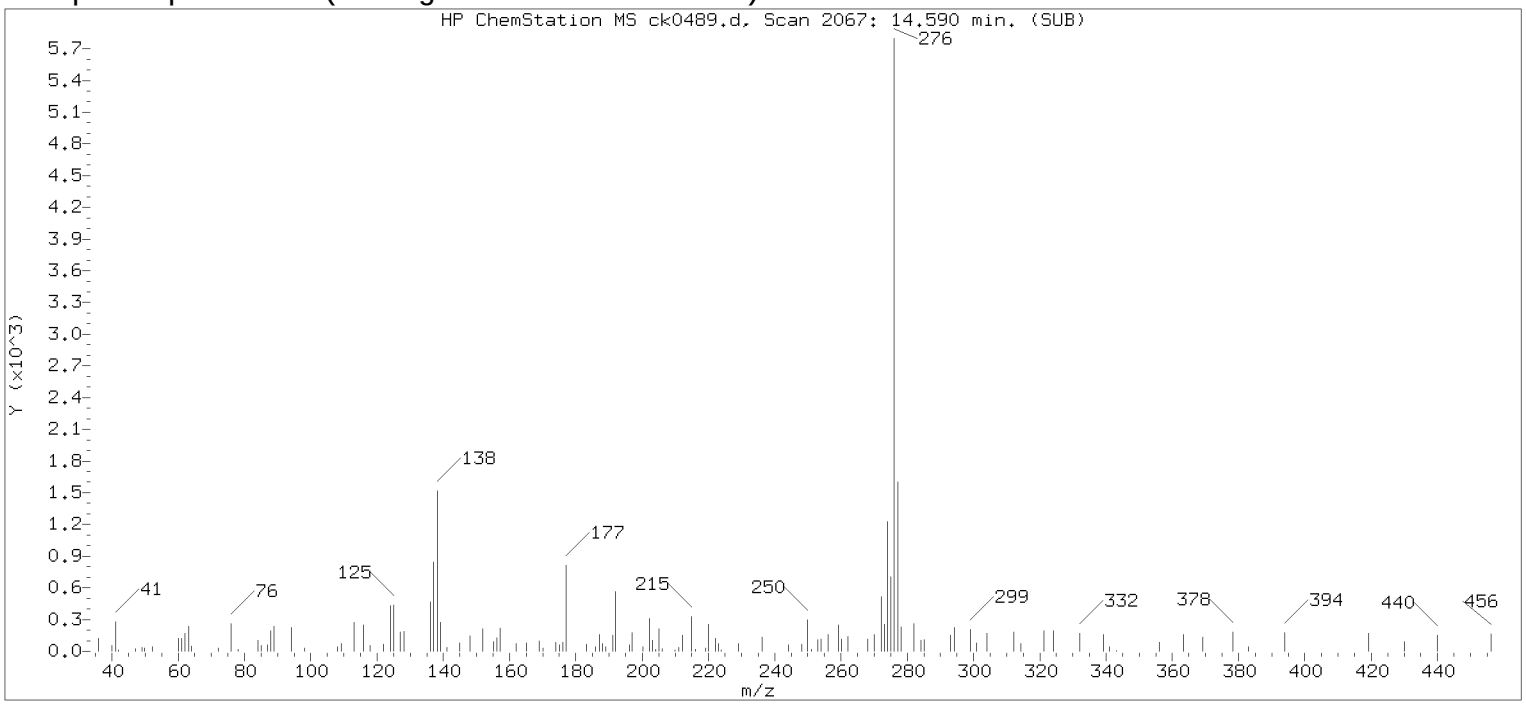
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2067
Retention Time (minutes) : 14.590
Quant Ion : 276.00
Area (flag) : 8072M
On-column Amount (ng/ul) : 0.2352
Integration start scan : 2062 Integration stop scan: 2069
Y at integration start : 226 Y at integration end: 226

Reason for manual integration: improper integration

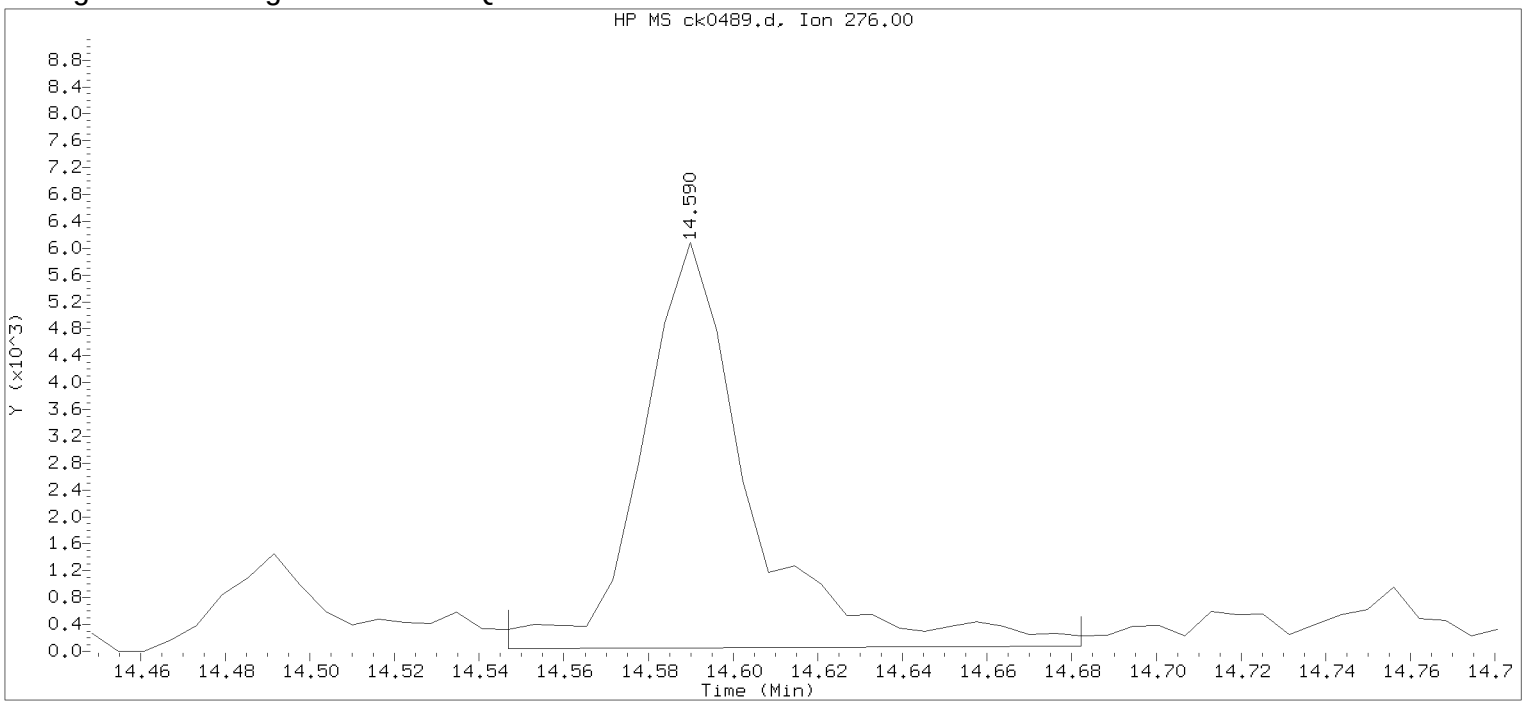
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:44 Automation

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2067
Retention Time (minutes) : 14.590
Quant Ion : 276.00
Area : 10778
On-column Amount (ng/ul) : 0.3141
Integration start scan : 2059 Integration stop scan: 2081
Y at integration start : 35 Y at integration end: 77

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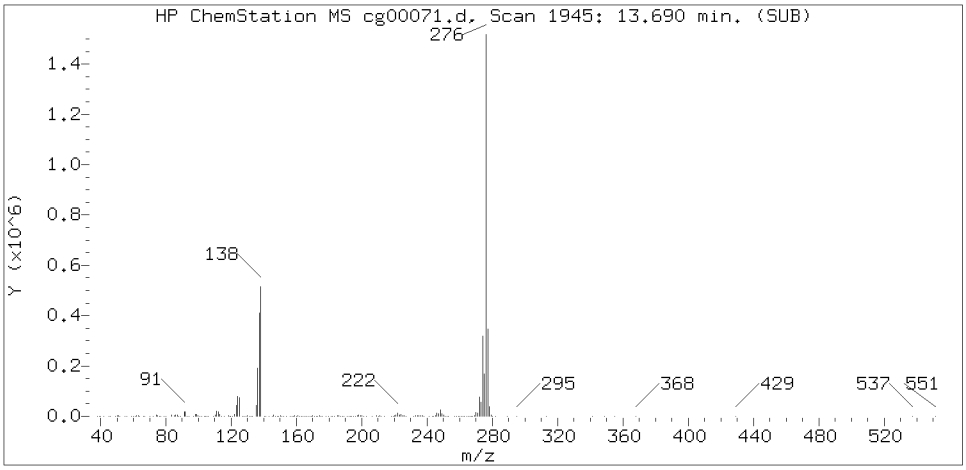
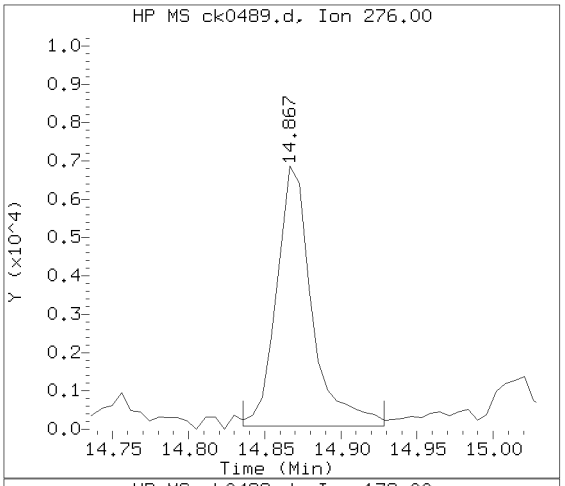
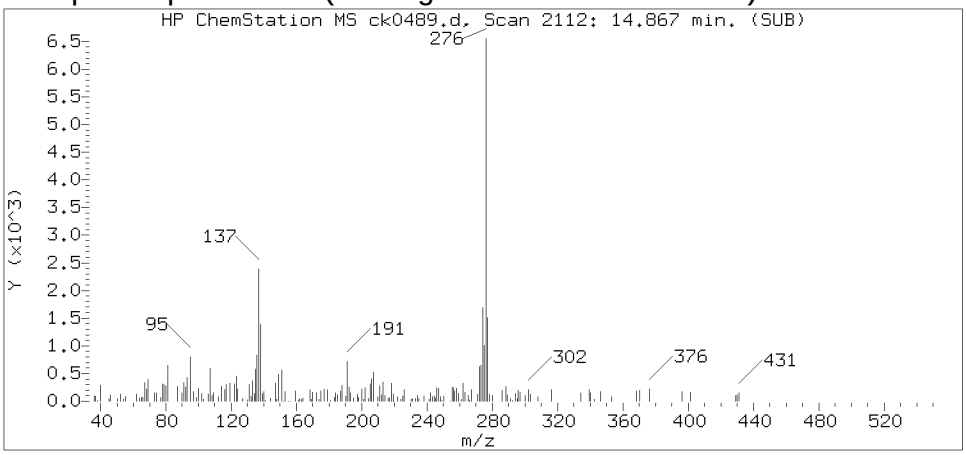
Target 3.5 esignature user ID: mac0013

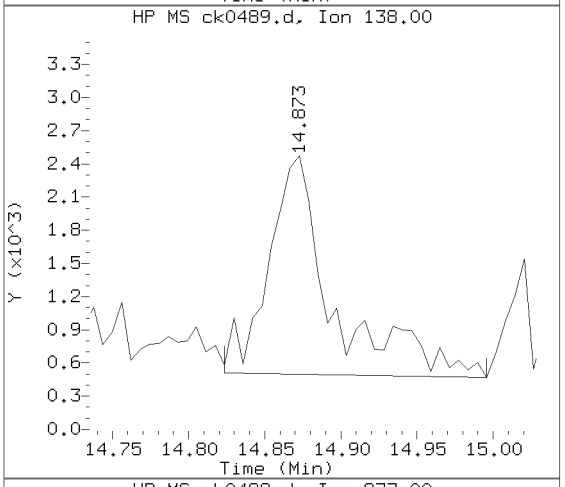
Reference Standard Spectrum for Benzo(g,h,i)perylene



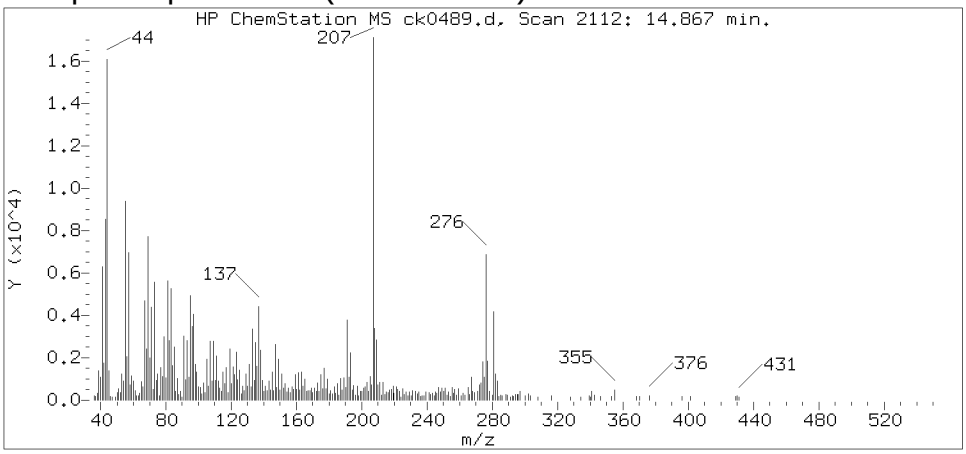


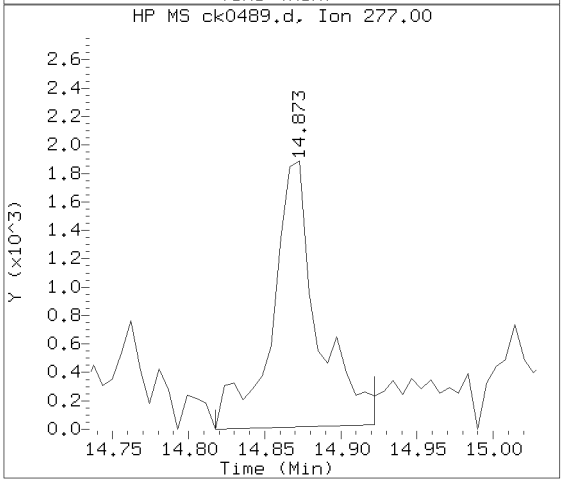
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

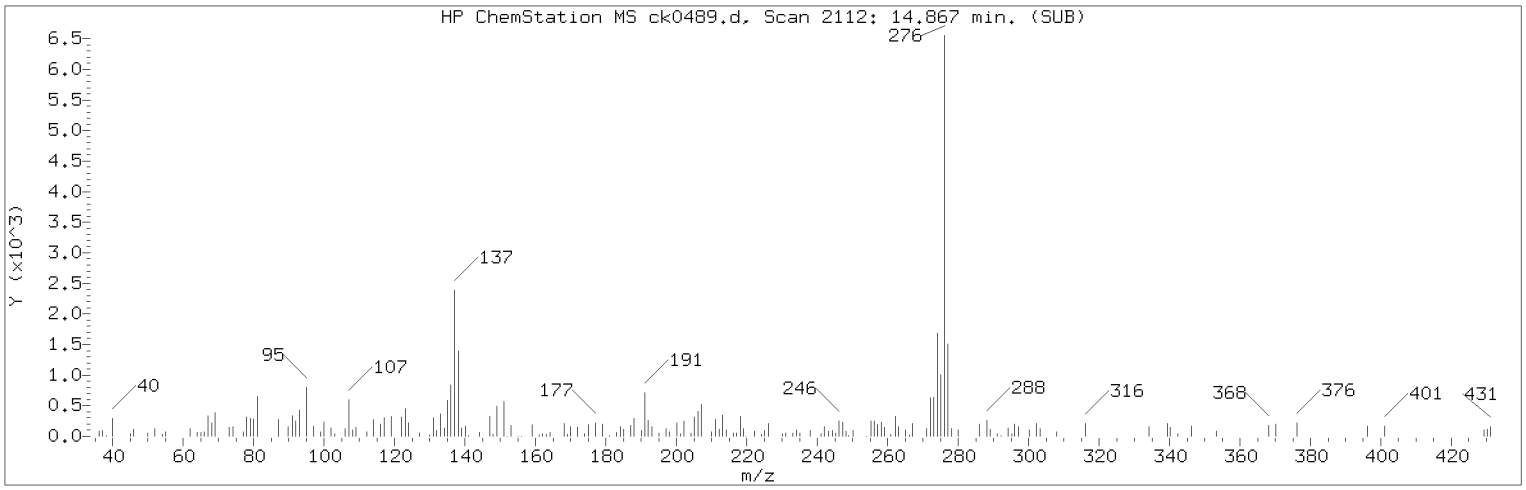
Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

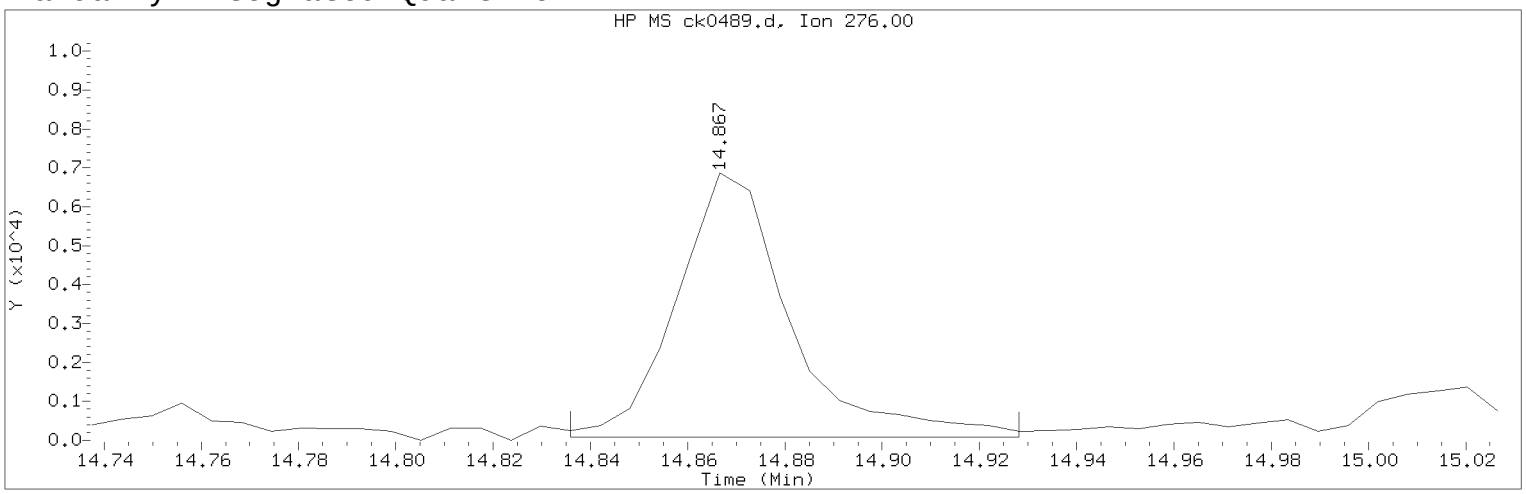
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Relative Retention Time : 0.00095
Quant Ion : 276.00
Area (flag) : 11079M
On-column Amount (ng/ul) : 0.3790

Digitally signed by Mark A. Clark on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 14-Nov-2013 00:00 mac00013

Sample Name: R2E16 Lab Sample ID: 7265234

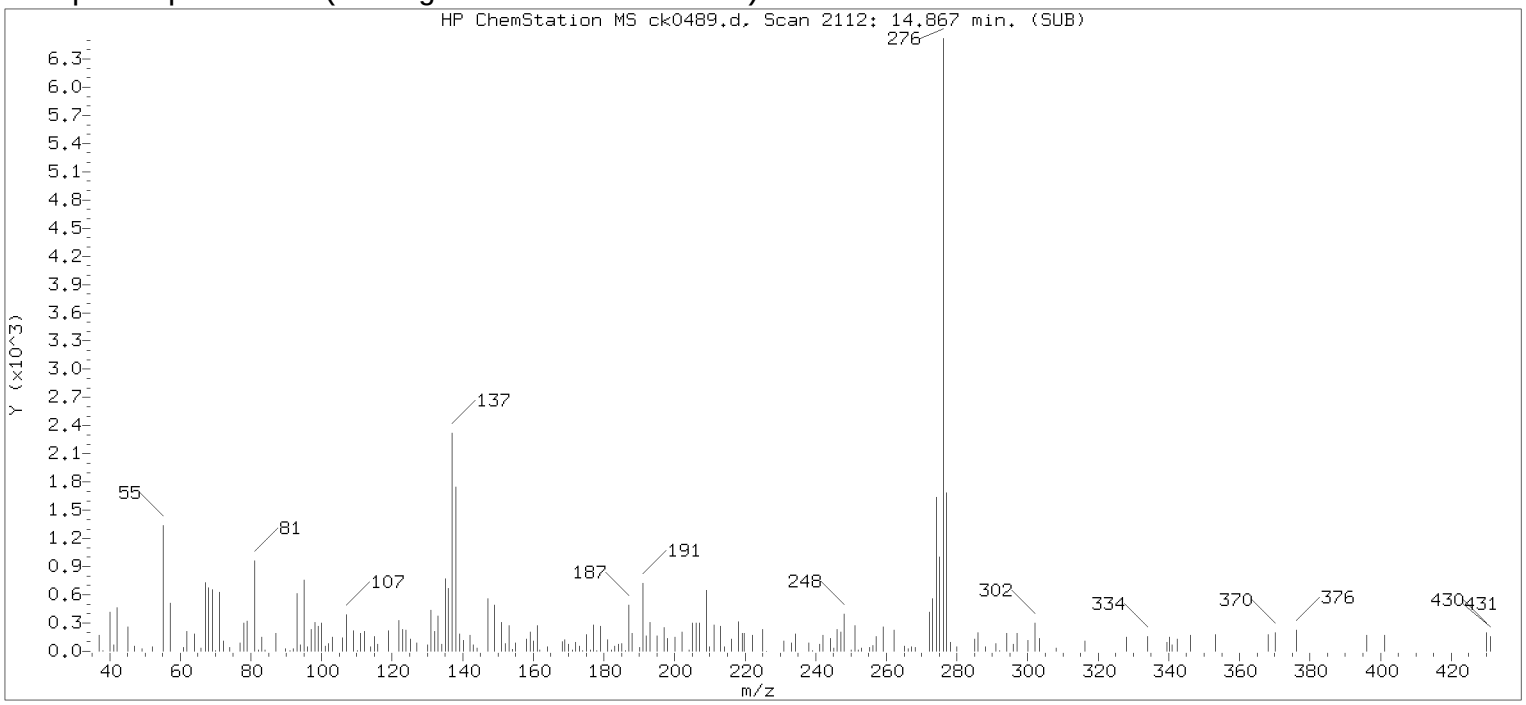
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Quant Ion : 276.00
Area (flag) : 11079M
On-column Amount (ng/ul) : 0.3790
Integration start scan : 2106 Integration stop scan: 2121
Y at integration start : 76 Y at integration end: 76

Reason for manual integration: improper integration

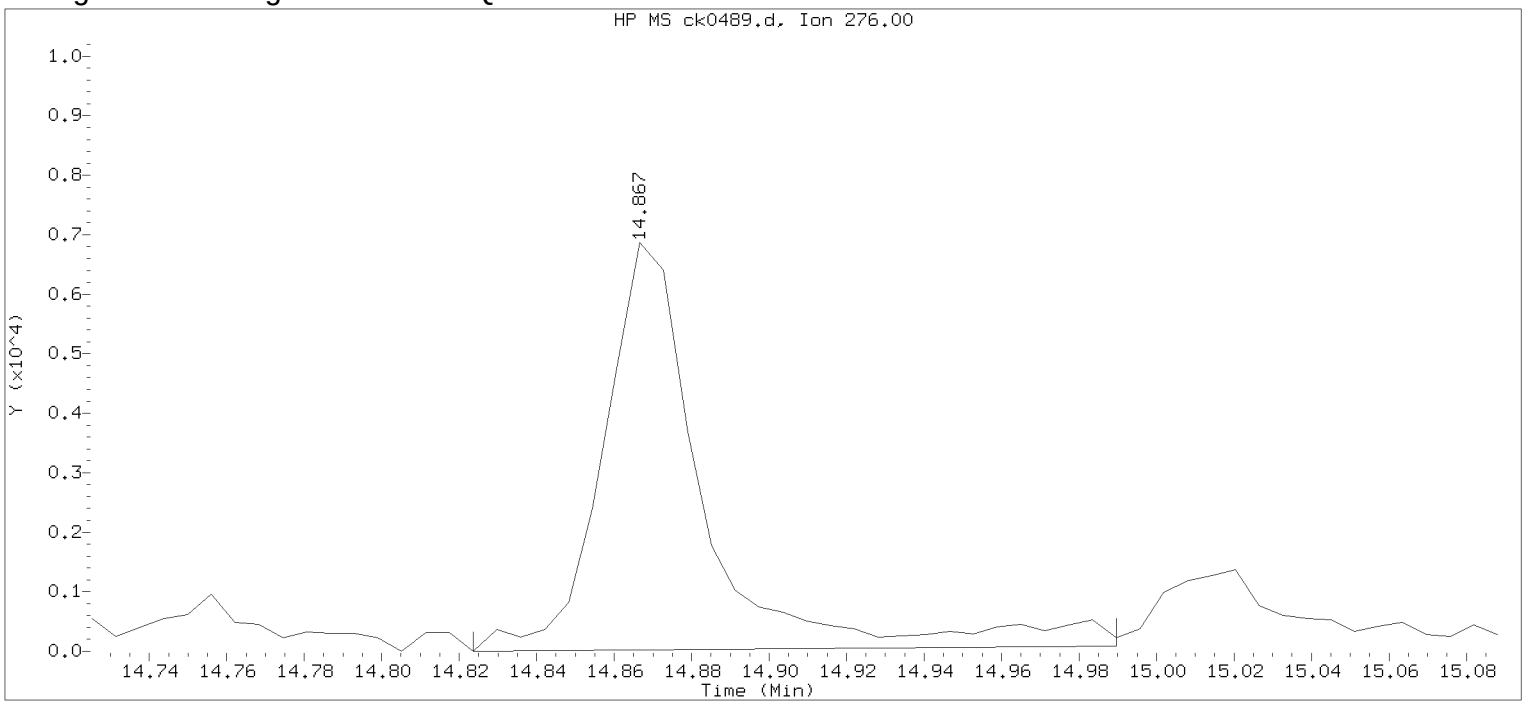
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 00:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:33.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov13a.b/ck0489.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 20:18 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 20:44 Automation

Sample Name: R2E16 Lab Sample ID: 7265234

Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2112
Retention Time (minutes) : 14.867
Quant Ion : 276.00
Area : 12520
On-column Amount (ng/ul) : 0.4283
Integration start scan : 2104 Integration stop scan: 2131
Y at integration start : 0 Y at integration end: 85

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Target 3.5 esignature used: 1.0 Page 1263 of 3494

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0339.d
Data file Sample Info. Line: E2161;7265235;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Injection date and time: **11-NOV-2013 12:37**
Instrument ID: **HP19760.i** Batch: **13312WAD**

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	126031 (-11)	5.00	
52) Naphthalene-d8	7.911(0.000)	1128	136	485096 (-11)	5.00	
92) Acenaphthene-d10	10.709(0.006)	1608	164	283812 (-13)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	513567 (-11)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	643375 (-13)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	419692 (-25)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.000(0.000)	112	1031652	27.569	55%		10 - 107
13) Phenol-d6	(1)	5.428(0.001)	99	1034021	20.120	40%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	988857	22.150	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(-0.001)	172	1717607	24.235	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(-0.001)	330	348429	46.743	93%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2220274	27.673	111%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)	7.917(0.003)	128	22140	0.214	0.88			0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:19. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0339.d Injection date and time: **11-NOV-2013 12:37**
Data file Sample Info. Line: E2161;7265235;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

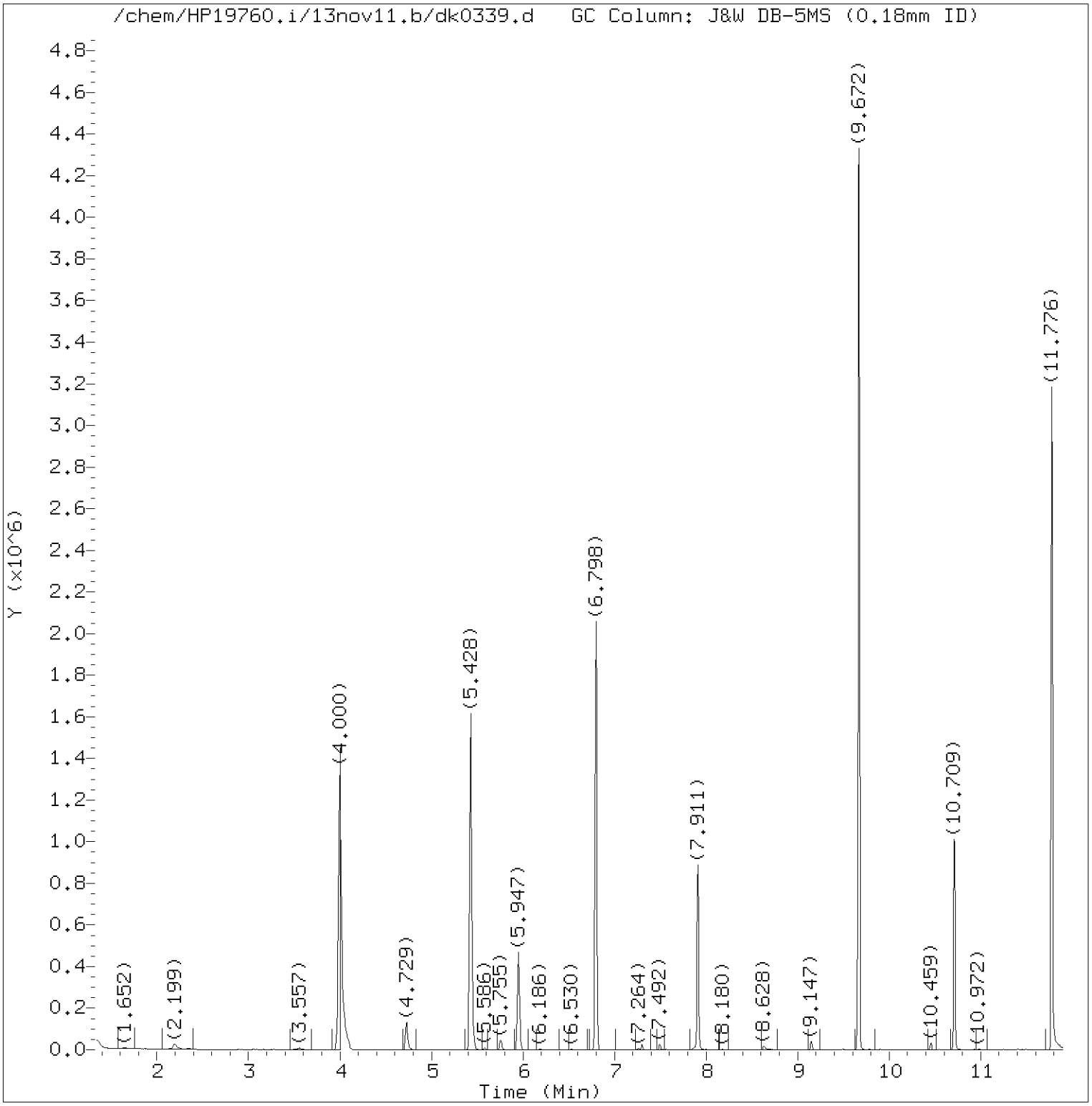
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:19. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

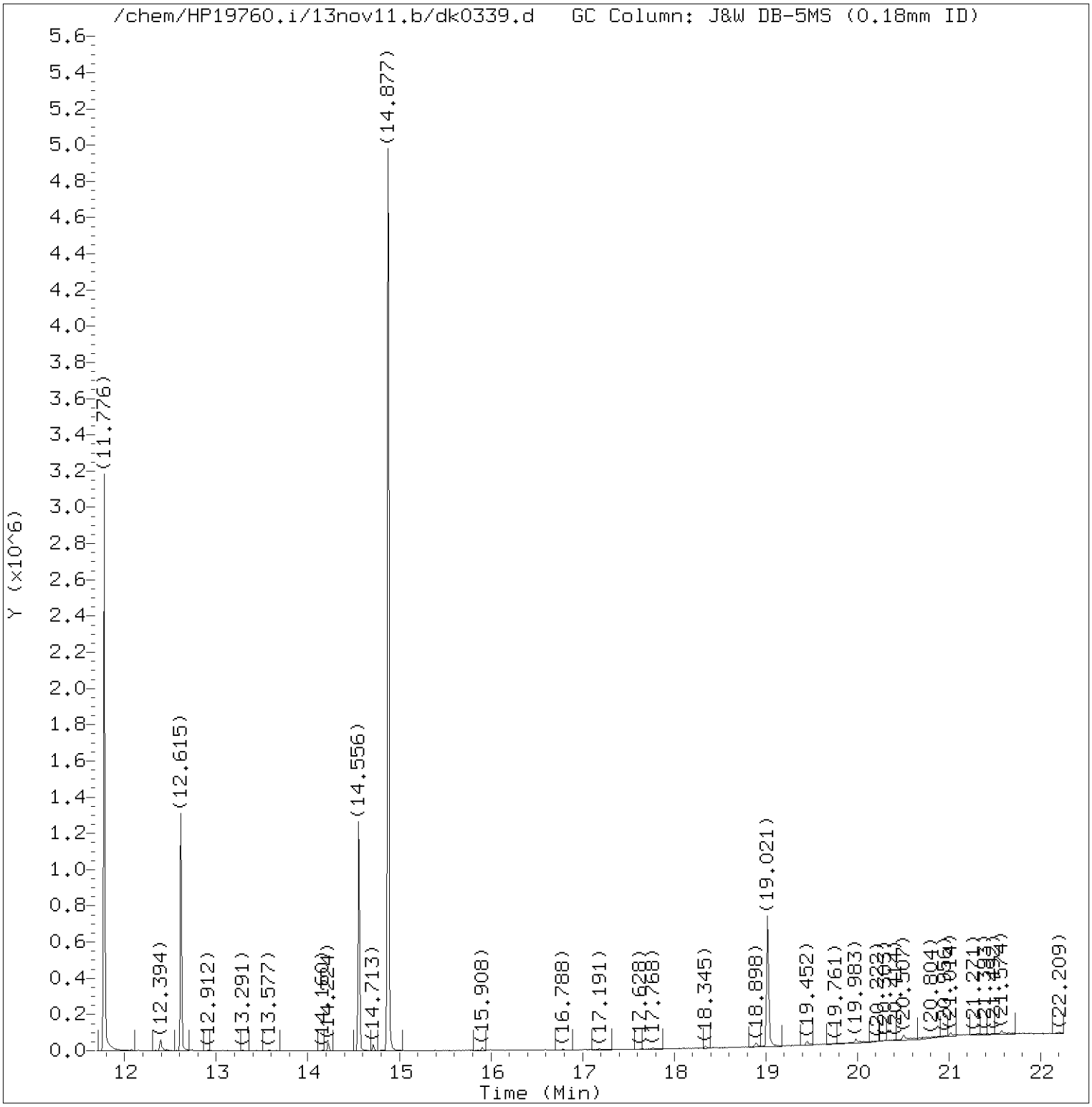
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:19.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:19.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

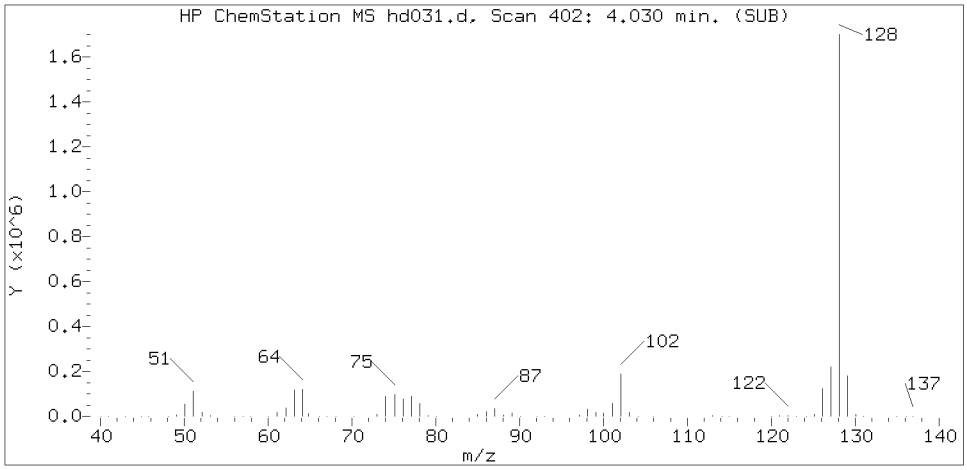
Sample Name: E2161 Lab Sample ID: 7265235

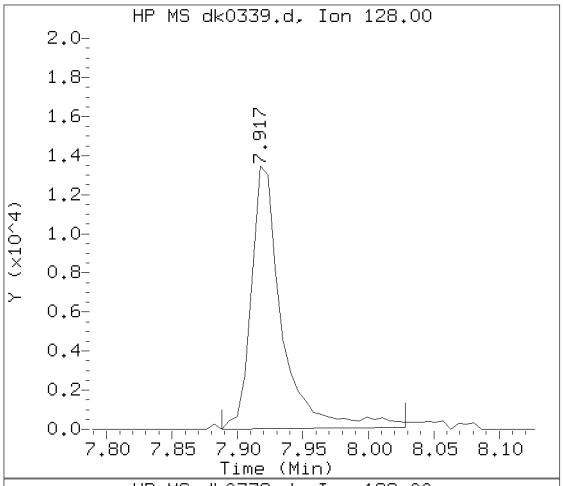
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.000	112	1031652	27.569
13)$Phenol-d6	(1)	5.428	99	1034021	20.120
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	126031	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	988857	22.150
52)*Naphthalene-d8	(2)	7.911	136	485096	5.000
53) Naphthalene	(2)	7.917	128	22140	0.214
72)$2-Fluorobiphenyl	(3)	9.672	172	1717607	24.235
92)*Acenaphthene-d10	(3)	10.709	164	283812	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	348429	46.743
130)*Phenanthrene-d10	(4)	12.615	188	513567	5.000
145)*Pyrene-d10	(5)	14.556	212	643375	5.000
149)$Terphenyl-d14	(5)	14.877	244	2220274	27.673
172)*Perylene-d12	(6)	19.021	264	419692	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

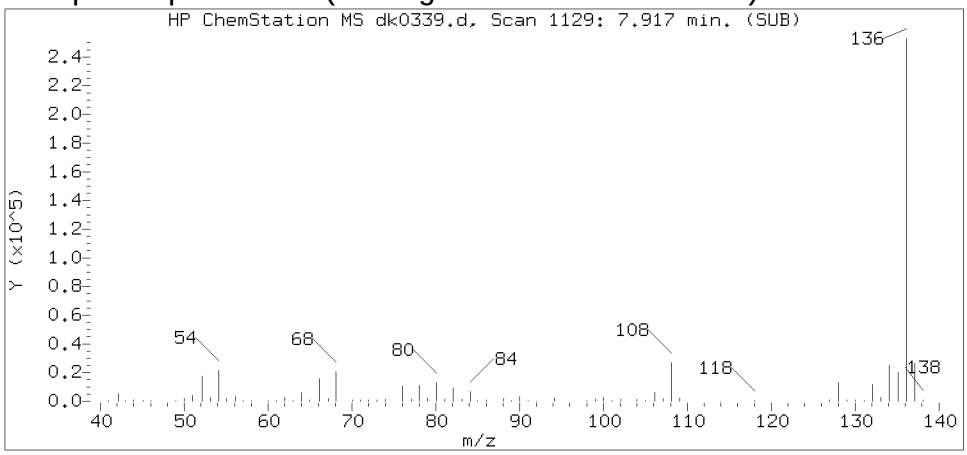
Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:19.
Target 3.5 esignature user ID: jmg00346

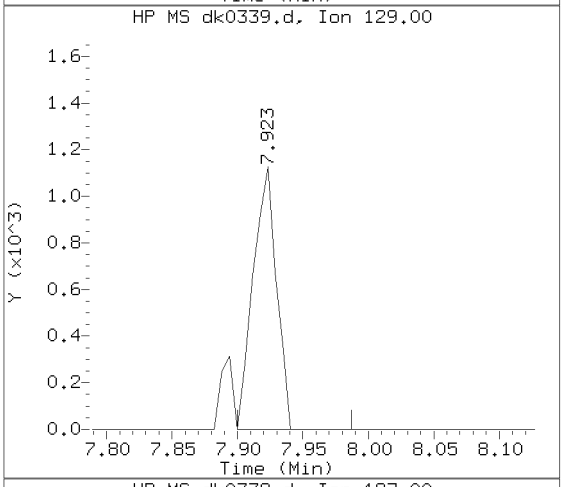
Reference Standard Spectrum for Naphthalene



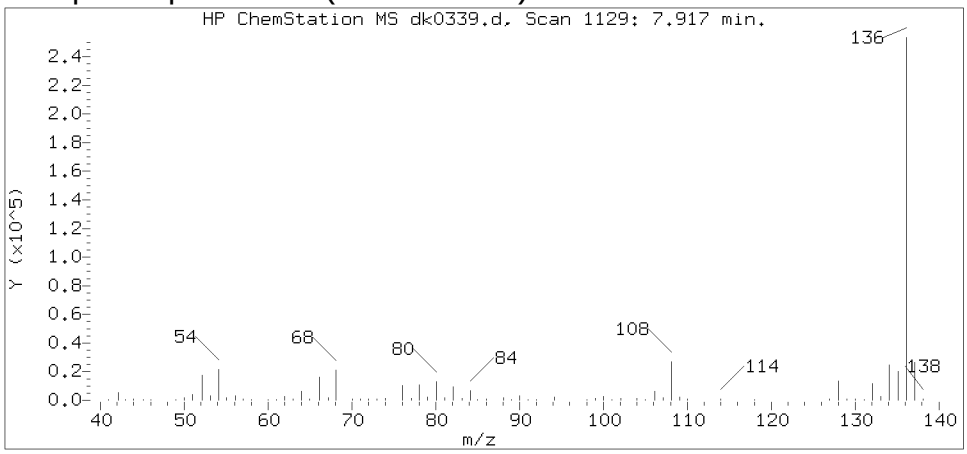


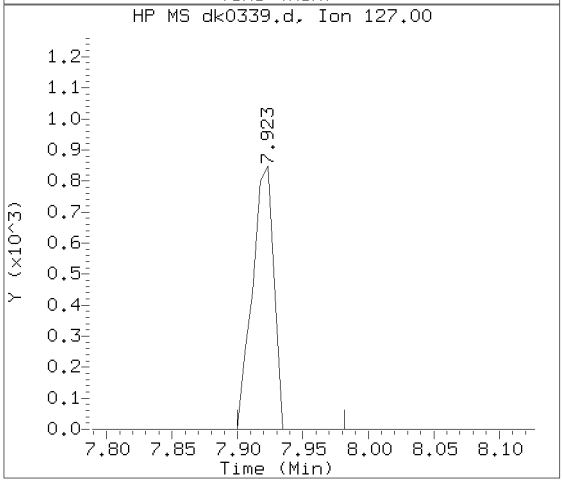
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Compound Number	: 53
Compound Name	: Naphthalene
Scan Number	: 1129
Retention Time (minutes)	: 7.917
Relative Retention Time	: 0.00368
Quant Ion	: 128.00
Area (flag)	: 22140
On-column Amount (ng/ul)	: 0.2141

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:19.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

E2161

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7265235

Sample wt/vol: 244 (g/mL) mL Lab File ID: dk0339.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 1 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	4.729	6	J
2.					
3.	SVOCTIC	Total SVOC TICs		6	J
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
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23.					
24.					
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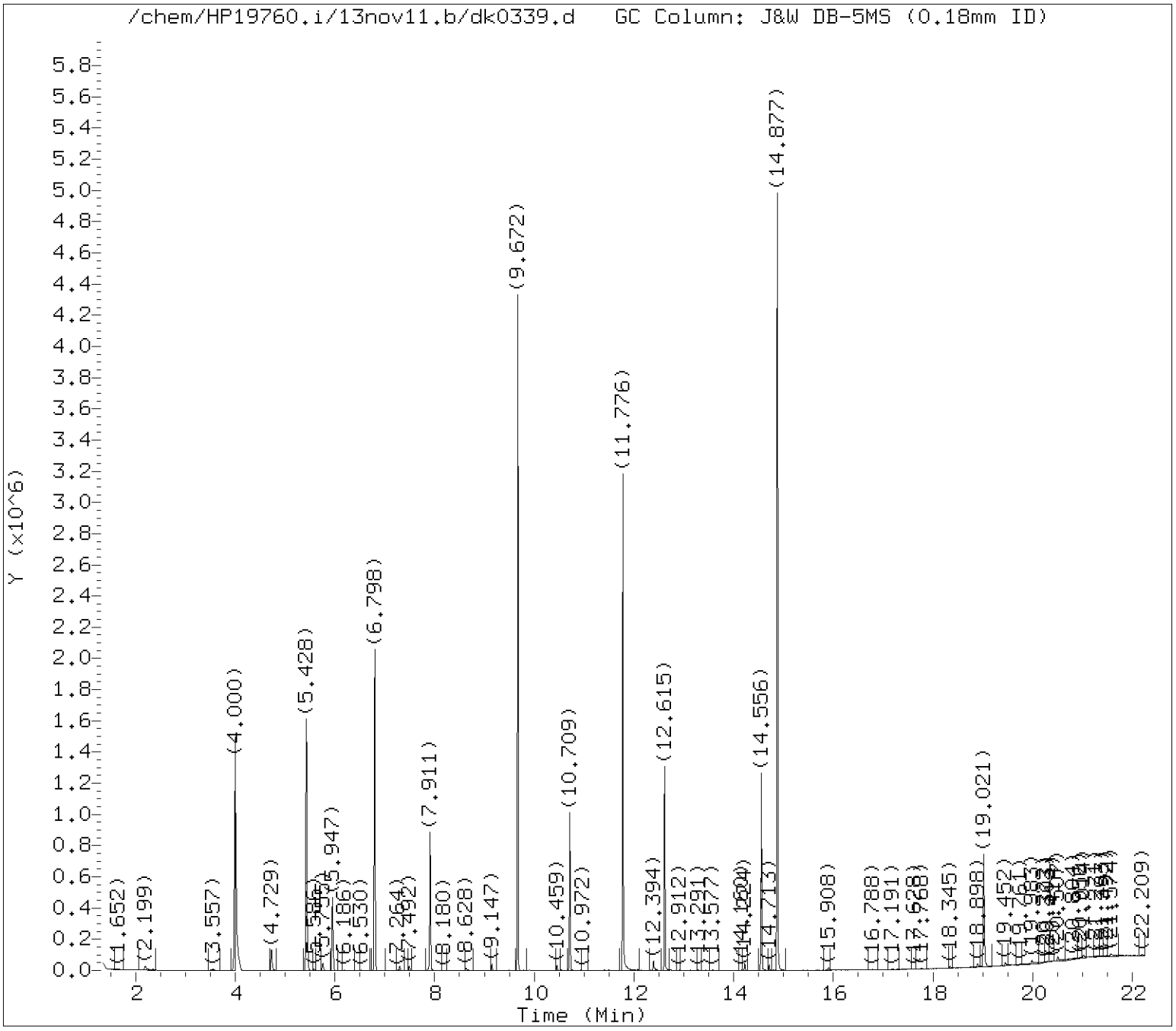
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

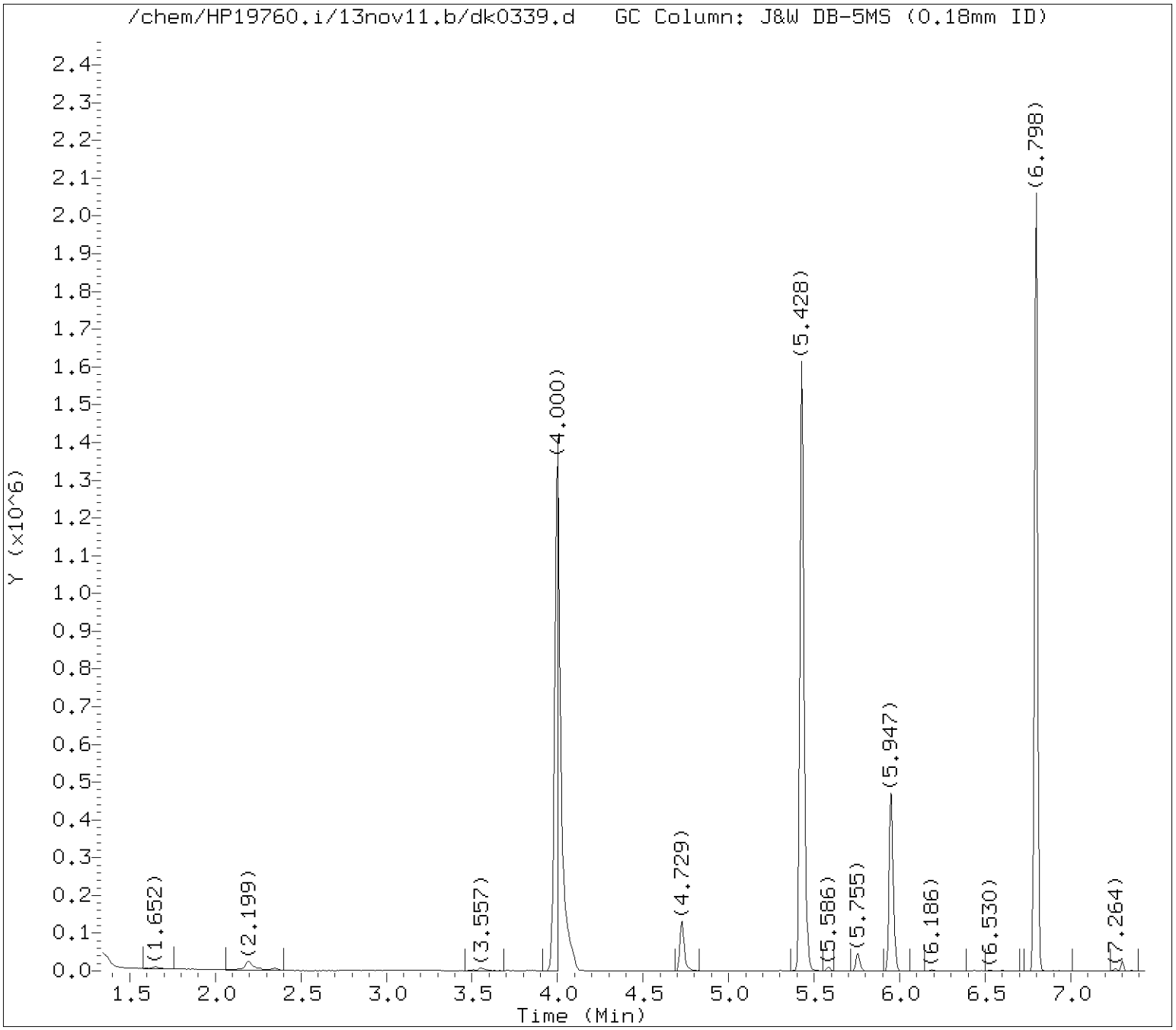
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

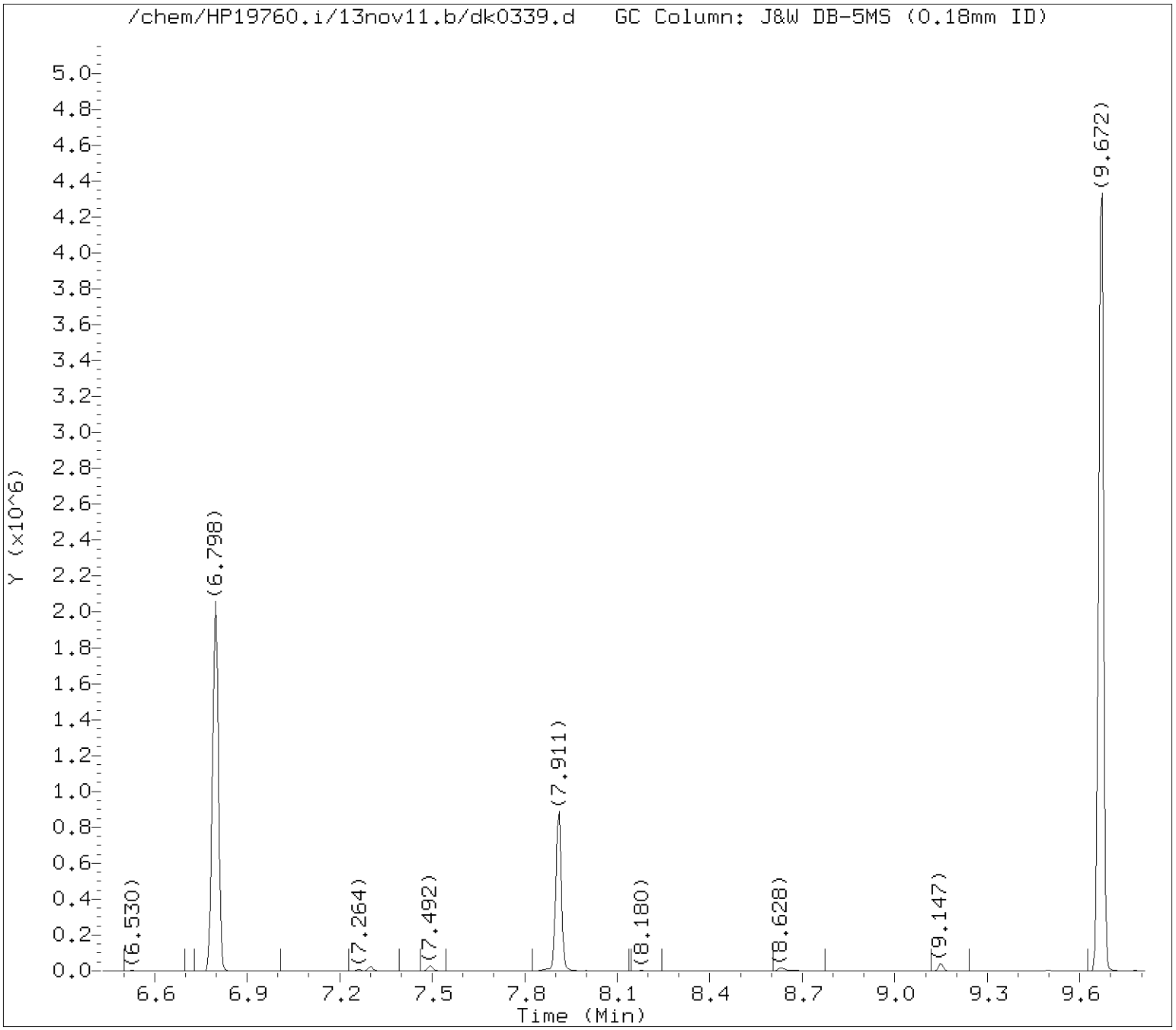
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

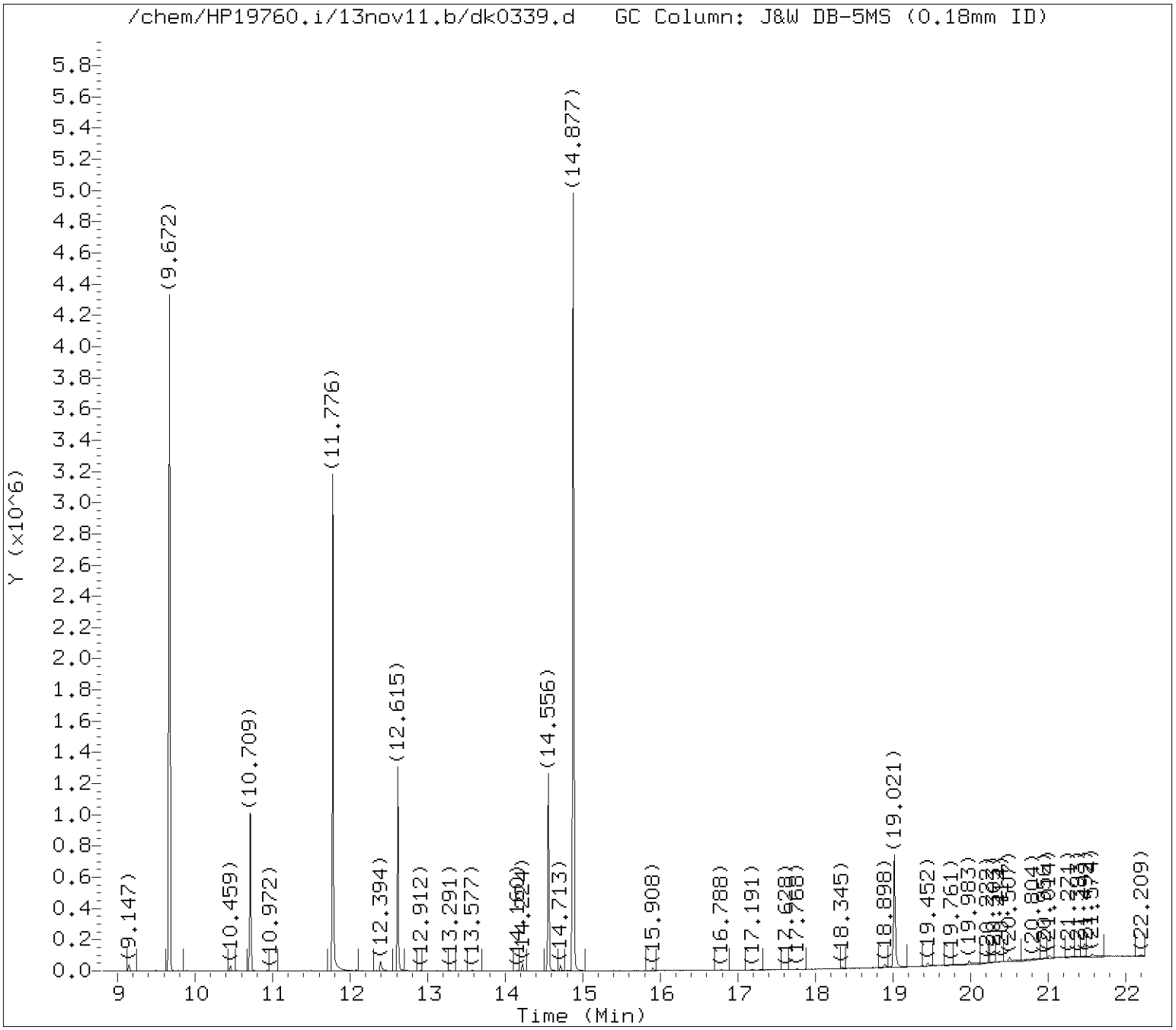
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: Naphthalene-d8 at 7.911 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.310

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

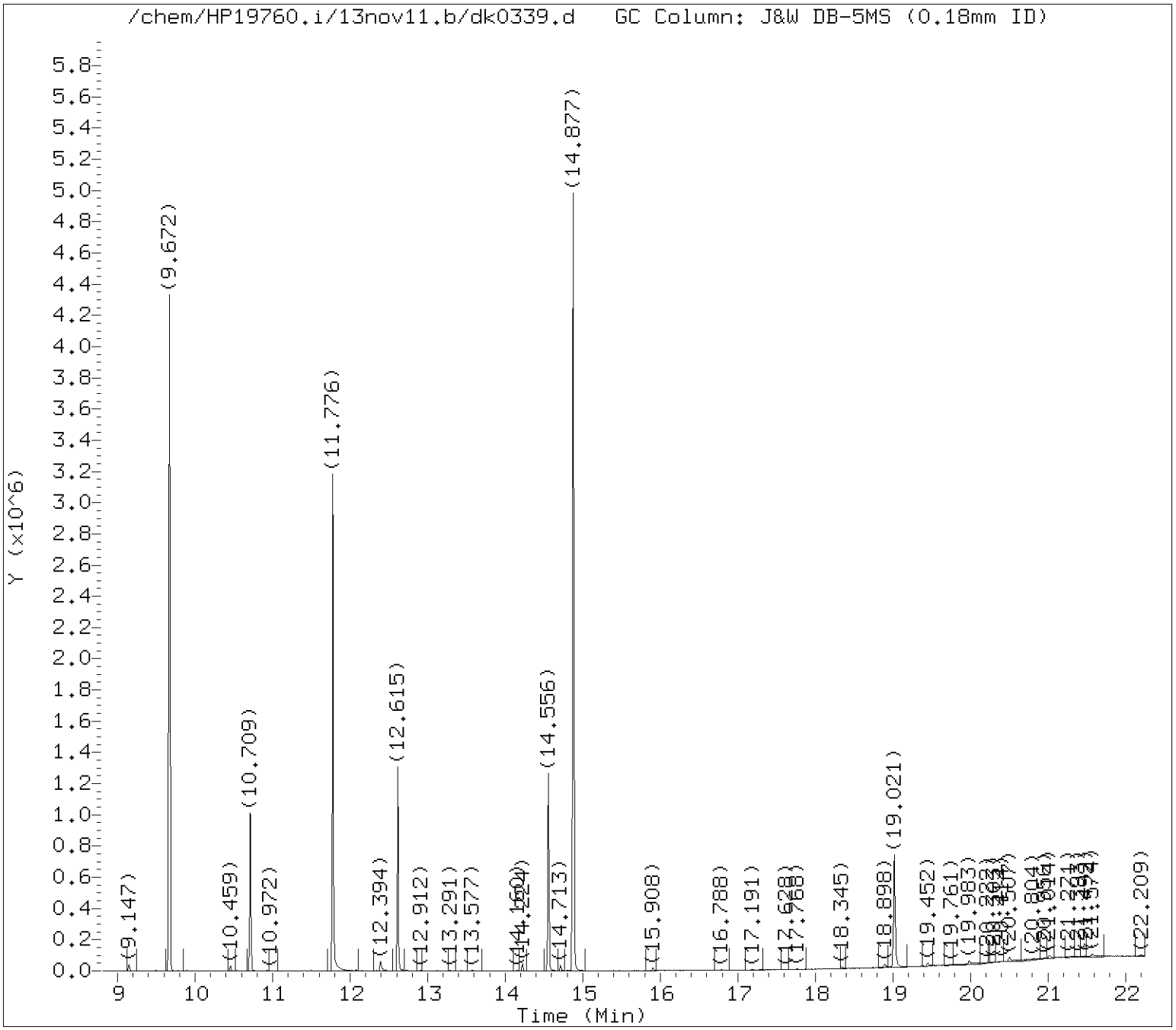
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: Acenaphthene-d10 at 10.709 minutes
Chromatogram Start Time (min.): 9.310
Chromatogram End Time (min.): 11.662

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

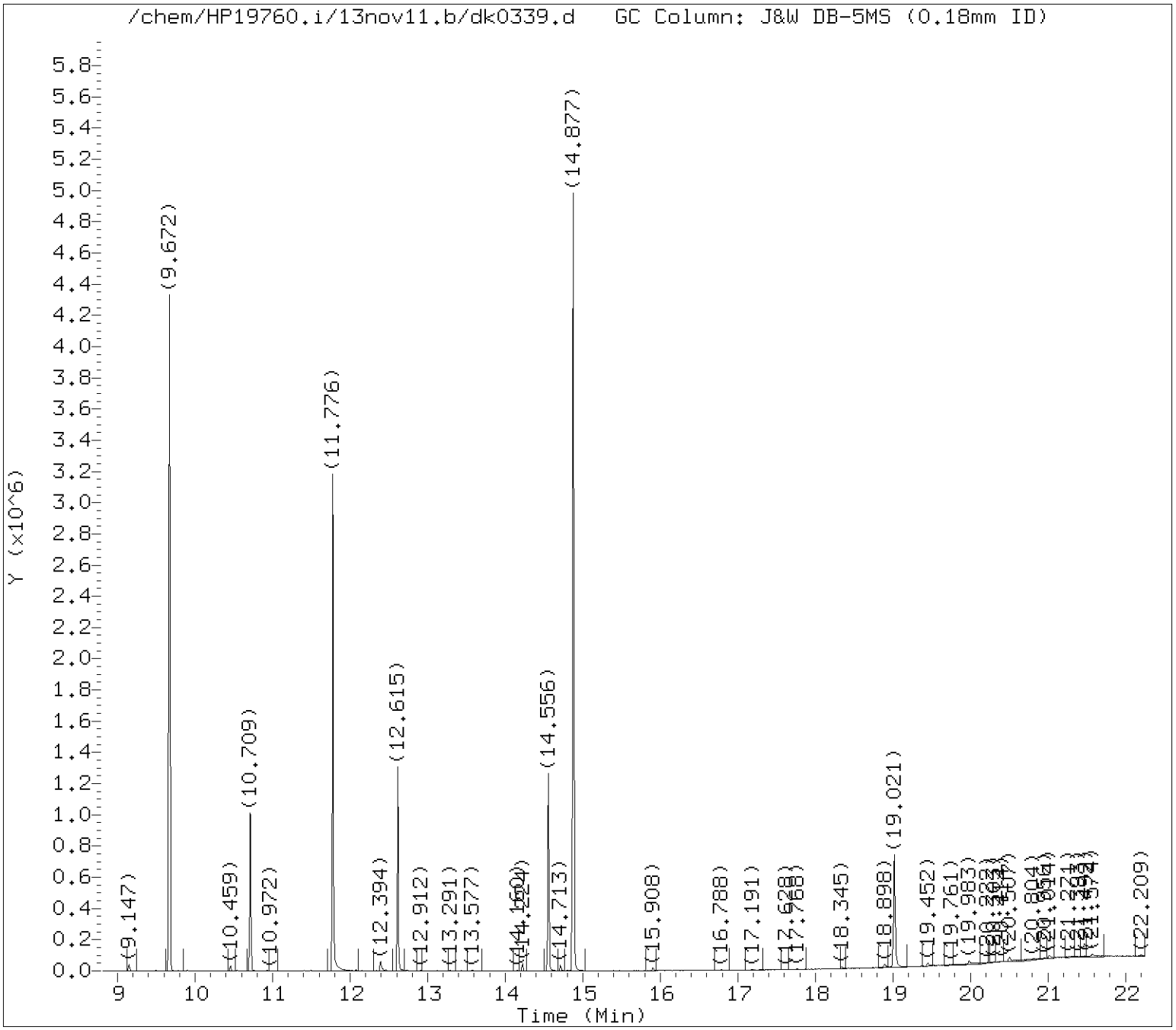
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.662
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

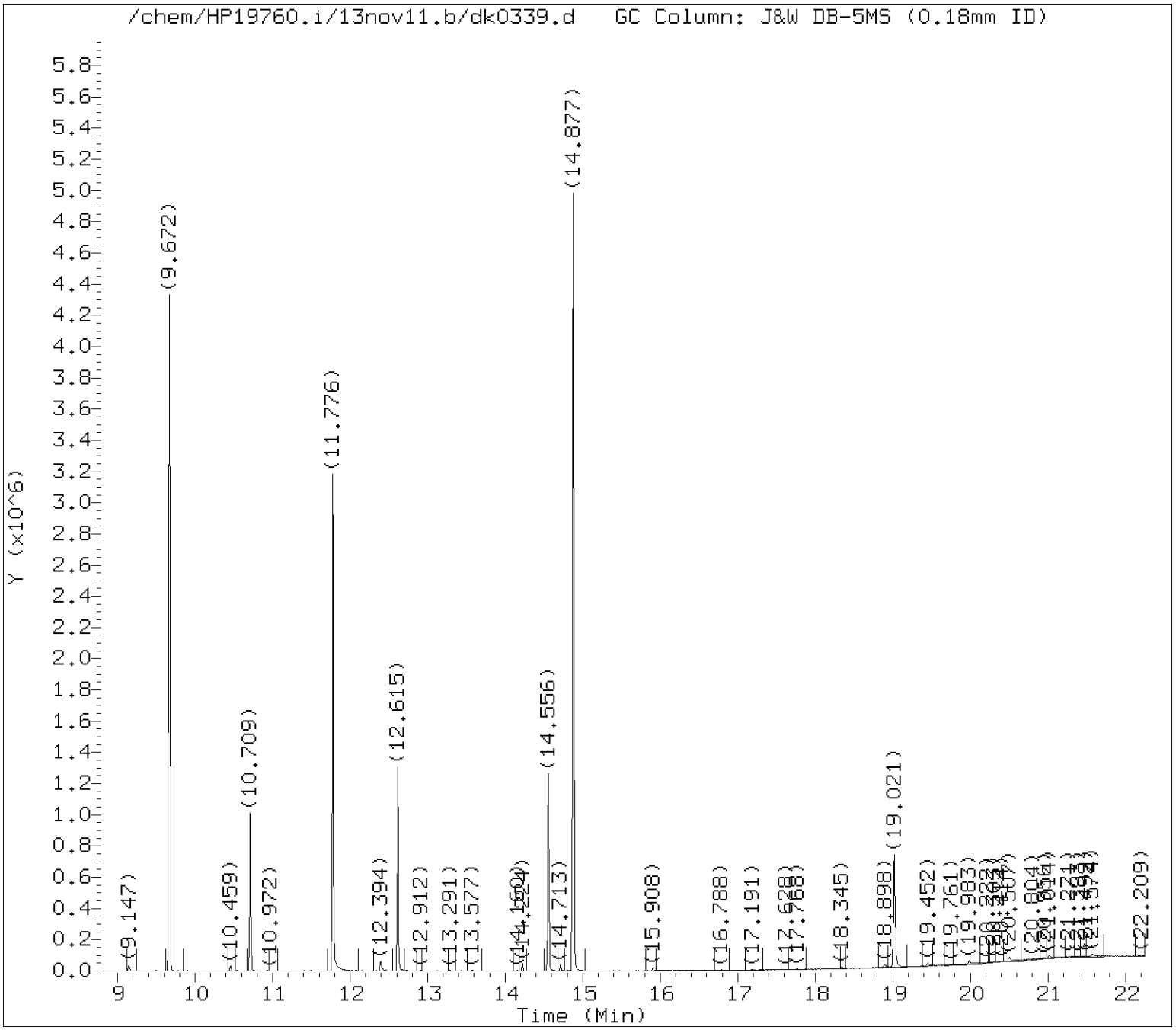
Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.788

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0339.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 12:37 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:50 jmg00346

Sample Name: E2161 Lab Sample ID: 7265235

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.788
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0339.d
Lab Smp Id: 7265235 Client Smp ID: E2161
Inj Date : 11-NOV-2013 12:37
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : E2161;7265235;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;244;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 1 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	244.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.953	795611	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:		
4.729	237729	1.49400463	6.12296	0		0	19

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0339.d

Date : 11-NOV-2013 12:37

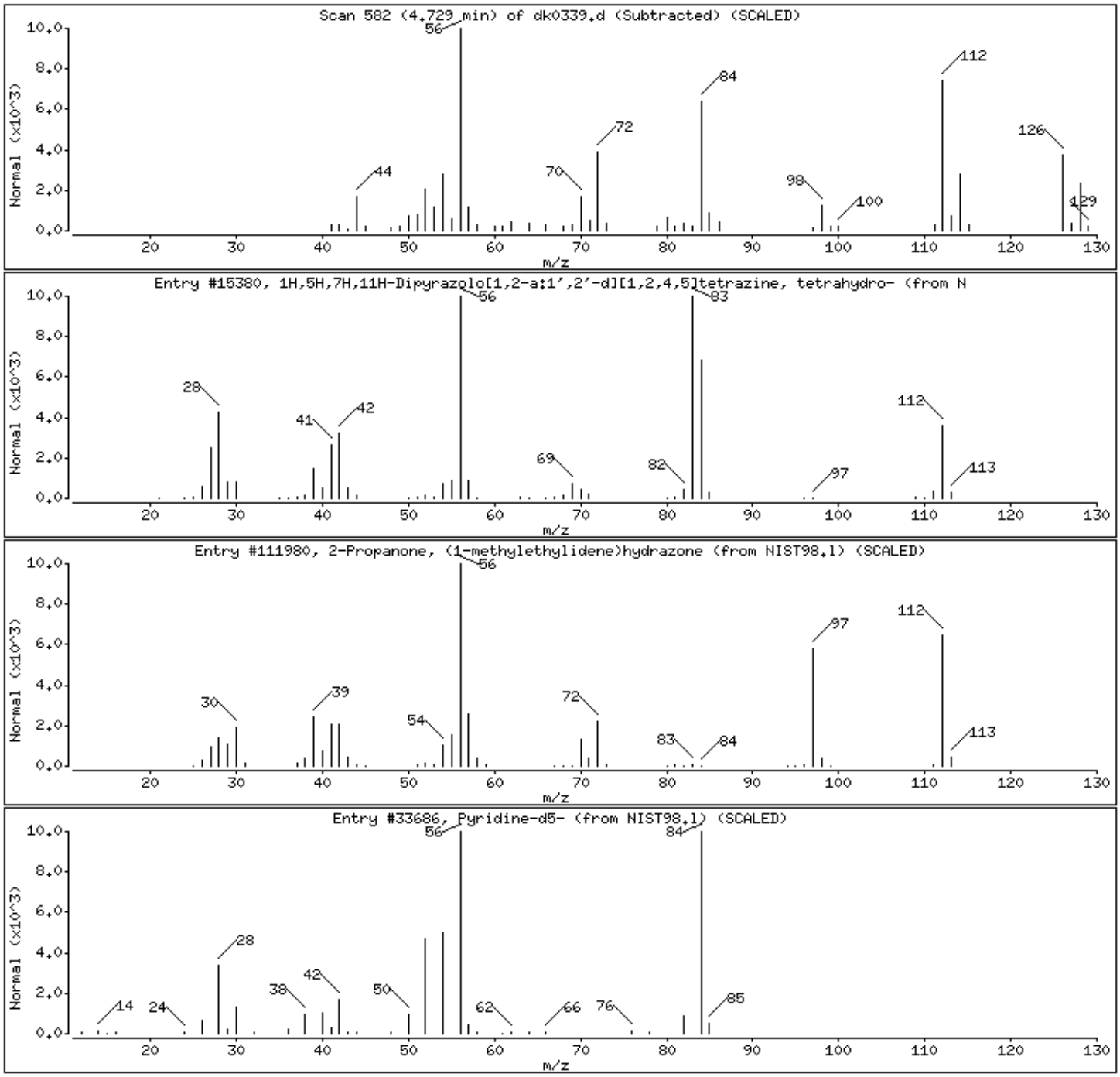
Client ID: E2161 Instrument: HP19760.i

Sample Info: E2161;7265235;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
1H,5H,7H,11H-Dipyrazolo[1,2-a:1',2'-d][1	37882-92-1	NIST98.1	15380	35	C8H16N4	168
2-Propanone, (1-methylethylidene)hydrazo	627-70-3	NIST98.1	111980	35	C6H12N2	112
Pyridine-d5-	7291-22-7	NIST98.1	33686	27	C5D5N	84



Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov15.b/ck0558.d Injection date and time: **15-NOV-2013 10:35**
Data file Sample Info. Line: 2E161;7265236;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.127(0.006)	528	152	134680 (-22)	20.00	
52) Naphthalene-d8	6.369(0.006)	730	136	640501 (-22)	20.00	
98) Acenaphthene-d10	8.078(0.006)	1008	164	413105 (-19)	20.00	
135) Phenanthrene-d10	9.517(0.012)	1242	188	764239 (-17)	20.00	
167) Pyrene-d10	10.901(0.006)	1467	212	914828 (-18)	20.00	
175) Perylene-d12	13.495(0.012)	1889	264	650336 (-27)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
9) 2-Fluorophenol	(1)	3.830(0.000)	112	193627	19.216	96%		63 - 126
15) Phenol-d6	(1)	4.807(0.000)	99	275706	18.595	93%		61 - 120
38) Nitrobenzene-d5	(2)	5.668(0.001)	82	114019	8.263	83%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.433(0.001)	172	239952	9.238	92%		69 - 120
119) 2,4,6-Tribromophenol	(3)	8.847(0.000)	330	53689	21.521	108%		42 - 134
156) Terphenyl-d14	(5)	11.097(0.001)	244	311892	9.537	95%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
12) Benzaldehyde	(1)			Not Detected					2
16) Phenol	(1)			Not Detected					0.5
18) bis(2-Chloroethyl)ether	(1)			Not Detected					0.5
19) 2-Chlorophenol	(1)			Not Detected					0.5
26) 2-Methylphenol	(1)			Not Detected					0.5
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.5
30) Acetophenone	(1)			Not Detected					0.5
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.5
33) 4-Methylphenol	(1)			Not Detected					0.5
37) Hexachloroethane	(1)			Not Detected					1
39) Nitrobenzene	(2)			Not Detected					0.5
41) Isophorone	(2)			Not Detected					0.5
42) 2-Nitrophenol	(2)			Not Detected					0.5
44) 2,4-Dimethylphenol	(2)			Not Detected					0.5
46) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.5
49) 2,4-Dichlorophenol	(2)			Not Detected					0.5
53) Naphthalene	(2)			Not Detected					0.1
56) 4-Chloroaniline	(2)			Not Detected					0.5
60) Hexachlorobutadiene	(2)			Not Detected					0.5
63) Caprolactam	(2)			Not Detected					1
68) 4-Chloro-3-methylphenol	(2)			Not Detected					0.5
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
72) Hexachlorocyclopentadiene	(3)			Not Detected					5
75) 2,4,6-Trichlorophenol	(3)			Not Detected					0.5
77) 2,4,5-Trichlorophenol	(3)			Not Detected					0.5
83) 1,1'-Biphenyl	(3)			Not Detected					0.5
84) 2-Chloronaphthalene	(3)			Not Detected					0.2

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov15.b/ck0558.d Injection date and time: **15-NOV-2013 10:35**
Data file Sample Info. Line: 2E161;7265236;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 10 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

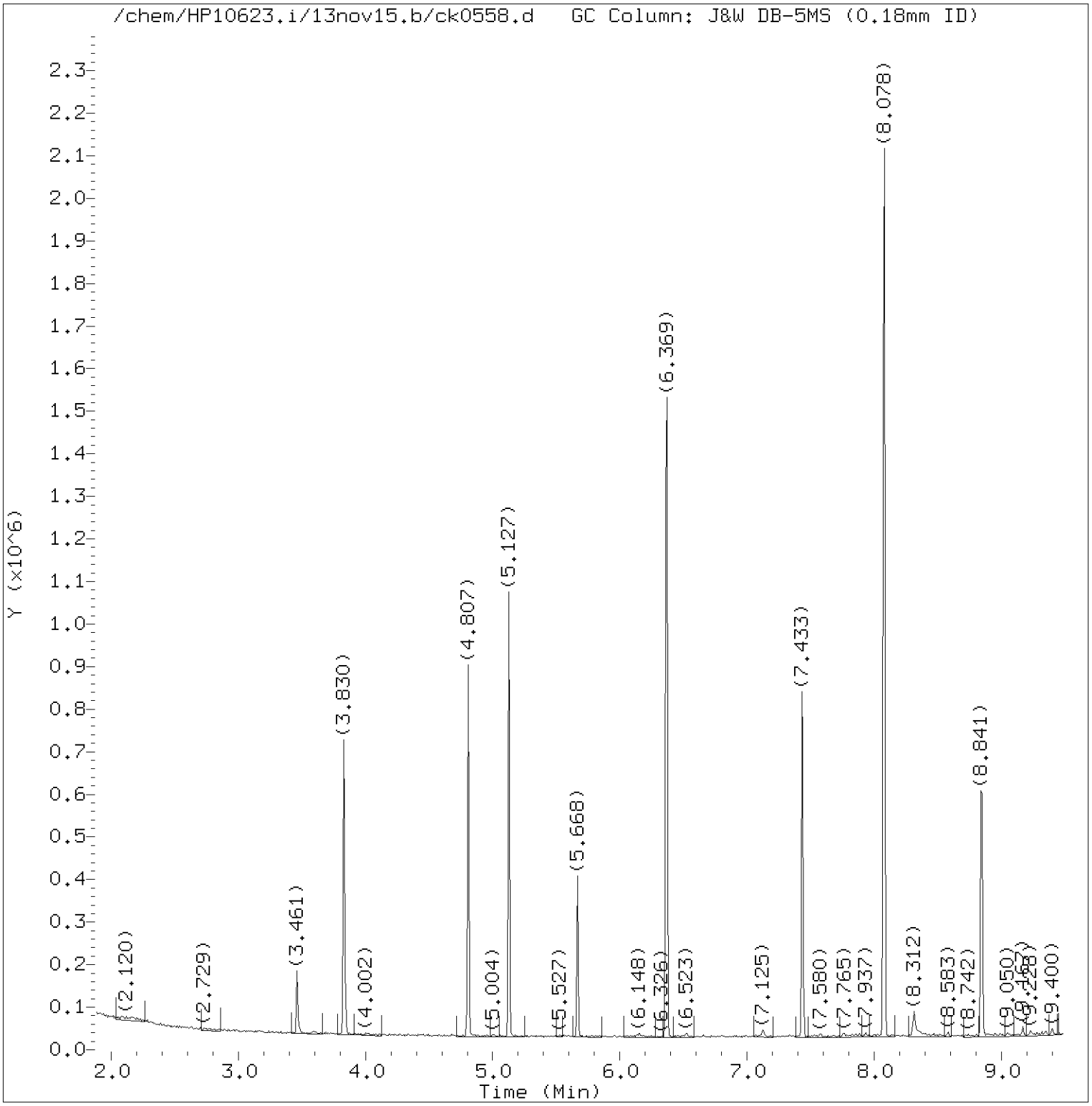
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
89) 2-Nitroaniline	(3)			Not Detected					0.5
92) Dimethylphthalate	(3)			Not Detected					2
94) 2,6-Dinitrotoluene	(3)			Not Detected					0.5
95) Acenaphthylene	(3)			Not Detected					0.1
97) 3-Nitroaniline	(3)			Not Detected					2
99) Acenaphthene	(3)			Not Detected					0.1
100) 2,4-Dinitrophenol	(3)			Not Detected					9
103) 4-Nitrophenol	(3)			Not Detected					5
104) Dibenzofuran	(3)			Not Detected					0.5
105) 2,4-Dinitrotoluene	(3)			Not Detected					2
109) Diethylphthalate	(3)			Not Detected					2
111) Fluorene	(3)			Not Detected					0.1
112) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.5
114) 4-Nitroaniline	(3)			Not Detected					2
115) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					5
117) N-Nitrosodiphenylamine	(4)			Not Detected					0.5
125) 4-Bromophenyl-phenylether	(4)			Not Detected					0.5
127) Hexachlorobenzene	(4)			Not Detected					0.1
130) Atrazine	(4)			Not Detected					1
131) Pentachlorophenol	(4)			Not Detected					1
137) Phenanthrene	(4)	9.542(-0.000)	178	7762	0.175	174.67			0.1
138) Anthracene	(4)			Not Detected					0.1
140) Carbazole	(4)			Not Detected					0.5
142) Di-n-butylphthalate	(4)			Not Detected					2
147) Fluoranthene	(4)	10.698(-0.000)	202	12989	0.261	261.41			0.1
154) Pyrene	(5)	10.913(0.000)	202	14504	0.285	285.49			0.1
161) Butylbenzylphthalate	(5)			Not Detected					2
164) 3,3'-Dichlorobenzidine	(5)			Not Detected					3
166) Benzo(a)anthracene	(5)	12.087(0.000)	228	6568	0.140	140.17			0.1
168) Chrysene	(5)	12.124(0.000)	228	7508	0.166	166.18			0.1
169) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					2
170) Di-n-octylphthalate	(6)			Not Detected					2
172) Benzo(b)fluoranthene	(6)	13.139(0.000)	252	8298M	0.209	208.99			0.1
173) Benzo(k)fluoranthene	(6)	13.157(0.000)	252	4599M	0.114	113.53			0.1
174) Benzo(a)pyrene	(6)	13.440(0.000)	252	5836	0.151	150.58			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.491(0.000)	276	4506M	0.109	109.29			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.756(0.001)	276	4289M	0.122	122.11			0.1

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:23. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

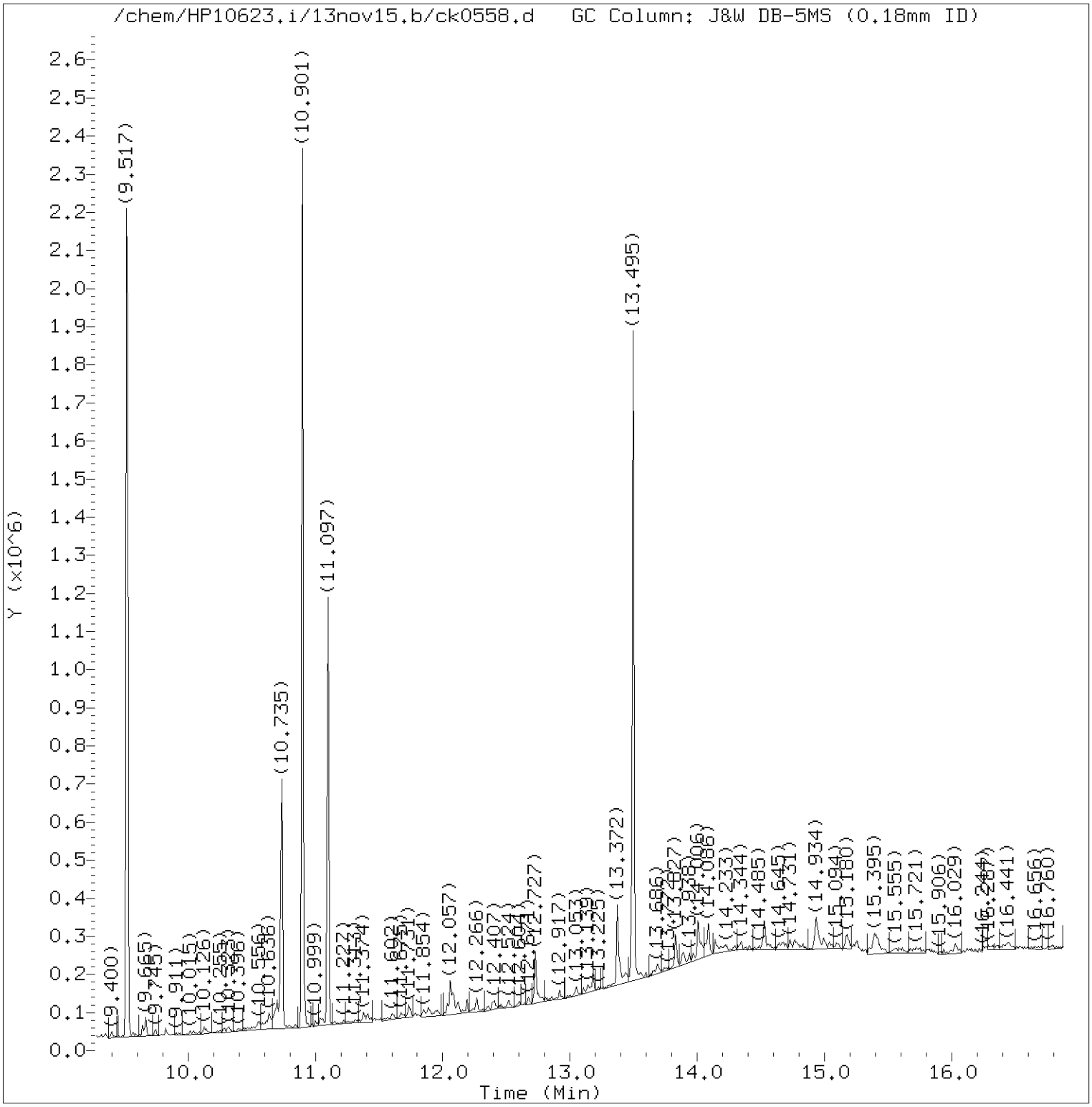
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.830	112	193627	19.216
15)$Phenol-d6	(1)	4.807	99	275706	18.595
21)*1,4-Dichlorobenzene-d4	(1)	5.127	152	134680	20.000
38)$Nitrobenzene-d5	(2)	5.668	82	114019	8.263
52)*Naphthalene-d8	(2)	6.369	136	640501	20.000
78)$2-Fluorobiphenyl	(3)	7.433	172	239952	9.238
98)*Acenaphthene-d10	(3)	8.078	164	413105	20.000
119)$2,4,6-Tribromophenol	(3)	8.847	330	53689	21.521
135)*Phenanthrene-d10	(4)	9.517	188	764239	20.000
137) Phenanthrene	(4)	9.542	178	7762	0.175
147) Fluoranthene	(4)	10.698	202	12989	0.261
167)*Pyrene-d10	(5)	10.901	212	914828	20.000
154) Pyrene	(5)	10.913	202	14504	0.285
156)$Terphenyl-d14	(5)	11.097	244	311892	9.537
166) Benzo(a)anthracene	(5)	12.087	228	6568	0.140
168) Chrysene	(5)	12.124	228	7508	0.166
172) Benzo(b)fluoranthene	(6)	13.139	252	8298M	0.209
173) Benzo(k)fluoranthene	(6)	13.157	252	4599M	0.114
174) Benzo(a)pyrene	(6)	13.440	252	5836	0.151
175)*Perylene-d12	(6)	13.495	264	650336	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.491	276	4506M	0.109
179) Benzo(g,h,i)perylene	(6)	14.756	276	4289M	0.122

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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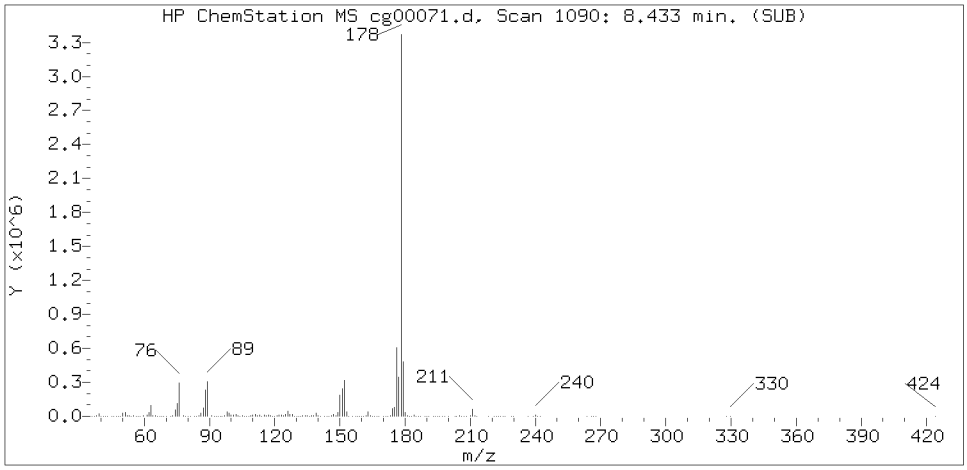
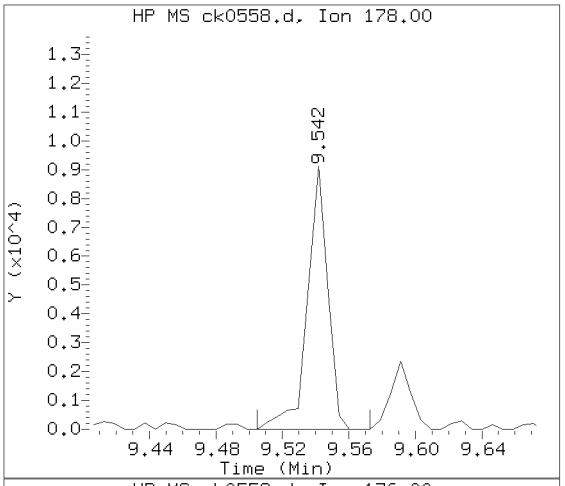
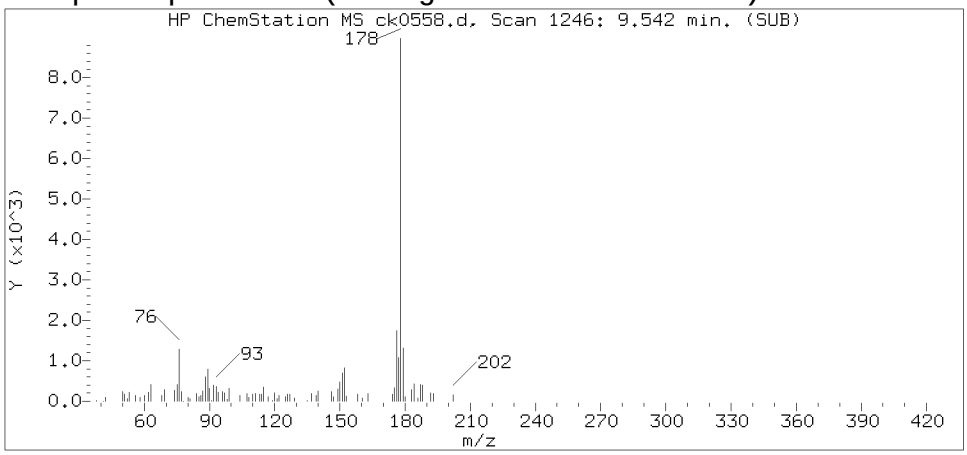
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

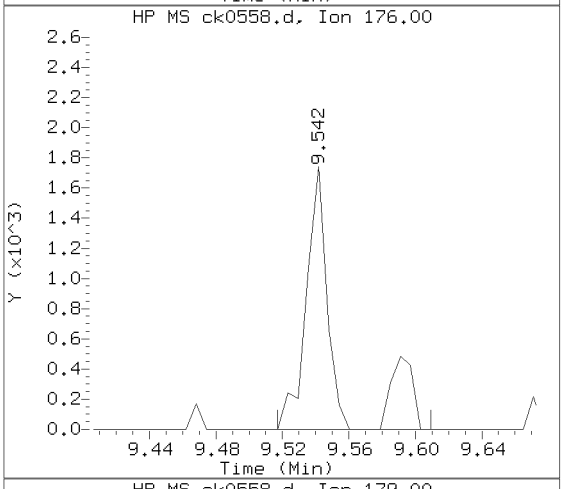
Reference Standard Spectrum for Phenanthrene



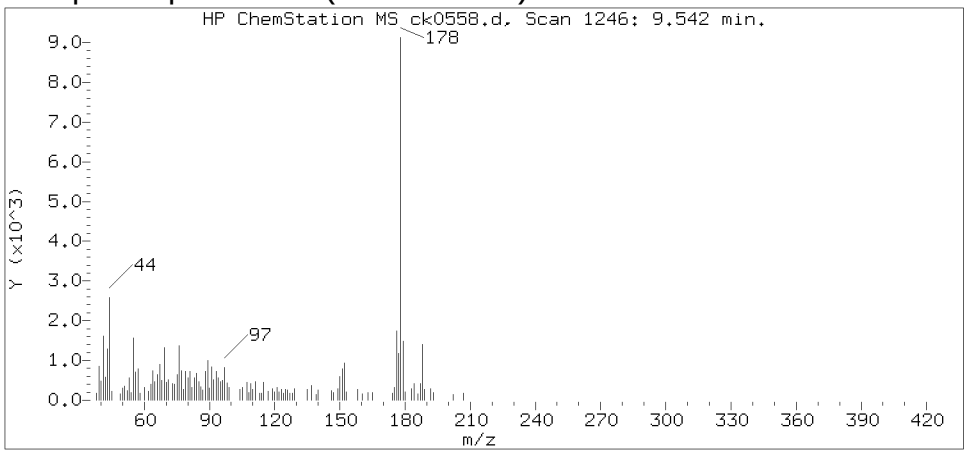


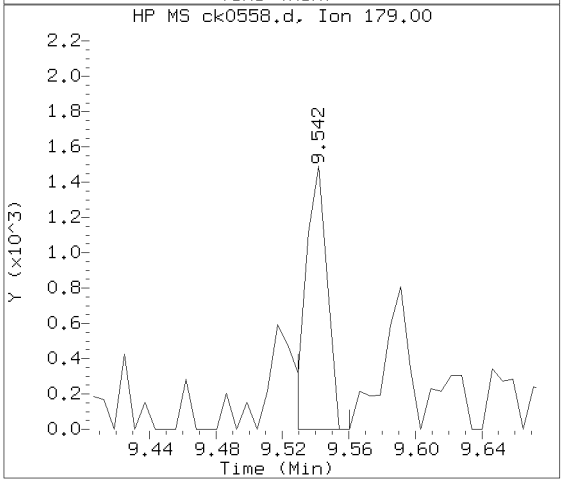
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1246
Retention Time (minutes) : 9.542
Relative Retention Time :-0.00001
Quant Ion : 178.00
Area (flag) : 7762
On-column Amount (ng/ul) : 0.1747

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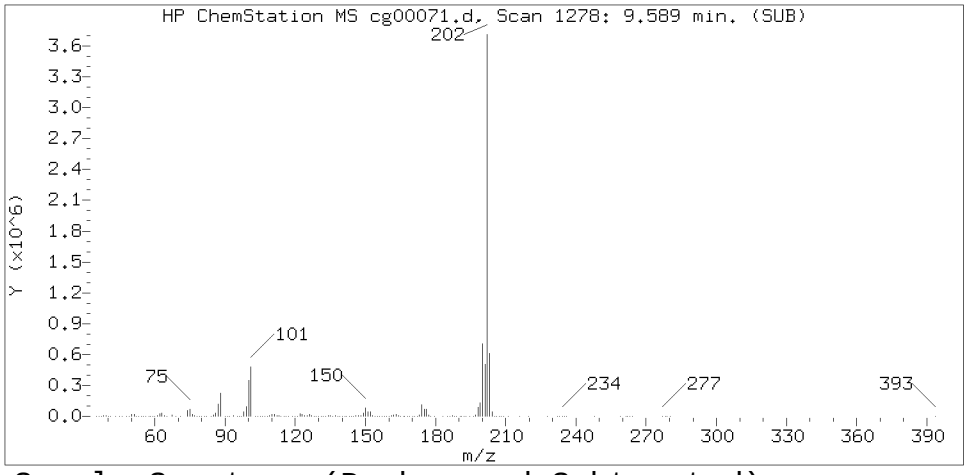
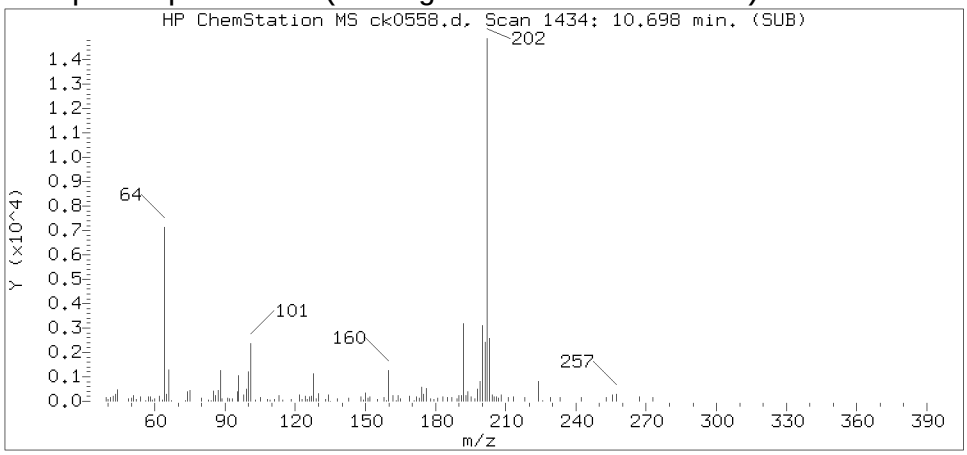
Target 3.5 esignature user ID: mac00013

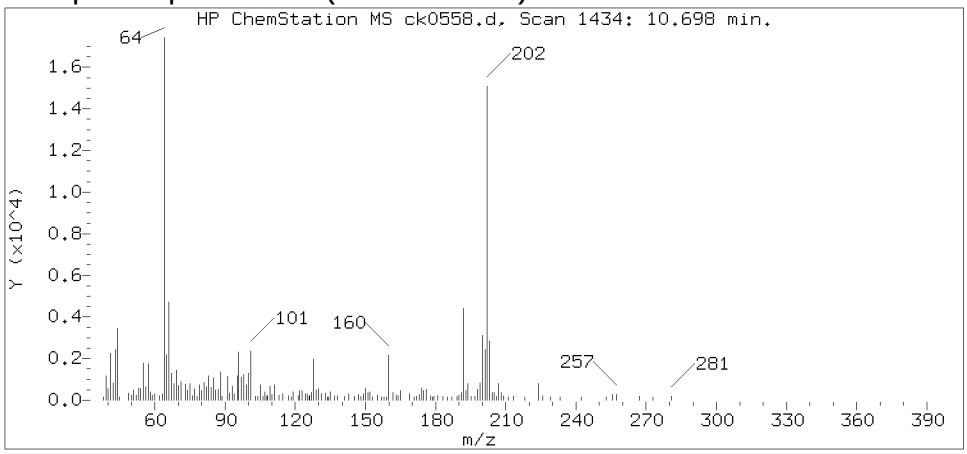
Reference Standard Spectrum for Fluoranthene

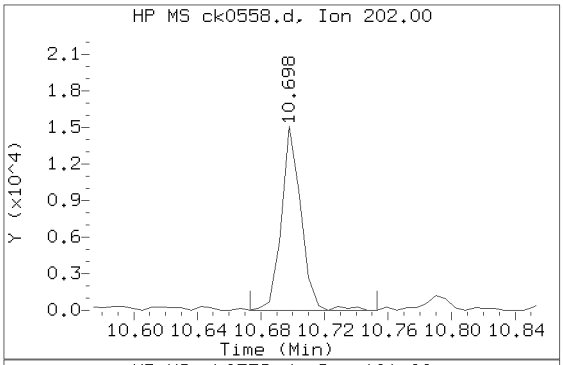


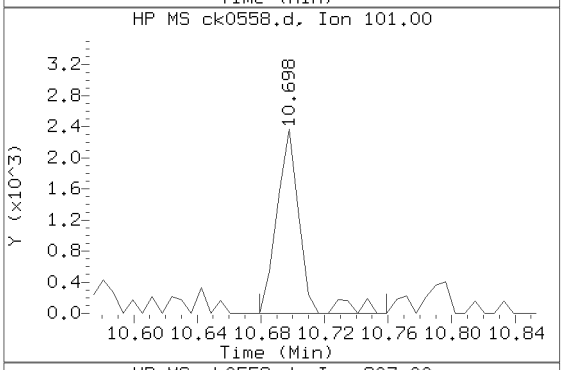
Sample Spectrum (Background Subtracted)

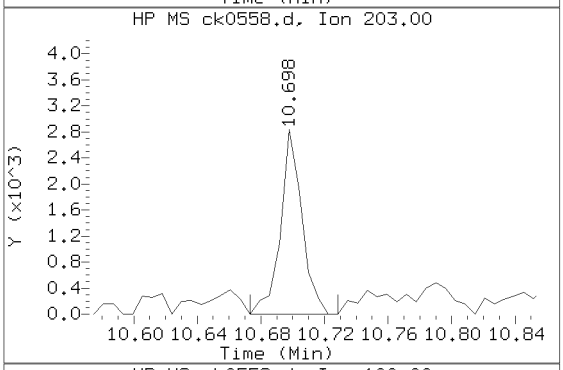


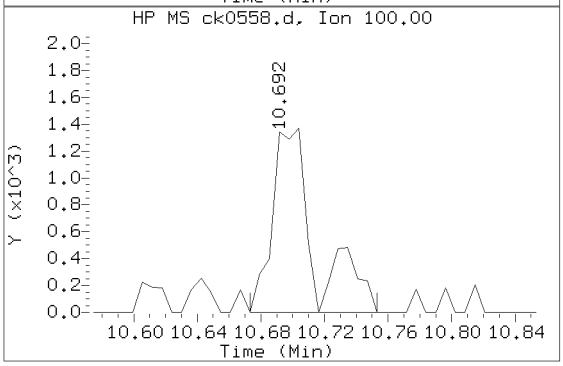
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1434
Retention Time (minutes) : 10.698
Relative Retention Time :-0.00016
Quant Ion : 202.00
Area (flag) : 12989
On-column Amount (ng/ul) : 0.2614

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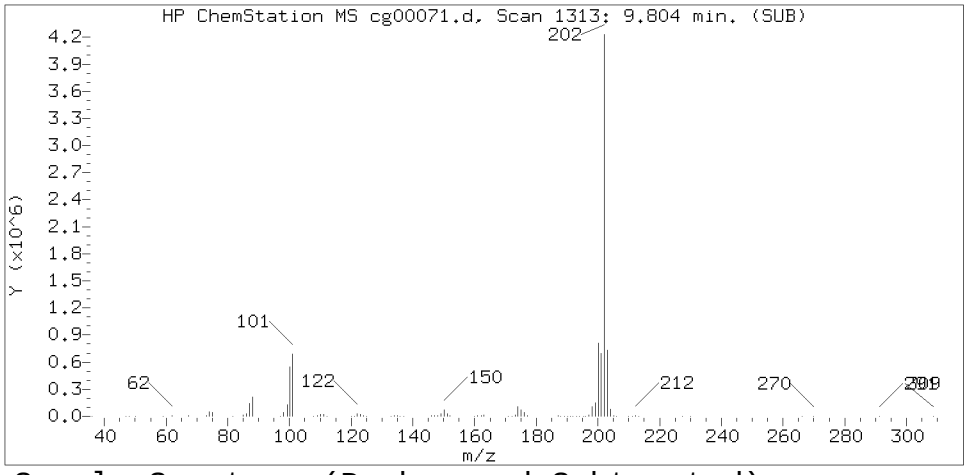
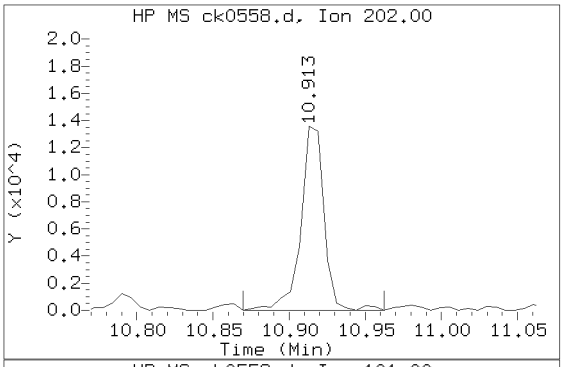
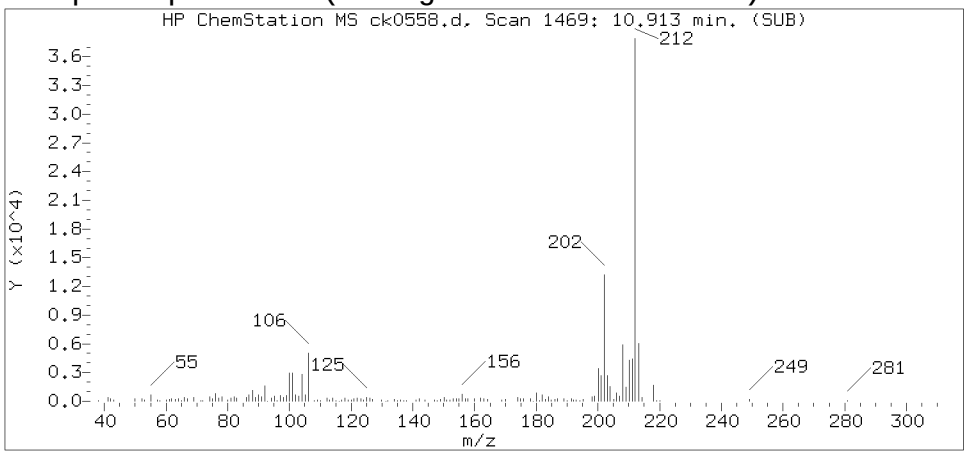
Target 3.5 esignature user ID: mac00013

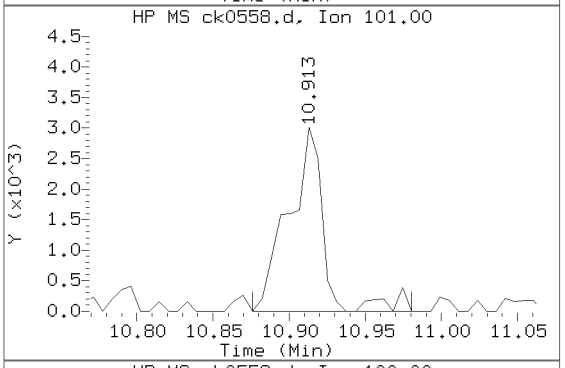
Reference Standard Spectrum for Pyrene

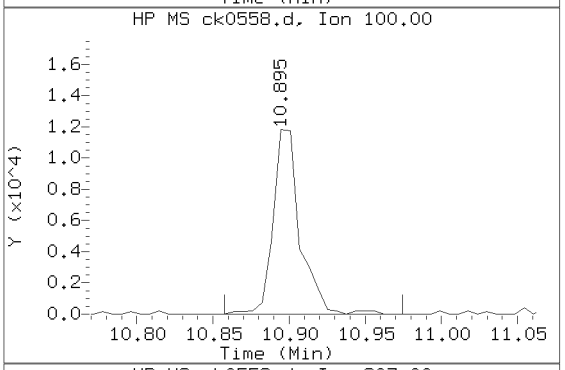




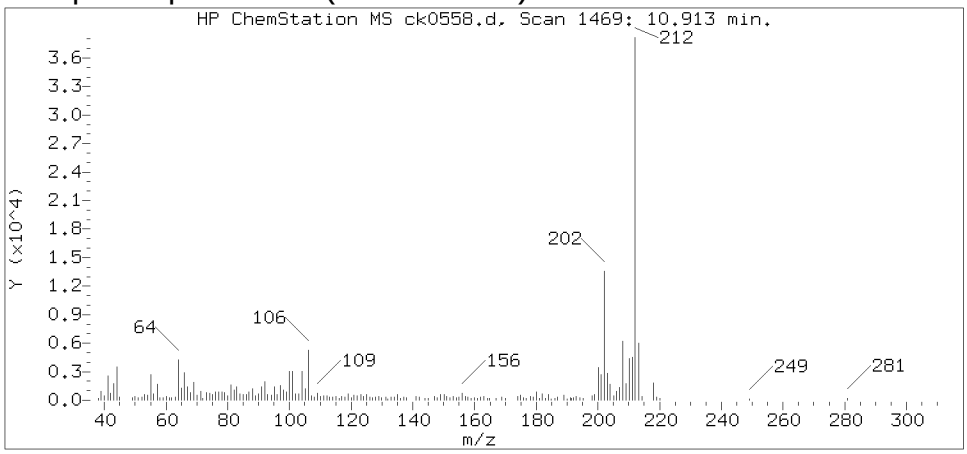
Sample Spectrum (Background Subtracted)

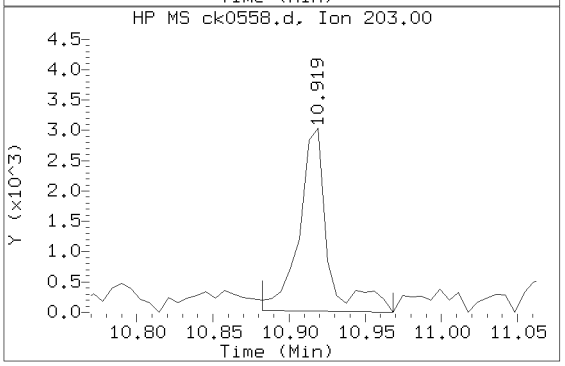






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1469
Retention Time (minutes)	: 10.913
Relative Retention Time	: 0.00056
Quant Ion	: 202.00
Area (flag)	: 14504
On-column Amount (ng/ul)	: 0.2855

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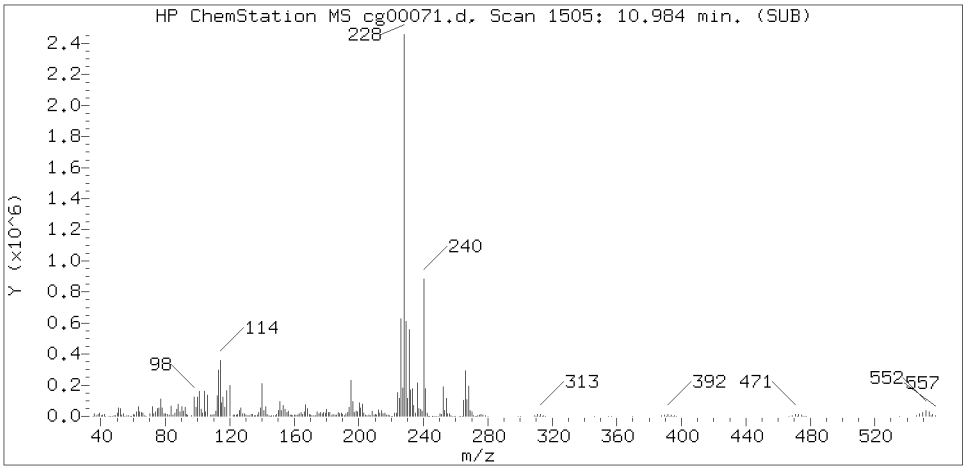
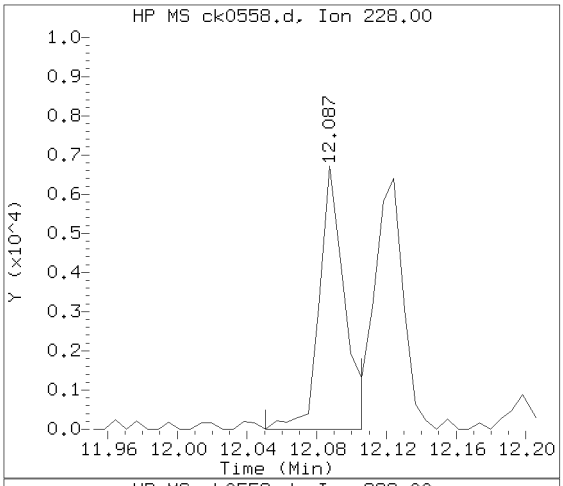
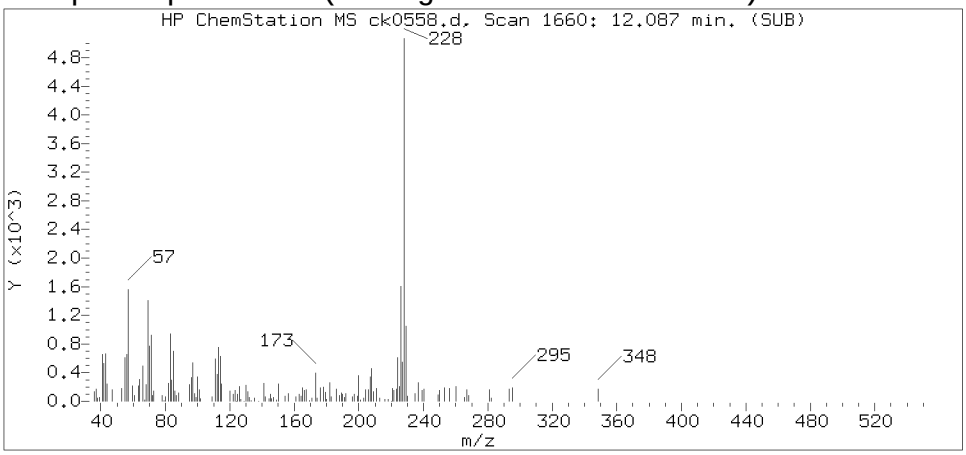
Target 3.5 esignature user ID: mac00013

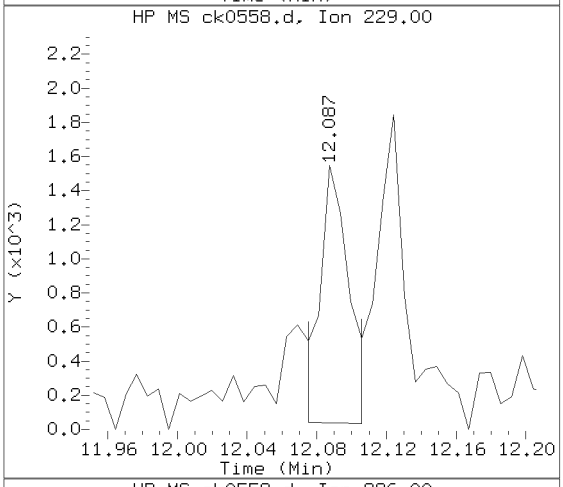
Reference Standard Spectrum for Benzo(a)anthracene



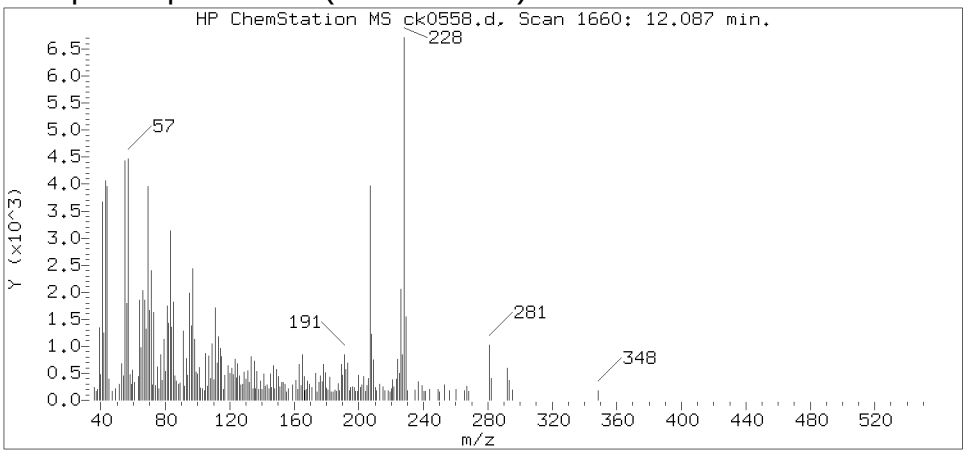


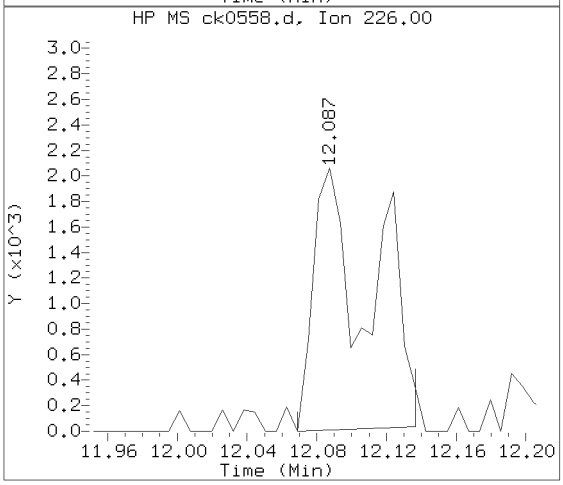
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

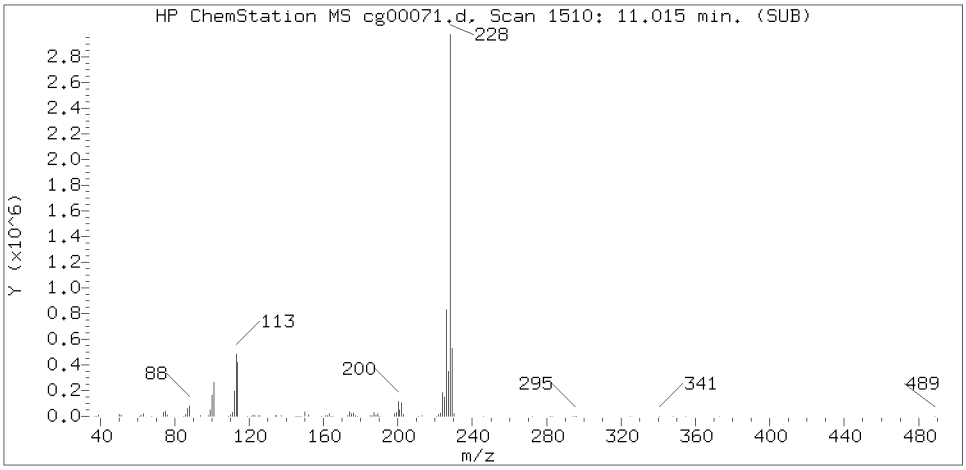
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

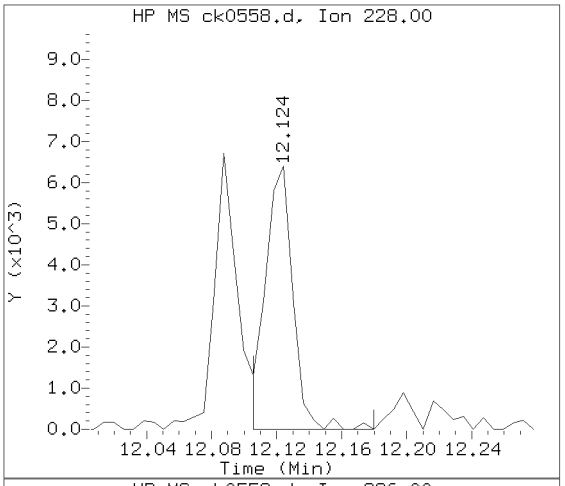
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1660
Retention Time (minutes)	: 12.087
Relative Retention Time	: 0.00050
Quant Ion	: 228.00
Area (flag)	: 6568
On-column Amount (ng/ul)	: 0.1402

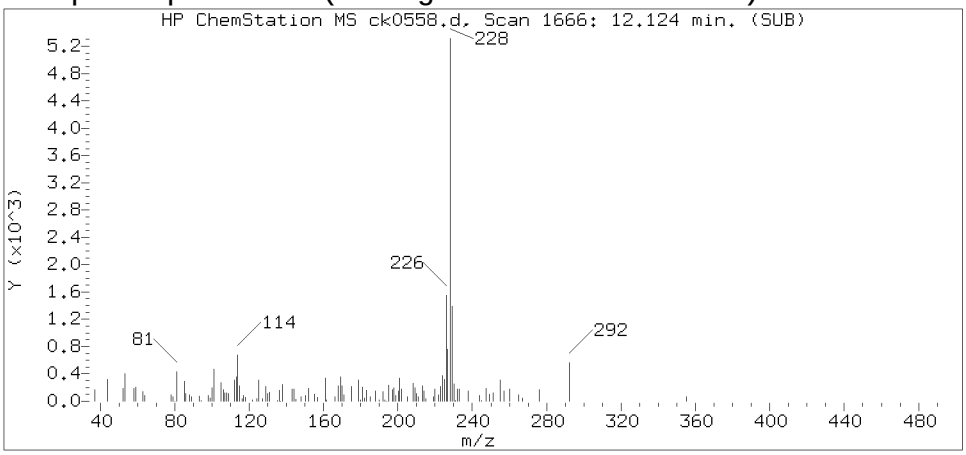
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

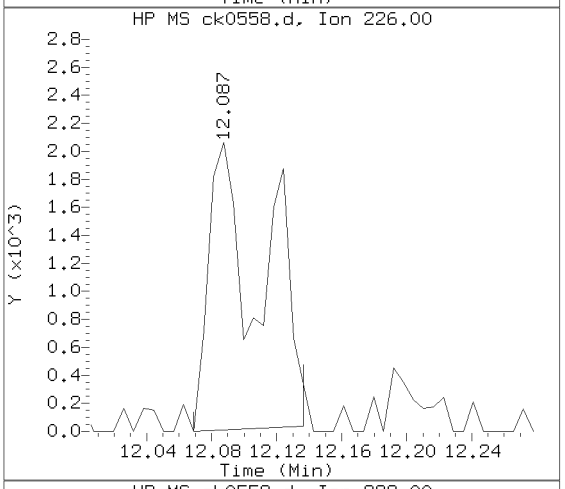
Reference Standard Spectrum for Chrysene



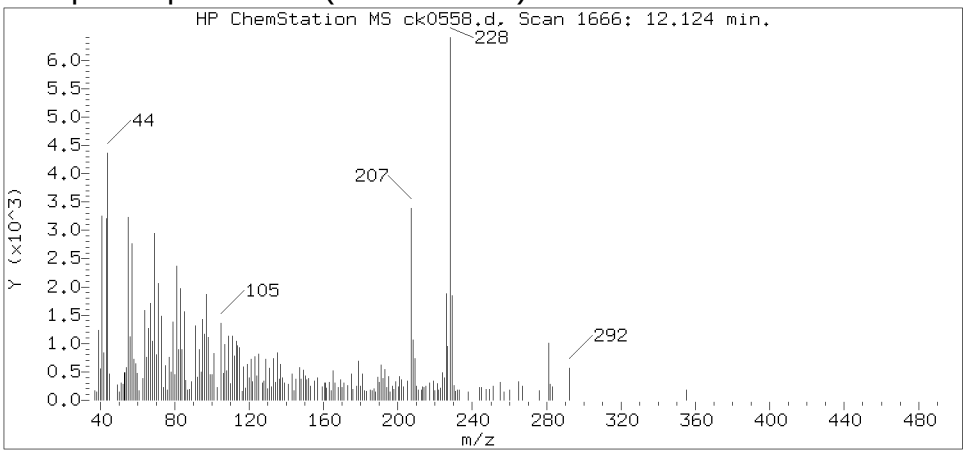


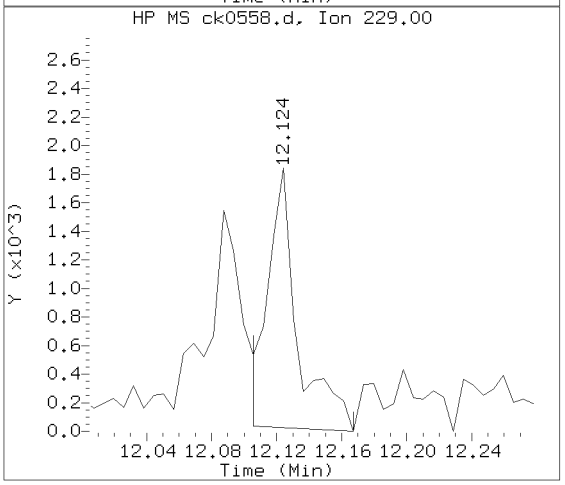
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

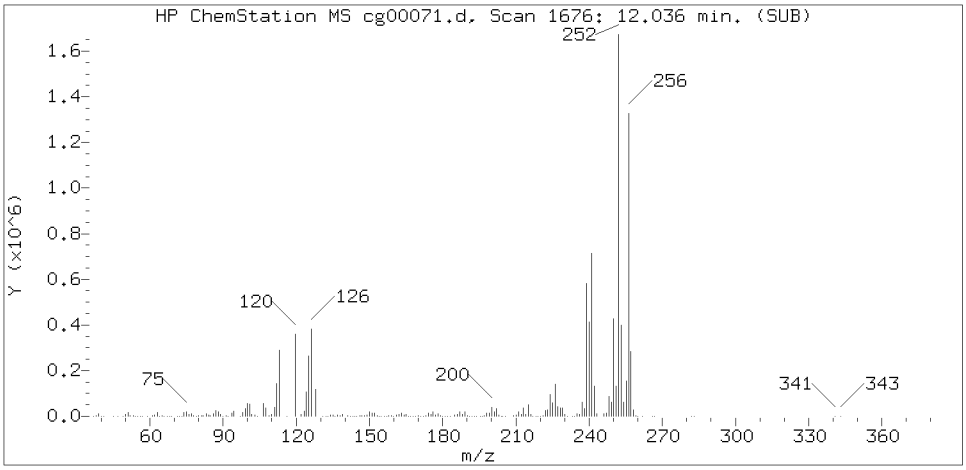
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

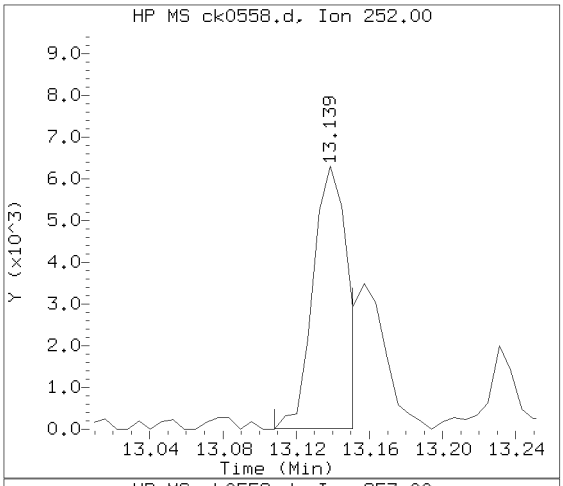
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1666
Retention Time (minutes)	: 12.124
Relative Retention Time	: 0.00050
Quant Ion	: 228.00
Area (flag)	: 7508
On-column Amount (ng/ul)	: 0.1662

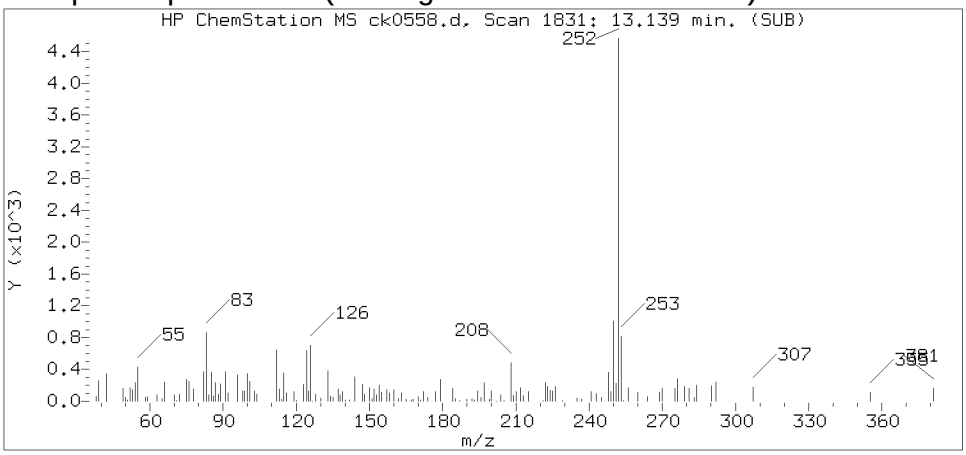
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

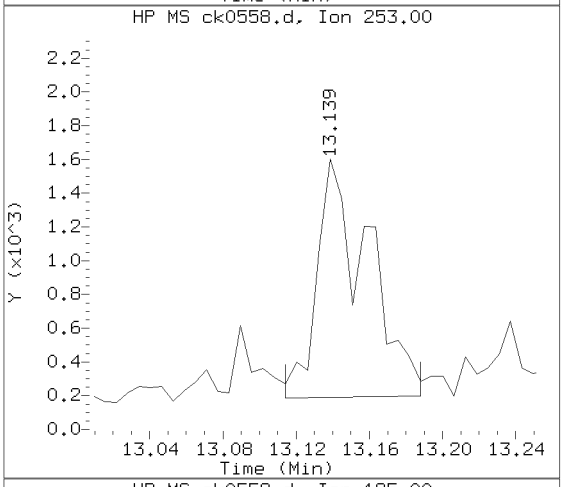
Reference Standard Spectrum for Benzo(b)fluoranthene



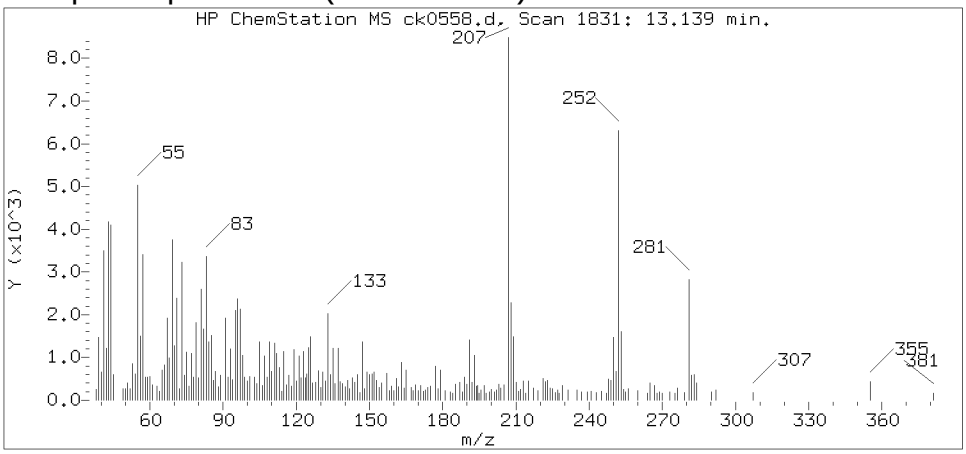


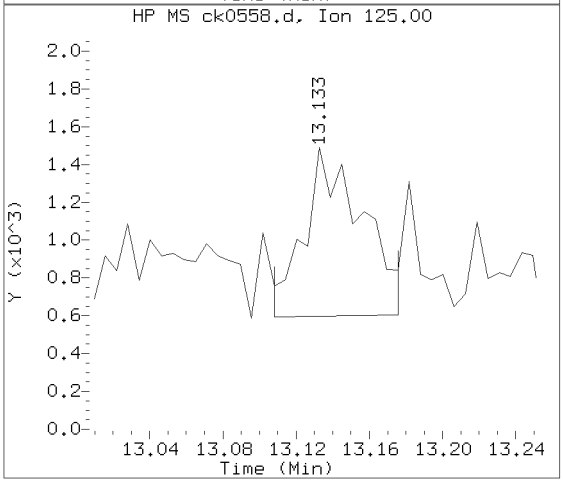
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

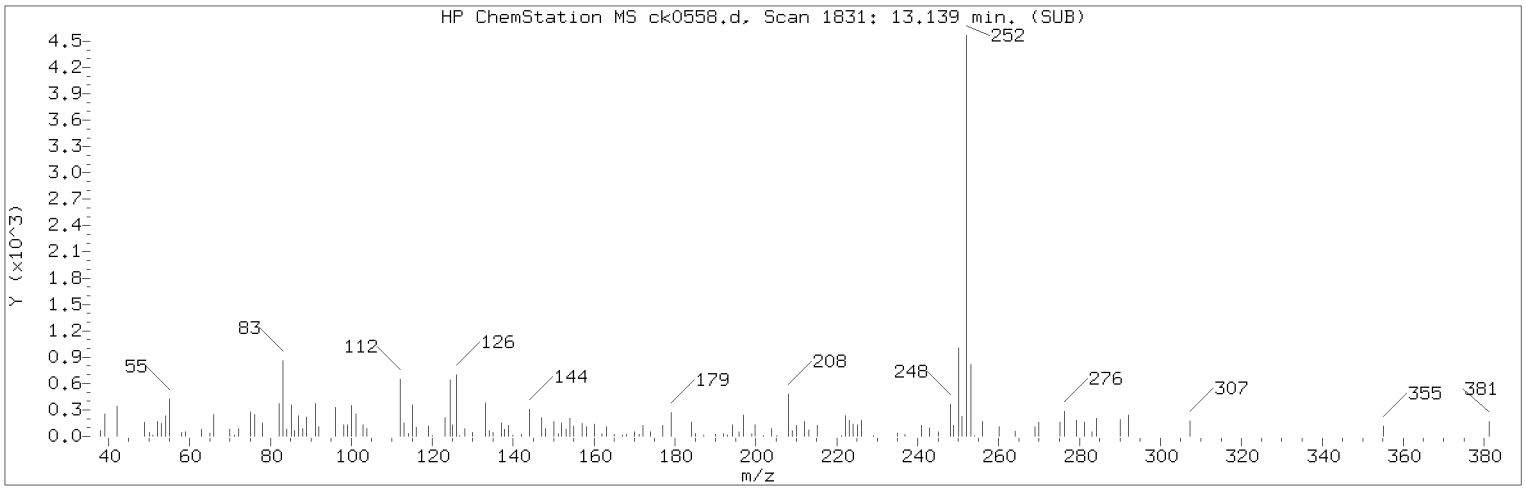
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

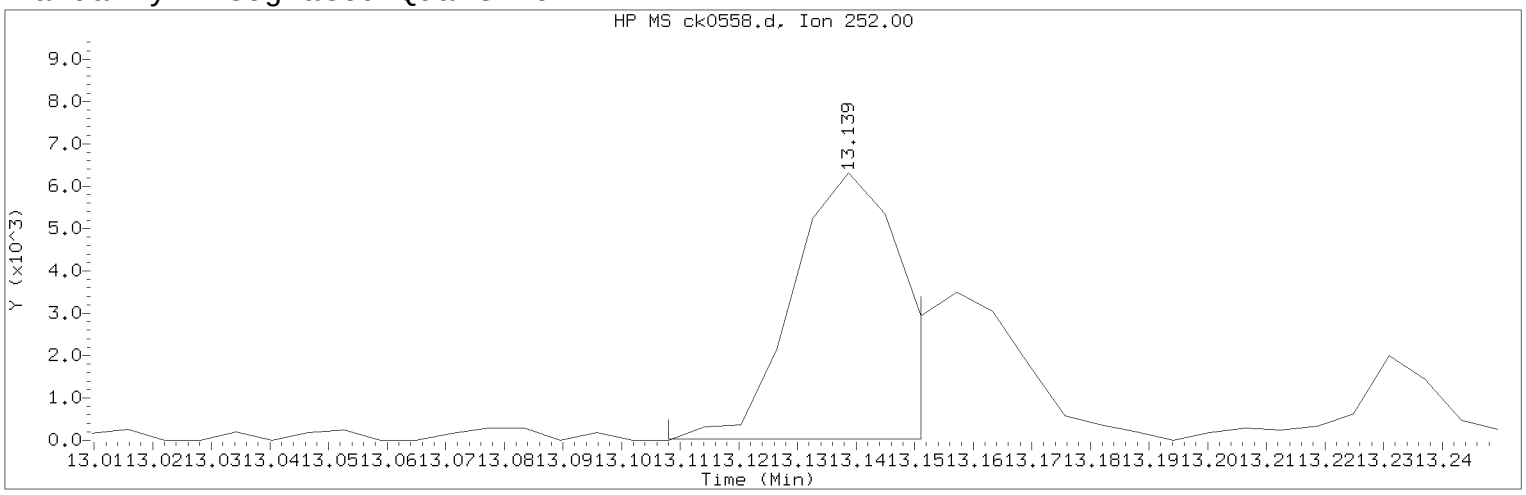
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1831
Retention Time (minutes) : 13.139
Relative Retention Time : 0.00048
Quant Ion : 252.00
Area (flag) : 8298M
On-column Amount (ng/ul) : 0.2090

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

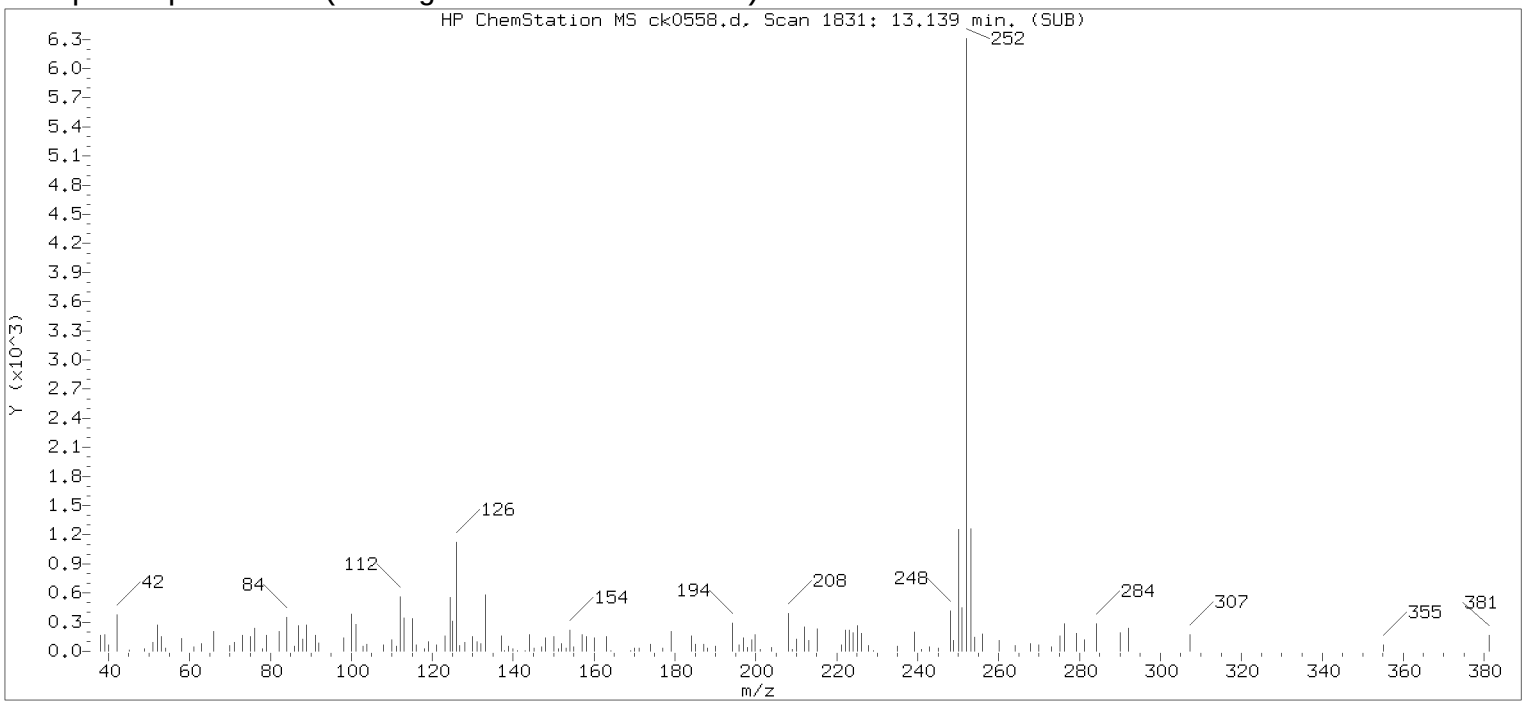
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1831
Retention Time (minutes) : 13.139
Quant Ion : 252.00
Area (flag) : 8298M
On-column Amount (ng/ul) : 0.2090
Integration start scan : 1825 Integration stop scan: 1832
Y at integration start : 23 Y at integration end: 23

Reason for manual integration: improper integration

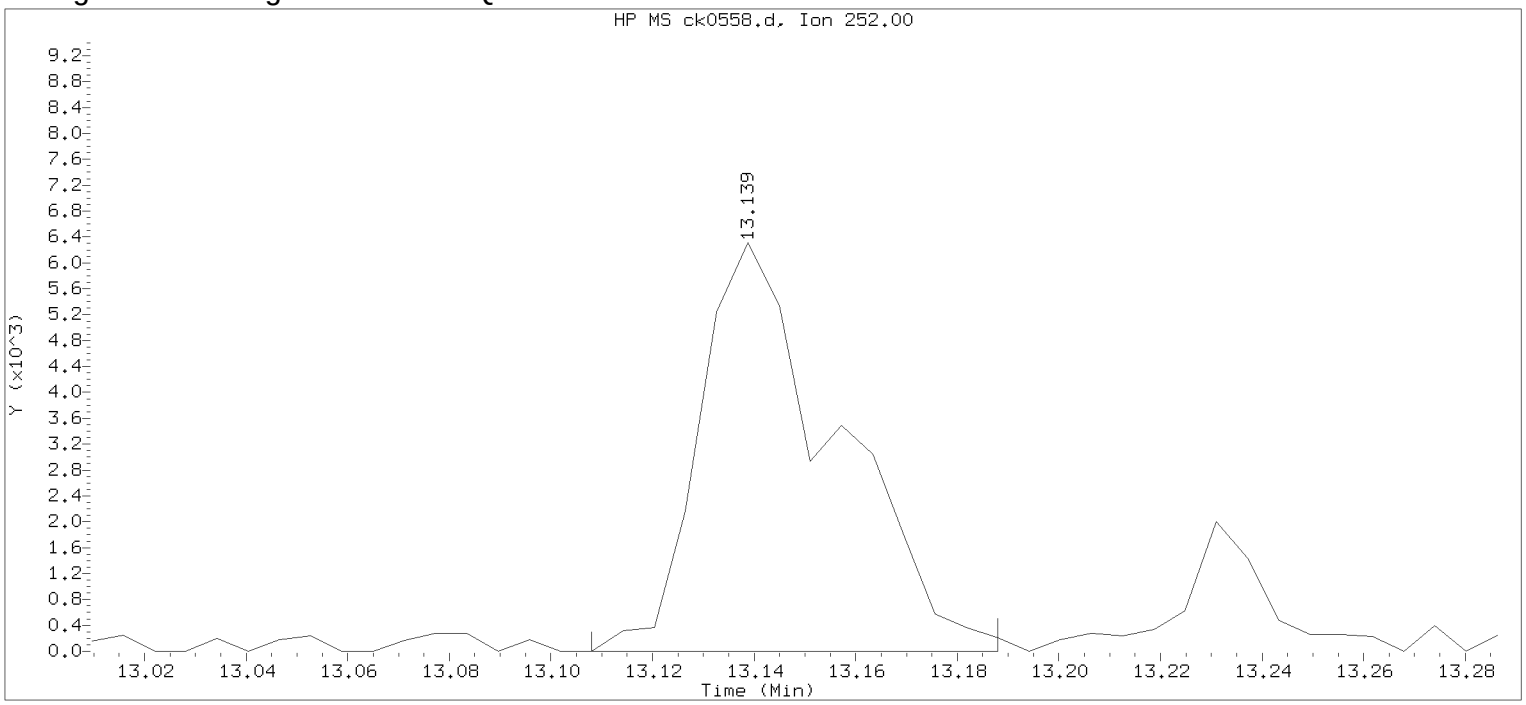
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:23.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

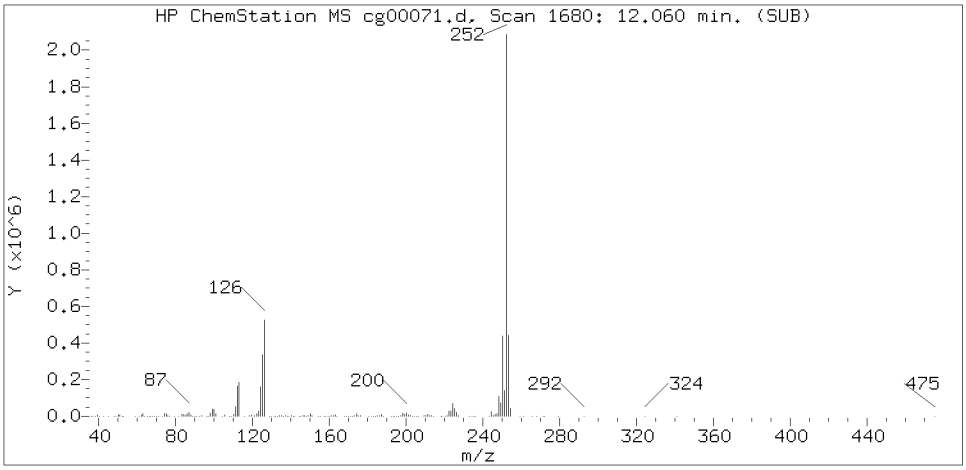
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:54 mac00013

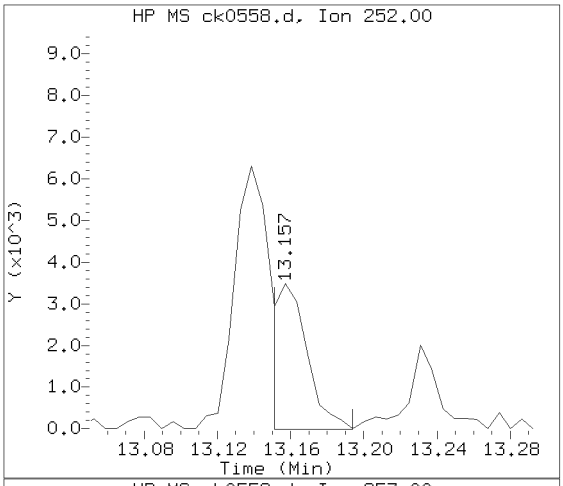
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1831
Retention Time (minutes) : 13.139
Quant Ion : 252.00
Area : 11817
On-column Amount (ng/ul) : 0.2976
Integration start scan : 1825 Integration stop scan: 1838
Y at integration start : 0 Y at integration end: 0

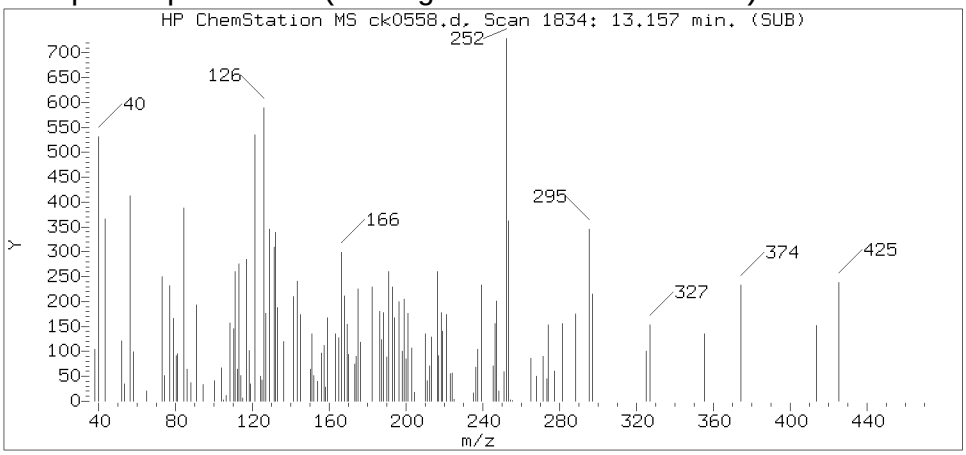
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

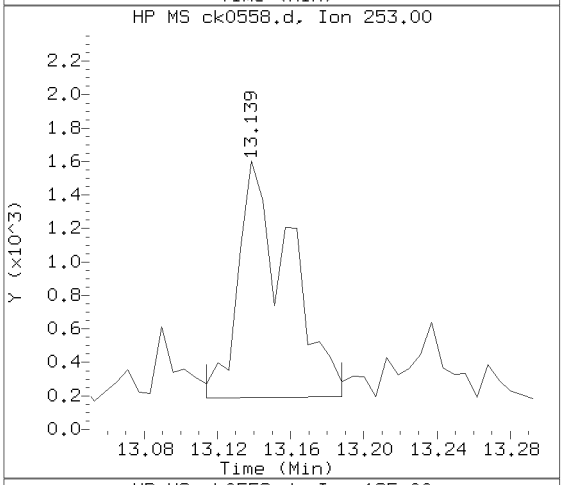
Reference Standard Spectrum for Benzo(k)fluoranthene



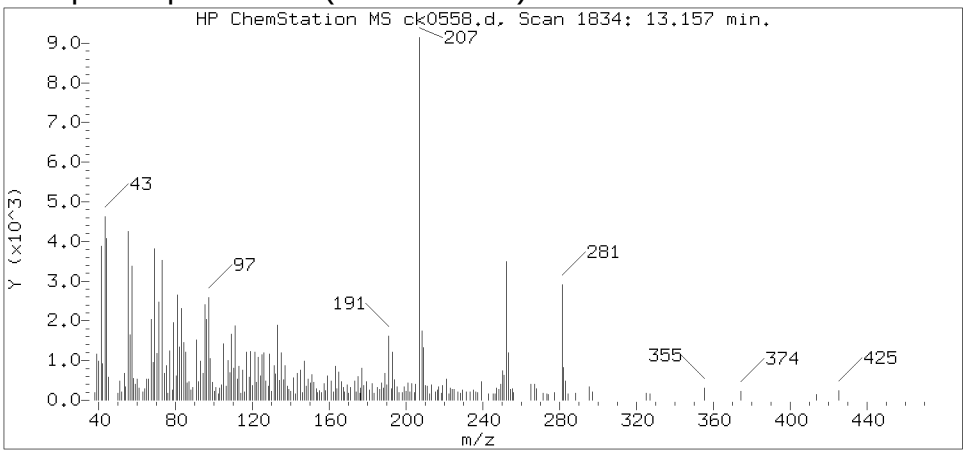


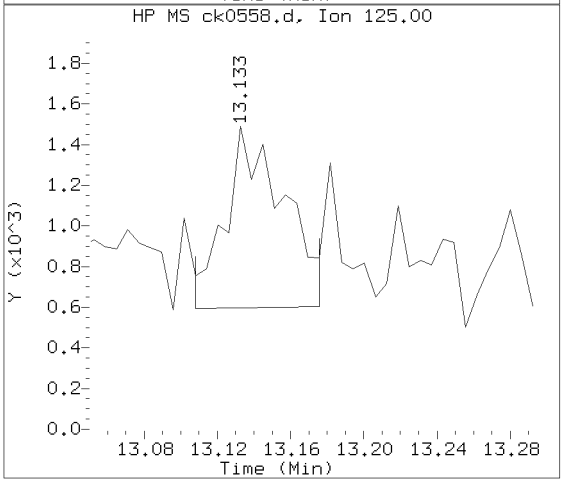
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

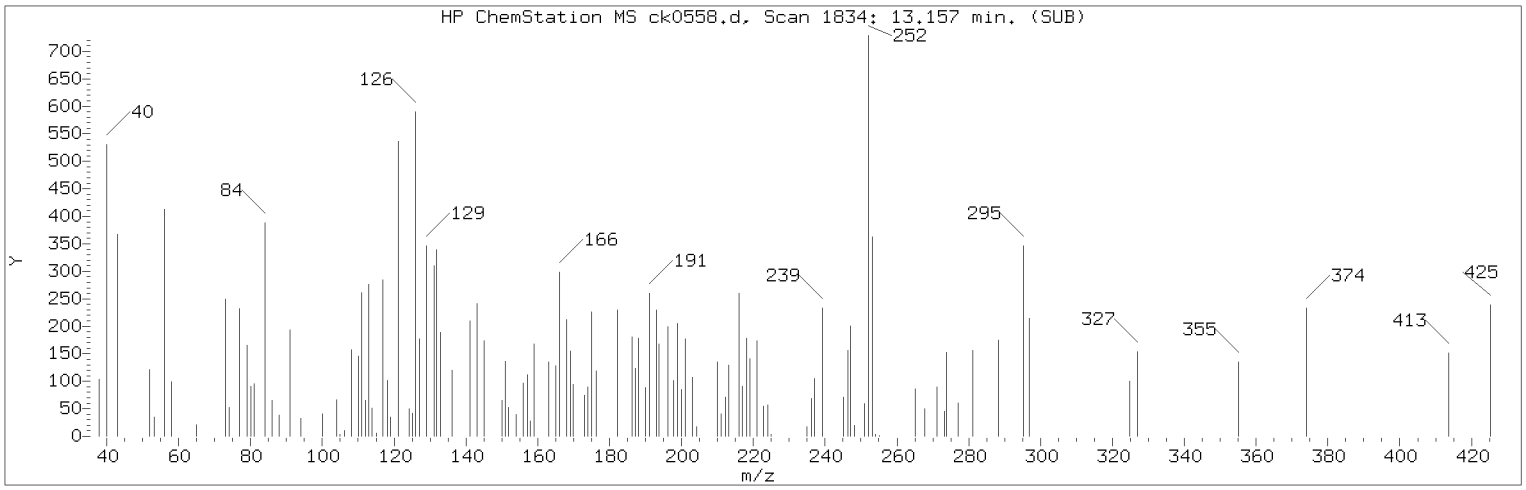
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

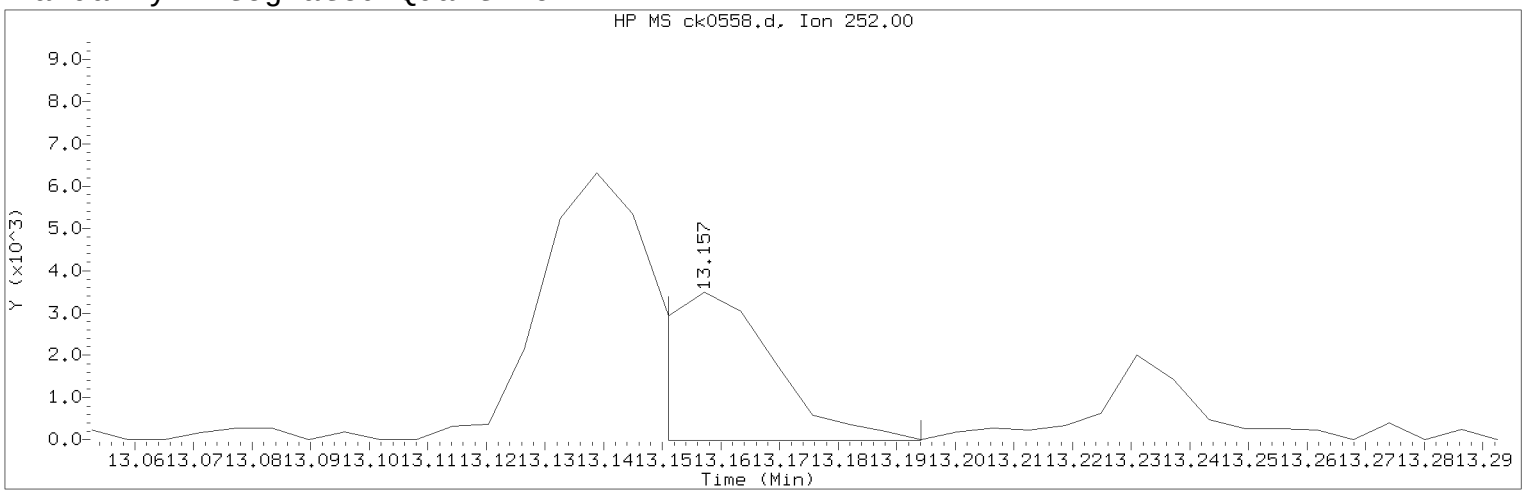
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1834
Retention Time (minutes) : 13.157
Relative Retention Time : 0.00093
Quant Ion : 252.00
Area (flag) : 4599M
On-column Amount (ng/ul) : 0.1135

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

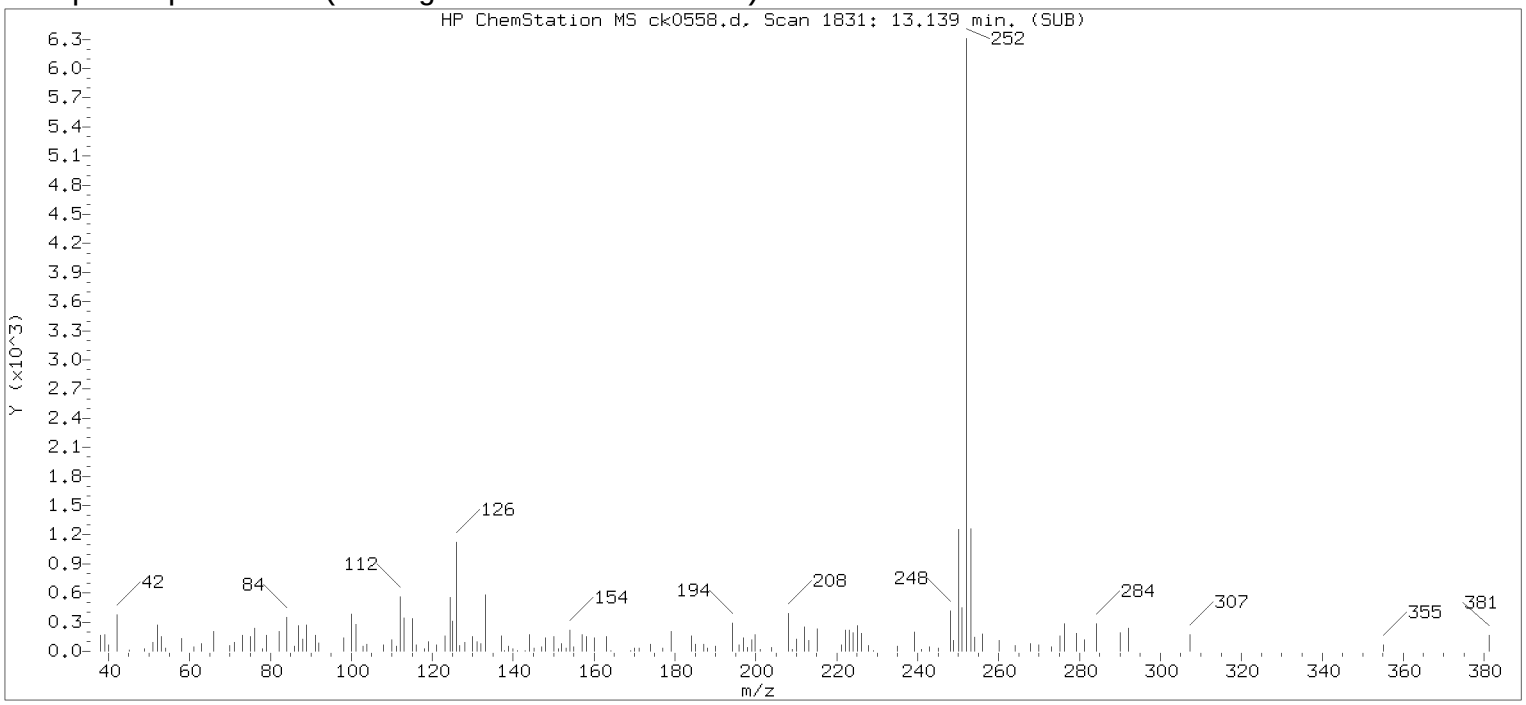
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1834
Retention Time (minutes) : 13.157
Quant Ion : 252.00
Area (flag) : 4599M
On-column Amount (ng/ul) : 0.1135
Integration start scan : 1832 Integration stop scan: 1839
Y at integration start : -10 Y at integration end: -10

Reason for manual integration: improper integration

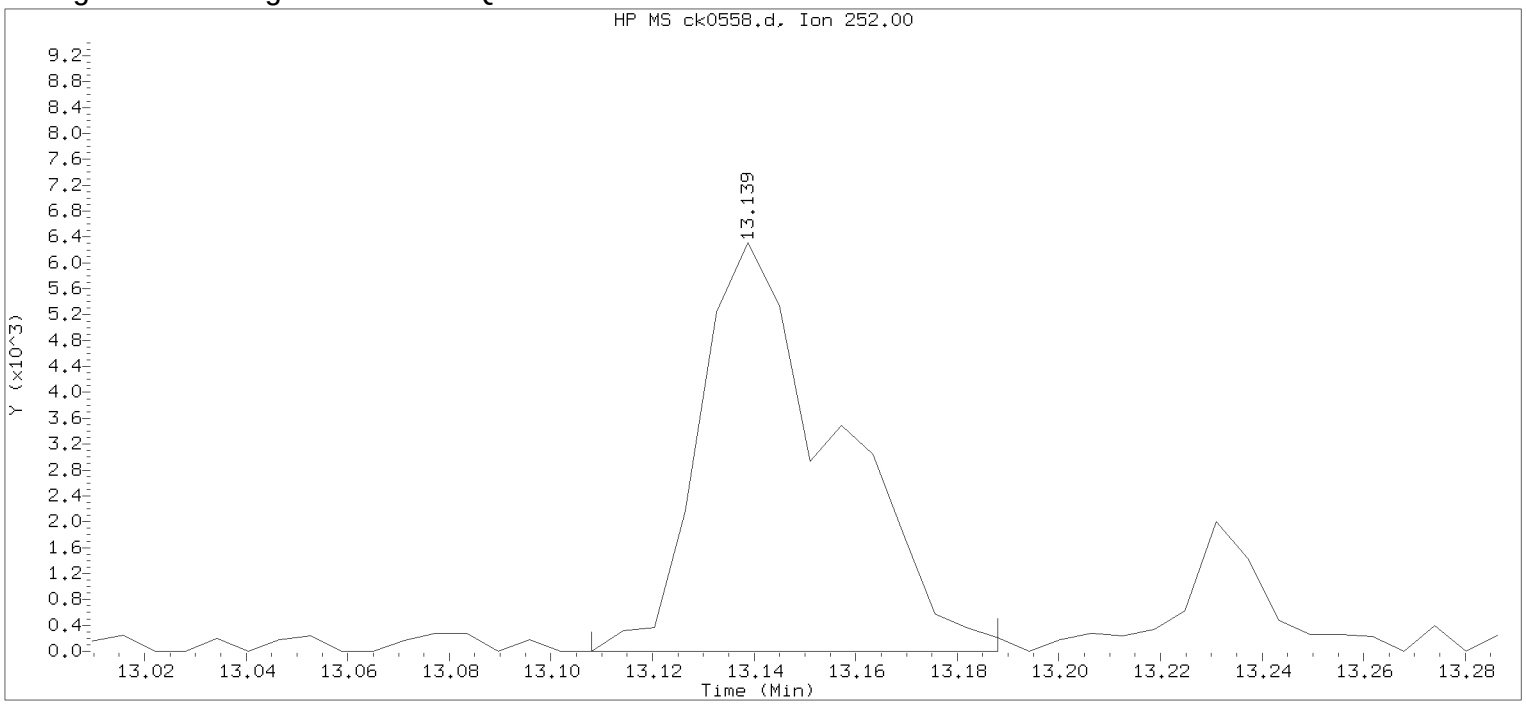
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:23.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

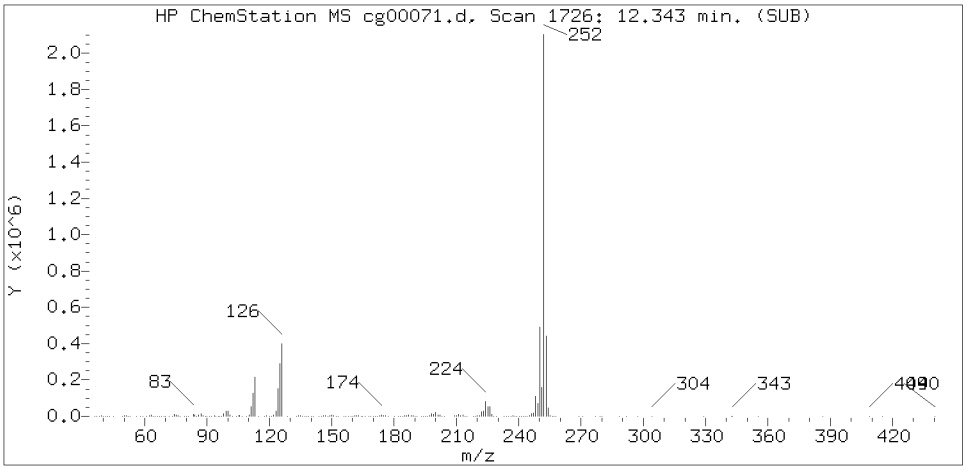
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:54 mac00013

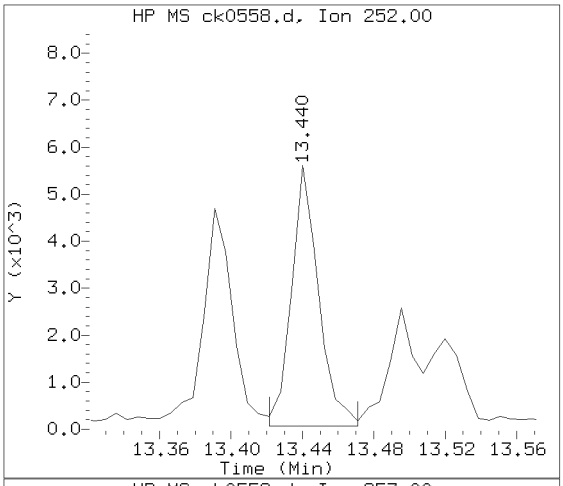
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1831
Retention Time (minutes) : 13.139
Quant Ion : 252.00
Area : 11817
On-column Amount (ng/ul) : 0.2917
Integration start scan : 1825 Integration stop scan: 1838
Y at integration start : 0 Y at integration end: 0

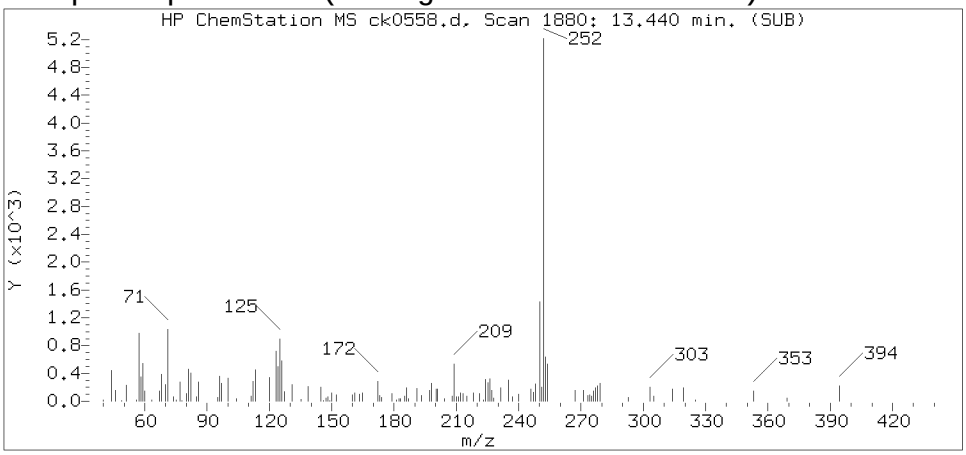
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

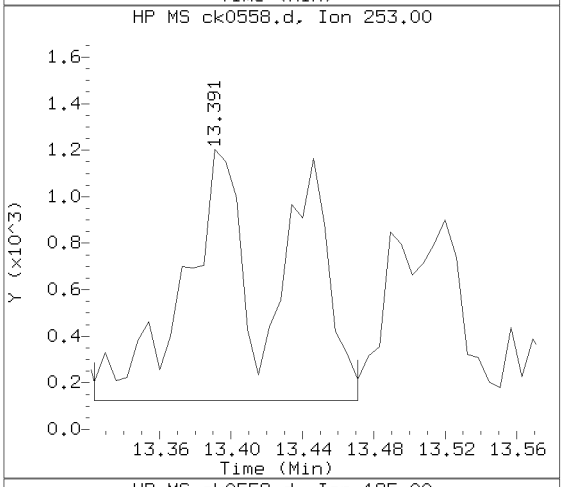
Reference Standard Spectrum for Benzo(a)pyrene



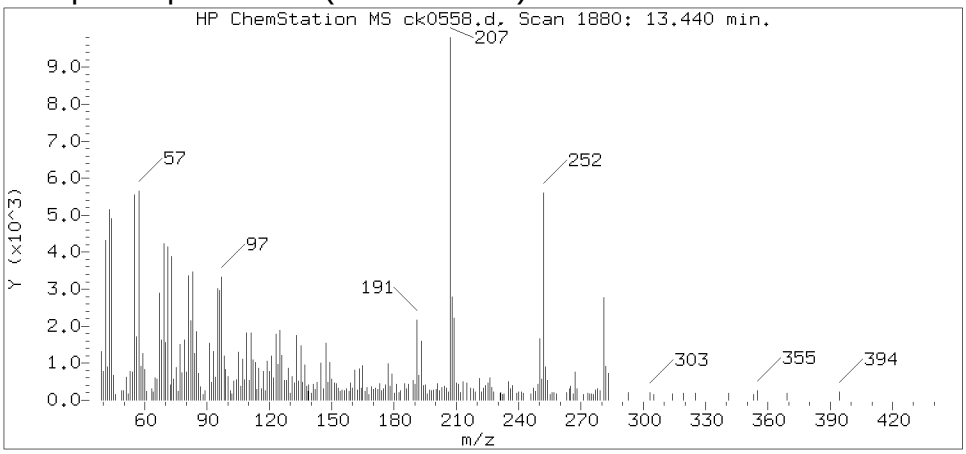


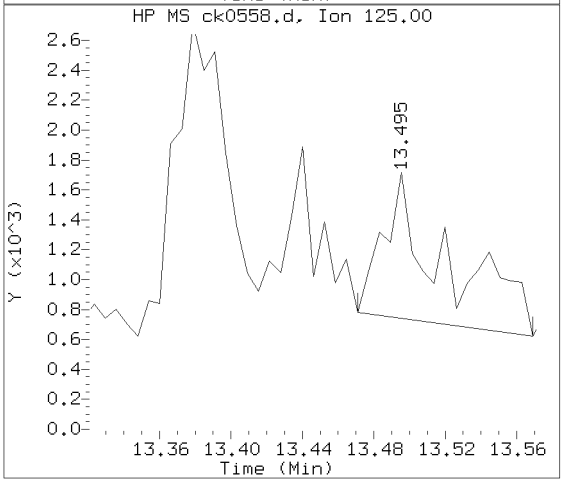
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

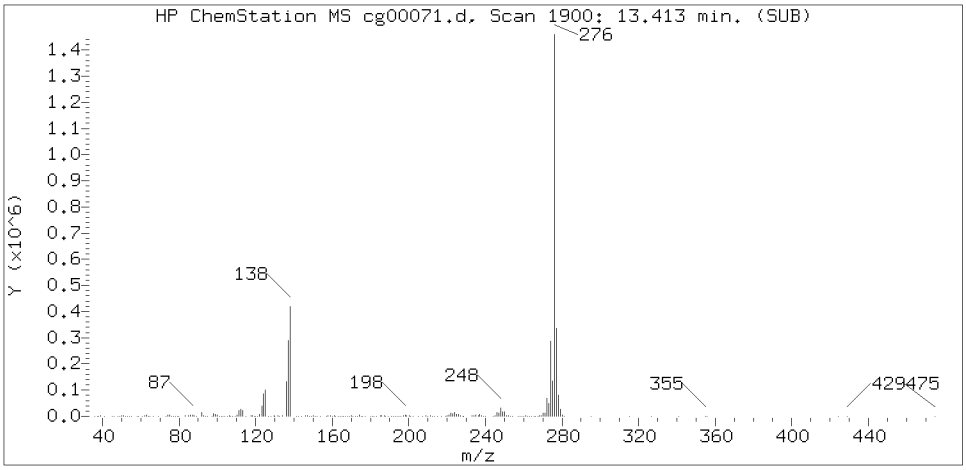
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

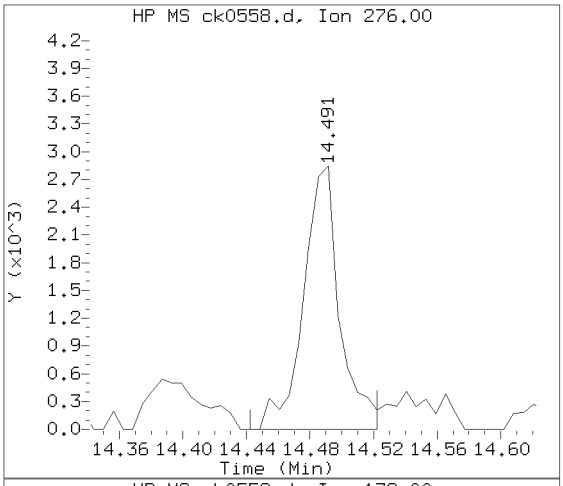
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1880
Retention Time (minutes)	: 13.440
Relative Retention Time	: 0.00046
Quant Ion	: 252.00
Area (flag)	: 5836
On-column Amount (ng/ul)	: 0.1506

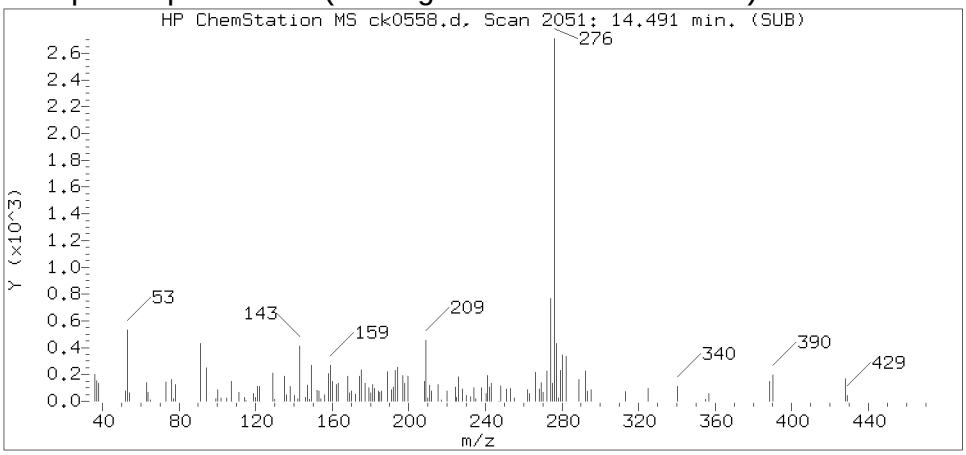
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

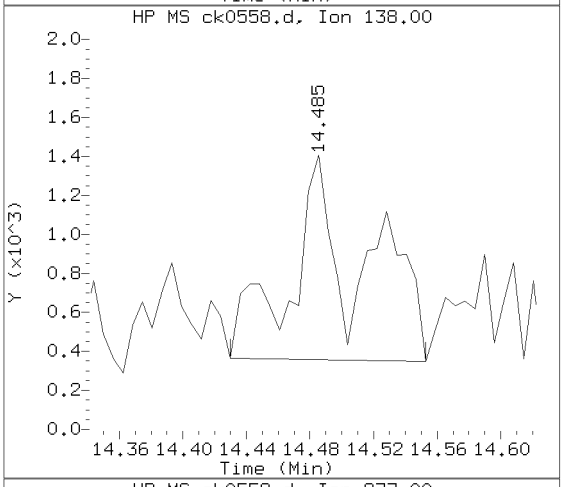
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



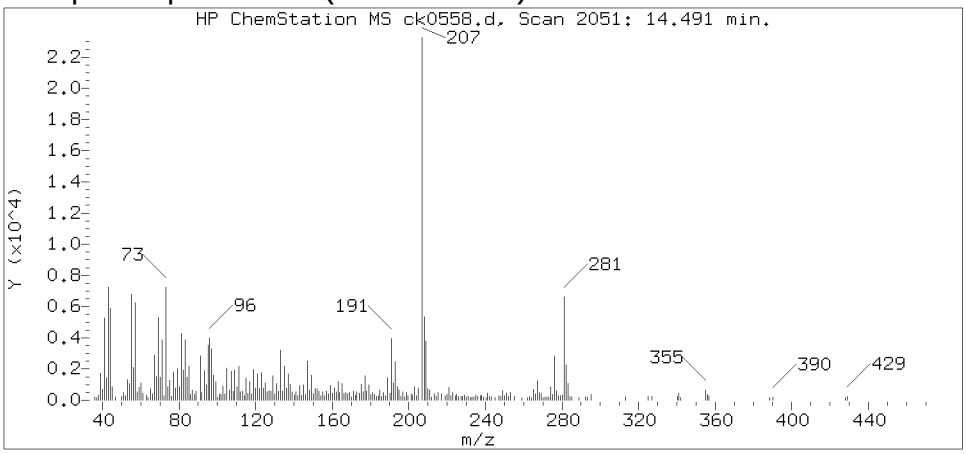


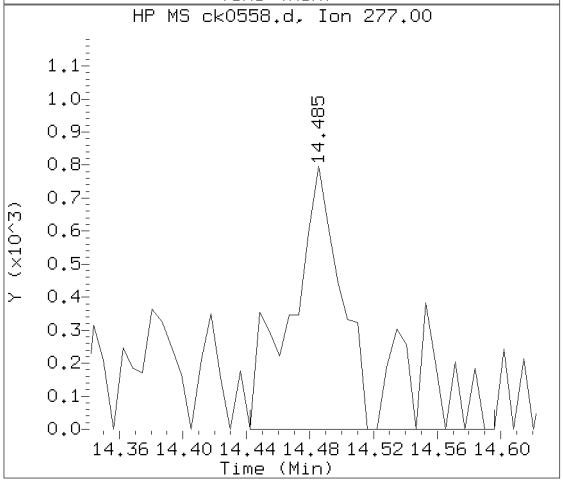
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

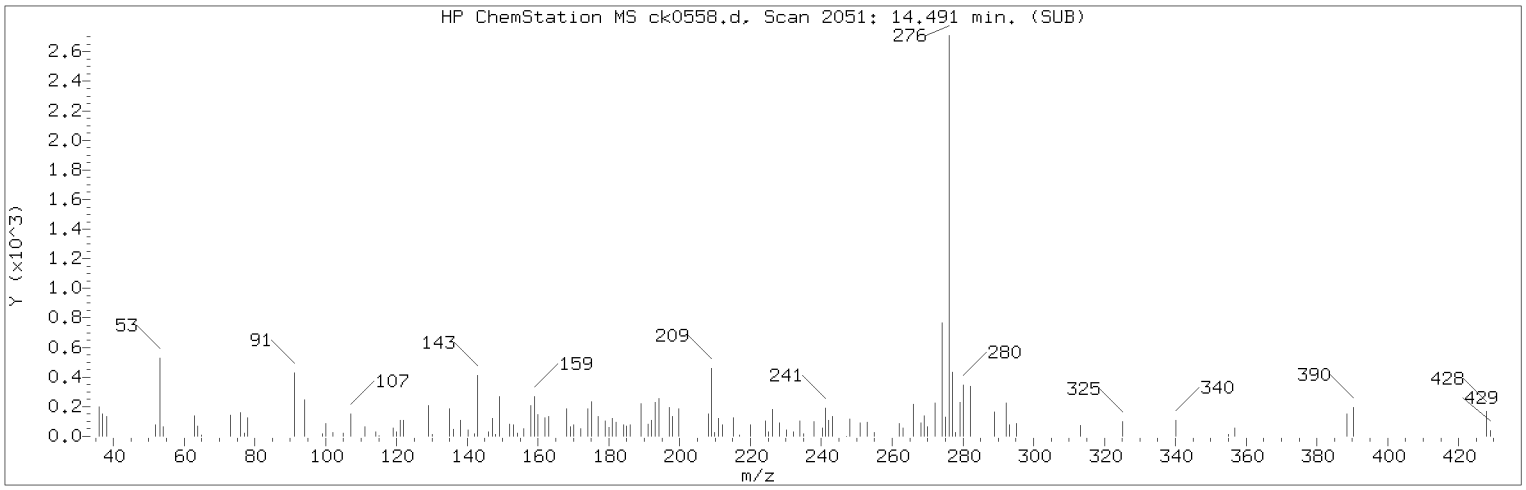
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

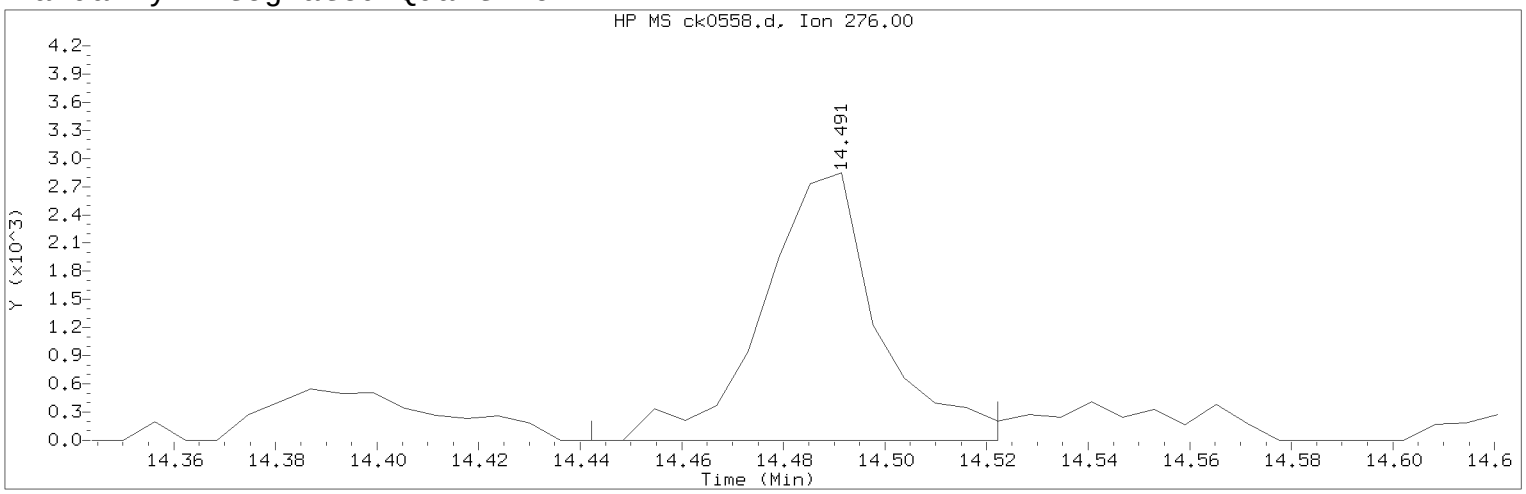
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2051
Retention Time (minutes) : 14.491
Relative Retention Time : 0.00084
Quant Ion : 276.00
Area (flag) : 4506M
On-column Amount (ng/ul) : 0.1093

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

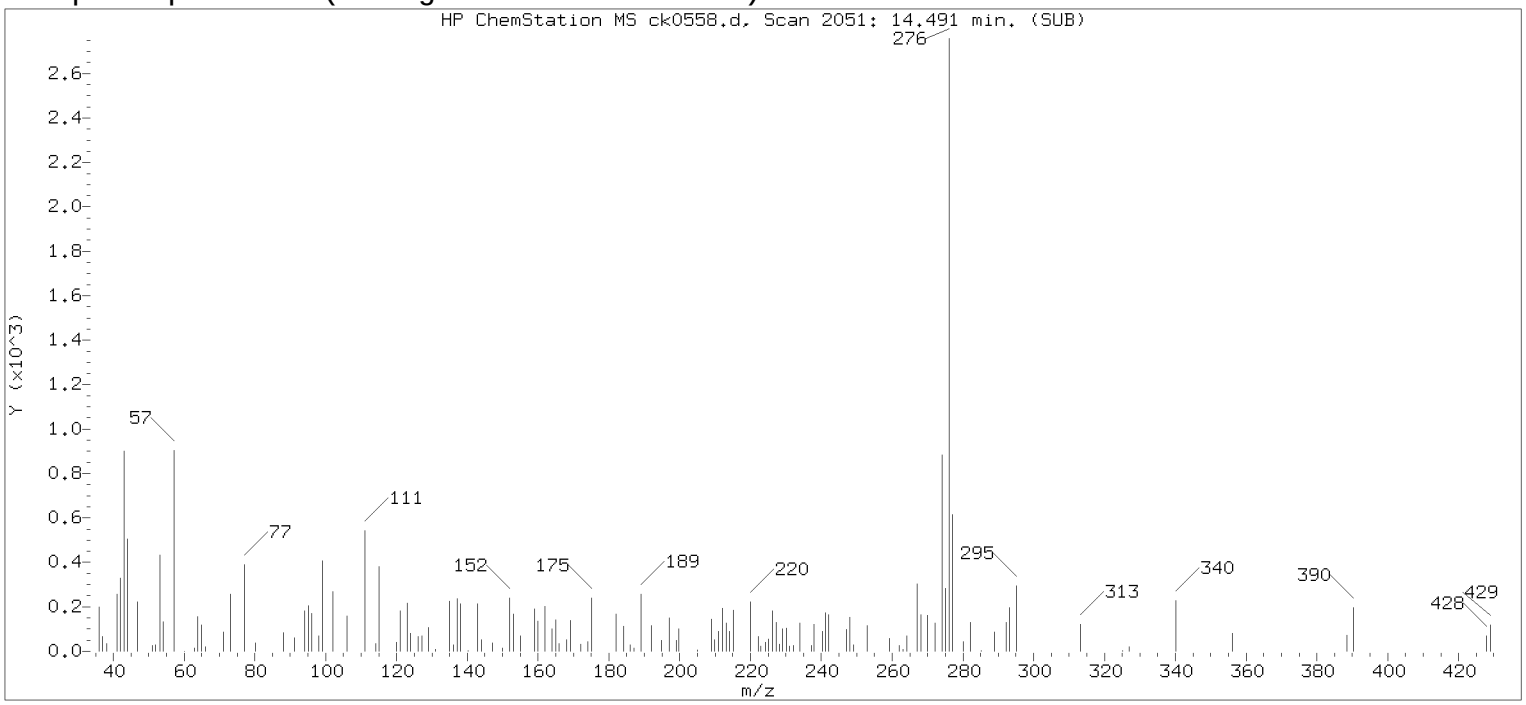
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2051
Retention Time (minutes) : 14.491
Quant Ion : 276.00
Area (flag) : 4506M
On-column Amount (ng/ul) : 0.1093
Integration start scan : 2042 Integration stop scan: 2055
Y at integration start : 1 Y at integration end: 1

Reason for manual integration: improper integration

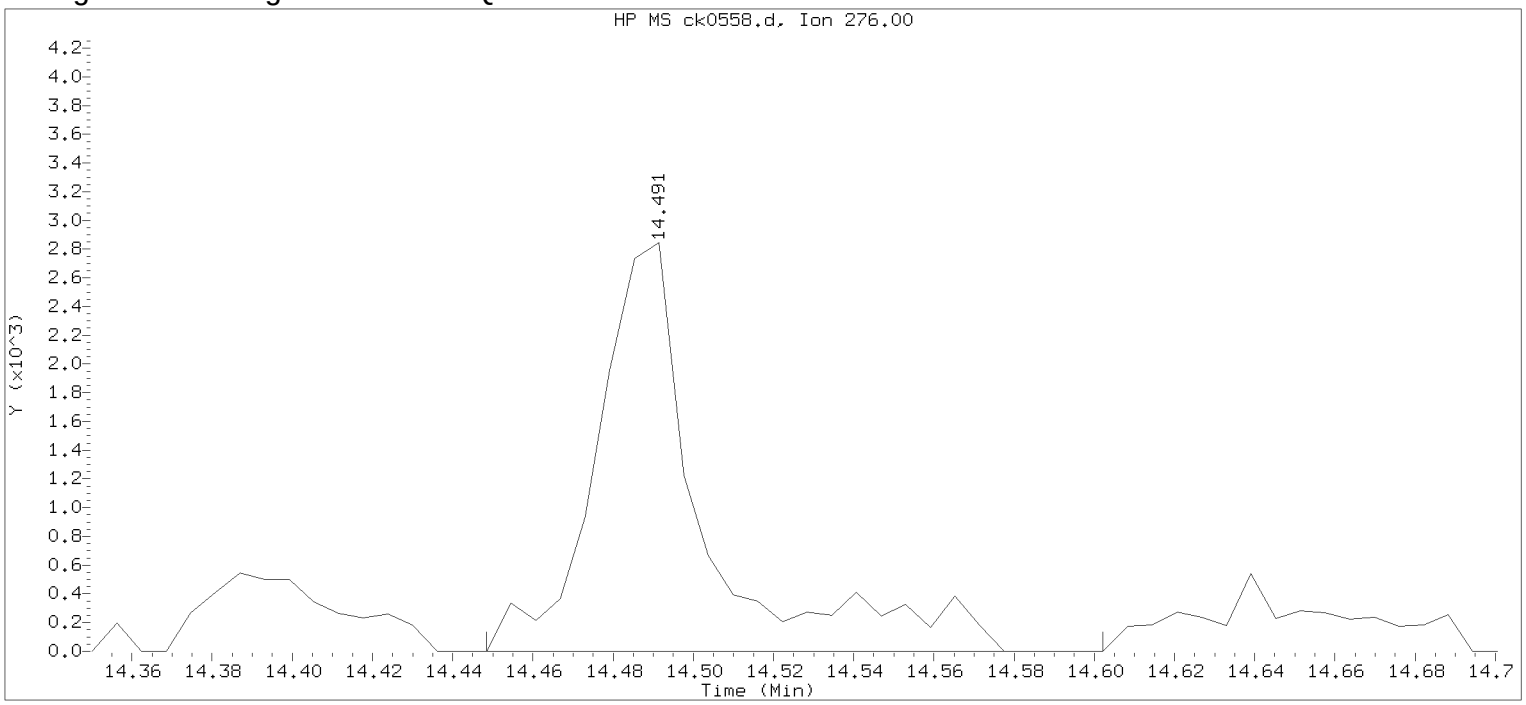
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:23.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

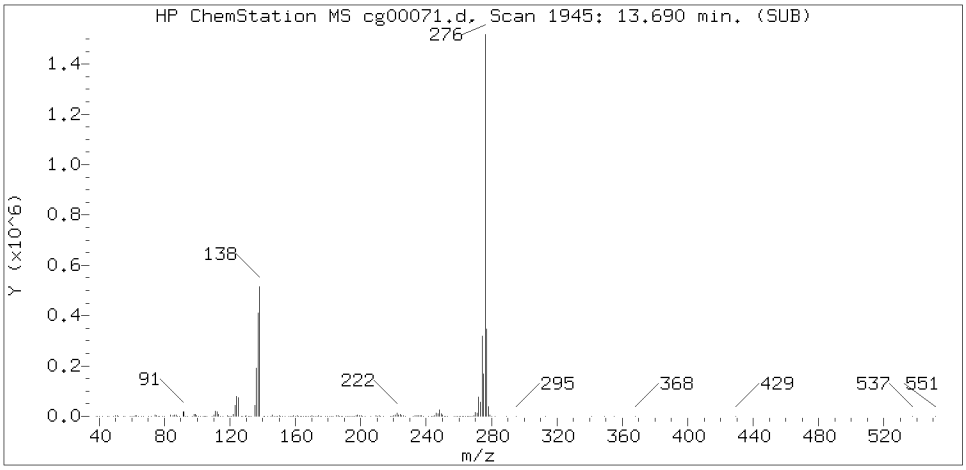
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:54 mac00013

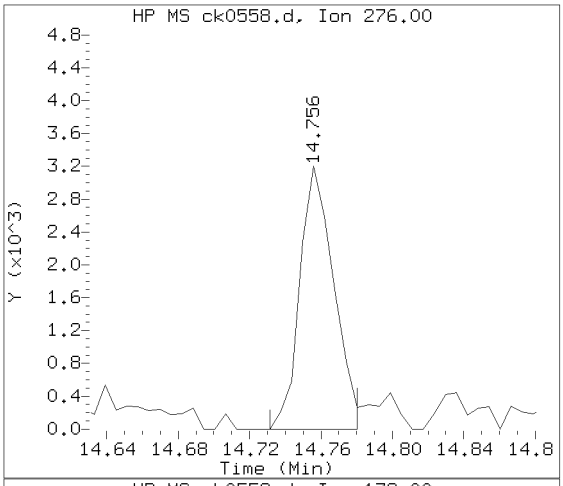
Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2051		
Retention Time (minutes)	: 14.491		
Quant Ion	: 276.00		
Area	: 5335		
On-column Amount (ng/ul)	: 0.1294		
Integration start scan	: 2043	Integration stop scan:	2068
Y at integration start	: 0	Y at integration end:	0

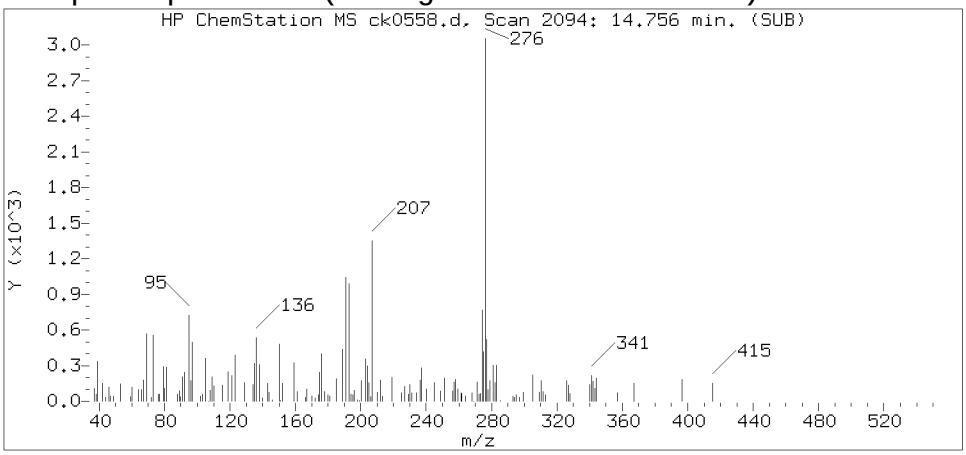
Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

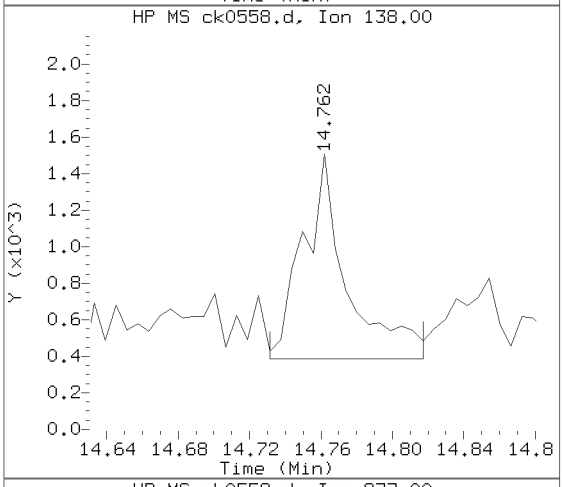
Reference Standard Spectrum for Benzo(g,h,i)perylene



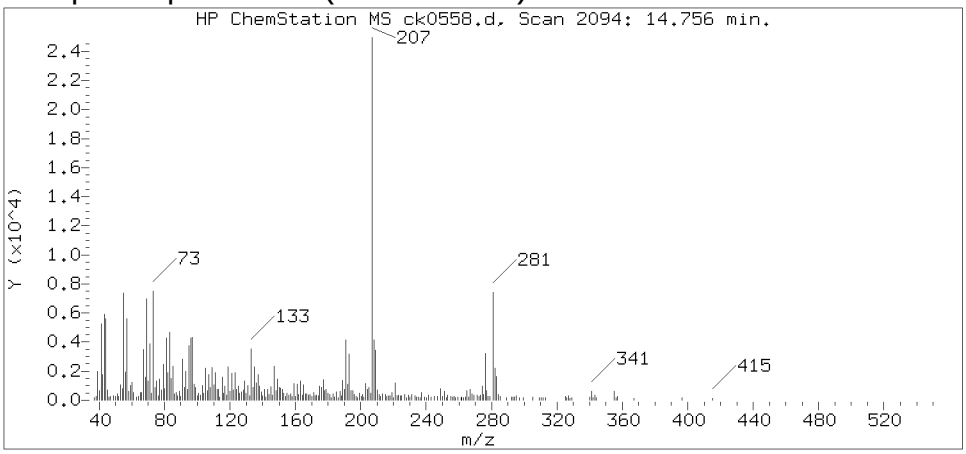


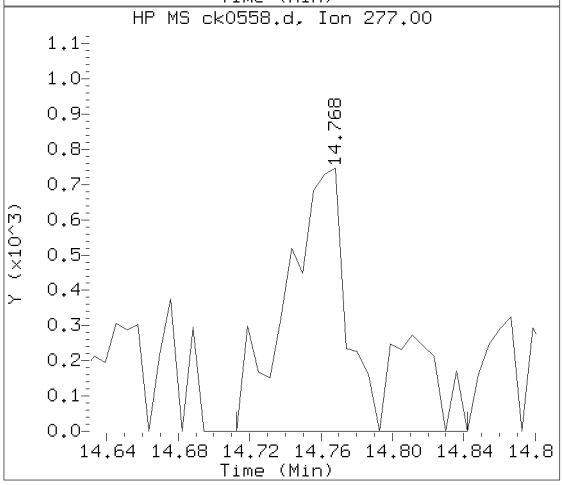
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

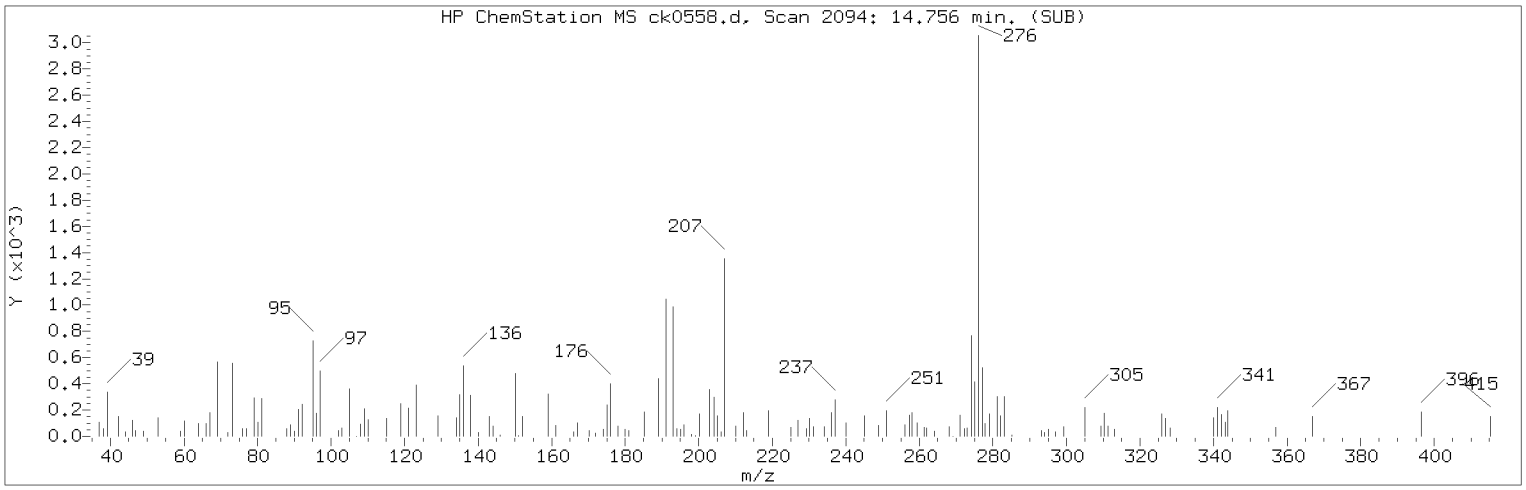
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

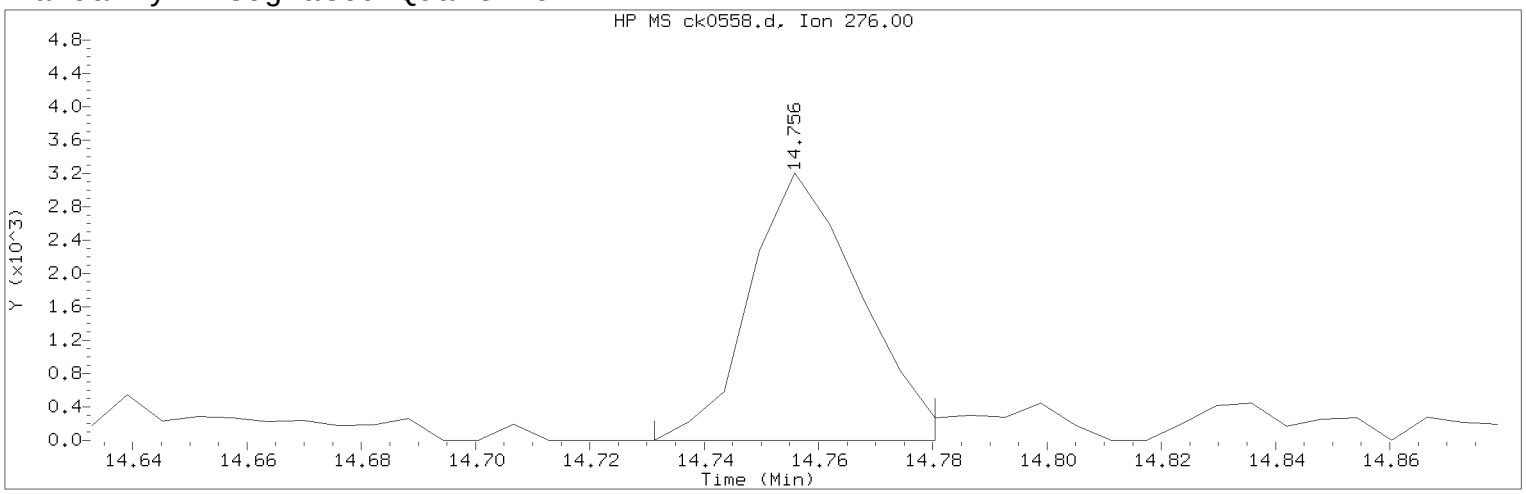
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2094
Retention Time (minutes) : 14.756
Relative Retention Time : 0.00128
Quant Ion : 276.00
Area (flag) : 4289M
On-column Amount (ng/ul) : 0.1221

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

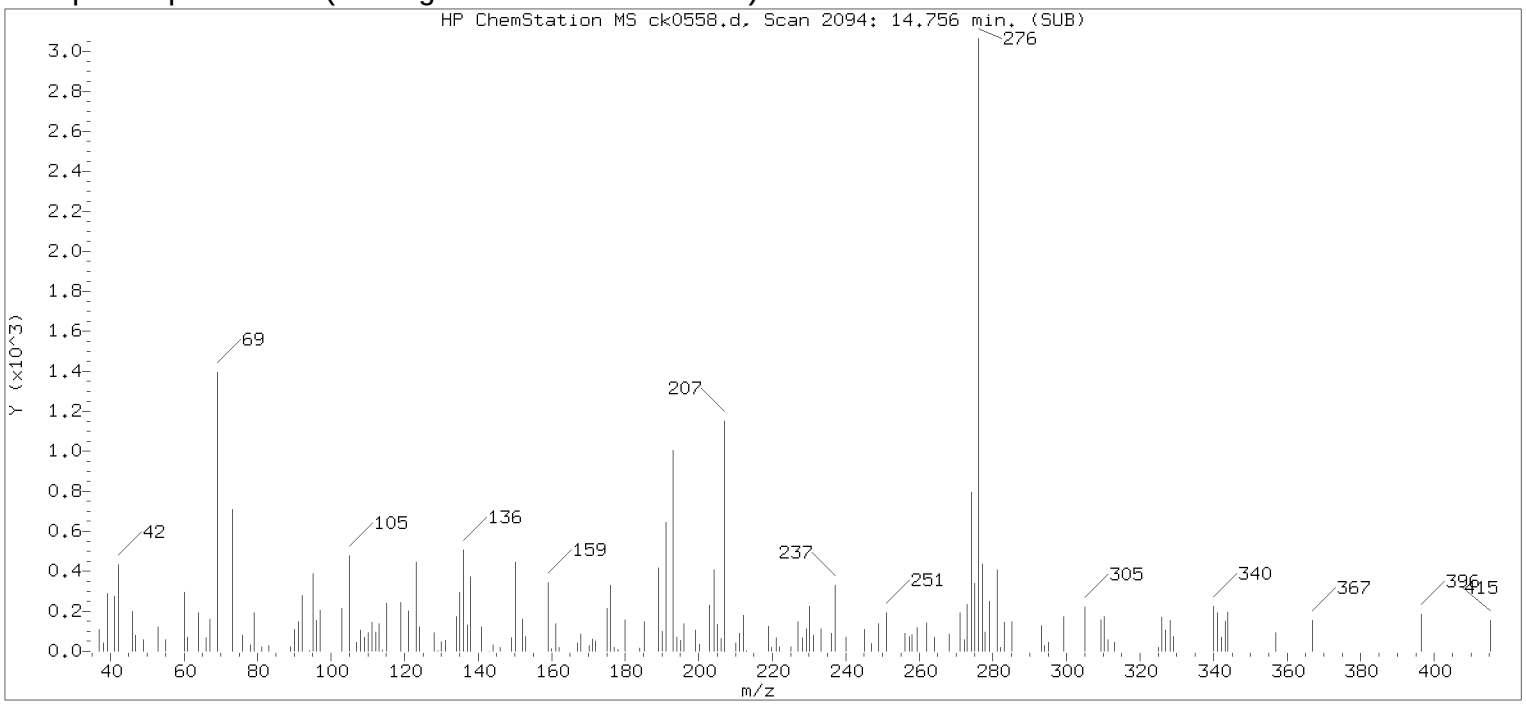
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2094
Retention Time (minutes) : 14.756
Quant Ion : 276.00
Area (flag) : 4289M
On-column Amount (ng/ul) : 0.1221
Integration start scan : 2089 Integration stop scan: 2097
Y at integration start : -2 Y at integration end: -2

Reason for manual integration: improper integration

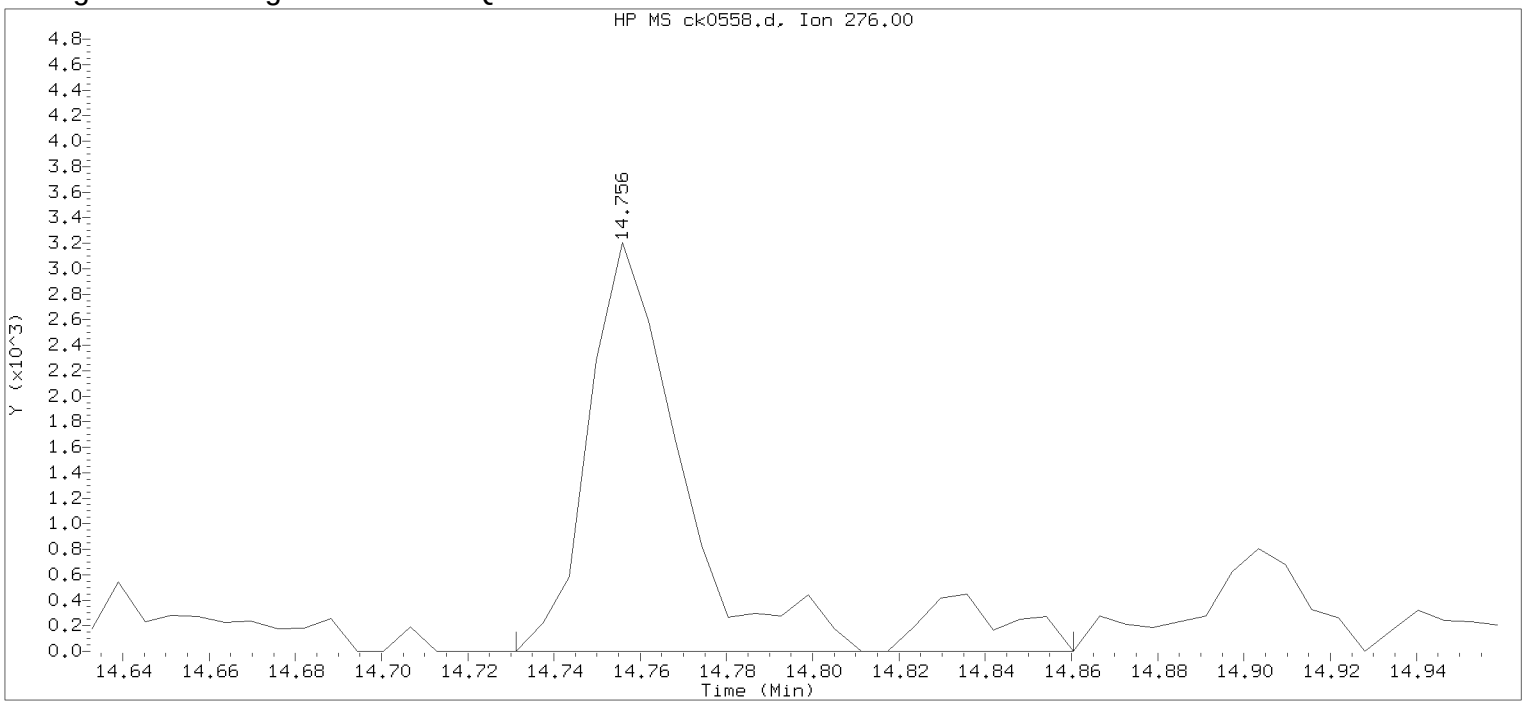
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:23.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:54 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2094		
Retention Time (minutes)	: 14.756		
Quant Ion	: 276.00		
Area	: 5367		
On-column Amount (ng/ul)	: 0.1528		
Integration start scan	: 2089	Integration stop scan:	2110
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/18/2013 at 10:47.
Target 3.5 esignature user ID: mac00013

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E161

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 7265236

Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0558.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: 27 Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13

Injection Volume: 1 (uL) Dilution Factor: 10

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
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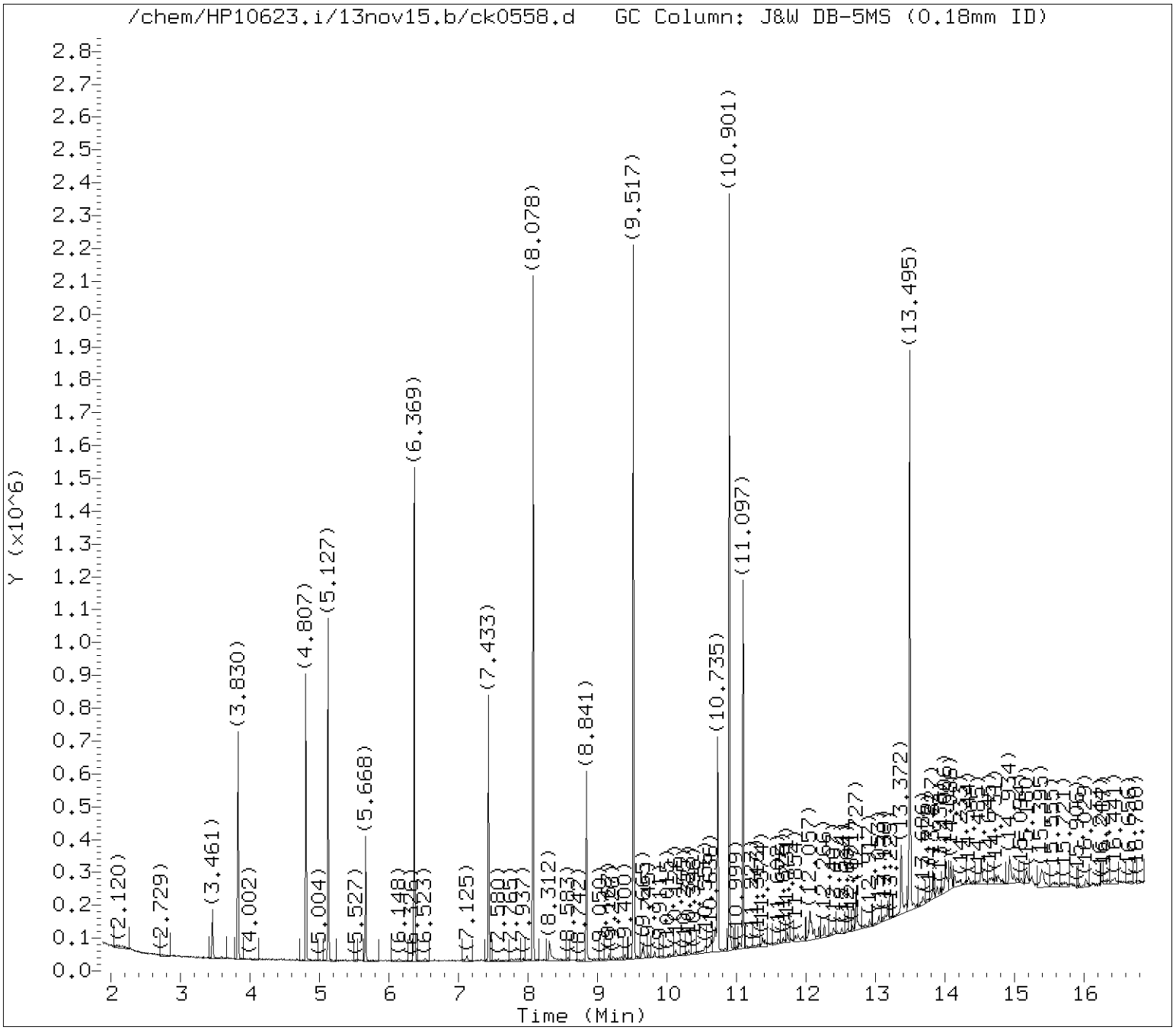
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

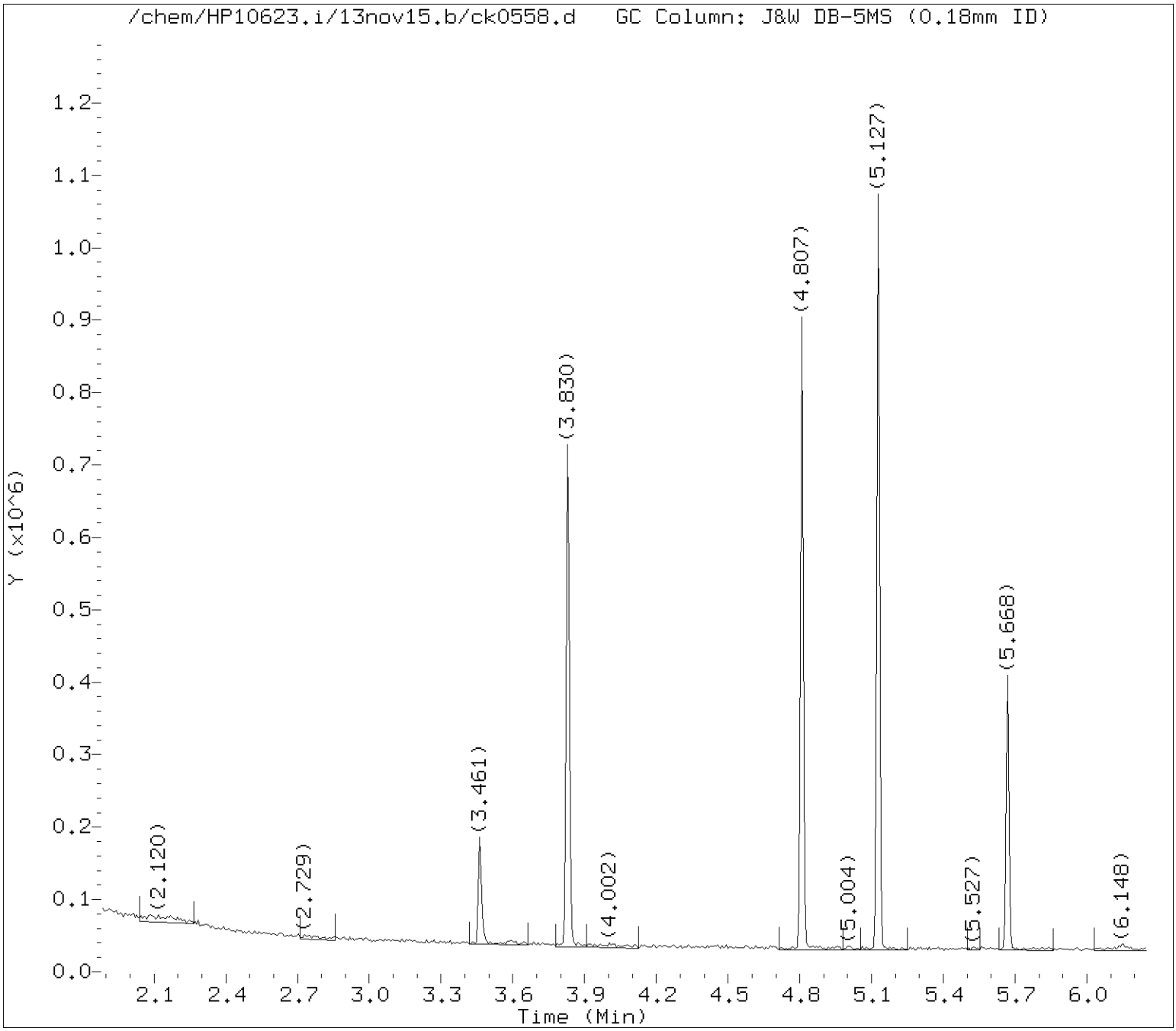
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

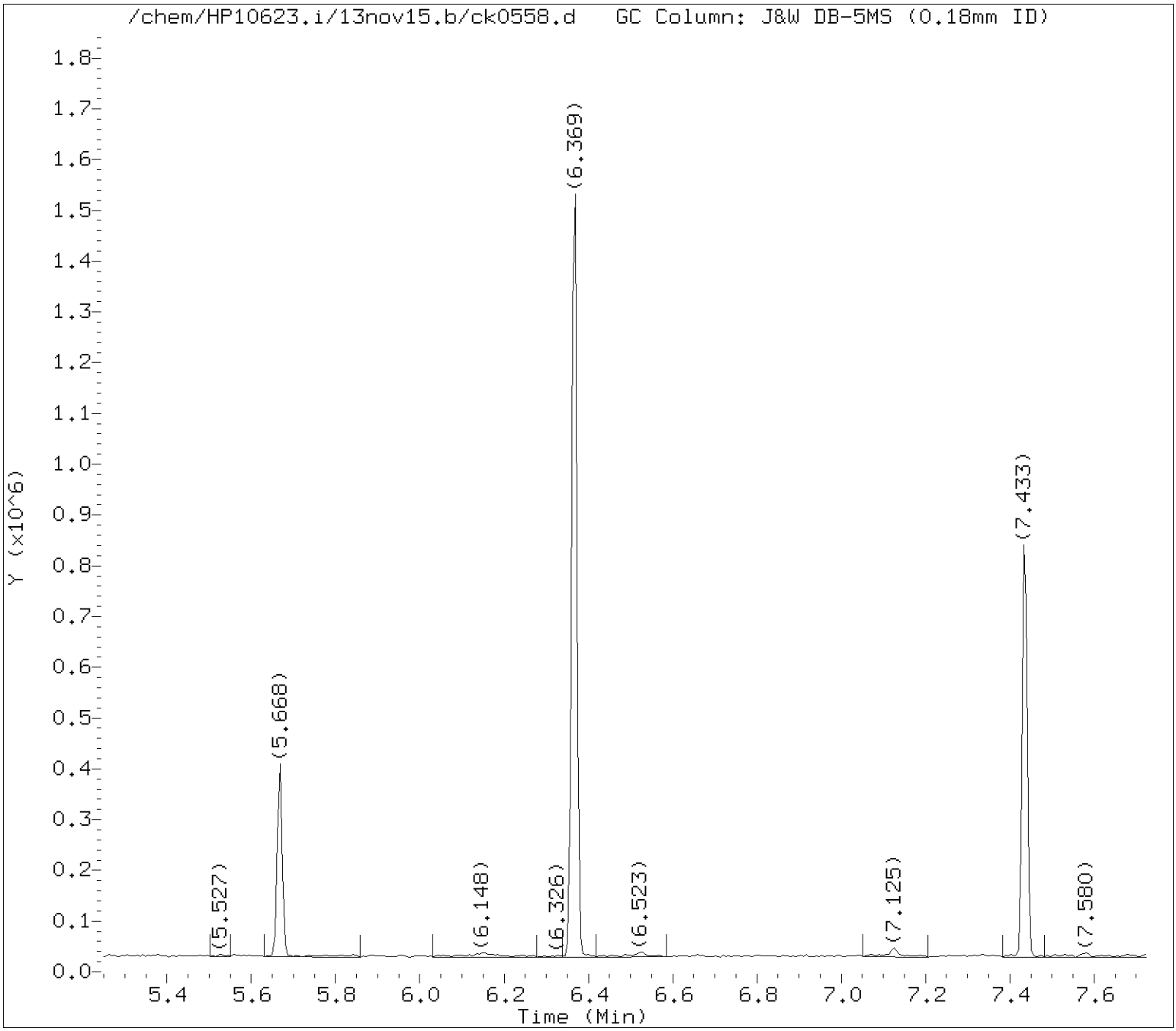
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.127 minutes
Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 5.748

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

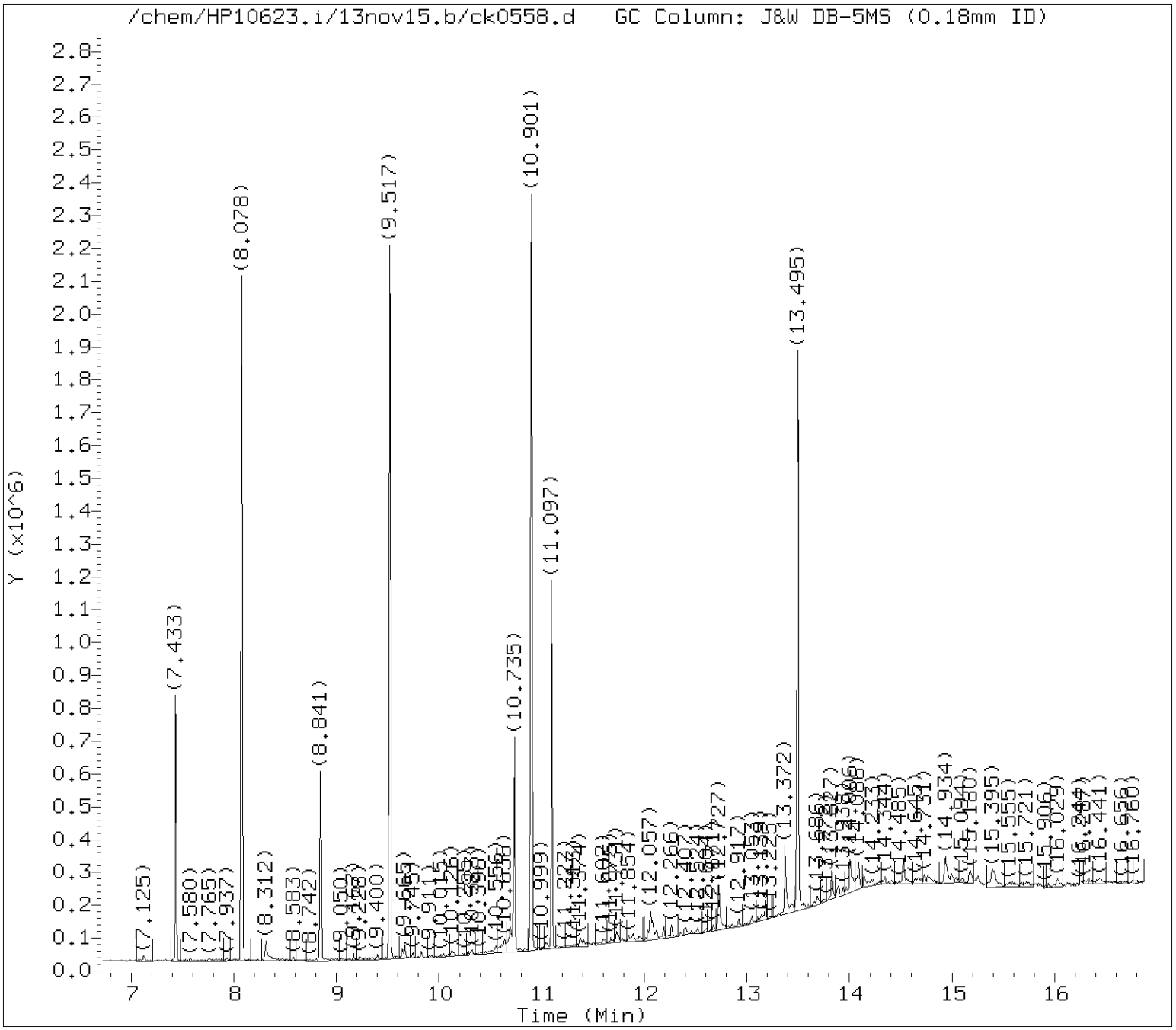
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Naphthalene-d8 at 6.369 minutes
Chromatogram Start Time (min.): 5.748
Chromatogram End Time (min.): 7.224

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

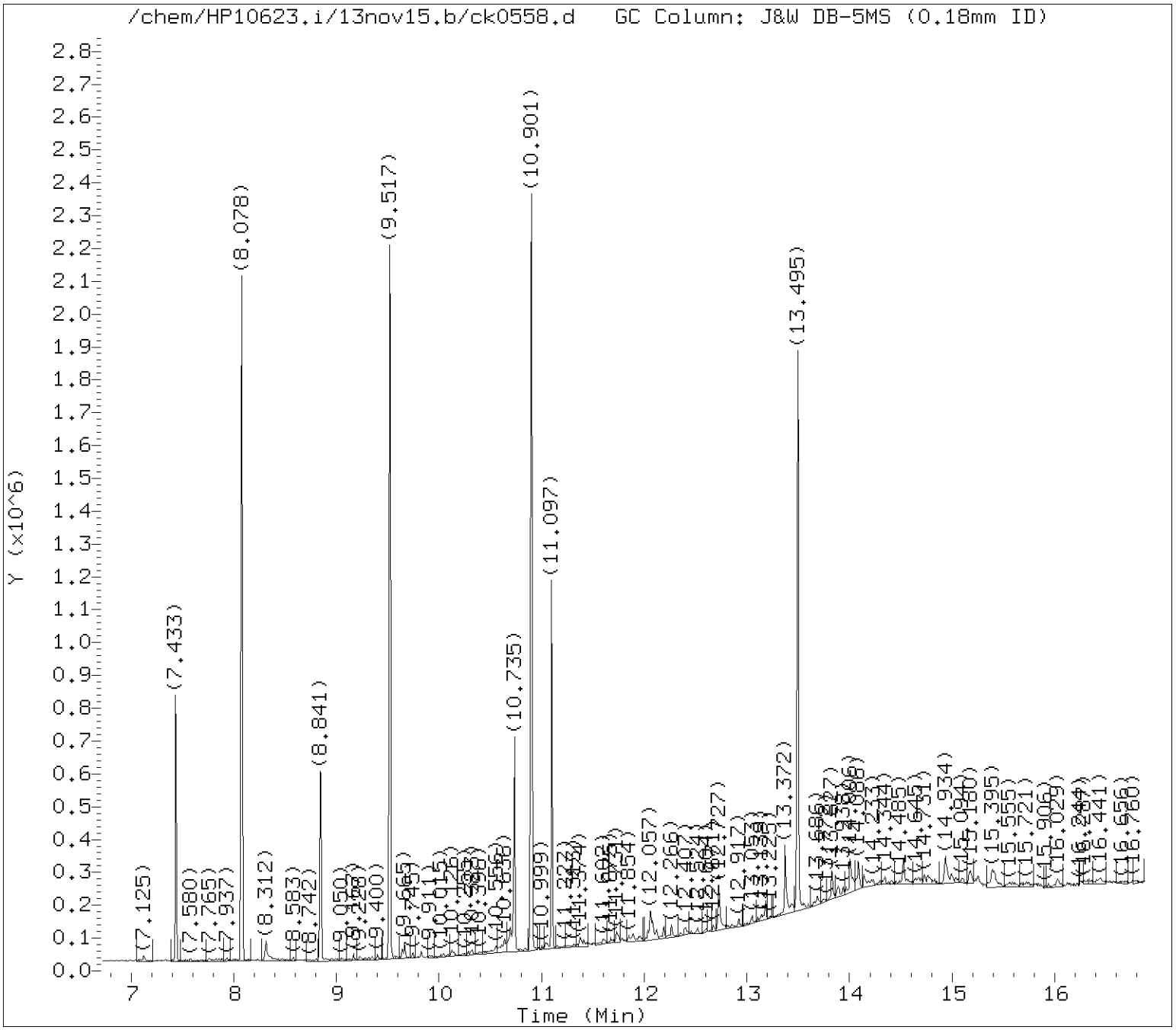
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Acenaphthene-d10 at 8.078 minutes
Chromatogram Start Time (min.): 7.224
Chromatogram End Time (min.): 8.798

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

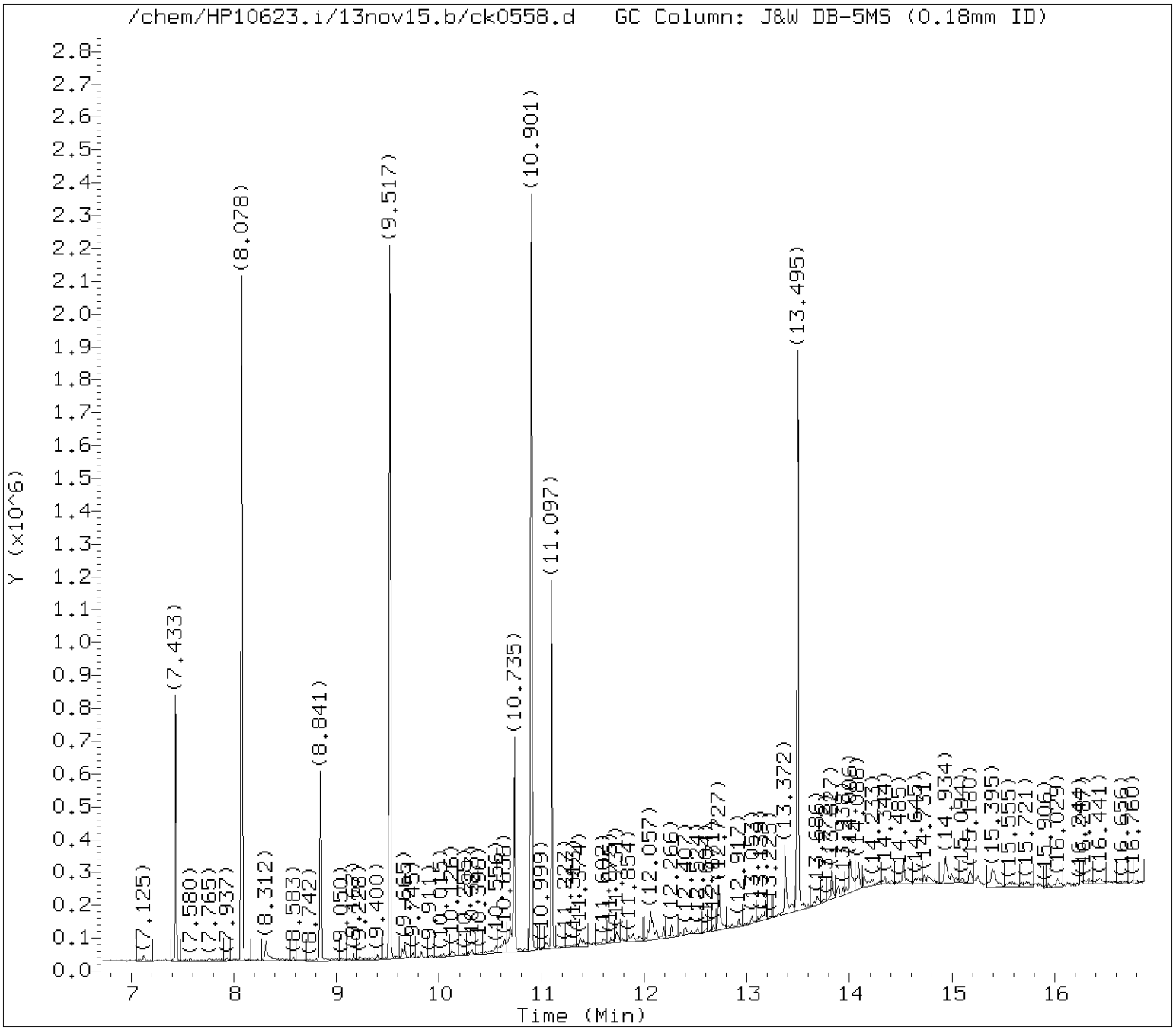
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Phenanthrene-d10 at 9.517 minutes
Chromatogram Start Time (min.): 8.798
Chromatogram End Time (min.): 10.209

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

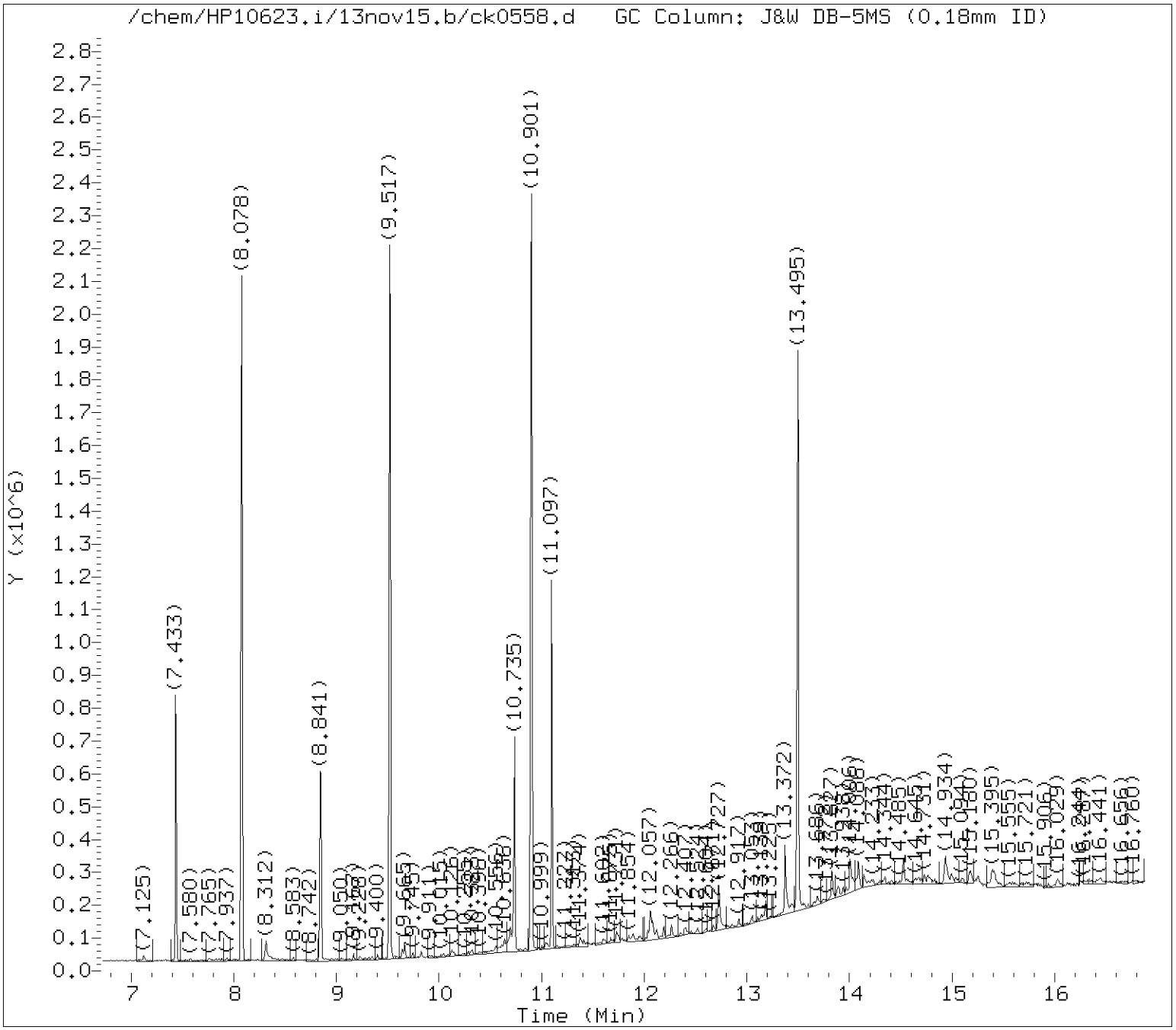
Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Pyrene-d10 at 10.901 minutes
Chromatogram Start Time (min.): 10.209
Chromatogram End Time (min.): 12.198

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0558.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 10:35 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:11 mac00013

Sample Name: 2E161 Lab Sample ID: 7265236

Internal Standard referenced: Perylene-d12 at 13.495 minutes
Chromatogram Start Time (min.): 12.198
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Lancaster Labs

Data file : /chem/HP10623.i/13nov15.b/ck0558.d
Lab Smp Id: 7265236 Client Smp ID: 2E161
Inj Date : 15-NOV-2013 10:35
Operator : mac00013 Inst ID: HP10623.i
Smp Info : 2E161;7265236;2;0;SAMPLE;;;
Misc Info : 13314SLD;all1.sub;10;;1000;0;ck0542;10727;
Comment : Max. number of TICs to report is 25, 0 TICs were found initially.
Method : /chem/HP10623.i/13nov15.b/m8270.m
Meth Date : 18-Nov-2013 04:21 mac00013 Quant Type: ISTD
Cal Date : 12-NOV-2013 12:38 Cal File: ck0408.d
Als bottle: 27
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles 7265237

Data file: /chem/HP10623.i/13nov15.b/ck0559.d
Data file Sample Info. Line: 2E16D;7265237;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Injection date and time: **15-NOV-2013 01:55**
Instrument ID: **HP10623.i** Batch: **13314SLD**

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.133(0.000)	529	152	135449 (-22)	20.00	
52) Naphthalene-d8	6.369(0.006)	730	136	603780 (-27)	20.00	
98) Acenaphthene-d10	8.079(0.006)	1008	164	394648 (-23)	20.00	
135) Phenanthrene-d10	9.523(0.006)	1243	188	741347 (-20)	20.00	
167) Pyrene-d10	10.901(0.006)	1467	212	904643 (-19)	20.00	
175) Perylene-d12	13.502(0.006)	1890	264	650793 (-27)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
9) 2-Fluorophenol	(1)	3.836(0.000)	112	1859880	183.531	92%		63 - 126
15) Phenol-d6	(1)	4.814(0.000)	99	2602499	174.528	87%		61 - 120
38) Nitrobenzene-d5	(2)	5.674(0.000)	82	1091998	83.946	84%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.439(0.000)	172	2277019	91.762	92%		69 - 120
119) 2,4,6-Tribromophenol	(3)	8.853(-0.001)	330	502691	210.927	105%		42 - 134
156) Terphenyl-d14	(5)	11.110(-0.001)	244	3073159	95.027	95%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
12) Benzaldehyde	(1)			Not Detected					2
16) Phenol	(1)			Not Detected					0.5
18) bis(2-Chloroethyl)ether	(1)			Not Detected					0.5
19) 2-Chlorophenol	(1)			Not Detected					0.5
26) 2-Methylphenol	(1)			Not Detected					0.5
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.5
30) Acetophenone	(1)			Not Detected					0.5
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.5
33) 4-Methylphenol	(1)			Not Detected					0.5
37) Hexachloroethane	(1)			Not Detected					1
39) Nitrobenzene	(2)			Not Detected					0.5
41) Isophorone	(2)			Not Detected					0.5
42) 2-Nitrophenol	(2)			Not Detected					0.5
44) 2,4-Dimethylphenol	(2)			Not Detected					0.5
46) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.5
49) 2,4-Dichlorophenol	(2)			Not Detected					0.5
53) Naphthalene	(2)	6.388(-0.000)	128	27842	0.869	86.91			0.1
56) 4-Chloroaniline	(2)			Not Detected					0.5
60) Hexachlorobutadiene	(2)			Not Detected					0.5
63) Caprolactam	(2)			Not Detected					1
68) 4-Chloro-3-methylphenol	(2)			Not Detected					0.5
70) 2-Methylnaphthalene	(2)	7.070(-0.000)	142	11386	0.501	50.08			0.1
72) Hexachlorocyclopentadiene	(3)			Not Detected					5
75) 2,4,6-Trichlorophenol	(3)			Not Detected					0.5
77) 2,4,5-Trichlorophenol	(3)			Not Detected					0.5
83) 1,1'-Biphenyl	(3)			Not Detected					0.5
84) 2-Chloronaphthalene	(3)			Not Detected					0.2

Digitally signed by Mark A. Clark on 11/18/2013 at 10:53. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov15.b/ck0559.d Injection date and time: **15-NOV-2013 01:55**
Data file Sample Info. Line: 2E16D;7265237;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 04:21
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 10 g

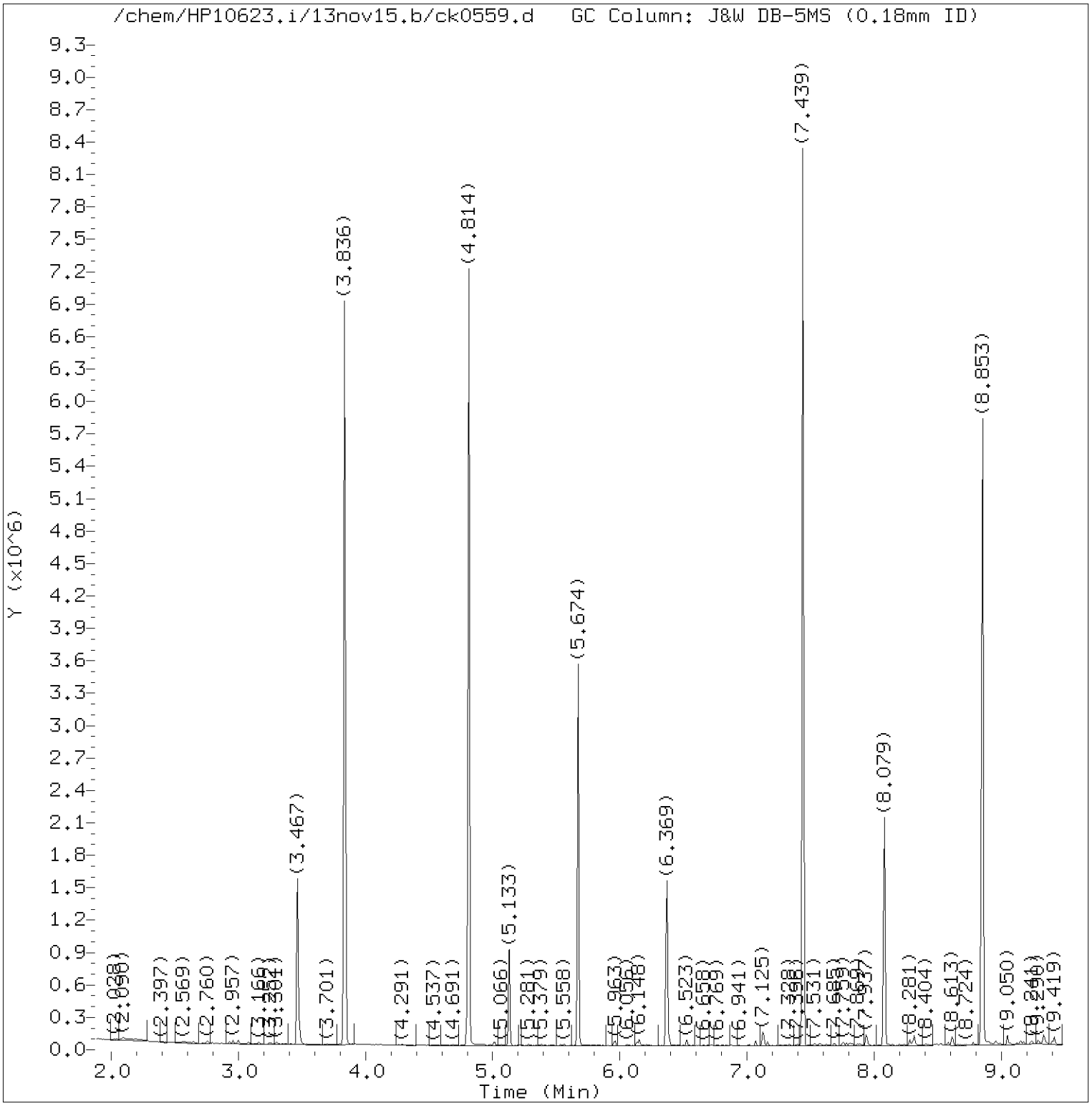
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
89) 2-Nitroaniline	(3)			Not Detected					0.5
92) Dimethylphthalate	(3)			Not Detected					2
94) 2,6-Dinitrotoluene	(3)			Not Detected					0.5
95) Acenaphthylene	(3)	7.937(0.000)	152	36886	1.061	106.08			0.1
97) 3-Nitroaniline	(3)			Not Detected					2
99) Acenaphthene	(3)	8.109(-0.000)	153	3453	0.143	14.35			0.1
100) 2,4-Dinitrophenol	(3)			Not Detected					9
103) 4-Nitrophenol	(3)			Not Detected					5
104) Dibenzofuran	(3)	8.281(-0.000)	168	16641	0.505	50.48			0.5
105) 2,4-Dinitrotoluene	(3)			Not Detected					2
109) Diethylphthalate	(3)			Not Detected					2
111) Fluorene	(3)	8.613(-0.000)	166	19877	0.701	70.08			0.1
112) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.5
114) 4-Nitroaniline	(3)			Not Detected					2
115) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					5
117) N-Nitrosodiphenylamine	(4)			Not Detected					0.5
125) 4-Bromophenyl-phenylether	(4)			Not Detected					0.5
127) Hexachlorobenzene	(4)			Not Detected					0.1
130) Atrazine	(4)			Not Detected					1
131) Pentachlorophenol	(4)			Not Detected					1
137) Phenanthrene	(4)	9.548(-0.000)	178	549983	12.759	1275.88			0.1
138) Anthracene	(4)	9.597(-0.000)	178	39236	0.884	88.43			0.1
140) Carbazole	(4)	9.757(-0.000)	167	47352	1.094	109.36			0.5
142) Di-n-butylphthalate	(4)			Not Detected					2
147) Fluoranthene	(4)	10.704(-0.000)	202	431110	8.944	894.43			0.1
154) Pyrene	(5)	10.919(-0.000)	202	378499	7.534	753.41			0.1
161) Butylbenzylphthalate	(5)			Not Detected					2
164) 3,3'-Dichlorobenzidine	(5)			Not Detected					3
166) Benzo(a)anthracene	(5)	12.094(-0.000)	228	141853	3.061	306.13			0.1
168) Chrysene	(5)	12.130(-0.000)	228	177585	3.975	397.50			0.1
169) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					2
170) Di-n-octylphthalate	(6)			Not Detected					2
172) Benzo(b)fluoranthene	(6)	13.145(0.000)	252	177743M	4.473	447.28			0.1
173) Benzo(k)fluoranthene	(6)	13.170(0.000)	252	71432M	1.762	176.19			0.1
174) Benzo(a)pyrene	(6)	13.446(0.000)	252	110955	2.861	286.08			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.498(0.000)	276	58000M	1.406	140.56			0.1
178) Dibenz(a,h)anthracene	(6)	14.516(0.000)	278	18508	0.536	53.62			0.1
179) Benzo(g,h,i)perylene	(6)	14.768(0.000)	276	51270	1.458	145.84			0.1

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Mark A. Clark on 11/18/2013 at 10:53. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

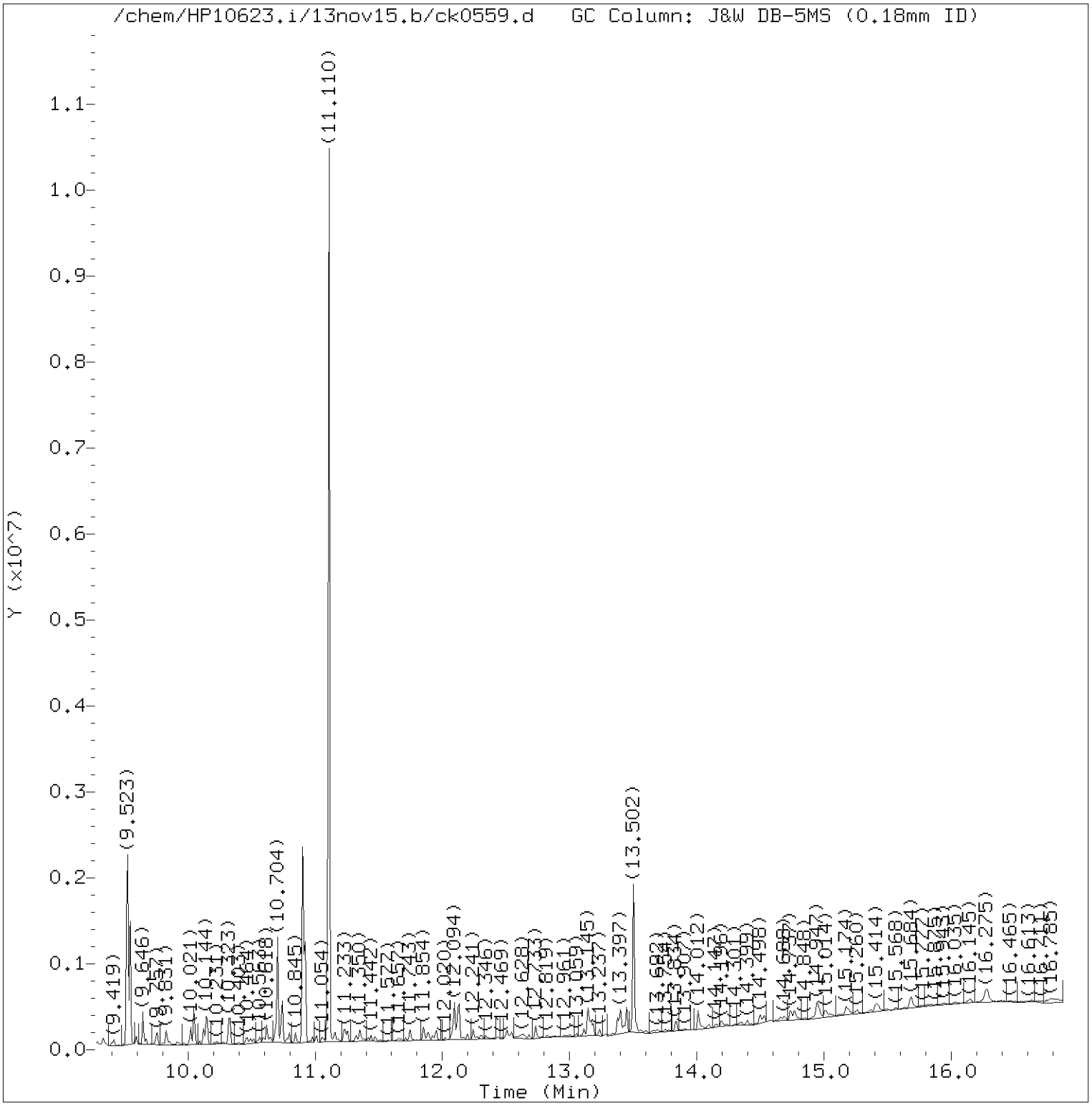
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

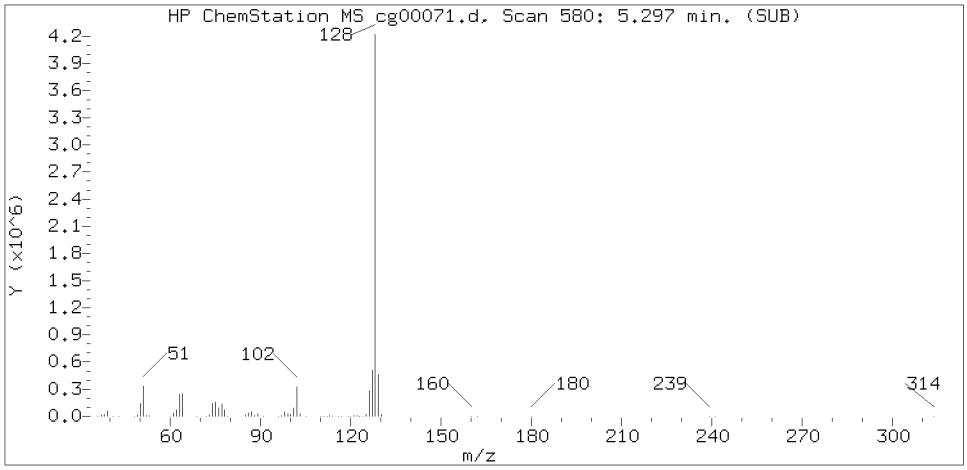
Sample Name: 2E16D Lab Sample ID: 7265237

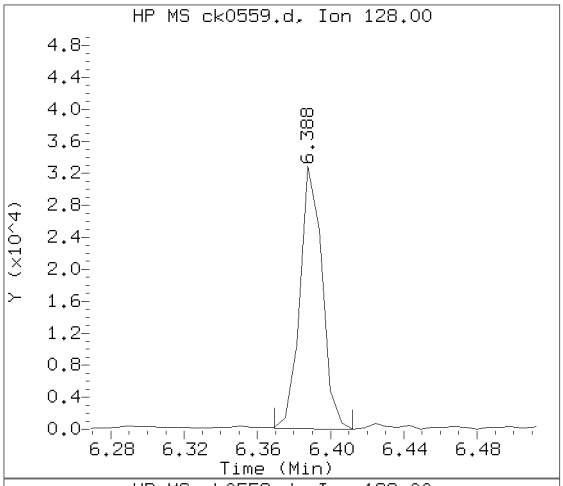
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.836	112	1859880	183.531
15)$Phenol-d6	(1)	4.814	99	2602499	174.528
21)*1,4-Dichlorobenzene-d4	(1)	5.133	152	135449	20.000
38)$Nitrobenzene-d5	(2)	5.674	82	1091998	83.946
52)*Naphthalene-d8	(2)	6.369	136	603780	20.000
53) Naphthalene	(2)	6.388	128	27842	0.869
70) 2-Methylnaphthalene	(2)	7.070	142	11386	0.501
78)$2-Fluorobiphenyl	(3)	7.439	172	2277019	91.762
95) Acenaphthylene	(3)	7.937	152	36886	1.061
98)*Acenaphthene-d10	(3)	8.079	164	394648	20.000
99) Acenaphthene	(3)	8.109	153	3453	0.143
104) Dibenzofuran	(3)	8.281	168	16641	0.505
111) Fluorene	(3)	8.613	166	19877	0.701
119)$2,4,6-Tribromophenol	(3)	8.853	330	502691	210.927
135)*Phenanthrene-d10	(4)	9.523	188	741347	20.000
137) Phenanthrene	(4)	9.548	178	549983	12.759
138) Anthracene	(4)	9.597	178	39236	0.884
140) Carbazole	(4)	9.757	167	47352	1.094
147) Fluoranthene	(4)	10.704	202	431110	8.944
167)*Pyrene-d10	(5)	10.901	212	904643	20.000
154) Pyrene	(5)	10.919	202	378499	7.534
156)$Terphenyl-d14	(5)	11.110	244	3073159	95.027
166) Benzo(a)anthracene	(5)	12.094	228	141853	3.061
168) Chrysene	(5)	12.130	228	177585	3.975
172) Benzo(b)fluoranthene	(6)	13.145	252	177743M	4.473
173) Benzo(k)fluoranthene	(6)	13.170	252	71432M	1.762
174) Benzo(a)pyrene	(6)	13.446	252	110955	2.861
175)*Perylene-d12	(6)	13.502	264	650793	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.498	276	58000M	1.406
178) Dibenz(a,h)anthracene	(6)	14.516	278	18508	0.536
179) Benzo(g,h,i)perylene	(6)	14.768	276	51270	1.458

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

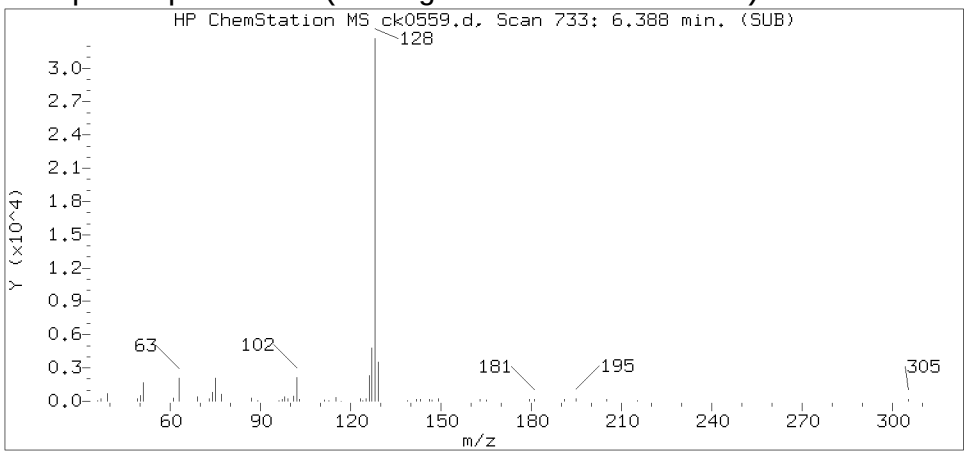
Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

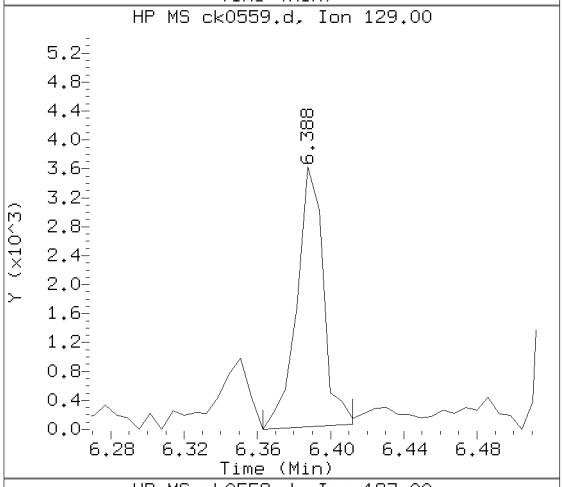
Reference Standard Spectrum for Naphthalene



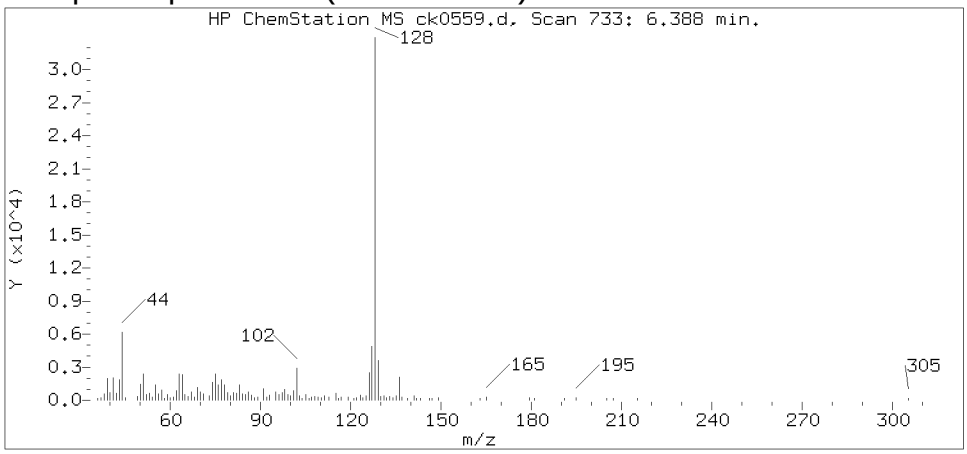


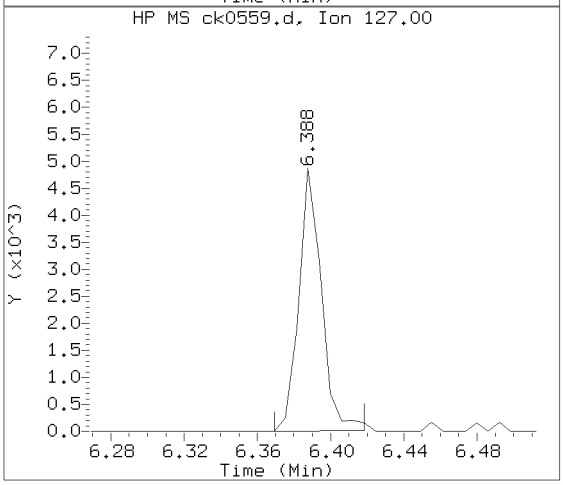
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 53
Compound Name : Naphthalene
Scan Number : 733
Retention Time (minutes) : 6.388
Relative Retention Time :-0.00000
Quant Ion : 128.00
Area (flag) : 27842
On-column Amount (ng/ul) : 0.8691

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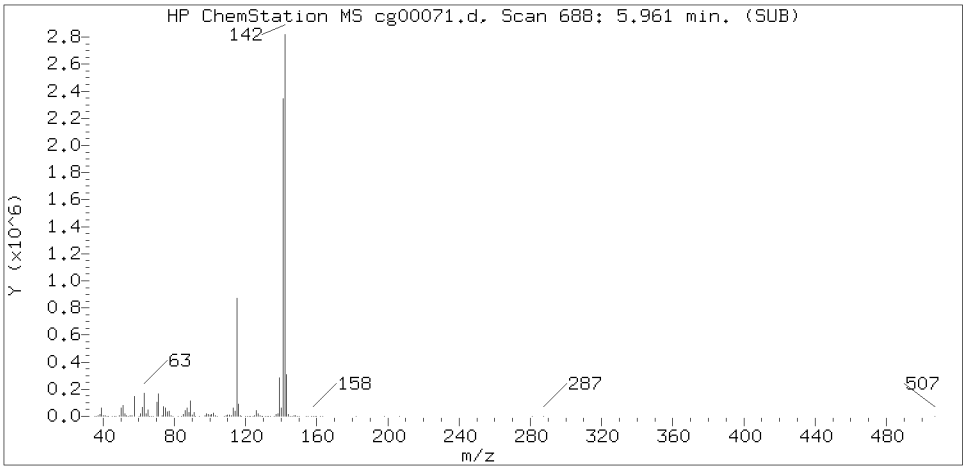
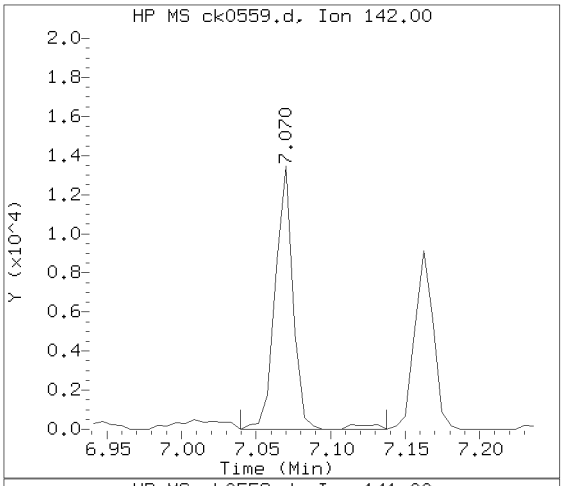
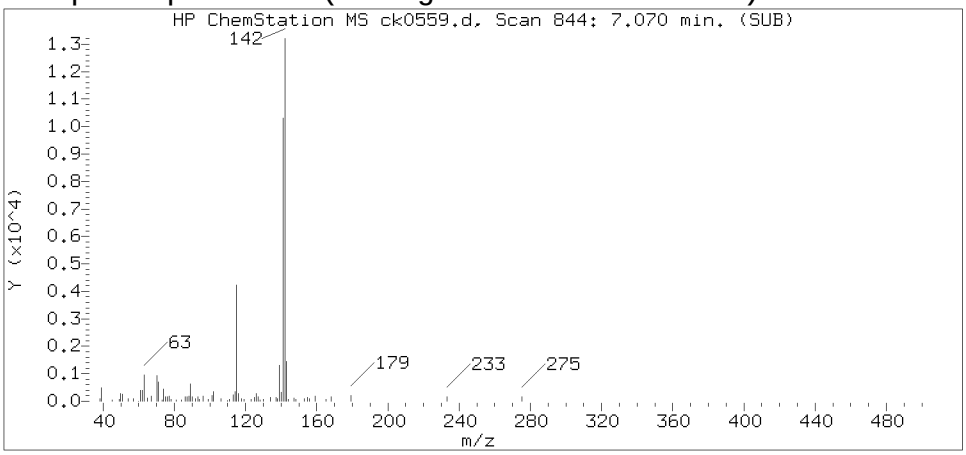
Target 3.5 esignature user ID: mac00013

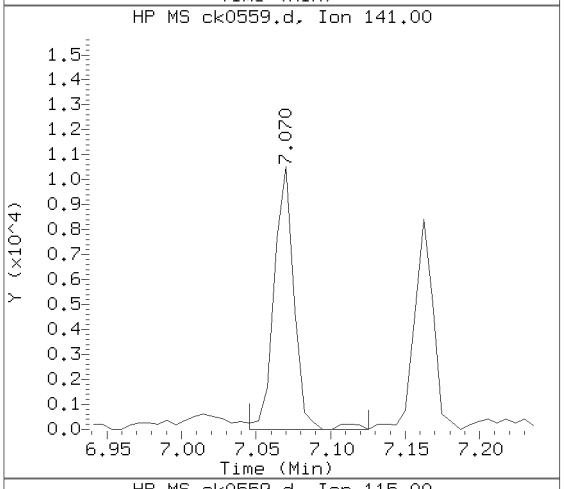
Reference Standard Spectrum for 2-Methylnaphthalene



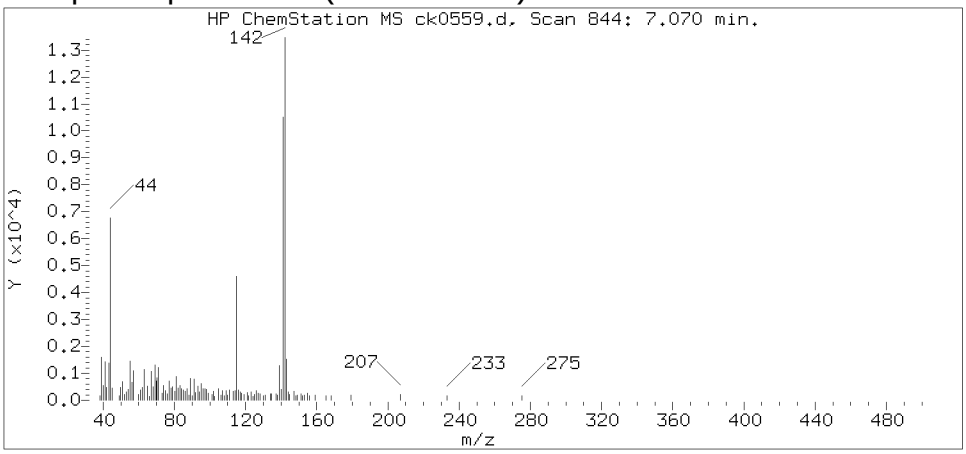


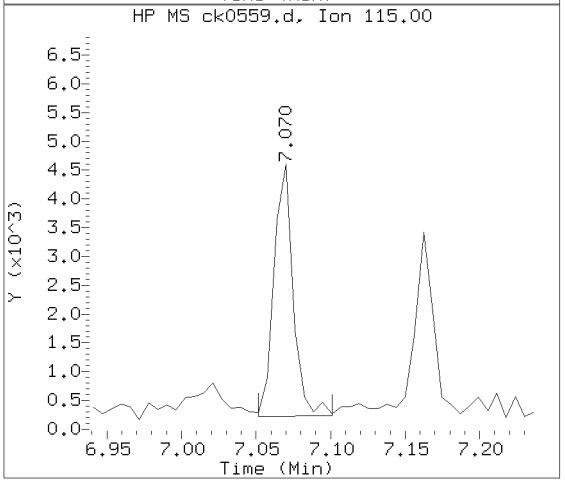
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 844
Retention Time (minutes) : 7.070
Relative Retention Time :-0.00011
Quant Ion : 142.00
Area (flag) : 11386
On-column Amount (ng/ul) : 0.5008

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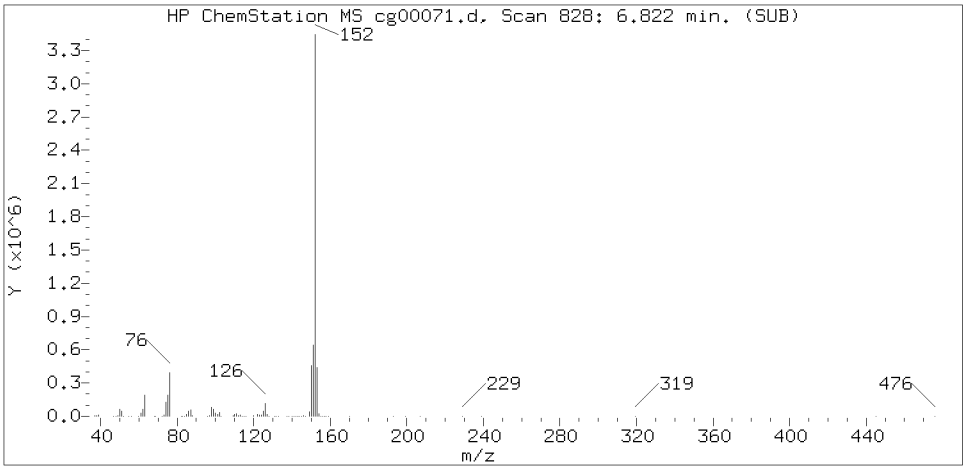
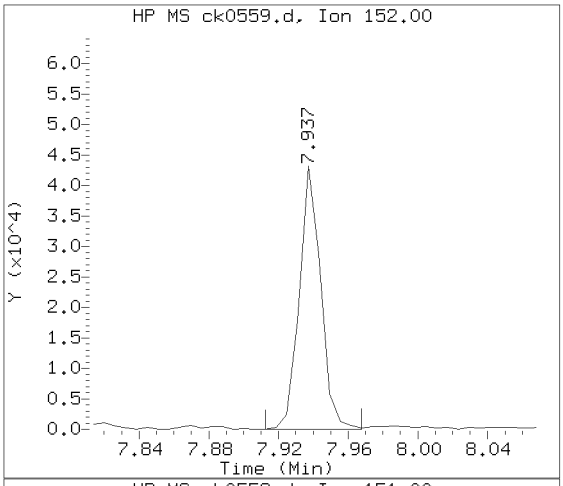
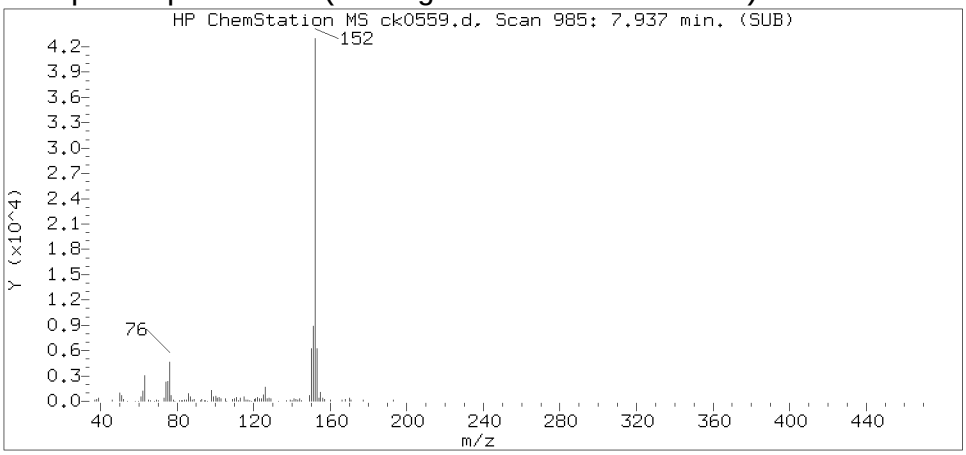
Target 3.5 esignature user ID: mac00013

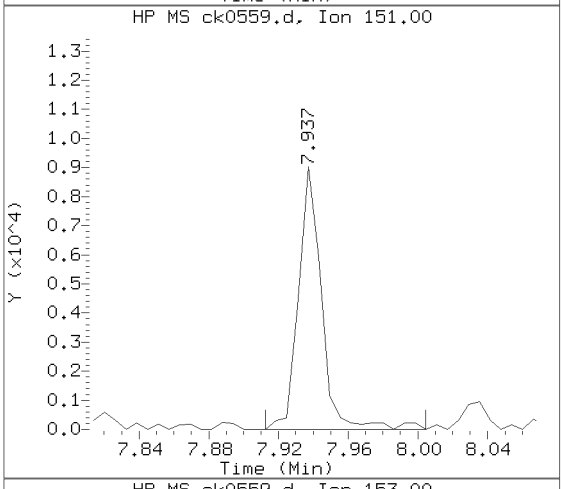
Reference Standard Spectrum for Acenaphthylene



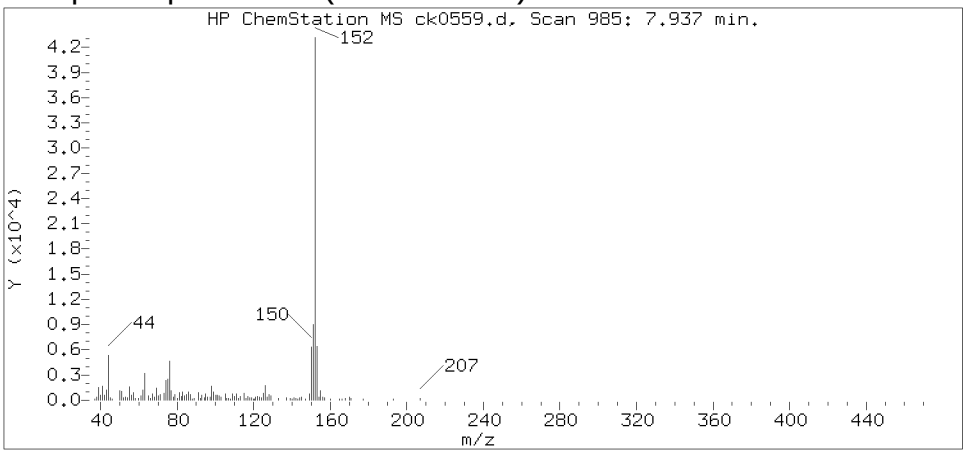


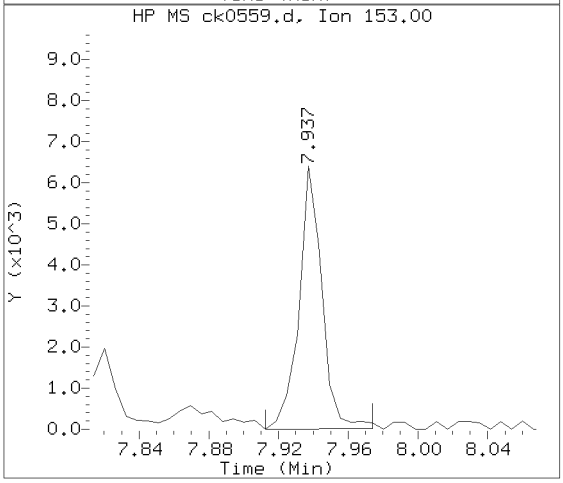
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 95
Compound Name : Acenaphthylene
Scan Number : 985
Retention Time (minutes) : 7.937
Relative Retention Time : 0.00001
Quant Ion : 152.00
Area (flag) : 36886
On-column Amount (ng/ul) : 1.0608

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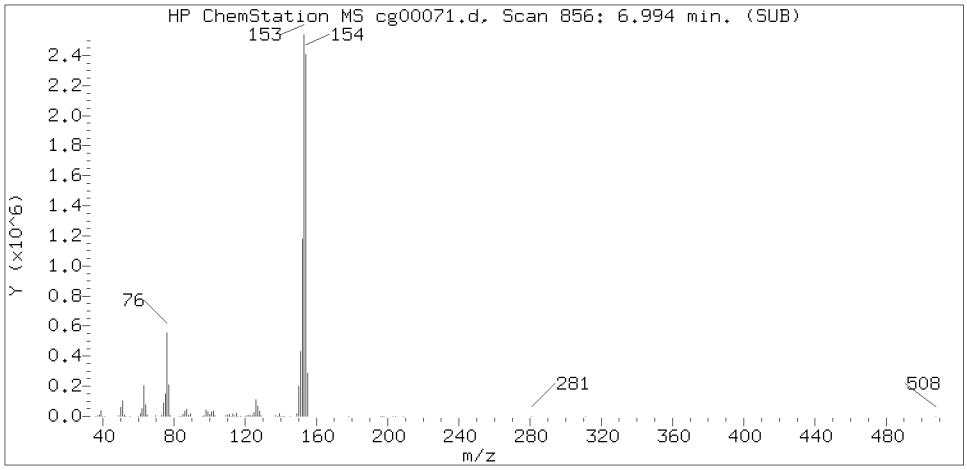
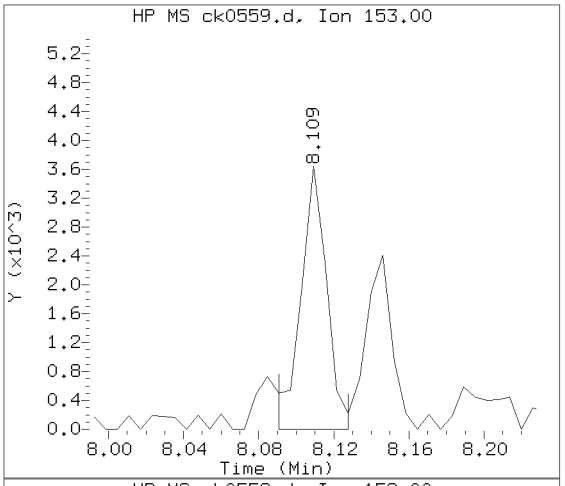
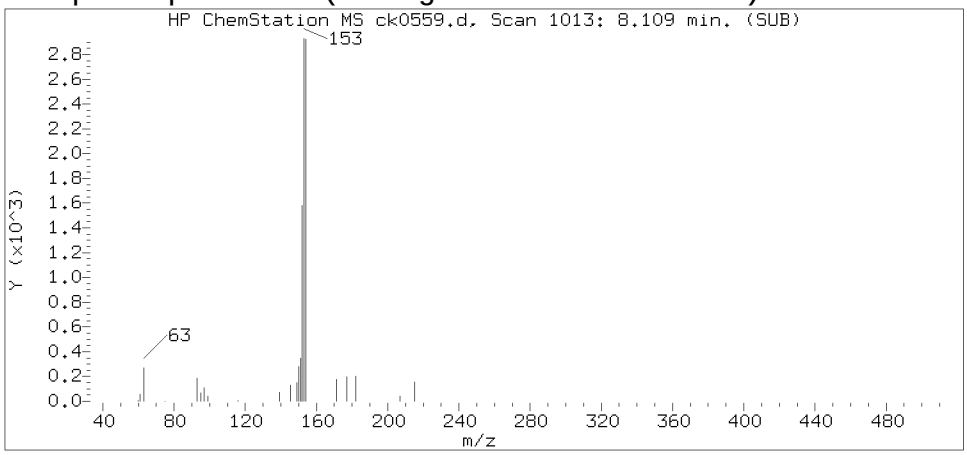
Target 3.5 esignature user ID: mac00013

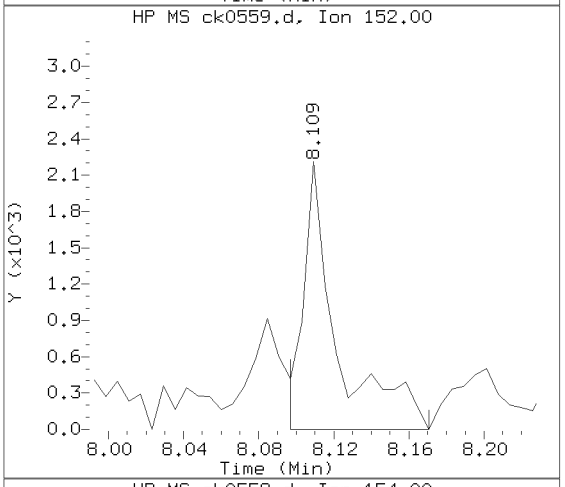
Reference Standard Spectrum for Acenaphthene



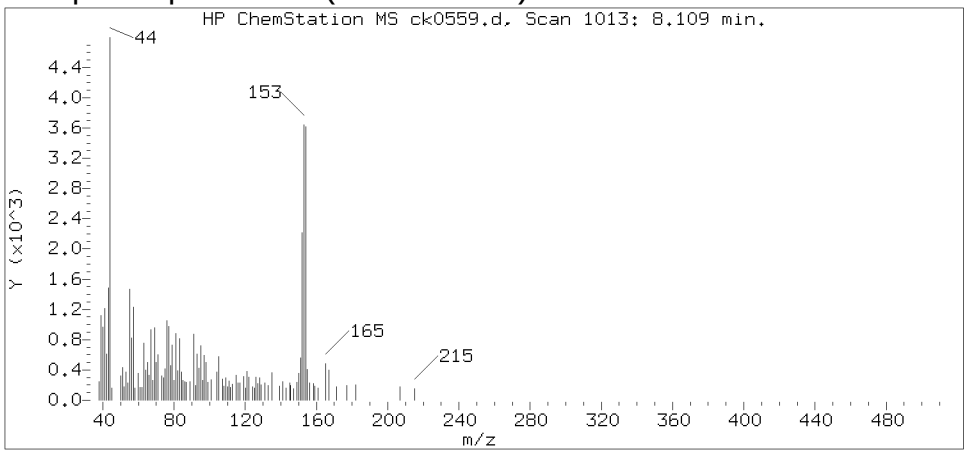


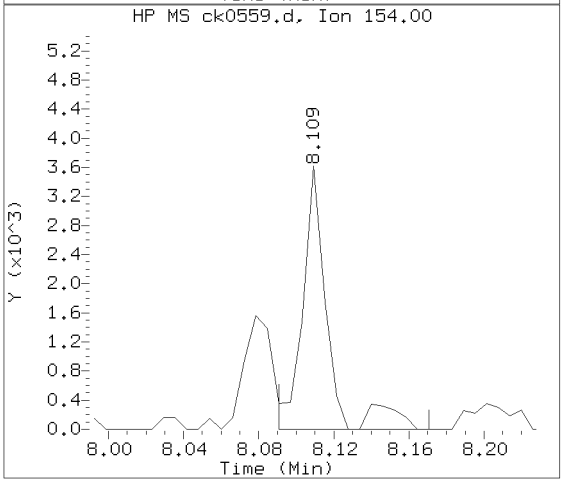
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

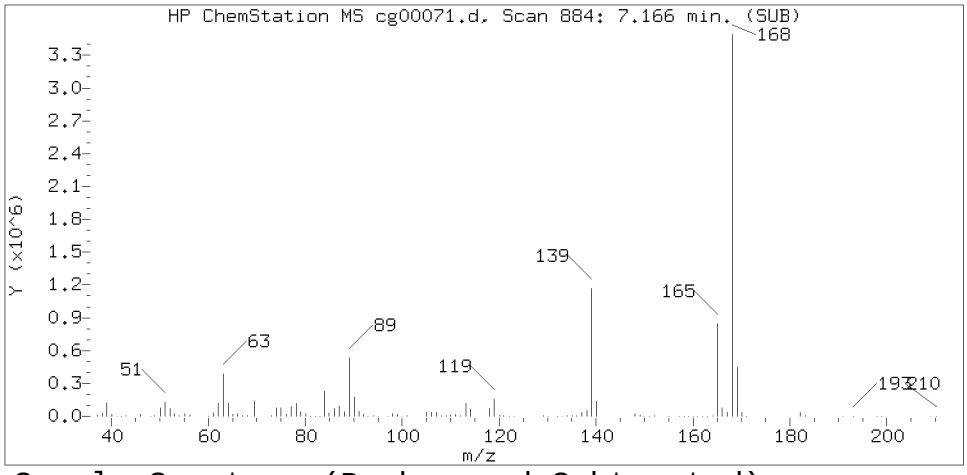
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

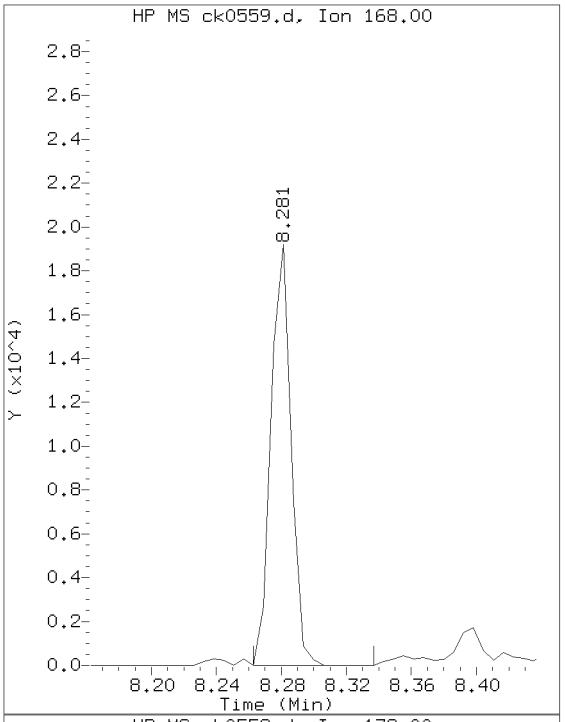
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 99
Compound Name : Acenaphthene
Scan Number : 1013
Retention Time (minutes) : 8.109
Relative Retention Time :-0.00000
Quant Ion : 153.00
Area (flag) : 3453
On-column Amount (ng/ul) : 0.1435

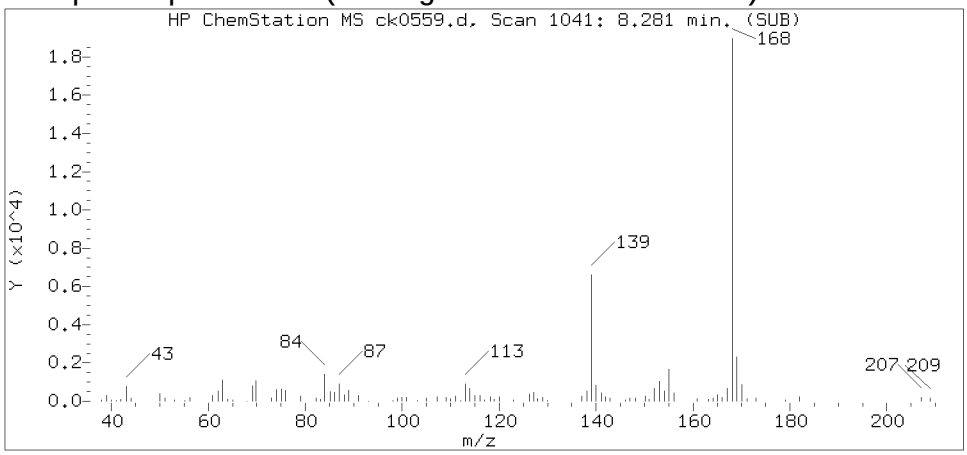
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

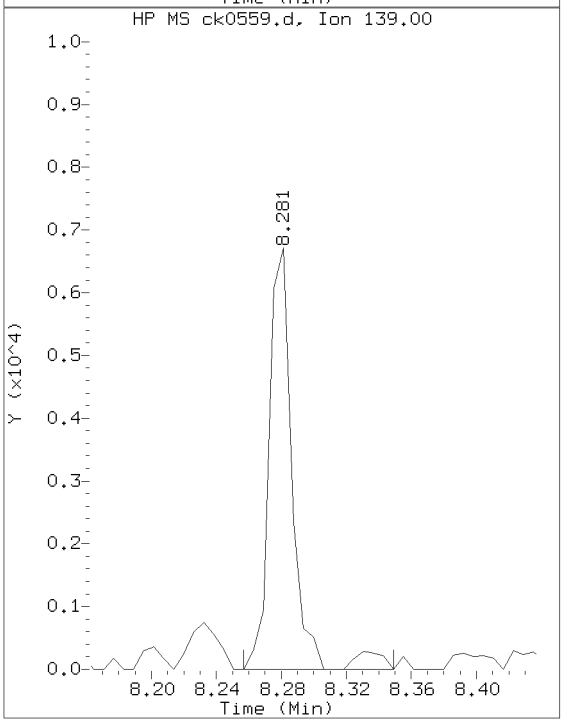
Reference Standard Spectrum for Dibenzofuran



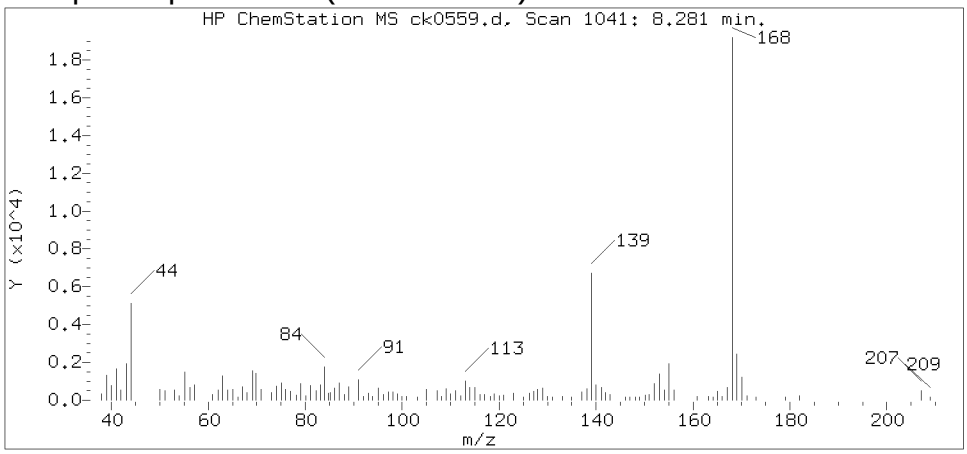


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 104
Compound Name : Dibenzofuran
Scan Number : 1041
Retention Time (minutes) : 8.281
Relative Retention Time :-0.00002
Quant Ion : 168.00
Area (flag) : 16641
On-column Amount (ng/ul) : 0.5048

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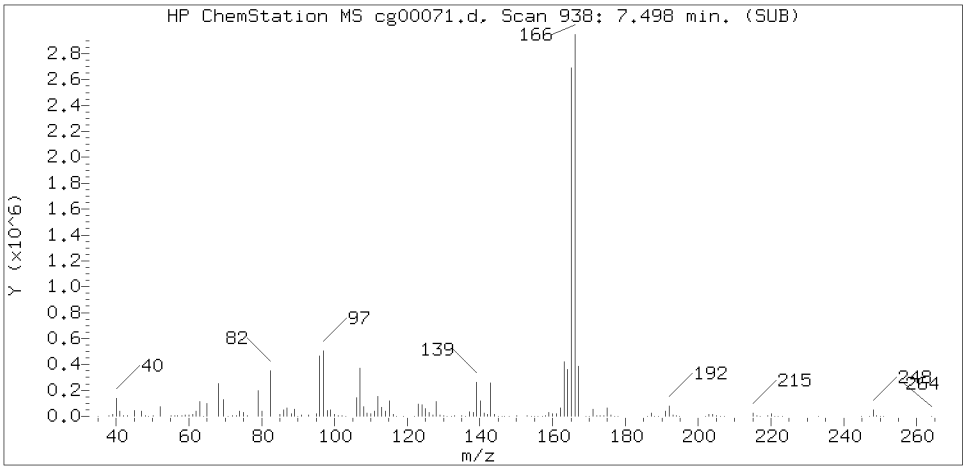
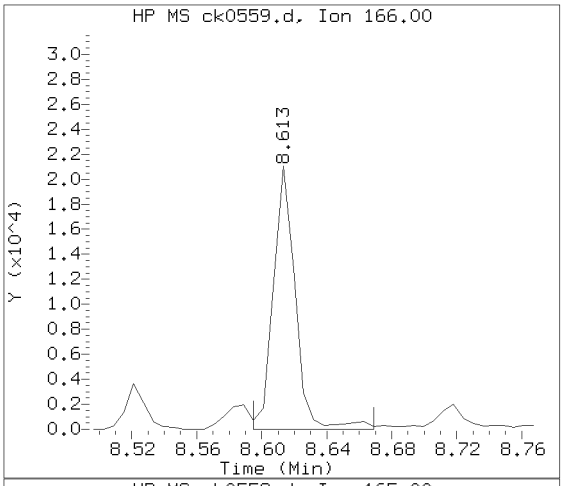
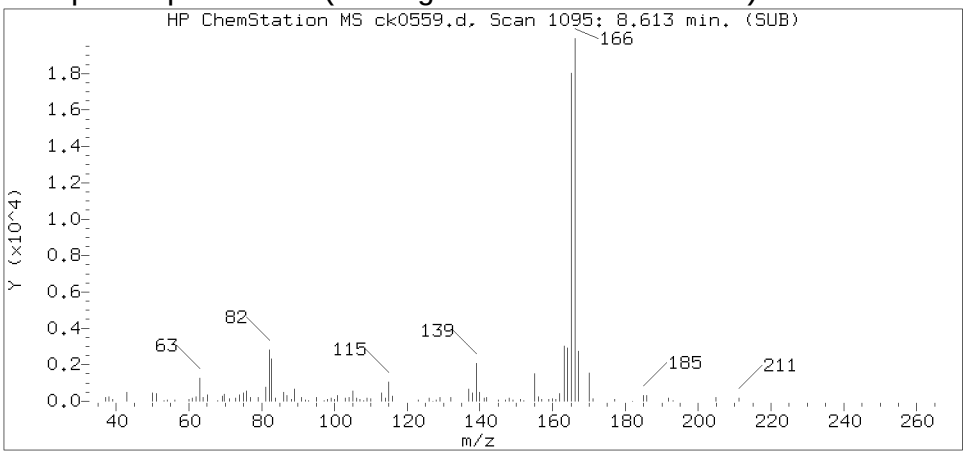
Target 3.5 esignature user ID: mac00013

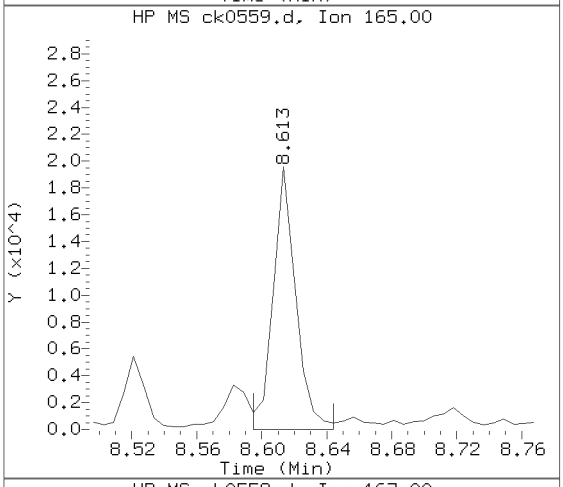
Reference Standard Spectrum for Fluorene



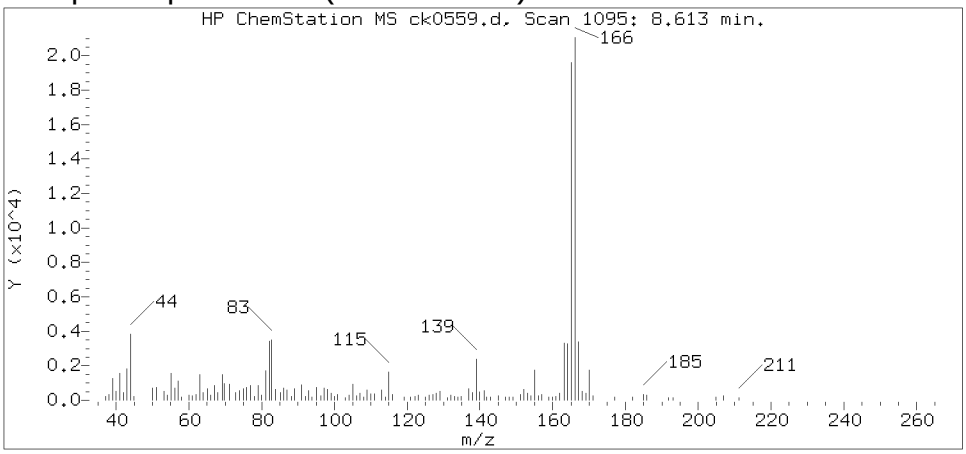


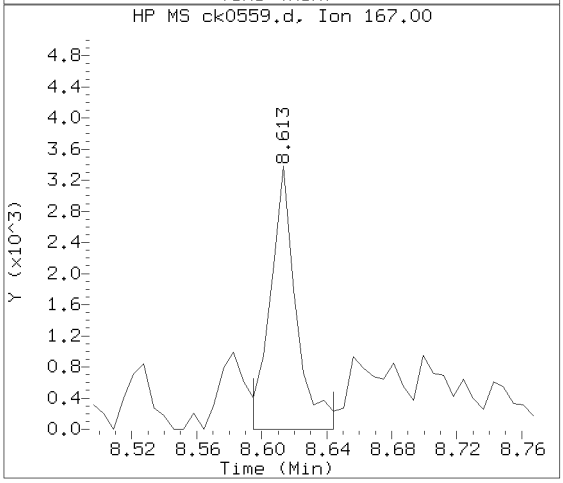
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 111
Compound Name : Fluorene
Scan Number : 1095
Retention Time (minutes) : 8.613
Relative Retention Time :-0.00005
Quant Ion : 166.00
Area (flag) : 19877
On-column Amount (ng/ul) : 0.7008

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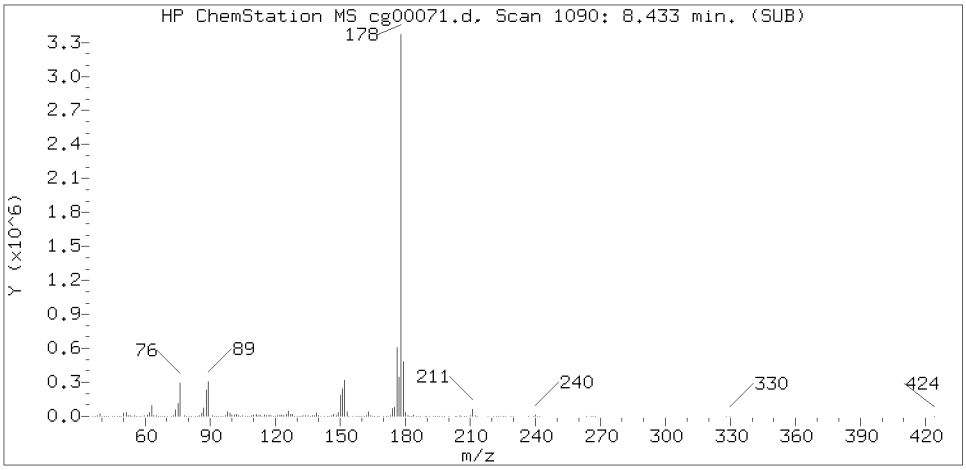
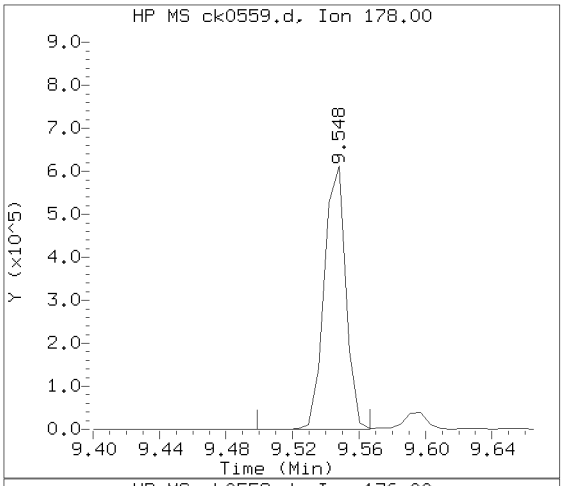
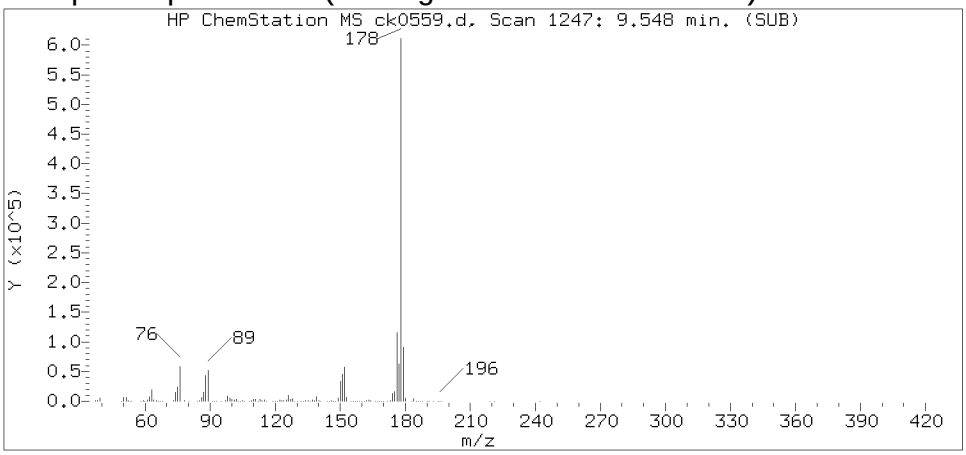
Target 3.5 esignature user ID: mac00013

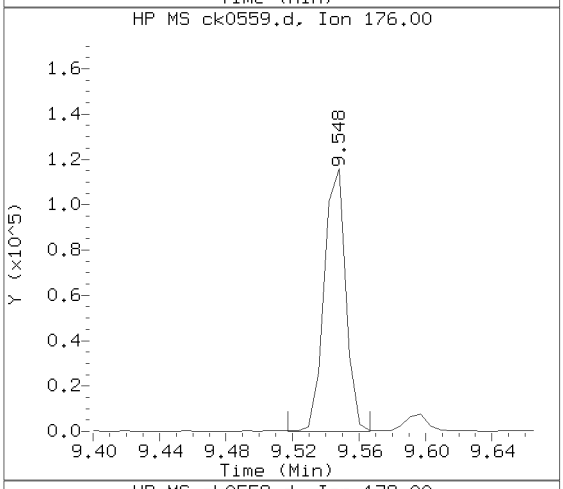
Reference Standard Spectrum for Phenanthrene



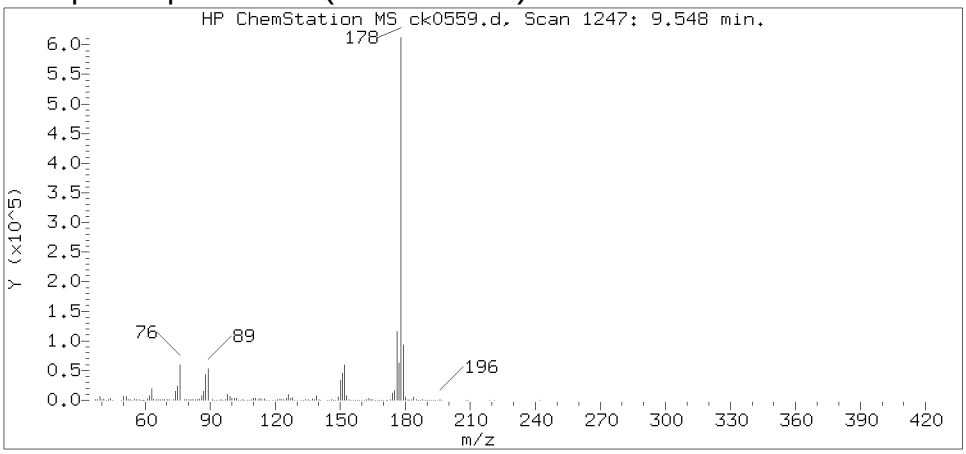


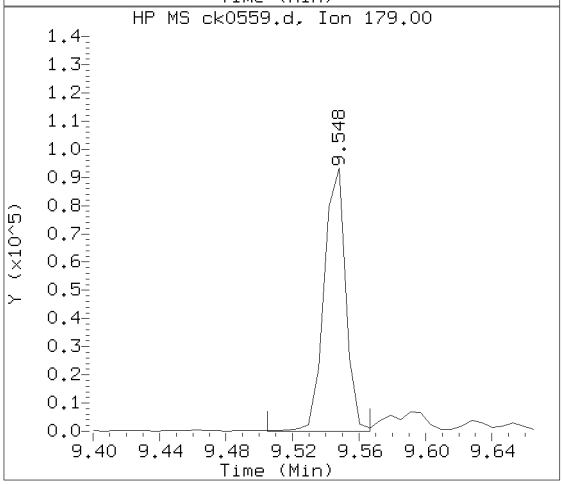
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1247
Retention Time (minutes) : 9.548
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 549983
On-column Amount (ng/ul) : 12.7588

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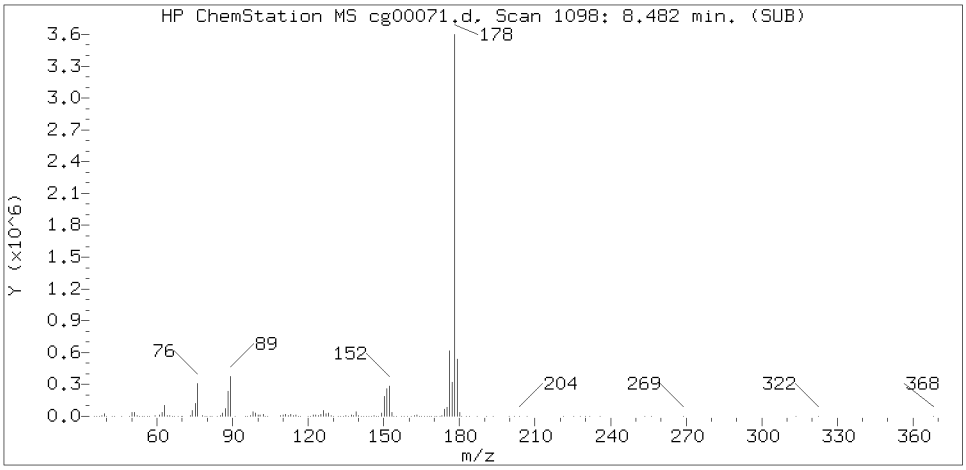
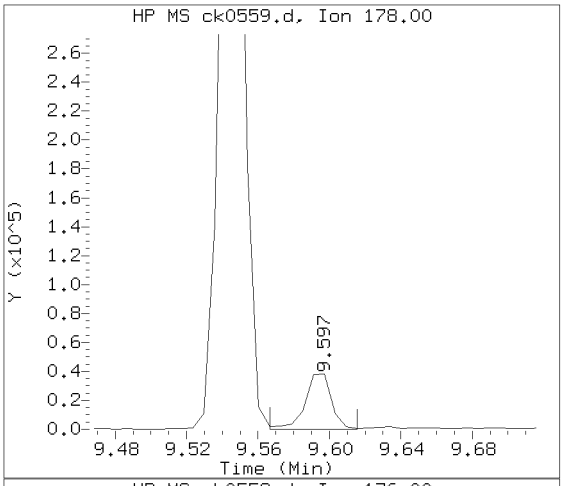
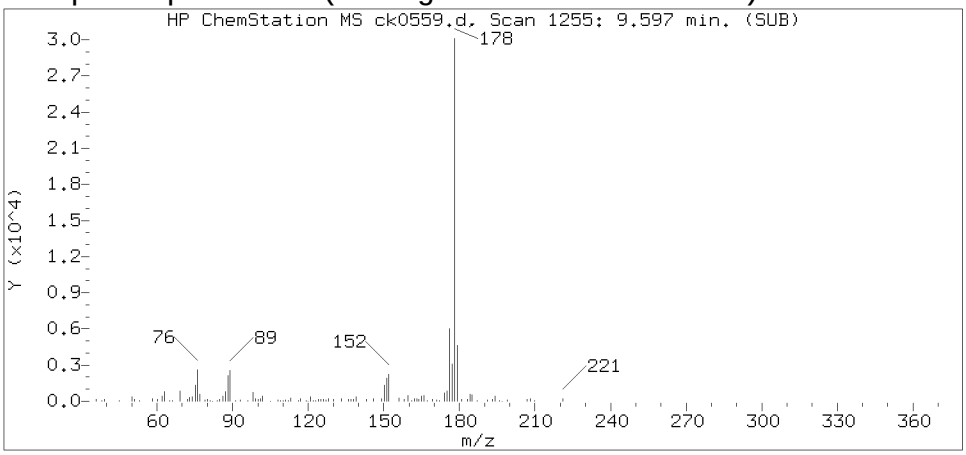
Target 3.5 esignature user ID: mac00013

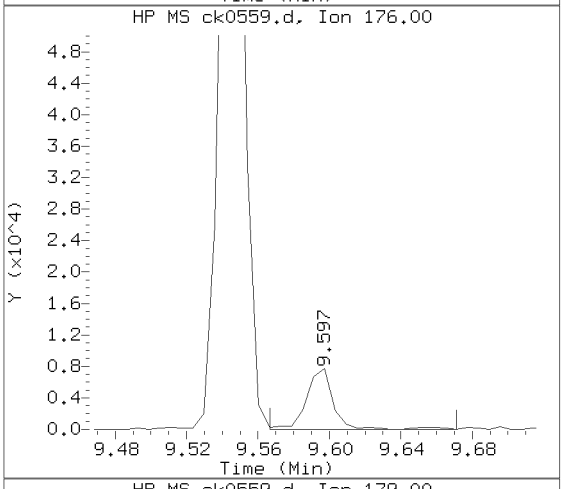
Reference Standard Spectrum for Anthracene



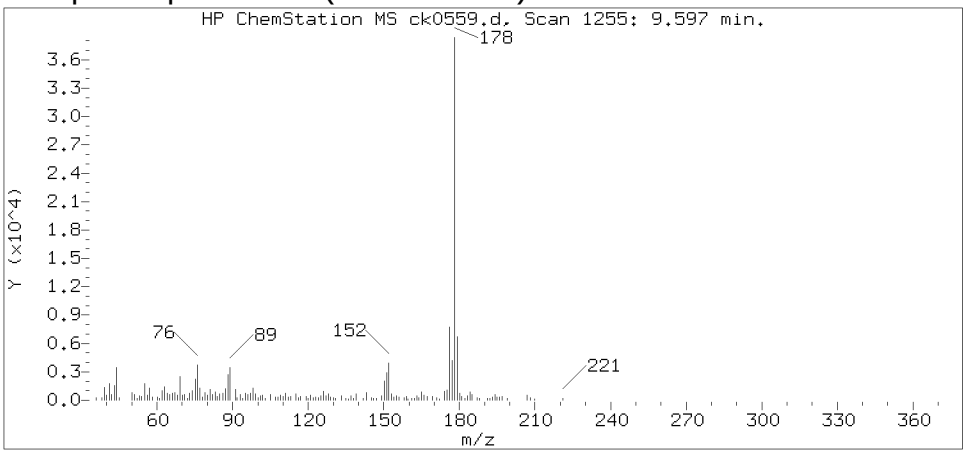


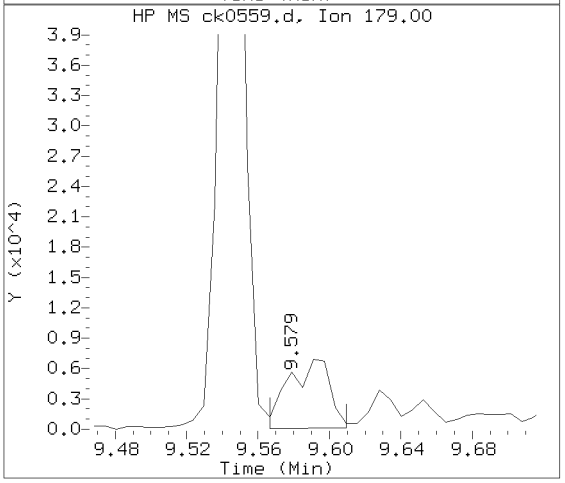
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 138
Compound Name : Anthracene
Scan Number : 1255
Retention Time (minutes) : 9.597
Relative Retention Time :-0.00001
Quant Ion : 178.00
Area (flag) : 39236
On-column Amount (ng/ul) : 0.8843

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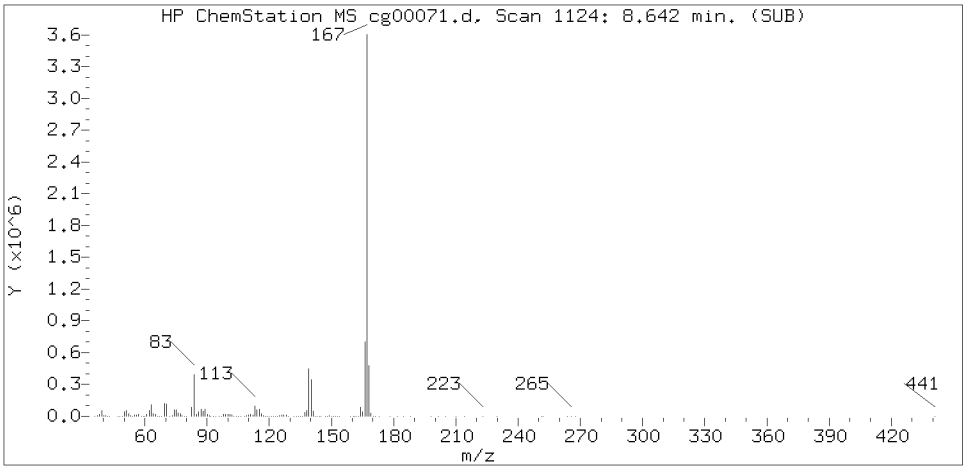
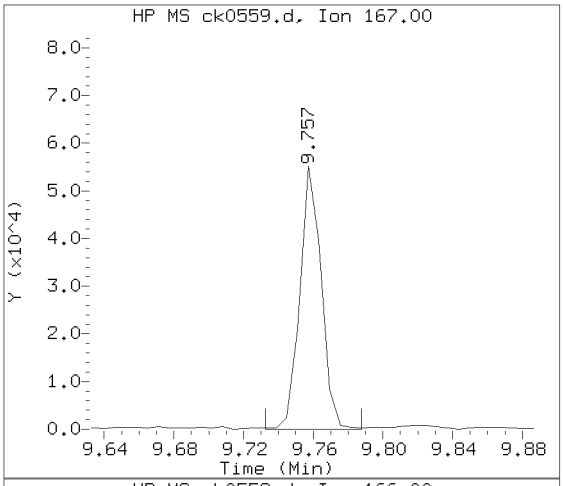
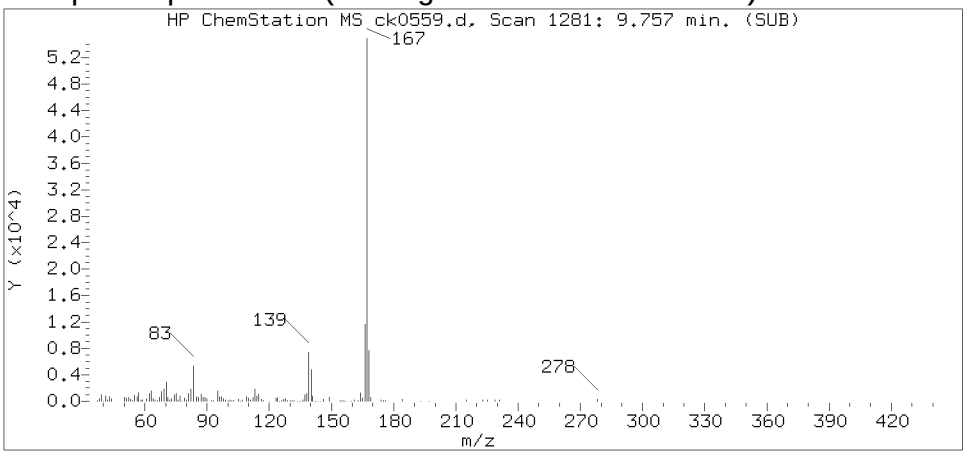
Target 3.5 esignature user ID: mac00013

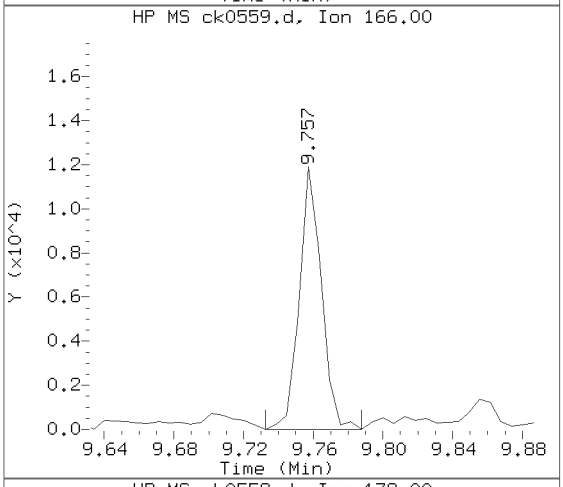
Reference Standard Spectrum for Carbazole



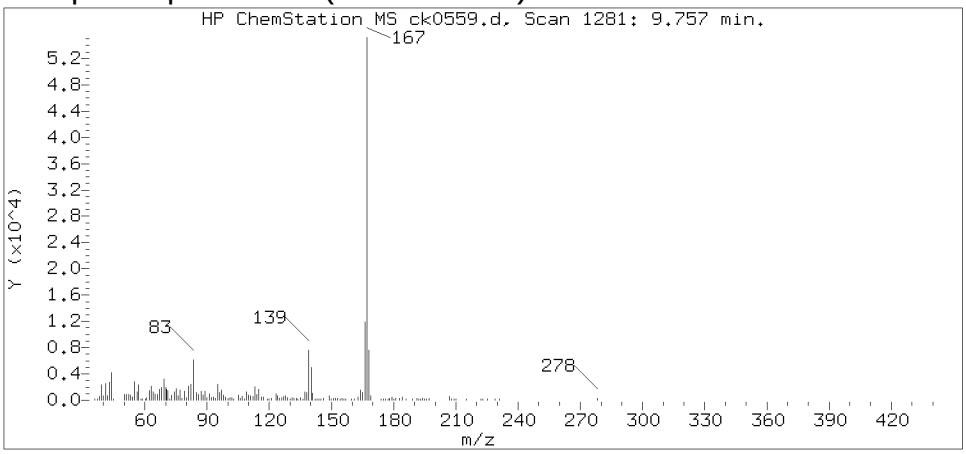


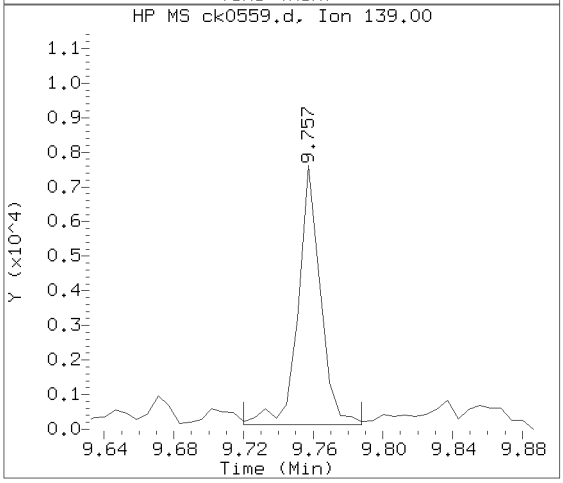
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 140
Compound Name : Carbazole
Scan Number : 1281
Retention Time (minutes) : 9.757
Relative Retention Time :-0.00002
Quant Ion : 167.00
Area (flag) : 47352
On-column Amount (ng/ul) : 1.0936

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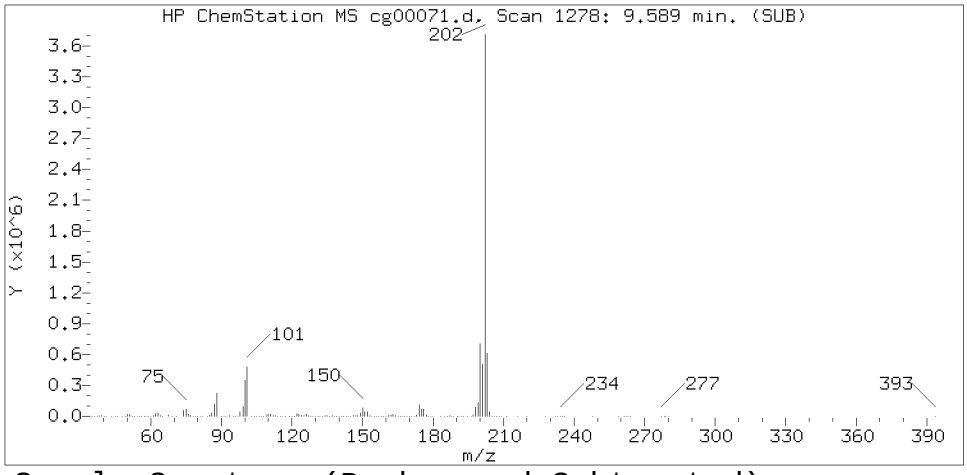
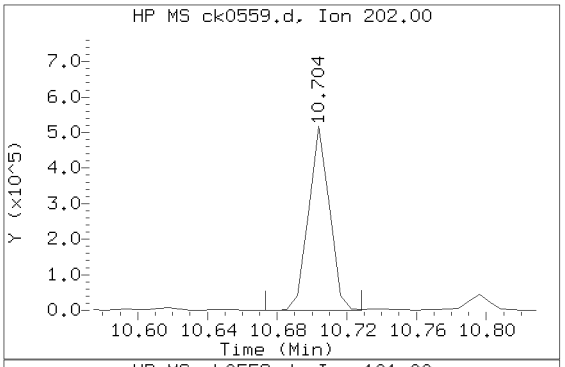
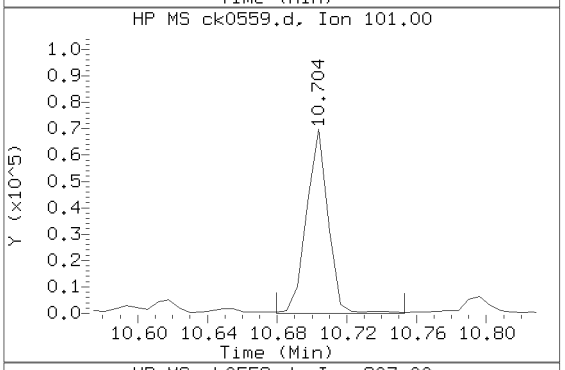
Target 3.5 esignature user ID: mac00013

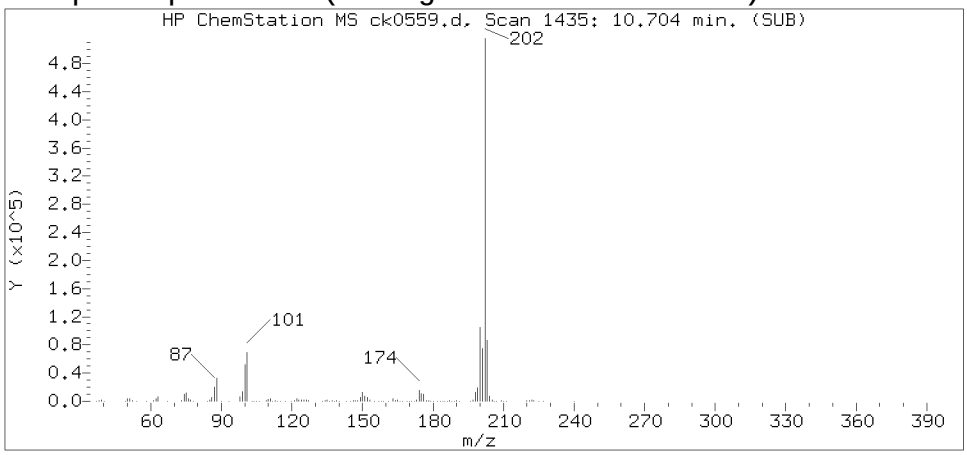
Reference Standard Spectrum for Fluoranthene

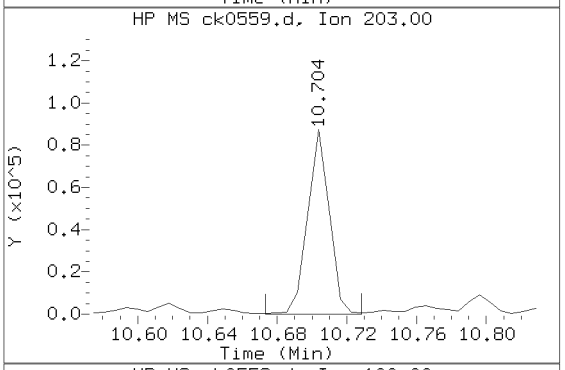




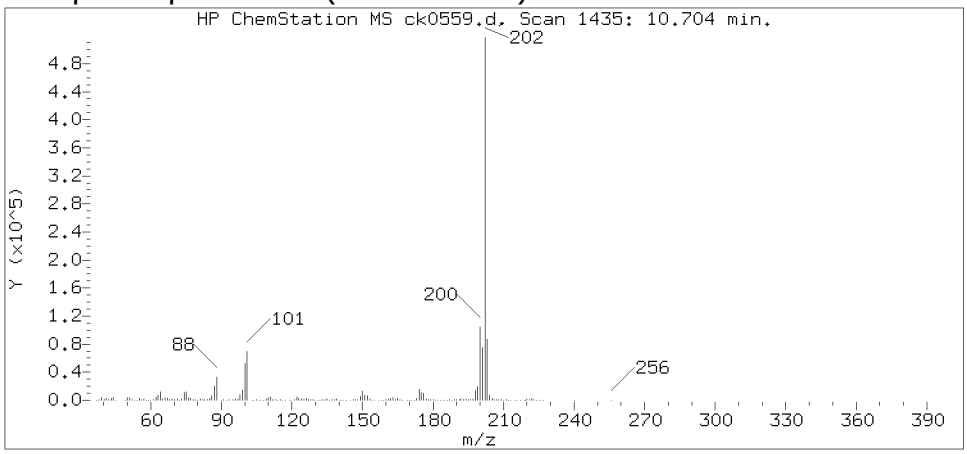


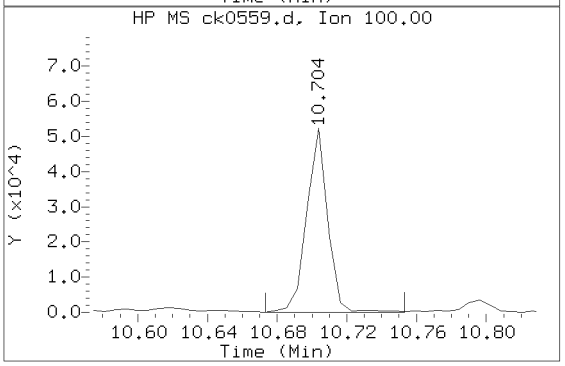
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1435
Retention Time (minutes)	: 10.704
Relative Retention Time	:-0.00008
Quant Ion	: 202.00
Area (flag)	: 431110
On-column Amount (ng/ul)	: 8.9443

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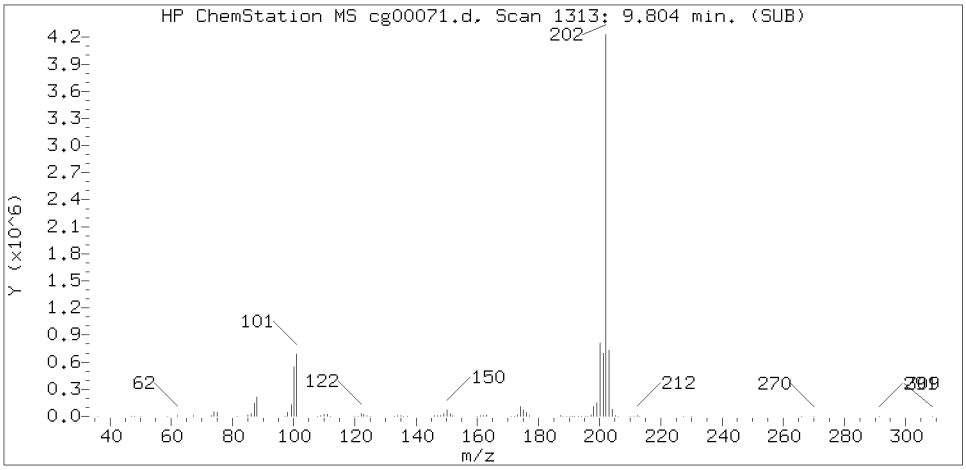
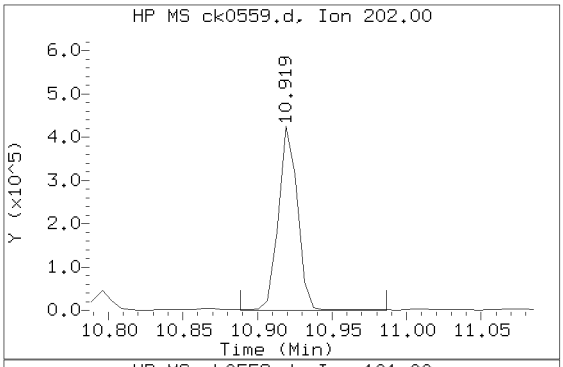
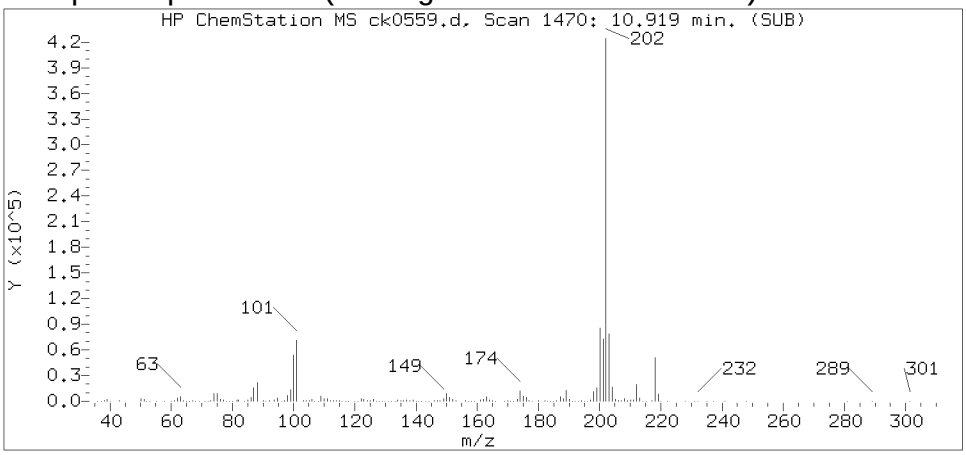
Target 3.5 esignature user ID: mac00013

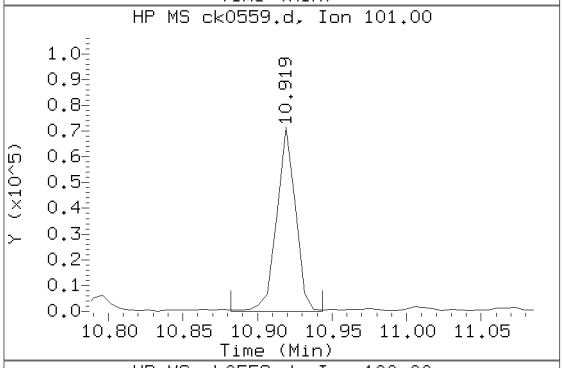
Reference Standard Spectrum for Pyrene

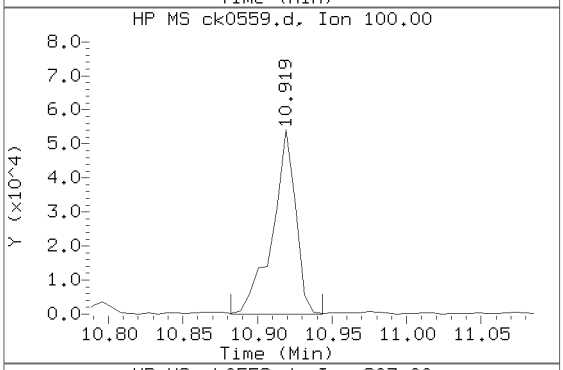




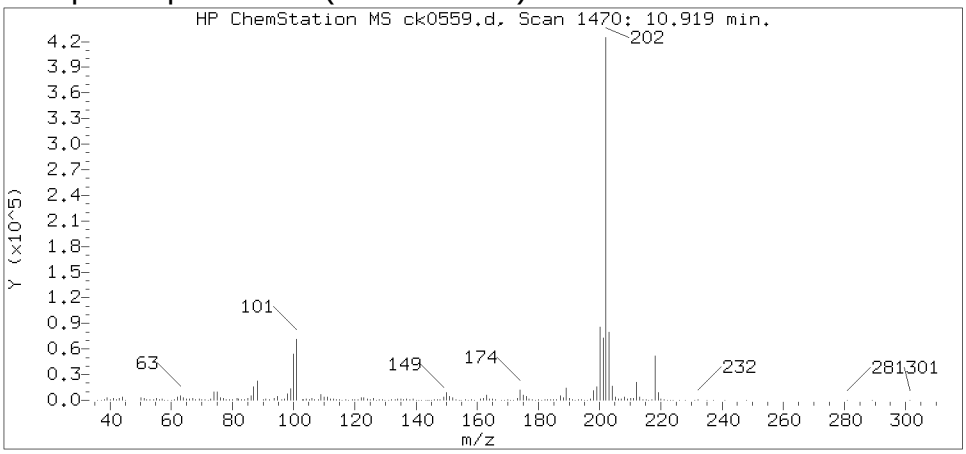
Sample Spectrum (Background Subtracted)

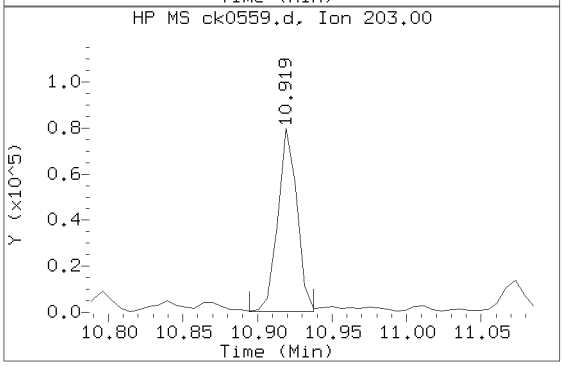






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1470
Retention Time (minutes)	: 10.919
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 378499
On-column Amount (ng/ul)	: 7.5341

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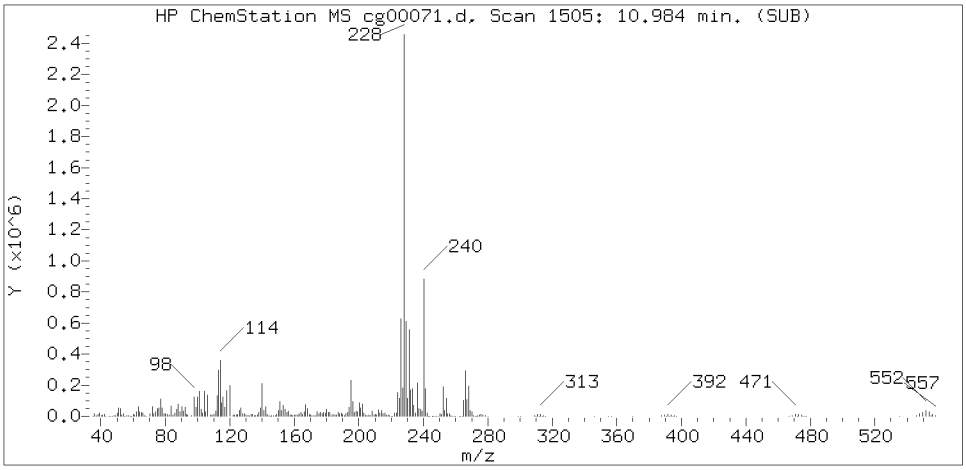
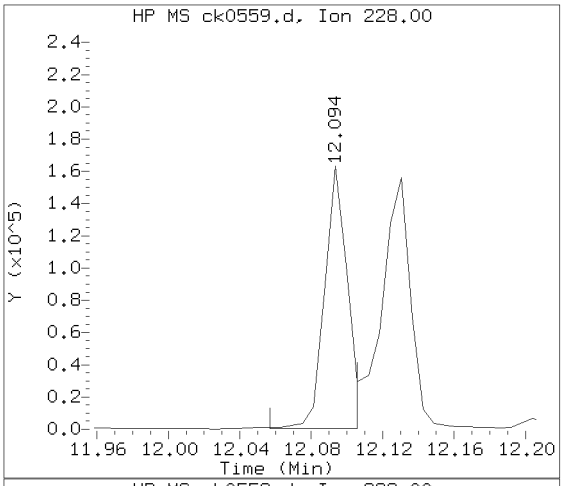
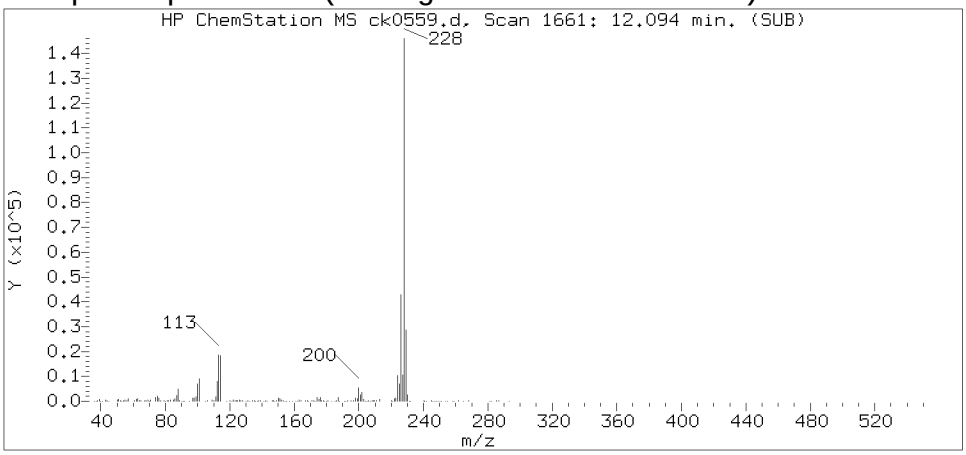
Target 3.5 esignature user ID: mac00013

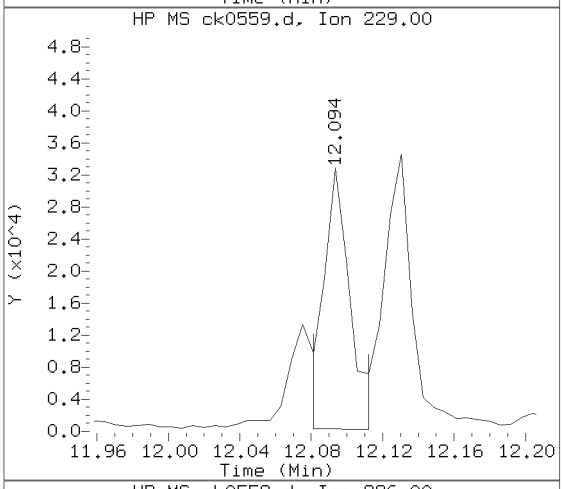
Reference Standard Spectrum for Benzo(a)anthracene



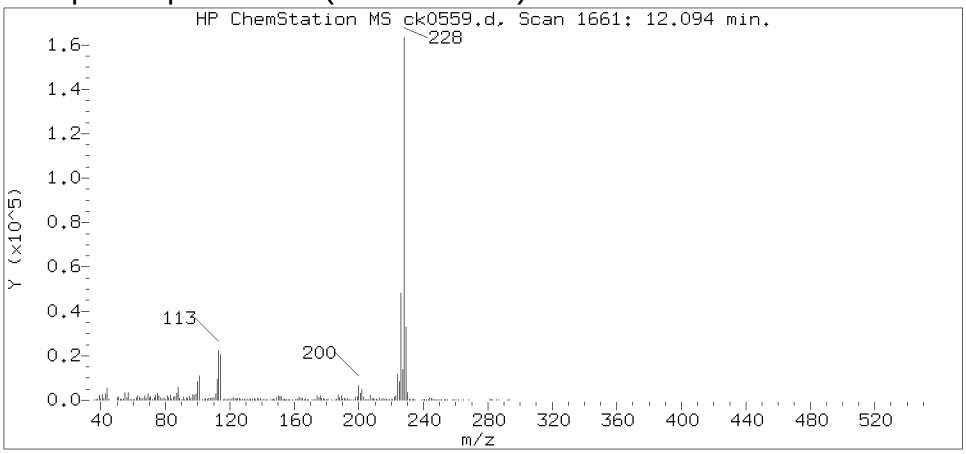


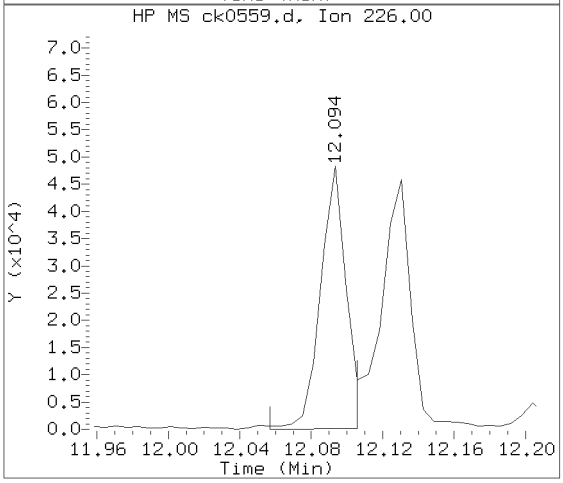
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

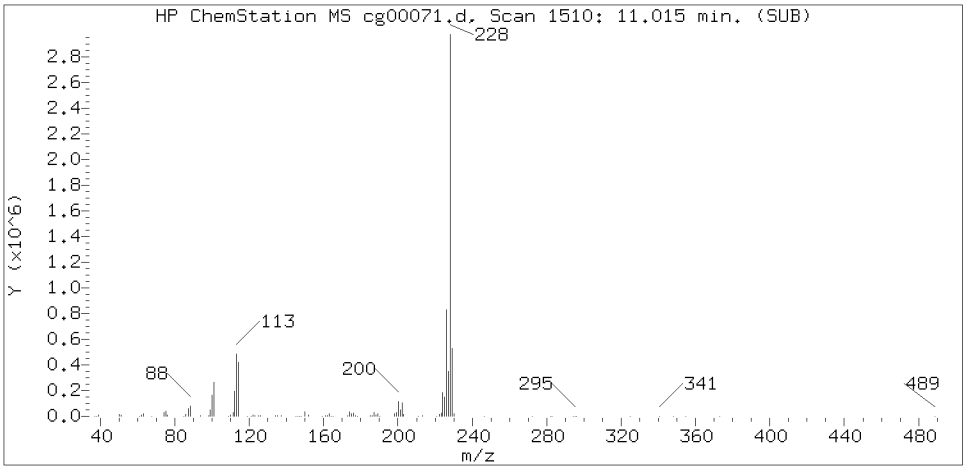
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

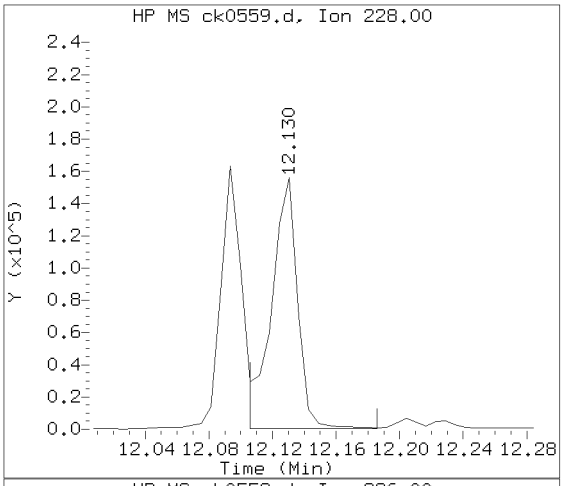
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 166
Compound Name : Benzo(a)anthracene
Scan Number : 1661
Retention Time (minutes) : 12.094
Relative Retention Time :-0.00006
Quant Ion : 228.00
Area (flag) : 141853
On-column Amount (ng/ul) : 3.0613

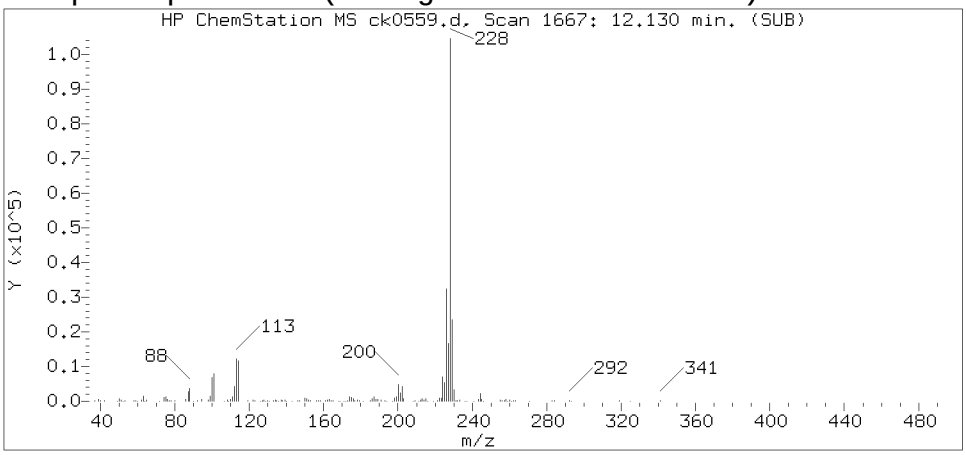
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

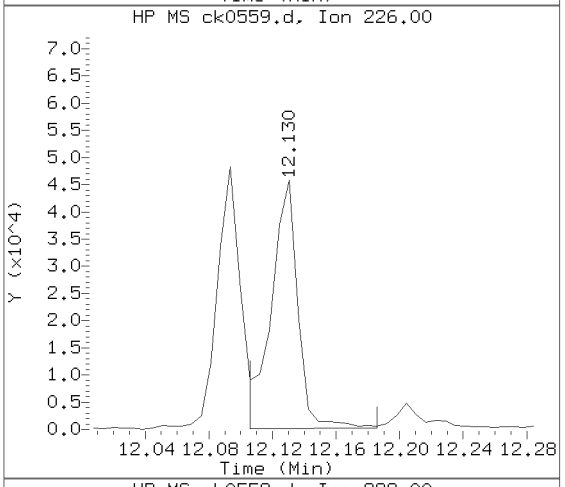
Reference Standard Spectrum for Chrysene



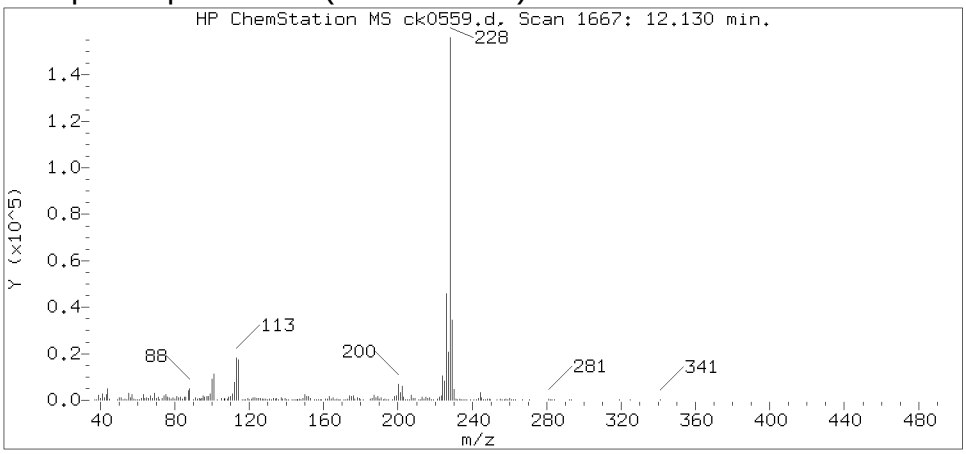


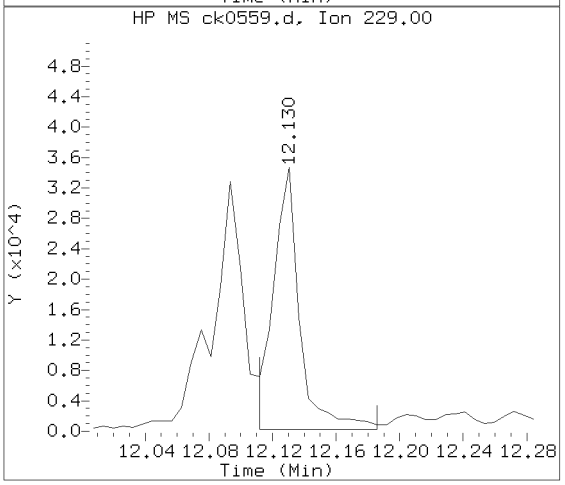
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

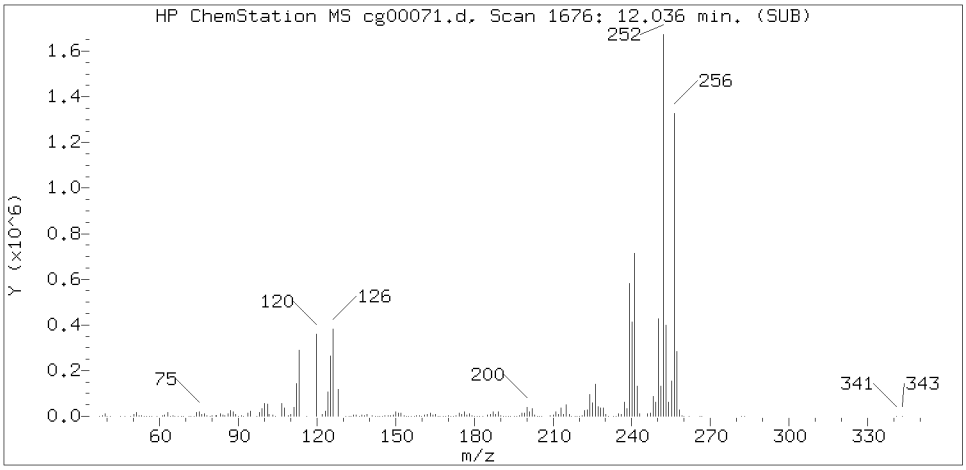
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

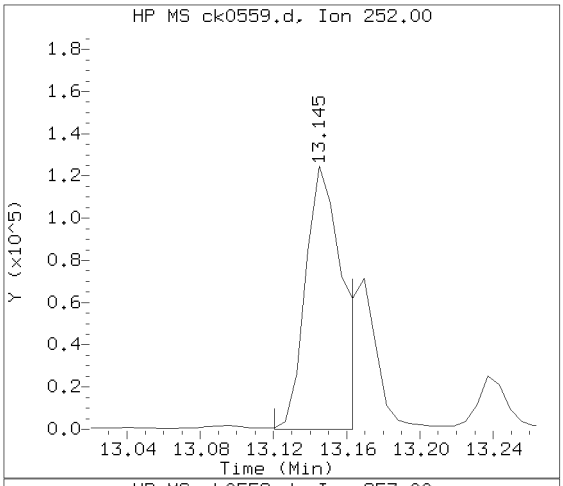
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 168
Compound Name : Chrysene
Scan Number : 1667
Retention Time (minutes) : 12.130
Relative Retention Time :-0.00006
Quant Ion : 228.00
Area (flag) : 177585
On-column Amount (ng/ul) : 3.9750

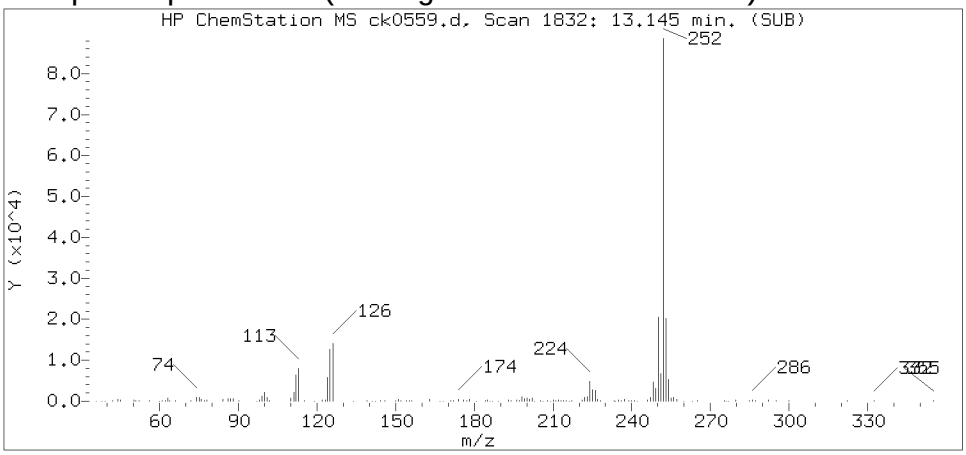
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

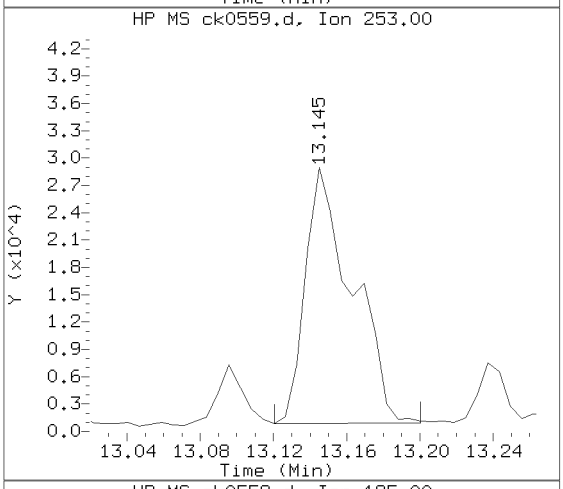
Reference Standard Spectrum for Benzo(b)fluoranthene



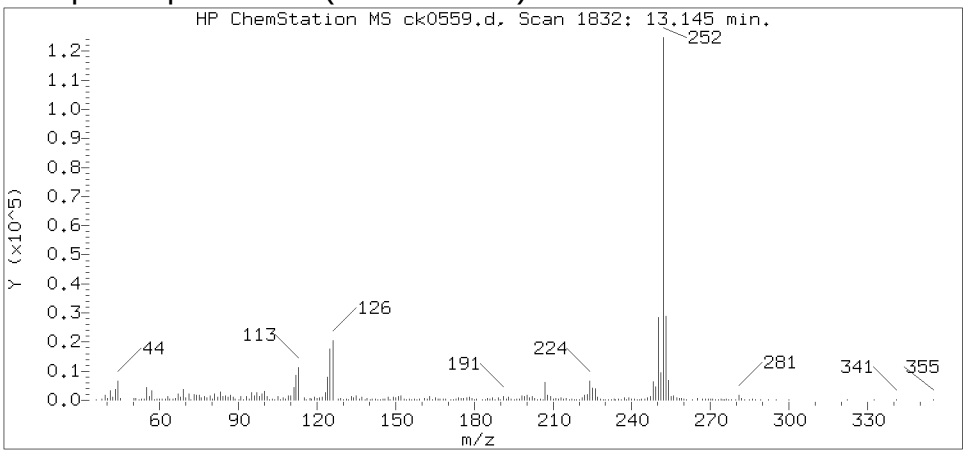


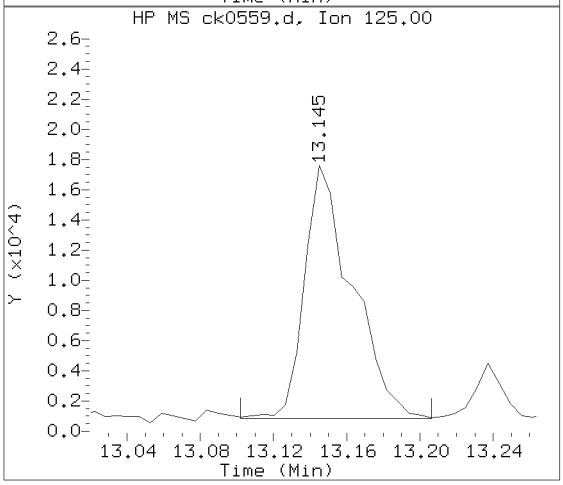
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1832
Retention Time (minutes) : 13.145
Relative Retention Time : 0.00047
Quant Ion : 252.00
Area (flag) : 177743M
On-column Amount (ng/ul) : 4.4728

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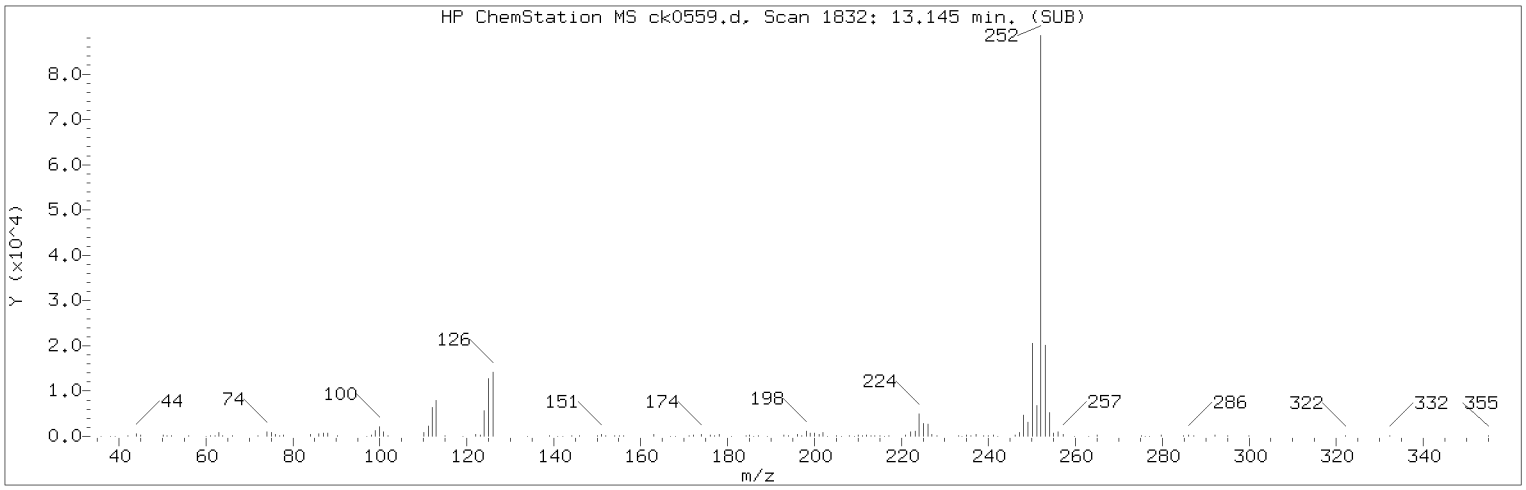
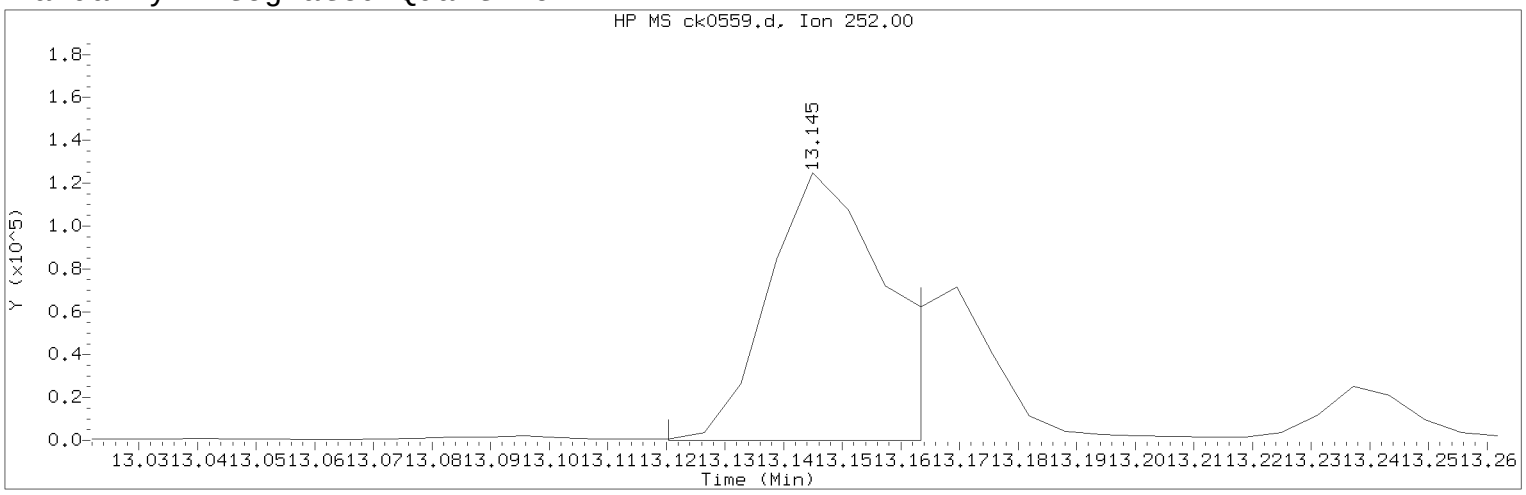
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

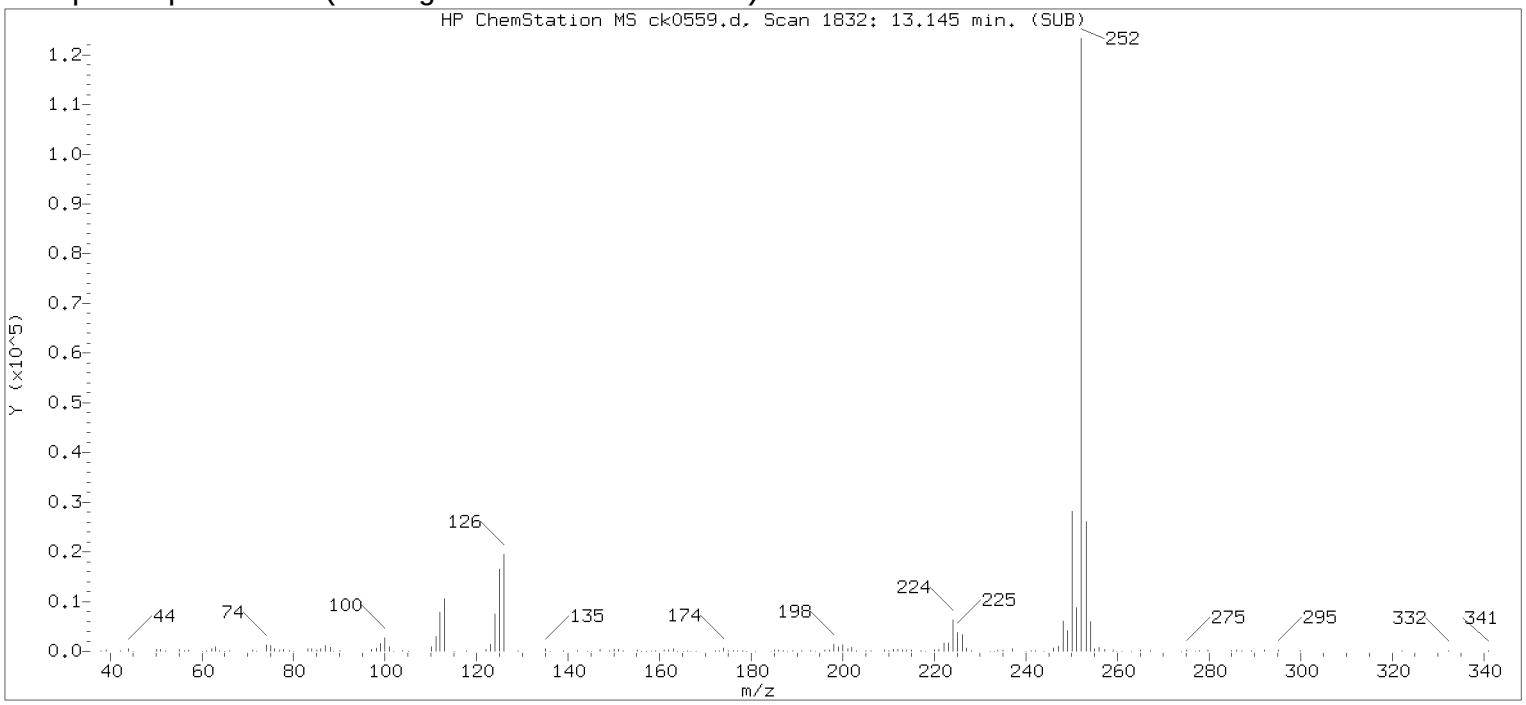
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1832
Retention Time (minutes) : 13.145
Quant Ion : 252.00
Area (flag) : 177743M
On-column Amount (ng/ul) : 4.4728
Integration start scan : 1827 Integration stop scan: 1834
Y at integration start : 11 Y at integration end: 11

Reason for manual integration: improper integration

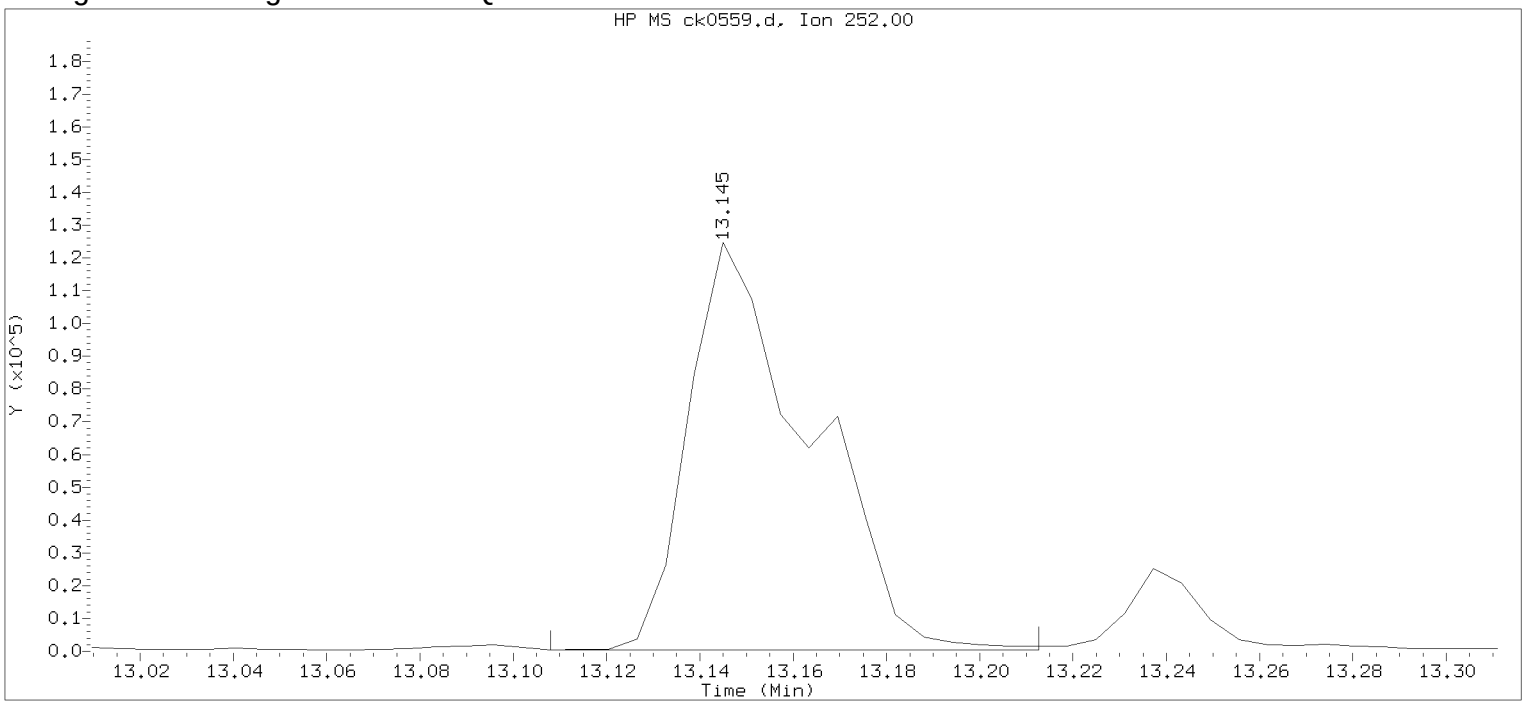
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

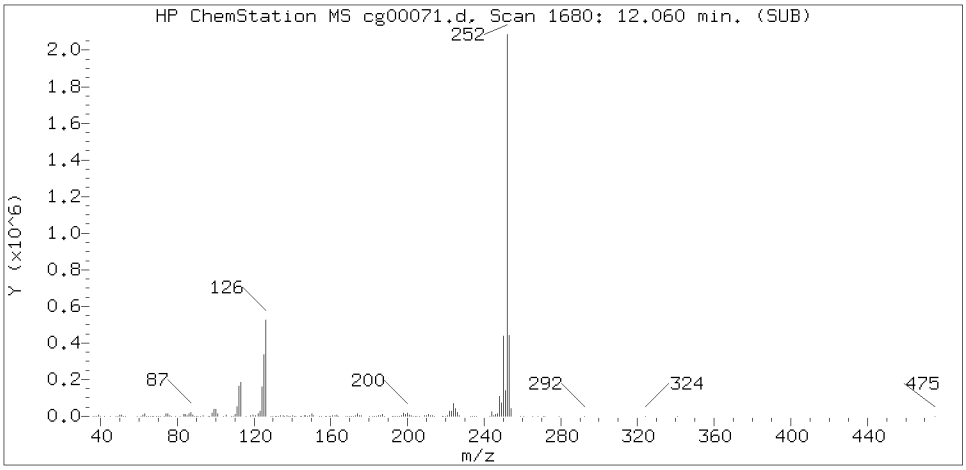
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:55 mac00013

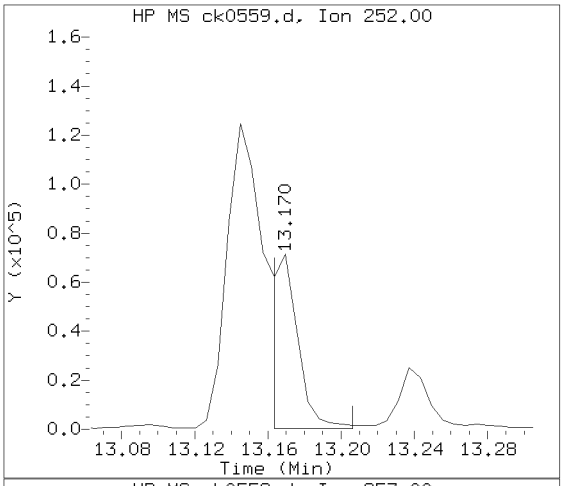
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1832
Retention Time (minutes) : 13.145
Quant Ion : 252.00
Area : 224771
On-column Amount (ng/ul) : 5.6563
Integration start scan : 1825 Integration stop scan: 1842
Y at integration start : 443 Y at integration end: 466

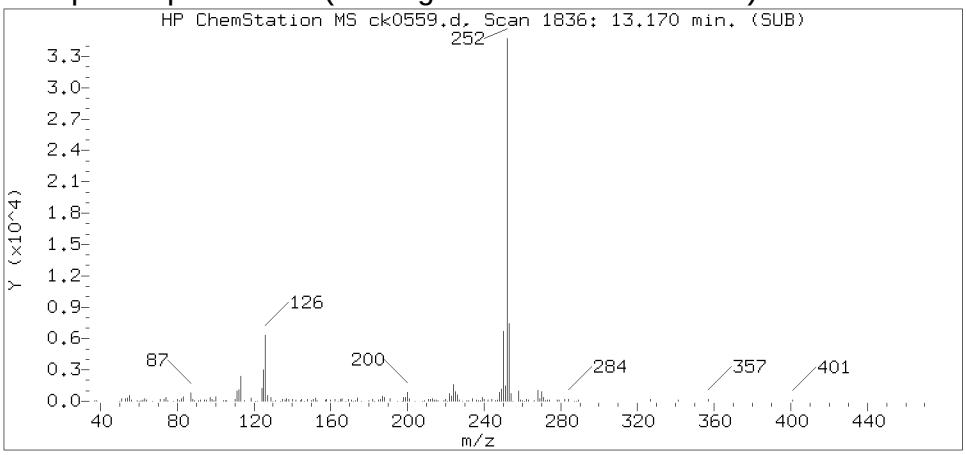
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

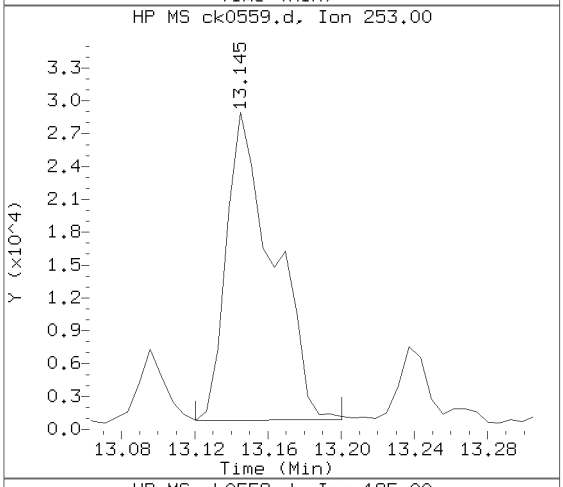
Reference Standard Spectrum for Benzo(k)fluoranthene



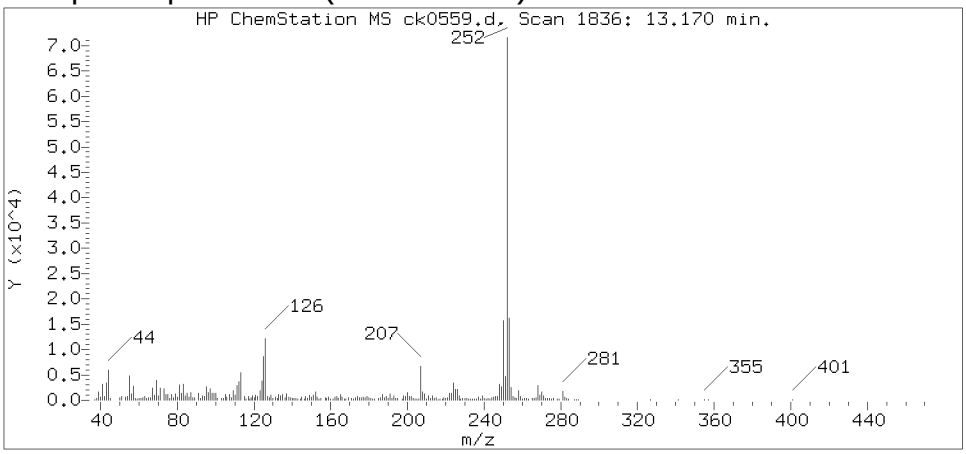


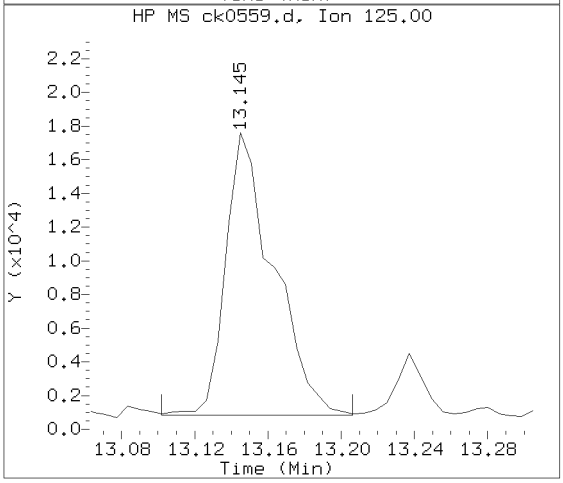
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

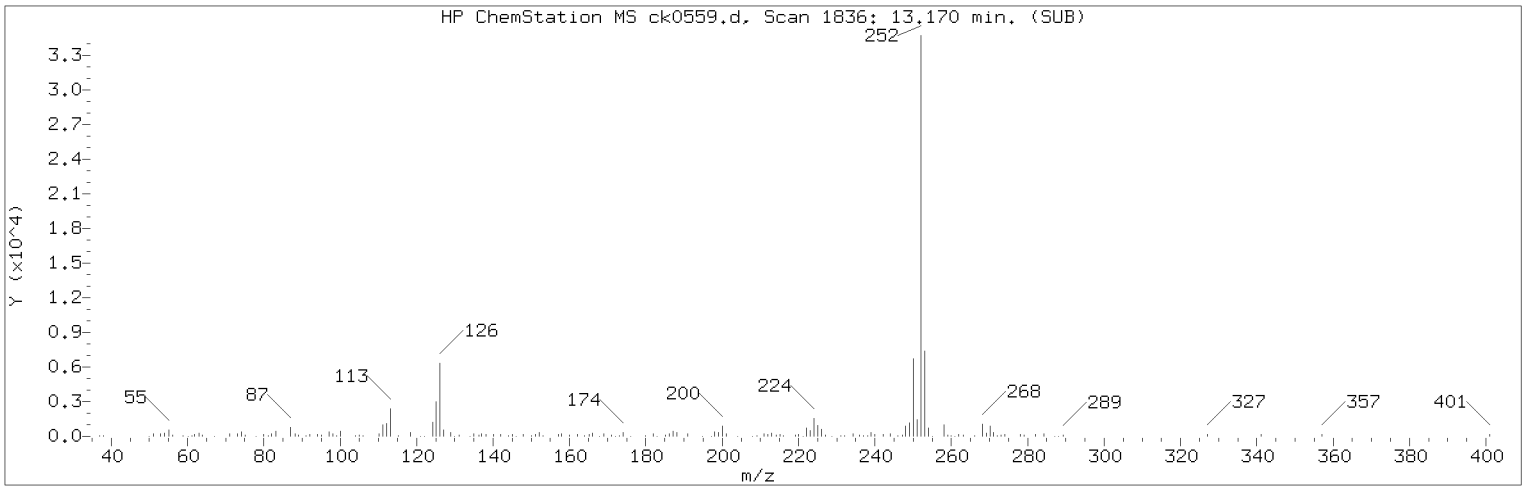
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

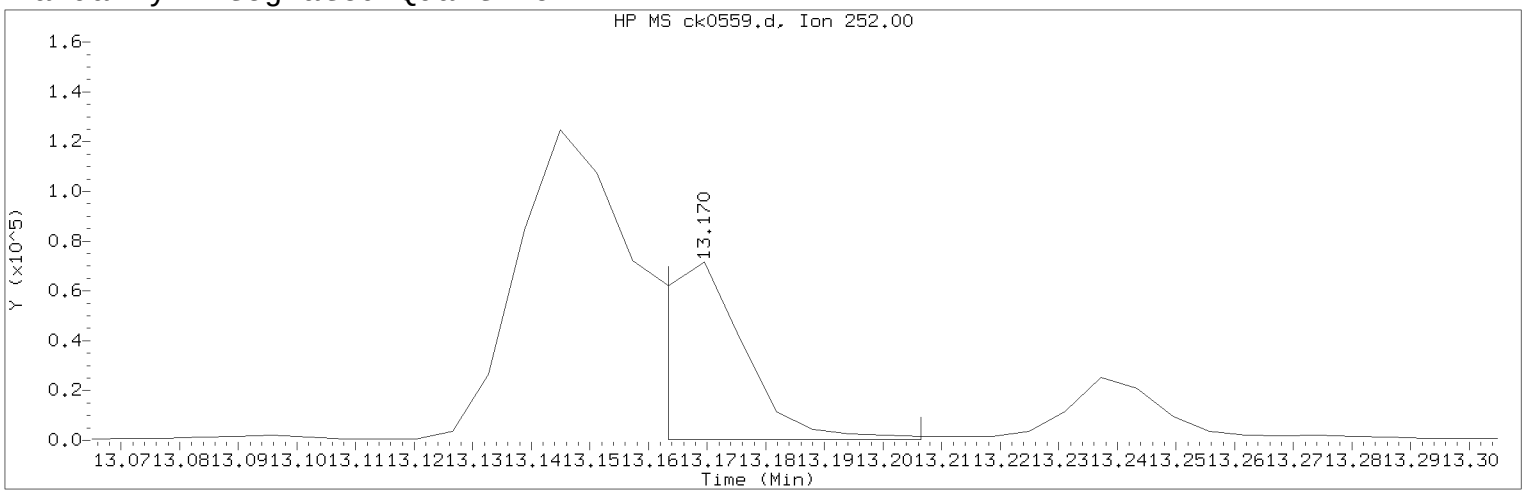
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1836
Retention Time (minutes) : 13.170
Relative Retention Time : 0.00047
Quant Ion : 252.00
Area (flag) : 71432M
On-column Amount (ng/ul) : 1.7619

Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

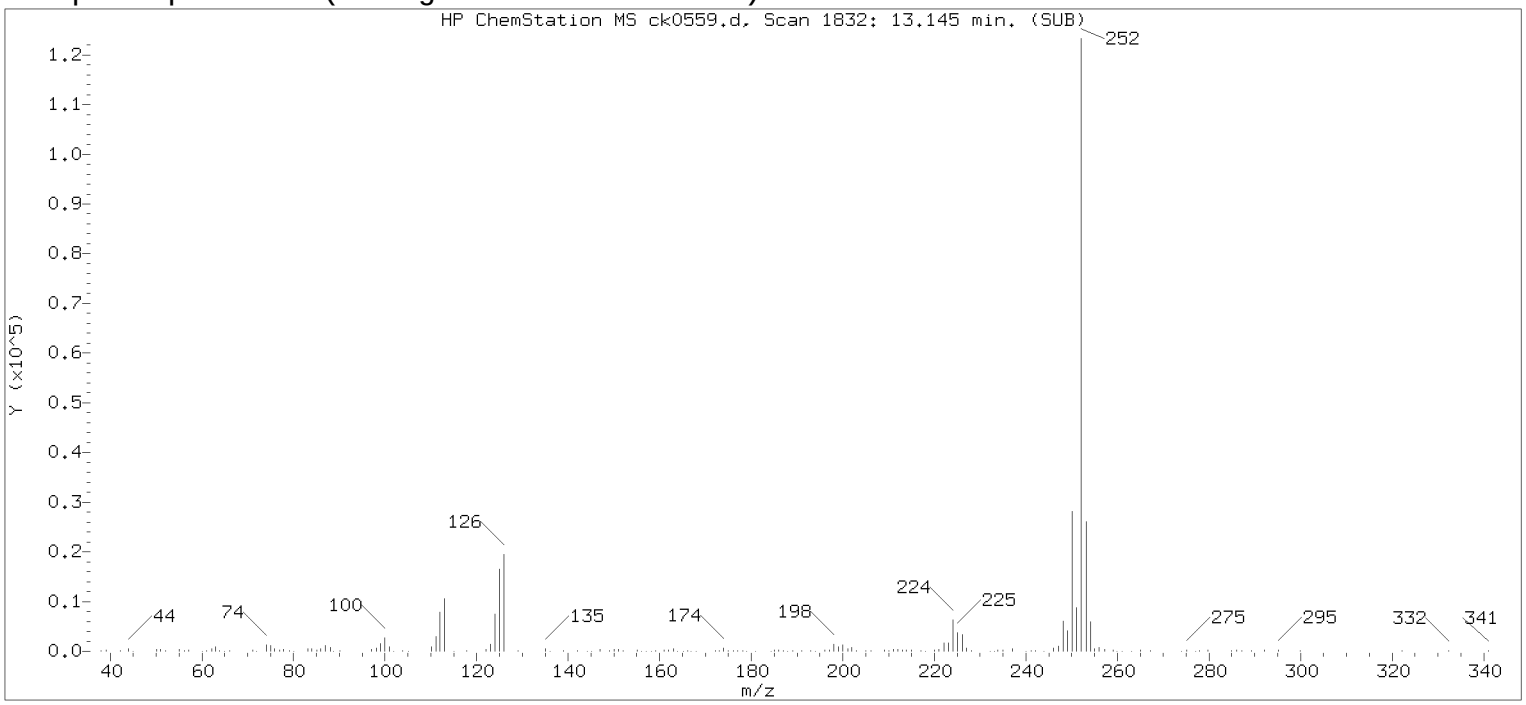
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1836
Retention Time (minutes) : 13.170
Quant Ion : 252.00
Area (flag) : 71432M
On-column Amount (ng/ul) : 1.7619
Integration start scan : 1834 Integration stop scan: 1841
Y at integration start : 246 Y at integration end: 246

Reason for manual integration: improper integration

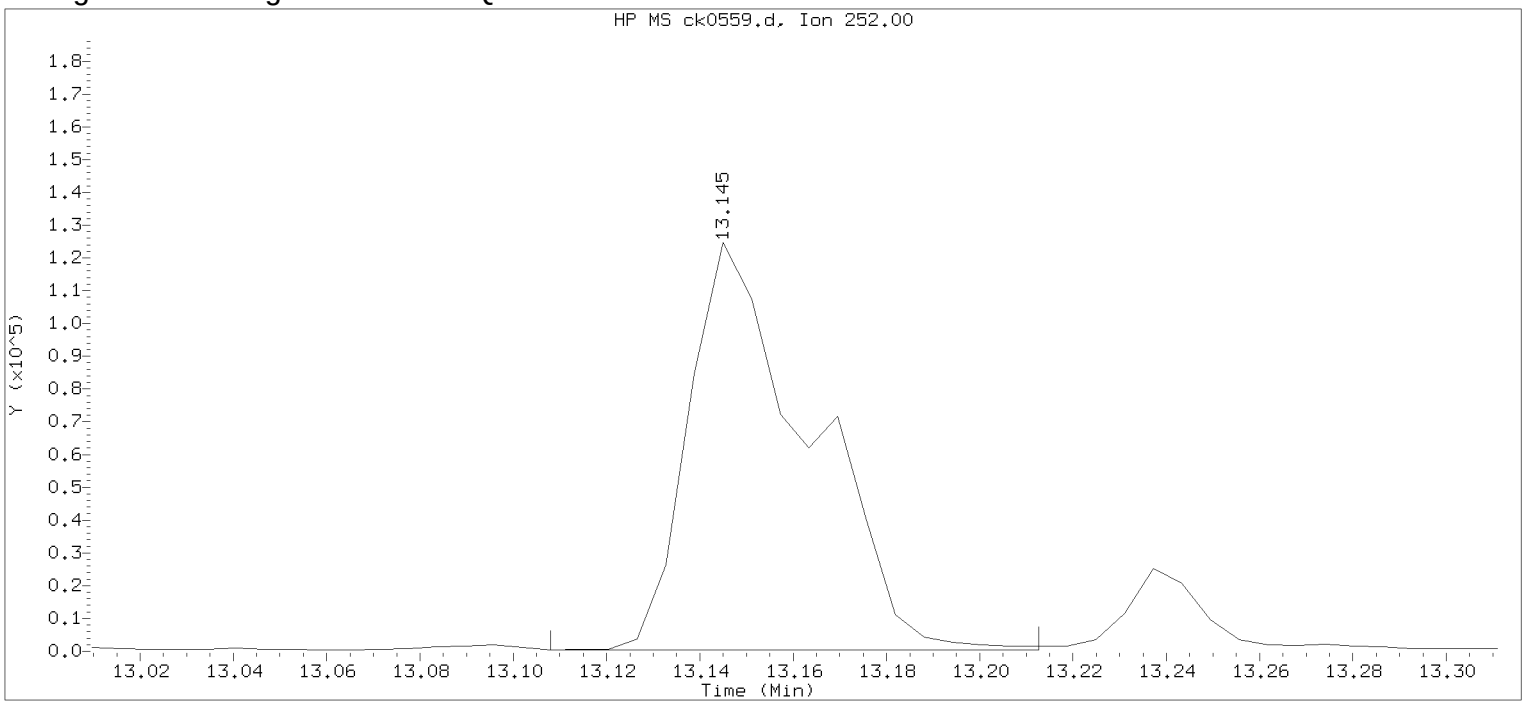
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

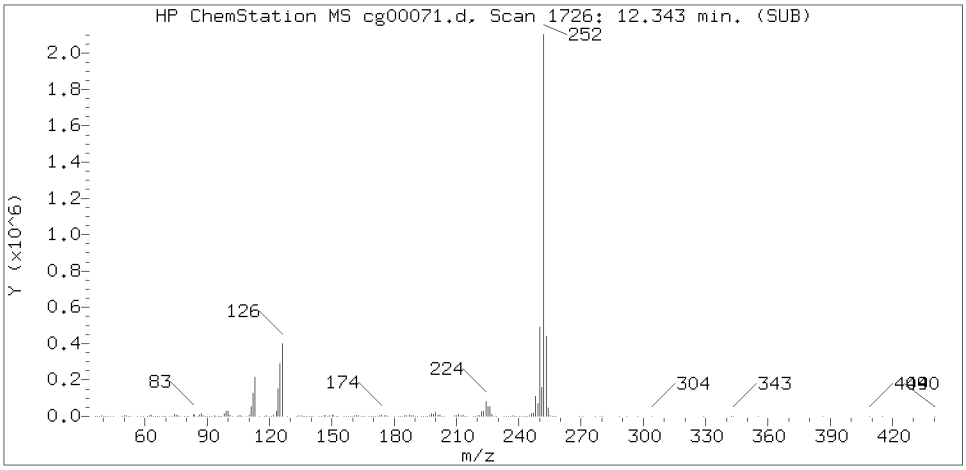
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:55 mac00013

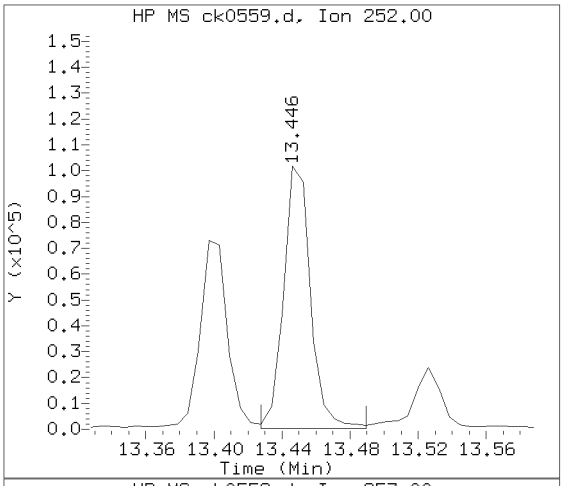
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1832
Retention Time (minutes) : 13.145
Quant Ion : 252.00
Area : 224771
On-column Amount (ng/ul) : 5.5442
Integration start scan : 1825 Integration stop scan: 1842
Y at integration start : 443 Y at integration end: 466

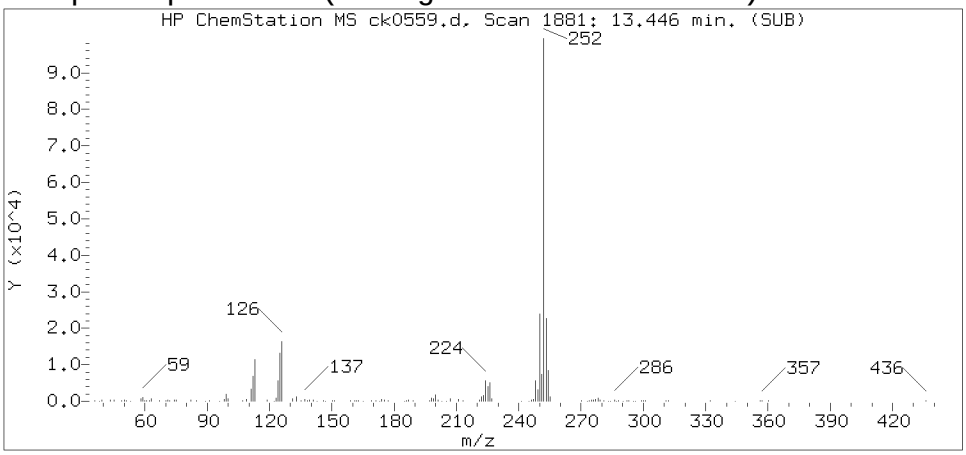
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

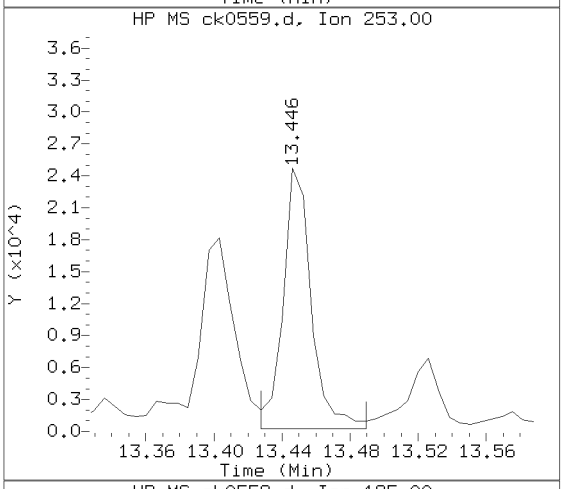
Reference Standard Spectrum for Benzo(a)pyrene



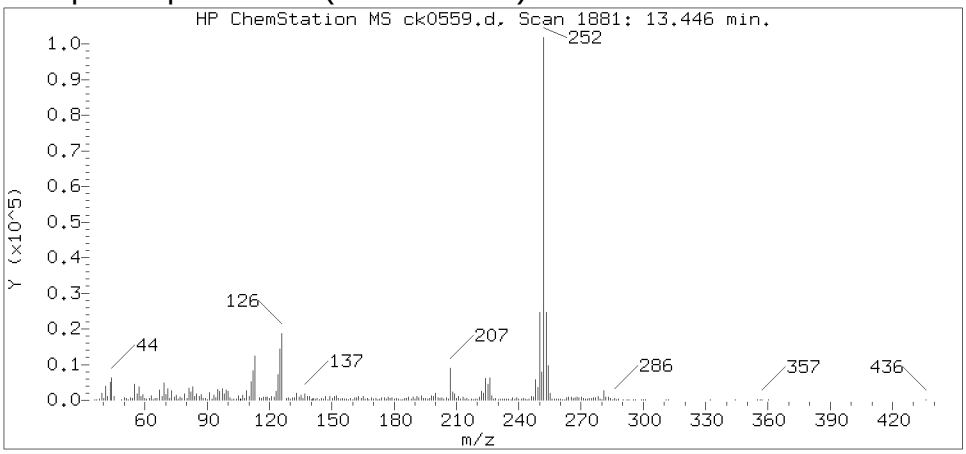


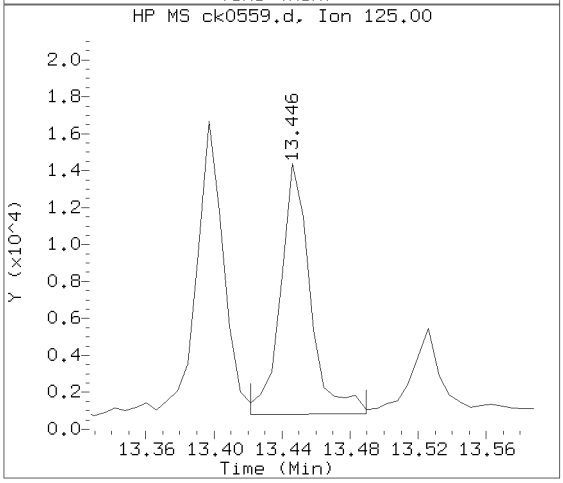
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

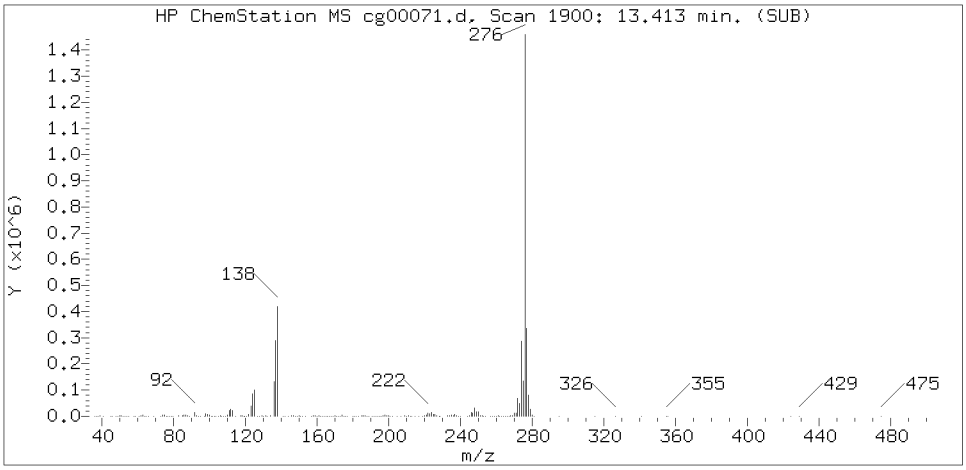
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

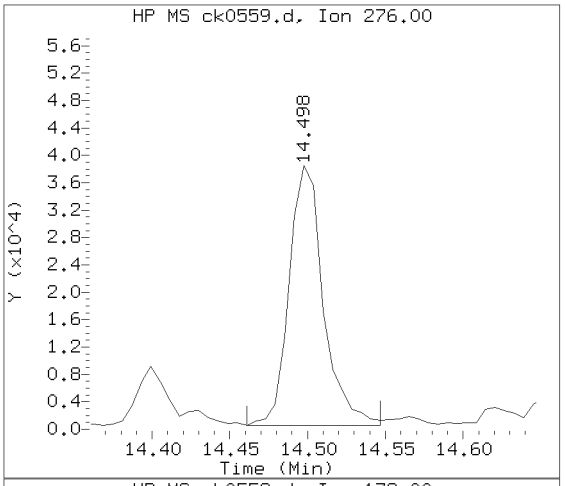
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1881
Retention Time (minutes) : 13.446
Relative Retention Time : 0.00046
Quant Ion : 252.00
Area (flag) : 110955
On-column Amount (ng/ul) : 2.8608

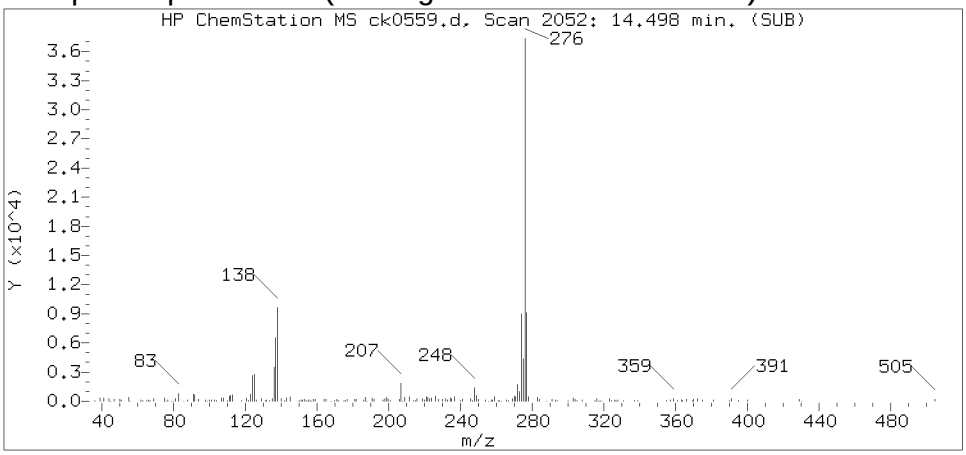
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

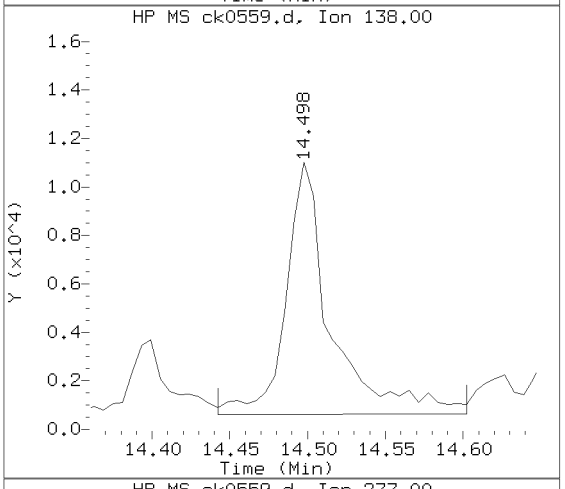
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



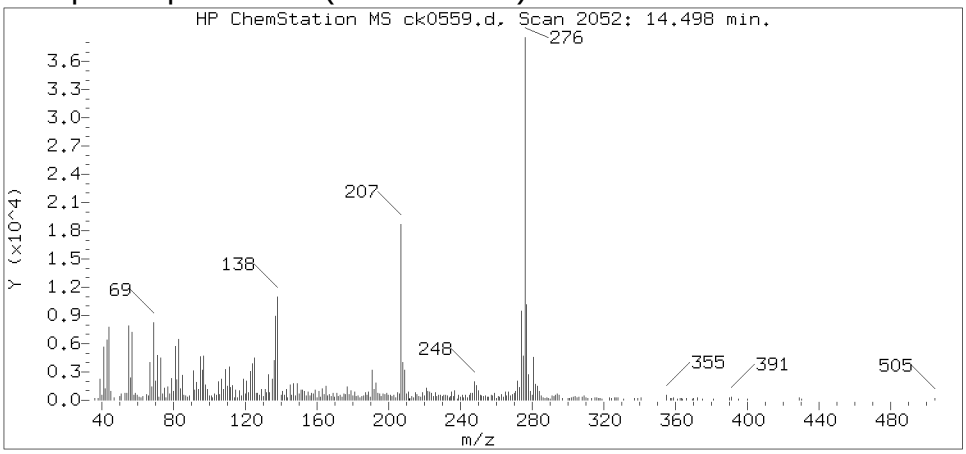


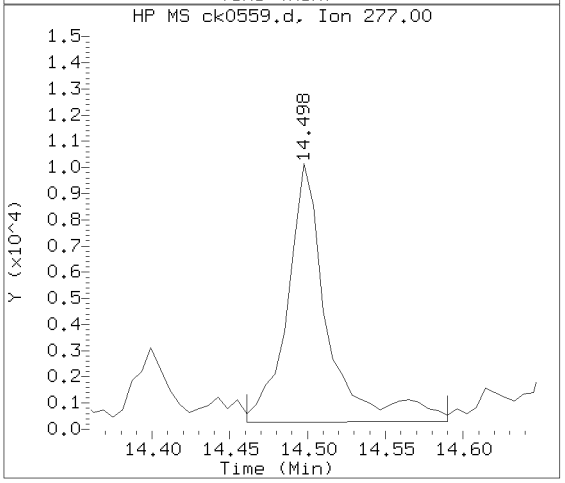
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

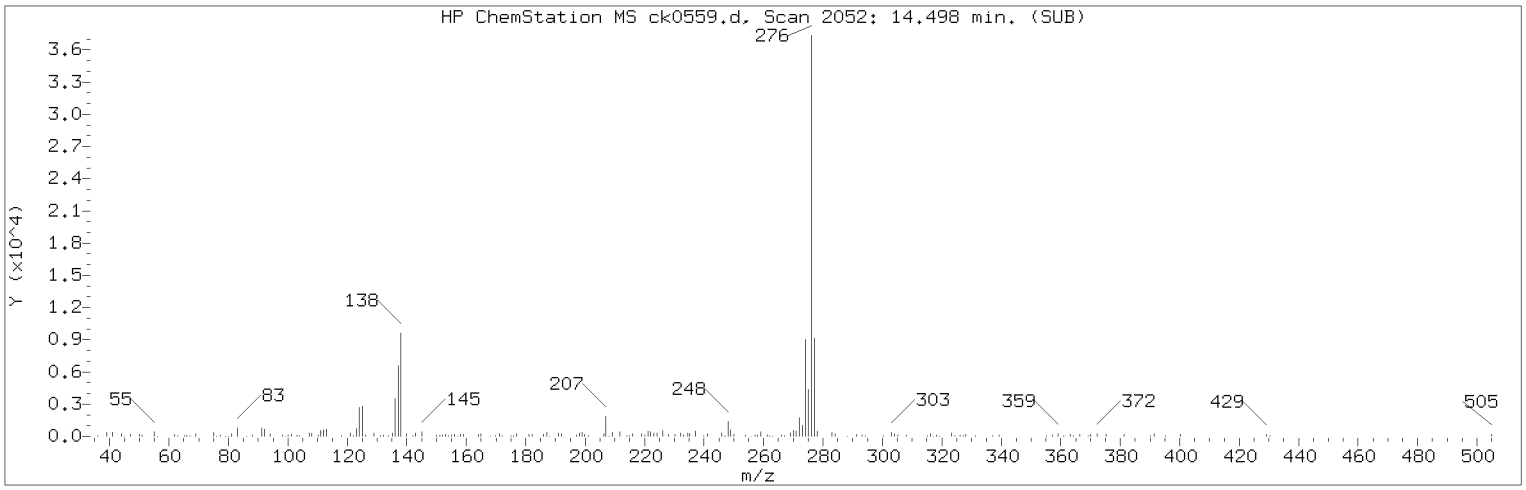
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

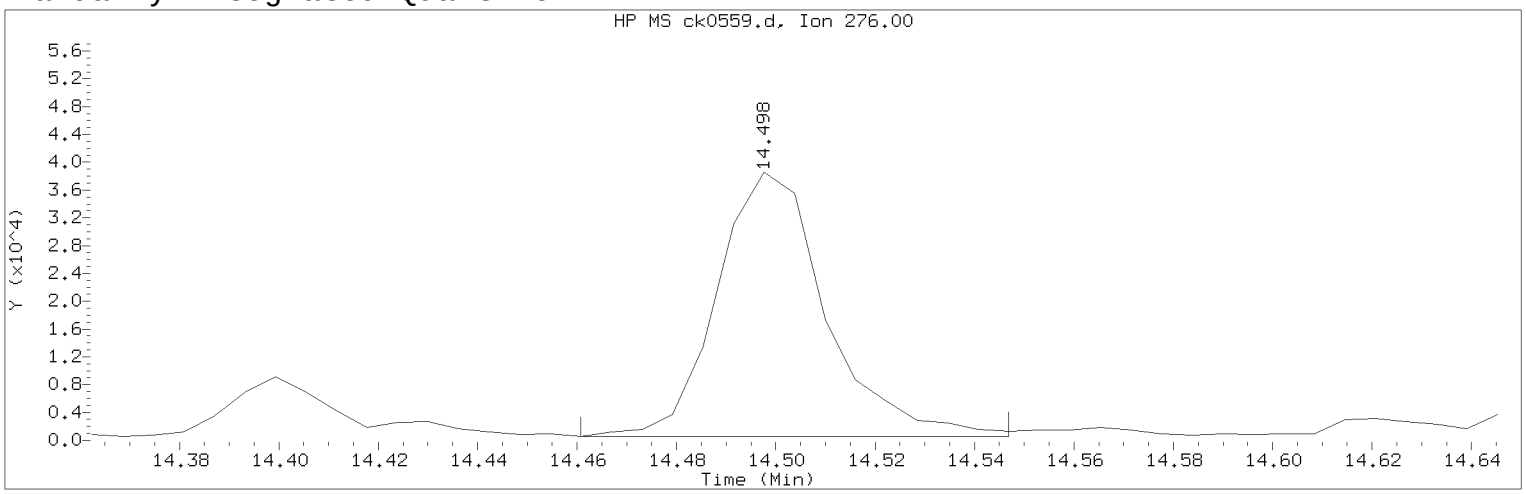
Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2052
Retention Time (minutes)	: 14.498
Relative Retention Time	: 0.00088
Quant Ion	: 276.00
Area (flag)	: 58000M
On-column Amount (ng/ul)	: 1.4056

Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

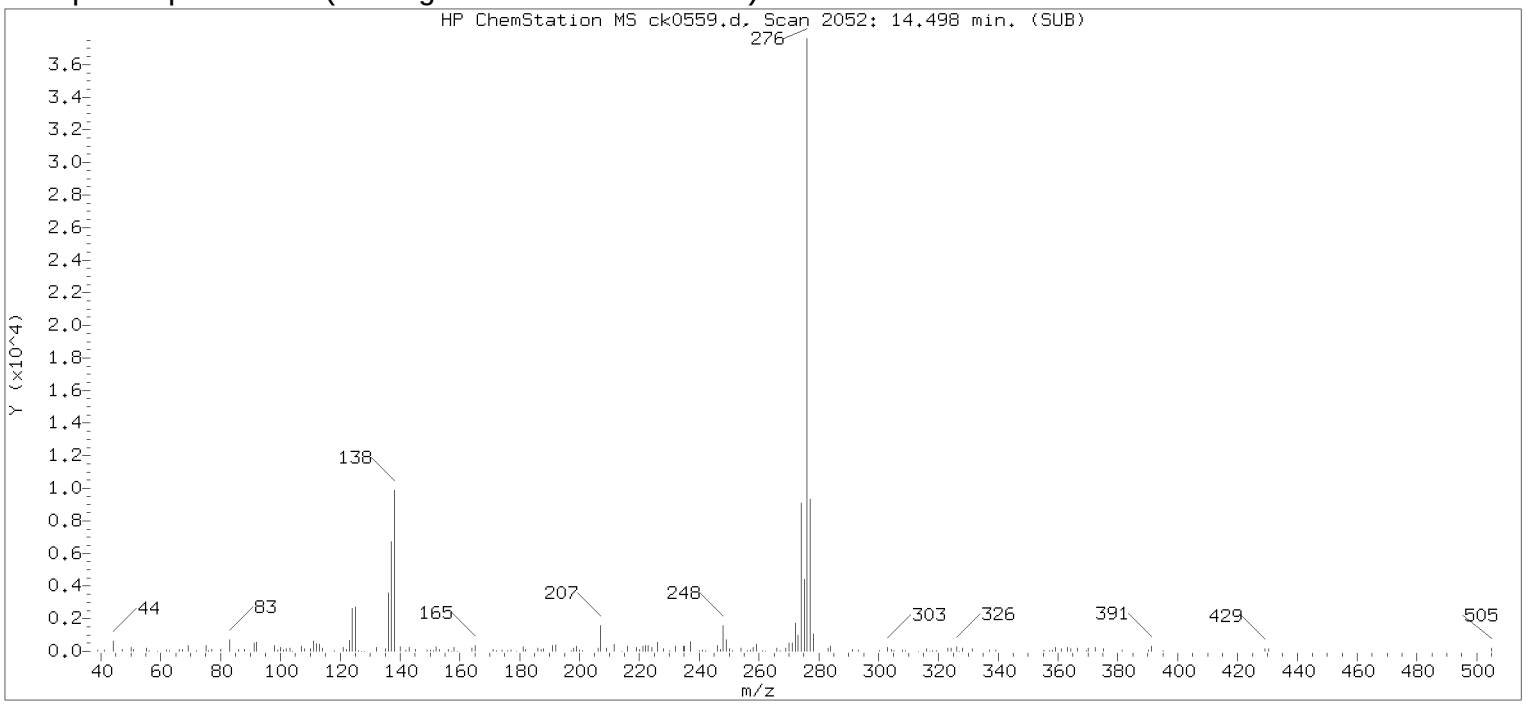
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2052
Retention Time (minutes) : 14.498
Quant Ion : 276.00
Area (flag) : 58000M
On-column Amount (ng/ul) : 1.4056
Integration start scan : 2045 Integration stop scan: 2059
Y at integration start : 548 Y at integration end: 548

Reason for manual integration: improper integration

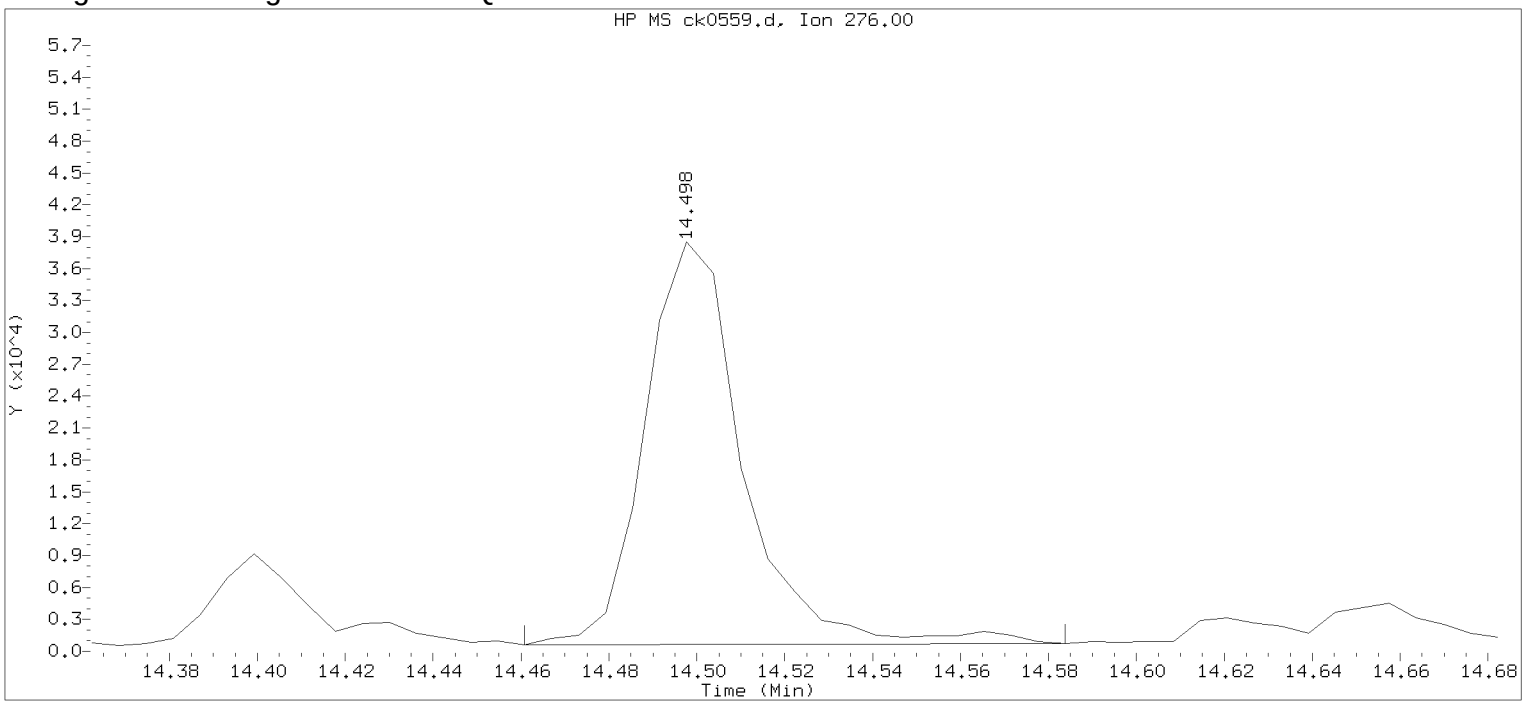
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

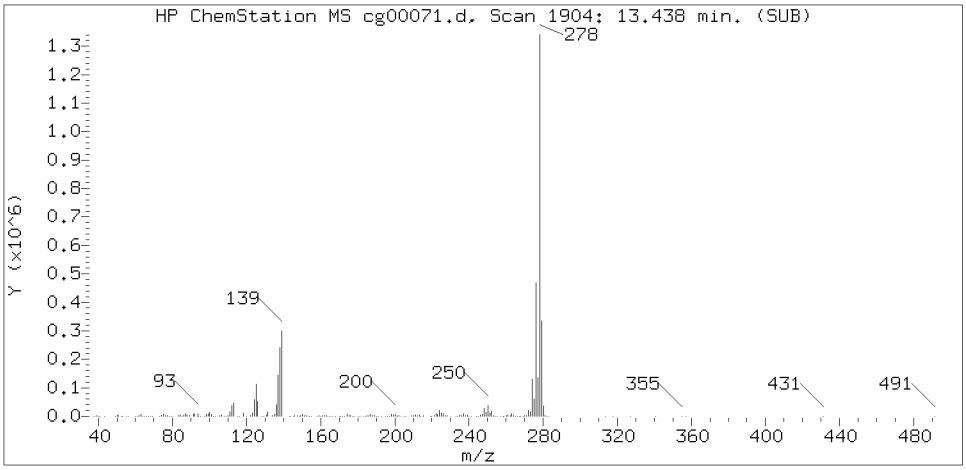
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 04:55 mac00013

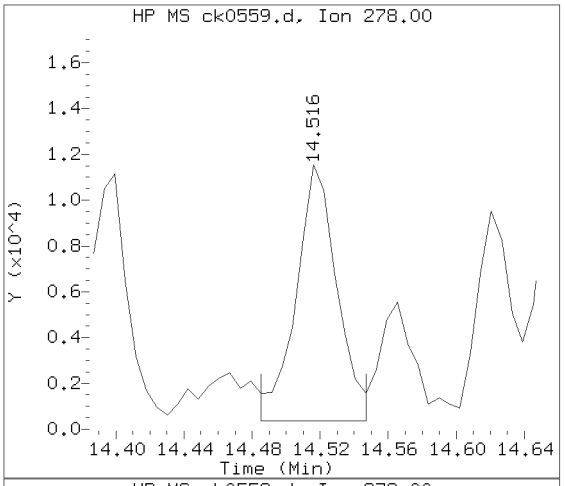
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2052		
Retention Time (minutes)	: 14.498		
Quant Ion	: 276.00		
Area	: 58860		
On-column Amount (ng/ul)	: 1.4264		
Integration start scan	: 2045	Integration stop scan:	2065
Y at integration start	: 580	Y at integration end:	733

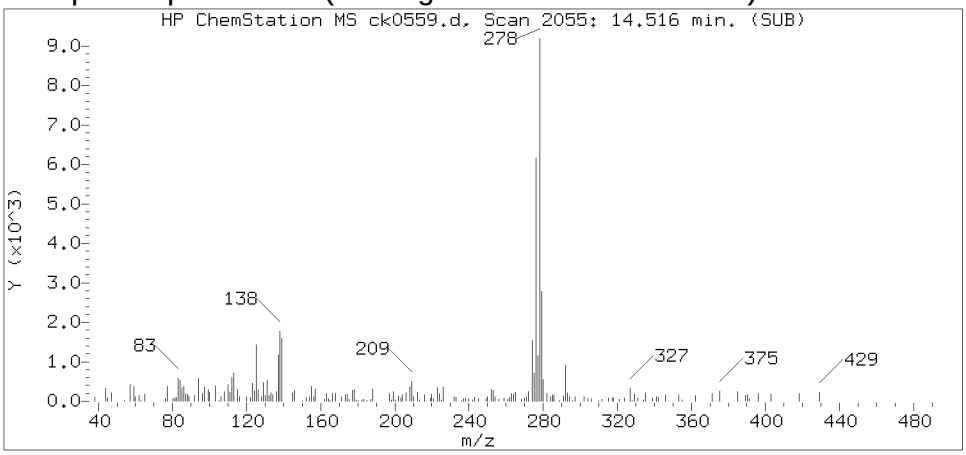
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

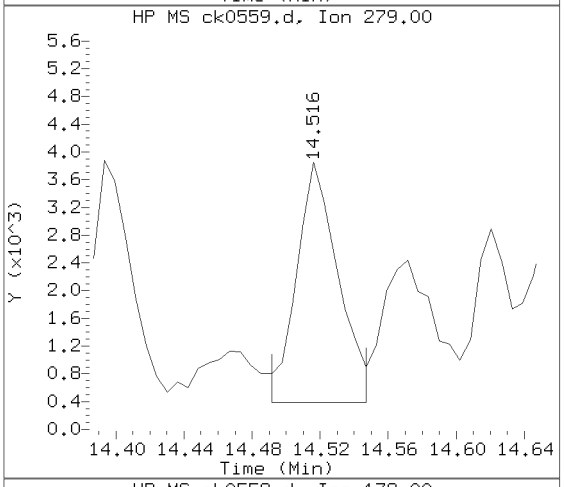
Reference Standard Spectrum for Dibenz(a,h)anthracene



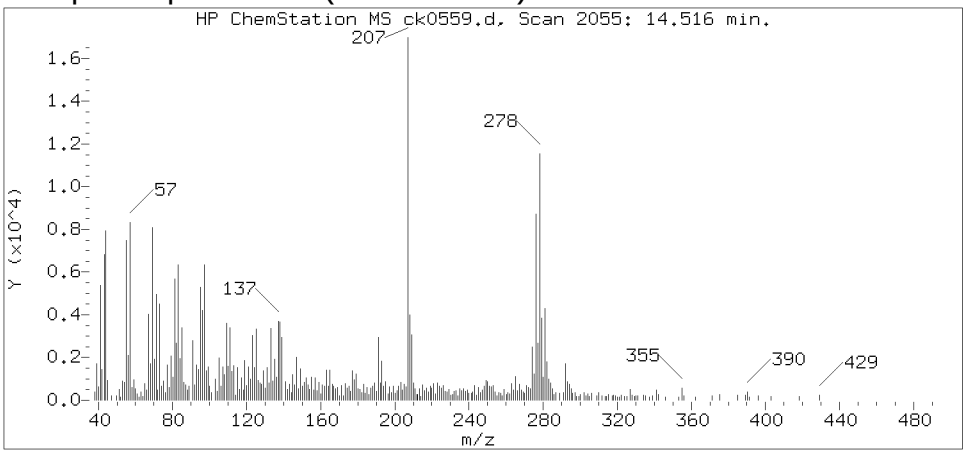


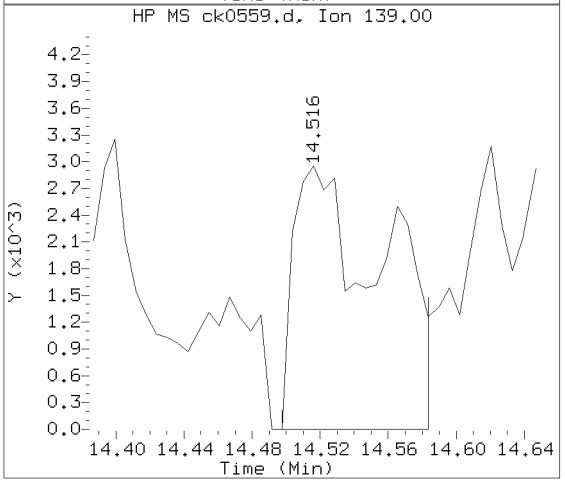
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

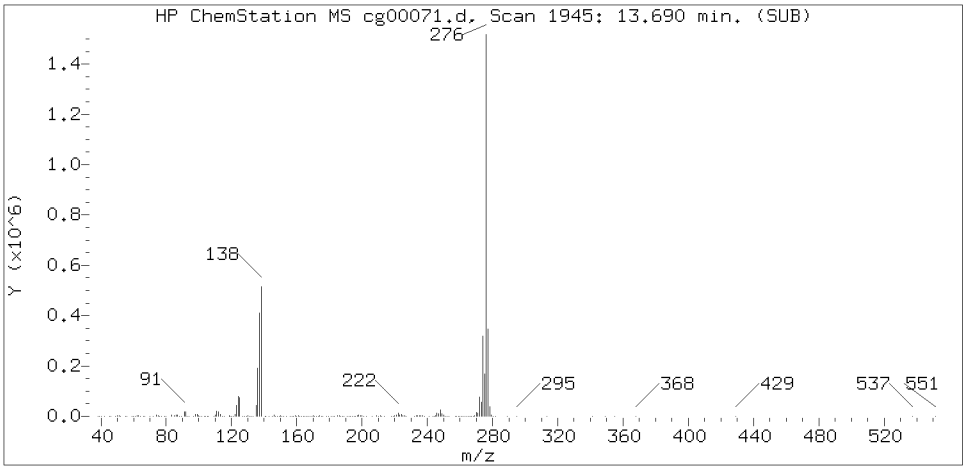
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

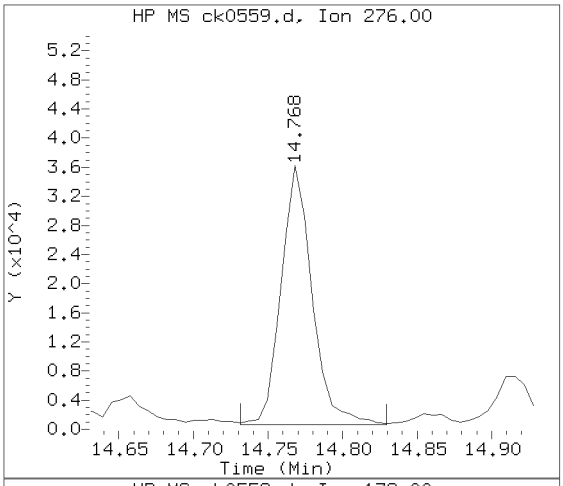
Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number	: 178
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2055
Retention Time (minutes)	: 14.516
Relative Retention Time	: 0.00088
Quant Ion	: 278.00
Area (flag)	: 18508
On-column Amount (ng/ul)	: 0.5362

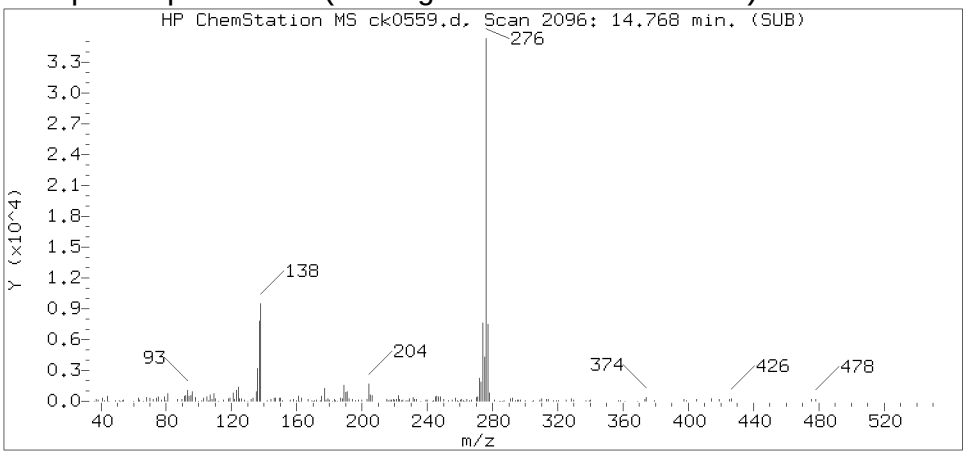
Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

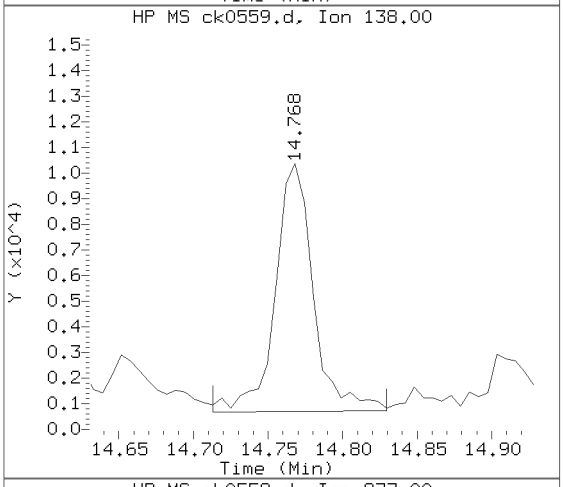
Reference Standard Spectrum for Benzo(g,h,i)perylene



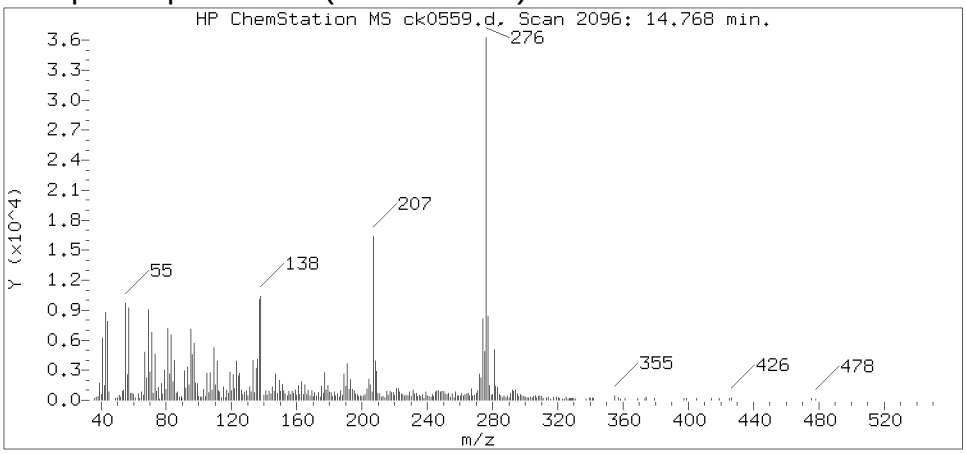


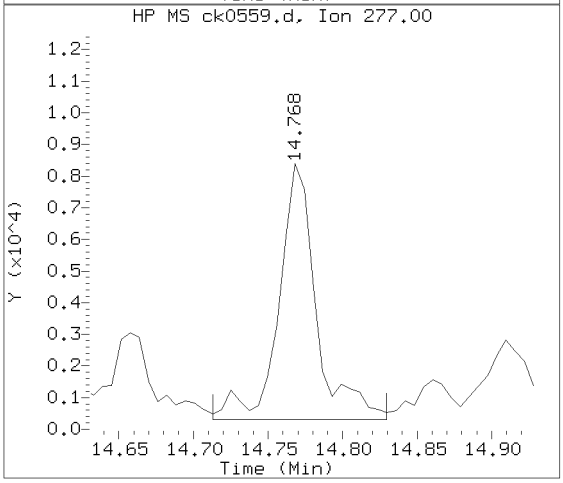
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2096
Retention Time (minutes)	: 14.768
Relative Retention Time	: 0.00087
Quant Ion	: 276.00
Area (flag)	: 51270
On-column Amount (ng/ul)	: 1.4584

Digitally signed by Mark A. Clark on 11/18/2013 at 10:53.
Target 3.5 esignature user ID: mac00013

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2E16D

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) SOIL Lab Sample ID: 7265237

Sample wt/vol: 10.0 (g/mL) g Lab File ID: ck0559.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: 21 Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/15/13

Injection Volume: 1 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Mic

CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.467	5000	JB
2.		Unknown	14.947	590	J
3.		Unknown	16.275	650	J
4.					
5.	SVOCTIC	Total SVOC TICs		6300	JB
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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15.					
16.					
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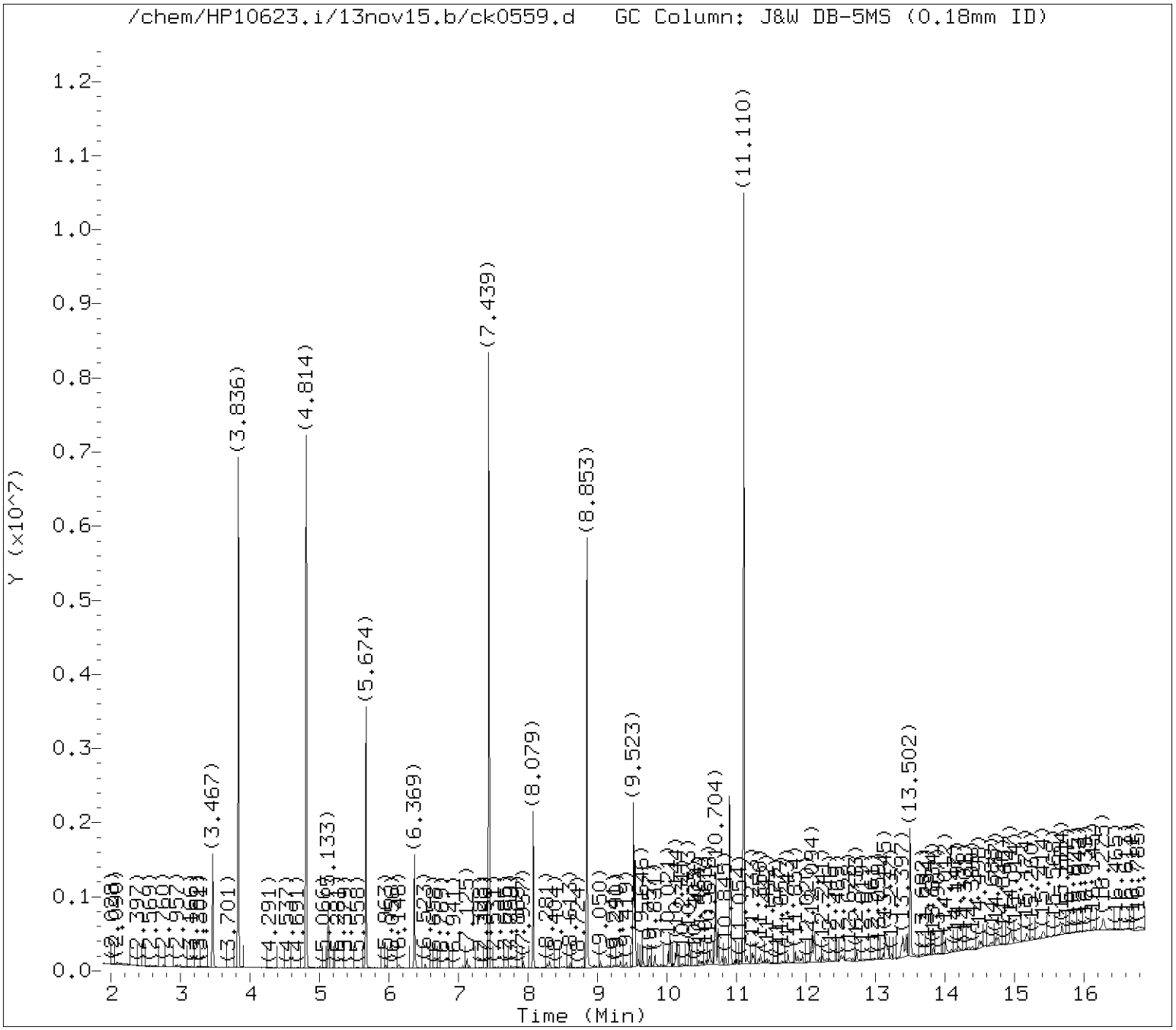
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

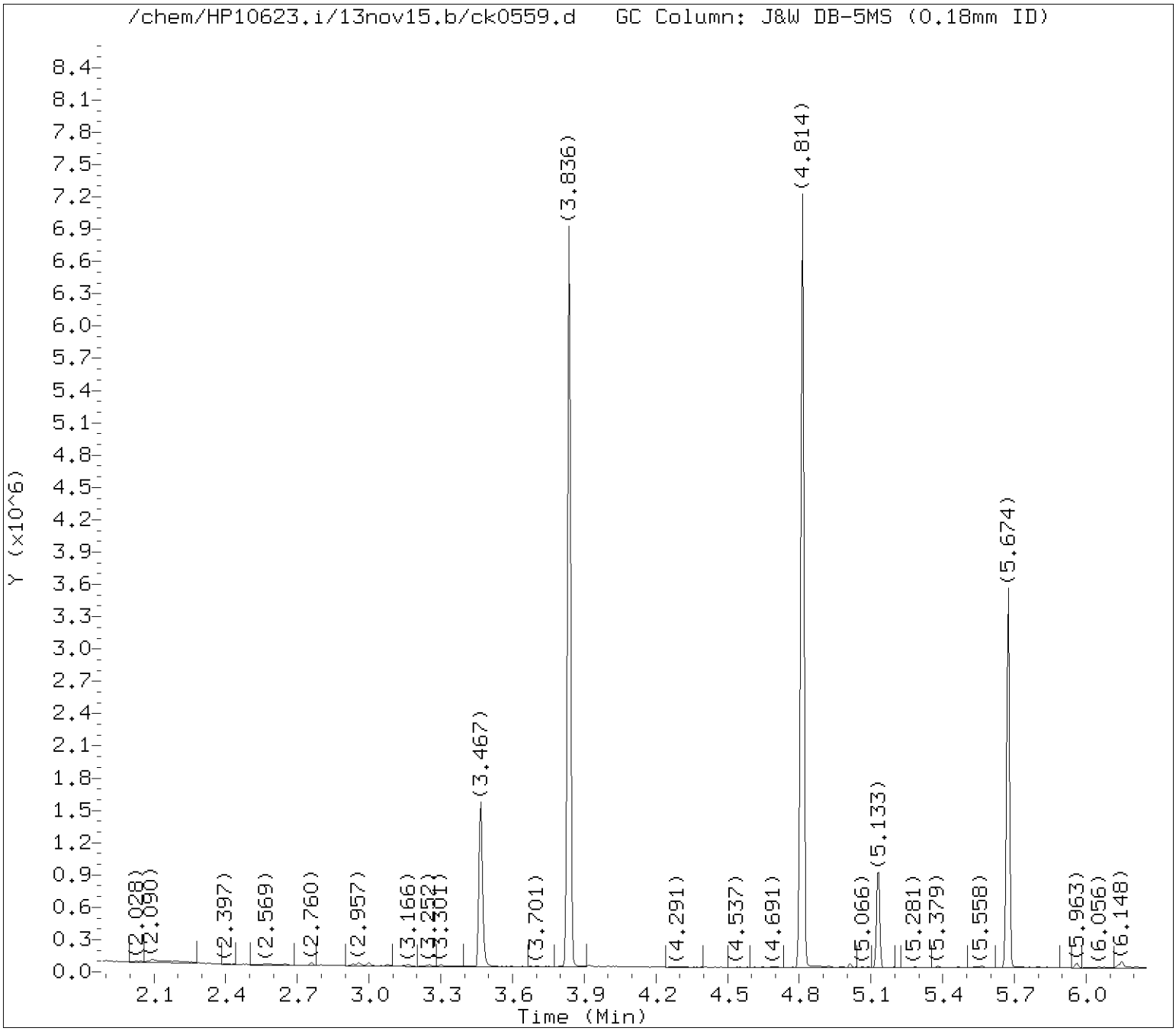
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

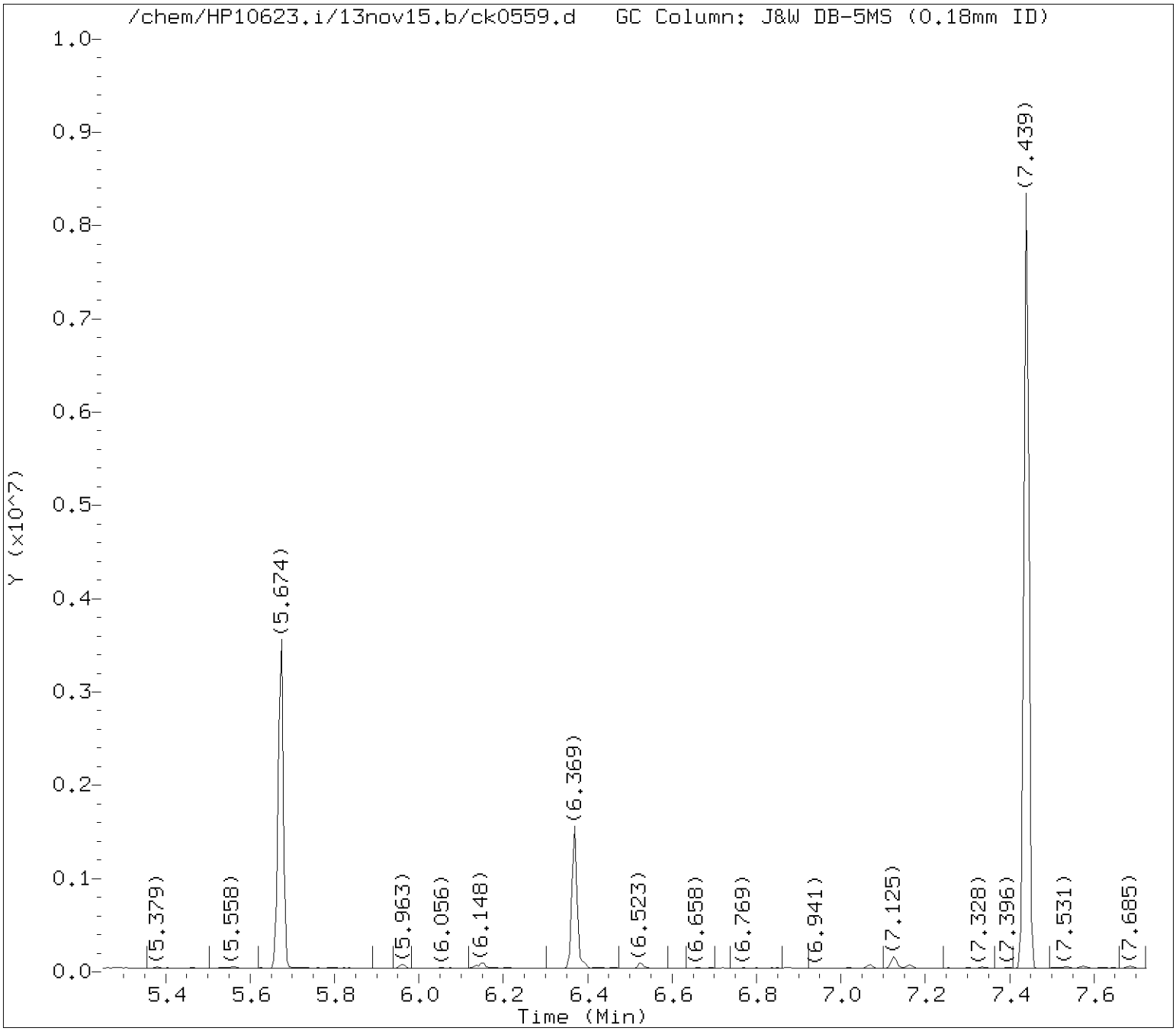
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.133 minutes
Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 5.751

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

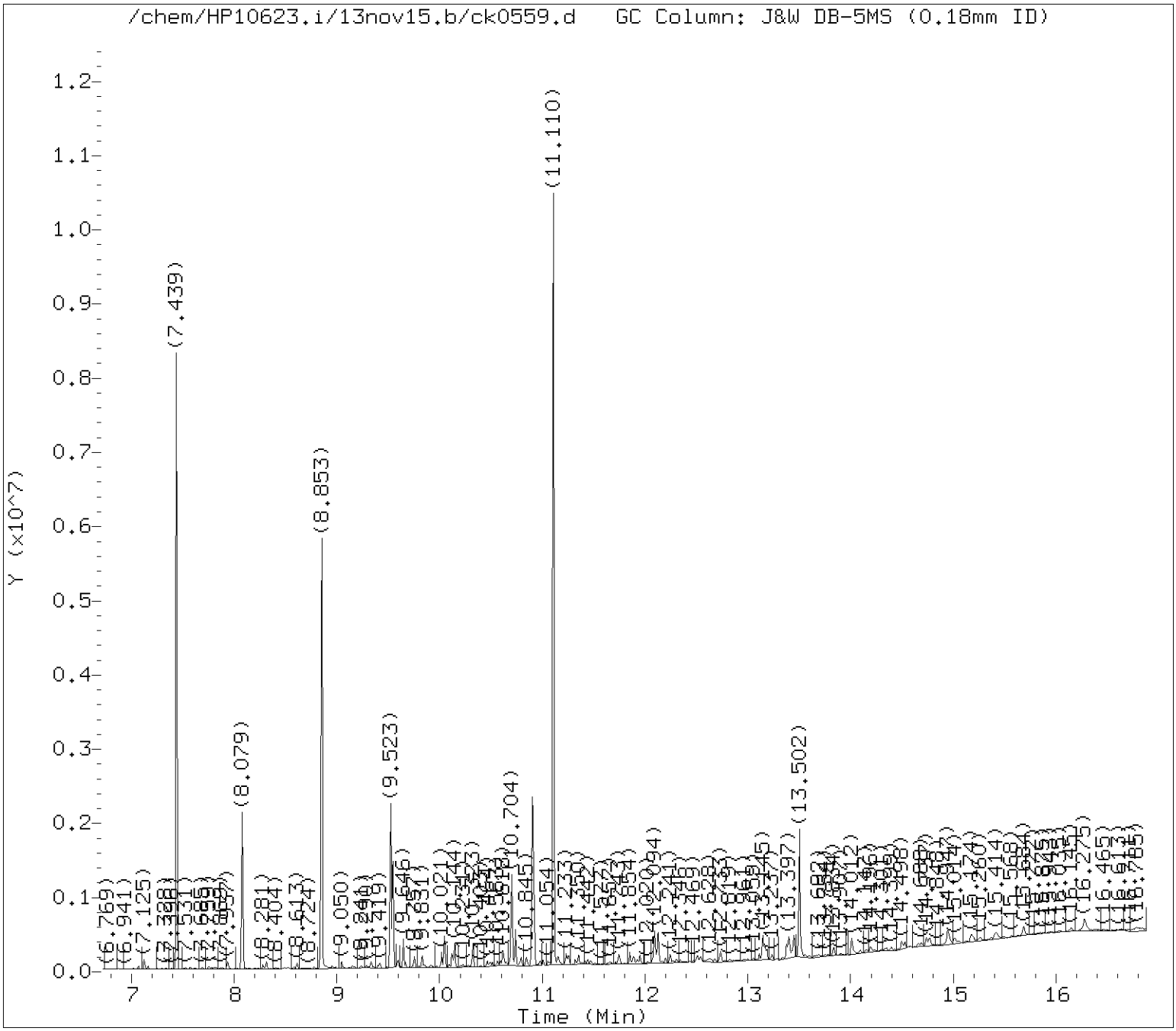
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Naphthalene-d8 at 6.369 minutes
Chromatogram Start Time (min.): 5.751
Chromatogram End Time (min.): 7.224

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

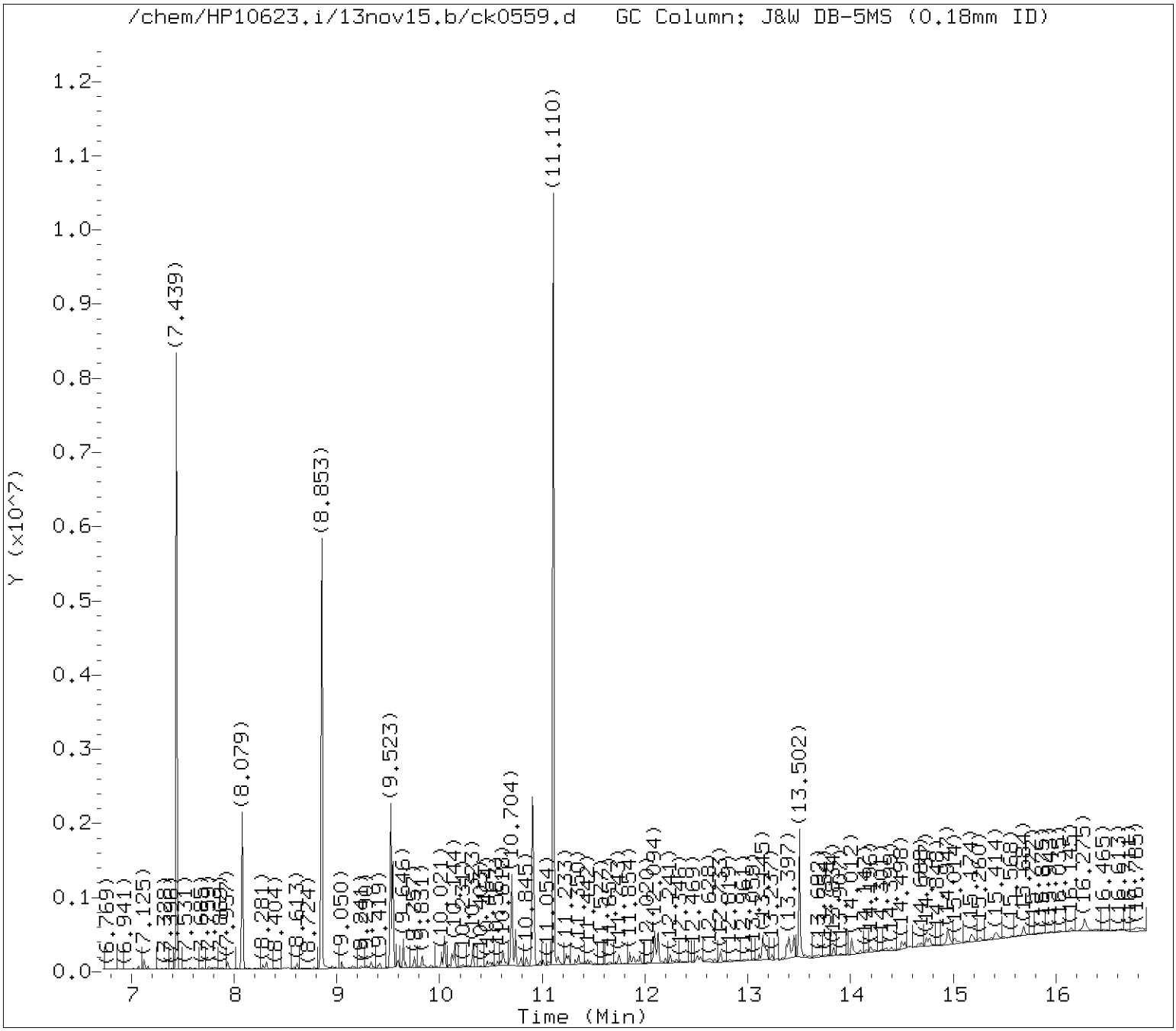
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Acenaphthene-d10 at 8.079 minutes
Chromatogram Start Time (min.): 7.224
Chromatogram End Time (min.): 8.801

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

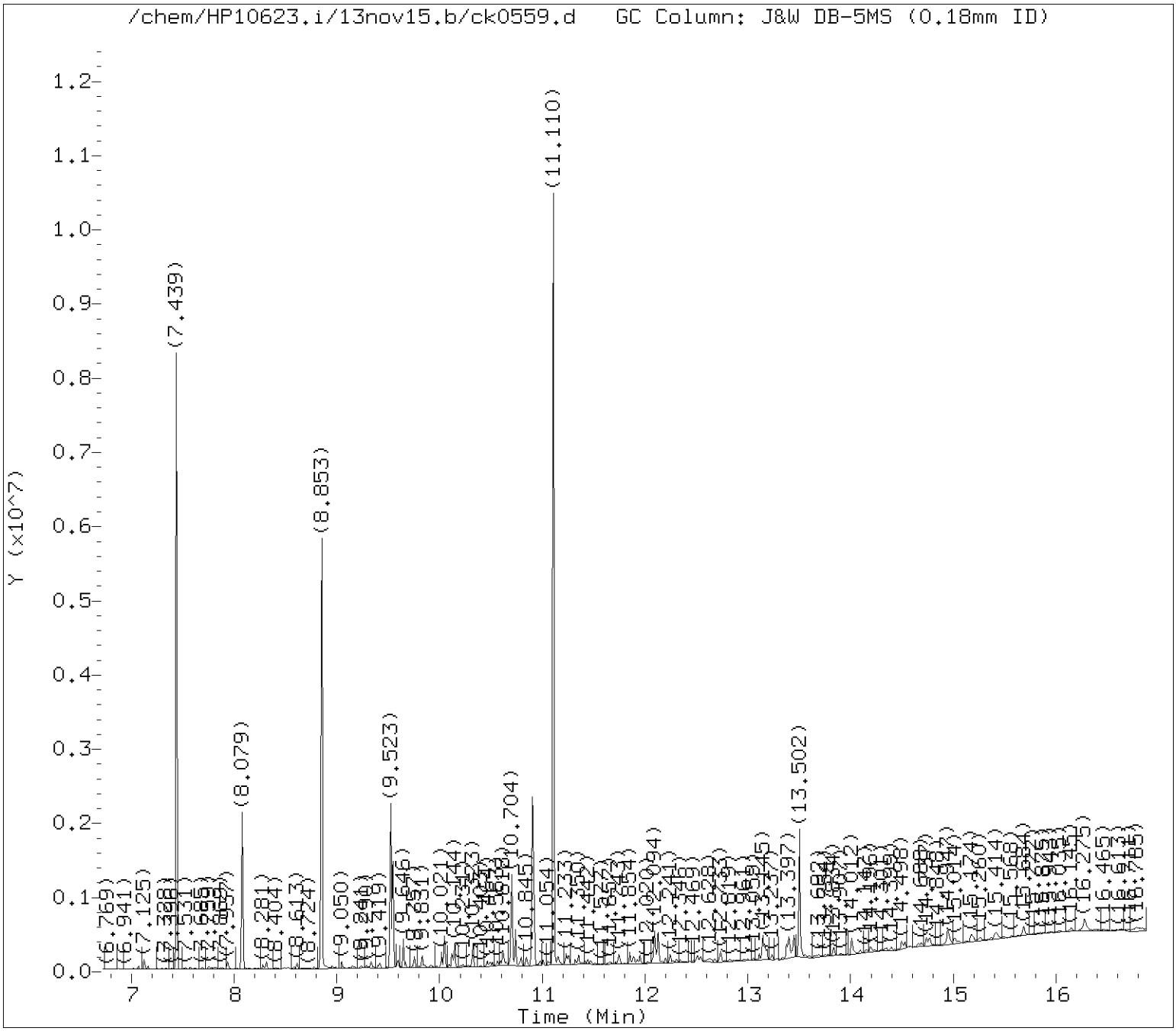
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Phenanthrene-d10 at 9.523 minutes
Chromatogram Start Time (min.): 8.801
Chromatogram End Time (min.): 10.212

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

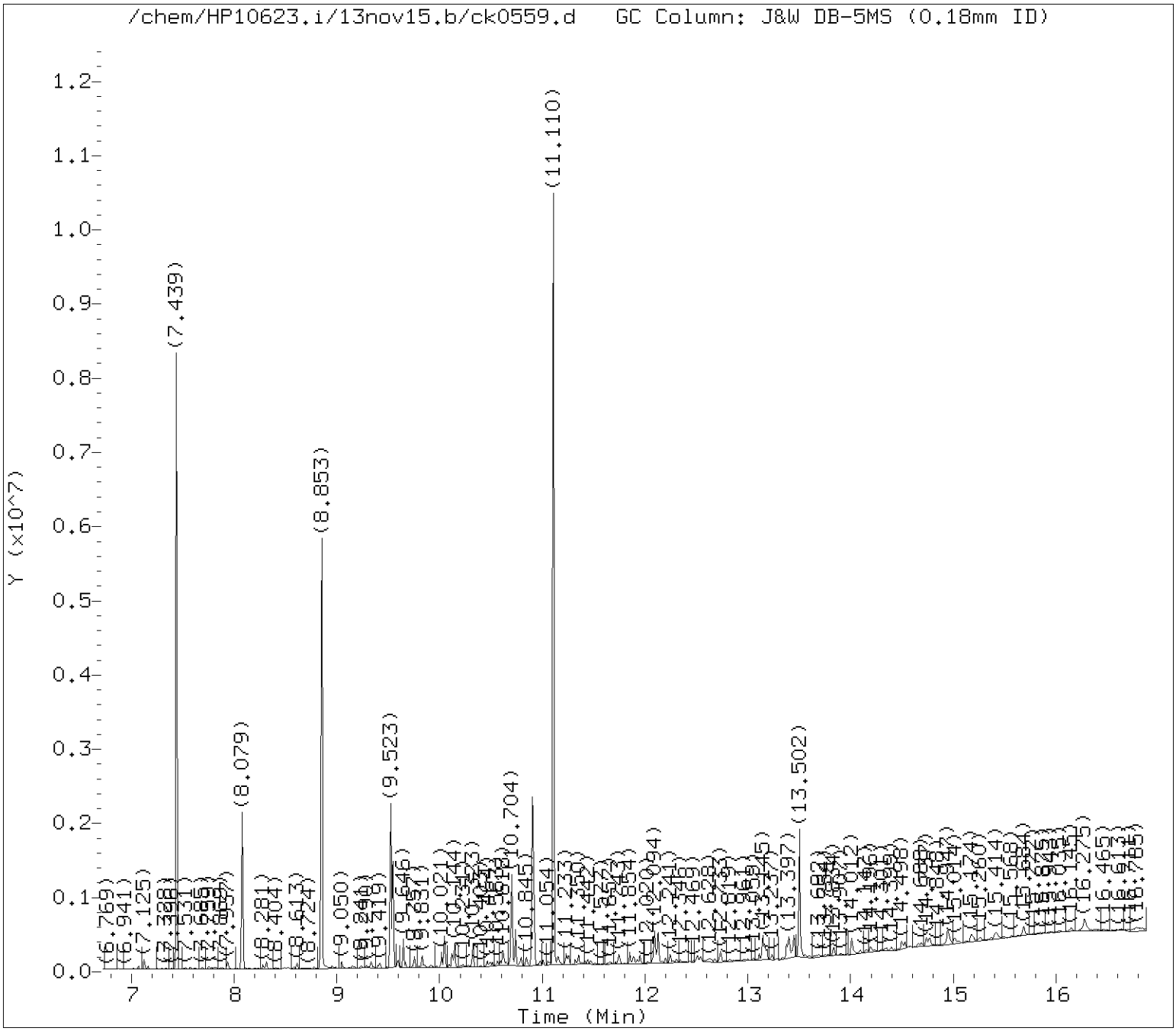
Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Pyrene-d10 at 10.901 minutes
Chromatogram Start Time (min.): 10.212
Chromatogram End Time (min.): 12.201

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0559.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:55 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 18-NOV-2013 04:21
Date, time and analyst ID of latest file update: 18-Nov-2013 08:18 mac00013

Sample Name: 2E16D Lab Sample ID: 7265237

Internal Standard referenced: Perylene-d12 at 13.502 minutes
Chromatogram Start Time (min.): 12.201
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Lancaster Labs

Data file : /chem/HP10623.i/13nov15.b/ck0559.d
Lab Smp Id: 7265237 Client Smp ID: 2E16D
Inj Date : 15-NOV-2013 01:55
Operator : mac00013 Inst ID: HP10623.i
Smp Info : 2E16D;7265237;2;0;SAMPLE;;;
Misc Info : 13314SLD;all1.sub;10;;1000;0;ck0542;10727;
Comment : Max. number of TICs to report is 25, 3 TICs were found initially.
Method : /chem/HP10623.i/13nov15.b/m8270.m
Meth Date : 18-Nov-2013 04:21 mac00013 Quant Type: ISTD
Cal Date : 12-NOV-2013 12:38 Cal File: ck0408.d
Als bottle: 28
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	10.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 21 1,4-Dichlorobenzene-d4	5.133	856798	20.000
* 175 Perylene-d12	13.502	1964246	20.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
3.467	1700671	39.6982747	3969.82747	0		0	21

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
14.947	458697	4.67046753	467.04675	0		0	175
Unknown				CAS #:			
16.275	501575	5.10705322	510.70532	0		0	175

Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0559.d

Date : 15-NOV-2013 01:55

Client ID: 2E16D

Instrument: HP10623.i

Sample Info: 2E16D;7265237;2;0;SAMPLE;;;

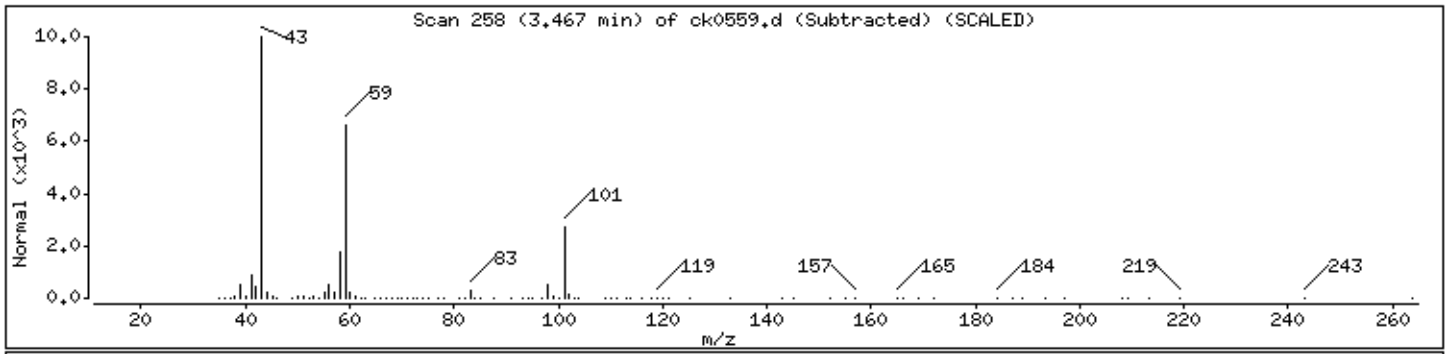
Volume Injected (uL): 1.0

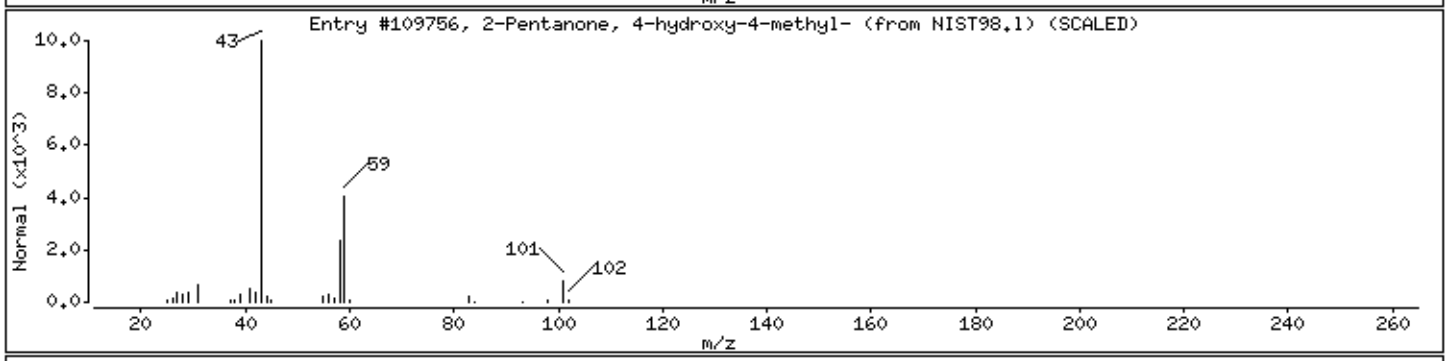
Operator: mac00013

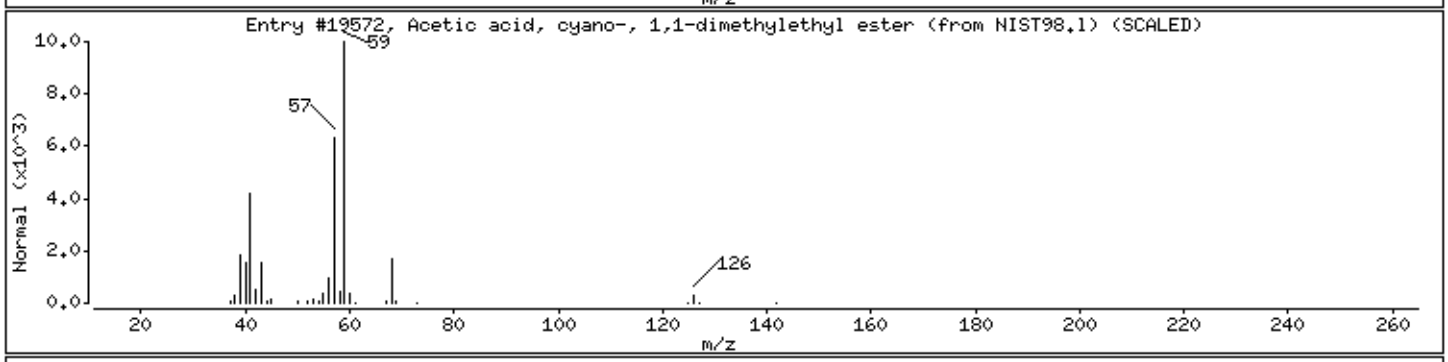
Column phase: J&W DB-5MS

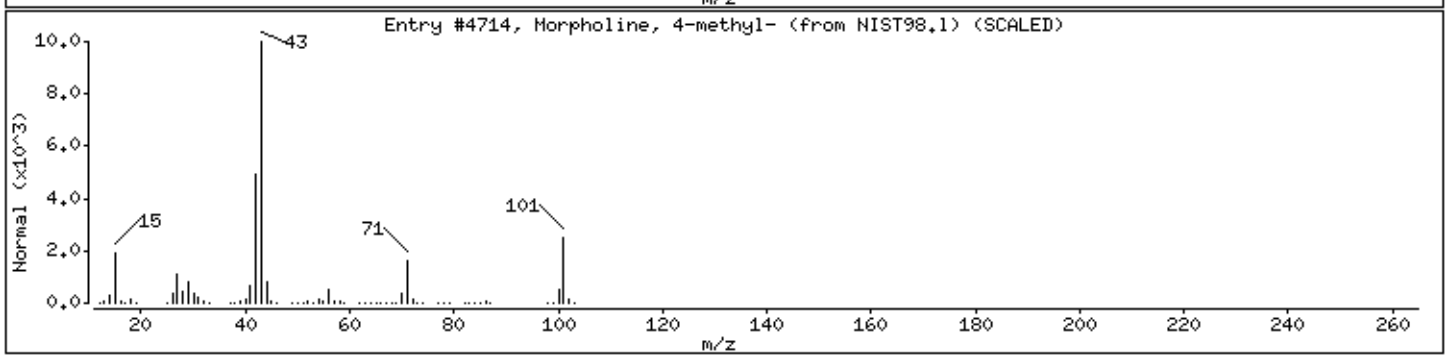
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST98.1	109756	56	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST98.1	19572	17	C7H11NO2	141
Morpholine, 4-methyl-	109-02-4	NIST98.1	4714	9	C5H11NO	101









Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0559.d

Date : 15-NOV-2013 01:55

Client ID: 2E16D

Instrument: HP10623.i

Sample Info: 2E16D;7265237;2;0;SAMPLE;;;

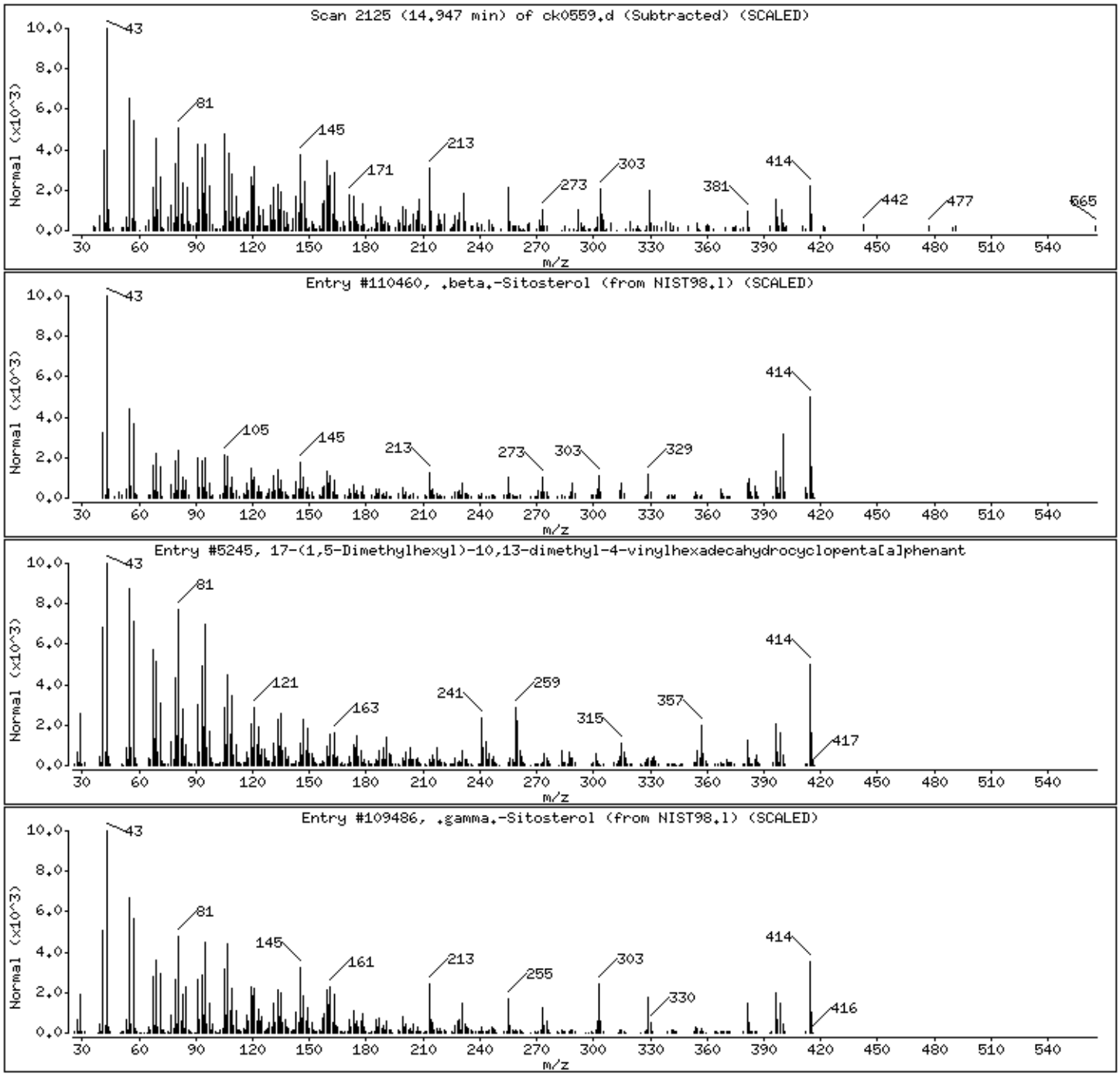
Volume Injected (uL): 1.0

Operator: mac00013

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
.beta.-Sitosterol	83-46-5	NIST98.1	110460	94	C29H50O	414
17-(1,5-Dimethylhexyl)-10,13-dimethyl-4-	1000210-86-9	NIST98.1	5245	93	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST98.1	109486	90	C29H50O	414



Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0559.d

Date : 15-NOV-2013 01:55

Client ID: 2E16D

Instrument: HP10623.i

Sample Info: 2E16D;7265237;2;0;SAMPLE;;;

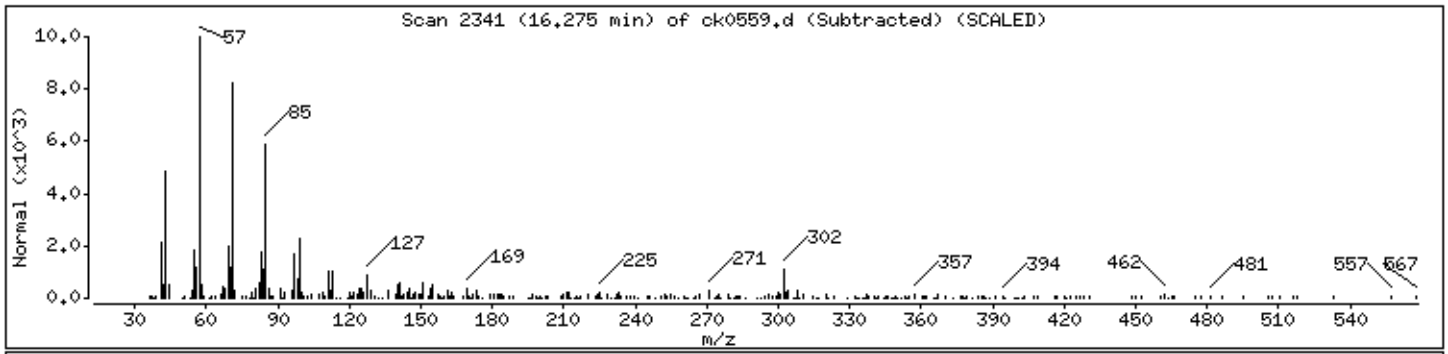
Volume Injected (uL): 1.0

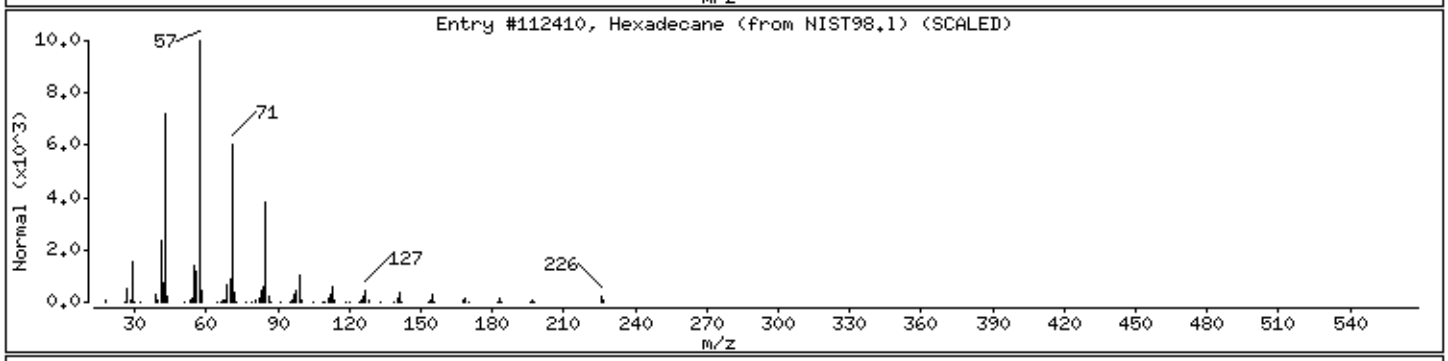
Operator: mac00013

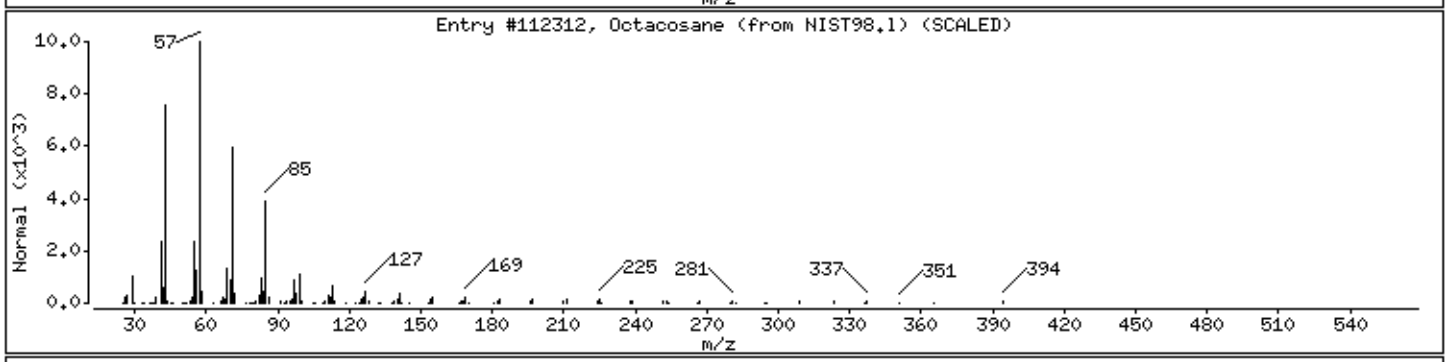
Column phase: J&W DB-5MS

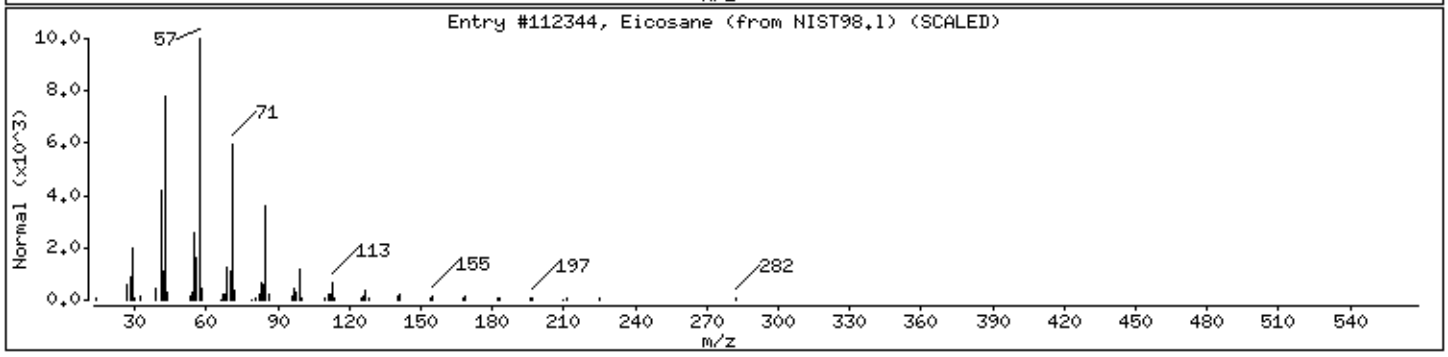
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexadecane	544-76-3	NIST98.1	112410	93	C16H34	226
Octacosane	630-02-4	NIST98.1	112312	93	C28H58	394
Eicosane	112-95-8	NIST98.1	112344	91	C20H42	282









Digitally signed by Mark A. Clark on 11/18/2013 at 09:52.
Target 3.5 esignature user ID: mac00013

R2141 Lancaster Labs
Analysis Summary for GC/MS Semivolatiles 7265238

Data file: /chem/HP19760.i/13nov11.b/dk0340.d Injection date and time: **11-NOV-2013 13:03**
Data file Sample Info. Line: R2141;7265238;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.947(0.006)	791	152	137095 (-3)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	527221 (-3)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	306935 (-6)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	552314 (-4)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	708280 (-5)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	445966 (-20)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.001(-0.001)	112	1160286	28.504	57%		10 - 107
13) Phenol-d6	(1)	5.429(0.000)	99	1120827	20.049	40%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	929720	19.162	77%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1629943	21.265	85%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	426928	52.959	106%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2228118	25.226	101%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:20. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0340.d
Injection date and time: **11-NOV-2013 13:03**
Data file Sample Info. Line: R2141;7265238;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

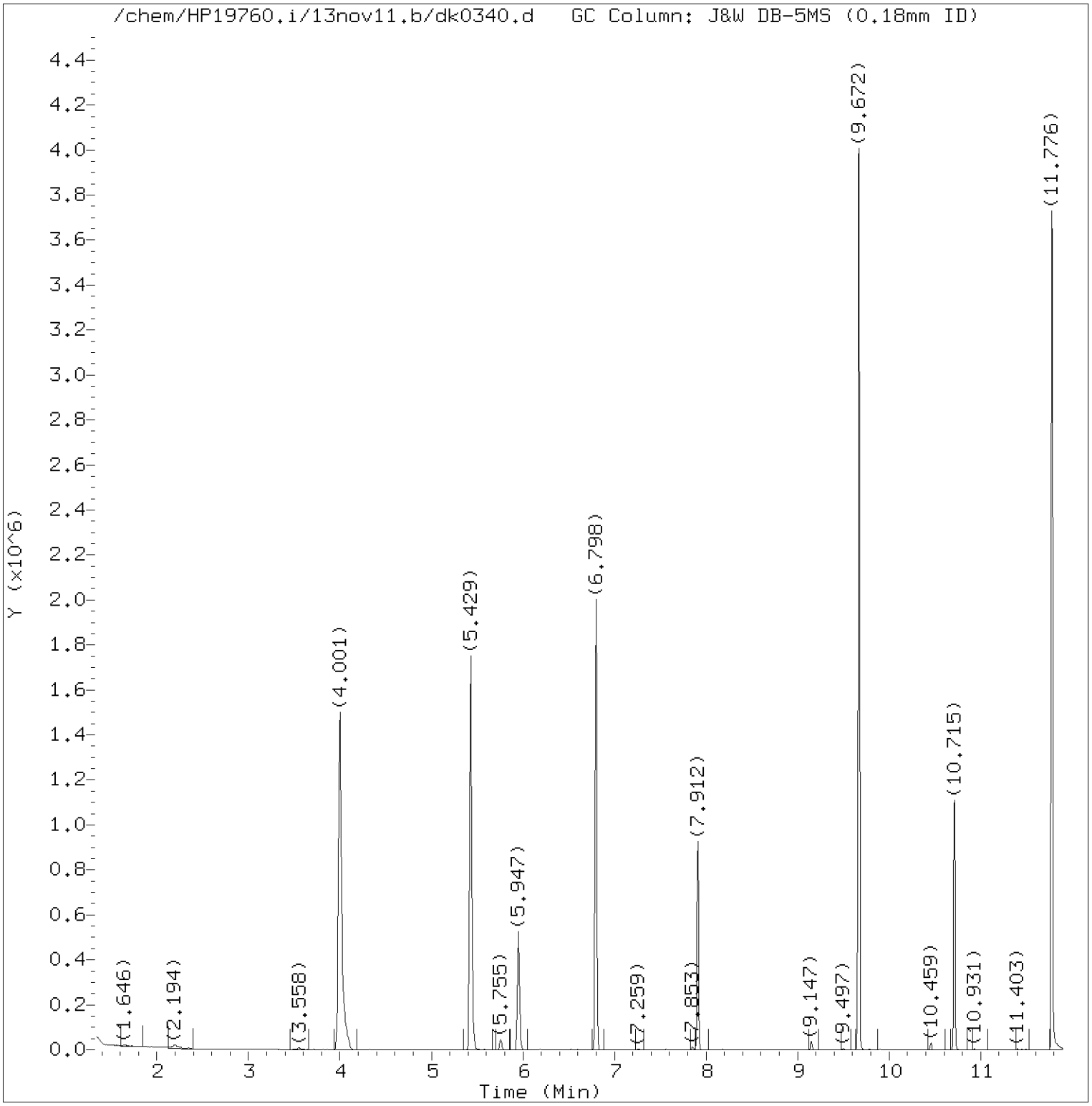
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:20. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

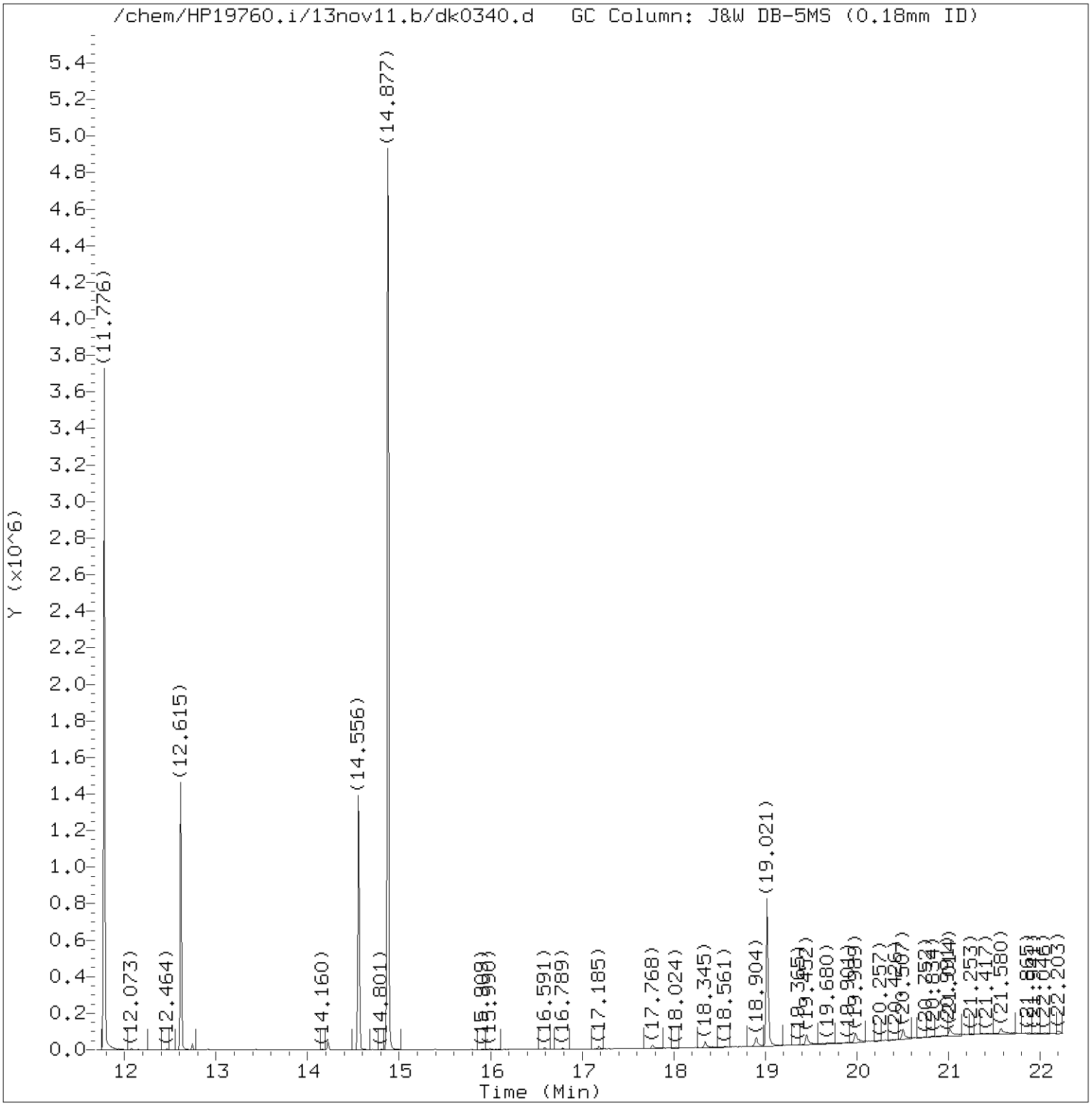
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:20.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:20.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.001	112	1160286	28.504
13)$Phenol-d6	(1)	5.429	99	1120827	20.049
19)*1,4-Dichlorobenzene-d4	(1)	5.947	152	137095	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	929720	19.162
52)*Naphthalene-d8	(2)	7.912	136	527221	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1629943	21.265
92)*Acenaphthene-d10	(3)	10.715	164	306935	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	426928	52.959
130)*Phenanthrene-d10	(4)	12.615	188	552314	5.000
145)*Pyrene-d10	(5)	14.556	212	708280	5.000
149)$Terphenyl-d14	(5)	14.877	244	2228118	25.226
172)*Perylene-d12	(6)	19.021	264	445966	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:20.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2141

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7265238

Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0340.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
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11.					
12.					
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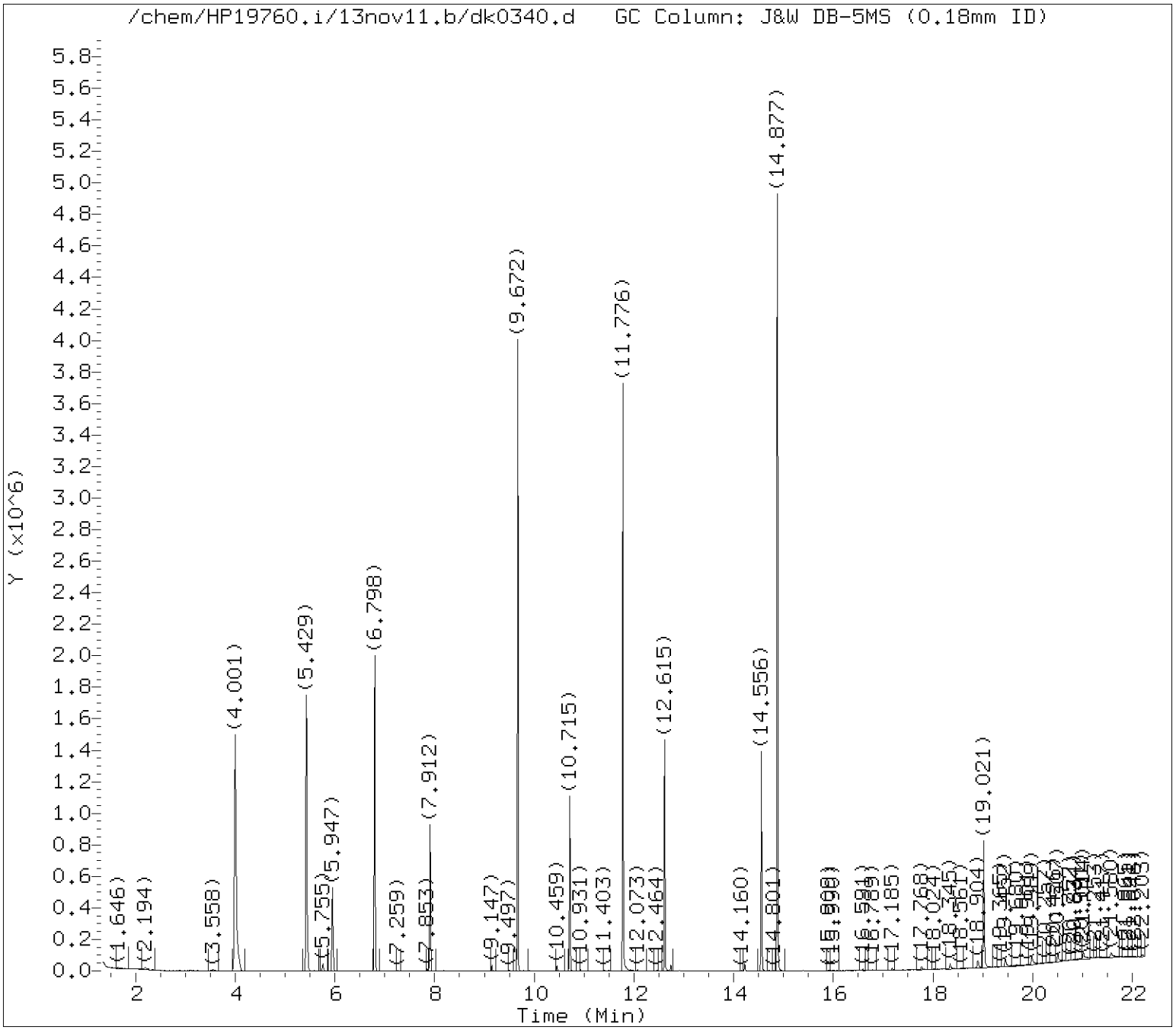
FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

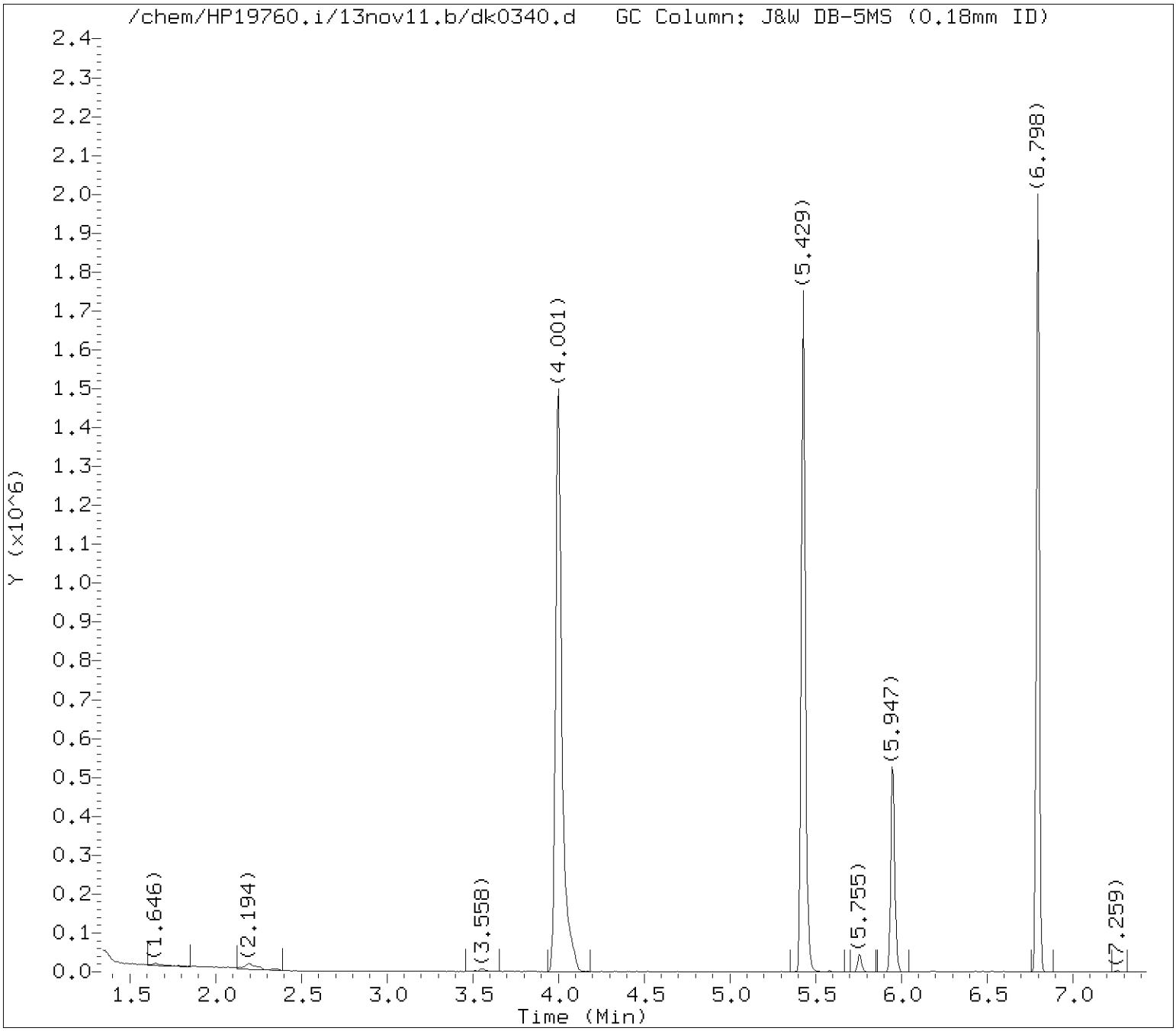
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

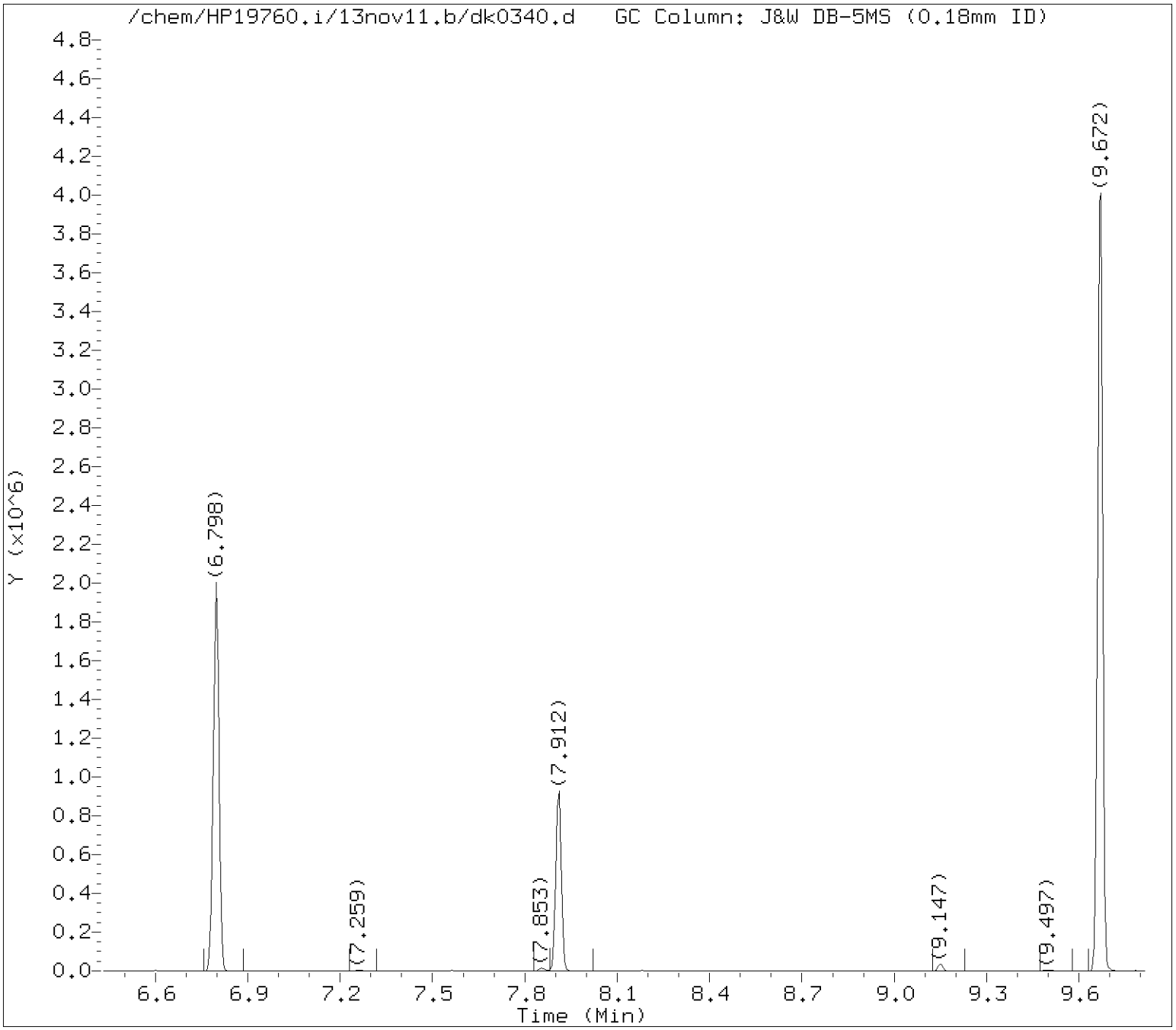
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.947 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.930

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

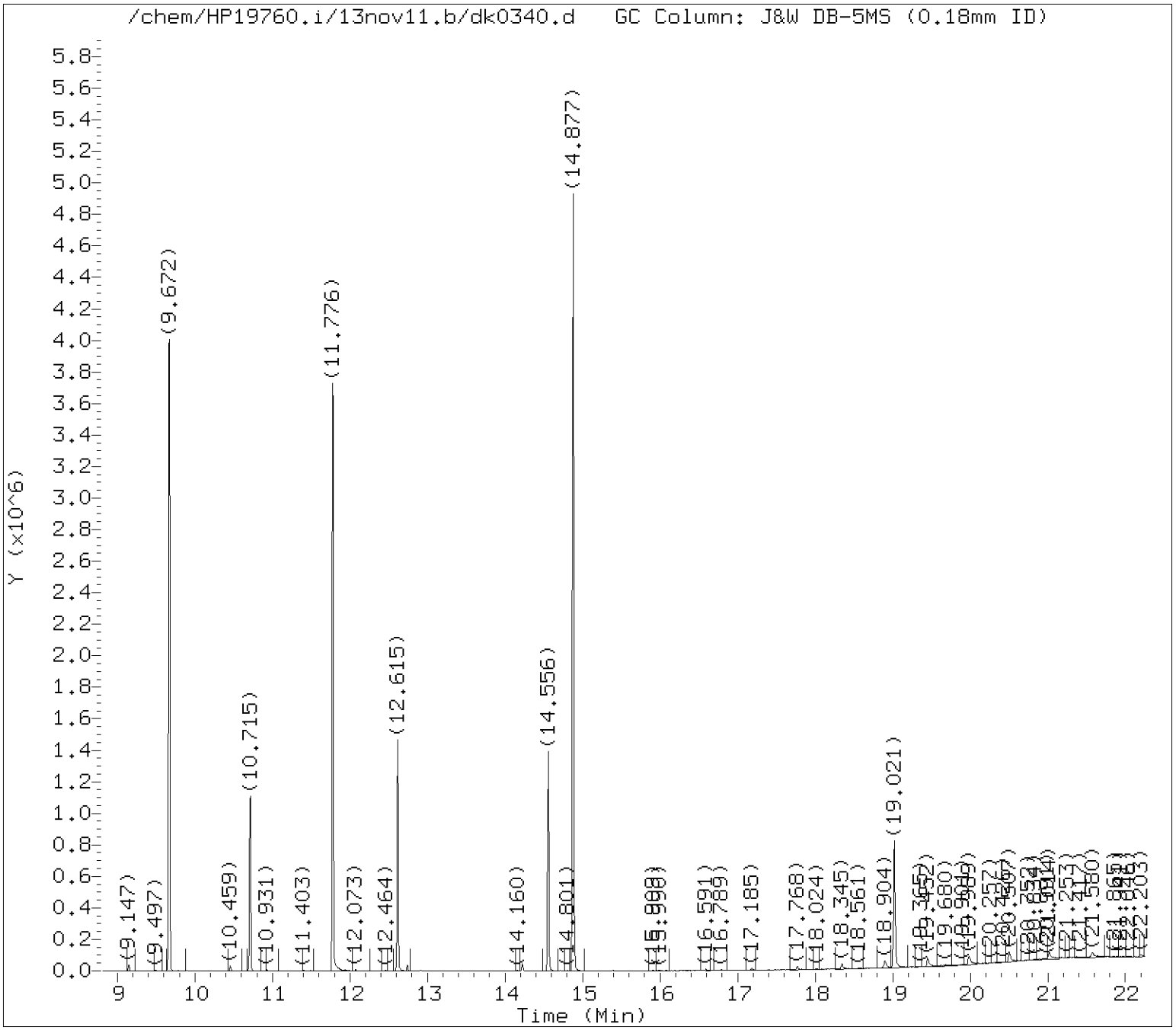
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.930
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

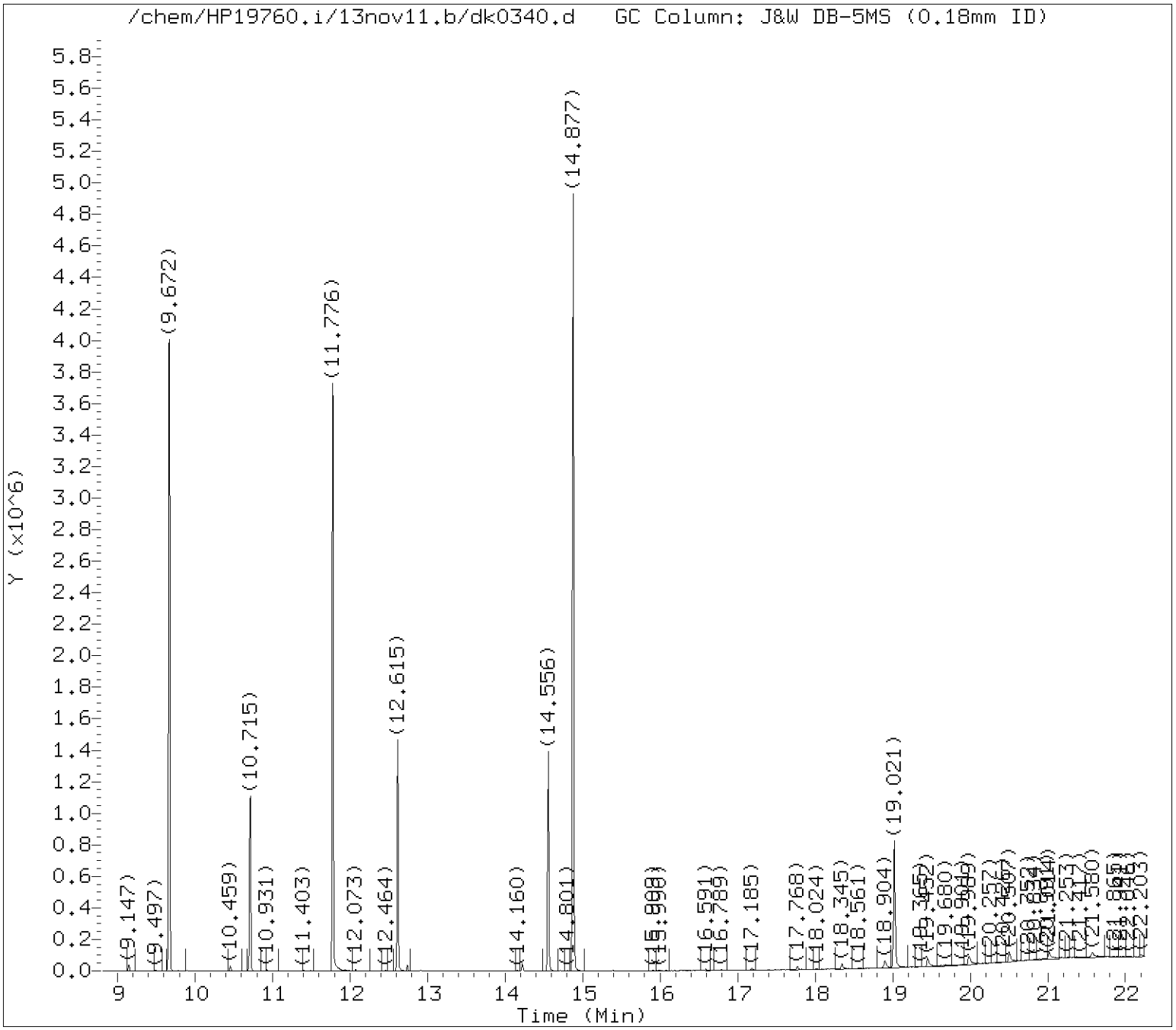
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

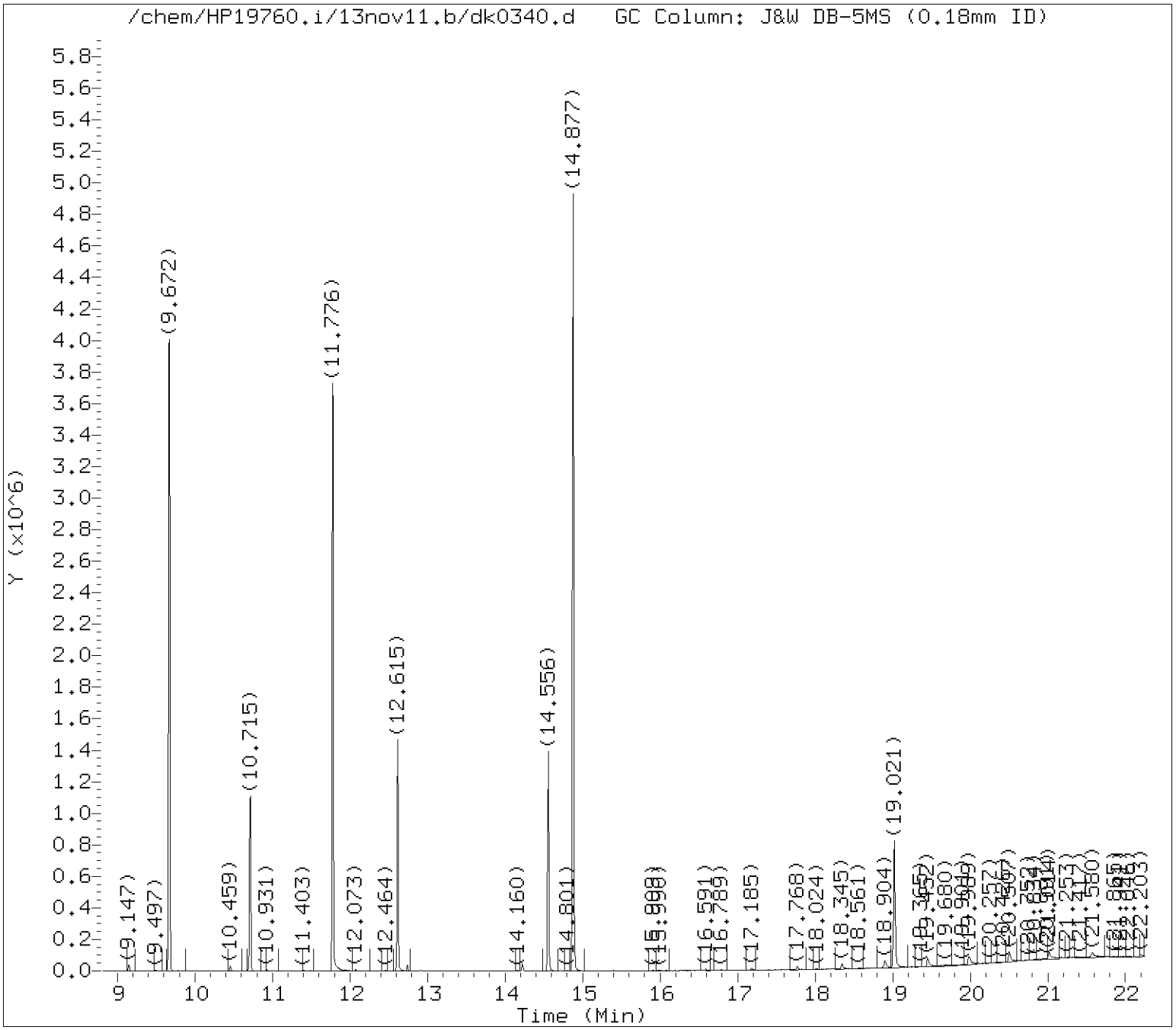
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

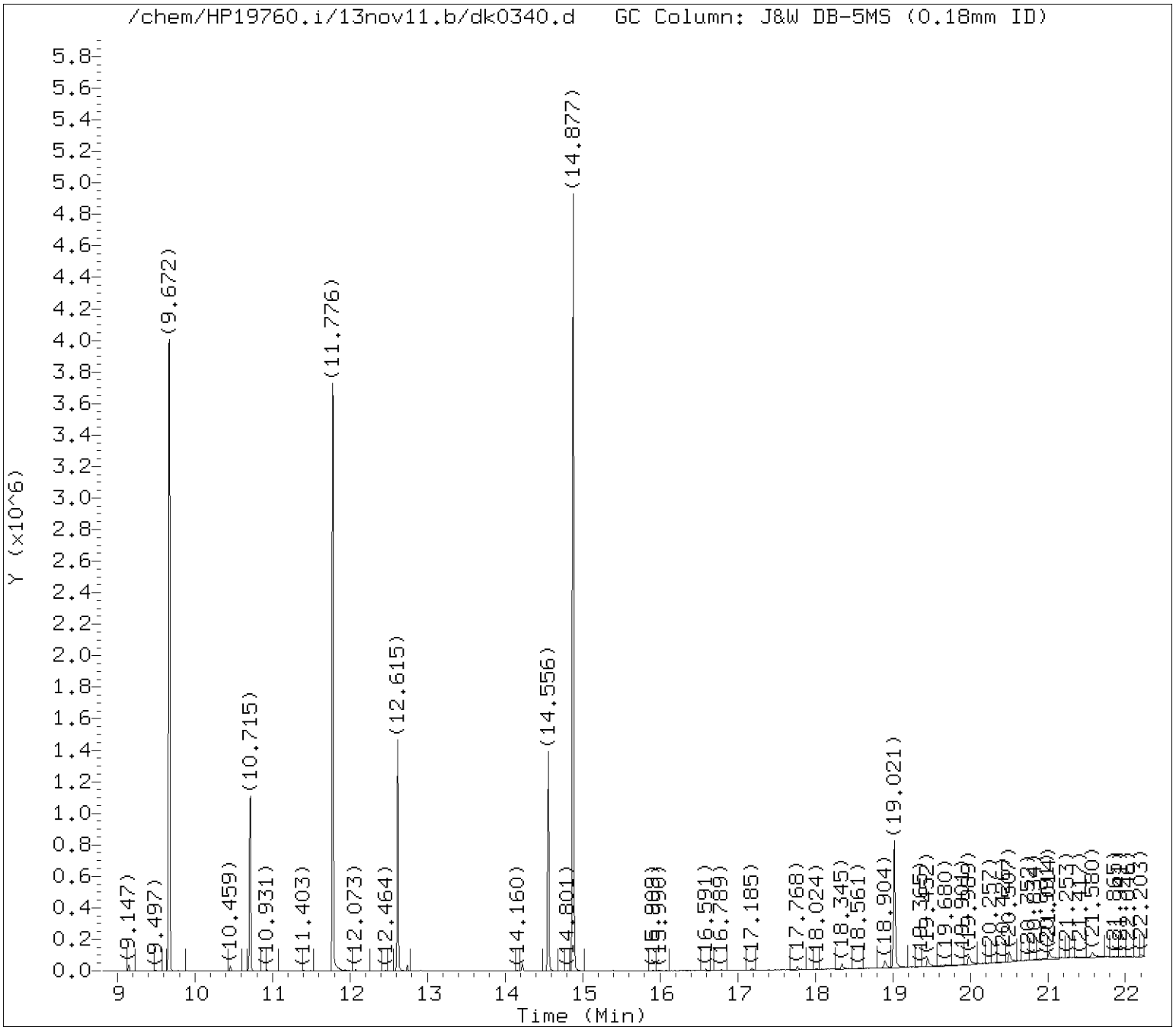
Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0340.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:51 jmg00346

Sample Name: R2141 Lab Sample ID: 7265238

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0340.d
Lab Smp Id: 7265238 Client Smp ID: R2141
Inj Date : 11-NOV-2013 13:03
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2141;7265238;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;245;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 21
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0634.d
Injection date and time: **18-NOV-2013 11:10**
Data file Sample Info. Line: R2F14;7265239;2;0;SAMPLE;;;
Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	101238 (1)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	477699 (3)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	303269 (5)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	542724 (2)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	654957 (1)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	596890 (3)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.595(0.000)	82	163049	15.842	79%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	332148	17.419	87%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	410492	17.532	88%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(0.000)	128	14641	0.578	192.55			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	10579	0.588	196.05			0.1
71) 1-Methylnaphthalene	(2)	7.082(0.000)	142	9996M	0.607	202.45			0.1
95) Acenaphthylene	(3)	7.857(-0.000)	152	47128	1.764	587.94			0.1
99) Acenaphthene	(3)	8.029(0.000)	153	6594	0.357	118.86			0.1
111) Fluorene	(3)	8.527(0.000)	166	25158	1.154	384.77			0.1
137) Phenanthrene	(4)	9.456(0.000)	178	229529	7.273	2424.49			0.1
138) Anthracene	(4)	9.505(0.000)	178	50331	1.549	516.48			0.1
147) Fluoranthene	(4)	10.612(0.000)	202	297748	8.438	2812.72			0.1
154) Pyrene	(5)	10.827(0.000)	202	355160	9.765	3254.88			0.1
166) Benzo(a)anthracene	(5)	11.995(0.000)	228	107933	3.217	1072.43			0.1
168) Chrysene	(5)	12.032(0.000)	228	159172	4.921	1640.35			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	151385M	4.154	1384.52			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	58188M	1.565	521.63			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	112853	3.172	1057.49			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(0.000)	276	63514	1.678	559.39			0.1
178) Dibenz(a,h)anthracene	(6)	14.381(0.000)	278	13283M	0.420	139.87			0.1
179) Benzo(g,h,i)perylene	(6)	14.615(0.000)	276	65990	2.047	682.23			0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0634.d Injection date and time: **18-NOV-2013 11:10**
Data file Sample Info. Line: R2F14;7265239;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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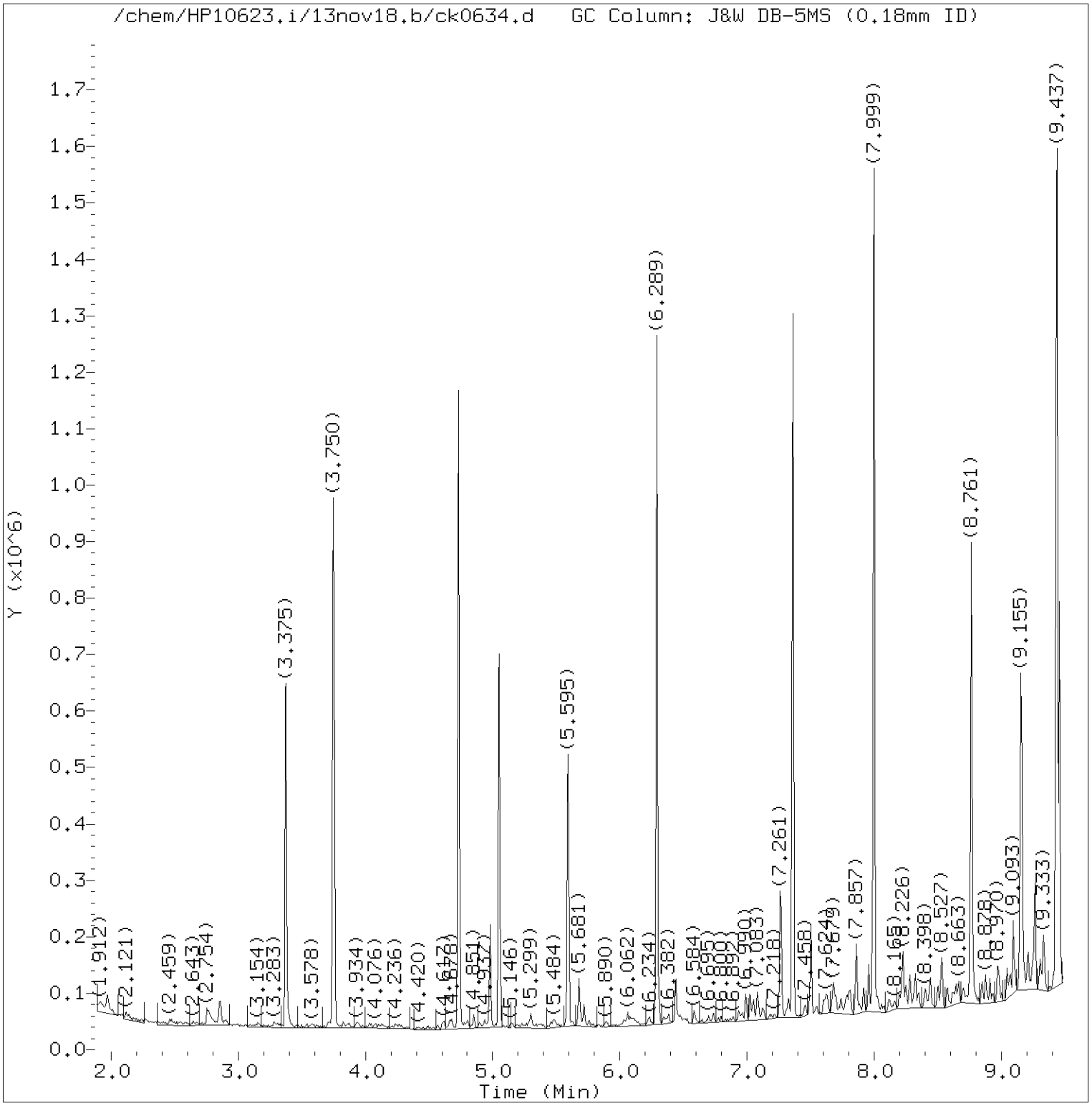
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:27. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

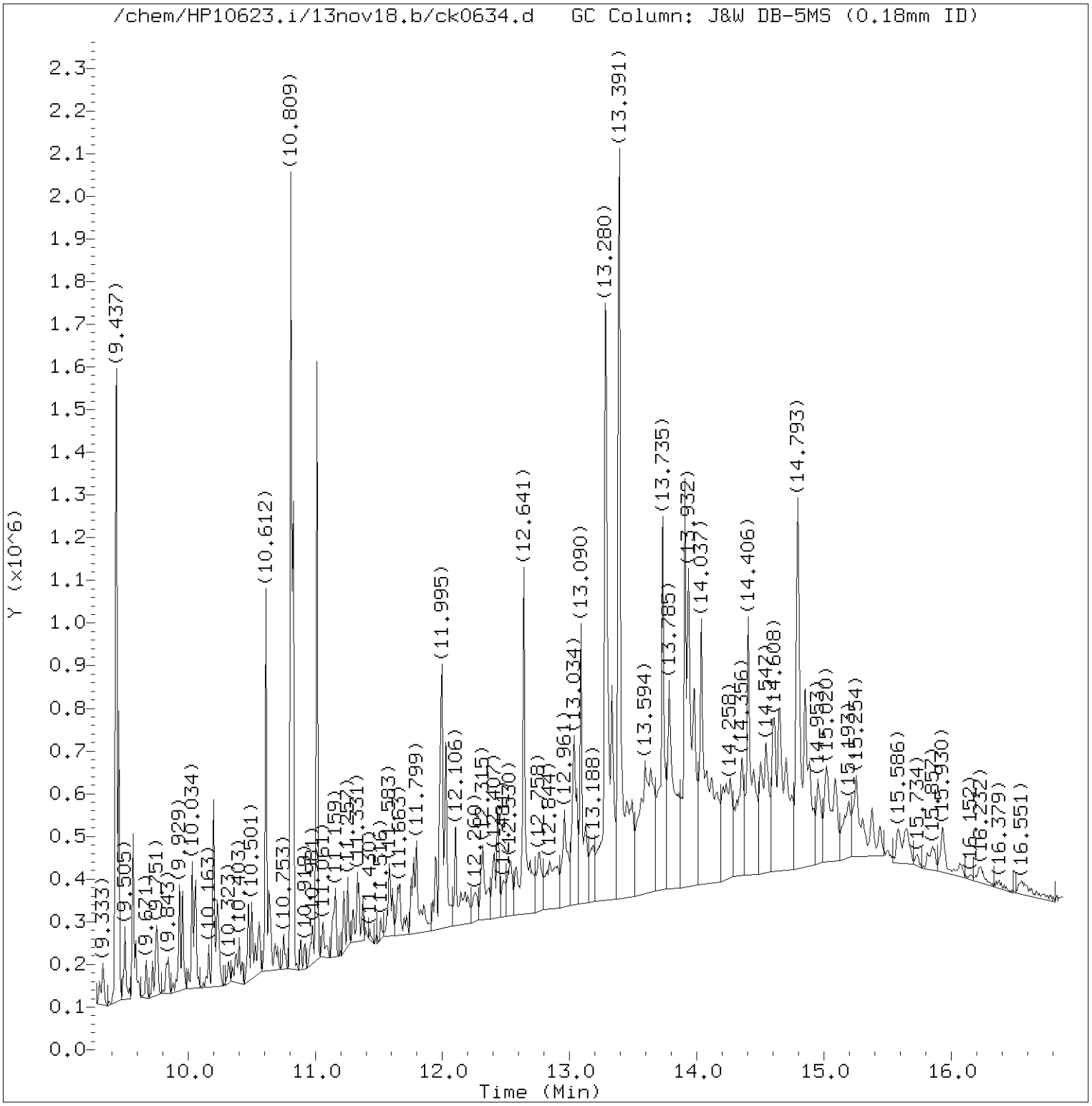
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

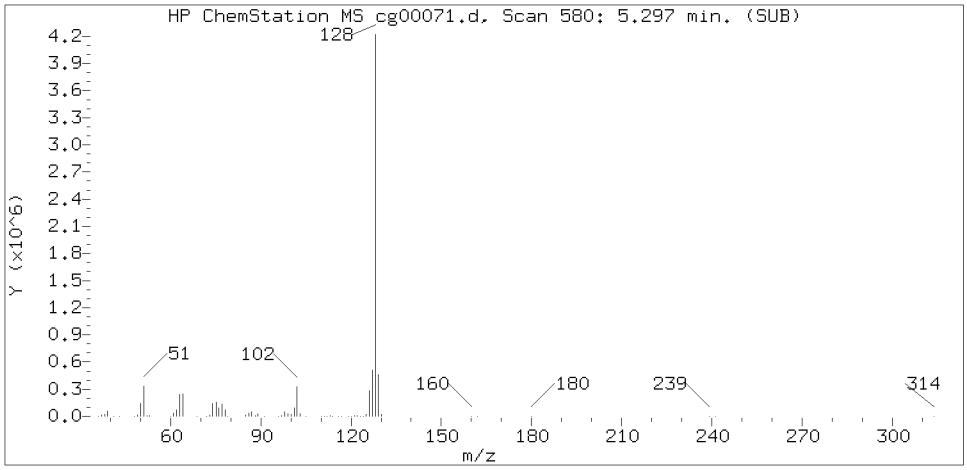
Sample Name: R2F14 Lab Sample ID: 7265239

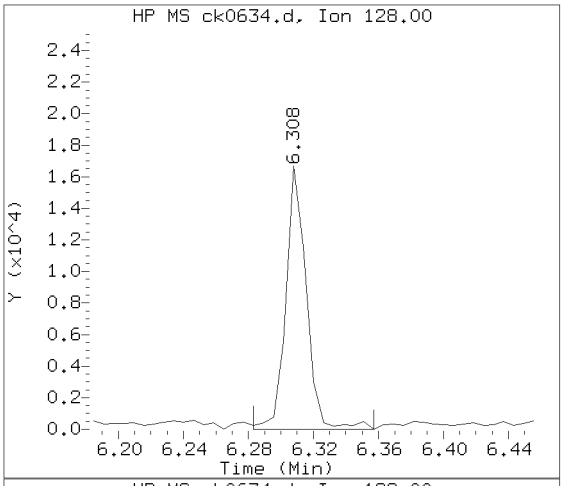
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	101238	20.000
38)$Nitrobenzene-d5	(2)	5.595	82	163049	15.842
52)*Naphthalene-d8	(2)	6.289	136	477699	20.000
53) Naphthalene	(2)	6.308	128	14641	0.578
70) 2-Methylnaphthalene	(2)	6.990	142	10579	0.588
71) 1-Methylnaphthalene	(2)	7.083	142	9996M	0.607
78)$2-Fluorobiphenyl	(3)	7.359	172	332148	17.419
95) Acenaphthylene	(3)	7.857	152	47128	1.764
98)*Acenaphthene-d10	(3)	7.999	164	303269	20.000
99) Acenaphthene	(3)	8.029	153	6594	0.357
111) Fluorene	(3)	8.527	166	25158	1.154
135)*Phenanthrene-d10	(4)	9.437	188	542724	20.000
137) Phenanthrene	(4)	9.456	178	229529	7.273
138) Anthracene	(4)	9.505	178	50331	1.549
147) Fluoranthene	(4)	10.612	202	297748	8.438
167)*Pyrene-d10	(5)	10.809	212	654957	20.000
154) Pyrene	(5)	10.827	202	355160	9.765
156)$Terphenyl-d14	(5)	11.011	244	410492	17.532
166) Benzo(a)anthracene	(5)	11.995	228	107933	3.217
168) Chrysene	(5)	12.032	228	159172	4.921
172) Benzo(b)fluoranthene	(6)	13.034	252	151385M	4.154
173) Benzo(k)fluoranthene	(6)	13.059	252	58188M	1.565
174) Benzo(a)pyrene	(6)	13.336	252	112853	3.172
175)*Perylene-d12	(6)	13.391	264	596890	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	63514	1.678
178) Dibenz(a,h)anthracene	(6)	14.381	278	13283M	0.420
179) Benzo(g,h,i)perylene	(6)	14.615	276	65990	2.047

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

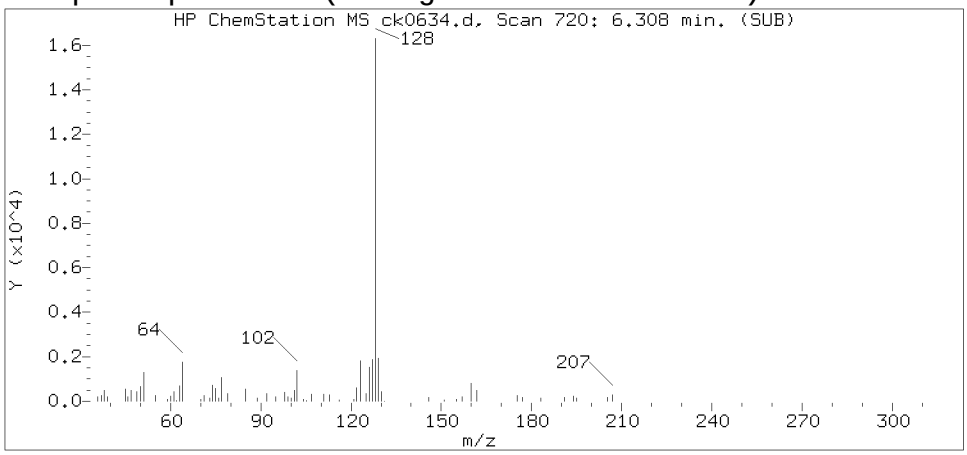
Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

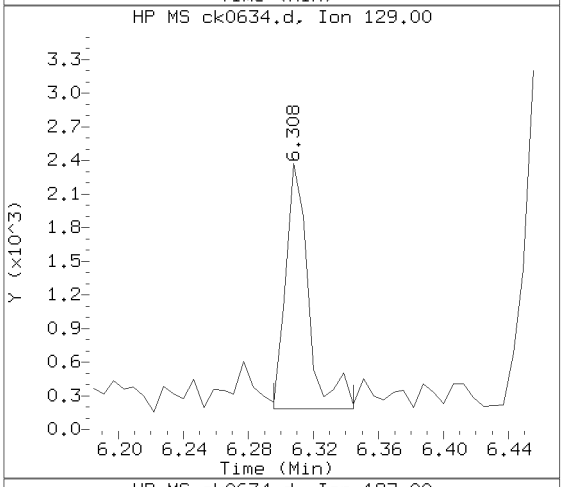
Reference Standard Spectrum for Naphthalene



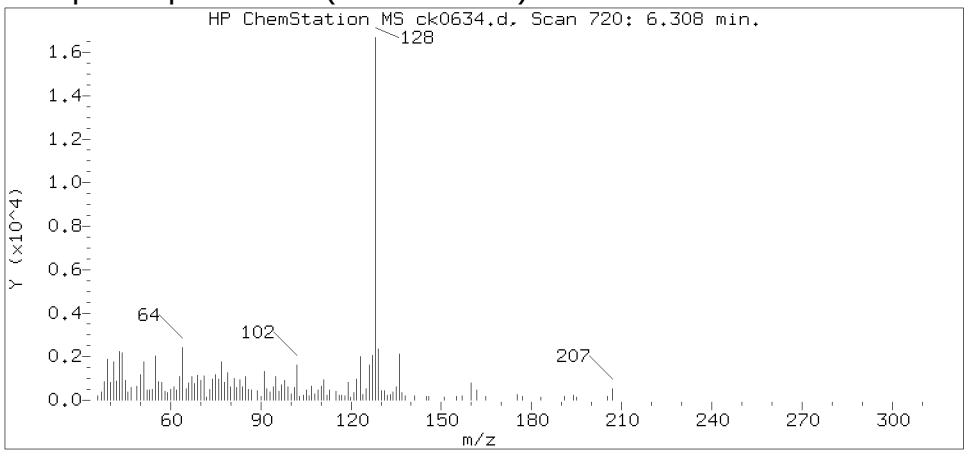


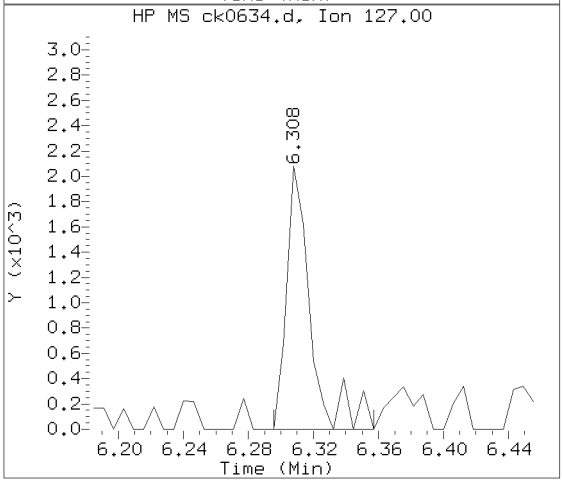
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

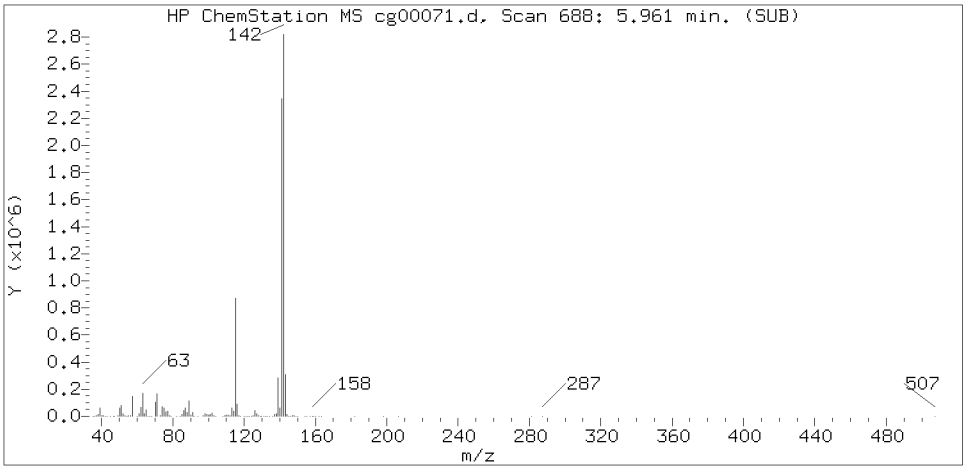
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

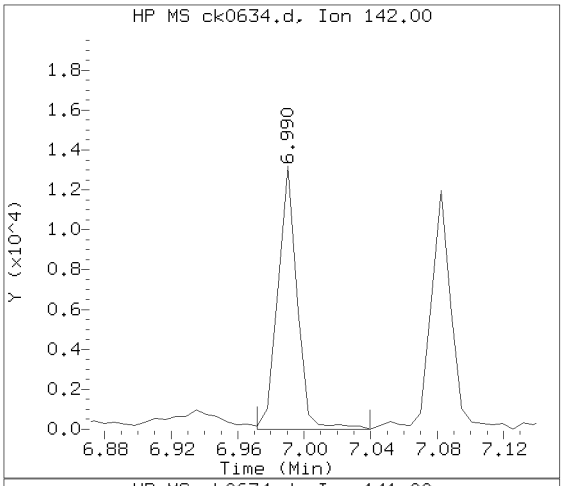
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 53
Compound Name : Naphthalene
Scan Number : 720
Retention Time (minutes) : 6.308
Relative Retention Time : 0.00000
Quant Ion : 128.00
Area (flag) : 14641
On-column Amount (ng/ul) : 0.5777

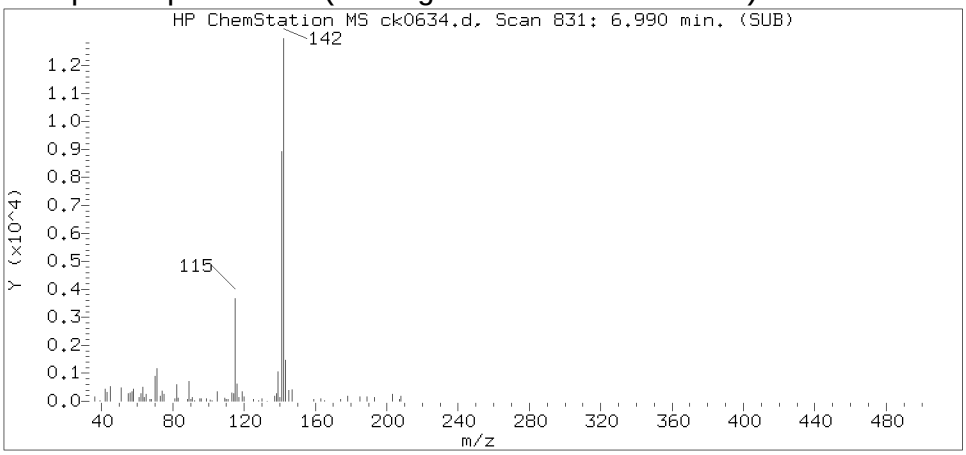
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

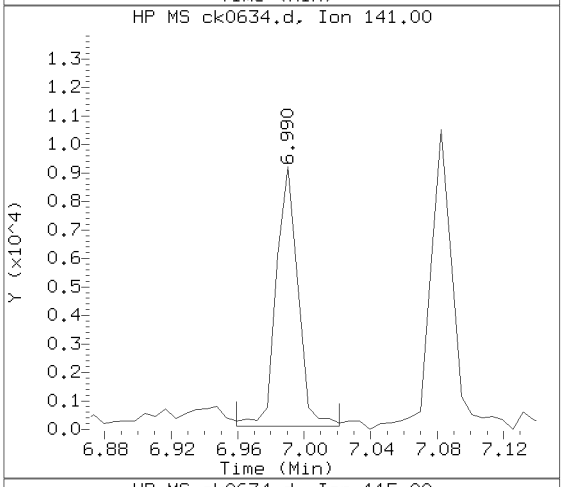
Reference Standard Spectrum for 2-Methylnaphthalene



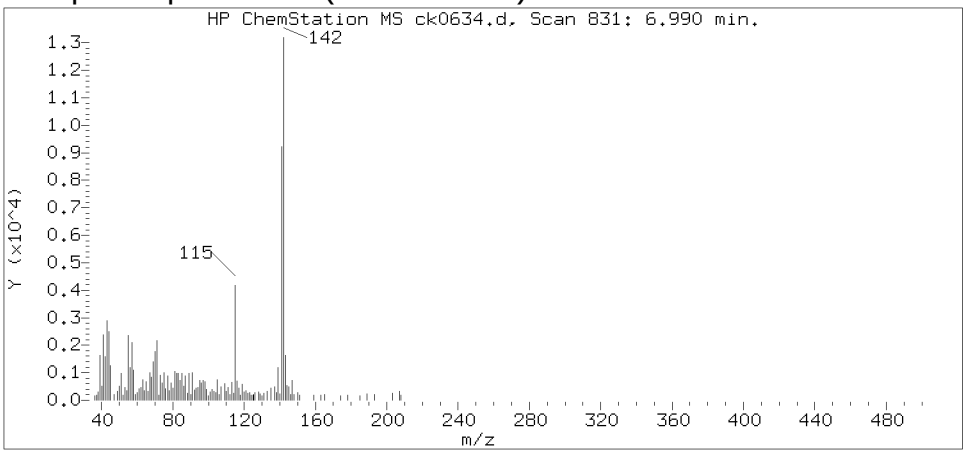


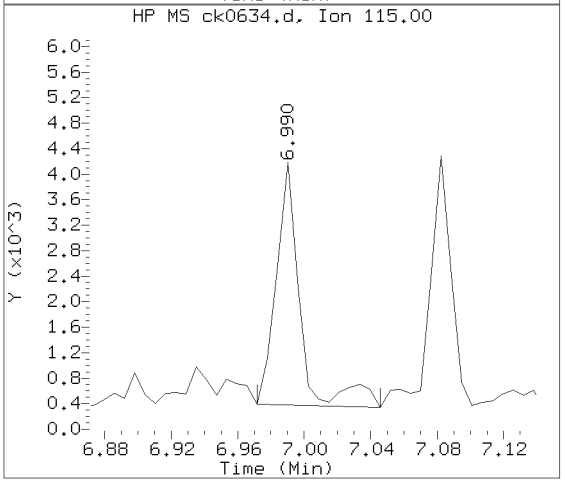
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

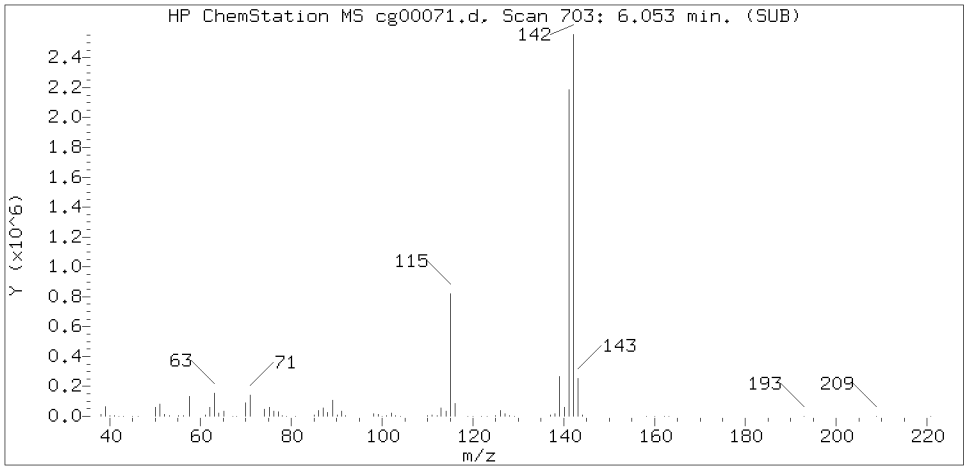
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

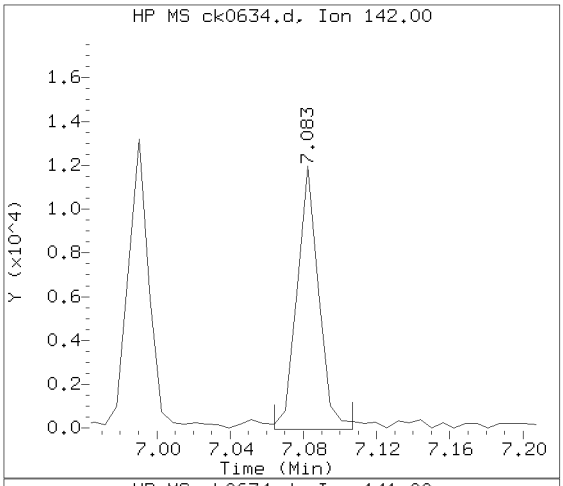
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 70
Compound Name	: 2-Methylnaphthalene
Scan Number	: 831
Retention Time (minutes)	: 6.990
Relative Retention Time	: 0.00001
Quant Ion	: 142.00
Area (flag)	: 10579
On-column Amount (ng/ul)	: 0.5881

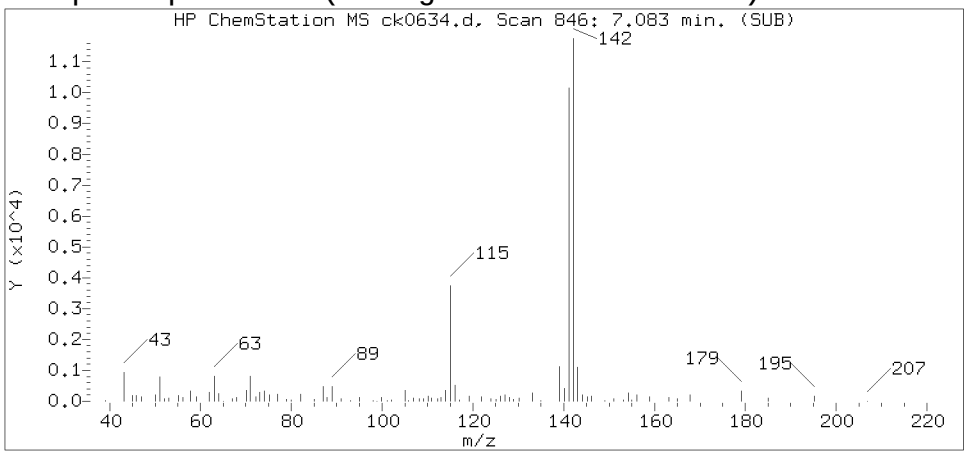
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

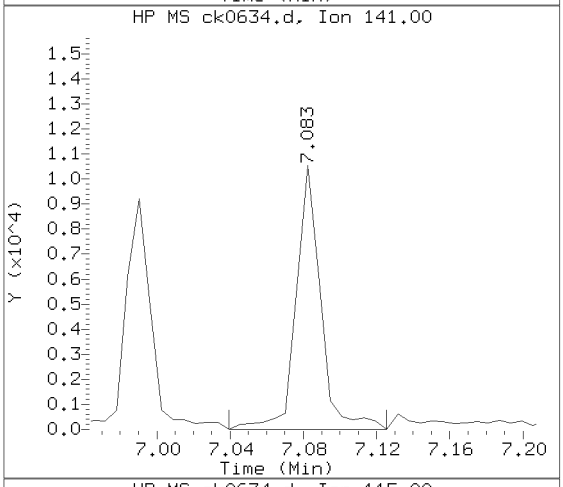
Reference Standard Spectrum for 1-Methylnaphthalene



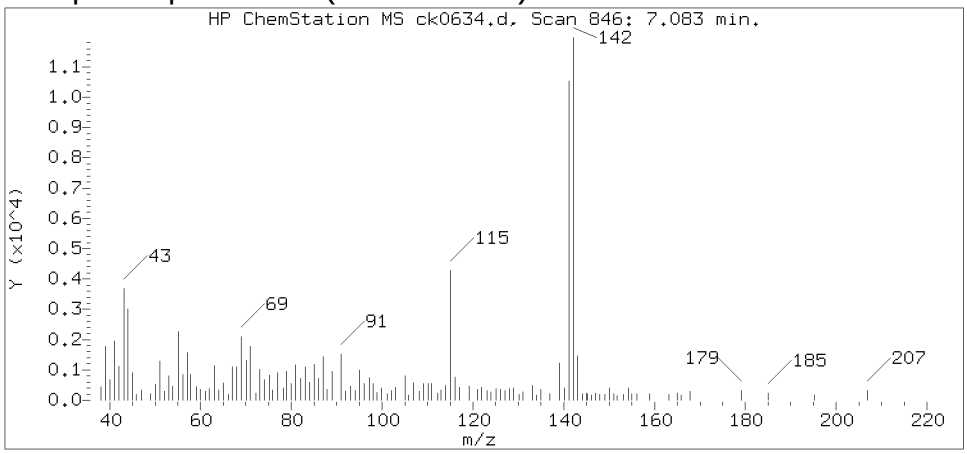


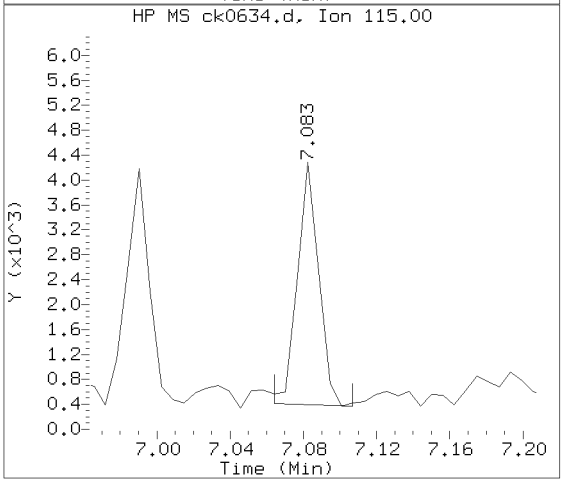
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 846
Retention Time (minutes)	: 7.083
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 9996M
On-column Amount (ng/ul)	: 0.6074

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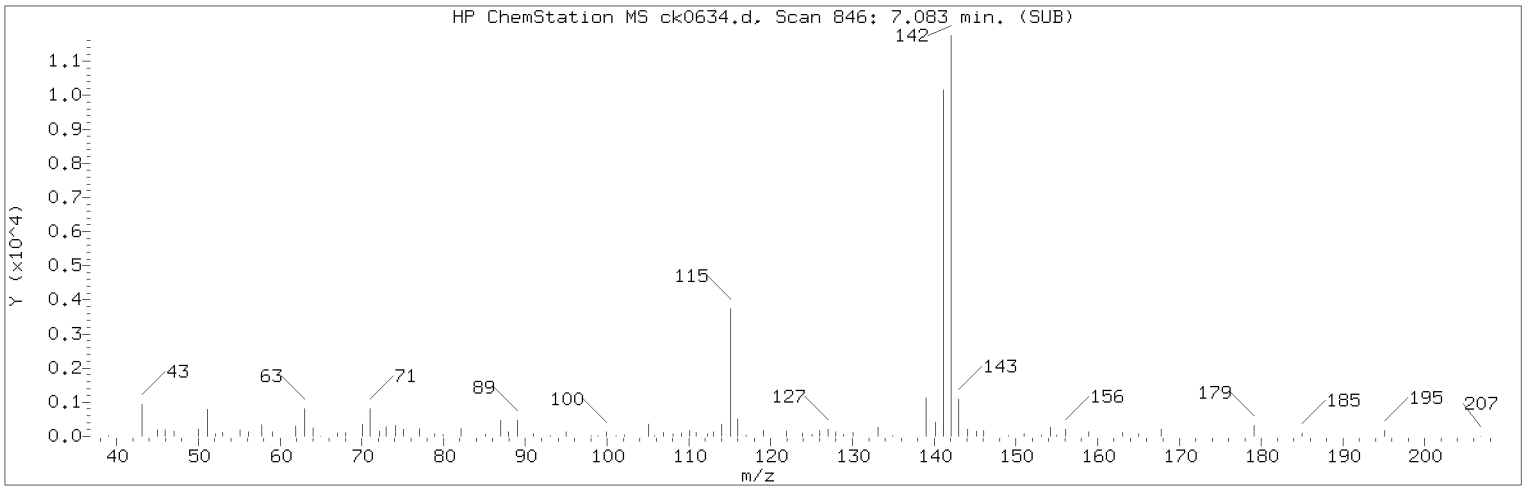
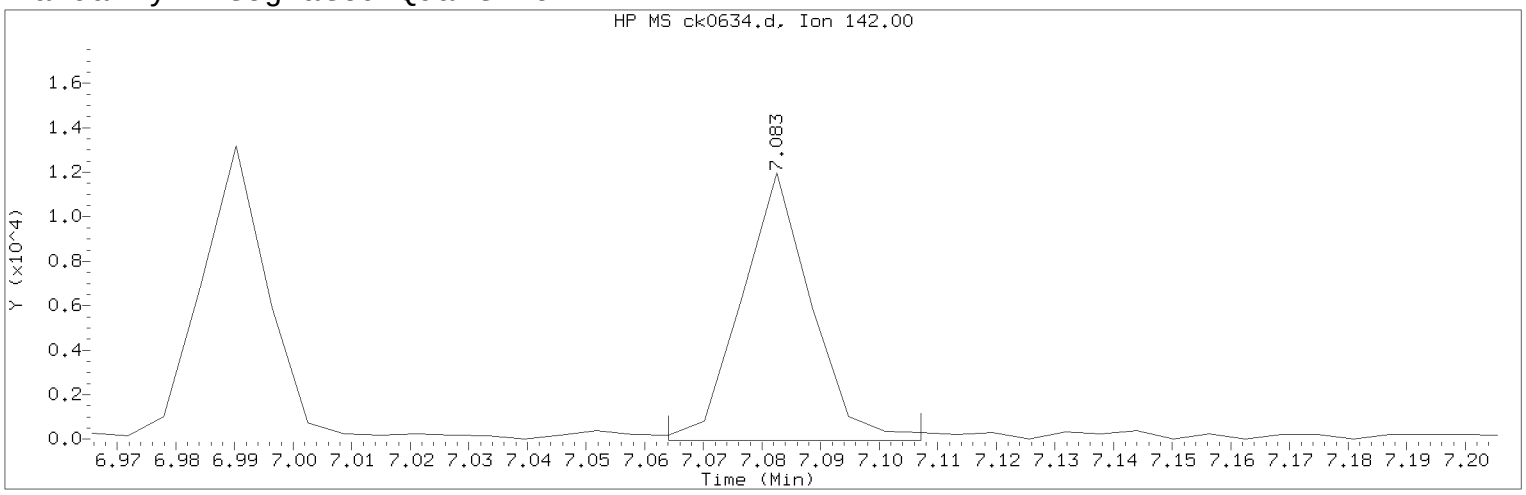
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

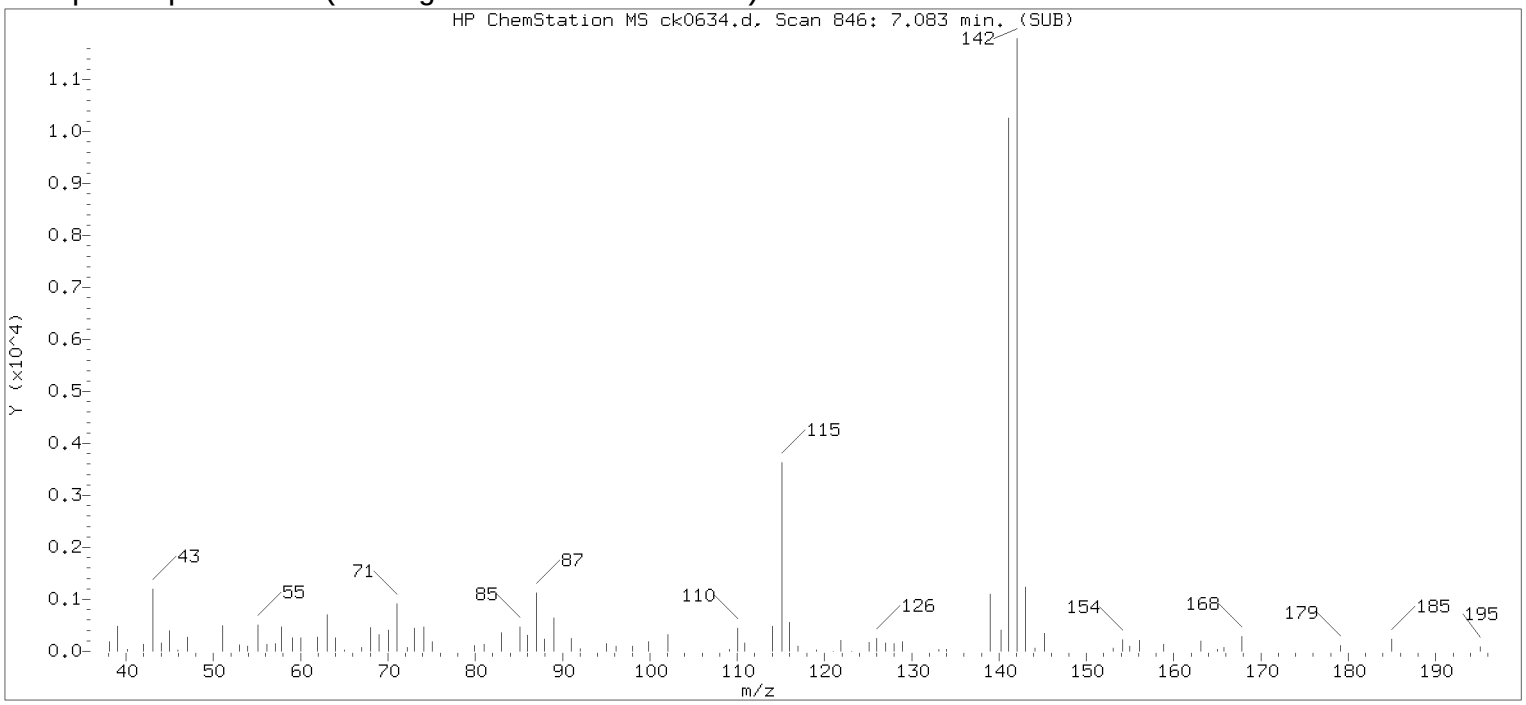
Compound Number : 71
Compound Name : 1-Methylnaphthalene
Scan Number : 846
Retention Time (minutes) : 7.083
Quant Ion : 142.00
Area (flag) : 9996M
On-column Amount (ng/ul) : 0.6074
Integration start scan : 842 Integration stop scan: 849
Y at integration start : -47 Y at integration end: -47

Reason for manual integration: improper integration

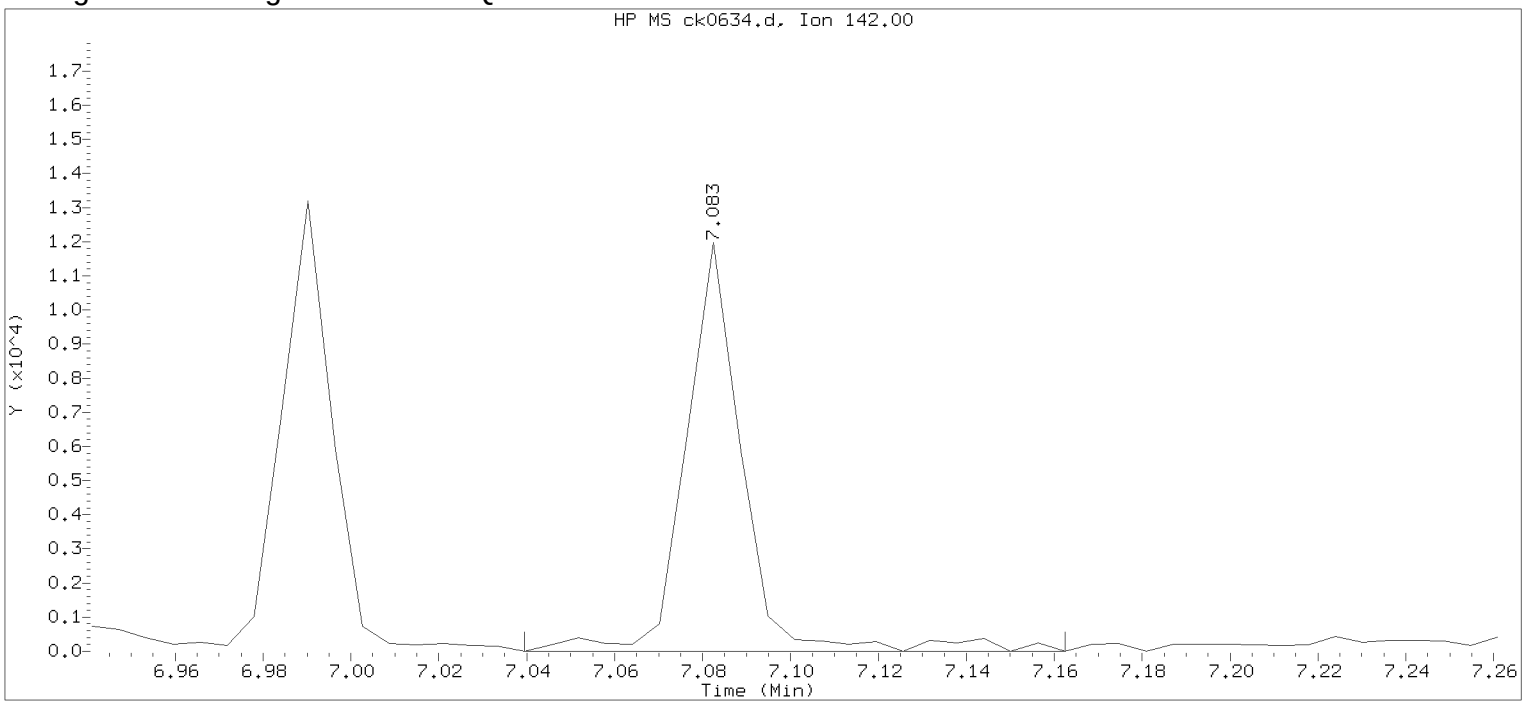
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:27.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

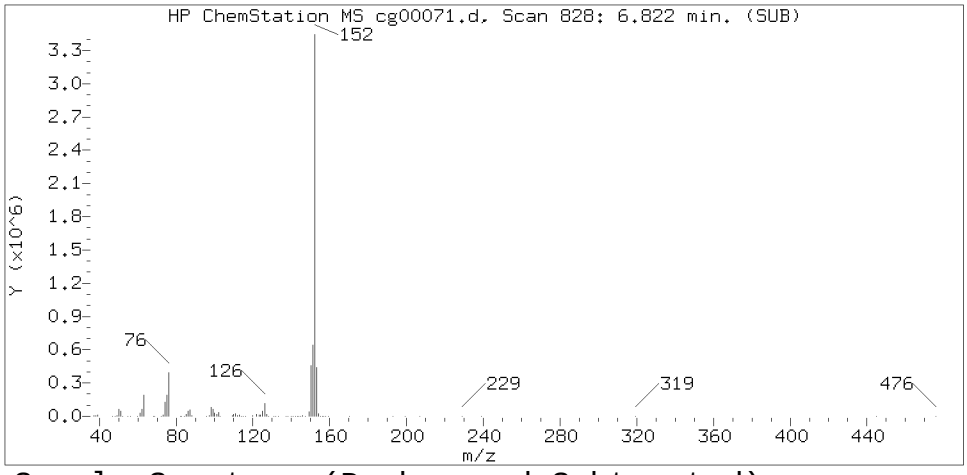
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 11:36 Automation

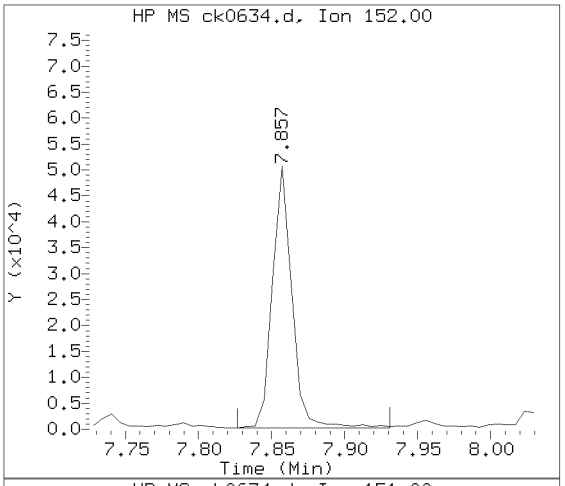
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 846
Retention Time (minutes)	: 7.083
Quant Ion	: 142.00
Area	: 10774
On-column Amount (ng/ul)	: 0.6546
Integration start scan	: 838 Integration stop scan: 858
Y at integration start	: 0 Y at integration end: 0

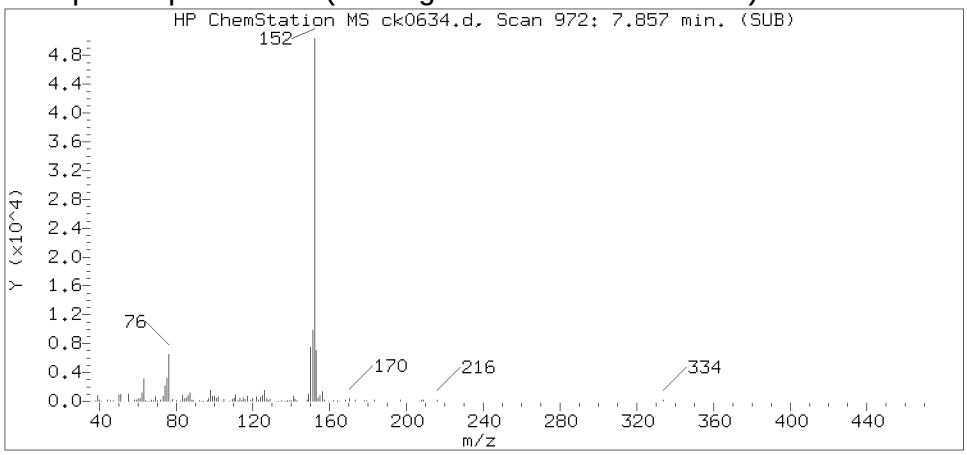
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

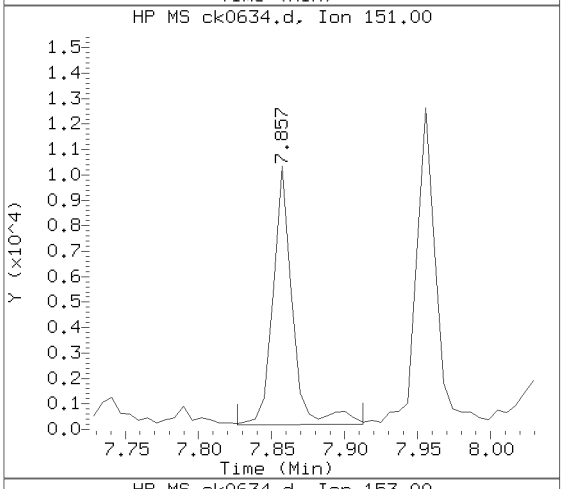
Reference Standard Spectrum for Acenaphthylene



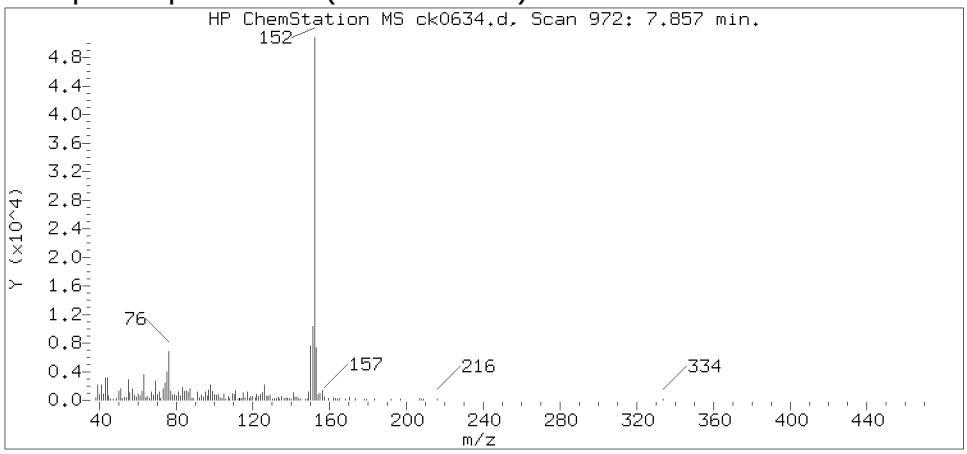


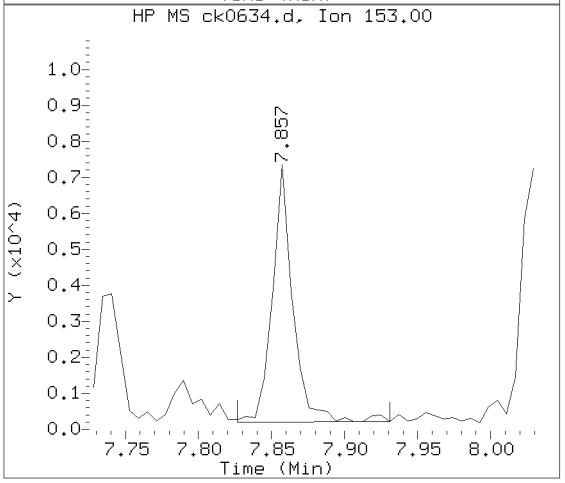
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 95
Compound Name : Acenaphthylene
Scan Number : 972
Retention Time (minutes) : 7.857
Relative Retention Time :-0.00000
Quant Ion : 152.00
Area (flag) : 47128
On-column Amount (ng/ul) : 1.7638

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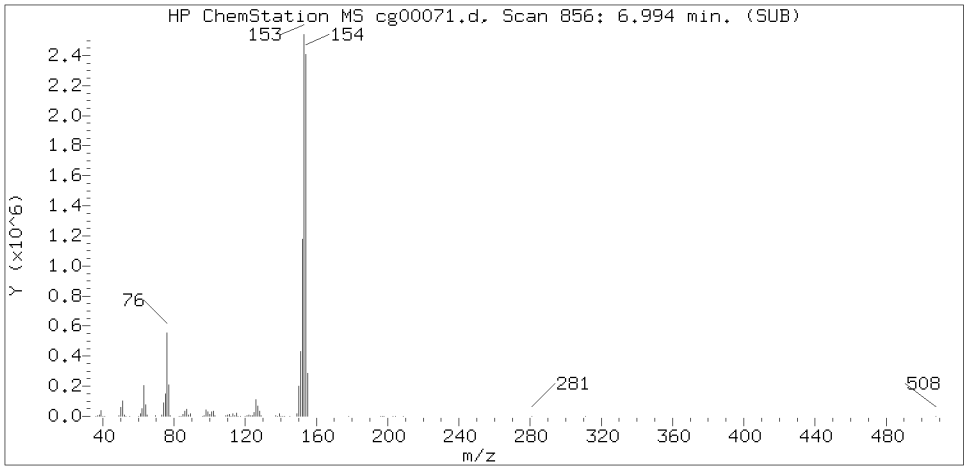
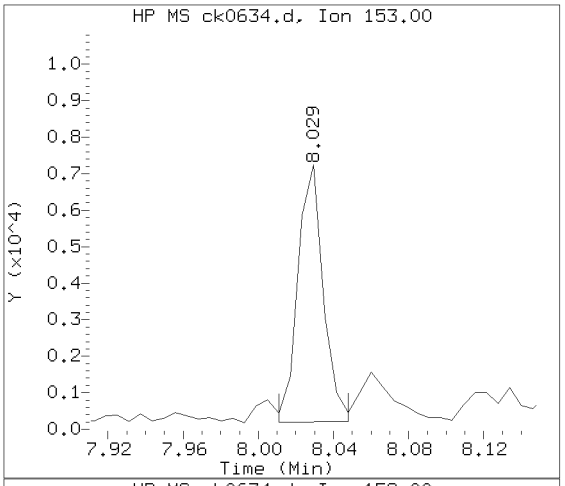
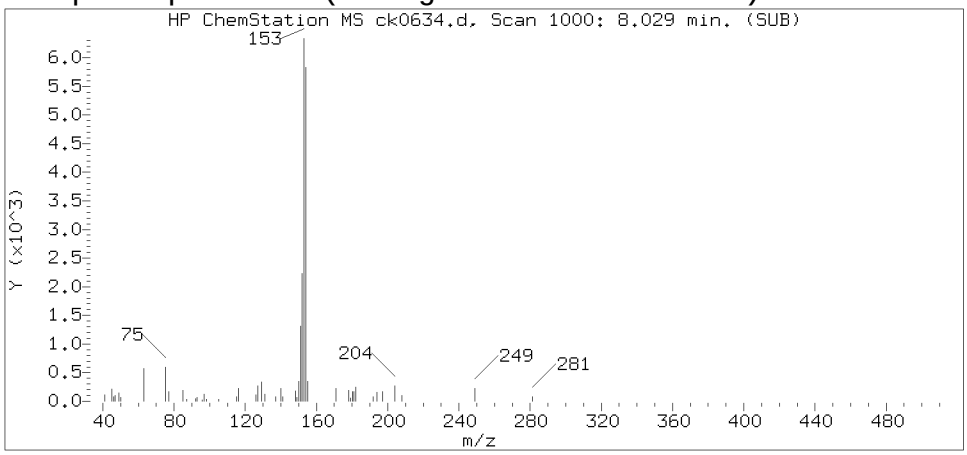
Target 3.5 esignature user ID: jmg00346

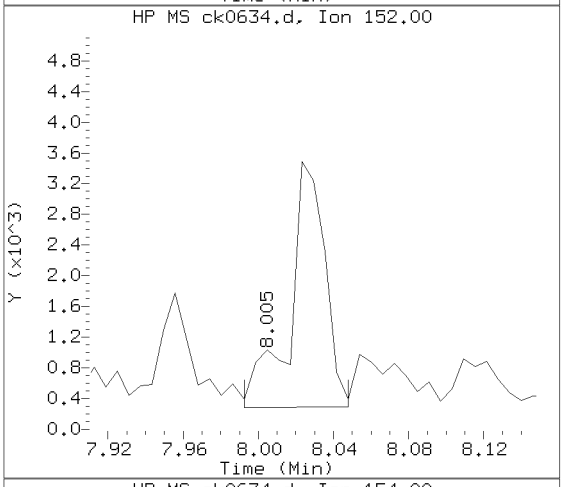
Reference Standard Spectrum for Acenaphthene



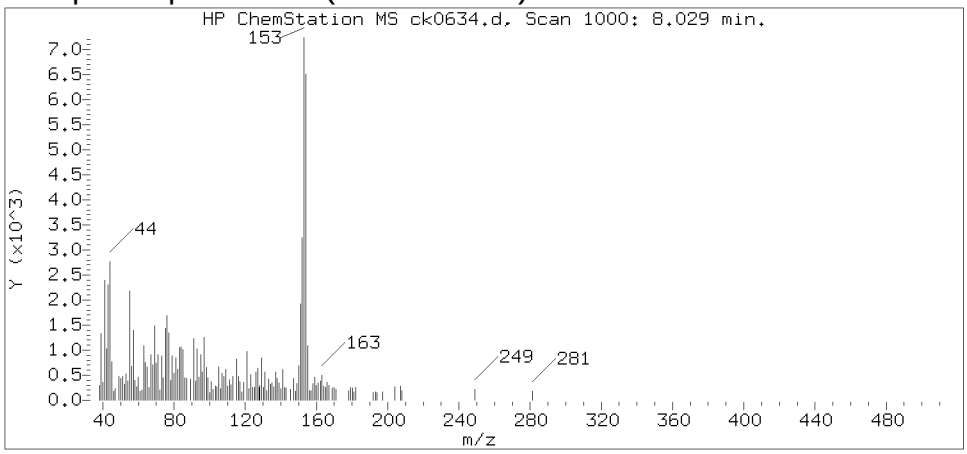


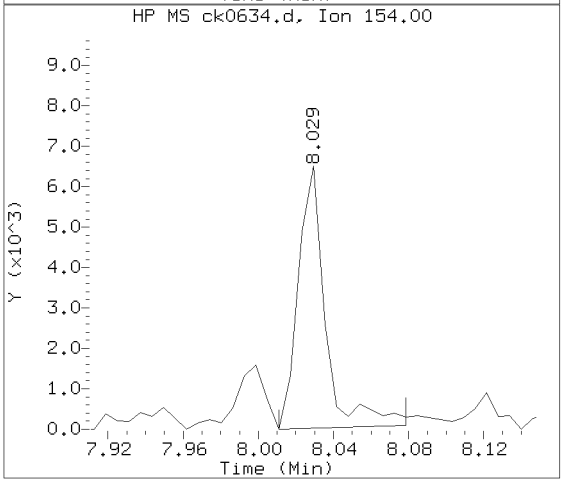
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

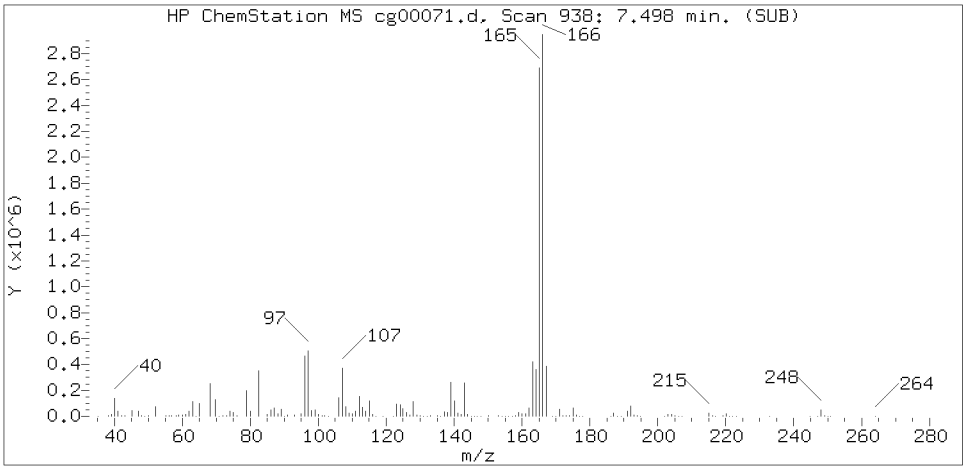
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

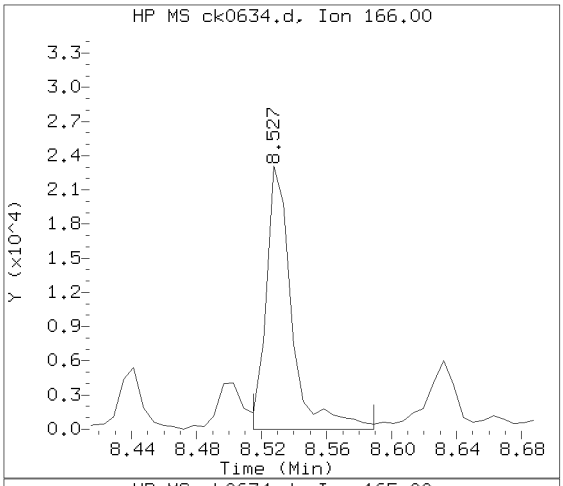
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 99
Compound Name	: Acenaphthene
Scan Number	: 1000
Retention Time (minutes)	: 8.029
Relative Retention Time	: 0.00000
Quant Ion	: 153.00
Area (flag)	: 6594
On-column Amount (ng/ul)	: 0.3566

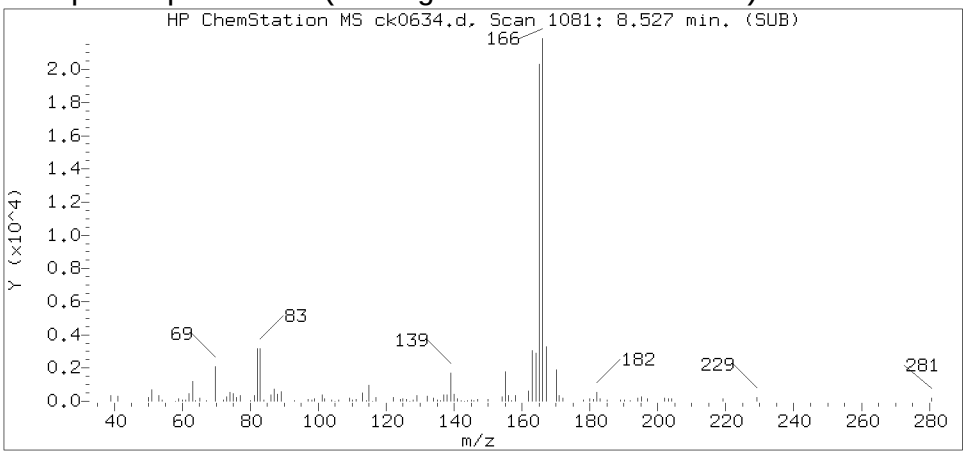
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

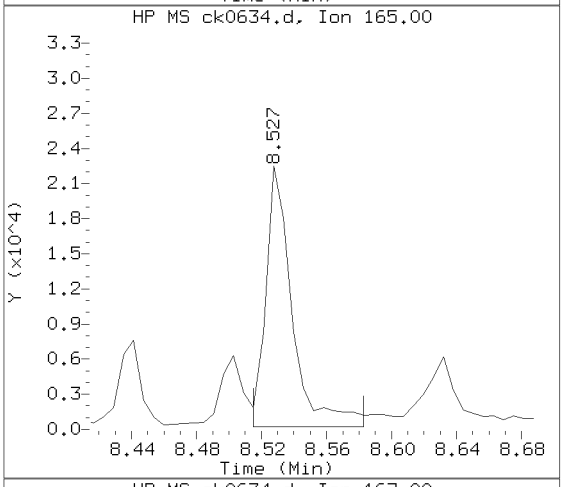
Reference Standard Spectrum for Fluorene



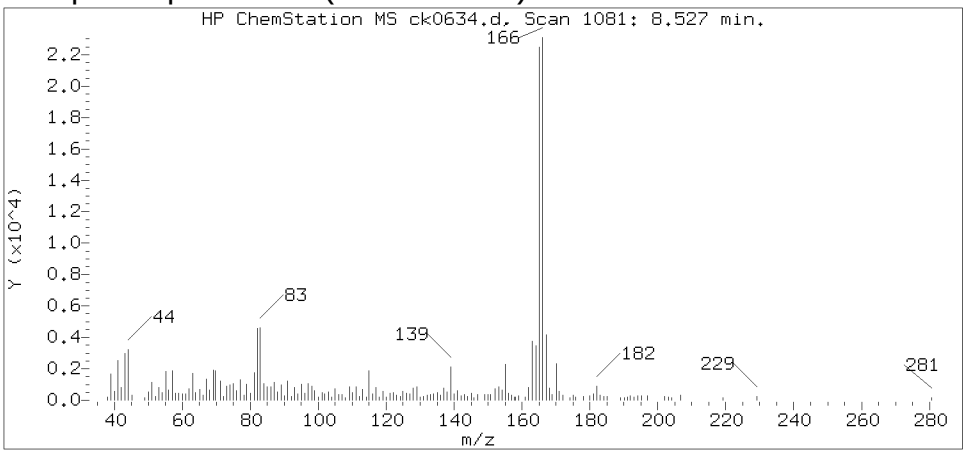


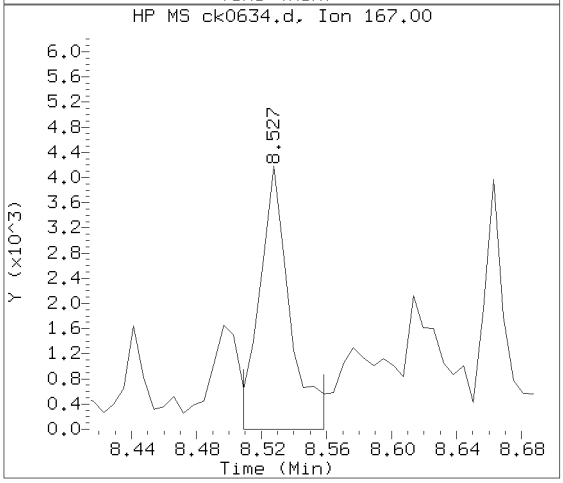
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 111
Compound Name	: Fluorene
Scan Number	: 1081
Retention Time (minutes)	: 8.527
Relative Retention Time	: 0.00077
Quant Ion	: 166.00
Area (flag)	: 25158
On-column Amount (ng/ul)	: 1.1543

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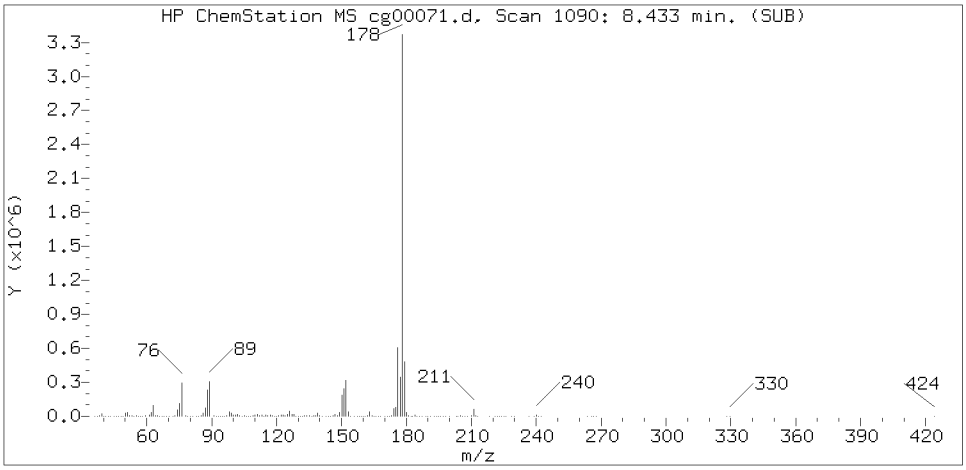
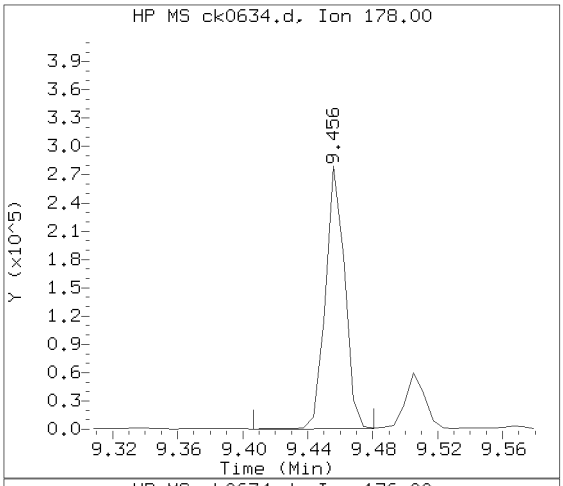
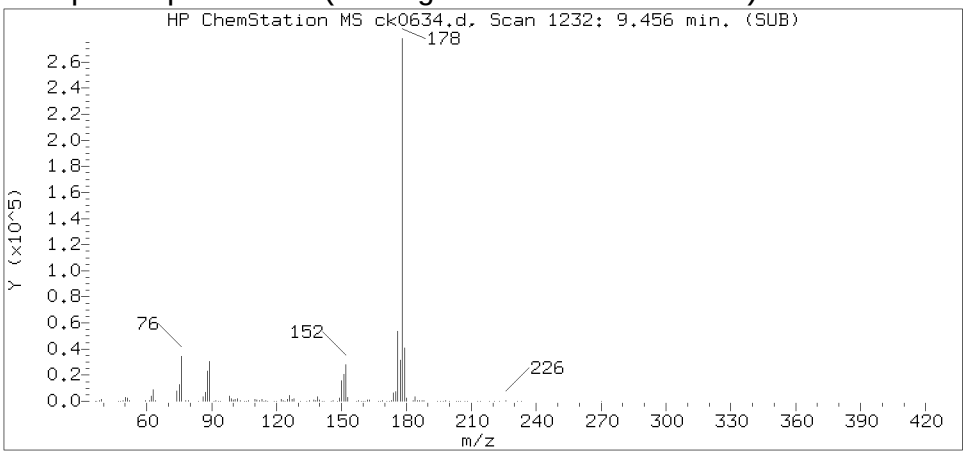
Target 3.5 esignature user ID: jmg00346

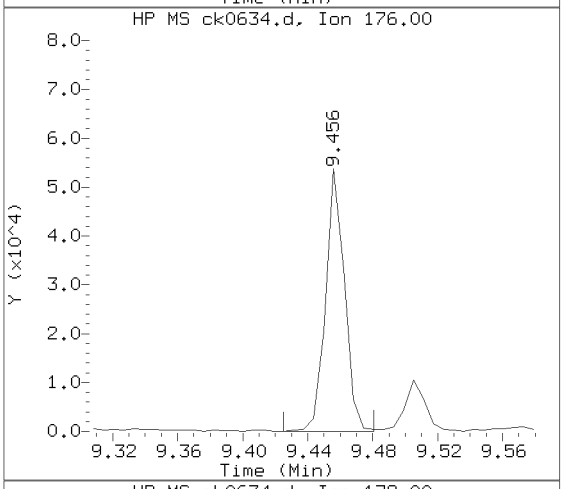
Reference Standard Spectrum for Phenanthrene



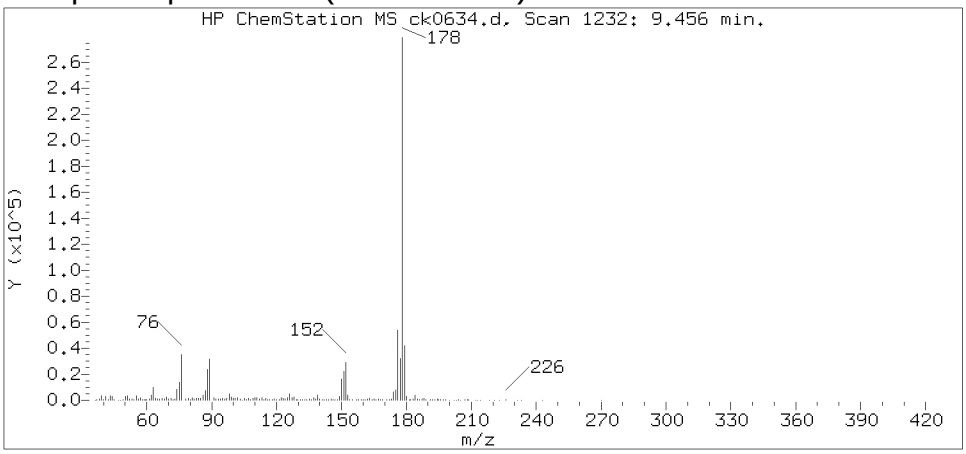


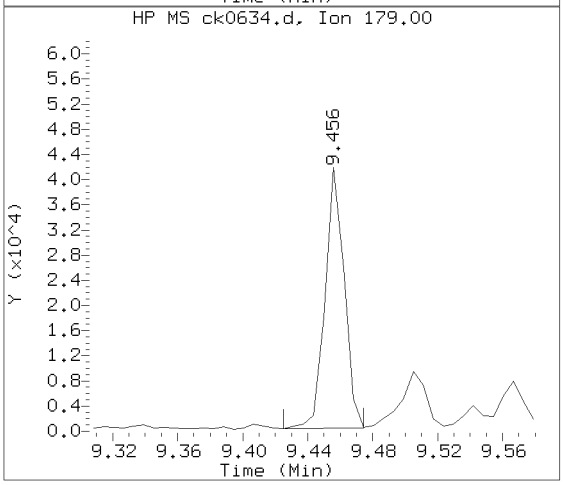
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1232
Retention Time (minutes)	: 9.456
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 229529
On-column Amount (ng/ul)	: 7.2735

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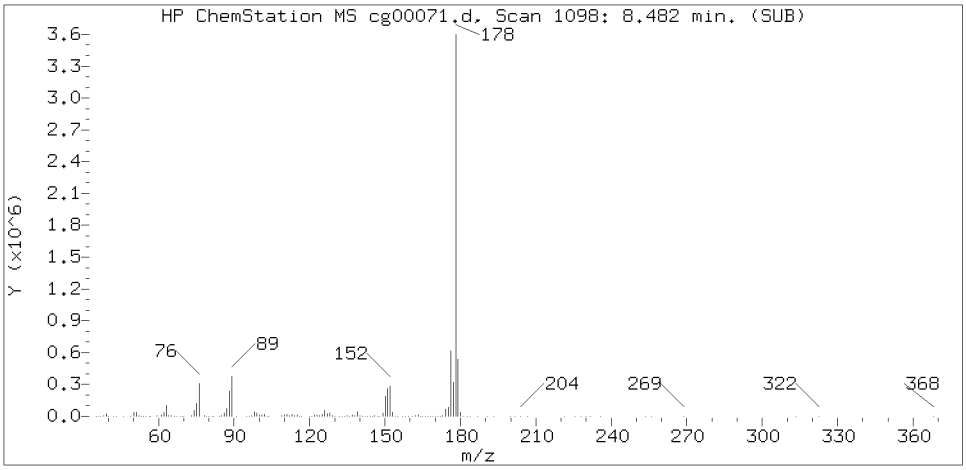
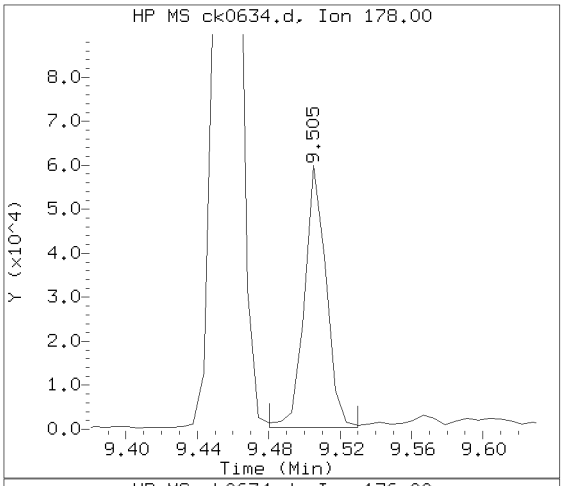
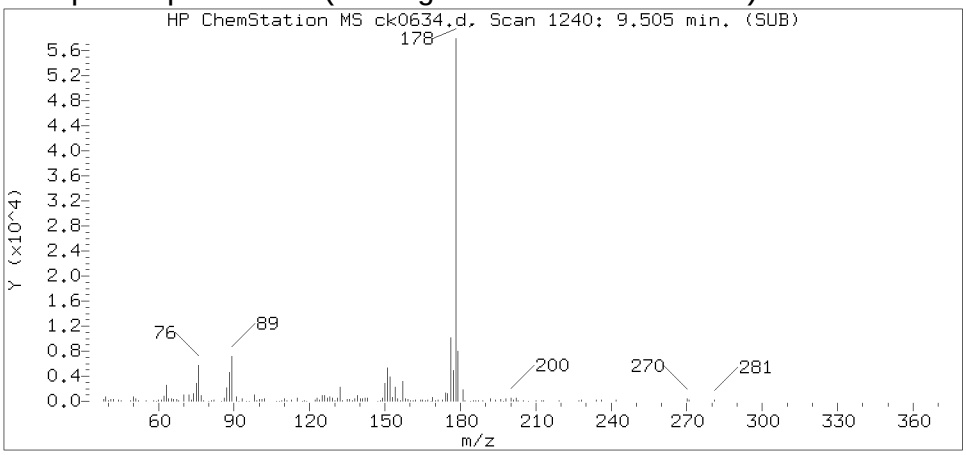
Target 3.5 esignature user ID: jmg00346

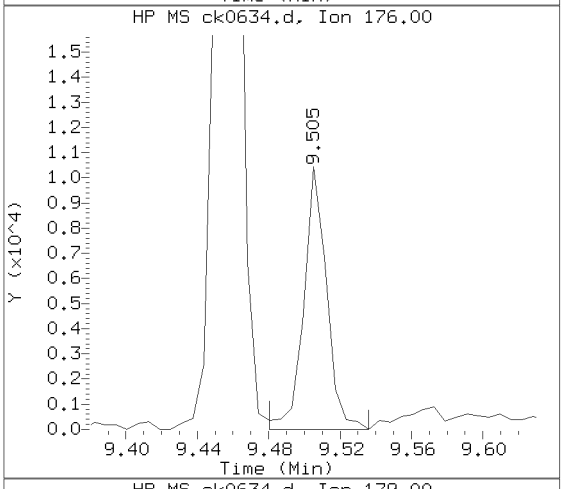
Reference Standard Spectrum for Anthracene



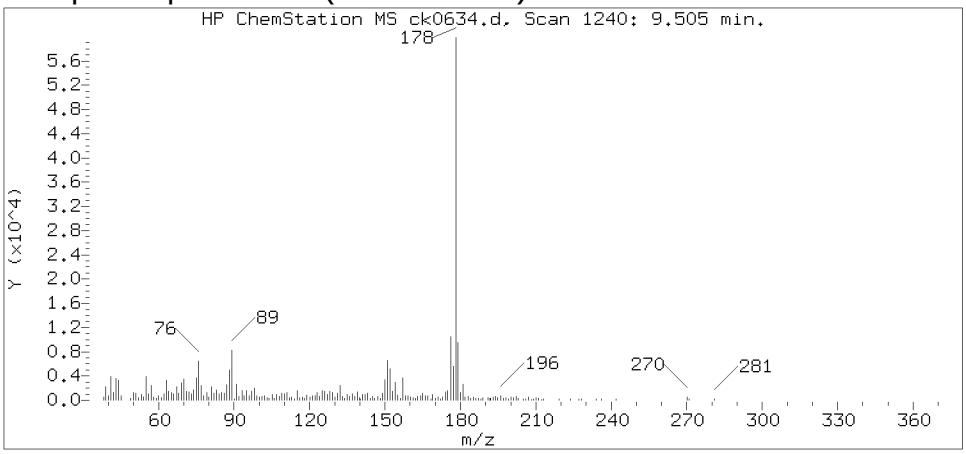


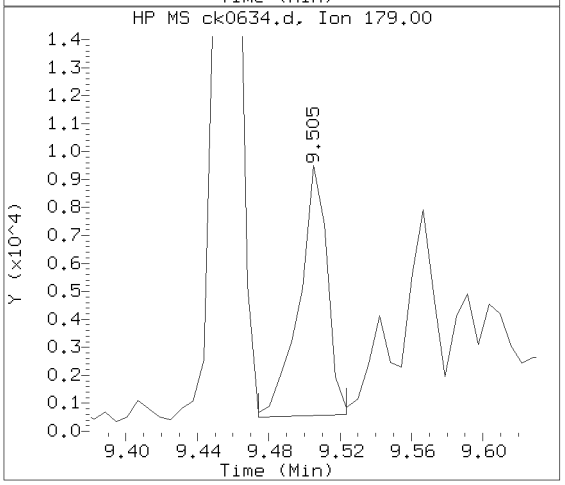
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 138
Compound Name	: Anthracene
Scan Number	: 1240
Retention Time (minutes)	: 9.505
Relative Retention Time	: 0.00065
Quant Ion	: 178.00
Area (flag)	: 50331
On-column Amount (ng/ul)	: 1.5494

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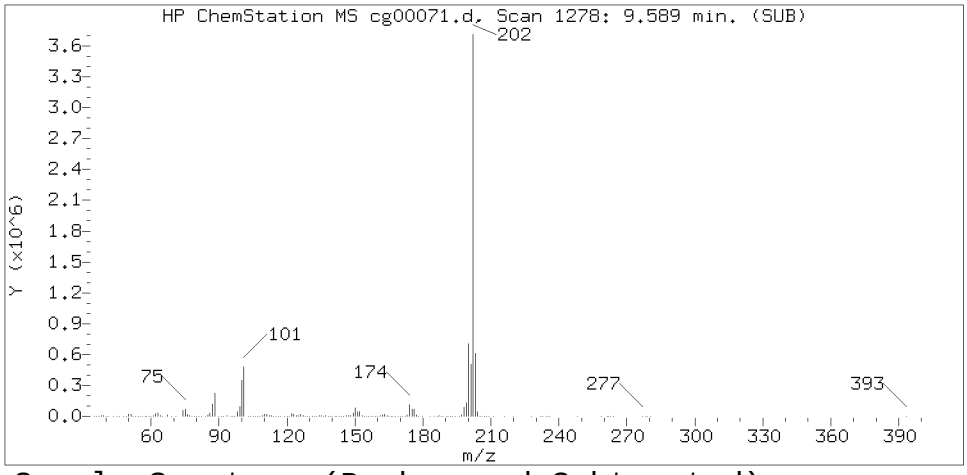
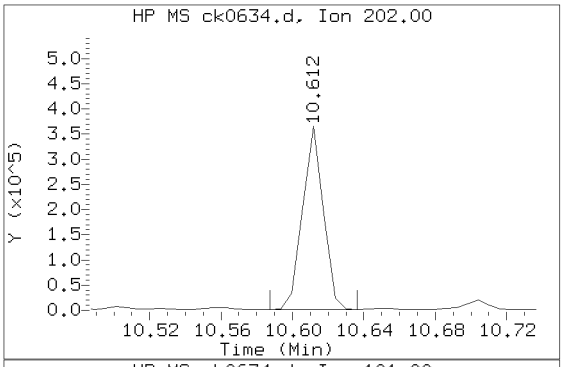
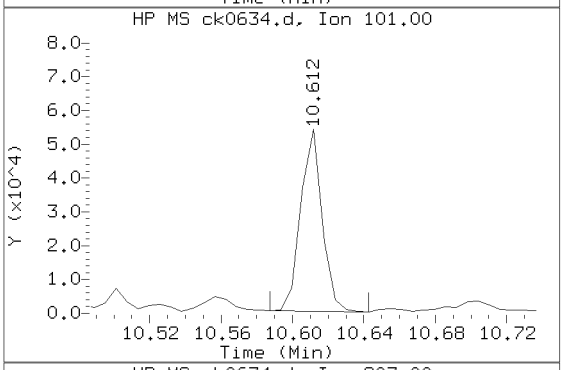
Target 3.5 esignature user ID: jmg00346

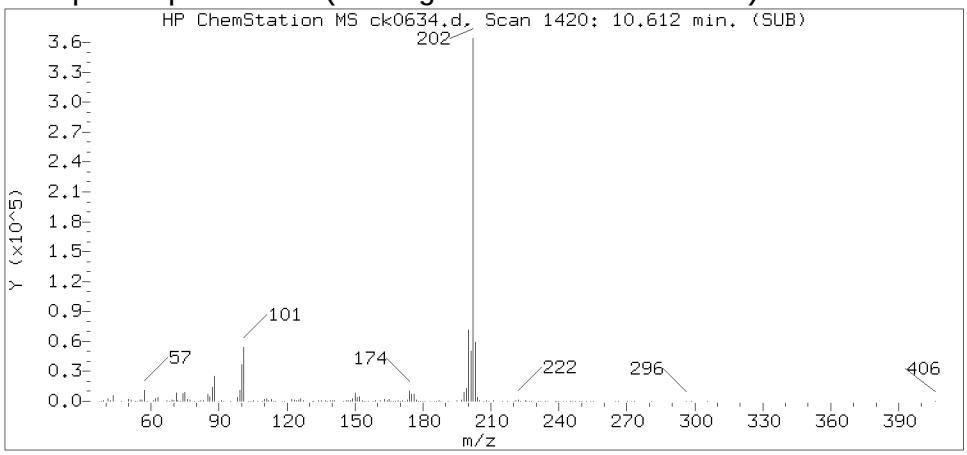
Reference Standard Spectrum for Fluoranthene

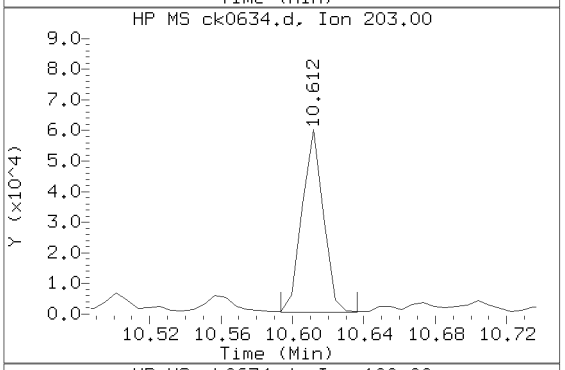




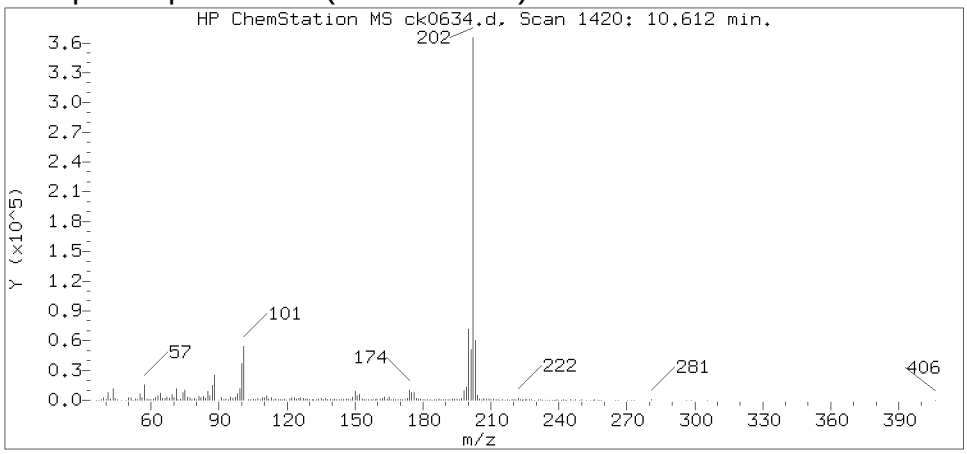


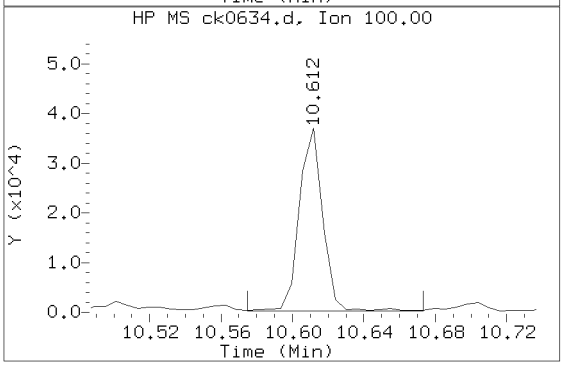
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1420
Retention Time (minutes)	: 10.612
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 297748
On-column Amount (ng/ul)	: 8.4382

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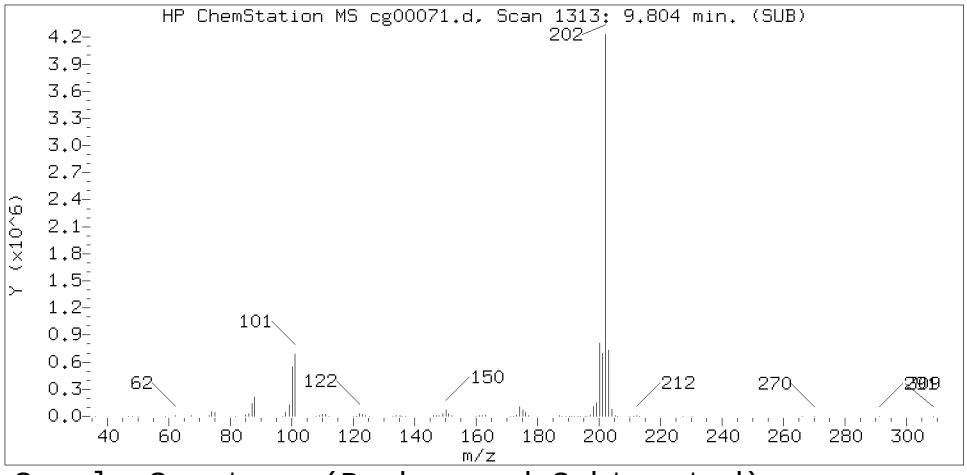
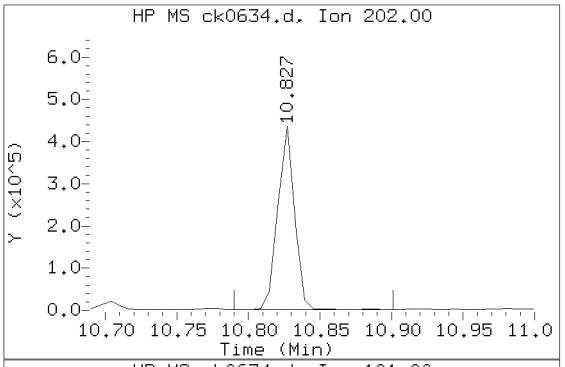
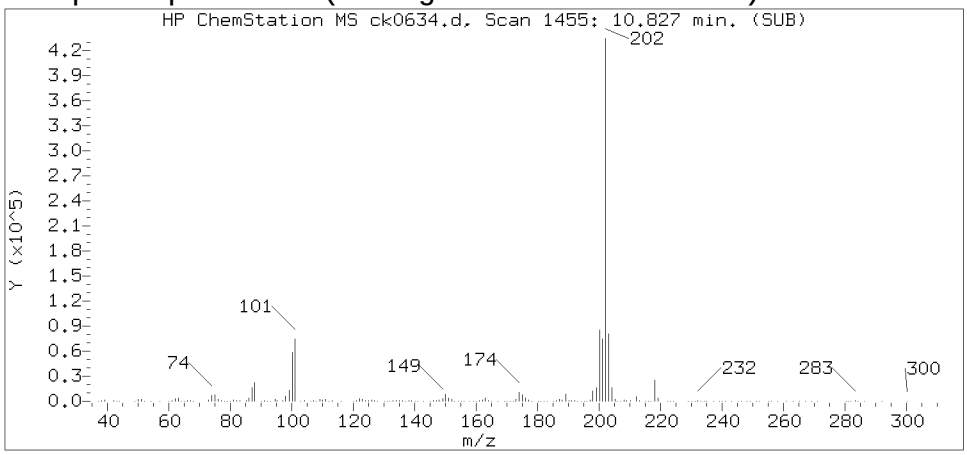
Target 3.5 esignature user ID: jmg00346

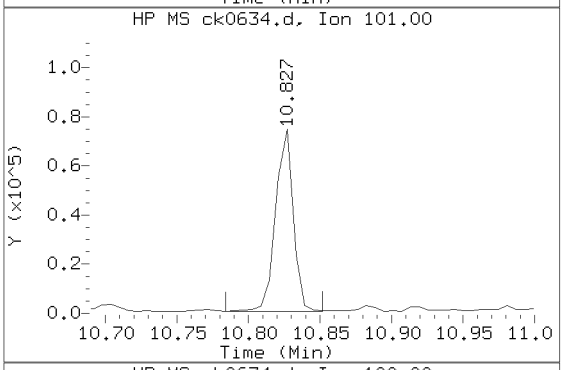
Reference Standard Spectrum for Pyrene

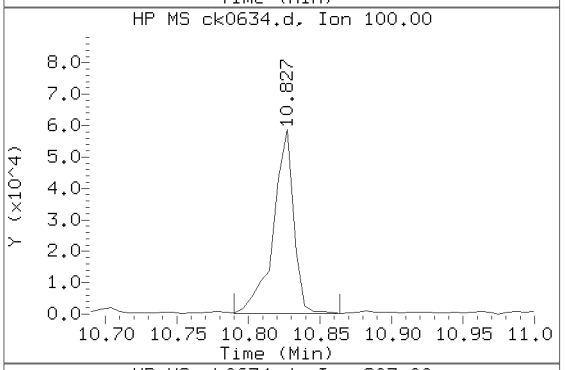




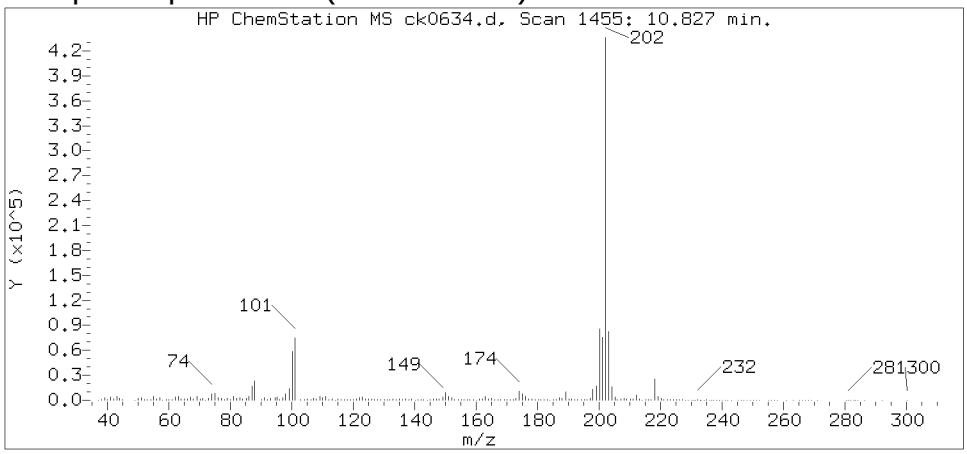
Sample Spectrum (Background Subtracted)

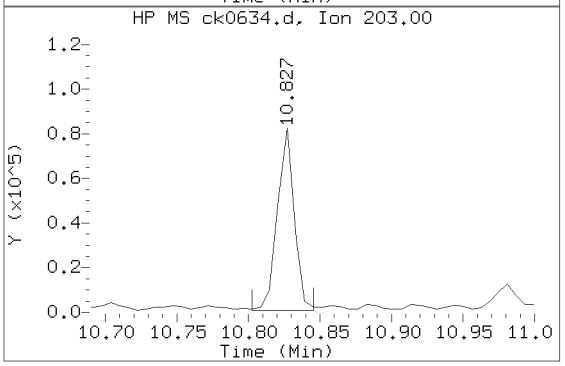






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1455
Retention Time (minutes)	: 10.827
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 355160
On-column Amount (ng/ul)	: 9.7646

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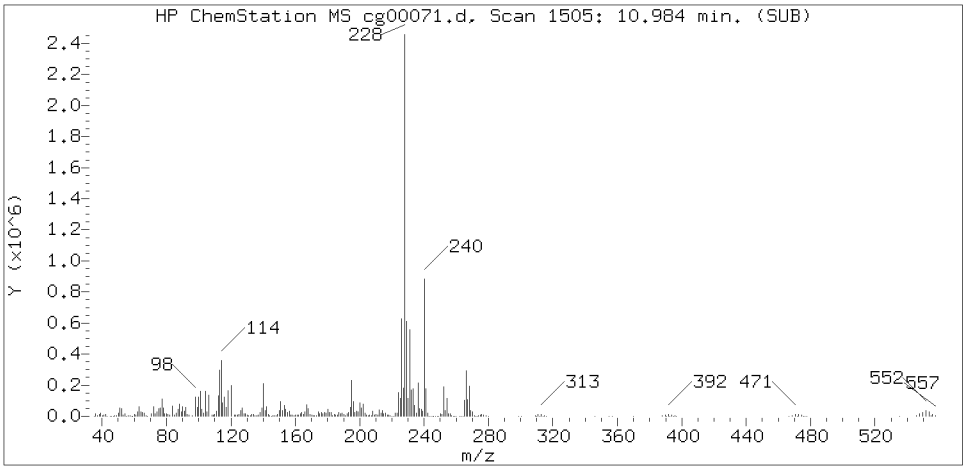
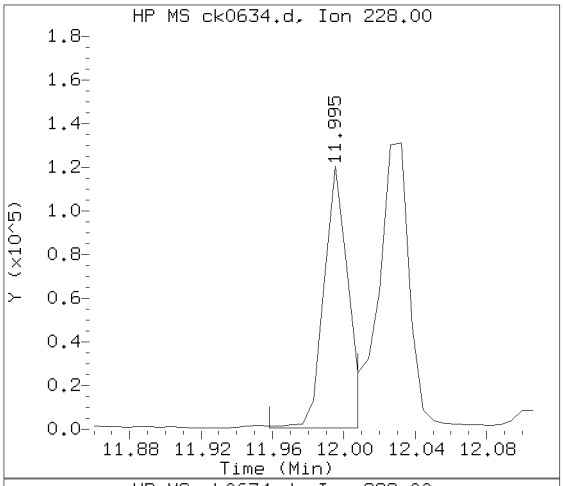
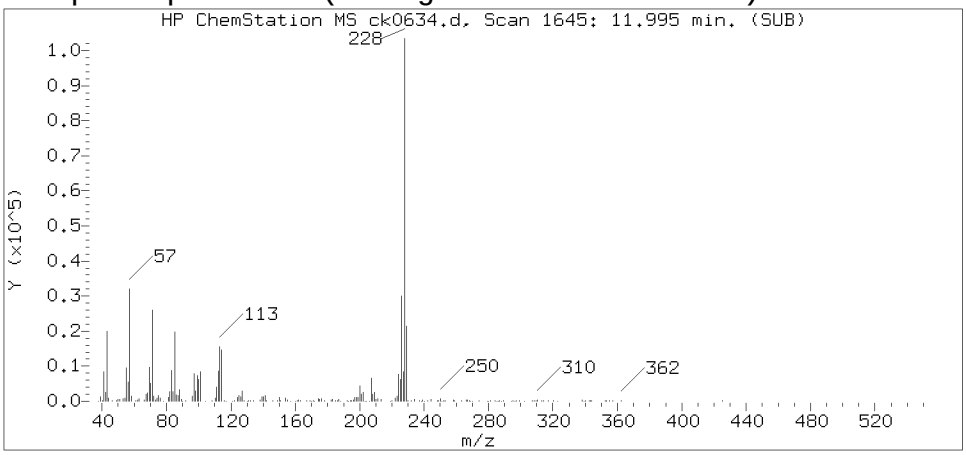
Target 3.5 esignature user ID: jmg00346

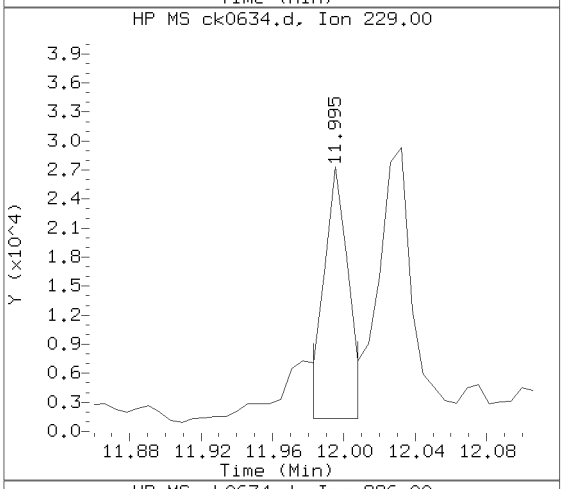
Reference Standard Spectrum for Benzo(a)anthracene



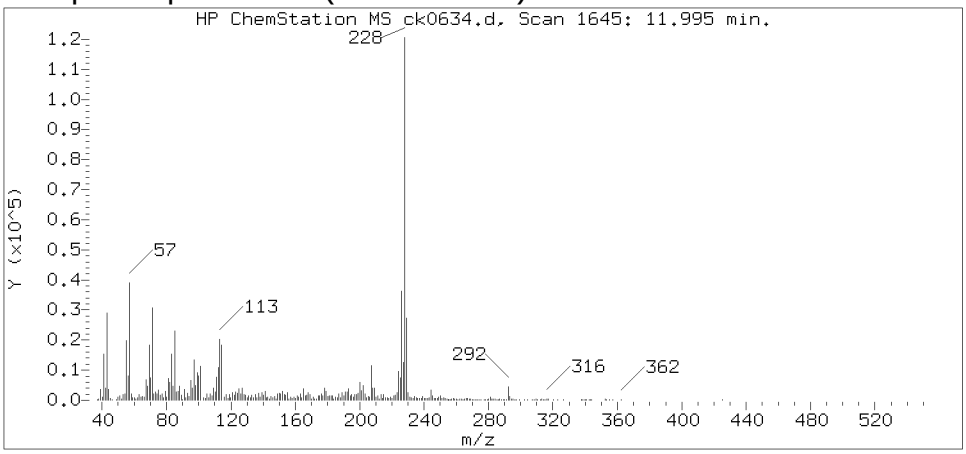


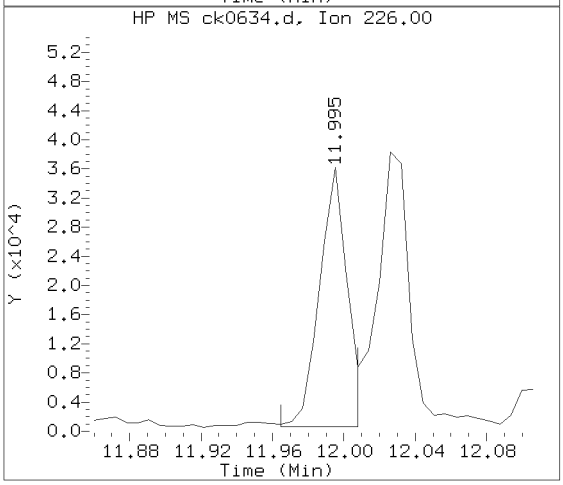
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1645
Retention Time (minutes)	: 11.995
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 107933
On-column Amount (ng/ul)	: 3.2173

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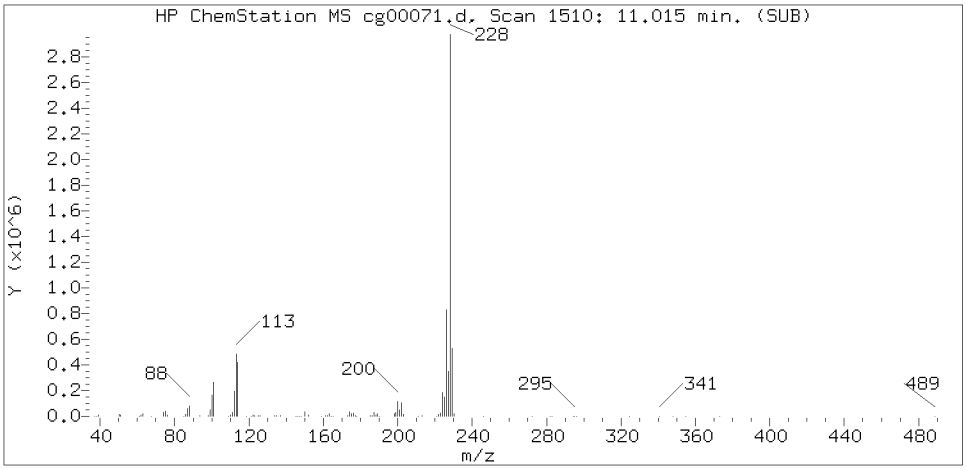
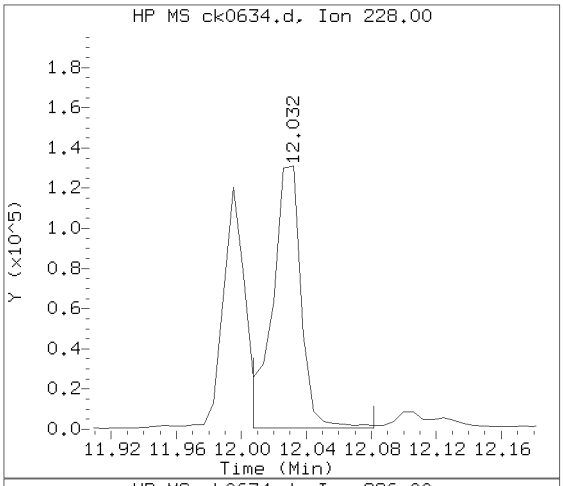
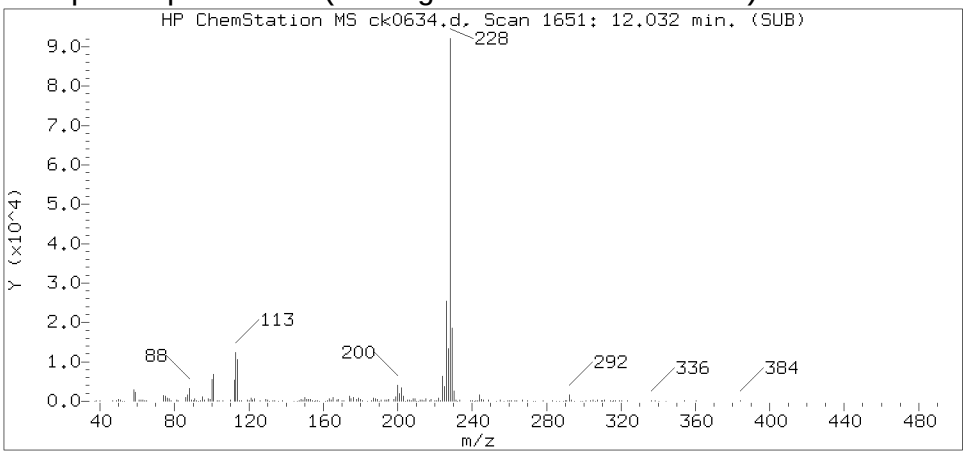
Target 3.5 esignature user ID: jmg00346

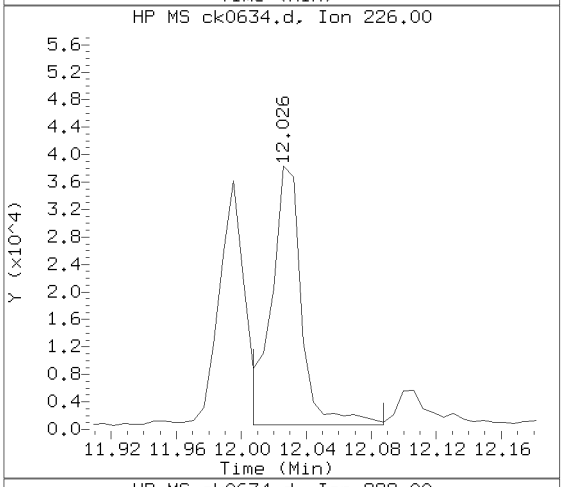
Reference Standard Spectrum for Chrysene



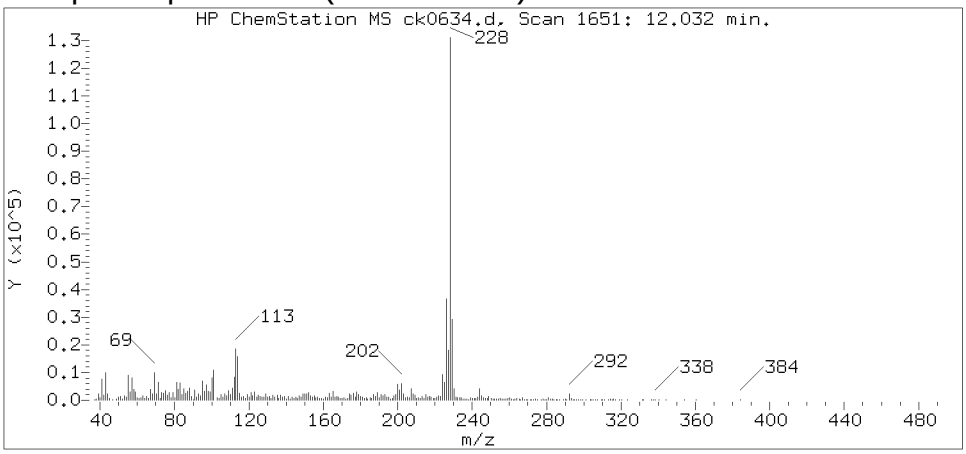


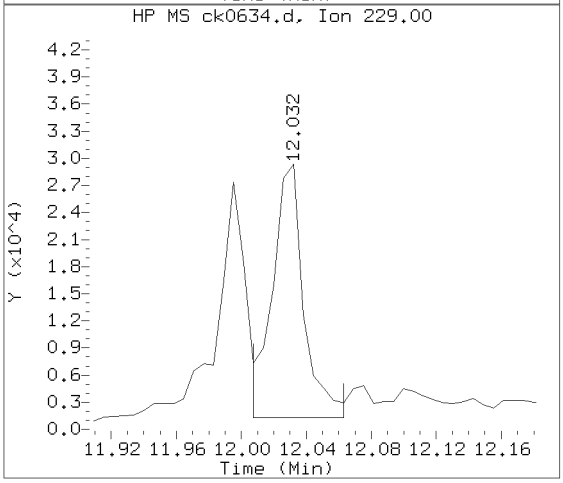
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 168
Compound Name : Chrysene
Scan Number : 1651
Retention Time (minutes) : 12.032
Relative Retention Time : 0.00000
Quant Ion : 228.00
Area (flag) : 159172
On-column Amount (ng/ul) : 4.9211

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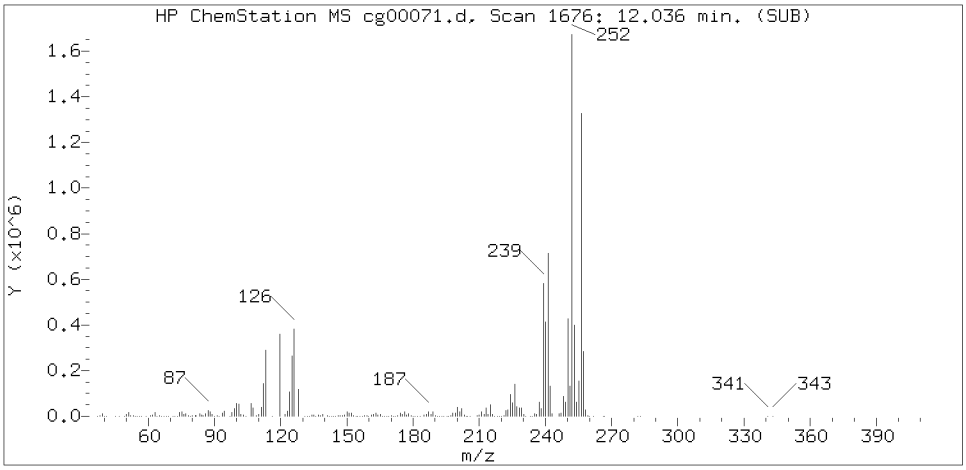
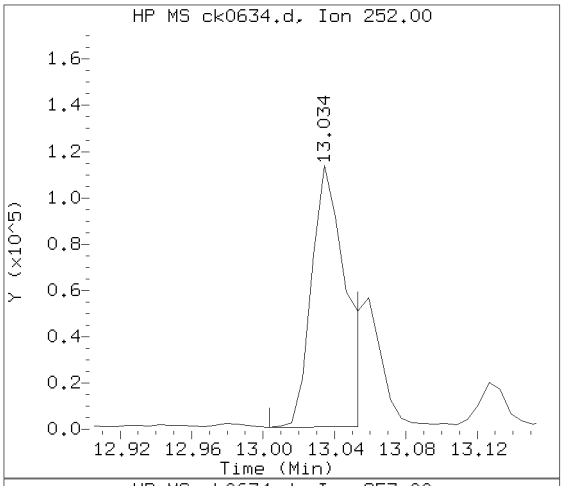
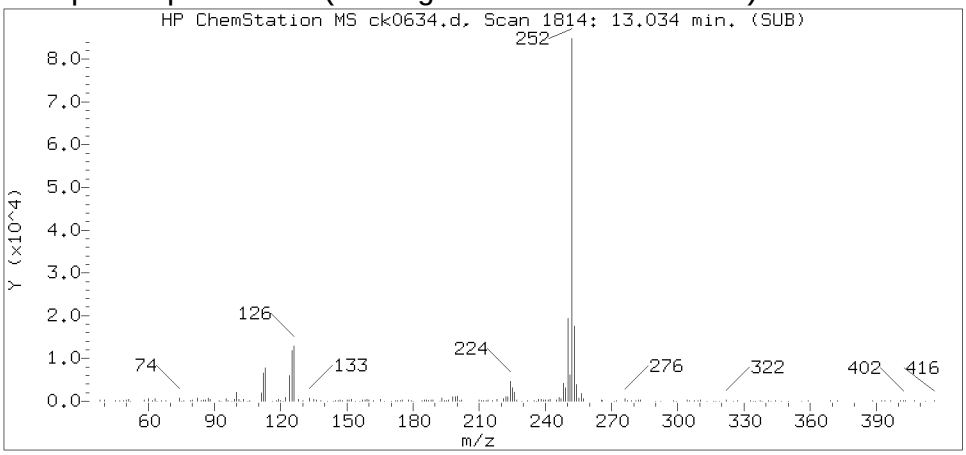
Target 3.5 esignature user ID: jmg00346

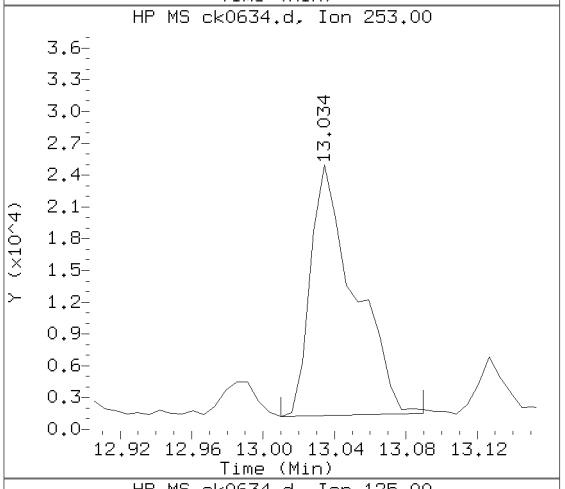
Reference Standard Spectrum for Benzo(b)fluoranthene



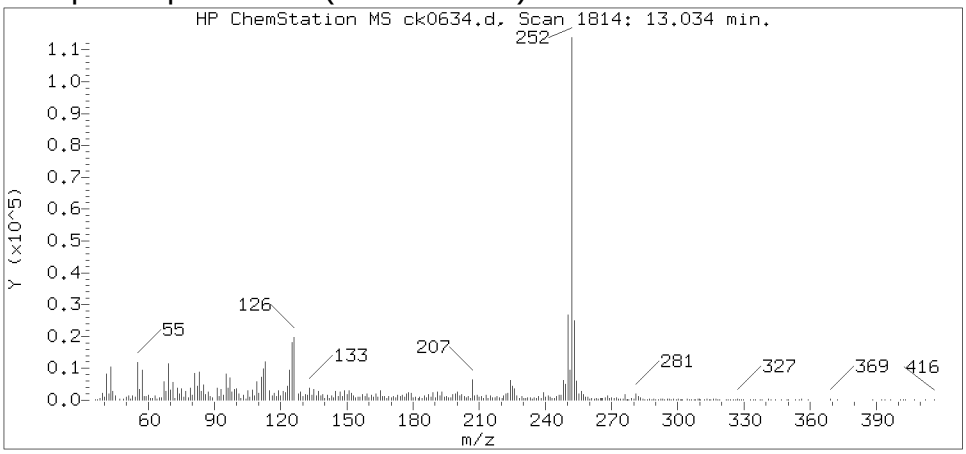


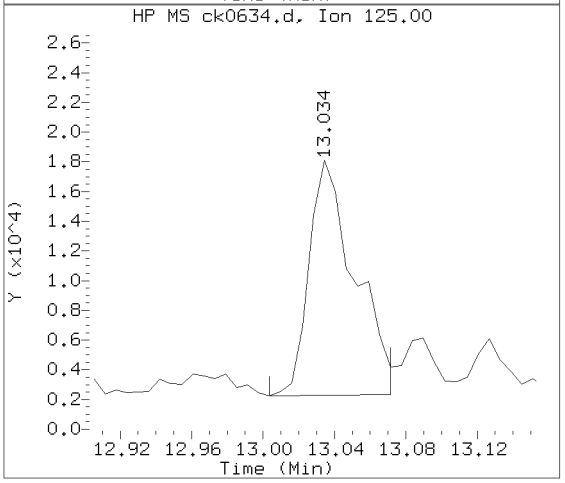
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

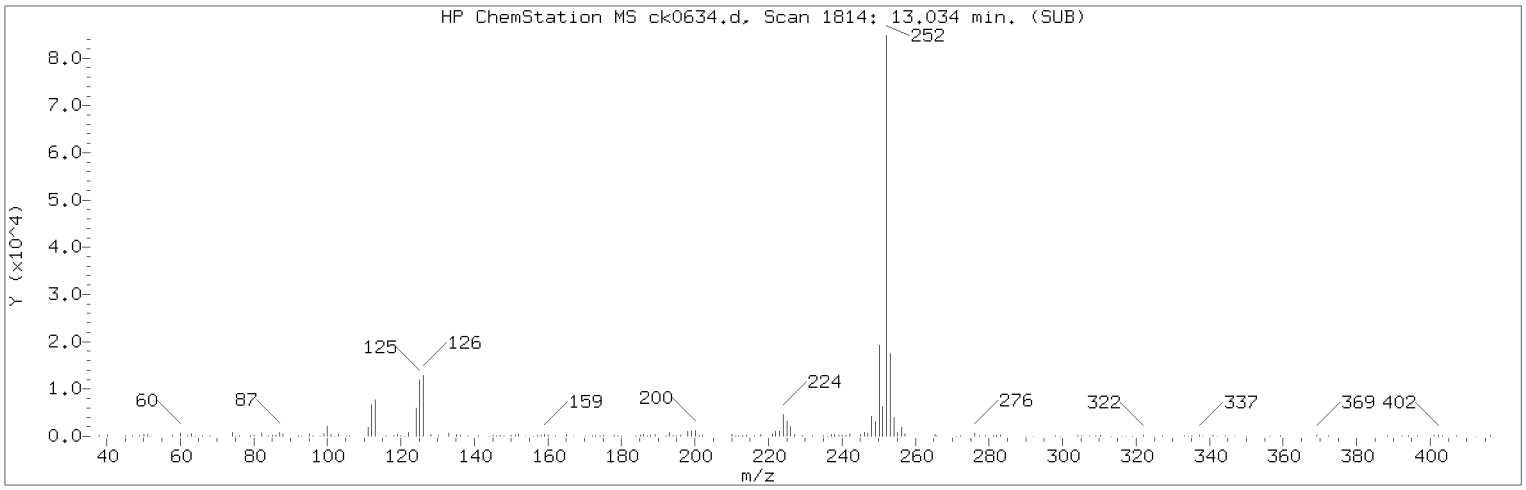
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

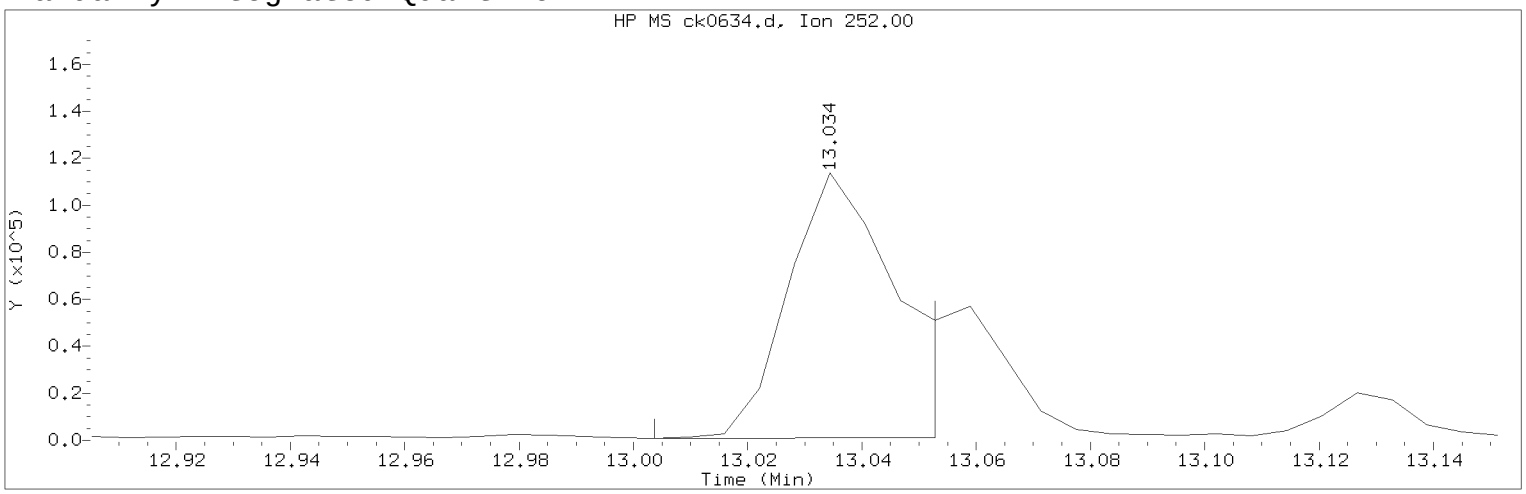
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 151385M
On-column Amount (ng/ul) : 4.1536

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

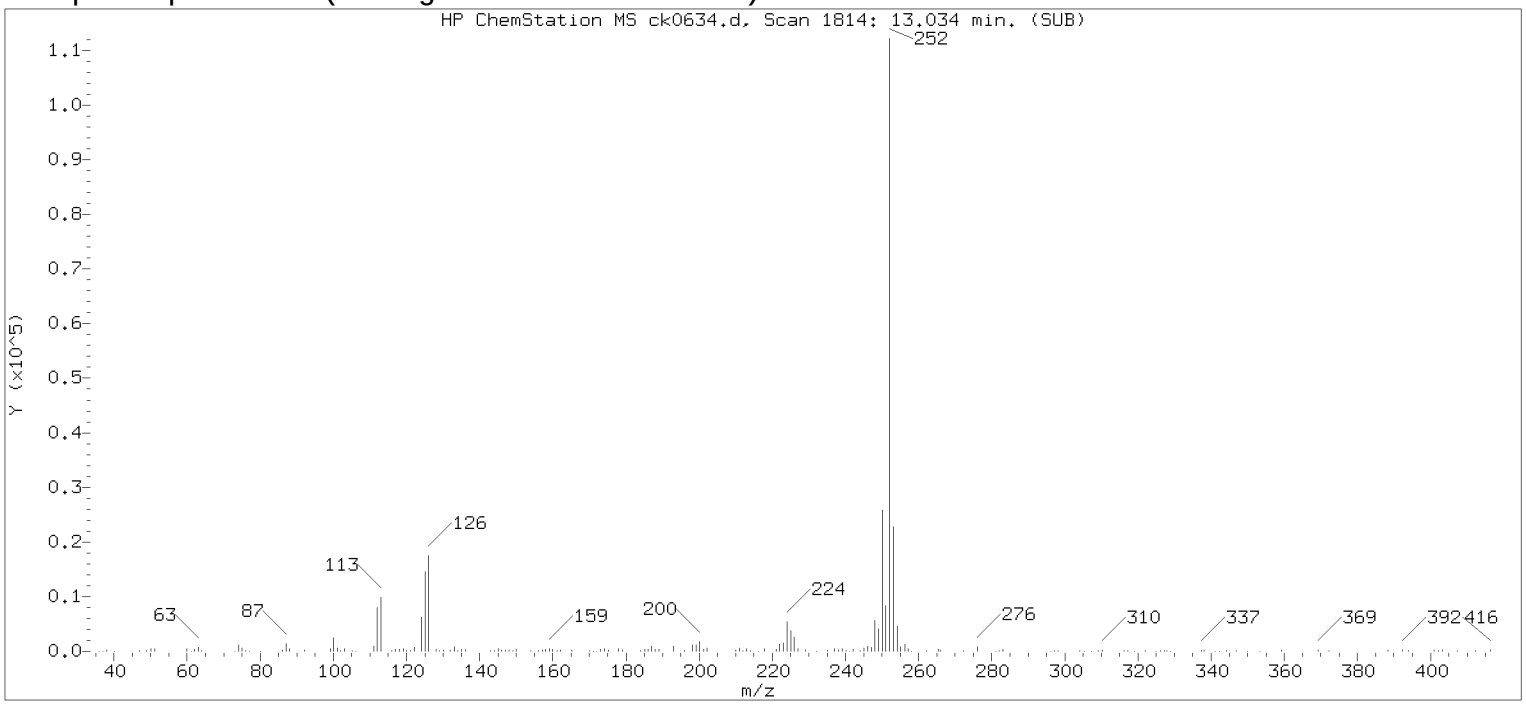
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 151385M
On-column Amount (ng/ul) : 4.1536
Integration start scan : 1808 Integration stop scan: 1816
Y at integration start : 894 Y at integration end: 998

Reason for manual integration: improper integration

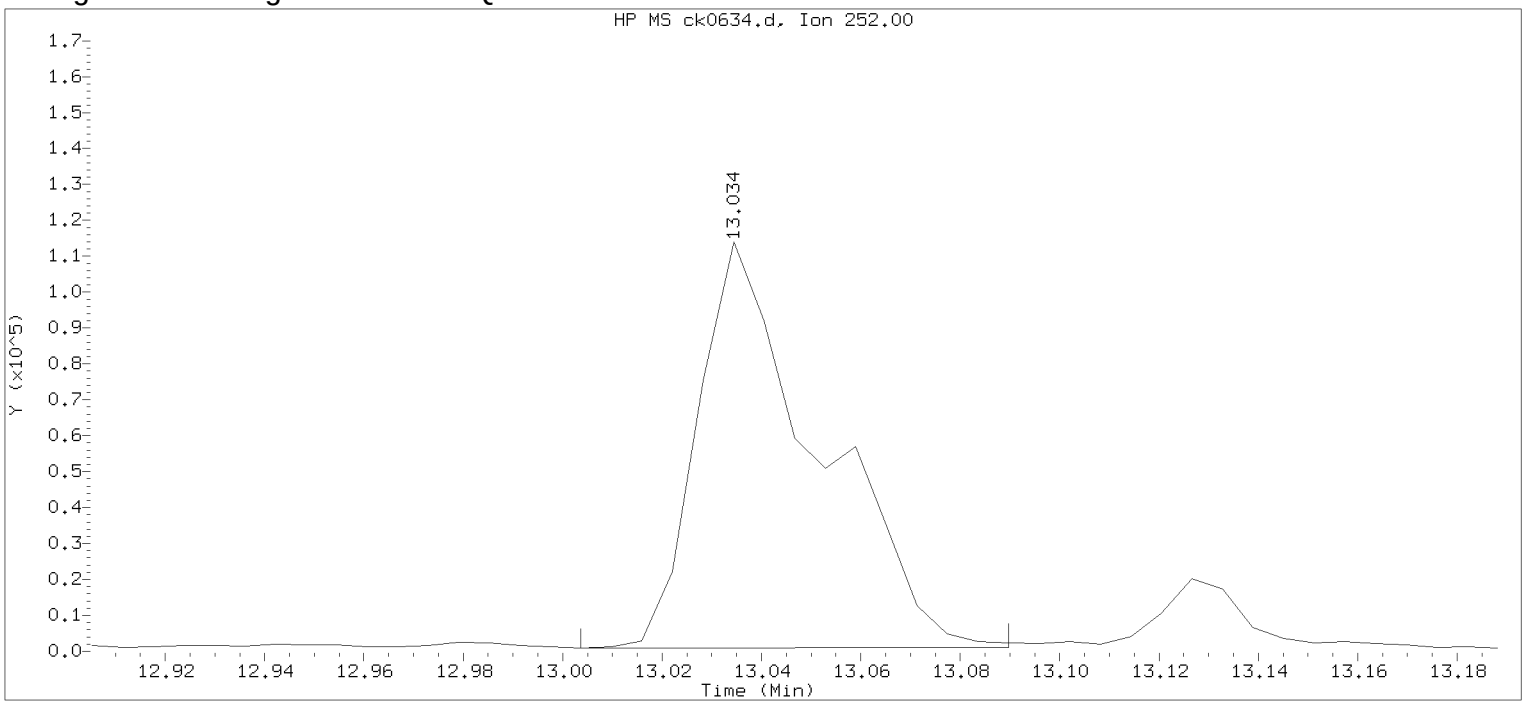
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:27.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

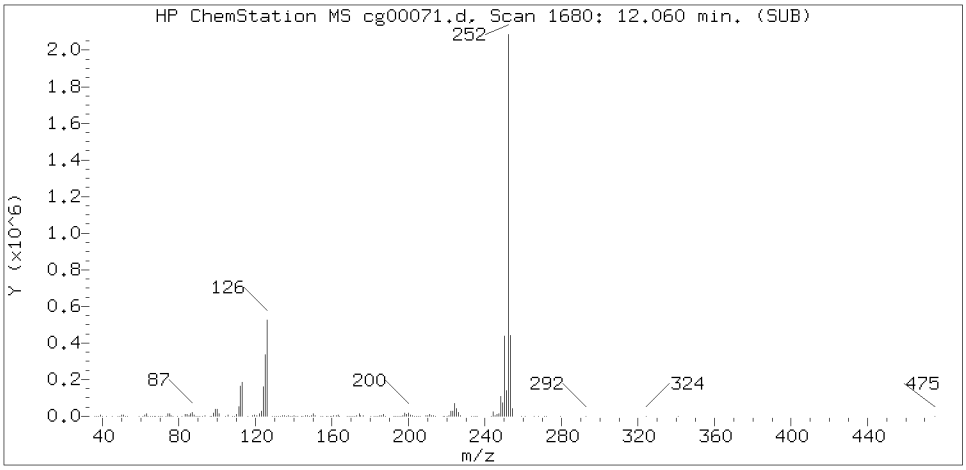
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 11:36 Automation

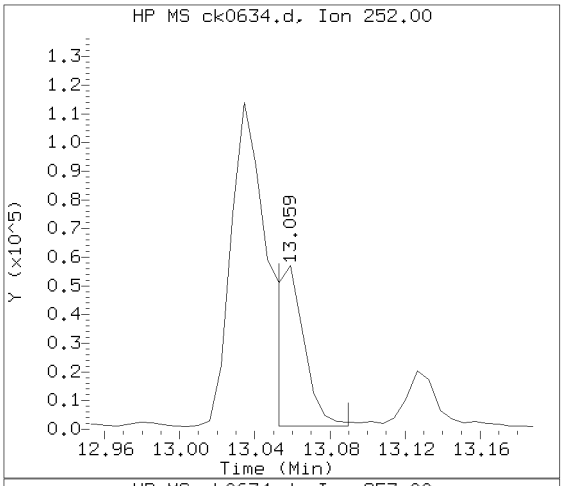
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 191073		
On-column Amount (ng/ul)	: 5.2425		
Integration start scan	: 1808	Integration stop scan:	1822
Y at integration start	: 894	Y at integration end:	1077

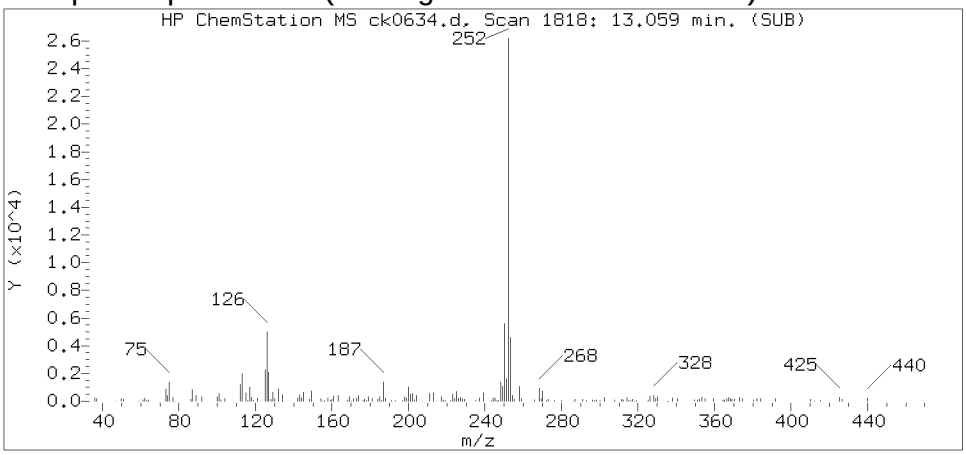
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

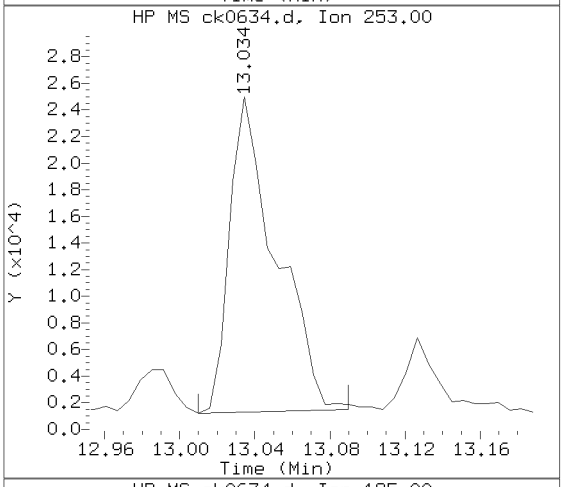
Reference Standard Spectrum for Benzo(k)fluoranthene



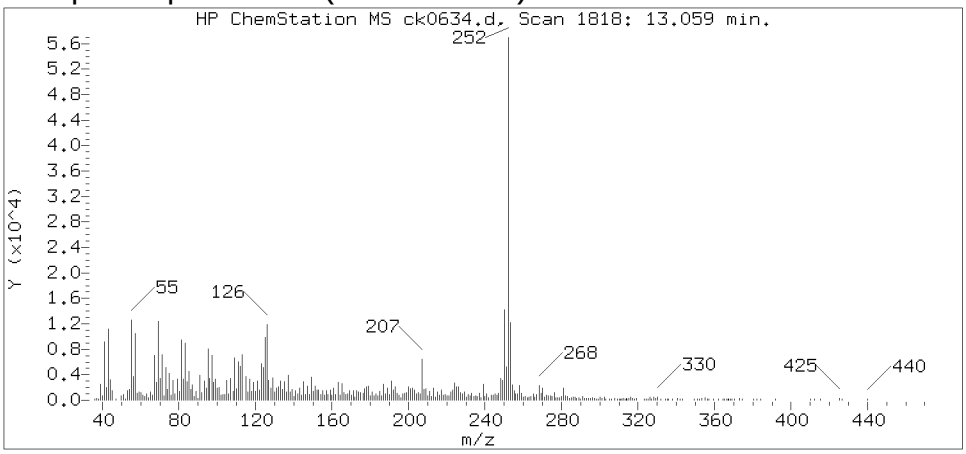


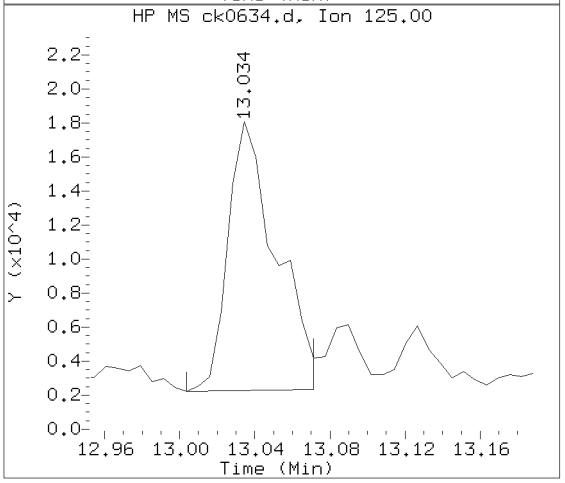
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

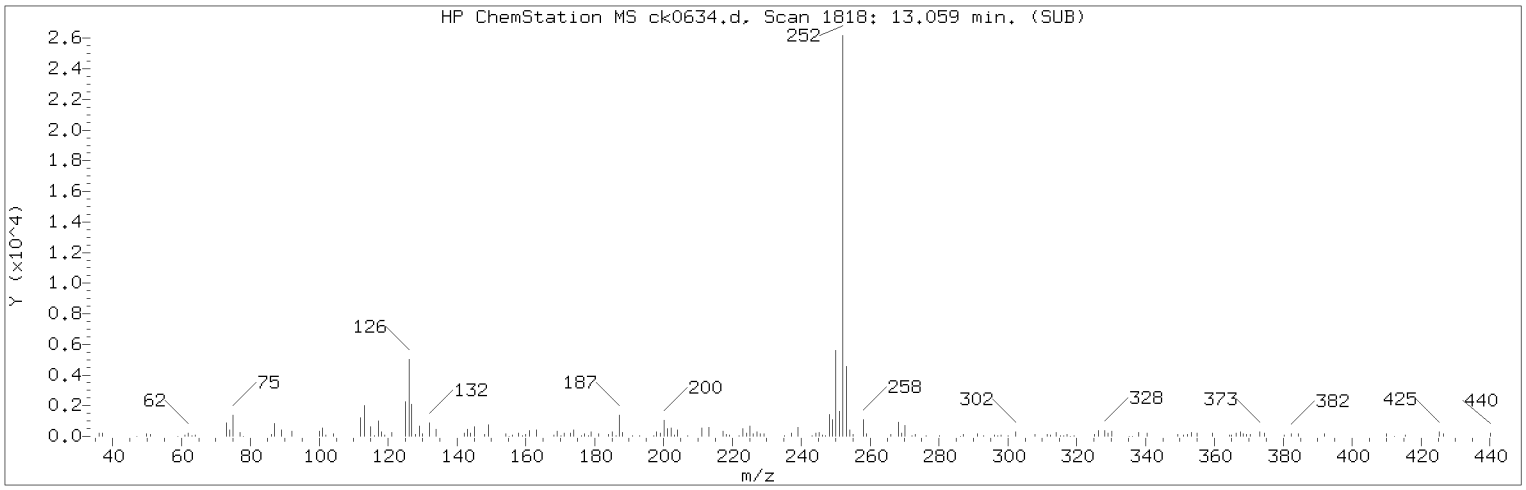
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

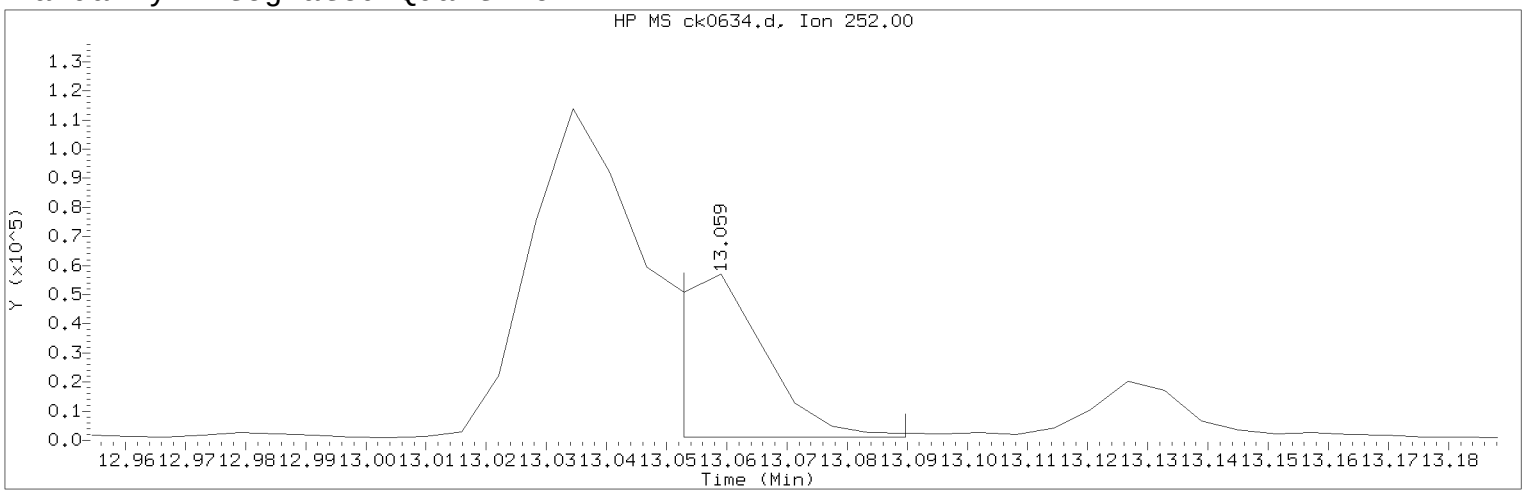
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Relative Retention Time : 0.00046
Quant Ion : 252.00
Area (flag) : 58188M
On-column Amount (ng/ul) : 1.5649

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

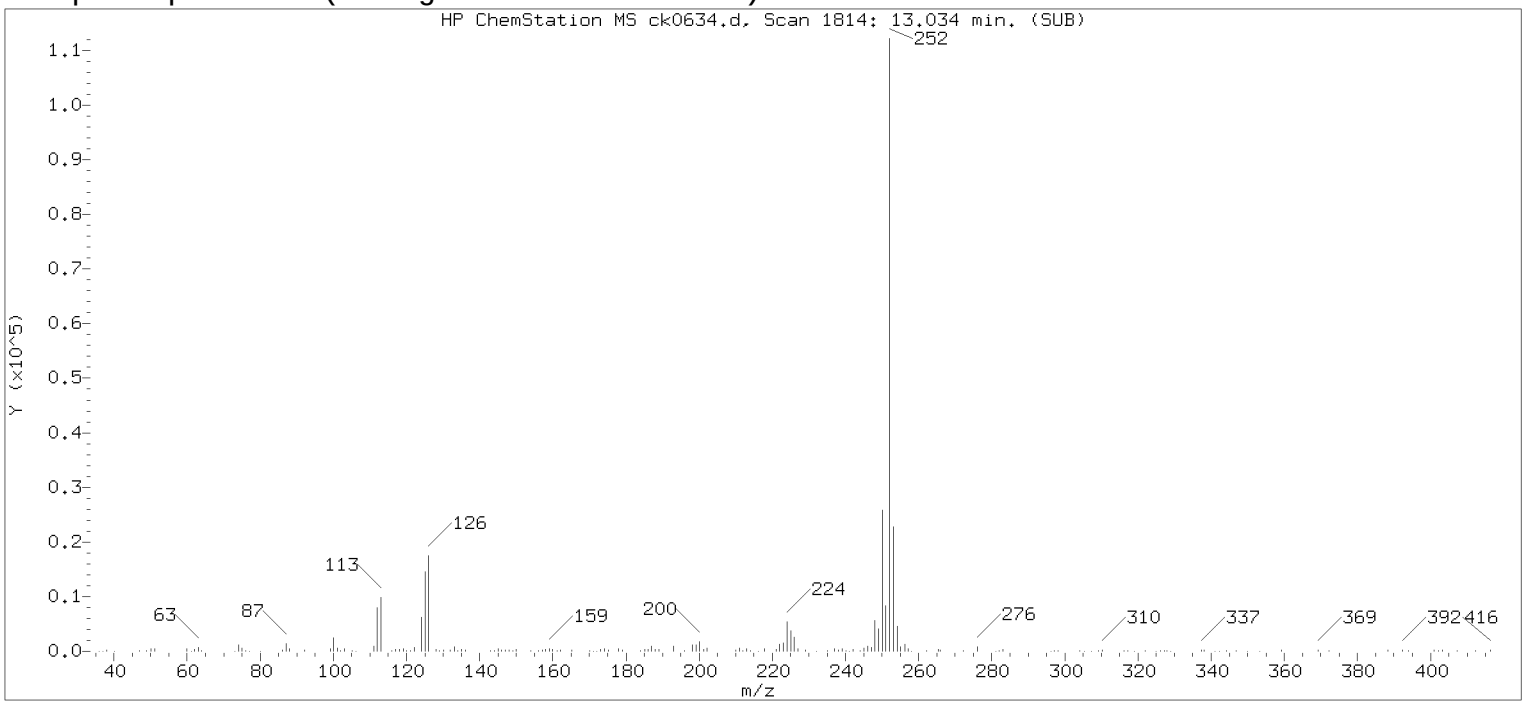
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Quant Ion : 252.00
Area (flag) : 58188M
On-column Amount (ng/ul) : 1.5649
Integration start scan : 1816 Integration stop scan: 1822
Y at integration start : 1105 Y at integration end: 1105

Reason for manual integration: improper integration

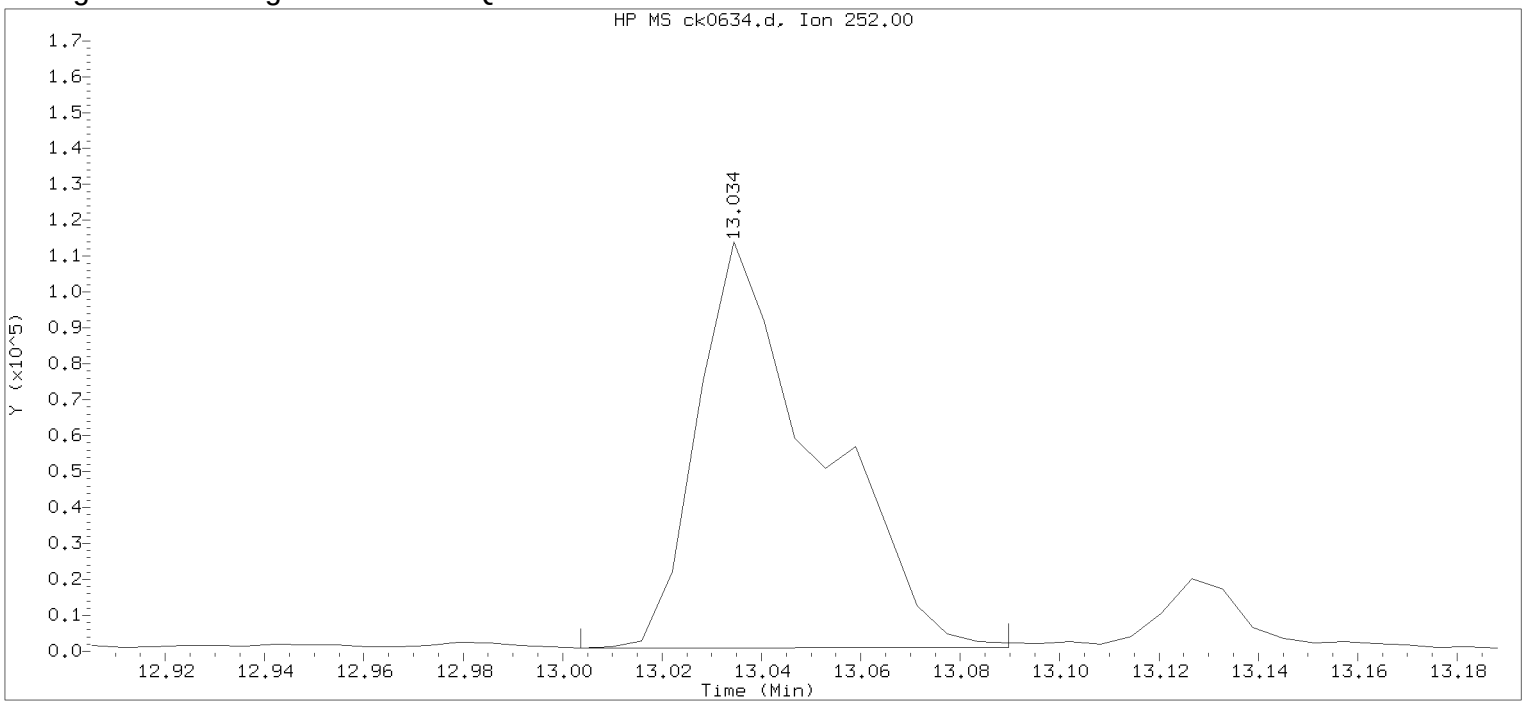
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:27.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

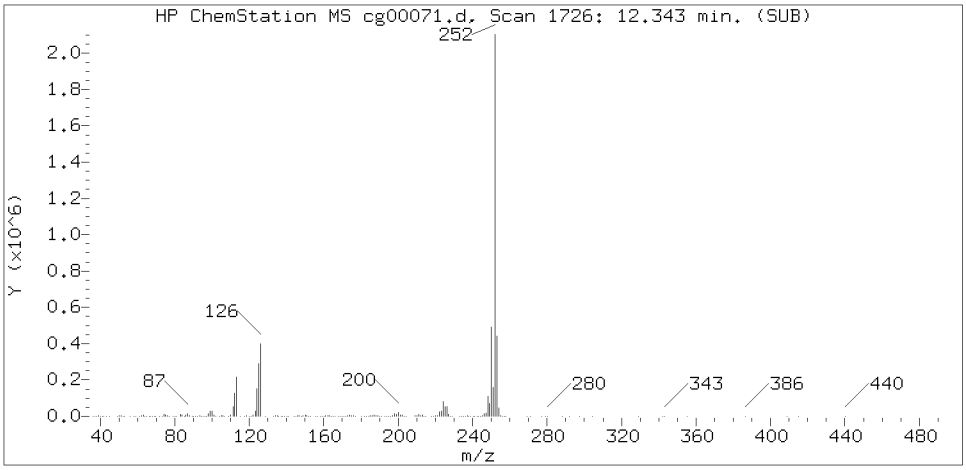
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 11:36 Automation

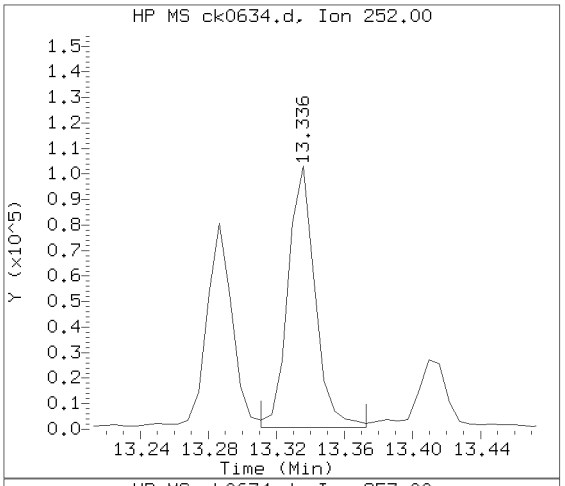
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 191073		
On-column Amount (ng/ul)	: 5.1386		
Integration start scan	: 1808	Integration stop scan:	1822
Y at integration start	: 894	Y at integration end:	1077

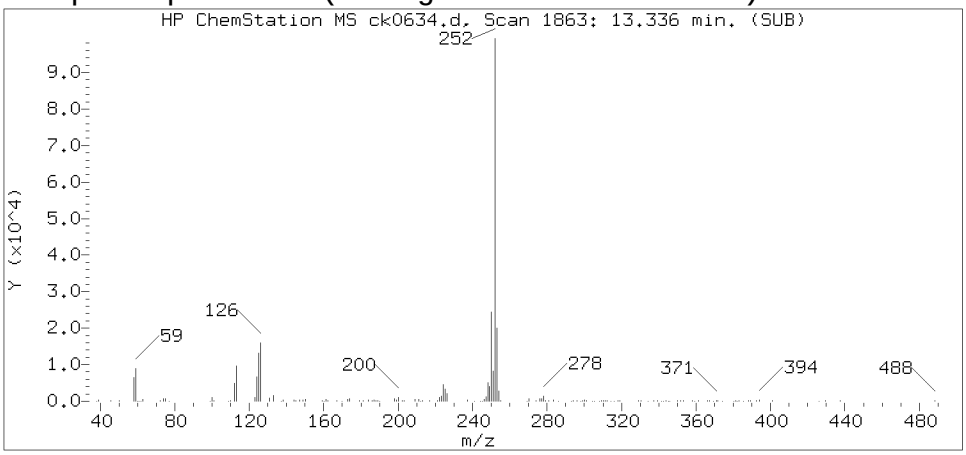
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

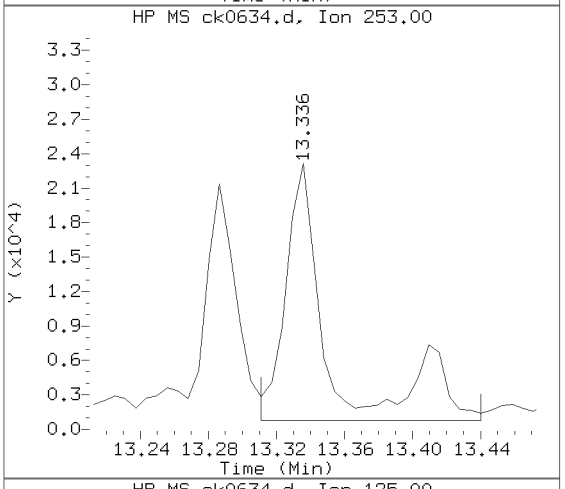
Reference Standard Spectrum for Benzo(a)pyrene



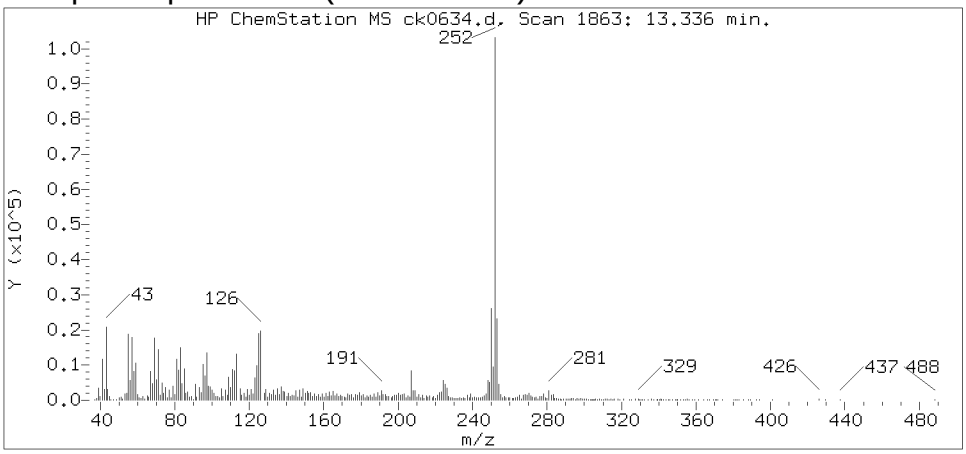


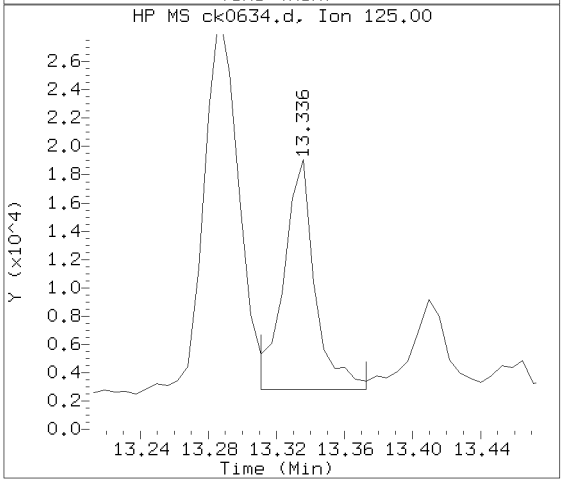
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

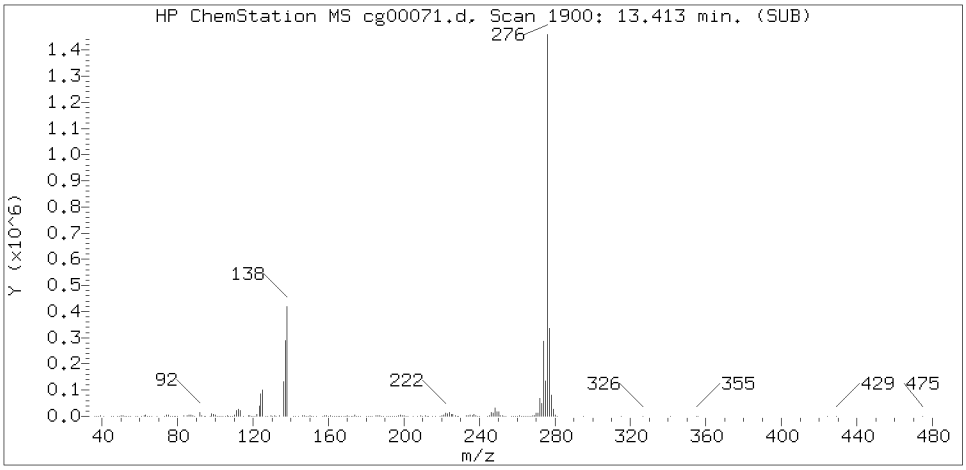
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

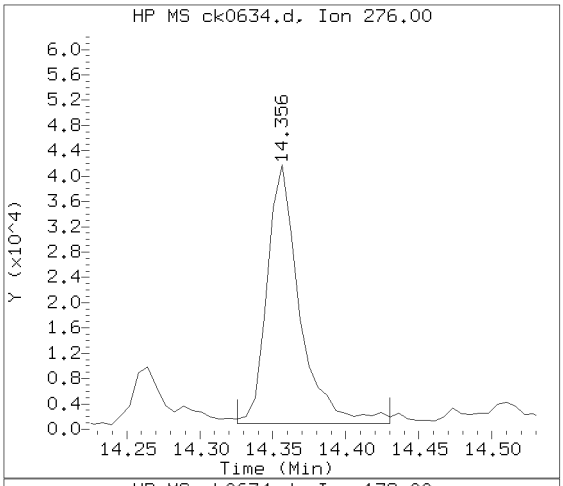
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 112853
On-column Amount (ng/ul) : 3.1725

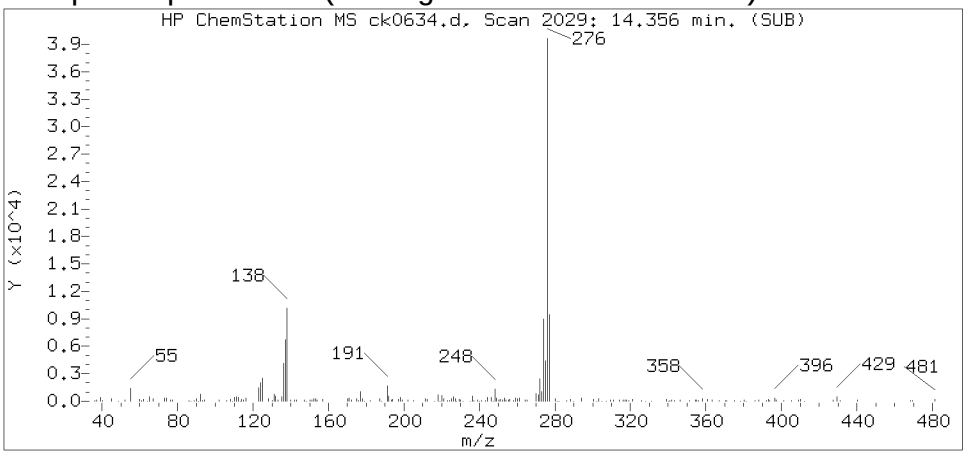
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

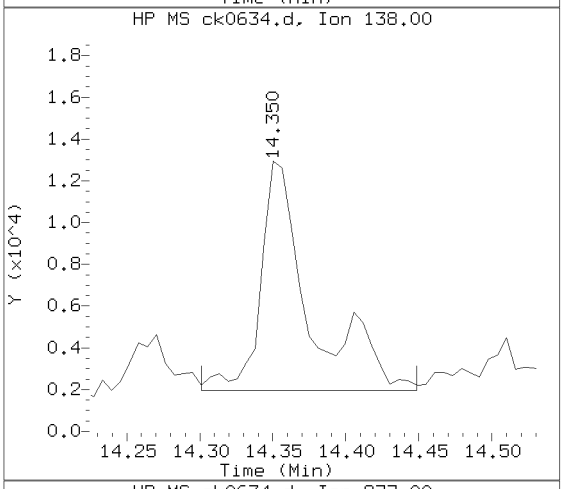
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



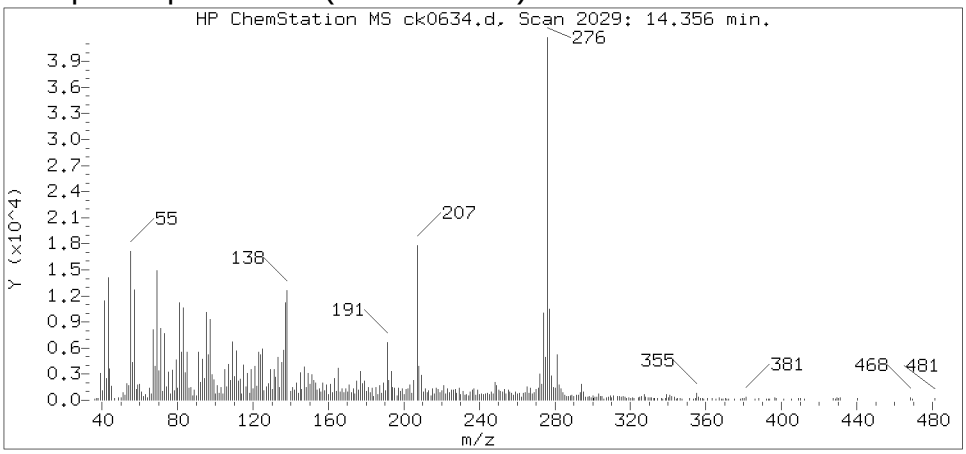


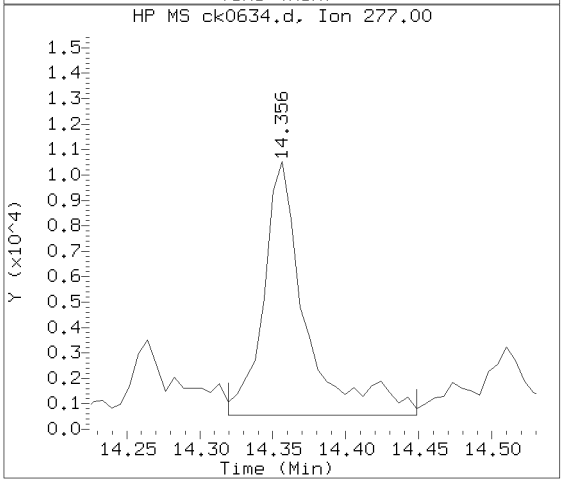
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

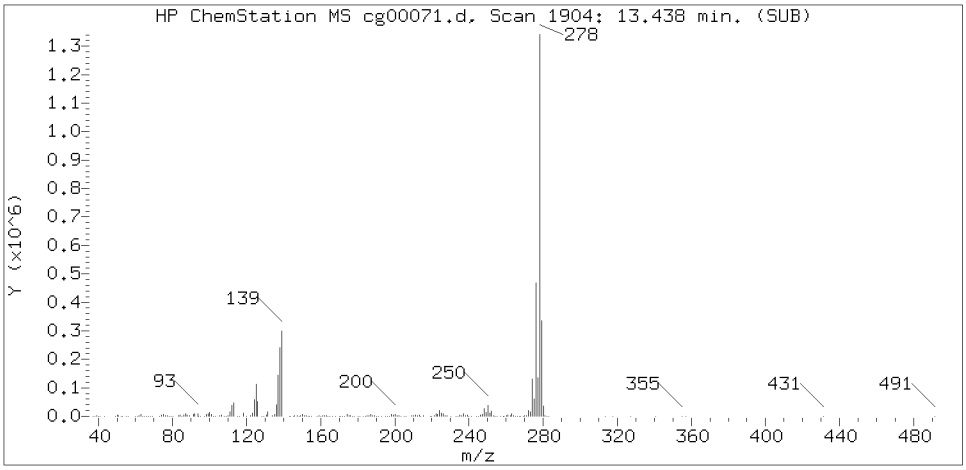
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

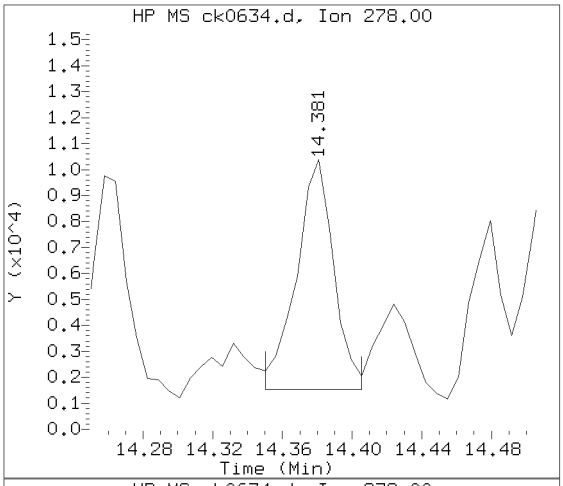
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2029
Retention Time (minutes) : 14.356
Relative Retention Time : 0.00046
Quant Ion : 276.00
Area (flag) : 63514
On-column Amount (ng/ul) : 1.6782

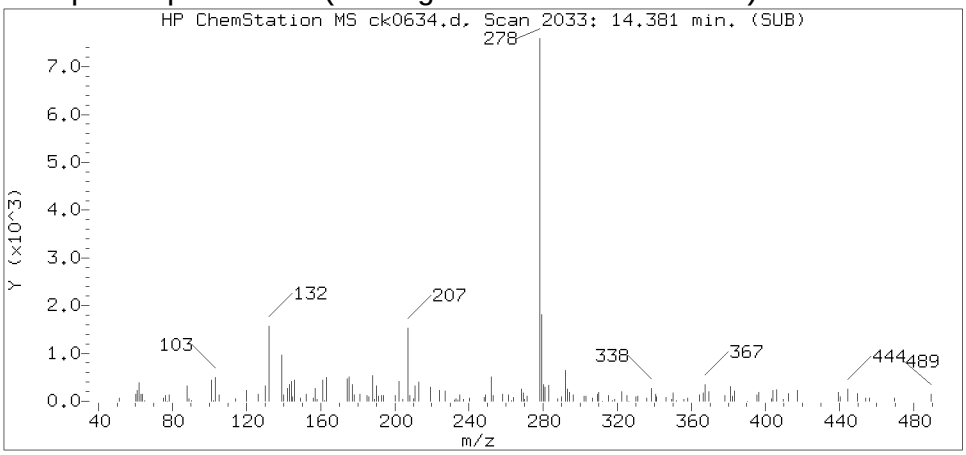
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

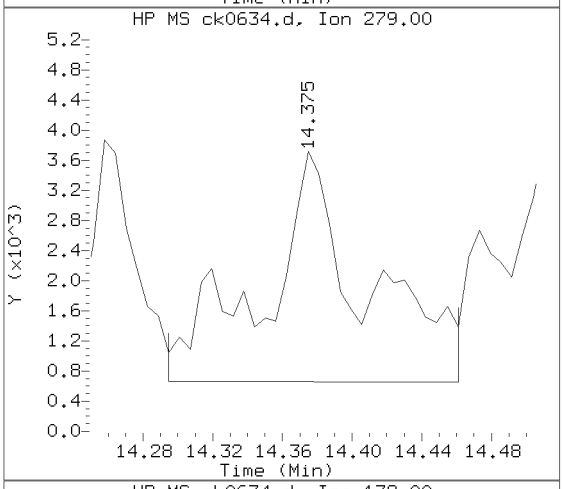
Reference Standard Spectrum for Dibenz(a,h)anthracene



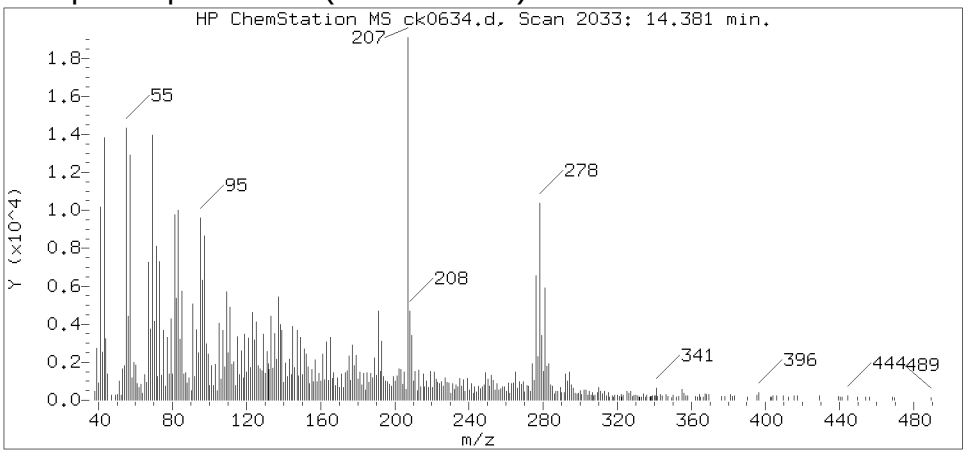


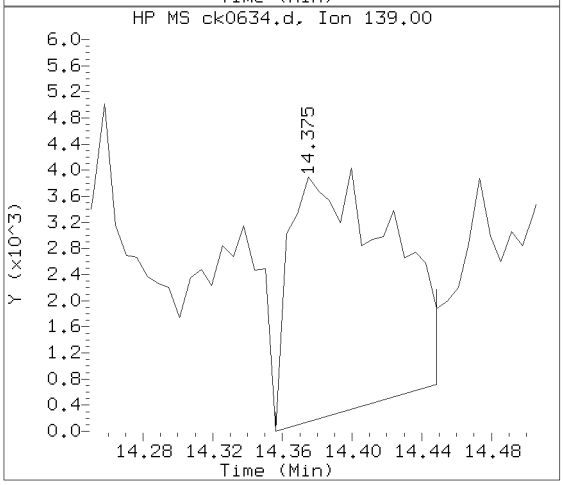
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

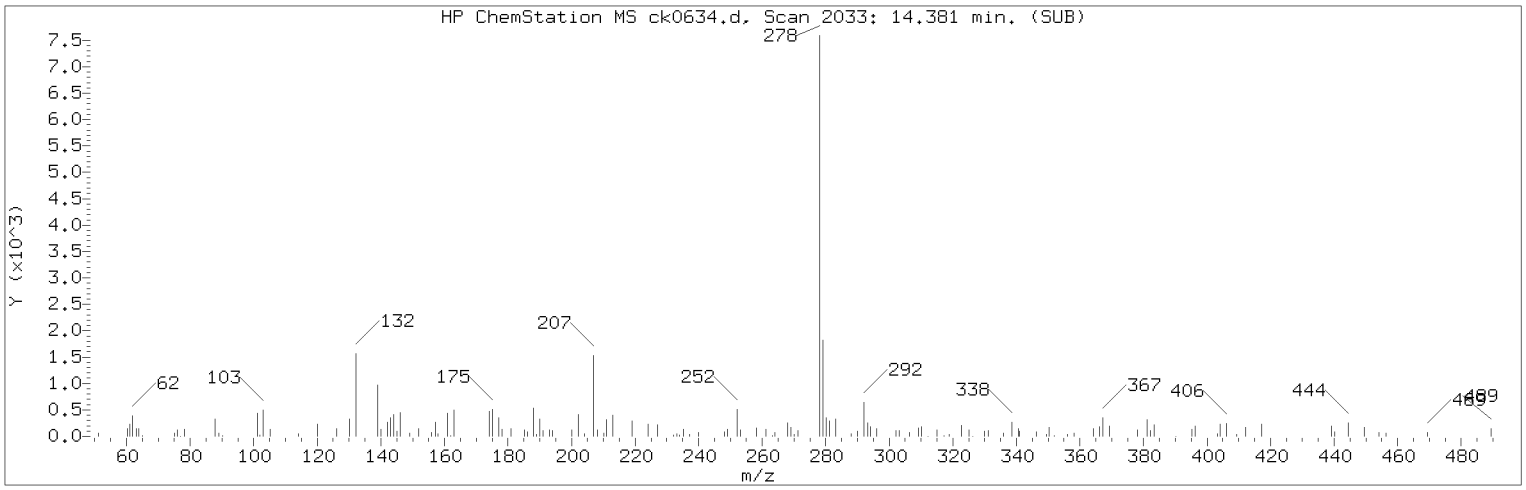
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

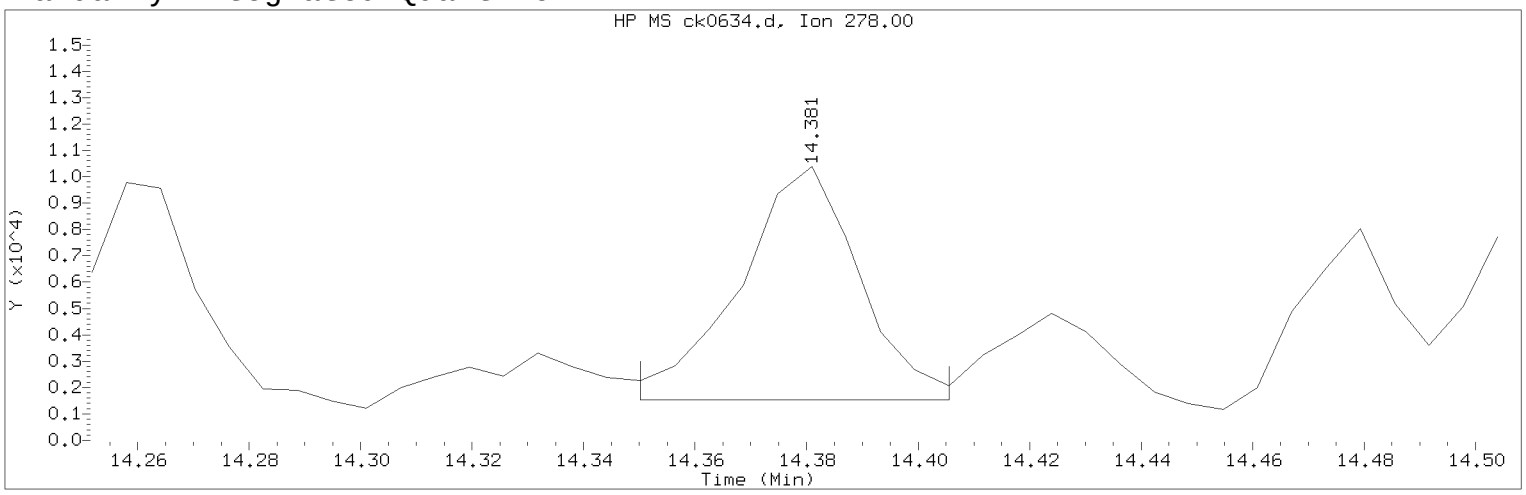
Compound Number	: 178
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2033
Retention Time (minutes)	: 14.381
Relative Retention Time	: 0.00046
Quant Ion	: 278.00
Area (flag)	: 13283M
On-column Amount (ng/ul)	: 0.4196

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

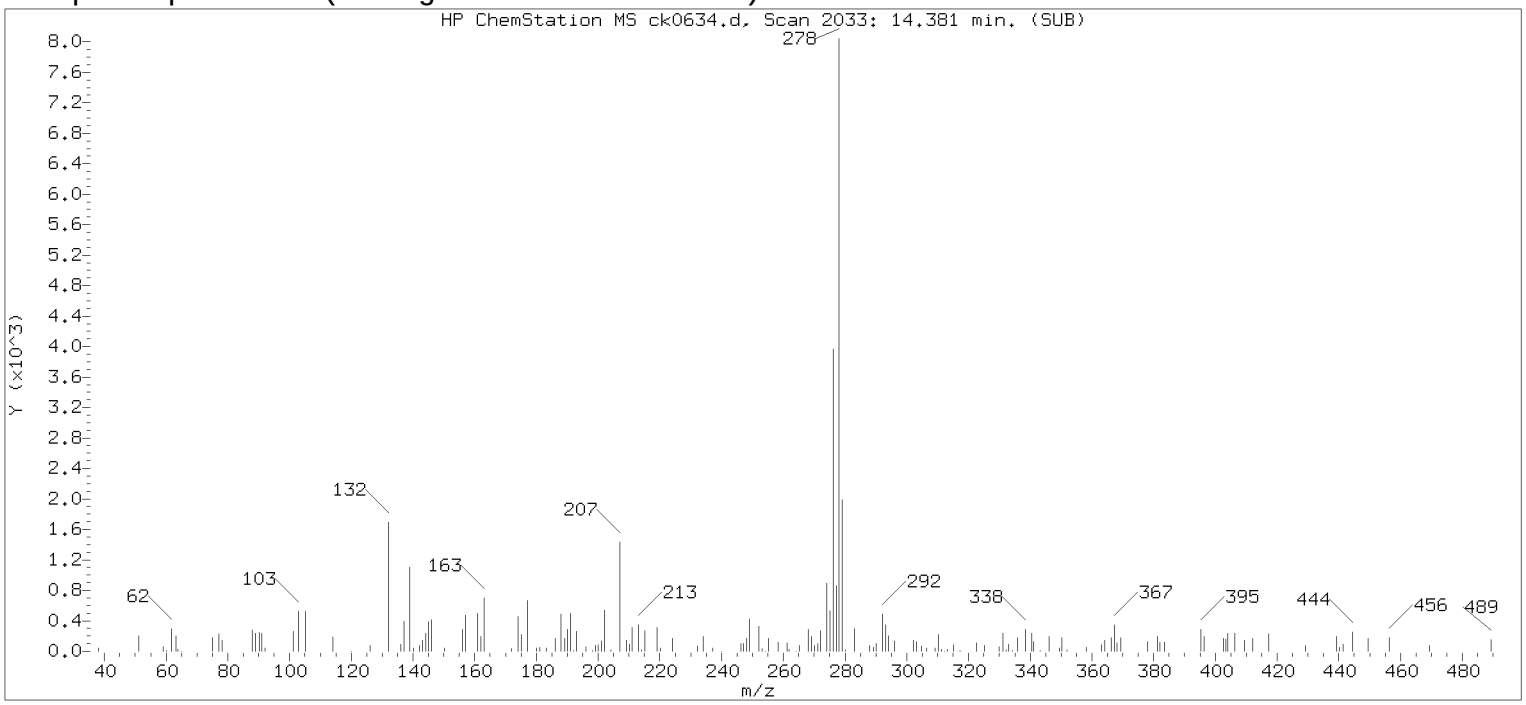
Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2033
Retention Time (minutes) : 14.381
Quant Ion : 278.00
Area (flag) : 13283M
On-column Amount (ng/ul) : 0.4196
Integration start scan : 2027 Integration stop scan: 2036
Y at integration start : 1545 Y at integration end: 1545

Reason for manual integration: improper integration

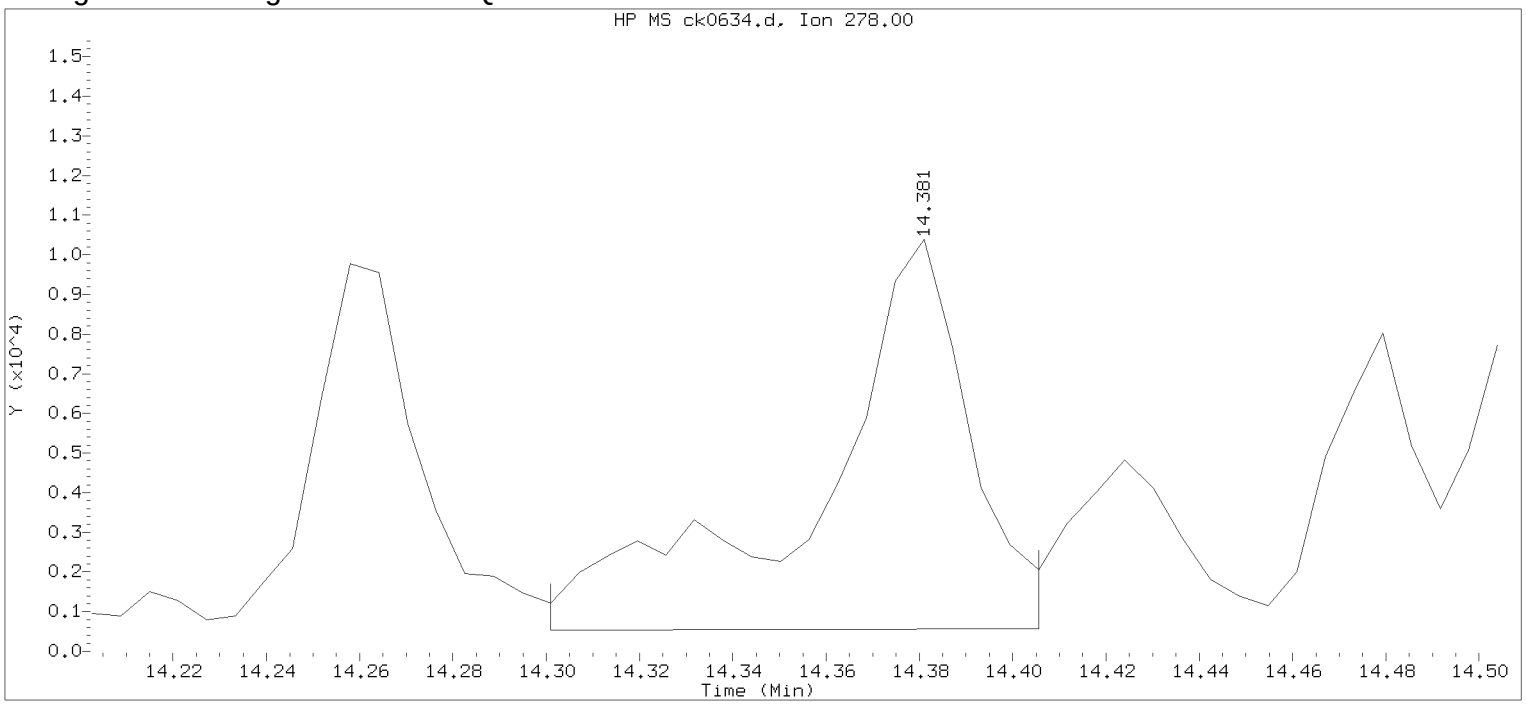
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:27.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

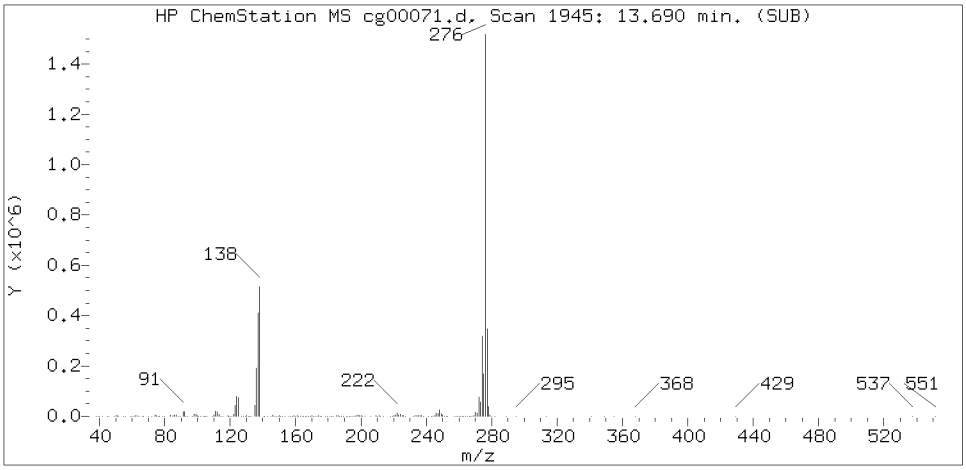
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 11:36 Automation

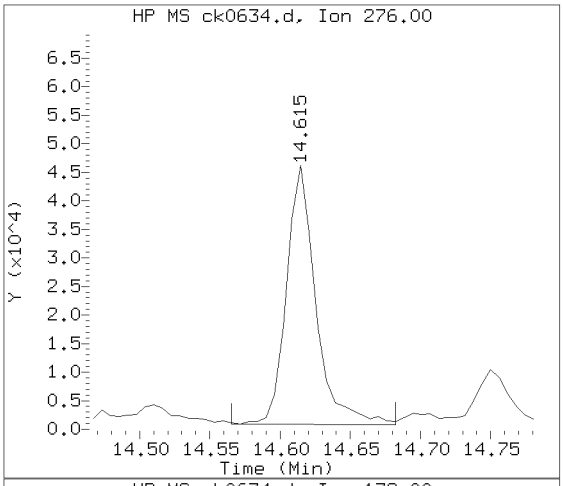
Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2033
Retention Time (minutes) : 14.381
Quant Ion : 278.00
Area : 22039
On-column Amount (ng/ul) : 0.6962
Integration start scan : 2019 Integration stop scan: 2036
Y at integration start : 541 Y at integration end: 565

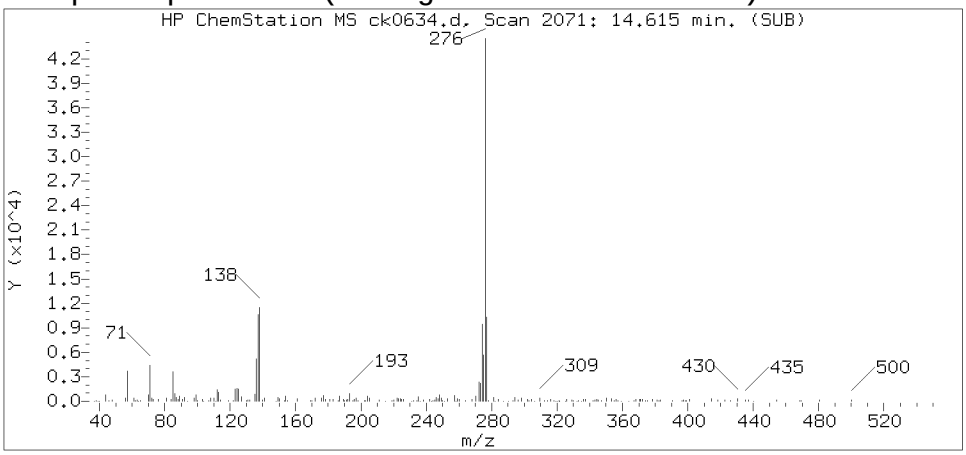
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature used: VID: jmg00346

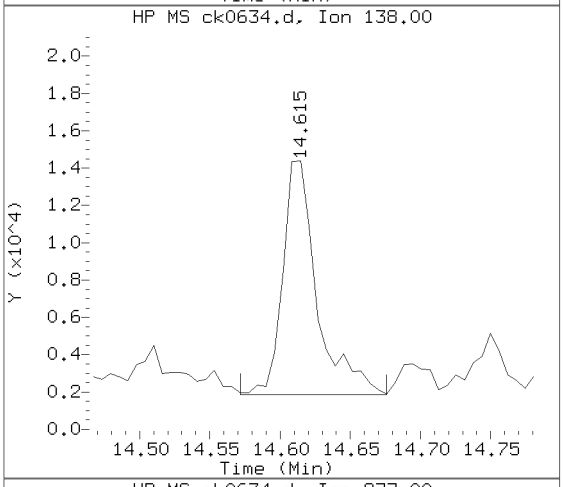
Reference Standard Spectrum for Benzo(g,h,i)perylene



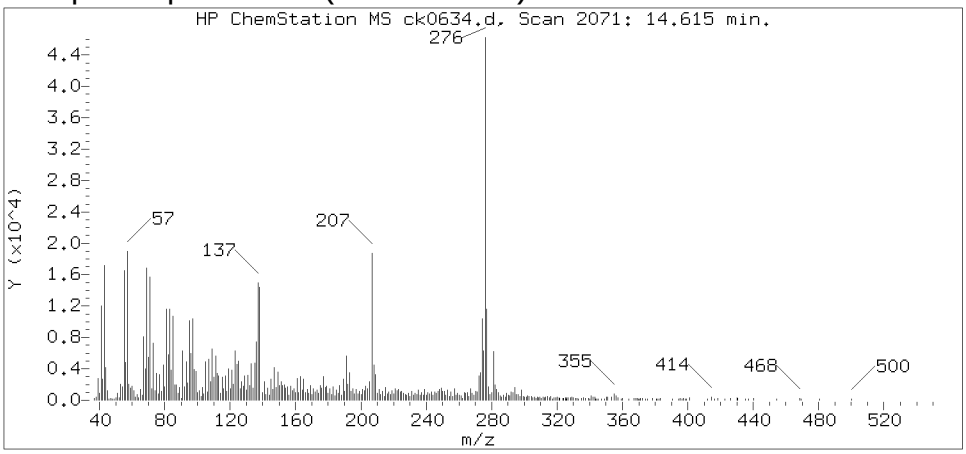


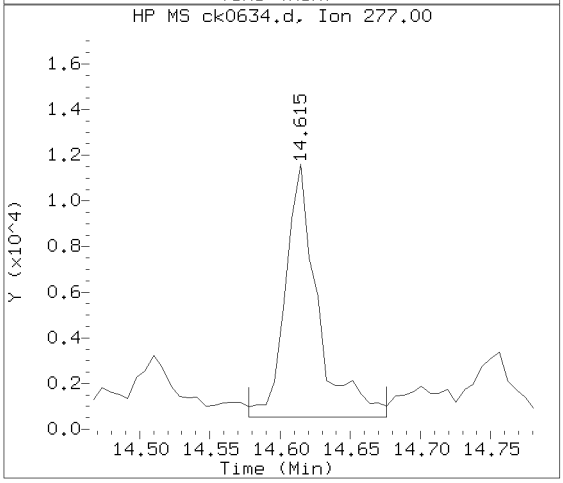
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0634.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:58 jmg00346

Sample Name: R2F14 Lab Sample ID: 7265239

Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2071
Retention Time (minutes) : 14.615
Relative Retention Time : 0.00046
Quant Ion : 276.00
Area (flag) : 65990
On-column Amount (ng/ul) : 2.0467

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:31.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0341.d
Injection date and time: **11-NOV-2013 13:30**
Data file Sample Info. Line: R2142;7265240;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 241 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	132999 (-6)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	517025 (-5)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	306351 (-6)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	544533 (-5)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	691135 (-7)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	418622 (-25)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.001(0.000)	112	1239949	31.399	63%		10 - 107
13) Phenol-d6	(1)	5.429(0.001)	99	1187973	21.905	44%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	950909	19.985	80%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.666(0.001)	172	1672570	21.863	87%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	457293	56.834	114%		22 - 150
149) Terphenyl-d14	(5)	14.883(0.000)	244	2396529	27.805	111%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)	7.929(0.002)	128	3080	0.028	0.12			0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0341.d Injection date and time: **11-NOV-2013 13:30**
Data file Sample Info. Line: R2142;7265240;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

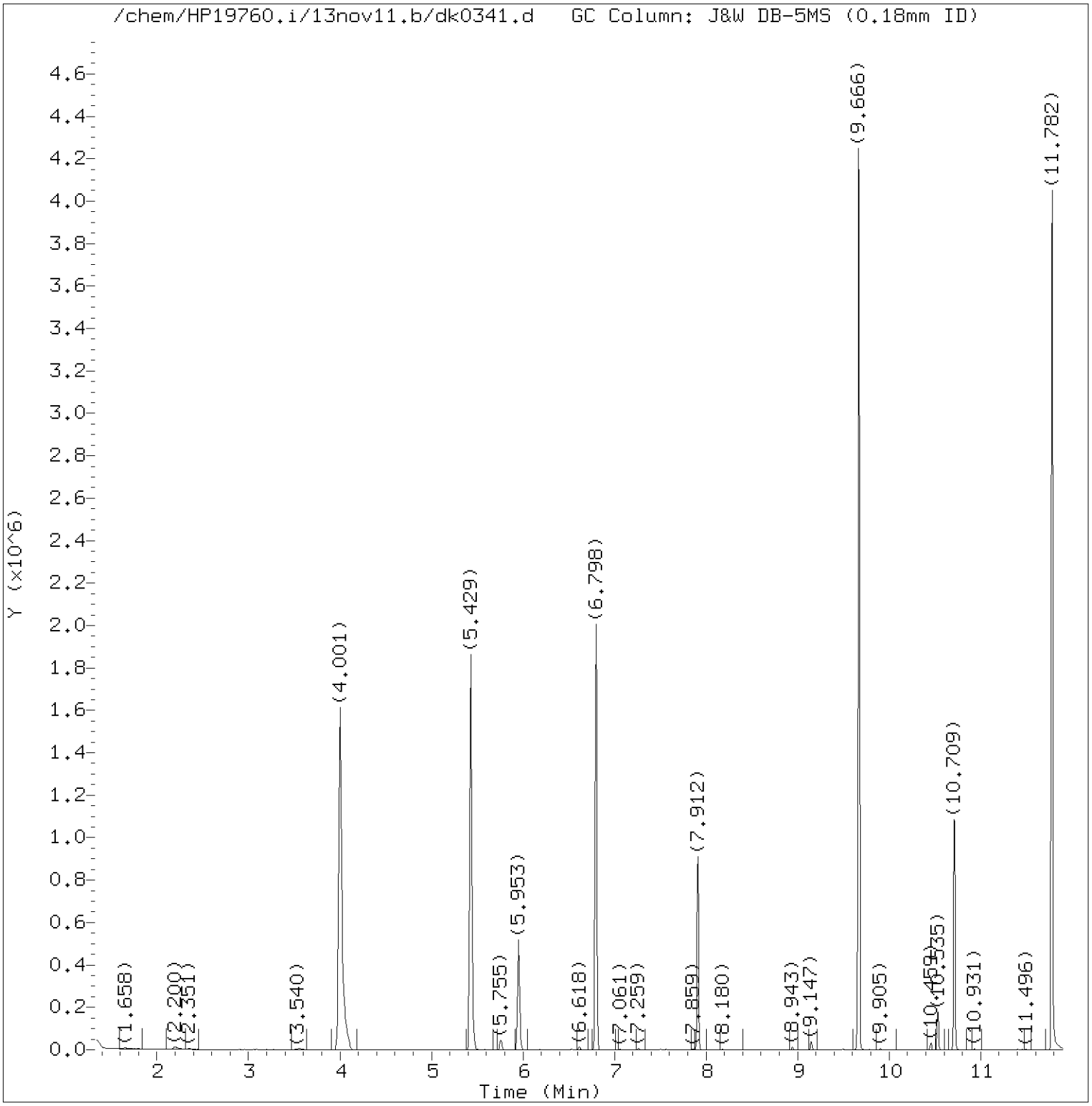
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 241 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:21. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

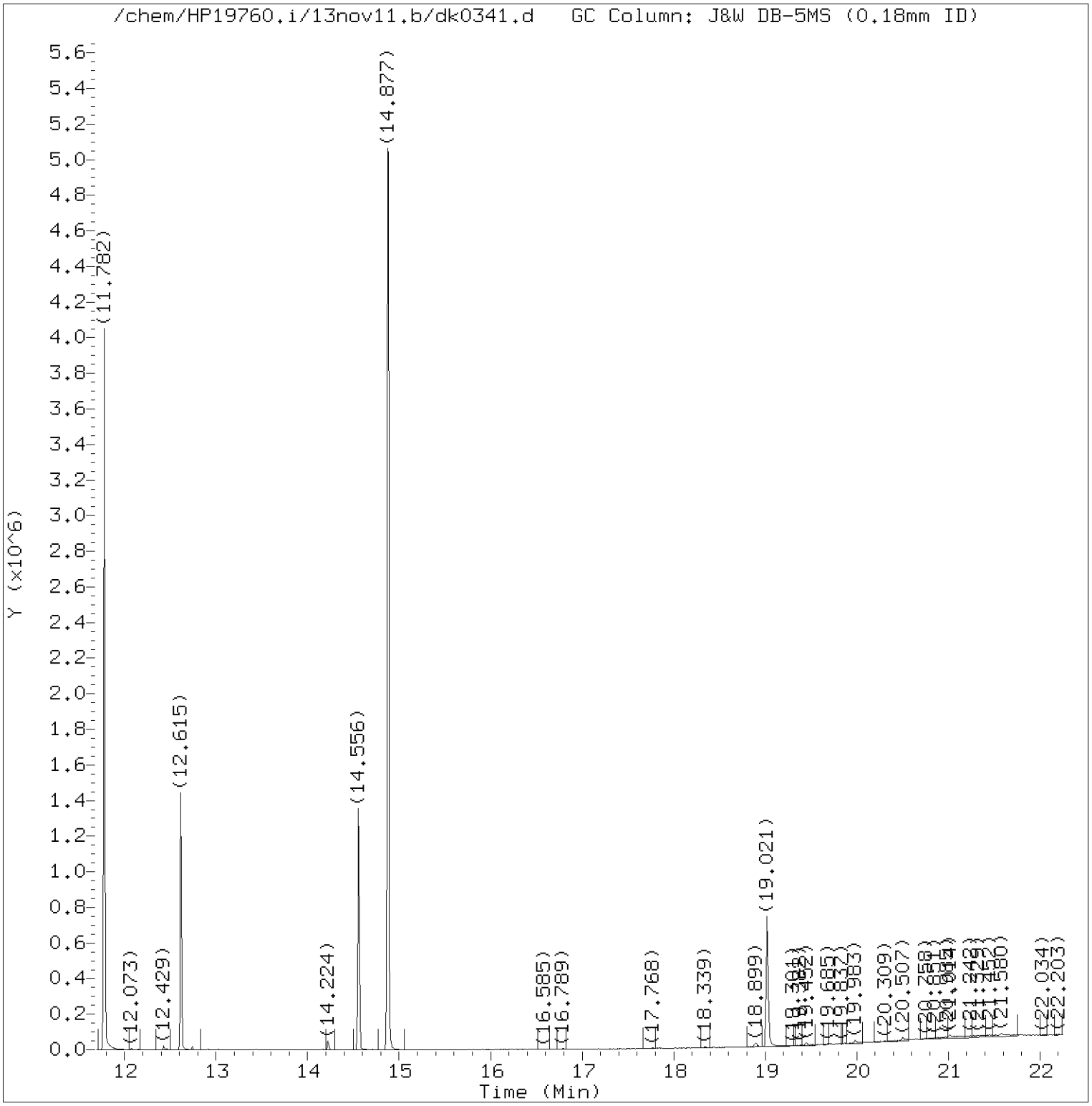
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:21.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:21.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.001	112	1239949	31.399
13)$Phenol-d6	(1)	5.429	99	1187973	21.905
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	132999	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	950909	19.985
52)*Naphthalene-d8	(2)	7.912	136	517025	5.000
53) Naphthalene	(2)	7.929	128	3080	0.028
72)$2-Fluorobiphenyl	(3)	9.666	172	1672570	21.863
92)*Acenaphthene-d10	(3)	10.715	164	306351	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	457293	56.834
130)*Phenanthrene-d10	(4)	12.615	188	544533	5.000
145)*Pyrene-d10	(5)	14.556	212	691135	5.000
149)$Terphenyl-d14	(5)	14.883	244	2396529	27.805
172)*Perylene-d12	(6)	19.021	264	418622	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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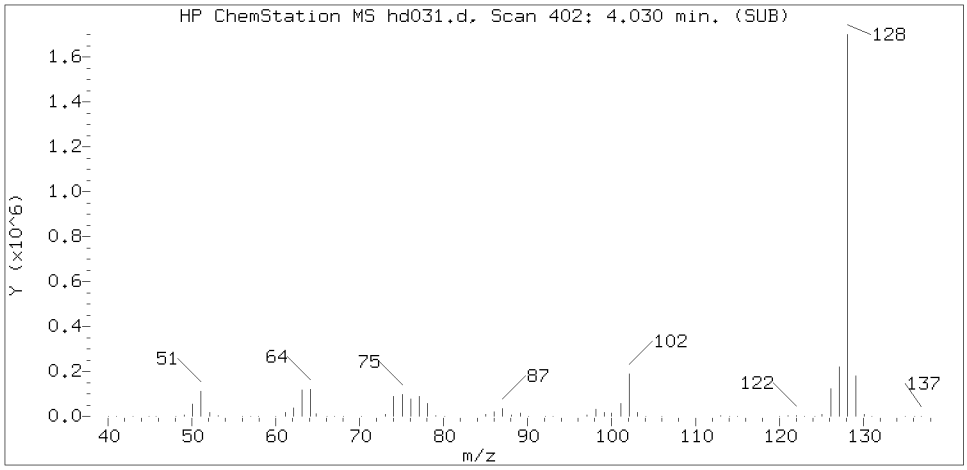
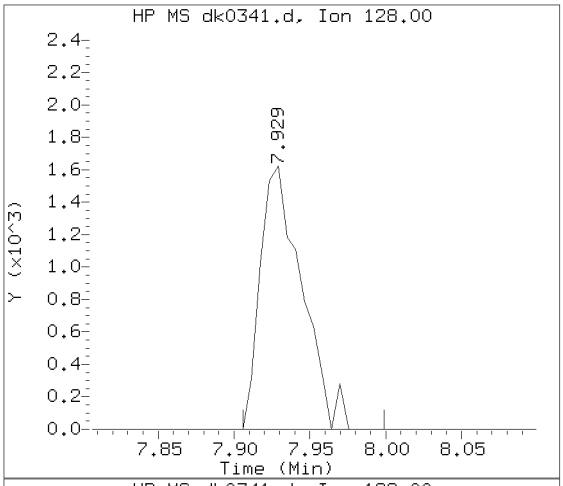
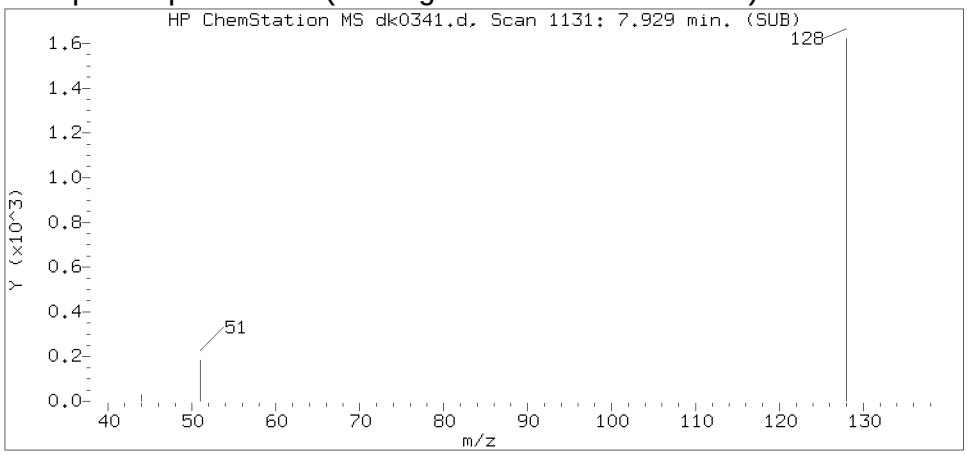
on 11/12/2013 at 07:21.
Target 3.5 esignature user ID: jmg00346

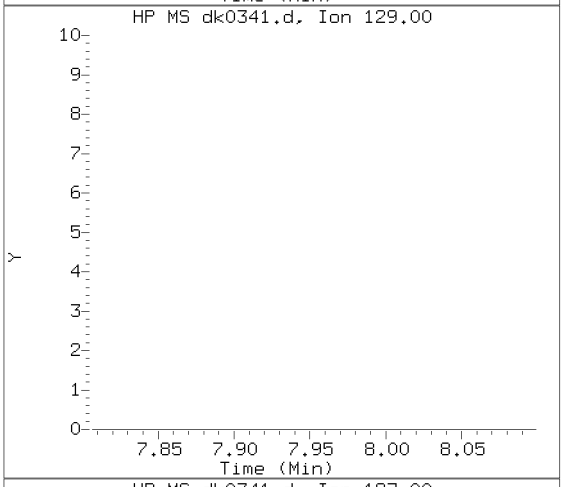
Reference Standard Spectrum for Naphthalene



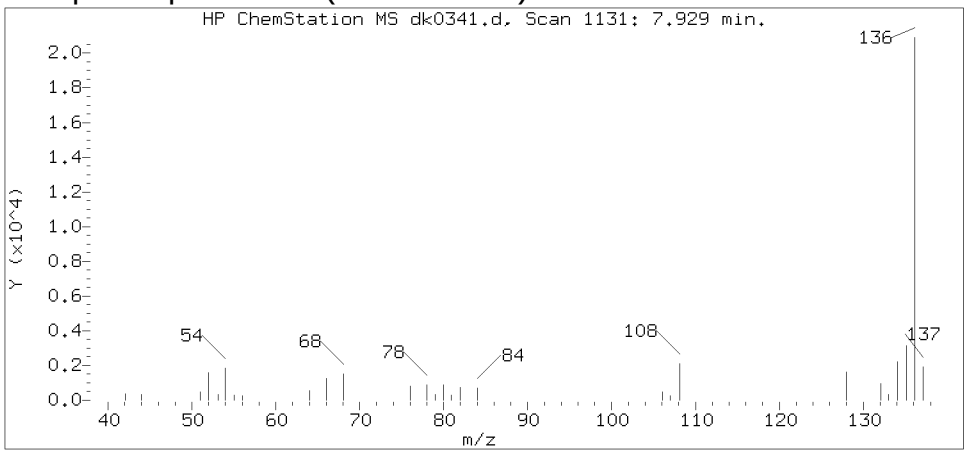


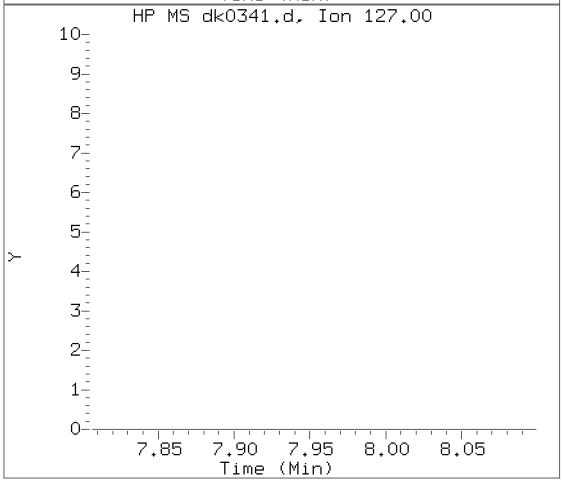
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Compound Number : 53
Compound Name : Naphthalene
Scan Number : 1131
Retention Time (minutes) : 7.929
Relative Retention Time : 0.00221
Quant Ion : 128.00
Area (flag) : 3080
On-column Amount (ng/ul) : 0.0279

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:21.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2142

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265240

Sample wt/vol: 241 (g/mL) mL Lab File ID: dk0341.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: _____ Decanted: (Y/N) _____ Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: _____ Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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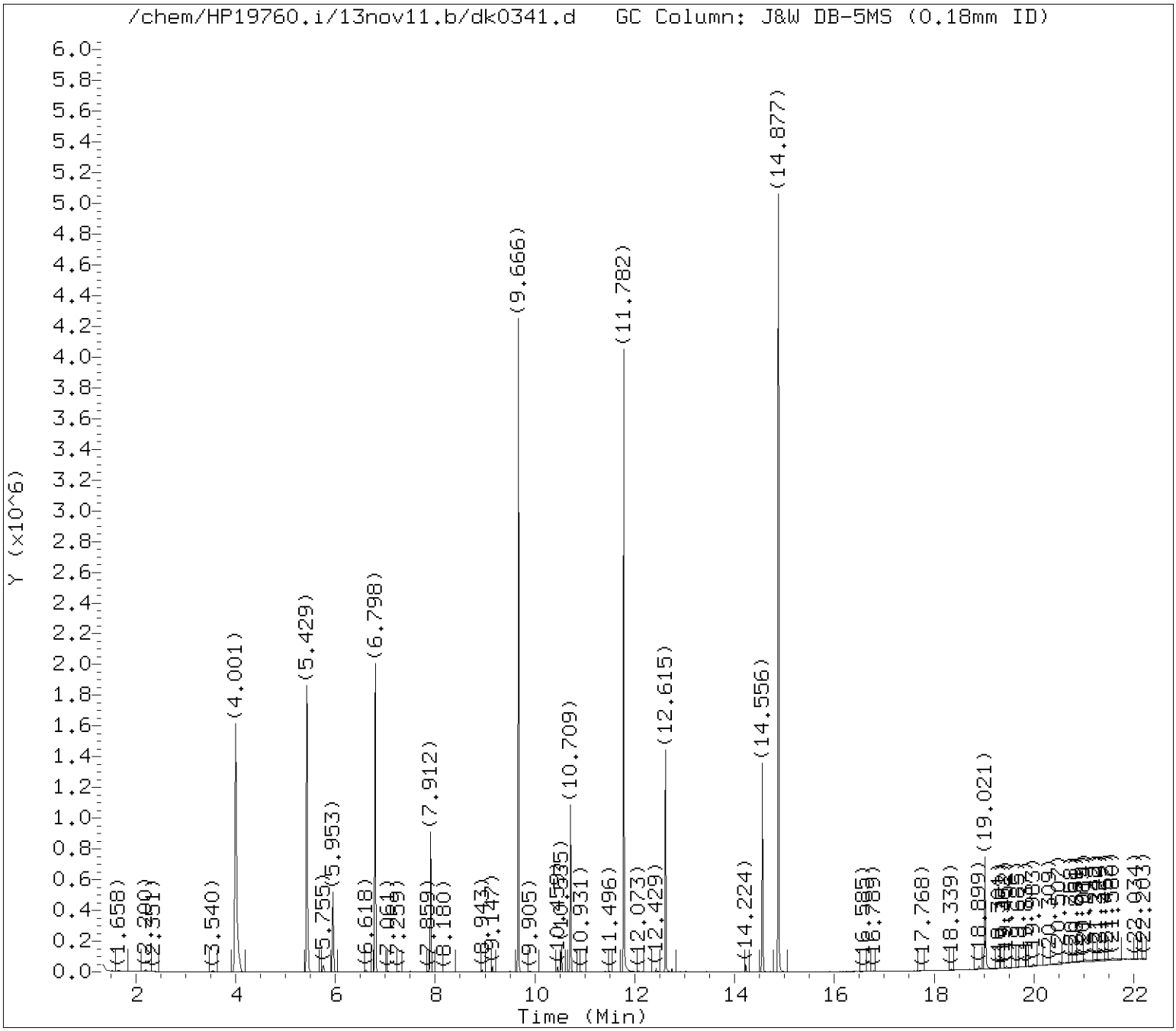
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

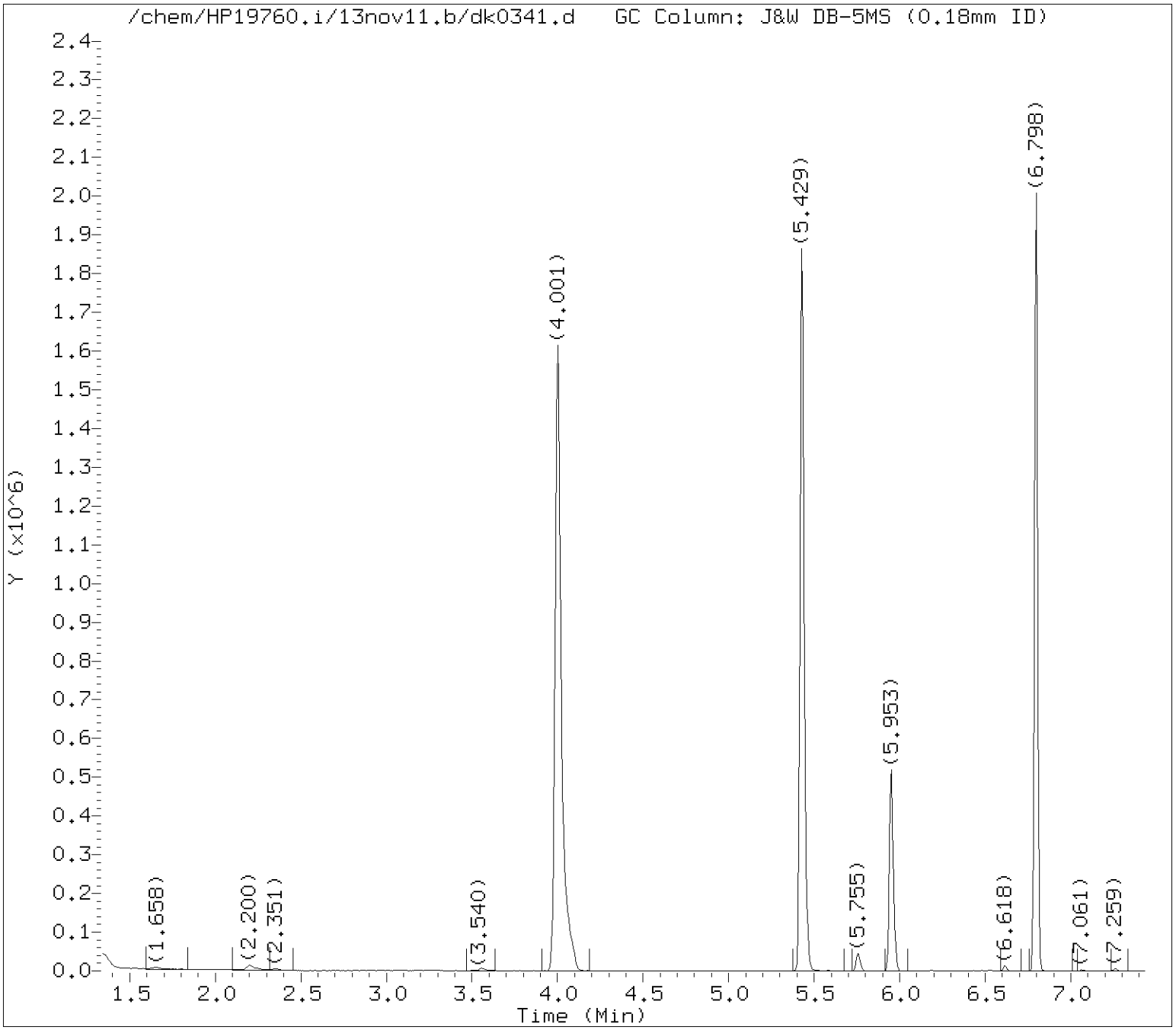
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

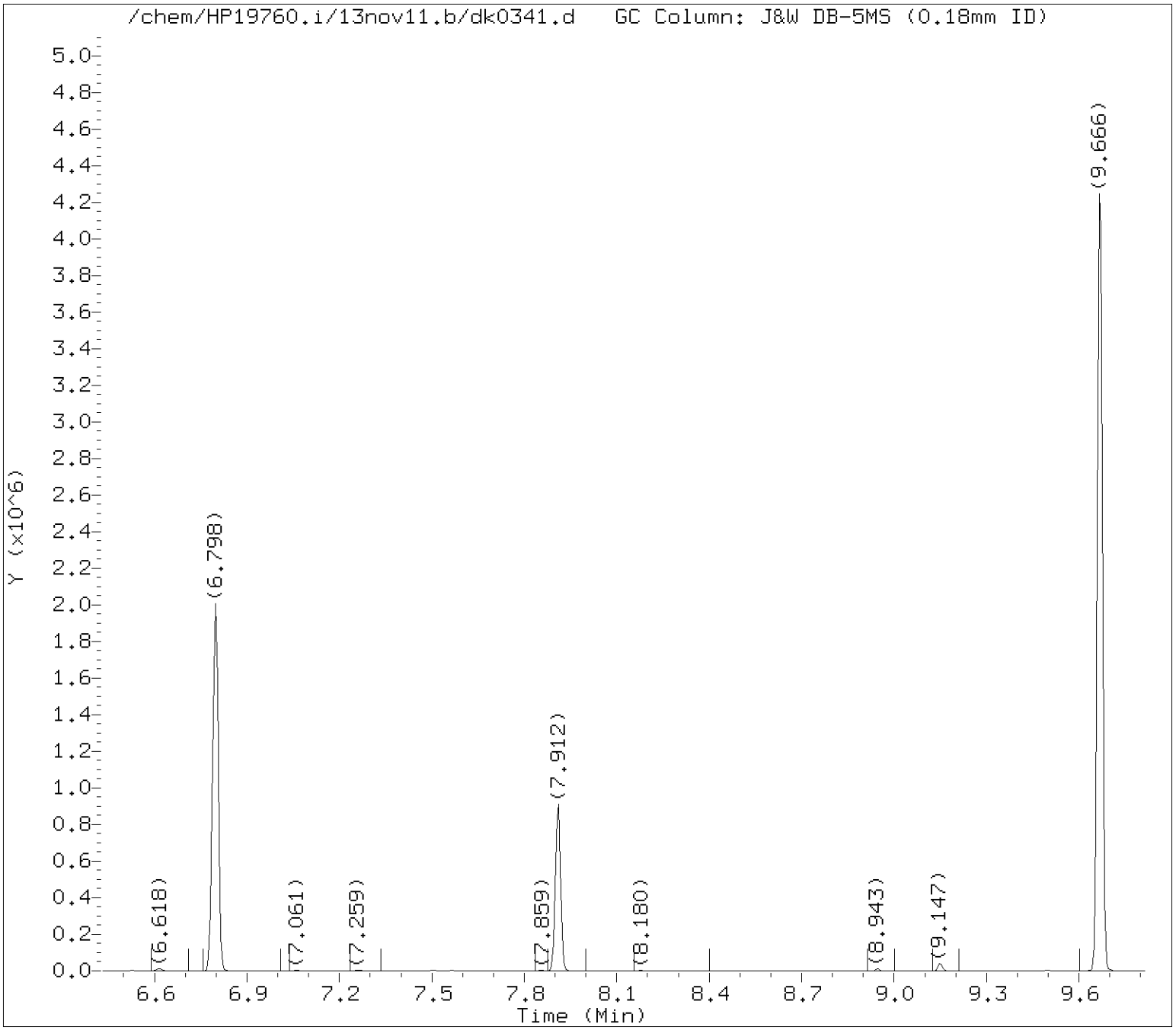
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

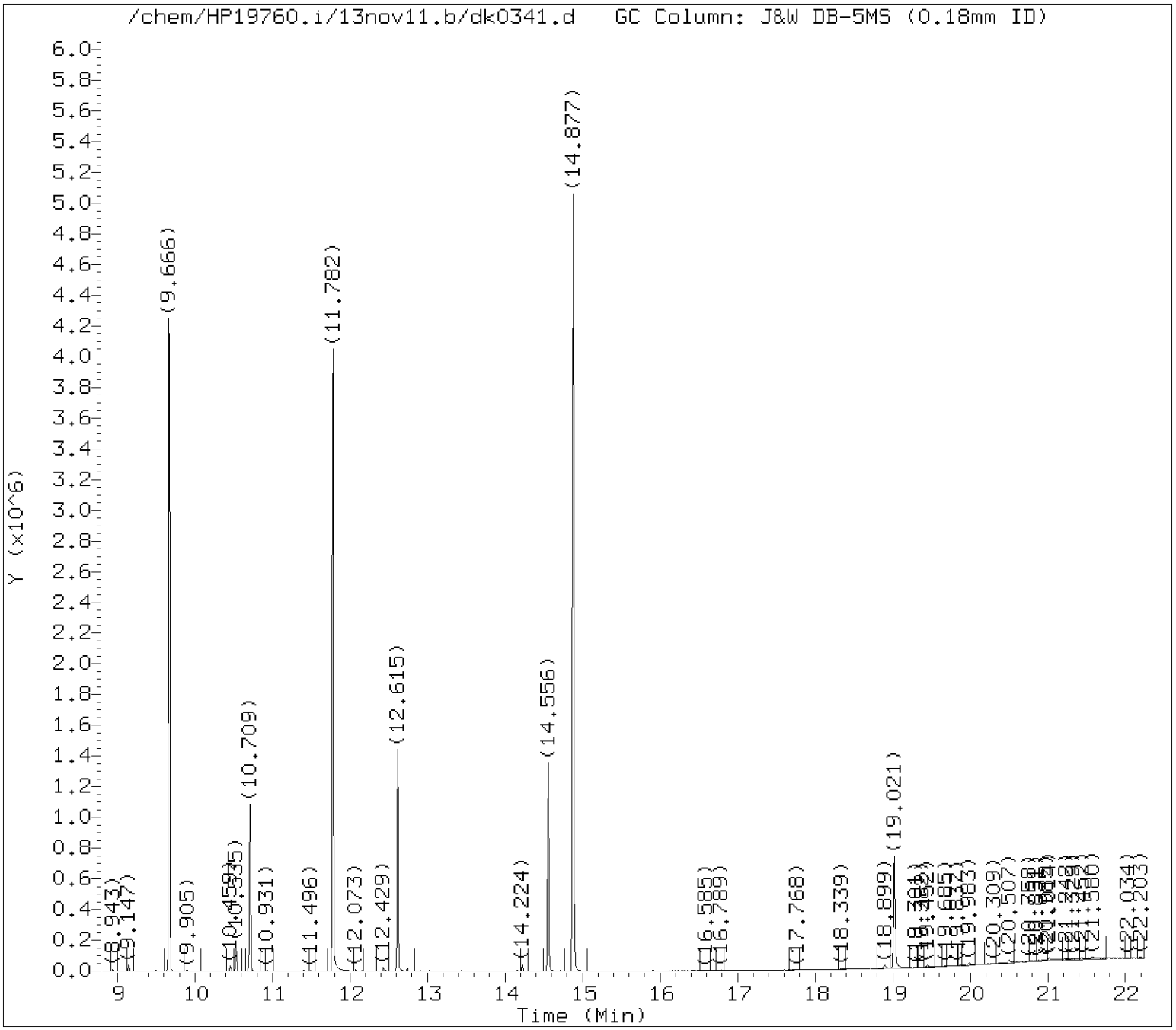
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

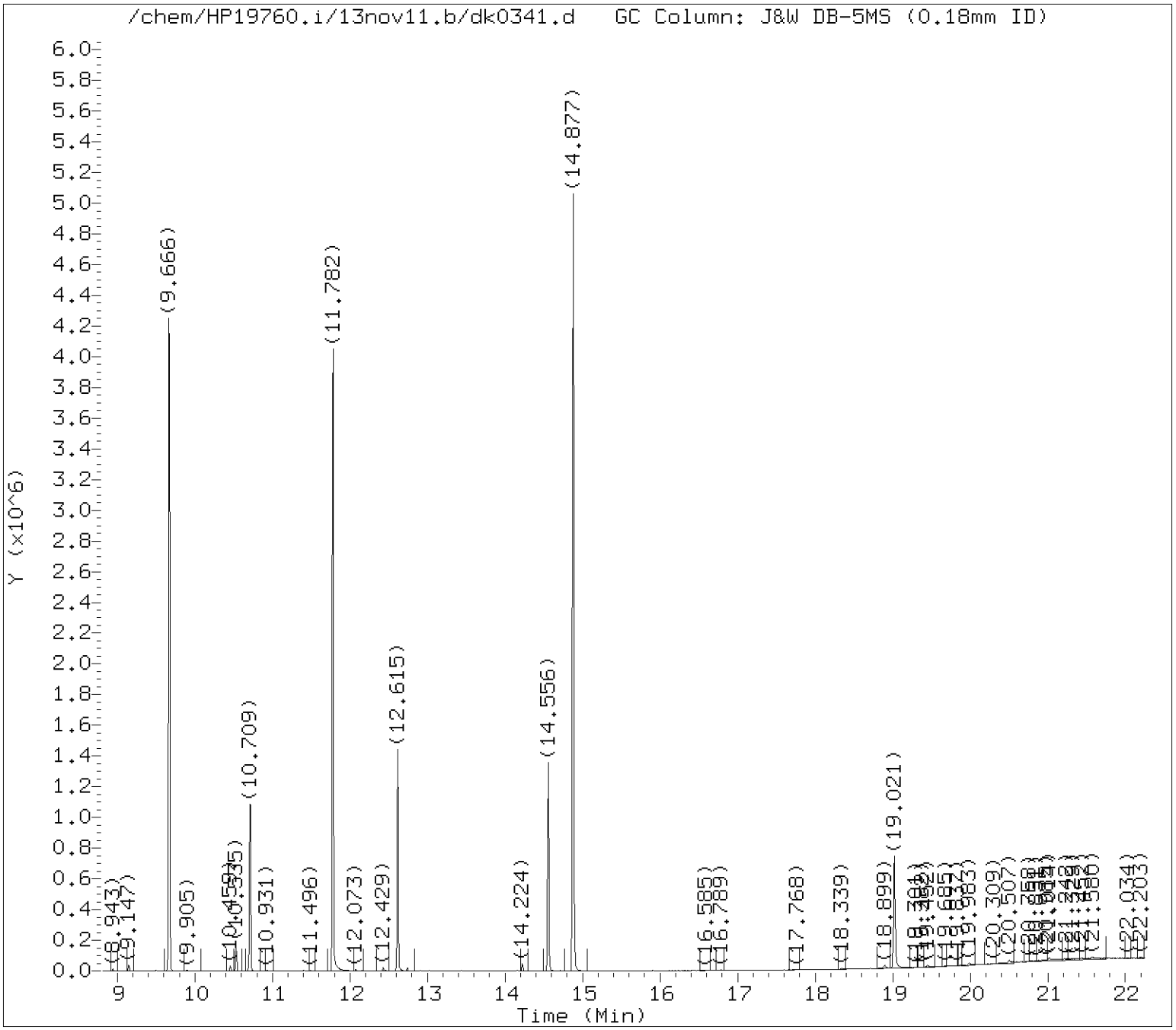
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

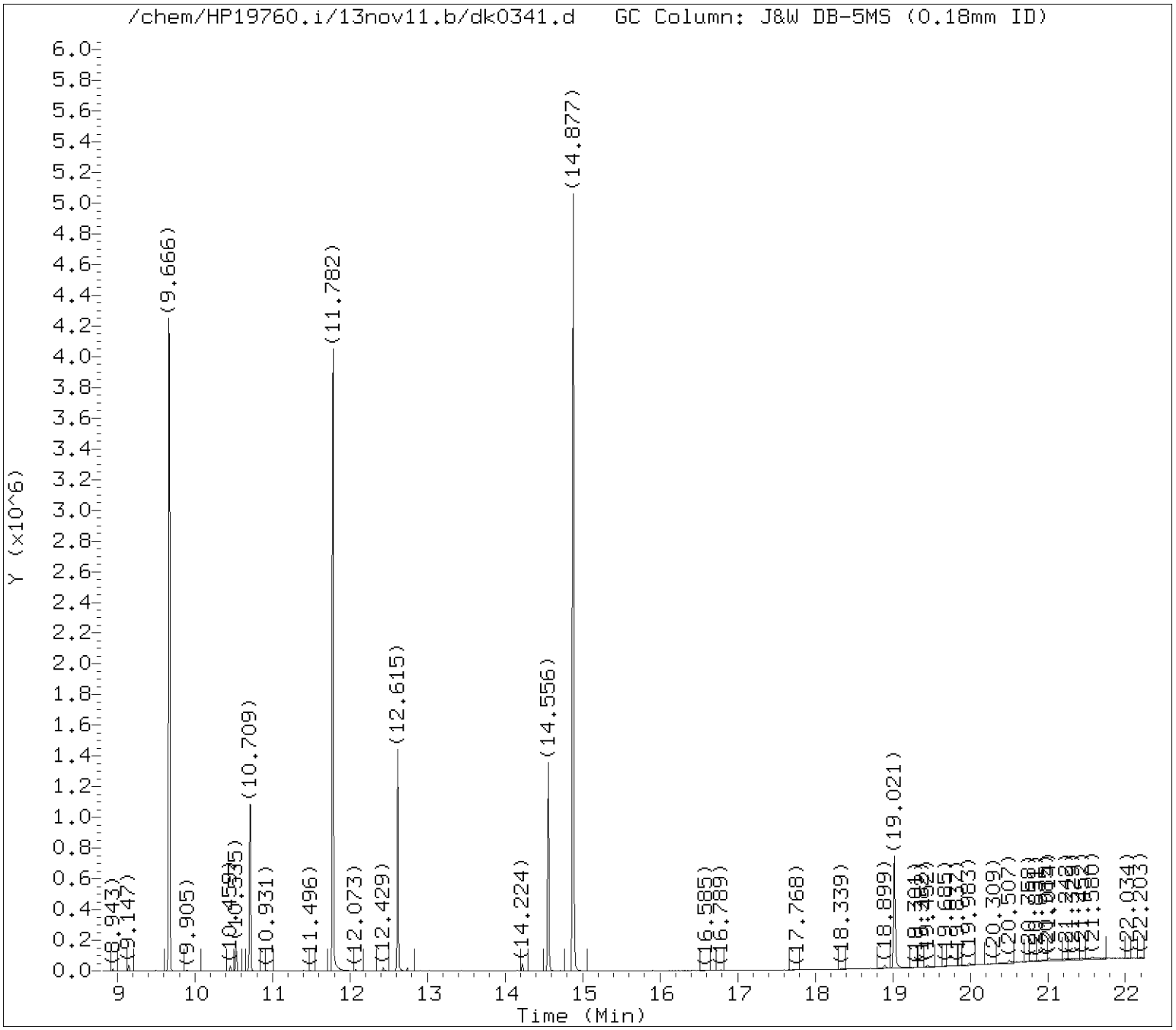
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

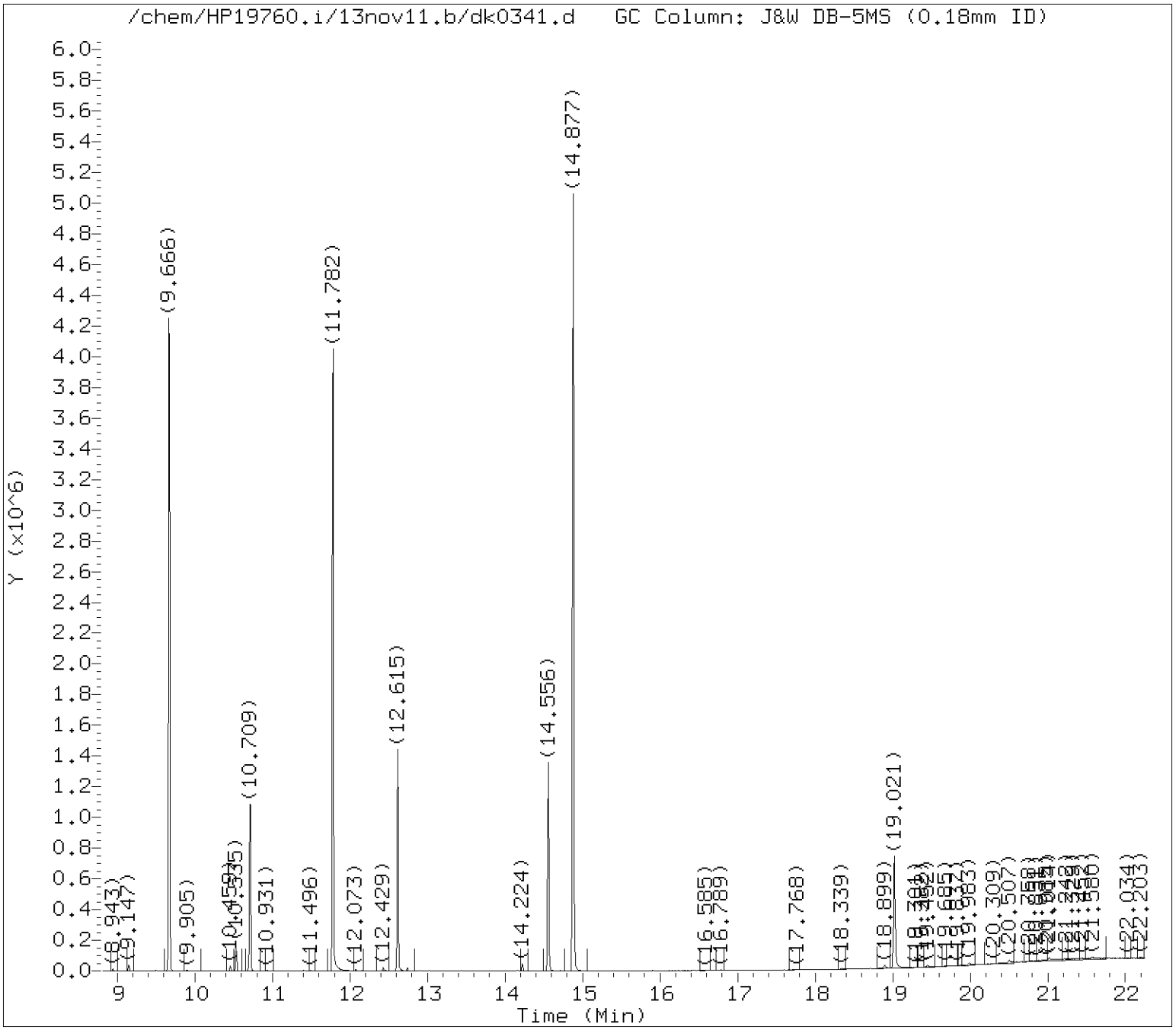
Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0341.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:30 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:52 jmg00346

Sample Name: R2142 Lab Sample ID: 7265240

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0341.d
Lab Smp Id: 7265240 Client Smp ID: R2142
Inj Date : 11-NOV-2013 13:30
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2142;7265240;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;241;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0522.d
Injection date and time: **14-NOV-2013 02:58**
Data file Sample Info. Line: 2F142;7265241;2;0;SAMPLE;;;
Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	151093 (2)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	682956 (-4)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	413146 (-8)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	734774 (-11)	20.00	
167) Pyrene-d10	10.932(0.000)	1472	212	829724 (-20)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	544782 (-37)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.705(0.000)	82	1300564	88.388	88%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.476(-0.001)	172	2575096	99.128	99%		69 - 120
156) Terphenyl-d14	(5)	11.141(-0.001)	244	3103797	104.640	105%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.418(-0.000)	128	6035	0.167	33.31			0.1
70) 2-Methylnaphthalene	(2)	7.101(-0.000)	142	4467	0.174	34.74			0.1
71) 1-Methylnaphthalene	(2)	7.193(0.000)	142	3953	0.168	33.60			0.1
95) Acenaphthylene	(3)	7.968(0.000)	152	18112	0.498	99.52			0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)	8.644(0.000)	166	6669	0.225	44.92			0.1
137) Phenanthrene	(4)	9.573(0.000)	178	77367	1.811	362.17			0.1
138) Anthracene	(4)	9.622(0.000)	178	17815	0.405	81.02			0.1
147) Fluoranthene	(4)	10.735(0.000)	202	138069	2.890	578.03			0.1
154) Pyrene	(5)	10.950(0.000)	202	140504	3.049	609.86			0.1
166) Benzo(a)anthracene	(5)	12.124(0.000)	228	47219	1.111	222.21			0.1
168) Chrysene	(5)	12.155(0.000)	228	65027	1.587	317.39			0.1
172) Benzo(b)fluoranthene	(6)	13.176(-0.000)	252	74112M	2.228	445.58			0.1
173) Benzo(k)fluoranthene	(6)	13.200(0.000)	252	26964M	0.795	158.90			0.1
174) Benzo(a)pyrene	(6)	13.477(0.000)	252	45066M	1.388	277.61			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.535(0.000)	276	30338	0.878	175.65			0.1
178) Dibenz(a,h)anthracene	(6)	14.553(0.000)	278	7237M	0.250	50.09			0.1
179) Benzo(g,h,i)perylene	(6)	14.805(0.000)	276	30560	1.038	207.70			0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0522.d Injection date and time: **14-NOV-2013 02:58**
Data file Sample Info. Line: 2F142;7265241;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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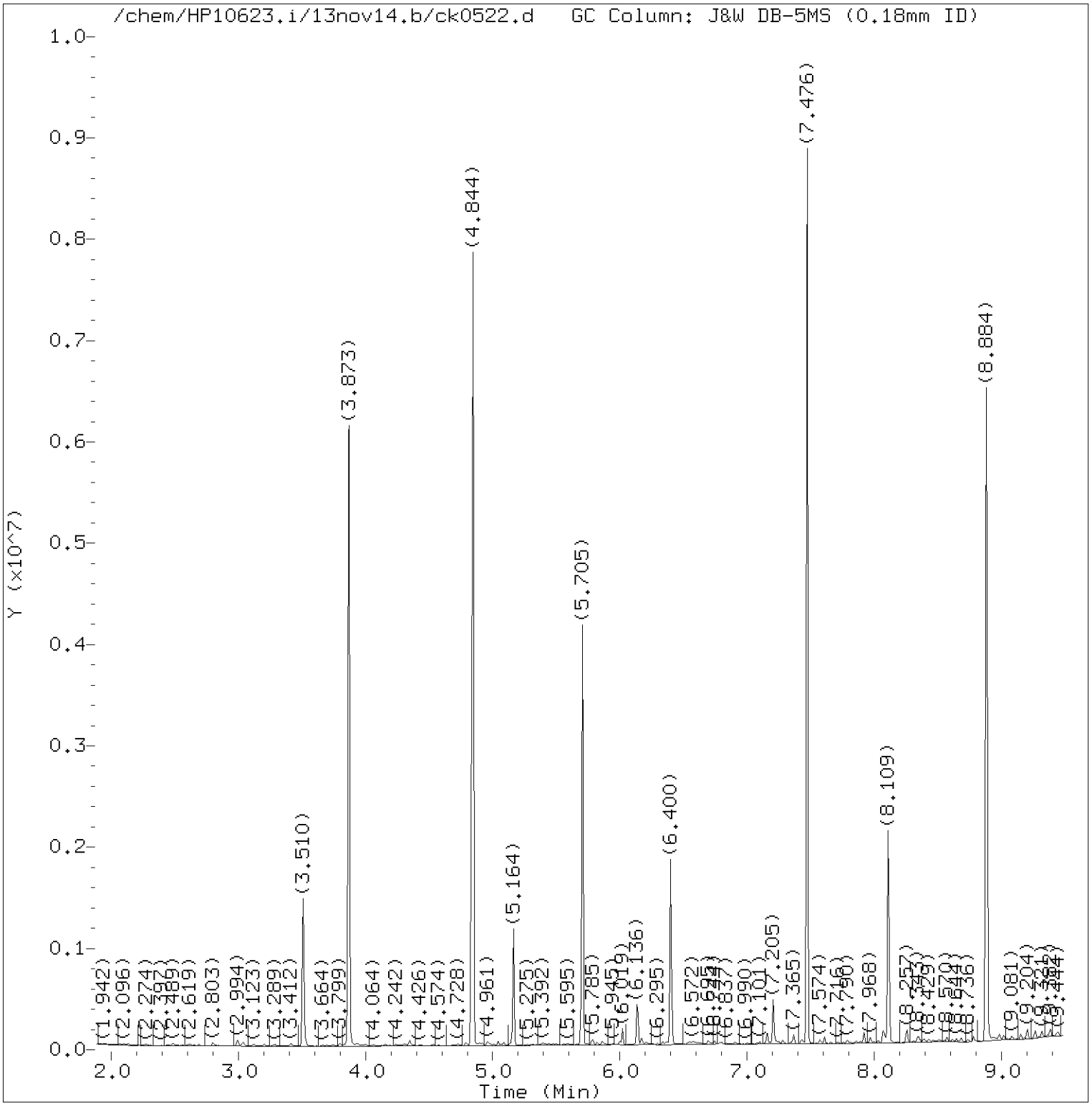
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

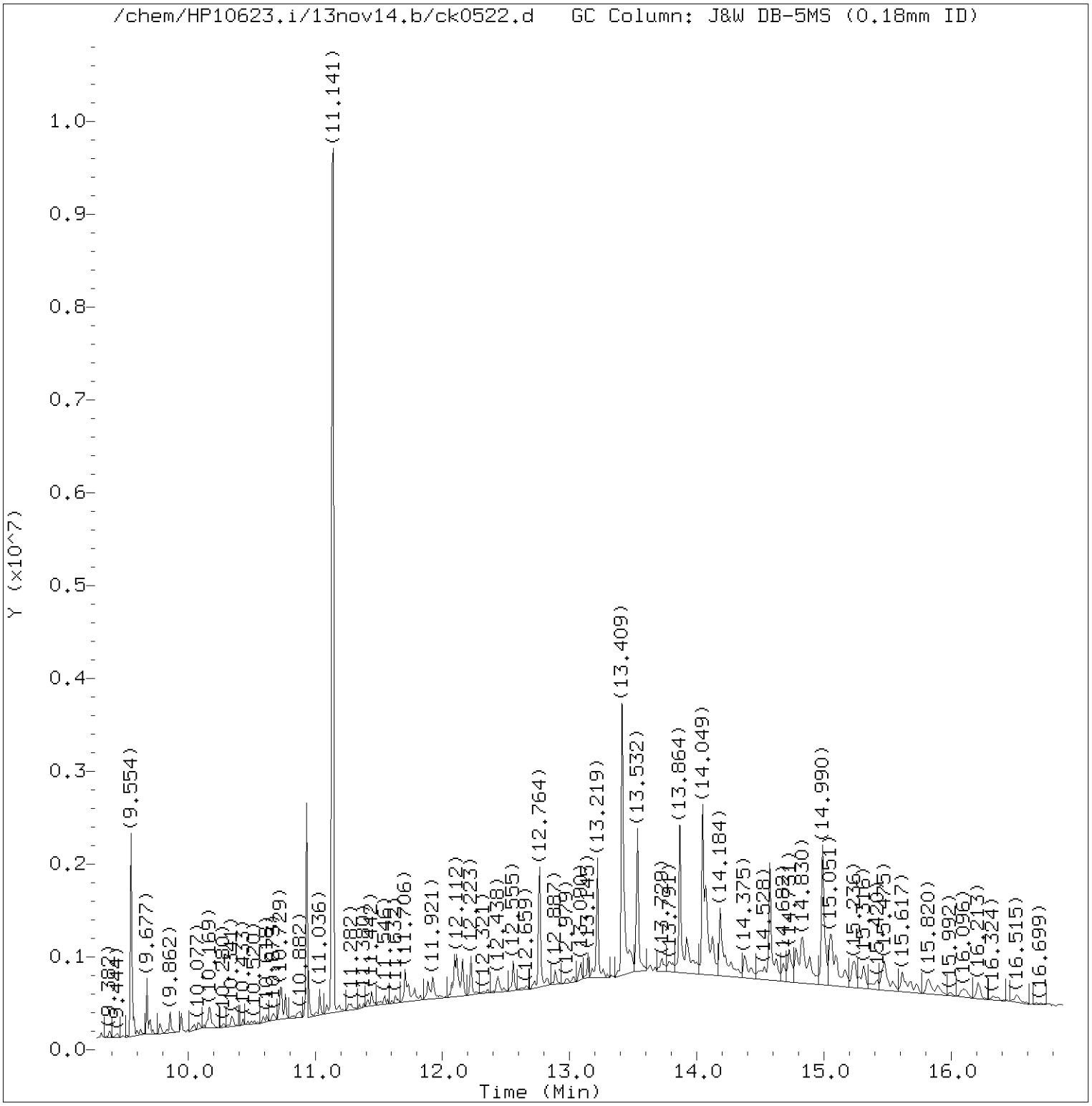
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

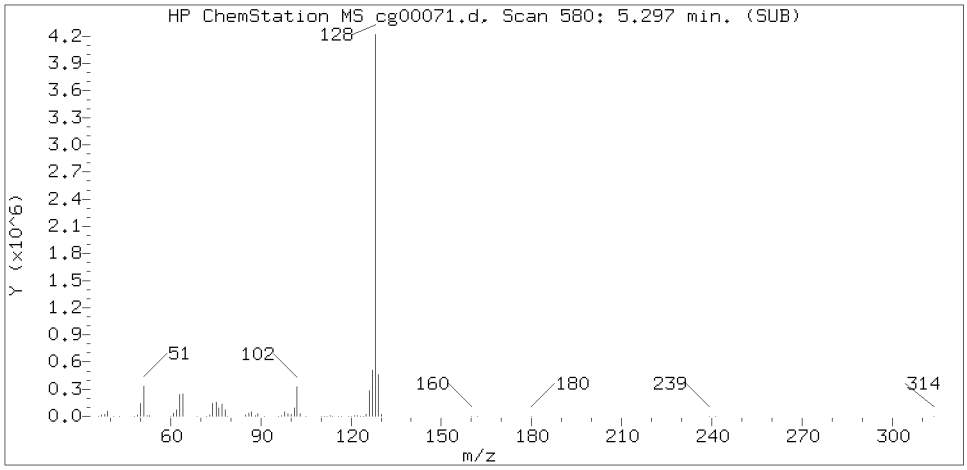
Sample Name: 2F142 Lab Sample ID: 7265241

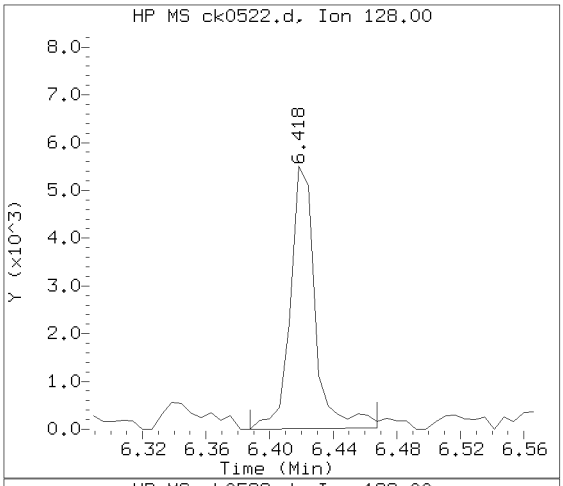
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	151093	20.000
38)$Nitrobenzene-d5	(2)	5.705	82	1300564	88.388
52)*Naphthalene-d8	(2)	6.400	136	682956	20.000
53) Naphthalene	(2)	6.418	128	6035	0.167
70) 2-Methylnaphthalene	(2)	7.101	142	4467	0.174
71) 1-Methylnaphthalene	(2)	7.193	142	3953	0.168
78)$2-Fluorobiphenyl	(3)	7.476	172	2575096	99.128
95) Acenaphthylene	(3)	7.968	152	18112	0.498
98)*Acenaphthene-d10	(3)	8.109	164	413146	20.000
111) Fluorene	(3)	8.644	166	6669	0.225
135)*Phenanthrene-d10	(4)	9.554	188	734774	20.000
137) Phenanthrene	(4)	9.573	178	77367	1.811
138) Anthracene	(4)	9.622	178	17815	0.405
147) Fluoranthene	(4)	10.735	202	138069	2.890
167)*Pyrene-d10	(5)	10.932	212	829724	20.000
154) Pyrene	(5)	10.950	202	140504	3.049
156)$Terphenyl-d14	(5)	11.141	244	3103797	104.640
166) Benzo(a)anthracene	(5)	12.124	228	47219	1.111
168) Chrysene	(5)	12.155	228	65027	1.587
172) Benzo(b)fluoranthene	(6)	13.176	252	74112M	2.228
173) Benzo(k)fluoranthene	(6)	13.200	252	26964M	0.795
174) Benzo(a)pyrene	(6)	13.477	252	45066M	1.388
175)*Perylene-d12	(6)	13.532	264	544782	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.535	276	30338	0.878
178) Dibenz(a,h)anthracene	(6)	14.553	278	7237M	0.250
179) Benzo(g,h,i)perylene	(6)	14.805	276	30560	1.038

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

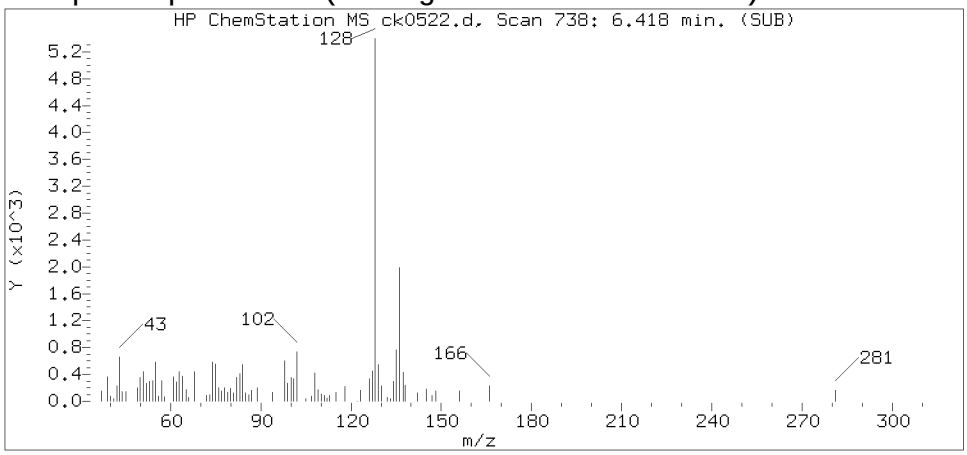
Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

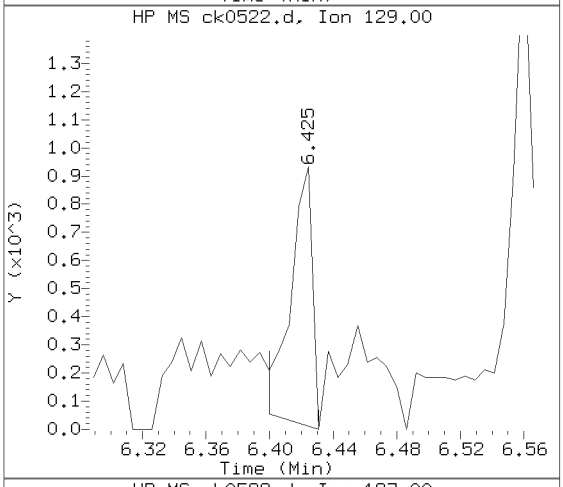
Reference Standard Spectrum for Naphthalene



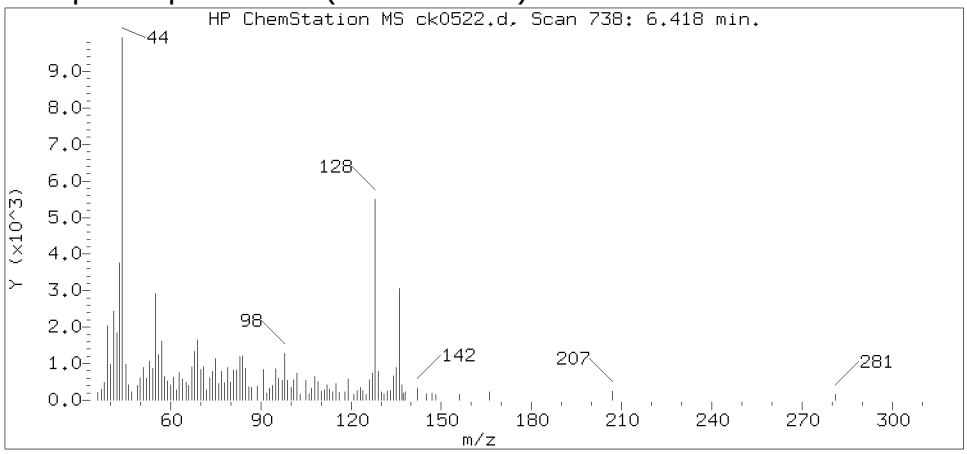


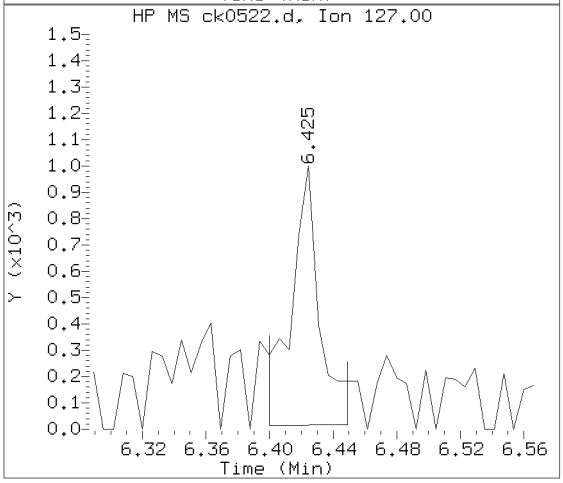
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

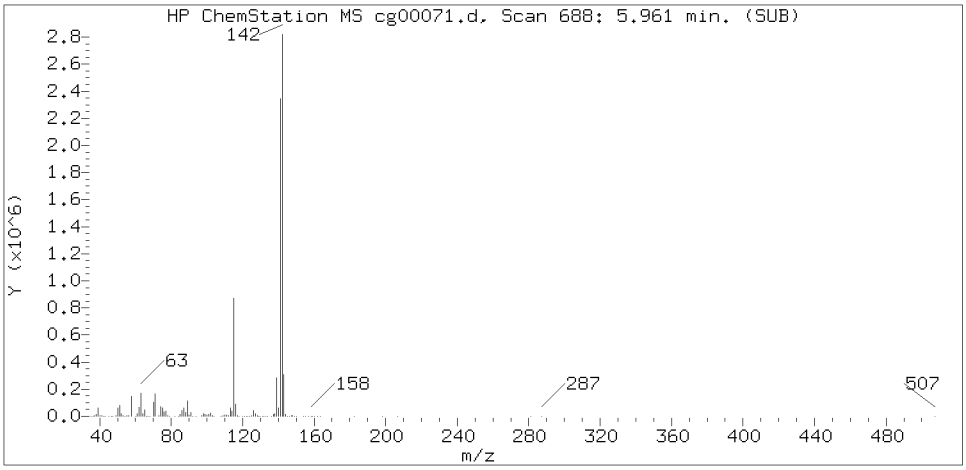
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

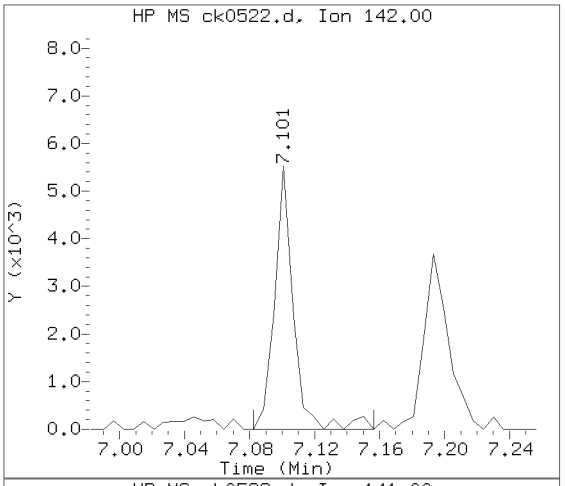
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 53
Compound Name : Naphthalene
Scan Number : 738
Retention Time (minutes) : 6.418
Relative Retention Time :-0.00000
Quant Ion : 128.00
Area (flag) : 6035
On-column Amount (ng/ul) : 0.1665

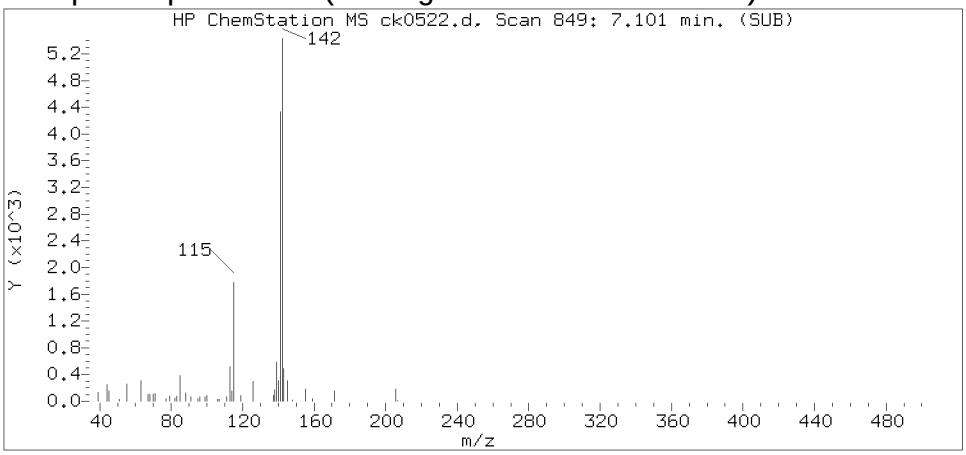
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

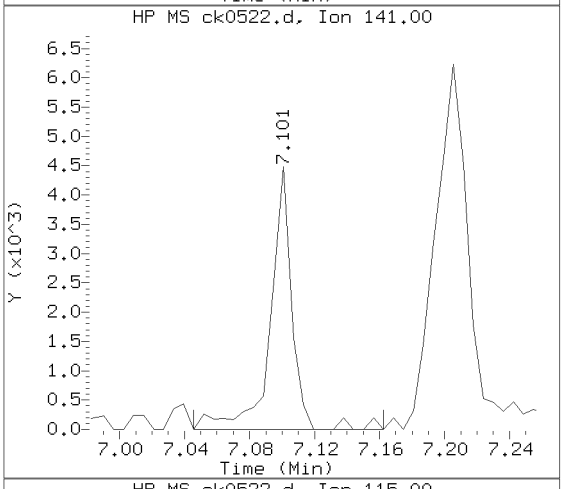
Reference Standard Spectrum for 2-Methylnaphthalene



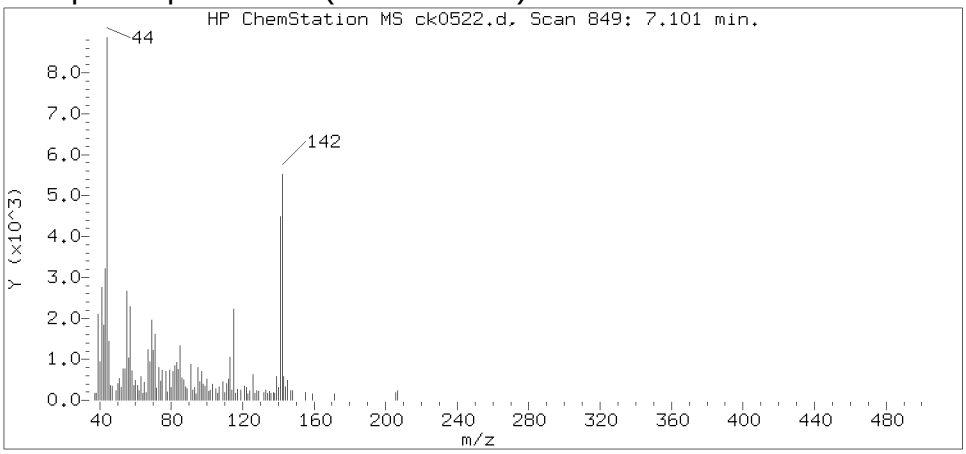


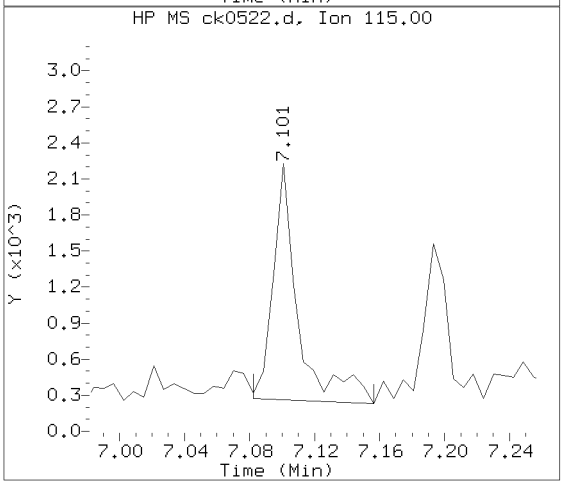
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

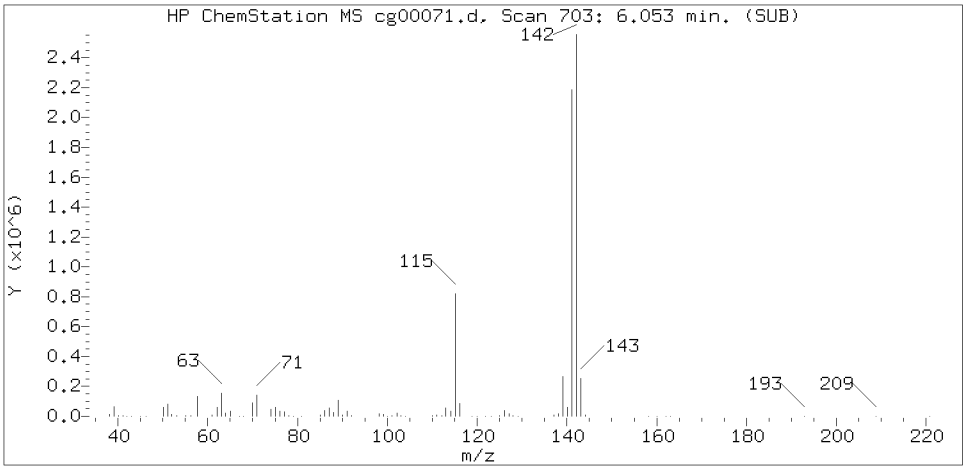
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

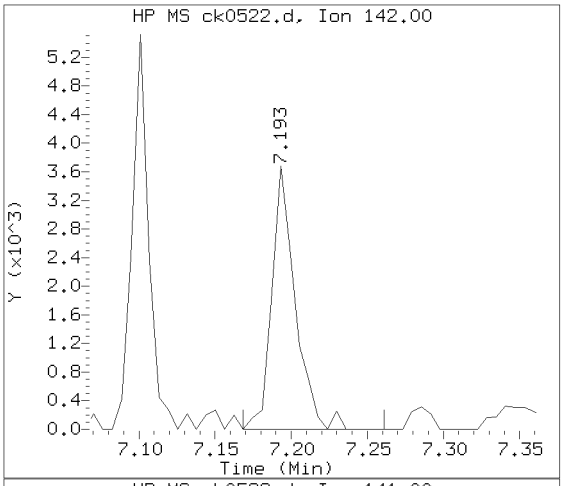
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 849
Retention Time (minutes) : 7.101
Relative Retention Time :-0.00000
Quant Ion : 142.00
Area (flag) : 4467
On-column Amount (ng/ul) : 0.1737

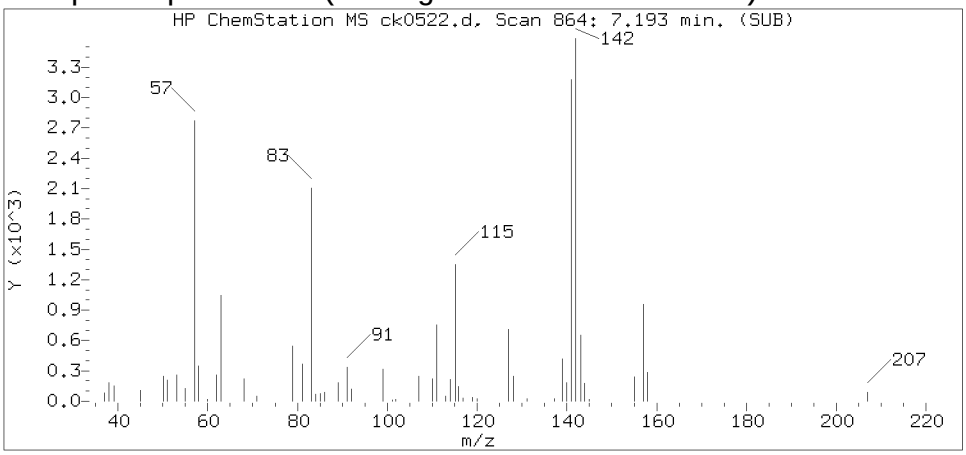
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

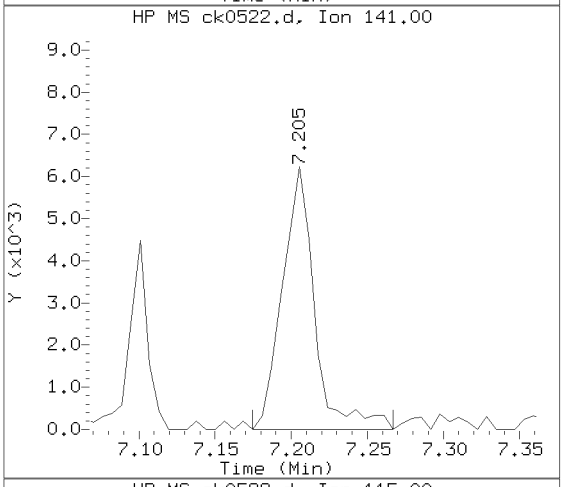
Reference Standard Spectrum for 1-Methylnaphthalene



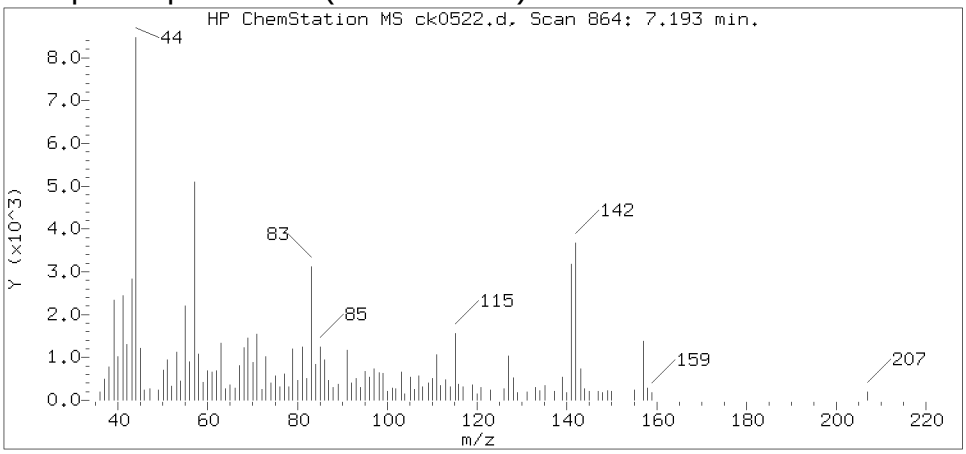


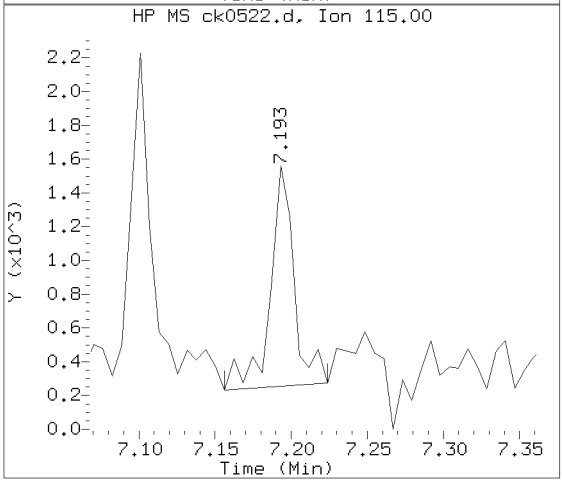
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

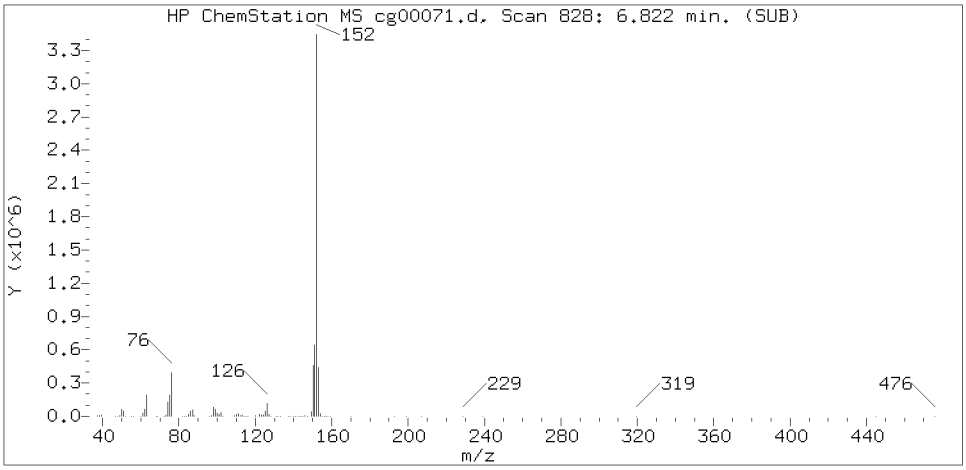
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

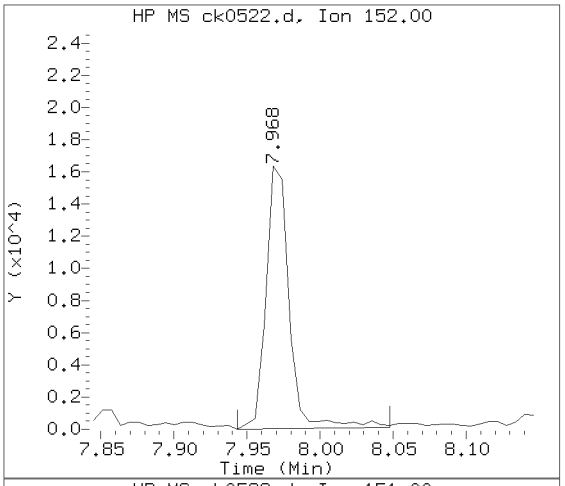
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 71
Compound Name : 1-Methylnaphthalene
Scan Number : 864
Retention Time (minutes) : 7.193
Relative Retention Time : 0.00000
Quant Ion : 142.00
Area (flag) : 3953
On-column Amount (ng/ul) : 0.1680

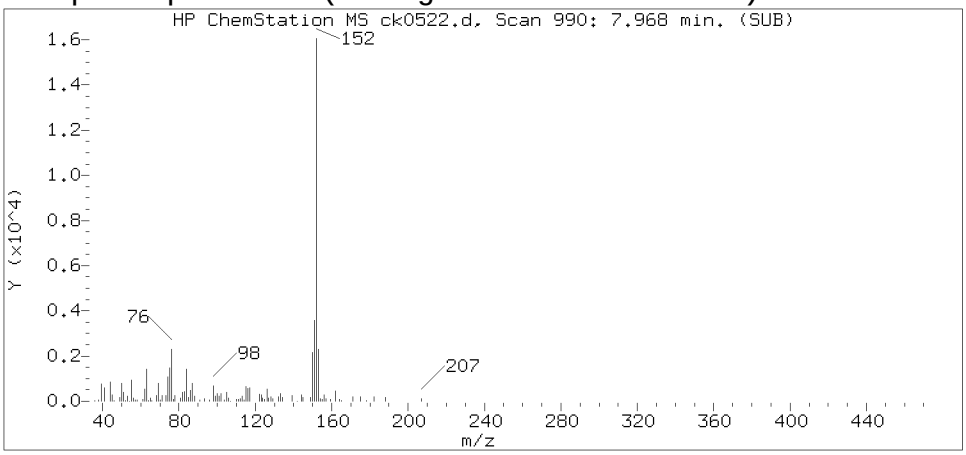
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

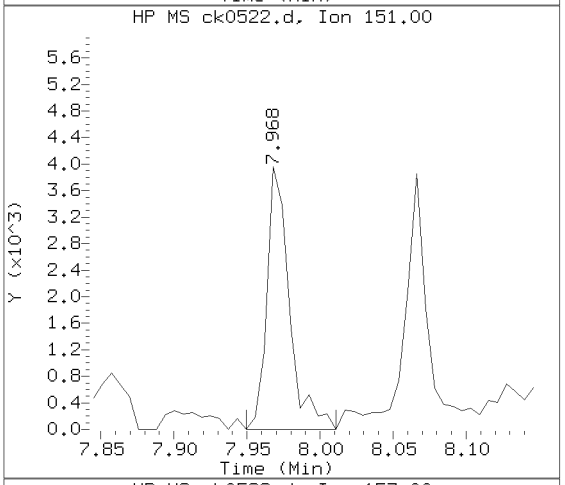
Reference Standard Spectrum for Acenaphthylene



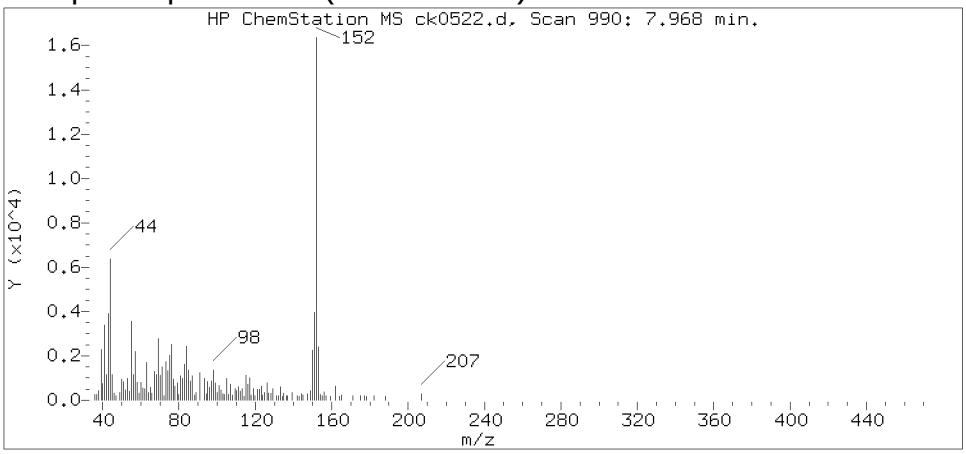


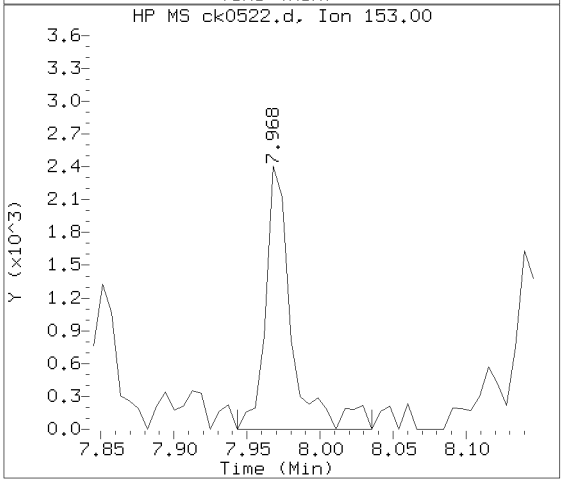
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 95
Compound Name	: Acenaphthylene
Scan Number	: 990
Retention Time (minutes)	: 7.968
Relative Retention Time	: 0.00076
Quant Ion	: 152.00
Area (flag)	: 18112
On-column Amount (ng/ul)	: 0.4976

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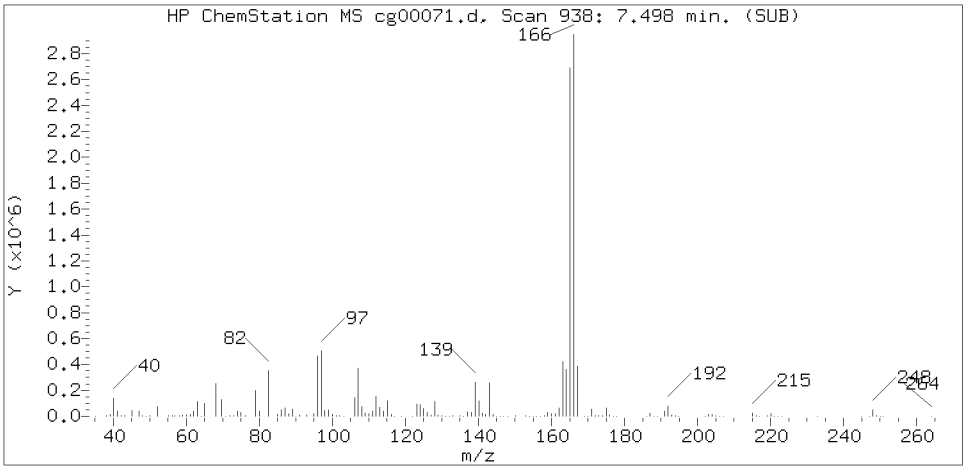
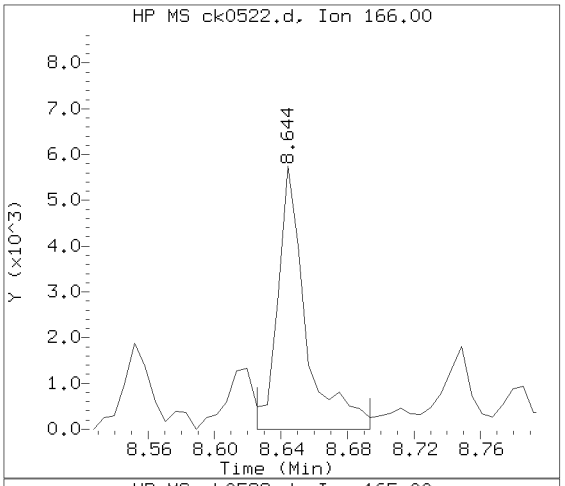
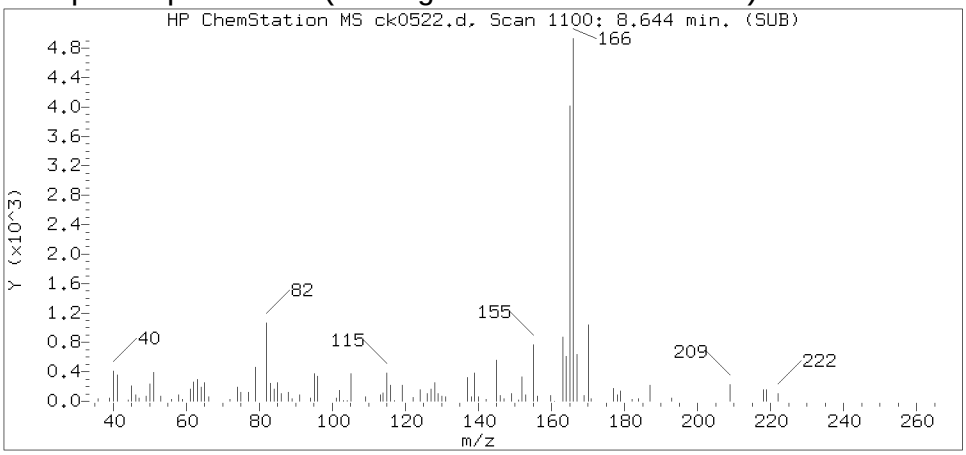
Target 3.5 esignature user ID: mac00013

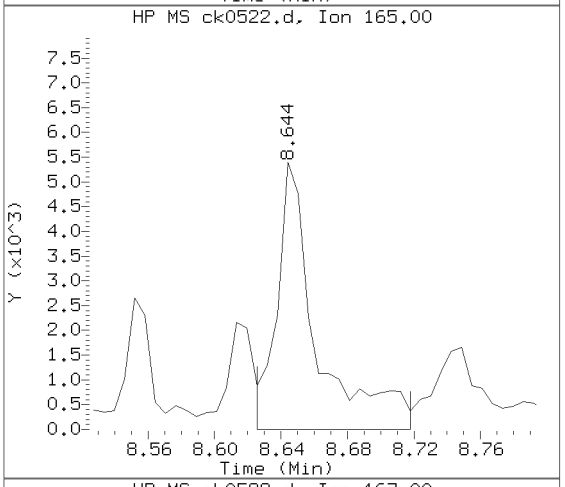
Reference Standard Spectrum for Fluorene



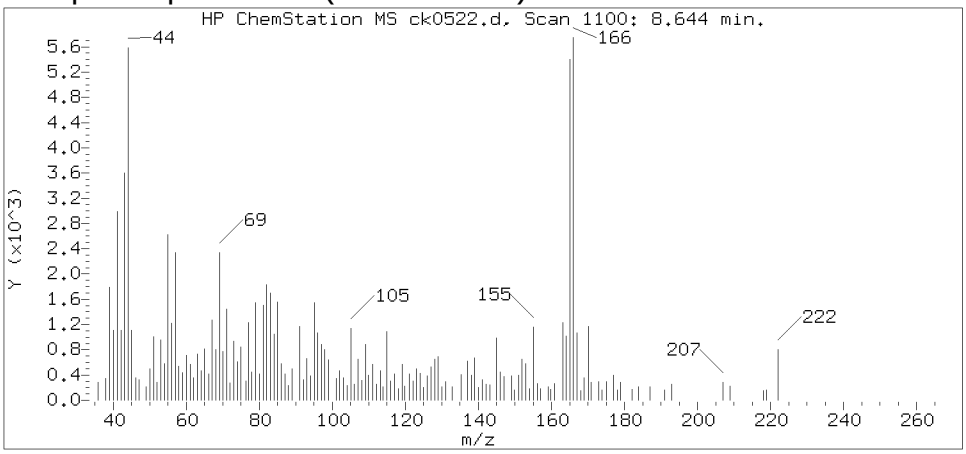


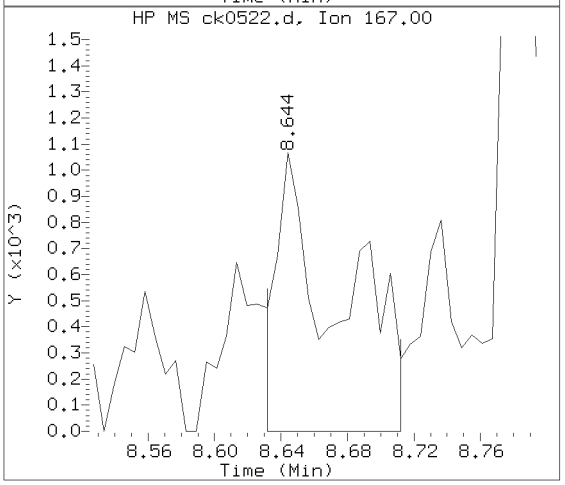
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 111
Compound Name	: Fluorene
Scan Number	: 1100
Retention Time (minutes)	: 8.644
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 6669
On-column Amount (ng/ul)	: 0.2246

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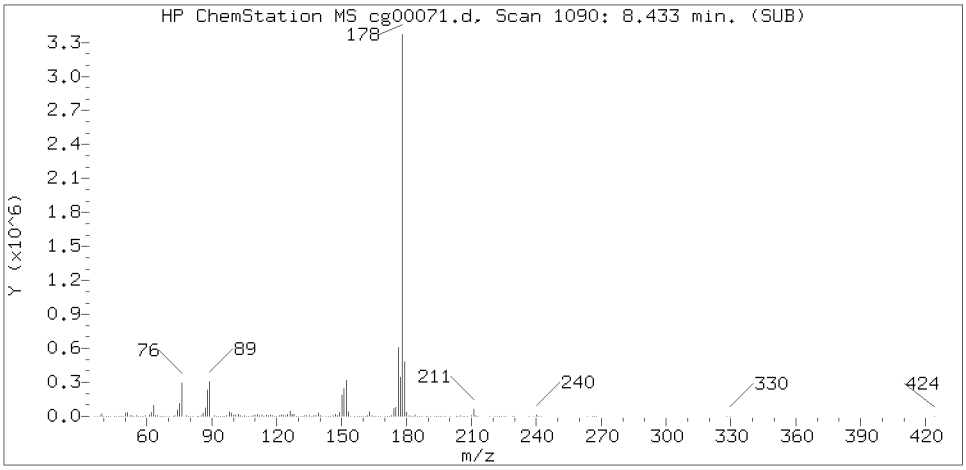
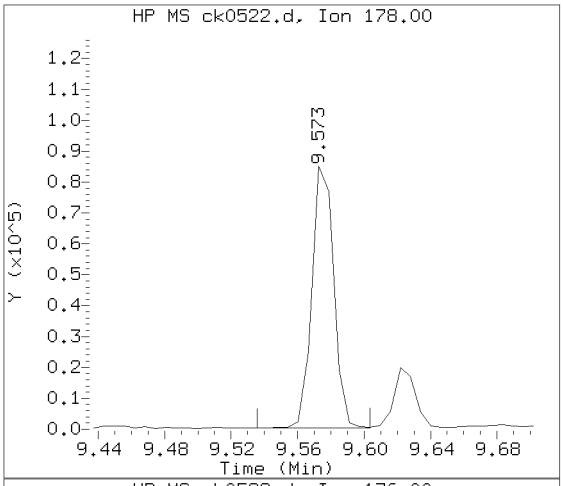
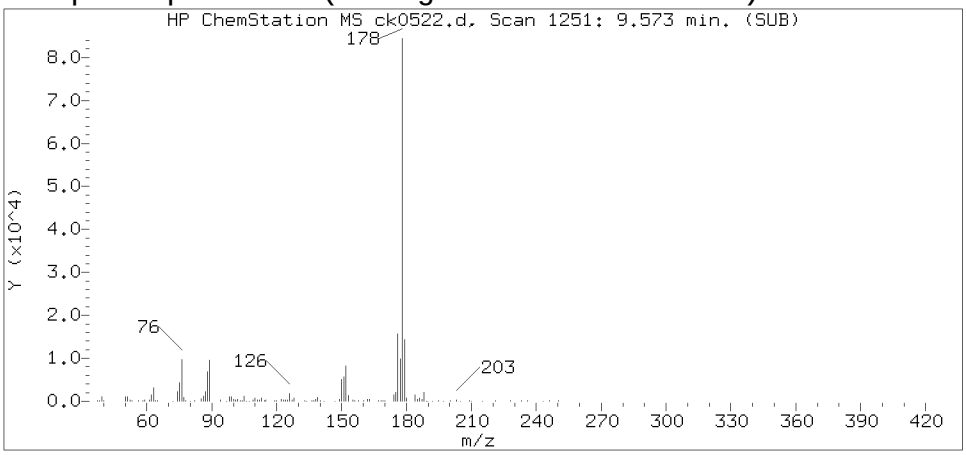
Target 3.5 esignature user ID: mac00013

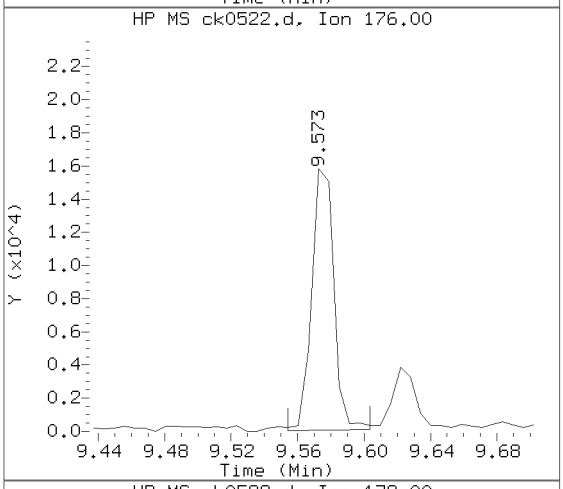
Reference Standard Spectrum for Phenanthrene



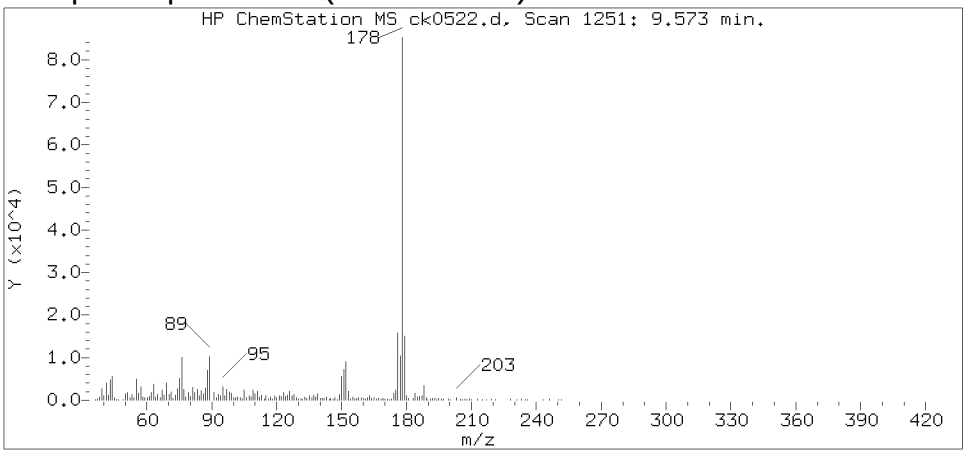


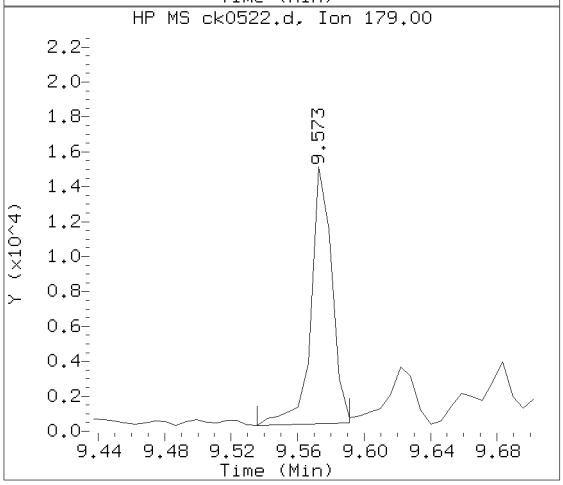
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1251
Retention Time (minutes)	: 9.573
Relative Retention Time	: 0.00064
Quant Ion	: 178.00
Area (flag)	: 77367
On-column Amount (ng/ul)	: 1.8109

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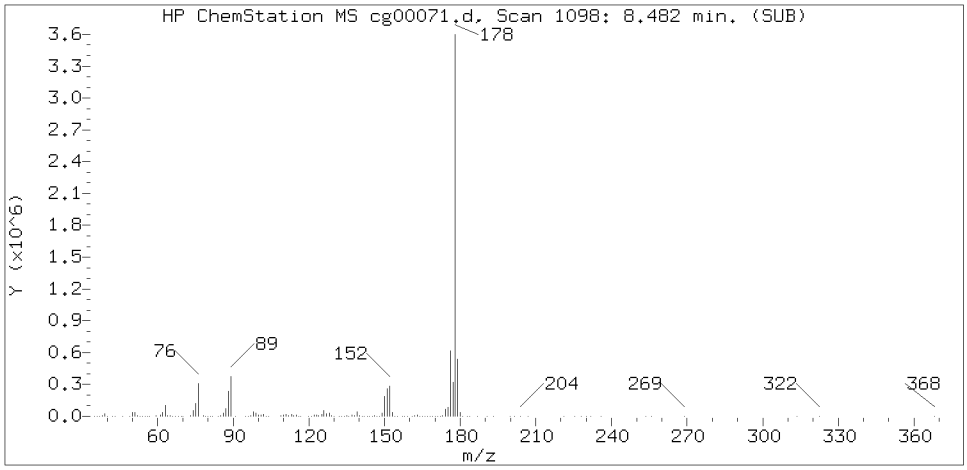
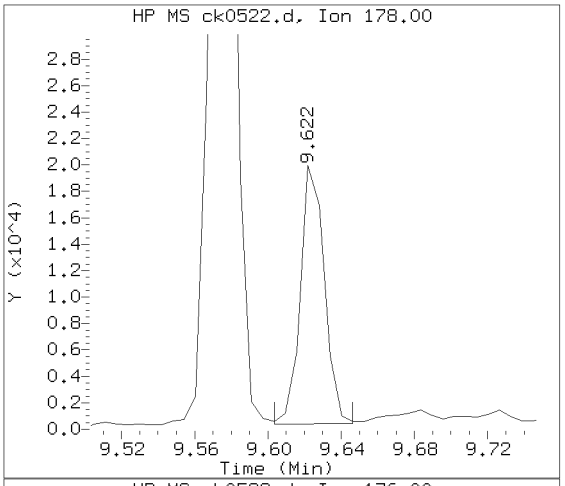
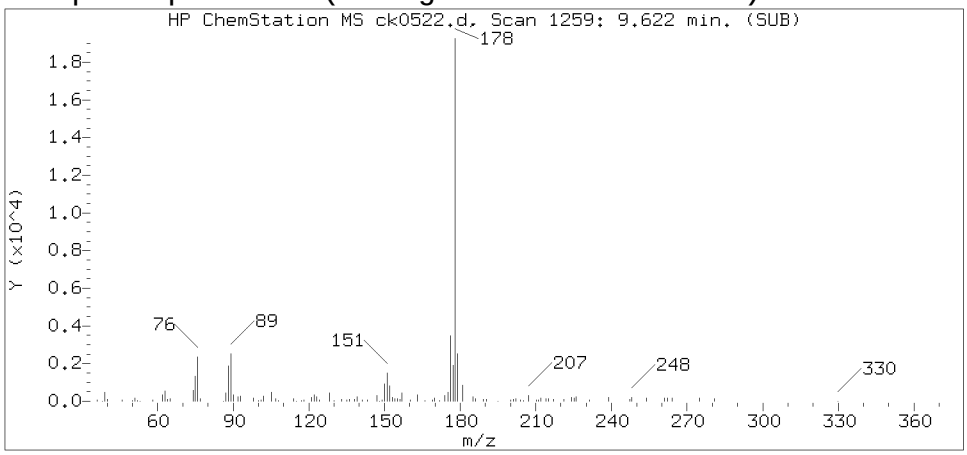
Target 3.5 esignature user ID: mac00013

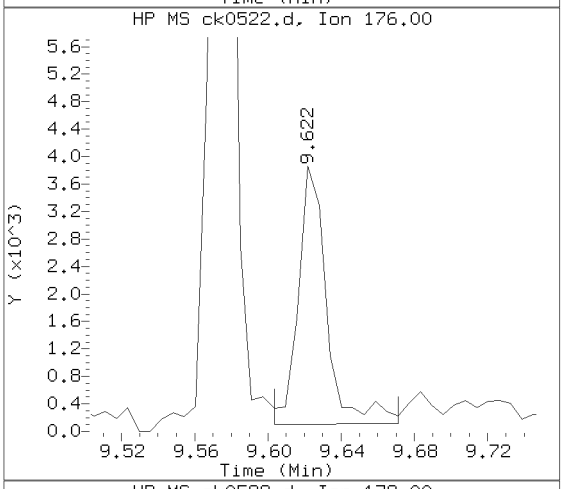
Reference Standard Spectrum for Anthracene



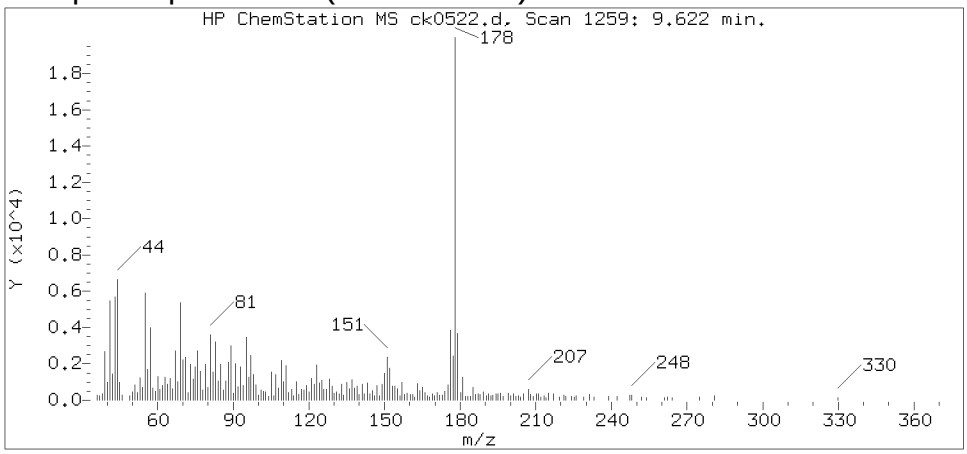


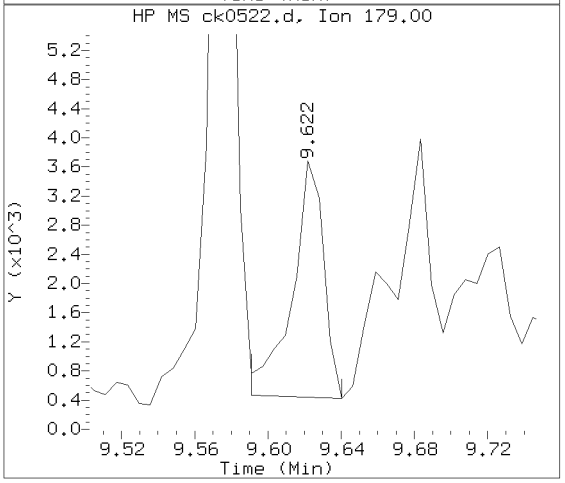
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 138
Compound Name	: Anthracene
Scan Number	: 1259
Retention Time (minutes)	: 9.622
Relative Retention Time	: 0.00064
Quant Ion	: 178.00
Area (flag)	: 17815
On-column Amount (ng/ul)	: 0.4051

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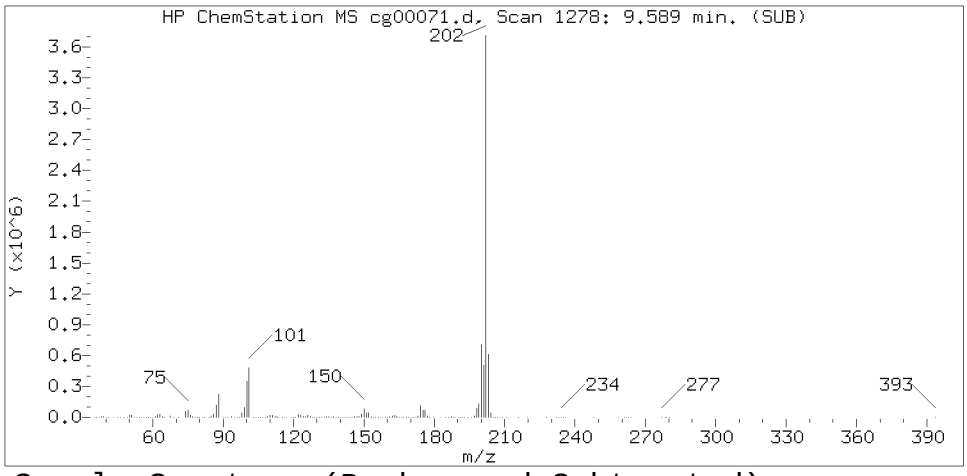
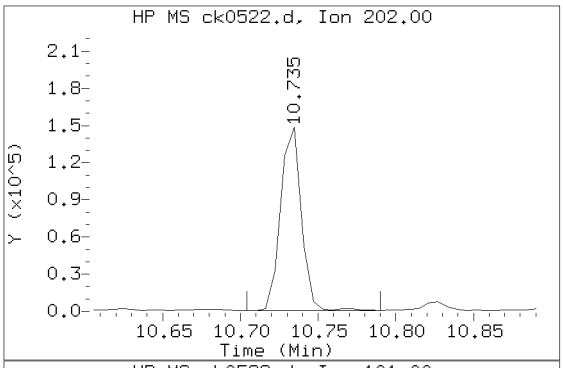
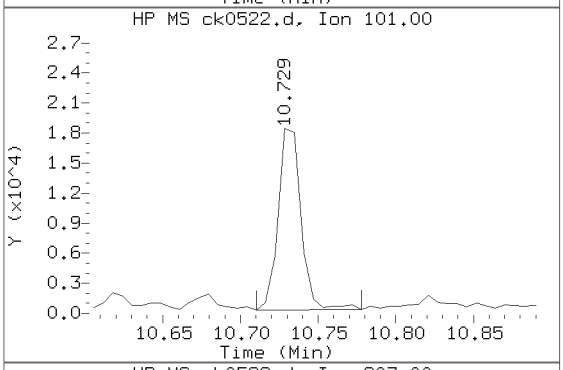
Target 3.5 esignature user ID: mac00013

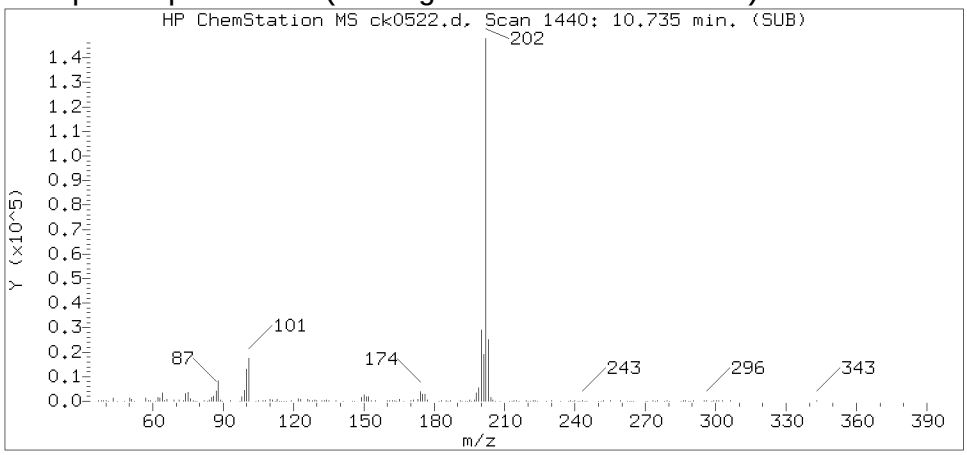
Reference Standard Spectrum for Fluoranthene

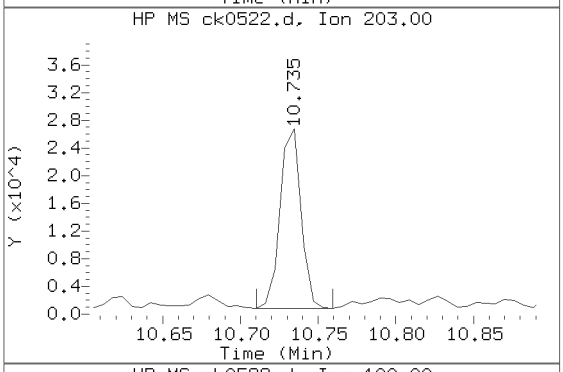




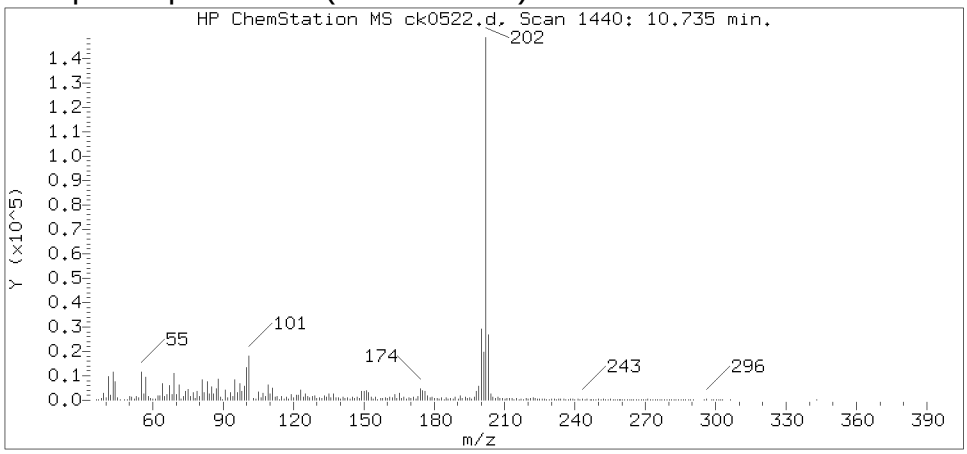


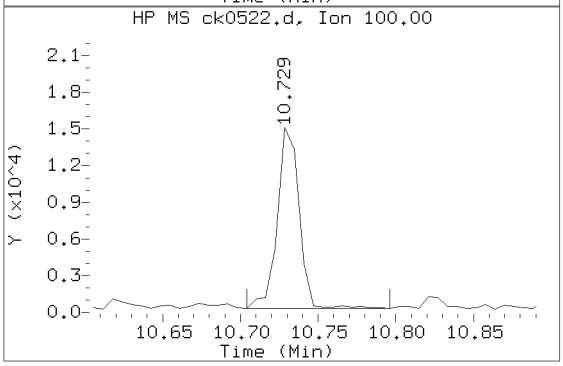
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1440
Retention Time (minutes) : 10.735
Relative Retention Time : 0.00000
Quant Ion : 202.00
Area (flag) : 138069
On-column Amount (ng/ul) : 2.8902

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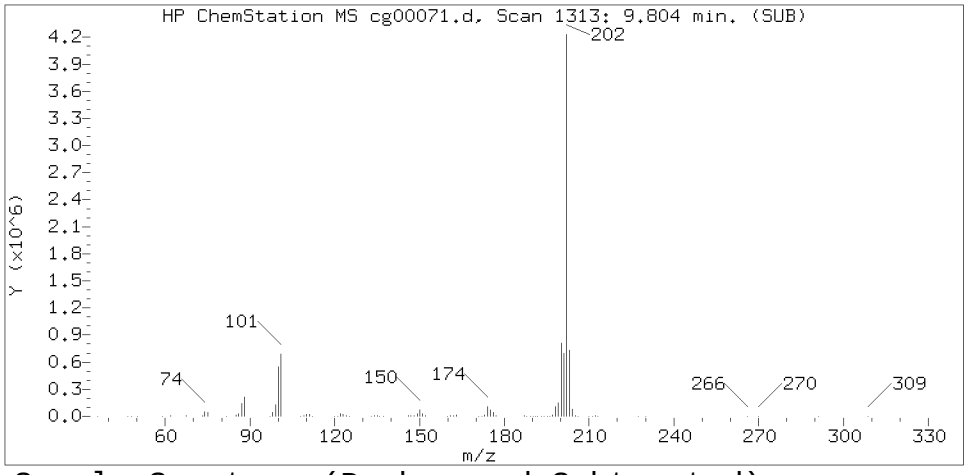
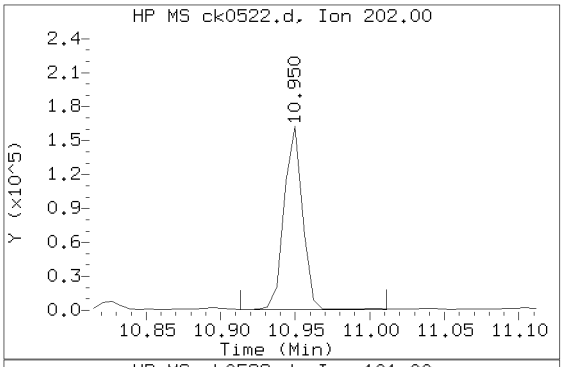
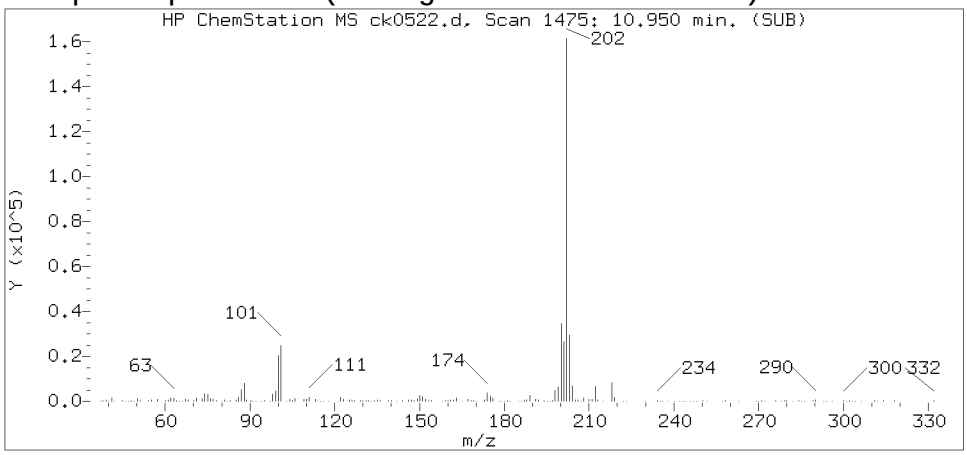
Target 3.5 esignature user ID: mac00013

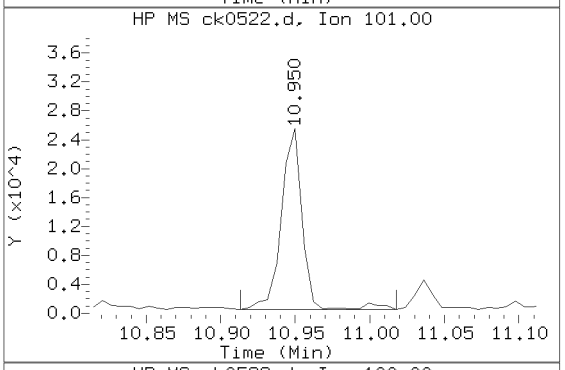
Reference Standard Spectrum for Pyrene

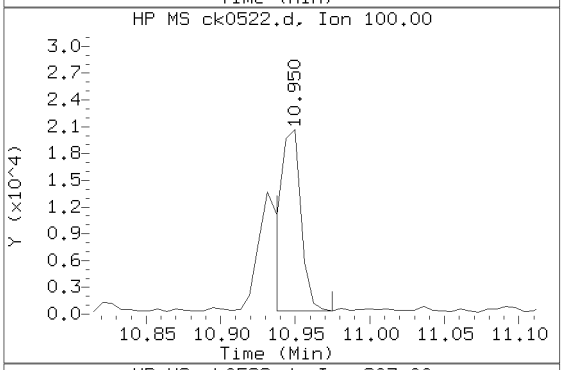




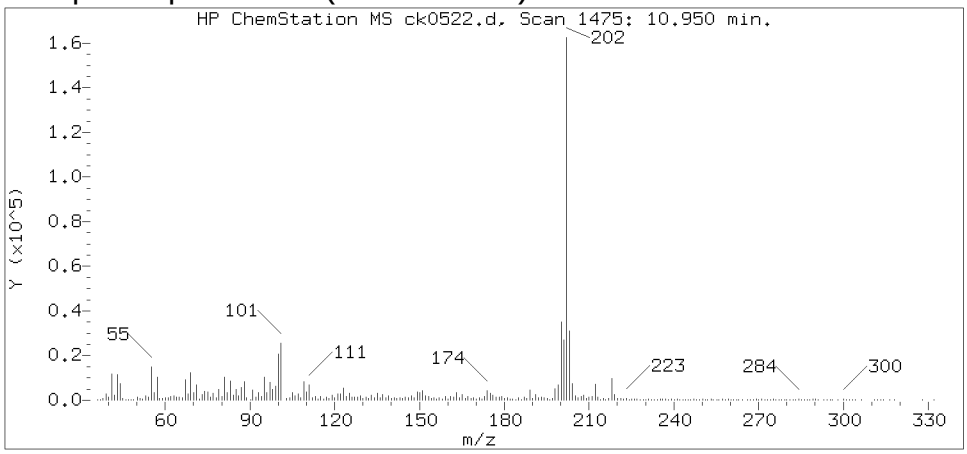
Sample Spectrum (Background Subtracted)

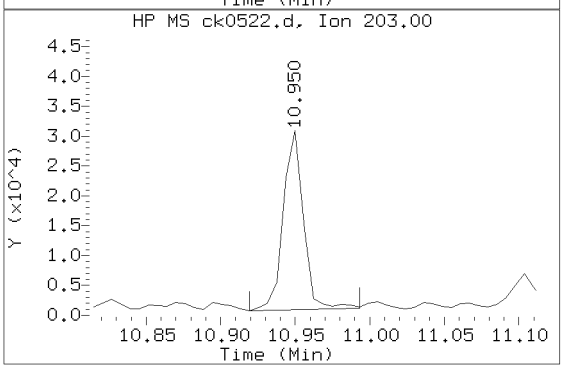






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 140504
On-column Amount (ng/ul)	: 3.0493

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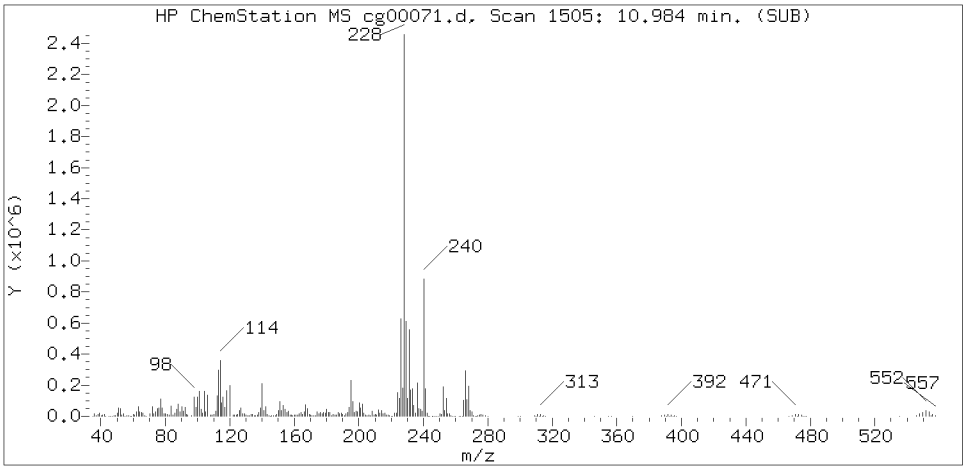
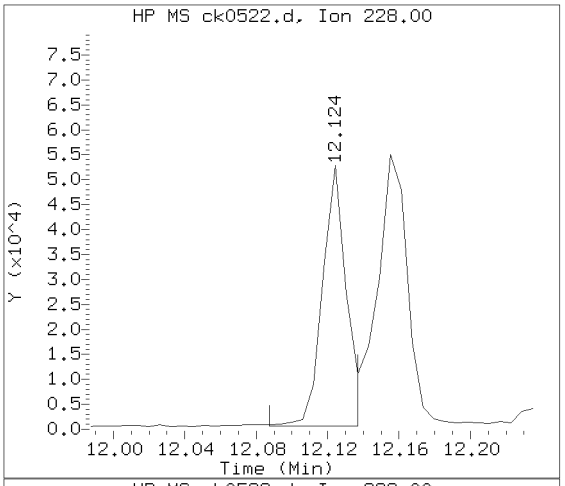
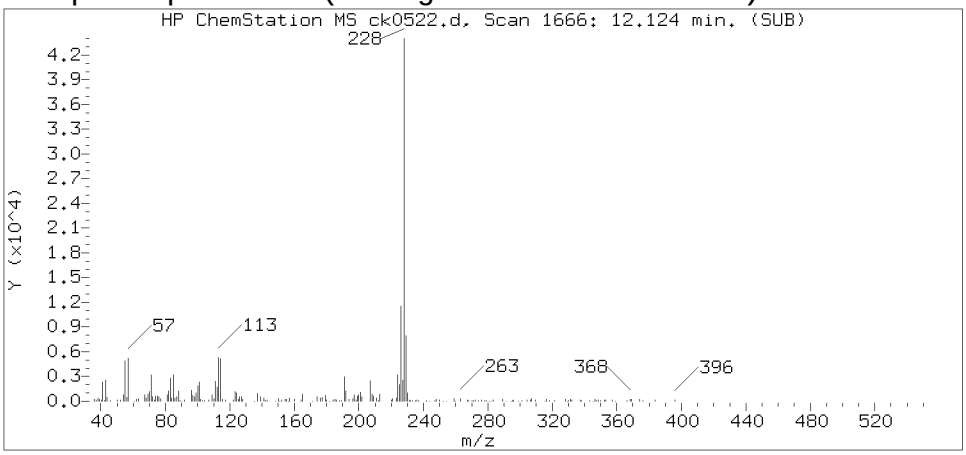
Target 3.5 esignature user ID: mac00013

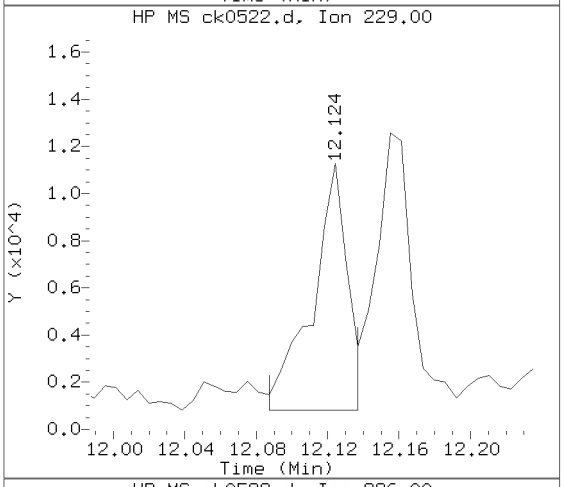
Reference Standard Spectrum for Benzo(a)anthracene



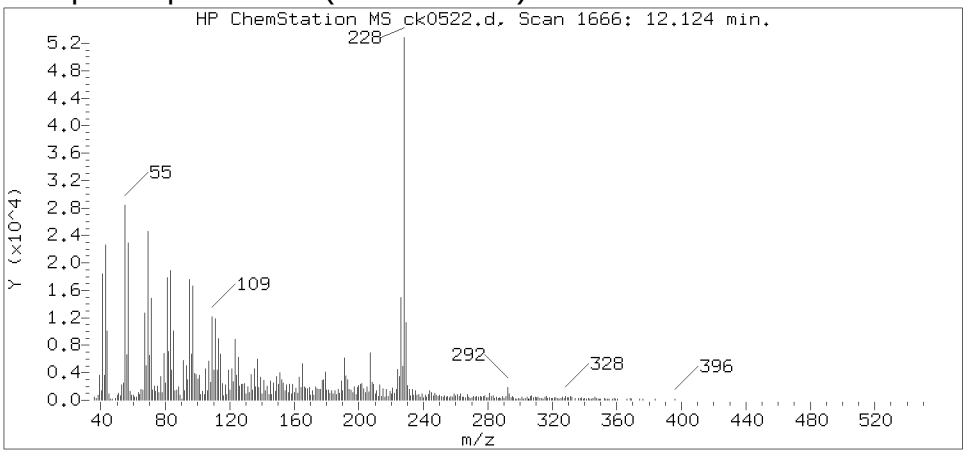


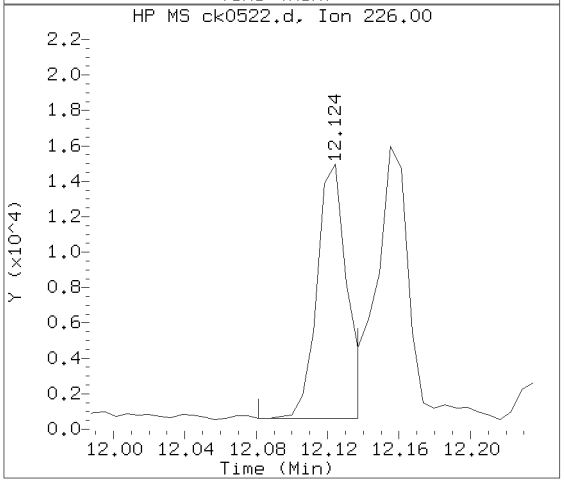
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

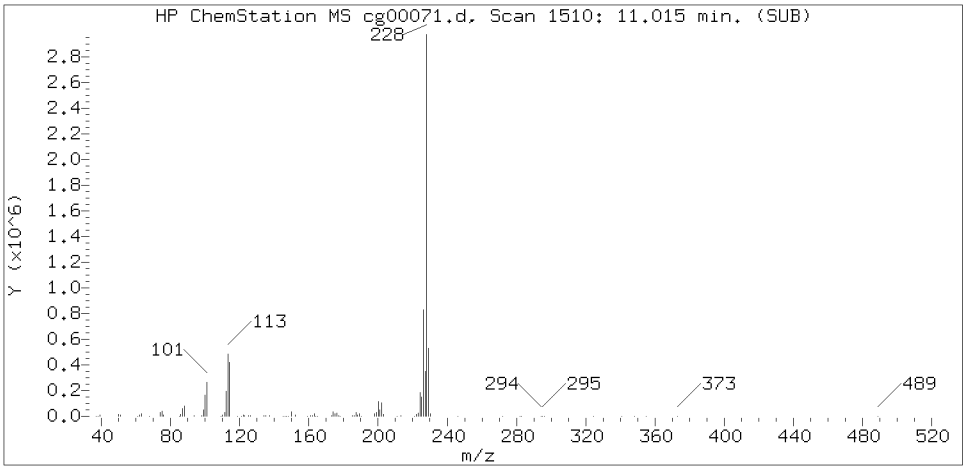
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

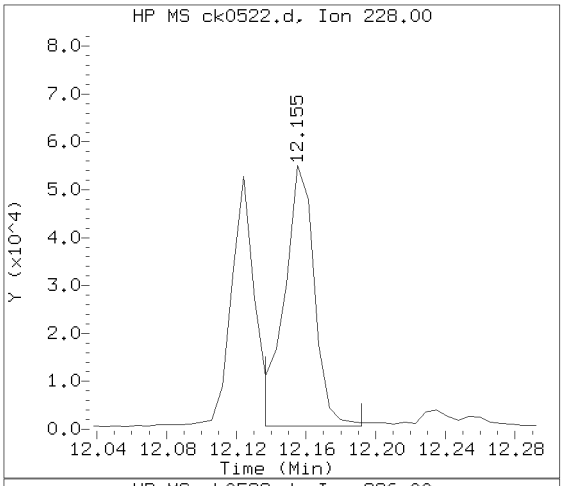
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1666
Retention Time (minutes)	: 12.124
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 47219
On-column Amount (ng/ul)	: 1.1110

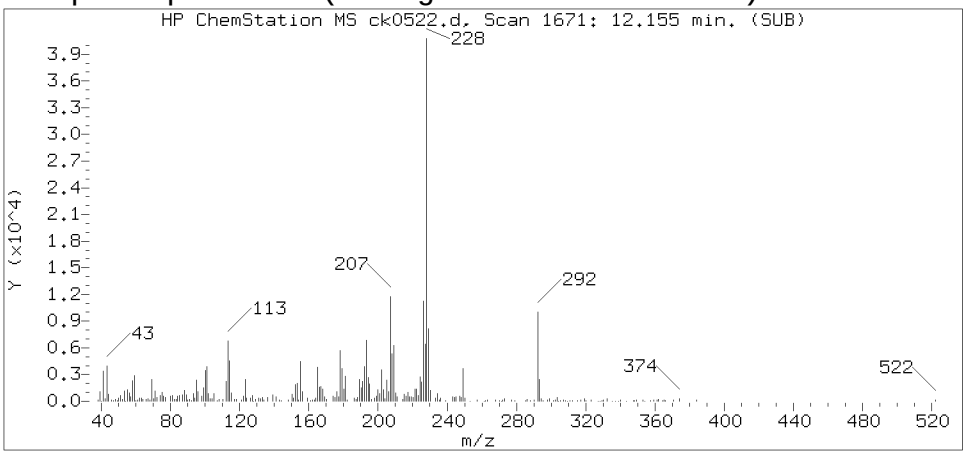
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

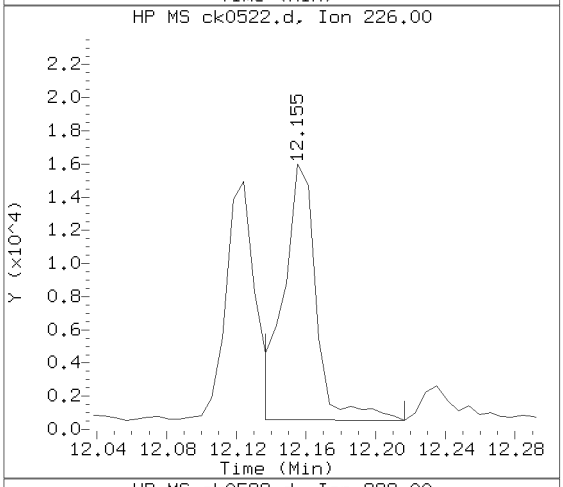
Reference Standard Spectrum for Chrysene



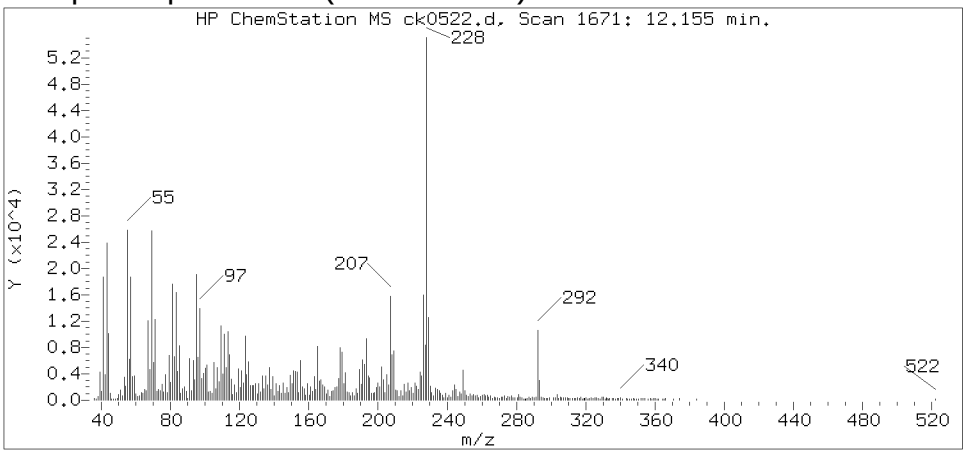


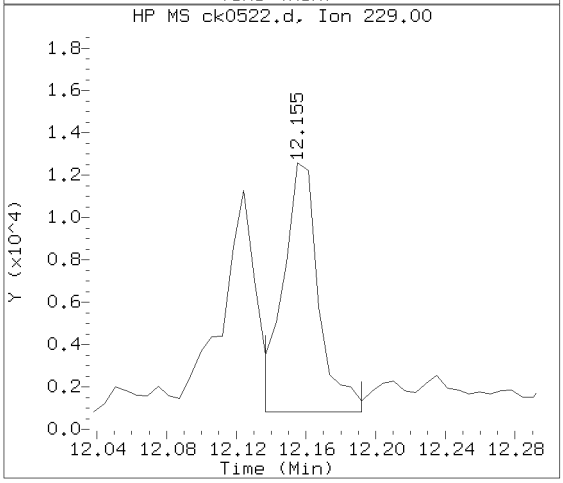
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

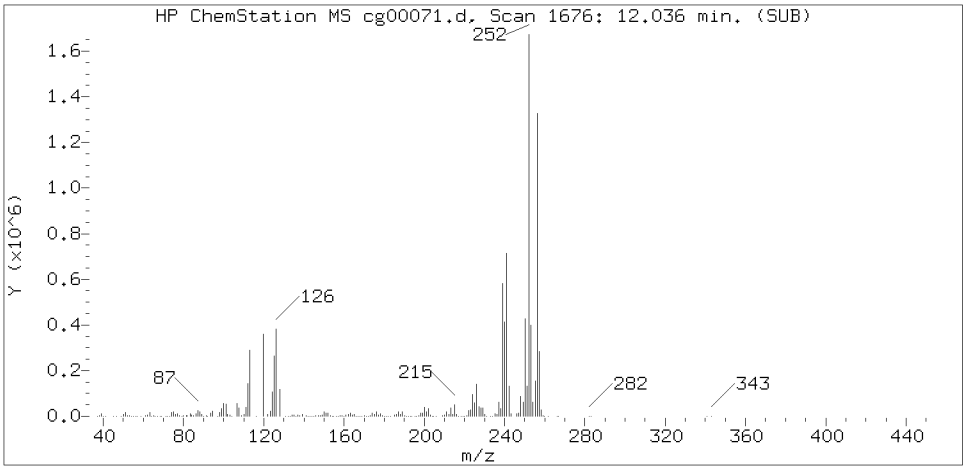
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

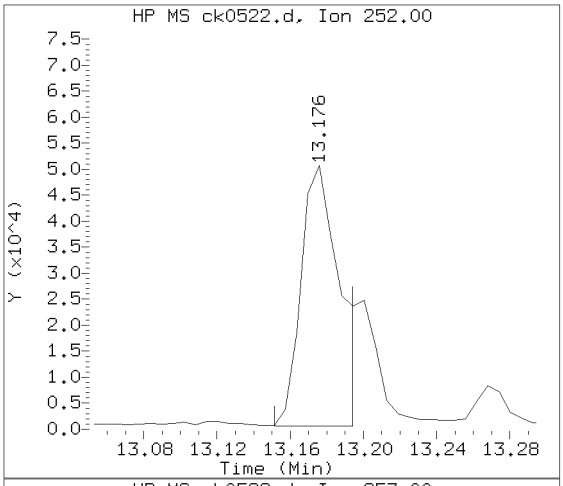
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1671
Retention Time (minutes)	: 12.155
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 65027
On-column Amount (ng/ul)	: 1.5870

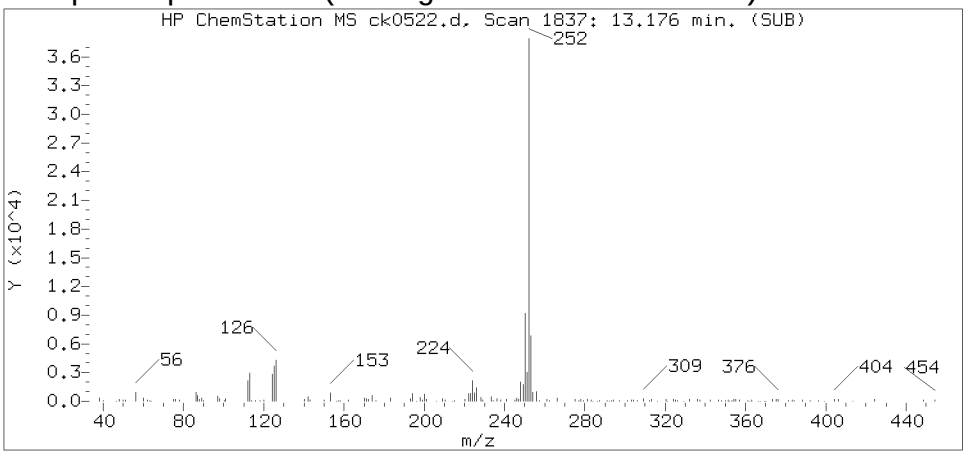
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

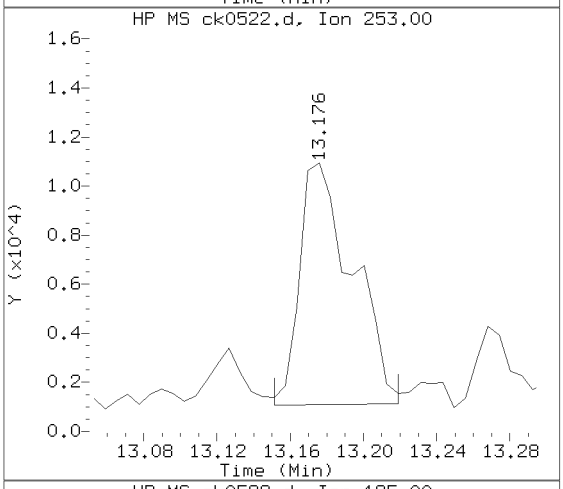
Reference Standard Spectrum for Benzo(b)fluoranthene



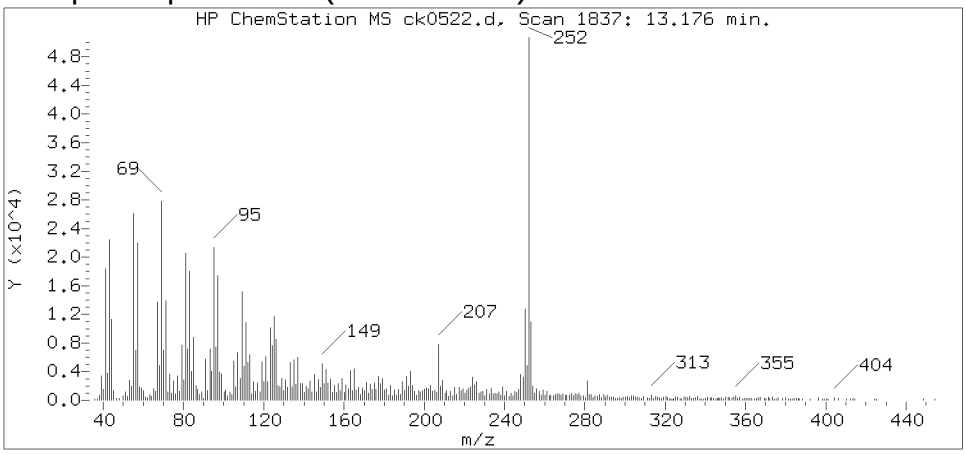


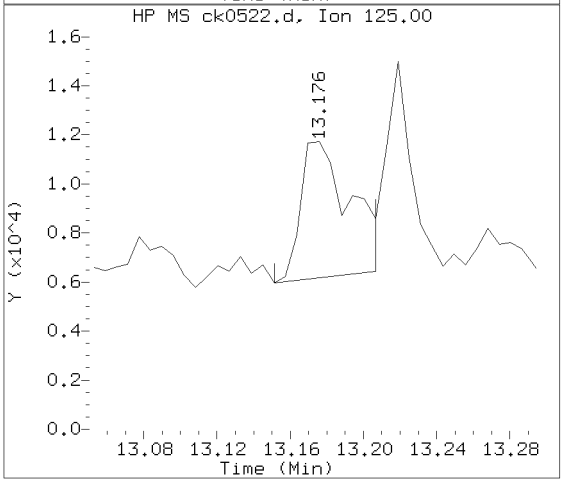
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

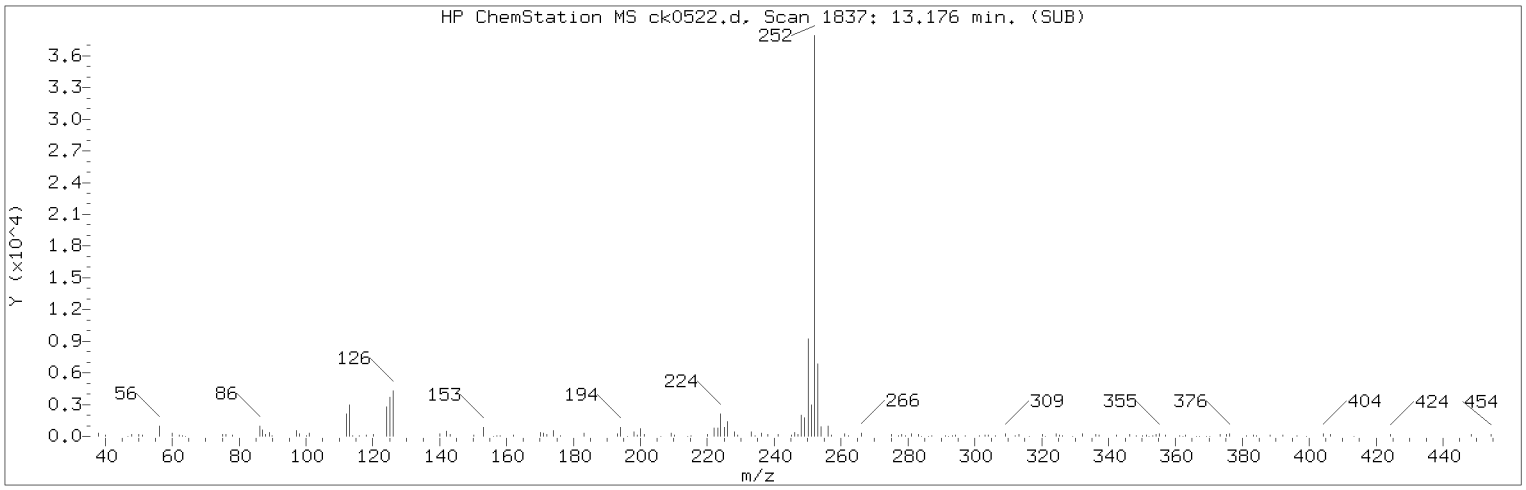
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

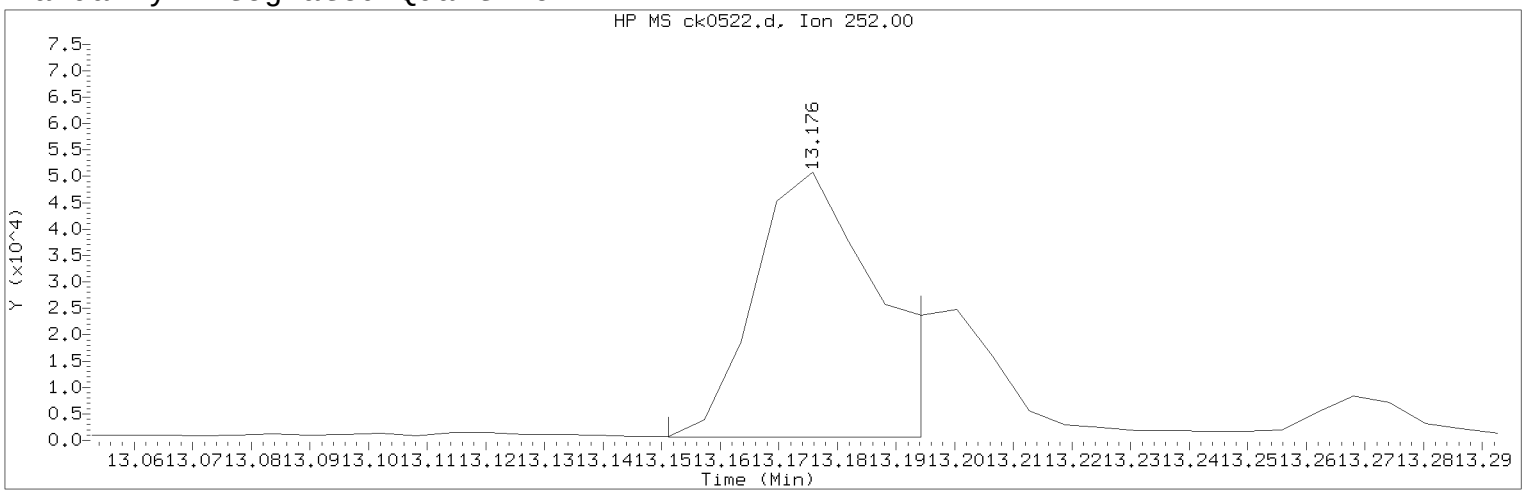
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 74112M
On-column Amount (ng/ul) : 2.2279

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

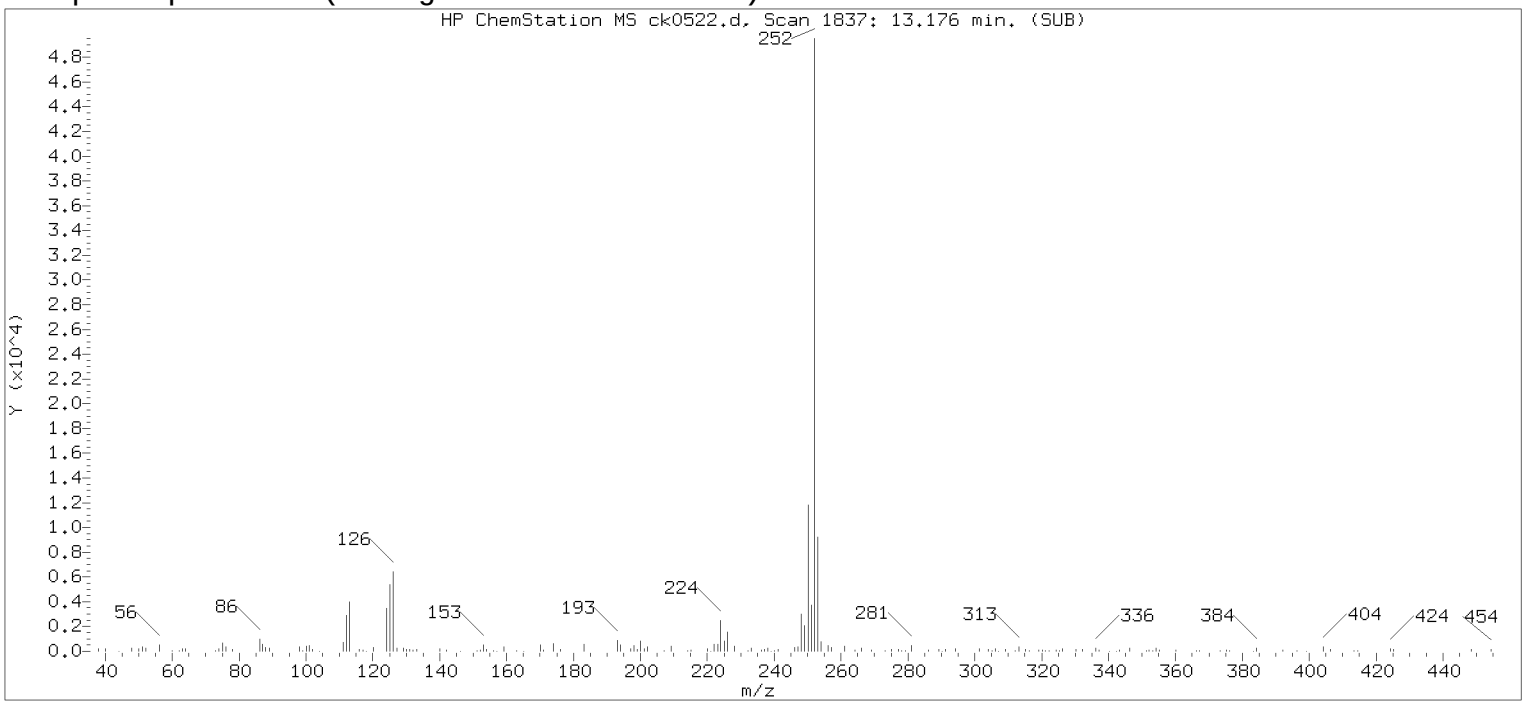
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area (flag) : 74112M
On-column Amount (ng/ul) : 2.2279
Integration start scan : 1832 Integration stop scan: 1839
Y at integration start : 661 Y at integration end: 661

Reason for manual integration: improper integration

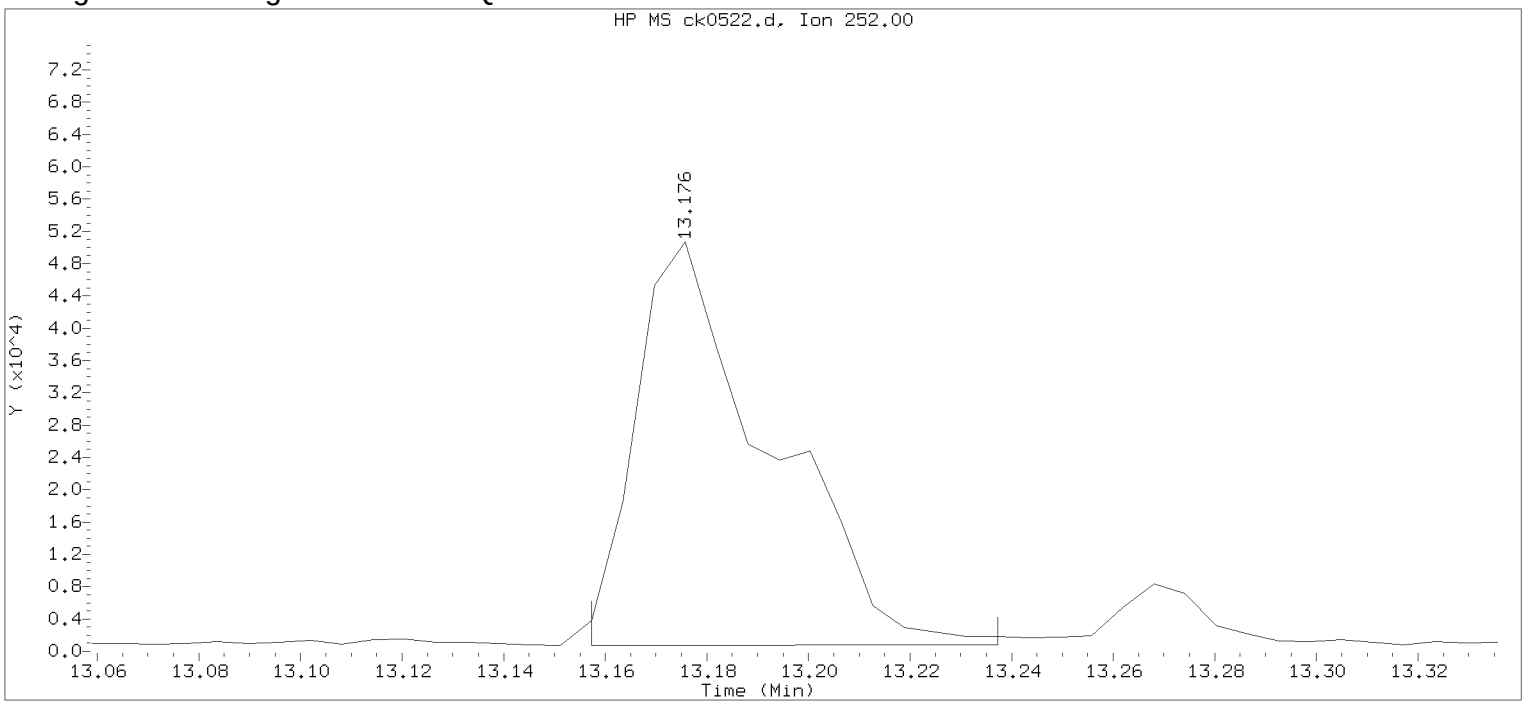
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

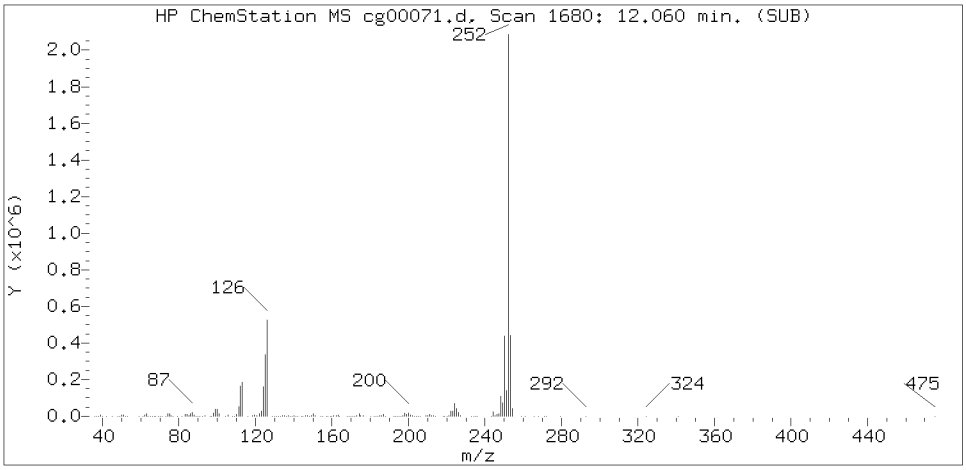
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 03:25 Automation

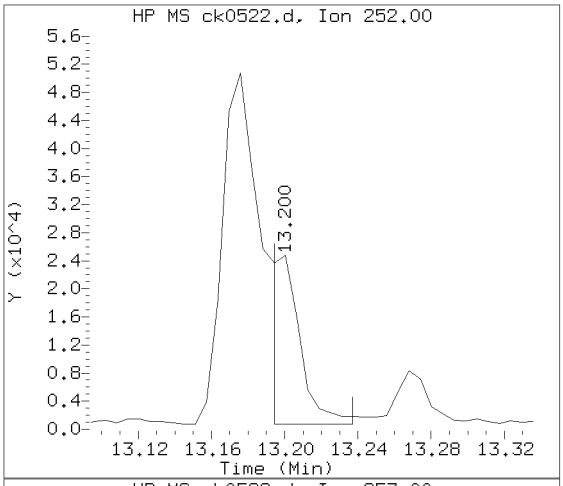
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1837		
Retention Time (minutes)	: 13.176		
Quant Ion	: 252.00		
Area	: 91498		
On-column Amount (ng/ul)	: 2.7506		
Integration start scan	: 1833	Integration stop scan:	1846
Y at integration start	: 750	Y at integration end:	773

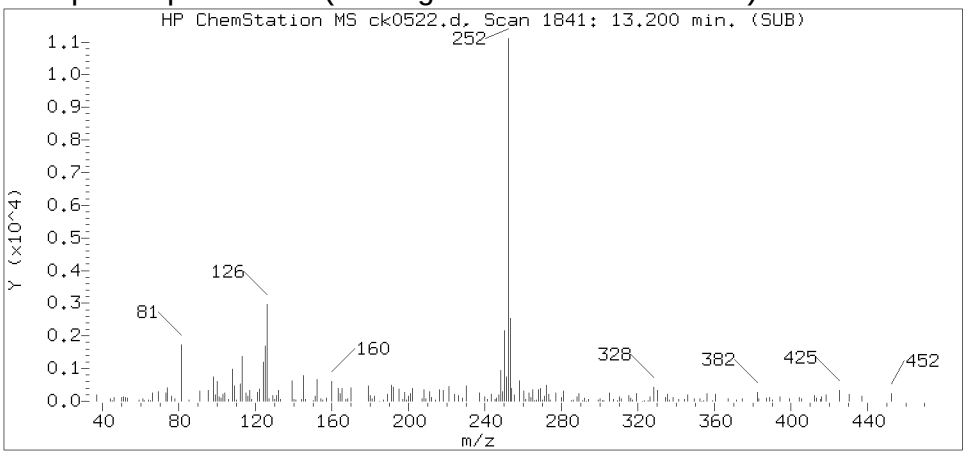
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

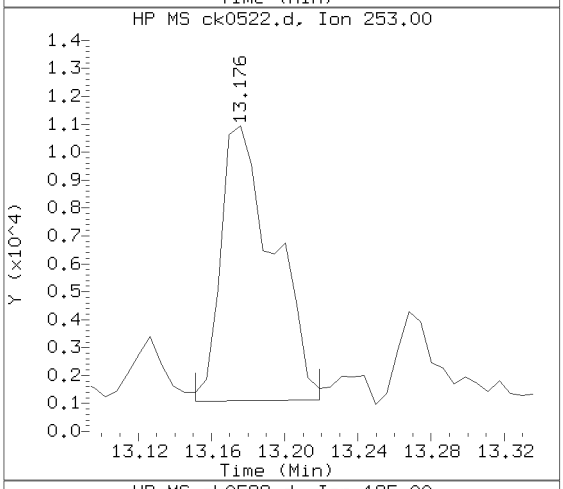
Reference Standard Spectrum for Benzo(k)fluoranthene



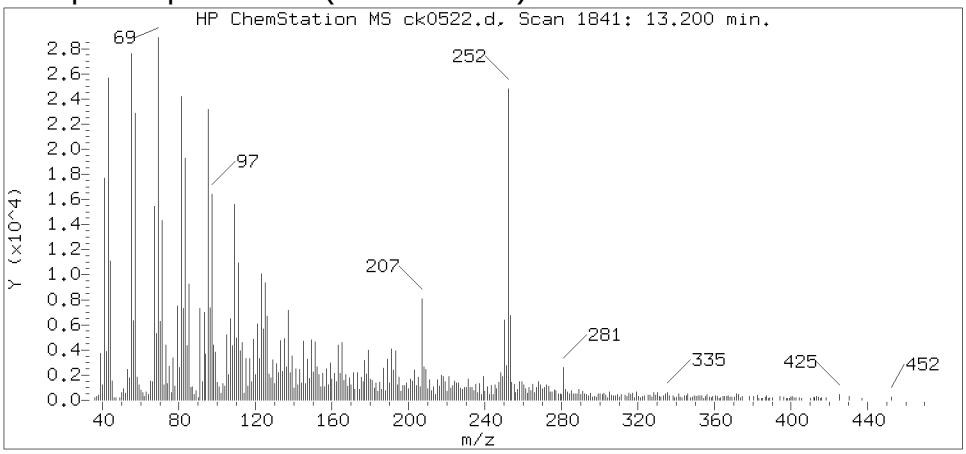


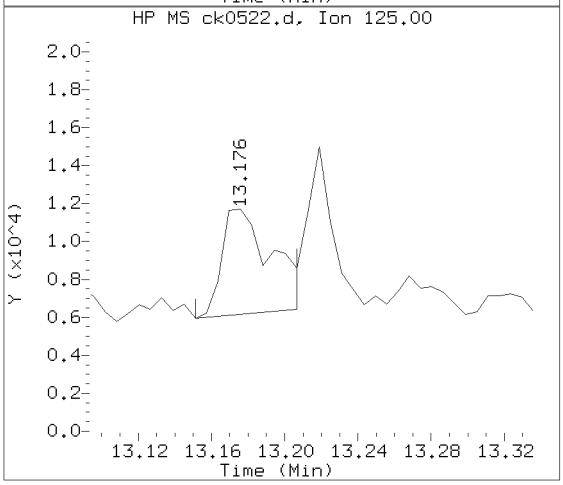
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

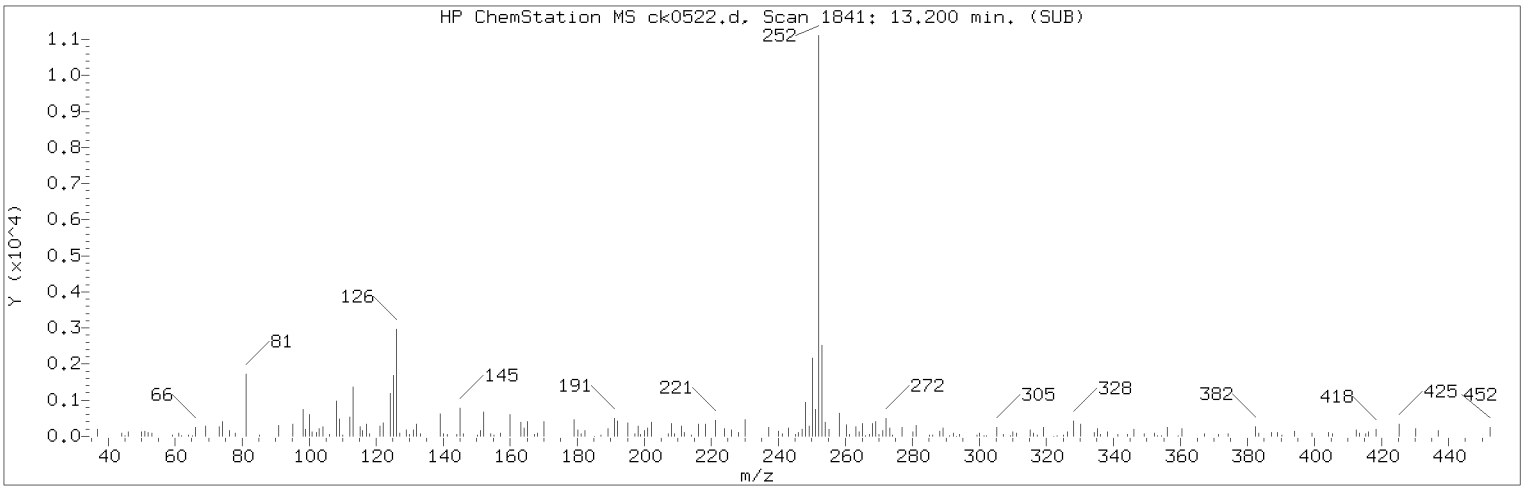
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

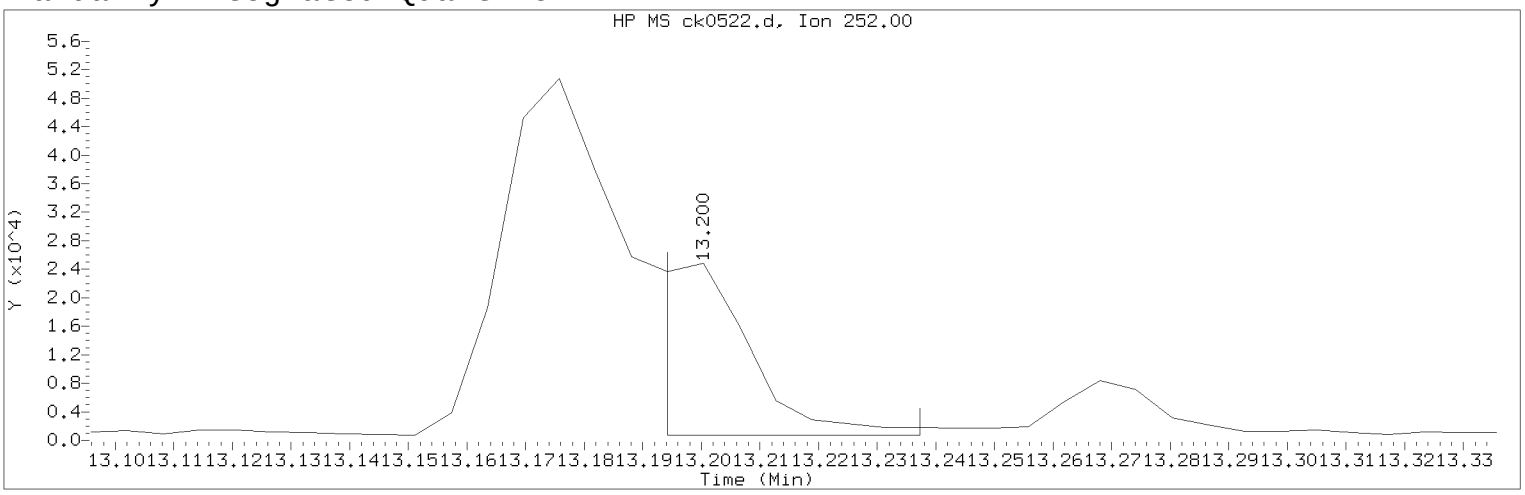
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1841
Retention Time (minutes) : 13.200
Relative Retention Time : 0.00045
Quant Ion : 252.00
Area (flag) : 26964M
On-column Amount (ng/ul) : 0.7945

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

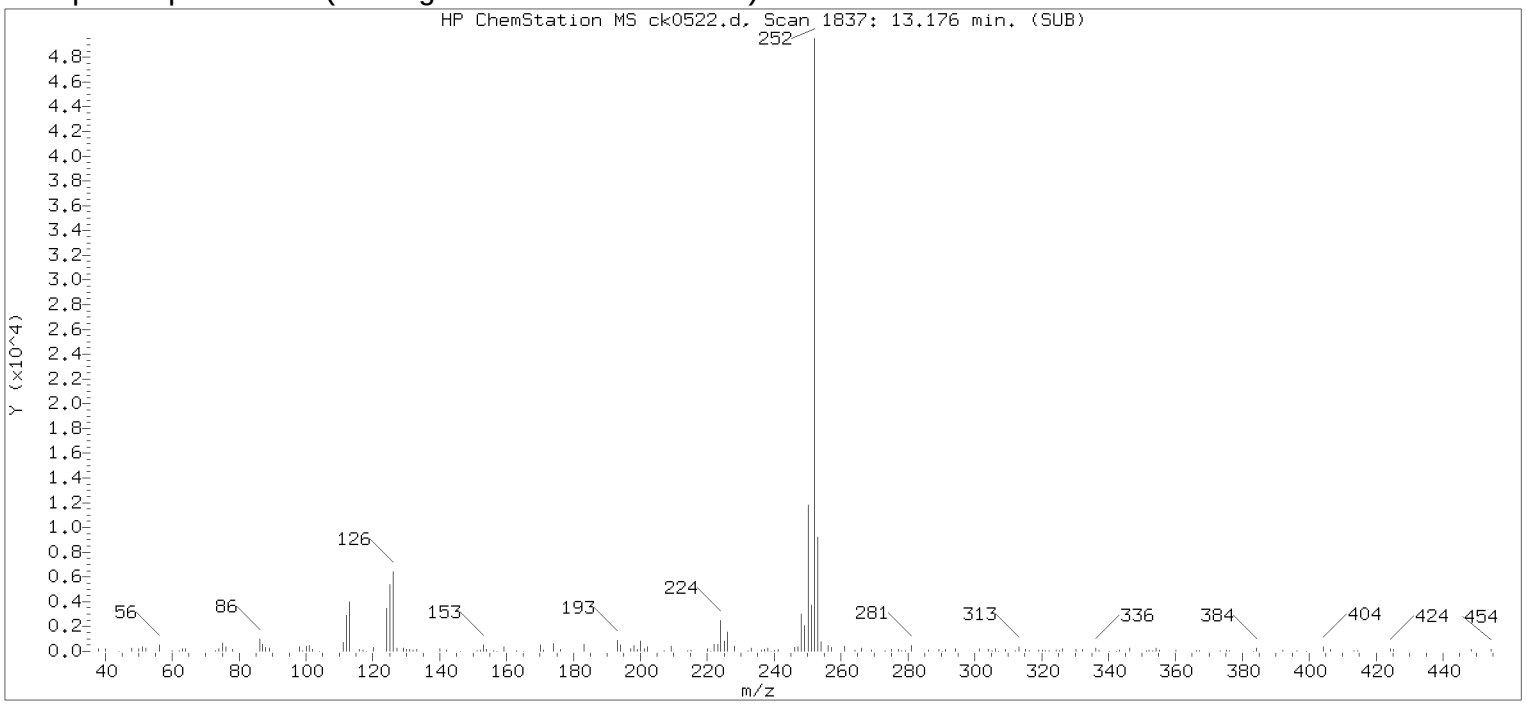
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1841
Retention Time (minutes) : 13.200
Quant Ion : 252.00
Area (flag) : 26964M
On-column Amount (ng/ul) : 0.7945
Integration start scan : 1839 Integration stop scan: 1846
Y at integration start : 732 Y at integration end: 732

Reason for manual integration: improper integration

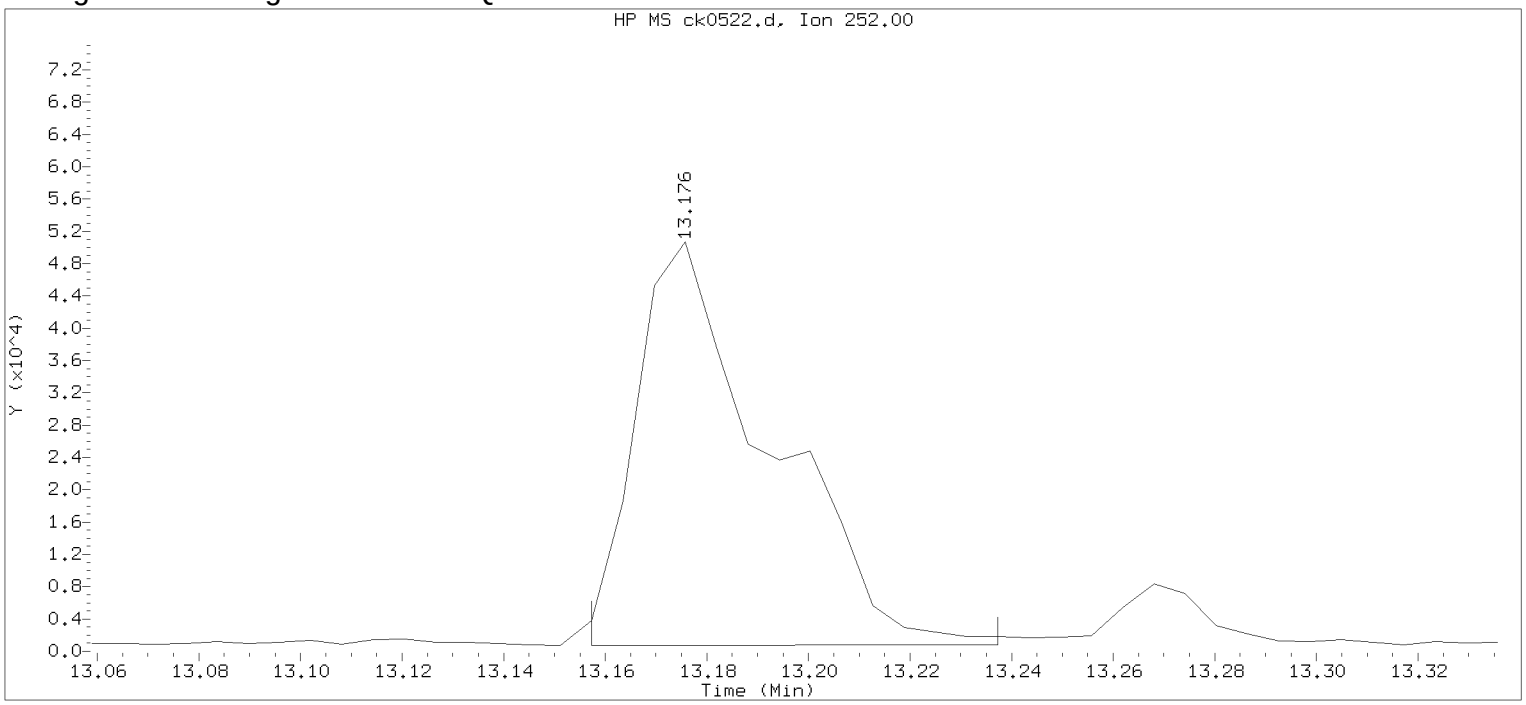
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

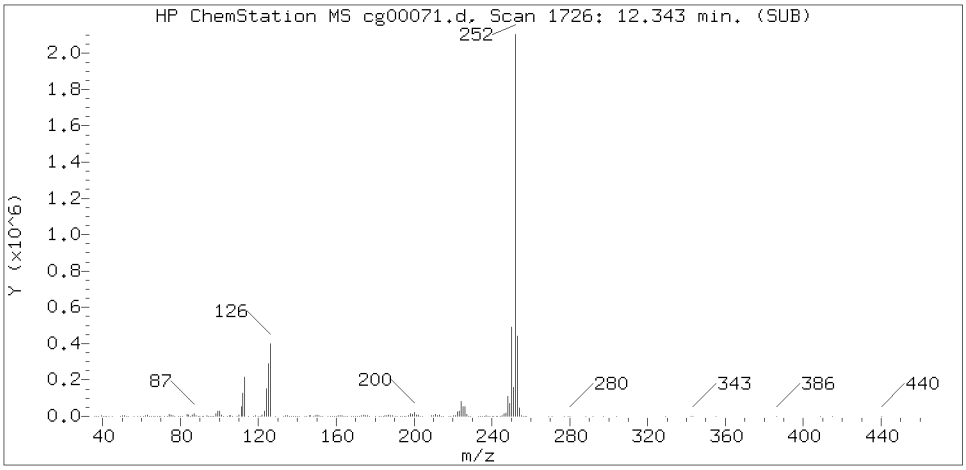
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 03:25 Automation

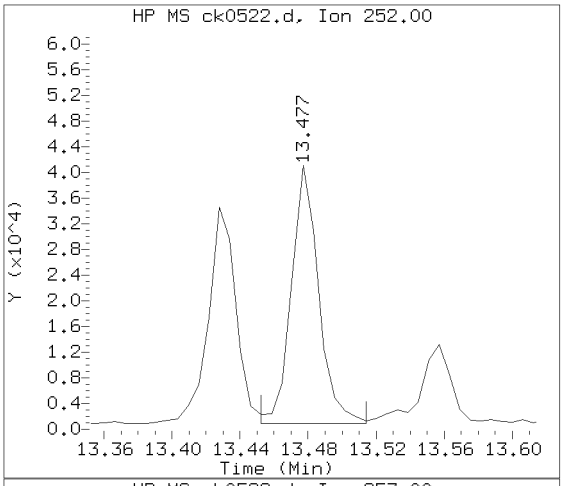
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area : 91498
On-column Amount (ng/ul) : 2.6961
Integration start scan : 1833 Integration stop scan: 1846
Y at integration start : 750 Y at integration end: 773

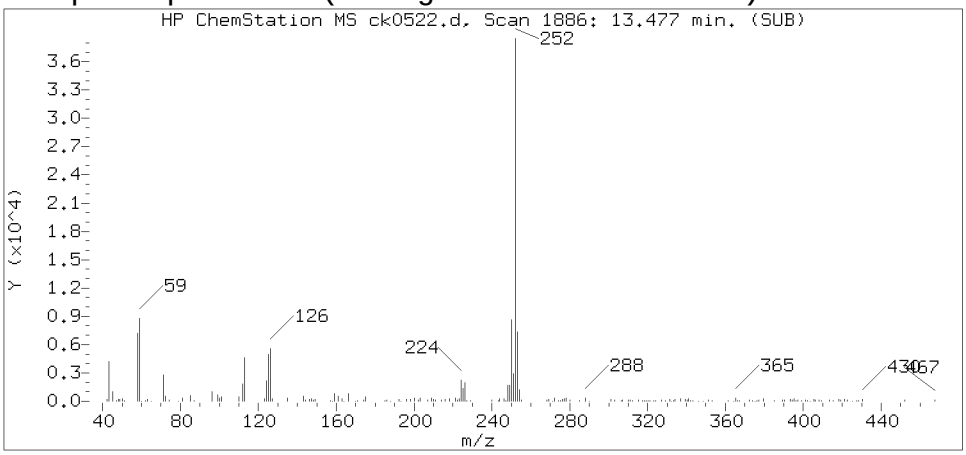
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

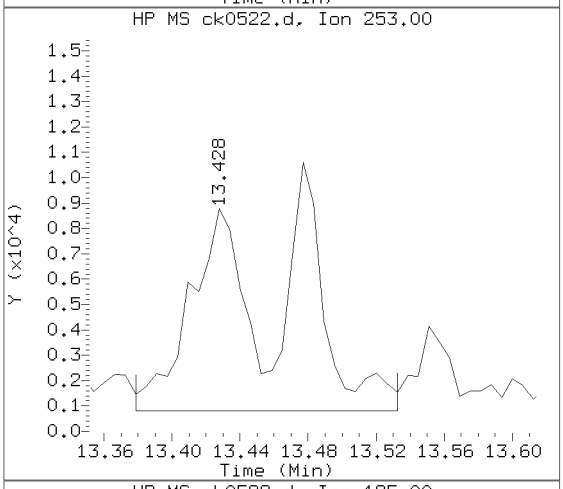
Reference Standard Spectrum for Benzo(a)pyrene



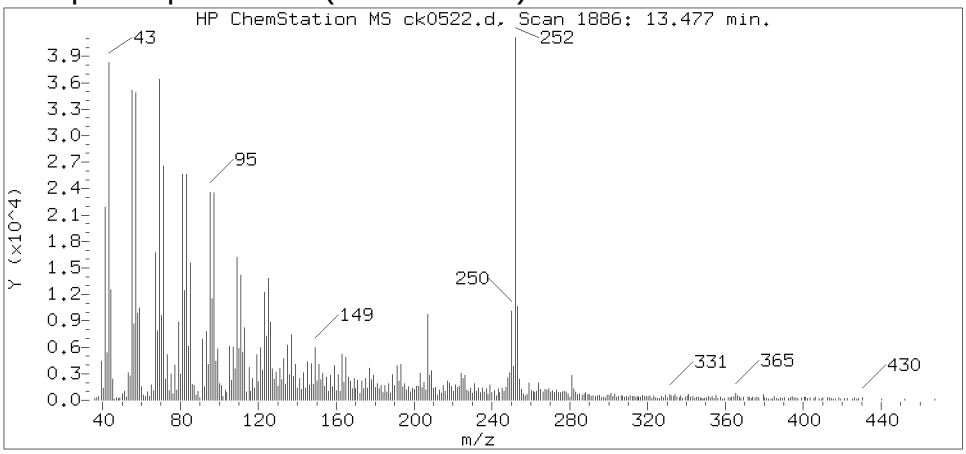


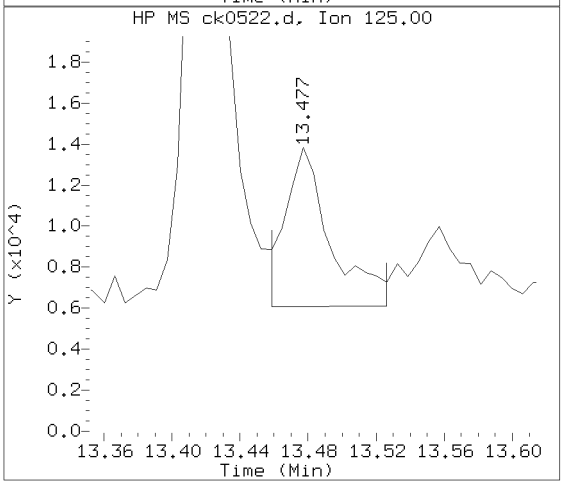
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

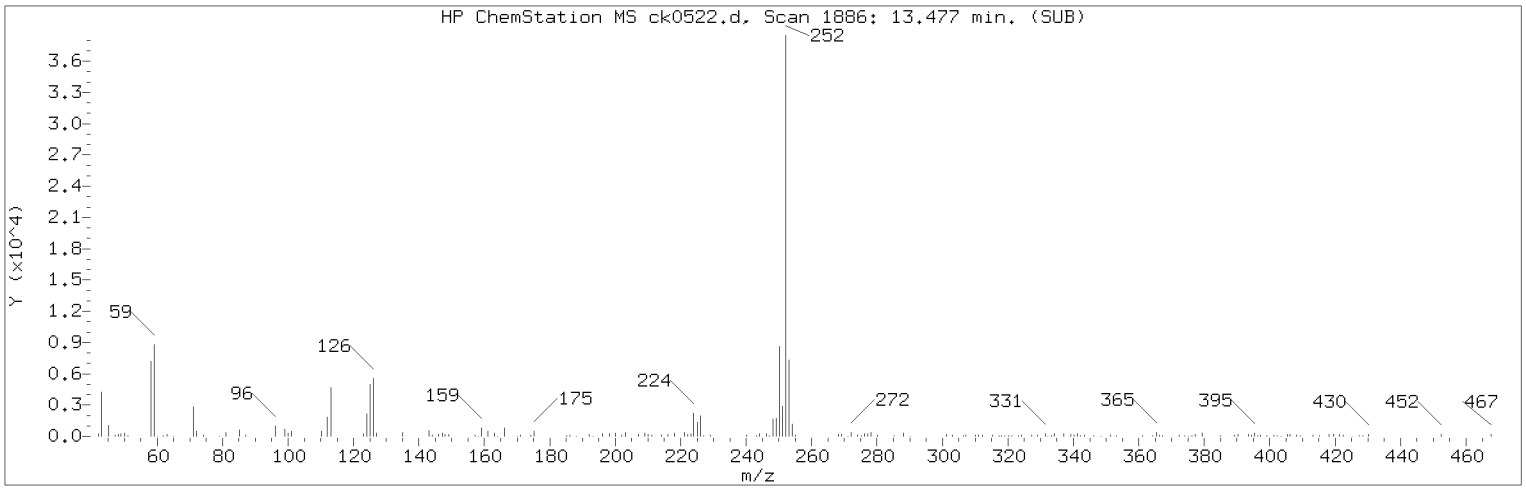
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

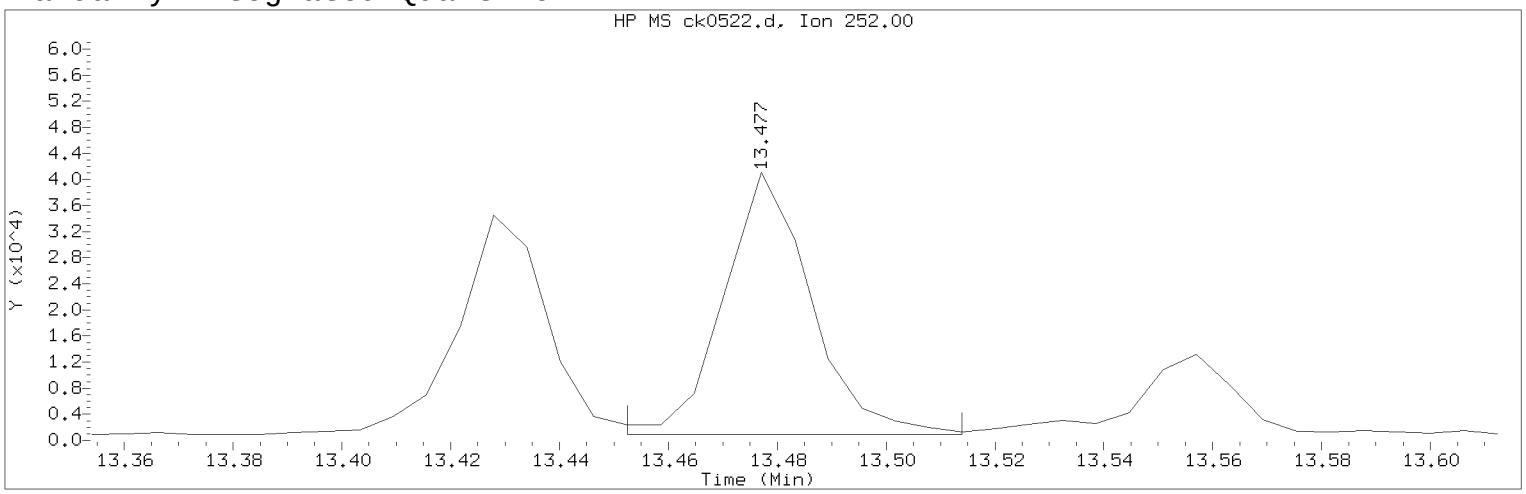
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1886
Retention Time (minutes) : 13.477
Relative Retention Time : 0.00045
Quant Ion : 252.00
Area (flag) : 45066M
On-column Amount (ng/ul) : 1.3880

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

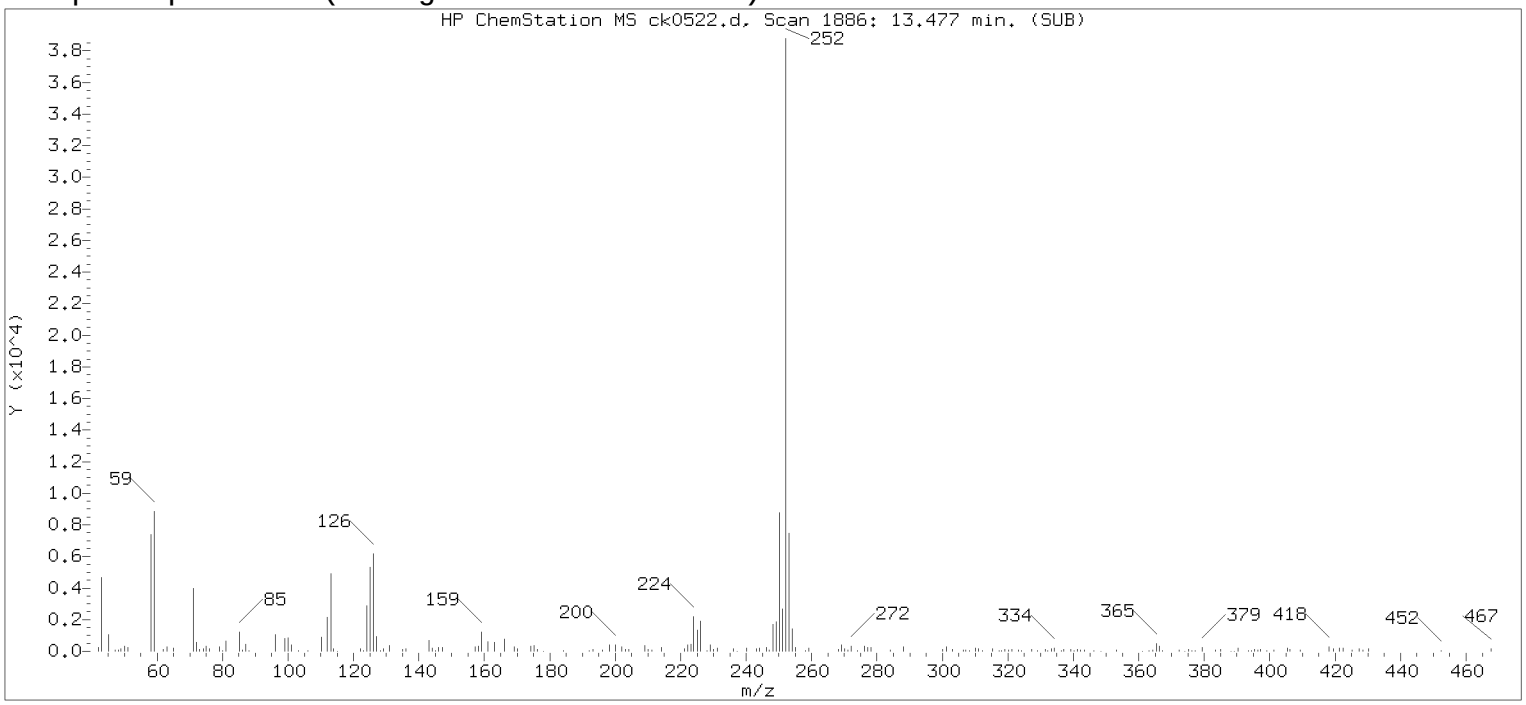
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1886
Retention Time (minutes) : 13.477
Quant Ion : 252.00
Area (flag) : 45066M
On-column Amount (ng/ul) : 1.3880
Integration start scan : 1881 Integration stop scan: 1891
Y at integration start : 863 Y at integration end: 863

Reason for manual integration: improper integration

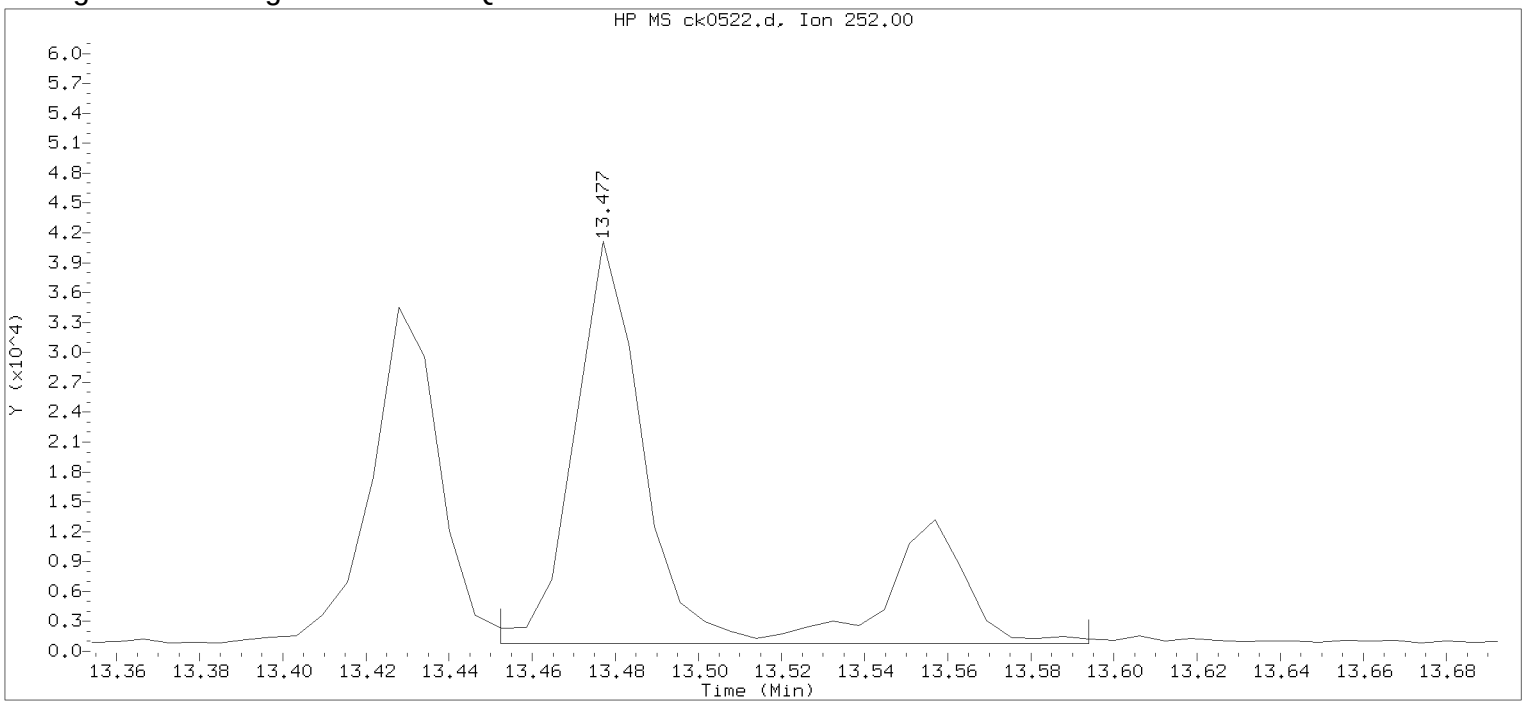
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

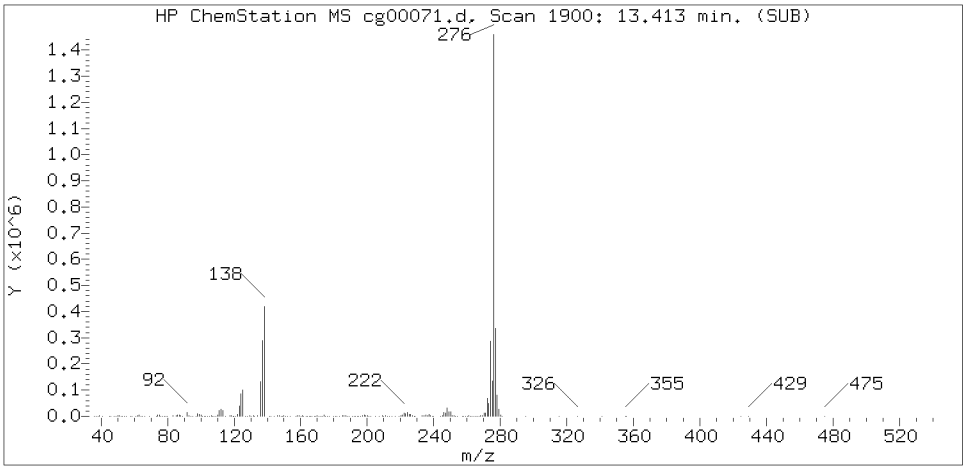
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 03:25 Automation

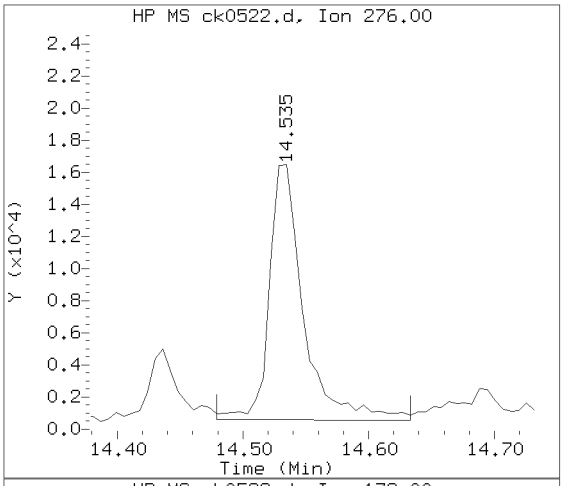
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1886		
Retention Time (minutes)	: 13.477		
Quant Ion	: 252.00		
Area	: 61700		
On-column Amount (ng/ul)	: 1.9004		
Integration start scan	: 1881	Integration stop scan:	1904
Y at integration start	: 768	Y at integration end:	761

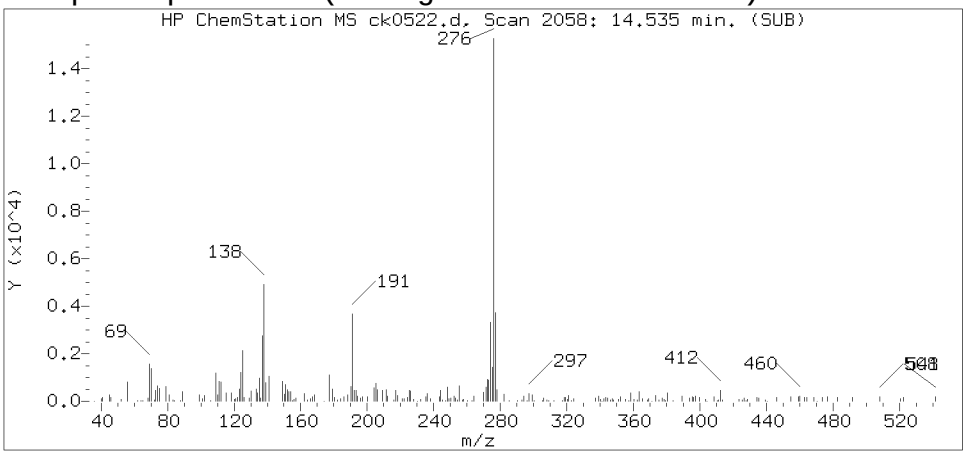
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

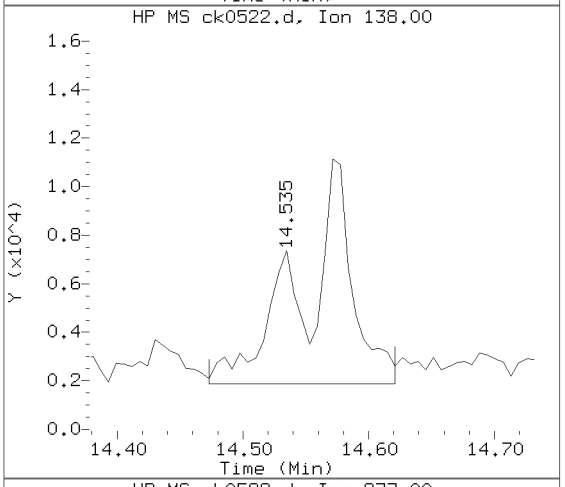
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



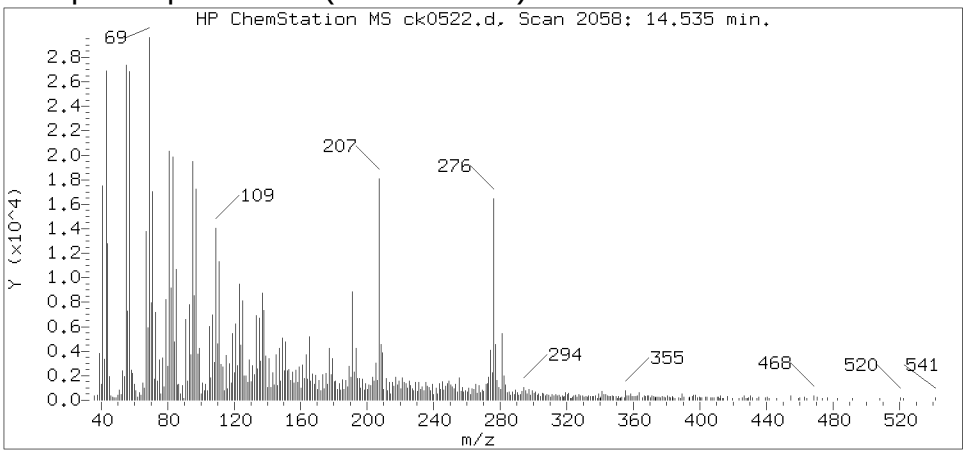


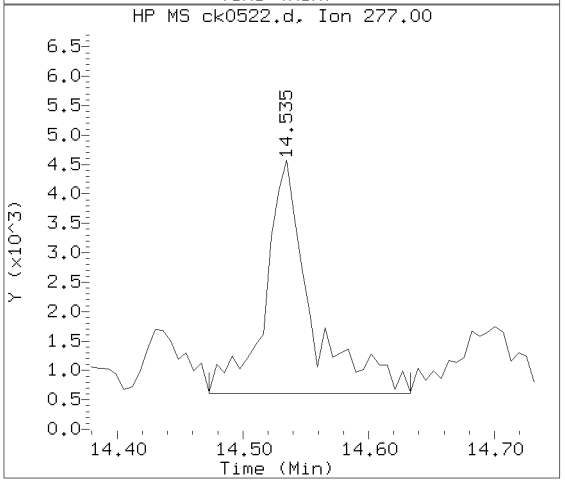
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

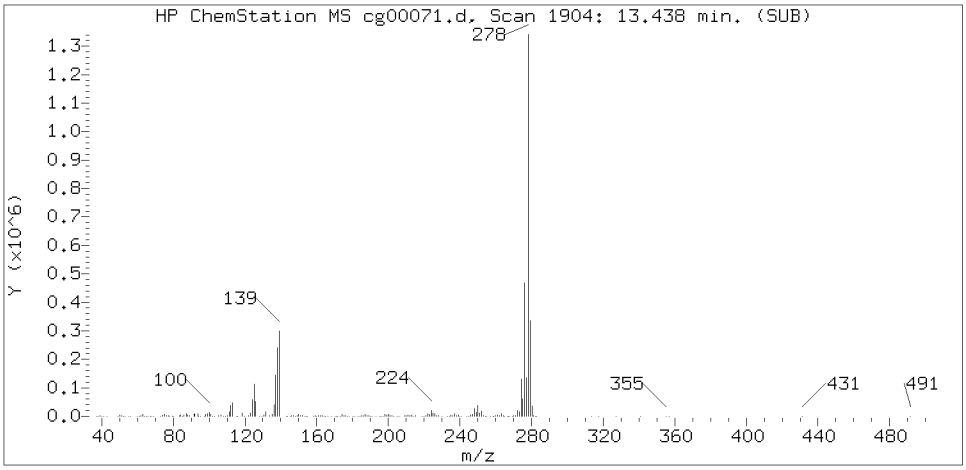
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

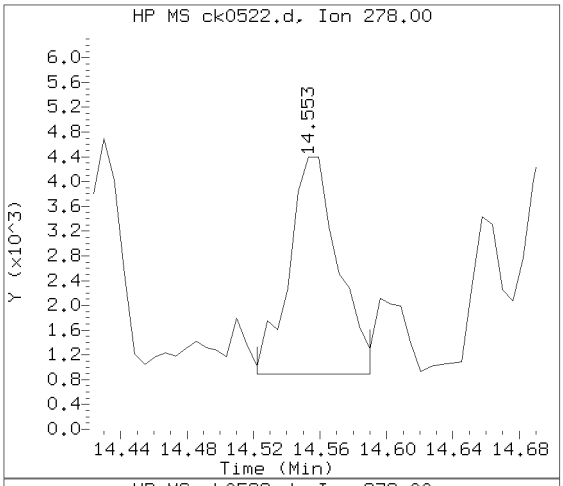
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2058
Retention Time (minutes)	: 14.535
Relative Retention Time	: 0.00045
Quant Ion	: 276.00
Area (flag)	: 30338
On-column Amount (ng/ul)	: 0.8783

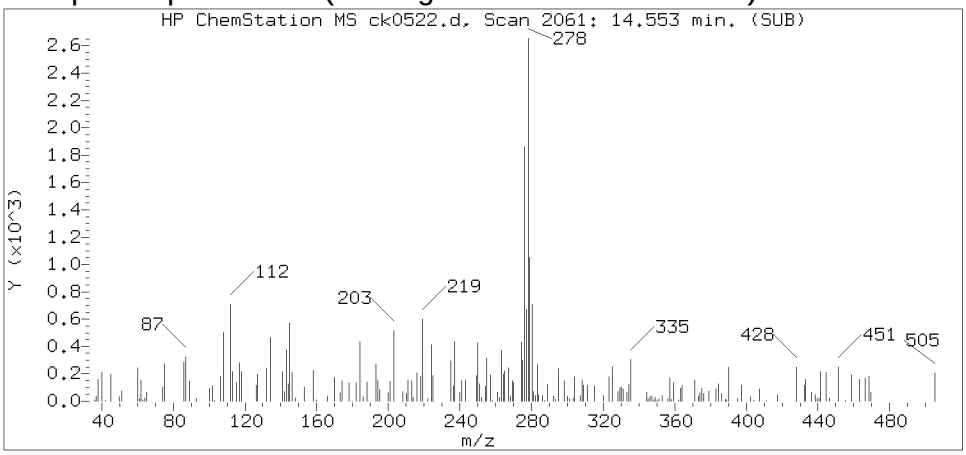
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

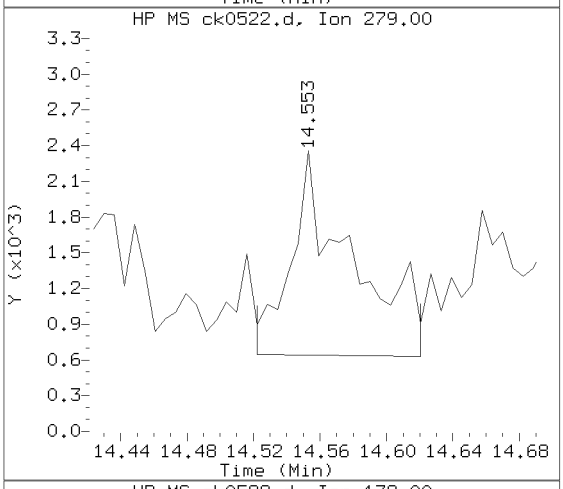
Reference Standard Spectrum for Dibenz(a,h)anthracene



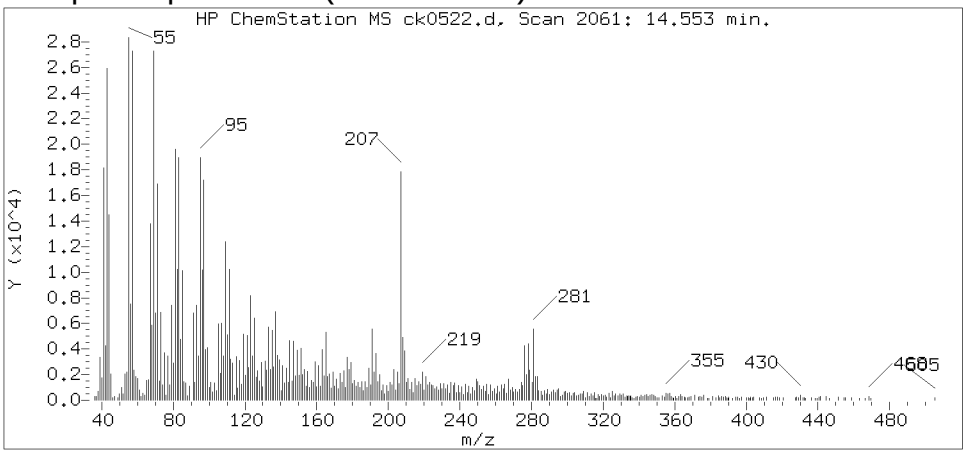


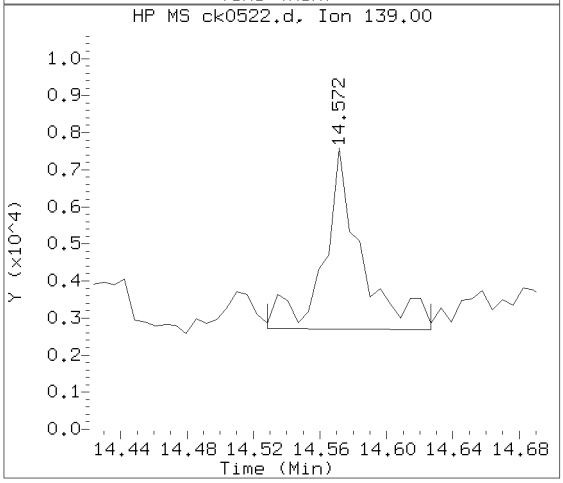
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

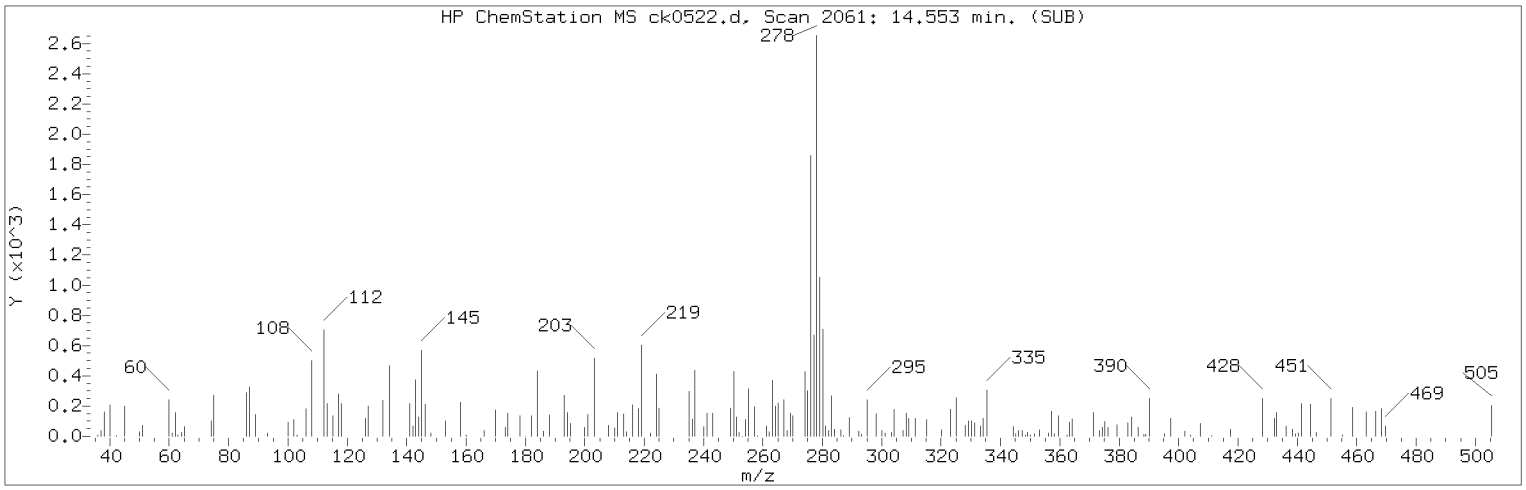
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

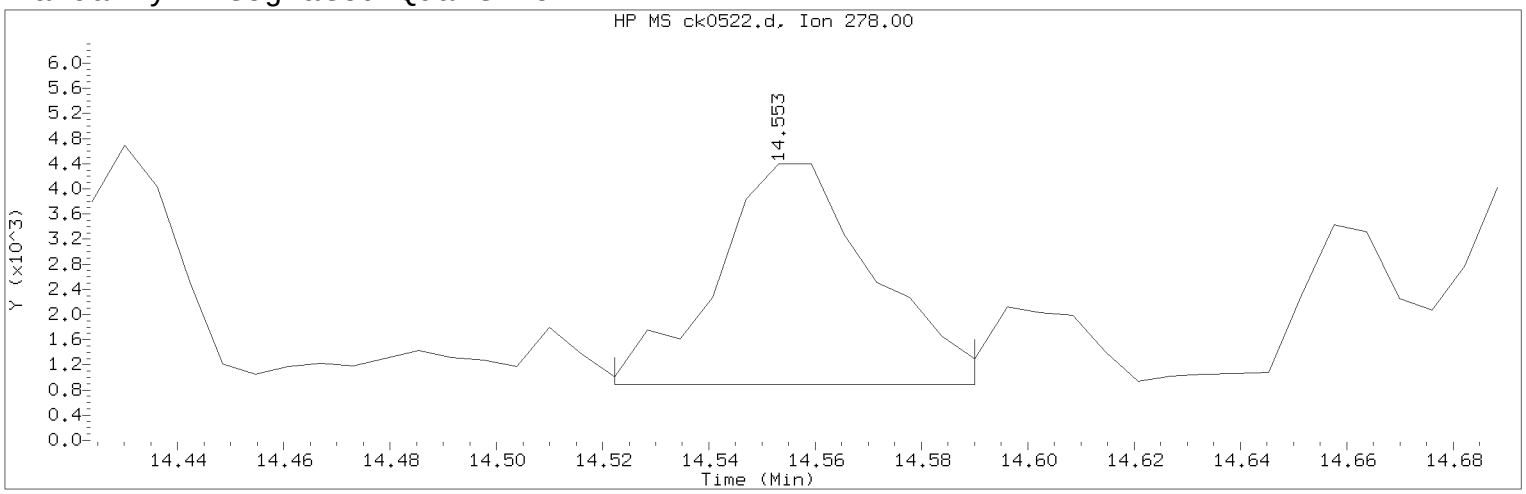
Compound Number	: 178
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2061
Retention Time (minutes)	: 14.553
Relative Retention Time	: 0.00091
Quant Ion	: 278.00
Area (flag)	: 7237M
On-column Amount (ng/ul)	: 0.2505

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

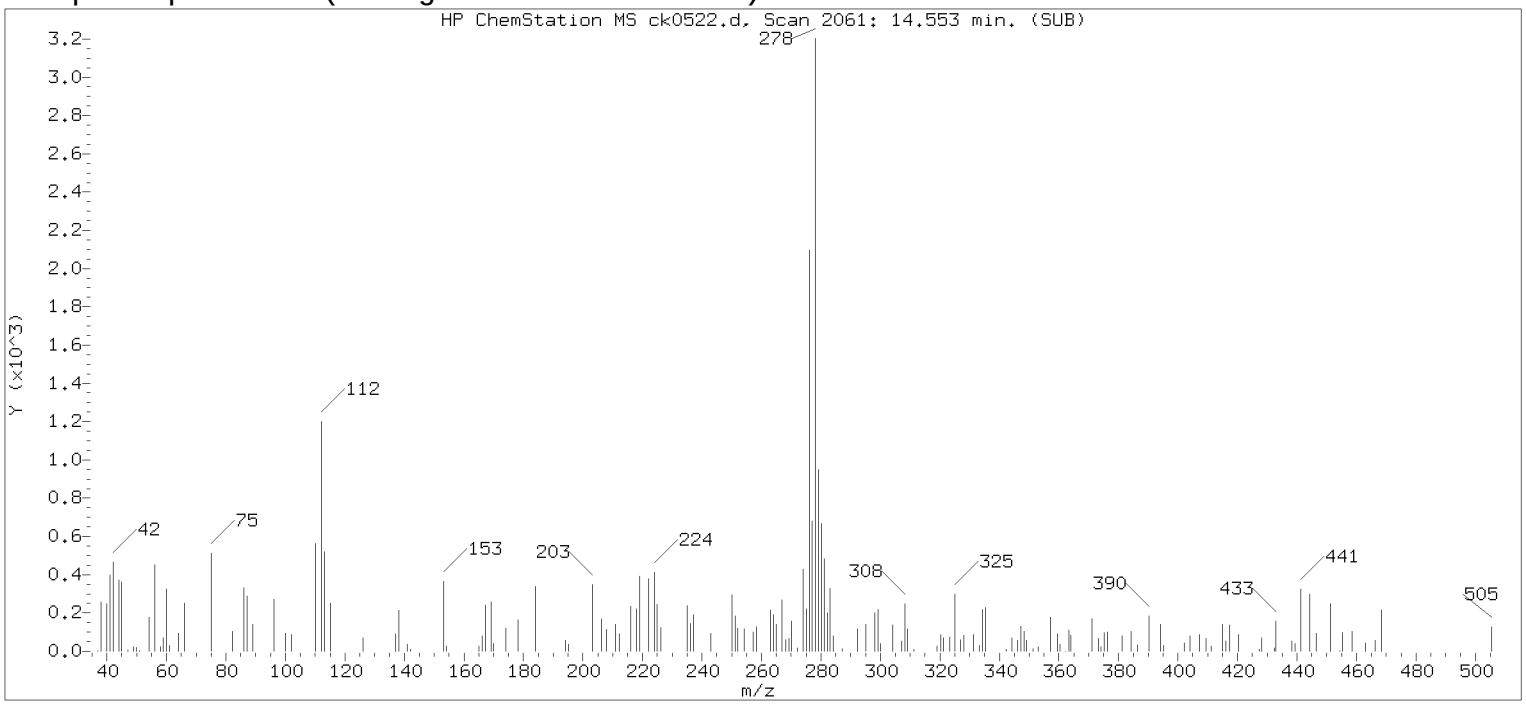
Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2061
Retention Time (minutes) : 14.553
Quant Ion : 278.00
Area (flag) : 7237M
On-column Amount (ng/ul) : 0.2505
Integration start scan : 2055 Integration stop scan: 2066
Y at integration start : 889 Y at integration end: 889

Reason for manual integration: improper integration

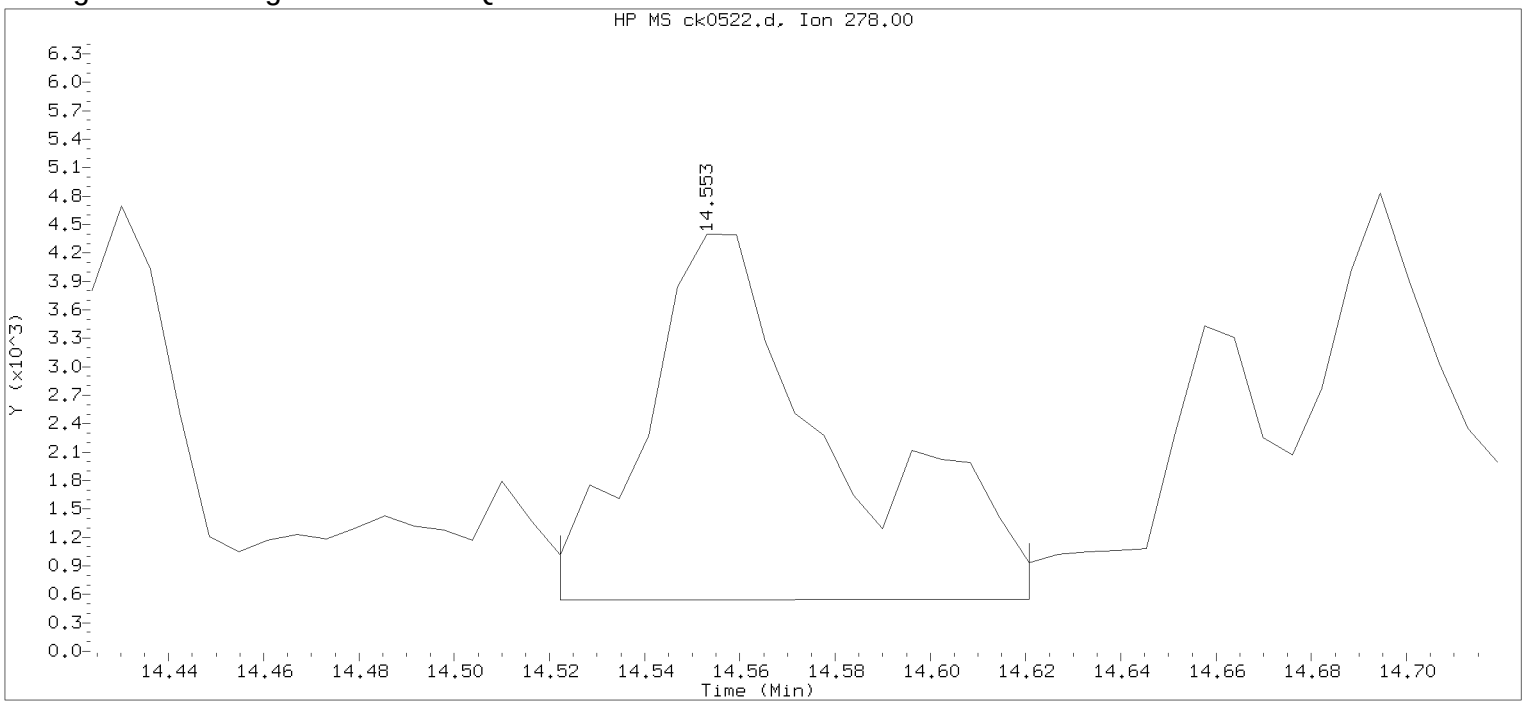
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

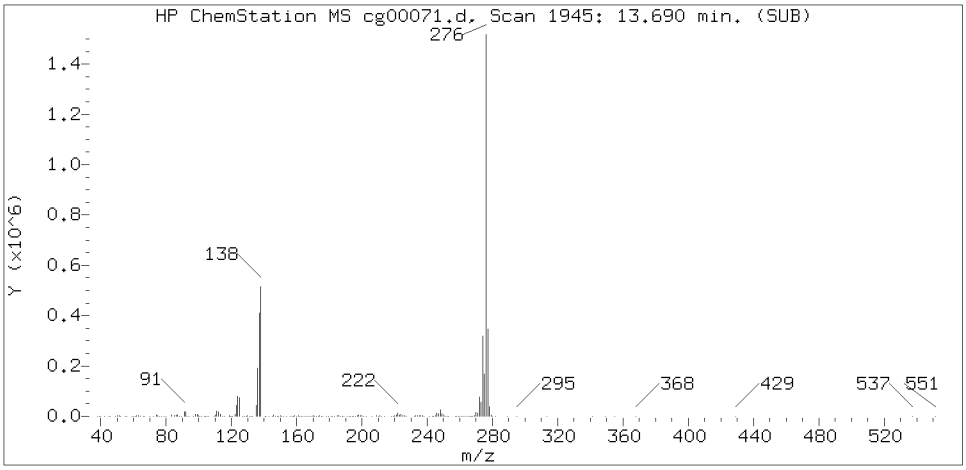
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 03:25 Automation

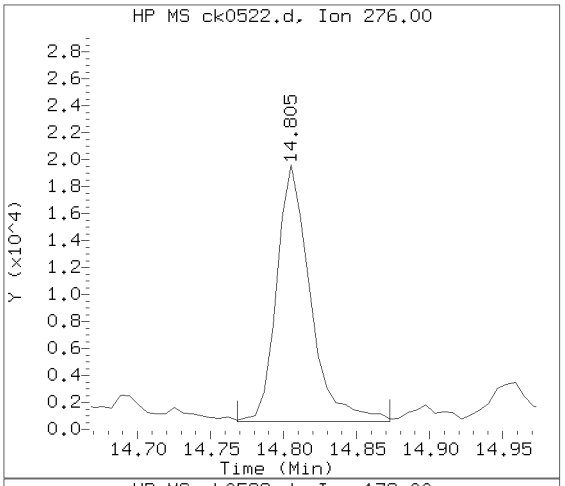
Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2061
Retention Time (minutes) : 14.553
Quant Ion : 278.00
Area : 10714
On-column Amount (ng/ul) : 0.3708
Integration start scan : 2055 Integration stop scan: 2071
Y at integration start : 543 Y at integration end: 550

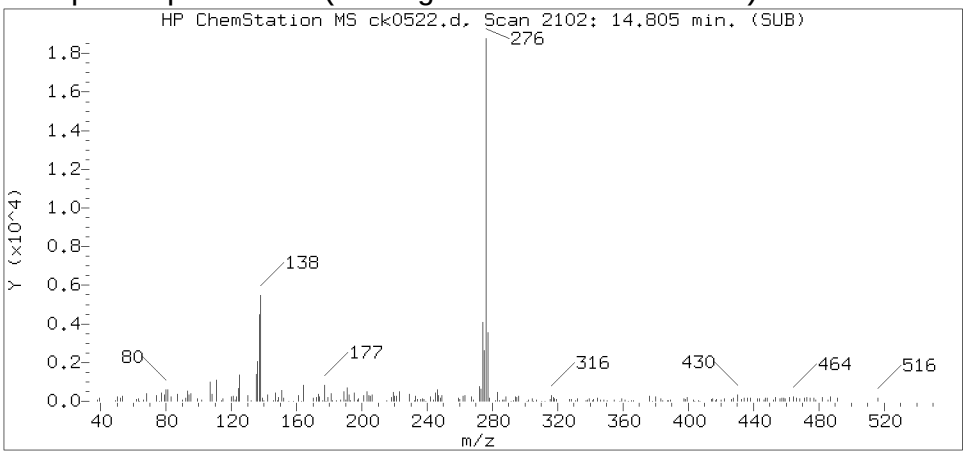
Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

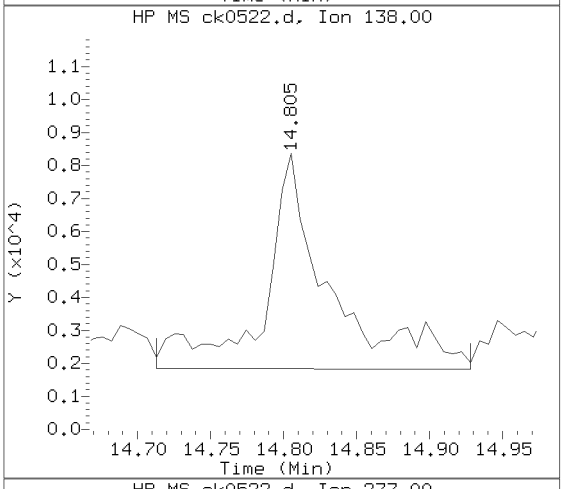
Reference Standard Spectrum for Benzo(g,h,i)perylene



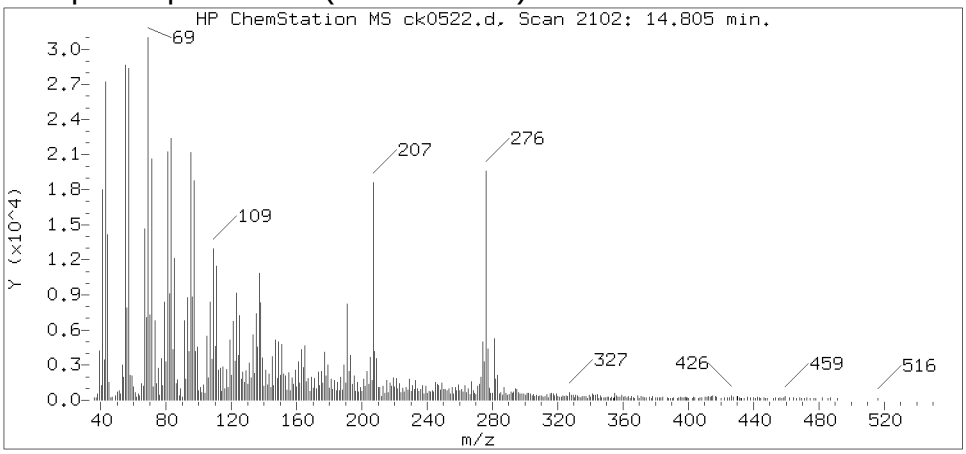


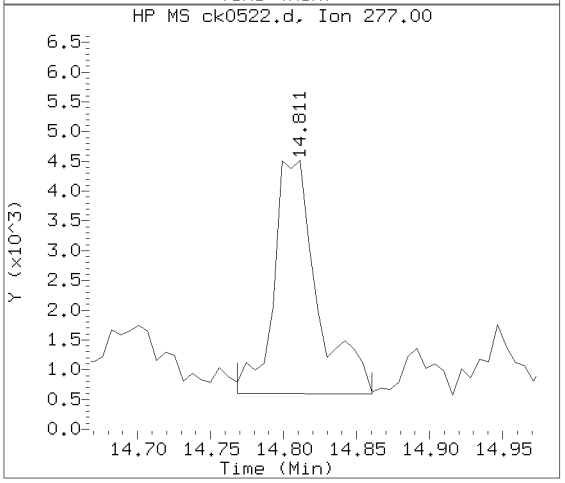
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0522.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 02:58 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:44 mac00013

Sample Name: 2F142 Lab Sample ID: 7265241

Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2102
Retention Time (minutes) : 14.805
Relative Retention Time : 0.00045
Quant Ion : 276.00
Area (flag) : 30560
On-column Amount (ng/ul) : 1.0385

Digitally signed by Mark A. Clark on 11/14/2013 at 04:56.
Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0523.d
Data file Sample Info. Line: R2121;7265242;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Injection date and time: **14-NOV-2013 03:23**
Instrument ID: **HP10623.i** Batch: **13310SLF**

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	132274 (-11)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	609486 (-14)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	377960 (-16)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	690842 (-16)	20.00	
167) Pyrene-d10	10.931(0.000)	1472	212	808958 (-22)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	623029 (-28)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.699(0.001)	82	216649	16.499	82%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.470(0.000)	172	443571	18.665	93%		69 - 120
156) Terphenyl-d14	(5)	11.134(0.000)	244	553599	19.143	96%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)			Not Detected					0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.735(-0.000)	202	5664	0.126	126.10			0.1
154) Pyrene	(5)	10.950(0.000)	202	5641	0.126	125.57			0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)	13.169(0.000)	252	4073M	0.107	107.09			0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0523.d Injection date and time: **14-NOV-2013 03:23**
Data file Sample Info. Line: R2121;7265242;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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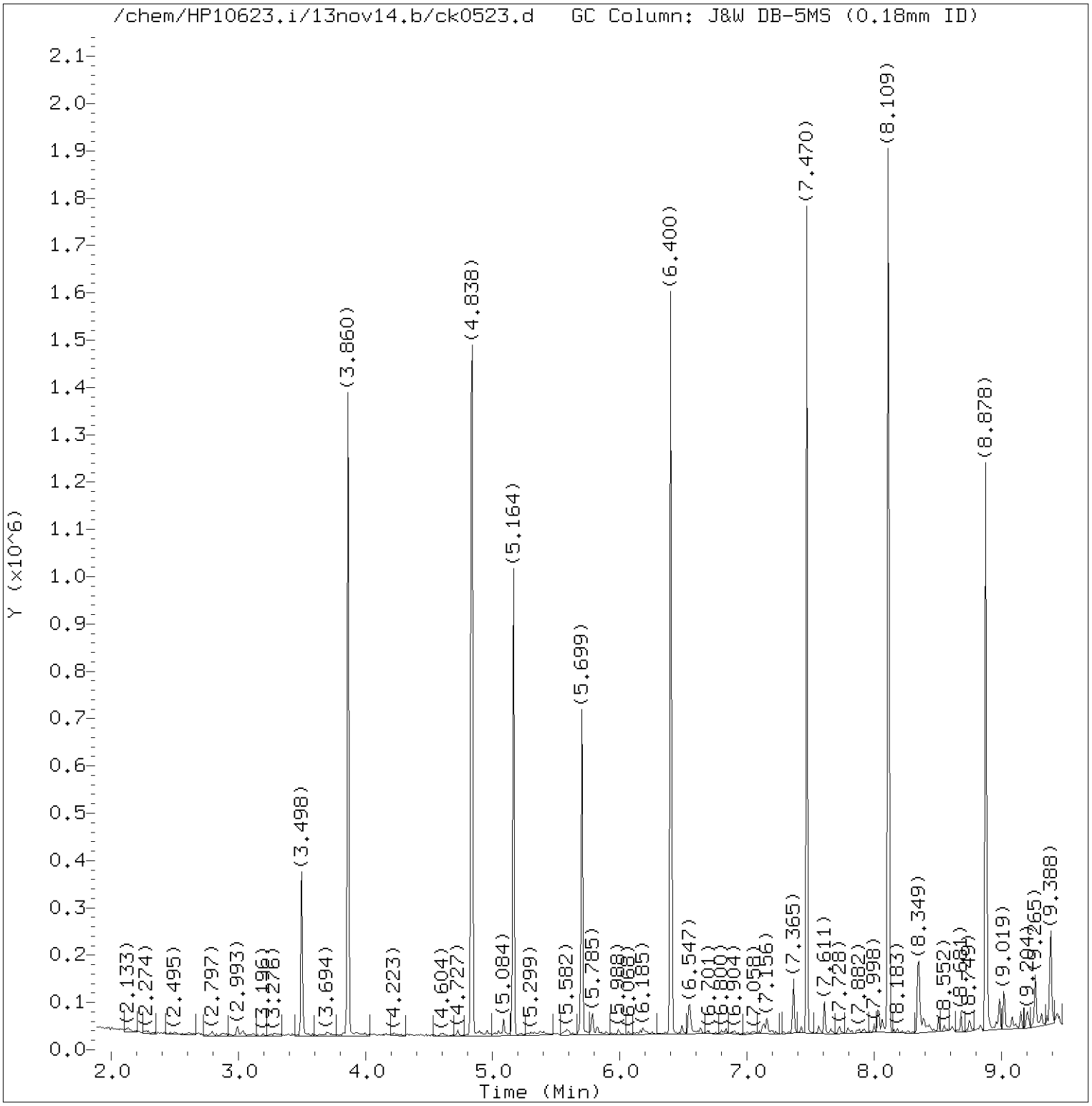
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

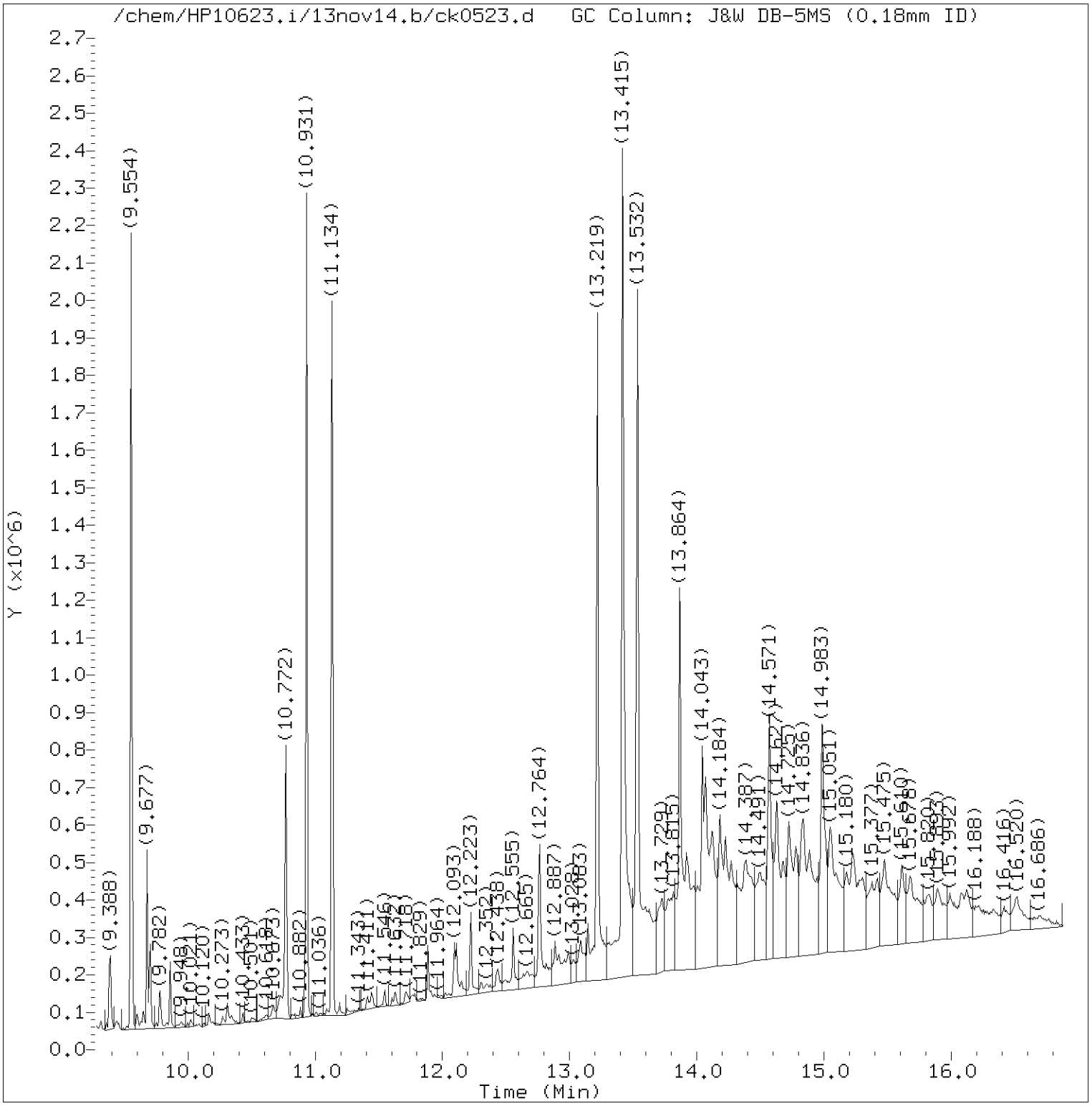
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Sample Name: R2121 Lab Sample ID: 7265242

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Sample Name: R2121 Lab Sample ID: 7265242

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

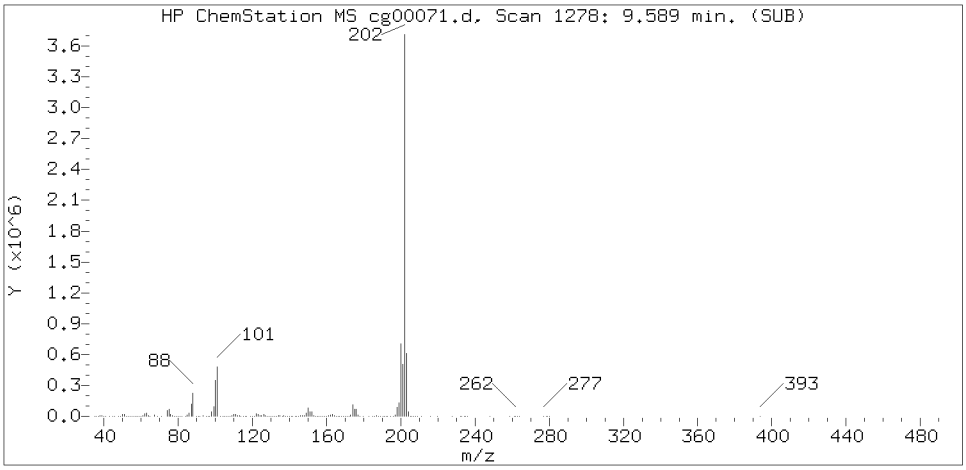
Sample Name: R2121 Lab Sample ID: 7265242

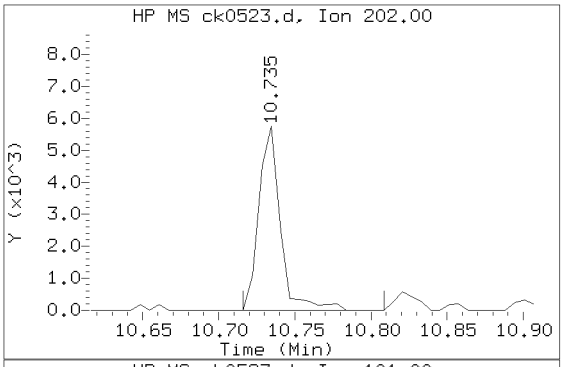
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	132274	20.000
38)$Nitrobenzene-d5	(2)	5.699	82	216649	16.499
52)*Naphthalene-d8	(2)	6.400	136	609486	20.000
78)$2-Fluorobiphenyl	(3)	7.470	172	443571	18.665
98)*Acenaphthene-d10	(3)	8.109	164	377960	20.000
135)*Phenanthrene-d10	(4)	9.554	188	690842	20.000
147) Fluoranthene	(4)	10.735	202	5664	0.126
167)*Pyrene-d10	(5)	10.931	212	808958	20.000
154) Pyrene	(5)	10.950	202	5641	0.126
156)$Terphenyl-d14	(5)	11.134	244	553599	19.143
172) Benzo(b)fluoranthene	(6)	13.169	252	4073M	0.107
175)*Perylene-d12	(6)	13.532	264	623029	20.000

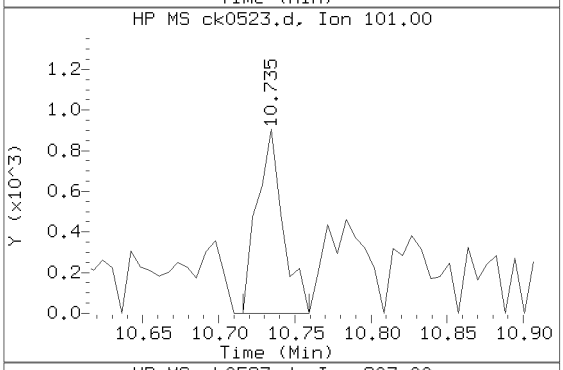
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

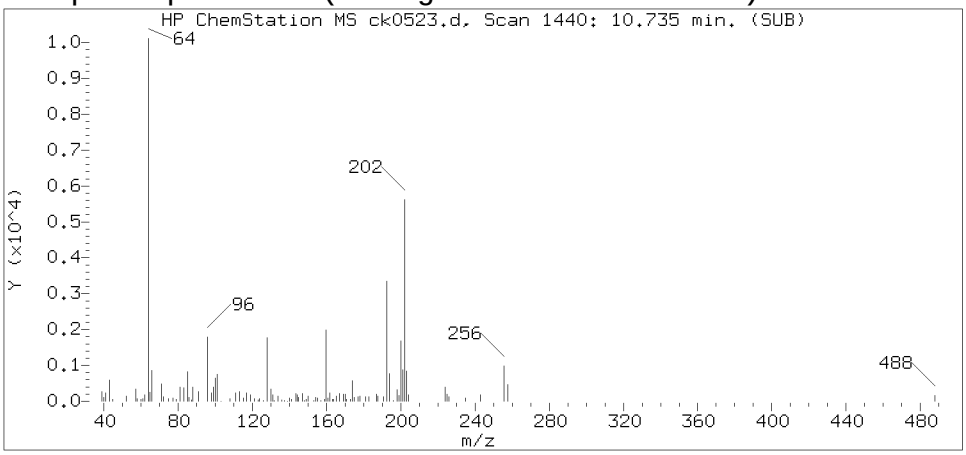
Reference Standard Spectrum for Fluoranthene

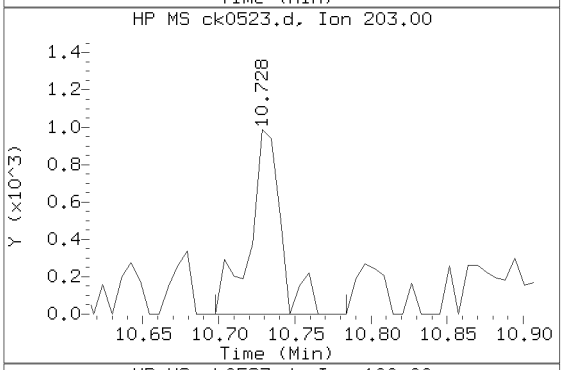




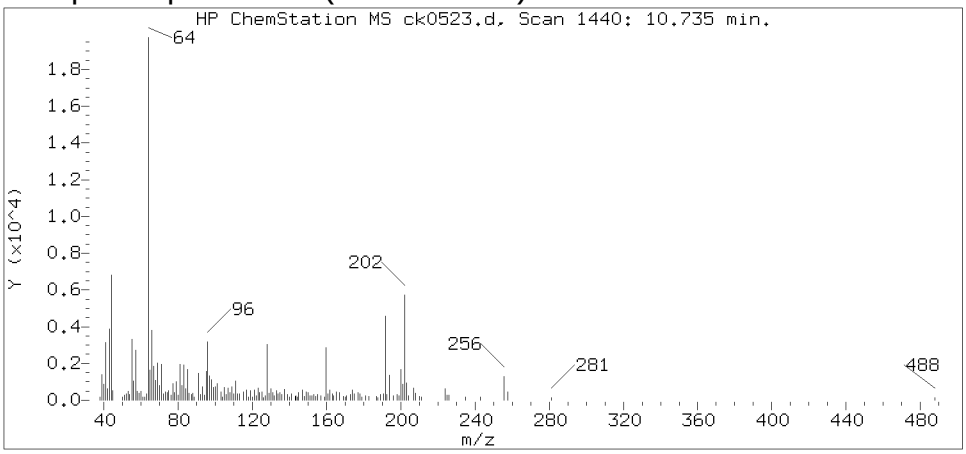


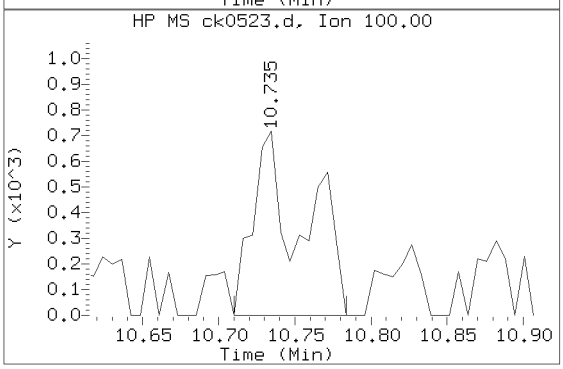
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

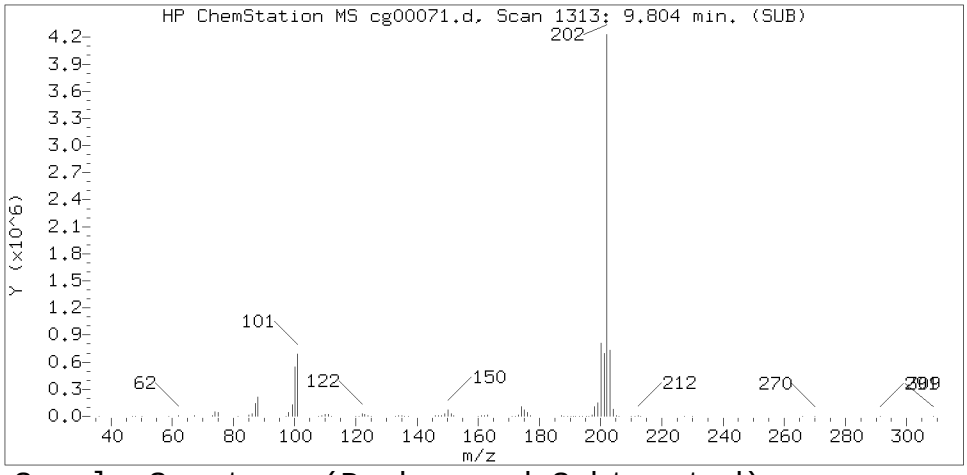
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

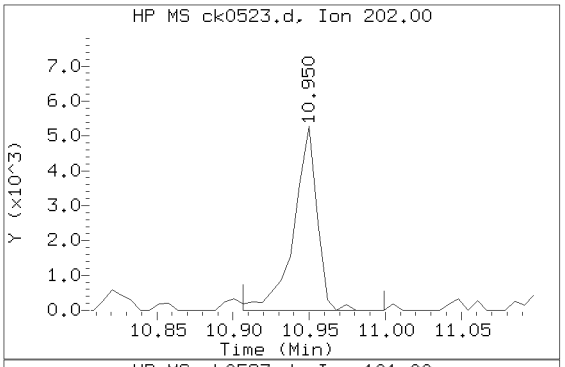
Sample Name: R2121 Lab Sample ID: 7265242

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1440
Retention Time (minutes) : 10.735
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 5664
On-column Amount (ng/ul) : 0.1261

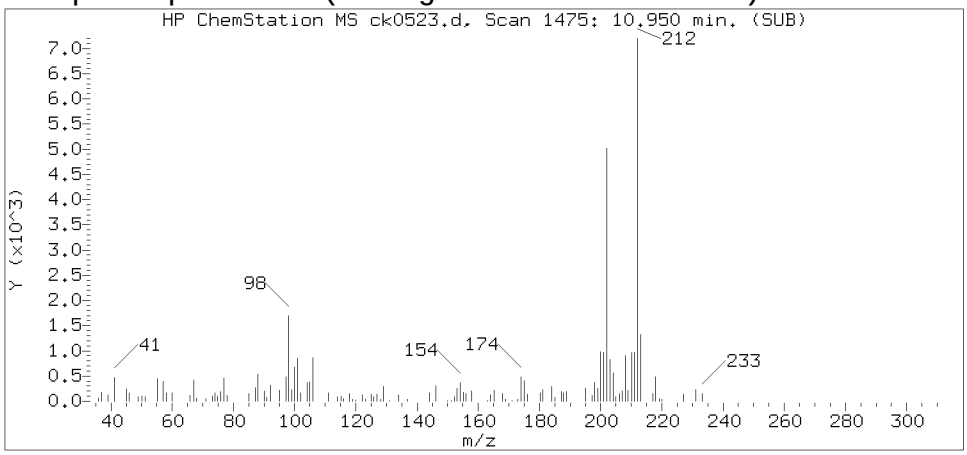
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

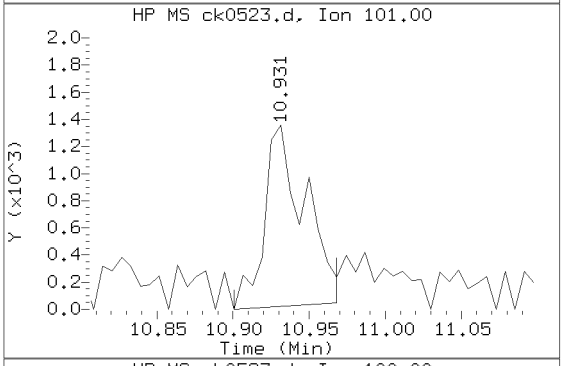
Reference Standard Spectrum for Pyrene

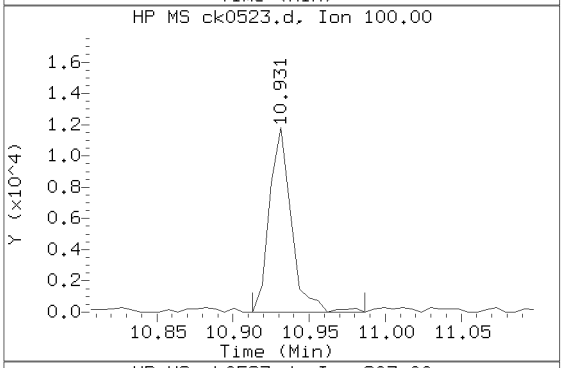




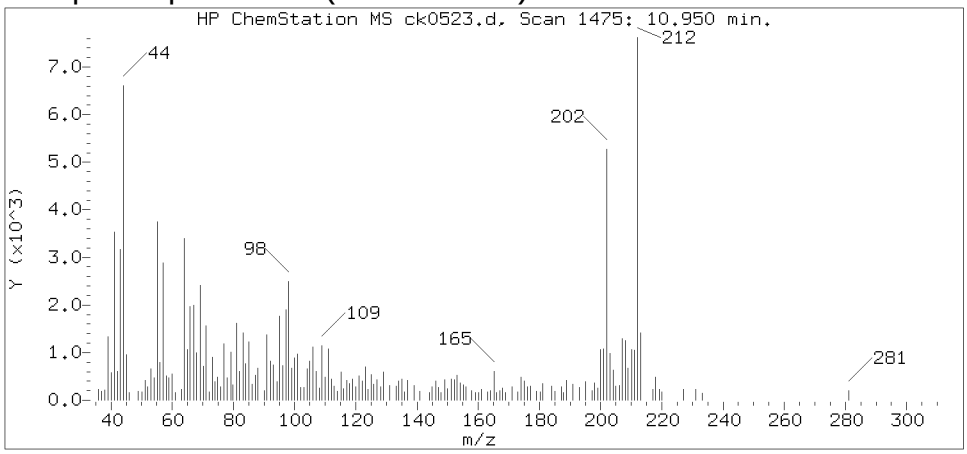
Sample Spectrum (Background Subtracted)

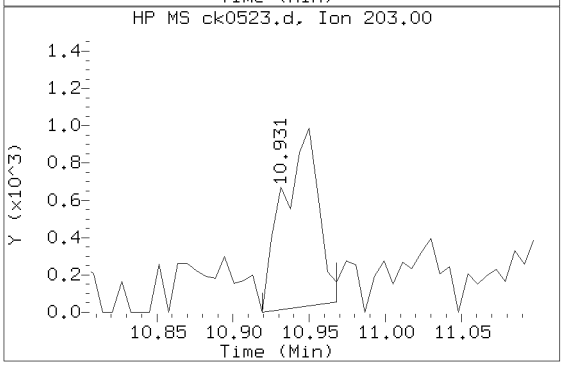






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Sample Name: R2121 Lab Sample ID: 7265242

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 5641
On-column Amount (ng/ul)	: 0.1256

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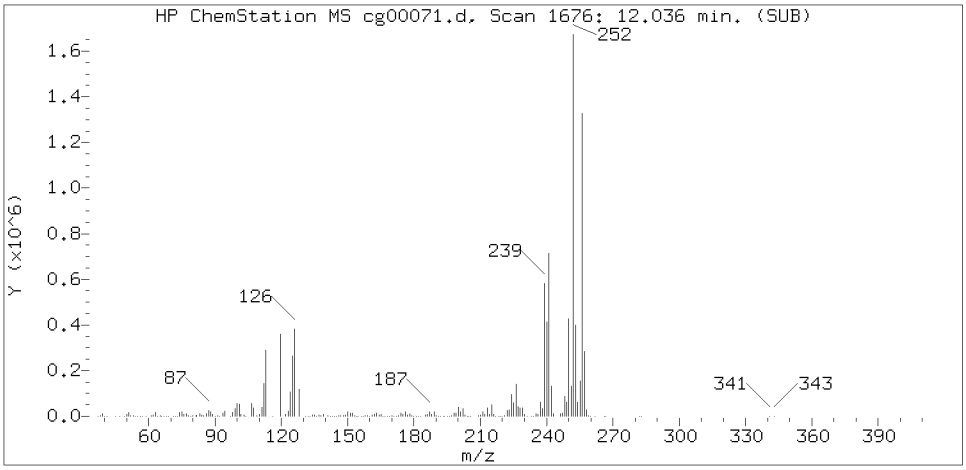
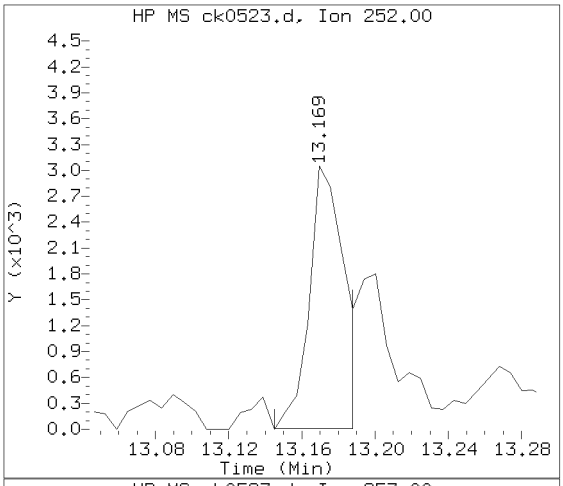
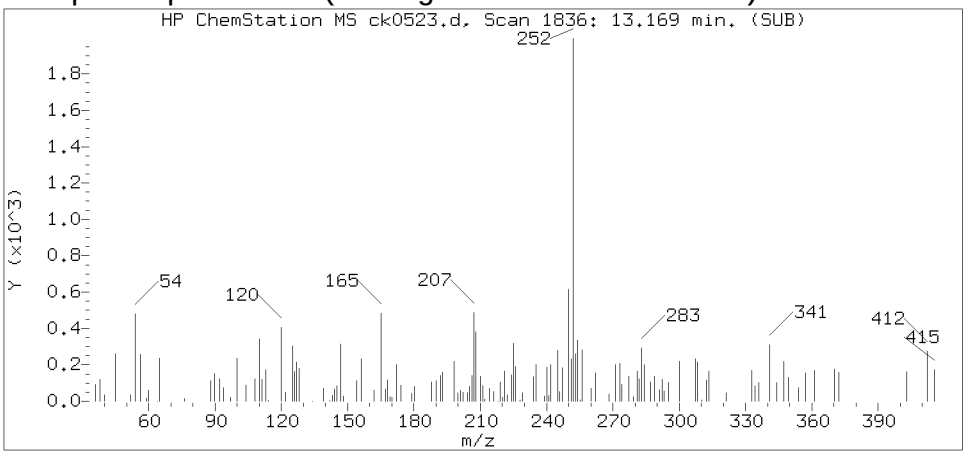
Target 3.5 esignature user ID: mac00013

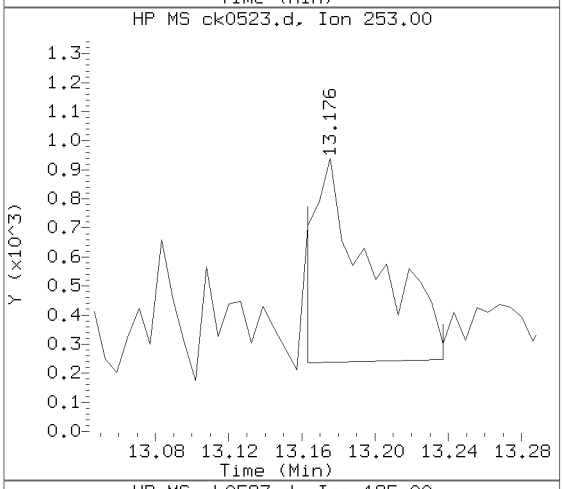
Reference Standard Spectrum for Benzo(b)fluoranthene



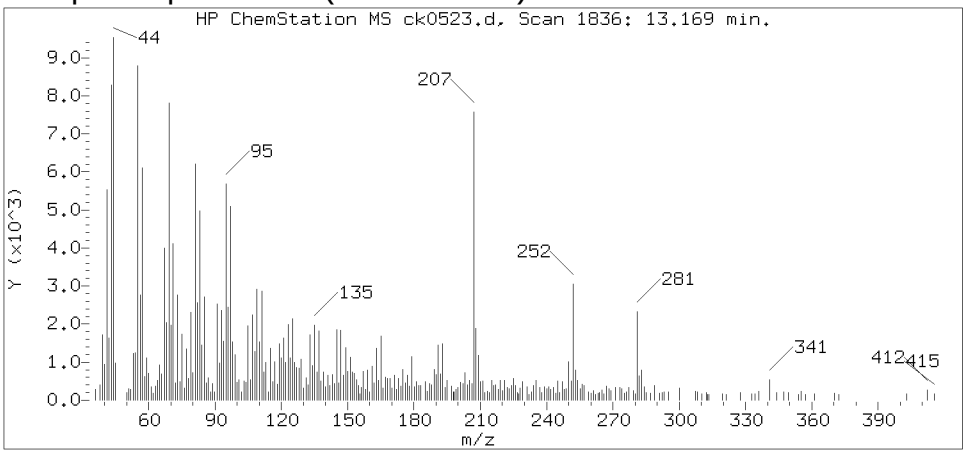


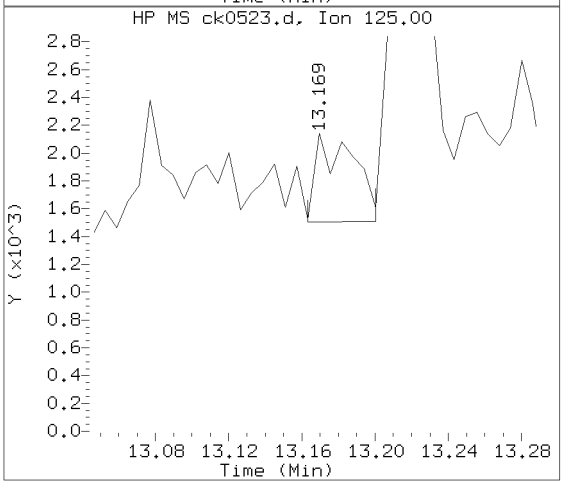
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

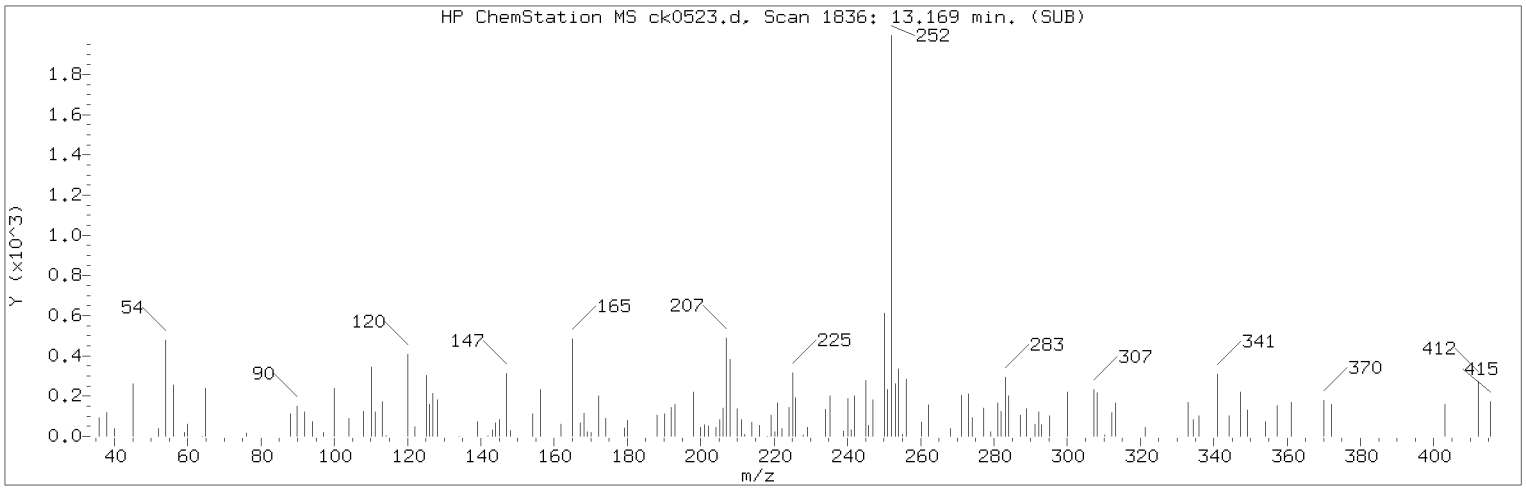
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Sample Name: R2121 Lab Sample ID: 7265242

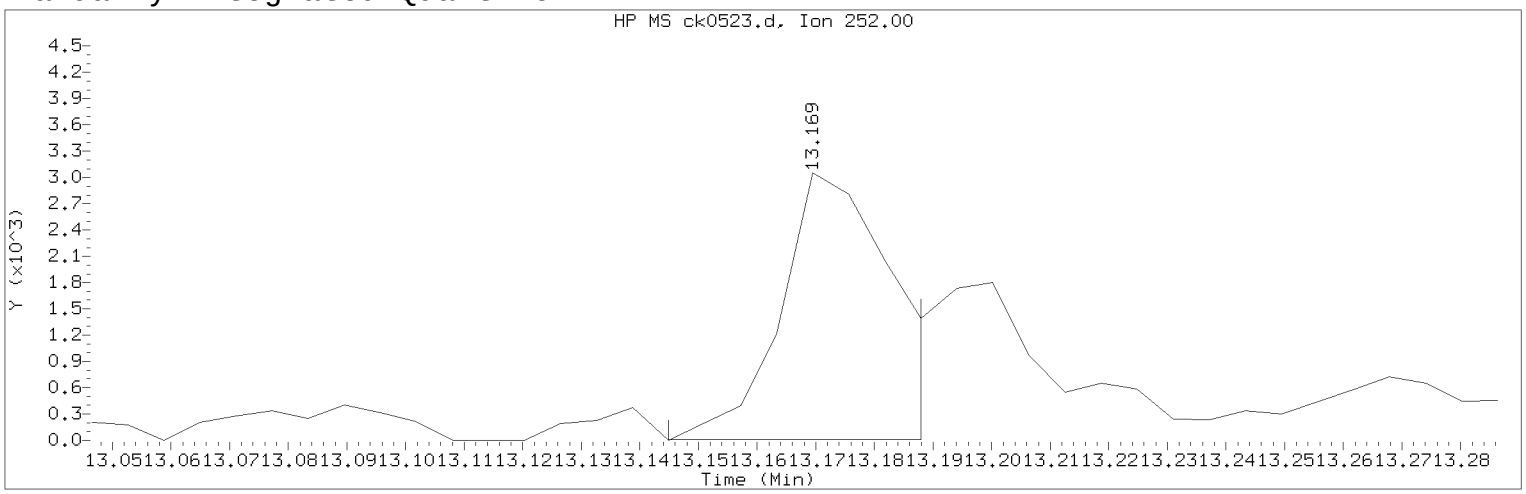
Compound Number	: 172
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1836
Retention Time (minutes)	: 13.169
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 4073M
On-column Amount (ng/ul)	: 0.1071

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:46 mac00013

Sample Name: R2121 Lab Sample ID: 7265242

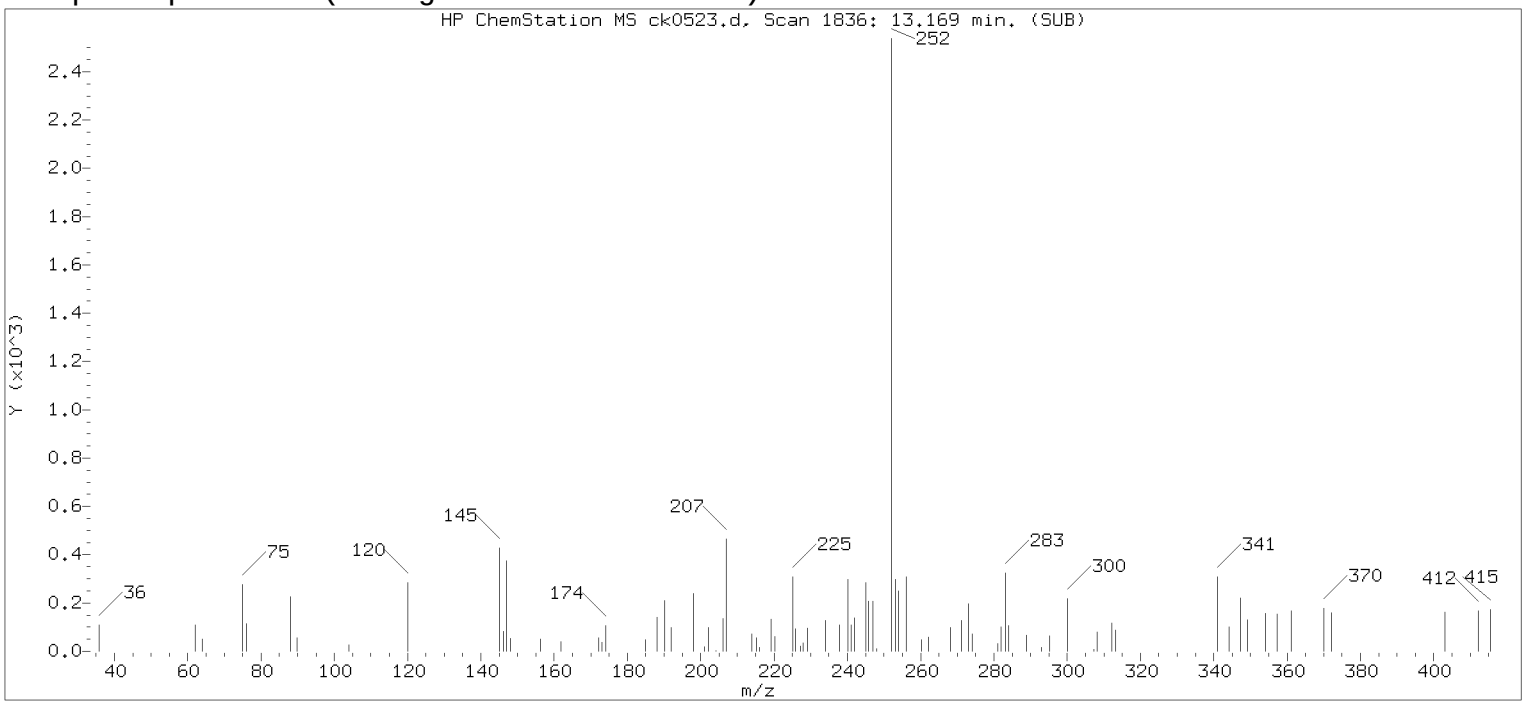
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1836
Retention Time (minutes) : 13.169
Quant Ion : 252.00
Area (flag) : 4073M
On-column Amount (ng/ul) : 0.1071
Integration start scan : 1831 Integration stop scan: 1838
Y at integration start : 10 Y at integration end: 10

Reason for manual integration: improper integration

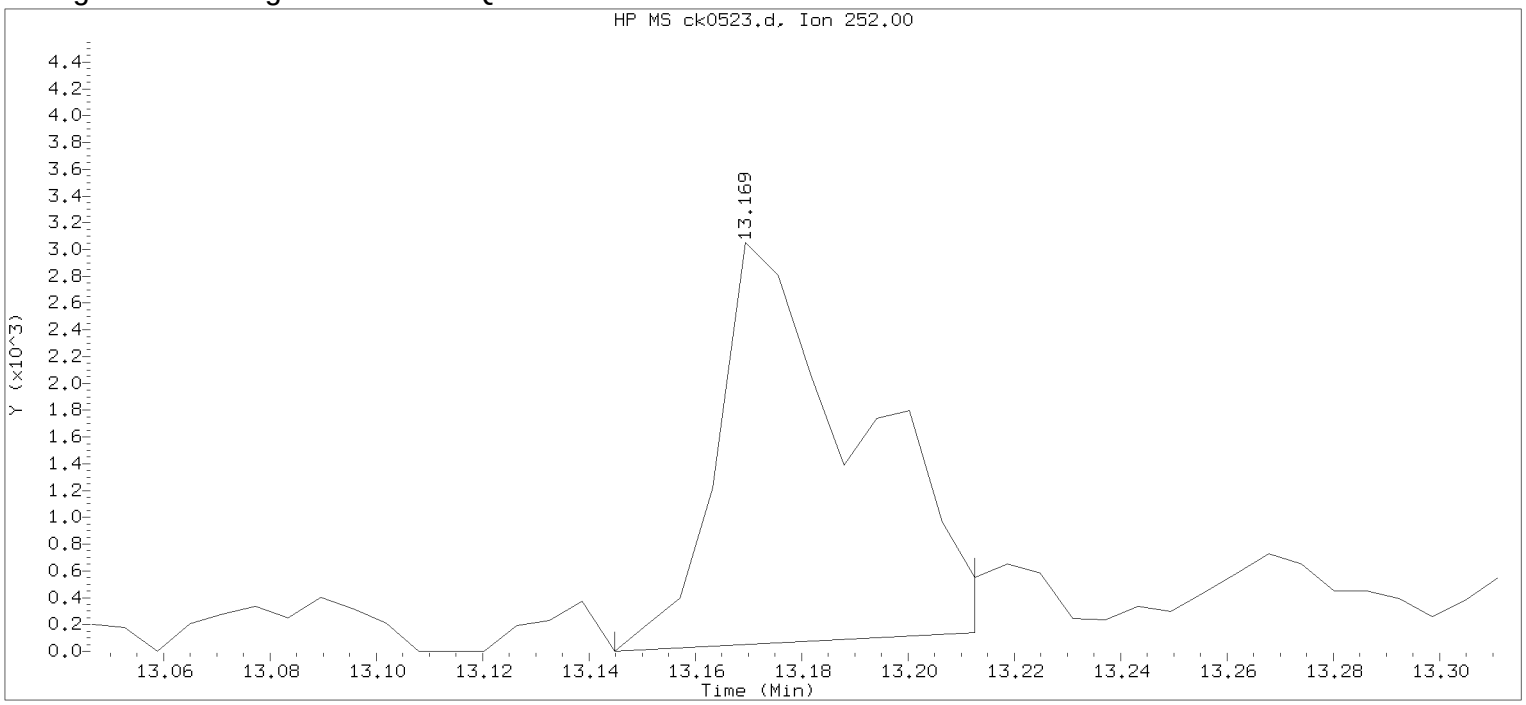
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:34.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0523.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:23 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 03:49 Automation

Sample Name: R2121 Lab Sample ID: 7265242

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1836		
Retention Time (minutes)	: 13.169		
Quant Ion	: 252.00		
Area	: 5588		
On-column Amount (ng/ul)	: 0.1469		
Integration start scan	: 1831	Integration stop scan:	1842
Y at integration start	: 0	Y at integration end:	137

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0342.d
Injection date and time: **11-NOV-2013 13:57**
Data file Sample Info. Line: R2122;7265243;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	138624 (-2)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	526779 (-3)	5.00	
92) Acenaphthene-d10	10.709(0.006)	1608	164	311161 (-5)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	554874 (-3)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	690550 (-7)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	433782 (-22)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.000(0.000)	112	1356965	32.968	66%		10 - 107
13) Phenol-d6	(1)	5.428(0.001)	99	1353713	23.948	48%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	1055284	21.768	87%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(-0.001)	172	1849384	23.800	95%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(-0.001)	330	477216	58.393	117%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2426243	28.174	113%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:22. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0342.d Injection date and time: **11-NOV-2013 13:57**
Data file Sample Info. Line: R2122;7265243;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

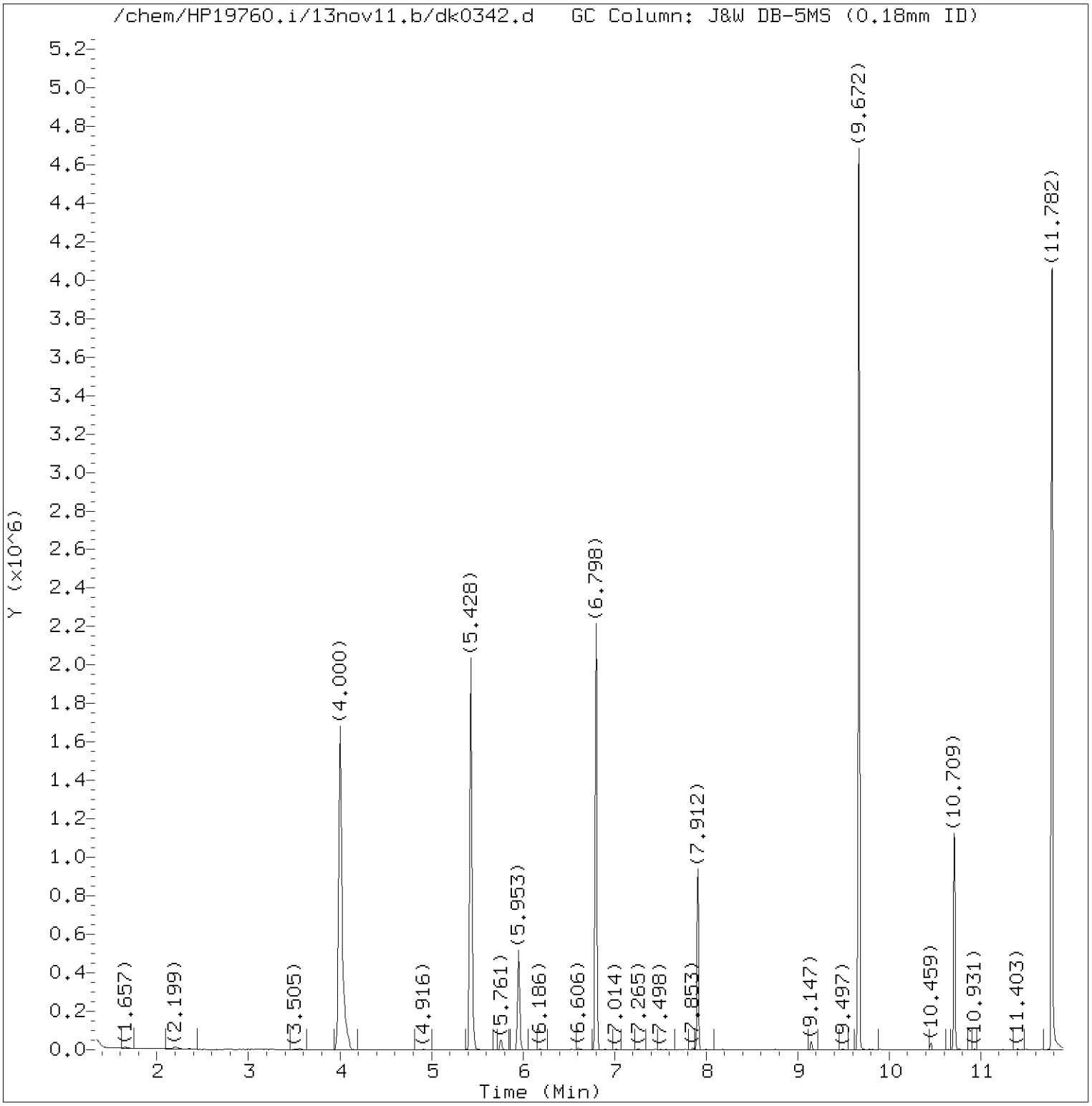
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 240 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:22. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

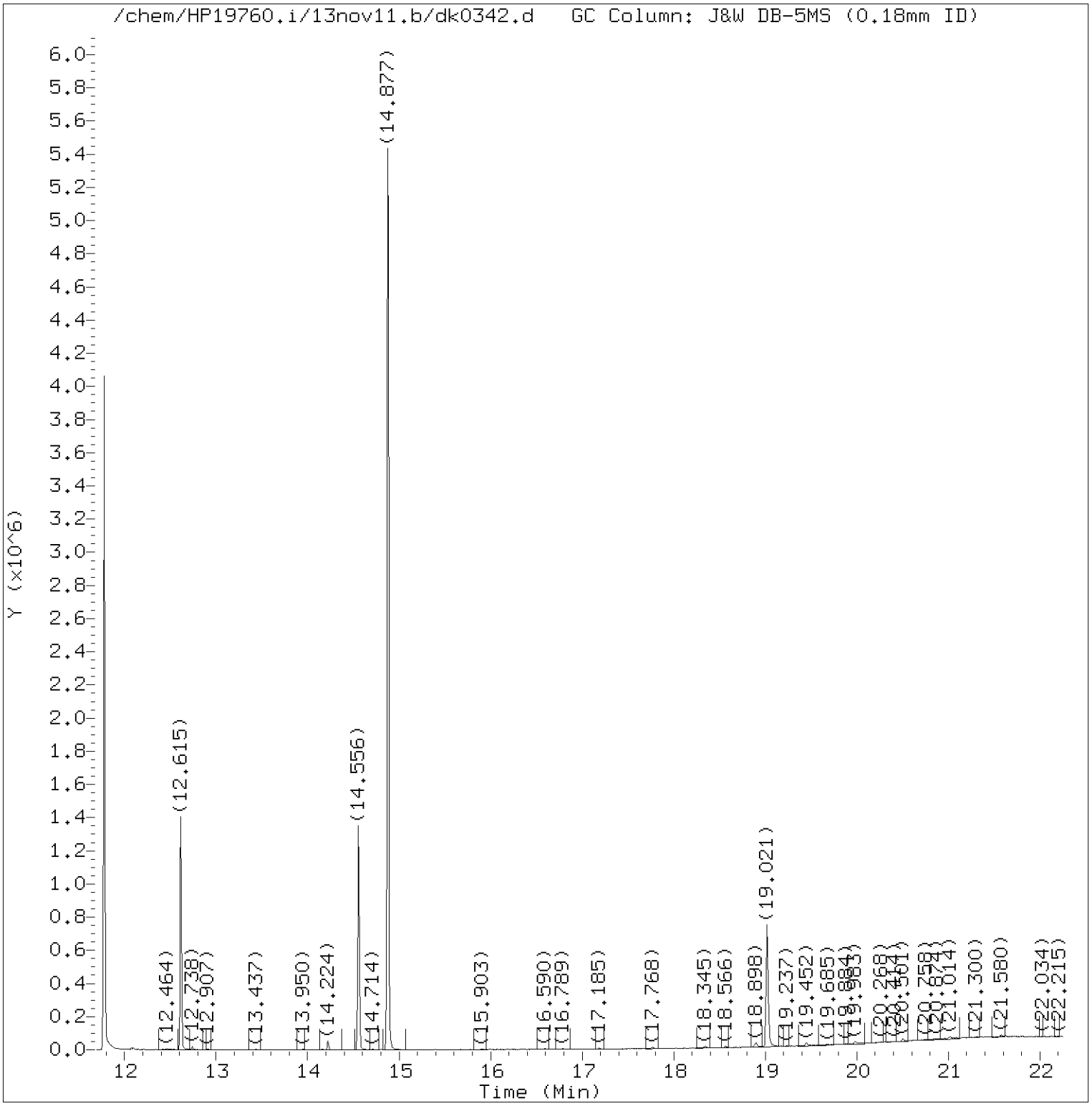
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:22.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:22.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.000	112	1356965	32.968
13)$Phenol-d6	(1)	5.428	99	1353713	23.948
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	138624	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	1055284	21.768
52)*Naphthalene-d8	(2)	7.912	136	526779	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1849384	23.800
92)*Acenaphthene-d10	(3)	10.709	164	311161	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	477216	58.393
130)*Phenanthrene-d10	(4)	12.615	188	554874	5.000
145)*Pyrene-d10	(5)	14.556	212	690550	5.000
149)$Terphenyl-d14	(5)	14.877	244	2426243	28.174
172)*Perylene-d12	(6)	19.021	264	433782	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:22.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

R2122

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265243

Sample wt/vol: 240 (g/mL) mL Lab File ID: dk0342.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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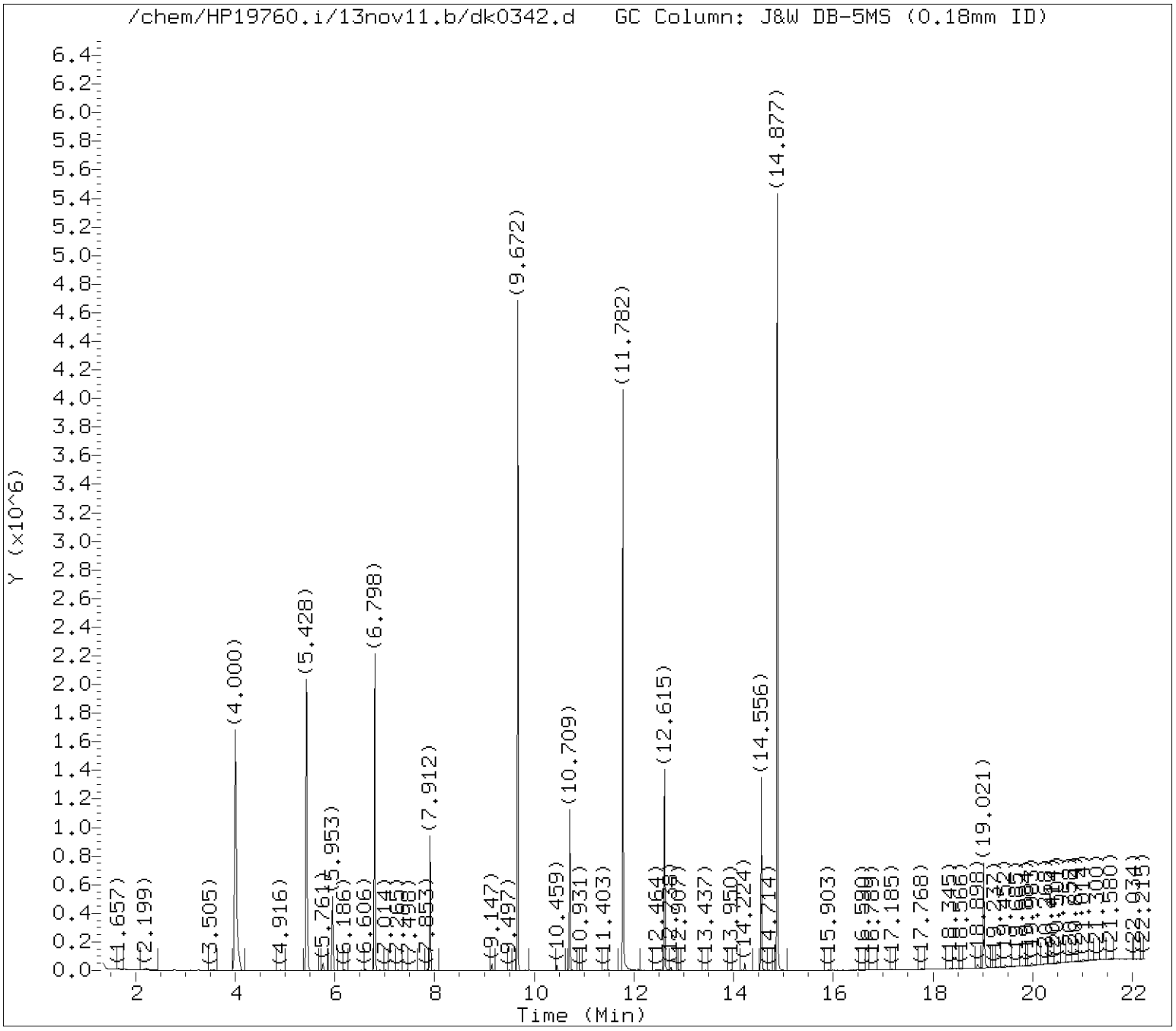
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

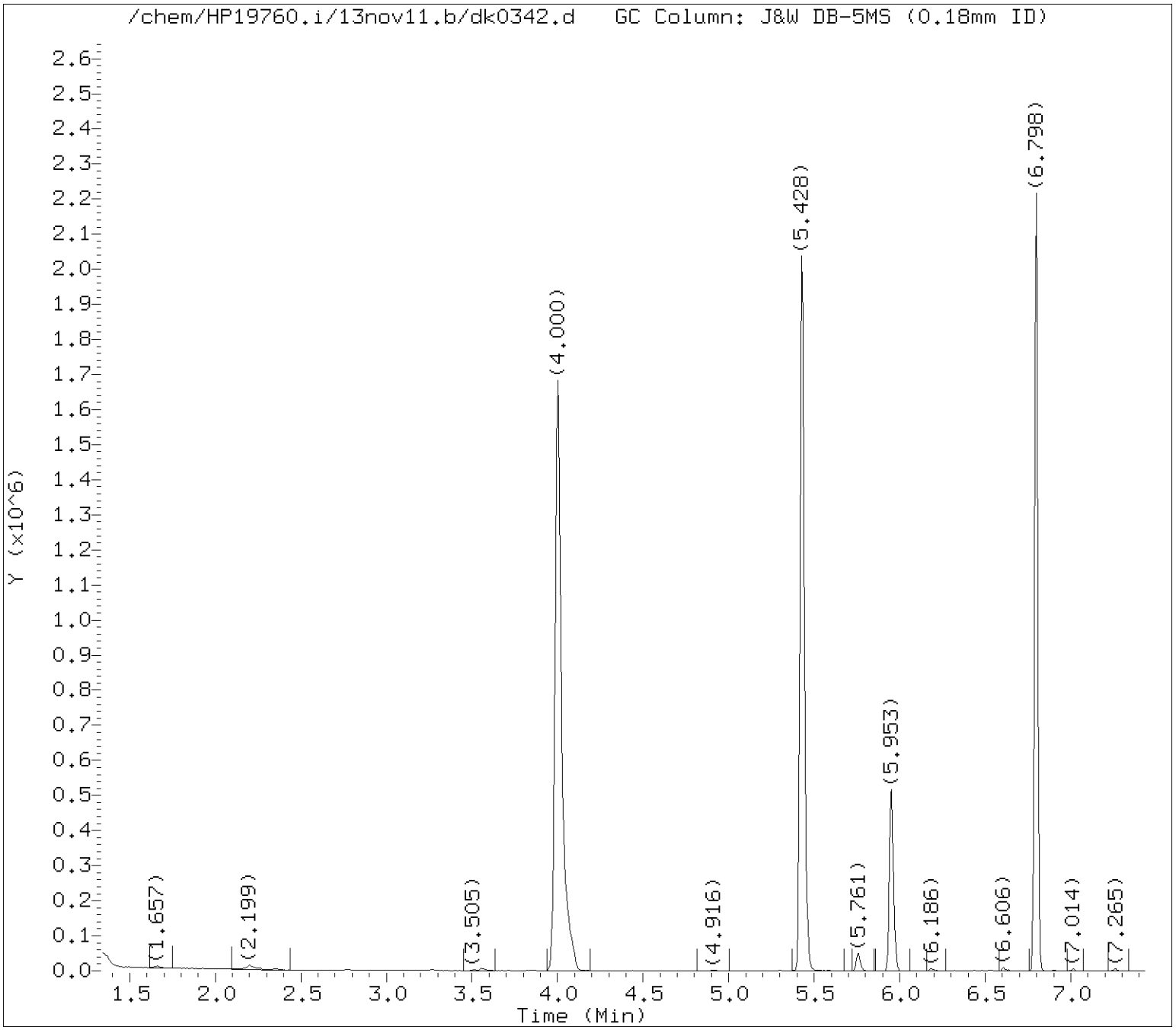
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

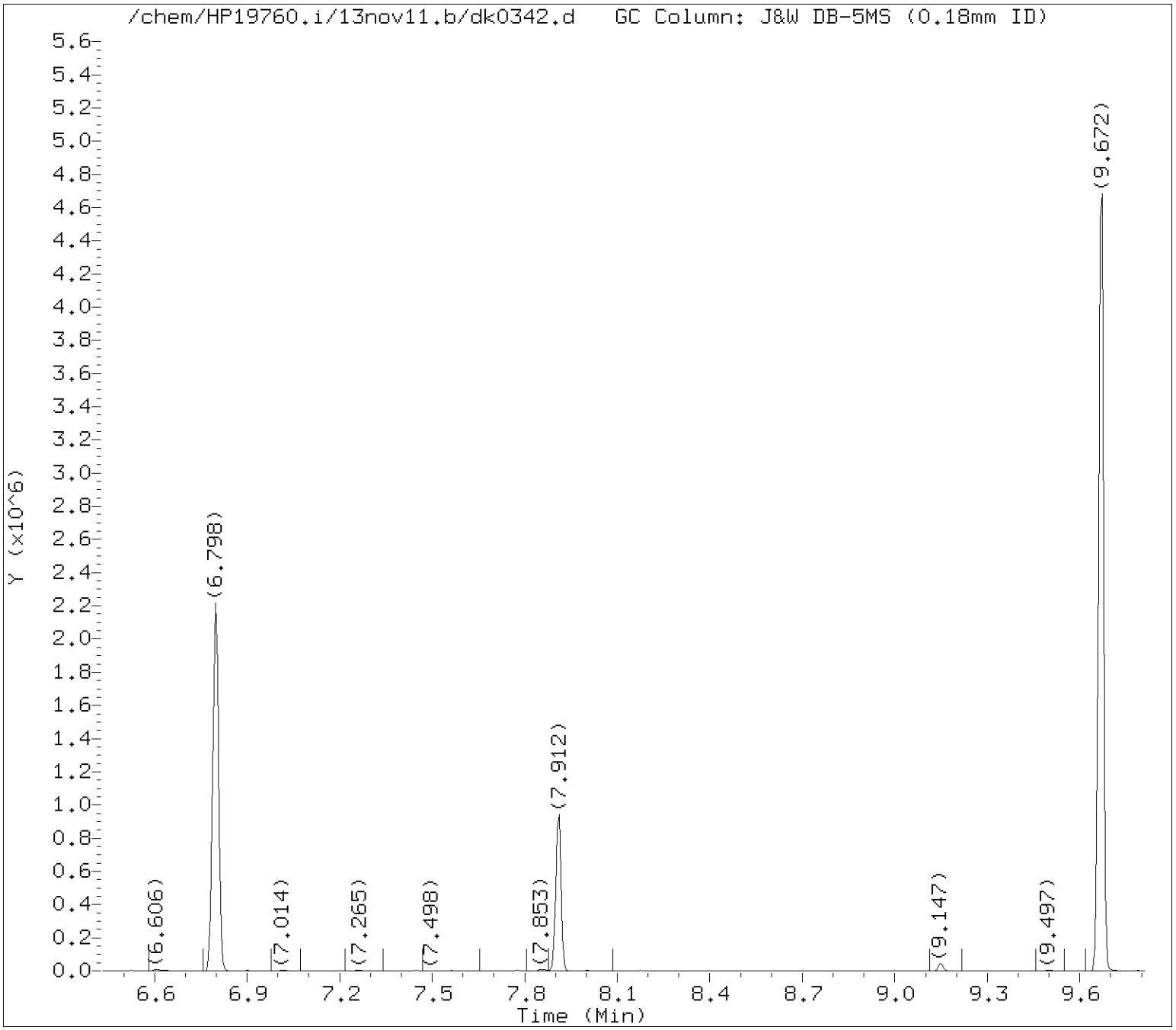
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.953 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.932

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

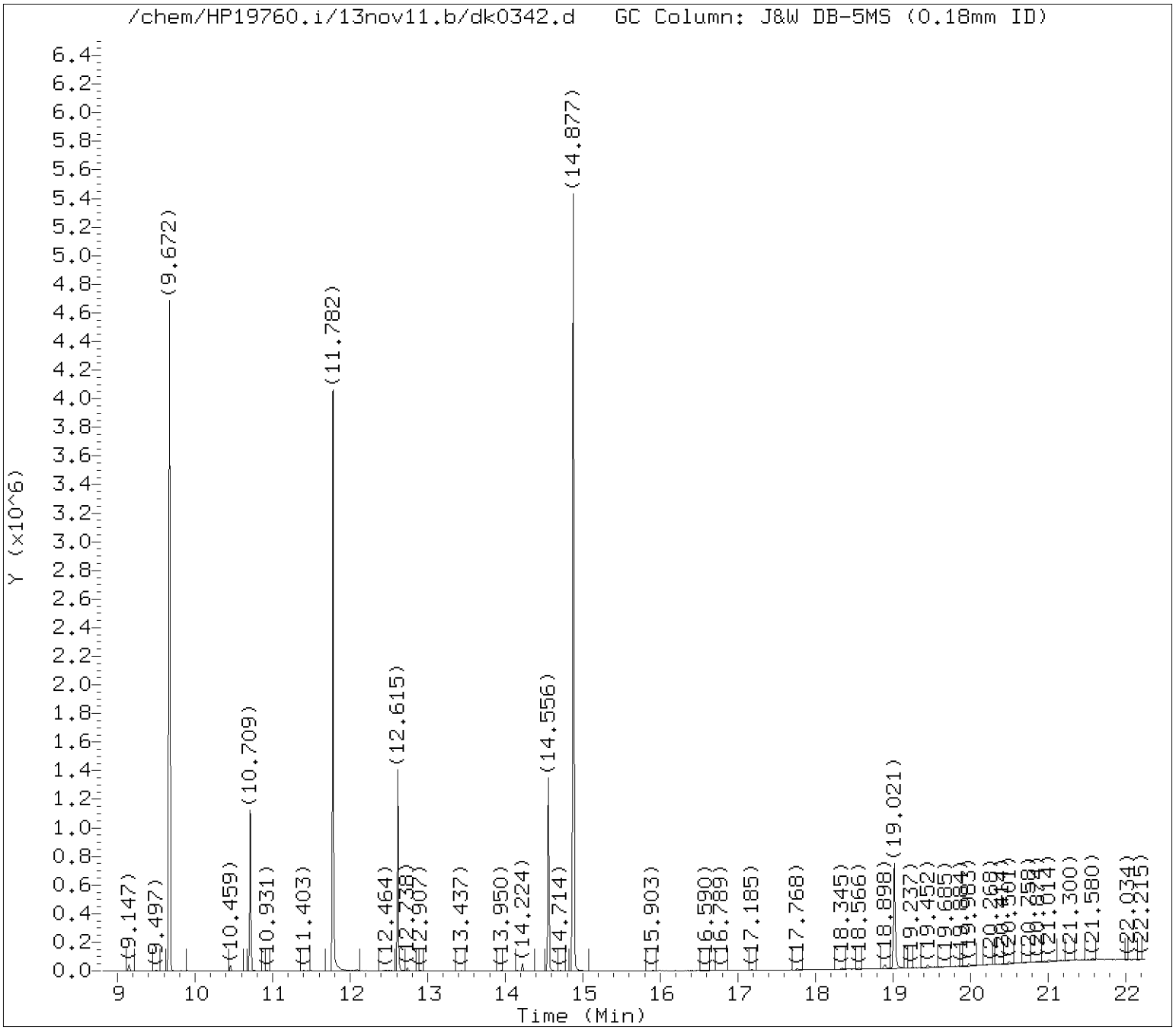
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.932
Chromatogram End Time (min.): 9.310

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

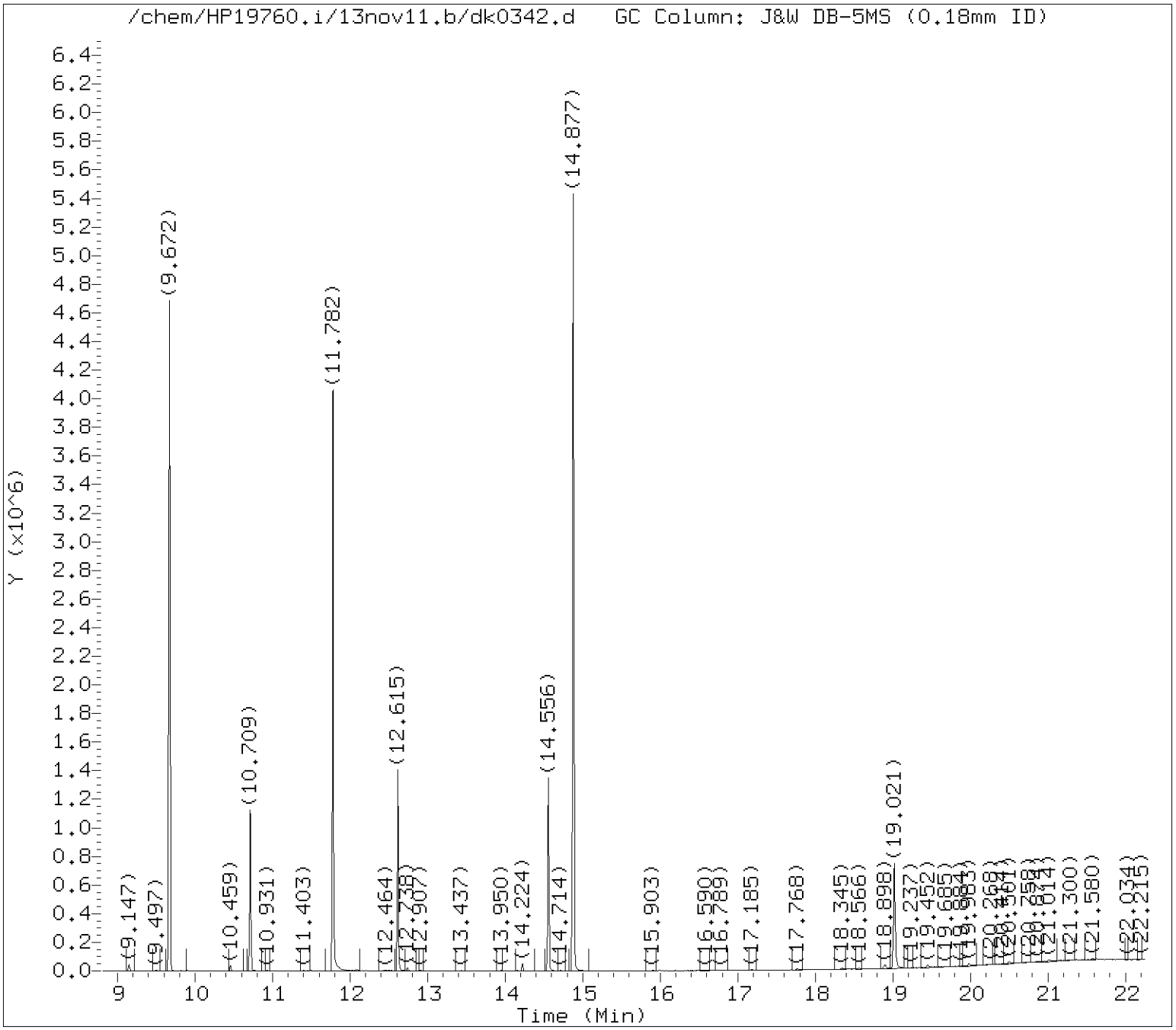
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: Acenaphthene-d10 at 10.709 minutes
Chromatogram Start Time (min.): 9.310
Chromatogram End Time (min.): 11.662

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

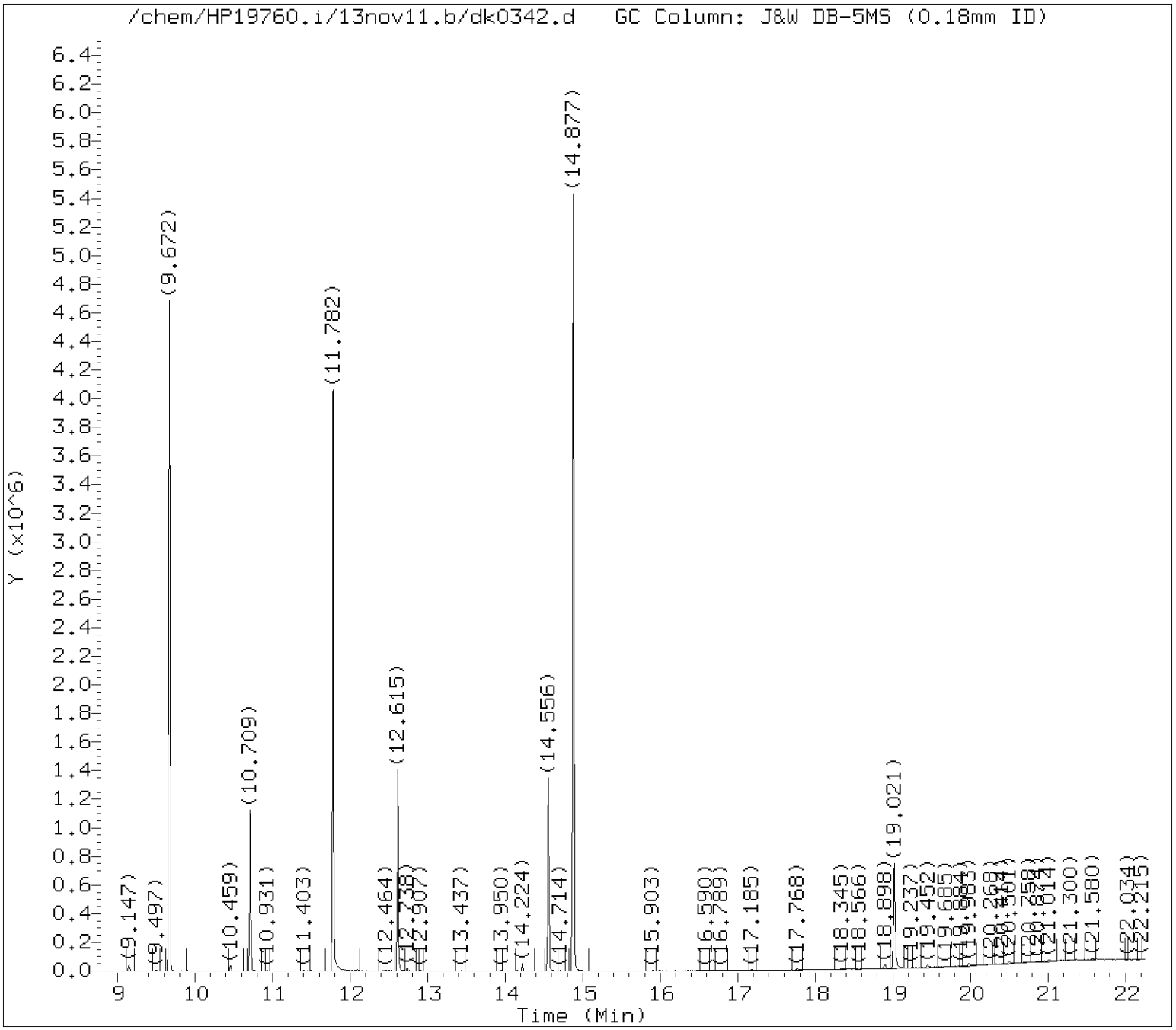
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.662
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

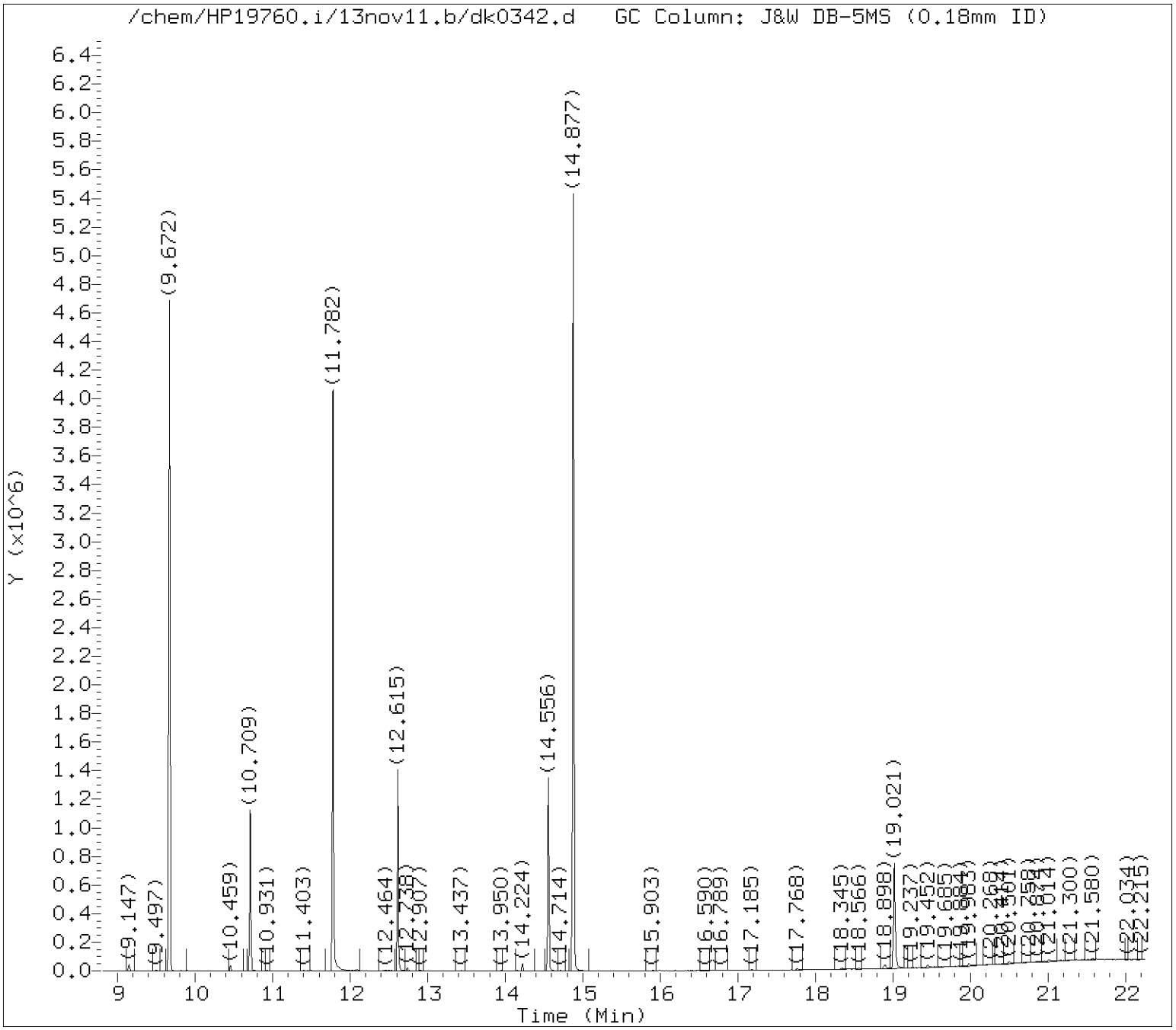
Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0342.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 13:57 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:53 jmg00346

Sample Name: R2122 Lab Sample ID: 7265243

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0342.d
Lab Smp Id: 7265243 Client Smp ID: R2122
Inj Date : 11-NOV-2013 13:57
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : R2122;7265243;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;240;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:57.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0524.d
Injection date and time: **14-NOV-2013 03:47**
Data file Sample Info. Line: R2123;7265244;2;0;SAMPLE;;;
Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	140941 (-5)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	661569 (-7)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	418254 (-6)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	735674 (-11)	20.00	
167) Pyrene-d10	10.932(0.000)	1472	212	828416 (-20)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	553460 (-36)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.705(0.000)	82	1235537	86.684	87%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.476(-0.001)	172	2548531	96.908	97%		69 - 120
156) Terphenyl-d14	(5)	11.141(-0.001)	244	3042097	102.722	103%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)	7.974(-0.000)	152	5436	0.148	29.50			0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.573(0.000)	178	27445	0.642	128.32			0.1
138) Anthracene	(4)	9.622(0.000)	178	6005	0.136	27.28			0.1
147) Fluoranthene	(4)	10.735(0.000)	202	60848	1.272	254.43			0.1
154) Pyrene	(5)	10.950(0.000)	202	57242	1.244	248.85			0.1
166) Benzo(a)anthracene	(5)	12.124(0.000)	228	19692	0.464	92.82			0.1
168) Chrysene	(5)	12.155(0.000)	228	27920	0.682	136.49			0.1
172) Benzo(b)fluoranthene	(6)	13.170(0.000)	252	32747M	0.969	193.80			0.1
173) Benzo(k)fluoranthene	(6)	13.194(0.000)	252	15151MA	0.439	87.89			0.1
174) Benzo(a)pyrene	(6)	13.477(0.000)	252	21732M	0.659	131.78			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.528(0.000)	276	14344M	0.409	81.75			0.1
178) Dibenz(a,h)anthracene	(6)	14.553(0.000)	278	3360M	0.114	22.89			0.1
179) Benzo(g,h,i)perylene	(6)	14.805(0.000)	276	15890	0.532	106.30			0.1

M = Compound was manually integrated. A = User selected an alternate peak.

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0524.d Injection date and time: **14-NOV-2013 03:47**
Data file Sample Info. Line: R2123;7265244;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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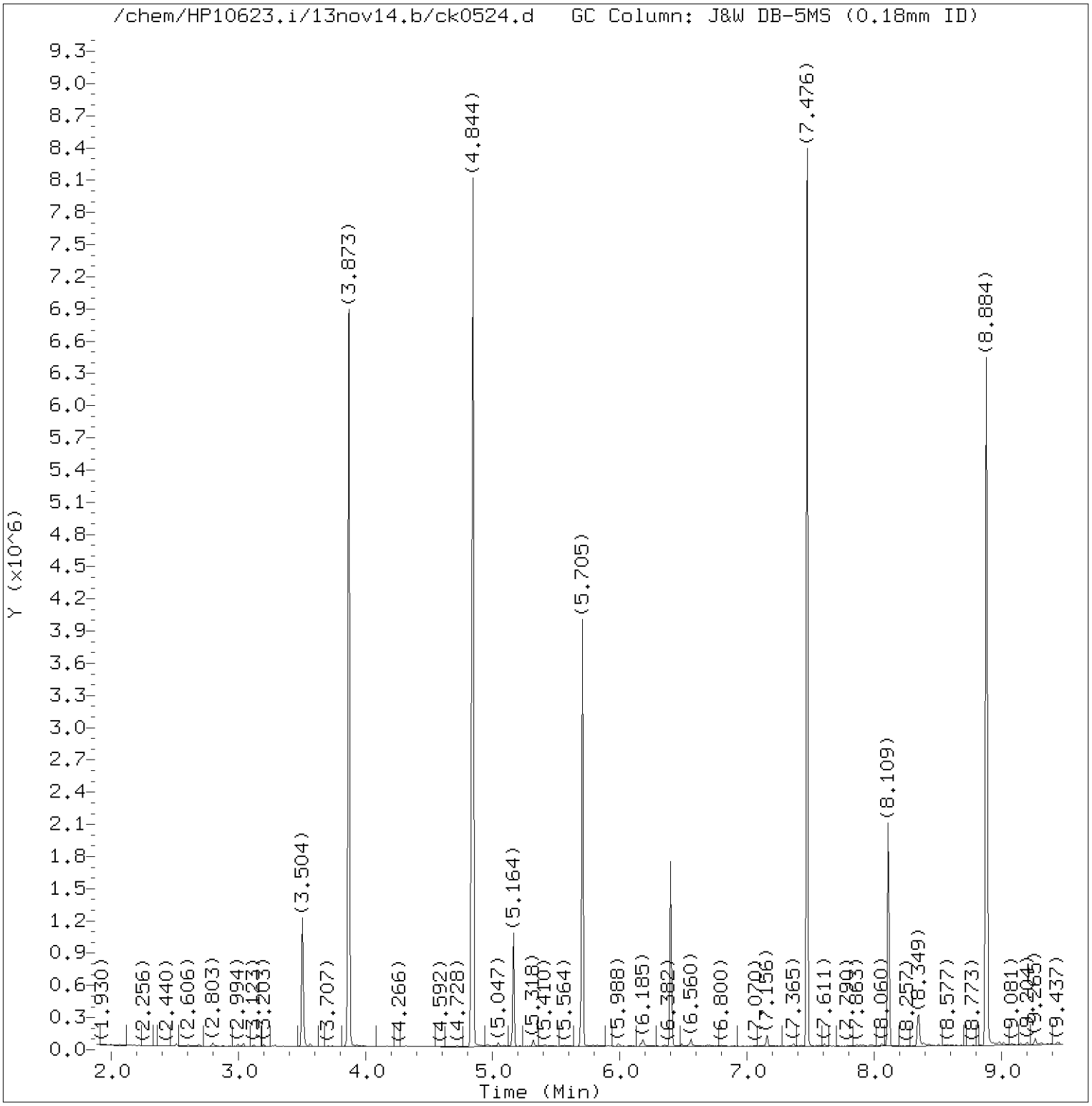
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

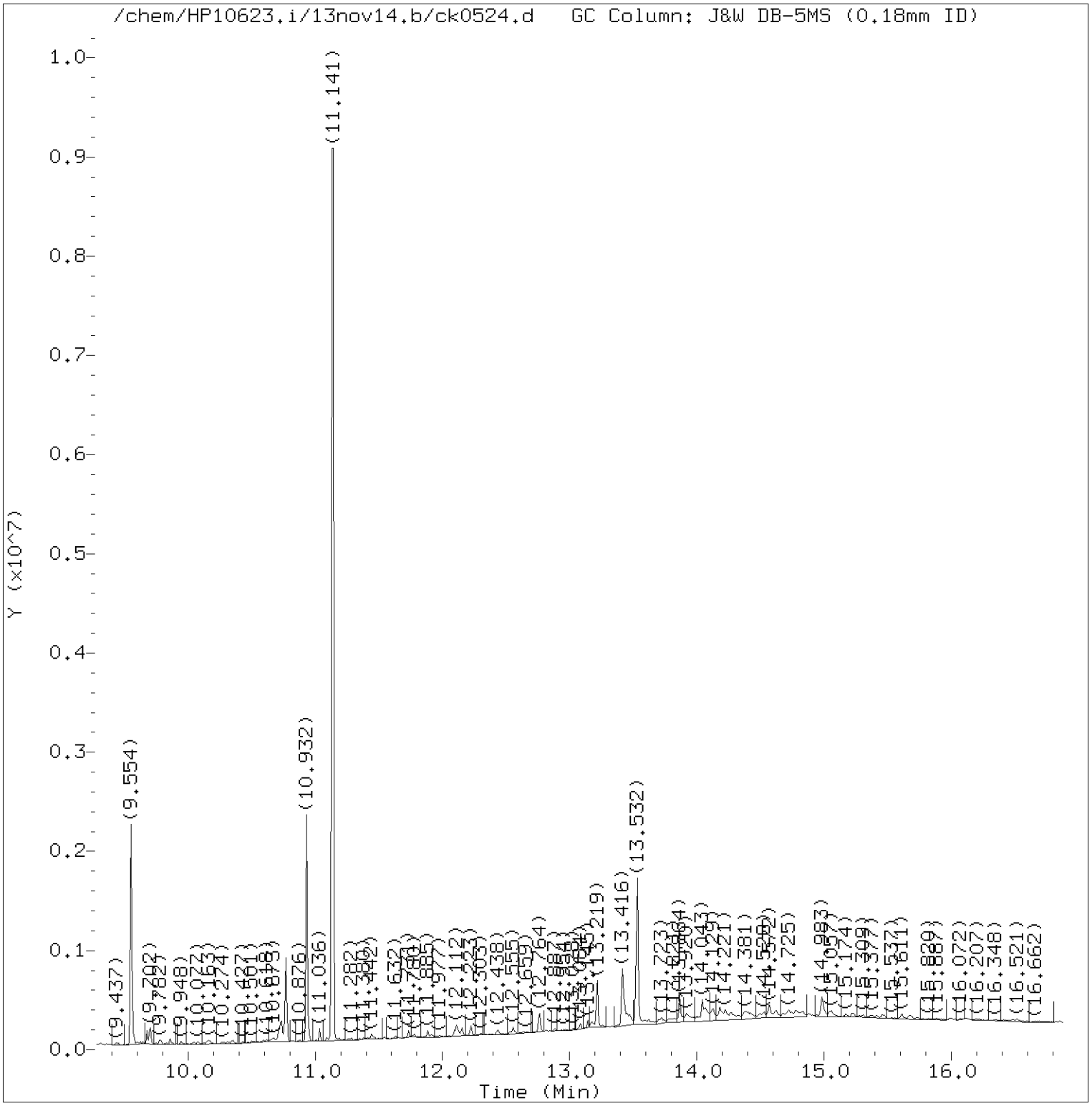
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

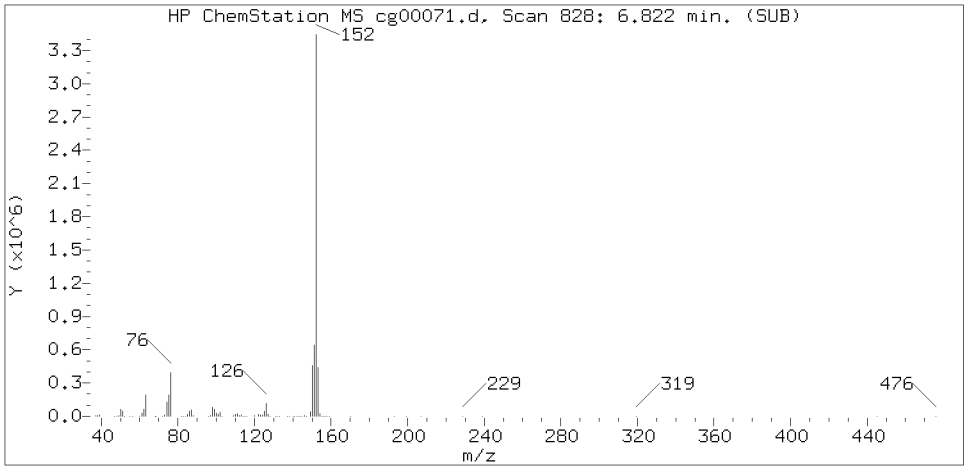
Sample Name: R2123 Lab Sample ID: 7265244

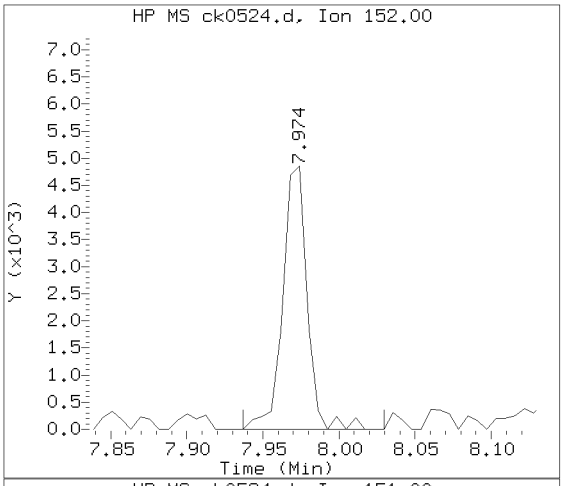
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	140941	20.000
38)$Nitrobenzene-d5	(2)	5.705	82	1235537	86.684
52)*Naphthalene-d8	(2)	6.400	136	661569	20.000
78)$2-Fluorobiphenyl	(3)	7.476	172	2548531	96.908
95) Acenaphthylene	(3)	7.974	152	5436	0.148
98)*Acenaphthene-d10	(3)	8.109	164	418254	20.000
135)*Phenanthrene-d10	(4)	9.554	188	735674	20.000
137) Phenanthrene	(4)	9.573	178	27445	0.642
138) Anthracene	(4)	9.622	178	6005	0.136
147) Fluoranthene	(4)	10.735	202	60848	1.272
167)*Pyrene-d10	(5)	10.932	212	828416	20.000
154) Pyrene	(5)	10.950	202	57242	1.244
156)$Terphenyl-d14	(5)	11.141	244	3042097	102.722
166) Benzo(a)anthracene	(5)	12.124	228	19692	0.464
168) Chrysene	(5)	12.155	228	27920	0.682
172) Benzo(b)fluoranthene	(6)	13.170	252	32747M	0.969
173) Benzo(k)fluoranthene	(6)	13.194	252	15151MA	0.439
174) Benzo(a)pyrene	(6)	13.477	252	21732M	0.659
175)*Perylene-d12	(6)	13.532	264	553460	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.528	276	14344M	0.409
178) Dibenz(a,h)anthracene	(6)	14.553	278	3360M	0.114
179) Benzo(g,h,i)perylene	(6)	14.805	276	15890	0.532

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

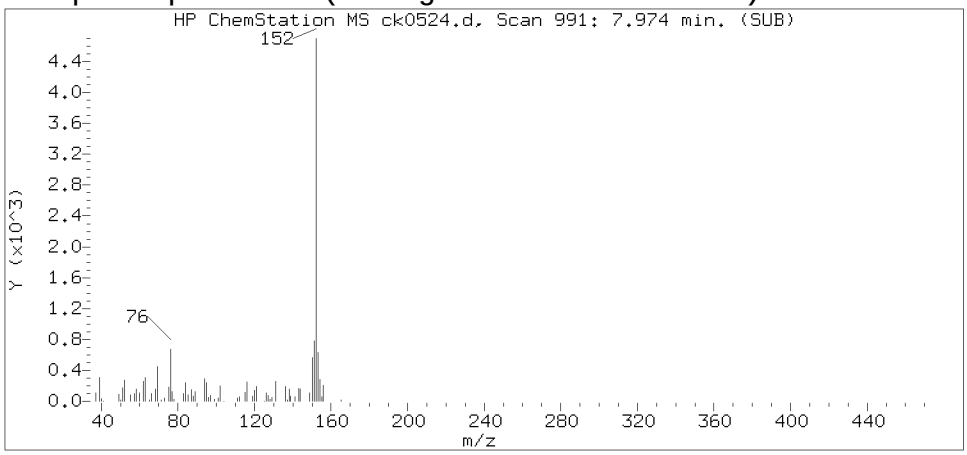
Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

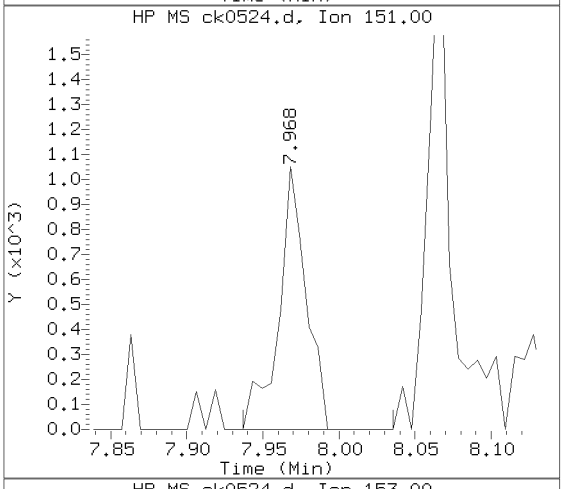
Reference Standard Spectrum for Acenaphthylene



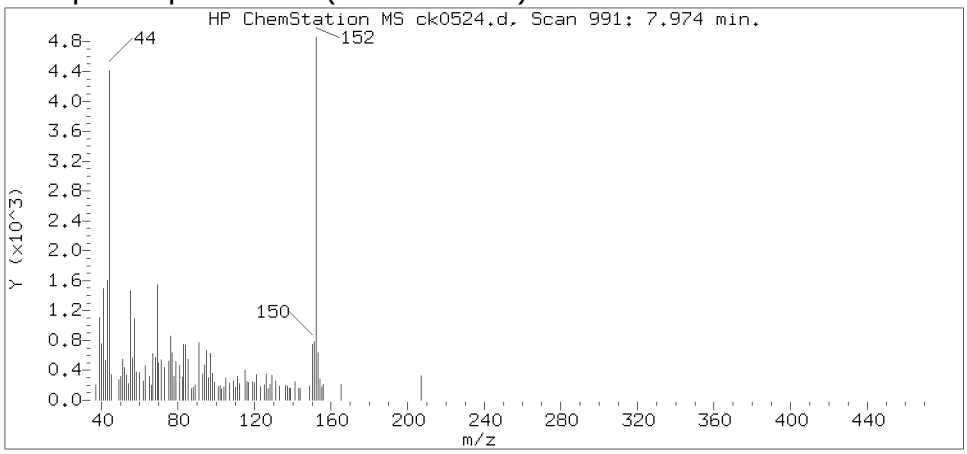


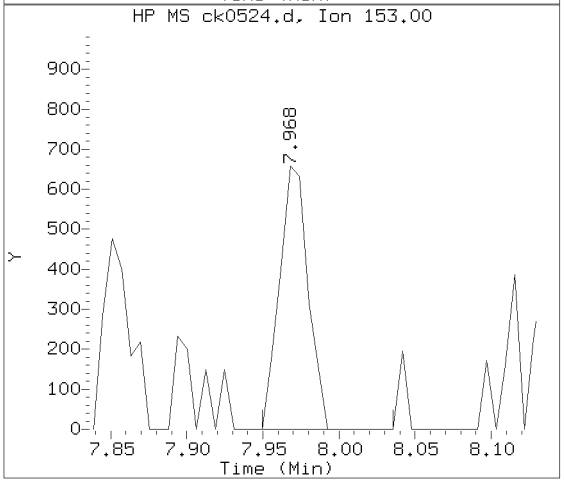
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number : 95
Compound Name : Acenaphthylene
Scan Number : 991
Retention Time (minutes) : 7.974
Relative Retention Time :-0.00000
Quant Ion : 152.00
Area (flag) : 5436
On-column Amount (ng/ul) : 0.1475

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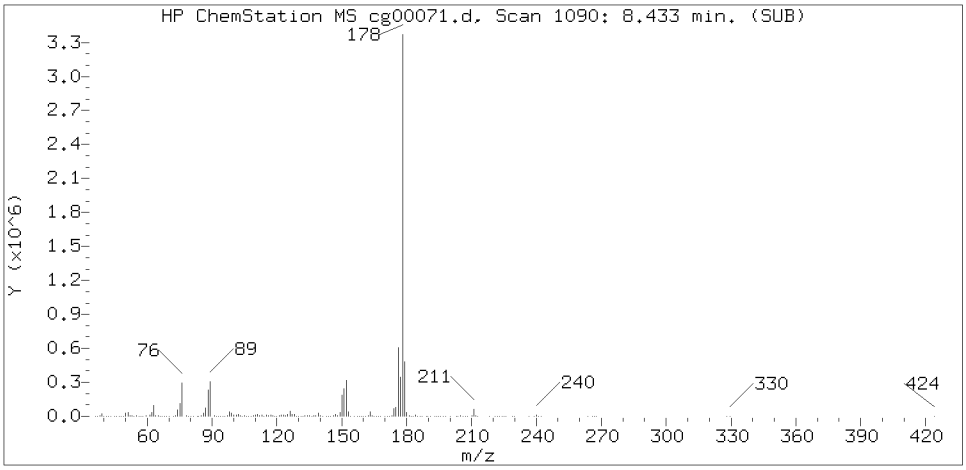
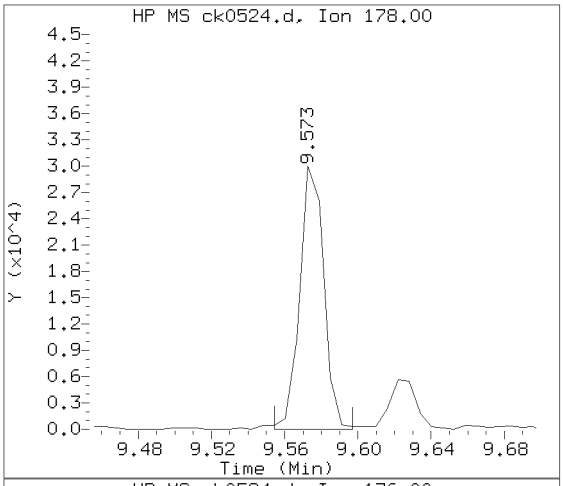
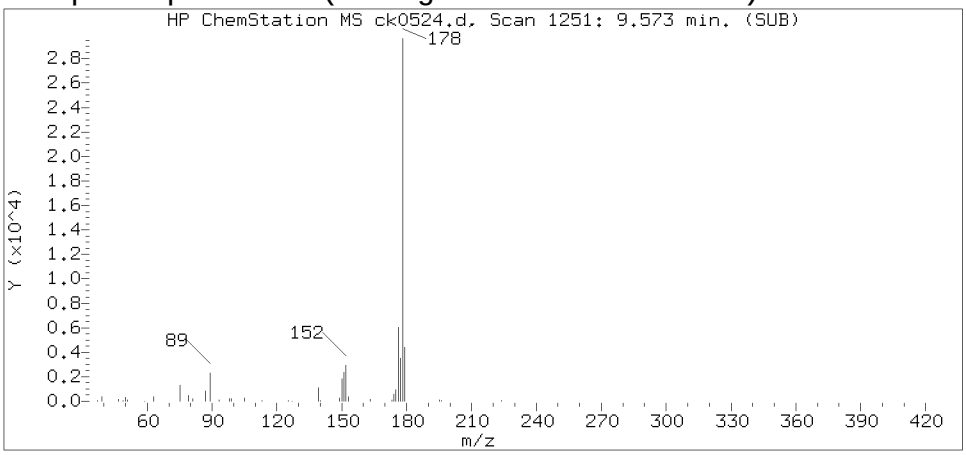
Target 3.5 esignature user ID: mac00013

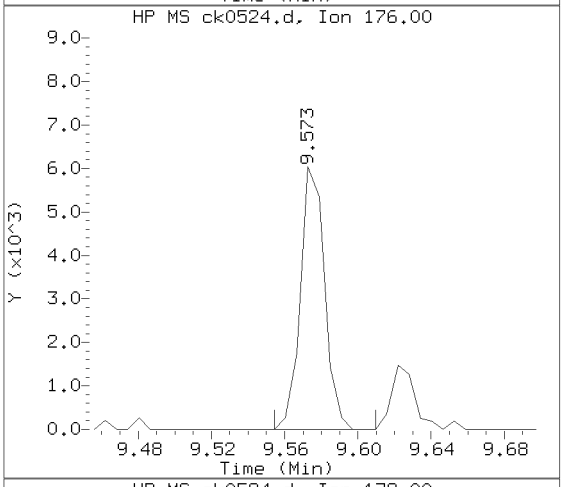
Reference Standard Spectrum for Phenanthrene



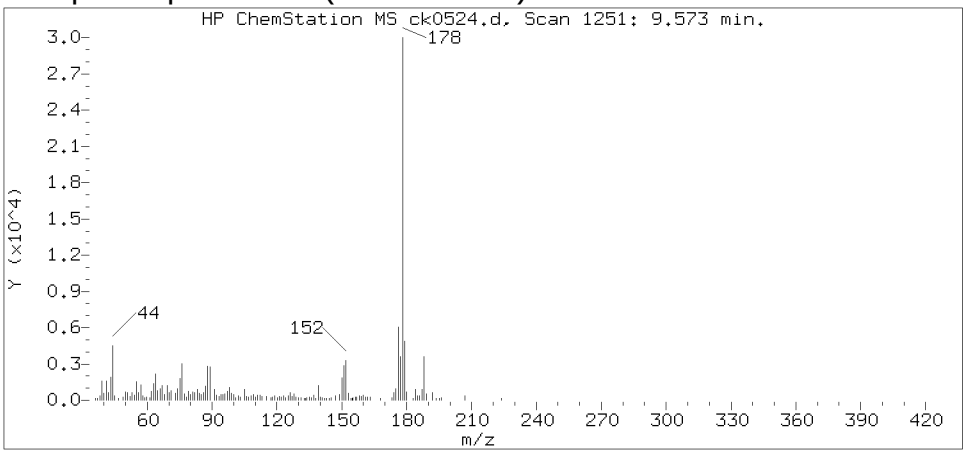


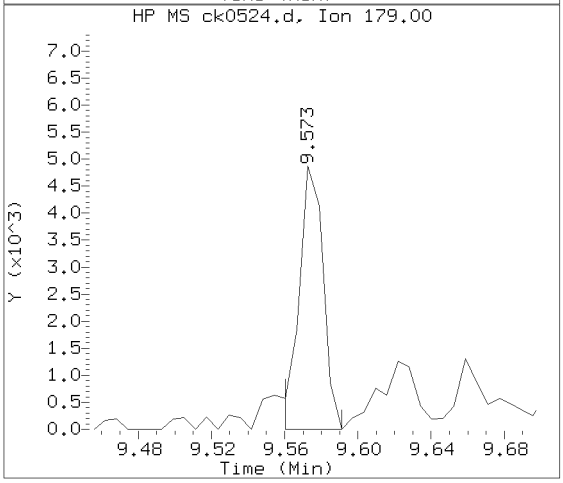
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1251
Retention Time (minutes)	: 9.573
Relative Retention Time	: 0.00064
Quant Ion	: 178.00
Area (flag)	: 27445
On-column Amount (ng/ul)	: 0.6416

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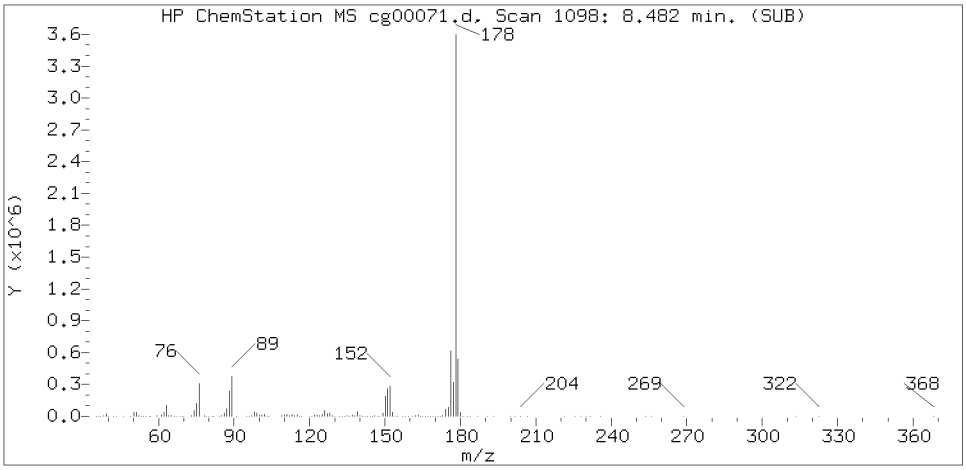
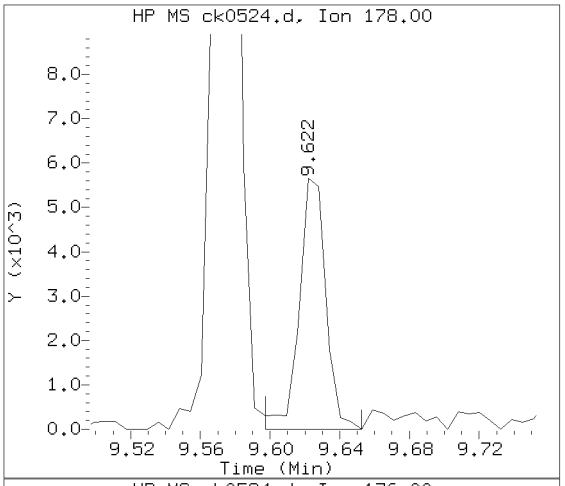
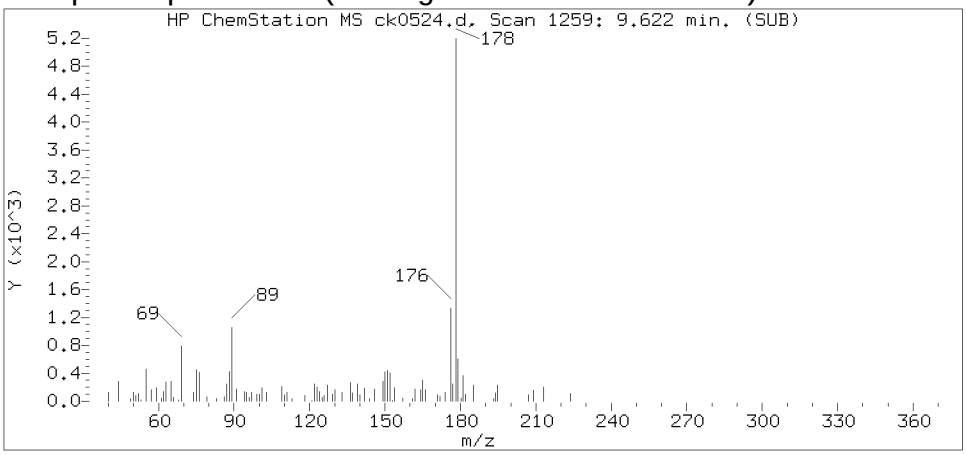
Target 3.5 esignature user ID: mac00013

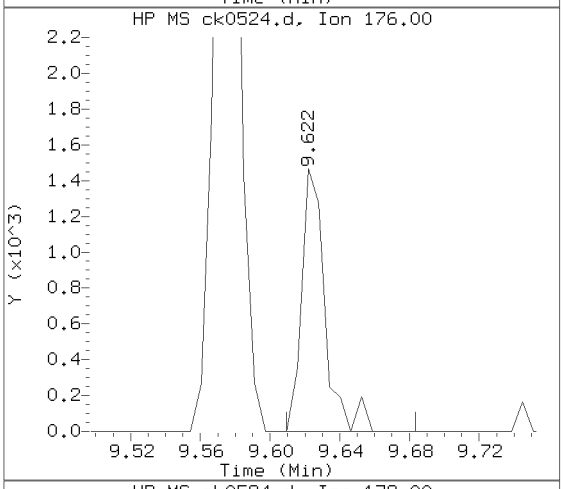
Reference Standard Spectrum for Anthracene



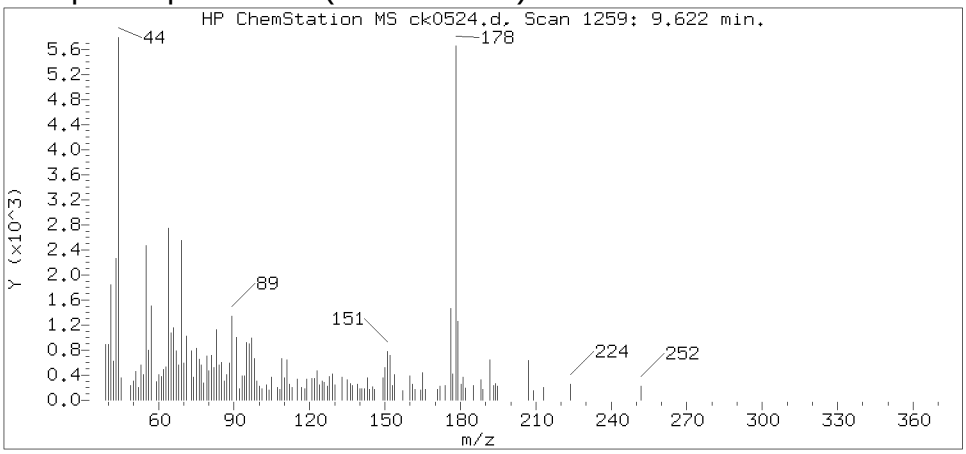


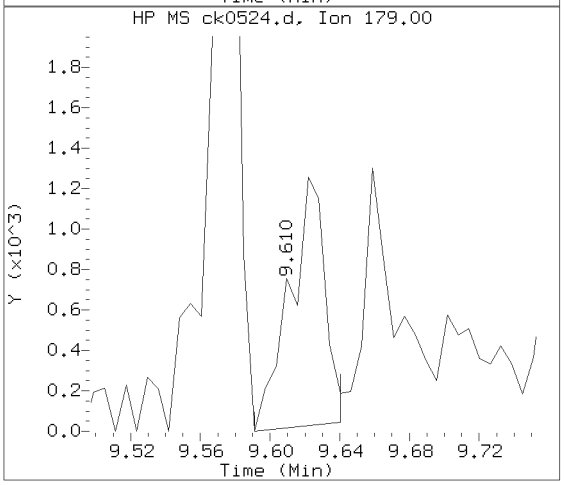
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number : 138
Compound Name : Anthracene
Scan Number : 1259
Retention Time (minutes) : 9.622
Relative Retention Time : 0.00064
Quant Ion : 178.00
Area (flag) : 6005
On-column Amount (ng/ul) : 0.1364

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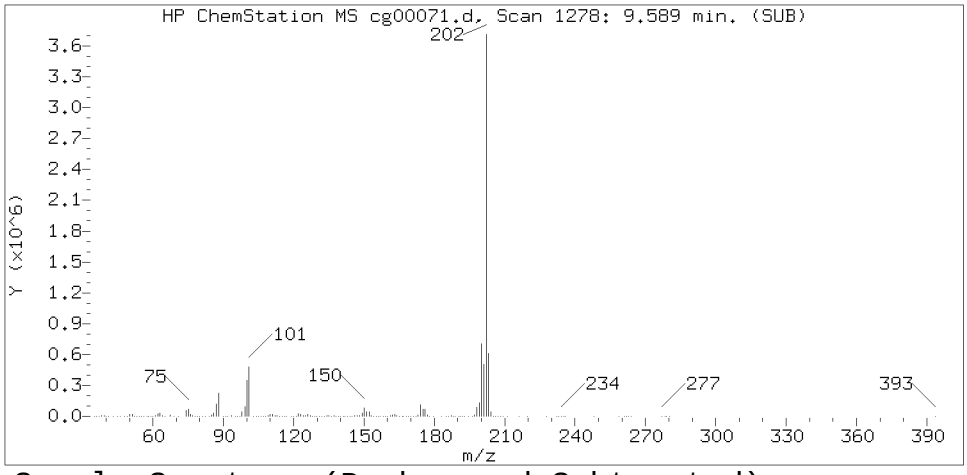
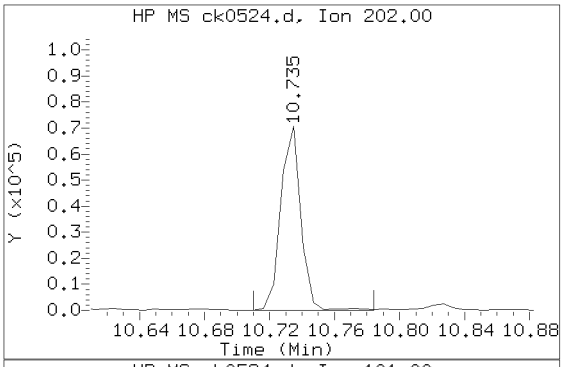
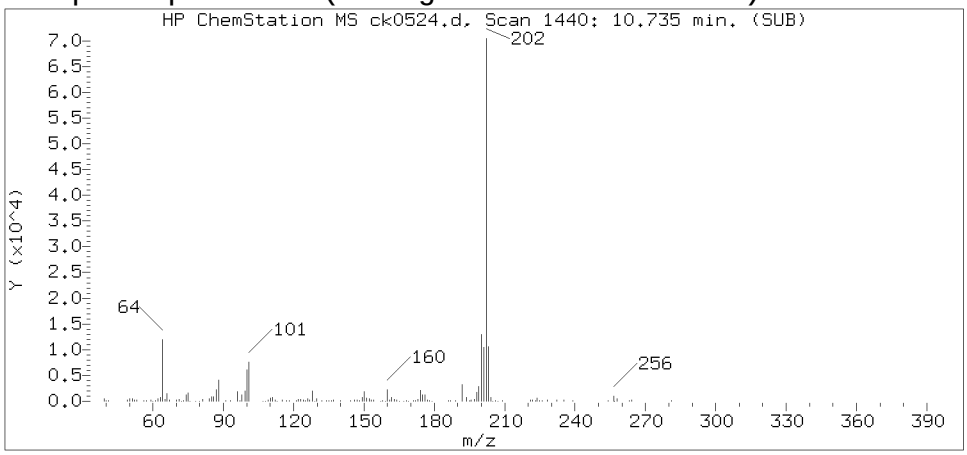
Target 3.5 esignature user ID: mac00013

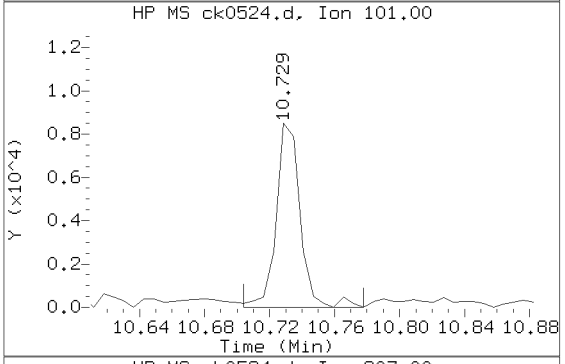
Reference Standard Spectrum for Fluoranthene

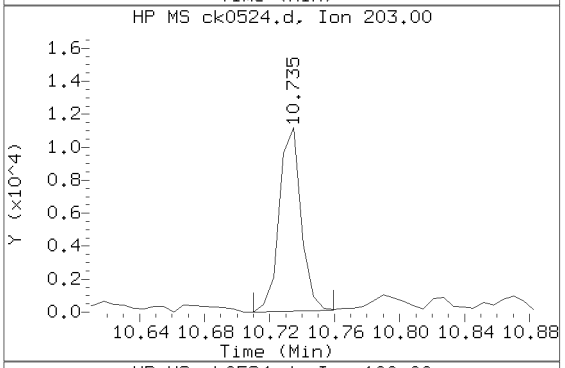




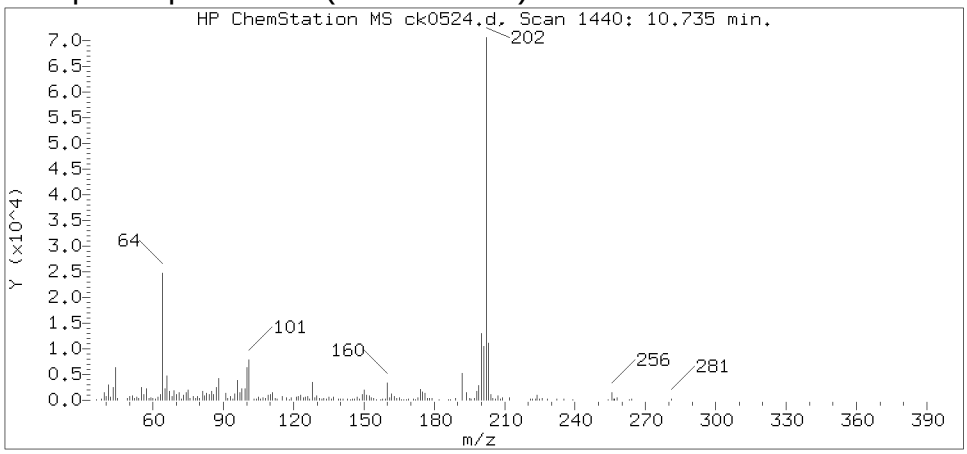
Sample Spectrum (Background Subtracted)

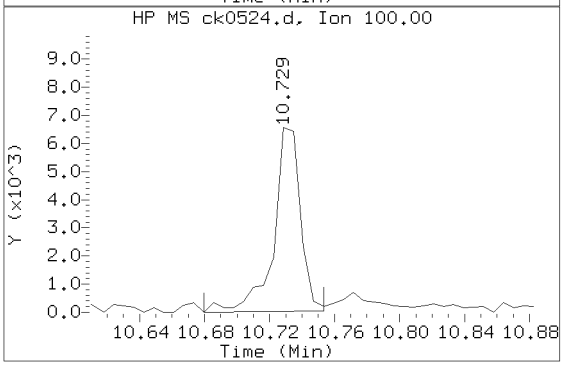






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1440
Retention Time (minutes)	: 10.735
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 60848
On-column Amount (ng/ul)	: 1.2722

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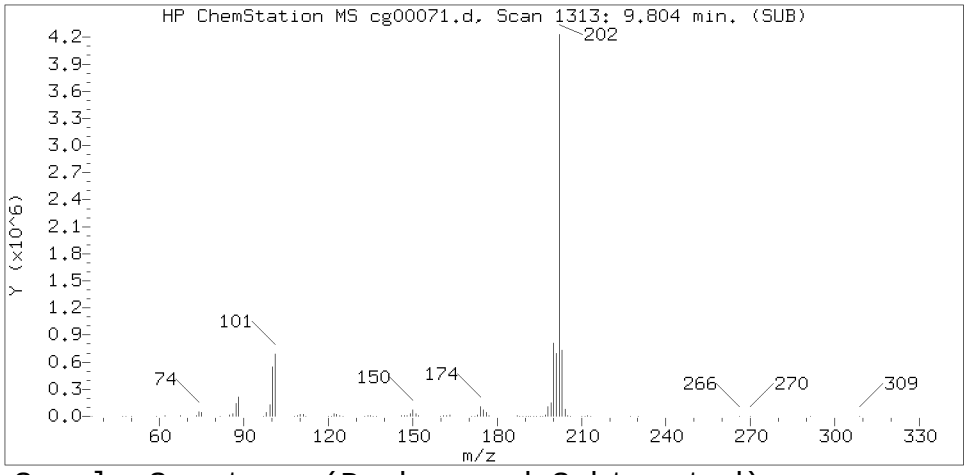
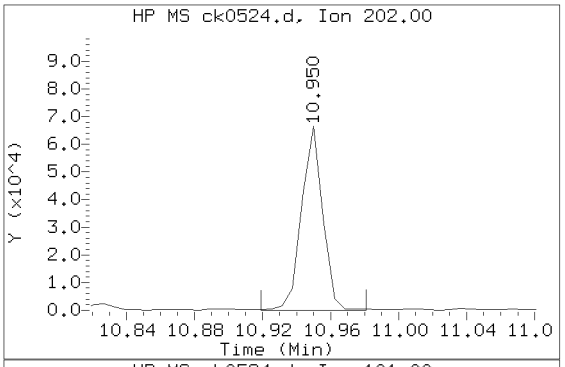
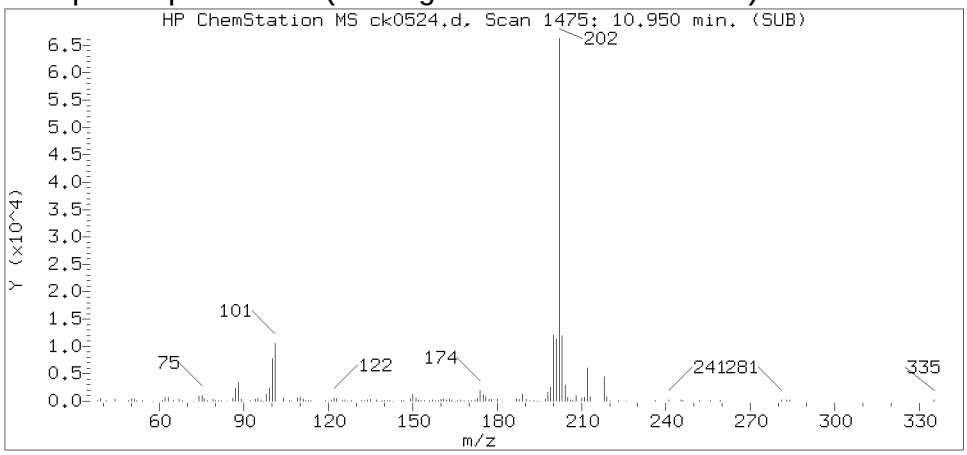
Target 3.5 esignature user ID: mac00013

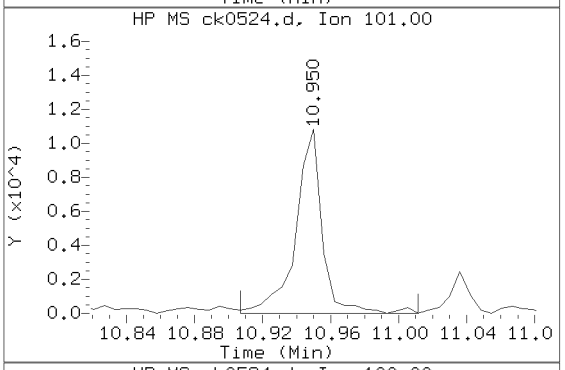
Reference Standard Spectrum for Pyrene

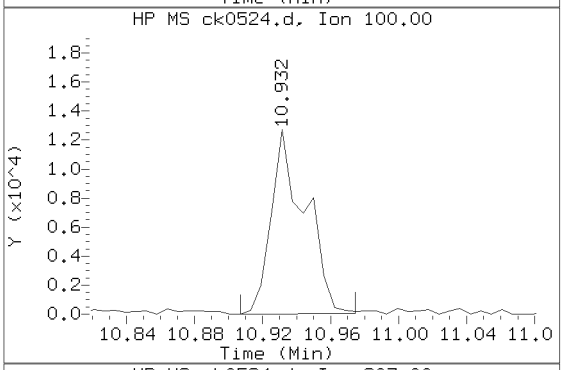




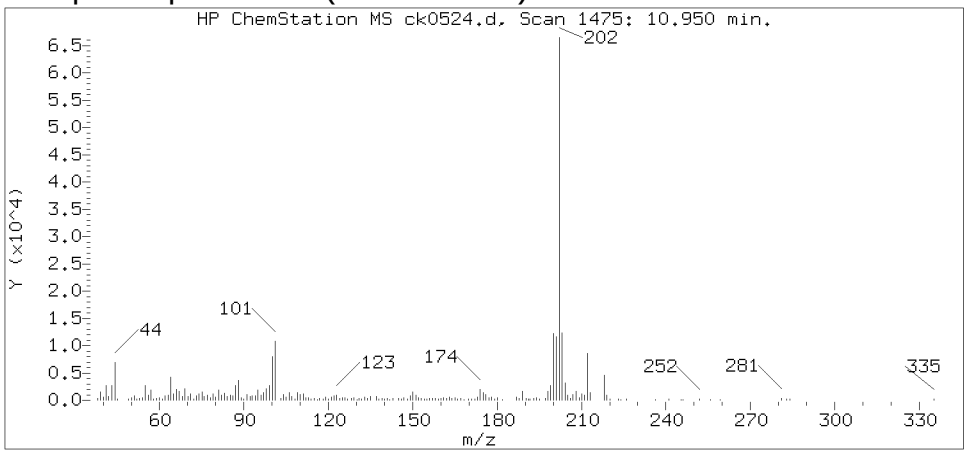
Sample Spectrum (Background Subtracted)

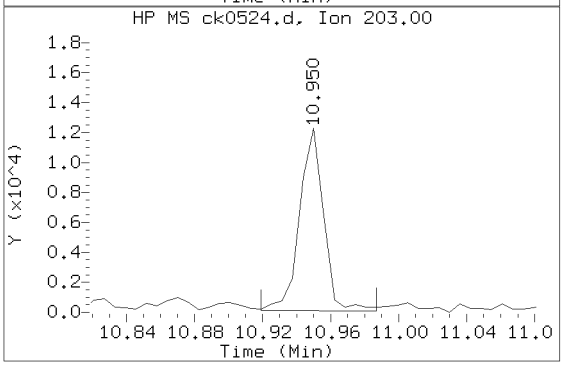






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 57242
On-column Amount (ng/ul)	: 1.2443

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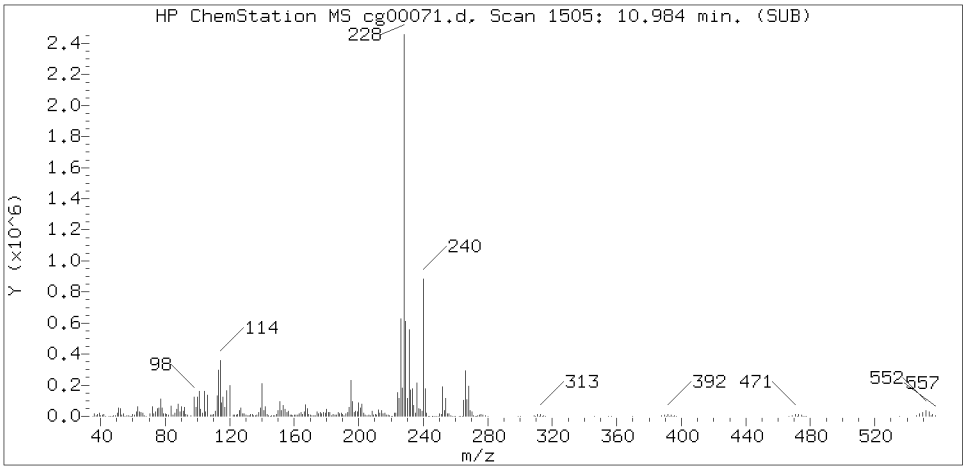
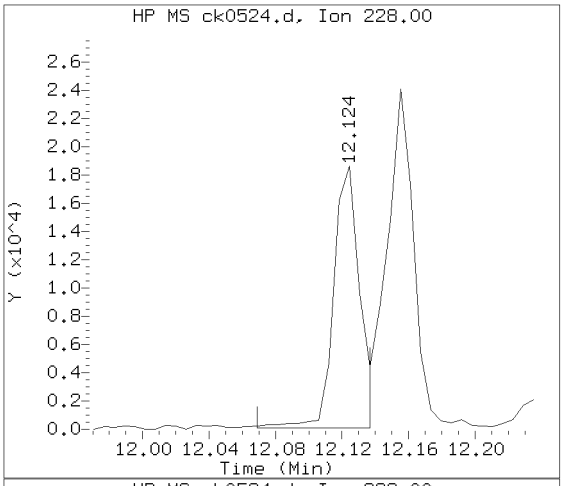
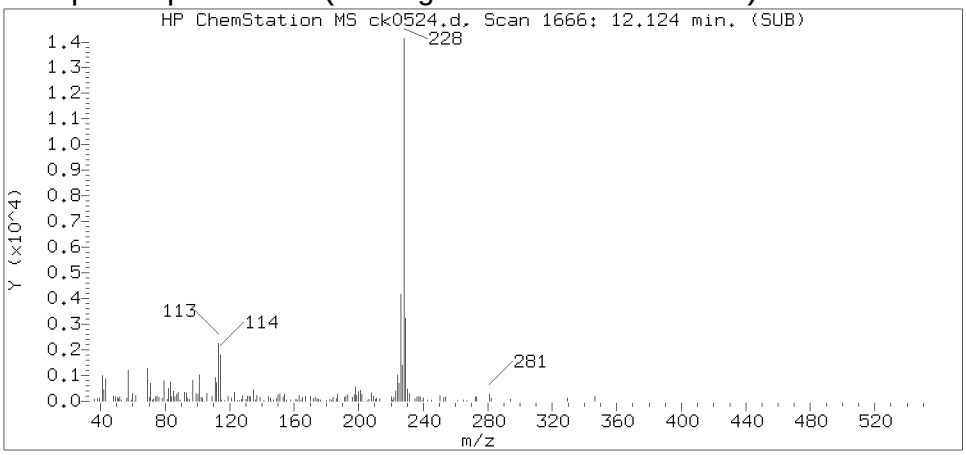
Target 3.5 esignature user ID: mac00013

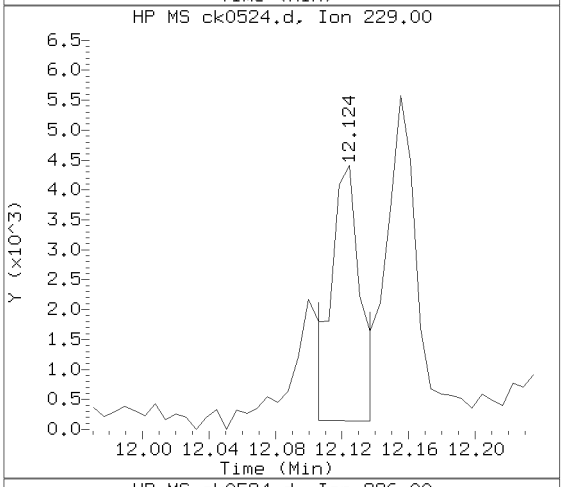
Reference Standard Spectrum for Benzo(a)anthracene



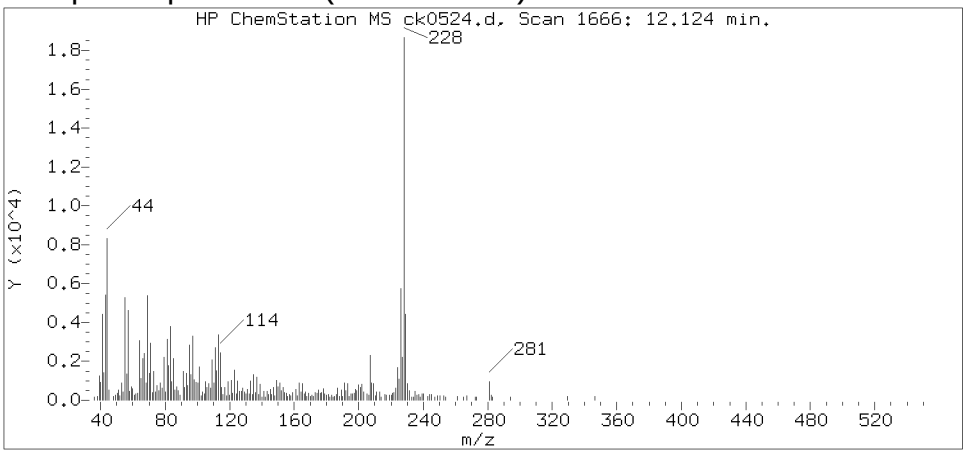


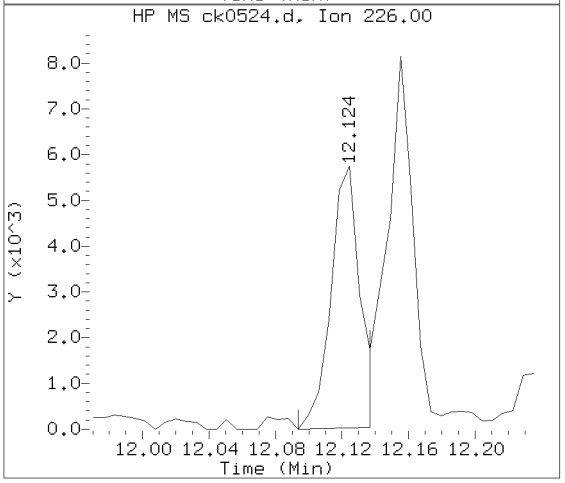
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1666
Retention Time (minutes)	: 12.124
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 19692
On-column Amount (ng/ul)	: 0.4641

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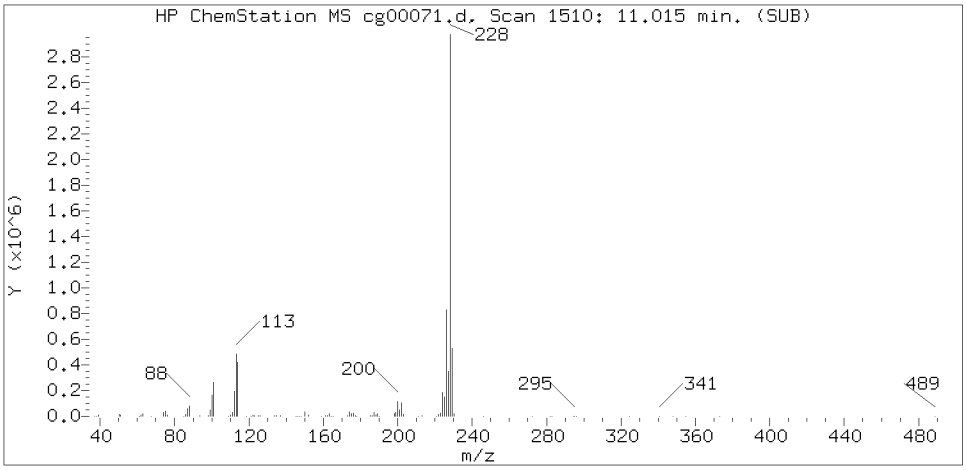
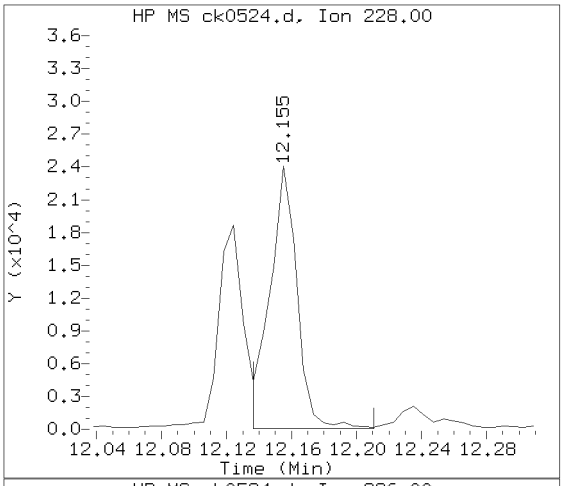
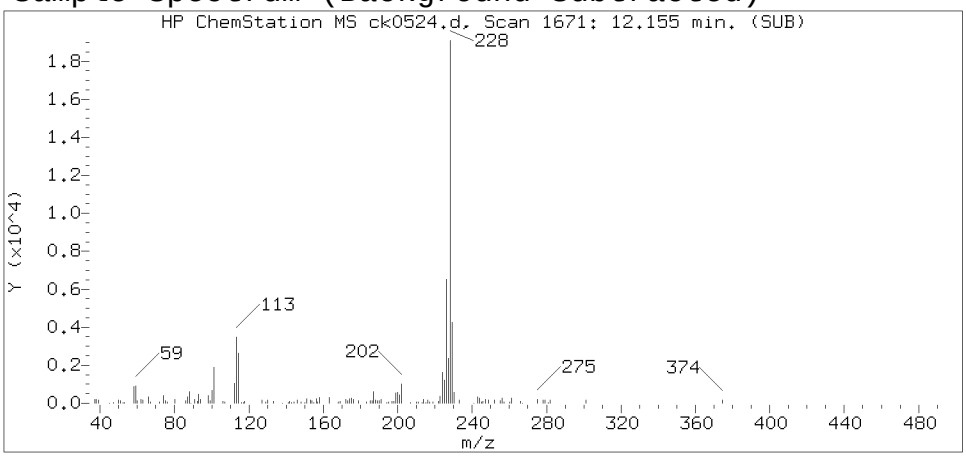
Target 3.5 esignature user ID: mac00013

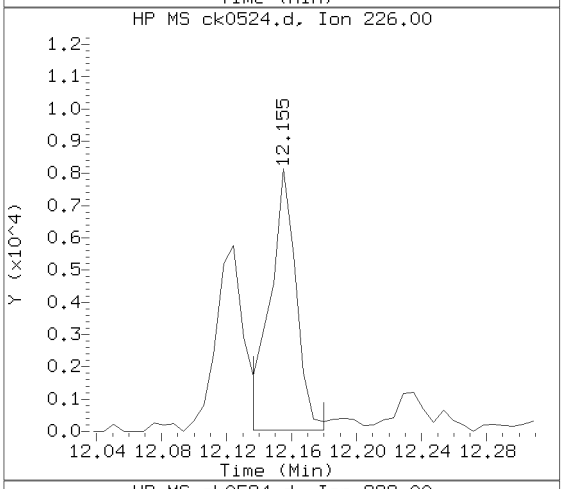
Reference Standard Spectrum for Chrysene



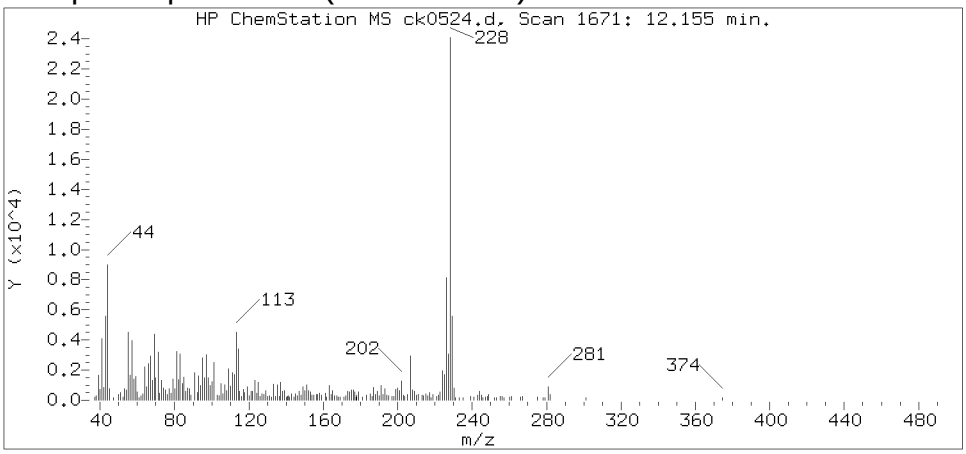


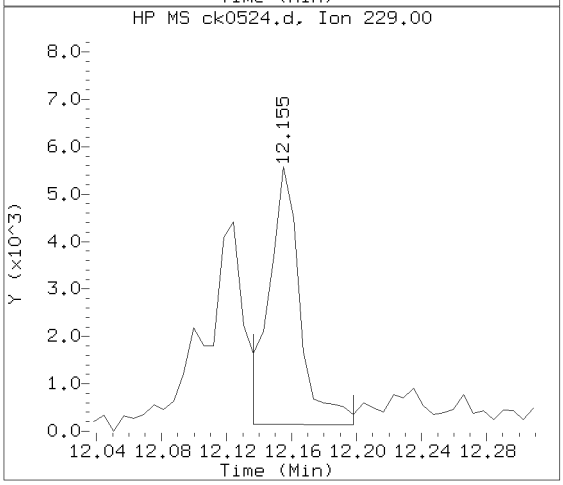
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1671
Retention Time (minutes)	: 12.155
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 27920
On-column Amount (ng/ul)	: 0.6825

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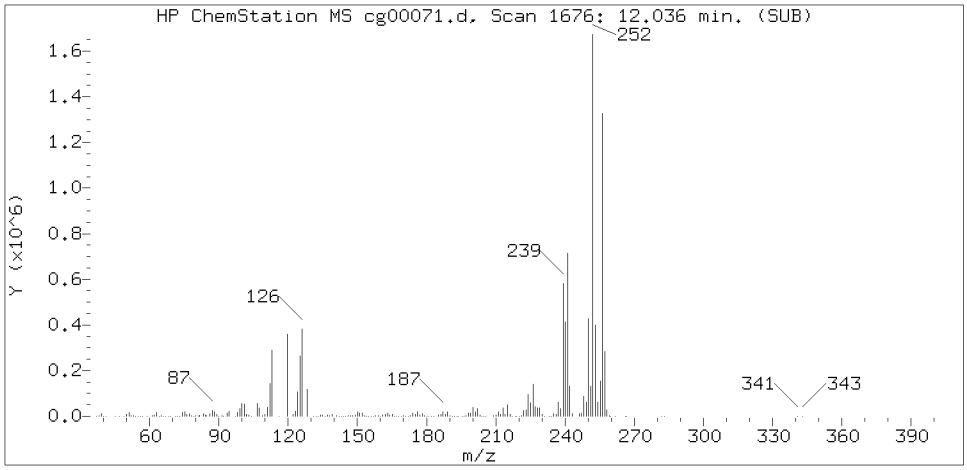
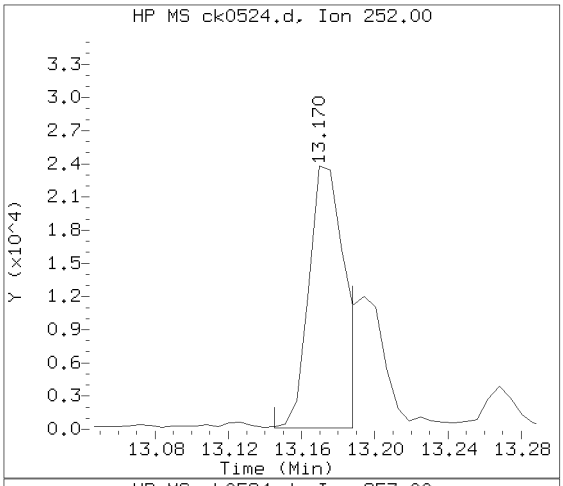
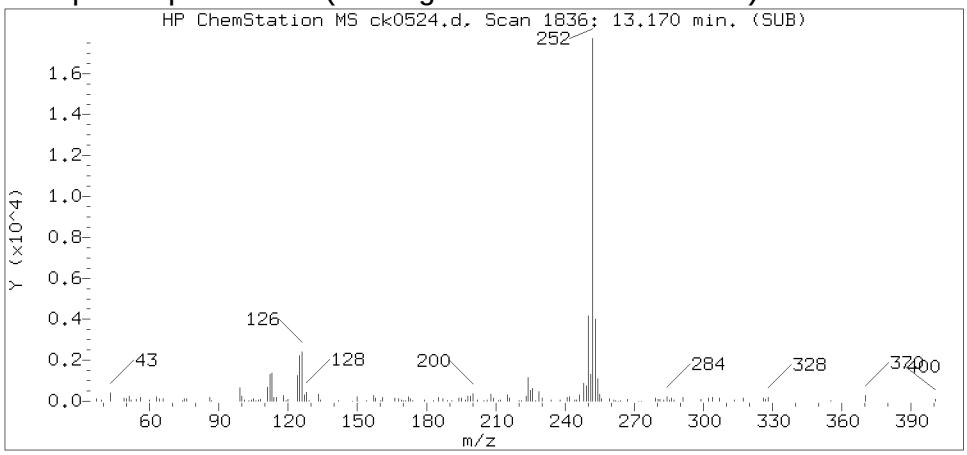
Target 3.5 esignature user ID: mac00013

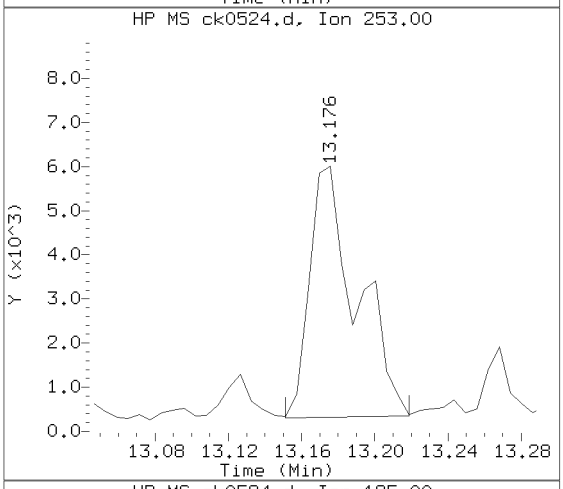
Reference Standard Spectrum for Benzo(b)fluoranthene



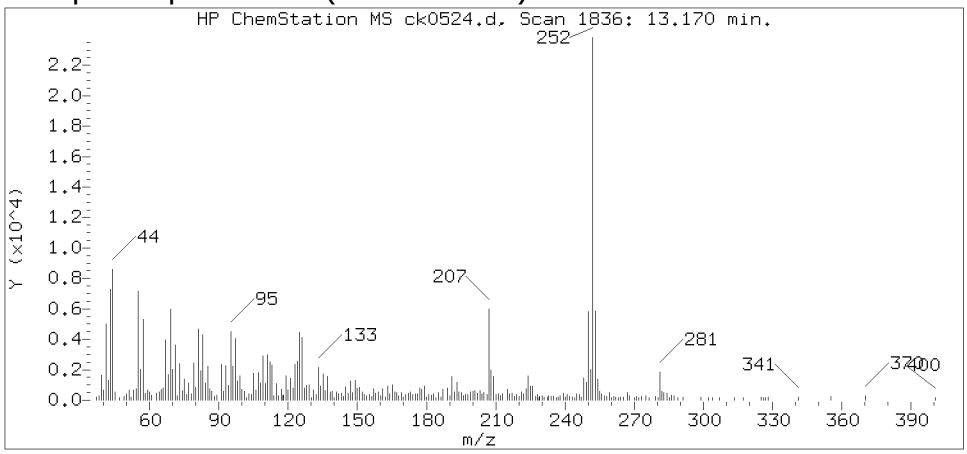


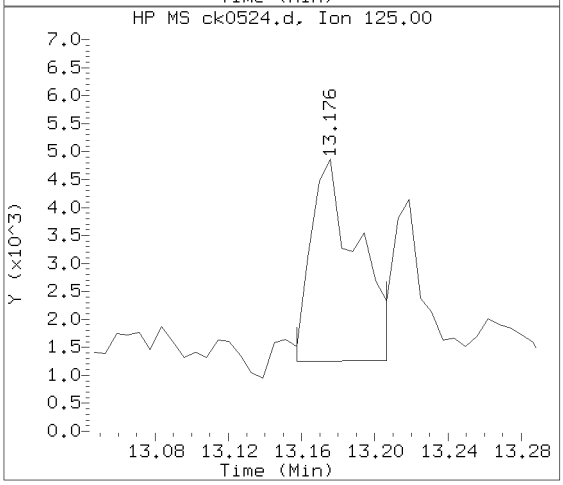
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

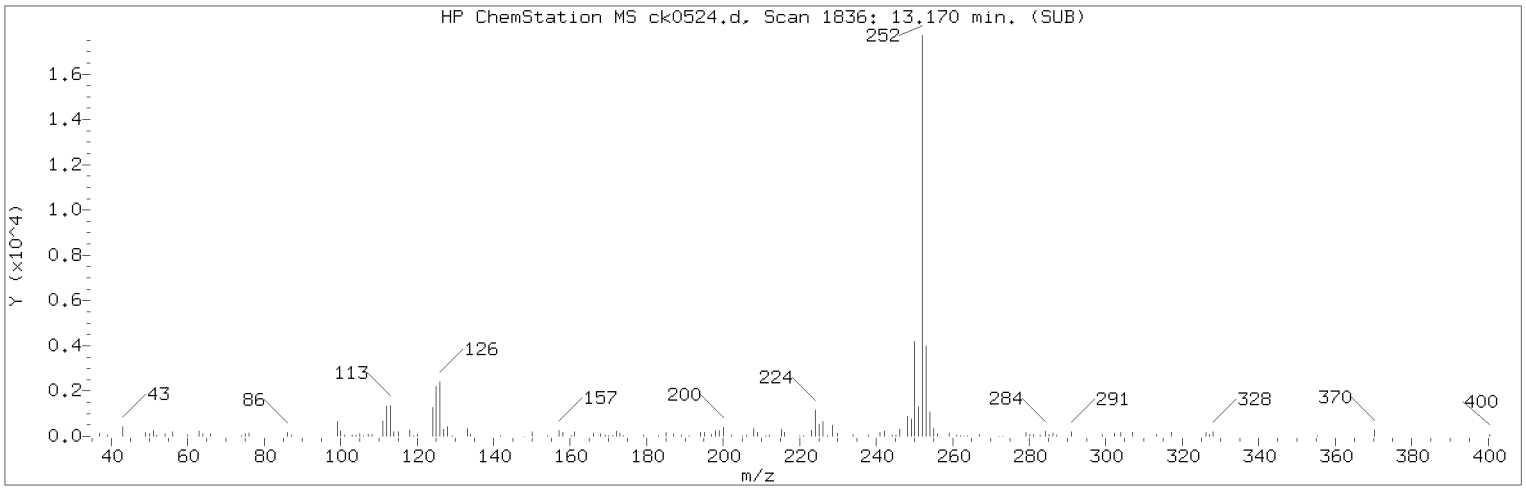
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

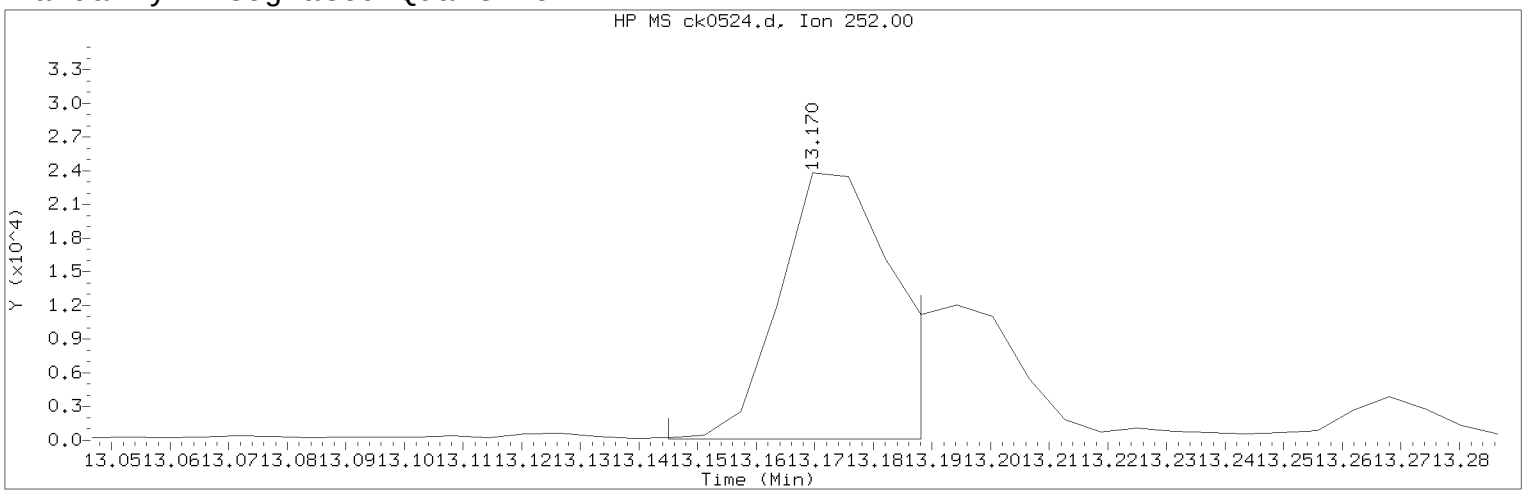
Compound Number	: 172
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1836
Retention Time (minutes)	: 13.170
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 32747M
On-column Amount (ng/ul)	: 0.9690

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

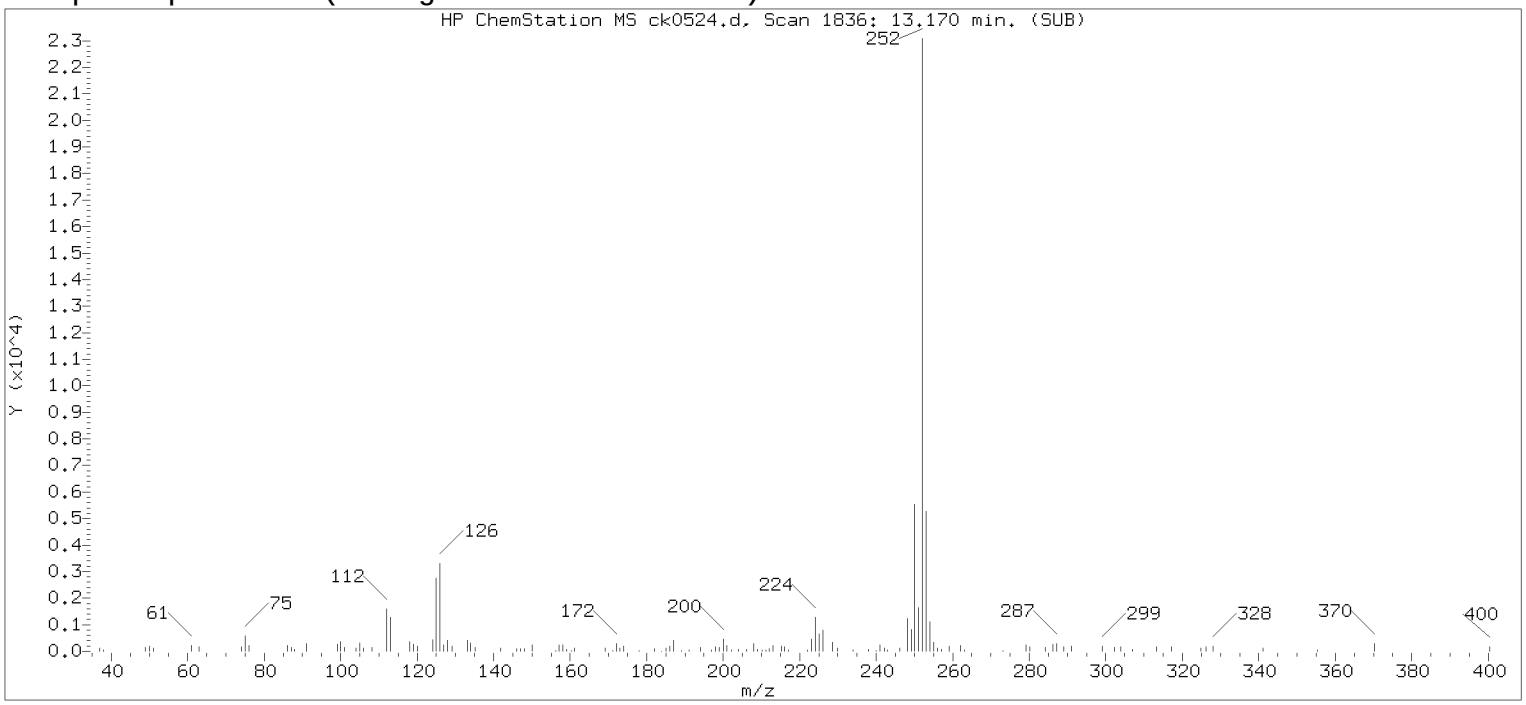
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1836
Retention Time (minutes) : 13.170
Quant Ion : 252.00
Area (flag) : 32747M
On-column Amount (ng/ul) : 0.9690
Integration start scan : 1831 Integration stop scan: 1838
Y at integration start : 136 Y at integration end: 136

Reason for manual integration: improper integration

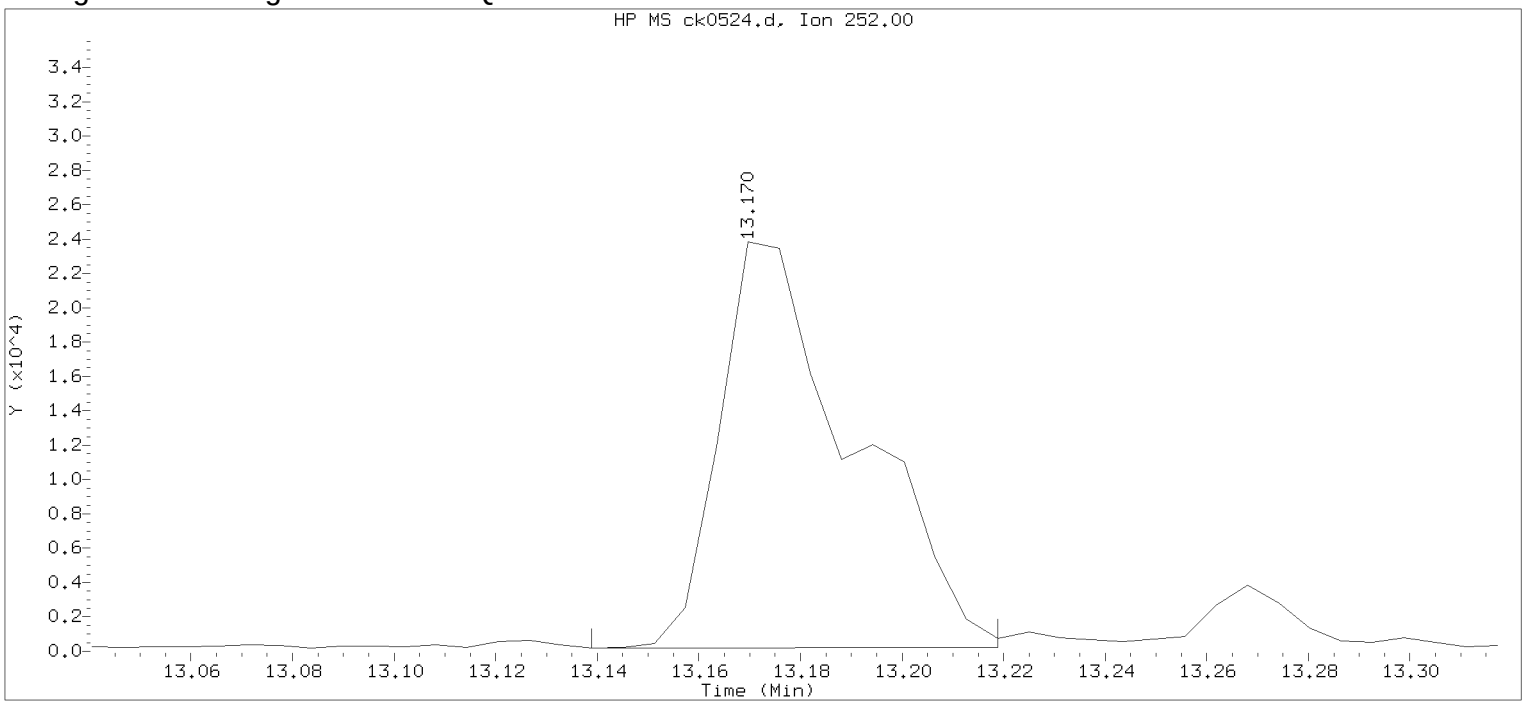
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

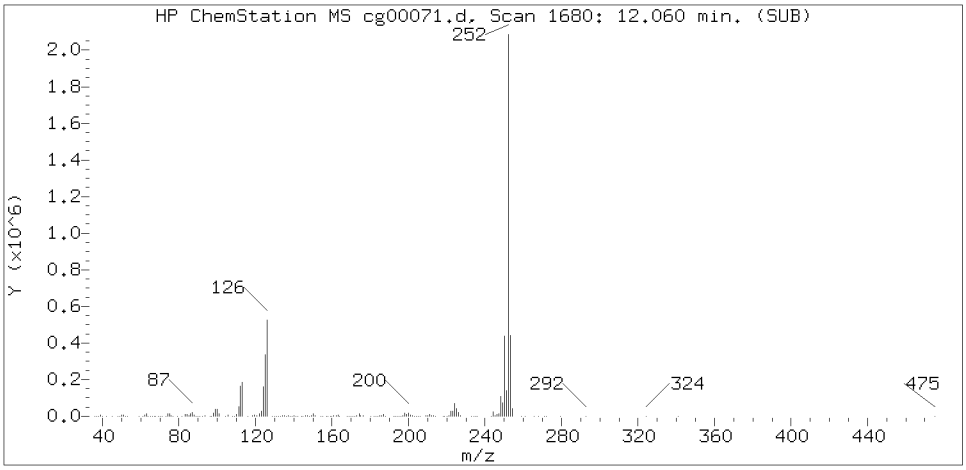
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:13 Automation

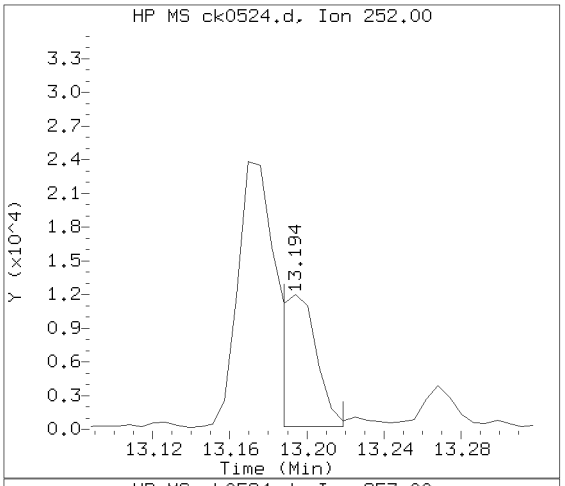
Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1836		
Retention Time (minutes)	: 13.170		
Quant Ion	: 252.00		
Area	: 43524		
On-column Amount (ng/ul)	: 1.2879		
Integration start scan	: 1830	Integration stop scan:	1843
Y at integration start	: 193	Y at integration end:	222

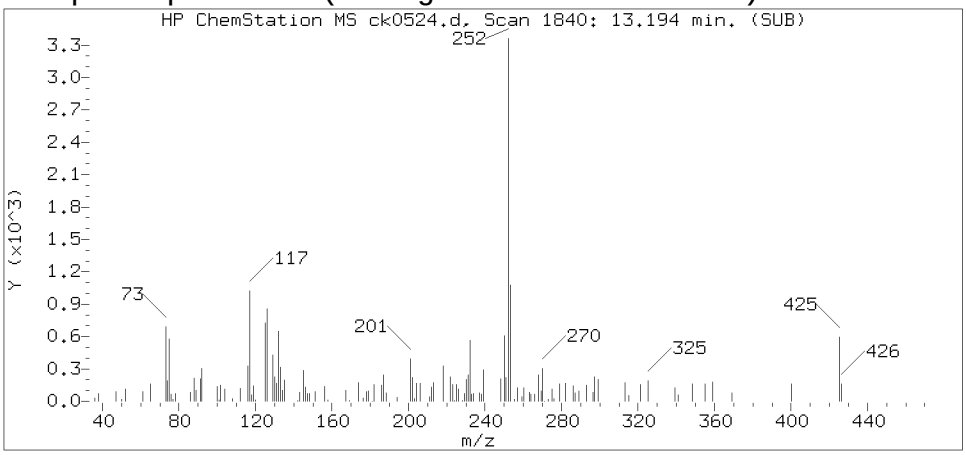
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

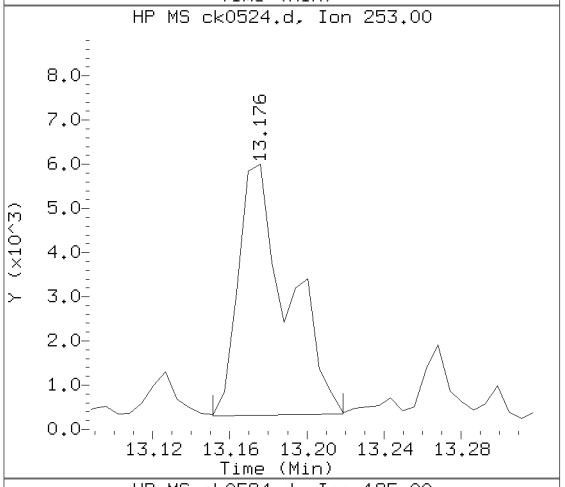
Reference Standard Spectrum for Benzo(k)fluoranthene



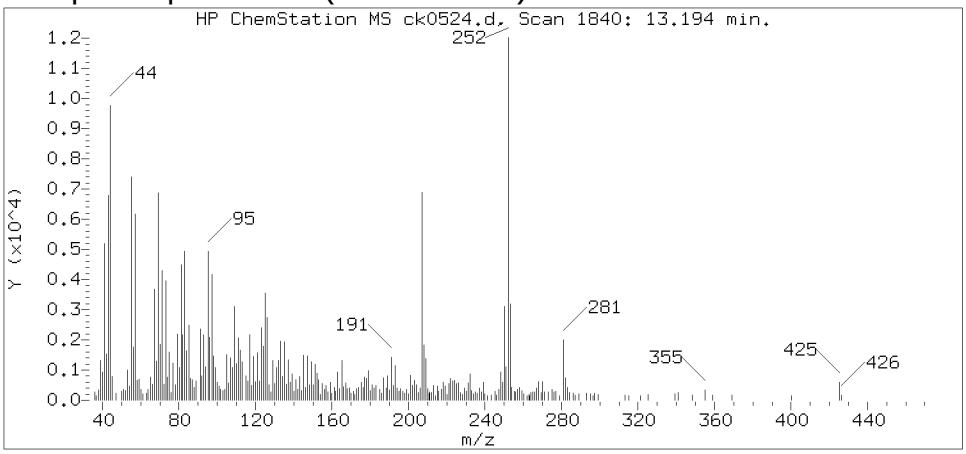


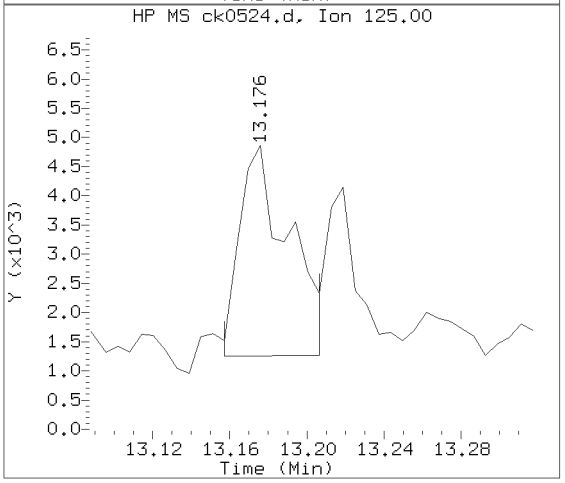
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

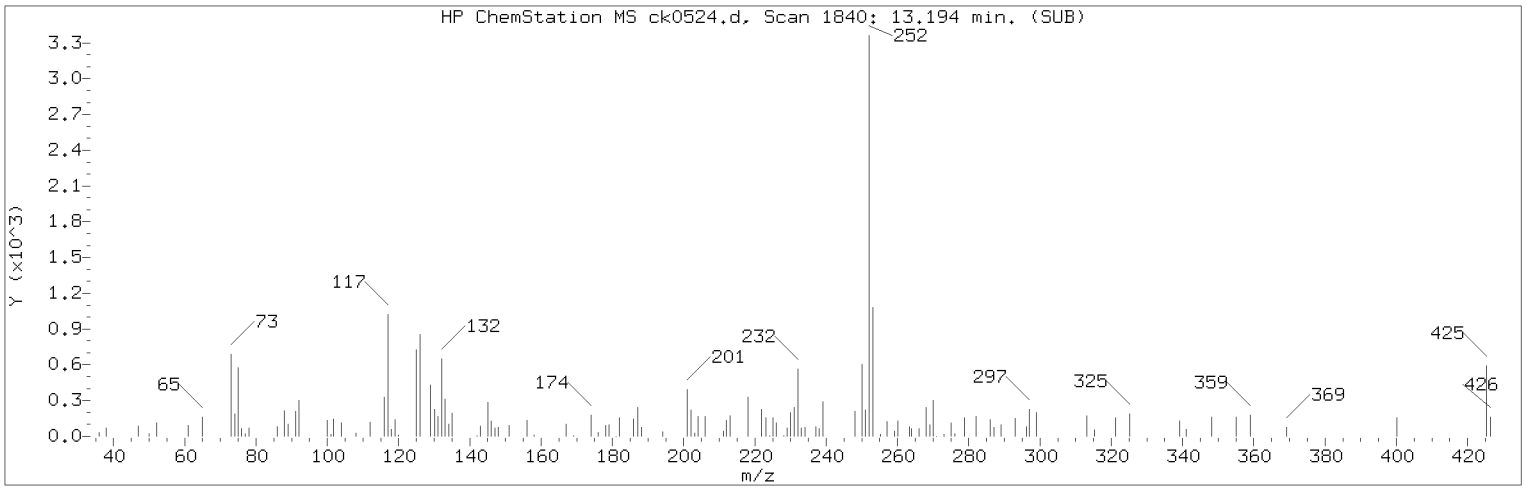
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

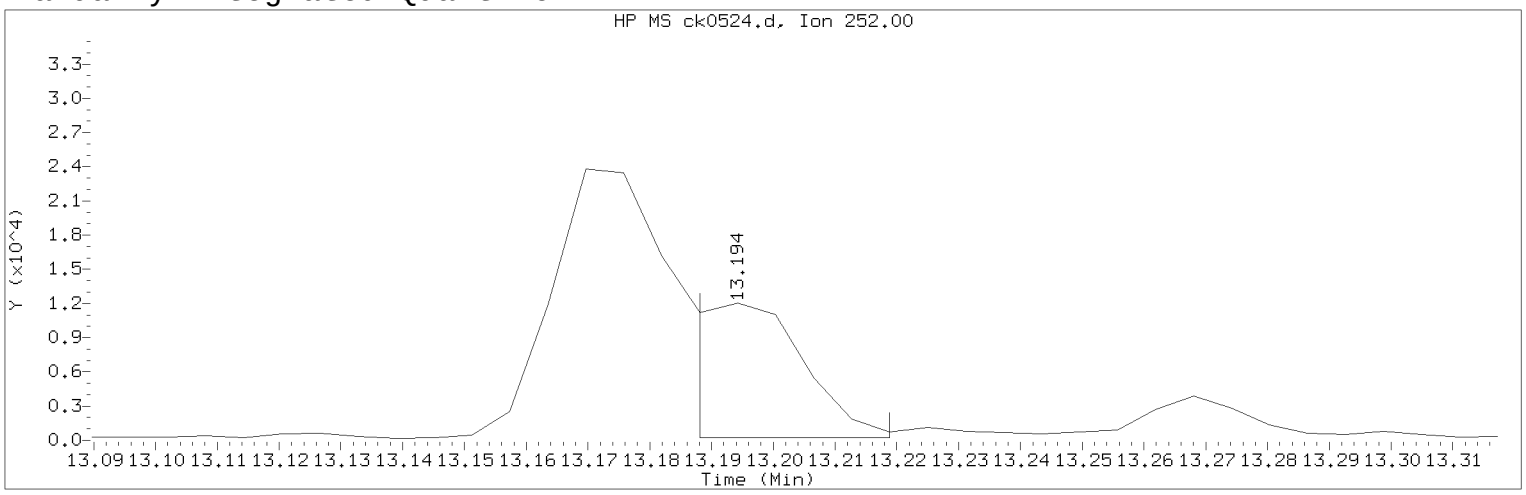
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Relative Retention Time : 0.00091
Quant Ion : 252.00
Area (flag) : 15151AM
On-column Amount (ng/ul) : 0.4395

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

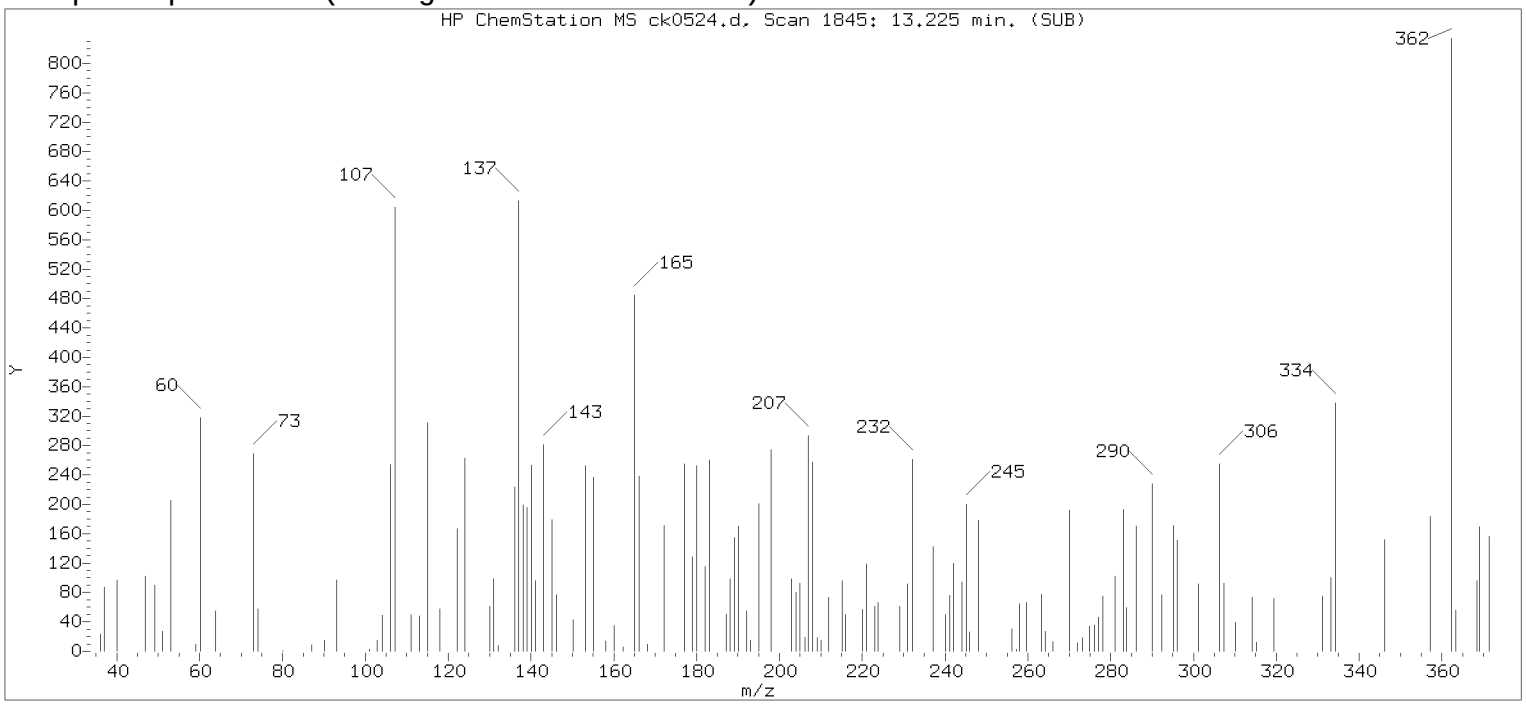
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Quant Ion : 252.00
Area (flag) : 15151AM
On-column Amount (ng/ul) : 0.4395
Integration start scan : 1838 Integration stop scan: 1843
Y at integration start : 202 Y at integration end: 202

Reason for manual integration: improper integration

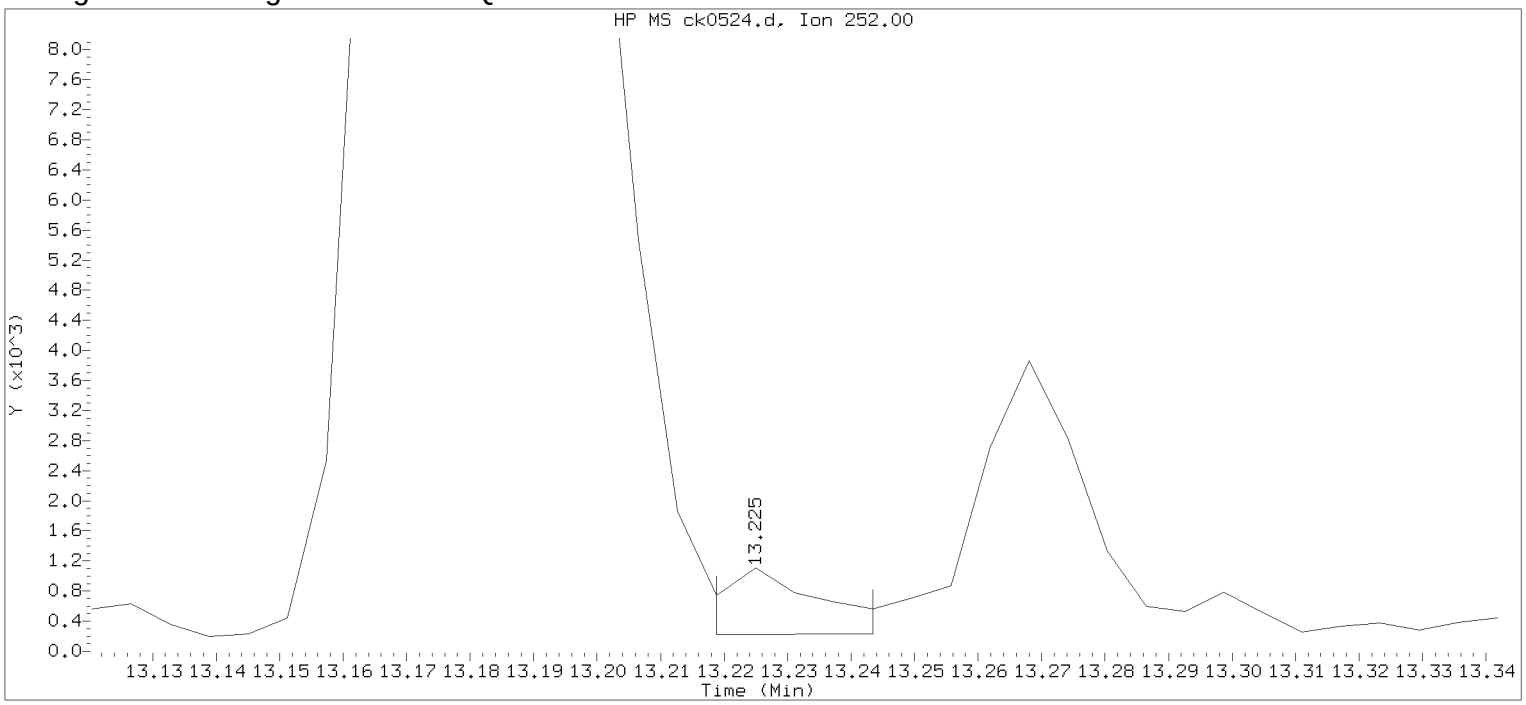
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

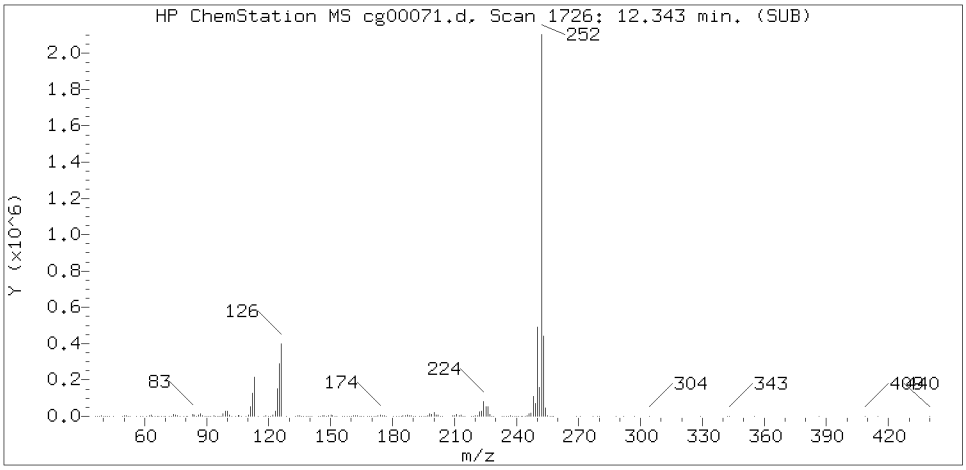
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:13 Automation

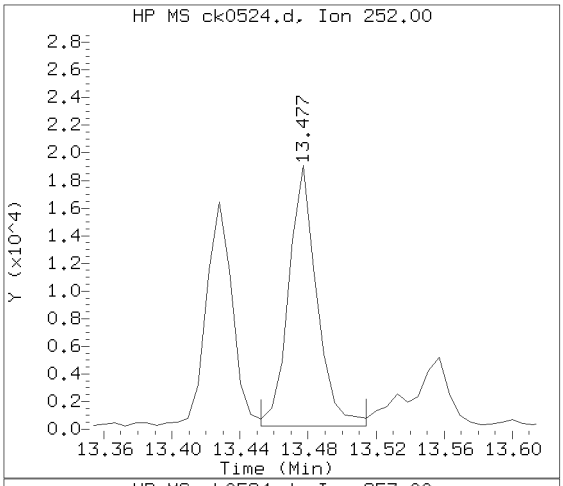
Sample Name: R2123 Lab Sample ID: 7265244

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1845
Retention Time (minutes) : 13.225
Quant Ion : 252.00
Area : 848
On-column Amount (ng/ul) : 0.0246
Integration start scan : 1843 Integration stop scan: 1847
Y at integration start : 222 Y at integration end: 228

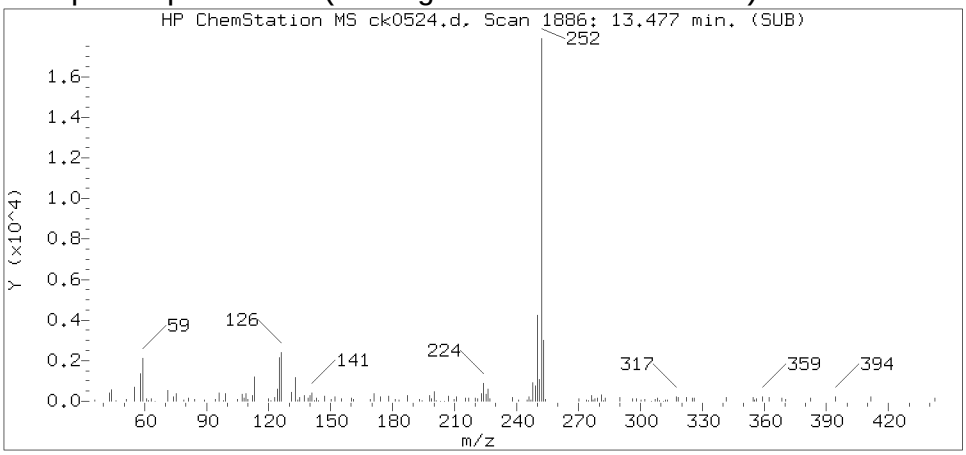
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

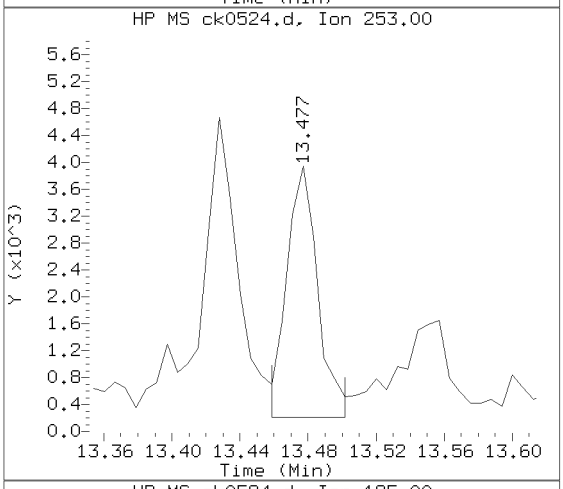
Reference Standard Spectrum for Benzo(a)pyrene



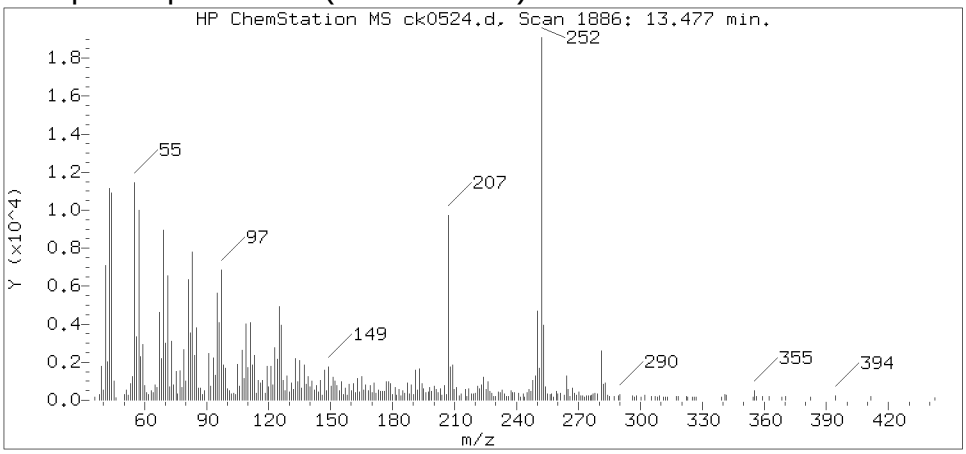


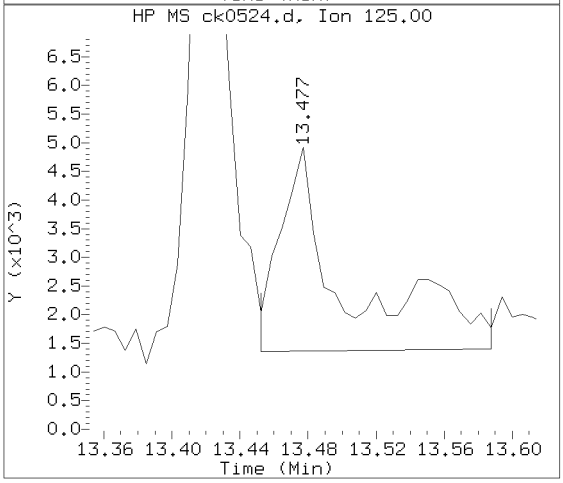
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

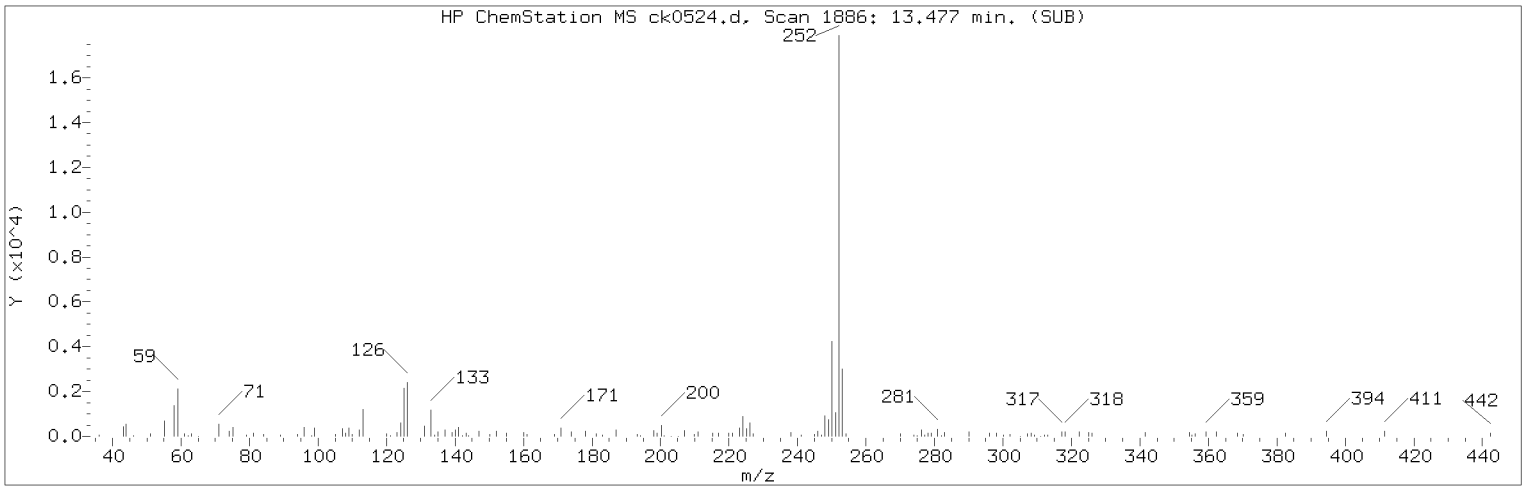
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

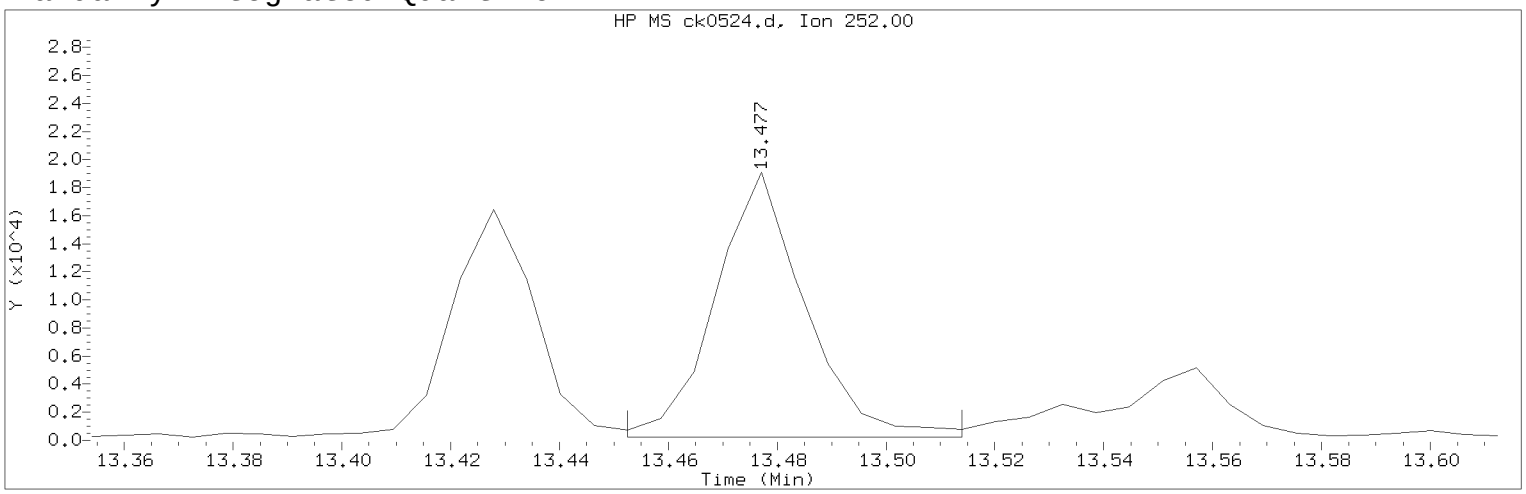
Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1886
Retention Time (minutes)	: 13.477
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 21732M
On-column Amount (ng/ul)	: 0.6589

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

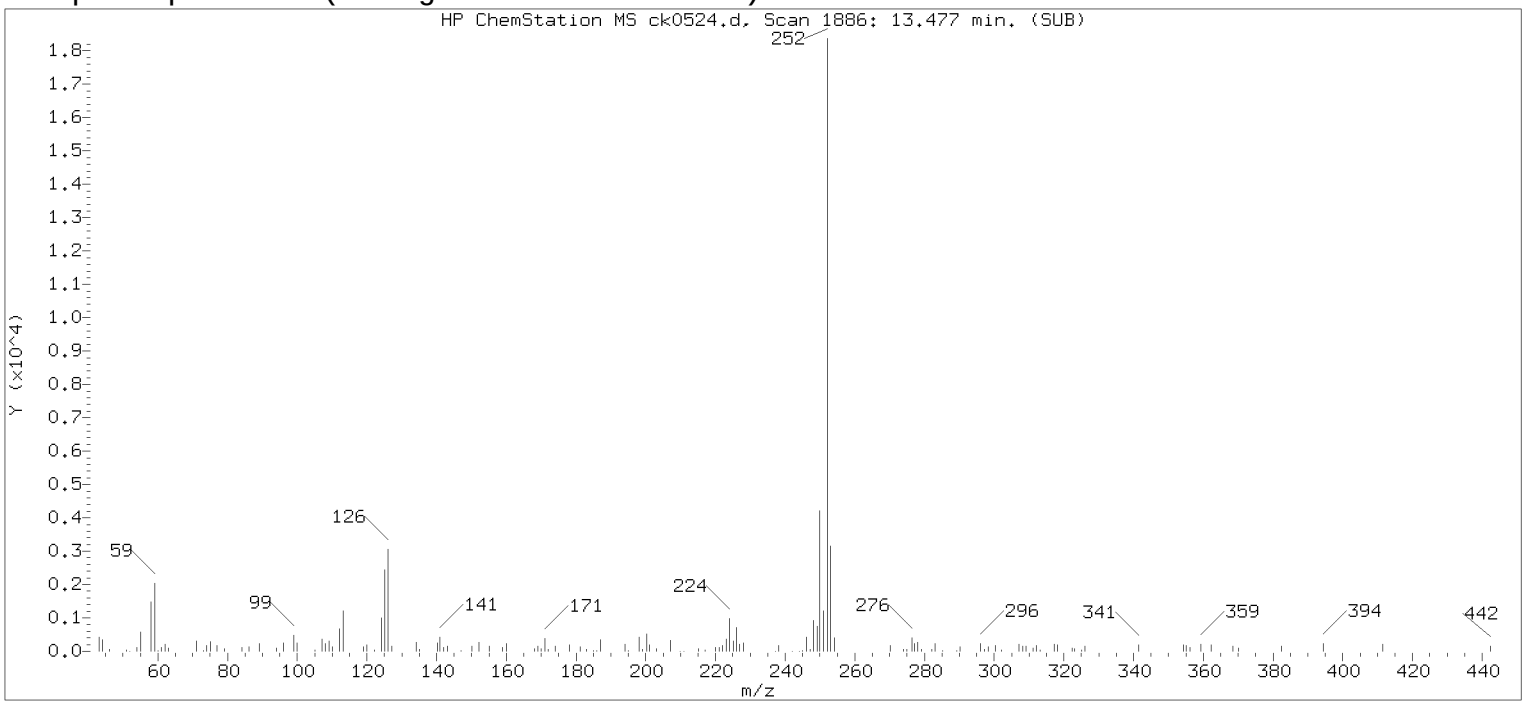
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1886
Retention Time (minutes) : 13.477
Quant Ion : 252.00
Area (flag) : 21732M
On-column Amount (ng/ul) : 0.6589
Integration start scan : 1881 Integration stop scan: 1891
Y at integration start : 246 Y at integration end: 246

Reason for manual integration: improper integration

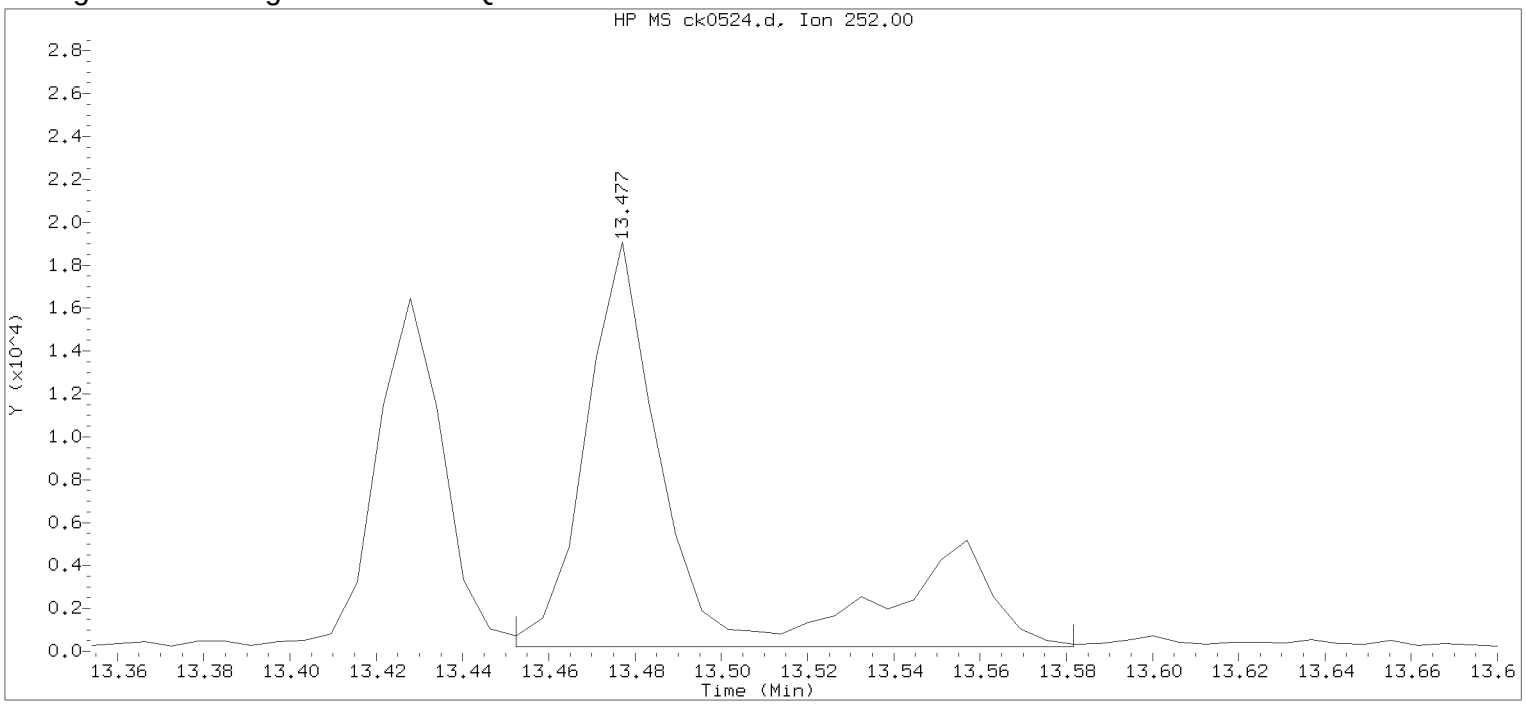
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

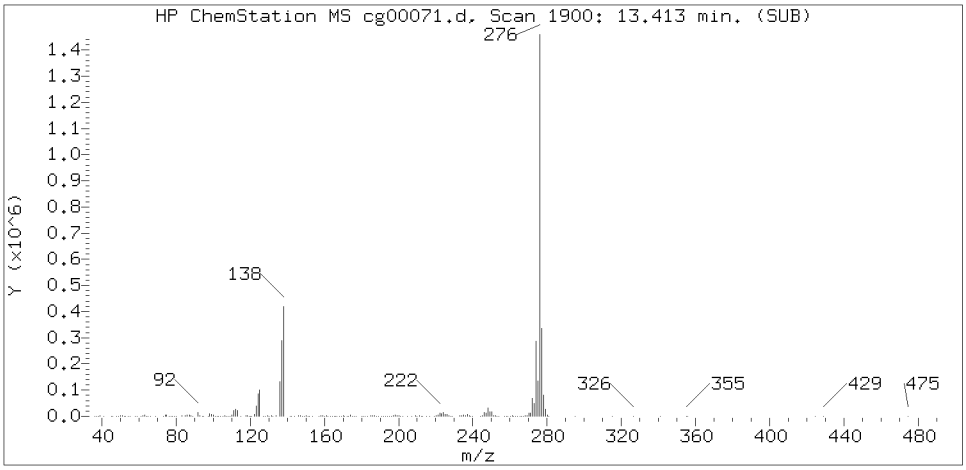
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:13 Automation

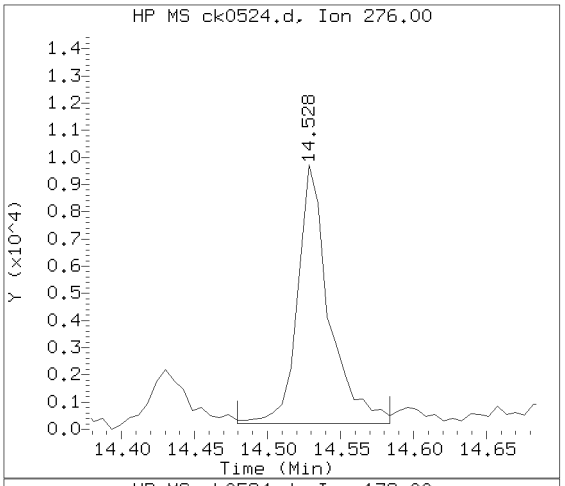
Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1886		
Retention Time (minutes)	: 13.477		
Quant Ion	: 252.00		
Area	: 29656		
On-column Amount (ng/ul)	: 0.8991		
Integration start scan	: 1881	Integration stop scan:	1902
Y at integration start	: 214	Y at integration end:	209

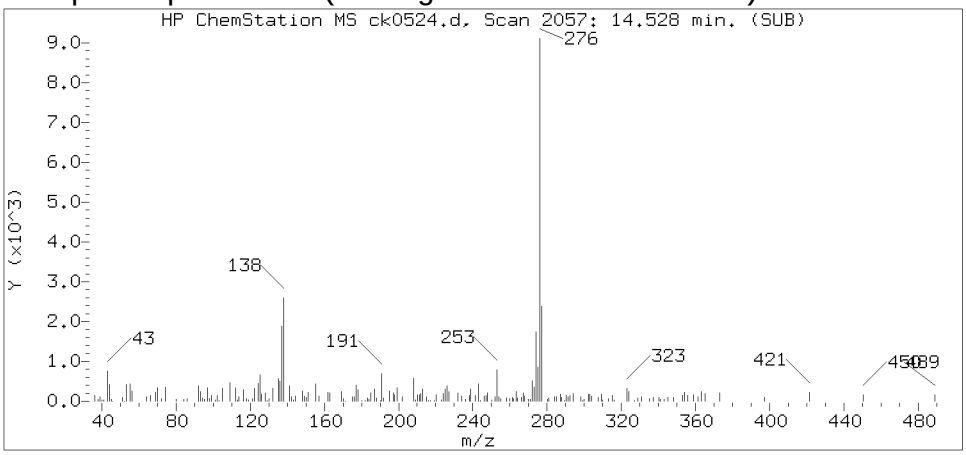
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

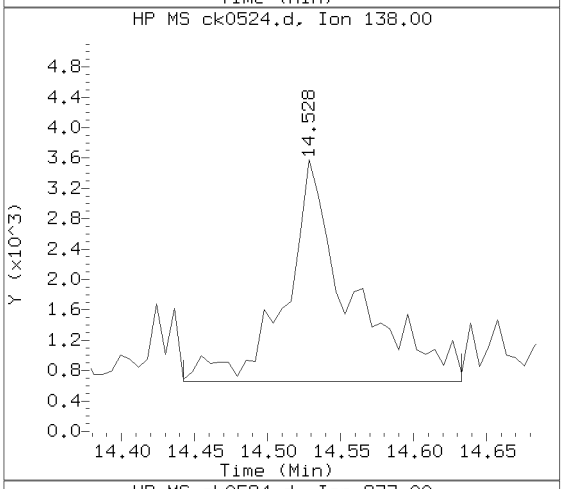
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



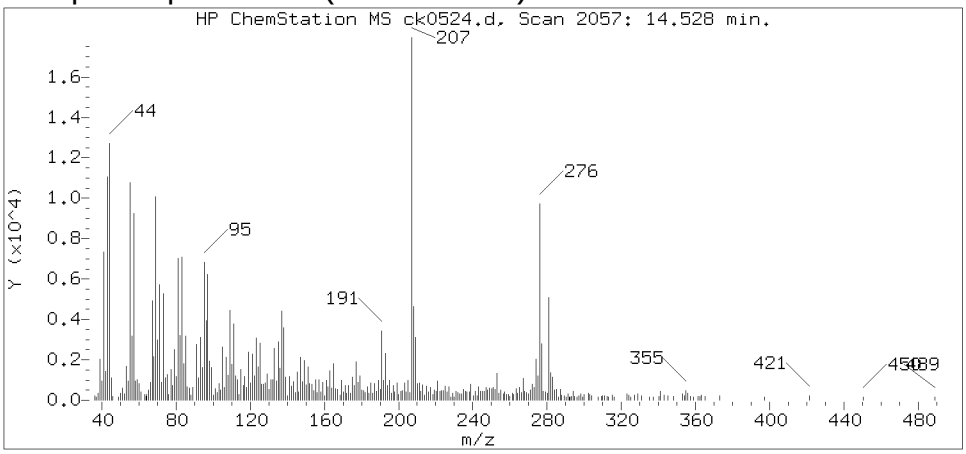


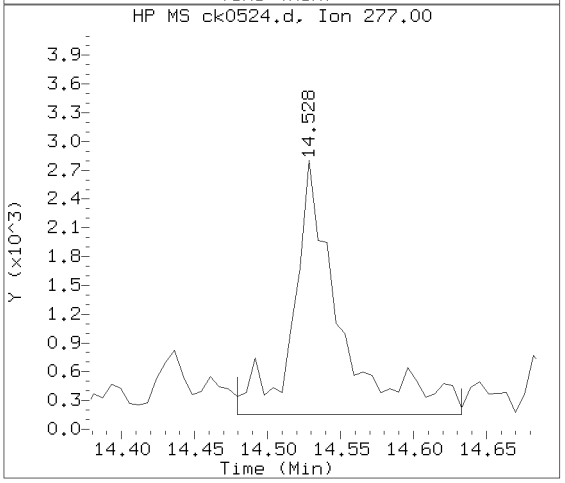
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

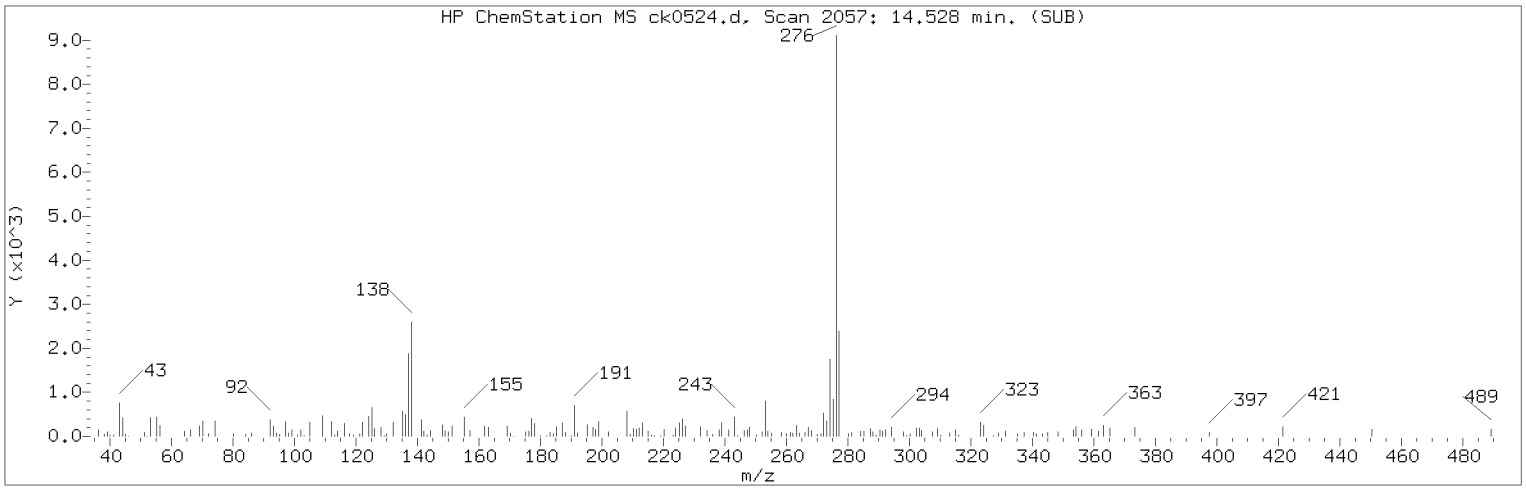
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

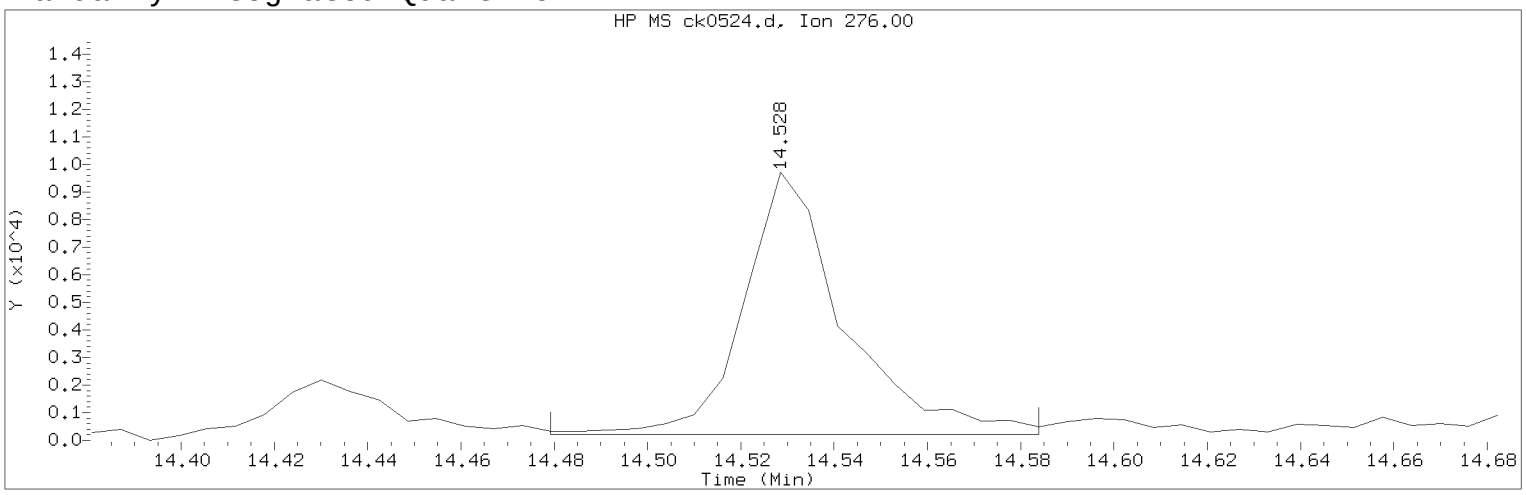
Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2057
Retention Time (minutes)	: 14.528
Relative Retention Time	: 0.00091
Quant Ion	: 276.00
Area (flag)	: 14344M
On-column Amount (ng/ul)	: 0.4088

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

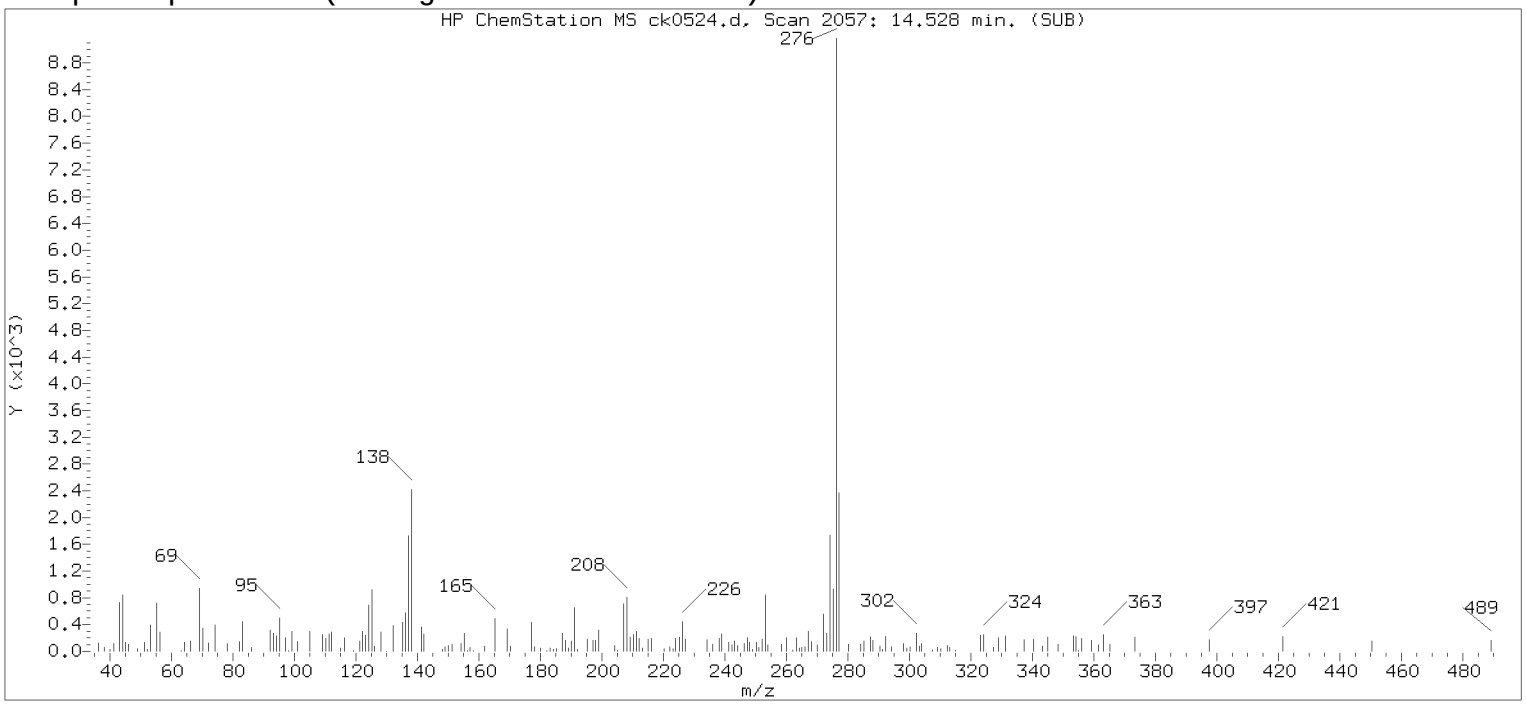
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2057
Retention Time (minutes) : 14.528
Quant Ion : 276.00
Area (flag) : 14344M
On-column Amount (ng/ul) : 0.4088
Integration start scan : 2048 Integration stop scan: 2065
Y at integration start : 215 Y at integration end: 215

Reason for manual integration: improper integration

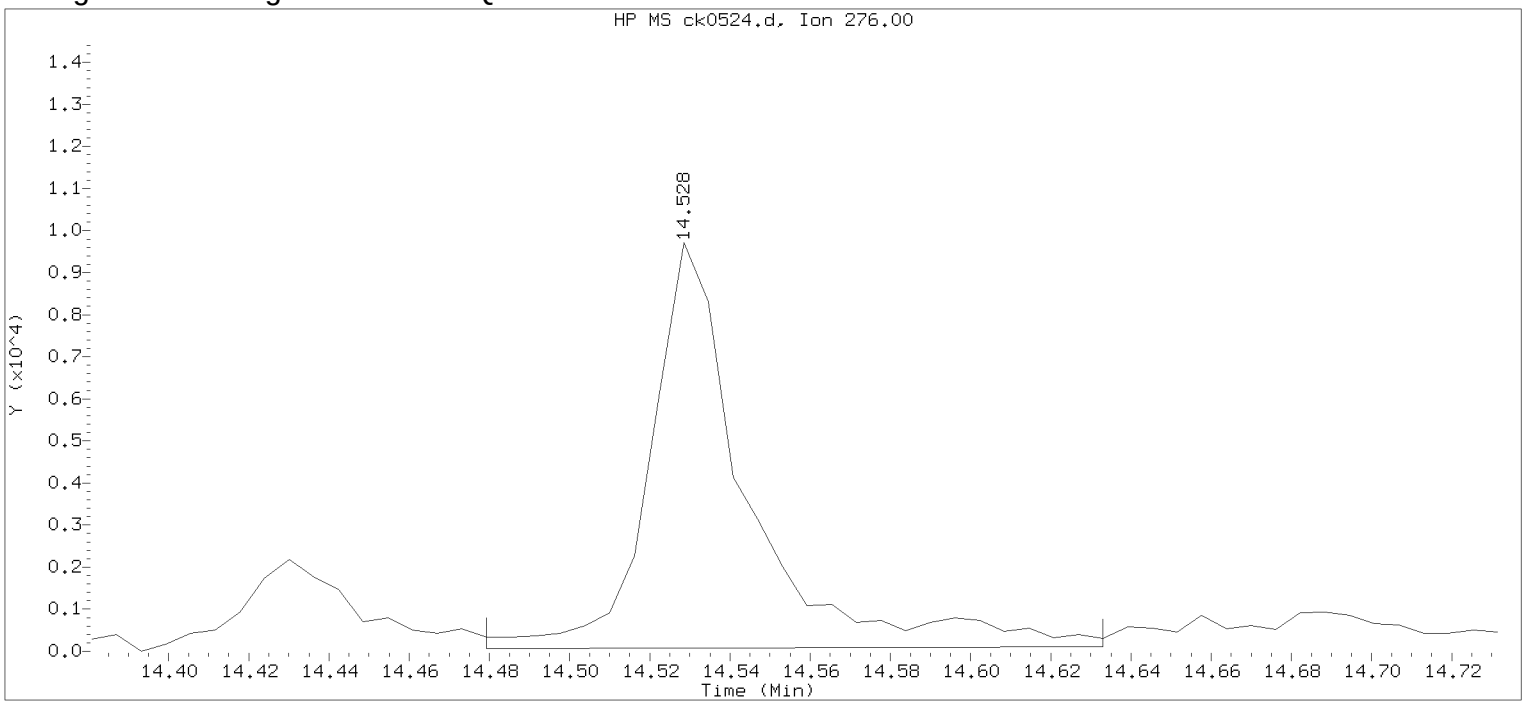
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

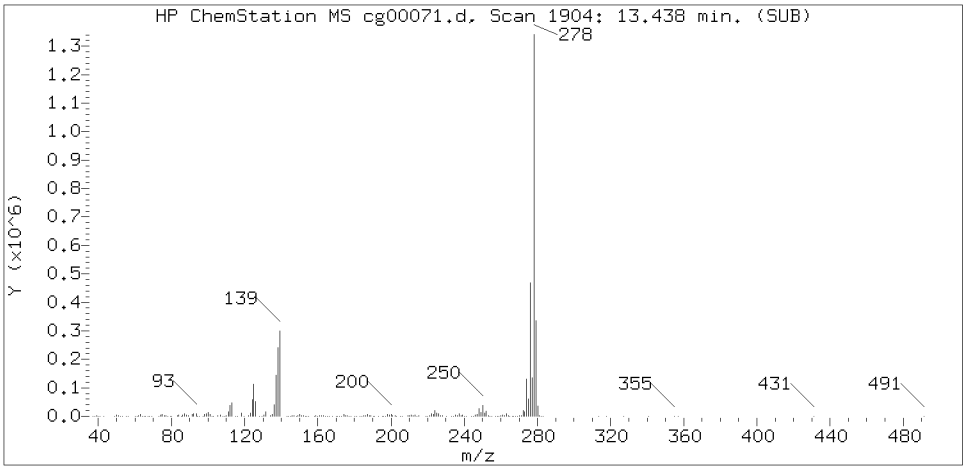
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:13 Automation

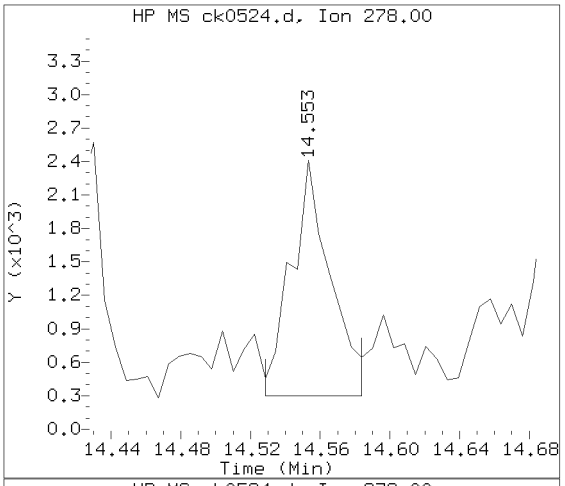
Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2057		
Retention Time (minutes)	: 14.528		
Quant Ion	: 276.00		
Area	: 16454		
On-column Amount (ng/ul)	: 0.4689		
Integration start scan	: 2048	Integration stop scan:	2073
Y at integration start	: 54	Y at integration end:	114

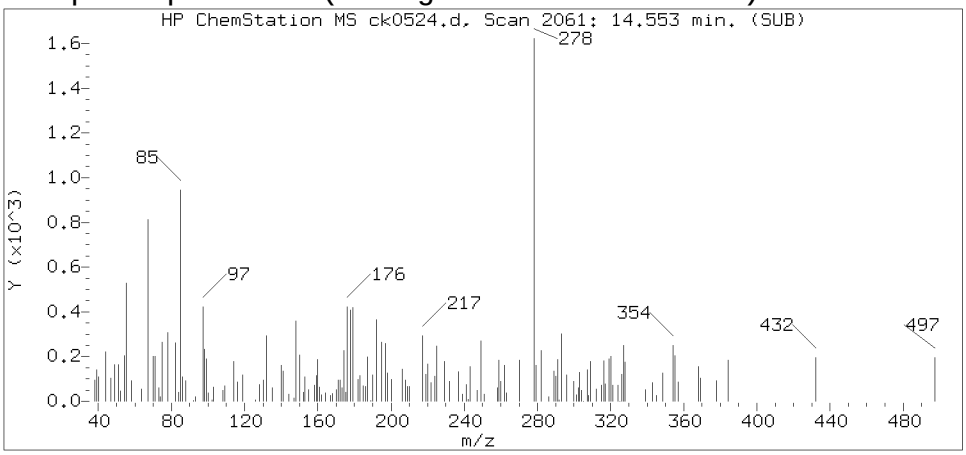
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

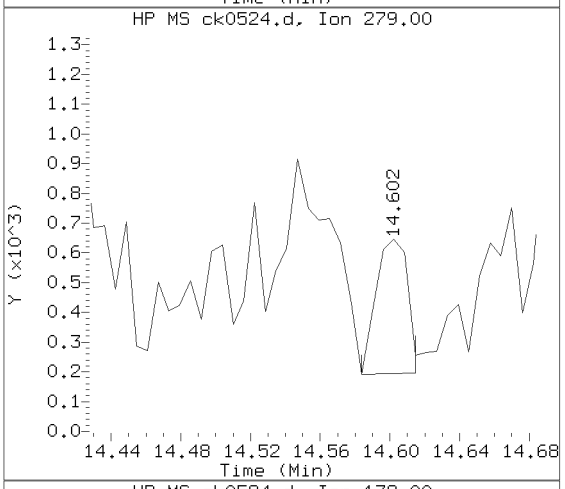
Reference Standard Spectrum for Dibenz(a,h)anthracene



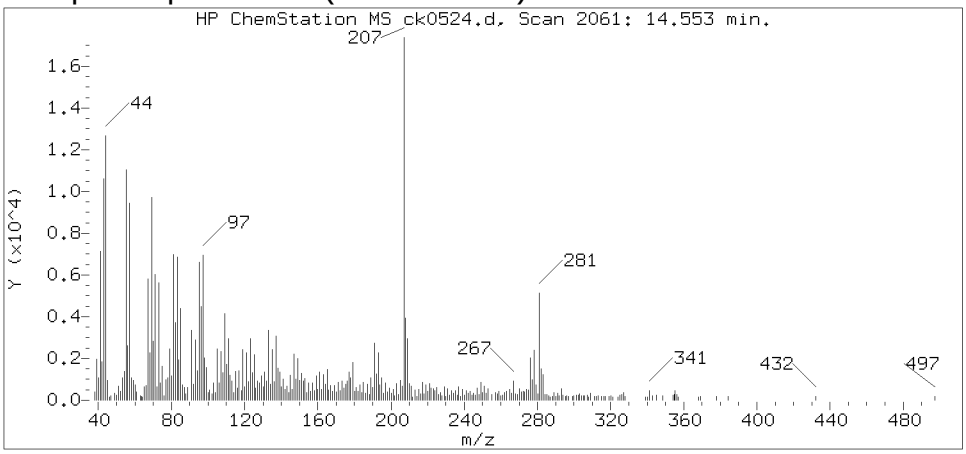


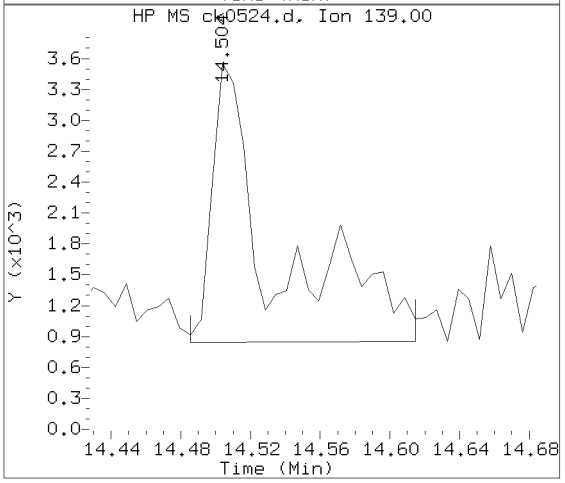
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

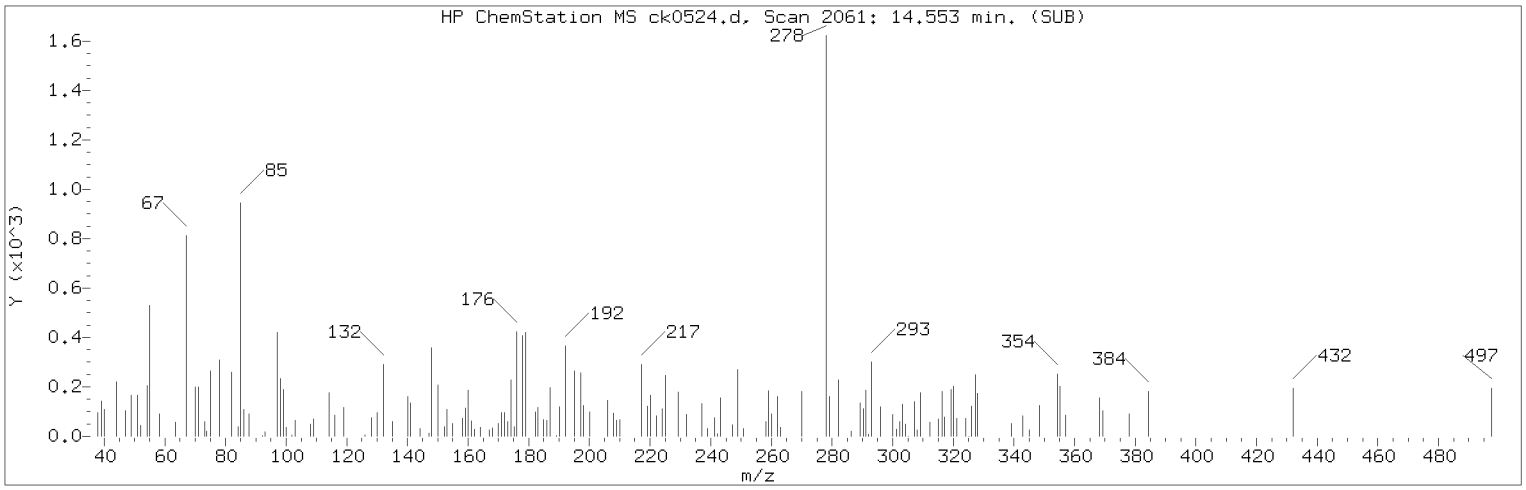
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

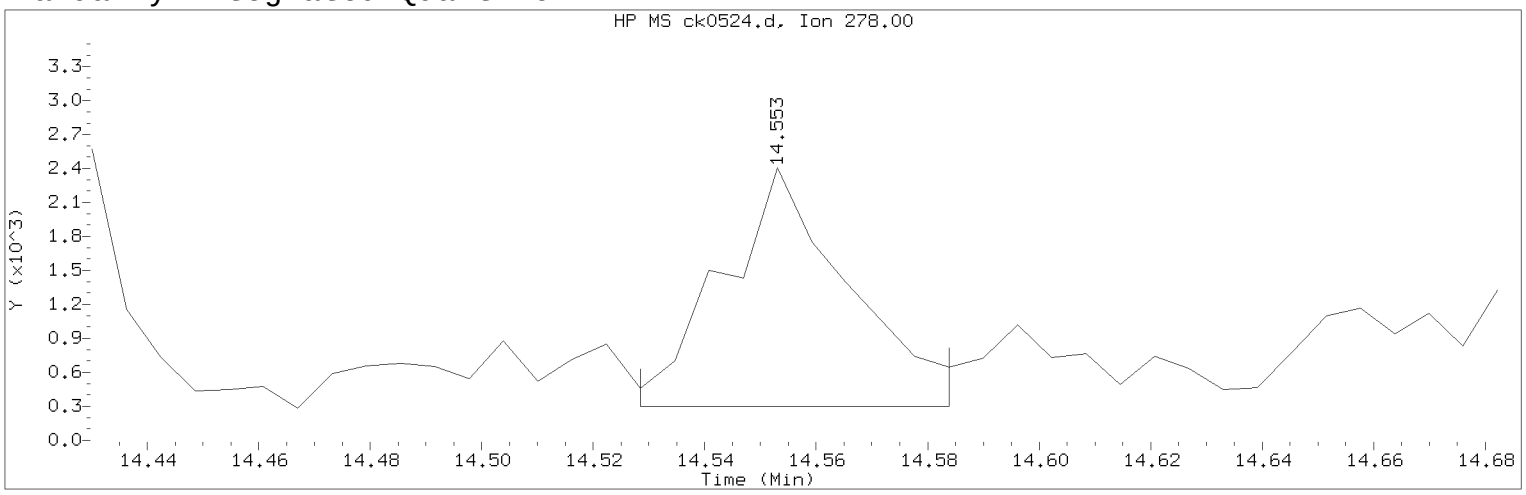
Compound Number	: 178
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2061
Retention Time (minutes)	: 14.553
Relative Retention Time	: 0.00091
Quant Ion	: 278.00
Area (flag)	: 3360M
On-column Amount (ng/ul)	: 0.1145

Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

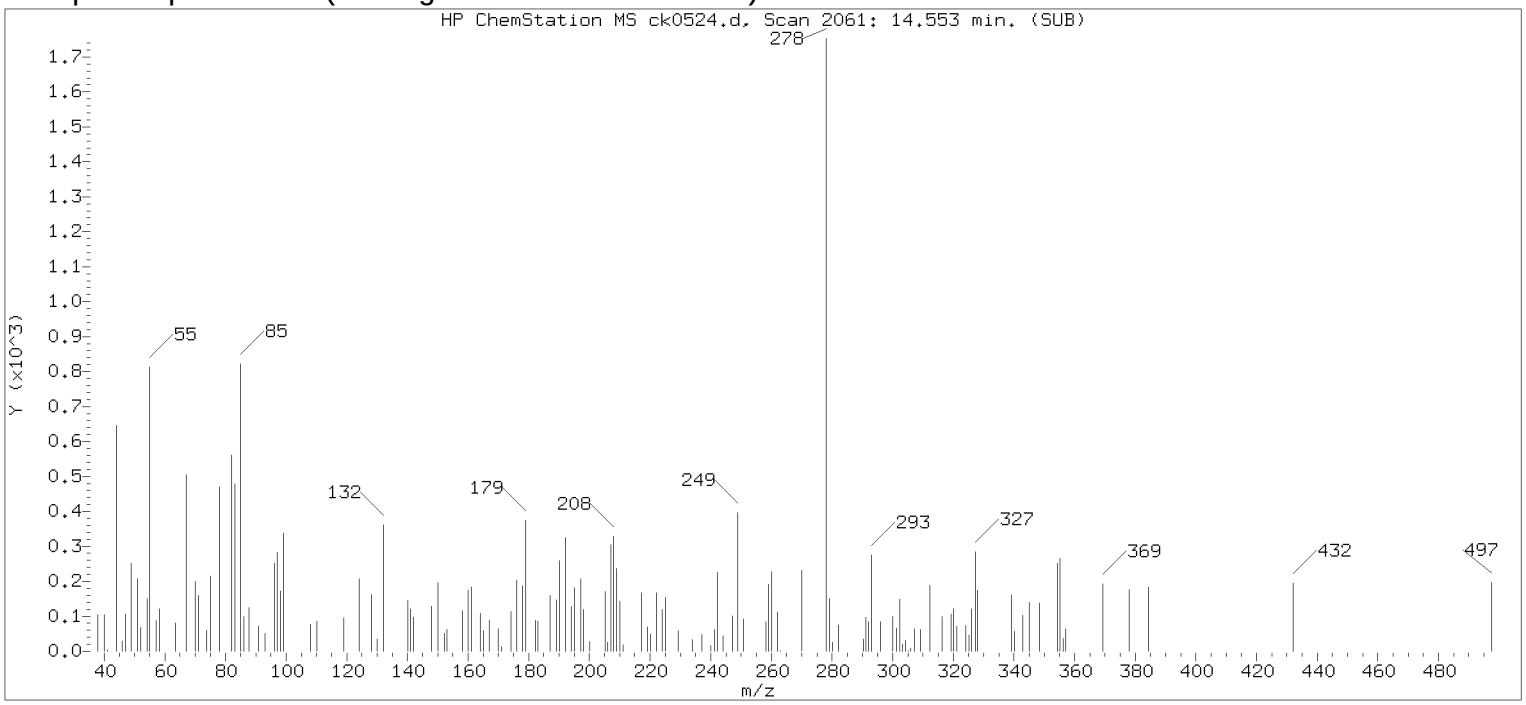
Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2061
Retention Time (minutes) : 14.553
Quant Ion : 278.00
Area (flag) : 3360M
On-column Amount (ng/ul) : 0.1145
Integration start scan : 2056 Integration stop scan: 2065
Y at integration start : 298 Y at integration end: 298

Reason for manual integration: improper integration

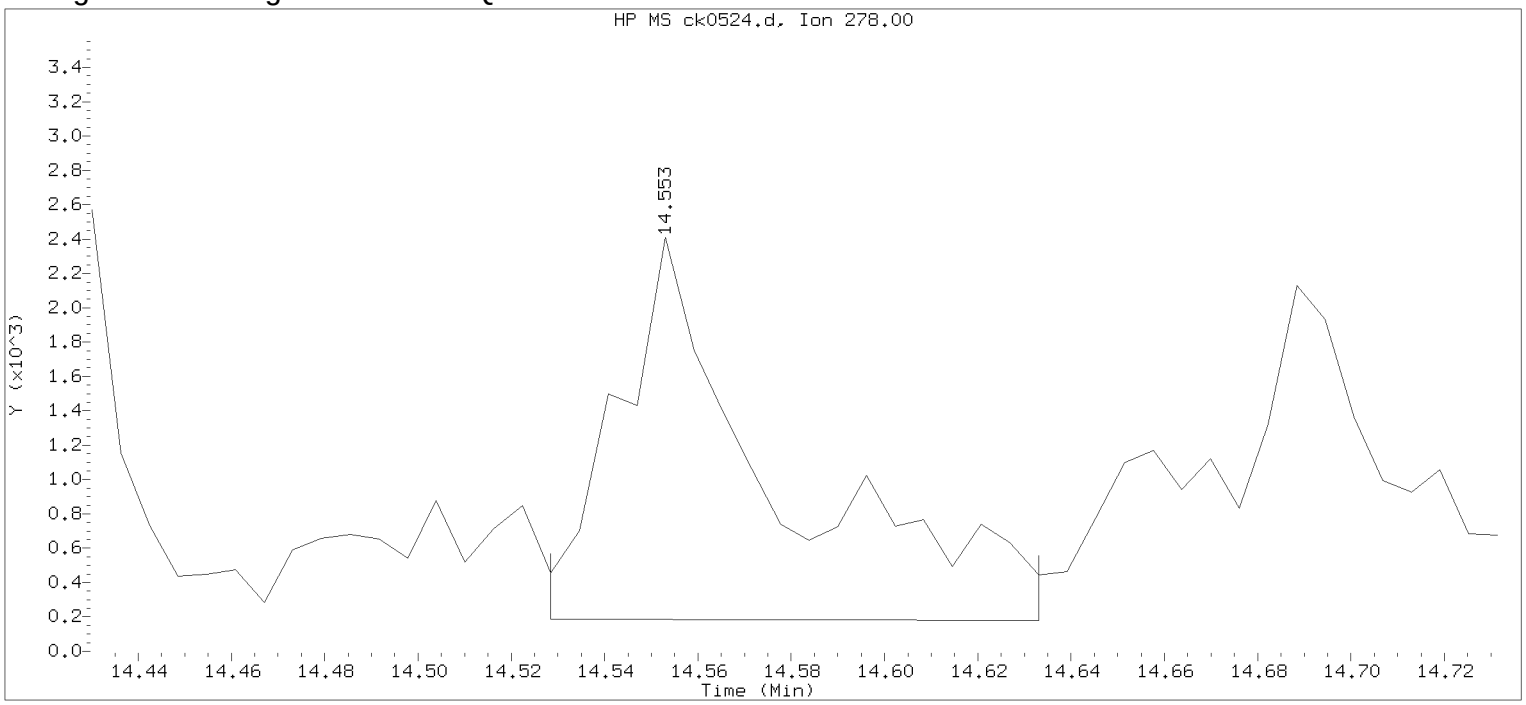
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:35.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

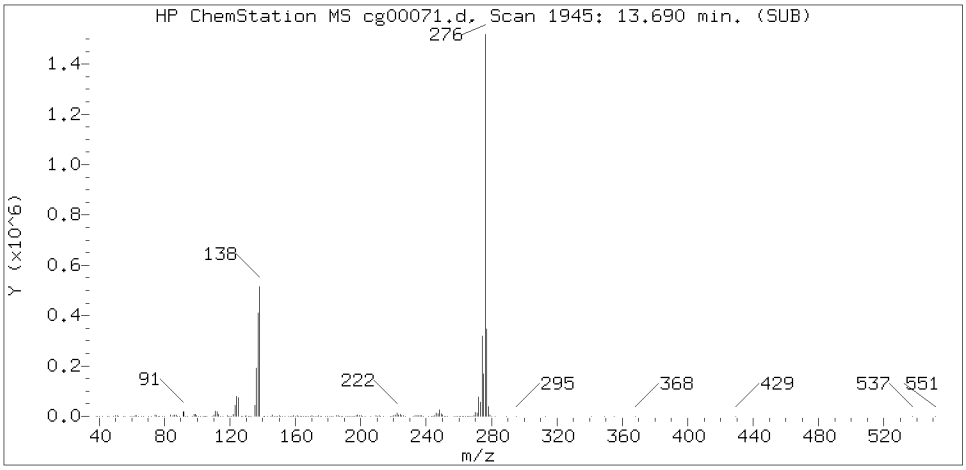
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:13 Automation

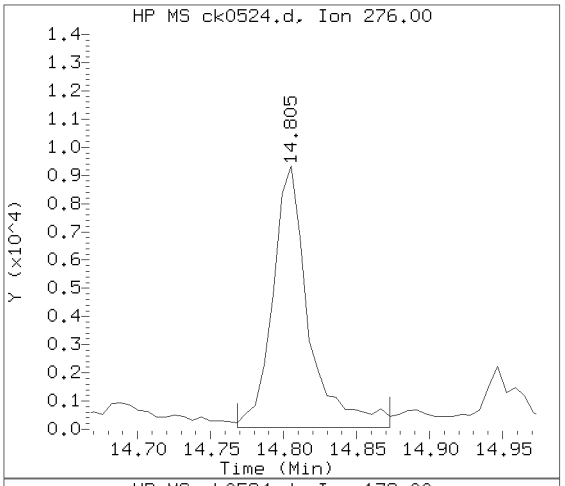
Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 178		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2061		
Retention Time (minutes)	: 14.553		
Quant Ion	: 278.00		
Area	: 5183		
On-column Amount (ng/ul)	: 0.1766		
Integration start scan	: 2056	Integration stop scan:	2073
Y at integration start	: 188	Y at integration end:	181

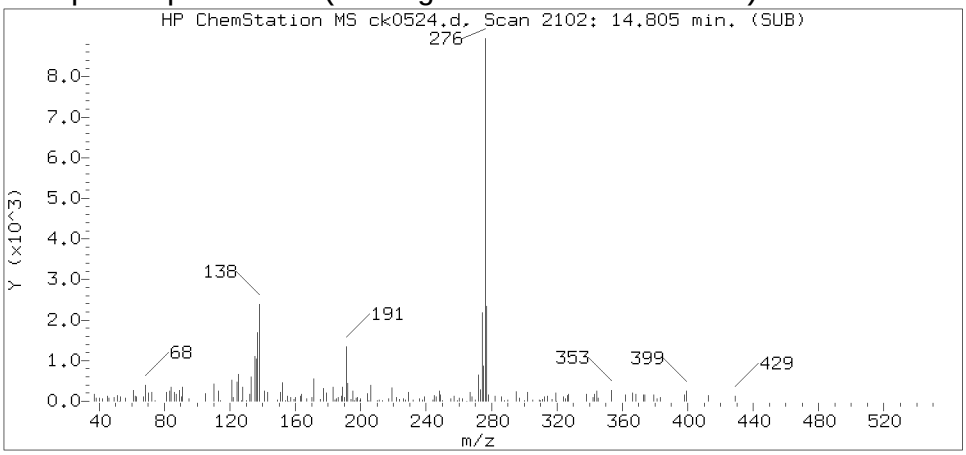
Digitally signed by Mark A. Clark on 11/14/2013 at 04:57.
Target 3.5 esignature user ID: mac00013

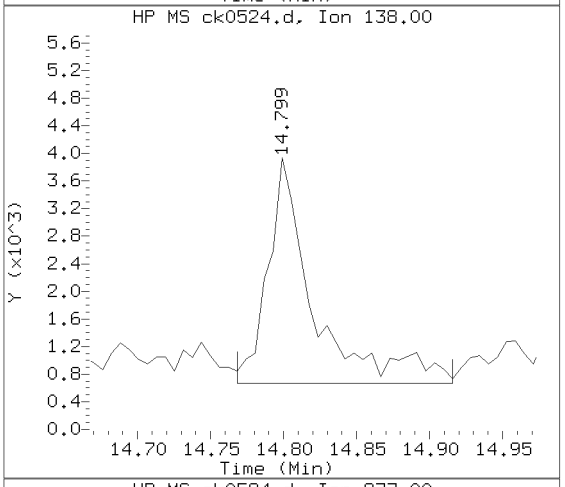
Reference Standard Spectrum for Benzo(g,h,i)perylene



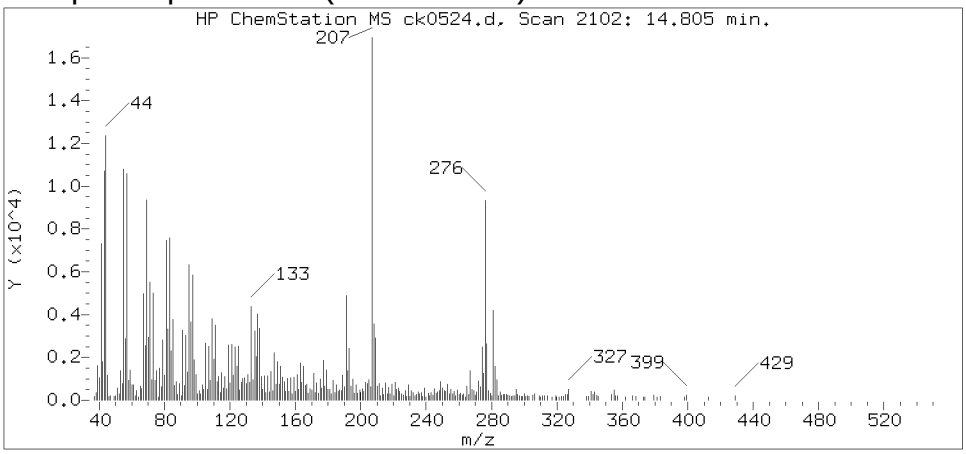


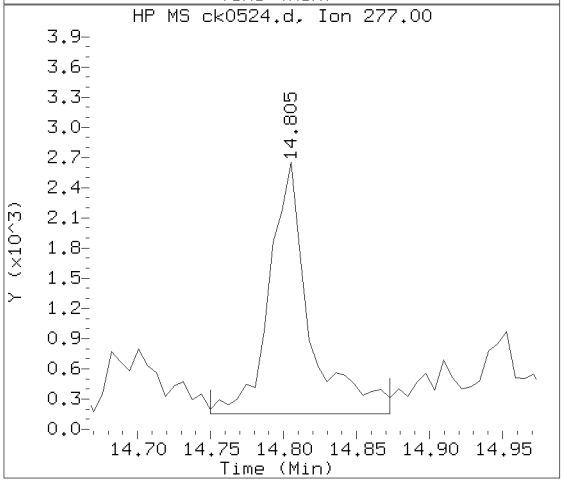
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0524.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 03:47 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:48 mac00013

Sample Name: R2123 Lab Sample ID: 7265244

Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2102
Retention Time (minutes)	: 14.805
Relative Retention Time	: 0.00046
Quant Ion	: 276.00
Area (flag)	: 15890
On-column Amount (ng/ul)	: 0.5315

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Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0525.d Injection date and time: **14-NOV-2013 04:12**
Data file Sample Info. Line: 2D141;7265245;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	133074 (-11)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	627023 (-11)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	394715 (-12)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	689281 (-17)	20.00	
167) Pyrene-d10	10.932(0.000)	1472	212	796409 (-23)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	582331 (-33)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.705(0.000)	82	1118511	82.797	83%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.476(-0.001)	172	2302986	92.793	93%		69 - 120
156) Terphenyl-d14	(5)	11.141(-0.001)	244	2767994	97.223	97%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)			Not Detected					0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.735(0.000)	202	7818	0.174	34.89			0.1
154) Pyrene	(5)	10.950(0.000)	202	6998	0.158	31.65			0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)	13.176(-0.000)	252	4175M	0.117	23.48			0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 04:58. Target 3.5 esignature user ID: mac00013

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov14.b/ck0525.d Injection date and time: **14-NOV-2013 04:12**
Data file Sample Info. Line: 2D141;7265245;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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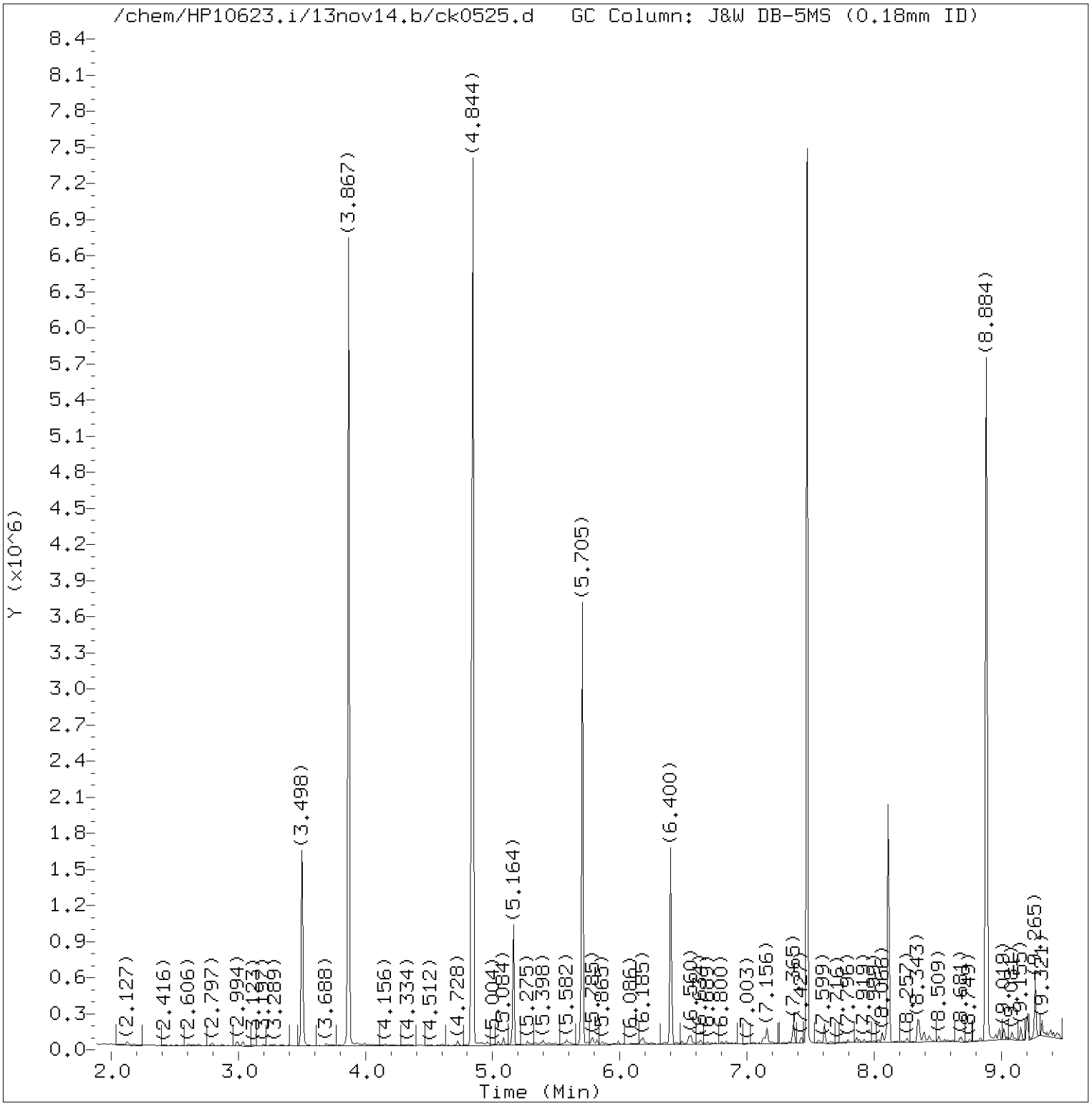
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 04:58. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:36. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

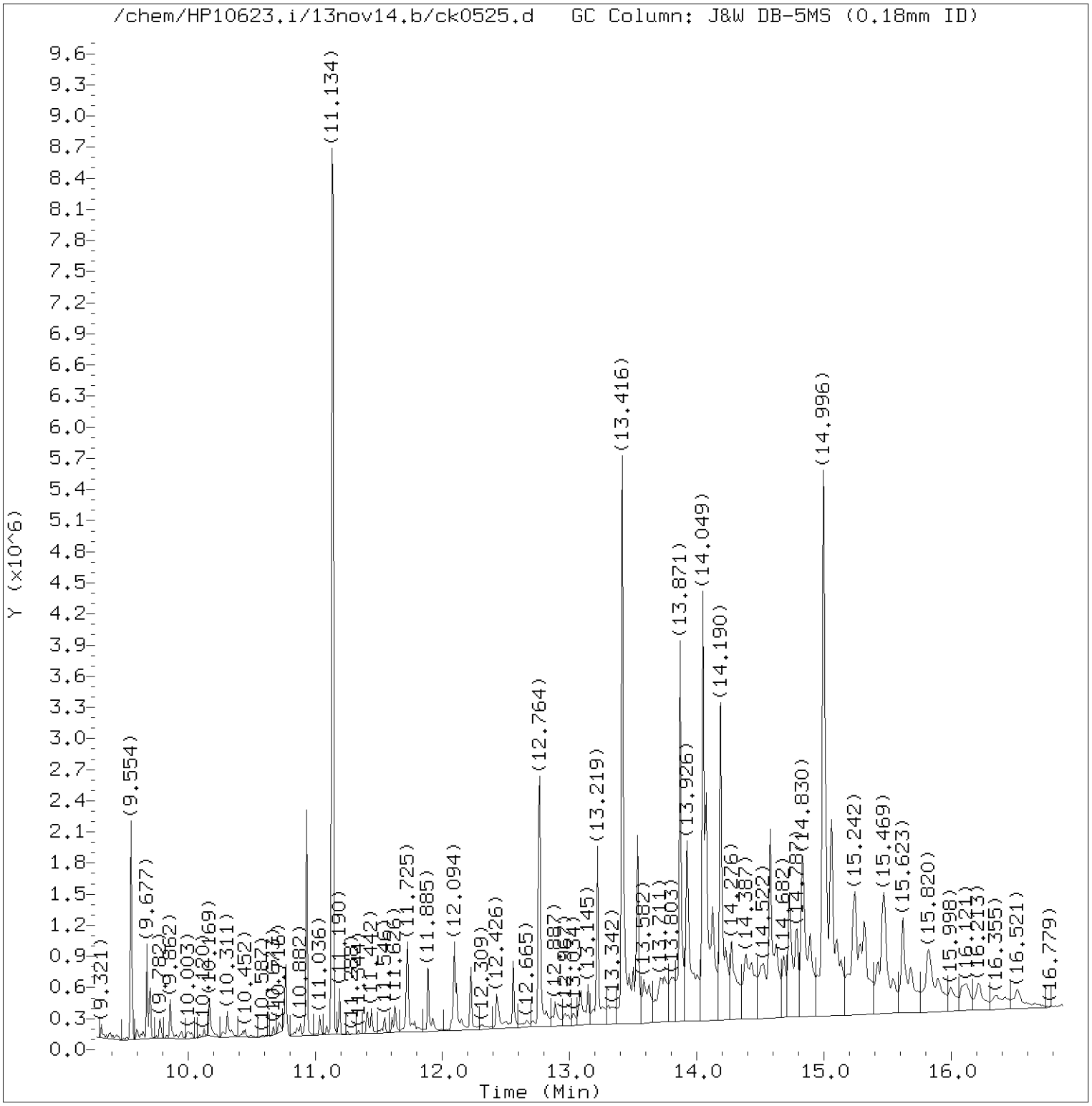
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

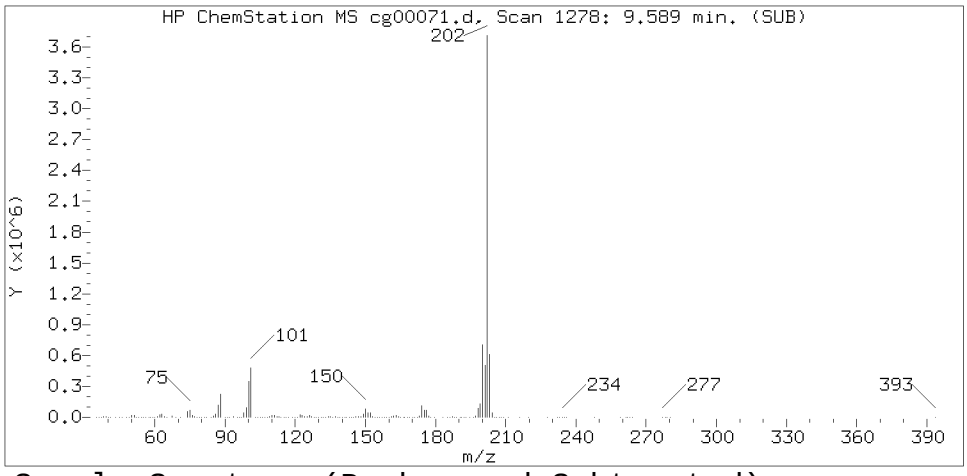
Sample Name: 2D141 Lab Sample ID: 7265245

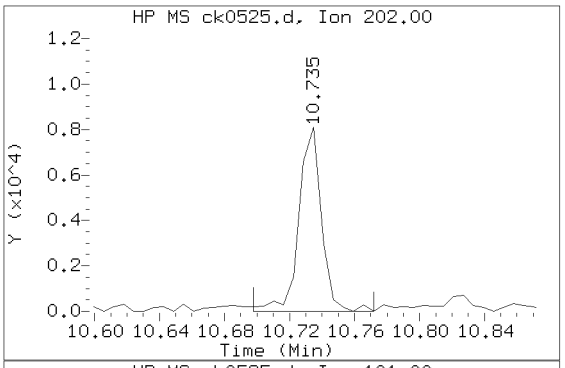
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	133074	20.000
38)$Nitrobenzene-d5	(2)	5.705	82	1118511	82.797
52)*Naphthalene-d8	(2)	6.400	136	627023	20.000
78)$2-Fluorobiphenyl	(3)	7.476	172	2302986	92.793
98)*Acenaphthene-d10	(3)	8.109	164	394715	20.000
135)*Phenanthrene-d10	(4)	9.554	188	689281	20.000
147) Fluoranthene	(4)	10.735	202	7818	0.174
167)*Pyrene-d10	(5)	10.932	212	796409	20.000
154) Pyrene	(5)	10.950	202	6998	0.158
156)$Terphenyl-d14	(5)	11.141	244	2767994	97.223
172) Benzo(b)fluoranthene	(6)	13.176	252	4175M	0.117
175)*Perylene-d12	(6)	13.532	264	582331	20.000

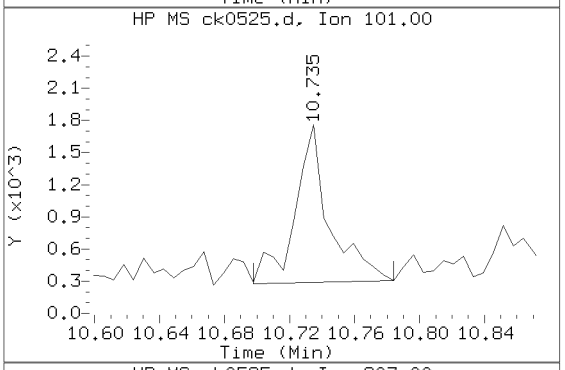
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

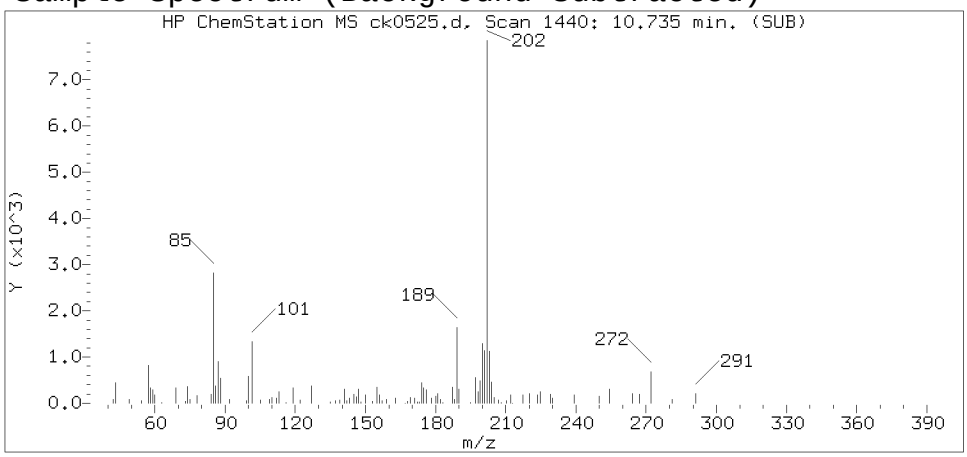
Reference Standard Spectrum for Fluoranthene

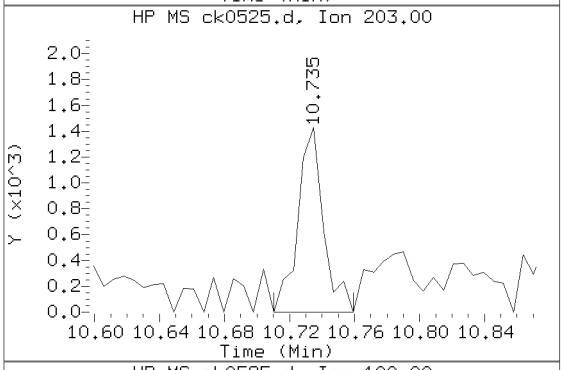




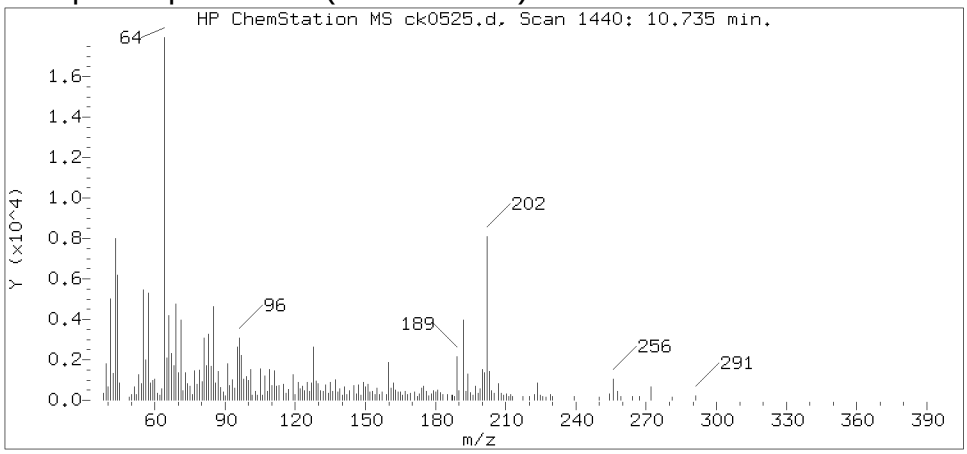


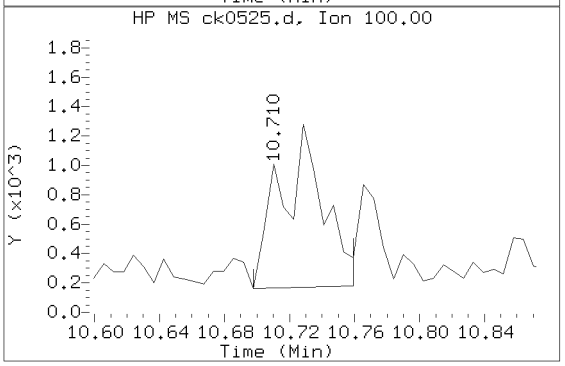
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

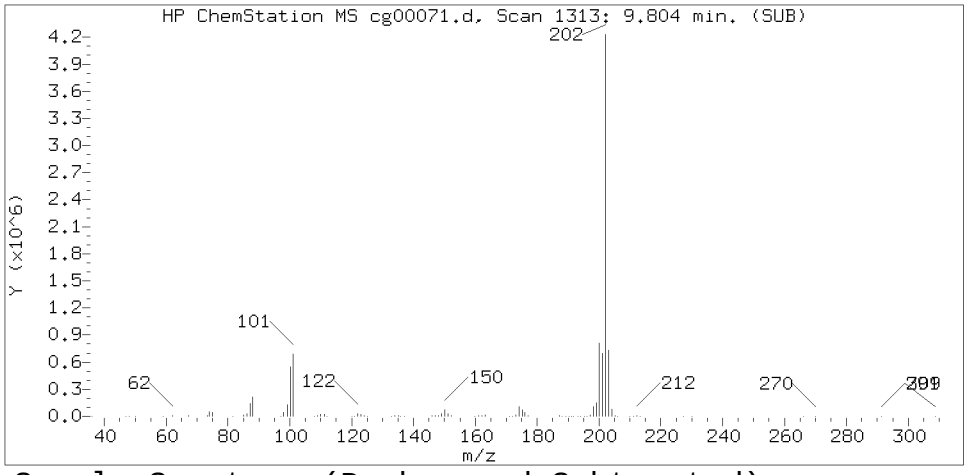
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

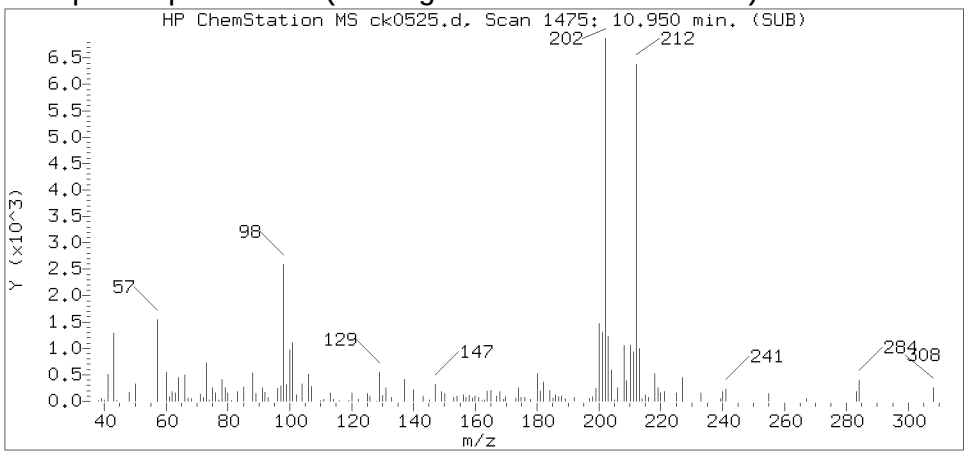
Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1440
Retention Time (minutes)	: 10.735
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 7818
On-column Amount (ng/ul)	: 0.1745

Digitally signed by Mark A. Clark on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

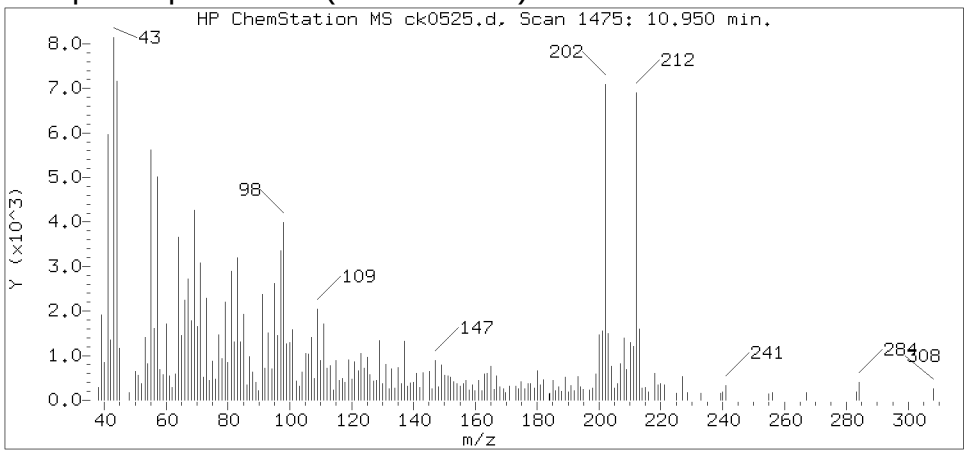
Reference Standard Spectrum for Pyrene

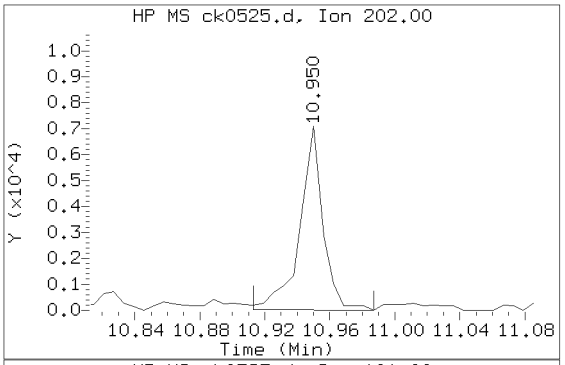


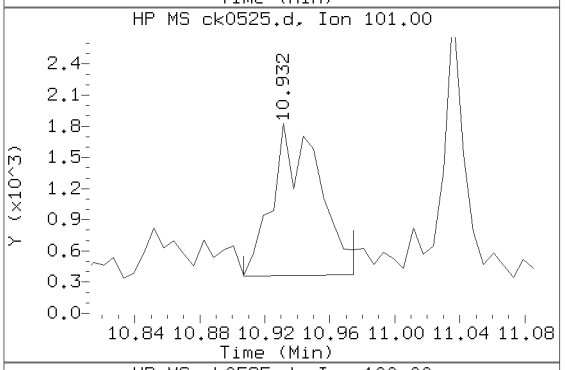
Sample Spectrum (Background Subtracted)

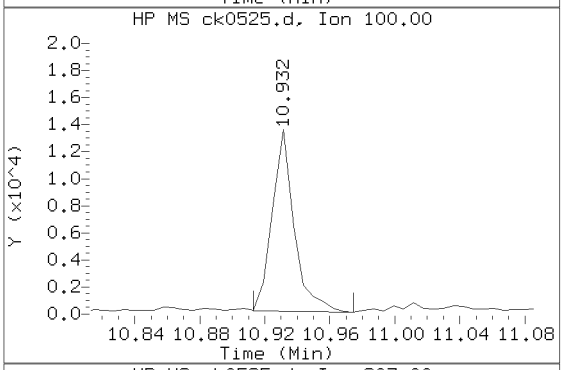


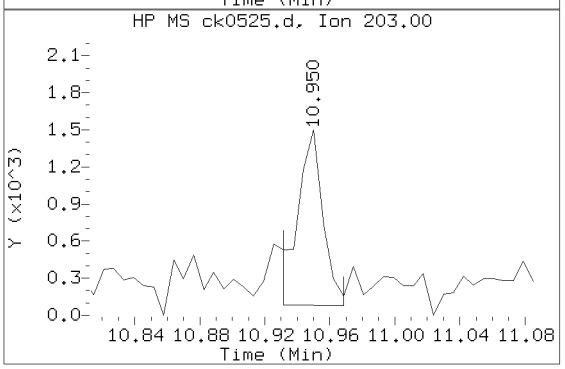
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 6998
On-column Amount (ng/ul)	: 0.1582

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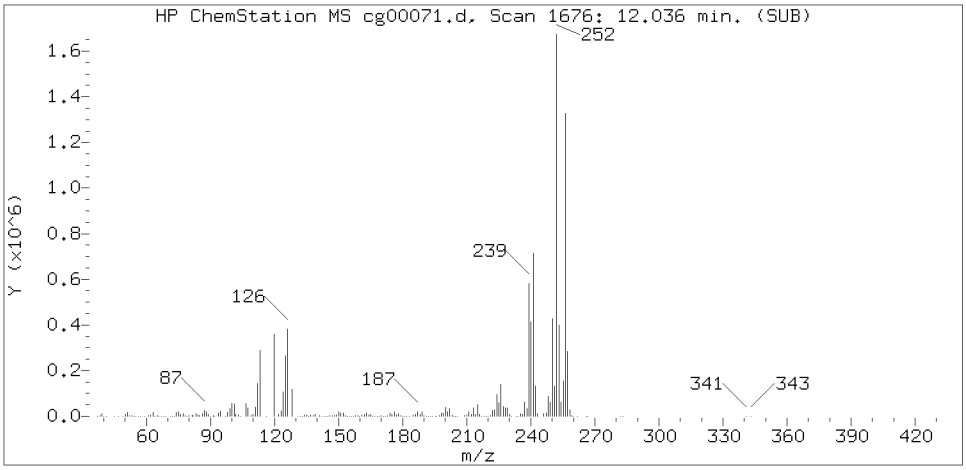
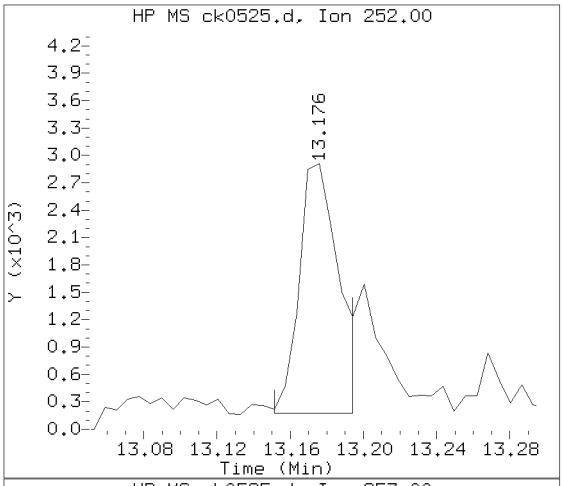
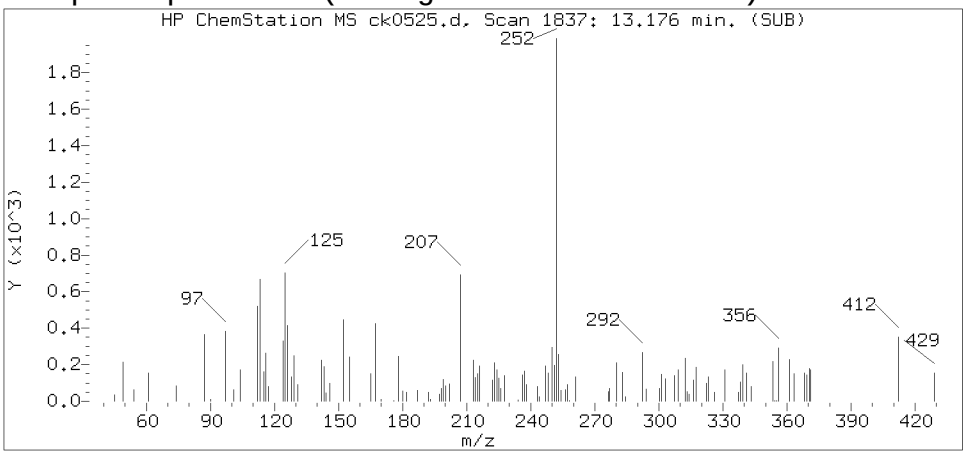
Target 3.5 esignature user ID: mac00013

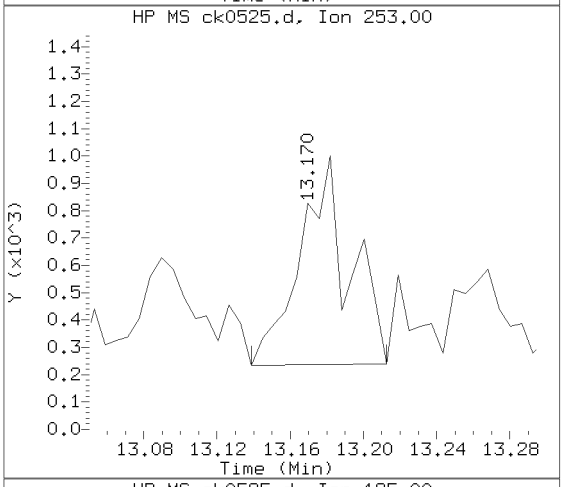
Reference Standard Spectrum for Benzo(b)fluoranthene



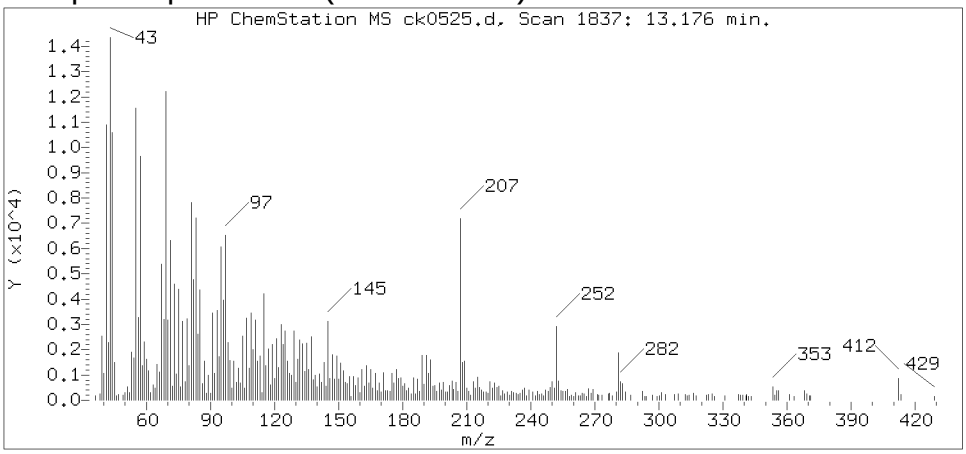


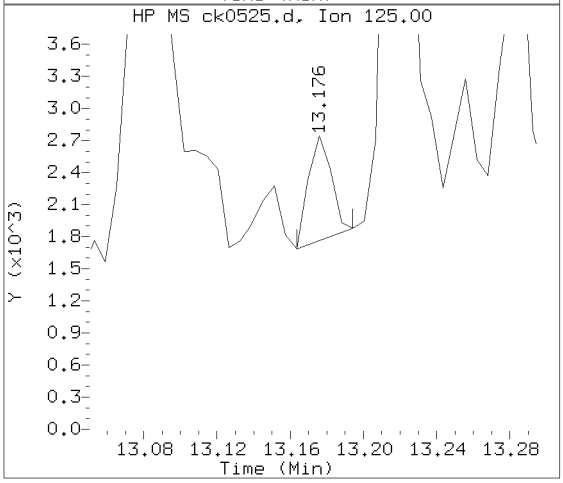
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

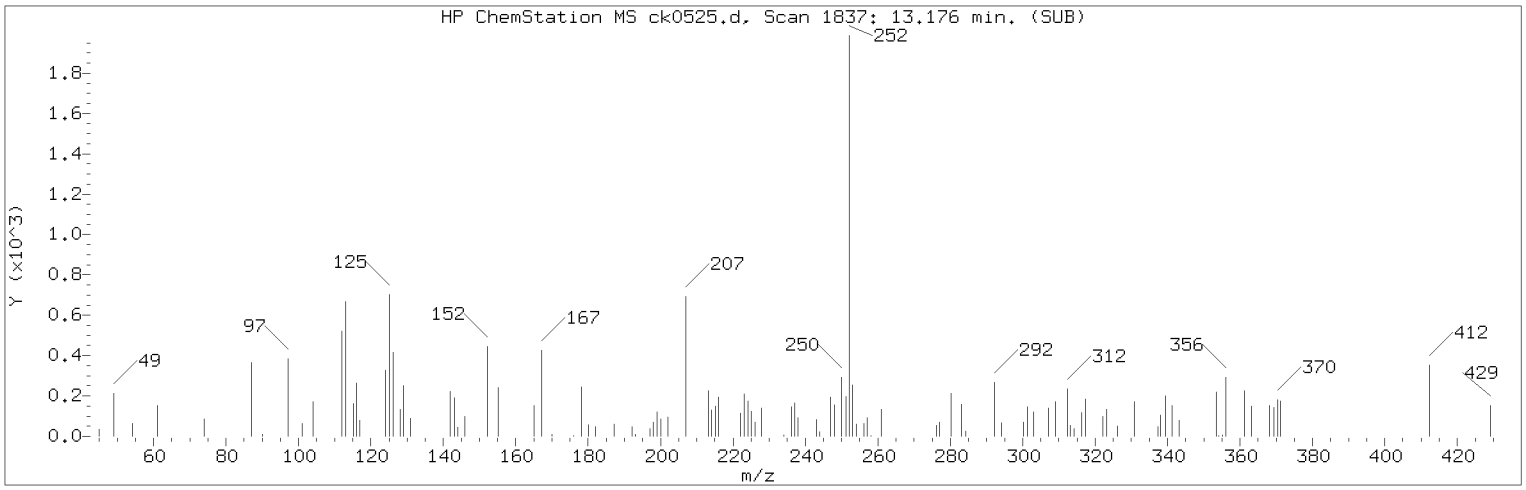
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

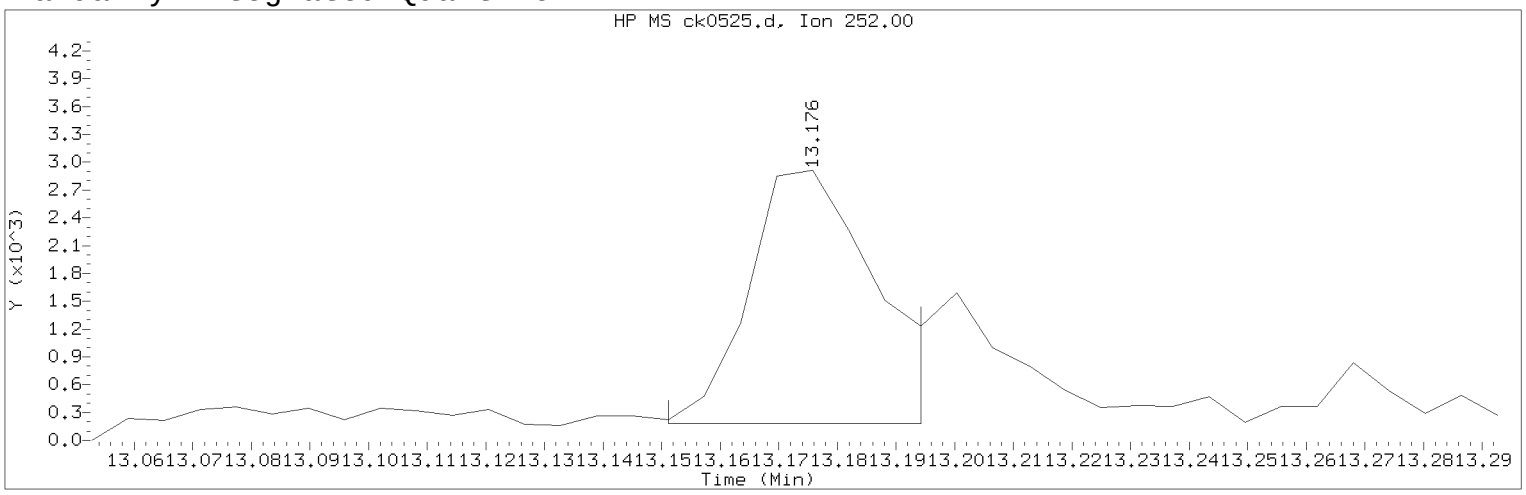
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 4175M
On-column Amount (ng/ul) : 0.1174

Digitally signed by Mark A. Clark on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:54 mac00013

Sample Name: 2D141 Lab Sample ID: 7265245

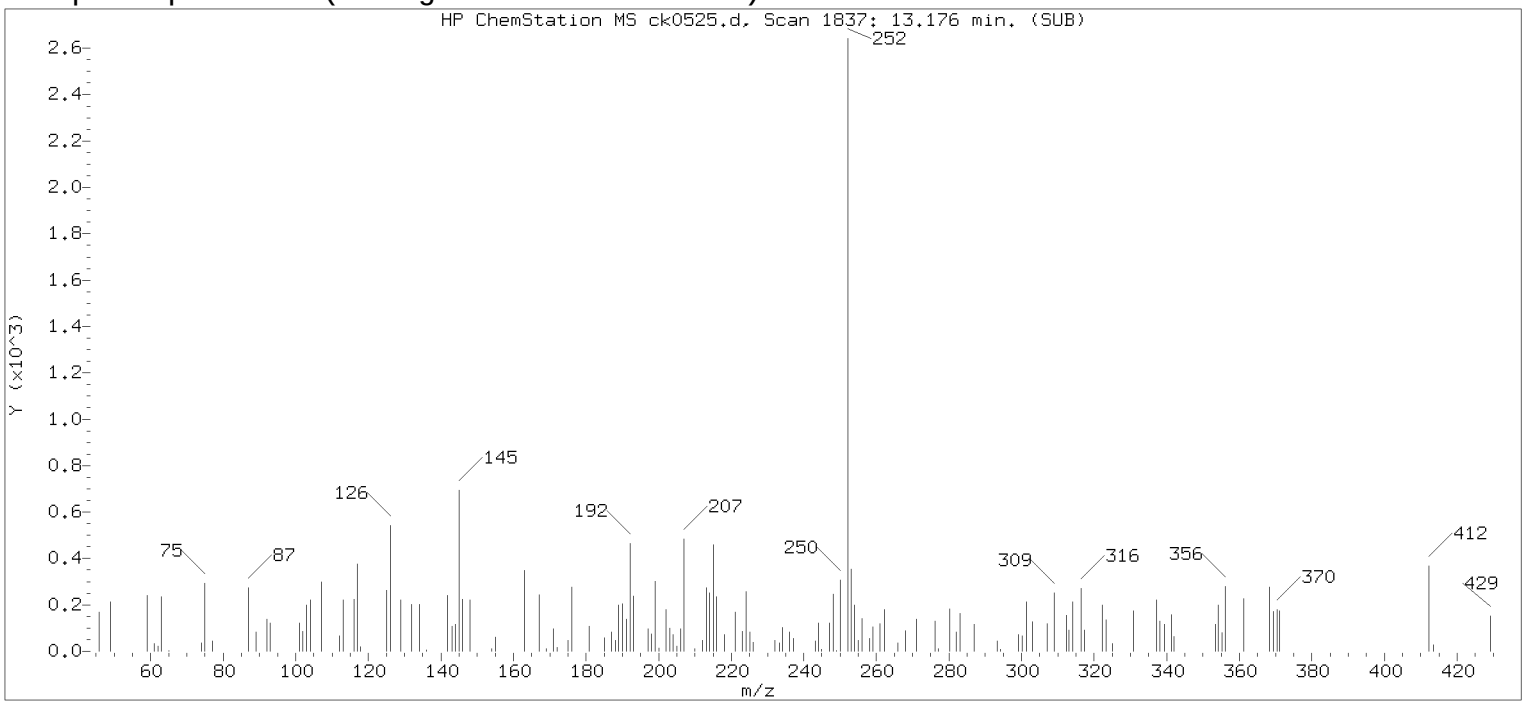
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area (flag) : 4175M
On-column Amount (ng/ul) : 0.1174
Integration start scan : 1832 Integration stop scan: 1839
Y at integration start : 178 Y at integration end: 178

Reason for manual integration: improper integration

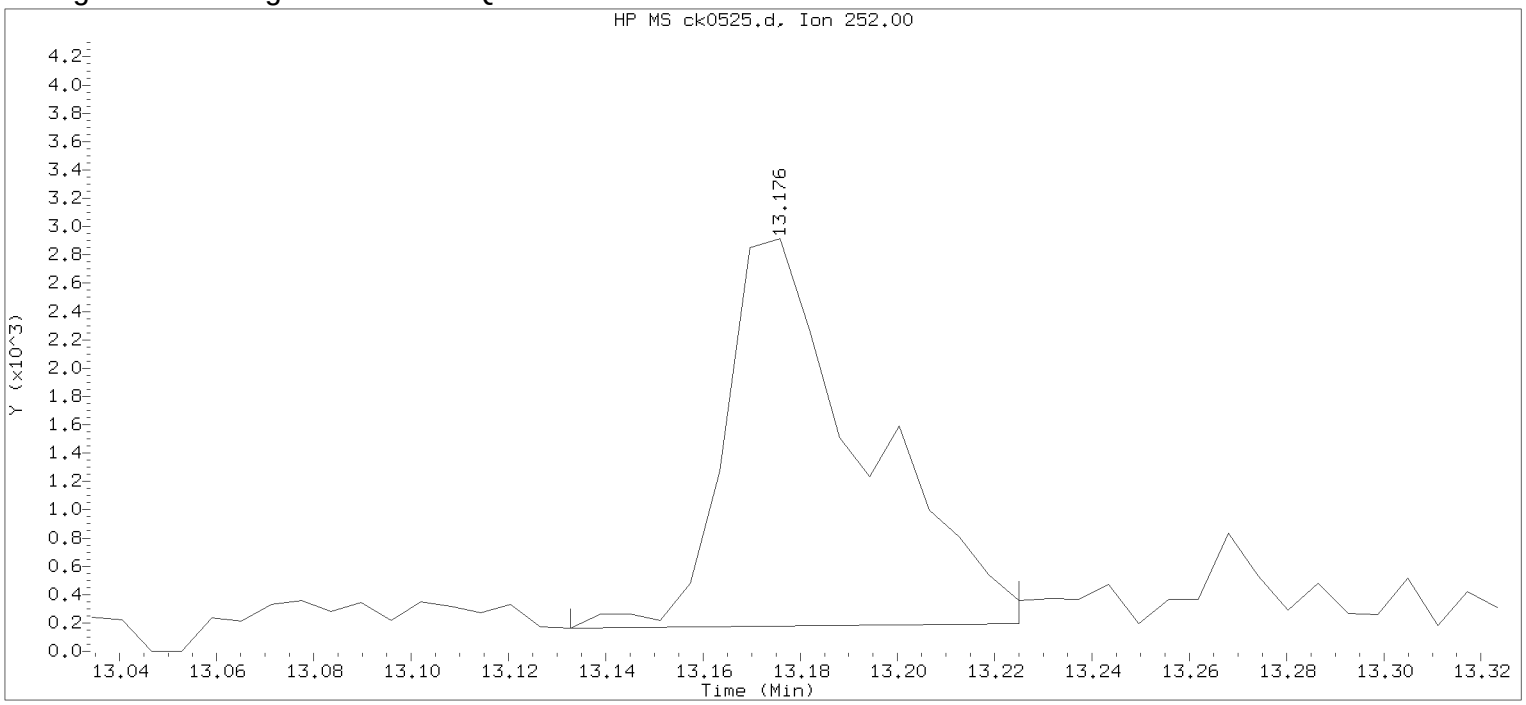
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:36.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0525.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:12 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 04:38 Automation

Sample Name: 2D141 Lab Sample ID: 7265245

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1837		
Retention Time (minutes)	: 13.176		
Quant Ion	: 252.00		
Area	: 5457		
On-column Amount (ng/ul)	: 0.1535		
Integration start scan	: 1829	Integration stop scan:	1844
Y at integration start	: 162	Y at integration end:	194

Digitally signed by Mark A. Clark on 11/14/2013 at 04:58.
Target 3.5 esignature user ID: mac00013

DUPX1 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7265246

Data file: /chem/HP10623.i/13nov14.b/ck0526.d Injection date and time: **14-NOV-2013 04:36**
Data file Sample Info. Line: DUPX1;7265246;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.164(0.000)	534	152	150209 (1)	20.00	
52) Naphthalene-d8	6.400(0.000)	735	136	713802 (1)	20.00	
98) Acenaphthene-d10	8.109(0.000)	1013	164	450774 (1)	20.00	
135) Phenanthrene-d10	9.554(0.000)	1248	188	785962 (-5)	20.00	
167) Pyrene-d10	10.931(0.000)	1472	212	870819 (-16)	20.00	
175) Perylene-d12	13.532(0.000)	1895	264	577258 (-33)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.705(0.000)	82	1303541	84.762	85%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.476(-0.001)	172	2688386	94.851	95%		69 - 120
156) Terphenyl-d14	(5)	11.141(-0.001)	244	3094133	99.392	99%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)	7.968(0.000)	152	4170	0.105	21.00			0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.573(0.000)	178	19918	0.436	87.17			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.735(0.000)	202	33779	0.661	132.21			0.1
154) Pyrene	(5)	10.950(0.000)	202	33535	0.693	138.69			0.1
166) Benzo(a)anthracene	(5)	12.124(0.000)	228	10167	0.228	45.59			0.1
168) Chrysene	(5)	12.155(0.000)	228	15896	0.370	73.93			0.1
172) Benzo(b)fluoranthene	(6)	13.176(-0.000)	252	18332M	0.520	104.02			0.1
173) Benzo(k)fluoranthene	(6)	13.194(0.000)	252	9639M	0.268	53.61			0.1
174) Benzo(a)pyrene	(6)	13.477(0.000)	252	11201	0.326	65.12			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.534(0.000)	276	8568	0.234	46.82			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.805(0.000)	276	8112M	0.260	52.03			0.1

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov14.b/ck0526.d Injection date and time: **14-NOV-2013 04:36**
Data file Sample Info. Line: DUPX1;7265246;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 14-NOV-2013 01:55
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov14.b/ck0501.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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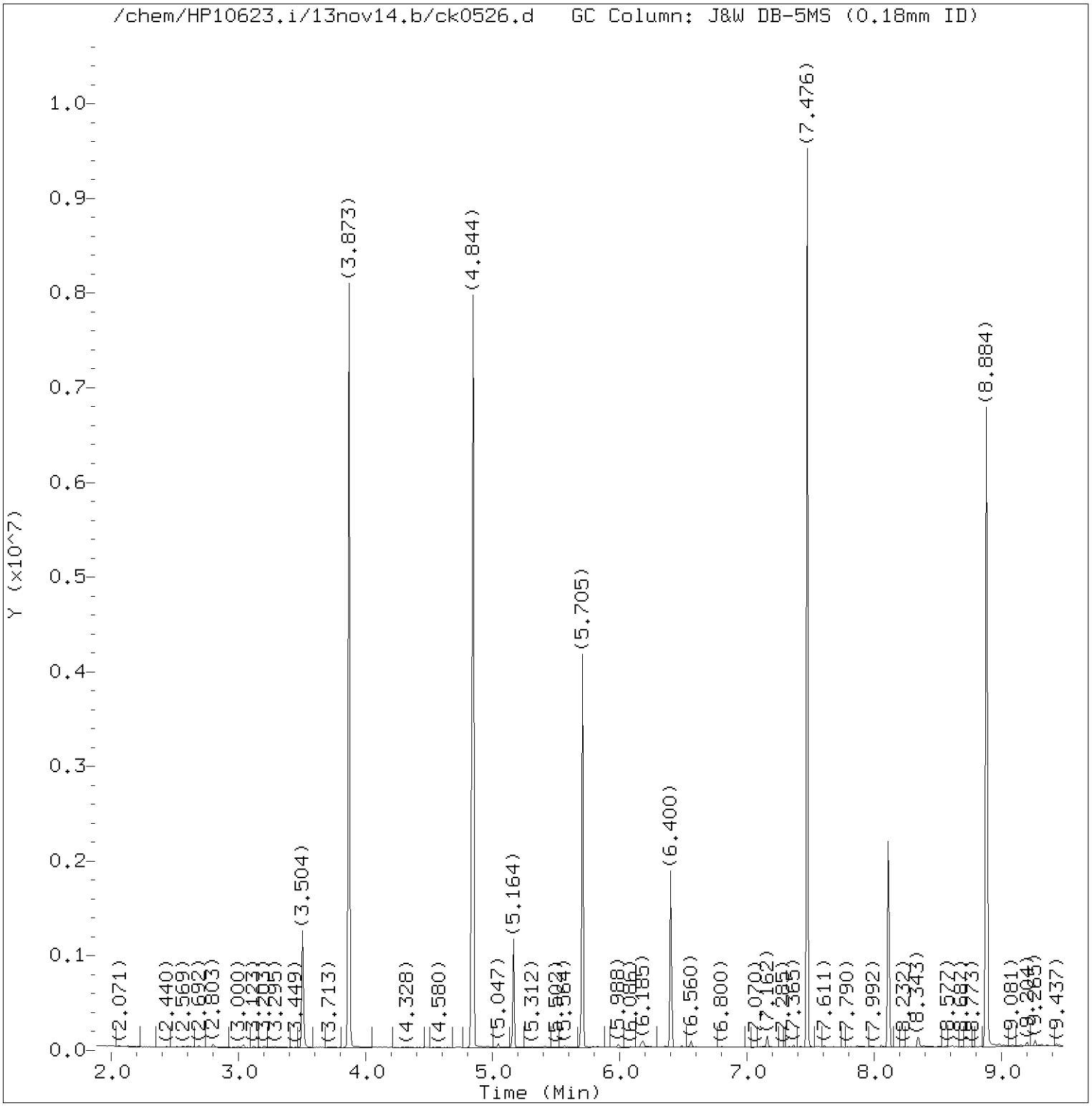
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:37. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

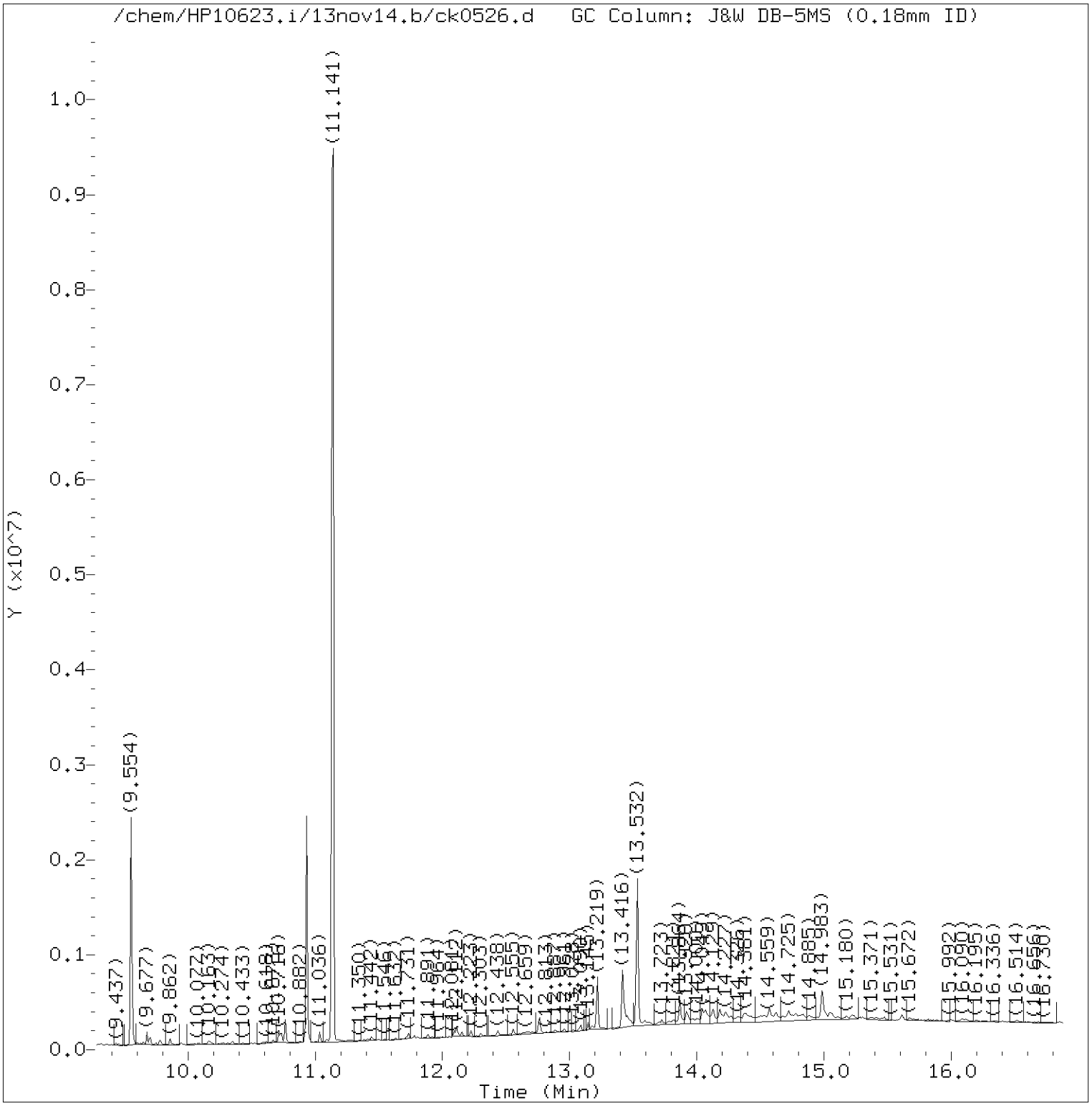
Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Digitally signed by Mark A. Clark
on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Digitally signed by Mark A. Clark
on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	150209	20.000
38)$Nitrobenzene-d5	(2)	5.705	82	1303541	84.762
52)*Naphthalene-d8	(2)	6.400	136	713802	20.000
78)$2-Fluorobiphenyl	(3)	7.476	172	2688386	94.851
95) Acenaphthylene	(3)	7.968	152	4170	0.105
98)*Acenaphthene-d10	(3)	8.109	164	450774	20.000
135)*Phenanthrene-d10	(4)	9.554	188	785962	20.000
137) Phenanthrene	(4)	9.573	178	19918	0.436
147) Fluoranthene	(4)	10.735	202	33779	0.661
167)*Pyrene-d10	(5)	10.931	212	870819	20.000
154) Pyrene	(5)	10.950	202	33535	0.693
156)$Terphenyl-d14	(5)	11.141	244	3094133	99.392
166) Benzo(a)anthracene	(5)	12.124	228	10167	0.228
168) Chrysene	(5)	12.155	228	15896	0.370
172) Benzo(b)fluoranthene	(6)	13.176	252	18332M	0.520
173) Benzo(k)fluoranthene	(6)	13.194	252	9639M	0.268
174) Benzo(a)pyrene	(6)	13.477	252	11201	0.326
175)*Perylene-d12	(6)	13.532	264	577258	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.535	276	8568	0.234
179) Benzo(g,h,i)perylene	(6)	14.805	276	8112M	0.260

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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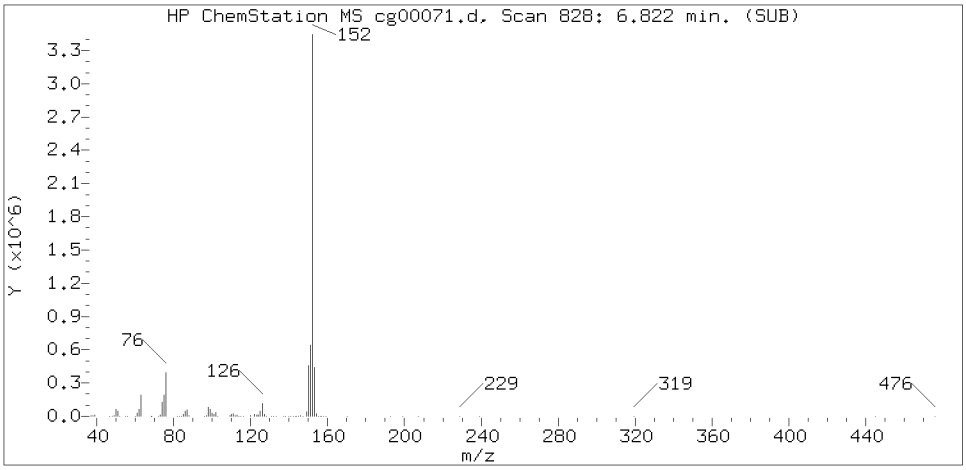
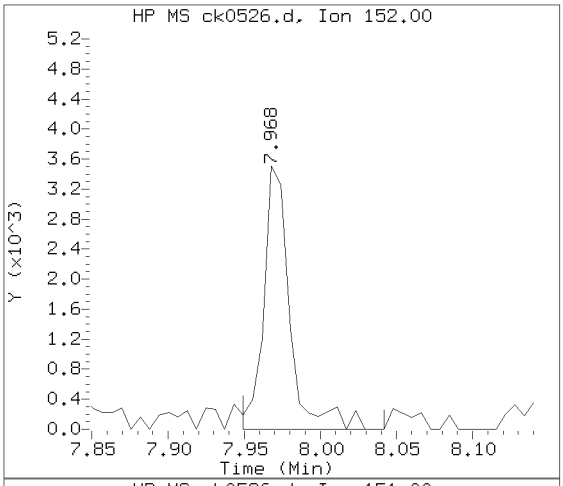
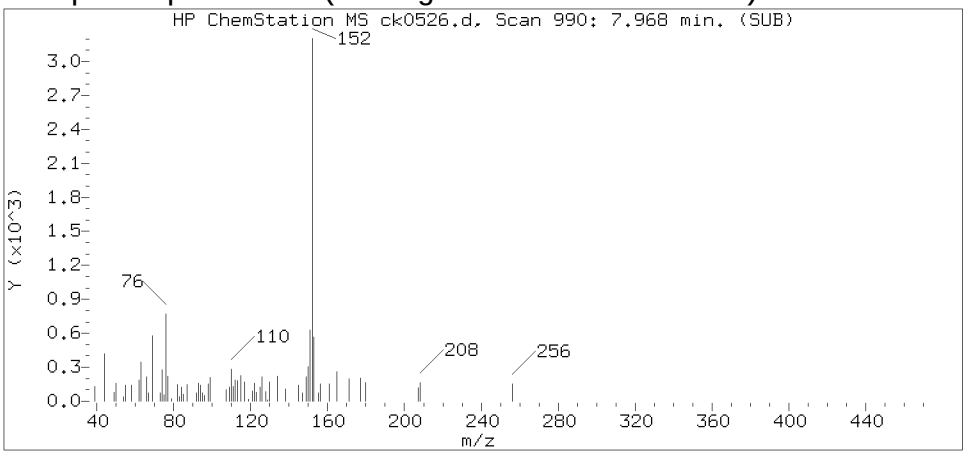
Target 3.5 esignature user ID: mac00013

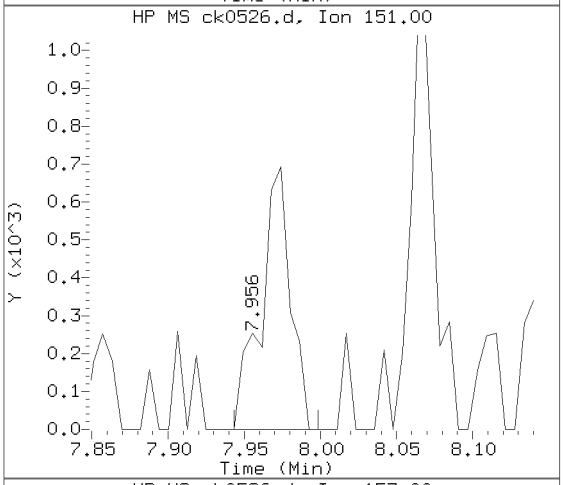
Reference Standard Spectrum for Acenaphthylene



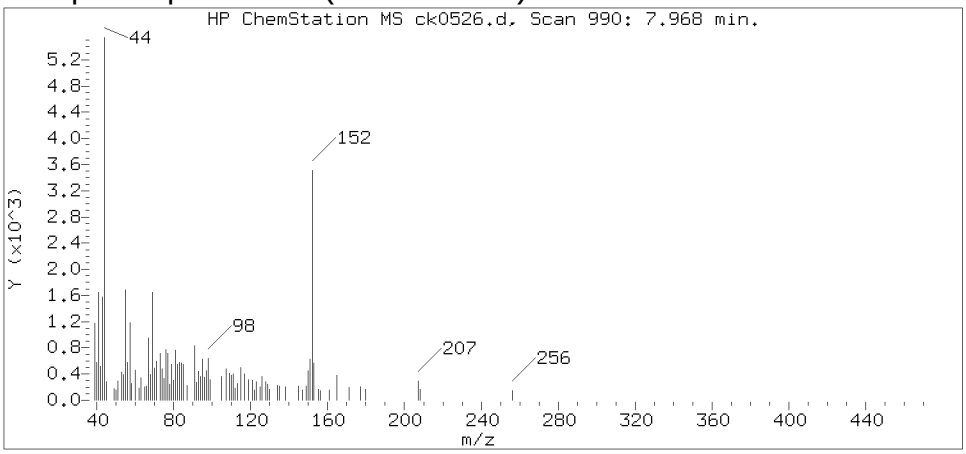


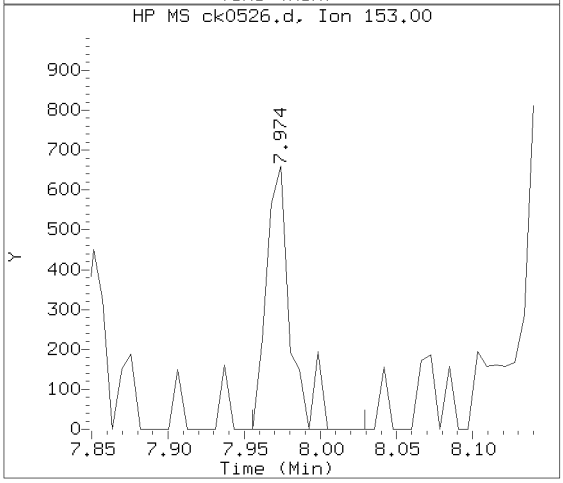
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 95
Compound Name	: Acenaphthylene
Scan Number	: 990
Retention Time (minutes)	: 7.968
Relative Retention Time	: 0.00076
Quant Ion	: 152.00
Area (flag)	: 4170
On-column Amount (ng/ul)	: 0.1050

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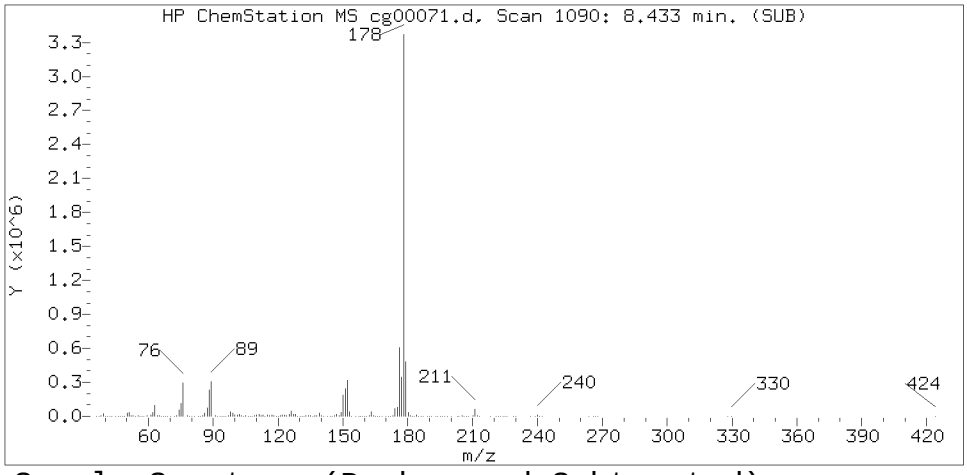
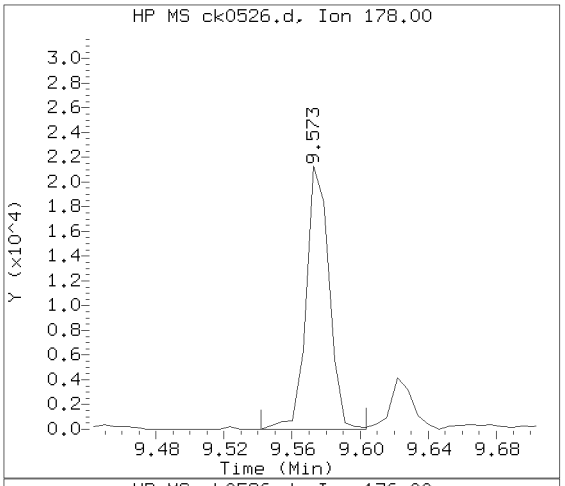
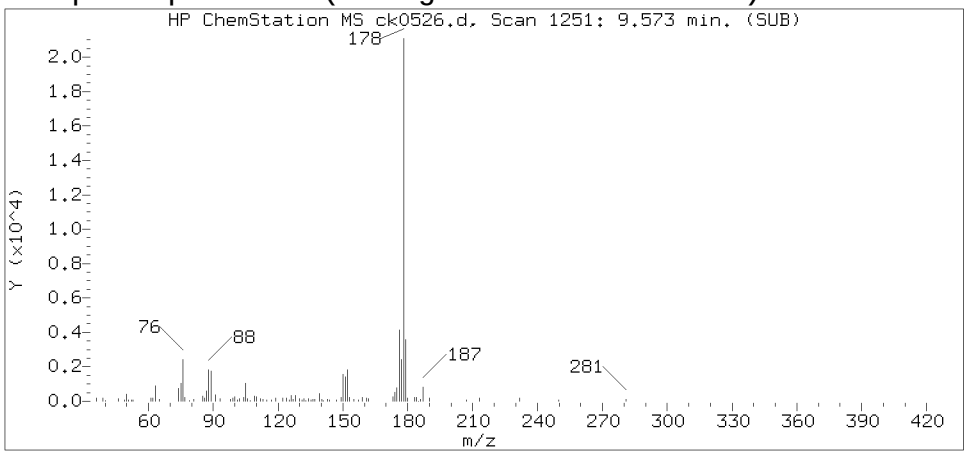
Target 3.5 esignature user ID: mac00013

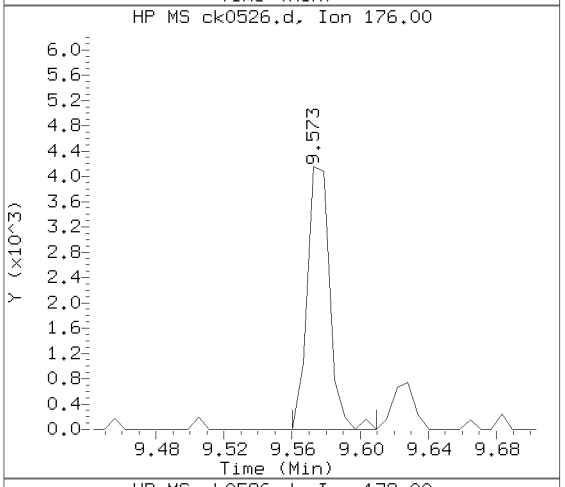
Reference Standard Spectrum for Phenanthrene



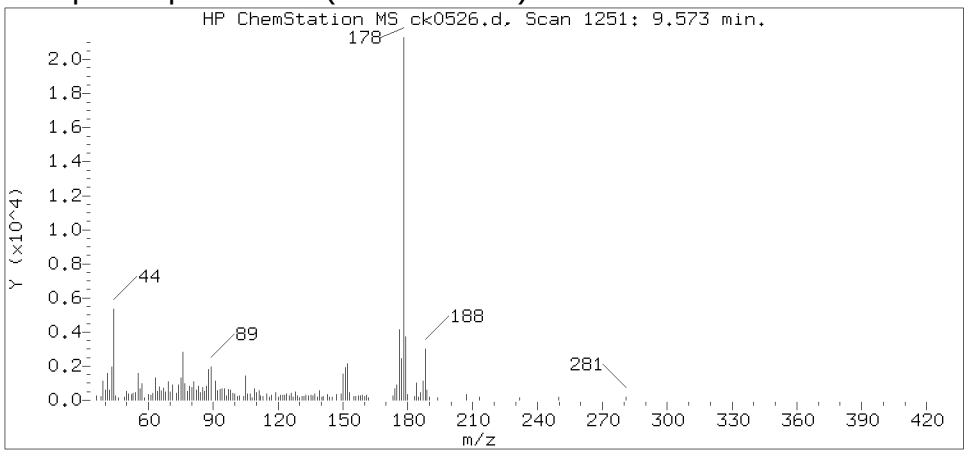


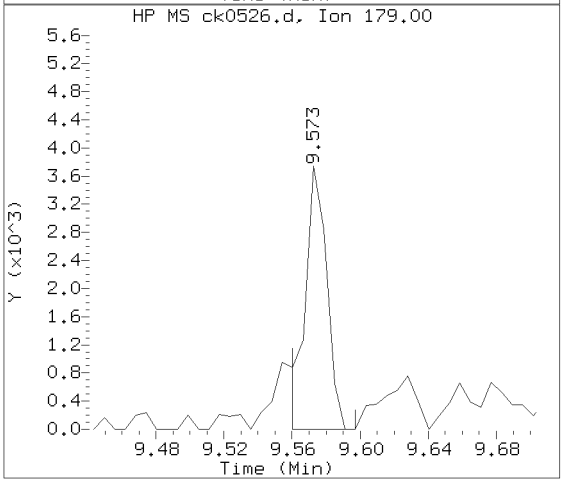
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1251
Retention Time (minutes)	: 9.573
Relative Retention Time	: 0.00064
Quant Ion	: 178.00
Area (flag)	: 19918
On-column Amount (ng/ul)	: 0.4358

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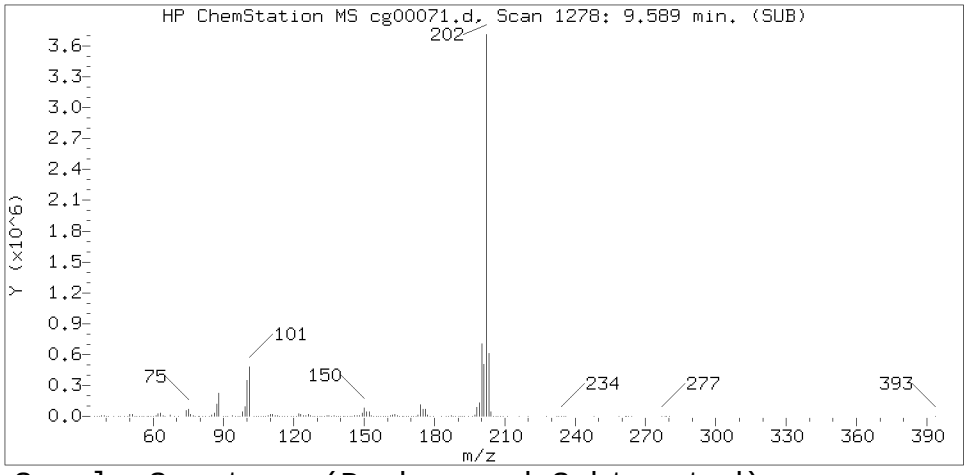
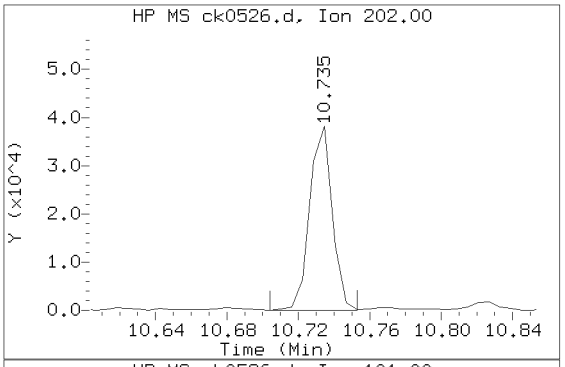
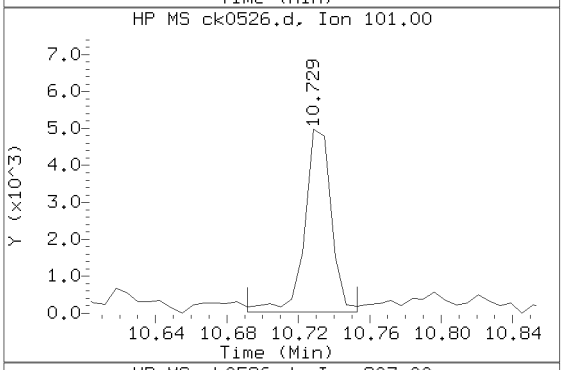
Target 3.5 esignature user ID: mac00013

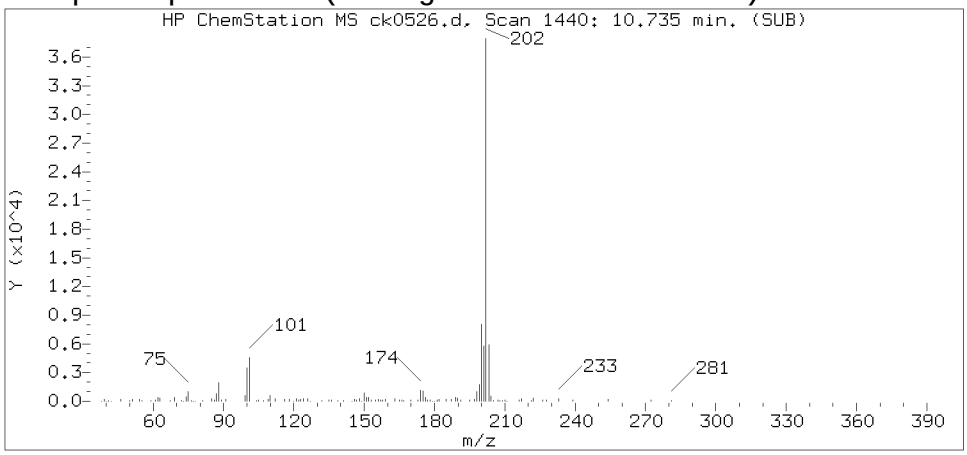
Reference Standard Spectrum for Fluoranthene

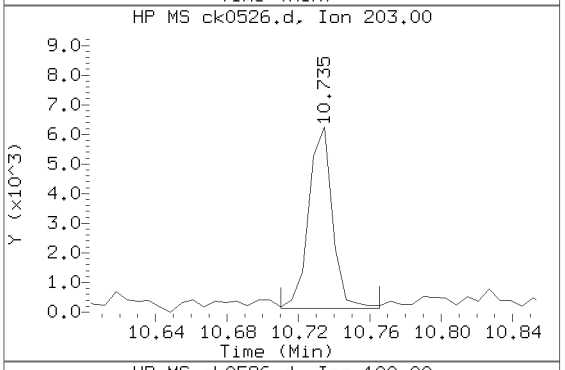




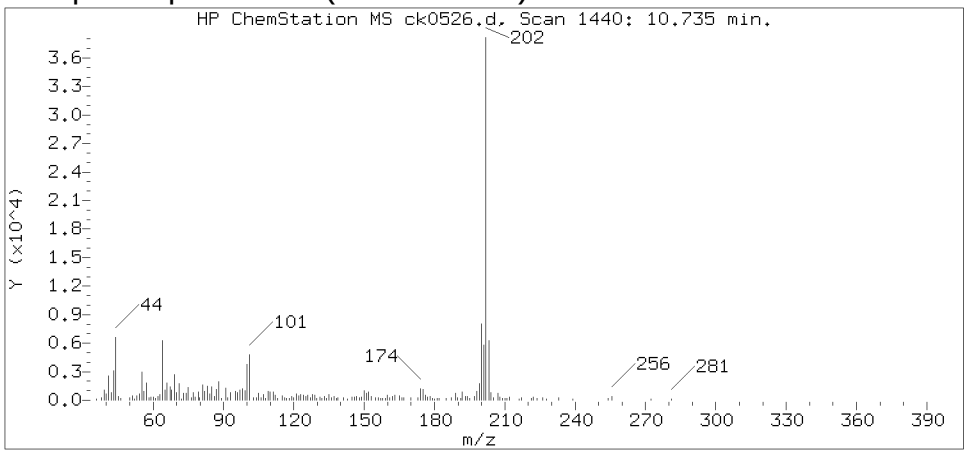


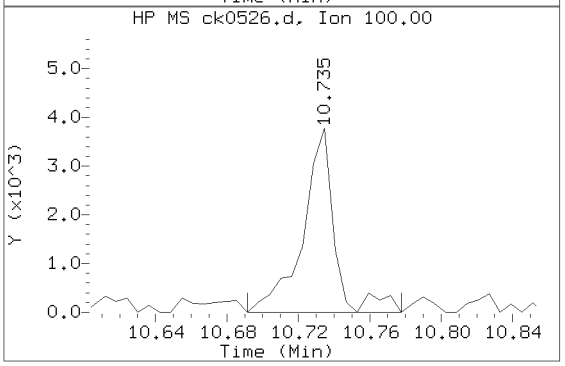
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1440
Retention Time (minutes)	: 10.735
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 33779
On-column Amount (ng/ul)	: 0.6610

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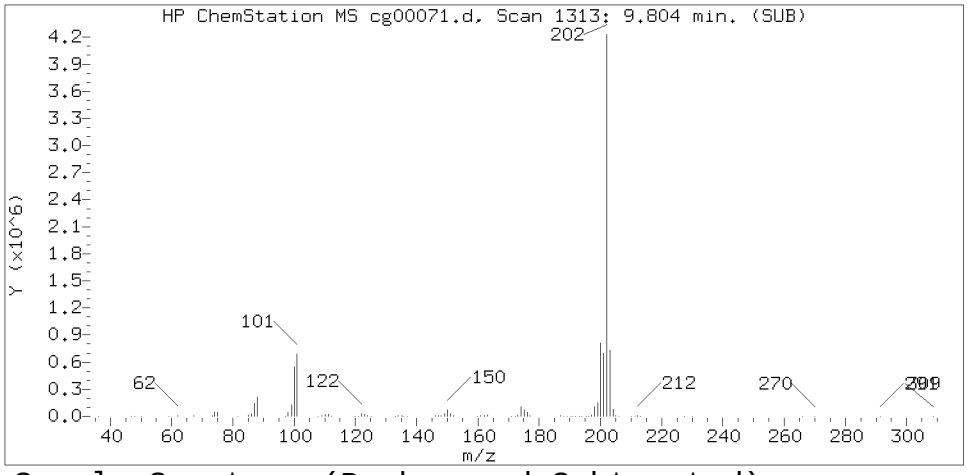
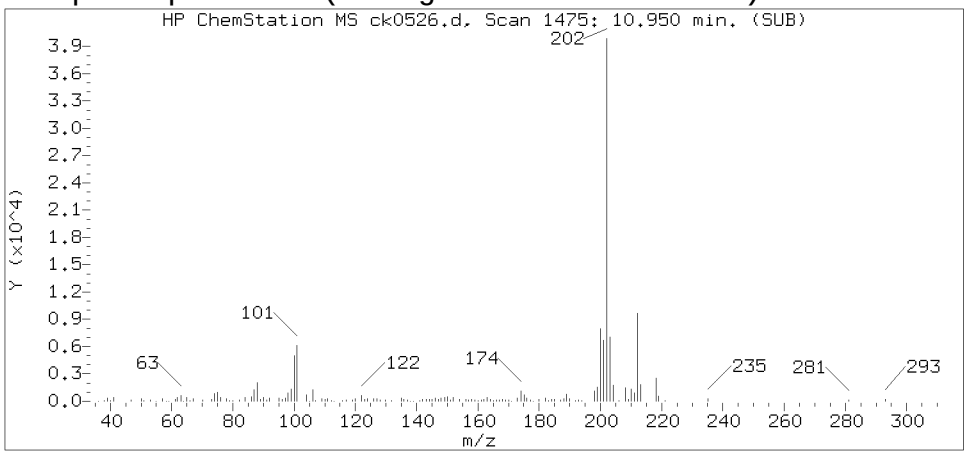
Target 3.5 esignature user ID: mac00013

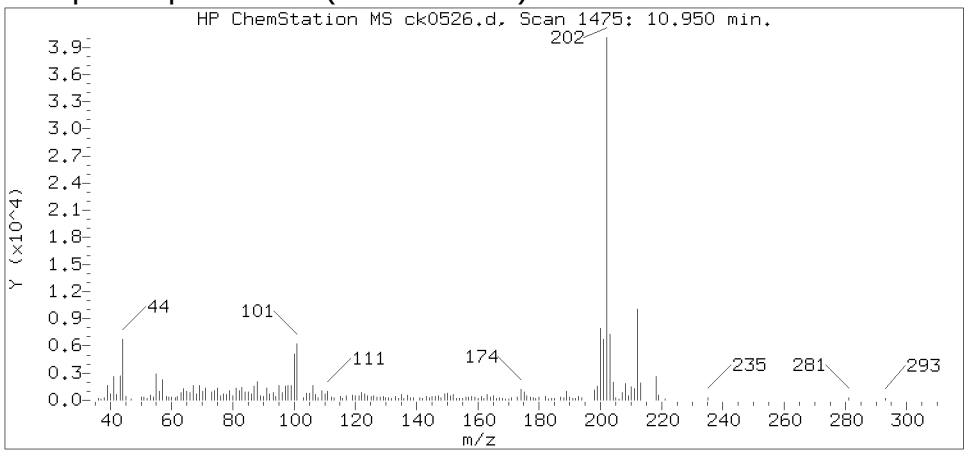
Reference Standard Spectrum for Pyrene

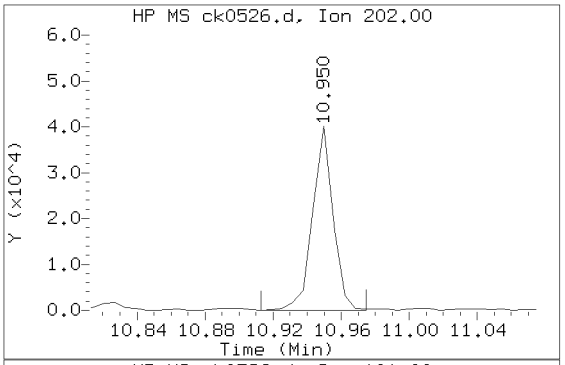


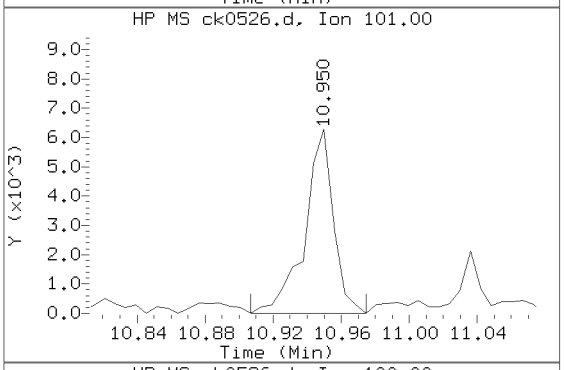
Sample Spectrum (Background Subtracted)

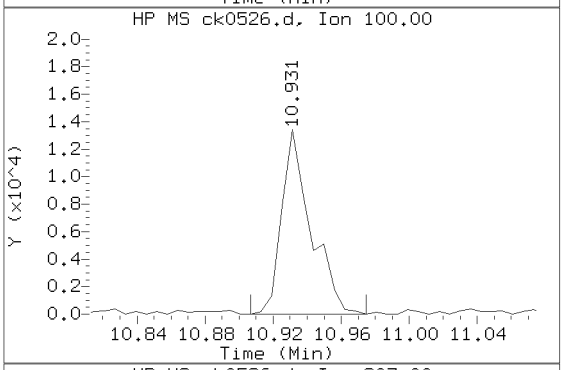


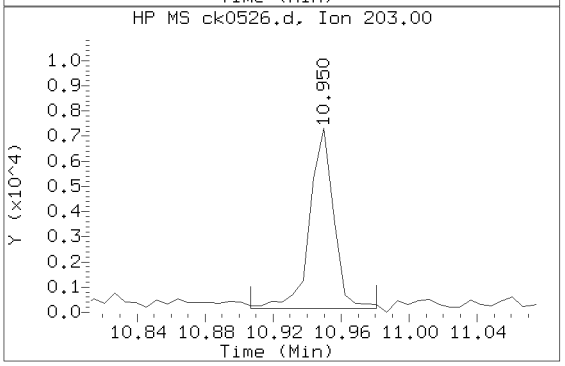
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1475
Retention Time (minutes)	: 10.950
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 33535
On-column Amount (ng/ul)	: 0.6935

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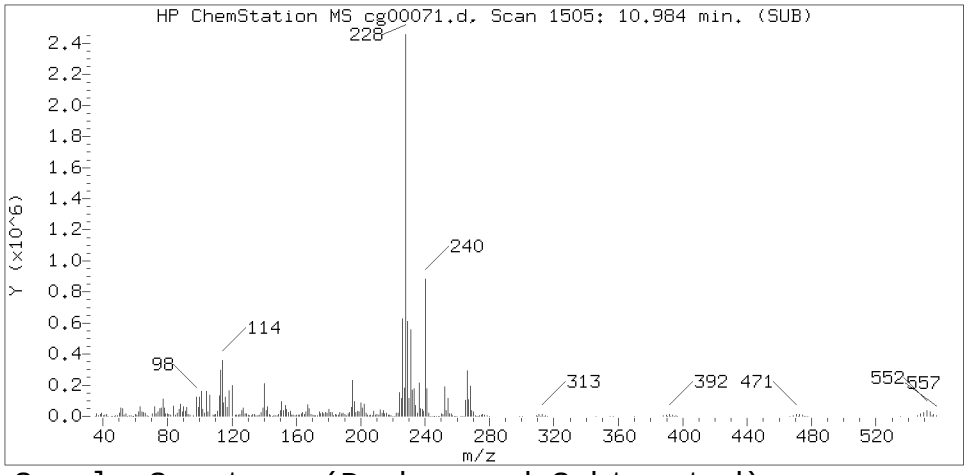
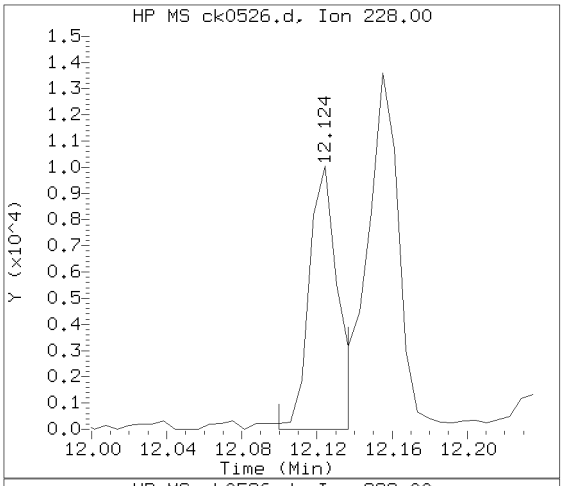
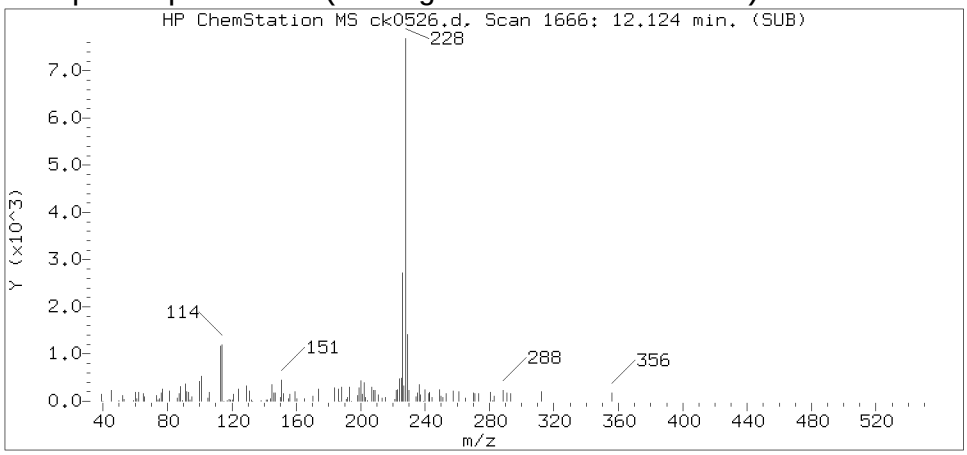
Target 3.5 esignature user ID: mac00013

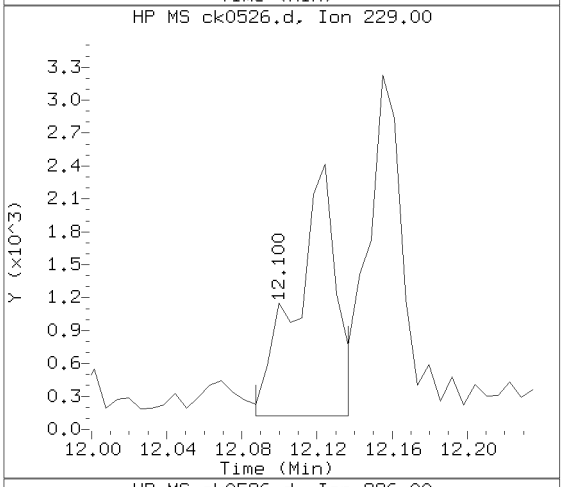
Reference Standard Spectrum for Benzo(a)anthracene



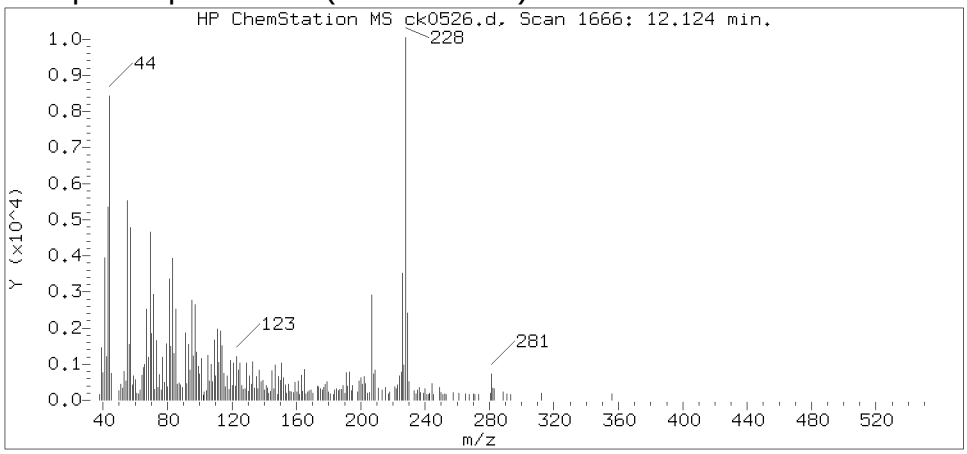


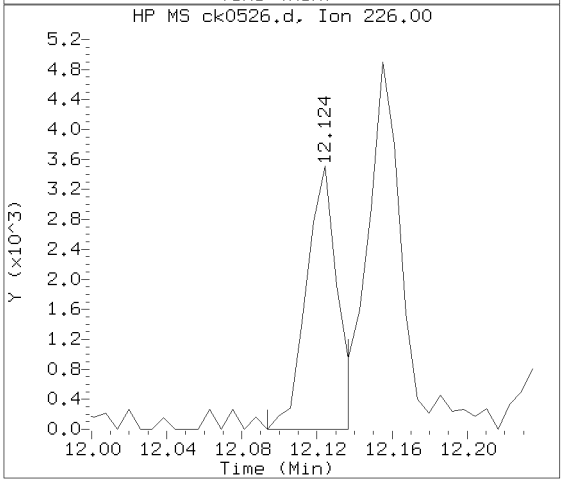
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1666
Retention Time (minutes)	: 12.124
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 10167
On-column Amount (ng/ul)	: 0.2279

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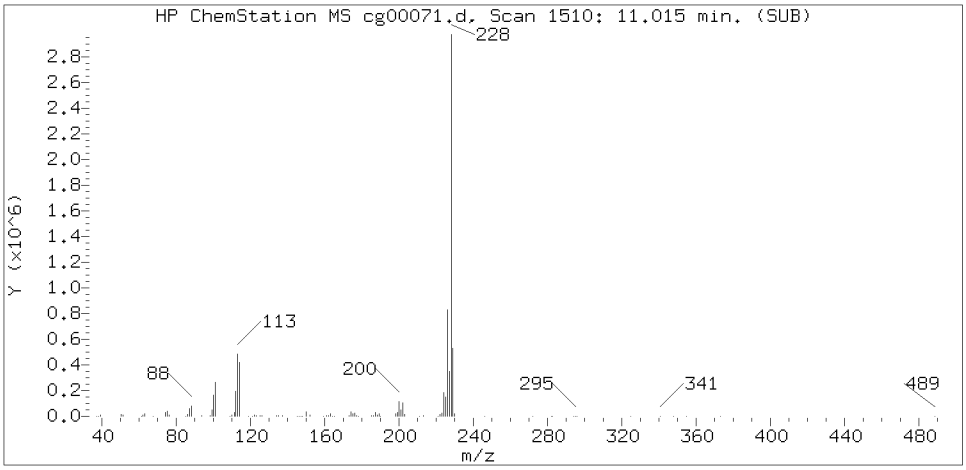
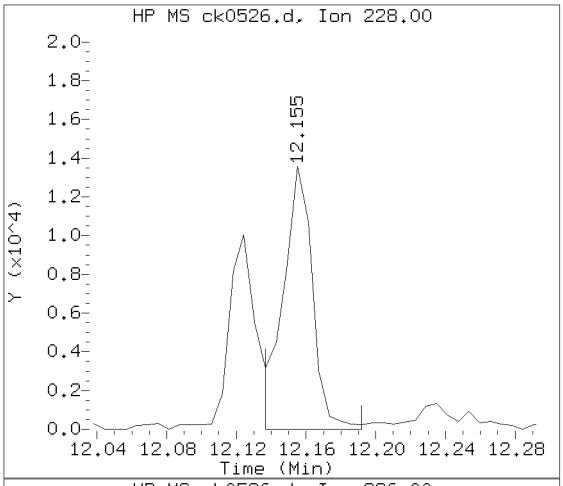
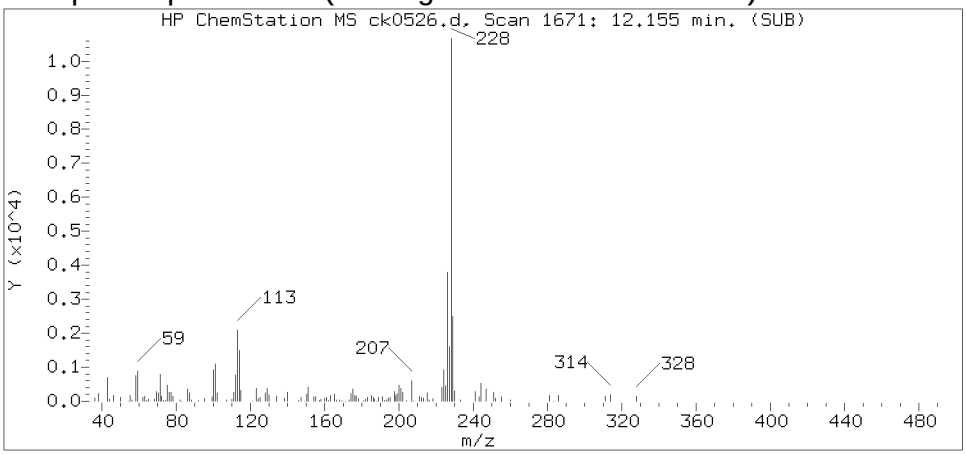
Target 3.5 esignature user ID: mac00013

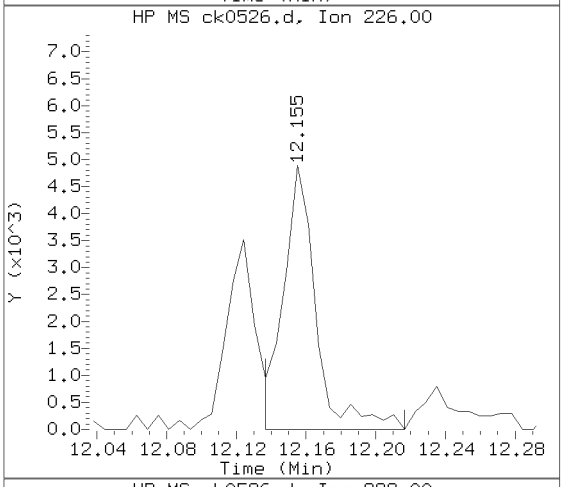
Reference Standard Spectrum for Chrysene



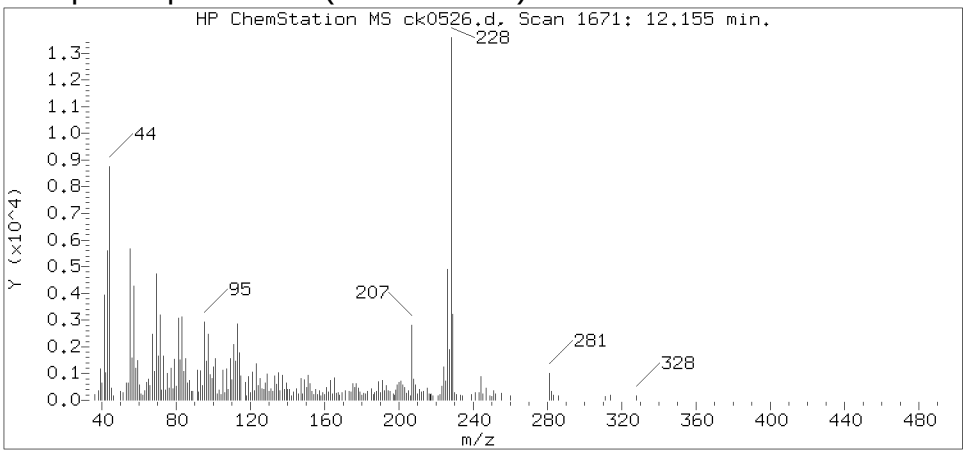


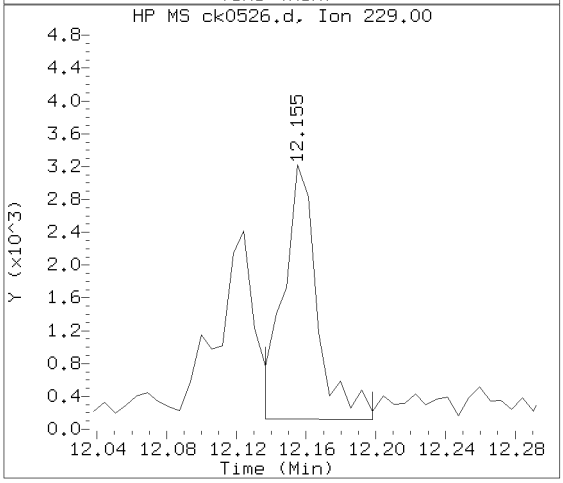
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1671
Retention Time (minutes)	: 12.155
Relative Retention Time	: 0.00056
Quant Ion	: 228.00
Area (flag)	: 15896
On-column Amount (ng/ul)	: 0.3696

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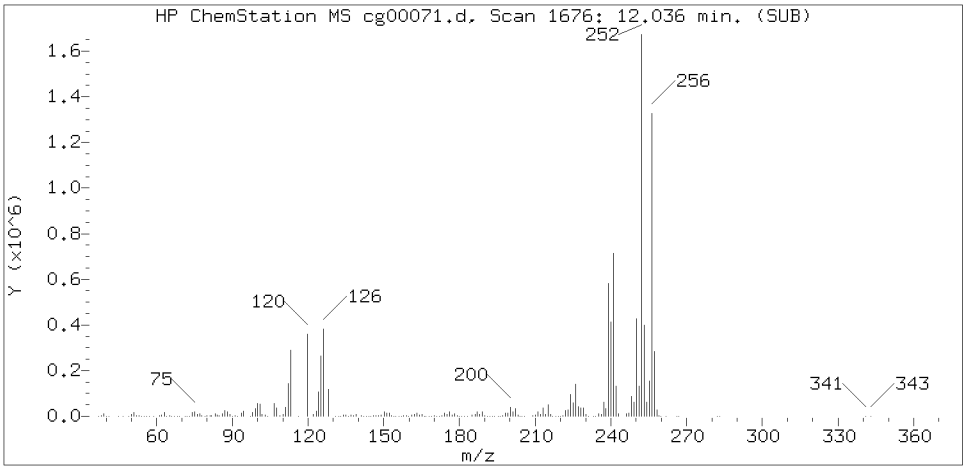
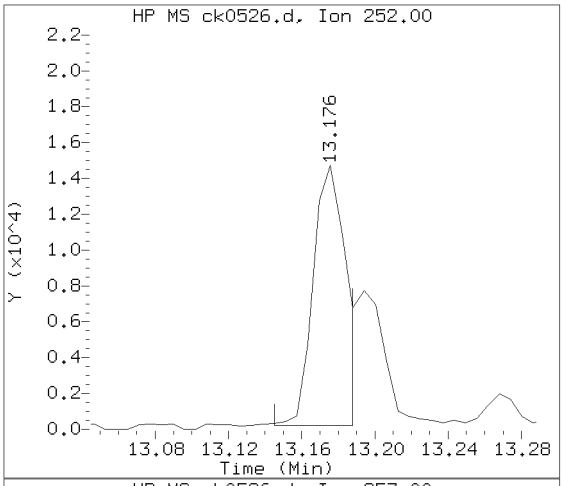
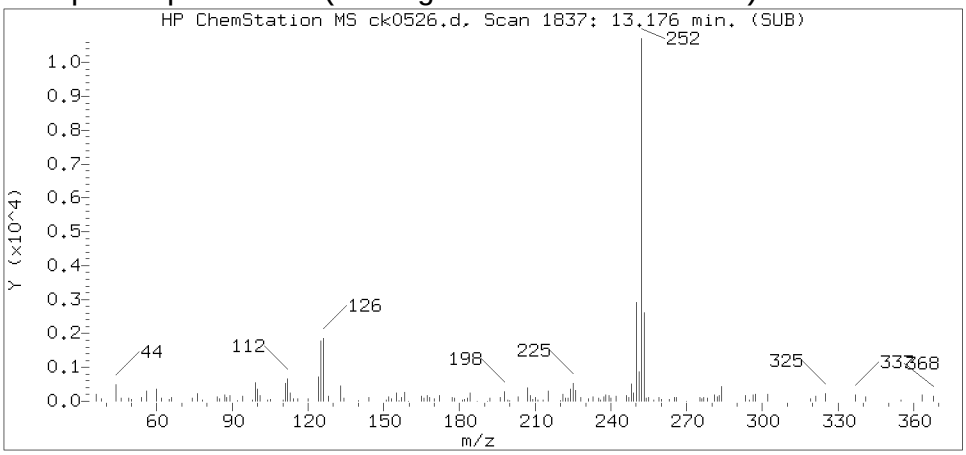
Target 3.5 esignature user ID: mac00013

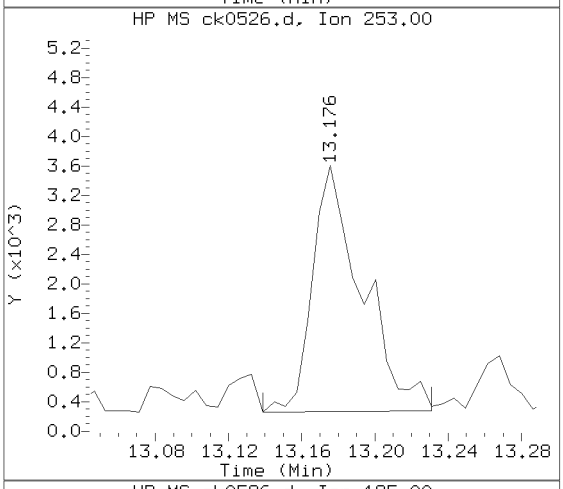
Reference Standard Spectrum for Benzo(b)fluoranthene



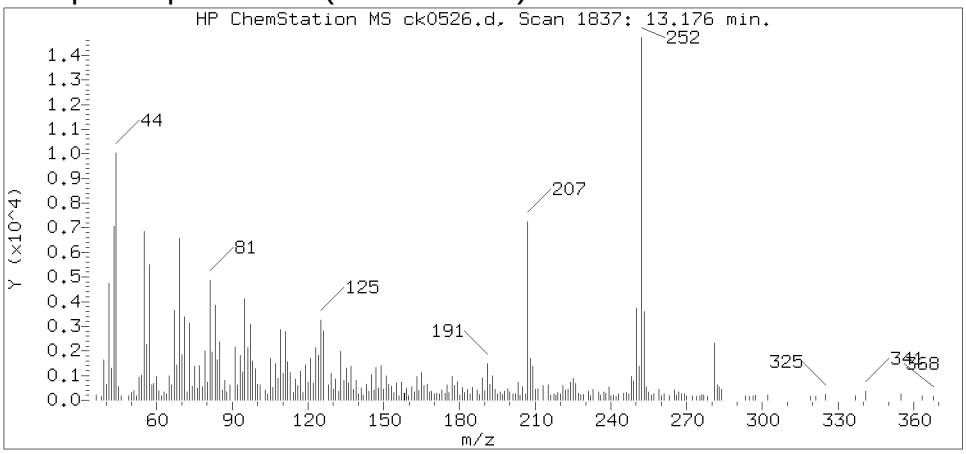


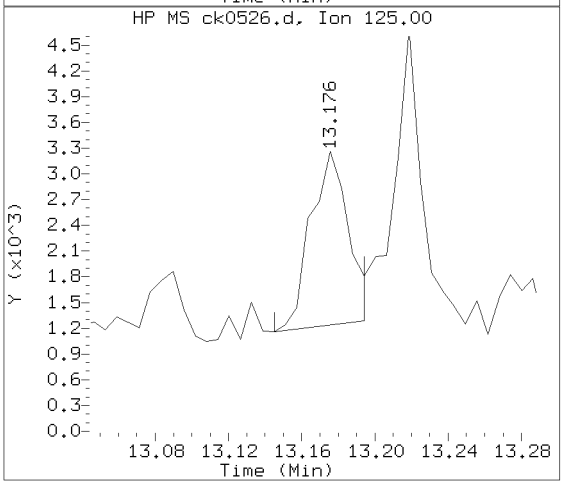
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

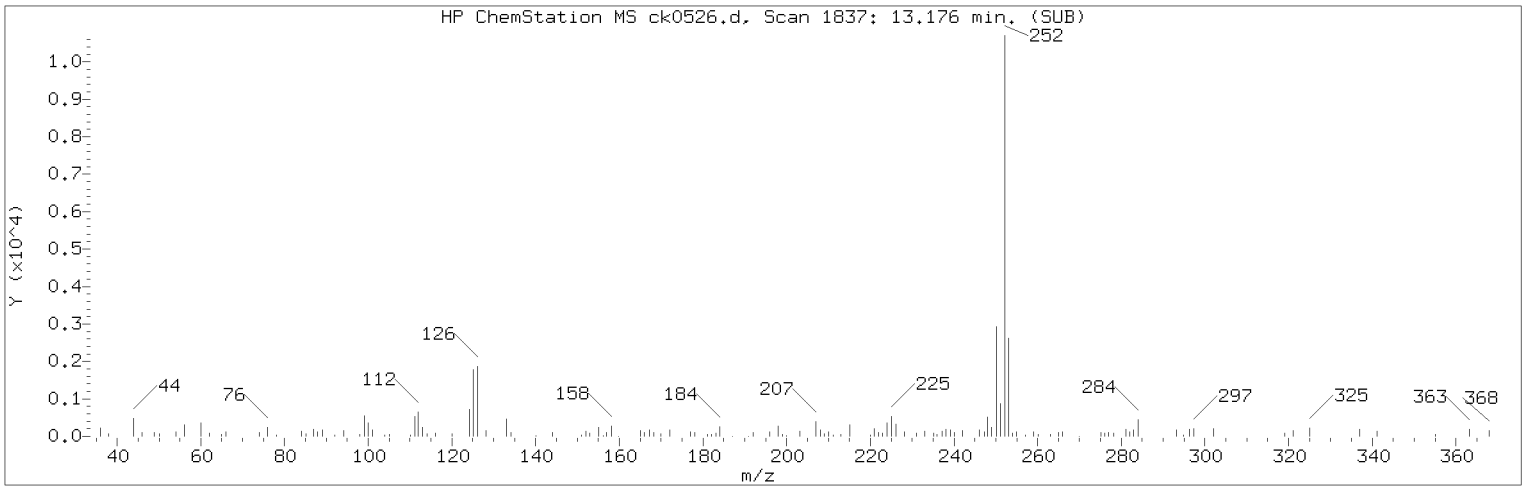
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

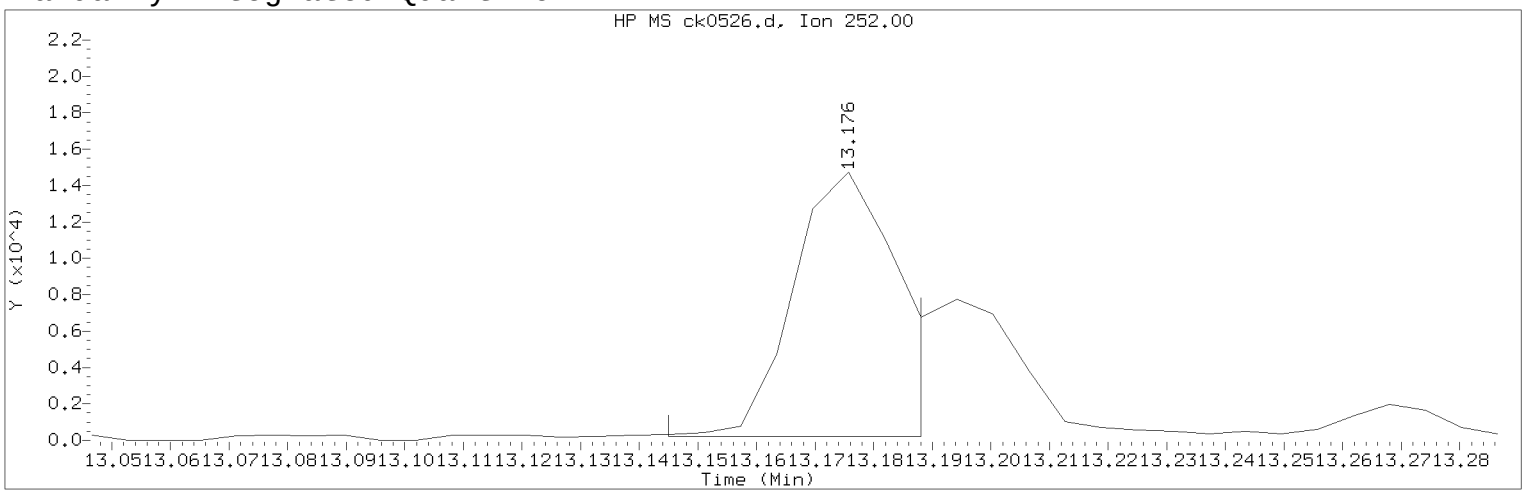
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 18332M
On-column Amount (ng/ul) : 0.5201

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

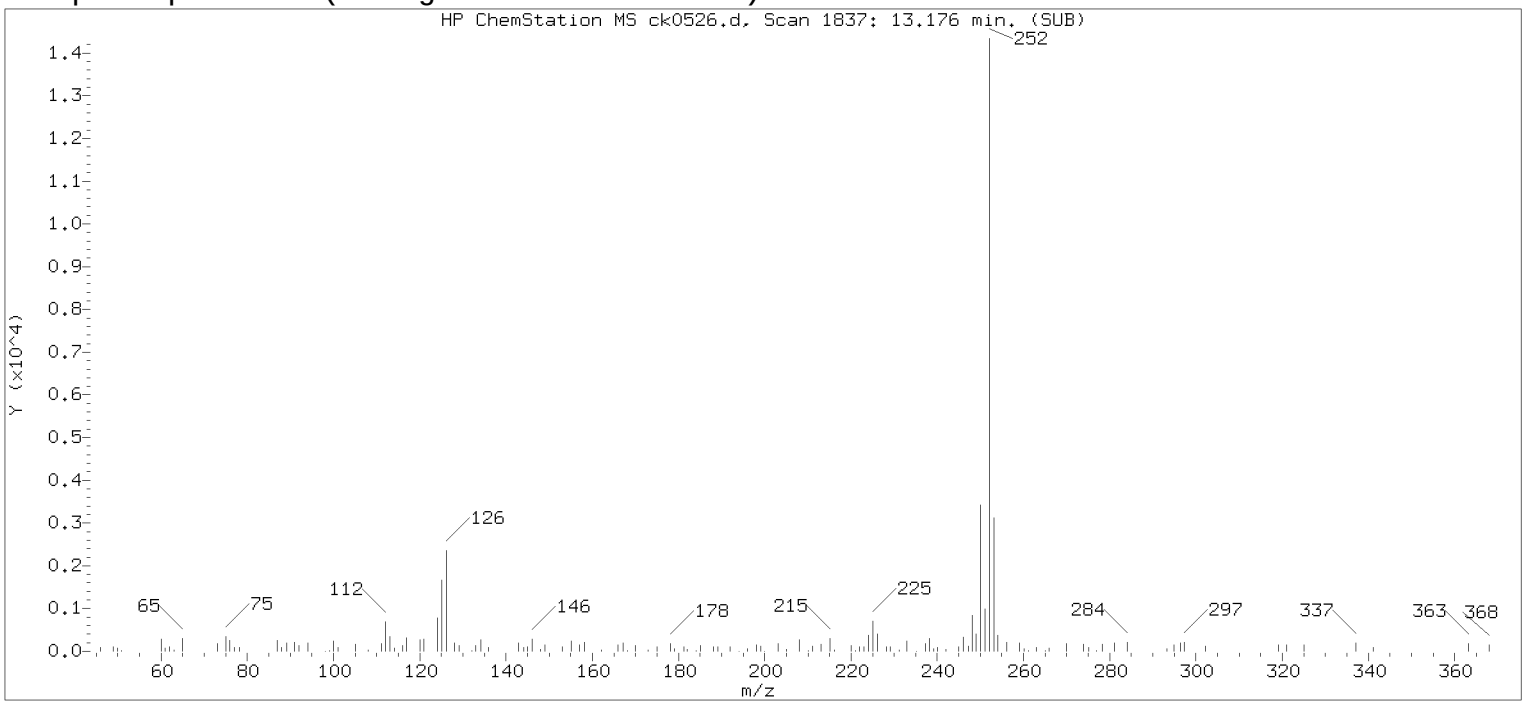
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area (flag) : 18332M
On-column Amount (ng/ul) : 0.5201
Integration start scan : 1831 Integration stop scan: 1838
Y at integration start : 228 Y at integration end: 228

Reason for manual integration: improper integration

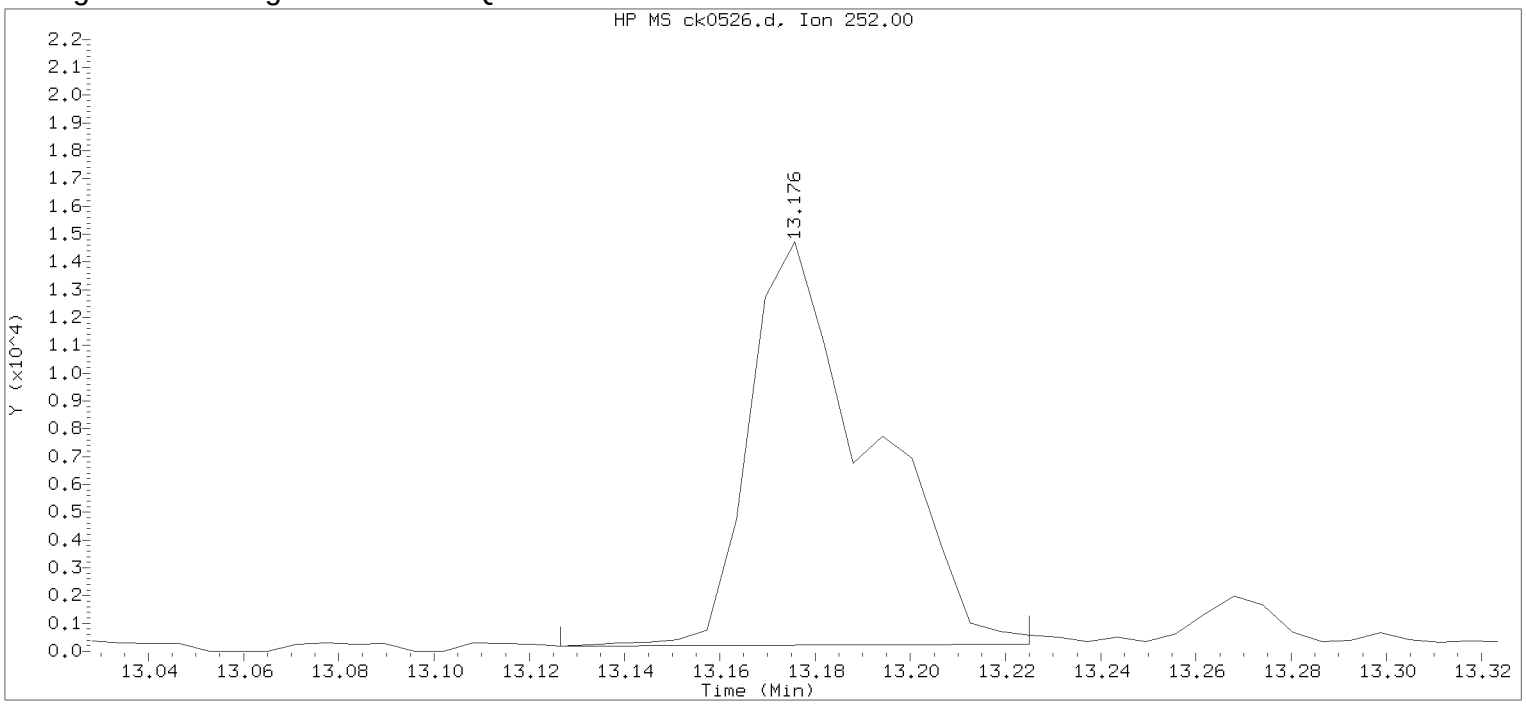
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:37.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

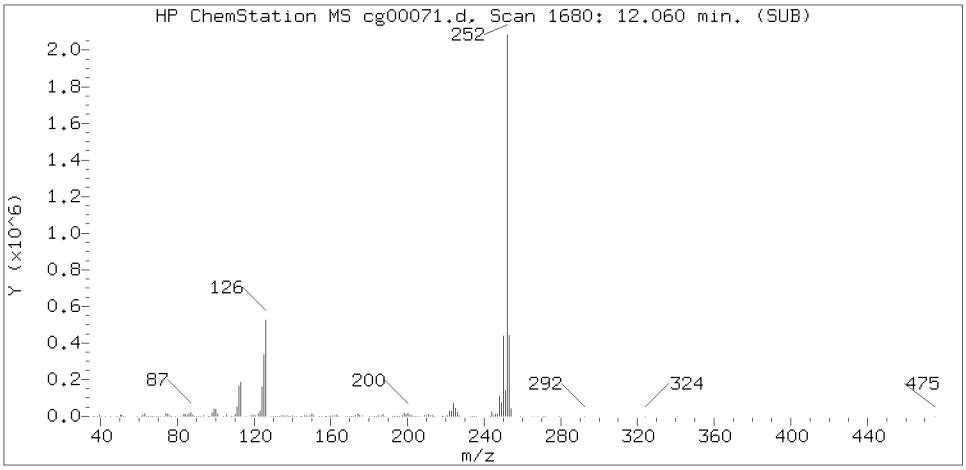
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:02 Automation

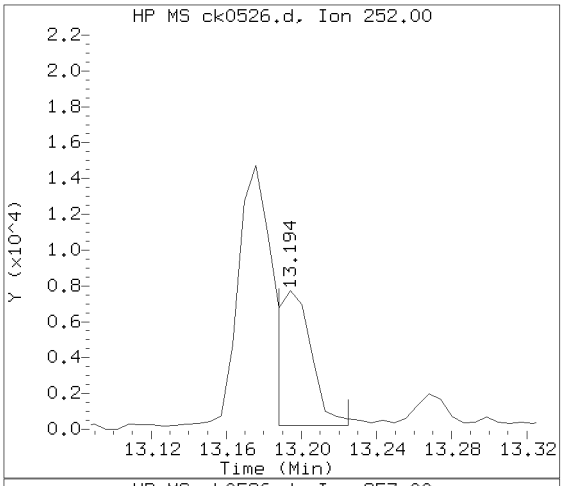
Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1837
Retention Time (minutes) : 13.176
Quant Ion : 252.00
Area : 25472
On-column Amount (ng/ul) : 0.7226
Integration start scan : 1828 Integration stop scan: 1844
Y at integration start : 184 Y at integration end: 264

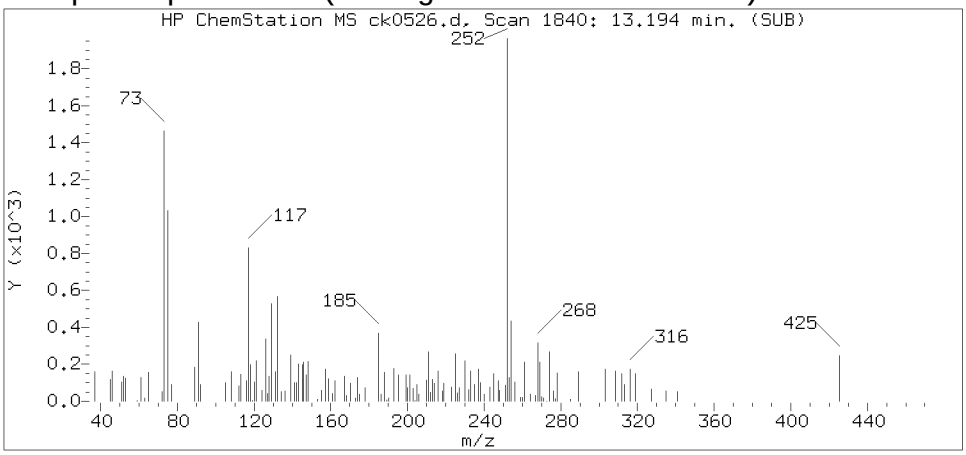
Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

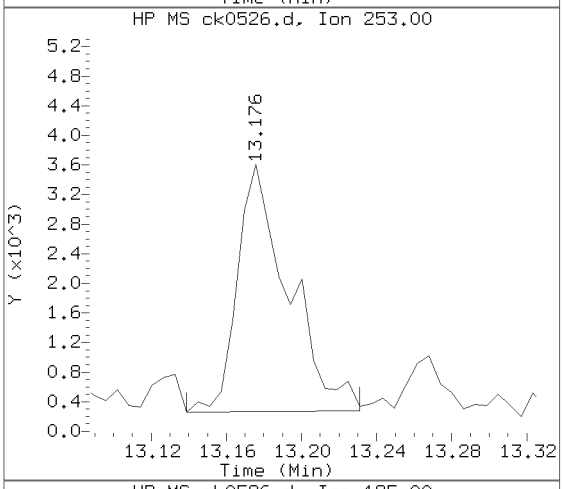
Reference Standard Spectrum for Benzo(k)fluoranthene



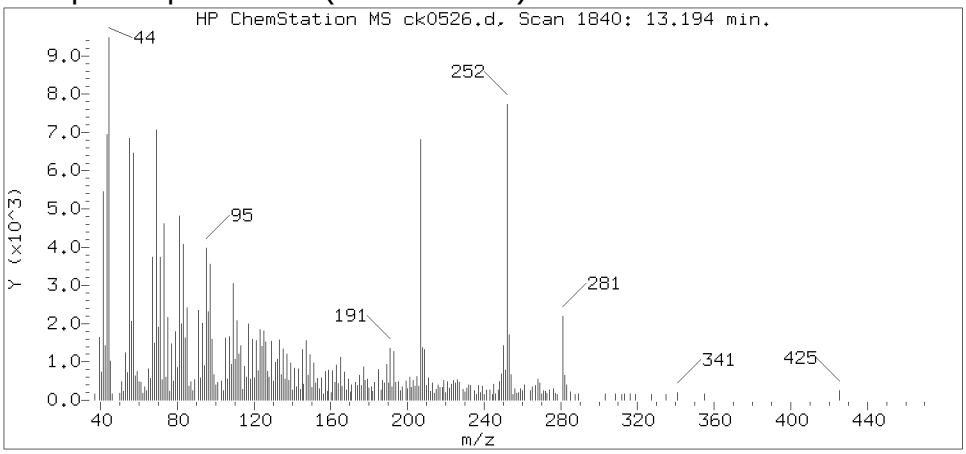


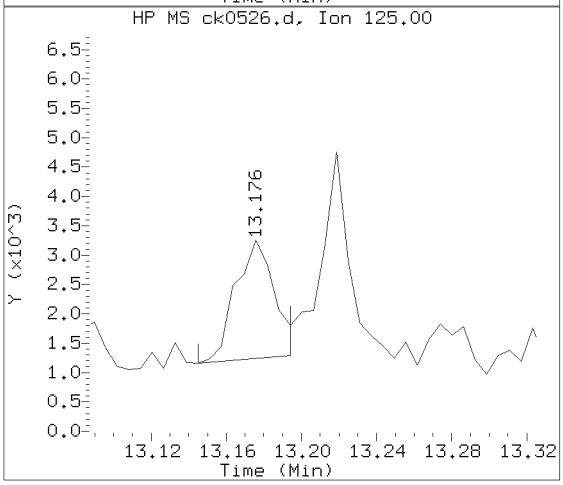
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

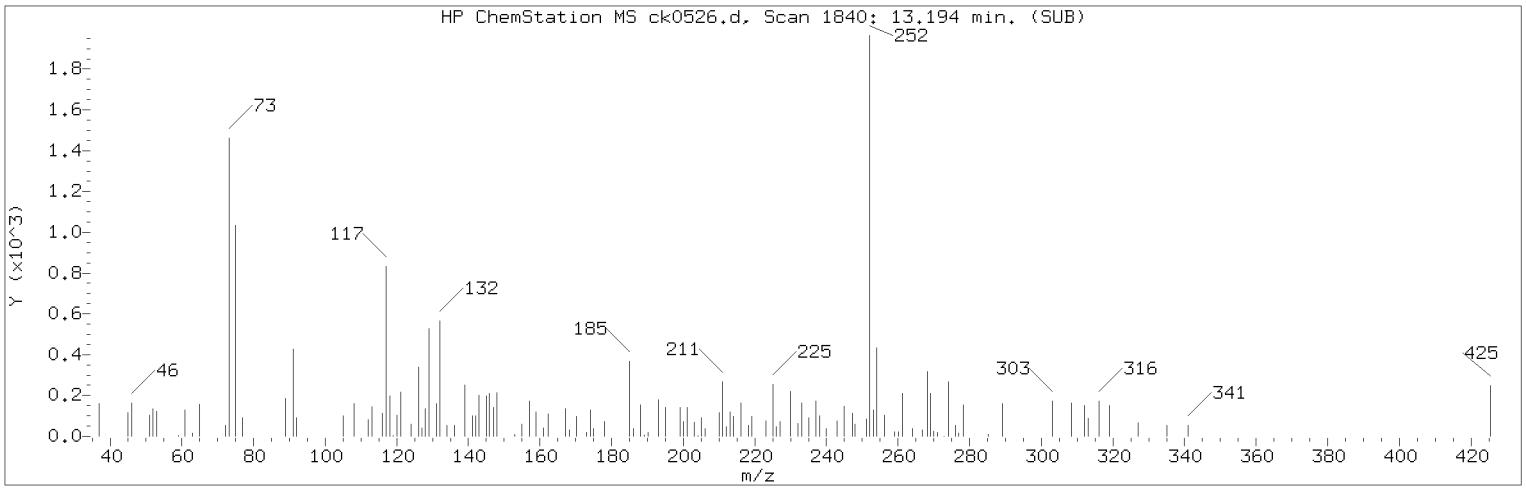
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

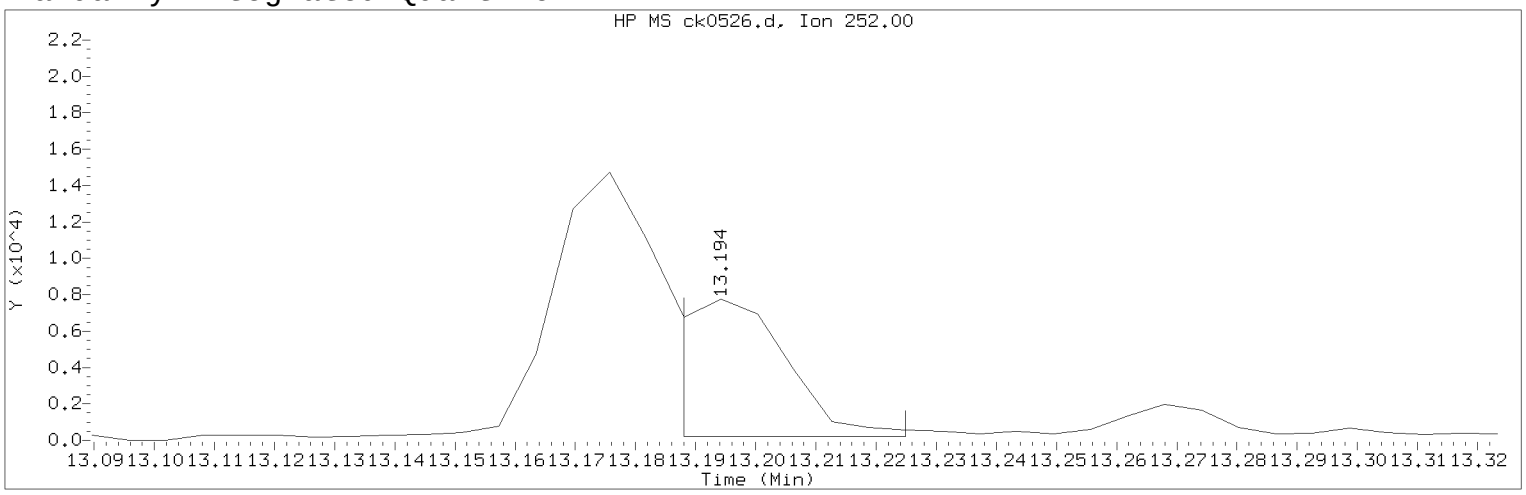
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Relative Retention Time : 0.00091
Quant Ion : 252.00
Area (flag) : 9639M
On-column Amount (ng/ul) : 0.2680

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

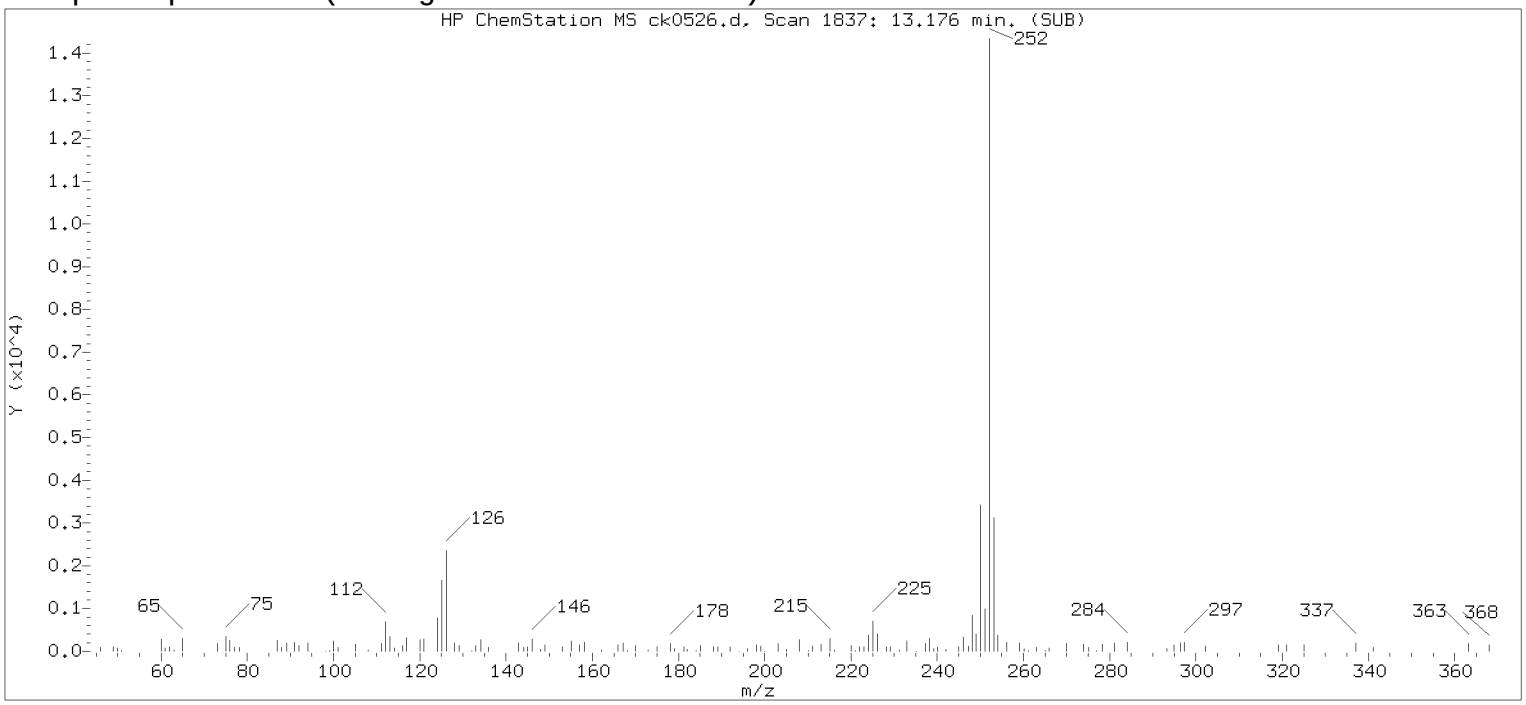
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1840
Retention Time (minutes) : 13.194
Quant Ion : 252.00
Area (flag) : 9639M
On-column Amount (ng/ul) : 0.2680
Integration start scan : 1838 Integration stop scan: 1844
Y at integration start : 204 Y at integration end: 204

Reason for manual integration: improper integration

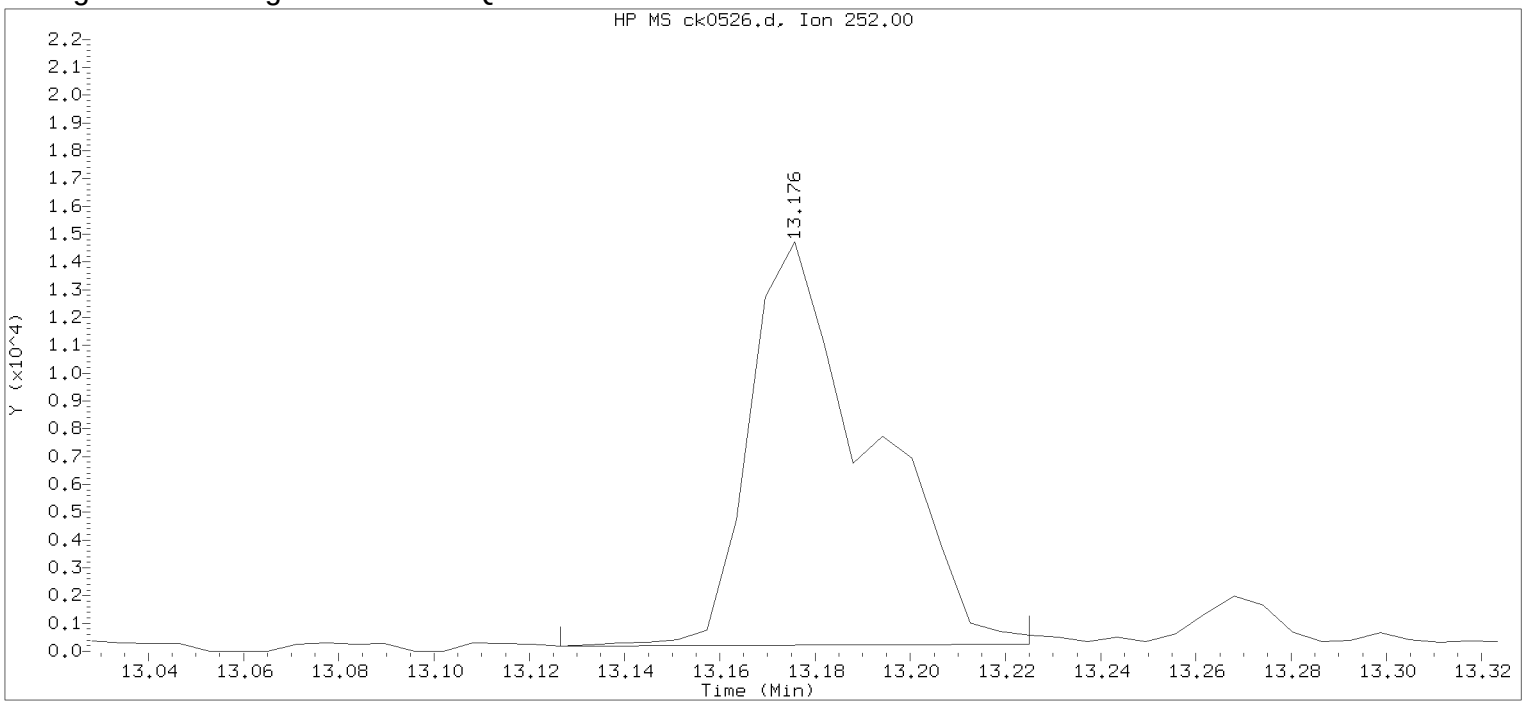
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:37.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

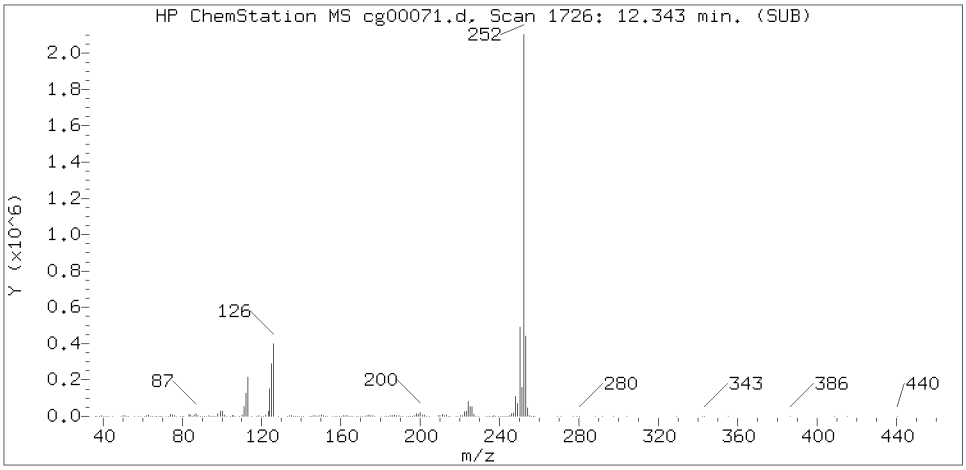
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:02 Automation

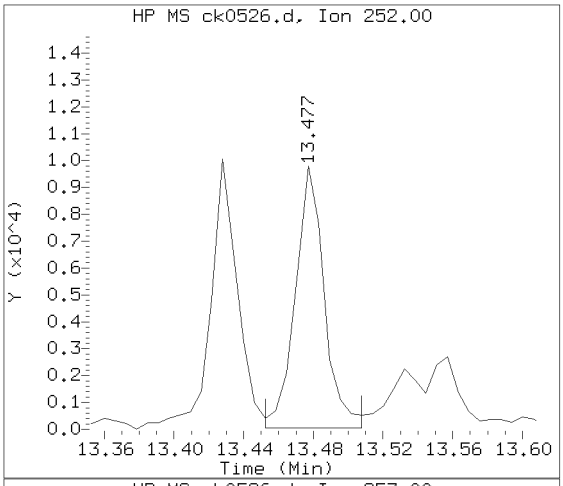
Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1837		
Retention Time (minutes)	: 13.176		
Quant Ion	: 252.00		
Area	: 25472		
On-column Amount (ng/ul)	: 0.7083		
Integration start scan	: 1828	Integration stop scan:	1844
Y at integration start	: 184	Y at integration end:	264

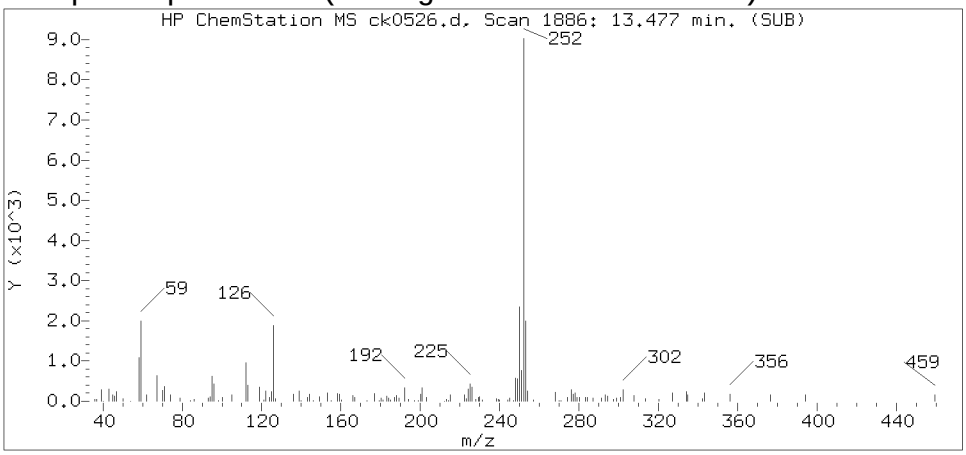
Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

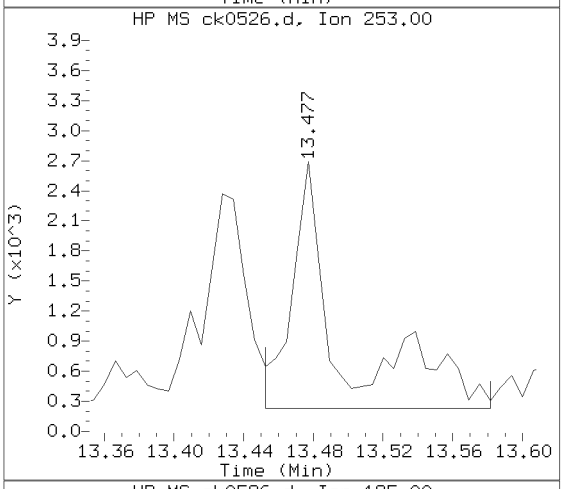
Reference Standard Spectrum for Benzo(a)pyrene



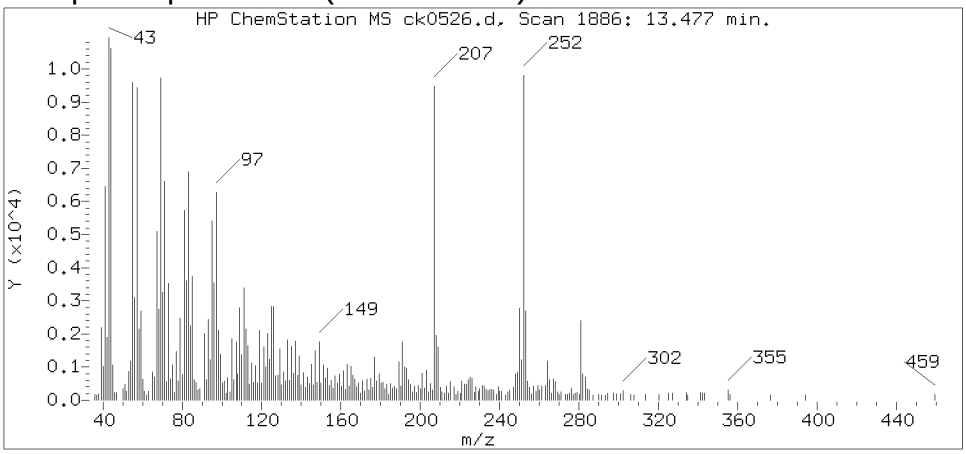


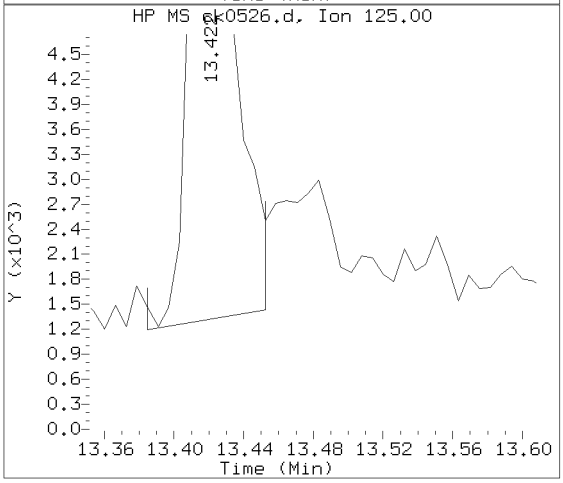
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

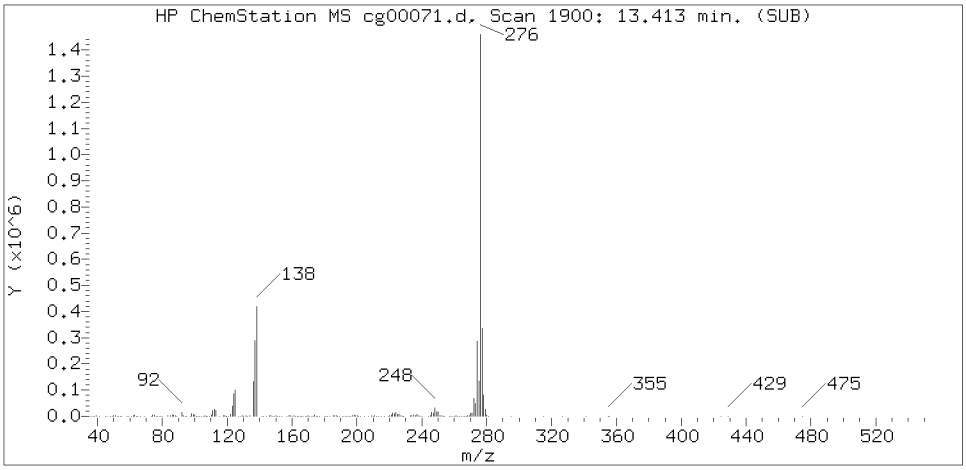
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

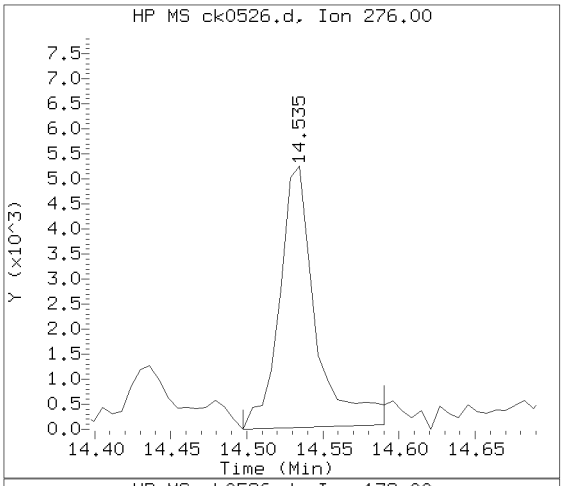
Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1886
Retention Time (minutes)	: 13.477
Relative Retention Time	: 0.00045
Quant Ion	: 252.00
Area (flag)	: 11201
On-column Amount (ng/ul)	: 0.3256

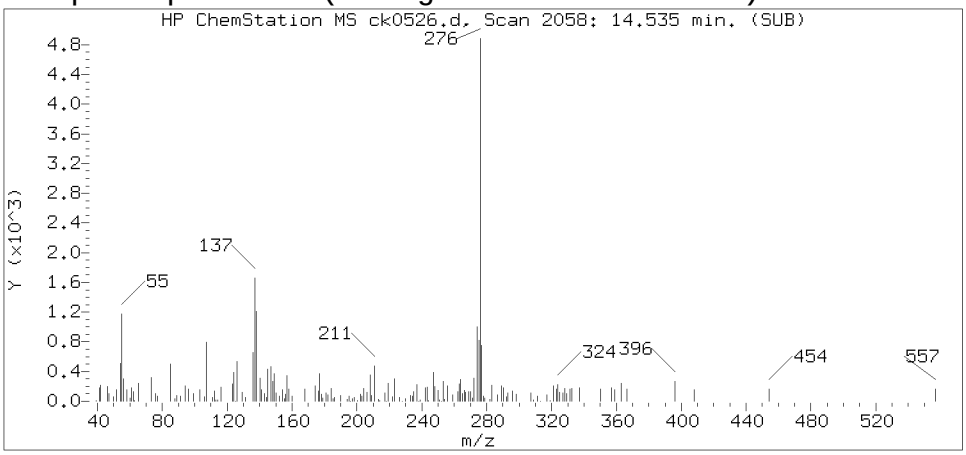
Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

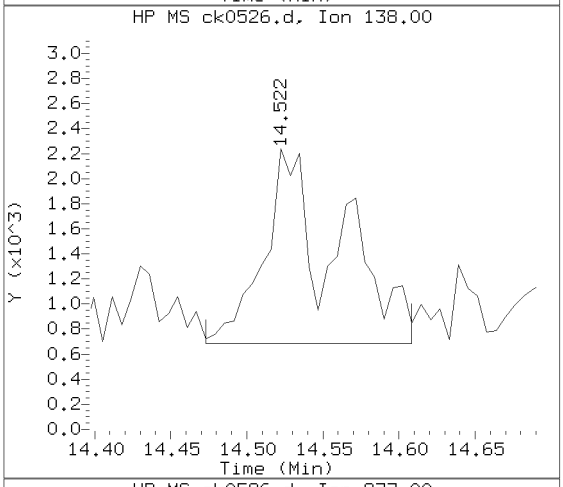
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



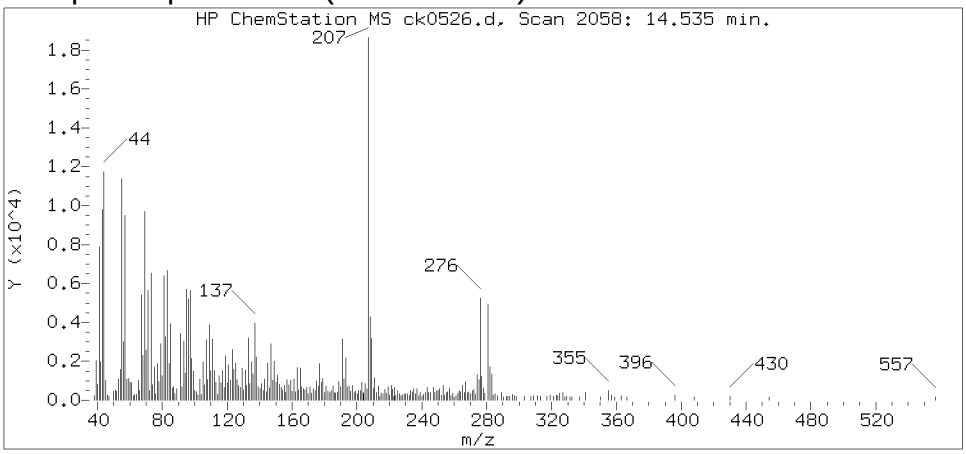


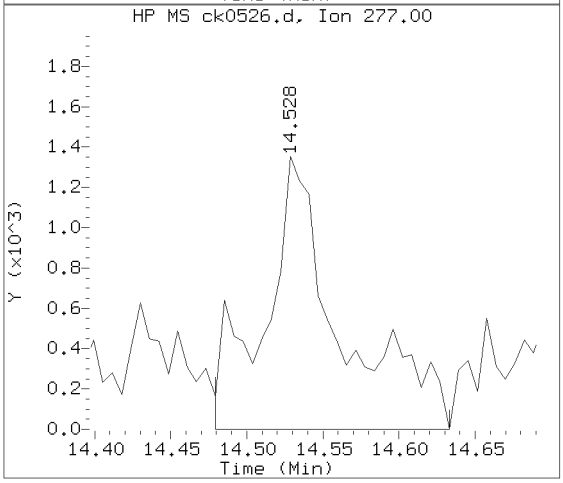
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

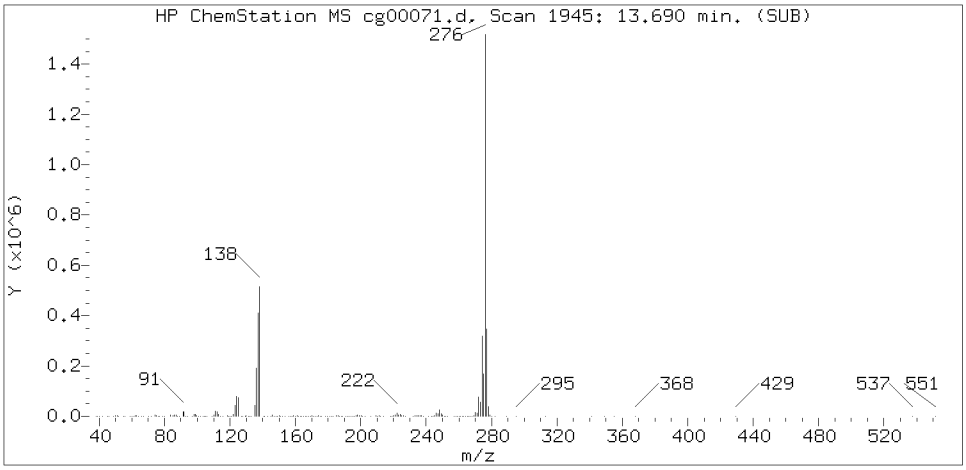
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

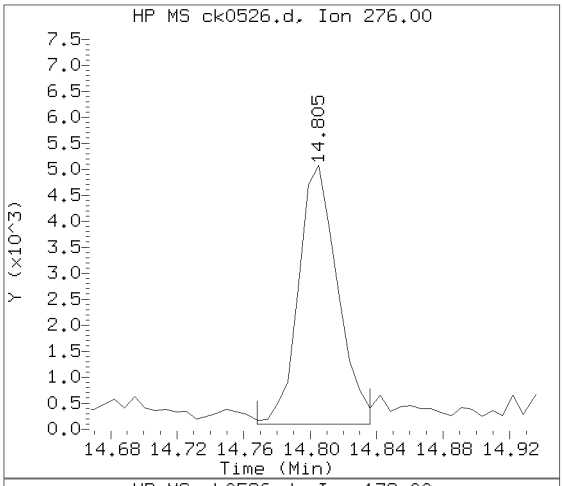
Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2058
Retention Time (minutes) : 14.535
Relative Retention Time : 0.00045
Quant Ion : 276.00
Area (flag) : 8568
On-column Amount (ng/ul) : 0.2341

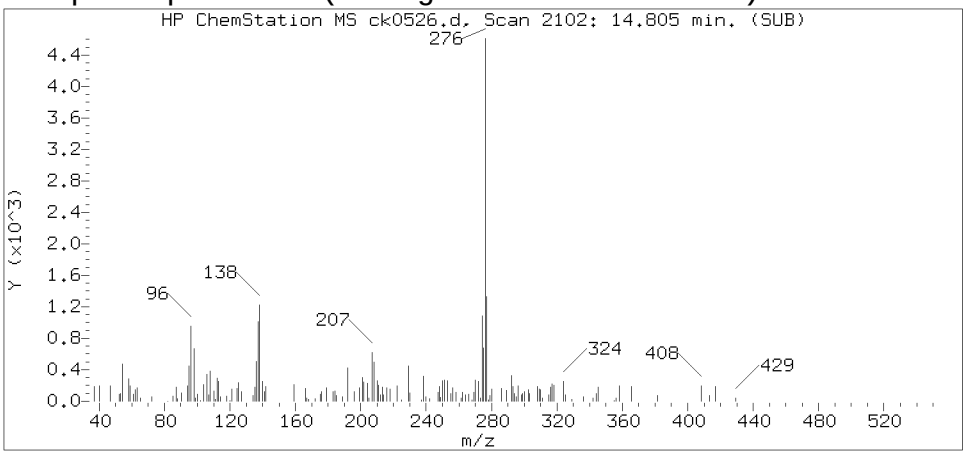
Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

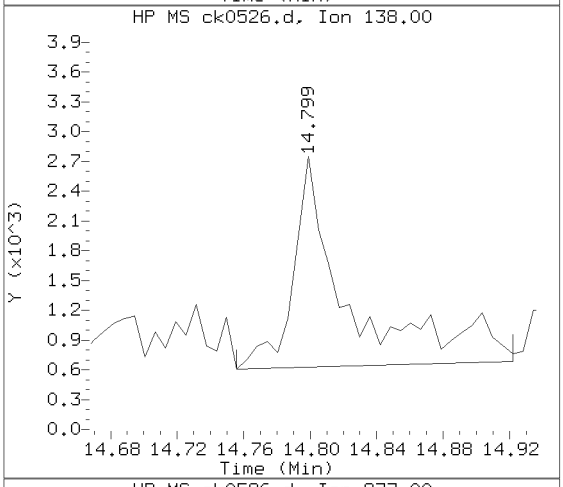
Reference Standard Spectrum for Benzo(g,h,i)perylene



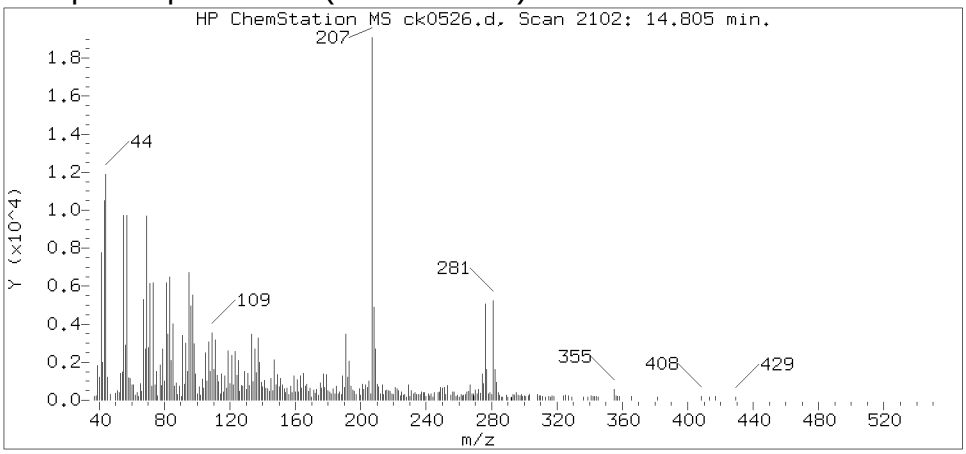


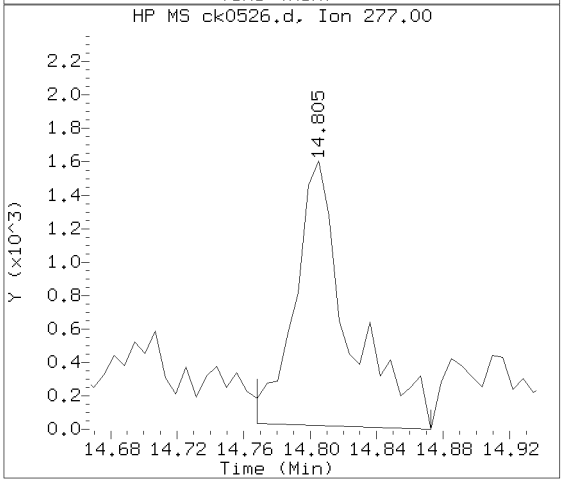
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

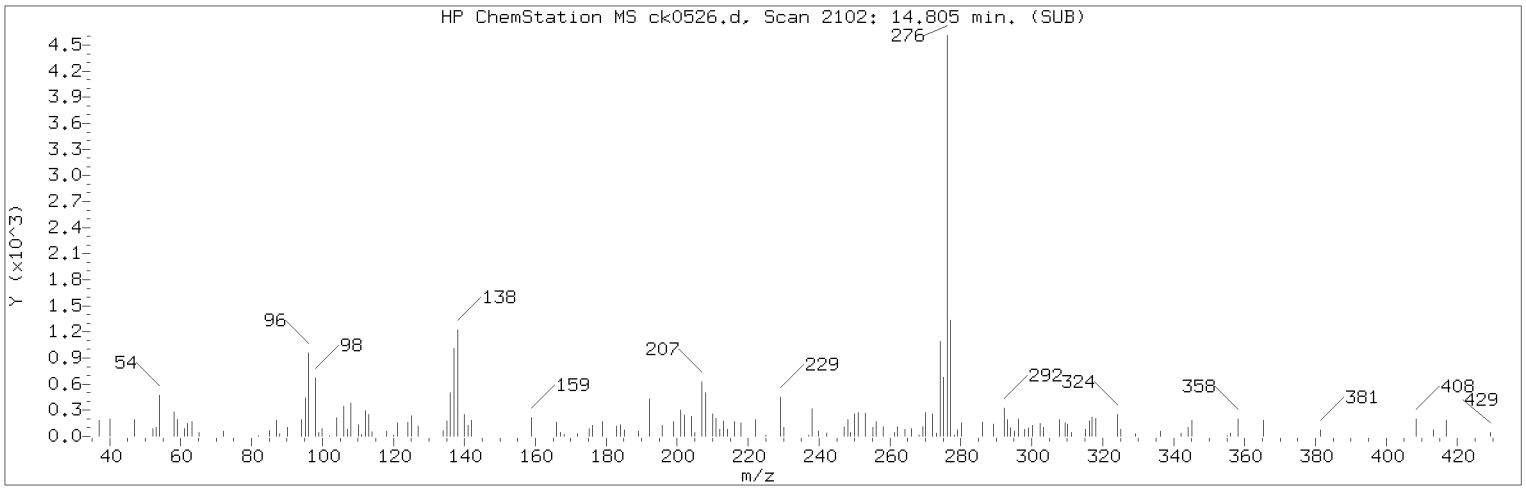
Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

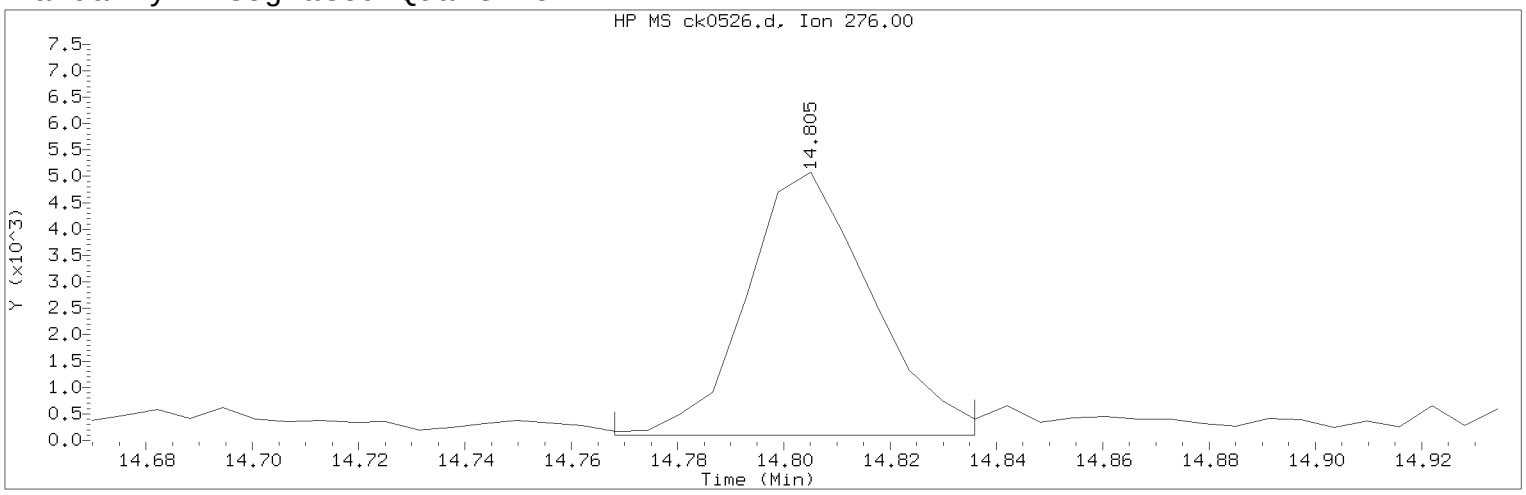
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2102
Retention Time (minutes)	: 14.805
Relative Retention Time	: 0.00045
Quant Ion	: 276.00
Area (flag)	: 8112M
On-column Amount (ng/ul)	: 0.2602

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 06:13 mac00013

Sample Name: DUPX1 Lab Sample ID: 7265246

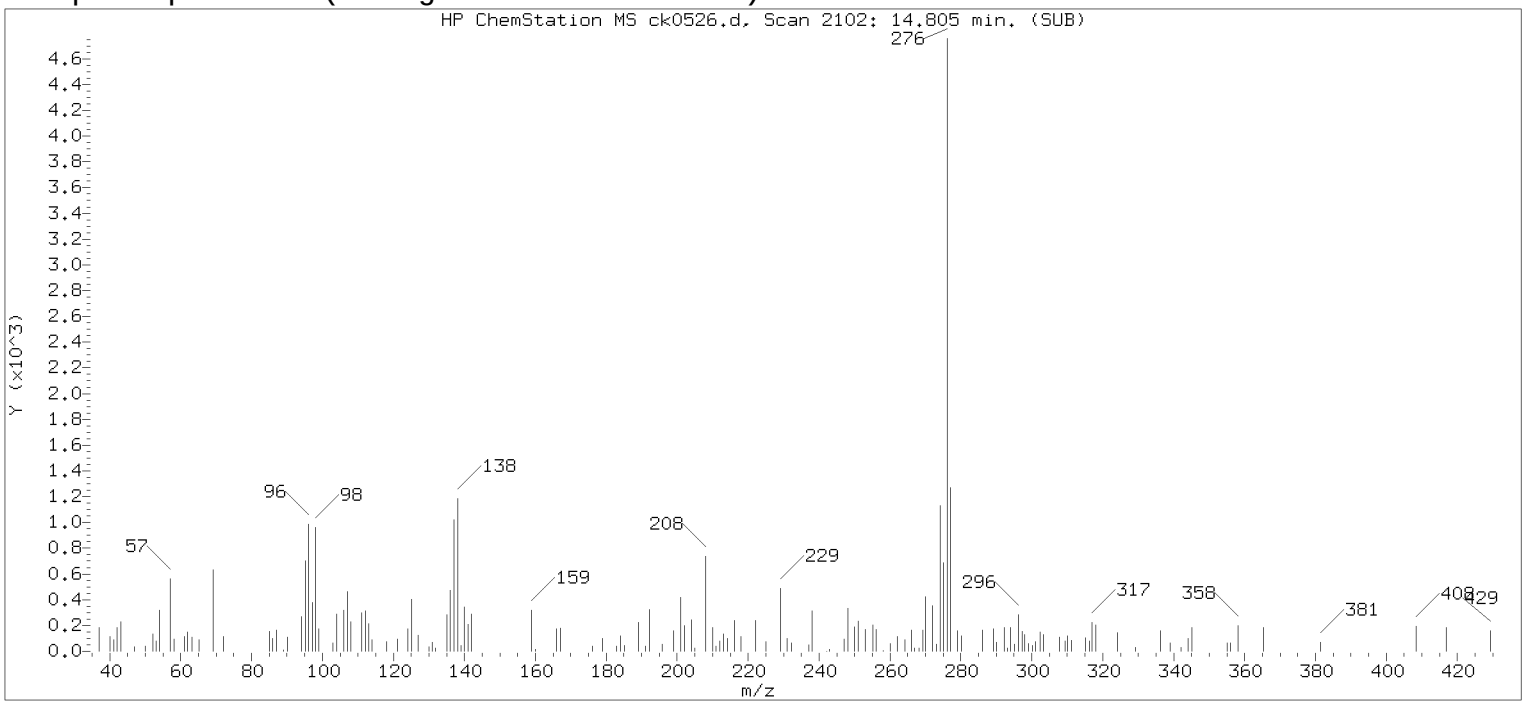
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2102
Retention Time (minutes) : 14.805
Quant Ion : 276.00
Area (flag) : 8112M
On-column Amount (ng/ul) : 0.2602
Integration start scan : 2095 Integration stop scan: 2106
Y at integration start : 102 Y at integration end: 102

Reason for manual integration: improper integration

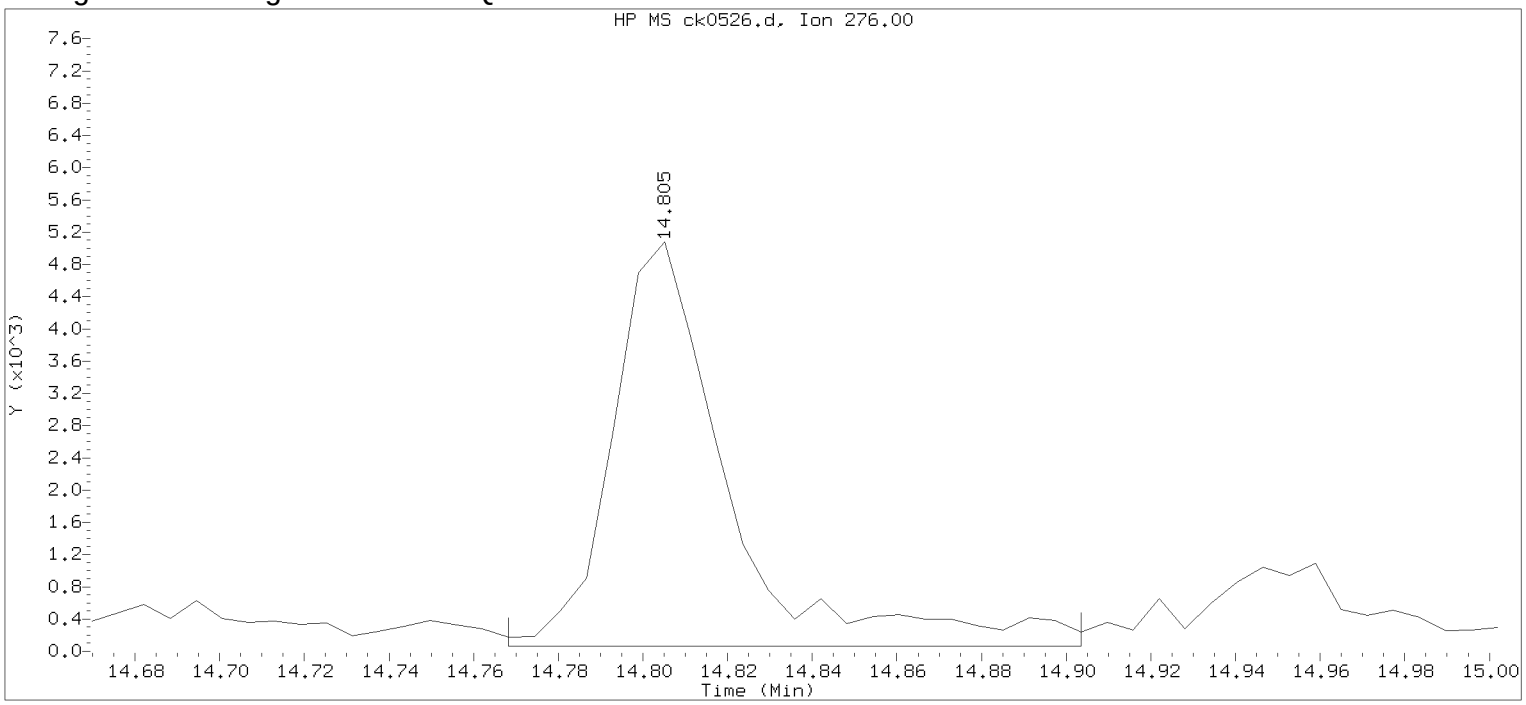
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:37.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0526.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 04:36 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: all1
Calibration date and time: 14-NOV-2013 01:55
Date, time and analyst ID of latest file update: 14-Nov-2013 05:02 Automation

Sample Name: DUPX1 Lab Sample ID: 7265246

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2102		
Retention Time (minutes)	: 14.805		
Quant Ion	: 276.00		
Area	: 9567		
On-column Amount (ng/ul)	: 0.3068		
Integration start scan	: 2095	Integration stop scan:	2117
Y at integration start	: 62	Y at integration end:	62

Digitally signed by Mark A. Clark on 11/14/2013 at 06:21.
Target 3.5 esignature user ID: mac00013

FBX01 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7265247

Data file: /chem/HP19760.i/13nov11.b/dk0343.d Injection date and time: **11-NOV-2013 14:24**
Data file Sample Info. Line: FBX01;7265247;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.947(0.006)	791	152	141842 (0)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	547426 (0)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	323034 (-1)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	574305 (0)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	727931 (-2)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	448072 (-20)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.000(-0.001)	112	1466334	34.817	70%		10 - 107
13) Phenol-d6	(1)	5.428(0.000)	99	1406553	24.318	49%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	1111537	22.063	88%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1922672	23.834	95%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	484780	57.138	114%		22 - 150
149) Terphenyl-d14	(5)	14.883(0.000)	244	2546439	28.051	112%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:24. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0343.d Injection date and time: **11-NOV-2013 14:24**
Data file Sample Info. Line: FBX01;7265247;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

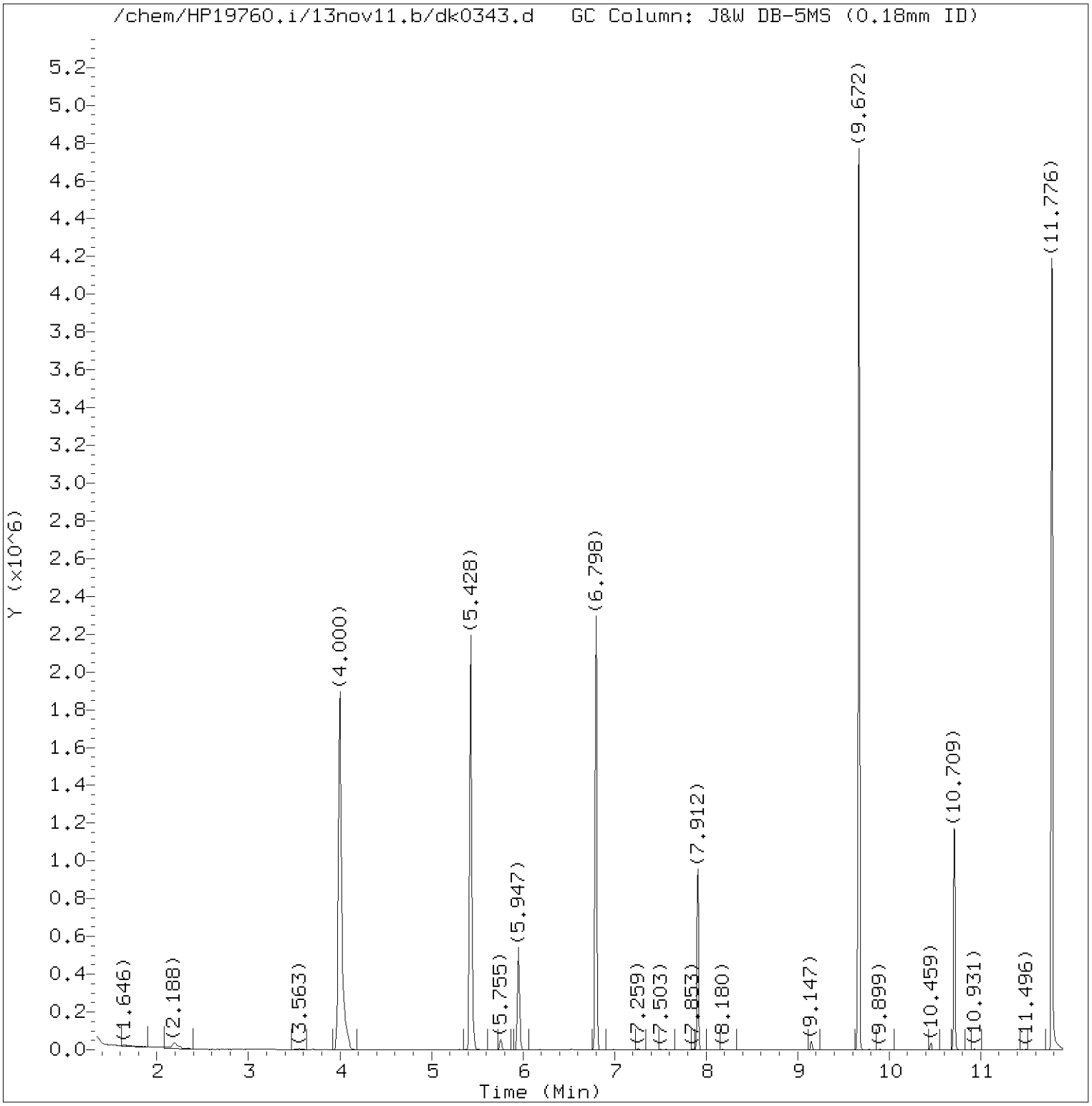
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 238 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:24. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

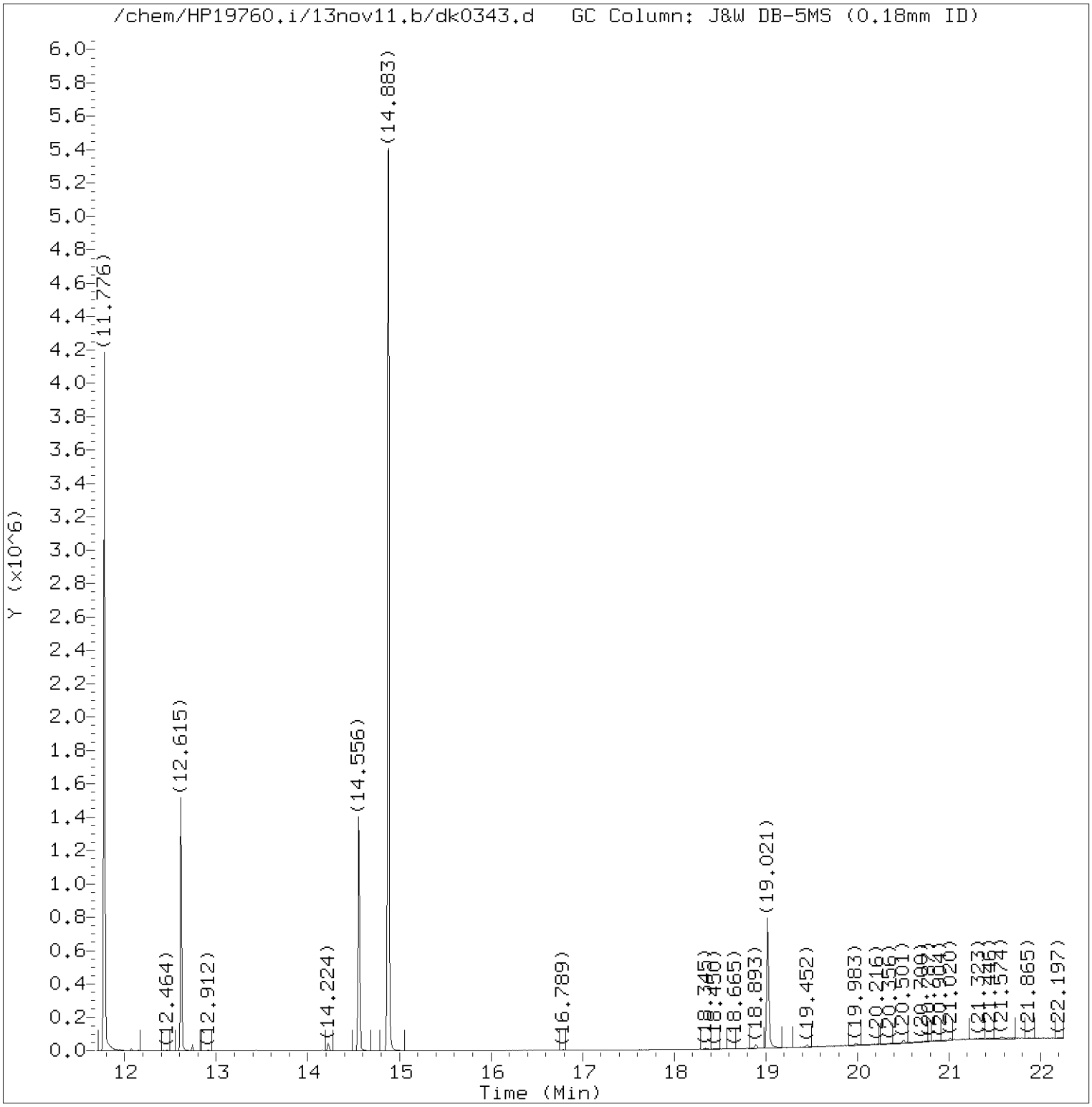
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:24.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:24.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.000	112	1466334	34.817
13)$Phenol-d6	(1)	5.428	99	1406553	24.318
19)*1,4-Dichlorobenzene-d4	(1)	5.947	152	141842	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	1111537	22.063
52)*Naphthalene-d8	(2)	7.912	136	547426	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1922672	23.834
92)*Acenaphthene-d10	(3)	10.715	164	323034	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	484780	57.138
130)*Phenanthrene-d10	(4)	12.615	188	574305	5.000
145)*Pyrene-d10	(5)	14.556	212	727931	5.000
149)$Terphenyl-d14	(5)	14.883	244	2546439	28.051
172)*Perylene-d12	(6)	19.021	264	448072	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:24.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

FBX01

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265247

Sample wt/vol: 238 (g/mL) mL Lab File ID: dk0343.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: _____ Decanted: (Y/N) _____ Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: _____ Extraction: Sepf

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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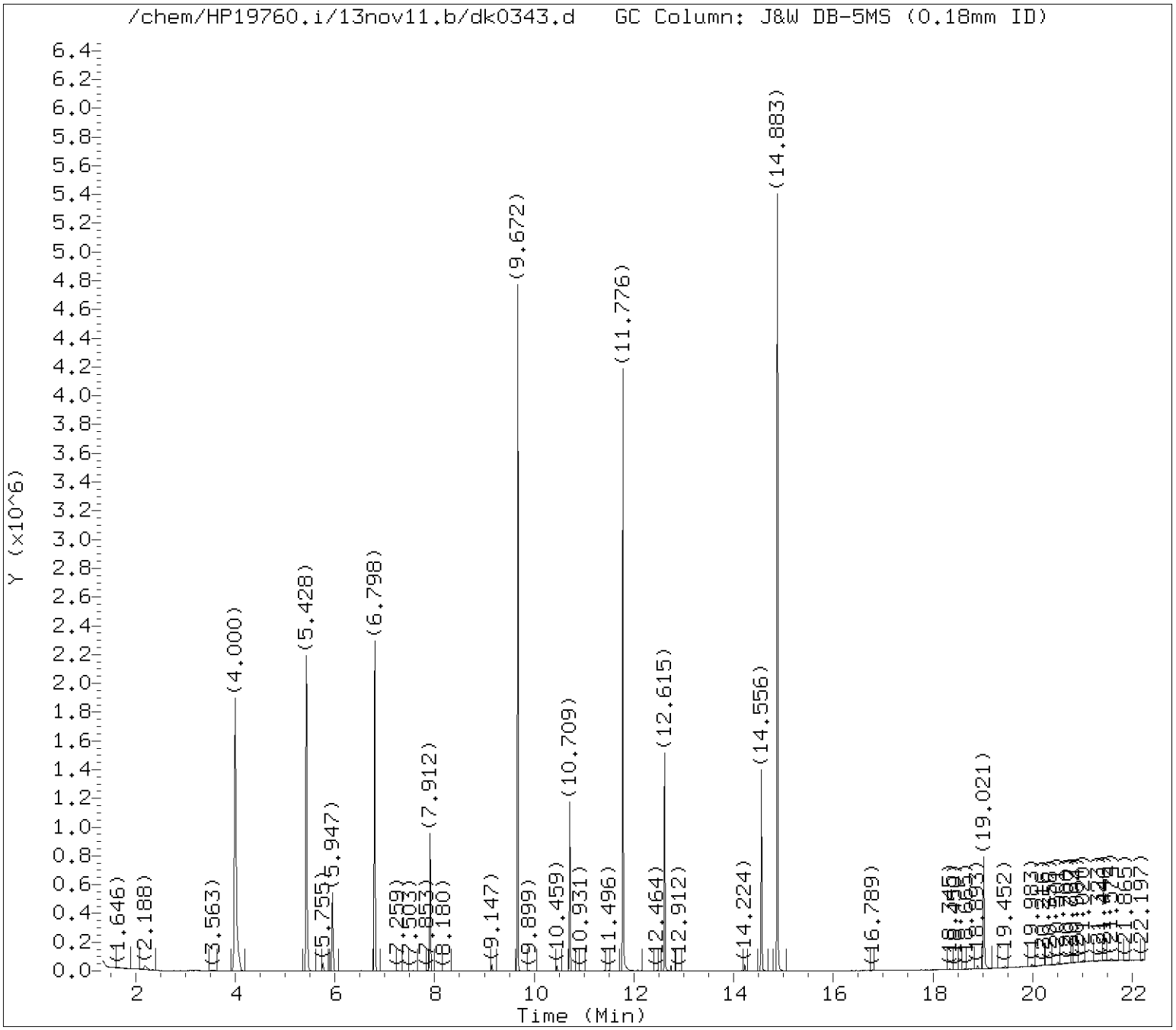
30.					



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

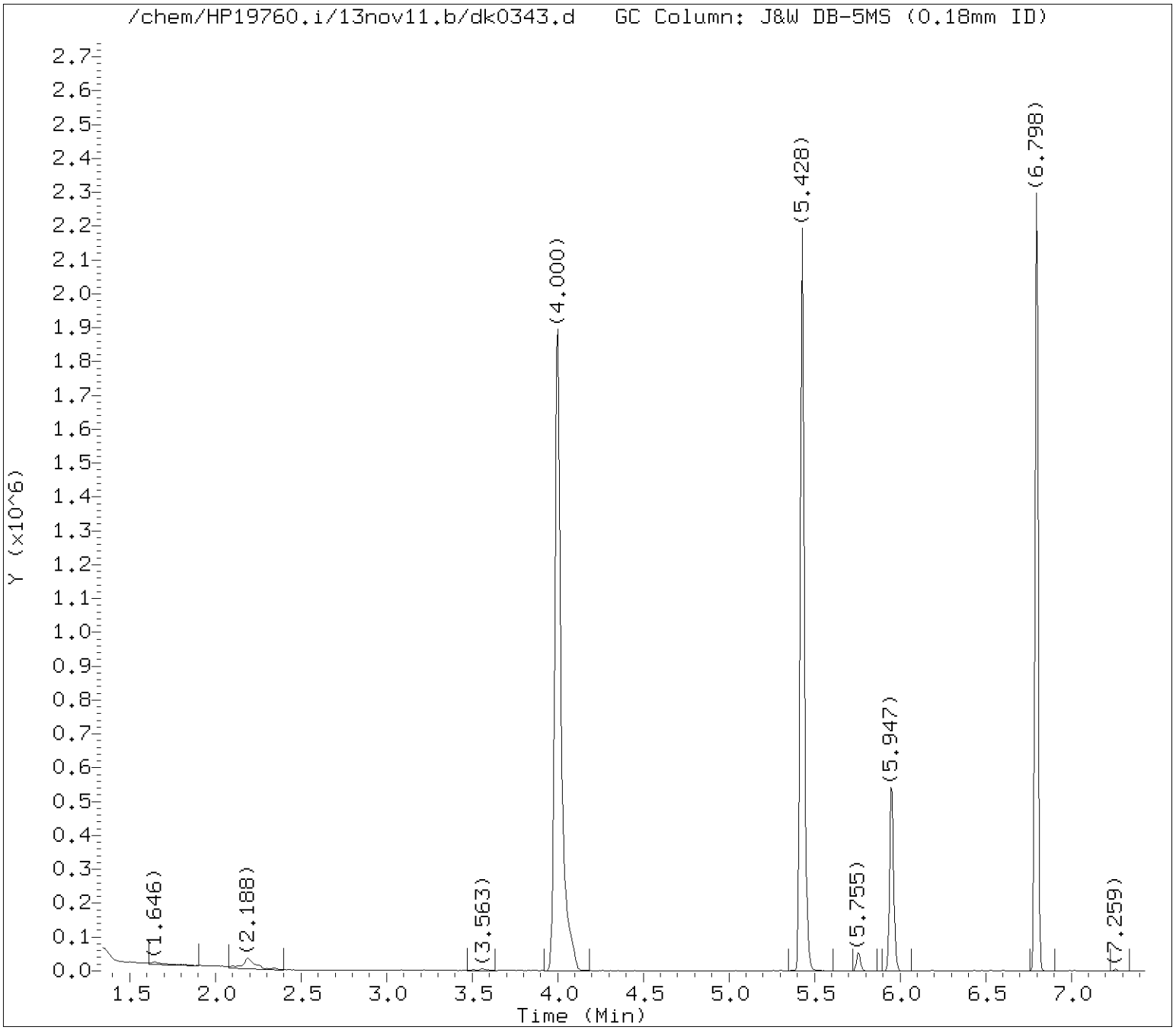
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

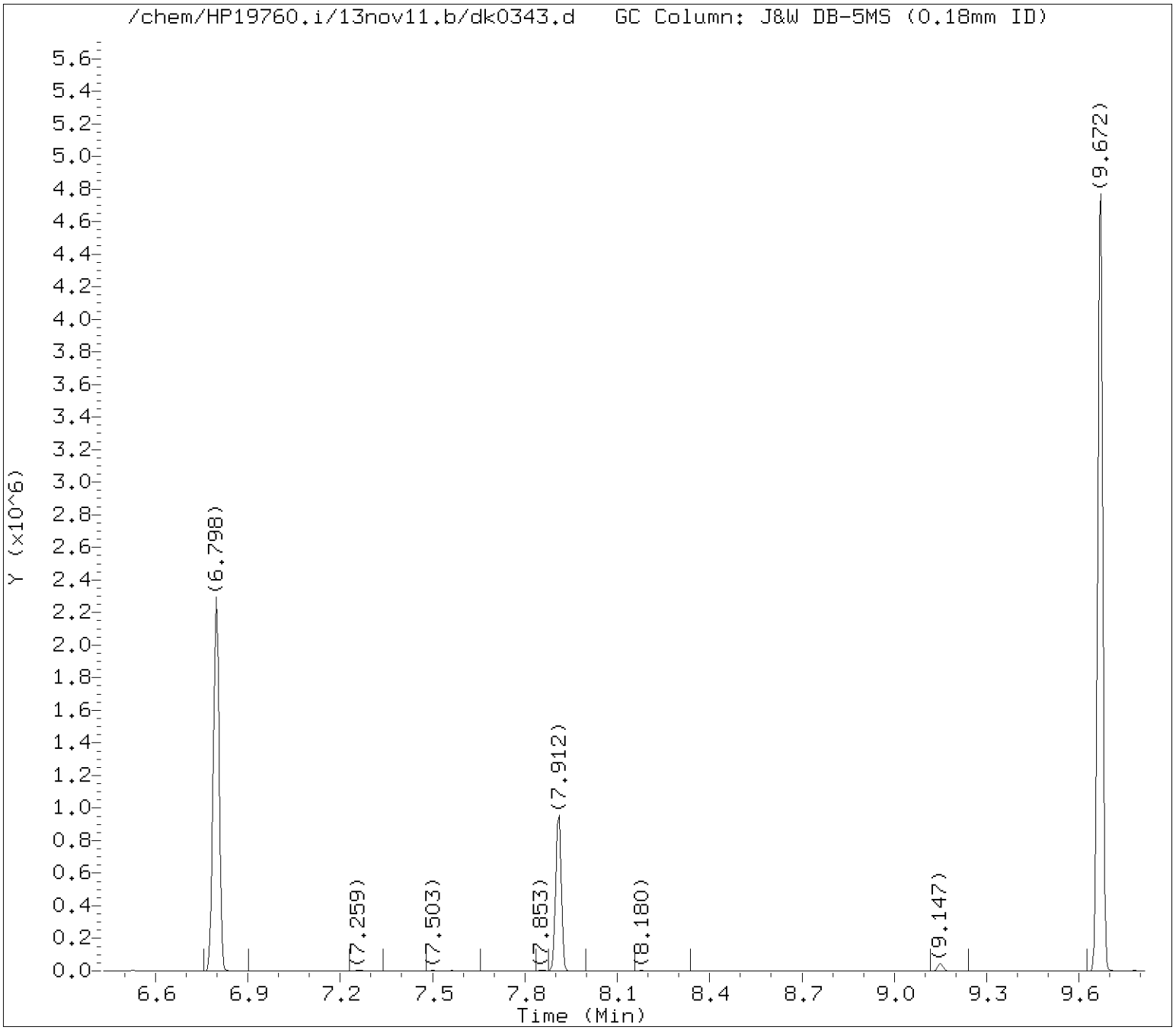
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.947 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.929

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

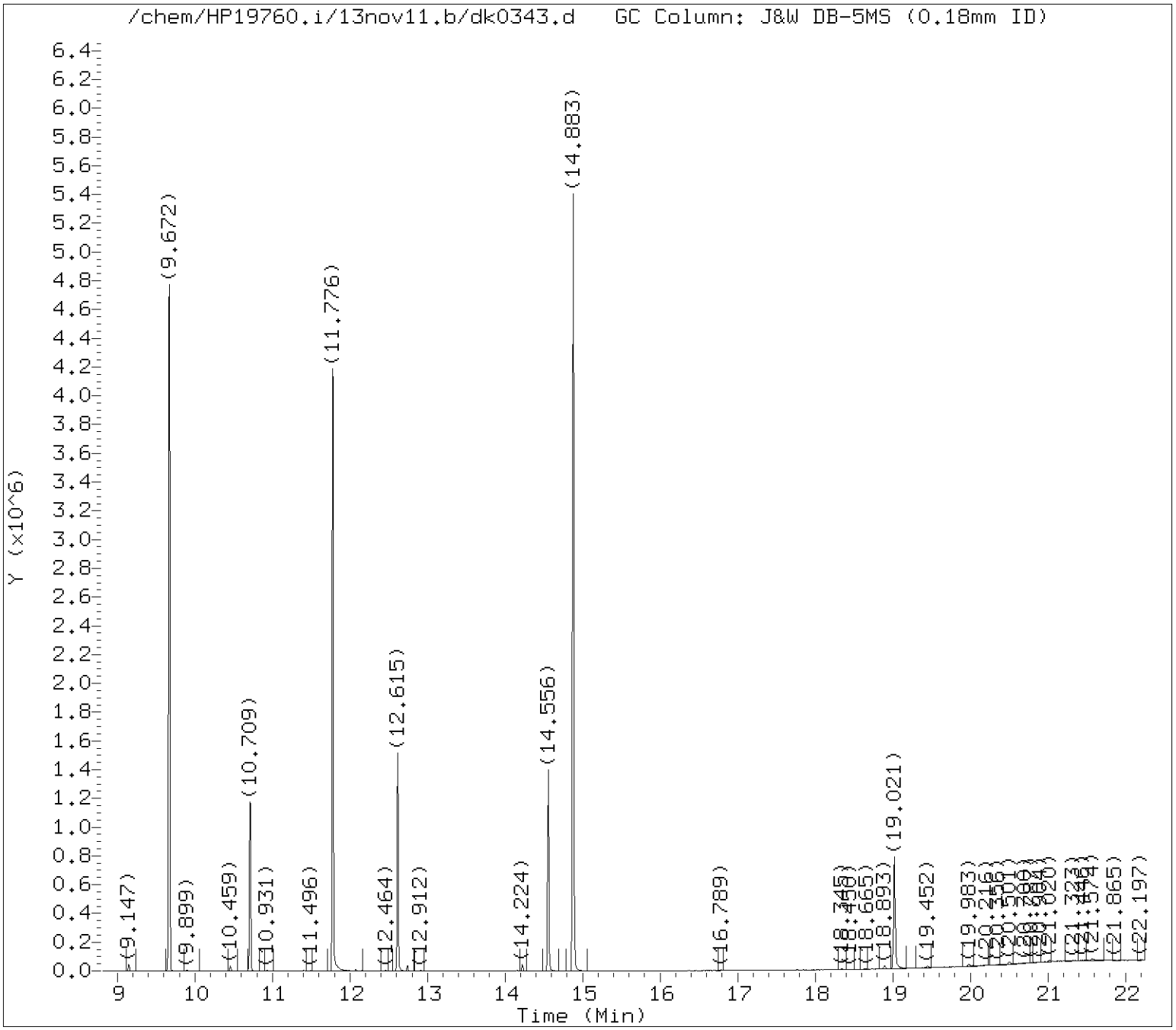
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Naphthalene-d8 at 7.912 minutes
Chromatogram Start Time (min.): 6.929
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

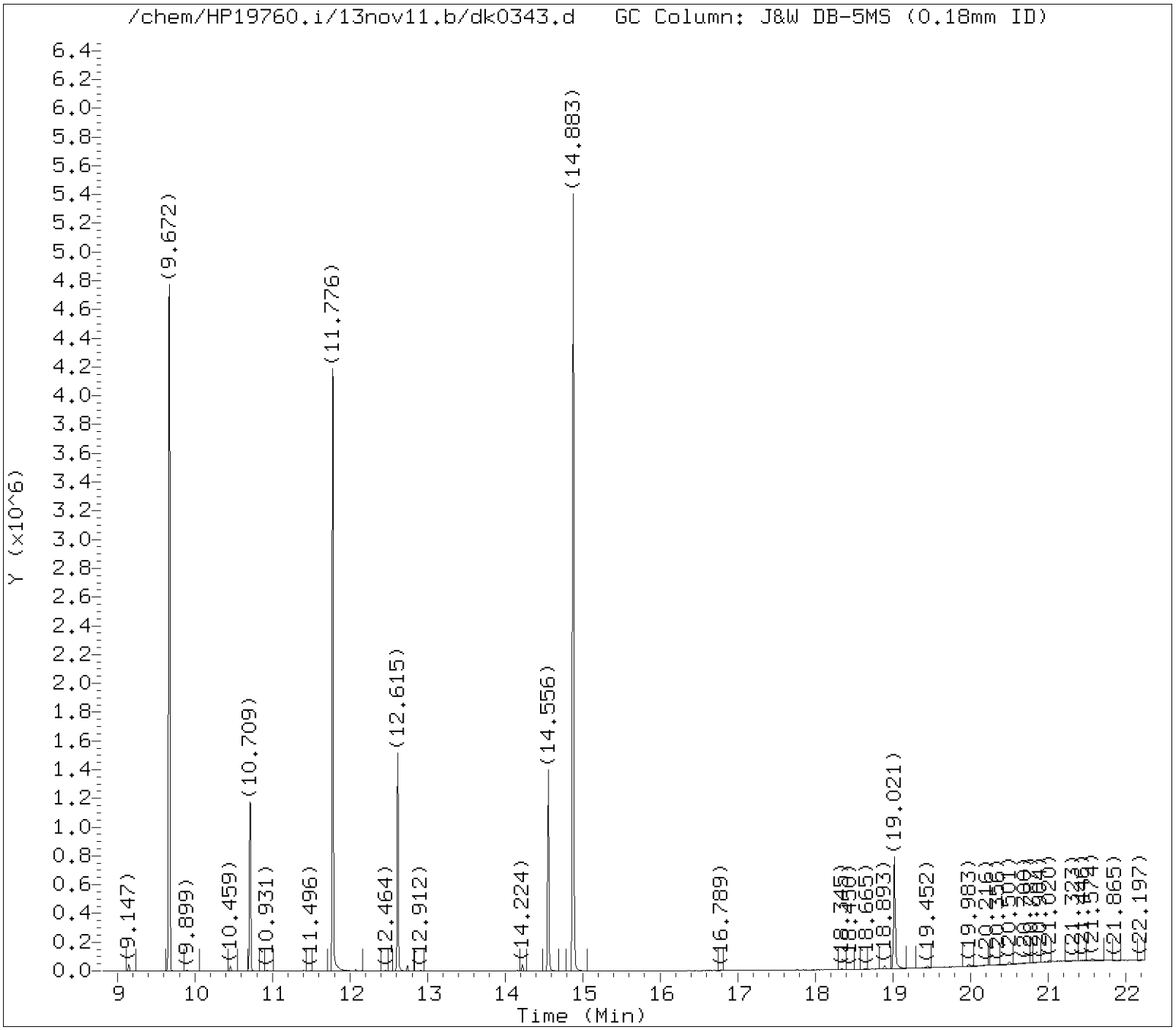
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

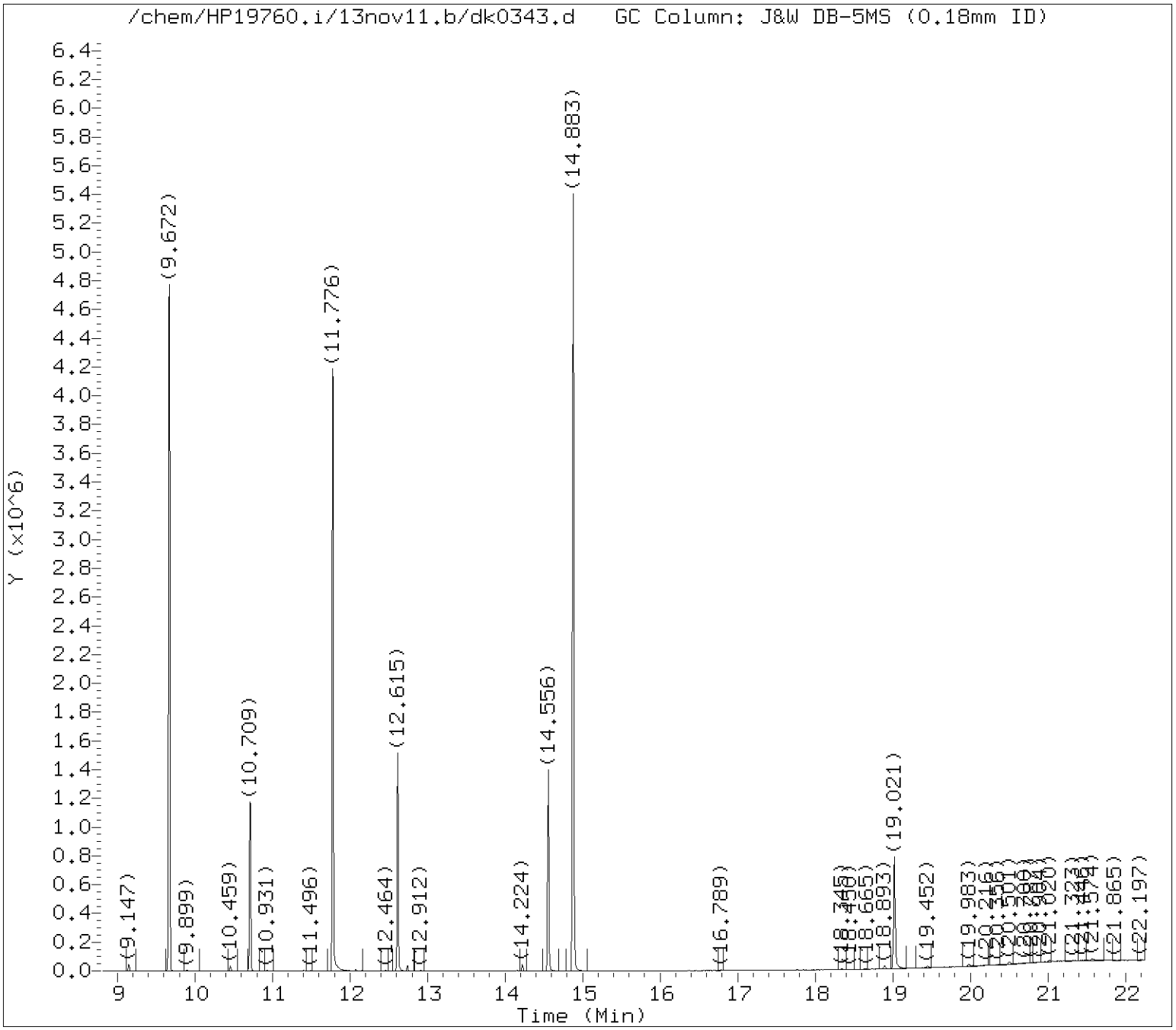
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

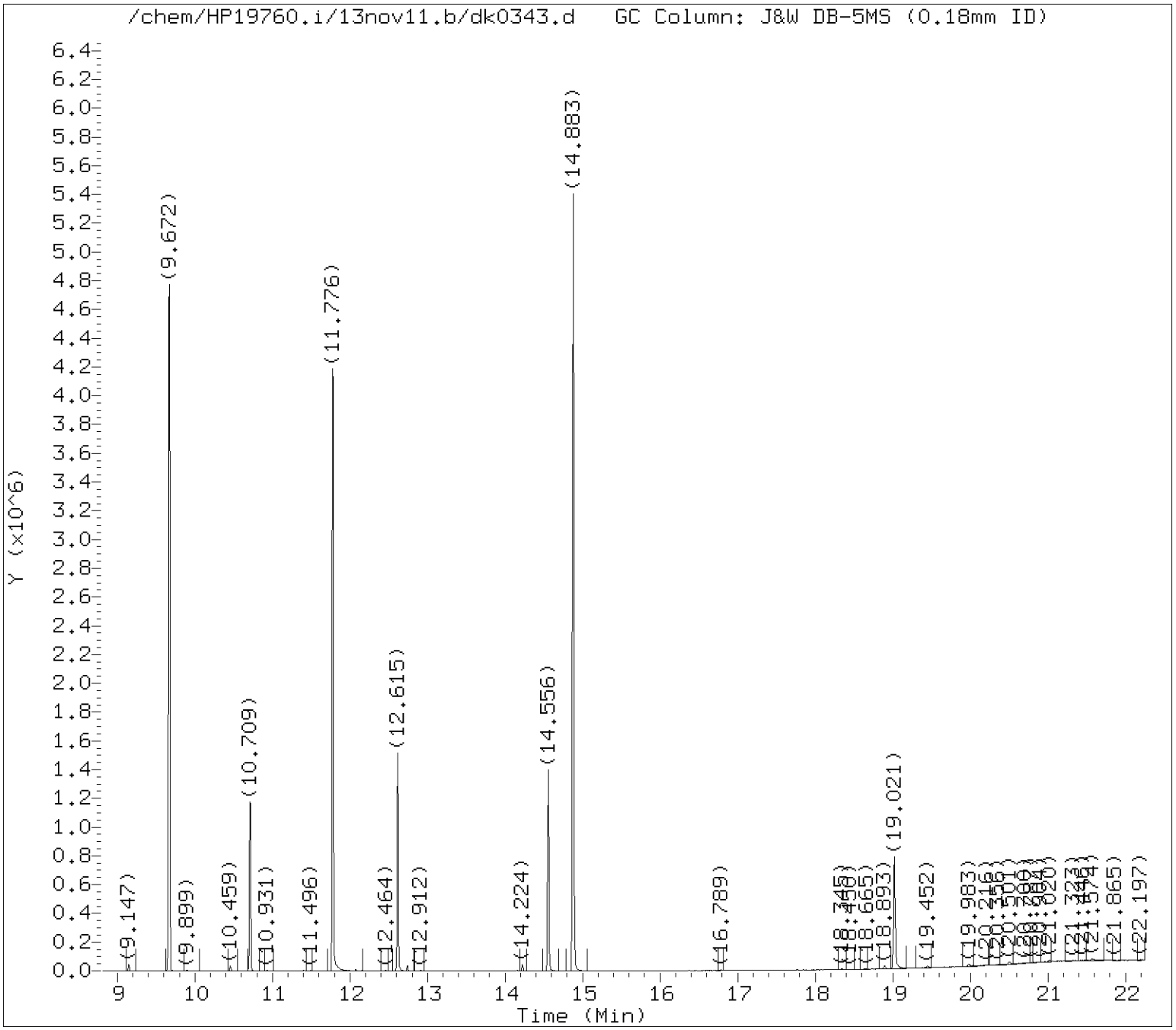
Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.789

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0343.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:24 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX01 Lab Sample ID: 7265247

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.789
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0343.d
Lab Smp Id: 7265247 Client Smp ID: FBX01
Inj Date : 11-NOV-2013 14:24
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : FBX01;7265247;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;238;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346

FBX02 Lancaster Labs 7265248
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0344.d Injection date and time: **11-NOV-2013 14:51**
Data file Sample Info. Line: FBX02;7265248;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.947(0.006)	791	152	135564 (-4)	5.00	
52) Naphthalene-d8	7.911(0.000)	1128	136	517198 (-5)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	300296 (-8)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	535467 (-7)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	674073 (-9)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	402660 (-28)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.000(-0.001)	112	1403847	34.877	70%		10 - 107
13) Phenol-d6	(1)	5.428(0.000)	99	1353135	24.478	49%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	1053420	22.132	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1839794	24.534	98%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	461480	58.511	117%		22 - 150
149) Terphenyl-d14	(5)	14.883(0.000)	244	2427124	28.873	115%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0344.d Injection date and time: **11-NOV-2013 14:51**
Data file Sample Info. Line: FBX02;7265248;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

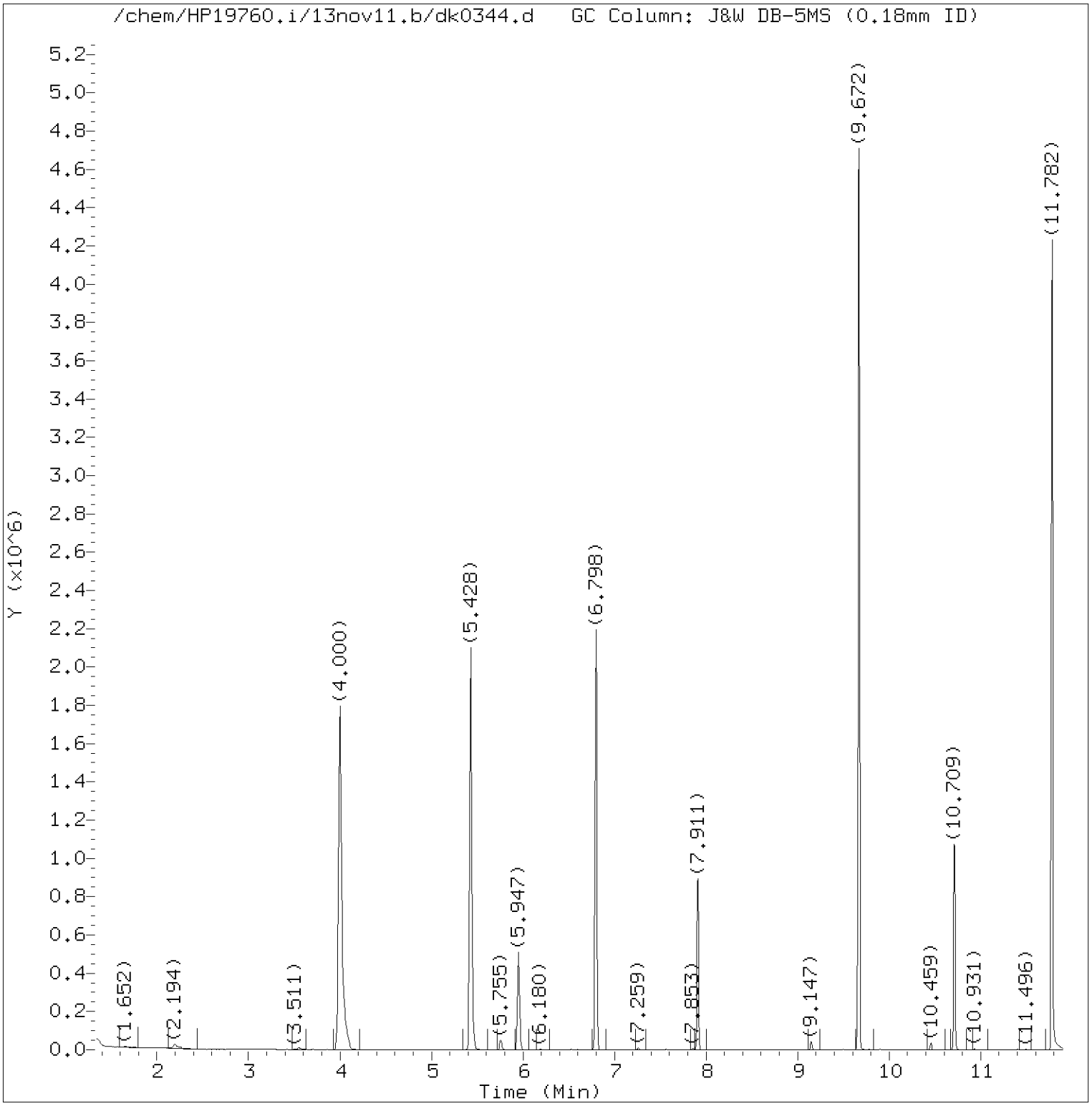
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/12/2013 at 07:25. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/13/2013 at 06:40. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

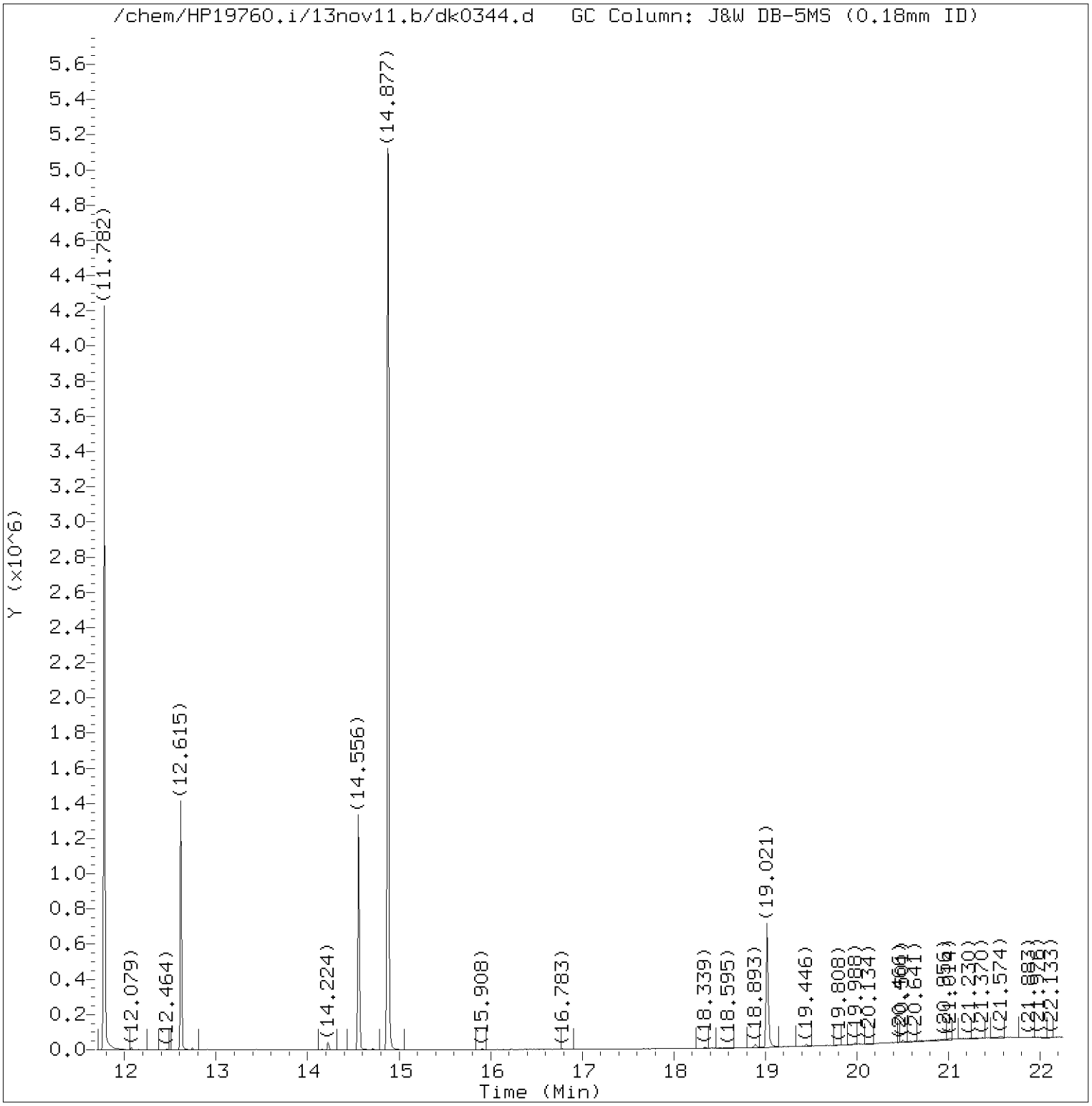
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:25.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:25.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.000	112	1403847	34.877
13)$Phenol-d6	(1)	5.428	99	1353135	24.478
19)*1,4-Dichlorobenzene-d4	(1)	5.947	152	135564	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	1053420	22.132
52)*Naphthalene-d8	(2)	7.911	136	517198	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1839794	24.534
92)*Acenaphthene-d10	(3)	10.715	164	300296	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	461480	58.511
130)*Phenanthrene-d10	(4)	12.615	188	535467	5.000
145)*Pyrene-d10	(5)	14.556	212	674073	5.000
149)$Terphenyl-d14	(5)	14.883	244	2427124	28.873
172)*Perylene-d12	(6)	19.021	264	402660	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/12/2013 at 07:25.
Target 3.5 esignature user ID: jmg00346

1F

EPA SAMPLE NO.

FBX02

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7265248

Sample wt/vol: 237 (g/mL) mL Lab File ID: dk0344.d

Level: (low/med) LOW Date Received: 11/05/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/09/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/11/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
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11.					
12.					
13.					
14.					
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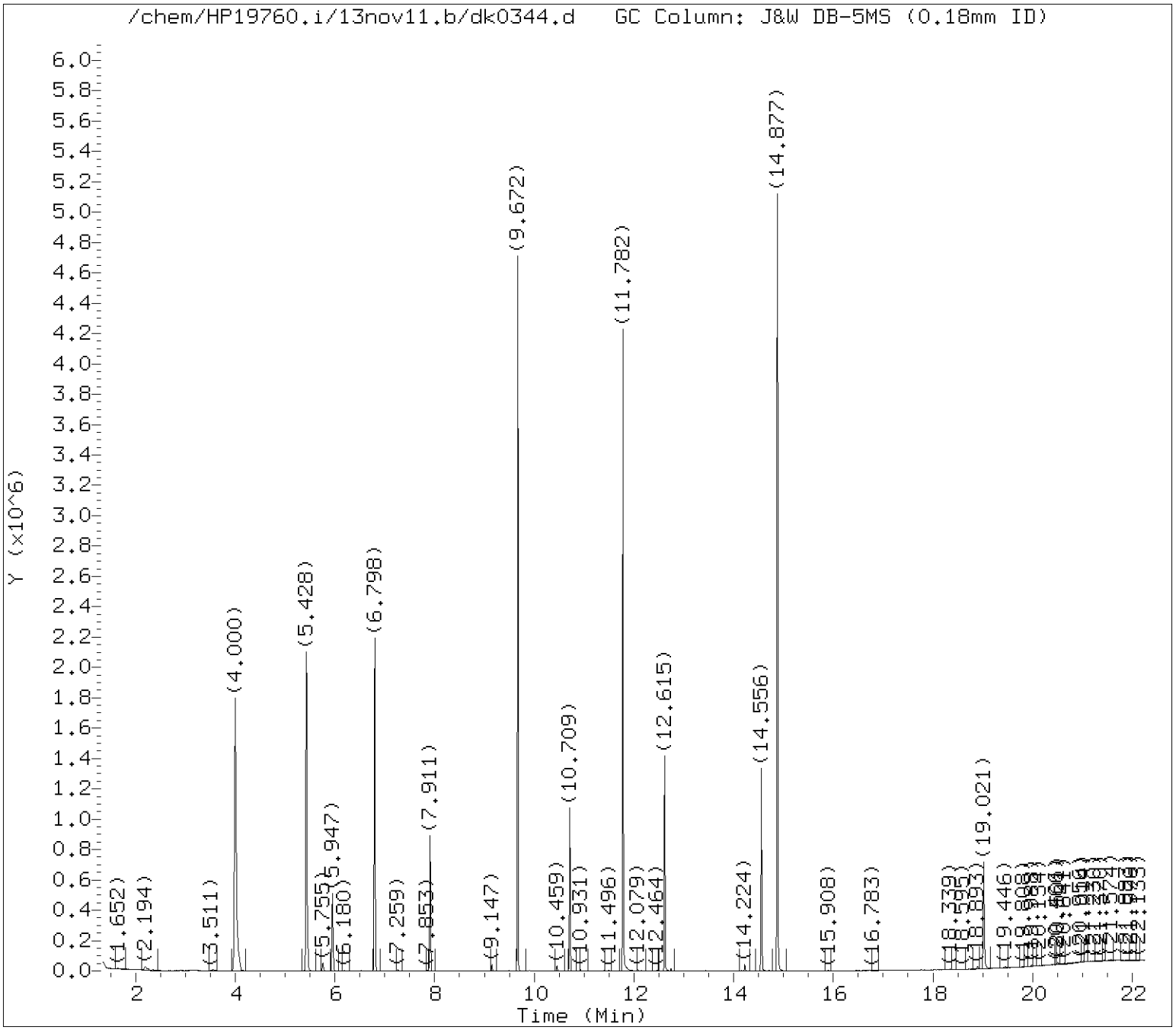
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

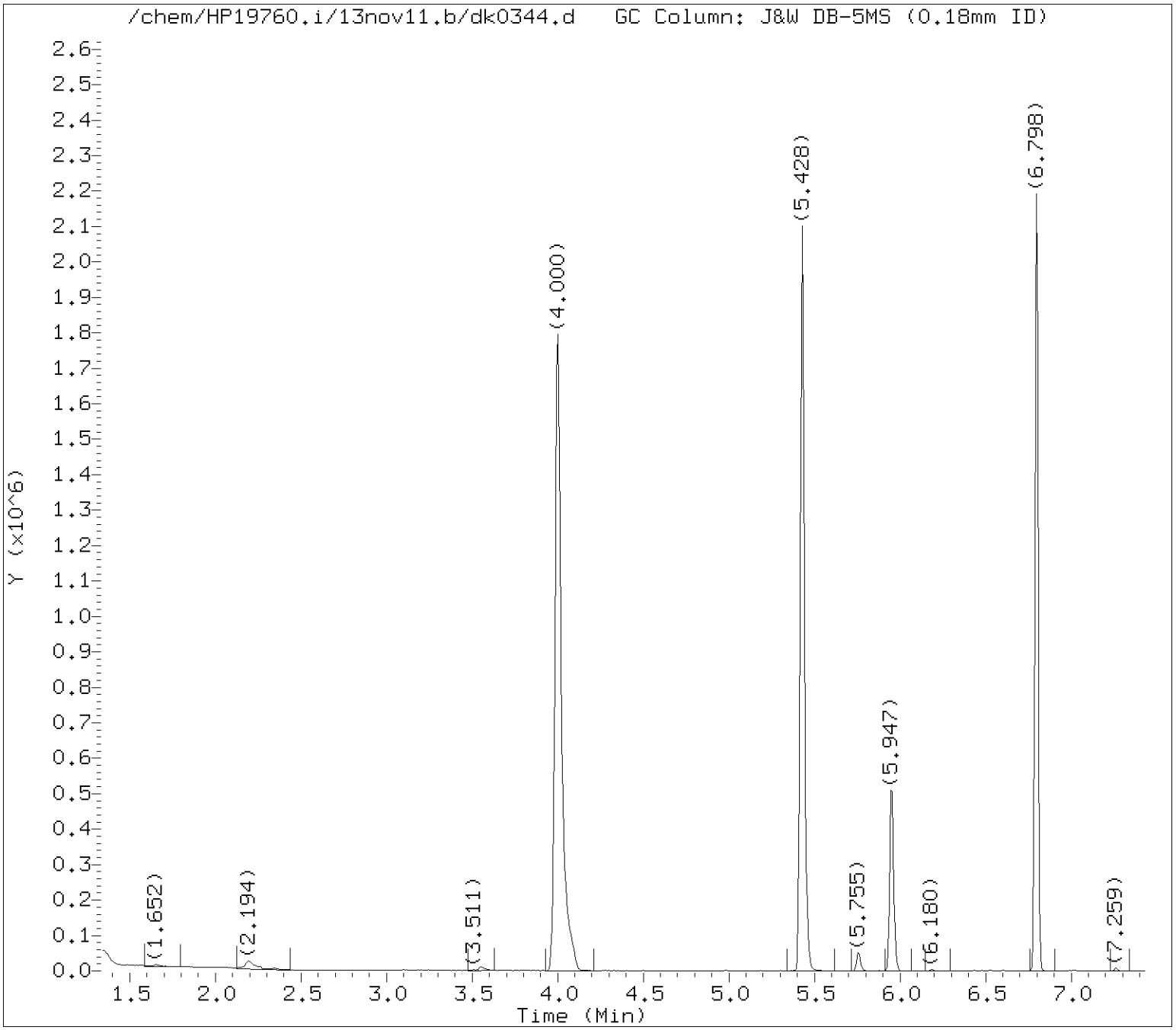
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

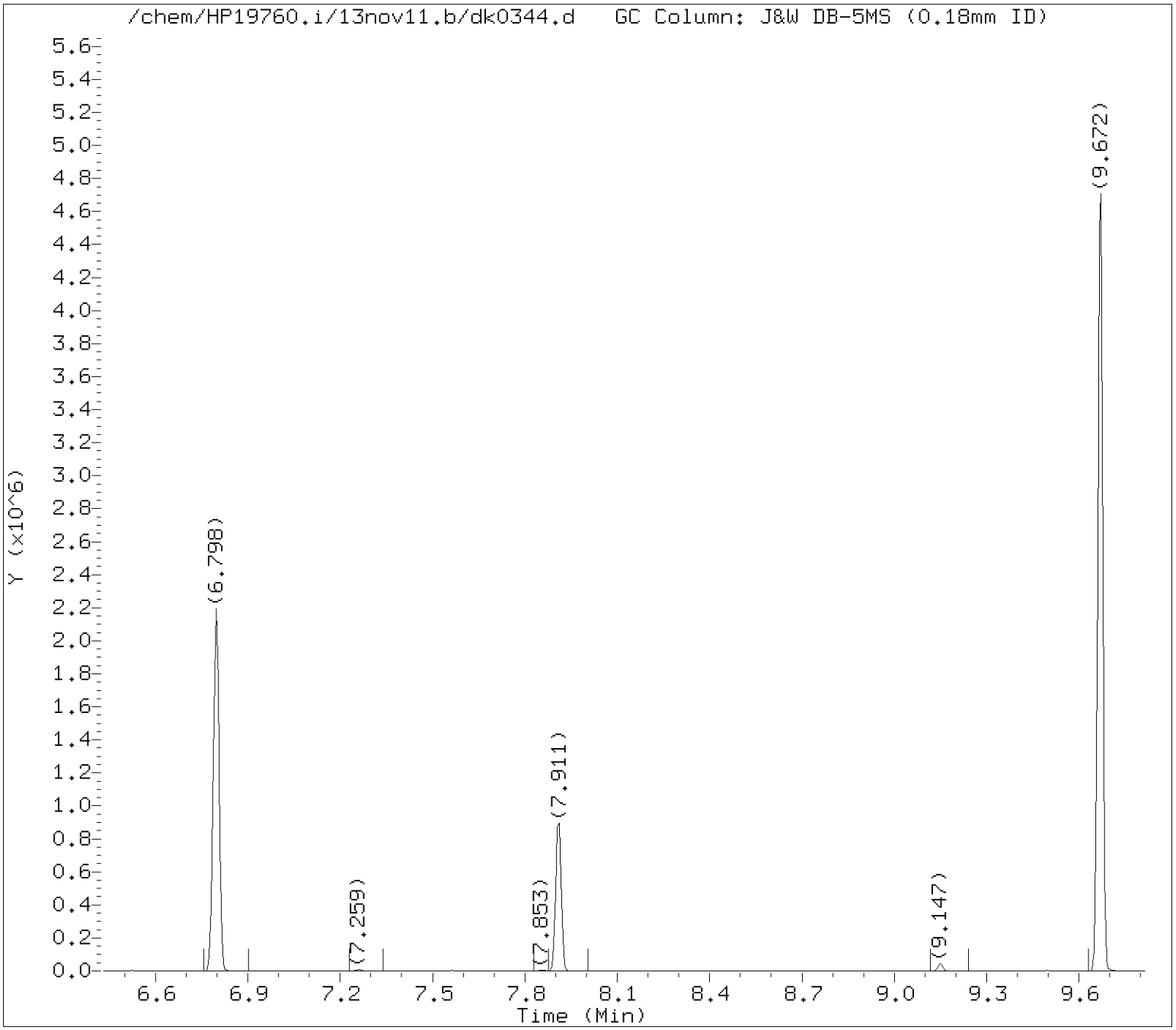
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.947 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.929

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

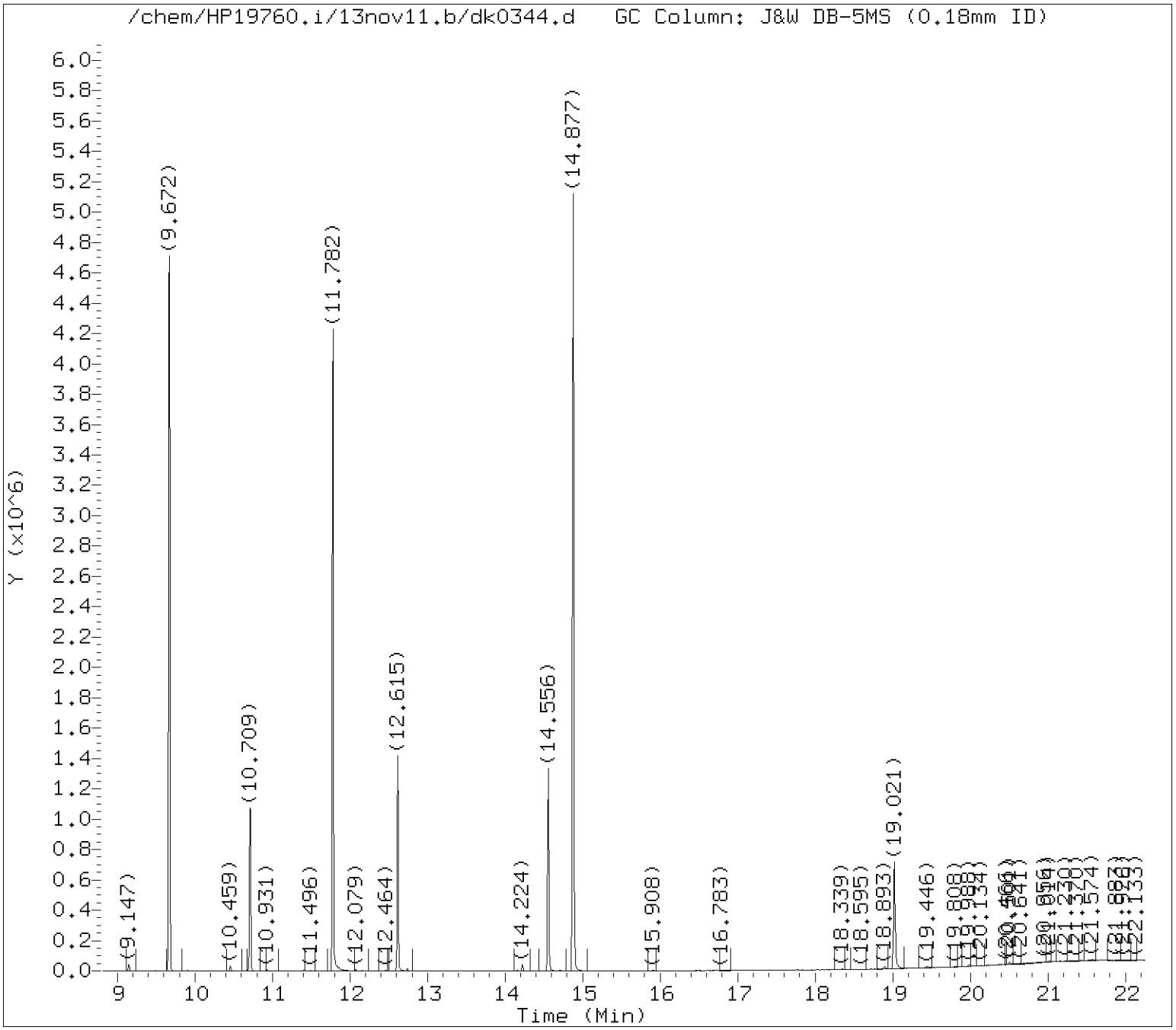
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: Naphthalene-d8 at 7.911 minutes
Chromatogram Start Time (min.): 6.929
Chromatogram End Time (min.): 9.313

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

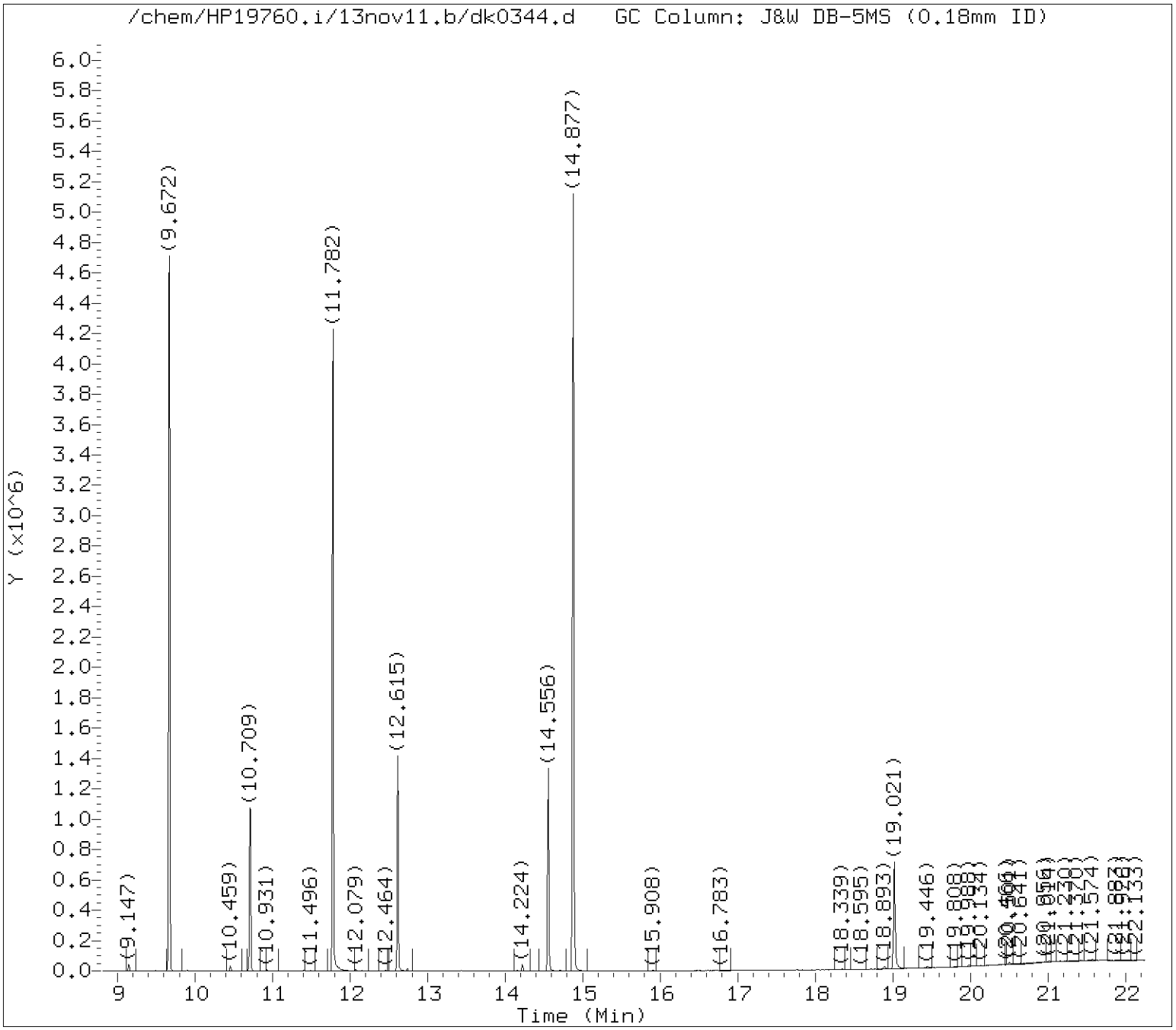
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.313
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

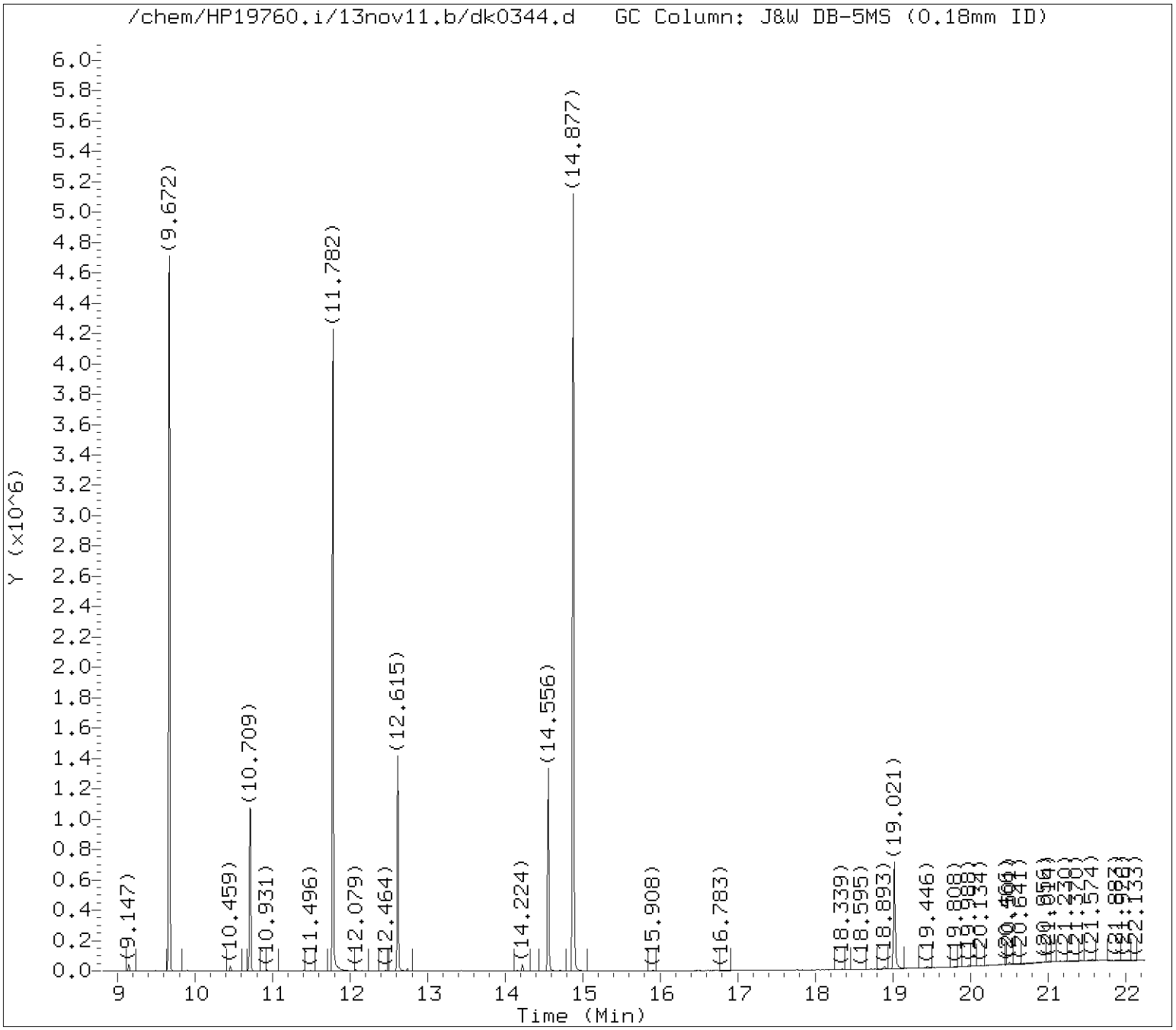
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.586

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

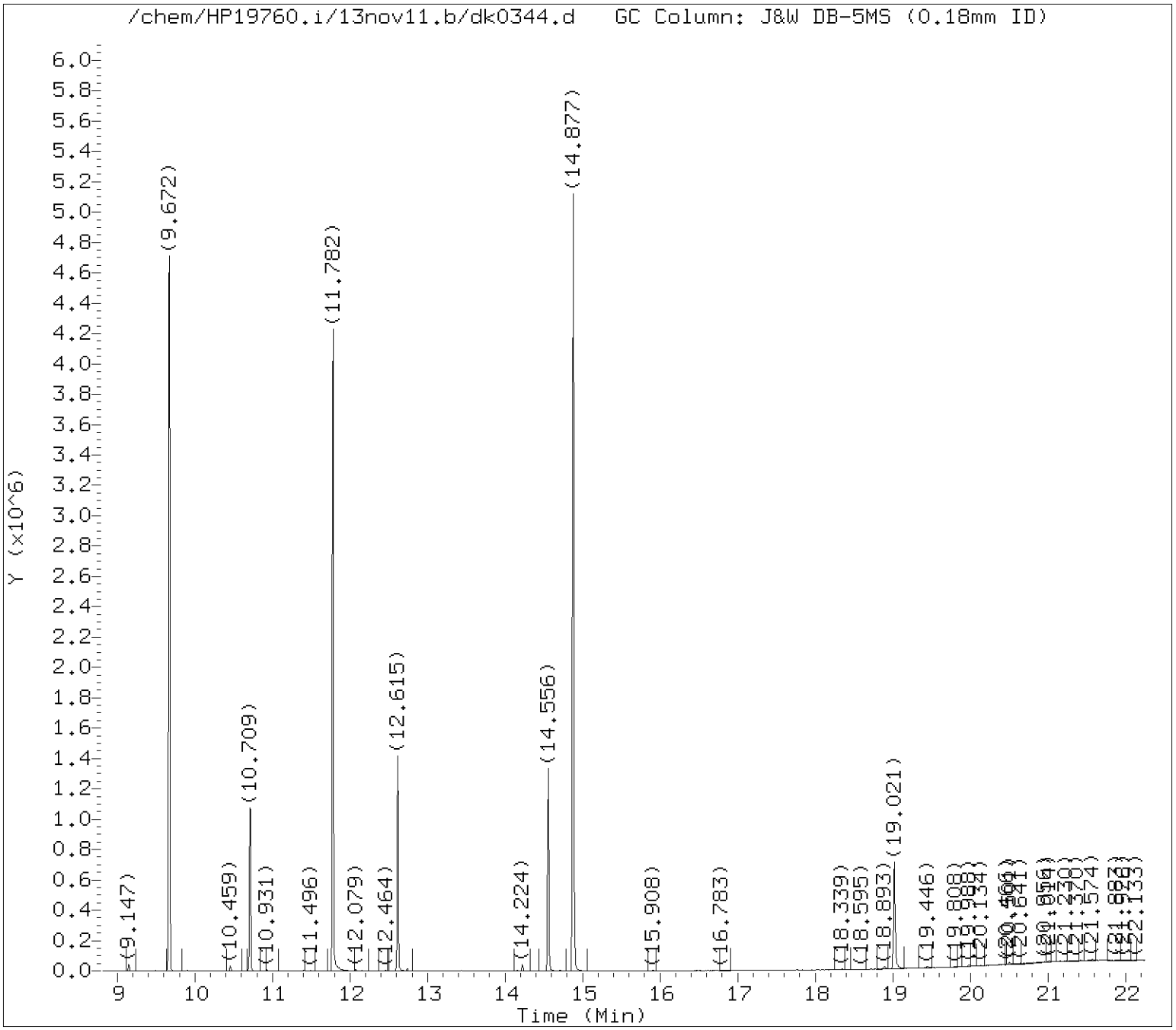
Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: Pyrene-d10 at 14.556 minutes
Chromatogram Start Time (min.): 13.586
Chromatogram End Time (min.): 16.788

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0344.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 14:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 12-Nov-2013 06:54 jmg00346

Sample Name: FBX02 Lab Sample ID: 7265248

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.788
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0344.d
Lab Smp Id: 7265248 Client Smp ID: FBX02
Inj Date : 11-NOV-2013 14:51
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : FBX02;7265248;1;0;SAMPLE;;;
Misc Info : 13312WAD;newall1;;237;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 20, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 12-Nov-2013 06:39 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 25
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Joseph M. Gambler on 11/12/2013 at 06:58.
Target 3.5 esignature user ID: jmg00346

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: mr 13 *** Shift #2 Analyst: *

Comment Code:

R = Reinjection necessary	X = Sample sent to be reextracted
S = Surrogate problem	I = Internal Standard problem
NU = Not used	F = Further dilution required
MR = Meets requirements	IUO = Internal use only
Cz = Confirms z, (z = I or X)	T = Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\DATA\13nov12a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	ck0400.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:20			nu
1	ck0400z.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:43			nu
1	ck0400y.D	50 NG/UL	DFTPP2843	12 Nov 2013	09:23			mr
2	ck0401.D	SSTD030	STD3083	12 Nov 2013	09:38			mr
3	ck0402.D	SSTD0.50	STD3083	12 Nov 2013	10:10			mr
9	ck0403.D	SSTD001	STD3083	12 Nov 2013	10:35			mr
4	ck0404.D	SSTD120	STD3083	12 Nov 2013	10:59			mr
5	ck0405.D	SSTD080	STD3083	12 Nov 2013	11:24			mr
6	ck0406.D	SSTD050	STD3083	12 Nov 2013	11:49			mr
7	ck0407.D	SSTD015	STD3083	12 Nov 2013	12:13			mr
8	ck0408.D	SSTD005	STD3083	12 Nov 2013	12:38			mr
3	ck0409.D	SSTD0.50	8270MDL3083	12 Nov 2013	13:03			mr
10	ck0410.D	SSTD0.10	PAHMDL3083	12 Nov 2013	13:27			mr
11	ck0411.D	SSTD050	8270ICV2463	12 Nov 2013	13:52			mr
12	ck0412.D	SSTD050	BASICV2463	12 Nov 2013	14:17			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: MAC 13 *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov13a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0460.D	DFTPP	DFTPP	13 Nov 2013	08:29			mr
2	CK0461.D	SSTD3083	SSTD030	13 Nov 2013	08:44			mr
3	CK0462.D	SBLKWA3163	SBLKWA316	13 Nov 2013	09:13	13316WAA		mr
4	CK0463.D	316WALCS3	316WALCS	13 Nov 2013	09:37	13316WAA		mr
5	CK0464.D	316WALCSD3	316WALCSD	13 Nov 2013	10:02	13316WAA		mr
6	CK0465.D	11067	7272361	13 Nov 2013	10:26	13316WAA		nu
7	CK0466.D	11012	7272362	13 Nov 2013	10:51	13316WAA		nu
8	CK0467.D	11024	7272363	13 Nov 2013	11:16	13316WAA		nu
9	CK0468.D	S1111	7273602	13 Nov 2013	11:40	13316WAA		mr
6	CK0465a.D	11067	7272361	13 Nov 2013	12:05	13316WAA	100	mr
7	CK0466a.D	11012	7272362	13 Nov 2013	12:30	13316WAA	50	mr
8	CK0467a.D	11024	7272363	13 Nov 2013	12:55	13316WAA	20	mr
10	CK0469.D	SBLKLF3103	SBLKLF310	13 Nov 2013	13:20	13310SLF		mr
11	CK0470.D	310LFLCS3	310LFLCS	13 Nov 2013	13:44	13310SLF		mr
15	CK0474.D	GAAV1	7262294	13 Nov 2013	14:09	13310SLF		mr
16	CK0475.D	GAAV1MS	7262294	13 Nov 2013	14:34	13310SLF		mr
17	CK0476.D	GAAV1MSD	7262294	13 Nov 2013	14:58	13310SLF		mr
18	CK0477.D	GAAV2	7262296	13 Nov 2013	15:23	13310SLF		mr
19	CK0478.D	GAAV3	7262298	13 Nov 2013	15:48	13310SLF		mr
20	CK0479.D	GAAV4	7262300	13 Nov 2013	16:12	13310SLF		mr
21	CK0480.D	GAAV5	7262302	13 Nov 2013	16:37	13310SLF		mr
22	CK0481.D	GAAV6	7262304	13 Nov 2013	17:02	13310SLF		mr
23	CK0482.D	GAAV7	7262306	13 Nov 2013	17:26	13310SLF	5	mr
24	CK0483.D	GAAV8	7262308	13 Nov 2013	17:51	13310SLF		mr
25	CK0484.D	PHERC	7263054	13 Nov 2013	18:15	13310SLF		mr
26	CK0485.D	OHERC	7263055	13 Nov 2013	18:40	13310SLF		mr
27	CK0486.D	R2041	7265225	13 Nov 2013	19:04	13310SLF	5	mr
28	CK0487.D	R2042	7265226	13 Nov 2013	19:29	13310SLF	5	nu
29	CK0488.D	R2043	7265227	13 Nov 2013	19:54	13310SLF		mr
30	CK0489.D	R2E16	7265234	13 Nov 2013	20:18	13310SLF		mr
31	CK0490.D	2F142	7265241	13 Nov 2013	20:43	13310SLF		t,nu
32	CK0491.D	R2121	7265242	13 Nov 2013	21:08	13310SLF	5	
33	CK0492.D	R2123	7265244	13 Nov 2013	21:32	13310SLF		
34	CK0493.D	2D141	7265245	13 Nov 2013	21:56	13310SLF		
35	CK0494.D	DUPX1	7265246	13 Nov 2013	22:21	13310SLF		

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Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: MAE 13 *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov14\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0500.D	DFTPP	DFTPP2843	13 Nov 2013	23:59			mr
2	CK0501.D	SSTD030	STD3083	14 Nov 2013	00:13			mr
11	CK0502.D	SBLKLB3113	SBLKLB311	14 Nov 2013	00:55	13311SLB		
12	CK0503.D	311LBLCS3	311LBLCS	14 Nov 2013	01:20	13311SLB		
28	CK0519.D	MNB52	7260896	14 Nov 2013	01:45	13309SLF	10	mr
29	CK0520.D	MNB51	7260897	14 Nov 2013	02:09	13309SLF	50	s,ok
30	CK0521.D	MNB63	7260899	14 Nov 2013	02:34	13309SLF	10	mr
31	CK0522.D	R2042	7265226	14 Nov 2013	02:58	13310SLF		
32	CK0523.D	2F142	7265241	14 Nov 2013	03:23	13310SLF		
33	CK0524.D	R2121	7265242	14 Nov 2013	03:47	13310SLF	5	

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: mr 13 *** Shift #2 Analyst: _____ *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov15\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0540.D	DFTPP	DFTPP2843	15 Nov 2013	00:17			mr
2	CK0541.D	SSTD030	STD3083	15 Nov 2013	00:32			mr
11	CK0542.D	SBLKLD3143	SBLKLD314	15 Nov 2013	01:06	13314SLD		mr
12	CK0543.D	314LDLCS3	314LDLCS	15 Nov 2013	01:31	13314SLD		mr
28	CK0559.D	2E16D	7265237	15 Nov 2013	01:55	13314SLD		mr
29	CK0560.D	999C3	7266676	15 Nov 2013	02:20	13314SLD		mr
30	CK0561.D	999G4	7266677	15 Nov 2013	02:45	13314SLD		mr
31	CK0562.D	013D1	7266678	15 Nov 2013	03:09	13314SLD		mr
32	CK0563.D	013G4	7266679	15 Nov 2013	03:34	13314SLD		mr
33	CK0564.D	001D1	7266681	15 Nov 2013	03:59	13314SLD		mr
34	CK0565.D	001G3	7266682	15 Nov 2013	04:23	13314SLD		mr
13	CK0544.D	LDEN2	7265020	15 Nov 2013	04:48	13314SLD		mr
14	CK0545.D	LDEN2MS	7265020	15 Nov 2013	05:13	13314SLD		mr
15	CK0546.D	LDEN2MSD	7265020	15 Nov 2013	05:38	13314SLD		mr
16	CK0547.D	LDEN4	7265022	15 Nov 2013	06:03	13314SLD		mr
17	CK0548.D	LDEN6	7265024	15 Nov 2013	06:27	13314SLD		mr
18	CK0549.D	LDEN8	7265026	15 Nov 2013	06:52	13314SLD		mr
19	CK0550.D	LDE10	7265028	15 Nov 2013	07:17	13314SLD		mr
20	CK0551.D	LDE12	7265030	15 Nov 2013	07:41	13314SLD		mr
21	CK0552.D	LDE14	7265032	15 Nov 2013	08:06	13314SLD		mr
22	CK0553.D	LDE16	7265034	15 Nov 2013	08:31	13314SLD		mr
23	CK0554.D	LDE18	7265036	15 Nov 2013	08:56	13314SLD		mr
24	CK0555.D	LDE20	7265038	15 Nov 2013	09:21	13314SLD		mr
25	CK0556.D	LDE22	7265040	15 Nov 2013	09:45	13314SLD		mr
26	CK0557.D	R2M71	7265229	15 Nov 2013	10:10	13314SLD		mr
27	CK0558.D	2E161	7265236	15 Nov 2013	10:35	13314SLD		mr

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Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____ *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13nov18\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0620.D	DFTPP	DFTPP	18 Nov 2013	04:49			nu
1	CK0620z.D	DFTPP	DFTPP	18 Nov 2013	05:00			nu
1	CK0620y.D	DFTPP	DFTPP	18 Nov 2013	05:14			mr
2	CK0621.D	SSTD3213	SSTD030	18 Nov 2013	05:29			mr
3	CK0622.D	SBLKLC3163	SBLKLC316	18 Nov 2013	06:14	13316SLC		mr
4	CK0623.D	316LCLCS3	316LCLCS	18 Nov 2013	06:38	13316SLC		mr
5	CK0624.D	SBLKWA3203	SBLKWA320	18 Nov 2013	07:03	13320WAA		mr
6	CK0625.D	320WALCS3	320WALCS	18 Nov 2013	07:27	13320WAA		mr
7	CK0626.D	320WALCSD3	320WALCSD	18 Nov 2013	07:52	13320WAA		mr
8	CK0627.D	14307	7279095	18 Nov 2013	08:17	13320WAA		mr
9	CK0628.D	93012	7279096	18 Nov 2013	08:42	13320WAA		mr
10	CK0629.D	73024	7279097	18 Nov 2013	09:07	13320WAA		mr
11	CK0630.D	2E101	7266814	18 Nov 2013	09:31	13316SLC	5	mr
12	CK0631.D	2E101MS	7266815	18 Nov 2013	09:56	13316SLC	5	mr
13	CK0632.D	2E101MSD	7266816	18 Nov 2013	10:21	13316SLC	5	mr
14	CK0633.D	PAYN7	7259331	18 Nov 2013	10:45	13316SLC		mr
15	CK0634.D	R2F14	7265239	18 Nov 2013	11:10	13316SLC	5	mr
16	CK0635.D	2E131	7266809	18 Nov 2013	11:35	13316SLC		mr
17	CK0636.D	2C126	7266812	18 Nov 2013	12:00	13316SLC	5	mr
18	CK0637.D	2C111	7266813	18 Nov 2013	12:25	13316SLC	5	mr
19	CK0638.D	2E102	7266818	18 Nov 2013	12:50	13316SLC	5	mr
20	CK0639.D	51931	7270464	18 Nov 2013	13:14	13316SLC		mr
21	CK0640.D	51932	7270465	18 Nov 2013	13:39	13316SLC		mr
22	CK0641.D	51933	7270466	18 Nov 2013	14:04	13316SLC		mr
23	CK0642.D	51934	7270467	18 Nov 2013	14:29	13316SLC		mr
24	CK0643.D	51935	7270468	18 Nov 2013	14:54	13316SLC		mr
25	CK0644.D	51936	7270469	18 Nov 2013	15:19	13316SLC		mr
26	CK0645.D	51937	7270470	18 Nov 2013	15:43	13316SLC		mr
27	CK0646.D	51938	7270471	18 Nov 2013	16:08	13316SLC		mr,f
28	CK0647.D	51939	7270472	18 Nov 2013	16:33	13316SLC		mr

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Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: BC *** Shift #2 Analyst: _____

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = 1 or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

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Data Directory Path is - C:\msdchem\1\data\13oct29\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DJ1150.D	DFTPP12.5	DFTPP1863	29 Oct 2013	07:25			nu
2	DJ1151.D	SSTD7.5	STD2813	29 Oct 2013	07:41			nu
3	DJ1152.D	SSTD0.125	STD2813	29 Oct 2013	08:13			nu
4	DJ1153.D	SSTD30	STD2813	29 Oct 2013	08:40			nu
5	DJ1154.D	SSTD0.25	STD2813	29 Oct 2013	09:06			nu
1	DJ1180.D	DFTPP12.5	DFTPP1863	29 Oct 2013	11:14			mr
2	DJ1181.D	SSTD7.5	STD2813	29 Oct 2013	11:28			mr
3	DJ1182.D	SSTD0.125	STD2813	29 Oct 2013	11:55			mr
4	DJ1183.D	SSTD30	STD2813	29 Oct 2013	12:21			mr
5	DJ1184.D	SSTD0.25	STD2813	29 Oct 2013	12:48			mr
6	DJ1185.D	SSTD1.25	STD2813	29 Oct 2013	13:15			mr
7	DJ1186.D	SSTD3.75	STD2813	29 Oct 2013	13:42			mr
8	DJ1187.D	SSTD12.5	STD2813	29 Oct 2013	14:08			mr
9	DJ1188.D	SSTD20	STD2813	29 Oct 2013	14:35			mr
3	DJ1189.D	SSTD0.125	MDL2813	29 Oct 2013	15:02			mr
10	DJ1190.D	SSTD0.025	PAH2813	29 Oct 2013	15:28			mr
11	DJ1191.D	SSTD12.5	ICV2463	29 Oct 2013	15:55			mr
12	DJ1192.D	SSTD12.5	BASICV2463	29 Oct 2013	16:22			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: JM6 *** Shift #2 Analyst: CEB

Comment Code:
R = Reinjection necessary
S = Surrogate problem
NU = Not used
MR = Meets requirements
Cz = Confirms z, (z = I or X)
X = Sample sent to be reextracted
I = Internal Standard problem
F = Further dilution required
IUO = Internal use only
T = Injected outside valid tune period

Other problems or comments are as follows:

Data Directory Path is - C:\msdchem\1\data\13nov11\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DK0320.D	DFTPP	DFTPP2843	11 Nov 2013	04:04			mr
2	DK0321.D	SSTD12.	STD2813	11 Nov 2013	04:17			mr
3	DK0322.D	SBLKWD3124	SBLKWD312	11 Nov 2013	05:02	13312WAD		mr
4	DK0323.D	312WDLCS4	312WDLCS	11 Nov 2013	05:29	13312WAD		mr
5	DK0324.D	R2163	7265230	11 Nov 2013	05:55	13312WAD		mr
6	DK0325.D	R2163MS	7265231	11 Nov 2013	06:22	13312WAD		mr
7	DK0326.D	R2163MSD	7265232	11 Nov 2013	06:49	13312WAD		mr
8	DK0327.D	EW52-RE	7264723RE	11 Nov 2013	07:16	13312WAD		s
9	DK0328.D	E32--RE	7264727RE	11 Nov 2013	07:42	13312WAD		s
10	DK0329.D	SS-30RE	7264728RE	11 Nov 2013	08:09	13312WAD		mr
11	DK0330.D	091BX	7265142	11 Nov 2013	08:36	13312WAD		mr
12	DK0331.D	325A8	7265217	11 Nov 2013	09:03	13312WAD		mr
13	DK0332.D	324A8	7265218	11 Nov 2013	09:29	13312WAD		mr
14	DK0333.D	323A9	7265219	11 Nov 2013	09:56	13312WAD		mr
15	DK0334.D	D1151	7265220	11 Nov 2013	10:23	13312WAD		mr
16	DK0335.D	F1151	7265221	11 Nov 2013	10:50	13312WAD		mr
17	DK0336.D	R2N51	7265223	11 Nov 2013	11:16	13312WAD		mr
18	DK0337.D	R2N52	7265224	11 Nov 2013	11:43	13312WAD		mr
19	DK0338.D	R2M61	7265228	11 Nov 2013	12:10	13312WAD		mr
20	DK0339.D	E2161	7265235	11 Nov 2013	12:37	13312WAD		mr
21	DK0340.D	R2141	7265238	11 Nov 2013	13:03	13312WAD		mr
22	DK0341.D	R2142	7265240	11 Nov 2013	13:30	13312WAD		mr
23	DK0342.D	R2122	7265243	11 Nov 2013	13:57	13312WAD		mr
24	DK0343.D	FBX01	7265247	11 Nov 2013	14:24	13312WAD		mr
25	DK0344.D	FBX02	7265248	11 Nov 2013	14:51	13312WAD		mr
26	DK0345.D	NAS-E	7265741	11 Nov 2013	15:17	13312WAD		mr

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

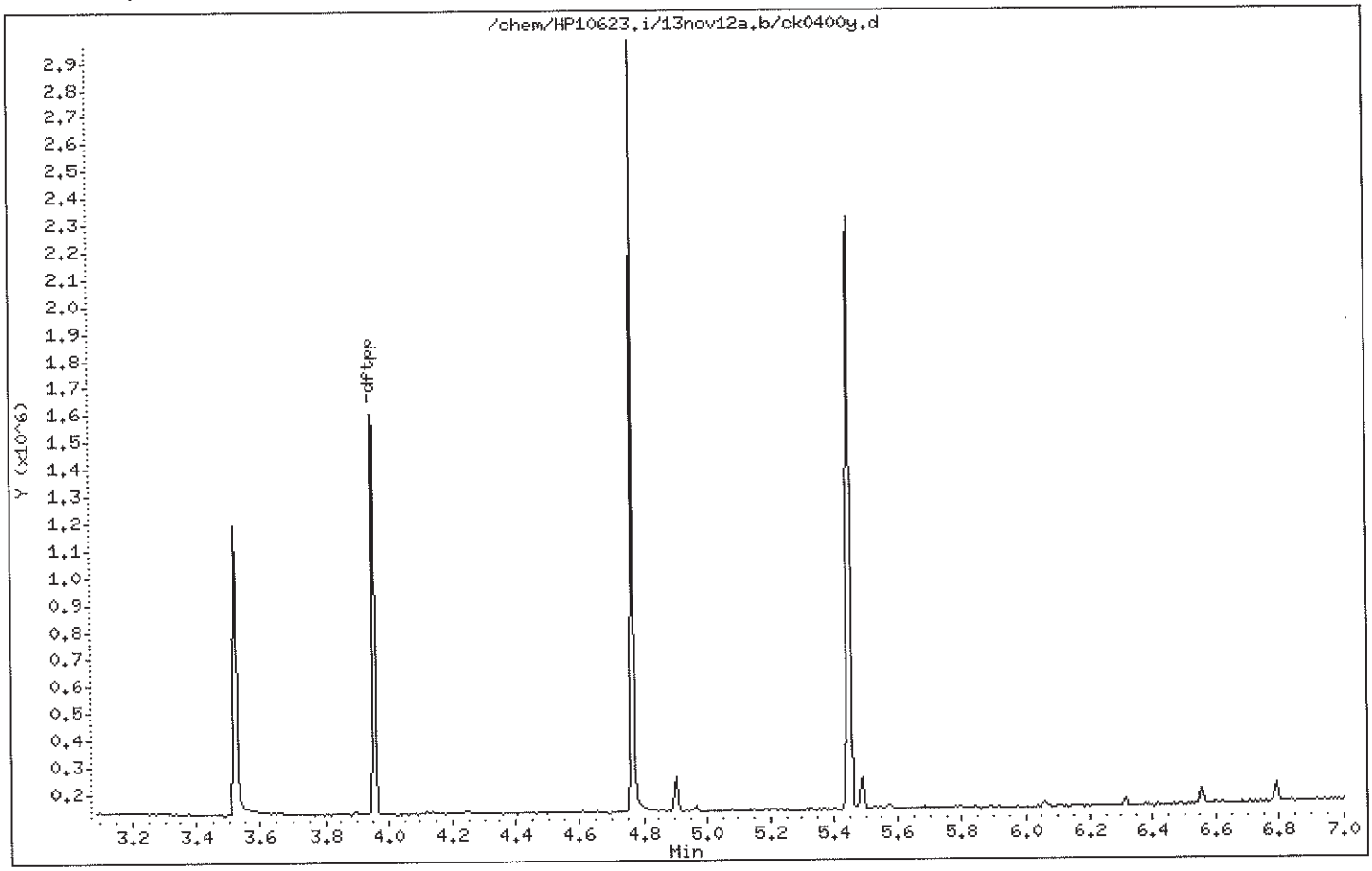
Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

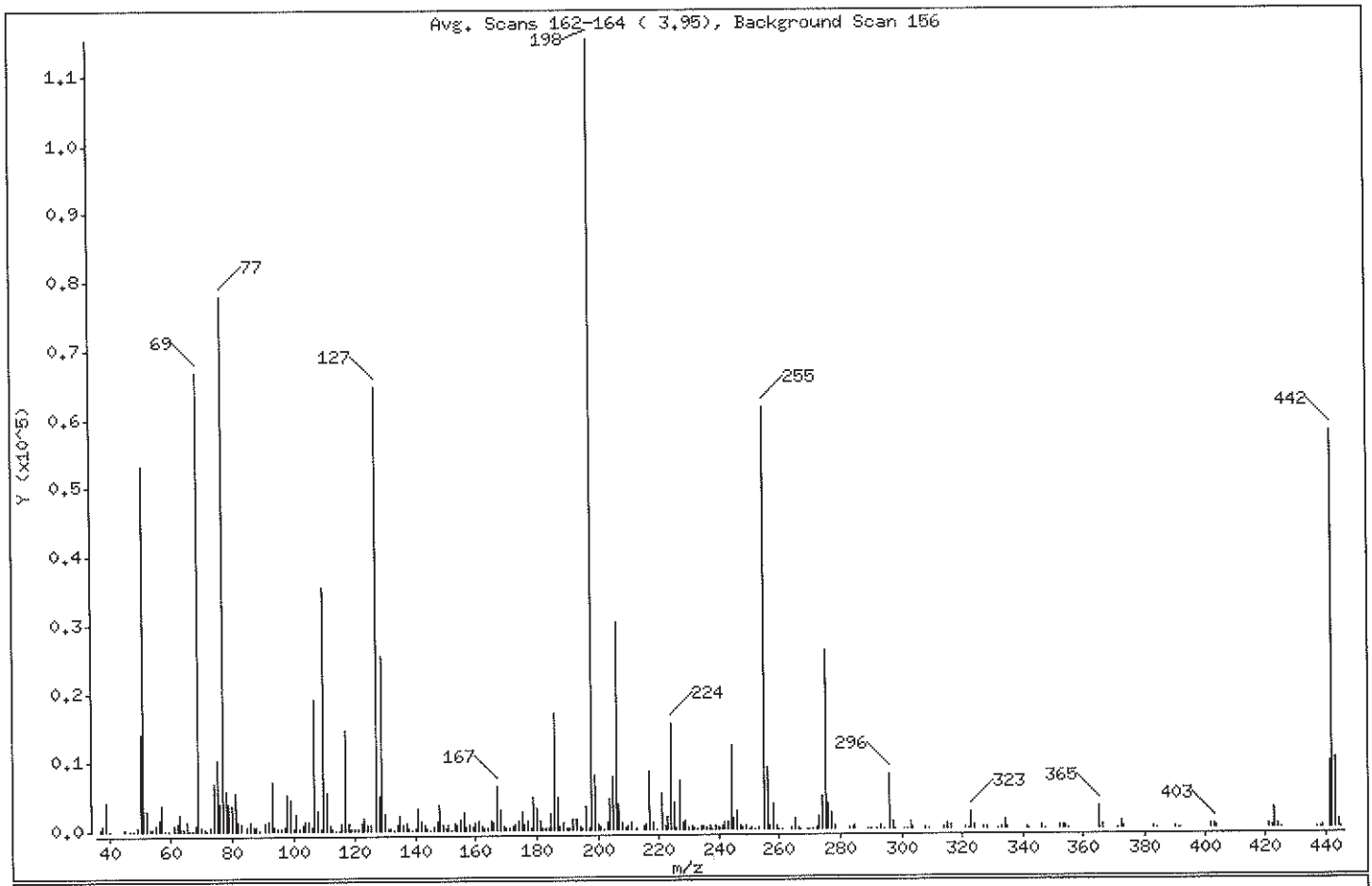
Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.32
68	Less than 2.00% of mass 69	0.74 (1.28)
69	Mass 69 relative abundance	57.87
70	Less than 2.00% of mass 69	0.39 (0.67)
127	40.00 - 60.00% of mass 198	56.14
197	Less than 1.00% of mass 198	0.33
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 30.00% of mass 198	22.54
365	Greater than 1.00% of mass 198	2.68
441	Present, but less than mass 443	8.26
442	40.00 - 99.99% of mass 198	50.09
443	17.00 - 23.00% of mass 442	8.79 (17.55)

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	204	118.00	1151	192.00	1652	272.00	203
38.00	685	119.00	337	193.00	1487	273.00	1806
39.00	4172	120.00	241	194.00	438	274.00	4671
40.00	132	121.00	307	195.00	245	275.00	25984
45.00	181	122.00	1112	196.00	3564	276.00	3732
47.00	56	123.00	1983	197.00	375	277.00	2413
48.00	50	124.00	901	198.00	115312	278.00	435
49.00	408	125.00	689	199.00	7904	283.00	228
50.00	13963	127.00	64744	200.00	689	284.00	341
51.00	53408	128.00	4920	201.00	589	285.00	432
52.00	2813	129.00	25328	202.00	57	289.00	54
53.00	293	130.00	2263	203.00	1014	290.00	59
54.00	259	131.00	268	204.00	4472	292.00	130
55.00	757	132.00	394	205.00	7568	293.00	491
56.00	1608	133.00	70	206.00	30232	294.00	102
57.00	3836	134.00	781	207.00	3702	296.00	7873
58.00	100	135.00	2031	208.00	1052	297.00	1131
59.00	79	136.00	772	209.00	158	298.00	62
61.00	779	137.00	1071	210.00	520	301.00	68
62.00	970	138.00	294	211.00	1171	302.00	96
63.00	2461	139.00	82	213.00	177	303.00	964
64.00	274	140.00	233	215.00	432	304.00	218
65.00	1399	141.00	3155	216.00	702	308.00	181
66.00	23	142.00	1224	217.00	8582	309.00	123
67.00	47	143.00	772	218.00	950	314.00	375
68.00	852	144.00	345	219.00	73	315.00	726
69.00	66728	145.00	73	221.00	5321	316.00	541
70.00	447	146.00	558	222.00	598	321.00	252
71.00	140	147.00	1279	223.00	1881	322.00	99
72.00	13	148.00	3579	224.00	15456	323.00	2338
73.00	436	149.00	696	225.00	3977	324.00	448
74.00	6819	150.00	212	226.00	386	327.00	373
75.00	10255	151.00	904	227.00	7080	328.00	257
76.00	4062	152.00	56	228.00	1185	332.00	125
77.00	77960	153.00	1062	229.00	1423	333.00	264

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	5704	154.00	675	230.00	273	334.00	1348
79.00	3956	155.00	1615	231.00	577	335.00	344
80.00	3581	156.00	2608	232.00	152	341.00	224
81.00	5489	157.00	458	233.00	106	342.00	76
82.00	1282	158.00	740	234.00	434	346.00	423
83.00	1057	159.00	580	235.00	590	347.00	53
85.00	530	160.00	1122	236.00	297	352.00	631
86.00	1229	161.00	1407	237.00	568	353.00	541
87.00	531	162.00	617	238.00	60	354.00	504
88.00	452	163.00	250	239.00	447	355.00	96
89.00	132	164.00	154	240.00	207	365.00	3089
91.00	998	165.00	1375	241.00	469	366.00	400
92.00	1456	166.00	1022	242.00	937	371.00	102
93.00	7115	167.00	6282	243.00	1111	372.00	1159
94.00	509	168.00	2856	244.00	12309	373.00	239
95.00	363	169.00	579	245.00	1710	383.00	200
96.00	234	170.00	185	246.00	2534	384.00	52
97.00	427	171.00	244	247.00	498	390.00	144
98.00	5329	172.00	626	248.00	161	391.00	62
99.00	4578	173.00	787	249.00	409	392.00	93
100.00	362	174.00	1250	250.00	50	402.00	488
101.00	2462	175.00	2582	251.00	146	403.00	658
102.00	360	176.00	794	252.00	60	404.00	187
103.00	853	177.00	1274	253.00	285	421.00	409
104.00	1354	178.00	361	255.00	61496	422.00	317
105.00	1323	179.00	4731	256.00	9058	423.00	2842
106.00	435	180.00	3075	257.00	598	424.00	556
107.00	19216	181.00	1448	258.00	3756	425.00	63
108.00	2961	182.00	293	259.00	495	437.00	53
109.00	195	183.00	281	260.00	75	438.00	121
110.00	35624	184.00	213	261.00	128	439.00	178
111.00	5599	185.00	2334	264.00	201	441.00	9525
112.00	743	186.00	16984	265.00	1539	442.00	57760
113.00	221	187.00	4756	266.00	315	443.00	10138
114.00	30	188.00	593	267.00	73	444.00	942

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

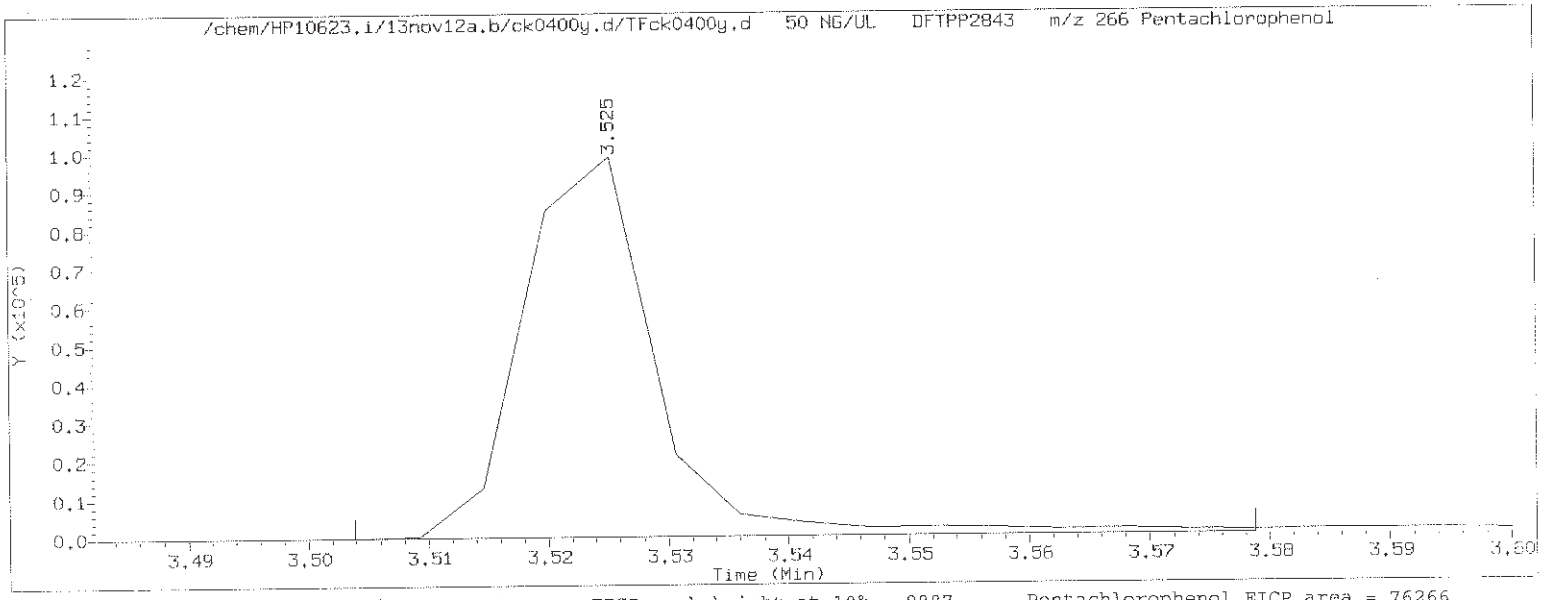
Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	50	189.00	1162	269.00	57	445.00	70
116.00	1125	190.00	284	270.00	66		
117.00	14669	191.00	349	271.00	57		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346

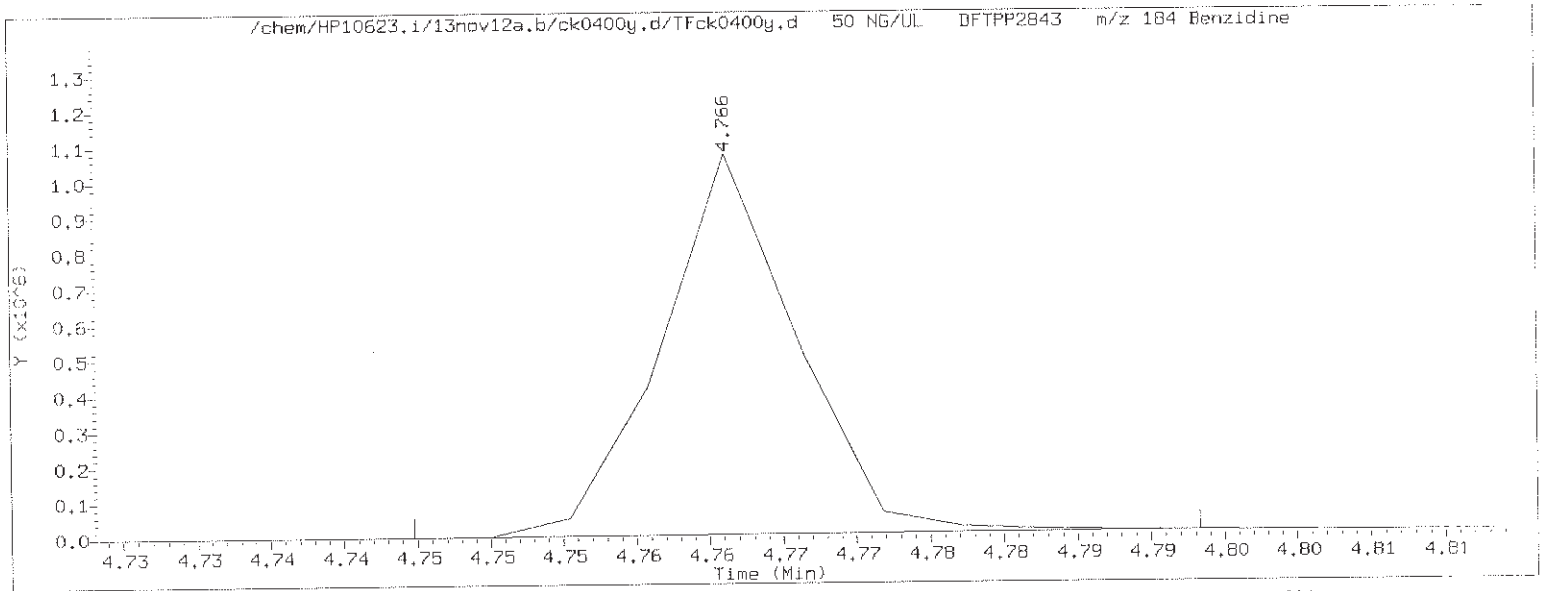


Pentachlorophenol EICP peak height = 98872 EICP peak height at 10% = 9887 Pentachlorophenol EICP area = 76266

Pentachlorophenol EICP peak apex (min.) = 3.525
RT at 10% of front half of EICP (min.) = 3.513
RT at 10% of back half of EICP (min.) = 3.534

'Front' peak width (min.) = 0.0118500000
'Tailing' peak width (min.) = 0.0091500000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0091500000}{0.0118500000} = 0.772$



Benzidine EICP peak height = 1069531 EICP peak height at 10% = 106953 Benzidine EICP area = 682611

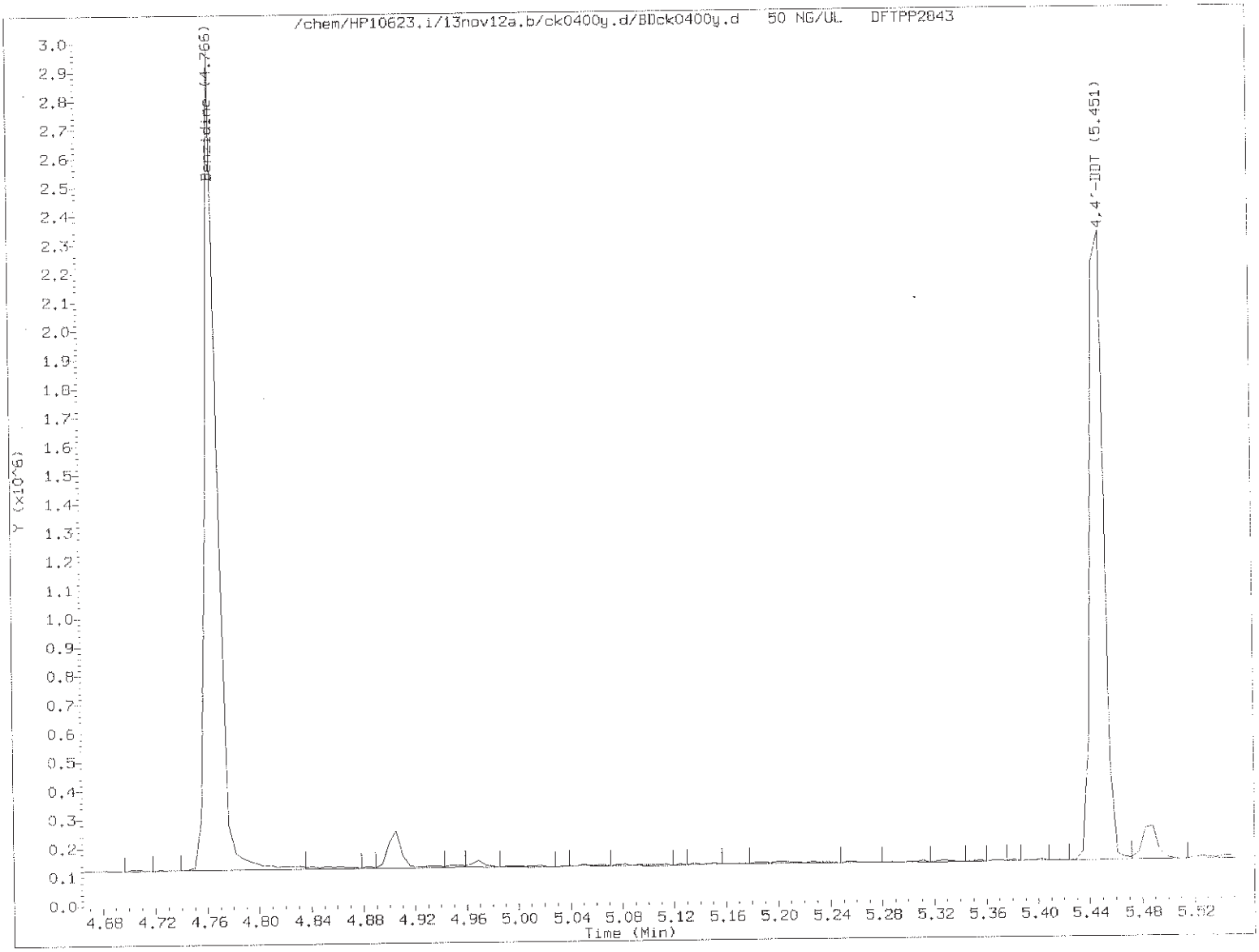
Benzidine EICP peak apex (min.) = 4.766
RT at 10% of front half of EICP (min.) = 4.756
RT at 10% of back half of EICP (min.) = 4.776

'Front' peak width (min.) = 0.0098333333
'Tailing' peak width (min.) = 0.0101166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0101166667}{0.0098333333} = 1.029$

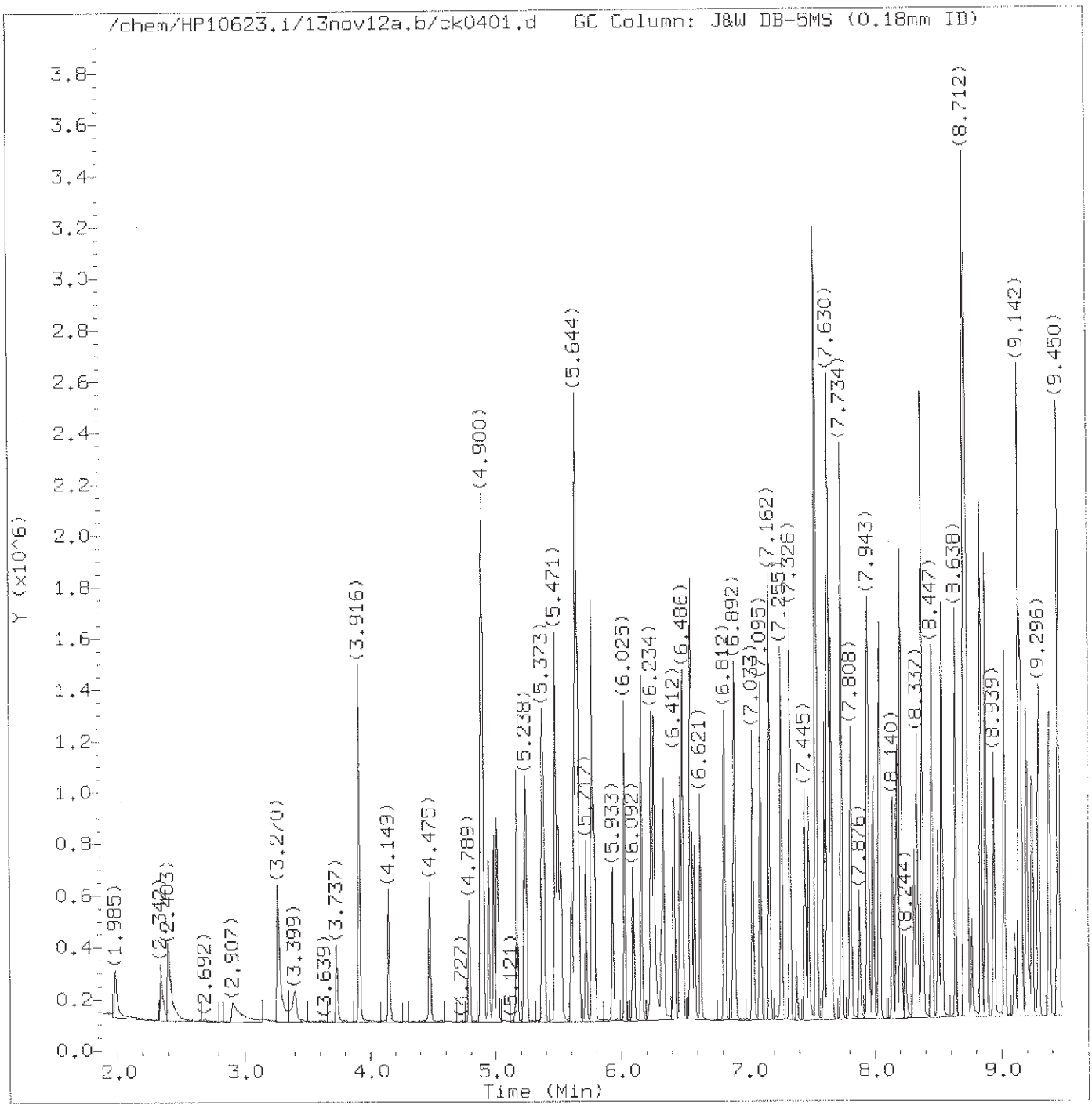
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 0}{0 + 0 + 1650105} \times 100 = 0.0$$



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

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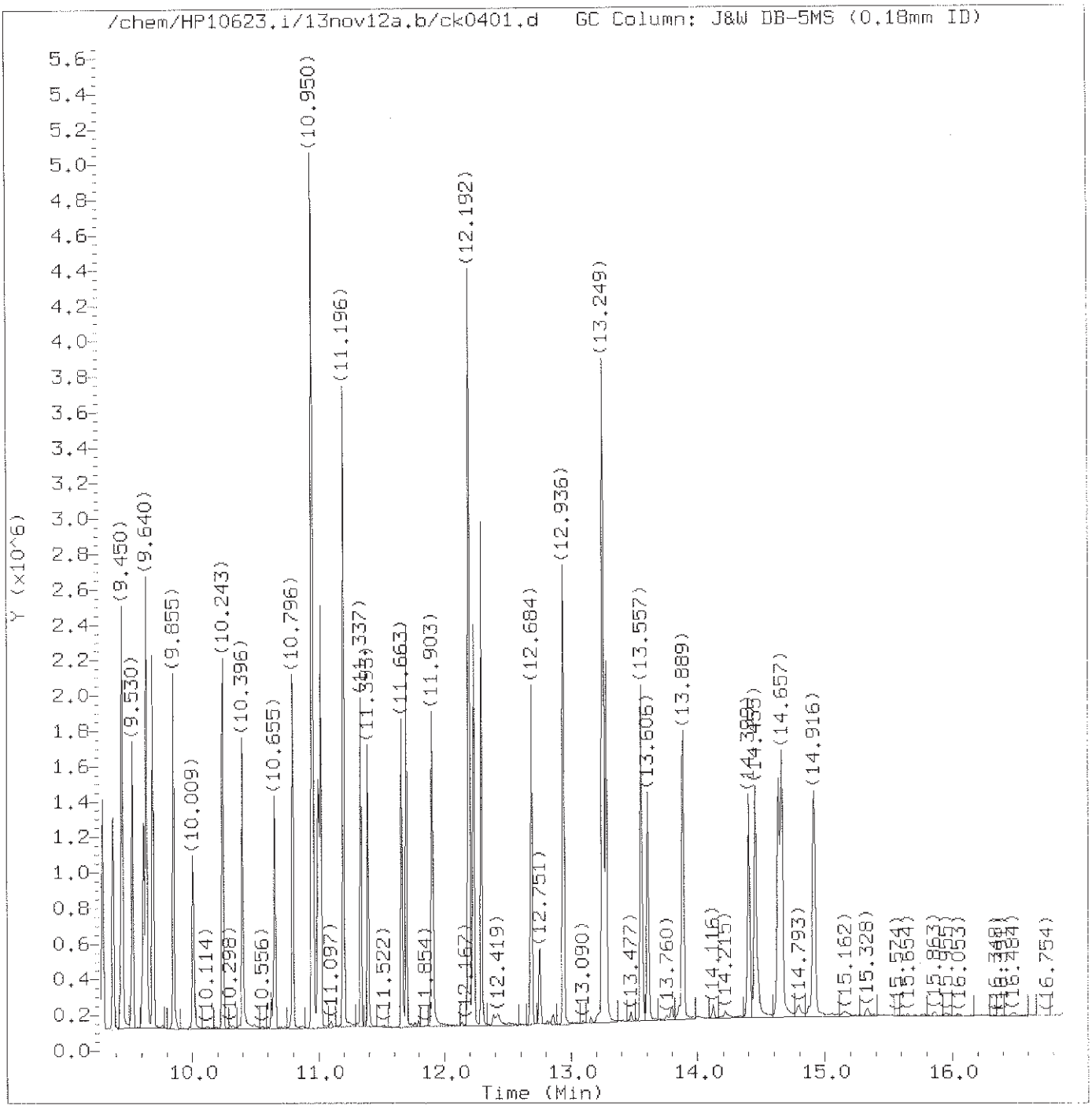
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	81893	32.323
2) N-Nitrosodimethylamine	(1)	2.342	74	156704	33.408
3) Pyridine	(1)	2.397	79	252093	34.667
5) 2-Picoline	(1)	3.270	93	238578	32.151
6) N-Nitrosomethylethylamine	(1)	3.399	88	115272	32.494
7) Methyl methanesulfonate	(1)	3.737	80	115913	32.497
9)$2-Fluorophenol	(1)	3.916	112	354062	30.548
10) N-Nitrosodiethylamine	(1)	4.149	102	111325	31.589
11) Ethyl methanesulfonate	(1)	4.475	109	98844	30.799
12) Benzaldehyde	(1)	4.789	77	99877	27.326
15)$Phenol-d6	(1)	4.887	99	538352	31.566
14)$Phenol-d5	(1)	4.887	99	538352	31.566
16) Phenol	(1)	4.900	94	314309	31.593
13) Aniline	(1)	4.900	93	372438	31.569
18) bis(2-Chloroethyl)ether	(1)	4.986	93	224247	31.750
19) 2-Chlorophenol	(1)	5.010	128	182131	29.347
20) 1,3-Dichlorobenzene	(1)	5.164	146	185926	29.688
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	77457	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	186718	29.215
24) Benzyl alcohol	(1)	5.373	108	155485	32.043
25) 1,2-Dichlorobenzene	(1)	5.385	146	178351	29.730
206) Indene	(1)	5.471	115	415413	31.000
26) 2-Methylphenol	(1)	5.496	108	203749	30.858
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	293836	33.808
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	293836	33.722
29) N-Nitrosopyrrolidine	(1)	5.601	100	126878	32.102
30) Acetophenone	(1)	5.625	105	298124	30.284
31) N-Nitroso-di-n-propylamine	(1)	5.644	70	205034	32.539
32) N-Nitrosomorpholine	(1)	5.644	56	149858	33.377
33) 4-Methylphenol	(1)	5.644	108	238518	30.519
34) o-Toluidine	(1)	5.656	106	349240	30.970
37) Hexachloroethane	(1)	5.717	117	73084	30.045
38)$Nitrobenzene-d5	(2)	5.767	82	505210	32.460
39) Nitrobenzene	(2)	5.785	77	267336	32.387
40) N-Nitrosopiperidine	(2)	5.933	114	112699	30.776
41) Isophorone	(2)	6.025	82	482496	32.191
42) 2-Nitrophenol	(2)	6.092	139	88042	30.681
44) 2,4-Dimethylphenol	(2)	6.160	107	227178	30.801
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	90355	29.381
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	270857	29.741

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d
Injection date and time: 12-NOV-2013 09:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:09
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.265	105	209906	43.907
49) 2,4-Dichlorophenol	(2)	6.332	162	148284	29.562
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	153077	28.973
52)*Naphthalene-d8	(2)	6.461	136	361204	20.000
53) Naphthalene	(2)	6.486	128	569014	29.691
56) 4-Chloroaniline	(2)	6.547	127	248002	29.696
57) 2,6-Dichlorophenol	(2)	6.554	162	141915	30.038
58) Hexachloropropene	(2)	6.578	213	86091	28.812
60) Hexachlorobutadiene	(2)	6.621	225	73712	27.816
194) Quinoline	(2)	6.812	129	397153	30.065
63) Caprolactam	(2)	6.886	113	85885	30.908
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	245265M	31.525
68) 4-Chloro-3-methylphenol	(2)	7.033	107	201458	31.414
69) Safrole	(2)	7.095	162	150150	29.578
70) 2-Methylnaphthalene	(2)	7.162	142	406905	29.918
71) 1-Methylnaphthalene	(2)	7.255	142	370806	29.795
72) Hexachlorocyclopentadiene	(3)	7.328	237	66120	28.828
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	148933	28.060
74) cis-Isosafrole	(3)	7.377	162	28054	3.292
75) 2,4,6-Trichlorophenol	(3)	7.445	196	99135	28.625
77) 2,4,5-Trichlorophenol	(3)	7.476	196	110011	29.134
78)$2-Fluorobiphenyl	(3)	7.531	172	827422	29.569
79) trans-Isosafrole	(3)	7.599	162	161733	26.811
80) Isosafrole	(3)	7.599	162	161733	30.124
83) 1,1'-Biphenyl	(3)	7.623	154	489134	28.372
84) 2-Chloronaphthalene	(3)	7.636	162	335653	26.729
85) 1-Chloronaphthalene	(3)	7.654	162	372212	30.117
88) Diphenyl ether	(3)	7.734	170	252217	29.368
89) 2-Nitroaniline	(3)	7.740	138	124694	30.438
90) 1,4-Naphthoquinone	(3)	7.808	158	160289	30.331
91) 1,4-Dinitrobenzene	(3)	7.876	168	44413	26.844
92) Dimethylphthalate	(3)	7.943	163	444697	29.761
93) 1,3-Dinitrobenzene	(3)	7.949	168	60984	27.087
94) 2,6-Dinitrotoluene	(3)	7.986	165	91316	29.342
95) Acenaphthylene	(3)	8.035	152	584873	29.833
97) 3-Nitroaniline	(3)	8.140	138	113917	29.975
98)*Acenaphthene-d10	(3)	8.177	164	222517	20.000
99) Acenaphthene	(3)	8.208	153	402167	29.641
100) 2,4-Dinitrophenol	(3)	8.244	184	35950	35.967
103) 4-Nitrophenol	(3)	8.312	109	71787	30.492

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d
Injection date and time: 12-NOV-2013 09:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:09
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	130256	28.399
104) Dibenzofuran	(3)	8.374	168	544349	29.288
105) 2,4-Dinitrotoluene	(3)	8.374	165	116516	28.973
106) 1-Naphthylamine	(3)	8.454	143	470452	30.804
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	77227	29.035
108) 2-Naphthylamine	(3)	8.527	143	483276	30.928
109) Diethylphthalate	(3)	8.638	149	467647	30.298
110) Thionazin	(3)	8.712	107	103874	30.514
111) Fluorene	(3)	8.712	166	471552	29.487
113) 5-Nitro-o-toluidine	(3)	8.724	152	130131	30.820
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	202981	28.532
114) 4-Nitroaniline	(3)	8.730	138	131607	30.795
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	40678	26.346
117) N-Nitrosodiphenylamine	(4)	8.841	169	405279	29.915
202) NDPA as diphenylamine	(4)	8.841	169	405279	29.844
118) 1,2-Diphenylhydrazine	(4)	8.878	77	637989	32.876
119)$2,4,6-Tribromophenol	(3)	8.945	330	76050	28.297
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	89301	32.286
121) 1,3,5-Trinitrobenzene	(4)	9.105	213	25810	24.916
122) Diallate (peak 1)	(4)	9.136	86	240722	24.241
123) Phorate	(4)	9.142	75	394362	32.983
124) Phenacetin	(4)	9.154	108	297458	31.771
125) 4-Bromophenyl-phenylether	(4)	9.204	248	107171	28.711
126) Diallate (peak 2)	(4)	9.222	86	33778	7.833
127) Hexachlorobenzene	(4)	9.247	284	100817	27.355
128) Dimethoate	(4)	9.296	87	245700	33.605
130) Atrazine	(4)	9.382	200	121986	28.105
131) Pentachlorophenol	(4)	9.437	266	57290	28.028
133) 4-Aminobiphenyl	(4)	9.450	169	452732	30.905
132) Pentachloronitrobenzene	(4)	9.456	237	45875	28.674
134) Pronamide	(4)	9.530	173	215987	30.588
135)*Phenanthrene-d10	(4)	9.622	188	404202	20.000
136) Dinoseb	(4)	9.640	211	54552	25.446
137) Phenanthrene	(4)	9.640	178	690619	29.385
138) Anthracene	(4)	9.689	178	720725	29.791
140) Carbazole	(4)	9.855	167	705956	29.903
141) Methyl parathion	(4)	10.009	109	136840	29.343
142) Di-n-butylphthalate	(4)	10.243	149	854793	30.688
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	43626	26.308
143) Parathion	(4)	10.403	109	100032	29.542

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	76584	28.834
147) Fluoranthene	(4)	10.802	202	773711	29.441
152) Benzidine	(5)	10.950	184	1891880	91.825
167)*Pyrene-d10	(5)	10.999	212	503289	20.000
154) Pyrene	(5)	11.017	202	810442	28.997
156)$Terphenyl-d14	(5)	11.196	244	1033822	28.730
158) p-Dimethylaminoazobenzene	(5)	11.337	225	163625	30.040
159) Chlorobenzilate	(5)	11.393	139	265463	31.330
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	526908	30.588
161) Butylbenzylphthalate	(5)	11.700	149	407296	30.537
162) 2-Acetylaminofluorene	(5)	11.903	181	381478	31.581
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	290307	29.872
166) Benzo(a)anthracene	(5)	12.192	228	757839	29.397
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	143791	30.288
168) Chrysene	(5)	12.229	228	715548	28.789
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	569996	30.802
189) 6-Methylchrysene	(5)	12.684	242	548565	29.912
170) Di-n-octylphthalate	(6)	12.936	149	1032709	31.791
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.249	256	370208	30.316
172) Benzo(b)fluoranthene	(6)	13.249	252	757915	28.840
173) Benzo(k)fluoranthene	(6)	13.280	252	818853	30.542
174) Benzo(a)pyrene	(6)	13.557	252	754869	29.431
175)*Perylene-d12	(6)	13.606	264	430377	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	384586	29.914
190) Dibenz(a,h)acridine	(6)	14.399	279	574141	30.813
191) Dibenz(a,j)acridine	(6)	14.455	279	632132	29.502
177) Indeno(1,2,3-cd)pyrene	(6)	14.633	276	819116	30.016
178) Dibenz(a,h)anthracene	(6)	14.657	278	695362	30.463
179) Benzo(g,h,i)perylene	(6)	14.916	276	690215	29.690
129) Diallate TRANS/CIS	(4)			274500	32.196

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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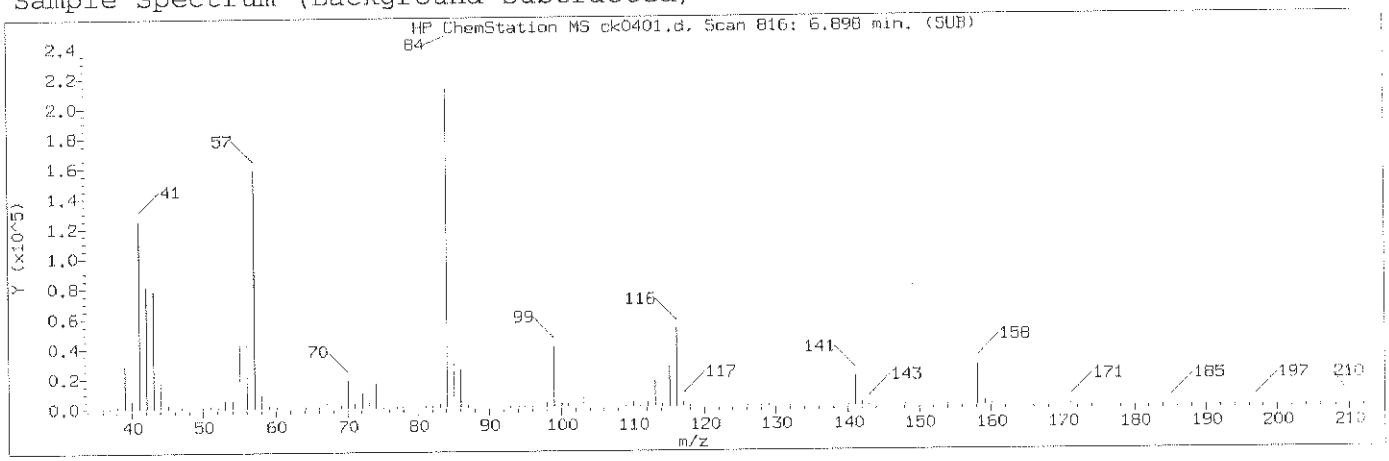
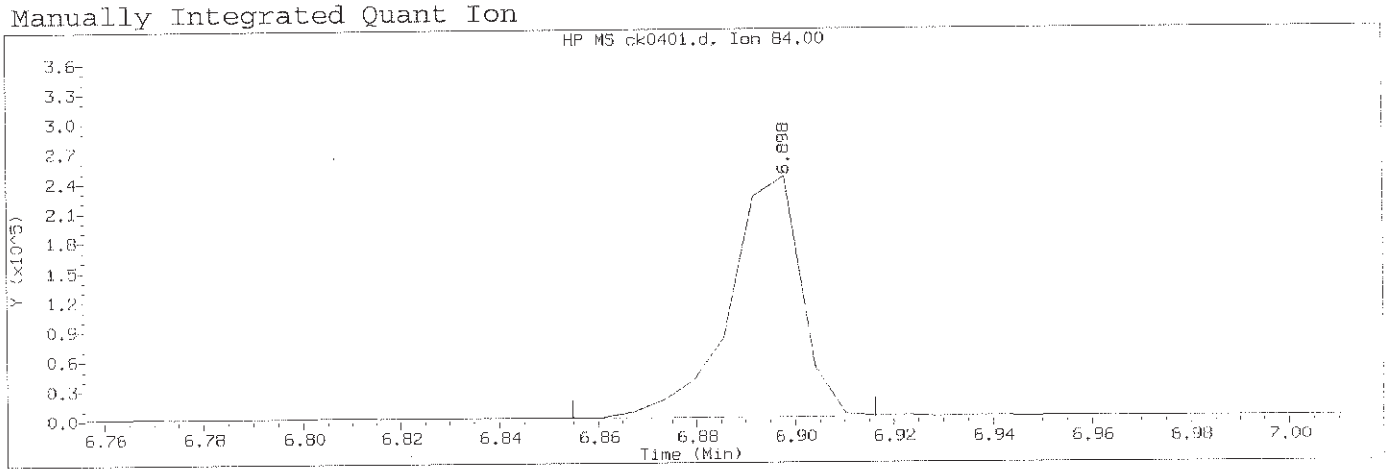
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area (flag)	: 245265M		
On-Column Amount (ng/ul)	: 31.5253		
Integration start scan	: 808	Integration stop scan:	818
Y at integration start	: 1124	Y at integration end:	1124

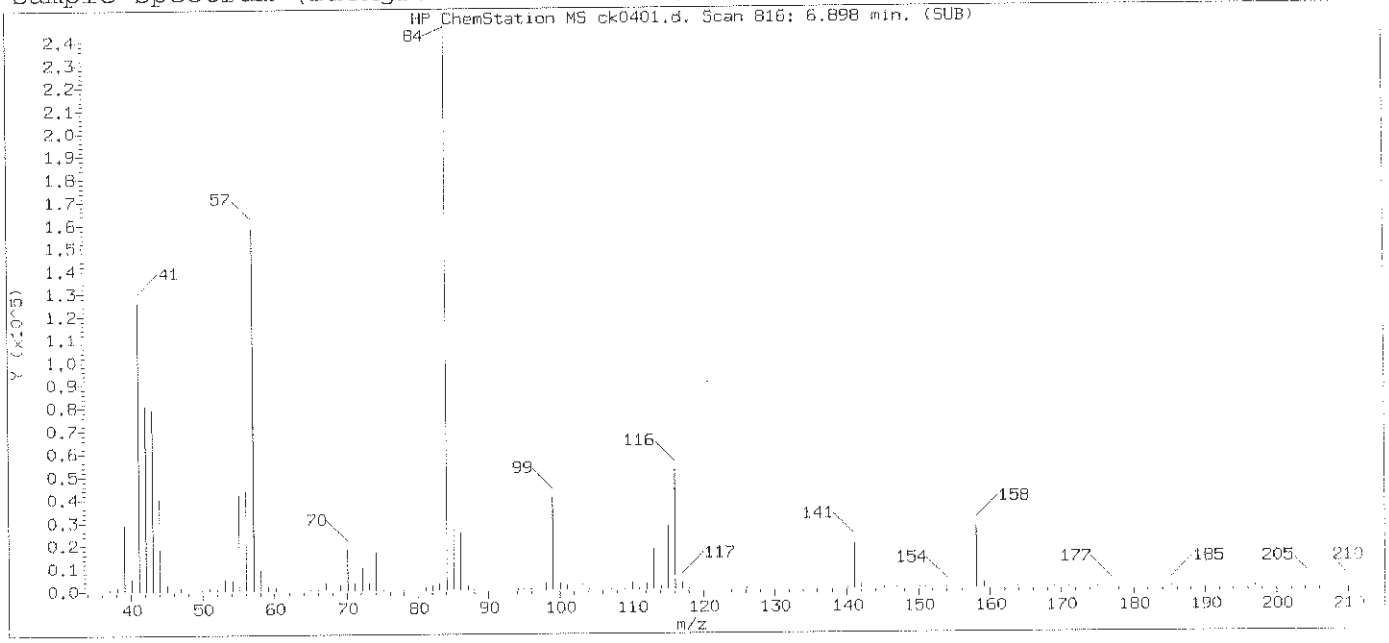
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

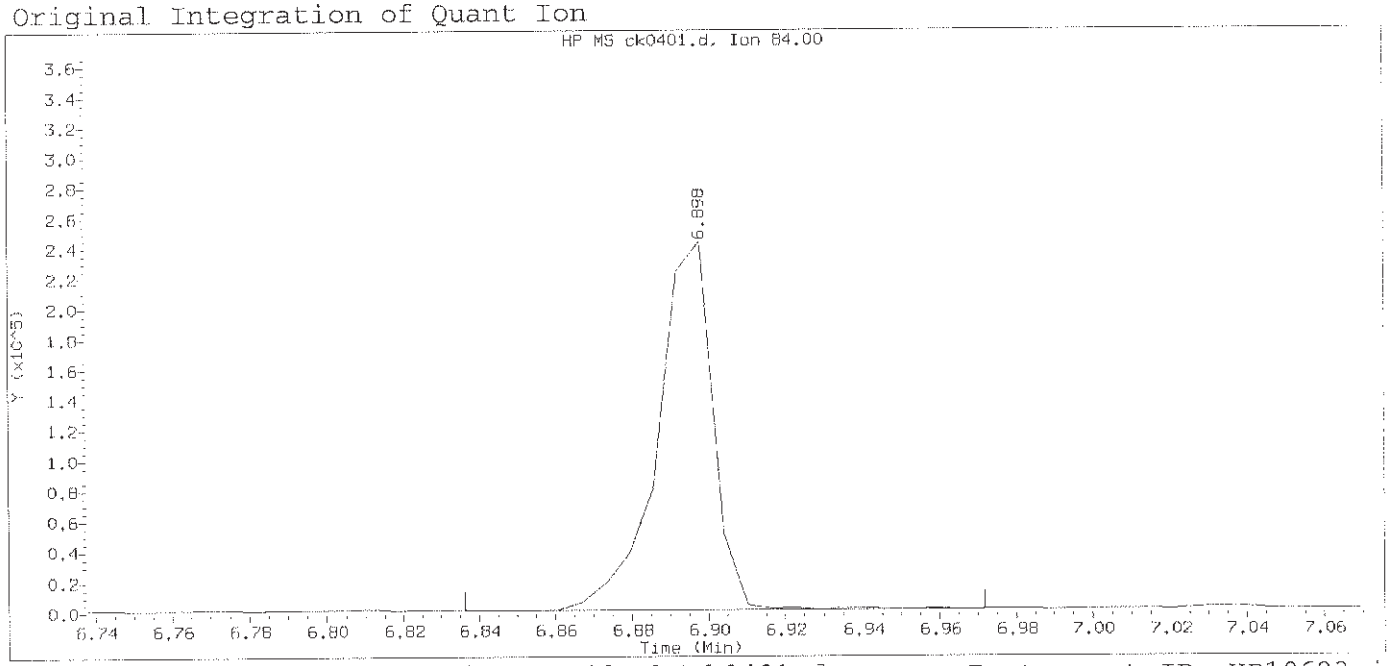
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:41
Date, time and analyst ID of latest file update: 12-Nov-2013 10:41 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area	: 245989		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 805	Integration stop scan:	827
Y at integration start	: 1527	Y at integration end:	1527

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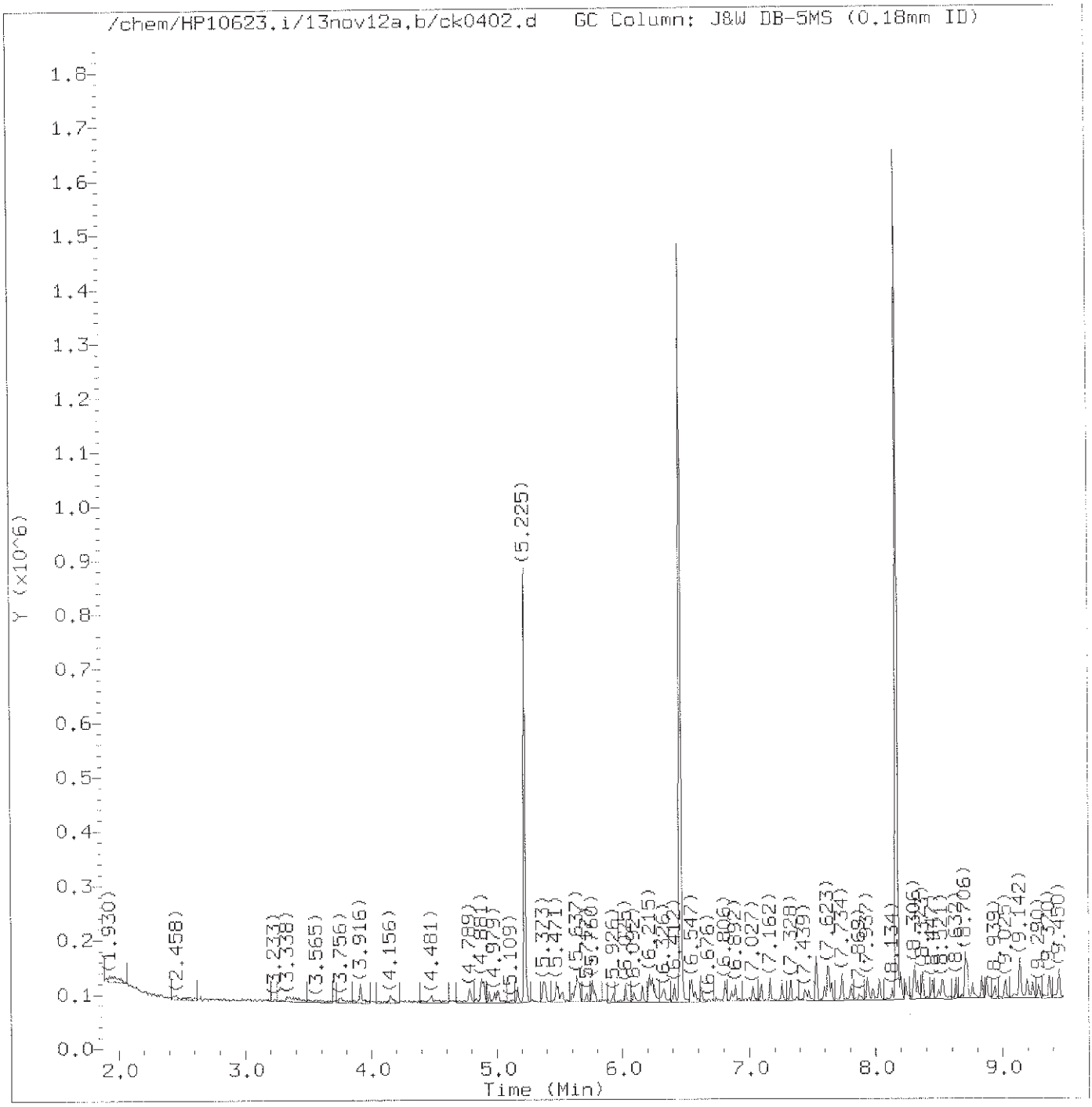
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

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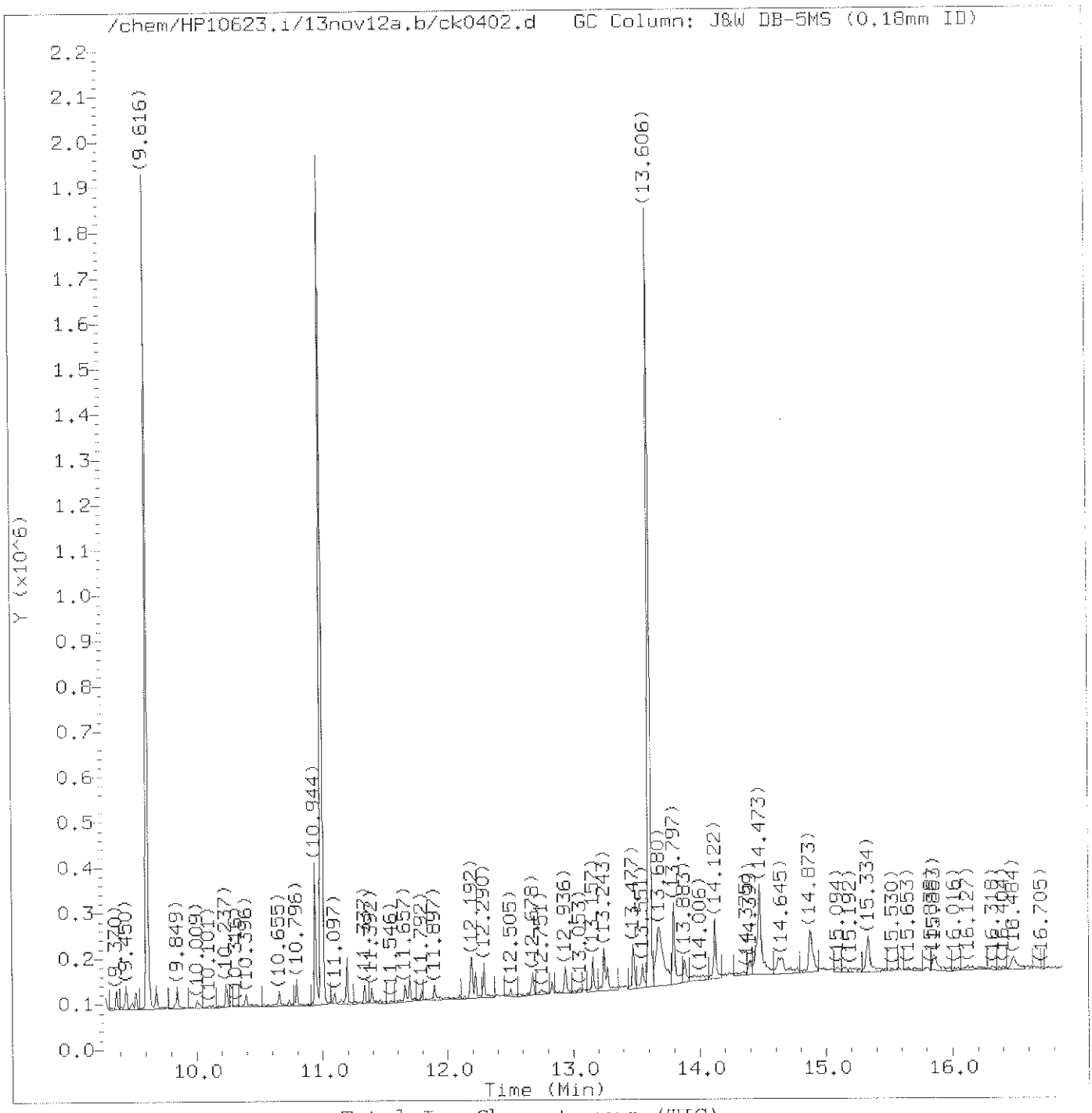
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d
Injection date and time: 12-NOV-2013 10:10

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50

Lab Sample ID: STD3083

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.016	88	2502M	0.668
2) N-Nitrosodimethylamine	(1)	2.477	74	4899M	0.706
3) Pyridine	(1)	2.557	79	9243M	0.860
5) 2-Picoline	(1)	3.338	93	6292M	0.574
6) N-Nitrosomethylethylamine	(1)	3.430	88	7327	1.397
7) Methyl methanesulfonate	(1)	3.750	80	2840	0.539
9)$2-Fluorophenol	(1)	3.916	112	8559	0.500
10) N-Nitrosodiethylamine	(1)	4.156	102	2939	0.564
11) Ethyl methanesulfonate	(1)	4.481	109	2371	0.500
12) Benzaldehyde	(1)	4.789	77	5539	0.786
14)$Phenol-d5	(1)	4.881	99	12834	0.509
15)$Phenol-d6	(1)	4.881	99	12834	0.509
16) Phenol	(1)	4.893	94	7584	0.516
13) Aniline	(1)	4.899	93	9703	0.556
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6089	0.583
19) 2-Chlorophenol	(1)	5.010	128	5413	0.590
20) 1,3-Dichlorobenzene	(1)	5.164	146	4814	0.520
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	114510	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	4855	0.514
24) Benzyl alcohol	(1)	5.367	108	5339	0.744
25) 1,2-Dichlorobenzene	(1)	5.385	146	4782	0.539
206) Indene	(1)	5.471	115	9695	0.489
26) 2-Methylphenol	(1)	5.484	108	6800	0.697
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	10033	0.781
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10033	0.779
29) N-Nitrosopyrrolidine	(1)	5.600	100	3531	0.604
30) Acetophenone	(1)	5.619	105	7972	0.548
31) N-Nitroso-di-n-propylamine	(1)	5.631	70	5626	0.604
32) N-Nitrosomorpholine	(1)	5.643	56	9410	1.418
33) 4-Methylphenol	(1)	5.643	108	6760	0.585
34) o-Toluidine	(1)	5.656	106	8493	0.509
37) Hexachloroethane	(1)	5.717	117	2402	0.668
38)$Nitrobenzene-d5	(2)	5.760	82	11914	0.538
39) Nitrobenzene	(2)	5.779	77	6271	0.534
40) N-Nitrosopiperidine	(2)	5.926	114	2892	0.556
41) Isophorone	(2)	6.025	82	11651	0.547
42) 2-Nitrophenol	(2)	6.092	139	3089	0.757
44) 2,4-Dimethylphenol	(2)	6.154	107	5843	0.557
47) Benzoic acid	(2)	6.215	105	21525	3.167
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2406	0.550

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7084	0.547
49) 2,4-Dichlorophenol	(2)	6.332	162	3426	0.480
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	3762	0.501
52)*Naphthalene-d8	(2)	6.461	136	513472	20.000
53) Naphthalene	(2)	6.480	128	14248	0.523
56) 4-Chloroaniline	(2)	6.541	127	6400	0.539
57) 2,6-Dichlorophenol	(2)	6.547	162	3467	0.516
58) Hexachloropropene	(2)	6.578	213	2141	0.504
60) Hexachlorobutadiene	(2)	6.621	225	1846	0.490
194) Quinoline	(2)	6.806	129	10871	0.579
63) Caprolactam	(2)	6.861	113	2351	0.595
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4989	0.517
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5578	0.612
69) Safrole	(2)	7.095	162	3910	0.542
70) 2-Methylnaphthalene	(2)	7.162	142	9511	0.492
71) 1-Methylnaphthalene	(2)	7.254	142	8965	0.507
72) Hexachlorocyclopentadiene	(3)	7.322	237	1328	0.415
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3696	0.499
74) cis-Isosafrole	(3)	7.377	162	937	0.079
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2161	0.447
77) 2,4,5-Trichlorophenol	(3)	7.470	196	2786	0.529
78)$2-Fluorobiphenyl	(3)	7.531	172	19427	0.498
79) trans-Isosafrole	(3)	7.599	162	3814	0.453
80) Isosafrole	(3)	7.599	162	3814	0.509
83) 1,1'-Biphenyl	(3)	7.623	154	12551	0.522
84) 2-Chloronaphthalene	(3)	7.630	162	9196M	0.525
85) 1-Chloronaphthalene	(3)	7.648	162	9244M	0.536
88) Diphenyl ether	(3)	7.734	170	6275	0.524
89) 2-Nitroaniline	(3)	7.734	138	3528	0.617
90) 1,4-Naphthoquinone	(3)	7.802	158	3486	0.473
91) 1,4-Dinitrobenzene	(3)	7.869	168	1124M	0.506
92) Dimethylphthalate	(3)	7.937	163	11333	0.544
93) 1,3-Dinitrobenzene	(3)	7.943	168	1011	0.335
94) 2,6-Dinitrotoluene	(3)	7.980	165	2520	0.580
95) Acenaphthylene	(3)	8.029	152	14446	0.528
97) 3-Nitroaniline	(3)	8.134	138	2436	0.459
98)*Acenaphthene-d10	(3)	8.171	164	310493	20.000
99) Acenaphthene	(3)	8.201	153	9481	0.501
100) 2,4-Dinitrophenol	(3)	8.238	184	3333	2.363
103) 4-Nitrophenol	(3)	8.306	109	7791	2.372

M = Compound was manually integrated.
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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	3152	0.492
105) 2,4-Dinitrotoluene	(3)	8.367	165	2878	0.513
104) Dibenzofuran	(3)	8.373	168	13586	0.524
106) 1-Naphthylamine	(3)	8.447	143	10096	0.474
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	1716	0.462
108) 2-Naphthylamine	(3)	8.527	143	11544	0.529
109) Diethylphthalate	(3)	8.632	149	11743	0.545
110) Thionazin	(3)	8.706	107	3537	0.745
111) Fluorene	(3)	8.706	166	11352	0.509
113) 5-Nitro-o-toluidine	(3)	8.718	152	2664	0.452
114) 4-Nitroaniline	(3)	8.718	138	3036	0.509
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	4955	0.499
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	3100	1.406
117) N-Nitrosodiphenylamine	(4)	8.835	169	9561	0.499
202) NDPA as diphenylamine	(4)	8.835	169	9561	0.498
118) 1,2-Diphenylhydrazine	(4)	8.878	77	14940	0.545
119)$2,4,6-Tribromophenol	(3)	8.939	330	1588	0.423
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3188	0.816
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	728M	0.502
122) Diallate (peak 1)	(4)	9.136	86	5379	0.383
124) Phenacetin	(4)	9.142	108	6266	0.474
123) Phorate	(4)	9.142	75	7915	0.468
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2742	0.520
126) Diallate (peak 2)	(4)	9.216	86	1405M	0.231
127) Hexachlorobenzene	(4)	9.240	284	2828	0.543
128) Dimethoate	(4)	9.290	87	5568	0.539
130) Atrazine	(4)	9.376	200	3843	0.627
131) Pentachlorophenol	(4)	9.437	266	886	0.307
133) 4-Aminobiphenyl	(4)	9.443	169	10935	0.528
132) Pentachloronitrobenzene	(4)	9.450	237	895M	0.396
134) Pronamide	(4)	9.529	173	4751	0.476
135)*Phenanthrene-d10	(4)	9.616	188	571166	20.000
136) Dinoseb	(4)	9.640	211	706M	0.237
137) Phenanthrene	(4)	9.640	178	17539	0.528
138) Anthracene	(4)	9.689	178	17770	0.520
140) Carbazole	(4)	9.849	167	17049	0.511
141) Methyl parathion	(4)	10.009	109	2488	0.402
142) Di-n-butylphthalate	(4)	10.237	149	19749	0.502
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	505M	0.224
143) Parathion	(4)	10.396	109	1848	0.406

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

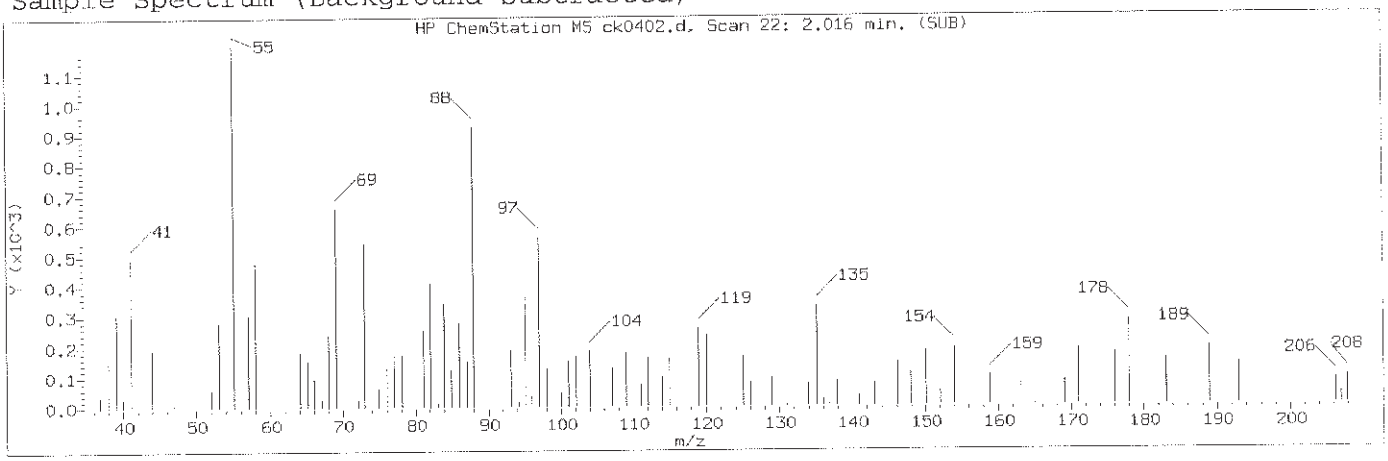
Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	2126	0.566
147) Fluoranthene	(4)	10.796	202	17969	0.484
152) Benzidine	(5)	10.944	184	112842	3.924
167)*Pyrene-d10	(5)	10.999	212	702415	20.000
154) Pyrene	(5)	11.011	202	20471	0.525
156)$Terphenyl-d14	(5)	11.196	244	24851	0.495
158) p-Dimethylaminoazobenzene	(5)	11.337	225	3730	0.491
159) Chlorobenzilate	(5)	11.392	139	5584	0.472
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	12285	0.511
161) Butylbenzylphthalate	(5)	11.694	149	9239	0.496
162) 2-Acetylaminofluorene	(5)	11.897	181	6778	0.402
164) 3,3'-Dichlorobenzidine	(5)	12.179	252	6353	0.468
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	2765	0.417
166) Benzo(a)anthracene	(5)	12.192	228	17291	0.481
168) Chrysene	(5)	12.223	228	17453	0.503
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	15494	0.600
189) 6-Methylchrysene	(5)	12.678	242	12618	0.493
170) Di-n-octylphthalate	(6)	12.936	149	21571	0.454
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7301	0.408
172) Benzo(b)fluoranthene	(6)	13.243	252	17114	0.445
173) Benzo(k)fluoranthene	(6)	13.268	252	19921	0.508
174) Benzo(a)pyrene	(6)	13.551	252	20650	0.550
175)*Perylene-d12	(6)	13.606	264	629898	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	8691	0.462
190) Dibenz(a,h)acridine	(6)	14.399	279	12323	0.452
191) Dibenz(a,j)acridine	(6)	14.442	279	14068	0.449
177) Indeno(1,2,3-cd)pyrene	(6)	14.620	276	19278	0.483
178) Dibenz(a,h)anthracene	(6)	14.651	278	15572	0.466
179) Benzo(g,h,i)perylene	(6)	14.903	276	16966	0.499
129) Diallate TRANS/CIS	(4)			6784	0.563

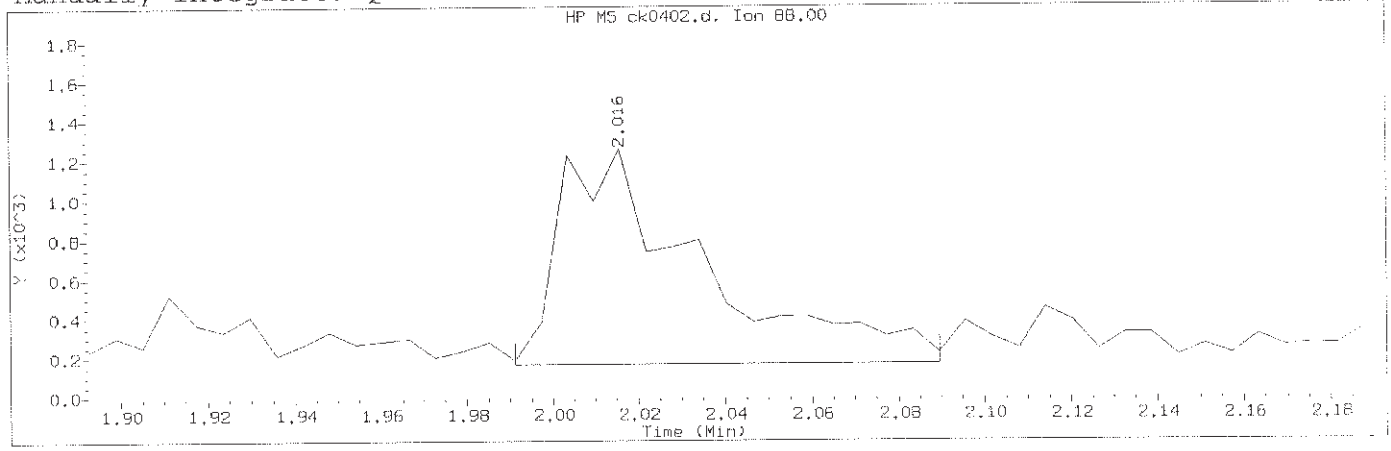
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 22		
Retention Time (minutes)	: 2.016		
Quant Ion	: 88.00		
Area (flag)	: 2502M		
On-Column Amount (ng/ul)	: 0.6680		
Integration start scan	: 17	Integration stop scan:	33
Y at integration start	: 164	Y at integration end:	164

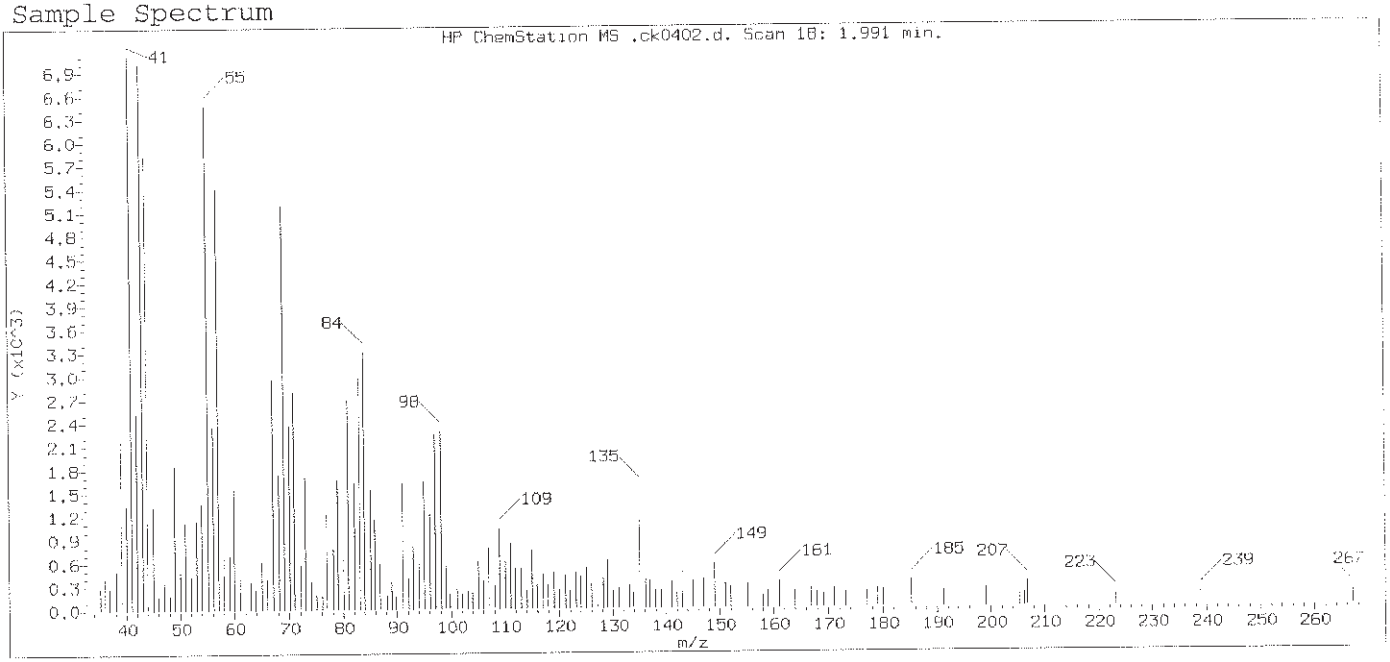
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

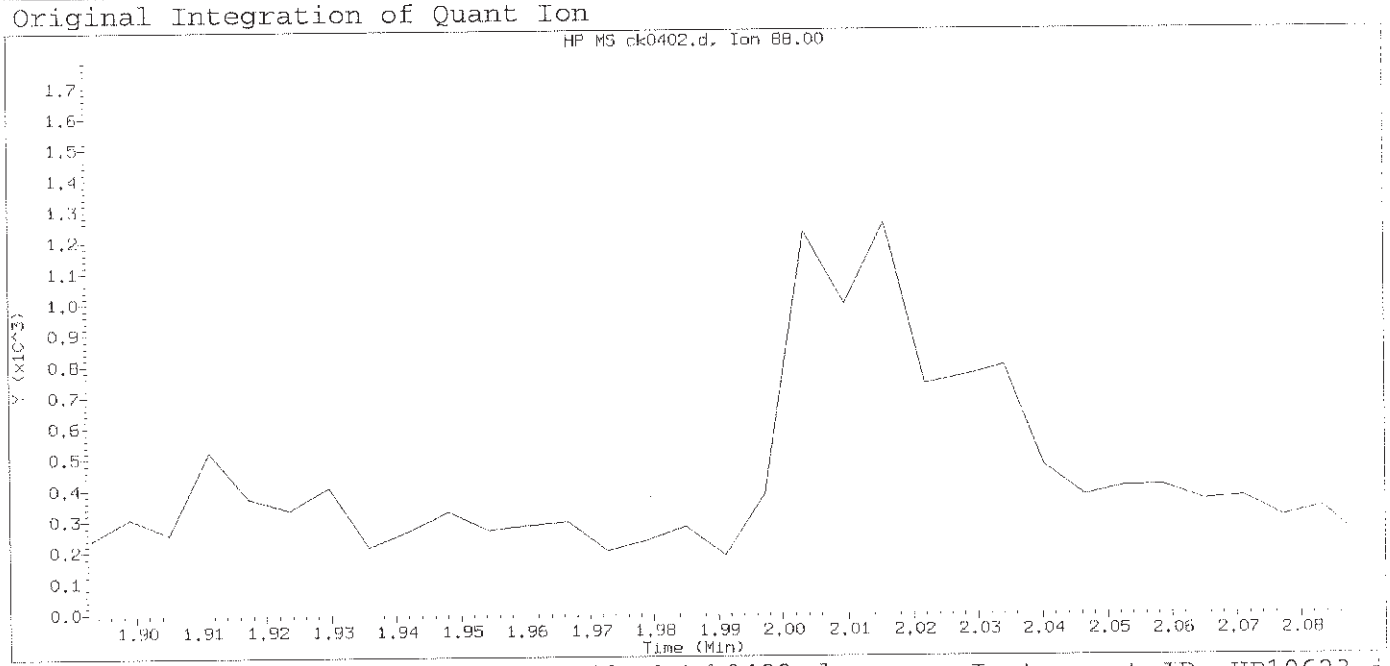
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

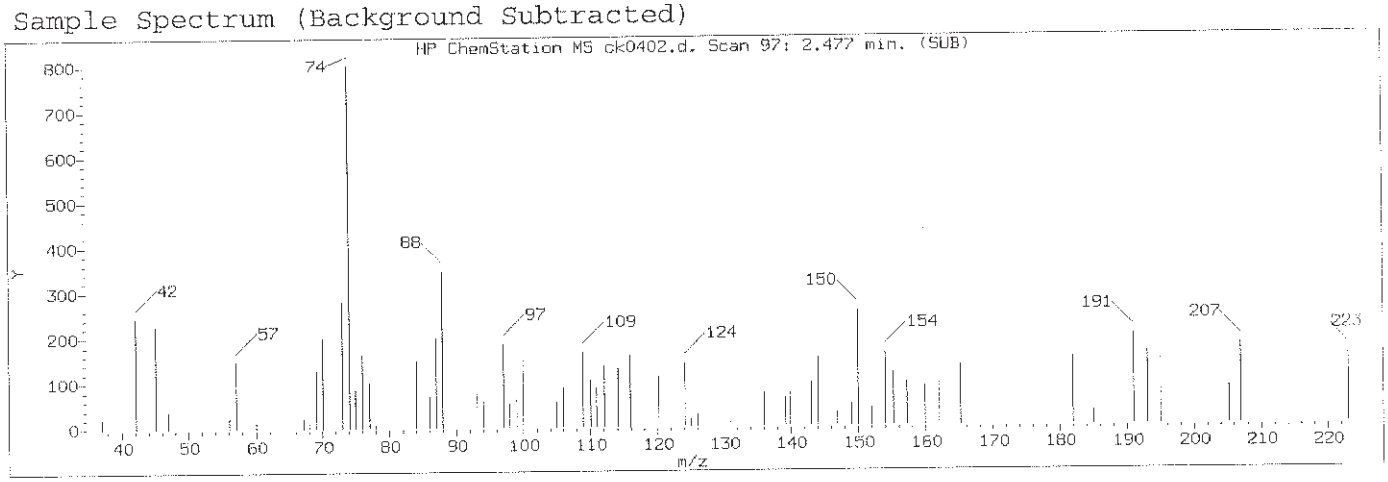
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

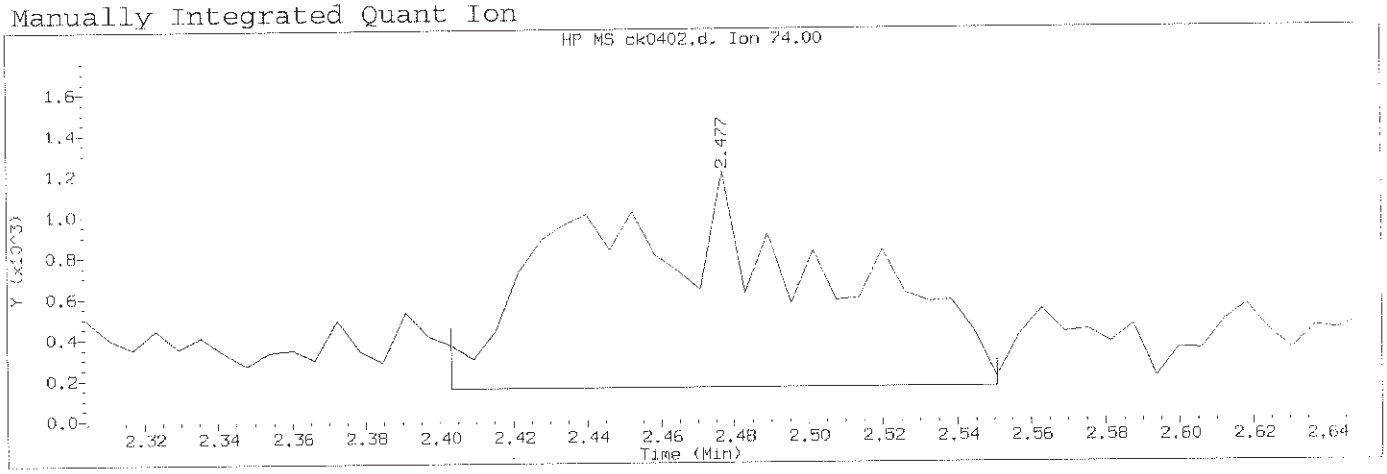
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.991
Quant Ion : 88.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

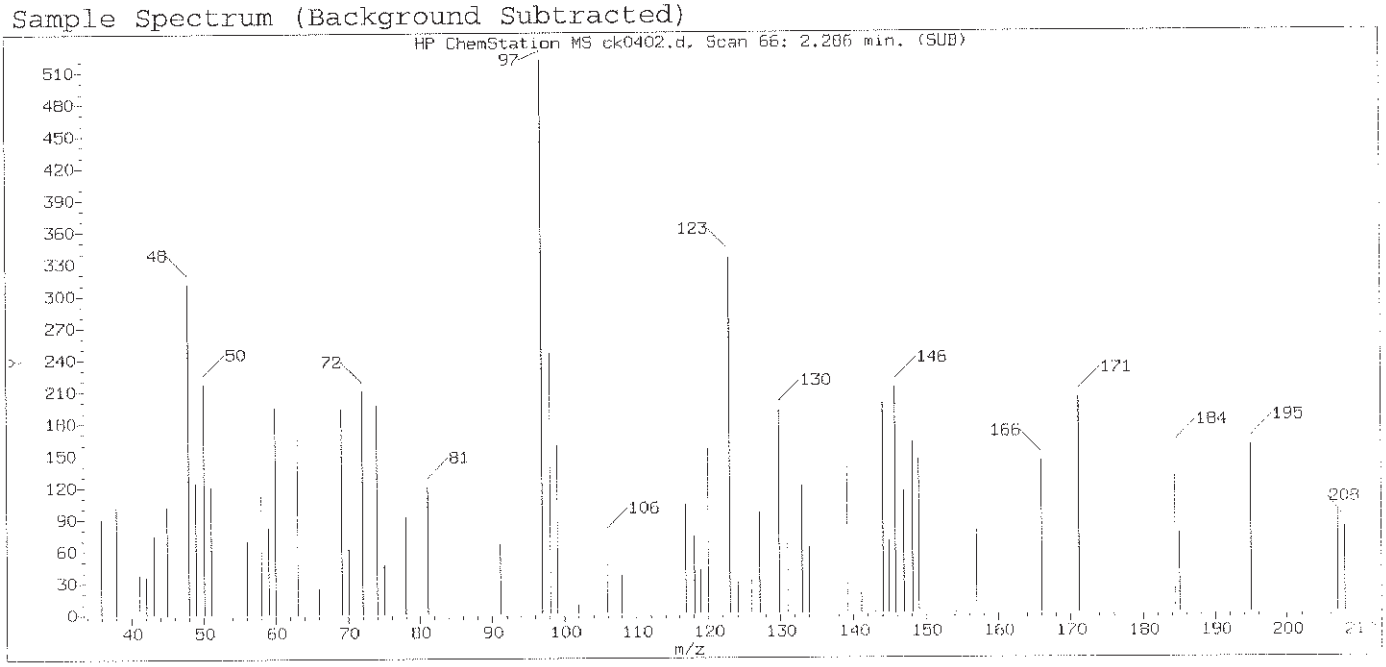
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 97		
Retention Time (minutes)	: 2.477		
Quant Ion	: 74.00		
Area (flag)	: 4899M		
On-Column Amount (ng/ul)	: 0.7065		
Integration start scan	: 84	Integration stop scan:	108
Y at integration start	: 152	Y at integration end:	152

Reason for manual integration: improper integration

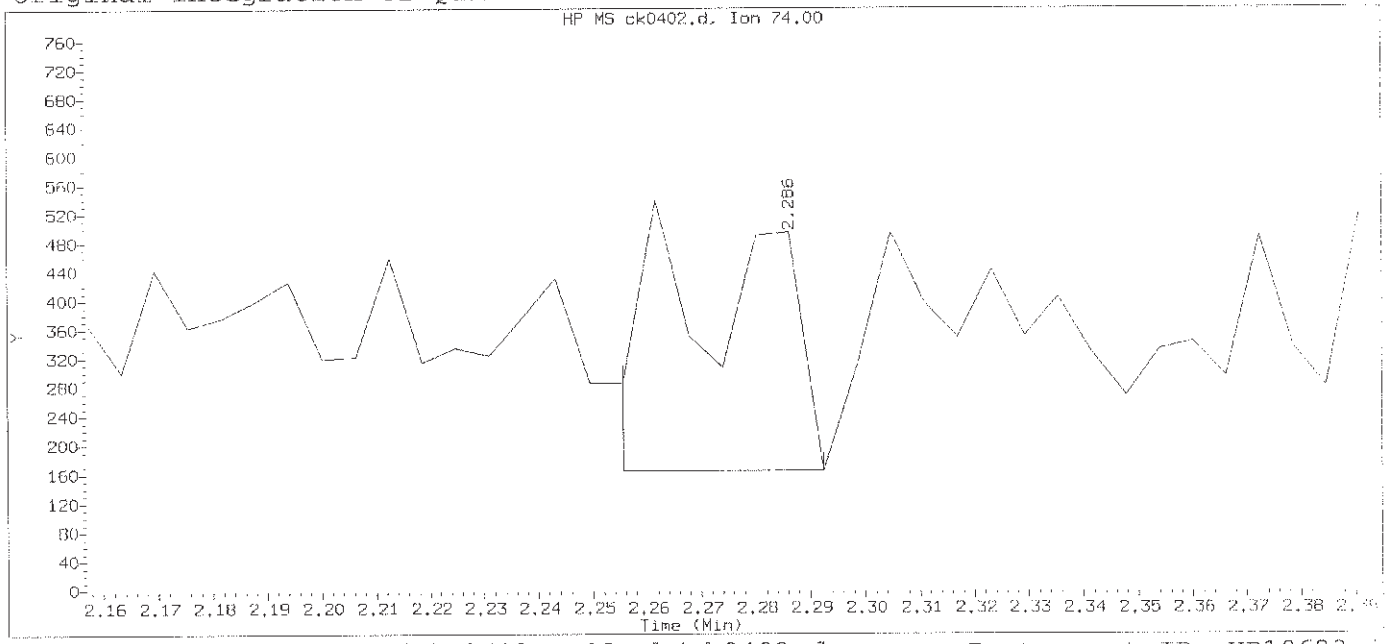
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 66		
Retention Time (minutes)	: 2.286		
Quant Ion	: 74.00		
Area	: 522		
On-column Amount (ng/ul)	: 0.0676		
Integration start scan	: 60	Integration stop scan:	66
Y at integration start	: 165	Y at integration end:	165

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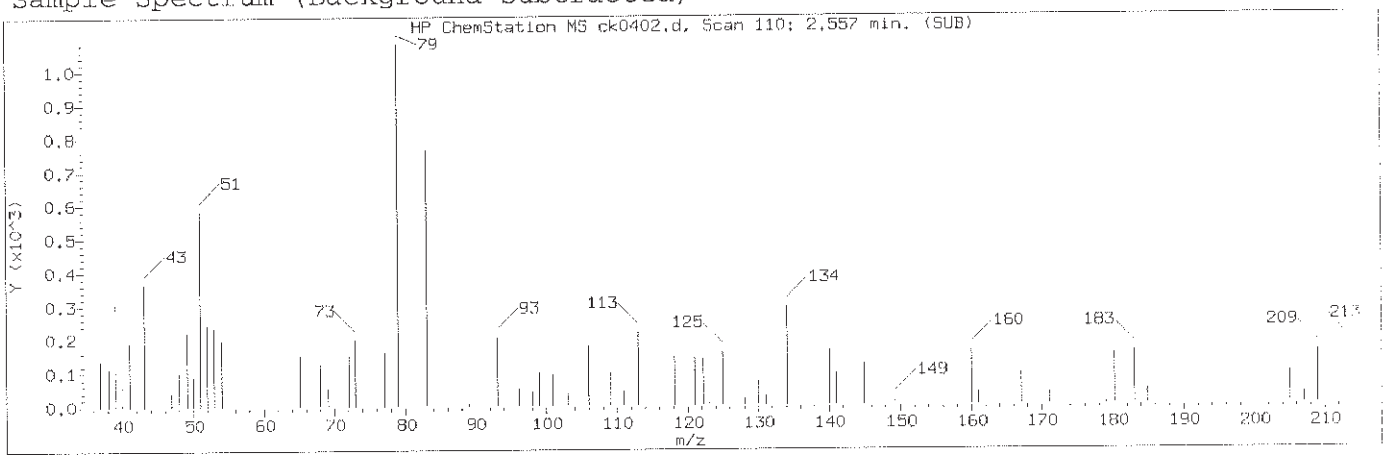
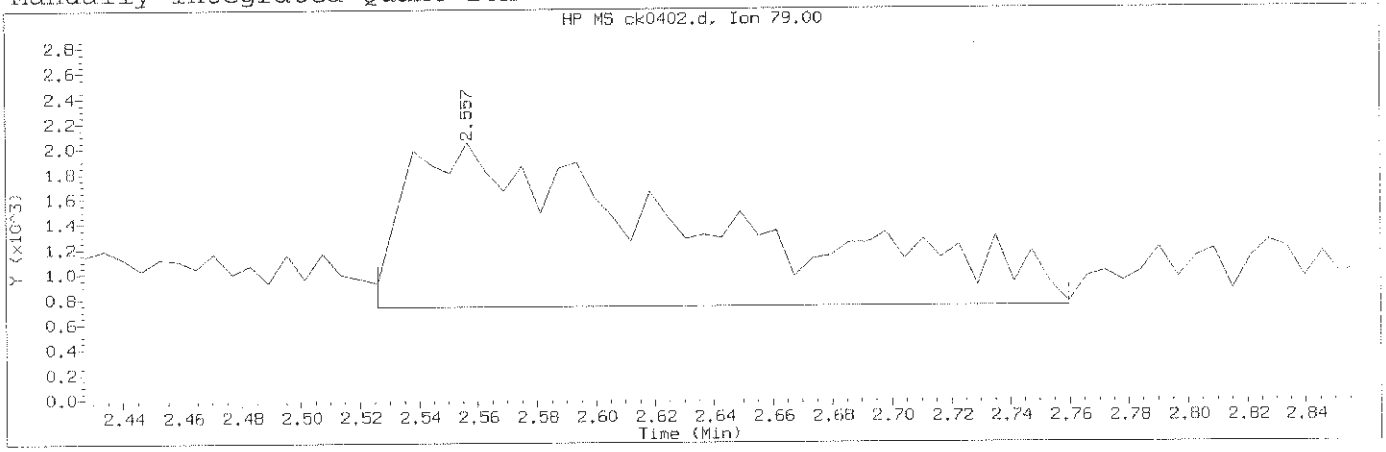
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 9243M		
On-Column Amount (ng/ul)	: 0.8598		
Integration start scan	: 104	Integration stop scan:	142
Y at integration start	: 732	Y at integration end:	732

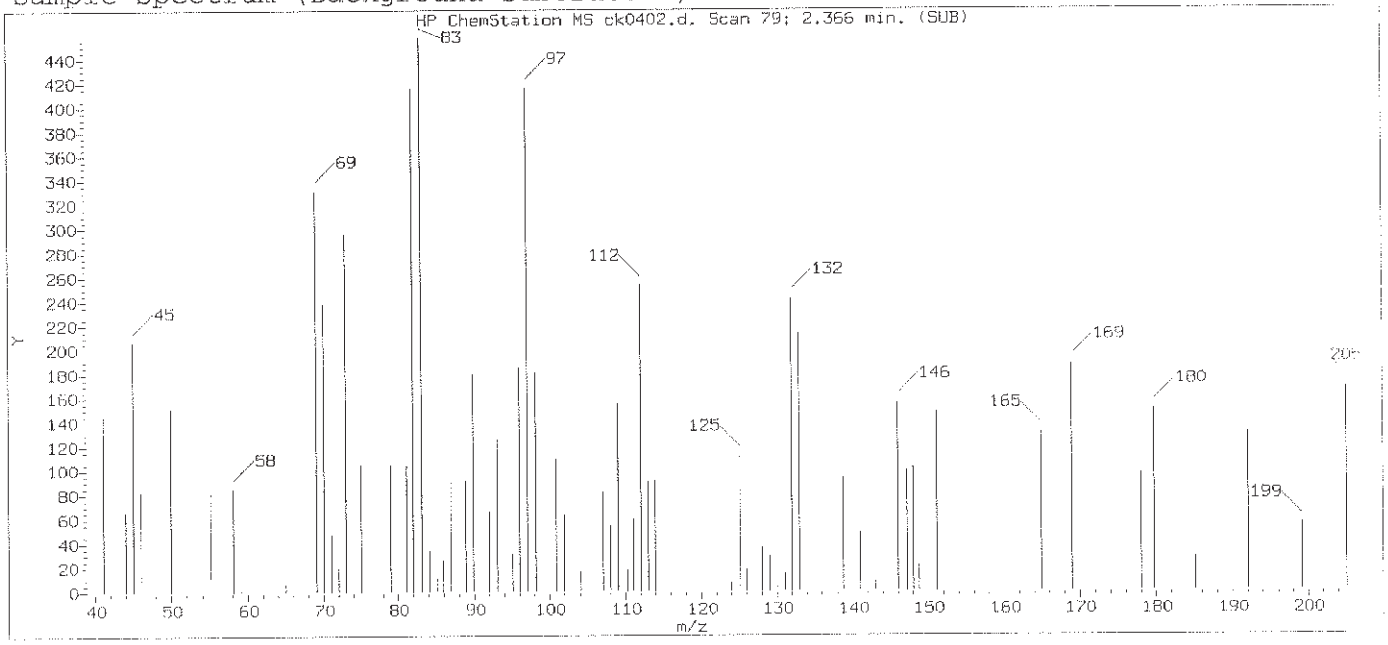
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

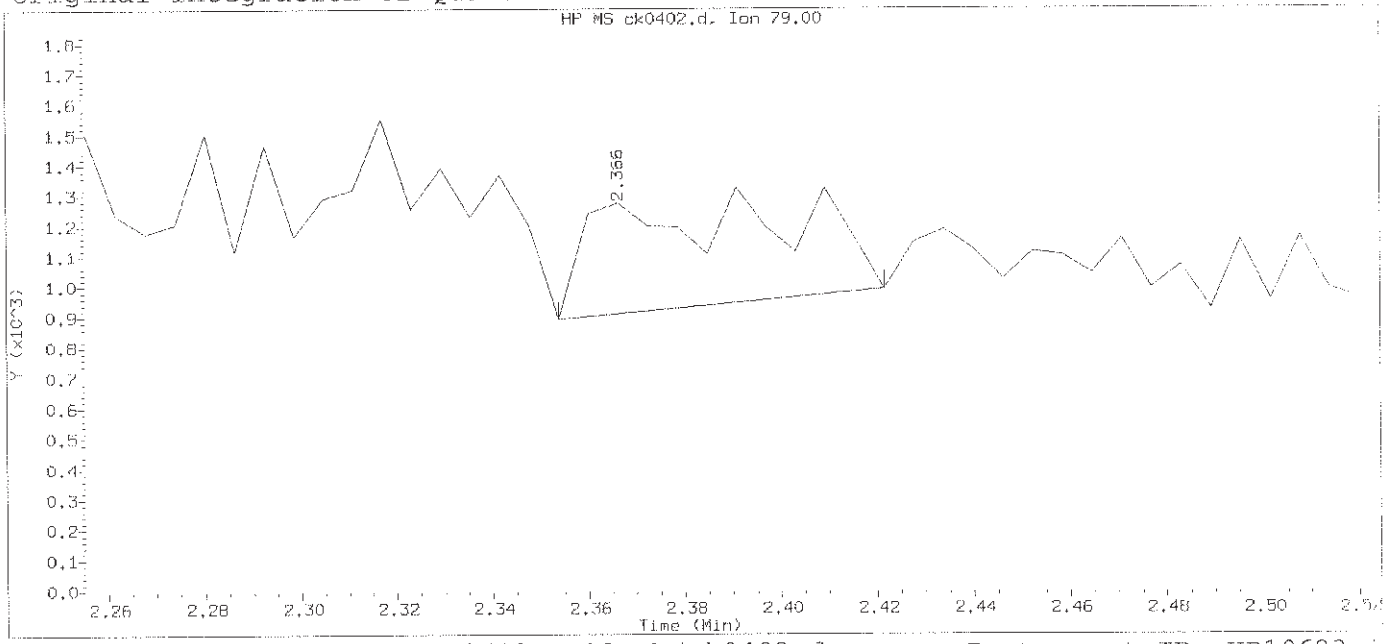
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 79.00		
Area	: 996		
On-column Amount (ng/ul)	: 0.0802		
Integration start scan	: 76	Integration stop scan:	87
Y at integration start	: 893	Y at integration end:	991

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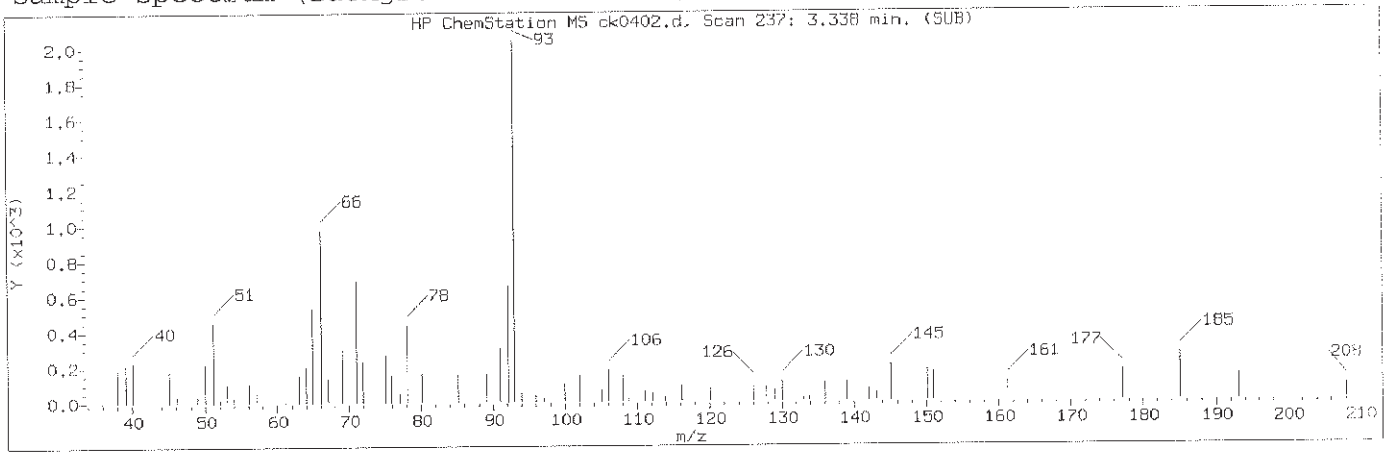
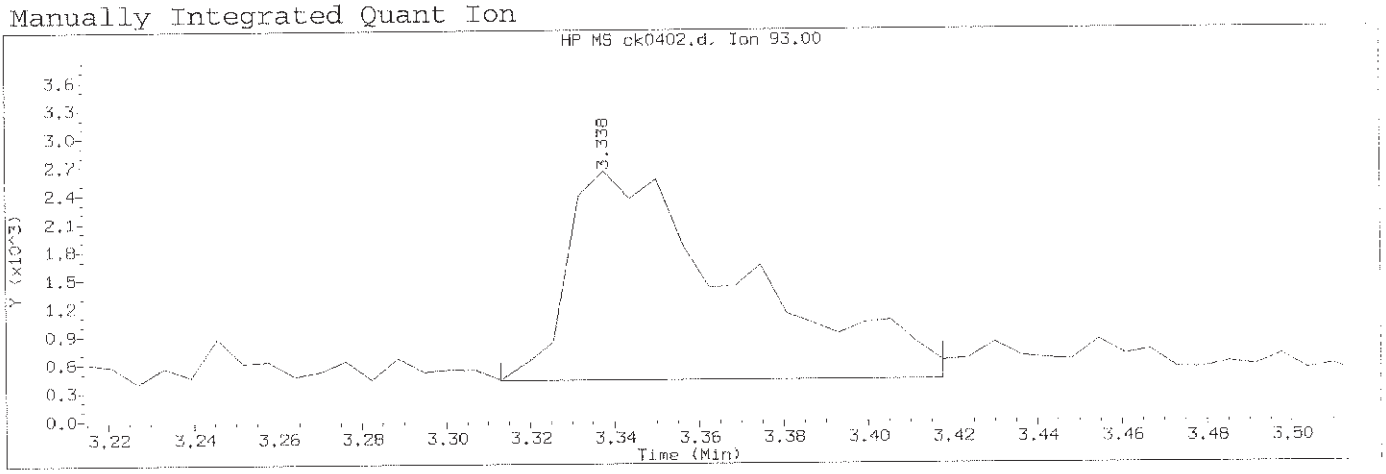
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6292M		
On-Column Amount (ng/ul)	: 0.5736		
Integration start scan	: 232	Integration stop scan:	249
Y at integration start	: 417	Y at integration end:	417

Reason for manual integration: improper integration

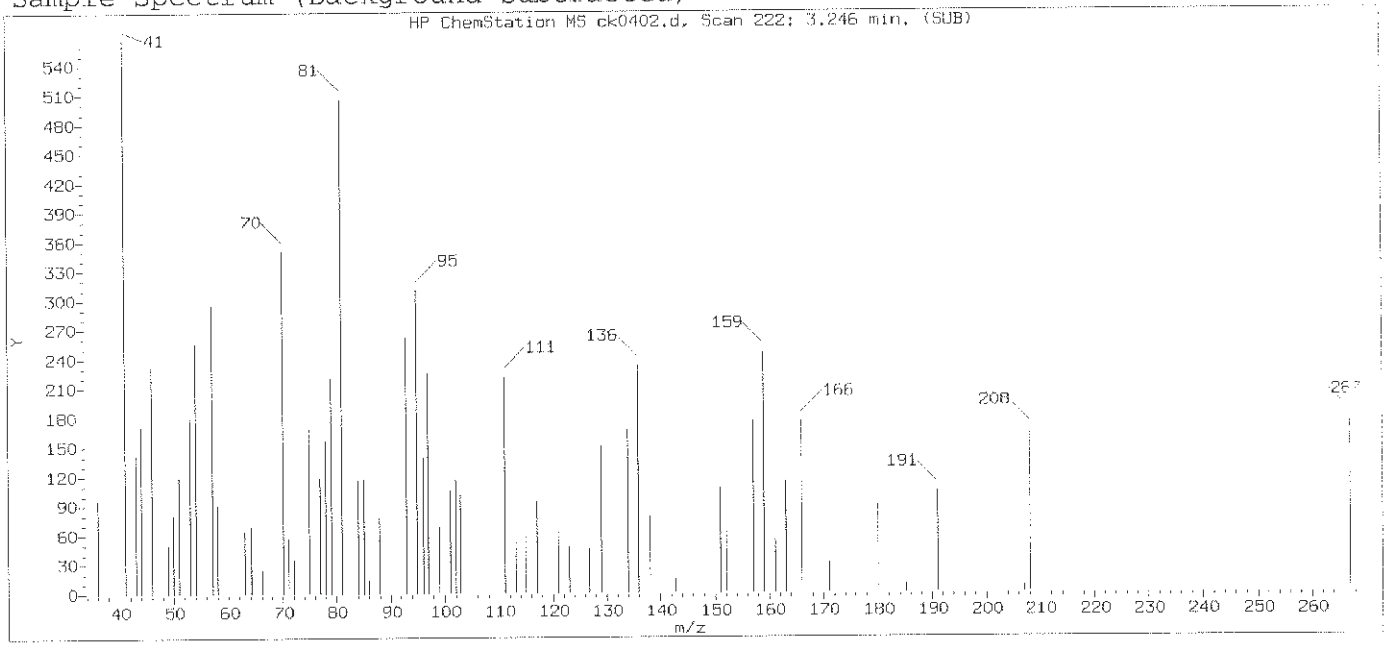
Analyst responsible for change: Digitally signed by Mark A. Clark on 11/13/2013 at 01:16. Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

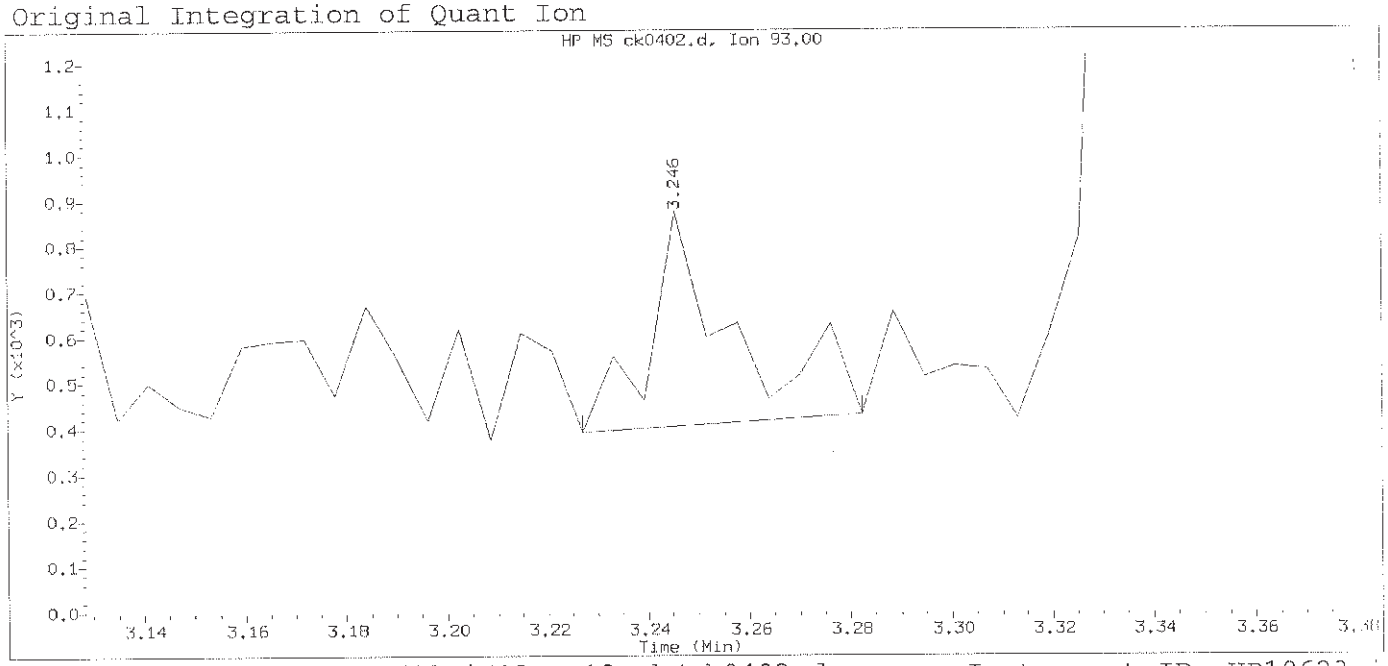
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 222		
Retention Time (minutes)	: 3.246		
Quant Ion	: 93.00		
Area	: 532		
On-column Amount (ng/ul)	: 0.0453		
Integration start scan	: 218	Integration stop scan:	227
Y at integration start	: 391	Y at integration end:	431

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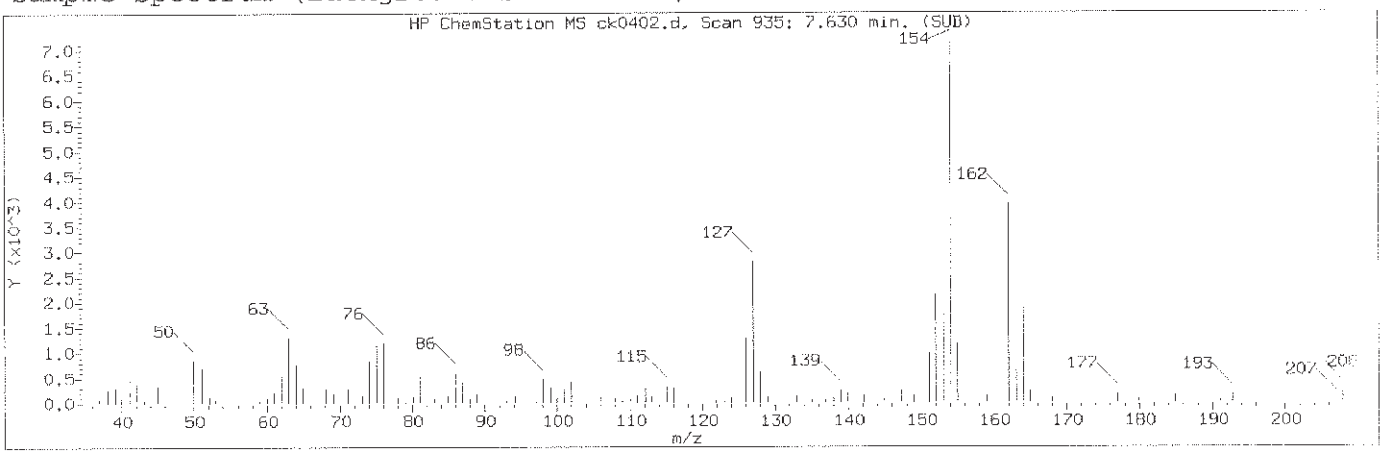
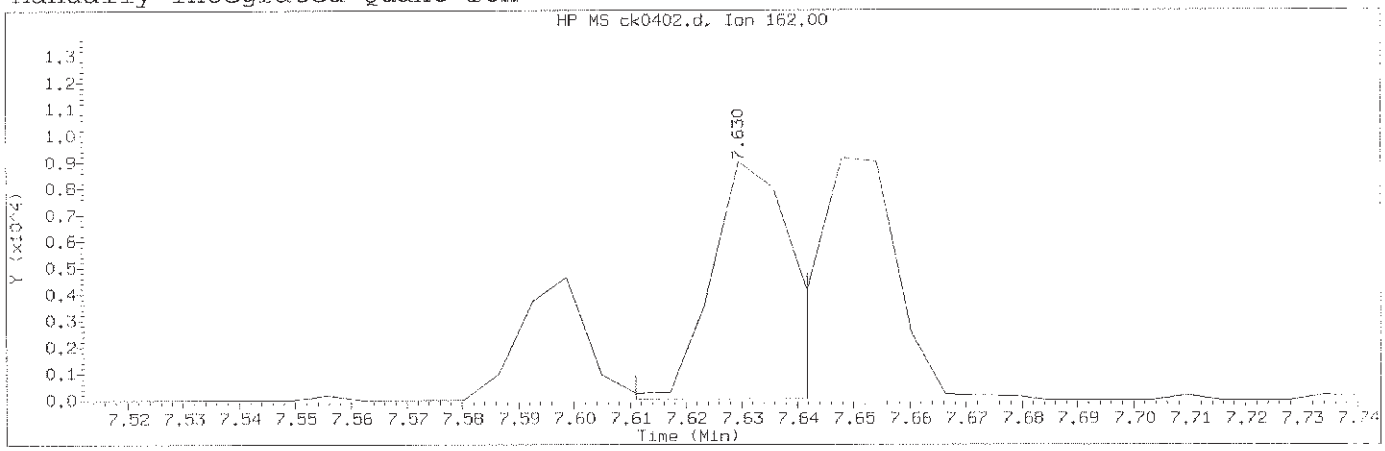
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 9196M		
On-Column Amount (ng/ul)	: 0.5248		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 47	Y at integration end:	54

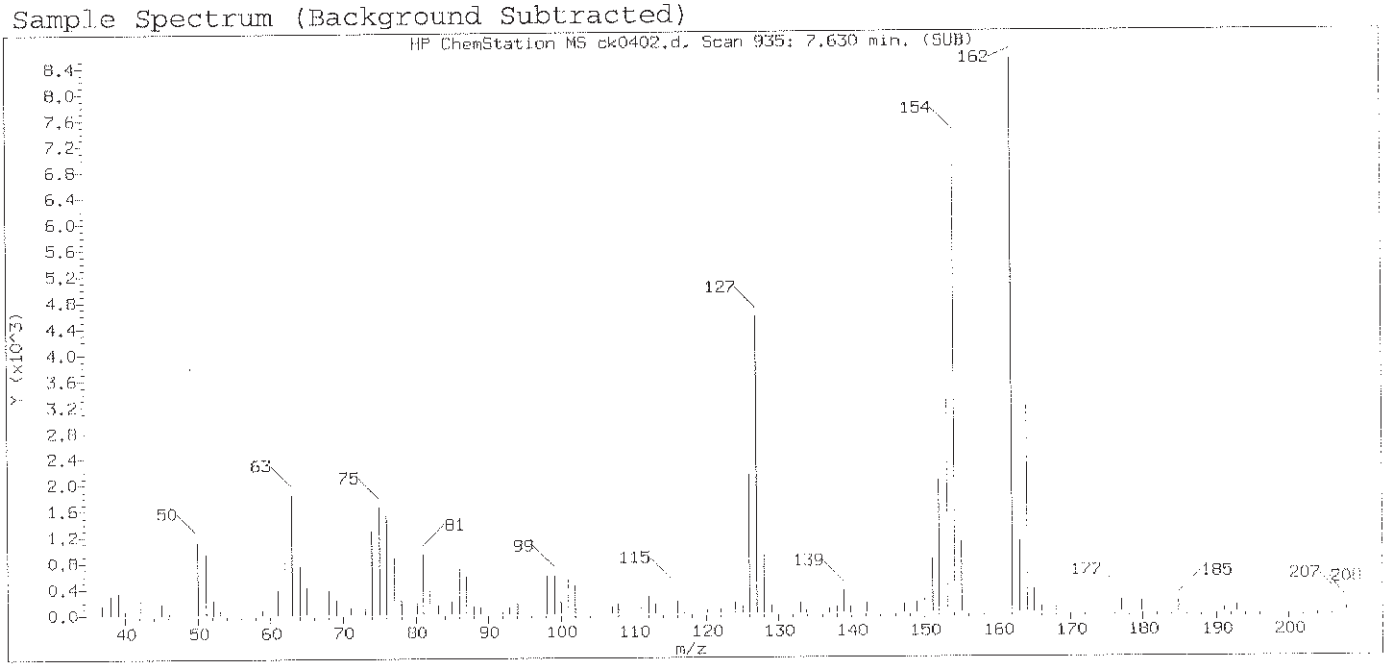
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

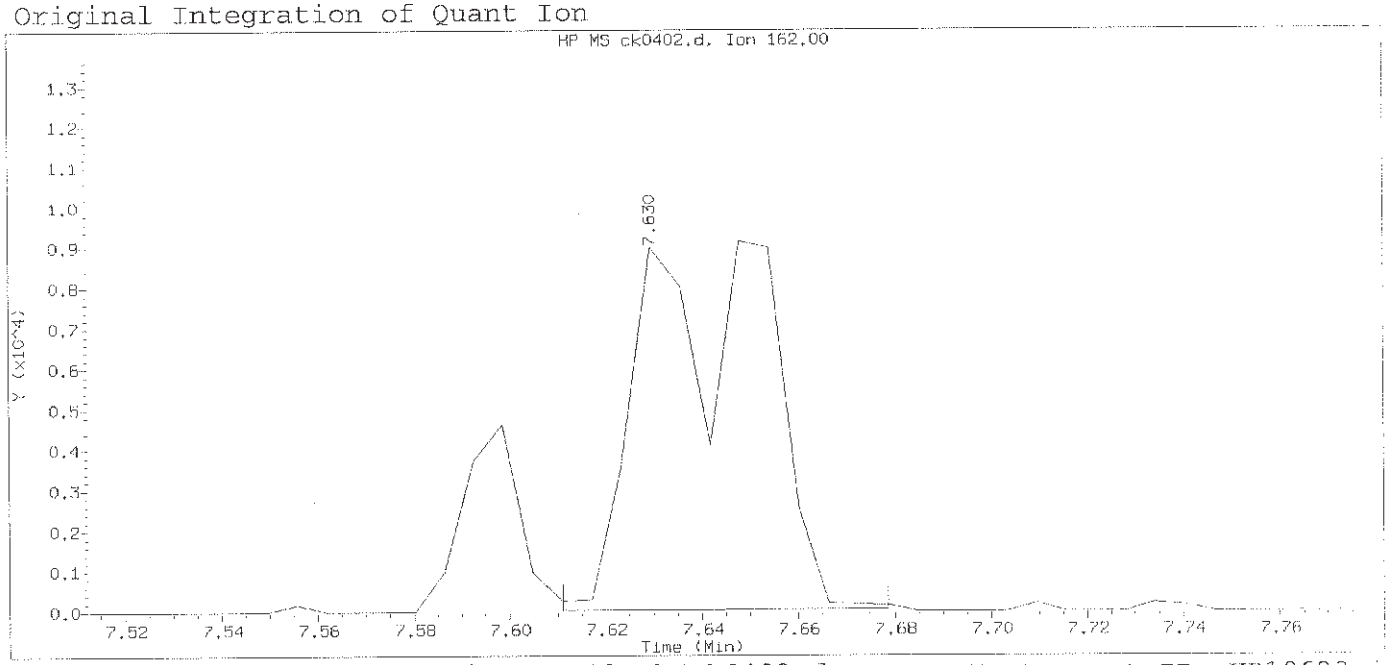
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

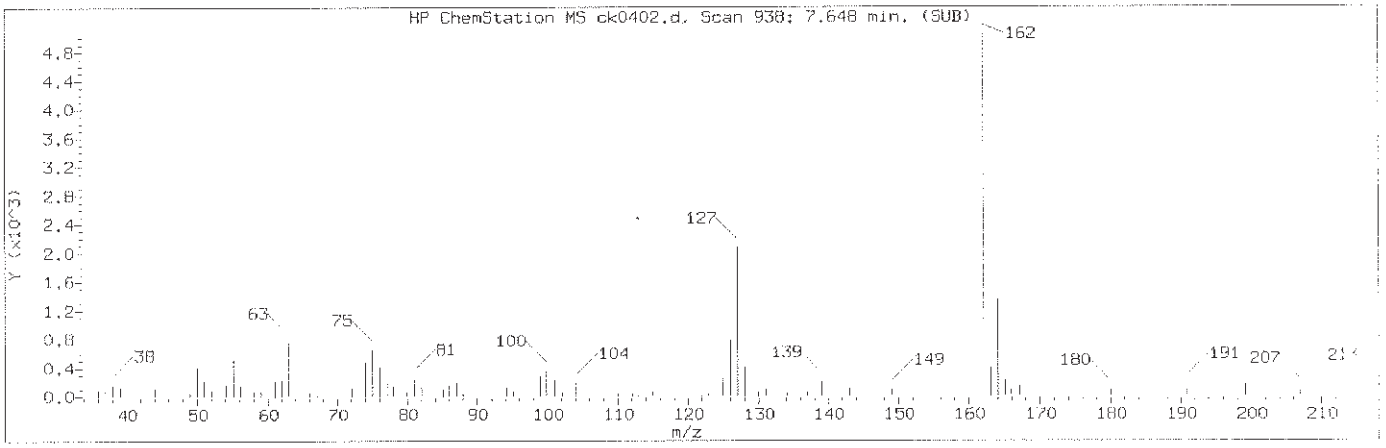
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

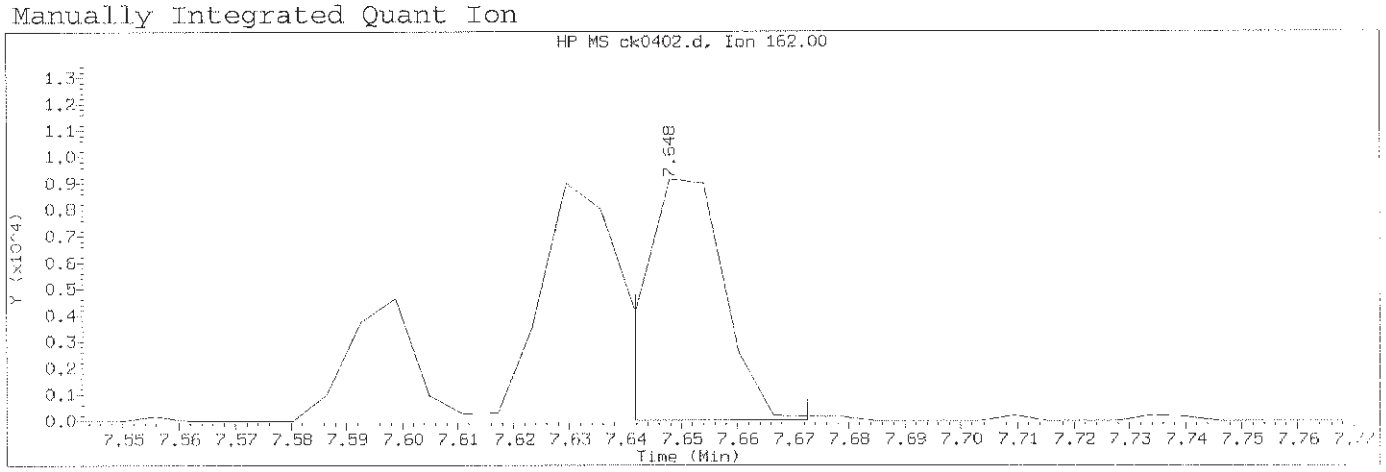
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16846		
On-column Amount (ng/ul)	: 1.0791		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 47	Y at integration end:	63

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 938		
Retention Time (minutes)	: 7.648		
Quant Ion	: 162.00		
Area (flag)	: 9244M		
On-Column Amount (ng/ul)	: 0.5360		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 26	Y at integration end:	26

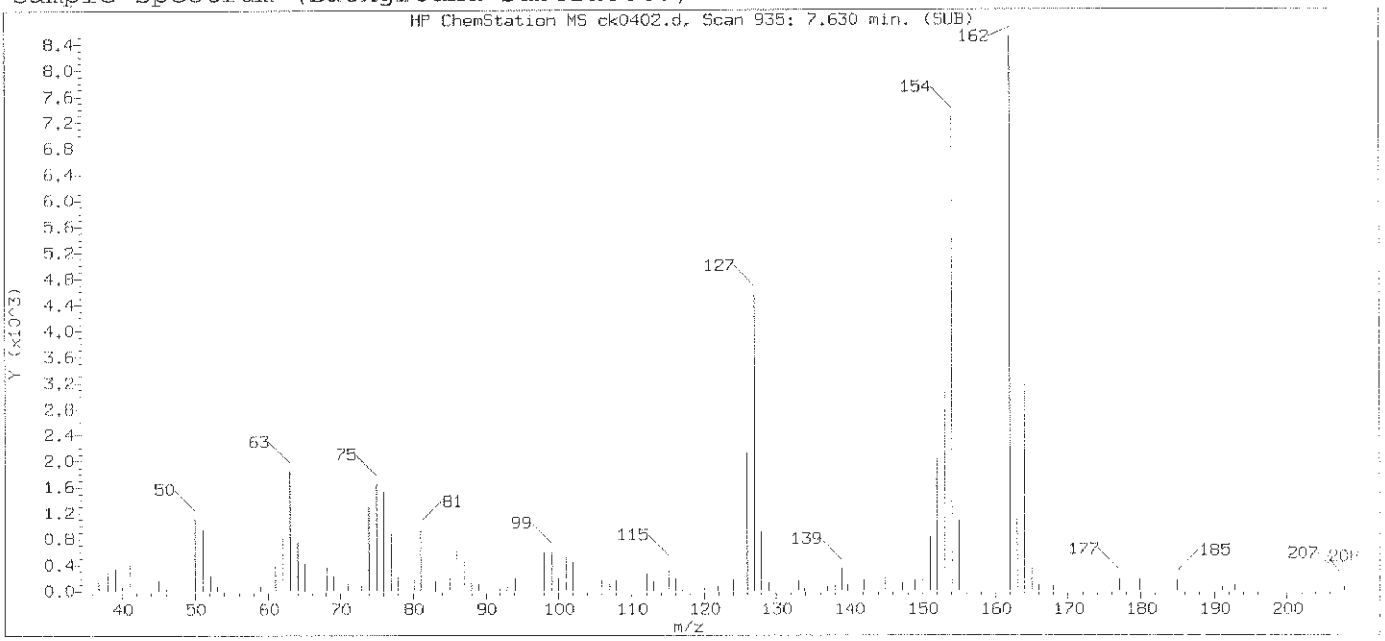
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

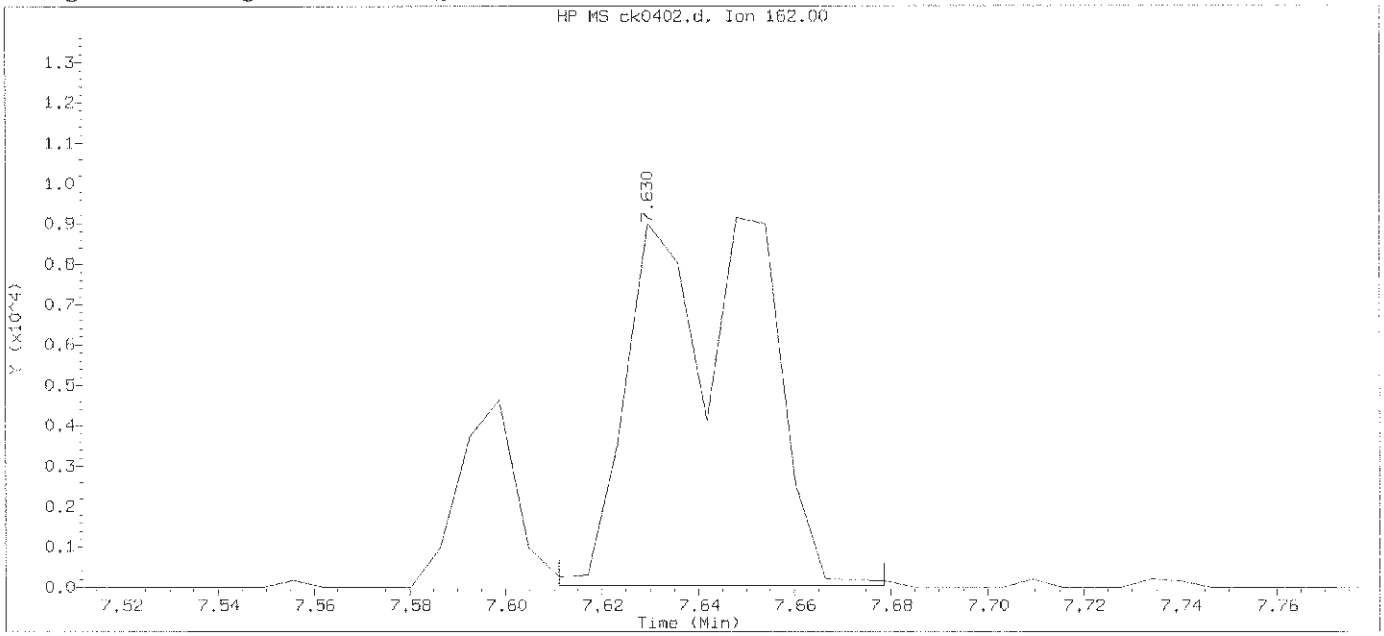
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

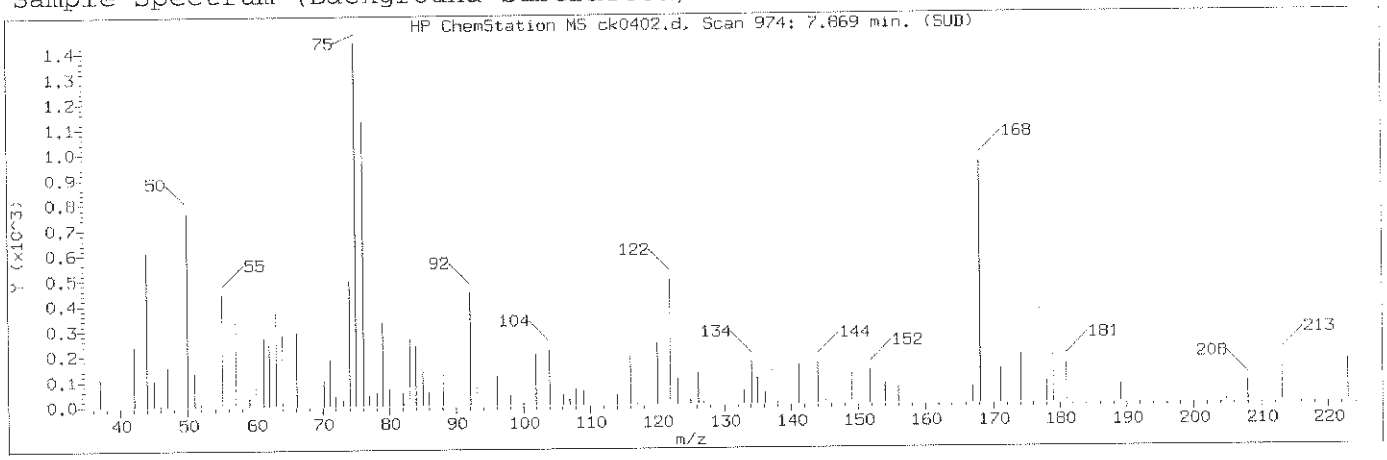
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

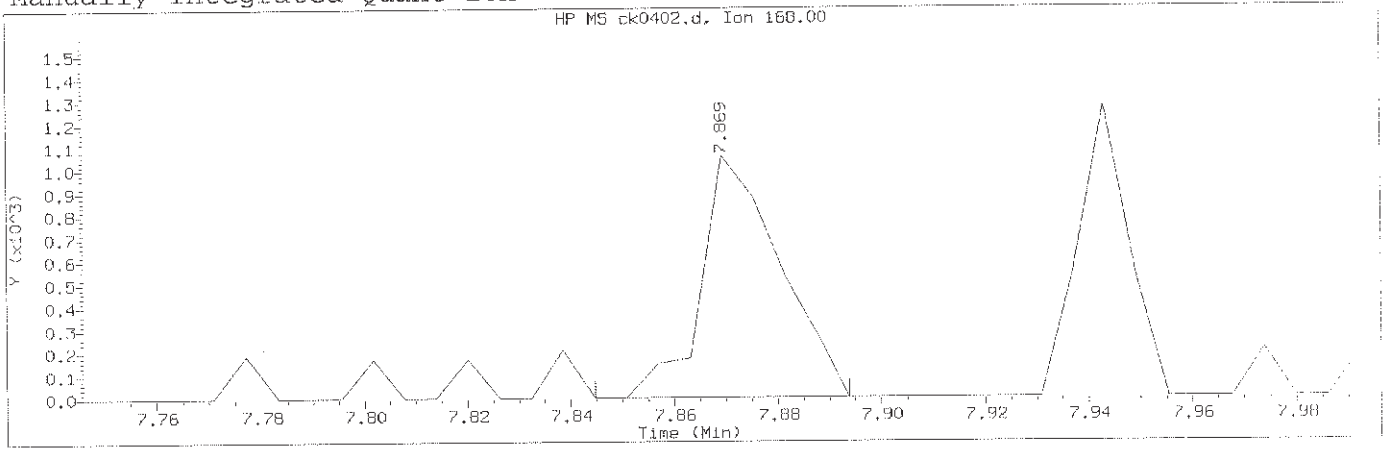
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16903		
On-column Amount (ng/ul)	: 0.9764		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 41	Y at integration end:	41

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 974		
Retention Time (minutes)	: 7.869		
Quant Ion	: 168.00		
Area (flag)	: 1124M		
On-Column Amount (ng/ul)	: 0.5059		
Integration start scan	: 969	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

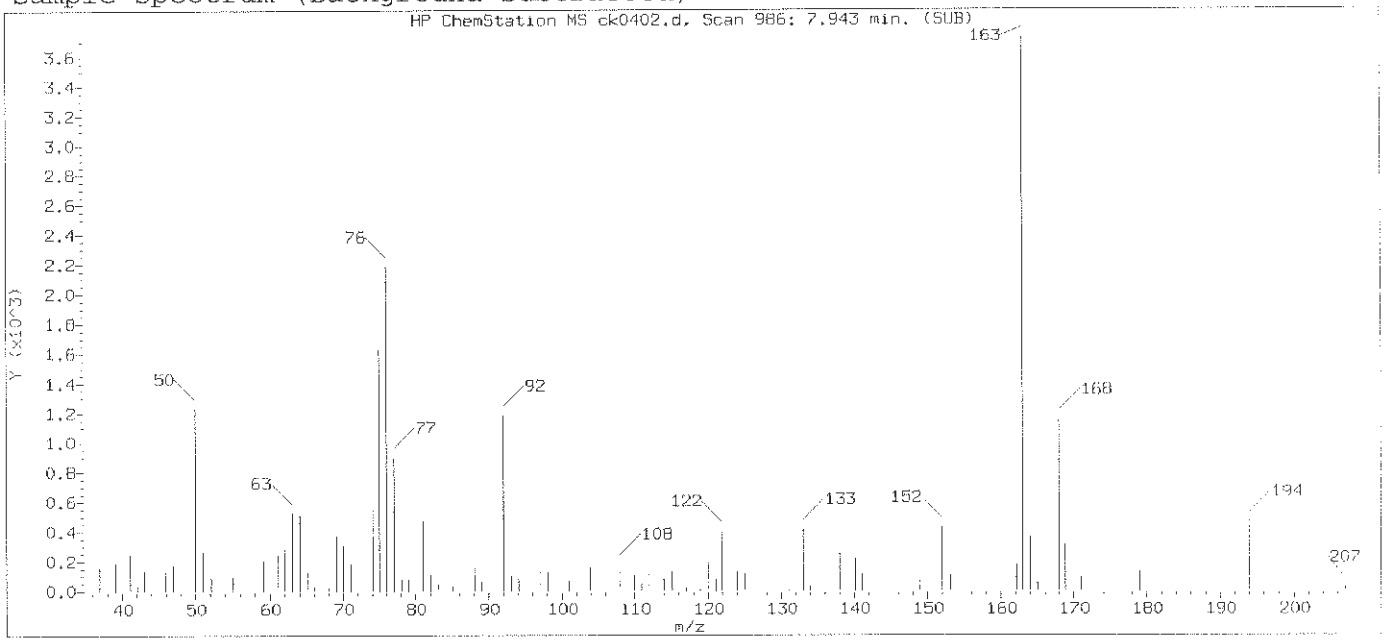
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.0 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

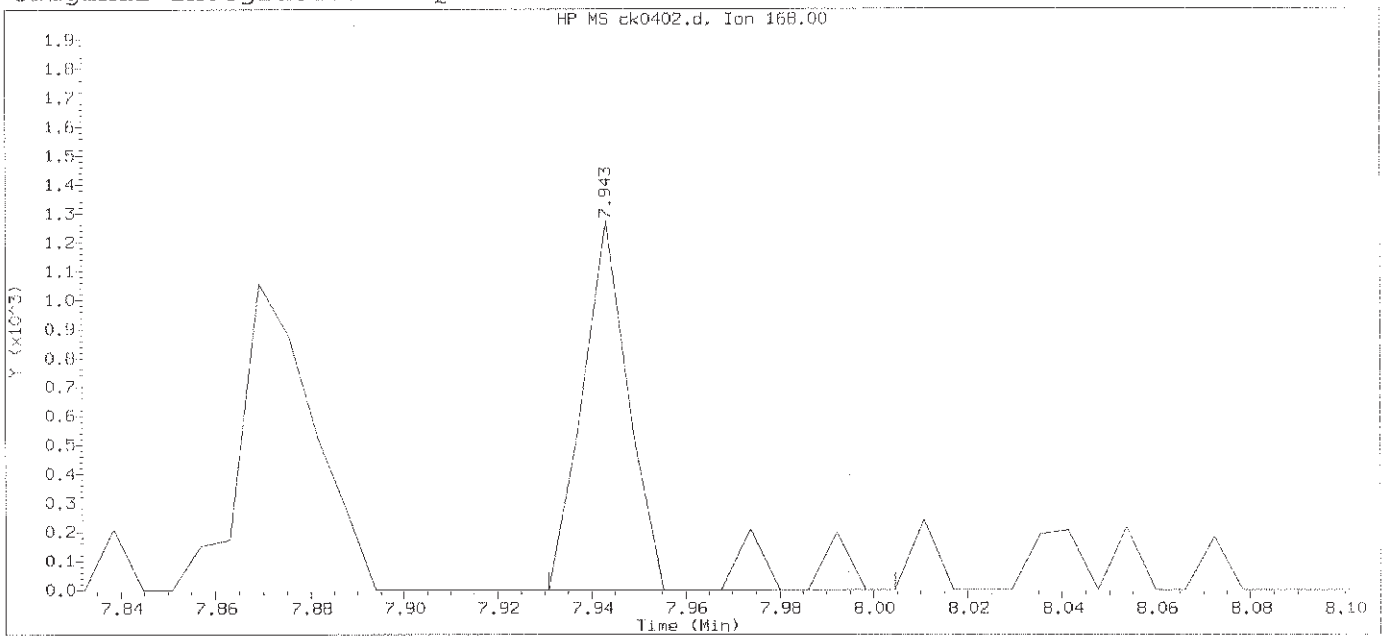
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

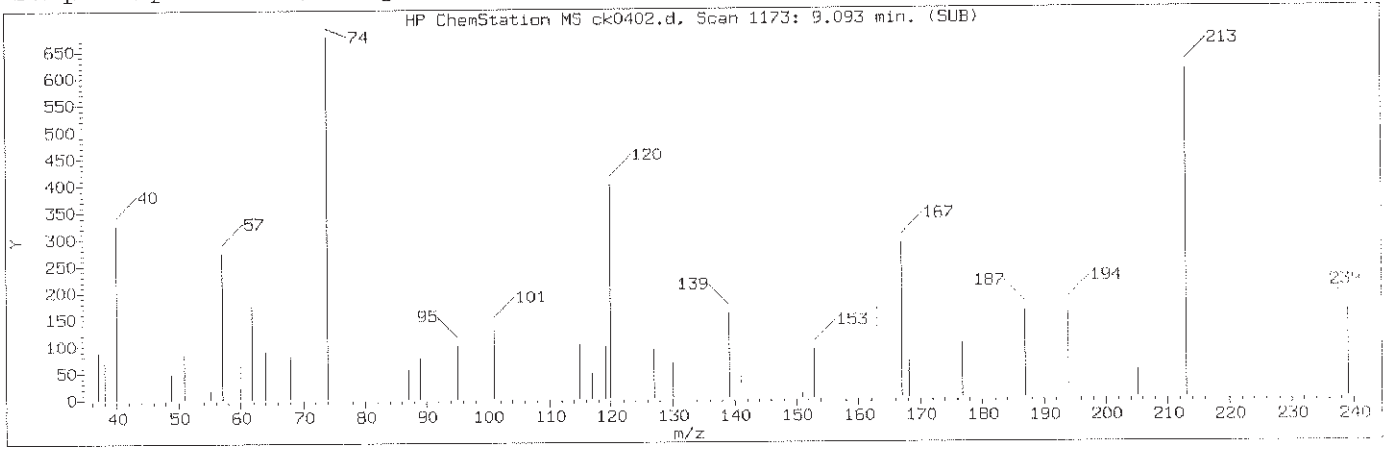
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

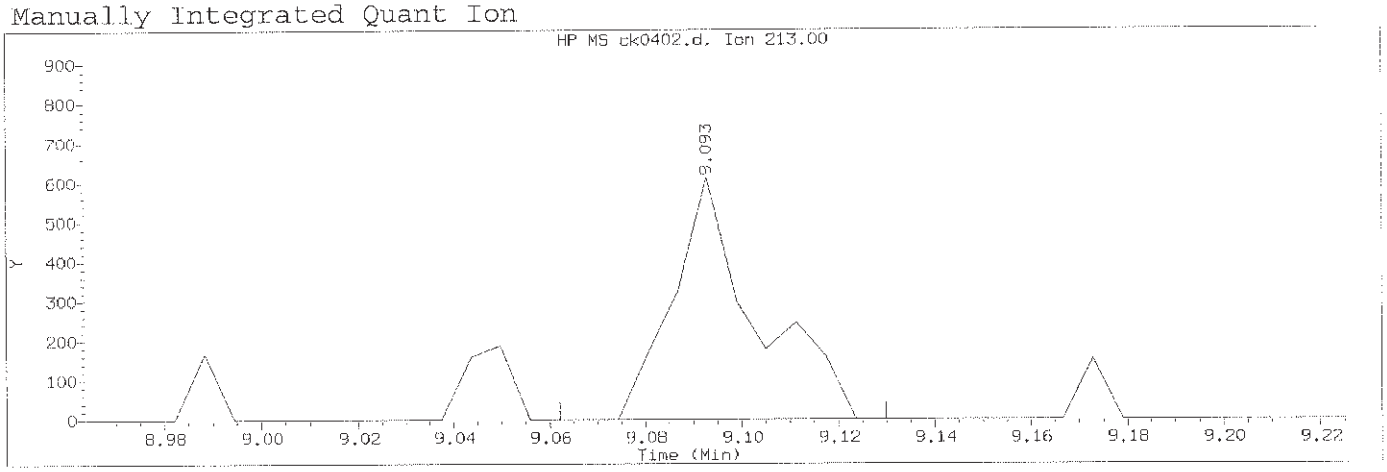
Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area	: 1011		
On-column Amount (ng/ul)	: 0.4897		
Integration start scan	: 983	Integration stop scan:	995
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

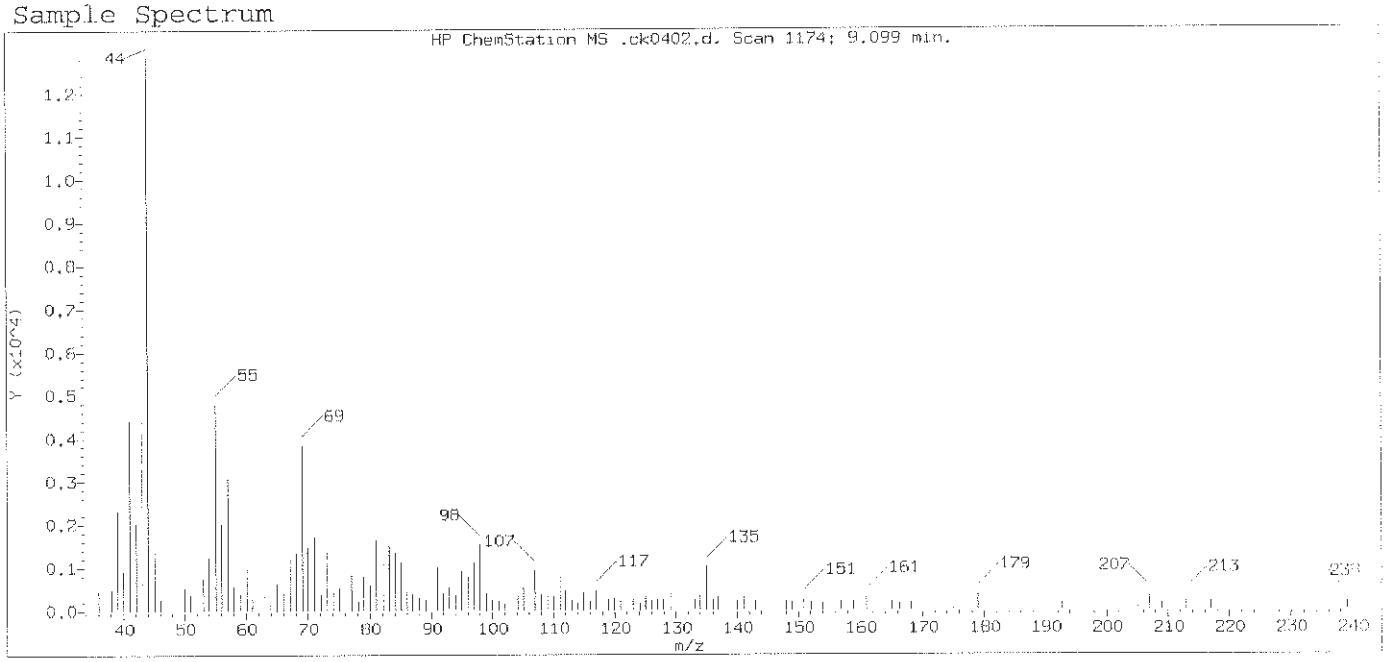
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 728M		
On-Column Amount (ng/ul)	: 0.5016		
Integration start scan	: 1167	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

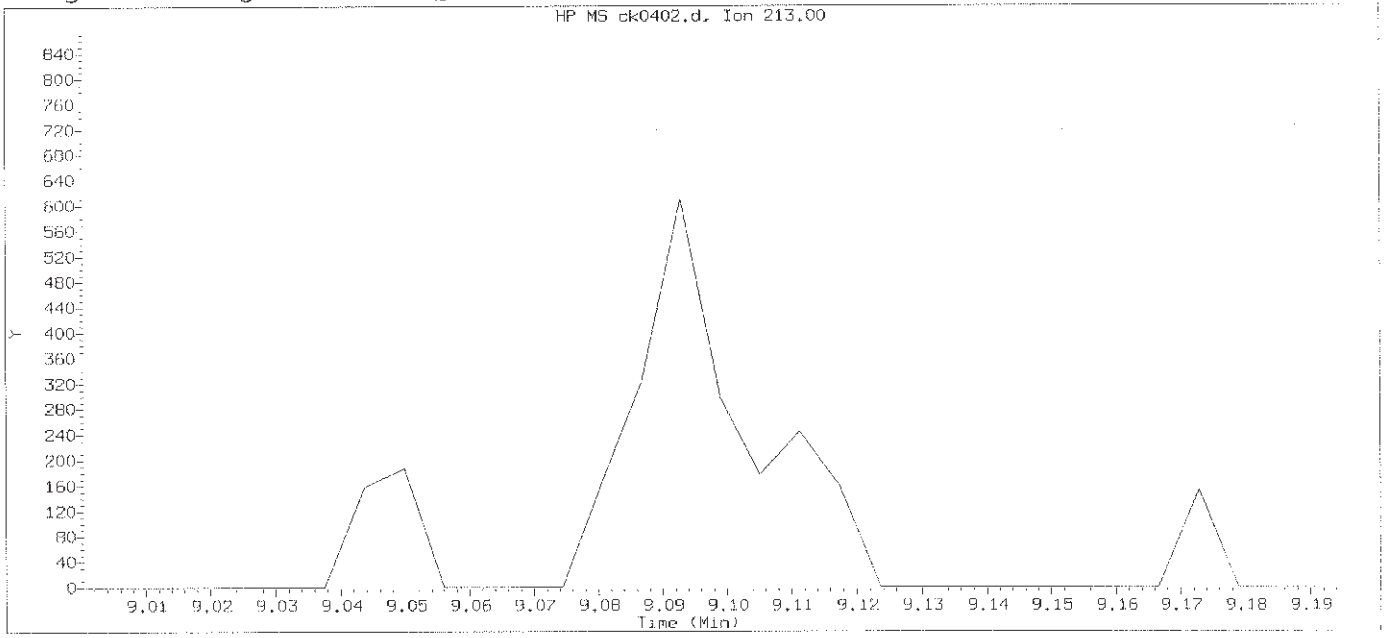
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

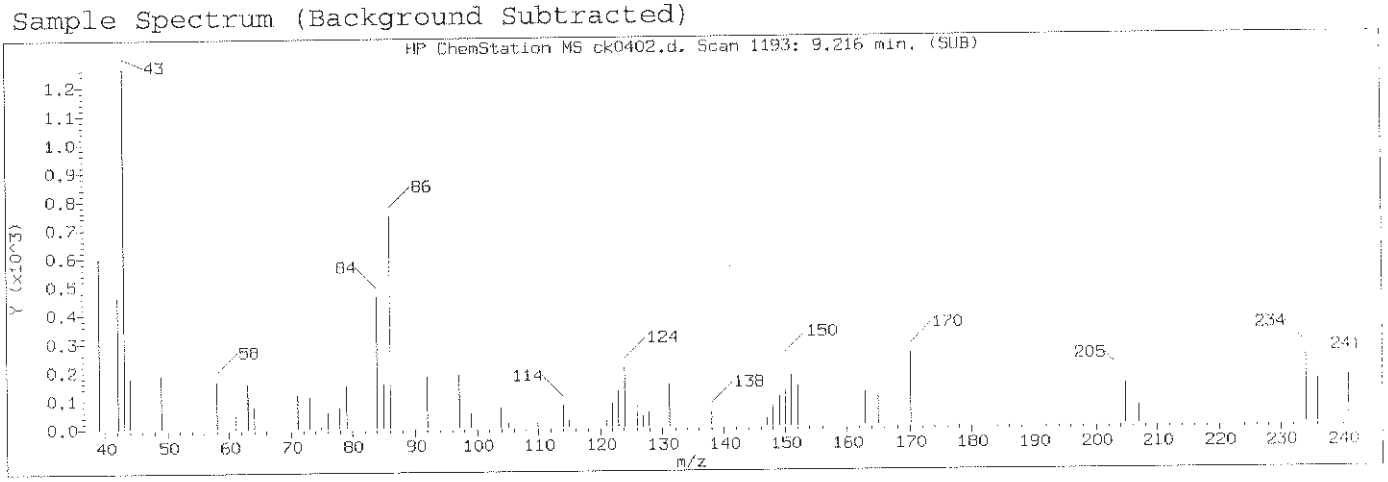
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

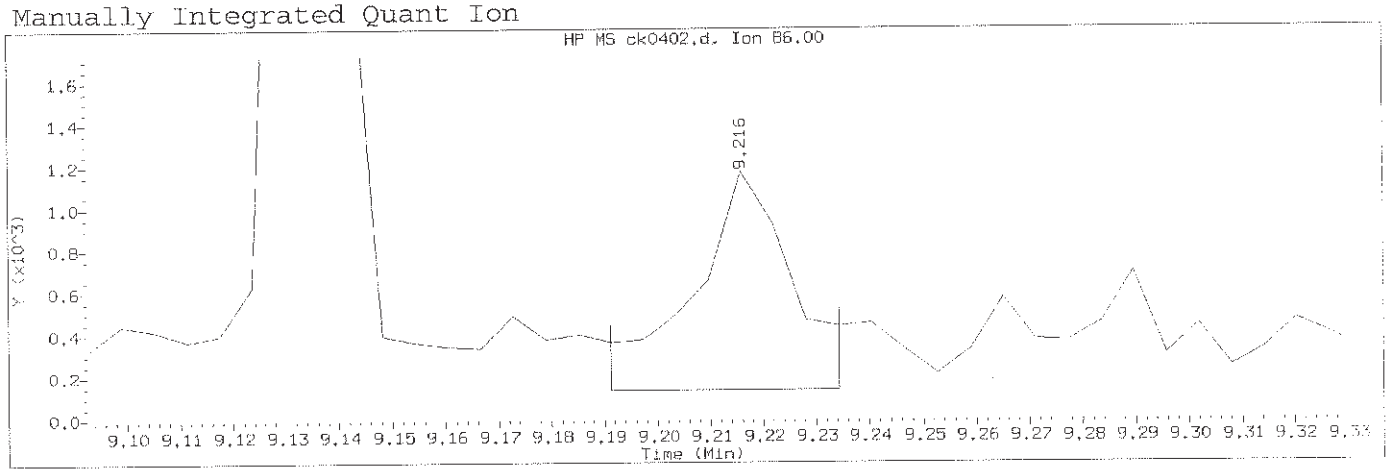
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1193		
Retention Time (minutes)	: 9.216		
Quant Ion	: 86.00		
Area (flag)	: 1405M		
On-Column Amount (ng/ul)	: 0.2306		
Integration start scan	: 1188	Integration stop scan:	1195
Y at integration start	: 134	Y at integration end:	134

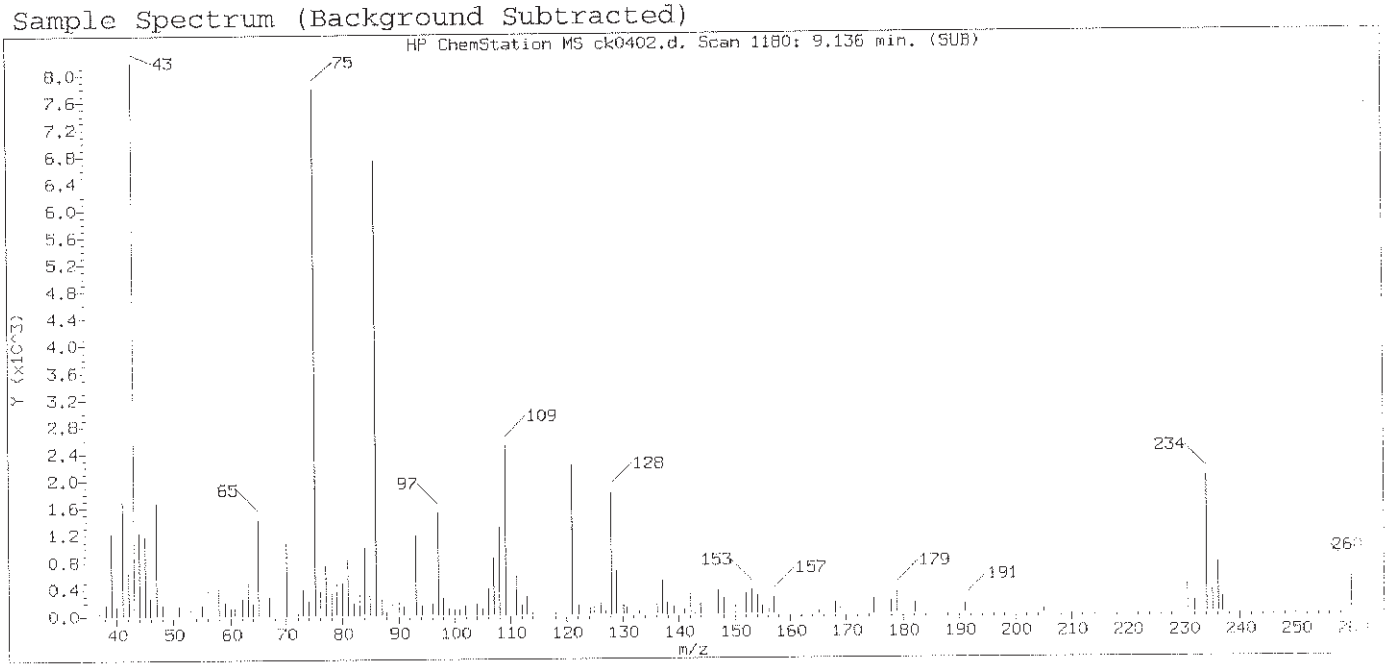
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

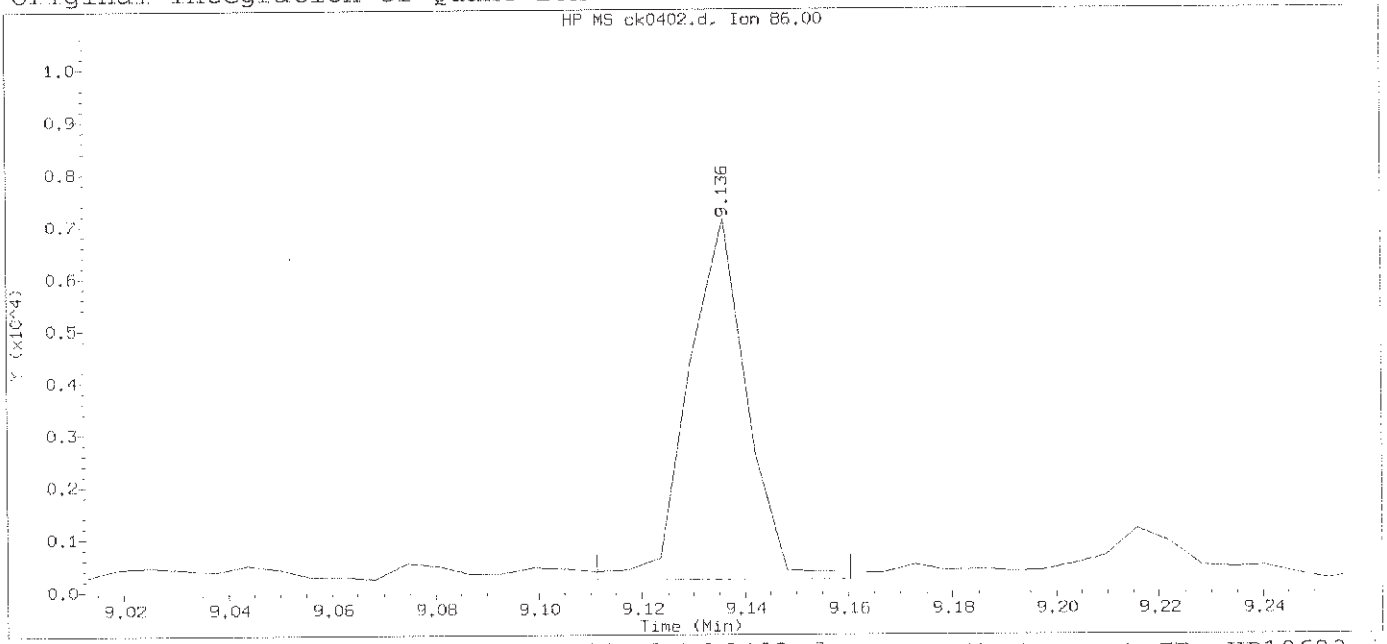
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

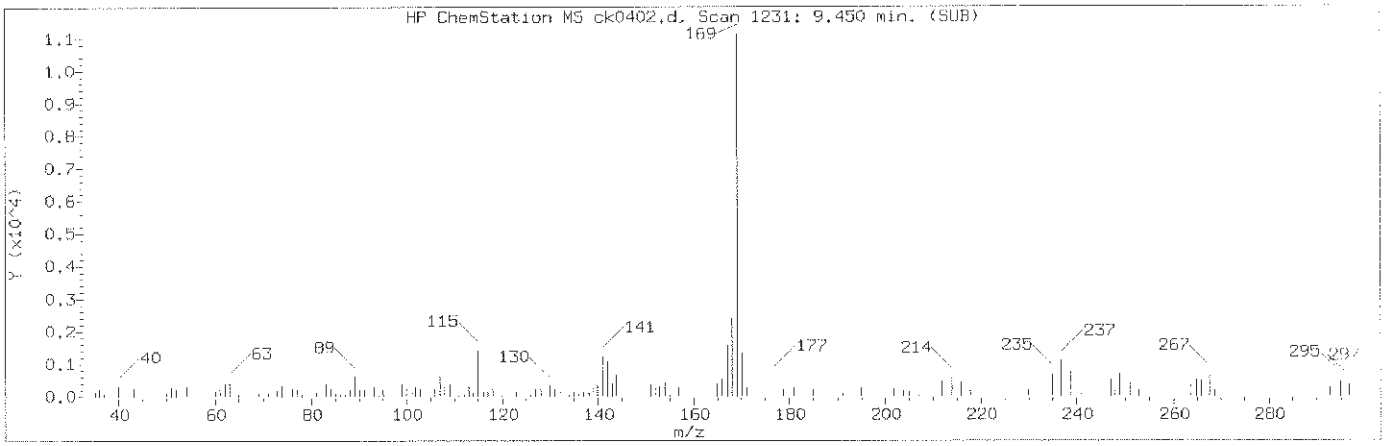
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

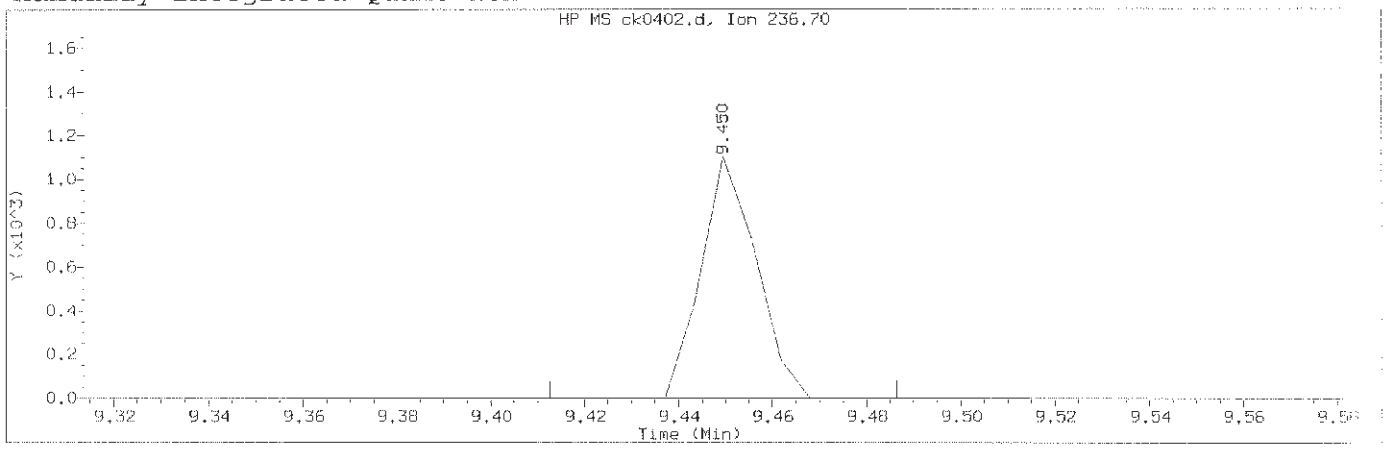
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5379		
On-column Amount (ng/ul)	: 0.8453		
Integration start scan	: 1175	Integration stop scan:	1183
Y at integration start	: 213	Y at integration end:	213

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 132		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1231		
Retention Time (minutes)	: 9.450		
Quant Ion	: 237.00		
Area (flag)	: 895M		
On-Column Amount (ng/ul)	: 0.3959		
Integration start scan	: 1224	Integration stop scan:	1236
Y at integration start	: 0	Y at integration end:	0

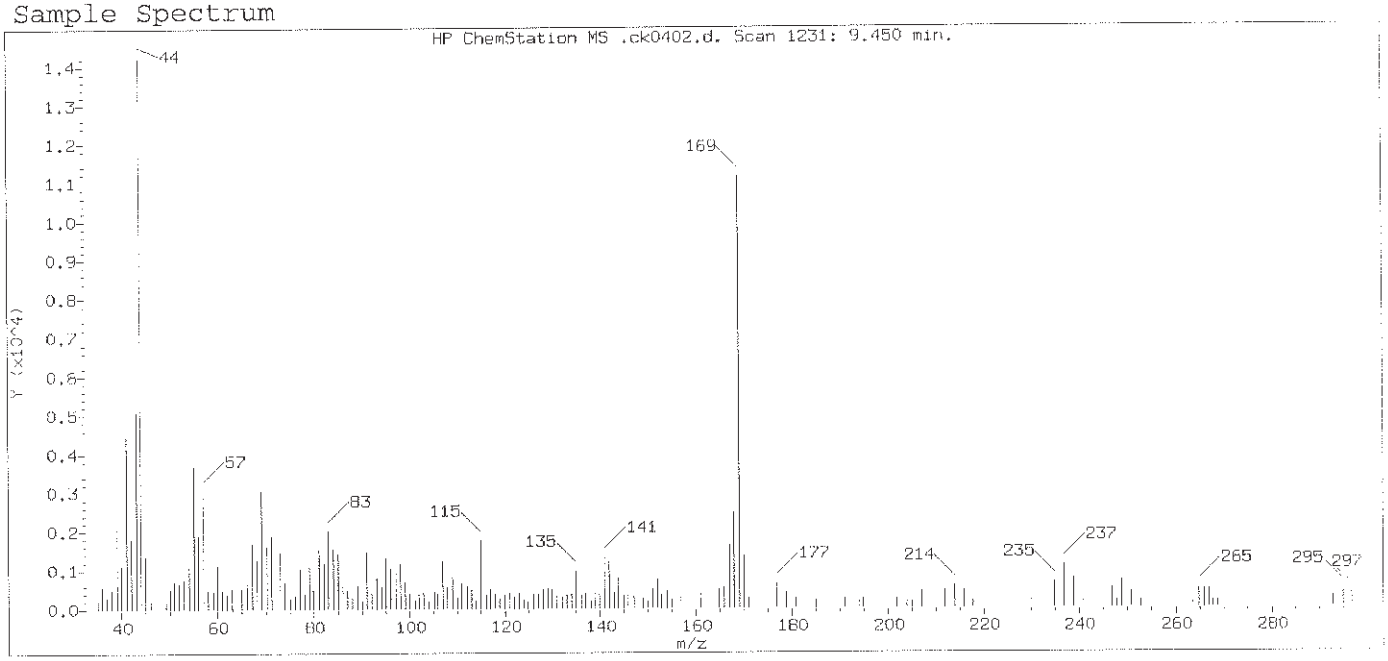
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

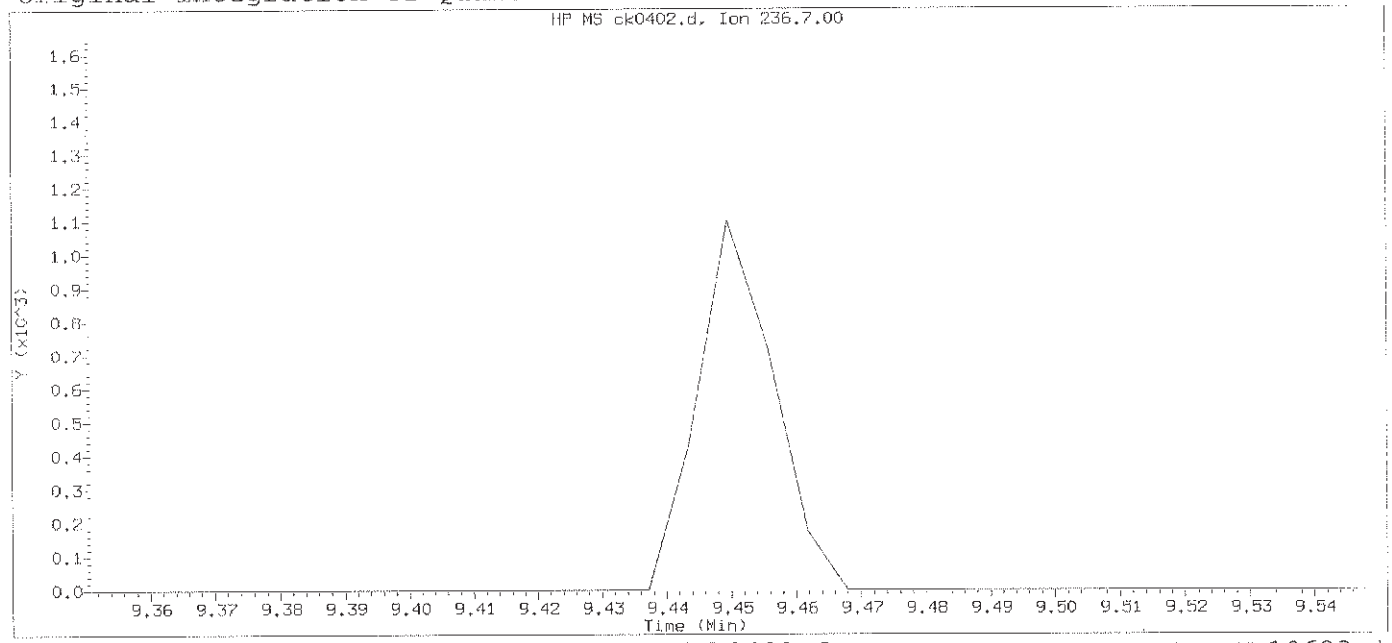
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

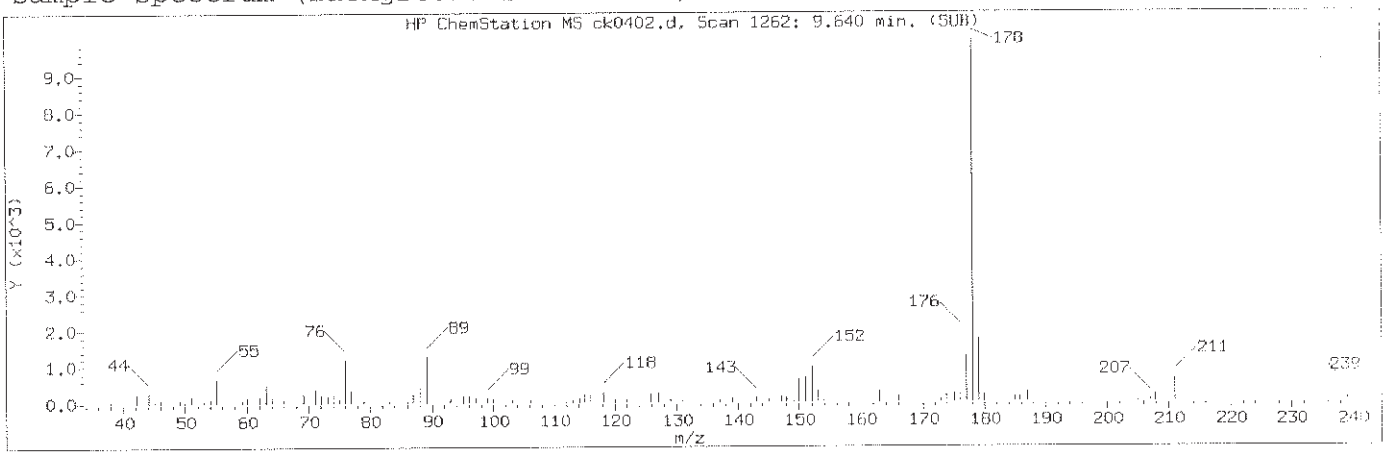
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

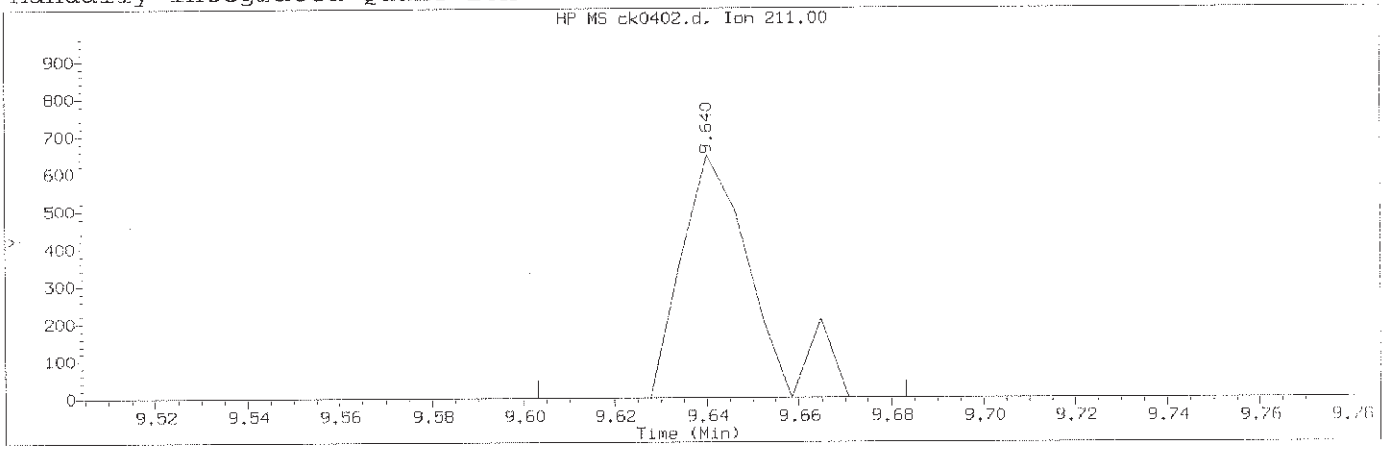
Compound Number : 132
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.450
Quant Ion : 237.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

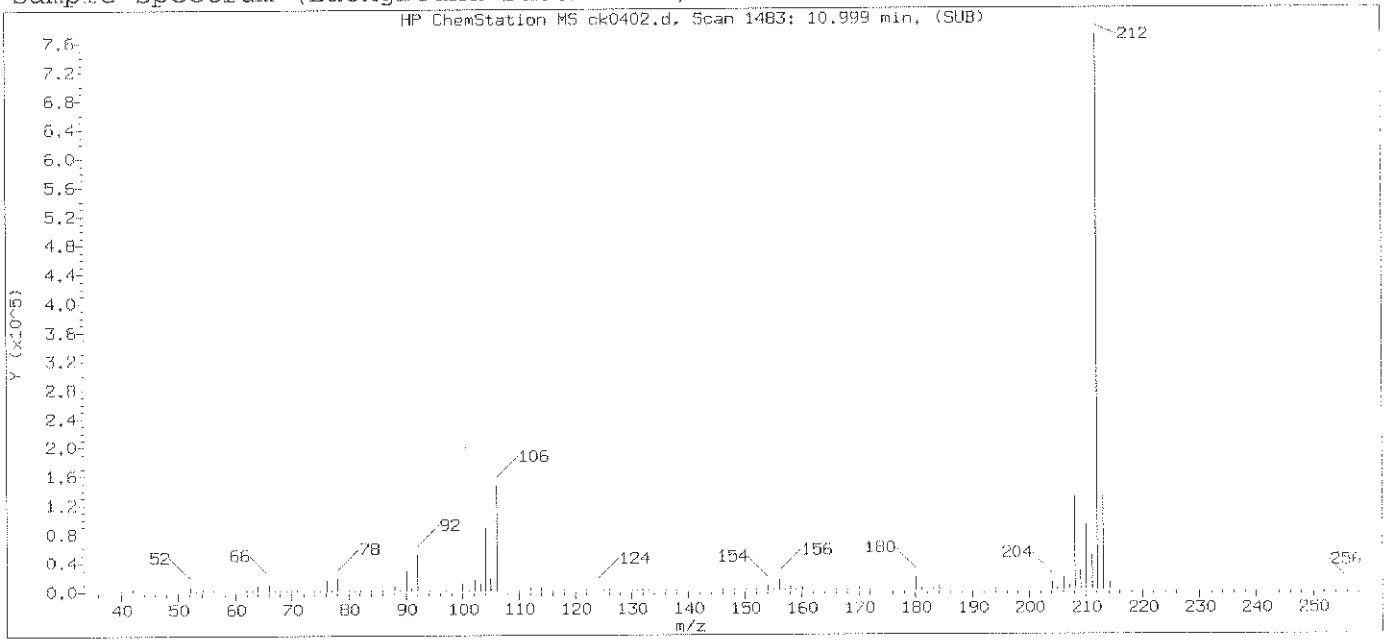
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 706M		
On-Column Amount (ng/ul)	: 0.2371		
Integration start scan	: 1255	Integration stop scan:	1268
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

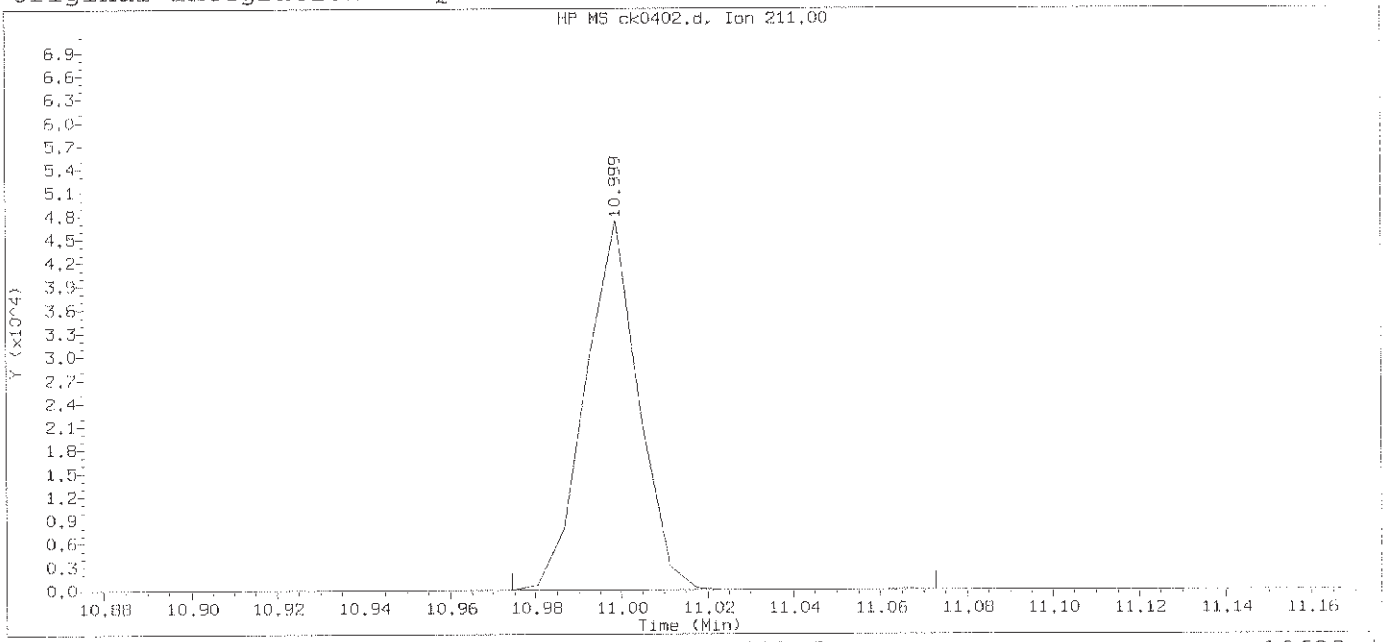
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

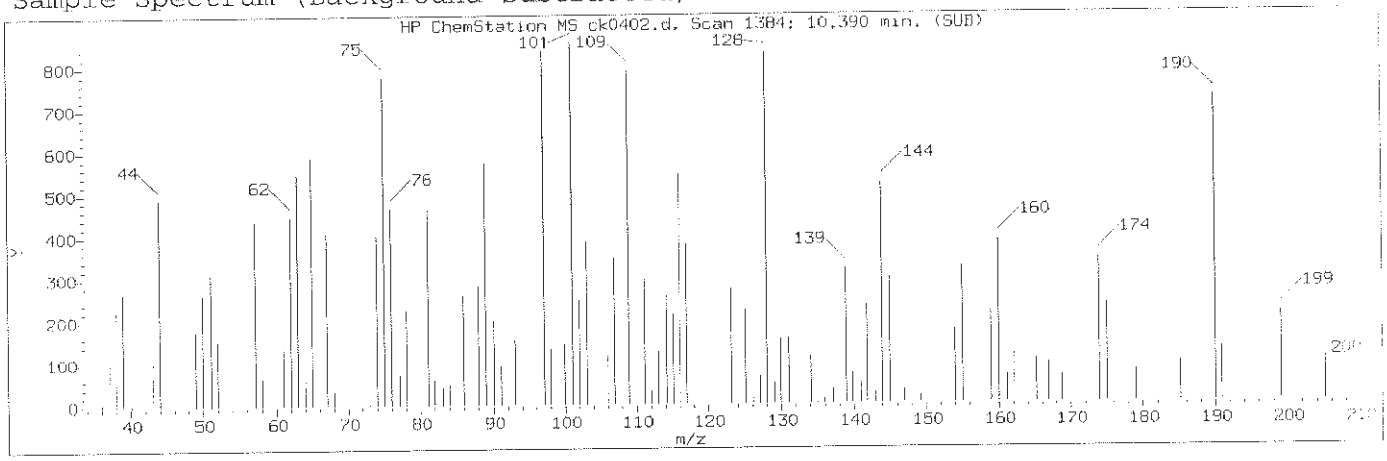
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

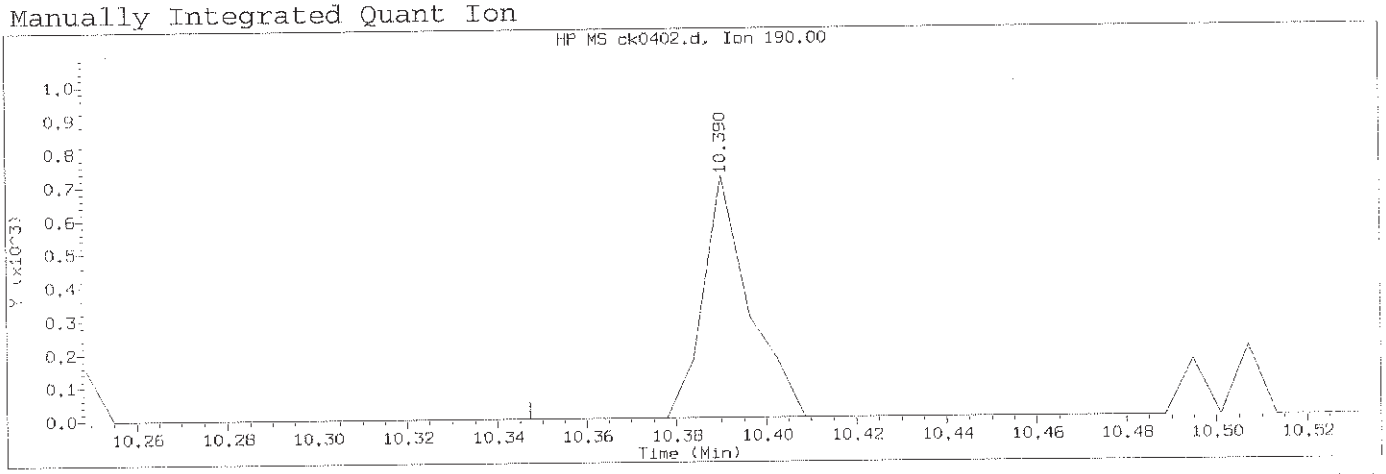
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 40792		
On-column Amount (ng/ul)	: 15.8756		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 144		
Compound Name	: 4-Nitroquinoline-1-oxide		
Scan Number	: 1384		
Retention Time (minutes)	: 10.390		
Quant Ion	: 190.00		
Area (flag)	: 505M		
On-Column Amount (ng/ul)	: 0.2244		
Integration start scan	: 1376	Integration stop scan:	1390
Y at integration start	: 0	Y at integration end:	0

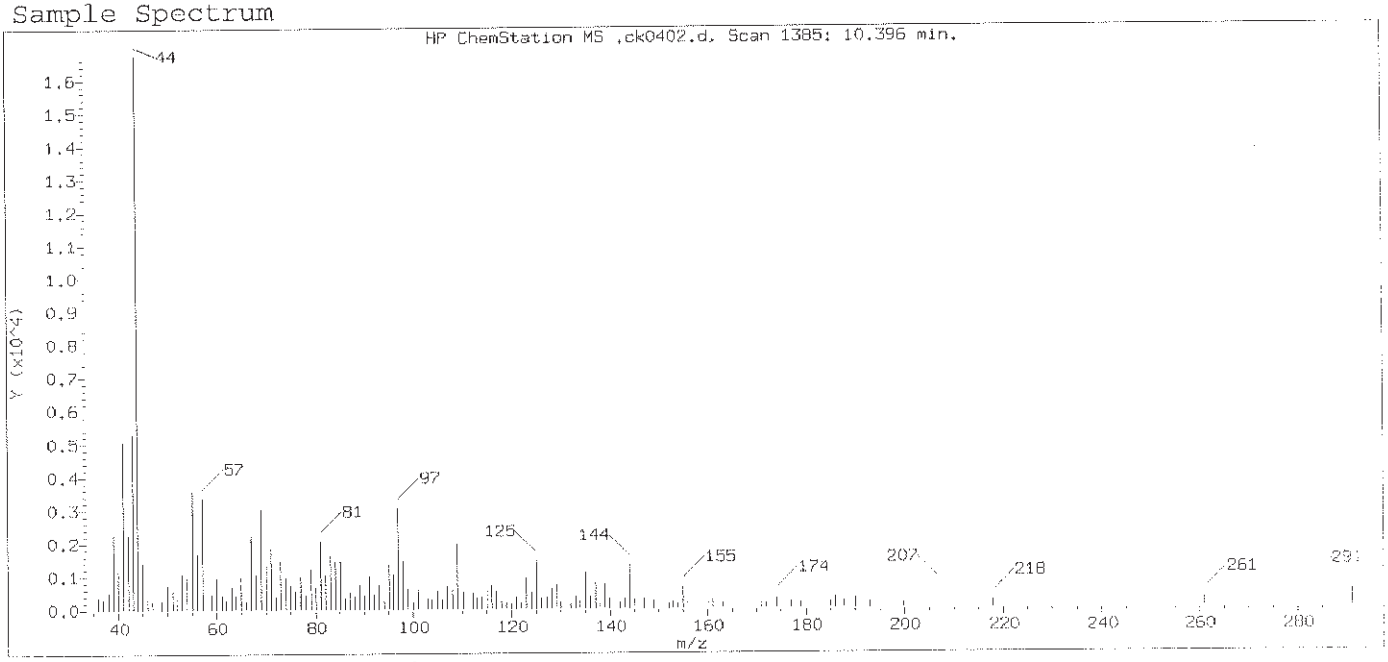
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

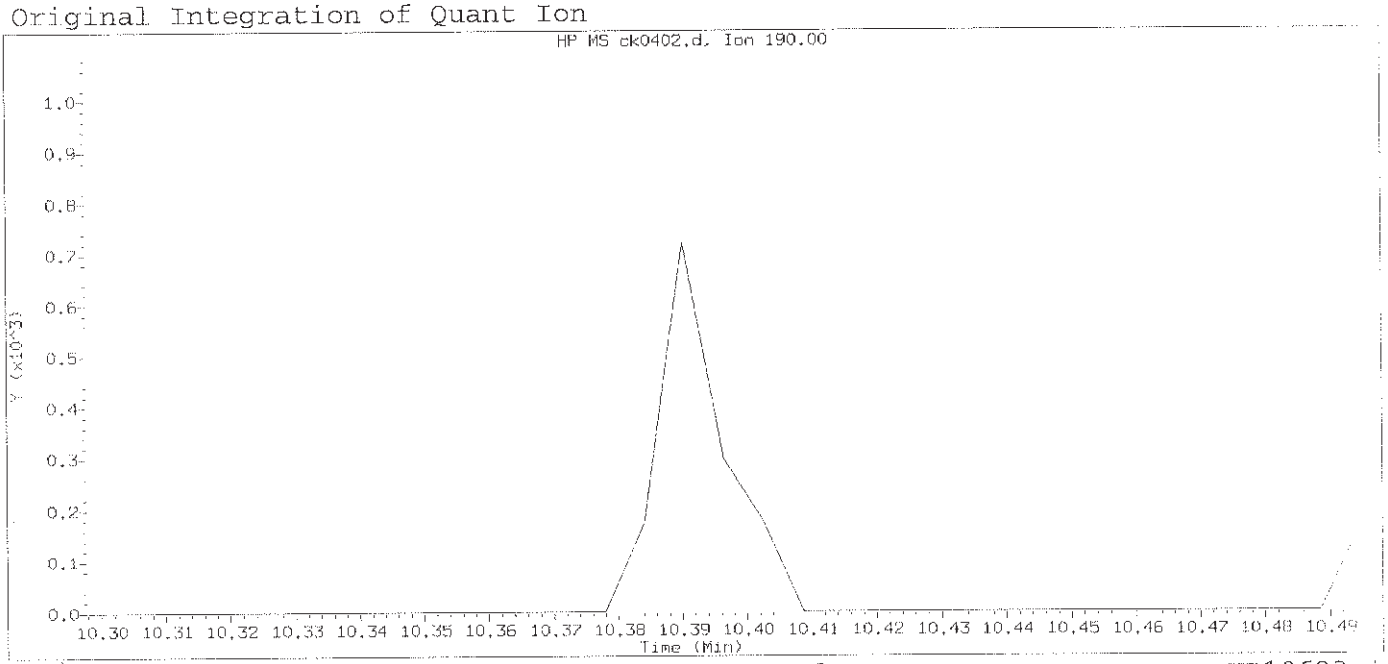
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



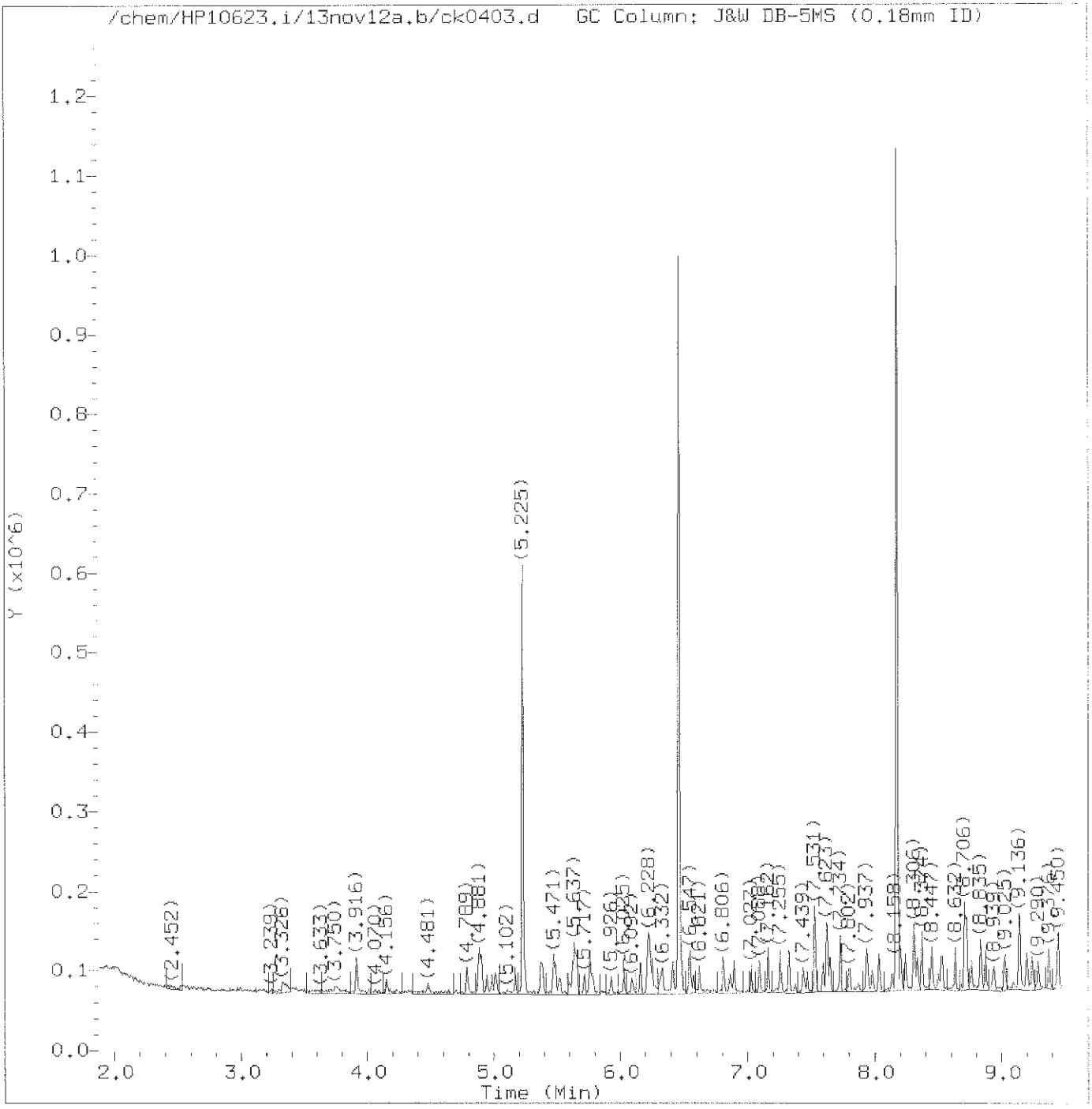
Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number : 144
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 10.397
Quant Ion : 190.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

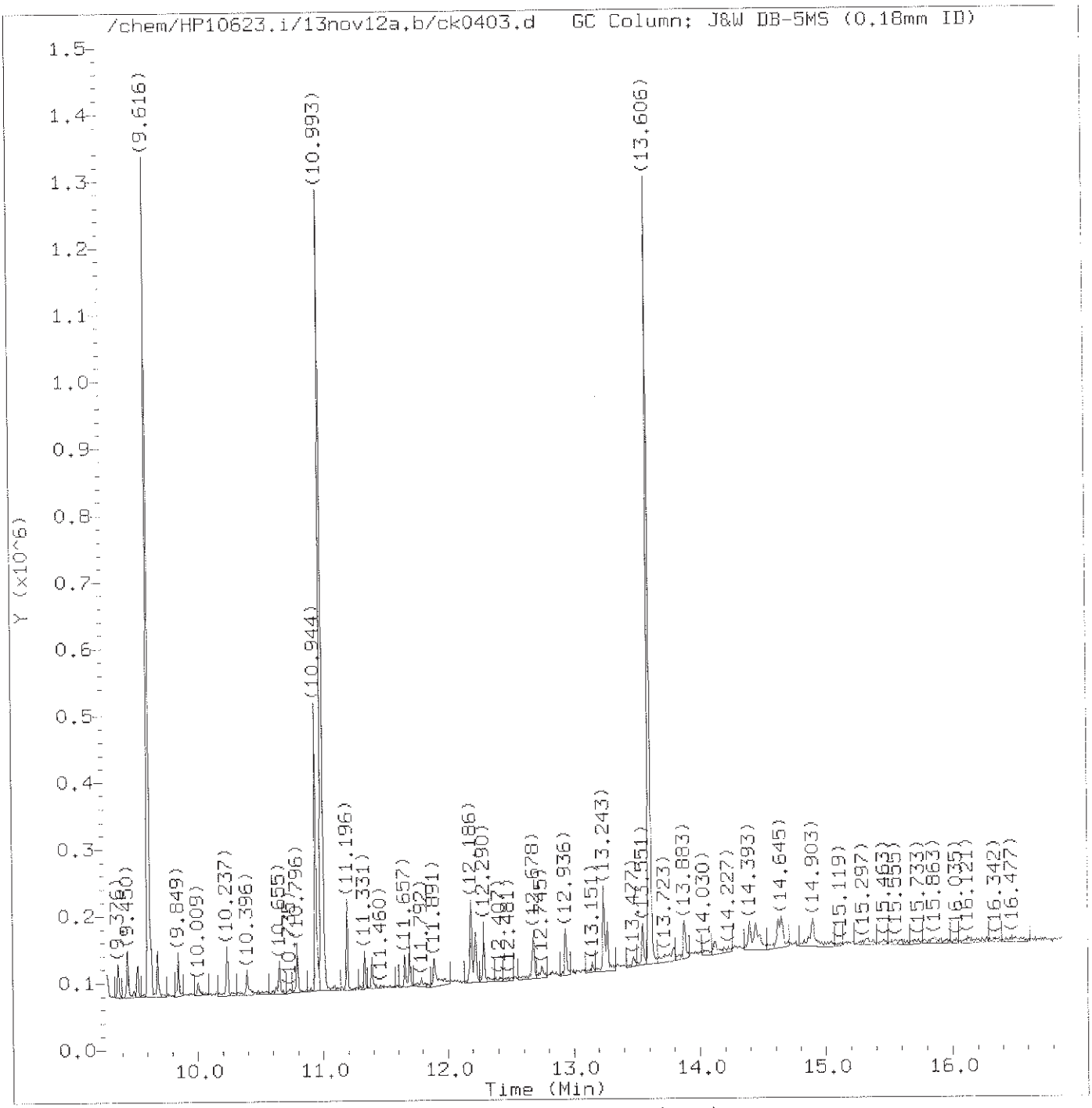
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d
Injection date and time: 12-NOV-2013 10:35

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.004	88	3656	1.484
2) N-Nitrosodimethylamine	(1)	2.428	74	4954M	1.086
3) Pyridine	(1)	2.526	79	8126M	1.149
5) 2-Picoline	(1)	3.332	93	7640	1.059
6) N-Nitrosomethylethylamine	(1)	3.424	88	7635	2.214
7) Methyl methanesulfonate	(1)	3.750	80	3852	1.111
9)$2-Fluorophenol	(1)	3.916	112	12694	1.127
10) N-Nitrosodiethylamine	(1)	4.156	102	3955	1.154
11) Ethyl methanesulfonate	(1)	4.481	109	2987	0.957
12) Benzaldehyde	(1)	4.789	77	6633	1.431
14)$Phenol-d5	(1)	4.881	99	15789	0.952
15)$Phenol-d6	(1)	4.881	99	15789	0.952
16) Phenol	(1)	4.893	94	10188	1.053
13) Aniline	(1)	4.900	93	12292	1.072
18) bis(2-Chloroethyl)ether	(1)	4.980	93	6952	1.012
19) 2-Chlorophenol	(1)	5.010	128	7207	1.195
20) 1,3-Dichlorobenzene	(1)	5.164	146	6641	1.091
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	75301	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	6717	1.081
24) Benzyl alcohol	(1)	5.373	108	6021	1.276
25) 1,2-Dichlorobenzene	(1)	5.385	146	6077	1.042
206) Indene	(1)	5.471	115	13120	1.007
26) 2-Methylphenol	(1)	5.484	108	6918	1.078
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9861M	1.167
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10012M	1.182
29) N-Nitrosopyrrolidine	(1)	5.601	100	3958	1.030
30) Acetophenone	(1)	5.619	105	10169	1.063
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	6861	1.120
32) N-Nitrosomorpholine	(1)	5.644	56	5177	1.186
33) 4-Methylphenol	(1)	5.644	108	8140	1.071
34) o-Toluidine	(1)	5.656	106	11366	1.037
37) Hexachloroethane	(1)	5.711	117	3199	1.353
38)$Nitrobenzene-d5	(2)	5.760	82	15692	1.071
39) Nitrobenzene	(2)	5.779	77	8363	1.077
40) N-Nitrosopiperidine	(2)	5.926	114	3798	1.102
41) Isophorone	(2)	6.025	82	15814	1.121
42) 2-Nitrophenol	(2)	6.092	139	2659	0.985
44) 2,4-Dimethylphenol	(2)	6.160	107	7745	1.116
47) Benzoic acid	(2)	6.222	105	32094	7.134
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	3309	1.144

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	9764	1.139
49) 2,4-Dichlorophenol	(2)	6.332	162	4737	1.004
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	5420	1.090
52)*Naphthalene-d8	(2)	6.461	136	339882	20.000
53) Naphthalene	(2)	6.480	128	18386	1.020
56) 4-Chloroaniline	(2)	6.541	127	8745	1.113
57) 2,6-Dichlorophenol	(2)	6.547	162	4344	0.977
58) Hexachloropropene	(2)	6.578	213	2925	1.040
60) Hexachlorobutadiene	(2)	6.621	225	2683	1.076
194) Quinoline	(2)	6.806	129	13942	1.122
63) Caprolactam	(2)	6.861	113	2649	1.013
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	5919	0.927
68) 4-Chloro-3-methylphenol	(2)	7.027	107	6165	1.022
69) Safrole	(2)	7.095	162	5041	1.055
70) 2-Methylnaphthalene	(2)	7.162	142	13163	1.029
71) 1-Methylnaphthalene	(2)	7.255	142	12007	1.025
72) Hexachlorocyclopentadiene	(3)	7.322	237	2059	0.963
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	5139	1.038
74) cis-Isosafrole	(3)	7.377	162	1098	0.138
75) 2,4,6-Trichlorophenol	(3)	7.439	196	3272	1.013
77) 2,4,5-Trichlorophenol	(3)	7.470	196	3558	1.011
78)$2-Fluorobiphenyl	(3)	7.531	172	26857	1.029
79) trans-Isosafrole	(3)	7.599	162	5680	1.010
80) Isosafrole	(3)	7.599	162	5680	1.135
83) 1,1'-Biphenyl	(3)	7.623	154	17917	1.115
84) 2-Chloronaphthalene	(3)	7.630	162	13366M	1.141
85) 1-Chloronaphthalene	(3)	7.654	162	12335M	1.070
88) Diphenyl ether	(3)	7.734	170	8053	1.006
89) 2-Nitroaniline	(3)	7.734	138	3871	1.013
90) 1,4-Naphthoquinone	(3)	7.808	158	4795	0.973
91) 1,4-Dinitrobenzene	(3)	7.876	168	1149	0.774
92) Dimethylphthalate	(3)	7.937	163	15290	1.097
93) 1,3-Dinitrobenzene	(3)	7.943	168	1225	0.607
94) 2,6-Dinitrotoluene	(3)	7.980	165	2652	0.914
95) Acenaphthylene	(3)	8.029	152	18627	1.019
97) 3-Nitroaniline	(3)	8.134	138	3342	0.943
98)*Acenaphthene-d10	(3)	8.171	164	207488	20.000
99) Acenaphthene	(3)	8.201	153	13284	1.050
100) 2,4-Dinitrophenol	(3)	8.238	184	4350	4.615
103) 4-Nitrophenol	(3)	8.306	109	8684	3.956

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	4307	1.007
105) 2,4-Dinitrotoluene	(3)	8.367	165	3285	0.876
104) Dibenzofuran	(3)	8.374	168	18759	1.082
106) 1-Naphthylamine	(3)	8.447	143	15016	1.054
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	2214	0.893
108) 2-Naphthylamine	(3)	8.527	143	15652	1.074
109) Diethylphthalate	(3)	8.632	149	16824	1.169
110) Thionazin	(3)	8.706	107	2832	0.892
111) Fluorene	(3)	8.706	166	15496	1.039
113) 5-Nitro-o-toluidine	(3)	8.718	152	3513	0.892
114) 4-Nitroaniline	(3)	8.718	138	4353	1.092
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	7174	1.081
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	4114	2.776
117) N-Nitrosodiphenylamine	(4)	8.835	169	12684	0.986
202) NDPA as diphenylamine	(4)	8.835	169	12684	0.983
118) 1,2-Diphenylhydrazine	(4)	8.872	77	18230	0.989
119)$2,4,6-Tribromophenol	(3)	8.939	330	2017	0.805
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3197	1.217
121) 1,3,5-Trinitrobenzene	(4)	9.087	213	512M	0.525
123) Phorate	(4)	9.136	75	11365	1.001
122) Diallate (peak 1)	(4)	9.136	86	7650	0.811
124) Phenacetin	(4)	9.142	108	9315	1.047
125) 4-Bromophenyl-phenylether	(4)	9.197	248	3336	0.941
126) Diallate (peak 2)	(4)	9.222	86	1656	0.404
127) Hexachlorobenzene	(4)	9.241	284	3671	1.049
128) Dimethoate	(4)	9.290	87	6609	0.952
130) Atrazine	(4)	9.376	200	4785	1.161
131) Pentachlorophenol	(4)	9.437	266	1189	0.612
133) 4-Aminobiphenyl	(4)	9.443	169	15759	1.133
132) Pentachloronitrobenzene	(4)	9.450	237	956	0.629
134) Pronamide	(4)	9.530	173	6820	1.017
135)*Phenanthrene-d10	(4)	9.616	188	383931	20.000
136) Dinoseb	(4)	9.640	211	1087M	0.543
137) Phenanthrene	(4)	9.640	178	22522	1.009
138) Anthracene	(4)	9.689	178	22698	0.988
140) Carbazole	(4)	9.849	167	22923	1.022
141) Methyl parathion	(4)	10.009	109	2378	0.571
142) Di-n-butylphthalate	(4)	10.237	149	28115	1.063
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	837	0.553
143) Parathion	(4)	10.396	109	2107	0.688

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d
Injection date and time: 12-NOV-2013 10:35
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	3084	1.222
147) Fluoranthene	(4)	10.796	202	24924	0.998
152) Benzidine	(5)	10.944	184	158131	8.161
167)*Pyrene-d10	(5)	10.999	212	473300	20.000
154) Pyrene	(5)	11.011	202	26424	1.005
156)$Terphenyl-d14	(5)	11.196	244	34221	1.011
158) p-Dimethylaminoazobenzene	(5)	11.331	225	4727	0.923
159) Chlorobenzilate	(5)	11.393	139	7491	0.940
160) 3,3'-Dimethylbenzidine	(5)	11.657	212	17197	1.062
161) Butylbenzylphthalate	(5)	11.694	149	13493	1.076
162) 2-Acetylaminofluorene	(5)	11.897	181	9317	0.820
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	9716	1.063
166) Benzo(a)anthracene	(5)	12.186	228	24335	1.004
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3999	0.896
168) Chrysene	(5)	12.223	228	24509	1.049
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	19101	1.098
189) 6-Methylchrysene	(5)	12.678	242	17250	1.000
170) Di-n-octylphthalate	(6)	12.936	149	28737	0.886
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	10787	0.885
172) Benzo(b)fluoranthene	(6)	13.243	252	25419	0.969
173) Benzo(k)fluoranthene	(6)	13.268	252	26389	0.986
174) Benzo(a)pyrene	(6)	13.551	252	26499	1.035
175)*Perylene-d12	(6)	13.606	264	429576	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	12858	1.002
190) Dibenz(a,h)acridine	(6)	14.393	279	15789	0.849
191) Dibenz(a,j)acridine	(6)	14.442	279	18629	0.871
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	27040	0.993
178) Dibenz(a,h)anthracene	(6)	14.645	278	22302	0.979
179) Benzo(g,h,i)perylene	(6)	14.897	276	24406	1.052
129) Diallate TRANS/CIS	(4)			9306	1.149

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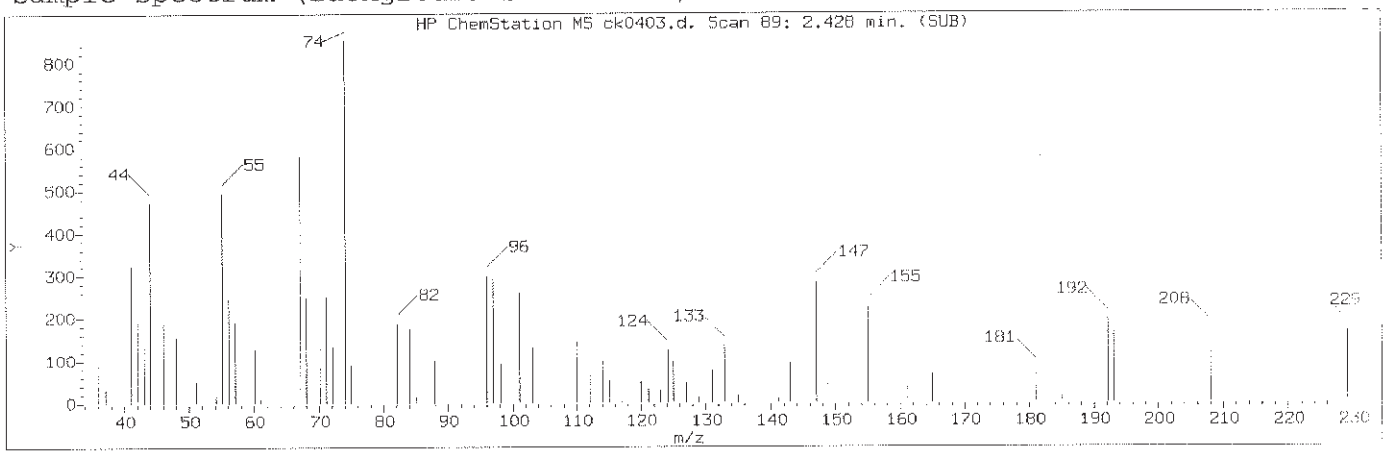
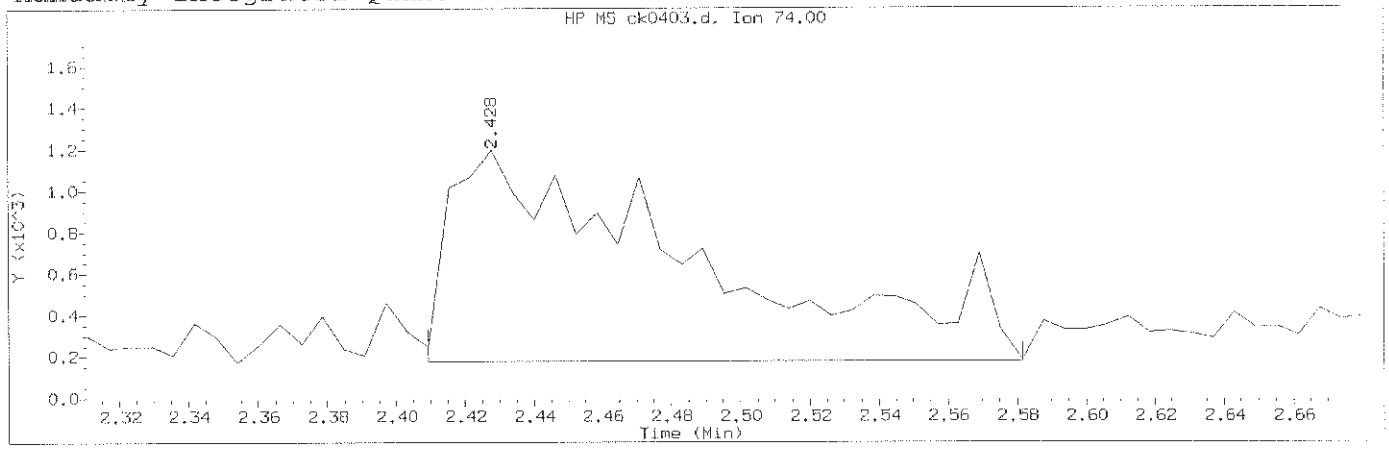
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area (flag)	: 4954M		
On-Column Amount (ng/ul)	: 1.0864		
Integration start scan	: 85	Integration stop scan:	113
Y at integration start	: 176	Y at integration end:	176

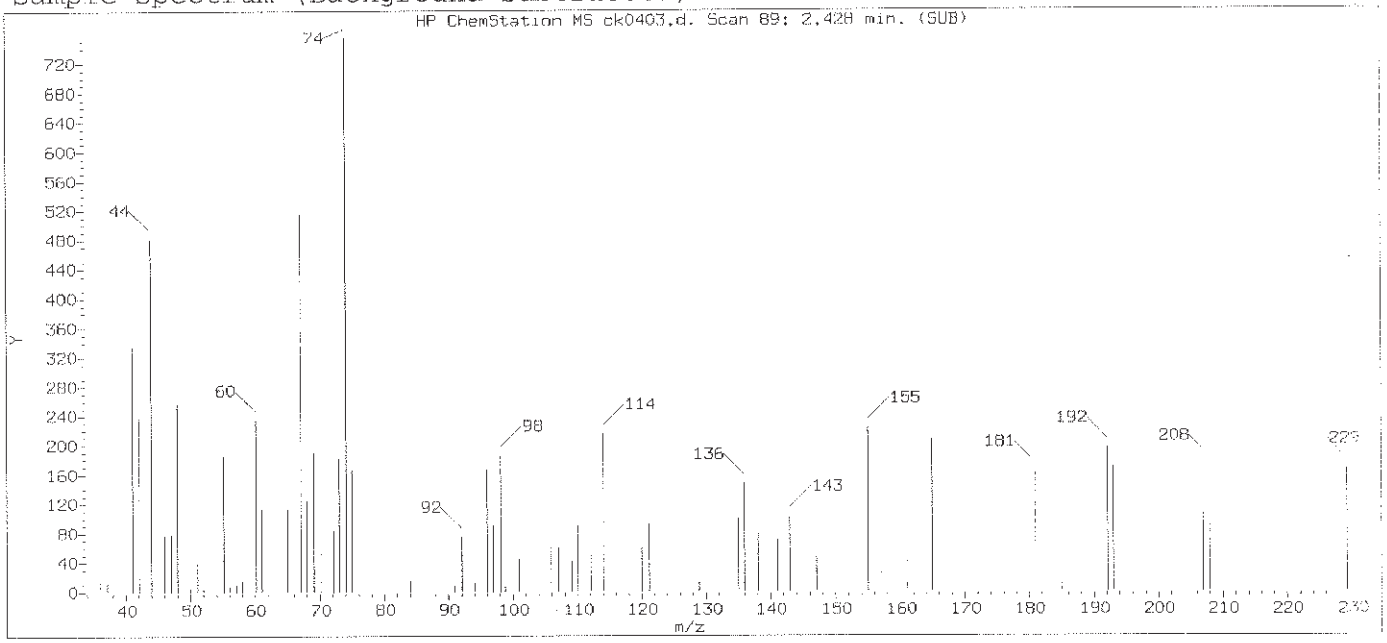
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

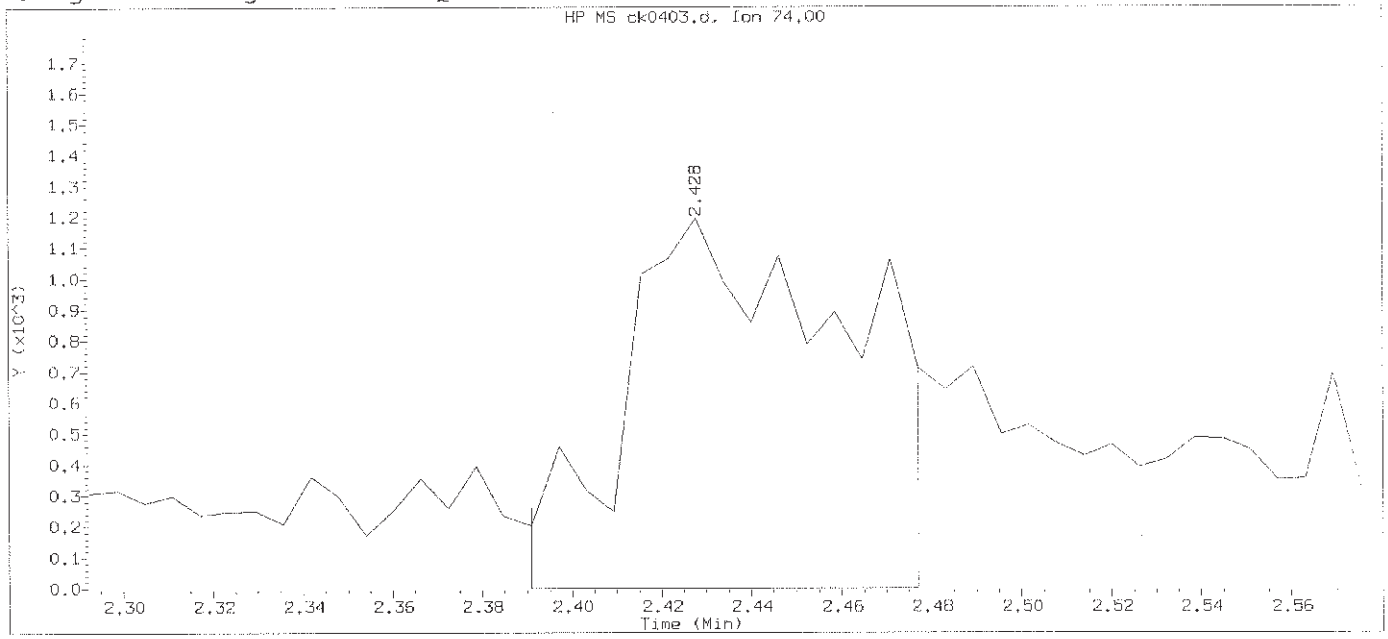
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area	: 4113		
On-column Amount (ng/ul)	: 0.8101		
Integration start scan	: 82	Integration stop scan:	96
Y at integration start	: 0	Y at integration end:	0

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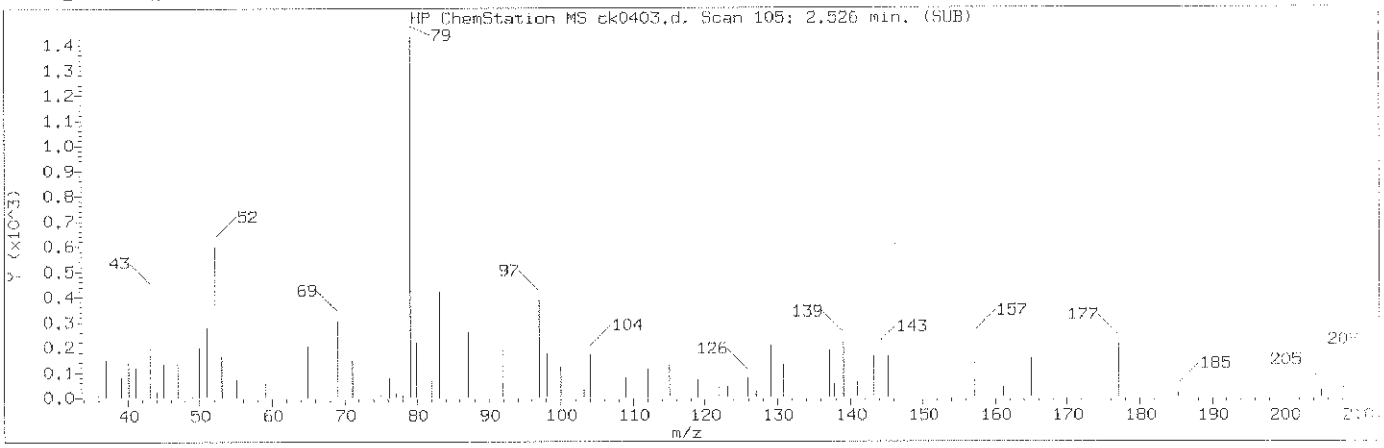
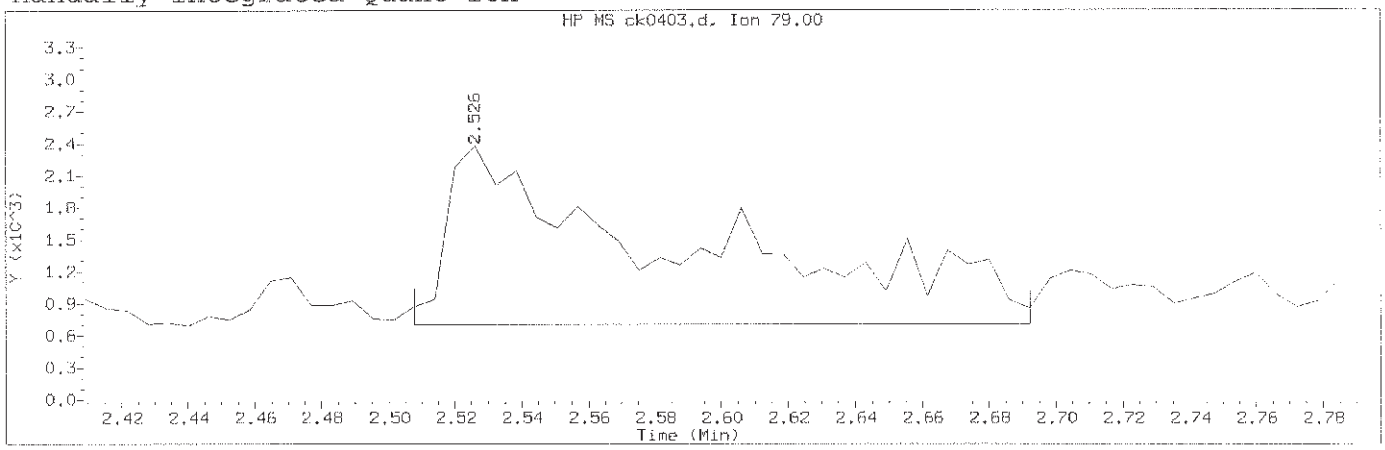
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area (flag)	: 8126M		
On-Column Amount (ng/ul)	: 1.1494		
Integration start scan	: 101	Integration stop scan:	131
Y at integration start	: 703	Y at integration end:	703

Reason for manual integration: improper integration

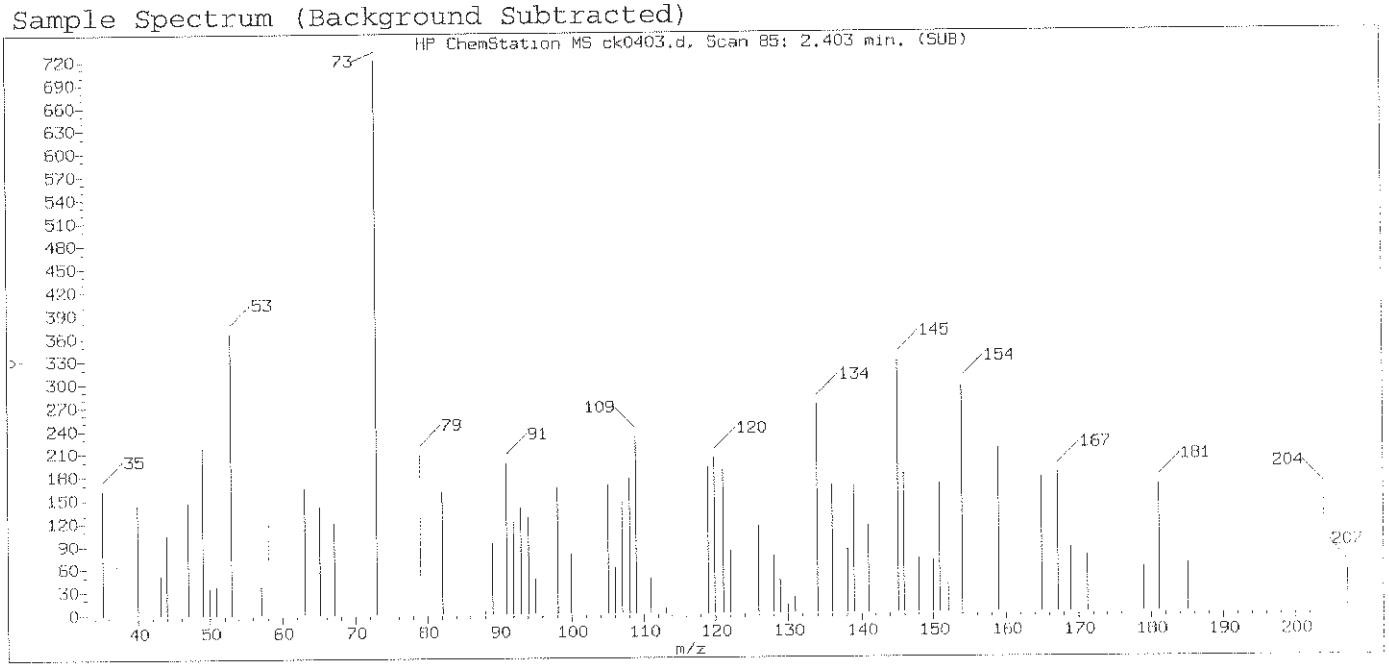
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 es[illegible]e user ID: mac00013

Mark A. Ratcliff
Senior Specialist

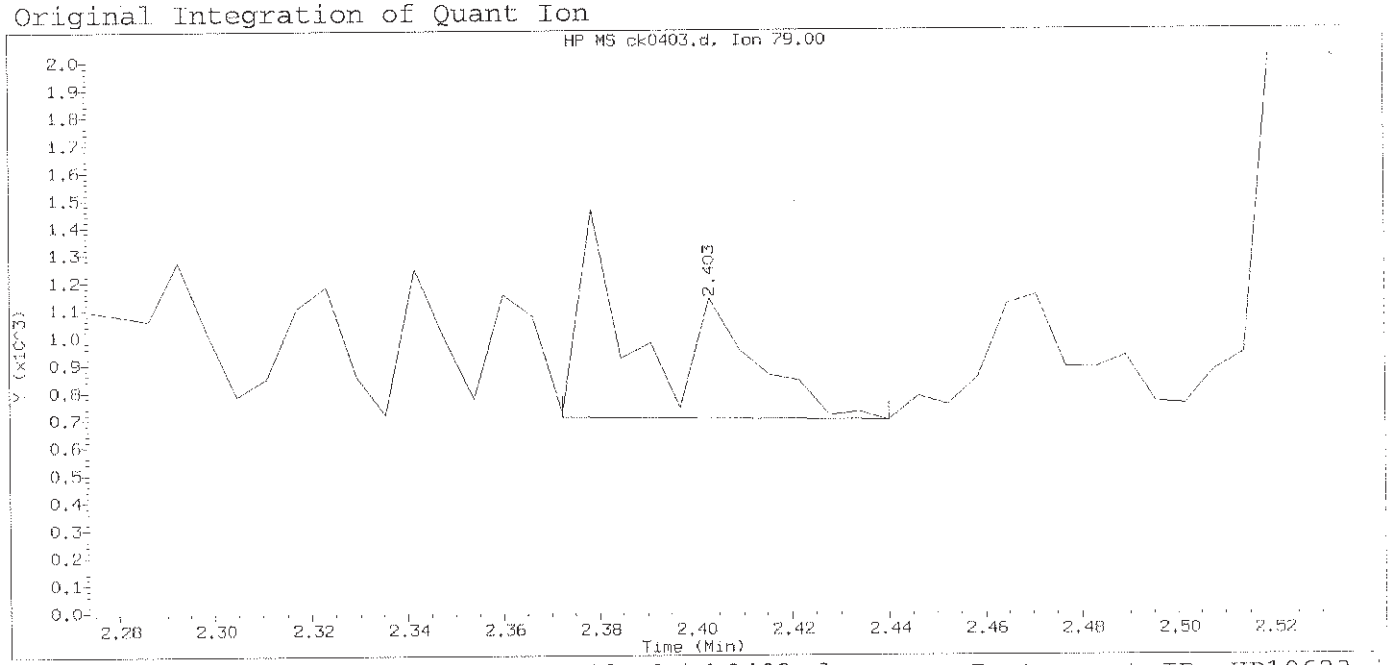
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

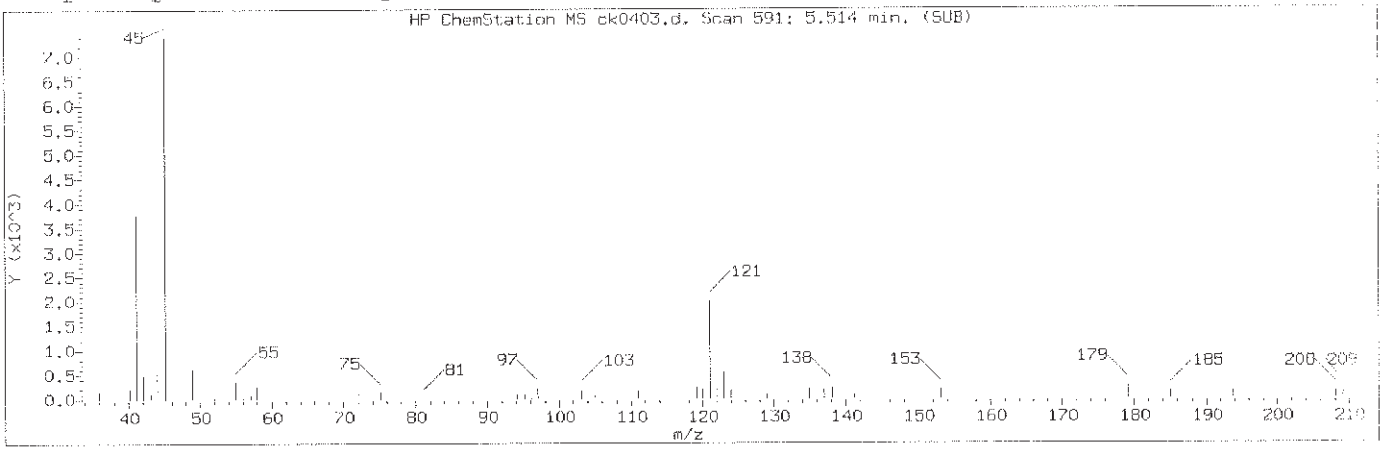
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

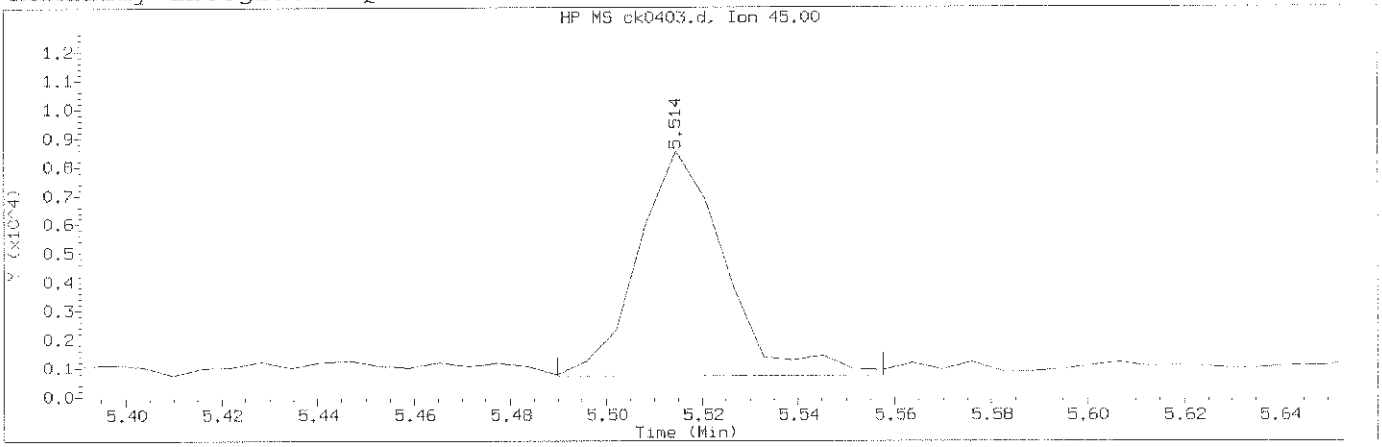
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 85		
Retention Time (minutes)	: 2.403		
Quant Ion	: 79.00		
Area	: 852		
On-column Amount (ng/ul)	: 0.1043		
Integration start scan	: 79	Integration stop scan:	90
Y at integration start	: 706	Y at integration end:	694

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 9861M		
On-Column Amount (ng/ul)	: 1.1671		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 723	Y at integration end:	723

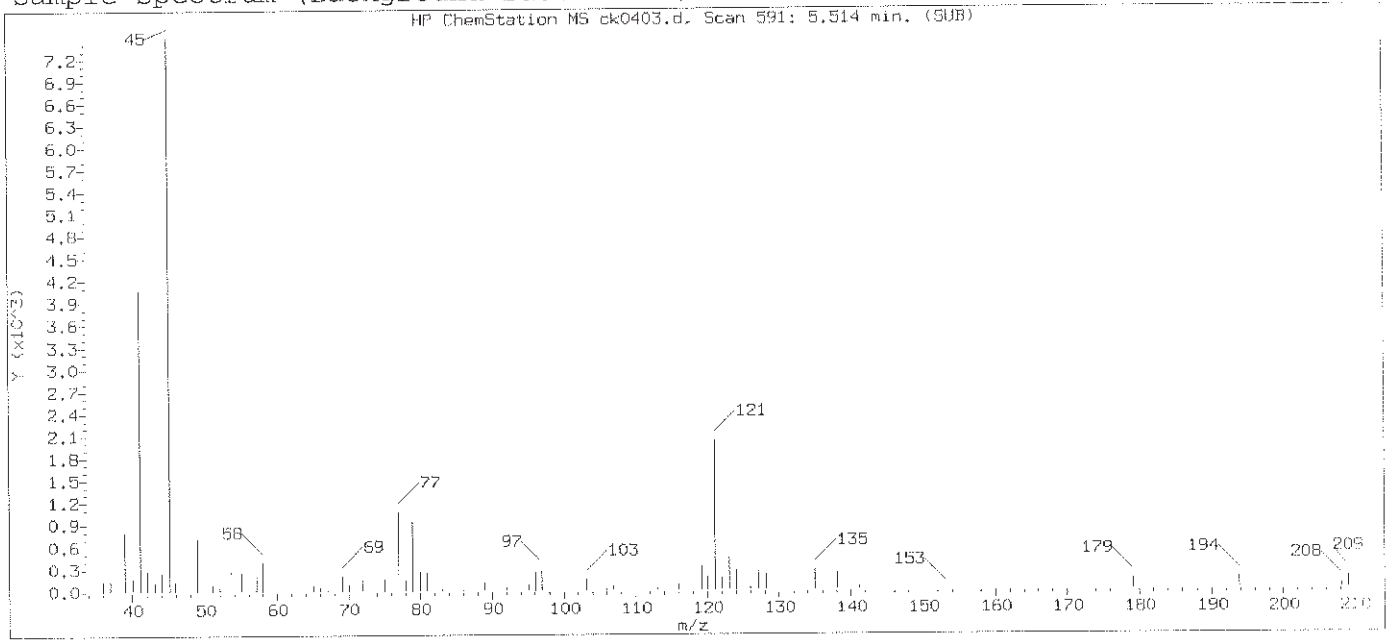
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

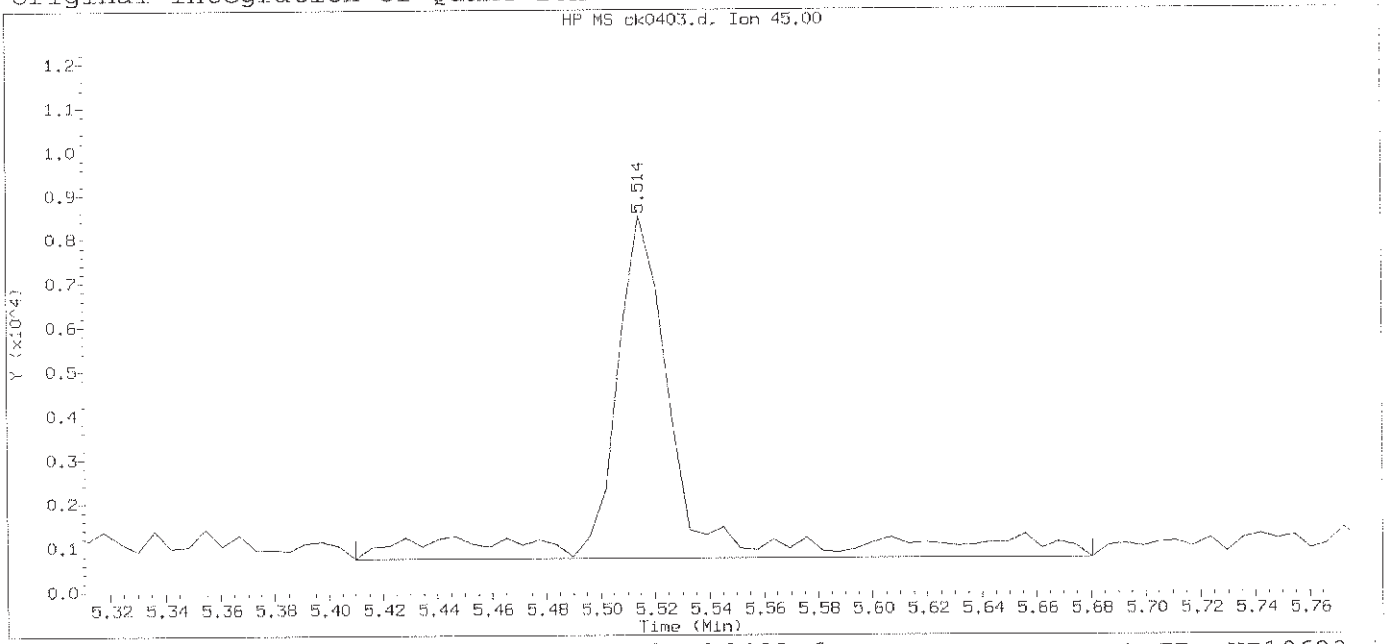
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

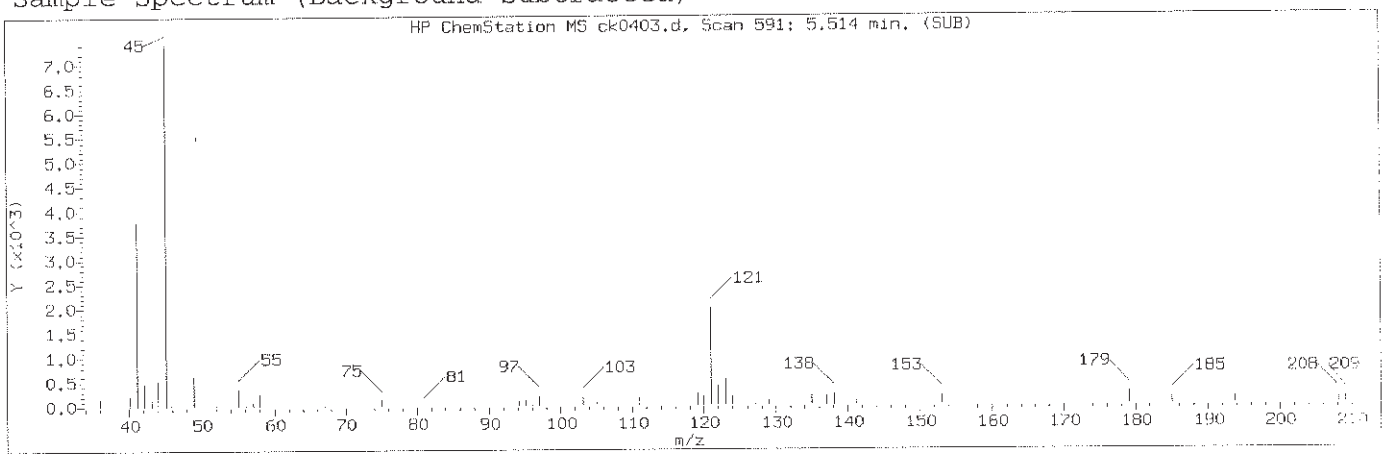
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

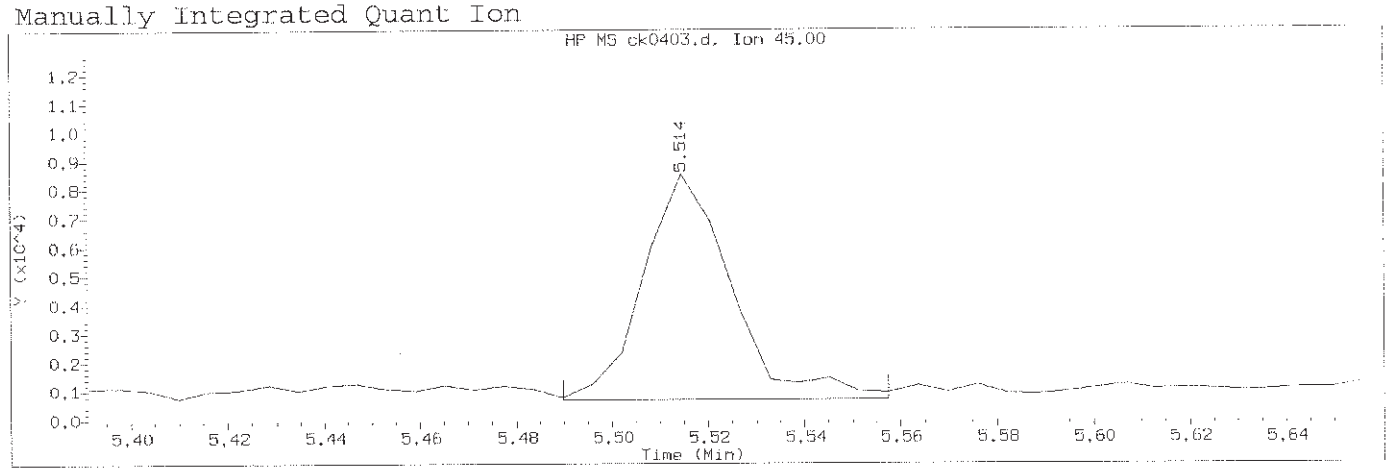
Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 10012M		
On-Column Amount (ng/ul)	: 1.1819		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 689	Y at integration end:	689

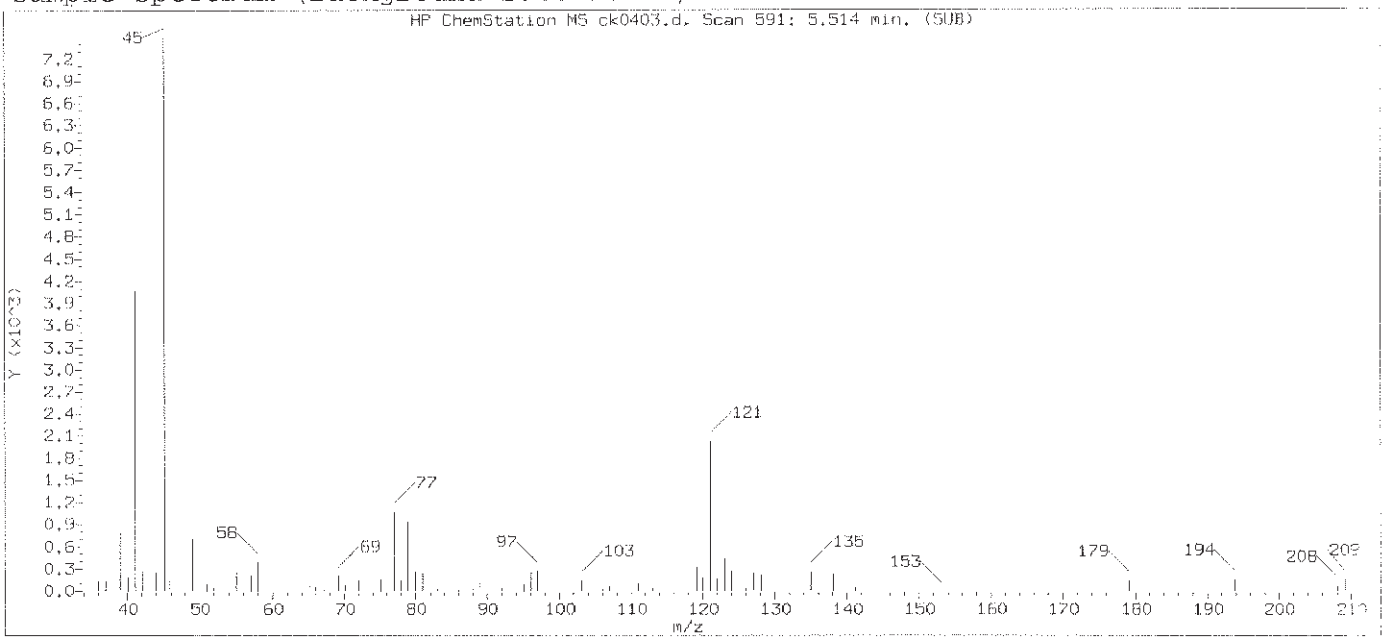
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

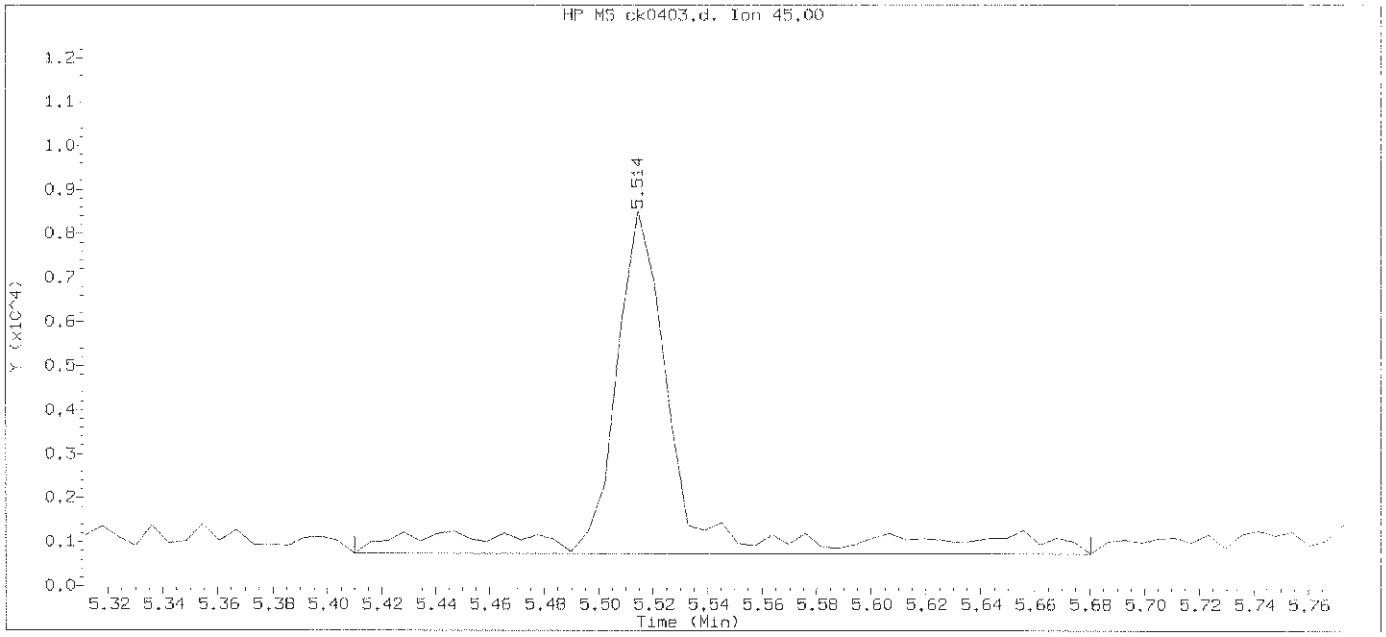
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

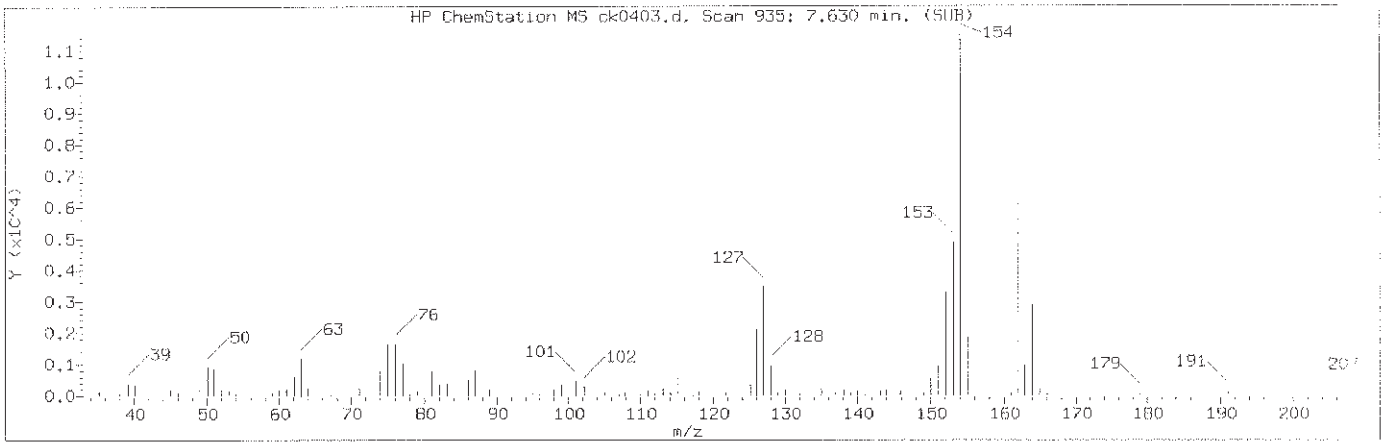
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

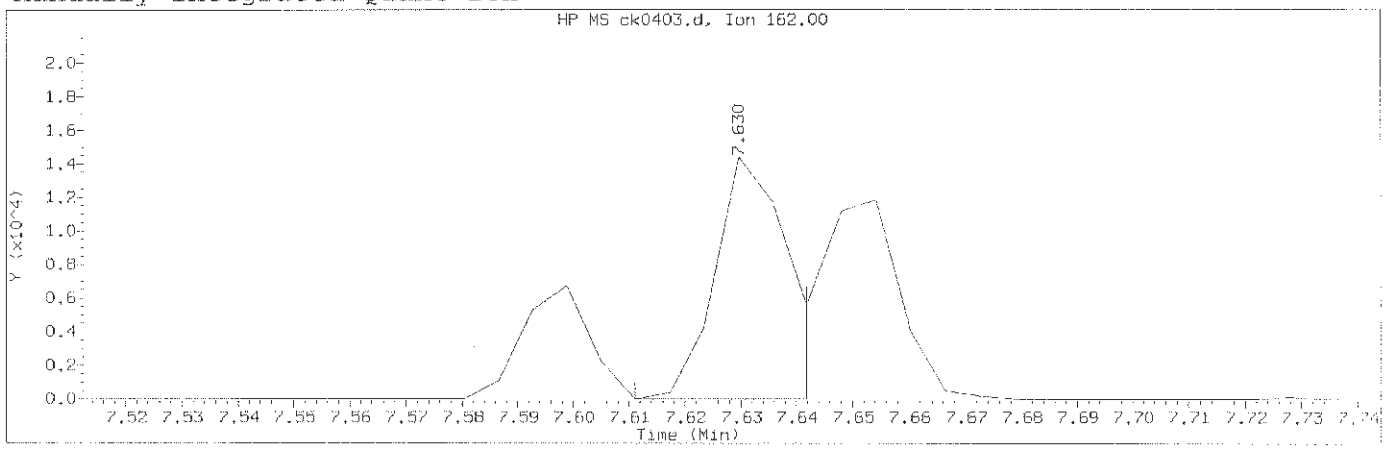
Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 13366M		
On-Column Amount (ng/ul)	: 1.1415		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 0	Y at integration end:	0

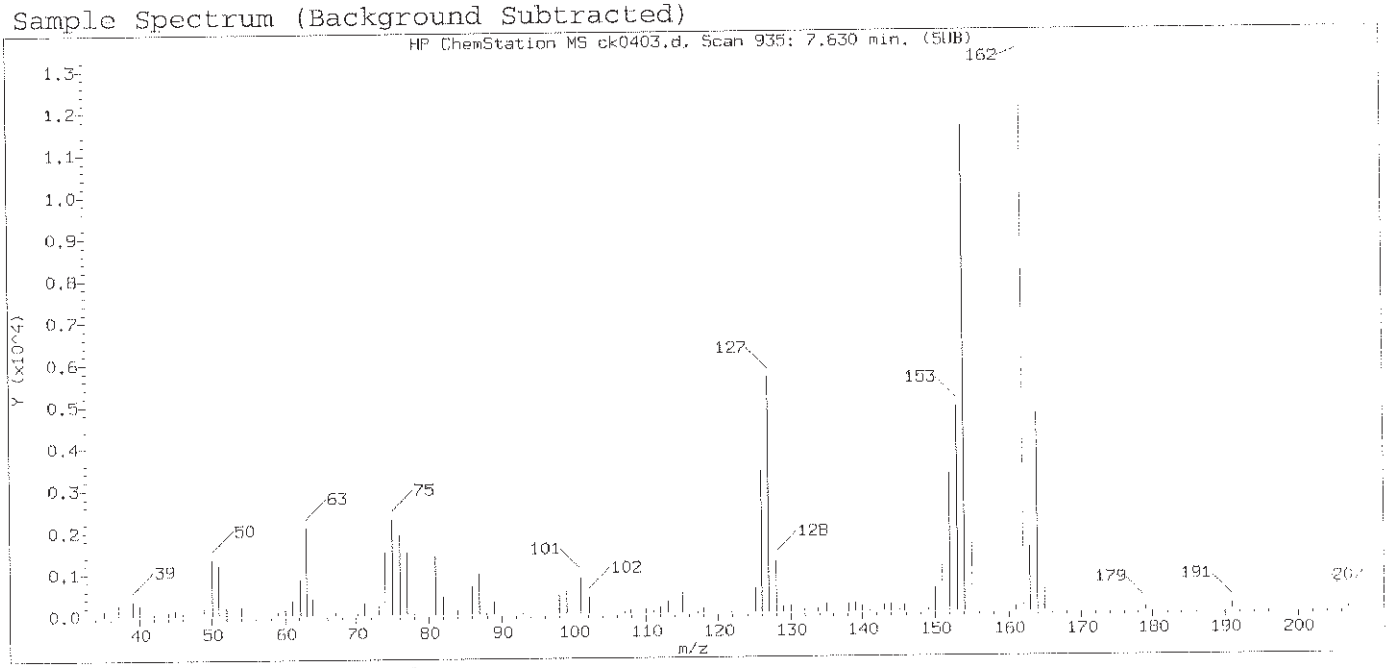
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

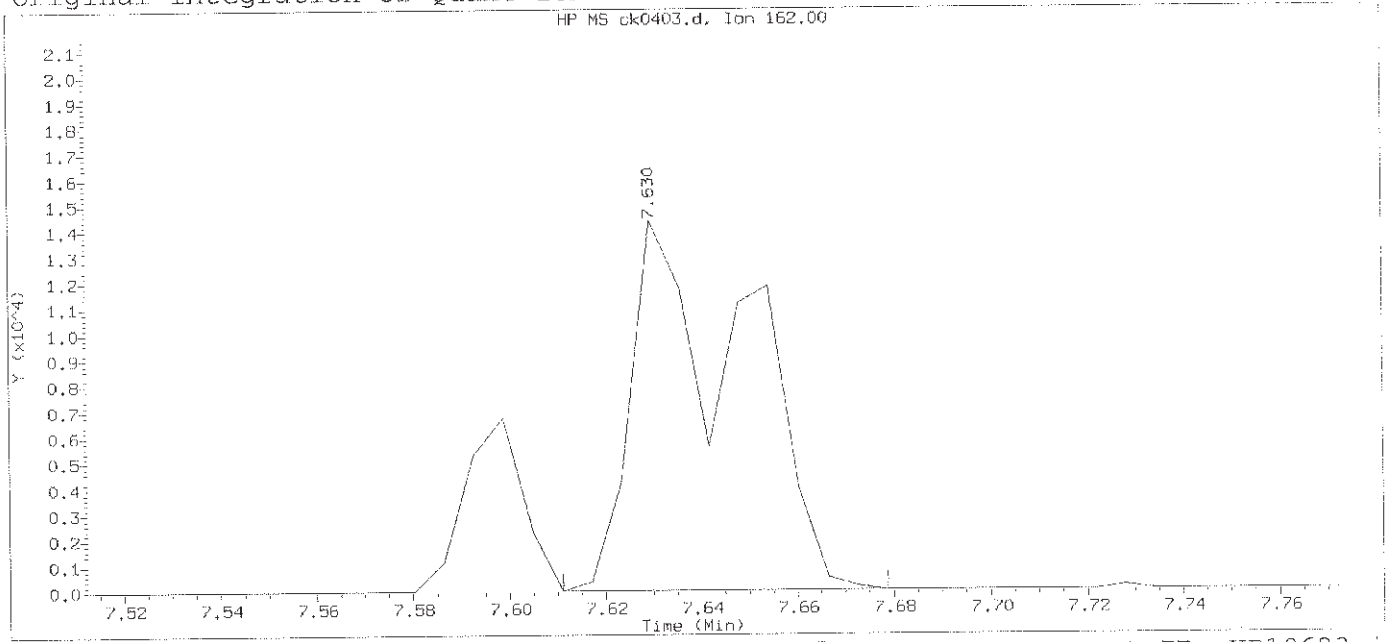
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

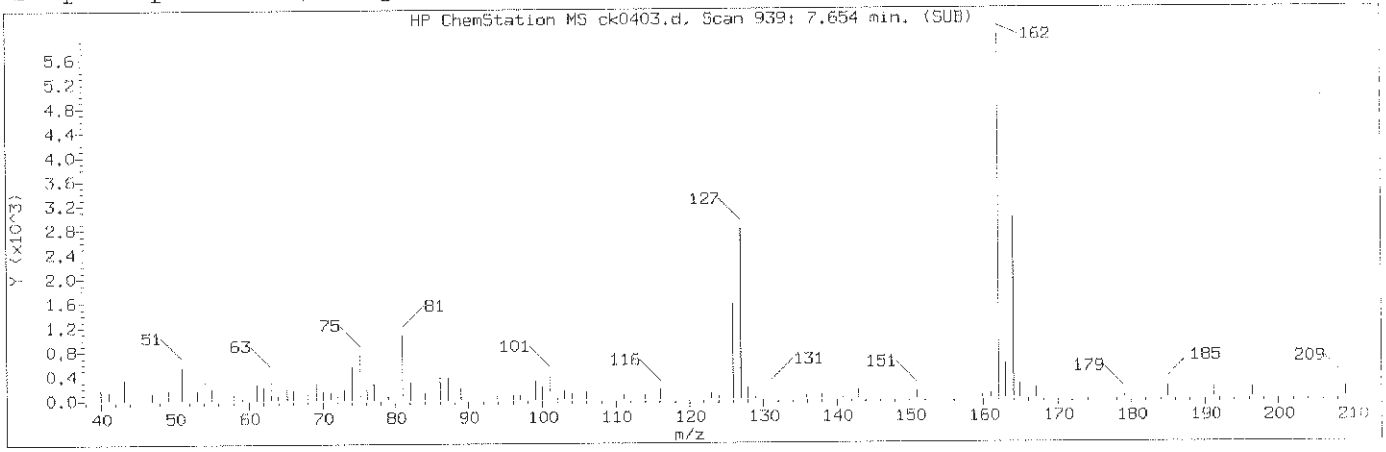
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

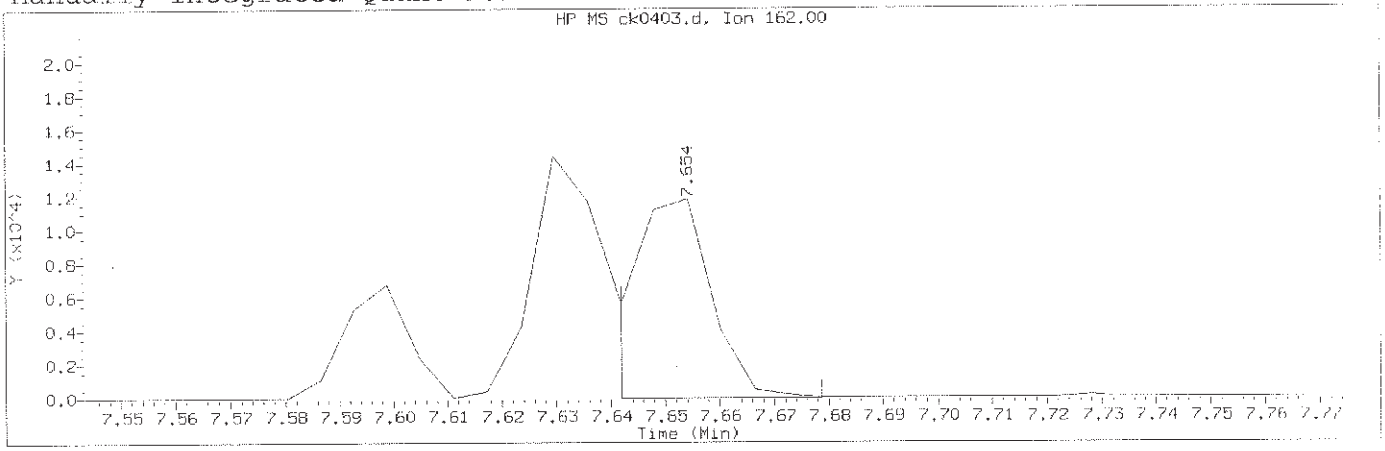
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3862		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 12335M		
On-Column Amount (ng/ul)	: 1.0704		
Integration start scan	: 936	Integration stop scan:	942
Y at integration start	: -29	Y at integration end:	-29

Reason for manual integration: improper integration

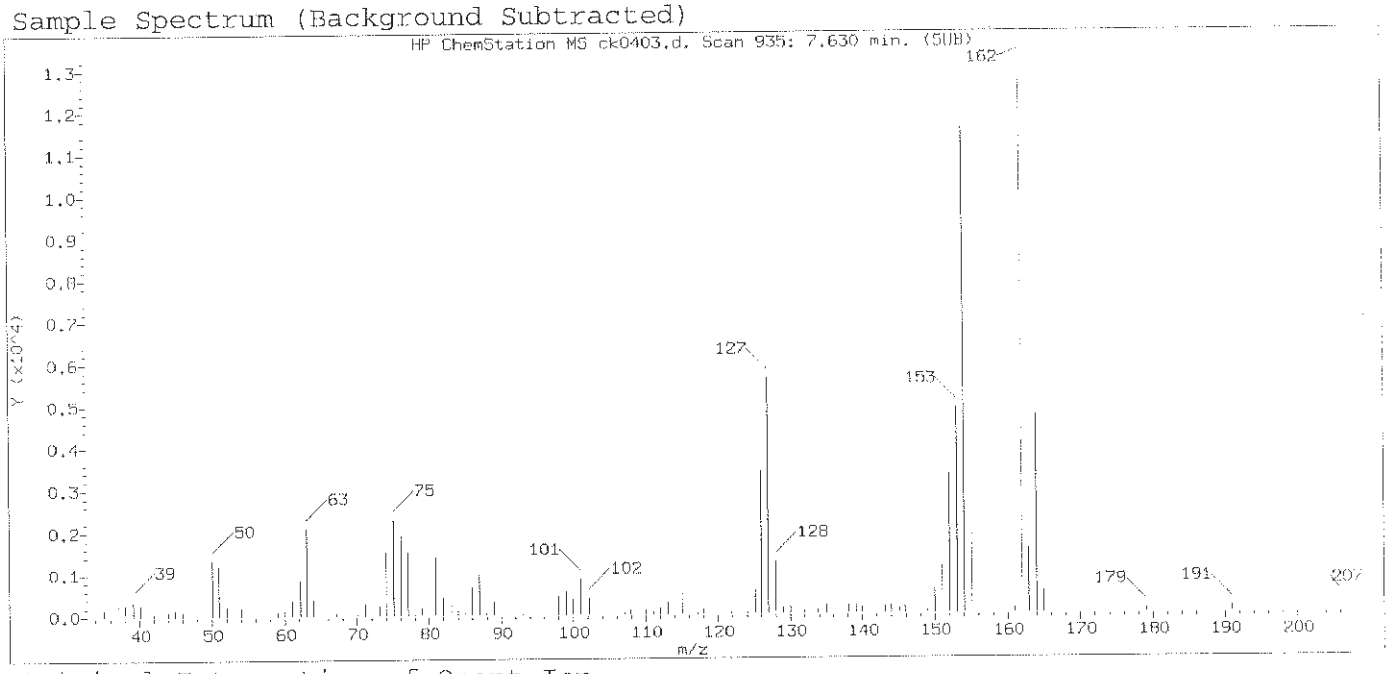
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

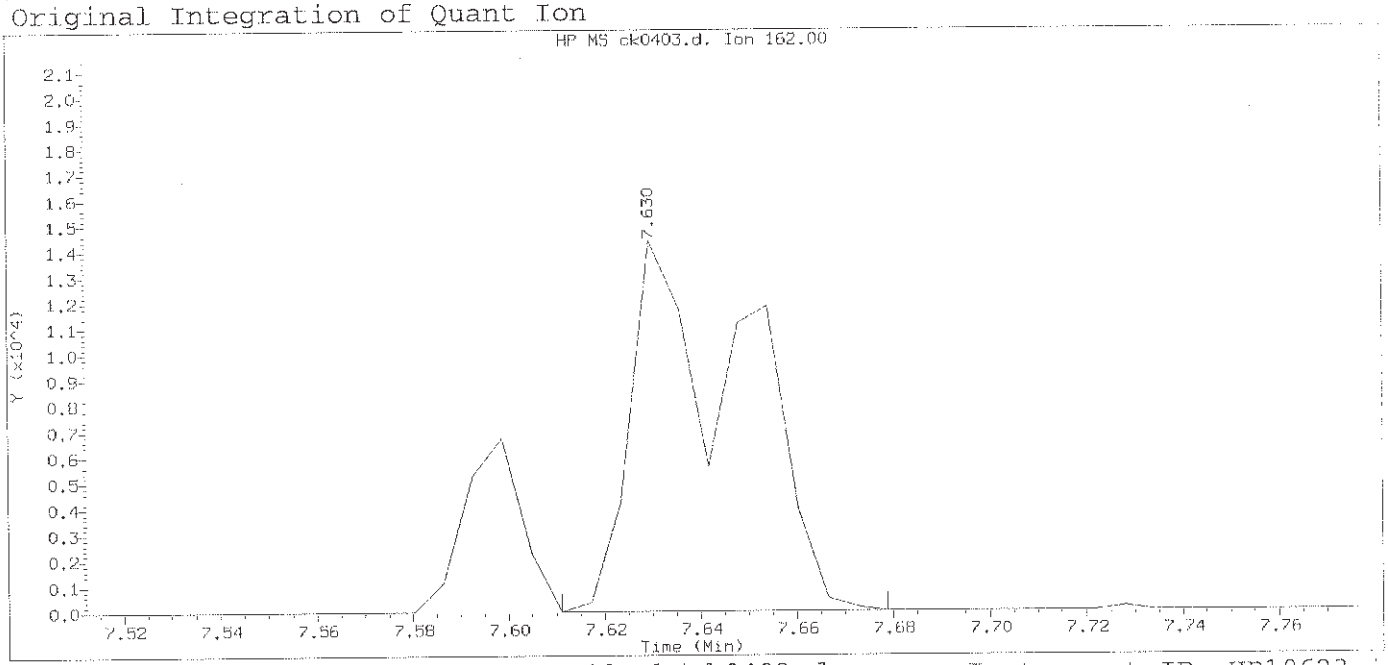
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

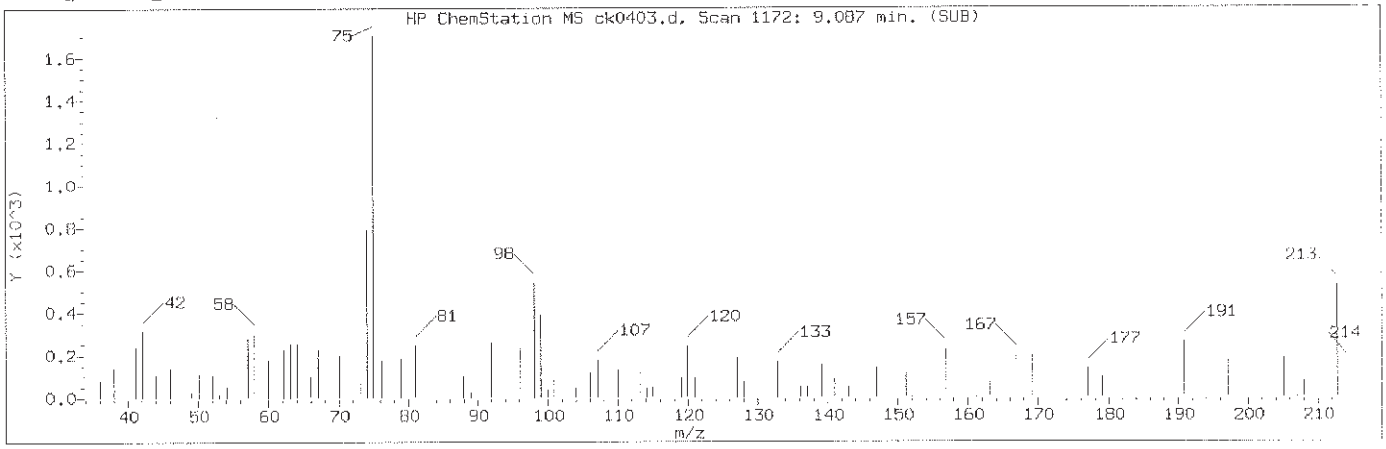
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

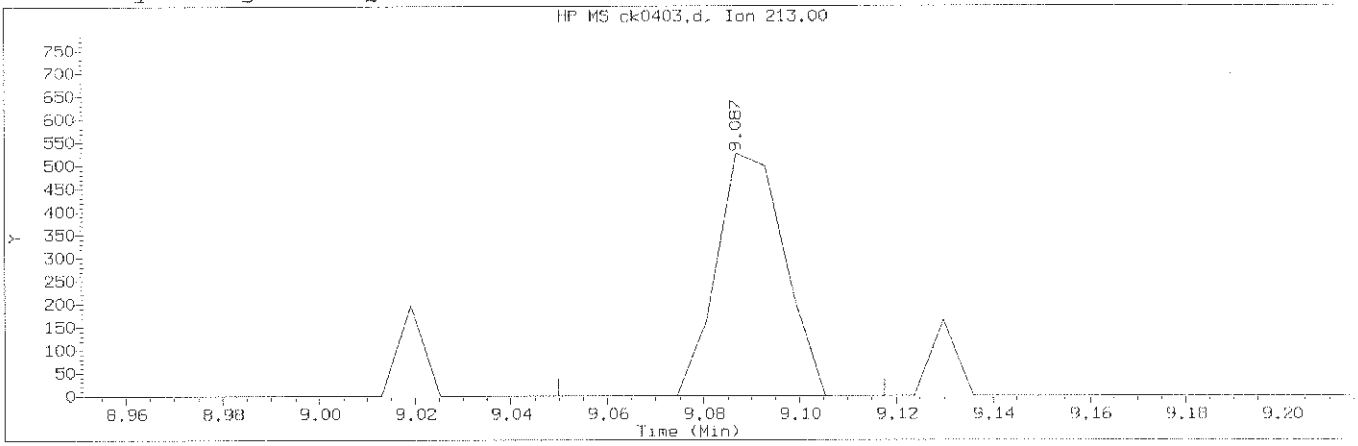
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3414		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1172		
Retention Time (minutes)	: 9.087		
Quant Ion	: 213.00		
Area (flag)	: 512M		
On-Column Amount (ng/ul)	: 0.5249		
Integration start scan	: 1165	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

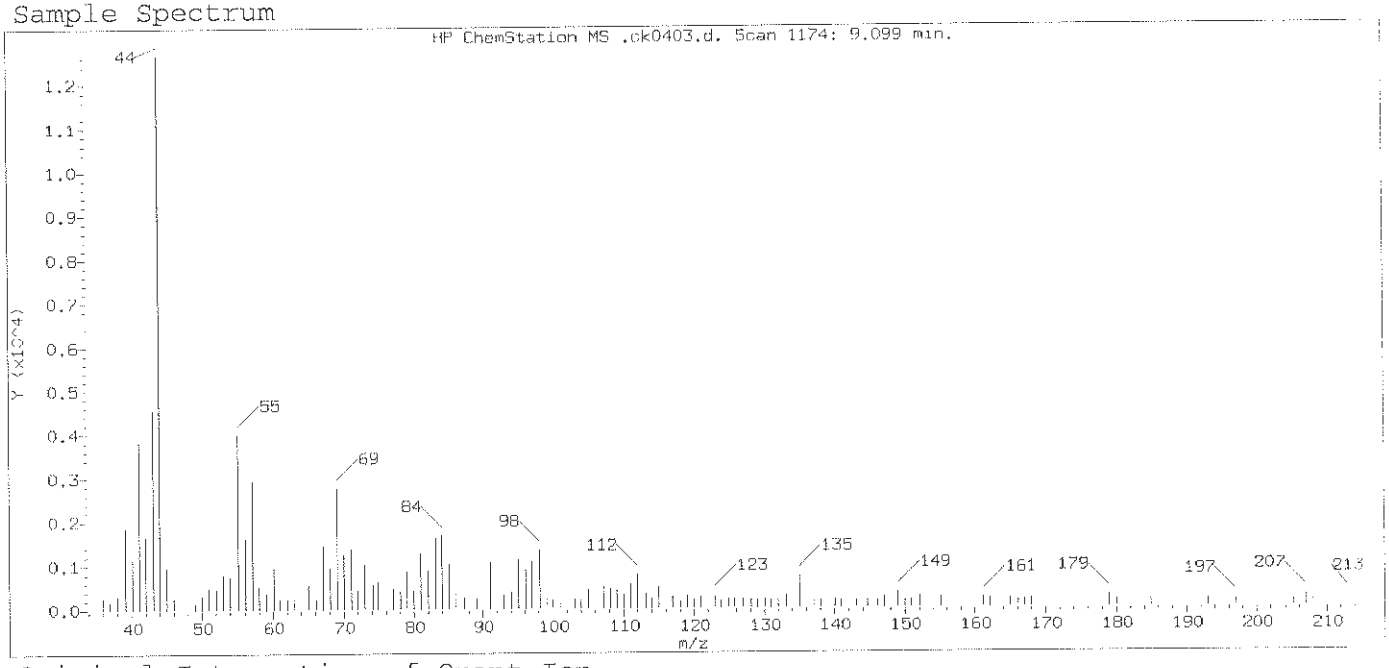
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

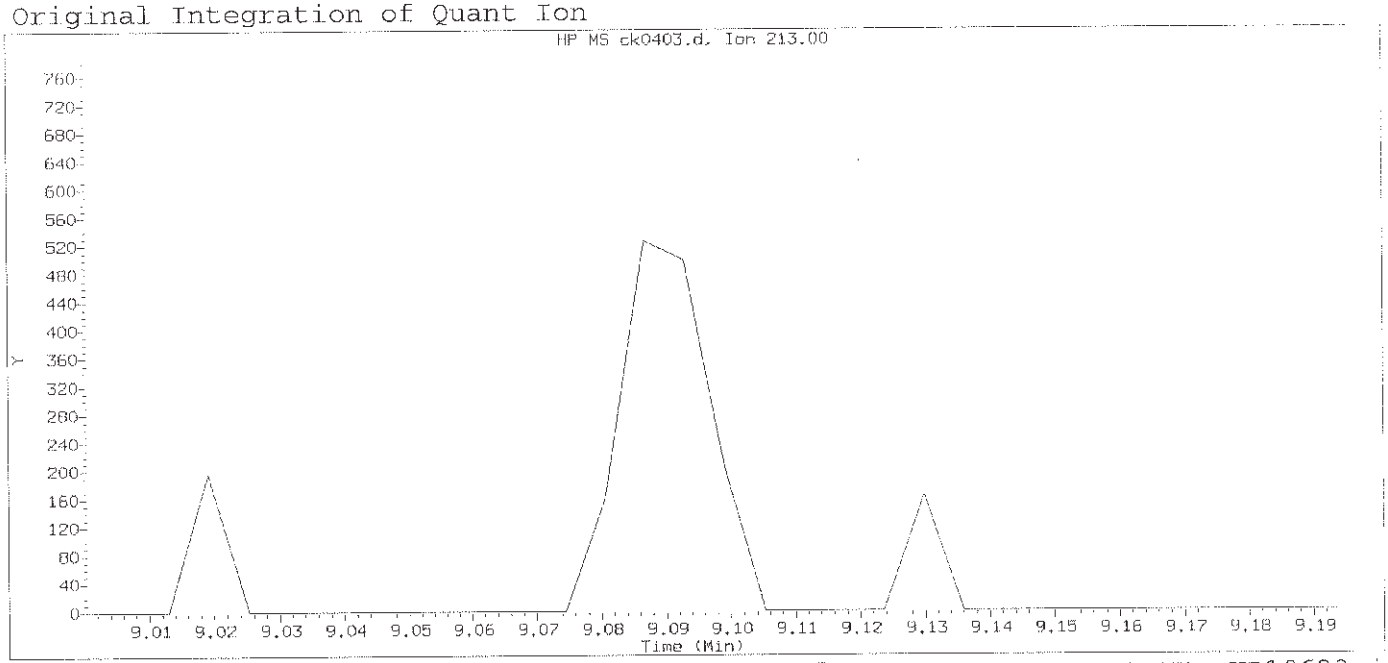
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

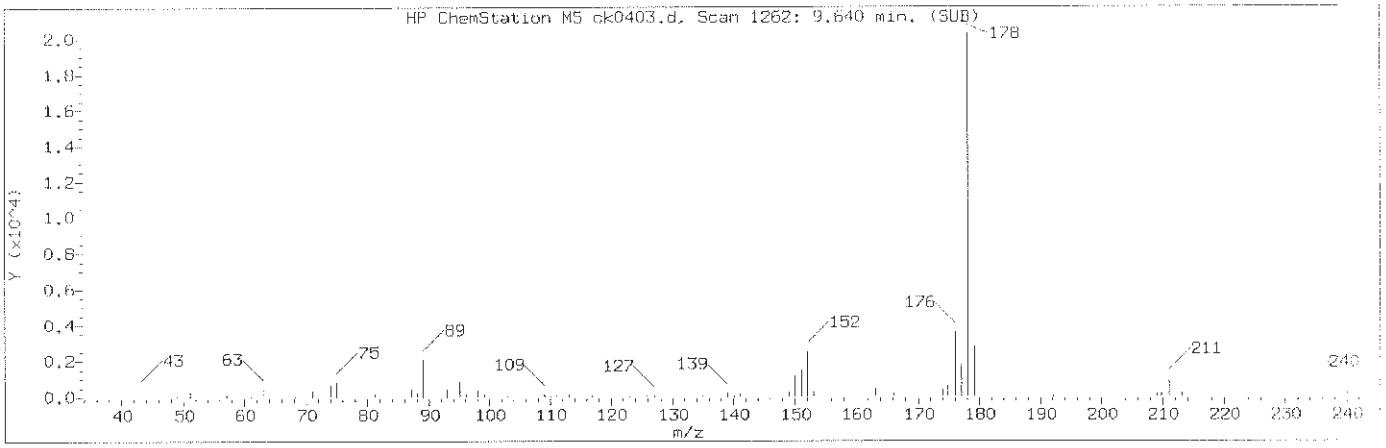
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

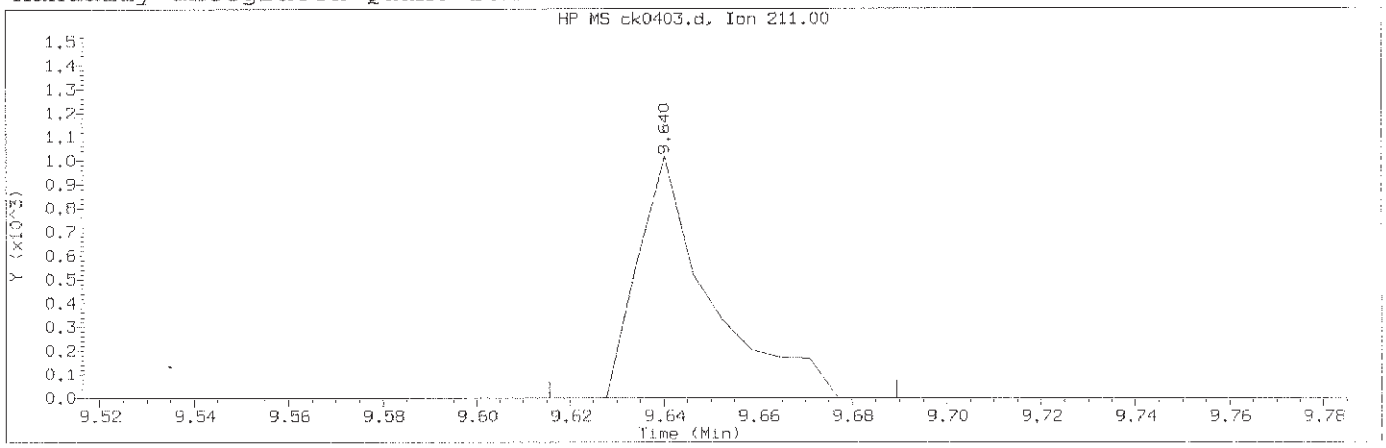
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 1087M		
On-Column Amount (ng/ul)	: 0.5430		
Integration start scan	: 1257	Integration stop scan:	1269
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

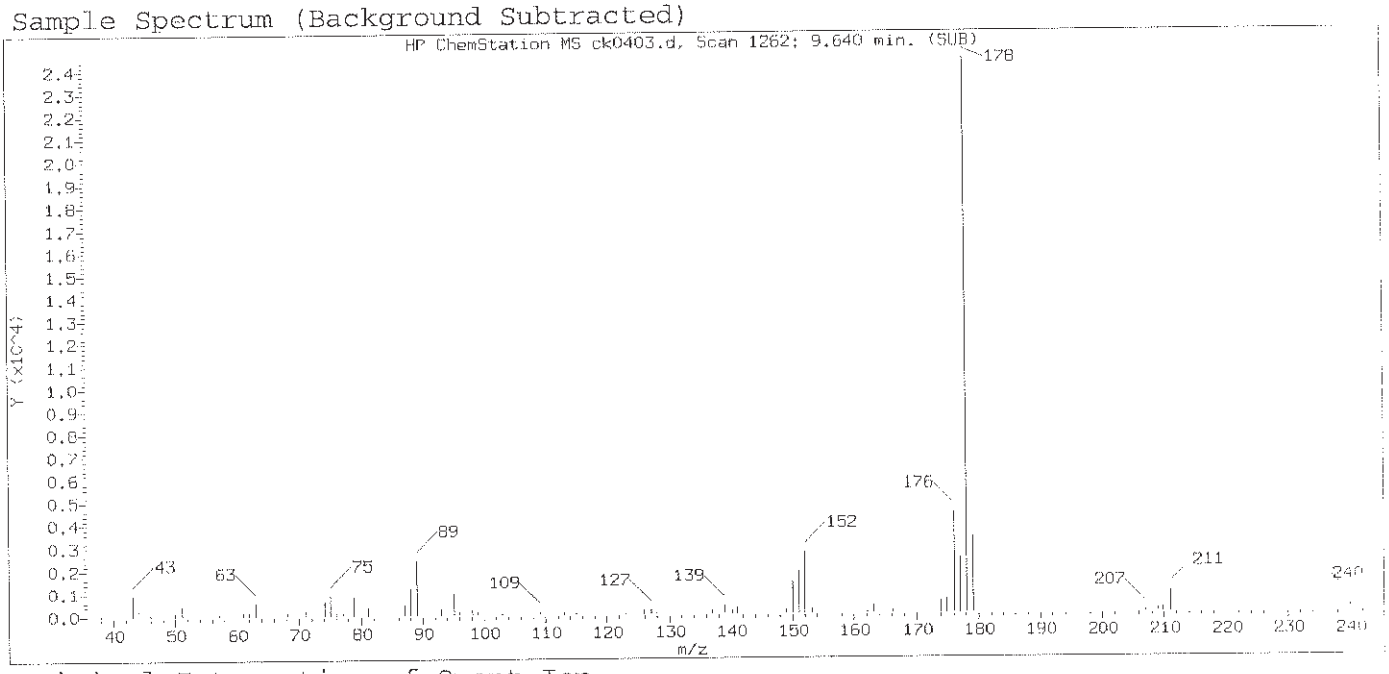
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

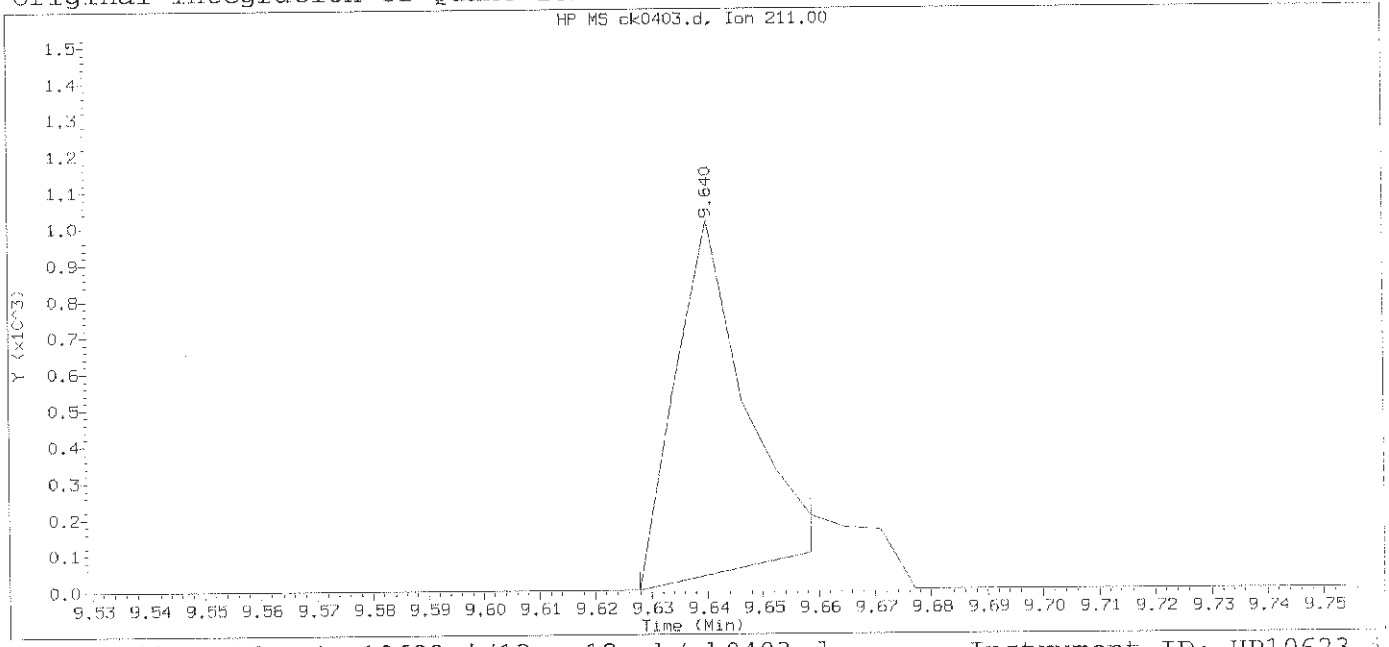
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



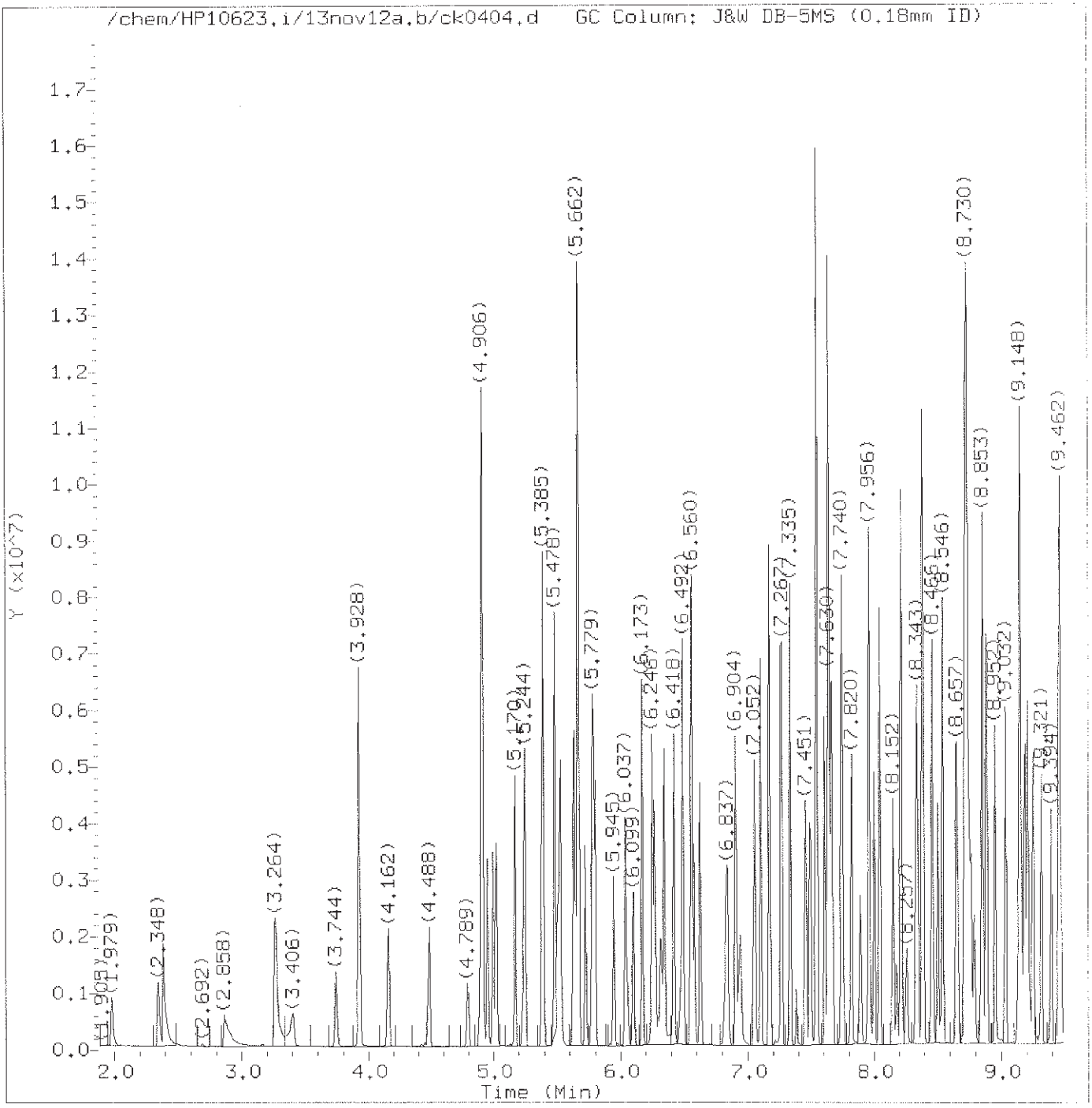
Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area	: 832		
On-column Amount (ng/ul)	: 0.4821		
Integration start scan	: 1259	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	101

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

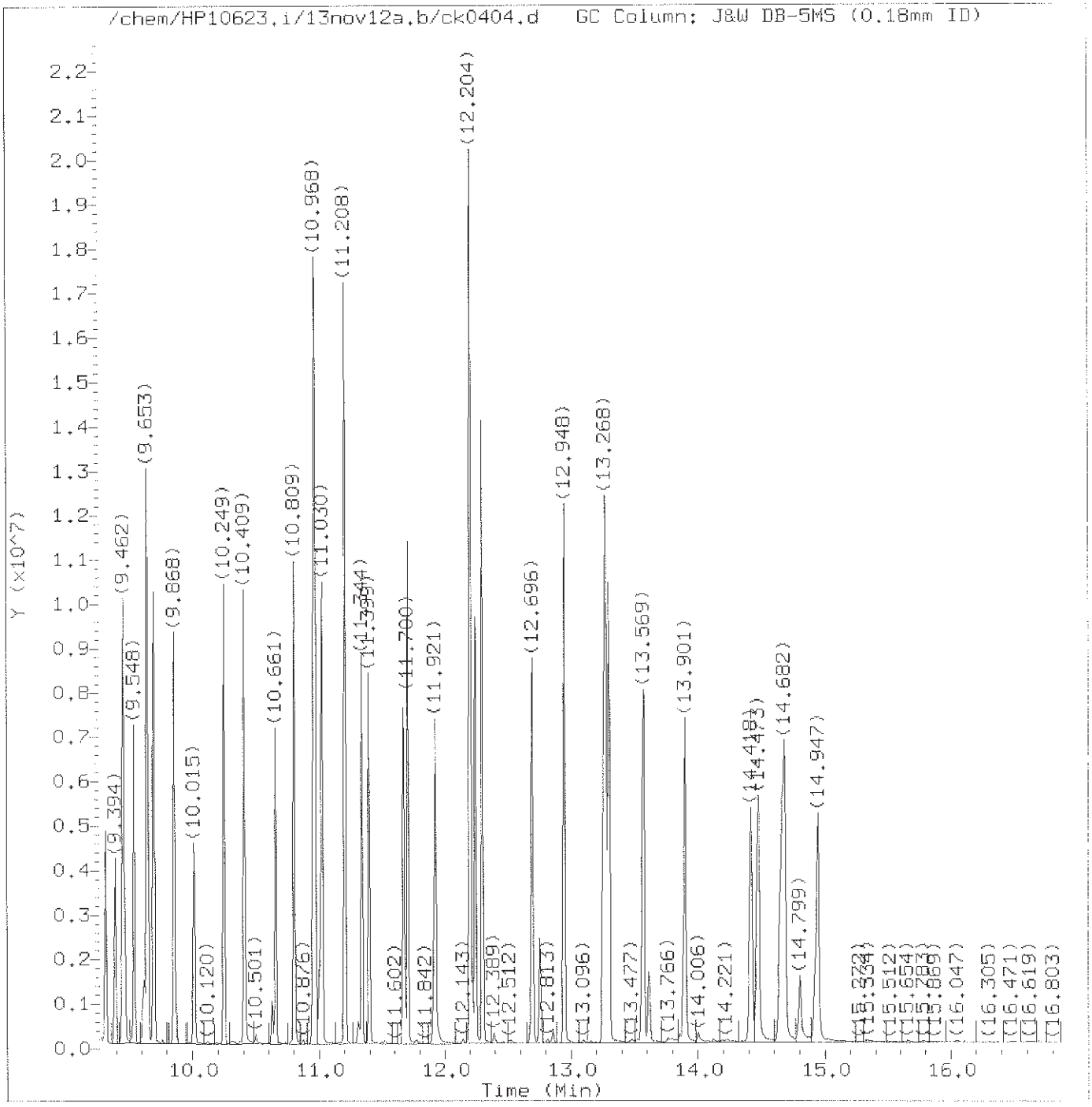
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	Qlon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	398795	117.270
2) N-Nitrosodimethylamine	(1)	2.348	74	742151	117.879
3) Pyridine	(1)	2.385	79	1204327	123.386
5) 2-Picoline	(1)	3.264	93	1191173	119.596
6) N-Nitrosomethylethylamine	(1)	3.406	88	553358	116.214
7) Methyl methanesulfonate	(1)	3.744	80	573067	119.700
9)$2-Fluorophenol	(1)	3.928	112	1869127	120.150
10) N-Nitrosodiethylamine	(1)	4.162	102	549404	116.145
11) Ethyl methanesulfonate	(1)	4.488	109	512186	118.903
12) Benzaldehyde	(1)	4.789	77	239575	50.173
15)$Phenol-d6	(1)	4.906	99	2814946	122.971
14)$Phenol-d5	(1)	4.906	99	2814946	122.971
13) Aniline	(1)	4.906	93	1936631	122.301
16) Phenol	(1)	4.912	94	1636135	122.526
18) bis(2-Chloroethyl)ether	(1)	4.992	93	1125526	118.726
19) 2-Chlorophenol	(1)	5.017	128	965818	115.945
20) 1,3-Dichlorobenzene	(1)	5.170	146	979337	116.504
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	103965	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	1003756	117.008
24) Benzyl alcohol	(1)	5.379	108	744719	114.342
25) 1,2-Dichlorobenzene	(1)	5.385	146	957351	118.894
206) Indene	(1)	5.478	115	2096143	116.540
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	1312918	112.545
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	1312918	112.259
26) 2-Methylphenol	(1)	5.527	108	1044241M	117.826
29) N-Nitrosopyrrolidine	(1)	5.631	100	644621	121.514
30) Acetophenone	(1)	5.638	105	1475769	111.687
33) 4-Methylphenol	(1)	5.662	108	1284338	122.433
32) N-Nitrosomorpholine	(1)	5.668	56	720241A	119.512
31) N-Nitroso-di-n-propylamine	(1)	5.668	70	1024425A	121.124
34) o-Toluidine	(1)	5.668	106	1846486	121.995
37) Hexachloroethane	(1)	5.718	117	389777	119.382
38)$Nitrobenzene-d5	(2)	5.779	82	2571559	122.450
39) Nitrobenzene	(2)	5.797	77	1329643	119.380
40) N-Nitrosopiperidine	(2)	5.945	114	572219	115.811
41) Isophorone	(2)	6.037	82	2356719	116.530
42) 2-Nitrophenol	(2)	6.105	139	488710	126.219
44) 2,4-Dimethylphenol	(2)	6.173	107	1186883	119.260
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	485104	116.907
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	1542458M	125.519

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on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.320	105	815004	126.346
49) 2,4-Dichlorophenol	(2)	6.345	162	822674	121.550
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	838364	117.598
52)*Naphthalene-d8	(2)	6.468	136	487375	20.000
53) Naphthalene	(2)	6.492	128	3076572	118.976
56) 4-Chloroaniline	(2)	6.554	127	1317377	116.907
57) 2,6-Dichlorophenol	(2)	6.560	162	772662	121.206
58) Hexachloropropene	(2)	6.578	213	495686	122.943
60) Hexachlorobutadiene	(2)	6.628	225	404428	113.108
194) Quinoline	(2)	6.843	129	2093475	117.451
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	1182208MA	121.485
63) Caprolactam	(2)	6.941	113	419377	111.854
68) 4-Chloro-3-methylphenol	(2)	7.052	107	1037587	119.911
69) Safrole	(2)	7.101	162	820159	119.736
70) 2-Methylnaphthalene	(2)	7.169	142	2202637	120.024
71) 1-Methylnaphthalene	(2)	7.267	142	1979369	117.874
72) Hexachlorocyclopentadiene	(3)	7.328	237	387341	126.858
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	832075	117.760
74) cis-Isosafrole	(3)	7.384	162	148091	13.055
75) 2,4,6-Trichlorophenol	(3)	7.458	196	560652	121.606
77) 2,4,5-Trichlorophenol	(3)	7.488	196	617685	122.880
78)$2-Fluorobiphenyl	(3)	7.544	172	4460940	119.752
79) trans-Isosafrole	(3)	7.605	162	853051	106.225
80) Isosafrole	(3)	7.605	162	853051	119.353
83) 1,1'-Biphenyl	(3)	7.636	154	2561525	111.609
84) 2-Chloronaphthalene	(3)	7.642	162	2036153	121.799
85) 1-Chloronaphthalene	(3)	7.667	162	1786834A	108.606
88) Diphenyl ether	(3)	7.740	170	1367218	119.588
89) 2-Nitroaniline	(3)	7.753	138	682699	125.182
90) 1,4-Naphthoquinone	(3)	7.820	158	844413	120.029
91) 1,4-Dinitrobenzene	(3)	7.888	168	292208	119.047
92) Dimethylphthalate	(3)	7.956	163	2337797	117.527
93) 1,3-Dinitrobenzene	(3)	7.962	168	390232	119.251
94) 2,6-Dinitrotoluene	(3)	7.999	165	526860	127.170
95) Acenaphthylene	(3)	8.042	152	3112269	119.250
97) 3-Nitroaniline	(3)	8.152	138	634912	125.496
98)*Acenaphthene-d10	(3)	8.177	164	296224	20.000
99) Acenaphthene	(3)	8.214	153	2143285	118.659
100) 2,4-Dinitrophenol	(3)	8.257	184	192454	118.038
103) 4-Nitrophenol	(3)	8.337	109	390890	124.719

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Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sublist used: newall1

Sample Name: SSTD120

Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	714495	117.017
104) Dibenzofuran	(3)	8.386	168	2914224	117.782
105) 2,4-Dinitrotoluene	(3)	8.392	165	700406	130.826
106) 1-Naphthylamine	(3)	8.466	143	2449421	120.476
107) 2,3,4,6-Tetrachlorophenol	(3)	8.509	232	451305	127.459
108) 2-Naphthylamine	(3)	8.546	143	2484193	119.421
109) Diethylphthalate	(3)	8.657	149	2415462	117.553
111) Fluorene	(3)	8.718	166	2540103	119.317
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	1110543	117.262
110) Thionazin	(3)	8.730	107	563773	124.406
113) 5-Nitro-o-toluidine	(3)	8.743	152	727951	129.509
114) 4-Nitroaniline	(3)	8.767	138	675934A	118.809
115) 4,6-Dinitro-2-methylphenol	(4)	8.792	198	299221	119.723
117) N-Nitrosodiphenylamine	(4)	8.853	169	2179897	122.698
202) NDPA as diphenylamine	(4)	8.853	169	2179897	122.406
118) 1,2-Diphenylhydrazine	(4)	8.884	77	3206144	125.982
119)$2,4,6-Tribromophenol	(3)	8.958	330	437175	122.193
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	447330	123.325
121) 1,3,5-Trinitrobenzene	(4)	9.136	213	212276	120.478
122) Diallate (peak 1)	(4)	9.148	86	1219924	93.676
123) Phorate	(4)	9.155	75	2188290M	139.560
124) Phenacetin	(4)	9.191	108	1508041	122.823
125) 4-Bromophenyl-phenylether	(4)	9.210	248	588059	120.129
126) Diallate (peak 2)	(4)	9.222	86	169919	30.045
127) Hexachlorobenzene	(4)	9.253	284	563038	116.493
128) Dimethoate	(4)	9.321	87	1137920	118.679
130) Atrazine	(4)	9.394	200	402424	70.700
131) Pentachlorophenol	(4)	9.450	266	351994	131.315
132) Pentachloronitrobenzene	(4)	9.462	237	266829	127.175
133) 4-Aminobiphenyl	(4)	9.462	169	1949097	101.456
134) Pronamide	(4)	9.548	173	1133279	122.383
135)*Phenanthrene-d10	(4)	9.628	188	530074	20.000
136) Dinoseb	(4)	9.646	211	439035	121.124
137) Phenanthrene	(4)	9.653	178	3706857	120.269
138) Anthracene	(4)	9.702	178	3894297	122.746
140) Carbazole	(4)	9.868	167	3745874	120.992
141) Methyl parathion	(4)	10.015	109	780017	119.613
142) Di-n-butylphthalate	(4)	10.249	149	4397140	120.377
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	332474	121.168
143) Parathion	(4)	10.409	109	581918	120.922

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	400372	114.947
147) Fluoranthene	(4)	10.809	202	4230747	122.761
152) Benzidine	(5)	10.975	184	9270730	344.486
167)*Pyrene-d10	(5)	11.005	212	657394	20.000
154) Pyrene	(5)	11.030	202	4426836	121.259
156)$Terphenyl-d14	(5)	11.208	244	5735835	122.034
158) p-Dimethylaminoazobenzene	(5)	11.344	225	887349	124.722
159) Chlorobenzilate	(5)	11.399	139	1395656	126.103
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2663290	118.366
161) Butylbenzylphthalate	(5)	11.706	149	2108453	121.025
162) 2-Acetylaminofluorene	(5)	11.921	181	2021224	128.105
164) 3,3'-Dichlorobenzidine	(5)	12.198	252	1498983	118.085
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	758170	122.263
166) Benzo(a)anthracene	(5)	12.204	228	4122074	122.416
168) Chrysene	(5)	12.247	228	3839201	118.255
169) bis(2-Ethylhexyl)phthalate	(5)	12.297	149	2944340	121.810
189) 6-Methylchrysene	(5)	12.696	242	2843627	118.707
170) Di-n-octylphthalate	(6)	12.948	149	5277690	129.610
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.268	256	1997972	130.520
172) Benzo(b)fluoranthene	(6)	13.274	252	4507467	136.831
173) Benzo(k)fluoranthene	(6)	13.299	252	3864269A	114.981
174) Benzo(a)pyrene	(6)	13.575	252	3882269	120.749
175)*Perylene-d12	(6)	13.612	264	539486	20.000
176) 3-Methylcholanthrene	(6)	13.901	268	1945486	120.720
190) Dibenz(a,h)acridine	(6)	14.418	279	2928415	125.375
191) Dibenz(a,j)acridine	(6)	14.473	279	3121340	116.211
177) Indeno(1,2,3-cd)pyrene	(6)	14.658	276	4123361	120.541
178) Dibenz(a,h)anthracene	(6)	14.682	278	3480308	121.633
179) Benzo(g,h,i)perylene	(6)	14.947	276	3410301	117.026
129) Diallate TRANS/CIS	(4)			1389843	124.304

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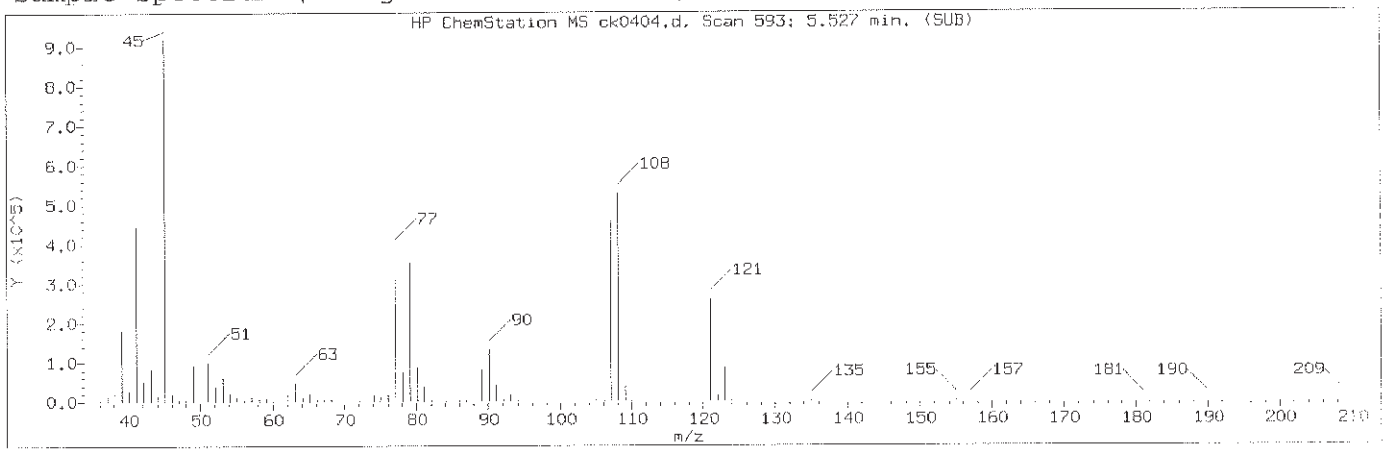
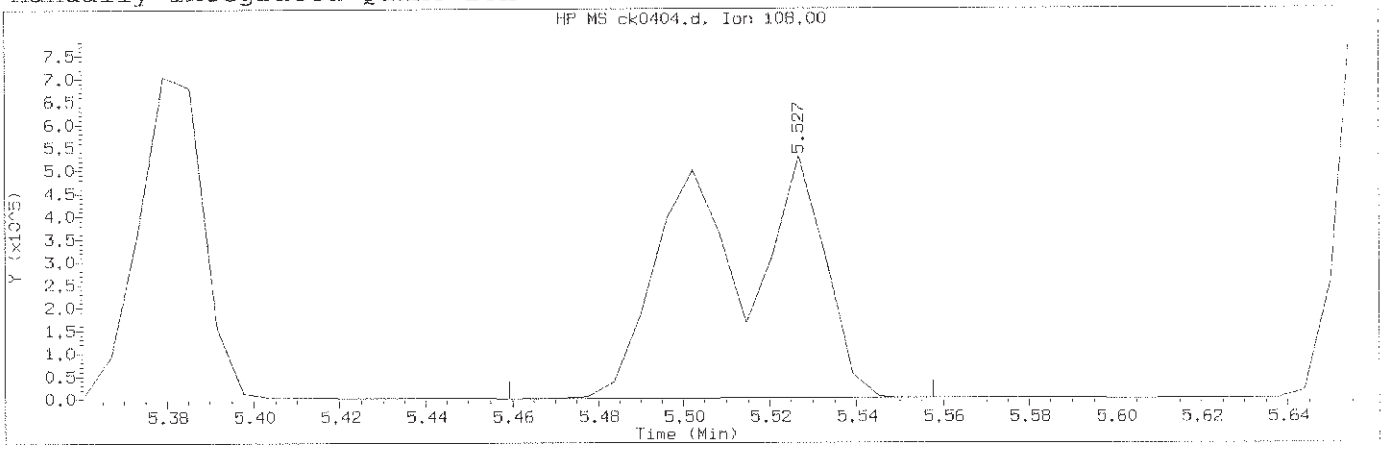
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

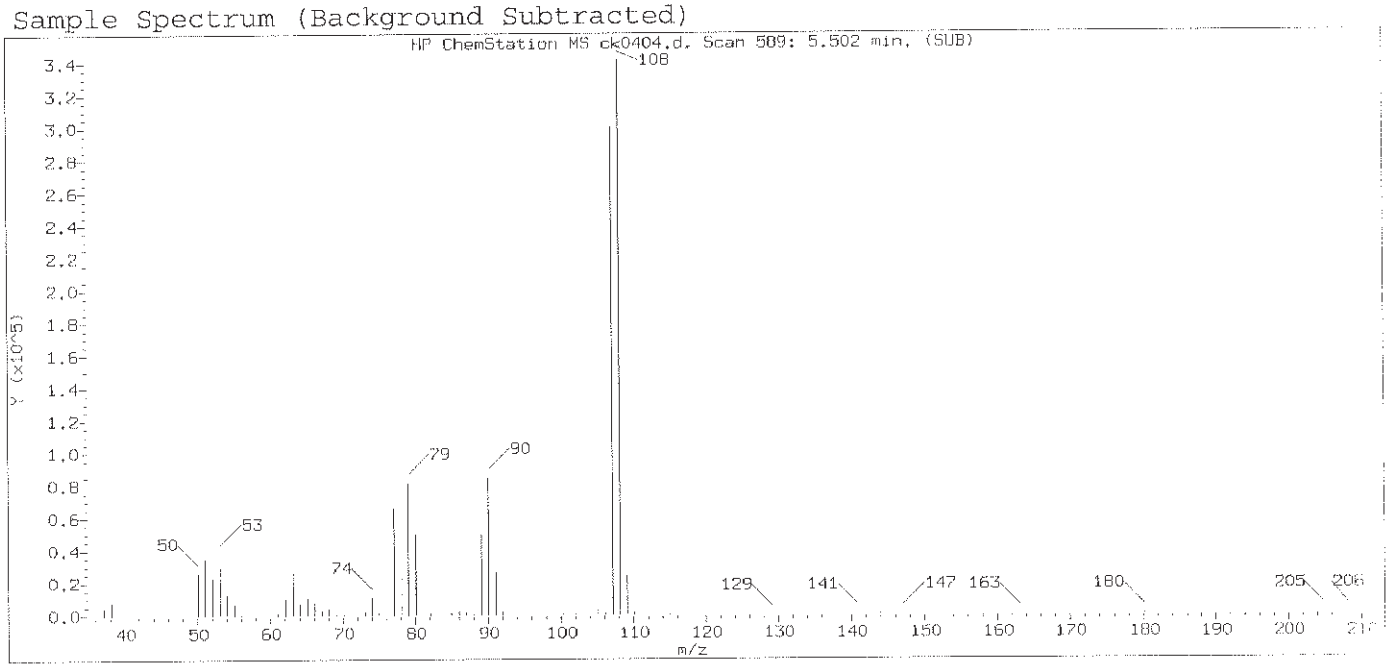
Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 593		
Retention Time (minutes)	: 5.527		
Quant Ion	: 108.00		
Area (flag)	: 1044241M		
On-Column Amount (ng/ul)	: 117.8262		
Integration start scan	: 581	Integration stop scan:	597
Y at integration start	: 544	Y at integration end:	1666

Reason for manual integration: improper integration

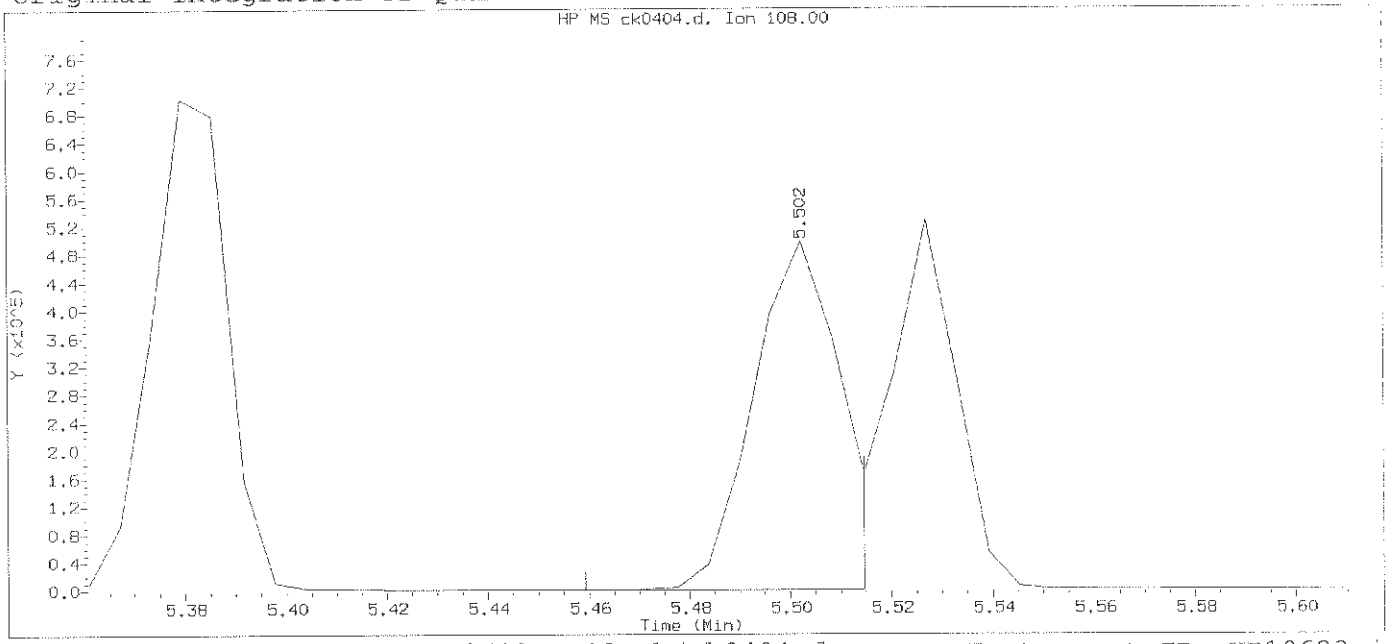
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 589		
Retention Time (minutes)	: 5.502		
Quant Ion	: 108.00		
Area	: 575903		
On-column Amount (ng/ul)	: 73.6240		
Integration start scan	: 581	Integration stop scan:	590
Y at integration start	: 0	Y at integration end:	0

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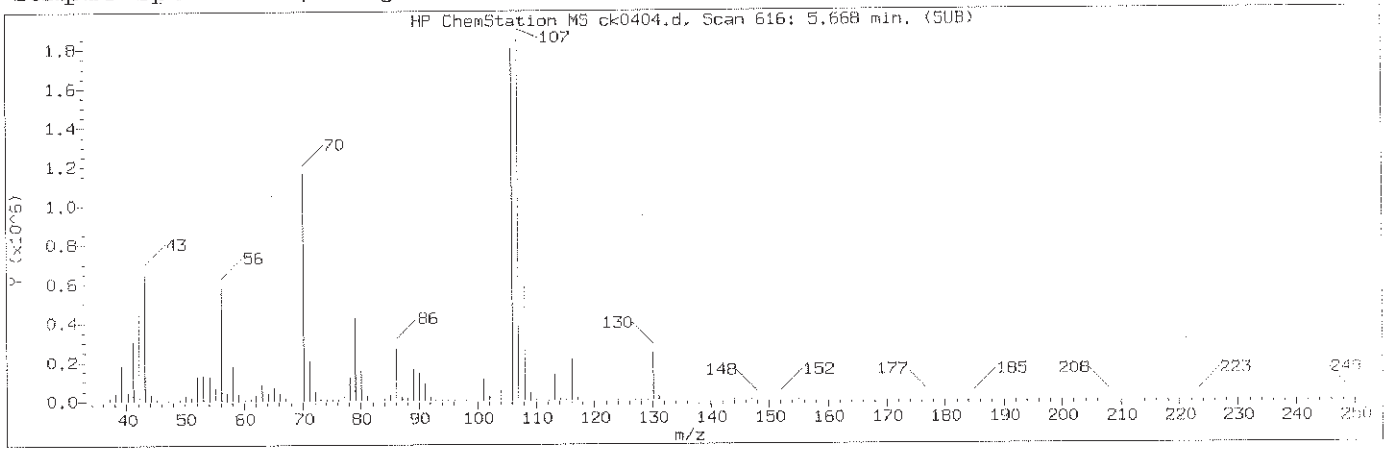
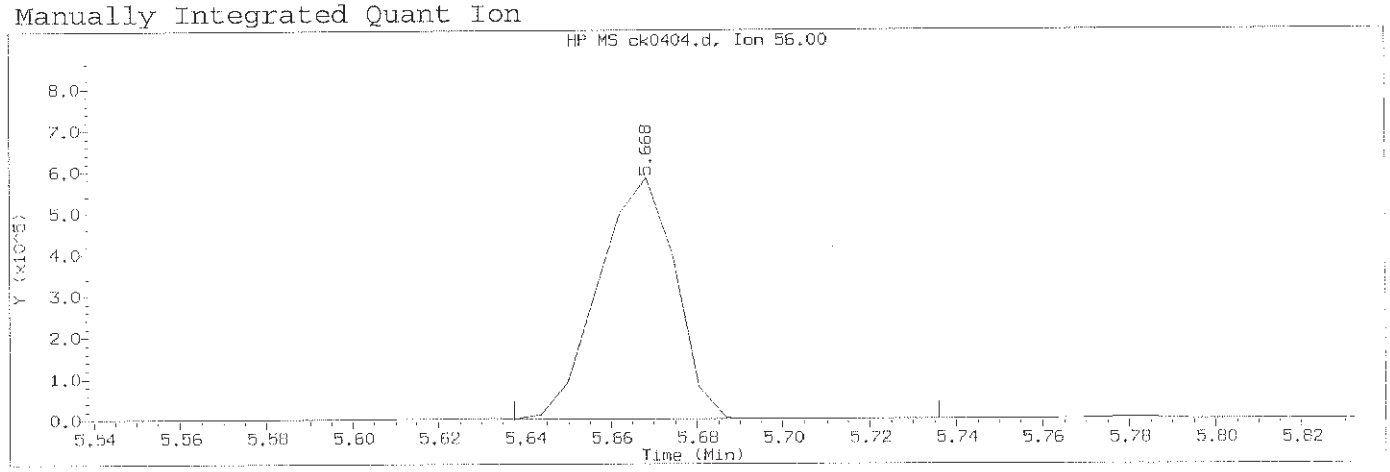
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

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Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 56.00		
Area (flag)	: 720241A		
On-Column Amount (ng/ul)	: 119.5124		
Integration start scan	: 610	Integration stop scan:	626
Y at integration start	: 1307	Y at integration end:	1307

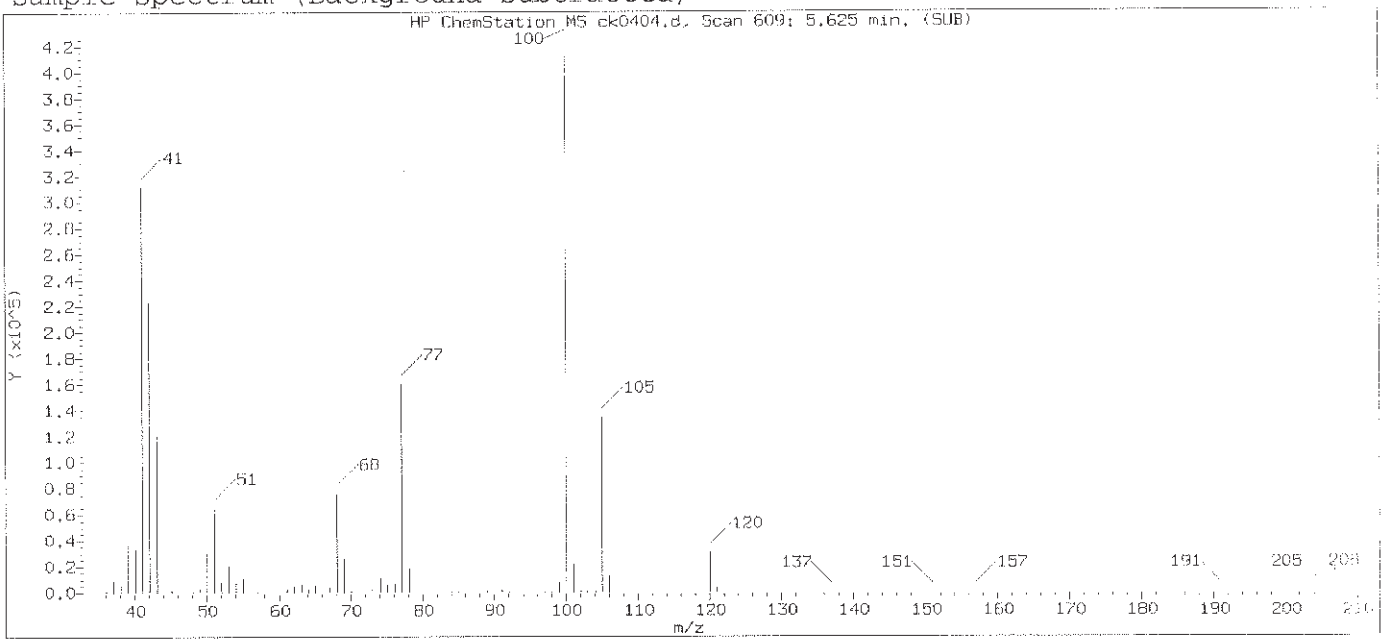
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

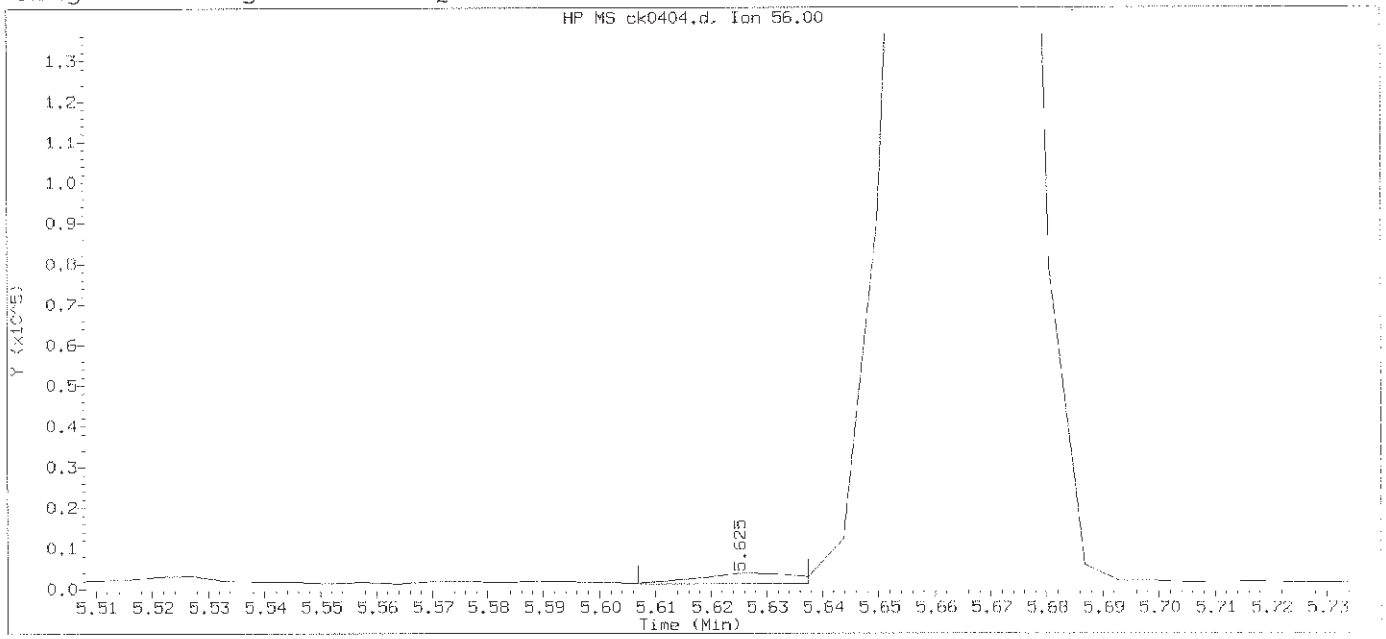
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

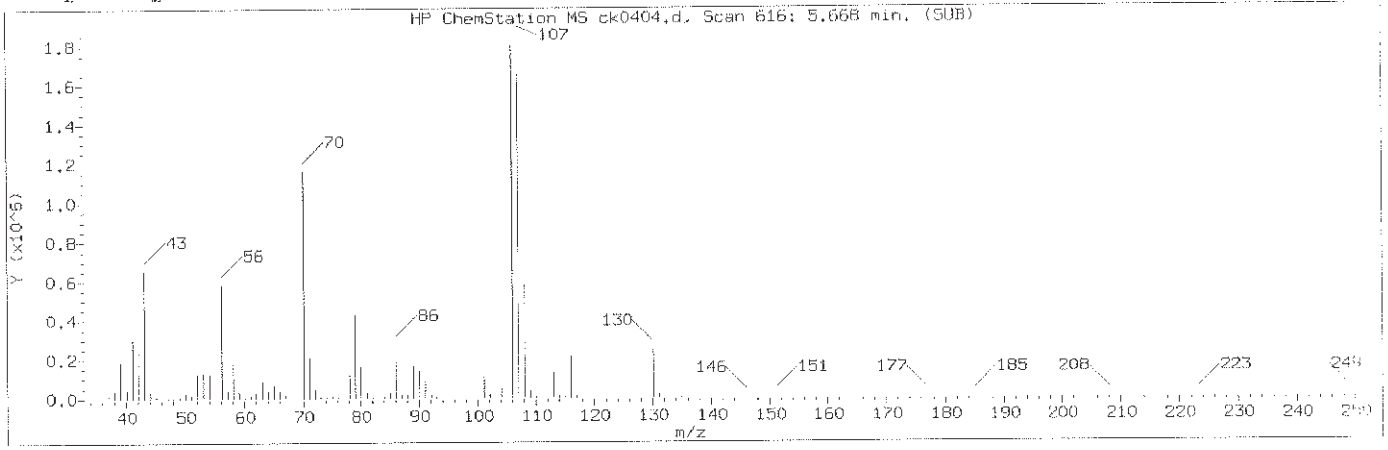
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

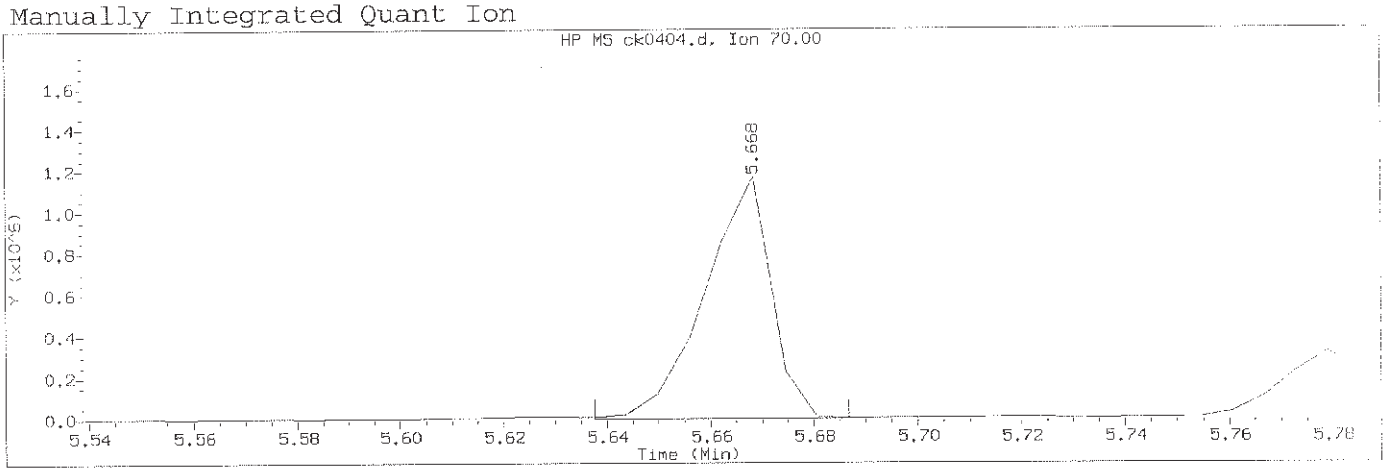
Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 609		
Retention Time (minutes)	: 5.625		
Quant Ion	: 56.00		
Area	: 3067		
On-column Amount (ng/ul)	: 0.9114		
Integration start scan	: 605	Integration stop scan:	610
Y at integration start	: 1307	Y at integration end:	1307

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 70.00		
Area (flag)	: 1024425A		
On-Column Amount (ng/ul)	: 121.1237		
Integration start scan	: 610	Integration stop scan:	618
Y at integration start	: 1062	Y at integration end:	1062

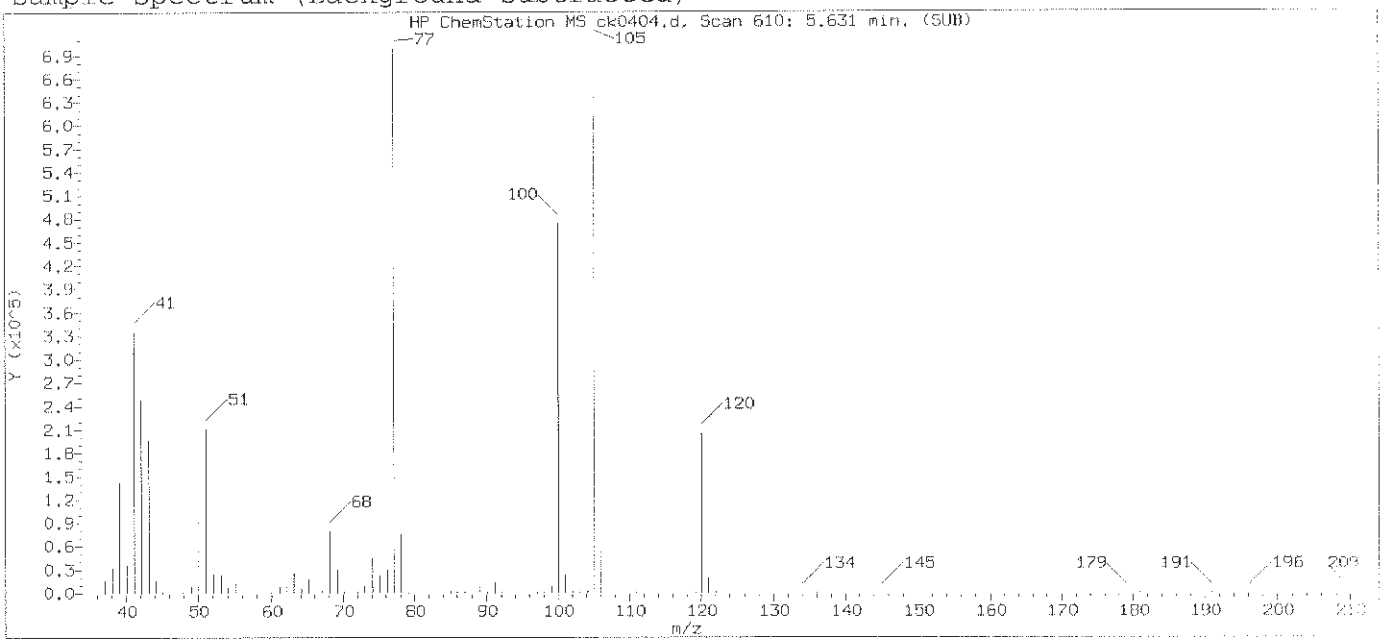
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

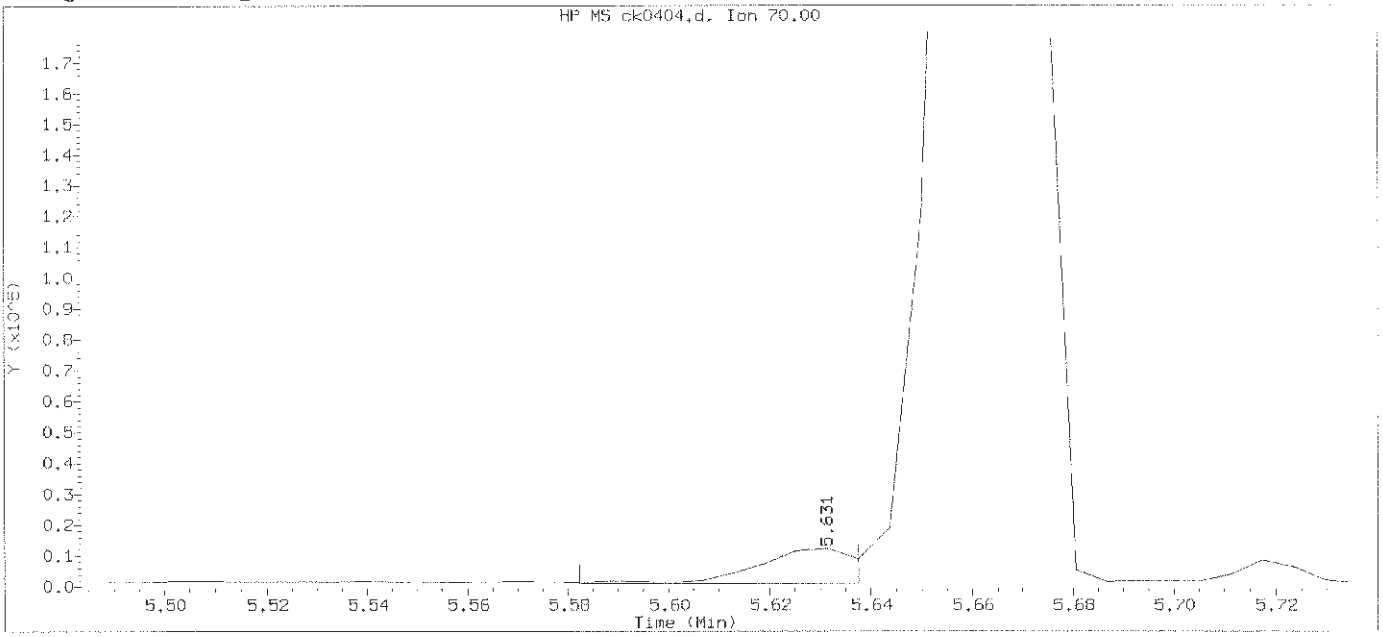
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 610		
Retention Time (minutes)	: 5.631		
Quant Ion	: 70.00		
Area	: 14177		
On-column Amount (ng/ul)	: 2.2666		
Integration start scan	: 601	Integration stop scan:	610
Y at integration start	: 1062	Y at integration end:	1062

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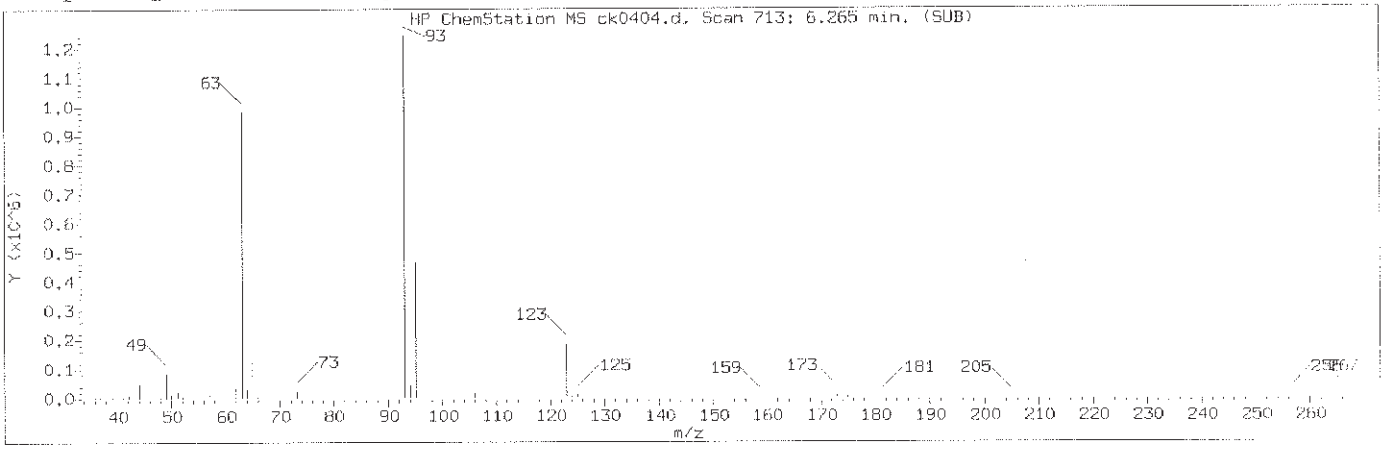
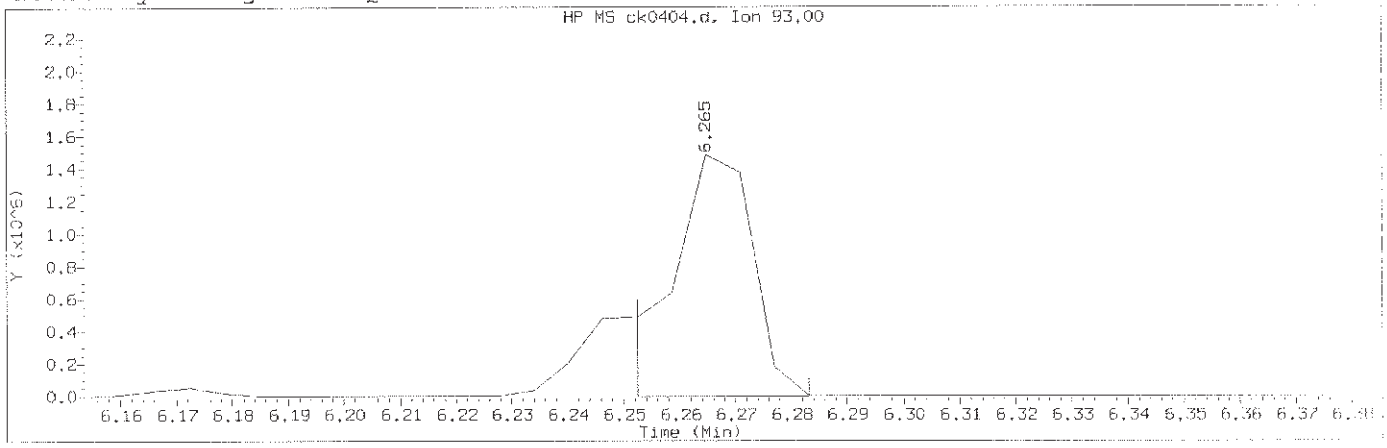
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area (flag)	: 1542458M		
On-Column Amount (ng/ul)	: 125.5195		
Integration start scan	: 710	Integration stop scan:	715
Y at integration start	: -2375	Y at integration end:	-2375

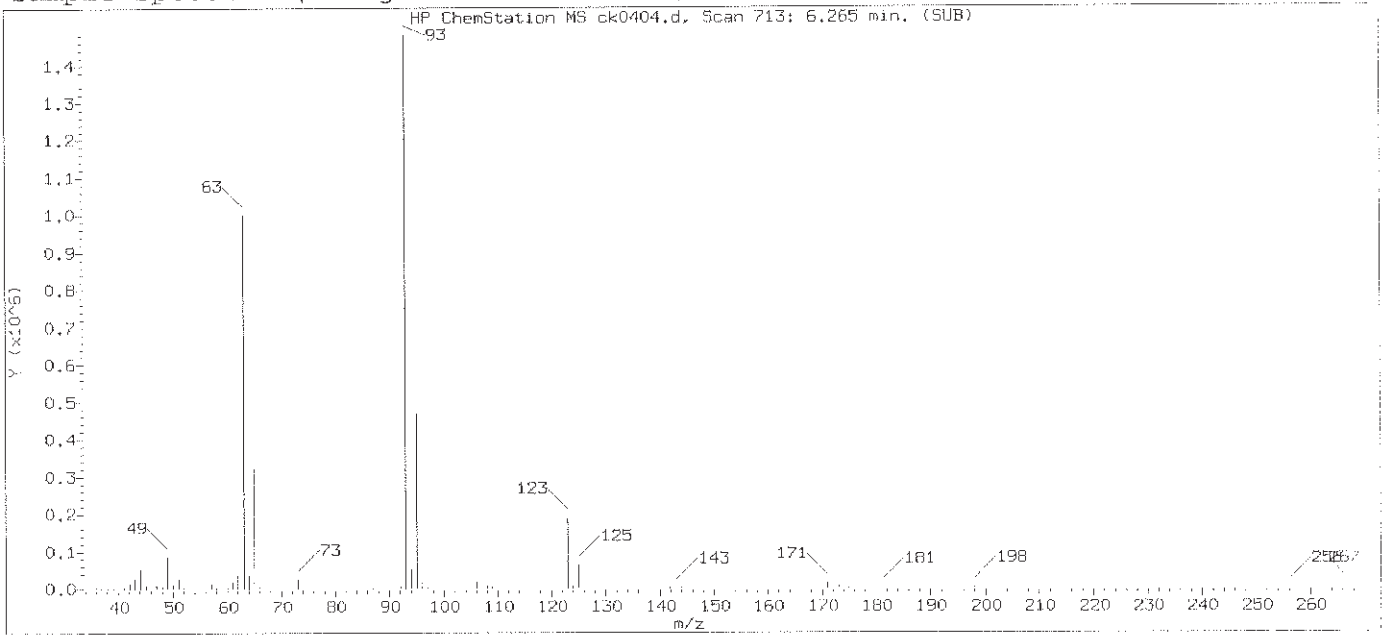
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

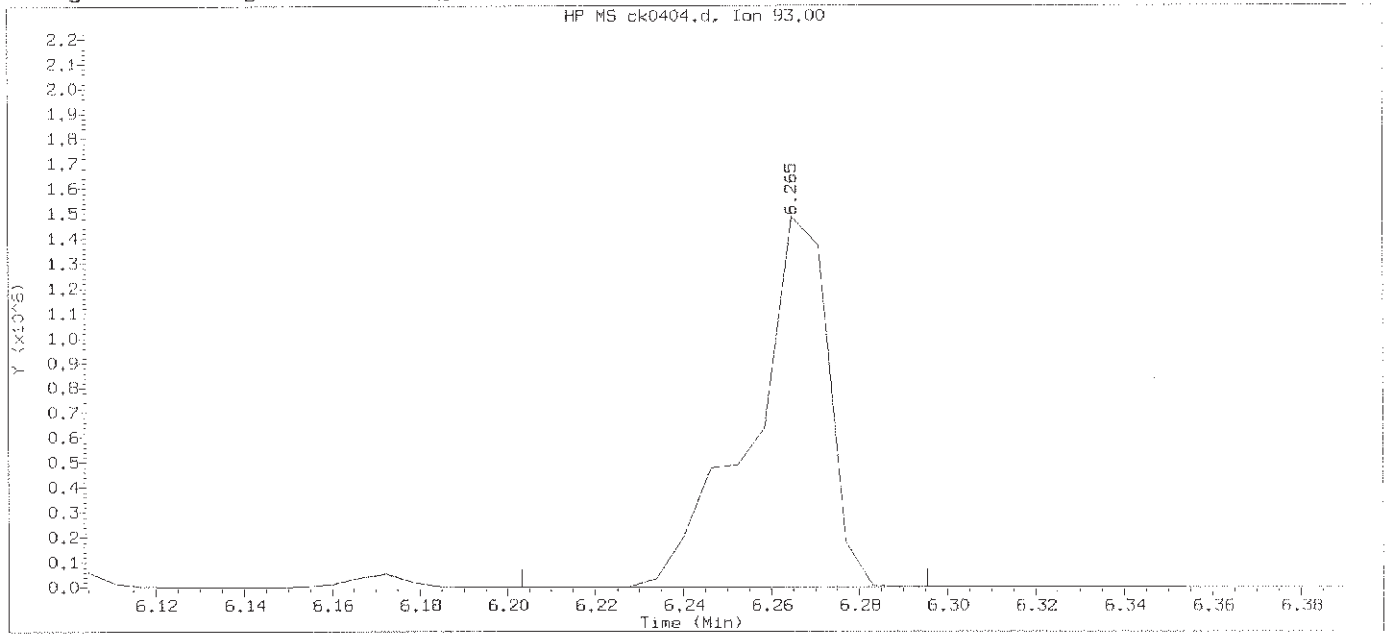
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area	: 1804476		
On-column Amount (ng/ul)	: 131.3277		
Integration start scan	: 702	Integration stop scan:	717
Y at integration start	: 0	Y at integration end:	0

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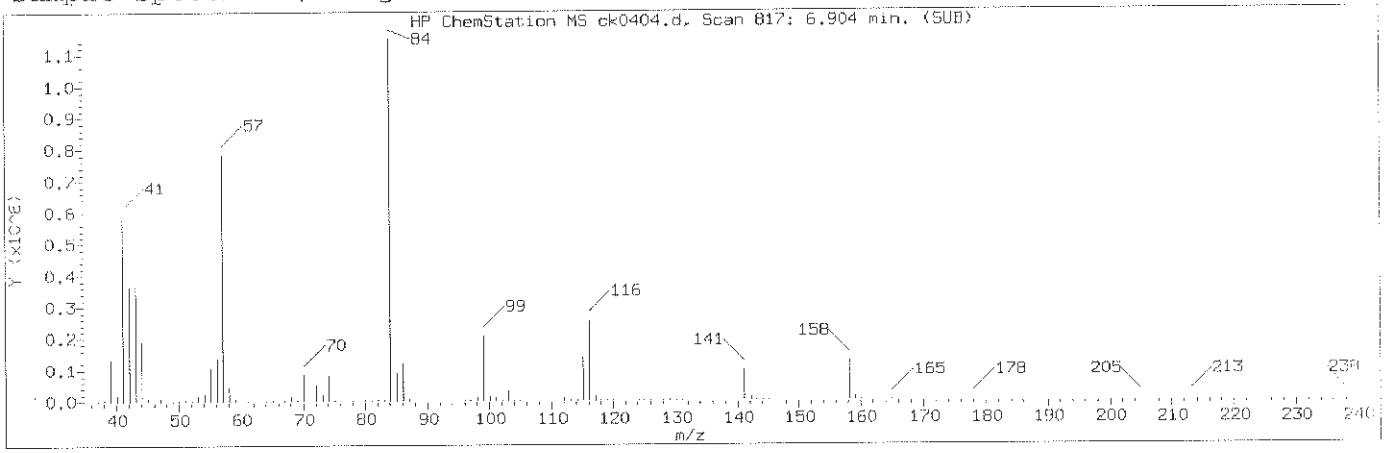
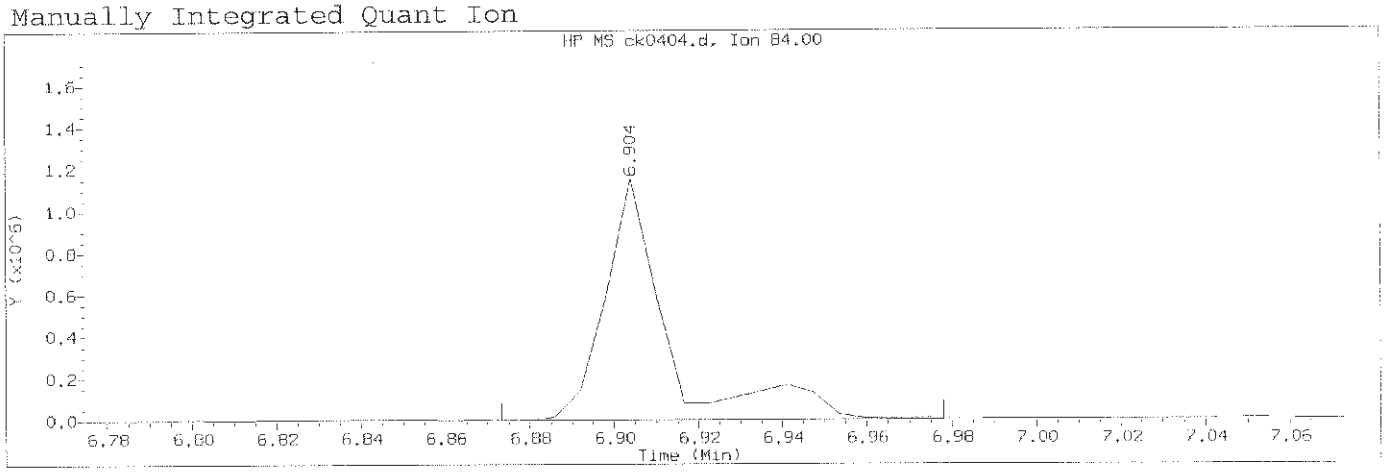
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 1182208MA		
On-Column Amount (ng/ul)	: 121.4847		
Integration start scan	: 811	Integration stop scan:	828
Y at integration start	: 866	Y at integration end:	866

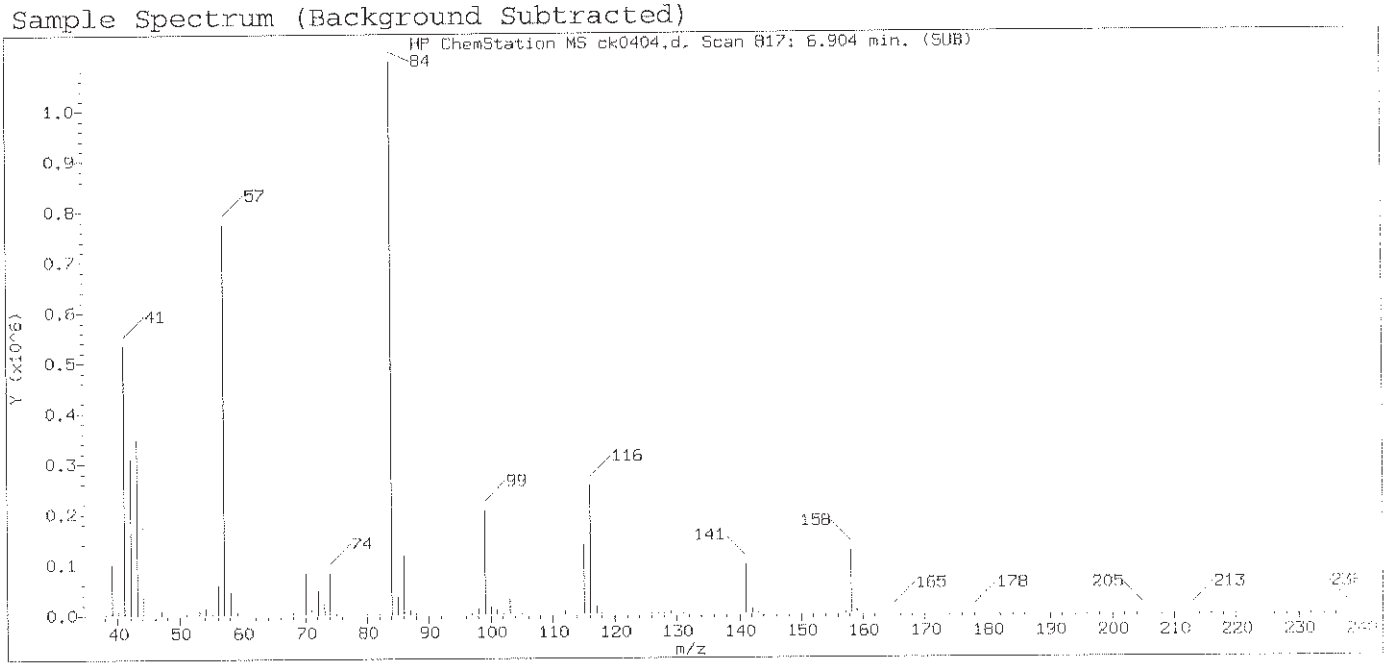
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

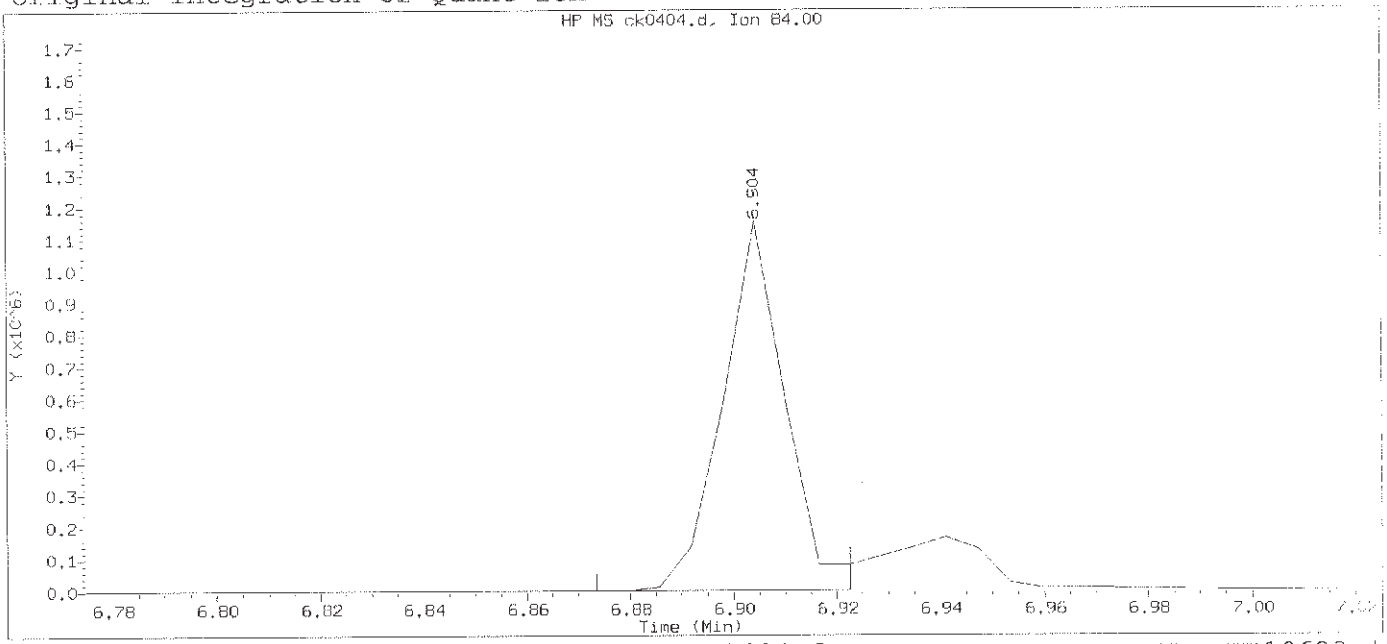
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 948721		
On-column Amount (ng/ul)	: 100.0241		
Integration start scan	: 811	Integration stop scan:	819
Y at integration start	: 1061	Y at integration end:	1061

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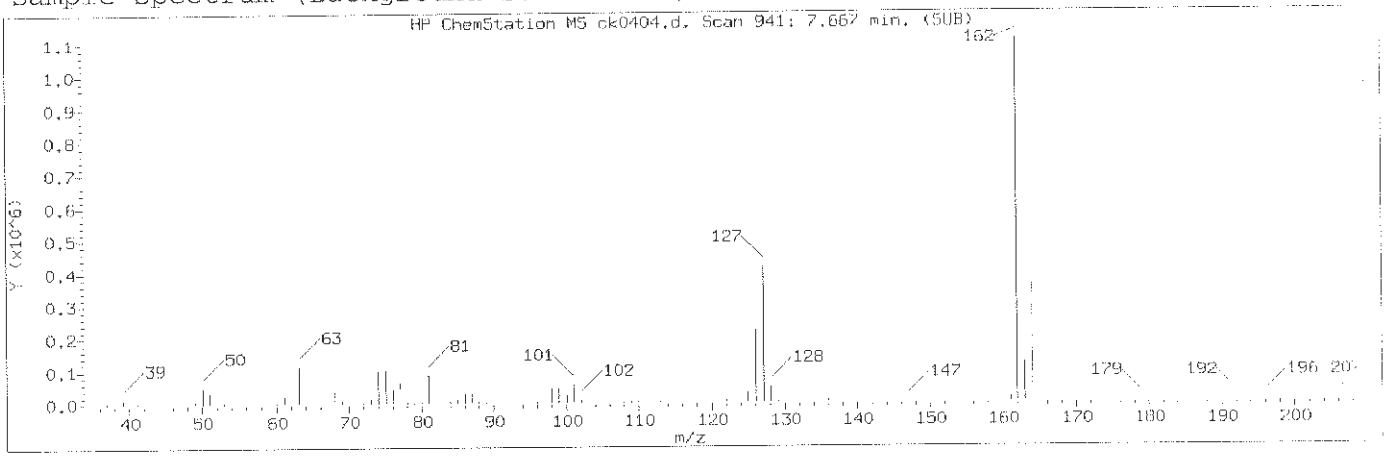
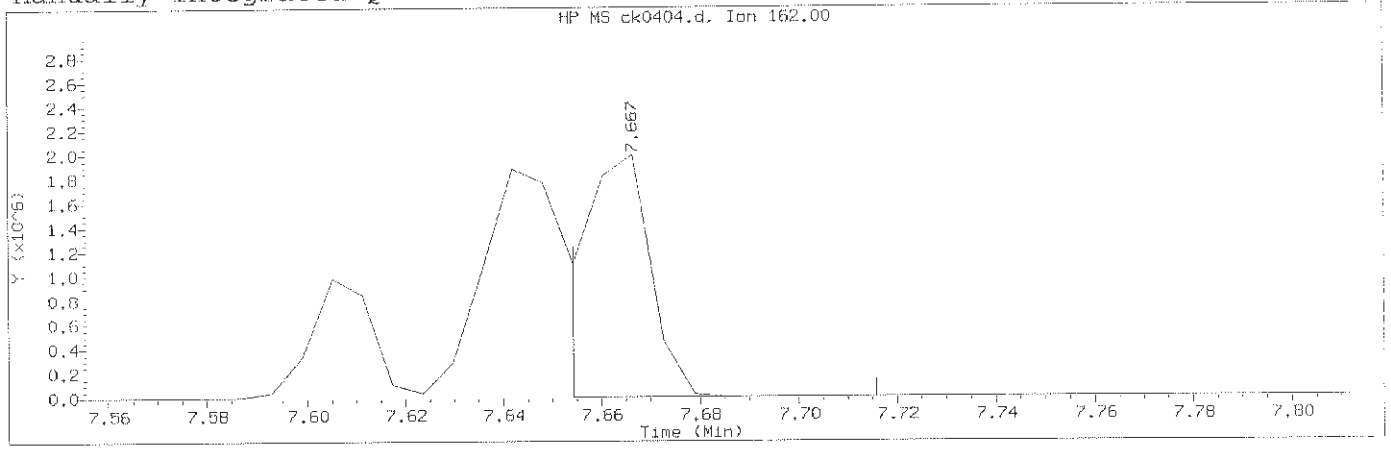
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 941		
Retention Time (minutes)	: 7.667		
Quant Ion	: 162.00		
Area (flag)	: 1786834A		
On-Column Amount (ng/ul)	: 108.6062		
Integration start scan	: 938	Integration stop scan:	948
Y at integration start	: 489	Y at integration end:	460

Reason for manual integration: improper integration

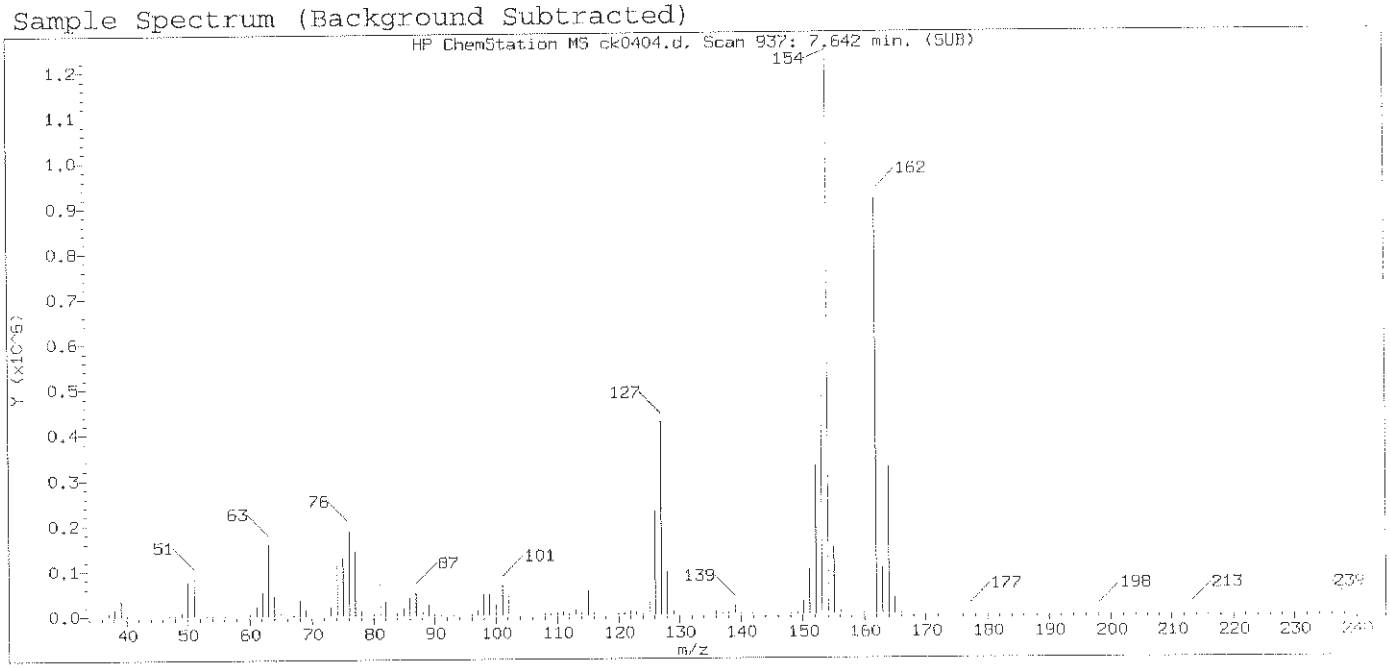
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 Designature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

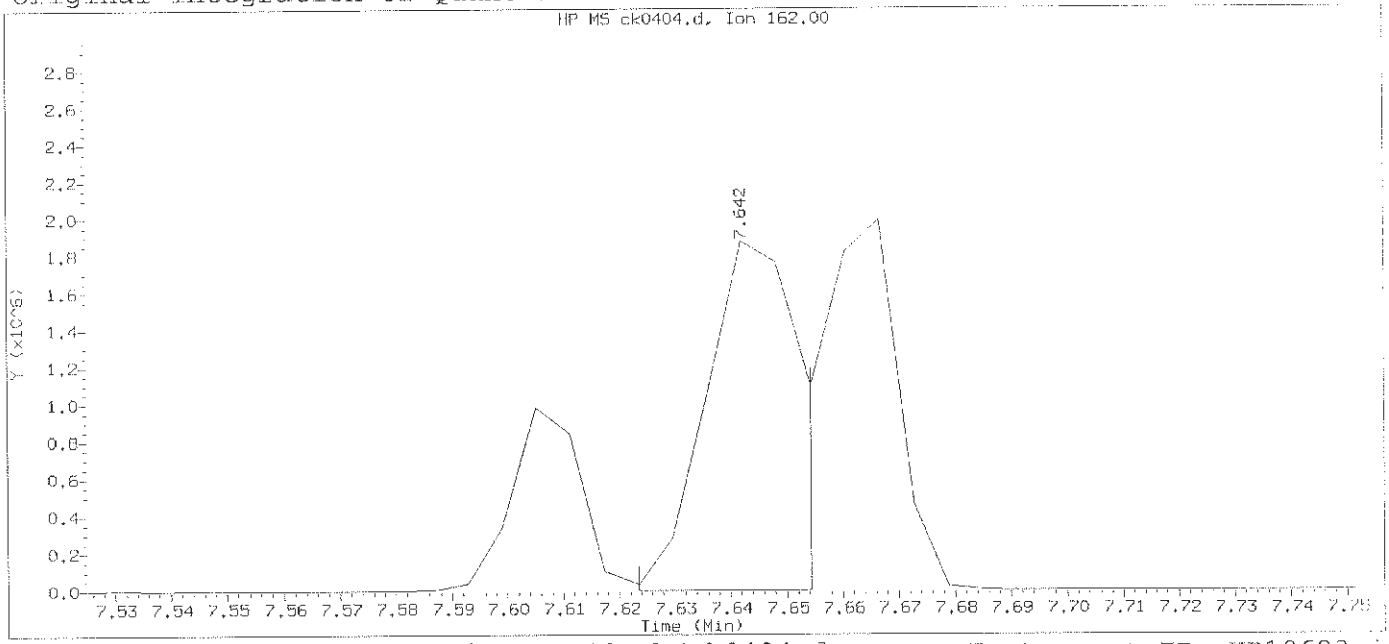
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 937		
Retention Time (minutes)	: 7.642		
Quant Ion	: 162.00		
Area	: 2036430		
On-column Amount (ng/ul)	: 119.5617		
Integration start scan	: 933	Integration stop scan:	938
Y at integration start	: 515	Y at integration end:	489

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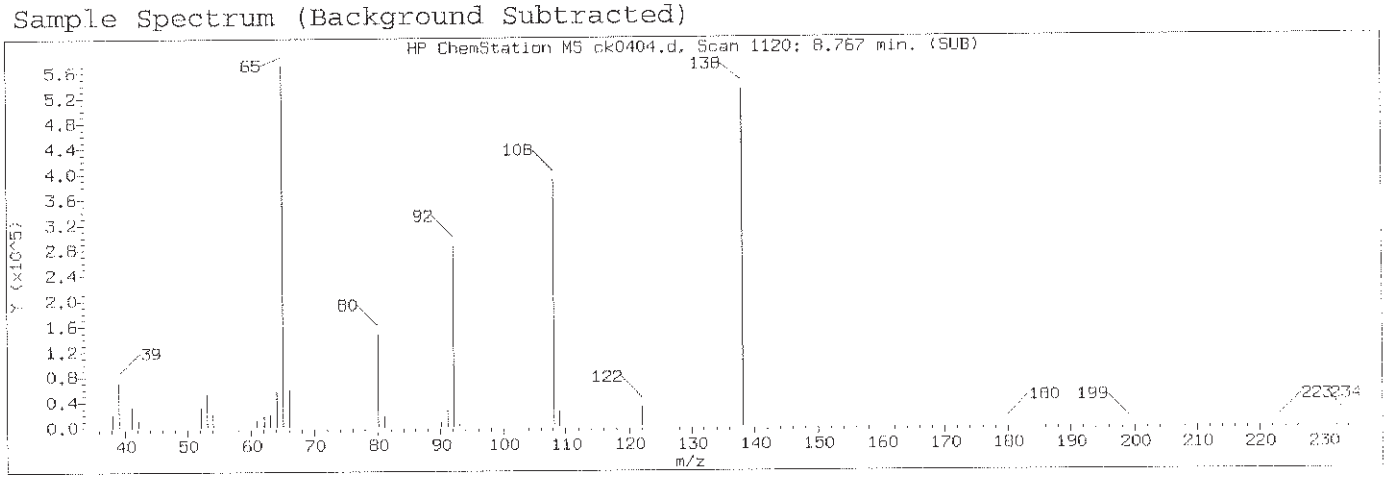
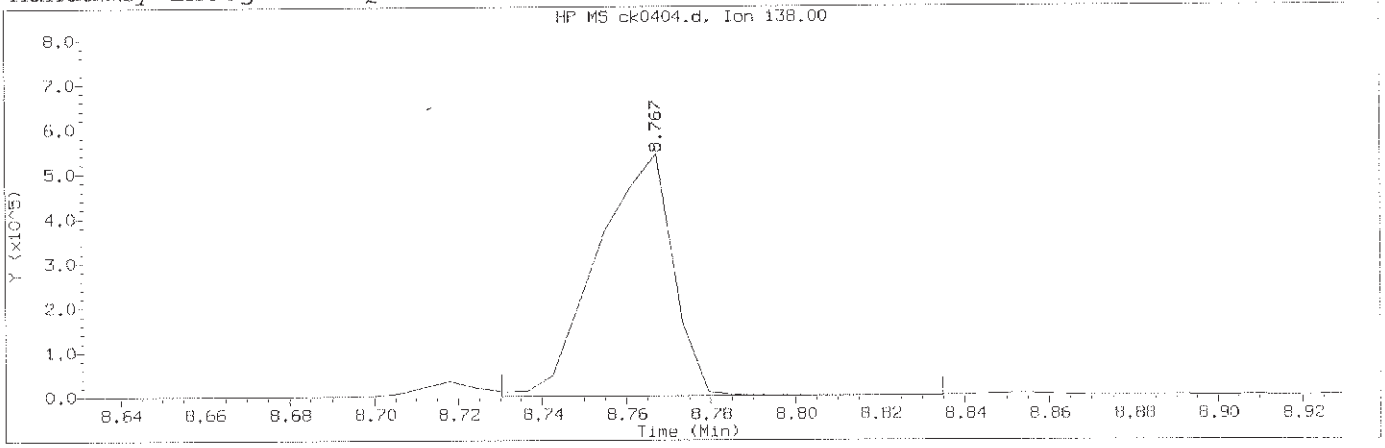
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1120		
Retention Time (minutes)	: 8.767		
Quant Ion	: 138.00		
Area (flag)	: 675934A		
On-Column Amount (ng/ul)	: 118.8095		
Integration start scan	: 1113	Integration stop scan:	1130
Y at integration start	: 267	Y at integration end:	362

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

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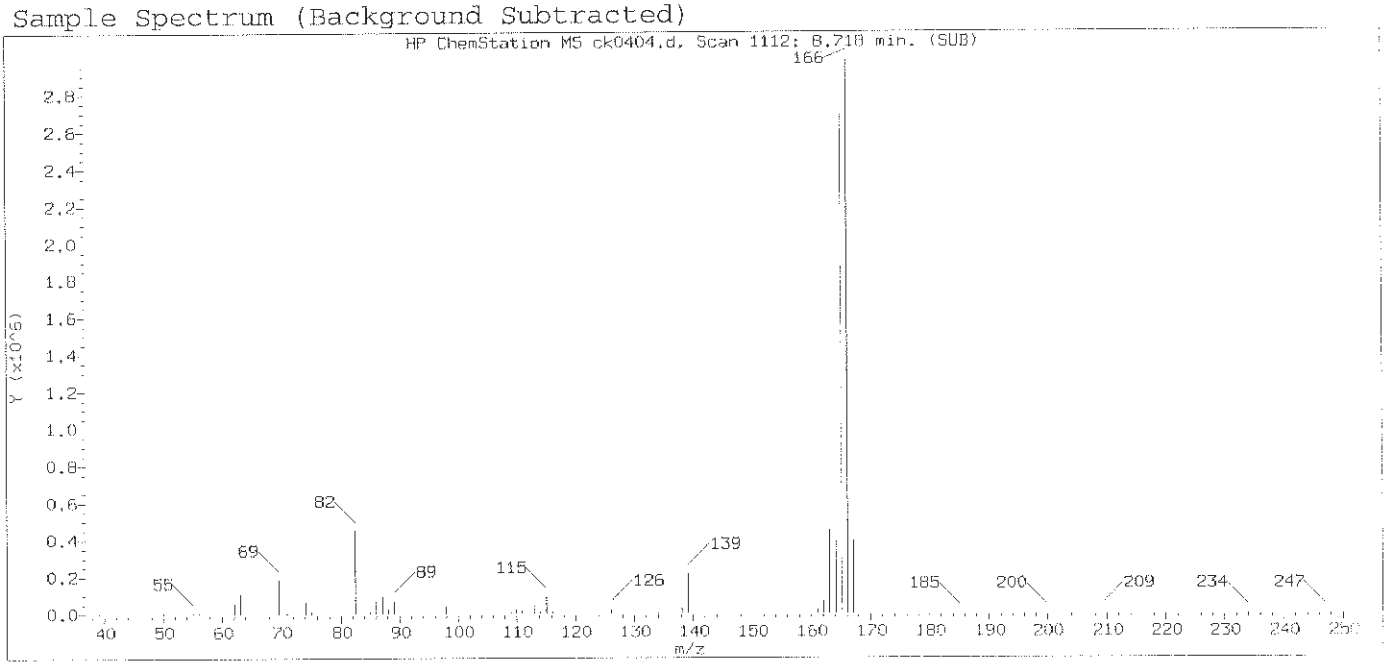
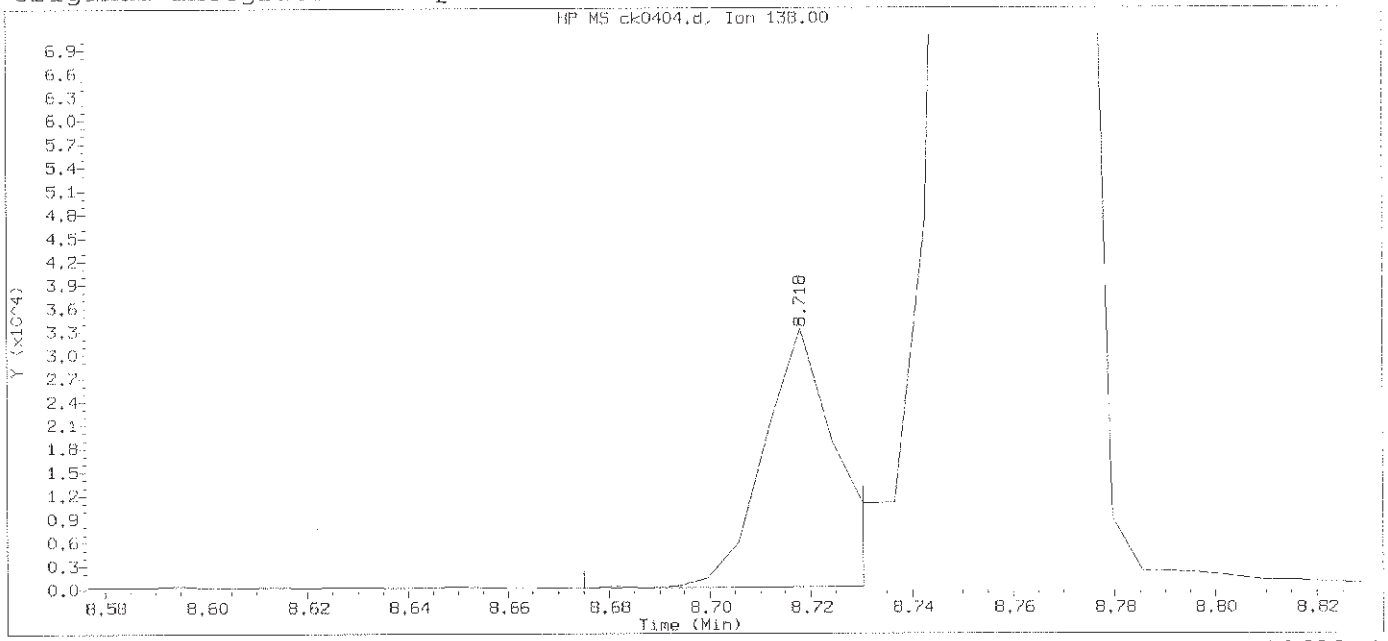
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 31386		
On-column Amount (ng/ul)	: 7.6452		
Integration start scan	: 1104	Integration stop scan:	1113
Y at integration start	: 168	Y at integration end:	267

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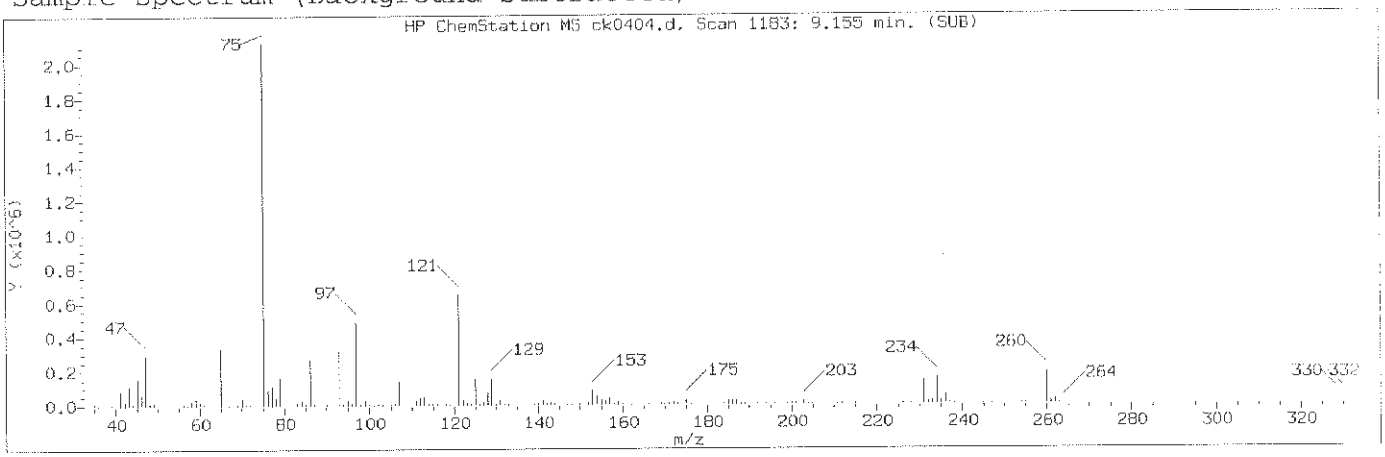
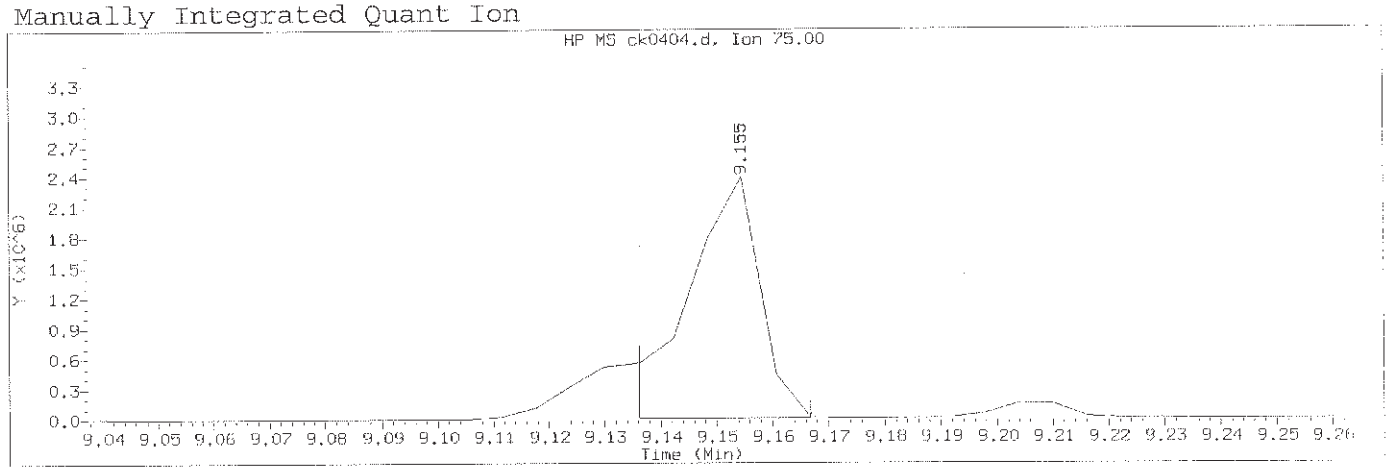
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area (flag)	: 2188290M		
On-Column Amount (ng/ul)	: 139.5603		
Integration start scan	: 1179	Integration stop scan:	1184
Y at integration start	: 4307	Y at integration end:	4307

Reason for manual integration: improper integration

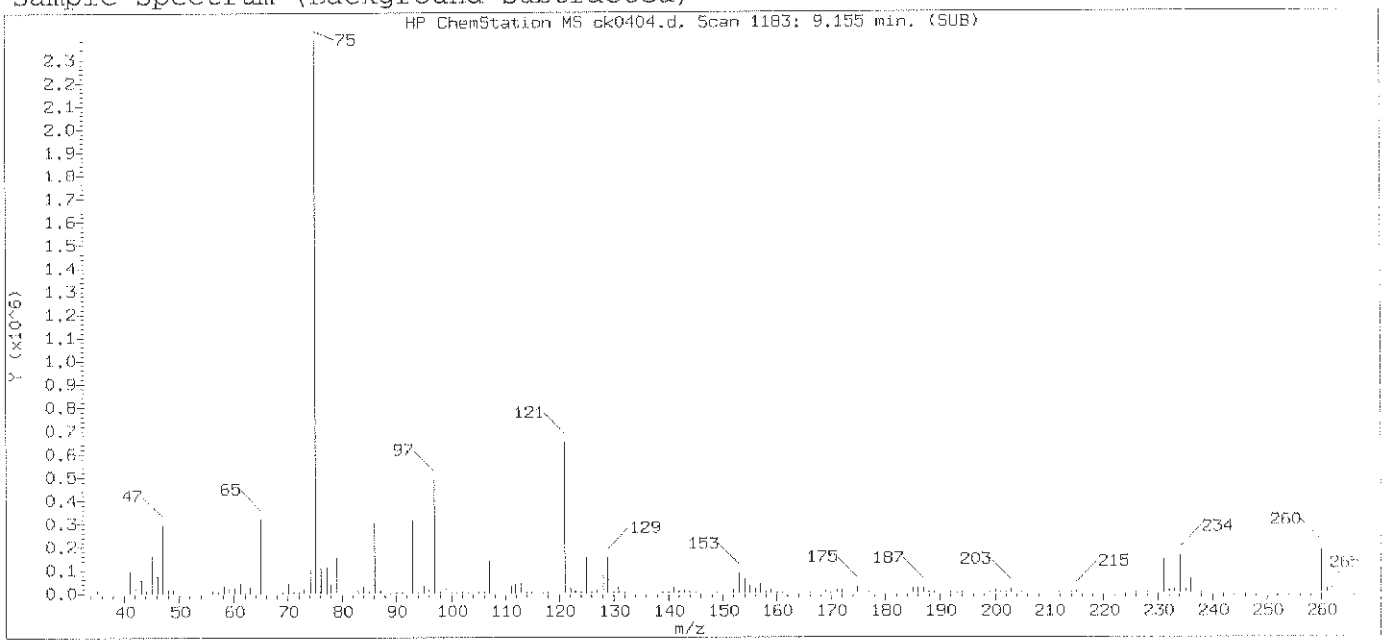
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

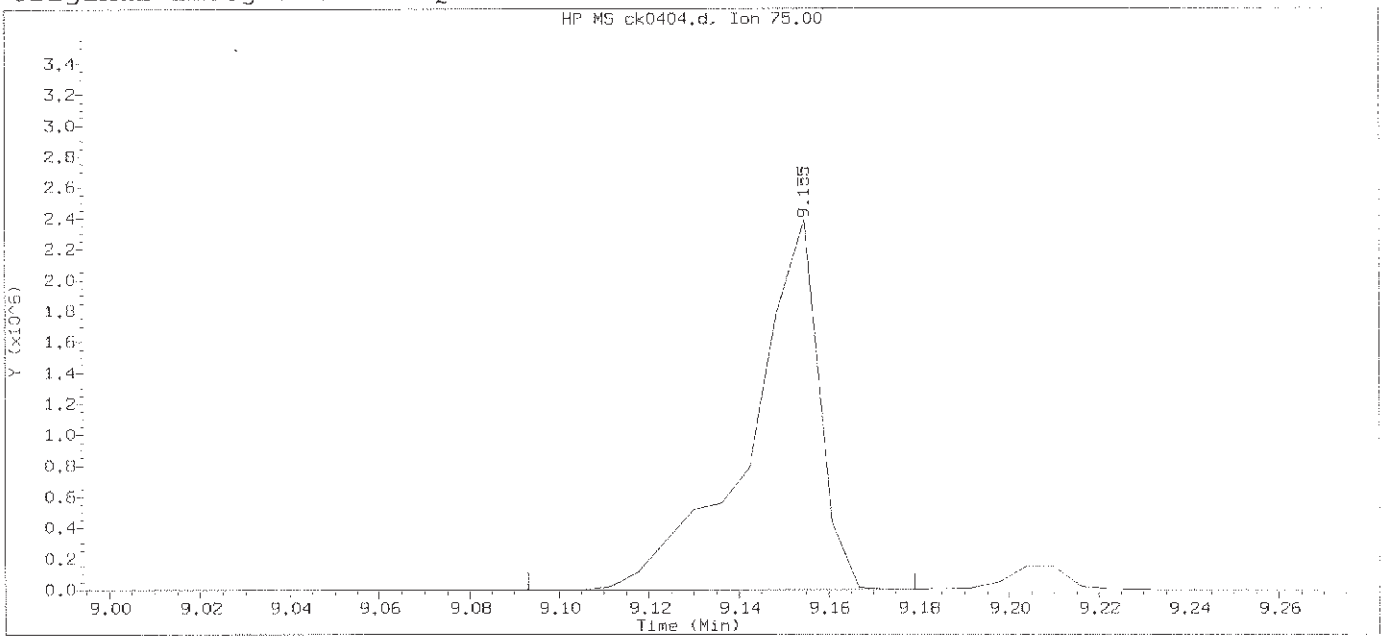
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

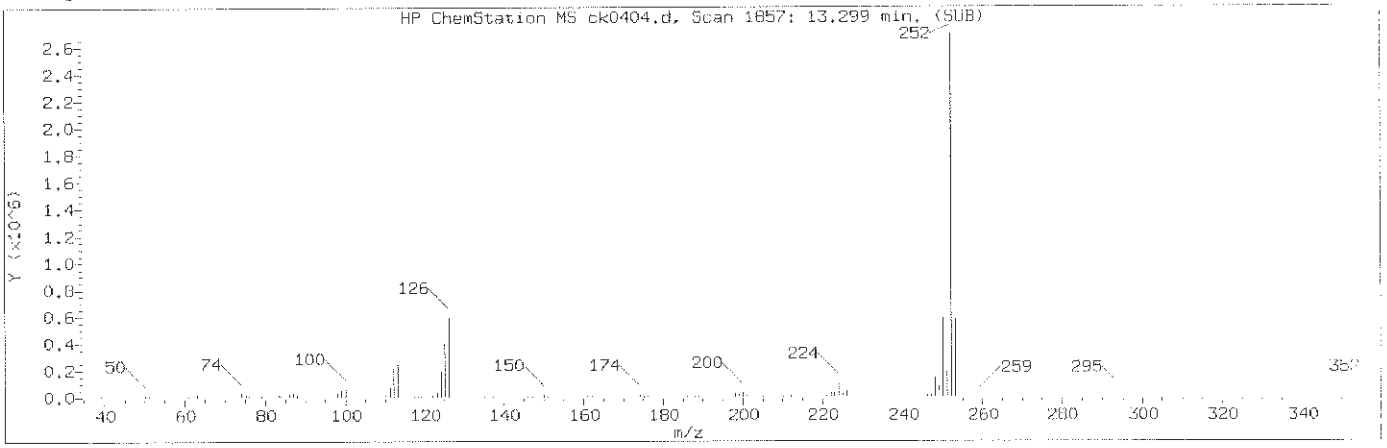
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

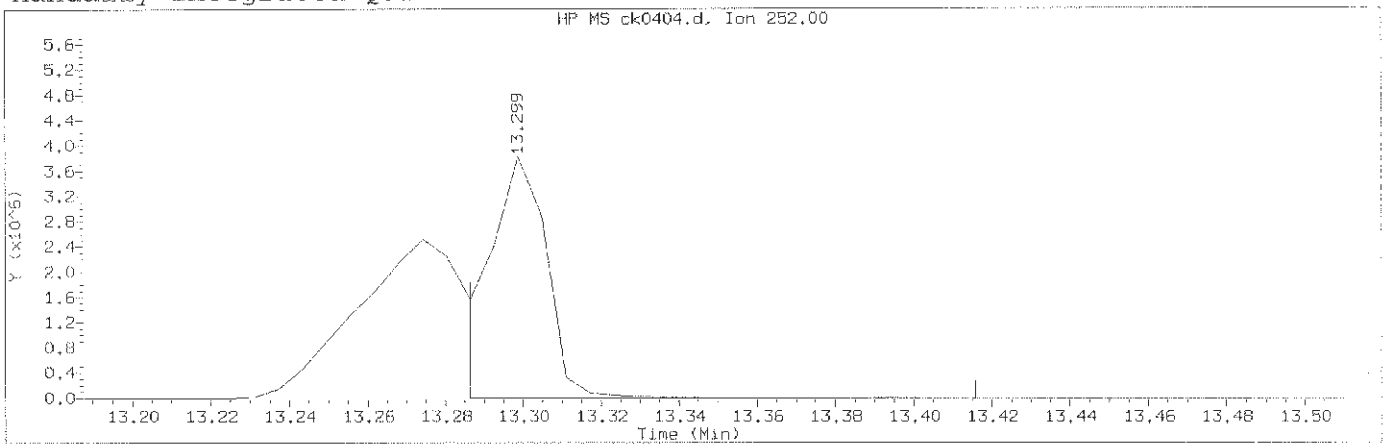
Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area	: 2560723		
On-column Amount (ng/ul)	: 141.5560		
Integration start scan	: 1172	Integration stop scan:	1186
Y at integration start	: 303	Y at integration end:	371

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1857		
Retention Time (minutes)	: 13.299		
Quant Ion	: 252.00		
Area (flag)	: 3864269A		
On-Column Amount (ng/ul)	: 114.9812		
Integration start scan	: 1854	Integration stop scan:	1875
Y at integration start	: 1274	Y at integration end:	1343

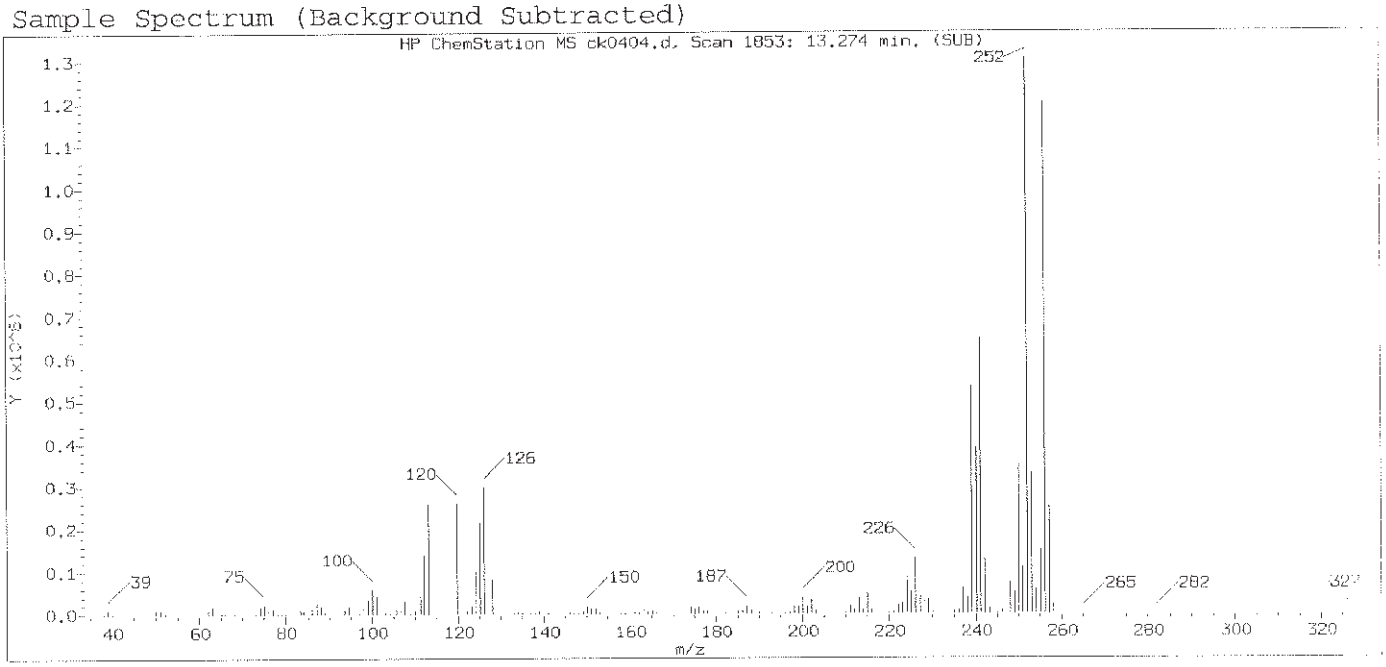
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

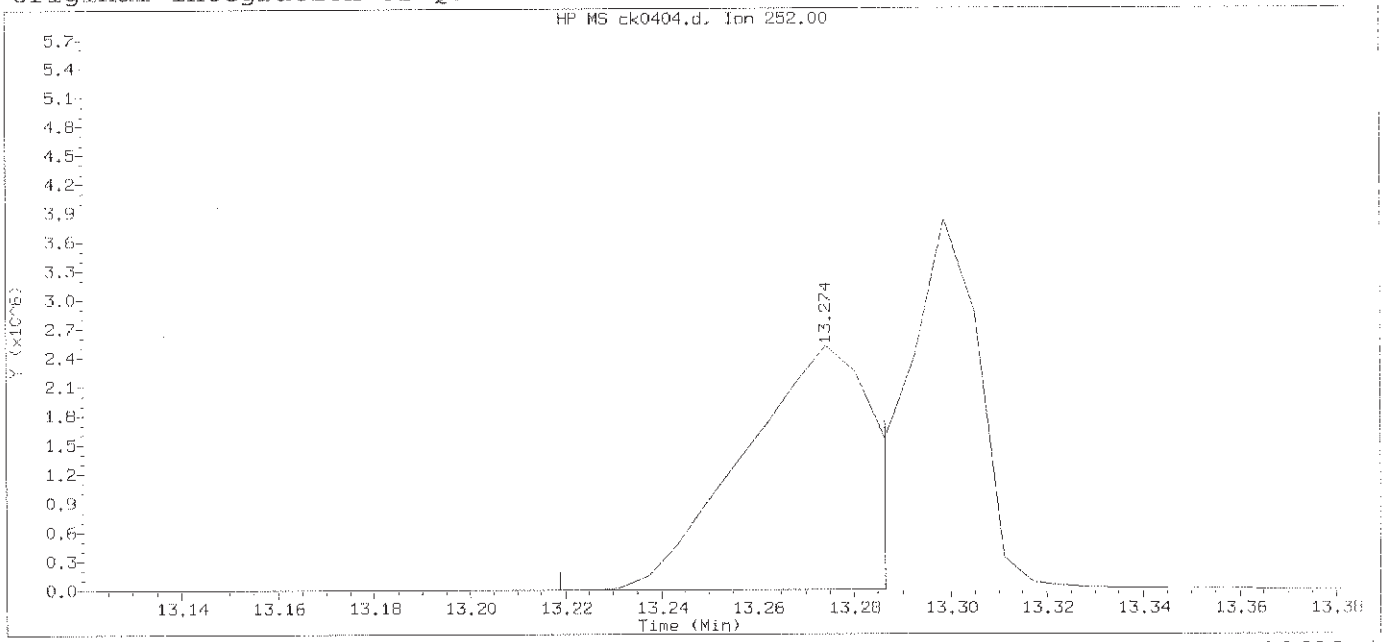
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



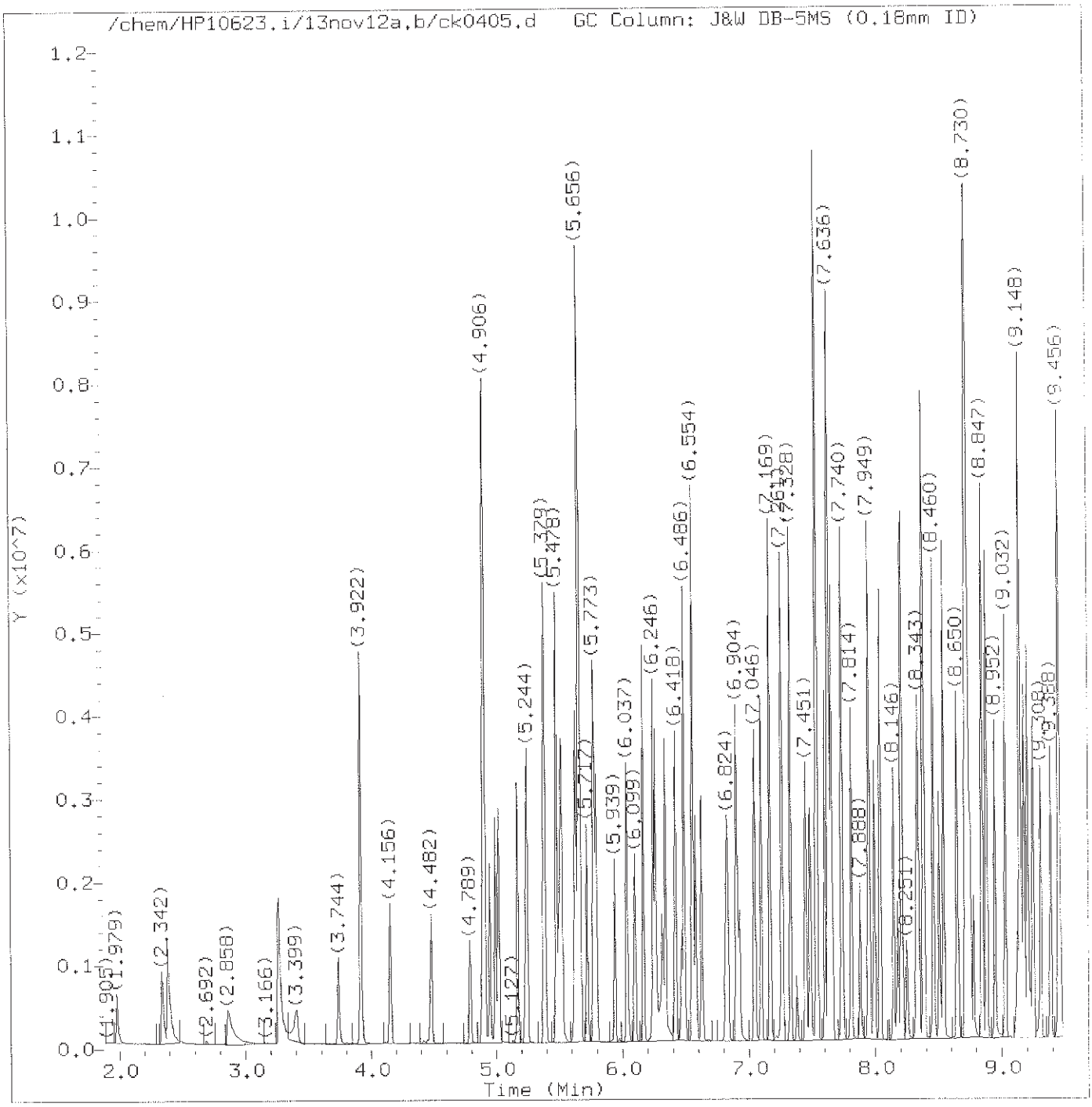
Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1853		
Retention Time (minutes)	: 13.274		
Quant Ion	: 252.00		
Area	: 4507467		
On-column Amount (ng/ul)	: 129.6726		
Integration start scan	: 1843	Integration stop scan:	1854
Y at integration start	: 180	Y at integration end:	1274

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

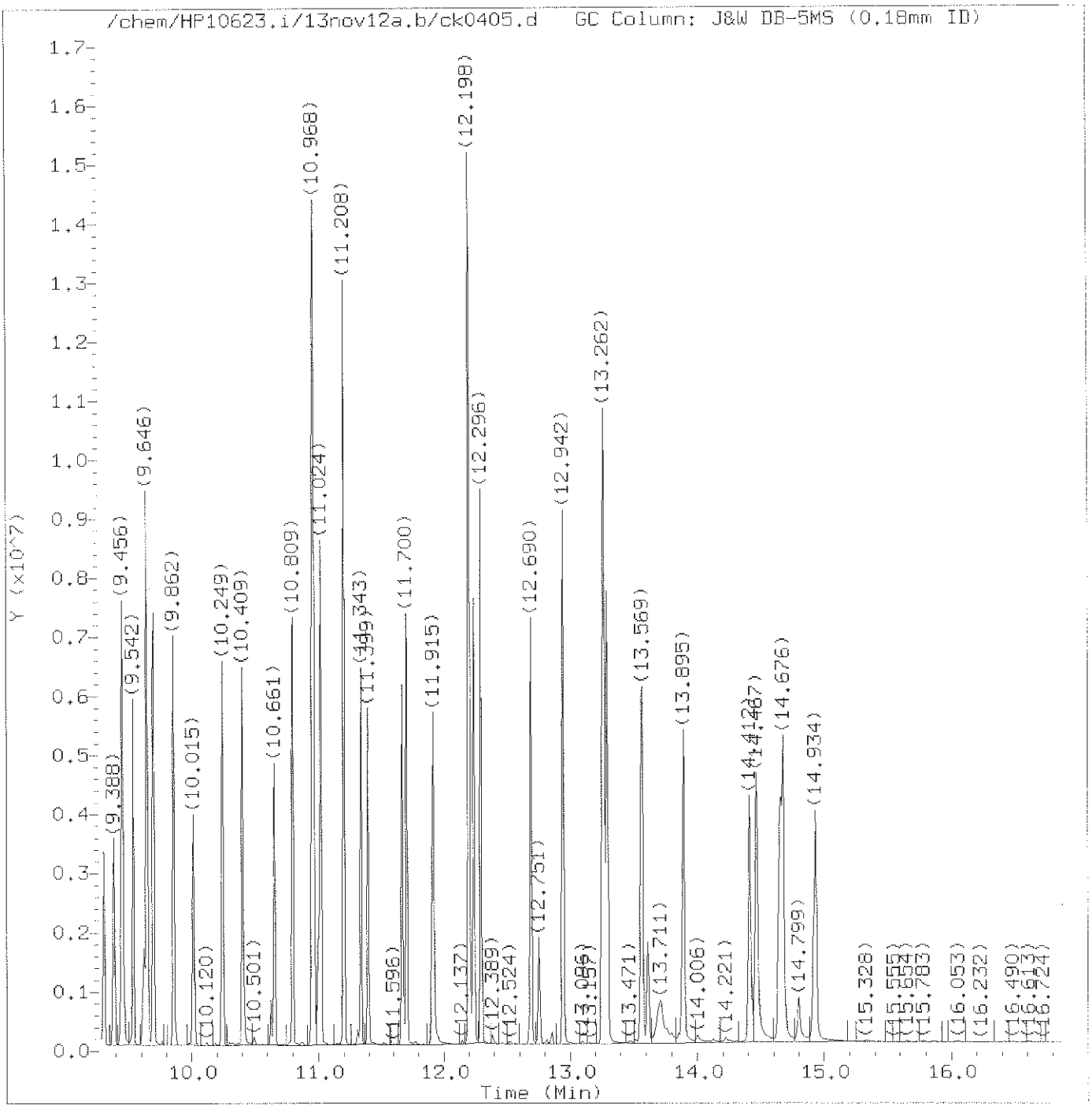
Sublist used: newall1

Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	281181	76.529
2) N-Nitrosodimethylamine	(1)	2.342	74	526263	77.366
3) Pyridine	(1)	2.385	79	792242	75.125
5) 2-Picoline	(1)	3.264	93	846134	78.629
6) N-Nitrosomethylethylamine	(1)	3.406	88	392457	76.286
7) Methyl methanesulfonate	(1)	3.744	80	408117	78.900
9)$2-Fluorophenol	(1)	3.922	112	1326311	78.910
10) N-Nitrosodiethylamine	(1)	4.156	102	397609	77.798
11) Ethyl methanesulfonate	(1)	4.482	109	366459	78.740
12) Benzaldehyde	(1)	4.789	77	253926	49.188
15)$Phenol-d6	(1)	4.900	99	1980143	80.063
14)$Phenol-d5	(1)	4.900	99	1980143	80.063
13) Aniline	(1)	4.906	93	1337258	78.163
16) Phenol	(1)	4.912	94	1155237	80.072
18) bis(2-Chloroethyl)ether	(1)	4.992	93	807504	78.839
19) 2-Chlorophenol	(1)	5.016	128	690304	76.701
20) 1,3-Dichlorobenzene	(1)	5.170	146	699316	76.999
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	112327	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	722232	77.924
24) Benzyl alcohol	(1)	5.379	108	549362	78.068
25) 1,2-Dichlorobenzene	(1)	5.385	146	686313	78.889
206) Indene	(1)	5.478	115	1507198	77.558
26) 2-Methylphenol	(1)	5.496	108	746061	77.915
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	922722	73.209
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	922722	73.022
29) N-Nitrosopyrrolidine	(1)	5.619	100	456887	79.714
30) Acetophenone	(1)	5.631	105	1091072	76.426
31) N-Nitroso-di-n-propylamine	(1)	5.656	70	710750	77.780
33) 4-Methylphenol	(1)	5.656	108	897917	79.224
32) N-Nitrosomorpholine	(1)	5.662	56	505445	77.627
34) o-Toluidine	(1)	5.668	106	1294141	79.137
37) Hexachloroethane	(1)	5.717	117	280321	79.466
38)$Nitrobenzene-d5	(2)	5.773	82	1806874	80.618
39) Nitrobenzene	(2)	5.791	77	933654	78.546
40) N-Nitrosopiperidine	(2)	5.939	114	410601	77.866
41) Isophorone	(2)	6.037	82	1658048	76.819
42) 2-Nitrophenol	(2)	6.099	139	346841	83.935
44) 2,4-Dimethylphenol	(2)	6.166	107	825621	77.734
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	344888	77.880
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	956471	72.931

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.314	105	599358	87.062
49) 2,4-Dichlorophenol	(2)	6.338	162	575693	79.700
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	603920	79.376
52)*Naphthalene-d8	(2)	6.468	136	520142	20.000
53) Naphthalene	(2)	6.486	128	2159412	78.247
56) 4-Chloroaniline	(2)	6.554	127	924260	76.854
57) 2,6-Dichlorophenol	(2)	6.560	162	546772	80.368
58) Hexachloropropene	(2)	6.578	213	351856	81.772
60) Hexachlorobutadiene	(2)	6.627	225	293503	76.914
194) Quinoline	(2)	6.824	129	1485361	78.084
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	840875M	77.759
63) Caprolactam	(2)	6.929	113	309471	77.340
68) 4-Chloro-3-methylphenol	(2)	7.046	107	723316	78.326
69) Safrole	(2)	7.101	162	583874	79.870
70) 2-Methylnaphthalene	(2)	7.169	142	1544243	78.847
71) 1-Methylnaphthalene	(2)	7.261	142	1403778	78.330
72) Hexachlorocyclopentadiene	(3)	7.328	237	273349	84.525
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	594507	79.439
74) cis-Isosafrole	(3)	7.378	162	104845	8.726
75) 2,4,6-Trichlorophenol	(3)	7.451	196	398034	81.513
77) 2,4,5-Trichlorophenol	(3)	7.488	196	432400	81.216
78)$2-Fluorobiphenyl	(3)	7.537	172	3151873	79.886
79) trans-Isosafrole	(3)	7.605	162	602210	70.801
80) Isosafrole	(3)	7.605	162	602210	79.552
83) 1,1'-Biphenyl	(3)	7.630	154	1889884	77.746
84) 2-Chloronaphthalene	(3)	7.642	162	1272028	71.841
85) 1-Chloronaphthalene	(3)	7.660	162	1438178	82.533
88) Diphenyl ether	(3)	7.740	170	968050	79.945
89) 2-Nitroaniline	(3)	7.747	138	486166	84.166
90) 1,4-Naphthoquinone	(3)	7.814	158	602381	80.843
91) 1,4-Dinitrobenzene	(3)	7.888	168	208338	81.268
92) Dimethylphthalate	(3)	7.949	163	1640838	77.883
93) 1,3-Dinitrobenzene	(3)	7.956	168	276083	80.612
94) 2,6-Dinitrotoluene	(3)	7.992	165	382521	87.174
95) Acenaphthylene	(3)	8.042	152	2185431	79.061
97) 3-Nitroaniline	(3)	8.146	138	450027	83.985
98)*Acenaphthene-d10	(3)	8.177	164	313745	20.000
99) Acenaphthene	(3)	8.214	153	1519712	79.438
100) 2,4-Dinitrophenol	(3)	8.251	184	139143	83.369
103) 4-Nitrophenol	(3)	8.324	109	277003	83.446

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	510240	78.899
104) Dibenzofuran	(3)	8.380	168	2048915	78.185
105) 2,4-Dinitrotoluene	(3)	8.386	165	493436	87.020
106) 1-Naphthylamine	(3)	8.460	143	1717735	79.770
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	315577	84.149
108) 2-Naphthylamine	(3)	8.540	143	1756792	79.737
109) Diethylphthalate	(3)	8.650	149	1713932	78.754
111) Fluorene	(3)	8.718	166	1805820	80.088
110) Thionazin	(3)	8.724	107	394432	82.178
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	774921	77.254
113) 5-Nitro-o-toluidine	(3)	8.736	152	512412	86.072
114) 4-Nitroaniline	(3)	8.755	138	480197A	79.691
115) 4,6-Dinitro-2-methylphenol	(4)	8.779	198	212223	81.017
117) N-Nitrosodiphenylamine	(4)	8.847	169	1545231	80.860
202) NDPA as diphenylamine	(4)	8.847	169	1545231	80.668
118) 1,2-Diphenylhydrazine	(4)	8.884	77	2214620	80.902
119)$2,4,6-Tribromophenol	(3)	8.952	330	305668	80.665
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	311247	79.775
121) 1,3,5-Trinitrobenzene	(4)	9.124	213	148089	80.524
122) Diallate (peak 1)	(4)	9.142	86	838932	59.891
123) Phorate	(4)	9.148	75	1320107	78.272
124) Phenacetin	(4)	9.179	108	1059132	80.196
125) 4-Bromophenyl-phenylether	(4)	9.204	248	415056	78.826
126) Diallate (peak 2)	(4)	9.222	86	120701	19.842
127) Hexachlorobenzene	(4)	9.247	284	399087	76.766
128) Dimethoate	(4)	9.308	87	811304	78.666
130) Atrazine	(4)	9.388	200	337054	55.052
131) Pentachlorophenol	(4)	9.444	266	250563	86.903
133) 4-Aminobiphenyl	(4)	9.456	169	1441837	69.775
132) Pentachloronitrobenzene	(4)	9.462	237	186794	82.769
134) Pronamide	(4)	9.542	173	799280	80.245
135)*Phenanthrene-d10	(4)	9.622	188	570162	20.000
136) Dinoseb	(4)	9.646	211	300325	79.513
137) Phenanthrene	(4)	9.646	178	2639762	79.625
138) Anthracene	(4)	9.702	178	2768162	81.116
140) Carbazole	(4)	9.862	167	2667080M	80.090
141) Methyl parathion	(4)	10.015	109	551286	79.407
142) Di-n-butylphthalate	(4)	10.249	149	3117913	79.355
143) Parathion	(4)	10.403	109	399671	78.277
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	226513	79.164

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	289534	77.281
147) Fluoranthene	(4)	10.809	202	3034613	81.862
152) Benzidine	(5)	10.968	184	6860438	233.099
167)*Pyrene-d10	(5)	11.005	212	718943	20.000
154) Pyrene	(5)	11.024	202	3164835	79.269
156)$Terphenyl-d14	(5)	11.208	244	4103351	79.827
158) p-Dimethylaminoazobenzene	(5)	11.343	225	627493	80.647
159) Chlorobenzilate	(5)	11.399	139	983807	81.281
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	1904833	77.410
161) Butylbenzylphthalate	(5)	11.700	149	1505314	79.008
162) 2-Acetylaminofluorene	(5)	11.915	181	1436051	83.225
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	1085409	78.185
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	552444	81.460
166) Benzo(a)anthracene	(5)	12.204	228	2979223	80.902
168) Chrysene	(5)	12.241	228	2792548	78.652
169) bis(2-Ethylhexyl)phthalate	(5)	12.296	149	2103634	79.578
189) 6-Methylchrysene	(5)	12.690	242	2073310	79.141
170) Di-n-octylphthalate	(6)	12.942	149	3723181	82.851
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.262	256	1431376	84.729
172) Benzo(b)fluoranthene	(6)	13.268	252	3241098	89.152
173) Benzo(k)fluoranthene	(6)	13.293	252	2795956	75.384
174) Benzo(a)pyrene	(6)	13.569	252	2808536	79.153
175)*Perylene-d12	(6)	13.612	264	595376	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	1423346	80.030
190) Dibenz(a,h)acridine	(6)	14.412	279	2095938	81.310
191) Dibenz(a,j)acridine	(6)	14.467	279	2321827	78.329
177) Indeno(1,2,3-cd)pyrene	(6)	14.651	276	3001656	79.512
178) Dibenz(a,h)anthracene	(6)	14.676	278	2512295	79.560
179) Benzo(g,h,i)perylene	(6)	14.934	276	2483886	77.234
129) Diallate TRANS/CIS	(4)			959633	79.793

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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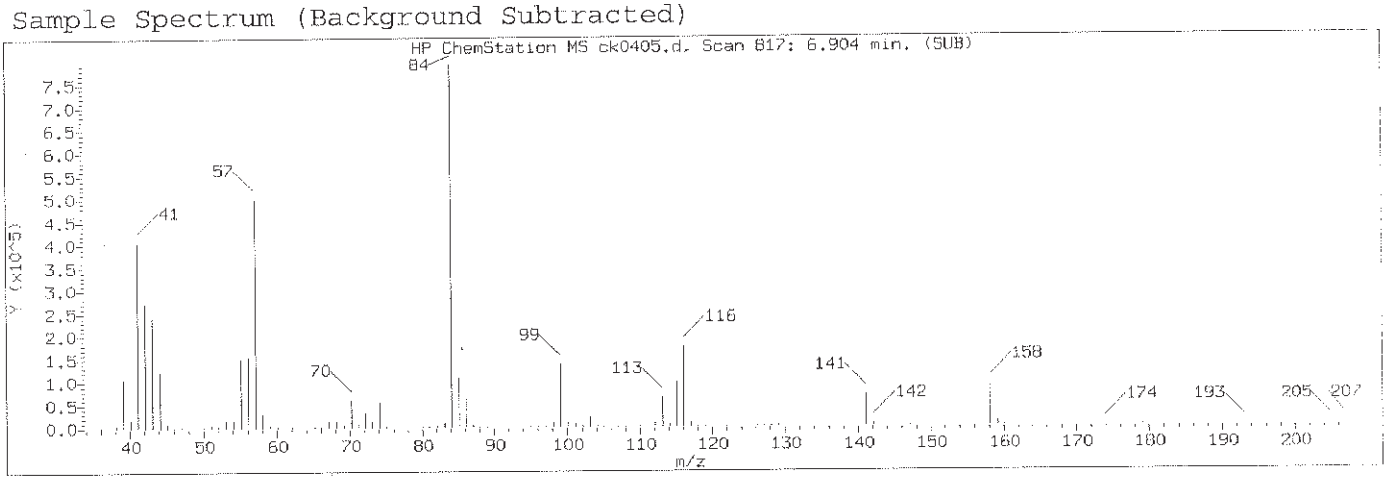
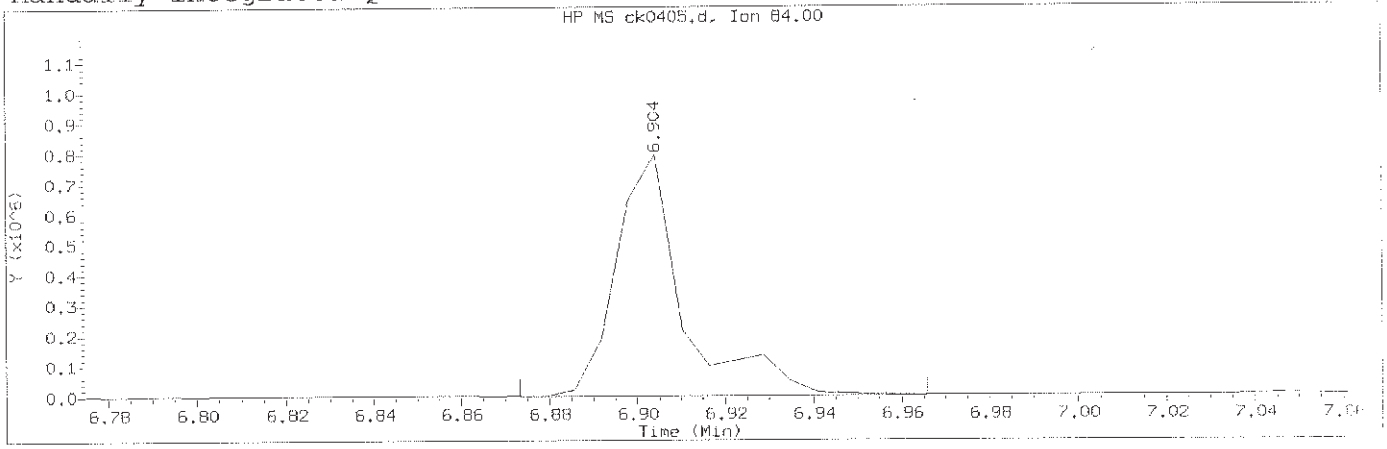
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 840875M		
On-Column Amount (ng/ul)	: 77.7594		
Integration start scan	: 811	Integration stop scan:	826
Y at integration start	: 845	Y at integration end:	845

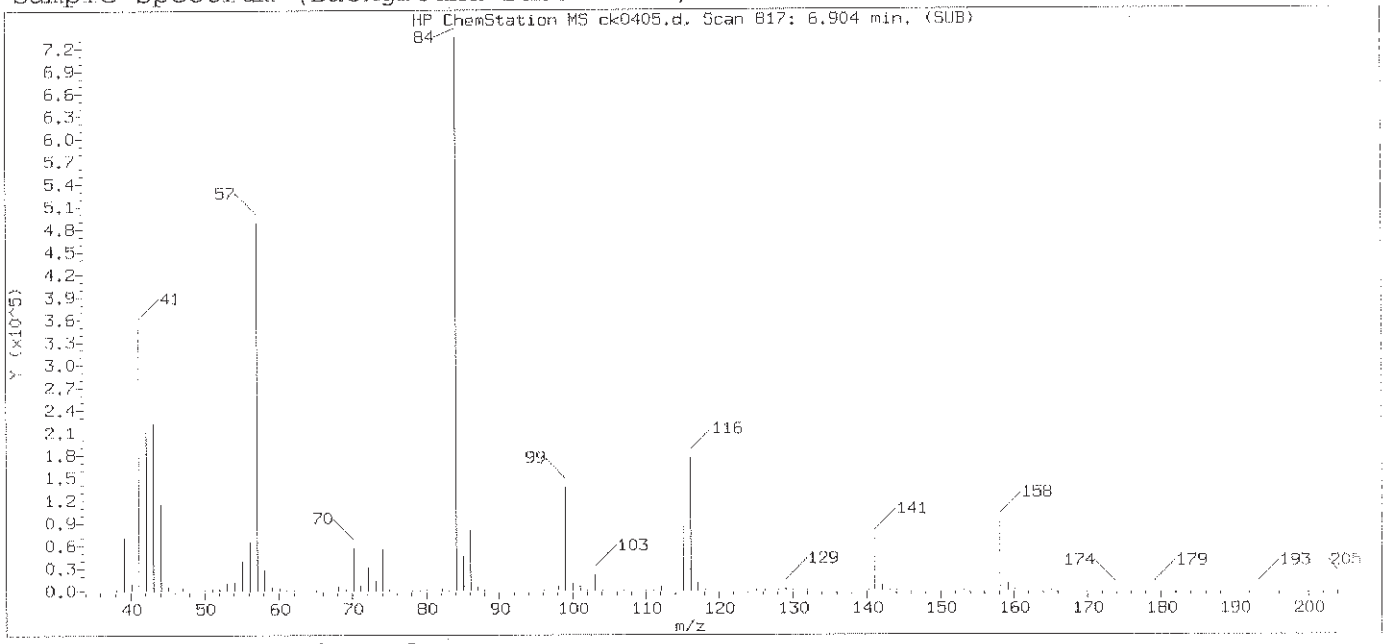
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

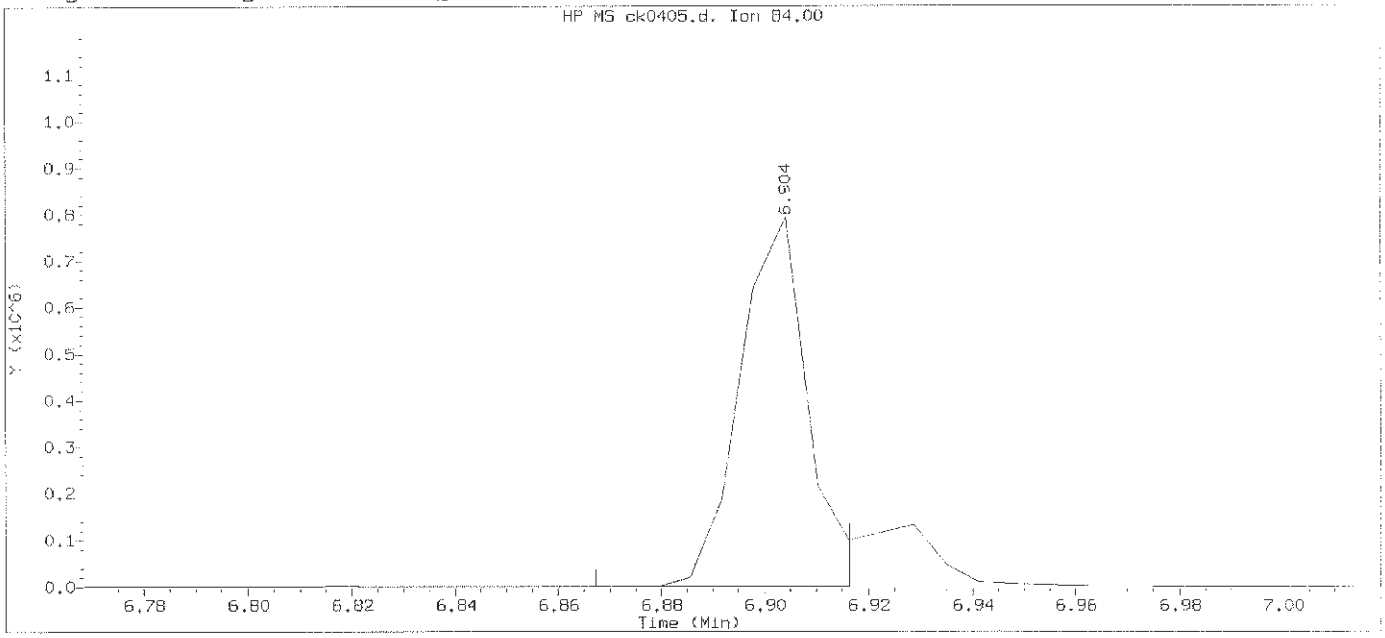
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

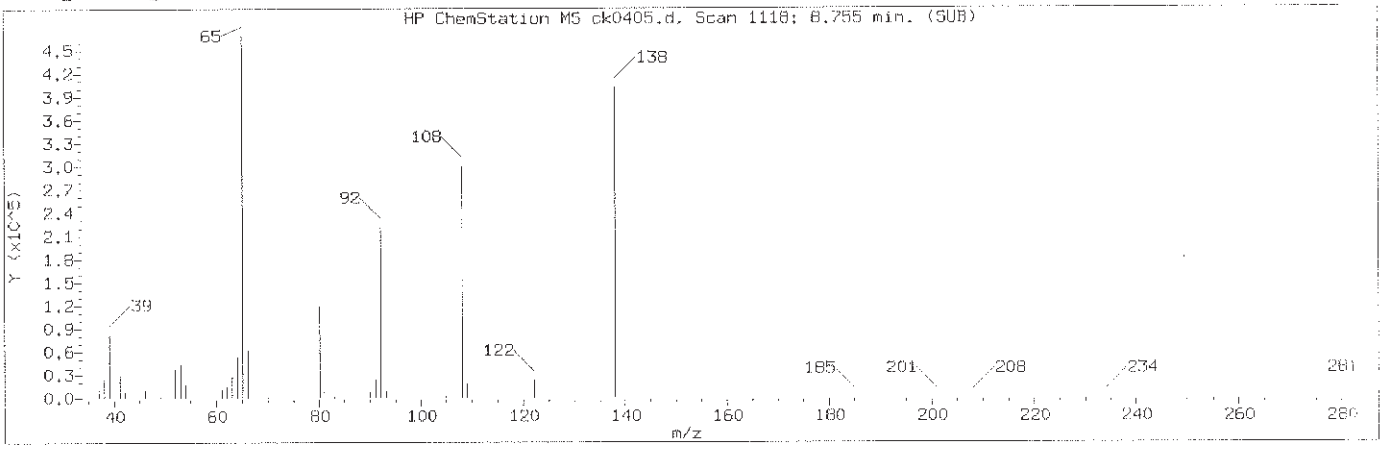
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

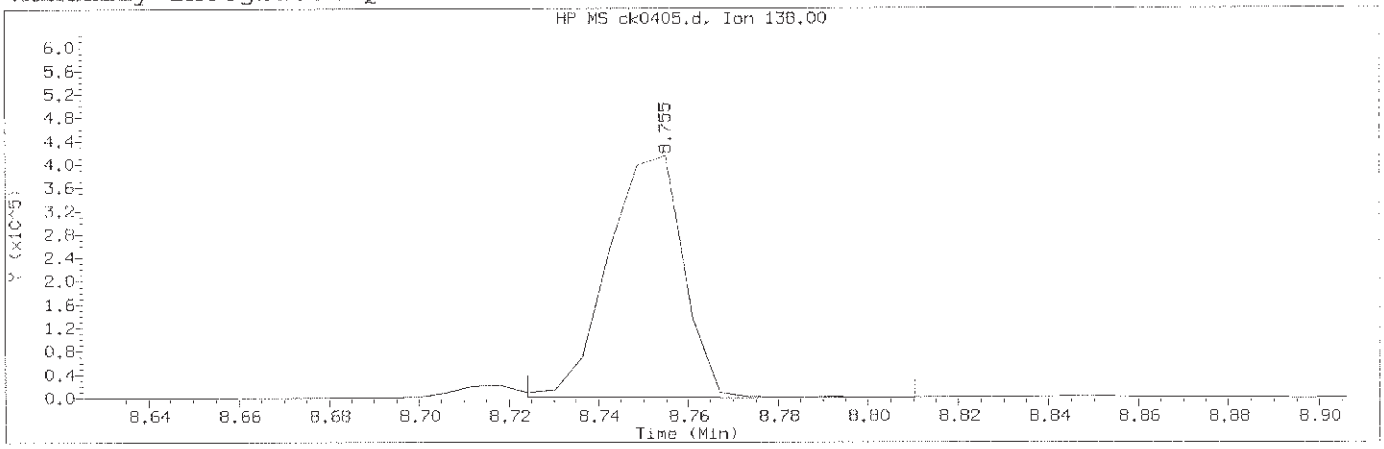
Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 703670		
On-column Amount (ng/ul)	: 72.6904		
Integration start scan	: 810	Integration stop scan:	818
Y at integration start	: 854	Y at integration end:	854

Digitally signed by Mark A. Clark on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1118		
Retention Time (minutes)	: 8.755		
Quant Ion	: 138.00		
Area (flag)	: 480197A		
On-Column Amount (ng/ul)	: 79.6911		
Integration start scan	: 1112	Integration stop scan:	1126
Y at integration start	: 499	Y at integration end:	477

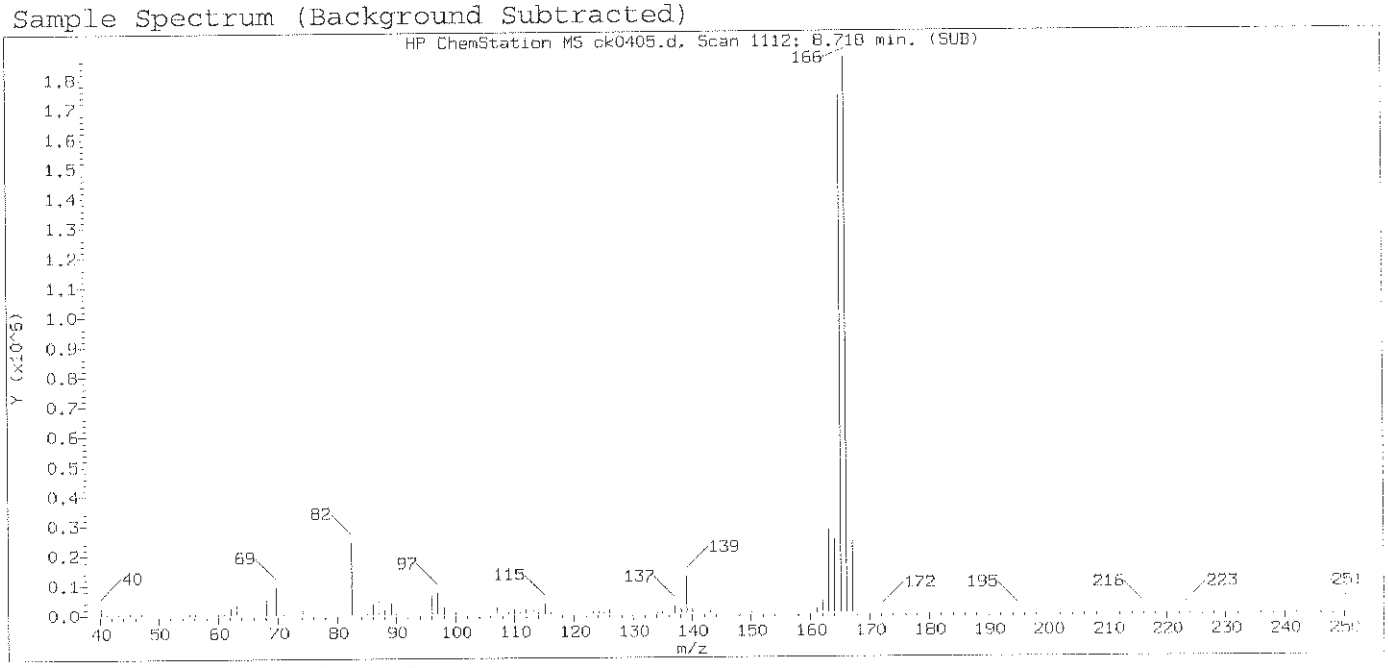
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 signature user ID: mac00013

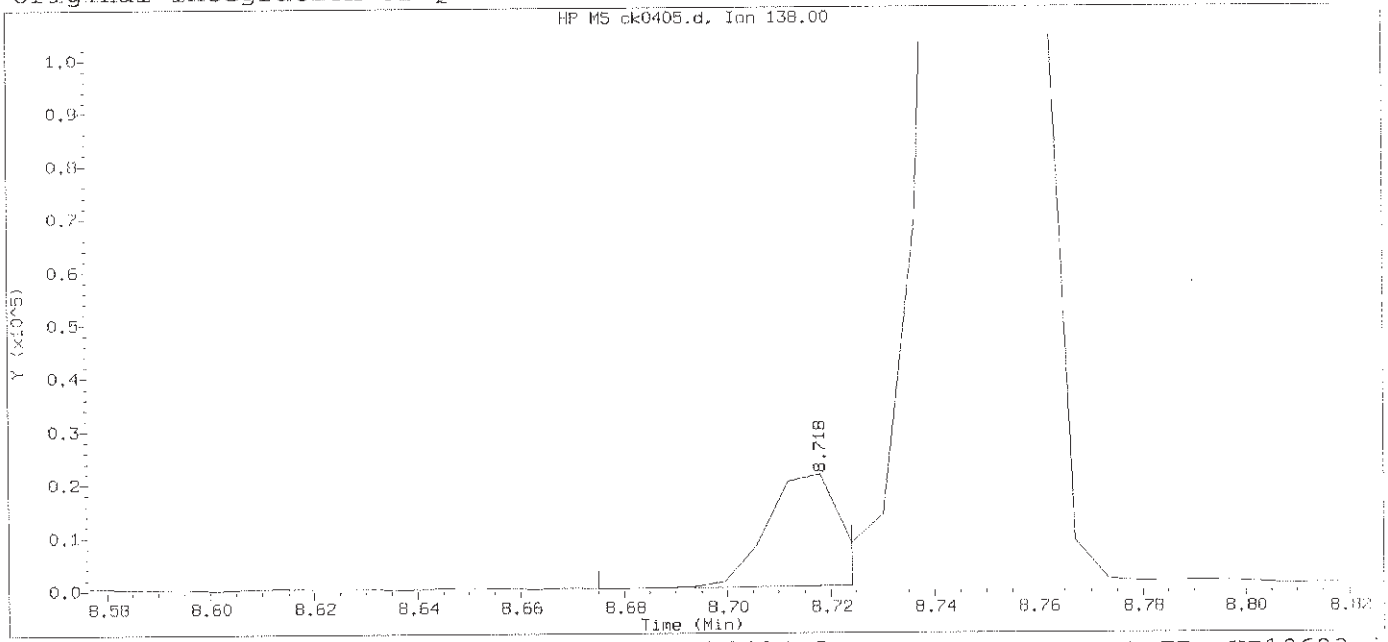
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

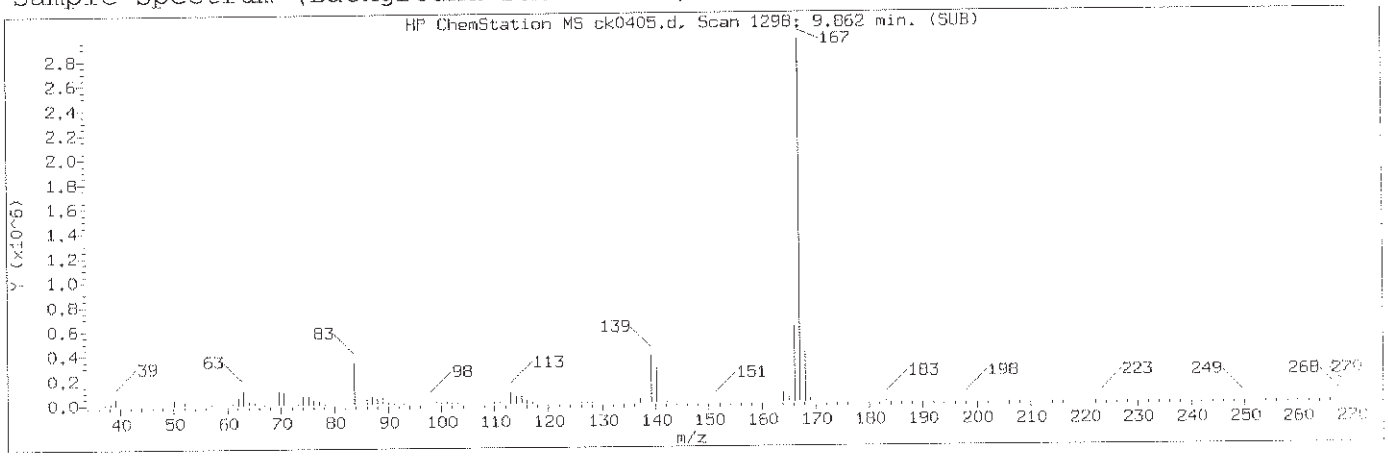
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

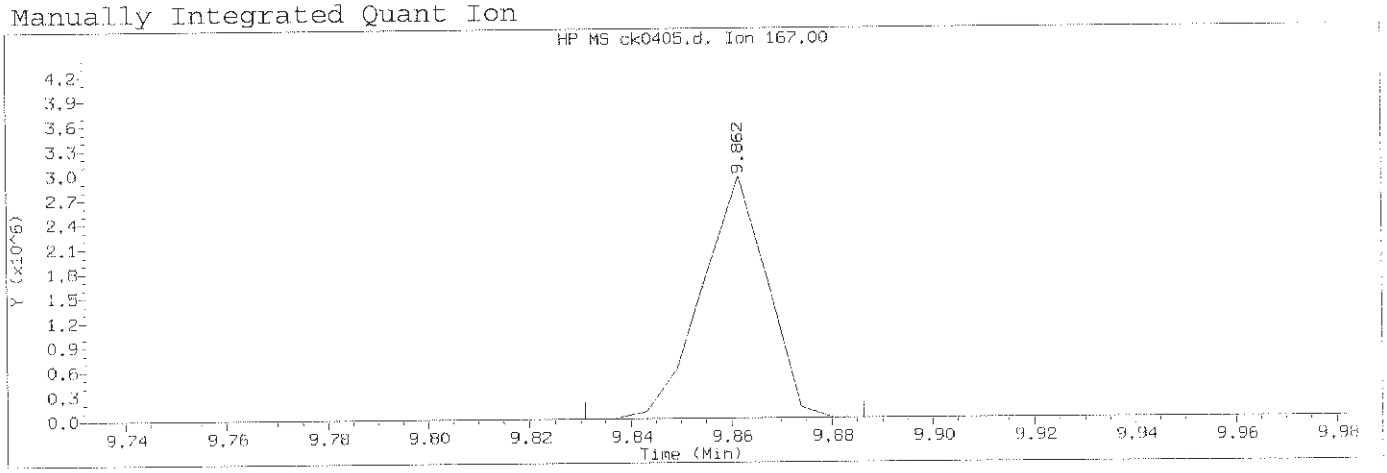
Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 19974		
On-column Amount (ng/ul)	: 6.0101		
Integration start scan	: 1104	Integration stop scan:	1112
Y at integration start	: 161	Y at integration end:	499

Digitally signed by Mark A. Clark on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area (flag)	: 2667080M		
On-Column Amount (ng/ul)	: 80.0900		
Integration start scan	: 1292	Integration stop scan:	1301
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

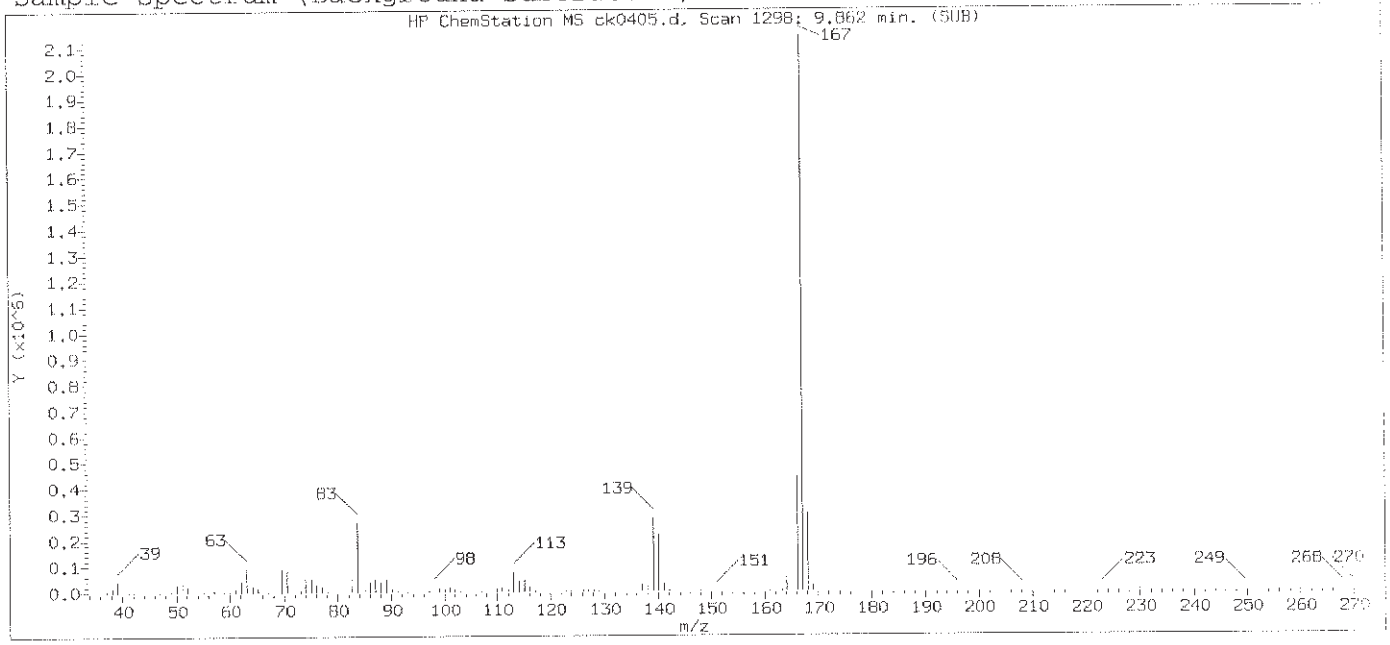
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

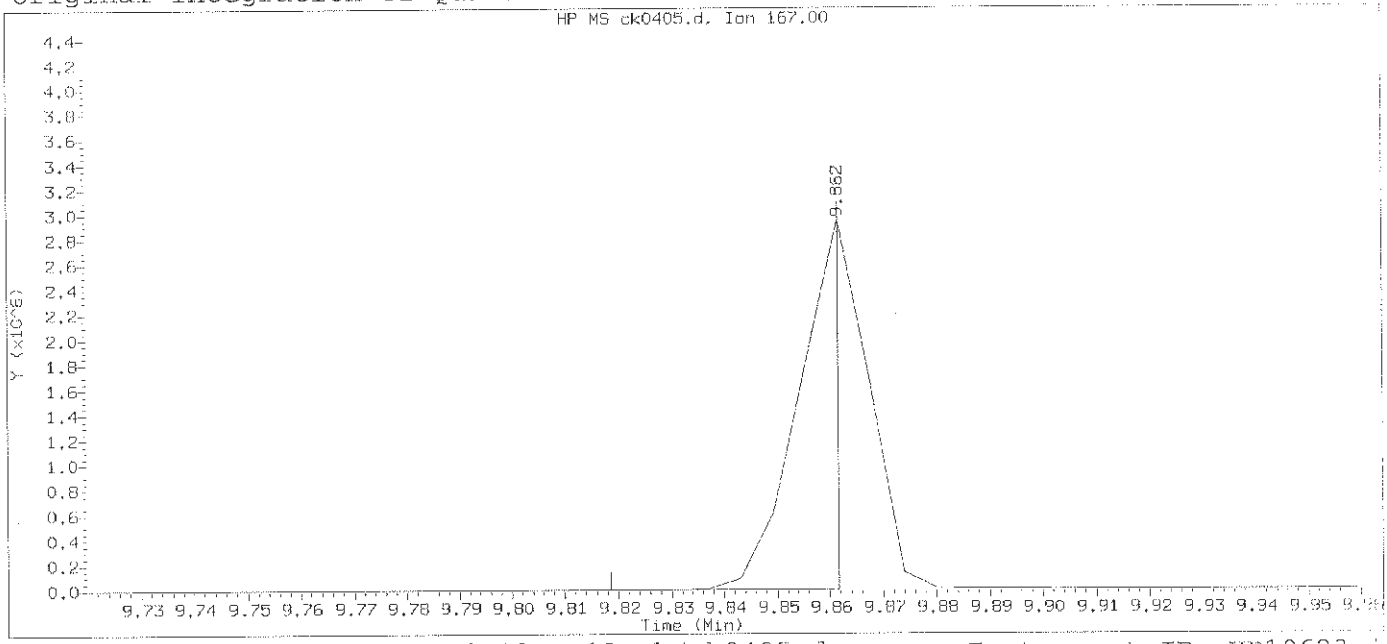
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area	: 1465822		
On-column Amount (ng/ul)	: 49.2155		
Integration start scan	: 1290	Integration stop scan:	1297
Y at integration start	: 272	Y at integration end:	255

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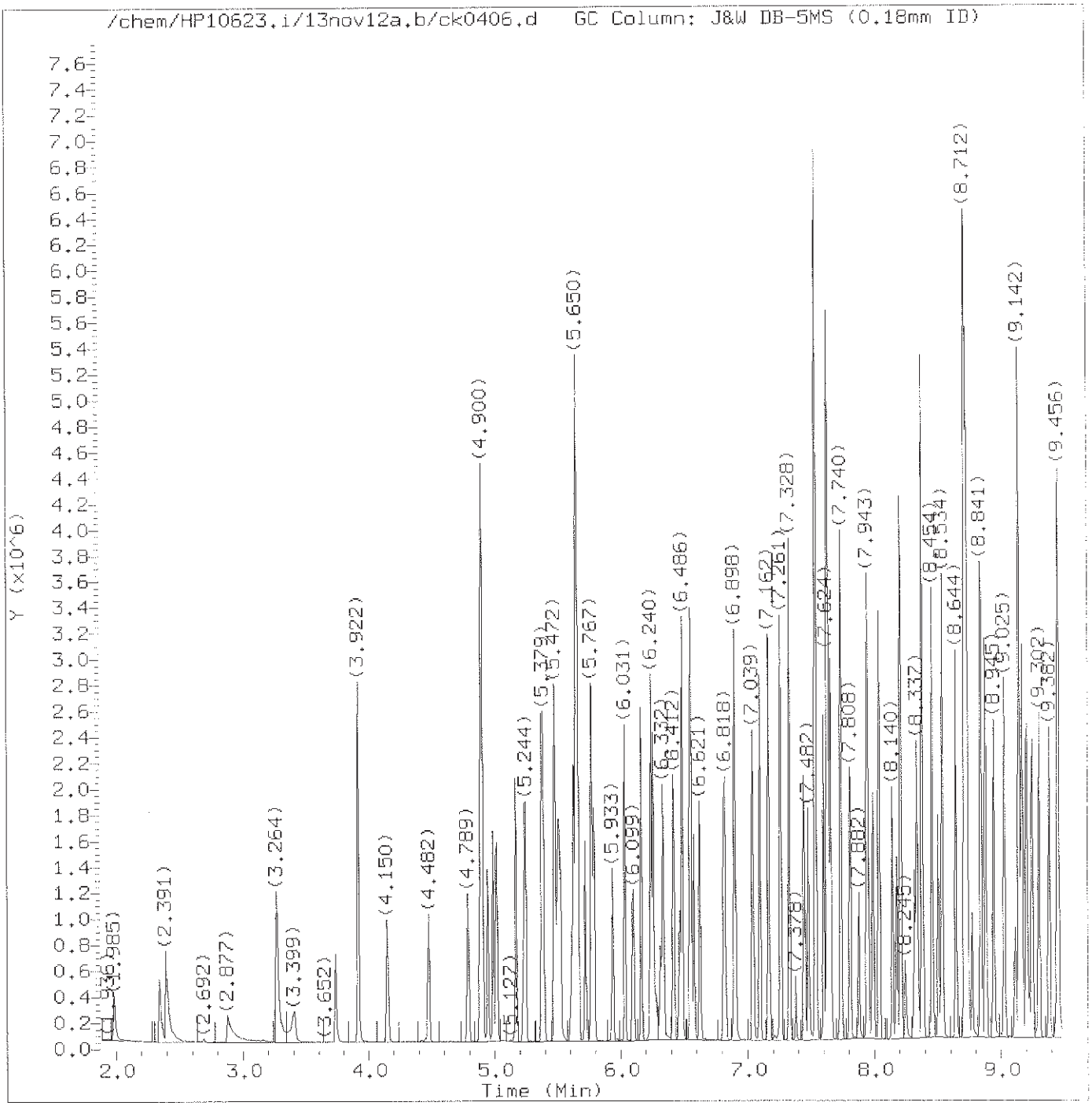
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

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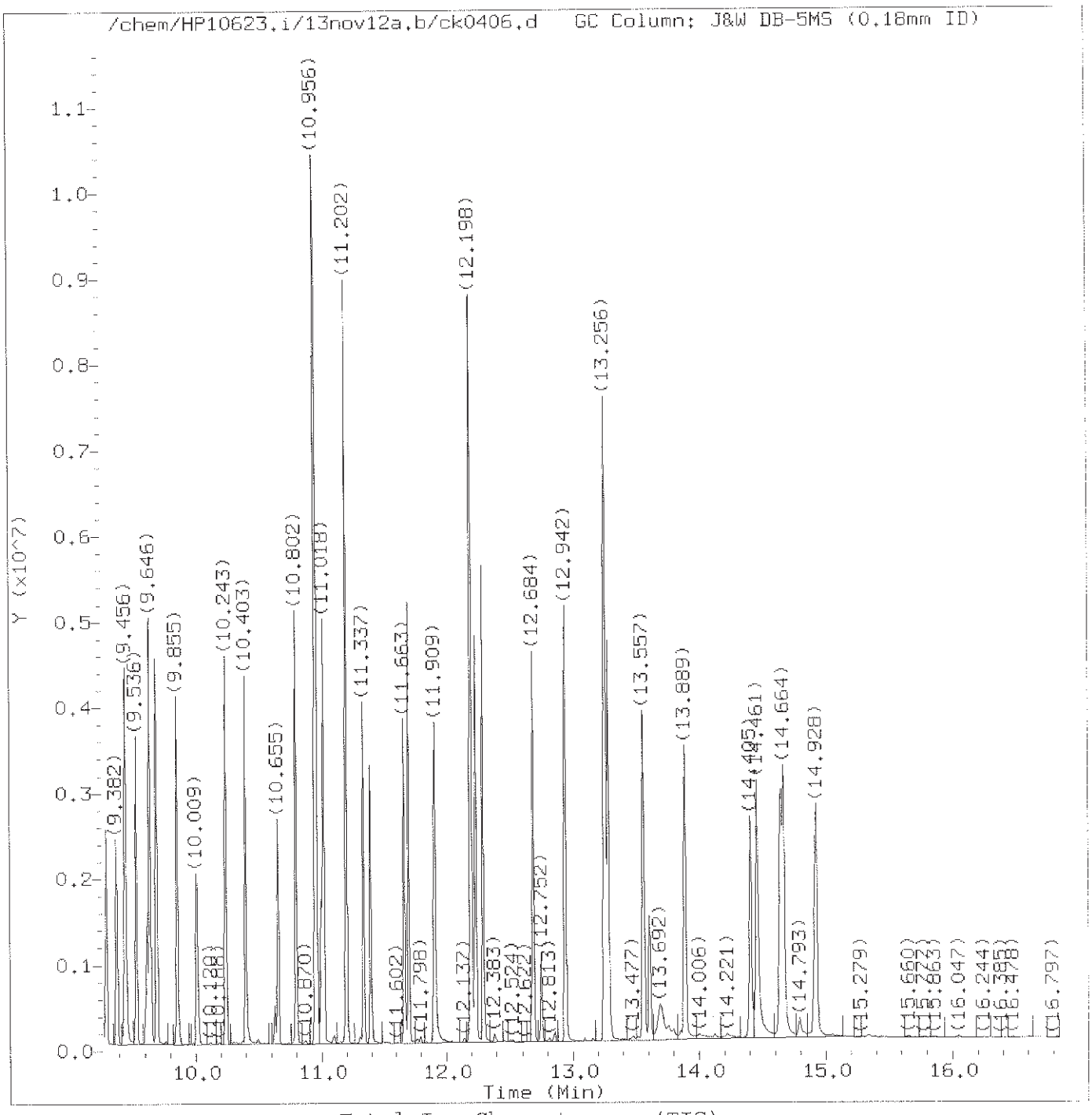
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	166551	52.372
2) N-Nitrosodimethylamine	(1)	2.342	74	307336	52.200
3) Pyridine	(1)	2.391	79	452230	49.545
5) 2-Picoline	(1)	3.264	93	489961	52.604
6) N-Nitrosomethylethylamine	(1)	3.406	88	227025	50.985
7) Methyl methanesulfonate	(1)	3.738	80	236107	52.737
9)$2-Fluorophenol	(1)	3.922	112	764649	52.560
10) N-Nitrosodiethylamine	(1)	4.150	102	227481	51.424
11) Ethyl methanesulfonate	(1)	4.482	109	211788	52.575
12) Benzaldehyde	(1)	4.789	77	228131	38.119
15)$Phenol-d6	(1)	4.894	99	1127988	52.693
14)$Phenol-d5	(1)	4.894	99	1127988	52.693
13) Aniline	(1)	4.900	93	764549	51.630
16) Phenol	(1)	4.906	94	659733	52.831
18) bis(2-Chloroethyl)ether	(1)	4.986	93	451188	50.894
19) 2-Chlorophenol	(1)	5.017	128	399173	51.243
20) 1,3-Dichlorobenzene	(1)	5.164	146	412147	52.429
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	97224	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	418970	52.226
24) Benzyl alcohol	(1)	5.373	108	314851	51.693
25) 1,2-Dichlorobenzene	(1)	5.385	146	396306	52.630
206) Indene	(1)	5.478	115	854997	50.831
26) 2-Methylphenol	(1)	5.502	108	433232	52.273
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	536609	49.188
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	536609	49.063
29) N-Nitrosopyrrolidine	(1)	5.607	100	261876	52.787
30) Acetophenone	(1)	5.631	105	628772	50.885
31) N-Nitroso-di-n-propylamine	(1)	5.650	70	400514	50.638
32) N-Nitrosomorpholine	(1)	5.650	56	288826	51.249
33) 4-Methylphenol	(1)	5.650	108	515642	52.563
34) o-Toluidine	(1)	5.662	106	736166	52.010
37) Hexachloroethane	(1)	5.717	117	159722	52.312
38)$Nitrobenzene-d5	(2)	5.767	82	1021292	52.453
39) Nitrobenzene	(2)	5.785	77	535338	51.842
40) N-Nitrosopiperidine	(2)	5.933	114	237648	51.878
41) Isophorone	(2)	6.031	82	956779	51.027
42) 2-Nitrophenol	(2)	6.099	139	194388	54.151
44) 2,4-Dimethylphenol	(2)	6.160	107	475375	51.521
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	204800	53.235
46) bis(2-Chloroethoxy)methane	(2)	6.259	93	583002	51.172

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d
Injection date and time: 12-NOV-2013 11:49
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.277	105	282383	47.217
49) 2,4-Dichlorophenol	(2)	6.332	162	335715	53.501
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	353203	53.438
52)*Naphthalene-d8	(2)	6.468	136	451858	20.000
53) Naphthalene	(2)	6.486	128	1256553	52.412
56) 4-Chloroaniline	(2)	6.548	127	540774	51.761
57) 2,6-Dichlorophenol	(2)	6.554	162	316418	53.538
58) Hexachloropropene	(2)	6.578	213	201839	53.996
60) Hexachlorobutadiene	(2)	6.621	225	175136	52.831
194) Quinoline	(2)	6.818	129	870592	52.682
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	486968	57.388
63) Caprolactam	(2)	6.904	113	177327	51.013
68) 4-Chloro-3-methylphenol	(2)	7.039	107	419009	52.230
69) Safrole	(2)	7.095	162	337185	53.095
70) 2-Methylnaphthalene	(2)	7.169	142	888217	52.204
71) 1-Methylnaphthalene	(2)	7.261	142	819117	52.614
72) Hexachlorocyclopentadiene	(3)	7.328	237	155608	54.704
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	350871	53.302
74) cis-Isosafrole	(3)	7.378	162	61911	5.858
75) 2,4,6-Trichlorophenol	(3)	7.445	196	231921	53.996
77) 2,4,5-Trichlorophenol	(3)	7.482	196	258422	55.183
78)$2-Fluorobiphenyl	(3)	7.537	172	1845614	53.181
79) trans-Isosafrole	(3)	7.599	162	352507	47.117
80) Isosafrole	(3)	7.599	162	352507	52.940
83) 1,1'-Biphenyl	(3)	7.630	154	1086550	50.817
84) 2-Chloronaphthalene	(3)	7.636	162	931809M	59.830
85) 1-Chloronaphthalene	(3)	7.654	162	805433M	52.548
88) Diphenyl ether	(3)	7.734	170	558321	52.420
89) 2-Nitroaniline	(3)	7.740	138	277946	54.706
90) 1,4-Naphthoquinone	(3)	7.814	158	356818	54.442
91) 1,4-Dinitrobenzene	(3)	7.882	168	113783	57.616
92) Dimethylphthalate	(3)	7.943	163	983548	53.075
93) 1,3-Dinitrobenzene	(3)	7.956	168	154084	57.427
94) 2,6-Dinitrotoluene	(3)	7.992	165	216706	56.146
95) Acenaphthylene	(3)	8.036	152	1280224	52.653
97) 3-Nitroaniline	(3)	8.140	138	261109	55.399
98)*Acenaphthene-d10	(3)	8.177	164	275969	20.000
99) Acenaphthene	(3)	8.208	153	883671	52.514
100) 2,4-Dinitrophenol	(3)	8.245	184	70482	56.220
103) 4-Nitrophenol	(3)	8.318	109	157933	54.089

M = Compound was manually integrated.
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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	303223	53.306
104) Dibenzofuran	(3)	8.380	168	1208907	52.446
105) 2,4-Dinitrotoluene	(3)	8.380	165	285537	57.249
106) 1-Naphthylamine	(3)	8.454	143	1018825	53.790
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	186330	56.486
108) 2-Naphthylamine	(3)	8.534	143	1043725	53.857
109) Diethylphthalate	(3)	8.644	149	1013871	52.964
111) Fluorene	(3)	8.712	166	1039866	52.431
110) Thionazin	(3)	8.718	107	225224	53.347
113) 5-Nitro-o-toluidine	(3)	8.730	152	295058	56.346
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	462012	52.364
114) 4-Nitroaniline	(3)	8.743	138	284674	53.710
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	112544	56.805
117) N-Nitrosodiphenylamine	(4)	8.841	169	906257	52.676
202) NDPA as diphenylamine	(4)	8.841	169	906257	52.551
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1257134	51.011
119)$2,4,6-Tribromophenol	(3)	8.945	330	180919	54.279
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	180609	51.418
121) 1,3,5-Trinitrobenzene	(4)	9.112	213	77561M	59.469
123) Phorate	(4)	9.142	75	771823	50.831
122) Diallate (peak 1)	(4)	9.142	86	483754	38.360
124) Phenacetin	(4)	9.167	108	621689M	52.287
125) 4-Bromophenyl-phenylether	(4)	9.204	248	249245	52.579
126) Diallate (peak 2)	(4)	9.222	86	69225	12.640
127) Hexachlorobenzene	(4)	9.247	284	243532	52.033
128) Dimethoate	(4)	9.302	87	489471	52.717
130) Atrazine	(4)	9.382	200	239182	43.393
131) Pentachlorophenol	(4)	9.444	266	142341	54.836
133) 4-Aminobiphenyl	(4)	9.450	169	934558	50.235
132) Pentachloronitrobenzene	(4)	9.456	237	111513	54.885
134) Pronamide	(4)	9.536	173	474436	52.908
135)*Phenanthrene-d10	(4)	9.622	188	513309	20.000
136) Dinoseb	(4)	9.640	211	158765	59.322
137) Phenanthrene	(4)	9.646	178	1550869	51.961
138) Anthracene	(4)	9.696	178	1589210	51.727
140) Carbazole	(4)	9.855	167	1578178	52.640
141) Methyl parathion	(4)	10.009	109	322196	57.907
142) Di-n-butylphthalate	(4)	10.243	149	1857139	52.502
144) 4-Nitroquinoline-1-oxide	(4)	10.403	190	121482	60.066
143) Parathion	(4)	10.403	109	228279	55.769

M = Compound was manually integrated.
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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	168172	49.859
147) Fluoranthene	(4)	10.802	202	1771554	53.083
152) Benzidine	(5)	10.956	184	4346444	166.273
167)*Pyrene-d10	(5)	10.999	212	638551	20.000
154) Pyrene	(5)	11.018	202	1868816	52.701
156)$Terphenyl-d14	(5)	11.202	244	2420246	53.012
158) p-Dimethylaminoazobenzene	(5)	11.337	225	379097	54.856
159) Chlorobenzilate	(5)	11.393	139	580654	54.013
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	1212405	55.474
161) Butylbenzylphthalate	(5)	11.700	149	902651	53.341
162) 2-Acetylaminofluorene	(5)	11.909	181	866954	56.569
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	675754	54.805
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	335934	55.771
166) Benzo(a)anthracene	(5)	12.198	228	1802816	55.119
168) Chrysene	(5)	12.235	228	1669436	52.939
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1249305	53.210
189) 6-Methylchrysene	(5)	12.684	242	1257306	54.035
170) Di-n-octylphthalate	(6)	12.942	149	2235566	52.110
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.256	256	876942	54.375
172) Benzo(b)fluoranthene	(6)	13.256	252	1777088	51.204
173) Benzo(k)fluoranthene	(6)	13.286	252	1977438	55.848
174) Benzo(a)pyrene	(6)	13.563	252	1763999	52.076
175)*Perylene-d12	(6)	13.612	264	568380	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	903147	53.193
190) Dibenz(a,h)acridine	(6)	14.412	279	1319896	53.636
191) Dibenz(a,j)acridine	(6)	14.461	279	1519832	53.709
177) Indeno(1,2,3-cd)pyrene	(6)	14.645	276	1933504	53.650
178) Dibenz(a,h)anthracene	(6)	14.670	278	1649351	54.713
179) Benzo(g,h,i)perylene	(6)	14.928	276	1623605	52.883
129) Diallate TRANS/CIS	(4)			552979	51.072

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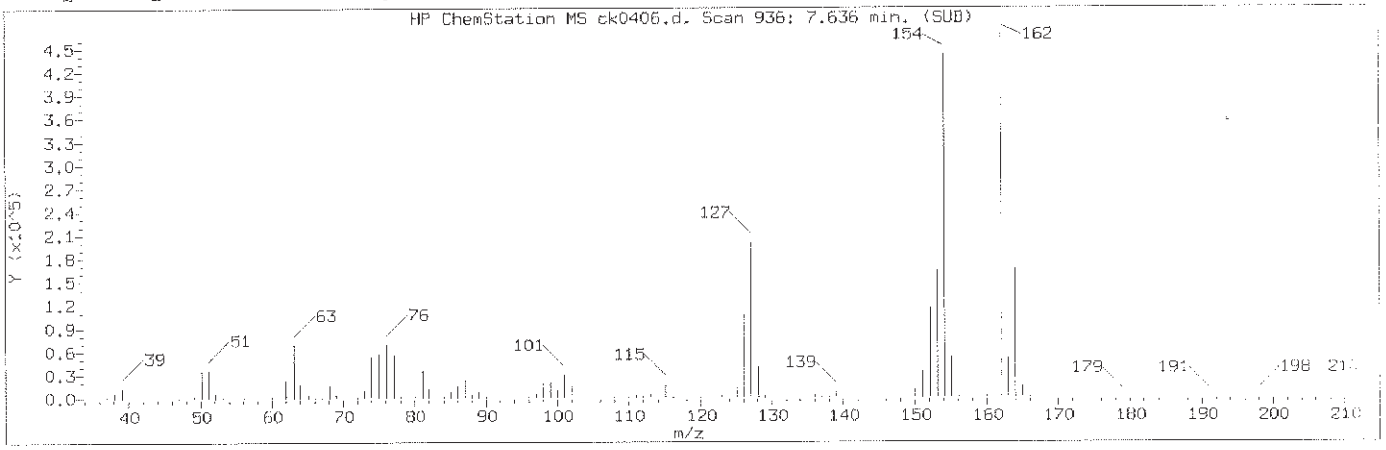
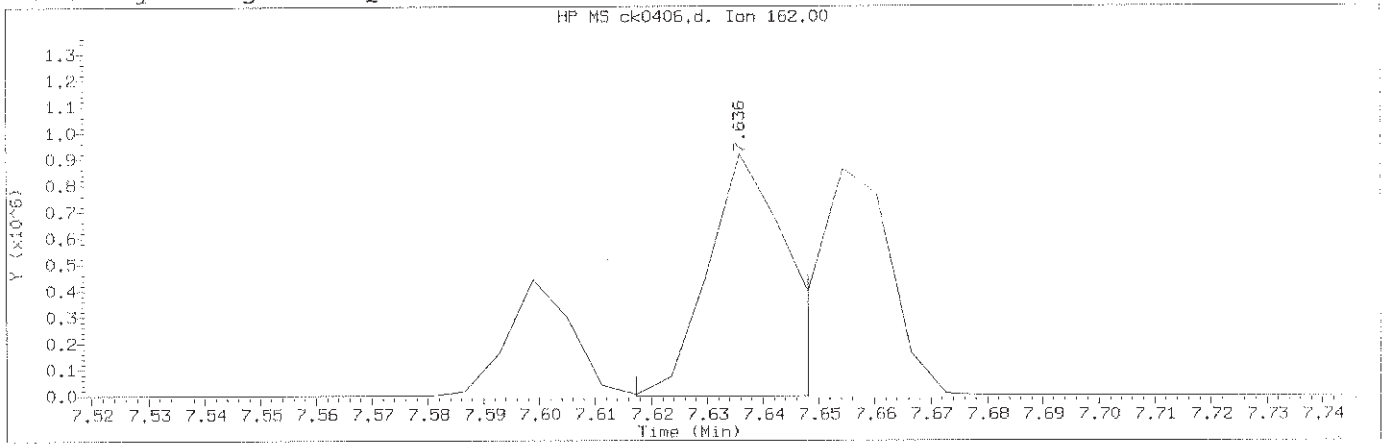
Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 931809M		
On-Column Amount (ng/ul)	: 59.8304		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -1729	Y at integration end:	-1729

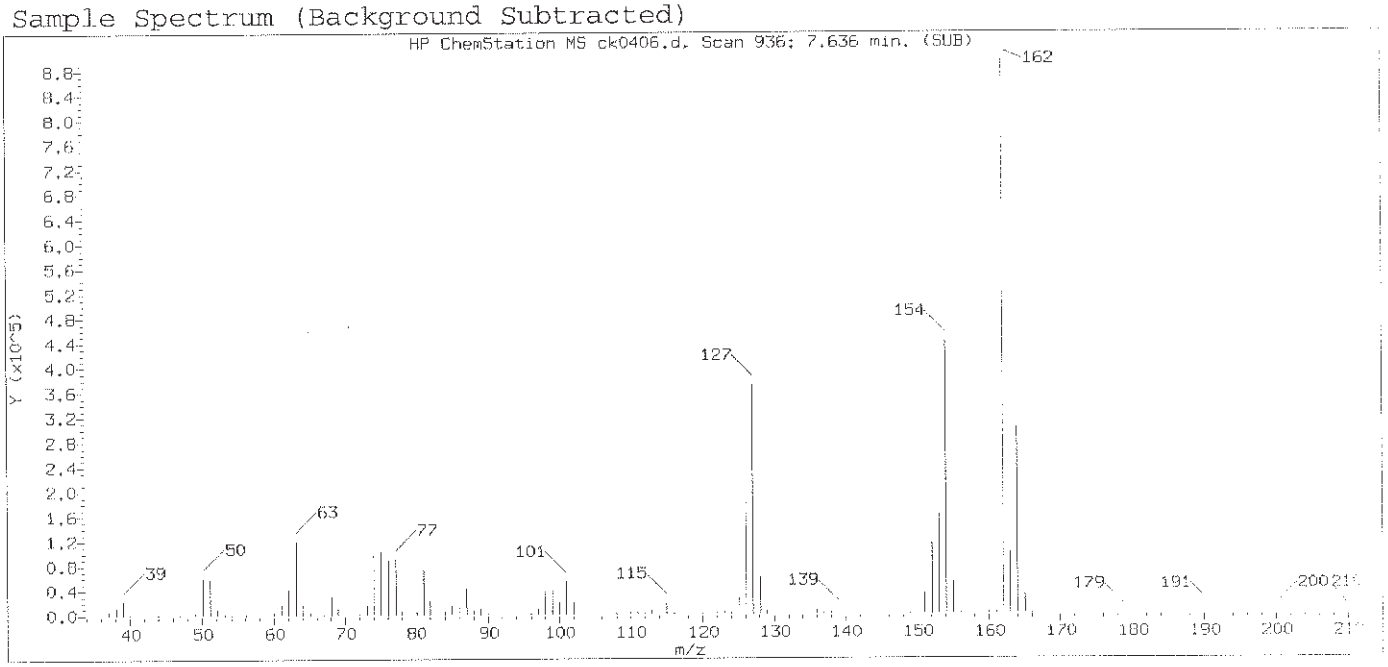
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

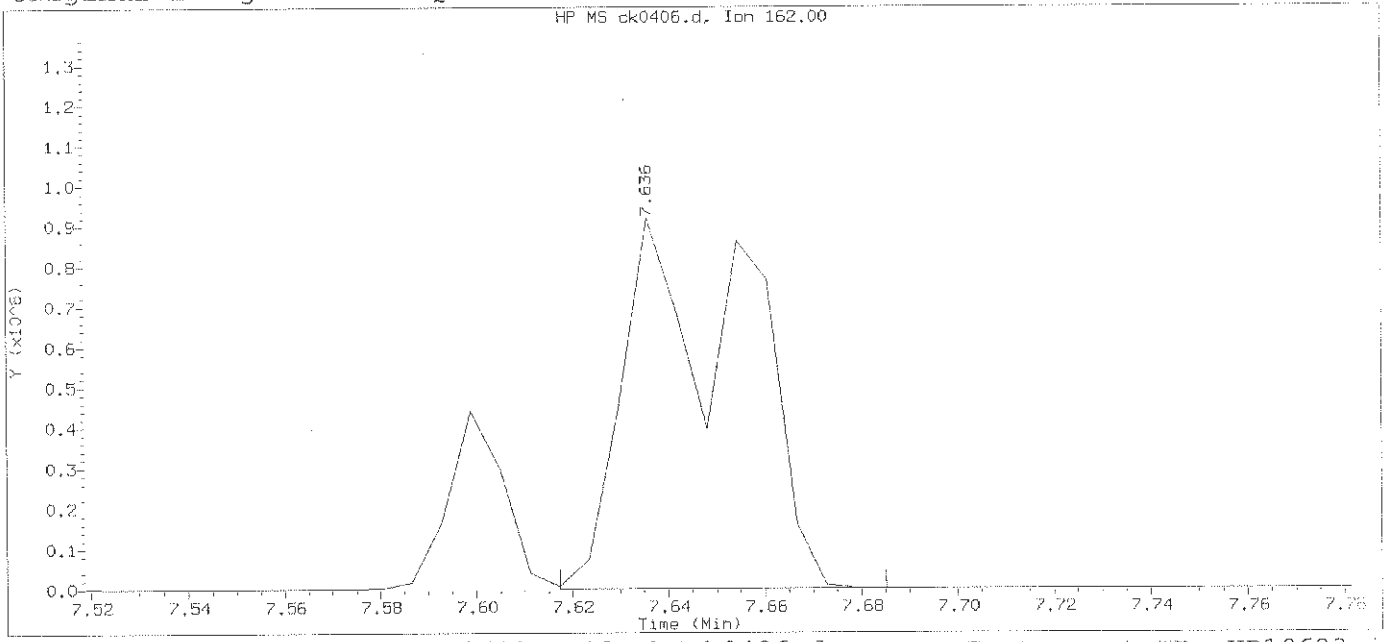
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1588916		
On-column Amount (ng/ul)	: 85.2189		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 431	Y at integration end:	459

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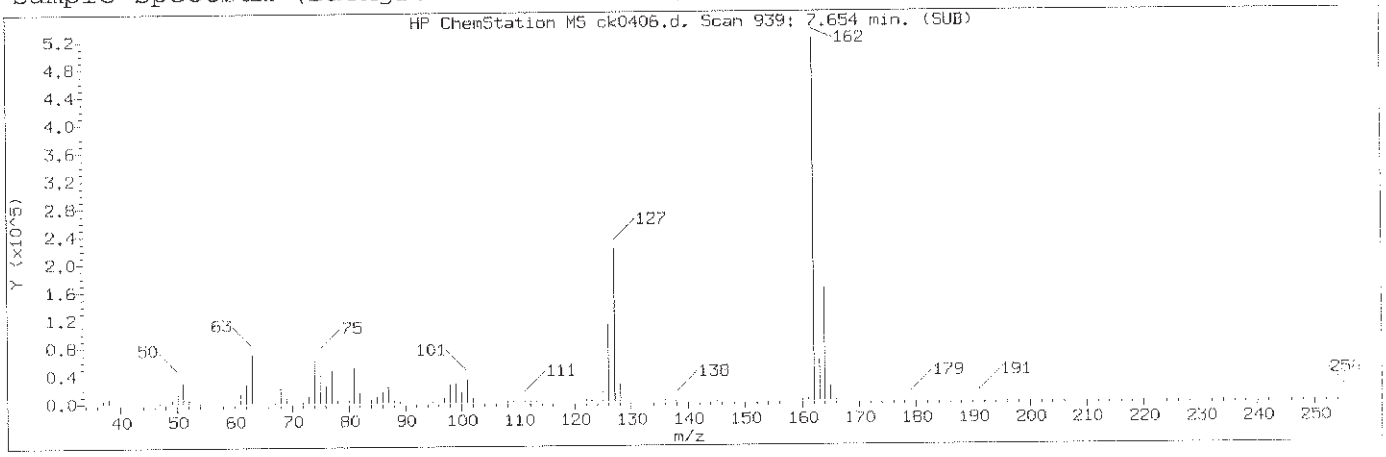
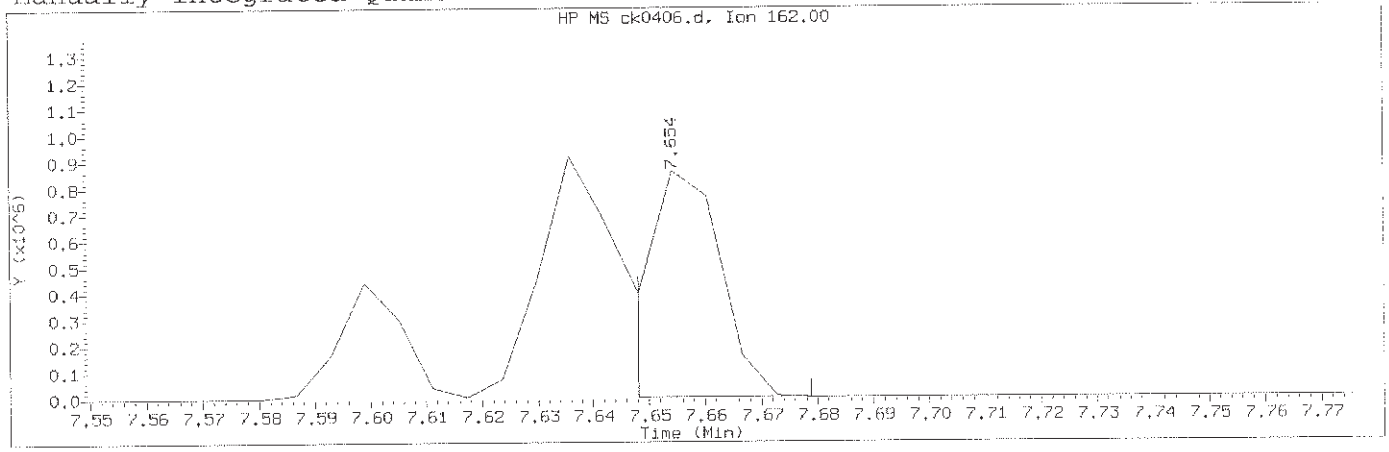
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 805433M		
On-Column Amount (ng/ul)	: 52.5484		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: 1902	Y at integration end:	1902

Reason for manual integration: improper integration

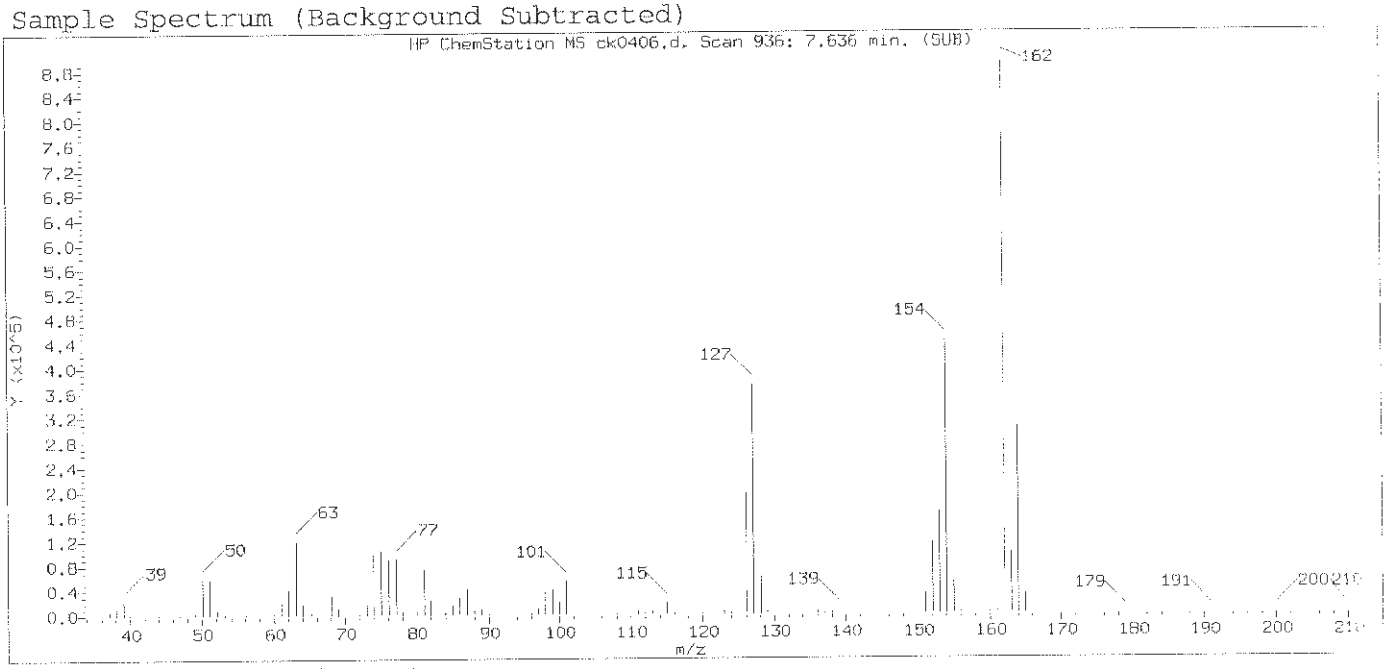
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

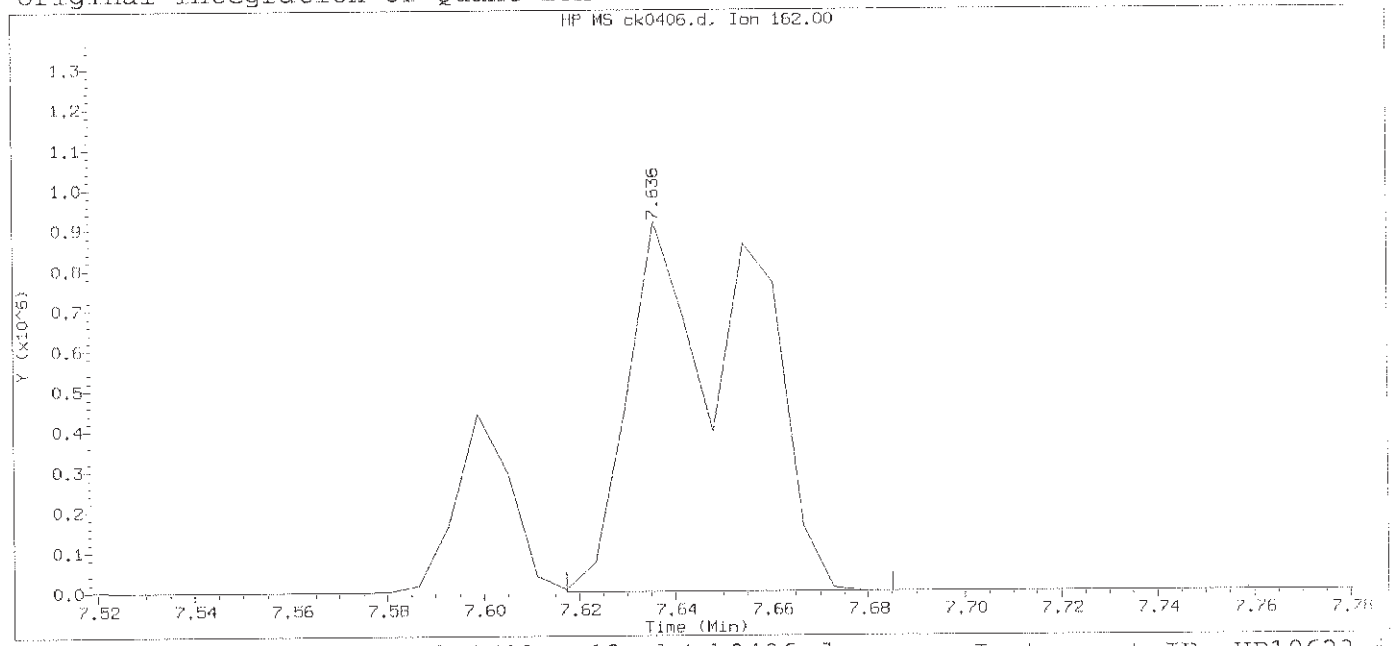
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1589583		
On-column Amount (ng/ul)	: 83.4795		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 292	Y at integration end:	271

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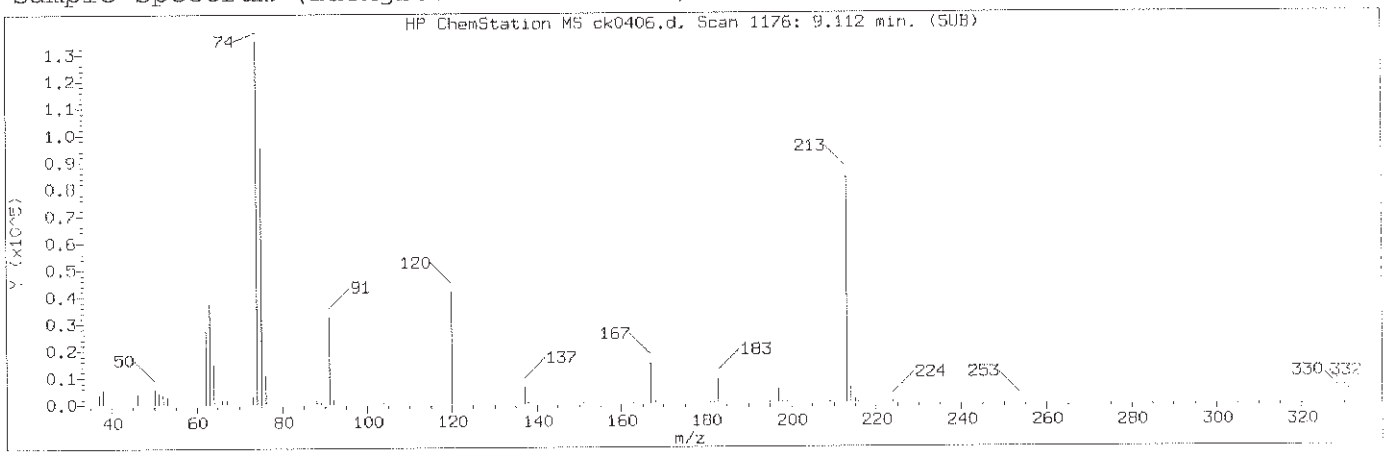
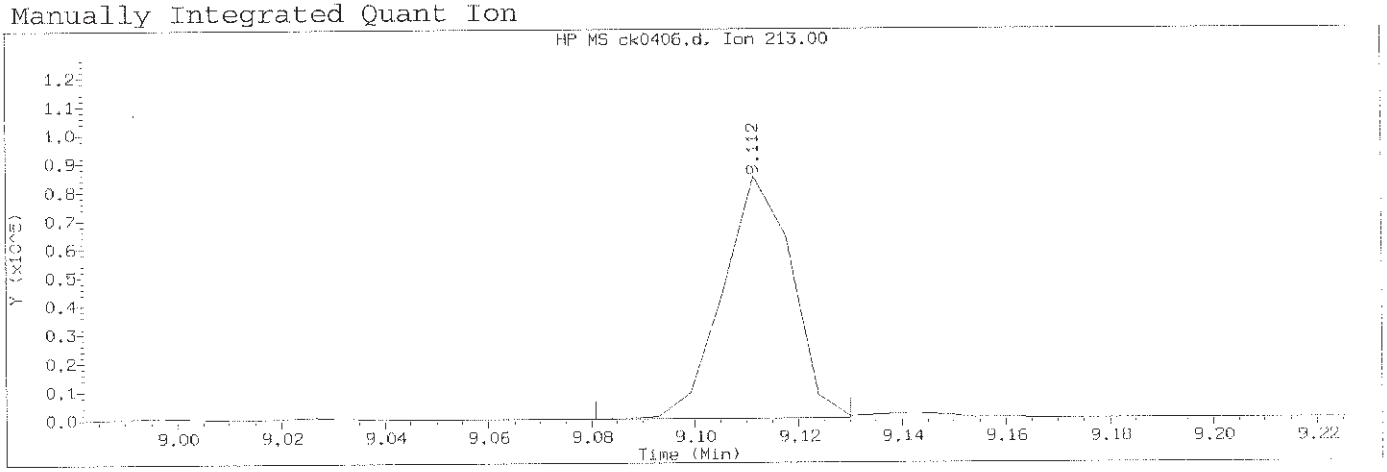
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area (flag)	: 77561M		
On-Column Amount (ng/ul)	: 59.4685		
Integration start scan	: 1170	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

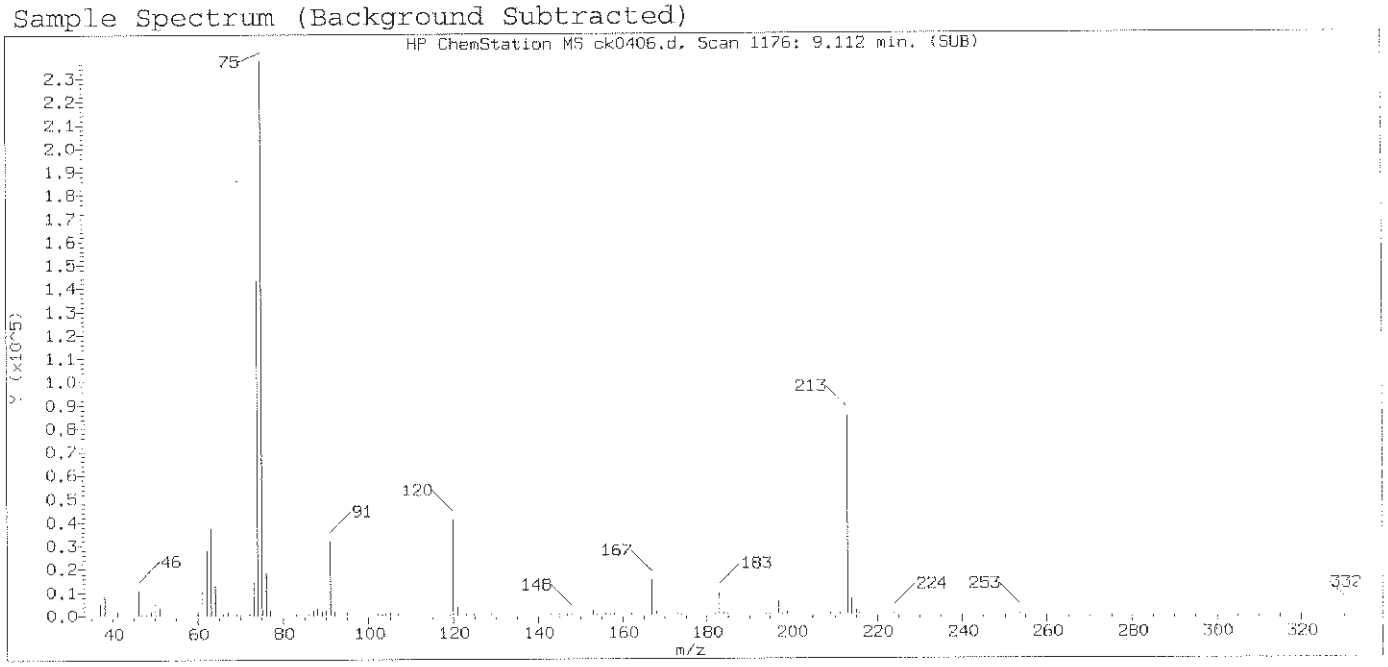
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

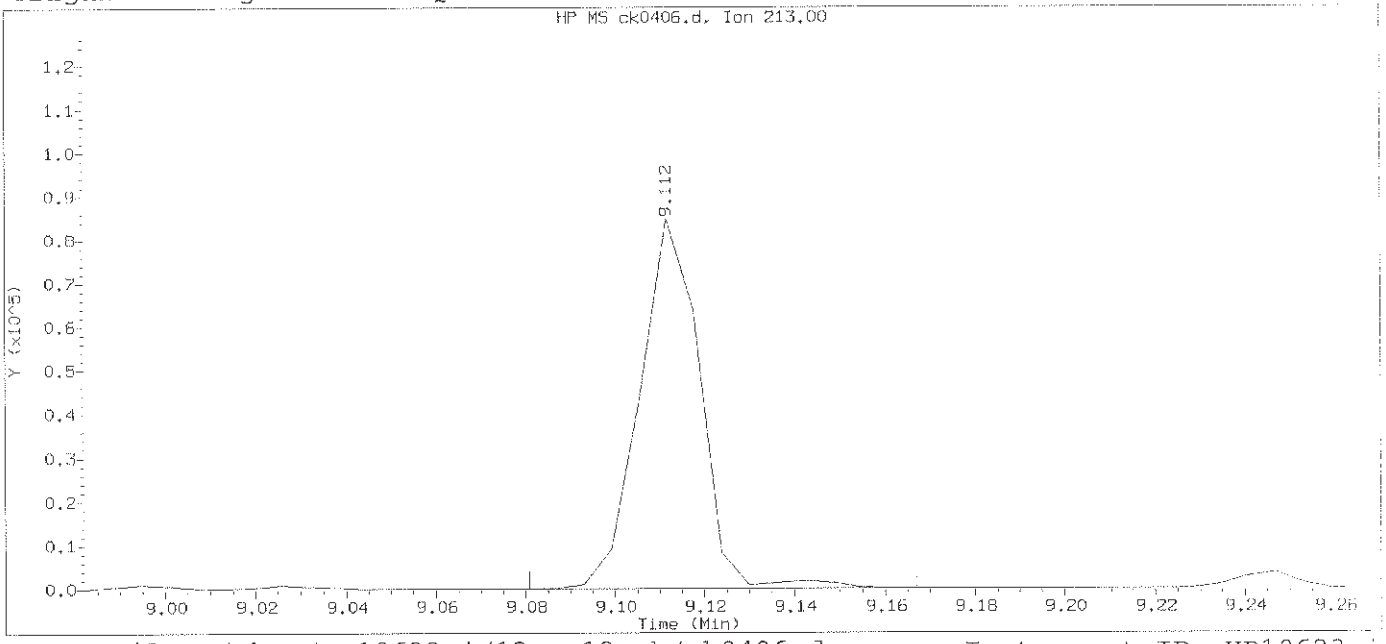
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area	: 79311		
On-column Amount (ng/ul)	: 52.3649		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

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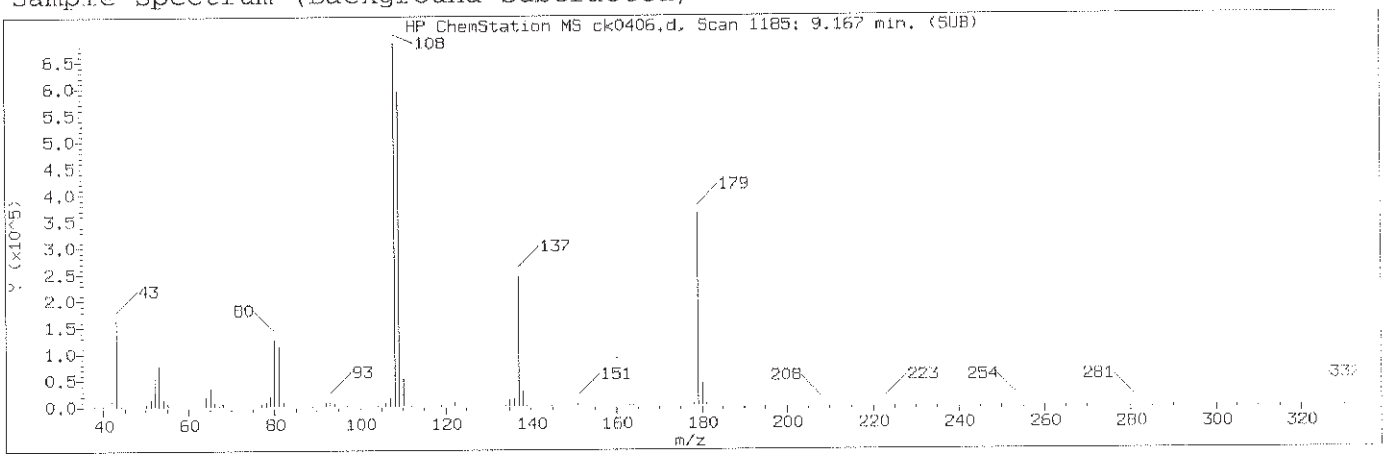
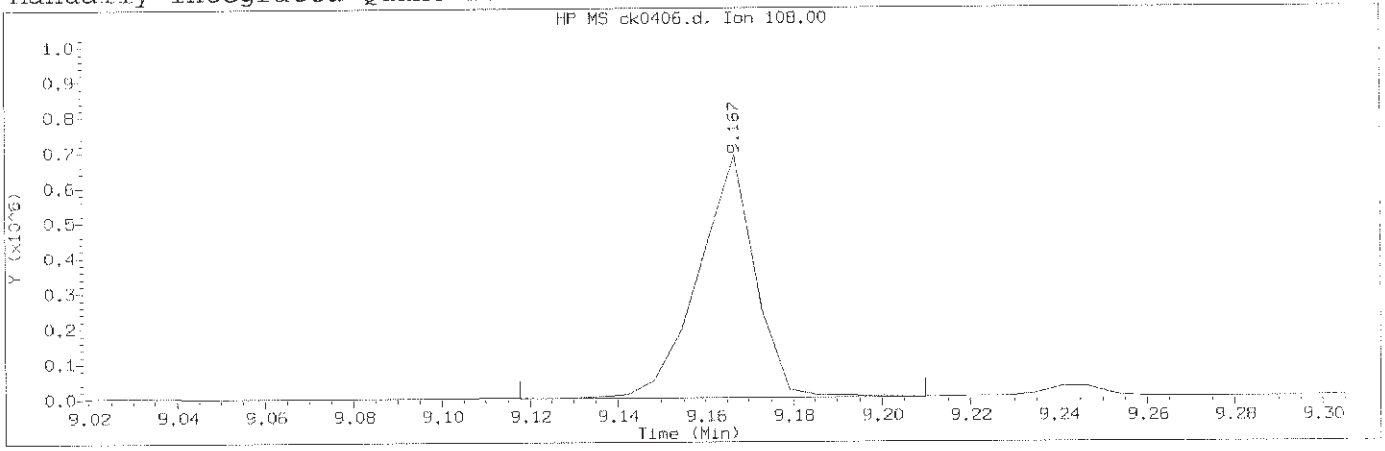
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area (flag)	: 621689M		
On-Column Amount (ng/ul)	: 52.2875		
Integration start scan	: 1176	Integration stop scan:	1191
Y at integration start	: 167	Y at integration end:	167

Reason for manual integration: improper integration

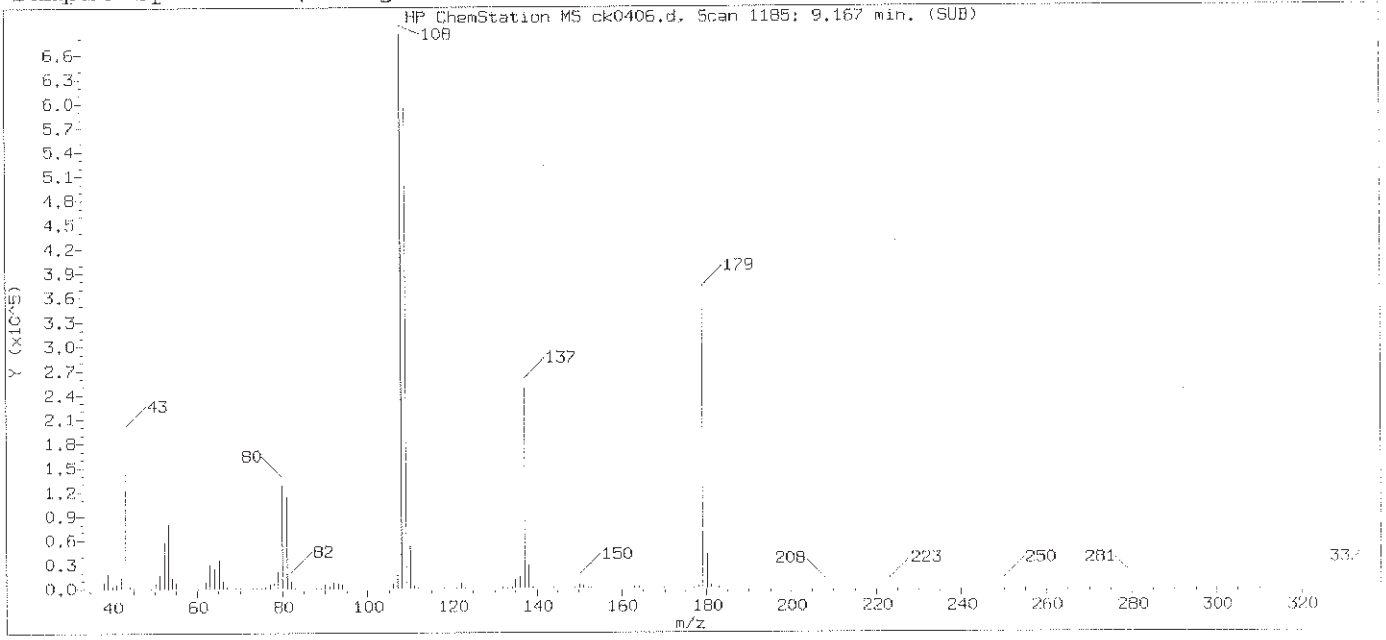
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 Signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

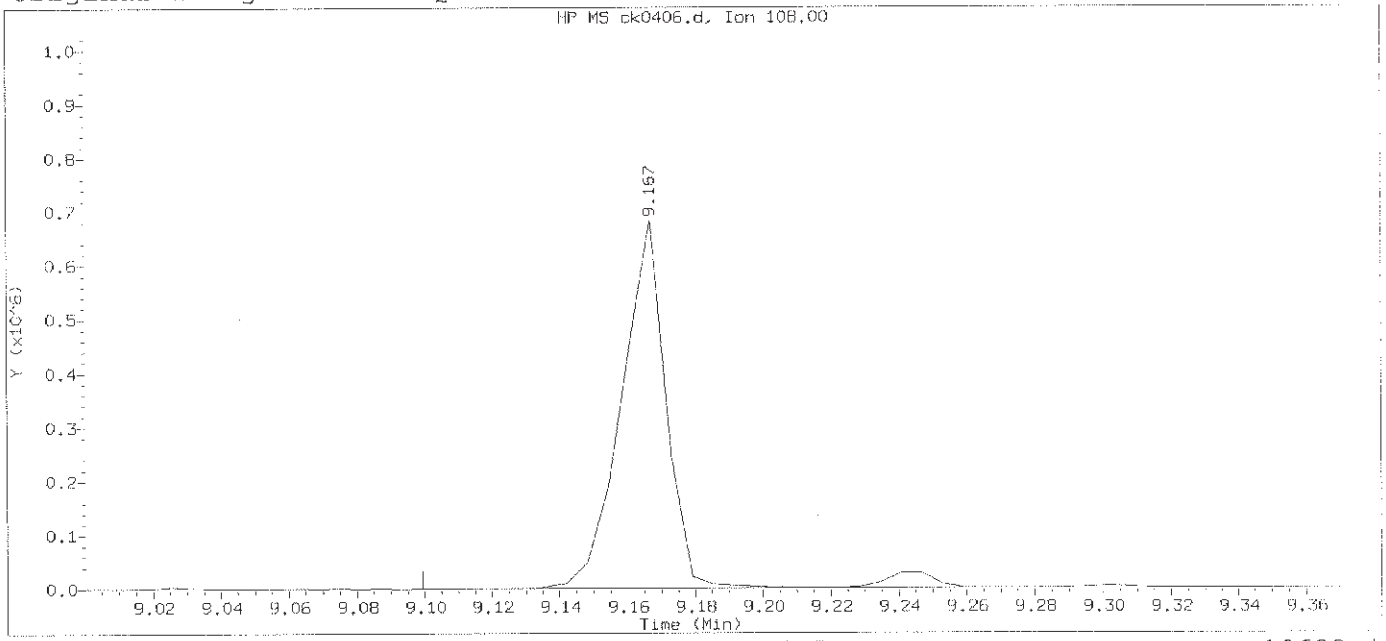
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area	: 650370		
On-column Amount (ng/ul)	: 52.3296		
Integration start scan	: 1173	Integration stop scan:	1202
Y at integration start	: 604	Y at integration end:	607

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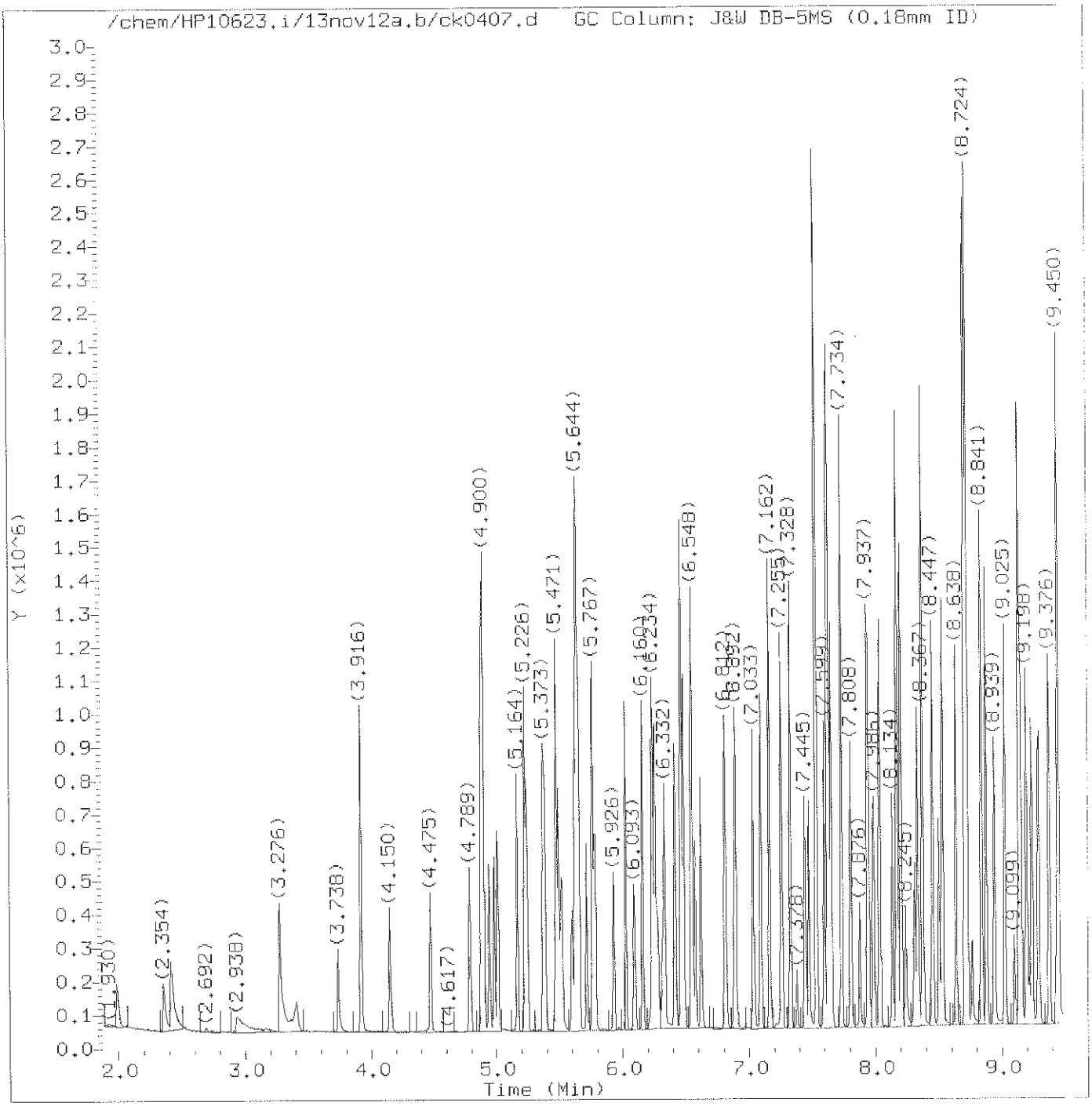
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d
Injection date and time: 12-NOV-2013 12:13

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

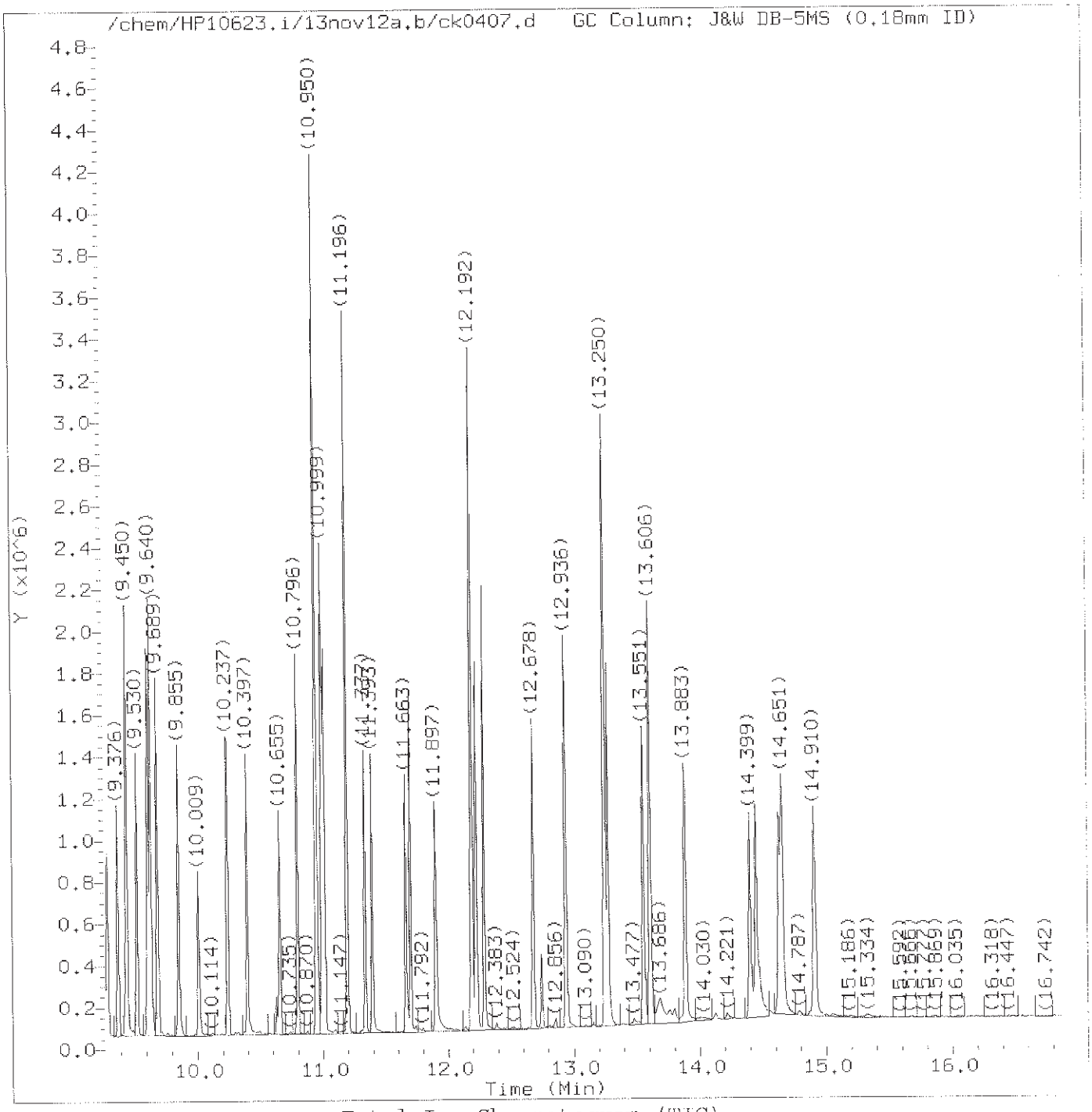
Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	60386	14.057
2) N-Nitrosodimethylamine	(1)	2.354	74	110728	13.922
3) Pyridine	(1)	2.409	79	174459	14.149
5) 2-Picoline	(1)	3.276	93	182617	14.514
6) N-Nitrosomethylethylamine	(1)	3.406	88	83985	13.962
7) Methyl methanesulfonate	(1)	3.738	80	84839	14.028
9)$2-Fluorophenol	(1)	3.916	112	284340	14.469
10) N-Nitrosodiethylamine	(1)	4.150	102	83415	13.959
11) Ethyl methanesulfonate	(1)	4.475	109	79082	14.533
12) Benzaldehyde	(1)	4.789	77	96858	11.981
15)$Phenol-d6	(1)	4.887	99	411349	14.225
14)$Phenol-d5	(1)	4.887	99	411349	14.225
16) Phenol	(1)	4.900	94	235200	13.943
13) Aniline	(1)	4.900	93	274323	13.714
18) bis(2-Chloroethyl)ether	(1)	4.986	93	171912	14.355
19) 2-Chlorophenol	(1)	5.010	128	147106	13.980
20) 1,3-Dichlorobenzene	(1)	5.164	146	152416	14.353
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	131335	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	158365	14.614
24) Benzyl alcohol	(1)	5.373	108	118150	14.360
25) 1,2-Dichlorobenzene	(1)	5.385	146	149992	14.746
206) Indene	(1)	5.471	115	331182	14.576
26) 2-Methylphenol	(1)	5.496	108	160811	14.364
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	202658	13.752
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	202658	13.717
29) N-Nitrosopyrrolidine	(1)	5.601	100	93901	14.012
30) Acetophenone	(1)	5.625	105	245309	14.696
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	145613	13.629
33) 4-Methylphenol	(1)	5.644	108	184742	13.941
32) N-Nitrosomorpholine	(1)	5.644	56	108509	14.253
34) o-Toluidine	(1)	5.656	106	273318	14.295
37) Hexachloroethane	(1)	5.717	117	58842	14.267
38)$Nitrobenzene-d5	(2)	5.767	82	365666	14.069
39) Nitrobenzene	(2)	5.785	77	190480	13.818
40) N-Nitrosopiperidine	(2)	5.926	114	88689	14.503
41) Isophorone	(2)	6.025	82	353281	14.114
42) 2-Nitrophenol	(2)	6.093	139	69222	14.445
44) 2,4-Dimethylphenol	(2)	6.160	107	173258	14.067
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	77504	15.092
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	212904M	13.999

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d
Injection date and time: 12-NOV-2013 12:13
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newal11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.271	105	243332	30.480
49) 2,4-Dichlorophenol	(2)	6.332	162	123828	14.783
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	133120	15.088
52)*Naphthalene-d8	(2)	6.461	136	603190	20.000
53) Naphthalene	(2)	6.486	128	463994	14.498
56) 4-Chloroaniline	(2)	6.548	127	200978	14.411
57) 2,6-Dichlorophenol	(2)	6.554	162	116590	14.778
58) Hexachloropropene	(2)	6.578	213	73210	14.672
60) Hexachlorobutadiene	(2)	6.621	225	67324	15.214
194) Quinoline	(2)	6.812	129	329699	14.946
63) Caprolactam	(2)	6.886	113	68406	14.742
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	181266	16.002
68) 4-Chloro-3-methylphenol	(2)	7.033	107	155931	14.560
69) Safrole	(2)	7.095	162	126976	14.978
70) 2-Methylnaphthalene	(2)	7.162	142	337708	14.869
71) 1-Methylnaphthalene	(2)	7.255	142	308537	14.846
72) Hexachlorocyclopentadiene	(3)	7.328	237	55206	14.193
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	133674	14.851
74) cis-Isosafrole	(3)	7.378	162	22739	1.574
75) 2,4,6-Trichlorophenol	(3)	7.445	196	86695	14.761
77) 2,4,5-Trichlorophenol	(3)	7.476	196	94239	14.717
78)$2-Fluorobiphenyl	(3)	7.531	172	693040	14.605
79) trans-Isosafrole	(3)	7.599	162	133212	13.022
80) Isosafrole	(3)	7.599	162	133212	14.631
83) 1,1'-Biphenyl	(3)	7.624	154	421690	14.423
84) 2-Chloronaphthalene	(3)	7.636	162	290061	13.621
85) 1-Chloronaphthalene	(3)	7.654	162	312929	14.931
88) Diphenyl ether	(3)	7.734	170	213924	14.689
89) 2-Nitroaniline	(3)	7.734	138	97477	14.031
90) 1,4-Naphthoquinone	(3)	7.808	158	132145	14.745
91) 1,4-Dinitrobenzene	(3)	7.876	168	35808	13.261
92) Dimethylphthalate	(3)	7.937	163	379705	14.985
93) 1,3-Dinitrobenzene	(3)	7.949	168	51287	13.979
94) 2,6-Dinitrotoluene	(3)	7.986	165	79007	14.970
95) Acenaphthylene	(3)	8.035	152	476611	14.336
97) 3-Nitroaniline	(3)	8.134	138	93677	14.535
98)*Acenaphthene-d10	(3)	8.177	164	377352	20.000
99) Acenaphthene	(3)	8.208	153	336320	14.617
100) 2,4-Dinitrophenol	(3)	8.245	184	45951	26.805
103) 4-Nitrophenol	(3)	8.312	109	56612	14.179

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	116006	14.914
104) Dibenzofuran	(3)	8.374	168	455060	14.438
105) 2,4-Dinitrotoluene	(3)	8.374	165	95329	13.978
106) 1-Naphthylamine	(3)	8.447	143	374843	14.473
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	66945	14.842
108) 2-Naphthylamine	(3)	8.527	143	386440	14.583
109) Diethylphthalate	(3)	8.638	149	385196	14.716
110) Thionazin	(3)	8.712	107	80154	13.885
111) Fluorene	(3)	8.712	166	390143	14.386
113) 5-Nitro-o-toluidine	(3)	8.724	152	102444M	14.307
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	176515	14.631
114) 4-Nitroaniline	(3)	8.730	138	105014	14.490
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	34312	12.792
117) N-Nitrosodiphenylamine	(4)	8.841	169	339604	14.580
202) NDPA as diphenylamine	(4)	8.841	169	339604	14.545
118) 1,2-Diphenylhydrazine	(4)	8.878	77	469238	14.064
119)$2,4,6-Tribromophenol	(3)	8.939	330	66980	14.696
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	67409	14.175
121) 1,3,5-Trinitrobenzene	(4)	9.099	213	21439M	12.141
122) Diallate (peak 1)	(4)	9.136	86	178786	10.471
123) Phorate	(4)	9.142	75	276369	13.444
124) Phenacetin	(4)	9.155	108	226163	14.050
125) 4-Bromophenyl-phenylether	(4)	9.198	248	95436	14.870
126) Diallate (peak 2)	(4)	9.222	86	25408	3.427
127) Hexachlorobenzene	(4)	9.241	284	94811	14.962
128) Dimethoate	(4)	9.296	87	182731	14.536
130) Atrazine	(4)	9.376	200	108004	14.473
131) Pentachlorophenol	(4)	9.437	266	49533	14.095
132) Pentachloronitrobenzene	(4)	9.450	237	40106	14.580
133) 4-Aminobiphenyl	(4)	9.450	169	424726	16.863
134) Pronamide	(4)	9.530	173	175408	14.448
135)*Phenanthrene-d10	(4)	9.622	188	694958	20.000
136) Dinoseb	(4)	9.640	211	44303	12.227
137) Phenanthrene	(4)	9.640	178	579231	14.334
138) Anthracene	(4)	9.689	178	604600	14.535
140) Carbazole	(4)	9.855	167	585146	14.416
141) Methyl parathion	(4)	10.009	109	102092	13.553
142) Di-n-butylphthalate	(4)	10.243	149	703330	14.686
144) 4-Nitroquinoline-1-oxide	(4)	10.397	190	32398	11.832
143) Parathion	(4)	10.397	109	75199	13.569

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	64903	14.213
147) Fluoranthene	(4)	10.796	202	665469	14.728
152) Benzidine	(5)	10.950	184	1501696	42.888
167)*Pyrene-d10	(5)	10.999	212	855313	20.000
154) Pyrene	(5)	11.018	202	691340	14.555
156)$Terphenyl-d14	(5)	11.196	244	900593	14.727
158) p-Dimethylaminoazobenzene	(5)	11.337	225	141149	15.248
159) Chlorobenzilate	(5)	11.393	139	212205	14.737
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	423523	14.467
161) Butylbenzylphthalate	(5)	11.700	149	332223	14.657
162) 2-Acetylaminofluorene	(5)	11.897	181	281617	13.719
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	242669	14.693
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	114914	14.243
166) Benzo(a)anthracene	(5)	12.192	228	642478	14.665
168) Chrysene	(5)	12.229	228	614897	14.557
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	452030	14.373
189) 6-Methylchrysene	(5)	12.678	242	458222	14.702
170) Di-n-octylphthalate	(6)	12.936	149	779461	14.070
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.250	256	302098	14.505
172) Benzo(b)fluoranthene	(6)	13.250	252	670144	14.953
173) Benzo(k)fluoranthene	(6)	13.274	252	667961	14.609
174) Benzo(a)pyrene	(6)	13.551	252	624750	14.282
175)*Perylene-d12	(6)	13.606	264	733981	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	324181	14.785
190) Dibenz(a,h)acridine	(6)	14.399	279	455469	14.333
191) Dibenz(a,j)acridine	(6)	14.448	279	546393	14.952
177) Indeno(1,2,3-cd)pyrene	(6)	14.627	276	693395	14.899
178) Dibenz(a,h)anthracene	(6)	14.651	278	584759	15.021
179) Benzo(g,h,i)perylene	(6)	14.910	276	576874	14.550
129) Diallate TRANS/CIS	(4)			204194	13.930

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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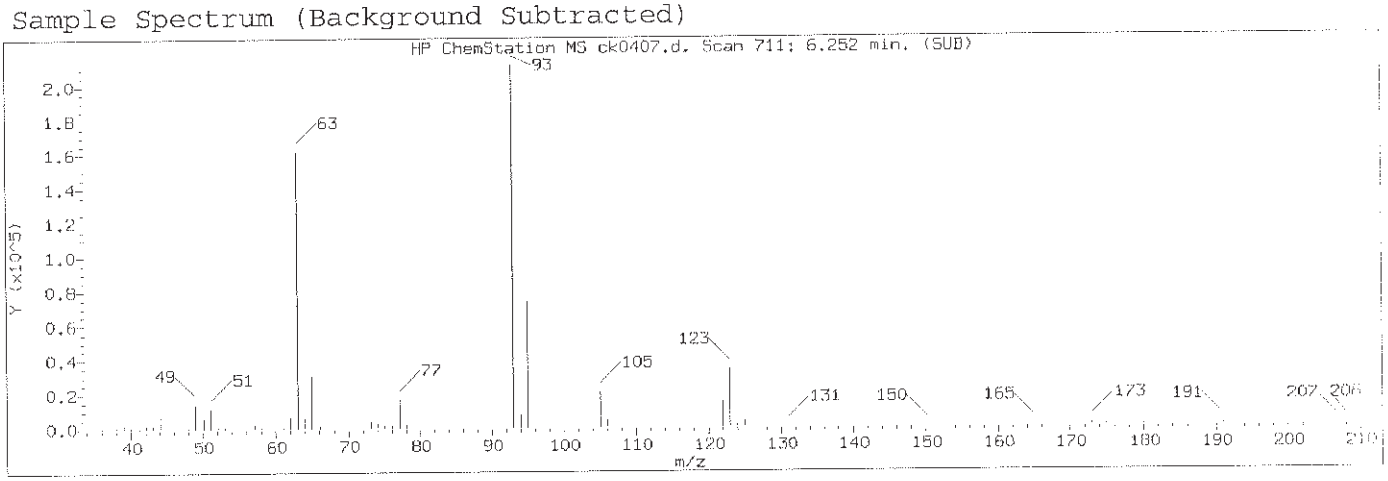
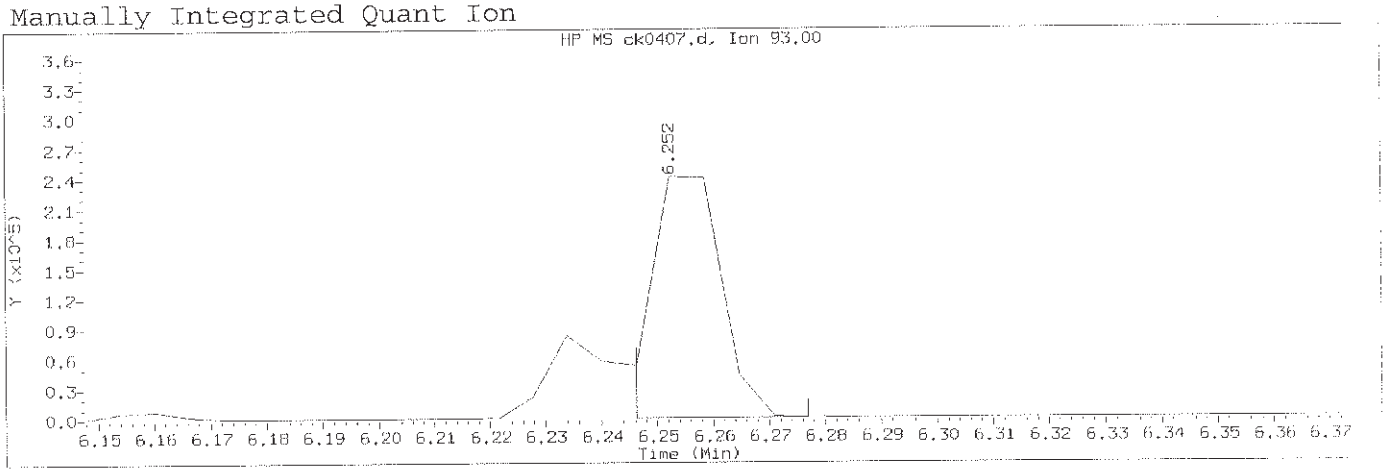
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 212904M		
On-Column Amount (ng/ul)	: 13.9988		
Integration start scan	: 709	Integration stop scan:	714
Y at integration start	: 545	Y at integration end:	545

Reason for manual integration: improper integration

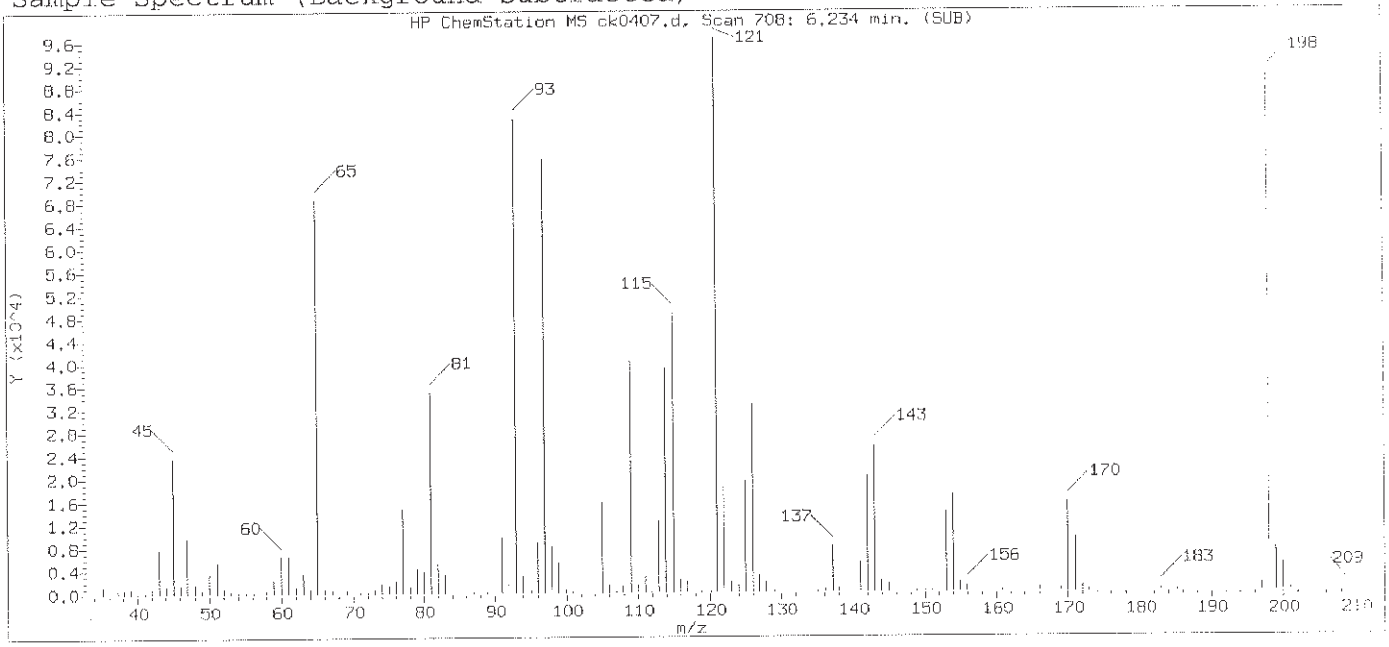
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

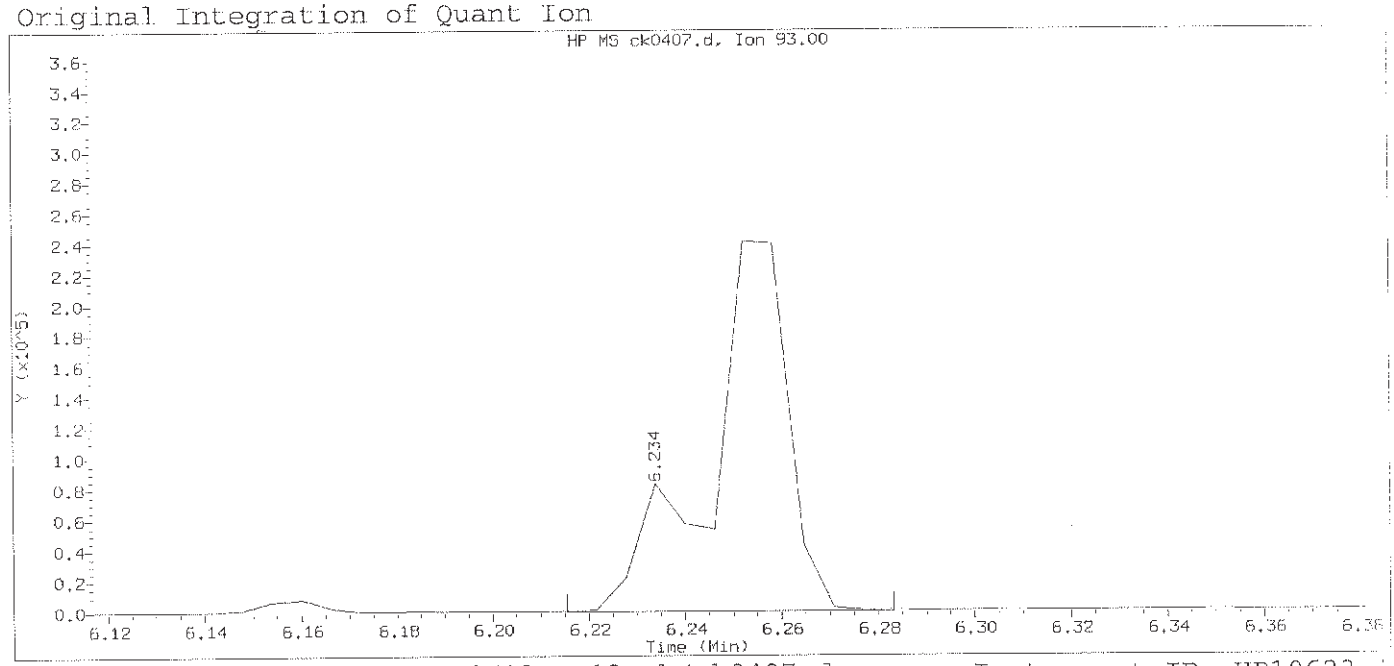
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 274471		
On-column Amount (ng/ul)	: 16.6778		
Integration start scan	: 704	Integration stop scan:	715
Y at integration start	: 0	Y at integration end:	0

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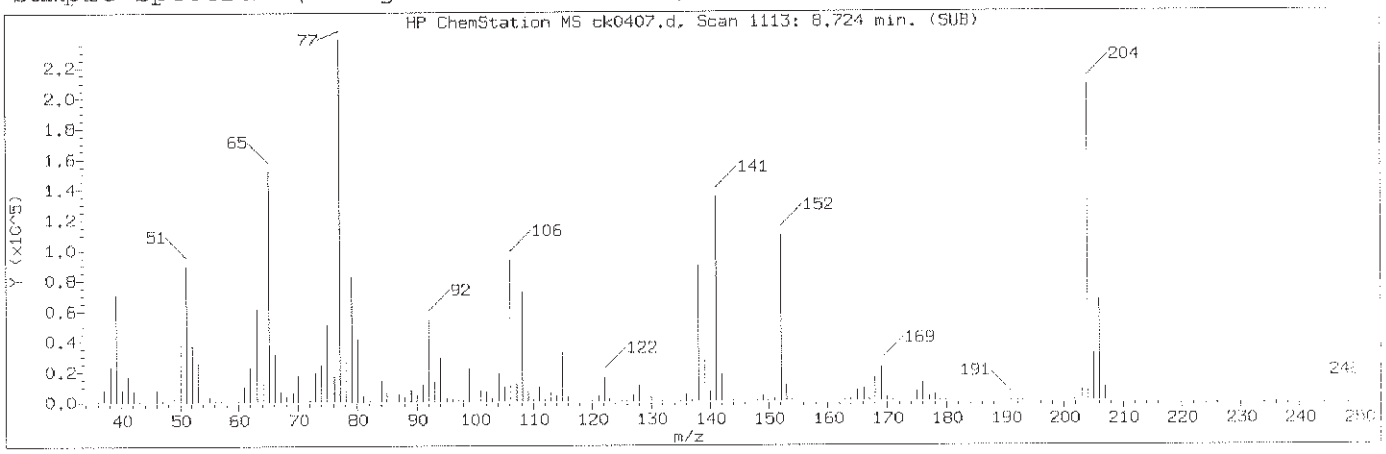
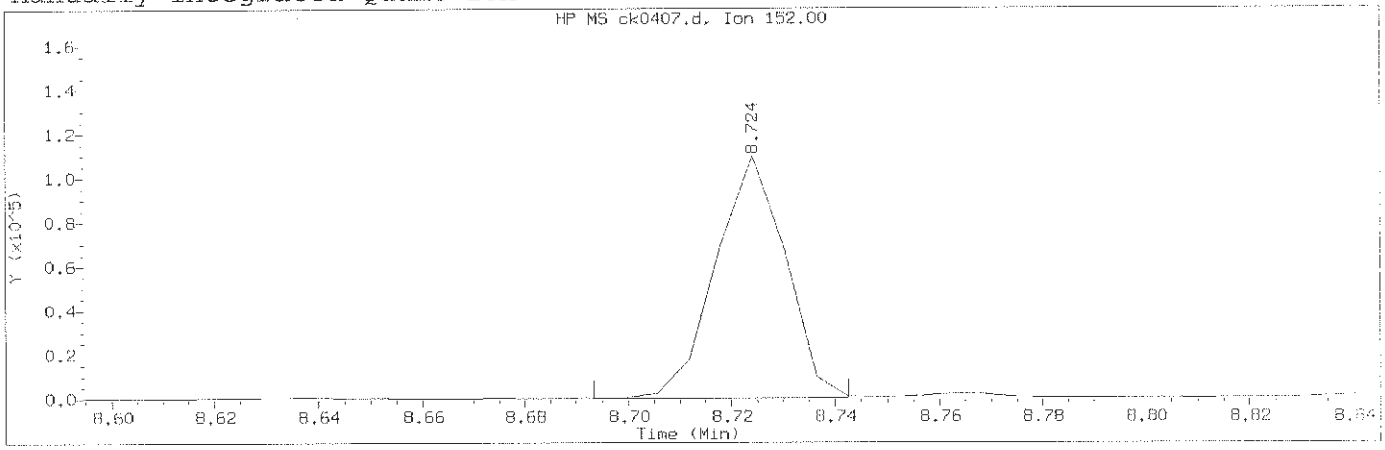
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number : 113
Compound Name : 5-Nitro-o-toluidine
Scan Number : 1113
Retention Time (minutes) : 8.724
Quant Ion : 152.00
Area (flag) : 102444M
On-Column Amount (ng/ul) : 14.3073
Integration start scan : 1107 Integration stop scan: 1115
Y at integration start : 0 Y at integration end: 0

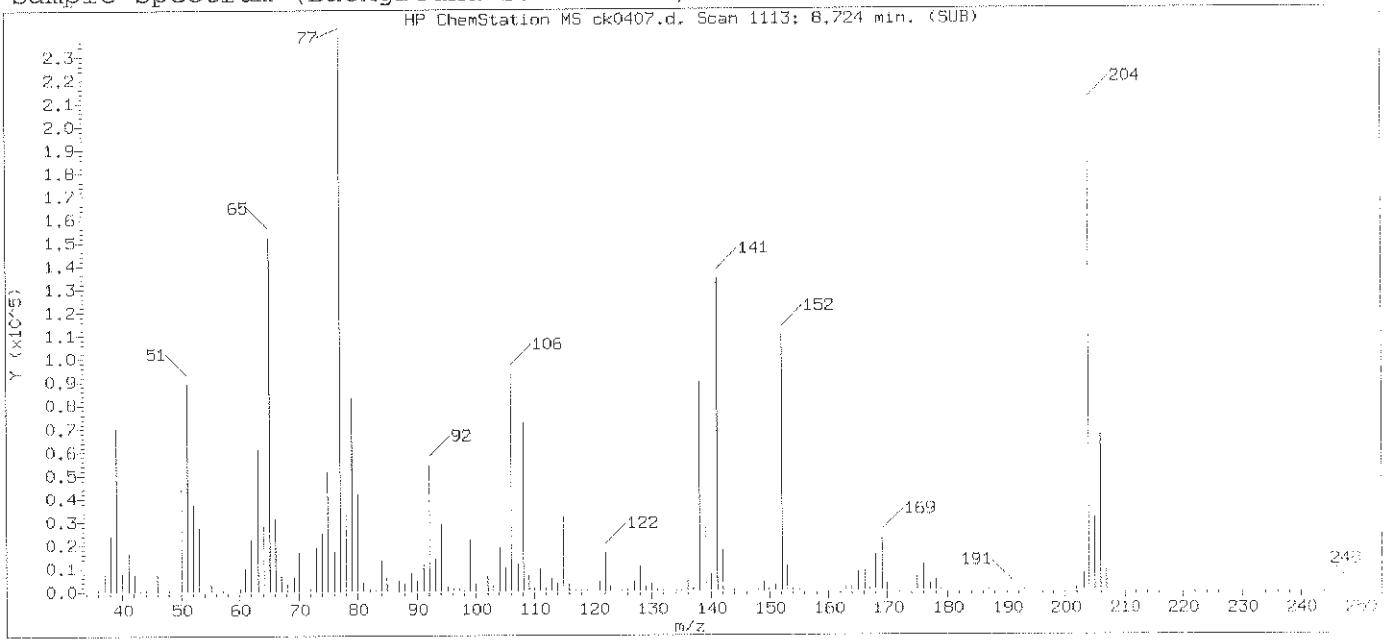
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

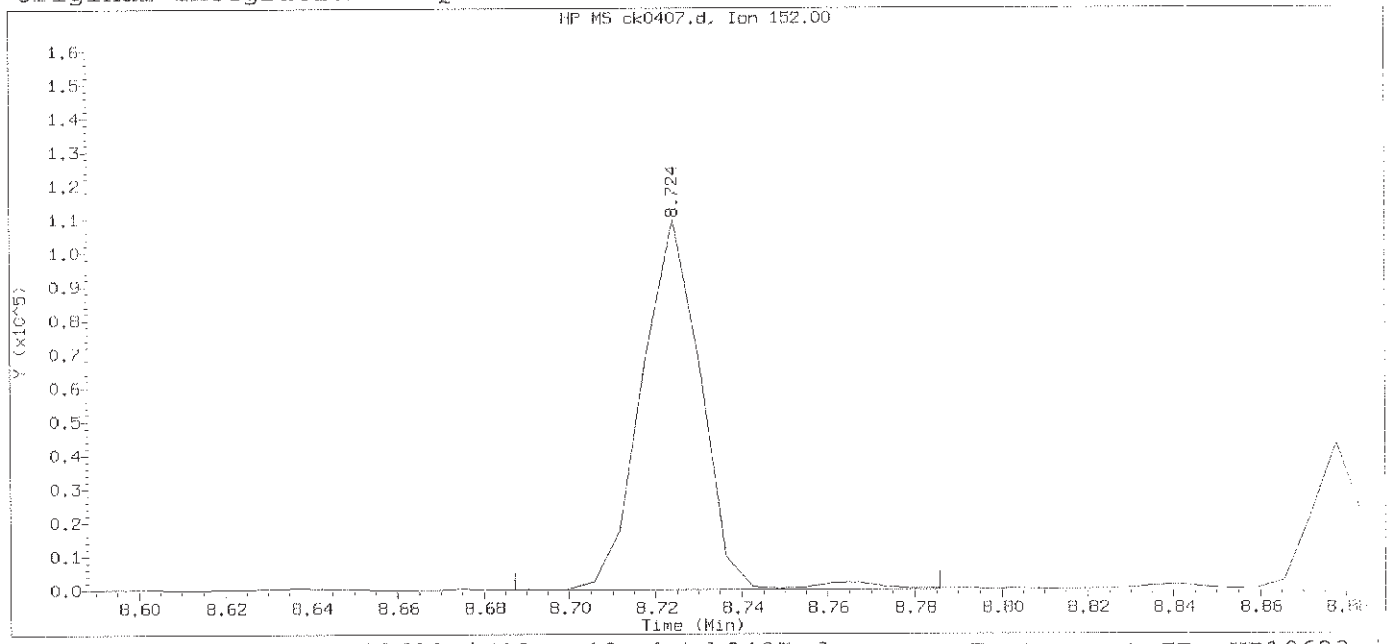
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1113		
Retention Time (minutes)	: 8.724		
Quant Ion	: 152.00		
Area	: 104834		
On-column Amount (ng/ul)	: 14.2198		
Integration start scan	: 1106	Integration stop scan:	1122
Y at integration start	: 0	Y at integration end:	0

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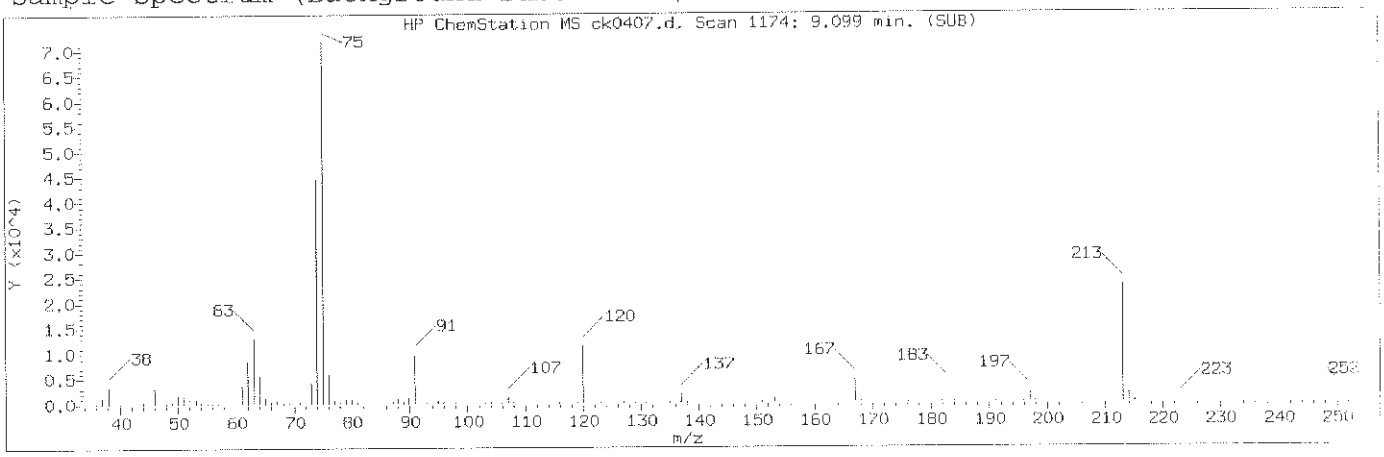
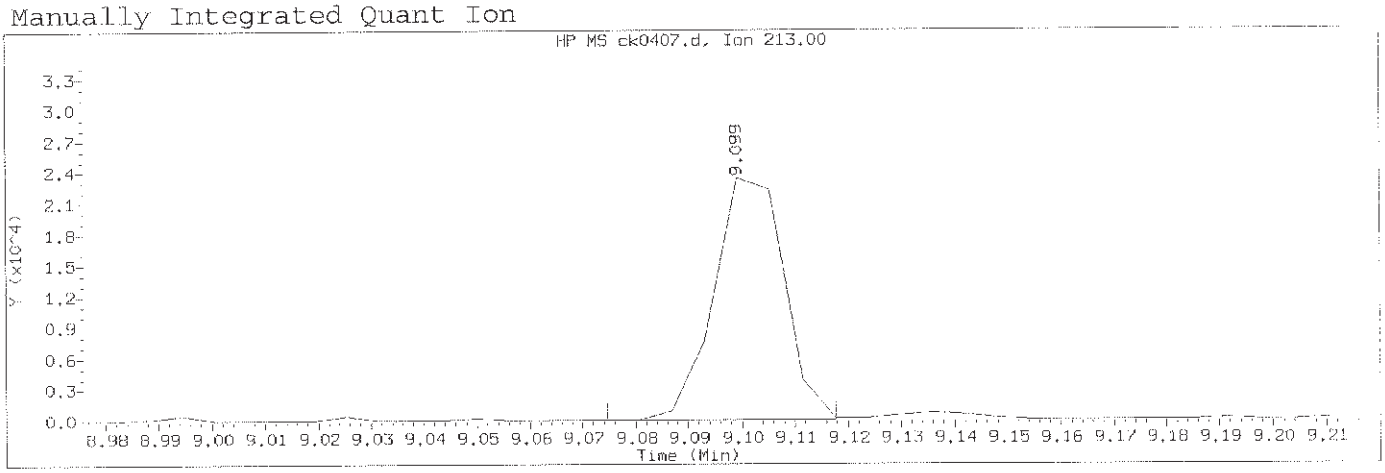
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

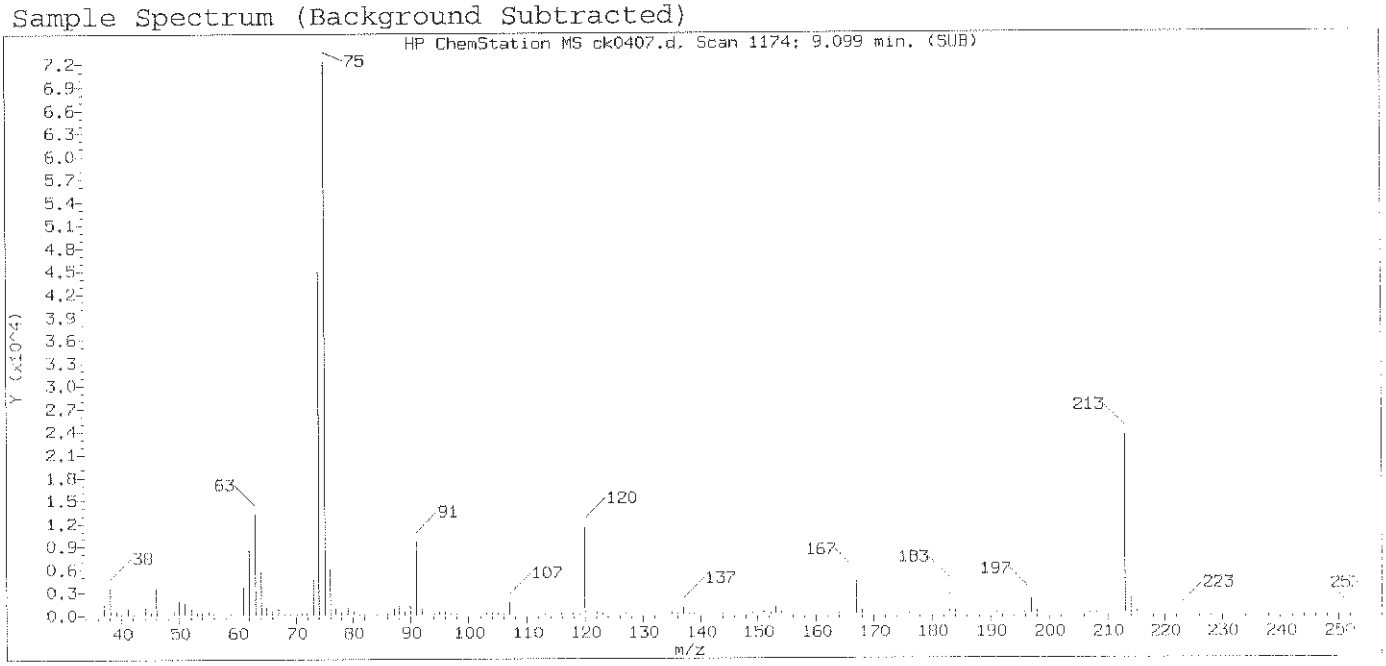
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area (flag)	: 21439M		
On-Column Amount (ng/ul)	: 12.1414		
Integration start scan	: 1169	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

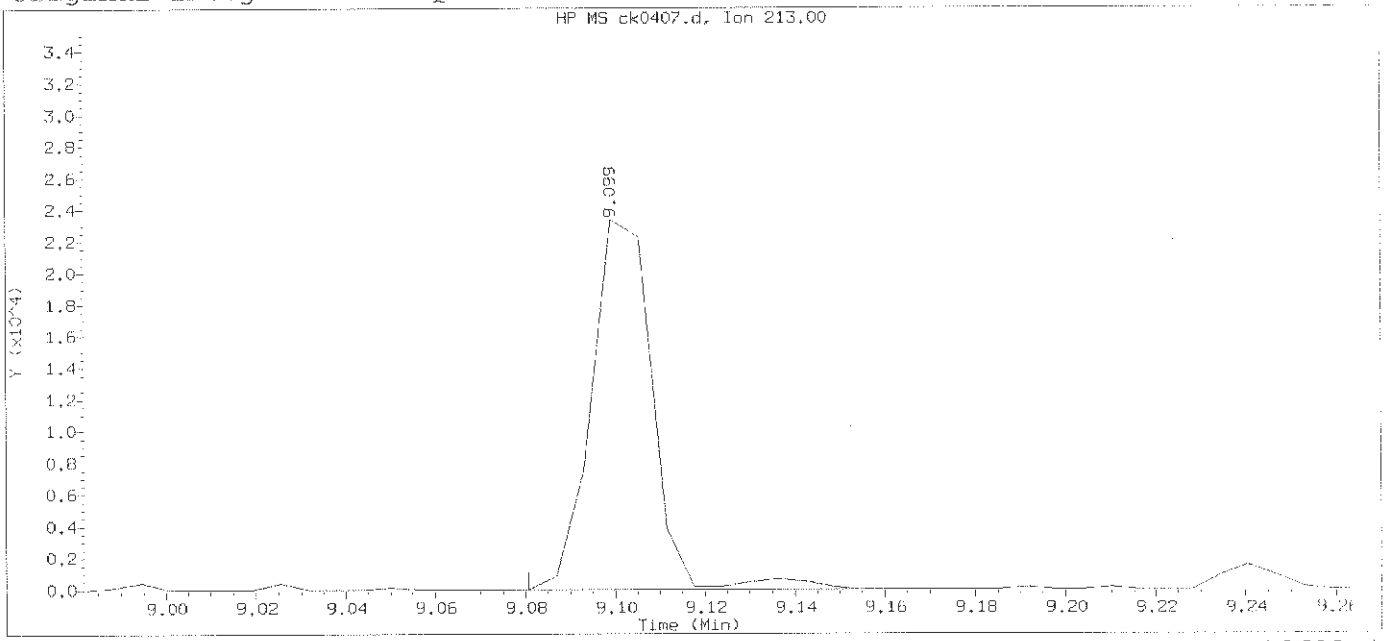
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area	: 22164		
On-column Amount (ng/ul)	: 11.4486		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

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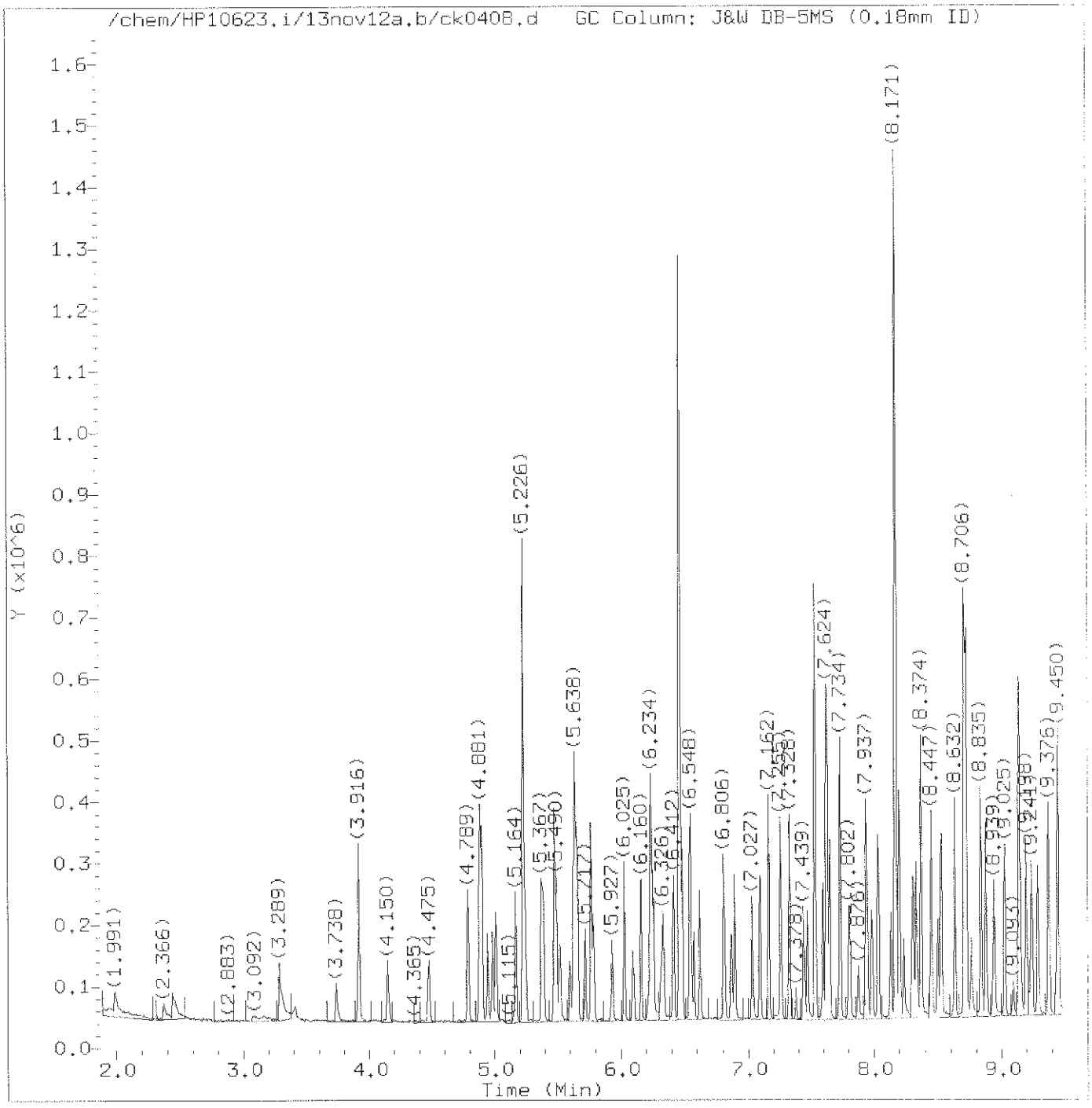
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

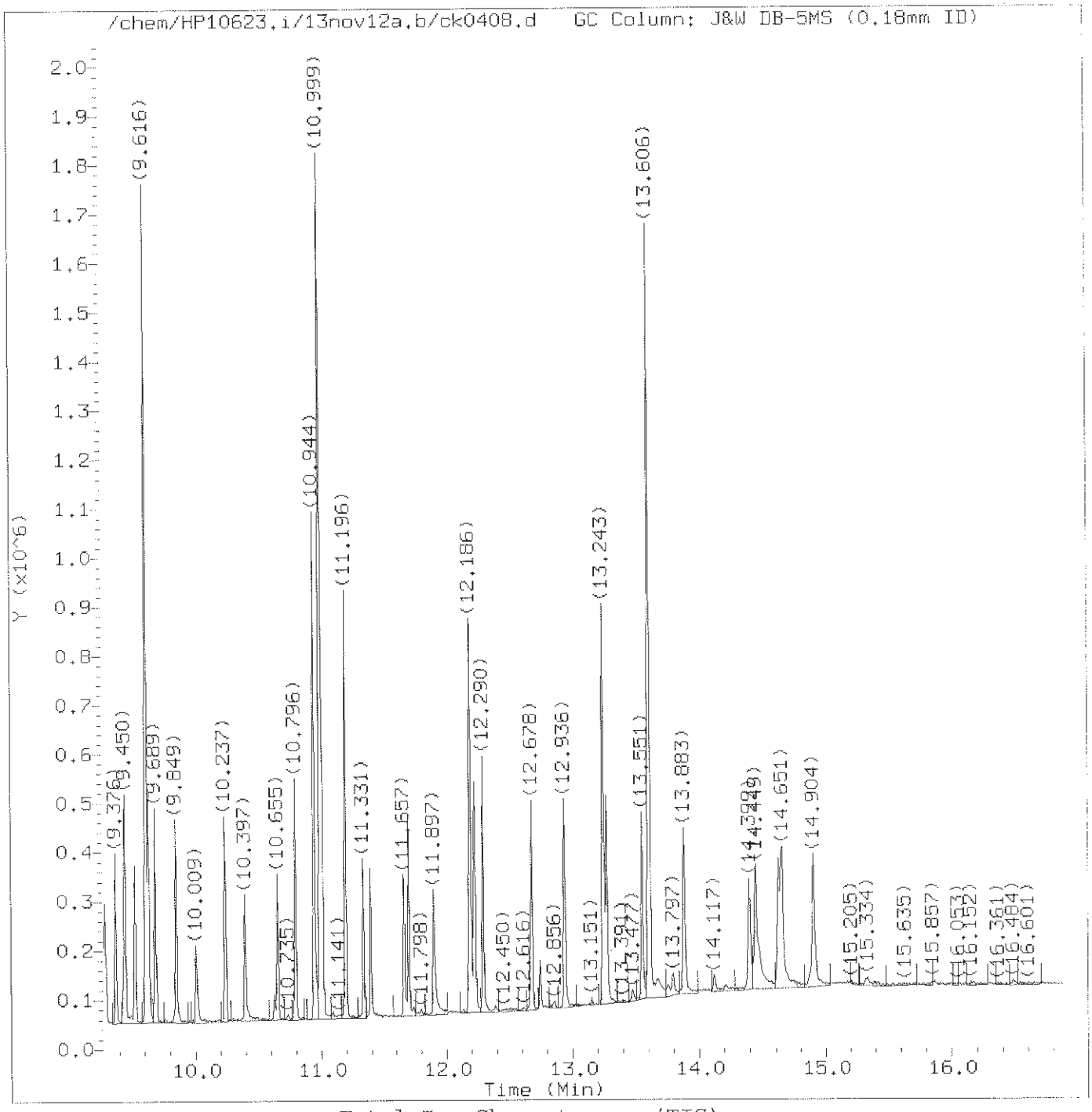
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	17313M	5.021
2) N-Nitrosodimethylamine	(1)	2.366	74	30798M	4.824
3) Pyridine	(1)	2.440	79	46666M	4.715
5) 2-Picoline	(1)	3.289	93	46917M	4.646
6) N-Nitrosomethylethylamine	(1)	3.412	88	25211	5.222
7) Methyl methanesulfonate	(1)	3.738	80	22891	4.715
9)$2-Fluorophenol	(1)	3.916	112	77161	4.892
10) N-Nitrosodiethylamine	(1)	4.150	102	21422	4.466
11) Ethyl methanesulfonate	(1)	4.475	109	22287	5.102
12) Benzaldehyde	(1)	4.789	77	42492	6.548
14)$Phenol-d5	(1)	4.881	99	106780	4.600
15)$Phenol-d6	(1)	4.881	99	106780	4.600
16) Phenol	(1)	4.894	94	59944	4.427
13) Aniline	(1)	4.900	93	74895	4.664
18) bis(2-Chloroethyl)ether	(1)	4.980	93	47075	4.897
19) 2-Chlorophenol	(1)	5.010	128	39928	4.727
20) 1,3-Dichlorobenzene	(1)	5.164	146	41802	4.904
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	105420	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	42503	4.886
24) Benzyl alcohol	(1)	5.367	108	33418	5.060
25) 1,2-Dichlorobenzene	(1)	5.385	146	38965	4.772
206) Indene	(1)	5.472	115	94629	5.188
26) 2-Methylphenol	(1)	5.490	108	42005	4.674
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	56333	4.762
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	56333	4.750
29) N-Nitrosopyrrolidine	(1)	5.594	100	24231	4.505
30) Acetophenone	(1)	5.619	105	69973	5.223
32) N-Nitrosomorpholine	(1)	5.638	56	28904	4.730
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	38266	4.462
33) 4-Methylphenol	(1)	5.644	108	48938	4.601
34) o-Toluidine	(1)	5.656	106	71509	4.659
37) Hexachloroethane	(1)	5.717	117	16768	5.065
38)$Nitrobenzene-d5	(2)	5.761	82	94228	4.514
39) Nitrobenzene	(2)	5.779	77	50315	4.545
40) N-Nitrosopiperidine	(2)	5.927	114	22811	4.645
41) Isophorone	(2)	6.025	82	91749	4.564
42) 2-Nitrophenol	(2)	6.093	139	16269	4.228
44) 2,4-Dimethylphenol	(2)	6.160	107	45682	4.618
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	20664	5.010
47) Benzoic acid	(2)	6.240	105	77016	12.013

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	58319A	4.775
49) 2,4-Dichlorophenol	(2)	6.332	162	31829	4.732
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	34984	4.937
52)*Naphthalene-d8	(2)	6.461	136	484406	20.000
53) Naphthalene	(2)	6.480	128	123417	4.802
56) 4-Chloroaniline	(2)	6.541	127	54123	4.832
57) 2,6-Dichlorophenol	(2)	6.548	162	30127	4.755
58) Hexachloropropene	(2)	6.578	213	18732	4.675
60) Hexachlorobutadiene	(2)	6.621	225	18159	5.110
194) Quinoline	(2)	6.806	129	87960	4.965
63) Caprolactam	(2)	6.867	113	19896	5.339
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	36945	4.061
68) 4-Chloro-3-methylphenol	(2)	7.027	107	40317	4.688
69) Safrole	(2)	7.095	162	32592	4.787
70) 2-Methylnaphthalene	(2)	7.162	142	88393	4.846
71) 1-Methylnaphthalene	(2)	7.255	142	80497	4.823
72) Hexachlorocyclopentadiene	(3)	7.328	237	13538	4.425
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	35253	4.980
74) cis-Isosafrole	(3)	7.378	162	6270	0.552
75) 2,4,6-Trichlorophenol	(3)	7.439	196	21626	4.682
77) 2,4,5-Trichlorophenol	(3)	7.470	196	22522	4.472
78)$2-Fluorobiphenyl	(3)	7.531	172	182995	4.903
79) trans-Isosafrole	(3)	7.599	162	34826	4.328
80) Isosafrole	(3)	7.599	162	34826	4.863
83) 1,1'-Biphenyl	(3)	7.624	154	121870	5.300
84) 2-Chloronaphthalene	(3)	7.630	162	79553	4.750
85) 1-Chloronaphthalene	(3)	7.654	162	77693	4.713
88) Diphenyl ether	(3)	7.734	170	56812	4.960
89) 2-Nitroaniline	(3)	7.734	138	23149	4.236
90) 1,4-Naphthoquinone	(3)	7.808	158	31942	4.532
91) 1,4-Dinitrobenzene	(3)	7.876	168	7702	3.626
92) Dimethylphthalate	(3)	7.937	163	99107	4.973
93) 1,3-Dinitrobenzene	(3)	7.943	168	10380	3.597
94) 2,6-Dinitrotoluene	(3)	7.980	165	17386	4.188
95) Acenaphthylene	(3)	8.029	152	122862	4.698
97) 3-Nitroaniline	(3)	8.134	138	22434	4.426
98)*Acenaphthene-d10	(3)	8.171	164	296800	20.000
99) Acenaphthene	(3)	8.202	153	86320	4.770
100) 2,4-Dinitrophenol	(3)	8.238	184	13772	10.214
103) 4-Nitrophenol	(3)	8.306	109	27450	8.741

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	31339	5.123
105) 2,4-Dinitrotoluene	(3)	8.368	165	20905	3.897
104) Dibenzofuran	(3)	8.374	168	120366	4.855
106) 1-Naphthylamine	(3)	8.447	143	94870	4.657
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	16075	4.531
108) 2-Naphthylamine	(3)	8.527	143	96695	4.639
109) Diethylphthalate	(3)	8.632	149	101468	4.929
110) Thionazin	(3)	8.706	107	21030M	4.632
111) Fluorene	(3)	8.706	166	102097	4.787
113) 5-Nitro-o-toluidine	(3)	8.718	152	23780	4.222
114) 4-Nitroaniline	(3)	8.724	138	24361	4.274
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	47537	5.010
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	15173	7.178
202) NDPA as diphenylamine	(4)	8.841	169	87965	4.781
117) N-Nitrosodiphenylamine	(4)	8.841	169	87965	4.792
118) 1,2-Diphenylhydrazine	(4)	8.878	77	117833	4.481
119)$2,4,6-Tribromophenol	(3)	8.939	330	17293	4.824
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	17344	4.628
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	3982	2.861
122) Diallate (peak 1)	(4)	9.136	86	46921	3.487
123) Phorate	(4)	9.142	75	68496	4.228
124) Phenacetin	(4)	9.148	108	56146	4.426
125) 4-Bromophenyl-phenylether	(4)	9.198	248	25635	5.068
126) Diallate (peak 2)	(4)	9.222	86	7575	1.296
127) Hexachlorobenzene	(4)	9.241	284	24595	4.925
128) Dimethoate	(4)	9.290	87	43793	4.420
130) Atrazine	(4)	9.376	200	31458	5.349
131) Pentachlorophenol	(4)	9.437	266	11754M	4.244
132) Pentachloronitrobenzene	(4)	9.450	237	9540	4.401
133) 4-Aminobiphenyl	(4)	9.450	169	98332	4.954
134) Pronamide	(4)	9.530	173	43979	4.596
135)*Phenanthrene-d10	(4)	9.616	188	547696	20.000
136) Dinoseb	(4)	9.634	211	7839M	2.745
137) Phenanthrene	(4)	9.640	178	153342	4.815
138) Anthracene	(4)	9.689	178	153942	4.696
140) Carbazole	(4)	9.849	167	153179	4.789
141) Methyl parathion	(4)	10.009	109	19323	3.255
142) Di-n-butylphthalate	(4)	10.237	149	179816	4.764
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	5501	2.549
143) Parathion	(4)	10.397	109	15274	3.497

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d
Injection date and time: 12-NOV-2013 12:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:11
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	17055	4.739
147) Fluoranthene	(4)	10.796	202	171379	4.813
152) Benzidine	(5)	10.944	184	413305	14.850
167)*Pyrene-d10	(5)	10.999	212	679864	20.000
154) Pyrene	(5)	11.011	202	179871	4.764
156)$Terphenyl-d14	(5)	11.196	244	239522	4.928
158) p-Dimethylaminoazobenzene	(5)	11.337	225	33651	4.574
159) Chlorobenzilate	(5)	11.393	139	50704	4.430
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	110813	4.762
161) Butylbenzylphthalate	(5)	11.694	149	84862	4.710
162) 2-Acetylaminofluorene	(5)	11.897	181	64736	3.967
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	63493	4.836
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	28485	4.442
166) Benzo(a)anthracene	(5)	12.192	228	164309	4.718
168) Chrysene	(5)	12.223	228	165805	4.938
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	117619	4.705
189) 6-Methylchrysene	(5)	12.678	242	119363	4.818
170) Di-n-octylphthalate	(6)	12.936	149	191440	4.222
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	76981	4.516
172) Benzo(b)fluoranthene	(6)	13.243	252	165832	4.521
173) Benzo(k)fluoranthene	(6)	13.268	252	185097	4.946
174) Benzo(a)pyrene	(6)	13.551	252	160113M	4.472
175)*Perylene-d12	(6)	13.606	264	600759	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	84791	4.725
190) Dibenz(a,h)acridine	(6)	14.399	279	114899	4.417
191) Dibenz(a,j)acridine	(6)	14.449	279	149262	4.990
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	186027	4.884
178) Dibenz(a,h)anthracene	(6)	14.651	278	154487	4.848
179) Benzo(g,h,i)perylene	(6)	14.904	276	161117	4.965
129) Diallate TRANS/CIS	(4)			54496	4.717

M = Compound was manually integrated.
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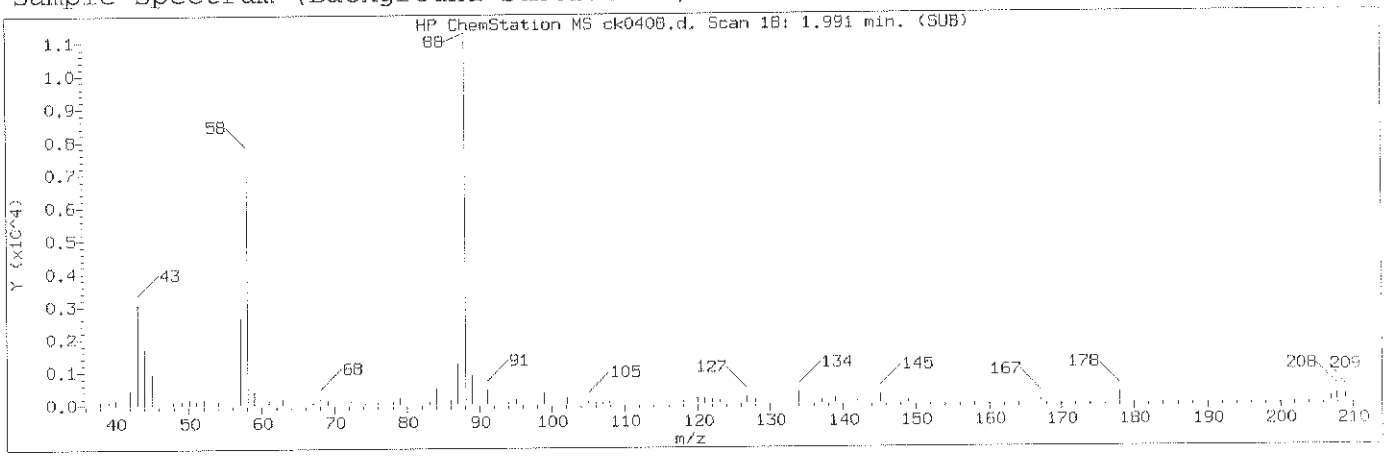
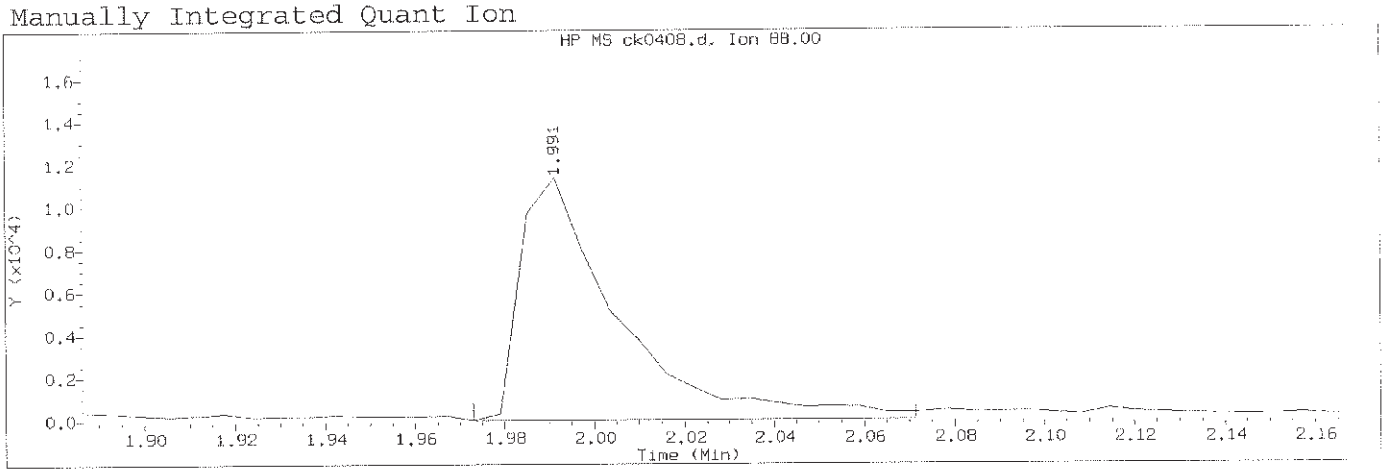
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area (flag)	: 17313M		
On-Column Amount (ng/ul)	: 5.0208		
Integration start scan	: 14	Integration stop scan:	30
Y at integration start	: 0	Y at integration end:	0

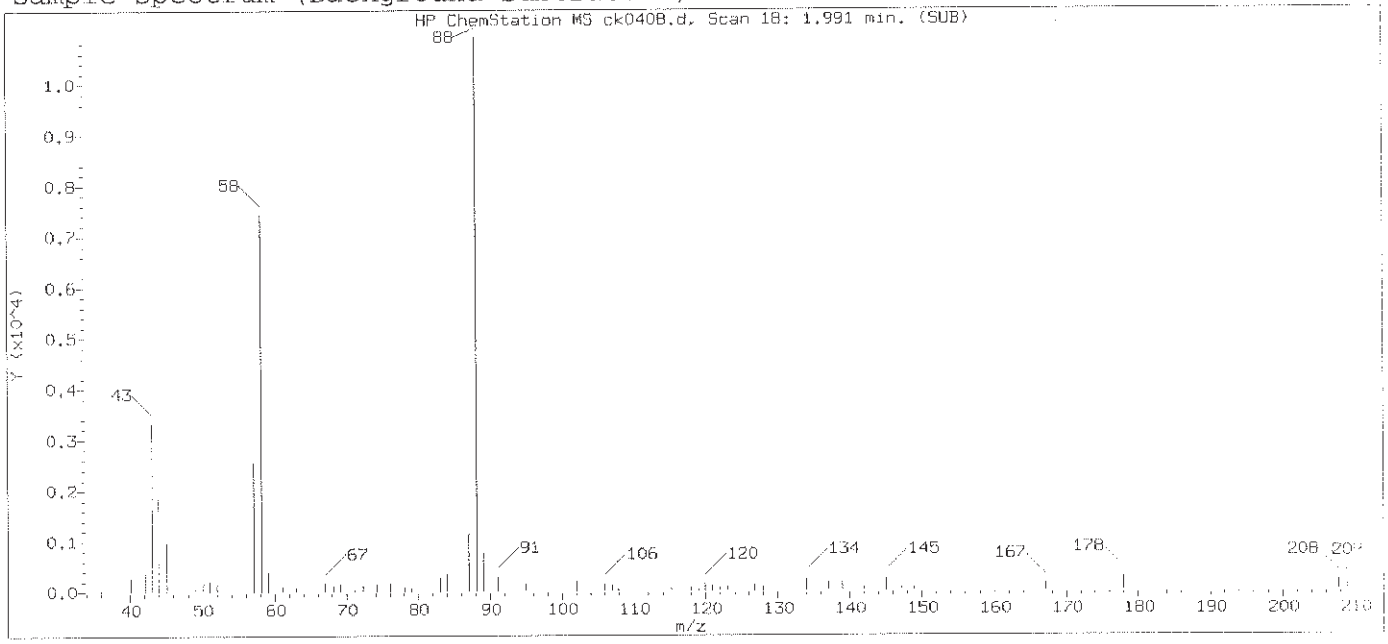
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

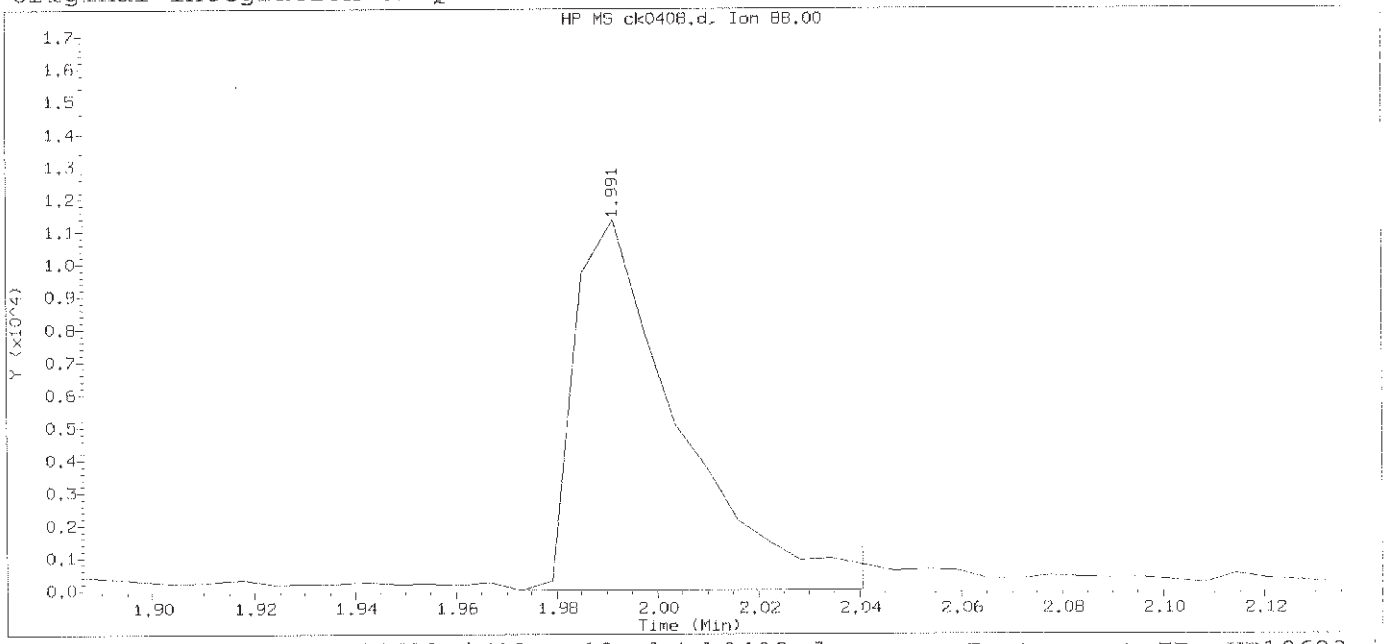
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area	: 16256		
On-column Amount (ng/ul)	: 4.7631		
Integration start scan	: 14	Integration stop scan:	25
Y at integration start	: 0	Y at integration end:	0

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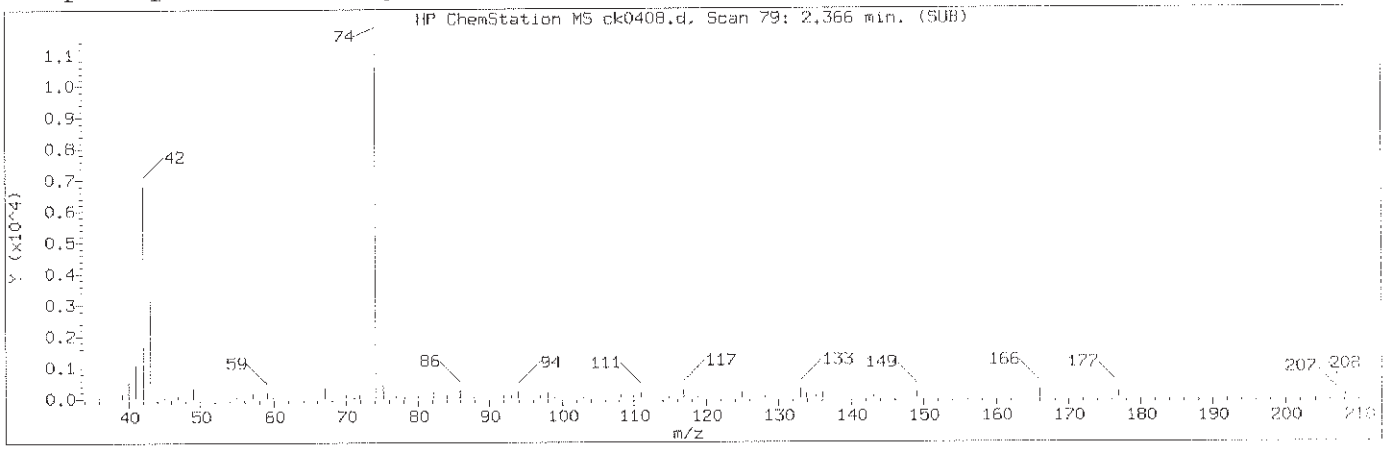
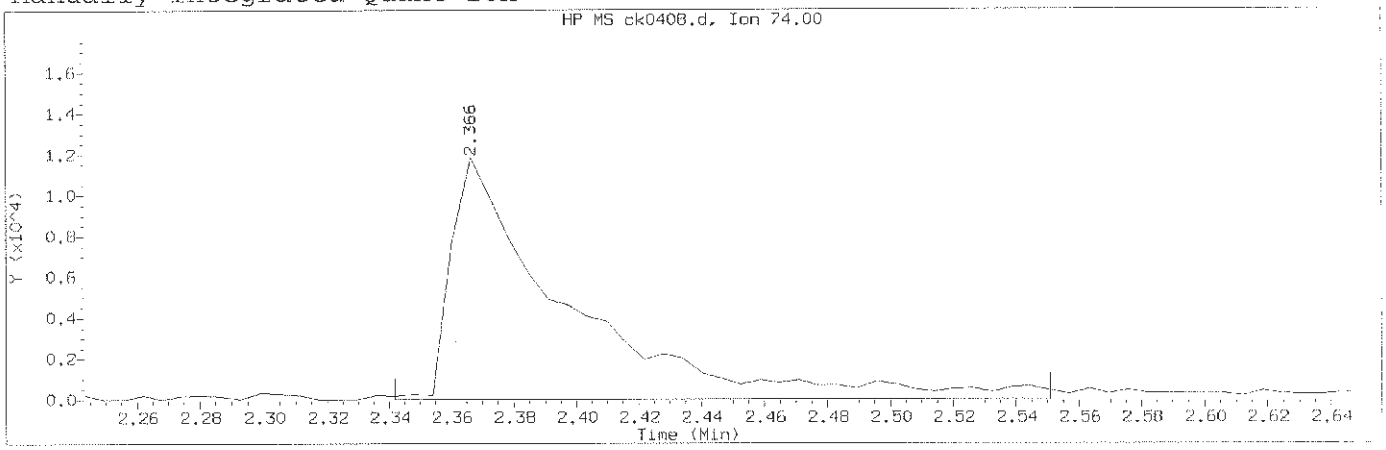
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

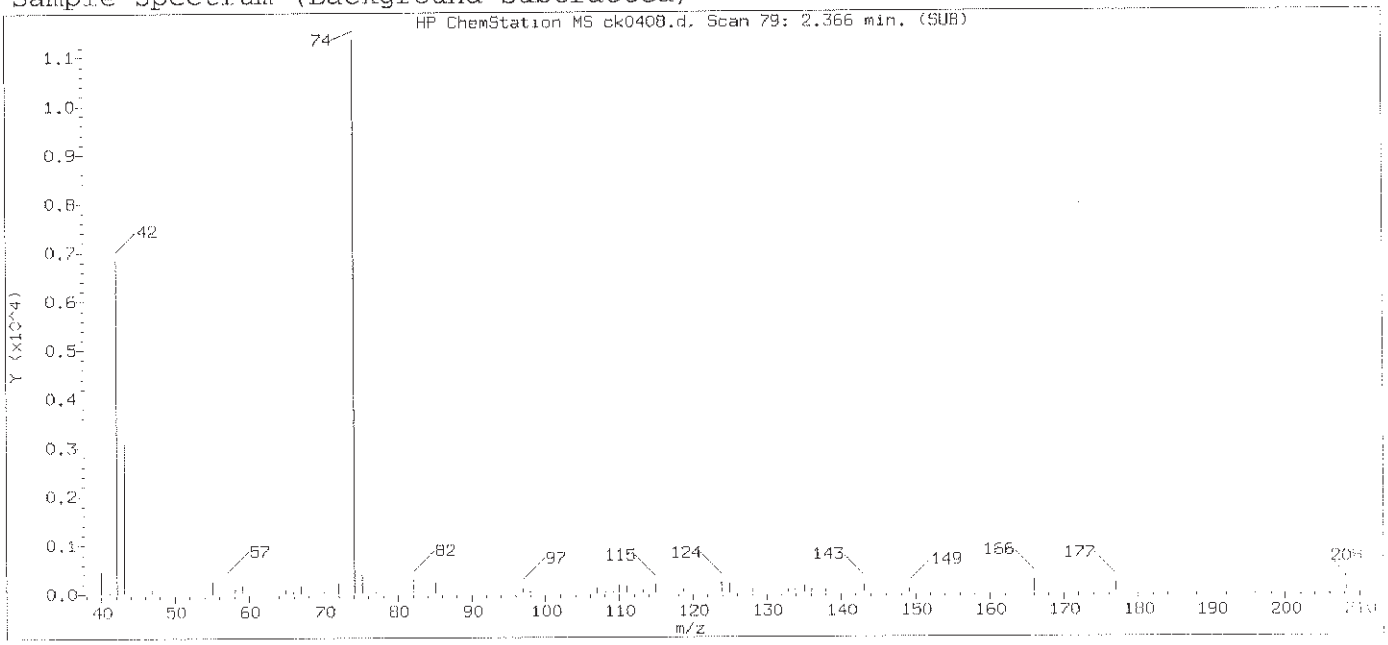
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area (flag)	: 30798M		
On-Column Amount (ng/ul)	: 4.8243		
Integration start scan	: 74	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

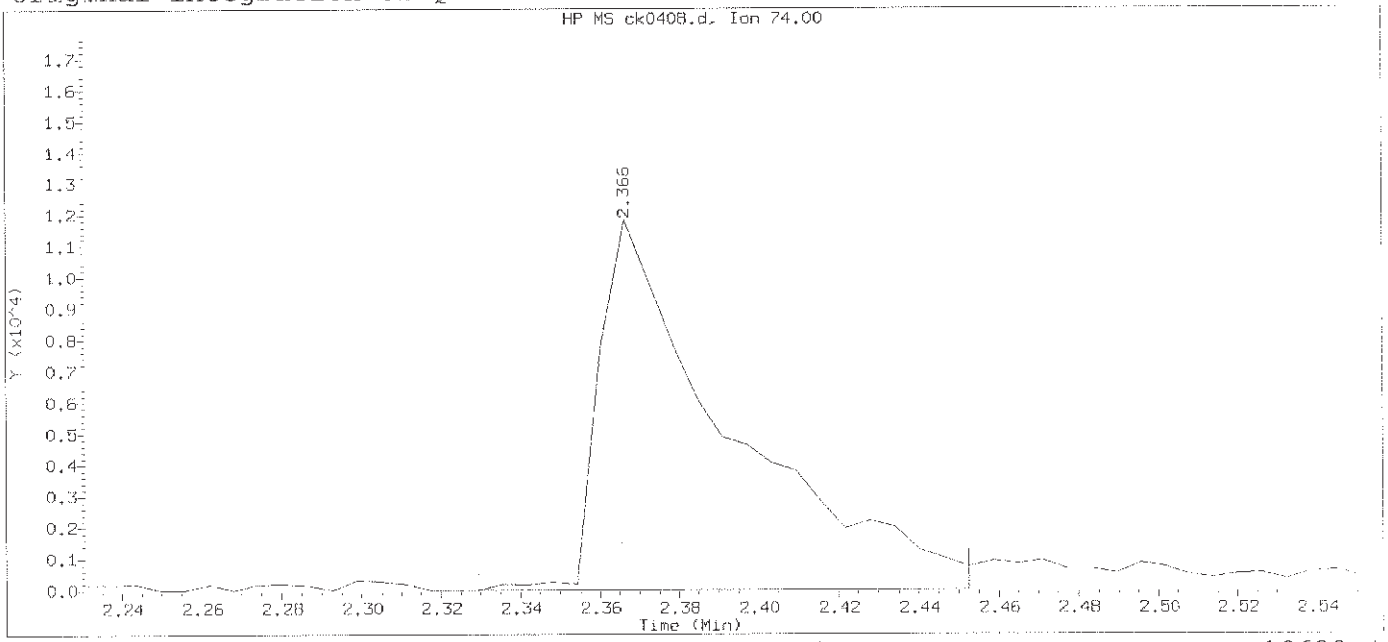
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area	: 27002		
On-column Amount (ng/ul)	: 4.3153		
Integration start scan	: 72	Integration stop scan:	92
Y at integration start	: 0	Y at integration end:	0

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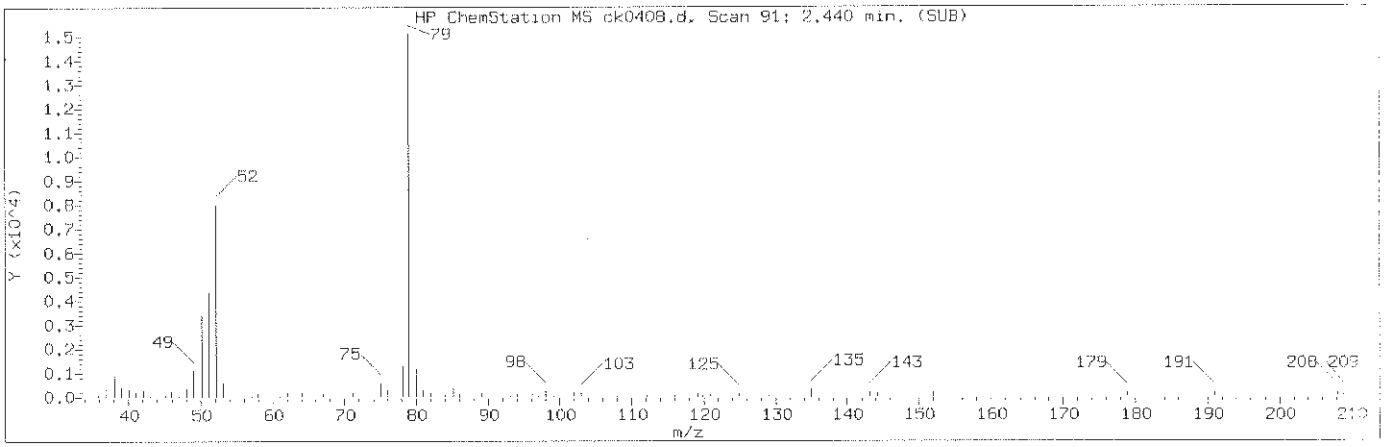
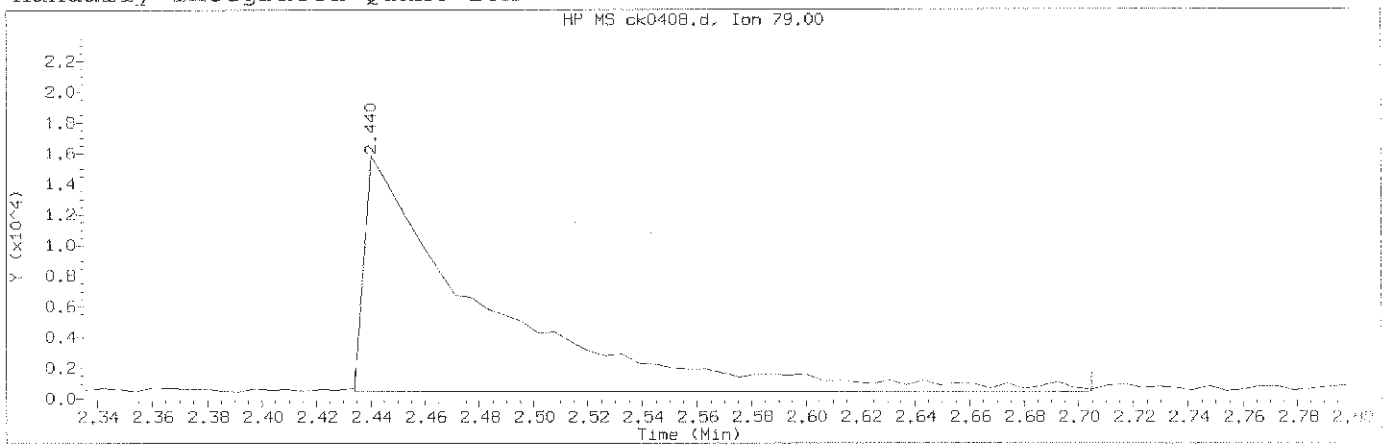
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area (flag)	: 46666M		
On-Column Amount (ng/ul)	: 4.7151		
Integration start scan	: 89	Integration stop scan:	133
Y at integration start	: 470	Y at integration end:	470

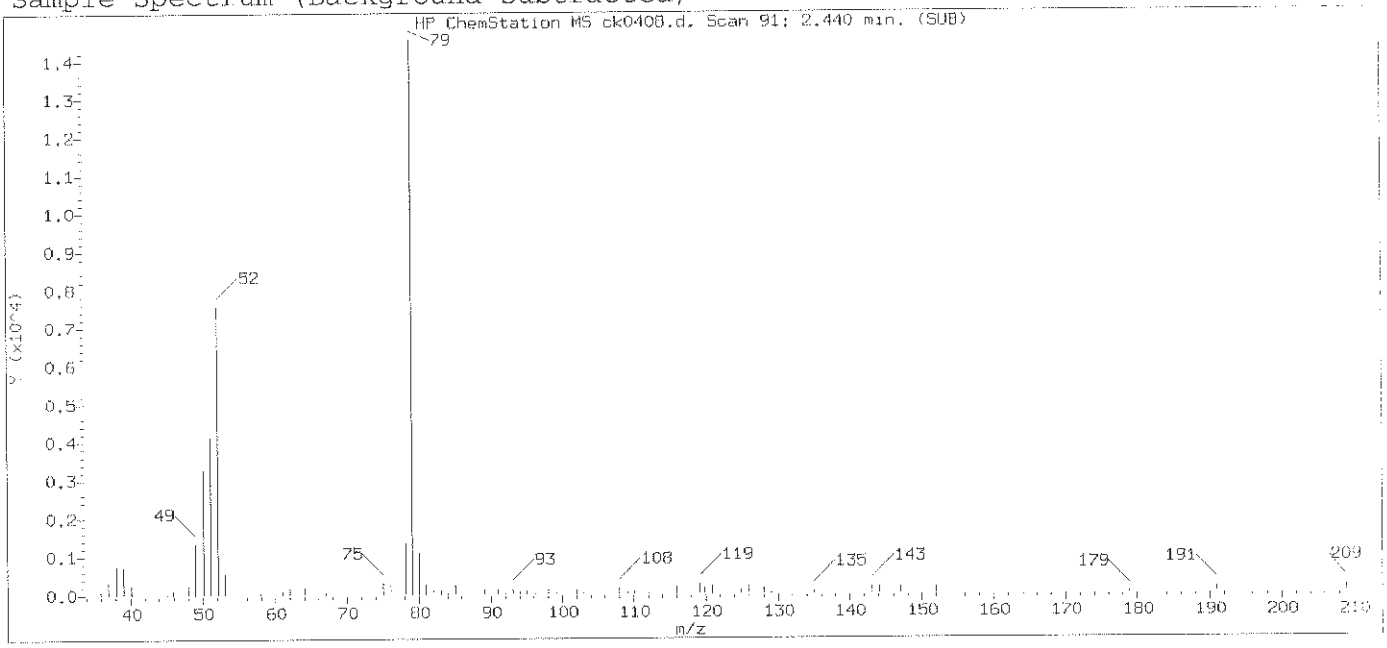
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

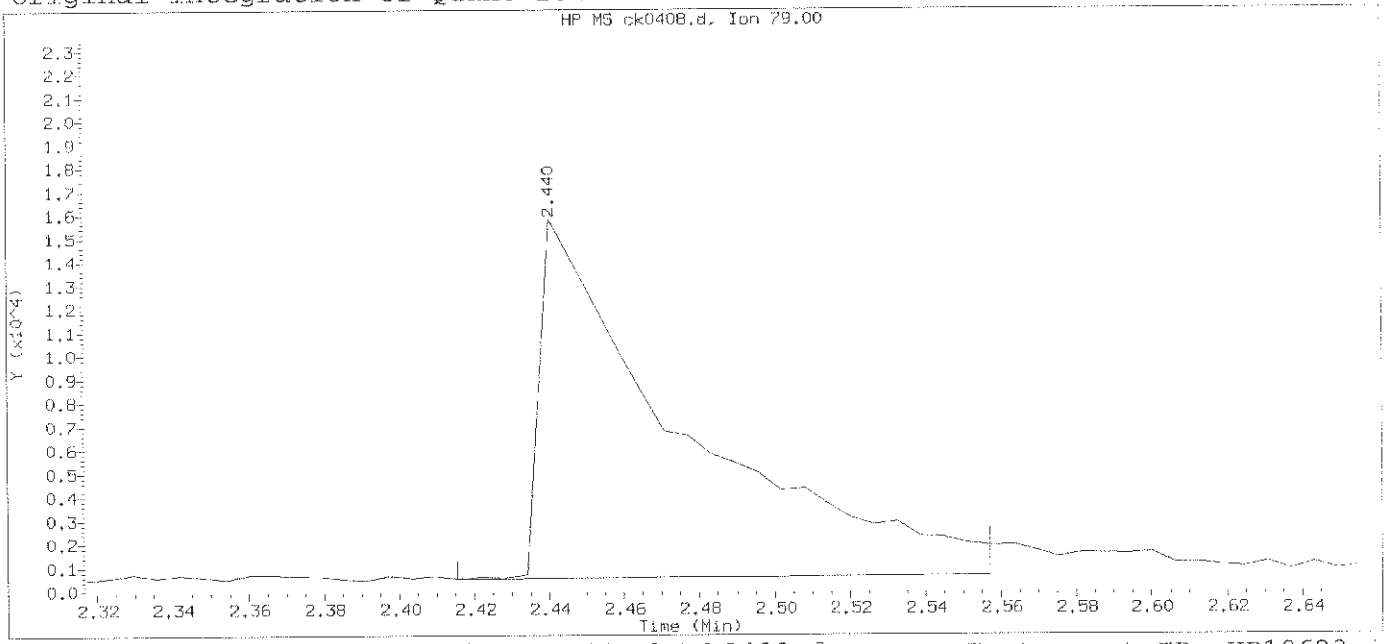
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

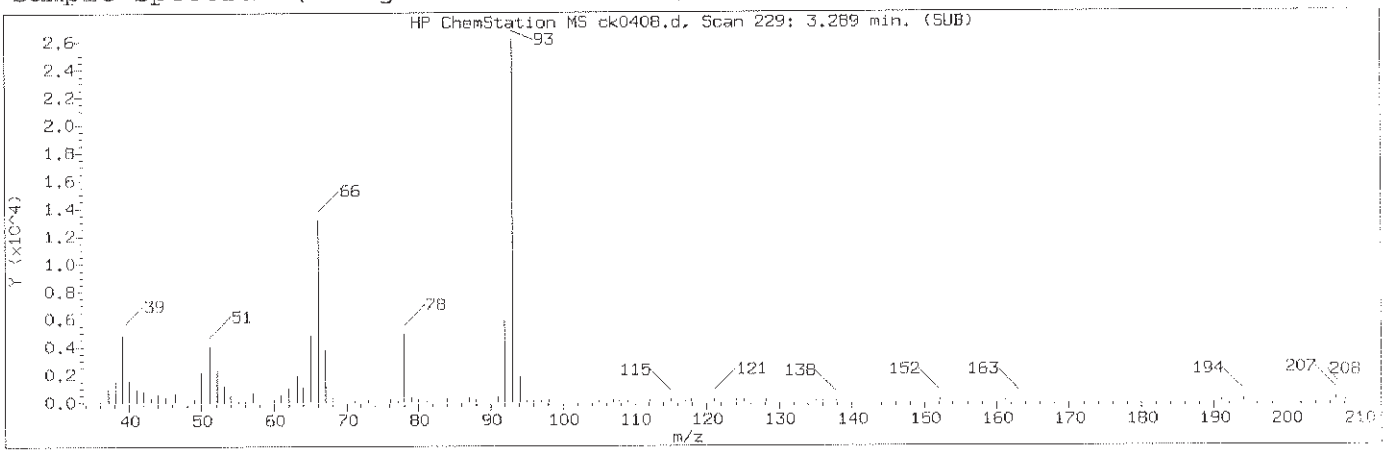
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

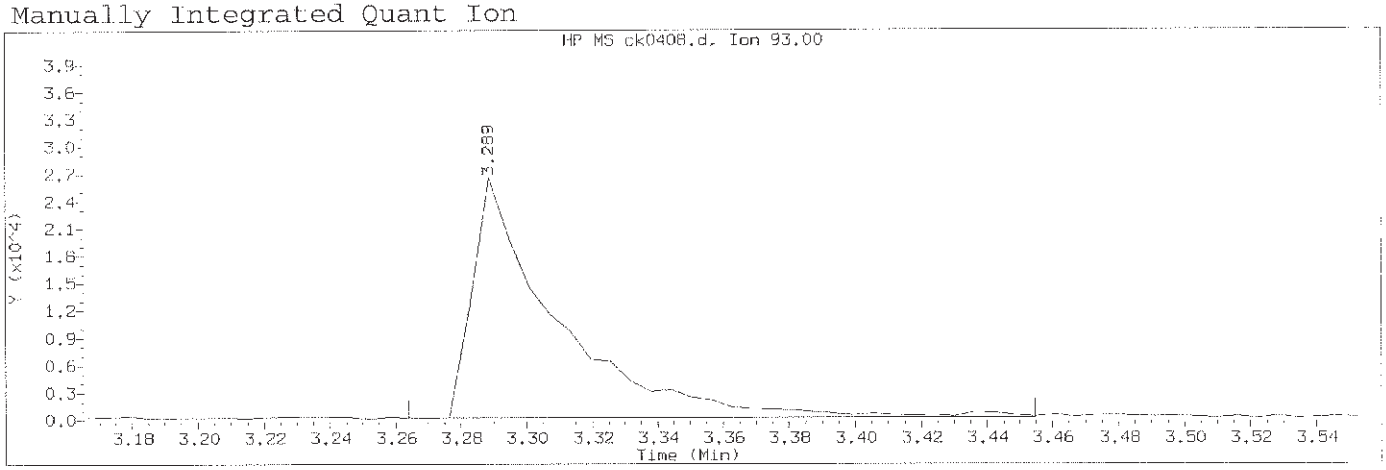
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area	: 39804		
On-column Amount (ng/ul)	: 4.1169		
Integration start scan	: 86	Integration stop scan:	109
Y at integration start	: 509	Y at integration end:	615

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area (flag)	: 46917M		
On-Column Amount (ng/ul)	: 4.6455		
Integration start scan	: 224	Integration stop scan:	255
Y at integration start	: 257	Y at integration end:	257

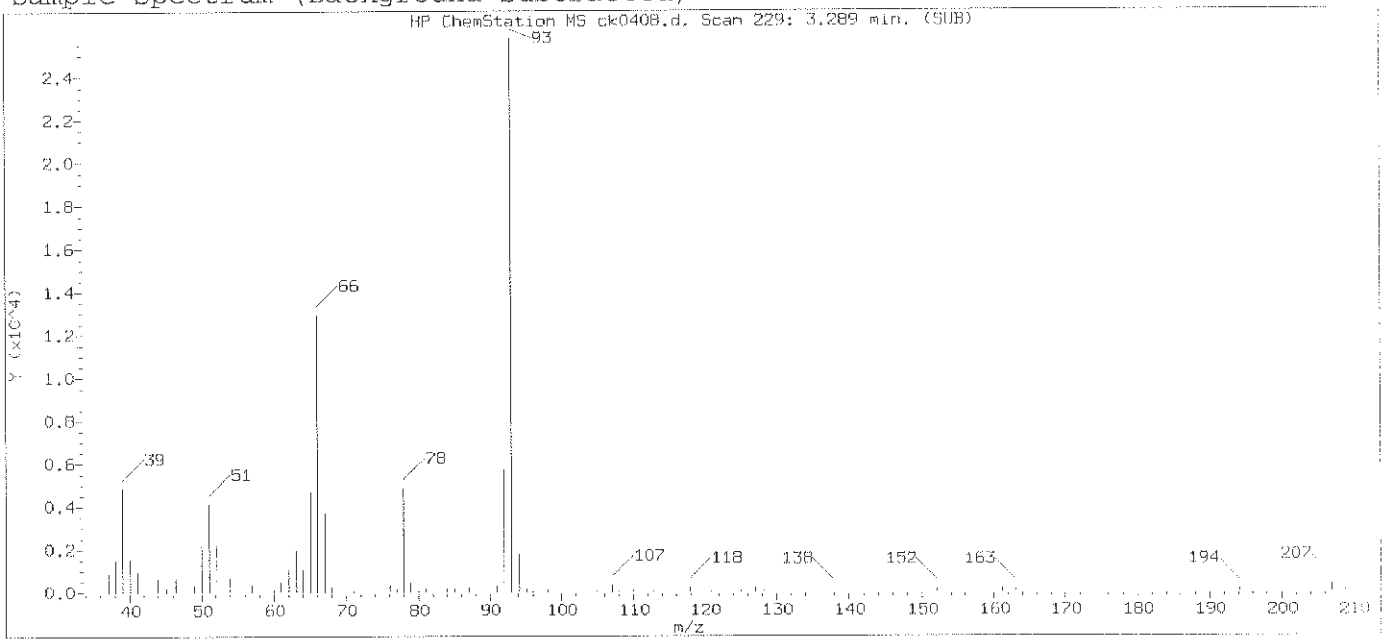
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

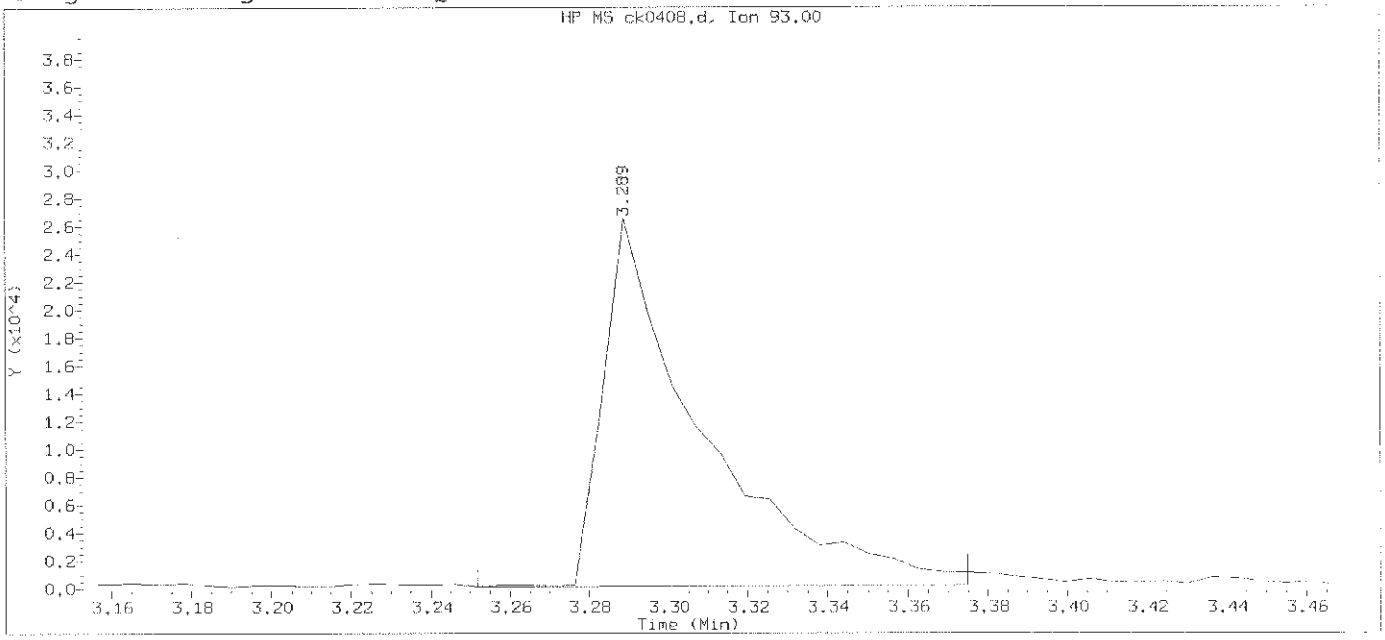
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

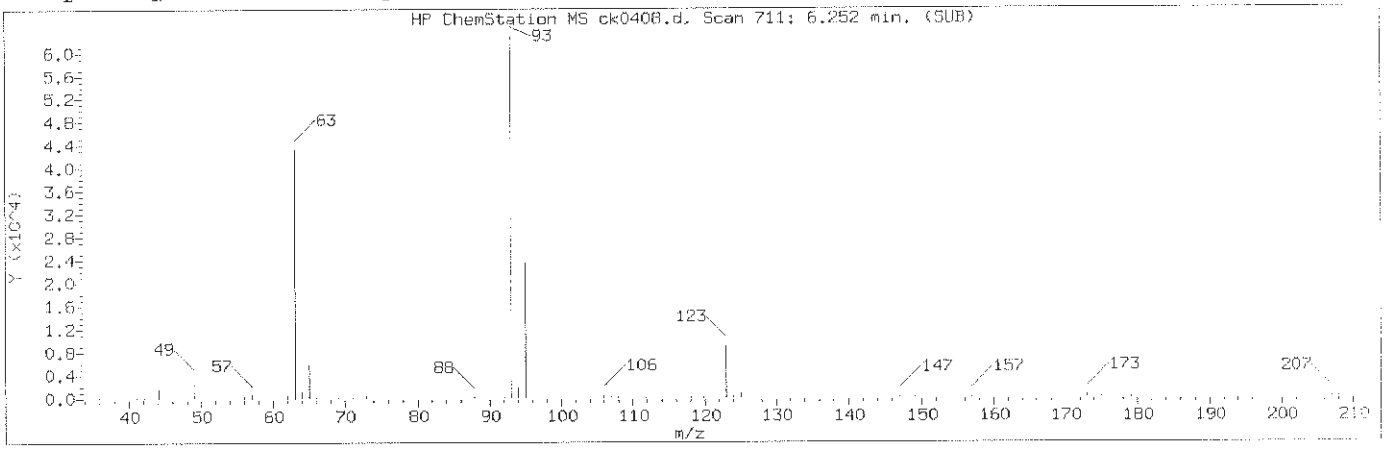
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

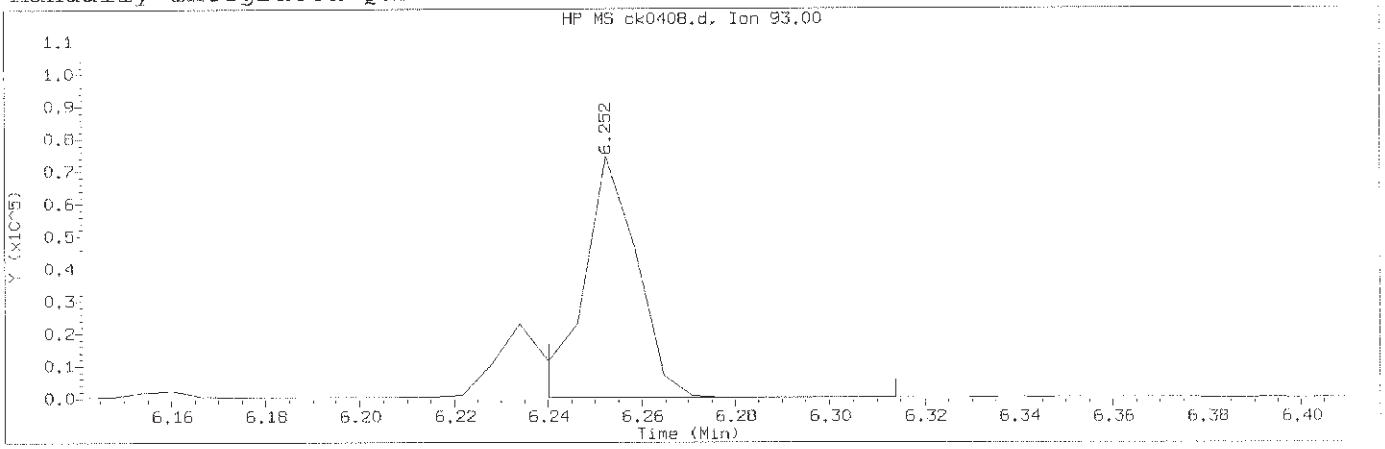
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area	: 45357		
On-column Amount (ng/ul)	: 4.5144		
Integration start scan	: 222	Integration stop scan:	242
Y at integration start	: 158	Y at integration end:	242

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 58319A		
On-Column Amount (ng/ul)	: 4.7749		
Integration start scan	: 708	Integration stop scan:	720
Y at integration start	: 168	Y at integration end:	168

Reason for manual integration: improper integration

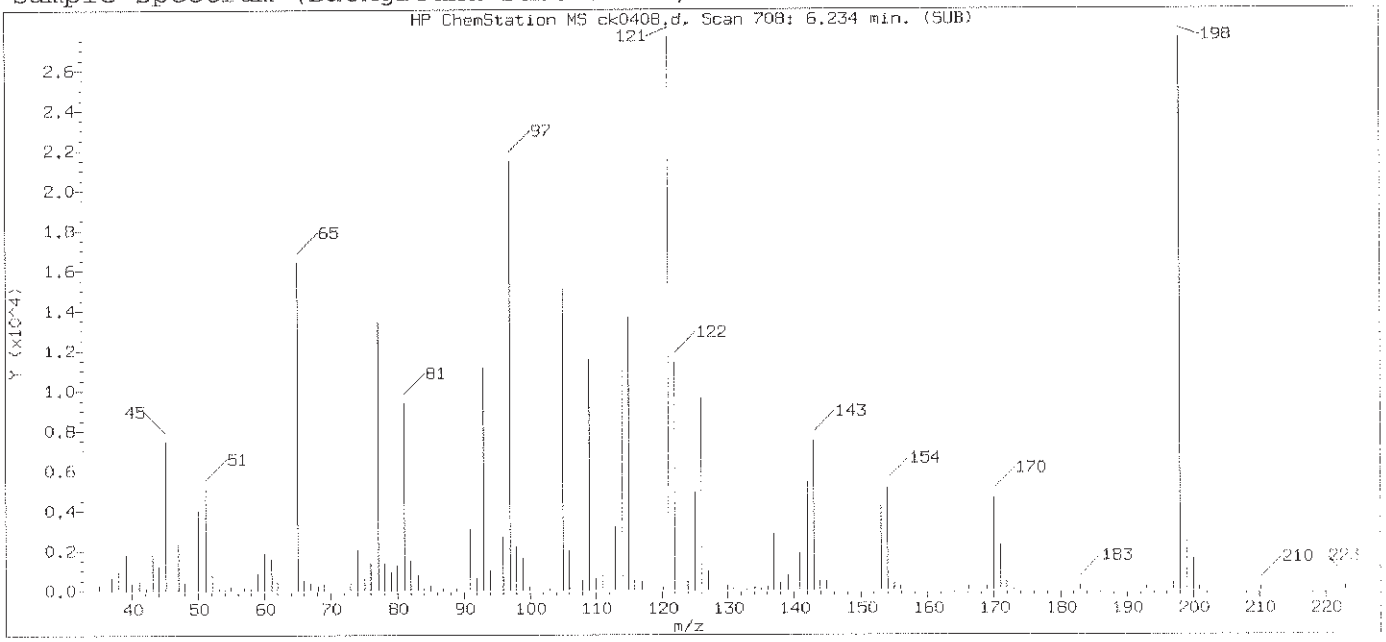
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3 Signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

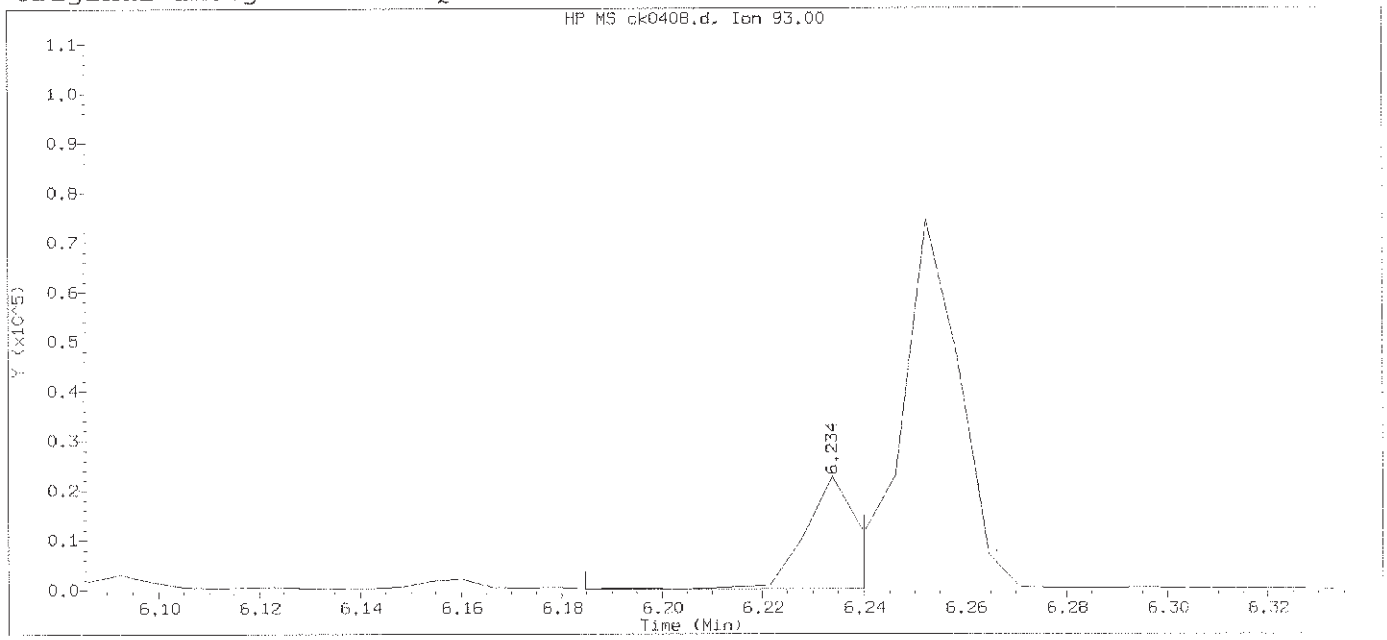
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

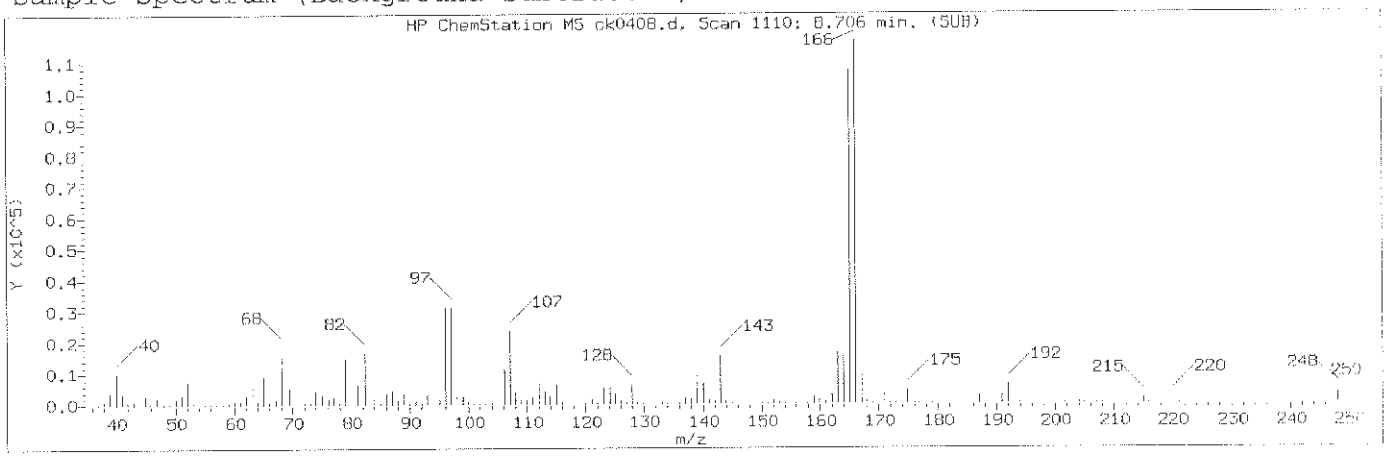
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

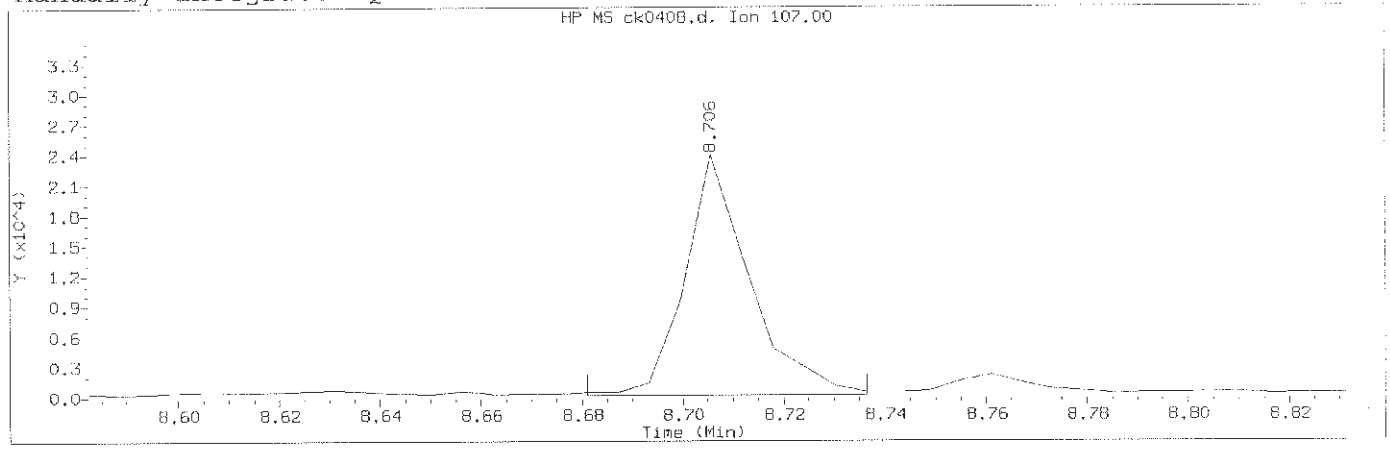
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 14835		
On-column Amount (ng/ul)	: 1.2624		
Integration start scan	: 699	Integration stop scan:	708
Y at integration start	: 168	Y at integration end:	168

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area (flag)	: 21030M		
On-Column Amount (ng/ul)	: 4.6316		
Integration start scan	: 1105	Integration stop scan:	1114
Y at integration start	: 198	Y at integration end:	198

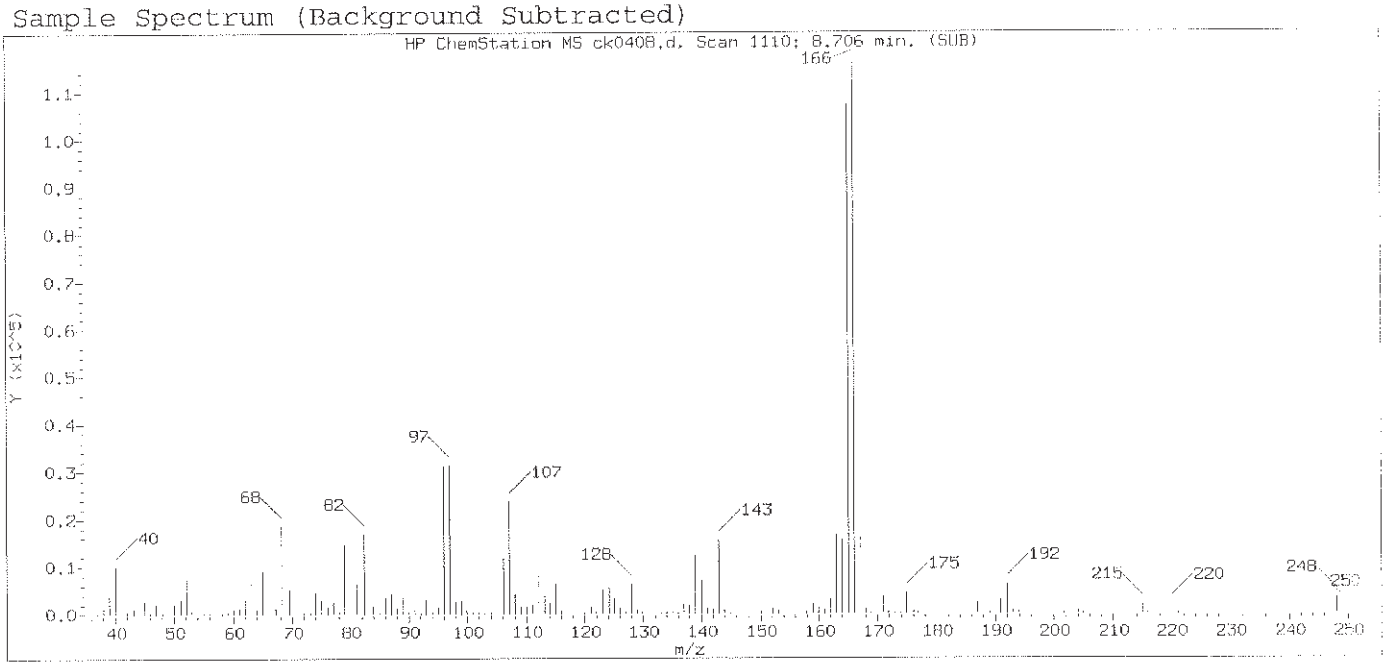
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

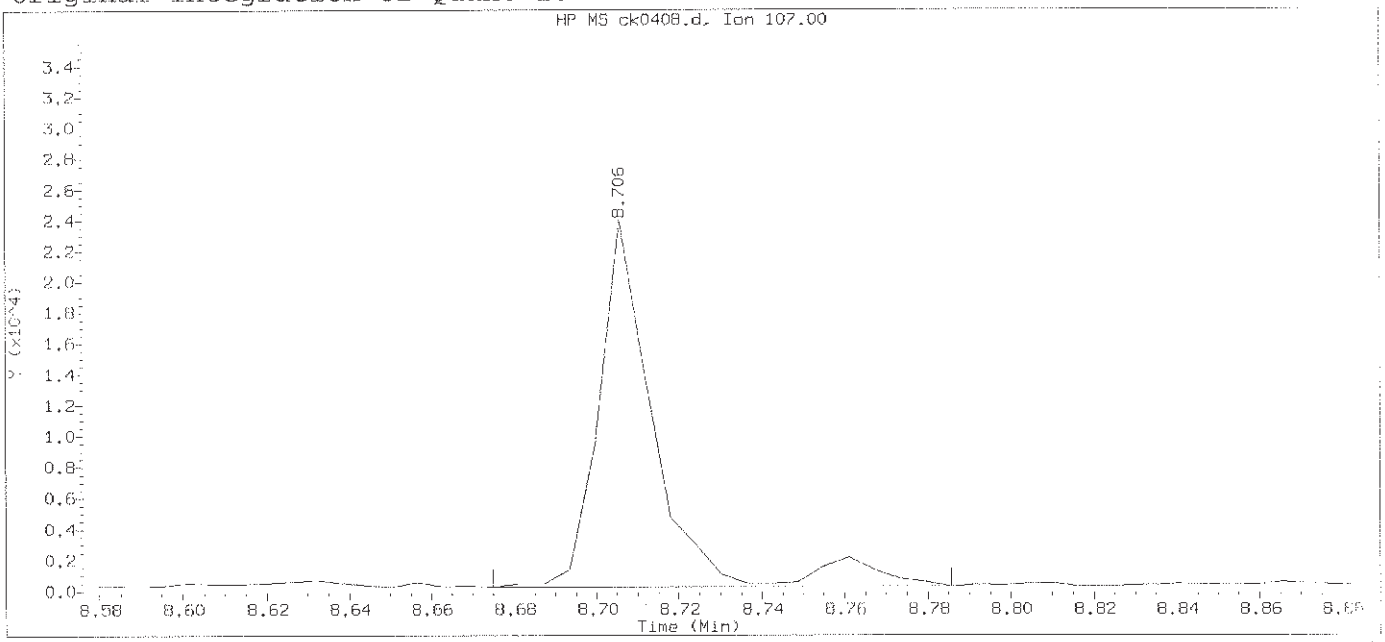
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

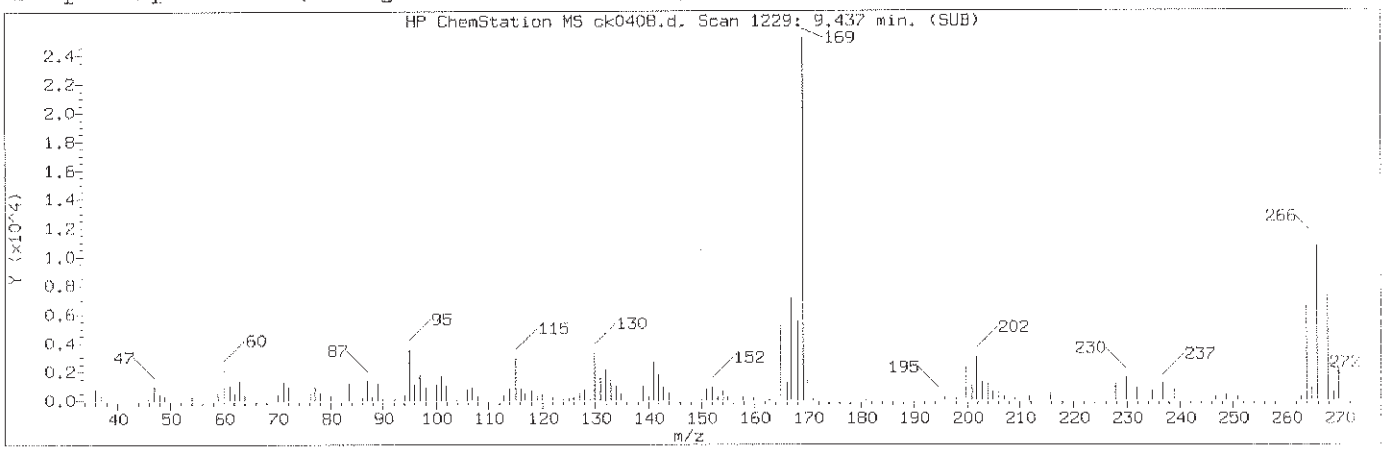
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

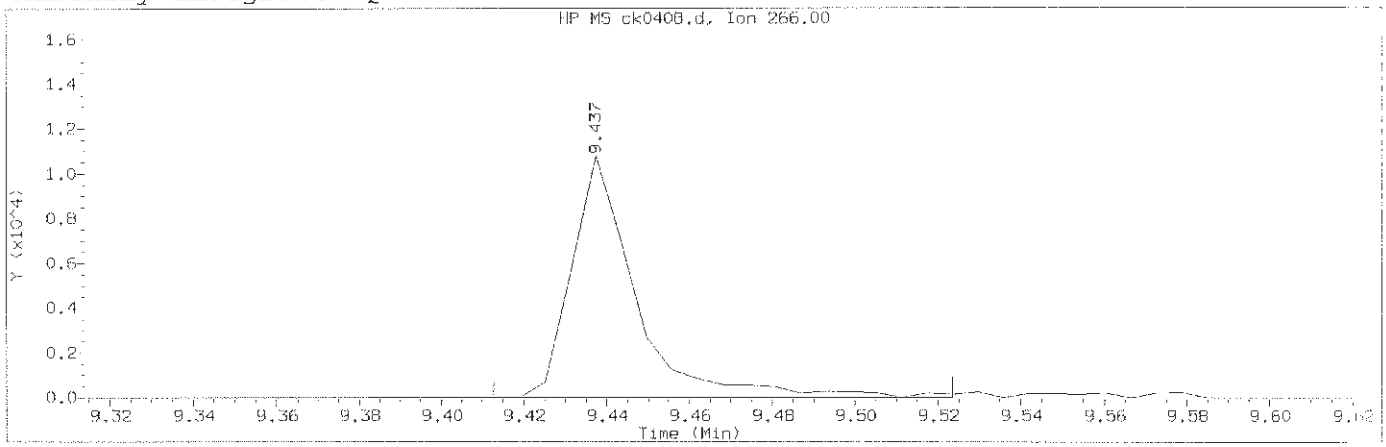
Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area	: 22717		
On-column Amount (ng/ul)	: 4.9421		
Integration start scan	: 1104	Integration stop scan:	1122
Y at integration start	: 274	Y at integration end:	311

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

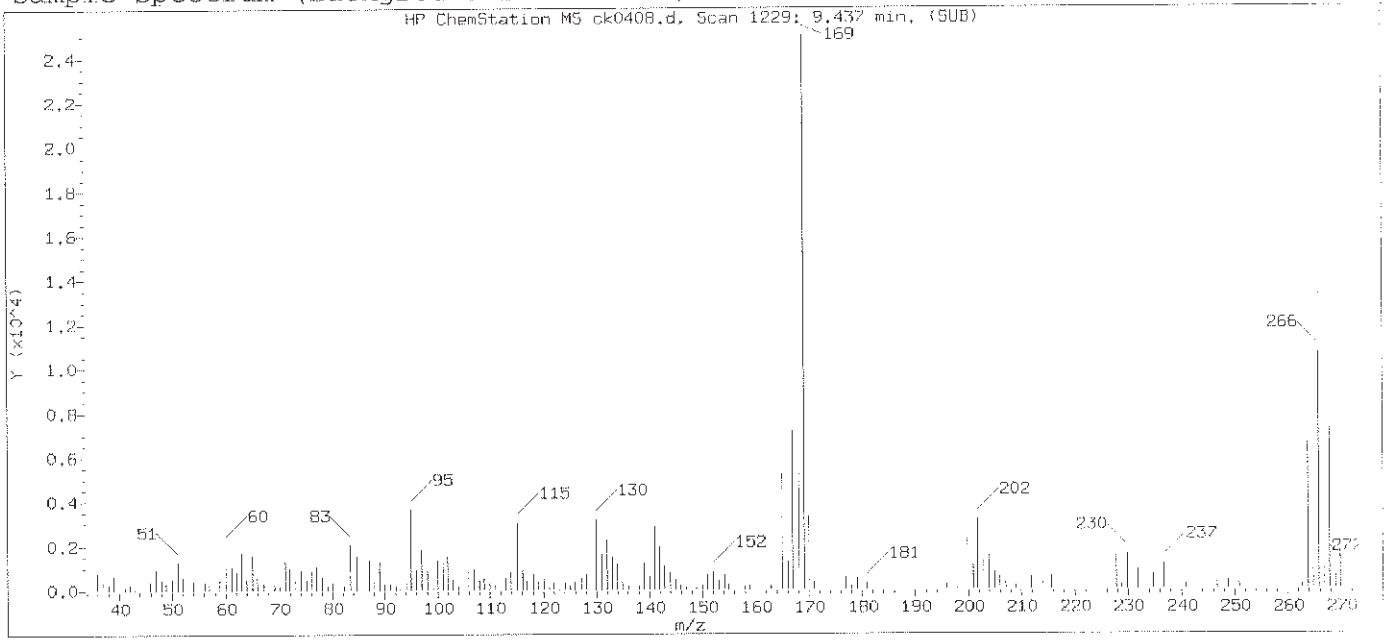
Compound Number	: 131		
Compound Name	: Pentachlorophenol		
Scan Number	: 1229		
Retention Time (minutes)	: 9.437		
Quant Ion	: 266.00		
Area (flag)	: 11754M		
On-Column Amount (ng/ul)	: 4.2439		
Integration start scan	: 1224	Integration stop scan:	1242
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

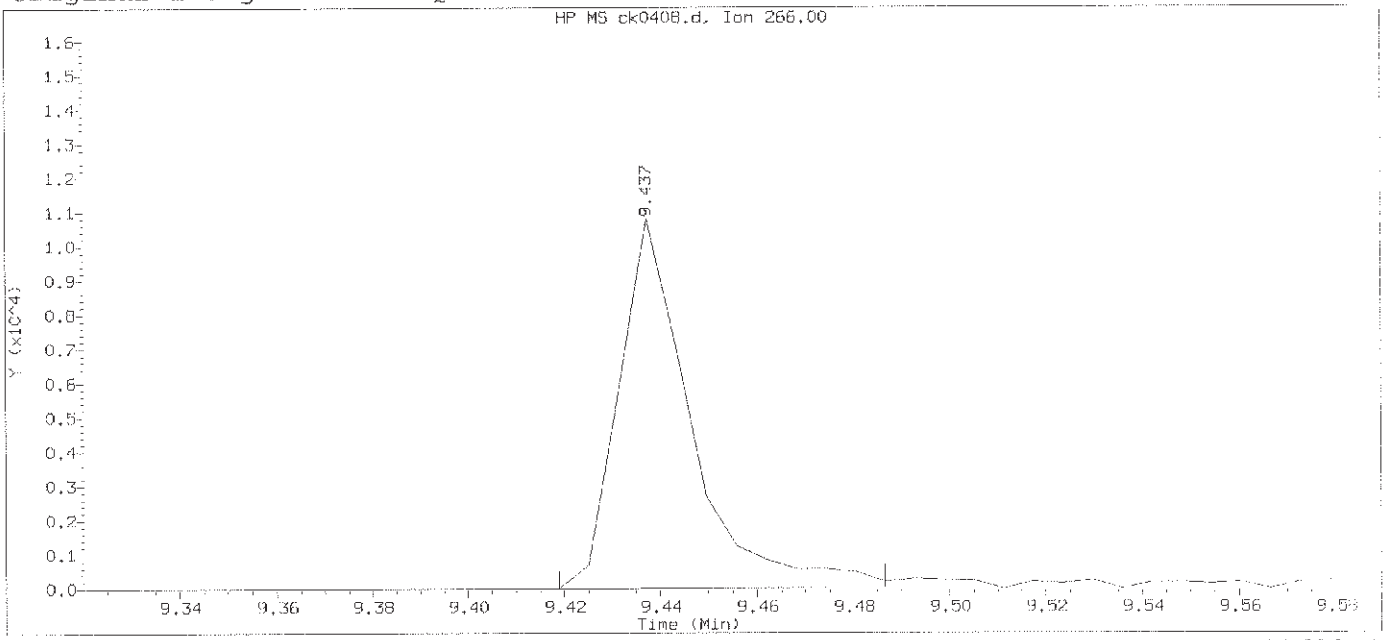
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

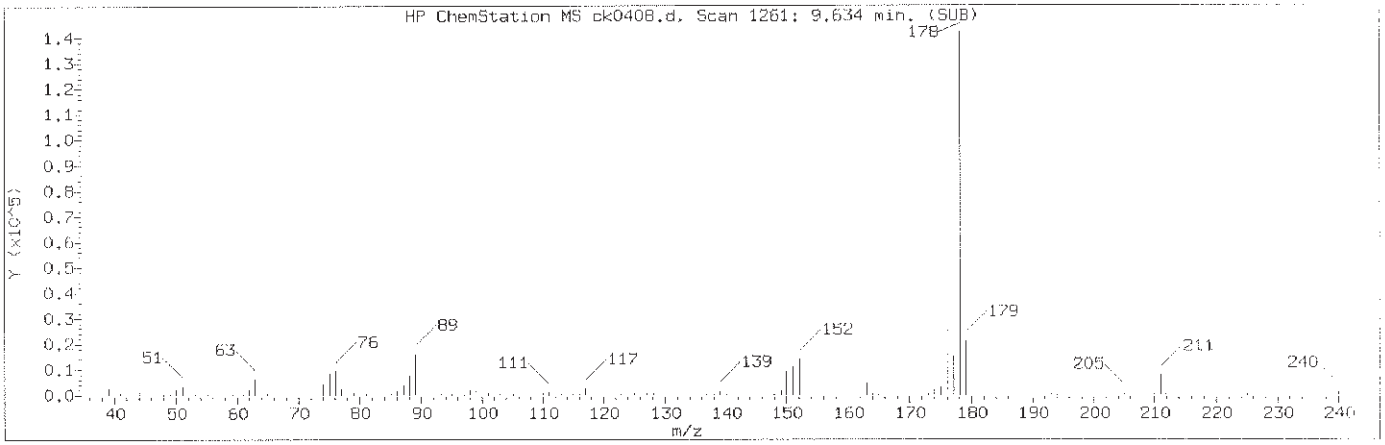
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

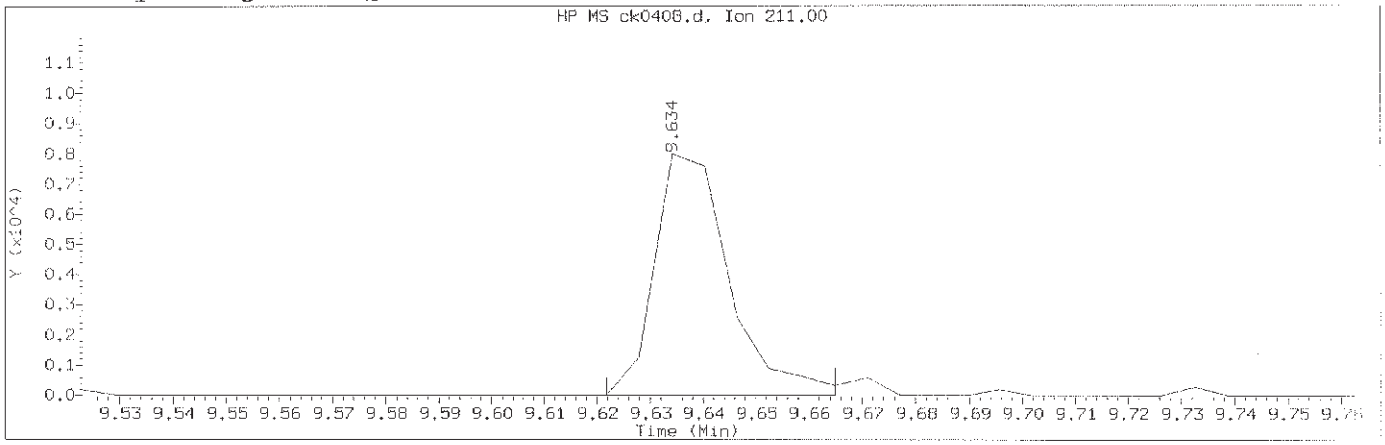
Compound Number	: 131		
Compound Name	: Pentachlorophenol		
Scan Number	: 1229		
Retention Time (minutes)	: 9.437		
Quant Ion	: 266.00		
Area	: 11208		
On-column Amount (ng/ul)	: 4.0737		
Integration start scan	: 1225	Integration stop scan:	1236
Y at integration start	: 0	Y at integration end:	42

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 7839M		
On-Column Amount (ng/ul)	: 2.7451		
Integration start scan	: 1258	Integration stop scan:	1265
Y at integration start	: 3	Y at integration end:	3

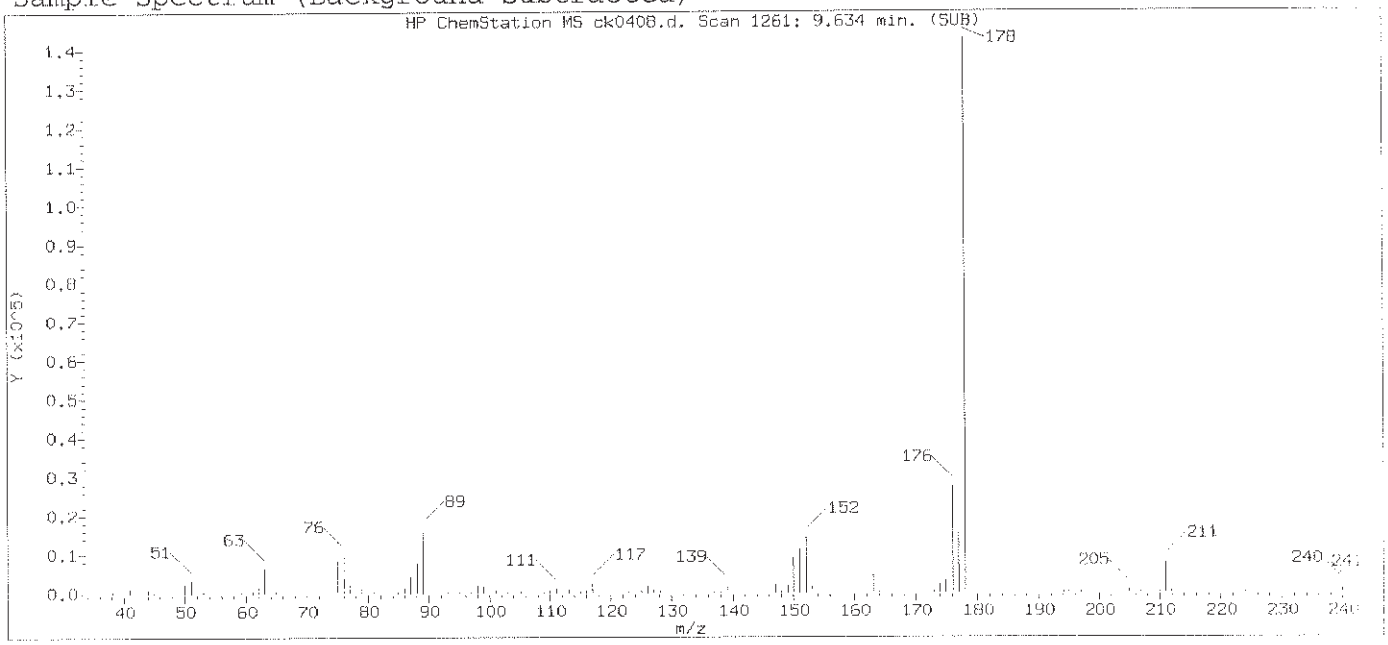
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

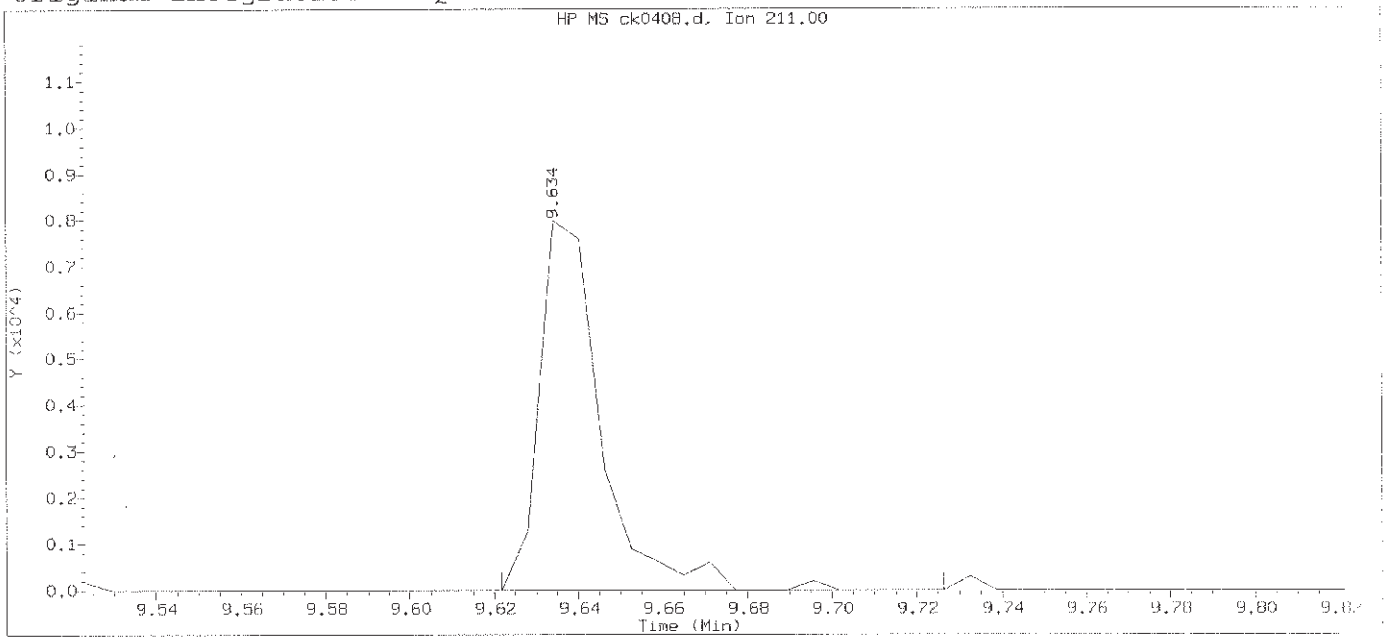
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

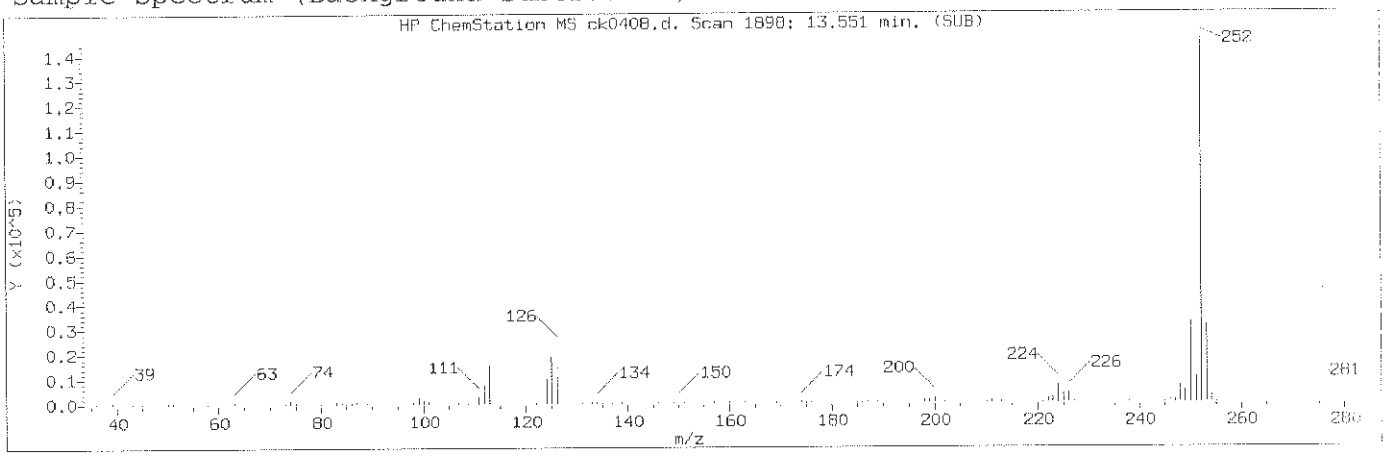
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

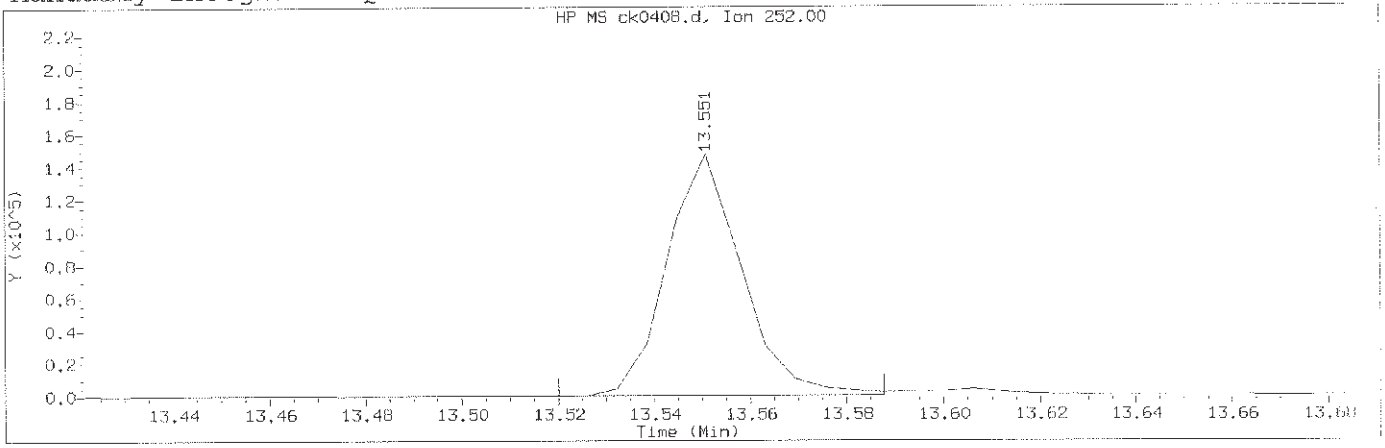
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area	: 8140		
On-column Amount (ng/ul)	: 2.8408		
Integration start scan	: 1258	Integration stop scan:	1275
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area (flag)	: 160113M		
On-Column Amount (ng/ul)	: 4.4720		
Integration start scan	: 1892	Integration stop scan:	1903
Y at integration start	: 180	Y at integration end:	180

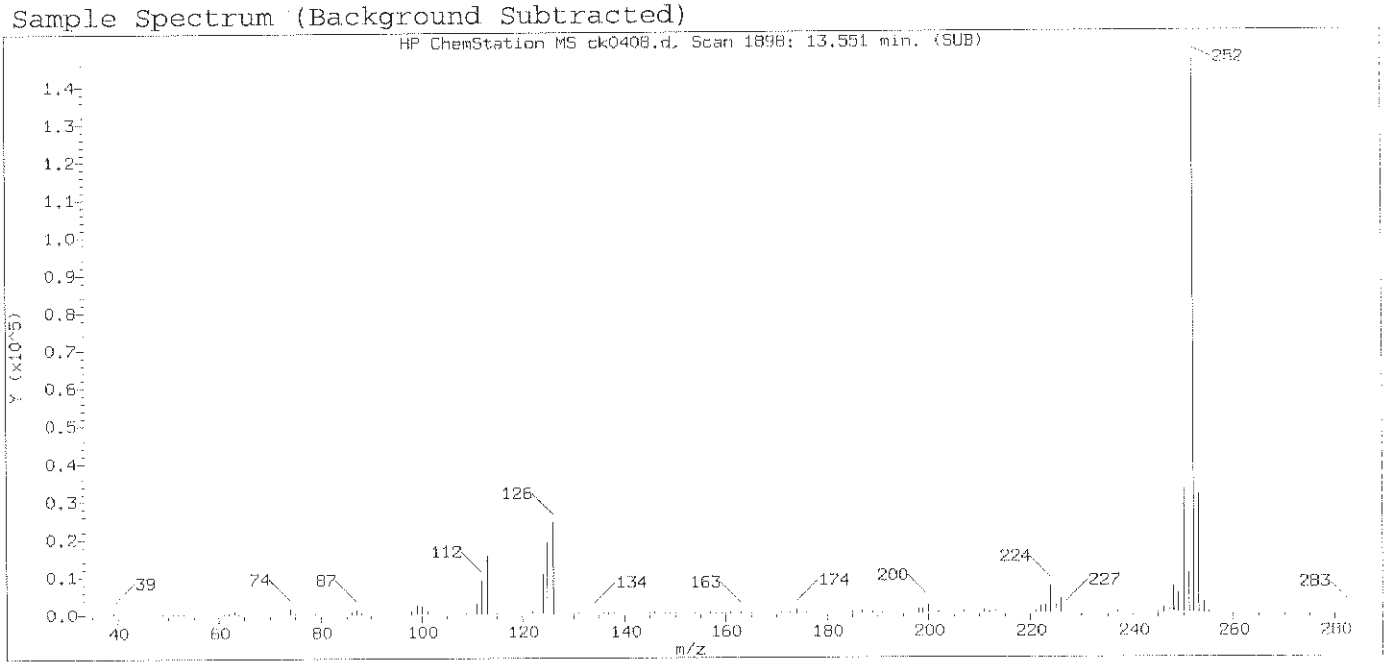
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

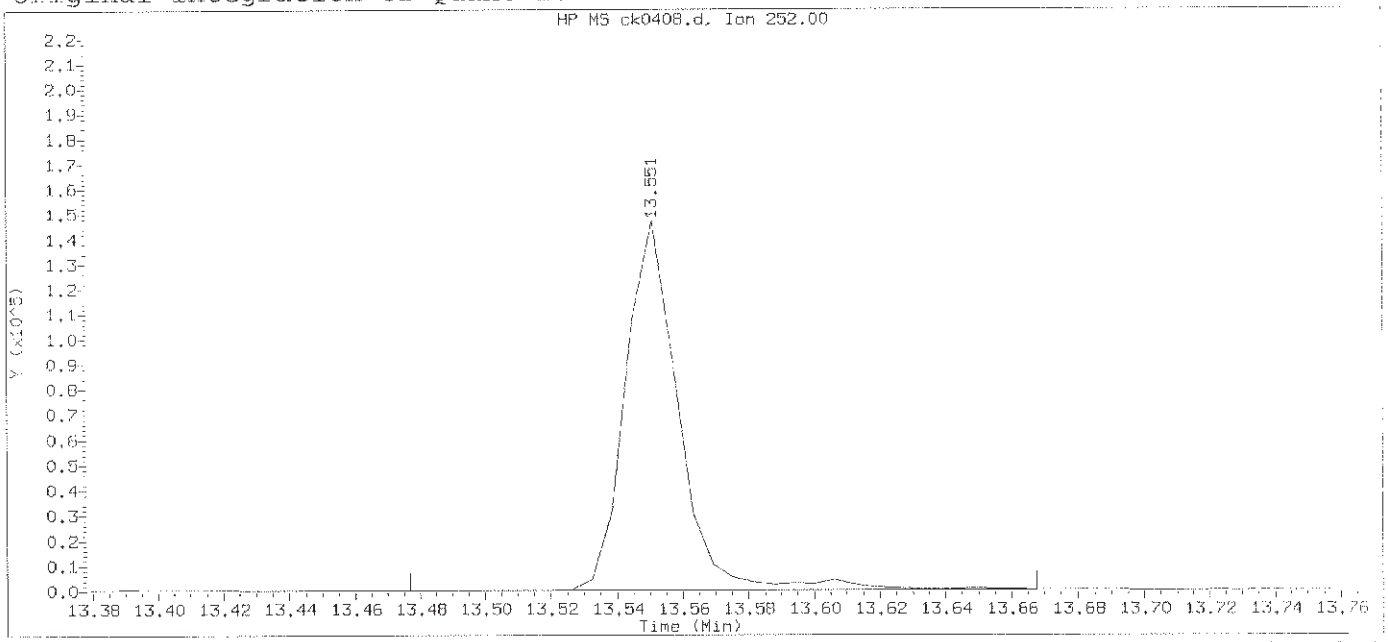
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



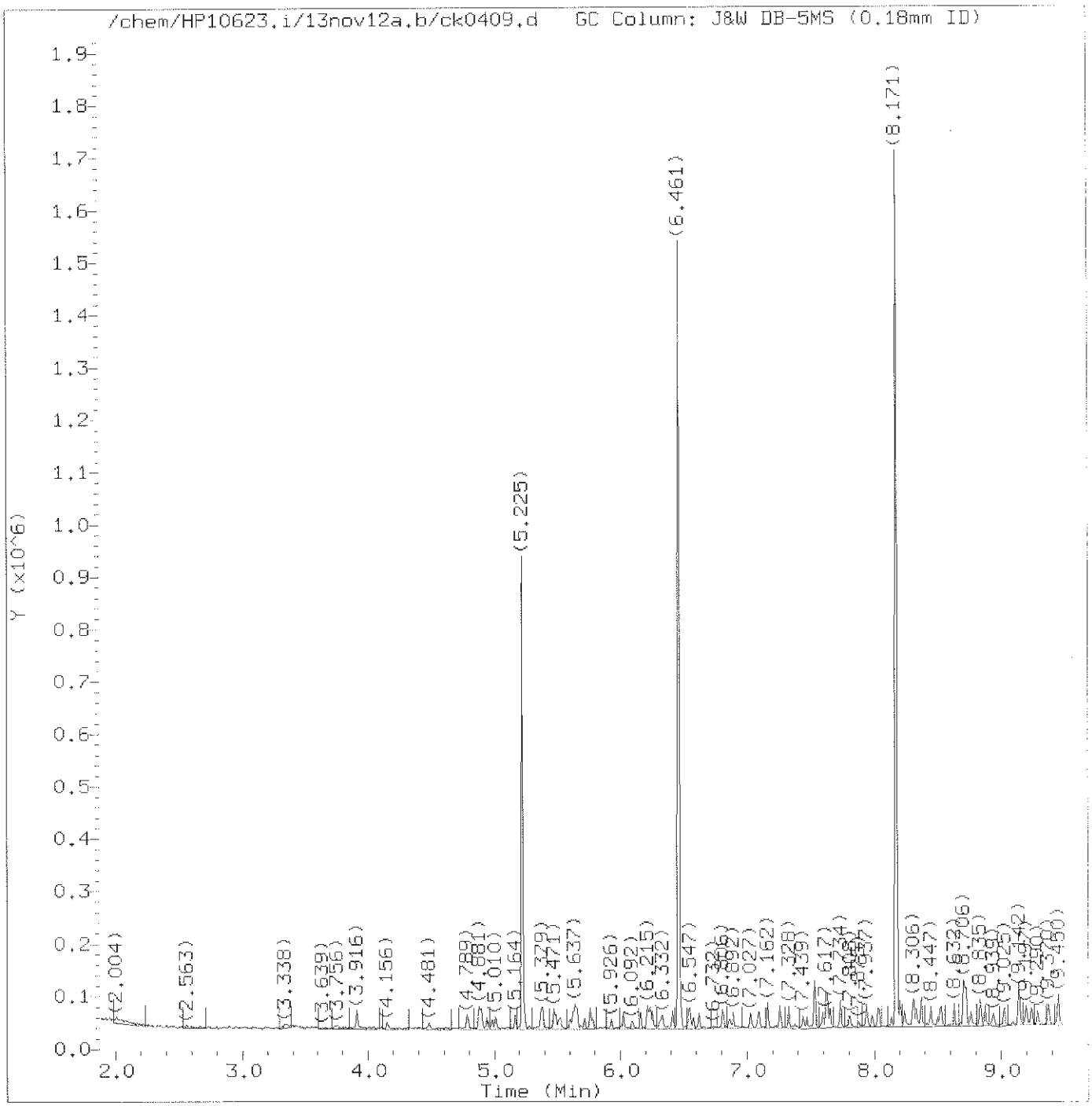
Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area	: 166771		
On-column Amount (ng/ul)	: 4.6365		
Integration start scan	: 1885	Integration stop scan:	1916
Y at integration start	: 155	Y at integration end:	191

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

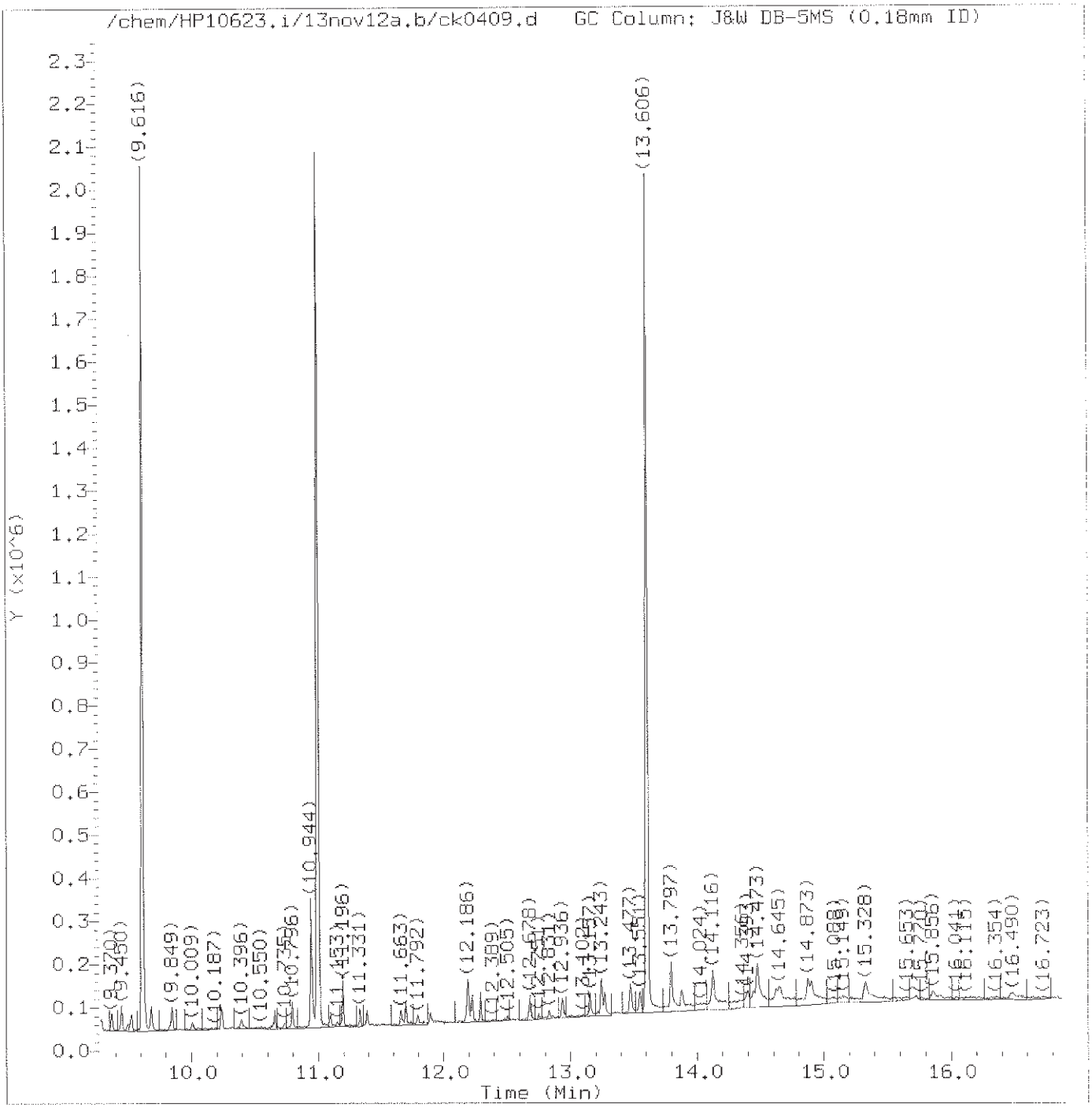
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d
Injection date and time: 12-NOV-2013 13:03
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Sublist used: 0.5mdlall1
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50
Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.010	88	1286	0.308
2) N-Nitrosodimethylamine	(1)	2.446	74	4782M	0.618
3) Pyridine	(1)	2.557	79	5630M	0.470
5) 2-Picoline	(1)	3.338	93	6732A	0.550
6) N-Nitrosomethylethylamine	(1)	3.424	88	4056	0.693
7) Methyl methanesulfonate	(1)	3.756	80	2702	0.459
9)$2-Fluorophenol	(1)	3.916	112	10172	0.532
10) N-Nitrosodiethylamine	(1)	4.156	102	2563	0.441
11) Ethyl methanesulfonate	(1)	4.481	109	2419	0.457
12) Benzaldehyde	(1)	4.789	77	5939M	0.000
14)$Phenol-d5	(1)	4.881	99	13505	0.480
15)$Phenol-d6	(1)	4.881	99	13505	0.480
16) Phenol	(1)	4.893	94	8425	0.514
13) Aniline	(1)	4.900	93	9956	0.512
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6701	0.575
19) 2-Chlorophenol	(1)	5.010	128	5106	0.499
20) 1,3-Dichlorobenzene	(1)	5.164	146	4881	0.473
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	127703	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	5492	0.521
24) Benzyl alcohol	(1)	5.373	108	4451	0.556
25) 1,2-Dichlorobenzene	(1)	5.385	146	5170	0.523
206) Indene	(1)	5.471	115	10254	0.464
26) 2-Methylphenol	(1)	5.490	108	5233	0.481
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9102	0.635
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	9102	0.634
29) N-Nitrosopyrrolidine	(1)	5.600	100	3220	0.494
30) Acetophenone	(1)	5.619	105	8327	0.513
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	4625	0.445
33) 4-Methylphenol	(1)	5.644	108	6317	0.490
32) N-Nitrosomorpholine	(1)	5.644	56	3651	0.493
34) o-Toluidine	(1)	5.656	106	9310	0.501
37) Hexachloroethane	(1)	5.717	117	2626	0.655
38)$Nitrobenzene-d5	(2)	5.760	82	12102	0.495
39) Nitrobenzene	(2)	5.779	77	6666	0.514
40) N-Nitrosopiperidine	(2)	5.926	114	2731	0.475
41) Isophorone	(2)	6.025	82	11831	0.502
42) 2-Nitrophenol	(2)	6.092	139	2047	0.454
44) 2,4-Dimethylphenol	(2)	6.160	107	6006	0.518
47) Benzoic acid	(2)	6.215	105	20488	2.728
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2442	0.505

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7322	0.512
49) 2,4-Dichlorophenol	(2)	6.332	162	3323	0.422
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	4308	0.519
52)*Naphthalene-d8	(2)	6.461	136	567410	20.000
56) 4-Chloroaniline	(2)	6.541	127	6227	0.475
57) 2,6-Dichlorophenol	(2)	6.547	162	3605	0.486
58) Hexachloropropene	(2)	6.578	213	2052	0.437
60) Hexachlorobutadiene	(2)	6.621	225	2327	0.559
194) Quinoline	(2)	6.806	129	11376	0.548
63) Caprolactam	(2)	6.861	113	1948	0.446
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4624	0.408
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5237	0.520
69) Safrole	(2)	7.095	162	4121	0.517
72) Hexachlorocyclopentadiene	(3)	7.328	237	1445	0.402
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3979	0.479
74) cis-Isosafrole	(3)	7.377	162	742	0.056
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2744	0.506
77) 2,4,5-Trichlorophenol	(3)	7.476	196	3145	0.532
78)$2-Fluorobiphenyl	(3)	7.531	172	22300	0.509
80) Isosafrole	(3)	7.599	162	4225	0.502
79) trans-Isosafrole	(3)	7.599	162	4225	0.447
83) 1,1'-Biphenyl	(3)	7.623	154	13762	0.510
84) 2-Chloronaphthalene	(3)	7.630	162	10411M	0.529
85) 1-Chloronaphthalene	(3)	7.654	162	9618M	0.497
88) Diphenyl ether	(3)	7.734	170	6818	0.507
89) 2-Nitroaniline	(3)	7.734	138	2739	0.427
90) 1,4-Naphthoquinone	(3)	7.808	158	3343	0.404
91) 1,4-Dinitrobenzene	(3)	7.875	168	873	3.749
92) Dimethylphthalate	(3)	7.937	163	11760	0.502
93) 1,3-Dinitrobenzene	(3)	7.943	168	1068M	3.147
94) 2,6-Dinitrotoluene	(3)	7.980	165	1780	0.365
97) 3-Nitroaniline	(3)	8.134	138	2352	0.395
98)*Acenaphthene-d10	(3)	8.171	164	348585	20.000
100) 2,4-Dinitrophenol	(3)	8.238	184	3378	10.432
103) 4-Nitrophenol	(3)	8.306	109	8114	2.200
101) Pentachlorobenzene	(3)	8.337	250	4002	0.557
105) 2,4-Dinitrotoluene	(3)	8.367	165	2067	0.328
104) Dibenzofuran	(3)	8.374	168	14343	0.493
106) 1-Naphthylamine	(3)	8.447	143	10944	0.457
107) 2,3,4,6-Tetrachlorophenol	(3)	8.496	232	1724	0.414

M = Compound was manually integrated.
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on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
108) 2-Naphthylamine	(3)	8.527	143	11175	0.457
109) Diethylphthalate	(3)	8.632	149	12675	0.524
110) Thionazin	(3)	8.706	107	2594	0.486
113) 5-Nitro-o-toluidine	(3)	8.718	152	2987	0.452
114) 4-Nitroaniline	(3)	8.718	138	2902	0.433
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	5937	0.533
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	2752	6.937
202) NDPA as diphenylamine	(4)	8.835	169	10468	0.478
117) N-Nitrosodiphenylamine	(4)	8.835	169	10468	0.479
118) 1,2-Diphenylhydrazine	(4)	8.872	77	13465	0.430
119)$2,4,6-Tribromophenol	(3)	8.939	330	1702	0.404
120) Tetraethyldithiopyrophosphate	(4)	9.019	97	2082	0.466
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	470M	6.992
122) Diallate (peak 1)	(4)	9.136	86	5989	0.374
123) Phorate	(4)	9.142	75	8029	0.416
124) Phenacetin	(4)	9.142	108	6574	0.435
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2949	0.490
126) Diallate (peak 2)	(4)	9.216	86	1113M	0.160
128) Dimethoate	(4)	9.290	87	5411	0.459
130) Atrazine	(4)	9.376	200	3859	0.551
131) Pentachlorophenol	(4)	9.443	266	1259	0.382
132) Pentachloronitrobenzene	(4)	9.450	237	988	0.383
133) 4-Aminobiphenyl	(4)	9.450	169	11704	0.495
134) Pronamide	(4)	9.529	173	5041	0.442
135)*Phenanthrene-d10	(4)	9.616	188	652252	20.000
136) Dinoseb	(4)	9.634	211	673M	6.963
140) Carbazole	(4)	9.849	167	18309	0.481
141) Methyl parathion	(4)	10.009	109	2207	2.640
142) Di-n-butylphthalate	(4)	10.237	149	21063	0.469
143) Parathion	(4)	10.396	109	1300M	3.162
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	574	6.753
146) Isodrin	(4)	10.655	193	2330	0.544
152) Benzidine	(5)	10.944	184	116323	3.532
167)*Pyrene-d10	(5)	10.999	212	804495	20.000
156)$Terphenyl-d14	(5)	11.196	244	27844	0.484
158) p-Dimethylaminoazobenzene	(5)	11.331	225	3798	0.436
159) Chlorobenzilate	(5)	11.393	139	5487	0.405
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	11604	0.421
161) Butylbenzylphthalate	(5)	11.694	149	9560	0.448
162) 2-Acetylaminofluorene	(5)	11.897	181	6080	0.315

M = Compound was manually integrated.
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on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

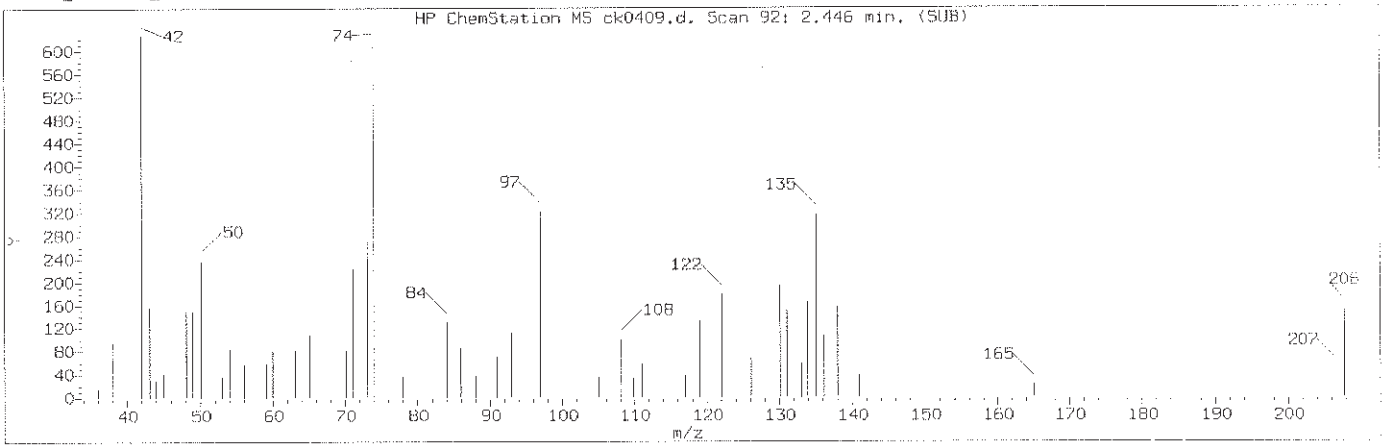
Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	7076	0.455
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3337	0.440
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	16083	0.544
189) 6-Methylchrysene	(5)	12.678	242	14148	0.483
170) Di-n-octylphthalate	(6)	12.936	149	20342	0.363
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7422	0.352
175)*Perylene-d12	(6)	13.606	264	742890	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	10230	0.461
190) Dibenz(a,h)acridine	(6)	14.393	279	11353	0.353
191) Dibenz(a,j)acridine	(6)	14.448	279	11301	0.306
129) Diallate TRANS/CIS	(4)			7102	0.534

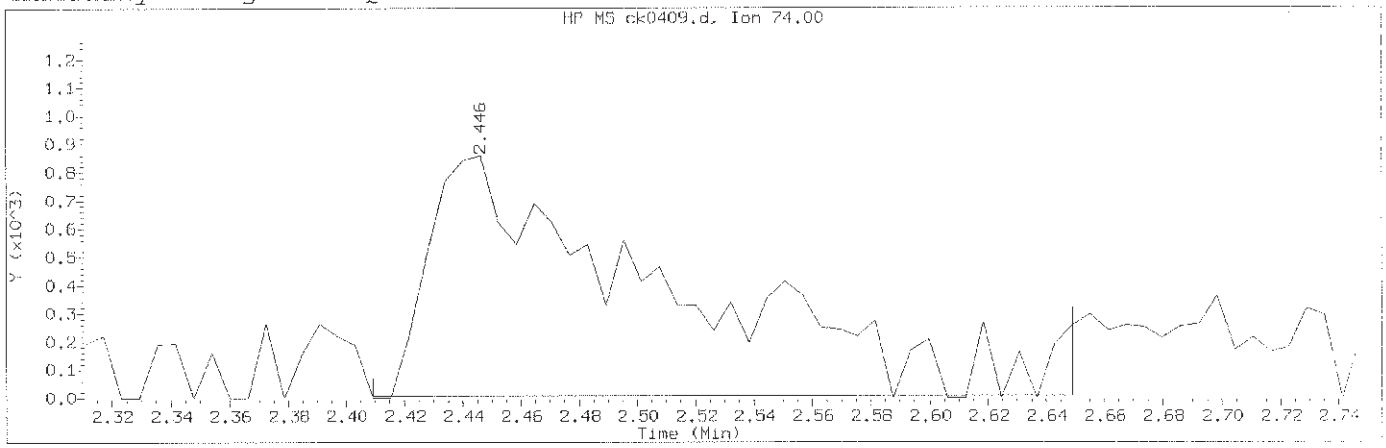
* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

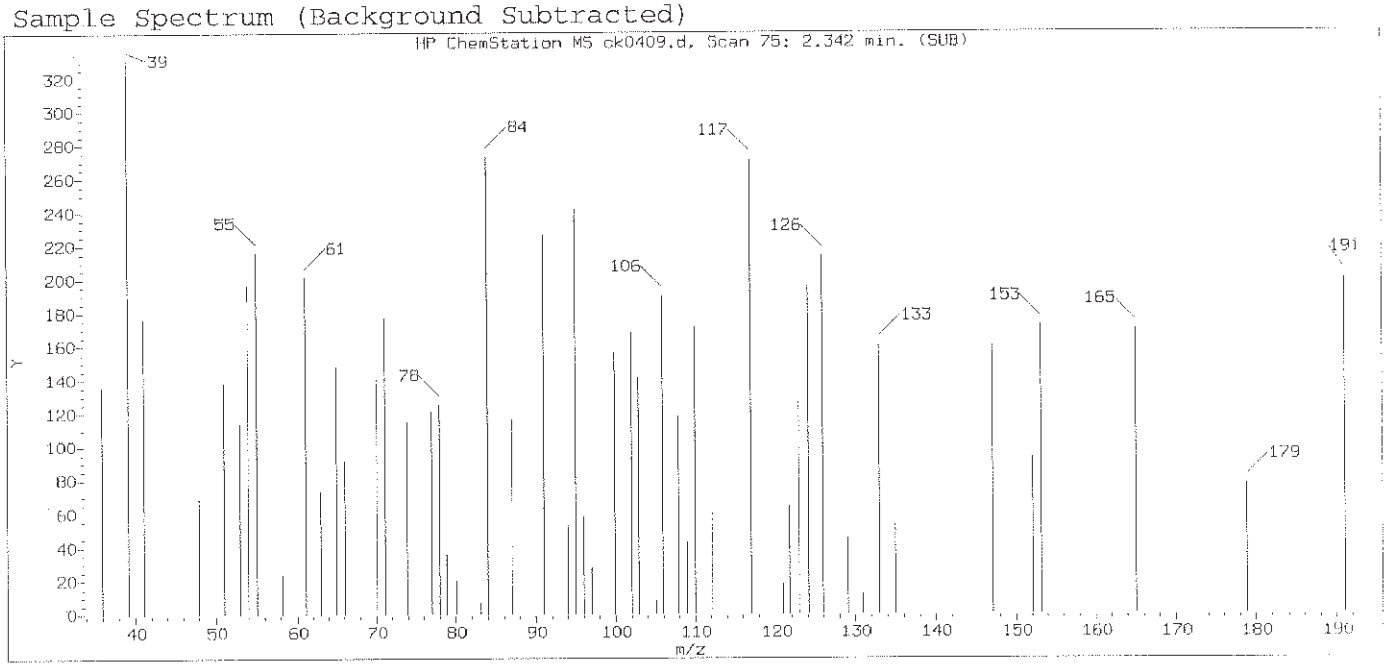
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 92		
Retention Time (minutes)	: 2.446		
Quant Ion	: 74.00		
Area (flag)	: 4782M		
On-Column Amount (ng/ul)	: 0.6184		
Integration start scan	: 85	Integration stop scan:	124
Y at integration start	: 8	Y at integration end:	8

Reason for manual integration: improper integration

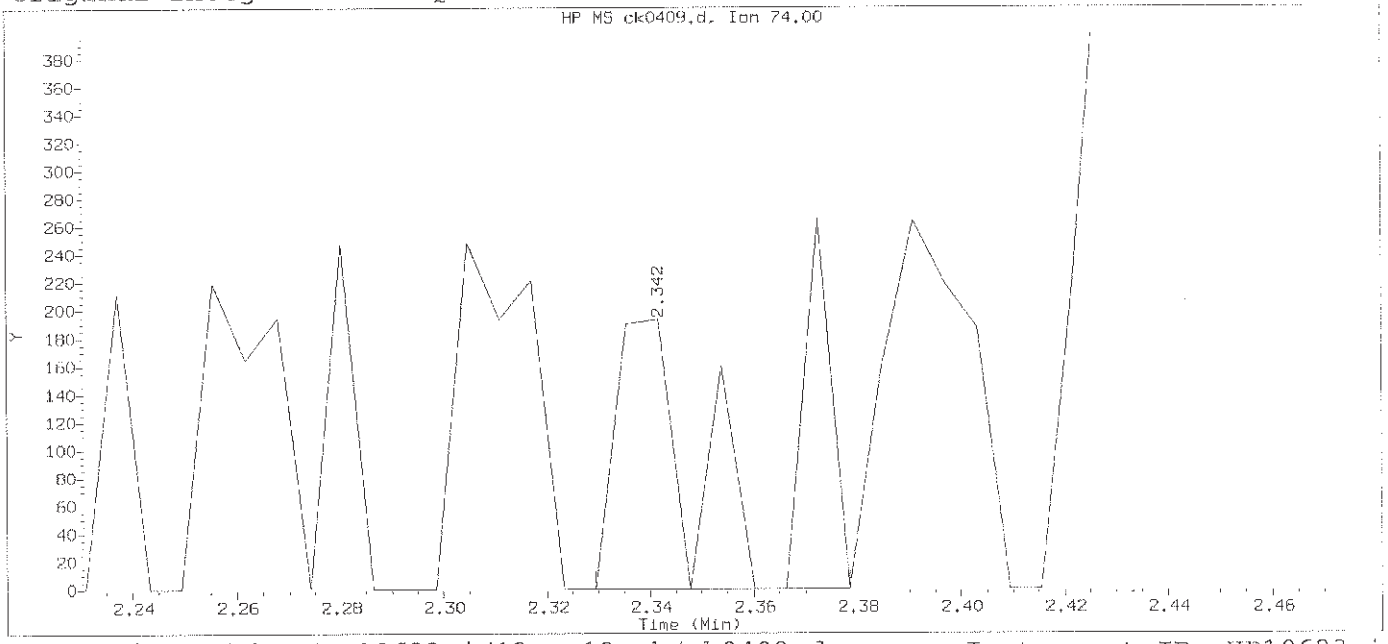
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 75		
Retention Time (minutes)	: 2.342		
Quant Ion	: 74.00		
Area	: 298		
On-column Amount (ng/ul)	: 0.0385		
Integration start scan	: 72	Integration stop scan:	80
Y at integration start	: 0	Y at integration end:	0

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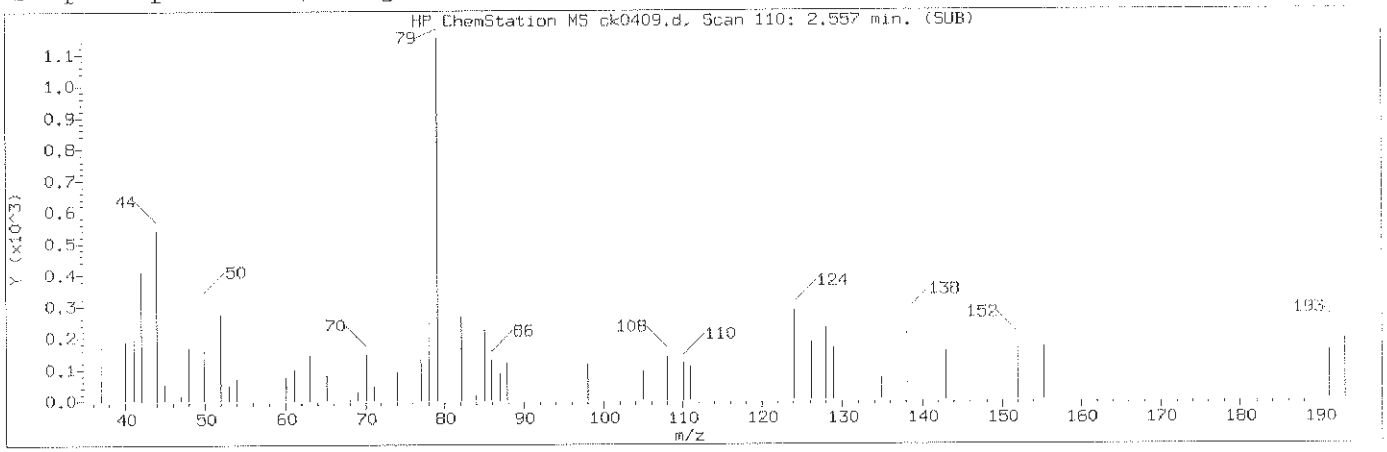
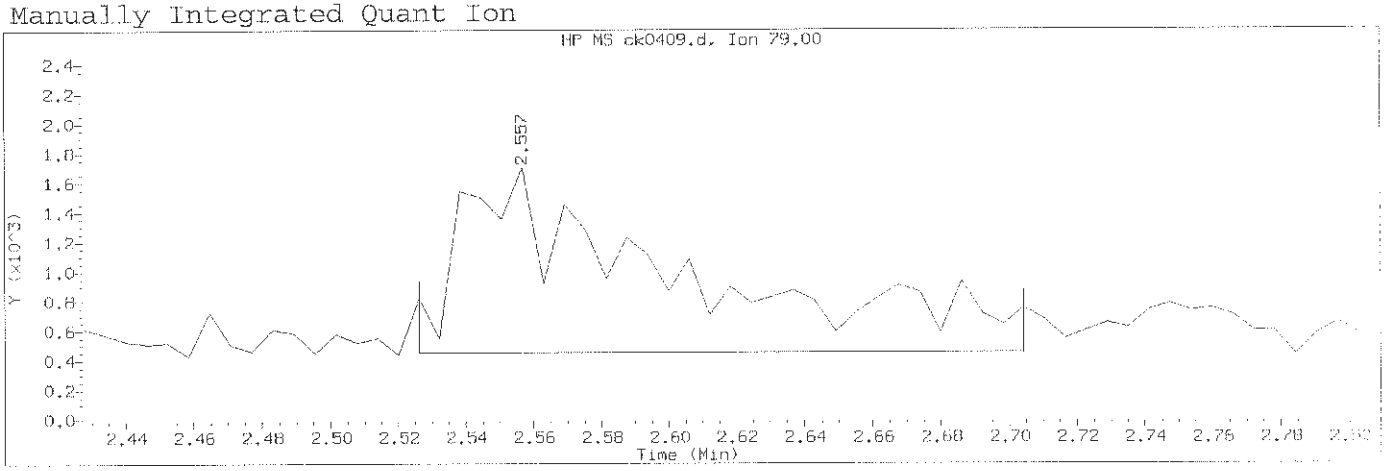
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 5630M		
On-Column Amount (ng/ul)	: 0.4697		
Integration start scan	: 104	Integration stop scan:	133
Y at integration start	: 449	Y at integration end:	449

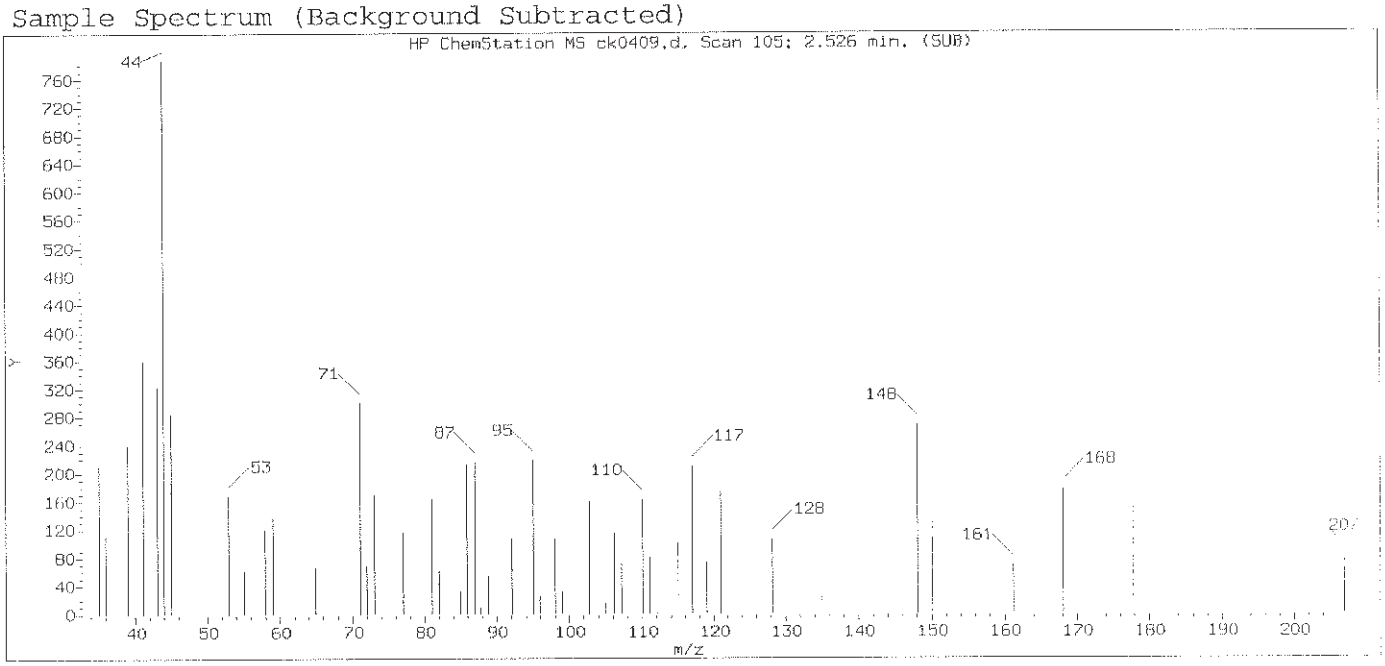
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 signature user ID: mac00013

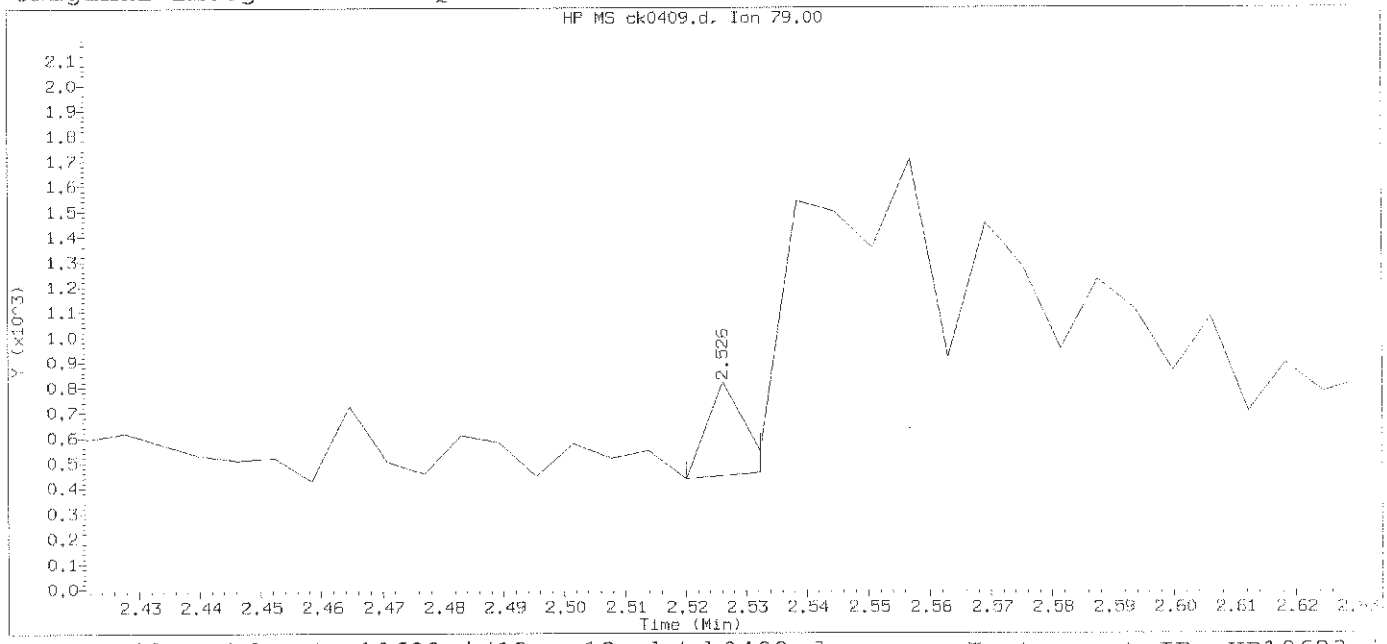
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

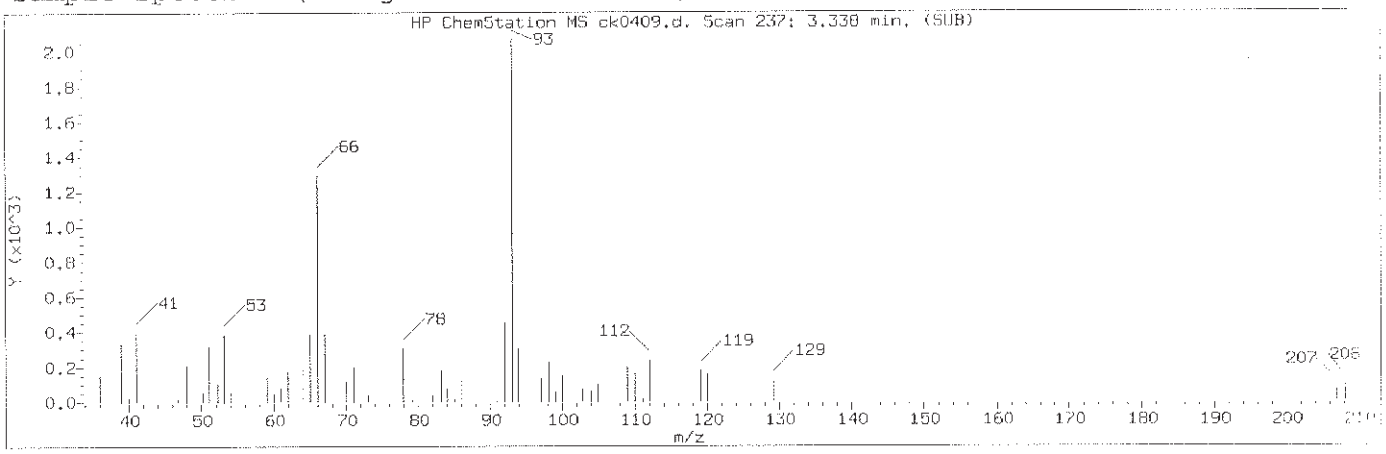
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

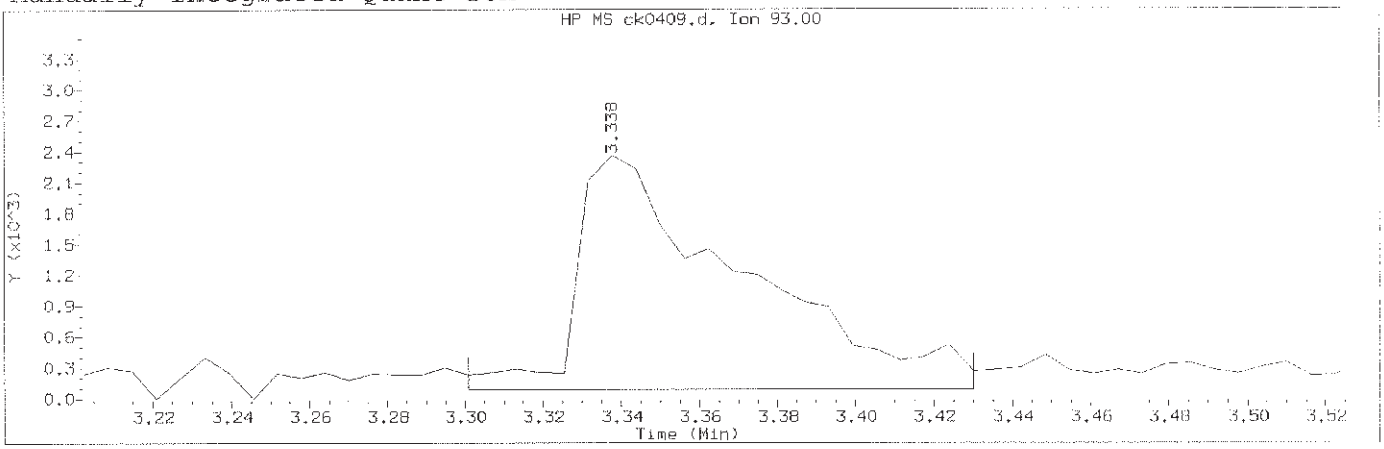
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area	: 152		
On-column Amount (ng/ul)	: 0.0127		
Integration start scan	: 103	Integration stop scan:	105
Y at integration start	: 435	Y at integration end:	461

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6732A		
On-Column Amount (ng/ul)	: 0.5503		
Integration start scan	: 230	Integration stop scan:	251
Y at integration start	: 88	Y at integration end:	88

Reason for manual integration: improper integration

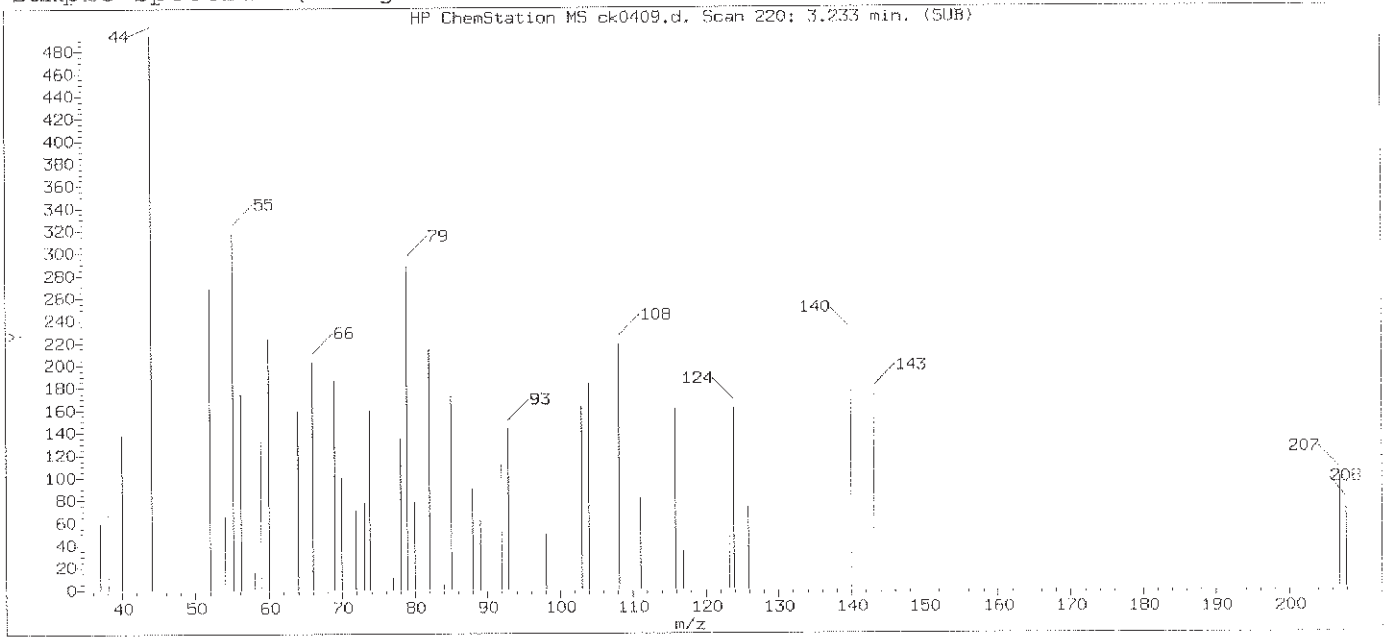
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3054 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

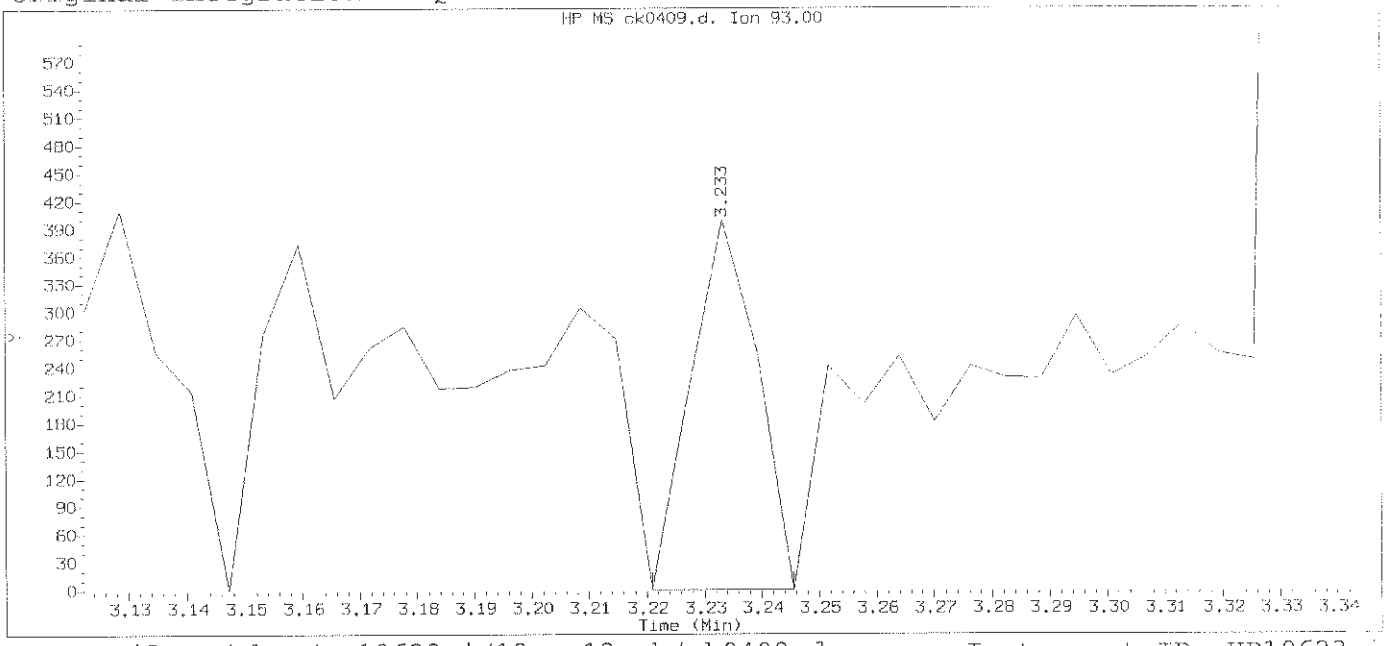
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

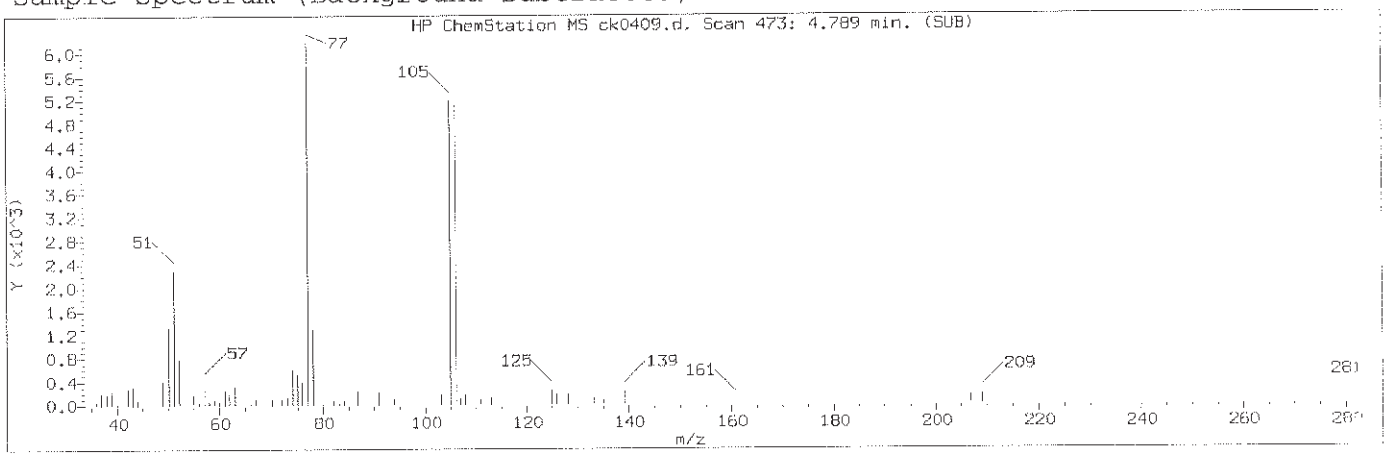
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

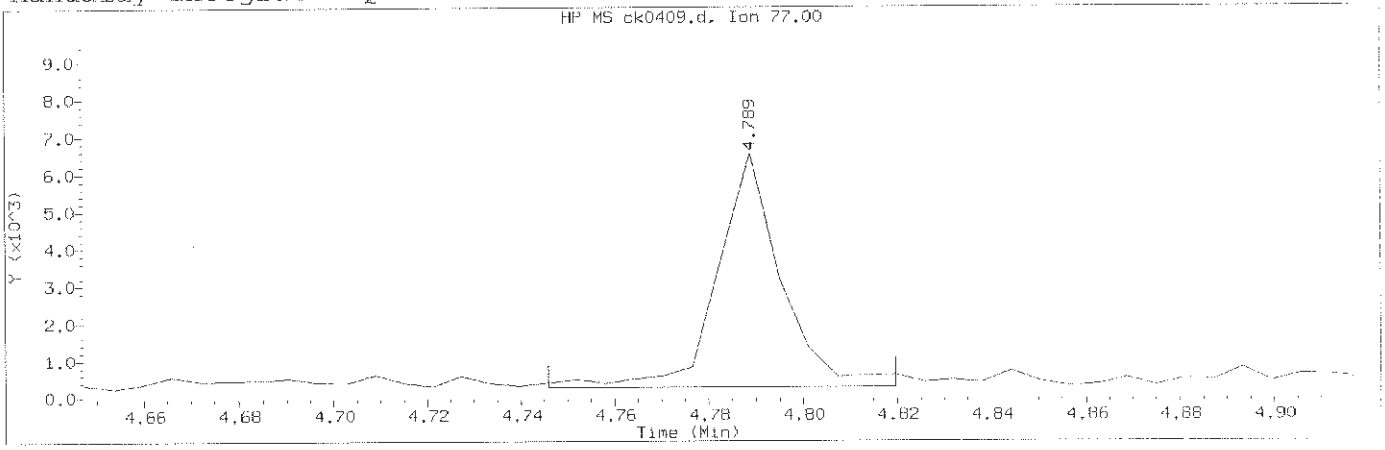
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 220		
Retention Time (minutes)	: 3.233		
Quant Ion	: 93.00		
Area	: 316		
On-column Amount (ng/ul)	: 0.0259		
Integration start scan	: 217	Integration stop scan:	221
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 473		
Retention Time (minutes)	: 4.789		
Quant Ion	: 77.00		
Area (flag)	: 5939M		
On-Column Amount (ng/ul)	: 0.0000		
Integration start scan	: 465	Integration stop scan:	477
Y at integration start	: 265	Y at integration end:	265

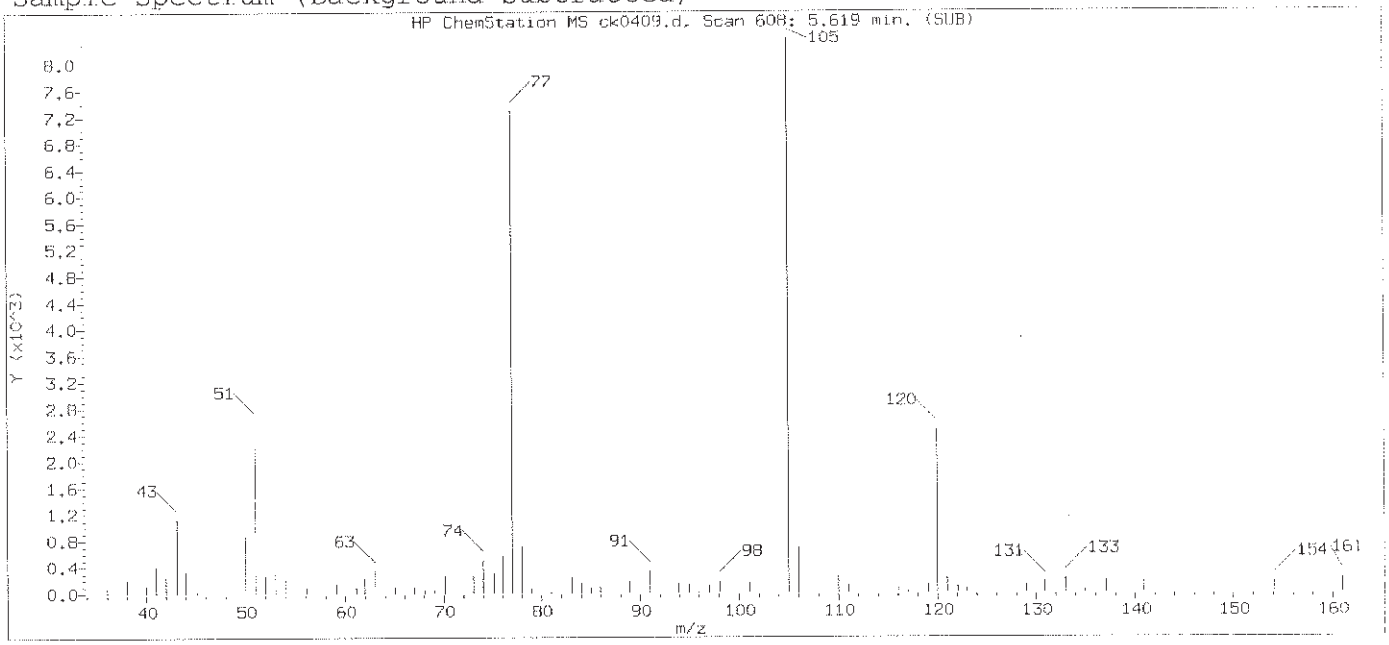
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

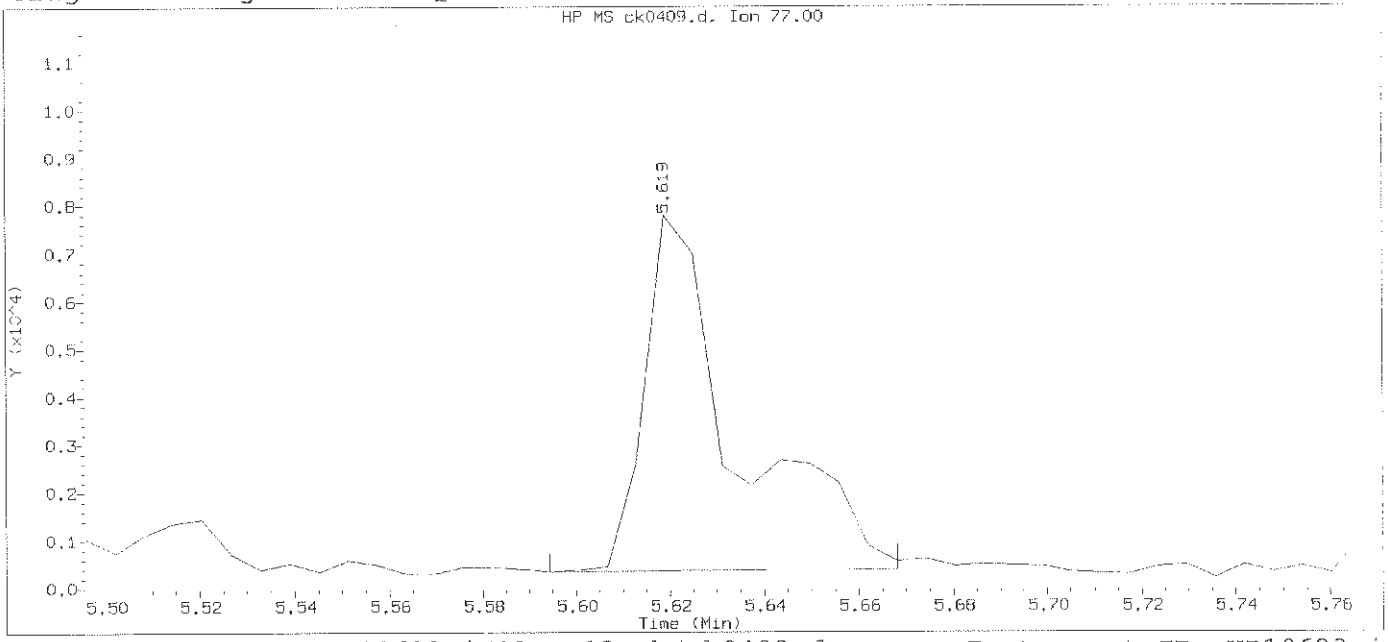
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

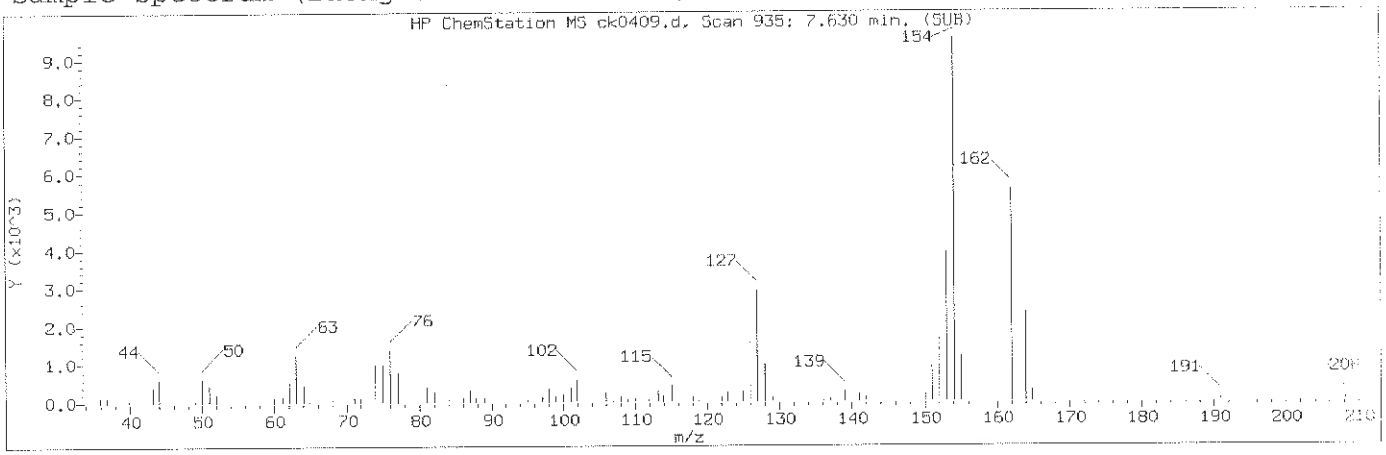
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

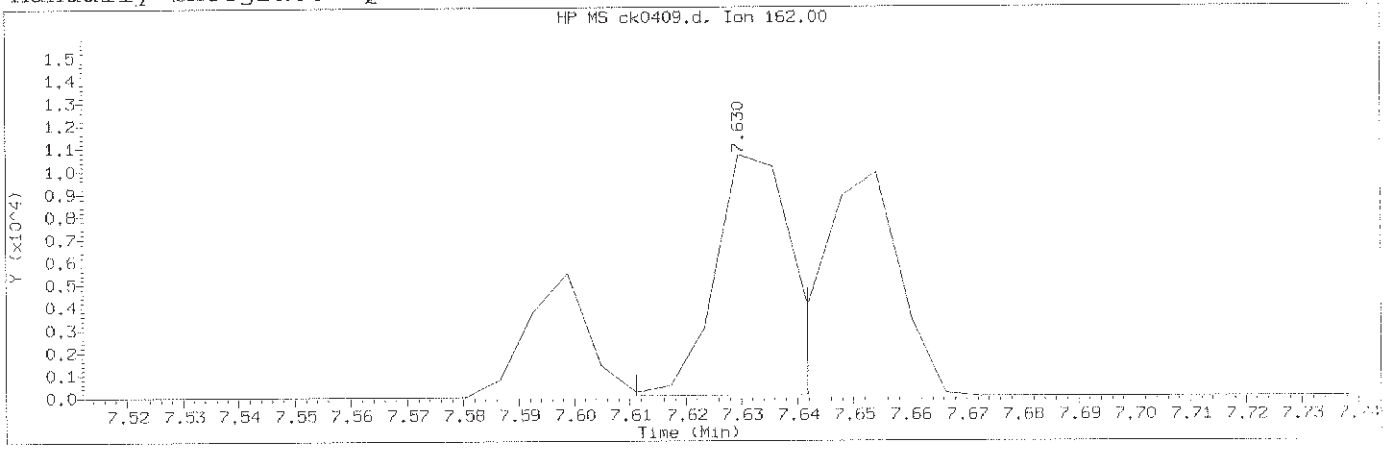
Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 608		
Retention Time (minutes)	: 5.619		
Quant Ion	: 77.00		
Area	: 10098		
On-column Amount (ng/ul)	: 0.0786		
Integration start scan	: 603	Integration stop scan:	615
Y at integration start	: 339	Y at integration end:	385

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

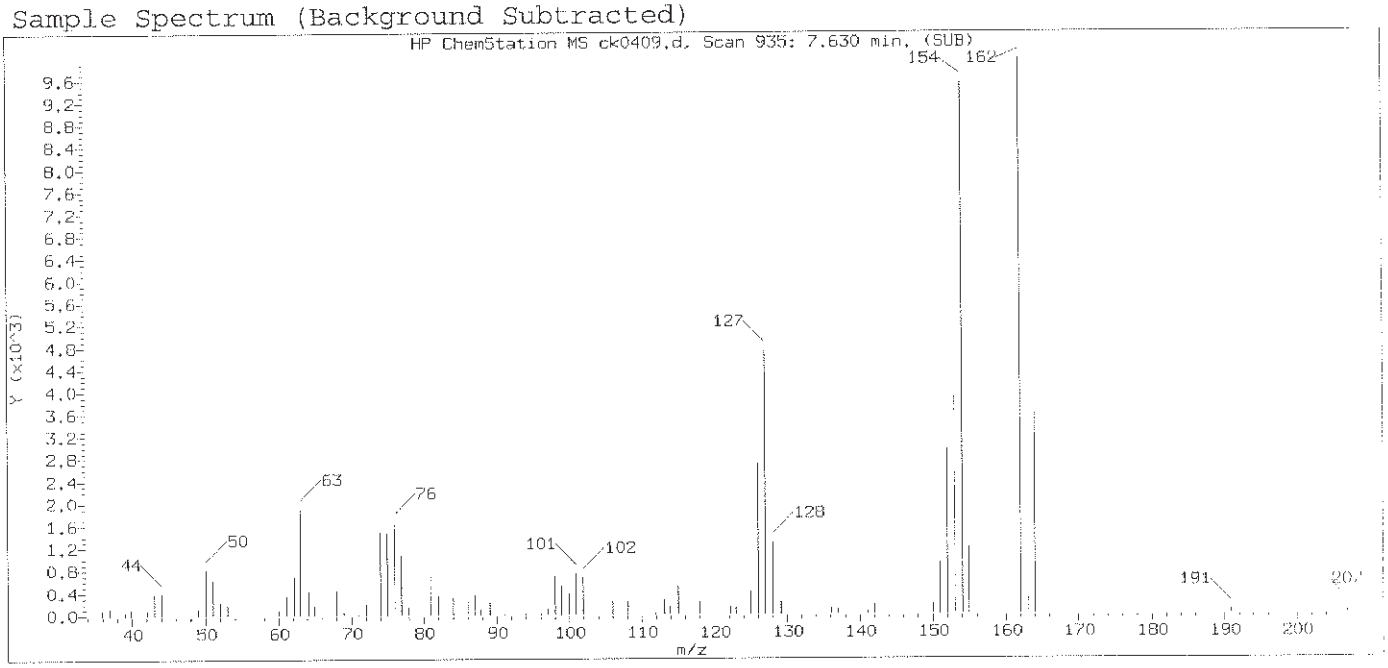
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 10411M		
On-Column Amount (ng/ul)	: 0.5293		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 43	Y at integration end:	43

Reason for manual integration: improper integration

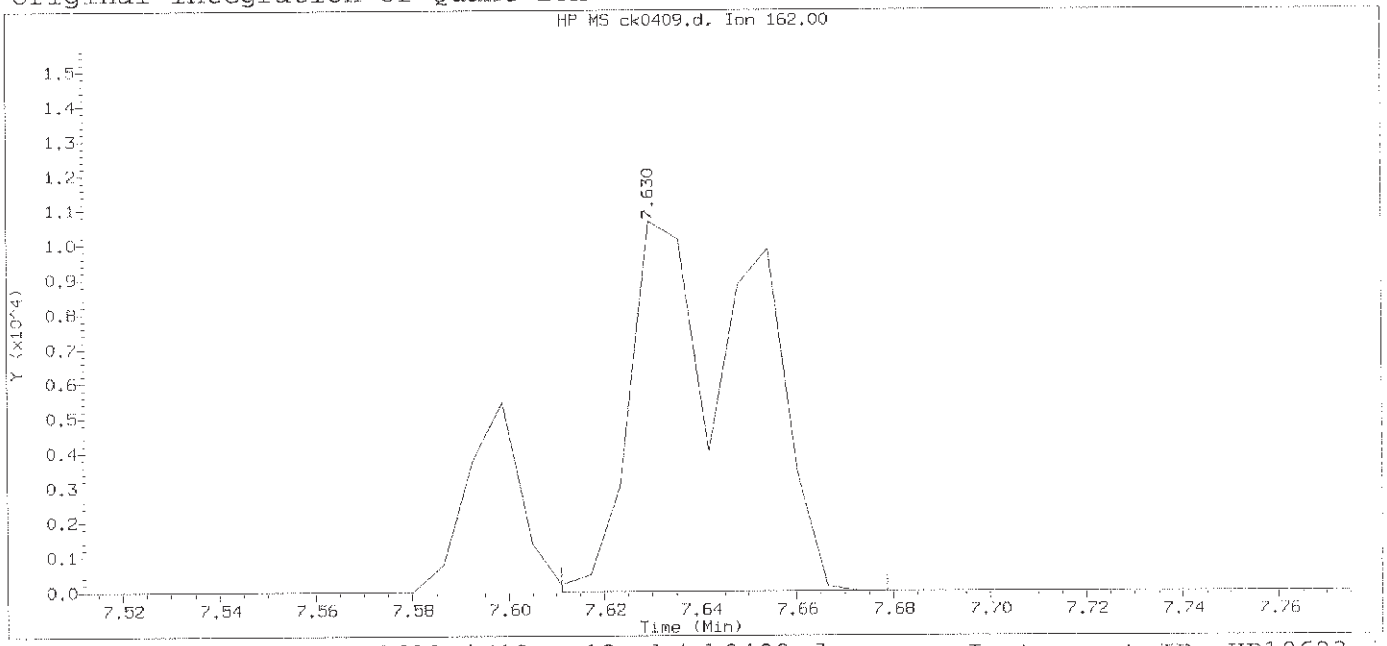
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

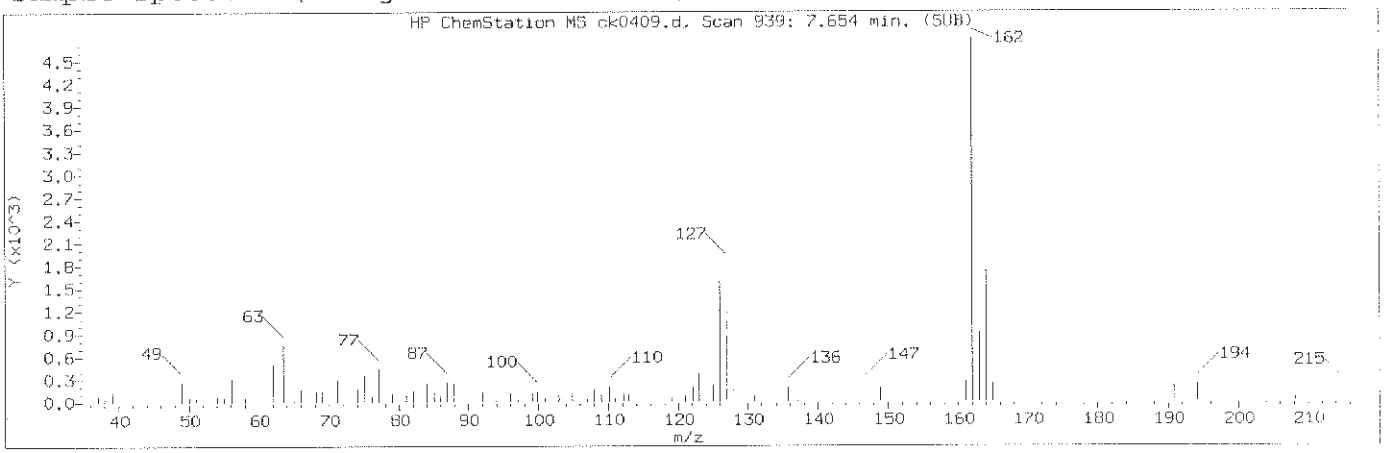
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

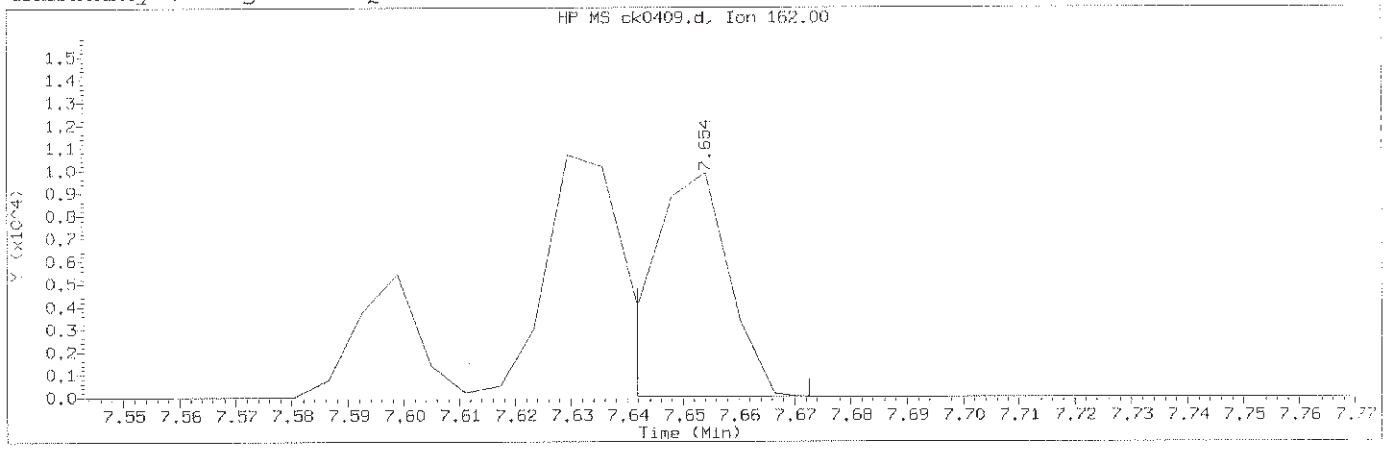
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9492		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 9618M		
On-Column Amount (ng/ul)	: 0.4968		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 28	Y at integration end:	28

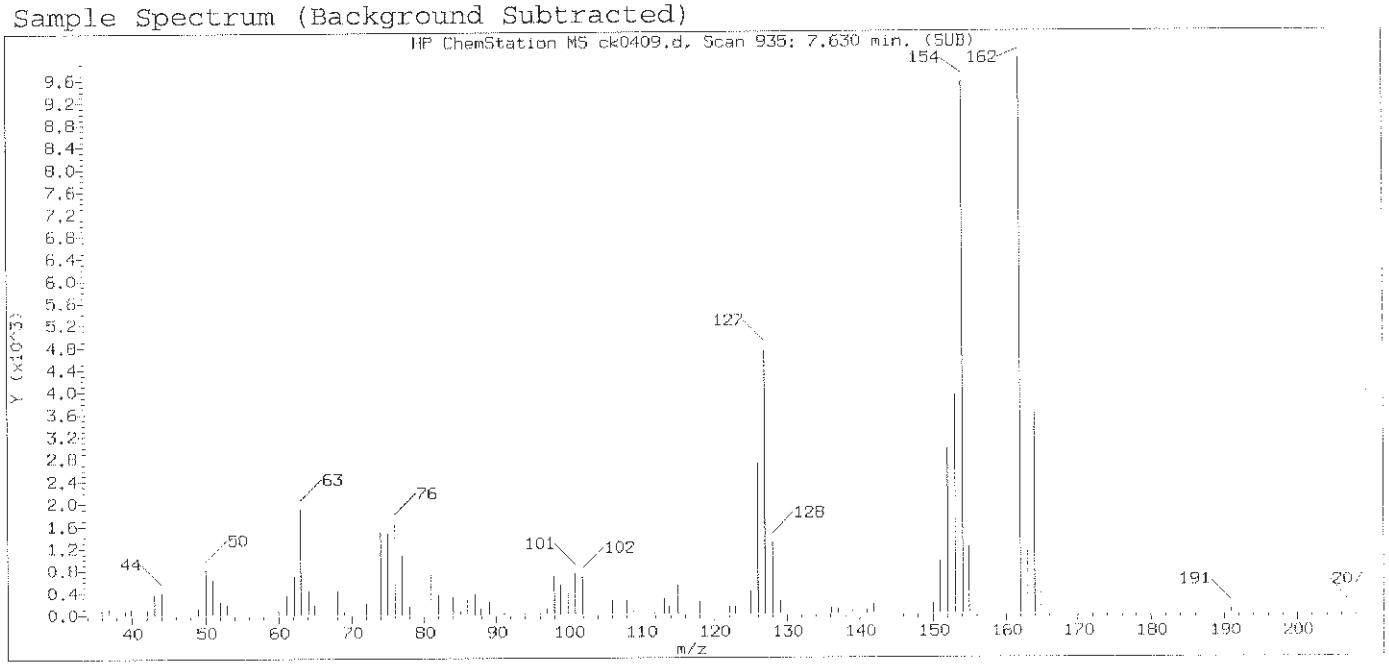
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 signature user ID: mac00013

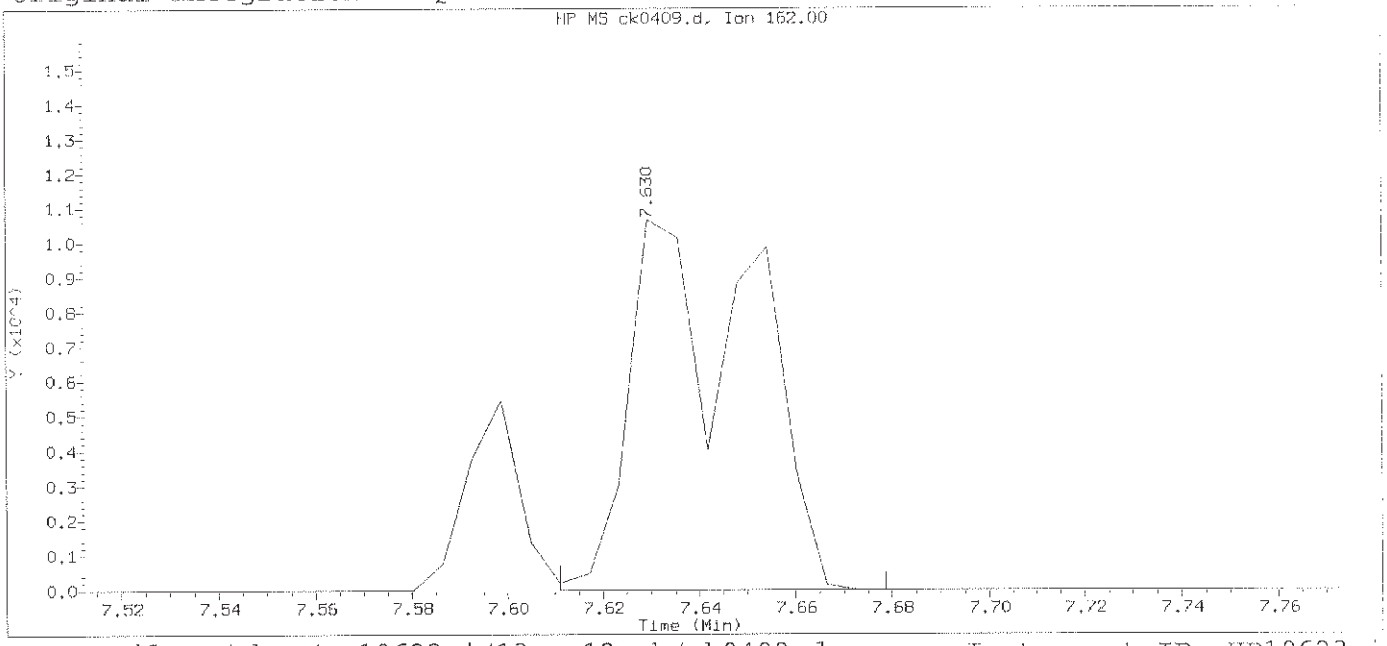
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

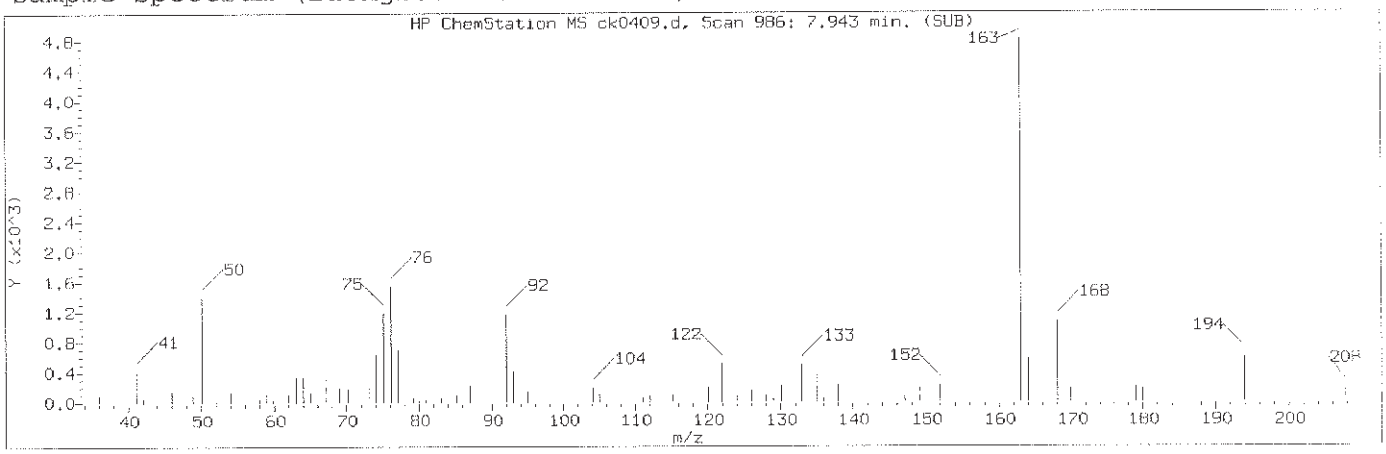
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

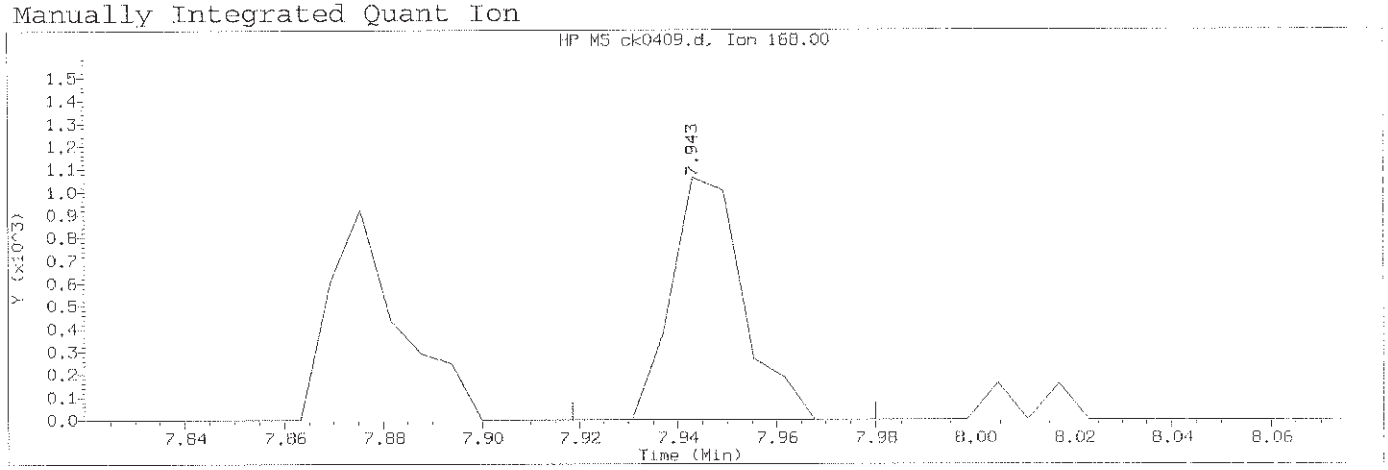
Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9644		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area (flag)	: 1068M		
On-Column Amount (ng/ul)	: 3.1474		
Integration start scan	: 981	Integration stop scan:	991
Y at integration start	: 0	Y at integration end:	0

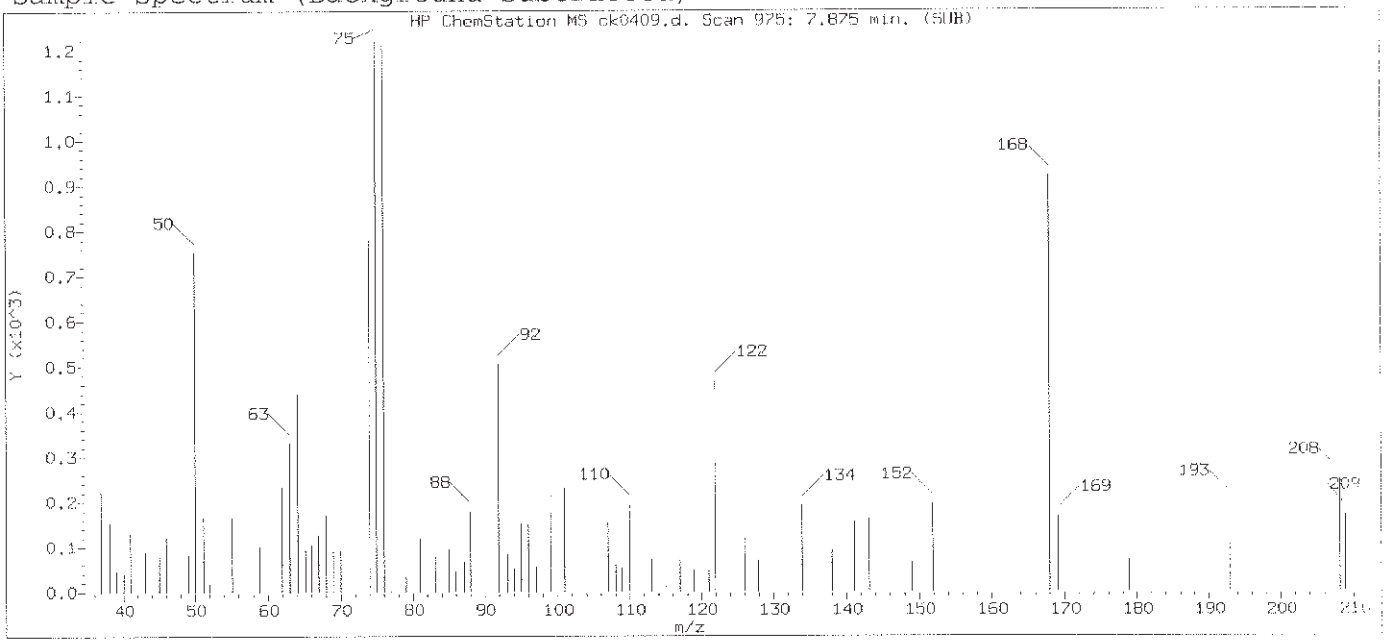
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

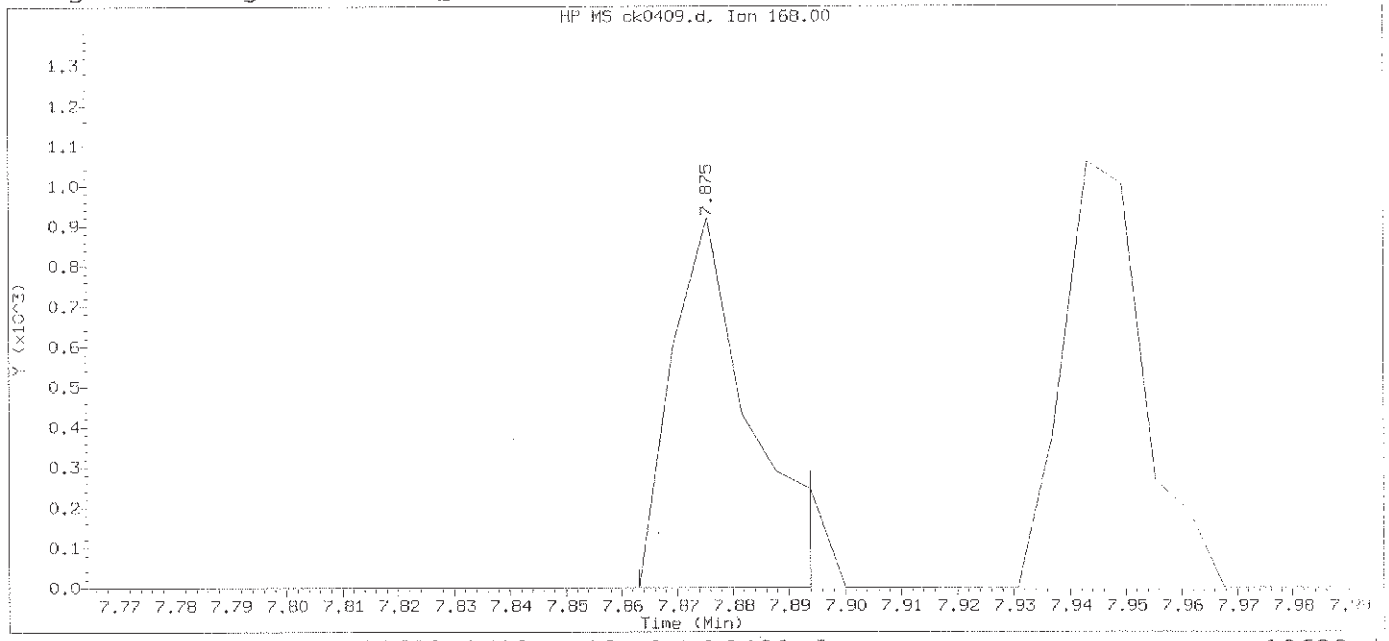
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

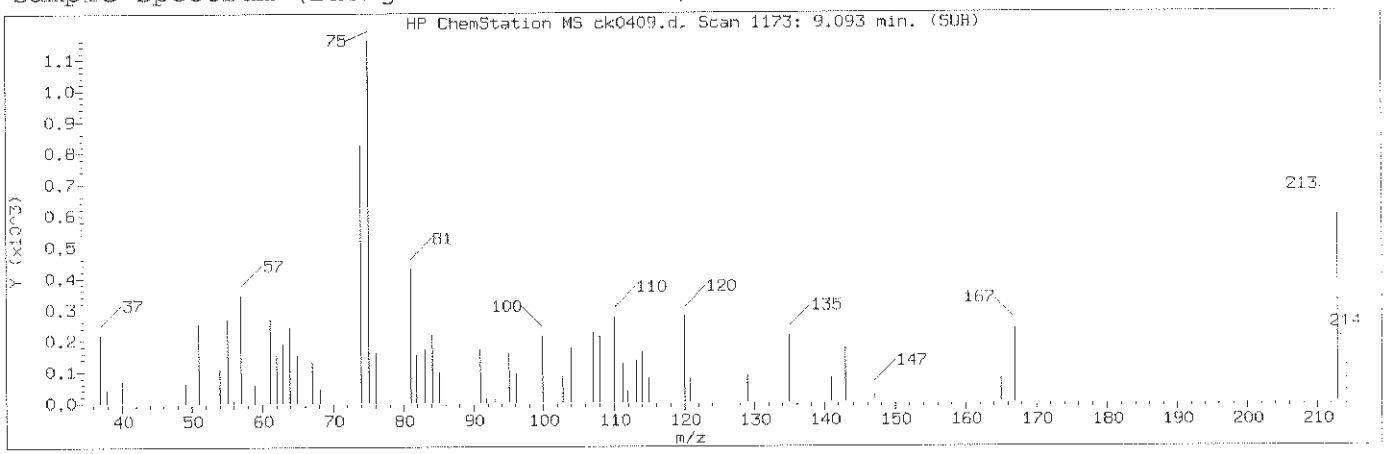
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

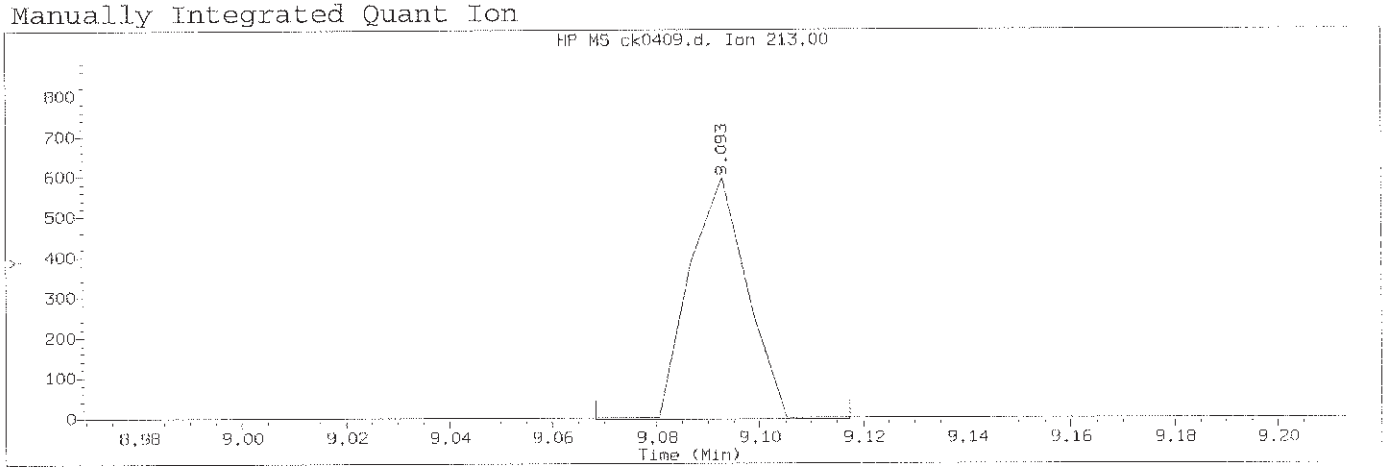
Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 975		
Retention Time (minutes)	: 7.875		
Quant Ion	: 168.00		
Area	: 873		
On-column Amount (ng/ul)	: 3.0982		
Integration start scan	: 972	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 470M		
On-Column Amount (ng/ul)	: 6.9925		
Integration start scan	: 1168	Integration stop scan:	1176
Y at integration start	: -5	Y at integration end:	-5

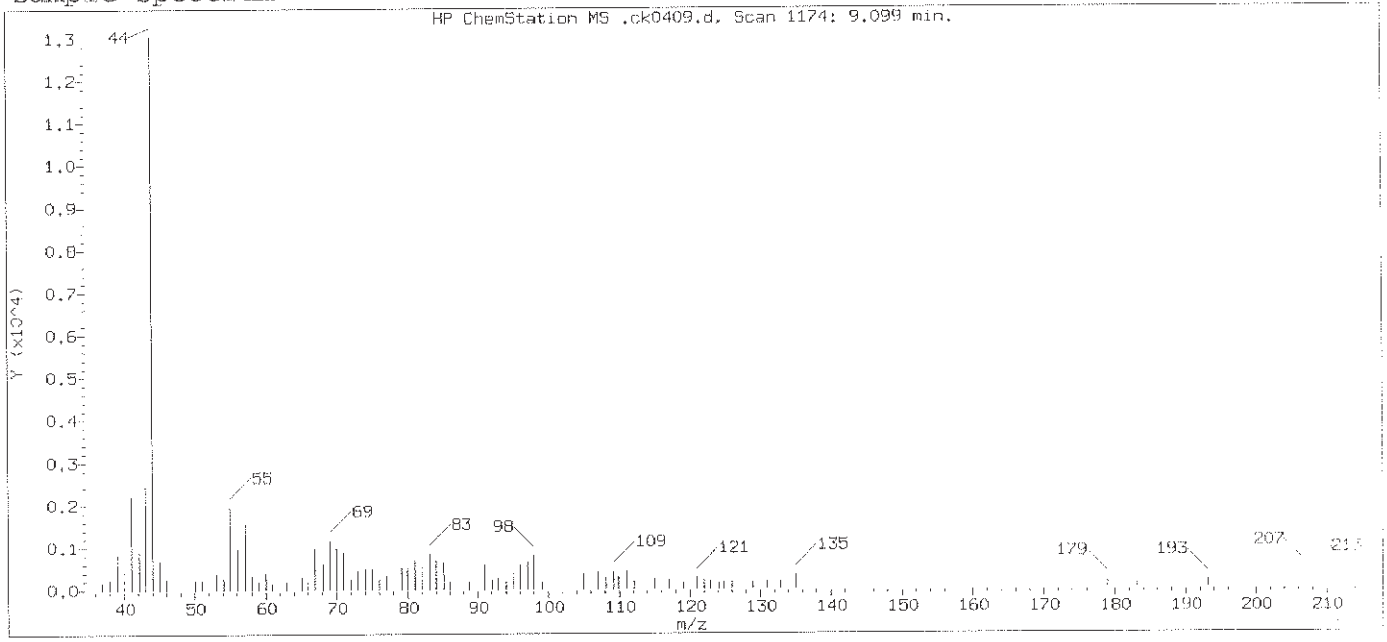
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

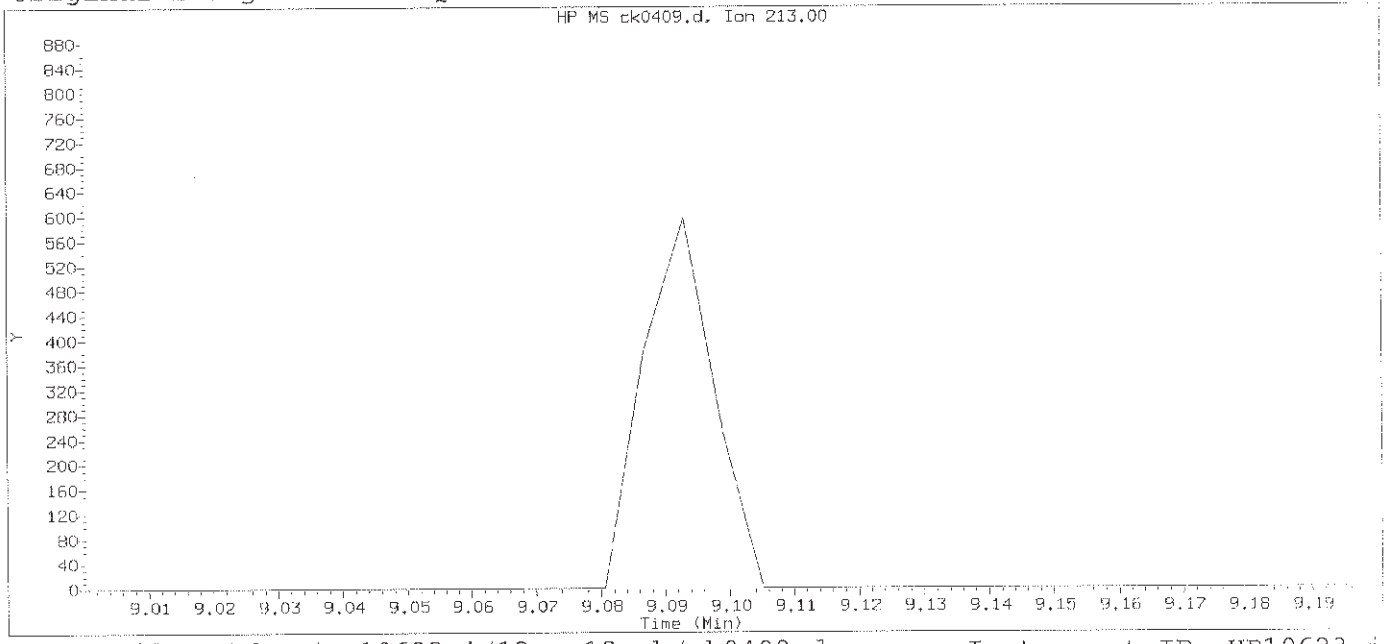
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

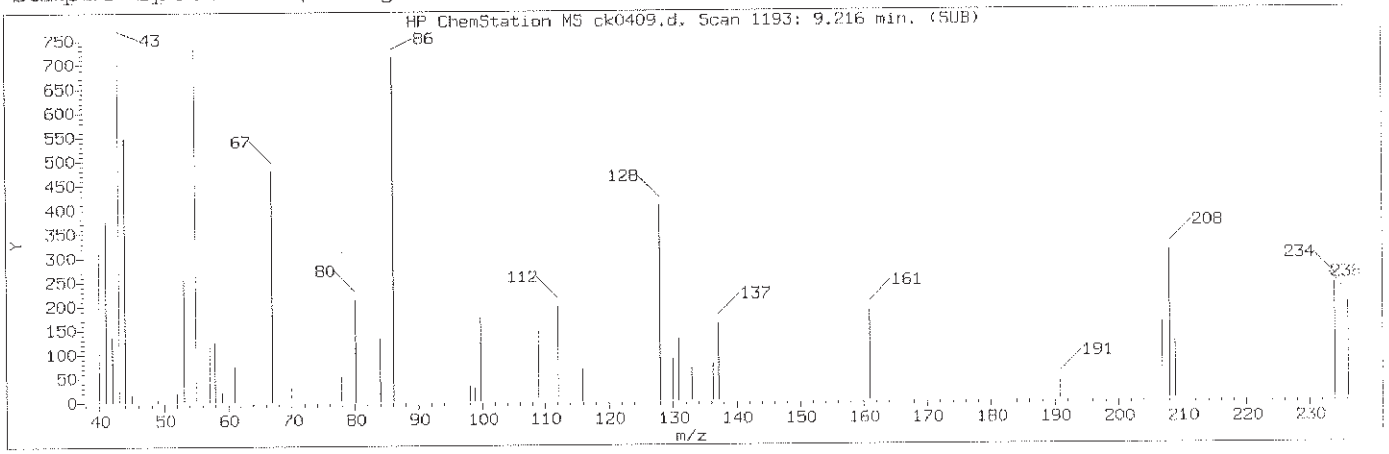
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11.l
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

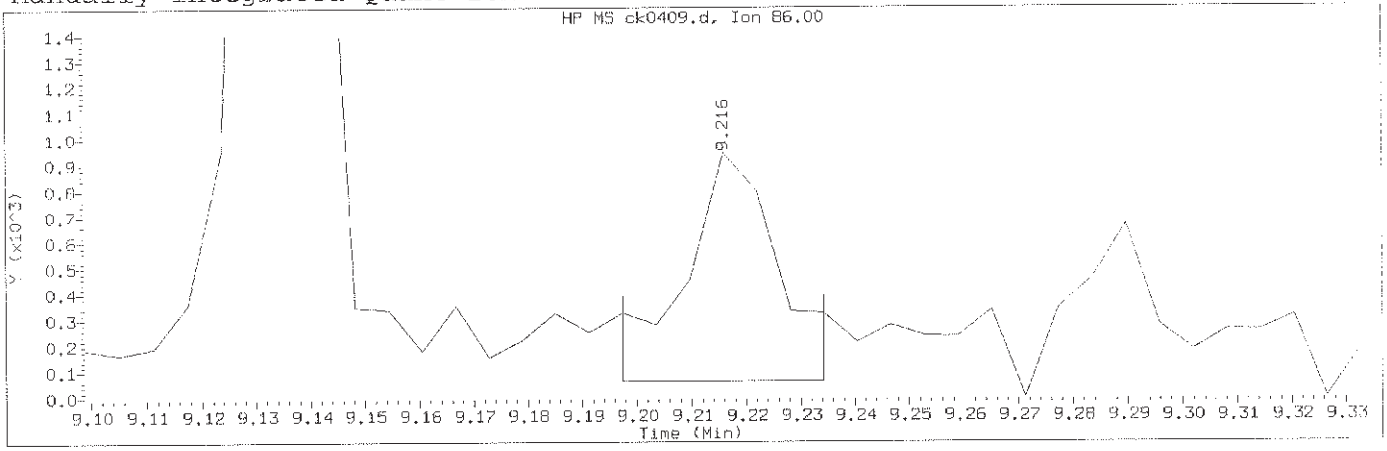
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1193		
Retention Time (minutes)	: 9.216		
Quant Ion	: 86.00		
Area (flag)	: 1113M		
On-Column Amount (ng/ul)	: 0.1600		
Integration start scan	: 1189	Integration stop scan:	1195
Y at integration start	: 62	Y at integration end:	62

Reason for manual integration: improper integration

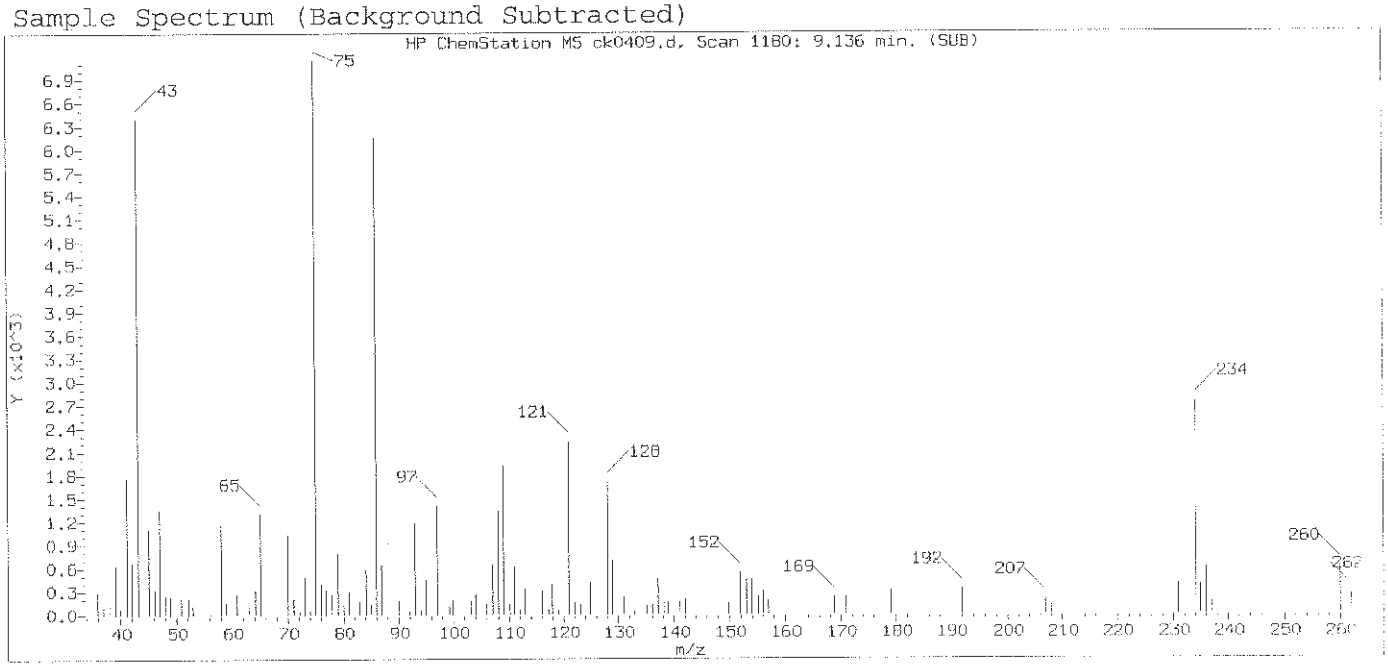
Analyst responsible for change: Digitally signed by Mark A. Clark on 11/13/2013 at 01:48. Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

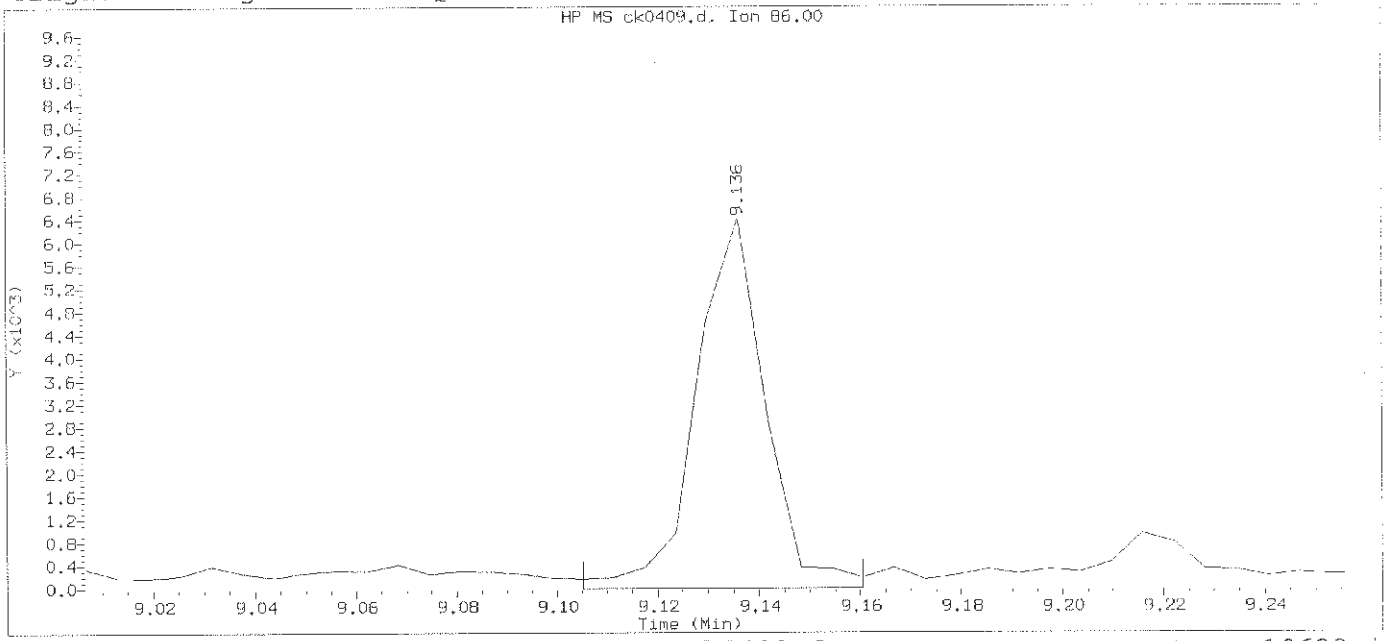
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

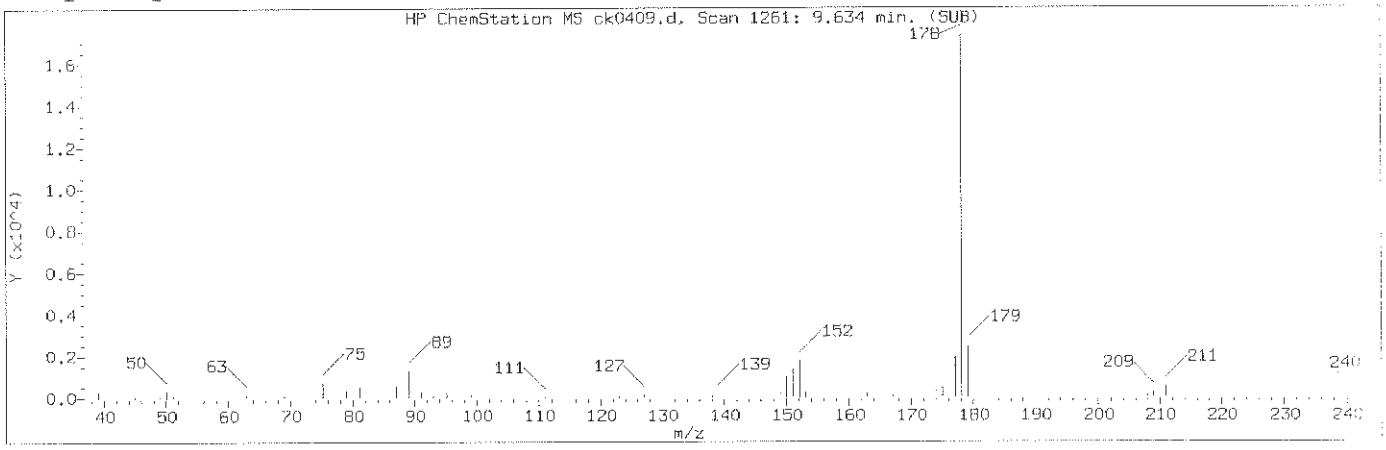
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

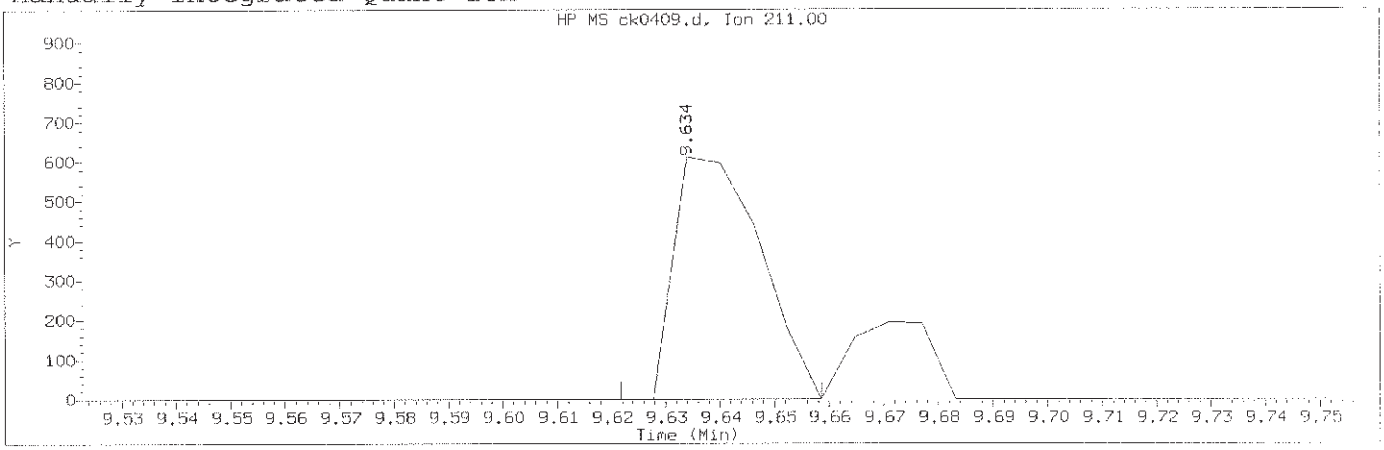
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5989		
On-column Amount (ng/ul)	: 0.8607		
Integration start scan	: 1174	Integration stop scan:	1183
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 673M		
On-Column Amount (ng/ul)	: 6.9625		
Integration start scan	: 1258	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

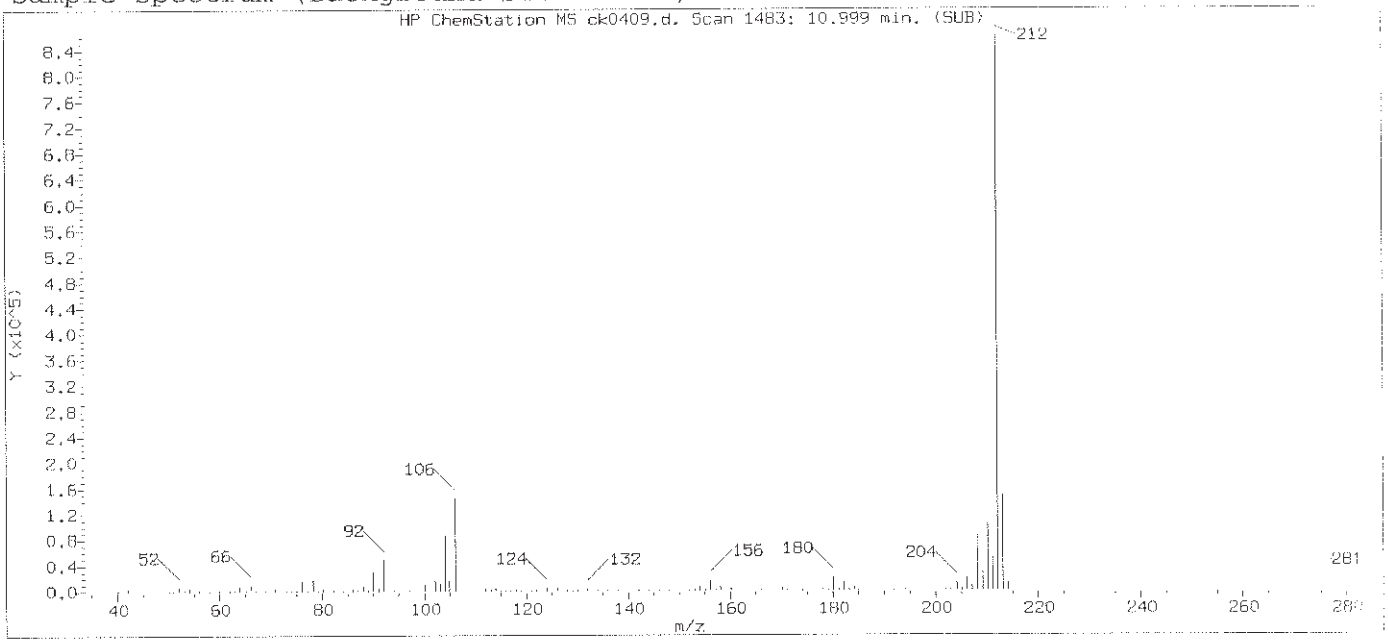
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 8.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

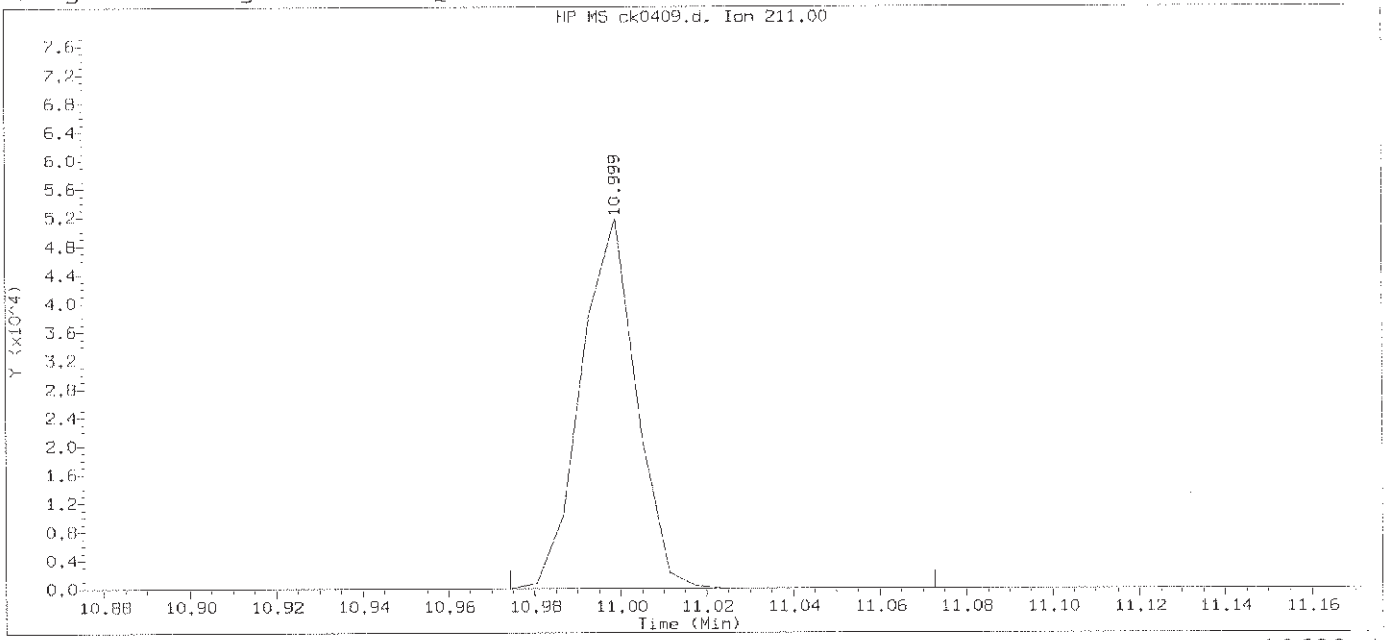
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 45885		
On-column Amount (ng/ul)	: 16.5287		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

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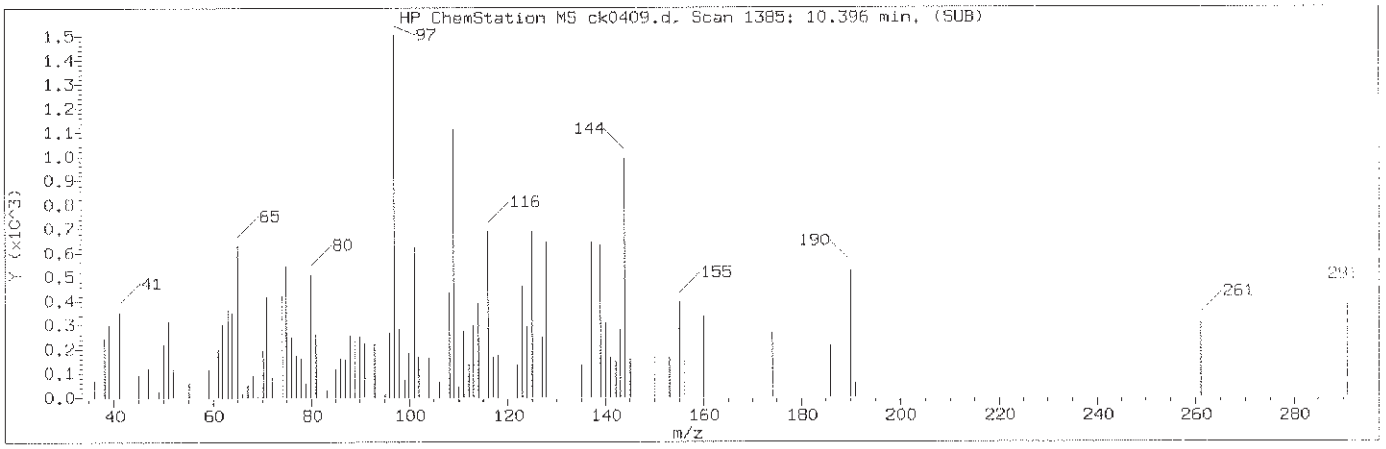
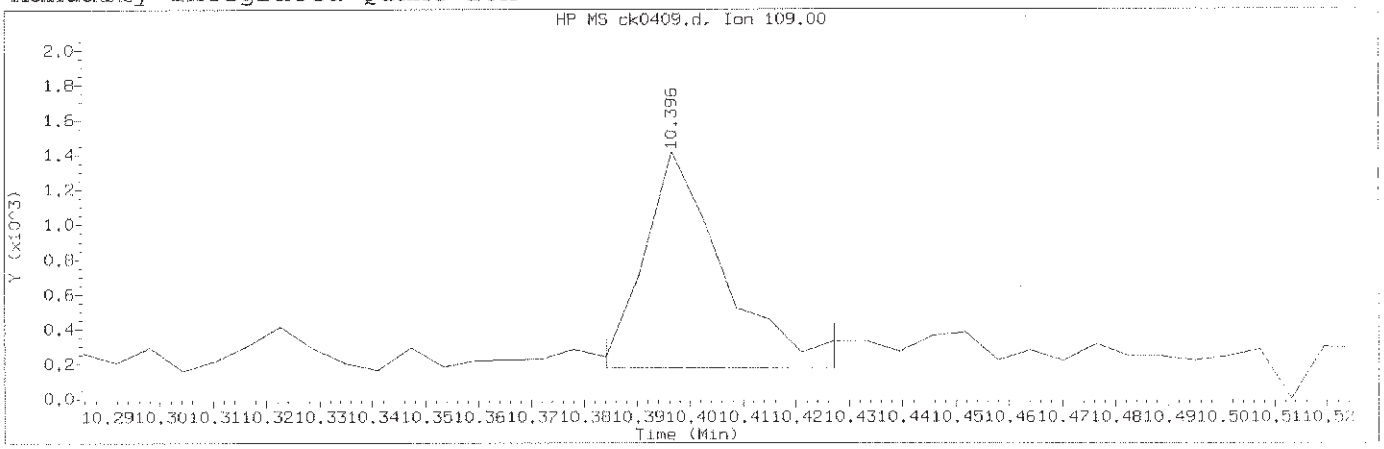
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1385		
Retention Time (minutes)	: 10.396		
Quant Ion	: 109.00		
Area (flag)	: 1300M		
On-Column Amount (ng/ul)	: 3.1615		
Integration start scan	: 1382	Integration stop scan:	1389
Y at integration start	: 178	Y at integration end:	178

Reason for manual integration: improper integration

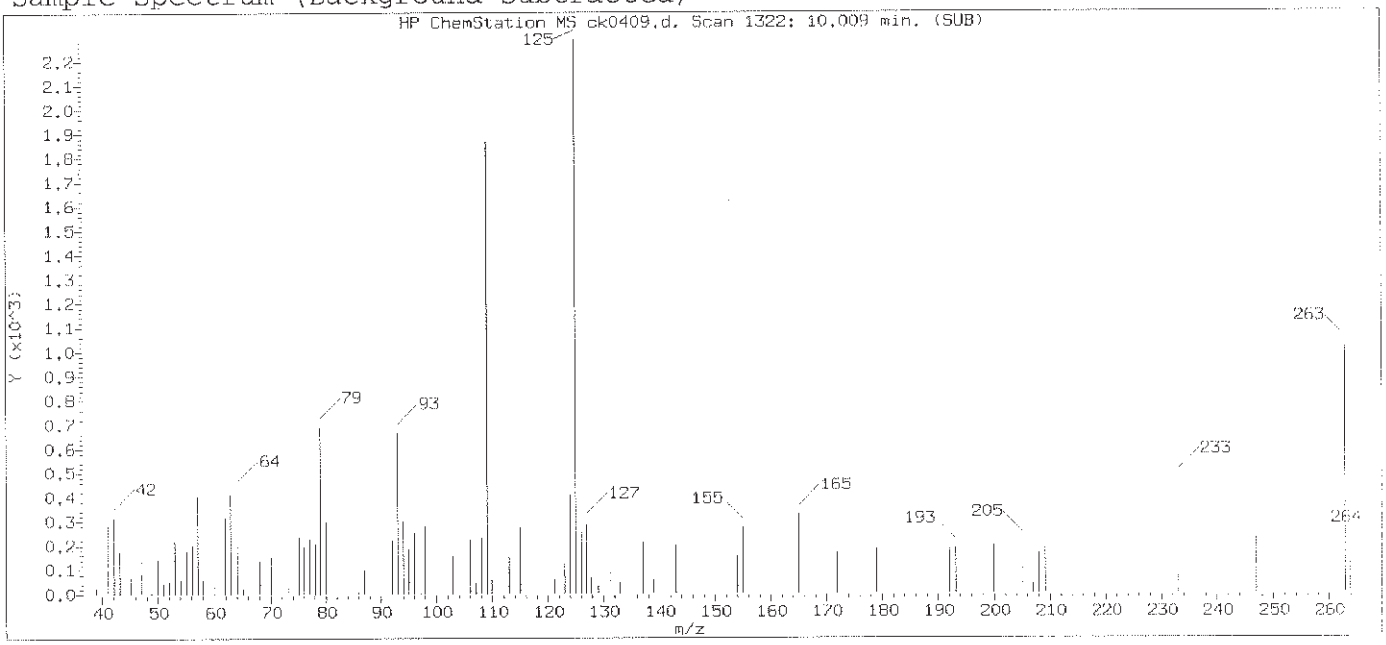
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.0 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

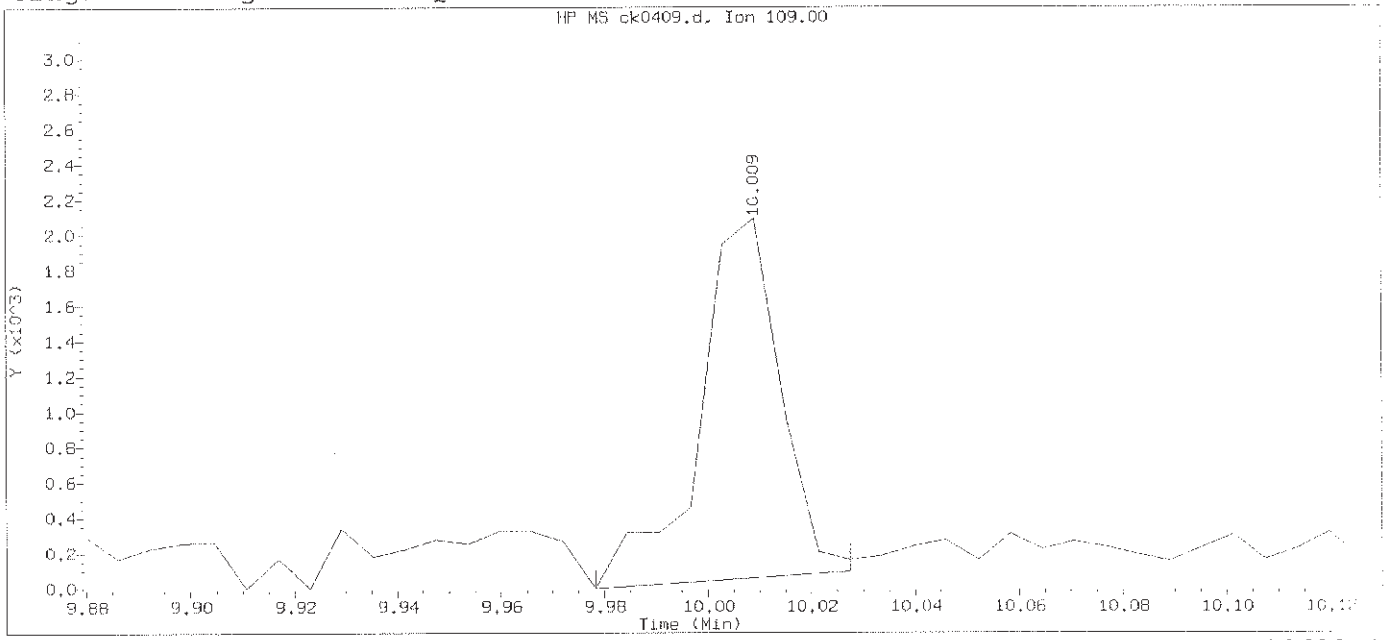
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1322		
Retention Time (minutes)	: 10.009		
Quant Ion	: 109.00		
Area	: 2207		
On-column Amount (ng/ul)	: 3.3110		
Integration start scan	: 1316	Integration stop scan:	1324
Y at integration start	: 0	Y at integration end:	95

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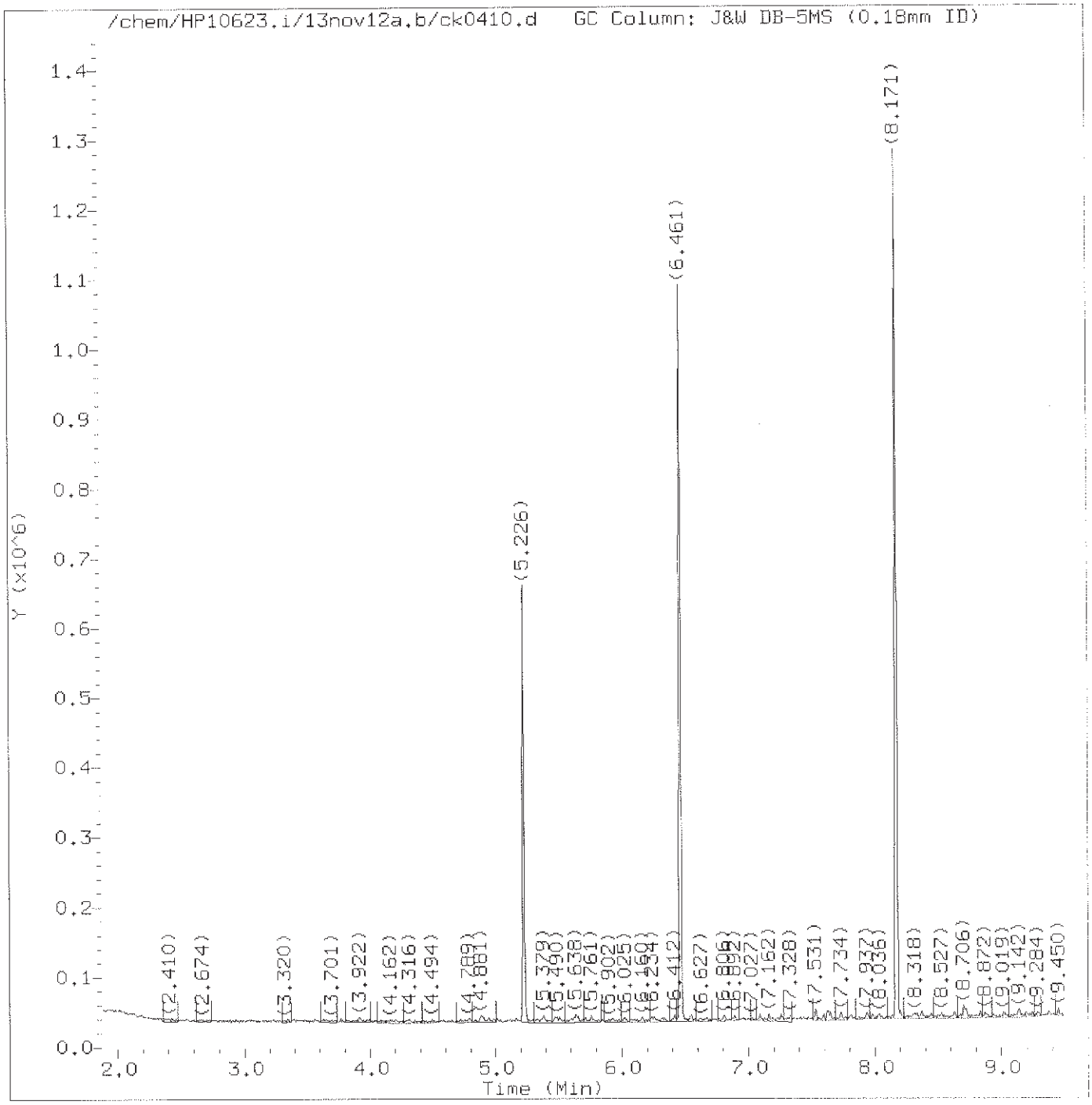
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

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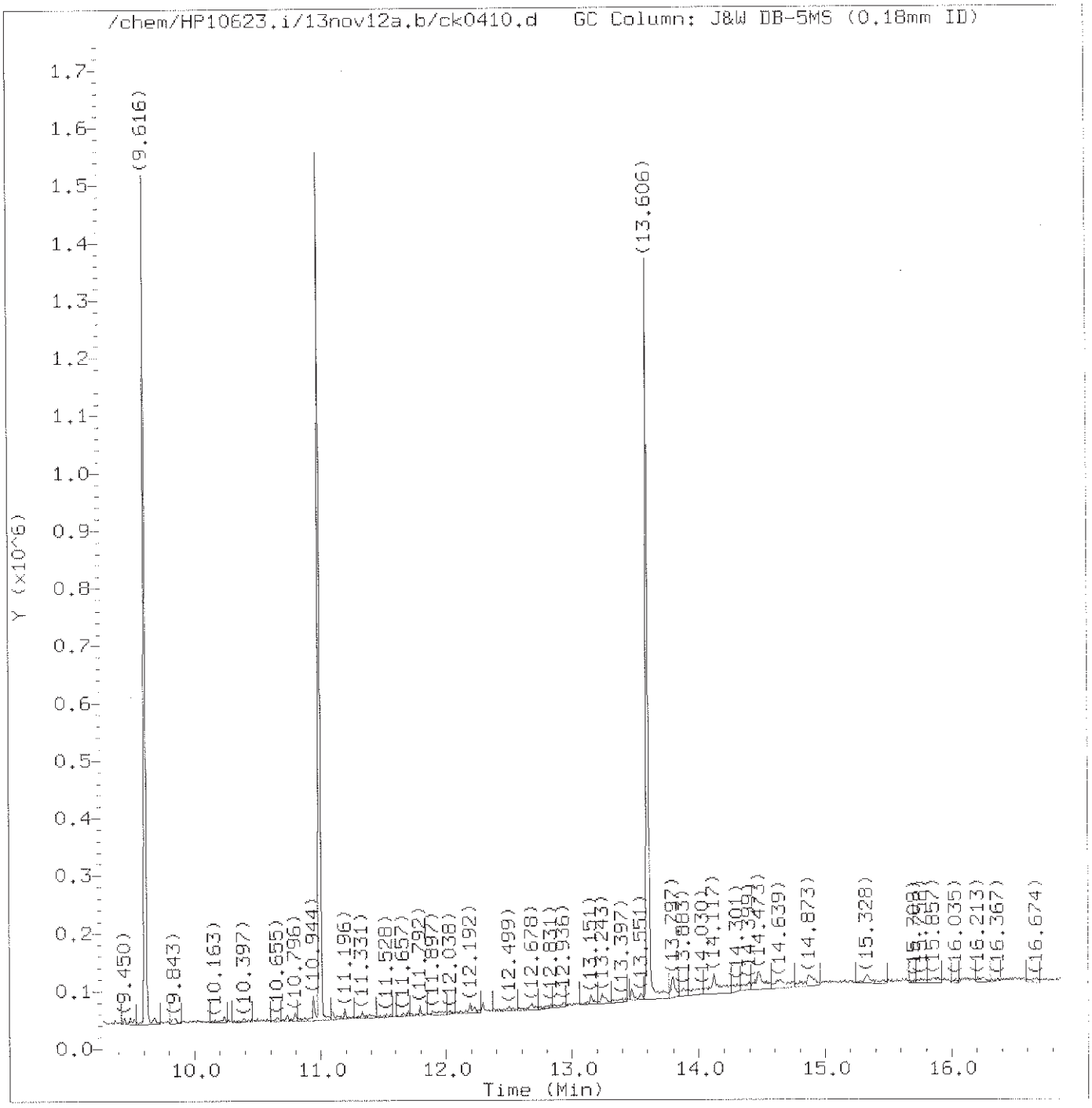
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d
Injection date and time: 12-NOV-2013 13:27

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: 0.1mdla111

Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10

Lab Sample ID: PAHMDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.916	112	2454	0.175
14)$Phenol-d5	(1)	4.881	99	2646	0.129
15)$Phenol-d6	(1)	4.881	99	2646	0.129
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93509	20.000
38)$Nitrobenzene-d5	(2)	5.761	82	1933	0.109
52)*Naphthalene-d8	(2)	6.461	136	412282	20.000
53) Naphthalene	(2)	6.480	128	2590	0.118
70) 2-Methylnaphthalene	(2)	7.162	142	1857	0.120
71) 1-Methylnaphthalene	(2)	7.255	142	1549	0.109
78)$2-Fluorobiphenyl	(3)	7.531	172	3592	0.113
95) Acenaphthylene	(3)	8.029	152	2641	0.118
98)*Acenaphthene-d10	(3)	8.171	164	253744	20.000
99) Acenaphthene	(3)	8.202	153	1735	0.112
111) Fluorene	(3)	8.706	166	2120	0.116
119)$2,4,6-Tribromophenol	(3)	8.939	330	293	0.096
127) Hexachlorobenzene	(4)	9.241	284	533	0.126
135)*Phenanthrene-d10	(4)	9.616	188	463222	20.000
137) Phenanthrene	(4)	9.634	178	3119	0.116
138) Anthracene	(4)	9.690	178	2896	0.104
147) Fluoranthene	(4)	10.796	202	3405	0.113
167)*Pyrene-d10	(5)	10.993	212	576214	20.000
154) Pyrene	(5)	11.011	202	3890	0.122
156)$Terphenyl-d14	(5)	11.196	244	4477	0.109
166) Benzo(a)anthracene	(5)	12.192	228	2810	0.095
168) Chrysene	(5)	12.223	228	2914	0.102
172) Benzo(b)fluoranthene	(6)	13.243	252	2820	0.090
173) Benzo(k)fluoranthene	(6)	13.268	252	3104	0.097
174) Benzo(a)pyrene	(6)	13.551	252	4571	0.149
175)*Perylene-d12	(6)	13.606	264	513658	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	2845	0.087
178) Dibenz(a,h)anthracene	(6)	14.645	278	2454	0.090
179) Benzo(g,h,i)perylene	(6)	14.904	276	2648	0.095

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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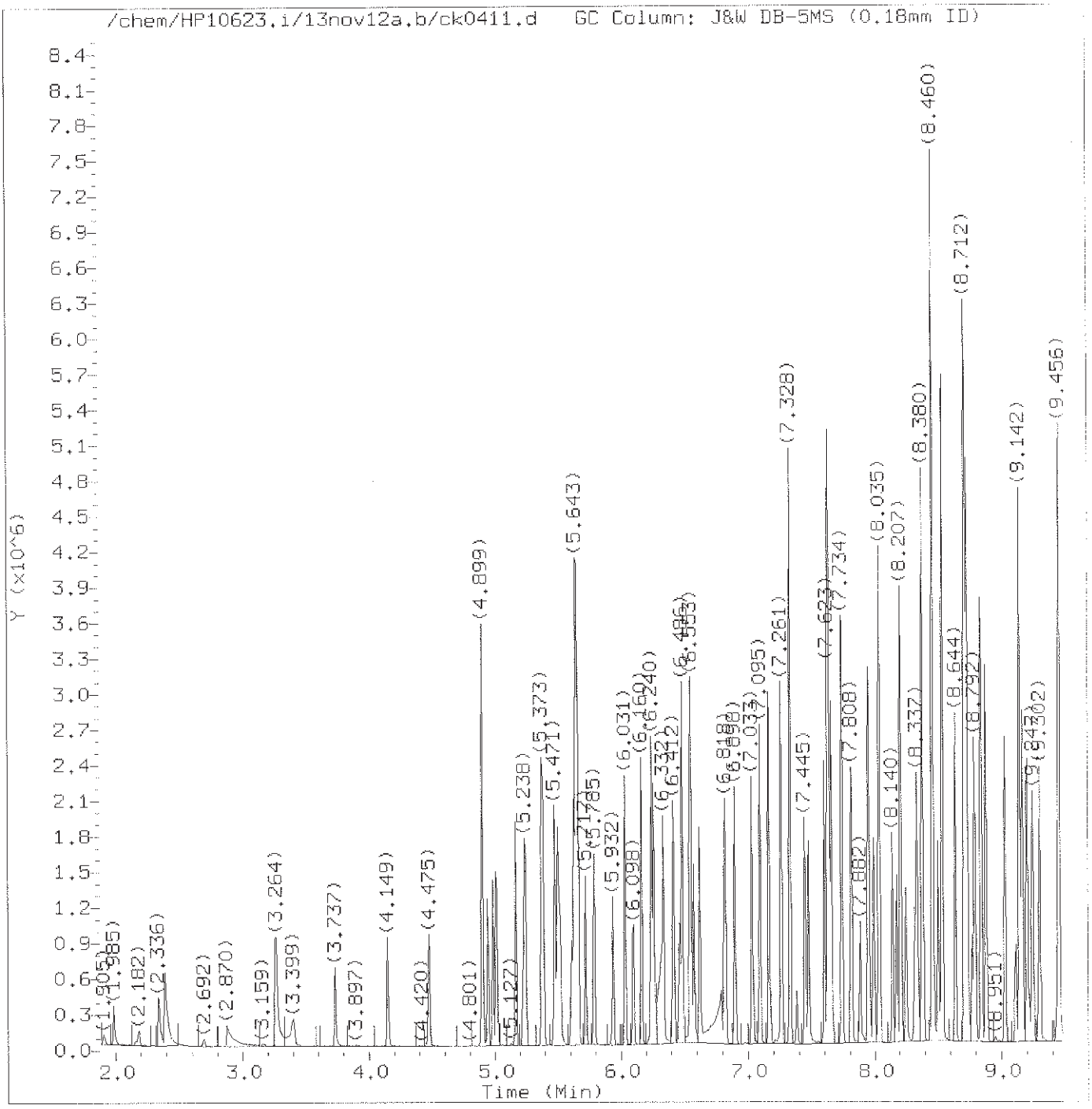
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

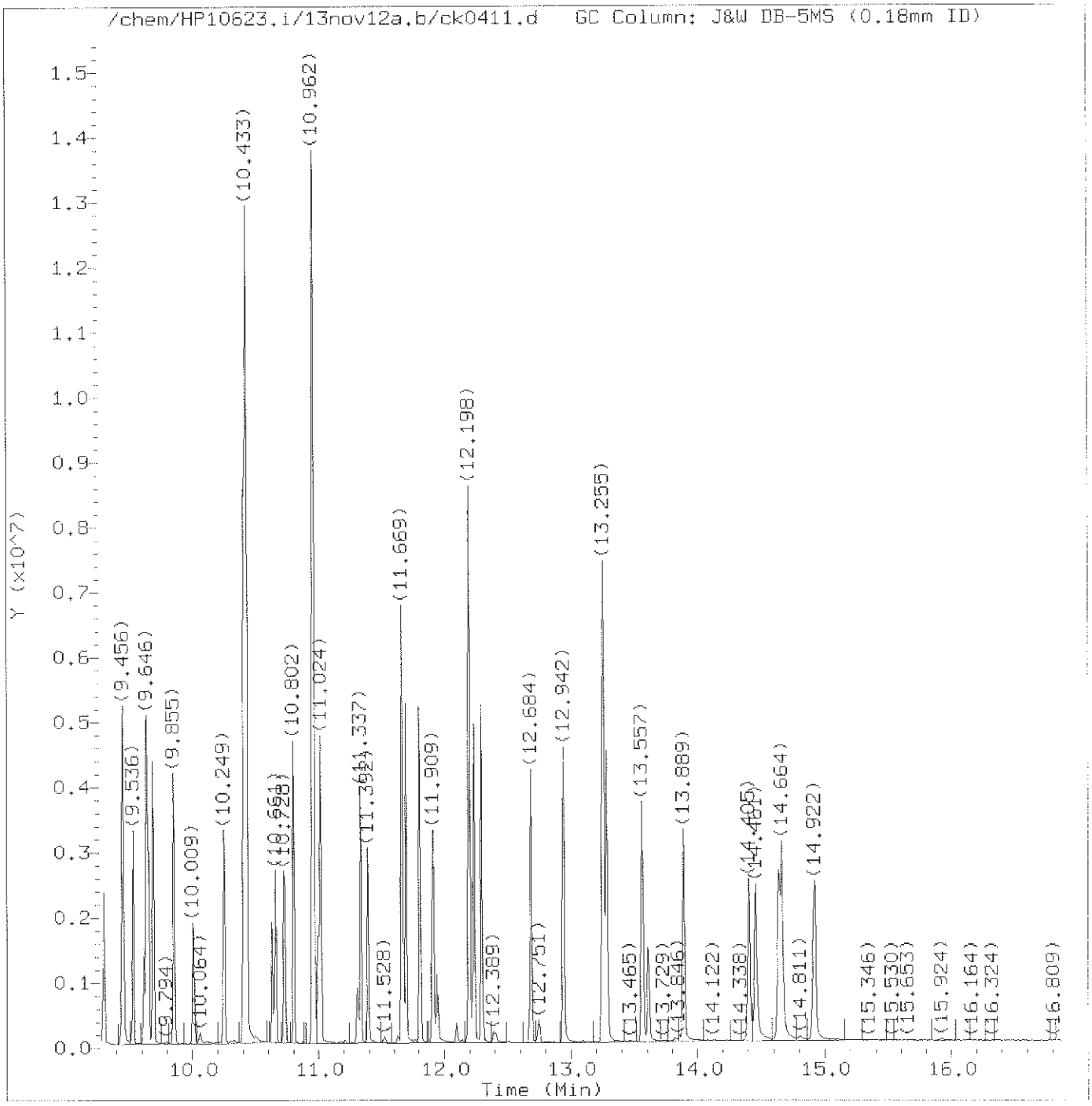
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicvall1
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	149311	47.957
2) N-Nitrosodimethylamine	(1)	2.342	74	252012	43.720
3) Pyridine	(1)	2.391	79	424785	47.535
5) 2-Picoline	(1)	3.264	93	431571	47.327
6) N-Nitrosomethylethylamine	(1)	3.399	88	206692	47.413
7) Methyl methanesulfonate	(1)	3.737	80	237169	54.109
9)$2-Fluorophenol	(1)	3.922	112	547	0.038
10) N-Nitrosodiethylamine	(1)	4.149	102	207816	47.985
11) Ethyl methanesulfonate	(1)	4.475	109	201755	51.157
15)$Phenol-d6	(1)	4.844	99	463	0.022
14)$Phenol-d5	(1)	4.844	99	463	0.022
13) Aniline	(1)	4.899	93	710385	49.000
16) Phenol	(1)	4.899	94	587646	48.067
18) bis(2-Chloroethyl)ether	(1)	4.986	93	418906	48.264
19) 2-Chlorophenol	(1)	5.010	128	371941	48.770
20) 1,3-Dichlorobenzene	(1)	5.164	146	387005	50.286
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	95185	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	394824	50.270
24) Benzyl alcohol	(1)	5.373	108	294737	49.427
25) 1,2-Dichlorobenzene	(1)	5.385	146	374976	50.864
206) Indene	(1)	5.471	115	599486	36.404
26) 2-Methylphenol	(1)	5.502	108	397816	49.028
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	470664	43.955
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	470664	44.068
29) N-Nitrosopyrrolidine	(1)	5.607	100	241796	49.784
30) Acetophenone	(1)	5.625	105	583217	48.210
31) N-Nitroso-di-n-propylamine	(1)	5.643	70	355052	45.852
33) 4-Methylphenol	(1)	5.650	108	469056	48.838
32) N-Nitrosomorpholine	(1)	5.650	56	262456	47.568
34) o-Toluidine	(1)	5.662	106	675835	48.770
38)$Nitrobenzene-d5	(2)	5.717	82	41086	2.154
37) Hexachloroethane	(1)	5.717	117	147419	49.317
39) Nitrobenzene	(2)	5.785	77	451476	44.623
40) N-Nitrosopiperidine	(2)	5.932	114	223398	49.773
41) Isophorone	(2)	6.031	82	891527	48.528
42) 2-Nitrophenol	(2)	6.098	139	173636	49.367
44) 2,4-Dimethylphenol	(2)	6.160	107	436233	48.254
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	191261	50.741
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	527676	47.271
47) Benzoic acid	(2)	6.314	105	586189	100.038

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	6.332	162	316817	51.530
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	347358	53.638
52)*Naphthalene-d8	(2)	6.461	136	442728	20.000
53) Naphthalene	(2)	6.486	128	1172491	49.915
56) 4-Chloroaniline	(2)	6.547	127	529549	51.732
57) 2,6-Dichlorophenol	(2)	6.553	162	300451	51.884
58) Hexachloropropene	(2)	6.578	213	190399	51.986
60) Hexachlorobutadiene	(2)	6.621	225	167513	51.574
194) Quinoline	(2)	6.818	129	818901	50.576
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	337694	38.170
68) 4-Chloro-3-methylphenol	(2)	7.033	107	396928	50.498
69) Safrole	(2)	7.095	162	320659	51.534
70) 2-Methylnaphthalene	(2)	7.162	142	821412	49.274
71) 1-Methylnaphthalene	(2)	7.261	142	775772	50.857
72) Hexachlorocyclopentadiene	(3)	7.328	237	324007	114.668
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	325095	49.717
74) cis-Isosafrole	(3)	7.377	162	59569	5.674
78)$2-Fluorobiphenyl	(3)	7.445	172	746	0.022
75) 2,4,6-Trichlorophenol	(3)	7.445	196	216899	50.837
77) 2,4,5-Trichlorophenol	(3)	7.476	196	247588	53.224
80) Isosafrole	(3)	7.599	162	341611	51.648
79) trans-Isosafrole	(3)	7.599	162	341611	45.967
83) 1,1'-Biphenyl	(3)	7.629	154	1002793	47.214
84) 2-Chloronaphthalene	(3)	7.636	162	909334M	58.779
85) 1-Chloronaphthalene	(3)	7.654	162	751847M	49.381
88) Diphenyl ether	(3)	7.734	170	533977	50.470
89) 2-Nitroaniline	(3)	7.740	138	257838	51.088
90) 1,4-Naphthoquinone	(3)	7.814	158	407751	62.631
91) 1,4-Dinitrobenzene	(3)	7.882	168	101153	46.695
92) Dimethylphthalate	(3)	7.943	163	940559	51.095
93) 1,3-Dinitrobenzene	(3)	7.955	168	139577	47.856
94) 2,6-Dinitrotoluene	(3)	7.992	165	208212	54.307
95) Acenaphthylene	(3)	8.035	152	1297511	53.722
97) 3-Nitroaniline	(3)	8.140	138	253015	54.041
98)*Acenaphthene-d10	(3)	8.177	164	274130	20.000
99) Acenaphthene	(3)	8.207	153	830165	49.665
100) 2,4-Dinitrophenol	(3)	8.251	184	147734	99.414
103) 4-Nitrophenol	(3)	8.318	109	152004	52.408
101) Pentachlorobenzene	(3)	8.337	250	293115	51.874
104) Dibenzofuran	(3)	8.380	168	1131103	49.399

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 2,4-Dinitrotoluene	(3)	8.380	165	273983	55.301
106) 1-Naphthylamine	(3)	8.460	143	1980480	105.262
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	192007	58.598
108) 2-Naphthylamine	(3)	8.539	143	1976694	102.683
109) Diethylphthalate	(3)	8.644	149	968057	50.909
111) Fluorene	(3)	8.712	166	1007496	51.140
110) Thionazin	(3)	8.718	107	199292	47.522
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	440587	50.271
113) 5-Nitro-o-toluidine	(3)	8.730	152	289839	55.721
114) 4-Nitroaniline	(3)	8.742	138	280640	53.304
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	111806	49.870
117) N-Nitrosodiphenylamine	(4)	8.841	169	878764	51.002
202) NDPA as diphenylamine	(4)	8.841	169	878764	50.881
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1180053	47.812
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	162188	46.106
121) 1,3,5-Trinitrobenzene	(4)	9.111	213	75929	48.720
122) Diallate (peak 1)	(4)	9.136	86	429247	33.987
123) Phorate	(4)	9.142	75	679865	44.709
124) Phenacetin	(4)	9.167	108	601455	50.511
125) 4-Bromophenyl-phenylether	(4)	9.204	248	243781	51.350
126) Diallate (peak 2)	(4)	9.222	86	62012	11.306
127) Hexachlorobenzene	(4)	9.247	284	236757	50.510
128) Dimethoate	(4)	9.302	87	445676	47.929
131) Pentachlorophenol	(4)	9.443	266	139666	53.726
133) 4-Aminobiphenyl	(4)	9.456	169	1247866	66.977
132) Pentachloronitrobenzene	(4)	9.456	237	105666	51.930
134) Pronamide	(4)	9.536	173	442161	49.235
135)*Phenanthrene-d10	(4)	9.622	188	514071	20.000
136) Dinoseb	(4)	9.640	211	155709	48.621
137) Phenanthrene	(4)	9.646	178	1490821	49.875
138) Anthracene	(4)	9.695	178	1578759	51.311
140) Carbazole	(4)	9.855	167	1562784	52.049
141) Methyl parathion	(4)	10.009	109	299763	48.830
142) Di-n-butylphthalate	(4)	10.249	149	1787952	50.471
143) Parathion	(4)	10.409	109	232212	51.490
144) 4-Nitroquinoline-1-oxide	(4)	10.433	190	2149290	770.330
156)$Terphenyl-d14	(5)	10.661	244	591	0.012
146) Isodrin	(4)	10.661	193	162361	48.065
147) Fluoranthene	(4)	10.802	202	1770588	52.975
152) Benzidine	(5)	10.968	184	6726223	246.851

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167)*Pyrene-d10	(5)	10.999	212	665610	20.000
154) Pyrene	(5)	11.024	202	1848877	50.019
158) p-Dimethylaminoazobenzene	(5)	11.337	225	382230	53.061
159) Chlorobenzilate	(5)	11.392	139	533173	47.580
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2334265	102.463
161) Butylbenzylphthalate	(5)	11.700	149	867538	49.182
162) 2-Acetylaminofluorene	(5)	11.909	181	825122	51.651
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	639098	49.725
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	309955	49.366
166) Benzo(a)anthracene	(5)	12.198	228	1778344	52.161
168) Chrysene	(5)	12.235	228	1660733	50.522
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1190472	48.643
189) 6-Methylchrysene	(5)	12.684	242	1204991	49.681
170) Di-n-octylphthalate	(6)	12.942	149	2087276	49.022
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.255	256	857518	53.573
172) Benzo(b)fluoranthene	(6)	13.255	252	1719775	49.927
173) Benzo(k)fluoranthene	(6)	13.286	252	1926453	54.819
174) Benzo(a)pyrene	(6)	13.563	252	1699768	50.559
175)*Perylene-d12	(6)	13.612	264	564114	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	850664	50.480
190) Dibenz(a,h)acridine	(6)	14.405	279	1220081	49.955
191) Dibenz(a,j)acridine	(6)	14.461	279	1426475	50.791
177) Indeno(1,2,3-cd)pyrene	(6)	14.639	276	1856821	51.912
178) Dibenz(a,h)anthracene	(6)	14.664	278	1566073	52.343
179) Benzo(g,h,i)perylene	(6)	14.922	276	1561134	51.232
129) Diallate TRANS/CIS	(4)	23.156	86	491259	45.305

* = Compound is an internal standard.

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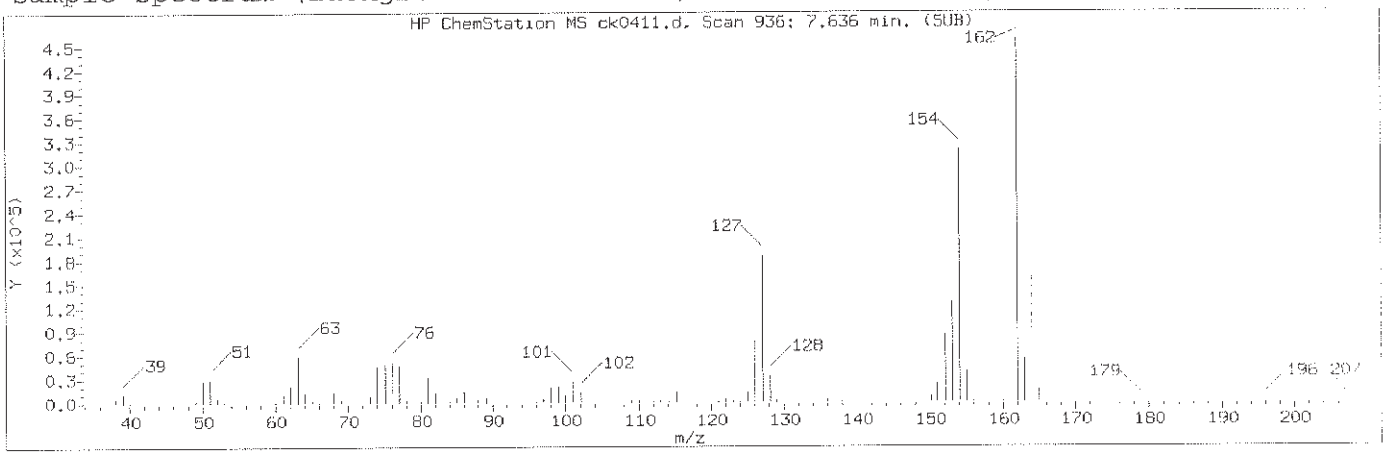
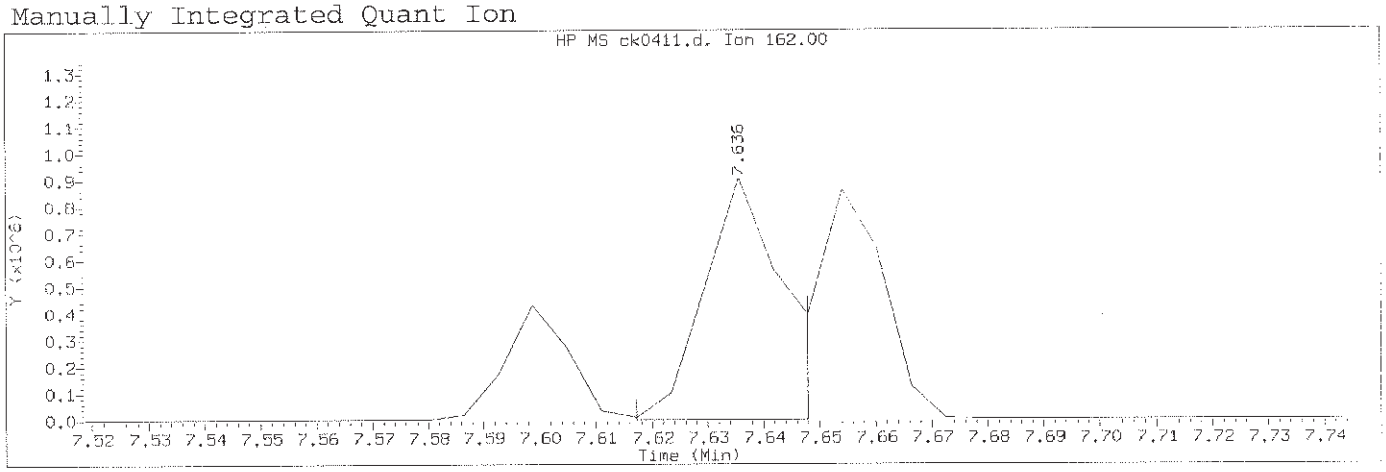
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

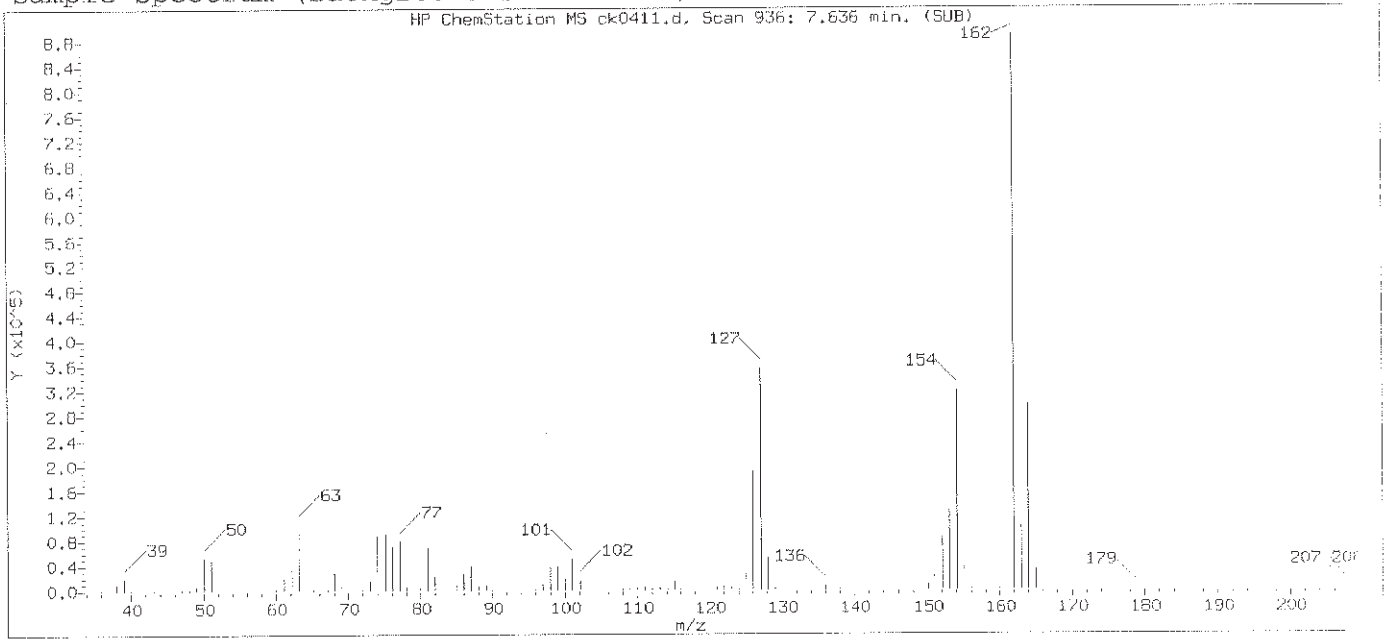
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 909334M		
On-Column Amount (ng/ul)	: 58.7790		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -854	Y at integration end:	-854

Reason for manual integration: improper integration

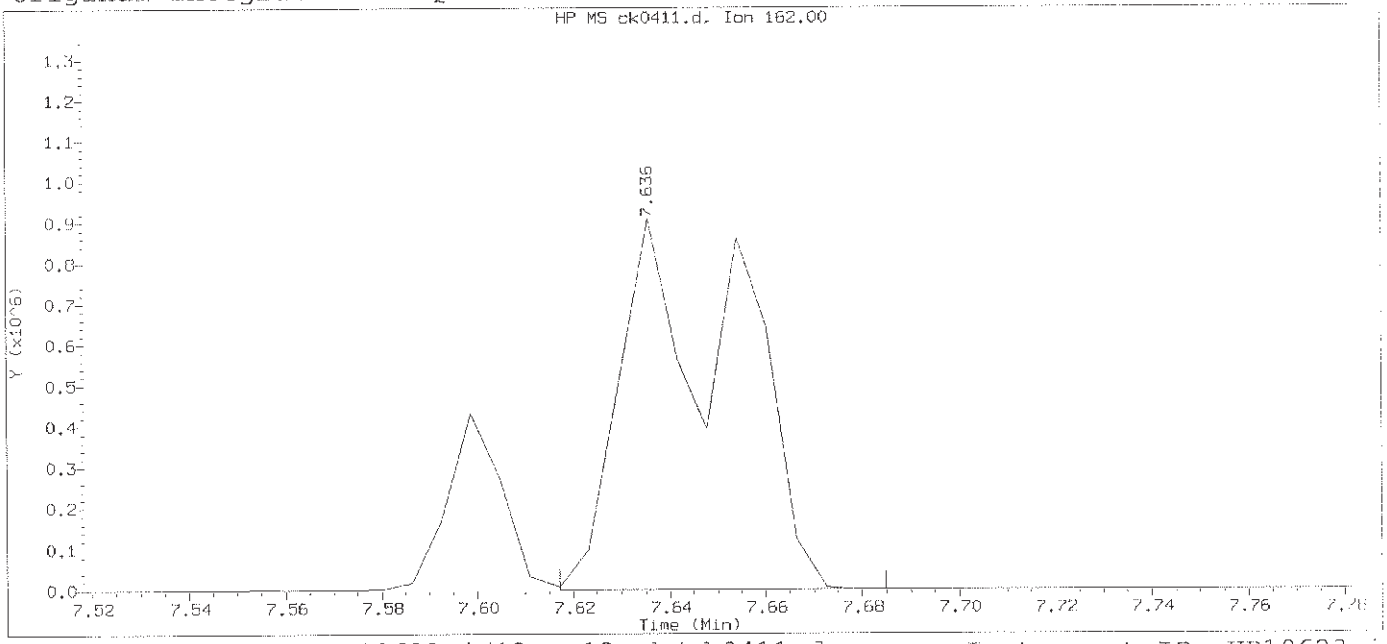
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507324		
On-column Amount (ng/ul)	: 97.4326		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 304	Y at integration end:	322

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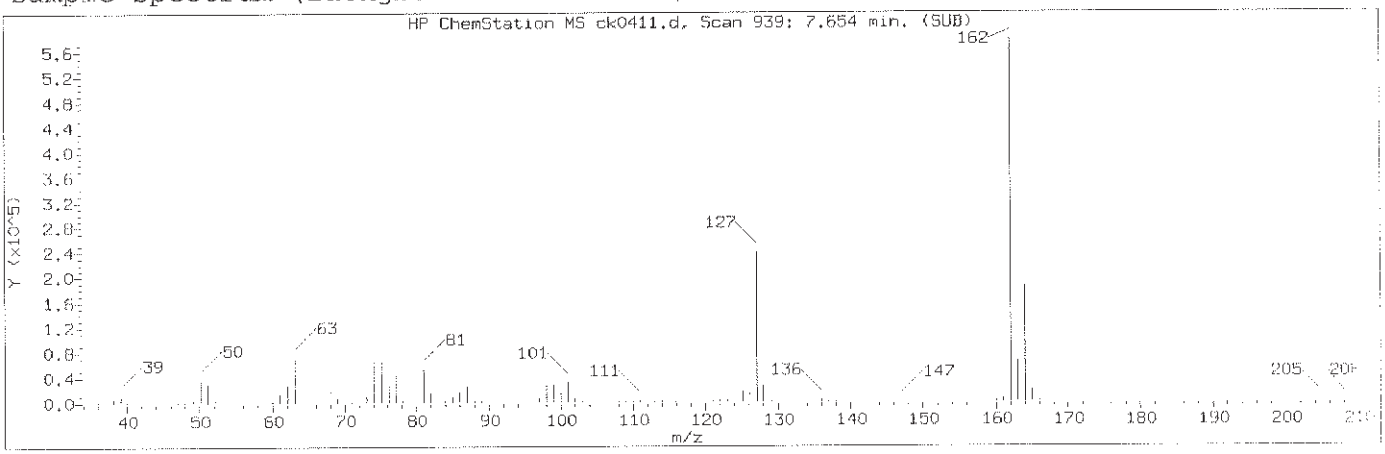
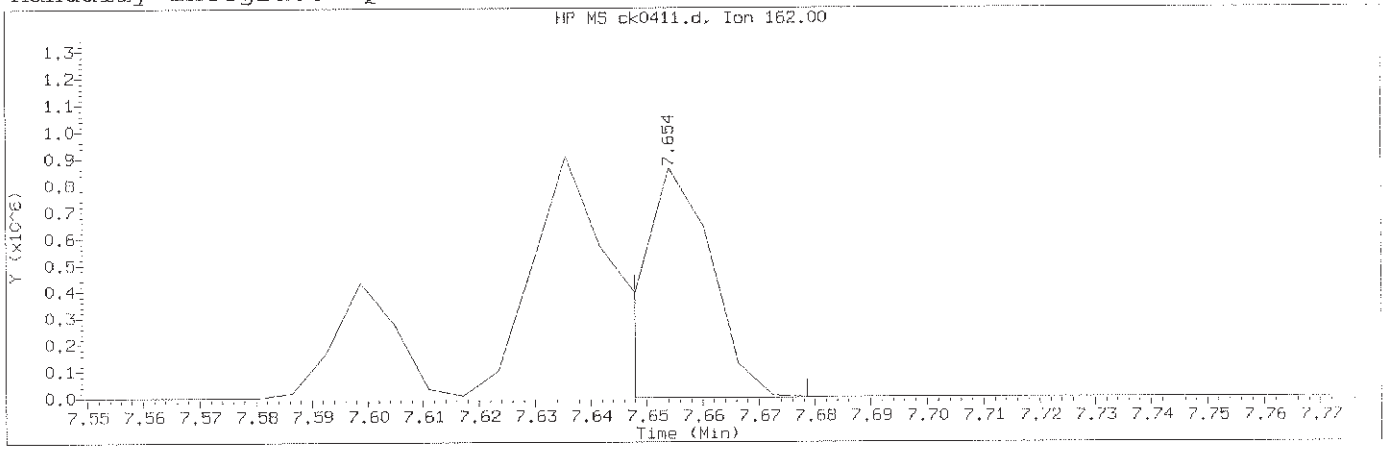
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 751847M		
On-Column Amount (ng/ul)	: 49.3814		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: -2049	Y at integration end:	-2049

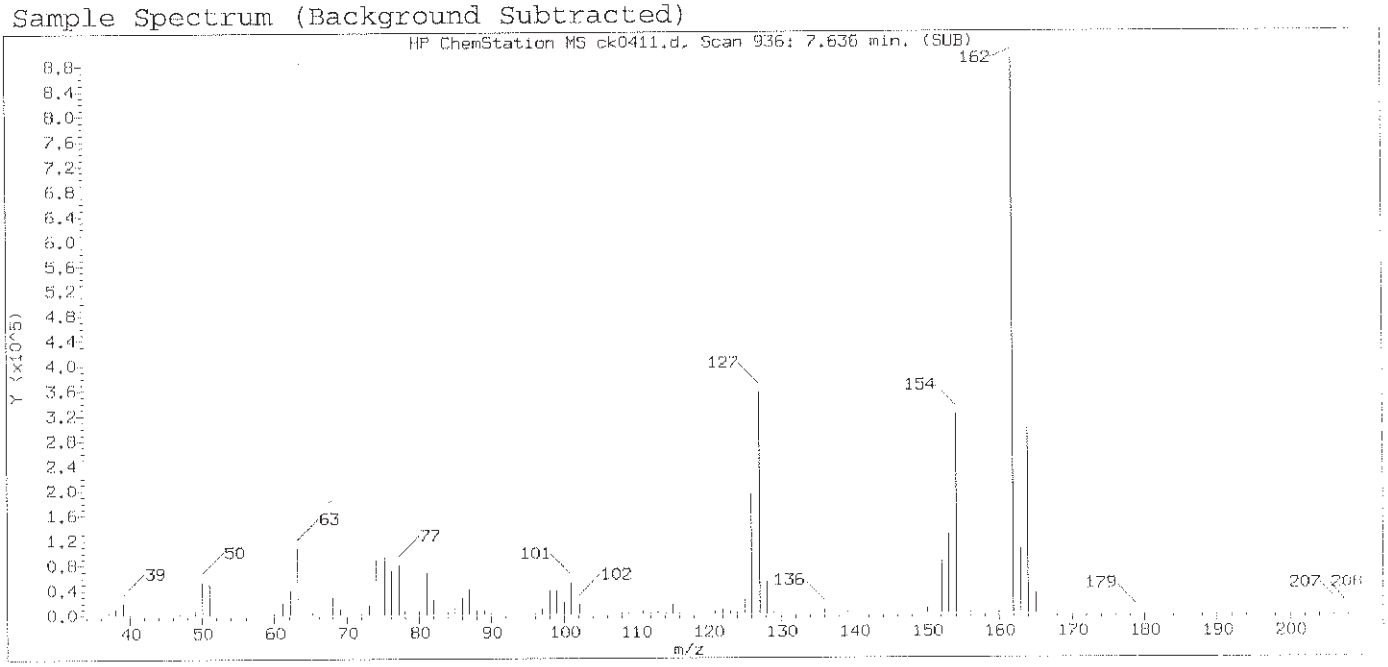
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

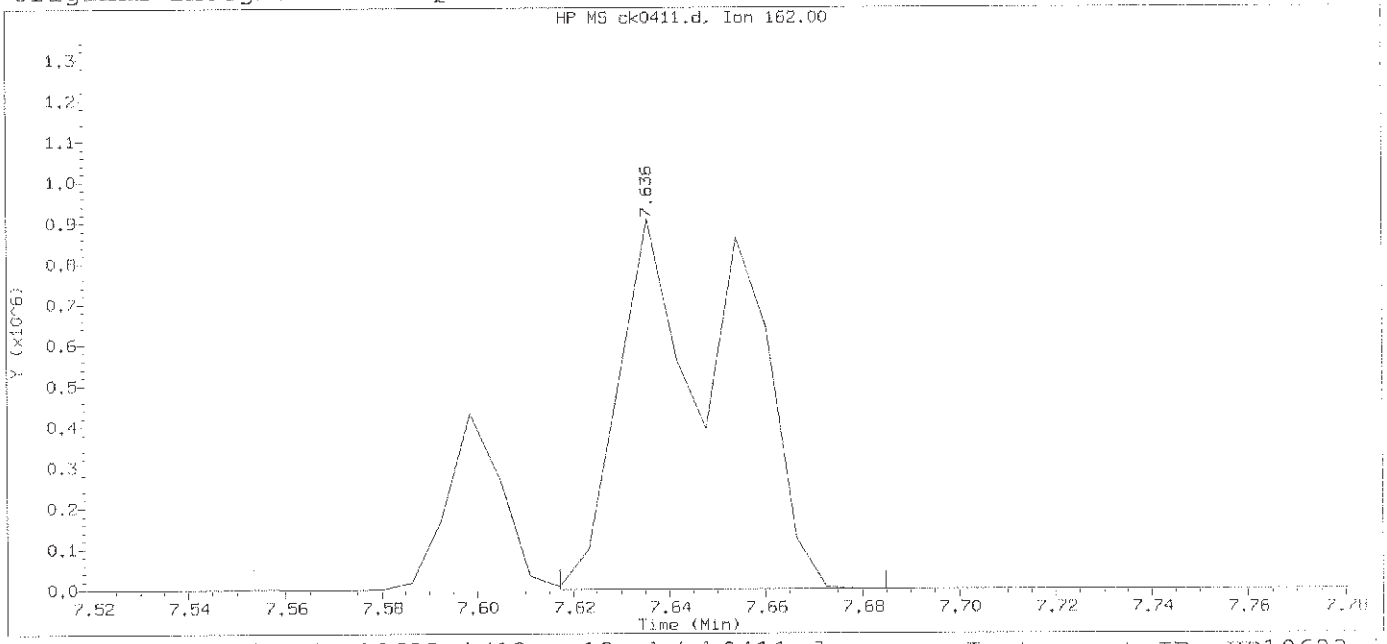
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507885		
On-column Amount (ng/ul)	: 99.0379		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 186	Y at integration end:	165

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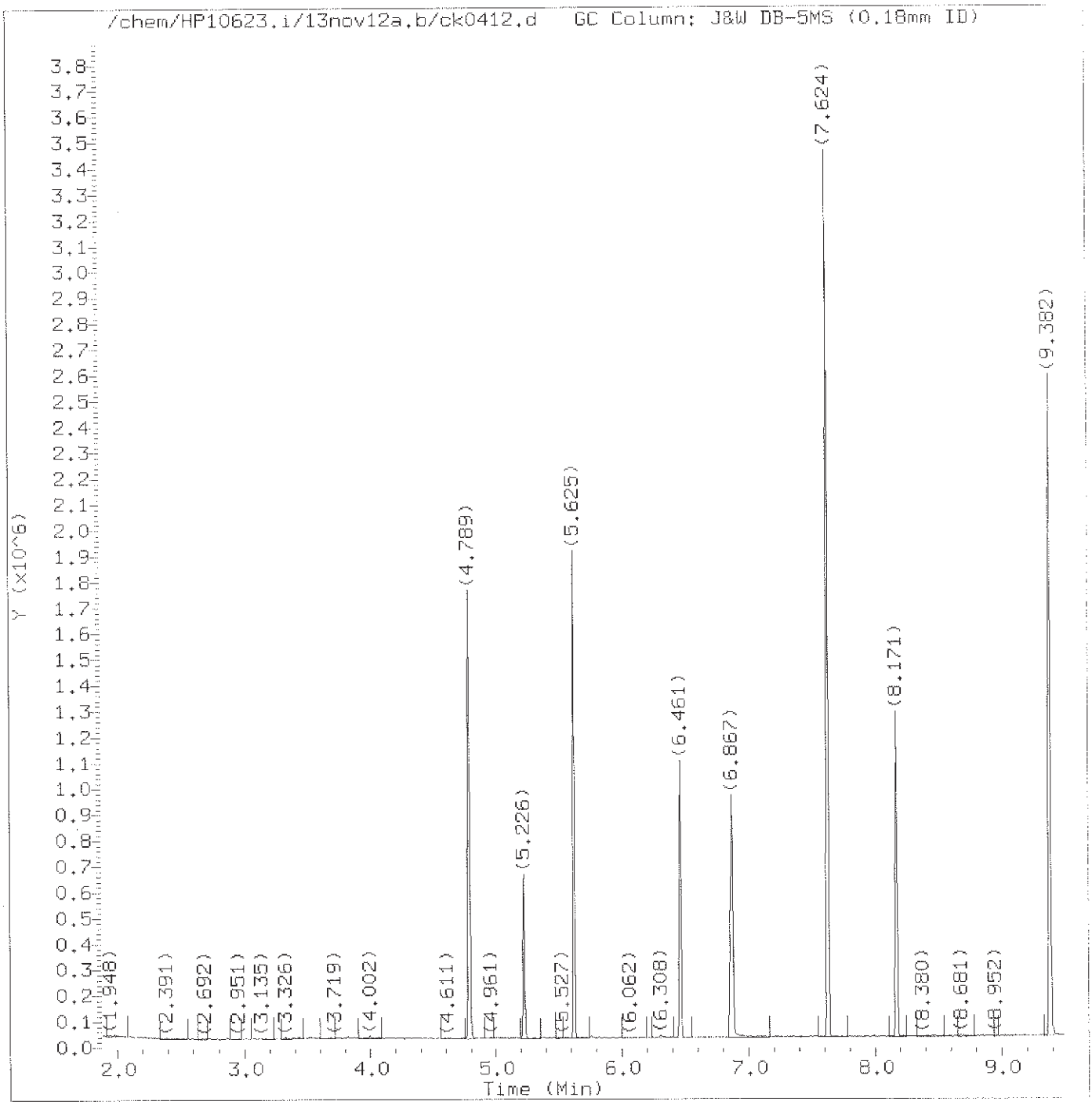
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

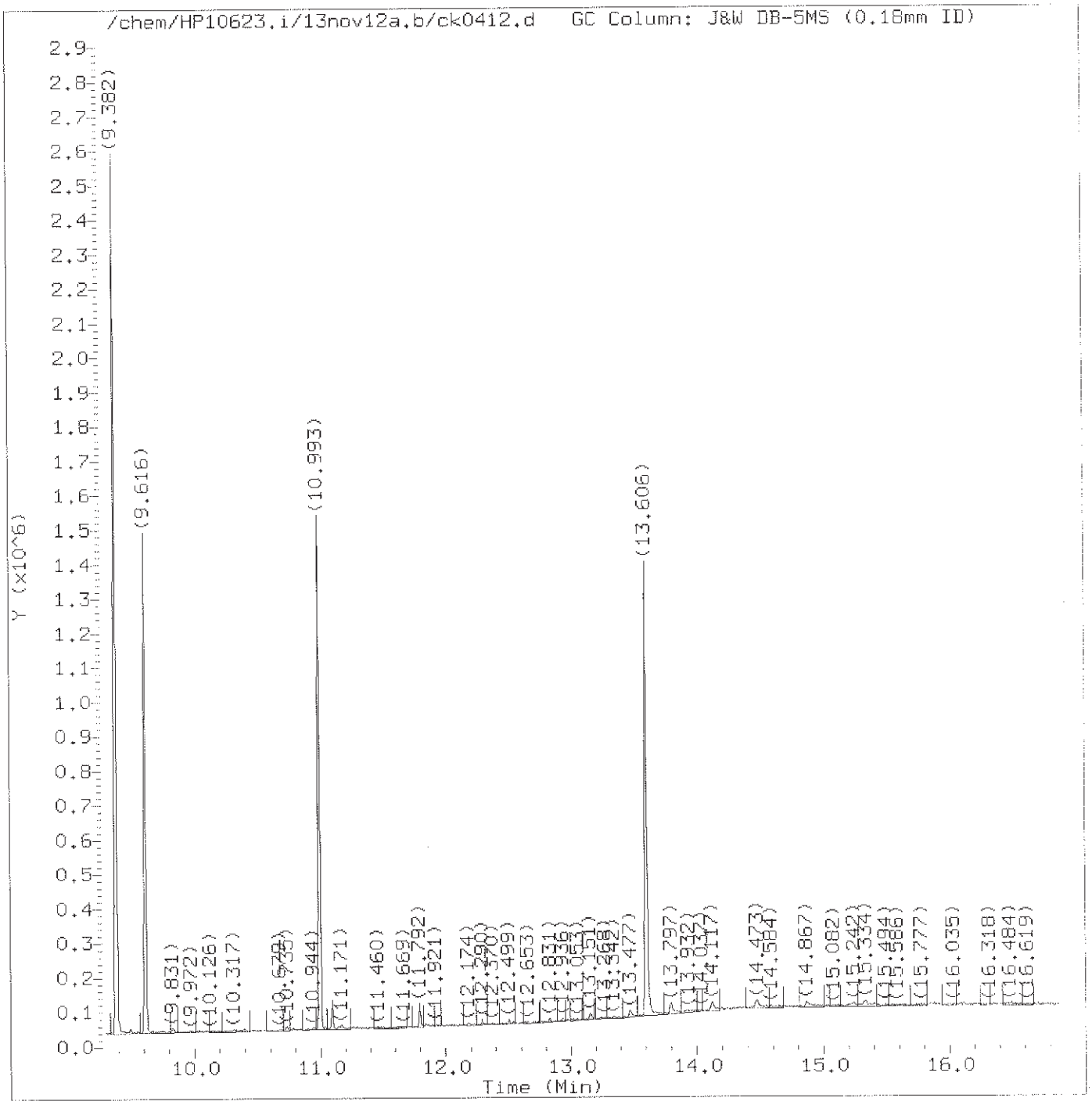
Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sublist used: basicval11

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: basicvall1

Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sublist used: basicval11

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12) Benzaldehyde	(1)	4.789	77	339099	79.821
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93637	20.000
52)*Naphthalene-d8	(2)	6.461	136	418471	20.000
63) Caprolactam	(2)	6.867	113	155639	48.346
98)*Acenaphthene-d10	(3)	8.171	164	254539	20.000
130) Atrazine	(4)	9.382	200	266151	52.717
135)*Phenanthrene-d10	(4)	9.616	188	470167	20.000
167)*Pyrene-d10	(5)	10.993	212	587857	20.000
175)*Perylene-d12	(6)	13.606	264	527879	20.000

* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov13a.b/ck0460.d

Date : 13-NOV-2013 08:29

Client ID: DFTPP

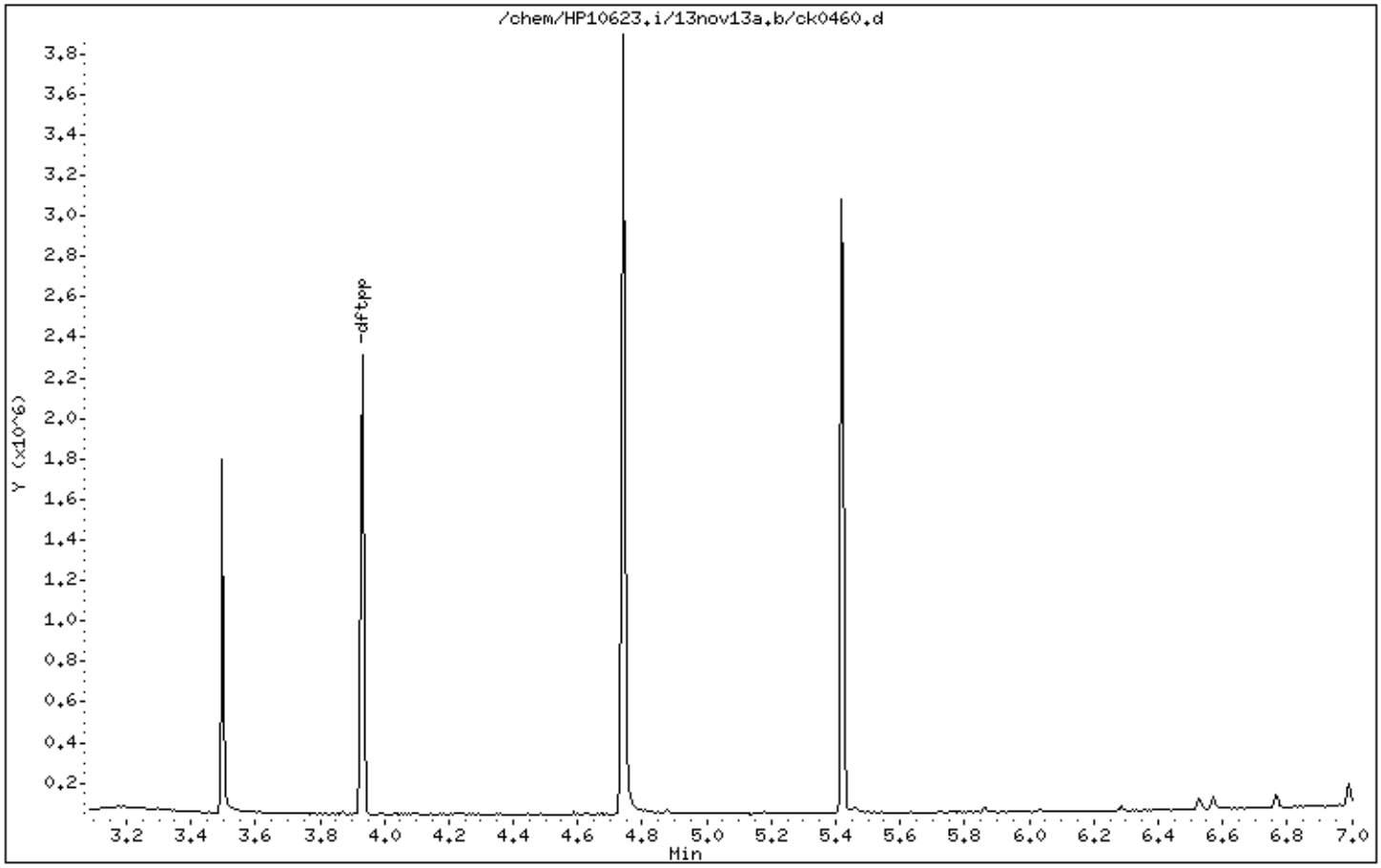
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/13nov13a.b/ck0460.d

Date : 13-NOV-2013 08:29

Client ID: DFTPP

Instrument: HP10623.i

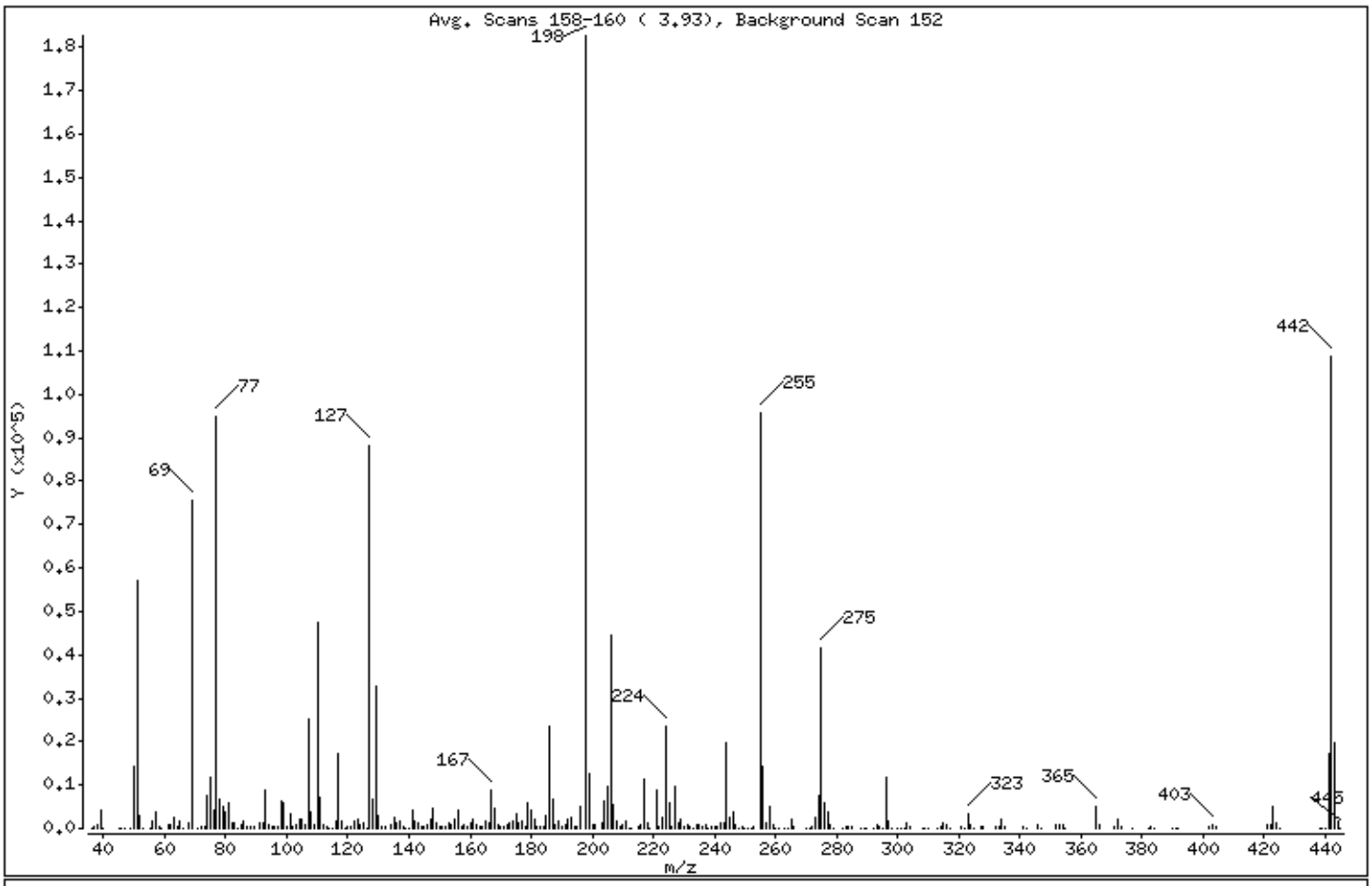
Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.19
68	Less than 2.00% of mass 69	0.60 (1.46)
69	Mass 69 relative abundance	41.33
70	Less than 2.00% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	48.16
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.93
275	10.00 - 30.00% of mass 198	22.67
365	Greater than 1.00% of mass 198	2.76
441	Present, but less than mass 443	9.51
442	40.00 - 99.99% of mass 198	59.58
443	17.00 - 23.00% of mass 442	10.89 (18.27)

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	113	121.00	332	198.00	182656	283.00	426
37.00	331	122.00	1595	199.00	12656	284.00	292
38.00	794	123.00	2276	200.00	903	285.00	545
39.00	4205	124.00	973	201.00	987	288.00	51
40.00	142	125.00	1082	203.00	1153	289.00	139
45.00	32	126.00	161	204.00	6301	290.00	125
46.00	69	127.00	87976	205.00	9811	292.00	136
47.00	69	128.00	6529	206.00	44528	293.00	925
49.00	174	129.00	32824	207.00	5645	294.00	298
50.00	14301	130.00	2981	208.00	1589	295.00	160
51.00	56968	131.00	565	209.00	501	296.00	11921
52.00	3063	132.00	357	210.00	825	297.00	1523
53.00	117	134.00	1033	211.00	1513	298.00	58
55.00	17	135.00	2394	212.00	57	300.00	58
56.00	1559	136.00	1163	213.00	98	301.00	112
57.00	3853	137.00	1601	215.00	596	302.00	91
58.00	293	138.00	236	216.00	1028	303.00	1289
59.00	169	139.00	15	217.00	11295	304.00	423
61.00	639	140.00	170	218.00	1453	308.00	59
62.00	980	141.00	4310	219.00	151	309.00	51
63.00	2516	142.00	1529	221.00	8825	310.00	117
64.00	378	143.00	1146	222.00	241	313.00	118
65.00	1569	144.00	327	223.00	2574	314.00	557
66.00	78	145.00	442	224.00	23328	315.00	1337
68.00	1100	146.00	883	225.00	6079	316.00	663
69.00	75496	147.00	2168	226.00	623	317.00	107
71.00	110	148.00	4533	227.00	9504	321.00	299
72.00	210	149.00	1094	228.00	1366	322.00	141
73.00	569	150.00	408	229.00	1981	323.00	3456
74.00	7487	151.00	533	230.00	503	324.00	780
75.00	11896	152.00	592	231.00	933	325.00	57
76.00	4358	153.00	1117	232.00	267	327.00	565
77.00	94944	154.00	971	233.00	197	328.00	511
78.00	6563	155.00	2306	234.00	658	332.00	276
79.00	5218	156.00	4205	235.00	815	333.00	361

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:25.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3964	157.00	499	236.00	575	334.00	2283
81.00	6066	158.00	695	237.00	784	335.00	581
82.00	1315	159.00	546	238.00	137	341.00	230
83.00	1379	160.00	1315	239.00	454	342.00	89
84.00	163	161.00	1970	240.00	325	346.00	804
85.00	802	162.00	775	241.00	469	347.00	66
86.00	1682	163.00	298	242.00	1213	352.00	848
87.00	624	164.00	297	243.00	1444	353.00	752
88.00	344	165.00	1510	244.00	19736	354.00	988
89.00	243	166.00	1432	245.00	2643	355.00	139
91.00	1108	167.00	8675	246.00	3804	365.00	5034
92.00	1193	168.00	4433	247.00	810	366.00	802
93.00	8909	169.00	783	248.00	173	371.00	245
94.00	743	170.00	349	249.00	603	372.00	1904
95.00	416	171.00	435	250.00	188	373.00	479
96.00	301	172.00	725	251.00	120	377.00	56
97.00	339	173.00	1164	252.00	152	382.00	63
98.00	6104	174.00	1753	253.00	494	383.00	376
99.00	5852	175.00	3361	255.00	95632	384.00	57
100.00	499	176.00	1144	256.00	14124	390.00	179
101.00	3488	177.00	1536	257.00	1222	391.00	131
102.00	316	178.00	594	258.00	5219	392.00	57
103.00	1029	179.00	5811	259.00	978	402.00	552
104.00	1926	180.00	4000	260.00	199	403.00	880
105.00	2021	181.00	1934	261.00	79	404.00	370
106.00	766	182.00	347	263.00	59	421.00	728
107.00	25160	183.00	285	264.00	79	422.00	881
108.00	3718	184.00	559	265.00	2141	423.00	4880
109.00	842	185.00	2876	266.00	281	424.00	1138
110.00	47384	186.00	23368	270.00	200	425.00	79
111.00	6983	187.00	6927	271.00	176	438.00	87
112.00	657	188.00	845	272.00	353	439.00	88
113.00	254	189.00	1692	273.00	2578	440.00	94
114.00	71	190.00	399	274.00	7460	441.00	17368
115.00	195	191.00	810	275.00	41416	442.00	108840

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Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 08:29

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0460.d
Spectrum: Avg. Scans 158-160 (3.93), Background Scan 152
Location of Maximum: 198.00
Number of points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
116.00	1523	192.00	2006	276.00	5689	443.00	19880
117.00	17104	193.00	2441	277.00	3813	444.00	1714
118.00	1491	194.00	626	278.00	643	445.00	77
119.00	191	195.00	363	279.00	155		
120.00	491	196.00	5198	282.00	74		

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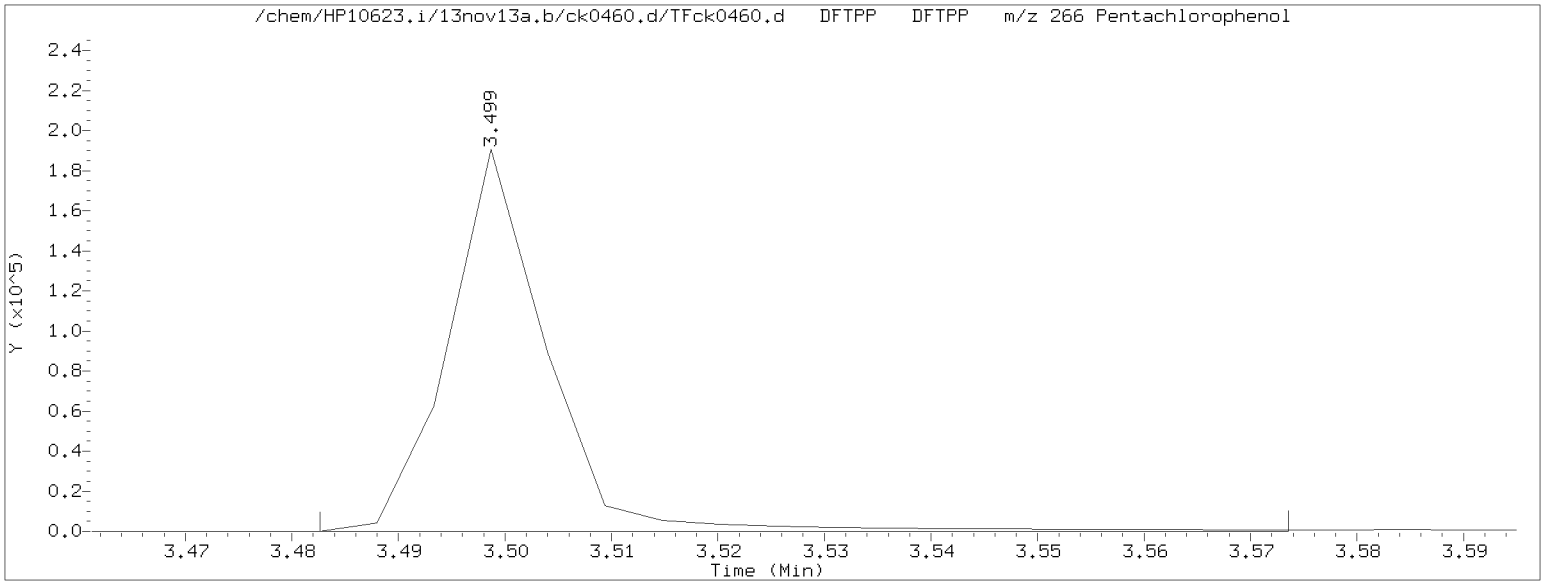
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

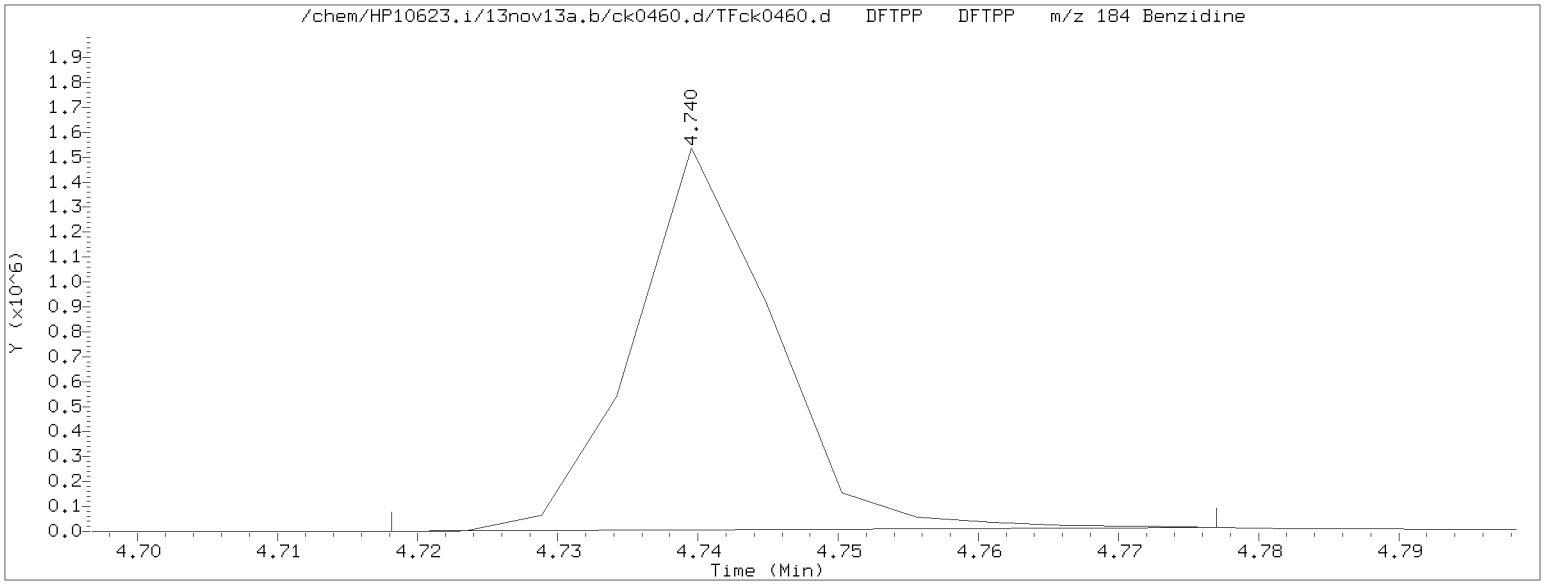
Instrument ID: HP10623.i Injection Date: 13-NOV-2013 08:29 Operator: jmg00346



Pentachlorophenol EICP peak height = 190784 EICP peak height at 10% = 19078 Pentachlorophenol EICP area = 122280

Pentachlorophenol EICP peak apex (min.) = 3.499
RT at 10% of front half of EICP (min.) = 3.489 'Front' peak width (min.) = 0.0093333333
RT at 10% of back half of EICP (min.) = 3.509 'Tailing' peak width (min.) = 0.0102500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0102500000}{0.0093333333} = 1.098$$



Benzidine EICP peak height = 1533055 EICP peak height at 10% = 153306 Benzidine EICP area = 1050403

Benzidine EICP peak apex (min.) = 4.740
RT at 10% of front half of EICP (min.) = 4.730 'Front' peak width (min.) = 0.0096333333
RT at 10% of back half of EICP (min.) = 4.750 'Tailing' peak width (min.) = 0.0106500000

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0106500000}{0.0096333333} = 1.106$$

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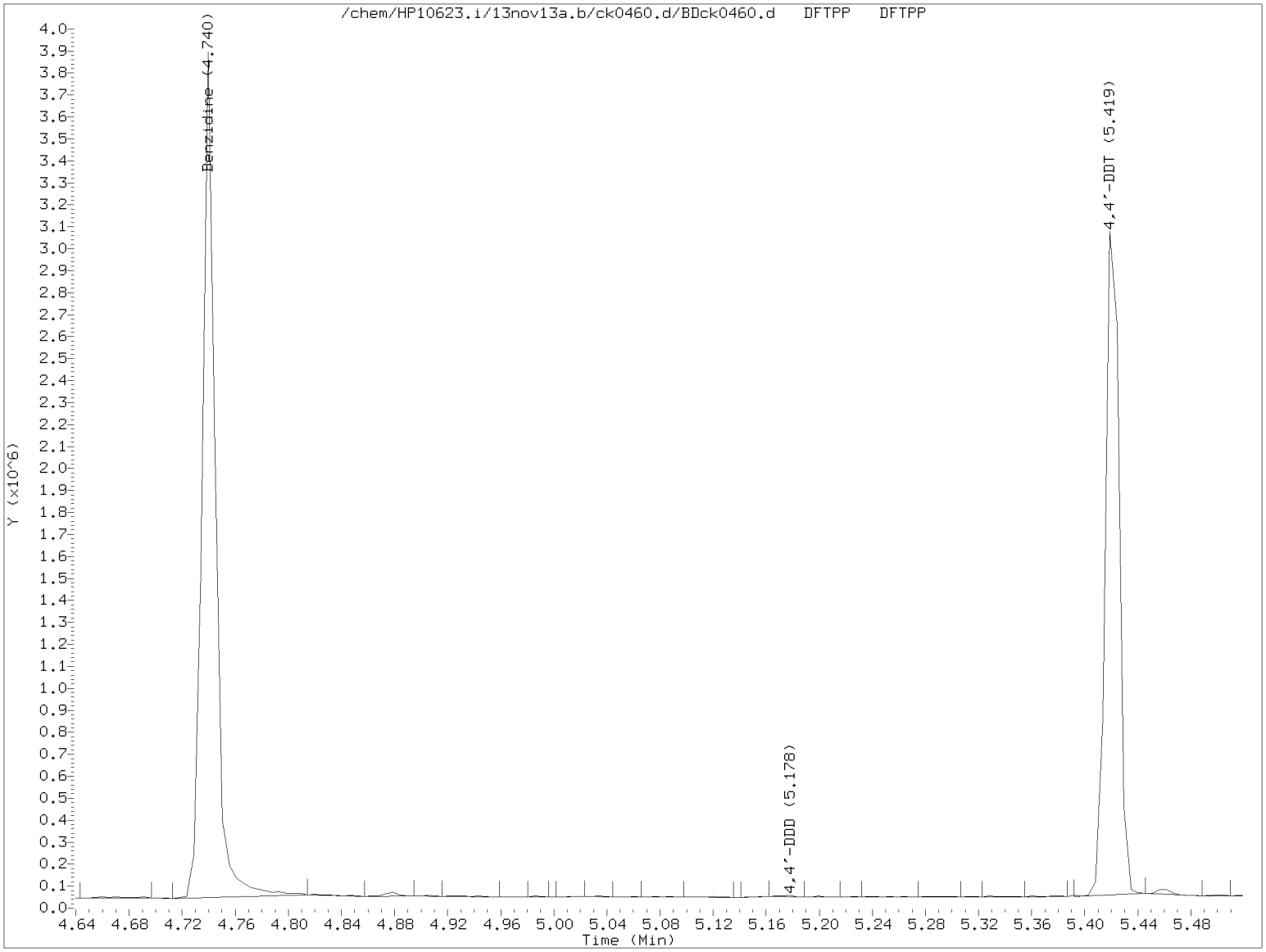
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 13-NOV-2013 08:29 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 4720}{0 + 4720 + 2215088} \times 100 = 0.2$$

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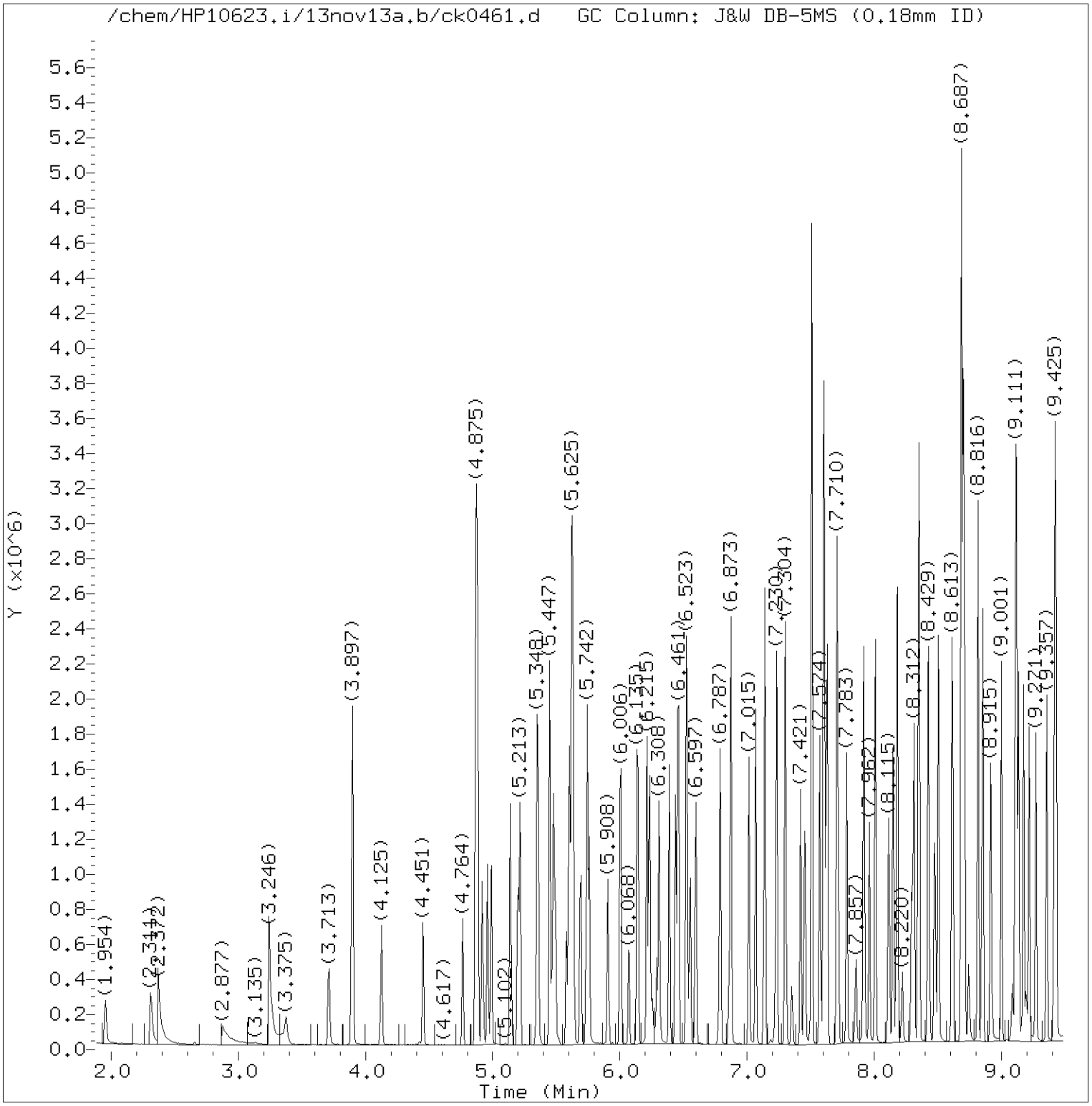
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

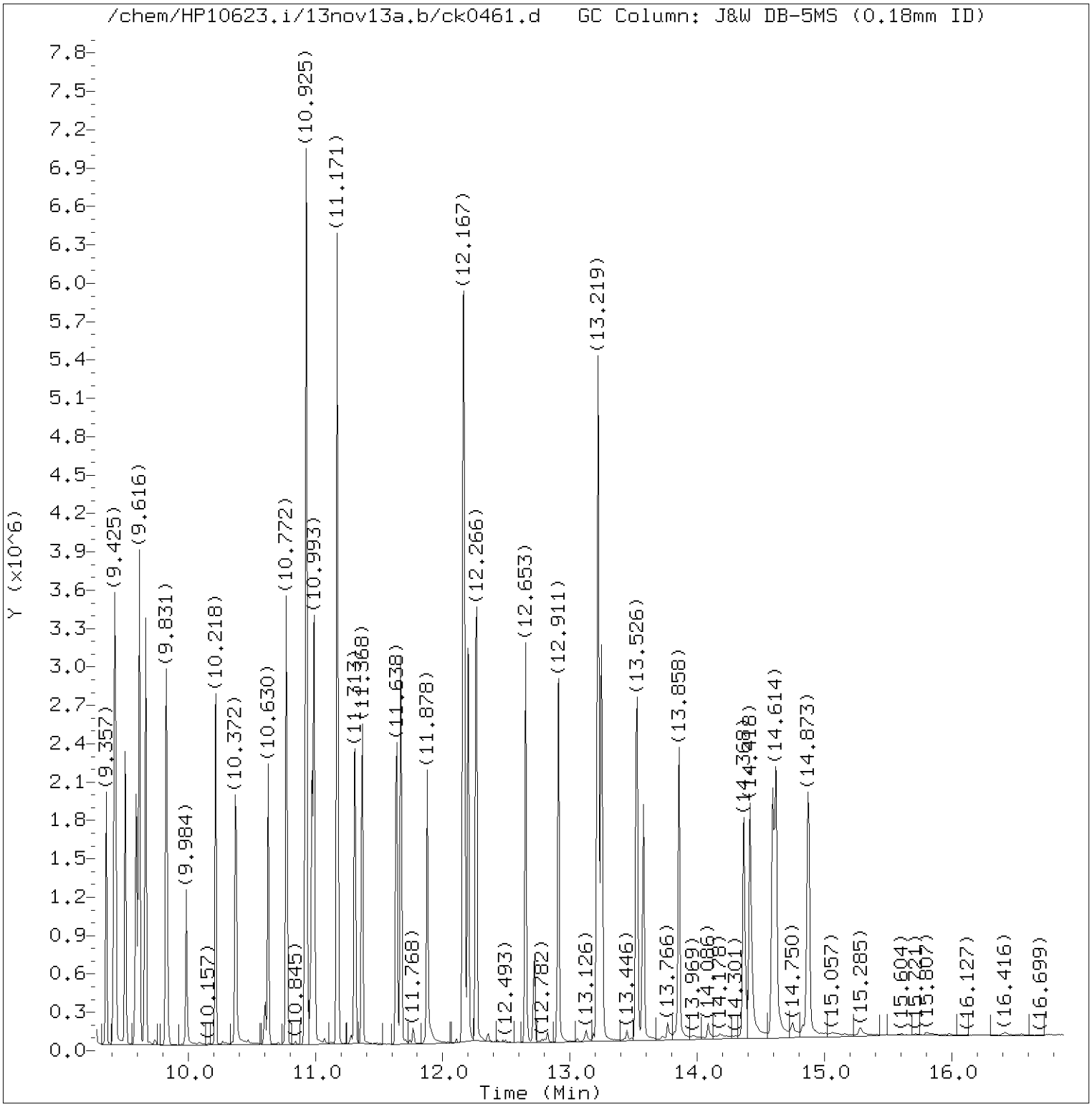
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.954	88	109394	28.082
2) N-Nitrosodimethylamine	(1)	2.311	74	193844	26.877
3) Pyridine	(1)	2.366	79	314530	28.130
5) 2-Picoline	(1)	3.239	93	328831	28.821
6) N-Nitrosomethylethylamine	(1)	3.375	88	149361	27.383
7) Methyl methanesulfonate	(1)	3.713	80	157455	28.710
9)$2-Fluorophenol	(1)	3.897	112	514879	57.784
10) N-Nitrosodiethylamine	(1)	4.125	102	152788	28.196
11) Ethyl methanesulfonate	(1)	4.451	109	146687	29.727
12) Benzaldehyde	(1)	4.764	77	139806	24.724
15)$Phenol-d6	(1)	4.869	99	759725	57.944
14)$Phenol-d5	(1)	4.869	99	759725	57.944
13) Aniline	(1)	4.875	93	516599	28.479
16) Phenol	(1)	4.881	94	429721	28.092
18) bis(2-Chloroethyl)ether	(1)	4.961	93	307272	28.295
19) 2-Chlorophenol	(1)	4.992	128	274760	28.794
20) 1,3-Dichlorobenzene	(1)	5.139	146	283379	29.428
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	119096	20.000
22) 1,4-Dichlorobenzene	(1)	5.213	146	286696	29.174
24) Benzyl alcohol	(1)	5.348	108	219748	29.453
25) 1,2-Dichlorobenzene	(1)	5.361	146	274117	29.718
206) Indene	(1)	5.447	115	609058	29.560
26) 2-Methylphenol	(1)	5.478	108	293135	28.873
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.490	45	354901	26.557
28) bis(2-Chloroisopropyl)ether	(1)	5.490	45	354901	26.490
29) N-Nitrosopyrrolidine	(1)	5.582	100	179987	29.618
30) Acetophenone	(1)	5.601	105	439382	29.028
31) N-Nitroso-di-n-propylamine	(1)	5.619	70	260534	26.891
33) 4-Methylphenol	(1)	5.625	108	342887	28.534
32) N-Nitrosomorpholine	(1)	5.625	56	195191	28.274
34) o-Toluidine	(1)	5.637	106	511430	29.497
37) Hexachloroethane	(1)	5.693	117	107584	28.765
38)$Nitrobenzene-d5	(2)	5.742	82	577229	47.239
39) Nitrobenzene	(2)	5.760	77	317699	24.512
40) N-Nitrosopiperidine	(2)	5.908	114	168881	29.372
41) Isophorone	(2)	6.006	82	655919	27.870
42) 2-Nitrophenol	(2)	6.074	139	95012	21.087
44) 2,4-Dimethylphenol	(2)	6.135	107	326068	28.155
45) O,O,O-triethylphosphorothioate	(2)	6.215	198	145070	30.043
46) bis(2-Chloroethoxy)methane	(2)	6.234	93	381511	26.679

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.252	105	207989	27.708
49) 2,4-Dichlorophenol	(2)	6.308	162	235787	29.937
50) 1,2,4-Trichlorobenzene	(2)	6.388	180	246508	29.714
52)*Naphthalene-d8	(2)	6.437	136	567152	20.000
53) Naphthalene	(2)	6.461	128	873228	29.019
56) 4-Chloroaniline	(2)	6.523	127	388272	29.609
57) 2,6-Dichlorophenol	(2)	6.529	162	226832	30.578
58) Hexachloropropene	(2)	6.554	213	138943	29.614
60) Hexachlorobutadiene	(2)	6.597	225	124422	29.903
194) Quinoline	(2)	6.787	129	626204	30.190
64) N-Nitrosodi-n-butylamine	(2)	6.873	84	331253	29.228
63) Caprolactam	(2)	6.873	113	132192	30.298
68) 4-Chloro-3-methylphenol	(2)	7.015	107	289287	28.729
69) Safrole	(2)	7.070	162	236193	29.632
70) 2-Methylnaphthalene	(2)	7.138	142	628769	29.443
71) 1-Methylnaphthalene	(2)	7.230	142	578356	29.597
72) Hexachlorocyclopentadiene	(3)	7.304	237	107270	28.668
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.304	216	252546	29.165
74) cis-Isosafrole	(3)	7.353	162	44313	3.188
75) 2,4,6-Trichlorophenol	(3)	7.421	196	169099	29.929
77) 2,4,5-Trichlorophenol	(3)	7.451	196	181016	29.384
78)$2-Fluorobiphenyl	(3)	7.507	172	1315602	57.637
79) trans-Isosafrole	(3)	7.574	162	255238	25.935
80) Isosafrole	(3)	7.574	162	255238	29.140
83) 1,1'-Biphenyl	(3)	7.599	154	788123	28.021
84) 2-Chloronaphthalene	(3)	7.611	162	543120	26.511
85) 1-Chloronaphthalene	(3)	7.630	162	607226	30.117
88) Diphenyl ether	(3)	7.710	170	412069	29.411
89) 2-Nitroaniline	(3)	7.716	138	152340	22.794
90) 1,4-Naphthoquinone	(3)	7.783	158	255751	29.664
91) 1,4-Dinitrobenzene	(3)	7.857	168	48901	19.240
92) Dimethylphthalate	(3)	7.919	163	729796	29.938
93) 1,3-Dinitrobenzene	(3)	7.925	168	69530	19.796
94) 2,6-Dinitrotoluene	(3)	7.962	165	122824	24.191
95) Acenaphthylene	(3)	8.011	152	926353	28.963
97) 3-Nitroaniline	(3)	8.115	138	160714	25.921
98)*Acenaphthene-d10	(3)	8.146	164	363022	20.000
99) Acenaphthene	(3)	8.183	153	636257	28.744
100) 2,4-Dinitrophenol	(3)	8.220	184	43058	28.745
103) 4-Nitrophenol	(3)	8.294	109	101510	26.429

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.312	250	231046	30.877
104) Dibenzofuran	(3)	8.349	168	879122	28.993
105) 2,4-Dinitrotoluene	(3)	8.349	165	144357	22.002
106) 1-Naphthylamine	(3)	8.429	143	745264	29.911
107) 2,3,4,6-Tetrachlorophenol	(3)	8.478	232	131805	30.375
108) 2-Naphthylamine	(3)	8.503	143	758187	29.741
109) Diethylphthalate	(3)	8.613	149	746846	29.659
111) Fluorene	(3)	8.687	166	748072	28.674
110) Thionazin	(3)	8.687	107	151297	27.243
112) 4-Chlorophenyl-phenylether	(3)	8.699	204	347646	29.953
113) 5-Nitro-o-toluidine	(3)	8.706	152	179213	26.017
114) 4-Nitroaniline	(3)	8.712	138	199879	28.668
115) 4,6-Dinitro-2-methylphenol	(4)	8.742	198	52912	21.517
117) N-Nitrosodiphenylamine	(4)	8.816	169	668285	28.883
202) NDPA as diphenylamine	(4)	8.816	169	668285	28.815
118) 1,2-Diphenylhydrazine	(4)	8.853	77	867593	26.177
119)$2,4,6-Tribromophenol	(3)	8.921	330	140561	64.117
120) Tetraethyldithiopyrophosphate	(4)	9.001	97	124130	26.277
121) 1,3,5-Trinitrobenzene	(4)	9.087	213	28632	18.563
122) Diallate (peak 1)	(4)	9.111	86	334004	19.694
123) Phorate	(4)	9.118	75	513806	25.162
124) Phenacetin	(4)	9.136	108	418278	26.159
125) 4-Bromophenyl-phenylether	(4)	9.173	248	192056	30.126
126) Diallate (peak 2)	(4)	9.191	86	48402	6.572
127) Hexachlorobenzene	(4)	9.216	284	189995	30.185
128) Dimethoate	(4)	9.271	87	328650	26.320
130) Atrazine	(4)	9.357	200	197885	26.695
131) Pentachlorophenol	(4)	9.413	266	102405	29.335
133) 4-Aminobiphenyl	(4)	9.425	169	716304	28.630
132) Pentachloronitrobenzene	(4)	9.431	237	72922	26.688
134) Pronamide	(4)	9.505	173	343300	28.467
135)*Phenanthrene-d10	(4)	9.591	188	690322	20.000
137) Phenanthrene	(4)	9.616	178	1146713	28.568
136) Dinoseb	(4)	9.616	211	65312	19.877
138) Anthracene	(4)	9.665	178	1183150	28.635
140) Carbazole	(4)	9.831	167	1147796	28.468
141) Methyl parathion	(4)	9.984	109	149855	19.666
142) Di-n-butylphthalate	(4)	10.218	149	1323182	27.815
144) 4-Nitroquinoline-1-oxide	(4)	10.372	190	48760	19.495
143) Parathion	(4)	10.372	109	113064	20.548

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$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0461.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 08:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: all1
Calibration date and time: 13-NOV-2013 10:36
Date, time and analyst ID of latest file update: 13-Nov-2013 10:36 jmg00346

Sample Name: SSTD3083 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.630	193	125746	27.721
147) Fluoranthene	(4)	10.772	202	1287657	28.690
152) Benzidine	(5)	10.925	184	2950998	85.061
167)*Pyrene-d10	(5)	10.974	212	847467	20.000
154) Pyrene	(5)	10.993	202	1346856	28.618
156)$Terphenyl-d14	(5)	11.171	244	1772139	58.494
158) p-Dimethylaminoazobenzene	(5)	11.313	225	270125	29.452
159) Chlorobenzilate	(5)	11.368	139	396170	27.767
160) 3,3'-Dimethylbenzidine	(5)	11.638	212	823463	28.389
161) Butylbenzylphthalate	(5)	11.669	149	626542	27.897
162) 2-Acetylaminofluorene	(5)	11.878	181	501444	24.653
164) 3,3'-Dichlorobenzidine	(5)	12.161	252	472911	28.899
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.167	231	227026	28.399
166) Benzo(a)anthracene	(5)	12.167	228	1246847	28.724
168) Chrysene	(5)	12.204	228	1174382	28.060
169) bis(2-Ethylhexyl)phthalate	(5)	12.266	149	857249	27.511
189) 6-Methylchrysene	(5)	12.653	242	884830	28.653
170) Di-n-octylphthalate	(6)	12.911	149	1448539	27.412
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.219	256	604289	30.419
172) Benzo(b)fluoranthene	(6)	13.219	252	1326608	31.032
173) Benzo(k)fluoranthene	(6)	13.249	252	1227163	28.137
174) Benzo(a)pyrene	(6)	13.526	252	1196217	28.670
175)*Perylene-d12	(6)	13.575	264	700104	20.000
176) 3-Methylcholanthrene	(6)	13.858	268	606617	29.006
190) Dibenz(a,h)acridine	(6)	14.368	279	882715	29.122
191) Dibenz(a,j)acridine	(6)	14.418	279	1035648	29.712
177) Indeno(1,2,3-cd)pyrene	(6)	14.596	276	1306700	29.436
178) Dibenz(a,h)anthracene	(6)	14.621	278	1105570	29.774
179) Benzo(g,h,i)perylene	(6)	14.873	276	1099626	29.077
196) 2,4_2,6-Dinitrotoluenes	(3)			267181	0.000
129) Diallate TRANS/CIS	(4)			382406	26.262

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$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 10:37.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/13nov14.b/ck0500.d

Date : 13-NOV-2013 23:59

Client ID: DFTPP

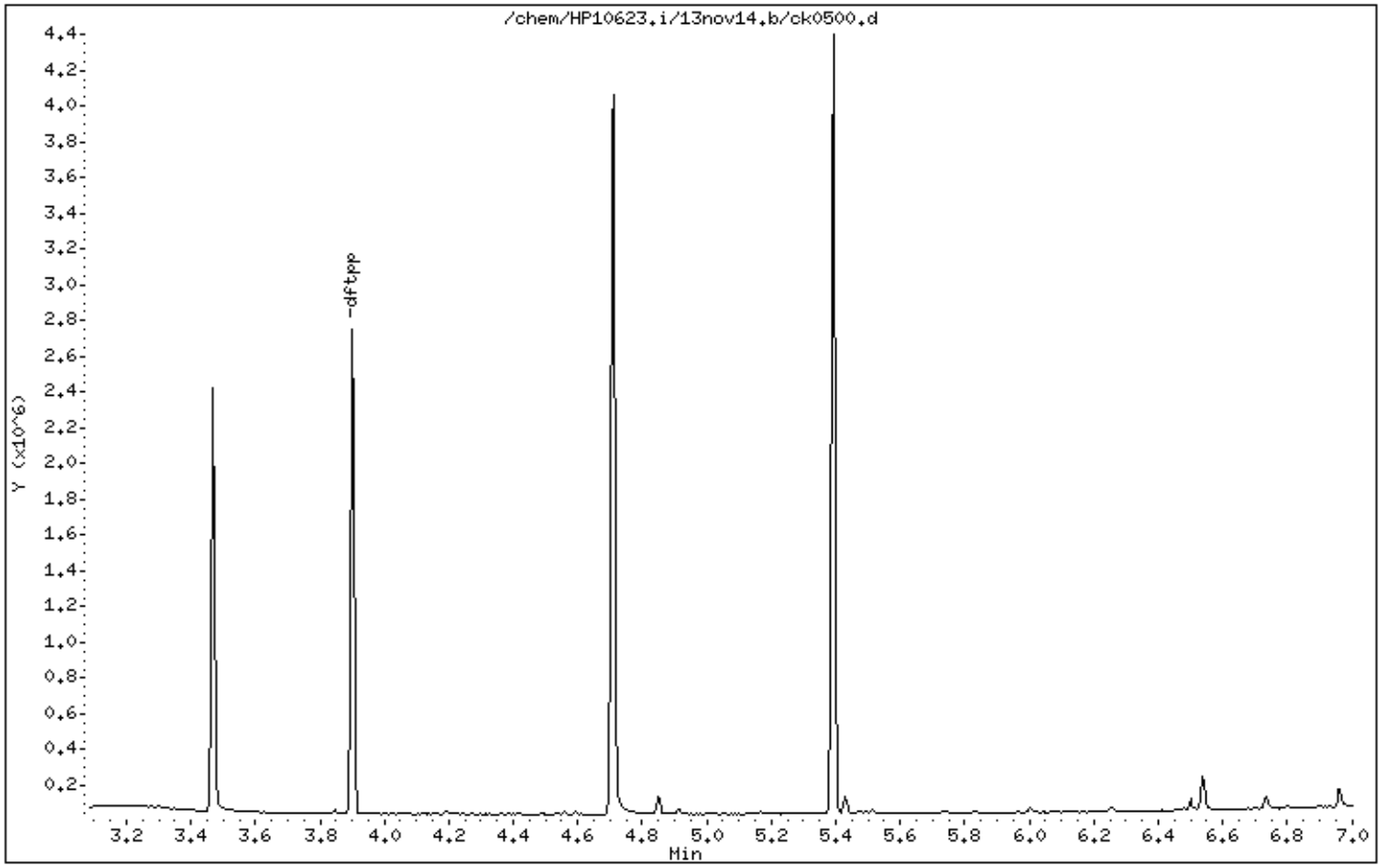
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Mark A. Clark on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov14.b/ck0500.d

Date : 13-NOV-2013 23:59

Client ID: DFTPP

Instrument: HP10623.i

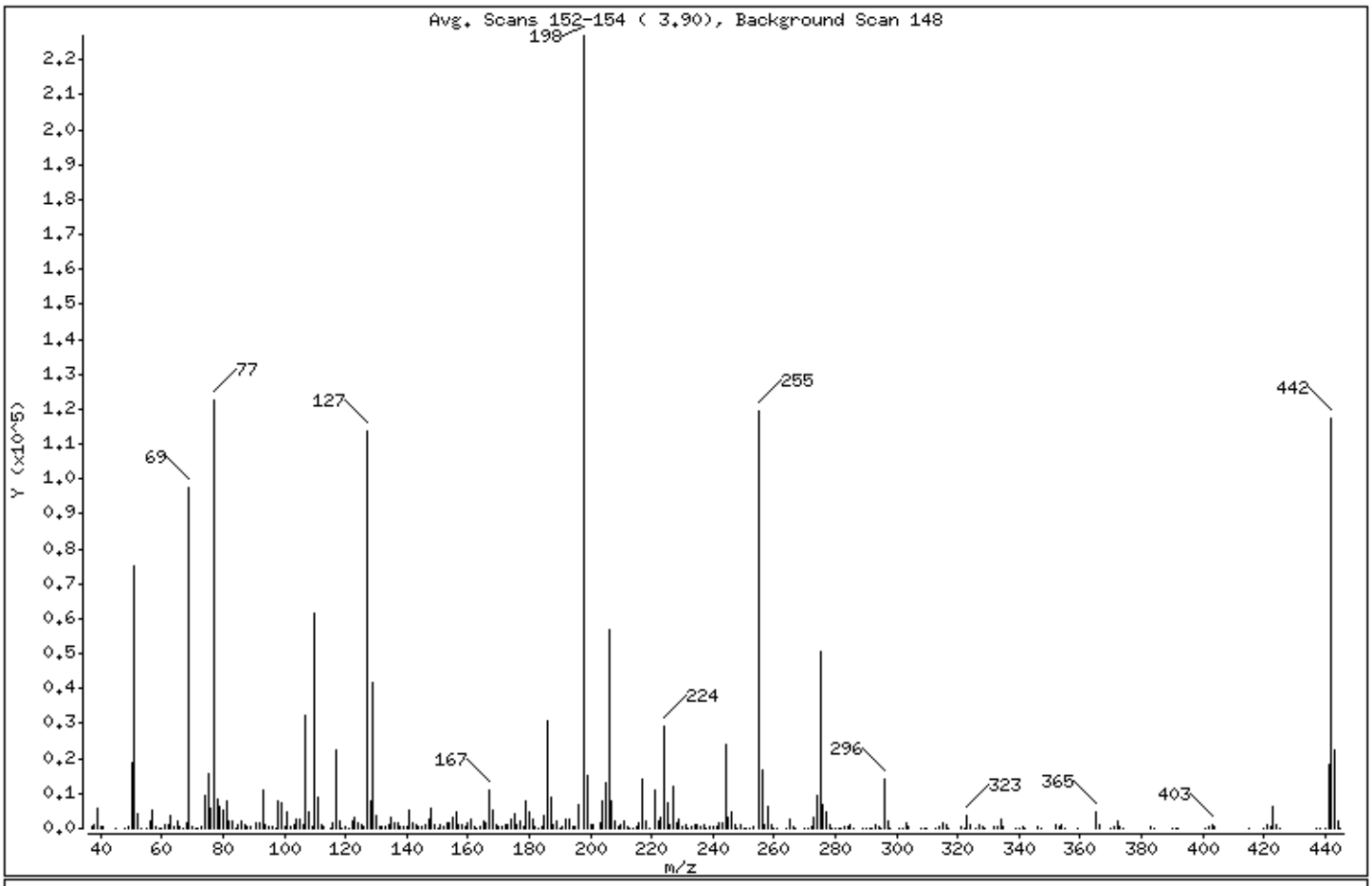
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	33.17
68	Less than 2.00% of mass 69	0.62 (1.44)
69	Mass 69 relative abundance	42.94
70	Less than 2.00% of mass 69	0.19 (0.45)
127	40.00 - 60.00% of mass 198	50.22
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.75
275	10.00 - 30.00% of mass 198	22.38
365	Greater than 1.00% of mass 198	2.18
441	Present, but less than mass 443	8.06
442	40.00 - 99.99% of mass 198	51.82
443	17.00 - 23.00% of mass 442	9.90 (19.09)

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Target 3.5 esignature user ID: mac00013

Date : 13-NOV-2013 23:59

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

Data File: ck0500.d
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 148
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	403	123.00	2955	203.00	1520	289.00	172
38.00	1127	124.00	1394	204.00	7824	290.00	189
39.00	5797	125.00	1302	205.00	13114	291.00	139
40.00	262	126.00	531	206.00	56640	292.00	209
41.00	373	127.00	113944	207.00	7693	293.00	914
45.00	179	128.00	8038	208.00	1960	294.00	308
48.00	51	129.00	41752	209.00	663	295.00	103
49.00	665	130.00	3454	210.00	902	296.00	14333
50.00	18920	131.00	583	211.00	2154	297.00	1927
51.00	75256	132.00	496	212.00	483	298.00	131
52.00	4307	133.00	321	213.00	174	301.00	192
53.00	208	134.00	1265	214.00	80	302.00	231
55.00	222	135.00	2947	215.00	712	303.00	1453
56.00	2062	136.00	1467	216.00	1432	304.00	404
57.00	5200	137.00	1624	217.00	13883	308.00	232
58.00	316	138.00	360	218.00	1924	309.00	123
59.00	56	139.00	325	219.00	221	310.00	147
60.00	19	140.00	633	221.00	10713	313.00	75
61.00	1193	141.00	5426	222.00	2056	314.00	658
62.00	1098	142.00	1449	223.00	3289	315.00	1418
63.00	3490	143.00	1101	224.00	29048	316.00	790
64.00	526	144.00	415	225.00	7410	317.00	58
65.00	2030	145.00	492	226.00	863	321.00	572
66.00	343	146.00	1047	227.00	11913	322.00	188
67.00	86	147.00	2690	228.00	1755	323.00	3733
68.00	1405	148.00	5842	229.00	2711	324.00	807
69.00	97440	149.00	1215	230.00	376	326.00	75
70.00	437	150.00	110	231.00	1001	327.00	807
71.00	148	151.00	785	232.00	209	328.00	503
72.00	142	152.00	281	233.00	307	329.00	69
73.00	720	153.00	1606	234.00	908	332.00	372
74.00	9380	154.00	1565	235.00	809	333.00	409
75.00	15441	155.00	3221	236.00	546	334.00	2846
76.00	5678	156.00	4437	237.00	1012	335.00	727
77.00	122712	157.00	962	238.00	214	339.00	77

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Target 3.5 esignature user ID: mac00013

Date : 13-NOV-2013 23:59

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

Data File: ck0500.d
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 148
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	8281	158.00	972	239.00	540	340.00	57
79.00	6469	159.00	765	240.00	286	341.00	555
80.00	5209	160.00	1770	241.00	696	342.00	169
81.00	7801	161.00	2430	242.00	1462	346.00	727
82.00	1854	162.00	749	243.00	1753	347.00	200
83.00	1847	163.00	101	244.00	23848	352.00	1212
84.00	178	164.00	311	245.00	3233	353.00	704
85.00	1259	165.00	1851	246.00	4482	354.00	1085
86.00	2058	166.00	1698	247.00	874	355.00	213
87.00	1062	167.00	10918	248.00	85	359.00	82
88.00	451	168.00	5436	249.00	812	365.00	4945
89.00	286	169.00	784	250.00	148	366.00	909
91.00	1809	170.00	470	251.00	162	370.00	119
92.00	1678	171.00	603	252.00	227	371.00	350
93.00	11101	172.00	871	253.00	547	372.00	1859
94.00	889	173.00	1300	255.00	119408	373.00	457
95.00	300	174.00	2438	256.00	16584	374.00	56
96.00	391	175.00	4335	257.00	1124	383.00	486
97.00	214	176.00	1264	258.00	6269	384.00	182
98.00	7754	177.00	2040	259.00	1079	390.00	190
99.00	7086	178.00	641	260.00	159	391.00	144
100.00	682	179.00	7889	261.00	205	392.00	104
101.00	4478	180.00	4854	264.00	196	401.00	65
102.00	317	181.00	2703	265.00	2580	402.00	731
103.00	1181	182.00	648	266.00	492	403.00	1004
104.00	2405	183.00	158	267.00	60	404.00	326
105.00	2353	184.00	722	270.00	136	415.00	74
106.00	904	185.00	3807	271.00	182	420.00	63
107.00	32104	186.00	30896	272.00	297	421.00	944
108.00	4902	187.00	9027	273.00	3161	422.00	634
109.00	674	188.00	905	274.00	9533	423.00	6331
110.00	61704	189.00	2058	275.00	50784	424.00	1299
111.00	8981	190.00	218	276.00	6743	425.00	86
112.00	1230	191.00	705	277.00	4855	437.00	93
113.00	346	192.00	2683	278.00	815	438.00	222

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Target 3.5 esignature user ID: mac00013

Date : 13-NOV-2013 23:59

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

Data File: ck0500.d
Spectrum: Avg. Scans 152-154 (3.90), Background Scan 148
Location of Maximum: 198.00
Number of points: 310

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	18	193.00	2645	279.00	175	440.00	129
116.00	1523	194.00	617	280.00	60	441.00	18280
117.00	22280	195.00	360	281.00	21	442.00	117584
118.00	1953	196.00	7009	282.00	101	443.00	22448
119.00	129	198.00	226880	283.00	637	444.00	2066
120.00	464	199.00	15323	284.00	307	445.00	151
121.00	73	200.00	1092	285.00	821		
122.00	1872	201.00	1197	286.00	61		

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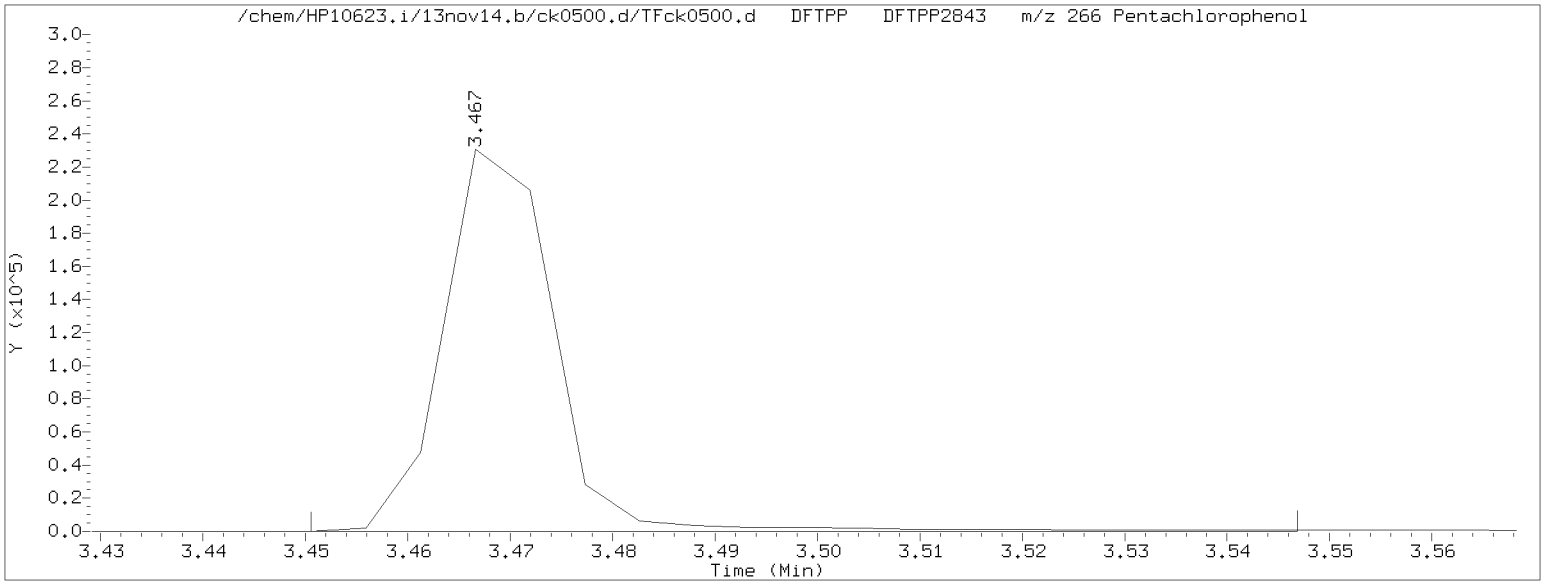
Target 3.5 esignature user ID: mac00013

Assessment of GC Column Performance and Injection Port Inertness for

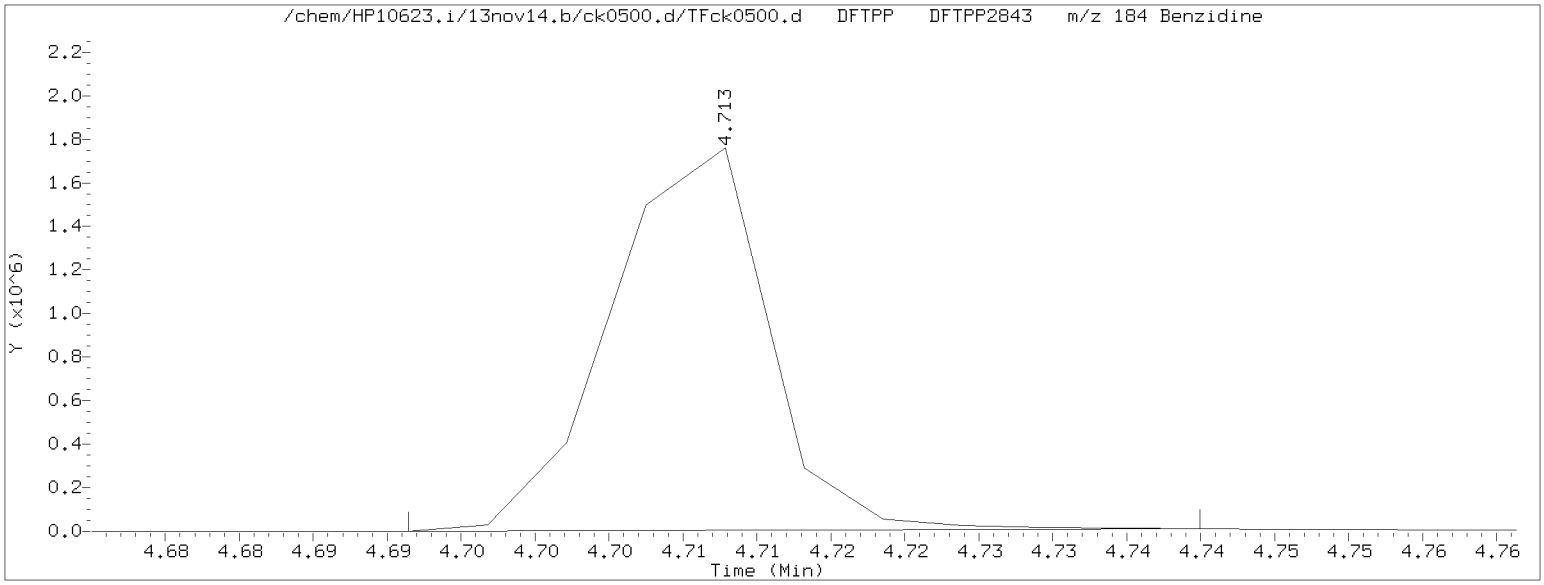
Instrument ID: HP10623.i Injection Date: 13-NOV-2013 23:59 Operator: mac00013



Pentachlorophenol EICP peak height = 230848 EICP peak height at 10% = 23085 Pentachlorophenol EICP area = 172678

Pentachlorophenol EICP peak apex (min.) = 3.467
RT at 10% of front half of EICP (min.) = 3.458 'Front' peak width (min.) = 0.0082166667
RT at 10% of back half of EICP (min.) = 3.478 'Tailing' peak width (min.) = 0.0118666667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0118666667}{0.0082166667} = 1.444$$



Benzidine EICP peak height = 1755099 EICP peak height at 10% = 175510 Benzidine EICP area = 1300271

Benzidine EICP peak apex (min.) = 4.713
RT at 10% of front half of EICP (min.) = 4.699 'Front' peak width (min.) = 0.0139166667
RT at 10% of back half of EICP (min.) = 4.721 'Tailing' peak width (min.) = 0.0078333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0078333333}{0.0139166667} = 0.563$$

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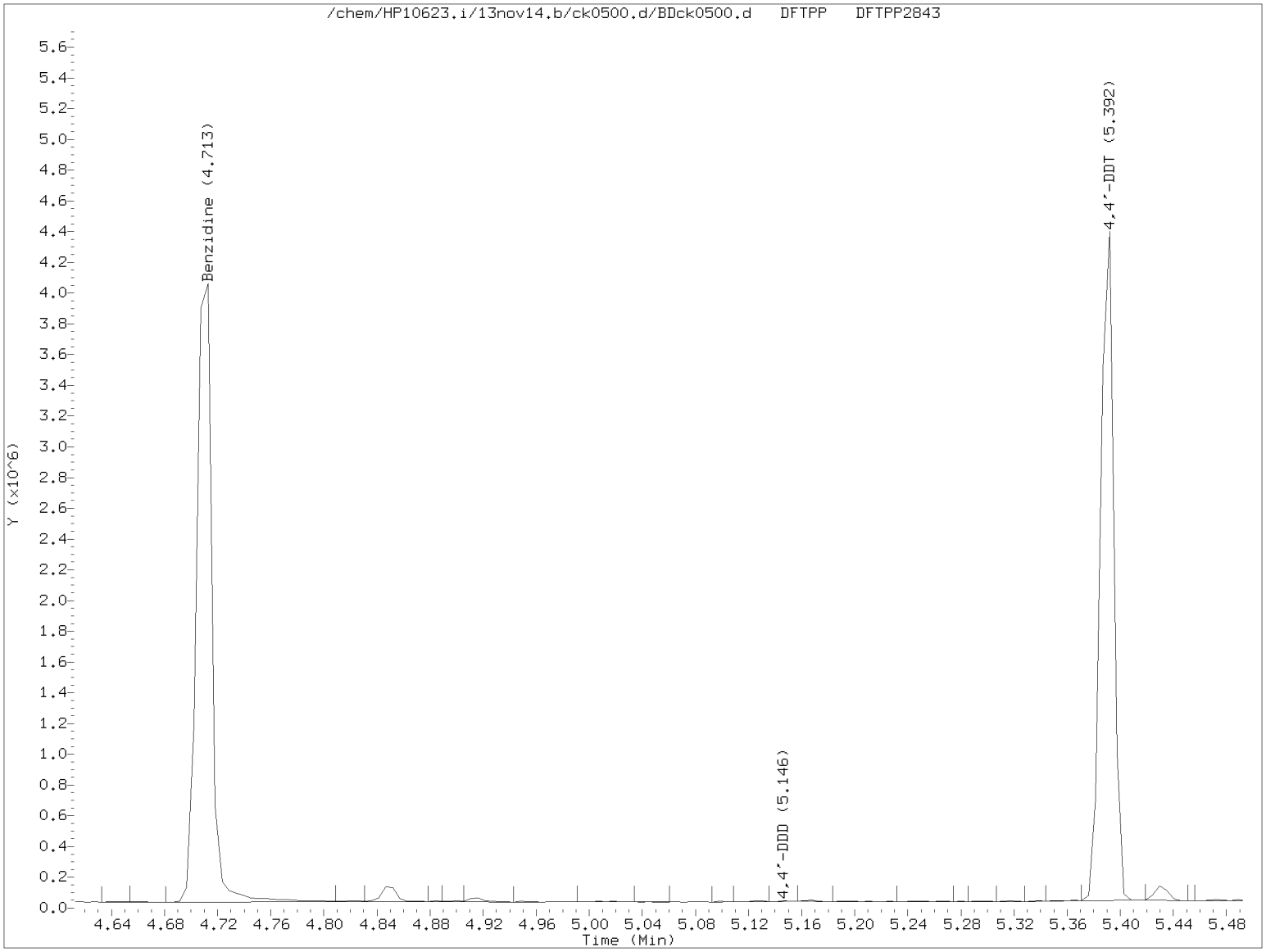
Target 3.5 esignature user ID: mac00013

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 13-NOV-2013 23:59 Operator: mac00013



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 1945}{0 + 1945 + 3049533} \times 100 = 0.1$$

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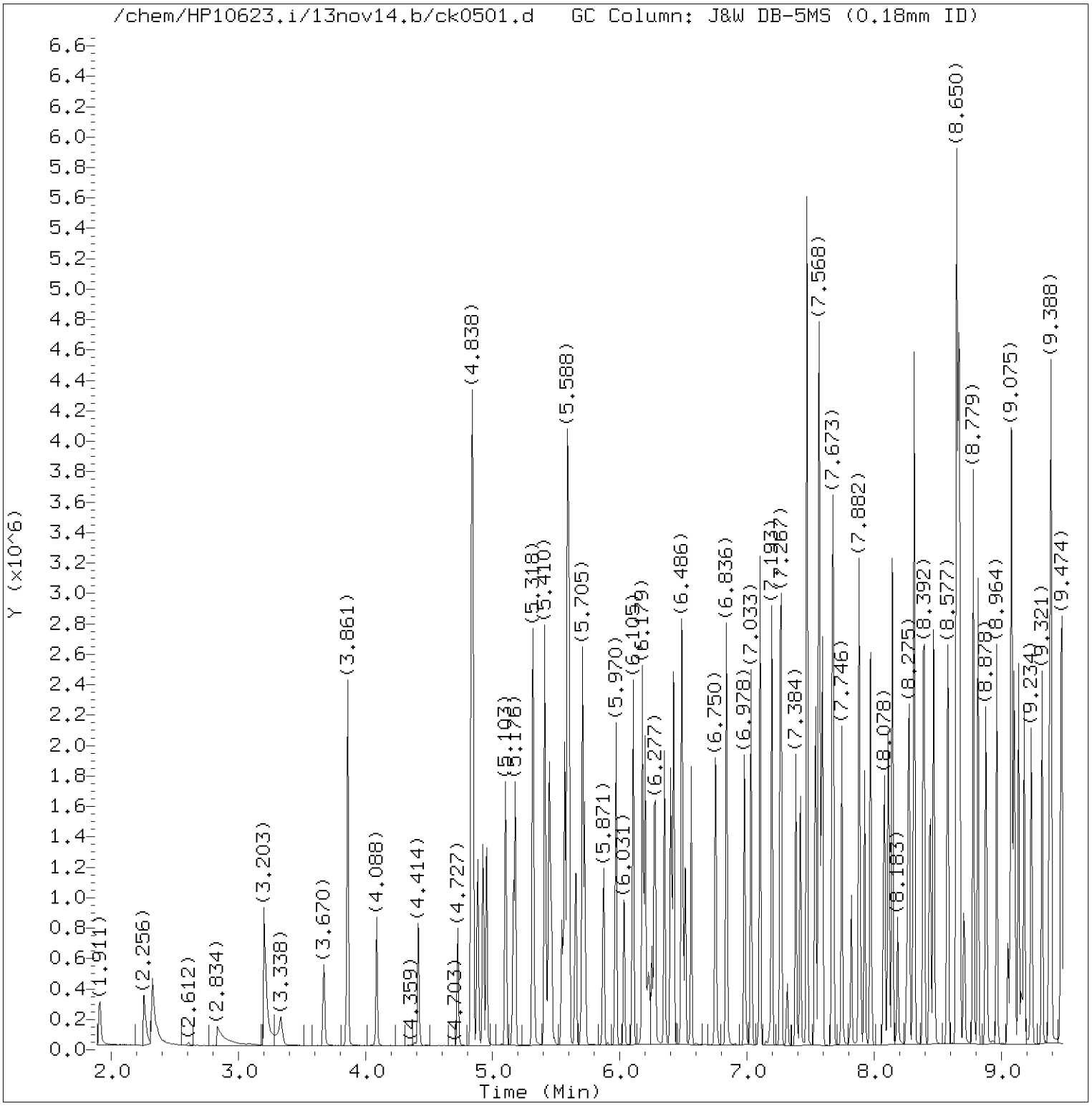
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

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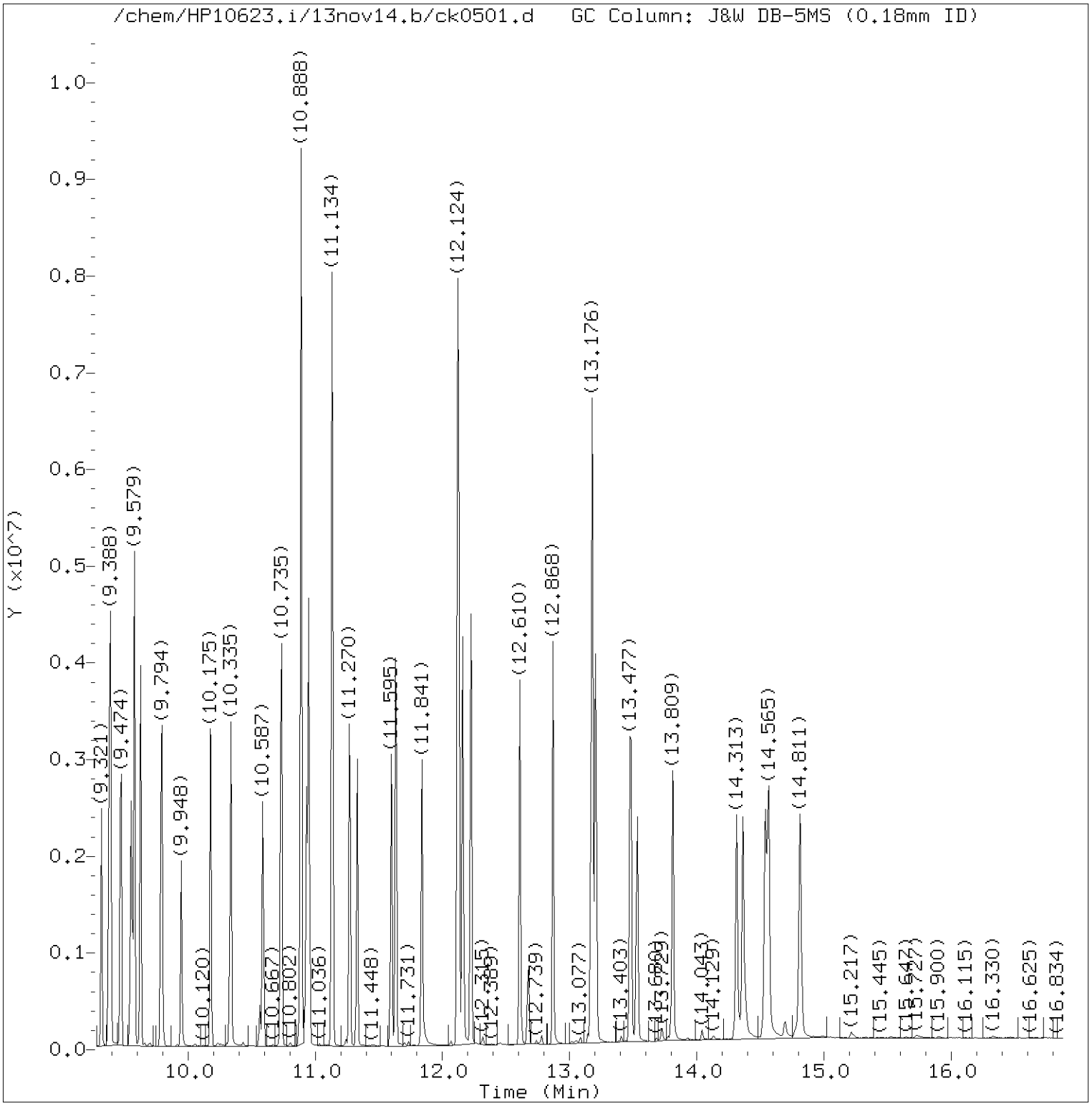
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.911	88	131183	26.971
2) N-Nitrosodimethylamine	(1)	2.262	74	232279	25.795
3) Pyridine	(1)	2.323	79	367932	26.355
5) 2-Picoline	(1)	3.203	93	395285	27.748
6) N-Nitrosomethylethylamine	(1)	3.338	88	180230	26.464
7) Methyl methanesulfonate	(1)	3.670	80	191933	28.029
9)$2-Fluorophenol	(1)	3.861	112	649154	58.350
10) N-Nitrosodiethylamine	(1)	4.088	102	192419	28.440
11) Ethyl methanesulfonate	(1)	4.420	109	181819	29.511
12) Benzaldehyde	(1)	4.727	77	153055	21.469
15)$Phenol-d6	(1)	4.832	99	932444	56.959
14)$Phenol-d5	(1)	4.832	99	932444	56.959
13) Aniline	(1)	4.838	93	630435	27.836
16) Phenol	(1)	4.844	94	536091	28.069
18) bis(2-Chloroethyl)ether	(1)	4.924	93	375894	27.723
19) 2-Chlorophenol	(1)	4.955	128	346078	29.047
20) 1,3-Dichlorobenzene	(1)	5.103	146	348201	28.961
21)*1,4-Dichlorobenzene-d4	(1)	5.164	152	148700	20.000
22) 1,4-Dichlorobenzene	(1)	5.176	146	358913	29.252
24) Benzyl alcohol	(1)	5.312	108	271102	29.102
25) 1,2-Dichlorobenzene	(1)	5.324	146	344065	29.875
206) Indene	(1)	5.410	115	741402	28.819
26) 2-Methylphenol	(1)	5.441	108	364112	28.724
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.459	45	439284	26.328
28) bis(2-Chloroisopropyl)ether	(1)	5.459	45	439284	26.261
29) N-Nitrosopyrrolidine	(1)	5.545	100	221666	29.214
30) Acetophenone	(1)	5.564	105	548829	29.040
31) N-Nitroso-di-n-propylamine	(1)	5.582	70	321935	26.613
32) N-Nitrosomorpholine	(1)	5.588	56	239173	27.747
33) 4-Methylphenol	(1)	5.594	108	431785	28.778
34) o-Toluidine	(1)	5.601	106	631399	29.166
37) Hexachloroethane	(1)	5.650	117	137956	29.542
38)$Nitrobenzene-d5	(2)	5.705	82	845176	55.406
39) Nitrobenzene	(2)	5.724	77	428817	26.502
40) N-Nitrosopiperidine	(2)	5.871	114	207082	28.850
41) Isophorone	(2)	5.970	82	796110	27.097
42) 2-Nitrophenol	(2)	6.037	139	174262	30.981
44) 2,4-Dimethylphenol	(2)	6.105	107	404827	28.001
45) O,O,O-triethylphosphorothioate	(2)	6.179	198	185911	30.841
46) bis(2-Chloroethoxy)methane	(2)	6.197	93	495196	27.739

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.228	105	378274	40.367
49) 2,4-Dichlorophenol	(2)	6.277	162	302734	30.790
50) 1,2,4-Trichlorobenzene	(2)	6.351	180	311681	30.095
52)*Naphthalene-d8	(2)	6.400	136	708022	20.000
53) Naphthalene	(2)	6.418	128	1090290	29.024
56) 4-Chloroaniline	(2)	6.486	127	480871	29.375
57) 2,6-Dichlorophenol	(2)	6.492	162	285184	30.795
58) Hexachloropropene	(2)	6.517	213	185743	31.712
60) Hexachlorobutadiene	(2)	6.560	225	157620	30.345
194) Quinoline	(2)	6.750	129	769397	29.714
64) N-Nitrosodi-n-butylamine	(2)	6.836	84	404643	28.600
63) Caprolactam	(2)	6.843	113	158335	29.070
68) 4-Chloro-3-methylphenol	(2)	6.978	107	362601	28.846
69) Safrole	(2)	7.033	162	296165	29.763
70) 2-Methylnaphthalene	(2)	7.101	142	783814	29.401
71) 1-Methylnaphthalene	(2)	7.193	142	716125	29.356
72) Hexachlorocyclopentadiene	(3)	7.261	237	147875	32.072
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.267	216	316657	29.677
74) cis-Isosafrole	(3)	7.316	162	54349	3.173
75) 2,4,6-Trichlorophenol	(3)	7.384	196	218647	31.405
77) 2,4,5-Trichlorophenol	(3)	7.421	196	240014	31.619
78)$2-Fluorobiphenyl	(3)	7.470	172	1652410	58.750
79) trans-Isosafrole	(3)	7.537	162	319174	26.320
80) Isosafrole	(3)	7.537	162	319174	29.573
83) 1,1'-Biphenyl	(3)	7.562	154	976195	28.167
84) 2-Chloronaphthalene	(3)	7.574	162	687035	27.215
85) 1-Chloronaphthalene	(3)	7.593	162	724705	29.170
88) Diphenyl ether	(3)	7.673	170	503417	29.159
89) 2-Nitroaniline	(3)	7.679	138	251133	30.494
90) 1,4-Naphthoquinone	(3)	7.746	158	319435	30.069
91) 1,4-Dinitrobenzene	(3)	7.820	168	102533	30.315
92) Dimethylphthalate	(3)	7.882	163	887579	29.549
93) 1,3-Dinitrobenzene	(3)	7.888	168	136378	29.809
94) 2,6-Dinitrotoluene	(3)	7.925	165	192758	30.811
95) Acenaphthylene	(3)	7.974	152	1130048	28.673
97) 3-Nitroaniline	(3)	8.078	138	239179	31.307
98)*Acenaphthene-d10	(3)	8.109	164	447321	20.000
99) Acenaphthene	(3)	8.140	153	779205	28.568
100) 2,4-Dinitrophenol	(3)	8.183	184	102661	47.390
103) 4-Nitrophenol	(3)	8.263	109	140395	29.664

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.275	250	280213	30.391
104) Dibenzofuran	(3)	8.312	168	1072031	28.692
105) 2,4-Dinitrotoluene	(3)	8.318	165	252130	31.187
106) 1-Naphthylamine	(3)	8.392	143	906331	29.521
107) 2,3,4,6-Tetrachlorophenol	(3)	8.441	232	177876	33.267
108) 2-Naphthylamine	(3)	8.466	143	929797	29.599
109) Diethylphthalate	(3)	8.577	149	903389	29.115
111) Fluorene	(3)	8.644	166	924060	28.744
110) Thionazin	(3)	8.650	107	184985	27.032
112) 4-Chlorophenyl-phenylether	(3)	8.663	204	422884	29.569
113) 5-Nitro-o-toluidine	(3)	8.669	152	262736	30.954
114) 4-Nitroaniline	(3)	8.675	138	248708	28.949
115) 4,6-Dinitro-2-methylphenol	(4)	8.706	198	111801	33.337
117) N-Nitrosodiphenylamine	(4)	8.779	169	813439	29.385
202) NDPA as diphenylamine	(4)	8.779	169	813439	29.315
118) 1,2-Diphenylhydrazine	(4)	8.816	77	1055494	26.618
119)$2,4,6-Tribromophenol	(3)	8.884	330	179025	66.273
120) Tetraethyldithiopyrophosphate	(4)	8.964	97	152167	26.924
121) 1,3,5-Trinitrobenzene	(4)	9.056	213	68537	30.346
122) Diallate (peak 1)	(4)	9.075	86	403783	19.899
123) Phorate	(4)	9.081	75	638417	26.131
124) Phenacetin	(4)	9.099	108	527395	27.568
125) 4-Bromophenyl-phenylether	(4)	9.136	248	236809	31.047
126) Diallate (peak 2)	(4)	9.155	86	56068	6.363
127) Hexachlorobenzene	(4)	9.179	284	233858	31.054
128) Dimethoate	(4)	9.234	87	413828	27.700
130) Atrazine	(4)	9.321	200	236583	26.676
131) Pentachlorophenol	(4)	9.376	266	141523	33.885
132) Pentachloronitrobenzene	(4)	9.388	237	100671	30.794
133) 4-Aminobiphenyl	(4)	9.388	169	873438	29.179
134) Pronamide	(4)	9.474	173	415811	28.819
135)*Phenanthrene-d10	(4)	9.554	188	825922	20.000
136) Dinoseb	(4)	9.579	211	153882	32.533
137) Phenanthrene	(4)	9.579	178	1377907	28.692
138) Anthracene	(4)	9.628	178	1420173	28.729
140) Carbazole	(4)	9.794	167	1390788	28.831
141) Methyl parathion	(4)	9.948	109	273976	28.800
142) Di-n-butylphthalate	(4)	10.181	149	1607445	28.243
144) 4-Nitroquinoline-1-oxide	(4)	10.335	190	100815	28.890
143) Parathion	(4)	10.335	109	188428	27.464

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

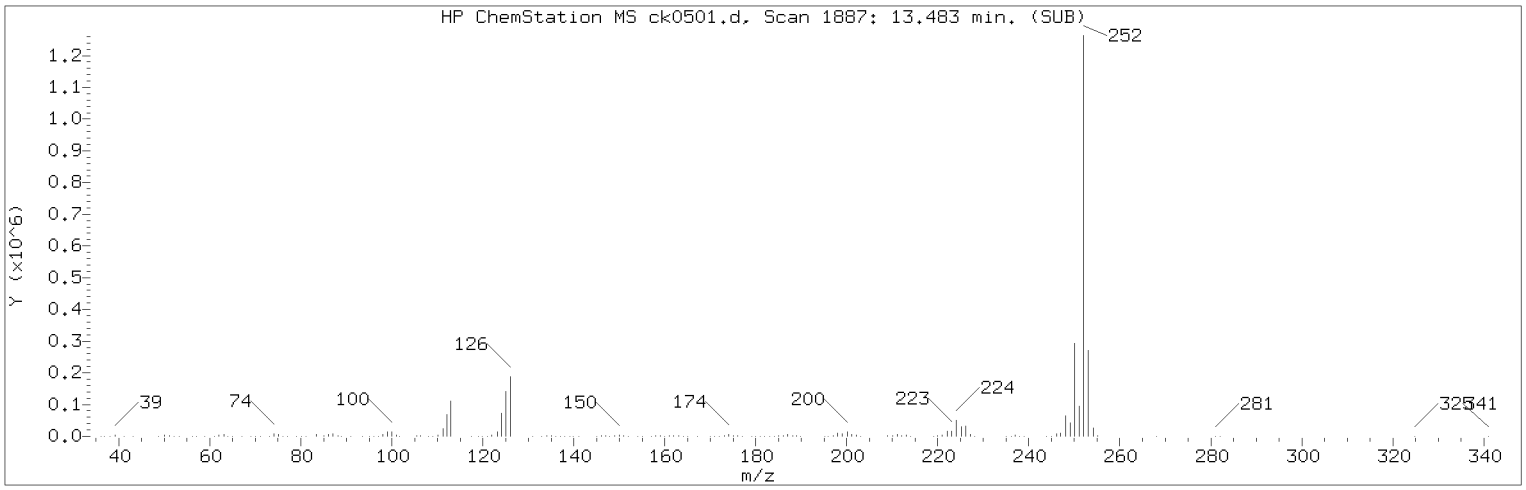
Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.587	193	151799	27.971
147) Fluoranthene	(4)	10.735	202	1555009	28.958
152) Benzidine	(5)	10.888	184	3636117	86.141
167)*Pyrene-d10	(5)	10.931	212	1031121	20.000
154) Pyrene	(5)	10.950	202	1641866	28.673
156)$Terphenyl-d14	(5)	11.134	244	2183457	59.234
158) p-Dimethylaminoazobenzene	(5)	11.270	225	328959	29.478
159) Chlorobenzilate	(5)	11.331	139	502622	28.954
160) 3,3'-Dimethylbenzidine	(5)	11.595	212	1029078	29.159
161) Butylbenzylphthalate	(5)	11.632	149	765449	28.012
162) 2-Acetylaminofluorene	(5)	11.841	181	686473	27.739
164) 3,3'-Dichlorobenzidine	(5)	12.118	252	594498	29.858
166) Benzo(a)anthracene	(5)	12.124	228	1530607	28.980
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.130	231	285507	29.354
168) Chrysene	(5)	12.161	228	1453521	28.544
169) bis(2-Ethylhexyl)phthalate	(5)	12.223	149	1055783	27.847
189) 6-Methylchrysene	(5)	12.610	242	1072652	28.548
170) Di-n-octylphthalate	(6)	12.868	149	1816370	27.854
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.176	256	752451	30.694
172) Benzo(b)fluoranthene	(6)	13.176	252	1643293	31.149
173) Benzo(k)fluoranthene	(6)	13.206	252	1508878	28.035
174) Benzo(a)pyrene	(6)	13.483	252	1455240M	28.263
175)*Perylene-d12	(6)	13.532	264	863964	20.000
176) 3-Methylcholanthrene	(6)	13.815	268	751956	29.136
190) Dibenz(a,h)acridine	(6)	14.313	279	1087206	29.065
191) Dibenz(a,j)acridine	(6)	14.362	279	1260053	29.294
177) Indeno(1,2,3-cd)pyrene	(6)	14.541	276	1593030	29.080
178) Dibenz(a,h)anthracene	(6)	14.565	278	1335075	29.136
179) Benzo(g,h,i)perylene	(6)	14.811	276	1349926	28.926
129) Diallate TRANS/CIS	(4)			459851	26.396

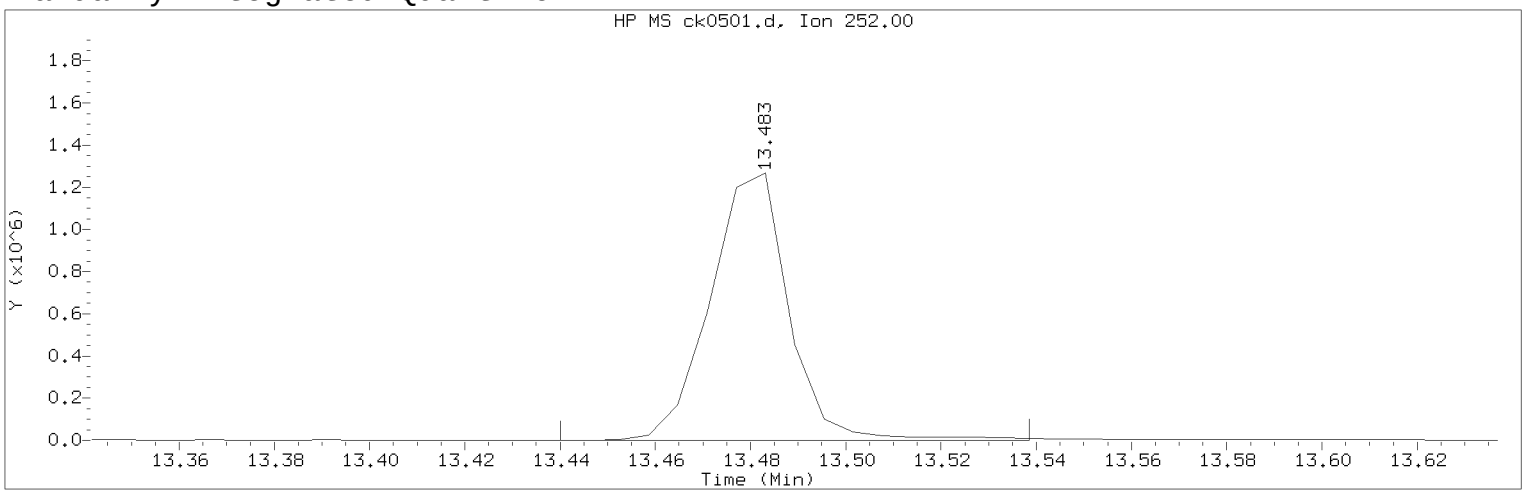
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:53
Date, time and analyst ID of latest file update: 14-Nov-2013 00:53 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

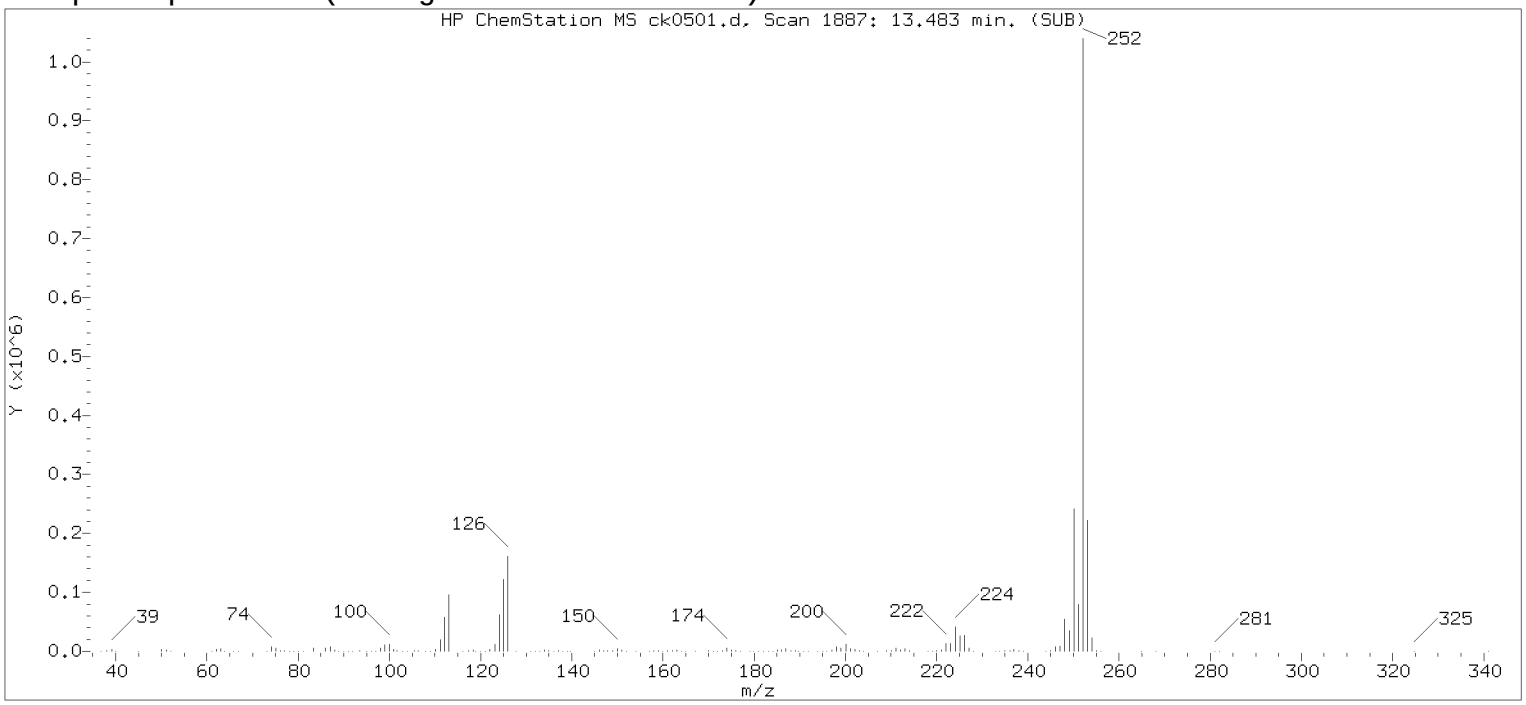
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1887
Retention Time (minutes) : 13.483
Quant Ion : 252.00
Area (flag) : 1455240M
On-Column Amount (ng/ul) : 28.2630
Integration start scan : 1879 Integration stop scan: 1895
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

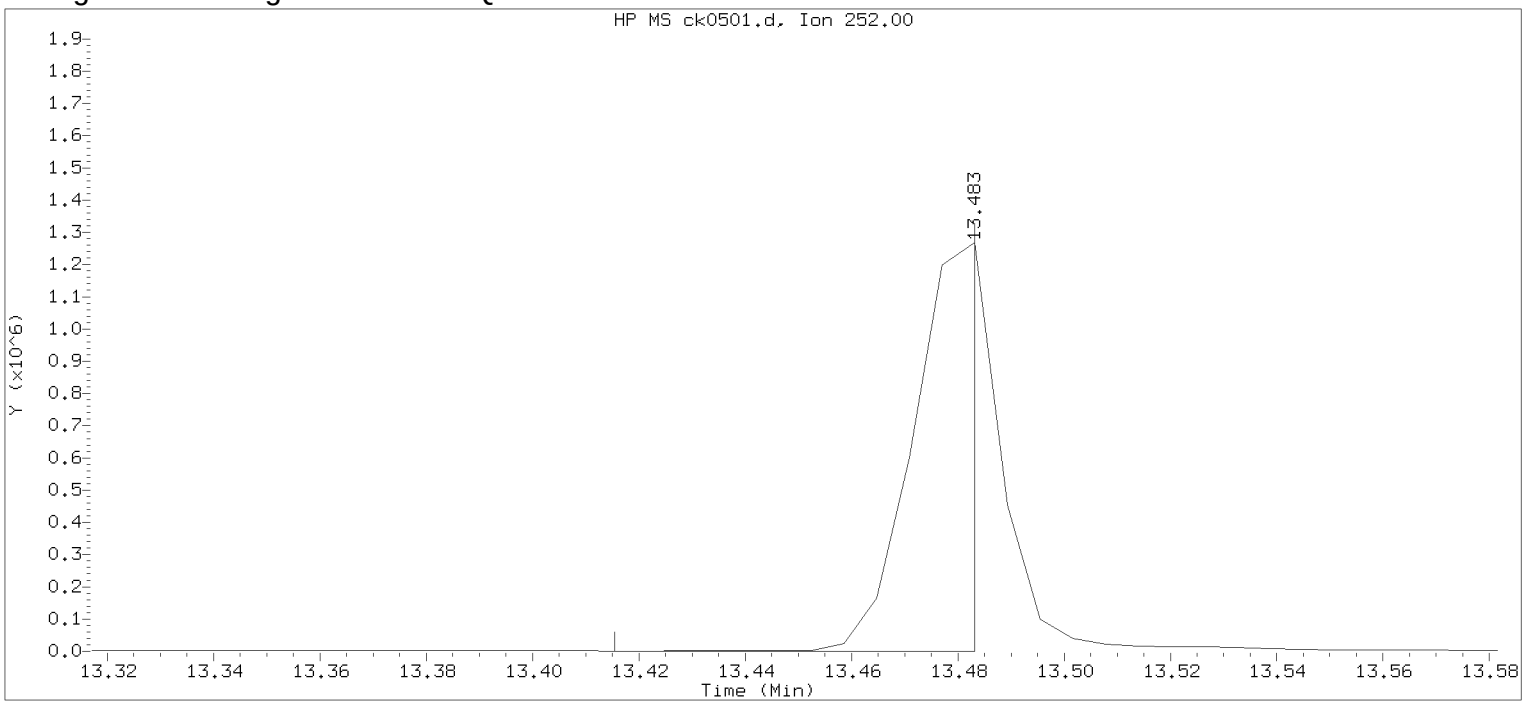
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 11:20.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov14.b/ck0501.d Instrument ID: HP10623.i
Injection date and time: 14-NOV-2013 00:13 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov14.b/m8270.m Sublist used: newall1
Calibration date and time: 14-NOV-2013 00:51
Date, time and analyst ID of latest file update: 14-Nov-2013 00:51 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1887
Retention Time (minutes) : 13.483
Quant Ion : 252.00
Area : 968114
On-column Amount (ng/ul) : 18.8022
Integration start scan : 1875 Integration stop scan: 1886
Y at integration start : 926 Y at integration end: 653

Digitally signed by Mark A. Clark on 11/14/2013 at 01:37.
Target 3.5 esignature user ID: mac00136

Data File: /chem/HP10623.i/13nov15.b/ck0540.d

Page 1

Date : 15-NOV-2013 00:17

Client ID: DFTPP

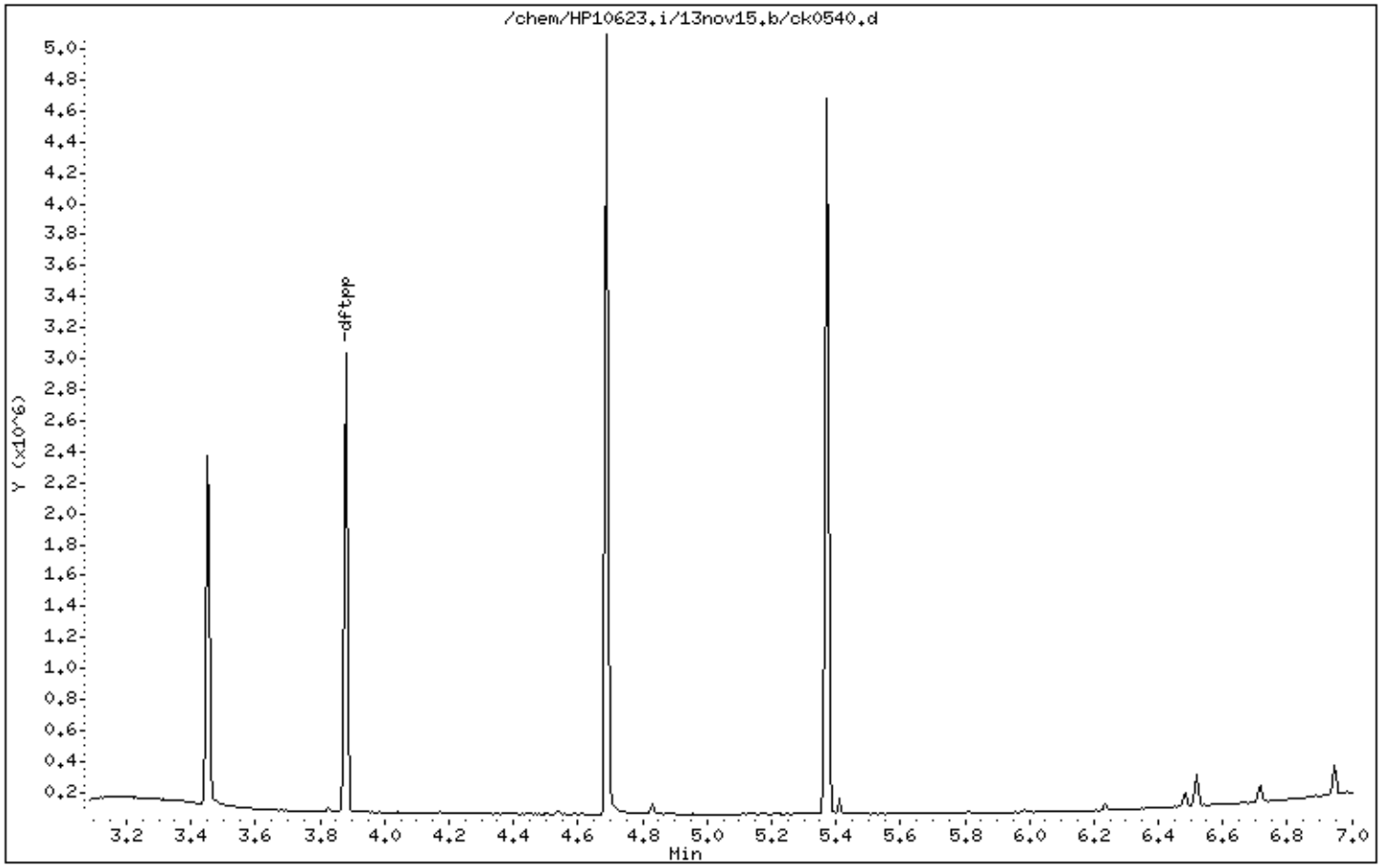
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0540.d

Date : 15-NOV-2013 00:17

Client ID: DFTPP

Instrument: HP10623.i

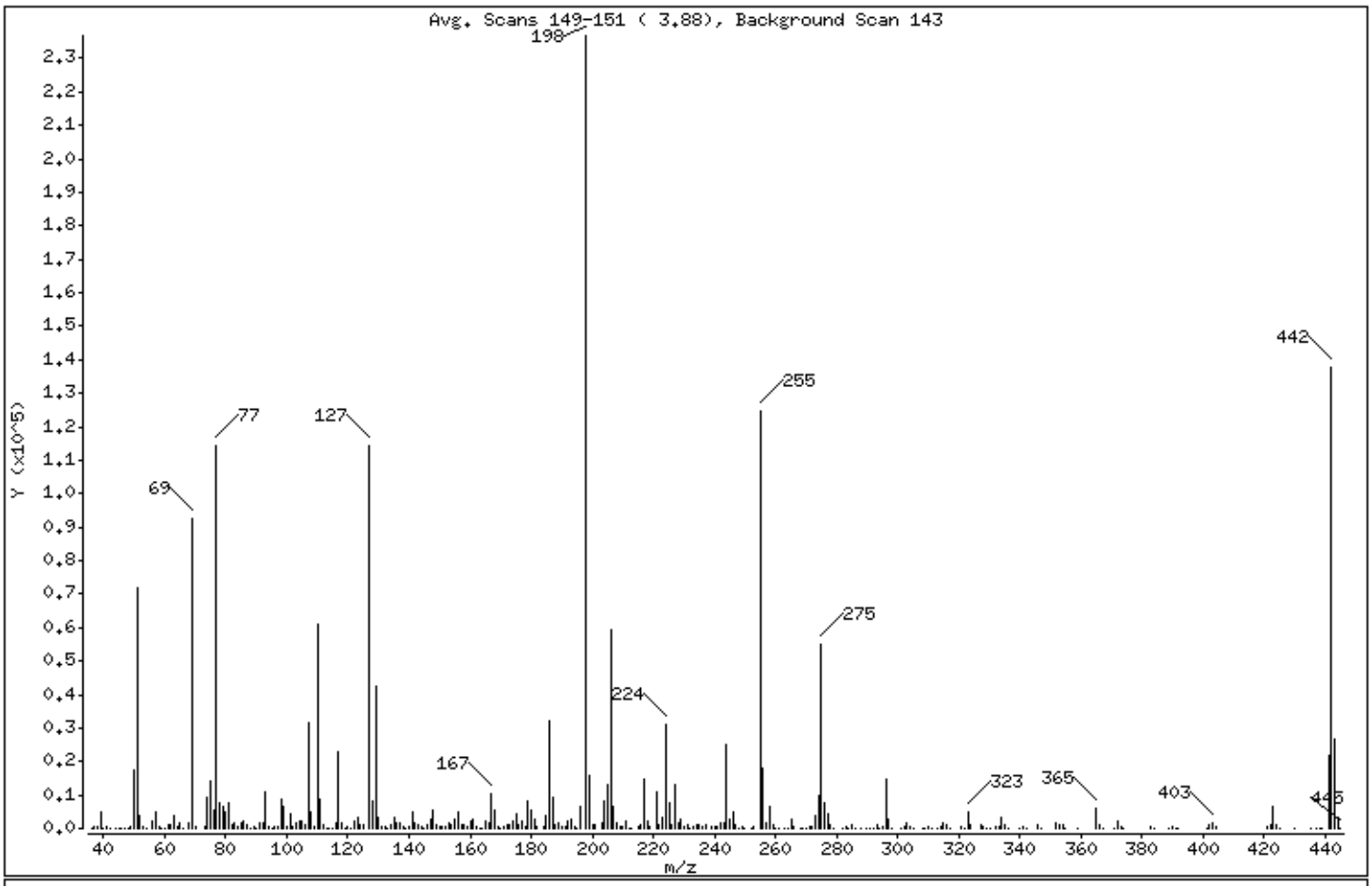
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	30.34
68	Less than 2.00% of mass 69	0.75 (1.91)
69	Mass 69 relative abundance	39.17
70	Less than 2.00% of mass 69	0.14 (0.35)
127	40.00 - 60.00% of mass 198	48.26
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.62
275	10.00 - 30.00% of mass 198	23.25
365	Greater than 1.00% of mass 198	2.62
441	Present, but less than mass 443	9.11
442	40.00 - 99.99% of mass 198	58.09
443	17.00 - 23.00% of mass 442	11.21 (19.30)

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Date : 15-NOV-2013 00:17

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

Data File: ck0540.d
Spectrum: Avg. Scans 149-151 (3.88), Background Scan 143
Location of Maximum: 198.00
Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	59	120.00	358	203.00	1525	293.00	1113
37.00	277	121.00	111	204.00	8297	294.00	175
38.00	659	122.00	2243	205.00	12922	295.00	345
39.00	4779	123.00	3297	206.00	59128	296.00	14901
40.00	269	124.00	1291	207.00	6520	297.00	2528
41.00	413	125.00	842	208.00	1824	298.00	55
42.00	111	127.00	114288	209.00	556	301.00	245
44.00	63	128.00	8345	210.00	699	302.00	368
45.00	21	129.00	42640	211.00	2291	303.00	1837
46.00	50	130.00	3371	212.00	187	304.00	465
47.00	62	131.00	649	213.00	230	305.00	82
48.00	103	132.00	545	215.00	417	308.00	215
49.00	561	133.00	217	216.00	1248	309.00	163
50.00	17664	134.00	930	217.00	14460	310.00	277
51.00	71832	135.00	3410	218.00	2069	311.00	64
52.00	3835	136.00	1403	219.00	307	313.00	183
53.00	335	137.00	1885	221.00	10803	314.00	770
54.00	150	138.00	559	222.00	836	315.00	1539
56.00	1914	139.00	107	223.00	3001	316.00	956
57.00	4814	140.00	611	224.00	30880	317.00	136
58.00	388	141.00	5086	225.00	7513	321.00	691
59.00	61	142.00	1655	226.00	968	322.00	154
60.00	120	143.00	1141	227.00	13243	323.00	4800
61.00	1224	144.00	455	228.00	1574	324.00	1008
62.00	1284	145.00	125	229.00	2770	327.00	847
63.00	3768	146.00	934	230.00	377	328.00	400
64.00	484	147.00	2710	231.00	1356	329.00	130
65.00	1691	148.00	5600	232.00	269	330.00	81
66.00	65	149.00	1233	233.00	401	332.00	401
68.00	1769	150.00	544	234.00	838	333.00	546
69.00	92744	151.00	636	235.00	970	334.00	3005
70.00	321	152.00	674	236.00	797	335.00	837
73.00	693	153.00	1502	237.00	1247	336.00	53
74.00	9081	154.00	1175	239.00	714	340.00	85
75.00	14020	155.00	2926	240.00	477	341.00	504

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Date : 15-NOV-2013 00:17

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

Data File: ck0540.d
Spectrum: Avg. Scans 149-151 (3.88), Background Scan 143
Location of Maximum: 198.00
Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	5482	156.00	4723	241.00	775	342.00	91
77.00	114568	157.00	1186	242.00	1776	346.00	972
78.00	7376	158.00	1334	243.00	1840	347.00	168
79.00	6442	159.00	634	244.00	25056	352.00	1465
80.00	4800	160.00	1935	245.00	2835	353.00	989
81.00	7378	161.00	2594	246.00	4858	354.00	1276
82.00	1348	162.00	796	247.00	1075	355.00	157
83.00	1594	163.00	129	248.00	272	359.00	66
84.00	282	164.00	238	249.00	805	365.00	6201
85.00	1368	165.00	1916	250.00	198	366.00	1008
86.00	2191	166.00	1760	252.00	256	367.00	50
87.00	1037	167.00	10122	253.00	607	371.00	268
88.00	46	168.00	5453	255.00	124536	372.00	2281
89.00	418	169.00	797	256.00	17752	373.00	635
90.00	54	170.00	234	257.00	1460	374.00	65
91.00	1570	171.00	459	258.00	6614	383.00	518
92.00	1661	172.00	1234	259.00	1160	384.00	93
93.00	10829	173.00	1100	260.00	138	389.00	58
94.00	642	174.00	2248	261.00	214	390.00	290
95.00	60	175.00	4445	263.00	152	391.00	214
96.00	519	176.00	1161	264.00	263	392.00	140
97.00	344	177.00	1992	265.00	2911	401.00	185
98.00	8731	178.00	771	266.00	662	402.00	853
99.00	6691	179.00	7941	268.00	72	403.00	1387
100.00	624	180.00	5359	269.00	56	404.00	379
101.00	4275	181.00	2649	270.00	120	421.00	809
102.00	384	182.00	403	271.00	397	422.00	1129
103.00	1688	184.00	668	272.00	303	423.00	6790
104.00	2348	185.00	3838	273.00	3838	424.00	1307
105.00	2121	186.00	31952	274.00	9763	425.00	134
106.00	907	187.00	9355	275.00	55064	430.00	54
107.00	31752	188.00	974	276.00	7400	435.00	57
108.00	5130	189.00	1741	277.00	4562	437.00	54
109.00	773	190.00	488	278.00	987	438.00	171
110.00	61096	191.00	757	279.00	238	439.00	263

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Date : 15-NOV-2013 00:17

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: mac00013

Column phase: DB-5 Column diameter: 0.25

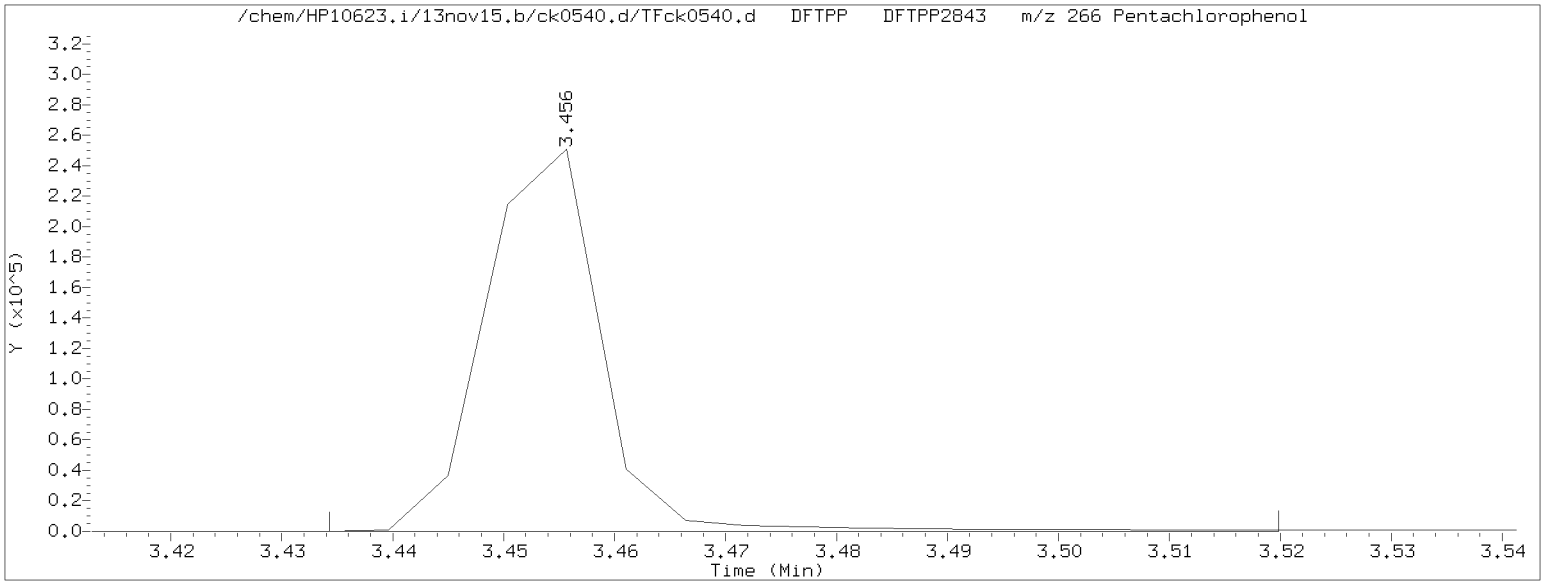
Data File: ck0540.d
Spectrum: Avg. Scans 149-151 (3.88), Background Scan 143
Location of Maximum: 198.00
Number of points: 312

m/z	Y	m/z	Y	m/z	Y	m/z	Y
111.00	8871	192.00	2390	282.00	84	441.00	21560
112.00	1021	193.00	2515	283.00	601	442.00	137536
113.00	225	194.00	563	284.00	249	443.00	26552
114.00	125	195.00	70	285.00	902	444.00	2481
115.00	150	196.00	6756	286.00	180	445.00	125
116.00	1816	198.00	236800	288.00	67		
117.00	23056	199.00	15666	290.00	172		
118.00	1565	200.00	1335	291.00	99		
119.00	237	201.00	899	292.00	153		

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Assessment of GC Column Performance and Injection Port Inertness for

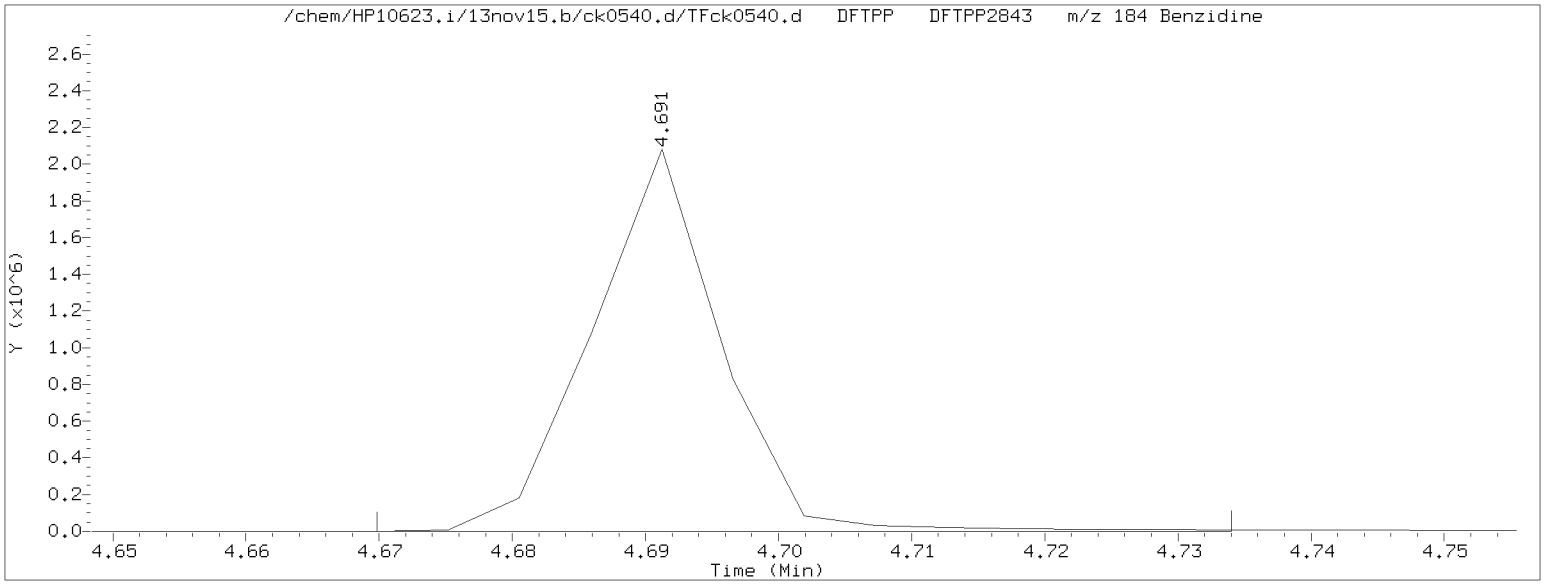
Instrument ID: HP10623.i Injection Date: 15-NOV-2013 00:17 Operator: mac00013



Pentachlorophenol EICP peak height = 250944 EICP peak height at 10% = 25094 Pentachlorophenol EICP area = 182214

Pentachlorophenol EICP peak apex (min.) = 3.456
RT at 10% of front half of EICP (min.) = 3.443 'Front' peak width (min.) = 0.0123833333
RT at 10% of back half of EICP (min.) = 3.463 'Tailing' peak width (min.) = 0.0078000000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0078000000}{0.0123833333} = 0.630$



Benzidine EICP peak height = 2082064 EICP peak height at 10% = 208206 Benzidine EICP area = 1393616

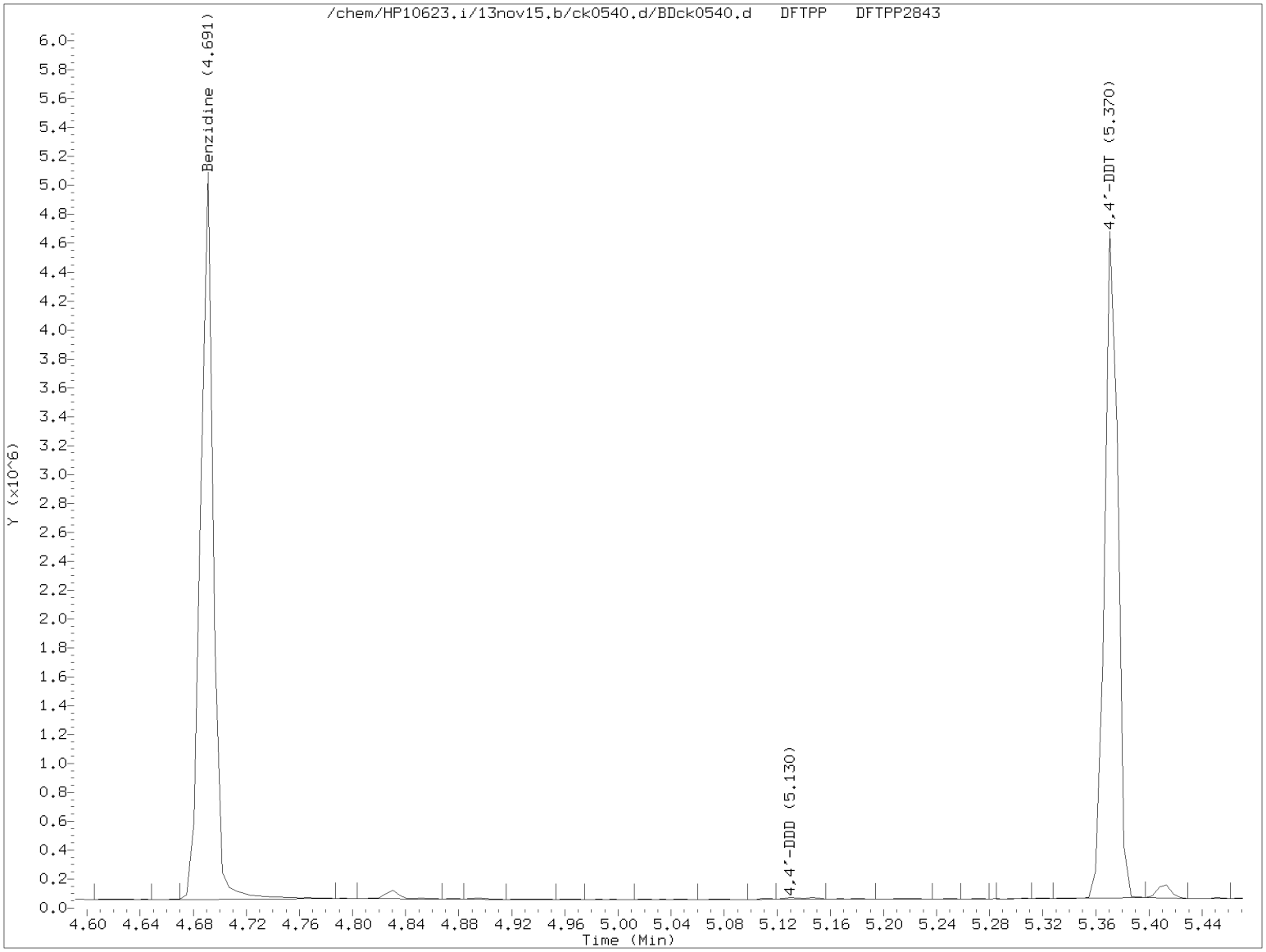
Benzidine EICP peak apex (min.) = 4.691
RT at 10% of front half of EICP (min.) = 4.681 'Front' peak width (min.) = 0.0105166667
RT at 10% of back half of EICP (min.) = 4.701 'Tailing' peak width (min.) = 0.0097666667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0097666667}{0.0105166667} = 0.929$

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Assessment of GC Column Performance and Injection Port Inertness for

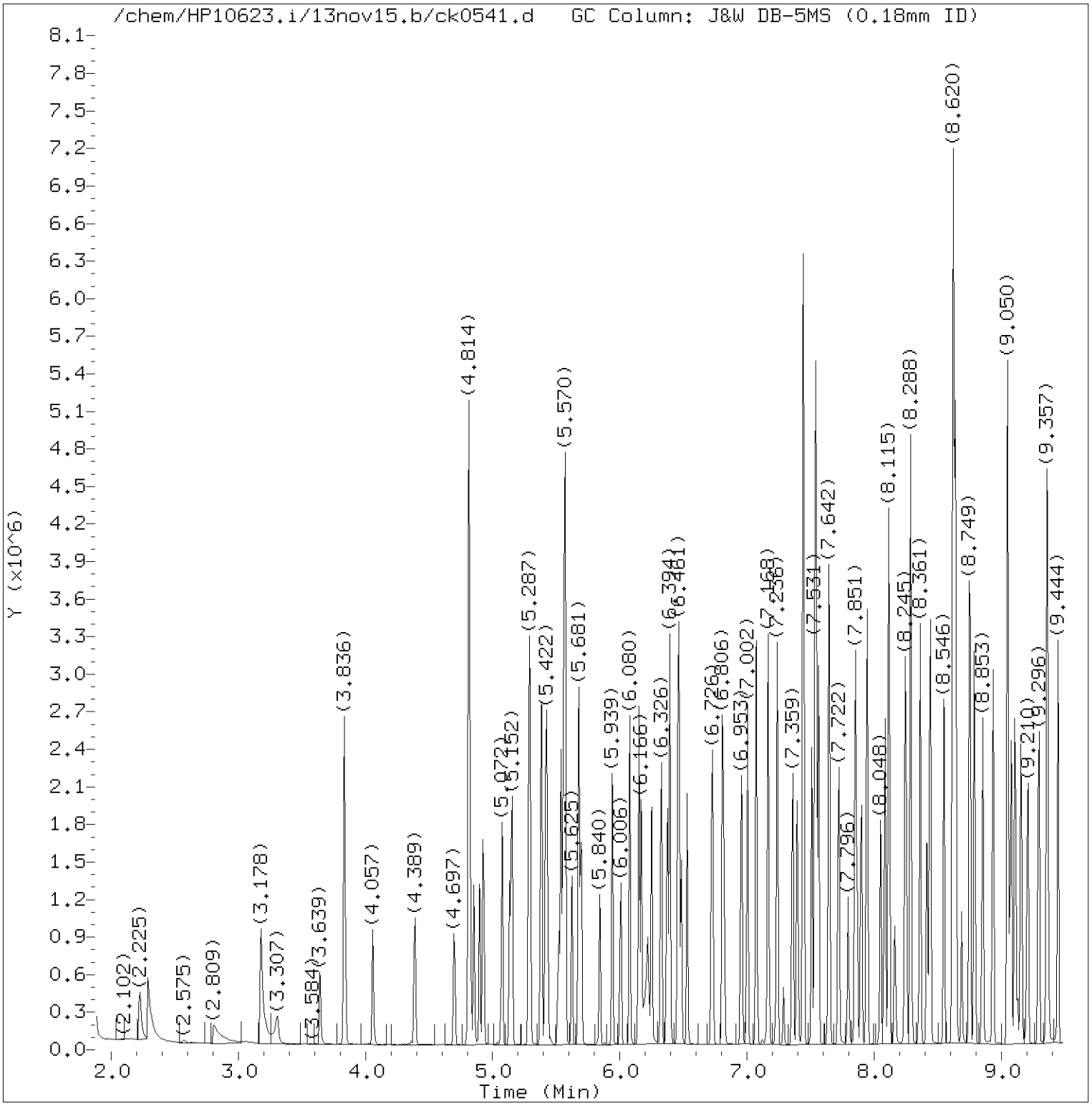
Instrument ID: HP10623.i Injection Date: 15-NOV-2013 00:17 Operator: mac00013



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 15921}{0 + 15921 + 3239524} \times 100 = 0.5$$

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

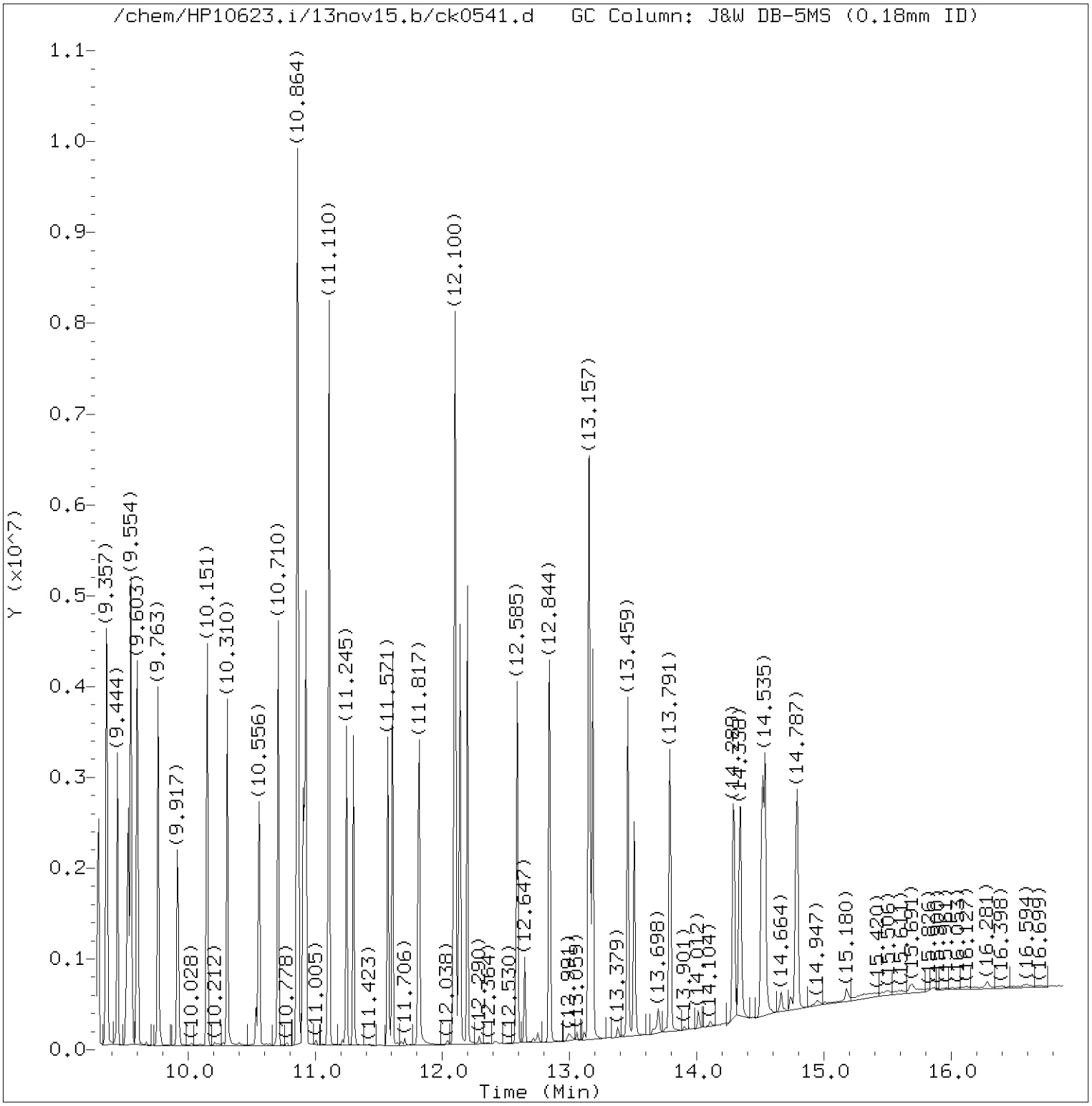
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.225	74	283037	26.961
3) Pyridine	(1)	2.286	79	463313	28.467
5) 2-Picoline	(1)	3.178	93	481372	28.984
1) 1,4-Dioxane	(1)	3.196	88	12021	2.120
6) N-Nitrosomethylethylamine	(1)	3.307	88	213530	26.894
7) Methyl methanesulfonate	(1)	3.639	80	221480	27.744
9)$2-Fluorophenol	(1)	3.836	112	757944	58.437
10) N-Nitrosodiethylamine	(1)	4.057	102	220038	27.896
11) Ethyl methanesulfonate	(1)	4.389	109	209935	29.227
12) Benzaldehyde	(1)	4.697	77	180421	21.727
13) Aniline	(1)	4.814	93	736262	27.884
15)$Phenol-d6	(1)	4.814	99	1109721	58.146
14)$Phenol-d5	(1)	4.814	99	1109721	58.146
16) Phenol	(1)	4.826	94	648650	29.131
18) bis(2-Chloroethyl)ether	(1)	4.894	93	450571	28.503
19) 2-Chlorophenol	(1)	4.924	128	408300	29.395
20) 1,3-Dichlorobenzene	(1)	5.072	146	405405	28.923
21)*1,4-Dichlorobenzene-d4	(1)	5.133	152	173359	20.000
22) 1,4-Dichlorobenzene	(1)	5.152	146	412597	28.844
24) Benzyl alcohol	(1)	5.287	108	320404	29.502
25) 1,2-Dichlorobenzene	(1)	5.293	146	399438	29.750
206) Indene	(1)	5.385	115	860378	28.687
26) 2-Methylphenol	(1)	5.422	108	428482	28.994
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.428	45	507070	26.067
28) bis(2-Chloroisopropyl)ether	(1)	5.428	45	507070	26.001
29) N-Nitrosopyrrolidine	(1)	5.521	100	256602	29.008
30) Acetophenone	(1)	5.539	105	625180	28.375
32) N-Nitrosomorpholine	(1)	5.558	56	271230	26.991
31) N-Nitroso-di-n-propylamine	(1)	5.558	70	375412	26.619
33) 4-Methylphenol	(1)	5.570	108	510249	29.170
34) o-Toluidine	(1)	5.570	106	740271	29.331
37) Hexachloroethane	(1)	5.625	117	158063	29.033
38)$Nitrobenzene-d5	(2)	5.681	82	986065	55.616
39) Nitrobenzene	(2)	5.693	77	506271	26.920
40) N-Nitrosopiperidine	(2)	5.840	114	242438	29.059
41) Isophorone	(2)	5.939	82	932623	27.311
42) 2-Nitrophenol	(2)	6.006	139	210124	32.140
44) 2,4-Dimethylphenol	(2)	6.080	107	476627	28.364
45) O,O,O-triethylphosphorothioate	(2)	6.148	198	216915	30.960
46) bis(2-Chloroethoxy)methane	(2)	6.166	93	577242	27.820

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.215	105	440096	40.406
49) 2,4-Dichlorophenol	(2)	6.252	162	356028	31.154
50) 1,2,4-Trichlorobenzene	(2)	6.326	180	360116	29.916
52)*Naphthalene-d8	(2)	6.375	136	822933	20.000
53) Naphthalene	(2)	6.394	128	1262629	28.918
56) 4-Chloroaniline	(2)	6.461	127	553343	29.082
57) 2,6-Dichlorophenol	(2)	6.468	162	340480	31.632
58) Hexachloropropene	(2)	6.486	213	213214	31.319
60) Hexachlorobutadiene	(2)	6.529	225	180753	29.939
194) Quinoline	(2)	6.726	129	885941	29.437
64) N-Nitrosodi-n-butylamine	(2)	6.806	84	473129	28.771
63) Caprolactam	(2)	6.818	113	180029	28.437
68) 4-Chloro-3-methylphenol	(2)	6.953	107	423085	28.957
69) Safrole	(2)	7.002	162	349915	30.254
70) 2-Methylnaphthalene	(2)	7.076	142	920756	29.715
71) 1-Methylnaphthalene	(2)	7.168	142	833428	29.394
72) Hexachlorocyclopentadiene	(3)	7.230	237	161457	30.675
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.236	216	367971	30.210
74) cis-Isosafrole	(3)	7.285	162	62657	3.204
75) 2,4,6-Trichlorophenol	(3)	7.359	196	259406	32.639
77) 2,4,5-Trichlorophenol	(3)	7.396	196	278200	32.105
78)$2-Fluorobiphenyl	(3)	7.445	172	1899333	59.154
79) trans-Isosafrole	(3)	7.507	162	365473	26.400
80) Isosafrole	(3)	7.507	162	365473	29.663
83) 1,1'-Biphenyl	(3)	7.537	154	1125252	28.441
84) 2-Chloronaphthalene	(3)	7.544	162	976873M	33.898
85) 1-Chloronaphthalene	(3)	7.562	162	825192M	29.095
88) Diphenyl ether	(3)	7.642	170	586564	29.762
89) 2-Nitroaniline	(3)	7.648	138	290118	30.859
90) 1,4-Naphthoquinone	(3)	7.722	158	352584	29.073
91) 1,4-Dinitrobenzene	(3)	7.796	168	122093	31.473
92) Dimethylphthalate	(3)	7.851	163	1006669	29.357
93) 1,3-Dinitrobenzene	(3)	7.869	168	161054	30.738
94) 2,6-Dinitrotoluene	(3)	7.900	165	224275	31.403
95) Acenaphthylene	(3)	7.943	152	1310568	29.130
97) 3-Nitroaniline	(3)	8.048	138	265601	30.454
98)*Acenaphthene-d10	(3)	8.085	164	510651	20.000
99) Acenaphthene	(3)	8.115	153	901007	28.937
100) 2,4-Dinitrophenol	(3)	8.165	184	123194	49.365
103) 4-Nitrophenol	(3)	8.245	109	153492	28.409

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.251	250	325544	30.928
104) Dibenzofuran	(3)	8.288	168	1236274	28.985
105) 2,4-Dinitrotoluene	(3)	8.294	165	290106	31.434
106) 1-Naphthylamine	(3)	8.361	143	1028028	29.332
107) 2,3,4,6-Tetrachlorophenol	(3)	8.417	232	207734	34.033
108) 2-Naphthylamine	(3)	8.441	143	1053681	29.383
109) Diethylphthalate	(3)	8.552	149	1026205	28.971
111) Fluorene	(3)	8.620	166	1065036	29.021
110) Thionazin	(3)	8.620	107	208248	26.657
112) 4-Chlorophenyl-phenylether	(3)	8.632	204	487878	29.883
113) 5-Nitro-o-toluidine	(3)	8.638	152	301492	31.115
114) 4-Nitroaniline	(3)	8.644	138	281751	28.728
115) 4,6-Dinitro-2-methylphenol	(4)	8.687	198	133118	35.161
117) N-Nitrosodiphenylamine	(4)	8.749	169	930187	30.110
202) NDPA as diphenylamine	(4)	8.749	169	930187	30.039
118) 1,2-Diphenylhydrazine	(4)	8.786	77	1184384	26.765
119)$2,4,6-Tribromophenol	(3)	8.853	330	209579	67.962
120) Tetraethyldithiopyrophosphate	(4)	8.933	97	171832	27.244
122) Diallate (peak 1)	(4)	9.044	86	456923	20.178
123) Phorate	(4)	9.050	75	906241	33.239
121) 1,3,5-Trinitrobenzene	(4)	9.056	213	79930	31.407
124) Phenacetin	(4)	9.075	108	578503	27.097
125) 4-Bromophenyl-phenylether	(4)	9.105	248	267031	31.371
126) Diallate (peak 2)	(4)	9.130	86	63781	6.486
127) Hexachlorobenzene	(4)	9.155	284	257761	30.671
128) Dimethoate	(4)	9.210	87	464741	27.875
130) Atrazine	(4)	9.296	200	262217	26.494
131) Pentachlorophenol	(4)	9.351	266	153232	32.876
133) 4-Aminobiphenyl	(4)	9.357	169	967382	28.959
132) Pentachloronitrobenzene	(4)	9.364	237	108782	29.817
134) Pronamide	(4)	9.444	173	469908	29.184
135)*Phenanthrene-d10	(4)	9.530	188	921704	20.000
137) Phenanthrene	(4)	9.554	178	1541961	28.772
136) Dinoseb	(4)	9.554	211	181537	34.001
138) Anthracene	(4)	9.603	178	1609620	29.177
140) Carbazole	(4)	9.763	167	1527896	28.382
141) Methyl parathion	(4)	9.917	109	314428	29.550
142) Di-n-butylphthalate	(4)	10.151	149	1791648	28.208
144) 4-Nitroquinoline-1-oxide	(4)	10.310	190	105057	27.413
143) Parathion	(4)	10.310	109	211591	27.617

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on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

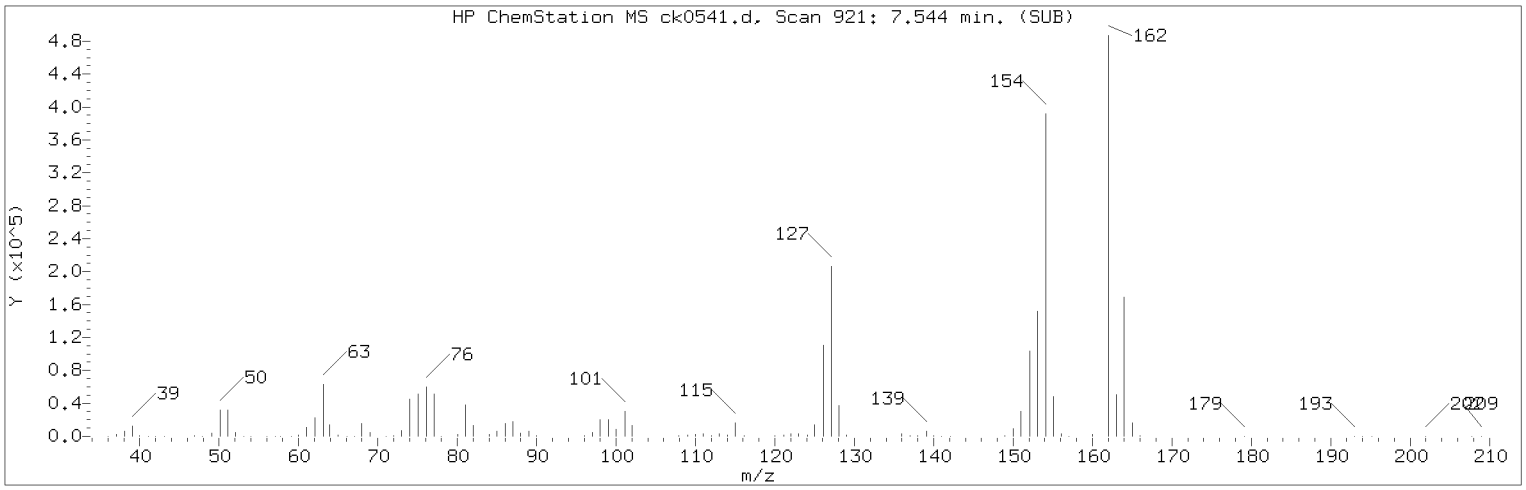
Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.556	193	167625	27.677
147) Fluoranthene	(4)	10.710	202	1718893	28.684
152) Benzidine	(5)	10.864	184	3807786	83.496
167)*Pyrene-d10	(5)	10.907	212	1114013	20.000
154) Pyrene	(5)	10.925	202	1794666	29.009
156)$Terphenyl-d14	(5)	11.110	244	2355498	59.147
158) p-Dimethylaminoazobenzene	(5)	11.245	225	351074	29.119
159) Chlorobenzilate	(5)	11.300	139	540985	28.845
160) 3,3'-Dimethylbenzidine	(5)	11.571	212	1096768	28.765
161) Butylbenzylphthalate	(5)	11.608	149	812845	27.533
162) 2-Acetylaminofluorene	(5)	11.817	181	752003	28.126
164) 3,3'-Dichlorobenzidine	(5)	12.094	252	614466	28.565
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.100	231	297011	28.264
166) Benzo(a)anthracene	(5)	12.100	228	1592975	27.917
168) Chrysene	(5)	12.137	228	1516185	27.559
169) bis(2-Ethylhexyl)phthalate	(5)	12.198	149	1114358	27.205
189) 6-Methylchrysene	(5)	12.585	242	1126439	27.749
170) Di-n-octylphthalate	(6)	12.844	149	1949499	29.073
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.157	256	761139	30.194
172) Benzo(b)fluoranthene	(6)	13.157	252	1649990	30.416
173) Benzo(k)fluoranthene	(6)	13.182	252	1612585	29.137
174) Benzo(a)pyrene	(6)	13.459	252	1516406	28.641
175)*Perylene-d12	(6)	13.508	264	888410	20.000
176) 3-Methylcholanthrene	(6)	13.791	268	784610	29.565
190) Dibenz(a,h)acridine	(6)	14.289	279	1156260	30.061
191) Dibenz(a,j)acridine	(6)	14.344	279	1269918	28.711
177) Indeno(1,2,3-cd)pyrene	(6)	14.516	276	1661367	29.493
178) Dibenz(a,h)anthracene	(6)	14.535	278	1393059	29.565
179) Benzo(g,h,i)perylene	(6)	14.787	276	1391628	28.999
196) 2,4_2,6-Dinitrotoluenes	(3)			514381	0.000
129) Diallate TRANS/CIS	(4)			520704	26.783

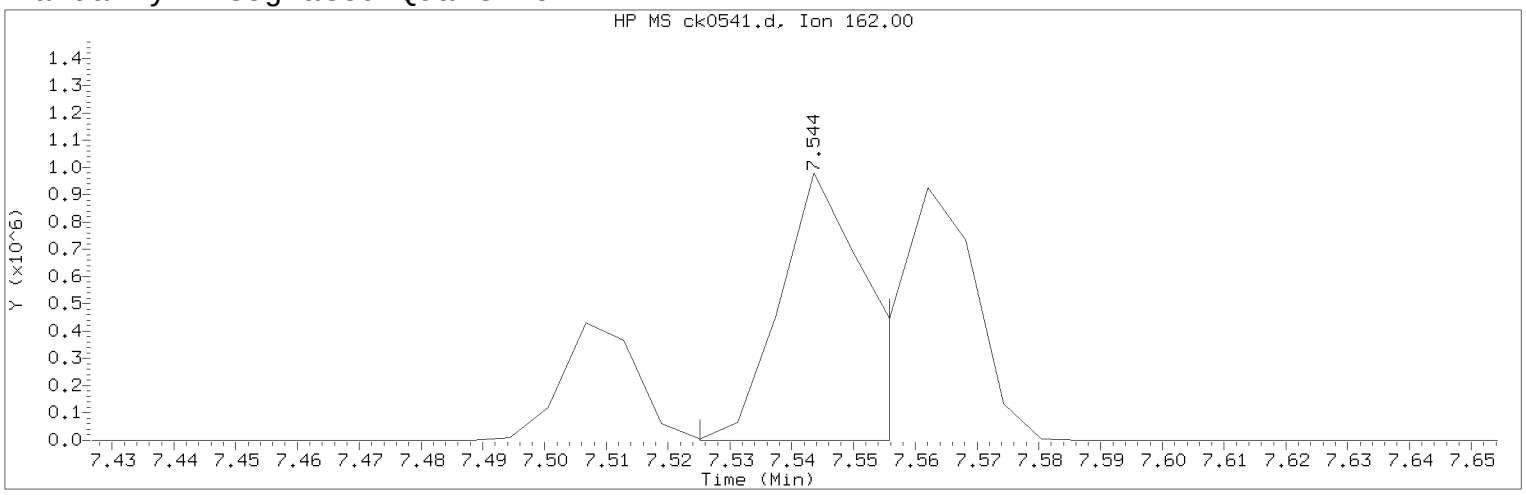
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

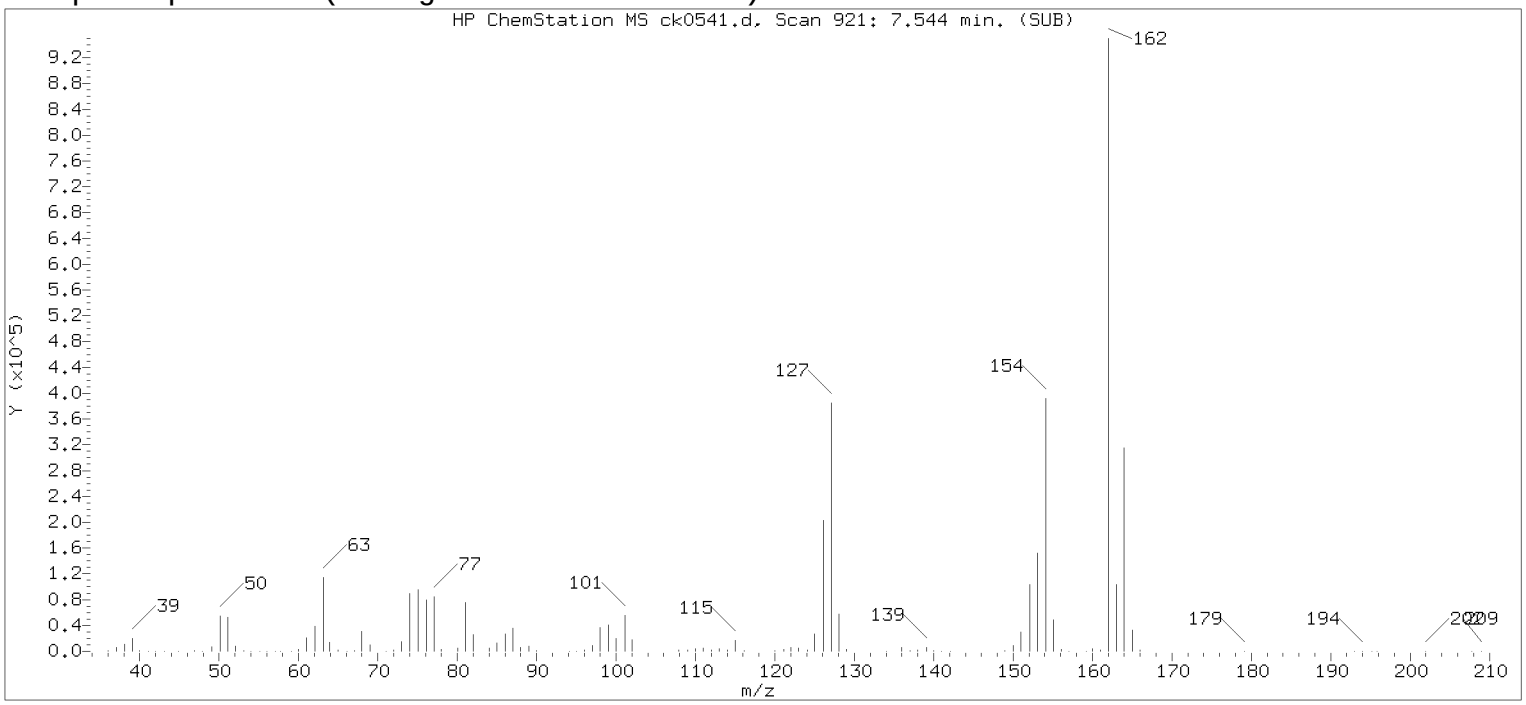
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 921
Retention Time (minutes) : 7.544
Quant Ion : 162.00
Area (flag) : 976873M
On-Column Amount (ng/ul) : 33.8976
Integration start scan : 917 Integration stop scan: 922
Y at integration start : 369 Y at integration end: 369

Reason for manual integration: improper integration

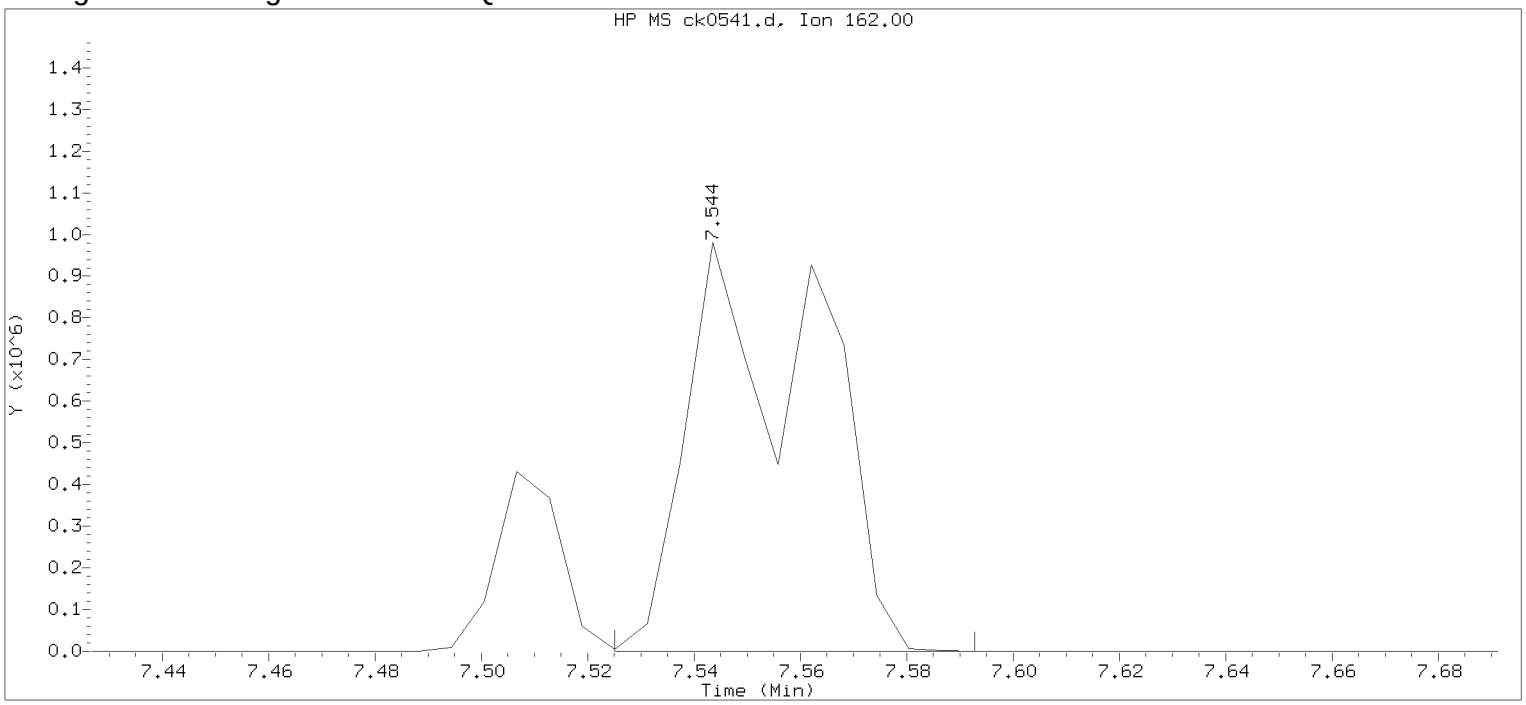
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

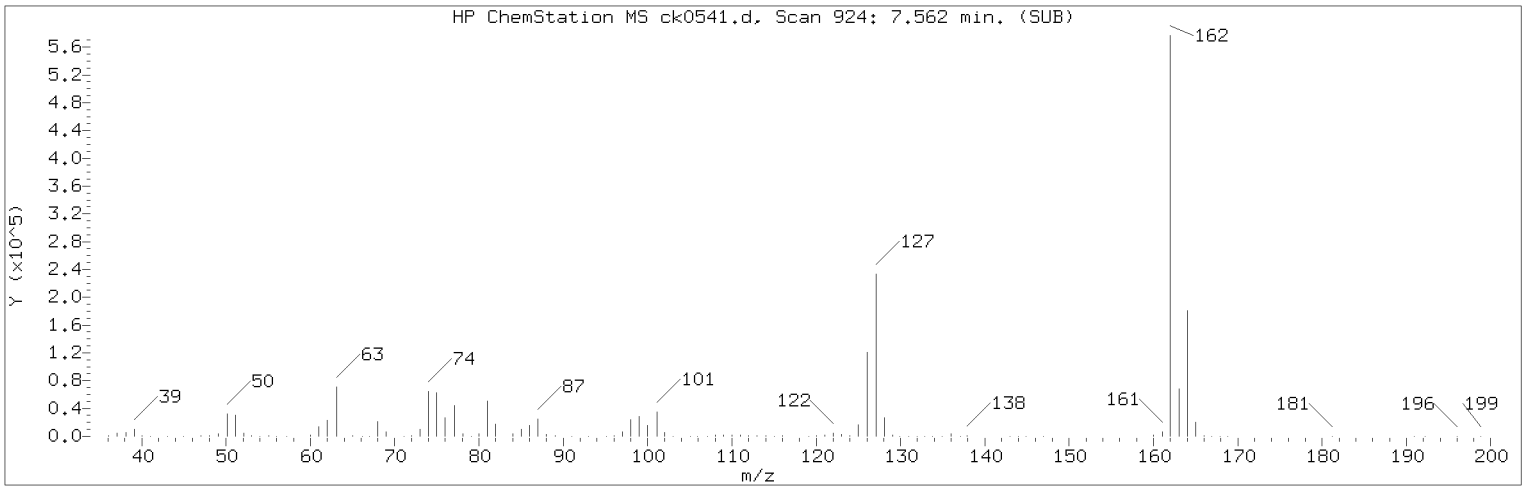
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:58
Date, time and analyst ID of latest file update: 15-Nov-2013 00:58 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

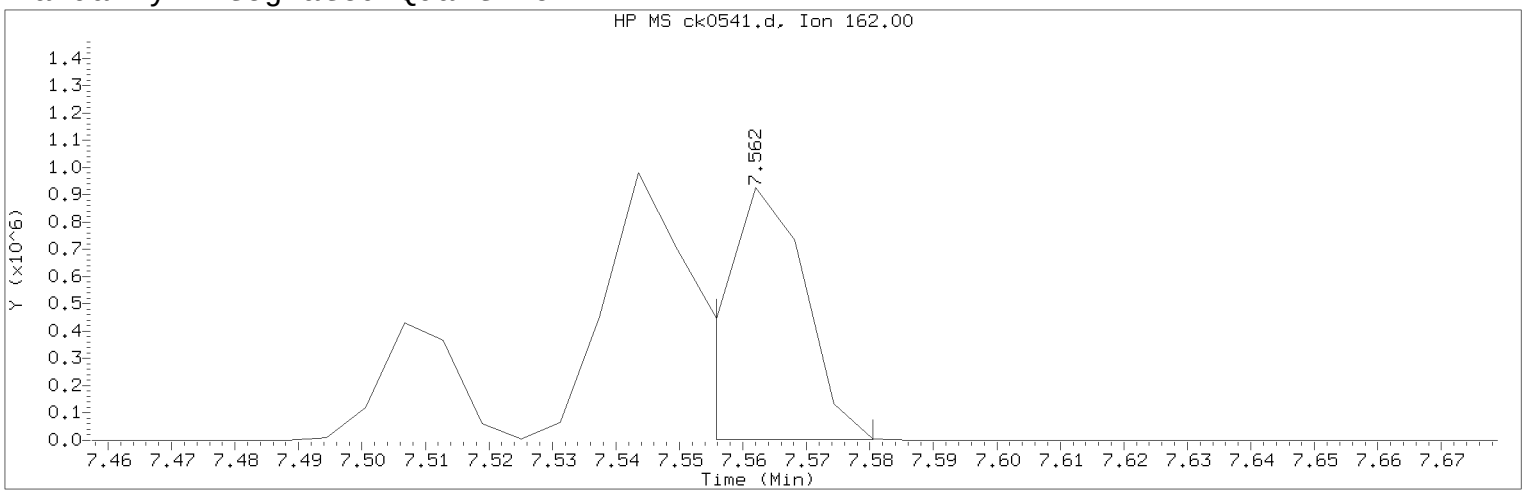
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 921
Retention Time (minutes) : 7.544
Quant Ion : 162.00
Area : 1640634
On-column Amount (ng/ul) : 56.9302
Integration start scan : 917 Integration stop scan: 928
Y at integration start : 192 Y at integration end: 206

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:59
Date, time and analyst ID of latest file update: 15-Nov-2013 01:01 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

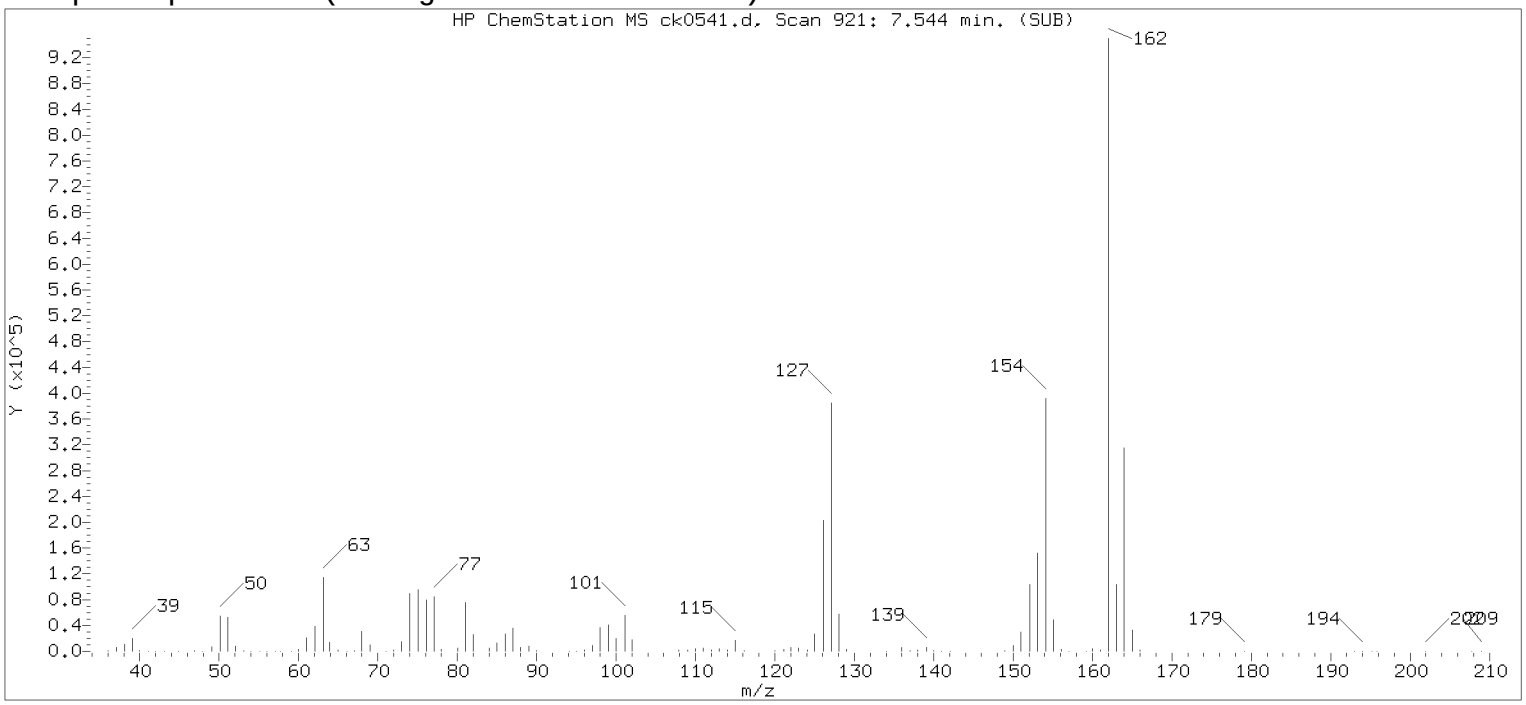
Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 924
Retention Time (minutes) : 7.562
Quant Ion : 162.00
Area (flag) : 825192M
On-Column Amount (ng/ul) : 29.0952
Integration start scan : 922 Integration stop scan: 926
Y at integration start : 2402 Y at integration end: 2402

Reason for manual integration: improper integration

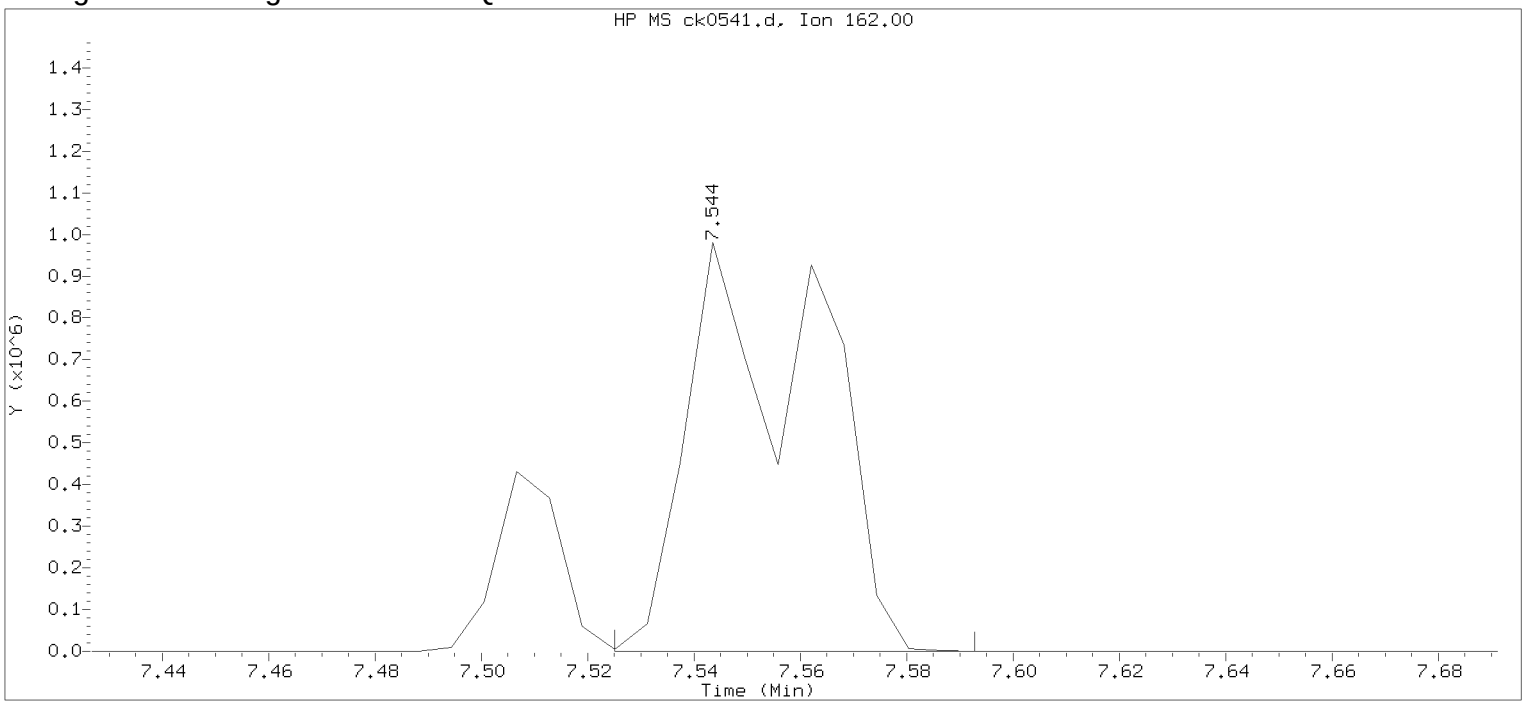
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0541.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 00:32 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: all1
Calibration date and time: 15-NOV-2013 00:58
Date, time and analyst ID of latest file update: 15-Nov-2013 00:58 Automation

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 921
Retention Time (minutes) : 7.544
Quant Ion : 162.00
Area : 1641020
On-column Amount (ng/ul) : 57.8603
Integration start scan : 917 Integration stop scan: 928
Y at integration start : 111 Y at integration end: 96

Digitally signed by Mark A. Clark on 11/15/2013 at 05:22.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov18.b/ck0620y.d

Date : 18-NOV-2013 05:14

Client ID: DFTPP

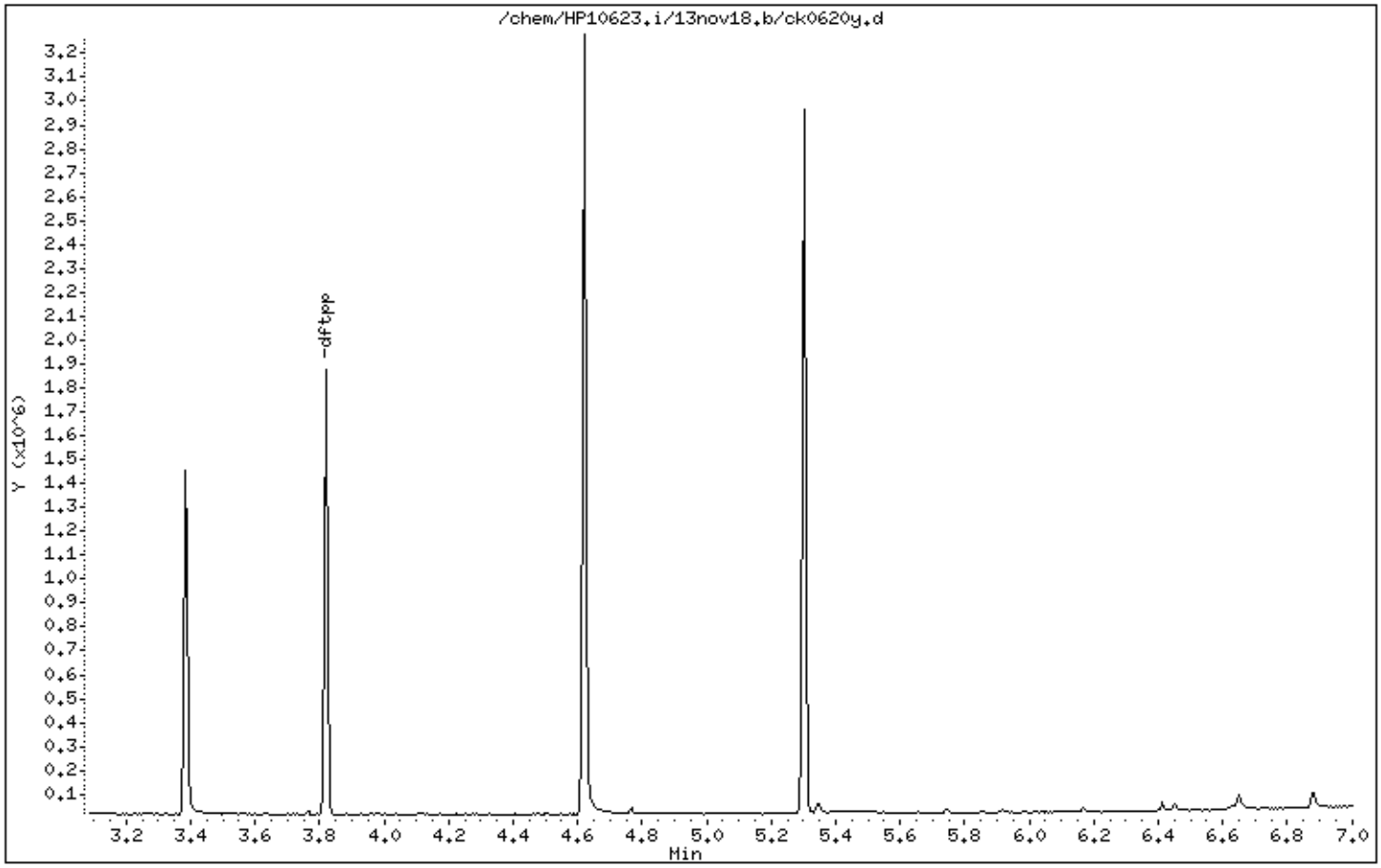
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/13nov18.b/ck0620y.d

Date : 18-NOV-2013 05:14

Client ID: DFTPP

Instrument: HP10623.i

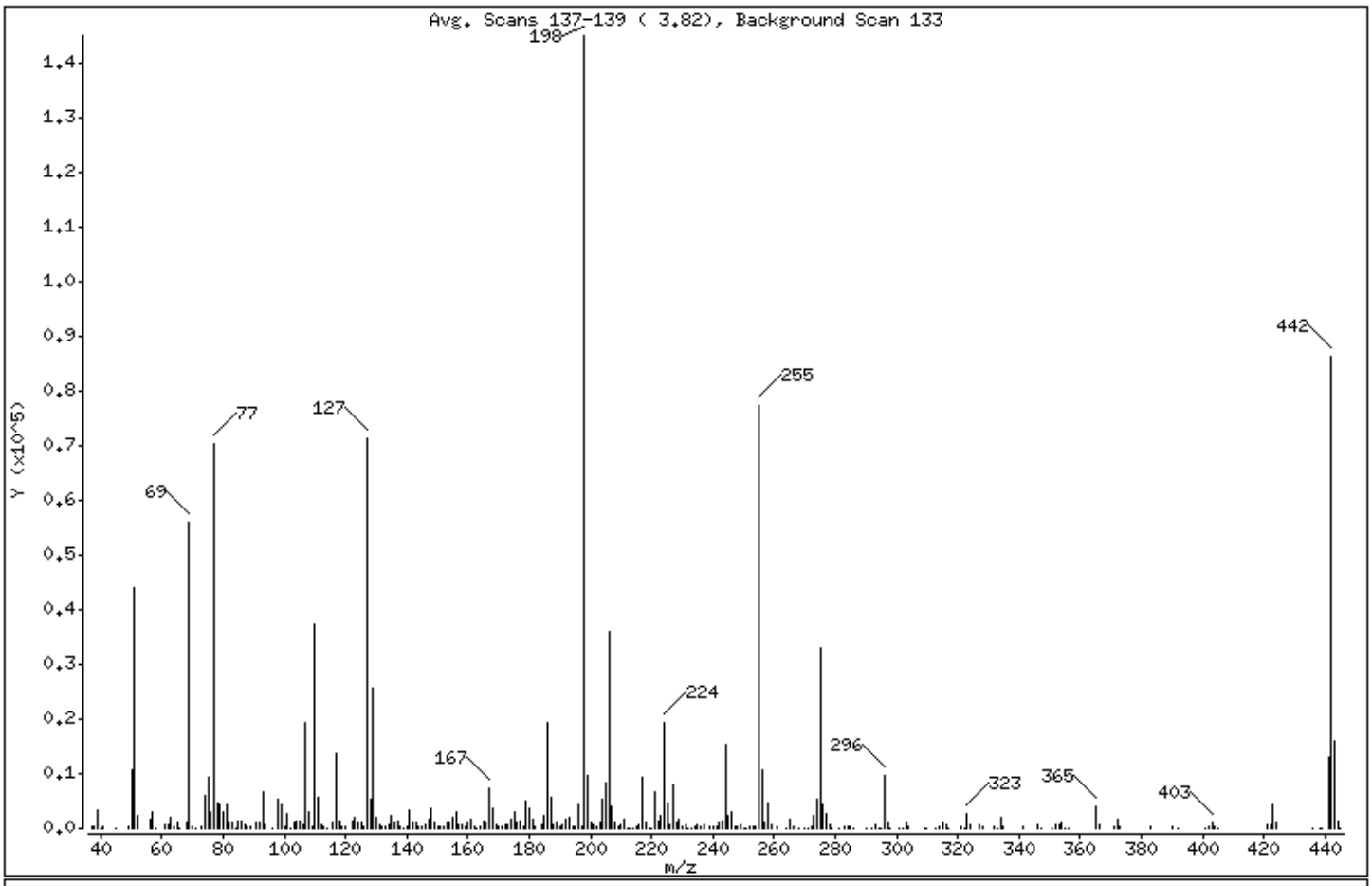
Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	30.34
68	Less than 2.00% of mass 69	0.74 (1.90)
69	Mass 69 relative abundance	38.73
70	Less than 2.00% of mass 69	0.12 (0.30)
127	40.00 - 60.00% of mass 198	49.18
197	Less than 1.00% of mass 198	0.15
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 30.00% of mass 198	22.67
365	Greater than 1.00% of mass 198	2.78
441	Present, but less than mass 443	8.90
442	40.00 - 99.99% of mass 198	59.62
443	17.00 - 23.00% of mass 442	11.12 (18.65)

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Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	231	127.00	71304	200.00	888	278.00	534
38.00	426	128.00	5235	201.00	830	279.00	58
39.00	3272	129.00	25776	202.00	171	281.00	51
40.00	149	130.00	2109	203.00	992	283.00	426
41.00	250	131.00	561	204.00	5244	284.00	266
45.00	137	132.00	247	205.00	8494	285.00	447
49.00	355	133.00	171	206.00	35888	286.00	70
50.00	10827	134.00	816	207.00	4146	290.00	111
51.00	43992	135.00	2180	208.00	1064	292.00	98
52.00	2287	136.00	1098	209.00	296	293.00	516
56.00	1528	137.00	1296	210.00	508	294.00	82
57.00	3080	138.00	282	211.00	1663	295.00	61
58.00	165	139.00	93	212.00	93	296.00	9543
61.00	647	140.00	408	213.00	151	297.00	1074
62.00	782	141.00	3331	214.00	62	298.00	50
63.00	1989	142.00	1101	215.00	446	301.00	59
64.00	417	143.00	1030	216.00	793	302.00	87
65.00	948	144.00	260	217.00	9336	303.00	1053
66.00	139	145.00	185	218.00	1126	304.00	239
68.00	1069	146.00	703	219.00	117	309.00	63
69.00	56144	147.00	1600	220.00	70	310.00	142
70.00	169	148.00	3742	221.00	6776	313.00	66
71.00	10	149.00	893	222.00	1254	314.00	489
73.00	416	150.00	171	223.00	2322	315.00	1033
74.00	5855	151.00	456	224.00	19480	316.00	632
75.00	9185	152.00	460	225.00	4813	317.00	117
76.00	3087	153.00	1163	226.00	613	321.00	285
77.00	70472	154.00	835	227.00	8020	322.00	140
78.00	4639	155.00	1890	228.00	1157	323.00	2715
79.00	4177	156.00	2868	229.00	1812	324.00	597
80.00	2928	157.00	745	230.00	387	327.00	507
81.00	4243	158.00	775	231.00	828	328.00	278
82.00	1140	159.00	464	232.00	153	332.00	375
83.00	1010	160.00	1097	233.00	70	333.00	154
84.00	98	161.00	1502	234.00	481	334.00	1900

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Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	1288	162.00	457	235.00	634	335.00	488
86.00	1388	163.00	148	236.00	398	341.00	346
87.00	798	164.00	215	237.00	758	346.00	619
88.00	274	165.00	1264	239.00	371	347.00	123
89.00	235	166.00	1098	240.00	295	351.00	101
91.00	986	167.00	7347	241.00	300	352.00	792
92.00	1159	168.00	3553	242.00	1133	353.00	538
93.00	6679	169.00	699	243.00	1381	354.00	1032
94.00	590	170.00	203	244.00	15490	355.00	146
96.00	93	171.00	273	245.00	2332	356.00	52
98.00	5372	172.00	711	246.00	3078	365.00	4033
99.00	4352	173.00	800	247.00	488	366.00	727
100.00	407	174.00	1547	248.00	237	371.00	263
101.00	2510	175.00	2941	249.00	516	372.00	1584
102.00	127	176.00	928	250.00	76	373.00	366
103.00	1089	177.00	1328	251.00	127	383.00	421
104.00	1491	178.00	473	252.00	181	390.00	173
105.00	1329	179.00	4859	253.00	324	392.00	66
106.00	791	180.00	3654	254.00	180	401.00	117
107.00	19280	181.00	1709	255.00	77208	402.00	494
108.00	3100	182.00	221	256.00	10647	403.00	964
109.00	483	184.00	543	257.00	1136	404.00	217
110.00	37232	185.00	2439	258.00	4499	405.00	54
111.00	5758	186.00	19352	259.00	701	421.00	527
112.00	651	187.00	5734	261.00	180	422.00	666
113.00	236	188.00	678	264.00	152	423.00	4228
114.00	51	189.00	1154	265.00	1566	424.00	1067
116.00	1071	190.00	287	266.00	177	436.00	53
117.00	13824	191.00	614	268.00	52	438.00	61
118.00	1293	192.00	1502	270.00	94	439.00	142
119.00	216	193.00	1856	271.00	150	441.00	12902
120.00	243	194.00	384	272.00	200	442.00	86432
122.00	1337	195.00	241	273.00	2311	443.00	16124
123.00	2006	196.00	4479	274.00	5496	444.00	1486
124.00	835	197.00	223	275.00	32872	445.00	54

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

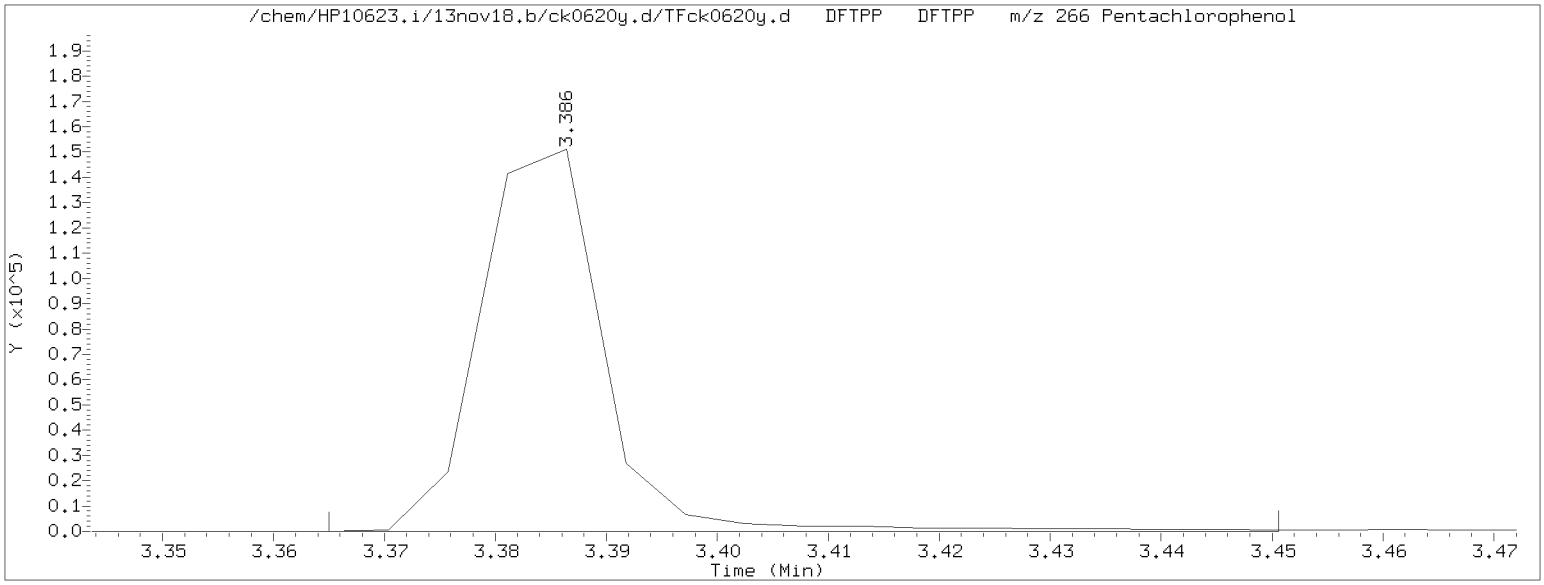
Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1163	198.00	144960	276.00	4272		
126.00	275	199.00	9673	277.00	2637		

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

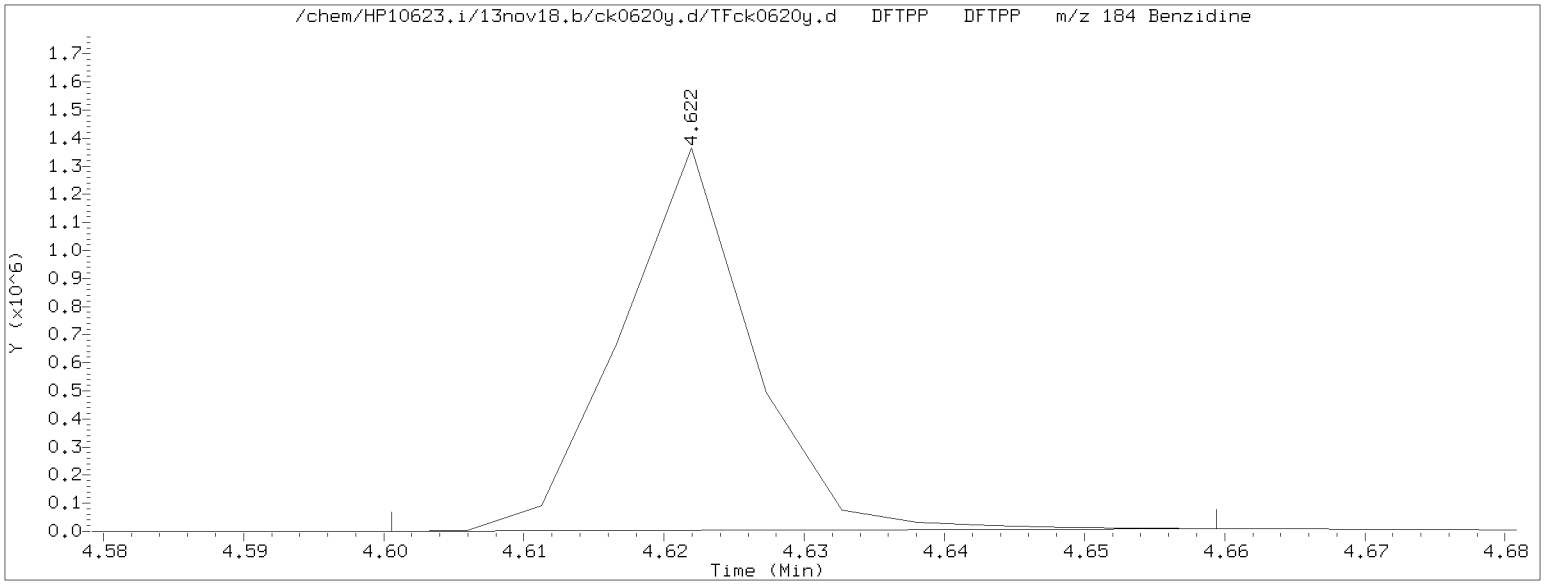
Instrument ID: HP10623.i Injection Date: 18-NOV-2013 05:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 151168 EICP peak height at 10% = 15117 Pentachlorophenol EICP area = 116687

Pentachlorophenol EICP peak apex (min.) = 3.386
RT at 10% of front half of EICP (min.) = 3.374 'Front' peak width (min.) = 0.0126333333
RT at 10% of back half of EICP (min.) = 3.395 'Tailing' peak width (min.) = 0.0084000000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0084000000}{0.0126333333} = 0.665$$



Benzidine EICP peak height = 1361188 EICP peak height at 10% = 136119 Benzidine EICP area = 875113

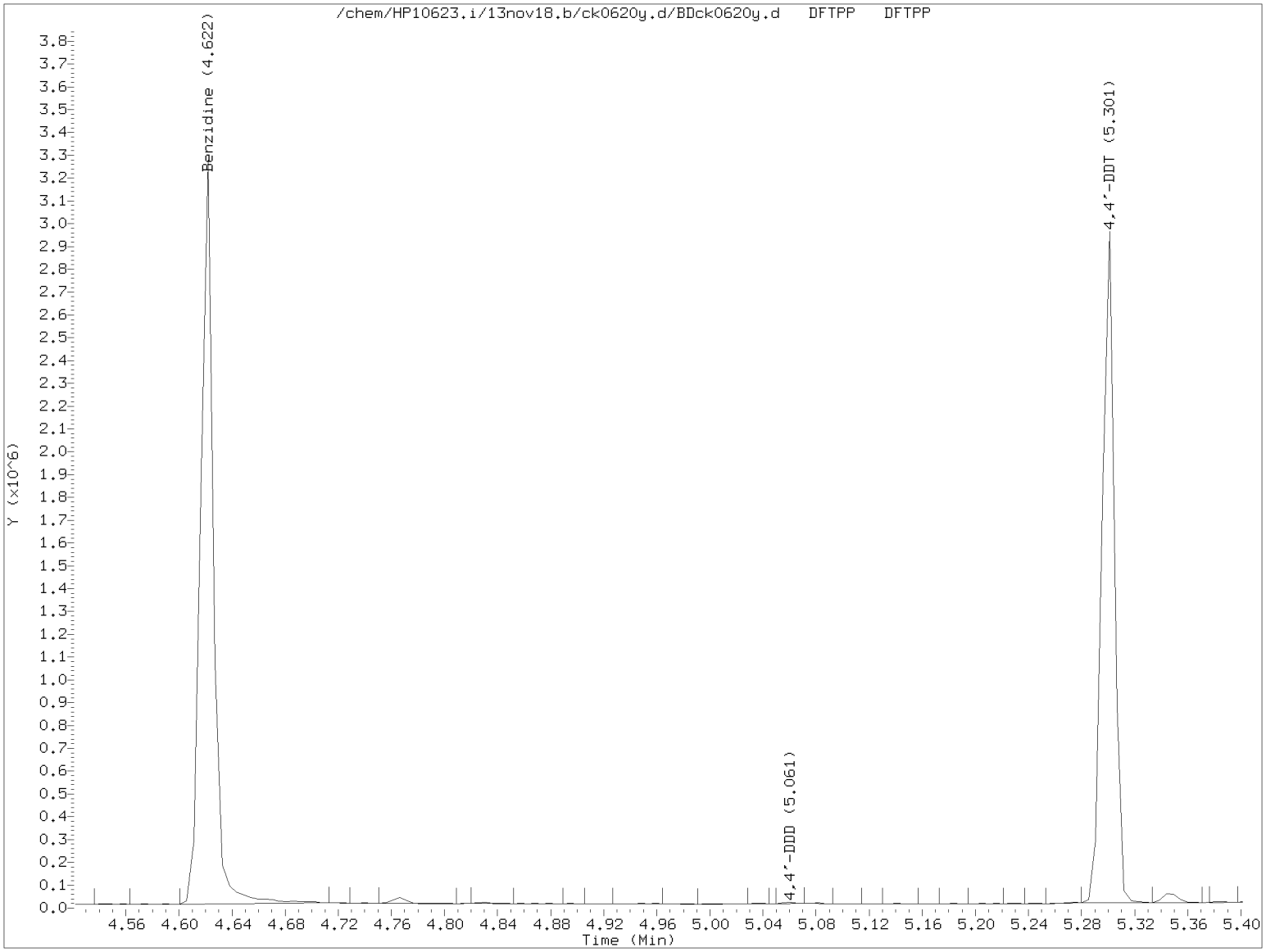
Benzidine EICP peak apex (min.) = 4.622
RT at 10% of front half of EICP (min.) = 4.612 'Front' peak width (min.) = 0.0102333333
RT at 10% of back half of EICP (min.) = 4.632 'Tailing' peak width (min.) = 0.0098666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0098666667}{0.0102333333} = 0.964$$

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 18-NOV-2013 05:14 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 3462}{0 + 3462 + 1926450} \times 100 = 0.2$$

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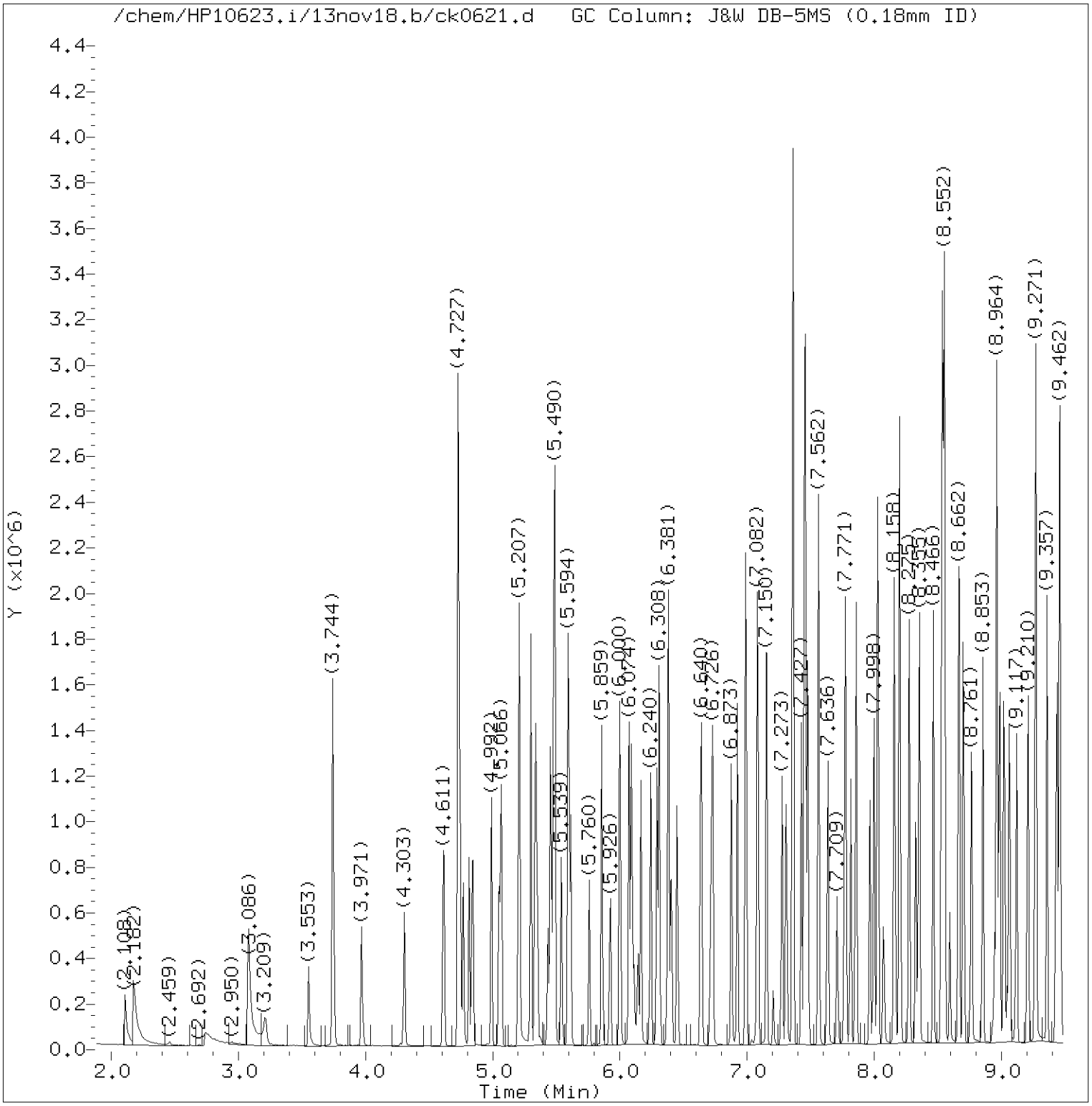
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

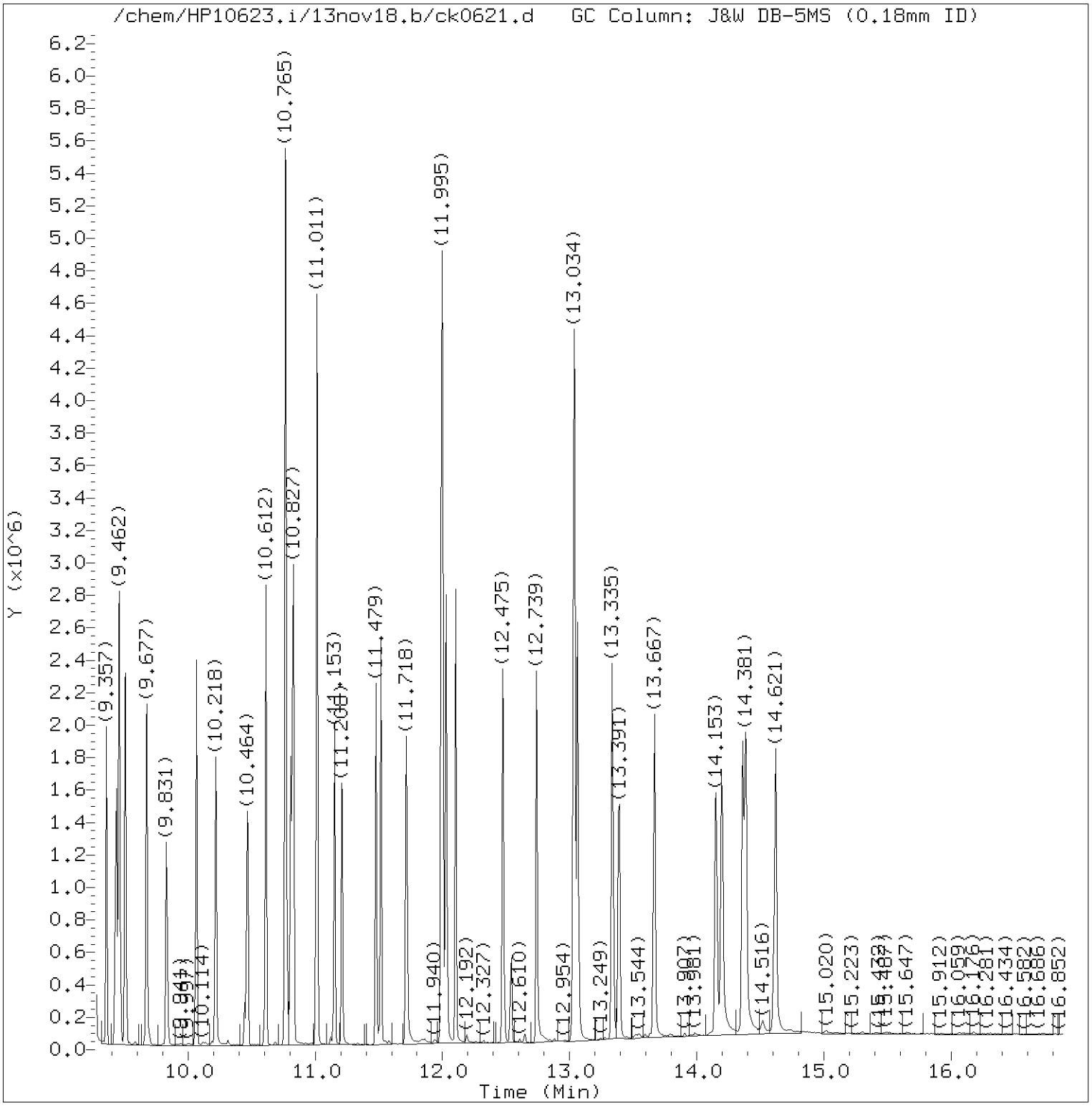
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.108	74	150740	24.943
3) Pyridine	(1)	2.176	79	233043M	24.873
5) 2-Picoline	(1)	3.080	93	270352	28.278
6) N-Nitrosomethylethylamine	(1)	3.209	88	124630	27.267
7) Methyl methanesulfonate	(1)	3.553	80	124982	27.196
9)$2-Fluorophenol	(1)	3.744	112	432294	57.898
10) N-Nitrosodiethylamine	(1)	3.971	102	123159	27.123
11) Ethyl methanesulfonate	(1)	4.303	109	119081	28.799
12) Benzaldehyde	(1)	4.611	77	192046	41.619
13) Aniline	(1)	4.727	93	423423	27.857
15)$Phenol-d6	(1)	4.727	99	628946	57.246
14)$Phenol-d5	(1)	4.727	99	628946	57.246
16) Phenol	(1)	4.740	94	367335	28.658
18) bis(2-Chloroethyl)ether	(1)	4.813	93	255508	28.078
19) 2-Chlorophenol	(1)	4.844	128	223741	27.982
20) 1,3-Dichlorobenzene	(1)	4.992	146	235675	29.207
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	99797	20.000
22) 1,4-Dichlorobenzene	(1)	5.066	146	238949	29.018
24) Benzyl alcohol	(1)	5.207	108	171860	27.489
25) 1,2-Dichlorobenzene	(1)	5.213	146	228304	29.537
206) Indene	(1)	5.299	115	472857	27.388
26) 2-Methylphenol	(1)	5.336	108	242490	28.504
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.348	45	286543	25.589
28) bis(2-Chloroisopropyl)ether	(1)	5.348	45	286543	25.524
29) N-Nitrosopyrrolidine	(1)	5.434	100	148149	29.093
30) Acetophenone	(1)	5.453	105	351137	27.684
31) N-Nitroso-di-n-propylamine	(1)	5.471	70	212708	26.200
32) N-Nitrosomorpholine	(1)	5.478	56	148451	25.662
34) o-Toluidine	(1)	5.490	106	414290	28.515
33) 4-Methylphenol	(1)	5.490	108	280287	27.835
37) Hexachloroethane	(1)	5.539	117	88955	28.383
38)$Nitrobenzene-d5	(2)	5.594	82	550844	55.203
39) Nitrobenzene	(2)	5.613	77	279298	26.388
40) N-Nitrosopiperidine	(2)	5.760	114	134284	28.599
41) Isophorone	(2)	5.859	82	516643	26.882
42) 2-Nitrophenol	(2)	5.926	139	115792	31.470
44) 2,4-Dimethylphenol	(2)	6.000	107	262651M	27.772
45) O,O,O-triethylphosphorothioate	(2)	6.074	198	119056	30.193
46) bis(2-Chloroethoxy)methane	(2)	6.092	93	306946	26.285
47) Benzoic acid	(2)	6.111	105	225540	36.793

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	6.166	162	197559	30.716
50) 1,2,4-Trichlorobenzene	(2)	6.240	180	200912	29.656
52)*Naphthalene-d8	(2)	6.289	136	463147	20.000
53) Naphthalene	(2)	6.308	128	712575	28.998
56) 4-Chloroaniline	(2)	6.375	127	305405	28.520
57) 2,6-Dichlorophenol	(2)	6.381	162	187101	30.886
58) Hexachloropropene	(2)	6.406	213	112643	29.400
60) Hexachlorobutadiene	(2)	6.449	225	97840	28.795
194) Quinoline	(2)	6.640	129	498366	29.423
63) Caprolactam	(2)	6.720	113	102457	28.756
64) N-Nitrosodi-n-butylamine	(2)	6.726	84	261140	28.216
68) 4-Chloro-3-methylphenol	(2)	6.873	107	237919	28.934
69) Safrole	(2)	6.922	162	196646	30.210
70) 2-Methylnaphthalene	(2)	6.990	142	513512	29.446
71) 1-Methylnaphthalene	(2)	7.082	142	463633	29.054
72) Hexachlorocyclopentadiene	(3)	7.150	237	77241	25.860
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.156	216	207105	29.962
74) cis-Isosafrole	(3)	7.205	162	33959	3.060
75) 2,4,6-Trichlorophenol	(3)	7.273	196	140792	31.217
77) 2,4,5-Trichlorophenol	(3)	7.310	196	156971	31.922
78)$2-Fluorobiphenyl	(3)	7.359	172	1063492	58.368
79) trans-Isosafrole	(3)	7.427	162	198217	25.231
80) Isosafrole	(3)	7.427	162	198217	28.350
83) 1,1'-Biphenyl	(3)	7.451	154	629639	28.044
84) 2-Chloronaphthalene	(3)	7.457	162	536380M	32.799
85) 1-Chloronaphthalene	(3)	7.476	162	472583M	29.363
88) Diphenyl ether	(3)	7.562	170	329203	29.435
89) 2-Nitroaniline	(3)	7.568	138	158635	29.735
90) 1,4-Naphthoquinone	(3)	7.636	158	198967	28.911
91) 1,4-Dinitrobenzene	(3)	7.709	168	68533	31.169
92) Dimethylphthalate	(3)	7.771	163	561467	28.854
93) 1,3-Dinitrobenzene	(3)	7.777	168	88944	29.991
94) 2,6-Dinitrotoluene	(3)	7.814	165	124135	30.629
95) Acenaphthylene	(3)	7.857	152	730587	28.616
97) 3-Nitroaniline	(3)	7.968	138	152303	30.774
98)*Acenaphthene-d10	(3)	7.998	164	289780	20.000
99) Acenaphthene	(3)	8.029	153	501825	28.401
100) 2,4-Dinitrophenol	(3)	8.072	184	62969	45.338
101) Pentachlorobenzene	(3)	8.158	250	182752	30.596
103) 4-Nitrophenol	(3)	8.158	109	89863	29.310

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) Dibenzofuran	(3)	8.201	168	702089	29.007
105) 2,4-Dinitrotoluene	(3)	8.201	165	162716	31.069
106) 1-Naphthylamine	(3)	8.275	143	570072	28.663
107) 2,3,4,6-Tetrachlorophenol	(3)	8.330	232	113099	32.652
108) 2-Naphthylamine	(3)	8.355	143	590616	29.024
109) Diethylphthalate	(3)	8.466	149	569002	28.307
111) Fluorene	(3)	8.533	166	599808	28.801
110) Thionazin	(3)	8.540	107	117044	26.402
112) 4-Chlorophenyl-phenylether	(3)	8.552	204	274671	29.647
113) 5-Nitro-o-toluidine	(3)	8.552	152	171554	31.200
114) 4-Nitroaniline	(3)	8.558	138	159850	28.722
115) 4,6-Dinitro-2-methylphenol	(4)	8.595	198	71645	33.193
117) N-Nitrosodiphenylamine	(4)	8.669	169	522835	29.317
202) NDPA as diphenylamine	(4)	8.669	169	522835	29.247
118) 1,2-Diphenylhydrazine	(4)	8.699	77	654255	25.611
119)$2,4,6-Tribromophenol	(3)	8.767	330	116409	66.521
120) Tetraethyldithiopyrophosphate	(4)	8.853	97	91242	25.059
121) 1,3,5-Trinitrobenzene	(4)	8.945	213	42488	29.457
122) Diallate (peak 1)	(4)	8.964	86	255239	19.525
123) Phorate	(4)	8.964	75	400332	25.435
124) Phenacetin	(4)	8.988	108	323675	26.262
125) 4-Bromophenyl-phenylether	(4)	9.019	248	148705	30.262
126) Diallate (peak 2)	(4)	9.044	86	36373	6.407
127) Hexachlorobenzene	(4)	9.062	284	147873	30.479
128) Dimethoate	(4)	9.117	87	258575	26.866
130) Atrazine	(4)	9.210	200	156214	27.340
131) Pentachlorophenol	(4)	9.265	266	87023	32.342
133) 4-Aminobiphenyl	(4)	9.271	169	580473	30.100
132) Pentachloronitrobenzene	(4)	9.271	237	60504	28.728
134) Pronamide	(4)	9.357	173	256049	27.546
135)*Phenanthrene-d10	(4)	9.437	188	532095	20.000
137) Phenanthrene	(4)	9.456	178	885018	28.605
136) Dinoseb	(4)	9.462	211	92187	30.730
138) Anthracene	(4)	9.511	178	919130	28.860
140) Carbazole	(4)	9.677	167	886366	28.521
141) Methyl parathion	(4)	9.831	109	173656	28.373
142) Di-n-butylphthalate	(4)	10.064	149	983714	26.828
144) 4-Nitroquinoline-1-oxide	(4)	10.218	190	51138	24.148
143) Parathion	(4)	10.218	109	117718	26.722
146) Isodrin	(4)	10.464	193	95256	27.244

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

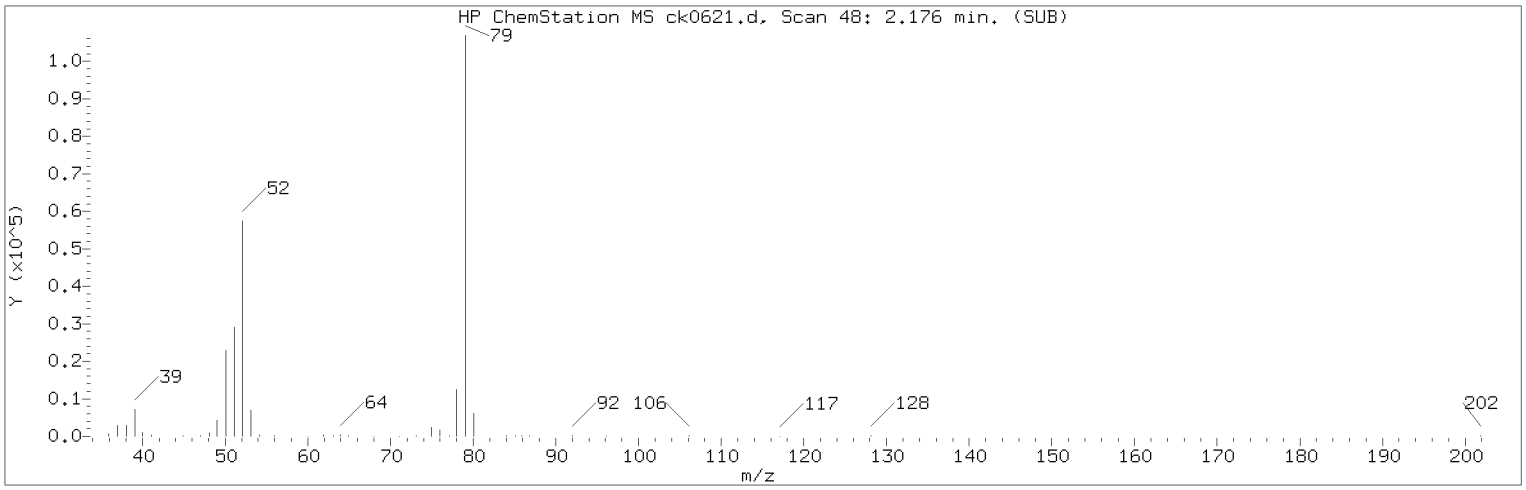
Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
147) Fluoranthene	(4)	10.612	202	992503	28.689
152) Benzidine	(5)	10.771	184	2342332	88.195
167)*Pyrene-d10	(5)	10.808	212	648763	20.000
154) Pyrene	(5)	10.827	202	1051331	29.181
156)$Terphenyl-d14	(5)	11.011	244	1347565	58.103
158) p-Dimethylaminoazobenzene	(5)	11.153	225	202091	28.783
159) Chlorobenzilate	(5)	11.208	139	303530	27.790
160) 3,3'-Dimethylbenzidine	(5)	11.479	212	706543	31.819
161) Butylbenzylphthalate	(5)	11.515	149	469229	27.292
162) 2-Acetylaminofluorene	(5)	11.718	181	438677	28.173
166) Benzo(a)anthracene	(5)	11.995	228	961211	28.926
164) 3,3'-Dichlorobenzidine	(5)	11.995	252	374242	29.874
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.001	231	184364	30.126
168) Chrysene	(5)	12.032	228	944557	29.481
169) bis(2-Ethylhexyl)phthalate	(5)	12.106	149	632967	26.535
189) 6-Methylchrysene	(5)	12.475	242	692871	29.309
170) Di-n-octylphthalate	(6)	12.739	149	1083643	24.792
172) Benzo(b)fluoranthene	(6)	13.034	252	1063345	30.072
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.040	256	480933	29.269
173) Benzo(k)fluoranthene	(6)	13.065	252	1010324	28.006
174) Benzo(a)pyrene	(6)	13.335	252	976366	28.291
175)*Perylene-d12	(6)	13.391	264	579092	20.000
176) 3-Methylcholanthrene	(6)	13.667	268	499294	28.863
190) Dibenz(a,h)acridine	(6)	14.153	279	732670	29.223
191) Dibenz(a,j)acridine	(6)	14.196	279	876826	30.413
177) Indeno(1,2,3-cd)pyrene	(6)	14.362	276	1107811	30.170
178) Dibenz(a,h)anthracene	(6)	14.387	278	938772	30.565
179) Benzo(g,h,i)perylene	(6)	14.621	276	953418	30.479
196) 2,4_2,6-Dinitrotoluenes	(3)			286851	0.000
129) Diallate TRANS/CIS	(4)			291612	25.982

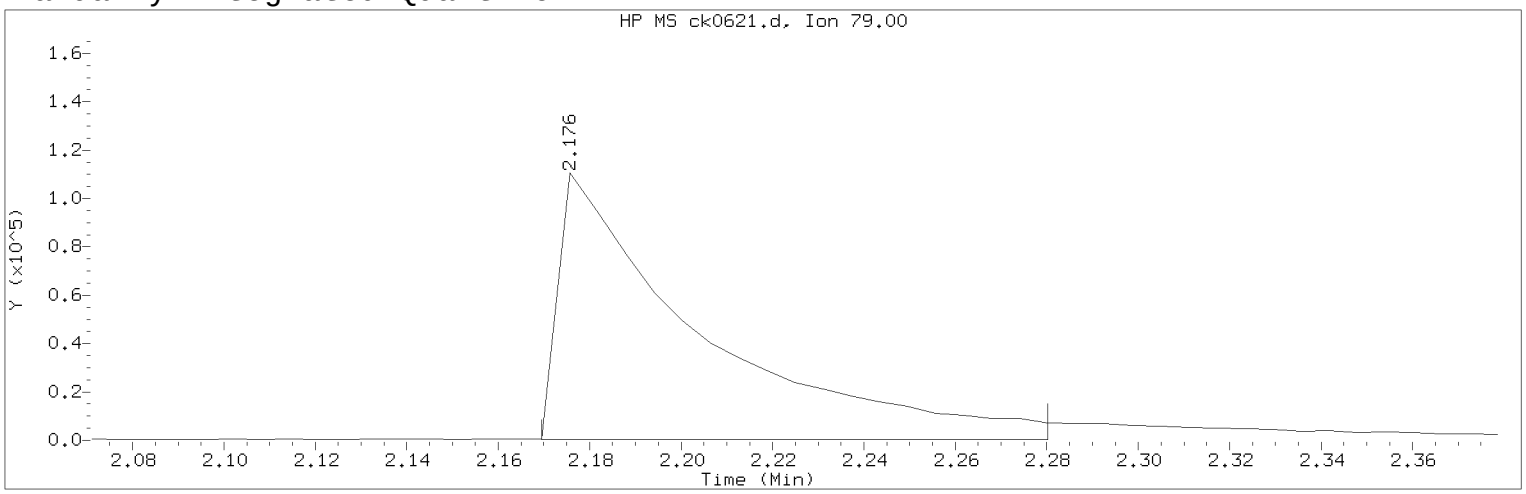
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

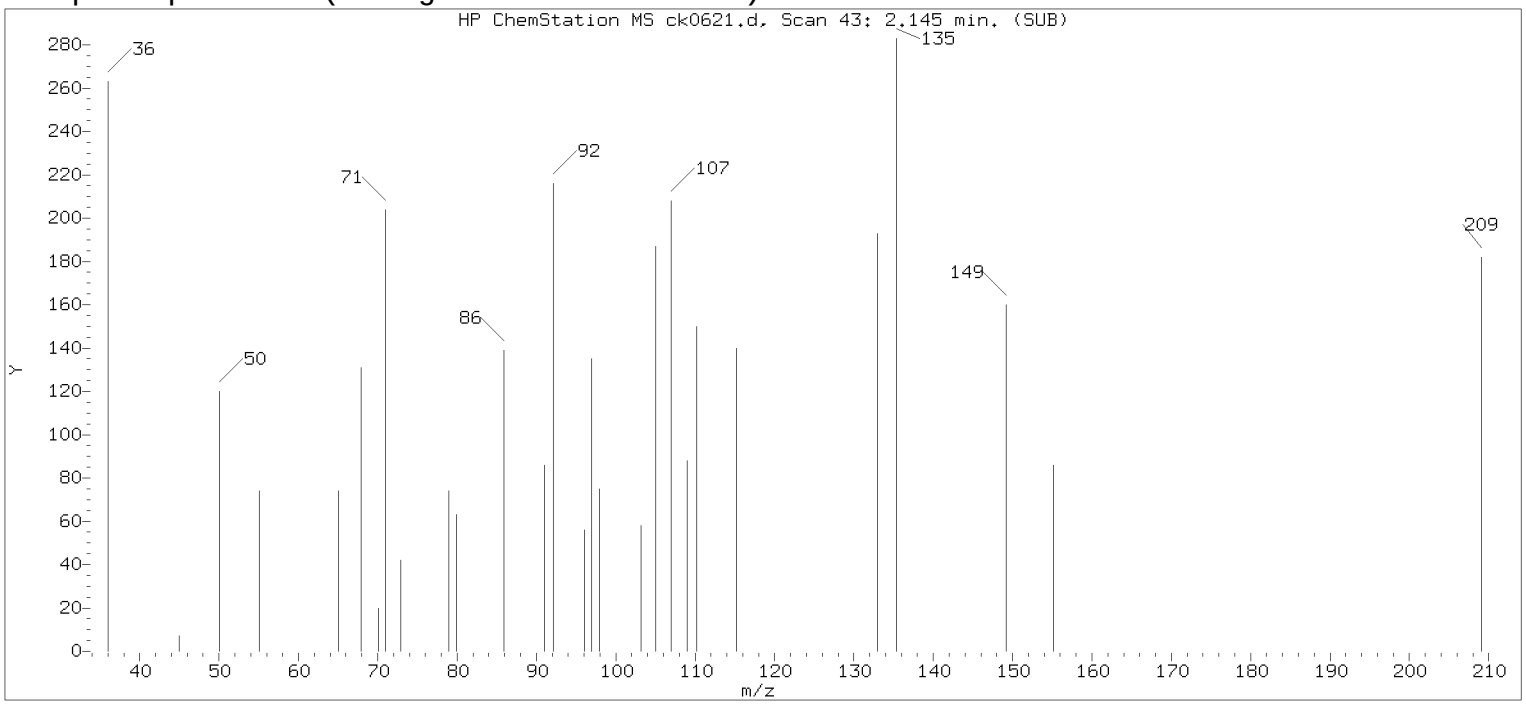
Compound Number : 3
Compound Name : Pyridine
Scan Number : 48
Retention Time (minutes) : 2.176
Quant Ion : 79.00
Area (flag) : 233043M
On-Column Amount (ng/ul) : 24.8730
Integration start scan : 46 Integration stop scan: 64
Y at integration start : 255 Y at integration end: 255

Reason for manual integration: improper integration

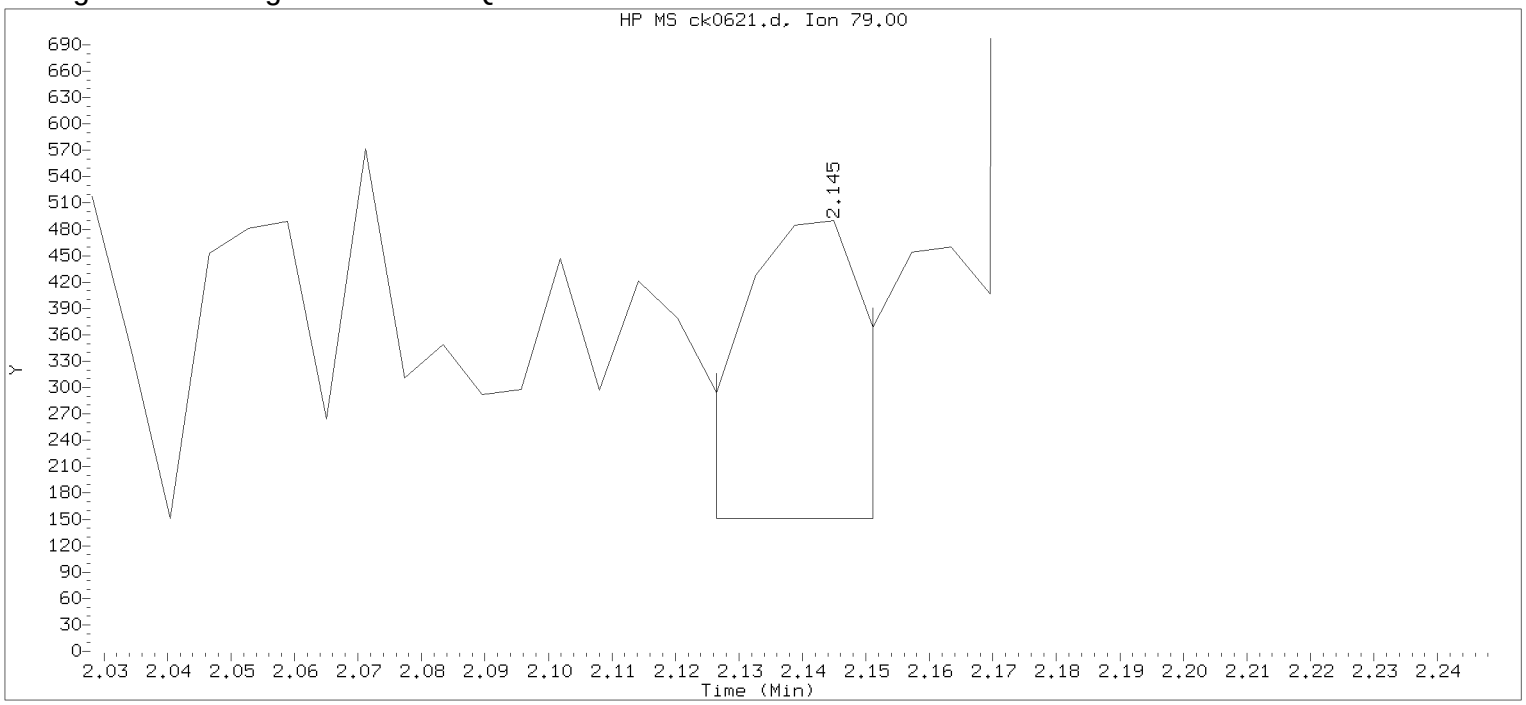
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

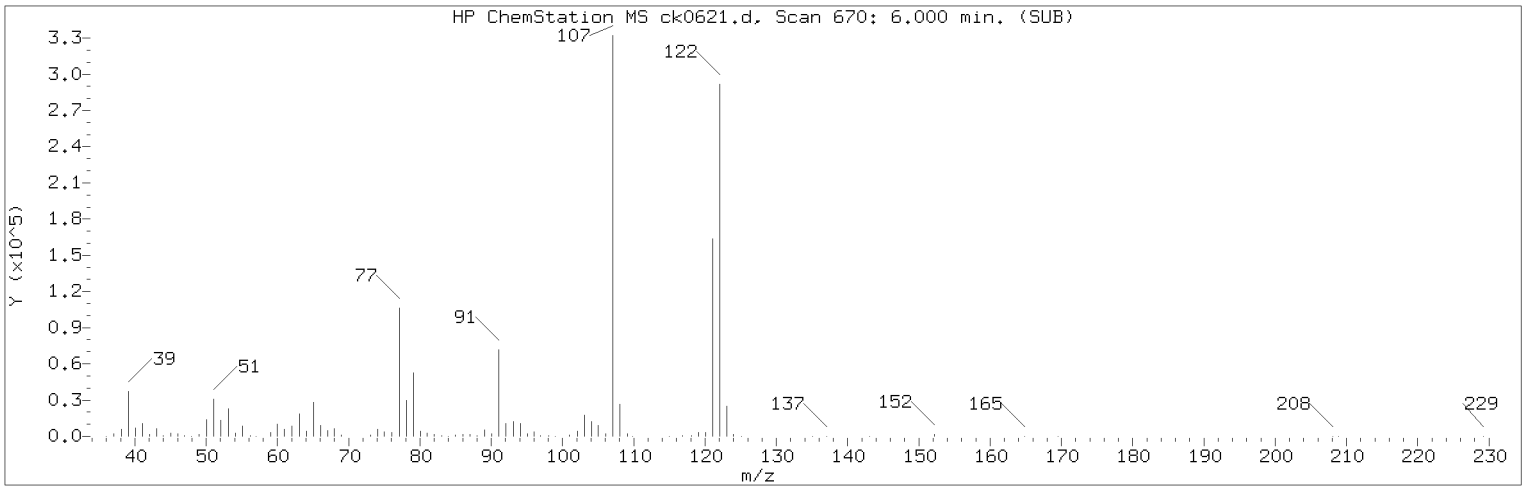
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

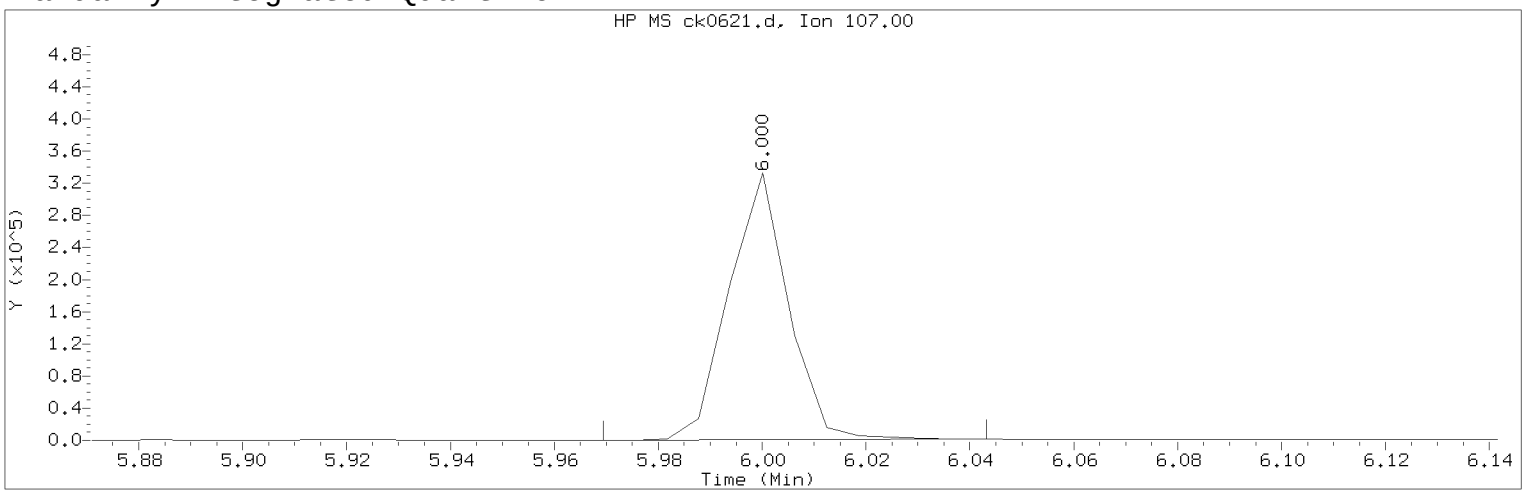
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 43		
Retention Time (minutes)	: 2.145		
Quant Ion	: 79.00		
Area	: 417		
On-column Amount (ng/ul)	: 0.0445		
Integration start scan	: 39	Integration stop scan:	43
Y at integration start	: 151	Y at integration end:	151

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

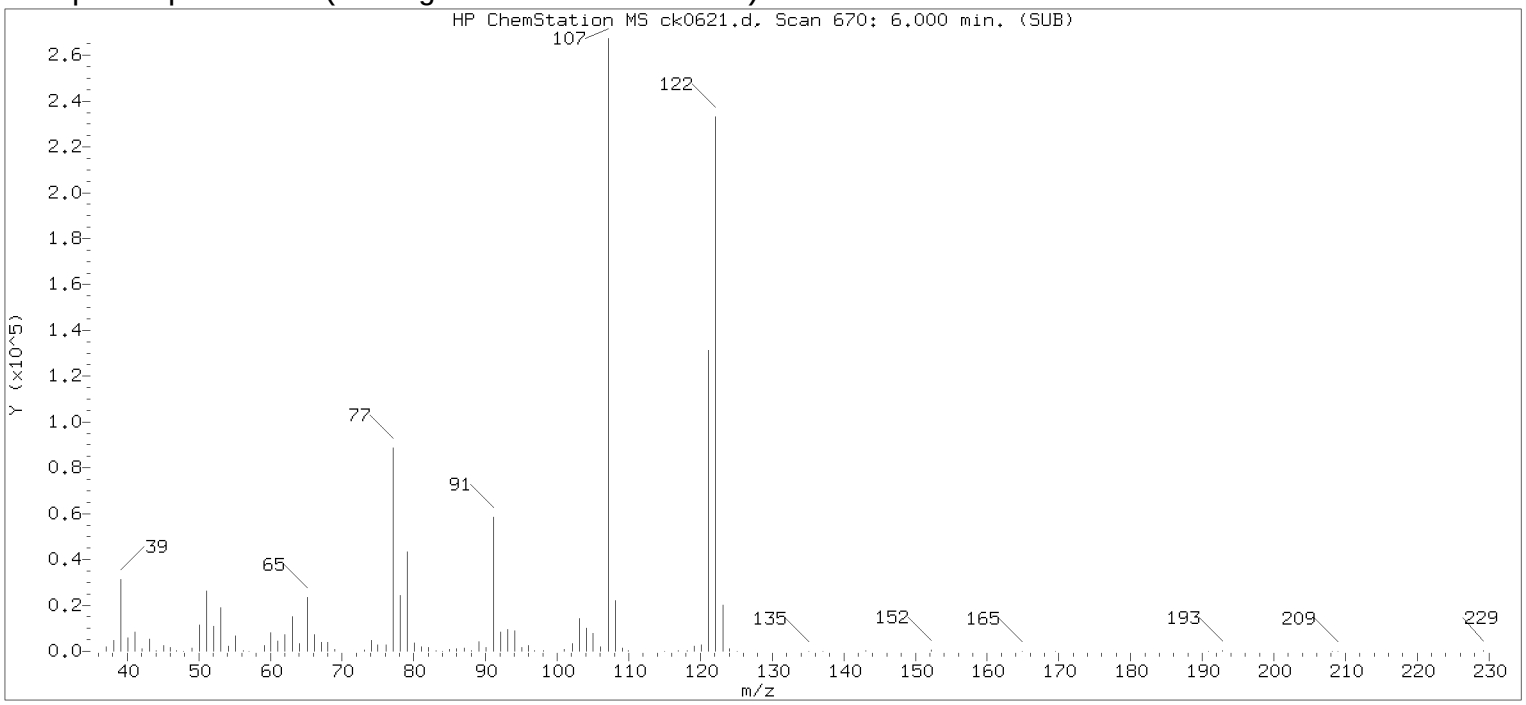
Compound Number : 44
Compound Name : 2,4-Dimethylphenol
Scan Number : 670
Retention Time (minutes) : 6.000
Quant Ion : 107.00
Area (flag) : 262651M
On-Column Amount (ng/ul) : 27.7722
Integration start scan : 664 Integration stop scan: 676
Y at integration start : 153 Y at integration end: 1321

Reason for manual integration: improper integration

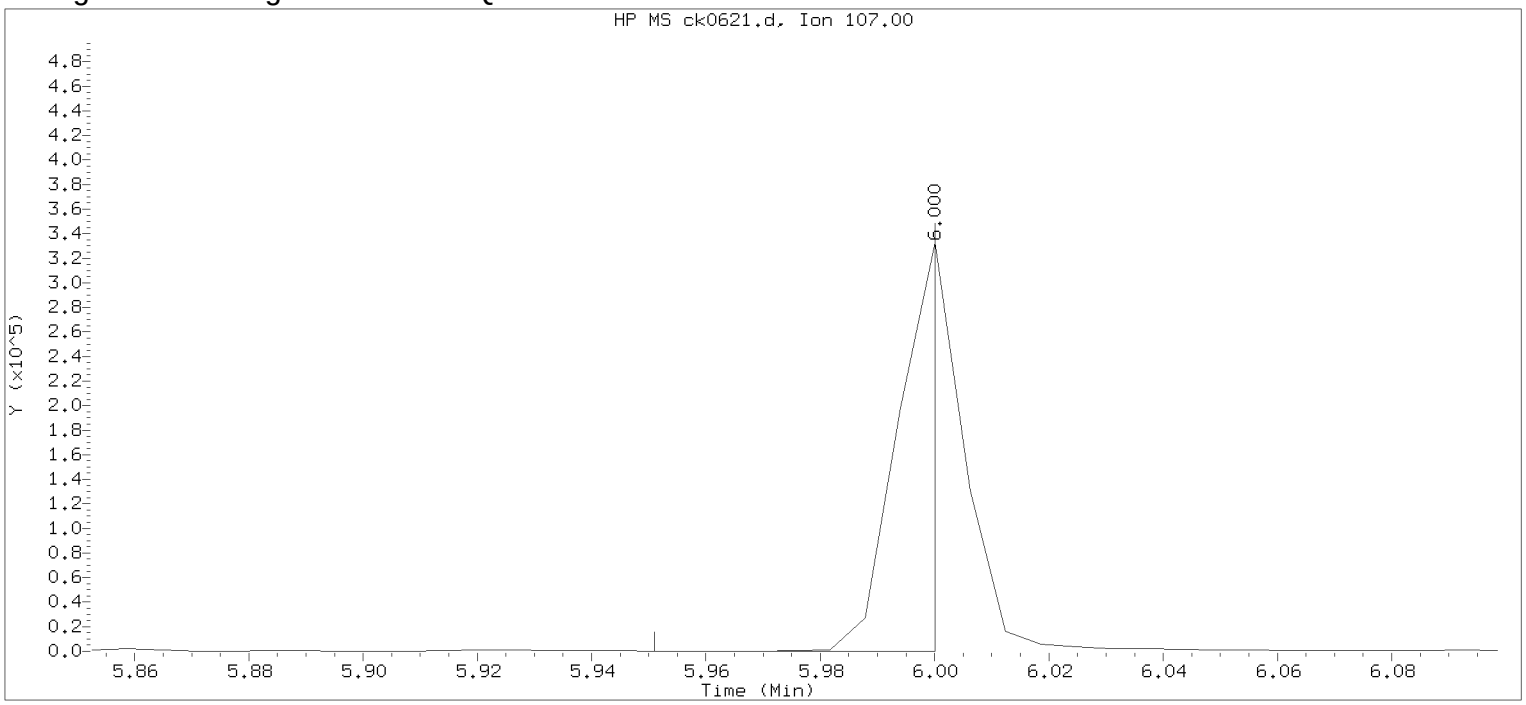
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

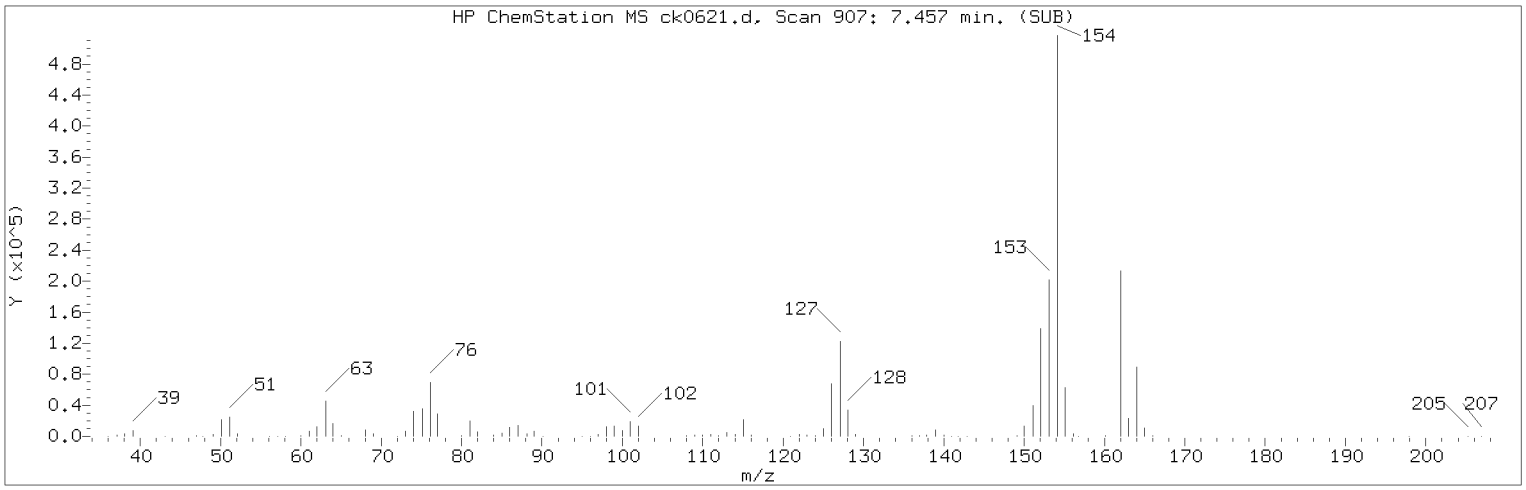
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

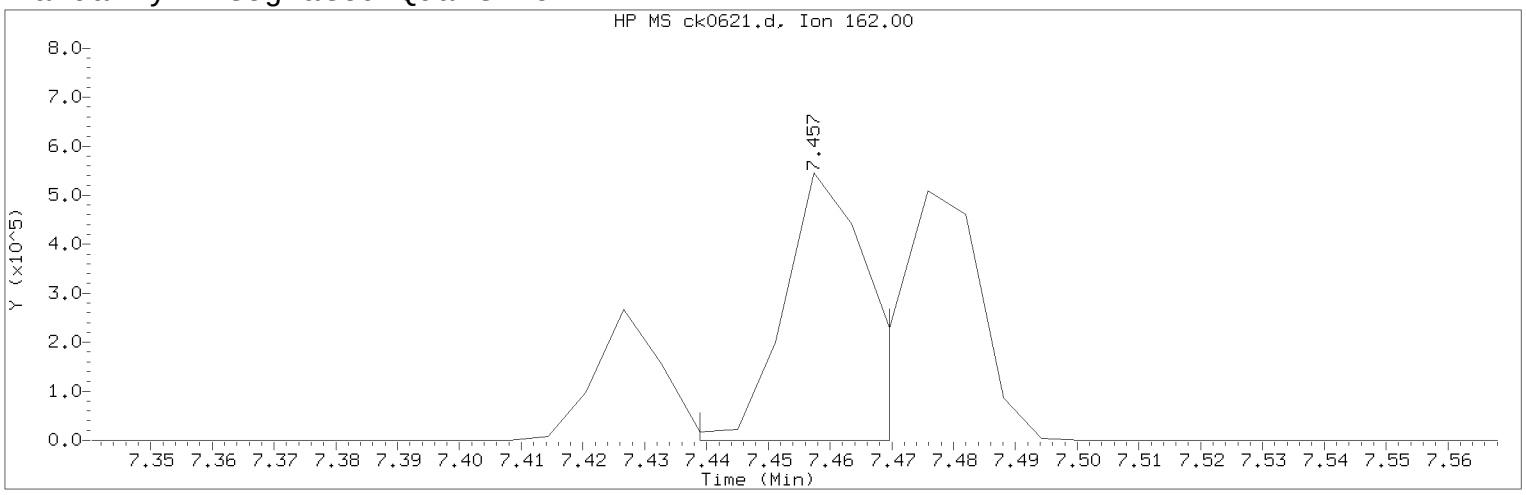
Compound Number : 44
Compound Name : 2,4-Dimethylphenol
Scan Number : 670
Retention Time (minutes) : 6.000
Quant Ion : 107.00
Area : 144979
On-column Amount (ng/ul) : 15.3298
Integration start scan : 661 Integration stop scan: 669
Y at integration start : 115 Y at integration end: 108

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature used: VD4 Page 1340 of 3494

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

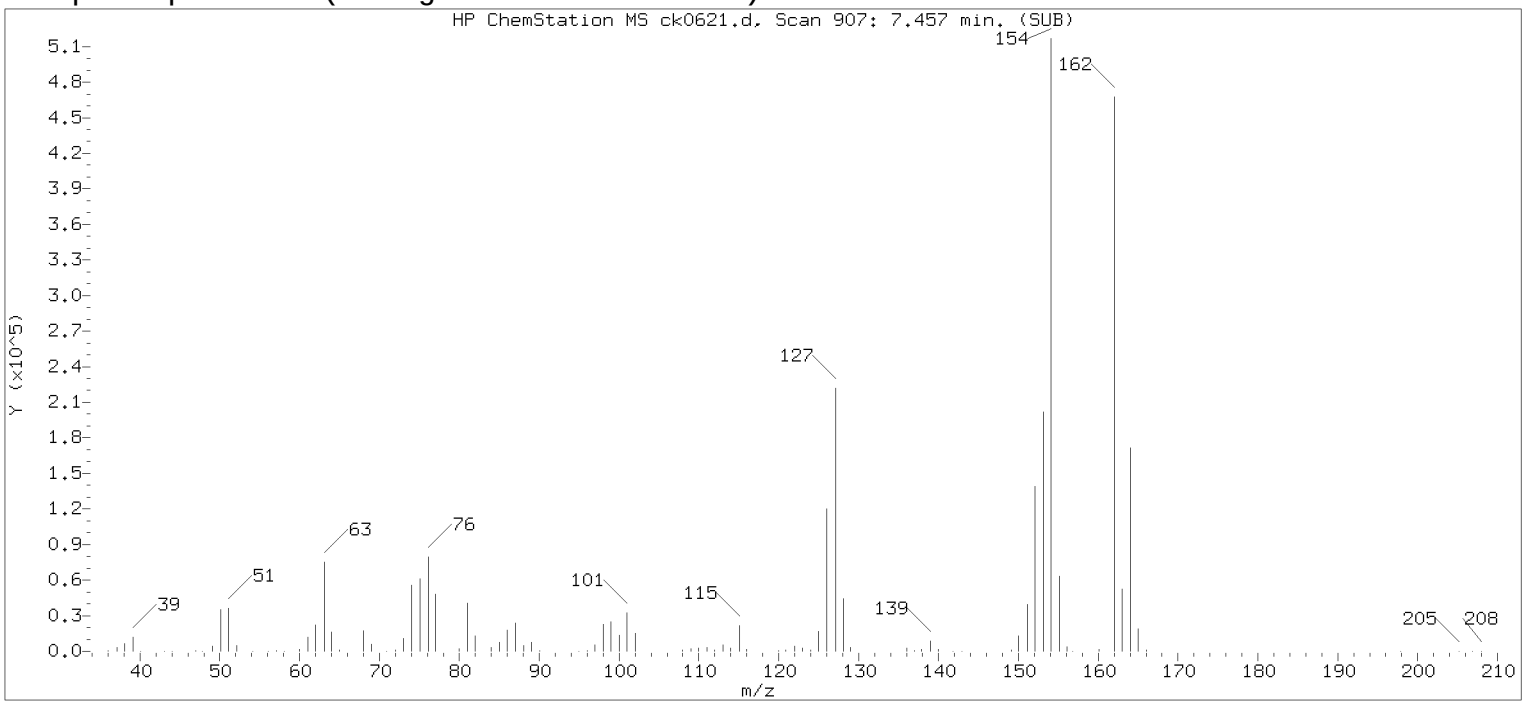
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area (flag) : 536380M
On-Column Amount (ng/ul) : 32.7989
Integration start scan : 903 Integration stop scan: 908
Y at integration start : 66 Y at integration end: 71

Reason for manual integration: improper integration

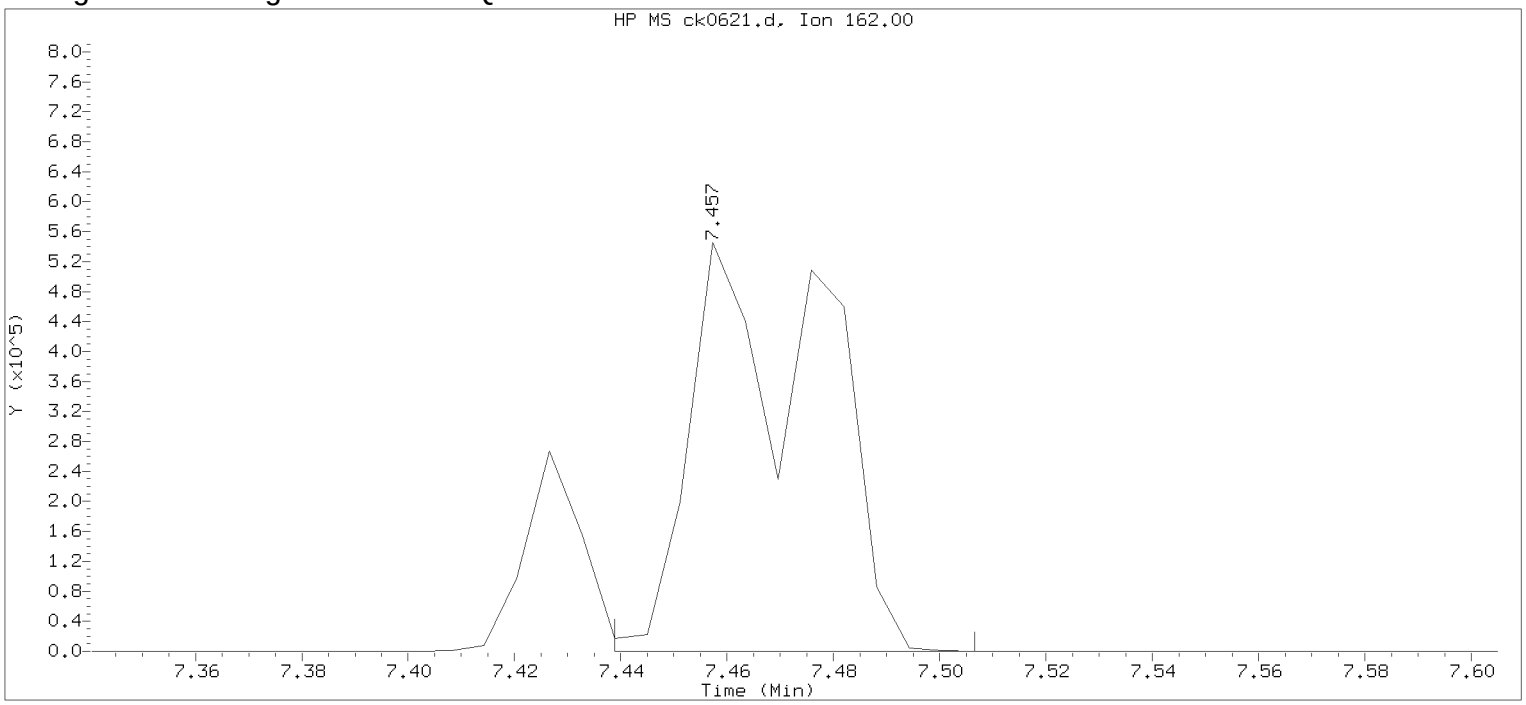
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

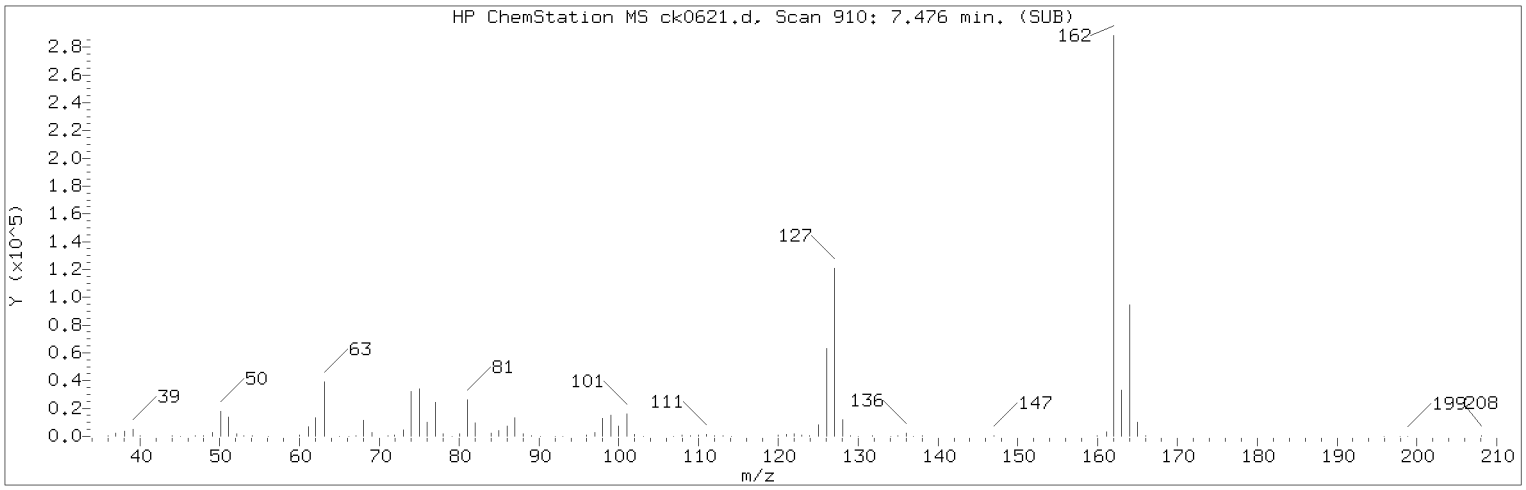
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

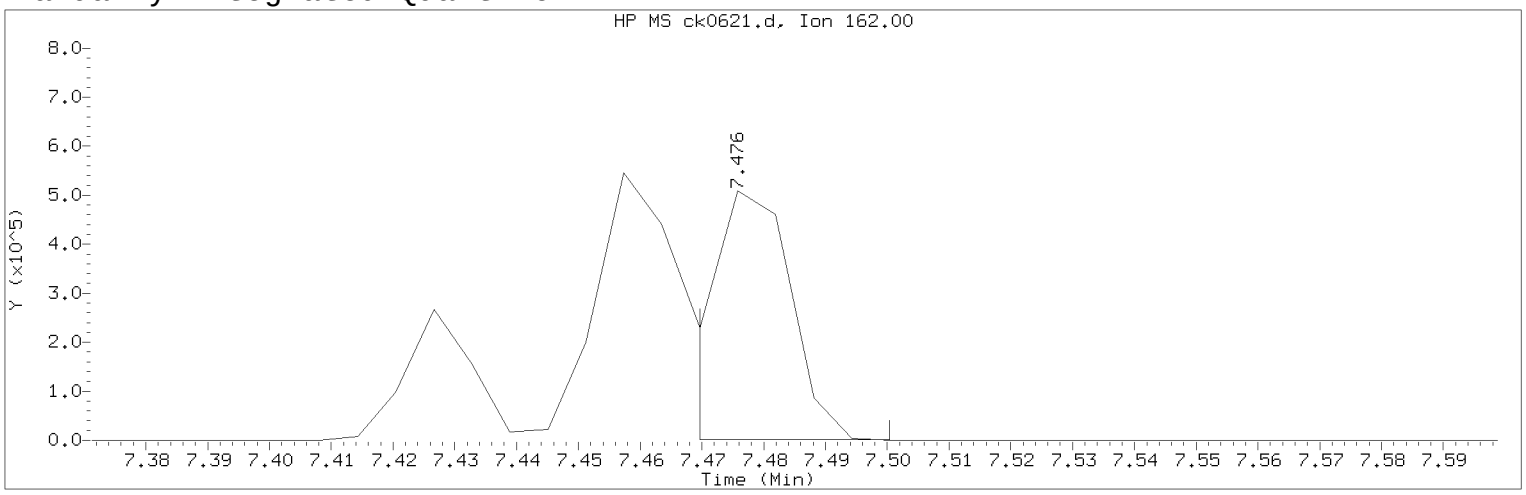
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area : 923982
On-column Amount (ng/ul) : 56.5002
Integration start scan : 903 Integration stop scan: 914
Y at integration start : 66 Y at integration end: 78

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

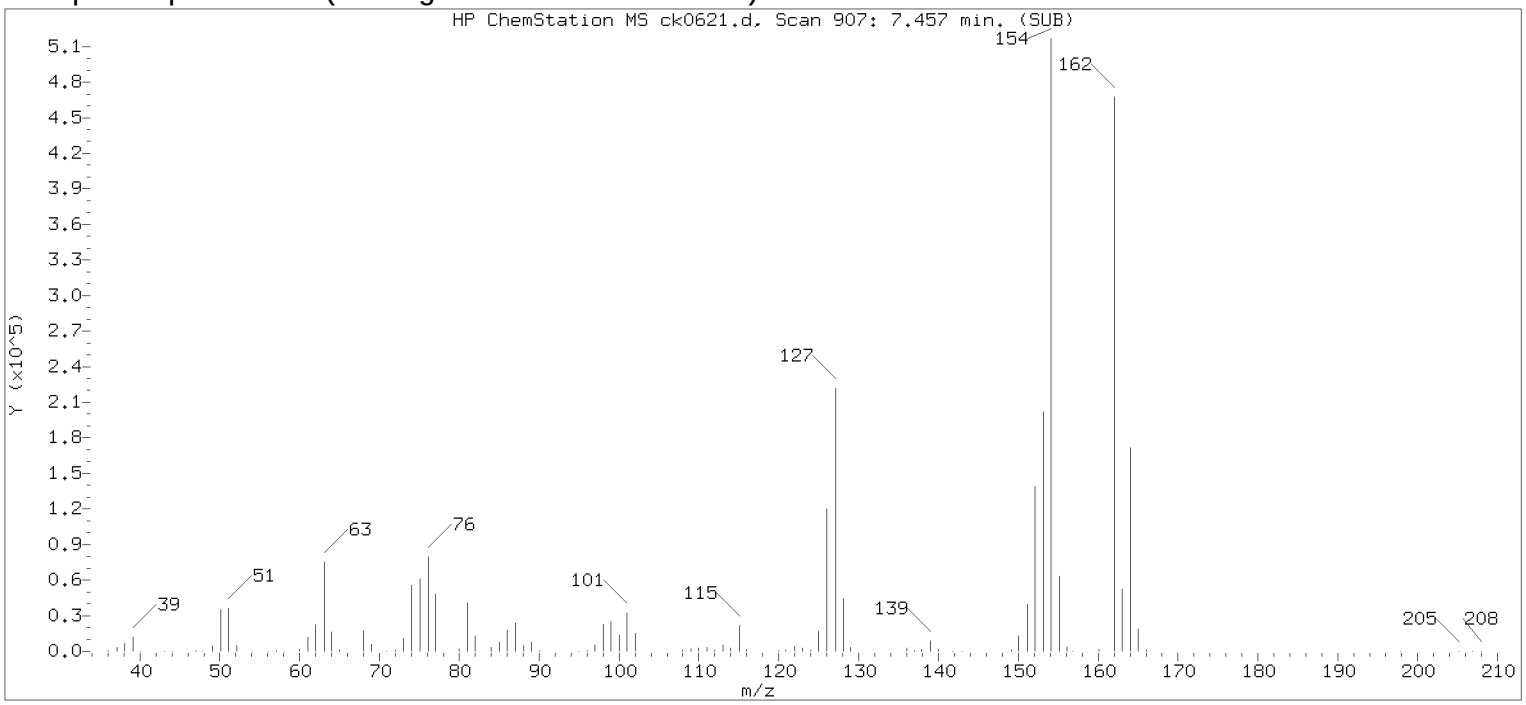
Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 910
Retention Time (minutes) : 7.476
Quant Ion : 162.00
Area (flag) : 472583M
On-Column Amount (ng/ul) : 29.3630
Integration start scan : 908 Integration stop scan: 913
Y at integration start : 1336 Y at integration end: 1336

Reason for manual integration: improper integration

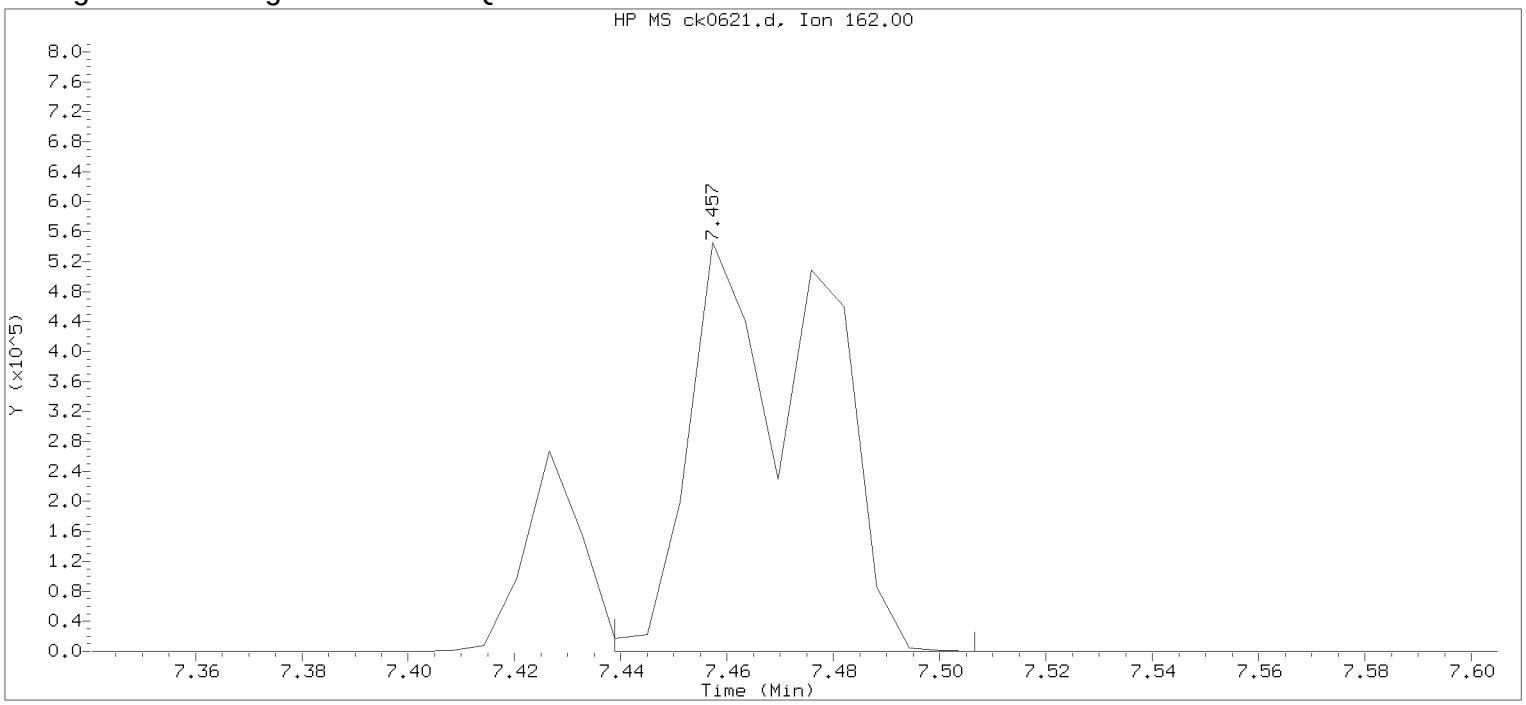
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area : 924127
On-column Amount (ng/ul) : 57.4187
Integration start scan : 903 Integration stop scan: 914
Y at integration start : 38 Y at integration end: 36

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

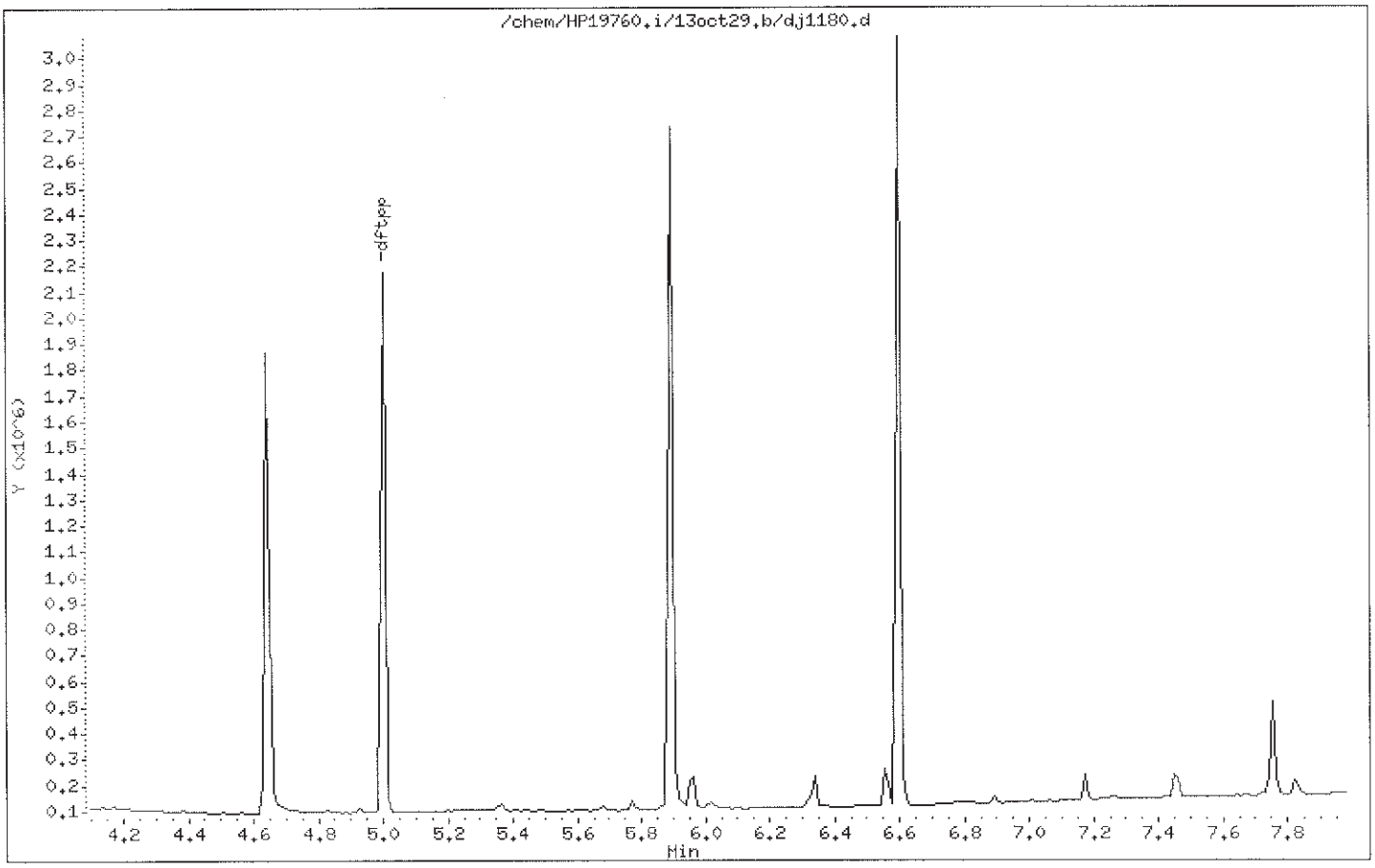
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

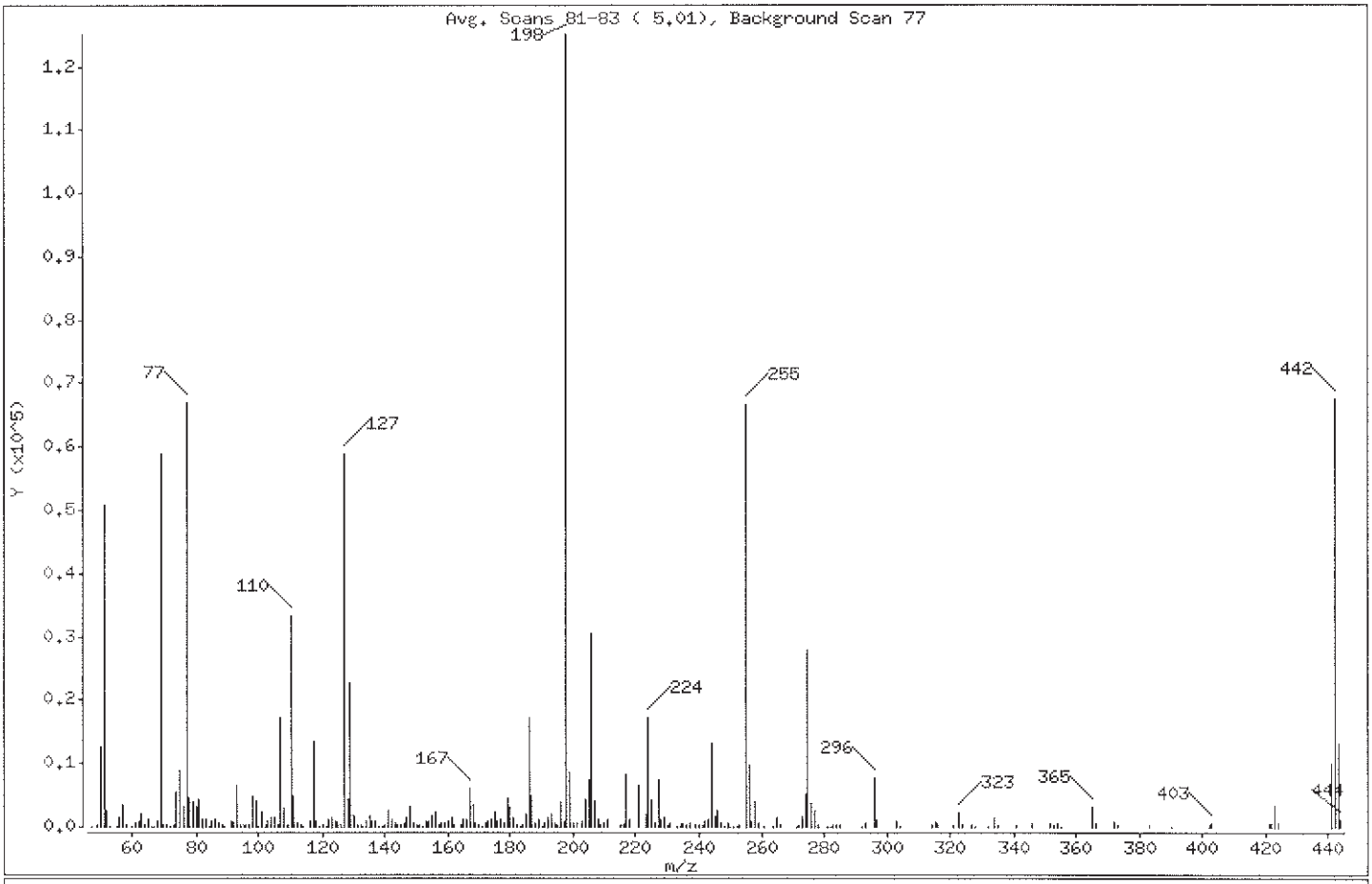
Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.63
68	Less than 2.00% of mass 69	0.61 (1.30)
69	Mass 69 relative abundance	47.07
70	Less than 2.00% of mass 69	0.22 (0.47)
127	40.00 - 60.00% of mass 198	47.20
197	Less than 1.00% of mass 198	0.62
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	7.96
442	40.00 - 99.99% of mass 198	53.99
443	17.00 - 23.00% of mass 442	10.46 (19.38)

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d
Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	13	116.00	929	181.00	1462	255.00	66776
49.00	261	117.00	13587	182.00	291	256.00	9856
50.00	12707	118.00	891	183.00	143	257.00	787
51.00	50792	119.00	70	184.00	364	258.00	3960
52.00	2525	120.00	147	185.00	2083	259.00	515
53.00	20	121.00	36	186.00	17232	261.00	89
55.00	76	122.00	1155	187.00	4804	264.00	110
56.00	1295	123.00	1560	188.00	488	265.00	1556
57.00	3551	124.00	721	189.00	1028	266.00	224
58.00	186	125.00	778	190.00	135	271.00	107
60.00	129	126.00	172	191.00	434	272.00	152
61.00	662	127.00	59016	192.00	1400	273.00	1837
62.00	792	128.00	4334	193.00	1907	274.00	5128
63.00	2094	129.00	22576	194.00	447	275.00	27968
64.00	251	130.00	1821	195.00	243	276.00	3801
65.00	1088	131.00	408	196.00	3990	277.00	2556
66.00	43	132.00	329	197.00	771	278.00	336
67.00	9	133.00	2	198.00	125032	281.00	79
68.00	765	134.00	785	199.00	8488	282.00	108
69.00	58856	135.00	1720	200.00	703	283.00	234
70.00	276	136.00	896	201.00	580	284.00	166
71.00	205	137.00	852	203.00	834	285.00	364
72.00	37	138.00	108	204.00	4361	292.00	83
73.00	162	139.00	59	205.00	7410	293.00	500
74.00	5521	140.00	378	206.00	30336	296.00	7902
75.00	8878	141.00	2631	207.00	3917	297.00	1170
76.00	3208	142.00	1009	208.00	1033	303.00	767
77.00	66928	143.00	510	209.00	258	304.00	143
78.00	4517	144.00	245	210.00	495	314.00	331
79.00	3900	145.00	408	211.00	1226	315.00	774
80.00	3044	146.00	599	215.00	391	316.00	434
81.00	4425	147.00	1398	216.00	685	321.00	177
82.00	1038	148.00	3200	217.00	8299	323.00	2340
83.00	1074	149.00	650	218.00	1128	324.00	382
84.00	117	150.00	311	221.00	6661	327.00	385

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d

Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77

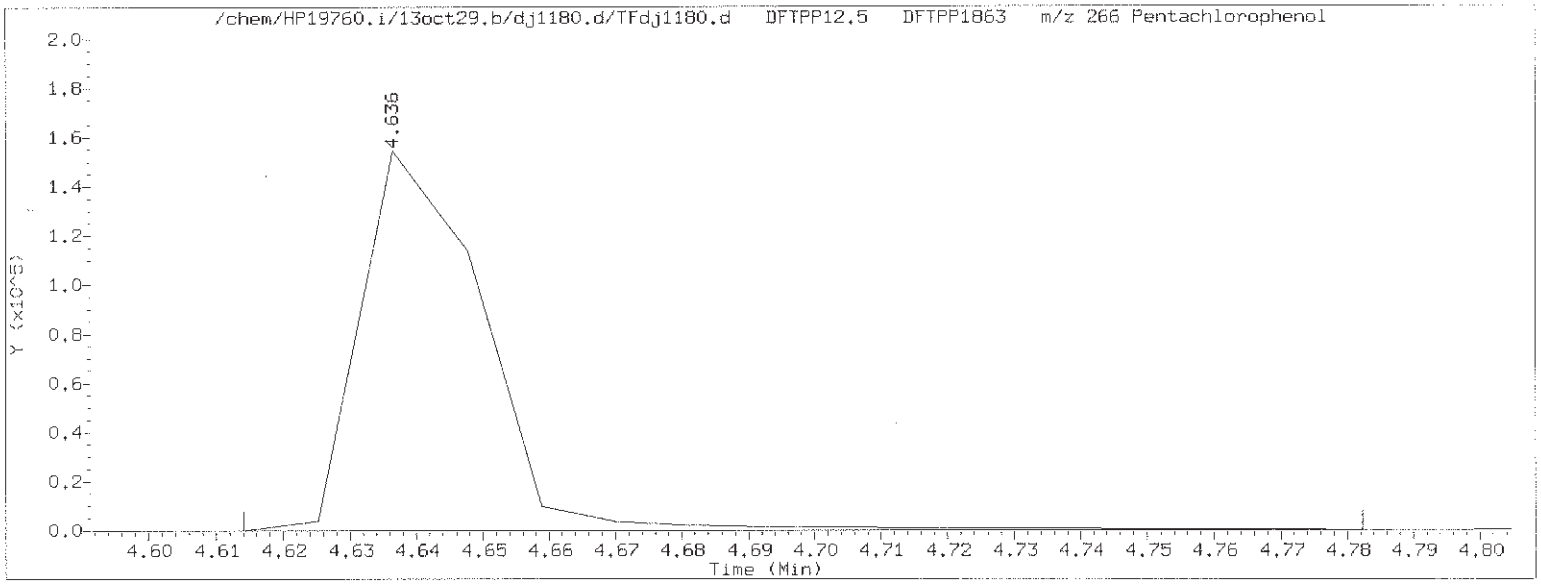
Location of Maximum: 198.00

Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	730	151.00	347	223.00	1931	328.00	105
86.00	1136	152.00	115	224.00	17384	332.00	94
87.00	504	153.00	923	225.00	4444	334.00	1395
88.00	348	154.00	792	226.00	485	335.00	344
89.00	140	155.00	1648	227.00	7391	341.00	240
91.00	953	156.00	2400	228.00	1081	346.00	451
92.00	900	157.00	250	229.00	1546	352.00	610
93.00	6479	158.00	576	230.00	169	353.00	425
94.00	405	159.00	492	231.00	629	354.00	617
95.00	146	160.00	1004	233.00	116	355.00	124
96.00	229	161.00	1421	234.00	480	365.00	3246
97.00	183	162.00	391	235.00	560	366.00	459
98.00	4747	164.00	233	236.00	276	372.00	946
99.00	3999	165.00	1040	237.00	642	373.00	170
100.00	126	166.00	1180	239.00	257	383.00	169
101.00	2341	167.00	5965	240.00	184	390.00	105
102.00	187	168.00	3512	241.00	370	402.00	369
103.00	775	169.00	567	242.00	924	403.00	500
104.00	1455	170.00	169	243.00	1252	421.00	444
105.00	1370	171.00	41	244.00	13079	422.00	479
106.00	380	172.00	563	245.00	1740	423.00	3350
107.00	17112	173.00	735	246.00	2568	424.00	517
108.00	2756	174.00	1279	247.00	557	441.00	9954
109.00	396	175.00	2300	248.00	115	442.00	67496
110.00	33216	176.00	754	249.00	484	443.00	13079
111.00	4816	177.00	1124	250.00	91	444.00	1189
112.00	615	178.00	434	251.00	86		
113.00	205	179.00	4545	252.00	112		
114.00	16	180.00	3086	253.00	238		

Assessment of GC Column Performance and Injection Port Inertness for

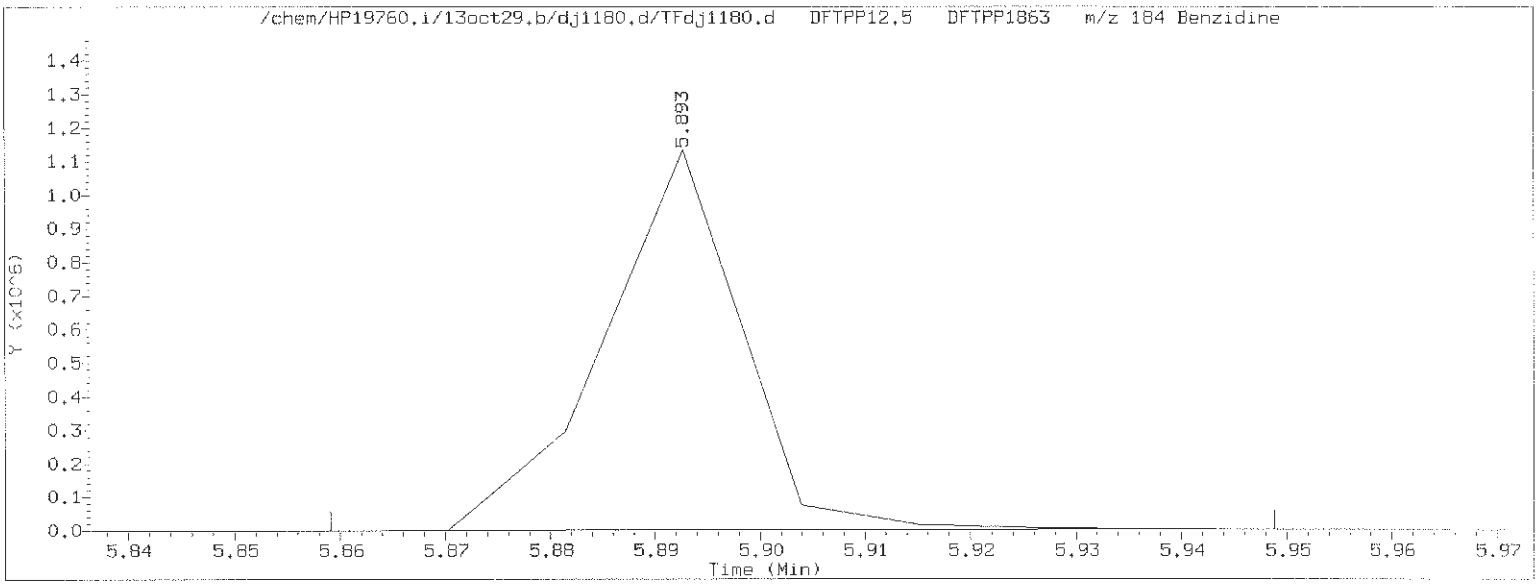
Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 154624 EICP peak height at 10% = 15462 Pentachlorophenol EICP area = 198857

Pentachlorophenol EICP peak apex (min.) = 4.636
RT at 10% of front half of EICP (min.) = 4.626 'Front' peak width (min.) = 0.0103333333
RT at 10% of back half of EICP (min.) = 4.658 'Tailing' peak width (min.) = 0.0218166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0218166667}{0.0103333333} = 2.111$$



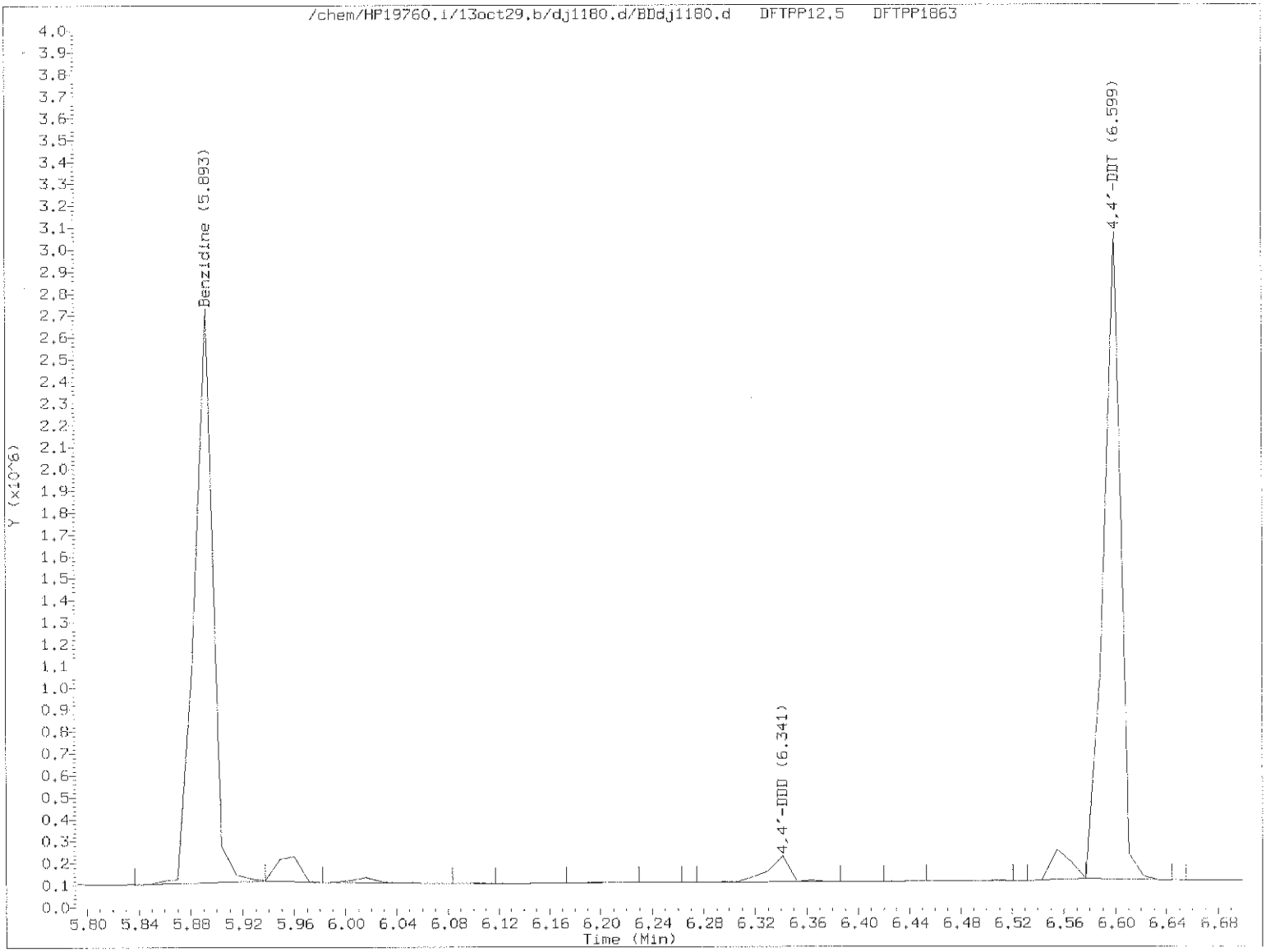
Benzidine EICP peak height = 1133040 EICP peak height at 10% = 113304 Benzidine EICP area = 1026461

Benzidine EICP peak apex (min.) = 5.893
RT at 5% of front half of EICP (min.) = 5.872 'Front' peak width (min.) = 0.0202666667
RT at 5% of back half of EICP (min.) = 5.907 'Tailing' peak width (min.) = 0.0146166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0146166667}{0.0202666667} = 0.721$$

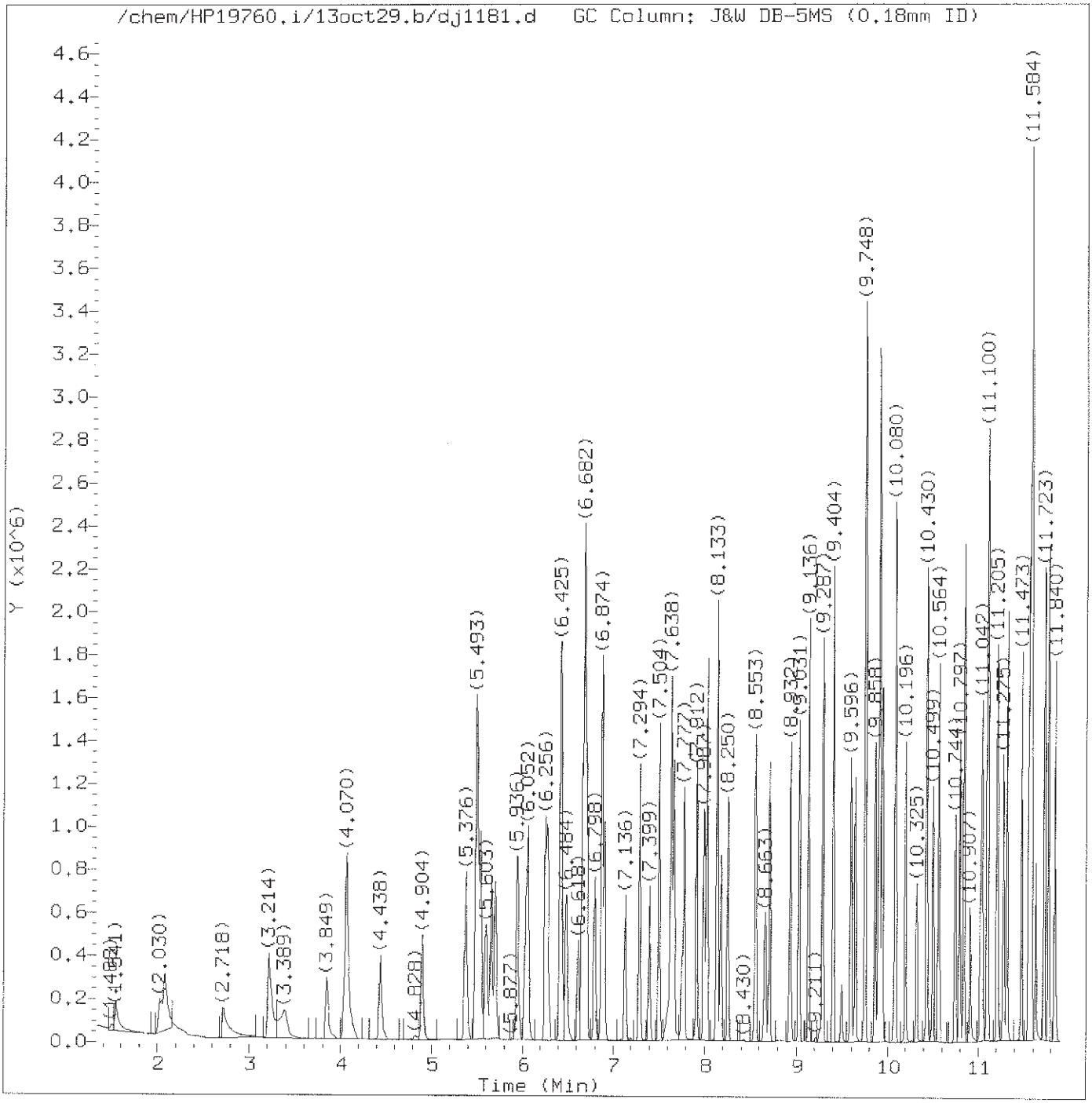
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 147644}{0 + 147644 + 2694927} \times 100 = 5.2$$



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d
Injection date and time: 29-OCT-2013 11:28

Instrument ID: HP19760.i
Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m
Calibration date and time: 29-OCT-2013 21:49

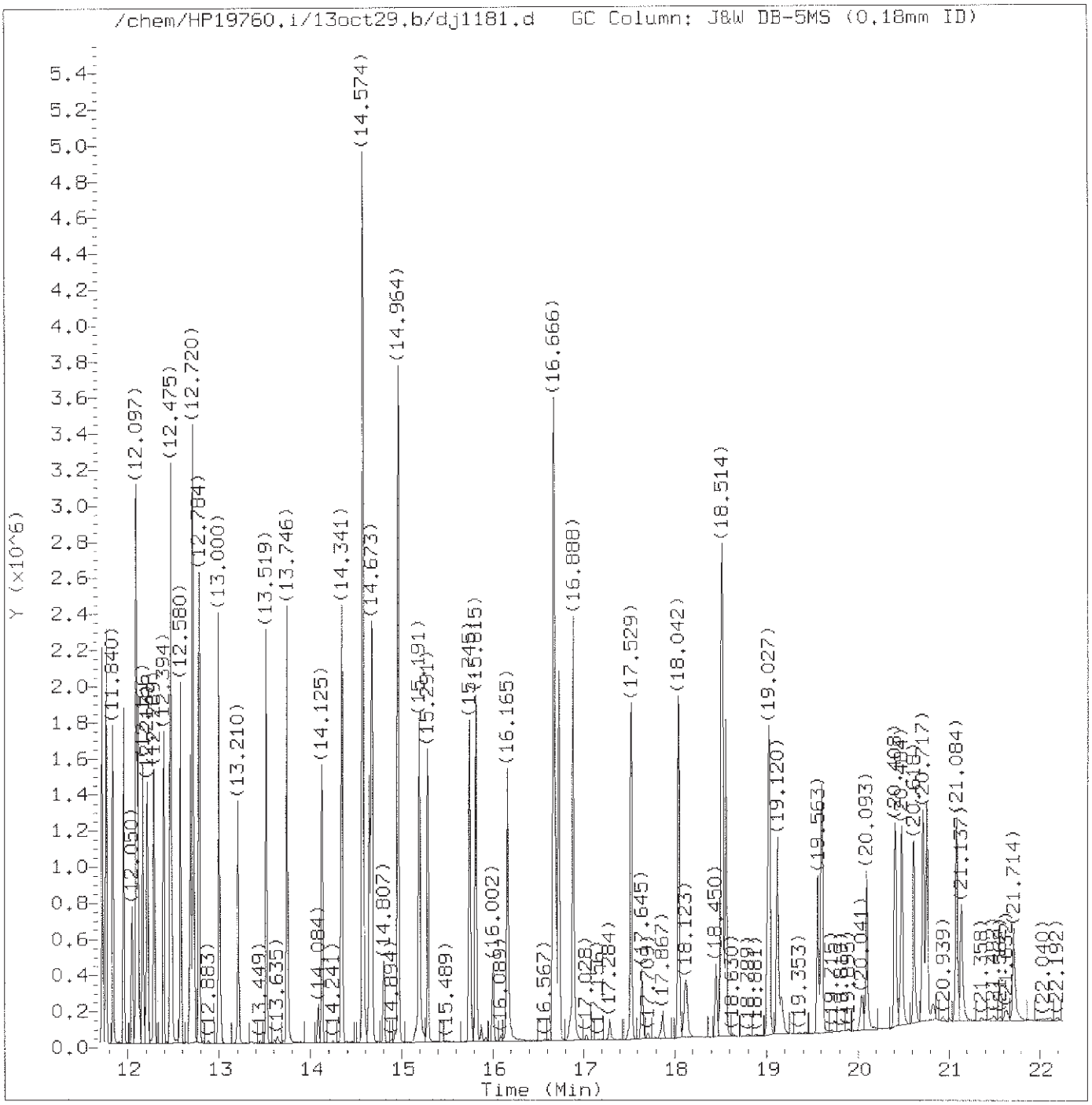
Sublist used: newall1

Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5

Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	137767	7.500
2) N-Nitrosodimethylamine	(1)	2.030	74	268516	7.500
3) Pyridine	(1)	2.083	79	432268	7.500
4) 2-Picoline	(1)	3.214	93	459785	7.500
5) N-Nitrosomethylethylamine	(1)	3.389	88	208027	7.500
6) Methyl methanesulfonate	(1)	3.849	80	233954	7.500
7)$2-Fluorophenol	(1)	4.070	112	709277	15.000
8) N-Nitrosodiethylamine	(1)	4.444	102	197319	7.500
10) Ethyl methanesulfonate	(1)	4.904	109	186082	7.500
11) Benzaldehyde	(1)	5.376	77	349278	7.500
12)$Phenol-d5	(1)	5.487	99	975454	15.000
13)$Phenol-d6	(1)	5.487	99	975454	15.000
14) Phenol	(1)	5.510	94	556847	7.500
15) Aniline	(1)	5.539	93	690455	7.500
16) bis(2-Chloroethyl)ether	(1)	5.656	93	436390	7.500
17) 2-Chlorophenol	(1)	5.702	128	351189	7.500
18) 1,3-Dichlorobenzene	(1)	5.941	146	363080	7.500
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	151909	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	364571	7.500
23) Benzyl alcohol	(1)	6.250	108	239760	7.500
24) 1,2-Dichlorobenzene	(1)	6.280	146	342428	7.500
25) Indene	(1)	6.419	115	702500	9.000
26) 2-Methylphenol	(1)	6.431	108	348956	7.500
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	541494	7.500
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	541494	7.500
29) N-Nitrosopyrrolidine	(1)	6.618	100	206158	7.500
30) Acetophenone	(1)	6.658	105	512562	7.500
33) 4-Methylphenol	(1)	6.682	108	394695	7.500
31) N-Nitroso-di-n-propylamine	(1)	6.682	70	319187	7.500
32) N-Nitrosomorpholine	(1)	6.688	56	245653	7.500
34) o-Toluidine	(1)	6.705	106	598993	7.500
35) Hexachloroethane	(1)	6.798	117	157145	7.500
36)$Nitrobenzene-d5	(2)	6.874	82	873687	15.000
37) Nitrobenzene	(2)	6.903	77	459440	7.500
39) N-Nitrosopiperidine	(2)	7.136	114	190894	7.500
40) Isophorone	(2)	7.294	82	797440	7.500
42) 2-Nitrophenol	(2)	7.399	139	175236	7.500
45) 2,4-Dimethylphenol	(2)	7.504	107	386388	7.500
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	164859	7.500
47) Benzoic acid	(2)	7.655	105	357390	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	501971M	7.500
49) 2,4-Dichlorophenol	(2)	7.777	162	272381	7.500
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	288881	7.500
52)*Naphthalene-d8	(2)	7.987	136	608104	5.000
53) Naphthalene	(2)	8.022	128	975519	7.500
55) 4-Chloroaniline	(2)	8.127	127	418617	7.500
56) 2,6-Dichlorophenol	(2)	8.139	162	261060	7.500
57) Hexachloropropene	(2)	8.174	213	192094	7.500
58) Hexachlorobutadiene	(2)	8.255	225	166743	7.500
60) Quinoline	(2)	8.553	129	657223	7.500
61) Caprolactam	(2)	8.663	113	122649	7.500
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	291446	7.500
63) 4-Chloro-3-methylphenol	(2)	8.932	107	337960	7.500
64) Safrole	(2)	9.031	162	255020	7.500
65) 2-Methylnaphthalene	(2)	9.136	142	661678	7.500
66) 1-Methylnaphthalene	(2)	9.287	142	601705	7.500
67) Hexachlorocyclopentadiene	(3)	9.404	237	149375	7.500
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	295528	7.500
69) cis-Isosafrole	(3)	9.497	162	46662	7.500
70) 2,4,6-Trichlorophenol	(3)	9.596	196	203516	7.500
71) 2,4,5-Trichlorophenol	(3)	9.643	196	211849	7.500
72)$2-Fluorobiphenyl	(3)	9.748	172	1291899	15.000
74) Isosafrole	(3)	9.858	162	260550	7.500
73) trans-Isosafrole	(3)	9.858	162	260550	7.500
75) 1,1'-Biphenyl	(3)	9.899	154	731309	7.500
76) 2-Chloronaphthalene	(3)	9.905	162	587363	7.500
77) 1-Chloronaphthalene	(3)	9.940	162	566223	7.500
82) Diphenyl ether	(3)	10.080	170	422807	7.500
83) 2-Nitroaniline	(3)	10.086	138	206464	7.500
84) 1,4-Naphthoquinone	(3)	10.196	158	268566	7.500
85) 1,4-Dinitrobenzene	(3)	10.325	168	107464	7.500
86) Dimethylphthalate	(3)	10.430	163	671240	7.500
87) 1,3-Dinitrobenzene	(3)	10.435	168	125634	7.500
88) 2,6-Dinitrotoluene	(3)	10.499	165	161578	7.500
90) Acenaphthylene	(3)	10.564	152	909644	7.500
91) 3-Nitroaniline	(3)	10.744	138	186158	7.500
92)*Acenaphthene-d10	(3)	10.797	164	340173	5.000
93) Acenaphthene	(3)	10.843	153	609286	7.500
94) 2,4-Dinitrophenol	(3)	10.913	184	99795	10.000
96) 4-Nitrophenol	(3)	11.030	109	118092	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	237796	7.500
97) Dibenzofuran	(3)	11.100	168	865450	7.500
98) 2,4-Dinitrotoluene	(3)	11.106	165	200480	7.500
99) 1-Naphthylamine	(3)	11.205	143	632752	7.500
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	166684	7.500
101) 2-Naphthylamine	(3)	11.315	143	653595	7.500
102) Diethylphthalate	(3)	11.473	149	661064	7.500
103) Fluorene	(3)	11.554	166	710098	7.500
104) Thionazin	(3)	11.566	107	145158	7.500
106) 5-Nitro-o-toluidine	(3)	11.578	152	196066	7.500
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	338065	7.500
107) 4-Nitroaniline	(3)	11.584	138	177952	7.500
108) 4,6-Dinitro-2-methylphenol	(4)	11.630	198	108493	7.500
109) N-Nitrosodiphenylamine	(4)	11.729	169	561532	7.500
110) NDPA as diphenylamine	(4)	11.729	169	561532	7.500
111) 1,2-Diphenylhydrazine	(4)	11.770	77	905405	7.500
112)$2,4,6-Tribromophenol	(3)	11.840	330	143815	15.000
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	132618	7.500
116) 1,3,5-Trinitrobenzene	(4)	12.050	213	80876	7.500
117) Diallate (peak 1)	(4)	12.091	86	342542	5.625
118) Phorate	(4)	12.097	75	547268	7.500
119) Phenacetin	(4)	12.114	108	408525	7.500
120) 4-Bromophenyl-phenylether	(4)	12.166	248	174573	7.500
121) Diallate (peak 2)	(4)	12.196	86	49019	1.875
122) Hexachlorobenzene	(4)	12.213	284	169395	7.500
123) Dimethoate	(4)	12.289	87	373493	7.500
124) Atrazine	(4)	12.394	200	180156	7.500
125) Pentachlorophenol	(4)	12.464	266	128448	7.500
126) Pentachloronitrobenzene	(4)	12.475	237	84108	7.500
127) 4-Aminobiphenyl	(4)	12.475	169	721220	7.500
129) Pronamide	(4)	12.580	173	318096	7.500
130)*Phenanthrene-d10	(4)	12.691	188	574655	5.000
131) Phenanthrene	(4)	12.720	178	962778	7.500
133) Dinoseb	(4)	12.720	211	158315	7.500
134) Anthracene	(4)	12.784	178	1008447	7.500
135) Carbazole	(4)	13.000	167	986634	7.500
136) Methyl parathion	(4)	13.204	109	269786	7.500
137) Di-n-butylphthalate	(4)	13.519	149	1215775	7.500
138) Parathion	(4)	13.746	109	172642	7.500
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	87192	7.500

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	122402	7.500
142) Fluoranthene	(4)	14.341	202	1145853	7.500
144) Benzidine	(5)	14.574	184	2350030	22.500
145)*Pyrene-d10	(5)	14.649	212	743541	5.000
146) Pyrene	(5)	14.679	202	1179015	7.500
149)$Terphenyl-d14	(5)	14.964	244	1432906	15.000
150) p-Dimethylaminoazobenzene	(5)	15.197	225	245246	7.500
151) Chlorobenzilate	(5)	15.291	139	368575	7.500
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	805018	7.500
153) Butylbenzylphthalate	(5)	15.815	149	555530	7.500
156) 2-Acetylaminofluorene	(5)	16.165	181	483665	7.500
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	388403	7.500
158) Benzo(a)anthracene	(5)	16.666	228	1087387	7.500
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	209240	7.500
161) Chrysene	(5)	16.730	228	1019141	7.500
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	760232	7.500
165) 6-Methylchrysene	(5)	17.529	242	745309	7.500
166) Di-n-octylphthalate	(6)	18.042	149	1259155	7.500
168) Benzo(b)fluoranthene	(6)	18.508	252	957737	7.500
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.514	256	391427	7.500
170) Benzo(k)fluoranthene	(6)	18.555	252	953456	7.500
171) Benzo(a)pyrene	(6)	19.027	252	891430	7.500
172)*Perylene-d12	(6)	19.120	264	528760	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	434800	7.500
174) Dibenz(a,h)acridine	(6)	20.408	279	608478	7.500
175) Dibenz(a,j)acridine	(6)	20.484	279	626394	7.500
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	822323	7.500
177) Dibenz(a,h)anthracene	(6)	20.764	278	692510	7.500
178) Benzo(g,h,i)perylene	(6)	21.084	276	667334	7.500
179) Diallate TRANS/CIS	(4)			391561	7.500
182) 2,4_2,6-Dinitrotoluenes	(3)			362058	15.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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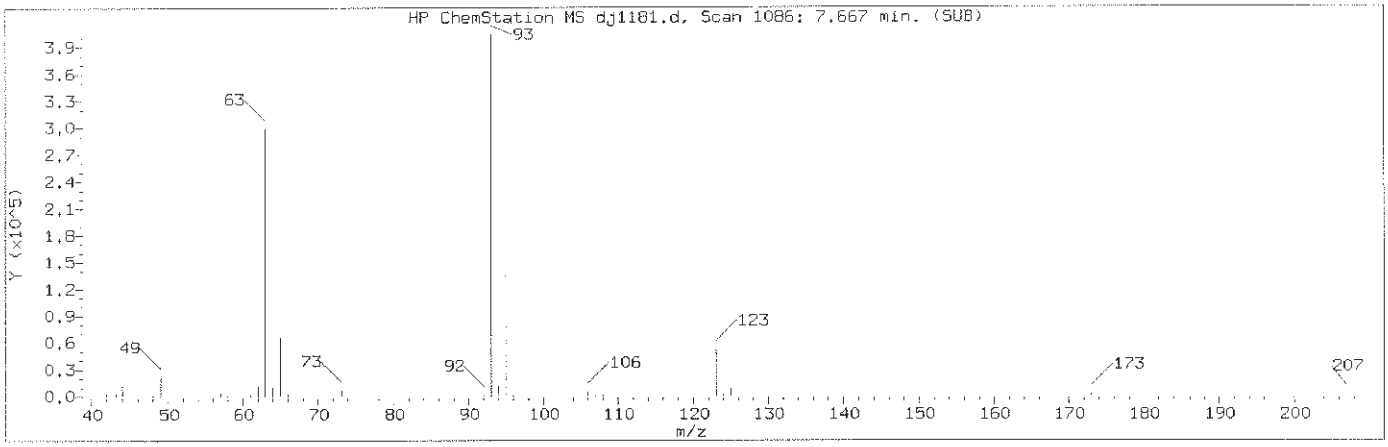
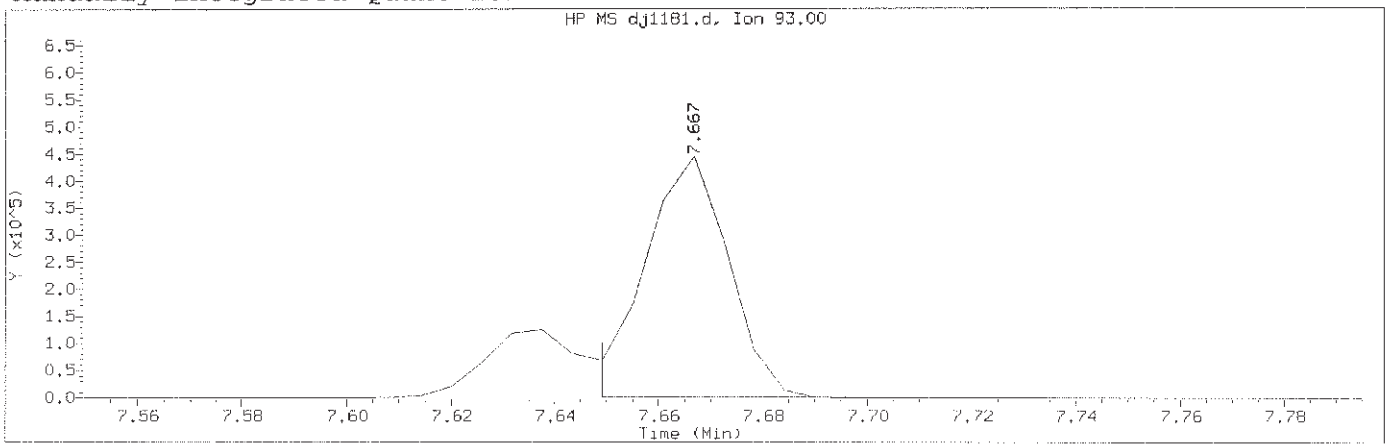
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 501971M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 584	Y at integration end:	584

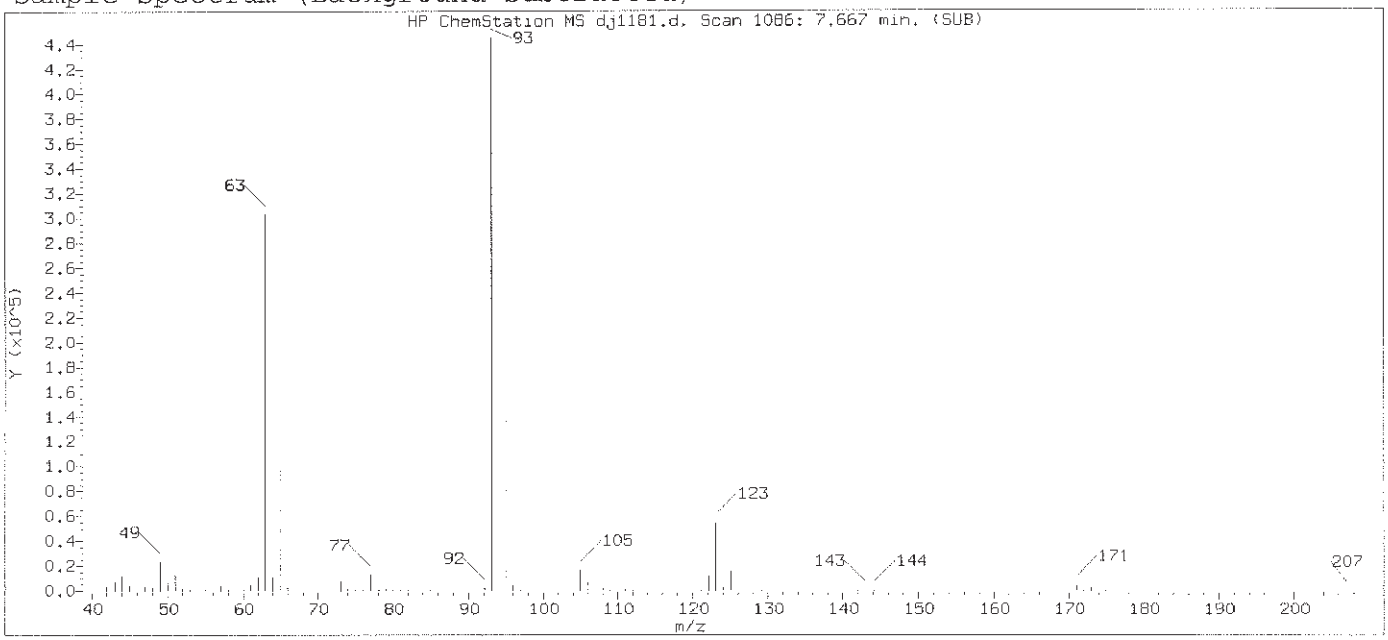
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

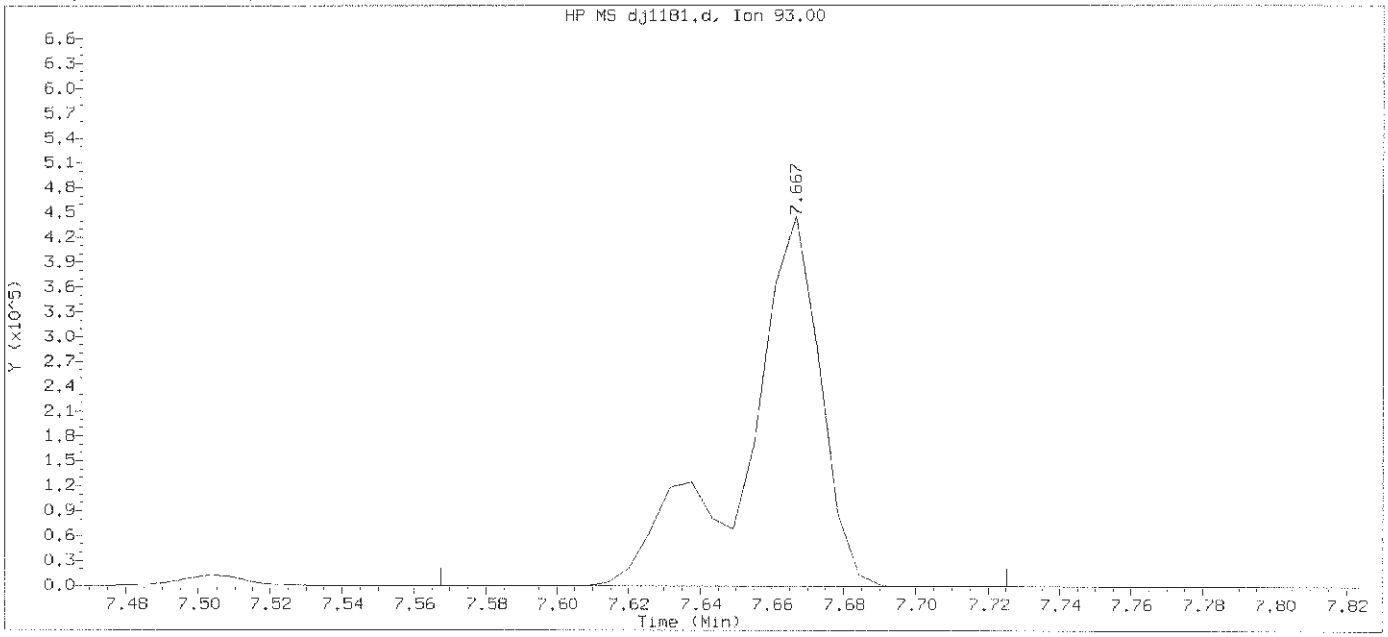
GC/MS audit/management approval: OCT 3 0 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:37
Date, time and analyst ID of latest file update: 29-Oct-2013 21:37 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area	: 649915		
On-column Amount (ng/ul)	: 8.8624		
Integration start scan	: 1068	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	0

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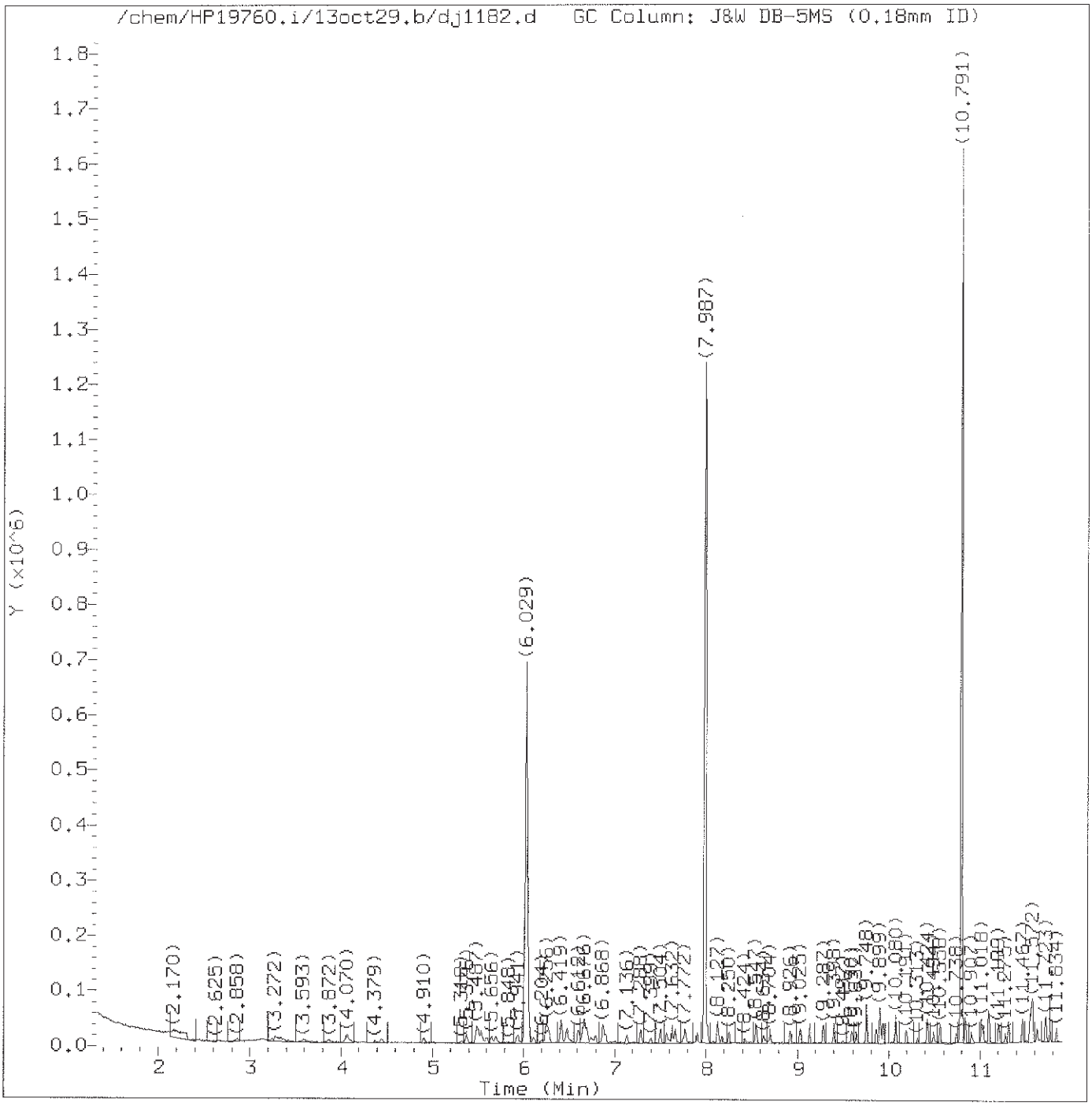
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

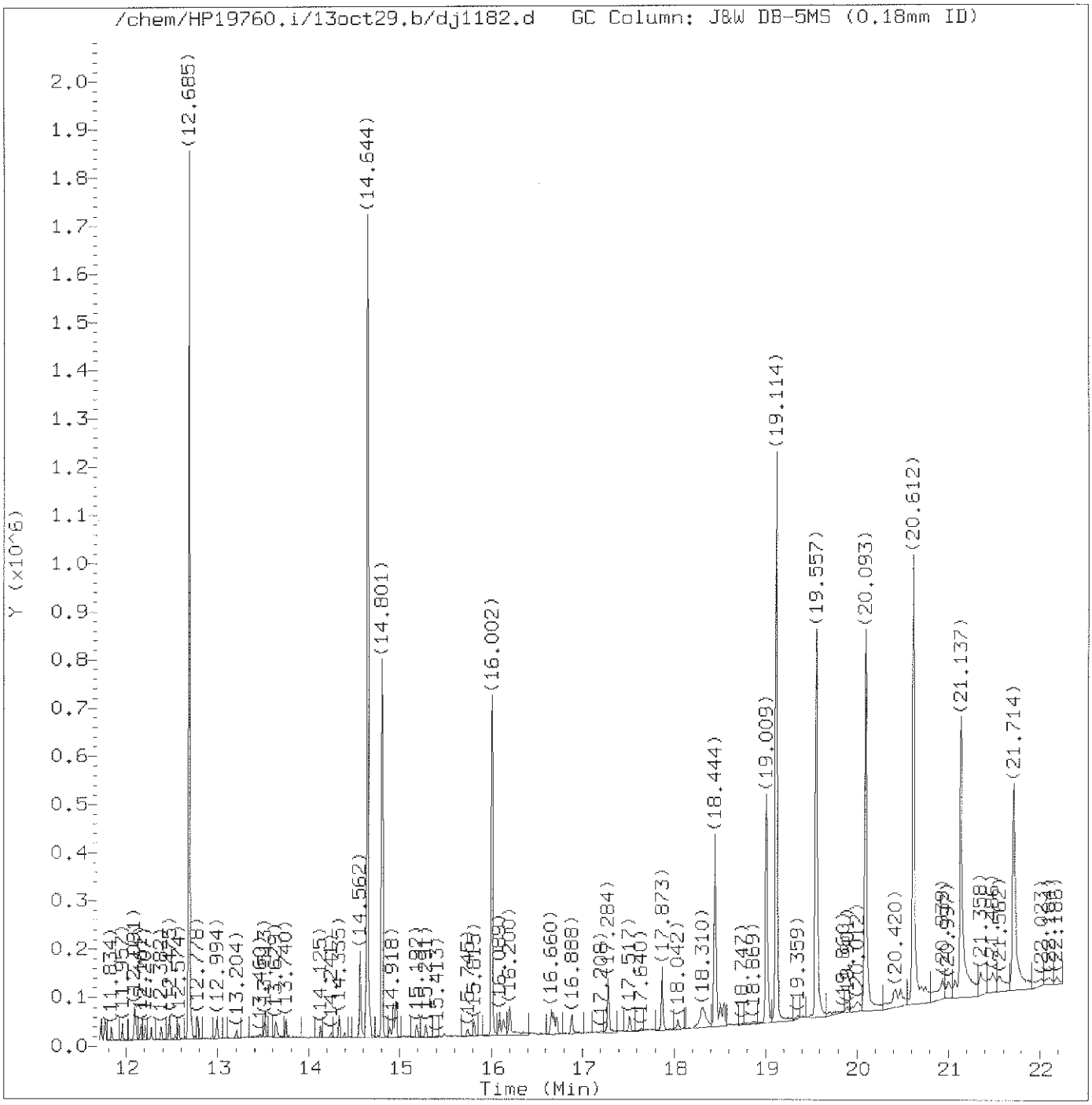
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.089	74	1978	0.049
3) Pyridine	(1)	2.159	79	4040	0.062
4) 2-Picoline	(1)	3.278	93	5887	0.085
5) N-Nitrosomethylethylamine	(1)	3.412	88	2434	0.077
6) Methyl methanesulfonate	(1)	3.866	80	3178	0.090
7)$2-Fluorophenol	(1)	4.065	112	11592	0.216
8) N-Nitrosodiethylamine	(1)	4.449	102	2906	0.097
10) Ethyl methanesulfonate	(1)	4.910	109	2854	0.101
11) Benzaldehyde	(1)	5.376	77	6602	0.125
12)$Phenol-d5	(1)	5.487	99	16847	0.228
13)$Phenol-d6	(1)	5.487	99	16847	0.228
14) Phenol	(1)	5.504	94	10250	0.122
15) Aniline	(1)	5.539	93	13009	0.124
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6855	0.104
17) 2-Chlorophenol	(1)	5.697	128	5496	0.103
18) 1,3-Dichlorobenzene	(1)	5.941	146	5342	0.097
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	172486	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5727	0.104
23) Benzyl alcohol	(1)	6.250	108	5087	0.140
24) 1,2-Dichlorobenzene	(1)	6.280	146	5122	0.099
25) Indene	(1)	6.414	115	13592	0.153
26) 2-Methylphenol	(1)	6.431	108	6249	0.118
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	11271	0.137
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	11271	0.137
29) N-Nitrosopyrrolidine	(1)	6.612	100	3637	0.117
30) Acetophenone	(1)	6.653	105	9151	0.118
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	6438	0.133
33) 4-Methylphenol	(1)	6.676	108	7465	0.125
32) N-Nitrosomorpholine	(1)	6.682	56	5072	0.136
34) o-Toluidine	(1)	6.699	106	10505	0.116
35) Hexachloroethane	(1)	6.792	117	2399	0.101
36)$Nitrobenzene-d5	(2)	6.868	82	14956	0.231
37) Nitrobenzene	(2)	6.897	77	8544	0.126
39) N-Nitrosopiperidine	(2)	7.136	114	3210	0.114
40) Isophorone	(2)	7.288	82	14776	0.125
42) 2-Nitrophenol	(2)	7.399	139	2257	0.087
45) 2,4-Dimethylphenol	(2)	7.504	107	6641	0.116
47) Benzoic acid	(2)	7.568	105	9965	0.251
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3021	0.124
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	9510	0.128

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	7.772	162	4415	0.109
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4887	0.114
52)*Naphthalene-d8	(2)	7.987	136	675195	5.000
53) Naphthalene	(2)	8.022	128	17062	0.121
55) 4-Chloroaniline	(2)	8.127	127	8283	0.134
56) 2,6-Dichlorophenol	(2)	8.133	162	4277	0.111
57) Hexachloropropene	(2)	8.174	213	2448	0.086
58) Hexachlorobutadiene	(2)	8.250	225	2766	0.112
60) Quinoline	(2)	8.547	129	14809	0.152
61) Caprolactam	(2)	8.634	113	2282	0.126
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	5553	0.129
63) 4-Chloro-3-methylphenol	(2)	8.926	107	5929	0.119
64) Safrole	(2)	9.025	162	4340	0.115
65) 2-Methylnaphthalene	(2)	9.130	142	11868	0.123
66) 1-Methylnaphthalene	(2)	9.287	142	10863	0.123
67) Hexachlorocyclopentadiene	(3)	9.398	237	1612	0.071
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.398	216	5395	0.120
69) cis-Isosafrole	(3)	9.497	162	787	0.111
70) 2,4,6-Trichlorophenol	(3)	9.590	196	3352	0.109
71) 2,4,5-Trichlorophenol	(3)	9.637	196	3643	0.113
72)$2-Fluorobiphenyl	(3)	9.748	172	26357	0.269
74) Isosafrole	(3)	9.858	162	4585	0.116
73) trans-Isosafrole	(3)	9.858	162	4585	0.116
75) 1,1'-Biphenyl	(3)	9.893	154	13490	0.122
76) 2-Chloronaphthalene	(3)	9.899	162	11235	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12712	0.148
82) Diphenyl ether	(3)	10.080	170	8236	0.128
83) 2-Nitroaniline	(3)	10.080	138	3138	0.100
84) 1,4-Naphthoquinone	(3)	10.191	158	3989	0.098
85) 1,4-Dinitrobenzene	(3)	10.319	168	1125	0.069
86) Dimethylphthalate	(3)	10.424	163	13121	0.129
87) 1,3-Dinitrobenzene	(3)	10.430	168	1495	0.078
88) 2,6-Dinitrotoluene	(3)	10.494	165	2253	0.092
90) Acenaphthylene	(3)	10.558	152	16378	0.122
91) 3-Nitroaniline	(3)	10.738	138	2678	0.095
92)*Acenaphthene-d10	(3)	10.791	164	386904	5.000
93) Acenaphthene	(3)	10.838	153	11840	0.127
94) 2,4-Dinitrophenol	(3)	10.907	184	2929	0.258
96) 4-Nitrophenol	(3)	11.018	109	6470	0.361
95) Pentachlorobenzene	(3)	11.036	250	4685	0.130

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
97) Dibenzofuran	(3)	11.094	168	16311	0.124
98) 2,4-Dinitrotoluene	(3)	11.100	165	2709	0.089
99) 1-Naphthylamine	(3)	11.199	143	11145	0.116
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2308	0.091
101) 2-Naphthylamine	(3)	11.310	143	12227	0.123
102) Diethylphthalate	(3)	11.467	149	12664	0.126
103) Fluorene	(3)	11.549	166	13013	0.123
104) Thionazin	(3)	11.560	107	3060	0.139
106) 5-Nitro-o-toluidine	(3)	11.572	152	3031	0.102
107) 4-Nitroaniline	(3)	11.572	138	2893	0.107
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6859	0.134
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	3453	0.207
109) N-Nitrosodiphenylamine	(4)	11.723	169	11124	0.129
110) NDPA as diphenylamine	(4)	11.723	169	11124	0.129
111) 1,2-Diphenylhydrazine	(4)	11.764	77	16987	0.122
112)$2,4,6-Tribromophenol	(3)	11.840	330	2419	0.222
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	2806	0.138
117) Diallate (peak 1)	(4)	12.085	86	6127	0.087
118) Phorate	(4)	12.091	75	10537	0.125
119) Phenacetin	(4)	12.102	108	6376	0.102
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3210	0.120
121) Diallate (peak 2)	(4)	12.190	86	769	0.026
122) Hexachlorobenzene	(4)	12.207	284	3315	0.126
123) Dimethoate	(4)	12.277	87	6002	0.105
124) Atrazine	(4)	12.388	200	2898	0.105
125) Pentachlorophenol	(4)	12.458	266	1375	0.070
126) Pentachloronitrobenzene	(4)	12.470	237	1266	0.098
127) 4-Aminobiphenyl	(4)	12.475	169	12135	0.109
129) Pronamide	(4)	12.574	173	5209	0.107
130)*Phenanthrene-d10	(4)	12.685	188	662675	5.000
131) Phenanthrene	(4)	12.714	178	19587	0.129
134) Anthracene	(4)	12.778	178	18511	0.122
135) Carbazole	(4)	12.994	167	18175	0.120
136) Methyl parathion	(4)	13.204	109	3103	0.075
137) Di-n-butylphthalate	(4)	13.513	149	21722	0.116
138) Parathion	(4)	13.740	109	2270	0.086
140) Isodrin	(4)	14.125	193	2777	0.148
142) Fluoranthene	(4)	14.335	202	20363	0.120
144) Benzidine	(5)	14.562	184	88772	0.761
145)*Pyrene-d10	(5)	14.644	212	830589	5.000

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Pyrene	(5)	14.673	202	24159	0.131
149)$Terphenyl-d14	(5)	14.958	244	28150	0.264
150) p-Dimethylaminoazobenzene	(5)	15.192	225	2695	0.074
151) Chlorobenzilate	(5)	15.291	139	6067	0.111
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	8981	0.075
153) Butylbenzylphthalate	(5)	15.815	149	7839	0.095
156) 2-Acetylaminofluorene	(5)	16.153	181	3961	0.055
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	5296	0.092
158) Benzo(a)anthracene	(5)	16.660	228	17959	0.118
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	2581	0.083
161) Chrysene	(5)	16.719	228	18348	0.123
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	13020	0.115
165) 6-Methylchrysene	(5)	17.517	242	14196	0.128
166) Di-n-octylphthalate	(6)	18.042	149	13839	0.074
168) Benzo(b)fluoranthene	(6)	18.502	252	16394	0.120
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	5521	0.095
170) Benzo(k)fluoranthene	(6)	18.543	252	17604	0.124
171) Benzo(a)pyrene	(6)	19.021	252	15464	0.121
172)*Perylene-d12	(6)	19.114	264	590527	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	7441	0.115
174) Dibenz(a,h)acridine	(6)	20.402	279	8282	0.091
175) Dibenz(a,j)acridine	(6)	20.472	279	9481	0.102
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	11904	0.109
177) Dibenz(a,h)anthracene	(6)	20.752	278	10127	0.110
178) Benzo(g,h,i)perylene	(6)	21.073	276	10674	0.116
179) Diallate TRANS/CIS	(4)			6896	0.115
182) 2,4_2,6-Dinitrotoluenes	(3)			4962	0.181

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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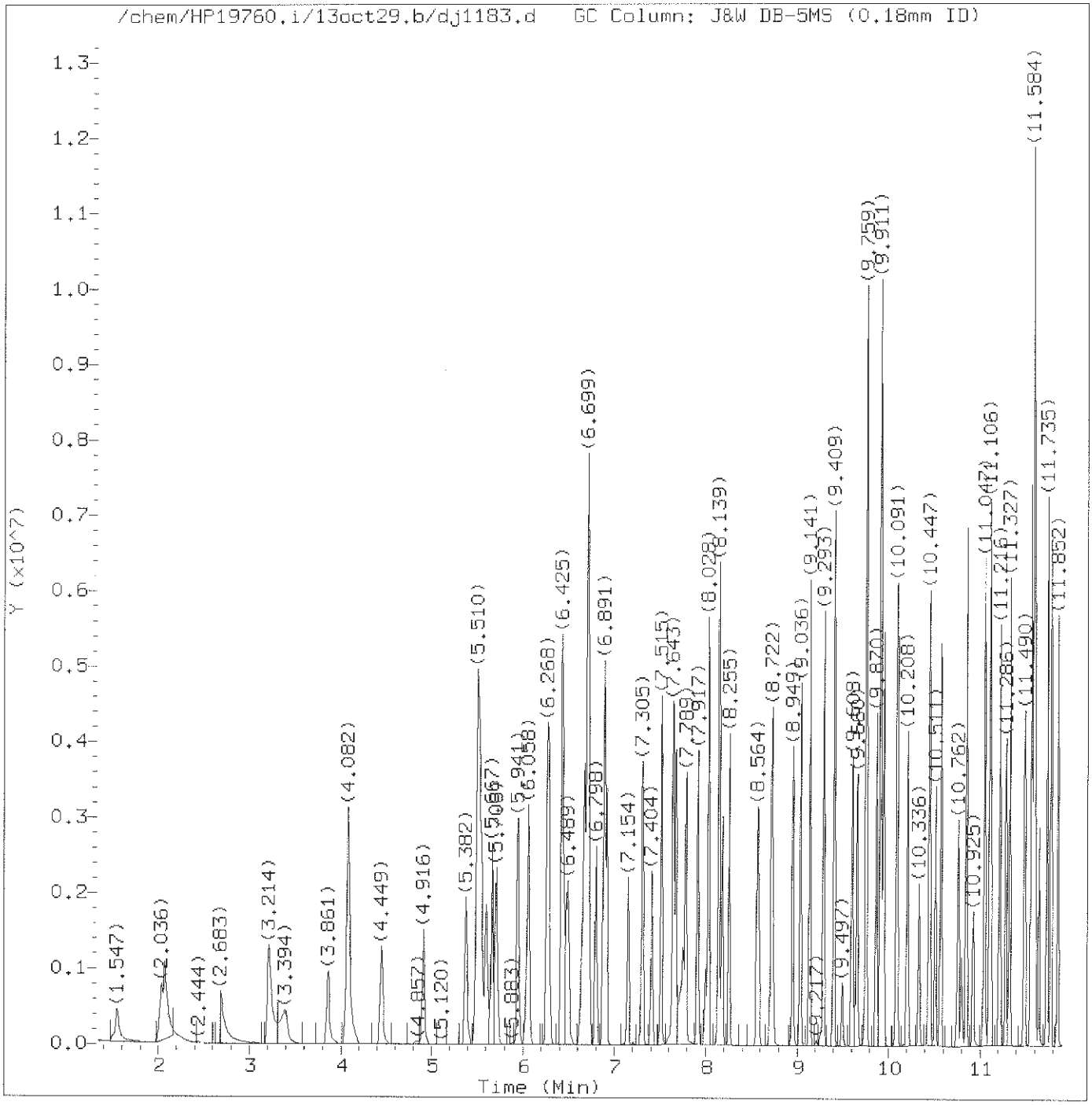
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

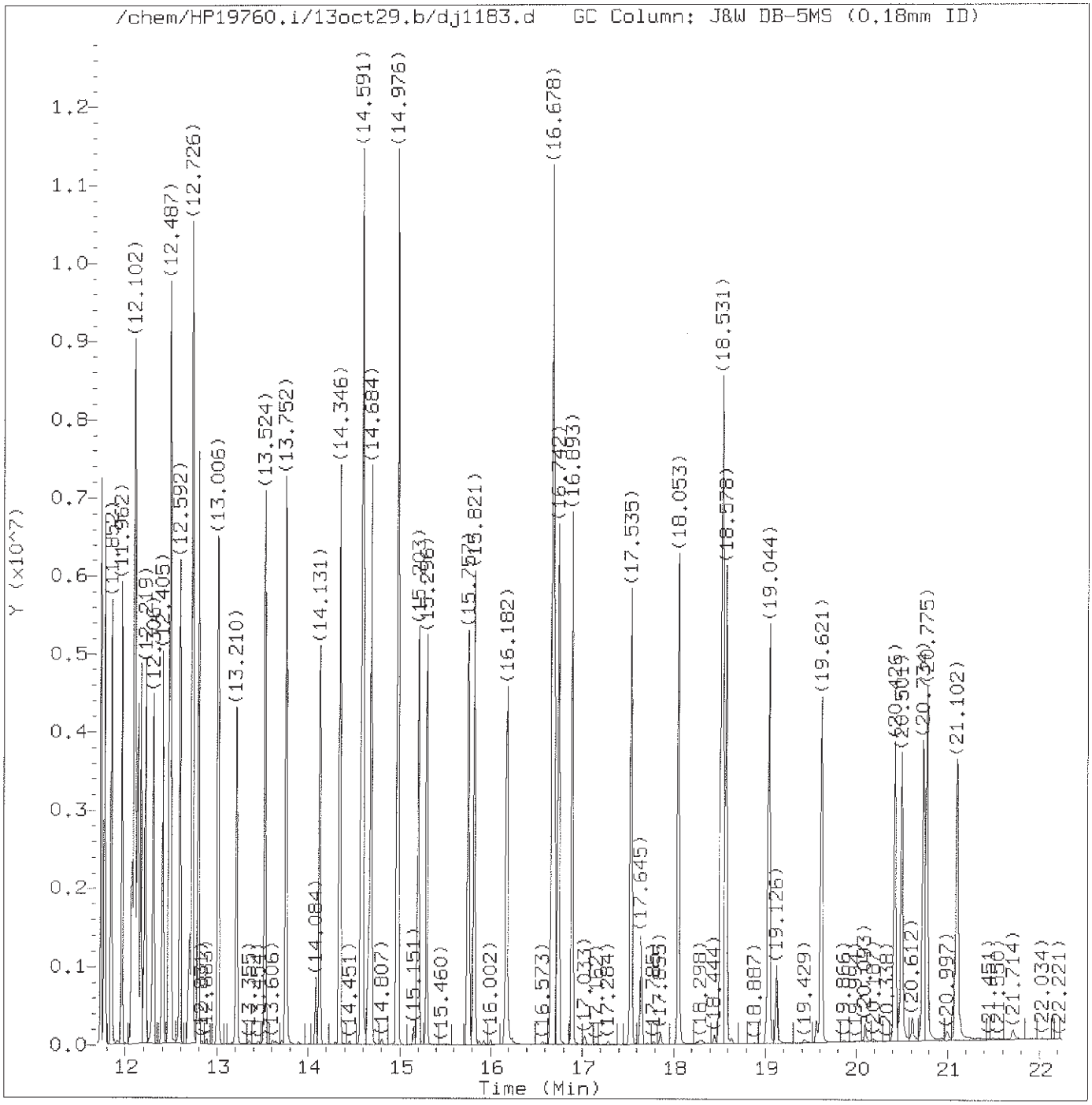
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	533811M	31.085
2) N-Nitrosodimethylamine	(1)	2.030	74	962330	29.915
3) Pyridine	(1)	2.071	79	1618210	30.569
4) 2-Picoline	(1)	3.214	93	1649187	29.927
5) N-Nitrosomethylethylamine	(1)	3.394	88	732071	29.641
6) Methyl methanesulfonate	(1)	3.861	80	814086	29.472
7)$2-Fluorophenol	(1)	4.082	112	2413564	58.275
8) N-Nitrosodiethylamine	(1)	4.449	102	690447	29.556
10) Ethyl methanesulfonate	(1)	4.916	109	648760	29.501
11) Benzaldehyde	(1)	5.382	77	936320	25.592
12)$Phenol-d5	(1)	5.510	99	3225817	57.419
13)$Phenol-d6	(1)	5.510	99	3225817	57.419
14) Phenol	(1)	5.528	94	1839299	28.692
15) Aniline	(1)	5.545	93	2320471	28.951
16) bis(2-Chloroethyl)ether	(1)	5.667	93	1475312	29.040
17) 2-Chlorophenol	(1)	5.714	128	1188155	29.051
18) 1,3-Dichlorobenzene	(1)	5.941	146	1241476	29.210
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	136880	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	1240683	29.139
23) Benzyl alcohol	(1)	6.262	108	859919	29.926
24) 1,2-Dichlorobenzene	(1)	6.279	146	1143792	28.859
25) Indene	(1)	6.419	115	2285068	34.155
26) 2-Methylphenol	(1)	6.437	108	1169803	28.913
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1784369	28.656
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1784369	28.656
29) N-Nitrosopyrrolidine	(1)	6.641	100	704808	29.208
30) Acetophenone	(1)	6.670	105	1840492	29.944
33) 4-Methylphenol	(1)	6.699	108	1237807	27.916
31) N-Nitroso-di-n-propylamine	(1)	6.705	70	983097	27.647
32) N-Nitrosomorpholine	(1)	6.711	56	764484	27.801
34) o-Toluidine	(1)	6.722	106	1930813	28.327
35) Hexachloroethane	(1)	6.798	117	530896	29.030
36)$Nitrobenzene-d5	(2)	6.891	82	2871559	57.502
37) Nitrobenzene	(2)	6.921	77	1522252	28.871
39) N-Nitrosopiperidine	(2)	7.154	114	641771	29.090
40) Isophorone	(2)	7.305	82	2655803	28.949
42) 2-Nitrophenol	(2)	7.410	139	586205	29.015
45) 2,4-Dimethylphenol	(2)	7.515	107	1286581	28.946
46) O,O,O-triethylphosphorothioate	(2)	7.649	198	568840	29.479
48) bis(2-Chloroethoxy)methane	(2)	7.678	93	1689288M	29.105

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.737	105	1076787	31.759
49) 2,4-Dichlorophenol	(2)	7.789	162	921015	29.176
51) 1,2,4-Trichlorobenzene	(2)	7.917	180	976302	29.168
52)*Naphthalene-d8	(2)	7.993	136	543087	5.000
53) Naphthalene	(2)	8.028	128	3205184	28.894
55) 4-Chloroaniline	(2)	8.139	127	1344813	28.409
56) 2,6-Dichlorophenol	(2)	8.145	162	860749	28.798
57) Hexachloropropene	(2)	8.180	213	695357	30.198
58) Hexachlorobutadiene	(2)	8.255	225	583889	29.701
60) Quinoline	(2)	8.564	129	2197862	29.010
62) N-Nitrosodi-n-butylamine	(2)	8.722	84	1227168	32.460
61) Caprolactam	(2)	8.733	113	420909	29.398
63) 4-Chloro-3-methylphenol	(2)	8.949	107	1126249	28.958
64) Safrole	(2)	9.036	162	859283	29.123
65) 2-Methylnaphthalene	(2)	9.141	142	2132185	28.274
66) 1-Methylnaphthalene	(2)	9.293	142	1948789	28.310
67) Hexachlorocyclopentadiene	(3)	9.404	237	551060	30.214
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.409	216	1025079	29.290
69) cis-Isosafrole	(3)	9.497	162	164912	29.571
70) 2,4,6-Trichlorophenol	(3)	9.608	196	701260	29.191
71) 2,4,5-Trichlorophenol	(3)	9.660	196	712383	28.825
72)$2-Fluorobiphenyl	(3)	9.759	172	4163177	56.376
74) Isosafrole	(3)	9.870	162	872242	28.758
73) trans-Isosafrole	(3)	9.870	162	872242	28.758
75) 1,1'-Biphenyl	(3)	9.911	154	2438245	28.697
76) 2-Chloronaphthalene	(3)	9.917	162	1792144	27.373
77) 1-Chloronaphthalene	(3)	9.946	162	1935636	29.072
82) Diphenyl ether	(3)	10.086	170	1385610	28.439
83) 2-Nitroaniline	(3)	10.097	138	664121	28.161
84) 1,4-Naphthoquinone	(3)	10.208	158	893735	28.669
85) 1,4-Dinitrobenzene	(3)	10.336	168	366530	29.038
86) Dimethylphthalate	(3)	10.447	163	2156829	28.145
87) 1,3-Dinitrobenzene	(3)	10.453	168	415458	28.575
88) 2,6-Dinitrotoluene	(3)	10.511	165	526071	28.342
90) Acenaphthylene	(3)	10.569	152	2971115	28.382
91) 3-Nitroaniline	(3)	10.762	138	629662	28.913
92)*Acenaphthene-d10	(3)	10.797	164	309287	5.000
93) Acenaphthene	(3)	10.849	153	1954037	27.302
94) 2,4-Dinitrophenol	(3)	10.925	184	319330	32.390
96) 4-Nitrophenol	(3)	11.047	109	403476	29.063

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.047	250	814606	29.103
97) Dibenzofuran	(3)	11.106	168	2777166	28.125
98) 2,4-Dinitrotoluene	(3)	11.123	165	702019	29.432
99) 1-Naphthylamine	(3)	11.216	143	2152834	29.001
100) 2,3,4,6-Tetrachlorophenol	(3)	11.286	232	580597	29.353
101) 2-Naphthylamine	(3)	11.327	143	2168398	28.623
102) Diethylphthalate	(3)	11.490	149	2257543	29.056
103) Fluorene	(3)	11.560	166	2225368	27.419
104) Thionazin	(3)	11.584	107	448938	27.575
105) 4-Chlorophenyl-phenylether	(3)	11.589	204	1132180	28.764
106) 5-Nitro-o-toluidine	(3)	11.595	152	657947	28.794
107) 4-Nitroaniline	(3)	11.607	138	618137A	29.311
108) 4,6-Dinitro-2-methylphenol	(4)	11.648	198	443113	31.440
110) NDPA as diphenylamine	(4)	11.735	169	1837235	28.117
109) N-Nitrosodiphenylamine	(4)	11.735	169	1837235	28.117
111) 1,2-Diphenylhydrazine	(4)	11.776	77	2839842	27.487
112)$2,4,6-Tribromophenol	(3)	11.852	330	545042	61.237
115) Tetraethyldithiopyrophosphate	(4)	11.962	97	443512	28.444
116) 1,3,5-Trinitrobenzene	(4)	12.073	213	329707	31.413
117) Diallate (peak 1)	(4)	12.096	86	1078550	20.658
118) Phorate	(4)	12.102	75	1716065	25.356
119) Phenacetin	(4)	12.137	108	1401644	28.828
120) 4-Bromophenyl-phenylether	(4)	12.172	248	609610	29.092
121) Diallate (peak 2)	(4)	12.196	86	171573	7.282
122) Hexachlorobenzene	(4)	12.219	284	597745	28.828
123) Dimethoate	(4)	12.306	87	1223135	28.131
124) Atrazine	(4)	12.405	200	591090	28.159
125) Pentachlorophenol	(4)	12.469	266	490292	30.426
127) 4-Aminobiphenyl	(4)	12.487	169	2373398	28.203
126) Pentachloronitrobenzene	(4)	12.487	237	298768	29.348
129) Pronamide	(4)	12.592	173	1088998	28.795
130)*Phenanthrene-d10	(4)	12.697	188	533001	5.000
131) Phenanthrene	(4)	12.726	178	3186893	27.213
133) Dinoseb	(4)	12.726	211	657031	31.680
134) Anthracene	(4)	12.796	178	3353888	28.293
135) Carbazole	(4)	13.012	167	3247508	28.207
136) Methyl parathion	(4)	13.210	109	911392	28.595
137) Di-n-butylphthalate	(4)	13.524	149	3923710	27.913
138) Parathion	(4)	13.752	109	577302	28.443
139) 4-Nitroquinoline-1-oxide	(4)	13.758	190	414372	33.695

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.131	193	429506	29.164
142) Fluoranthene	(4)	14.346	202	3926948	29.187
144) Benzidine	(5)	14.591	184	7555861	84.169
145)*Pyrene-d10	(5)	14.649	212	680467	5.000
146) Pyrene	(5)	14.684	202	3955299	27.338
149)$Terphenyl-d14	(5)	14.976	244	4971452	58.391
150) p-Dimethylaminoazobenzene	(5)	15.203	225	881982	29.734
151) Chlorobenzilate	(5)	15.296	139	1231178	28.627
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2630050	28.295
153) Butylbenzylphthalate	(5)	15.821	149	1808532	28.242
156) 2-Acetylaminofluorene	(5)	16.182	181	1719429	29.561
159) 3,3'-Dichlorobenzidine	(5)	16.678	252	1398429	29.751
158) Benzo(a)anthracene	(5)	16.678	228	3820231	30.341
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.695	231	736186	29.405
161) Chrysene	(5)	16.742	228	3459397	28.834
162) bis(2-Ethylhexyl)phthalate	(5)	16.893	149	2465418	28.185
165) 6-Methylchrysene	(5)	17.540	242	2639356	29.503
166) Di-n-octylphthalate	(6)	18.053	149	4322950	28.917
168) Benzo(b)fluoranthene	(6)	18.525	252	3518347	30.734
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.537	256	1691748	32.365
170) Benzo(k)fluoranthene	(6)	18.578	252	3417738	29.501
171) Benzo(a)pyrene	(6)	19.044	252	3191333	30.085
172)*Perylene-d12	(6)	19.126	264	487829	5.000
173) 3-Methylcholanthrene	(6)	19.621	268	1637077	30.301
174) Dibenz(a,h)acridine	(6)	20.426	279	2334375	30.582
175) Dibenz(a,j)acridine	(6)	20.501	279	2348896	30.240
176) Indeno(1,2,3-cd)pyrene	(6)	20.734	276	3014289	32.261
177) Dibenz(a,h)anthracene	(6)	20.775	278	2583344	32.532
178) Benzo(g,h,i)perylene	(6)	21.108	276	2403123	30.977
179) Diallate TRANS/CIS	(4)			1250123	27.751
182) 2,4_2,6-Dinitrotoluenes	(3)			1228090	57.774

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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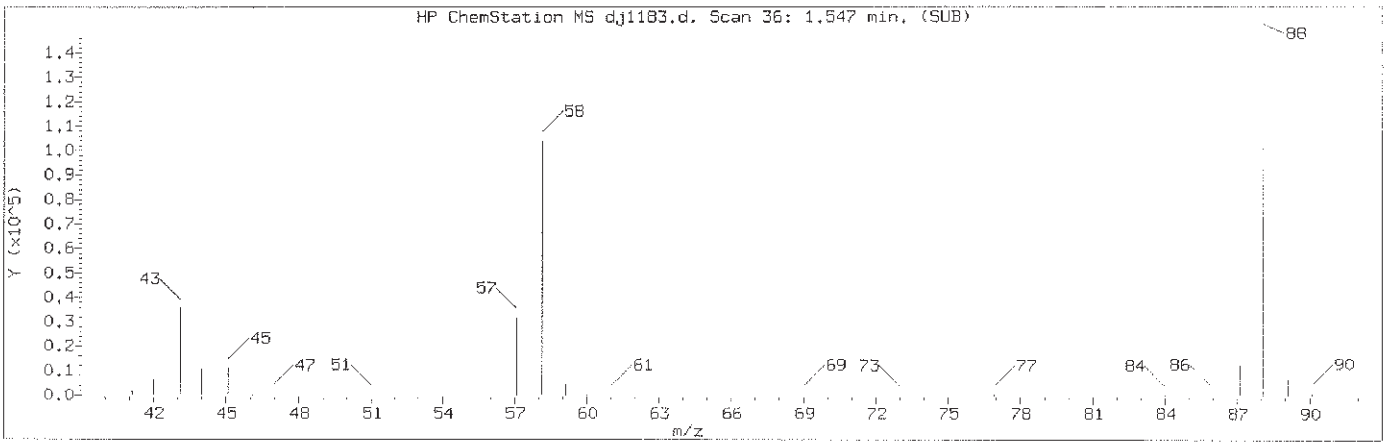
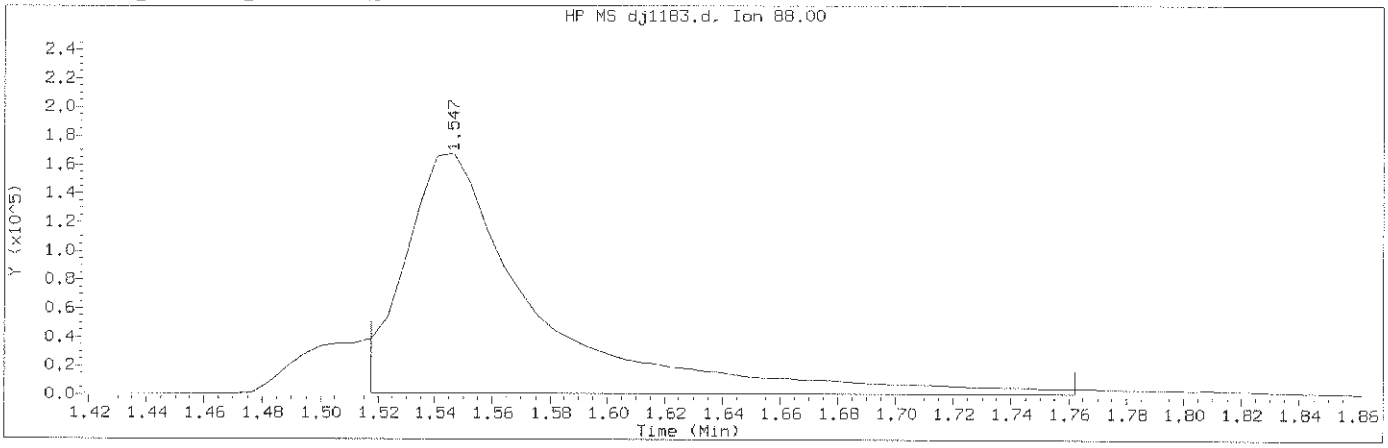
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area (flag)	: 533811M		
On-Column Amount (ng/ul)	: 31.0849		
Integration start scan	: 30	Integration stop scan:	72
Y at integration start	: 1385	Y at integration end:	1385

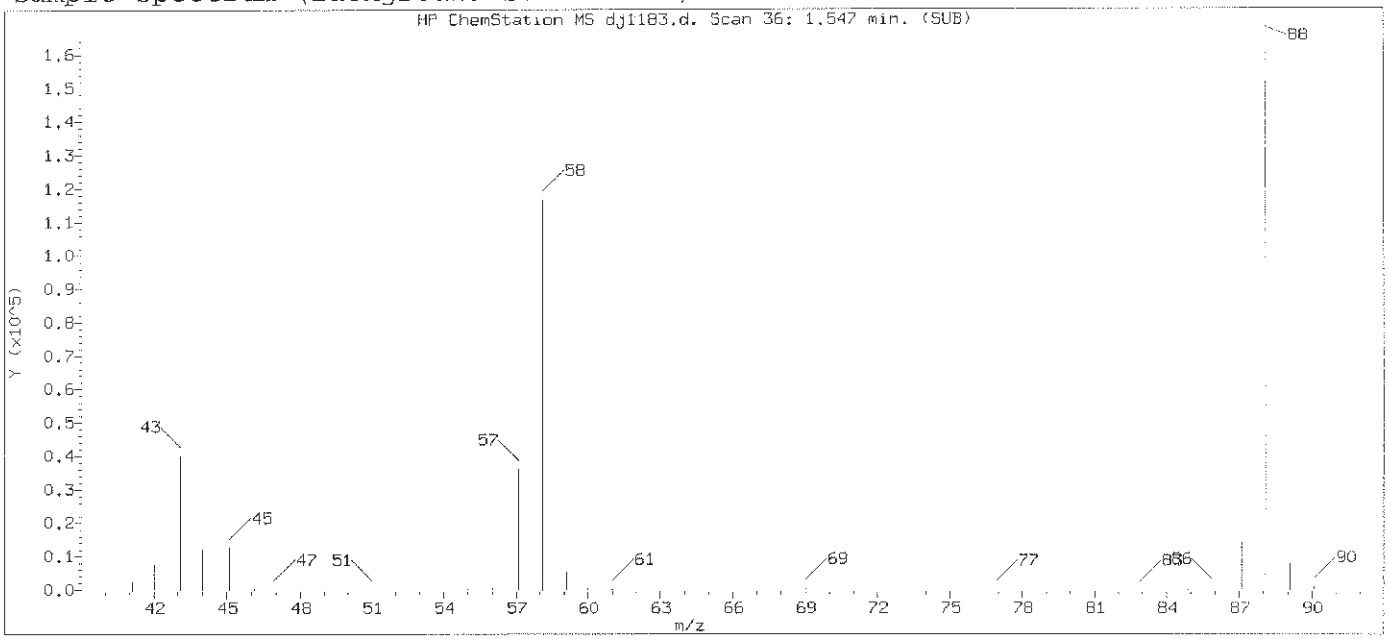
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

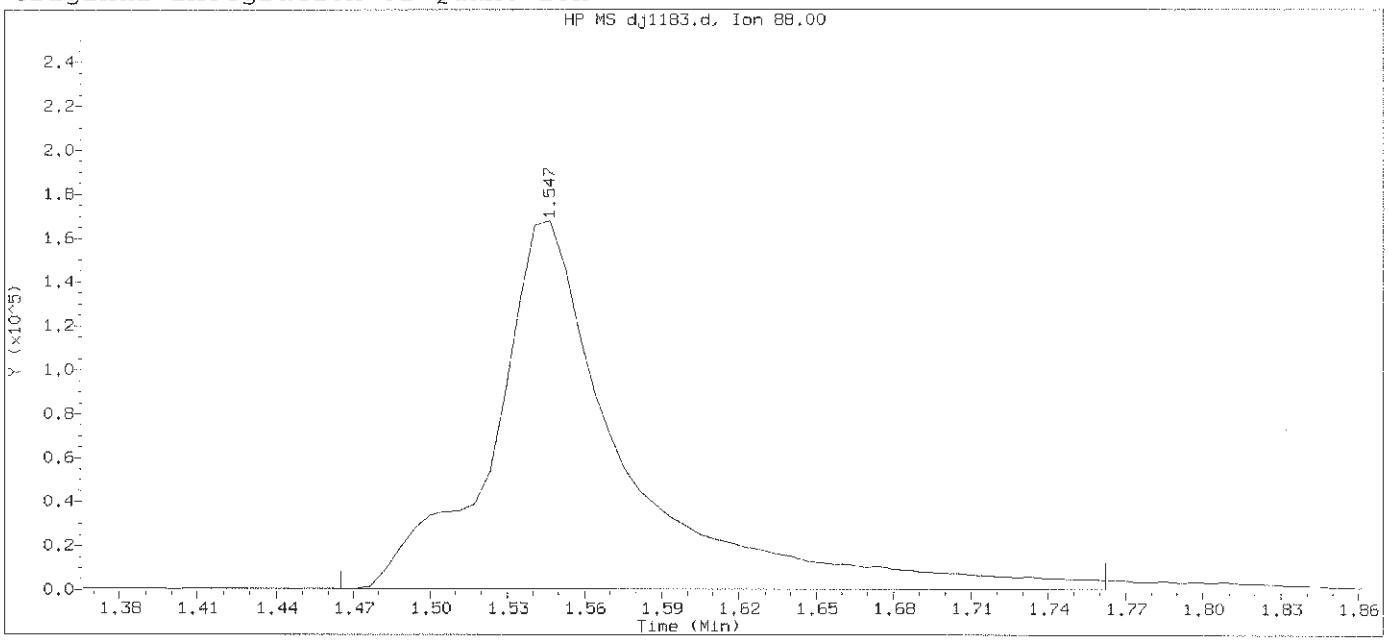
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Chemist Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

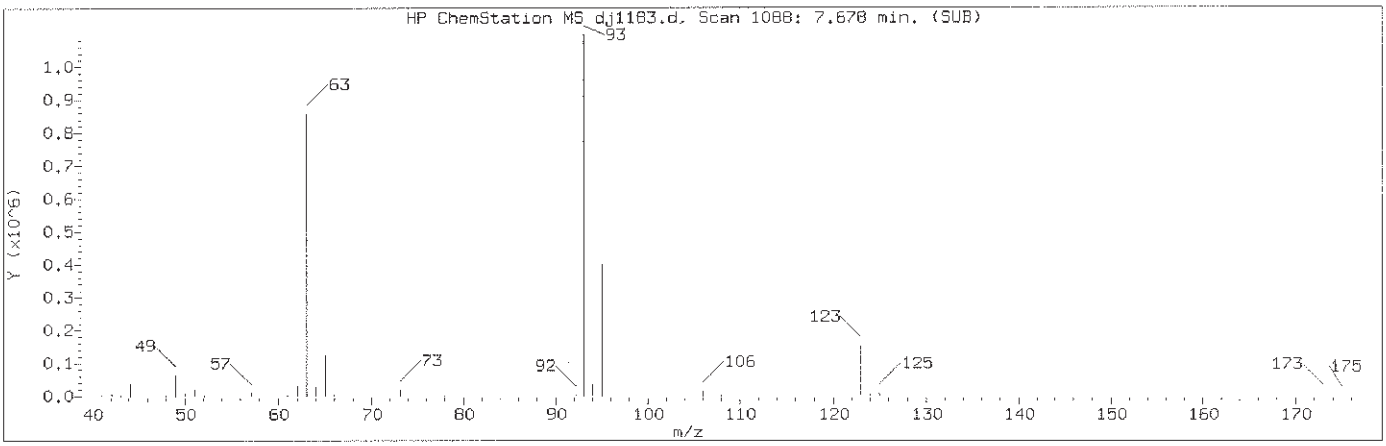
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

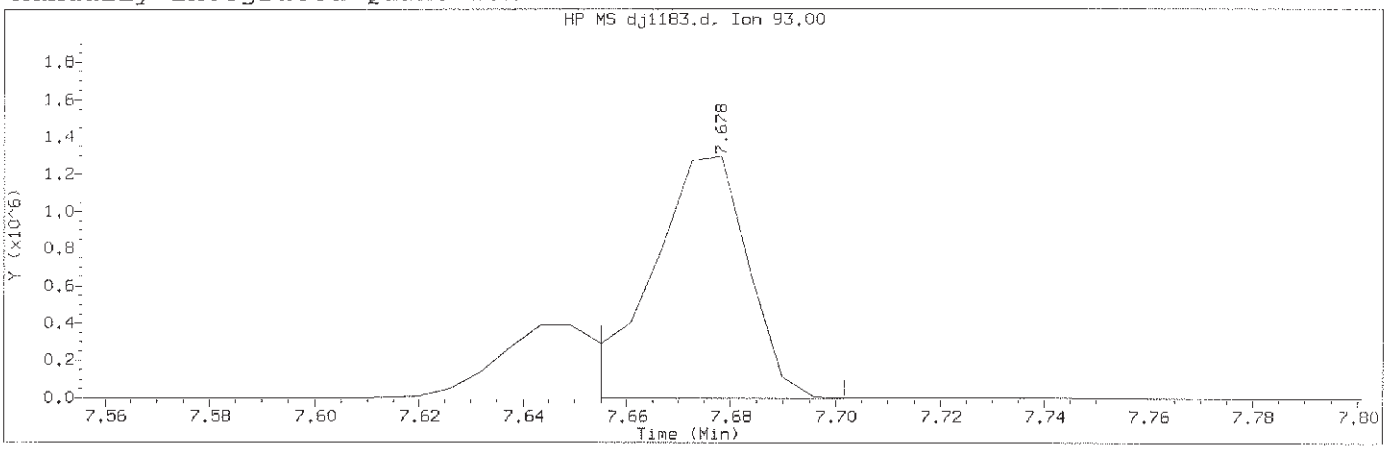
Compound Number	: 1
Compound Name	: 1,4-Dioxane
Scan Number	: 36
Retention Time (minutes)	: 1.547
Quant Ion	: 88.00
Area	: 600995
On-column Amount (ng/ul)	: 35.2969
Integration start scan	: 21 Integration stop scan: 72
Y at integration start	: 576 Y at integration end: 576

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area (flag)	: 1689288M		
On-Column Amount (ng/ul)	: 29.1048		
Integration start scan	: 1083	Integration stop scan:	1091
Y at integration start	: -679	Y at integration end:	-679

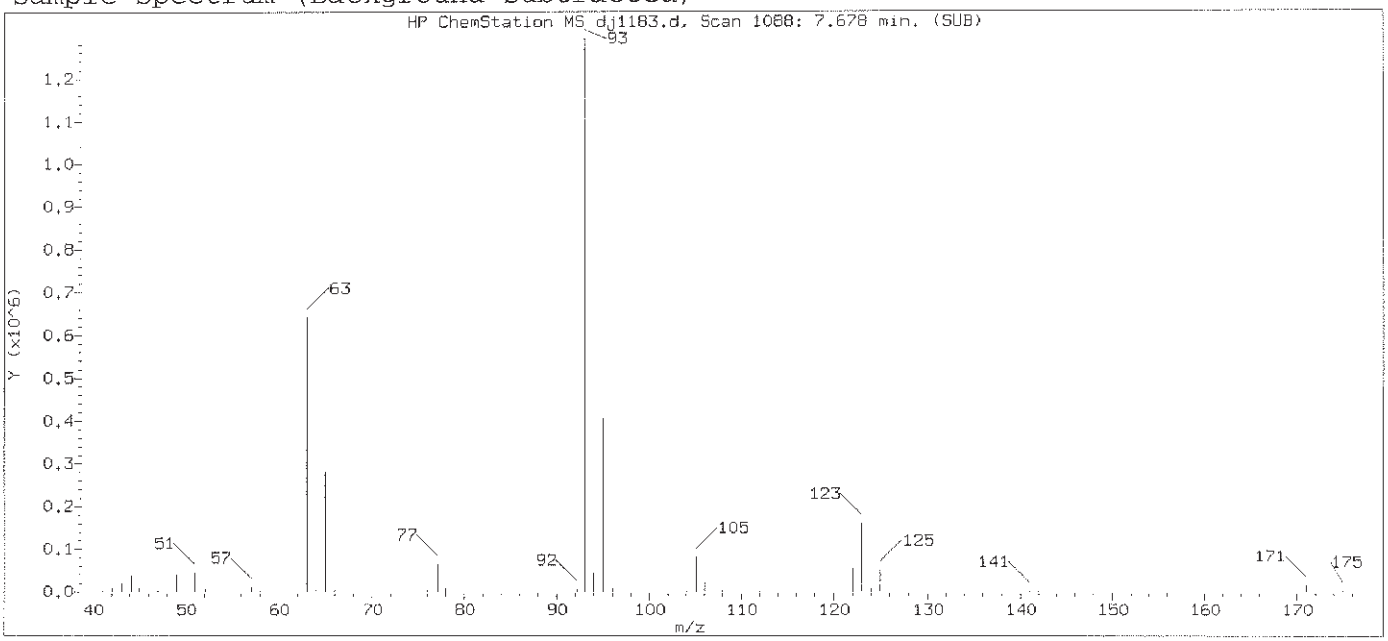
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

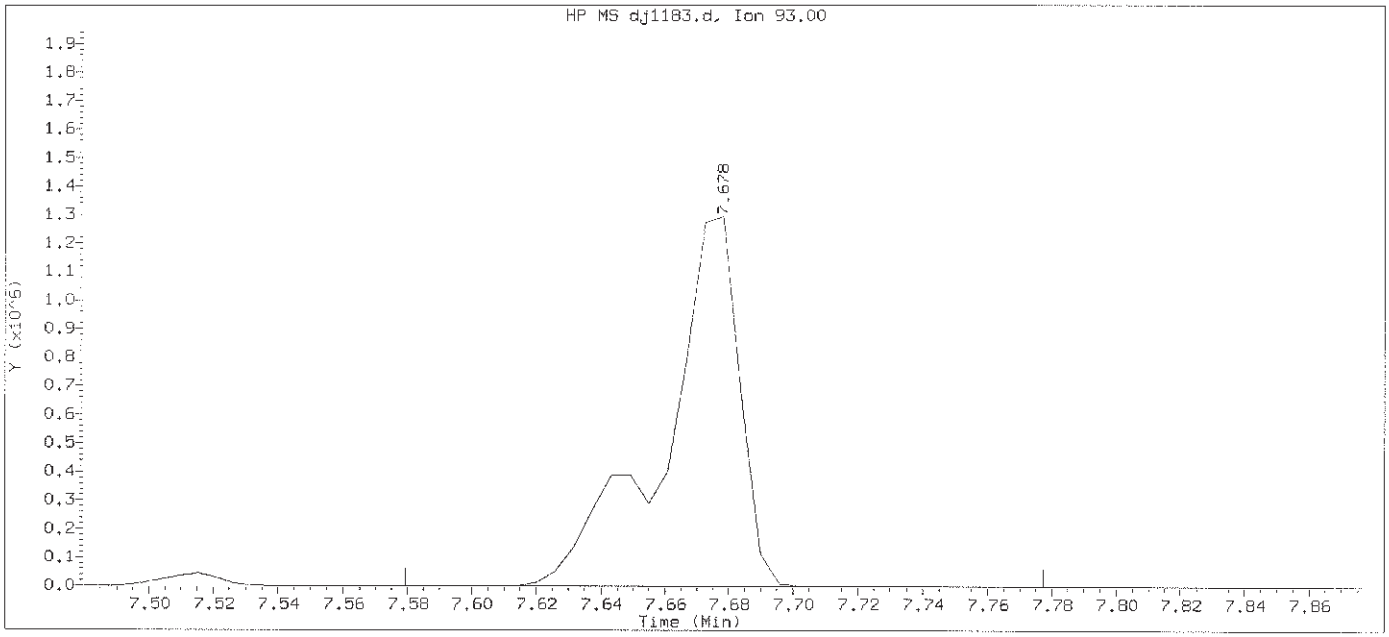
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

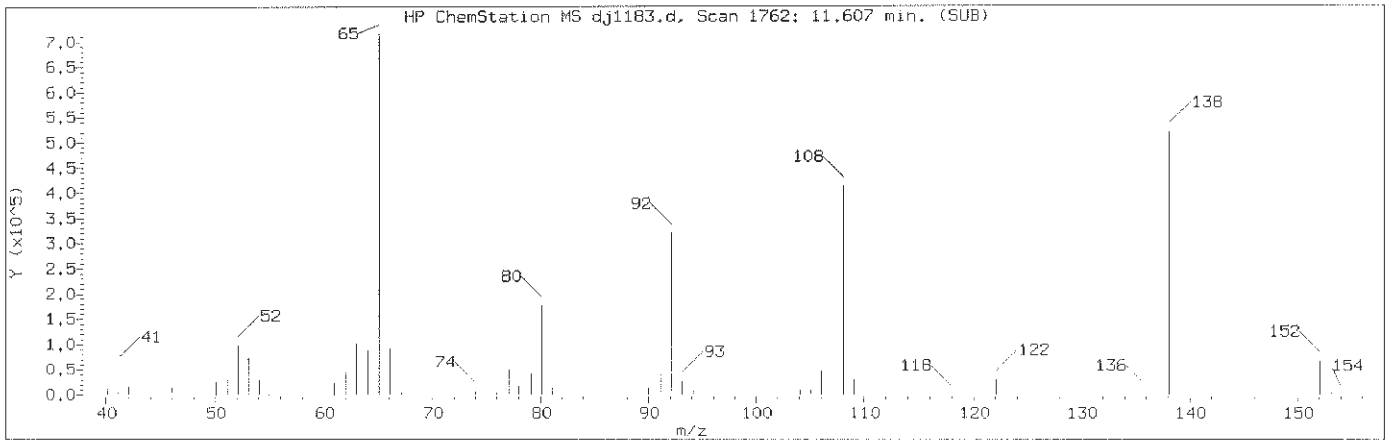
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

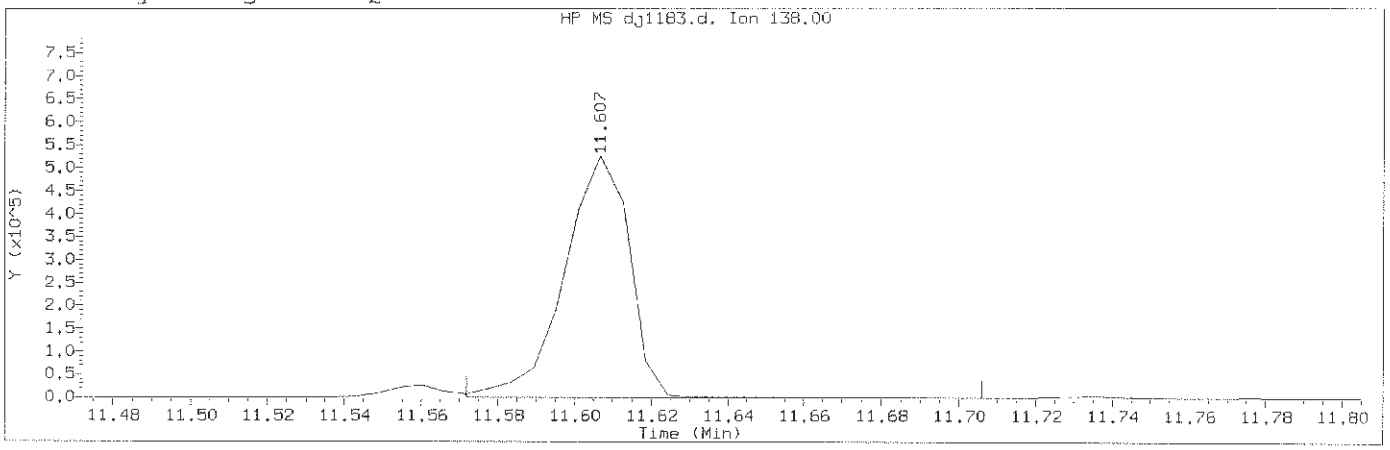
Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area	: 2128683		
On-column Amount (ng/ul)	: 32.5033		
Integration start scan	: 1070	Integration stop scan:	1104
Y at integration start	: 0	Y at integration end:	63

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1762		
Retention Time (minutes)	: 11.607		
Quant Ion	: 138.00		
Area (flag)	: 618137A		
On-Column Amount (ng/ul)	: 29.3114		
Integration start scan	: 1755	Integration stop scan:	1778
Y at integration start	: 0	Y at integration end:	0

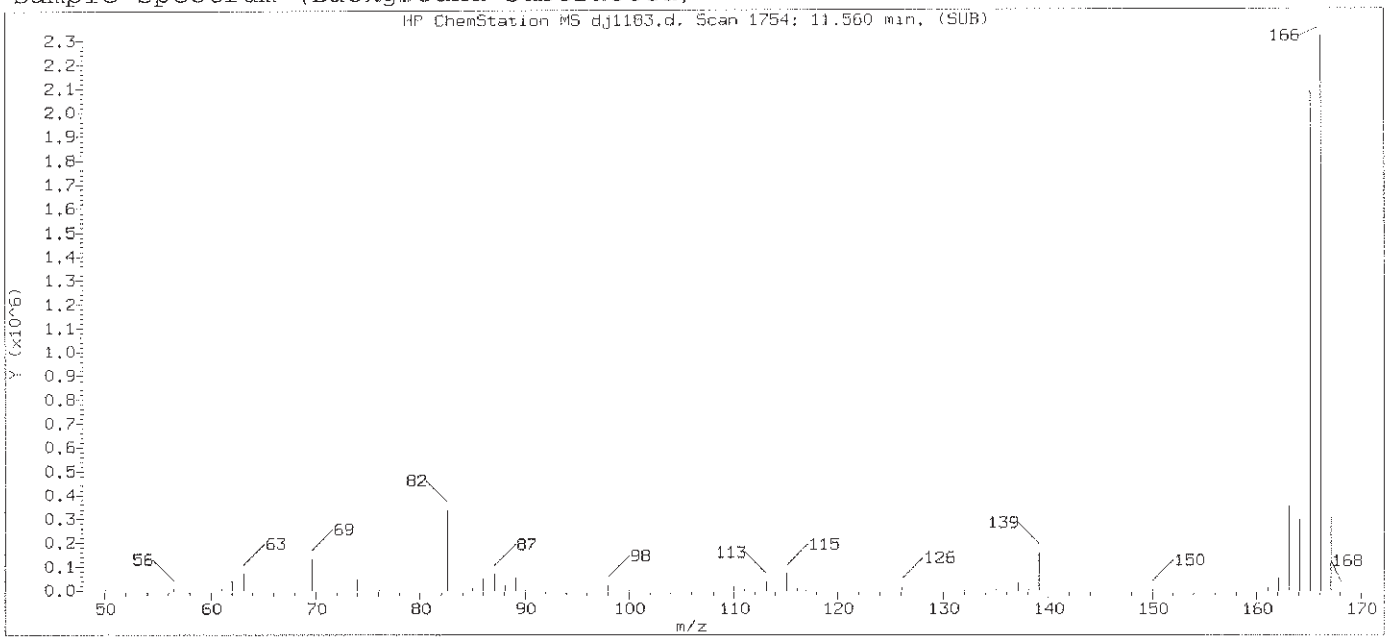
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

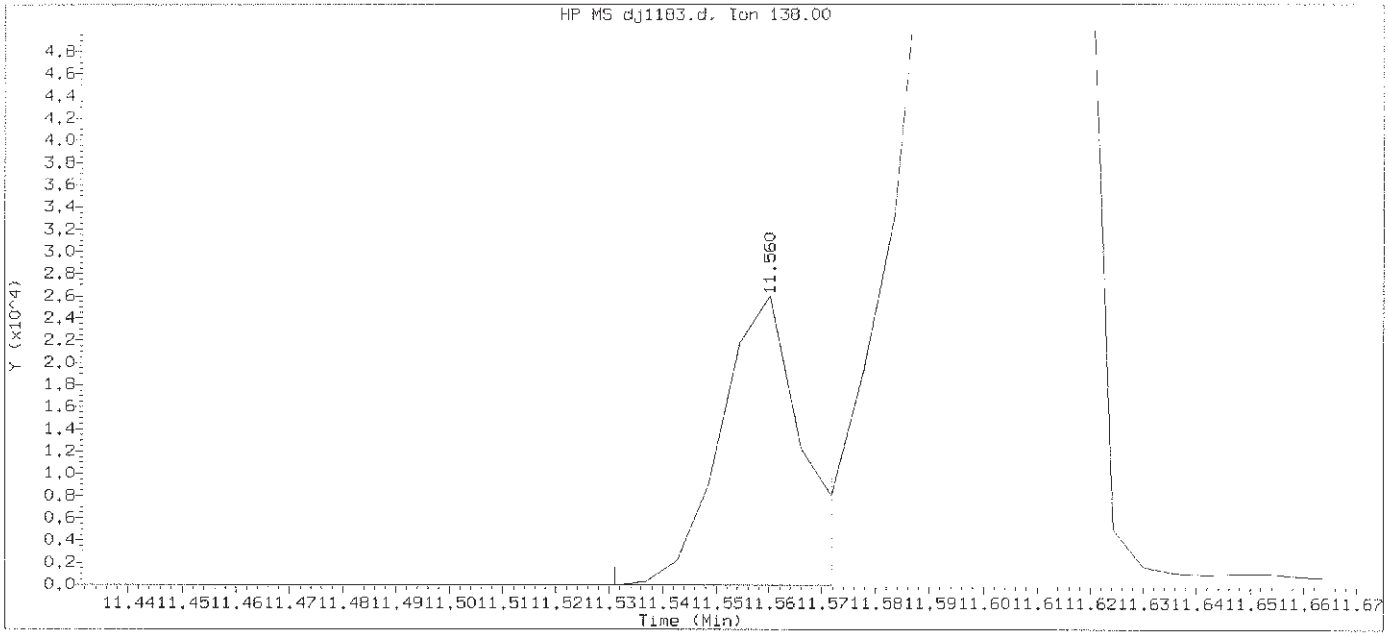
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1754		
Retention Time (minutes)	: 11.560		
Quant Ion	: 138.00		
Area	: 26465		
On-column Amount (ng/ul)	: 1.5063		
Integration start scan	: 1748	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

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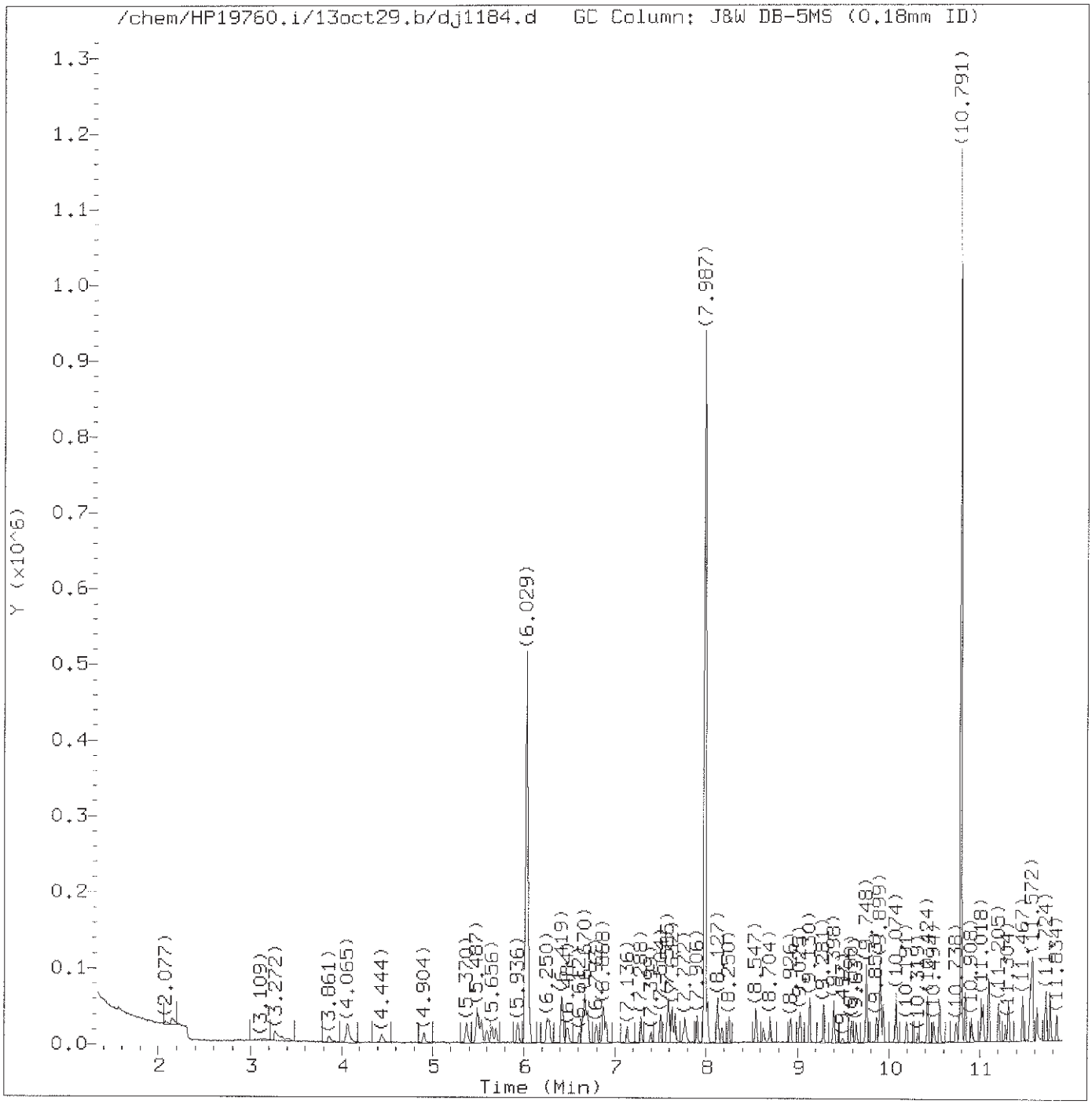
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

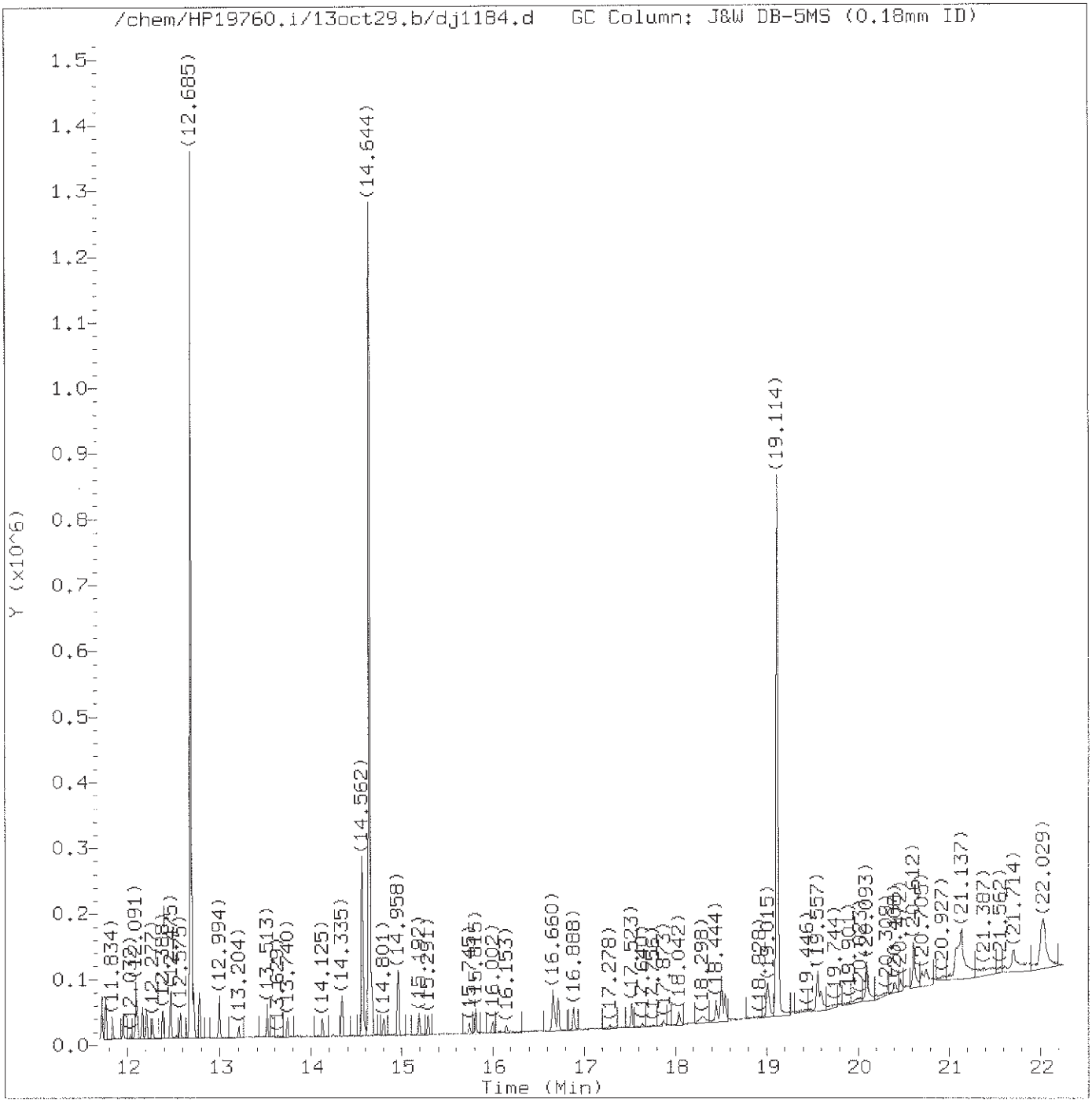
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.564	88	3696M	0.232
2) N-Nitrosodimethylamine	(1)	2.077	74	6220M	0.221
3) Pyridine	(1)	2.147	79	17293M	0.352
4) 2-Picoline	(1)	3.266	93	13682M	0.262
5) N-Nitrosomethylethylamine	(1)	3.418	88	5080	0.231
6) Methyl methanesulfonate	(1)	3.861	80	6376M	0.249
7)$2-Fluorophenol	(1)	4.065	112	19200	0.500
8) N-Nitrosodiethylamine	(1)	4.444	102	5285M	0.246
10) Ethyl methanesulfonate	(1)	4.904	109	5358M	0.258
11) Benzaldehyde	(1)	5.376	77	11103	0.327
12)$Phenol-d5	(1)	5.487	99	26913	0.511
13)$Phenol-d6	(1)	5.487	99	26913	0.511
14) Phenol	(1)	5.504	94	16178	0.264
15) Aniline	(1)	5.539	93	19481	0.258
16) bis(2-Chloroethyl)ether	(1)	5.656	93	12791	0.264
17) 2-Chlorophenol	(1)	5.703	128	9542	0.251
18) 1,3-Dichlorobenzene	(1)	5.936	146	10610	0.263
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	126889	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	11036	0.269
23) Benzyl alcohol	(1)	6.250	108	6796	0.255
24) 1,2-Dichlorobenzene	(1)	6.280	146	10030	0.265
25) Indene	(1)	6.414	115	21122	0.326
26) 2-Methylphenol	(1)	6.425	108	9745	0.256
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	16394	0.272
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	16394	0.272
29) N-Nitrosopyrrolidine	(1)	6.612	100	5168	0.237
30) Acetophenone	(1)	6.653	105	15413	0.263
33) 4-Methylphenol	(1)	6.670	108	11034	0.262
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	9090	0.267
32) N-Nitrosomorpholine	(1)	6.682	56	7524	0.278
34) o-Toluidine	(1)	6.699	106	17422	0.267
35) Hexachloroethane	(1)	6.793	117	4580	0.263
36)$Nitrobenzene-d5	(2)	6.868	82	23926	0.516
37) Nitrobenzene	(2)	6.897	77	12719	0.259
39) N-Nitrosopiperidine	(2)	7.136	114	5015	0.249
40) Isophorone	(2)	7.288	82	21125	0.252
42) 2-Nitrophenol	(2)	7.399	139	3541	0.208
45) 2,4-Dimethylphenol	(2)	7.504	107	10359	0.254
47) Benzoic acid	(2)	7.585	105	30416	0.983
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	4669	0.260

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	14395	0.264
49) 2,4-Dichlorophenol	(2)	7.772	162	7102	0.248
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	8785	0.274
52)*Naphthalene-d8	(2)	7.987	136	495519	5.000
53) Naphthalene	(2)	8.022	128	30041	0.284
55) 4-Chloroaniline	(2)	8.127	127	11979	0.268
56) 2,6-Dichlorophenol	(2)	8.133	162	6778	0.249
57) Hexachloropropene	(2)	8.174	213	4815	0.236
58) Hexachlorobutadiene	(2)	8.250	225	4973	0.268
60) Quinoline	(2)	8.547	129	19114	0.267
61) Caprolactam	(2)	8.629	113	3083	0.236
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	7870	0.228
63) 4-Chloro-3-methylphenol	(2)	8.926	107	8404	0.241
64) Safrole	(2)	9.025	162	6608	0.247
65) 2-Methylnaphthalene	(2)	9.130	142	18878	0.268
66) 1-Methylnaphthalene	(2)	9.281	142	16987	0.265
67) Hexachlorocyclopentadiene	(3)	9.398	237	2826	0.169
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	8849	0.267
69) cis-Isosafrole	(3)	9.497	162	1141	0.232
70) 2,4,6-Trichlorophenol	(3)	9.590	196	4697	0.225
71) 2,4,5-Trichlorophenol	(3)	9.637	196	5103	0.233
72)$2-Fluorobiphenyl	(3)	9.748	172	39741	0.556
74) Isosafrole	(3)	9.853	162	6499	0.239
73) trans-Isosafrole	(3)	9.853	162	6499	0.239
75) 1,1'-Biphenyl	(3)	9.893	154	22904	0.278
76) 2-Chloronaphthalene	(3)	9.899	162	17748	0.279
77) 1-Chloronaphthalene	(3)	9.934	162	16994	0.269
82) Diphenyl ether	(3)	10.080	170	11939	0.262
83) 2-Nitroaniline	(3)	10.080	138	4042	0.204
84) 1,4-Naphthoquinone	(3)	10.191	158	4974	0.174
85) 1,4-Dinitrobenzene	(3)	10.319	168	1574	0.136
86) Dimethylphthalate	(3)	10.424	163	19473	0.278
87) 1,3-Dinitrobenzene	(3)	10.430	168	1962	0.148
88) 2,6-Dinitrotoluene	(3)	10.494	165	3241	0.207
90) Acenaphthylene	(3)	10.558	152	24150	0.252
91) 3-Nitroaniline	(3)	10.738	138	3561	0.198
92)*Acenaphthene-d10	(3)	10.791	164	282862	5.000
93) Acenaphthene	(3)	10.838	153	17930	0.268
94) 2,4-Dinitrophenol	(3)	10.908	184	5476	0.607
96) 4-Nitrophenol	(3)	11.018	109	9085	0.716

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	7421	0.275
97) Dibenzofuran	(3)	11.094	168	25697	0.272
98) 2,4-Dinitrotoluene	(3)	11.100	165	4206	0.209
99) 1-Naphthylamine	(3)	11.205	143	17020	0.250
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	3868	0.225
101) 2-Naphthylamine	(3)	11.310	143	17627	0.253
102) Diethylphthalate	(3)	11.467	149	18398	0.259
103) Fluorene	(3)	11.549	166	19968	0.264
104) Thionazin	(3)	11.566	107	3976	0.261
106) 5-Nitro-o-toluidine	(3)	11.572	152	4559	0.228
107) 4-Nitroaniline	(3)	11.572	138	4144	0.225
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	10239	0.272
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	6064	0.472
109) N-Nitrosodiphenylamine	(4)	11.724	169	15725	0.259
110) NDPA as diphenylamine	(4)	11.724	169	15725	0.259
111) 1,2-Diphenylhydrazine	(4)	11.764	77	25065	0.260
112)$2,4,6-Tribromophenol	(3)	11.840	330	3128	0.416
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	3448	0.245
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	656	0.069
117) Diallate (peak 1)	(4)	12.085	86	9067	0.189
118) Phorate	(4)	12.091	75	13349	0.232
119) Phenacetin	(4)	12.102	108	8021	0.199
120) 4-Bromophenyl-phenylether	(4)	12.161	248	4904	0.254
121) Diallate (peak 2)	(4)	12.190	86	1191	0.058
122) Hexachlorobenzene	(4)	12.207	284	5132	0.266
123) Dimethoate	(4)	12.277	87	7175	0.181
124) Atrazine	(4)	12.388	200	4752	0.249
125) Pentachlorophenol	(4)	12.458	266	1535	0.104
126) Pentachloronitrobenzene	(4)	12.470	237	1737	0.204
127) 4-Aminobiphenyl	(4)	12.475	169	18057	0.240
129) Pronamide	(4)	12.575	173	6404	0.203
130)*Phenanthrene-d10	(4)	12.685	188	486096	5.000
131) Phenanthrene	(4)	12.714	178	30082	0.273
133) Dinoseb	(4)	12.720	211	1071	0.057
134) Anthracene	(4)	12.778	178	26925	0.249
135) Carbazole	(4)	12.994	167	26389	0.251
136) Methyl parathion	(4)	13.204	109	3458	0.119
137) Di-n-butylphthalate	(4)	13.513	149	27530	0.215
138) Parathion	(4)	13.740	109	2408	0.130
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	417	0.037

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

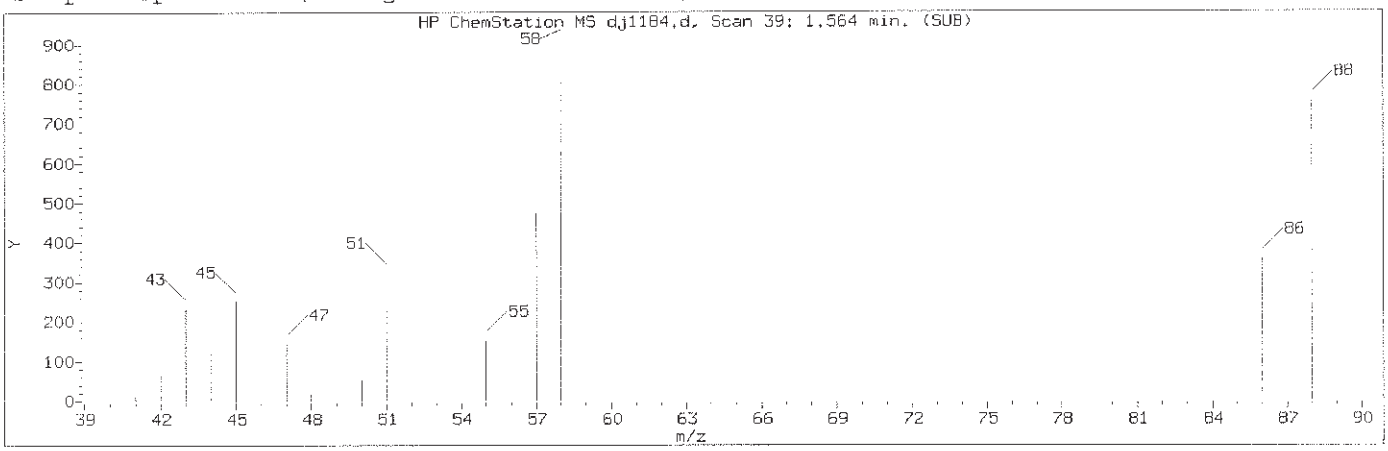
Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	3050	0.234
142) Fluoranthene	(4)	14.335	202	29686	0.244
144) Benzidine	(5)	14.562	184	137965	1.720
145)*Pyrene-d10	(5)	14.644	212	607939	5.000
146) Pyrene	(5)	14.673	202	35149	0.266
149)$Terphenyl-d14	(5)	14.958	244	39291	0.511
150) p-Dimethylaminoazobenzene	(5)	15.192	225	3822	0.168
151) Chlorobenzilate	(5)	15.291	139	7130	0.186
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	10857	0.131
153) Butylbenzylphthalate	(5)	15.815	149	10632	0.186
156) 2-Acetylaminofluorene	(5)	16.153	181	4634	0.089
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	7120M	0.170
158) Benzo(a)anthracene	(5)	16.660	228	23780	0.220
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	3484	0.156
161) Chrysene	(5)	16.719	228	26853	0.250
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	12026	0.154
165) 6-Methylchrysene	(5)	17.517	242	16847	0.222
166) Di-n-octylphthalate	(6)	18.042	149	14018	0.112
168) Benzo(b)fluoranthene	(6)	18.496	252	23703	0.247
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	8832	0.215
170) Benzo(k)fluoranthene	(6)	18.543	252	24057	0.248
171) Benzo(a)pyrene	(6)	19.021	252	22451	0.252
172)*Perylene-d12	(6)	19.114	264	409698	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	8857	0.211
174) Dibenz(a,h)acridine	(6)	20.402	279	9846M	0.154
175) Dibenz(a,j)acridine	(6)	20.472	279	11208M	0.172
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	15702	0.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	12821	0.204
178) Benzo(g,h,i)perylene	(6)	21.073	276	15545	0.241
179) Diallate TRANS/CIS	(4)			10258	0.250
182) 2,4_2,6-Dinitrotoluenes	(3)			7447	0.416

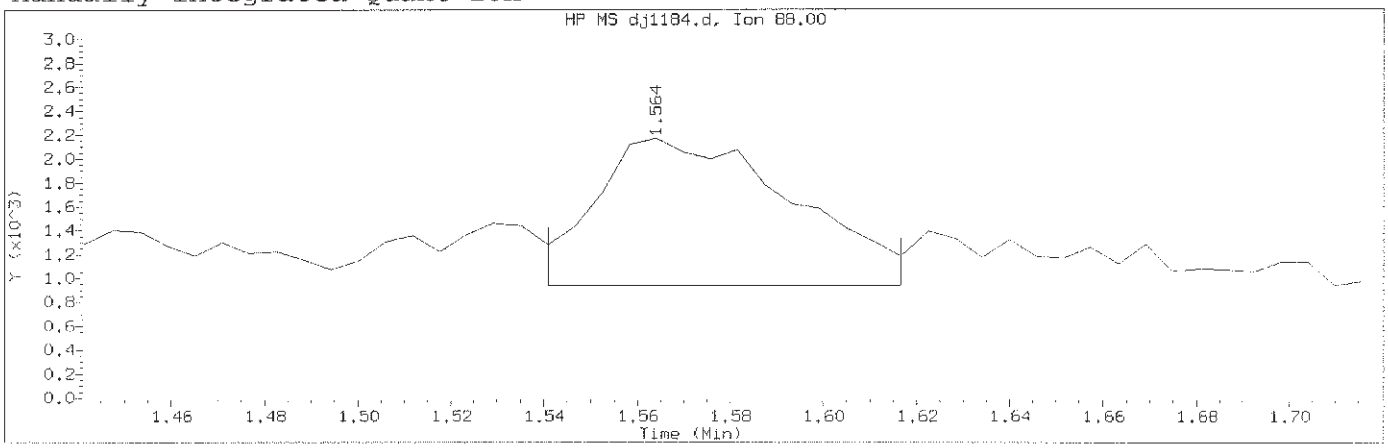
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 39		
Retention Time (minutes)	: 1.564		
Quant Ion	: 88.00		
Area (flag)	: 3696M		
On-Column Amount (ng/ul)	: 0.2322		
Integration start scan	: 34	Integration stop scan:	47
Y at integration start	: 939	Y at integration end:	939

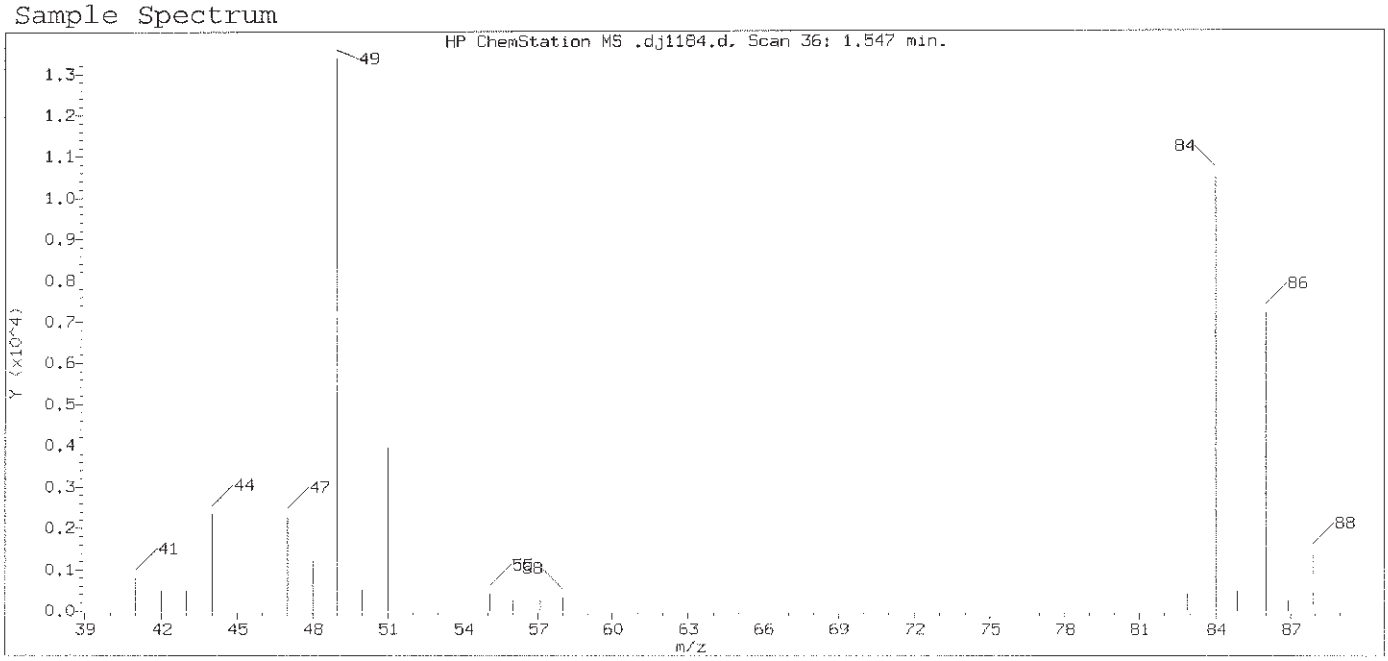
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

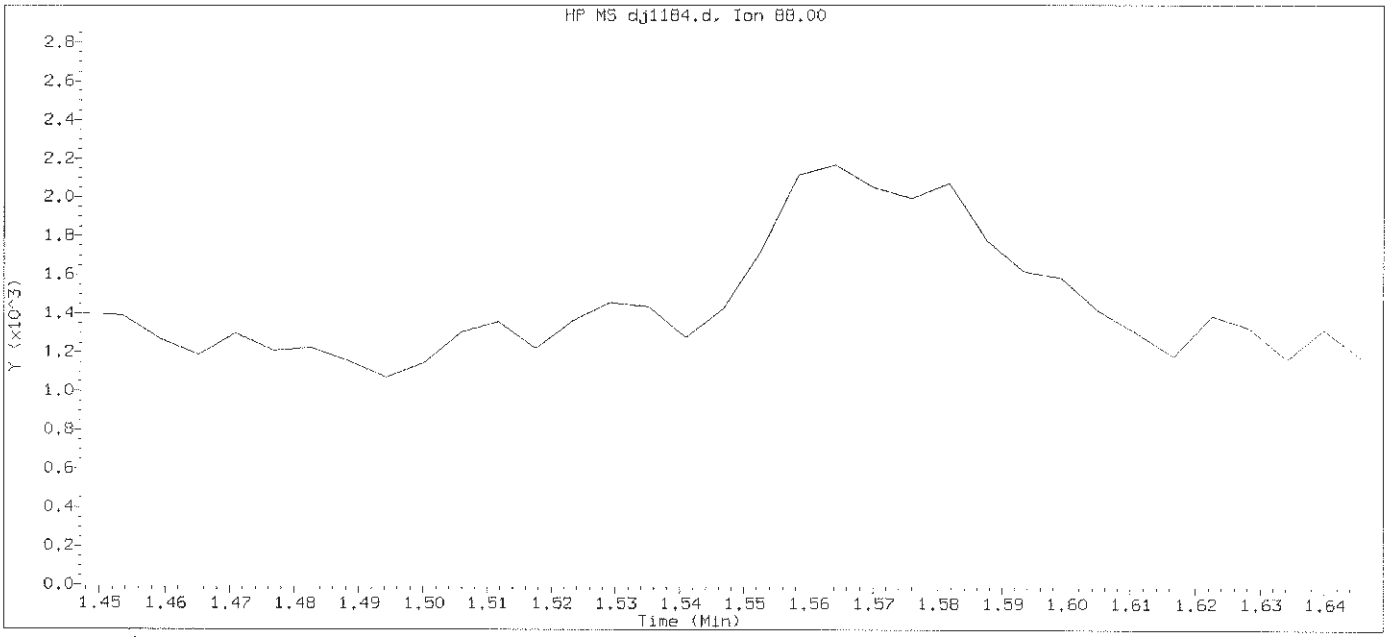
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

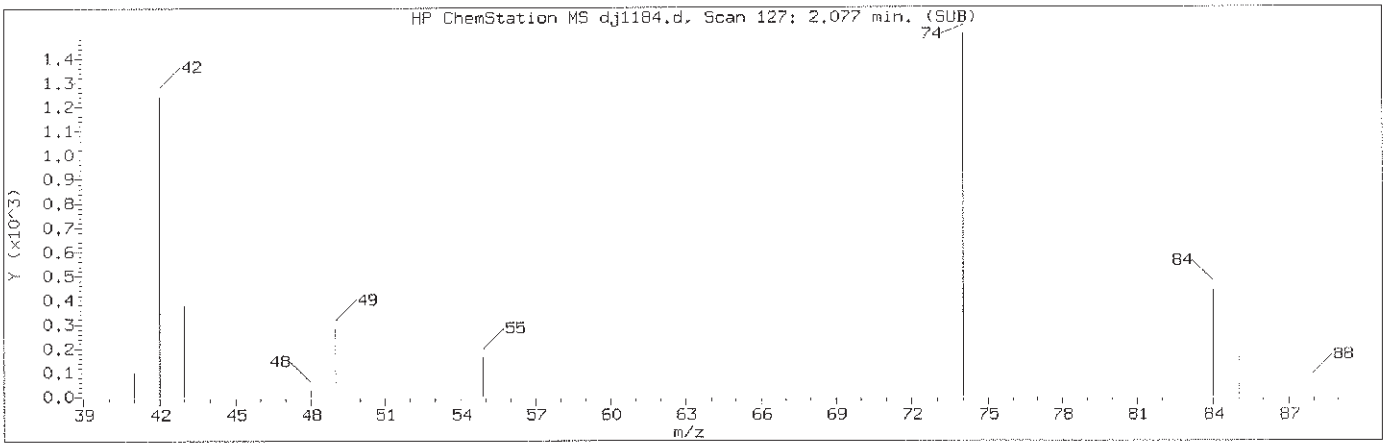
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

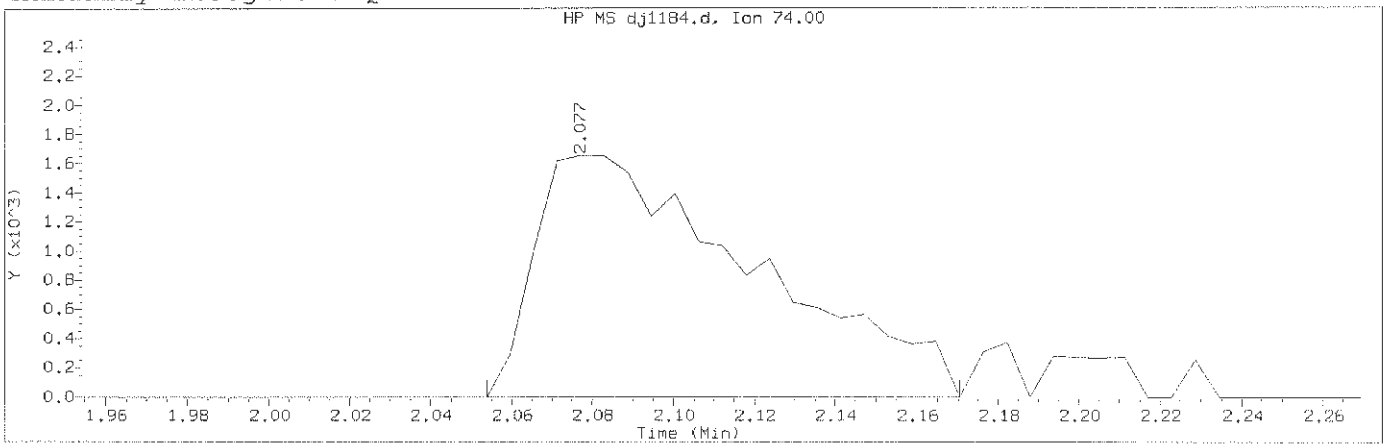
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area (flag)	: 6220M		
On-Column Amount (ng/ul)	: 0.2208		
Integration start scan	: 122	Integration stop scan:	142
Y at integration start	: -1	Y at integration end:	-1

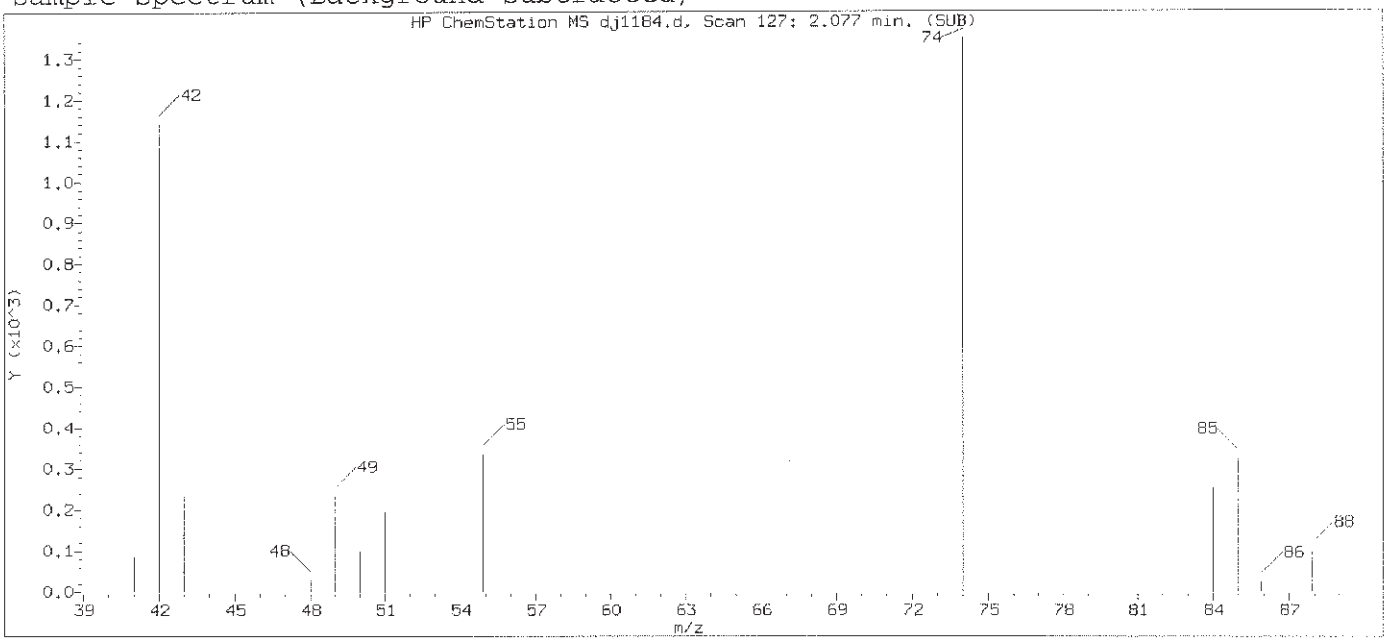
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

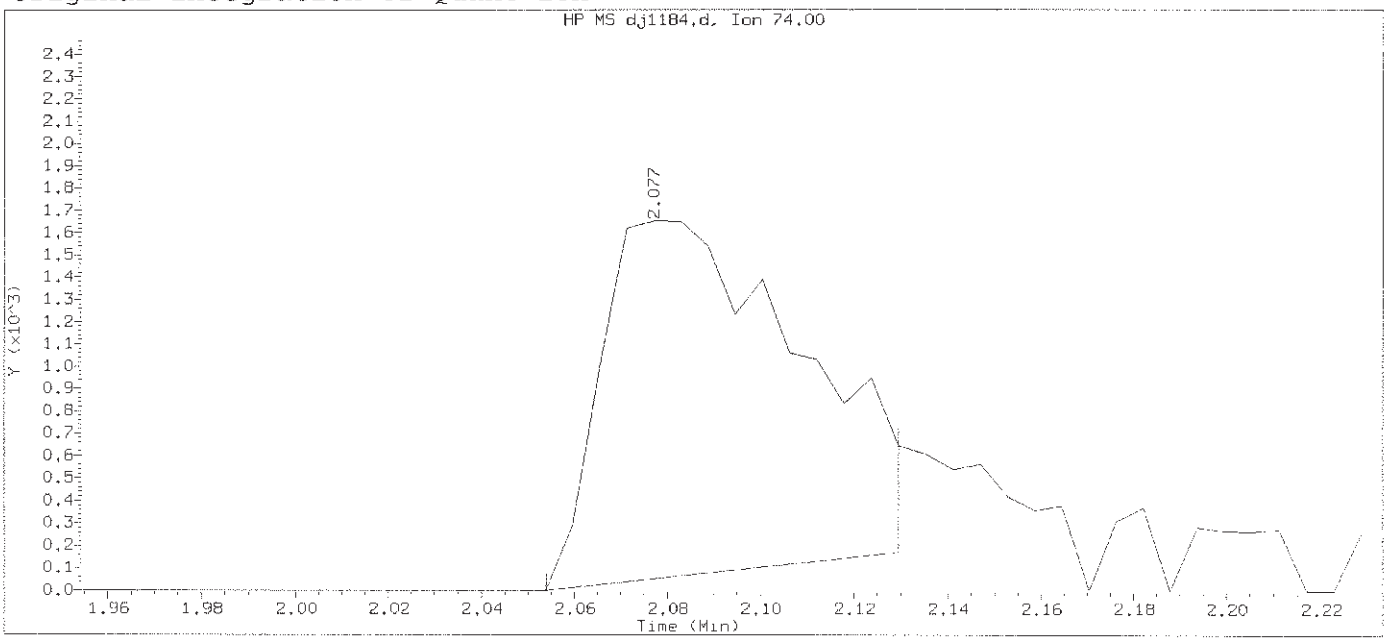
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area	: 4711		
On-column Amount (ng/ul)	: 0.1787		
Integration start scan	: 122	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	170

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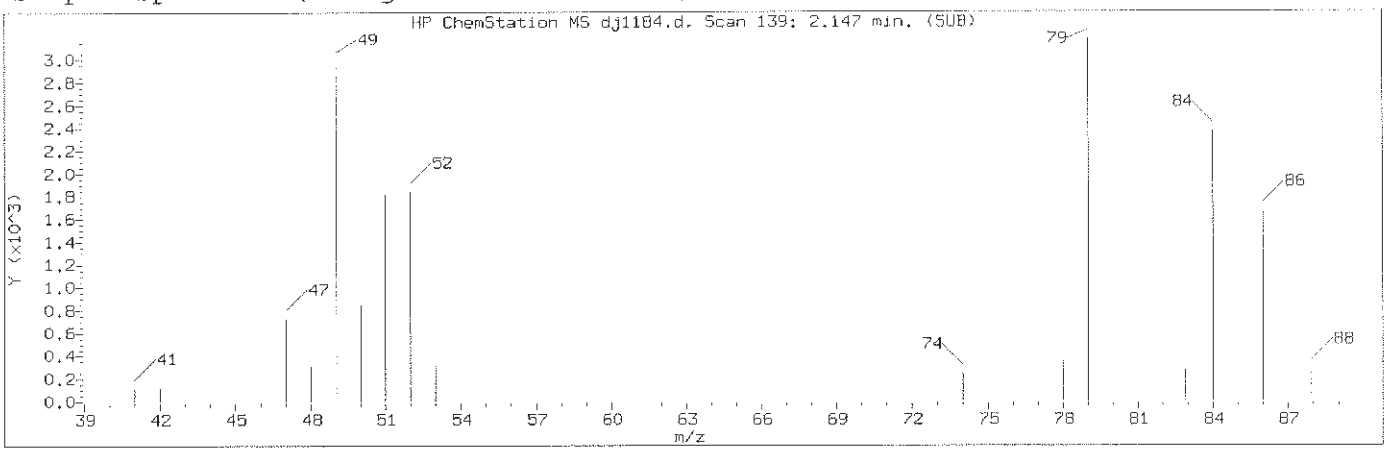
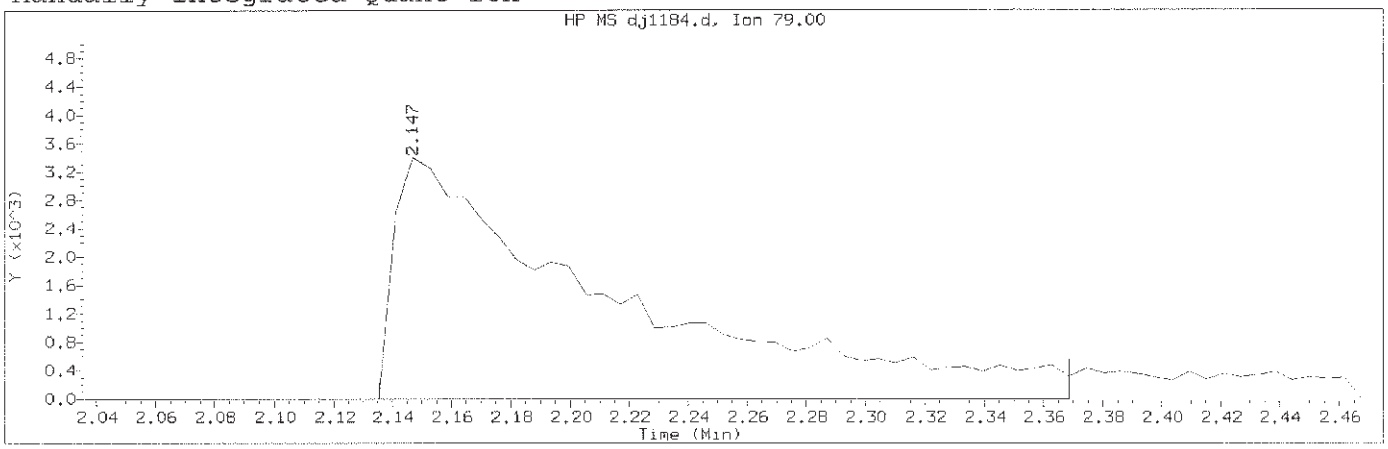
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area (flag)	: 17293M		
On-Column Amount (ng/ul)	: 0.3524		
Integration start scan	: 136	Integration stop scan:	176
Y at integration start	: -3	Y at integration end:	-3

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

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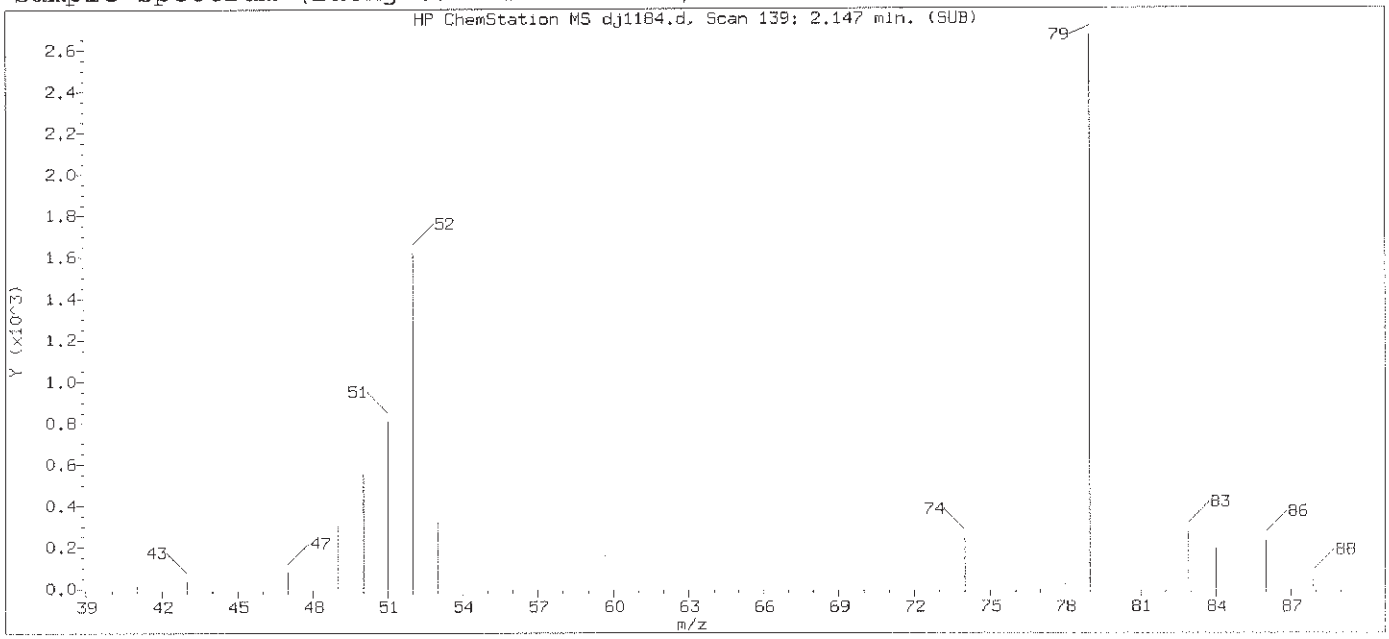
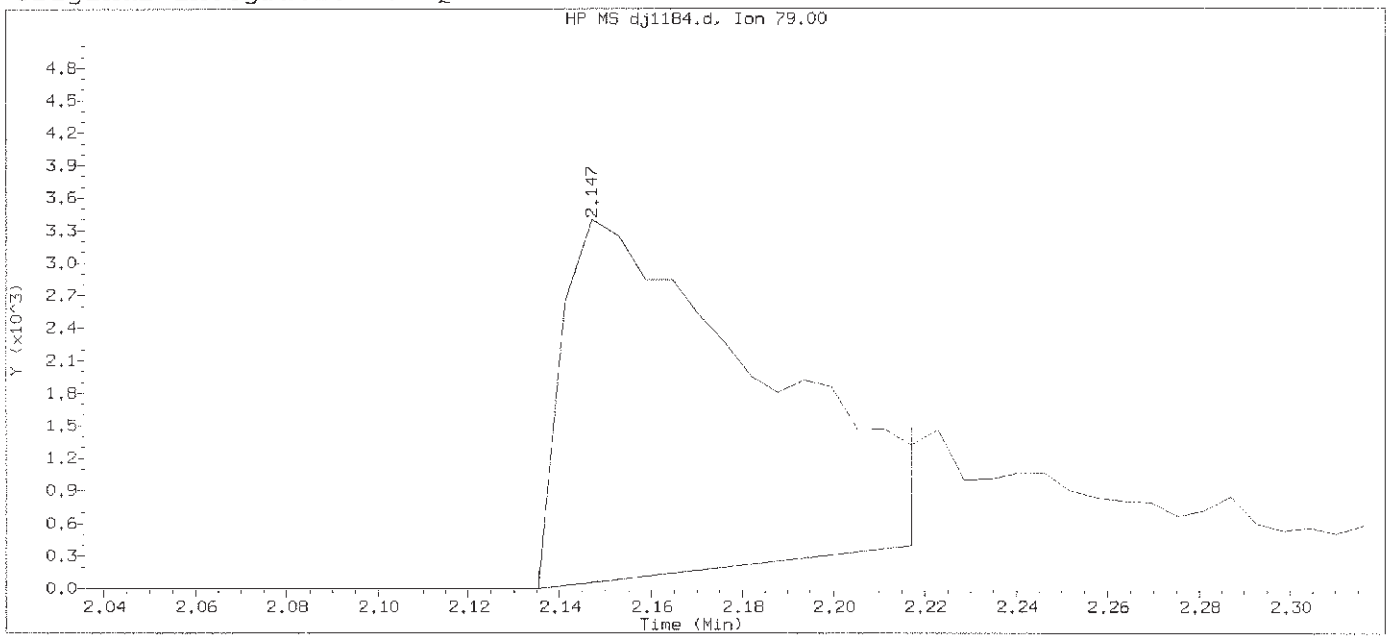
Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area	: 9841		
On-column Amount (ng/ul)	: 0.2168		
Integration start scan	: 136	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	397

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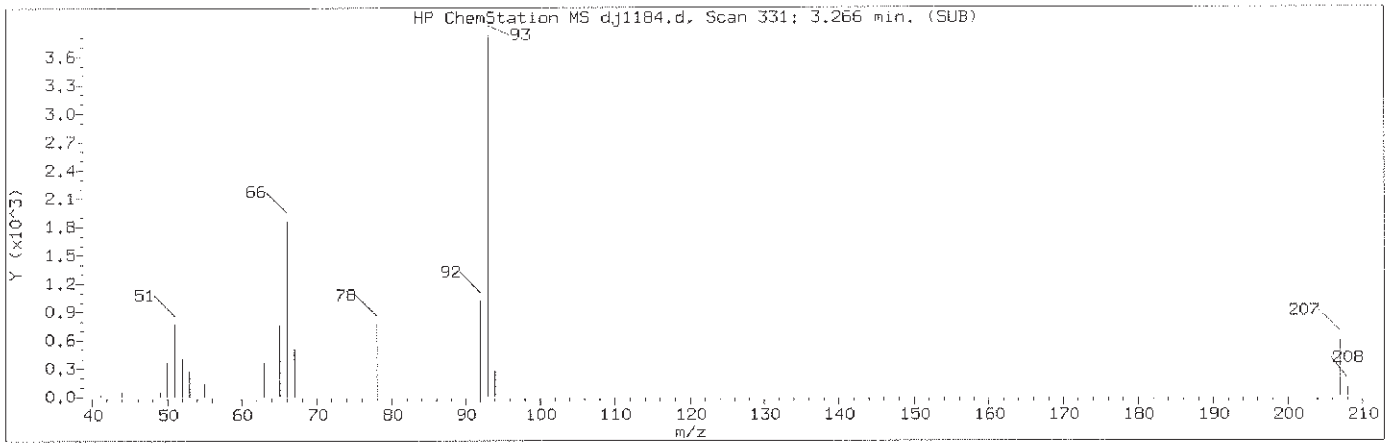
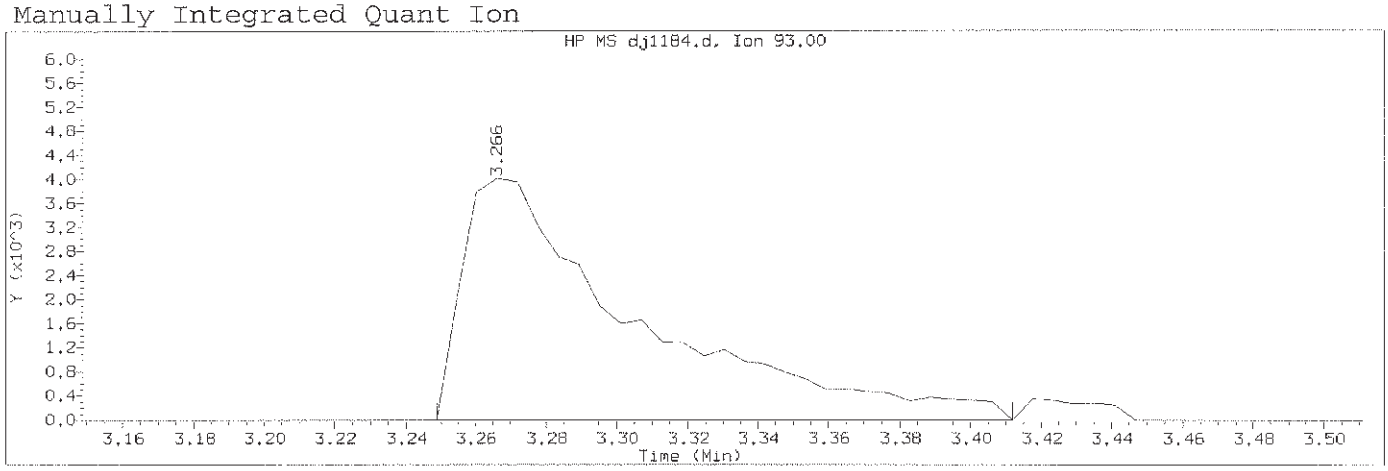
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area (flag)	: 13682M		
On-Column Amount (ng/ul)	: 0.2616		
Integration start scan	: 327	Integration stop scan:	355
Y at integration start	: 2	Y at integration end:	2

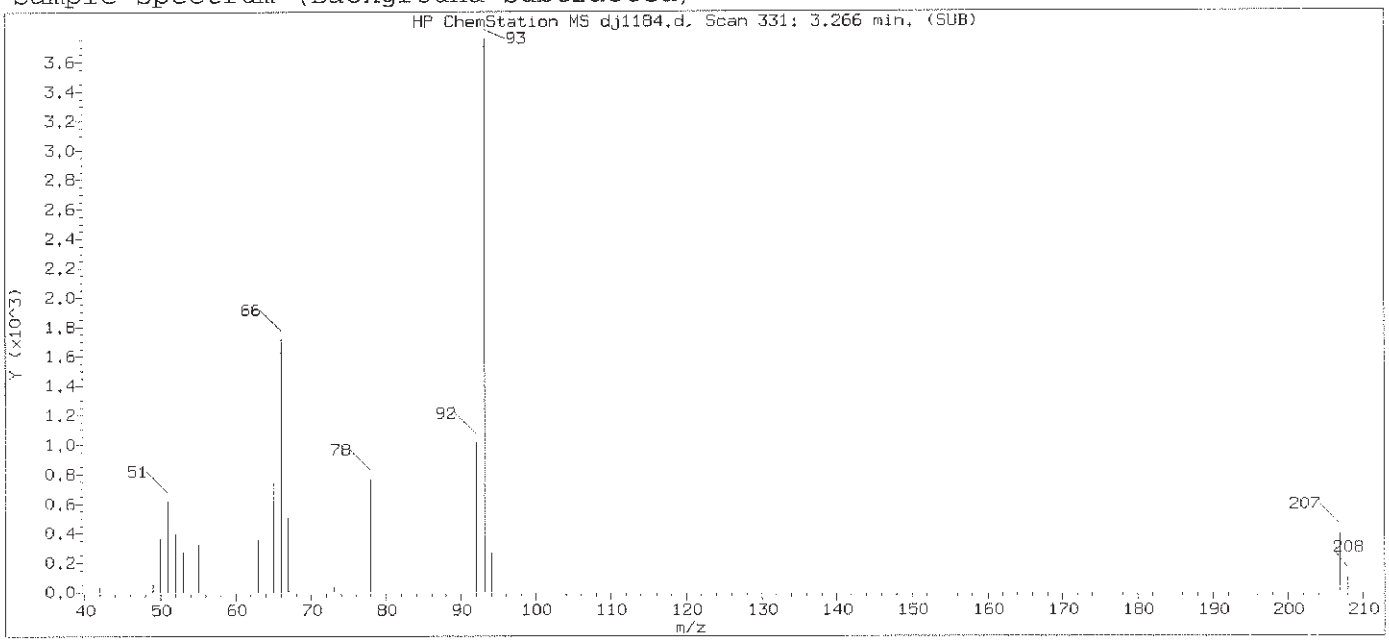
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

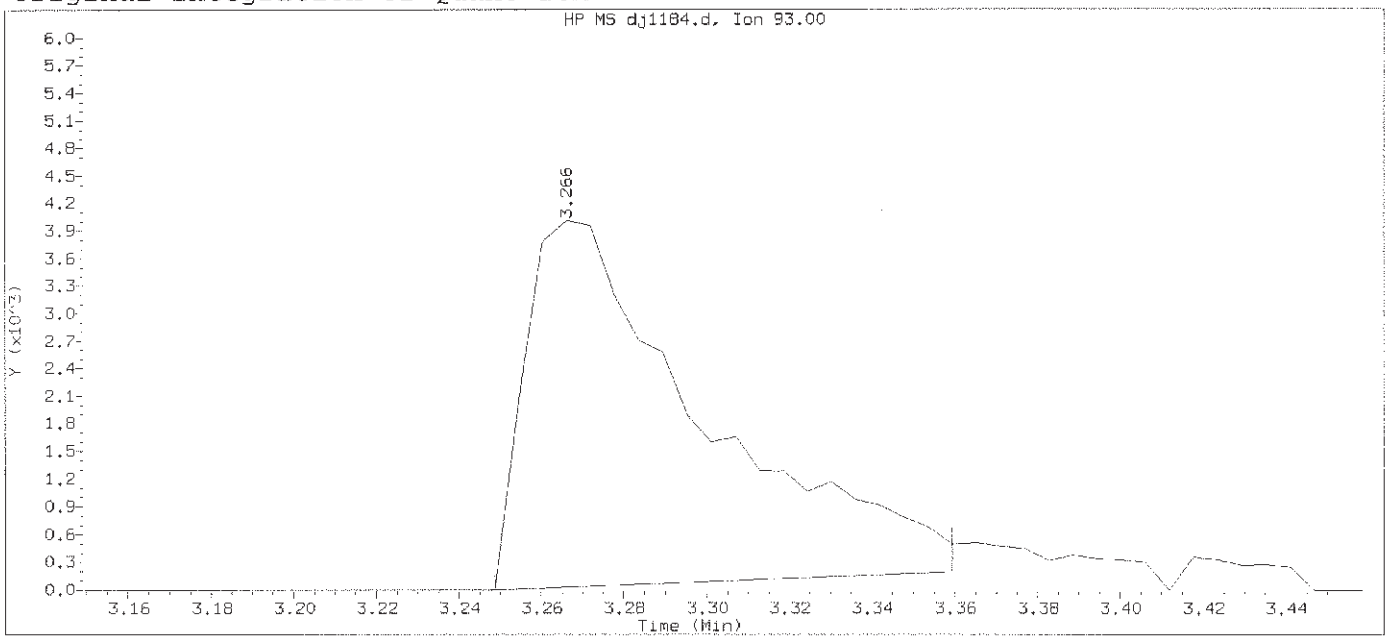
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

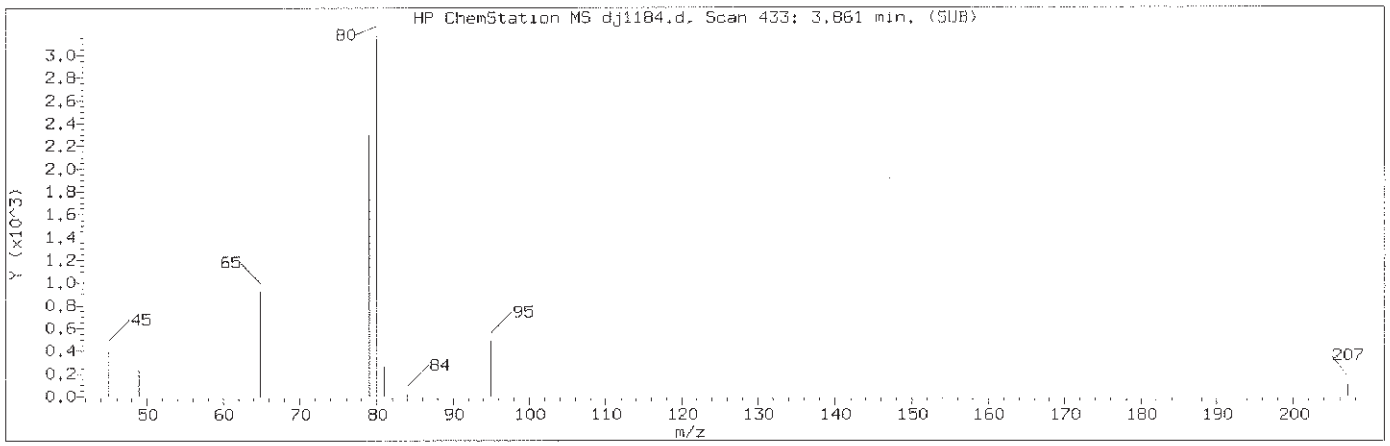
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

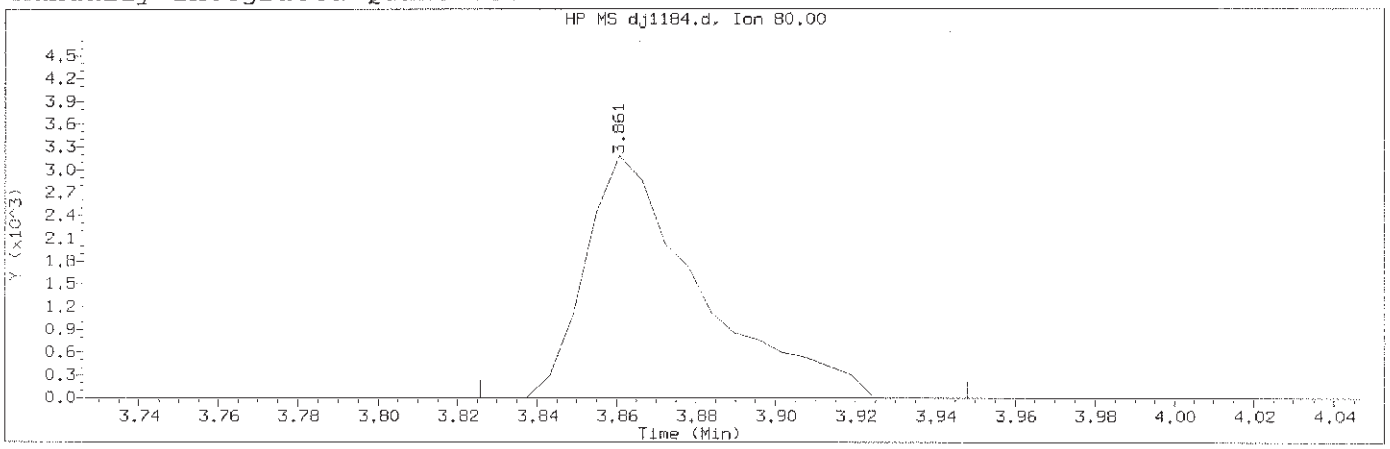
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area	: 11889		
On-column Amount (ng/ul)	: 0.2395		
Integration start scan	: 327	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	193

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area (flag)	: 6376M		
On-Column Amount (ng/ul)	: 0.2493		
Integration start scan	: 426	Integration stop scan:	447
Y at integration start	: 0	Y at integration end:	0

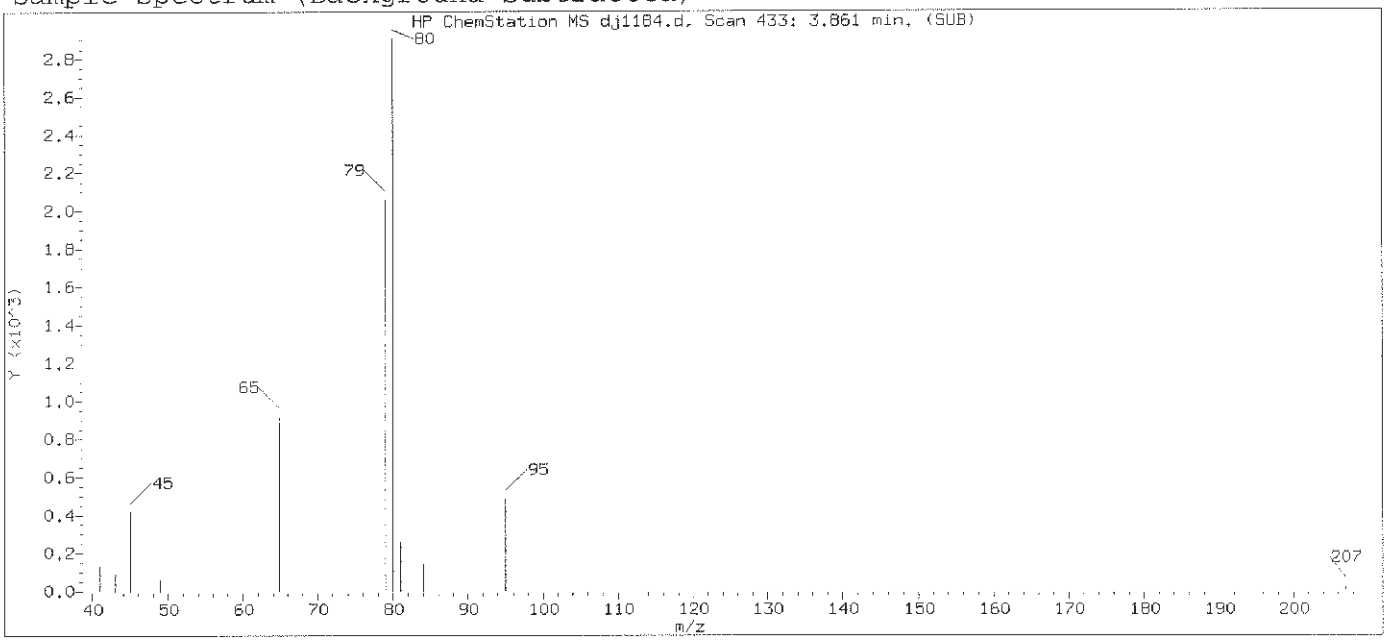
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

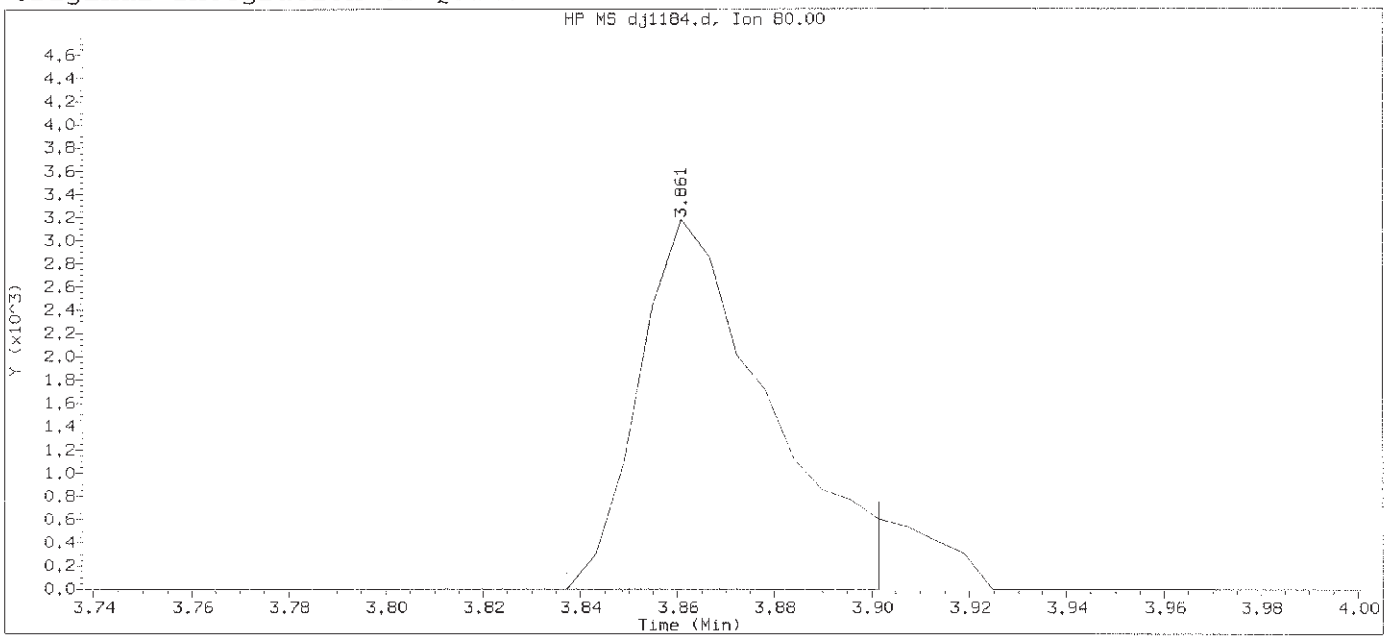
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

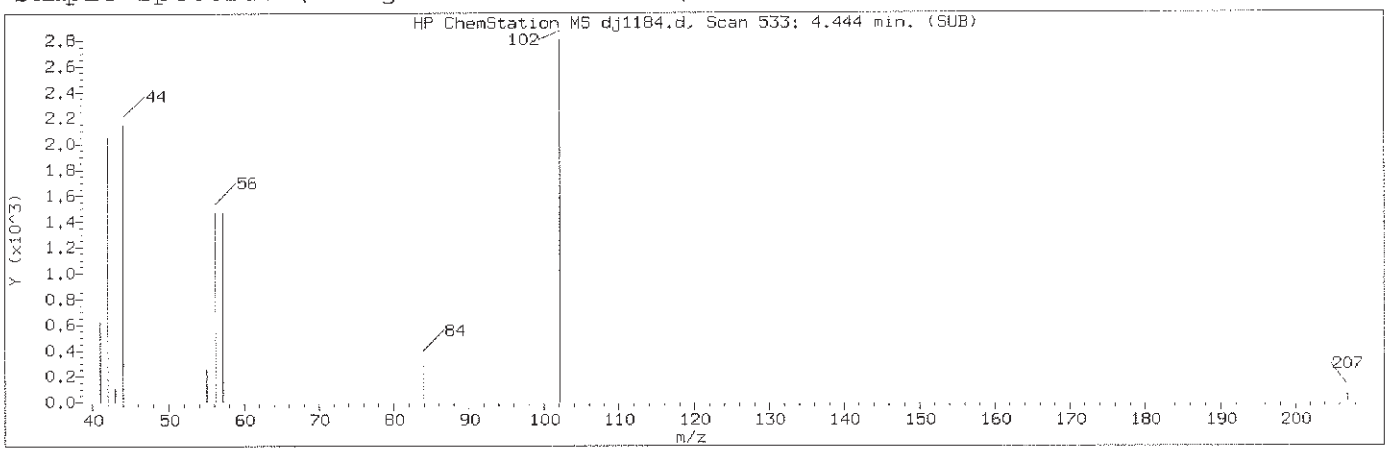
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

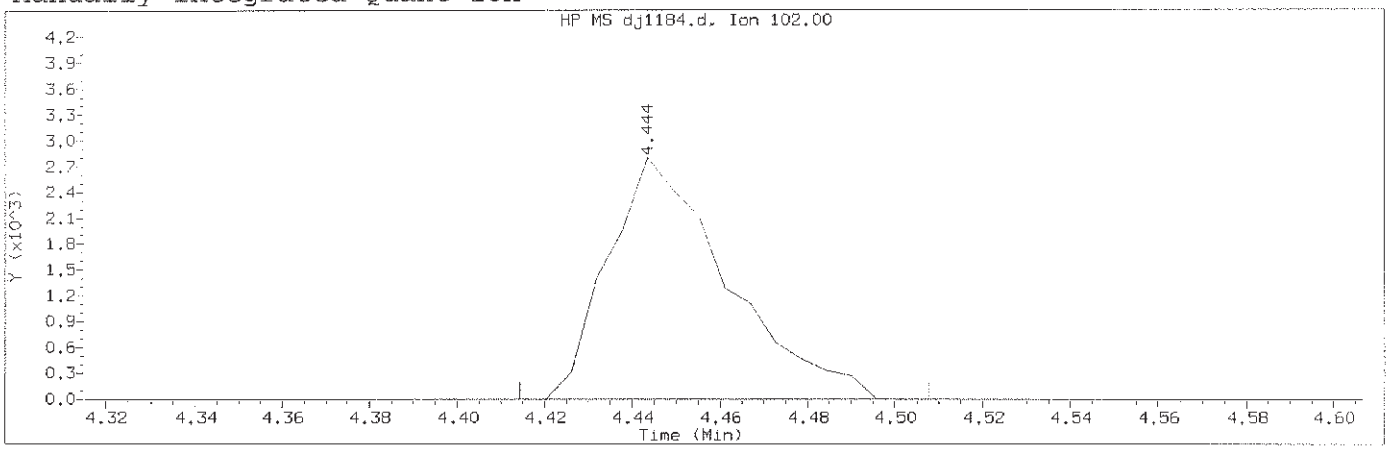
Compound Number	: 6
Compound Name	: Methyl methanesulfonate
Scan Number	: 433
Retention Time (minutes)	: 3.861
Quant Ion	: 80.00
Area	: 5828
On-column Amount (ng/ul)	: 0.2371
Integration start scan	: 428 Integration stop scan: 439
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area (flag)	: 5285M		
On-Column Amount (ng/ul)	: 0.2460		
Integration start scan	: 527	Integration stop scan:	543
Y at integration start	: 0	Y at integration end:	0

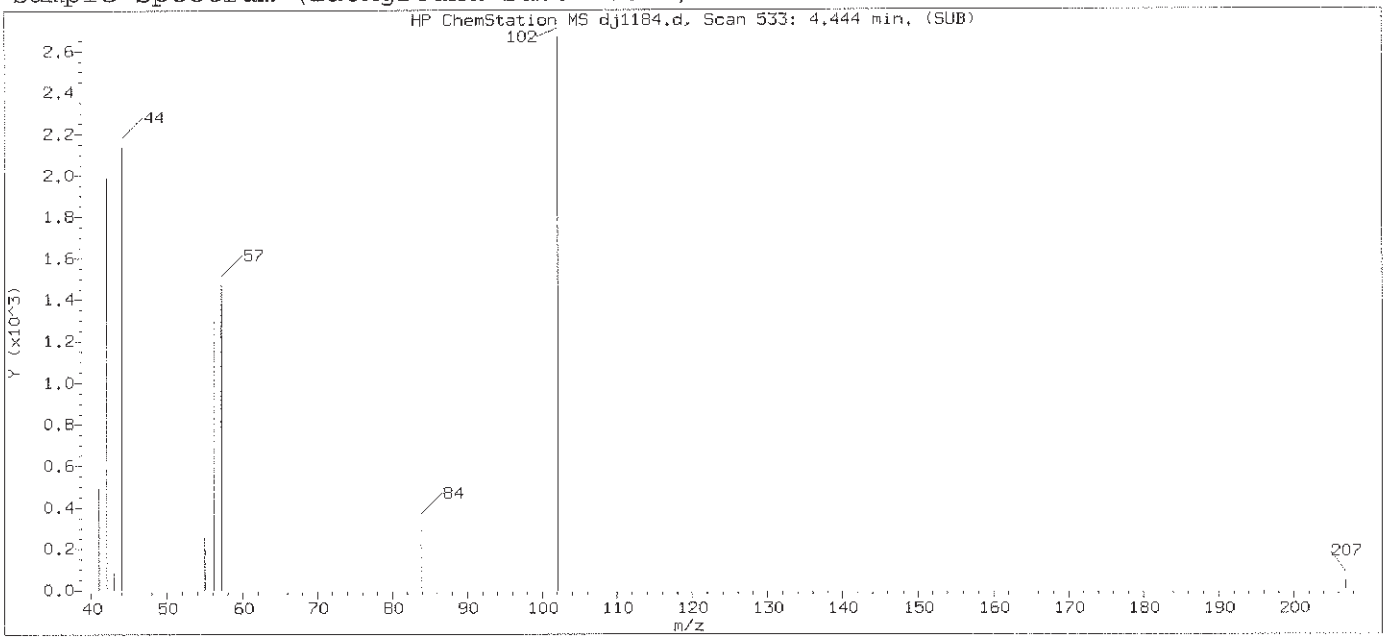
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

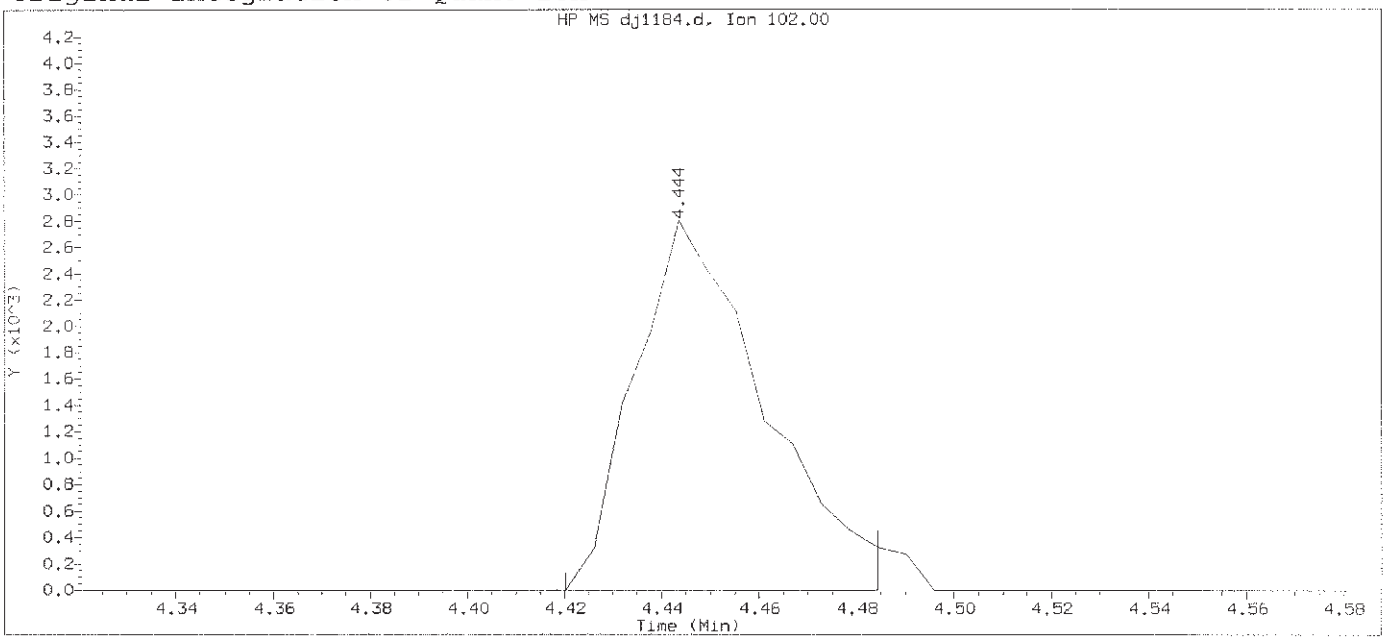
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Chemist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

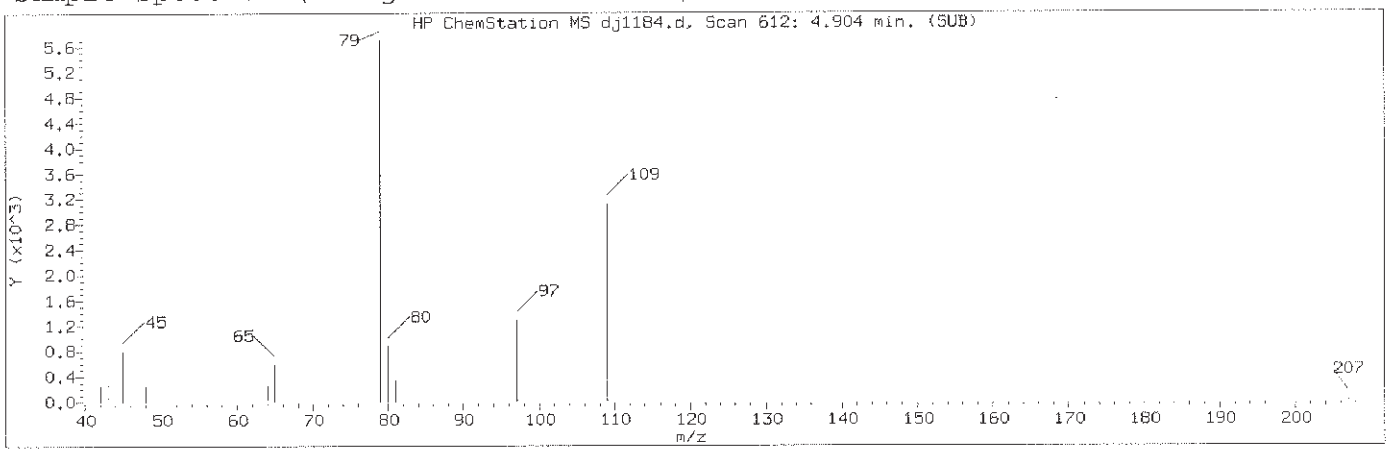
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

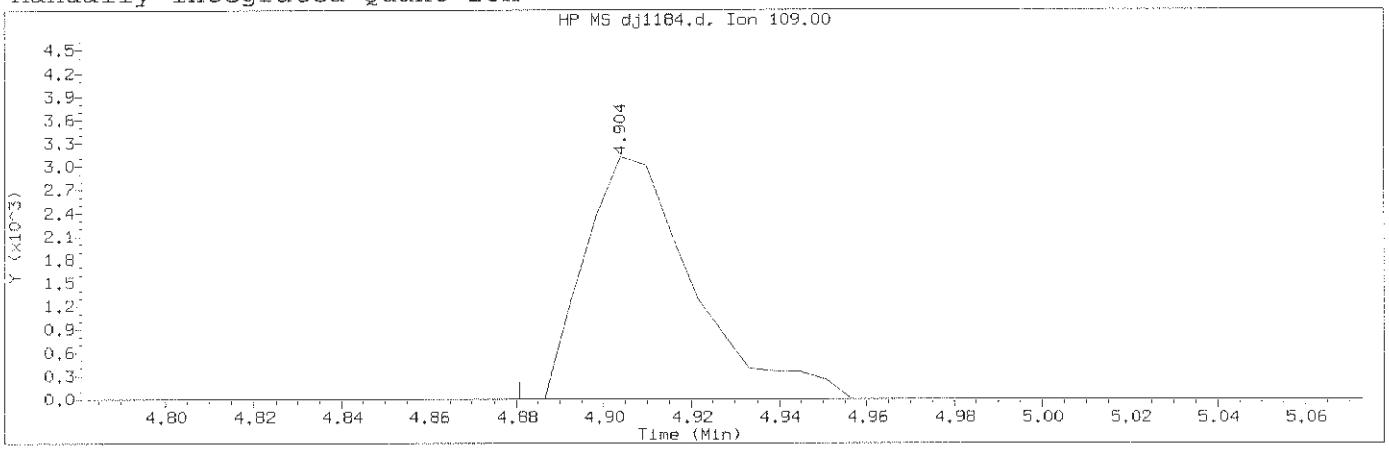
Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area	: 5133		
On-column Amount (ng/ul)	: 0.2465		
Integration start scan	: 528	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area (flag)	: 5358M		
On-Column Amount (ng/ul)	: 0.2584		
Integration start scan	: 607	Integration stop scan:	623
Y at integration start	: 0	Y at integration end:	0

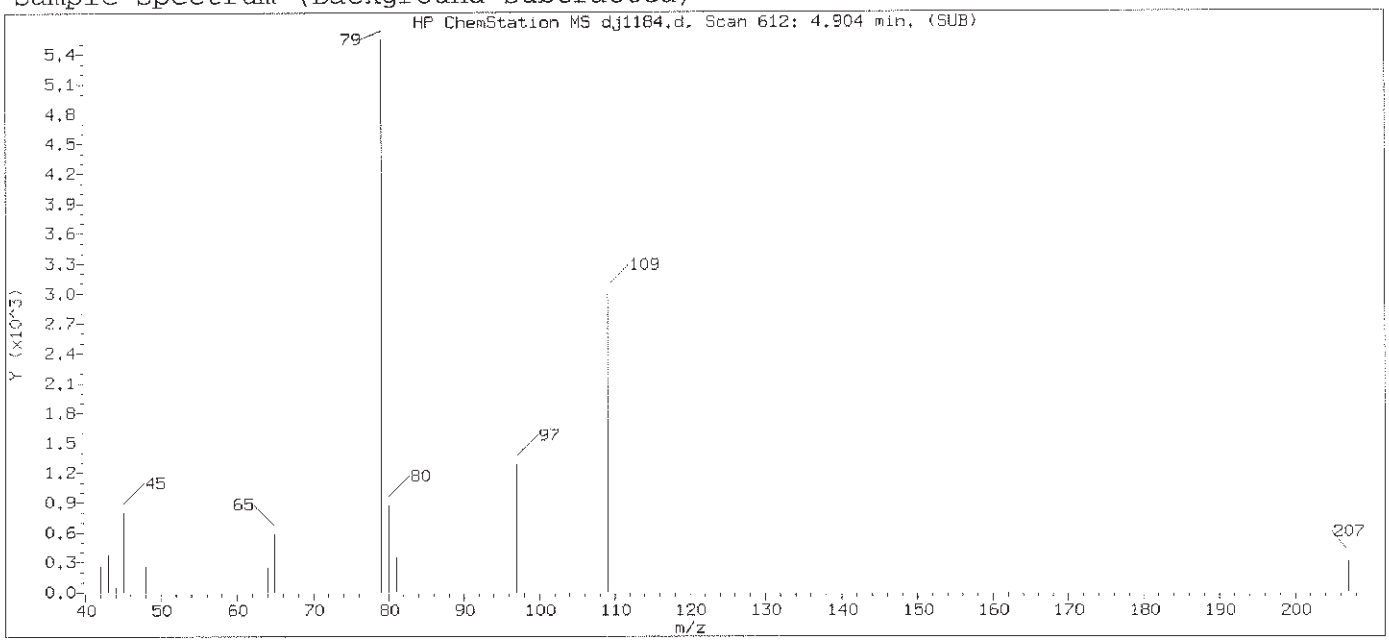
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

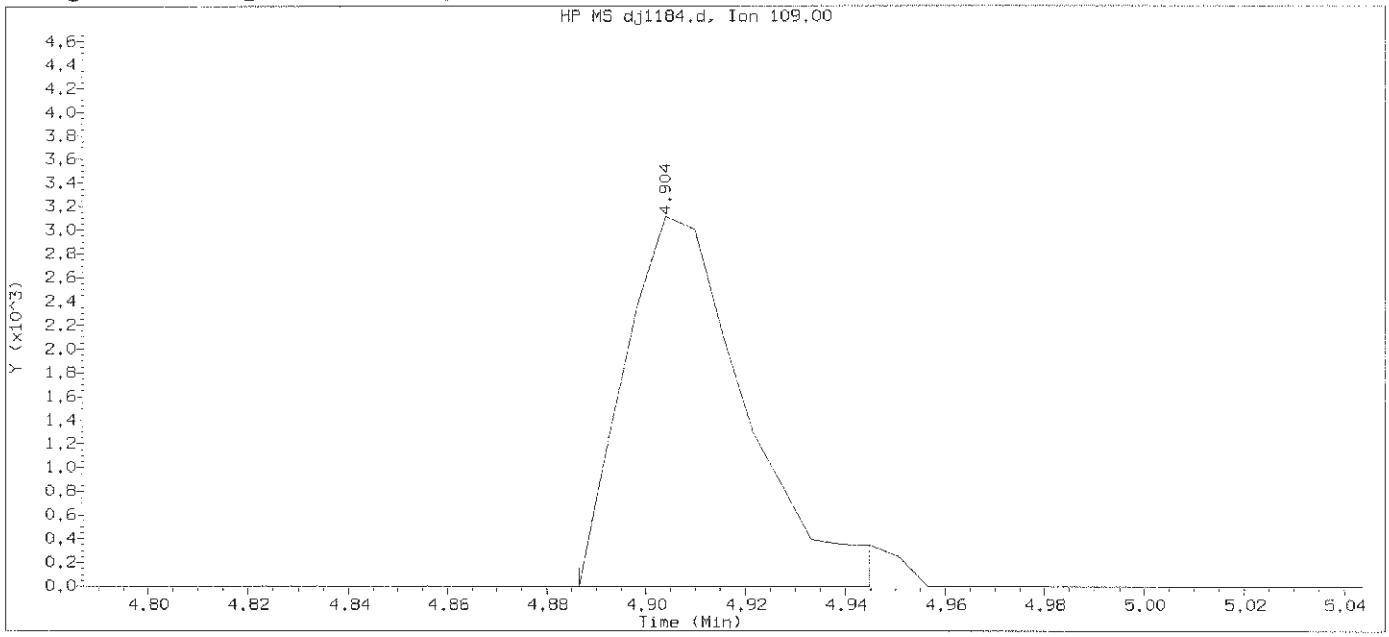
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

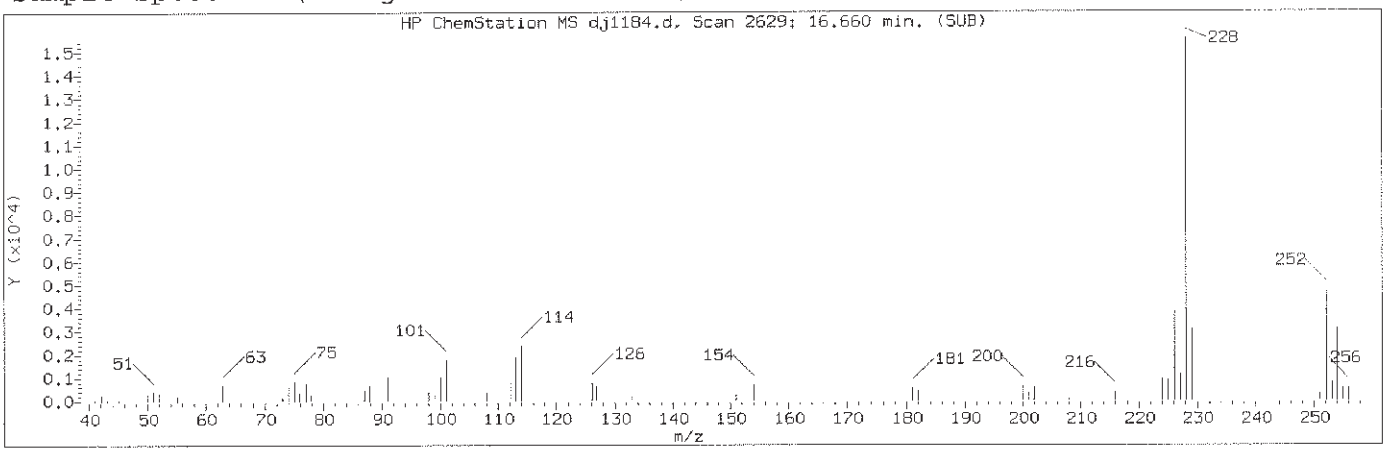
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

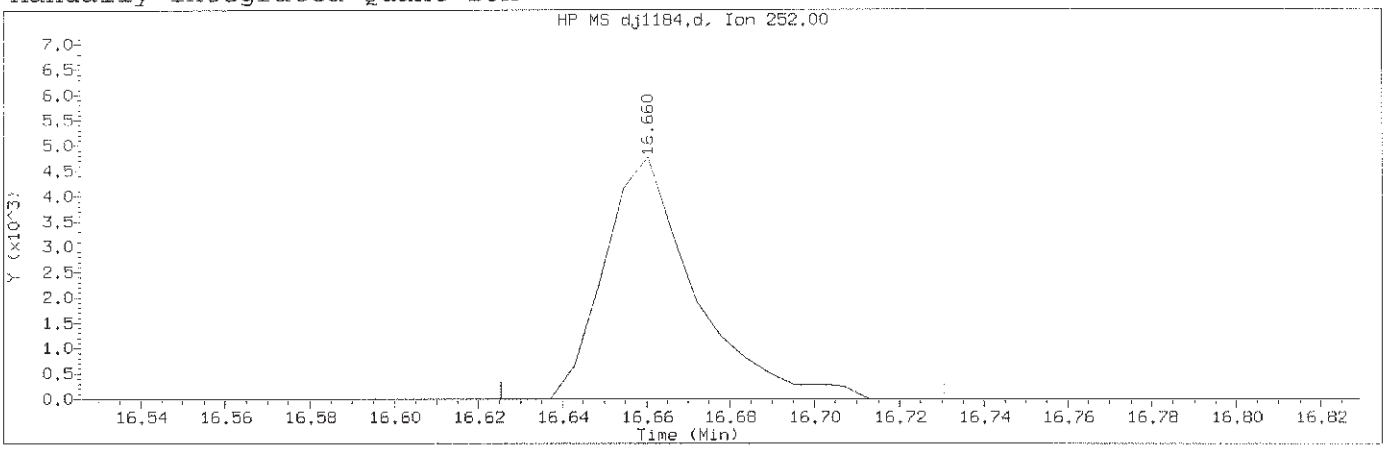
Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area	: 5209		
On-column Amount (ng/ul)	: 0.2594		
Integration start scan	: 608	Integration stop scan:	618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 159		
Compound Name	: 3,3'-Dichlorobenzidine		
Scan Number	: 2629		
Retention Time (minutes)	: 16.660		
Quant Ion	: 252.00		
Area (flag)	: 7120M		
On-Column Amount (ng/ul)	: 0.1695		
Integration start scan	: 2622	Integration stop scan:	2640
Y at integration start	: 0	Y at integration end:	0

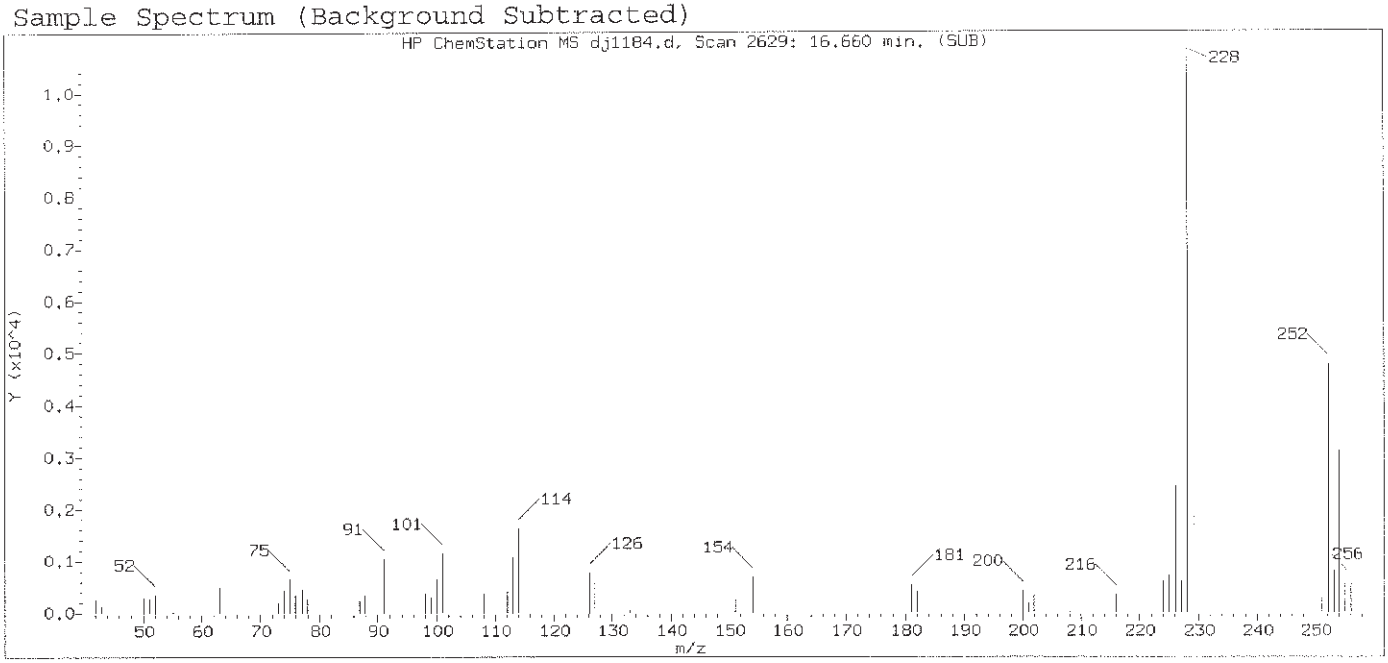
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

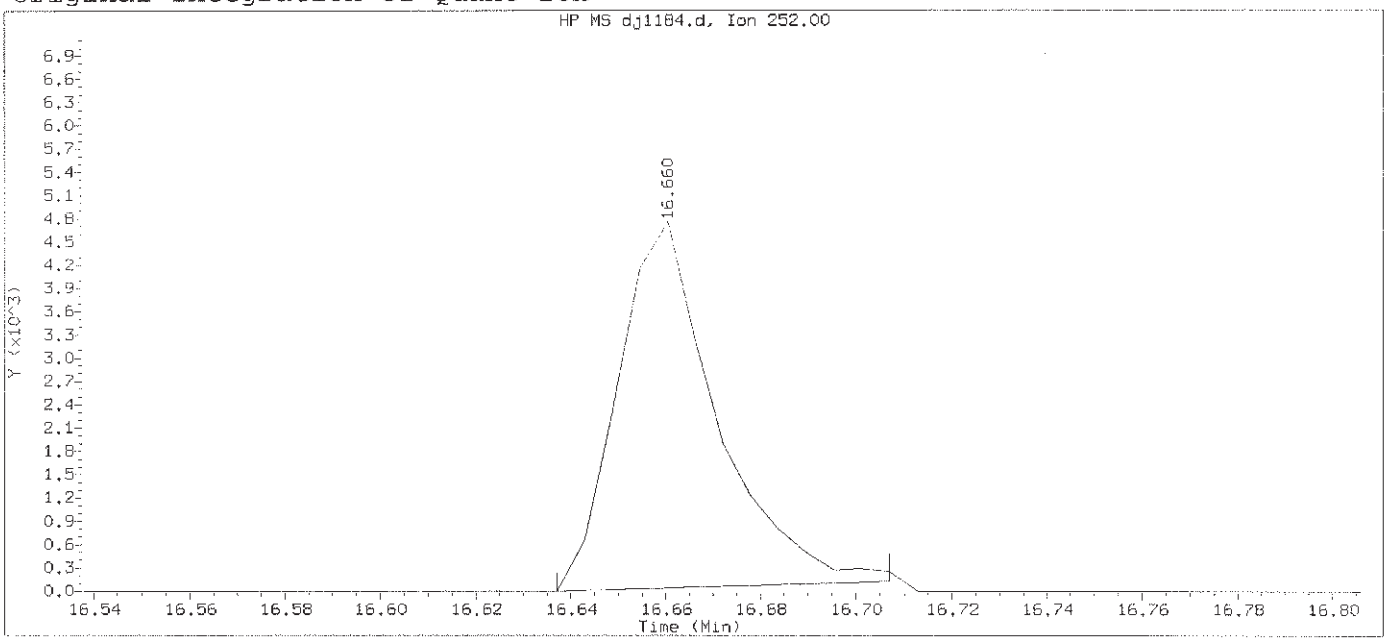
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

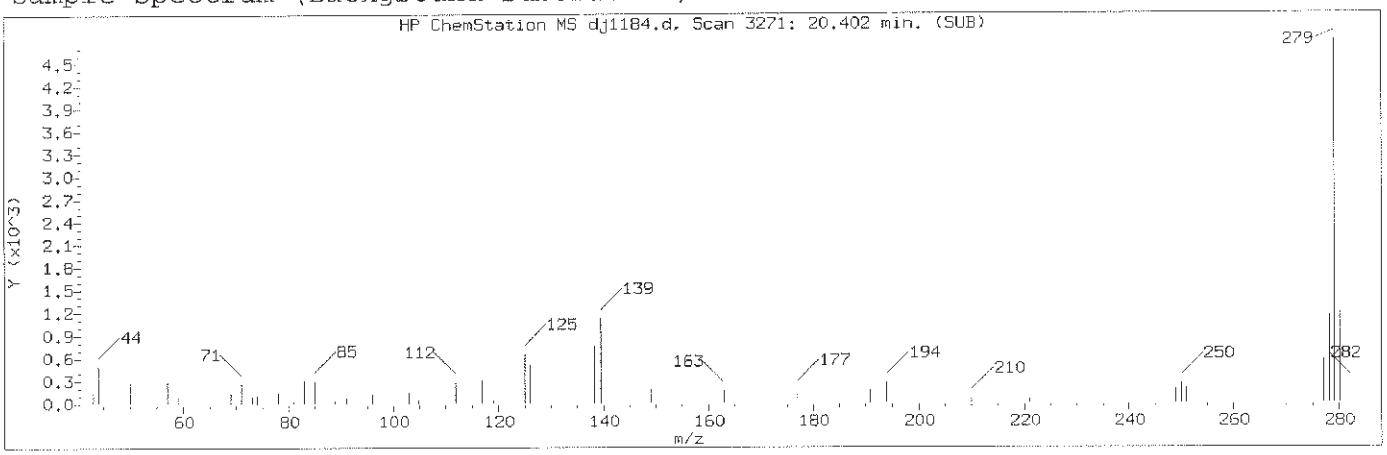
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

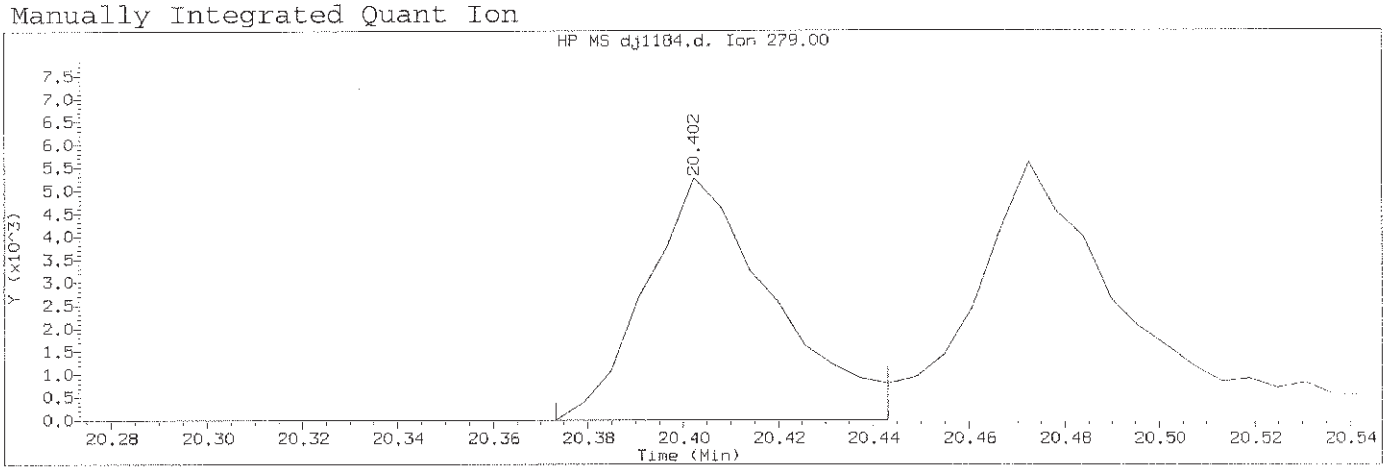
Compound Number	: 159		
Compound Name	: 3,3'-Dichlorobenzidine		
Scan Number	: 2629		
Retention Time (minutes)	: 16.660		
Quant Ion	: 252.00		
Area	: 6810		
On-column Amount (ng/ul)	: 0.1722		
Integration start scan	: 2624	Integration stop scan:	2636
Y at integration start	: 0	Y at integration end:	127

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area (flag)	: 9846M		
On-Column Amount (ng/ul)	: 0.1536		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 1	Y at integration end:	1

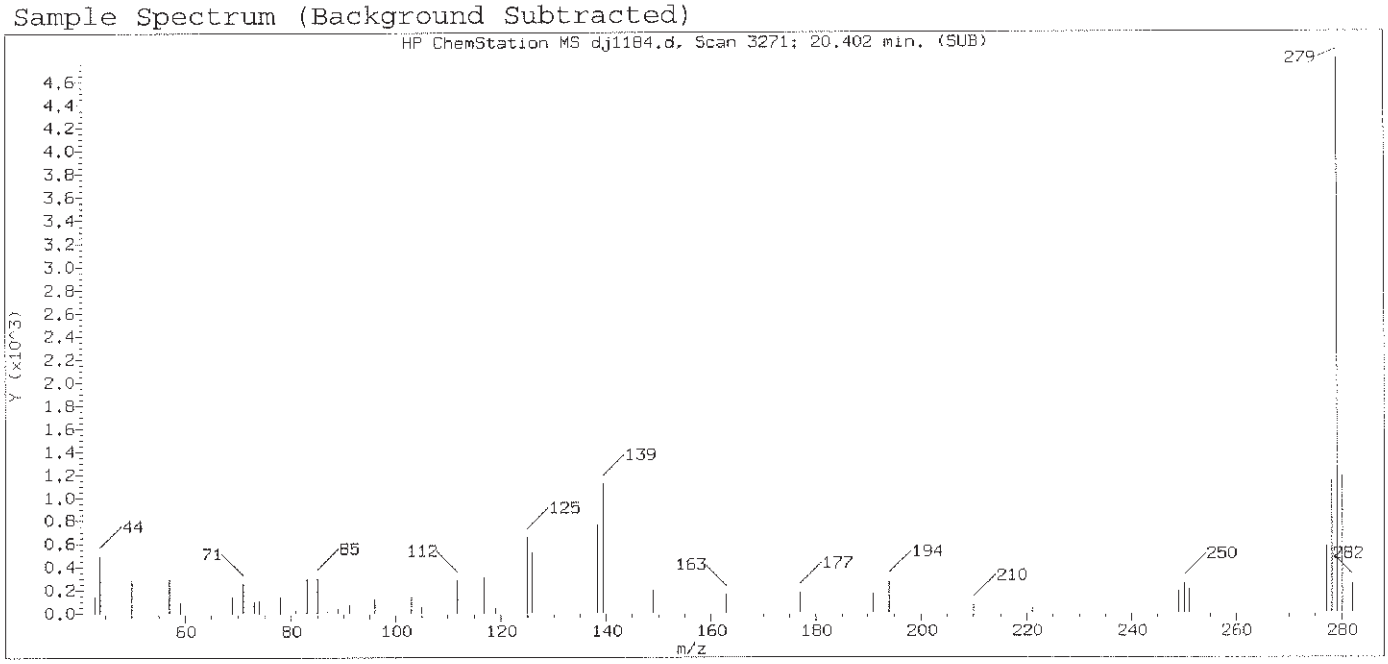
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

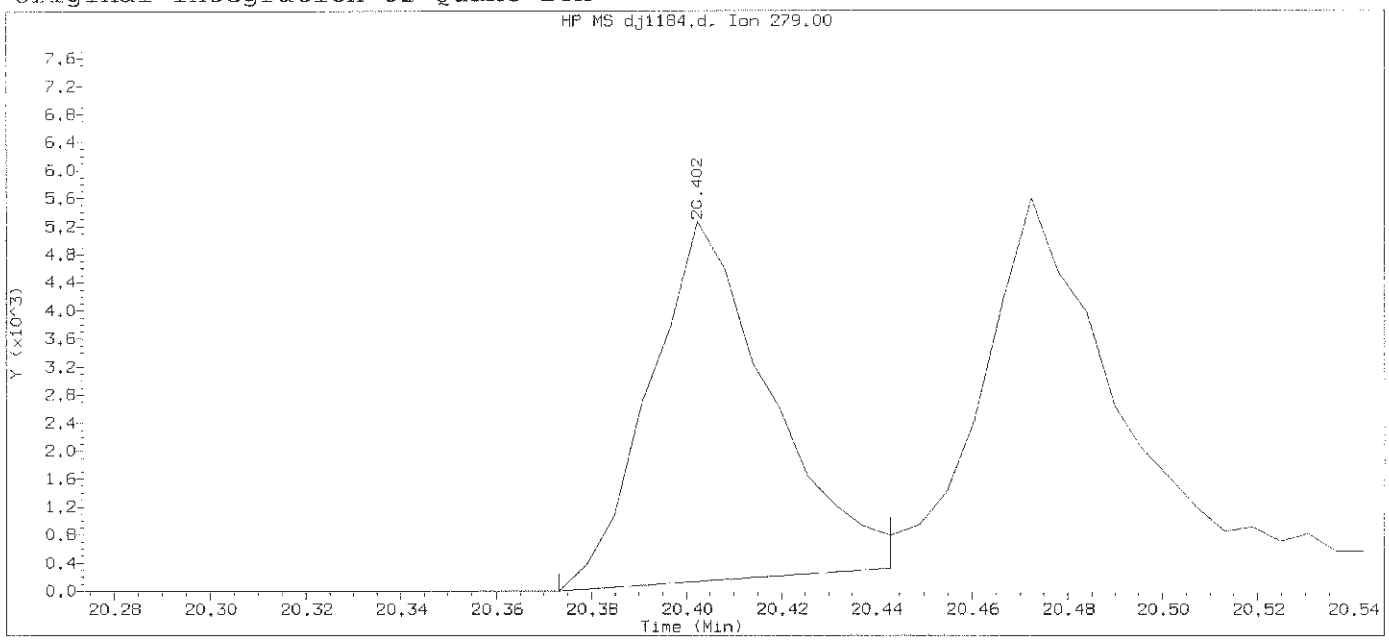
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area	: 9028		
On-column Amount (ng/ul)	: 0.1541		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 0	Y at integration end:	326

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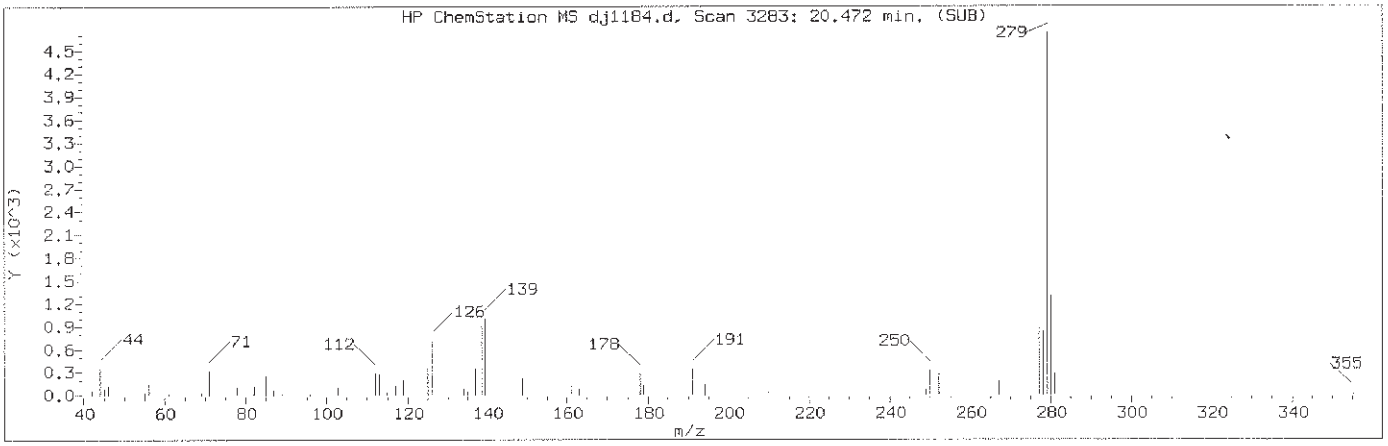
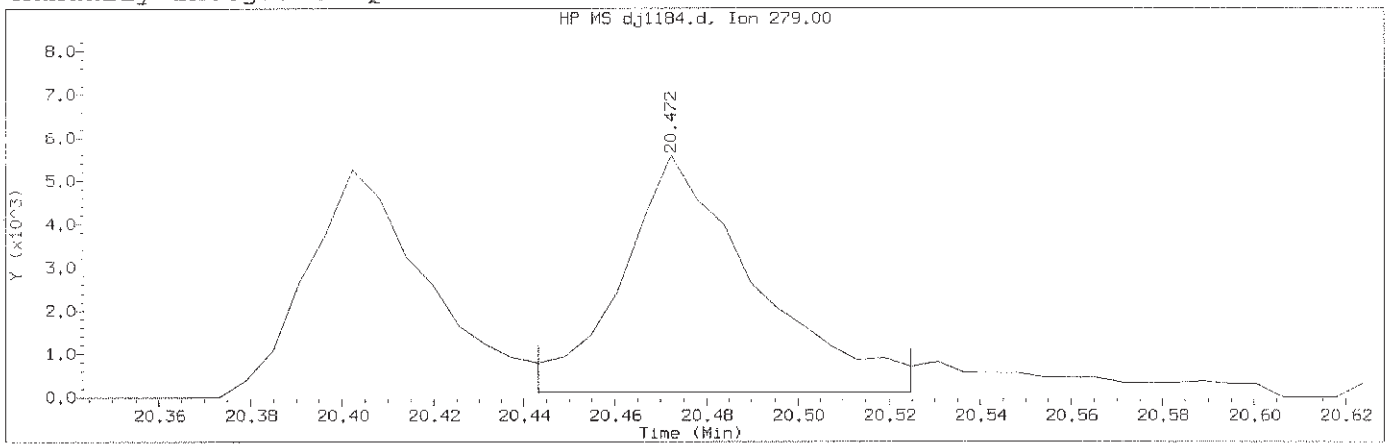
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area (flag)	: 11208M		
On-Column Amount (ng/ul)	: 0.1718		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 119	Y at integration end:	119

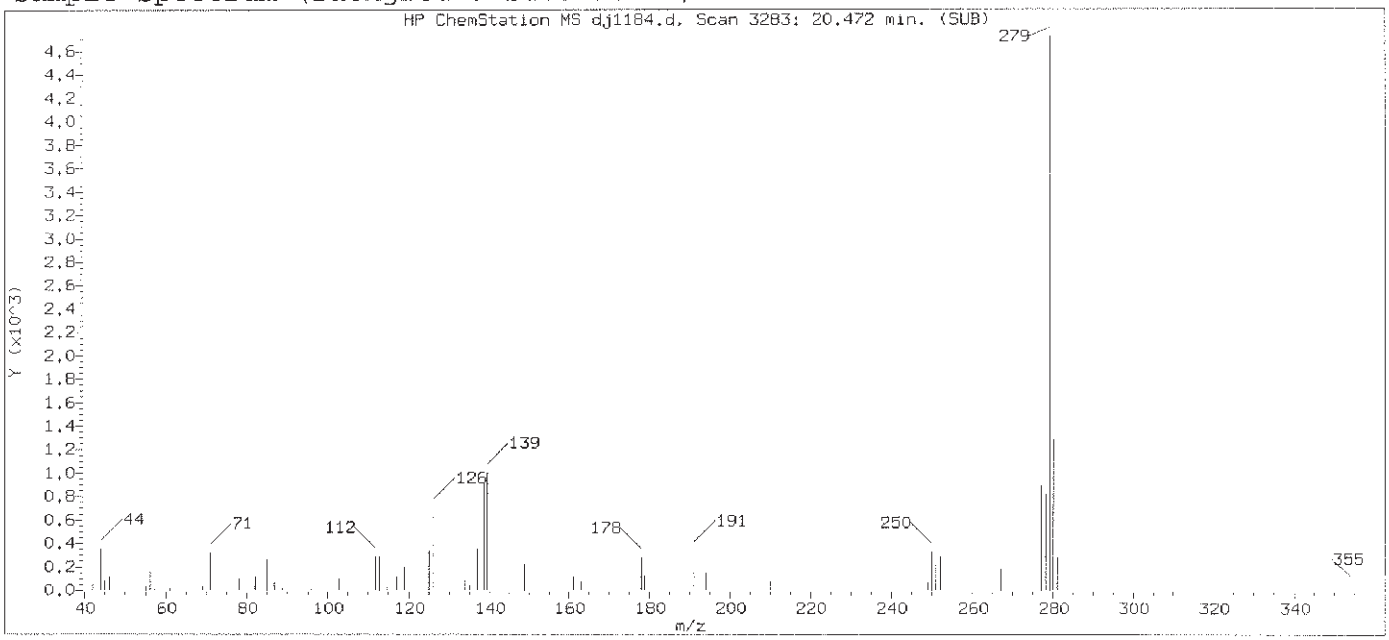
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

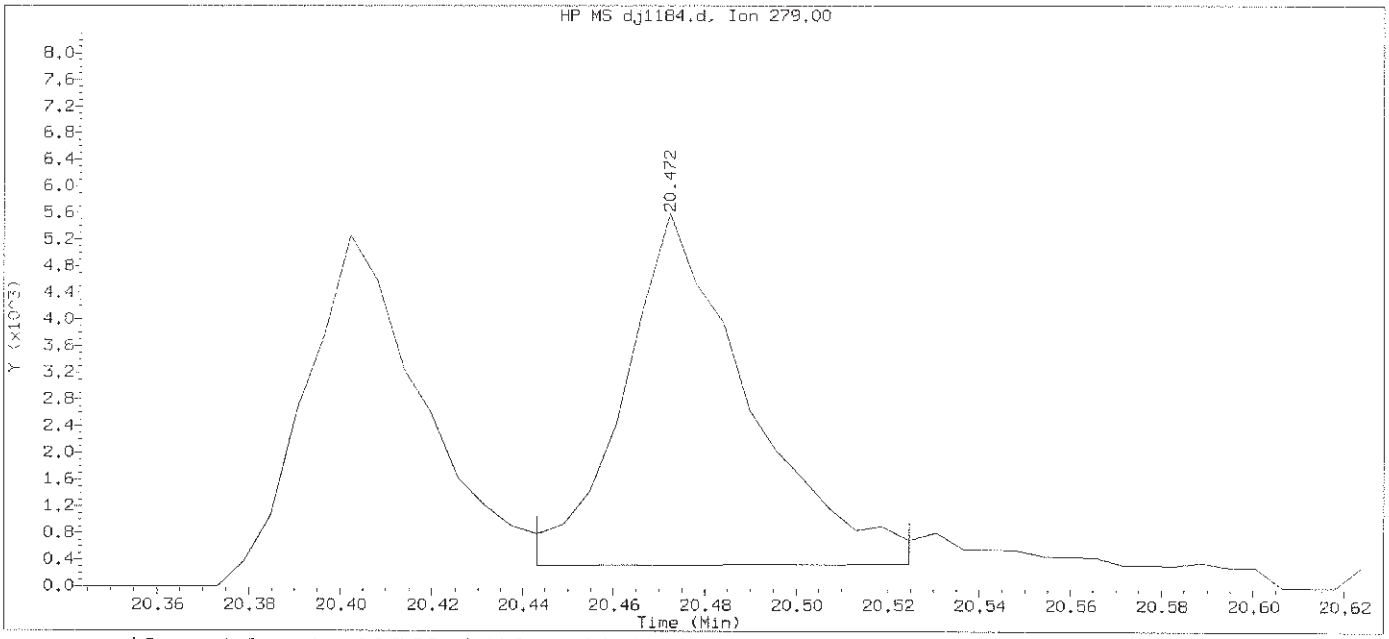
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Chemistry Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



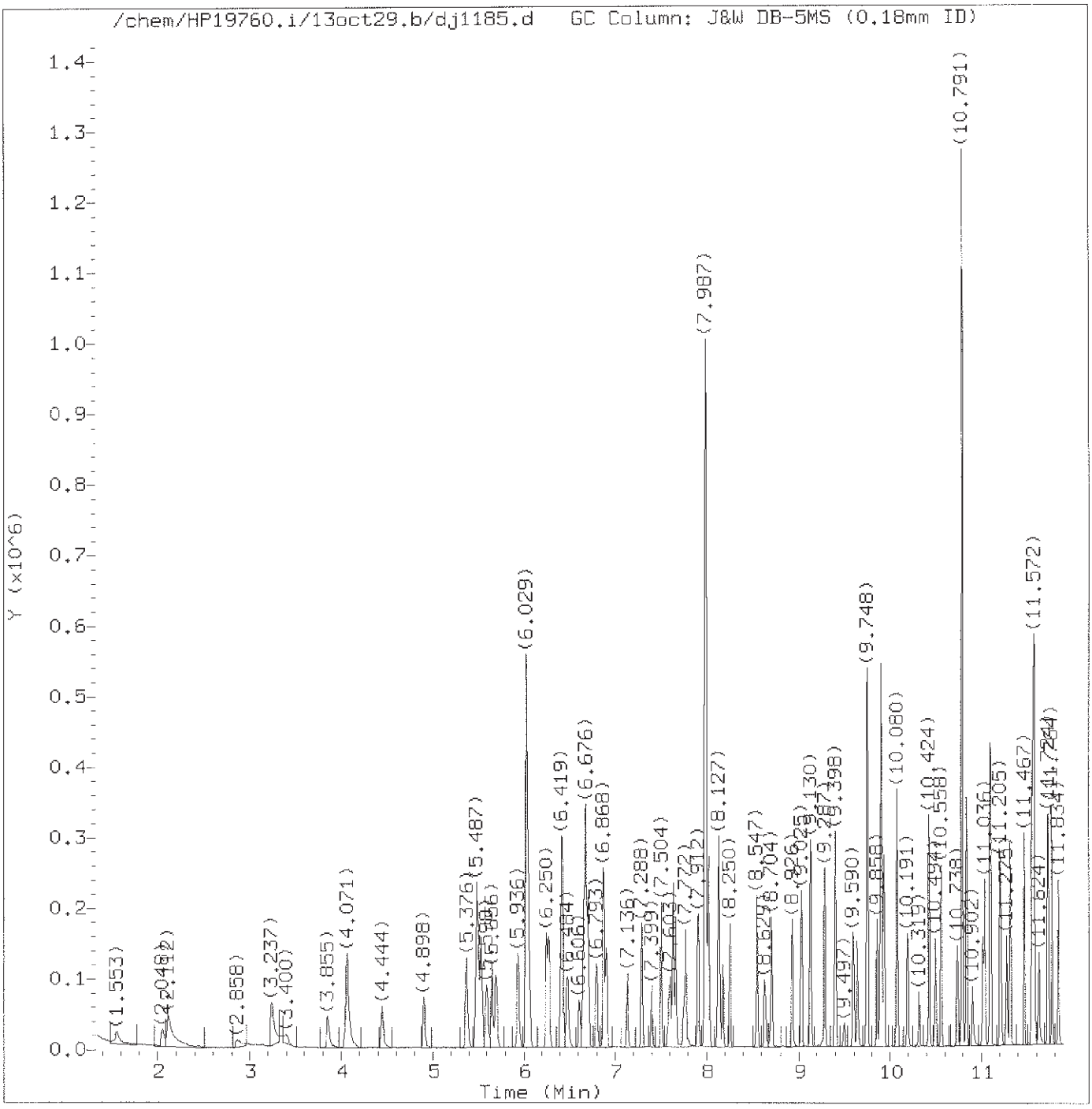
Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area	: 9925		
On-column Amount (ng/ul)	: 0.1579		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 326	Y at integration end:	346

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

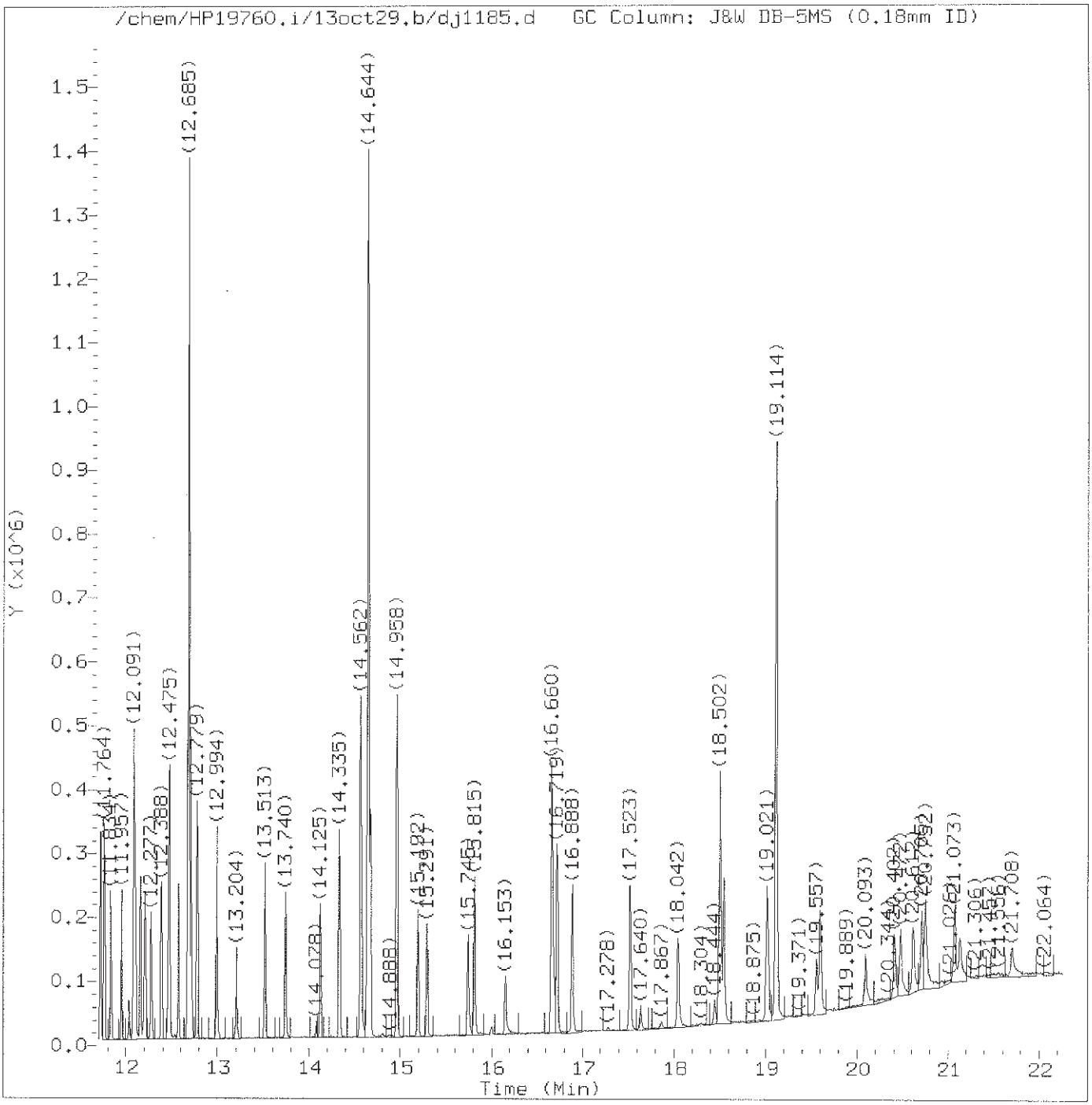
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	22269M	1.272
2) N-Nitrosodimethylamine	(1)	2.048	74	38547M	1.254
3) Pyridine	(1)	2.112	79	67472M	1.257
4) 2-Picoline	(1)	3.237	93	65872	1.178
5) N-Nitrosomethylethylamine	(1)	3.400	88	28658	1.207
6) Methyl methanesulfonate	(1)	3.855	80	32575	1.188
7)$2-Fluorophenol	(1)	4.071	112	101248	2.439
8) N-Nitrosodiethylamine	(1)	4.444	102	26770	1.168
10) Ethyl methanesulfonate	(1)	4.904	109	26410	1.188
11) Benzaldehyde	(1)	5.376	77	55036	1.399
12)$Phenol-d5	(1)	5.487	99	141190	2.469
13)$Phenol-d6	(1)	5.487	99	141190	2.469
14) Phenol	(1)	5.504	94	82122	1.236
15) Aniline	(1)	5.534	93	99089	1.215
16) bis(2-Chloroethyl)ether	(1)	5.656	93	63620	1.216
17) 2-Chlorophenol	(1)	5.697	128	48543	1.190
18) 1,3-Dichlorobenzene	(1)	5.936	146	54943	1.248
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	138331	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	55272	1.239
23) Benzyl alcohol	(1)	6.250	108	35118	1.223
24) 1,2-Dichlorobenzene	(1)	6.280	146	52982	1.275
25) Indene	(1)	6.414	115	106311	1.503
26) 2-Methylphenol	(1)	6.431	108	49448	1.207
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	81508	1.242
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	81508	1.242
29) N-Nitrosopyrrolidine	(1)	6.612	100	26480	1.145
30) Acetophenone	(1)	6.653	105	80822	1.262
33) 4-Methylphenol	(1)	6.670	108	57251	1.248
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	46619	1.253
32) N-Nitrosomorpholine	(1)	6.682	56	37671	1.271
34) o-Toluidine	(1)	6.705	106	87593	1.235
35) Hexachloroethane	(1)	6.793	117	23051	1.223
36)$Nitrobenzene-d5	(2)	6.868	82	122397	2.459
37) Nitrobenzene	(2)	6.897	77	66124	1.249
39) N-Nitrosopiperidine	(2)	7.136	114	25981	1.209
40) Isophorone	(2)	7.288	82	109011	1.213
42) 2-Nitrophenol	(2)	7.399	139	19527	1.104
45) 2,4-Dimethylphenol	(2)	7.504	107	53050	1.214
47) Benzoic acid	(2)	7.603	105	64759	1.938
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	23748	1.230

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	74668M	1.264
49) 2,4-Dichlorophenol	(2)	7.772	162	36329	1.191
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	43959	1.264
52)*Naphthalene-d8	(2)	7.987	136	535285	5.000
53) Naphthalene	(2)	8.022	128	147464	1.281
55) 4-Chloroaniline	(2)	8.127	127	58769	1.224
56) 2,6-Dichlorophenol	(2)	8.133	162	36624	1.247
57) Hexachloropropene	(2)	8.174	213	23865	1.119
58) Hexachlorobutadiene	(2)	8.250	225	25385	1.261
60) Quinoline	(2)	8.553	129	94155	1.226
61) Caprolactam	(2)	8.634	113	15728	1.156
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	39725	1.121
63) 4-Chloro-3-methylphenol	(2)	8.926	107	42929	1.166
64) Safrole	(2)	9.025	162	36262	1.253
65) 2-Methylnaphthalene	(2)	9.130	142	98282	1.282
66) 1-Methylnaphthalene	(2)	9.287	142	87553	1.262
67) Hexachlorocyclopentadiene	(3)	9.398	237	17375	1.048
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	45128	1.263
69) cis-Isosafrole	(3)	9.497	162	6014	1.163
70) 2,4,6-Trichlorophenol	(3)	9.596	196	25634	1.166
71) 2,4,5-Trichlorophenol	(3)	9.637	196	25547	1.124
72)$2-Fluorobiphenyl	(3)	9.748	172	198287	2.560
74) Isosafrole	(3)	9.858	162	34926	1.210
73) trans-Isosafrole	(3)	9.858	162	34926	1.210
75) 1,1'-Biphenyl	(3)	9.893	154	117078	1.304
76) 2-Chloronaphthalene	(3)	9.899	162	88989	1.289
77) 1-Chloronaphthalene	(3)	9.934	162	87532	1.278
82) Diphenyl ether	(3)	10.080	170	63424	1.282
83) 2-Nitroaniline	(3)	10.080	138	23140	1.125
84) 1,4-Naphthoquinone	(3)	10.196	158	30951	1.079
85) 1,4-Dinitrobenzene	(3)	10.319	168	9236	0.861
86) Dimethylphthalate	(3)	10.424	163	100272	1.303
87) 1,3-Dinitrobenzene	(3)	10.430	168	13847	1.048
88) 2,6-Dinitrotoluene	(3)	10.494	165	19733	1.192
90) Acenaphthylene	(3)	10.558	152	128664	1.248
91) 3-Nitroaniline	(3)	10.738	138	22330	1.176
92)*Acenaphthene-d10	(3)	10.791	164	303956	5.000
93) Acenaphthene	(3)	10.838	153	89771	1.247
94) 2,4-Dinitrophenol	(3)	10.908	184	13659	1.410
96) 4-Nitrophenol	(3)	11.018	109	24040	1.954

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	34962	1.217
97) Dibenzofuran	(3)	11.094	168	130135	1.274
98) 2,4-Dinitrotoluene	(3)	11.100	165	24532	1.160
99) 1-Naphthylamine	(3)	11.205	143	91867	1.256
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	19751	1.108
101) 2-Naphthylamine	(3)	11.310	143	95744	1.271
102) Diethylphthalate	(3)	11.467	149	95093	1.247
103) Fluorene	(3)	11.549	166	104201	1.275
104) Thionazin	(3)	11.566	107	20809	1.266
106) 5-Nitro-o-toluidine	(3)	11.572	152	27432	1.269
107) 4-Nitroaniline	(3)	11.572	138	24616	1.247
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	52803	1.291
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	17872	1.319
109) N-Nitrosodiphenylamine	(4)	11.724	169	82130	1.275
110) NDPA as diphenylamine	(4)	11.724	169	82130	1.275
111) 1,2-Diphenylhydrazine	(4)	11.764	77	132180	1.289
112)$2,4,6-Tribromophenol	(3)	11.840	330	18163	2.308
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	17130	1.177
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	5451	0.666
117) Diallate (peak 1)	(4)	12.085	86	48822	0.960
118) Phorate	(4)	12.091	75	75299	1.244
119) Phenacetin	(4)	12.102	108	47845	1.156
120) 4-Bromophenyl-phenylether	(4)	12.161	248	25926	1.269
121) Diallate (peak 2)	(4)	12.190	86	6365	0.297
122) Hexachlorobenzene	(4)	12.207	284	25349	1.246
123) Dimethoate	(4)	12.277	87	41240	1.061
124) Atrazine	(4)	12.388	200	26935	1.315
125) Pentachlorophenol	(4)	12.458	266	12480	0.914
126) Pentachloronitrobenzene	(4)	12.475	237	10941	1.227
127) 4-Aminobiphenyl	(4)	12.475	169	98012	1.239
129) Pronamide	(4)	12.575	173	38417	1.178
130)*Phenanthrene-d10	(4)	12.685	188	512509	5.000
131) Phenanthrene	(4)	12.714	178	150220	1.284
133) Dinoseb	(4)	12.714	211	10055	0.629
134) Anthracene	(4)	12.779	178	145940	1.275
135) Carbazole	(4)	12.994	167	137397	1.242
136) Methyl parathion	(4)	13.204	109	23830	0.890
137) Di-n-butylphthalate	(4)	13.513	149	149836	1.152
138) Parathion	(4)	13.740	109	15893	0.921
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	3967	0.444

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	16317	1.203
142) Fluoranthene	(4)	14.335	202	156364	1.225
144) Benzidine	(5)	14.562	184	272209	3.347
145)*Pyrene-d10	(5)	14.644	212	649692	5.000
146) Pyrene	(5)	14.673	202	175362	1.244
149)$Terphenyl-d14	(5)	14.958	244	203163	2.479
150) p-Dimethylaminoazobenzene	(5)	15.192	225	25171	1.081
151) Chlorobenzilate	(5)	15.291	139	42880	1.105
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	74815	0.946
153) Butylbenzylphthalate	(5)	15.815	149	65483	1.125
156) 2-Acetylaminofluorene	(5)	16.153	181	33973	0.737
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	44223	1.060
158) Benzo(a)anthracene	(5)	16.660	228	139152	1.213
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	22477	1.025
161) Chrysene	(5)	16.719	228	147664	1.281
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	79864	1.038
165) 6-Methylchrysene	(5)	17.523	242	94127	1.183
166) Di-n-octylphthalate	(6)	18.042	149	107935	0.898
168) Benzo(b)fluoranthene	(6)	18.502	252	126011	1.213
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	54160	1.219
170) Benzo(k)fluoranthene	(6)	18.543	252	130476	1.235
171) Benzo(a)pyrene	(6)	19.021	252	115098	1.194
172)*Perylene-d12	(6)	19.114	264	447306	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	51034	1.143
174) Dibenz(a,h)acridine	(6)	20.402	279	59881	0.956
175) Dibenz(a,j)acridine	(6)	20.472	279	69441	1.052
176) Indeno(1,2,3-cd)pyrene	(6)	20.705	276	97855	1.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	82575	1.213
178) Benzo(g,h,i)perylene	(6)	21.073	276	83734	1.202
179) Diallate TRANS/CIS	(4)			55187	1.268
182) 2,4_2,6-Dinitrotoluenes	(3)			44265	2.352

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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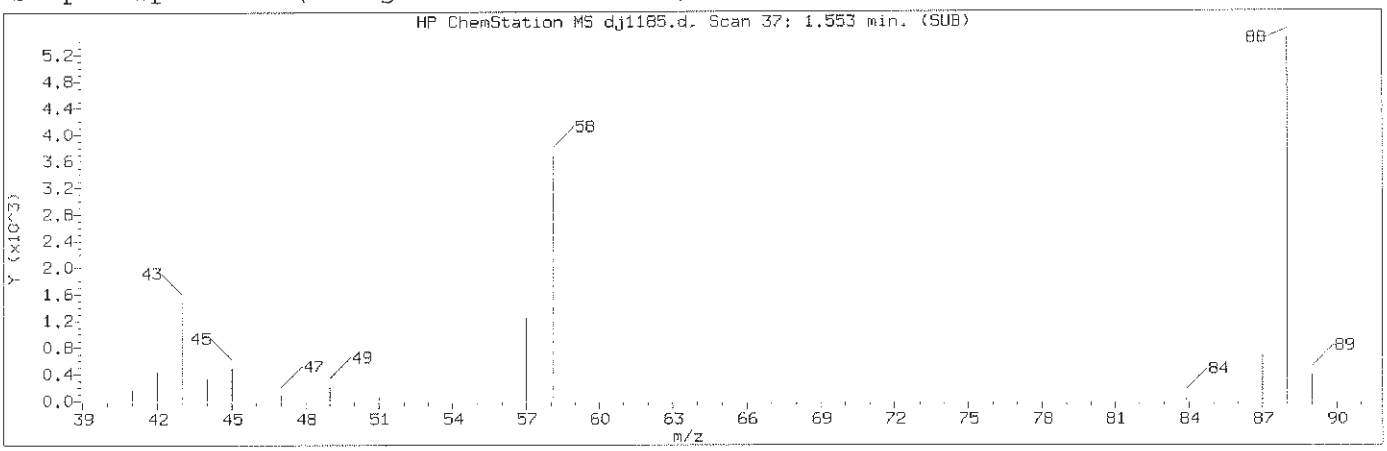
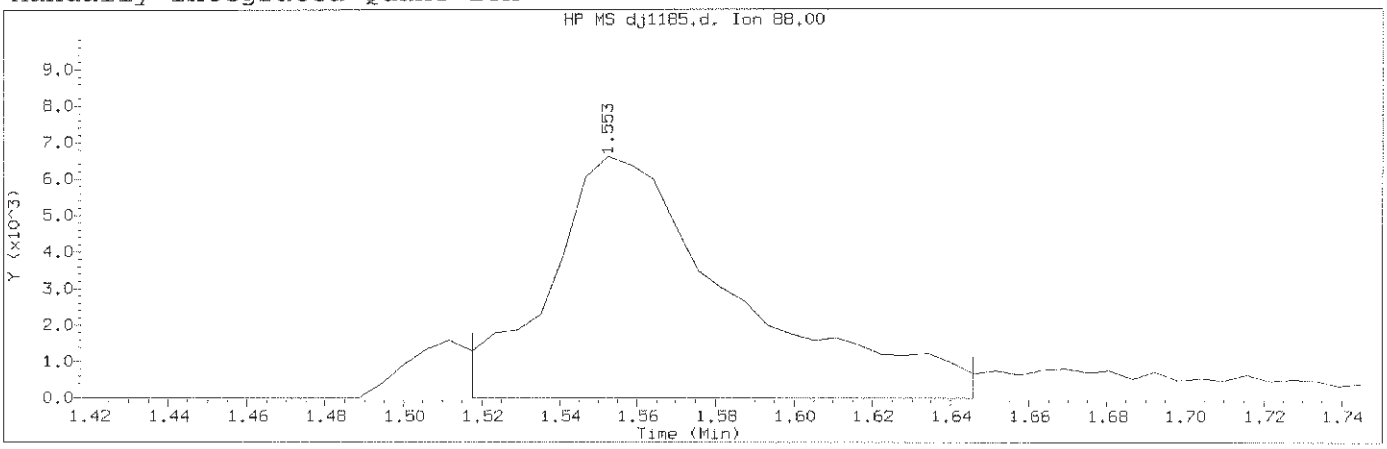
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 22269M		
On-Column Amount (ng/ul)	: 1.2719		
Integration start scan	: 30	Integration stop scan:	52
Y at integration start	: -1	Y at integration end:	-1

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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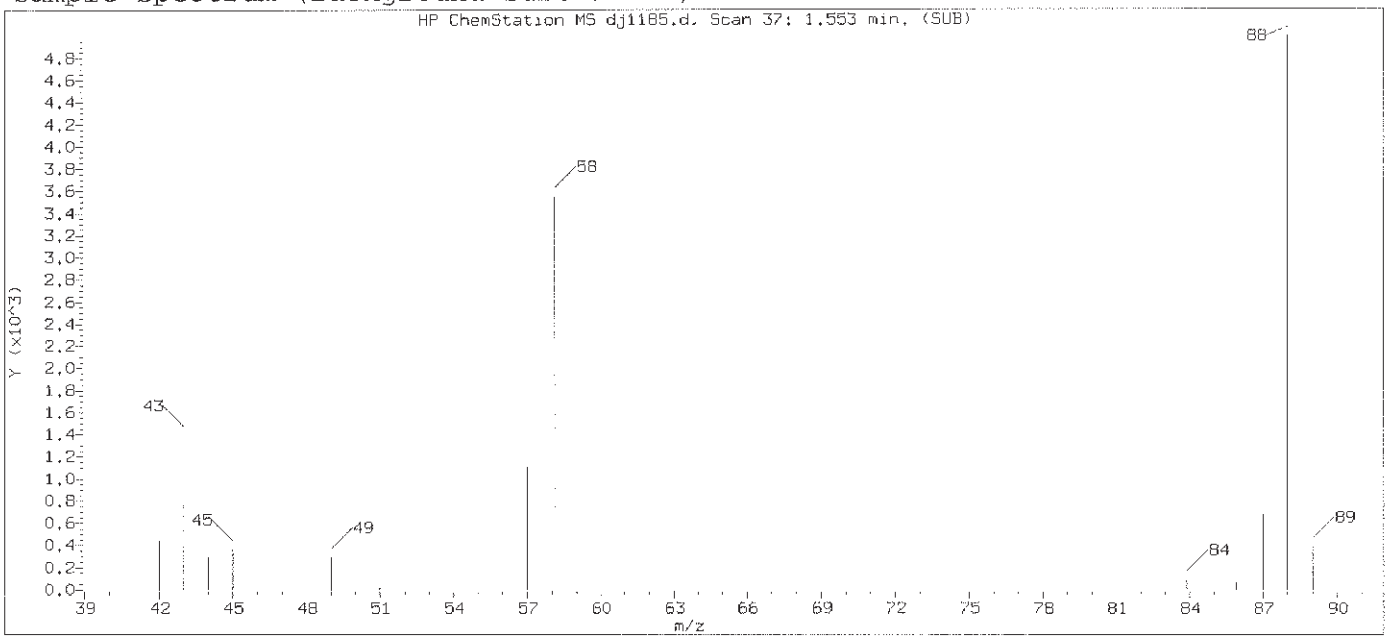
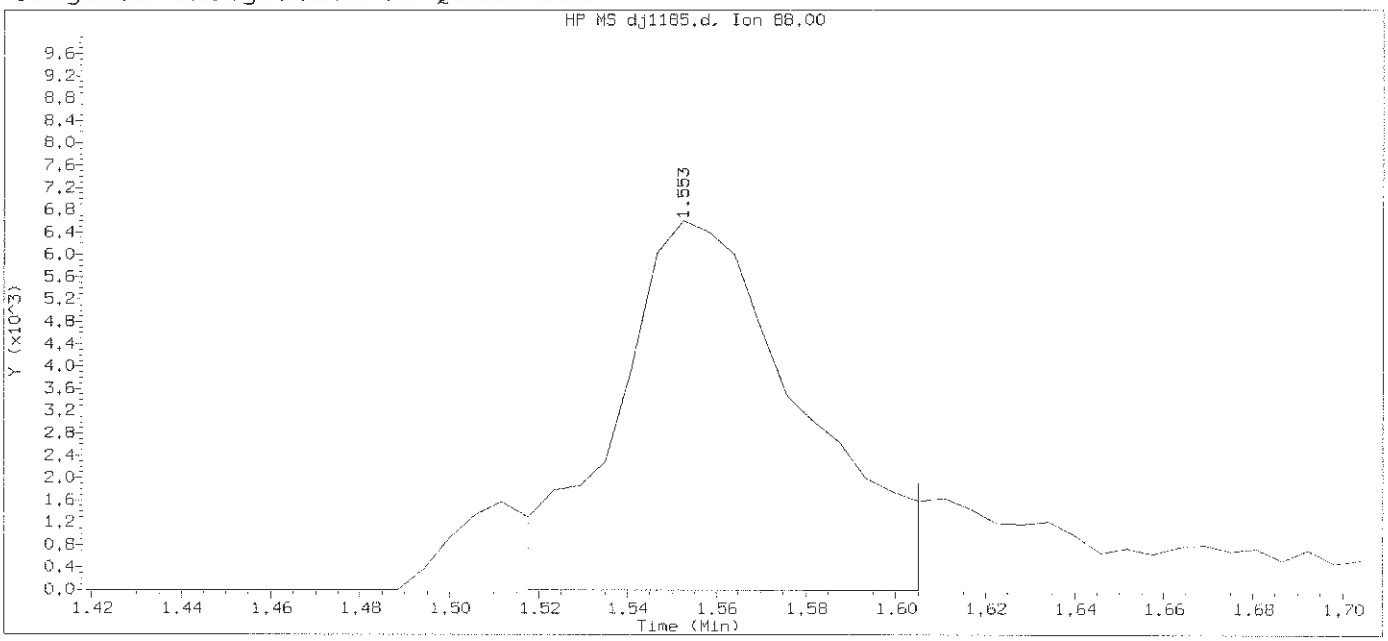
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 18846		
On-column Amount (ng/ul)	: 1.0953		
Integration start scan	: 30	Integration stop scan:	45
Y at integration start	: 0	Y at integration end:	0

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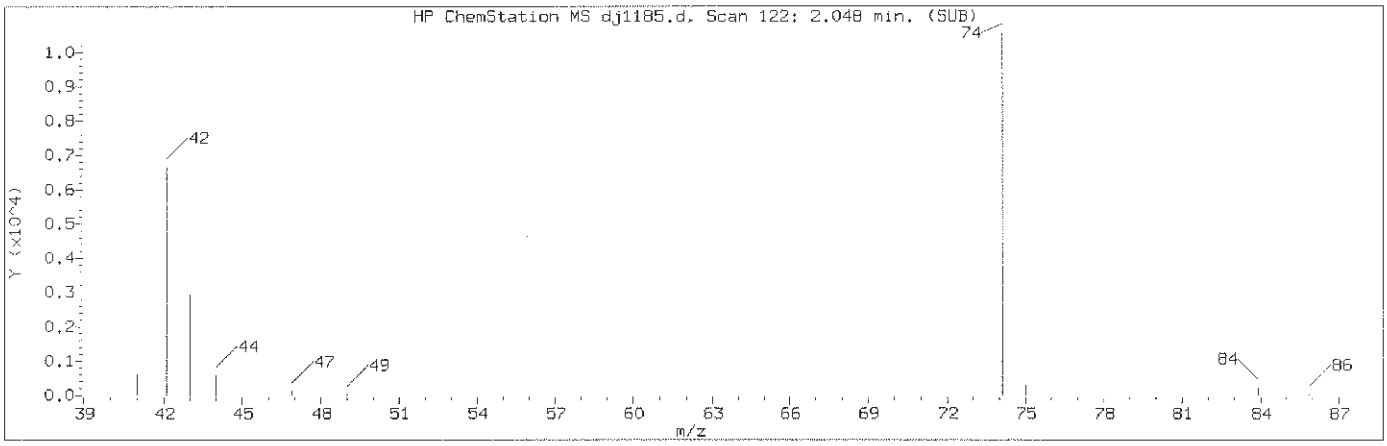
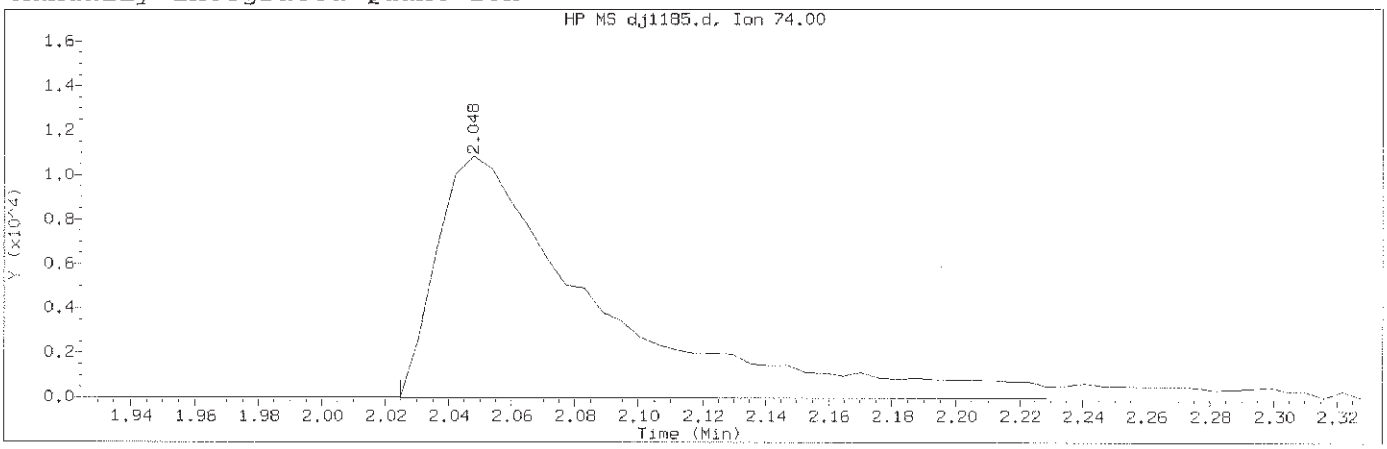
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area (flag)	: 38547M		
On-Column Amount (ng/ul)	: 1.2538		
Integration start scan	: 117	Integration stop scan:	152
Y at integration start	: -17	Y at integration end:	-17

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

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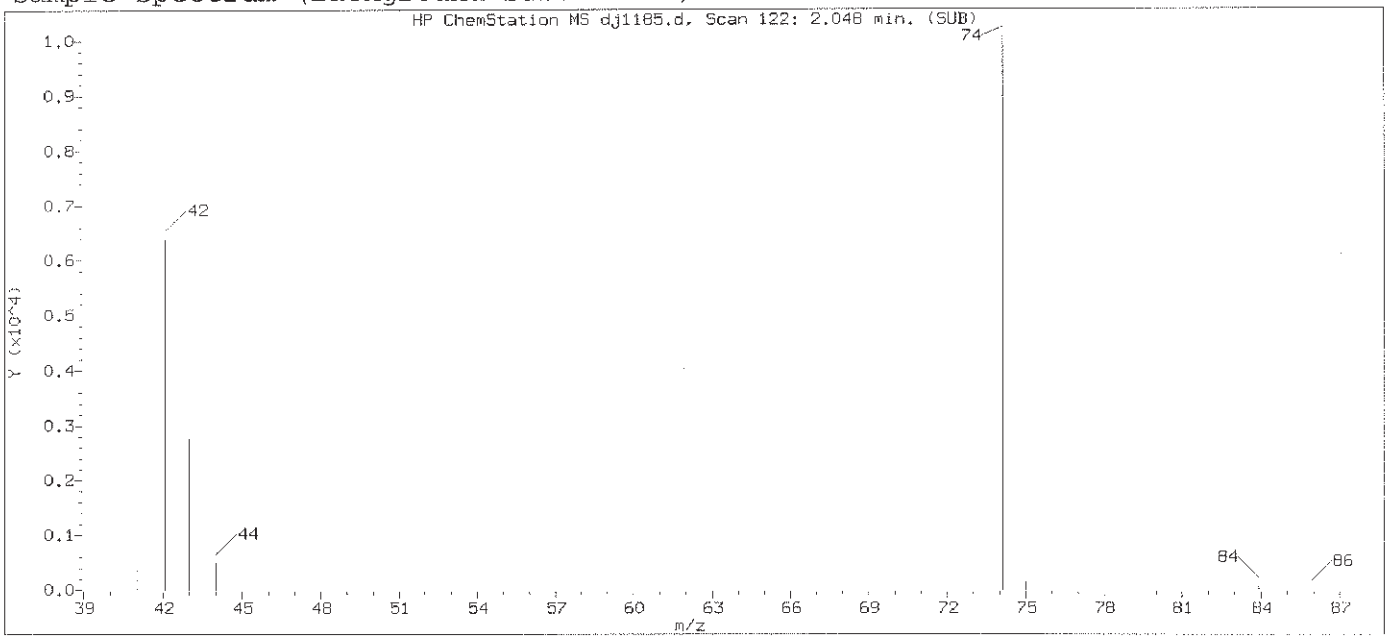
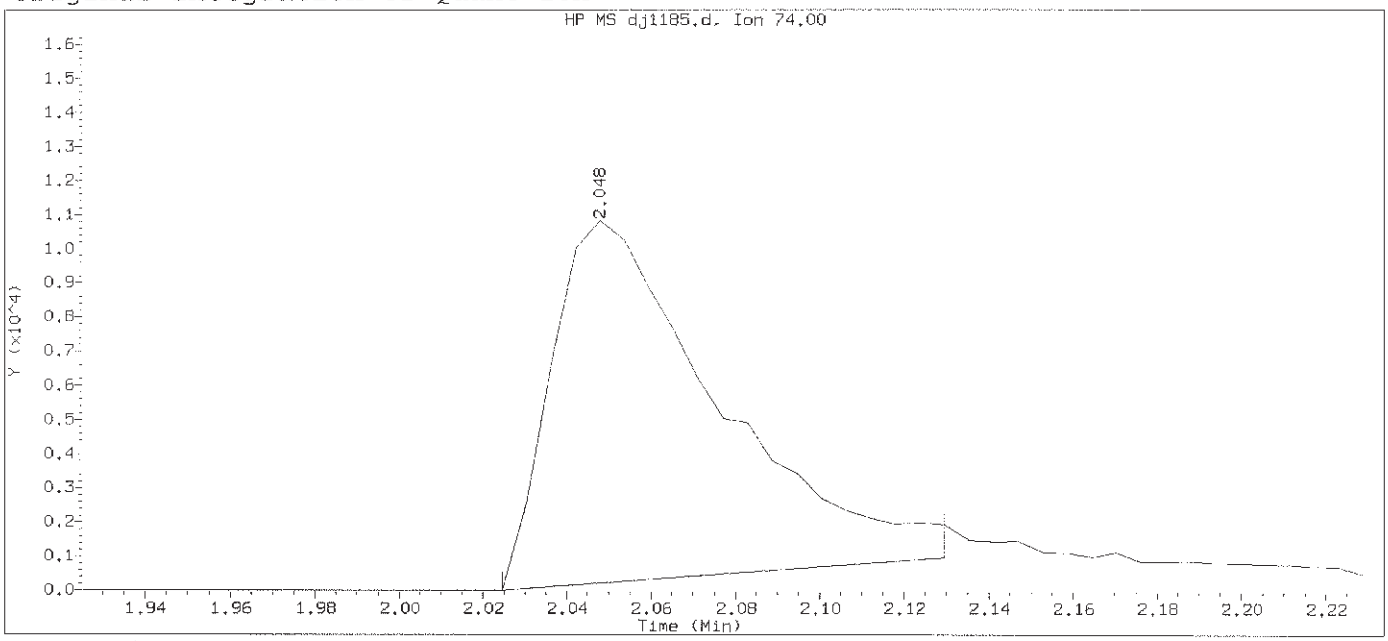
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area	: 29253		
On-column Amount (ng/ul)	: 1.0178		
Integration start scan	: 117	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	965

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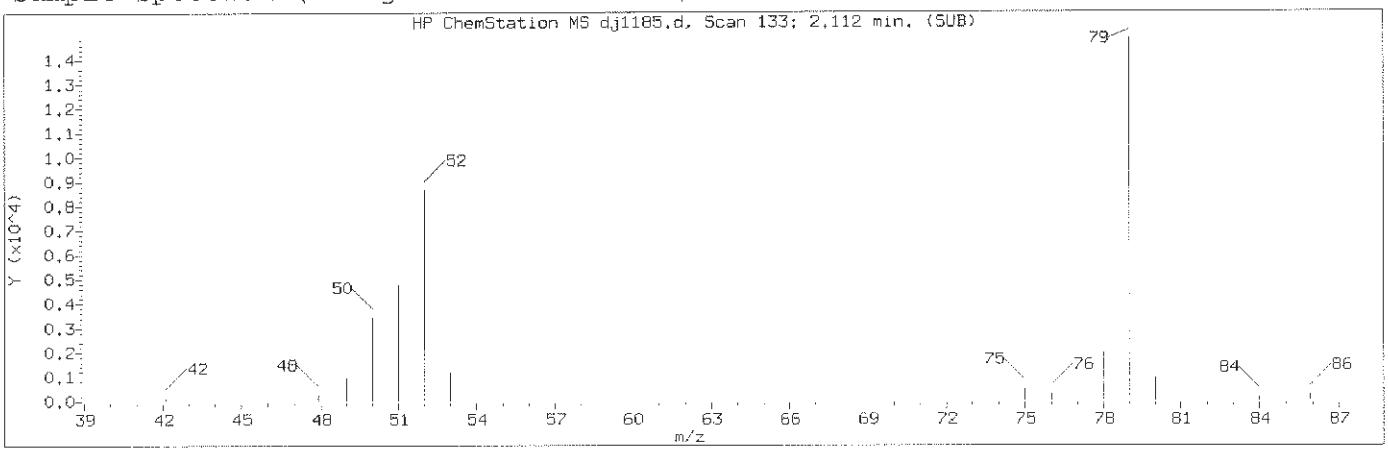
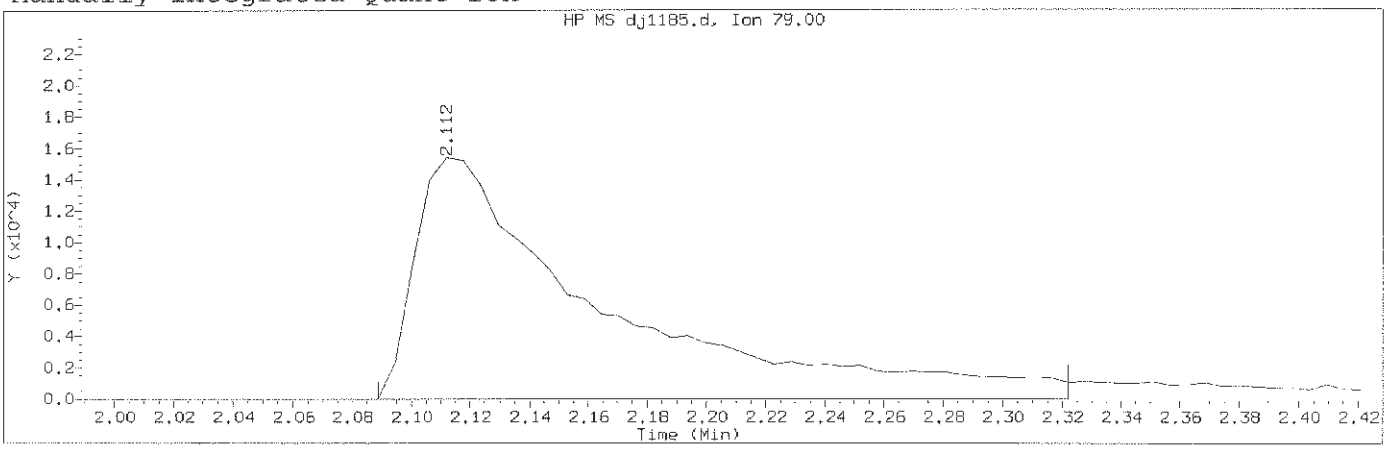
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area (flag)	: 67472M		
On-Column Amount (ng/ul)	: 1.2574		
Integration start scan	: 128	Integration stop scan:	168
Y at integration start	: -8	Y at integration end:	-8

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

GC/MS audit/management approval:_____

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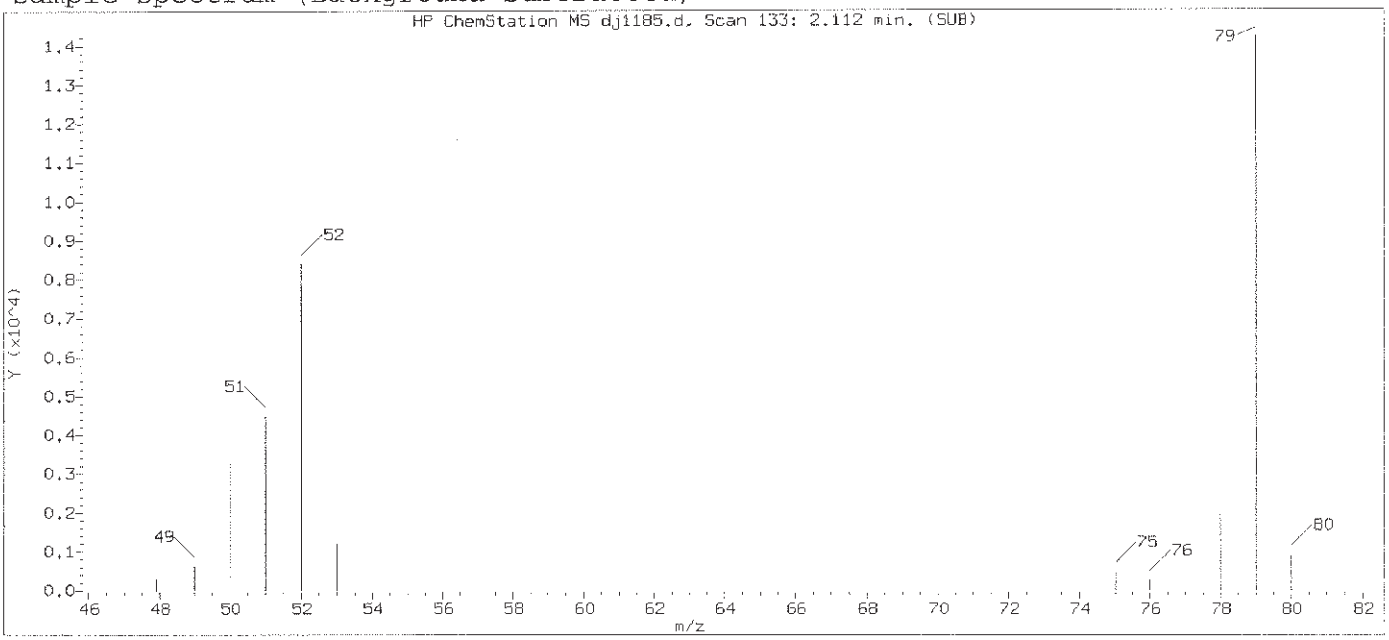
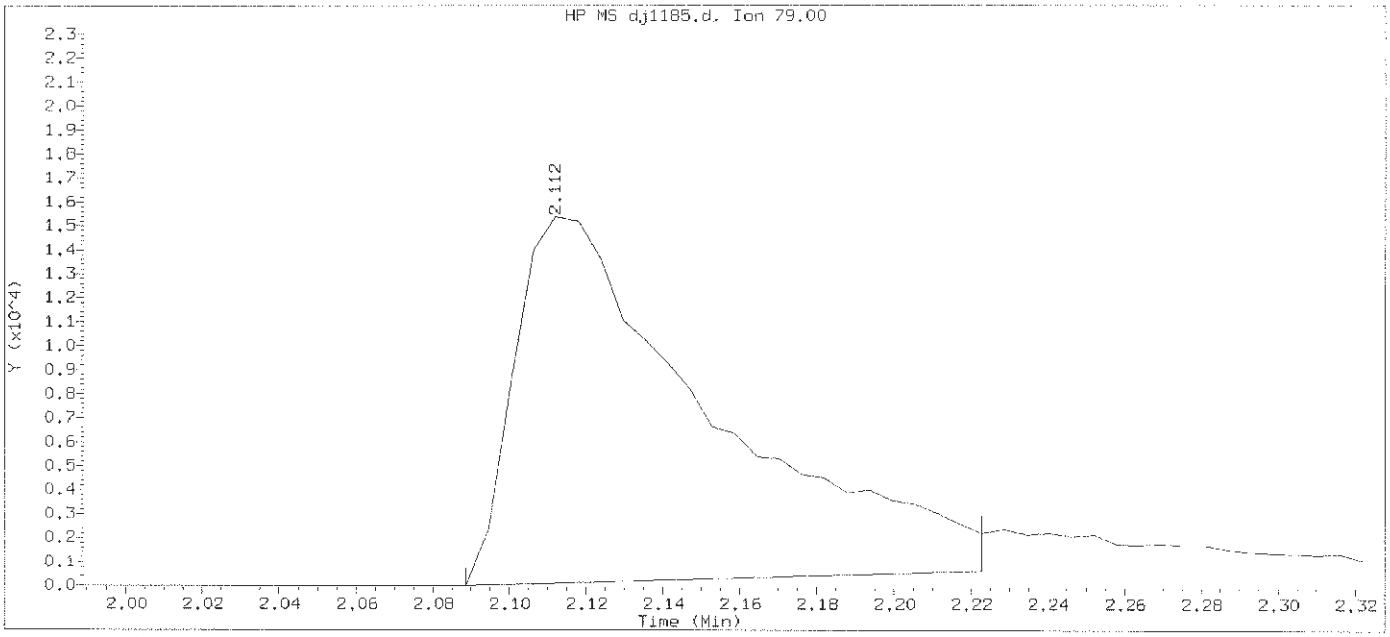
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area	: 54361		
On-column Amount (ng/ul)	: 1.0984		
Integration start scan	: 128	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	617

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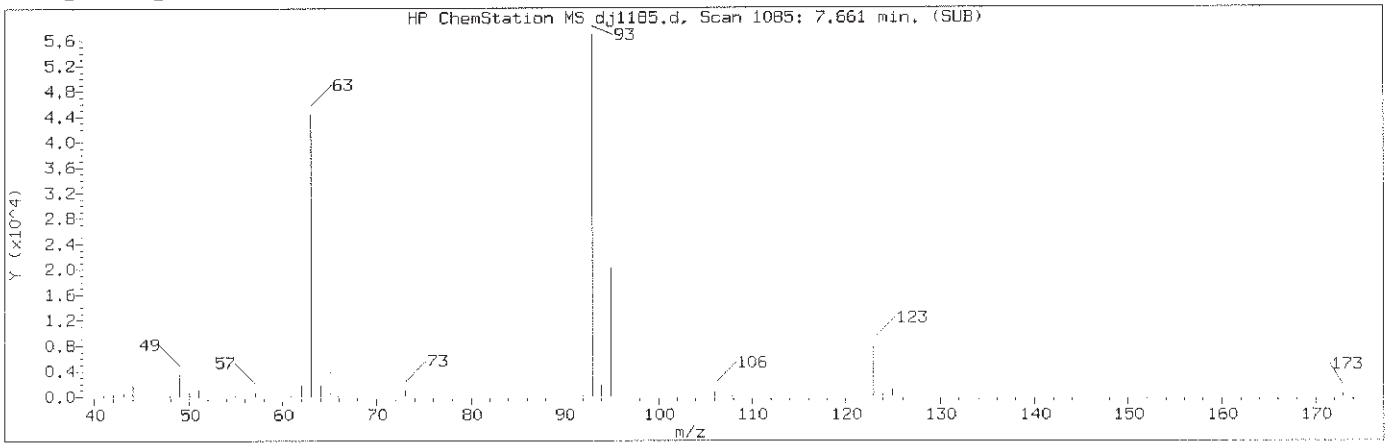
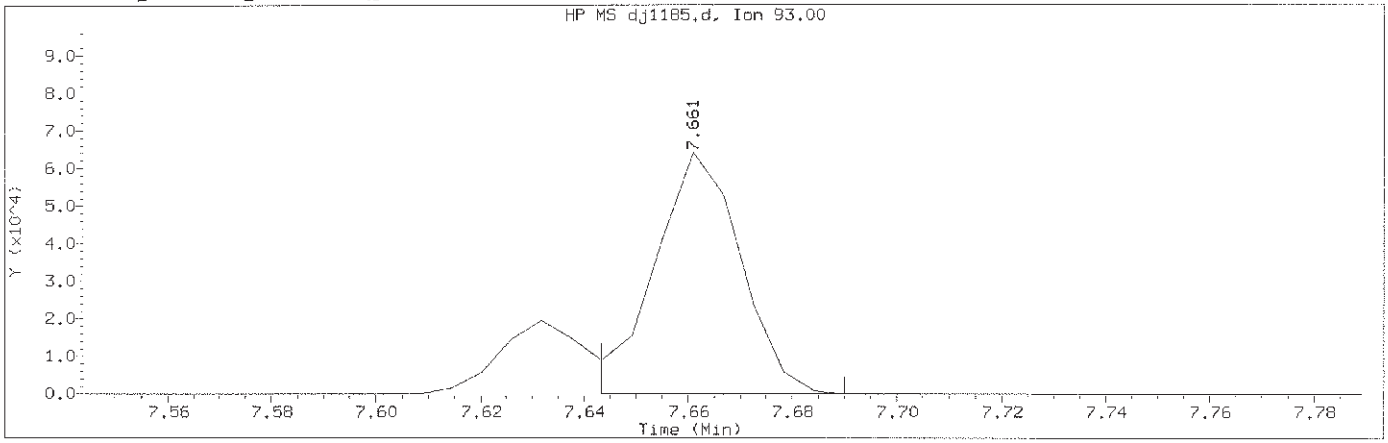
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1085		
Retention Time (minutes)	: 7.661		
Quant Ion	: 93.00		
Area (flag)	: 74668M		
On-Column Amount (ng/ul)	: 1.2637		
Integration start scan	: 1081	Integration stop scan:	1089
Y at integration start	: -3	Y at integration end:	-3

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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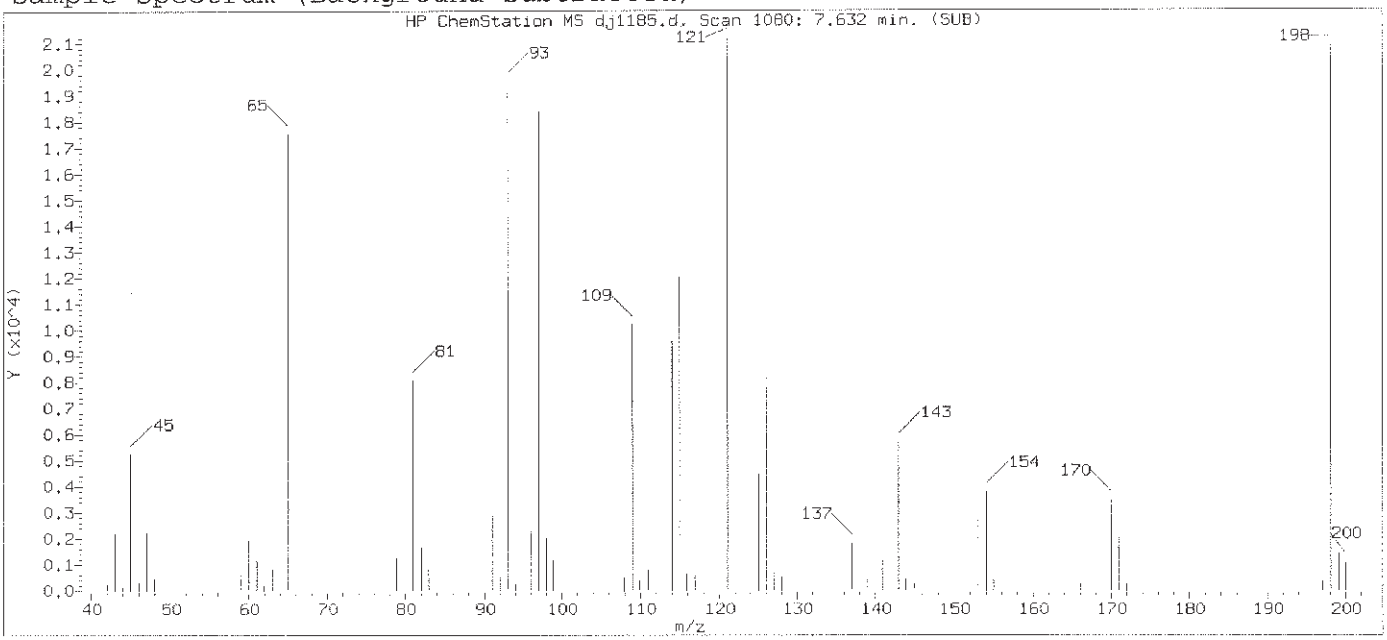
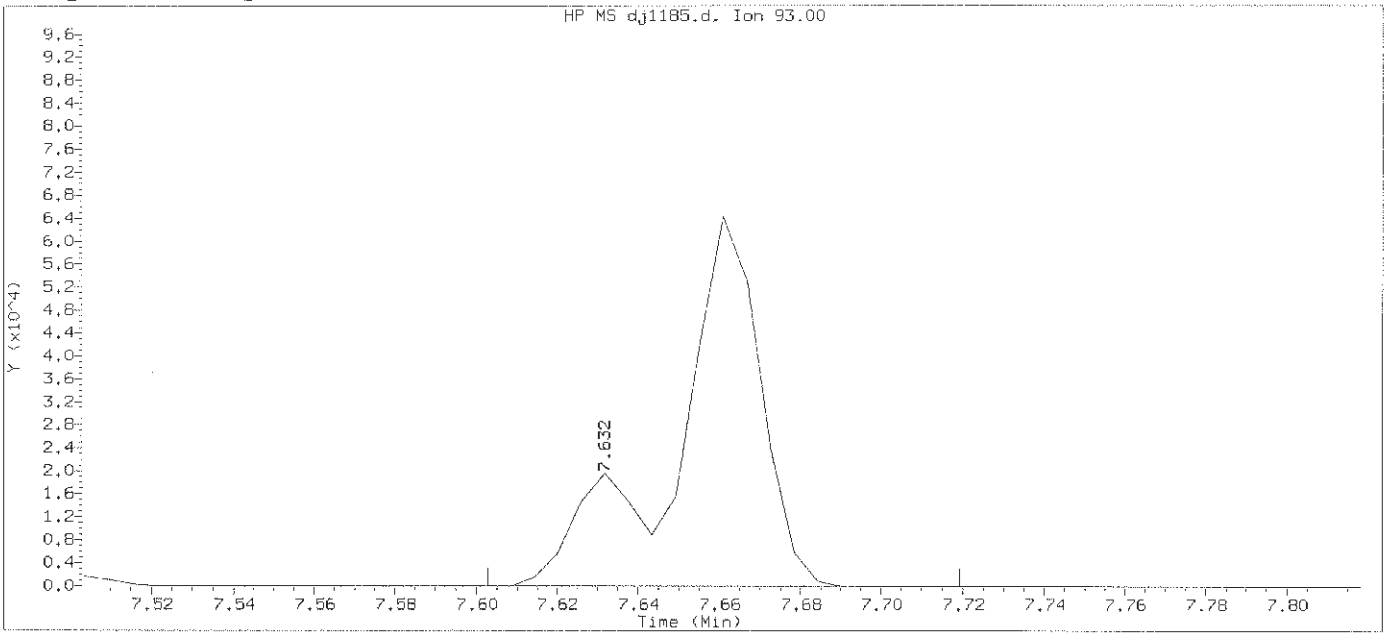
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



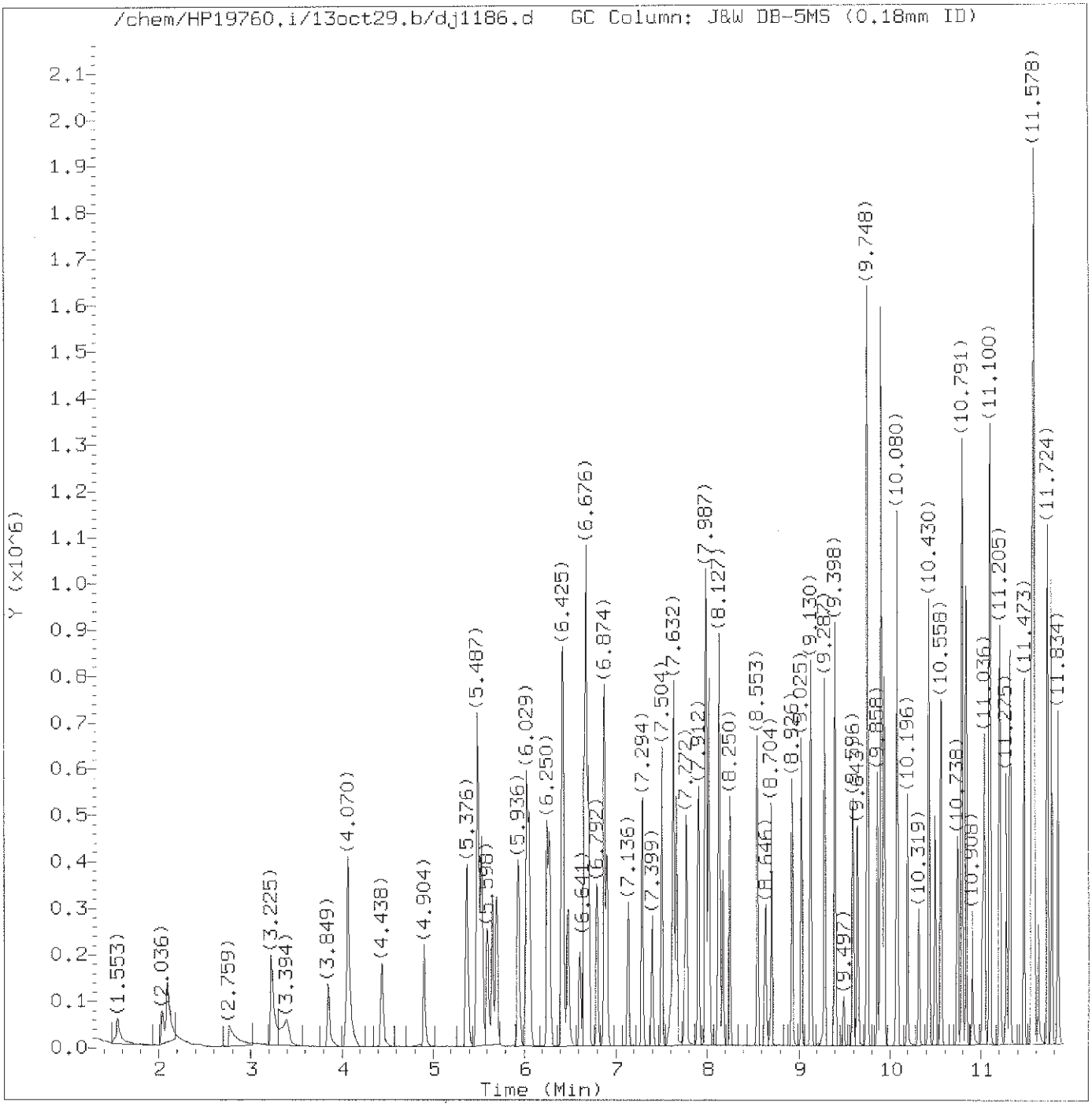
Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1080		
Retention Time (minutes)	: 7.632		
Quant Ion	: 93.00		
Area	: 94211		
On-column Amount (ng/ul)	: 1.4595		
Integration start scan	: 1074	Integration stop scan:	1094
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

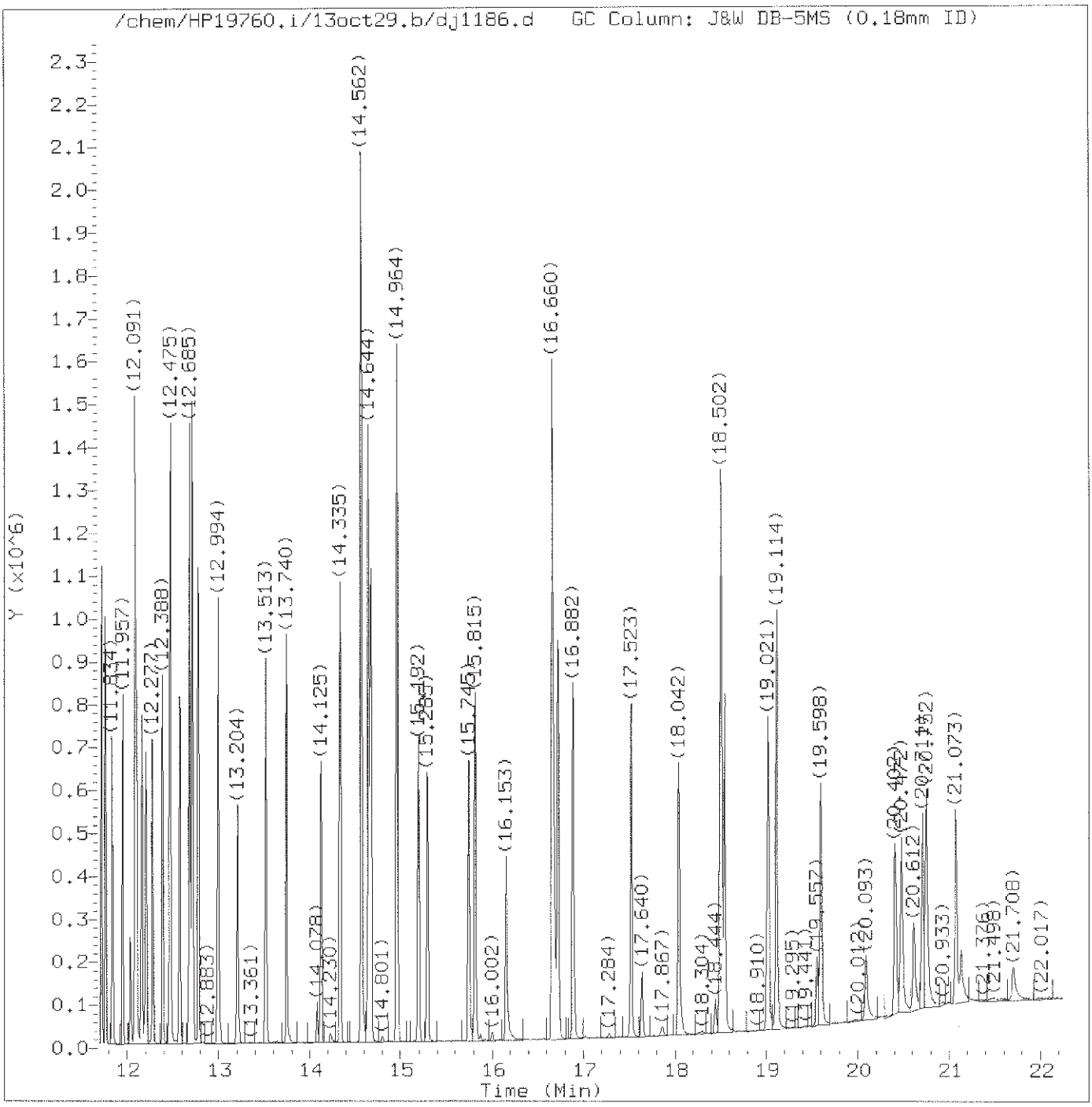
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	68392M	3.820
2) N-Nitrosodimethylamine	(1)	2.036	74	105553	3.447
3) Pyridine	(1)	2.095	79	177830	3.371
4) 2-Picoline	(1)	3.225	93	199277	3.552
5) N-Nitrosomethylethylamine	(1)	3.394	88	87323	3.644
6) Methyl methanesulfonate	(1)	3.849	80	99499	3.605
7)$2-Fluorophenol	(1)	4.070	112	301694	7.218
8) N-Nitrosodiethylamine	(1)	4.444	102	83412	3.614
10) Ethyl methanesulfonate	(1)	4.904	109	80657	3.604
11) Benzaldehyde	(1)	5.376	77	166226	4.049
12)$Phenol-d5	(1)	5.487	99	419689	7.277
13)$Phenol-d6	(1)	5.487	99	419689	7.277
14) Phenol	(1)	5.504	94	244417	3.645
15) Aniline	(1)	5.539	93	298601	3.632
16) bis(2-Chloroethyl)ether	(1)	5.656	93	192402	3.643
17) 2-Chlorophenol	(1)	5.703	128	148109	3.608
18) 1,3-Dichlorobenzene	(1)	5.936	146	163356	3.670
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	140563	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	164644	3.656
23) Benzyl alcohol	(1)	6.250	108	106806	3.682
24) 1,2-Dichlorobenzene	(1)	6.280	146	154923	3.685
25) Indene	(1)	6.414	115	305774	4.302
26) 2-Methylphenol	(1)	6.431	108	151928	3.670
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	241778	3.649
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	241778	3.649
29) N-Nitrosopyrrolidine	(1)	6.612	100	86112	3.682
30) Acetophenone	(1)	6.653	105	240525	3.708
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	139013	3.692
33) 4-Methylphenol	(1)	6.676	108	171824	3.698
32) N-Nitrosomorpholine	(1)	6.682	56	109527	3.660
34) o-Toluidine	(1)	6.705	106	263721	3.676
35) Hexachloroethane	(1)	6.792	117	69243	3.642
36)$Nitrobenzene-d5	(2)	6.874	82	374112	7.321
37) Nitrobenzene	(2)	6.903	77	198687	3.656
39) N-Nitrosopiperidine	(2)	7.136	114	81540	3.689
40) Isophorone	(2)	7.294	82	334673	3.635
42) 2-Nitrophenol	(2)	7.399	139	64142	3.557
45) 2,4-Dimethylphenol	(2)	7.504	107	165705	3.687
47) Benzoic acid	(2)	7.626	105	151594M	5.096
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	74096	3.723

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	222735	3.670
49) 2,4-Dichlorophenol	(2)	7.772	162	117512	3.735
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	129391	3.631
52)*Naphthalene-d8	(2)	7.987	136	552831	5.000
53) Naphthalene	(2)	8.022	128	439891	3.707
55) 4-Chloroaniline	(2)	8.127	127	178930	3.635
56) 2,6-Dichlorophenol	(2)	8.133	162	114671	3.774
57) Hexachloropropene	(2)	8.174	213	80240	3.665
58) Hexachlorobutadiene	(2)	8.250	225	75787	3.665
60) Quinoline	(2)	8.553	129	284083	3.613
61) Caprolactam	(2)	8.646	113	52556	3.743
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	124480	3.482
63) 4-Chloro-3-methylphenol	(2)	8.926	107	138946	3.672
64) Safrole	(2)	9.025	162	110360	3.705
65) 2-Methylnaphthalene	(2)	9.130	142	293792	3.718
66) 1-Methylnaphthalene	(2)	9.287	142	266959	3.729
67) Hexachlorocyclopentadiene	(3)	9.404	237	58106	3.459
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	135309	3.665
69) cis-Isosafrole	(3)	9.497	162	19222	3.611
70) 2,4,6-Trichlorophenol	(3)	9.596	196	83953	3.690
71) 2,4,5-Trichlorophenol	(3)	9.643	196	85454	3.642
72)$2-Fluorobiphenyl	(3)	9.748	172	593259	7.395
74) Isosafrole	(3)	9.858	162	112492	3.749
73) trans-Isosafrole	(3)	9.858	162	112492	3.749
75) 1,1'-Biphenyl	(3)	9.899	154	351719	3.766
76) 2-Chloronaphthalene	(3)	9.905	162	255632	3.599
77) 1-Chloronaphthalene	(3)	9.934	162	264305	3.721
82) Diphenyl ether	(3)	10.080	170	189965	3.707
83) 2-Nitroaniline	(3)	10.080	138	80534	3.765
84) 1,4-Naphthoquinone	(3)	10.196	158	108951	3.679
85) 1,4-Dinitrobenzene	(3)	10.319	168	35691	3.322
86) Dimethylphthalate	(3)	10.424	163	307320	3.819
87) 1,3-Dinitrobenzene	(3)	10.430	168	47338	3.517
88) 2,6-Dinitrotoluene	(3)	10.494	165	66555	3.845
90) Acenaphthylene	(3)	10.564	152	400060	3.737
91) 3-Nitroaniline	(3)	10.738	138	76037	3.831
92)*Acenaphthene-d10	(3)	10.791	164	315878	5.000
93) Acenaphthene	(3)	10.838	153	273437	3.671
94) 2,4-Dinitrophenol	(3)	10.908	184	44952	5.161
96) 4-Nitrophenol	(3)	11.018	109	45497	3.605

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	107060	3.618
97) Dibenzofuran	(3)	11.100	168	393706	3.717
98) 2,4-Dinitrotoluene	(3)	11.100	165	85005	3.844
99) 1-Naphthylamine	(3)	11.205	143	287654	3.778
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	70651	3.801
101) 2-Naphthylamine	(3)	11.316	143	298380	3.800
102) Diethylphthalate	(3)	11.473	149	289267	3.674
103) Fluorene	(3)	11.549	166	318814	3.754
104) Thionazin	(3)	11.566	107	64912	3.790
106) 5-Nitro-o-toluidine	(3)	11.572	152	87345	3.860
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	157117	3.707
107) 4-Nitroaniline	(3)	11.578	138	79776	3.860
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	34788	2.763
109) N-Nitrosodiphenylamine	(4)	11.724	169	255381	3.766
110) NDPA as diphenylamine	(4)	11.724	169	255381	3.766
111) 1,2-Diphenylhydrazine	(4)	11.764	77	405355	3.758
112)$2,4,6-Tribromophenol	(3)	11.840	330	60726	7.439
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	57370	3.748
116) 1,3,5-Trinitrobenzene	(4)	12.044	213	25031	3.082
117) Diallate (peak 1)	(4)	12.085	86	152285	2.840
118) Phorate	(4)	12.091	75	239579	3.760
119) Phenacetin	(4)	12.108	108	163548	3.755
120) 4-Bromophenyl-phenylether	(4)	12.161	248	78686	3.680
121) Diallate (peak 2)	(4)	12.190	86	20804	0.926
122) Hexachlorobenzene	(4)	12.207	284	76769	3.614
123) Dimethoate	(4)	12.277	87	148445	3.661
124) Atrazine	(4)	12.388	200	87367	3.990
125) Pentachlorophenol	(4)	12.458	266	47912	3.431
126) Pentachloronitrobenzene	(4)	12.475	237	37712	3.966
127) 4-Aminobiphenyl	(4)	12.475	169	316816	3.797
129) Pronamide	(4)	12.574	173	133638	3.866
130)*Phenanthrene-d10	(4)	12.685	188	538913	5.000
131) Phenanthrene	(4)	12.714	178	448337	3.662
133) Dinoseb	(4)	12.714	211	49773	3.127
134) Anthracene	(4)	12.778	178	453512	3.765
135) Carbazole	(4)	12.994	167	437915	3.761
136) Methyl parathion	(4)	13.204	109	96338	3.497
137) Di-n-butylphthalate	(4)	13.513	149	508920	3.728
138) Parathion	(4)	13.740	109	65531	3.646
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	21592	2.543

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	53847	3.771
142) Fluoranthene	(4)	14.335	202	510943	3.796
144) Benzidine	(5)	14.568	184	1018403	11.585
145)*Pyrene-d10	(5)	14.644	212	695223	5.000
146) Pyrene	(5)	14.673	202	539258	3.602
149)$Terphenyl-d14	(5)	14.964	244	640393	7.341
150) p-Dimethylaminoazobenzene	(5)	15.192	225	95700	3.823
151) Chlorobenzilate	(5)	15.285	139	148617	3.620
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	308612	3.671
153) Butylbenzylphthalate	(5)	15.815	149	230740	3.715
156) 2-Acetylaminofluorene	(5)	16.153	181	151546	3.218
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	160393	3.631
158) Benzo(a)anthracene	(5)	16.660	228	471516	3.825
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	84756	3.645
161) Chrysene	(5)	16.719	228	466993	3.779
162) bis(2-Ethylhexyl)phthalate	(5)	16.882	149	293533	3.608
165) 6-Methylchrysene	(5)	17.523	242	319217	3.750
166) Di-n-octylphthalate	(6)	18.042	149	445353	3.485
168) Benzo(b)fluoranthene	(6)	18.502	252	425715	3.764
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	192572	3.933
170) Benzo(k)fluoranthene	(6)	18.549	252	437867	3.799
171) Benzo(a)pyrene	(6)	19.021	252	376795	3.617
172)*Perylene-d12	(6)	19.114	264	486848	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	181235	3.734
174) Dibenz(a,h)acridine	(6)	20.402	279	232723	3.492
175) Dibenz(a,j)acridine	(6)	20.472	279	268607	3.742
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	350010	3.941
177) Dibenz(a,h)anthracene	(6)	20.752	278	293379	3.922
178) Benzo(g,h,i)perylene	(6)	21.073	276	286798	3.777
179) Diallate TRANS/CIS	(4)			173089	3.777
182) 2,4_2,6-Dinitrotoluenes	(3)			151560	7.689

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$ = Compound is a surrogate standard.

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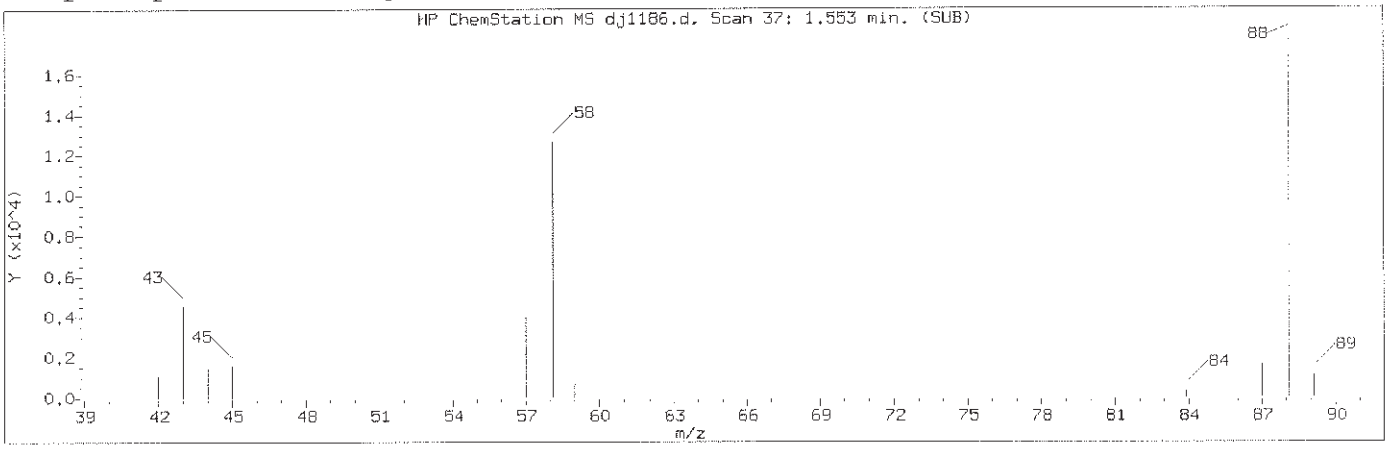
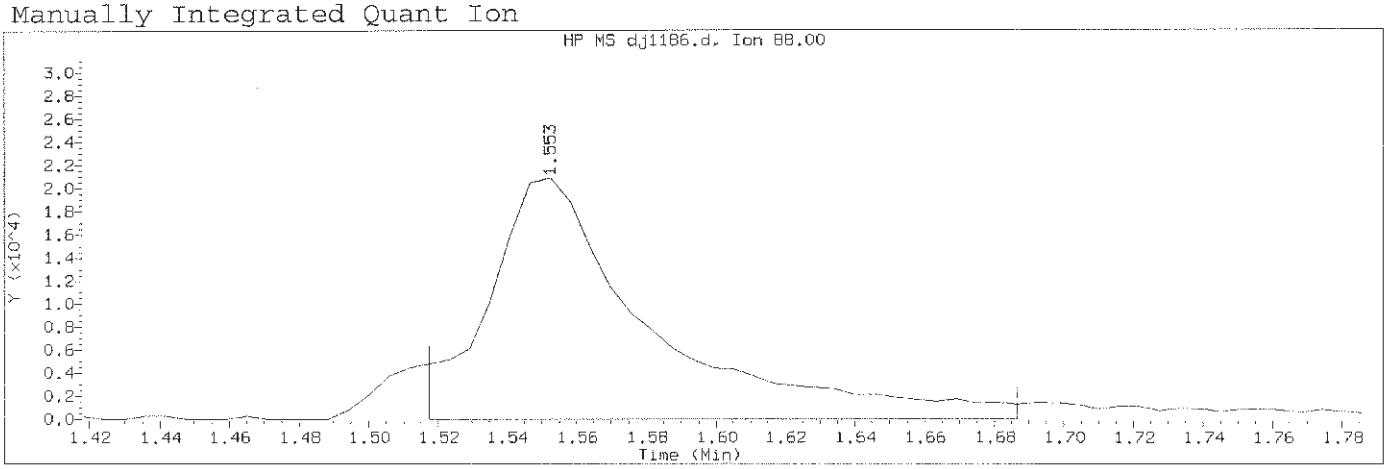
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 68392M		
On-Column Amount (ng/ul)	: 3.8203		
Integration start scan	: 30	Integration stop scan:	59
Y at integration start	: 3	Y at integration end:	3

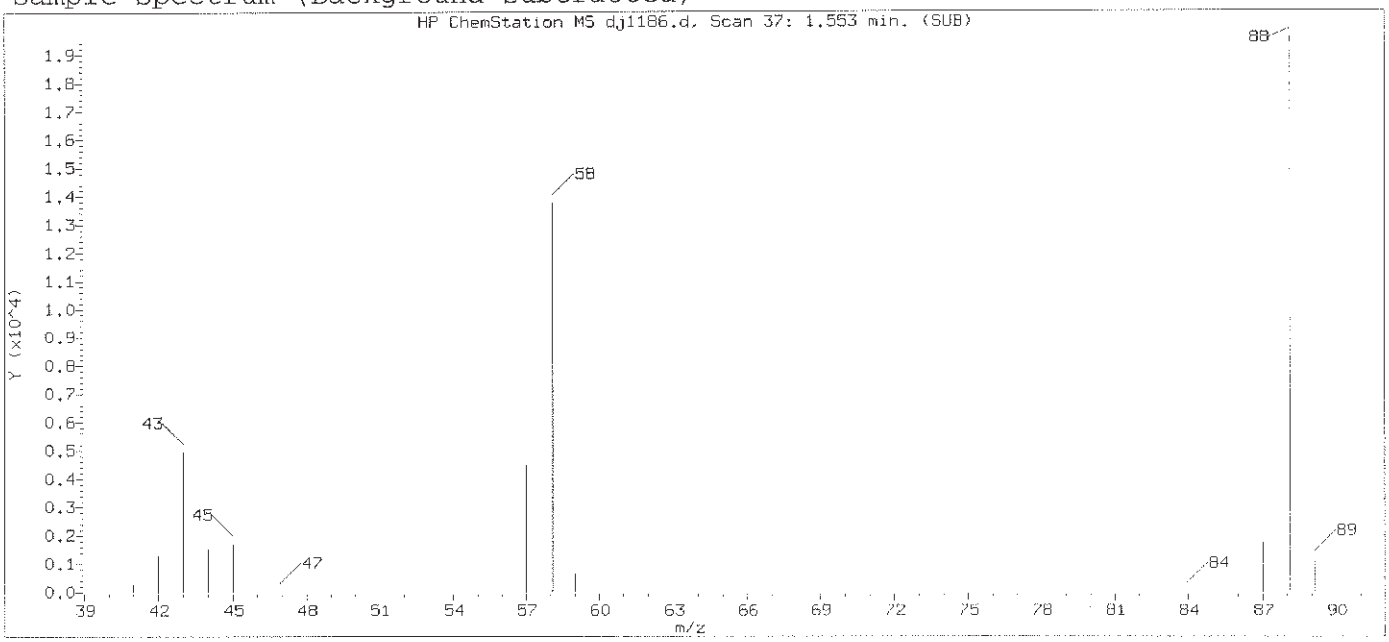
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

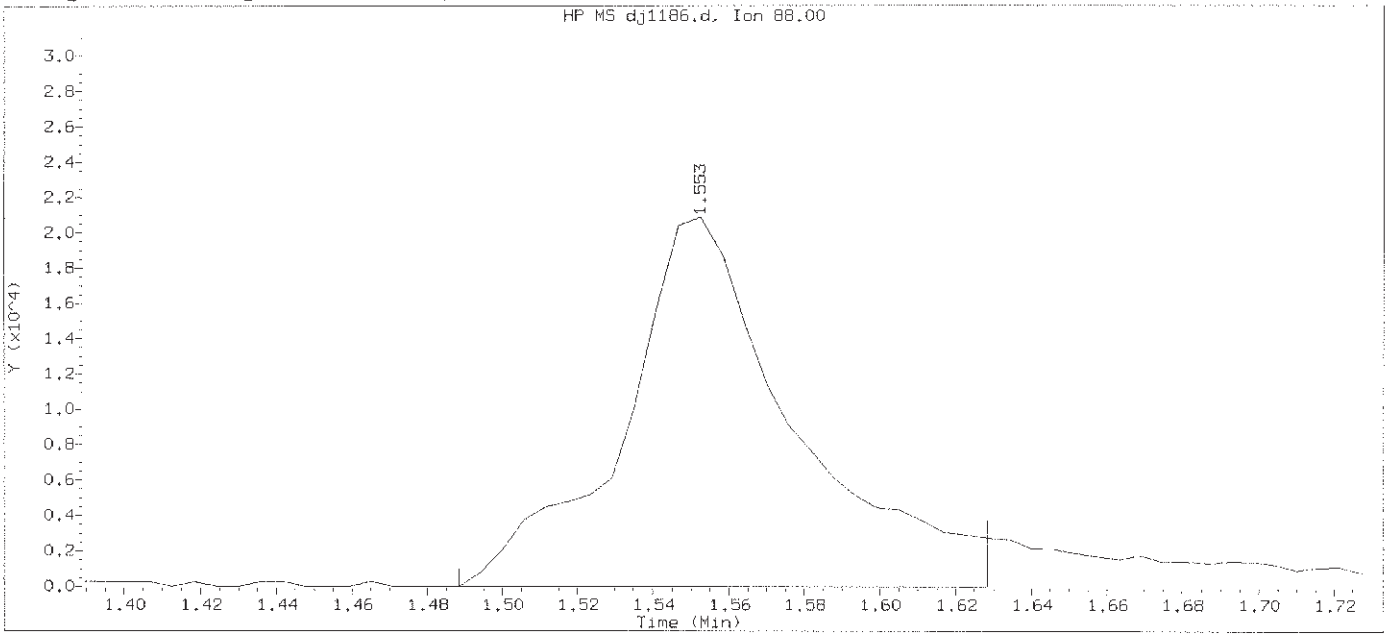
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

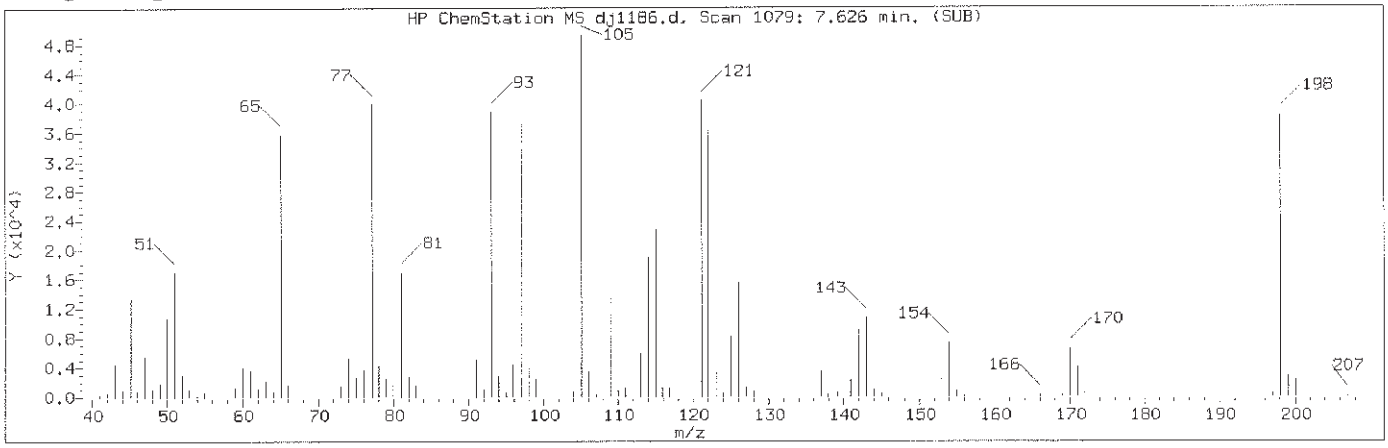
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

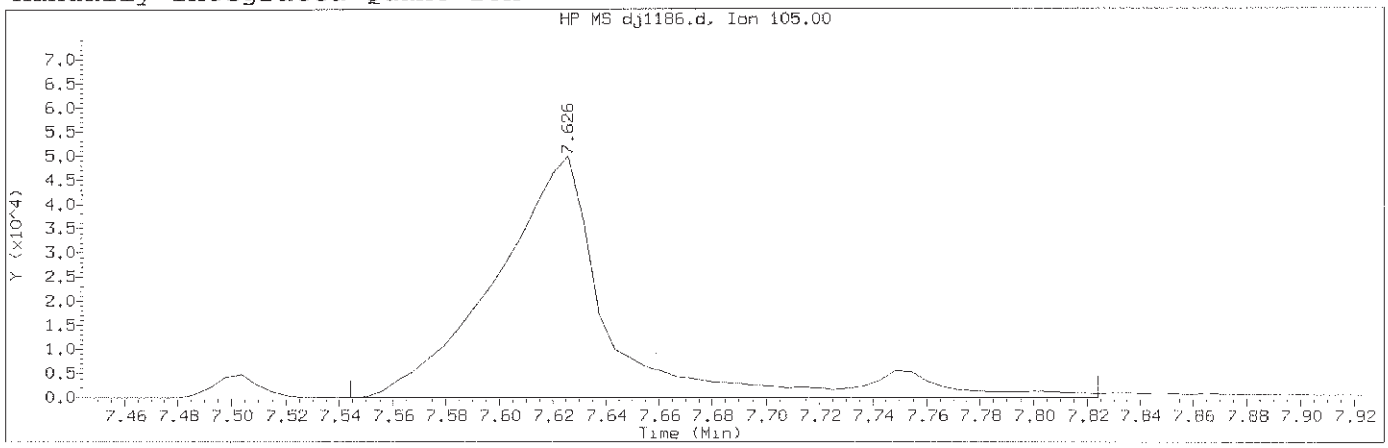
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 65518		
On-column Amount (ng/ul)	: 3.7471		
Integration start scan	: 25	Integration stop scan:	49
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area (flag)	: 151594M		
On-Column Amount (ng/ul)	: 5.0962		
Integration start scan	: 1064	Integration stop scan:	1112
Y at integration start	: 26	Y at integration end:	26

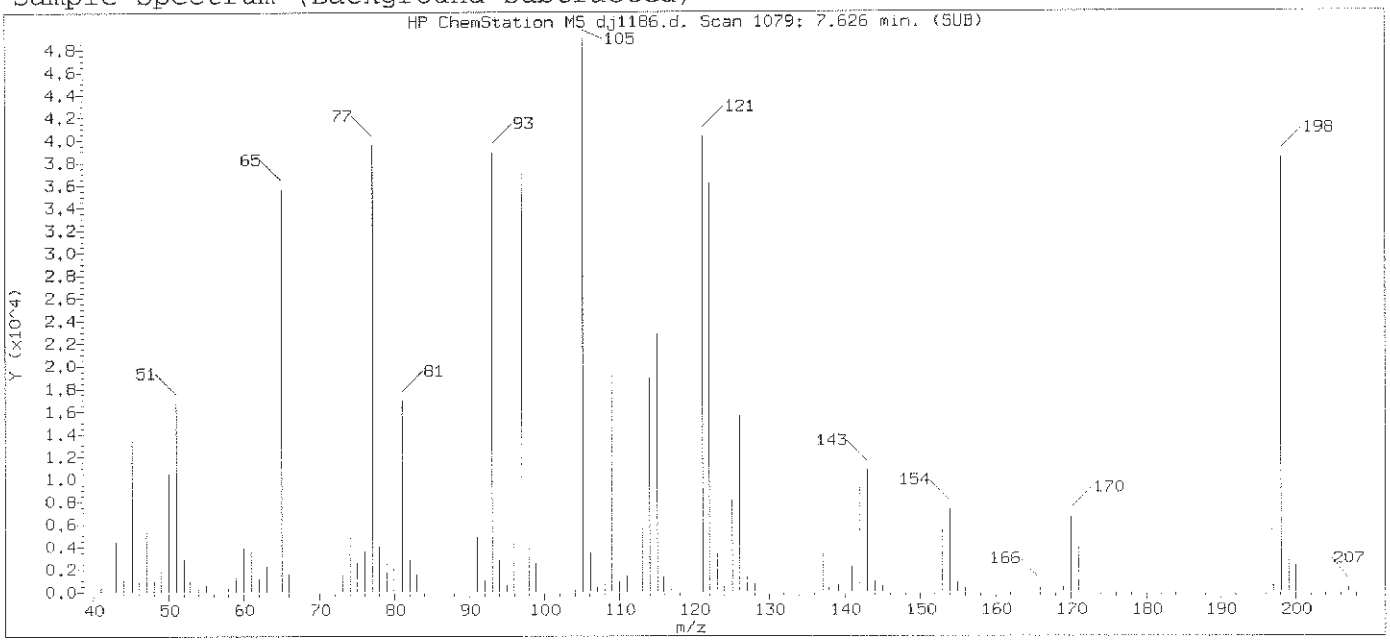
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

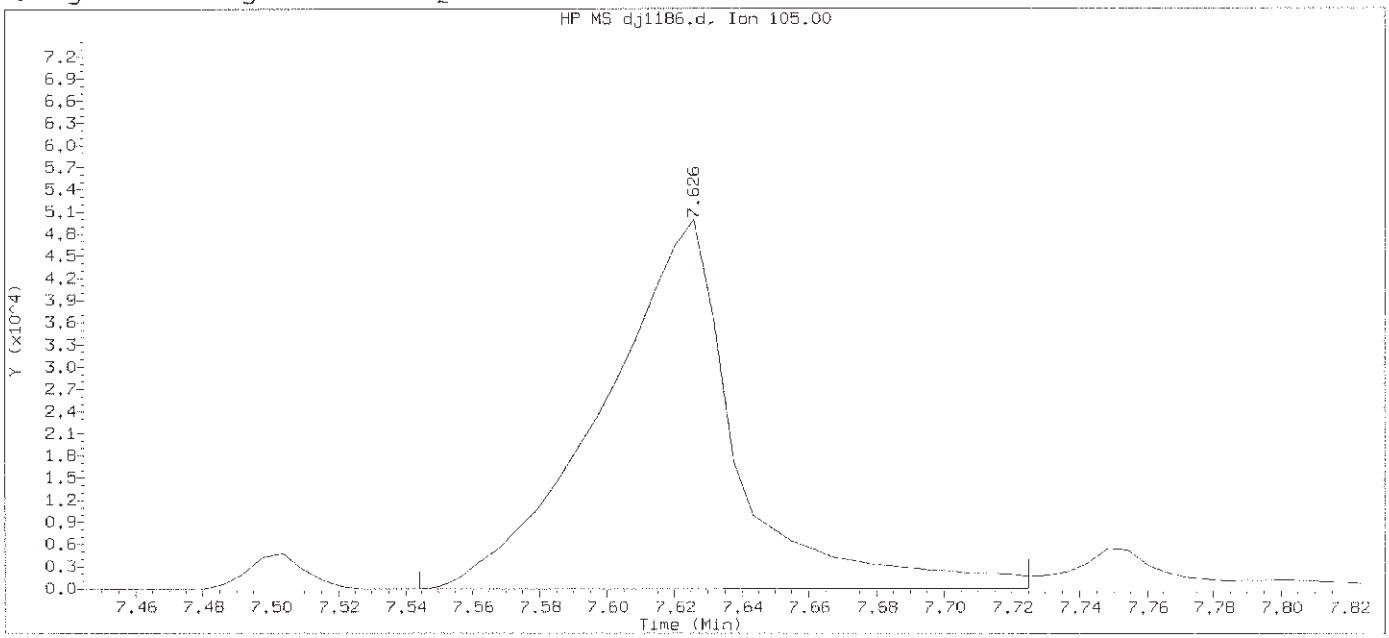
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



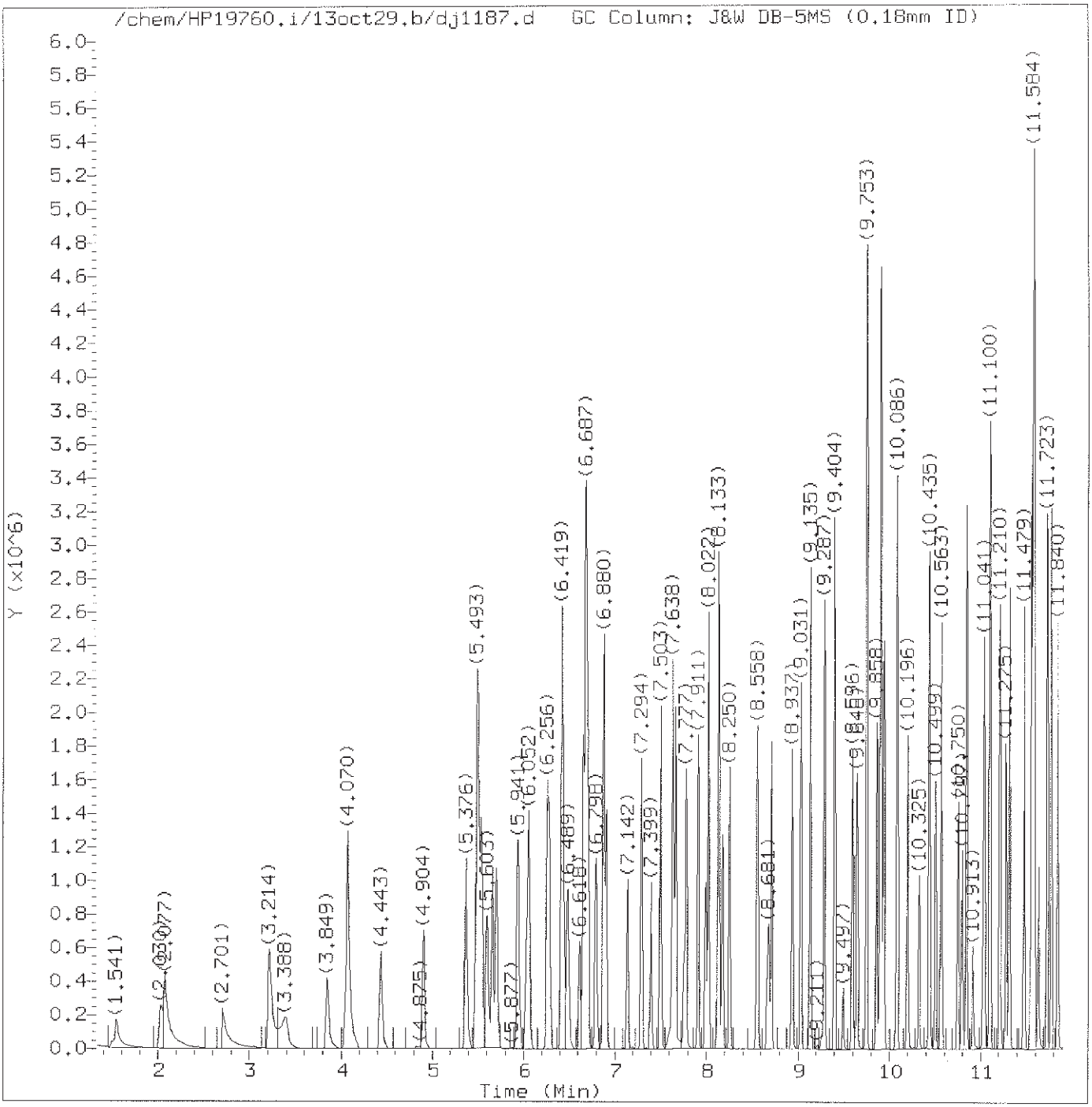
Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area	: 138684		
On-column Amount (ng/ul)	: 4.6933		
Integration start scan	: 1064	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	64

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

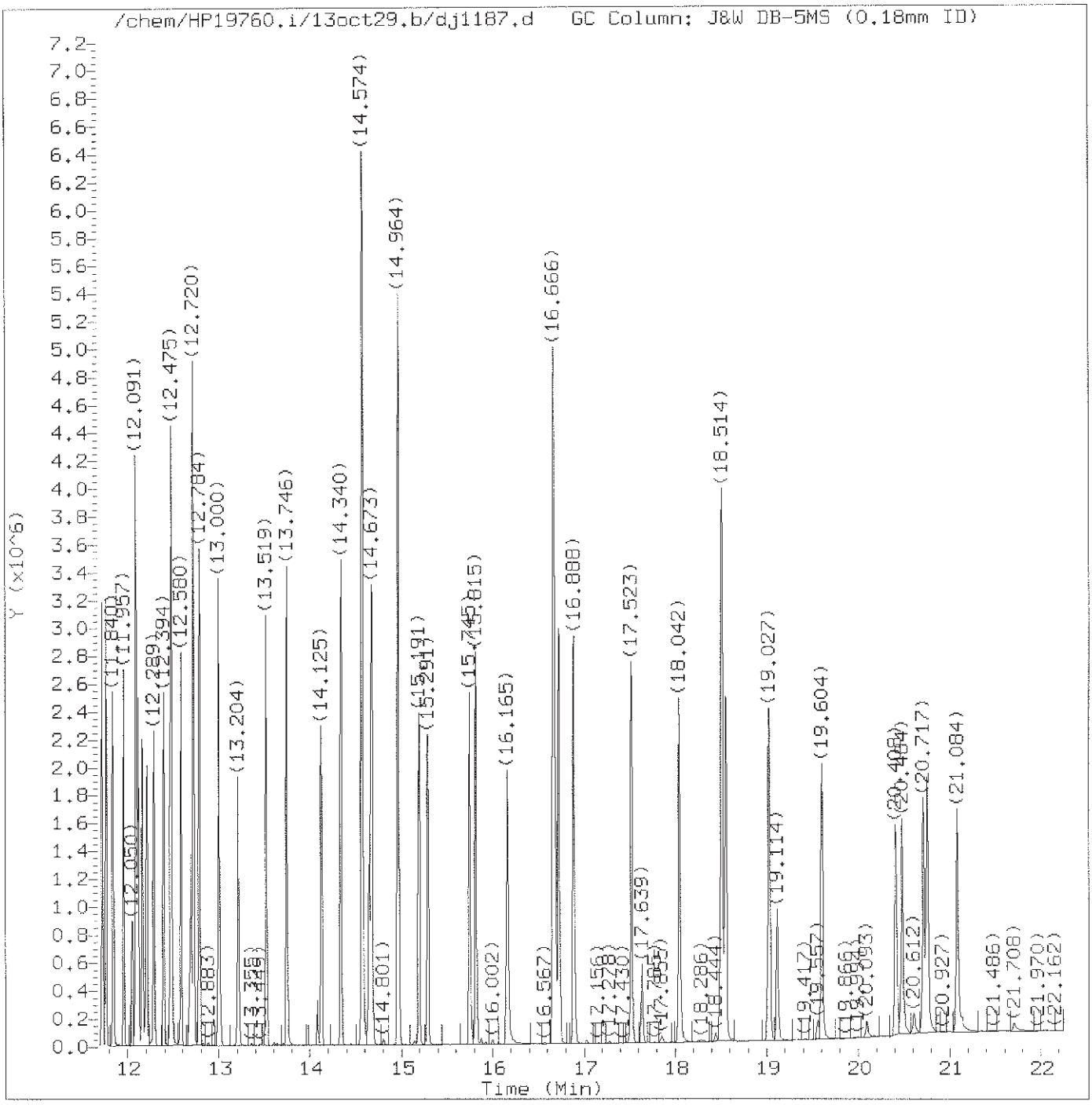
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.541	88	217441	12.323
2) N-Nitrosodimethylamine	(1)	2.030	74	406062	13.246
3) Pyridine	(1)	2.077	79	678751M	12.904
4) 2-Picoline	(1)	3.214	93	698067	12.567
5) N-Nitrosomethylethylamine	(1)	3.388	88	302408	12.715
6) Methyl methanesulfonate	(1)	3.849	80	339392	12.444
7)$2-Fluorophenol	(1)	4.070	112	1027222	24.873
8) N-Nitrosodiethylamine	(1)	4.443	102	288293	12.607
10) Ethyl methanesulfonate	(1)	4.904	109	273542	12.382
11) Benzaldehyde	(1)	5.376	77	498842	12.327
12)$Phenol-d5	(1)	5.493	99	1402775	24.658
13)$Phenol-d6	(1)	5.493	99	1402775	24.658
14) Phenol	(1)	5.510	94	804262	12.186
15) Aniline	(1)	5.539	93	997877	12.307
16) bis(2-Chloroethyl)ether	(1)	5.656	93	638471	12.268
17) 2-Chlorophenol	(1)	5.702	128	505845	12.466
18) 1,3-Dichlorobenzene	(1)	5.941	146	536362	12.235
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	139035	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	541731	12.216
23) Benzyl alcohol	(1)	6.256	108	359714	12.528
24) 1,2-Dichlorobenzene	(1)	6.279	146	510656	12.315
25) Indene	(1)	6.419	115	1031733	14.729
26) 2-Methylphenol	(1)	6.431	108	503066	12.321
28) bis(2-Chloroisopropyl)ether	(1)	6.483	45	774924	11.932
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.483	45	774924	11.932
29) N-Nitrosopyrrolidine	(1)	6.618	100	294760	12.700
30) Acetophenone	(1)	6.658	105	778913	12.197
33) 4-Methylphenol	(1)	6.682	108	562542	12.283
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	448321	12.112
32) N-Nitrosomorpholine	(1)	6.693	56	345597	11.804
34) o-Toluidine	(1)	6.711	106	865552	12.246
35) Hexachloroethane	(1)	6.798	117	228903	12.226
36)$Nitrobenzene-d5	(2)	6.880	82	1240362	24.944
37) Nitrobenzene	(2)	6.909	77	655195	12.403
39) N-Nitrosopiperidine	(2)	7.142	114	272572	12.640
40) Isophorone	(2)	7.294	82	1133725	12.623
42) 2-Nitrophenol	(2)	7.399	139	239011	13.414
45) 2,4-Dimethylphenol	(2)	7.503	107	557475	12.699
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	247315	12.721
47) Benzoic acid	(2)	7.667	105	346411	12.092

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	704841	12.020
49) 2,4-Dichlorophenol	(2)	7.777	162	399960	12.961
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	431091	12.439
52)*Naphthalene-d8	(2)	7.993	136	538194	5.000
53) Naphthalene	(2)	8.022	128	1432666	12.416
55) 4-Chloroaniline	(2)	8.133	127	593011	12.396
56) 2,6-Dichlorophenol	(2)	8.139	162	379233	12.765
57) Hexachloropropene	(2)	8.174	213	284301	13.190
58) Hexachlorobutadiene	(2)	8.255	225	253018	12.556
60) Quinoline	(2)	8.558	129	937990	12.296
61) Caprolactam	(2)	8.681	113	176749	12.843
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	409804	11.914
63) 4-Chloro-3-methylphenol	(2)	8.937	107	474792	12.822
64) Safrole	(2)	9.031	162	374498	12.843
65) 2-Methylnaphthalene	(2)	9.135	142	957535	12.456
66) 1-Methylnaphthalene	(2)	9.287	142	868136	12.462
67) Hexachlorocyclopentadiene	(3)	9.404	237	218343	13.052
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	441807	12.206
69) cis-Isosafrole	(3)	9.497	162	67577	12.824
70) 2,4,6-Trichlorophenol	(3)	9.596	196	294243	13.023
71) 2,4,5-Trichlorophenol	(3)	9.648	196	303624	13.029
72)$2-Fluorobiphenyl	(3)	9.753	172	1884573	24.036
74) Isosafrole	(3)	9.858	162	376749	12.707
73) trans-Isosafrole	(3)	9.858	162	376749	12.707
75) 1,1'-Biphenyl	(3)	9.899	154	1091015	11.963
76) 2-Chloronaphthalene	(3)	9.905	162	835373	12.031
77) 1-Chloronaphthalene	(3)	9.940	162	833324	12.006
82) Diphenyl ether	(3)	10.080	170	611099	12.171
83) 2-Nitroaniline	(3)	10.086	138	285422	13.363
84) 1,4-Naphthoquinone	(3)	10.196	158	389887	13.184
85) 1,4-Dinitrobenzene	(3)	10.325	168	143389	13.326
86) Dimethylphthalate	(3)	10.429	163	969956	12.291
87) 1,3-Dinitrobenzene	(3)	10.435	168	172282	12.895
88) 2,6-Dinitrotoluene	(3)	10.499	165	226524	13.150
90) Acenaphthylene	(3)	10.563	152	1309652	12.434
91) 3-Nitroaniline	(3)	10.750	138	260480	13.181
92)*Acenaphthene-d10	(3)	10.797	164	311099	5.000
93) Acenaphthene	(3)	10.843	153	871740	11.967
94) 2,4-Dinitrophenol	(3)	10.913	184	94123	11.318
96) 4-Nitrophenol	(3)	11.030	109	164665	13.091

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.041	250	351717	12.139
97) Dibenzofuran	(3)	11.100	168	1252587	12.086
98) 2,4-Dinitrotoluene	(3)	11.111	165	289819	13.165
99) 1-Naphthylamine	(3)	11.210	143	927610	12.390
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	235067	12.782
101) 2-Naphthylamine	(3)	11.315	143	938106	12.190
102) Diethylphthalate	(3)	11.479	149	950623	12.308
103) Fluorene	(3)	11.554	166	1025190	12.292
104) Thionazin	(3)	11.572	107	206142	12.268
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	494846	11.957
106) 5-Nitro-o-toluidine	(3)	11.584	152	275986	12.403
107) 4-Nitroaniline	(3)	11.589	138	262921	12.847
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	155613	12.691
109) N-Nitrosodiphenylamine	(4)	11.729	169	806574	12.314
110) NDPA as diphenylamine	(4)	11.729	169	806574	12.314
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1276195	12.259
112)$2,4,6-Tribromophenol	(3)	11.840	330	205883	25.506
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	188239	12.662
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	115384	14.175
117) Diallate (peak 1)	(4)	12.091	86	478759	9.243
118) Phorate	(4)	12.096	75	760126	12.352
119) Phenacetin	(4)	12.120	108	577166	13.468
120) 4-Bromophenyl-phenylether	(4)	12.166	248	256706	12.410
121) Diallate (peak 2)	(4)	12.190	86	69285	3.172
122) Hexachlorobenzene	(4)	12.213	284	247689	12.101
123) Dimethoate	(4)	12.289	87	513340	12.950
124) Atrazine	(4)	12.394	200	266901	12.569
125) Pentachlorophenol	(4)	12.464	266	187965	13.591
126) Pentachloronitrobenzene	(4)	12.475	237	127220	13.572
127) 4-Aminobiphenyl	(4)	12.481	169	1049406	12.900
129) Pronamide	(4)	12.580	173	462653	13.578
130)*Phenanthrene-d10	(4)	12.691	188	522070	5.000
131) Phenanthrene	(4)	12.720	178	1401469	11.910
133) Dinoseb	(4)	12.720	211	231968	14.455
134) Anthracene	(4)	12.784	178	1458971	12.503
135) Carbazole	(4)	13.000	167	1415513	12.541
136) Methyl parathion	(4)	13.204	109	368685	13.531
137) Di-n-butylphthalate	(4)	13.519	149	1710230	12.844
138) Parathion	(4)	13.746	109	238421	13.437
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	124164	14.493

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	179675	12.905
142) Fluoranthene	(4)	14.340	202	1677613	12.813
144) Benzidine	(5)	14.574	184	3386718	39.510
145)*Pyrene-d10	(5)	14.644	212	668822	5.000
146) Pyrene	(5)	14.679	202	1733287	12.100
149)$Terphenyl-d14	(5)	14.964	244	2065792	24.678
150) p-Dimethylaminoazobenzene	(5)	15.197	225	356781	14.372
151) Chlorobenzilate	(5)	15.291	139	514982	12.928
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	1162212	13.953
153) Butylbenzylphthalate	(5)	15.815	149	786237	13.021
156) 2-Acetylaminofluorene	(5)	16.165	181	643223	13.823
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	576125	13.333
158) Benzo(a)anthracene	(5)	16.666	228	1595523	13.310
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	307206	13.469
161) Chrysene	(5)	16.730	228	1497033	12.578
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1043912	13.163
165) 6-Methylchrysene	(5)	17.523	242	1098857	13.257
166) Di-n-octylphthalate	(6)	18.042	149	1716460	13.846
168) Benzo(b)fluoranthene	(6)	18.508	252	1396180	12.990
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	654651	13.855
170) Benzo(k)fluoranthene	(6)	18.560	252	1416406	12.941
171) Benzo(a)pyrene	(6)	19.027	252	1296417	13.081
172)*Perylene-d12	(6)	19.114	264	459604	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	634593	13.604
174) Dibenz(a,h)acridine	(6)	20.408	279	876116	13.616
175) Dibenz(a,j)acridine	(6)	20.484	279	946076	13.642
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1208834	14.108
177) Dibenz(a,h)anthracene	(6)	20.758	278	1044758	14.417
178) Benzo(g,h,i)perylene	(6)	21.084	276	987567	13.580
179) Diallate TRANS/CIS	(4)			548044	12.369
182) 2,4_2,6-Dinitrotoluenes	(3)			516343	26.315

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$ = Compound is a surrogate standard.

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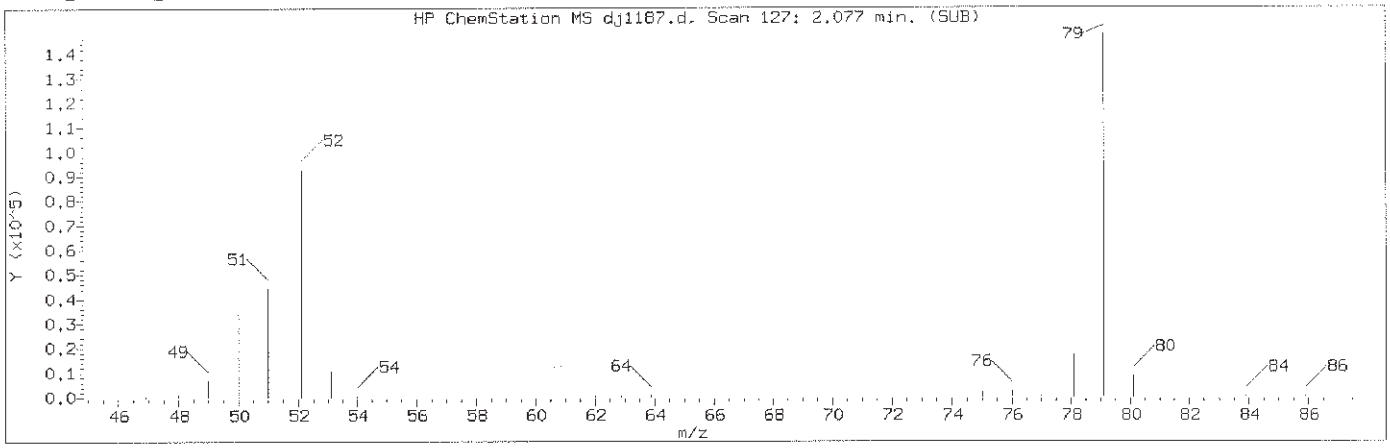
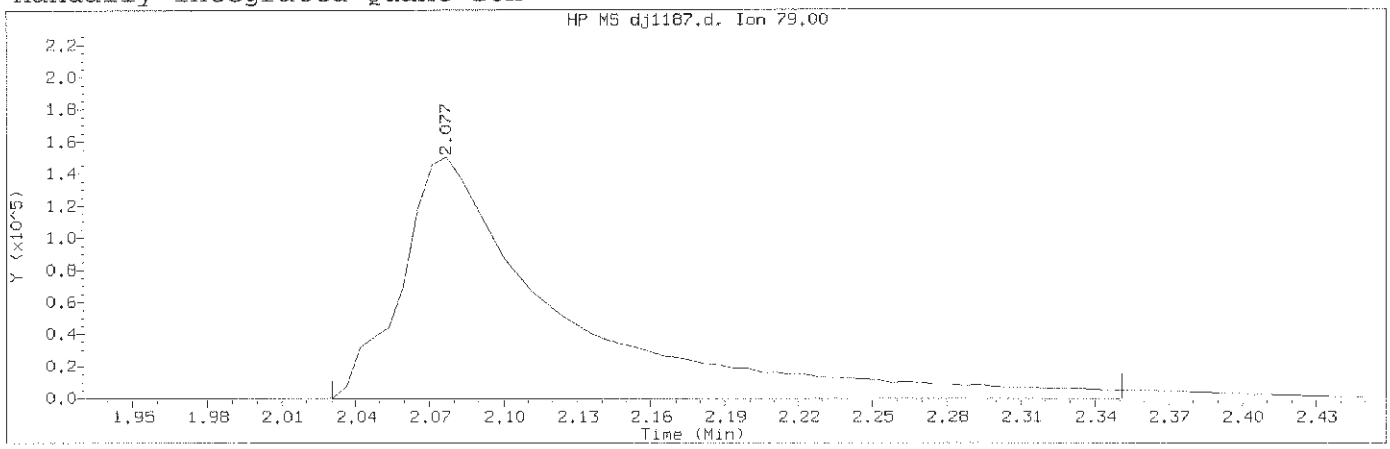
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area (flag)	: 678751M		
On-Column Amount (ng/ul)	: 12.9041		
Integration start scan	: 118	Integration stop scan:	173
Y at integration start	: -236	Y at integration end:	-236

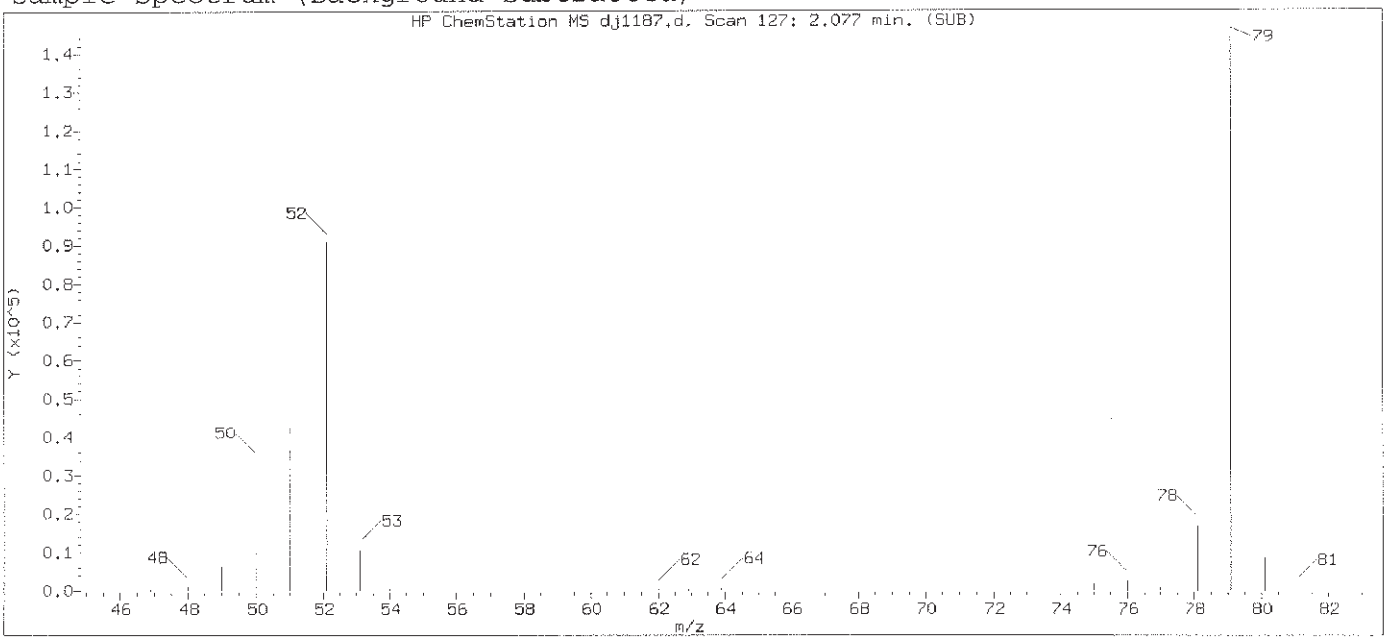
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

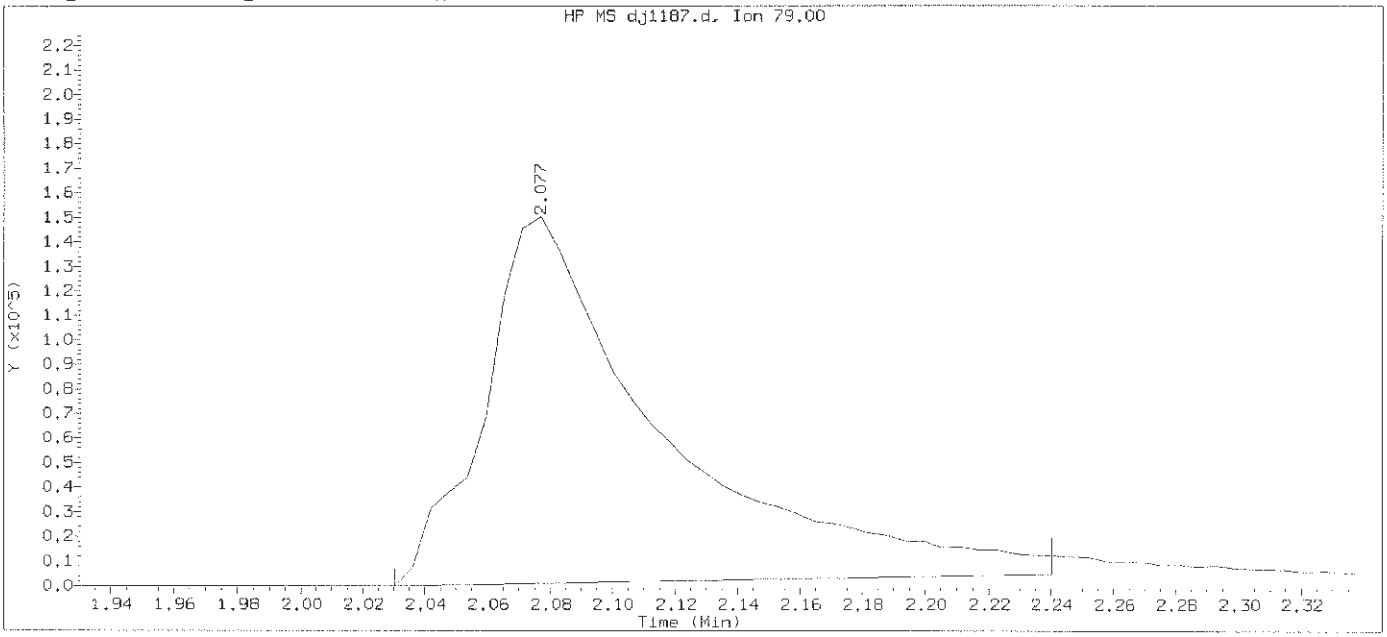
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area	: 588658		
On-column Amount (ng/ul)	: 11.8341		
Integration start scan	: 118	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	4950

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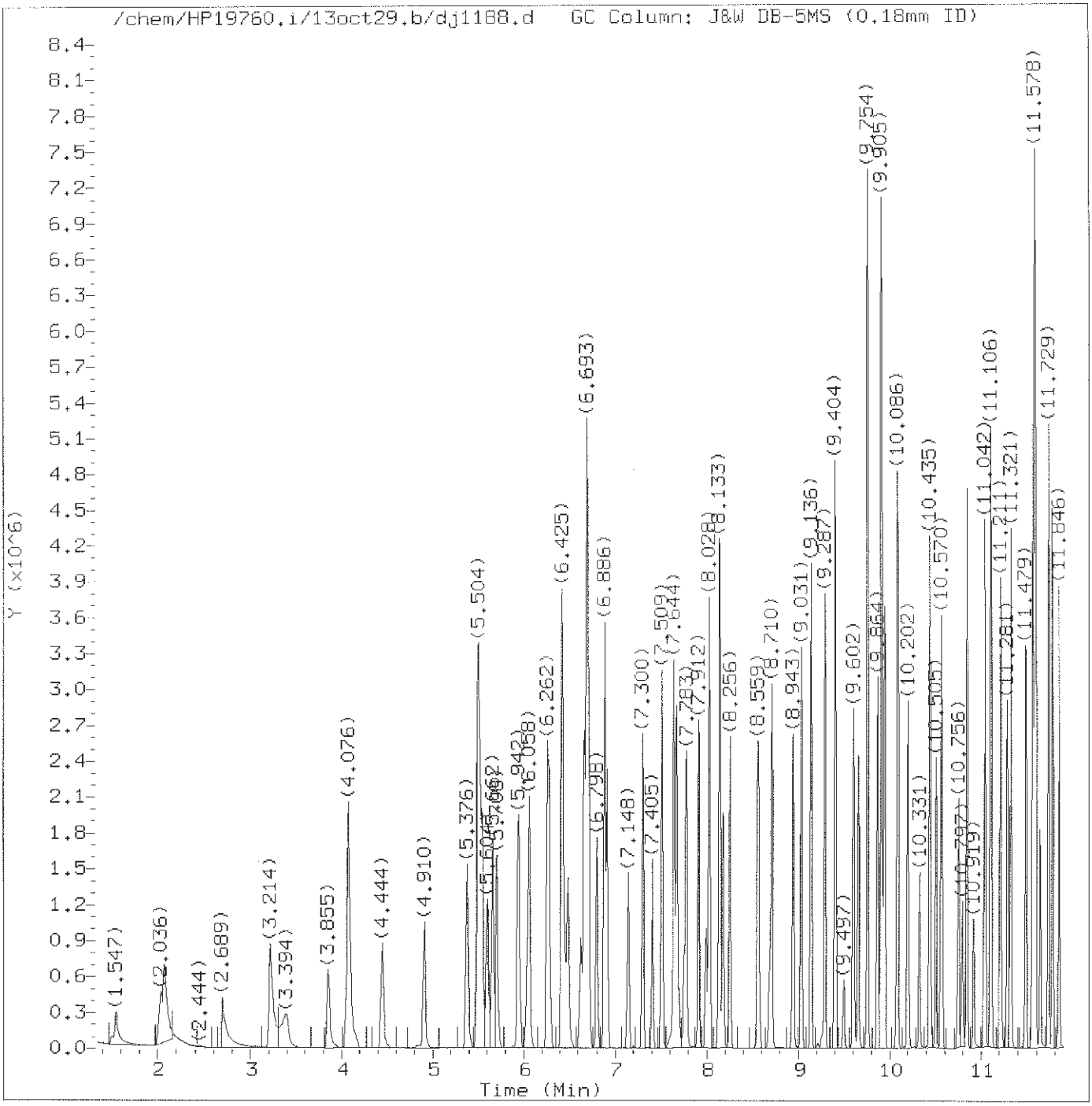
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

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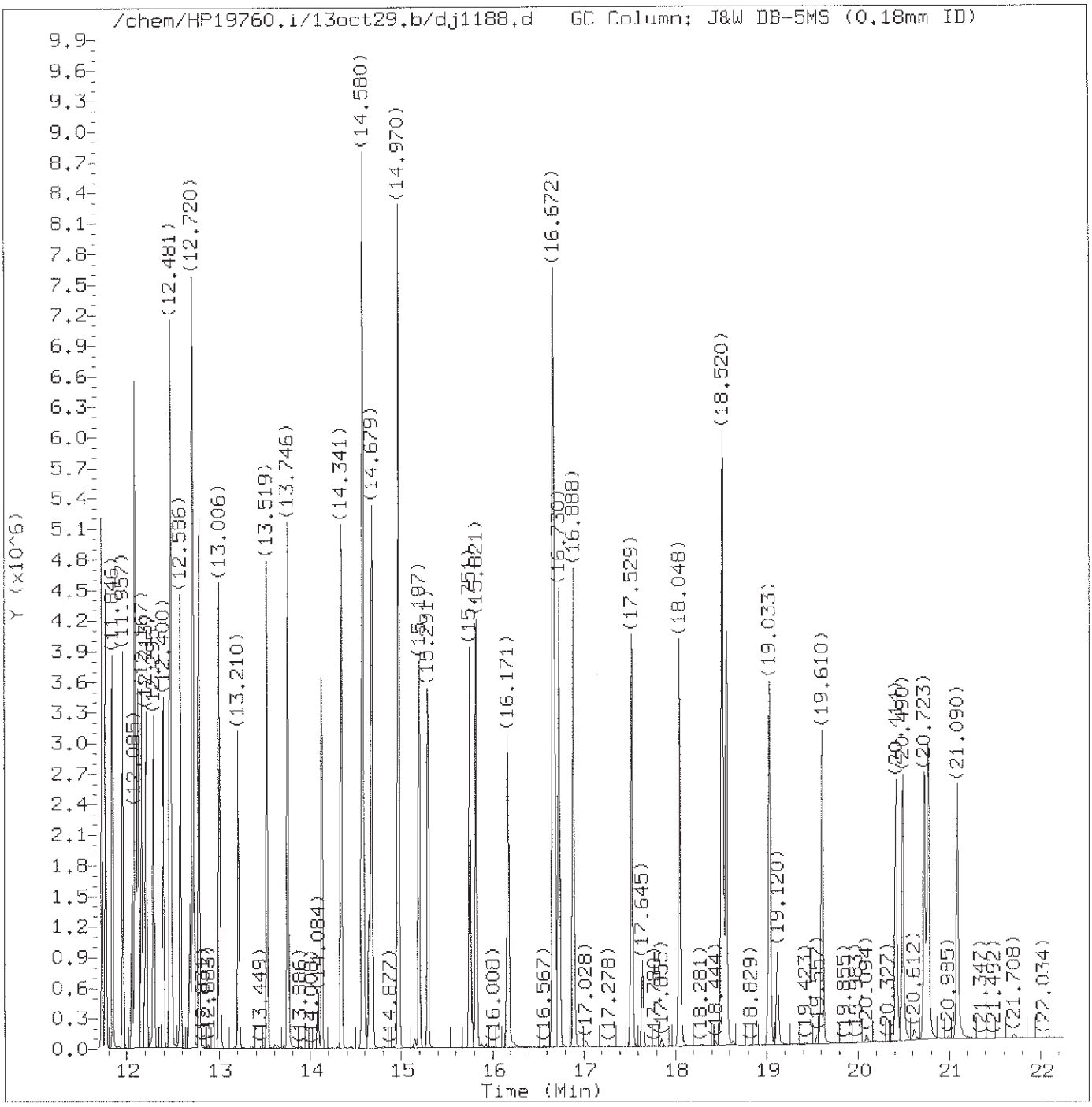
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	325165	19.174
2) N-Nitrosodimethylamine	(1)	2.031	74	627522	20.956
3) Pyridine	(1)	2.077	79	1031077	20.191
4) 2-Picoline	(1)	3.214	93	1071191	19.915
5) N-Nitrosomethylethylamine	(1)	3.394	88	470743	20.363
6) Methyl methanesulfonate	(1)	3.855	80	528331	19.992
7)$2-Fluorophenol	(1)	4.076	112	1596153	39.901
8) N-Nitrosodiethylamine	(1)	4.444	102	449166	20.231
10) Ethyl methanesulfonate	(1)	4.910	109	428518	20.015
11) Benzaldehyde	(1)	5.376	77	690695	17.972
12)$Phenol-d5	(1)	5.499	99	2152609	39.182
13)$Phenol-d6	(1)	5.499	99	2152609	39.182
14) Phenol	(1)	5.516	94	1229979	19.339
15) Aniline	(1)	5.545	93	1536784	19.622
16) bis(2-Chloroethyl)ether	(1)	5.662	93	973912	19.408
17) 2-Chlorophenol	(1)	5.708	128	789062	20.057
18) 1,3-Dichlorobenzene	(1)	5.942	146	826580	19.535
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	134726	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	835743	19.526
23) Benzyl alcohol	(1)	6.256	108	556643	20.006
24) 1,2-Dichlorobenzene	(1)	6.280	146	782771	19.554
25) Indene	(1)	6.420	115	1589371	23.497
26) 2-Methylphenol	(1)	6.437	108	779210	19.738
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1168228	18.756
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1168228	18.756
29) N-Nitrosopyrrolidine	(1)	6.629	100	461572	20.447
30) Acetophenone	(1)	6.664	105	1216572	19.708
33) 4-Methylphenol	(1)	6.688	108	849471	19.259
31) N-Nitroso-di-n-propylamine	(1)	6.693	70	670115	18.860
32) N-Nitrosomorpholine	(1)	6.699	56	518122	18.492
34) o-Toluidine	(1)	6.711	106	1311142	19.262
35) Hexachloroethane	(1)	6.798	117	355620	19.657
36)$Nitrobenzene-d5	(2)	6.886	82	1908801	39.052
37) Nitrobenzene	(2)	6.909	77	1007734	19.424
39) N-Nitrosopiperidine	(2)	7.148	114	423710	19.923
40) Isophorone	(2)	7.300	82	1743328	19.716
42) 2-Nitrophenol	(2)	7.405	139	382136	21.467
45) 2,4-Dimethylphenol	(2)	7.509	107	857500	19.823
46) O,O,O-triethylphosphorothioate	(2)	7.644	198	382048	19.925
48) bis(2-Chloroethoxy)methane	(2)	7.673	93	1134237M	19.656

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.702	105	610398	21.253
49) 2,4-Dichlorophenol	(2)	7.783	162	617339	20.233
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	667875	19.594
52)*Naphthalene-d8	(2)	7.993	136	531119	5.000
53) Naphthalene	(2)	8.028	128	2175665	19.213
55) 4-Chloroaniline	(2)	8.133	127	903717	19.261
56) 2,6-Dichlorophenol	(2)	8.139	162	583652	19.921
57) Hexachloropropene	(2)	8.180	213	459184	21.345
58) Hexachlorobutadiene	(2)	8.256	225	395446	19.902
60) Quinoline	(2)	8.564	129	1468344	19.573
61) Caprolactam	(2)	8.704	113	275391	20.230
62) N-Nitrosodi-n-butylamine	(2)	8.716	84	811695	23.158
63) 4-Chloro-3-methylphenol	(2)	8.943	107	744211	20.312
64) Safrole	(2)	9.031	162	581470	20.176
65) 2-Methylnaphthalene	(2)	9.136	142	1452939	19.254
66) 1-Methylnaphthalene	(2)	9.287	142	1332939	19.464
67) Hexachlorocyclopentadiene	(3)	9.404	237	358846	21.689
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	684824	19.535
69) cis-Isosafrole	(3)	9.497	162	105700	20.538
70) 2,4,6-Trichlorophenol	(3)	9.602	196	460428	20.816
71) 2,4,5-Trichlorophenol	(3)	9.654	196	480784	21.037
72)$2-Fluorobiphenyl	(3)	9.754	172	2853736	37.780
74) Isosafrole	(3)	9.864	162	585504	20.266
73) trans-Isosafrole	(3)	9.864	162	585504	20.266
75) 1,1'-Biphenyl	(3)	9.905	154	1656069	18.854
76) 2-Chloronaphthalene	(3)	9.911	162	1331601	19.763
77) 1-Chloronaphthalene	(3)	9.940	162	1202300	18.098
82) Diphenyl ether	(3)	10.086	170	945913	19.464
83) 2-Nitroaniline	(3)	10.092	138	446033	21.253
84) 1,4-Naphthoquinone	(3)	10.202	158	604466	20.845
85) 1,4-Dinitrobenzene	(3)	10.331	168	232734	21.837
86) Dimethylphthalate	(3)	10.435	163	1471328	19.309
87) 1,3-Dinitrobenzene	(3)	10.441	168	270524	20.683
88) 2,6-Dinitrotoluene	(3)	10.505	165	354207	20.976
90) Acenaphthylene	(3)	10.570	152	2027003	19.818
91) 3-Nitroaniline	(3)	10.756	138	407986	21.048
92)*Acenaphthene-d10	(3)	10.797	164	302476	5.000
93) Acenaphthene	(3)	10.849	153	1342436	19.079
94) 2,4-Dinitrophenol	(3)	10.919	184	186536	22.382
96) 4-Nitrophenol	(3)	11.036	109	260505	21.072

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	551450	19.635
97) Dibenzofuran	(3)	11.100	168	1915807	19.147
98) 2,4-Dinitrotoluene	(3)	11.112	165	461073	21.307
99) 1-Naphthylamine	(3)	11.211	143	1447962	19.908
100) 2,3,4,6-Tetrachlorophenol	(3)	11.281	232	380803	21.102
101) 2-Naphthylamine	(3)	11.321	143	1470056	19.696
102) Diethylphthalate	(3)	11.485	149	1499545	19.974
103) Fluorene	(3)	11.555	166	1534105	19.047
104) Thionazin	(3)	11.572	107	311254	19.181
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	763380	19.112
106) 5-Nitro-o-toluidine	(3)	11.590	152	434452	20.070
107) 4-Nitroaniline	(3)	11.595	138	403432	20.235
108) 4,6-Dinitro-2-methylphenol	(4)	11.642	198	279696	22.060
109) N-Nitrosodiphenylamine	(4)	11.729	169	1247929	19.060
110) NDPA as diphenylamine	(4)	11.729	169	1247929	19.060
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1926138	18.583
112)$2,4,6-Tribromophenol	(3)	11.846	330	340856	42.905
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	295865	19.789
116) 1,3,5-Trinitrobenzene	(4)	12.062	213	208612	24.335
117) Diallate (peak 1)	(4)	12.091	86	727862	14.089
118) Phorate	(4)	12.097	75	1149741	18.772
119) Phenacetin	(4)	12.126	108	922599	21.163
120) 4-Bromophenyl-phenylether	(4)	12.167	248	404863	19.508
121) Diallate (peak 2)	(4)	12.190	86	111193	5.046
122) Hexachlorobenzene	(4)	12.213	284	396121	19.305
123) Dimethoate	(4)	12.295	87	805609	20.144
124) Atrazine	(4)	12.400	200	417230	19.573
125) Pentachlorophenol	(4)	12.464	266	315705	22.167
127) 4-Aminobiphenyl	(4)	12.481	169	1632793	19.934
126) Pentachloronitrobenzene	(4)	12.481	237	201829	21.165
129) Pronamide	(4)	12.586	173	732209	21.129
130)*Phenanthrene-d10	(4)	12.691	188	525961	5.000
133) Dinoseb	(4)	12.720	211	415493	24.534
131) Phenanthrene	(4)	12.726	178	2172274	18.518
134) Anthracene	(4)	12.790	178	2256094	19.289
135) Carbazole	(4)	13.006	167	2201249	19.447
136) Methyl parathion	(4)	13.210	109	601743	21.575
137) Di-n-butylphthalate	(4)	13.519	149	2672851	19.937
138) Parathion	(4)	13.746	109	383066	21.178
139) 4-Nitroquinoline-1-oxide	(4)	13.752	190	247472	26.740

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	286795	20.382
142) Fluoranthene	(4)	14.341	202	2645406	20.048
144) Benzidine	(5)	14.585	184	5251006	60.369
145)*Pyrene-d10	(5)	14.650	212	677846	5.000
146) Pyrene	(5)	14.679	202	2701111	18.769
149)$Terphenyl-d14	(5)	14.970	244	3307867	39.131
150) p-Dimethylaminoazobenzene	(5)	15.197	225	579528	22.545
151) Chlorobenzilate	(5)	15.291	139	823625	20.332
152) 3,3'-Dimethylbenzidine	(5)	15.751	212	1809397	21.180
153) Butylbenzylphthalate	(5)	15.821	149	1230558	20.091
156) 2-Acetylaminofluorene	(5)	16.171	181	1075711	22.288
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	913090	20.703
158) Benzo(a)anthracene	(5)	16.672	228	2529133	20.712
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.690	231	483244	20.748
161) Chrysene	(5)	16.736	228	2326892	19.377
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1630232	20.234
165) 6-Methylchrysene	(5)	17.529	242	1737541	20.583
166) Di-n-octylphthalate	(6)	18.048	149	2760949	21.546
168) Benzo(b)fluoranthene	(6)	18.514	252	2314973	21.011
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.526	256	1076337	22.009
170) Benzo(k)fluoranthene	(6)	18.566	252	2184746	19.661
171) Benzo(a)pyrene	(6)	19.033	252	2061113	20.380
172)*Perylene-d12	(6)	19.120	264	467732	5.000
173) 3-Methylcholanthrene	(6)	19.610	268	1040881	21.628
174) Dibenz(a,h)acridine	(6)	20.414	279	1479580	22.116
175) Dibenz(a,j)acridine	(6)	20.490	279	1551213	21.623
176) Indeno(1,2,3-cd)pyrene	(6)	20.729	276	1985177	22.379
177) Dibenz(a,h)anthracene	(6)	20.770	278	1694542	22.557
178) Benzo(g,h,i)perylene	(6)	21.090	276	1602998	21.437
179) Diallate TRANS/CIS	(4)			839055	18.960
182) 2,4_2,6-Dinitrotoluenes	(3)			815280	42.283

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$ = Compound is a surrogate standard.

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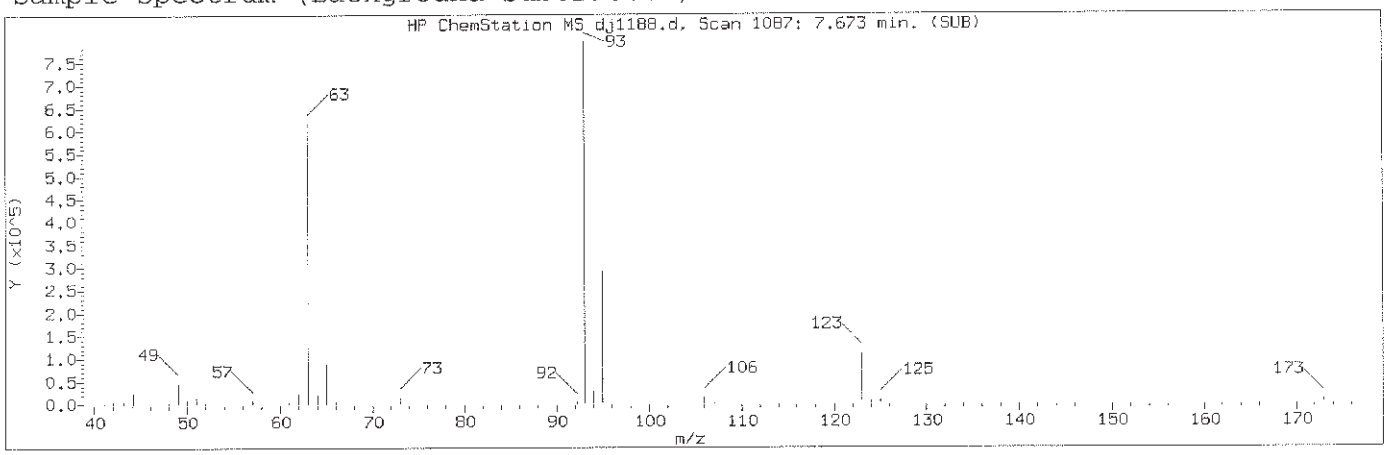
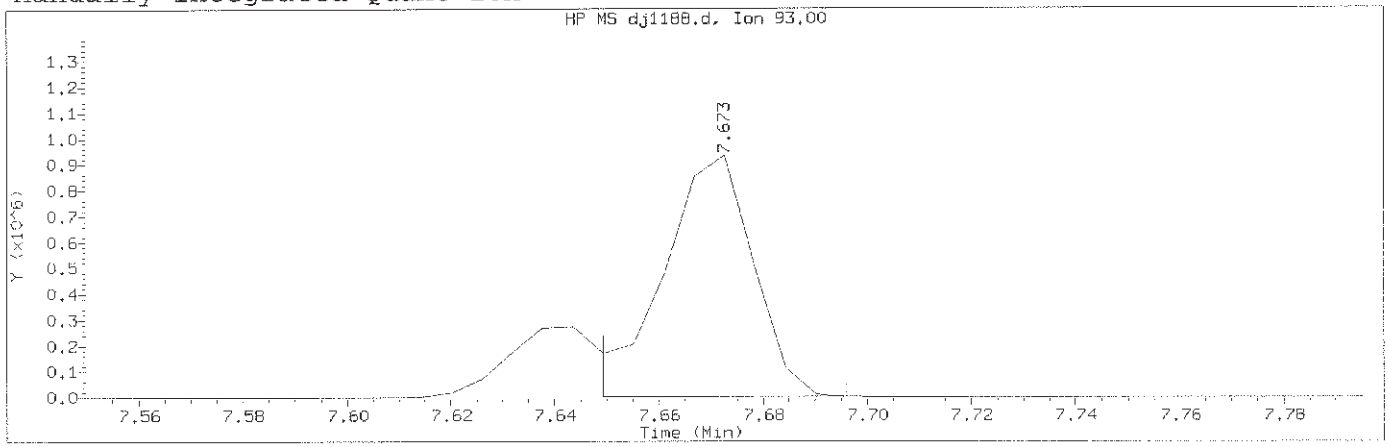
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area (flag)	: 1134237M		
On-Column Amount (ng/ul)	: 19.6559		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 1173	Y at integration end:	1173

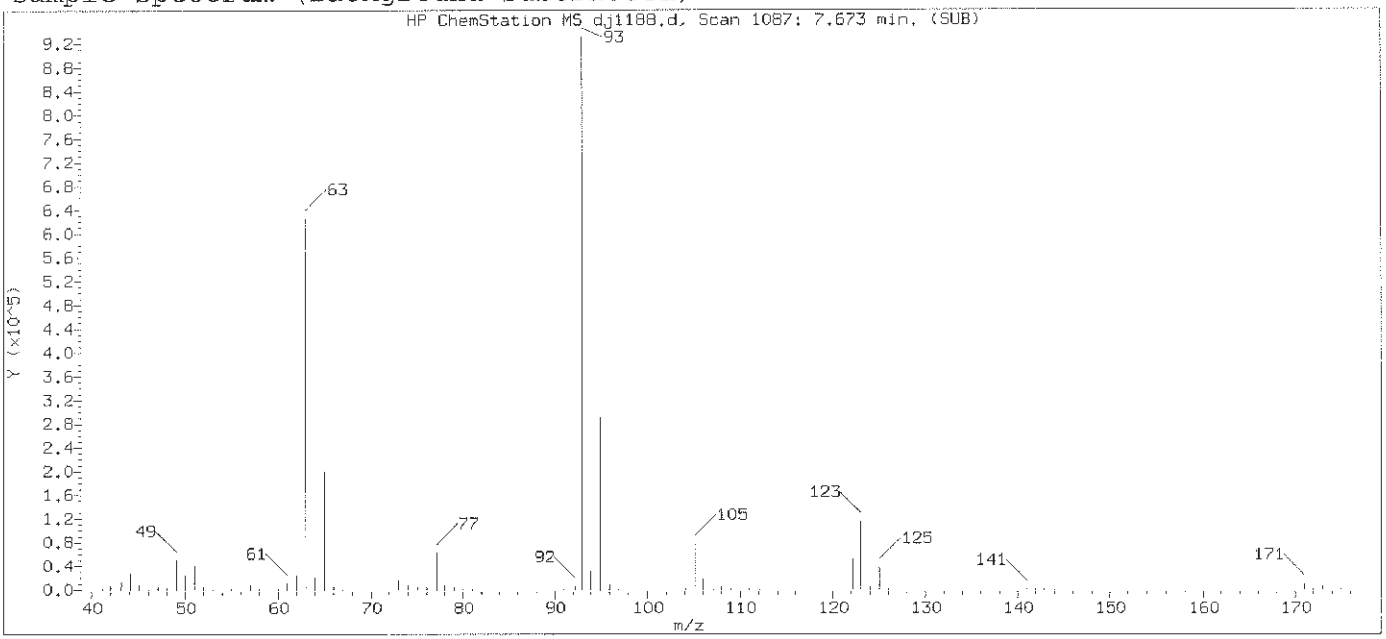
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

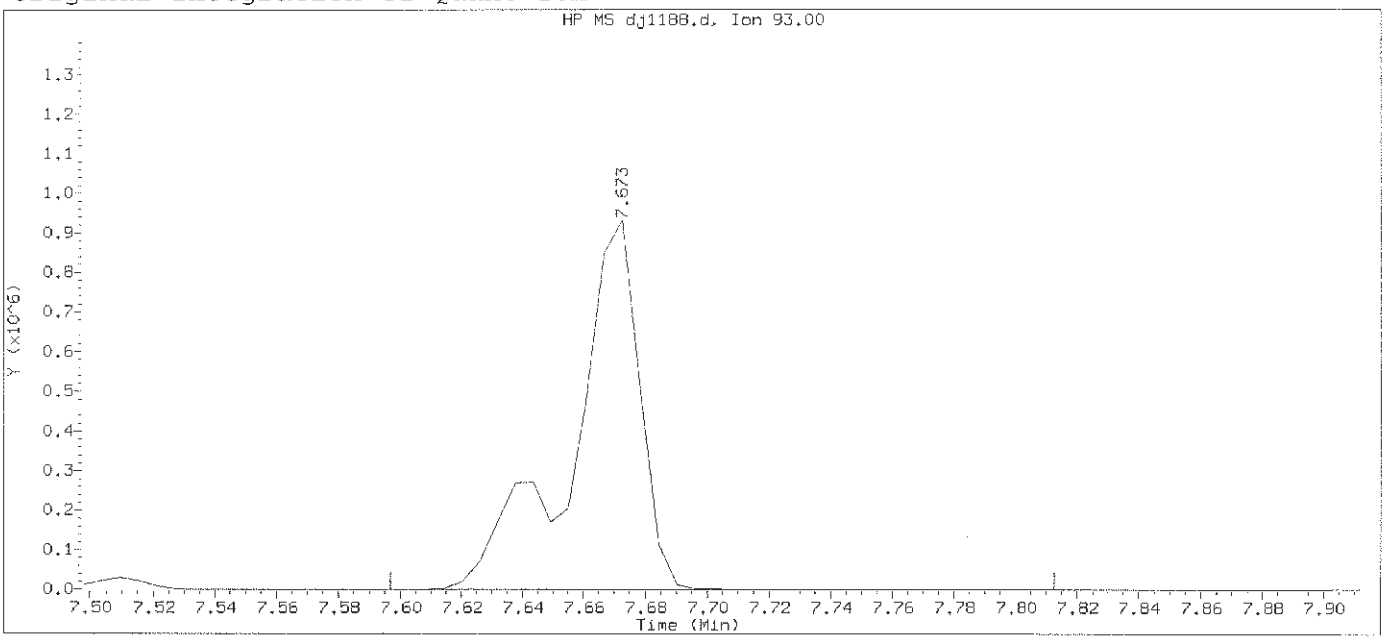
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area	: 1421968		
On-column Amount (ng/ul)	: 22.2016		
Integration start scan	: 1073	Integration stop scan:	1110
Y at integration start	: 0	Y at integration end:	0

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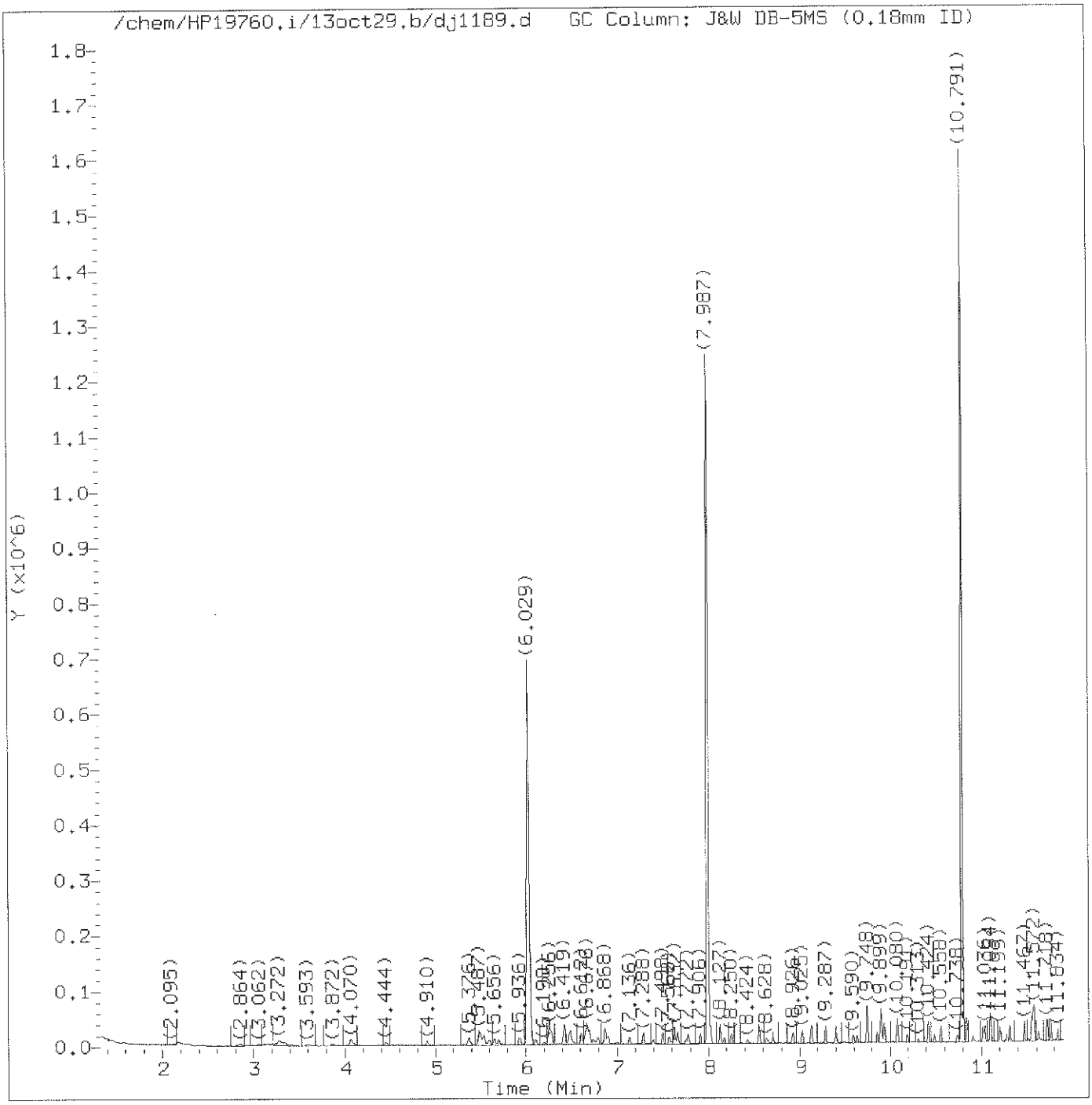
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

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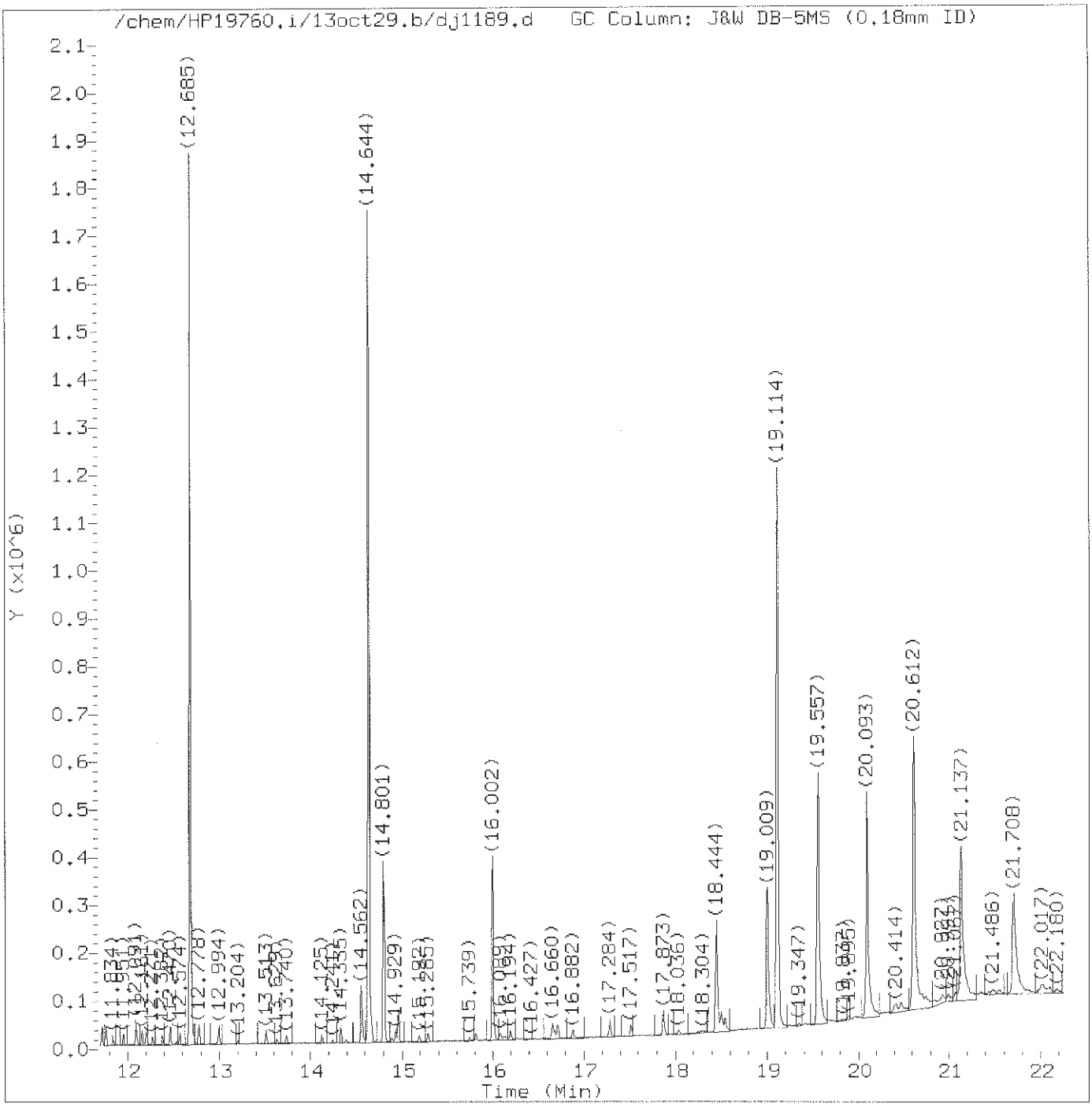
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.570	88	3666M	0.167
2) N-Nitrosodimethylamine	(1)	2.089	74	2809	0.072
3) Pyridine	(1)	2.165	79	10875M	0.164
5) N-Nitrosomethylethylamine	(1)	3.249	88	2617	0.087
4) 2-Picoline	(1)	3.278	93	6815	0.098
6) Methyl methanesulfonate	(1)	3.866	80	2981	0.087
7)$2-Fluorophenol	(1)	4.070	112	9940	0.192
8) N-Nitrosodiethylamine	(1)	4.444	102	1982	0.069
10) Ethyl methanesulfonate	(1)	4.910	109	2866	0.103
11) Benzaldehyde	(1)	5.370	77	5773	0.116
12)$Phenol-d5	(1)	5.487	99	15683	0.220
13)$Phenol-d6	(1)	5.487	99	15683	0.220
14) Phenol	(1)	5.504	94	8874	0.108
15) Aniline	(1)	5.539	93	12406	0.122
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6585	0.101
17) 2-Chlorophenol	(1)	5.702	128	4849	0.095
18) 1,3-Dichlorobenzene	(1)	5.936	146	5661	0.103
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	174606	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5964	0.108
23) Benzyl alcohol	(1)	6.250	108	4655	0.129
24) 1,2-Dichlorobenzene	(1)	6.280	146	5468	0.105
25) Indene	(1)	6.414	115	12134	0.138
26) 2-Methylphenol	(1)	6.431	108	5252	0.103
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	8860	0.110
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	8860	0.110
29) N-Nitrosopyrrolidine	(1)	6.612	100	2905	0.099
30) Acetophenone	(1)	6.653	105	8474	0.106
33) 4-Methylphenol	(1)	6.670	108	6702	0.117
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	5592	0.121
32) N-Nitrosomorpholine	(1)	6.682	56	4914	0.135
34) o-Toluidine	(1)	6.705	106	10085	0.114
35) Hexachloroethane	(1)	6.792	117	2232	0.095
36)$Nitrobenzene-d5	(2)	6.868	82	12836	0.206
37) Nitrobenzene	(2)	6.897	77	6906	0.105
39) N-Nitrosopiperidine	(2)	7.136	114	2867	0.106
40) Isophorone	(2)	7.294	82	12860	0.114
42) 2-Nitrophenol	(2)	7.399	139	1731	0.076
45) 2,4-Dimethylphenol	(2)	7.504	107	5945	0.108
47) Benzoic acid	(2)	7.574	105	6762	3.541
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3063	0.125

M = Compound was manually integrated.
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Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	8784	0.120
49) 2,4-Dichlorophenol	(2)	7.772	162	3993	0.103
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4610	0.106
52)*Naphthalene-d8	(2)	7.987	136	676323	5.000
55) 4-Chloroaniline	(2)	8.127	127	7548	0.126
56) 2,6-Dichlorophenol	(2)	8.133	162	4009	0.107
57) Hexachloropropene	(2)	8.174	213	2326	0.085
58) Hexachlorobutadiene	(2)	8.250	225	2637	0.104
60) Quinoline	(2)	8.547	129	14427	0.151
61) Caprolactam	(2)	8.634	113	1802	0.104
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	4368	0.098
63) 4-Chloro-3-methylphenol	(2)	8.926	107	4803	0.103
64) Safrole	(2)	9.025	162	3942	0.107
67) Hexachlorocyclopentadiene	(3)	9.398	237	1492	0.070
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	5668	0.125
69) cis-Isosafrole	(3)	9.491	162	530M	0.080
70) 2,4,6-Trichlorophenol	(3)	9.590	196	2714	0.095
71) 2,4,5-Trichlorophenol	(3)	9.643	196	3036	0.103
72)$2-Fluorobiphenyl	(3)	9.748	172	26016	0.267
74) Isosafrole	(3)	9.858	162	3898	0.105
73) trans-Isosafrole	(3)	9.858	162	3898	0.105
75) 1,1'-Biphenyl	(3)	9.893	154	13250	0.117
76) 2-Chloronaphthalene	(3)	9.899	162	10941	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12390	0.145
83) 2-Nitroaniline	(3)	10.074	138	2125	0.079
82) Diphenyl ether	(3)	10.080	170	8115	0.130
84) 1,4-Naphthoquinone	(3)	10.196	158	2996	0.080
85) 1,4-Dinitrobenzene	(3)	10.319	168	740M	0.583
86) Dimethylphthalate	(3)	10.424	163	12446	0.127
87) 1,3-Dinitrobenzene	(3)	10.430	168	1007M	0.060
88) 2,6-Dinitrotoluene	(3)	10.494	165	1765	0.081
91) 3-Nitroaniline	(3)	10.738	138	1951	0.078
92)*Acenaphthene-d10	(3)	10.791	164	389992	5.000
94) 2,4-Dinitrophenol	(3)	10.907	184	2068	3.927
96) 4-Nitrophenol	(3)	11.018	109	4568	0.287
95) Pentachlorobenzene	(3)	11.036	250	4705	0.130
97) Dibenzofuran	(3)	11.094	168	16519	0.128
98) 2,4-Dinitrotoluene	(3)	11.100	165	2005	0.072
99) 1-Naphthylamine	(3)	11.199	143	9497	0.101
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2016	0.087

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) 2-Naphthylamine	(3)	11.310	143	10595	0.110
102) Diethylphthalate	(3)	11.467	149	11373	0.117
104) Thionazin	(3)	11.560	107	2606	0.125
106) 5-Nitro-o-toluidine	(3)	11.572	152	2160	0.077
107) 4-Nitroaniline	(3)	11.572	138	2057	0.080
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6692	0.130
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	2423	1.691
109) N-Nitrosodiphenylamine	(4)	11.723	169	10283	0.122
110) NDPA as diphenylamine	(4)	11.723	169	10283	0.122
111) 1,2-Diphenylhydrazine	(4)	11.764	77	14760	0.111
112)$2,4,6-Tribromophenol	(3)	11.840	330	1914	0.187
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	2108	0.110
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	316M	1.317
117) Diallate (peak 1)	(4)	12.085	86	5354	0.081
118) Phorate	(4)	12.091	75	8810	0.112
119) Phenacetin	(4)	12.102	108	4220	0.075
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3113	0.117
121) Diallate (peak 2)	(4)	12.190	86	674M	0.024
123) Dimethoate	(4)	12.271	87	4204	0.082
124) Atrazine	(4)	12.382	200	2307	0.084
125) Pentachlorophenol	(4)	12.458	266	986	0.712
126) Pentachloronitrobenzene	(4)	12.470	237	1094M	0.089
127) 4-Aminobiphenyl	(4)	12.475	169	10255	0.097
129) Pronamide	(4)	12.574	173	3949	0.089
130)*Phenanthrene-d10	(4)	12.685	188	676898	5.000
133) Dinoseb	(4)	12.720	211	414M	1.336
135) Carbazole	(4)	12.994	167	15785	0.108
136) Methyl parathion	(4)	13.204	109	1786	0.273
137) Di-n-butylphthalate	(4)	13.513	149	14623	0.085
138) Parathion	(4)	13.740	109	1235M	0.112
140) Isodrin	(4)	14.125	193	2512	0.139
144) Benzidine	(5)	14.562	184	64682	0.595
145)*Pyrene-d10	(5)	14.644	212	846618	5.000
149)$Terphenyl-d14	(5)	14.958	244	27173	0.257
150) p-Dimethylaminoazobenzene	(5)	15.192	225	1978	0.320
151) Chlorobenzilate	(5)	15.291	139	4391	0.087
152) 3,3'-Dimethylbenzidine	(5)	15.739	212	4629	0.043
153) Butylbenzylphthalate	(5)	15.815	149	5061	0.066
156) 2-Acetylaminofluorene	(5)	16.147	181	2175	0.847
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	3586	0.065

M = Compound was manually integrated.
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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	1582M	0.054
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	6775	0.067
165) 6-Methylchrysene	(5)	17.517	242	11409	0.108
166) Di-n-octylphthalate	(6)	18.042	149	6684	0.280
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	4971	0.081
172)*Perylene-d12	(6)	19.114	264	585884	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	6441	0.107
174) Dibenz(a,h)acridine	(6)	20.402	279	5356	0.064
175) Dibenz(a,j)acridine	(6)	20.472	279	5840	0.065
179) Diallate TRANS/CIS	(4)			6028	0.104

M = Compound was manually integrated.
* = Compound is an internal standard.

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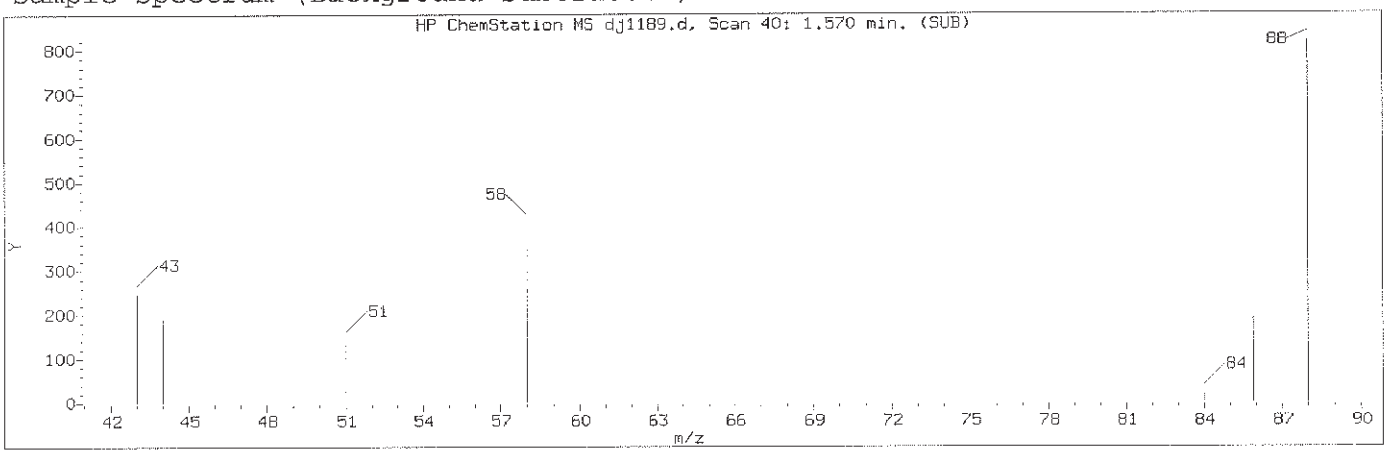
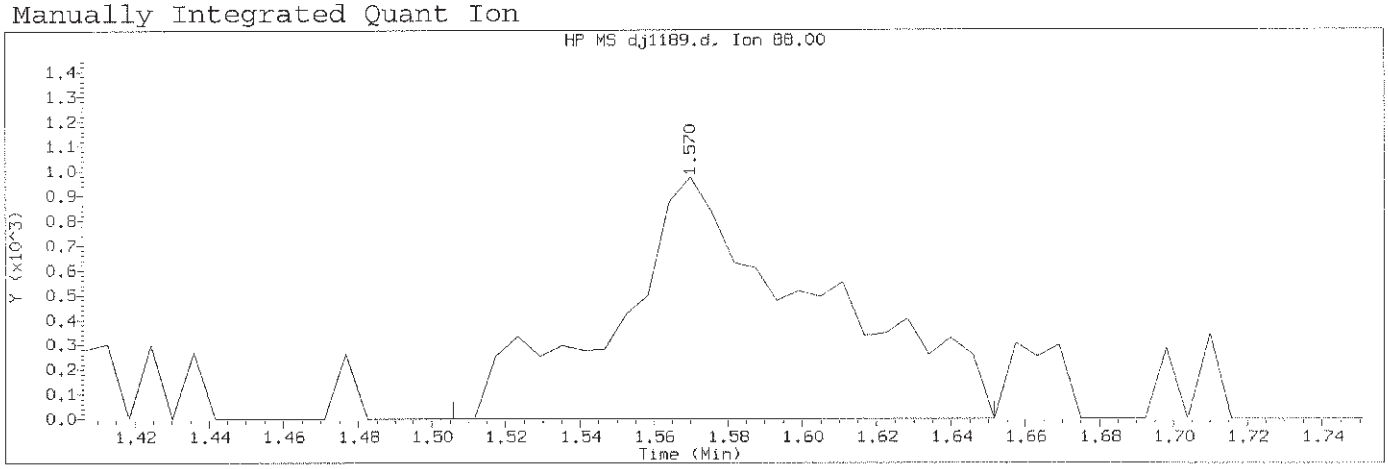
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 40		
Retention Time (minutes)	: 1.570		
Quant Ion	: 88.00		
Area (flag)	: 3666M		
On-Column Amount (ng/ul)	: 0.1668		
Integration start scan	: 28	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

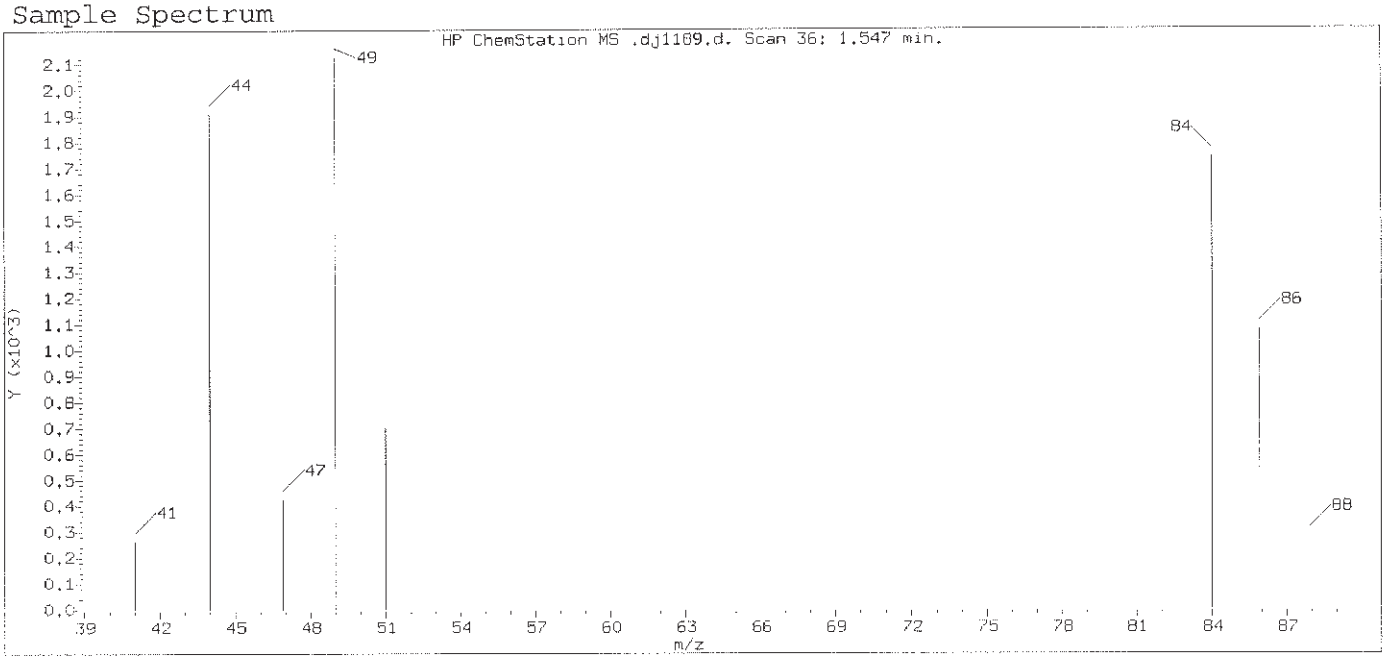
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: _____

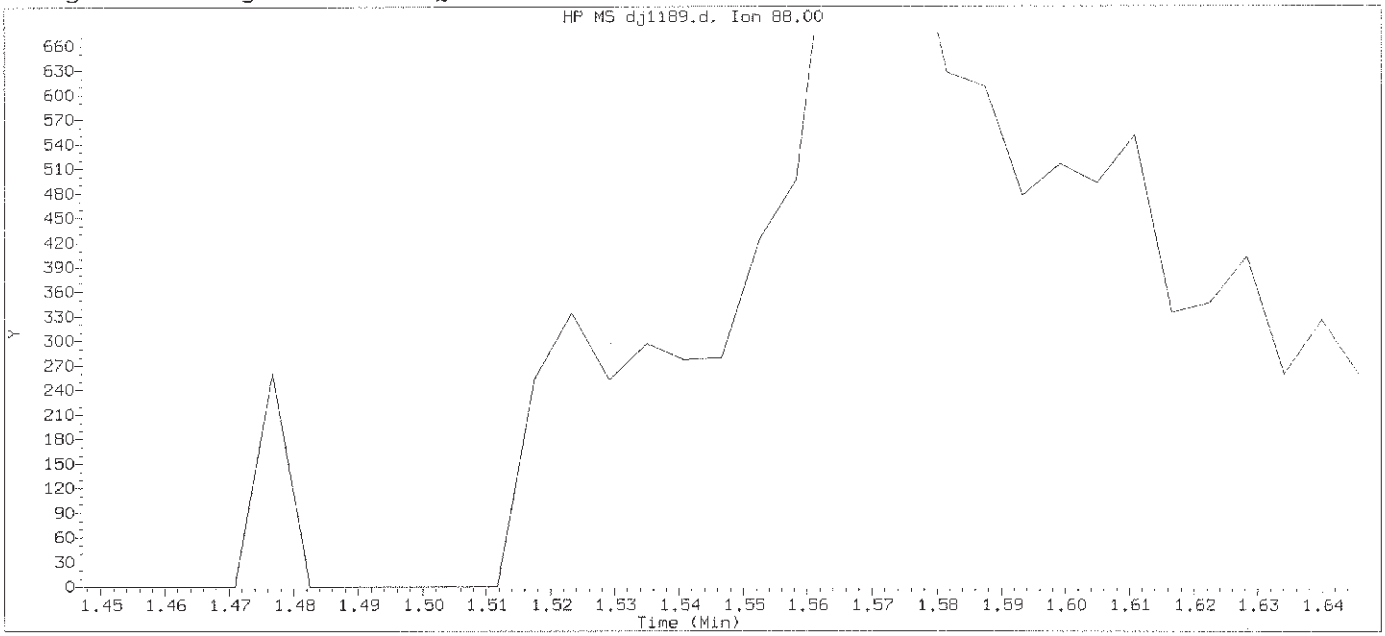
OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

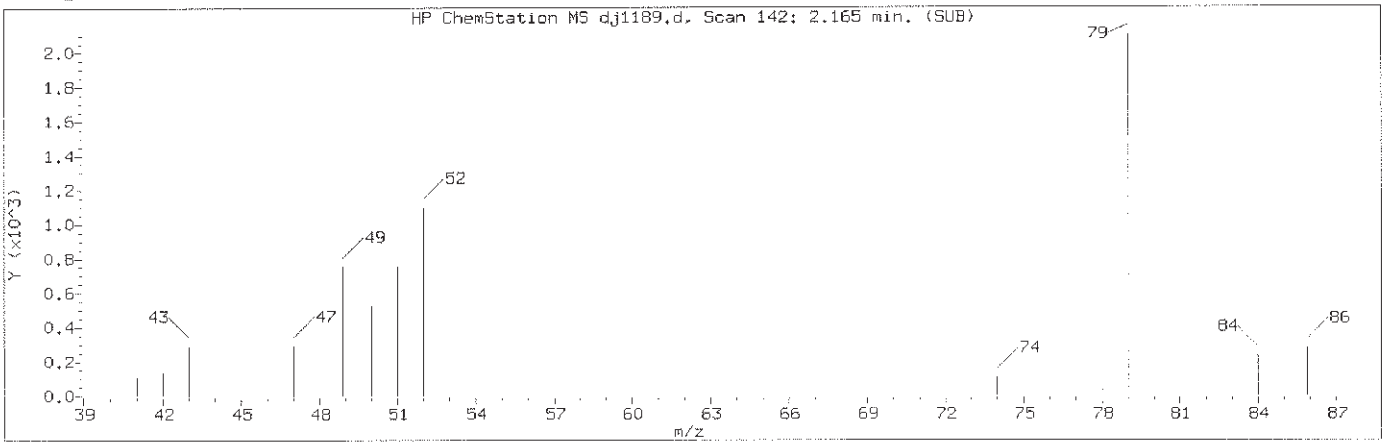
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

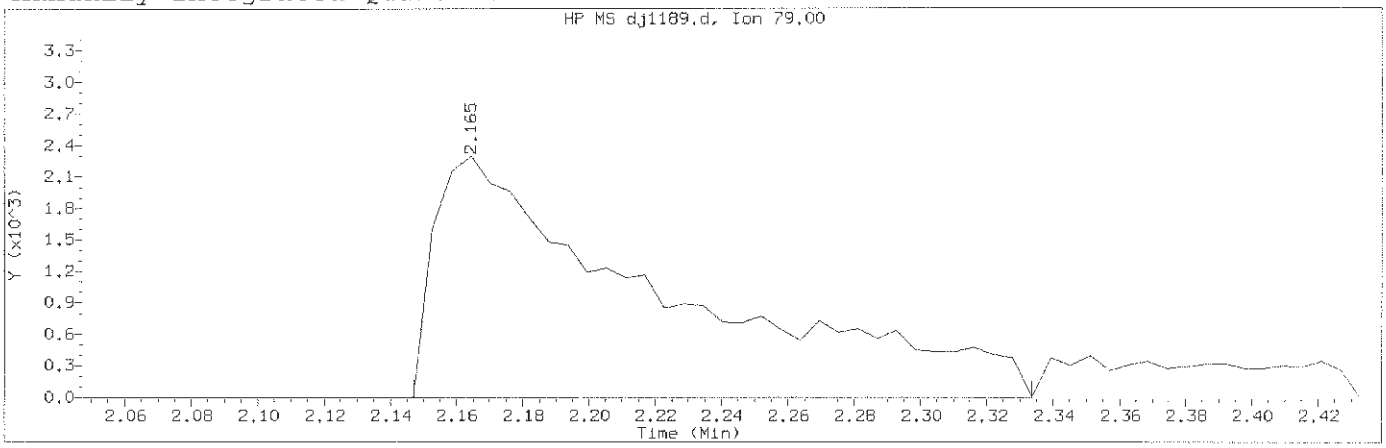
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area (flag)	: 10875M		
On-Column Amount (ng/ul)	: 0.1643		
Integration start scan	: 138	Integration stop scan:	170
Y at integration start	: 0	Y at integration end:	0

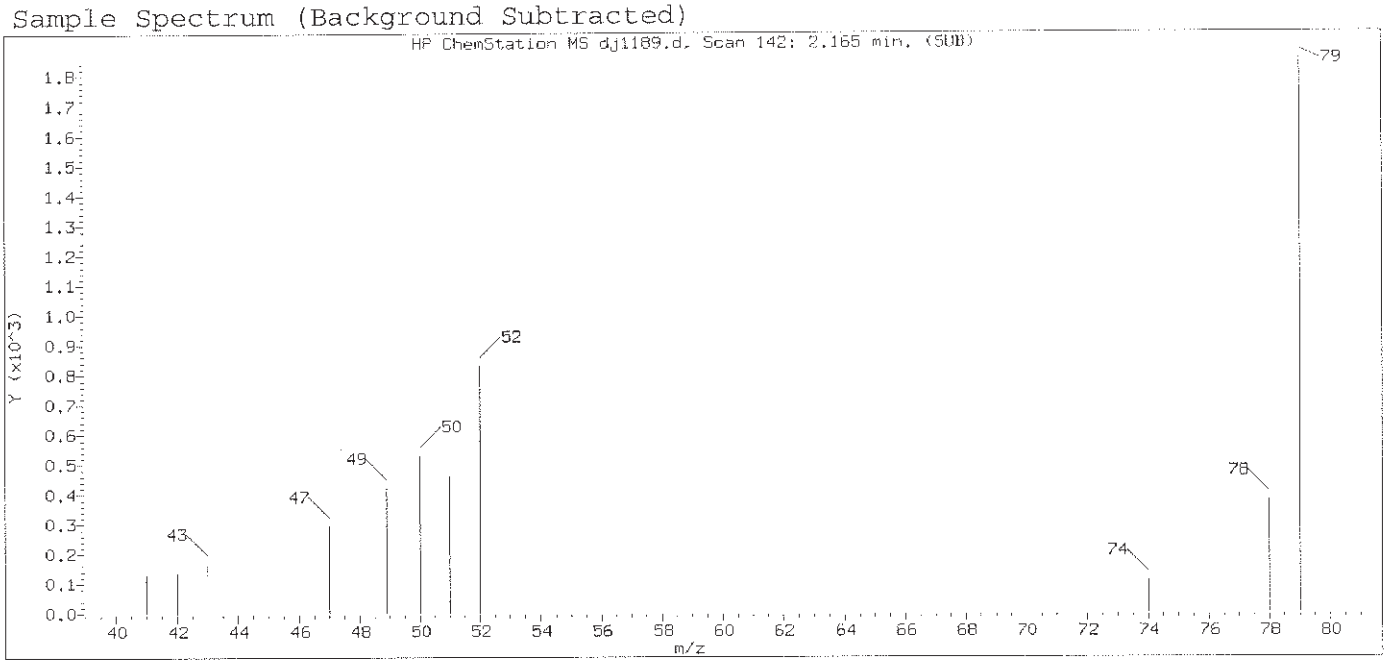
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

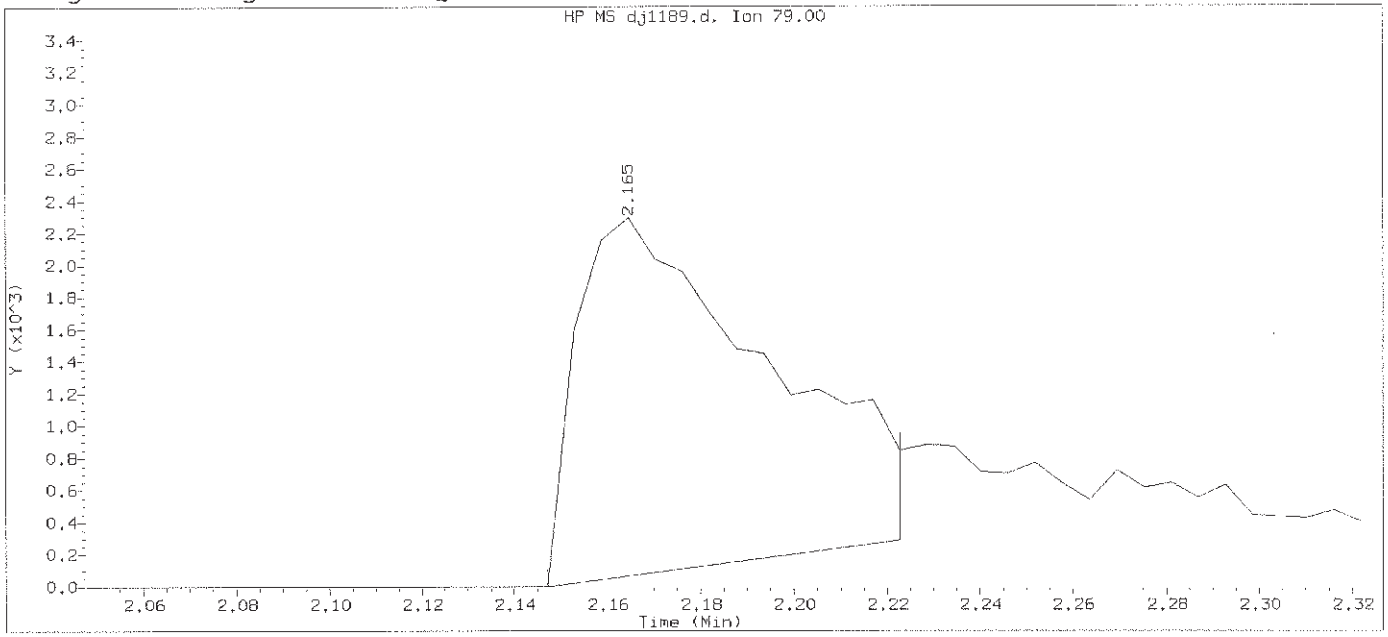
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area	: 6269		
On-column Amount (ng/ul)	: 0.0947		
Integration start scan	: 138	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	288

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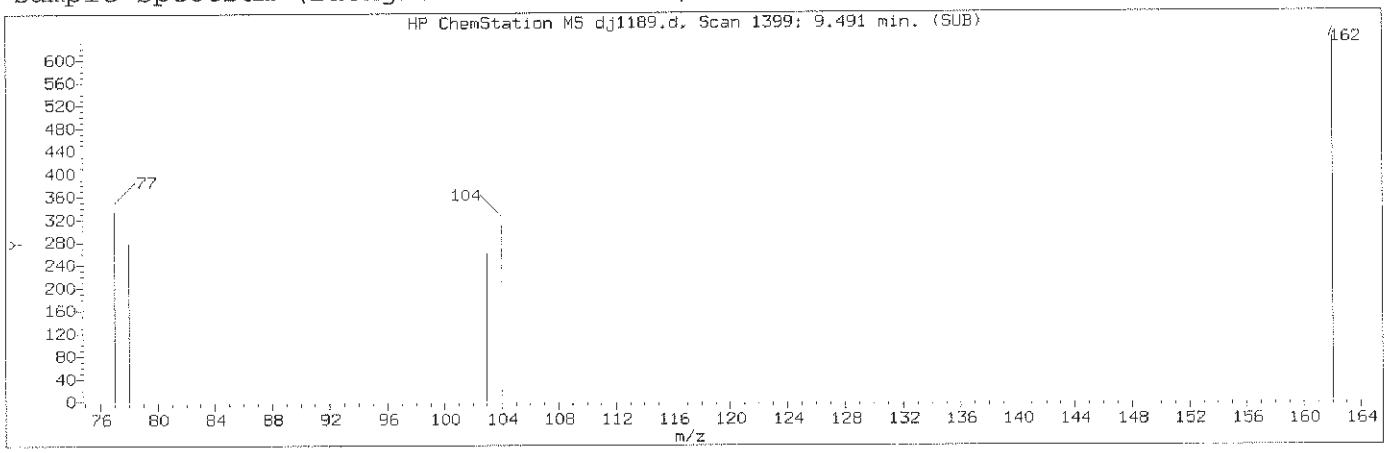
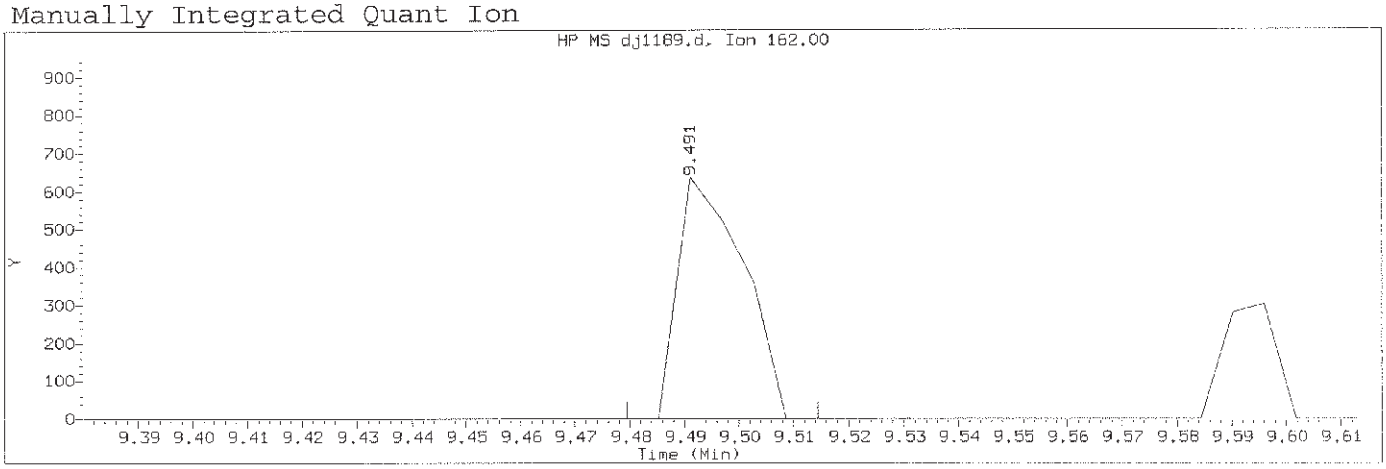
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1399		
Retention Time (minutes)	: 9.491		
Quant Ion	: 162.00		
Area (flag)	: 530M		
On-Column Amount (ng/ul)	: 0.0799		
Integration start scan	: 1396	Integration stop scan:	1402
Y at integration start	: 0	Y at integration end:	0

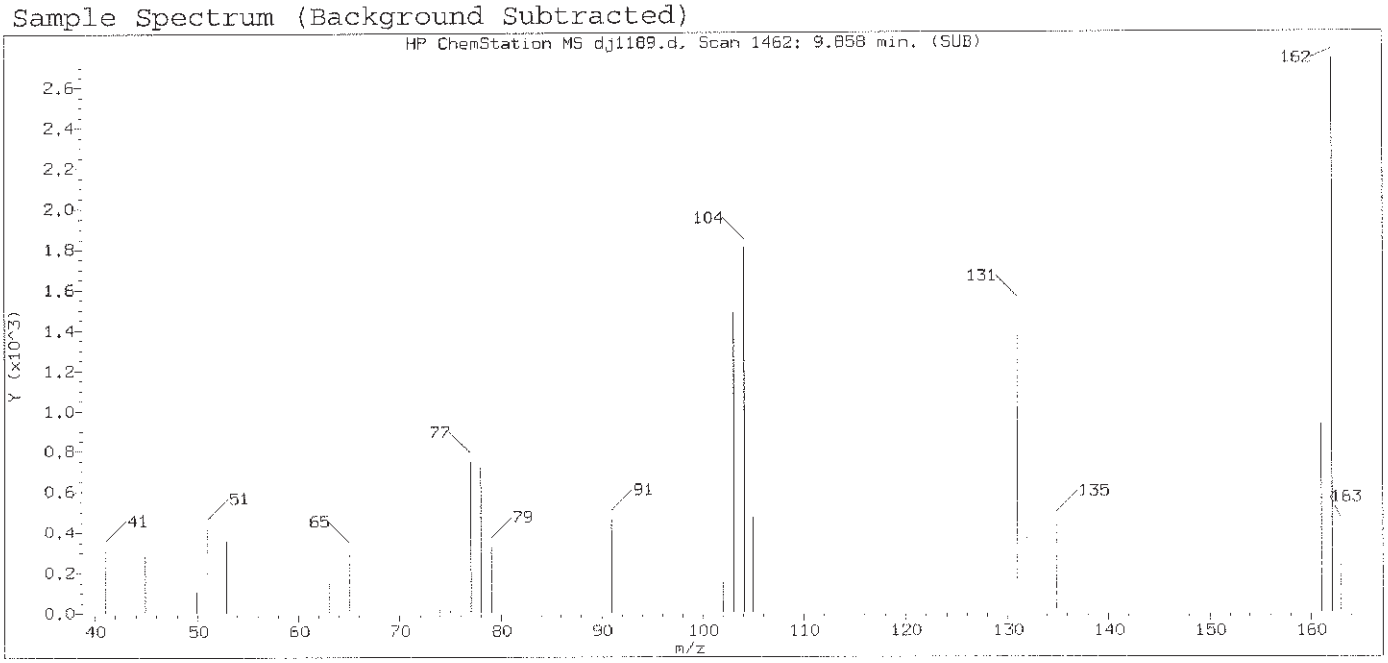
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

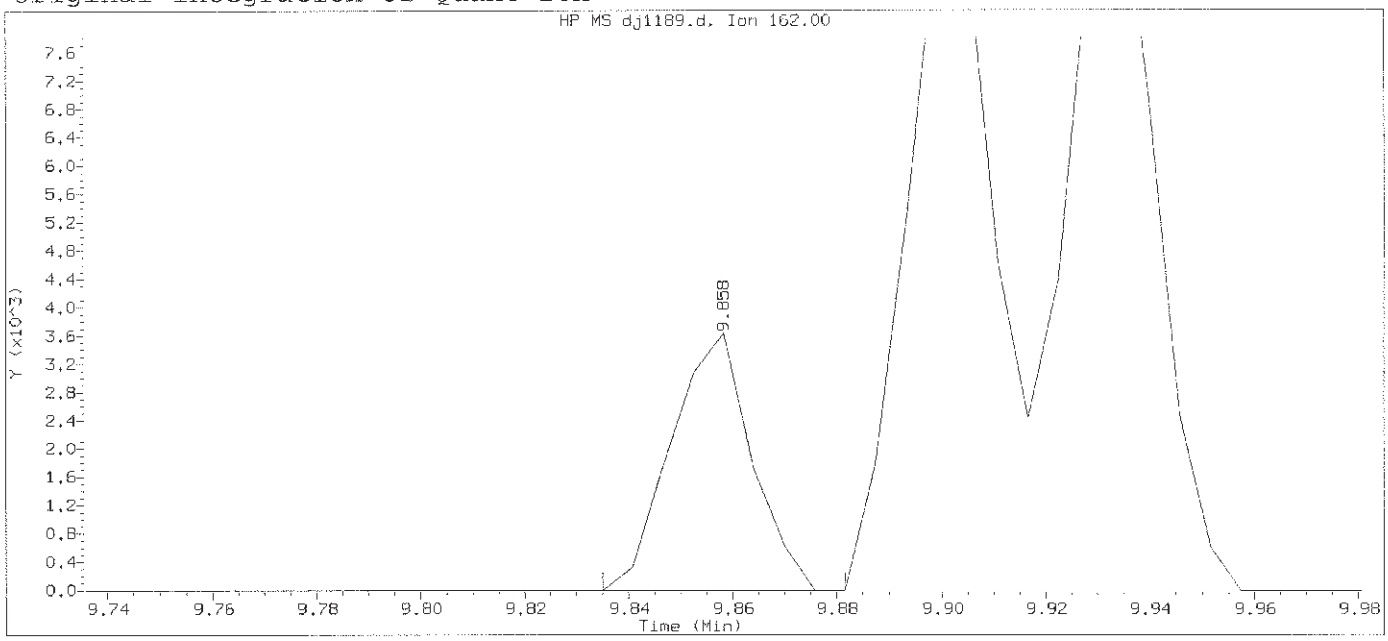
GC/MS audit/management approval: OCT 3 0 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

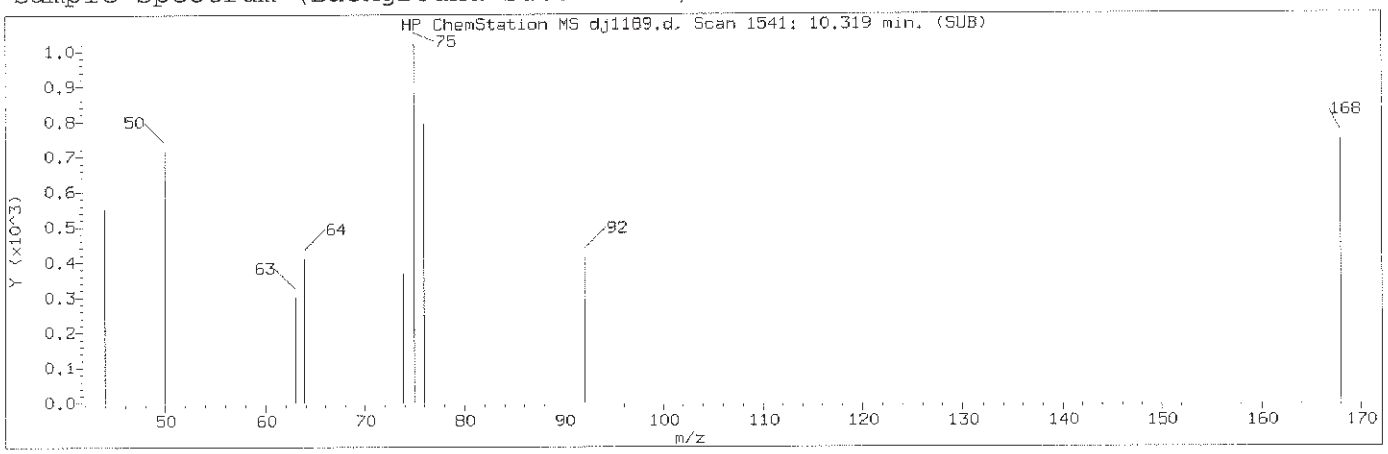
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

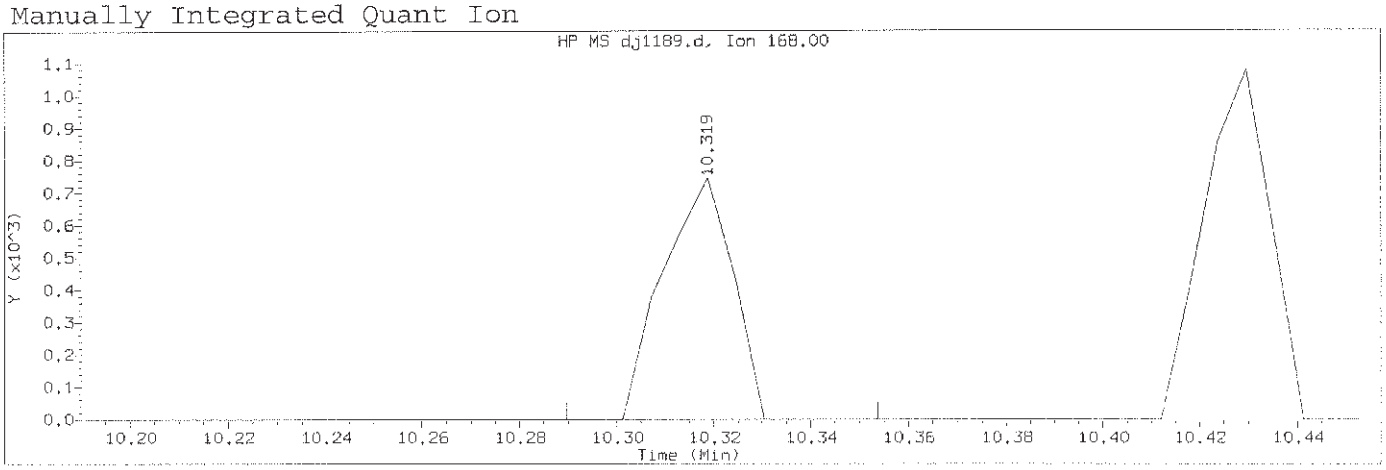
Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1462		
Retention Time (minutes)	: 9.858		
Quant Ion	: 162.00		
Area	: 3898		
On-column Amount (ng/ul)	: 0.5875		
Integration start scan	: 1457	Integration stop scan:	1465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 85		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1541		
Retention Time (minutes)	: 10.319		
Quant Ion	: 168.00		
Area (flag)	: 740M		
On-Column Amount (ng/ul)	: 0.5829		
Integration start scan	: 1535	Integration stop scan:	1546
Y at integration start	: 0	Y at integration end:	0

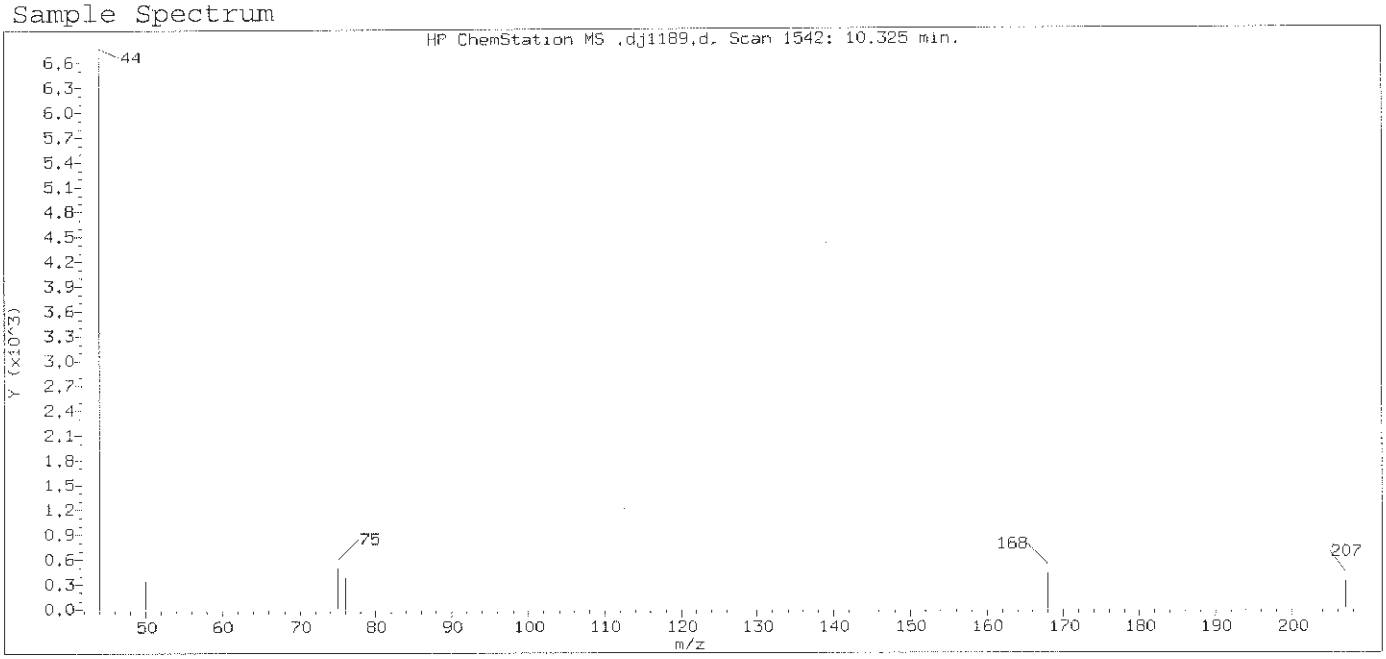
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

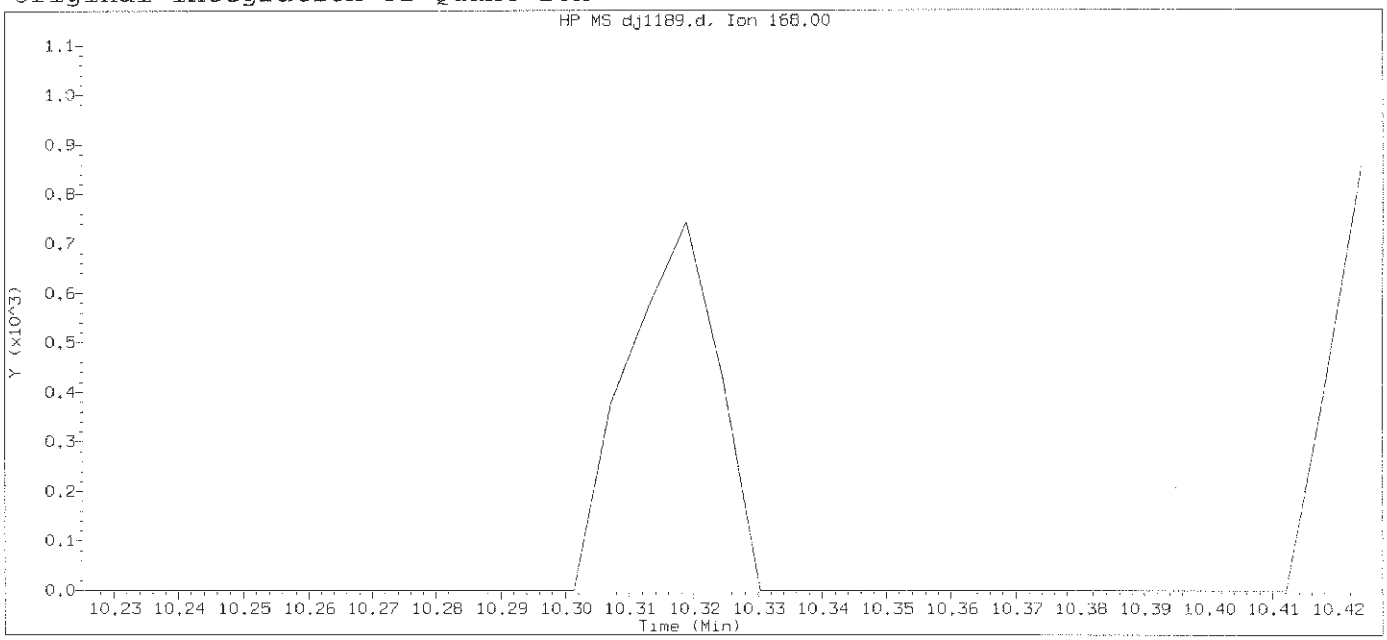
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

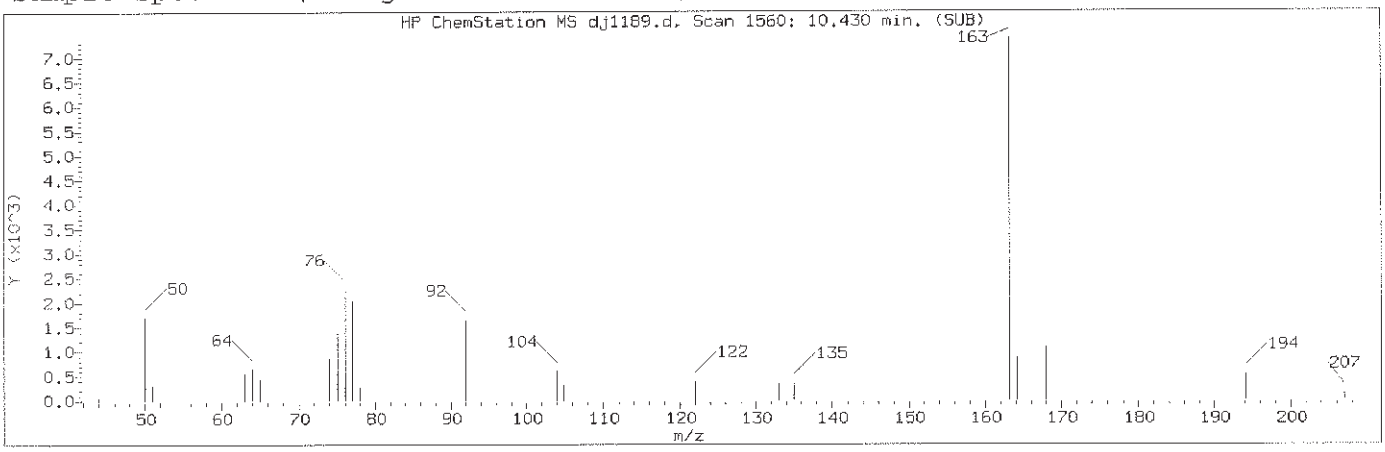
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

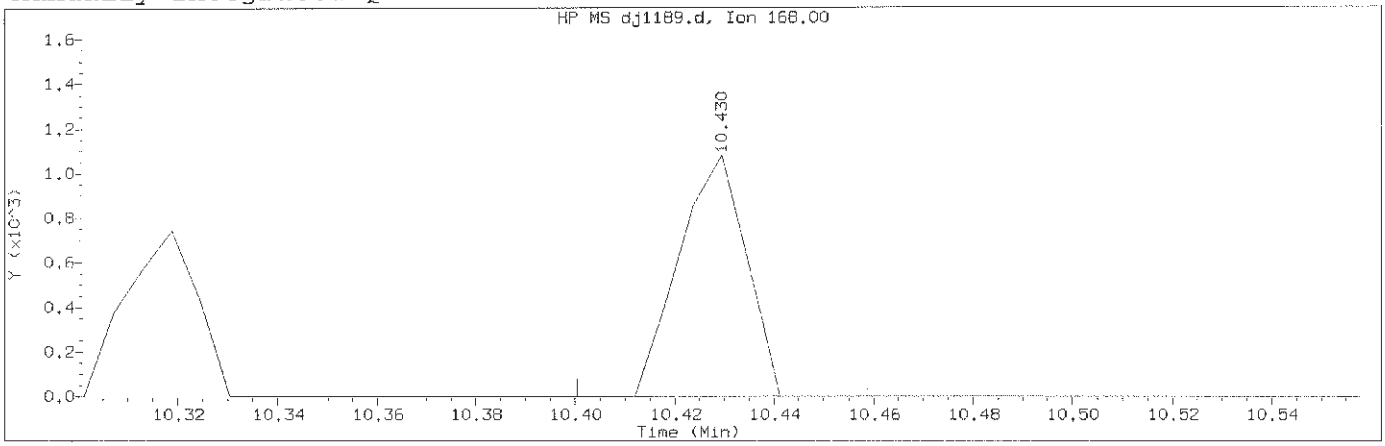
Compound Number : 85
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 10.325
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 87		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1560		
Retention Time (minutes)	: 10.430		
Quant Ion	: 168.00		
Area (flag)	: 1007M		
On-Column Amount (ng/ul)	: 0.0598		
Integration start scan	: 1554	Integration stop scan:	1564
Y at integration start	: 0	Y at integration end:	0

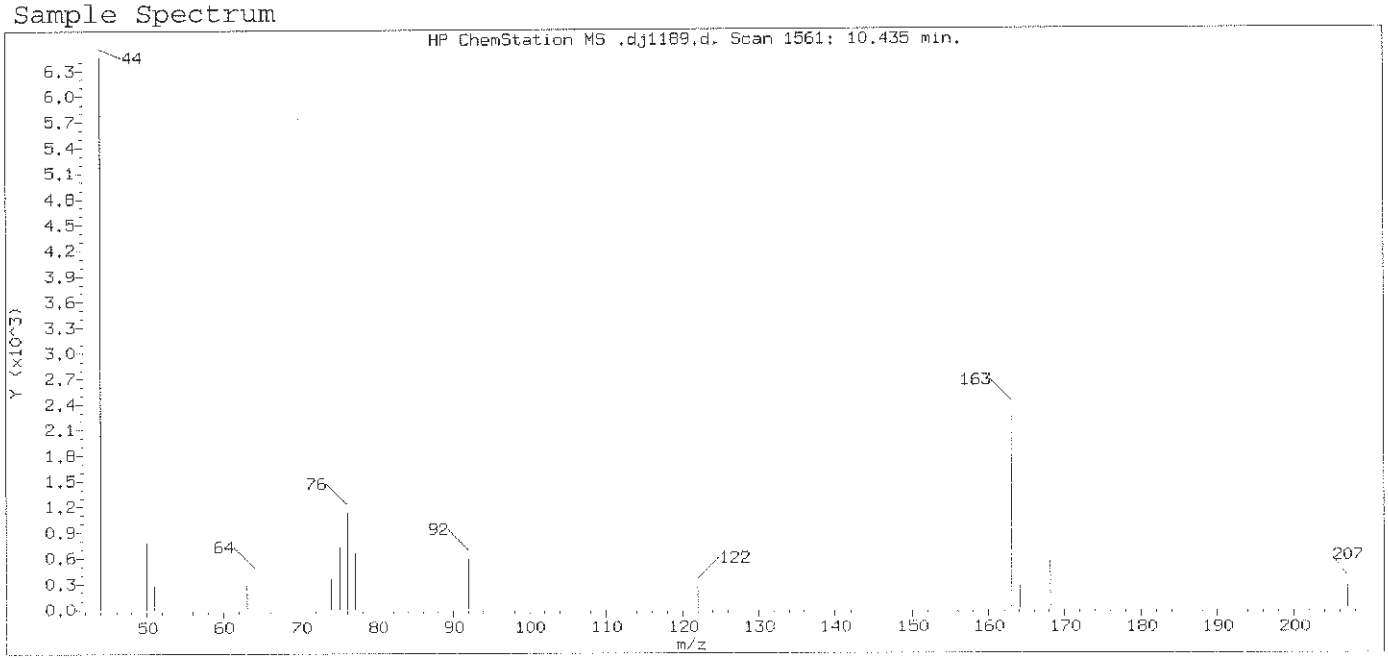
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

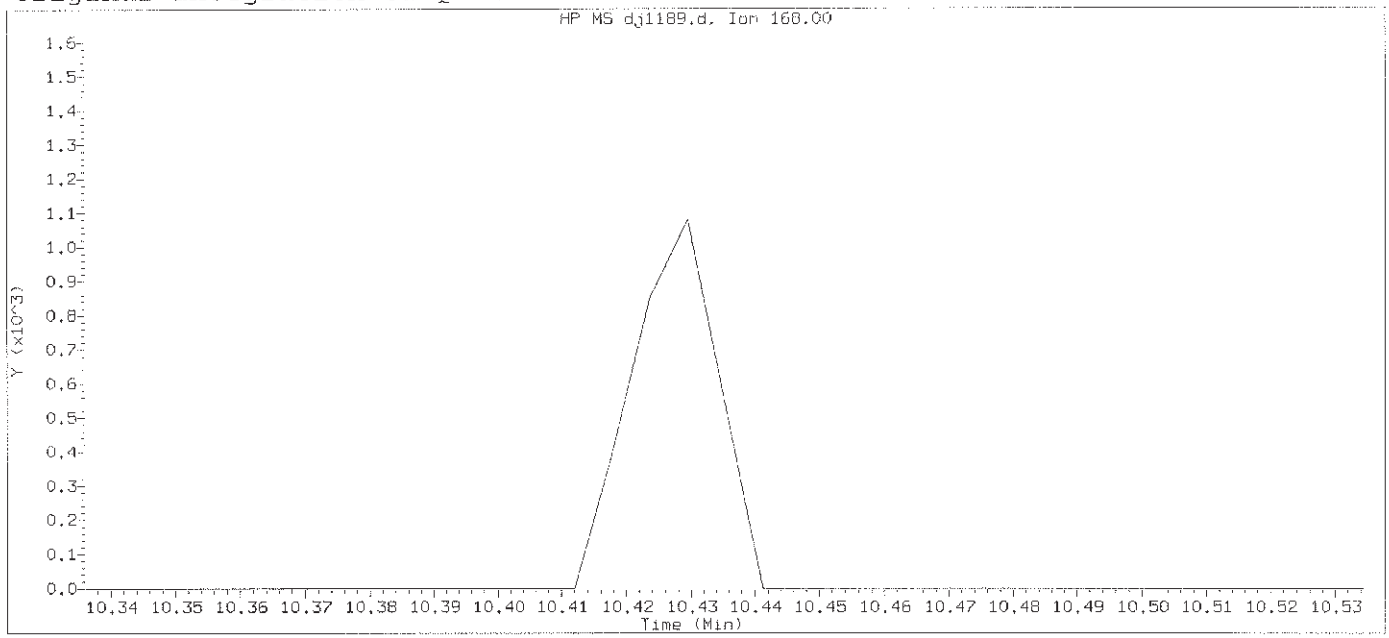
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

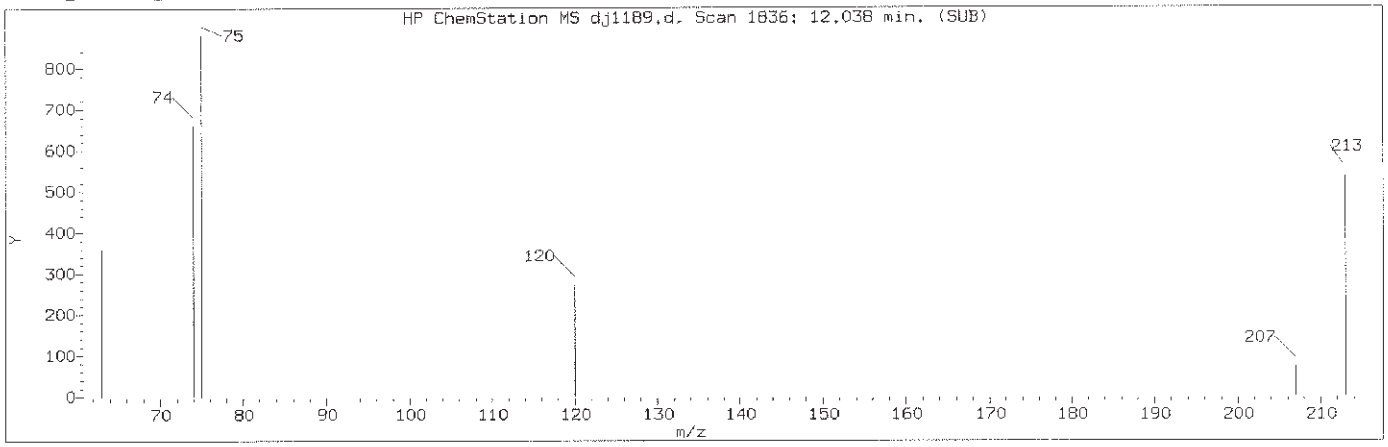
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

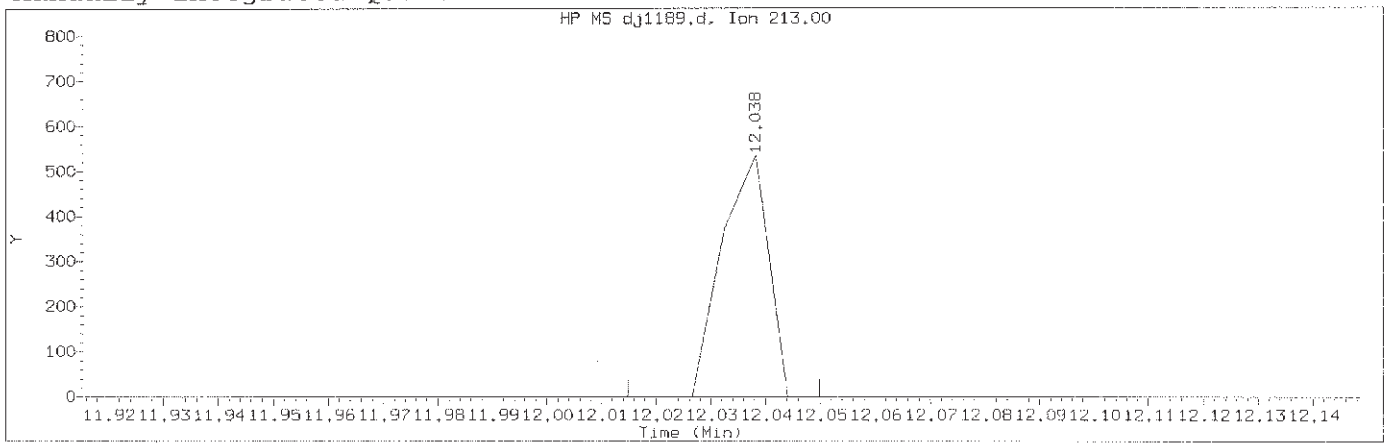
Compound Number : 87
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 10.435
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 116		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1836		
Retention Time (minutes)	: 12.038		
Quant Ion	: 213.00		
Area (flag)	: 316M		
On-Column Amount (ng/ul)	: 1.3173		
Integration start scan	: 1831	Integration stop scan:	1837
Y at integration start	: 0	Y at integration end:	0

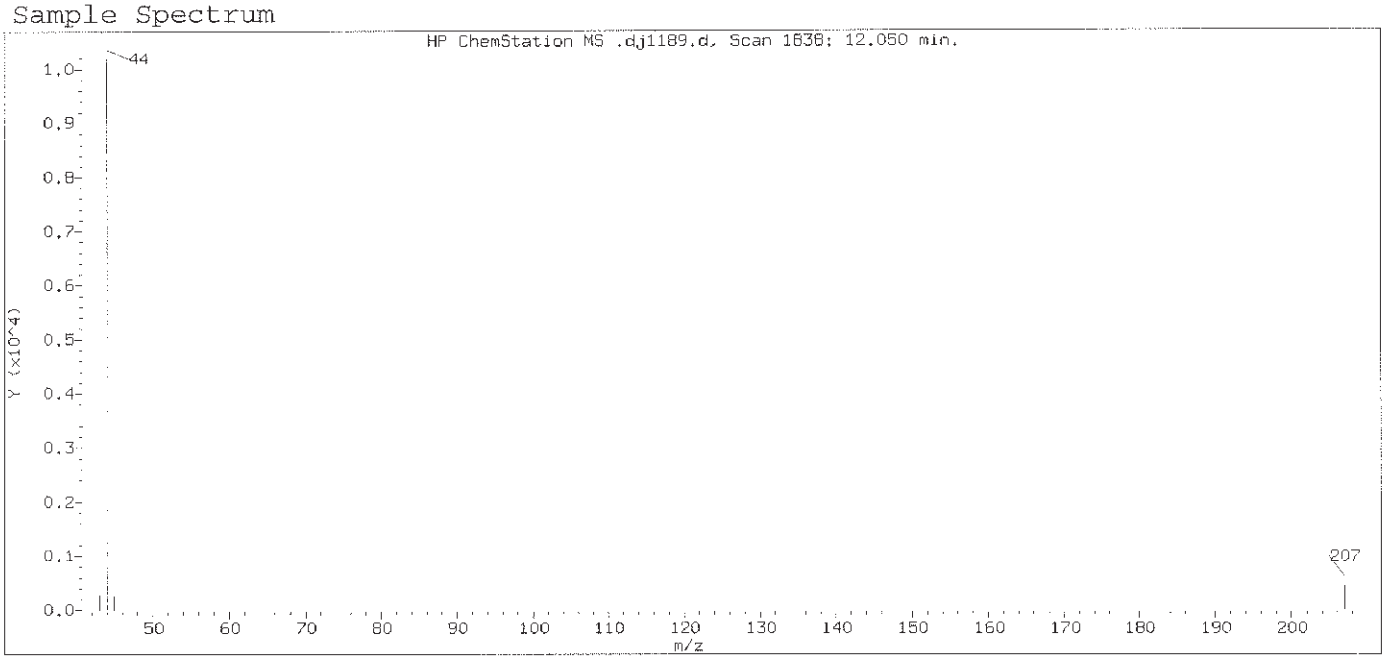
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

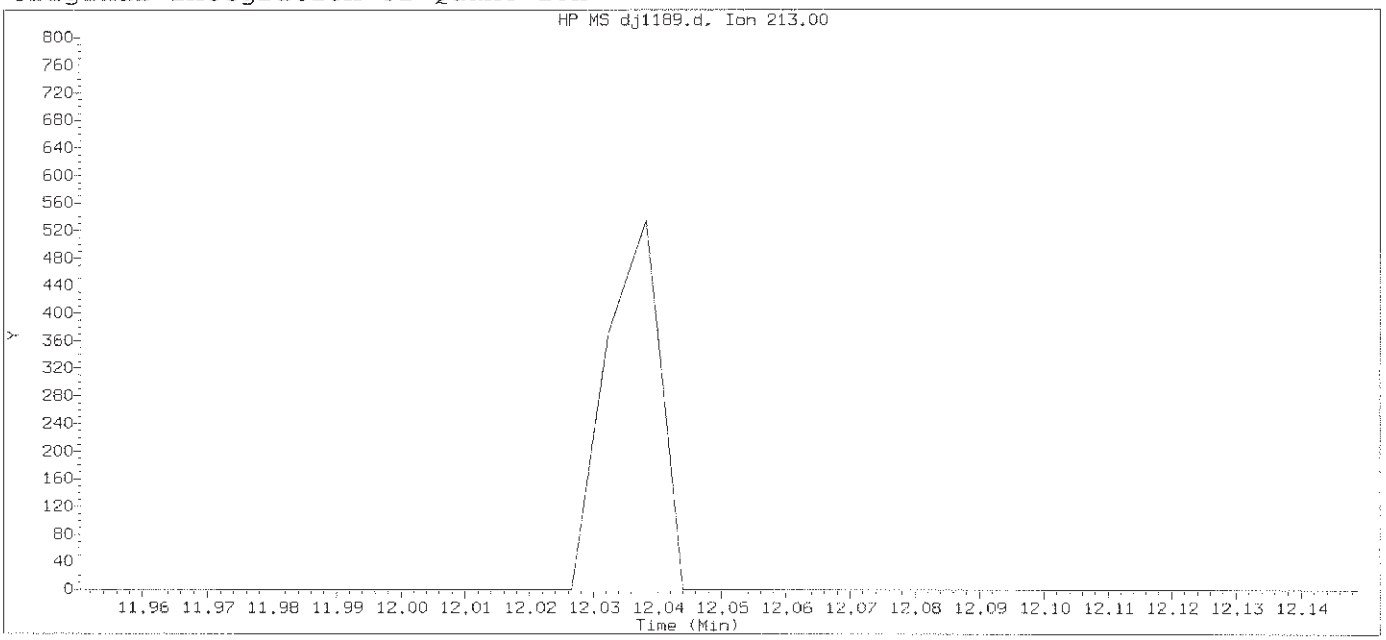
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

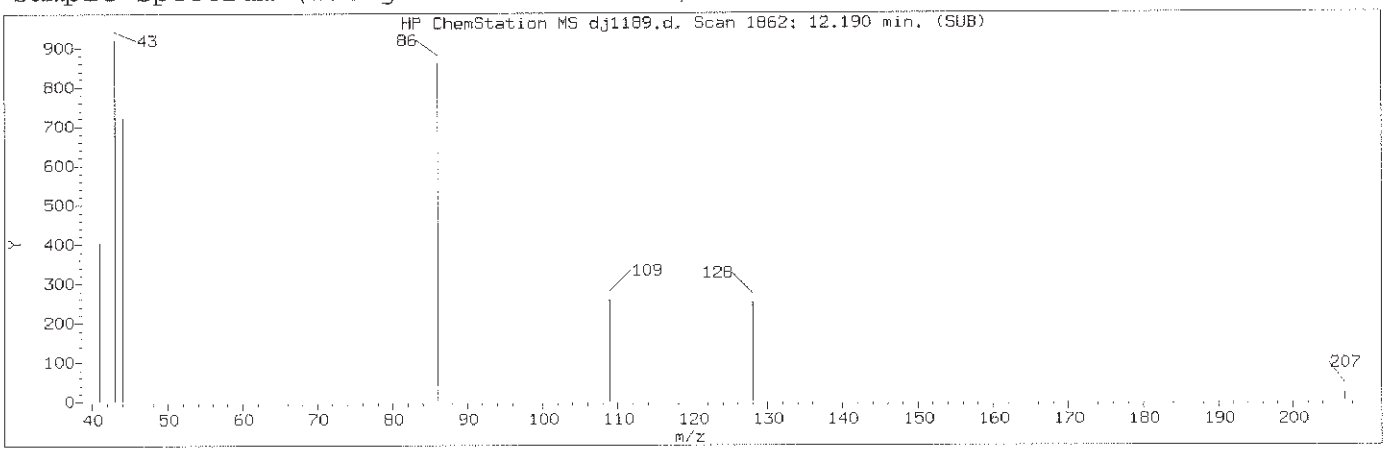
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

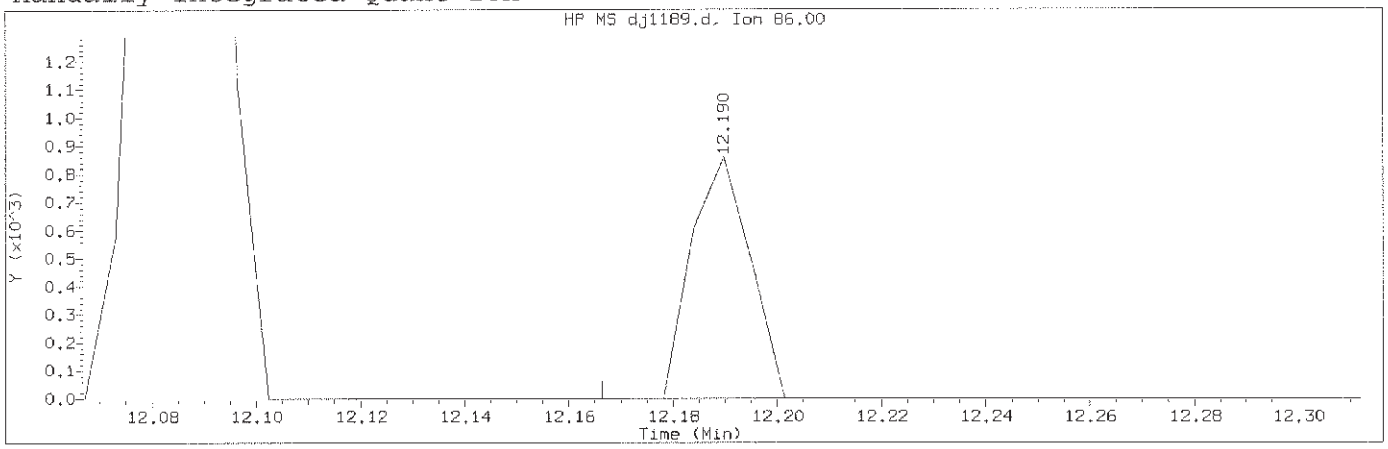
Compound Number : 116
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.050
Quant Ion : 213.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5md1a111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1862		
Retention Time (minutes)	: 12.190		
Quant Ion	: 86.00		
Area (flag)	: 674M		
On-Column Amount (ng/ul)	: 0.0238		
Integration start scan	: 1857	Integration stop scan:	1865
Y at integration start	: 0	Y at integration end:	0

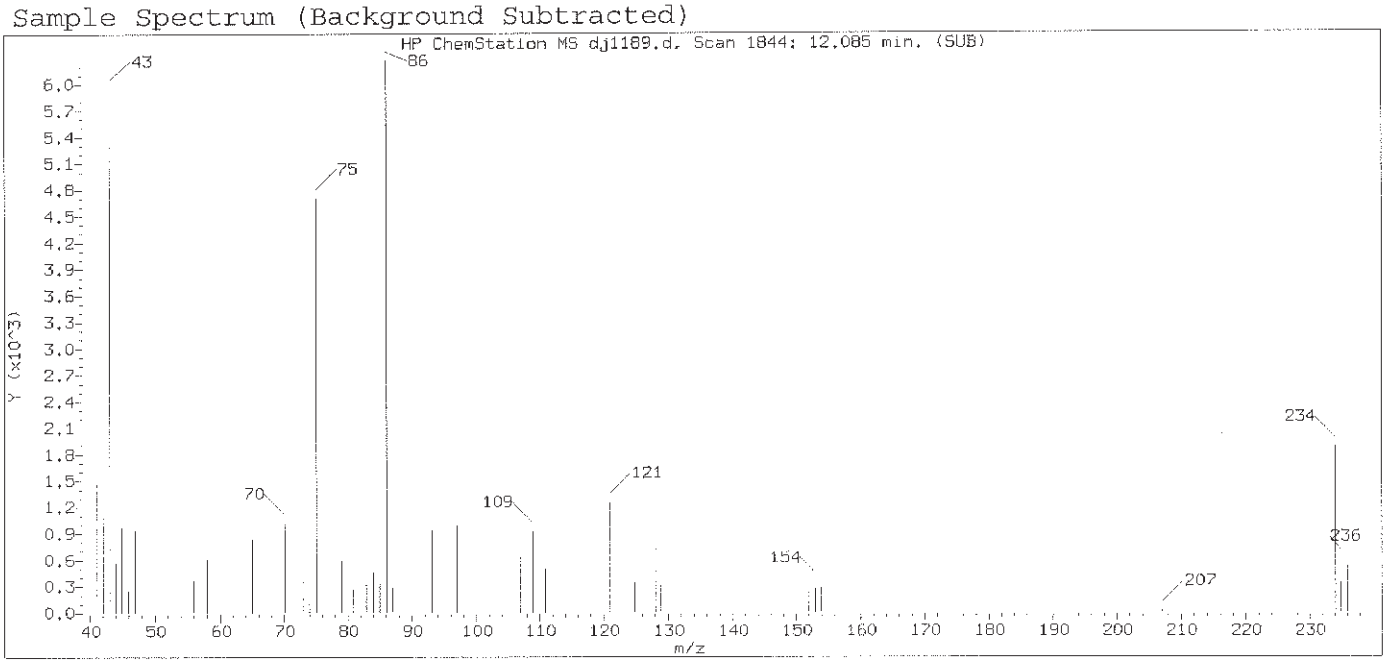
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

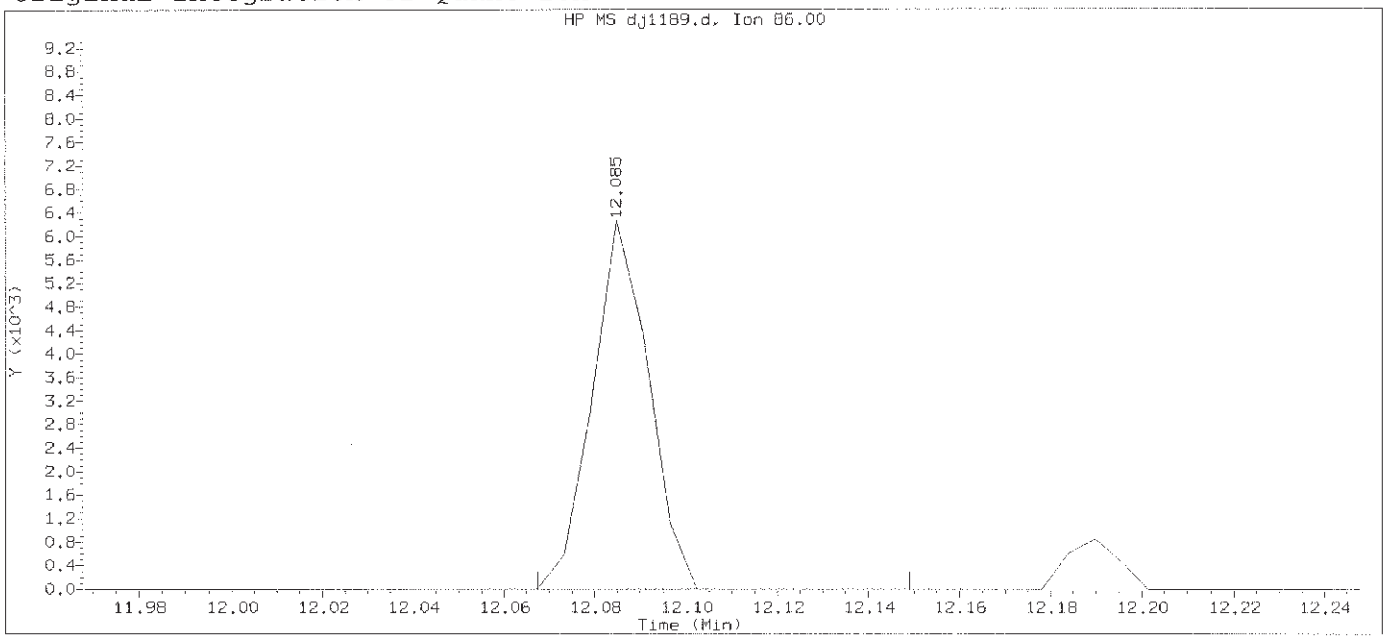
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

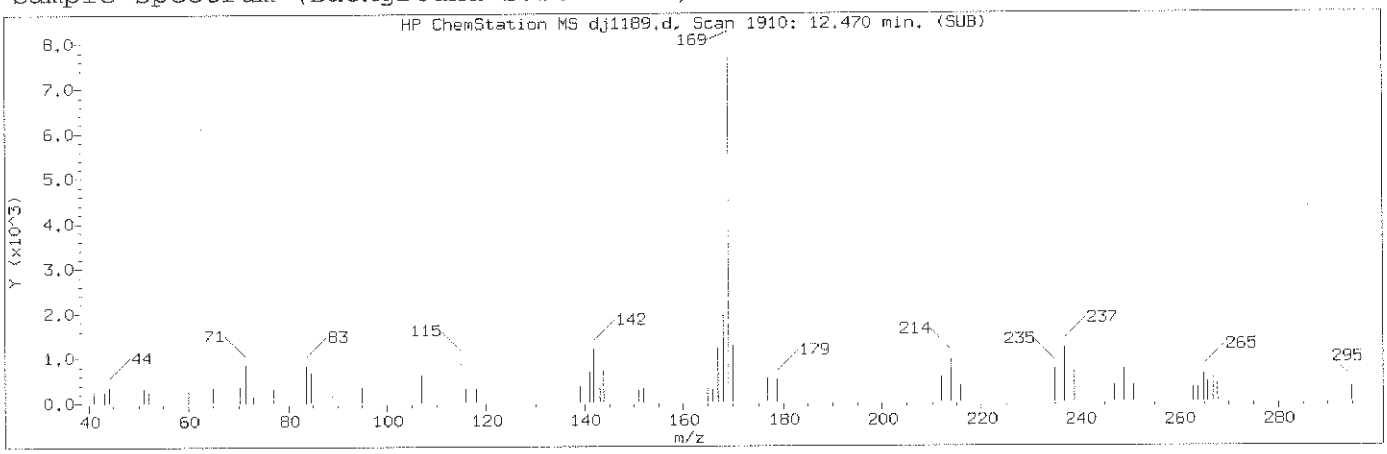
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

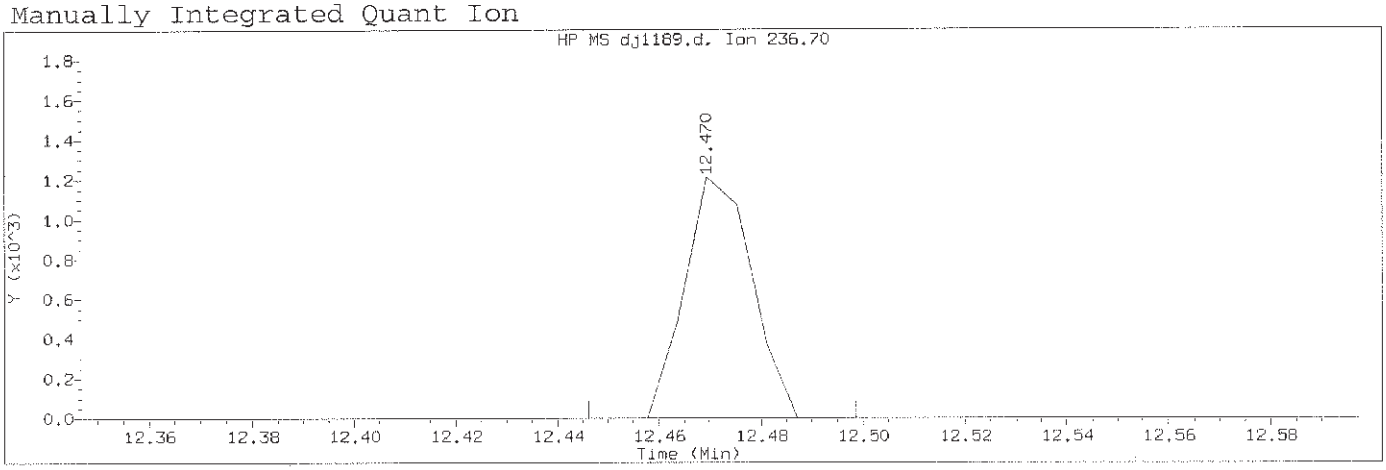
Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1844		
Retention Time (minutes)	: 12.085		
Quant Ion	: 86.00		
Area	: 5354		
On-column Amount (ng/ul)	: 0.1888		
Integration start scan	: 1840	Integration stop scan:	1854
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 126		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1910		
Retention Time (minutes)	: 12.470		
Quant Ion	: 237.00		
Area (flag)	: 1094M		
On-Column Amount (ng/ul)	: 0.0892		
Integration start scan	: 1905	Integration stop scan:	1914
Y at integration start	: 0	Y at integration end:	0

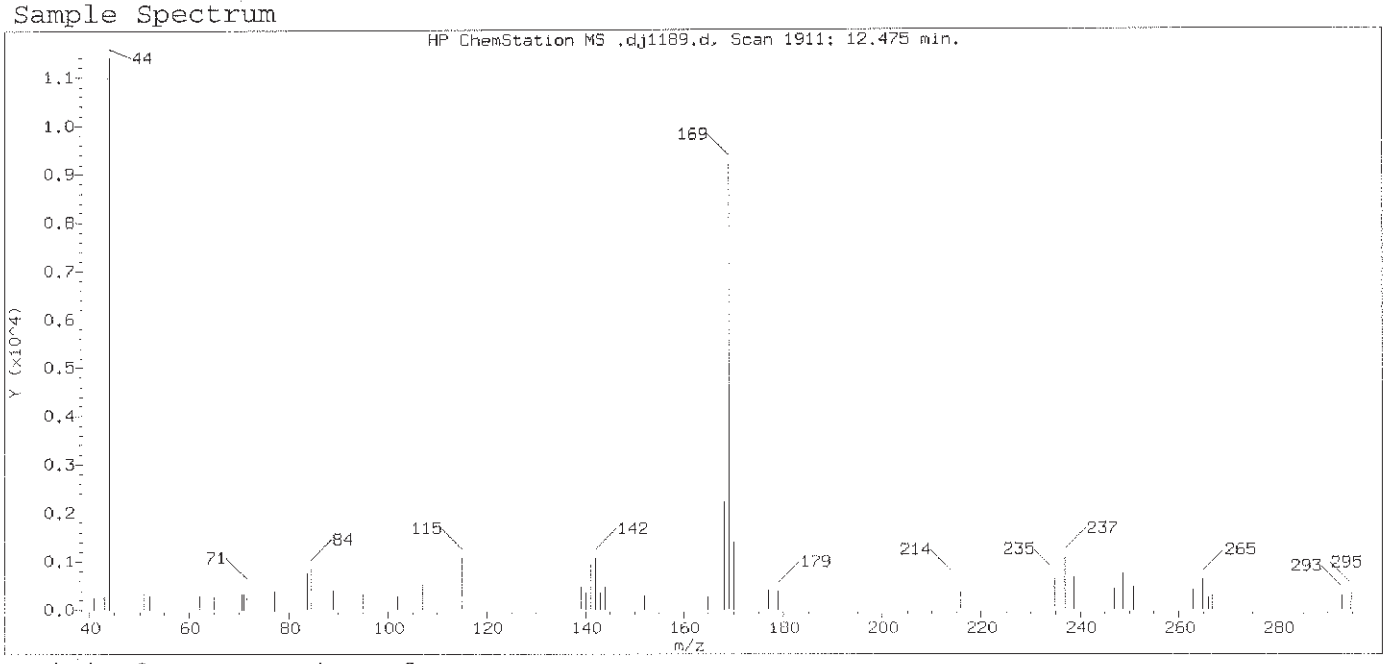
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

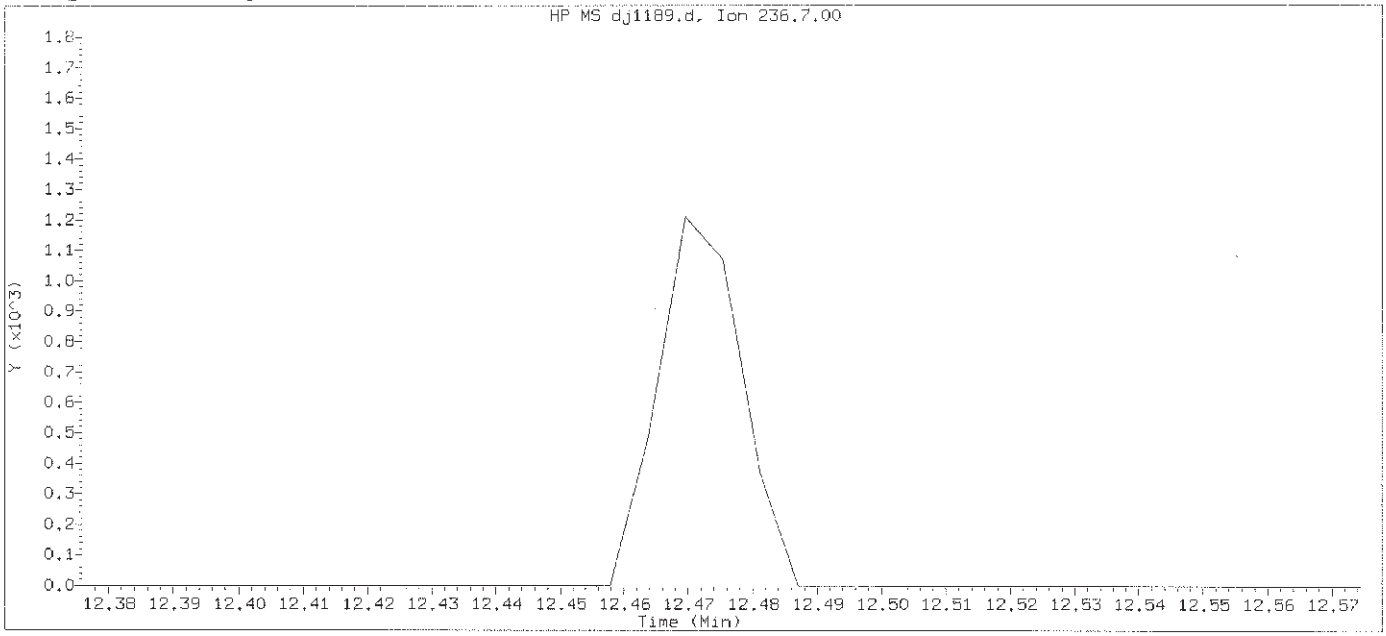
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Chemist Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

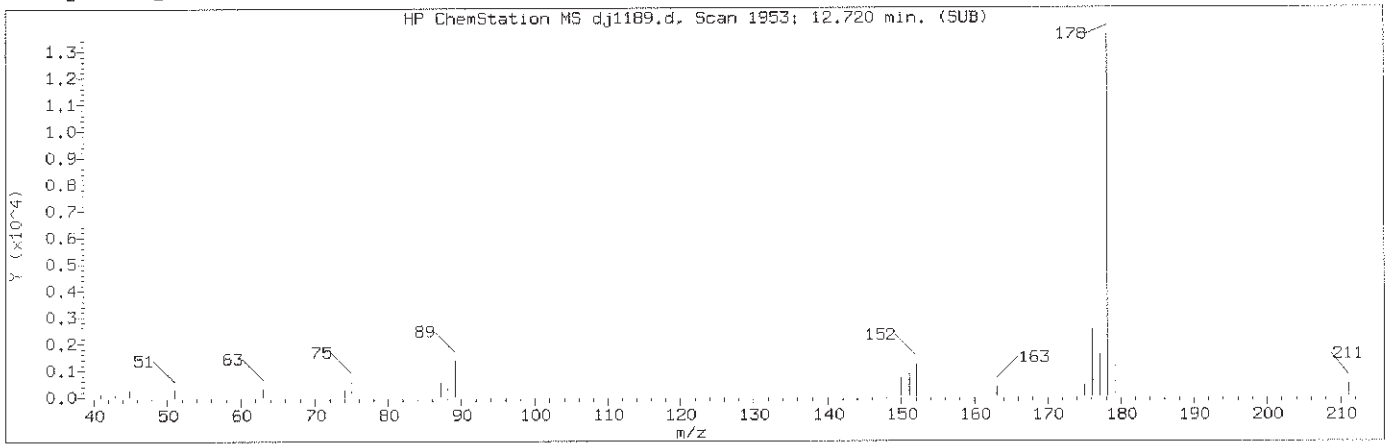
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

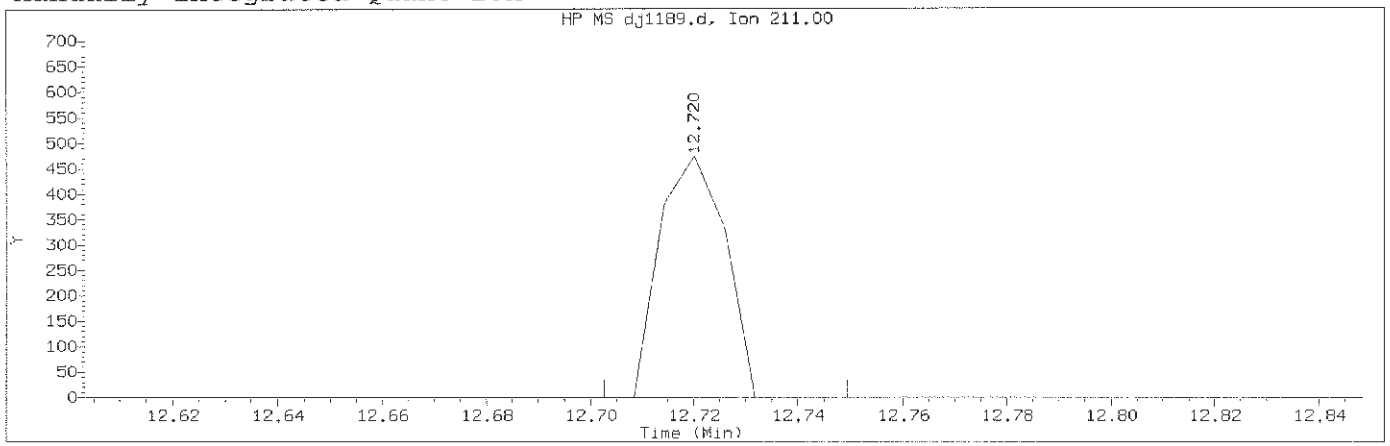
Compound Number : 126
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 12.475
Quant Ion : 237.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 133		
Compound Name	: Dinoseb		
Scan Number	: 1953		
Retention Time (minutes)	: 12.720		
Quant Ion	: 211.00		
Area (flag)	: 414M		
On-Column Amount (ng/ul)	: 1.3360		
Integration start scan	: 1949	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

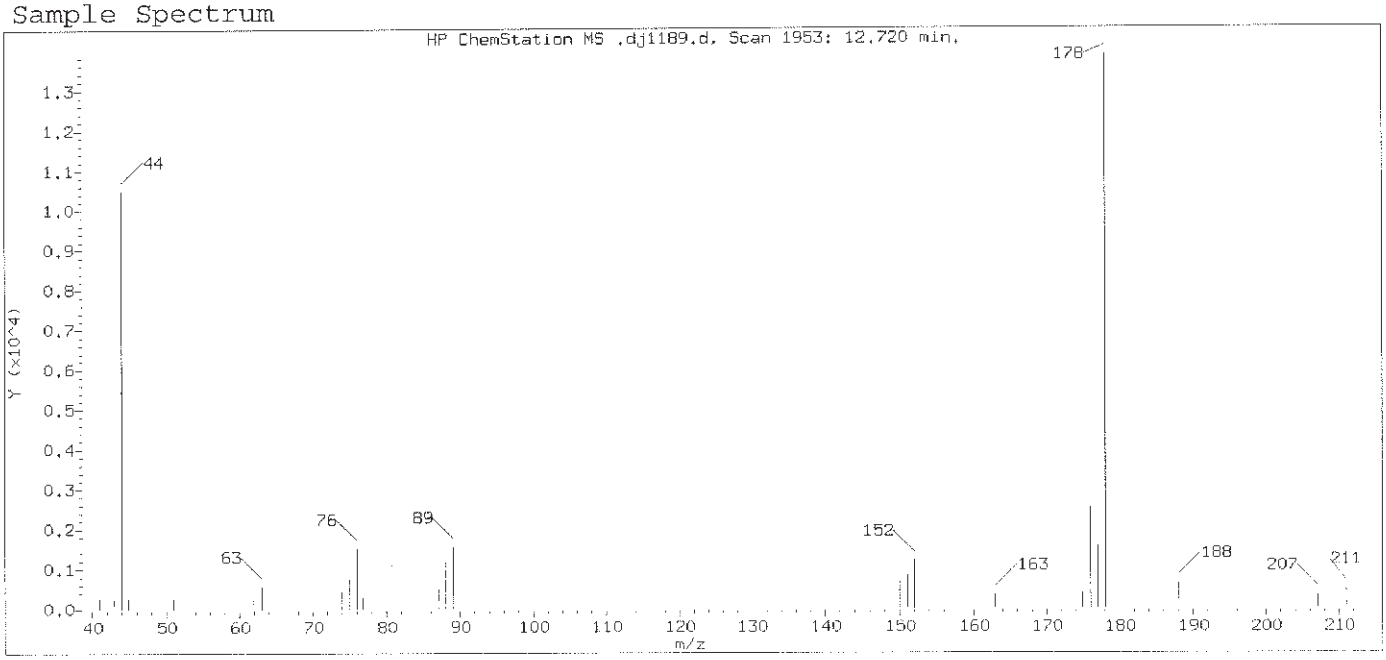
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

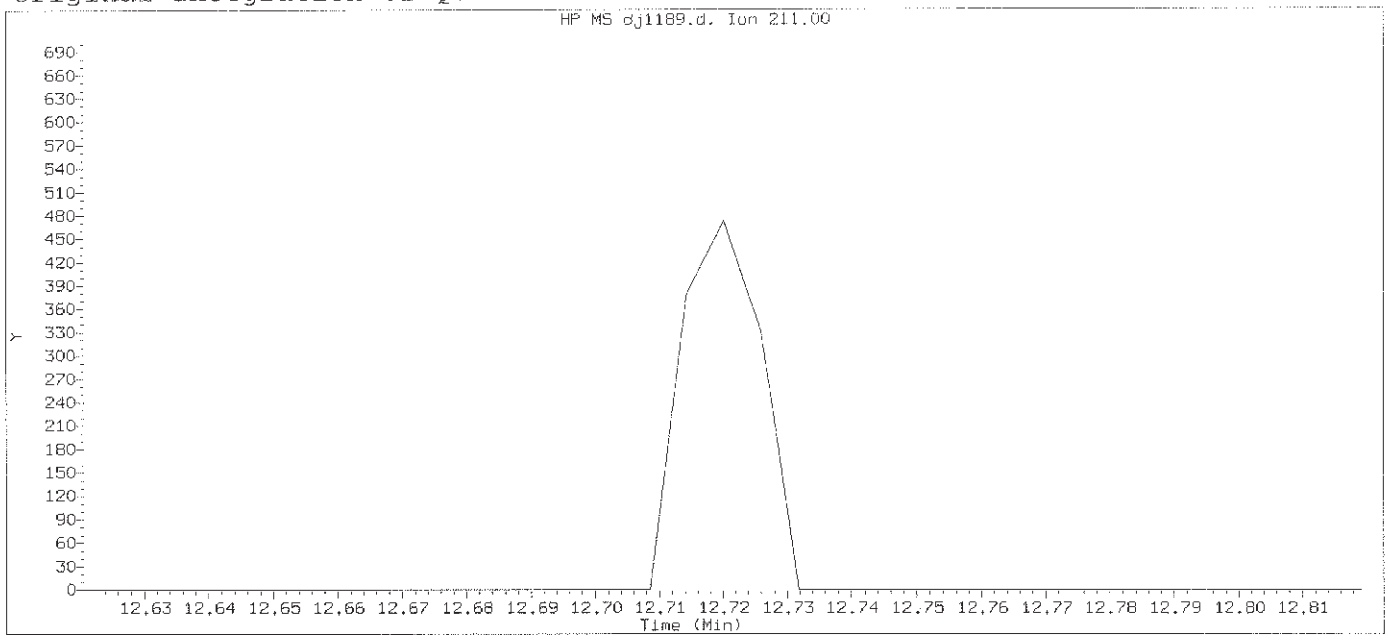
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

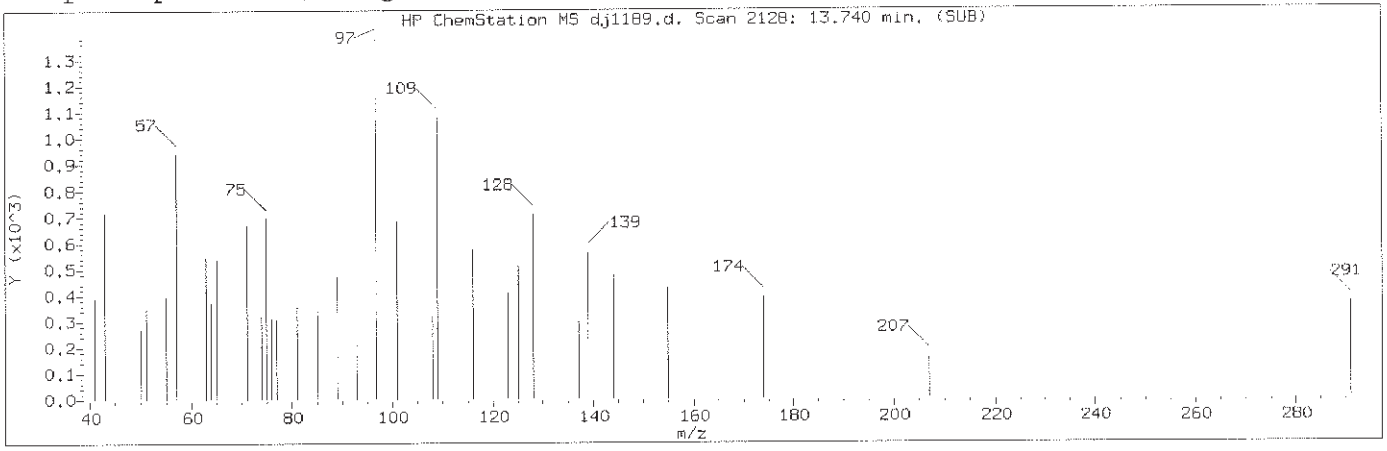
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

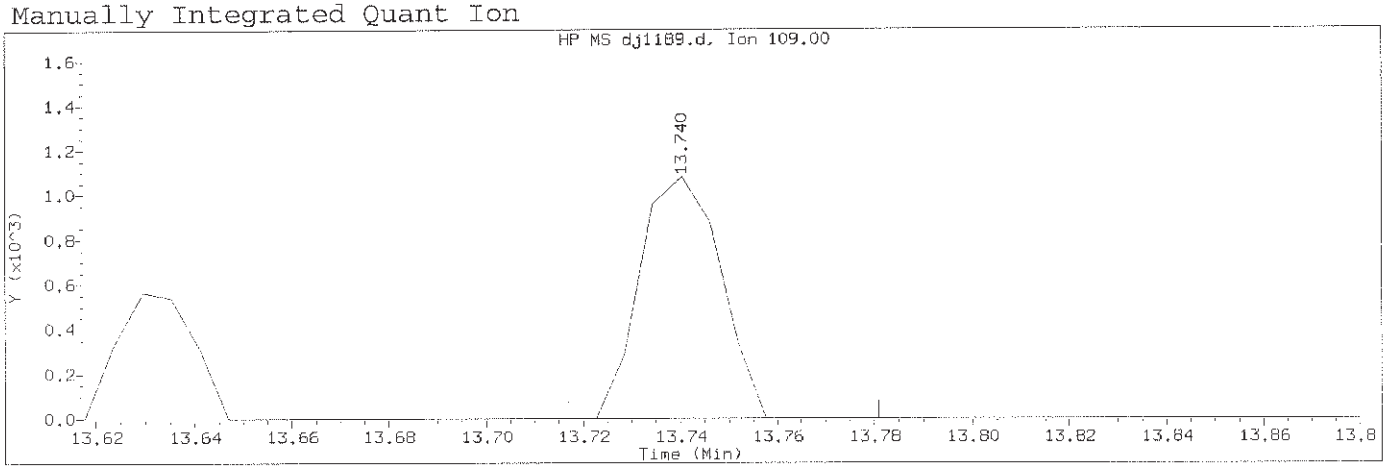
Compound Number : 133
Compound Name : Dinoseb
Expected RT (minutes) : 12.720
Quant Ion : 211.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2128		
Retention Time (minutes)	: 13.740		
Quant Ion	: 109.00		
Area (flag)	: 1235M		
On-Column Amount (ng/ul)	: 0.1123		
Integration start scan	: 2123	Integration stop scan:	2134
Y at integration start	: 0	Y at integration end:	0

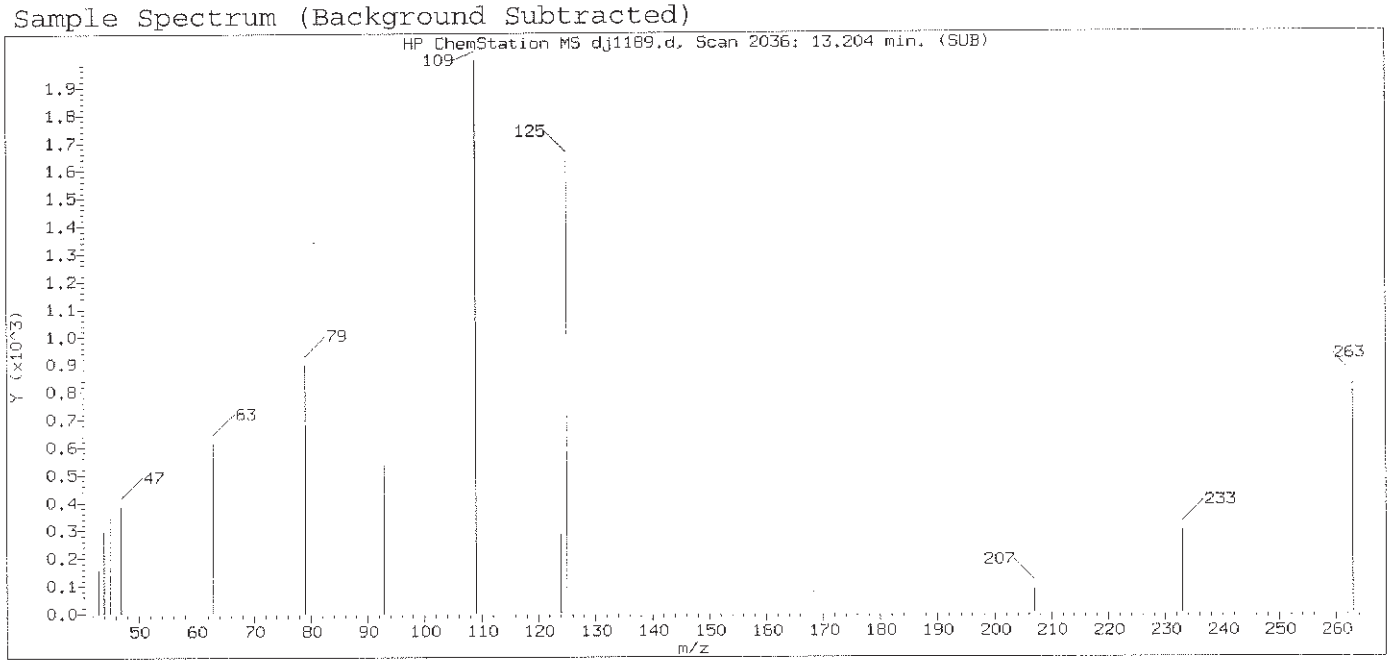
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

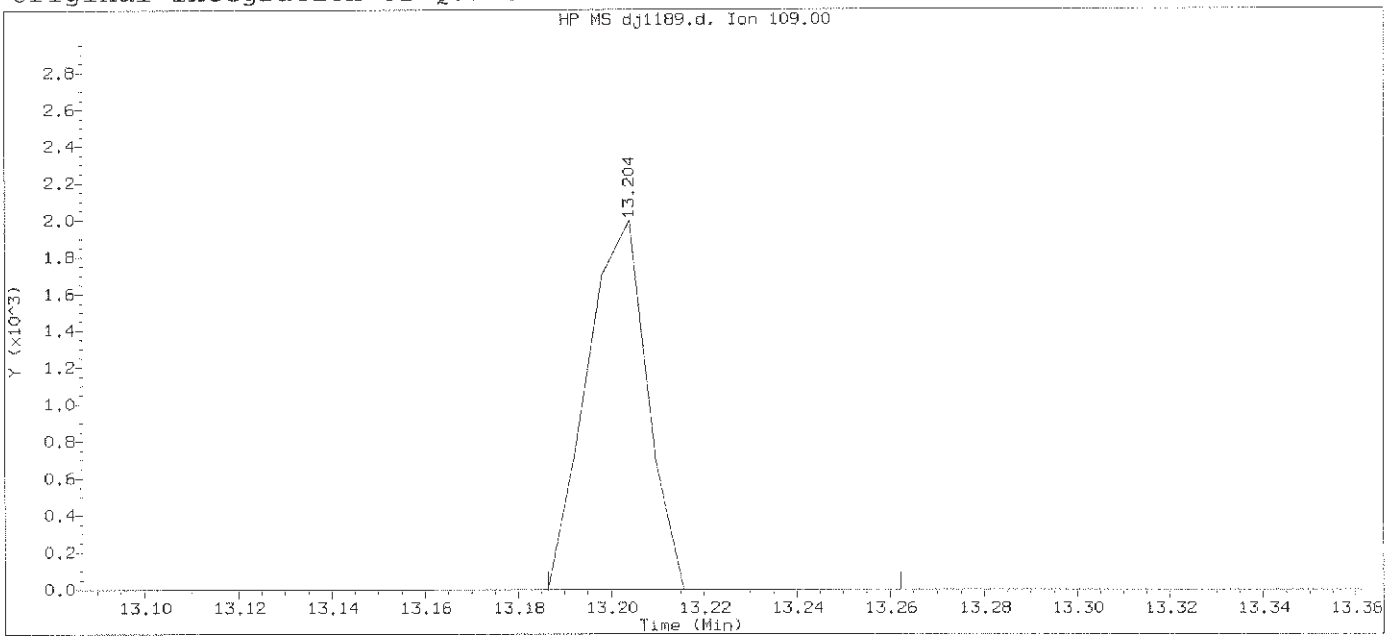
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

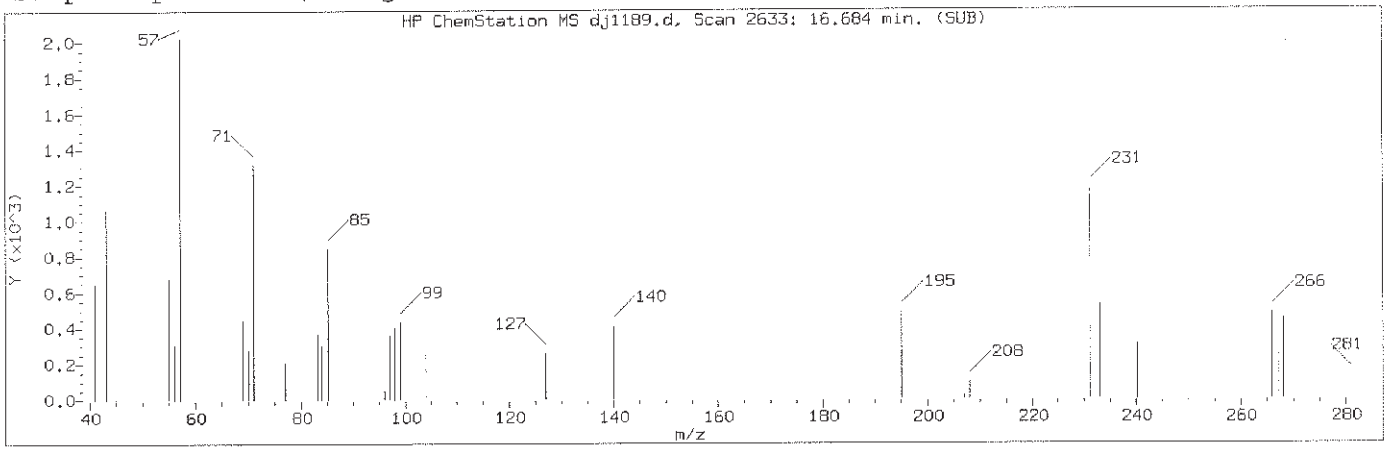
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

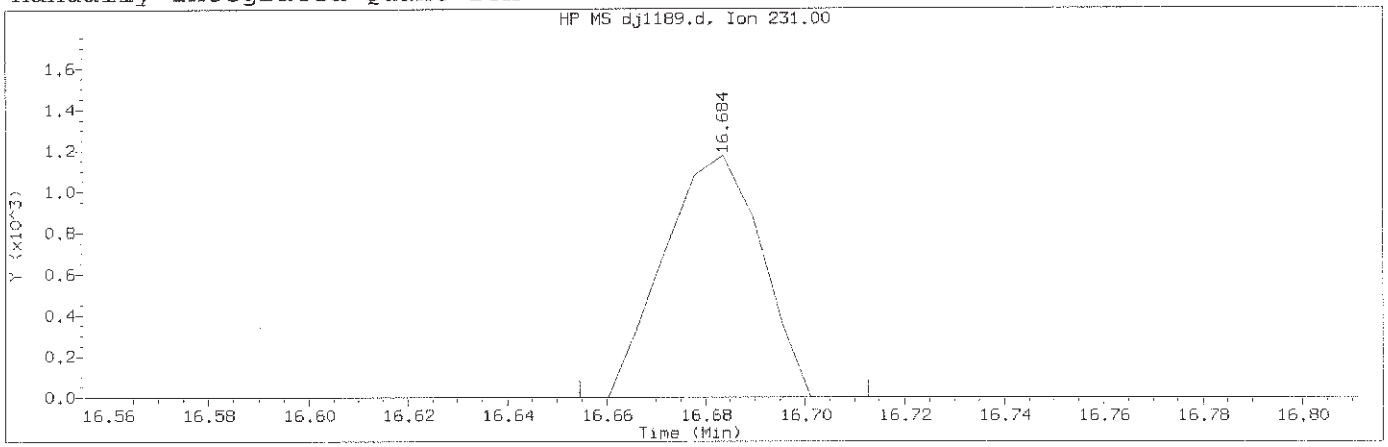
Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2036		
Retention Time (minutes)	: 13.204		
Quant Ion	: 109.00		
Area	: 1786		
On-column Amount (ng/ul)	: 0.1346		
Integration start scan	: 2032	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 160		
Compound Name	: 4,4'-Methylenebis(2-Chloroanil		
Scan Number	: 2633		
Retention Time (minutes)	: 16.684		
Quant Ion	: 231.00		
Area (flag)	: 1582M		
On-Column Amount (ng/ul)	: 0.0544		
Integration start scan	: 2627	Integration stop scan:	2637
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

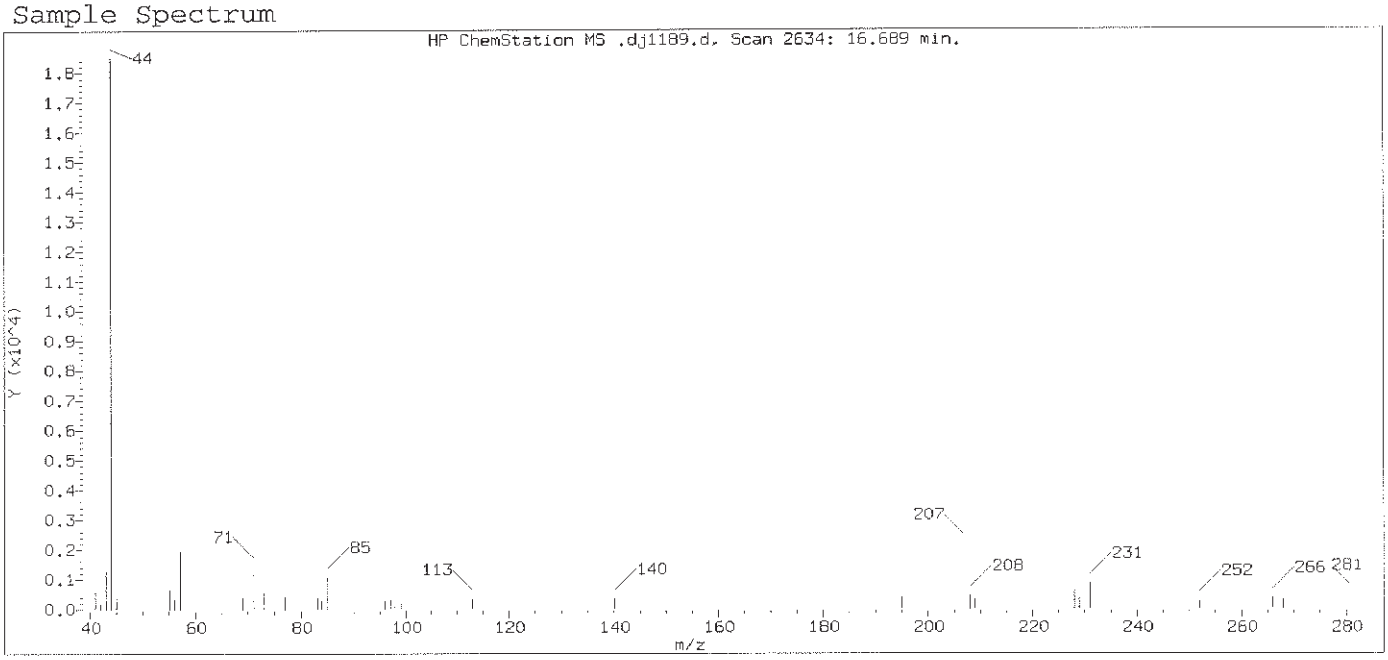
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

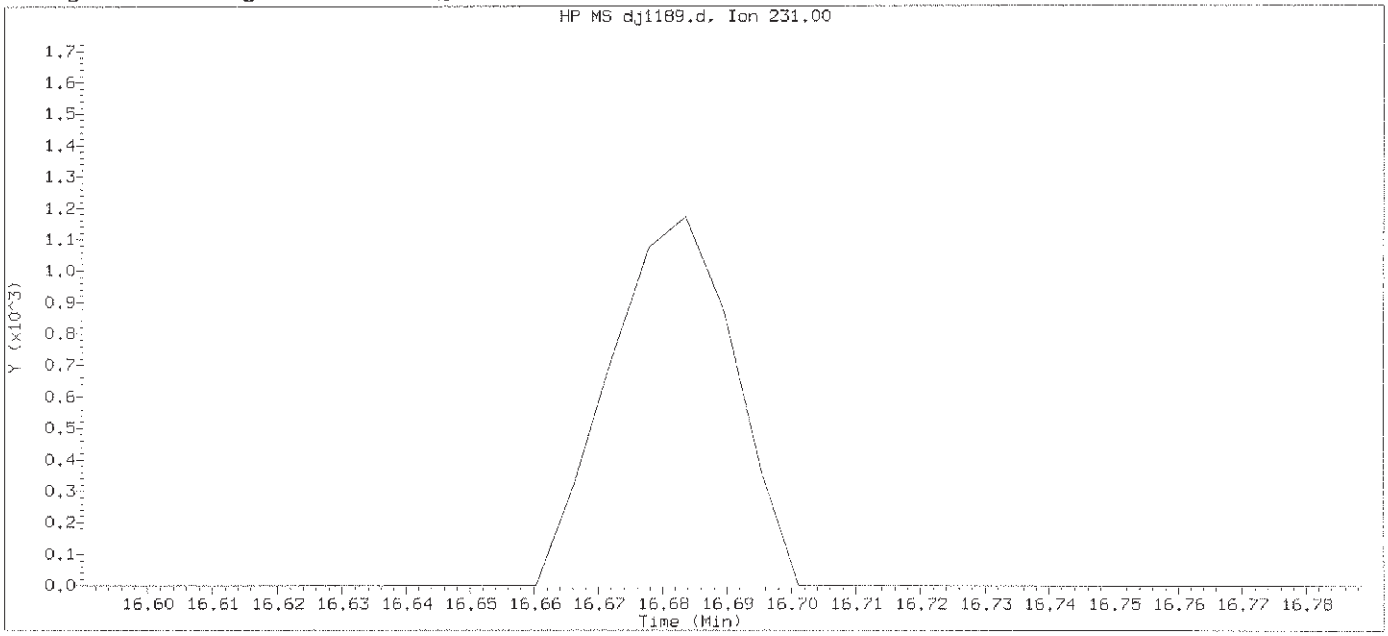
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



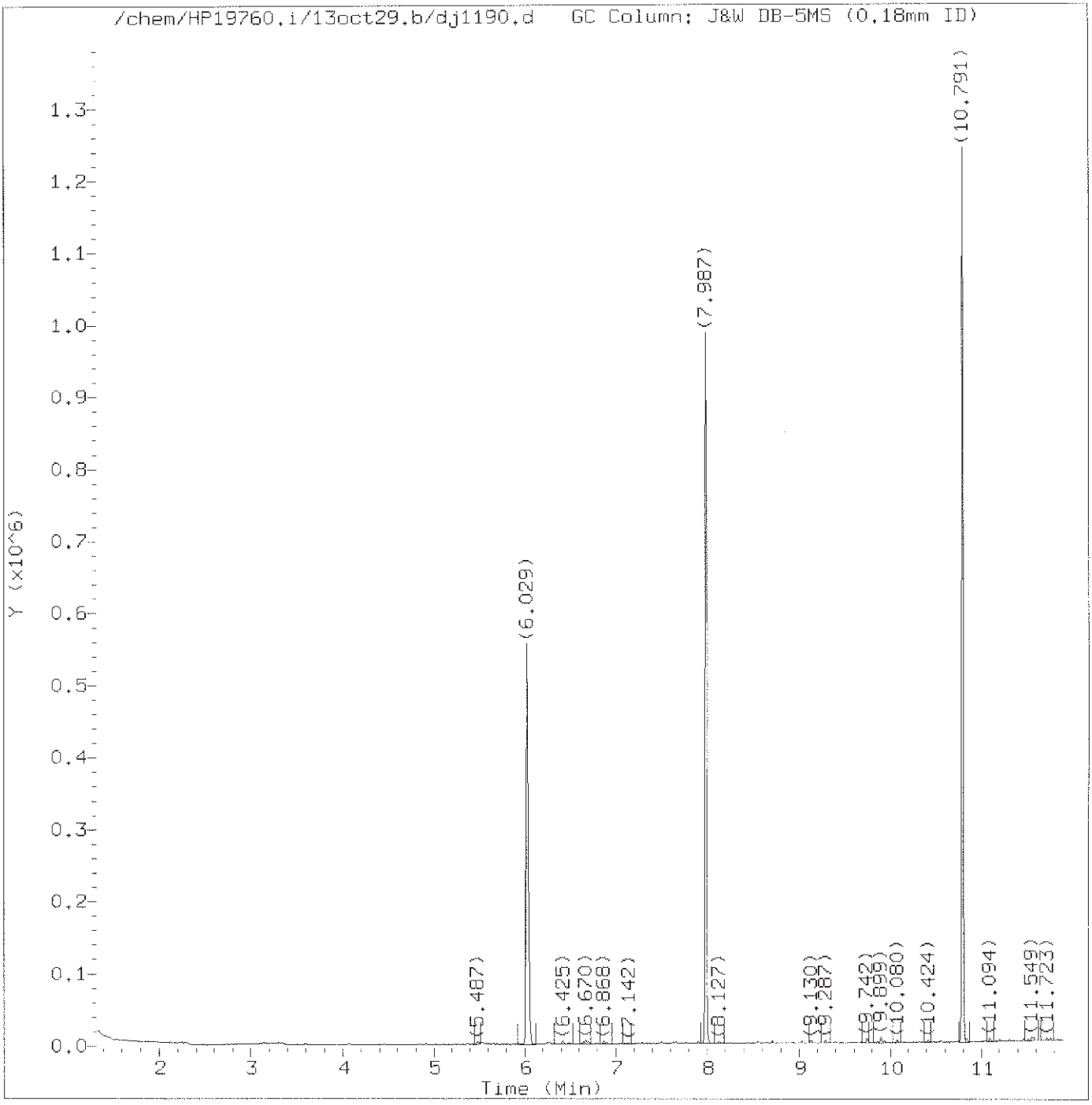
Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number : 160
Compound Name : 4,4'-Methylenebis(2-Chloroanil
Expected RT (minutes) : 16.689
Quant Ion : 231.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

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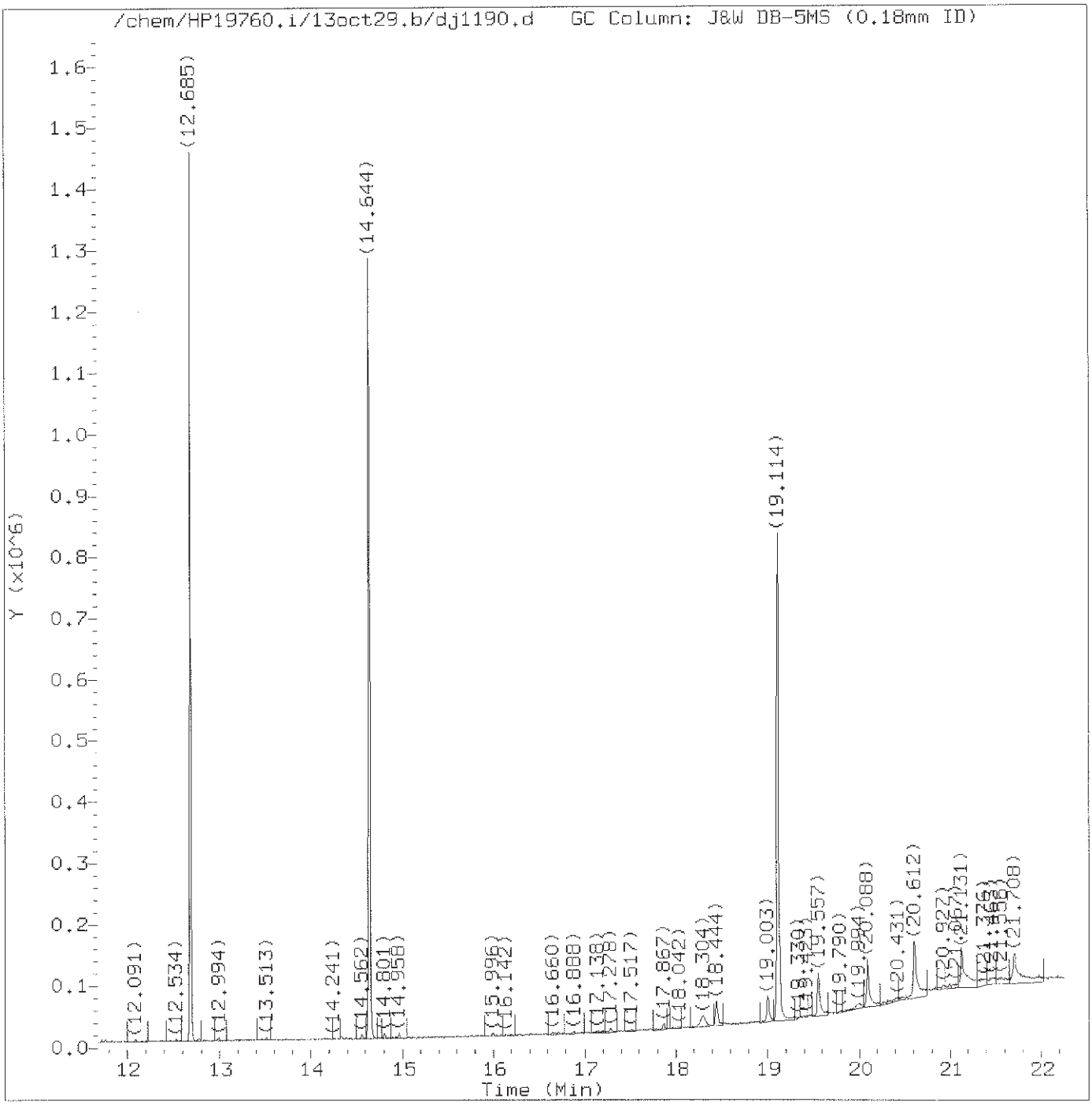
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.065	112	1215	0.030
12)$Phenol-d5	(1)	5.487	99	2471	0.044
13)$Phenol-d6	(1)	5.487	99	2471	0.044
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	137980	5.000
36)$Nitrobenzene-d5	(2)	6.868	82	1959	0.040
52)*Naphthalene-d8	(2)	7.987	136	529711	5.000
53) Naphthalene	(2)	8.022	128	3010	0.027
65) 2-Methylnaphthalene	(2)	9.130	142	1743	0.023
66) 1-Methylnaphthalene	(2)	9.287	142	1683	0.025
72)$2-Fluorobiphenyl	(3)	9.742	172	3786	0.051
90) Acenaphthylene	(3)	10.558	152	1902	0.019
92)*Acenaphthene-d10	(3)	10.791	164	297690	5.000
93) Acenaphthene	(3)	10.838	153	1795	0.026
103) Fluorene	(3)	11.549	166	1636	0.021
112)$2,4,6-Tribromophenol	(3)	11.840	330	122	0.016
122) Hexachlorobenzene	(4)	12.207	284	556	0.028
130)*Phenanthrene-d10	(4)	12.685	188	507726	5.000
131) Phenanthrene	(4)	12.714	178	3004	0.027
134) Anthracene	(4)	12.778	178	2321	0.021
142) Fluoranthene	(4)	14.335	202	2459	0.019
145)*Pyrene-d10	(5)	14.644	212	618065	5.000
146) Pyrene	(5)	14.667	202	4157	0.032
149)$Terphenyl-d14	(5)	14.958	244	4822	0.063
158) Benzo(a)anthracene	(5)	16.660	228	1516	0.014
161) Chrysene	(5)	16.719	228	2198	0.020
168) Benzo(b)fluoranthene	(6)	18.502	252	1711	0.018
170) Benzo(k)fluoranthene	(6)	18.549	252	2204	0.023
171) Benzo(a)pyrene	(6)	19.021	252	2994	0.034
172)*Perylene-d12	(6)	19.114	264	408848	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.700	276	333M	0.004
177) Dibenz(a,h)anthracene	(6)	20.746	278	250M	0.004
178) Benzo(g,h,i)perylene	(6)	21.073	276	449	0.007

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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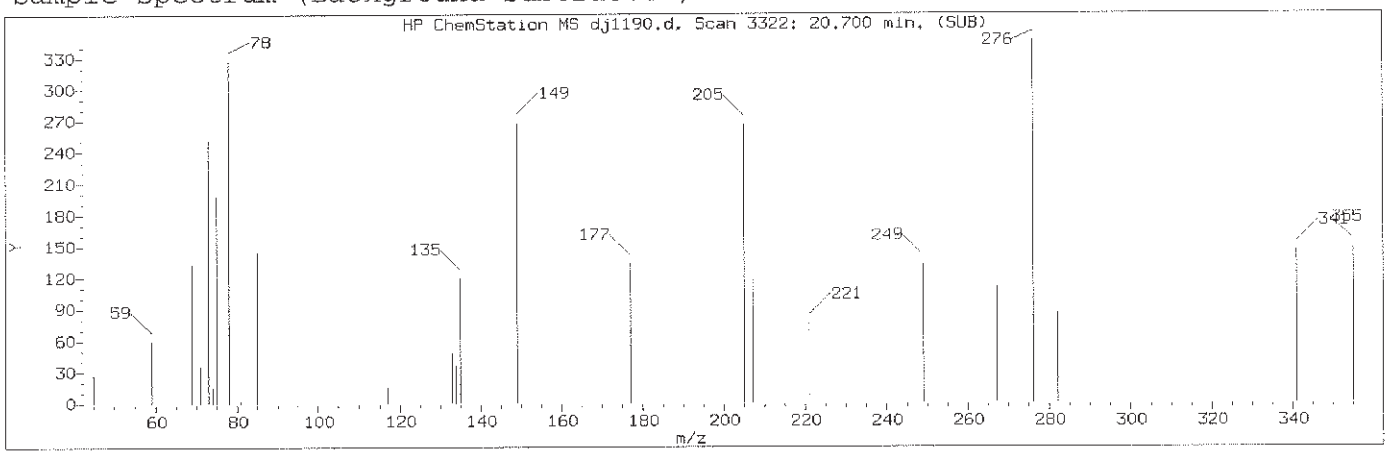
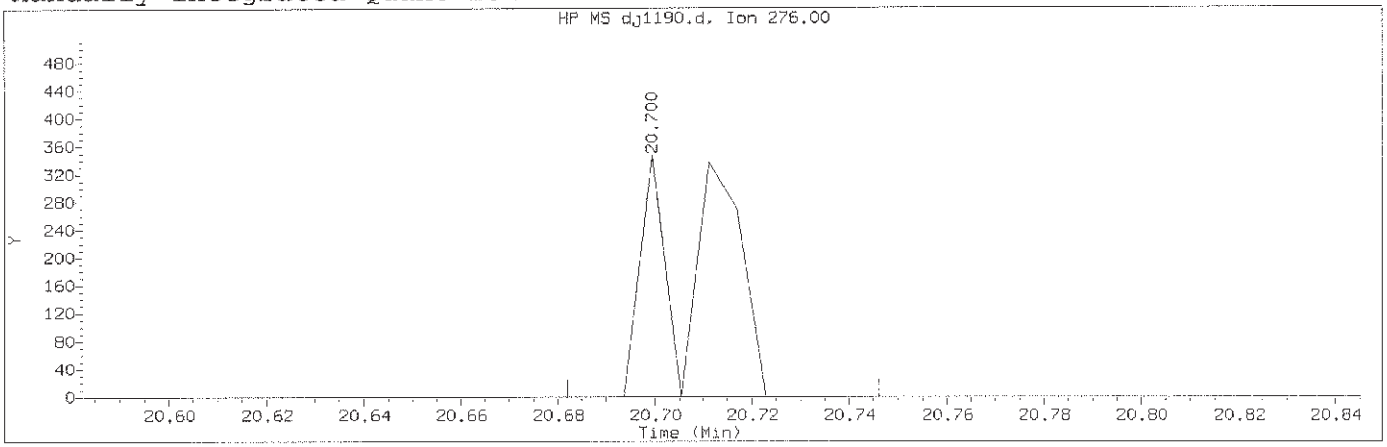
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3322		
Retention Time (minutes)	: 20.700		
Quant Ion	: 276.00		
Area (flag)	: 333M		
On-Column Amount (ng/ul)	: 0.0043		
Integration start scan	: 3318	Integration stop scan:	3329
Y at integration start	: 0	Y at integration end:	0

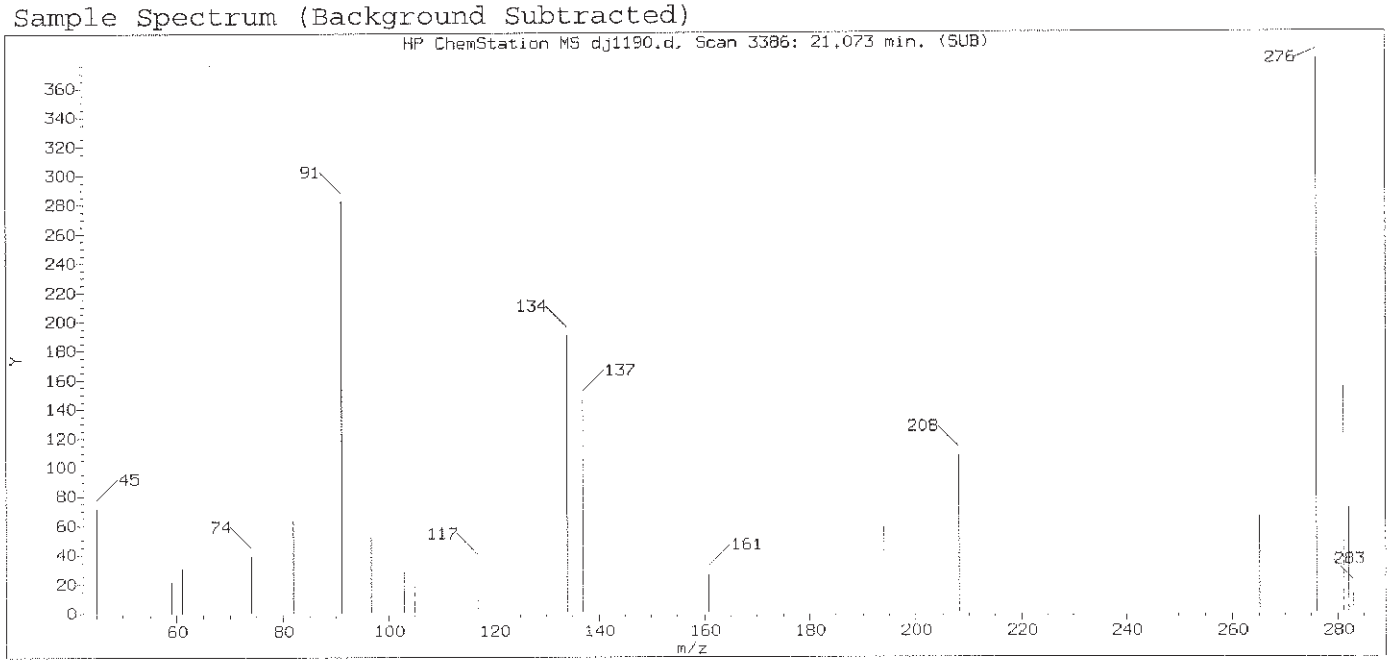
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

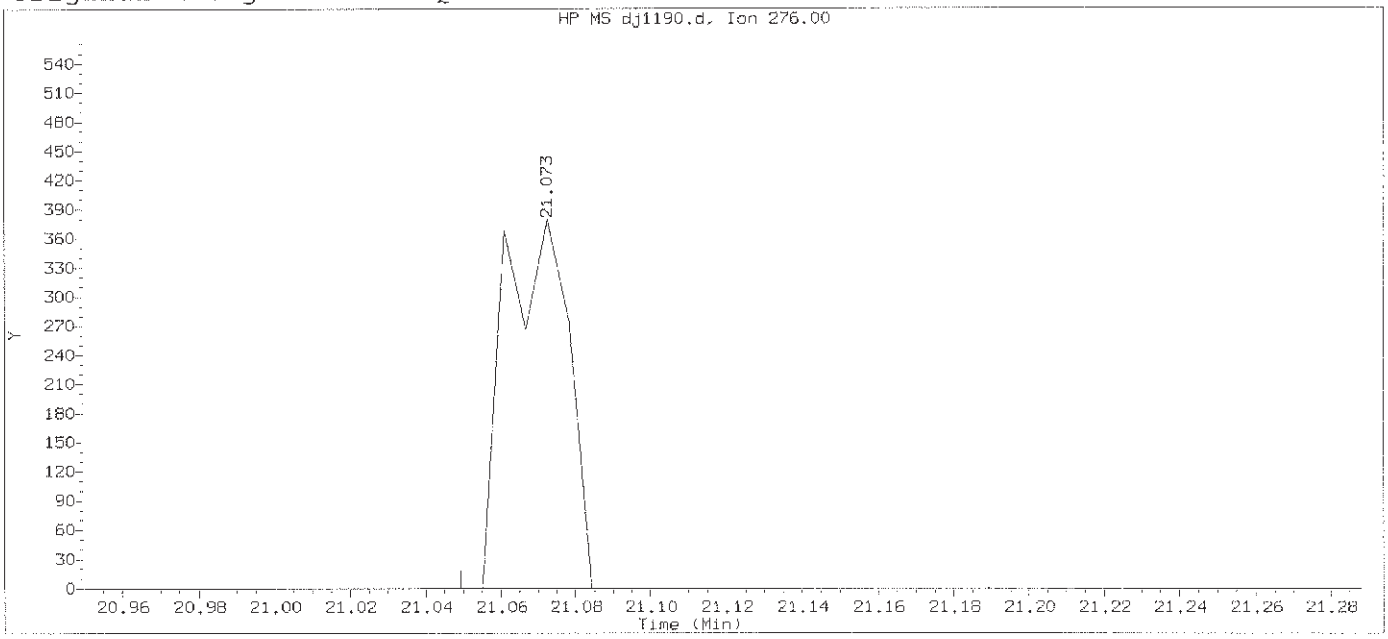
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

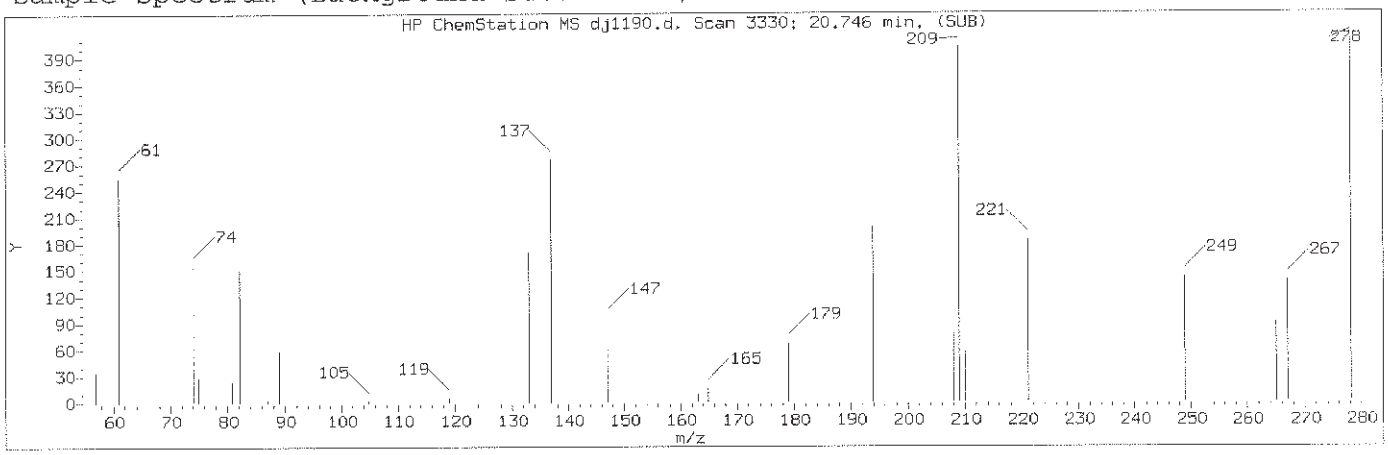
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

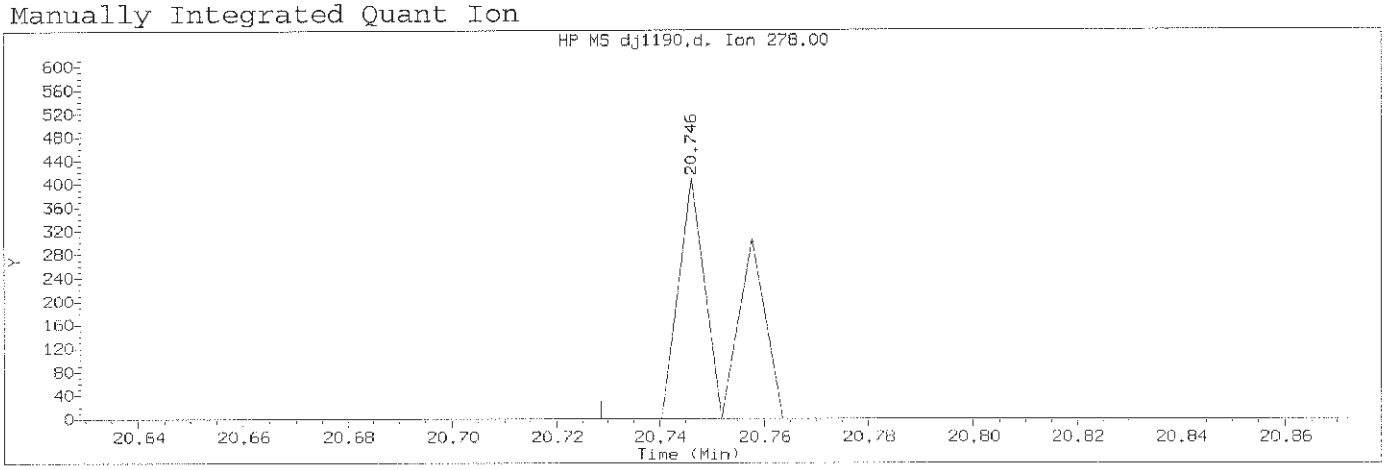
Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3386		
Retention Time (minutes)	: 21.073		
Quant Ion	: 276.00		
Area	: 449		
On-column Amount (ng/ul)	: 0.0058		
Integration start scan	: 3381	Integration stop scan:	3405
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 177		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3330		
Retention Time (minutes)	: 20.746		
Quant Ion	: 278.00		
Area (flag)	: 250M		
On-Column Amount (ng/ul)	: 0.0038		
Integration start scan	: 3326	Integration stop scan:	3334
Y at integration start	: 0	Y at integration end:	0

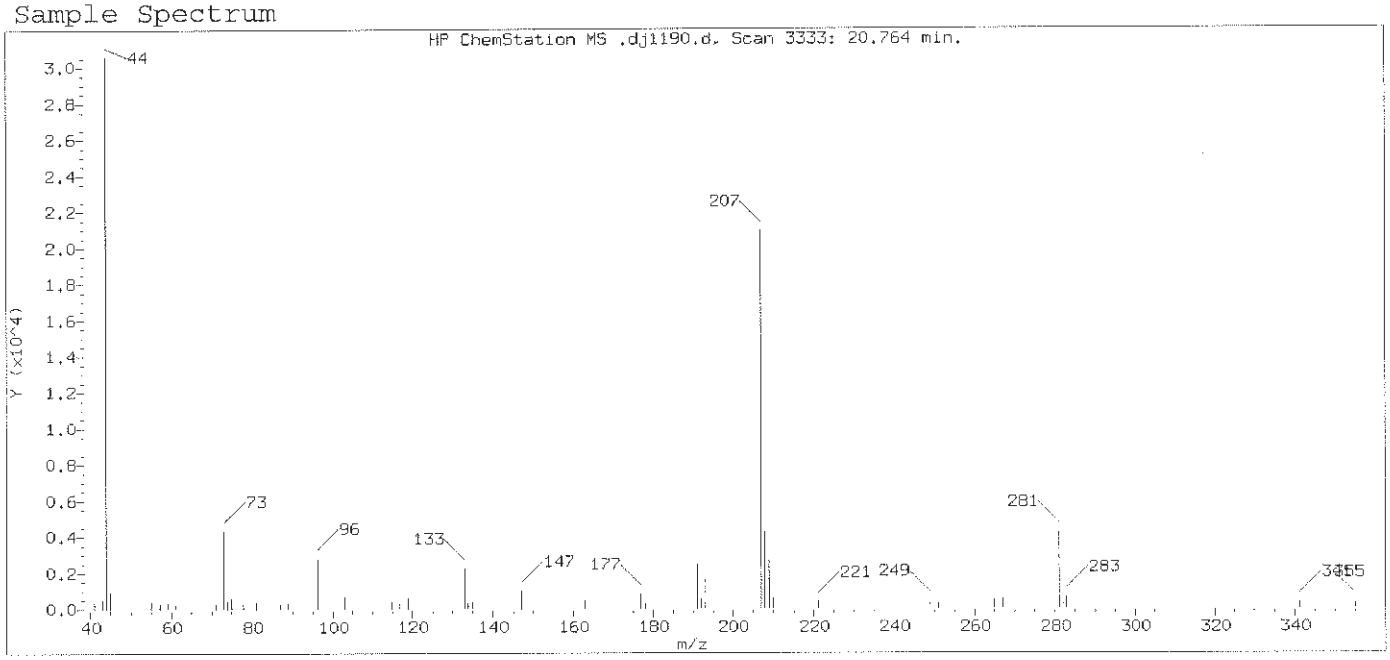
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

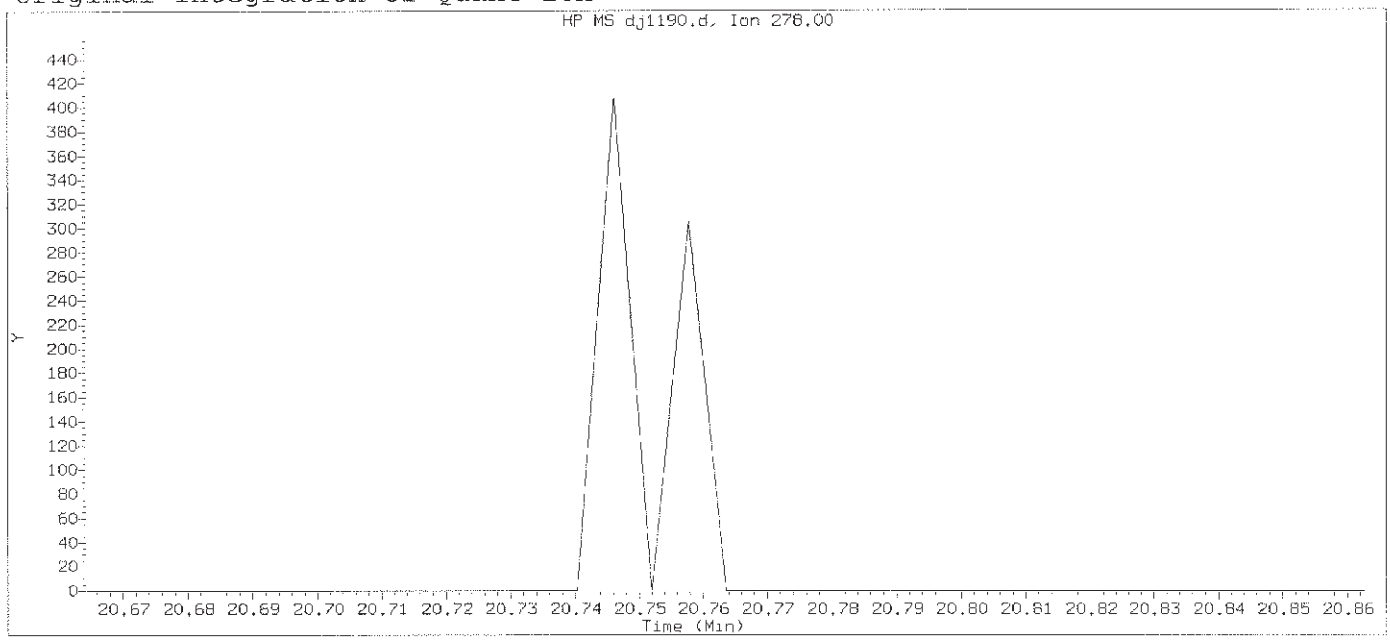
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



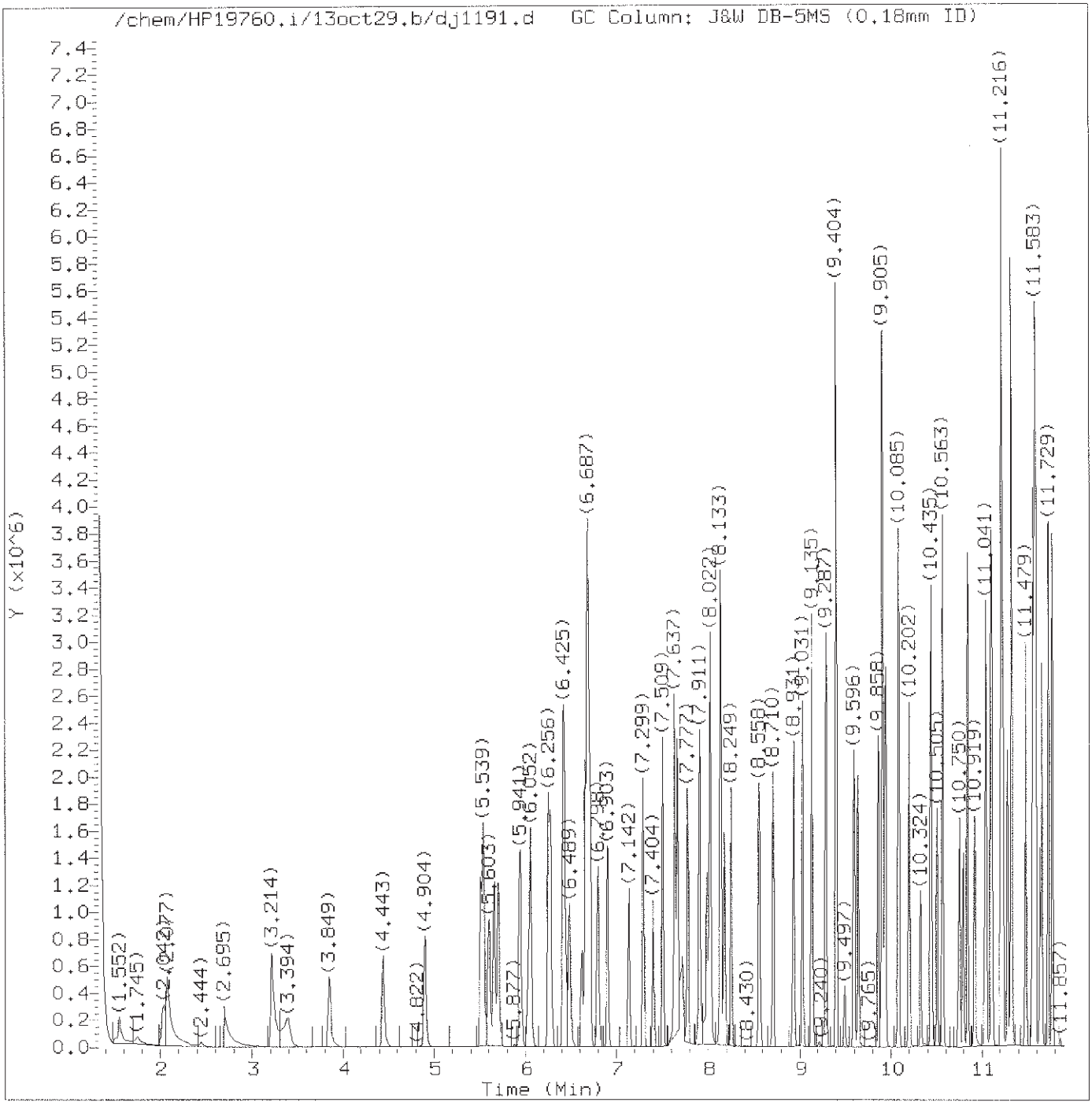
Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number : 177
Compound Name : Dibenz(a,h)anthracene
Expected RT (minutes) : 20.764
Quant Ion : 278.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

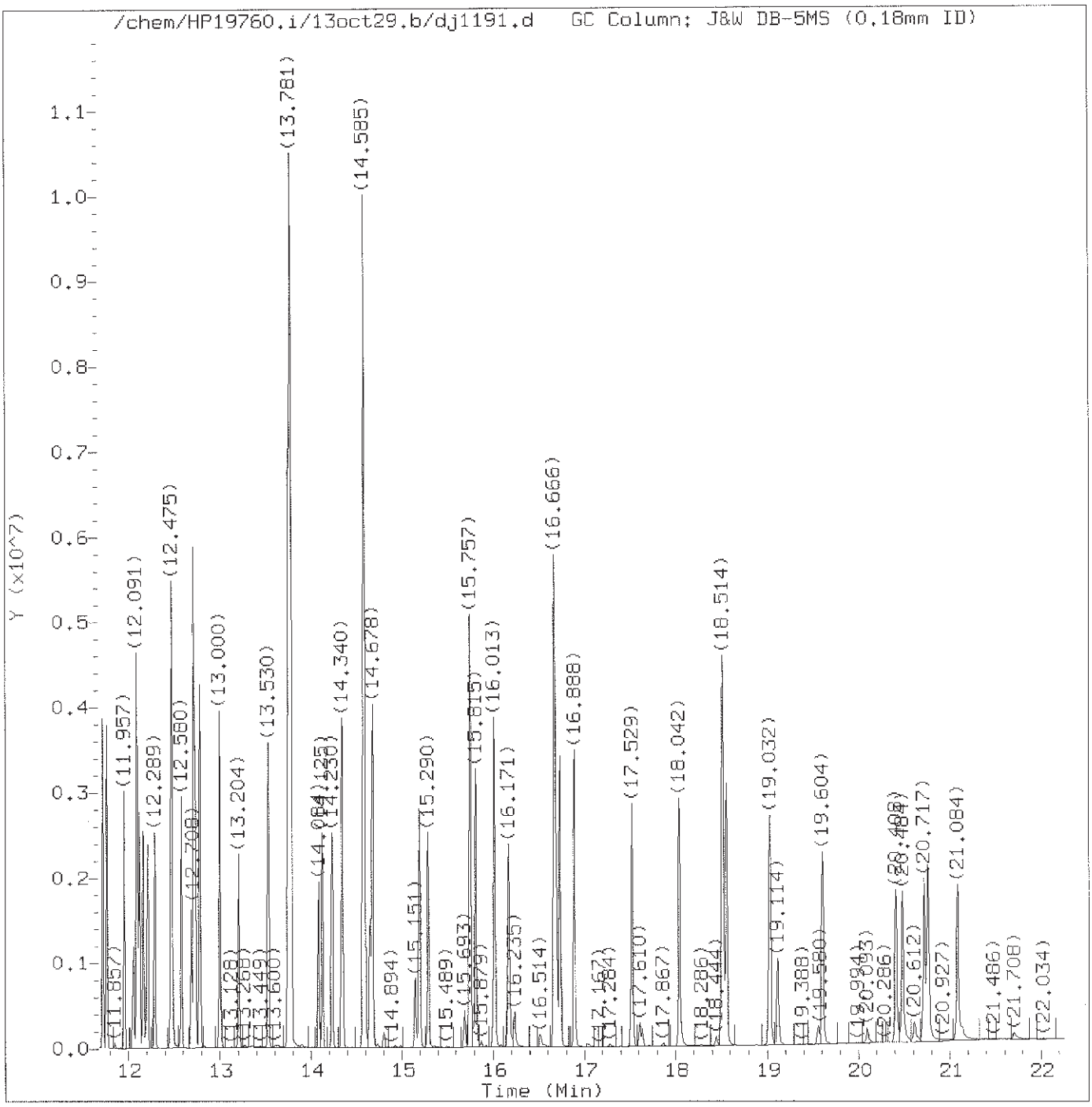
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.552	88	252866	12.813
2) N-Nitrosodimethylamine	(1)	2.030	74	458178	13.148
3) Pyridine	(1)	2.077	79	706933	11.895
4) 2-Picoline	(1)	3.214	93	787682	12.583
5) N-Nitrosomethylethylamine	(1)	3.394	88	348814	12.966
6) Methyl methanesulfonate	(1)	3.849	80	419860	13.652
8) N-Nitrosodiethylamine	(1)	4.443	102	332186	12.856
10) Ethyl methanesulfonate	(1)	4.904	109	325219	13.053
14) Phenol	(1)	5.510	94	934654	12.628
15) Aniline	(1)	5.539	93	1179304	12.939
16) bis(2-Chloroethyl)ether	(1)	5.662	93	731156	12.520
17) 2-Chlorophenol	(1)	5.702	128	593017	12.953
18) 1,3-Dichlorobenzene	(1)	5.941	146	627361	12.740
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	156790	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	633986	12.728
23) Benzyl alcohol	(1)	6.256	108	422533	13.049
24) 1,2-Dichlorobenzene	(1)	6.279	146	590009	12.665
25) Indene	(1)	6.419	115	936311	11.894
26) 2-Methylphenol	(1)	6.431	108	581856	12.664
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	859230	11.854
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	859230	11.854
29) N-Nitrosopyrrolidine	(1)	6.623	100	345261	13.142
30) Acetophenone	(1)	6.658	105	889098	12.376
33) 4-Methylphenol	(1)	6.682	108	645718	12.580
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	514957	12.454
32) N-Nitrosomorpholine	(1)	6.693	56	402202	12.335
34) o-Toluidine	(1)	6.711	106	984993	12.434
35) Hexachloroethane	(1)	6.798	117	266754	12.670
37) Nitrobenzene	(2)	6.903	77	736958	12.456
39) N-Nitrosopiperidine	(2)	7.142	114	323608	13.343
40) Isophorone	(2)	7.299	82	1329192	13.182
42) 2-Nitrophenol	(2)	7.404	139	274990	13.546
45) 2,4-Dimethylphenol	(2)	7.509	107	638586	12.945
46) O,O,O-triethylphosphorothioate	(2)	7.637	198	280555	12.830
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	841486M	12.787
47) Benzoic acid	(2)	7.725	105	835582	22.138
49) 2,4-Dichlorophenol	(2)	7.777	162	468581	13.467
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	515870	13.271
52)*Naphthalene-d8	(2)	7.993	136	605686	5.000
53) Naphthalene	(2)	8.022	128	1638400	12.688

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 4-Chloroaniline	(2)	8.133	127	706302	13.200
56) 2,6-Dichlorophenol	(2)	8.139	162	448488	13.423
57) Hexachloropropene	(2)	8.174	213	348607	14.210
58) Hexachlorobutadiene	(2)	8.255	225	295415	13.037
60) Quinoline	(2)	8.558	129	1084667	12.679
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	479758	12.002
63) 4-Chloro-3-methylphenol	(2)	8.931	107	554160	13.263
64) Safrole	(2)	9.031	162	441137	13.422
65) 2-Methylnaphthalene	(2)	9.135	142	1080755	12.558
66) 1-Methylnaphthalene	(2)	9.287	142	1020104	13.062
67) Hexachlorocyclopentadiene	(3)	9.404	237	624773	32.204
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	514999	12.529
70) 2,4,6-Trichlorophenol	(3)	9.596	196	341304	13.159
71) 2,4,5-Trichlorophenol	(3)	9.643	196	353683	13.198
74) Isosafrole	(3)	9.858	162	452952	13.371
75) 1,1'-Biphenyl	(3)	9.899	154	1259926	12.233
76) 2-Chloronaphthalene	(3)	9.911	162	970718	12.286
77) 1-Chloronaphthalene	(3)	9.940	162	947406	12.162
82) Diphenyl ether	(3)	10.080	170	714778	12.543
83) 2-Nitroaniline	(3)	10.091	138	330184	13.417
84) 1,4-Naphthoquinone	(3)	10.202	158	541572	15.927
85) 1,4-Dinitrobenzene	(3)	10.324	168	169392	12.462
86) Dimethylphthalate	(3)	10.435	163	1123197	12.570
87) 1,3-Dinitrobenzene	(3)	10.441	168	202814	13.224
88) 2,6-Dinitrotoluene	(3)	10.505	165	267388	13.504
90) Acenaphthylene	(3)	10.563	152	1624852	13.548
91) 3-Nitroaniline	(3)	10.750	138	308367	13.567
92)*Acenaphthene-d10	(3)	10.797	164	354681	5.000
93) Acenaphthene	(3)	10.843	153	1017034	12.327
94) 2,4-Dinitrophenol	(3)	10.919	184	282939	24.188
96) 4-Nitrophenol	(3)	11.036	109	193631	13.358
95) Pentachlorobenzene	(3)	11.041	250	417252	12.670
97) Dibenzofuran	(3)	11.100	168	1464807	12.485
98) 2,4-Dinitrotoluene	(3)	11.117	165	346555	13.658
99) 1-Naphthylamine	(3)	11.216	143	2099655	24.619
100) 2,3,4,6-Tetrachlorophenol	(3)	11.280	232	295053	13.943
101) 2-Naphthylamine	(3)	11.321	143	2101605	24.013
102) Diethylphthalate	(3)	11.479	149	1123150	12.758
103) Fluorene	(3)	11.554	166	1192153	12.623
104) Thionazin	(3)	11.572	107	227564	11.960

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 4-Chlorophenyl-phenylether	(3)	11.583	204	580969	12.404
106) 5-Nitro-o-toluidine	(3)	11.583	152	335108	13.202
107) 4-Nitroaniline	(3)	11.595	138	301384	12.891
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	198072	12.864
109) N-Nitrosodiphenylamine	(4)	11.729	169	998356	13.286
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1479946	12.441
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	214106	12.478
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	147739	12.769
117) Diallate (peak 1)	(4)	12.091	86	543072	9.160
118) Phorate	(4)	12.096	75	853757	12.146
119) Phenacetin	(4)	12.120	108	688586	13.762
120) 4-Bromophenyl-phenylether	(4)	12.166	248	302404	12.696
121) Diallate (peak 2)	(4)	12.190	86	78461	3.102
122) Hexachlorobenzene	(4)	12.213	284	294976	12.526
123) Dimethoate	(4)	12.289	87	597488	13.017
125) Pentachlorophenol	(4)	12.464	266	224311	12.568
126) Pentachloronitrobenzene	(4)	12.475	237	150953	13.793
127) 4-Aminobiphenyl	(4)	12.481	169	1350394	14.365
129) Pronamide	(4)	12.580	173	514382	12.933
130) *Phenanthrene-d10	(4)	12.691	188	603640	5.000
131) Phenanthrene	(4)	12.720	178	1652485	12.274
133) Dinoseb	(4)	12.720	211	302962	13.114
134) Anthracene	(4)	12.784	178	1731054	12.896
135) Carbazole	(4)	13.000	167	1699126	13.079
136) Methyl parathion	(4)	13.204	109	450225	13.135
137) Di-n-butylphthalate	(4)	13.530	149	2016342	13.105
138) Parathion	(4)	13.752	109	272718	12.452
139) 4-Nitroquinoline-1-oxide	(4)	13.781	190	2735978	168.753
140) Isodrin	(4)	14.125	193	202515	12.540
142) Fluoranthene	(4)	14.340	202	2006181	13.247
144) Benzidine	(5)	14.585	184	6002081	60.477
145) *Pyrene-d10	(5)	14.649	212	773413	5.000
146) Pyrene	(5)	14.678	202	2032565	12.378
150) p-Dimethylaminoazobenzene	(5)	15.197	225	441084	13.357
151) Chlorobenzilate	(5)	15.290	139	571680	12.369
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2527546	25.931
153) Butylbenzylphthalate	(5)	15.815	149	922592	13.201
156) 2-Acetylaminofluorene	(5)	16.171	181	779791	12.604
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	645378	12.825
158) Benzo(a)anthracene	(5)	16.666	228	1876414	13.468

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

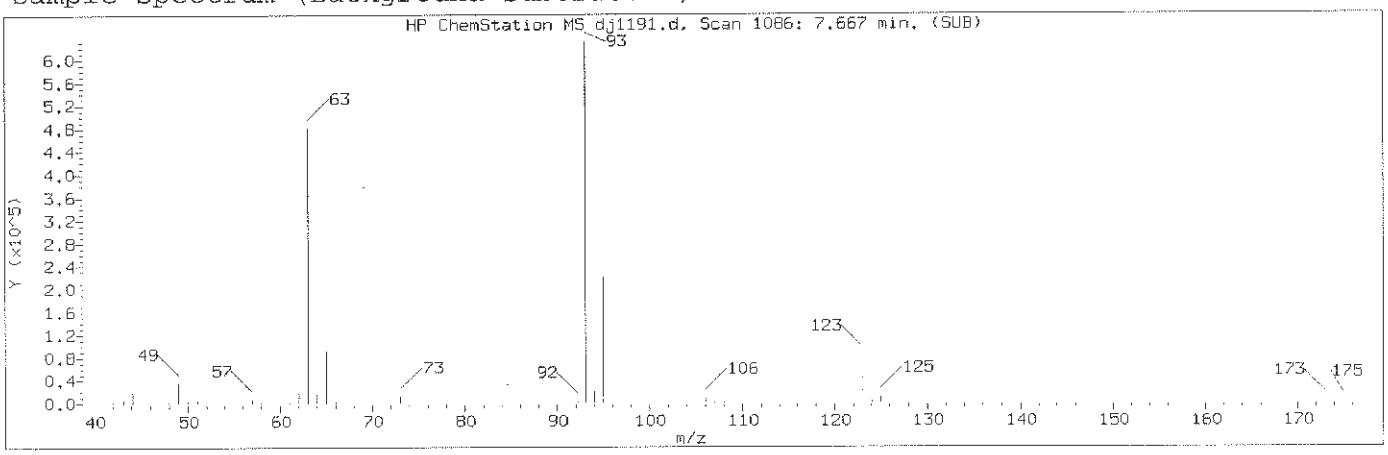
Sample Name: SSTD12.5 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160)	4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	338249	12.728
161)	Chrysene	(5)	16.730	228	1762571	12.864
162)	bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1217515	13.245
165)	6-Methylchrysene	(5)	17.529	242	1204416	12.505
166)	Di-n-octylphthalate	(6)	18.042	149	2020727	13.147
168)	Benzo(b)fluoranthene	(6)	18.508	252	1664477	13.521
169)	7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	746135	13.655
170)	Benzo(k)fluoranthene	(6)	18.560	252	1630979	13.136
171)	Benzo(a)pyrene	(6)	19.032	252	1533395	13.570
172)	*Perylene-d12	(6)	19.114	264	522609	5.000
173)	3-Methylcholanthrene	(6)	19.604	268	743613	13.829
174)	Dibenz(a,h)acridine	(6)	20.408	279	1002205	13.408
175)	Dibenz(a,j)acridine	(6)	20.484	279	1062543	13.256
176)	Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1427155	14.399
177)	Dibenz(a,h)anthracene	(6)	20.764	278	1212103	14.441
178)	Benzo(g,h,i)perylene	(6)	21.084	276	1163357	13.924
179)	Diallate TRANS/CIS	(4)	23.156	86	621533	12.237

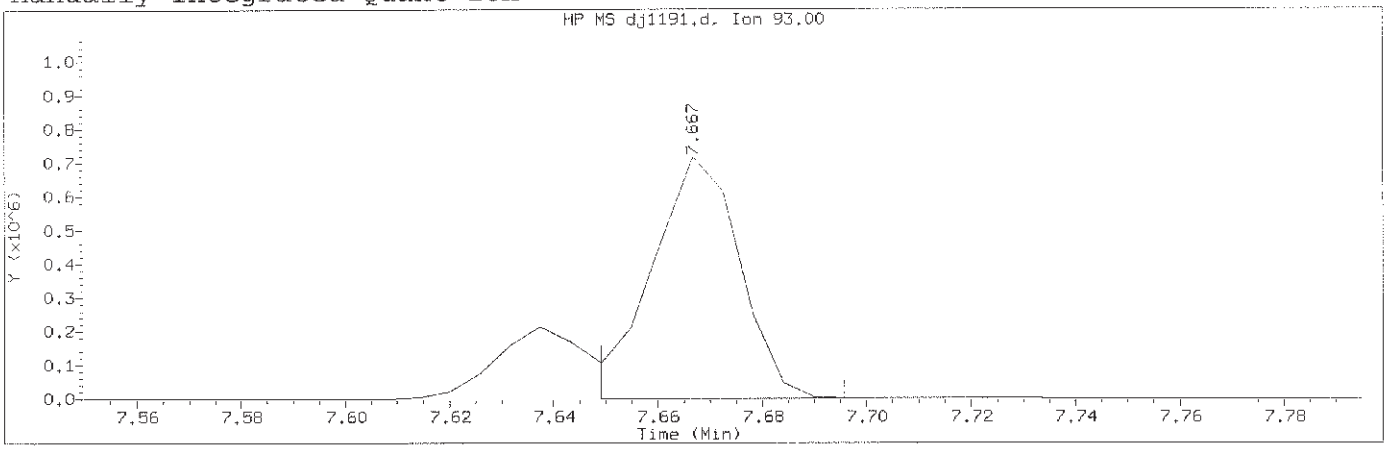
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 841486M		
On-Column Amount (ng/ul)	: 12.7873		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 675	Y at integration end:	675

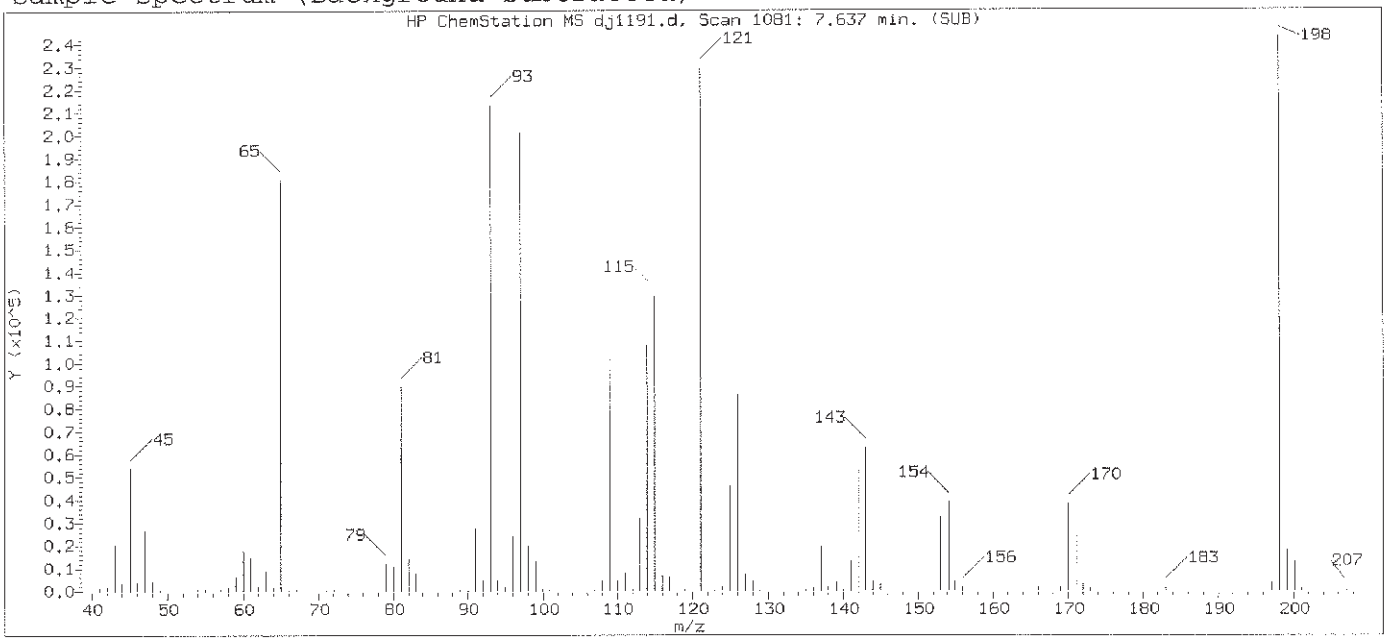
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

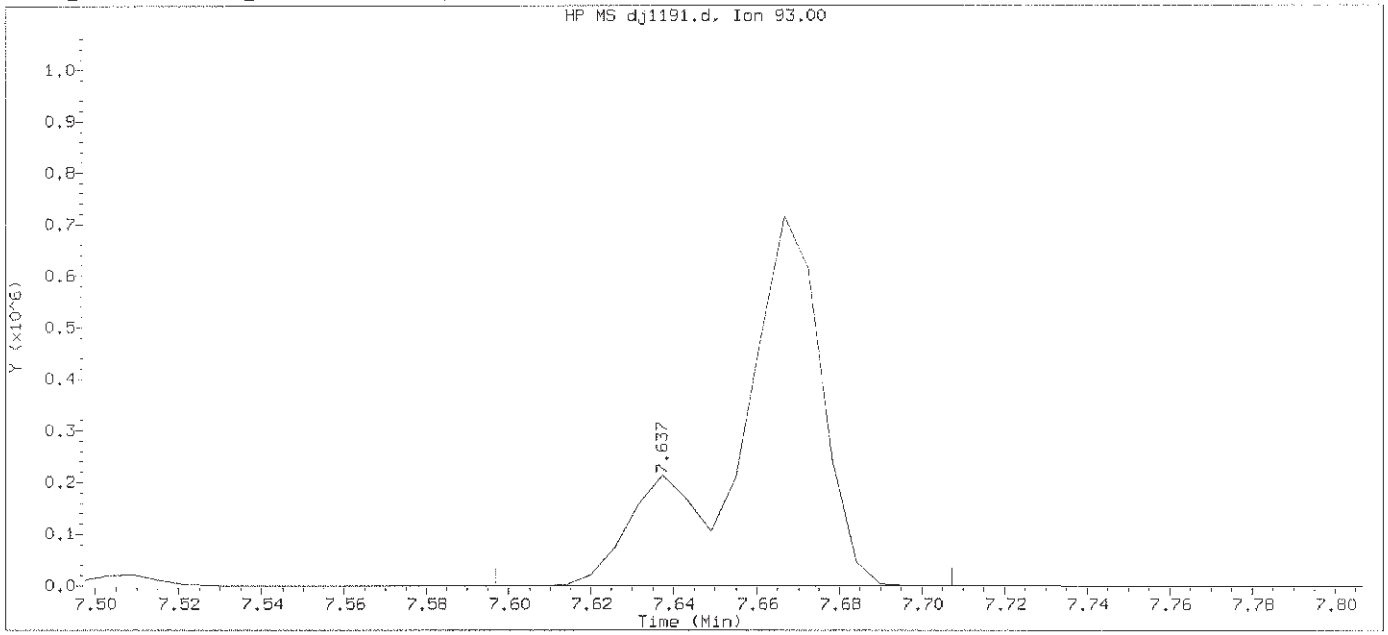
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



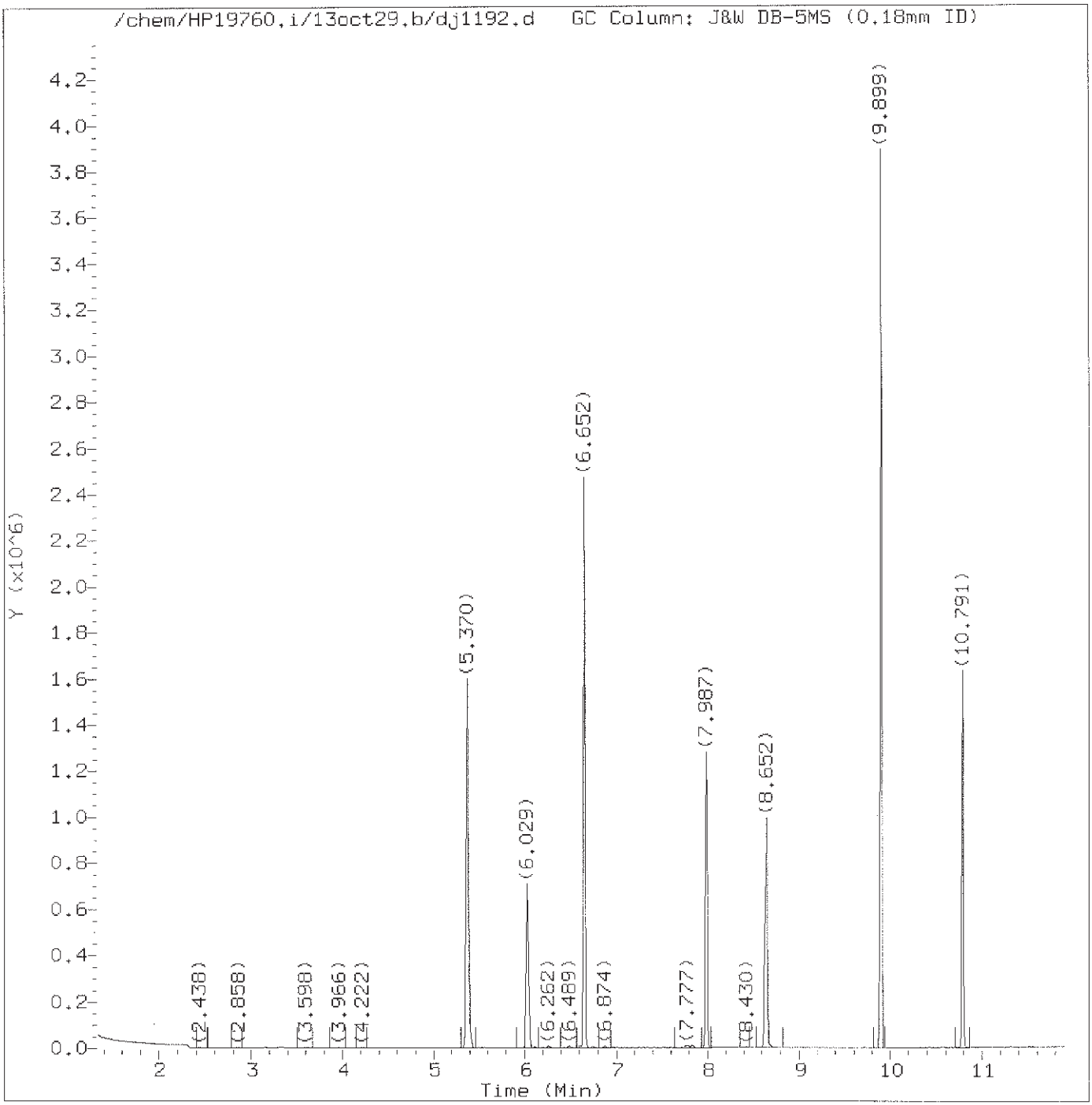
Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1081		
Retention Time (minutes)	: 7.637		
Quant Ion	: 93.00		
Area	: 1066922		
On-column Amount (ng/ul)	: 16.2131		
Integration start scan	: 1073	Integration stop scan:	1092
Y at integration start	: 0	Y at integration end:	133

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

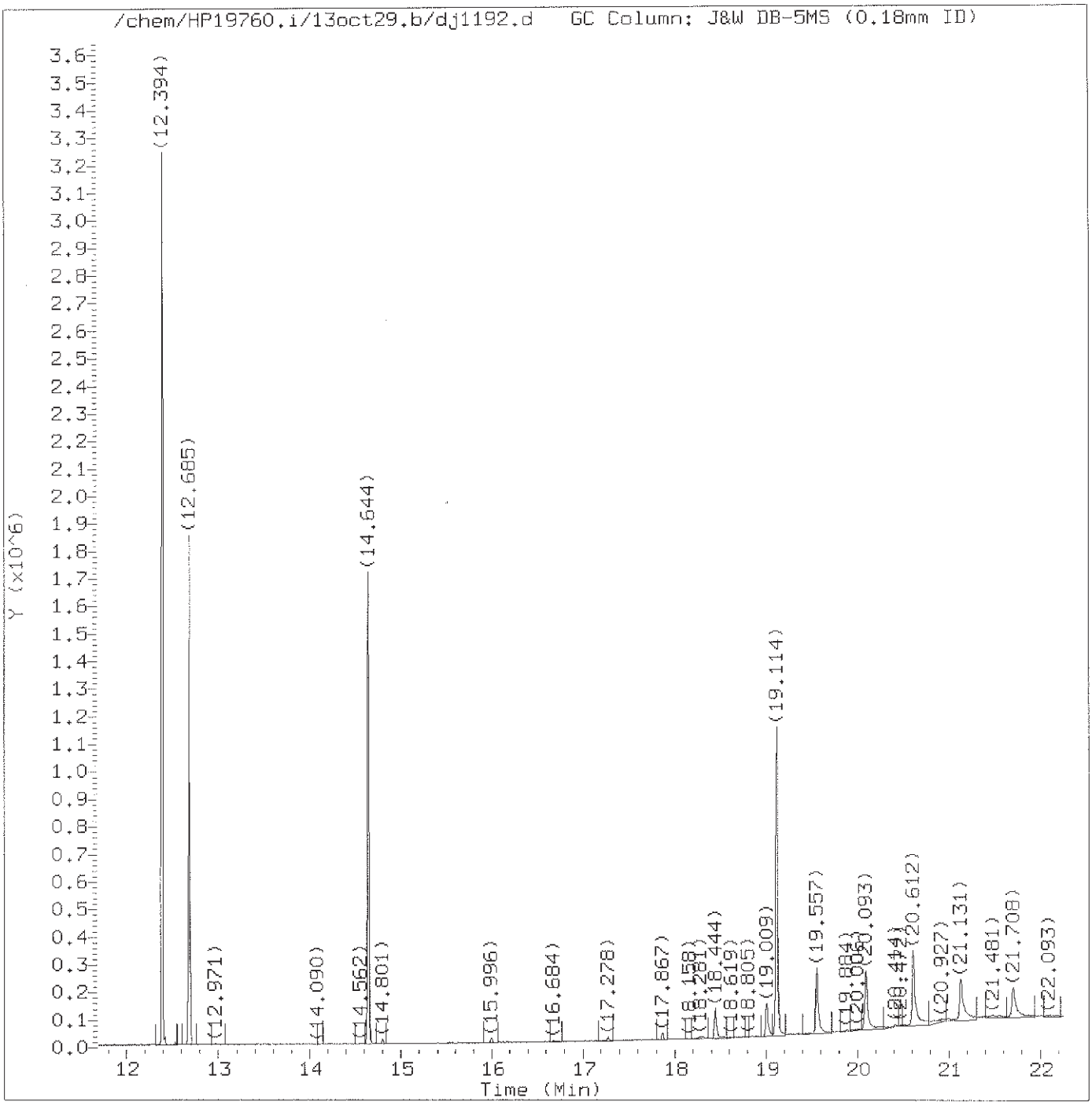
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11) Benzaldehyde	(1)	5.370	77	673572	13.169
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	179297	5.000
52)*Naphthalene-d8	(2)	7.987	136	685192	5.000
61) Caprolactam	(2)	8.652	113	230343	13.116
92)*Acenaphthene-d10	(3)	10.791	164	386805	5.000
124) Atrazine	(4)	12.394	200	366396	13.461
130)*Phenanthrene-d10	(4)	12.685	188	671597	5.000
145)*Pyrene-d10	(5)	14.644	212	826855	5.000
172)*Perylene-d12	(6)	19.114	264	563593	5.000

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP19760.i/13nov11.b/dk0320.d

Date : 11-NOV-2013 04:04

Client ID: DFTPP

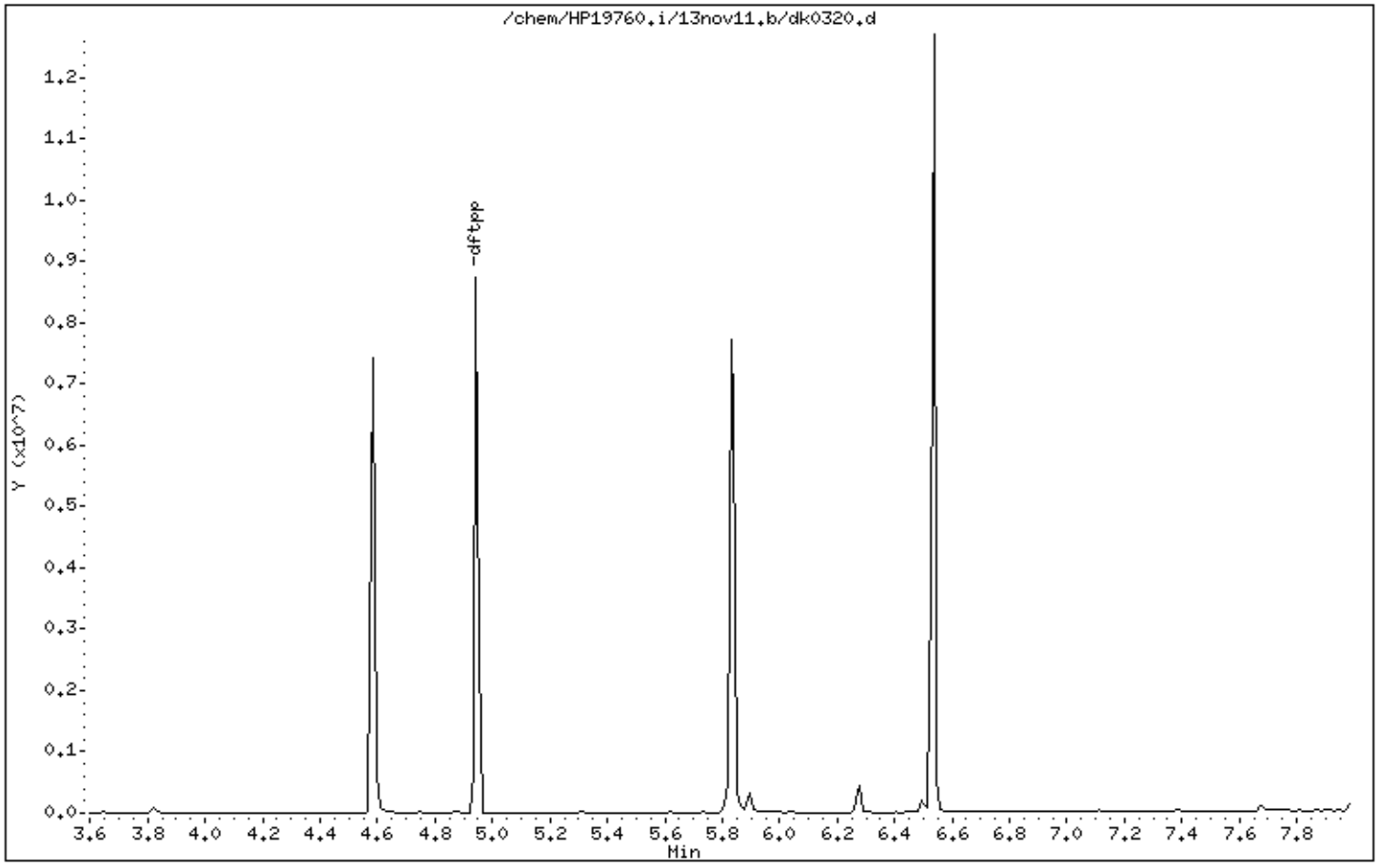
Instrument: HP19760.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov11.b/dk0320.d

Date : 11-NOV-2013 04:04

Client ID: DFTPP

Instrument: HP19760.i

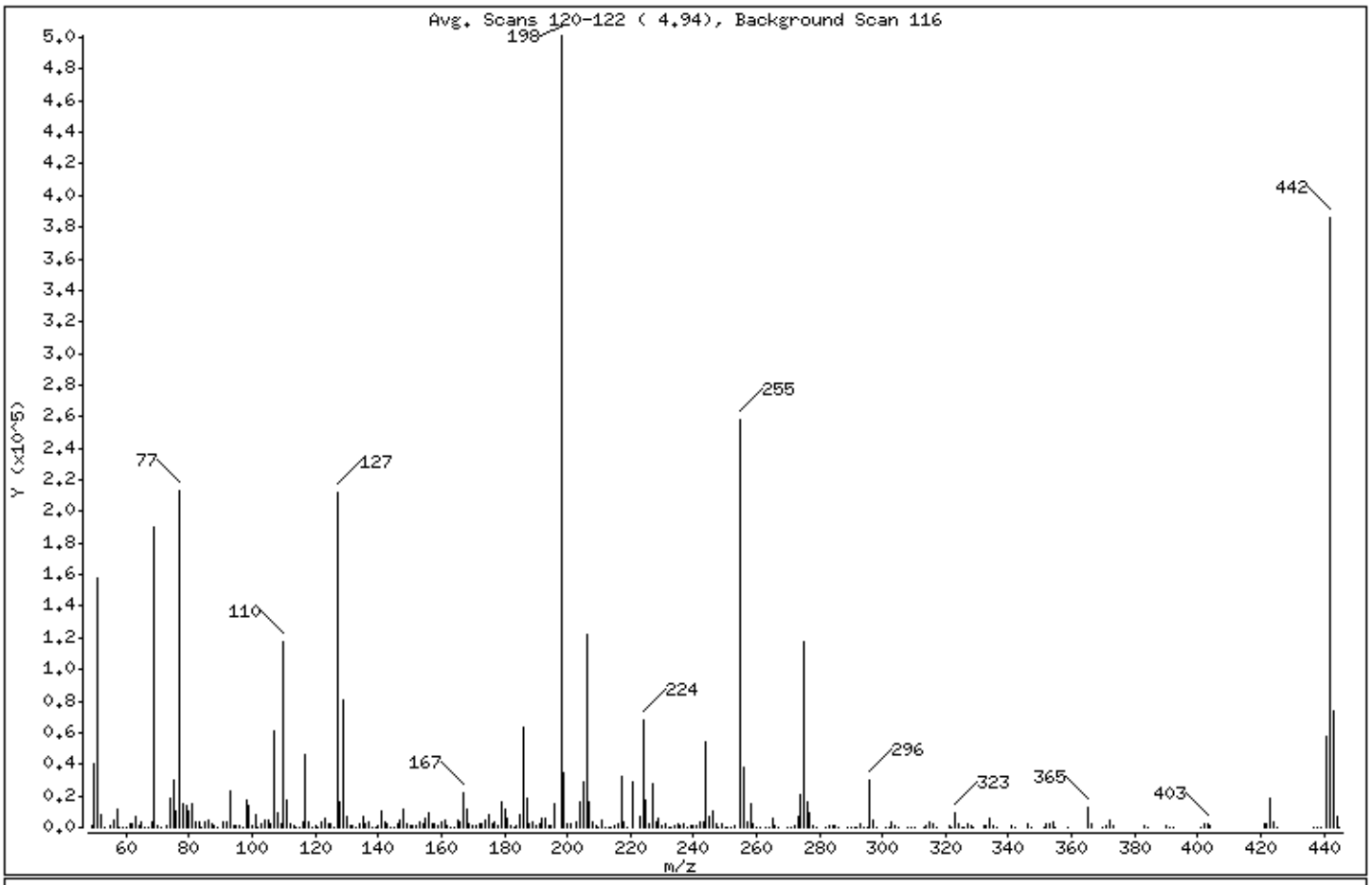
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	31.56
68	Less than 2.00% of mass 69	0.68 (1.80)
69	Mass 69 relative abundance	37.90
70	Less than 2.00% of mass 69	0.19 (0.49)
127	40.00 - 60.00% of mass 198	42.22
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	23.43
365	Greater than 1.00% of mass 198	2.53
441	Present, but less than mass 443	11.46
442	40.00 - 99.99% of mass 198	77.01
443	17.00 - 23.00% of mass 442	14.72 (19.11)

Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Date : 11-NOV-2013 04:04

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0320.d
Spectrum: Avg. Scans 120-122 (4.94), Background Scan 116
Location of Maximum: 198.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	1106	128.00	16408	206.00	122408	292.00	474
50.00	40064	129.00	81168	207.00	15558	293.00	2035
51.00	158144	130.00	6963	208.00	3987	294.00	545
52.00	8127	131.00	1361	209.00	1215	295.00	264
53.00	277	132.00	801	210.00	276	296.00	30272
55.00	1005	133.00	215	211.00	4663	297.00	4223
56.00	4732	134.00	2262	212.00	129	298.00	289
57.00	11261	135.00	6514	213.00	310	301.00	402
58.00	488	136.00	2597	214.00	105	302.00	511
59.00	128	137.00	3296	215.00	1194	303.00	3469
60.00	114	138.00	575	216.00	2446	304.00	941
61.00	2174	139.00	358	217.00	32592	305.00	87
62.00	2380	140.00	974	218.00	4016	308.00	452
63.00	6831	141.00	10427	219.00	402	309.00	289
64.00	999	142.00	3506	221.00	29328	310.00	336
65.00	3598	143.00	2500	223.00	7207	313.00	283
66.00	319	144.00	529	224.00	68264	314.00	1485
67.00	409	145.00	507	225.00	17664	315.00	3228
68.00	3425	146.00	1785	226.00	1857	316.00	1819
69.00	189952	147.00	5166	227.00	27392	317.00	336
70.00	939	148.00	11699	228.00	3946	321.00	927
71.00	225	149.00	2605	229.00	5956	322.00	499
73.00	1563	150.00	583	230.00	793	323.00	9473
74.00	17952	151.00	1148	231.00	2482	324.00	1792
75.00	29384	152.00	779	232.00	455	325.00	127
76.00	10750	153.00	3356	233.00	475	326.00	199
77.00	213376	154.00	2506	234.00	1694	327.00	1808
78.00	14853	155.00	5779	235.00	2084	328.00	892
79.00	13358	156.00	9014	236.00	1236	329.00	112
80.00	10495	157.00	1748	237.00	2164	332.00	675
81.00	15258	158.00	1968	238.00	362	333.00	945
82.00	3728	159.00	1514	239.00	1031	334.00	6093
83.00	3633	160.00	3452	240.00	817	335.00	1589
84.00	428	161.00	5001	241.00	1558	336.00	198
85.00	3475	162.00	1335	242.00	3553	341.00	1037

Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Date : 11-NOV-2013 04:04

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0320.d
Spectrum: Avg. Scans 120-122 (4.94), Background Scan 116
Location of Maximum: 198.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
86.00	4163	163.00	323	243.00	3958	342.00	311
87.00	2000	164.00	516	244.00	53872	346.00	2102
88.00	698	165.00	4136	245.00	7031	347.00	321
89.00	292	166.00	3325	246.00	9816	351.00	90
91.00	3517	167.00	22424	247.00	1950	352.00	2596
92.00	3640	168.00	11088	248.00	491	353.00	1971
93.00	22840	169.00	1936	249.00	1872	354.00	2979
94.00	1487	170.00	694	250.00	353	355.00	512
95.00	609	171.00	891	251.00	439	359.00	203
96.00	1095	172.00	1875	252.00	436	365.00	12696
97.00	501	173.00	2467	253.00	1020	366.00	1790
98.00	17336	174.00	4624	255.00	258048	370.00	247
99.00	14296	175.00	8524	256.00	38464	371.00	696
100.00	1373	176.00	2633	257.00	2953	372.00	4918
101.00	8273	177.00	4011	258.00	14561	373.00	1182
102.00	417	178.00	1284	259.00	2316	383.00	1255
103.00	2726	179.00	16301	260.00	425	384.00	324
104.00	5065	180.00	11024	261.00	465	390.00	582
105.00	4788	181.00	5222	263.00	93	391.00	368
106.00	1757	182.00	813	264.00	254	392.00	343
107.00	61464	183.00	428	265.00	5883	401.00	292
108.00	9645	184.00	1257	266.00	692	402.00	1854
109.00	2131	185.00	7995	267.00	106	403.00	2523
110.00	117000	186.00	63928	270.00	311	404.00	917
111.00	17400	187.00	18096	271.00	498	421.00	2305
112.00	2158	188.00	1777	272.00	645	422.00	2275
113.00	655	189.00	3645	273.00	7343	423.00	17872
114.00	104	190.00	650	274.00	20624	424.00	3474
115.00	319	191.00	1816	275.00	117424	425.00	399
116.00	3286	192.00	5228	276.00	15704	437.00	98
117.00	46616	193.00	5677	277.00	9493	438.00	129
118.00	3628	194.00	1188	278.00	1569	439.00	268
119.00	389	195.00	792	279.00	291	441.00	57408
120.00	657	196.00	14630	282.00	232	442.00	385920
121.00	267	198.00	501120	283.00	1016	443.00	73744

Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Date : 11-NOV-2013 04:04

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

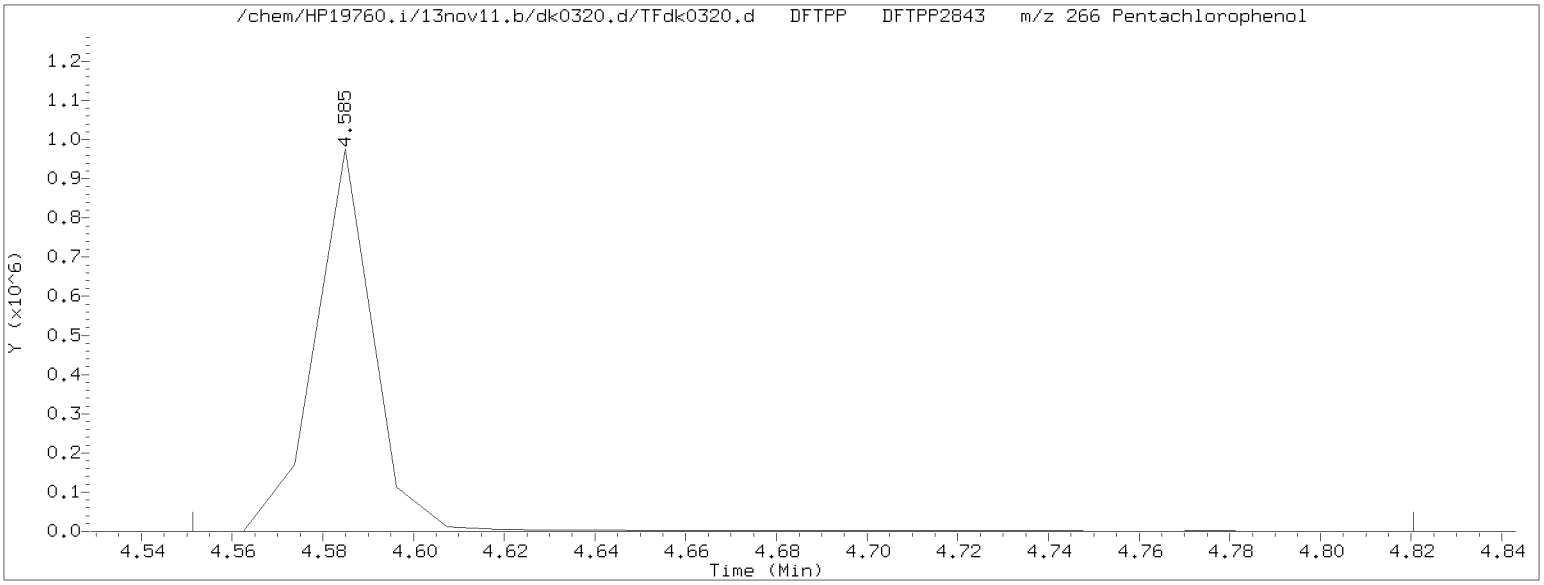
Data File: dk0320.d
Spectrum: Avg. Scans 120-122 (4.94), Background Scan 116
Location of Maximum: 198.00
Number of points: 300

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	3875	199.00	34048	284.00	665	444.00	6676
123.00	5911	200.00	2591	285.00	1662	445.00	350
124.00	2689	201.00	2338	286.00	317		
125.00	2670	203.00	3080	289.00	354		
126.00	89	204.00	16496	290.00	314		
127.00	211584	205.00	28488	291.00	269		

Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

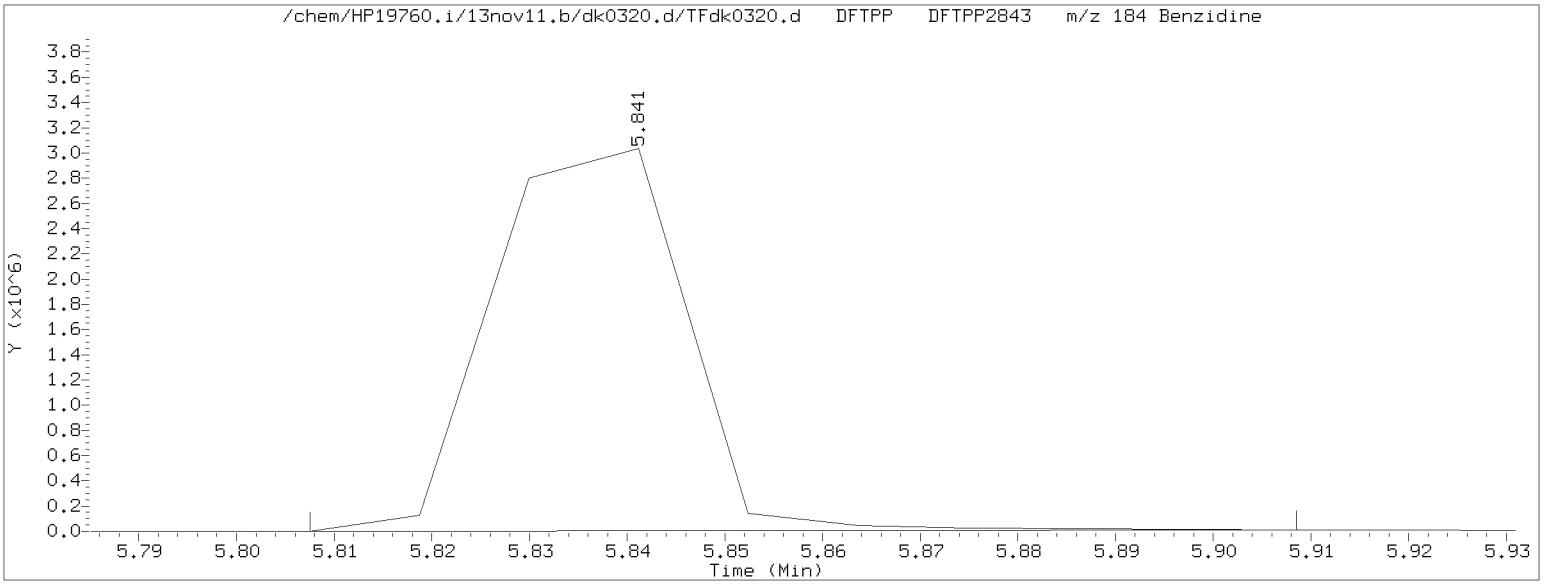
Instrument ID: HP19760.i Injection Date: 11-NOV-2013 04:04 Operator: jmg00346



Pentachlorophenol EICP peak height = 975872 EICP peak height at 10% = 97587 Pentachlorophenol EICP area = 873983

Pentachlorophenol EICP peak apex (min.) = 4.585
RT at 10% of front half of EICP (min.) = 4.569 'Front' peak width (min.) = 0.0160000000
RT at 10% of back half of EICP (min.) = 4.598 'Tailing' peak width (min.) = 0.0128500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0128500000}{0.0160000000} = 0.803$$



Benzidine EICP peak height = 3030604 EICP peak height at 10% = 303060 Benzidine EICP area = 4151662

Benzidine EICP peak apex (min.) = 5.841
RT at 2.5% of front half of EICP (min.) = 5.814 'Front' peak width (min.) = 0.0267666667
RT at 2.5% of back half of EICP (min.) = 5.860 'Tailing' peak width (min.) = 0.0186166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0186166667}{0.0267666667} = 0.696$$

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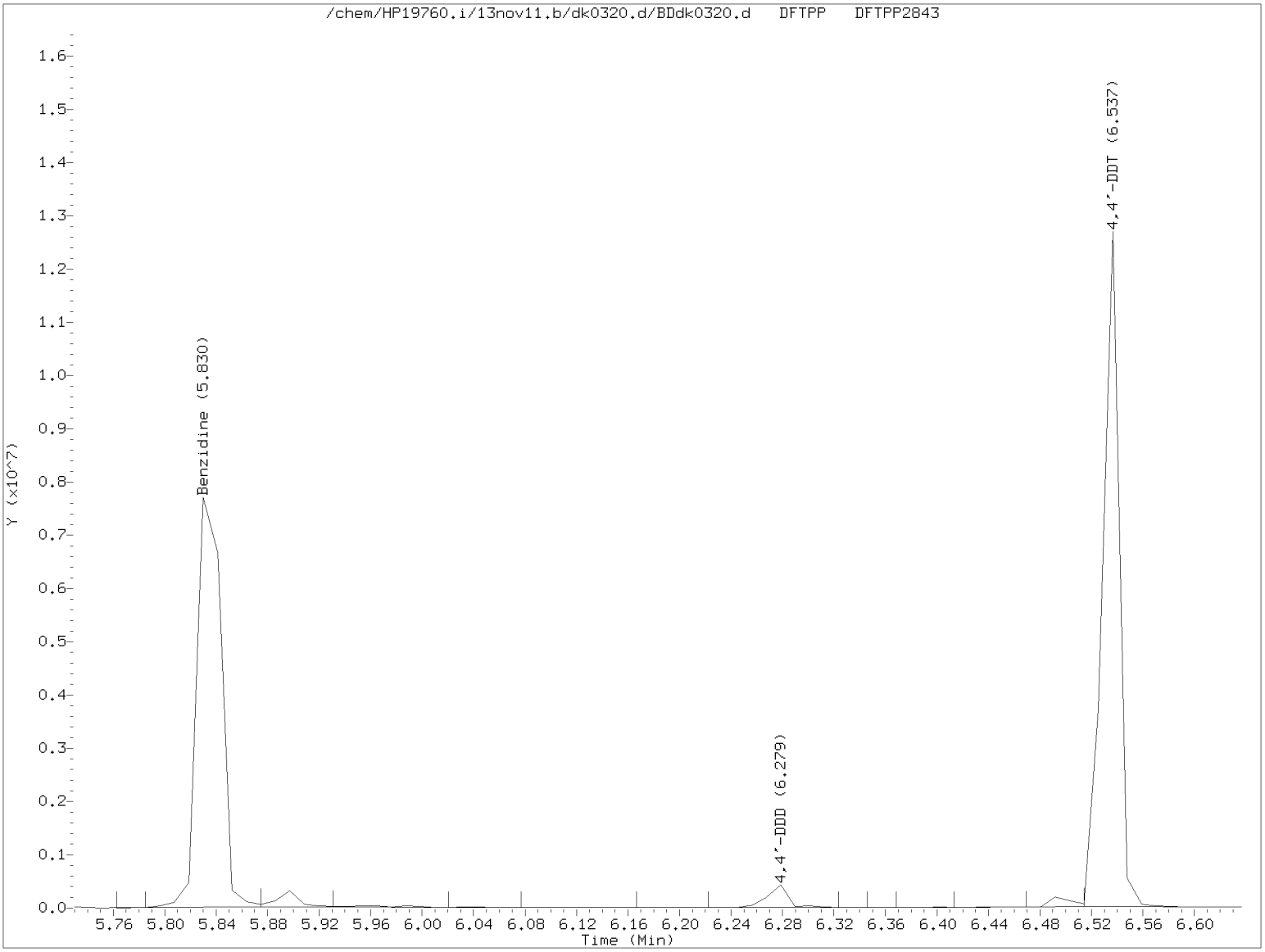
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 11-NOV-2013 04:04 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 485909}{0 + 485909 + 11456214} \times 100 = 4.1$$

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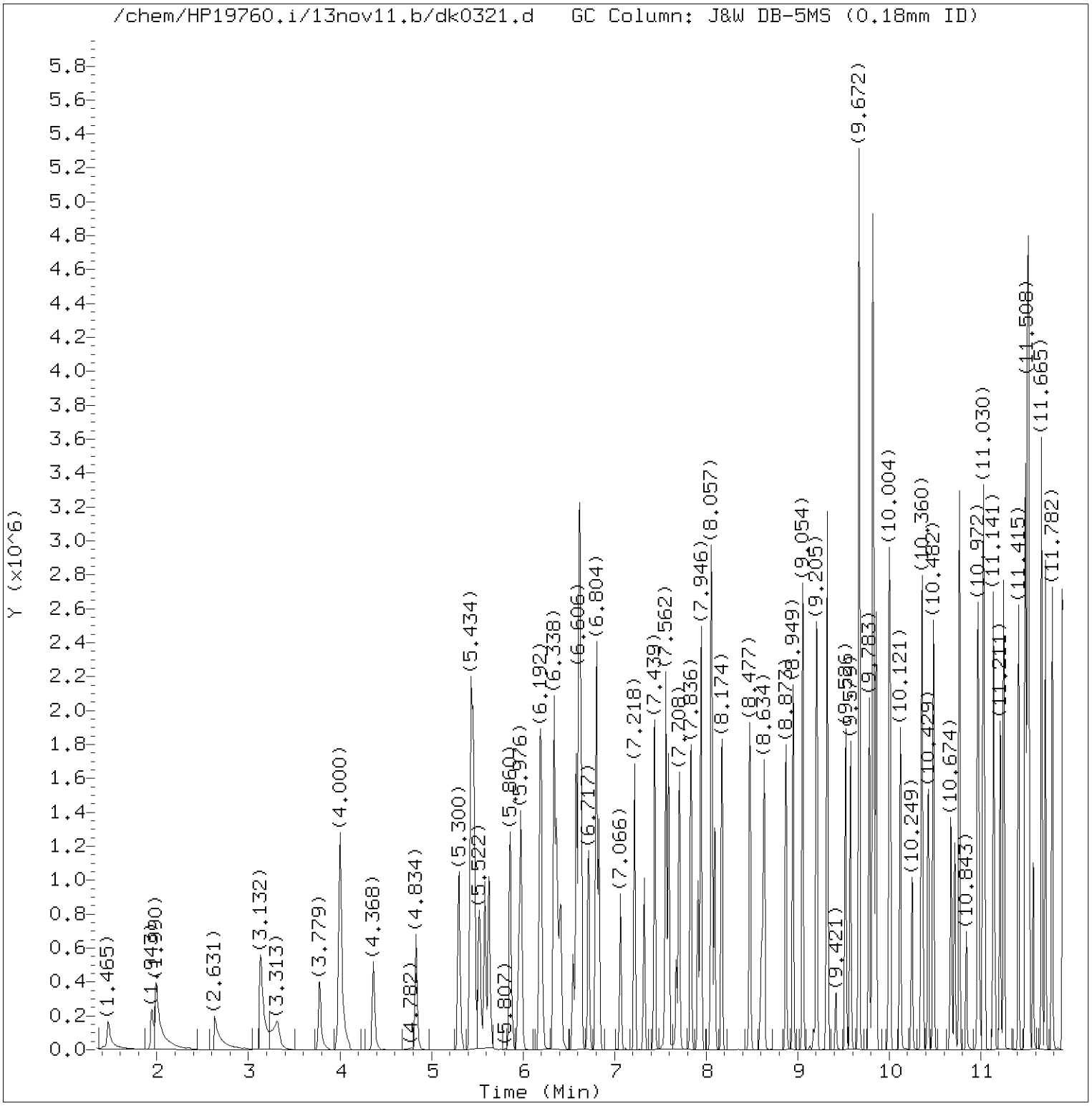
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

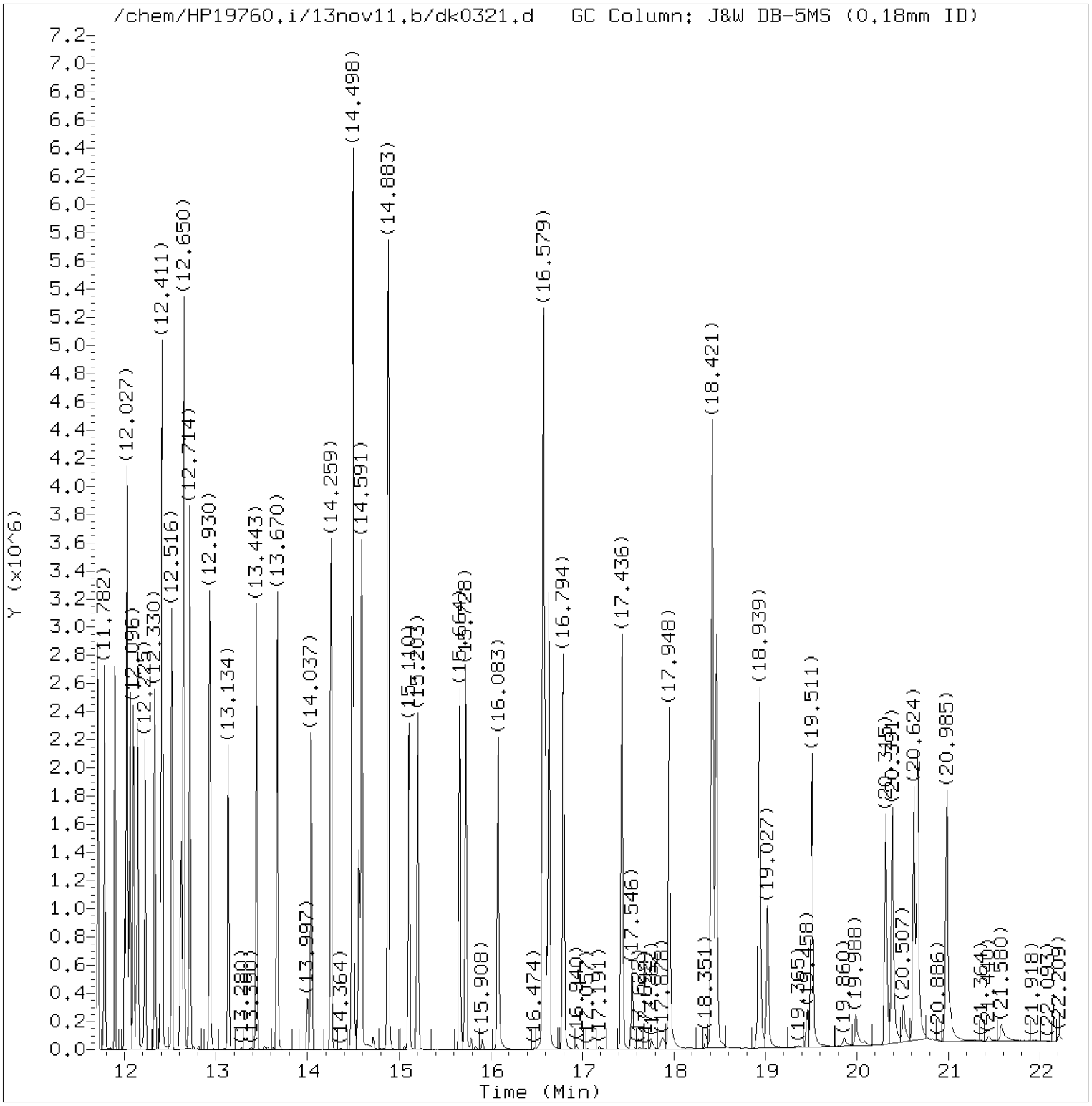
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.465	88	215021	12.040
2) N-Nitrosodimethylamine	(1)	1.943	74	332905	10.557
3) Pyridine	(1)	1.990	79	585972	10.896
4) 2-Picoline	(1)	3.132	93	649035	11.459
5) N-Nitrosomethylethylamine	(1)	3.319	88	276368	11.353
6) Methyl methanesulfonate	(1)	3.779	80	324477	11.659
7)$2-Fluorophenol	(1)	4.000	112	1010447	23.987
8) N-Nitrosodiethylamine	(1)	4.368	102	271931	11.631
10) Ethyl methanesulfonate	(1)	4.834	109	267510	11.865
11) Benzaldehyde	(1)	5.300	77	458899	11.339
12)$Phenol-d5	(1)	5.434	99	1352625	23.380
13)$Phenol-d6	(1)	5.434	99	1352625	23.380
14) Phenol	(1)	5.452	94	766907	11.451
15) Aniline	(1)	5.463	93	944512	11.452
16) bis(2-Chloroethyl)ether	(1)	5.586	93	603087	11.413
17) 2-Chlorophenol	(1)	5.627	128	511534	12.348
18) 1,3-Dichlorobenzene	(1)	5.860	146	552514	12.400
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	141874	5.000
20) 1,4-Dichlorobenzene	(1)	5.976	146	559737	12.418
23) Benzyl alcohol	(1)	6.180	108	347087	11.846
24) 1,2-Dichlorobenzene	(1)	6.198	146	523612	12.421
25) Indene	(1)	6.338	115	1035725	14.541
26) 2-Methylphenol	(1)	6.367	108	502826	12.095
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.408	45	657646	10.027
28) bis(2-Chloroisopropyl)ether	(1)	6.408	45	657646	10.027
29) N-Nitrosopyrrolidine	(1)	6.548	100	266643	11.217
30) Acetophenone	(1)	6.583	105	774173	11.909
31) N-Nitroso-di-n-propylamine	(1)	6.612	70	410661	10.975
32) N-Nitrosomorpholine	(1)	6.618	56	307899	10.436
33) 4-Methylphenol	(1)	6.618	108	549498	11.830
34) o-Toluidine	(1)	6.635	106	843612	11.769
35) Hexachloroethane	(1)	6.717	117	227474	11.940
36)$Nitrobenzene-d5	(2)	6.804	82	1193781	23.784
37) Nitrobenzene	(2)	6.833	77	626597	11.762
39) N-Nitrosopiperidine	(2)	7.066	114	267147	12.233
40) Isophorone	(2)	7.218	82	1080273	11.897
42) 2-Nitrophenol	(2)	7.323	139	259235	14.182
45) 2,4-Dimethylphenol	(2)	7.439	107	551982	12.426
46) O,O,O-triethylphosphorothioate	(2)	7.562	198	268722	13.648
47) Benzoic acid	(2)	7.585	105	170829	7.658

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.591	93	683220M	11.530
49) 2,4-Dichlorophenol	(2)	7.708	162	420398	13.418
51) 1,2,4-Trichlorobenzene	(2)	7.836	180	459027	13.114
52)*Naphthalene-d8	(2)	7.912	136	545396	5.000
53) Naphthalene	(2)	7.946	128	1445843	12.434
55) 4-Chloroaniline	(2)	8.057	127	598409	12.420
56) 2,6-Dichlorophenol	(2)	8.063	162	402013	13.362
57) Hexachloropropene	(2)	8.098	213	314028	14.215
58) Hexachlorobutadiene	(2)	8.174	225	286243	14.029
60) Quinoline	(2)	8.477	129	961953	12.487
61) Caprolactam	(2)	8.611	113	176293	12.612
62) N-Nitrosodi-n-butylamine	(2)	8.634	84	499290	13.872
63) 4-Chloro-3-methylphenol	(2)	8.873	107	486769	12.938
64) Safrole	(2)	8.949	162	394438	13.328
65) 2-Methylnaphthalene	(2)	9.054	142	973477	12.562
66) 1-Methylnaphthalene	(2)	9.205	142	889445	12.648
67) Hexachlorocyclopentadiene	(3)	9.322	237	205614	11.519
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.328	216	487233	12.882
69) cis-Isosafrole	(3)	9.421	162	68027	12.251
70) 2,4,6-Trichlorophenol	(3)	9.526	196	325282	13.630
71) 2,4,5-Trichlorophenol	(3)	9.579	196	331901	13.460
72)$2-Fluorobiphenyl	(3)	9.672	172	2013336	24.704
74) Isosafrole	(3)	9.783	162	393090	12.611
73) trans-Isosafrole	(3)	9.783	162	393090	12.611
75) 1,1'-Biphenyl	(3)	9.823	154	1142602	12.057
76) 2-Chloronaphthalene	(3)	9.829	162	860900	11.842
77) 1-Chloronaphthalene	(3)	9.858	162	915275	12.770
82) Diphenyl ether	(3)	10.004	170	659828	12.584
83) 2-Nitroaniline	(3)	10.016	138	313414	13.842
84) 1,4-Naphthoquinone	(3)	10.121	158	393192	12.567
85) 1,4-Dinitrobenzene	(3)	10.255	168	168084	13.397
86) Dimethylphthalate	(3)	10.354	163	1037112	12.615
87) 1,3-Dinitrobenzene	(3)	10.365	168	193078	13.682
88) 2,6-Dinitrotoluene	(3)	10.429	165	248347	13.631
90) Acenaphthylene	(3)	10.482	152	1380919	12.514
91) 3-Nitroaniline	(3)	10.674	138	271799	12.997
92)*Acenaphthene-d10	(3)	10.715	164	326350	5.000
93) Acenaphthene	(3)	10.768	153	920589	12.126
94) 2,4-Dinitrophenol	(3)	10.843	184	114463	12.759
95) Pentachlorobenzene	(3)	10.972	250	412005	13.597

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
96) 4-Nitrophenol	(3)	10.983	109	172253	12.914
97) Dibenzofuran	(3)	11.030	168	1346240	12.470
98) 2,4-Dinitrotoluene	(3)	11.041	165	327395	14.023
99) 1-Naphthylamine	(3)	11.141	143	945119	12.044
100) 2,3,4,6-Tetrachlorophenol	(3)	11.216	232	265735	13.648
101) 2-Naphthylamine	(3)	11.251	143	953212	11.837
102) Diethylphthalate	(3)	11.415	149	1013545	12.513
103) Fluorene	(3)	11.490	166	1079509	12.422
104) Thionazin	(3)	11.508	107	201819	11.527
105) 4-Chlorophenyl-phenylether	(3)	11.519	204	562174	13.045
106) 5-Nitro-o-toluidine	(3)	11.525	152	303141	12.980
107) 4-Nitroaniline	(3)	11.531	138	273392	12.709
108) 4,6-Dinitro-2-methylphenol	(4)	11.578	198	177256	12.190
110) NDPA as diphenylamine	(4)	11.665	169	859644	12.020
109) N-Nitrosodiphenylamine	(4)	11.665	169	859644	12.020
111) 1,2-Diphenylhydrazine	(4)	11.706	77	1200845	10.607
112)$2,4,6-Tribromophenol	(3)	11.782	330	258200	30.123
115) Tetraethyldithiopyrophosphate	(4)	11.892	97	189153	11.583
116) 1,3,5-Trinitrobenzene	(4)	12.003	213	139800	12.703
117) Diallate (peak 1)	(4)	12.027	86	468078	8.295
118) Phorate	(4)	12.032	75	708333	10.588
119) Phenacetin	(4)	12.062	108	589983	12.390
120) 4-Bromophenyl-phenylether	(4)	12.096	248	294365	12.985
121) Diallate (peak 2)	(4)	12.126	86	66499	2.763
122) Hexachlorobenzene	(4)	12.143	284	304616	13.591
123) Dimethoate	(4)	12.225	87	493587	11.299
124) Atrazine	(4)	12.330	200	309626	13.298
125) Pentachlorophenol	(4)	12.400	266	187740	11.132
127) 4-Aminobiphenyl	(4)	12.411	169	1113334	12.444
126) Pentachloronitrobenzene	(4)	12.411	237	145455	13.965
129) Pronamide	(4)	12.516	173	503625	13.305
130)*Phenanthrene-d10	(4)	12.621	188	574495	5.000
131) Phenanthrene	(4)	12.650	178	1523591	11.891
133) Dinoseb	(4)	12.650	211	256576	11.815
134) Anthracene	(4)	12.714	178	1587646	12.427
135) Carbazole	(4)	12.930	167	1506211	12.182
136) Methyl parathion	(4)	13.134	109	387158	11.890
137) Di-n-butylphthalate	(4)	13.443	149	1797224	12.273
138) Parathion	(4)	13.670	109	248493	11.925
139) 4-Nitroquinoline-1-oxide	(4)	13.670	190	103365	8.789

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

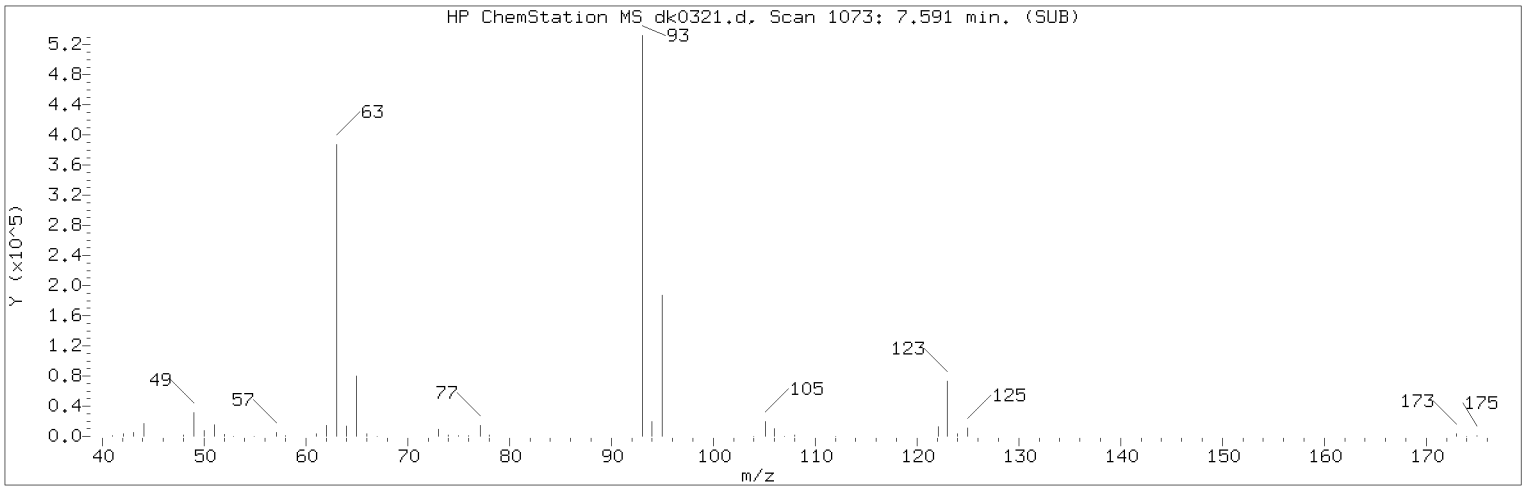
Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.037	193	197387	12.843
142) Fluoranthene	(4)	14.259	202	1875738	13.014
144) Benzidine	(5)	14.498	184	3534918	37.092
145)*Pyrene-d10	(5)	14.562	212	742674	5.000
146) Pyrene	(5)	14.591	202	1899064	12.044
149)$Terphenyl-d14	(5)	14.883	244	2396910	25.880
150) p-Dimethylaminoazobenzene	(5)	15.110	225	388589	12.277
151) Chlorobenzilate	(5)	15.203	139	547872	12.344
152) 3,3'-Dimethylbenzidine	(5)	15.664	212	1234261	13.187
153) Butylbenzylphthalate	(5)	15.728	149	809176	12.058
156) 2-Acetylaminofluorene	(5)	16.083	181	733910	12.369
158) Benzo(a)anthracene	(5)	16.573	228	1779895	13.304
159) 3,3'-Dichlorobenzidine	(5)	16.579	252	668749	13.839
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.596	231	340494	13.343
161) Chrysene	(5)	16.637	228	1672815	12.714
162) bis(2-Ethylhexyl)phthalate	(5)	16.794	149	1094618	12.400
165) 6-Methylchrysene	(5)	17.436	242	1281295	13.854
166) Di-n-octylphthalate	(6)	17.948	149	1886394	11.498
168) Benzo(b)fluoranthene	(6)	18.421	252	1667704	12.658
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.426	256	769282	13.155
170) Benzo(k)fluoranthene	(6)	18.467	252	1681881	12.657
171) Benzo(a)pyrene	(6)	18.939	252	1549668	12.814
172)*Perylene-d12	(6)	19.027	264	559319	5.000
173) 3-Methylcholanthrene	(6)	19.511	268	762679	13.253
174) Dibenz(a,h)acridine	(6)	20.315	279	1039157	12.990
175) Dibenz(a,j)acridine	(6)	20.391	279	1247376	14.540
176) Indeno(1,2,3-cd)pyrene	(6)	20.624	276	1458229	13.747
177) Dibenz(a,h)anthracene	(6)	20.665	278	1278796	14.235
178) Benzo(g,h,i)perylene	(6)	20.985	276	1206078	13.488
179) Diallate TRANS/CIS	(4)			534577	11.059
182) 2,4_2,6-Dinitrotoluenes	(3)			575742	27.654

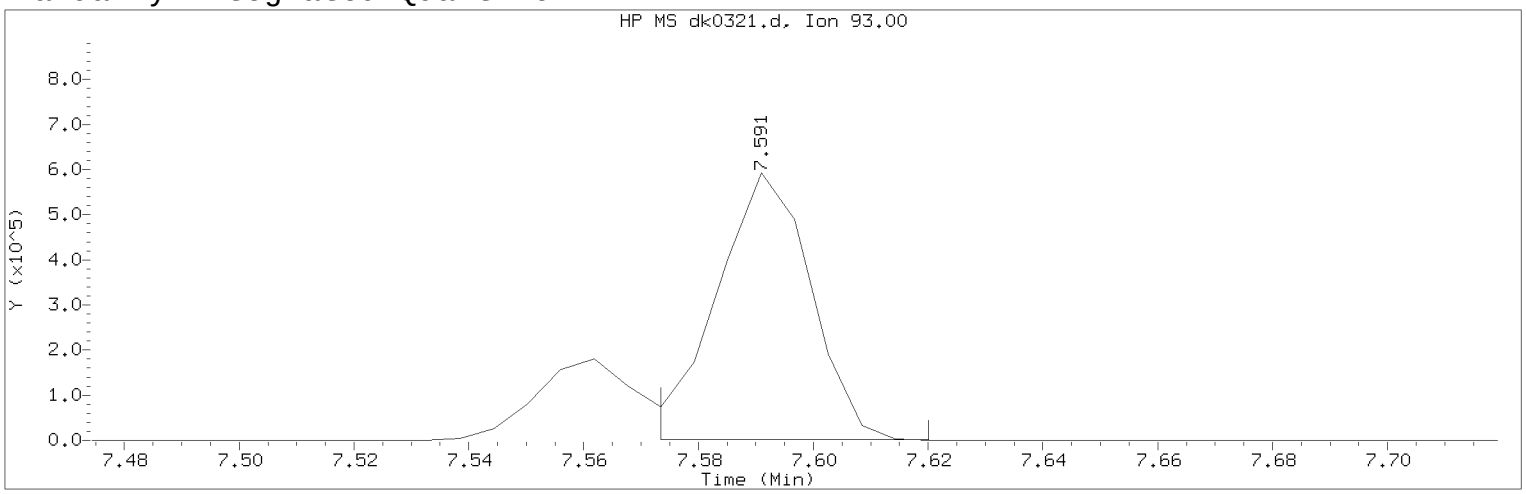
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 05:14
Date, time and analyst ID of latest file update: 11-Nov-2013 05:14 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

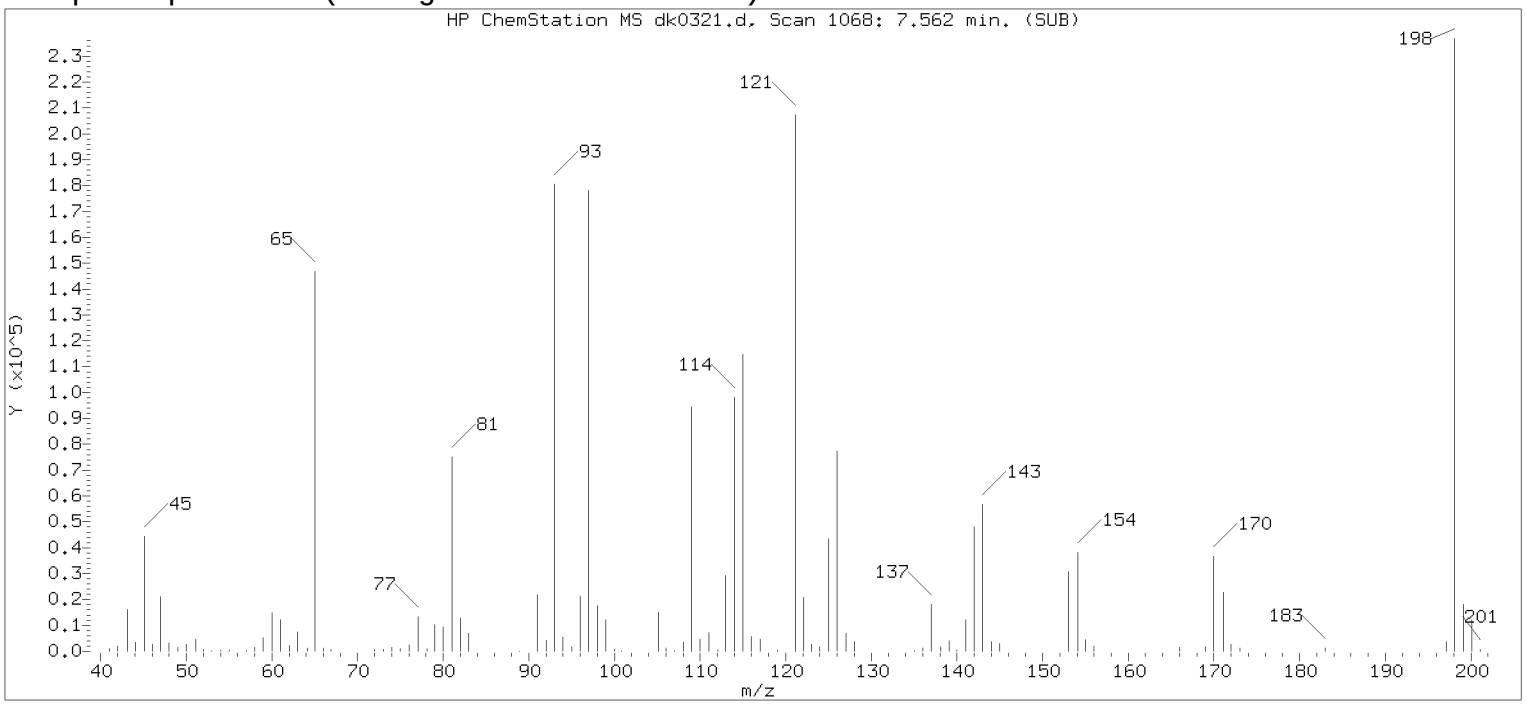
Compound Number : 48
Compound Name : bis(2-Chloroethoxy)methane
Scan Number : 1073
Retention Time (minutes) : 7.591
Quant Ion : 93.00
Area (flag) : 683220M
On-Column Amount (ng/ul) : 11.5300
Integration start scan : 1069 Integration stop scan: 1077
Y at integration start : 725 Y at integration end: 725

Reason for manual integration: improper integration

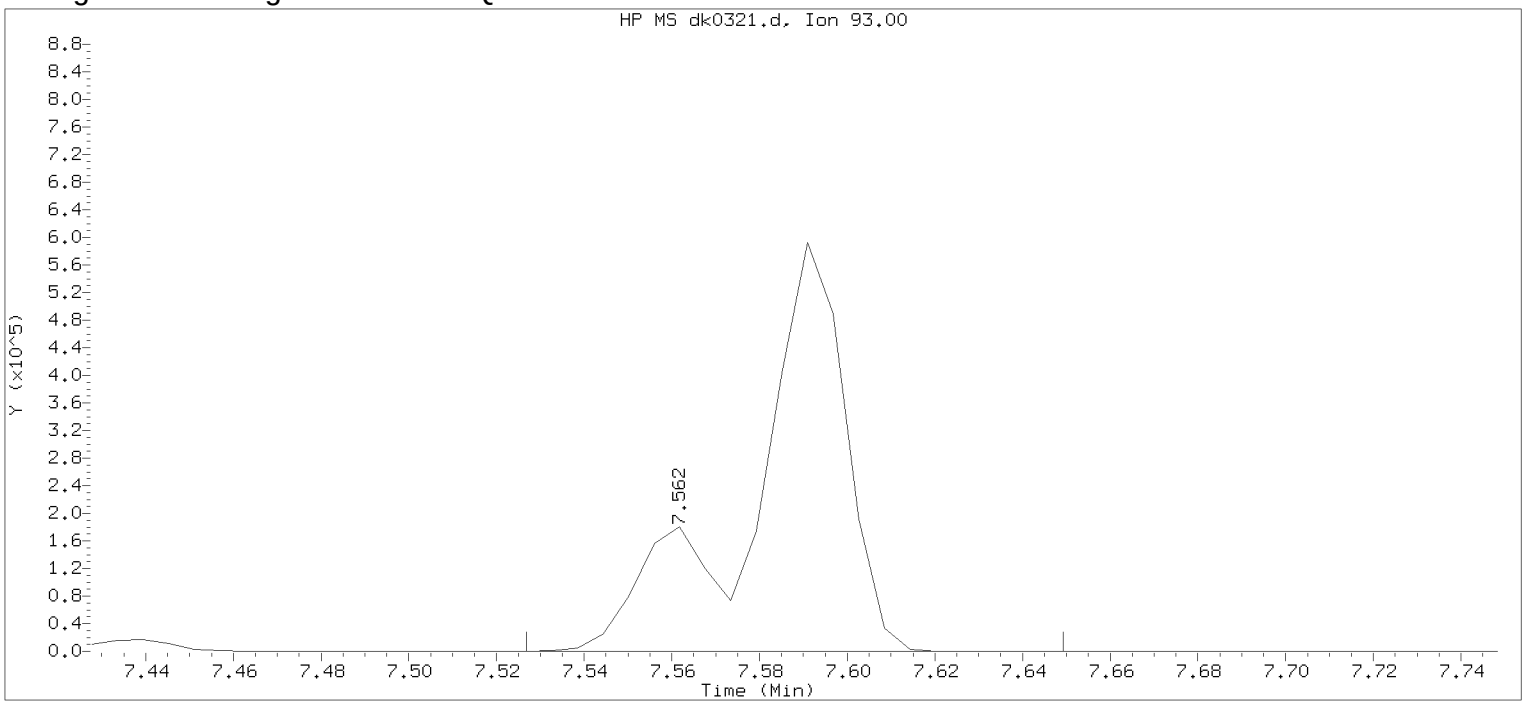
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0321.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 04:17 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 11-NOV-2013 04:48
Date, time and analyst ID of latest file update: 11-Nov-2013 04:49 Automation

Sample Name: SSTD12. Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1068		
Retention Time (minutes)	: 7.562		
Quant Ion	: 93.00		
Area	: 884180		
On-column Amount (ng/ul)	: 14.9214		
Integration start scan	: 1061	Integration stop scan:	1082
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 11/11/2013 at 05:16.
Target 3.5 esignature user ID: jmg00346

Raw QC Data

Semivolatiles by GC/MS

SBLKLF3103 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLF310

Data file: /chem/HP10623.i/13nov13a.b/ck0469.d Injection date and time: **13-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLF3103;SBLKLF310;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201(0.000)	540	152	105657 (-11)	20.00	
52) Naphthalene-d8	6.437(0.000)	741	136	452226 (-20)	20.00	
98) Acenaphthene-d10	8.146(0.000)	1019	164	267135 (-26)	20.00	
135) Phenanthrene-d10	9.591(0.000)	1254	188	507161 (-27)	20.00	
167) Pyrene-d10	10.968(0.006)	1478	212	608615 (-28)	20.00	
175) Perylene-d12	13.575(0.000)	1902	264	488624 (-30)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742(0.000)	82	792964	81.387	81%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.507(0.000)	172	1672257	99.559	100%		69 - 120
156) Terphenyl-d14	(5)	11.171(-0.001)	244	2346556	107.852	108%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)			Not Detected					0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)			Not Detected					0.1
154) Pyrene	(5)			Not Detected					0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)			Not Detected					0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Digitally signed by Mark A. Clark on 11/14/2013 at 00:15. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov13a.b/ck0469.d Injection date and time: **13-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLF3103;SBLKLF310;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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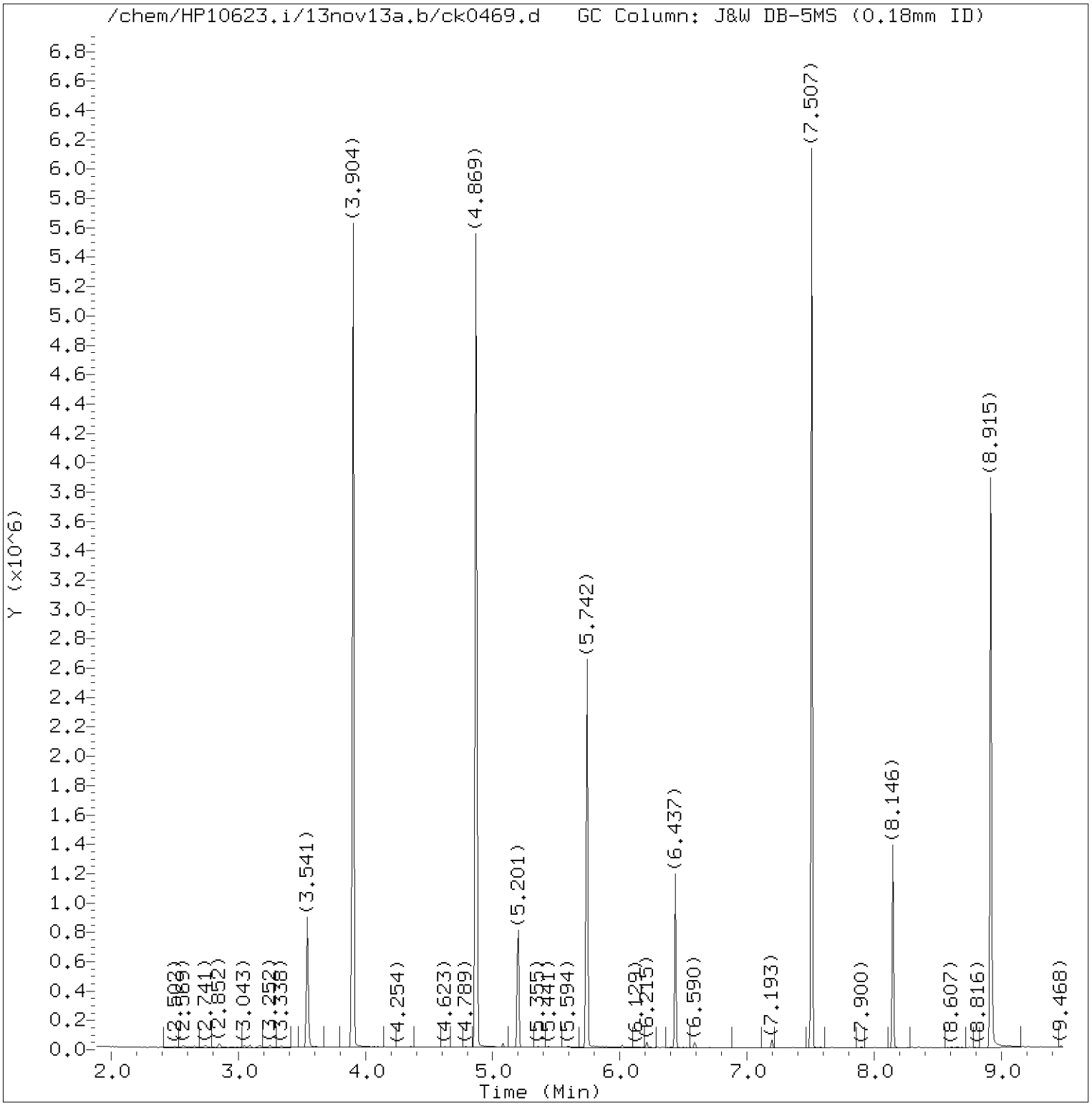
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:15. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:17. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

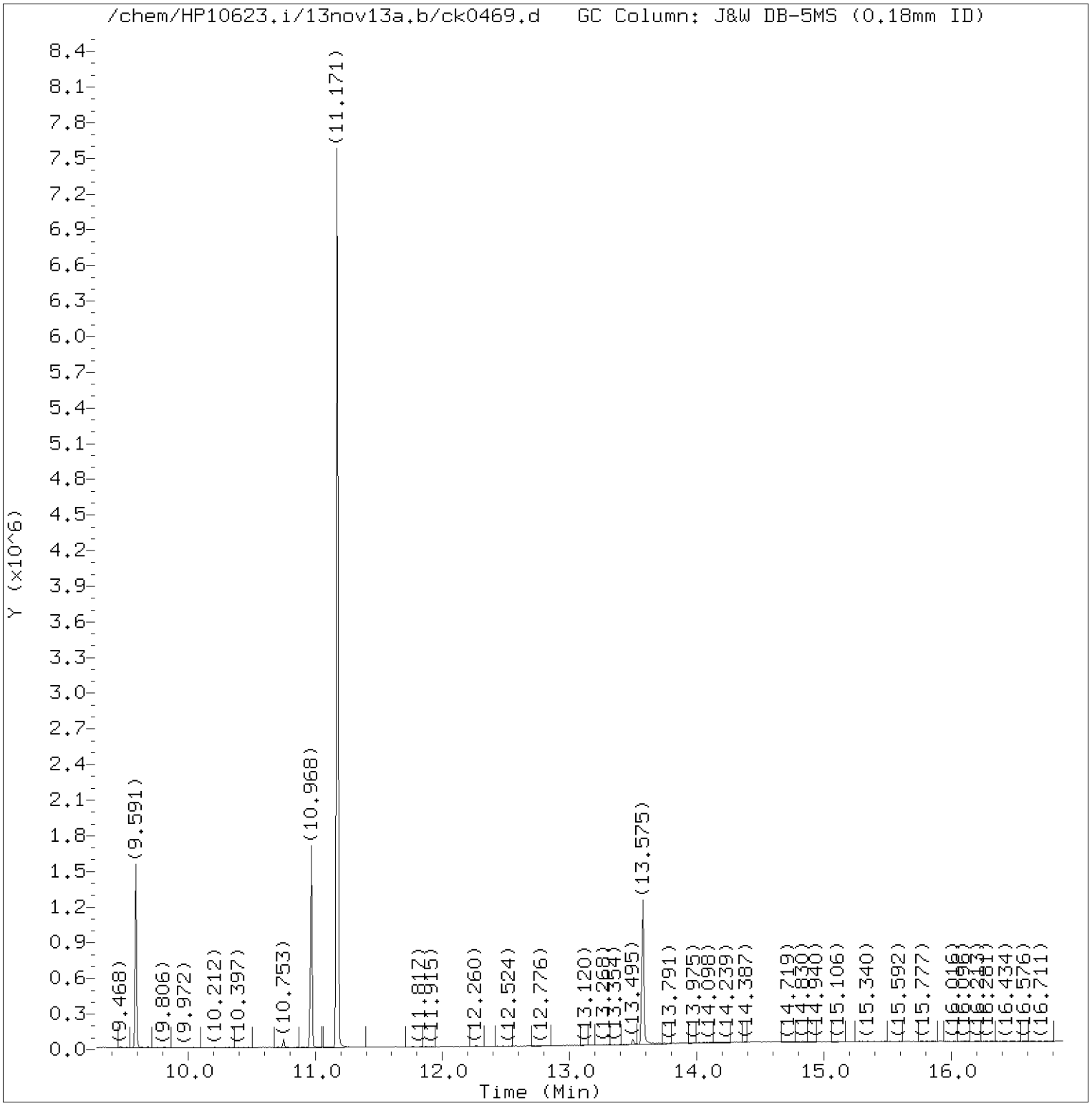
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0469.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:20 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:55 mac00013

Sample Name: SBLKLF3103 Lab Sample ID: SBLKLF310

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	105657	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	792964	81.387
52)*Naphthalene-d8	(2)	6.437	136	452226	20.000
78)$2-Fluorobiphenyl	(3)	7.507	172	1672257	99.559
98)*Acenaphthene-d10	(3)	8.146	164	267135	20.000
135)*Phenanthrene-d10	(4)	9.591	188	507161	20.000
167)*Pyrene-d10	(5)	10.968	212	608615	20.000
156)$Terphenyl-d14	(5)	11.171	244	2346556	107.852
175)*Perylene-d12	(6)	13.575	264	488624	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:15.
Target 3.5 esignature user ID: mac00013

SBLKLD3143 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLD314

Data file: /chem/HP10623.i/13nov15.b/ck0542.d Injection date and time: **15-NOV-2013 01:06**
Data file Sample Info. Line: SBLKLD3143;SBLKLD314;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 16-NOV-2013 01:00
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.133(0.000)	529	152	135401 (-22)	20.00	
52) Naphthalene-d8	6.369(0.006)	730	136	599140 (-27)	20.00	
98) Acenaphthene-d10	8.079(0.006)	1008	164	363372 (-29)	20.00	
135) Phenanthrene-d10	9.523(0.006)	1243	188	715257 (-22)	20.00	
167) Pyrene-d10	10.907(0.000)	1468	212	879248 (-21)	20.00	
175) Perylene-d12	13.508(0.000)	1891	264	711818 (-20)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
9) 2-Fluorophenol	(1)	3.836(0.000)	112	1968489	194.318	97%		63 - 126
15) Phenol-d6	(1)	4.814(0.000)	99	2678250	179.671	90%		61 - 120
38) Nitrobenzene-d5	(2)	5.674(0.000)	82	1116453	86.491	86%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.445(-0.001)	172	2215521	96.969	97%		69 - 120
119) 2,4,6-Tribromophenol	(3)	8.853(-0.001)	330	482838	220.035	110%		42 - 134
156) Terphenyl-d14	(5)	11.110(0.000)	244	3145520	100.074	100%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
12) Benzaldehyde	(1)			Not Detected					2
16) Phenol	(1)			Not Detected					0.5
18) bis(2-Chloroethyl)ether	(1)			Not Detected					0.5
19) 2-Chlorophenol	(1)			Not Detected					0.5
26) 2-Methylphenol	(1)			Not Detected					0.5
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.5
30) Acetophenone	(1)			Not Detected					0.5
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.5
33) 4-Methylphenol	(1)			Not Detected					0.5
37) Hexachloroethane	(1)			Not Detected					1
39) Nitrobenzene	(2)			Not Detected					0.5
41) Isophorone	(2)			Not Detected					0.5
42) 2-Nitrophenol	(2)			Not Detected					0.5
44) 2,4-Dimethylphenol	(2)			Not Detected					0.5
46) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.5
49) 2,4-Dichlorophenol	(2)			Not Detected					0.5
53) Naphthalene	(2)			Not Detected					0.1
56) 4-Chloroaniline	(2)			Not Detected					0.5
60) Hexachlorobutadiene	(2)			Not Detected					0.5
63) Caprolactam	(2)			Not Detected					1
68) 4-Chloro-3-methylphenol	(2)			Not Detected					0.5
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
72) Hexachlorocyclopentadiene	(3)			Not Detected					5
75) 2,4,6-Trichlorophenol	(3)			Not Detected					0.5
77) 2,4,5-Trichlorophenol	(3)			Not Detected					0.5
83) 1,1'-Biphenyl	(3)			Not Detected					0.5
84) 2-Chloronaphthalene	(3)			Not Detected					0.2

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Data file: /chem/HP10623.i/13nov15.b/ck0542.d Injection date and time: **15-NOV-2013 01:06**
Data file Sample Info. Line: SBLKLD3143;SBLKLD314;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 16-NOV-2013 01:00
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

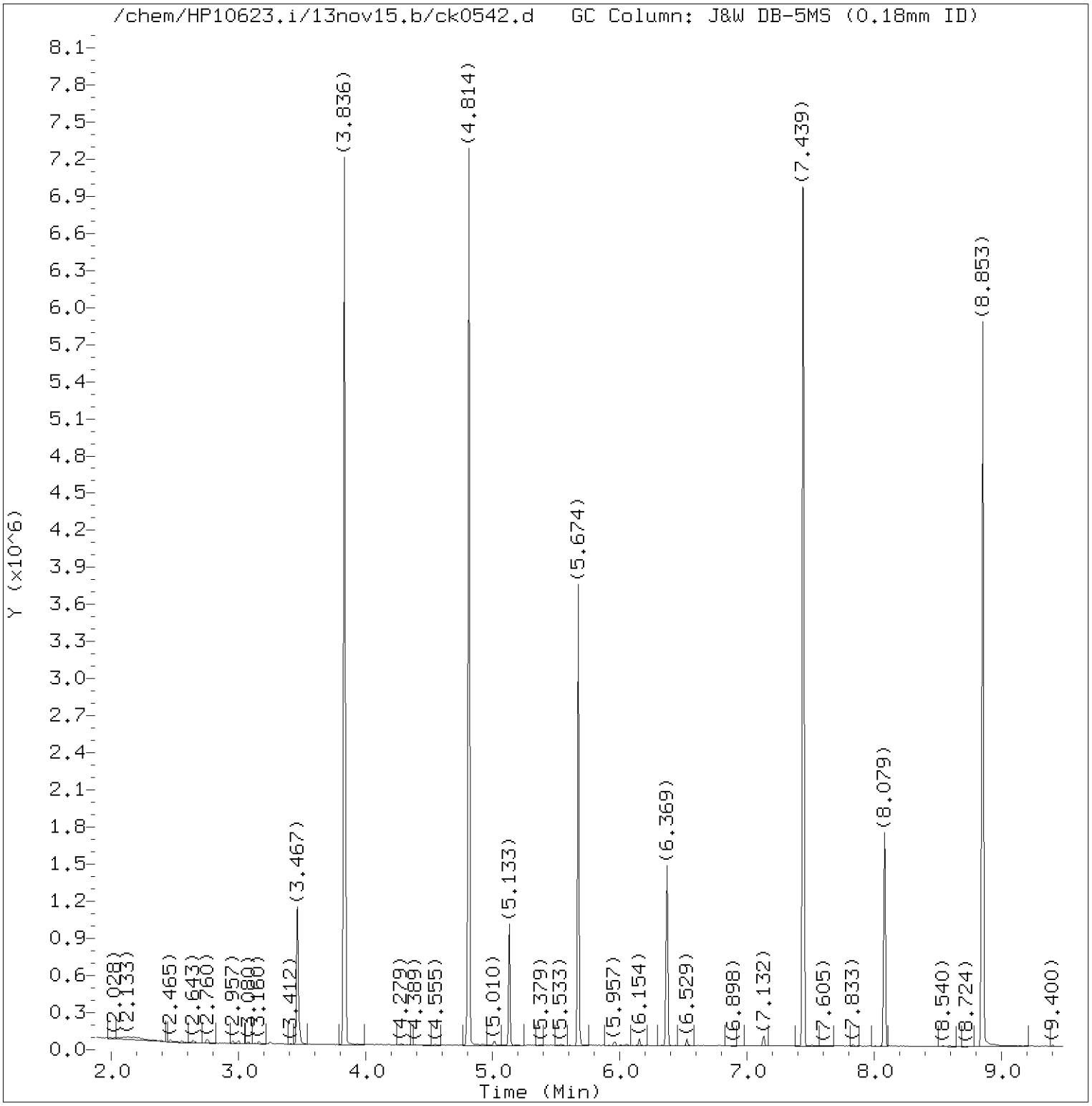
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
89) 2-Nitroaniline	(3)				Not Detected					0.5
92) Dimethylphthalate	(3)				Not Detected					2
94) 2,6-Dinitrotoluene	(3)				Not Detected					0.5
95) Acenaphthylene	(3)				Not Detected					0.1
97) 3-Nitroaniline	(3)				Not Detected					2
99) Acenaphthene	(3)				Not Detected					0.1
100) 2,4-Dinitrophenol	(3)				Not Detected					9
103) 4-Nitrophenol	(3)				Not Detected					5
104) Dibenzofuran	(3)				Not Detected					0.5
105) 2,4-Dinitrotoluene	(3)				Not Detected					2
109) Diethylphthalate	(3)				Not Detected					2
111) Fluorene	(3)				Not Detected					0.1
112) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.5
114) 4-Nitroaniline	(3)				Not Detected					2
115) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					5
117) N-Nitrosodiphenylamine	(4)				Not Detected					0.5
125) 4-Bromophenyl-phenylether	(4)				Not Detected					0.5
127) Hexachlorobenzene	(4)				Not Detected					0.1
130) Atrazine	(4)				Not Detected					1
131) Pentachlorophenol	(4)				Not Detected					1
137) Phenanthrene	(4)				Not Detected					0.1
138) Anthracene	(4)				Not Detected					0.1
140) Carbazole	(4)				Not Detected					0.5
142) Di-n-butylphthalate	(4)				Not Detected					2
147) Fluoranthene	(4)				Not Detected					0.1
154) Pyrene	(5)				Not Detected					0.1
161) Butylbenzylphthalate	(5)				Not Detected					2
164) 3,3'-Dichlorobenzidine	(5)				Not Detected					3
166) Benzo(a)anthracene	(5)				Not Detected					0.1
168) Chrysene	(5)				Not Detected					0.1
169) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					2
170) Di-n-octylphthalate	(6)				Not Detected					2
172) Benzo(b)fluoranthene	(6)				Not Detected					0.1
173) Benzo(k)fluoranthene	(6)				Not Detected					0.1
174) Benzo(a)pyrene	(6)				Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)				Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)				Not Detected					0.1

Total number of targets = 65

Digitally signed by Mark A. Clark on 11/18/2013 at 04:34. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

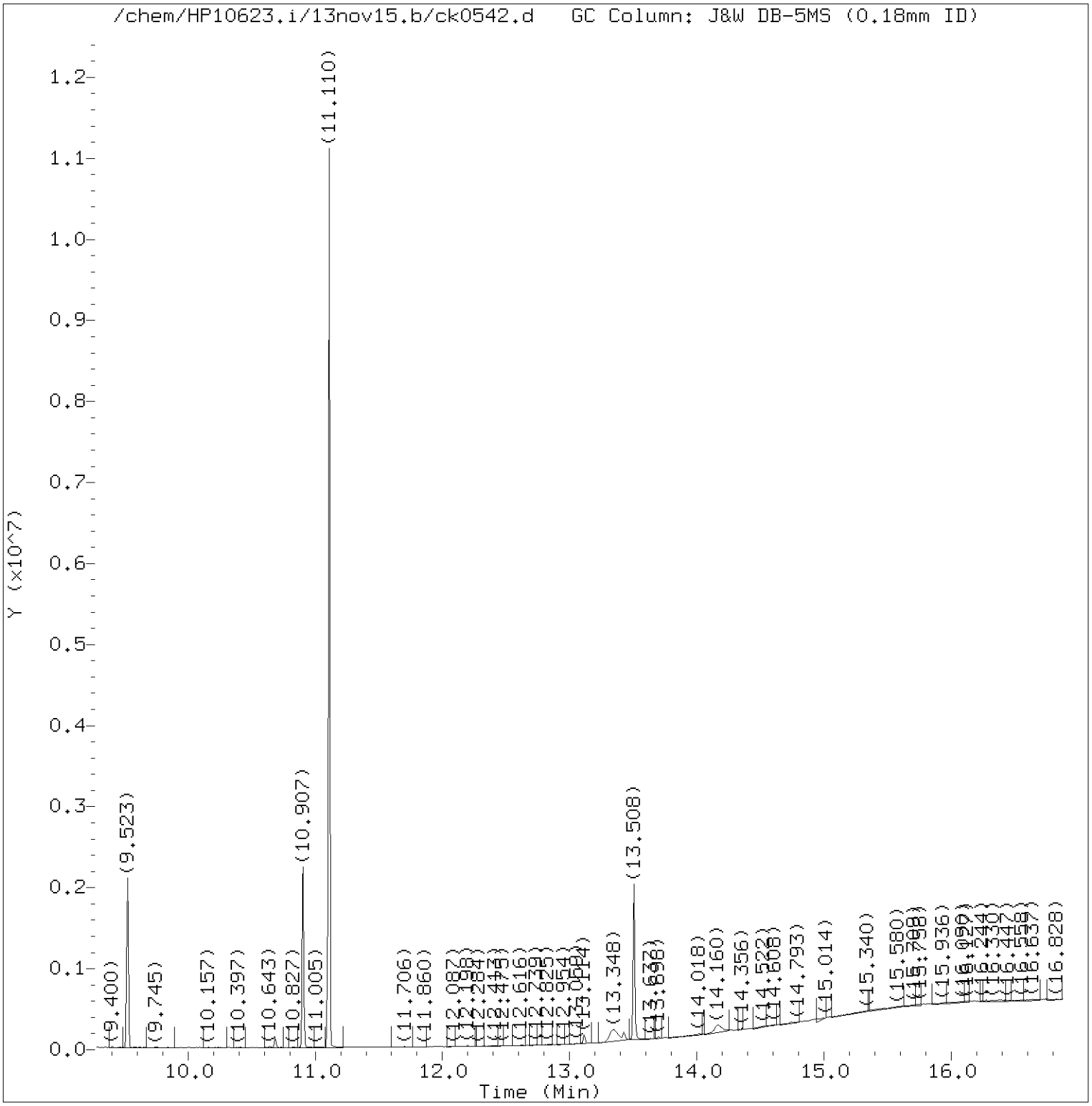
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:34.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:34.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

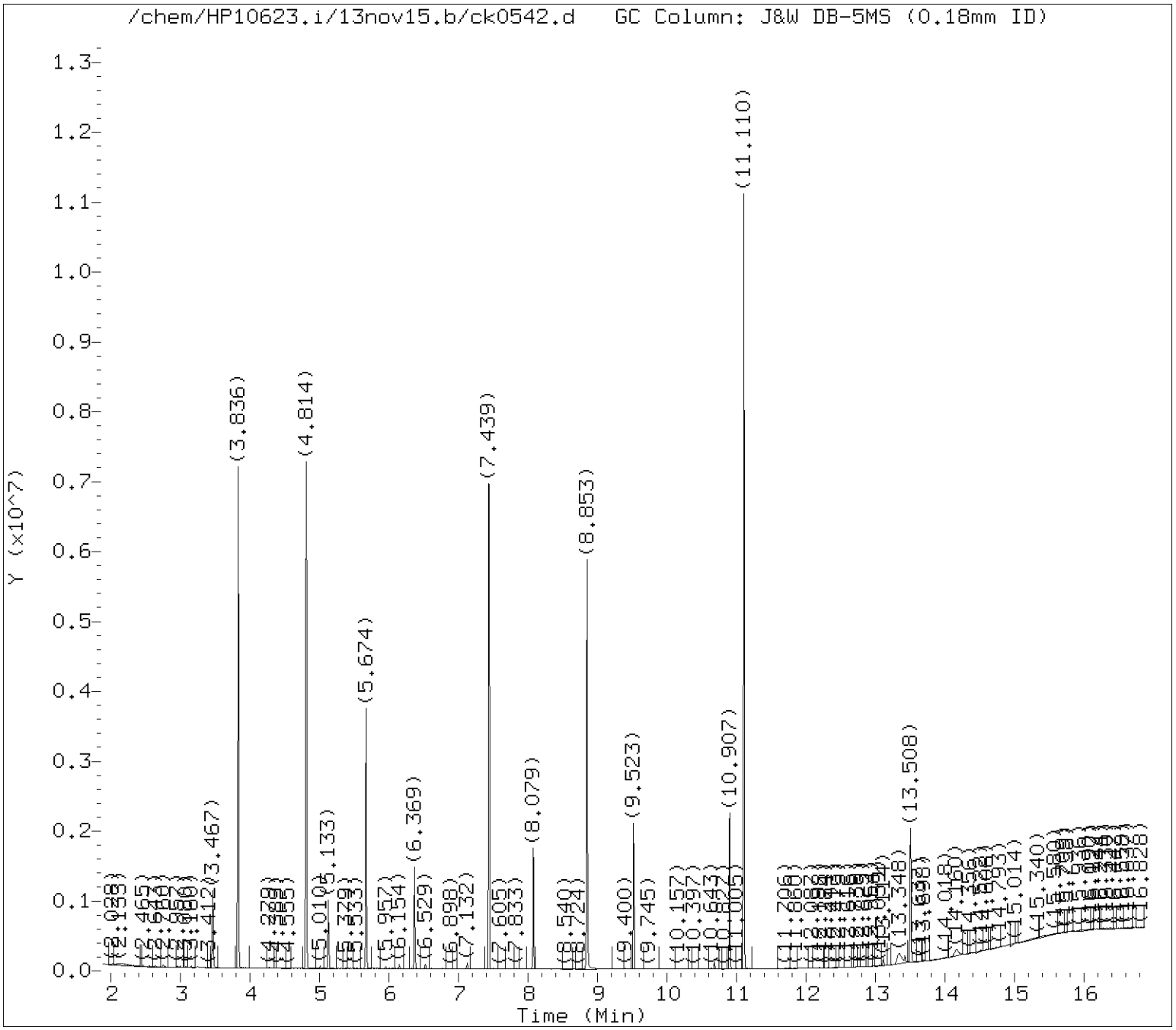
Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.836	112	1968489	194.318
15)$Phenol-d6	(1)	4.814	99	2678250	179.671
21)*1,4-Dichlorobenzene-d4	(1)	5.133	152	135401	20.000
38)$Nitrobenzene-d5	(2)	5.674	82	1116453	86.491
52)*Naphthalene-d8	(2)	6.369	136	599140	20.000
78)$2-Fluorobiphenyl	(3)	7.445	172	2215521	96.969
98)*Acenaphthene-d10	(3)	8.079	164	363372	20.000
119)$2,4,6-Tribromophenol	(3)	8.853	330	482838	220.035
135)*Phenanthrene-d10	(4)	9.523	188	715257	20.000
167)*Pyrene-d10	(5)	10.907	212	879248	20.000
156)$Terphenyl-d14	(5)	11.110	244	3145520	100.074
175)*Perylene-d12	(6)	13.508	264	711818	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:34.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

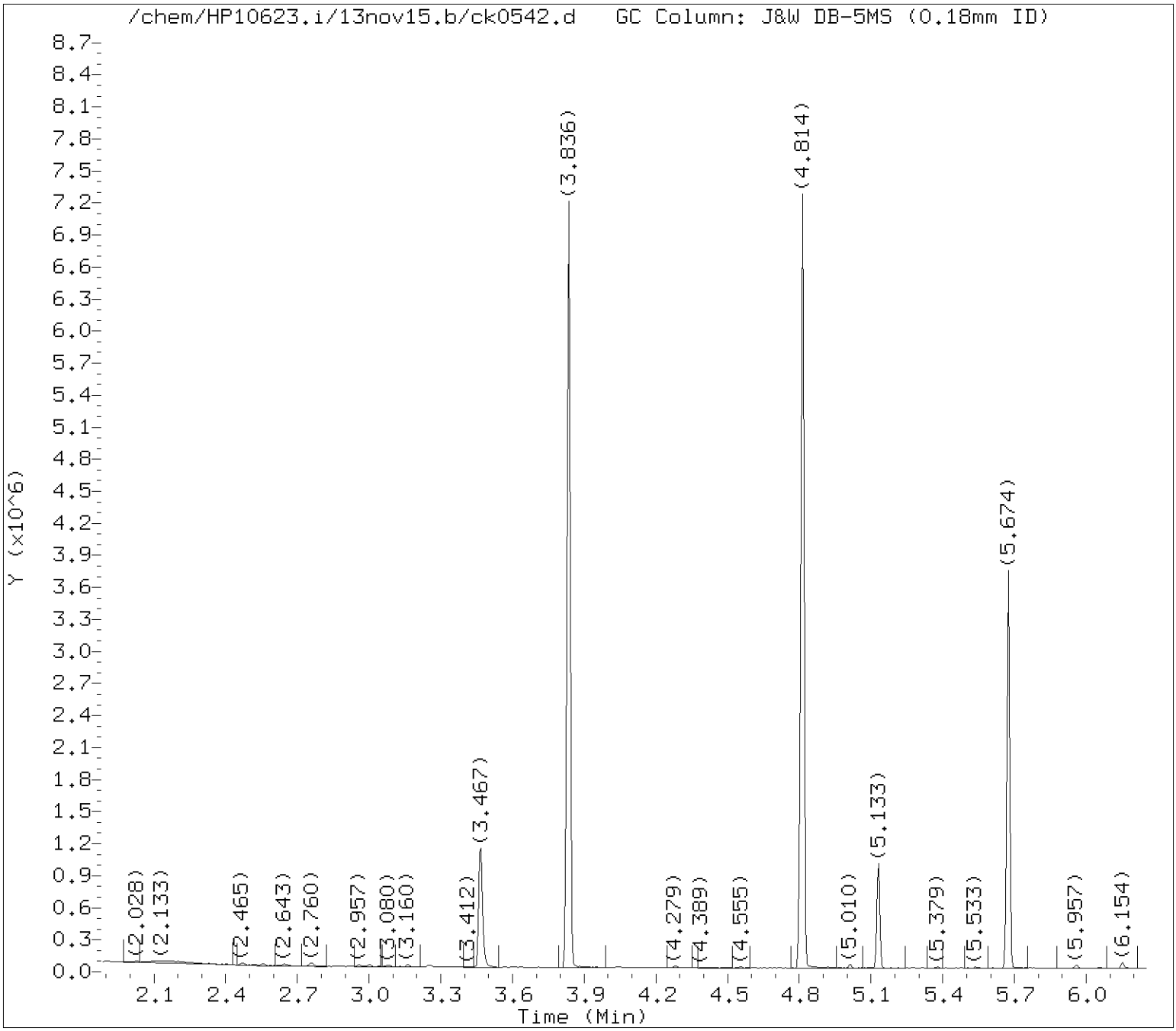
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

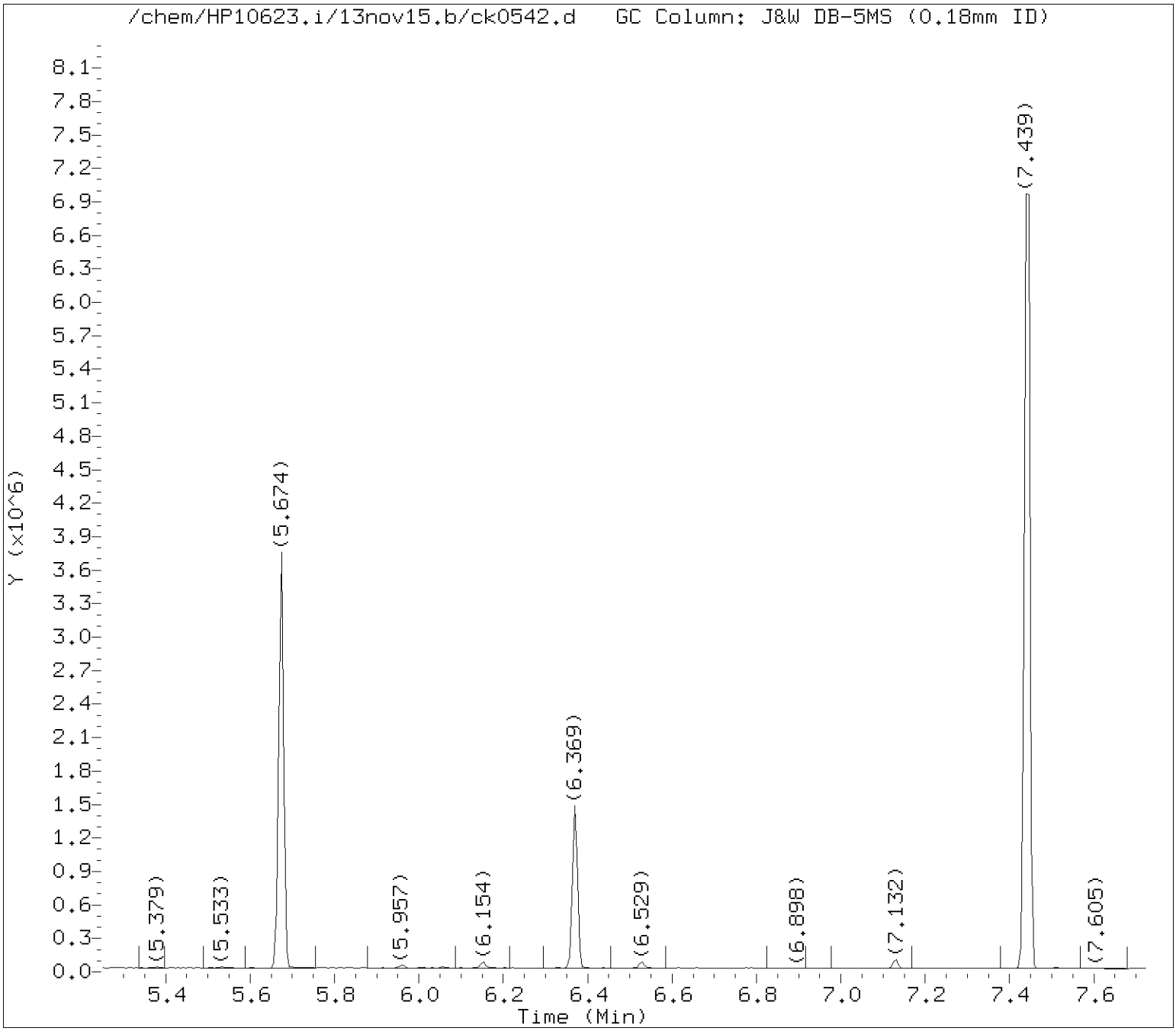
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.133 minutes
Chromatogram Start Time (min.): 1.887
Chromatogram End Time (min.): 5.751

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

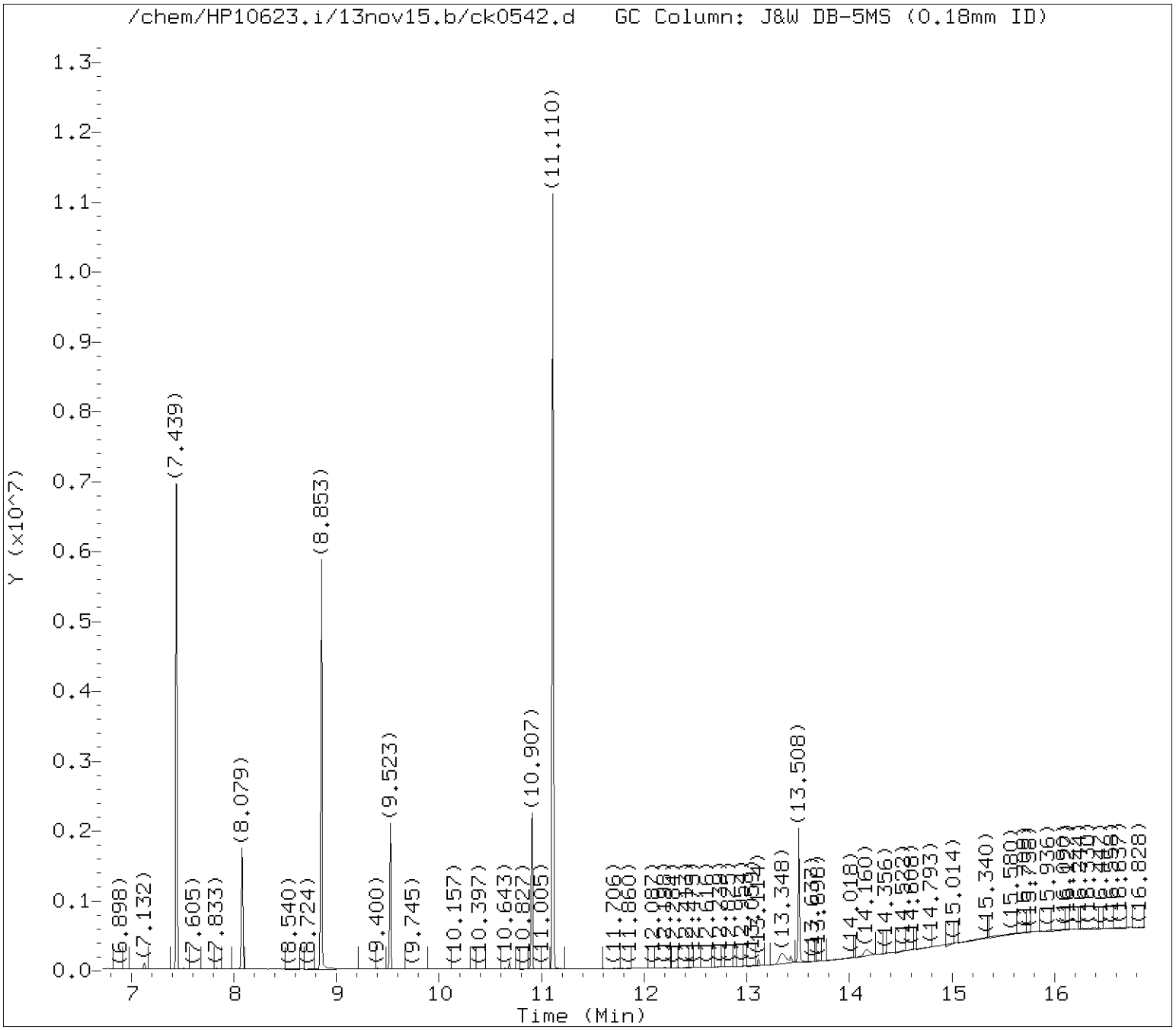
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: Naphthalene-d8 at 6.369 minutes
Chromatogram Start Time (min.): 5.751
Chromatogram End Time (min.): 7.224

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

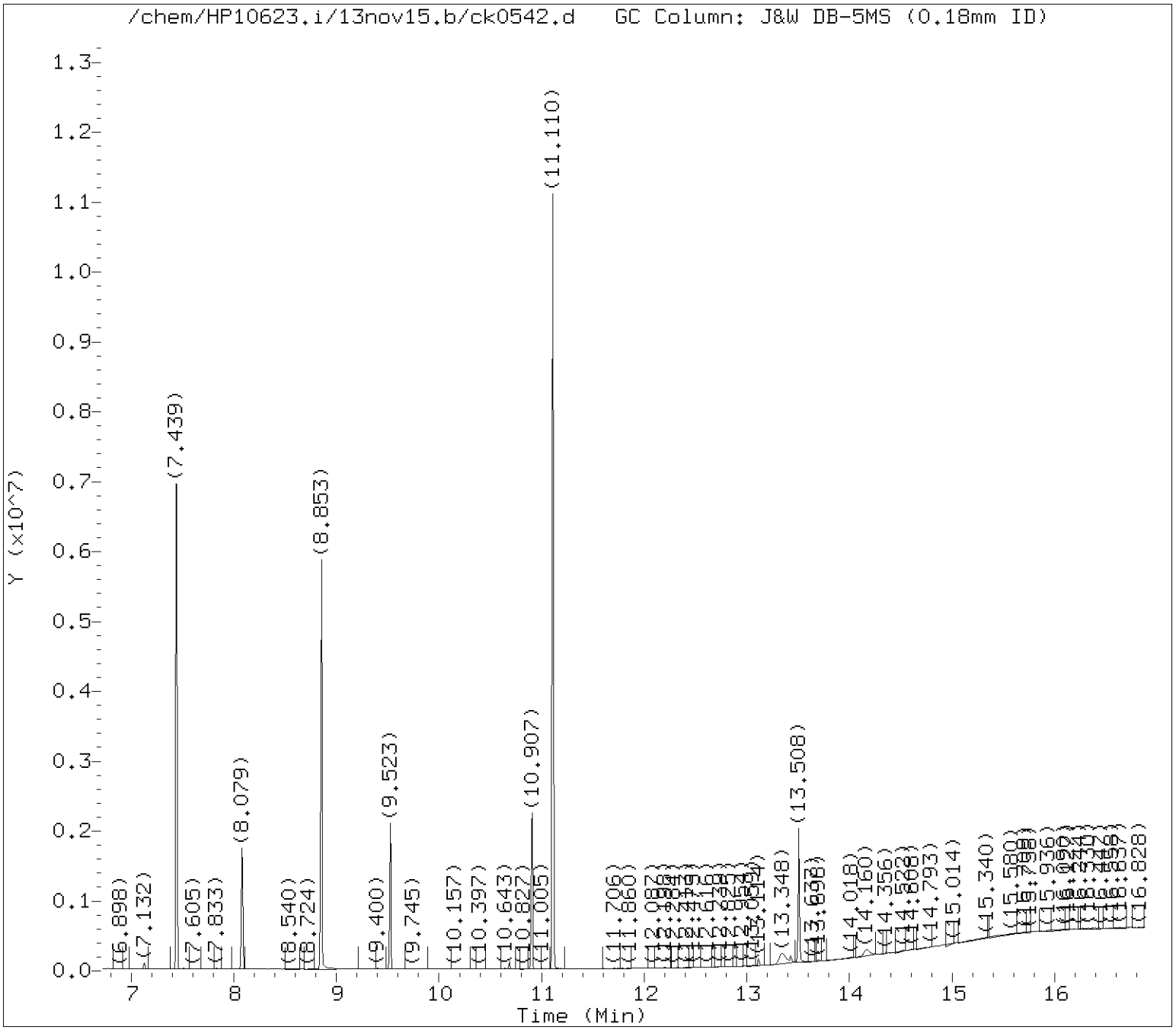
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: Acenaphthene-d10 at 8.079 minutes
Chromatogram Start Time (min.): 7.224
Chromatogram End Time (min.): 8.801

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

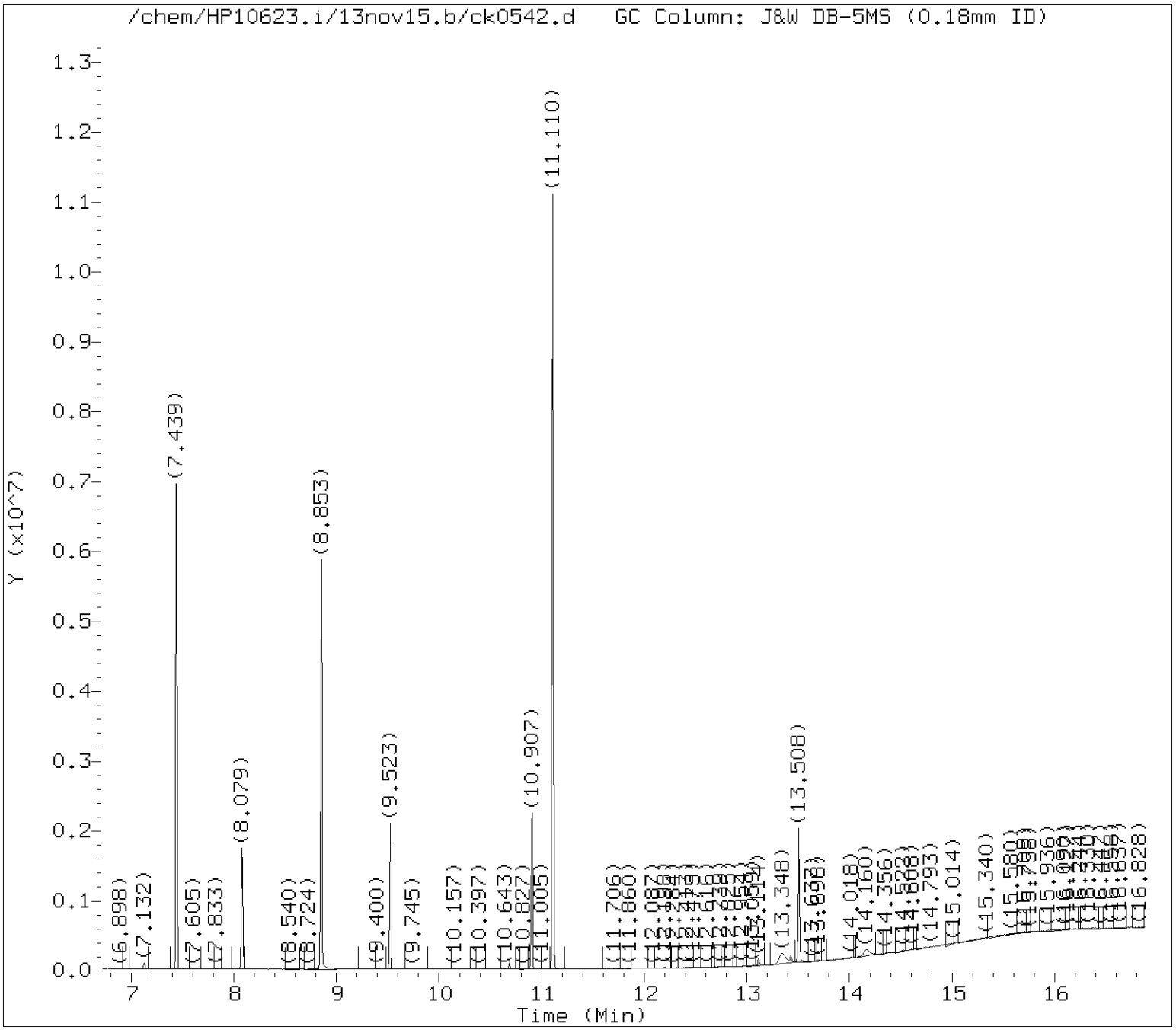
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: Phenanthrene-d10 at 9.523 minutes
Chromatogram Start Time (min.): 8.801
Chromatogram End Time (min.): 10.215

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

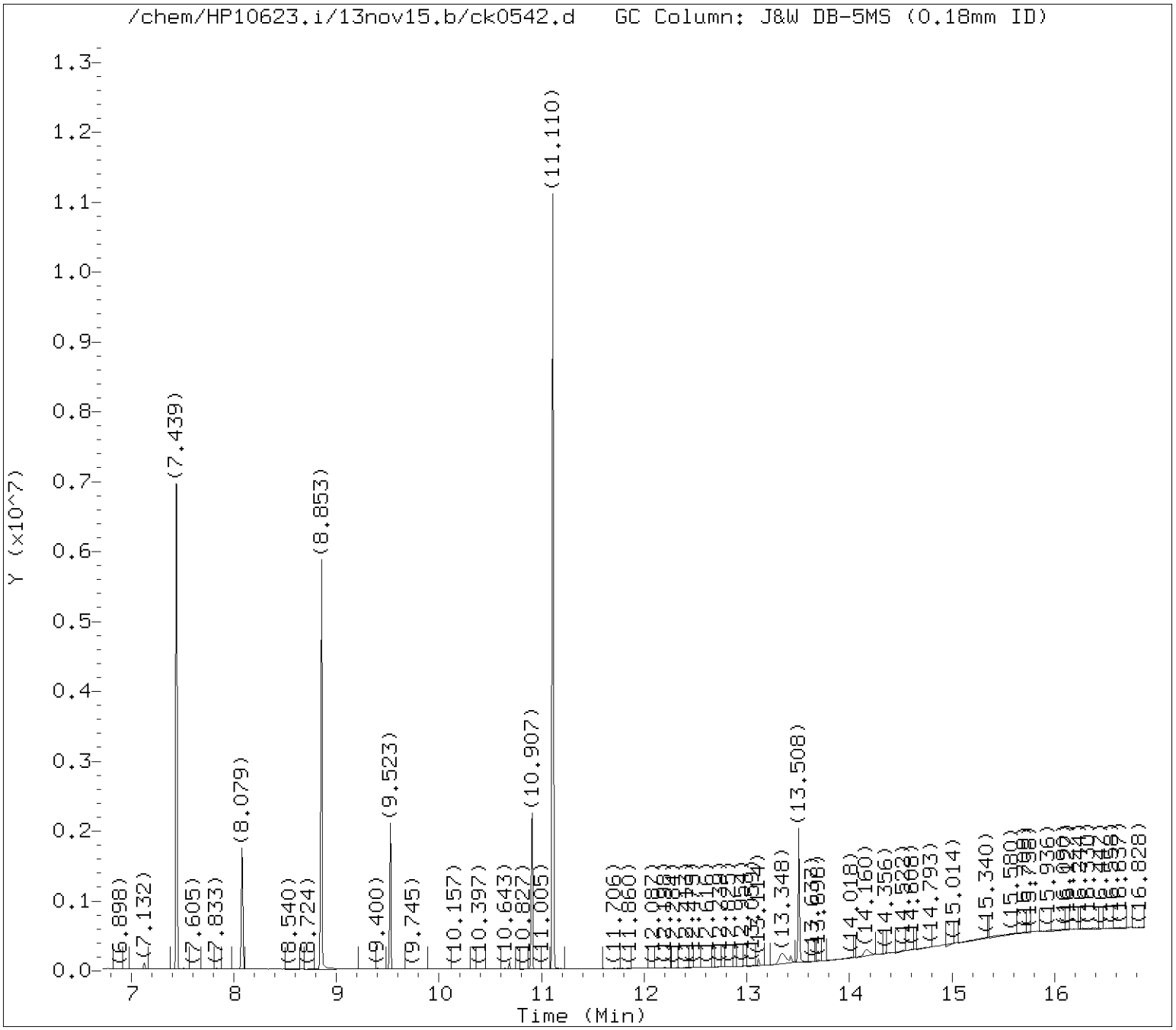
Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: Pyrene-d10 at 10.907 minutes
Chromatogram Start Time (min.): 10.215
Chromatogram End Time (min.): 12.207

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0542.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:06 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:21 mac00013

Sample Name: SBLKLD3143 Lab Sample ID: SBLKLD314

Internal Standard referenced: Perylene-d12 at 13.508 minutes
Chromatogram Start Time (min.): 12.207
Chromatogram End Time (min.): 16.877

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

Lancaster Labs

Data file : /chem/HP10623.i/13nov15.b/ck0542.d
Lab Smp Id: SBLKLD314 Client Smp ID: SBLKLD3143
Inj Date : 15-NOV-2013 01:06
Operator : mac00013 Inst ID: HP10623.i
Smp Info : SBLKLD3143;SBLKLD314;2;3;BLANK;;;
Misc Info : 13314SLD;all1.sub;30;;1000;0;ck0542;10727;
Comment : Max. number of TICs to report is 25, 3 TICs were found initially.
Method : /chem/HP10623.i/13nov15.b/m8270.m
Meth Date : 18-Nov-2013 04:21 mac00013 Quant Type: ISTD
Cal Date : 12-NOV-2013 12:38 Cal File: ck0408.d
Als bottle: 11 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: SL1847mic.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
GpcCleanup	0.00000	Gel Permeation Cleanup factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)(1000 low, 2
Vi	1.00000	Volume injected (uL)
Ws	30.00000	Weight of sample extracted (g)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 21 1,4-Dichlorobenzene-d4	5.133	885102	20.000
* 175 Perylene-d12	13.508	1999693	20.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.133	274608	6.20511970	206.83732	0		0	21

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/Kg)	QUAL	LIBRARY	LIB ENTRY	CPND #
2-Pentanone, 4-hydroxy-4-methyl-				CAS #: 123-42-2			
3.467	1315063	29.7154741	990.51580	56	NIST98.l	109756	21
Dibenzylidene 4,4'-biphenylenediamine				CAS #: 6311-48-4			
13.348	791888	7.92009613	264.00320	93	NIST98.l	128860	175

Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0542.d

Date : 15-NOV-2013 01:06

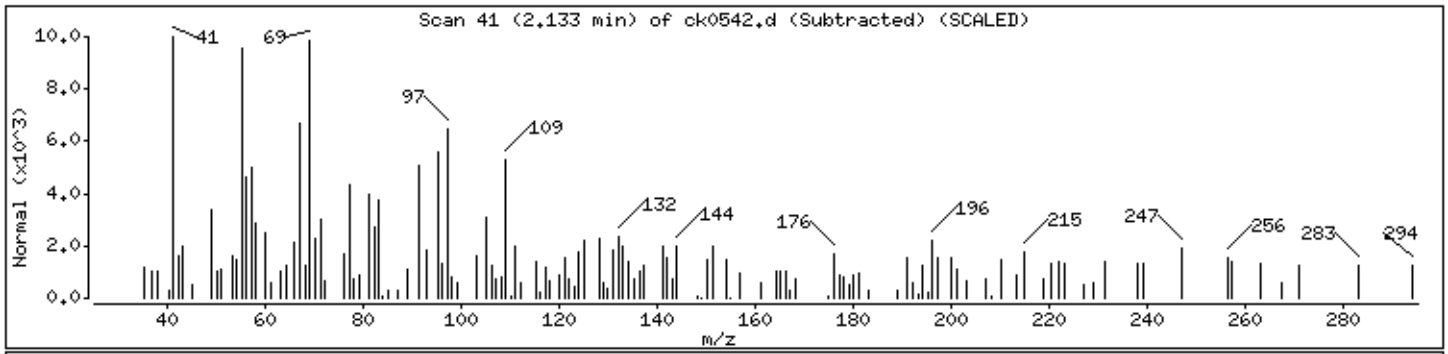
Client ID: SBLKLD3143 Instrument: HP10623.i

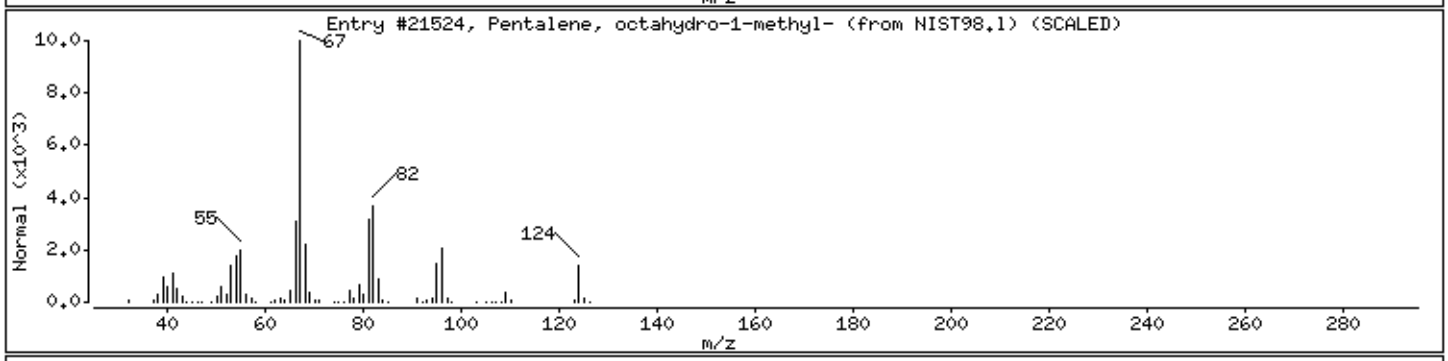
Sample Info: SBLKLD3143;SBLKLD314;2;3;BLANK;;;

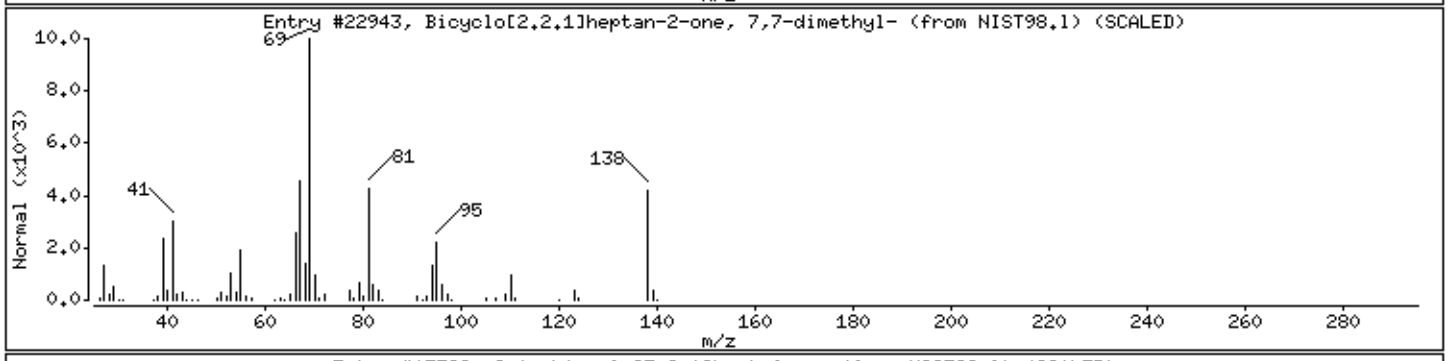
Volume Injected (uL): 1.0 Operator: mac00013

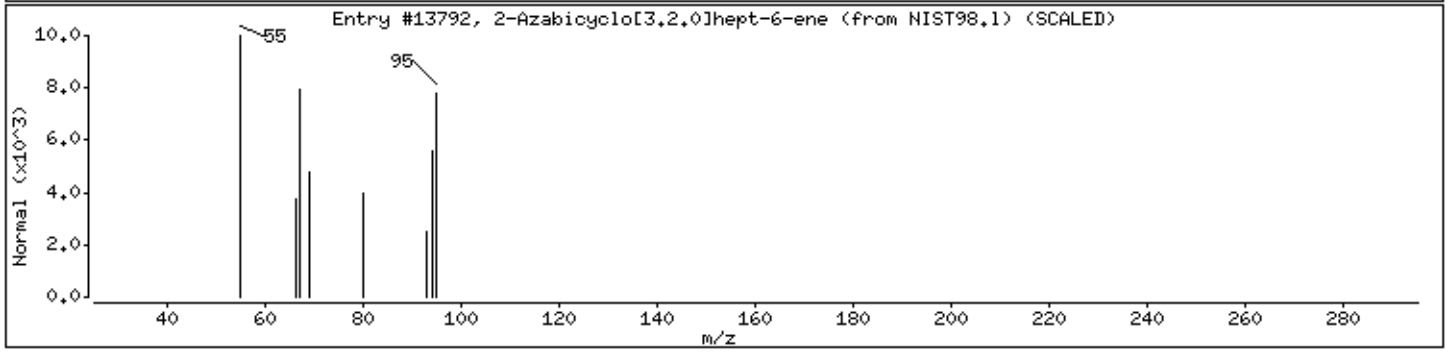
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Pentalene, octahydro-1-methyl-	32273-77-1	NIST98.1	21524	25	C9H16	124
Bicyclo[2.2.1]heptan-2-one, 7,7-dimethyl	514-15-8	NIST98.1	22943	22	C9H14O	138
2-Azabicyclo[3.2.0]hept-6-ene	1000143-71-8	NIST98.1	13792	16	C6H9N	95









Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0542.d

Date : 15-NOV-2013 01:06

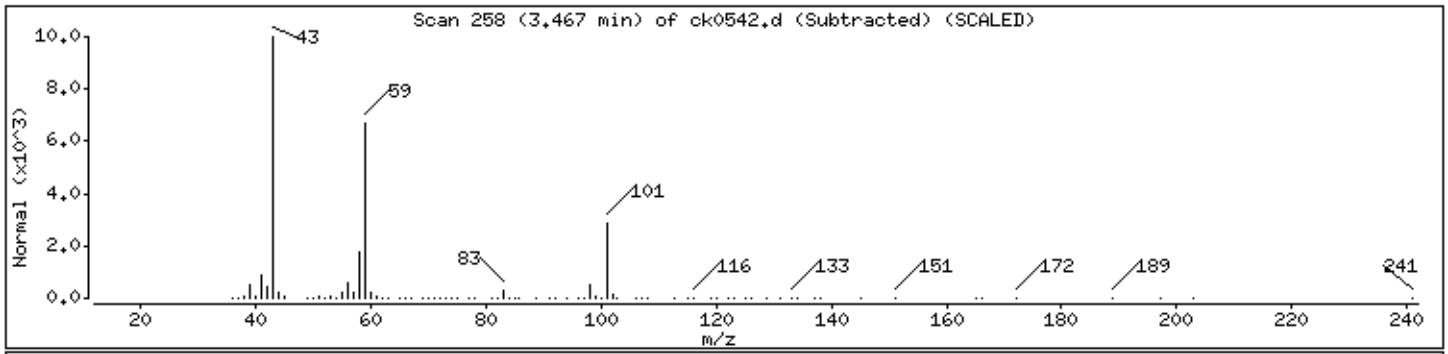
Client ID: SBLKLD3143 Instrument: HP10623.i

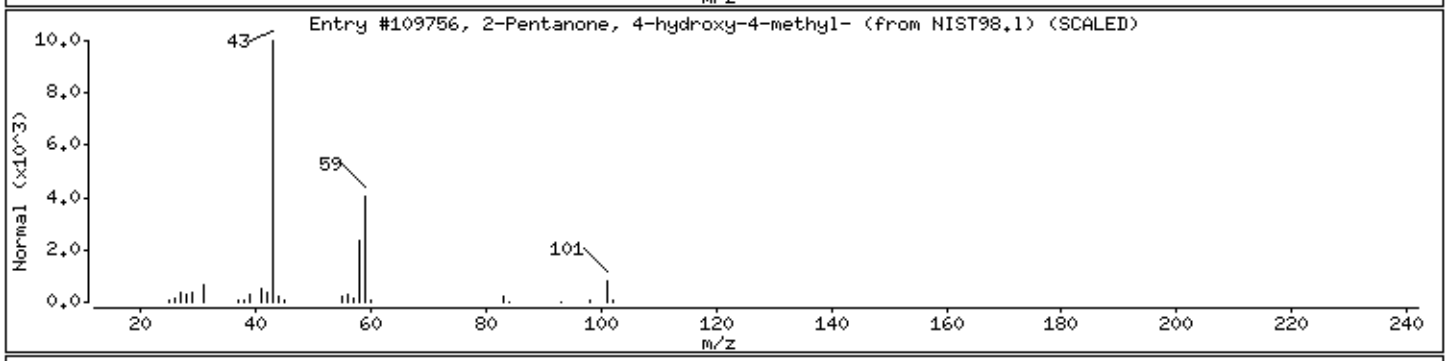
Sample Info: SBLKLD3143;SBLKLD314;2;3;BLANK;;;

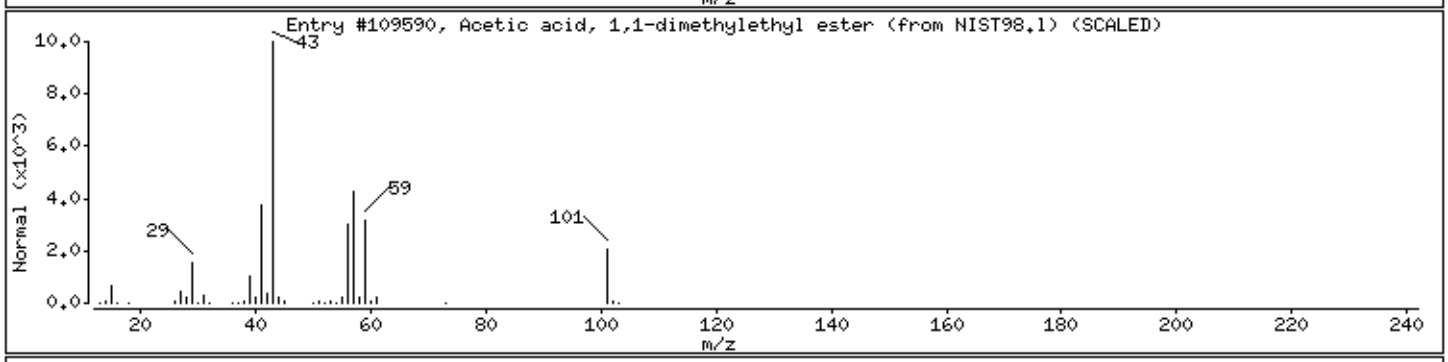
Volume Injected (uL): 1.0 Operator: mac00013

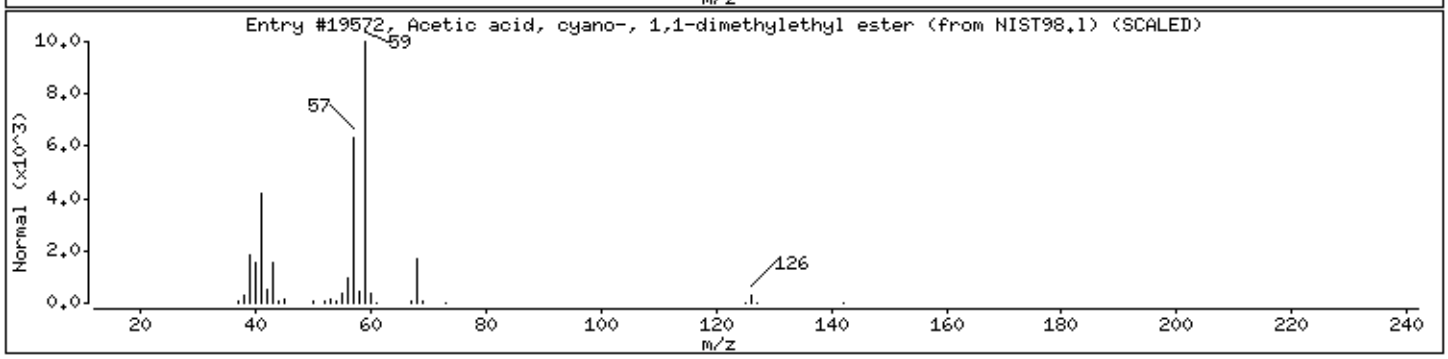
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Pentanone, 4-hydroxy-4-methyl-	123-42-2	NIST98.1	109756	56	C6H12O2	116
Acetic acid, 1,1-dimethylethyl ester	540-88-5	NIST98.1	109590	33	C6H12O2	116
Acetic acid, cyano-, 1,1-dimethylethyl e	1116-98-9	NIST98.1	19572	17	C7H11NO2	141









Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov15.b/ck0542.d

Date : 15-NOV-2013 01:06

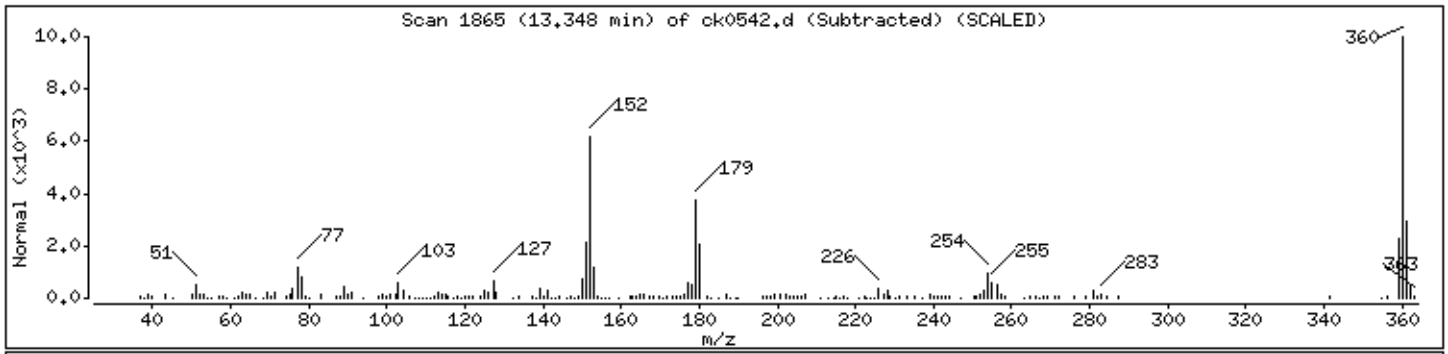
Client ID: SBLKLD3143 Instrument: HP10623.i

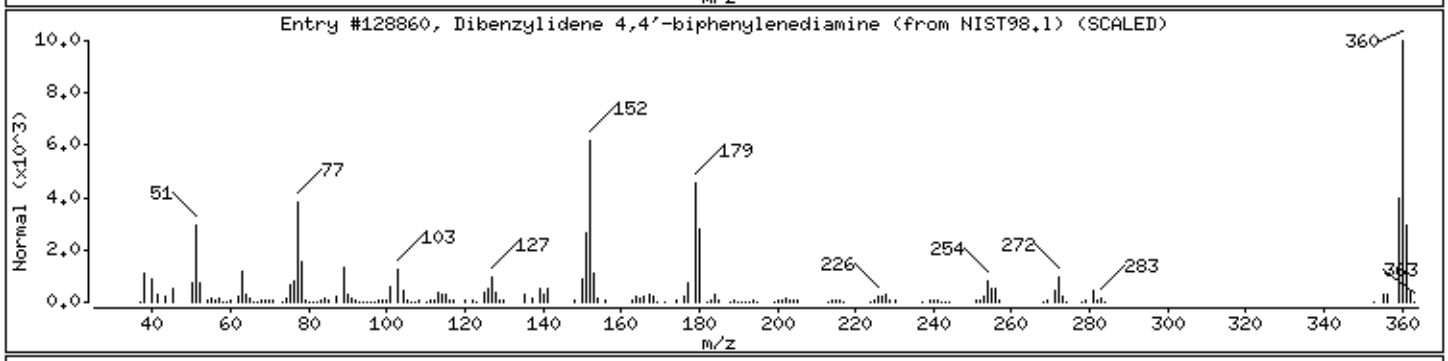
Sample Info: SBLKLD3143;SBLKLD314;2;3;BLANK;;;

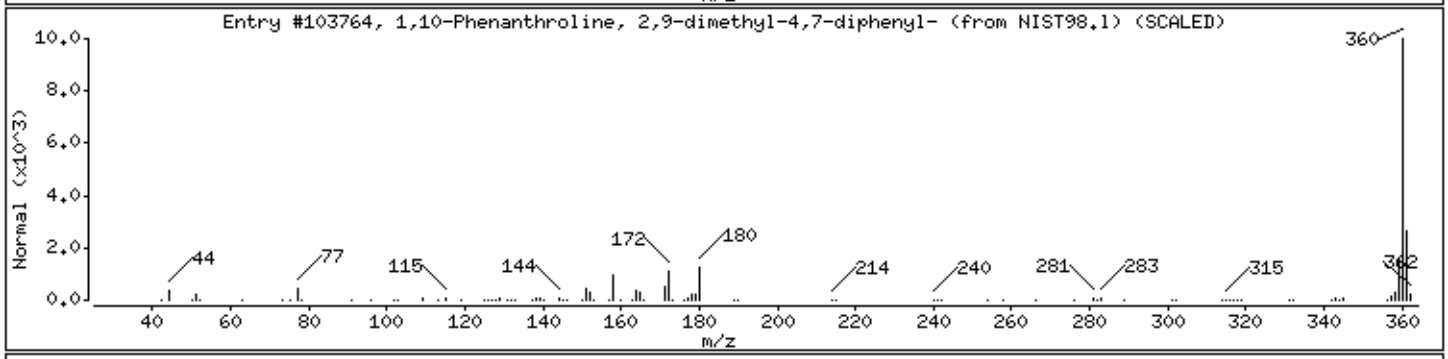
Volume Injected (uL): 1.0 Operator: mac00013

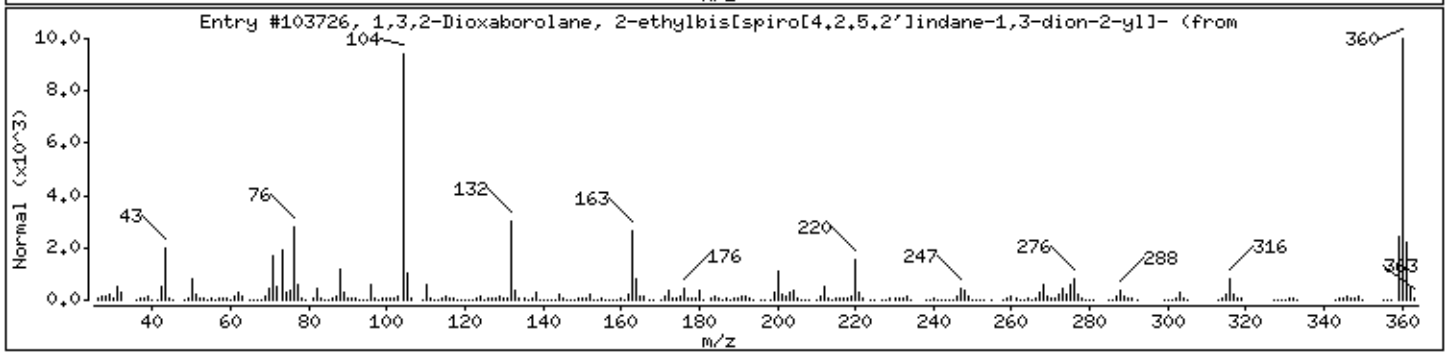
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Dibenzylidene 4,4'-biphenylenediamine	6311-48-4	NIST98.1	128860	93	C26H20N2	360
1,10-Phenanthroline, 2,9-dimethyl-4,7-di	4733-39-5	NIST98.1	103764	38	C26H20N2	360
1,3,2-Dioxaborolane, 2-ethylbis[spiro[4,	1000150-23-7	NIST98.1	103726	38	C20H13BO6	360









Digitally signed by Mark A. Clark on 11/19/2013 at 22:57.
Target 3.5 esignature user ID: mac00013

SBLKLC3163 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLC316

Data file: /chem/HP10623.i/13nov18.b/ck0622.d Injection date and time: **18-NOV-2013 06:14**
Data file Sample Info. Line: SBLKLC3163;SBLKLC316;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	108136 (8)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	457604 (-1)	20.00	
98) Acenaphthene-d10	7.992(0.006)	994	164	265192 (-8)	20.00	
135) Phenanthrene-d10	9.431(0.006)	1228	188	484724 (-9)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	573380 (-12)	20.00	
175) Perylene-d12	13.385(0.006)	1871	264	460346 (-21)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	877167	88.971	89%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(-0.001)	172	1673473	100.361	100%		69 - 120
156) Terphenyl-d14	(5)	11.017(-0.001)	244	2067773	100.879	101%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)			Not Detected					0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)			Not Detected					0.1
154) Pyrene	(5)			Not Detected					0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)			Not Detected					0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

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SBLKLC3163 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLC316

Data file: /chem/HP10623.i/13nov18.b/ck0622.d Injection date and time: **18-NOV-2013 06:14**
Data file Sample Info. Line: SBLKLC3163;SBLKLC316;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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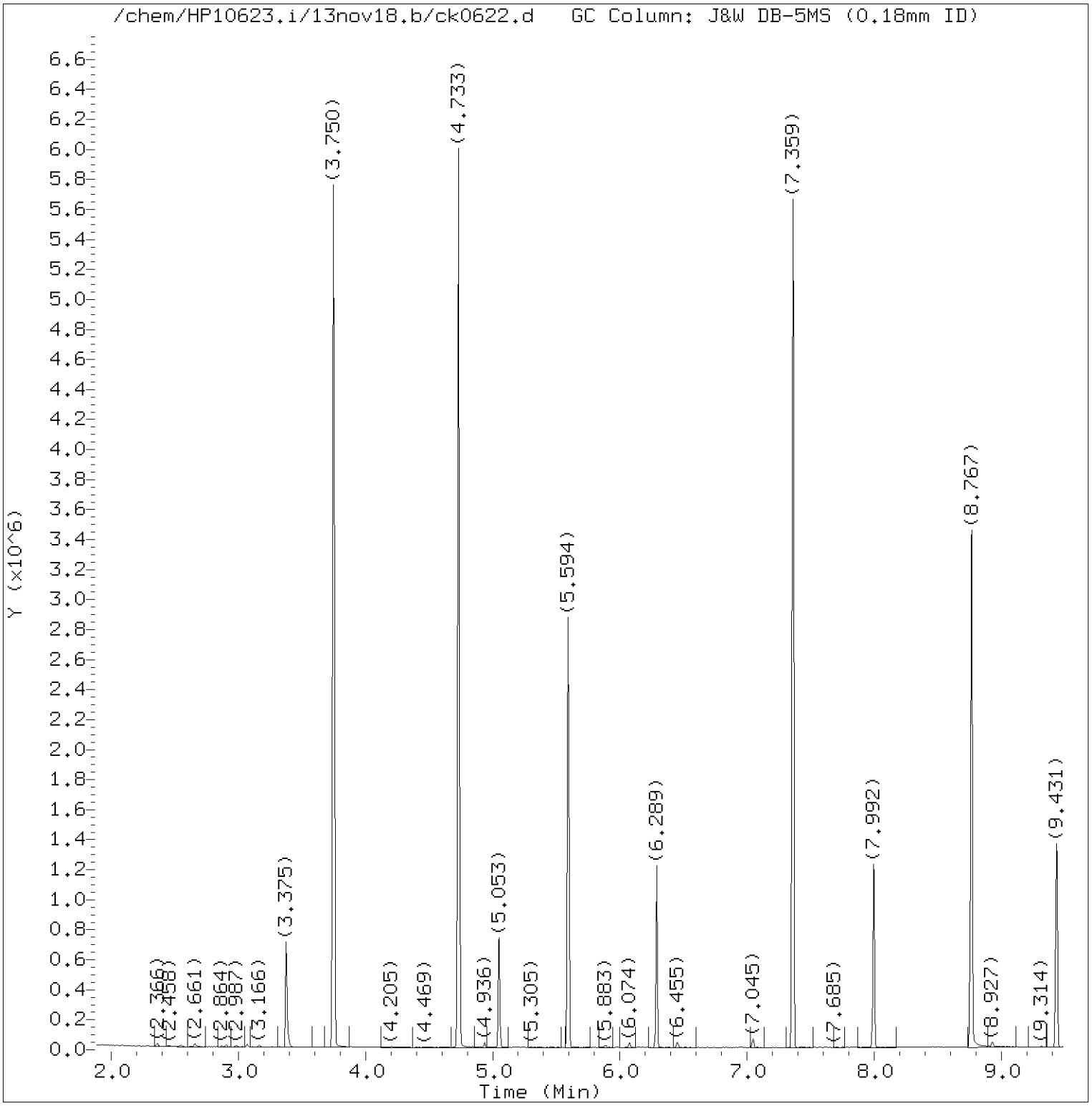
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:24. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:22. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

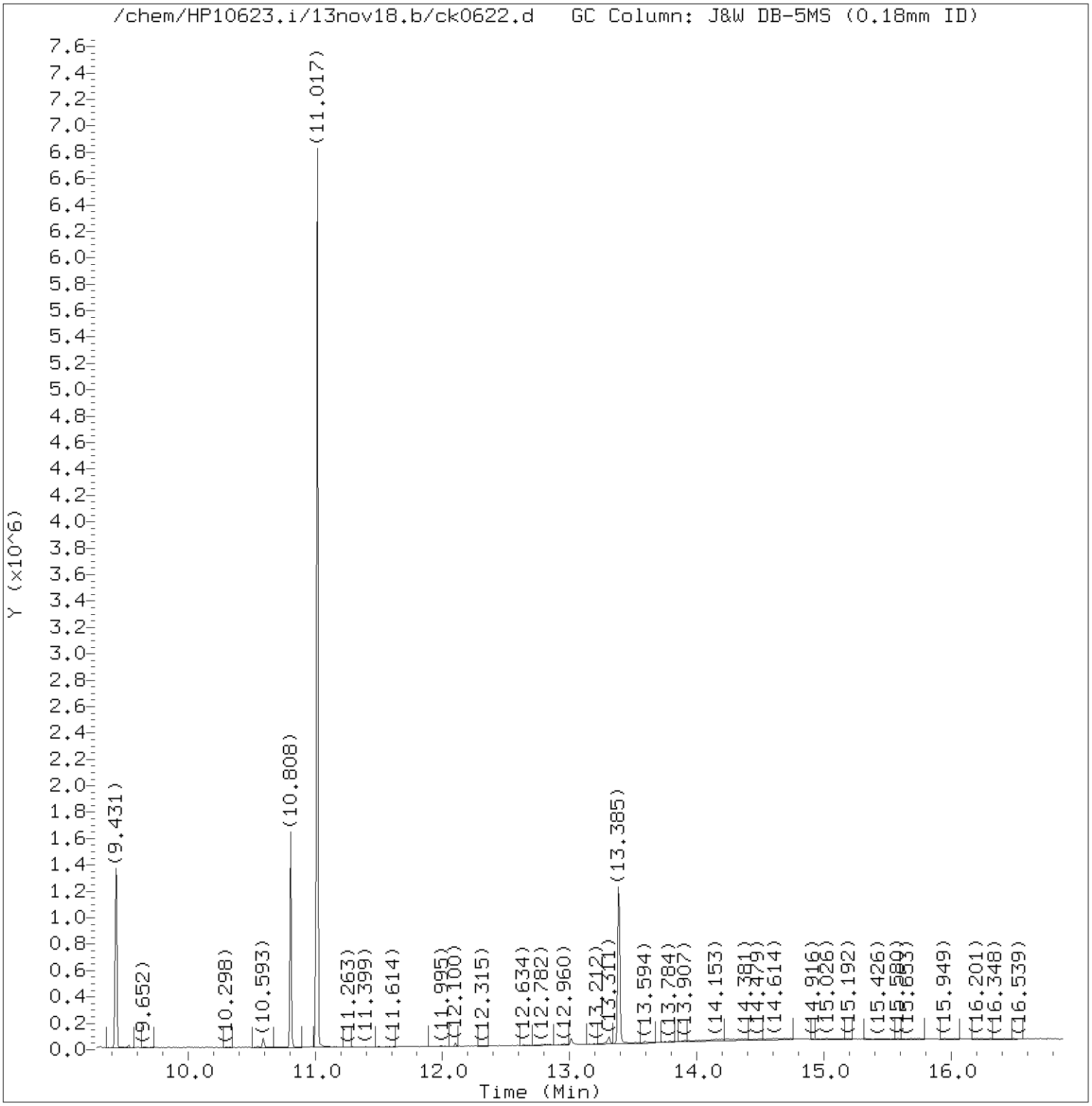
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	108136	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	877167	88.971
52)*Naphthalene-d8	(2)	6.289	136	457604	20.000
78)$2-Fluorobiphenyl	(3)	7.359	172	1673473	100.361
98)*Acenaphthene-d10	(3)	7.992	164	265192	20.000
135)*Phenanthrene-d10	(4)	9.431	188	484724	20.000
167)*Pyrene-d10	(5)	10.808	212	573380	20.000
156)$Terphenyl-d14	(5)	11.017	244	2067773	100.879
175)*Perylene-d12	(6)	13.385	264	460346	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346

SBLKWD3124 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKWD312

Data file: /chem/HP19760.i/13nov11.b/dk0322.d Injection date and time: **11-NOV-2013 05:02**
Data file Sample Info. Line: SBLKWD3124;SBLKWD312;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.947(0.006)	791	152	122707 (-14)	5.00	
52) Naphthalene-d8	7.906(0.006)	1127	136	478261 (-12)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	278262 (-15)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	492102 (-14)	5.00	
145) Pyrene-d10	14.562(0.000)	2269	212	613470 (-17)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	446101 (-20)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.995(0.000)	112	1339551	36.766	74%		10 - 107
13) Phenol-d6	(1)	5.423(0.001)	99	1344619	26.872	54%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.000)	82	964566	21.915	88%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1683048	24.221	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	452191	61.873	124%		22 - 150
149) Terphenyl-d14	(5)	14.883(0.000)	244	2218389	28.997	116%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
18) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
20) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
23) Benzyl alcohol	(1)			Not Detected					1
24) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
51) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:14. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov11.b/dk0322.d Injection date and time: **11-NOV-2013 05:02**
Data file Sample Info. Line: SBLKWD3124;SBLKWD312;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:14. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov11.b/dk0322.d Injection date and time: **11-NOV-2013 05:02**
Data file Sample Info. Line: SBLKWD3124;SBLKWD312;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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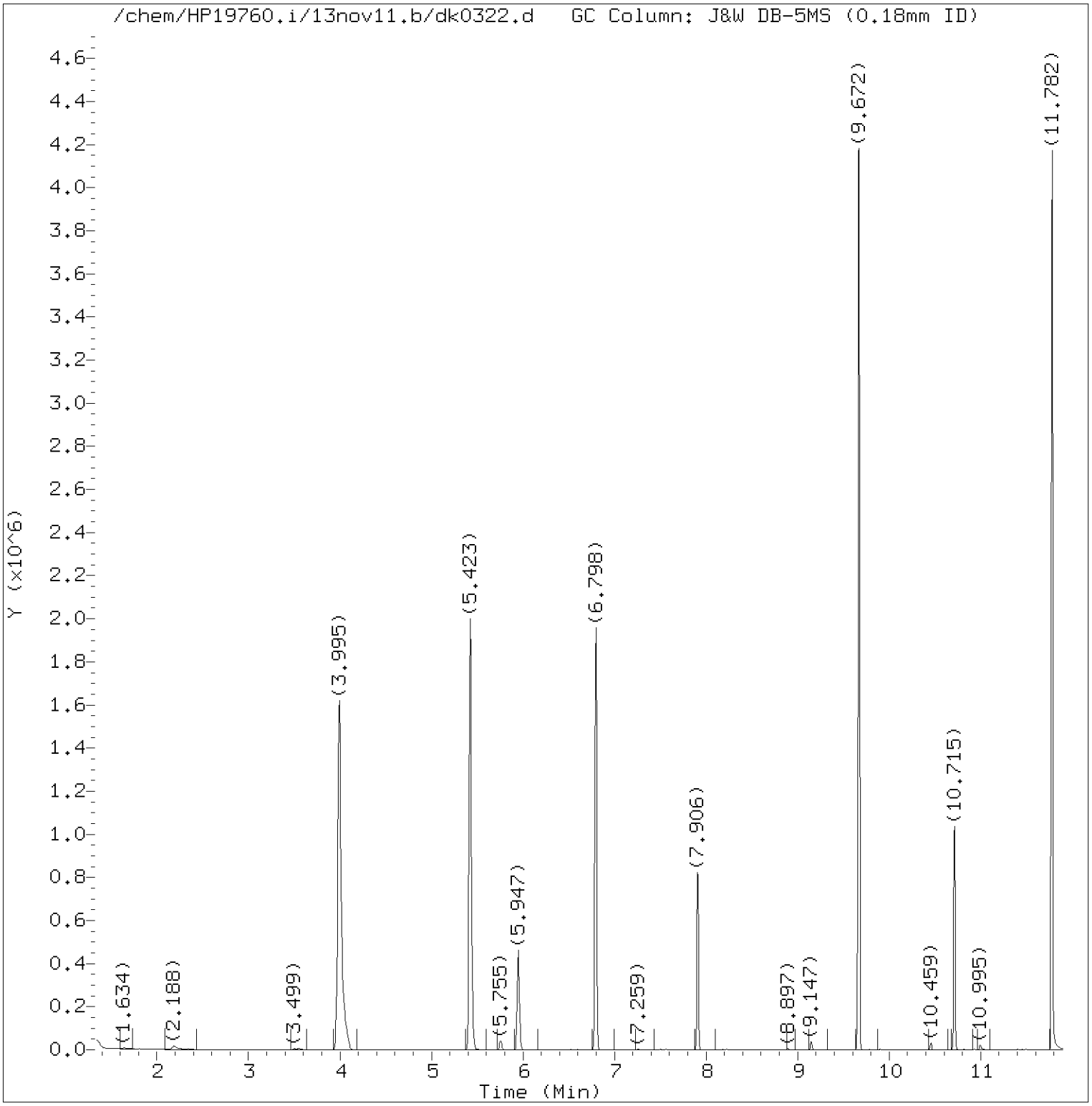
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 70

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:14. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

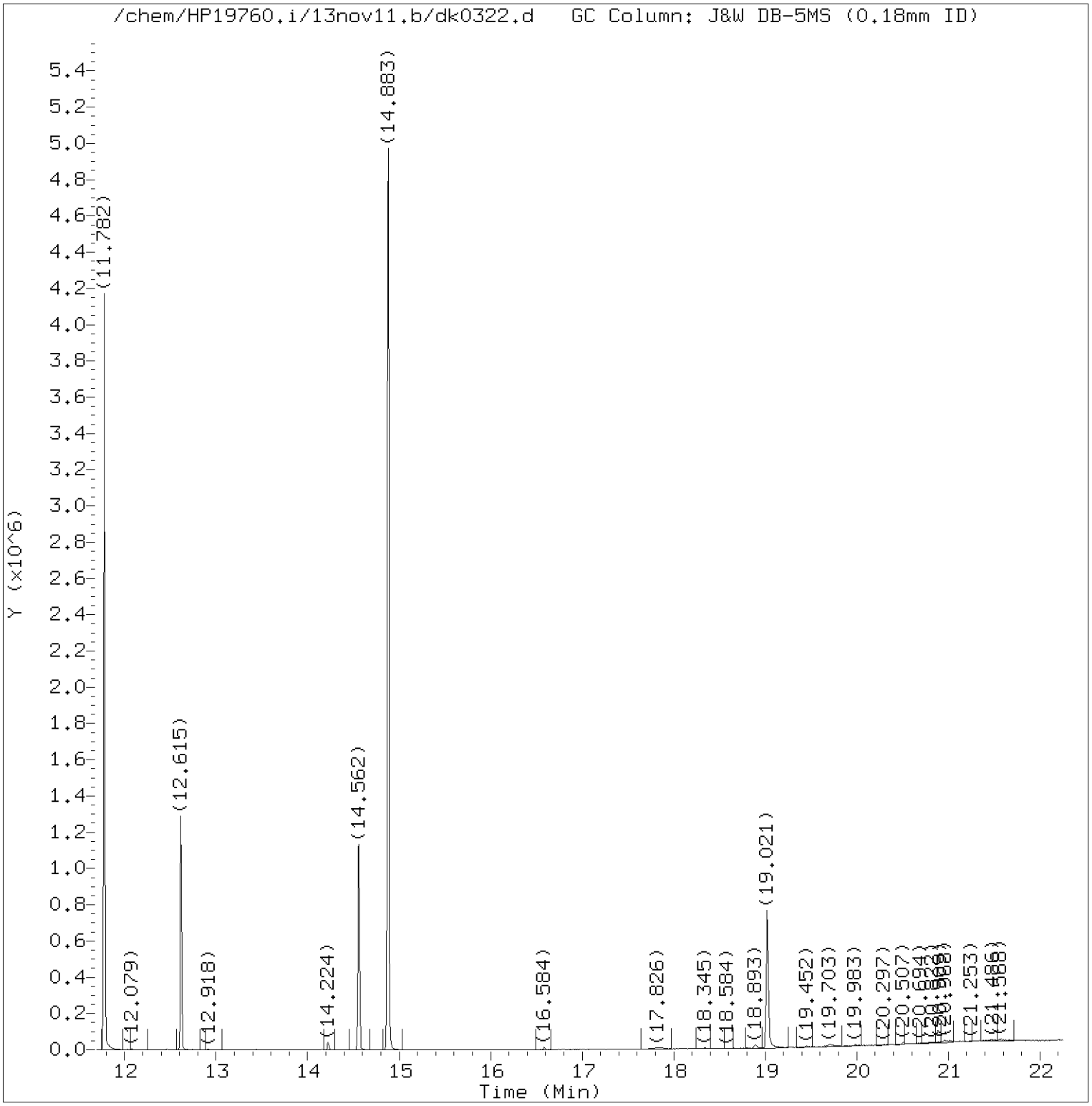
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:14.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:14.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

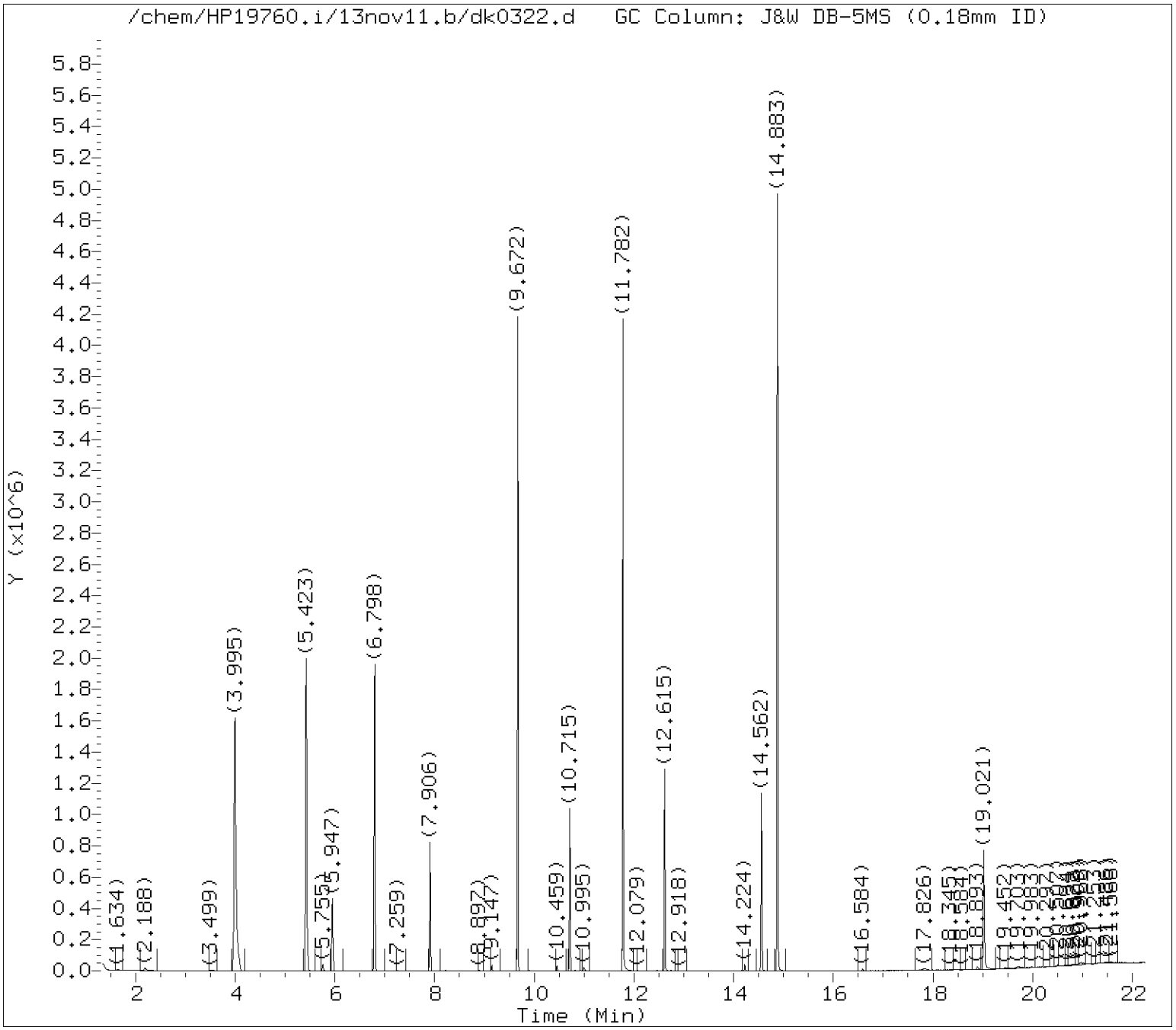
Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.995	112	1339551	36.766
13)$Phenol-d6	(1)	5.423	99	1344619	26.872
19)*1,4-Dichlorobenzene-d4	(1)	5.947	152	122707	5.000
36)$Nitrobenzene-d5	(2)	6.798	82	964566	21.915
52)*Naphthalene-d8	(2)	7.906	136	478261	5.000
72)$2-Fluorobiphenyl	(3)	9.672	172	1683048	24.221
92)*Acenaphthene-d10	(3)	10.715	164	278262	5.000
112)$2,4,6-Tribromophenol	(3)	11.782	330	452191	61.873
130)*Phenanthrene-d10	(4)	12.615	188	492102	5.000
145)*Pyrene-d10	(5)	14.562	212	613470	5.000
149)$Terphenyl-d14	(5)	14.883	244	2218389	28.997
172)*Perylene-d12	(6)	19.021	264	446101	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:14.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

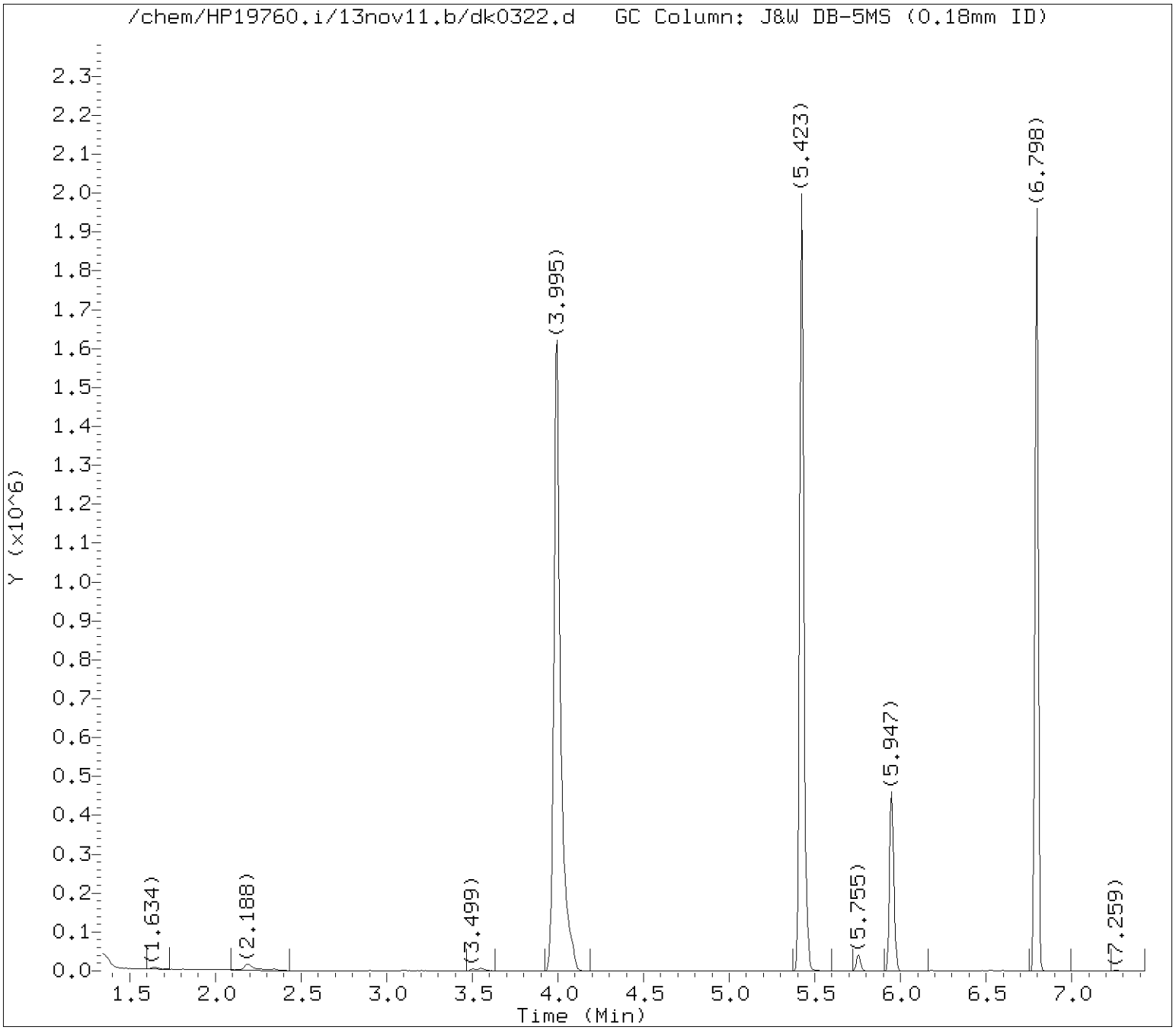
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

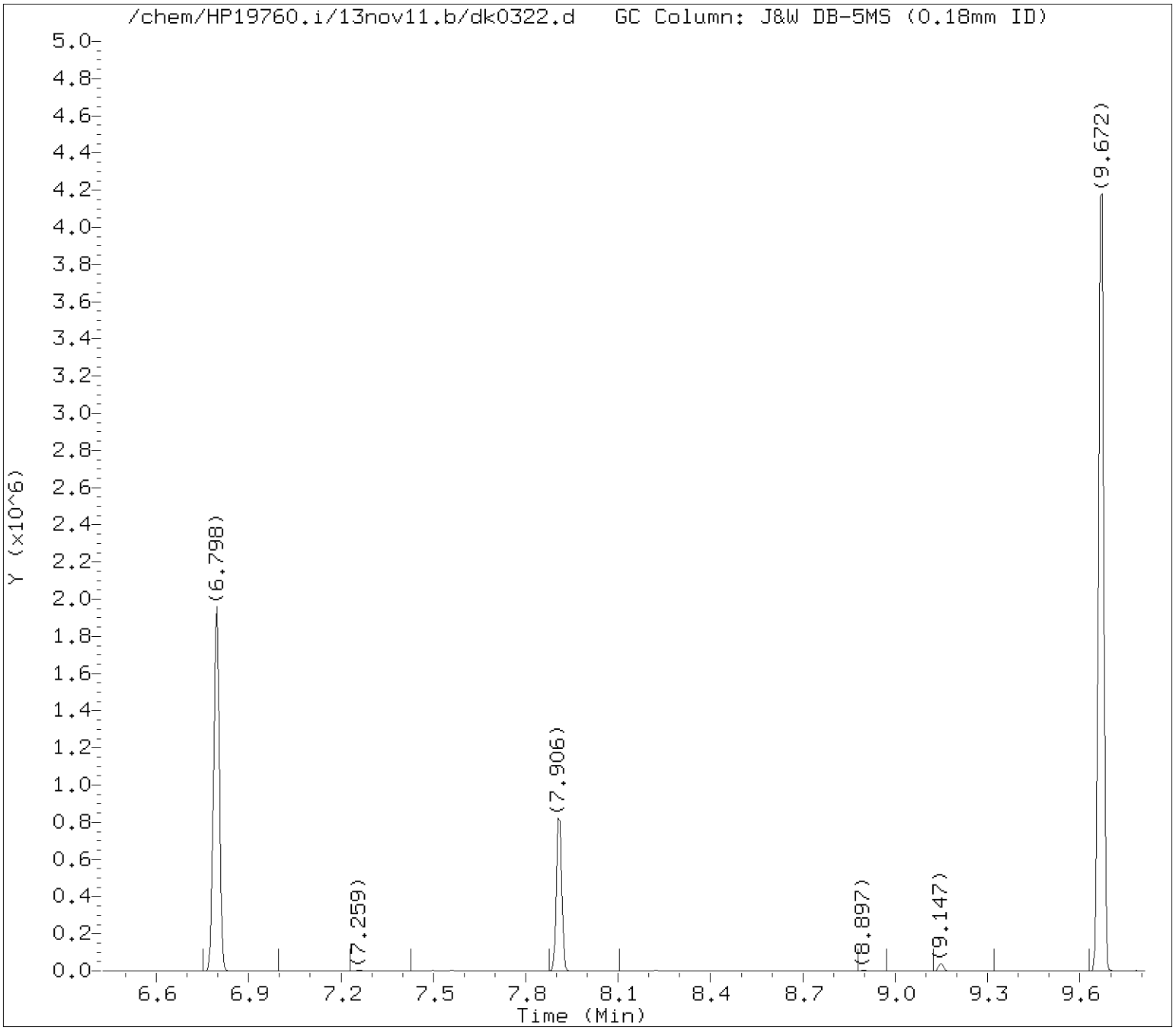
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.947 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.926

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

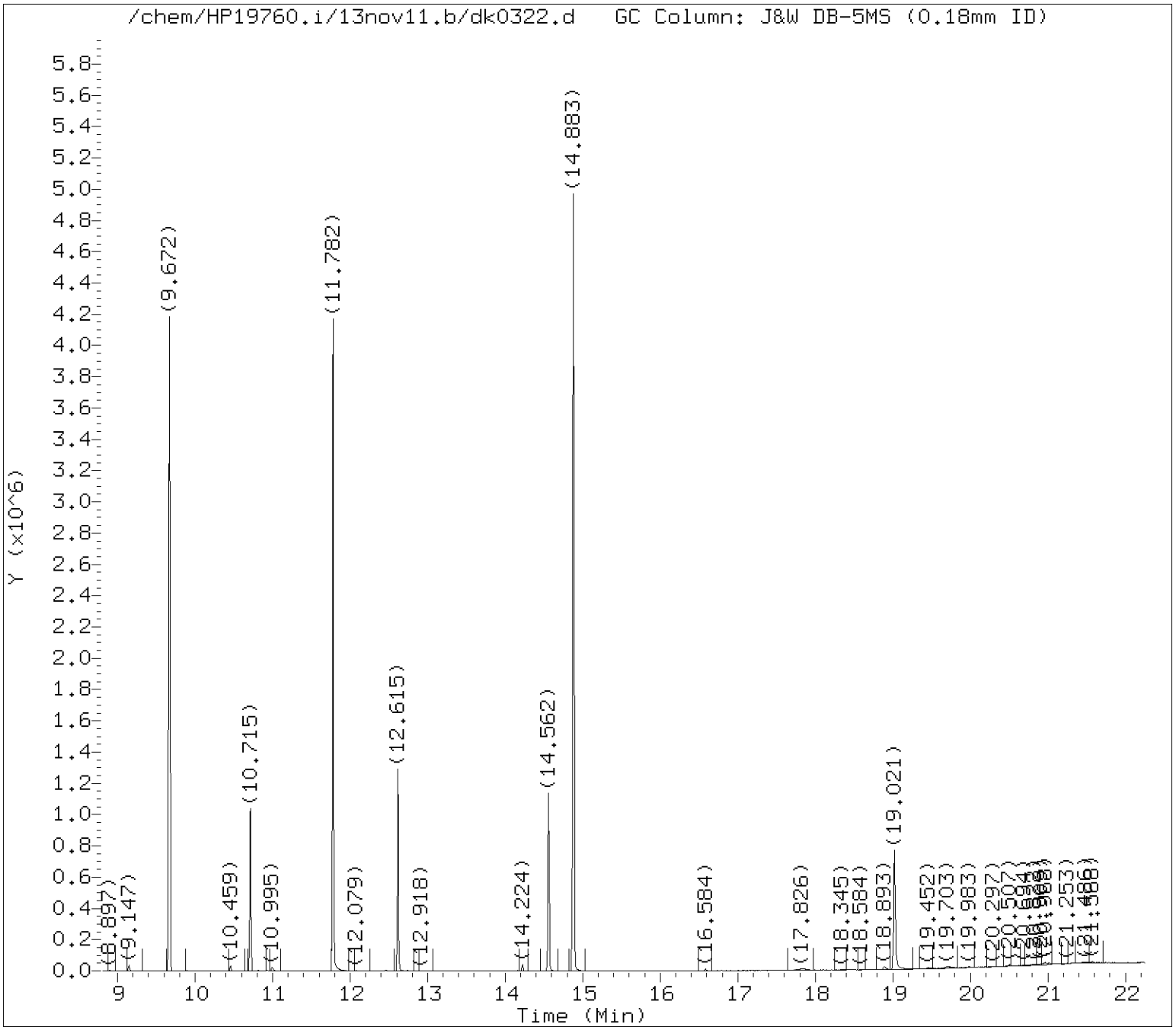
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: Naphthalene-d8 at 7.906 minutes
Chromatogram Start Time (min.): 6.926
Chromatogram End Time (min.): 9.310

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

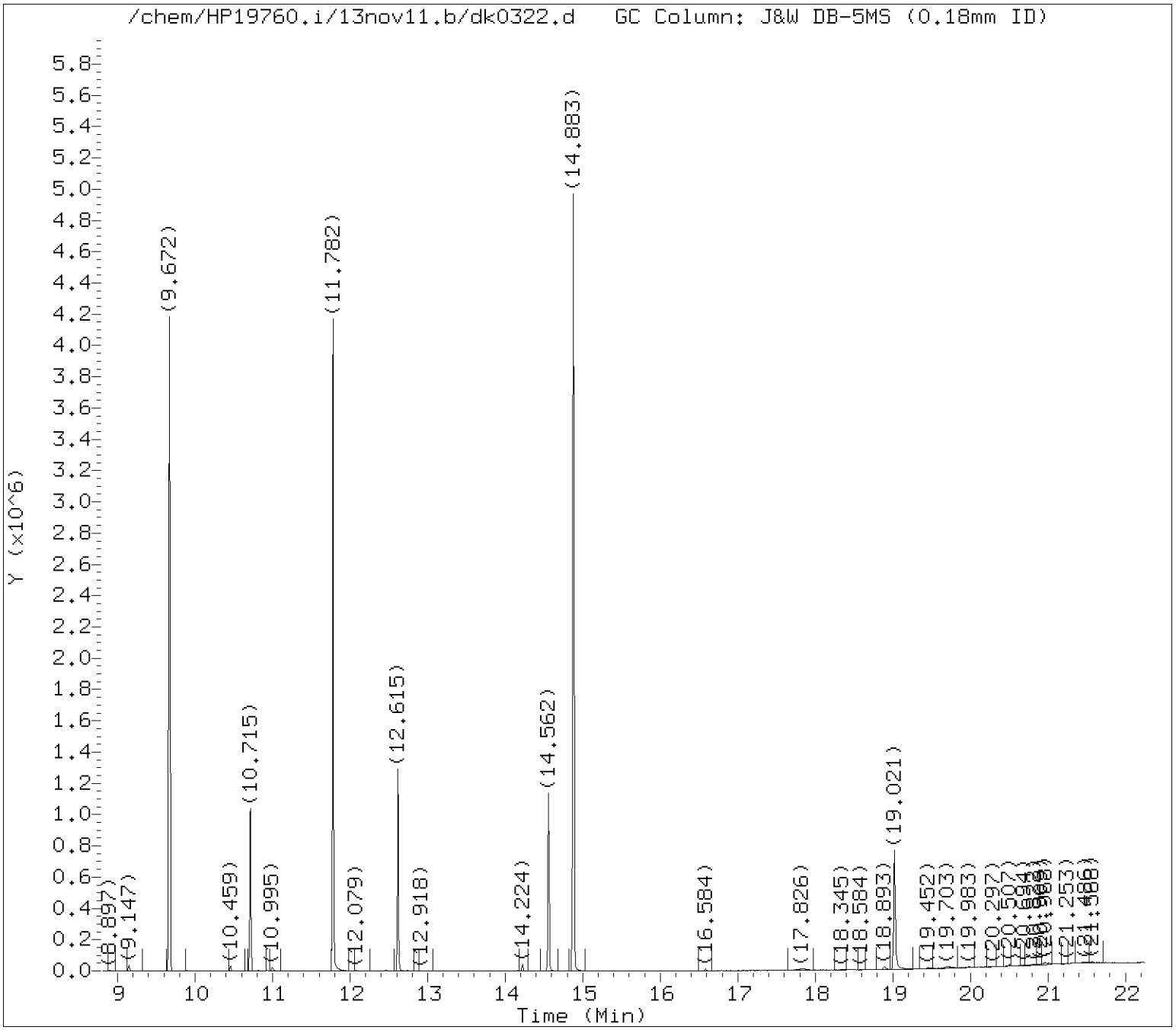
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: Acenaphthene-d10 at 10.715 minutes
Chromatogram Start Time (min.): 9.310
Chromatogram End Time (min.): 11.665

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

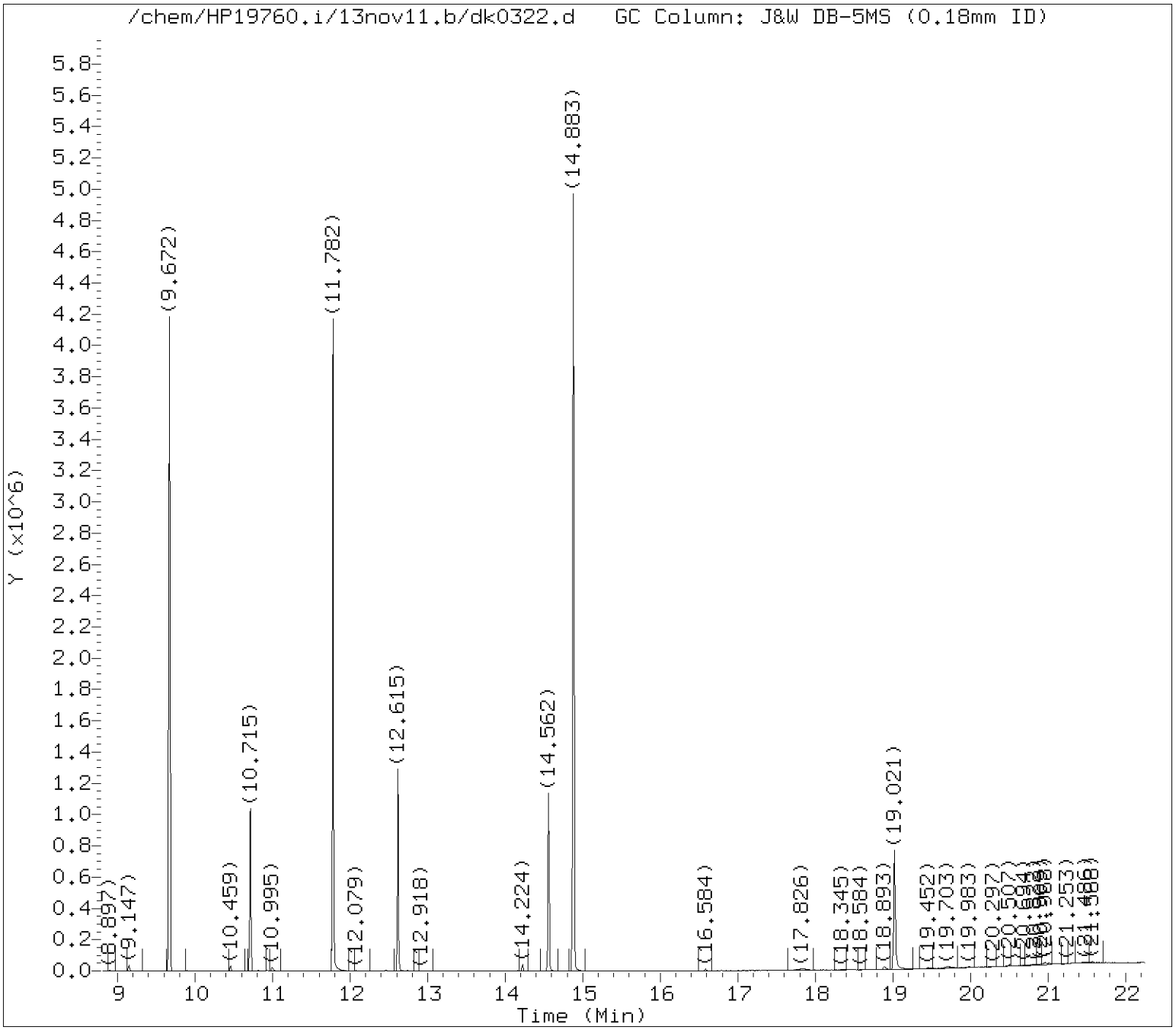
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: Phenanthrene-d10 at 12.615 minutes
Chromatogram Start Time (min.): 11.665
Chromatogram End Time (min.): 13.589

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

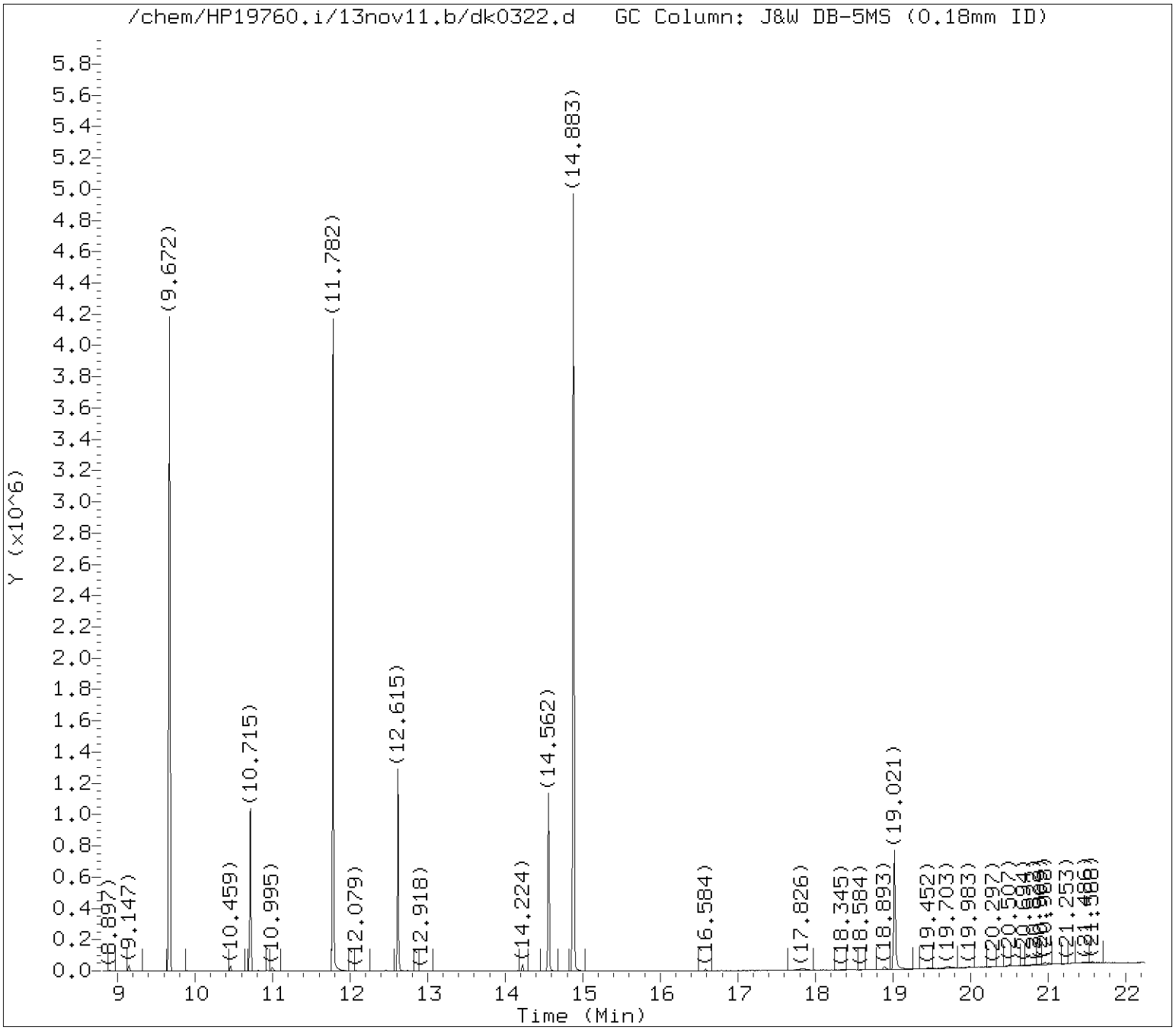
Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: Pyrene-d10 at 14.562 minutes
Chromatogram Start Time (min.): 13.589
Chromatogram End Time (min.): 16.791

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0322.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:09 jmg00346

Sample Name: SBLKWD3124 Lab Sample ID: SBLKWD312

Internal Standard referenced: Perylene-d12 at 19.021 minutes
Chromatogram Start Time (min.): 16.791
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:10.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov11.b/dk0322.d
Lab Smp Id: SBLKWD312 Client Smp ID: SBLKWD3124
Inj Date : 11-NOV-2013 05:02
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : SBLKWD3124;SBLKWD312;1;3;BLANK;;;
Misc Info : 13312WAD;newall1;;250;1000;0;dk0322;04678;
Comment : Max. number of TICs to report is 16, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov11.b/8270_LVI.m
Meth Date : 11-Nov-2013 05:30 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 312WAD.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

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Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0325.d
Injection date and time: **11-NOV-2013 06:22**
Data file Sample Info. Line: R2163MS;7265231;1;3;MS;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	125517 (-12)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	479874 (-12)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	290162 (-11)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	498431 (-13)	5.00	
145) Pyrene-d10	14.562(0.000)	2269	212	662891 (-11)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	480737 (-14)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.030(-0.005)	112	1182592	31.732	63%		10 - 107
13) Phenol-d6	(1)	5.440(-0.001)	99	1227208	23.977	48%		10 - 83
36) Nitrobenzene-d5	(2)	6.804(0.000)	82	1052643	23.836	95%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1860674	25.679	103%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	405685	53.233	106%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2336047	28.258	113%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.300(-0.000)	77	311743	8.707	35.68			0.3
14) Phenol	(1)	5.458(-0.000)	94	358271	6.046	24.78			0.1
16) bis(2-Chloroethyl)ether	(1)	5.586(0.000)	93	519226	11.106	45.52			0.1
17) 2-Chlorophenol	(1)	5.632(-0.000)	128	392159	10.700	43.85			0.1
26) 2-Methylphenol	(1)	6.373(-0.000)	108	333310	9.062	37.14			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.414(-0.000)	45	544536	9.384	38.46			0.1
30) Acetophenone	(1)	6.583(-0.000)	105	654041	11.372	46.61			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.606(0.000)	70	360826	10.900	44.67			0.1
33) 4-Methylphenol	(1)	6.618(0.000)	108	333319	8.111	33.24			0.1
35) Hexachloroethane	(1)	6.717(0.000)	117	182956	10.855	44.49			0.3
37) Nitrobenzene	(2)	6.827(0.000)	77	541458	11.551	47.34			0.1
40) Isophorone	(2)	7.218(0.000)	82	938319	11.745	48.14			0.1
42) 2-Nitrophenol	(2)	7.323(0.000)	139	221017	13.742	56.32			0.1
45) 2,4-Dimethylphenol	(2)	7.439(0.000)	107	366529	9.378	38.43			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.591(0.000)	93	574354	11.016	45.15			0.1
49) 2,4-Dichlorophenol	(2)	7.708(-0.000)	162	318232	11.544	47.31			0.1
53) Naphthalene	(2)	7.946(0.000)	128	1260653	12.322	50.50			0.03
55) 4-Chloroaniline	(2)	8.057(0.000)	127	398510	9.400	38.53			0.1
58) Hexachlorobutadiene	(2)	8.174(0.000)	225	237975	13.256	54.33			0.1
61) Caprolactam	(2)	8.588(0.002)	113	56716	4.611	18.90			1
63) 4-Chloro-3-methylphenol	(2)	8.867(0.000)	107	348720	10.534	43.17			0.1
65) 2-Methylnaphthalene	(2)	9.054(0.000)	142	807775	11.847	48.55			0.03
67) Hexachlorocyclopentadiene	(3)	9.322(0.000)	237	399246	25.155	103.10			1
70) 2,4,6-Trichlorophenol	(3)	9.520(0.000)	196	242030	11.407	46.75			0.1
71) 2,4,5-Trichlorophenol	(3)	9.573(0.000)	196	277340	12.650	51.84			0.1
75) 1,1'-Biphenyl	(3)	9.818(0.000)	154	1002189	11.894	48.75			0.1
76) 2-Chloronaphthalene	(3)	9.829(-0.000)	162	770683	11.923	48.87			0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0325.d Injection date and time: **11-NOV-2013 06:22**
Data file Sample Info. Line: R2163MS;7265231;1;3;MS;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 244 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)	10.010(0.000)	138	272284	13.525	55.43			0.1
86) Dimethylphthalate	(3)	10.354(-0.000)	163	832812	11.393	46.69			0.5
88) 2,6-Dinitrotoluene	(3)	10.430(-0.000)	165	220506	13.613	55.79			0.1
90) Acenaphthylene	(3)	10.482(0.000)	152	1291079	13.159	53.93			0.03
91) 3-Nitroaniline	(3)	10.674(0.000)	138	201707	10.848	44.46			0.1
93) Acenaphthene	(3)	10.768(-0.000)	153	802070	11.883	48.70			0.03
94) 2,4-Dinitrophenol	(3)	10.843(-0.000)	184	211070	22.391	91.77			3
96) 4-Nitrophenol	(3)	10.977(0.000)	109	86150	7.264	29.77			3
97) Dibenzofuran	(3)	11.030(-0.000)	168	1181409	12.308	50.44			0.1
98) 2,4-Dinitrotoluene	(3)	11.042(0.000)	165	281607	13.566	55.60			0.3
102) Diethylphthalate	(3)	11.409(0.000)	149	845552	11.741	48.12			0.5
103) Fluorene	(3)	11.484(0.000)	166	958808	12.410	50.86			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.519(0.000)	204	489816	12.783	52.39			0.1
107) 4-Nitroaniline	(3)	11.531(-0.000)	138	199478	10.430	42.74			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.572(0.000)	198	150796	11.983	49.11			1
109) N-Nitrosodiphenylamine	(4)	11.665(-0.000)	169	780899	12.586	51.58			0.1
120) 4-Bromophenyl-phenylether	(4)	12.096(-0.000)	248	259114	13.175	53.99			0.1
122) Hexachlorobenzene	(4)	12.143(-0.000)	284	266972	13.729	56.27			0.03
124) Atrazine	(4)	12.330(-0.000)	200	276914	13.708	56.18			0.5
125) Pentachlorophenol	(4)	12.394(0.000)	266	139672	9.641	39.51			0.3
131) Phenanthrene	(4)	12.644(-0.000)	178	1347442	12.121	49.68			0.03
134) Anthracene	(4)	12.708(-0.000)	178	1384374	12.490	51.19			0.03
135) Carbazole	(4)	12.930(-0.000)	167	1359288	12.672	51.93			0.1
137) Di-n-butylphthalate	(4)	13.437(-0.000)	149	1566378	12.329	50.53			0.5
142) Fluoranthene	(4)	14.253(-0.000)	202	1664148	13.308	54.54			0.03
146) Pyrene	(5)	14.591(-0.000)	202	1715475	12.189	49.96			0.03
153) Butylbenzylphthalate	(5)	15.728(-0.000)	149	697321	11.642	47.71			0.5
158) Benzo(a)anthracene	(5)	16.573(-0.000)	228	1545106	12.939	53.03			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.573(0.000)	252	339068	7.861	32.22			0.5
161) Chrysene	(5)	16.631(0.000)	228	1496298	12.741	52.22			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.794(0.000)	149	927029	11.766	48.22			0.5
166) Di-n-octylphthalate	(6)	17.948(-0.000)	149	1599065	11.344	46.49			0.5
168) Benzo(b)fluoranthene	(6)	18.415(0.000)	252	1416259	12.507	51.26			0.03
170) Benzo(k)fluoranthene	(6)	18.461(0.000)	252	1493903	13.080	53.61			0.03
171) Benzo(a)pyrene	(6)	18.933(0.000)	252	1291914	12.429	50.94			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.618(-0.000)	276	1185746M	13.005	53.30			0.03
177) Dibenz(a,h)anthracene	(6)	20.659(-0.000)	278	1024064	13.263	54.36			0.03
178) Benzo(g,h,i)perylene	(6)	20.979(-0.000)	276	915369	11.910	48.81			0.03

M = Compound was manually integrated.

Total number of targets = 65

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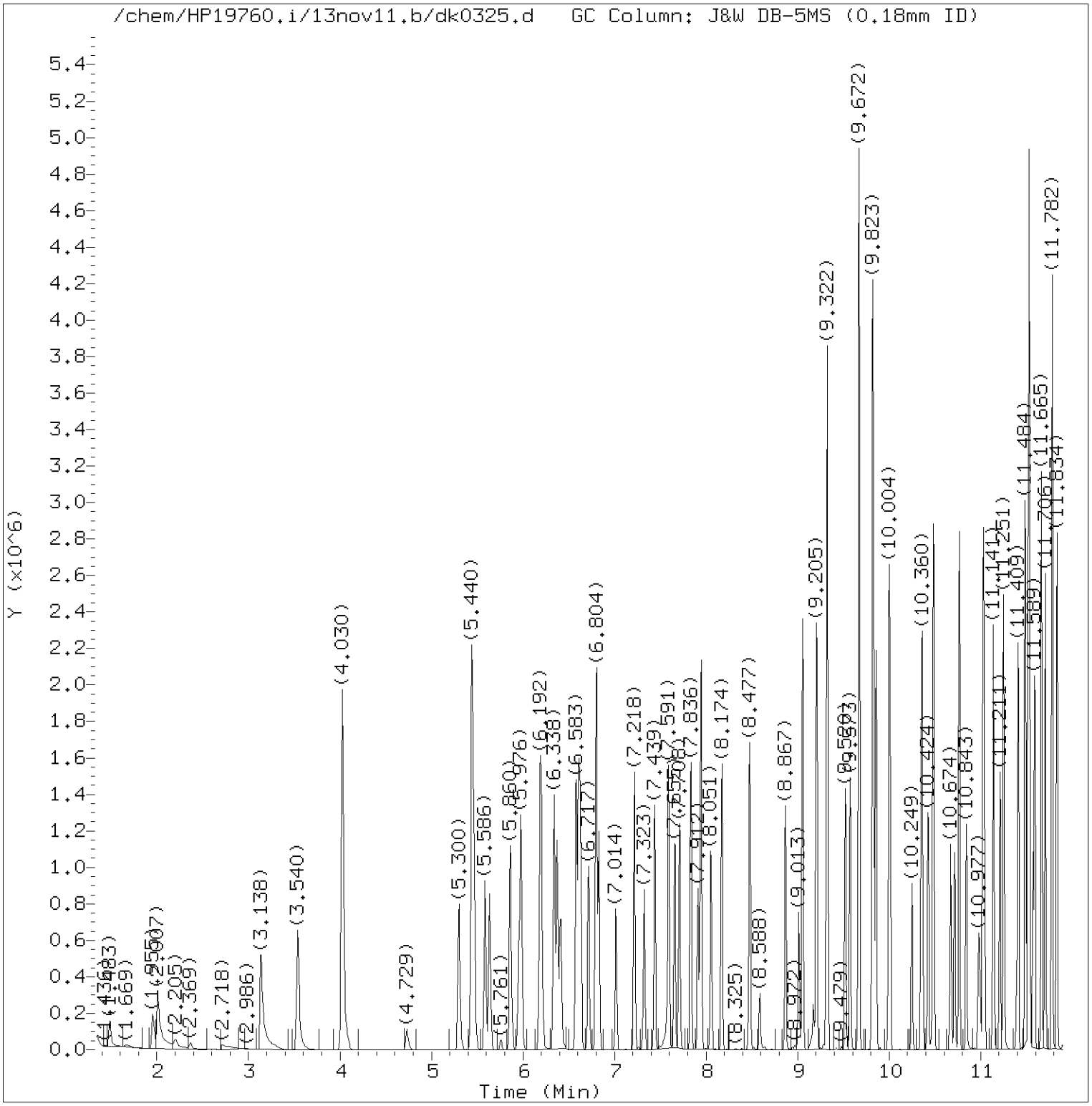
Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

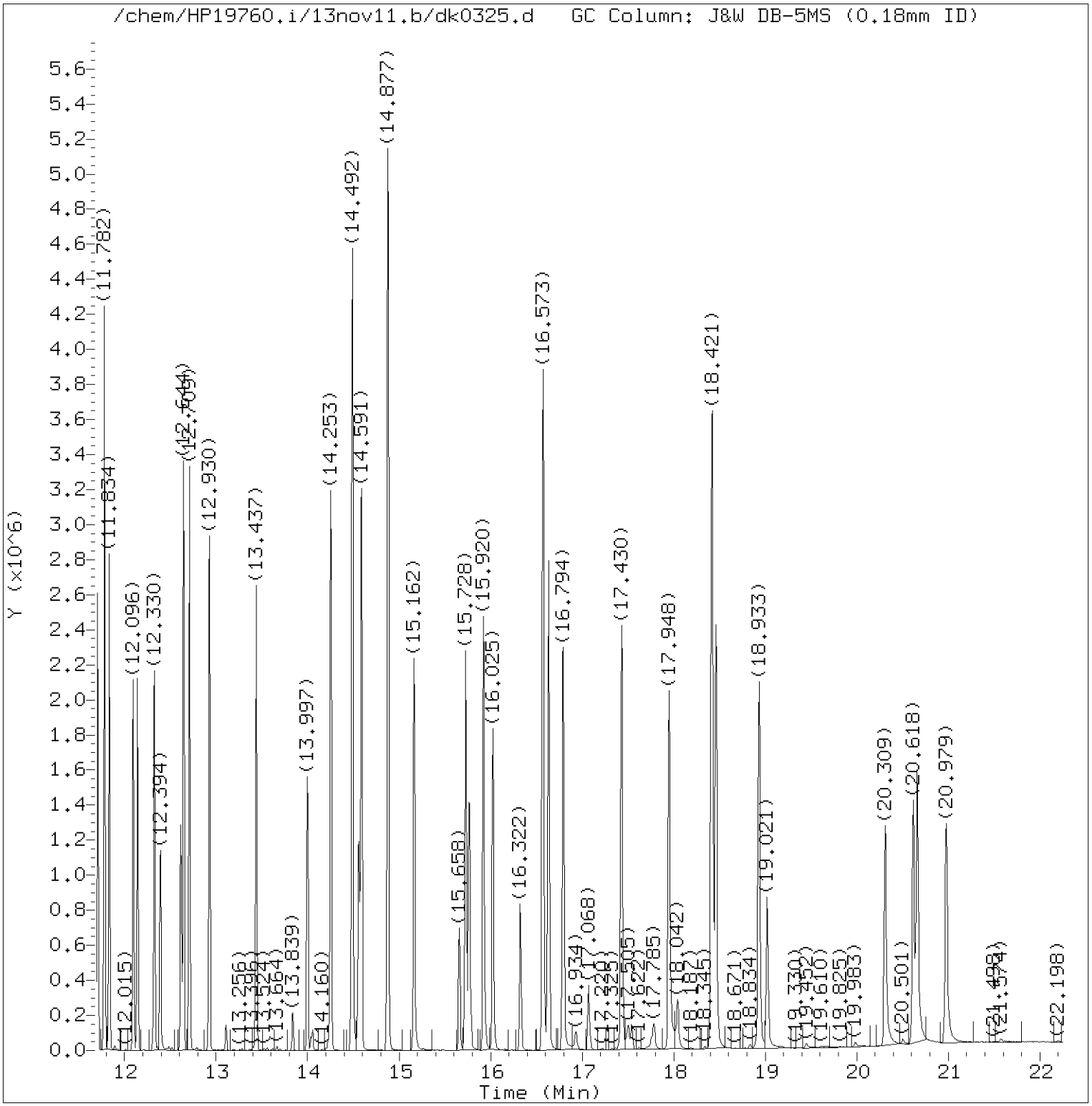
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163MS Lab Sample ID: 7265231

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:40.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163MS Lab Sample ID: 7265231

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:40.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163MS Lab Sample ID: 7265231

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.030	112	1182592	31.732
11) Benzaldehyde	(1)	5.300	77	311743	8.707
13)$Phenol-d6	(1)	5.440	99	1227208	23.977
14) Phenol	(1)	5.458	94	358271	6.046
16) bis(2-Chloroethyl)ether	(1)	5.586	93	519226	11.106
17) 2-Chlorophenol	(1)	5.633	128	392159	10.700
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	125517	5.000
26) 2-Methylphenol	(1)	6.373	108	333310	9.062
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.414	45	544536	9.384
30) Acetophenone	(1)	6.583	105	654041	11.372
31) N-Nitroso-di-n-propylamine	(1)	6.606	70	360826	10.900
33) 4-Methylphenol	(1)	6.618	108	333319	8.111
35) Hexachloroethane	(1)	6.717	117	182956	10.855
36)$Nitrobenzene-d5	(2)	6.804	82	1052643	23.836
37) Nitrobenzene	(2)	6.827	77	541458	11.551
40) Isophorone	(2)	7.218	82	938319	11.745
42) 2-Nitrophenol	(2)	7.323	139	221017	13.742
45) 2,4-Dimethylphenol	(2)	7.439	107	366529	9.378
48) bis(2-Chloroethoxy)methane	(2)	7.591	93	574354	11.016
49) 2,4-Dichlorophenol	(2)	7.708	162	318232	11.544
52)*Naphthalene-d8	(2)	7.912	136	479874	5.000
53) Naphthalene	(2)	7.947	128	1260653	12.322
55) 4-Chloroaniline	(2)	8.057	127	398510	9.400
58) Hexachlorobutadiene	(2)	8.174	225	237975	13.256
61) Caprolactam	(2)	8.588	113	56716	4.611
63) 4-Chloro-3-methylphenol	(2)	8.867	107	348720	10.534
65) 2-Methylnaphthalene	(2)	9.054	142	807775	11.847
67) Hexachlorocyclopentadiene	(3)	9.322	237	399246	25.155
70) 2,4,6-Trichlorophenol	(3)	9.520	196	242030	11.407
71) 2,4,5-Trichlorophenol	(3)	9.573	196	277340	12.650
72)$2-Fluorobiphenyl	(3)	9.672	172	1860674	25.679
75) 1,1'-Biphenyl	(3)	9.818	154	1002189	11.894
76) 2-Chloronaphthalene	(3)	9.829	162	770683	11.923
83) 2-Nitroaniline	(3)	10.010	138	272284	13.525
86) Dimethylphthalate	(3)	10.354	163	832812	11.393
88) 2,6-Dinitrotoluene	(3)	10.430	165	220506	13.613
90) Acenaphthylene	(3)	10.482	152	1291079	13.159
91) 3-Nitroaniline	(3)	10.674	138	201707	10.848
92)*Acenaphthene-d10	(3)	10.715	164	290162	5.000
93) Acenaphthene	(3)	10.768	153	802070	11.883

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/11/2013 at 09:40.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

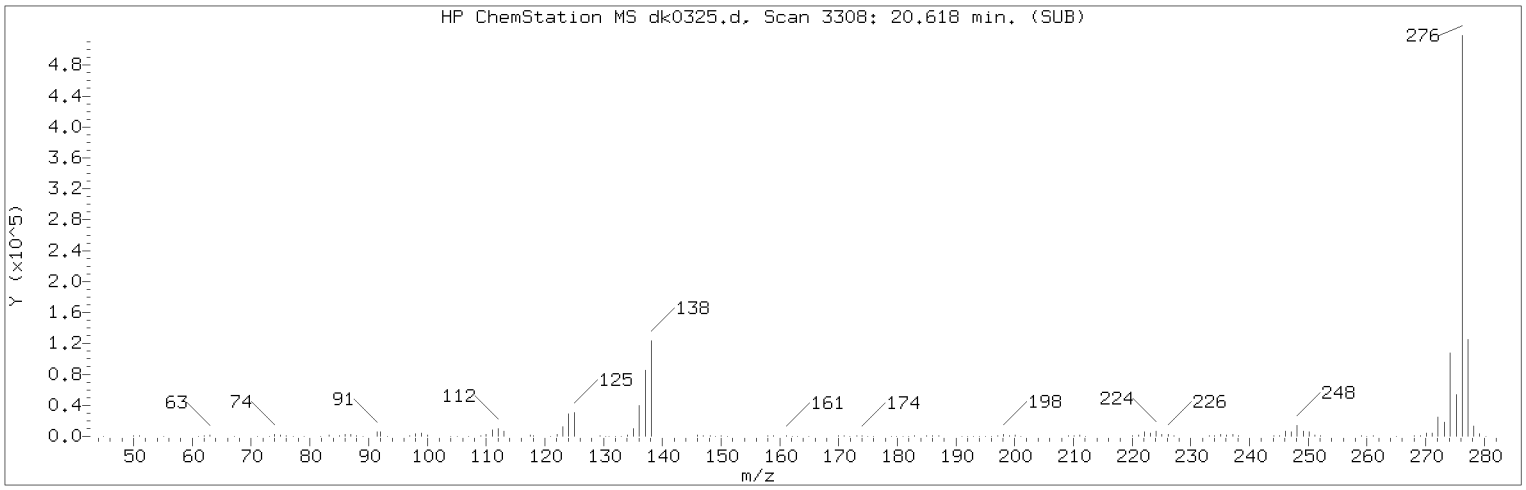
Sample Name: R2163MS Lab Sample ID: 7265231

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
94) 2,4-Dinitrophenol	(3)	10.843	184	211070	22.391
96) 4-Nitrophenol	(3)	10.977	109	86150	7.264
97) Dibenzofuran	(3)	11.030	168	1181409	12.308
98) 2,4-Dinitrotoluene	(3)	11.041	165	281607	13.566
102) Diethylphthalate	(3)	11.409	149	845552	11.741
103) Fluorene	(3)	11.484	166	958808	12.410
105) 4-Chlorophenyl-phenylether	(3)	11.519	204	489816	12.783
107) 4-Nitroaniline	(3)	11.531	138	199478	10.430
108) 4,6-Dinitro-2-methylphenol	(4)	11.572	198	150796	11.983
109) N-Nitrosodiphenylamine	(4)	11.665	169	780899	12.586
112)$2,4,6-Tribromophenol	(3)	11.782	330	405685	53.233
120) 4-Bromophenyl-phenylether	(4)	12.096	248	259114	13.175
122) Hexachlorobenzene	(4)	12.143	284	266972	13.729
124) Atrazine	(4)	12.330	200	276914	13.708
125) Pentachlorophenol	(4)	12.394	266	139672	9.641
130)*Phenanthrene-d10	(4)	12.615	188	498431	5.000
131) Phenanthrene	(4)	12.644	178	1347442	12.121
134) Anthracene	(4)	12.709	178	1384374	12.490
135) Carbazole	(4)	12.930	167	1359288	12.672
137) Di-n-butylphthalate	(4)	13.437	149	1566378	12.329
142) Fluoranthene	(4)	14.253	202	1664148	13.308
145)*Pyrene-d10	(5)	14.562	212	662891	5.000
146) Pyrene	(5)	14.591	202	1715475	12.189
149)$Terphenyl-d14	(5)	14.877	244	2336047	28.258
153) Butylbenzylphthalate	(5)	15.728	149	697321	11.642
158) Benzo(a)anthracene	(5)	16.573	228	1545106	12.939
159) 3,3'-Dichlorobenzidine	(5)	16.573	252	339068	7.861
161) Chrysene	(5)	16.631	228	1496298	12.741
162) bis(2-Ethylhexyl)phthalate	(5)	16.794	149	927029	11.766
166) Di-n-octylphthalate	(6)	17.948	149	1599065	11.344
168) Benzo(b)fluoranthene	(6)	18.415	252	1416259	12.507
170) Benzo(k)fluoranthene	(6)	18.461	252	1493903	13.080
171) Benzo(a)pyrene	(6)	18.933	252	1291914	12.429
172)*Perylene-d12	(6)	19.021	264	480737	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.618	276	1185746M	13.005
177) Dibenz(a,h)anthracene	(6)	20.659	278	1024064	13.263
178) Benzo(g,h,i)perylene	(6)	20.979	276	915369	11.910

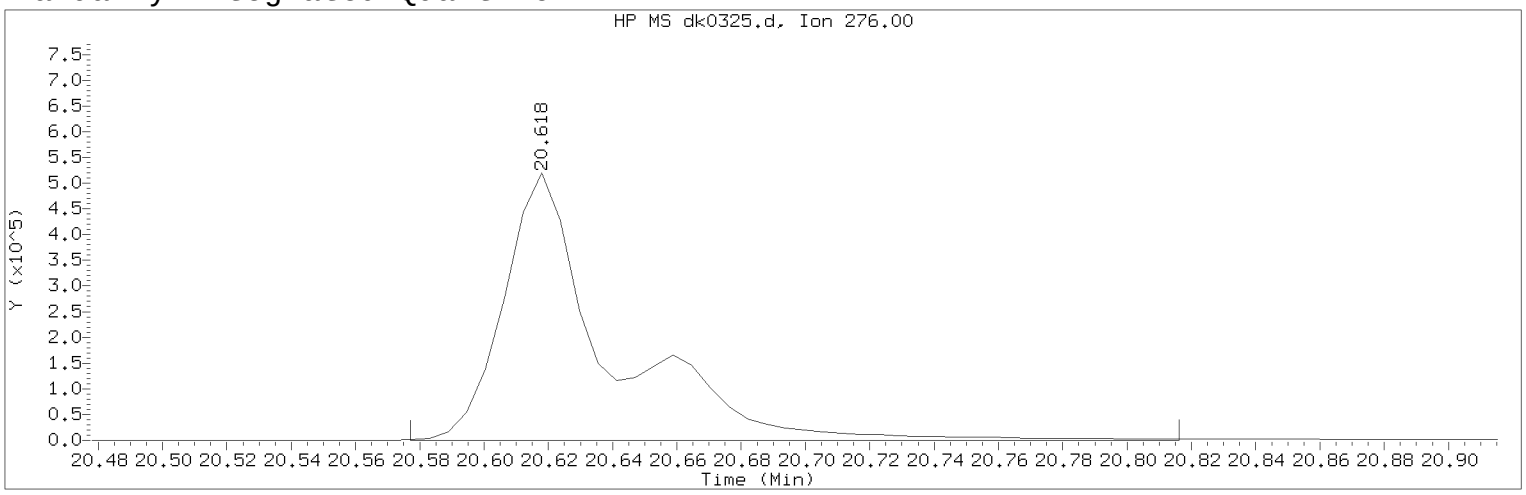
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:40.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:37 jmg00346

Sample Name: R2163MS Lab Sample ID: 7265231

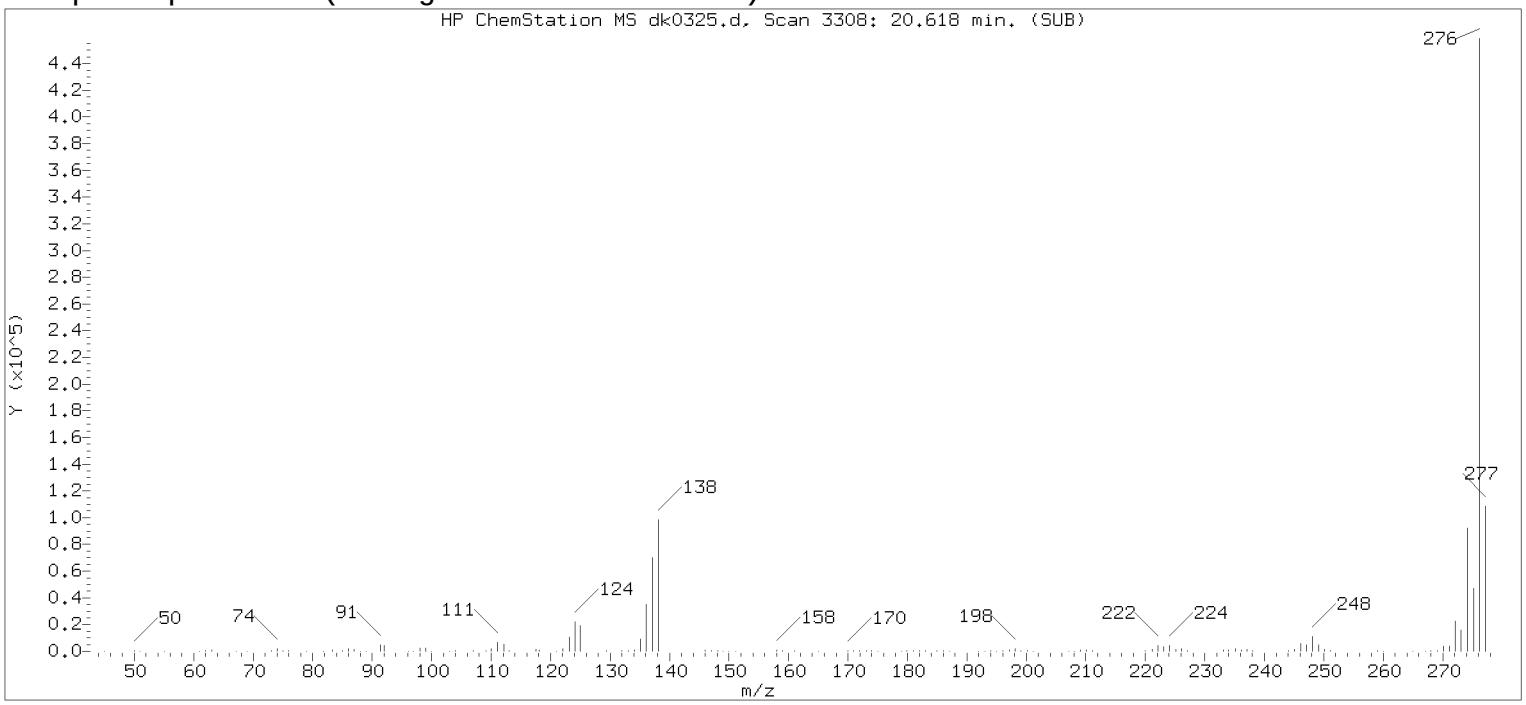
Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3308
Retention Time (minutes) : 20.618
Quant Ion : 276.00
Area (flag) : 1185746M
On-Column Amount (ng/ul) : 13.0052
Integration start scan : 3300 Integration stop scan: 3341
Y at integration start : -48 Y at integration end: -48

Reason for manual integration: improper integration

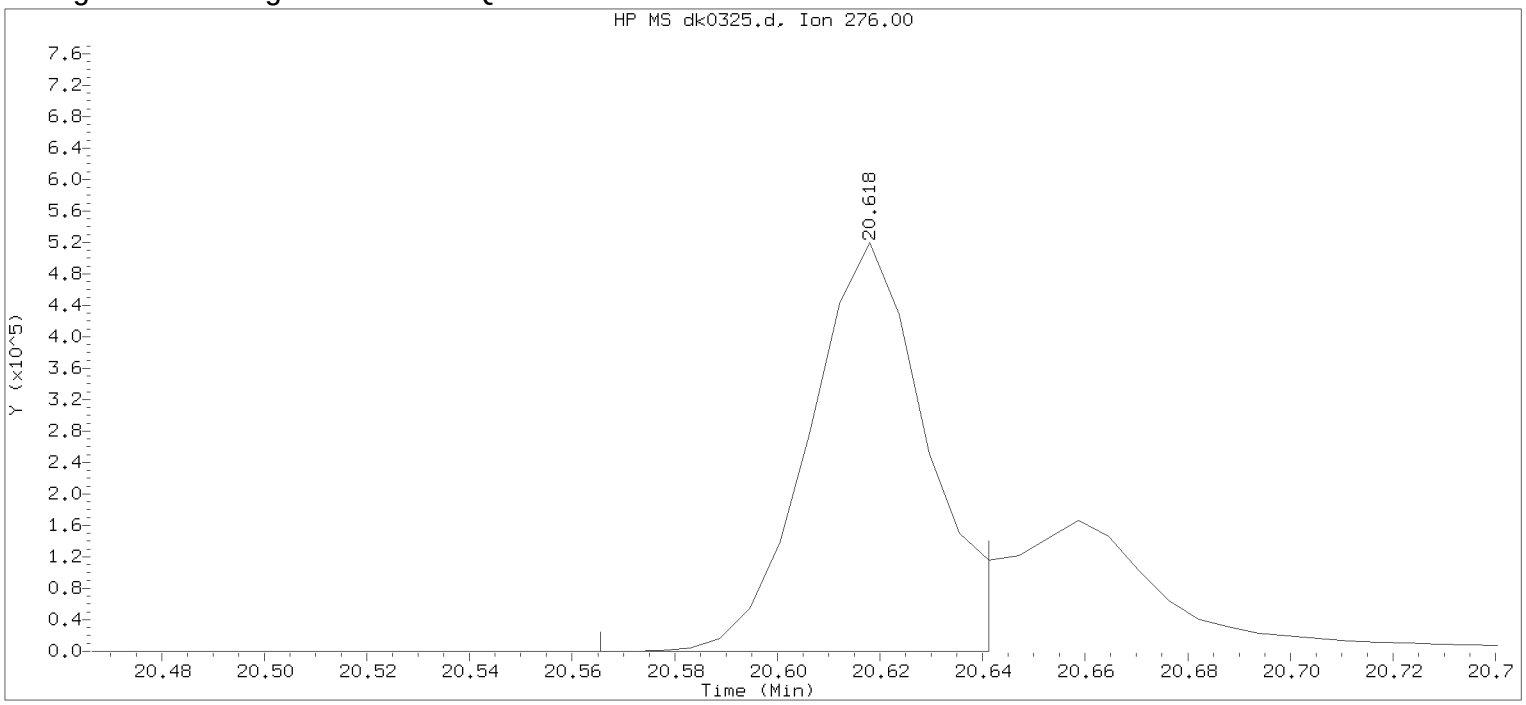
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:40.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0325.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:32 jmg00346

Sample Name: R2163MS Lab Sample ID: 7265231

Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3308
Retention Time (minutes) : 20.618
Quant Ion : 276.00
Area : 817922
On-column Amount (ng/ul) : 8.9709
Integration start scan : 3298 Integration stop scan: 3311
Y at integration start : 0 Y at integration end: 283

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:40.
Target 3.5 esignature used: 1 Page 2046 of 3494

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0326.d
Injection date and time: **11-NOV-2013 06:49**
Data file Sample Info. Line: R2163MSD;7265232;1;3;MSD;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	118659 (-16)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	449330 (-18)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	270647 (-17)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	466942 (-19)	5.00	
145) Pyrene-d10	14.562(0.000)	2269	212	617608 (-17)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	453070 (-19)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.024(-0.004)	112	1102530	31.293	63%		10 - 107
13) Phenol-d6	(1)	5.440(-0.001)	99	1138256	23.524	47%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	989839	23.937	96%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1772951	26.232	105%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	385147	54.182	108%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2241291	29.100	116%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.300(-0.000)	77	297479	8.788	35.87			0.3
14) Phenol	(1)	5.458(-0.000)	94	335567	5.991	24.45			0.1
16) bis(2-Chloroethyl)ether	(1)	5.586(-0.000)	93	488261	11.047	45.09			0.1
17) 2-Chlorophenol	(1)	5.632(-0.000)	128	371632	10.726	43.78			0.1
26) 2-Methylphenol	(1)	6.373(-0.000)	108	316136	9.092	37.11			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.408(0.000)	45	512388	9.341	38.12			0.1
30) Acetophenone	(1)	6.577(0.000)	105	624394	11.484	46.88			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.606(0.000)	70	340133	10.869	44.36			0.1
33) 4-Methylphenol	(1)	6.618(0.000)	108	318774	8.206	33.49			0.1
35) Hexachloroethane	(1)	6.717(0.000)	117	178623	11.211	45.76			0.3
37) Nitrobenzene	(2)	6.827(0.000)	77	513260	11.694	47.73			0.1
40) Isophorone	(2)	7.218(-0.000)	82	892094	11.925	48.68			0.1
42) 2-Nitrophenol	(2)	7.323(-0.000)	139	208942	13.874	56.63			0.1
45) 2,4-Dimethylphenol	(2)	7.439(-0.000)	107	339324	9.272	37.85			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.591(-0.000)	93	546043	11.185	45.65			0.1
49) 2,4-Dichlorophenol	(2)	7.708(-0.000)	162	301572	11.683	47.69			0.1
53) Naphthalene	(2)	7.946(0.000)	128	1203777	12.566	51.29			0.03
55) 4-Chloroaniline	(2)	8.057(0.000)	127	409019	10.304	42.06			0.1
58) Hexachlorobutadiene	(2)	8.174(-0.000)	225	233517	13.892	56.70			0.1
61) Caprolactam	(2)	8.588(0.002)	113	56075	4.869	19.87			1
63) 4-Chloro-3-methylphenol	(2)	8.867(0.000)	107	326668	10.539	43.02			0.1
65) 2-Methylnaphthalene	(2)	9.054(0.000)	142	764671	11.977	48.89			0.03
67) Hexachlorocyclopentadiene	(3)	9.322(-0.000)	237	397121	26.825	109.49			1
70) 2,4,6-Trichlorophenol	(3)	9.520(0.000)	196	226396	11.439	46.69			0.1
71) 2,4,5-Trichlorophenol	(3)	9.573(0.000)	196	258600	12.646	51.62			0.1
75) 1,1'-Biphenyl	(3)	9.818(0.000)	154	948647	12.071	49.27			0.1
76) 2-Chloronaphthalene	(3)	9.829(-0.000)	162	742067	12.309	50.24			0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov11.b/dk0326.d
Injection date and time: **11-NOV-2013 06:49**
Data file Sample Info. Line: R2163MSD;7265232;1;3;MSD;;;
Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

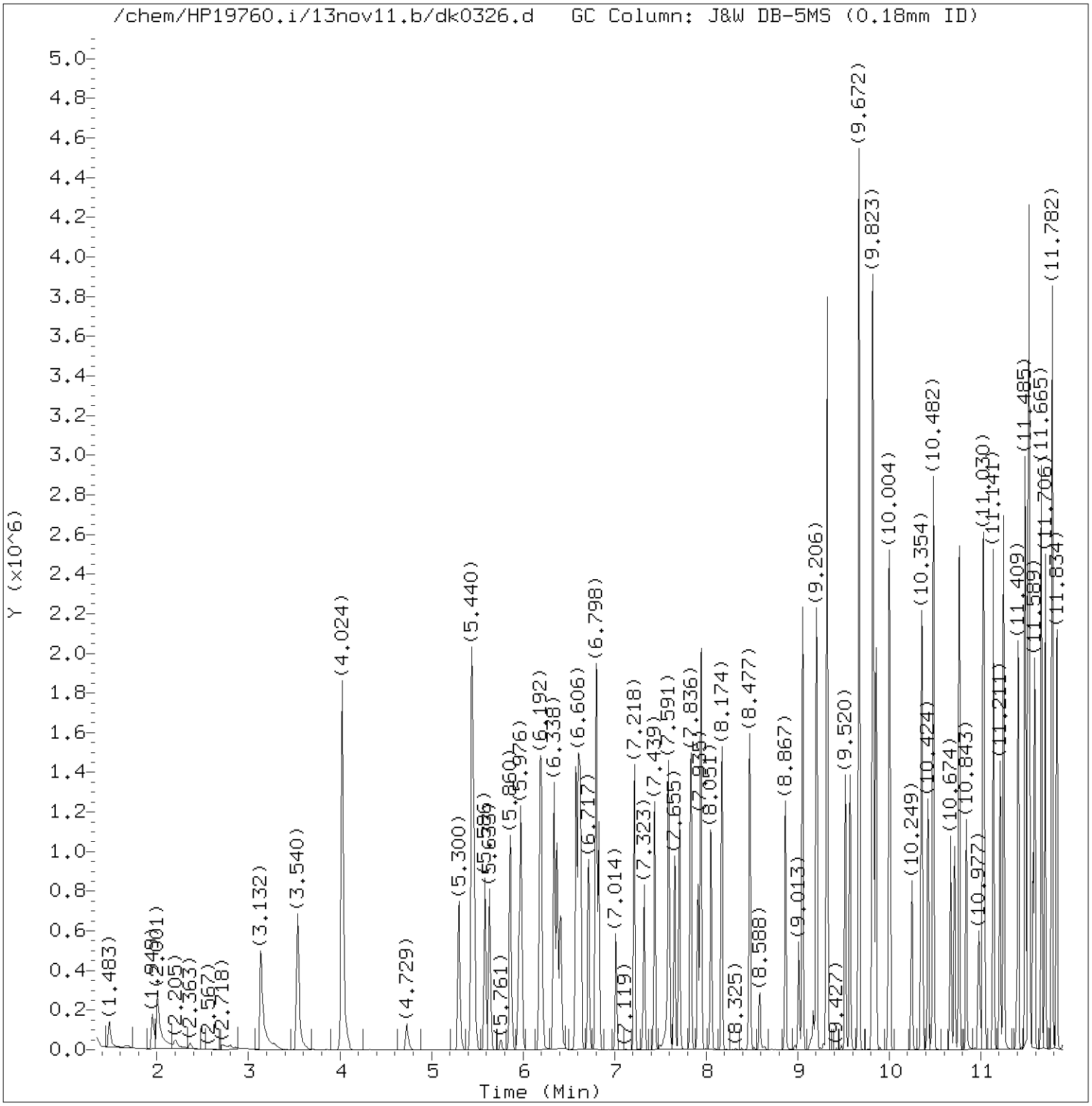
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)	10.010(0.000)	138	258288	13.755	56.14			0.1
86) Dimethylphthalate	(3)	10.354(-0.000)	163	788788	11.569	47.22			0.5
88) 2,6-Dinitrotoluene	(3)	10.424(0.000)	165	208531	13.802	56.33			0.1
90) Acenaphthylene	(3)	10.482(-0.000)	152	1222234	13.355	54.51			0.03
91) 3-Nitroaniline	(3)	10.674(-0.000)	138	200036	11.534	47.08			0.1
93) Acenaphthene	(3)	10.768(0.000)	153	766659	12.177	49.70			0.03
94) 2,4-Dinitrophenol	(3)	10.843(0.000)	184	196126	22.320	91.10			3
96) 4-Nitrophenol	(3)	10.977(0.000)	109	82468	7.455	30.43			3
97) Dibenzofuran	(3)	11.024(0.000)	168	1124208	12.557	51.25			0.1
98) 2,4-Dinitrotoluene	(3)	11.042(0.000)	165	267487	13.815	56.39			0.3
102) Diethylphthalate	(3)	11.409(0.000)	149	796656	11.859	48.41			0.5
103) Fluorene	(3)	11.484(0.000)	166	906802	12.583	51.36			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.519(0.000)	204	464768	13.004	53.08			0.1
107) 4-Nitroaniline	(3)	11.531(0.000)	138	193932	10.871	44.37			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.572(0.000)	198	141345	11.989	48.93			1
109) N-Nitrosodiphenylamine	(4)	11.665(-0.000)	169	741051	12.749	52.04			0.1
120) 4-Bromophenyl-phenylether	(4)	12.096(-0.000)	248	243608	13.222	53.97			0.1
122) Hexachlorobenzene	(4)	12.143(-0.000)	284	250736	13.764	56.18			0.03
124) Atrazine	(4)	12.330(-0.000)	200	262574	13.874	56.63			0.5
125) Pentachlorophenol	(4)	12.394(0.000)	266	131570	9.690	39.55			0.3
131) Phenanthrene	(4)	12.644(-0.000)	178	1271182	12.206	49.82			0.03
134) Anthracene	(4)	12.708(-0.000)	178	1311110	12.627	51.54			0.03
135) Carbazole	(4)	12.930(-0.000)	167	1279407	12.731	51.96			0.1
137) Di-n-butylphthalate	(4)	13.437(-0.000)	149	1469473	12.347	50.39			0.5
142) Fluoranthene	(4)	14.253(-0.000)	202	1575042	13.445	54.88			0.03
146) Pyrene	(5)	14.591(0.000)	202	1642714	12.528	51.13			0.03
153) Butylbenzylphthalate	(5)	15.728(0.000)	149	662596	11.873	48.46			0.5
158) Benzo(a)anthracene	(5)	16.573(-0.000)	228	1477634	13.281	54.21			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.573(0.000)	252	362551	9.022	36.82			0.5
161) Chrysene	(5)	16.631(0.000)	228	1416986	12.951	52.86			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.794(0.000)	149	896199	12.209	49.83			0.5
166) Di-n-octylphthalate	(6)	17.948(-0.000)	149	1532435	11.531	47.06			0.5
168) Benzo(b)fluoranthene	(6)	18.415(0.000)	252	1369958	12.836	52.39			0.03
170) Benzo(k)fluoranthene	(6)	18.461(0.000)	252	1424726	13.236	54.03			0.03
171) Benzo(a)pyrene	(6)	18.934(0.000)	252	1242966	12.688	51.79			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.618(-0.000)	276	1166703M	13.578	55.42			0.03
177) Dibenz(a,h)anthracene	(6)	20.659(-0.000)	278	1006213	13.828	56.44			0.03
178) Benzo(g,h,i)perylene	(6)	20.979(-0.000)	276	921567	12.723	51.93			0.03

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:41. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

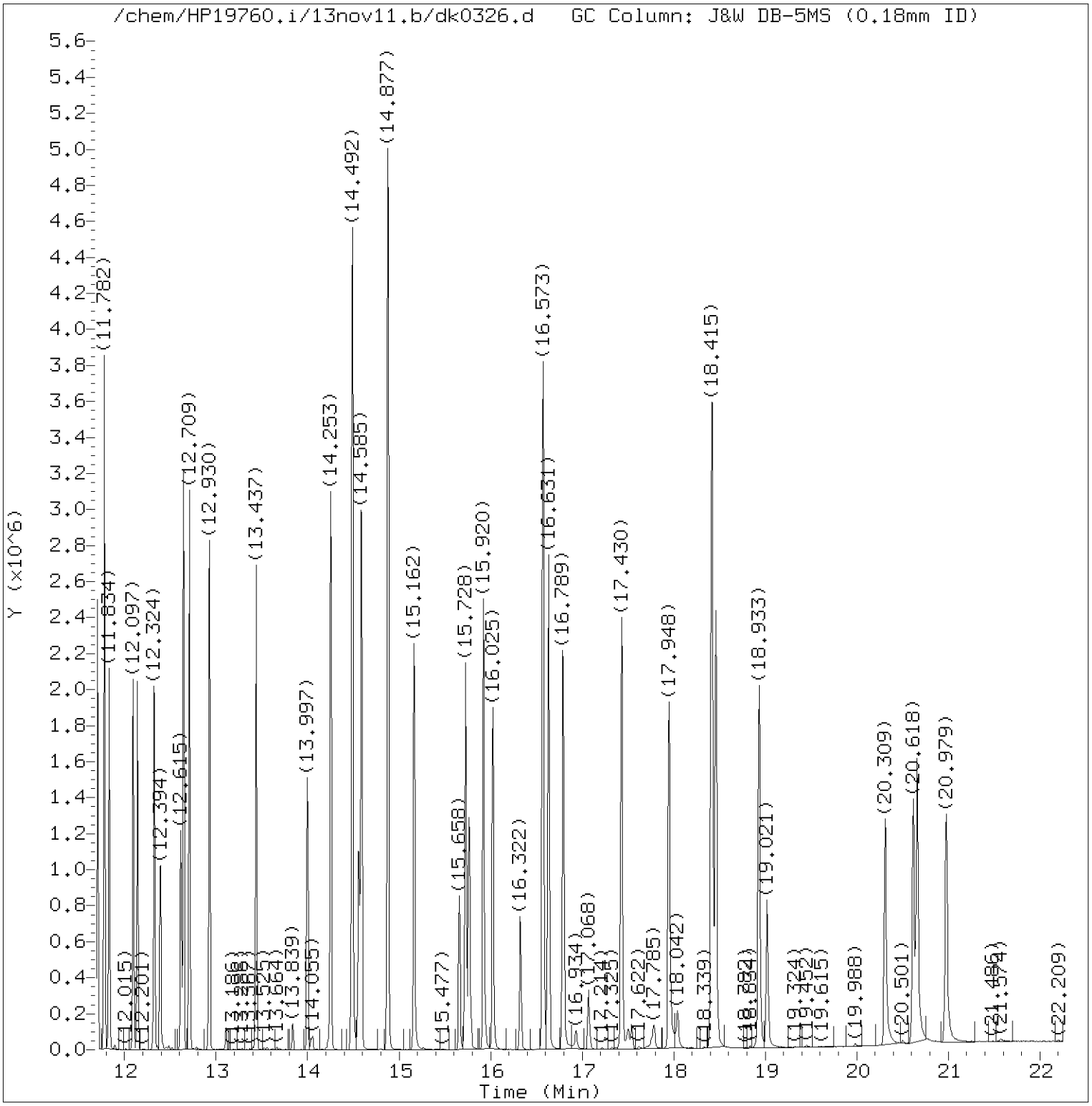
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Sample Name: R2163MSD Lab Sample ID: 7265232

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:41.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Sample Name: R2163MSD Lab Sample ID: 7265232

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:41.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Sample Name: R2163MSD Lab Sample ID: 7265232

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.024	112	1102530	31.293
11) Benzaldehyde	(1)	5.300	77	297479	8.788
13)$Phenol-d6	(1)	5.440	99	1138256	23.524
14) Phenol	(1)	5.458	94	335567	5.991
16) bis(2-Chloroethyl)ether	(1)	5.586	93	488261	11.047
17) 2-Chlorophenol	(1)	5.633	128	371632	10.726
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	118659	5.000
26) 2-Methylphenol	(1)	6.373	108	316136	9.092
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.408	45	512388	9.341
30) Acetophenone	(1)	6.577	105	624394	11.484
31) N-Nitroso-di-n-propylamine	(1)	6.606	70	340133	10.869
33) 4-Methylphenol	(1)	6.618	108	318774	8.206
35) Hexachloroethane	(1)	6.717	117	178623	11.211
36)$Nitrobenzene-d5	(2)	6.798	82	989839	23.937
37) Nitrobenzene	(2)	6.827	77	513260	11.694
40) Isophorone	(2)	7.218	82	892094	11.925
42) 2-Nitrophenol	(2)	7.323	139	208942	13.874
45) 2,4-Dimethylphenol	(2)	7.439	107	339324	9.272
48) bis(2-Chloroethoxy)methane	(2)	7.591	93	546043	11.185
49) 2,4-Dichlorophenol	(2)	7.708	162	301572	11.683
52)*Naphthalene-d8	(2)	7.912	136	449330	5.000
53) Naphthalene	(2)	7.947	128	1203777	12.566
55) 4-Chloroaniline	(2)	8.057	127	409019	10.304
58) Hexachlorobutadiene	(2)	8.174	225	233517	13.892
61) Caprolactam	(2)	8.588	113	56075	4.869
63) 4-Chloro-3-methylphenol	(2)	8.867	107	326668	10.539
65) 2-Methylnaphthalene	(2)	9.054	142	764671	11.977
67) Hexachlorocyclopentadiene	(3)	9.322	237	397121	26.825
70) 2,4,6-Trichlorophenol	(3)	9.520	196	226396	11.439
71) 2,4,5-Trichlorophenol	(3)	9.573	196	258600	12.646
72)$2-Fluorobiphenyl	(3)	9.672	172	1772951	26.232
75) 1,1'-Biphenyl	(3)	9.818	154	948647	12.071
76) 2-Chloronaphthalene	(3)	9.829	162	742067	12.309
83) 2-Nitroaniline	(3)	10.010	138	258288	13.755
86) Dimethylphthalate	(3)	10.354	163	788788	11.569
88) 2,6-Dinitrotoluene	(3)	10.424	165	208531	13.802
90) Acenaphthylene	(3)	10.482	152	1222234	13.355
91) 3-Nitroaniline	(3)	10.674	138	200036	11.534
92)*Acenaphthene-d10	(3)	10.715	164	270647	5.000
93) Acenaphthene	(3)	10.768	153	766659	12.177

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:41.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

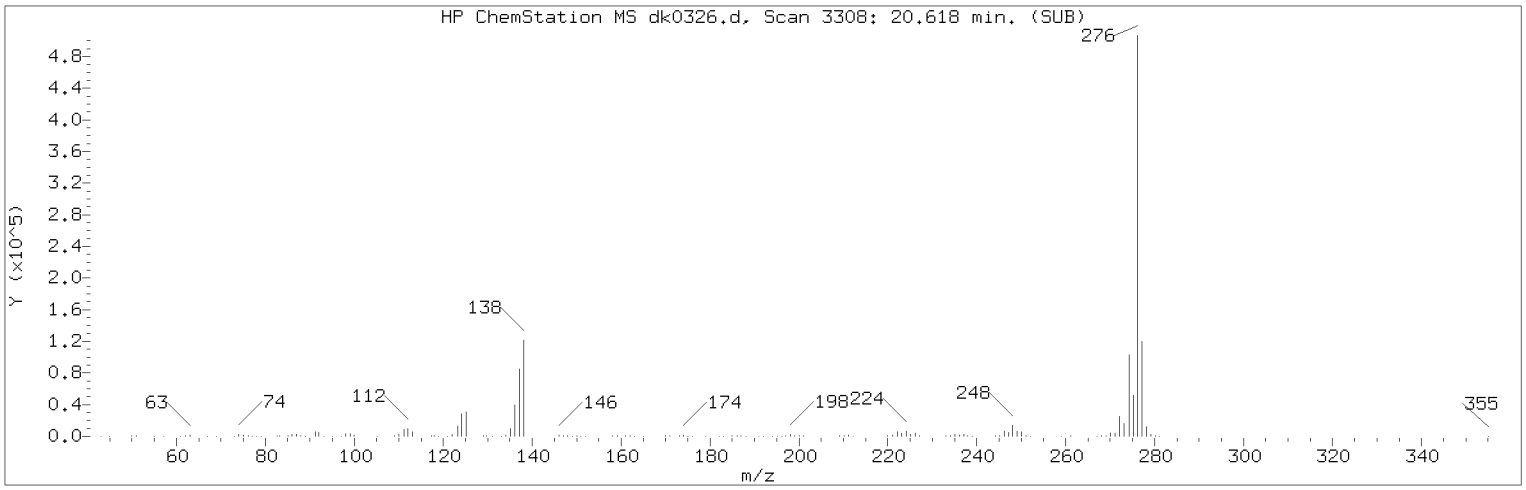
Sample Name: R2163MSD Lab Sample ID: 7265232

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
94) 2,4-Dinitrophenol	(3)	10.843	184	196126	22.320
96) 4-Nitrophenol	(3)	10.977	109	82468	7.455
97) Dibenzofuran	(3)	11.024	168	1124208	12.557
98) 2,4-Dinitrotoluene	(3)	11.042	165	267487	13.815
102) Diethylphthalate	(3)	11.409	149	796656	11.859
103) Fluorene	(3)	11.485	166	906802	12.583
105) 4-Chlorophenyl-phenylether	(3)	11.519	204	464768	13.004
107) 4-Nitroaniline	(3)	11.531	138	193932	10.871
108) 4,6-Dinitro-2-methylphenol	(4)	11.572	198	141345	11.989
109) N-Nitrosodiphenylamine	(4)	11.665	169	741051	12.749
112)$2,4,6-Tribromophenol	(3)	11.782	330	385147	54.182
120) 4-Bromophenyl-phenylether	(4)	12.097	248	243608	13.222
122) Hexachlorobenzene	(4)	12.143	284	250736	13.764
124) Atrazine	(4)	12.330	200	262574	13.874
125) Pentachlorophenol	(4)	12.394	266	131570	9.690
130)*Phenanthrene-d10	(4)	12.615	188	466942	5.000
131) Phenanthrene	(4)	12.644	178	1271182	12.206
134) Anthracene	(4)	12.709	178	1311110	12.627
135) Carbazole	(4)	12.930	167	1279407	12.731
137) Di-n-butylphthalate	(4)	13.437	149	1469473	12.347
142) Fluoranthene	(4)	14.253	202	1575042	13.445
145)*Pyrene-d10	(5)	14.562	212	617608	5.000
146) Pyrene	(5)	14.591	202	1642714	12.528
149)$Terphenyl-d14	(5)	14.877	244	2241291	29.100
153) Butylbenzylphthalate	(5)	15.728	149	662596	11.873
158) Benzo(a)anthracene	(5)	16.573	228	1477634	13.281
159) 3,3'-Dichlorobenzidine	(5)	16.573	252	362551	9.022
161) Chrysene	(5)	16.631	228	1416986	12.951
162) bis(2-Ethylhexyl)phthalate	(5)	16.794	149	896199	12.209
166) Di-n-octylphthalate	(6)	17.948	149	1532435	11.531
168) Benzo(b)fluoranthene	(6)	18.415	252	1369958	12.836
170) Benzo(k)fluoranthene	(6)	18.461	252	1424726	13.236
171) Benzo(a)pyrene	(6)	18.933	252	1242966	12.688
172)*Perylene-d12	(6)	19.021	264	453070	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.618	276	1166703M	13.578
177) Dibenz(a,h)anthracene	(6)	20.659	278	1006213	13.828
178) Benzo(g,h,i)perylene	(6)	20.979	276	921567	12.723

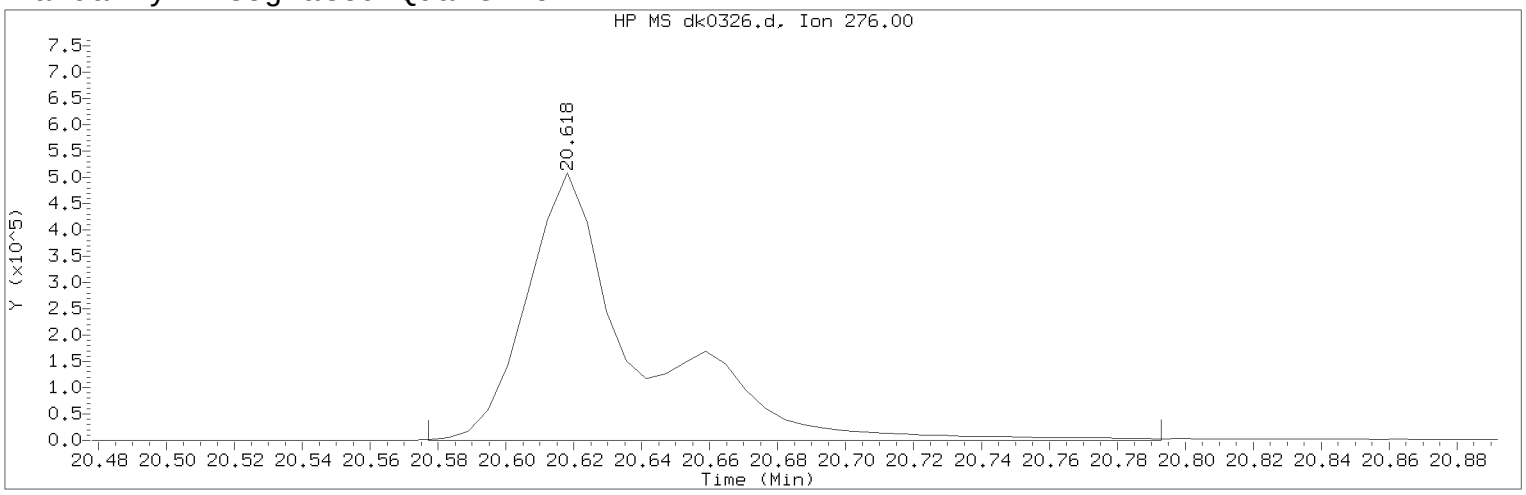
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:41.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:38 jmg00346

Sample Name: R2163MSD Lab Sample ID: 7265232

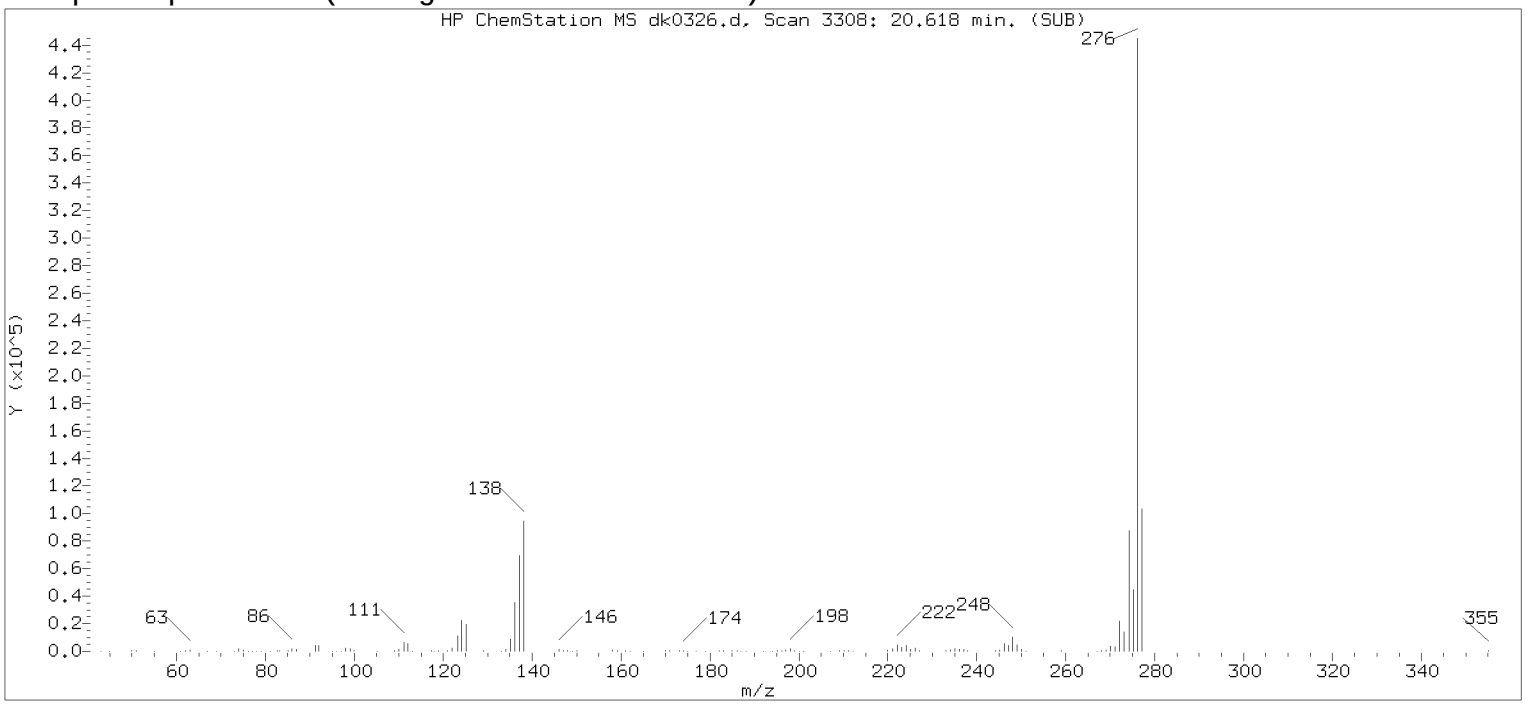
Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3308
Retention Time (minutes) : 20.618
Quant Ion : 276.00
Area (flag) : 1166703M
On-Column Amount (ng/ul) : 13.5778
Integration start scan : 3300 Integration stop scan: 3337
Y at integration start : -47 Y at integration end: -47

Reason for manual integration: improper integration

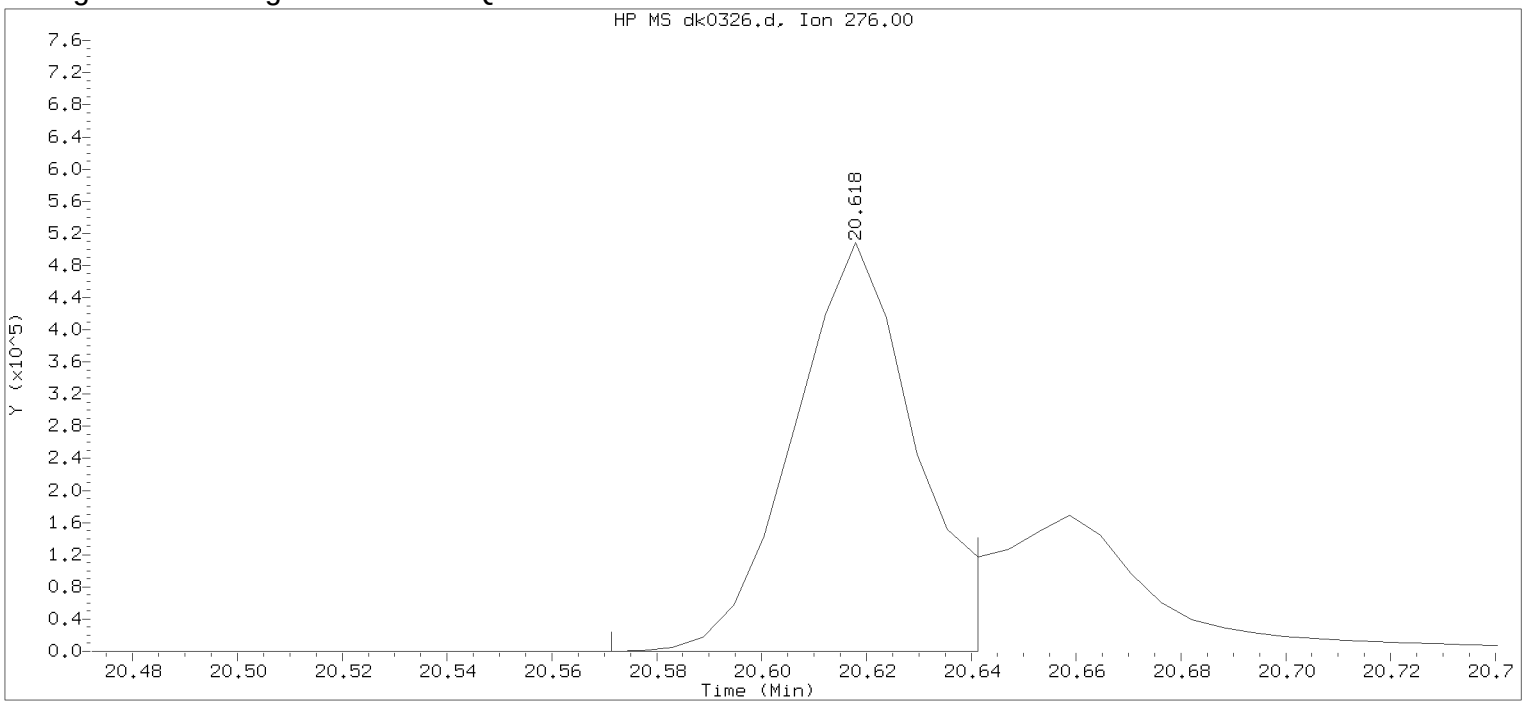
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:41.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov11.b/dk0326.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 06:49 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:32 jmg00346

Sample Name: R2163MSD Lab Sample ID: 7265232

Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3308
Retention Time (minutes) : 20.618
Quant Ion : 276.00
Area : 804576
On-column Amount (ng/ul) : 9.3634
Integration start scan : 3299 Integration stop scan: 3311
Y at integration start : 0 Y at integration end: 230

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:41.
Target 3.5 esignature used: 1004 jmg00346

Data file: /chem/HP10623.i/13nov13a.b/ck0470.d Injection date and time: **13-NOV-2013 13:44**
Data file Sample Info. Line: 310LFLCS3;310LFLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.201(0.000)	540	152	105509 (-11)	20.00	
52) Naphthalene-d8	6.437(0.000)	741	136	488949 (-14)	20.00	
98) Acenaphthene-d10	8.152(-0.006)	1020	164	300041 (-17)	20.00	
135) Phenanthrene-d10	9.591(0.000)	1254	188	546606 (-21)	20.00	
167) Pyrene-d10	10.975(0.000)	1479	212	671064 (-21)	20.00	
175) Perylene-d12	13.575(0.000)	1902	264	522975 (-25)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.742(0.000)	82	863011	81.924	82%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.513(0.000)	172	1849821	98.052	98%		69 - 120
156) Terphenyl-d14	(5)	11.171(0.000)	244	2433380	101.434	101%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.462(-0.000)	128	1227824	47.329	1577.64			0.1
70) 2-Methylnaphthalene	(2)	7.138(0.000)	142	842756	45.775	1525.83			0.1
71) 1-Methylnaphthalene	(2)	7.230(0.000)	142	848270	50.353	1678.43			0.1
95) Acenaphthylene	(3)	8.011(0.000)	152	1427674	54.007	1800.23			0.1
99) Acenaphthene	(3)	8.183(0.000)	153	894785	48.908	1630.27			0.1
111) Fluorene	(3)	8.687(0.000)	166	1068343	49.545	1651.50			0.1
137) Phenanthrene	(4)	9.616(-0.000)	178	1580449	49.727	1657.55			0.1
138) Anthracene	(4)	9.665(0.000)	178	1642983	50.220	1673.99			0.1
147) Fluoranthene	(4)	10.772(0.000)	202	1775019	49.947	1664.89			0.1
154) Pyrene	(5)	10.993(0.000)	202	1882088	50.503	1683.45			0.1
166) Benzo(a)anthracene	(5)	12.167(0.000)	228	1648340	47.955	1598.49			0.1
168) Chrysene	(5)	12.204(0.000)	228	1603269	48.378	1612.60			0.1
172) Benzo(b)fluoranthene	(6)	13.225(-0.000)	252	1590254	49.799	1659.95			0.1
173) Benzo(k)fluoranthene	(6)	13.256(-0.000)	252	1744096	53.534	1784.46			0.1
174) Benzo(a)pyrene	(6)	13.526(-0.000)	252	1530265	49.098	1636.60			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.596(-0.000)	276	1611750	48.605	1620.16			0.1
178) Dibenz(a,h)anthracene	(6)	14.621(0.000)	278	1362333	49.115	1637.18			0.1
179) Benzo(g,h,i)perylene	(6)	14.879(-0.000)	276	1362242	48.222	1607.40			0.1

Digitally signed by Mark A. Clark on 11/14/2013 at 00:16. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov13a.b/ck0470.d Injection date and time: **13-NOV-2013 13:44**
Data file Sample Info. Line: 310LFLCS3;310LFLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13310SLF**
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov13a.b/ck0469.d**

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 13-NOV-2013 10:41
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov13a.b/ck0461.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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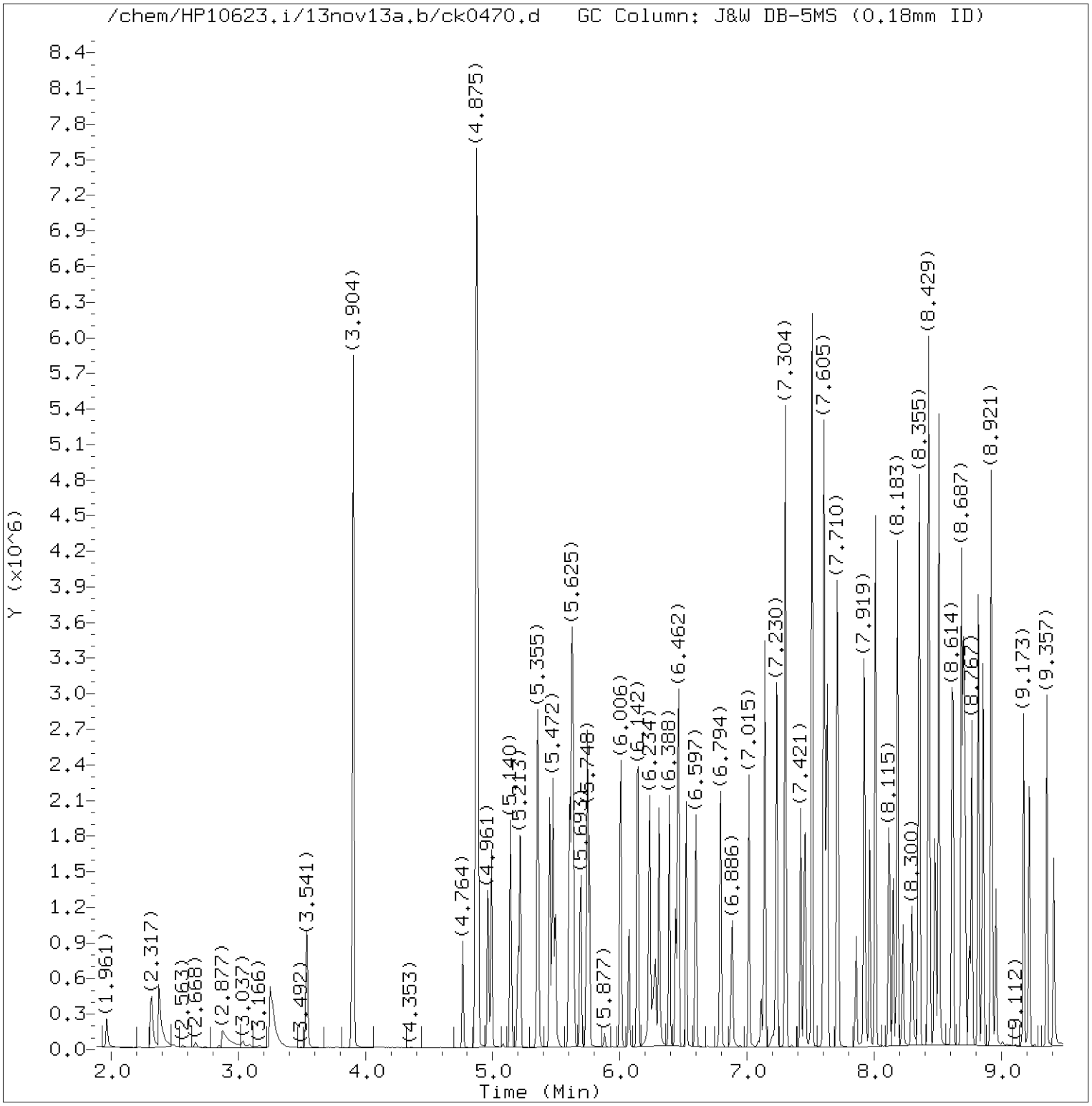
Total number of targets = 18

Digitally signed by Mark A. Clark on 11/14/2013 at 00:16. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 12:18. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

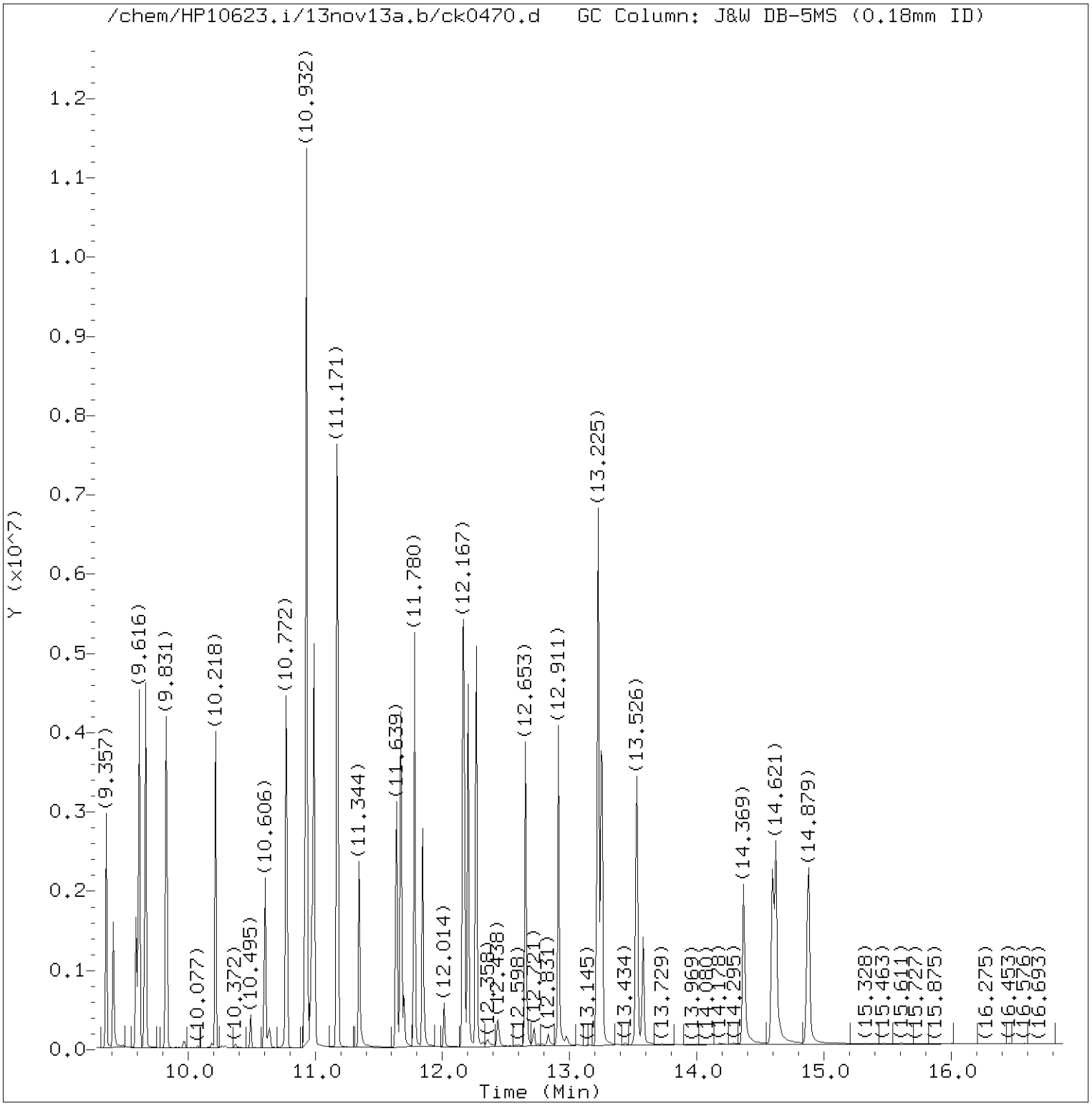
Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov13a.b/ck0470.d Instrument ID: HP10623.i
Injection date and time: 13-NOV-2013 13:44 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov13a.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 13-NOV-2013 10:41
Date, time and analyst ID of latest file update: 13-Nov-2013 22:56 mac00013

Sample Name: 310LFLCS3 Lab Sample ID: 310LFLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.201	152	105509	20.000
38)$Nitrobenzene-d5	(2)	5.742	82	863011	81.924
52)*Naphthalene-d8	(2)	6.437	136	488949	20.000
53) Naphthalene	(2)	6.462	128	1227824	47.329
70) 2-Methylnaphthalene	(2)	7.138	142	842756	45.775
71) 1-Methylnaphthalene	(2)	7.230	142	848270	50.353
78)$2-Fluorobiphenyl	(3)	7.513	172	1849821	98.052
95) Acenaphthylene	(3)	8.011	152	1427674	54.007
98)*Acenaphthene-d10	(3)	8.152	164	300041	20.000
99) Acenaphthene	(3)	8.183	153	894785	48.908
111) Fluorene	(3)	8.687	166	1068343	49.545
135)*Phenanthrene-d10	(4)	9.591	188	546606	20.000
137) Phenanthrene	(4)	9.616	178	1580449	49.727
138) Anthracene	(4)	9.665	178	1642983	50.220
147) Fluoranthene	(4)	10.772	202	1775019	49.947
167)*Pyrene-d10	(5)	10.975	212	671064	20.000
154) Pyrene	(5)	10.993	202	1882088	50.503
156)$Terphenyl-d14	(5)	11.171	244	2433380	101.434
166) Benzo(a)anthracene	(5)	12.167	228	1648340	47.955
168) Chrysene	(5)	12.204	228	1603269	48.378
172) Benzo(b)fluoranthene	(6)	13.225	252	1590254	49.799
173) Benzo(k)fluoranthene	(6)	13.256	252	1744096	53.534
174) Benzo(a)pyrene	(6)	13.526	252	1530265	49.098
175)*Perylene-d12	(6)	13.575	264	522975	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.596	276	1611750	48.605
178) Dibenz(a,h)anthracene	(6)	14.621	278	1362333	49.115
179) Benzo(g,h,i)perylene	(6)	14.879	276	1362242	48.222

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/14/2013 at 00:16.
Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov15.b/ck0543.d Injection date and time: **15-NOV-2013 01:31**
Data file Sample Info. Line: 314LDLCS3;314LDLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 16-NOV-2013 01:00
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.133(0.000)	529	152	130149 (-25)	20.00	
52) Naphthalene-d8	6.369(0.006)	730	136	596570 (-28)	20.00	
98) Acenaphthene-d10	8.085(0.000)	1009	164	384587 (-25)	20.00	
135) Phenanthrene-d10	9.524(0.006)	1243	188	713310 (-23)	20.00	
167) Pyrene-d10	10.907(0.000)	1468	212	880012 (-21)	20.00	
175) Perylene-d12	13.508(0.000)	1891	264	669874 (-25)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
9) 2-Fluorophenol	(1)	3.836(0.000)	112	1812828	186.173	93%		63 - 126
15) Phenol-d6	(1)	4.814(0.000)	99	2554098	178.257	89%		61 - 120
38) Nitrobenzene-d5	(2)	5.674(0.000)	82	1069082	83.178	83%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.445(0.000)	172	2194187	90.738	91%		69 - 120
119) 2,4,6-Tribromophenol	(3)	8.859(-0.001)	330	518677	223.328	112%		42 - 134
156) Terphenyl-d14	(5)	11.110(0.000)	244	3019569	95.983	96%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
12) Benzaldehyde	(1)	4.697(-0.000)	77	170379	27.768	925.61			2
16) Phenol	(1)	4.826(-0.000)	94	733614	43.886	1462.85			0.5
18) bis(2-Chloroethyl)ether	(1)	4.900(-0.001)	93	497758	41.943	1398.09			0.5
19) 2-Chlorophenol	(1)	4.924(-0.000)	128	488260	46.822	1560.75			0.5
26) 2-Methylphenol	(1)	5.410(0.002)	108	508326	45.817	1527.24			0.5
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.428(0.000)	45	555683	38.051	1268.36			0.5
30) Acetophenone	(1)	5.539(0.000)	105	688857	41.645	1388.16			0.5
31) N-Nitroso-di-n-propylamine	(1)	5.551(0.001)	70	422037	39.861	1328.69			0.5
33) 4-Methylphenol	(1)	5.564(0.001)	108	572027	43.559	1451.98			0.5
37) Hexachloroethane	(1)	5.619(0.001)	117	174288	42.642	1421.40			1
39) Nitrobenzene	(2)	5.693(-0.000)	77	577206	42.338	1411.26			0.5
41) Isophorone	(2)	5.939(-0.000)	82	1085725	43.858	1461.94			0.5
42) 2-Nitrophenol	(2)	6.006(-0.000)	139	233495	49.266	1642.22			0.5
44) 2,4-Dimethylphenol	(2)	6.080(-0.000)	107	564460	46.336	1544.54			0.5
46) bis(2-Chloroethoxy)methane	(2)	6.166(-0.000)	93	623998	41.484	1382.81			0.5
49) 2,4-Dichlorophenol	(2)	6.252(-0.000)	162	428413	51.712	1723.73			0.5
53) Naphthalene	(2)	6.394(-0.000)	128	1437805	45.425	1514.16			0.1
56) 4-Chloroaniline	(2)	6.455(-0.000)	127	162259	11.764	392.12			0.5
60) Hexachlorobutadiene	(2)	6.529(-0.000)	225	202512	46.271	1542.35			0.5
63) Caprolactam	(2)	6.830(-0.002)	113	211973	46.188	1539.60			1
68) 4-Chloro-3-methylphenol	(2)	6.960(-0.002)	107	527429	49.797	1659.89			0.5
70) 2-Methylnaphthalene	(2)	7.070(-0.000)	142	1003817	44.687	1489.57			0.1
72) Hexachlorocyclopentadiene	(3)	7.236(-0.000)	237	457205	115.335	3844.51			5
75) 2,4,6-Trichlorophenol	(3)	7.359(-0.000)	196	306389	51.187	1706.23			0.5
77) 2,4,5-Trichlorophenol	(3)	7.396(-0.000)	196	343234	52.593	1753.10			0.5
83) 1,1'-Biphenyl	(3)	7.538(-0.000)	154	1301708	43.686	1456.19			0.5
84) 2-Chloronaphthalene	(3)	7.544(-0.000)	162	1155579M	53.243	1774.76			0.2

M = Compound was manually integrated.

Digitally signed by Mark A. Clark on 11/18/2013 at 04:40. Target 3.5 esignature user ID: mac00013

Data file: /chem/HP10623.i/13nov15.b/ck0543.d Injection date and time: **15-NOV-2013 01:31**
Data file Sample Info. Line: 314LDLCS3;314LDLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13314SLD**
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Blank Data file reference: **/chem/HP10623.i/13nov15.b/ck0542.d**

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: **SL1847mic**
Calibration date and time (Last Method Edit): 16-NOV-2013 01:00
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov15.b/ck0541.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

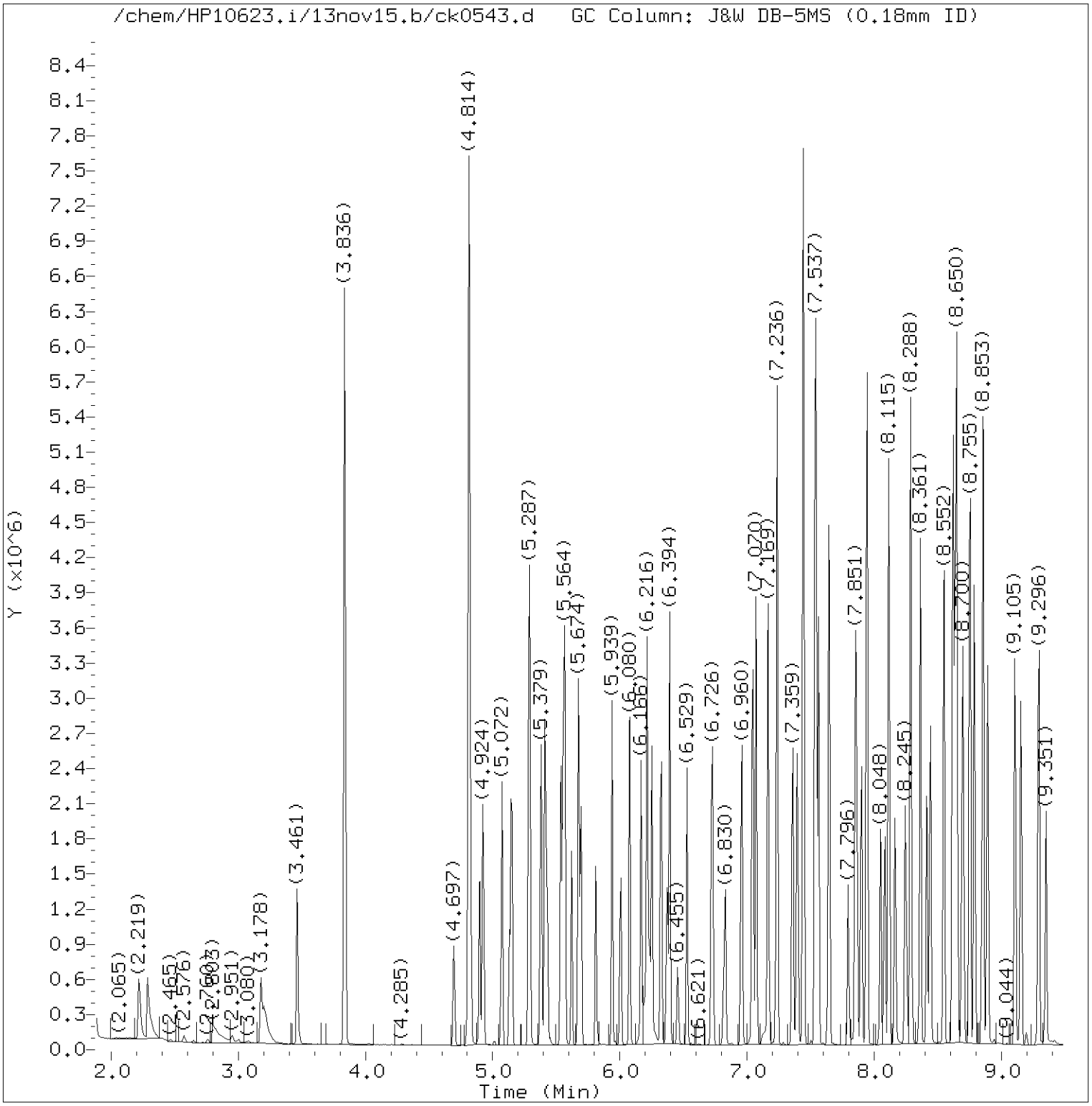
Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
89) 2-Nitroaniline	(3)	7.648(-0.000)	138	351888	49.698	1656.61			0.5
92) Dimethylphthalate	(3)	7.851(-0.000)	163	1238612	47.962	1598.72			2
94) 2,6-Dinitrotoluene	(3)	7.900(-0.000)	165	279907	52.039	1734.63			0.5
95) Acenaphthylene	(3)	7.943(-0.000)	152	1705068	50.321	1677.36			0.1
97) 3-Nitroaniline	(3)	8.054(-0.000)	138	280927	42.770	1425.66			2
99) Acenaphthene	(3)	8.115(0.000)	153	1082316	46.153	1538.44			0.1
100) 2,4-Dinitrophenol	(3)	8.165(0.000)	184	240184	113.807	3793.57			9
103) 4-Nitrophenol	(3)	8.245(0.000)	109	170428	41.884	1396.12			5
104) Dibenzofuran	(3)	8.288(0.000)	168	1505255	46.859	1561.96			0.5
105) 2,4-Dinitrotoluene	(3)	8.294(0.000)	165	375367	54.004	1800.14			2
109) Diethylphthalate	(3)	8.552(0.000)	149	1282881	48.089	1602.97			2
111) Fluorene	(3)	8.620(0.000)	166	1304894	47.212	1573.73			0.1
112) 4-Chlorophenyl-phenylether	(3)	8.632(0.000)	204	589464	47.941	1598.02			0.5
114) 4-Nitroaniline	(3)	8.650(-0.000)	138	249020	33.714	1123.79			2
115) 4,6-Dinitro-2-methylphenol	(4)	8.687(-0.000)	198	172319	54.718	1823.94			5
117) N-Nitrosodiphenylamine	(4)	8.755(-0.001)	169	1158386	48.452	1615.07			0.5
125) 4-Bromophenyl-phenylether	(4)	9.105(-0.000)	248	330131	50.115	1670.51			0.5
127) Hexachlorobenzene	(4)	9.154(-0.000)	284	316905	48.725	1624.16			0.1
130) Atrazine	(4)	9.296(-0.000)	200	362479	47.324	1577.46			1
131) Pentachlorophenol	(4)	9.351(-0.000)	266	200609	55.615	1853.82			1
137) Phenanthrene	(4)	9.548(-0.000)	178	1953778	47.106	1570.21			0.1
138) Anthracene	(4)	9.597(-0.000)	178	2048102	47.972	1599.07			0.1
140) Carbazole	(4)	9.763(-0.000)	167	1957696	46.990	1566.34			0.5
142) Di-n-butylphthalate	(4)	10.151(-0.000)	149	2323051	47.260	1575.32			2
147) Fluoranthene	(4)	10.710(-0.000)	202	2213551	47.730	1590.99			0.1
154) Pyrene	(5)	10.925(0.000)	202	2331795	47.714	1590.47			0.1
161) Butylbenzylphthalate	(5)	11.608(0.000)	149	1019921	43.734	1457.78			2
164) 3,3'-Dichlorobenzidine	(5)	12.094(0.000)	252	448938	26.419	880.64			3
166) Benzo(a)anthracene	(5)	12.100(0.000)	228	2027460	44.979	1499.31			0.1
168) Chrysene	(5)	12.137(0.000)	228	1913662	44.033	1467.78			0.1
169) bis(2-Ethylhexyl)phthalate	(5)	12.198(0.000)	149	1437010	44.411	1480.37			2
170) Di-n-octylphthalate	(6)	12.844(0.000)	149	2493435	49.315	1643.84			2
172) Benzo(b)fluoranthene	(6)	13.157(-0.000)	252	2036730	49.793	1659.78			0.1
173) Benzo(k)fluoranthene	(6)	13.182(-0.000)	252	1967028	47.136	1571.22			0.1
174) Benzo(a)pyrene	(6)	13.459(-0.000)	252	1855352	46.474	1549.14			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.516(0.000)	276	1920447	45.214	1507.13			0.1
178) Dibenz(a,h)anthracene	(6)	14.535(0.000)	278	1635882	46.044	1534.80			0.1
179) Benzo(g,h,i)perylene	(6)	14.787(0.000)	276	1615725	44.652	1488.41			0.1

Total number of targets = 65

Digitally signed by Mark A. Clark on 11/18/2013 at 04:40. Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

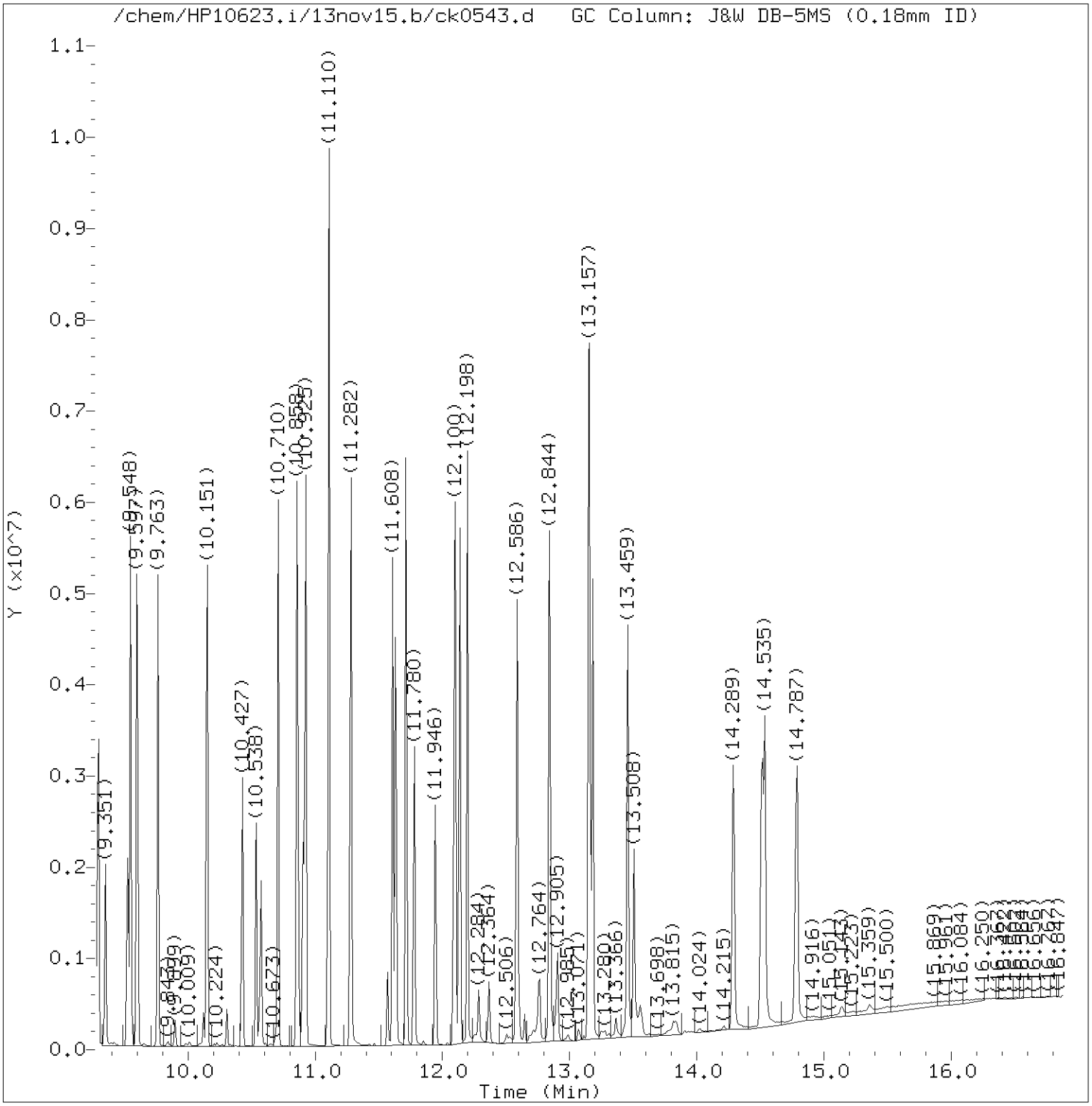
Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.836	112	1812828	186.173
12) Benzaldehyde	(1)	4.697	77	170379	27.768
15)$Phenol-d6	(1)	4.814	99	2554098	178.257
16) Phenol	(1)	4.826	94	733614	43.886
18) bis(2-Chloroethyl)ether	(1)	4.900	93	497758	41.943
19) 2-Chlorophenol	(1)	4.924	128	488260	46.822
21)*1,4-Dichlorobenzene-d4	(1)	5.133	152	130149	20.000
26) 2-Methylphenol	(1)	5.410	108	508326	45.817
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.429	45	555683	38.051
30) Acetophenone	(1)	5.539	105	688857	41.645
31) N-Nitroso-di-n-propylamine	(1)	5.551	70	422037	39.861
33) 4-Methylphenol	(1)	5.564	108	572027	43.559
37) Hexachloroethane	(1)	5.619	117	174288	42.642
38)$Nitrobenzene-d5	(2)	5.674	82	1069082	83.178
39) Nitrobenzene	(2)	5.693	77	577206	42.338
41) Isophorone	(2)	5.939	82	1085725	43.858
42) 2-Nitrophenol	(2)	6.006	139	233495	49.266
44) 2,4-Dimethylphenol	(2)	6.080	107	564460	46.336
46) bis(2-Chloroethoxy)methane	(2)	6.166	93	623998	41.484
49) 2,4-Dichlorophenol	(2)	6.252	162	428413	51.712
52)*Naphthalene-d8	(2)	6.369	136	596570	20.000
53) Naphthalene	(2)	6.394	128	1437805	45.425
56) 4-Chloroaniline	(2)	6.455	127	162259	11.764
60) Hexachlorobutadiene	(2)	6.529	225	202512	46.271
63) Caprolactam	(2)	6.830	113	211973	46.188
68) 4-Chloro-3-methylphenol	(2)	6.960	107	527429	49.797
70) 2-Methylnaphthalene	(2)	7.070	142	1003817	44.687
72) Hexachlorocyclopentadiene	(3)	7.236	237	457205	115.335
75) 2,4,6-Trichlorophenol	(3)	7.359	196	306389	51.187
77) 2,4,5-Trichlorophenol	(3)	7.396	196	343234	52.593
78)$2-Fluorobiphenyl	(3)	7.445	172	2194187	90.738
83) 1,1'-Biphenyl	(3)	7.537	154	1301708	43.686
84) 2-Chloronaphthalene	(3)	7.544	162	1155579M	53.243
89) 2-Nitroaniline	(3)	7.648	138	351888	49.698
92) Dimethylphthalate	(3)	7.851	163	1238612	47.962
94) 2,6-Dinitrotoluene	(3)	7.900	165	279907	52.039
95) Acenaphthylene	(3)	7.943	152	1705068	50.321
97) 3-Nitroaniline	(3)	8.054	138	280927	42.770
98)*Acenaphthene-d10	(3)	8.085	164	384587	20.000
99) Acenaphthene	(3)	8.115	153	1082316	46.153

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

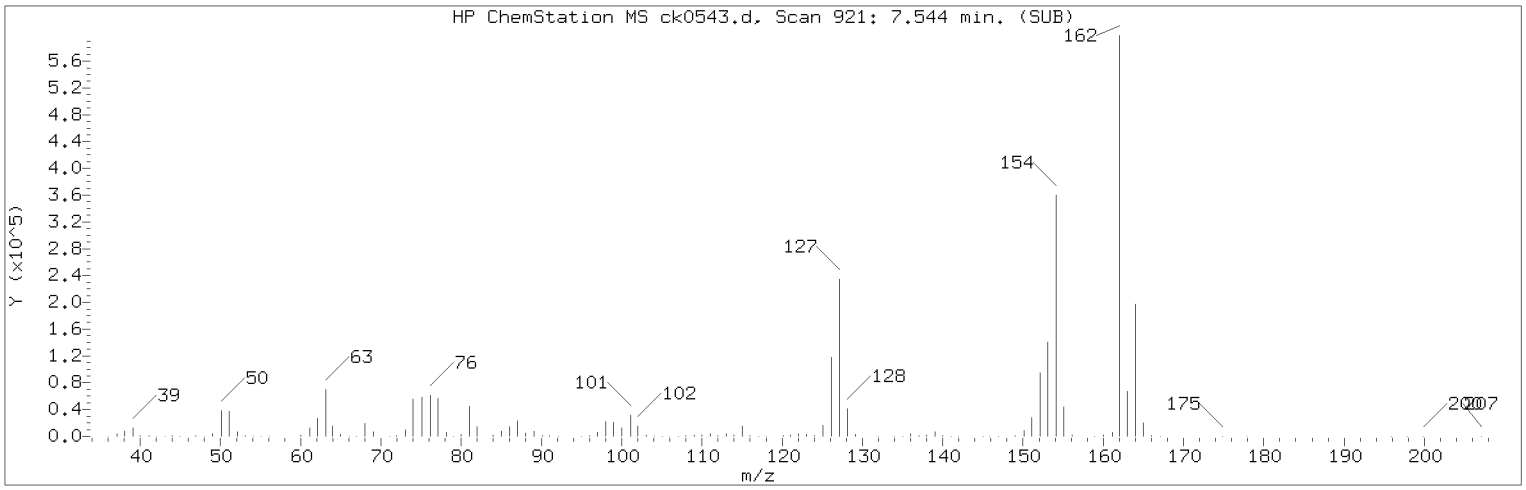
Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
100) 2,4-Dinitrophenol	(3)	8.165	184	240184	113.807
103) 4-Nitrophenol	(3)	8.245	109	170428	41.884
104) Dibenzofuran	(3)	8.288	168	1505255	46.859
105) 2,4-Dinitrotoluene	(3)	8.294	165	375367	54.004
109) Diethylphthalate	(3)	8.552	149	1282881	48.089
111) Fluorene	(3)	8.620	166	1304894	47.212
112) 4-Chlorophenyl-phenylether	(3)	8.632	204	589464	47.941
114) 4-Nitroaniline	(3)	8.650	138	249020	33.714
115) 4,6-Dinitro-2-methylphenol	(4)	8.687	198	172319	54.718
117) N-Nitrosodiphenylamine	(4)	8.755	169	1158386	48.452
119)$2,4,6-Tribromophenol	(3)	8.859	330	518677	223.328
125) 4-Bromophenyl-phenylether	(4)	9.105	248	330131	50.115
127) Hexachlorobenzene	(4)	9.155	284	316905	48.725
130) Atrazine	(4)	9.296	200	362479	47.324
131) Pentachlorophenol	(4)	9.351	266	200609	55.615
135)*Phenanthrene-d10	(4)	9.524	188	713310	20.000
137) Phenanthrene	(4)	9.548	178	1953778	47.106
138) Anthracene	(4)	9.597	178	2048102	47.972
140) Carbazole	(4)	9.763	167	1957696	46.990
142) Di-n-butylphthalate	(4)	10.151	149	2323051	47.260
147) Fluoranthene	(4)	10.710	202	2213551	47.730
167)*Pyrene-d10	(5)	10.907	212	880012	20.000
154) Pyrene	(5)	10.925	202	2331795	47.714
156)$Terphenyl-d14	(5)	11.110	244	3019569	95.983
161) Butylbenzylphthalate	(5)	11.608	149	1019921	43.734
164) 3,3'-Dichlorobenzidine	(5)	12.094	252	448938	26.419
166) Benzo(a)anthracene	(5)	12.100	228	2027460	44.979
168) Chrysene	(5)	12.137	228	1913662	44.033
169) bis(2-Ethylhexyl)phthalate	(5)	12.198	149	1437010	44.411
170) Di-n-octylphthalate	(6)	12.844	149	2493435	49.315
172) Benzo(b)fluoranthene	(6)	13.157	252	2036730	49.793
173) Benzo(k)fluoranthene	(6)	13.182	252	1967028	47.136
174) Benzo(a)pyrene	(6)	13.459	252	1855352	46.474
175)*Perylene-d12	(6)	13.508	264	669874	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.516	276	1920447	45.214
178) Dibenz(a,h)anthracene	(6)	14.535	278	1635882	46.044
179) Benzo(g,h,i)perylene	(6)	14.787	276	1615725	44.652

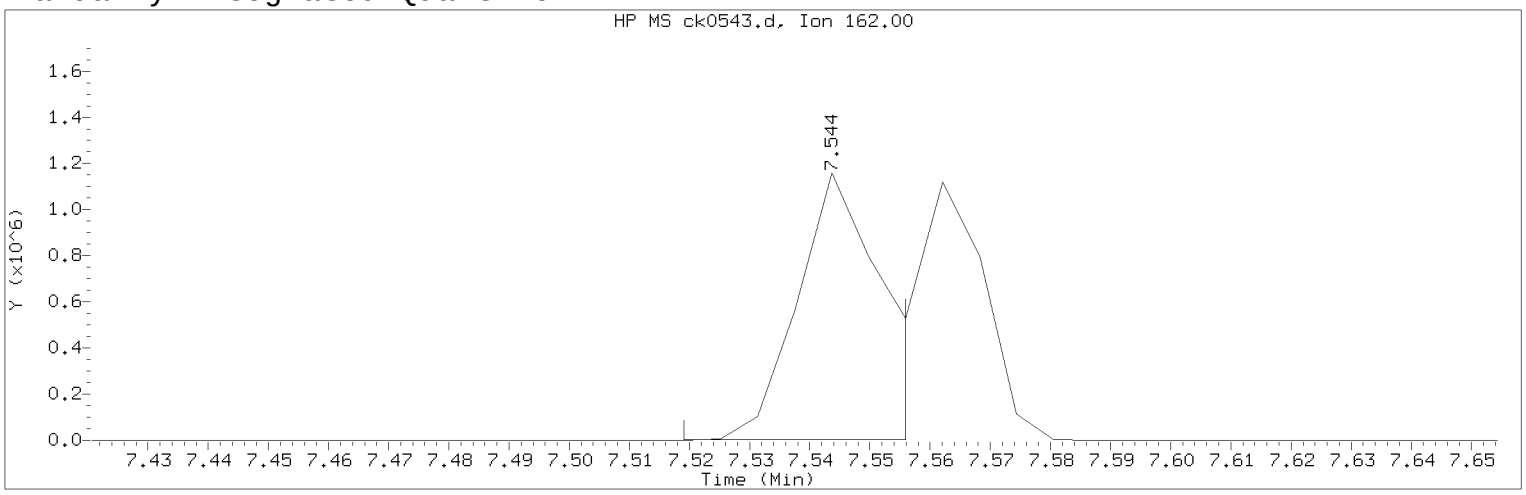
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:15 mac00013

Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

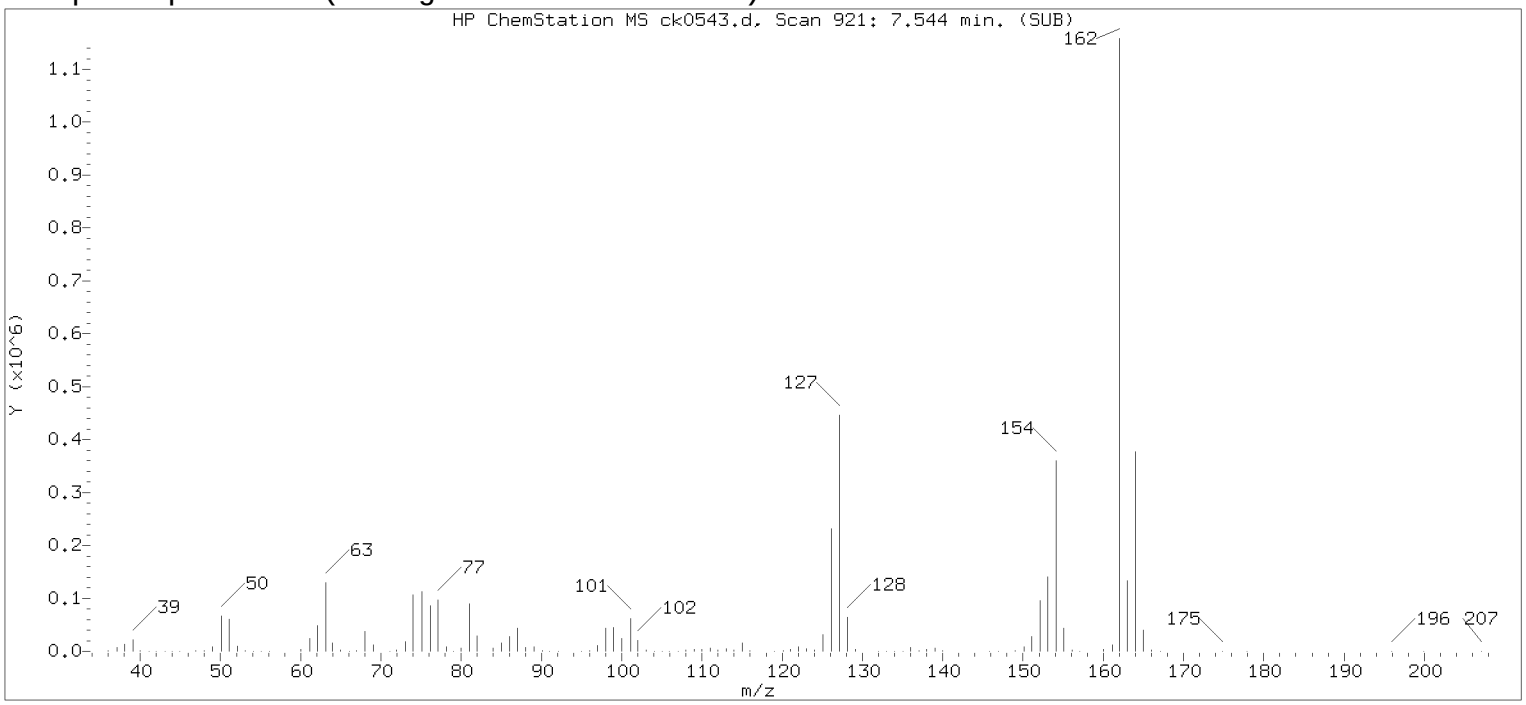
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 921
Retention Time (minutes) : 7.544
Quant Ion : 162.00
Area (flag) : 1155579M
On-Column Amount (ng/ul) : 53.2428
Integration start scan : 916 Integration stop scan: 922
Y at integration start : 2511 Y at integration end: 2511

Reason for manual integration: improper integration

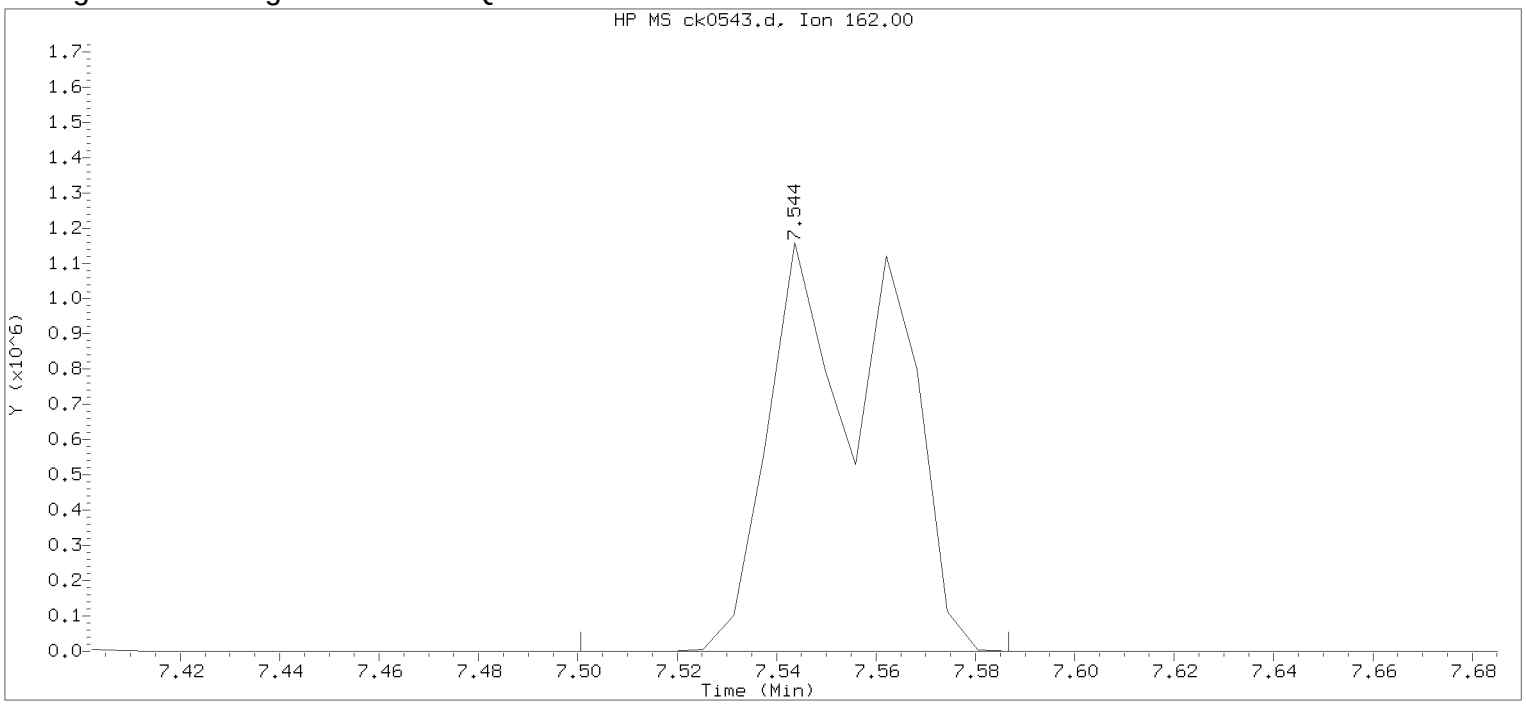
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013

Secondary review performed and digitally signed by Matthew E. Barton on 11/19/2013 at 09:20.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov15.b/ck0543.d Instrument ID: HP10623.i
Injection date and time: 15-NOV-2013 01:31 Analyst ID: mac00013

Method used: /chem/HP10623.i/13nov15.b/m8270.m Sublist used: SL1847mic
Calibration date and time: 16-NOV-2013 01:00
Date, time and analyst ID of latest file update: 18-Nov-2013 04:13 mac00013

Sample Name: 314LDLCS3 Lab Sample ID: 314LDLCS

Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 921
Retention Time (minutes) : 7.544
Quant Ion : 162.00
Area : 1912361
On-column Amount (ng/ul) : 88.1111
Integration start scan : 913 Integration stop scan: 927
Y at integration start : 191 Y at integration end: 255

Digitally signed by Mark A. Clark on 11/18/2013 at 04:40.
Target 3.5 esignature user ID: mac00013

316LCLCS3 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 316LCLCS

Data file: /chem/HP10623.i/13nov18.b/ck0623.d Injection date and time: **18-NOV-2013 06:38**
Data file Sample Info. Line: 316LCLCS3;316LCLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	107514 (8)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	479532 (4)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	297174 (3)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	531149 (0)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	638813 (-2)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	518634 (-10)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	913446	88.414	88%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.365(-0.001)	172	1831323	98.008	98%		69 - 120
156) Terphenyl-d14	(5)	11.018(-0.001)	244	2245602	98.333	98%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(0.000)	128	1247104	49.016	1633.88			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	846467	46.879	1562.65			0.1
71) 1-Methylnaphthalene	(2)	7.082(0.000)	142	833967	50.476	1682.53			0.1
95) Acenaphthylene	(3)	7.857(-0.000)	152	1390787	53.119	1770.63			0.1
99) Acenaphthene	(3)	8.029(0.000)	153	883188	48.740	1624.66			0.1
111) Fluorene	(3)	8.533(0.000)	166	1038357	48.619	1620.64			0.1
137) Phenanthrene	(4)	9.456(0.000)	178	1521537	49.266	1642.21			0.1
138) Anthracene	(4)	9.511(0.000)	178	1579078	49.671	1655.70			0.1
147) Fluoranthene	(4)	10.612(0.000)	202	1694450	49.067	1635.57			0.1
154) Pyrene	(5)	10.827(0.000)	202	1789999	50.457	1681.91			0.1
166) Benzo(a)anthracene	(5)	11.995(-0.000)	228	1548591	47.327	1577.57			0.1
168) Chrysene	(5)	12.032(0.000)	228	1533045	48.594	1619.81			0.1
172) Benzo(b)fluoranthene	(6)	13.040(-0.000)	252	1564412	49.399	1646.64			0.1
173) Benzo(k)fluoranthene	(6)	13.065(-0.000)	252	1607174	49.744	1658.14			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	1490851	48.234	1607.80			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.362(0.000)	276	1625115	49.418	1647.27			0.1
178) Dibenz(a,h)anthracene	(6)	14.387(-0.000)	278	1372305	49.889	1662.97			0.1
179) Benzo(g,h,i)perylene	(6)	14.621(-0.000)	276	1389303	49.591	1653.05			0.1

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10623.i/13nov18.b/ck0623.d Injection date and time: **18-NOV-2013 06:38**
Data file Sample Info. Line: 316LCLCS3;316LCLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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Total number of targets = 18

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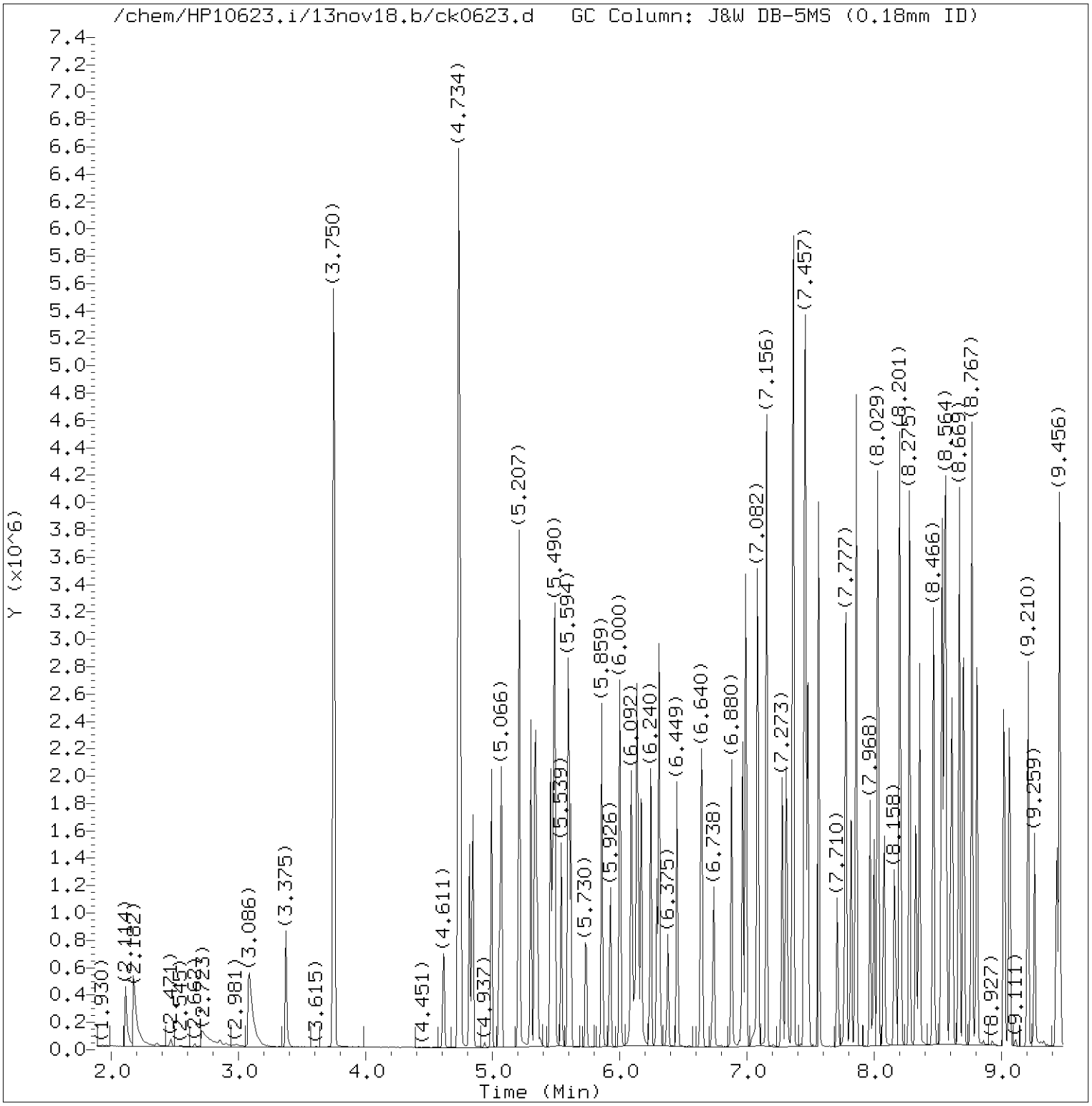
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:23. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

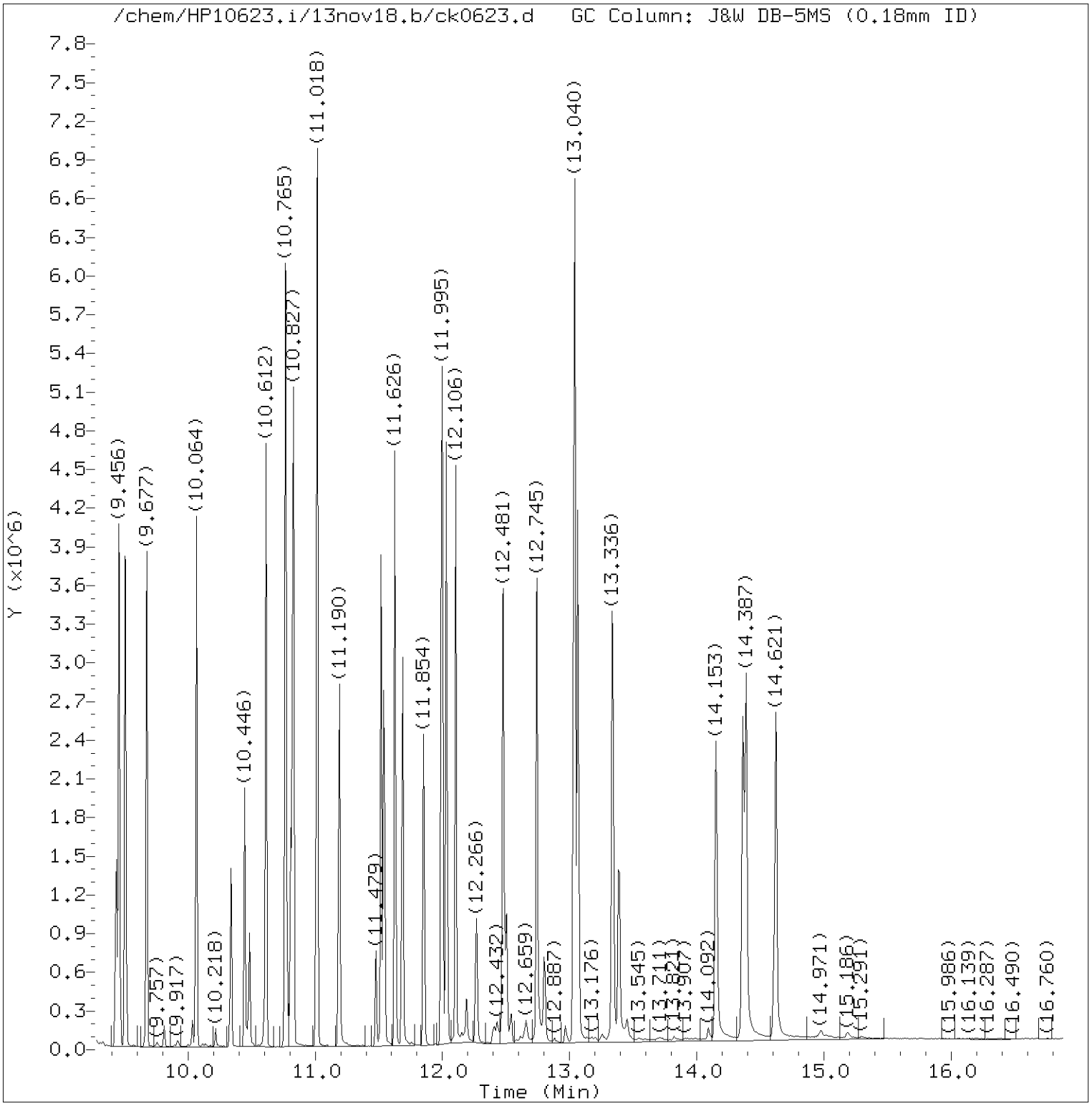
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	107514	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	913446	88.414
52)*Naphthalene-d8	(2)	6.289	136	479532	20.000
53) Naphthalene	(2)	6.308	128	1247104	49.016
70) 2-Methylnaphthalene	(2)	6.990	142	846467	46.879
71) 1-Methylnaphthalene	(2)	7.082	142	833967	50.476
78)$2-Fluorobiphenyl	(3)	7.365	172	1831323	98.008
95) Acenaphthylene	(3)	7.857	152	1390787	53.119
98)*Acenaphthene-d10	(3)	7.999	164	297174	20.000
99) Acenaphthene	(3)	8.029	153	883188	48.740
111) Fluorene	(3)	8.533	166	1038357	48.619
135)*Phenanthrene-d10	(4)	9.437	188	531149	20.000
137) Phenanthrene	(4)	9.456	178	1521537	49.266
138) Anthracene	(4)	9.511	178	1579078	49.671
147) Fluoranthene	(4)	10.612	202	1694450	49.067
167)*Pyrene-d10	(5)	10.808	212	638813	20.000
154) Pyrene	(5)	10.827	202	1789999	50.457
156)$Terphenyl-d14	(5)	11.018	244	2245602	98.333
166) Benzo(a)anthracene	(5)	11.995	228	1548591	47.327
168) Chrysene	(5)	12.032	228	1533045	48.594
172) Benzo(b)fluoranthene	(6)	13.040	252	1564412	49.399
173) Benzo(k)fluoranthene	(6)	13.065	252	1607174	49.744
174) Benzo(a)pyrene	(6)	13.336	252	1490851	48.234
175)*Perylene-d12	(6)	13.391	264	518634	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.362	276	1625115	49.418
178) Dibenz(a,h)anthracene	(6)	14.387	278	1372305	49.889
179) Benzo(g,h,i)perylene	(6)	14.621	276	1389303	49.591

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov11.b/dk0323.d Injection date and time: **11-NOV-2013 05:29**
Data file Sample Info. Line: 312WDLCS4;312WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.953(0.000)	792	152	122044 (-14)	5.00	
52) Naphthalene-d8	7.912(0.000)	1128	136	460480 (-16)	5.00	
92) Acenaphthene-d10	10.715(0.000)	1609	164	276053 (-15)	5.00	
130) Phenanthrene-d10	12.615(0.006)	1935	188	471129 (-18)	5.00	
145) Pyrene-d10	14.556(0.006)	2268	212	628484 (-15)	5.00	
172) Perylene-d12	19.021(0.006)	3034	264	467828 (-16)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	4.024(-0.004)	112	1335126	36.844	74%		10 - 107
13) Phenol-d6	(1)	5.440(-0.001)	99	1341554	26.957	54%		10 - 83
36) Nitrobenzene-d5	(2)	6.798(0.001)	82	993939	23.454	94%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.672(0.000)	172	1759376	25.522	102%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.782(0.000)	330	458409	63.225	126%		22 - 150
149) Terphenyl-d14	(5)	14.877(0.000)	244	2237951	28.554	114%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.300(-0.000)	77	292213	8.393	33.57			0.3
14) Phenol	(1)	5.458(-0.000)	94	383353	6.654	26.62			0.1
16) bis(2-Chloroethyl)ether	(1)	5.586(0.000)	93	488919	10.755	43.02			0.1
17) 2-Chlorophenol	(1)	5.632(-0.000)	128	410416	11.517	46.07			0.1
18) 1,3-Dichlorobenzene	(1)	5.860(-0.000)	146	434616	11.339	45.35			0.1
20) 1,4-Dichlorobenzene	(1)	5.976(0.000)	146	442085	11.402	45.61			0.1
23) Benzyl alcohol	(1)	6.186(-0.000)	108	267555	10.615	42.46			1
24) 1,2-Dichlorobenzene	(1)	6.198(0.000)	146	407870	11.247	44.99			0.1
26) 2-Methylphenol	(1)	6.373(-0.000)	108	390770	10.927	43.71			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.408(0.000)	45	514964	9.127	36.51			0.1
30) Acetophenone	(1)	6.583(0.000)	105	617976	11.051	44.20			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.606(0.000)	70	337402	10.483	41.93			0.1
33) 4-Methylphenol	(1)	6.618(0.000)	108	409331	10.245	40.98			0.1
35) Hexachloroethane	(1)	6.717(0.000)	117	175550	10.712	42.85			0.3
37) Nitrobenzene	(2)	6.827(0.000)	77	508310	11.301	45.20			0.1
40) Isophorone	(2)	7.218(-0.000)	82	885205	11.547	46.19			0.1
42) 2-Nitrophenol	(2)	7.323(-0.000)	139	204911	13.277	53.11			0.1
45) 2,4-Dimethylphenol	(2)	7.439(-0.000)	107	441621	11.775	47.10			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.591(-0.000)	93	541289	10.819	43.28			0.1
49) 2,4-Dichlorophenol	(2)	7.708(-0.000)	162	338745	12.805	51.22			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.836(-0.000)	180	370227	12.528	50.11			0.1
53) Naphthalene	(2)	7.946(0.000)	128	1169724	11.915	47.66			0.03
55) 4-Chloroaniline	(2)	8.051(0.000)	127	404981	9.955	39.82			0.1
58) Hexachlorobutadiene	(2)	8.174(0.000)	225	226880	13.170	52.68			0.1
61) Caprolactam	(2)	8.588(0.002)	113	53569	4.539	18.16			1
63) 4-Chloro-3-methylphenol	(2)	8.867(0.000)	107	383538	12.074	48.30			0.1
65) 2-Methylnaphthalene	(2)	9.054(0.000)	142	758193	11.588	46.35			0.03

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Data file: /chem/HP19760.i/13nov11.b/dk0323.d Injection date and time: **11-NOV-2013 05:29**
Data file Sample Info. Line: 312WDLCS4;312WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.322(-0.000)	237	358622	23.750	95.00			1
70) 2,4,6-Trichlorophenol	(3)	9.520(0.000)	196	255515	12.658	50.63			0.1
71) 2,4,5-Trichlorophenol	(3)	9.573(0.000)	196	272091	13.045	52.18			0.1
75) 1,1'-Biphenyl	(3)	9.818(0.000)	154	941489	11.745	46.98			0.1
76) 2-Chloronaphthalene	(3)	9.829(-0.000)	162	728208	11.842	47.37			0.1
83) 2-Nitroaniline	(3)	10.010(0.000)	138	251482	13.130	52.52			0.1
86) Dimethylphthalate	(3)	10.354(-0.000)	163	789436	11.352	45.41			0.5
88) 2,6-Dinitrotoluene	(3)	10.430(-0.000)	165	204950	13.299	53.20			0.1
90) Acenaphthylene	(3)	10.482(-0.000)	152	1209040	12.952	51.81			0.03
91) 3-Nitroaniline	(3)	10.674(-0.000)	138	196669	11.118	44.47			0.1
93) Acenaphthene	(3)	10.768(0.000)	153	755907	11.771	47.09			0.03
94) 2,4-Dinitrophenol	(3)	10.843(0.000)	184	172482	19.767	79.07			3
96) 4-Nitrophenol	(3)	10.977(0.000)	109	79404	7.038	28.15			3
97) Dibenzofuran	(3)	11.024(0.000)	168	1102225	12.070	48.28			0.1
98) 2,4-Dinitrotoluene	(3)	11.042(0.000)	165	264398	13.388	53.55			0.3
102) Diethylphthalate	(3)	11.409(0.000)	149	796868	11.630	46.52			0.5
103) Fluorene	(3)	11.484(0.000)	166	888713	12.090	48.36			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.519(0.000)	204	453383	12.437	49.75			0.1
107) 4-Nitroaniline	(3)	11.525(0.000)	138	190934	10.493	41.97			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.572(0.000)	198	130089	11.074	44.29			1
109) N-Nitrosodiphenylamine	(4)	11.665(-0.000)	169	722852	12.325	49.30			0.1
120) 4-Bromophenyl-phenylether	(4)	12.096(-0.000)	248	240110	12.916	51.66			0.1
122) Hexachlorobenzene	(4)	12.143(-0.000)	284	245003	13.330	53.32			0.03
124) Atrazine	(4)	12.330(-0.000)	200	256824	13.450	53.80			0.5
125) Pentachlorophenol	(4)	12.394(0.000)	266	137647	10.023	40.09			0.3
131) Phenanthrene	(4)	12.644(-0.000)	178	1255036	11.944	47.78			0.03
134) Anthracene	(4)	12.708(-0.000)	178	1291806	12.330	49.32			0.03
135) Carbazole	(4)	12.930(-0.000)	167	1258687	12.414	49.66			0.1
137) Di-n-butylphthalate	(4)	13.437(-0.000)	149	1451327	12.086	48.34			0.5
142) Fluoranthene	(4)	14.253(-0.000)	202	1546612	13.085	52.34			0.03
146) Pyrene	(5)	14.591(-0.000)	202	1588987	11.908	47.63			0.03
153) Butylbenzylphthalate	(5)	15.728(-0.000)	149	658382	11.593	46.37			0.5
158) Benzo(a)anthracene	(5)	16.573(-0.000)	228	1436363	12.687	50.75			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.573(-0.000)	252	360545	8.817	35.27			0.5
161) Chrysene	(5)	16.631(-0.000)	228	1382979	12.421	49.68			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.794(-0.000)	149	886818	11.872	47.49			0.5
166) Di-n-octylphthalate	(6)	17.948(-0.000)	149	1500445	10.946	43.79			0.5
168) Benzo(b)fluoranthene	(6)	18.415(0.000)	252	1341600	12.174	48.70			0.03
170) Benzo(k)fluoranthene	(6)	18.461(0.000)	252	1389224	12.499	50.00			0.03
171) Benzo(a)pyrene	(6)	18.934(0.000)	252	1239906	12.258	49.03			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.618(-0.000)	276	1120561	12.629	50.52			0.03
177) Dibenz(a,h)anthracene	(6)	20.659(-0.000)	278	998958	13.295	53.18			0.03
178) Benzo(g,h,i)perylene	(6)	20.979(-0.000)	276	912194	12.196	48.79			0.03

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:16. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov11.b/dk0323.d Injection date and time: **11-NOV-2013 05:29**
Data file Sample Info. Line: 312WDLCS4;312WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13312WAD**
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov11.b/dk0322.d**

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: **312WAD**
Calibration date and time (Last Method Edit): 11-NOV-2013 05:30
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov11.b/dk0321.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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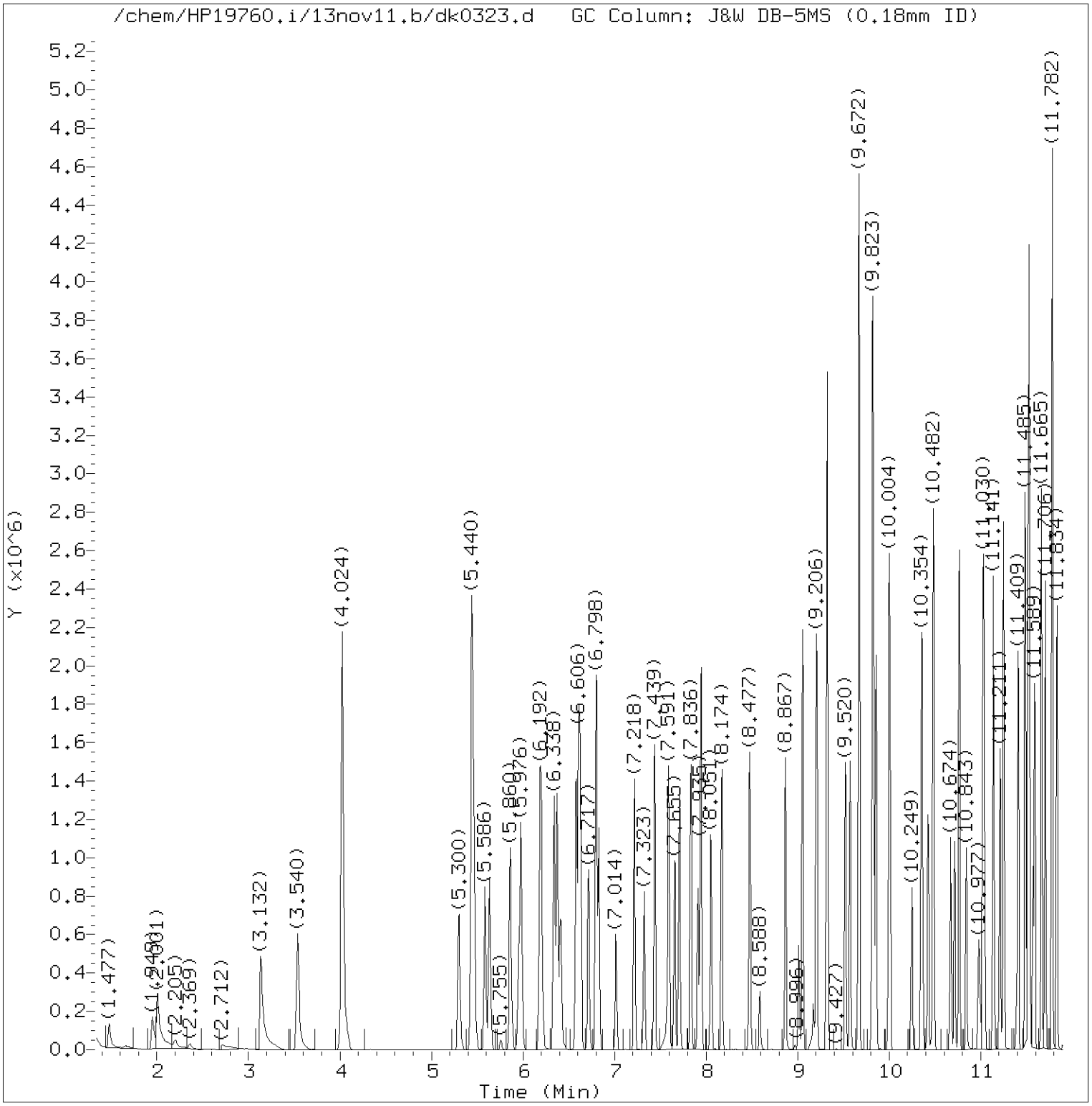
Total number of targets = 70

Digitally signed by Joseph M. Gambler on 11/11/2013 at 09:16. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Matthew E. Barton on 11/12/2013 at 10:57. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

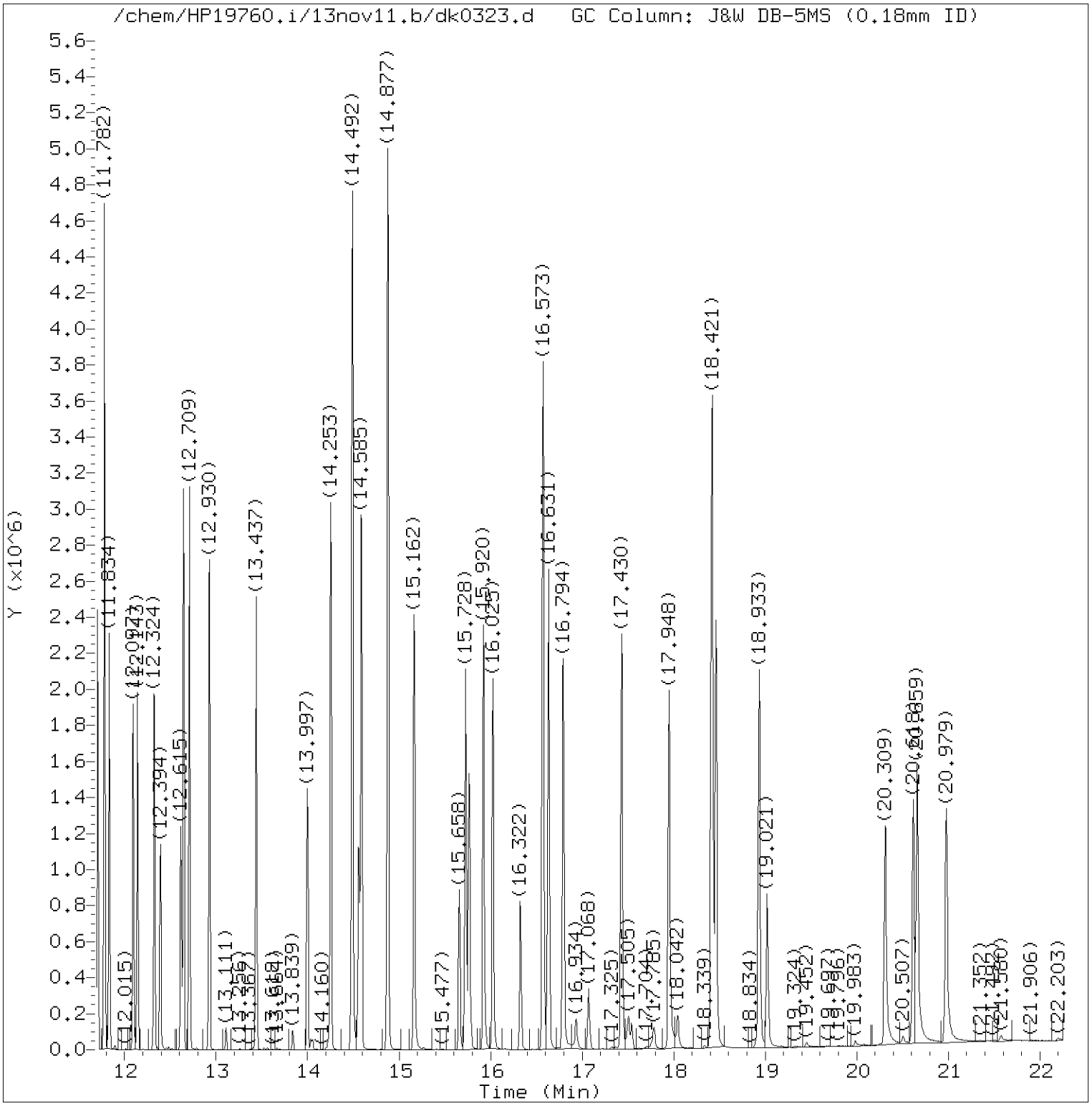
Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0323.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Sample Name: 312WDLCS4 Lab Sample ID: 312WDLCS

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:16.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0323.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Sample Name: 312WDLCS4 Lab Sample ID: 312WDLCS

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0323.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Sample Name: 312WDLCS4 Lab Sample ID: 312WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.024	112	1335126	36.844
11) Benzaldehyde	(1)	5.300	77	292213	8.393
13)$Phenol-d6	(1)	5.440	99	1341554	26.957
14) Phenol	(1)	5.458	94	383353	6.654
16) bis(2-Chloroethyl)ether	(1)	5.586	93	488919	10.755
17) 2-Chlorophenol	(1)	5.633	128	410416	11.517
18) 1,3-Dichlorobenzene	(1)	5.860	146	434616	11.339
19)*1,4-Dichlorobenzene-d4	(1)	5.953	152	122044	5.000
20) 1,4-Dichlorobenzene	(1)	5.976	146	442085	11.402
23) Benzyl alcohol	(1)	6.186	108	267555	10.615
24) 1,2-Dichlorobenzene	(1)	6.198	146	407870	11.247
26) 2-Methylphenol	(1)	6.373	108	390770	10.927
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.408	45	514964	9.127
30) Acetophenone	(1)	6.583	105	617976	11.051
31) N-Nitroso-di-n-propylamine	(1)	6.606	70	337402	10.483
33) 4-Methylphenol	(1)	6.618	108	409331	10.245
35) Hexachloroethane	(1)	6.717	117	175550	10.712
36)$Nitrobenzene-d5	(2)	6.798	82	993939	23.454
37) Nitrobenzene	(2)	6.827	77	508310	11.301
40) Isophorone	(2)	7.218	82	885205	11.547
42) 2-Nitrophenol	(2)	7.323	139	204911	13.277
45) 2,4-Dimethylphenol	(2)	7.439	107	441621	11.775
48) bis(2-Chloroethoxy)methane	(2)	7.591	93	541289	10.819
49) 2,4-Dichlorophenol	(2)	7.708	162	338745	12.805
51) 1,2,4-Trichlorobenzene	(2)	7.836	180	370227	12.528
52)*Naphthalene-d8	(2)	7.912	136	460480	5.000
53) Naphthalene	(2)	7.947	128	1169724	11.915
55) 4-Chloroaniline	(2)	8.051	127	404981	9.955
58) Hexachlorobutadiene	(2)	8.174	225	226880	13.170
61) Caprolactam	(2)	8.588	113	53569	4.539
63) 4-Chloro-3-methylphenol	(2)	8.867	107	383538	12.074
65) 2-Methylnaphthalene	(2)	9.054	142	758193	11.588
67) Hexachlorocyclopentadiene	(3)	9.322	237	358622	23.750
70) 2,4,6-Trichlorophenol	(3)	9.520	196	255515	12.658
71) 2,4,5-Trichlorophenol	(3)	9.573	196	272091	13.045
72)$2-Fluorobiphenyl	(3)	9.672	172	1759376	25.522
75) 1,1'-Biphenyl	(3)	9.818	154	941489	11.745
76) 2-Chloronaphthalene	(3)	9.829	162	728208	11.842
83) 2-Nitroaniline	(3)	10.010	138	251482	13.130
86) Dimethylphthalate	(3)	10.354	163	789436	11.352

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0323.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Sample Name: 312WDLCS4 Lab Sample ID: 312WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
88) 2,6-Dinitrotoluene	(3)	10.430	165	204950	13.299
90) Acenaphthylene	(3)	10.482	152	1209040	12.952
91) 3-Nitroaniline	(3)	10.674	138	196669	11.118
92)*Acenaphthene-d10	(3)	10.715	164	276053	5.000
93) Acenaphthene	(3)	10.768	153	755907	11.771
94) 2,4-Dinitrophenol	(3)	10.843	184	172482	19.767
96) 4-Nitrophenol	(3)	10.977	109	79404	7.038
97) Dibenzofuran	(3)	11.024	168	1102225	12.070
98) 2,4-Dinitrotoluene	(3)	11.042	165	264398	13.388
102) Diethylphthalate	(3)	11.409	149	796868	11.630
103) Fluorene	(3)	11.485	166	888713	12.090
105) 4-Chlorophenyl-phenylether	(3)	11.519	204	453383	12.437
107) 4-Nitroaniline	(3)	11.525	138	190934	10.493
108) 4,6-Dinitro-2-methylphenol	(4)	11.572	198	130089	11.074
109) N-Nitrosodiphenylamine	(4)	11.665	169	722852	12.325
112)$2,4,6-Tribromophenol	(3)	11.782	330	458409	63.225
120) 4-Bromophenyl-phenylether	(4)	12.097	248	240110	12.916
122) Hexachlorobenzene	(4)	12.143	284	245003	13.330
124) Atrazine	(4)	12.330	200	256824	13.450
125) Pentachlorophenol	(4)	12.394	266	137647	10.023
130)*Phenanthrene-d10	(4)	12.615	188	471129	5.000
131) Phenanthrene	(4)	12.644	178	1255036	11.944
134) Anthracene	(4)	12.709	178	1291806	12.330
135) Carbazole	(4)	12.930	167	1258687	12.414
137) Di-n-butylphthalate	(4)	13.437	149	1451327	12.086
142) Fluoranthene	(4)	14.253	202	1546612	13.085
145)*Pyrene-d10	(5)	14.556	212	628484	5.000
146) Pyrene	(5)	14.591	202	1588987	11.908
149)$Terphenyl-d14	(5)	14.877	244	2237951	28.554
153) Butylbenzylphthalate	(5)	15.728	149	658382	11.593
159) 3,3'-Dichlorobenzidine	(5)	16.573	252	360545	8.817
158) Benzo(a)anthracene	(5)	16.573	228	1436363	12.687
161) Chrysene	(5)	16.631	228	1382979	12.421
162) bis(2-Ethylhexyl)phthalate	(5)	16.794	149	886818	11.872
166) Di-n-octylphthalate	(6)	17.948	149	1500445	10.946
168) Benzo(b)fluoranthene	(6)	18.415	252	1341600	12.174
170) Benzo(k)fluoranthene	(6)	18.461	252	1389224	12.499
171) Benzo(a)pyrene	(6)	18.933	252	1239906	12.258
172)*Perylene-d12	(6)	19.021	264	467828	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.618	276	1120561	12.629

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:16.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov11.b/dk0323.d Instrument ID: HP19760.i
Injection date and time: 11-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov11.b/8270_LVI.m Sublist used: 312WAD
Calibration date and time: 11-NOV-2013 05:30
Date, time and analyst ID of latest file update: 11-Nov-2013 09:10 jmg00346

Sample Name: 312WDLCS4 Lab Sample ID: 312WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
177) Dibenz(a,h)anthracene	(6)	20.659	278	998958	13.295
178) Benzo(g,h,i)perylene	(6)	20.979	276	912194	12.196

Digitally signed by Joseph M. Gambler
on 11/11/2013 at 09:16.
Target 3.5 esignature user ID: jmg00346

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 2991 William Saadeh Reviewed by: [illegible] 11-13-13 Start Date: 11-7-13 Start time: 10:00

13310SLF026

Tech 1: DS 2894 Tech 2: WHS 2991

Dept: 26	Prep Analysis: 10814 BNA Soil Microwave PAH							PAH 8270 (microwave)			
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7262294MSD	GAAV1MSD	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	34A	Rocky brown soil
7262294MS	GAAV1MS	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	34A	↓ ↓
BLANKA	SBLKLF310	30.0	~~SS1330326A~~	1.0			1	Z	Z	Z	Narson
LCSA	310LFLCS	30.0	~~SS1330326A~~	1.0	MS1330526A	1.0	1	Z	Z	Z	↓ ↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185103113B
Methylene Chloride	60309
Sodium Sulfate	13309A

~~SS1330326A~~ Surrogate # changed to SS1330826A WHS 2991 11/7/13

Spike Solutions: Witness: N/A
MS1330526A LCS SPIKE MIX
~~SS1330326A~~ BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7262294	GAAV1	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
2 7262296	GAAV2	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Brown clay-like soil	10724	7600	11/13/2013	P
3 7262298	GAAV3	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
4 7262300	GAAV4	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Brown clay	10724	7600	11/13/2013	P
5 7262302	GAAV5	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	Rocky brown soil	10724	7600	11/13/2013	P
6 7262304	GAAV6	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
7 7262306	GAAV7	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
8 7262308	GAAV8	30.0	~~SS1330326A~~	1.0	1	Z	Z	34A	↓ ↓	10724	7600	11/13/2013	P
9 7263054	PHERC	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black Sludge	10724	4677	11/14/2013	N
10 7263055	OHERC	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ ↓	10724	4677	11/14/2013	N
11 7265225	R2041	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Brown wet sludge/foul odor	10724	4677	11/15/2013	N
12 7265226	R2042	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ ↓	10724	4677	11/15/2013	N
13 7265227	R2043	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black dry sludge	10724	4677	11/15/2013	N
14 7265234	R2E16	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Black gritty sludge	10724	4677	11/15/2013	N
15 7265241	2F142	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	Brown wet sludge	10724	4677	11/15/2013	N
16 7265242	R2121	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓ /foul odor	10724	4677	11/15/2013	N
17 7265244	R2123	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓	10724	4677	11/15/2013	N
18 7265245	2D141	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓	10724	4677	11/15/2013	N
19 7265246	DUPX1	5.0	~~SS1330326A~~	1.0	1	Z	Z	20A	↓	10724	4677	11/15/2013	N

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Rack ID:		Work Station	Micro
Internal Standard	4395318	Balance #	17609

S-bath ID	3	87°C	S-bath ID	C	N-Evap	C	M-vap	C	13310SLF026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 3583 Seth Farrier

Reviewed by: SMO 11-11-13 Start Date: 11/9/2013 Start time: 1630

13312WAD026

Tech 1: ~~SAF3583~~ Tech 2: NA

Dept: 26 Prep Analysis: 00813 BNA Water Extraction TCL SW846 Semivolatiles/Waters

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
7265231MS	R2163	244	SS1330426A	1.0	~~MS1329726A~~ ③	1.0	1	✓	✓	153A	CLEAR YELLOW
7265232MSD	R2163	245	SS1330426A	1.0	~~MS1329726A~~ ③	1.0	1	✓	✓	153A	" "
BLANKA	SBLKWD312	230	SS1330426A	1.0			1	✓	✓	Z	TAP H_2O
LCSA	312WDLCS	250	SS1330426A	1.0	~~MS1329726A~~ ③	1.0	1	✓	✓	Z	" "

Solvent Used	Lot No.
10N NaOH	121122
Methylene Chloride	60309
Sodium Sulfate	13311A
Sulfuric Acid	132553

③ SAF3583 11/9/13 MS1330582WA NEW SPIKE #

Spike Solutions: ~~MS1329726A~~ MINI SEP. LCS SPIKE

SS1330426A MINI SEP. BNA SURROGATE

Witness: NA

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 7264723 R	EW52-	241	SS1330426A	1.0	1	✓	✓	153B	CLOUDY BLACK CENT. 6X	04678	155	11/08/2013	S
2 7264727 R	E32--	240	SS1330426A	1.0	1	✓	✓	153B	YELLOW CENT. 3X	04678	155	11/08/2013	S
3 7264728 R	SS-30	245	SS1330426A	1.0	1	✓	✓	153B	BLACK	04678	155	11/08/2013	S
4 7265142	091BX	244	SS1330426A	1.0	1	✓	✓	153A	TAN	04678	2272	11/15/2013	N
5 7265217	325A8	228	SS1330426A	1.0	1	✓	✓	153A	CLEAR YELLOW	04678	2272	11/15/2013	P
6 7265218	324A8	207	SS1330426A	1.0	1	✓	✓	153A	CLOUDY ORANGE	04678	2272	11/15/2013	P
7 7265219	323A9	228	SS1330426A	1.0	1	✓	✓	153A	CLEAR YELLOW	04678	2272	11/15/2013	P
8 7265220	D1151	212	SS1330426A	1.0	1	✓	✓	153A	↓	04678	2272	11/15/2013	P
9 7265221	F1151	239	SS1330426A	1.0	1	✓	✓	153A	COLORLESS	04678	2272	11/15/2013	P
10 7265223	R2N51	234	SS1330426A	1.0	1	✓	✓	153A	BROWN CENT. 3X	04678	2272	11/15/2013	N
11 7265224	R2N52	240	SS1330426A	1.0	1	✓	✓	153A	↓	04678	2272	11/15/2013	N
12 7265228	R2M61	245	SS1330426A	1.0	1	✓	✓	153A	YELLOW	04678	2272	11/15/2013	N
13 7265230BKG	R2163	243	SS1330426A	1.0	1	✓	✓	153A		04678	2272	11/15/2013	N
14 7265235	E2161	244	SS1330426A	1.0	1	✓	✓	153A		04678	2272	11/15/2013	N
15 7265238	R2141	245	SS1330426A	1.0	1	✓	✓	153A		04678	2272	11/15/2013	N
16 7265240	R2142	241	SS1330426A	1.0	1	✓	✓	153A		04678	2272	11/15/2013	N
17 7265243	R2122	240	SS1330426A	1.0	1	✓	✓	153A		04678	2272	11/15/2013	N
18 7265247	FBX01	238	SS1330426A	1.0	1	✓	✓	153A	COLORLESS	04678	2272	11/15/2013	N
19 7265248	FBX02	237	SS1330426A	1.0	1	✓	✓	153A	↓	04678	2272	11/15/2013	N
20 7265741	NAS-E	241	SS1330426A	1.0	1	✓	✓	153A	YELLOW	04678	1013	11/15/2013	P

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Rack ID:		Work Station	H20 BKPL44
Internal Standard	IST03105	Balance #	15461

S-bath ID 1	68 C	S-bath ID 10	68 C	N-Evap — C	M-vap — C	13312WAD026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2894 David Schrum Reviewed by: mre (3) 11/15/13 Start Date: 11-12-13 Start time: 9:30

13314SLD026

Tech 1: DB ~~JSA~~ 2894 Tech 2: _____

(3) DB 2894 11-12-13

Dept: 26	Prep Analysis: 10809 BNA Soil Microwave										TCL 8270 (microwave)
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7265020MSD	LDEN2MSD	30.0	~~SS1330826A~~ (8)	1.0	MS1330526A	1.0	1.0	Z	Z	36A	Rich brown soil
7265020MS	LDEN2MS	30.0	~~SS1330826A~~ (8)	1.0	MS1330526A	1.0	1.0	Z	Z	36A	↓ ↓
BLANKA	SBLKLD314	30.0	~~SS1330826A~~ (8)	1.0			1.0	Z	Z	7	Nasson
LCSA	314LDLCS	30.0	~~SS1330826A~~ (8)	1.0	MS1330526A	1.0	1.0	Z	Z	2	↓ ↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185110713A
Methylene Chloride	60310
Sodium Sulfate	13312A

(8) DB 2894 11-12-13
SS1331226A
~~SS13~~ (3) DB 2894 11-12-13

Spike Solutions: Witness: N/A
MS1330526A LCS SPIKE MIX
~~SS1330826A~~ BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7265020	LDEN2	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A	Rich brown soil	10727	1847	11/14/2013	P
2 7265022	LDEN4	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
3 7265024	LDEN6	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
4 7265026	LDEN8	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
5 7265028	LDE10	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
6 7265030	LDE12	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
7 7265032	LDE14	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
8 7265034	LDE16	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
9 7265036	LDE18	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
10 7265038	LDE20	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
11 7265040	LDE22	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	36A		10727	1847	11/14/2013	P
12 7265229	R2M71	10.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A	wet muddy gritty soil	10727	1847	11/15/2013	N
13 7265236	2E161	10.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A		10727	1847	11/15/2013	N
14 7265237	2E16D	10.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A		10727	1847	11/15/2013	N
15 7266676	999C3	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	34A	Brown soil	10727	1847	11/18/2013	N
16 7266677	999G4	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	34A	wet Red clay-like soil	10727	1847	11/18/2013	N
17 7266678	013D1	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A	Red clay	10727	1847	11/18/2013	N
18 7266679	013G4	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A	Tan/green clay	10727	1847	11/18/2013	N
19 7266681	001D1	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A	Red clay/strong fuel odor	10727	1847	11/18/2013	N
20 7266682	001G3	30.0	~~SS1330826A~~ (8)	1.0	1.0	Z	Z	20A	Tan/green clay	10727	1847	11/18/2013	N

N/A DB 2894 11-12-13

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Rack ID:		Work Station	Micro
Internal Standard	LB993/8	Balance #	17609

S-bath ID	3	85°C	S-bath ID	C	N-Evap	C	M-vap	C	13314SLD026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2807 Nicholas Shroyer Reviewed by: SMG 11-18-2013 Start Date: 11-12-13 Start time: 18:45

13316SLC026

Tech 1: NS2807 Tech 2:

Dept: 26	Prep Analysis: 10814 BNA Soil Microwave PAH								PAH 8270 (microwave)		
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266815MS *	2E101	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	brown med
7266816MSD *	2E101	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	↓ ↓
BLANKA	SBLKLC316	30.0	SS1331226A	1.0	—	—	1.0	Z	Z	—	Na_2SO_4
LCSA	316LCLCS	30.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	—	↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185110713A
Methylene Chloride	60310
Sodium Sulfate	13316A

Spike Solutions: Witness:
MS1330526A LCS SPIKE MIX
SS1331226A BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7259331	PAYN7	30.0	SS1331226A	1.0	1.0	Z	Z	20A	brown dirt	10724	1850	11/19/2013	P
* 2 7265239 *	R2F14	15.0	SS1331226A	↓	1.0	Z	Z	20A	brown med	10724	4677	11/19/2013	N
3 7266809 *	2E131	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 4 7266812 *	2C126	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 5 7266813 *	2C111	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 6 7266814BKG *	2E101	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 7 7266818 *	2E102	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
8 7270464 *	51931	15.0	SS1331226A		1.0	Z	Z	20A	wet brown sand + dirt	10724	7600	11/20/2013	P
9 7270465	51932	30.0	SS1331226A		1.0	Z	Z	20A	beige sand	10724	7600	11/20/2013	P
10 7270466	51933	30.0	SS1331226A		1.0	Z	Z	20A	brown dirt + sand	10724	7600	11/20/2013	P
11 7270467	51934	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
12 7270468	51935	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
13 7270469	51936	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
14 7270470 *	51937	15.0	SS1331226A		1.0	Z	Z	20A	wet brown sand + dirt	10724	7600	11/20/2013	P
15 7270471 *	51938	15.0	SS1331226A		1.0	Z	Z	20A	↓ ↓	10724	7600	11/20/2013	P
16 7270472	51939	30.0	SS1331226A	↓	1.0	Z	Z	20A	brown dirt + sand	10724	7600	11/20/2013	P

* Reduced due to poor sample matrix. NS2807 11-12-13

N/A NS2807 11-12-13

Rack ID:		Work Station	Micro
Internal Standard	43995318	Balance #	17609

S-bath ID 13	87° C	S-bath ID	C	N-Evap	C	M-vap	C	13316SLC026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Explosives Data

Case Narrative/Conformance Summary

Explosives

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Pesticide Residue Analysis

Fraction: Explosives

Nitroaromatics/Amines in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7265223	SW-R2-N-5-1	X		1	
7265224	SW-R2-N-5-2	X		1	
7265225	SD-R2-0-4-1		X	1	
7265226	SD-R2-0-4-2		X	1	
7265227	SD-R2-0-4-3		X	1	
7265228	SW-R2-M-6-1	X		1	
7265229	SD-R2-M-7-01D		X	1	
7265230	SW-R2-E-16-3	X		1	Unspiked
7265231	SW-R2-E-16-3_MS	X		1	Matrix Spike
7265232	SW-R2-E-16-3_MSD	X		1	Matrix Spike Duplicate
7265234	SD-R2-E16-3		X	1	
7265235	SW-R2-E-16-1	X		1	
7265236	SD-R2-E-16-1		X	1	
7265237	SD-R2-E-16-1D		X	1	
7265238	SW-R2-F-14-1	X		1	
7265239	SD-R2-F-14-1		X	1	
7265240	SW-R2-F-14-2	X		1	
7265241	SD-R2-F-14-2		X	1	
7265242	SD-R2-G-12-1		X	1	
7265243	SW-R2-G-12-2	X		1	
7265244	SD-R2-G-12-3		X	1	
7265245	SD-R2-D-14-1		X	1	
7265246	DUP-02		X	1	Field Duplicate Sample
7265247	FB-01_11052013	X		1	Field Blank
7265248	FB-02_11052013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Pesticide Residue Analysis

Fraction: Explosives

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 7265225-7265227, 7265234, 7265236-7265237, 7265241-7265242, 7265244-7265246: Analysis: 06918)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

(Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248: Analysis: 06916)
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene

(Sample number(s): 7265229, 7265239: Analysis: 06918)
A thorough investigation for HMX was performed on the ampulated standard used for the laboratory control samples (LCS) and/or matrix spike control samples (MS) by analyzing the ampulated standard in quadruplet against a second source material from another vendor. HMX was present at 20-25% below the manufacturer's reported true value. The true value of HMX for the LCS and MS spiking standard was adjusted to compensate for this discrepancy.

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

SAMPLE ANALYSIS:

(Sample number(s): 7265242-7265243: Analysis: 06916)
Reporting limits were raised due to interference from the sample matrix.

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Pesticide Residue Analysis

Fraction: Explosives

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Explosives

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Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Ashland, Inc.
SDG: KVM04

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
Nitroaromatics/Amines in Solid	133110004A	PBLK04311	11/12/2013 20:59:00
		LCS04311	11/13/2013 12:01:00
		7265225	11/13/2013 16:58:00
		7265226	11/13/2013 22:37:00
		7265227	11/13/2013 23:20:00
		7265234	11/14/2013 00:02:00
		7265236	11/14/2013 00:45:00
		7265237	11/14/2013 01:27:00
		7265241	11/14/2013 03:35:00
		7265242	11/14/2013 04:17:00
		7265244	11/14/2013 04:59:00
		7265245	11/14/2013 05:42:00
		7265246	11/14/2013 06:24:00
Nitroaromatics/Amines in Solid	133140020A	PBLK20314	11/19/2013 17:48:00
		LCS20314	11/19/2013 18:30:00
		7265229	11/19/2013 19:13:00
		7265239	11/19/2013 19:55:00
Nitroaromatics/Amines in Water	133130015A	PBLK15313	11/17/2013 10:27:00
		LCS15313	11/17/2013 11:09:00
		7265223	11/17/2013 11:51:00
		7265224	11/17/2013 12:34:00
		7265228	11/17/2013 13:16:00
		7265230 UNSPK	11/17/2013 13:59:00
		7265231 MS	11/17/2013 14:41:00
		7265232 MSD	11/17/2013 15:24:00
		7265235	11/17/2013 16:06:00
		7265238	11/17/2013 16:49:00
		7265240	11/17/2013 18:14:00
		7265243	11/17/2013 18:56:00
		7265247	11/17/2013 19:38:00
		7265248	11/17/2013 20:21:00

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Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM04
Matrix: LIQUID

Fraction: Explosives

133130015A / PBLK15313 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/17/13	N.D.	ug/l	5.2	15
PETN	11/17/13	N.D.	ug/l	6.0	18
HMX	11/17/13	N.D.	ug/l	0.65	2.0
RDX	11/17/13	N.D.	ug/l	0.20	0.50
1,3,5-Trinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,2-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,3-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
Tetryl	11/17/13	N.D.	ug/l	0.40	0.60
Nitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
2,4,6-Trinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
4-Amino-2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.30	0.60
1,4-Dinitrobenzene	11/17/13	N.D.	ug/l	0.30	0.60
2-Amino-4,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
2,4-Dinitrotoluene	11/17/13	N.D.	ug/l	0.72	2.0
2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.45	1.3
2-Nitrotoluene	11/17/13	N.D.	ug/l	0.25	0.75
3-Nitrotoluene	11/17/13	N.D.	ug/l	0.40	1.2
4-Nitrotoluene	11/17/13	N.D.	ug/l	0.60	1.2
1-Nitronaphthalene	11/17/13	N.D.	ug/l	0.20	0.60

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Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM04
Matrix: SOLID

Fraction: Explosives

133110004A / PBLK04311 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/12/13	N.D.	ug/kg	2000	6000
PETN	11/12/13	N.D.	ug/kg	2000	6000
HMX	11/12/13	N.D.	ug/kg	250	750
RDX	11/12/13	N.D.	ug/kg	130	300
1,3,5-Trinitrobenzene	11/12/13	N.D.	ug/kg	100	300
1,4-Dinitrobenzene	11/12/13	N.D.	ug/kg	100	300
1,2-Dinitrobenzene	11/12/13	N.D.	ug/kg	100	300
1,3-Dinitrobenzene	11/12/13	N.D.	ug/kg	100	300
Tetryl	11/12/13	N.D.	ug/kg	150	300
Nitrobenzene	11/12/13	N.D.	ug/kg	100	300
2,4,6-Trinitrotoluene	11/12/13	N.D.	ug/kg	100	300
4-Amino-2,6-Dinitrotoluene	11/12/13	N.D.	ug/kg	150	300
2-Amino-4,6-Dinitrotoluene	11/12/13	N.D.	ug/kg	100	300
2,4-Dinitrotoluene	11/12/13	N.D.	ug/kg	100	300
2,6-Dinitrotoluene	11/12/13	N.D.	ug/kg	100	300
2-Nitrotoluene	11/12/13	N.D.	ug/kg	200	300
3-Nitrotoluene	11/12/13	N.D.	ug/kg	250	300
4-Nitrotoluene	11/12/13	N.D.	ug/kg	200	300
1-Nitronaphthalene	11/12/13	N.D.	ug/kg	100	300

133140020A / PBLK20314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/19/13	N.D.	ug/kg	2000	6000
PETN	11/19/13	N.D.	ug/kg	2000	6000
HMX	11/19/13	N.D.	ug/kg	250	750
RDX	11/19/13	N.D.	ug/kg	130	300
1,3,5-Trinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,4-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,2-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,3-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
Tetryl	11/19/13	N.D.	ug/kg	150	300
Nitrobenzene	11/19/13	N.D.	ug/kg	100	300
2,4,6-Trinitrotoluene	11/19/13	N.D.	ug/kg	100	300
4-Amino-2,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	150	300
2-Amino-4,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2,4-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2-Nitrotoluene	11/19/13	N.D.	ug/kg	200	300
3-Nitrotoluene	11/19/13	N.D.	ug/kg	250	300
4-Nitrotoluene	11/19/13	N.D.	ug/kg	200	300
1-Nitronaphthalene	11/19/13	N.D.	ug/kg	100	300

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Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM04
Matrix: LIQUID

Fraction: Explosives

133130015A	2-Nitro-m-xylene	
	Spike Added	10 ug/l
Sample	% Recovery	Limits
PBLK15313	98	73 - 122
LCS15313	85	73 - 122
7265223	103	73 - 122
7265224	105	73 - 122
7265228	99	73 - 122
7265230	94	73 - 122
7265231 MS	89	73 - 122
7265232 MSD	81	73 - 122
7265235	83	73 - 122
7265238	89	73 - 122
7265240	93	73 - 122
7265243	83	73 - 122
7265247	91	73 - 122
7265248	82	73 - 122

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Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM04
Matrix: SOLID

Fraction: Explosives

133110004A	2-Nitro-m-xylene	
	Spike Added	5000 ug/kg
Sample	% Recovery	Limits
PBLK04311	106	63 - 150
LCS04311	111	63 - 150
7265225	107	63 - 150
7265226	105	63 - 150
7265227	104	63 - 150
7265234	101	63 - 150
7265236	104	63 - 150
7265237	109	63 - 150
7265241	102	63 - 150
7265242	117	63 - 150
7265244	119	63 - 150
7265245	115	63 - 150
7265246	109	63 - 150

133140020A	2-Nitro-m-xylene	
	Spike Added	5000 ug/kg
Sample	% Recovery	Limits
PBLK20314	89	63 - 150
LCS20314	97	63 - 150
7265229	82	63 - 150
7265239	92	63 - 150

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: LIQUID

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS15313	Batch: **133130015A** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	240	199.68	NA	83	NA	73-116	NA	NA
PETN	240	217.85	NA	91	NA	73-126	NA	NA
HMX	10	7.62	NA	76	NA	73-112	NA	NA
RDX	10	8.82	NA	88	NA	70-117	NA	NA
1,3,5-Trinitrobenzene	10	8.95	NA	90	NA	72-119	NA	NA
1,2-Dinitrobenzene	20	19.62	NA	98	NA	90-118	NA	NA
1,3-Dinitrobenzene	10	10.09	NA	101	NA	78-121	NA	NA
Tetryl	10	10.14	NA	101	NA	43-133	NA	NA
Nitrobenzene	10	8.96	NA	90	NA	71-111	NA	NA
2,4,6-Trinitrotoluene	10	10.05	NA	101	NA	75-119	NA	NA
1,4-Dinitrobenzene	20	17.58	NA	88	NA	81-108	NA	NA
4-Amino-2,6-Dinitrotoluene	10	8.93	NA	89 *	NA	97-156	NA	NA
2-Amino-4,6-Dinitrotoluene	10	8.03	NA	80	NA	65-107	NA	NA
2,4-Dinitrotoluene	10	9.65	NA	96	NA	71-111	NA	NA
2,6-Dinitrotoluene	10	9.42	NA	94	NA	84-157	NA	NA
2-Nitrotoluene	10	8.04	NA	80	NA	74-115	NA	NA
3-Nitrotoluene	10	9.59	NA	96	NA	76-115	NA	NA
4-Nitrotoluene	10	8.02	NA	80	NA	76-120	NA	NA
1-Nitronaphthalene	20	18.87	NA	94	NA	69-125	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: SOLID

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS04311	Batch: **133110004A** (Sample number(s): 7265225-7265227, 7265234, 7265236-7265237, 7265241-7265242, 7265244-7265246)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	20010.56	NA	100	NA	70-118	NA	NA
PETN	20000	19768.39	NA	99	NA	67-136	NA	NA
HMX	3936.25	3729.65	NA	95	NA	79-104	NA	NA
RDX	5000	5296.38	NA	106	NA	87-111	NA	NA
1,3,5-Trinitrobenzene	5020	5192.3	NA	103	NA	83-119	NA	NA
1,4-Dinitrobenzene	10000	10625.58	NA	106	NA	83-122	NA	NA
1,2-Dinitrobenzene	10000	11778.81	NA	118	NA	94-129	NA	NA
1,3-Dinitrobenzene	5000	5966.82	NA	119	NA	97-119	NA	NA
Tetryl	5000	5526.29	NA	111	NA	80-112	NA	NA
Nitrobenzene	5000	5439.78	NA	109 *	NA	89-107	NA	NA
2,4,6-Trinitrotoluene	5000	5806.82	NA	116	NA	85-122	NA	NA
4-Amino-2,6-Dinitrotoluene	5000	5174.95	NA	103	NA	98-143	NA	NA
2-Amino-4,6-Dinitrotoluene	5000	4925.31	NA	99	NA	84-115	NA	NA
2,4-Dinitrotoluene	5000	5798.76	NA	116 *	NA	91-112	NA	NA
2,6-Dinitrotoluene	5000	5189.77	NA	104	NA	86-137	NA	NA
2-Nitrotoluene	5000	4989.27	NA	100	NA	91-113	NA	NA
3-Nitrotoluene	5000	6304.07	NA	126 *	NA	88-121	NA	NA
4-Nitrotoluene	5000	4931.6	NA	99	NA	89-119	NA	NA
1-Nitronaphthalene	10000	12636.72	NA	126 *	NA	83-122	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: SOLID

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS20314	Batch: **133140020A** (Sample number(s): 7265229, 7265239)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	19662.19	NA	98	NA	70-118	NA	NA
PETN	20000	17711.81	NA	89	NA	67-136	NA	NA
HMX	3936.25	3450.96	NA	88	NA	79-104	NA	NA
RDX	5000	4742.68	NA	95	NA	87-111	NA	NA
1,3,5-Trinitrobenzene	5020	4700.48	NA	94	NA	83-119	NA	NA
1,4-Dinitrobenzene	10000	9440.37	NA	94	NA	83-122	NA	NA
1,2-Dinitrobenzene	10000	11034.77	NA	110	NA	94-129	NA	NA
1,3-Dinitrobenzene	5000	5542.36	NA	111	NA	97-119	NA	NA
Tetryl	5000	5389.92	NA	108	NA	80-112	NA	NA
Nitrobenzene	5000	4875.07	NA	98	NA	89-107	NA	NA
2,4,6-Trinitrotoluene	5000	5573.06	NA	111	NA	85-122	NA	NA
4-Amino-2,6-Dinitrotoluene	5000	4969.73	NA	99	NA	98-143	NA	NA
2-Amino-4,6-Dinitrotoluene	5000	4554.07	NA	91	NA	84-115	NA	NA
2,4-Dinitrotoluene	5000	5238.37	NA	105	NA	91-112	NA	NA
2,6-Dinitrotoluene	5000	5368.09	NA	107	NA	86-137	NA	NA
2-Nitrotoluene	5000	4543.37	NA	91	NA	91-113	NA	NA
3-Nitrotoluene	5000	5539.25	NA	111	NA	88-121	NA	NA
4-Nitrotoluene	5000	4687.74	NA	94	NA	89-119	NA	NA
1-Nitronaphthalene	10000	11875.68	NA	119	NA	83-122	NA	NA

Pesticide Residue Analysis

Fraction: Explosives

UNSPK: 7265230 MS: 7265231 MSD: 7265232 Analyte	Batch: **133130015A** (Sample number(s): 7265223-7265224, 7265228, 7265230-7265232, 7265235, 7265238, 7265240, 7265243, 7265247-7265248)								
	Spike Added ug/l	Unspiked Conc ug/l	MS Conc ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Nitroglycerin	240	N.D.	204.93	178.34	85	74 *	80-120	14	30
PETN	240	N.D.	224.52	196.11	94	82	80-120	14	30
HMX	10	N.D.	7.1	6.76	71	68	34-105	5	30
RDX	10	N.D.	8.74	7.8	87	78 *	80-120	11	30
1,3,5-Trinitrobenzene	10	N.D.	8.67	7.73	87	77 *	80-120	11	30
1,2-Dinitrobenzene	20	N.D.	20.09	18.09	100	90	80-120	11	30
1,3-Dinitrobenzene	10	N.D.	9.87	8.95	99	89	80-120	10	30
Tetryl	10	N.D.	8.95	8.06	89	81	45-113	11	30
Nitrobenzene	10	N.D.	9.05	8.35	91	83	75-144	8	30
2,4,6-Trinitrotoluene	10	N.D.	9.75	8.57	97	86	80-120	13	30
1,4-Dinitrobenzene	20	N.D.	17.33	15.52	87	78 *	80-120	11	30
4-Amino-2,6-Dinitrotoluene	10	0.77	8.98	8.56	82	78 *	80-120	5	30
2-Amino-4,6-Dinitrotoluene	10	N.D.	8.24	7.57	82	76 *	80-120	9	30
2,4-Dinitrotoluene	10	N.D.	9.72	8.93	97	89	80-120	9	30
2,6-Dinitrotoluene	10	N.D.	10.12	9.27	101	93	80-120	9	30
2-Nitrotoluene	10	N.D.	7.93	7.45	79 *	74 *	80-120	6	30
3-Nitrotoluene	10	N.D.	9.22	8.69	92	87	80-120	6	30
4-Nitrotoluene	10	N.D.	7.95	7.36	80	74 *	80-120	8	30
1-Nitronaphthalene	20	N.D.	18.32	18.36	92	92	43-114	0	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						~~MIDPOINT~~ Level 4 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
RDX	4.22	4.21	4.23	4.22	4.20	4.24	4.22	4.12	4.32
1,3,5-Trinitrobenzene	4.89	4.91	4.91	4.90	4.86	4.92	4.90	4.80	5.00
1,4-Dinitrobenzene	5.78	5.80	5.83	5.79	5.68	5.78	5.79	5.69	5.89
o-Dinitrobenzene	6.38	6.41	6.44	6.41	6.23	6.51	6.41	6.31	6.51
1,3-DNB	6.78	6.79	6.82	6.80	6.65	6.82	6.80	6.70	6.90
Nitrobenzene	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
Tetryl	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
2,4,6-Trinitrotoluene	8.12	8.17	8.20	8.16	7.89	8.18	8.16	8.06	8.26
Tetryl breakdown	8.78	8.74	8.88	8.90	8.55	8.89	8.90	8.77	9.02
4-Amino-2,6-dinitrotoluene	9.98	10.00	10.07	10.02	9.59	10.19	10.02	9.88	10.16
2-Amino-4,6-dinitrotoluene	10.41	10.48	10.52	10.47	10.05	10.51	10.47	10.33	10.61
2,6-Dinitrotoluene	10.88	10.91	10.98	10.93	10.46	10.91	10.93	10.79	11.07
2,4-Dinitrotoluene	11.33	11.40	11.43	11.40	10.96	11.43	11.40	11.26	11.54
2-Nitrotoluene	13.38	13.43	13.44	13.39	12.87	13.44	13.39	13.25	13.54
4-Nitrotoluene	14.71	14.73	14.84	14.77	14.25	14.84	14.77	14.61	14.94
3-Nitrotoluene	15.43	15.45	15.57	15.50	14.97	15.56	15.50	15.33	15.66
2-NMX	26.57	26.83	26.85	26.77	25.96	26.86	26.77	26.43	27.11
1-Nitronaphthalene	33.40	33.27	33.29	33.24	33.01	33.29	33.24	32.99	33.48

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+02	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310.CAL** Version = 9
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.216 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.899 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.789 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.412 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.800 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.159 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.895 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.022 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.468 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.932 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.398 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.393 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.774 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.496 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.768 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.236 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4 RT	RT WINDOW FROM	RT WINDOW TO
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6			
HMX	2.79	2.81	2.82	2.81	2.84	2.82	2.81	2.71	2.91
2,4-Diamino-6-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
2,6-Diamino-4-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
Nitroglycerin	8.95	8.99	9.03	8.99	8.69	9.03	8.99	8.80	9.18
PETN	16.67	16.68	16.74	16.67	16.11	16.73	16.67	16.38	16.96
2-NMX	26.75	26.93	27.01	26.91	26.11	27.02	26.91	26.58	27.24

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 18

Linear

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310B.CAL** Version = 10
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.809 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.969 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.969 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin

Retention time = 8.992 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN

Retention time = 16.669 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.910 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 2E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 1E12310.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.14			4.14	4.04	4.24
1,3,5-Trinitrobenzene				4.81			4.81	4.71	4.91
1,4-Dinitrobenzene				5.69			5.69	5.59	5.79
o-Dinitrobenzene				6.30			6.30	6.20	6.40
1,3-DNB				6.68			6.68	6.58	6.78
Nitrobenzene				7.57			7.57	7.43	7.71
Tetryl				7.57			7.57	7.43	7.71
2,4,6-Trinitrotoluene				8.00			8.00	7.90	8.10
Tetryl breakdown				8.74			8.74	8.62	8.86
4-Amino-2,6-dinitrotoluene				9.84			9.84	9.70	9.99
2-Amino-4,6-dinitrotoluene				10.27			10.27	10.13	10.41
2,6-Dinitrotoluene				10.70			10.70	10.56	10.84
2,4-Dinitrotoluene				11.17			11.17	11.03	11.31
2-Nitrotoluene				13.12			13.12	12.98	13.26
4-Nitrotoluene				14.47			14.47	14.31	14.64
3-Nitrotoluene				15.18			15.18	15.02	15.34
2-NMX				26.14			26.14	25.80	26.48
1-Nitronaphthalene				33.02			33.02	32.78	33.26

Calculate

RT Update

Files used
1E12310.39 + .40

Applies to
1E12310.20 →

James H. Place
Senior Chemist

NOV 0 8 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 0 8 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 2E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

Coelute

Linear

James H. Place
Senior Chemist

NOV 0 8 2013

Calibration File Name: **C:\CPWIN\DATA1\2E12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.144 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.814 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.688 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.295 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.675 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.568 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.568 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.004 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.738 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 9.844 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.268 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.697 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.171 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
Fit					
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.121 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.473 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.178 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.140 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.023 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 2E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 1E12310B.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.77			2.77	2.67	2.87
2,4-Diamino-6-nitrotoluene				2.96			2.96	2.86	3.06
2,6-Diamino-4-nitrotoluene				2.96			2.96	2.86	3.06
Nitroglycerin				8.82			8.82	8.63	9.01
PETN				16.30			16.30	16.01	16.59
2-NMX				26.30			26.30	25.96	26.63

James H. Place
Senior Chemist

NOV 0 8 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 2E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	%RSD	
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 18

Calculate

James H. Place
Senior Chemist

NOV 08 2013

Calibration File Name: **C:\CPWIN\DATA1\2E12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.769 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.957 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.957 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.821 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.299 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.295 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 4E12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.10			4.10	4.00	4.20
1,3,5-Trinitrobenzene				4.76			4.76	4.66	4.86
1,4-Dinitrobenzene				5.62			5.62	5.52	5.72
o-Dinitrobenzene				6.23			6.23	6.13	6.33
1,3-DNB				6.59			6.59	6.49	6.69
Nitrobenzene				7.47			7.47	7.33	7.61
Tetryl				7.47			7.47	7.33	7.61
2,4,6-Trinitrotoluene				7.88			7.88	7.78	7.98
Tetryl breakdown				8.39			8.39	8.27	8.52
4-Amino-2,6-dinitrotoluene				9.83			9.83	9.69	9.97
2-Amino-4,6-dinitrotoluene				10.11			10.11	9.97	10.25
2,6-Dinitrotoluene				10.52			10.52	10.38	10.66
2,4-Dinitrotoluene				11.00			11.00	10.86	11.14
2-Nitrotoluene				12.94			12.94	12.80	13.08
4-Nitrotoluene				14.27			14.27	14.11	14.43
3-Nitrotoluene				14.95			14.95	14.79	15.12
2-NMX				25.75			25.75	25.41	26.09
1-Nitronaphthalene				32.87			32.87	32.62	33.11

RT Update

Files used 4E12310.58 +.59

Applies to 4E12310.58 →

11/20/13

Audited By:

Lisa A. Reinert
Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Tetryl

Average % RSD: 8

James H. Place
Senior Chemist

NOV 2 0 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310.CAL** Version = 6
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.102 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.764 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.623 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.233 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.594 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 7.876 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.394 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 9.828 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.111 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.518 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 10.997 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 12.941 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.267 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 14.953 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 25.749 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 32.866 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 4E12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.75			2.75	2.65	2.85
2,4-Diamino-6-nitrotoluene				2.87			2.87	2.77	2.97
2,6-Diamino-4-nitrotoluene				2.87			2.87	2.77	2.97
Nitroglycerin				8.70			8.70	8.51	8.89
PETN				16.04			16.04	15.75	16.33
2-NMX				25.91			25.91	25.57	26.24

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NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6

Average % RSD: 18

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Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.747 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.698 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.039 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 25.906 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 5E12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT (Level 3) RT	RT WINDOW FROM	TO
RDX				4.30			4.30	4.20	4.40
1,3,5-Trinitrobenzene				5.00			5.00	4.90	5.10
1,4-Dinitrobenzene				5.90			5.90	5.80	6.00
o-Dinitrobenzene				6.53			6.53	6.43	6.63
1,3-DNB				6.93			6.93	6.83	7.03
Nitrobenzene				7.85			7.85	7.71	7.99
Tetryl				7.85			7.85	7.71	7.99
2,4,6-Trinitrotoluene				8.29			8.29	8.19	8.39
Tetryl breakdown				8.83			8.83	8.71	8.95
4-Amino-2,6-dinitrotoluene				10.35			10.35	10.21	10.49
2-Amino-4,6-dinitrotoluene				10.66			10.66	10.51	10.80
2,6-Dinitrotoluene				11.09			11.09	10.95	11.23
2,4-Dinitrotoluene				11.59			11.59	11.45	11.74
2-Nitrotoluene				13.63			13.63	13.49	13.77
4-Nitrotoluene				15.03			15.03	14.87	15.19
3-Nitrotoluene				15.76			15.76	15.60	15.93
2-NMX				27.25			27.25	26.91	27.59
1-Nitronaphthalene				33.45			33.45	33.20	33.69

RT Update

File used 5E12310.17

Applies to 5E12310.01 →

11/22/13

Audited By: Jessica L. Miller
Chemist

NOV 24 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.36E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.301 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.998 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.904 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.531 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.930 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.290 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.833 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.350 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.655 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 11.092 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.593 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.627 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 15.029 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.763 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 27.252 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.445 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 5E12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
HMX				2.87			2.87	2.77	2.97
Nitroglycerin				9.15			9.15	8.96	9.34
PETN				16.92			16.92	16.63	17.20
2-NMX				27.42			27.42	27.09	27.76

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	- Linear
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	- Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 24

11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

20 HMX
Retention time = 2.870 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

21 Nitroglycerin
Retention time = 9.150 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.917 min., Search window = 0.286 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 27.424 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	~~MIDPOINT~~ Level 4 RT	RT WINDOW FROM	TO
HMX	4.25	4.29	4.29	4.28	4.25	4.25	4.28	4.18	4.38
RDX	5.25	5.24	5.25	5.26	5.17	5.20	5.26	5.16	5.36
Nitrobenzene	12.90	12.88	12.92	12.88	12.46	12.78	12.88	12.72	13.04
o-Dinitrobenzene	14.97	14.97	14.95	14.92	14.40	14.78	14.92	14.74	15.10
2-Amino-4,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
4-Amino-2,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
1,3-DNB	19.07	19.15	19.06	19.04	18.63	18.91	19.04	18.89	19.19
1,4-Dinitrobenzene	19.76	19.90	19.86	19.85	19.40	19.67	19.85	19.70	20.00
2-Nitrotoluene	24.39	24.41	24.38	24.33	23.71	24.14	24.33	24.07	24.59
3-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
4-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
1,3,5-Trinitrobenzene	30.07	30.04	30.02	39.94	29.52	29.67	29.94	29.74	30.14
2,6-Dinitrotoluene	31.07	31.33	30.97	30.89	29.91	30.62	30.89	30.69	31.09
2,4-Dinitrotoluene	33.86	33.85	33.80	33.79	33.62	33.71	33.79	33.68	33.90
2-NMX	34.37	34.28	34.22	34.23	34.10	34.17	34.23	34.13	34.33
Tetryl	34.63	34.59	34.54	34.53	34.42	34.47	34.53	34.43	34.63
2,4,6-Trinitrotoluene	35.58	35.53	35.47	35.46	35.38	35.41	35.46	35.36	35.56
1-Nitronaphthalene	36.54	36.48	36.47	36.46	36.42	36.43	36.46	36.36	36.56

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	%RSD	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.00E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310.CAL** Version = 21
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.260 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.877 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.924 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.035 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.850 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.334 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.943 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.885 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.788 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.226 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.529 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.463 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT Lave/4 RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
2,6-Diamino-4-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
Nitroglycerin	9.77	9.71	9.70	9.70	9.37	9.63	9.70	9.60	9.80
PETN	26.50	26.32	26.34	26.28	25.64	26.08	26.28	26.07	26.49

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310B.CAL** Version = 20
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.695 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.283 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 1C12310.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.31			4.31	4.21	4.41
RDX				5.28			5.28	5.18	5.38
Nitrobenzene				12.98			12.98	12.82	13.14
o-Dinitrobenzene				15.03			15.03	14.85	15.21
2-Amino-4,6-dinitrotoluene				16.97			16.97	16.81	17.13
4-Amino-2,6-dinitrotoluene				16.97			16.97	16.81	17.13
1,3-DNB				19.19			19.19	19.04	19.34
1,4-Dinitrobenzene				19.98			19.98	19.83	20.13
2-Nitrotoluene				24.47			24.47	24.21	24.73
3-Nitrotoluene				28.03			28.03	27.77	28.29
4-Nitrotoluene				28.03			28.03	27.77	28.29
1,3,5-Trinitrobenzene				30.21			30.21	30.01	30.41
2,6-Dinitrotoluene				30.96			30.96	30.76	31.16
2,4-Dinitrotoluene				33.84			33.84	33.73	33.95
2-NMX				34.25			34.25	34.15	34.35
Tetryl				34.57			34.56	34.46	34.66
2,4,6-Trinitrotoluene				35.50			35.50	35.40	35.60
1-Nitronaphthalene				36.48			36.48	36.38	36.58

Calculate

RT Update

Files used 1C12310.39+.40

Applies to 1C12310.20 →

James H. Place
Senior Chemist

NOV 08 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	Linear
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Coelute

Average % RSD: 25

James H. Place
Senior Chemist

NOV 0 8 2013

Calibration File Name: **C:\CPWIN\DATA1\2C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.311 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.977 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 15.029 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.194 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.984 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.467 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.212 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.964 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.841 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.248 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.565 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.500 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.478 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 1C12310B.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.83			3.83	3.65	4.01
2,6-Diamino-4-nitrotoluene				3.83			3.83	3.65	4.01
Nitroglycerin				9.76			9.76	9.66	9.86
PETN				26.38			26.38	26.17	26.59

James H. Place
Senior Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
						Average % RSD:		12

Calibration File Name: **C:\CPWIN\DATA1\2C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.760 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

2 PETN
Retention time = 26.381 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 4C12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.30			4.30	4.20	4.40
RDX				5.26			5.26	5.16	5.36
Nitrobenzene				12.91			12.91	12.75	13.07
o-Dinitrobenzene				14.90			14.90	14.72	15.08
2-Amino-4,6-dinitrotoluene				16.82			16.82	16.66	16.98
4-Amino-2,6-dinitrotoluene				16.82			16.82	16.66	16.98
1,3-DNB				19.08			19.08	18.93	19.23
1,4-Dinitrobenzene				19.77			19.77	19.62	19.92
2-Nitrotoluene				24.31			24.31	24.05	24.57
3-Nitrotoluene				27.86			27.86	27.60	28.12
4-Nitrotoluene				27.86			27.86	27.60	28.12
1,3,5-Trinitrobenzene				30.01			30.01	29.81	30.21
2,6-Dinitrotoluene				30.82			30.82	30.62	31.02
2,4-Dinitrotoluene				33.78			33.78	33.67	33.89
2-NMX				34.22			34.22	34.12	34.32
Tetryl				34.51			34.51	34.41	34.61
2,4,6-Trinitrotoluene				35.46			35.46	35.36	35.56
1-Nitronaphthalene				36.46			36.46	36.36	36.56

RT Update

Files used 4C12310.58+.59

Applies to 4C12310.58 →

RT update applies to files 58→ of cal: 3C12310

James H. Place
Senior Chemist

NOV 20 2013

Audited By: Lisa A. Reinert
Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23

Linear

Linear

Linear

Average % RSD: 25

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.297 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.262 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.911 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.900 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.078 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB
Retention time = 19.773 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.306 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.009 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.816 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.782 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.215 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.513 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.458 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 4C12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.82			3.82	3.64	4.00
2,6-Diamino-4-nitrotoluene				3.82			3.82	3.64	4.00
Nitroglycerin				9.72			9.72	9.62	9.82
PETN				26.23			26.23	26.02	26.44

James H. Place
Senior Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.719 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.233 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 5C12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.23			4.23	4.13	4.33
RDX				5.18			5.18	5.08	5.28
Nitrobenzene				12.78			12.78	12.62	12.94
o-Dinitrobenzene				14.83			14.83	14.65	15.01
2-Amino-4,6-dinitrotoluene				16.77			16.77	16.61	16.93
4-Amino-2,6-dinitrotoluene				16.77			16.77	16.61	16.93
1,3-DNB				18.95			18.95	18.80	19.10
1,4-Dinitrobenzene				19.75			19.75	19.60	19.90
2-Nitrotoluene				24.15			24.15	23.89	24.41
3-Nitrotoluene				27.75			27.75	27.49	28.01
4-Nitrotoluene				27.75			27.75	27.49	28.01
1,3,5-Trinitrobenzene				29.77			29.77	29.57	29.97
2,6-Dinitrotoluene				30.69			30.69	30.49	30.89
2,4-Dinitrotoluene				33.71			33.71	33.60	33.82
2-NMX				34.15			34.15	34.05	34.25
Tetryl				34.49			34.49	34.39	34.59
2,4,6-Trinitrotoluene				35.42			35.42	35.32	35.52
1-Nitronaphthalene				36.44			36.44	36.34	36.54

RT Update

File used 5C12310.17

Applies to 5C12310.01 →

11/22/13

Audited By:

Jessica L. Miller
Chemist

NOV 24 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	%RSD	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	— Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	— Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

1566
11/22/13

FORM VI-2

Calibration File Name: **C:\CPWIN\DATA1\4C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.228 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.179 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.784 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.833 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 18.952 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.754 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.150 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.768 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.691 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.711 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.153 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.486 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.417 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.435 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 5C12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
Nitroglycerin				9.57			9.57	9.47	9.67
PETN				25.94			25.94	25.73	26.15

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
							Average % RSD:	13

Calibration File Name: **C:\CPWIN\DATA1\4C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

21 Nitroglycerin
Retention time = 9.567 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 25.939 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
RDX	4.20	4.12	4.32	496.07	500.00	-1
1,3,5-Trinitrobenzene	4.88	4.80	5.00	492.04	499.80	-2
1,4-Dinitrobenzene	5.77	5.69	5.89	466.40	500.00	-7
o-Dinitrobenzene	6.38	6.31	6.51	485.01	500.00	-3
1,3-DNB	6.77	6.70	6.90	501.80	499.55	0
Tetryl + Breakdown	7.67	7.57	7.85	25.32 + 437.75 = 463.07	500.00	-12 / -7
2,4,6-Trinitrotoluene	8.12	8.06	8.26	492.63	499.80	-1
4-Amino-2,6-dinitrotoluene	9.96	9.88	10.16	553.23	499.80	11
2-Amino-4,6-dinitrotoluene	10.42	10.33	10.61	465.31	500.00	-7
2,6-Dinitrotoluene	10.87	10.79	11.07	488.15	500.00	-2
2,4-Dinitrotoluene	11.34	11.26	11.54	480.84	500.00	-4
2-Nitrotoluene	13.33	13.25	13.54	460.36	500.00	-8
4-Nitrotoluene	14.70	14.61	14.94	496.26	499.55	-1
3-Nitrotoluene	15.43	15.33	15.66	498.88	500.00	0
2-NMX	26.63	26.43	27.11	986.47	1000.45	-1
1-Nitronaphthalene	33.18	32.99	33.48	544.17	500.00	9

Compounds 16 Average of %D: 4

James H. Place
Senior Chemist

NOV 07 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	2.80	2.71	2.91	485.07	500.00	-3
Nitroglycerin	8.95	8.80	9.18	5425.07	6000.00	-10
PETN	16.59	16.38	16.96	5923.12	6000.00	-1
2-NMX	26.76	26.58	27.24	1113.34	1000.45	11

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	4.29	4.18	4.38	443.58	500.00	-11
RDX	5.26	5.16	5.36	502.76	500.00	1
Nitrobenzene	12.89	12.72	13.04	496.28	500.00	-1
o-Dinitrobenzene	14.91	14.74	15.10	502.21	500.00	0
4-Amino-2,6-dinitrotoluene	16.83	16.70	17.02	499.96	499.80	0
1,3-DNB	19.05	18.89	19.19	499.49	499.55	0
1,4-Dinitrobenzene	19.84	19.70	20.00	500.62	500.00	0
2-Nitrotoluene	24.33	24.07	24.59	501.96	500.00	0
4-Nitrotoluene	27.90	27.68	28.20	466.62	499.55	-7
1,3,5-Trinitrobenzene	29.94	29.74	30.14	443.53	499.80	-11
2,6-Dinitrotoluene	30.88	30.69	31.09	498.30	500.00	0
2,4-Dinitrotoluene	33.78	33.68	33.90	528.91	500.00	6
2-NMX	34.22	34.13	34.33	990.46	1000.45	-1
Tetryl	34.52	34.43	34.63	475.03	500.00	-5
2,4,6-Trinitrotoluene	35.46	35.36	35.56	503.01	499.80	1
1-Nitronaphthalene	36.46	36.36	36.56	517.66	500.00	4

Compounds 16 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Nitroglycerin	9.70	9.60	9.80	5470.55	6000.00	-9
PETN	26.30	26.07	26.49	5363.19	6000.00	-11

Compounds 2 Average of %D: 10

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/12/13

Lab File ID: 2E12310.63R Time Analyzed: 16:02

Lab Standard ID: NITR3OE Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.15	4.04	4.24	486.47	494.00	-2
1,3,5-Trinitrobenzene	4.82	4.71	4.91	465.69	500.50	-7
1,4-Dinitrobenzene	5.69	5.59	5.79	491.45	497.00	-1
o-Dinitrobenzene	6.38	6.20	6.40	445.22	502.00	-11
1,3-DNB	6.68	6.58	6.78	519.99	500.50	4
Nitrobenzene + Tetryl breakdown	7.58	7.43	7.71	52.69 + 390.01 = 442.70	501.50	-22 -12
2,4,6-Trinitrotoluene	7.98	7.90	8.10	515.68	501.50	3
4-Amino-2,6-dinitrotoluene	9.95	9.70	9.99	446.93	500.50	-11
2-Amino-4,6-dinitrotoluene	10.26	10.13	10.41	459.35	500.00	-8
2,6-Dinitrotoluene	10.66	10.56	10.84	473.89	500.50	-5
2,4-Dinitrotoluene	11.16	11.03	11.31	529.28	500.50	6
2-Nitrotoluene	13.14	12.98	13.26	453.47	496.00	-9
4-Nitrotoluene	14.50	14.31	14.64	442.75	497.50	-11
3-Nitrotoluene	15.18	15.02	15.34	532.09	495.00	7
2-NMX	26.24	25.80	26.48	1529.83	1500.68	2
1-Nitronaphthalene	33.06	32.78	33.26	550.87	501.00	10

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 12 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/12/13

Lab File ID: 2E12310B.63R Time Analyzed: 16:02

Lab Standard ID: NITR3OE Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.77	2.67	2.87	505.41	498.50	1
Nitroglycerin	8.83	8.63	9.01	9628.50	10030.00	-4
PETN	16.31	16.01	16.59	9842.73	9980.00	-1
2-NMX	26.38	25.96	26.63	1447.43	1500.68	-4

Compounds 4 Average of %D: 3

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/12/13

Lab File ID: 2E12310B.64R Time Analyzed: 16:45

Lab Standard ID: NITR3OF Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.91	2.86	3.06	489.82	502.00	-2

Compounds 1 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/12/13

Lab File ID: 2C12310.63R Time Analyzed: 16:02

Lab Standard ID: NITR3OE Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.32	4.21	4.41	470.33	498.50	-6
RDX	5.28	5.18	5.38	510.20	494.00	3
Nitrobenzene	13.00	12.82	13.14	510.89	501.50	2
o-Dinitrobenzene	15.04	14.85	15.21	538.76	502.00	7
2-Amino-4,6-dinitrotoluene	16.99	16.81	17.13	509.79	500.00	2
1,3-DNB	19.22	19.04	19.34	507.05	500.50	1
1,4-Dinitrobenzene	19.99	19.83	20.13	532.77	497.00	7
2-Nitrotoluene	24.55	24.21	24.73	498.57	496.00	1
3-Nitrotoluene	28.10	27.77	28.29	447.55	495.00	-10
1,3,5-Trinitrobenzene	30.20	30.01	30.41	399.88	500.50	-20
2,6-Dinitrotoluene	31.05	30.76	31.16	564.40	500.50	13
2,4-Dinitrotoluene	33.84	33.73	33.95	529.17	500.50	6
2-NMX	34.26	34.15	34.35	1536.50	1500.68	2
Tetryl	34.56	34.46	34.66	386.86	499.50	-23
2,4,6-Trinitrotoluene	35.49	35.40	35.60	495.53	501.50	-1
1-Nitronaphthalene	36.48	36.38	36.58	457.76	501.00	-9

Compounds 16 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/12/13

Lab File ID: 2C12310B.63R Time Analyzed: 16:02

Lab Standard ID: NITR3OE Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.77	9.66	9.86	9561.53	10030.00	-5
PETN	26.48	26.17	26.59	9048.48	9980.00	-9

Compounds 2 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/12/13

Lab File ID: 2C12310B.64R Time Analyzed: 16:45

Lab Standard ID: NITR3OF Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.85	3.65	4.01	544.52	506.00	8

Compounds 1 Average of %D: 8

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310.05R Time Analyzed: 0:42

Lab Standard ID: NITR3OM Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.12	4.04	4.24	494.42	494.00	0
1,3,5-Trinitrobenzene	4.79	4.71	4.91	468.13	500.50	-6
1,4-Dinitrobenzene	5.66	5.59	5.79	495.59	497.00	0
o-Dinitrobenzene	6.27	6.20	6.40	461.95	502.00	-8
1,3-DNB	6.64	6.58	6.78	507.29	500.50	1
Tetryl+ Breakdown	7.53	7.43	7.71	53.69 + 394.84	=448.53 499.50	-21 -10
2,4,6-Trinitrotoluene	7.94	7.90	8.10	495.38	501.50	-1
4-Amino-2,6-dinitrotoluene	9.87	9.70	9.99	460.66	500.50	-8
2-Amino-4,6-dinitrotoluene	10.19	10.13	10.41	475.60	500.00	-5
2,6-Dinitrotoluene	10.57	10.56	10.84	455.50	500.50	-9
2,4-Dinitrotoluene	11.08	11.03	11.31	511.73	500.50	2
2-Nitrotoluene	13.02	12.98	13.26	456.57	496.00	-8
4-Nitrotoluene	14.34	14.31	14.64	458.25	497.50	-8
3-Nitrotoluene	15.03	15.02	15.34	528.19	495.00	7
2-NMX	25.88	25.80	26.48	1513.42	1500.68	1
1-Nitronaphthalene	32.90	32.78	33.26	543.20	501.00	8

Compounds 16 Average of %D: 6

James H. Place
Senior Chemist

NOV 13 2013

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CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.05R Time Analyzed: 0:42

Lab Standard ID: NITR3OM Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.76	2.67	2.87	510.42	498.50	2
Nitroglycerin	8.77	8.63	9.01	9721.65	10030.00	-3
PETN	16.16	16.01	16.59	9893.47	9980.00	-1
2-NMX	26.04	25.96	26.63	1452.25	1500.68	-3

Compounds 4 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.06R Time Analyzed: 1:25

Lab Standard ID: NITR3ON Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.94	2.86	3.06	514.34	502.00	2

Compounds 1 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.15	4.04	4.24	489.33	494.00	-1
1,3,5-Trinitrobenzene	4.82	4.71	4.91	472.64	500.50	-6
1,4-Dinitrobenzene	5.70	5.59	5.79	494.57	497.00	0
o-Dinitrobenzene	6.30	6.20	6.40	439.04	502.00	-13
1,3-DNB	6.68	6.58	6.78	519.19	500.50	4
Nitrobenzene + Tetryl breakdown	7.57	7.43	7.71	53.84 + 397.41	= 451.25	501.50	-21 / -10
2,4,6-Trinitrotoluene	7.98	7.90	8.10	507.11	501.50	1
4-Amino-2,6-dinitrotoluene	9.93	9.70	9.99	449.45	500.50	-10
2-Amino-4,6-dinitrotoluene	10.24	10.13	10.41	468.86	500.00	-6
2,6-Dinitrotoluene	10.62	10.56	10.84	481.96	500.50	-4
2,4-Dinitrotoluene	11.15	11.03	11.31	510.00	500.50	2
2-Nitrotoluene	13.12	12.98	13.26	455.12	496.00	-8
4-Nitrotoluene	14.47	14.31	14.64	436.73	497.50	-12
3-Nitrotoluene	15.15	15.02	15.34	552.19	495.00	12
2-NMX	26.00	25.80	26.48	1521.92	1500.68	1
1-Nitronaphthalene	32.95	32.78	33.26	547.49	501.00	9

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 13 2013

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CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.78	2.67	2.87	506.93	498.50	2
Nitroglycerin	8.83	8.63	9.01	9688.12	10030.00	-3
PETN	16.29	16.01	16.59	9932.26	9980.00	0
2-NMX	26.16	25.96	26.63	1486.94	1500.68	-1

Compounds 4 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.18R Time Analyzed: 9:54

Lab Standard ID: NITR3OP Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.94	2.86	3.06	514.29	502.00	2

Compounds 1 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.12	4.04	4.24	488.10	494.00	-1
1,3,5-Trinitrobenzene	4.78	4.71	4.91	470.22	500.50	-6
1,4-Dinitrobenzene	5.65	5.59	5.79	494.19	497.00	-1
o-Dinitrobenzene	6.26	6.20	6.40	458.50	502.00	-9
1,3-DNB	6.63	6.58	6.78	515.63	500.50	3
Tetryl + Breakdown	7.52	7.43	7.71	56.94 + 391.05 = 447.99	499.50	-22 -10
2,4,6-Trinitrotoluene	7.93	7.90	8.10	513.88	501.50	2
4-Amino-2,6-dinitrotoluene	9.87	9.70	9.99	438.40	500.50	-12
2-Amino-4,6-dinitrotoluene	10.21	10.13	10.41	479.25	500.00	-4
2,6-Dinitrotoluene	10.54	10.56	10.84	471.62	500.50	-6
2,4-Dinitrotoluene	11.08	11.03	11.31	522.95	500.50	4
2-Nitrotoluene	13.05	12.98	13.26	455.81	496.00	-8
4-Nitrotoluene	14.40	14.31	14.64	448.09	497.50	-10
3-Nitrotoluene	15.09	15.02	15.34	540.87	495.00	9
2-NMX	26.04	25.80	26.48	1521.82	1500.68	1
1-Nitronaphthalene	32.96	32.78	33.26	540.11	501.00	8

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 14 2013

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CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.75	2.67	2.87	506.21	498.50	2
Nitroglycerin	8.77	8.63	9.01	9711.33	10030.00	-3
PETN	16.23	16.01	16.59	9925.43	9980.00	-1
2-NMX	26.19	25.96	26.63	1476.93	1500.68	-2

Compounds 4 Average of %D: 2

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/13/13

Lab File ID: 3E12310B.30R Time Analyzed: 18:23

Lab Standard ID: NITR3OR Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.92	2.86	3.06	521.96	502.00	4

Compounds 1 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310.41R Time Analyzed: 2:10

Lab Standard ID: NITR3OS Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.03	4.04	4.24	479.50	494.00	-3
1,3,5-Trinitrobenzene	4.68	4.71	4.91	468.43	500.50	-6
1,4-Dinitrobenzene	5.49	5.59	5.79	492.28	497.00	-1
o-Dinitrobenzene	5.98	6.20	6.40	505.44	502.00	1
1,3-DNB	6.41	6.58	6.78	497.20	500.50	-1
Tetryl + Breakdown	7.25	7.43	7.71	57.74 + 373.83 = 431.57	499.50	-25 -14
2,4,6-Trinitrotoluene	7.58	7.90	8.10	549.40	501.50	10
4-Amino-2,6-dinitrotoluene	9.37	9.70	9.99	445.89	500.50	-11
2-Amino-4,6-dinitrotoluene	9.68	10.13	10.41	447.57	500.00	-10
2,6-Dinitrotoluene	10.02	10.56	10.84	516.30	500.50	3
2,4-Dinitrotoluene	10.55	11.03	11.31	518.90	500.50	4
2-Nitrotoluene	12.42	12.98	13.26	446.64	496.00	-10
4-Nitrotoluene	13.75	14.31	14.64	440.85	497.50	-11
3-Nitrotoluene	14.43	15.02	15.34	530.15	495.00	7
2-NMX	25.03	25.80	26.48	1519.80	1500.68	1
1-Nitronaphthalene	32.62	32.78	33.26	500.53	501.00	0

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 14 2013

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CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310B.41R Time Analyzed: 2:10

Lab Standard ID: NITR3OS Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.75	2.67	2.87	540.45	498.50	8
Nitroglycerin	8.40	8.63	9.01	9426.62	10030.00	-6
PETN	15.52	16.01	16.59	11127.10	9980.00	11
2-NMX	25.19	25.96	26.63	1478.86	1500.68	-1

Compounds 4 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310B.42R Time Analyzed: 2:52

Lab Standard ID: NITR3OT Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.92	2.86	3.06	524.86	502.00	5

Compounds 1 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310.53R Time Analyzed: 10:39

Lab Standard ID: NITR3OU Initial Calibration: 2E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.09	4.04	4.24	494.06	494.00	0
1,3,5-Trinitrobenzene	4.76	4.71	4.91	475.23	500.50	-5
1,4-Dinitrobenzene	5.62	5.59	5.79	492.66	497.00	-1
o-Dinitrobenzene	6.23	6.20	6.40	435.64	502.00	-13
1,3-DNB	6.59	6.58	6.78	521.26	500.50	4
Tetryl + Breakdown	7.49	7.43	7.71	63.14 + 393.41	= 456.55 499.50	-21 -9
2,4,6-Trinitrotoluene	7.90	7.90	8.10	511.03	501.50	2
4-Amino-2,6-dinitrotoluene	9.86	9.70	9.99	490.26	500.50	-2
2-Amino-4,6-dinitrotoluene	10.15	10.13	10.41	476.01	500.00	-5
2,6-Dinitrotoluene	10.53	10.56	10.84	425.92	500.50	-15
2,4-Dinitrotoluene	11.03	11.03	11.31	527.40	500.50	5
2-Nitrotoluene	12.98	12.98	13.26	449.54	496.00	-9
4-Nitrotoluene	14.33	14.31	14.64	460.68	497.50	-7
3-Nitrotoluene	15.03	15.02	15.34	515.51	495.00	4
2-NMX	25.95	25.80	26.48	1516.77	1500.68	1
1-Nitronaphthalene	32.93	32.78	33.26	528.88	501.00	6

Compounds 16 Average of %D: 6

James H. Place
Senior Chemist

NOV 14 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310B.53R Time Analyzed: 10:39

Lab Standard ID: NITR3OU Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.73	2.67	2.87	525.10	498.50	5
Nitroglycerin	8.72	8.63	9.01	9816.88	10030.00	-2
PETN	16.15	16.01	16.59	9996.34	9980.00	0
2-NMX	26.09	25.96	26.63	1457.45	1500.68	-3

Compounds 4 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/14/13

Lab File ID: 3E12310B.54R Time Analyzed: 11:21

Lab Standard ID: NITR3OV Initial Calibration: 2E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.92	2.86	3.06	516.78	502.00	3

Compounds 1 Average of %D: 3

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.05R Time Analyzed: 0:42

Lab Standard ID: NITR3OM Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.33	4.21	4.41	462.25	498.50	-7
RDX	5.31	5.18	5.38	500.85	494.00	1
Nitrobenzene	13.04	12.82	13.14	501.09	501.50	0
o-Dinitrobenzene	15.08	14.85	15.21	535.35	502.00	7
2-Amino-4,6-dinitrotoluene	17.03	16.81	17.13	507.83	500.00	2
1,3-DNB	19.27	19.04	19.34	503.51	500.50	1
1,4-Dinitrobenzene	20.06	19.83	20.13	513.88	497.00	3
2-Nitrotoluene	24.59	24.21	24.73	501.00	496.00	1
3-Nitrotoluene	28.24	27.77	28.29	455.88	495.00	-8
1,3,5-Trinitrobenzene	30.40	30.01	30.41	431.75	500.50	-14
2,6-Dinitrotoluene	31.14	30.76	31.16	521.68	500.50	4
2,4-Dinitrotoluene	33.90	33.73	33.95	528.39	500.50	6
2-NMX	34.29	34.15	34.35	1528.02	1500.68	2
Tetryl	34.60	34.46	34.66	408.26	499.50	-18
2,4,6-Trinitrotoluene	35.53	35.40	35.60	503.63	501.50	0
1-Nitronaphthalene	36.50	36.38	36.58	458.52	501.00	-8

Compounds 16 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.05R Time Analyzed: 0:42

Lab Standard ID: NITR3OM Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.80	9.66	9.86	9560.80	10030.00	-5
PETN	26.63	26.17	26.59	9216.20	9980.00	-8

Compounds 2 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.06R Time Analyzed: 1:25

Lab Standard ID: NITR3CN Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.87	3.65	4.01	542.16	506.00	7

Compounds 1 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.21	4.41	462.02	498.50	-7
RDX	5.26	5.18	5.38	494.39	494.00	0
Nitrobenzene	12.93	12.82	13.14	524.41	501.50	5
o-Dinitrobenzene	14.96	14.85	15.21	549.18	502.00	9
4-Amino-2,6-dinitrotoluene	16.83	16.81	17.13	506.81	500.50	1
1,3-DNB	19.05	19.04	19.34	500.68	500.50	0
1,4-Dinitrobenzene	19.85	19.83	20.13	531.15	497.00	7
2-Nitrotoluene	24.32	24.21	24.73	497.97	496.00	0
4-Nitrotoluene	27.94	27.77	28.29	467.35	497.50	-6
1,3,5-Trinitrobenzene	30.03	30.01	30.41	427.29	500.50	-15
2,6-Dinitrotoluene	30.89	30.76	31.16	525.12	500.50	5
2,4-Dinitrotoluene	33.80	33.73	33.95	533.42	500.50	7
2-NMX	34.22	34.15	34.35	1537.83	1500.68	2
Tetryl	34.54	34.46	34.66	408.85	499.50	-18
2,4,6-Trinitrotoluene	35.48	35.40	35.60	504.36	501.50	1
1-Nitronaphthalene	36.46	36.38	36.58	466.53	501.00	-7

Compounds 16 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.17R Time Analyzed: 9:11

Lab Standard ID: NITR3OO Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.71	9.66	9.86	9597.09	10030.00	-4
PETN	26.27	26.17	26.59	9056.91	9980.00	-9

Compounds 2 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.18R Time Analyzed: 9:54

Lab Standard ID: NITR3OP Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.86	3.65	4.01	536.58	506.00	6

Compounds 1 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.33	4.21	4.41	460.95	498.50	-8
RDX	5.31	5.18	5.38	503.64	494.00	2
Nitrobenzene	13.03	12.82	13.14	499.51	501.50	0
o-Dinitrobenzene	15.06	14.85	15.21	503.92	502.00	0
2-Amino-4,6-dinitrotoluene	17.00	16.81	17.13	492.25	500.00	-2
1,3-DNB	19.23	19.04	19.34	491.05	500.50	-2
1,4-Dinitrobenzene	20.05	19.83	20.13	513.33	497.00	3
2-Nitrotoluene	24.58	24.21	24.73	502.41	496.00	1
3-Nitrotoluene	28.16	27.77	28.29	459.59	495.00	-7
1,3,5-Trinitrobenzene	30.33	30.01	30.41	426.96	500.50	-15
2,6-Dinitrotoluene	31.07	30.76	31.16	534.62	500.50	7
2,4-Dinitrotoluene	33.88	33.73	33.95	521.50	500.50	4
2-NMX	34.28	34.15	34.35	1439.78	1500.68	-4
Tetryl	34.60	34.46	34.66	393.19	499.50	-21
2,4,6-Trinitrotoluene	35.53	35.40	35.60	476.15	501.50	-5
1-Nitronaphthalene	36.50	36.38	36.58	480.80	501.00	-4

Compounds 16 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.29R Time Analyzed: 17:40

Lab Standard ID: NITR3OQ Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.79	9.66	9.86	9555.03	10030.00	-5
PETN	26.50	26.17	26.59	9104.75	9980.00	-9

Compounds 2 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/13/13

Lab File ID: 3C12310B.30R Time Analyzed: 18:23

Lab Standard ID: NITR3OR Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.88	3.65	4.01	540.78	506.00	7

Compounds 1 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310.41R Time Analyzed: 2:10

Lab Standard ID: NITR3OS Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.26	4.21	4.41	473.03	498.50	-5
RDX	5.20	5.18	5.38	504.88	494.00	2
Nitrobenzene	12.64	12.82	13.14	497.71	501.50	-1
o-Dinitrobenzene	14.62	14.85	15.21	511.91	502.00	2
4-Amino-2,6-dinitrotoluene	16.47	16.81	17.13	495.89	500.50	-1
1,3-DNB	18.89	19.04	19.34	496.50	500.50	-1
1,4-Dinitrobenzene	19.65	19.83	20.13	502.32	497.00	1
2-Nitrotoluene	24.05	24.21	24.73	500.16	496.00	1
4-Nitrotoluene	27.62	27.77	28.29	498.99	497.50	0
1,3,5-Trinitrobenzene	30.02	30.01	30.41	453.47	500.50	-9
2,6-Dinitrotoluene	30.34	30.76	31.16	514.97	500.50	3
2,4-Dinitrotoluene	33.78	33.73	33.95	525.57	500.50	5
2-NMX	34.20	34.15	34.35	1449.60	1500.68	-3
Tetryl	34.53	34.46	34.66	390.99	499.50	-22
2,4,6-Trinitrotoluene	35.49	35.40	35.60	479.45	501.50	-4
1-Nitronaphthalene	36.48	36.38	36.58	470.18	501.00	-6

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310B.41R Time Analyzed: 2:10

Lab Standard ID: NITR3OS Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.48	9.66	9.86	9619.96	10030.00	-4
PETN	25.95	26.17	26.59	9530.80	9980.00	-5

Compounds 2 Average of %D: 5

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310B.42R Time Analyzed: 2:52

Lab Standard ID: NITR3OT Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.88	3.65	4.01	540.47	506.00	7

Compounds 1 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/07/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310.53R Time Analyzed: 10:39

Lab Standard ID: NITR3OU Initial Calibration: 2C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.35	4.21	4.41	468.40	498.50	-6
RDX	5.33	5.18	5.38	499.15	494.00	1
Nitrobenzene	13.08	12.82	13.14	504.34	501.50	1
o-Dinitrobenzene	15.14	14.85	15.21	538.19	502.00	7
4-Amino-2,6-dinitrotoluene	17.12	16.81	17.13	510.01	500.50	2
1,3-DNB	19.35	19.04	19.34	495.79	500.50	-1
1,4-Dinitrobenzene	20.14	19.83	20.13	509.68	497.00	3
2-Nitrotoluene	24.74	24.21	24.73	500.14	496.00	1
4-Nitrotoluene	28.39	27.77	28.29	447.87	497.50	-10
1,3,5-Trinitrobenzene	30.89	30.01	30.41	342.01	500.50	-32
2,6-Dinitrotoluene	31.28	30.76	31.16	438.96	500.50	-12
2,4-Dinitrotoluene	33.95	33.73	33.95	375.98	500.50	-25
2-NMX	34.35	34.15	34.35	468.36	1500.68	-69
Tetryl	34.70	34.46	34.66	132.66	499.50	-73
2,4,6-Trinitrotoluene	35.78	35.40	35.60	535.10	501.50	7
1-Nitronaphthalene	36.43	36.38	36.58	189.15	501.00	-62

Compounds 16 Average of %D: 20

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310B.53R Time Analyzed: 10:39

Lab Standard ID: NITR3OU Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.86	9.66	9.86	9574.89	10030.00	-5
PETN	26.75	26.17	26.59	9143.53	9980.00	-8

Compounds 2 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/07/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/14/13

Lab File ID: 3C12310B.54R Time Analyzed: 11:21

Lab Standard ID: NITR3OV Initial Calibration: 2C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.89	3.65	4.01	538.19	506.00	6

Compounds 1 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310.58R Time Analyzed: 9:02

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.10	4.00	4.20	468.79	494.00	-5
1,3,5-Trinitrobenzene	4.76	4.66	4.86	471.14	500.50	-6
1,4-Dinitrobenzene	5.62	5.52	5.72	458.77	497.00	-8
o-Dinitrobenzene	6.23	6.13	6.33	431.76	502.00	-14
1,3-DNB	6.59	6.49	6.69	495.85	500.50	-1
Tetryl + Breakdown	7.47	7.33	7.61	4237 + 433.71 = 4670.8	499.50	~~-13~~ -5
2,4,6-Trinitrotoluene	7.88	7.78	7.98	527.70	501.50	5
4-Amino-2,6-dinitrotoluene	9.83	9.69	9.97	459.36	500.50	-8
2-Amino-4,6-dinitrotoluene	10.11	9.97	10.25	448.04	500.00	-10
2,6-Dinitrotoluene	10.52	10.38	10.66	471.50	500.50	-6
2,4-Dinitrotoluene	11.00	10.86	11.14	520.11	500.50	4
2-Nitrotoluene	12.94	12.80	13.08	447.31	496.00	-10
4-Nitrotoluene	14.27	14.11	14.43	442.67	497.50	-11
3-Nitrotoluene	14.95	14.79	15.12	512.41	495.00	4
2-NMX	25.75	25.41	26.09	1507.18	1500.68	0
1-Nitronaphthalene	32.87	32.62	33.11	529.09	501.00	6

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310B.58R Time Analyzed: 9:02

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.75	2.65	2.85	491.08	498.50	-1
Nitroglycerin	8.70	8.51	8.89	8813.38	10030.00	-12
PETN	16.04	15.75	16.33	9443.19	9980.00	-5
2-NMX	25.91	25.57	26.24	1421.99	1500.68	-5

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310B.59R Time Analyzed: 9:44

Lab Standard ID: NITR3PX Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,4-Diamino-6-nitrotoluene	2.87	2.77	2.97	517.93	502.00	3

Compounds 1 Average of %D: 3

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13
GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13
Lab File ID: 4E12310.70R Time Analyzed: 17:31
Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.08	4.00	4.20	465.76	494.00	-6
1,3,5-Trinitrobenzene	4.74	4.66	4.86	466.27	500.50	-7
1,4-Dinitrobenzene	5.59	5.52	5.72	451.96	497.00	-9
o-Dinitrobenzene	6.19	6.13	6.33	426.52	502.00	-15
1,3-DNB	6.56	6.49	6.69	496.47	500.50	-1
Tetryl + Breakdown	7.43	7.33	7.61	44.68 + 422.23 = 466.91	499.50	-15
2,4,6-Trinitrotoluene	7.83	7.78	7.98	530.22	501.50	6
4-Amino-2,6-dinitrotoluene	9.78	9.69	9.97	453.91	500.50	-9
2-Amino-4,6-dinitrotoluene	10.07	9.97	10.25	437.29	500.00	-13
2,6-Dinitrotoluene	10.46	10.38	10.66	471.03	500.50	-6
2,4-Dinitrotoluene	10.95	10.86	11.14	522.40	500.50	4
2-Nitrotoluene	12.88	12.80	13.08	438.01	496.00	-12
4-Nitrotoluene	14.20	14.11	14.43	435.43	497.50	-12
3-Nitrotoluene	14.89	14.79	15.12	515.06	495.00	4
2-NMX	25.68	25.41	26.09	1454.63	1500.68	-3
1-Nitronaphthalene	32.82	32.62	33.11	520.34	501.00	4

Compounds 16 Average of %D: 8

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories
Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: X6329B
Init. Calib Date(s): 11/17/13 11/17/13
GC Column (2) : CHROMPACK ID: 100 (mm)
Date Analyzed: 11/17/13
Lab File ID: 4E12310B.70R
Time Analyzed: 17:31
Lab Standard ID: NITR3PV
Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.74	2.65	2.85	490.98	498.50	-2
Nitroglycerin	8.65	8.51	8.89	8773.75	10030.00	-13
PETN	15.96	15.75	16.33	9460.47	9980.00	-5
2-NMX	25.81	25.57	26.24	1451.79	1500.68	-3

Compounds 4
Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.04	4.00	4.20	462.72	494.00	-6
1,3,5-Trinitrobenzene	4.69	4.66	4.86	463.63	500.50	-7
1,4-Dinitrobenzene	5.52	5.52	5.72	451.59	497.00	-9
o-Dinitrobenzene	6.08	6.13	6.33	464.06	502.00	-8
1,3-DNB	6.46	6.49	6.69	477.62	500.50	-5
Tetryl + Breakdown	7.31	7.33	7.61	45.61 + 414.48 = 460.09	499.50	~~-7~~ -8
2,4,6-Trinitrotoluene	7.69	7.78	7.98	526.99	501.50	5
4-Amino-2,6-dinitrotoluene	9.56	9.69	9.97	426.79	500.50	-15
2-Amino-4,6-dinitrotoluene	9.85	9.97	10.25	441.64	500.00	-12
2,6-Dinitrotoluene	10.25	10.38	10.66	480.78	500.50	-4
2,4-Dinitrotoluene	10.72	10.86	11.14	514.47	500.50	3
2-Nitrotoluene	12.61	12.80	13.08	434.87	496.00	-12
4-Nitrotoluene	13.91	14.11	14.43	445.43	497.50	-10
3-Nitrotoluene	14.57	14.79	15.12	501.57	495.00	1
2-NMX	25.10	25.41	26.09	1490.67	1500.68	-1
1-Nitronaphthalene	32.59	32.62	33.11	508.57	501.00	2

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.71	2.65	2.85	493.56	498.50	-1
Nitroglycerin	8.49	8.51	8.89	8724.02	10030.00	-13
PETN	15.62	15.75	16.33	9454.38	9980.00	-5
2-NMX	25.23	25.57	26.24	1451.73	1500.68	-3

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310.58R Time Analyzed: 9:02

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.20	4.40	463.96	498.50	-7
RDX	5.26	5.16	5.36	500.34	494.00	1
Nitrobenzene	12.91	12.75	13.07	504.72	501.50	1
o-Dinitrobenzene	14.90	14.72	15.08	501.85	502.00	0
4-Amino-2,6-dinitrotoluene	16.82	16.66	16.98	498.05	500.50	0
1,3-DNB	19.08	18.93	19.23	481.48	500.50	-4
1,4-Dinitrobenzene	19.77	19.62	19.92	536.44	497.00	8
2-Nitrotoluene	24.31	24.05	24.57	476.90	496.00	-4
4-Nitrotoluene	27.86	27.60	28.12	396.05	497.50	-20
1,3,5-Trinitrobenzene	30.01	29.81	30.21	398.68	500.50	-20
2,6-Dinitrotoluene	30.82	30.62	31.02	506.07	500.50	1
2,4-Dinitrotoluene	33.78	33.67	33.89	525.60	500.50	5
2-NMX	34.21	34.12	34.32	1547.42	1500.68	3
Tetryl	34.51	34.41	34.61	545.21	499.50	9
2,4,6-Trinitrotoluene	35.46	35.36	35.56	501.30	501.50	0
1-Nitronaphthalene	36.46	36.36	36.56	514.27	501.00	3

Compounds 16 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310B.58R Time Analyzed: 9:02

Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.72	9.62	9.82	9281.49	10030.00	-7
PETN	26.23	26.02	26.44	9144.52	9980.00	-8

Compounds 2 Average of %D: 8

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310B.59R Time Analyzed: 9:44

Lab Standard ID: NITR3PX Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
2,6-Diamino-4-nitrotoluene	3.82	3.64	4.00	541.86	506.00	7

Compounds 1 Average of %D: 7

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.20	4.40	460.32	498.50	-8
RDX	5.27	5.16	5.36	493.76	494.00	0
Nitrobenzene	12.95	12.75	13.07	501.40	501.50	0
o-Dinitrobenzene	14.97	14.72	15.08	496.44	502.00	-1
4-Amino-2,6-dinitrotoluene	16.85	16.66	16.98	494.79	500.50	-1
1,3-DNB	19.12	18.93	19.23	497.18	500.50	-1
1,4-Dinitrobenzene	19.84	19.62	19.92	493.37	497.00	-1
2-Nitrotoluene	24.37	24.05	24.57	472.79	496.00	-5
4-Nitrotoluene	28.02	27.60	28.12	392.64	497.50	-21
1,3,5-Trinitrobenzene	30.07	29.81	30.21	366.66	500.50	-27
2,6-Dinitrotoluene	30.87	30.62	31.02	555.34	500.50	11
2,4-Dinitrotoluene	33.80	33.67	33.89	528.11	500.50	6
2-NMX	34.24	34.12	34.32	1517.05	1500.68	1
Tetryl	34.53	34.41	34.61	541.03	499.50	8
2,4,6-Trinitrotoluene	35.47	35.36	35.56	505.23	501.50	1
1-Nitronaphthalene	36.47	36.36	36.56	506.56	501.00	1

Compounds 16 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310B.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.72	9.62	9.82	9318.58	10030.00	-7
PETN	26.26	26.02	26.44	8808.53	9980.00	-12

Compounds 2 Average of %D: 10

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 4C12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.34	4.20	4.40	461.92	498.50	-7
RDX	5.31	5.16	5.36	503.58	494.00	2
Nitrobenzene	12.95	12.75	13.07	504.57	501.50	1
o-Dinitrobenzene	14.98	14.72	15.08	498.45	502.00	-1
4-Amino-2,6-dinitrotoluene	16.85	16.66	16.98	498.02	500.50	0
1,3-DNB	19.16	18.93	19.23	508.07	500.50	2
1,4-Dinitrobenzene	19.86	19.62	19.92	497.01	497.00	0
2-Nitrotoluene	24.37	24.05	24.57	472.49	496.00	-5
4-Nitrotoluene	27.95	27.60	28.12	430.33	497.50	-14
1,3,5-Trinitrobenzene	30.20	29.81	30.21	422.70	500.50	-16
2,6-Dinitrotoluene	30.84	30.62	31.02	488.30	500.50	-2
2,4-Dinitrotoluene	33.84	33.67	33.89	527.07	500.50	5
2-NMX	34.26	34.12	34.32	1522.37	1500.68	1
Tetryl	34.57	34.41	34.61	526.91	499.50	5
2,4,6-Trinitrotoluene	35.51	35.36	35.56	500.72	501.50	0
1-Nitronaphthalene	36.51	36.36	36.56	475.76	501.00	-5

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 4C12310B.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.74	9.62	9.82	9278.91	10030.00	-7
PETN	26.34	26.02	26.44	9006.53	9980.00	-10

Compounds 2 Average of %D: 9

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.31	4.20	4.40	467.00	494.00	-5
1,3,5-Trinitrobenzene	5.01	4.90	5.10	463.67	500.50	-7
1,4-Dinitrobenzene	5.92	5.80	6.00	452.01	497.00	-9
o-Dinitrobenzene	6.55	6.43	6.63	440.27	502.00	-12
1,3-DNB	6.95	6.83	7.03	486.17	500.50	-3
Nitrobenzene + Tetryl breakdown	7.87	7.71	7.99	4834 + 433.34 = 481.68	501.50	-14 -4
2,4,6-Trinitrotoluene	8.31	8.19	8.39	522.55	501.50	4
4-Amino-2,6-dinitrotoluene	10.37	10.21	10.49	428.28	500.50	-14
2-Amino-4,6-dinitrotoluene	10.68	10.51	10.80	442.91	500.00	-11
2,6-Dinitrotoluene	11.12	10.95	11.23	505.14	500.50	1
2,4-Dinitrotoluene	11.62	11.45	11.74	507.11	500.50	1
2-Nitrotoluene	13.66	13.49	13.77	425.04	496.00	-14
4-Nitrotoluene	15.08	14.87	15.19	439.61	497.50	-12
3-Nitrotoluene	15.80	15.60	15.93	506.36	495.00	2
2-NMX	27.29	26.91	27.59	1456.88	1500.68	-3
1-Nitronaphthalene	33.43	33.20	33.69	521.41	501.00	4

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 2 2 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310B.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.88	2.77	2.97	494.07	498.50	-1
Nitroglycerin	9.17	8.96	9.34	8816.66	10030.00	-12
PETN	16.95	16.63	17.20	9456.65	9980.00	-5
2-NMX	27.44	27.09	27.76	1455.85	1500.68	-3

Compounds 4 Average of %D: 5

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.32	4.20	4.40	468.50	494.00	-5
1,3,5-Trinitrobenzene	5.01	4.90	5.10	466.77	500.50	-7
1,4-Dinitrobenzene	5.92	5.80	6.00	453.45	497.00	-9
o-Dinitrobenzene	6.55	6.43	6.63	440.88	502.00	-12
1,3-DNB	6.95	6.83	7.03	492.77	500.50	-2
Nitrobenzene + Tetryl breakdown	7.87	7.71	7.99	48.73 + 426.01 = 474.74	501.50	-5
2,4,6-Trinitrotoluene	8.32	8.19	8.39	527.30	501.50	5
4-Amino-2,6-dinitrotoluene	10.39	10.21	10.49	450.34	500.50	-10
2-Amino-4,6-dinitrotoluene	10.69	10.51	10.80	460.24	500.00	-8
2,6-Dinitrotoluene	11.12	10.95	11.23	490.55	500.50	-2
2,4-Dinitrotoluene	11.62	11.45	11.74	500.20	500.50	0
2-Nitrotoluene	13.64	13.49	13.77	429.72	496.00	-13
4-Nitrotoluene	15.04	14.87	15.19	447.81	497.50	-10
3-Nitrotoluene	15.78	15.60	15.93	517.80	495.00	5
2-NMX	27.28	26.91	27.59	1517.00	1500.68	1
1-Nitronaphthalene	33.43	33.20	33.69	517.31	501.00	3

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 22 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310B.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.88	2.77	2.97	504.53	498.50	1
Nitroglycerin	9.18	8.96	9.34	8937.97	10030.00	-11
PETN	16.94	16.63	17.20	9619.85	9980.00	-4
2-NMX	27.42	27.09	27.76	1427.69	1500.68	-5

Compounds 4 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.22	4.13	4.33	458.69	498.50	-8
RDX	5.18	5.08	5.28	491.46	494.00	-1
Nitrobenzene	12.74	12.62	12.94	499.75	501.50	0
o-Dinitrobenzene	14.77	14.65	15.01	497.94	502.00	-1
4-Amino-2,6-dinitrotoluene	16.71	16.61	16.93	492.63	500.50	-2
1,3-DNB	18.89	18.80	19.10	491.33	500.50	-2
1,4-Dinitrobenzene	19.66	19.60	19.90	500.51	497.00	1
2-Nitrotoluene	24.12	23.89	24.41	487.46	496.00	-2
4-Nitrotoluene	27.65	27.49	28.01	464.94	497.50	-7
1,3,5-Trinitrobenzene	29.81	29.57	29.97	479.88	500.50	-4
2,6-Dinitrotoluene	30.65	30.49	30.89	447.86	500.50	-11
2,4-Dinitrotoluene	33.71	33.60	33.82	533.30	500.50	7
2-NMX	34.15	34.05	34.25	1497.28	1500.68	0
Tetryl	34.49	34.39	34.59	544.30	499.50	9
2,4,6-Trinitrotoluene	35.43	35.32	35.52	503.49	501.50	0
1-Nitronaphthalene	36.44	36.34	36.54	485.71	501.00	-3

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310B.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.55	9.47	9.67	9271.75	10030.00	-8
PETN	25.94	25.73	26.15	9092.02	9980.00	-9

Compounds 2 Average of %D: 9

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13
GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13
Lab File ID: 5C12310.39R Time Analyzed: 21:20
Lab Standard ID: NITR3QH Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.22	4.13	4.33	453.46	498.50	-9
RDX	5.18	5.08	5.28	485.85	494.00	-2
Nitrobenzene	12.68	12.62	12.94	499.29	501.50	0
o-Dinitrobenzene	14.73	14.65	15.01	497.37	502.00	-1
4-Amino-2,6-dinitrotoluene	16.64	16.61	16.93	493.88	500.50	-1
1,3-DNB	18.82	18.80	19.10	508.98	500.50	2
1,4-Dinitrobenzene	19.56	19.60	19.90	473.67	497.00	-5
2-Nitrotoluene	23.99	23.89	24.41	488.72	496.00	-1
4-Nitrotoluene	27.53	27.49	28.01	458.14	497.50	-8
1,3,5-Trinitrobenzene	29.63	29.57	29.97	485.81	500.50	-3
2,6-Dinitrotoluene	30.19	30.49	30.89	448.22	500.50	-10
2,4-Dinitrotoluene	33.65	33.60	33.82	523.16	500.50	5
2-NMX	34.12	34.05	34.25	1401.25	1500.68	-7
Tetryl	34.44	34.39	34.59	498.86	499.50	0
2,4,6-Trinitrotoluene	35.39	35.32	35.52	488.72	501.50	-3
1-Nitronaphthalene	36.42	36.34	36.54	482.82	501.00	-4

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310B.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.53	9.47	9.67	9296.46	10030.00	-7
PETN	25.78	25.73	26.15	8914.81	9980.00	-11

Compounds 2 Average of %D: 9

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/10/2013	20:11:42	1E12310	26.89
002		CONDITIONER	11/10/2013	20:54:10	1E12310	26.49
003		CONDITIONER	11/10/2013	21:36:43	1E12310	26.45
004		CONDITIONER	11/10/2013	22:19:07	1E12310	26.48
005		CONDITIONER	11/10/2013	23:01:26	1E12310	26.68
006	NITR3NU	NITR31324L	11/10/2013	23:43:52	1E12310	26.50
007	PBLK25305	BLANKA	11/11/2013	00:26:16	1E12310	26.39 *
008	LCS25305	LCSA	11/11/2013	01:08:42	1E12310	26.67
009	LCSD25305	LCSDA	11/11/2013	01:51:07	1E12310	26.55
010	FV-IN	7257293	11/11/2013	02:33:37	1E12310	26.47
011	FV1EF	7257294	11/11/2013	03:16:12	1E12310	26.43
012	FV3EF	7257295	11/11/2013	03:58:36	1E12310	26.46
013	MMH--	7257296	11/11/2013	04:41:00	1E12310	26.44
014	BW-9-	7257297	11/11/2013	05:23:24	1E12310	26.26 *
015	M85L9	7257298	11/11/2013	06:05:50	1E12310	26.55
016	BW-4-	7257299	11/11/2013	06:48:14	1E12310	26.59
017	NITR3NW	NITR31324L	11/11/2013	07:30:40	1E12310	26.55
018	MW-3B	7257301	11/11/2013	08:13:06	1E12310	26.45
019	PBLK16306	BLANKA	11/11/2013	08:55:36	1E12310	26.48
020	LCS16306	LCSA	11/11/2013	09:37:59	1E12310	26.56
021	GB227	7258858	11/11/2013	10:20:26	2E12310	26.43
022	2AL26	7258859	11/11/2013	11:02:51	2E12310	26.41
023	2DO25	7258860	11/11/2013	11:45:15	2E12310	26.43
024	BT235	7258861	11/11/2013	12:27:41	2E12310	26.37
025	2AT35	7258862	11/11/2013	13:10:06	2E12310	26.48
026	GB135	7258863	11/11/2013	13:52:29	2E12310	26.42
027	UB637	7258864	11/11/2013	14:34:59	2E12310	26.32
028	NITR3NY	NITR31324L	11/11/2013	15:17:23	2E12310	26.34
029	UB437	7258865	11/11/2013	15:59:49	2E12310	26.47
030	UB537	7258866	11/11/2013	16:42:15	2E12310	26.46
031	3AJ38	7258867	11/11/2013	17:24:41	2E12310	26.53
032	BT330	7258868	11/11/2013	18:07:04	2E12310	26.36
033	BT330	7258869	11/11/2013	18:49:32	2E12310	26.38

	ICAL Dates		ICAL RT QC Limits	
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	BT330	7258870	11/11/2013	19:31:56	2E12310	26.41
035	BT144	7258871	11/11/2013	20:14:23	2E12310	26.35
036	UBO44	7258872	11/11/2013	20:56:51	2E12310	26.39
037	BT145	7258873	11/11/2013	21:39:15	2E12310	26.29
038	537UB	7258874	11/11/2013	22:21:43	2E12310	26.40
039	NITR3OA	NITR31324L	11/11/2013	23:04:06	2E12310	26.37
040	NITR3OB	NITR31324M	11/11/2013	23:46:32	2E12310	
041	EBHOL	7258875	11/12/2013	00:28:59	2E12310	26.28
042	MW251	7260790	11/12/2013	01:11:27	2E12310	26.29
043	PBLK05311	BLANKA	11/12/2013	01:53:55	2E12310	26.29
044	LCS05311	LCSA	11/12/2013	02:36:20	2E12310	26.16
045	LCSD05311	LCSDDIA	11/12/2013	03:18:46	2E12310	26.27
046	LCS05311	LCSDIA	11/12/2013	04:01:12	2E12310	26.21
047	C4904	7264409	11/12/2013	04:43:42	2E12310	26.25
048	C4904MS	7264409	11/12/2013	05:26:06	2E12310	26.12
049	C4904MSD	7264409	11/12/2013	06:08:30	2E12310	26.26
050	C4910	7264415	11/12/2013	06:50:56	2E12310	26.23
051	NITR3OC	NITR31324L	11/12/2013	07:33:23	2E12310	26.15
052	NITR3OD	NITR31324M	11/12/2013	08:15:49	2E12310	
053	C4913	7264418	11/12/2013	08:58:14	2E12310	26.08
054	C4916	7264421	11/12/2013	09:40:40	2E12310	26.16
055	C4919	7264424	11/12/2013	10:23:04	2E12310	26.07
056	C4928	7264433	11/12/2013	11:05:31	2E12310	26.06
057	C4934	7264439	11/12/2013	11:47:56	2E12310	26.12
058	C4940	7264445	11/12/2013	12:30:20	2E12310	26.15
059	C5001	7264575	11/12/2013	13:12:50	2E12310	26.13
060	C5011	7264585	11/12/2013	13:55:16	2E12310	26.18
061	C5016	7264590	11/12/2013	14:37:46	2E12310	26.17
062	C5019	7264593	11/12/2013	15:20:12	2E12310	26.22
063	NITR3OE	NITR31324L	11/12/2013	16:02:40	2E12310	26.24
064	NITR3OF	NITR31324M	11/12/2013	16:45:09	2E12310	
065	C5201	7266316	11/12/2013	17:27:39	2E12310	25.92
066	C5204	7266319	11/12/2013	18:10:07	2E12310	26.02

	ICAL Dates		ICAL RT QC Limits	
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	C5210	7266325	11/12/2013	18:52:35	2E12310	26.02
068	C5213	7266328	11/12/2013	19:35:02	2E12310	26.10
069	C5219	7266344	11/12/2013	20:17:29	2E12310	26.12
070	PBLK04311	BLANKA	11/12/2013	20:59:54	2E12310	26.06

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/10/2013	20:11:42	1E12310B	27.08
002		CONDITIONER	11/10/2013	20:54:10	1E12310B	26.66
003		CONDITIONER	11/10/2013	21:36:43	1E12310B	26.60
004		CONDITIONER	11/10/2013	22:19:07	1E12310B	26.60
005		CONDITIONER	11/10/2013	23:01:26	1E12310B	26.84
006	NITR3NU	NITR31324L	11/10/2013	23:43:52	1E12310B	26.65
007	PBLK25305	BLANKA	11/11/2013	00:26:16	1E12310B	26.59
008	LCS25305	LCSA	11/11/2013	01:08:42	1E12310B	26.78
009	LCSD25305	LCSDA	11/11/2013	01:51:07	1E12310B	26.70
010	FV-IN	7257293	11/11/2013	02:33:37	1E12310B	26.61
011	FV1EF	7257294	11/11/2013	03:16:12	1E12310B	
012	FV3EF	7257295	11/11/2013	03:58:36	1E12310B	26.65
013	MMH--	7257296	11/11/2013	04:41:00	1E12310B	26.58
014	BW-9-	7257297	11/11/2013	05:23:24	1E12310B	26.62
015	M85L9	7257298	11/11/2013	06:05:50	1E12310B	26.70
016	BW-4-	7257299	11/11/2013	06:48:14	1E12310B	26.73
017	NITR3NW	NITR31324L	11/11/2013	07:30:40	1E12310B	26.71
018	MW-3B	7257301	11/11/2013	08:13:06	1E12310B	26.64
019	PBLK16306	BLANKA	11/11/2013	08:55:36	1E12310B	26.59
020	LCS16306	LCSA	11/11/2013	09:37:59	1E12310B	26.71
021	GB227	7258858	11/11/2013	10:20:26	2E12310B	26.57
022	2AL26	7258859	11/11/2013	11:02:51	2E12310B	26.56
023	2DO25	7258860	11/11/2013	11:45:15	2E12310B	26.58
024	BT235	7258861	11/11/2013	12:27:41	2E12310B	26.48
025	2AT35	7258862	11/11/2013	13:10:06	2E12310B	
026	GB135	7258863	11/11/2013	13:52:29	2E12310B	26.54
027	UB637	7258864	11/11/2013	14:34:59	2E12310B	26.50
028	NITR3NY	NITR31324L	11/11/2013	15:17:23	2E12310B	26.48
029	UB437	7258865	11/11/2013	15:59:49	2E12310B	26.65
030	UB537	7258866	11/11/2013	16:42:15	2E12310B	26.60
031	3AJ38	7258867	11/11/2013	17:24:41	2E12310B	26.65
032	BT330	7258868	11/11/2013	18:07:04	2E12310B	26.46
033	BT330	7258869	11/11/2013	18:49:32	2E12310B	26.51

ICAL Dates

1E12310B 11/06/2013 - 11/07/2013 NMX = 2-NMX

ICAL RT QC Limits

26.91 (26.58 - 27.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	BT330	7258870	11/11/2013	19:31:56	2E12310B	26.56
035	BT144	7258871	11/11/2013	20:14:23	2E12310B	26.51
036	UBO44	7258872	11/11/2013	20:56:51	2E12310B	26.48
037	BT145	7258873	11/11/2013	21:39:15	2E12310B	26.45
038	537UB	7258874	11/11/2013	22:21:43	2E12310B	26.53
039	NITR3OA	NITR31324L	11/11/2013	23:04:06	2E12310B	26.52
040	NITR3OB	NITR31324M	11/11/2013	23:46:32	2E12310B	26.13
041	EBHOL	7258875	11/12/2013	00:28:59	2E12310B	26.45
042	MW251	7260790	11/12/2013	01:11:27	2E12310B	26.40
043	PBLK05311	BLANKA	11/12/2013	01:53:55	2E12310B	26.41
044	LCS05311	LCSA	11/12/2013	02:36:20	2E12310B	26.34
045	LCSD05311	LCSDDIA	11/12/2013	03:18:46	2E12310B	26.43
046	LCS05311	LCSDIA	11/12/2013	04:01:12	2E12310B	26.38
047	C4904	7264409	11/12/2013	04:43:42	2E12310B	26.39
048	C4904MS	7264409	11/12/2013	05:26:06	2E12310B	26.32
049	C4904MSD	7264409	11/12/2013	06:08:30	2E12310B	26.45
050	C4910	7264415	11/12/2013	06:50:56	2E12310B	26.34
051	NITR3OC	NITR31324L	11/12/2013	07:33:23	2E12310B	26.31
052	NITR3OD	NITR31324M	11/12/2013	08:15:49	2E12310B	
053	C4913	7264418	11/12/2013	08:58:14	2E12310B	26.29
054	C4916	7264421	11/12/2013	09:40:40	2E12310B	26.26
055	C4919	7264424	11/12/2013	10:23:04	2E12310B	26.27
056	C4928	7264433	11/12/2013	11:05:31	2E12310B	26.15
057	C4934	7264439	11/12/2013	11:47:56	2E12310B	26.28
058	C4940	7264445	11/12/2013	12:30:20	2E12310B	26.35
059	C5001	7264575	11/12/2013	13:12:50	2E12310B	26.26
060	C5011	7264585	11/12/2013	13:55:16	2E12310B	26.34
061	C5016	7264590	11/12/2013	14:37:46	2E12310B	26.31
062	C5019	7264593	11/12/2013	15:20:12	2E12310B	26.35
063	NITR3OE	NITR31324L	11/12/2013	16:02:40	2E12310B	26.38
064	NITR3OF	NITR31324M	11/12/2013	16:45:09	2E12310B	
065	C5201	7266316	11/12/2013	17:27:39	2E12310B	26.11
066	C5204	7266319	11/12/2013	18:10:07	2E12310B	26.11

ICAL Dates ICAL RT QC Limits

1E12310B 11/06/2013 - 11/07/2013 NMX = 2-NMX 26.91 (26.58 - 27.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	C5210	7266325	11/12/2013	18:52:35	2E12310B	26.17
068	C5213	7266328	11/12/2013	19:35:02	2E12310B	26.23
069	C5219	7266344	11/12/2013	20:17:29	2E12310B	26.29
070	PBLK04311	BLANKA	11/12/2013	20:59:54	2E12310B	26.24

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001	PBLK17313	BLANKA	11/12/2013	21:53:17	2E12310
002	LCS17313	LCSA	11/12/2013	22:35:42	2E12310
003	LCSD17313	LCSDDIA	11/12/2013	23:18:03	2E12310
004	LCS17313	LCSDIA	11/13/2013	00:00:26	2E12310
005	NITR3OM	NITR31324L	11/13/2013	00:42:52	2E12310
006	NITR3ON	NITR31324M	11/13/2013	01:25:17	2E12310
007	C4010	7259353	11/13/2013	02:07:45	2E12310
008	C3534	7255735	11/13/2013	02:50:09	2E12310
009	C3534	7255736	11/13/2013	03:32:34	2E12310
010	C3534	7255737	11/13/2013	04:14:59	2E12310
011	PBLK18313	BLANKA	11/13/2013	04:57:25	2E12310
012	LCS18313	LCSA	11/13/2013	05:39:48	2E12310
013	LCSD18313	LCSDDIA	11/13/2013	06:22:13	2E12310
014	LCS18313	LCSDIA	11/13/2013	07:04:41	2E12310
015	C4303	7260617	11/13/2013	07:47:04	2E12310
016	C3817	7257006	11/13/2013	08:29:27	2E12310
017	NITR3OO	NITR31324L	11/13/2013	09:11:51	2E12310
018	NITR3OP	NITR31324M	11/13/2013	09:54:17	2E12310
019	C3817MS	7257006	11/13/2013	10:36:45	2E12310
020	C3817MSD	7257006	11/13/2013	11:19:11	2E12310
021	LCS04311	LCSA	11/13/2013	12:01:35	2E12310
022	WHERC	7263052	11/13/2013	12:44:00	2E12310
023	WHERCMS	7263052	11/13/2013	13:26:27	2E12310
024	WHERCMSD	7263052	11/13/2013	14:08:51	2E12310
025	XHERC	7263053	11/13/2013	14:51:16	2E12310
026	PHERC	7263054	11/13/2013	15:33:38	2E12310
027	OHERC	7263055	11/13/2013	16:16:05	2E12310
028	R2041	7265225	11/13/2013	16:58:31	2E12310
029	NITR3OQ	NITR31324L	11/13/2013	17:40:56	2E12310
030	NITR3OR	NITR31324M	11/13/2013	18:23:21	2E12310
031	AA	MS1330124B	11/13/2013	19:05:48	2E12310
032	AA	MS1330824A	11/13/2013	19:48:12	2E12310
033	AA	MS1326324A	11/13/2013	20:30:38	2E12310
034	AA	MS1331724C	11/13/2013	21:13:08	2E12310
035	AA	MS1330924A	11/13/2013	21:55:32	2E12310
036	R2042	7265226	11/13/2013	22:37:56	2E12310

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
037	R2043	7265227	11/13/2013	23:20:21	2E12310
038	R2E16	7265234	11/14/2013	00:02:48	2E12310
039	2E161	7265236	11/14/2013	00:45:15	2E12310
040	2E16D	7265237	11/14/2013	01:27:41	2E12310
041	NITR3OS	NITR31324L	11/14/2013	02:10:07	2E12310
042	NITR3OT	NITR31324M	11/14/2013	02:52:35	2E12310
043	2F142	7265241	11/14/2013	03:35:02	2E12310
044	R2121	7265242	11/14/2013	04:17:28	2E12310
045	R2123	7265244	11/14/2013	04:59:46	2E12310
046	2D141	7265245	11/14/2013	05:42:09	2E12310
047	DUPX1	7265246	11/14/2013	06:24:37	2E12310
048	C3511	7255708	11/14/2013	07:07:03	2E12310
049	C3514	7255711	11/14/2013	07:49:31	2E12310
050	C3520	7255717	11/14/2013	08:31:55	2E12310
051	C3525	7255722	11/14/2013	09:14:21	2E12310
052	C3537	7255744	11/14/2013	09:56:46	2E12310
053	NITR3OU	NITR31324L	11/14/2013	10:39:15	2E12310
054	NITR3OV	NITR31324M	11/14/2013	11:21:43	2E12310
055	C3539	7255746	11/14/2013	12:04:07	2E12310
056	C3545	7255752	11/14/2013	12:46:33	2E12310
057	C3701	7256953	11/14/2013	13:28:58	2E12310
058	C3707	7256959	11/14/2013	14:11:29	2E12310
059	C3710	7256962	11/14/2013	14:53:54	2E12310
060	C3713	7256965	11/14/2013	15:36:22	2E12310
061	C3718	7256970	11/14/2013	16:18:52	2E12310
062	C3721	7256973	11/14/2013	17:01:17	2E12310
063	C3724	7256976	11/14/2013	17:43:44	2E12310
064	C3810	7256999	11/14/2013	18:26:09	2E12310
065	NITR3OY	NITR31324L	11/14/2013	19:09:23	2E12310
066	NITR3OZ	NITR31324M	11/14/2013	19:51:49	2E12310
067	AA	NEW MS	11/14/2013	20:34:15	2E12310
068	AA	NEW LEVEL 3	11/14/2013	21:16:39	2E12310
069	AA	NEW ICV	11/14/2013	21:59:04	2E12310
070	C3822	7257011	11/14/2013	22:41:33	2E12310
071	C3827	7257016	11/14/2013	23:24:05	2E12310
072	C3830	7257019	11/15/2013	00:06:34	2E12310

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
073	C4001	7259344	11/15/2013	00:48:58	2E12310
074	C4016	7259359	11/15/2013	01:31:30	2E12310
075	C4023	7259366	11/15/2013	02:13:56	2E12310
076	C4025	7259368	11/15/2013	02:56:25	2E12310
077	NITR3OW	NITR31324L	11/15/2013	03:38:51	2E12310
078	NITR3OX	NITR31324M	11/15/2013	04:21:20	2E12310
079	C4111	7259386	11/15/2013	05:03:46	2E12310
080	C4116	7259391	11/15/2013	05:46:16	2E12310
081	C4121	7259396	11/15/2013	06:28:45	2E12310
082	C4309	7260623	11/15/2013	07:11:02	2E12310
083	C4320	7260634	11/15/2013	07:53:27	2E12310
084	C4413	7260649	11/15/2013	08:35:49	2E12310
085	NITR3OW	NITR31324L	11/15/2013	09:18:17	2E12310
086	NITR3OX	NITR31324M	11/15/2013	10:00:41	2E12310
087	AA	SS1330824A	11/15/2013	10:43:09	2E12310
088	AA	SS13328724A	11/15/2013	11:25:33	2E12310
089	AA	SS1331724A	11/15/2013	12:08:02	2E12310
090	AA	SS1327424A	11/15/2013	12:50:31	2E12310

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001	PBLK17313	BLANKA	11/12/2013	21:53:17	2E12310B
002	LCS17313	LCSA	11/12/2013	22:35:42	2E12310B
003	LCSD17313	LCSDDIA	11/12/2013	23:18:03	2E12310B
004	LCS17313	LCSDIA	11/13/2013	00:00:26	2E12310B
005	NITR3OM	NITR31324L	11/13/2013	00:42:52	2E12310B
006	NITR3ON	NITR31324M	11/13/2013	01:25:17	2E12310B
007	C4010	7259353	11/13/2013	02:07:45	2E12310B
008	C3534	7255735	11/13/2013	02:50:09	2E12310B
009	C3534	7255736	11/13/2013	03:32:34	2E12310B
010	C3534	7255737	11/13/2013	04:14:59	2E12310B
011	PBLK18313	BLANKA	11/13/2013	04:57:25	2E12310B
012	LCS18313	LCSA	11/13/2013	05:39:48	2E12310B
013	LCSD18313	LCSDDIA	11/13/2013	06:22:13	2E12310B
014	LCS18313	LCSDIA	11/13/2013	07:04:41	2E12310B
015	C4303	7260617	11/13/2013	07:47:04	2E12310B
016	C3817	7257006	11/13/2013	08:29:27	2E12310B
017	NITR3OO	NITR31324L	11/13/2013	09:11:51	2E12310B
018	NITR3OP	NITR31324M	11/13/2013	09:54:17	2E12310B
019	C3817MS	7257006	11/13/2013	10:36:45	2E12310B
020	C3817MSD	7257006	11/13/2013	11:19:11	2E12310B
021	LCS04311	LCSA	11/13/2013	12:01:35	2E12310B
022	WHERC	7263052	11/13/2013	12:44:00	2E12310B
023	WHERCMS	7263052	11/13/2013	13:26:27	2E12310B
024	WHERCMSD	7263052	11/13/2013	14:08:51	2E12310B
025	XHERC	7263053	11/13/2013	14:51:16	2E12310B
026	PHERC	7263054	11/13/2013	15:33:38	2E12310B
027	OHERC	7263055	11/13/2013	16:16:05	2E12310B
028	R2041	7265225	11/13/2013	16:58:31	2E12310B
029	NITR3OQ	NITR31324L	11/13/2013	17:40:56	2E12310B
030	NITR3OR	NITR31324M	11/13/2013	18:23:21	2E12310B
031	AA	MS1330124B	11/13/2013	19:05:48	2E12310B
032	AA	MS1330824A	11/13/2013	19:48:12	2E12310B
033	AA	MS1326324A	11/13/2013	20:30:38	2E12310B
034	AA	MS1331724C	11/13/2013	21:13:08	2E12310B
035	AA	MS1330924A	11/13/2013	21:55:32	2E12310B
036	R2042	7265226	11/13/2013	22:37:56	2E12310B

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
037	R2043	7265227	11/13/2013	23:20:21	2E12310B
038	R2E16	7265234	11/14/2013	00:02:48	2E12310B
039	2E161	7265236	11/14/2013	00:45:15	2E12310B
040	2E16D	7265237	11/14/2013	01:27:41	2E12310B
041	NITR3OS	NITR31324L	11/14/2013	02:10:07	2E12310B
042	NITR3OT	NITR31324M	11/14/2013	02:52:35	2E12310B
043	2F142	7265241	11/14/2013	03:35:02	2E12310B
044	R2121	7265242	11/14/2013	04:17:28	2E12310B
045	R2123	7265244	11/14/2013	04:59:46	2E12310B
046	2D141	7265245	11/14/2013	05:42:09	2E12310B
047	DUPX1	7265246	11/14/2013	06:24:37	2E12310B
048	C3511	7255708	11/14/2013	07:07:03	2E12310B
049	C3514	7255711	11/14/2013	07:49:31	2E12310B
050	C3520	7255717	11/14/2013	08:31:55	2E12310B
051	C3525	7255722	11/14/2013	09:14:21	2E12310B
052	C3537	7255744	11/14/2013	09:56:46	2E12310B
053	NITR3OU	NITR31324L	11/14/2013	10:39:15	2E12310B
054	NITR3OV	NITR31324M	11/14/2013	11:21:43	2E12310B
055	C3539	7255746	11/14/2013	12:04:07	2E12310B
056	C3545	7255752	11/14/2013	12:46:33	2E12310B
057	C3701	7256953	11/14/2013	13:28:58	2E12310B
058	C3707	7256959	11/14/2013	14:11:29	2E12310B
059	C3710	7256962	11/14/2013	14:53:54	2E12310B
060	C3713	7256965	11/14/2013	15:36:22	2E12310B
061	C3718	7256970	11/14/2013	16:18:52	2E12310B
062	C3721	7256973	11/14/2013	17:01:17	2E12310B
063	C3724	7256976	11/14/2013	17:43:44	2E12310B
064	C3810	7256999	11/14/2013	18:26:09	2E12310B
065	NITR3OY	NITR31324L	11/14/2013	19:09:23	2E12310B
066	NITR3OZ	NITR31324M	11/14/2013	19:51:49	2E12310B
067	AA	NEW MS	11/14/2013	20:34:15	2E12310B
068	AA	NEW LEVEL 3	11/14/2013	21:16:39	2E12310B
069	AA	NEW ICV	11/14/2013	21:59:04	2E12310B
070	C3822	7257011	11/14/2013	22:41:33	2E12310B
071	C3827	7257016	11/14/2013	23:24:05	2E12310B
072	C3830	7257019	11/15/2013	00:06:34	2E12310B

8D
ANALYTICAL SEQUENCE

Sequence: 3E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
073	C4001	7259344	11/15/2013	00:48:58	2E12310B
074	C4016	7259359	11/15/2013	01:31:30	2E12310B
075	C4023	7259366	11/15/2013	02:13:56	2E12310B
076	C4025	7259368	11/15/2013	02:56:25	2E12310B
077	NITR3OW	NITR31324L	11/15/2013	03:38:51	2E12310B
078	NITR3OX	NITR31324M	11/15/2013	04:21:20	2E12310B
079	C4111	7259386	11/15/2013	05:03:46	2E12310B
080	C4116	7259391	11/15/2013	05:46:16	2E12310B
081	C4121	7259396	11/15/2013	06:28:45	2E12310B
082	C4309	7260623	11/15/2013	07:11:02	2E12310B
083	C4320	7260634	11/15/2013	07:53:27	2E12310B
084	C4413	7260649	11/15/2013	08:35:49	2E12310B
085	NITR3OW	NITR31324L	11/15/2013	09:18:17	2E12310B
086	NITR3OX	NITR31324M	11/15/2013	10:00:41	2E12310B
087	AA	SS1330824A	11/15/2013	10:43:09	2E12310B
088	AA	SS13328724A	11/15/2013	11:25:33	2E12310B
089	AA	SS1331724A	11/15/2013	12:08:02	2E12310B
090	AA	SS1327424A	11/15/2013	12:50:31	2E12310B

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310	26.08
002		CONDITIONER	11/15/2013	17:25:53	2E12310	25.96
003		CONDITIONER	11/15/2013	18:08:16	2E12310	25.89
004		CONDITIONER	11/15/2013	18:50:40	2E12310	25.82
005		CONDITIONER	11/15/2013	19:33:09	2E12310	25.86
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310	25.75
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310	
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310	25.87
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310	25.99
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310	25.93
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310	
016	C5605	7269438	11/16/2013	03:19:46	2E12310	26.08
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310	26.15
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310	26.20
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310	26.01
021	C5611	7269454	11/16/2013	06:51:59	2E12310	25.86
022	C5621	7269467	11/16/2013	07:34:27	2E12310	25.83
023	C5626	7269472	11/16/2013	08:16:55	2E12310	26.09
024	C5629	7269475	11/16/2013	08:59:20	2E12310	26.01
025	C5632	7269478	11/16/2013	09:41:45	2E12310	25.85
026	C5638	7269484	11/16/2013	10:24:11	2E12310	26.06
027	C5641	7269487	11/16/2013	11:06:32	2E12310	25.99
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310	25.95
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310	25.82
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310	26.00
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310	25.60
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310	25.77

ICAL Dates ICAL RT QC Limits

3E12310 11/17/2013 - 11/17/2013 NMX = 2-NMX 25.75 (25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310	25.96
035	C5905	7269504	11/16/2013	16:46:09	2E12310	25.97
036	C5915	7269514	11/16/2013	17:28:35	2E12310	26.07
037	C5921	7269520	11/16/2013	18:11:00	2E12310	25.86
038	C5927	7269526	11/16/2013	18:53:29	2E12310	26.00
039	C5930	7269529	11/16/2013	19:35:53	2E12310	26.01
040	C5933	7269532	11/16/2013	20:18:18	2E12310	26.10
041	C5939	7269538	11/16/2013	21:00:45	2E12310	25.96
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310	25.97
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310	
044	C5942	7269541	11/16/2013	23:07:56	2E12310	26.07
045	C5945	7269544	11/16/2013	23:50:21	2E12310	25.96
046	C5951	7269550	11/17/2013	00:32:48	2E12310	26.22
047	C5954	7269553	11/17/2013	01:15:16	2E12310	26.27
048	C5960	7269559	11/17/2013	01:57:42	2E12310	25.93
049	C6109	7270974	11/17/2013	02:40:06	2E12310	25.87
050	C6109	7270975	11/17/2013	03:22:32	2E12310	26.10
051	C6109	7270976	11/17/2013	04:05:01	2E12310	26.10
052	C6115	7270986	11/17/2013	04:47:25	2E12310	26.08
053	C6118	7270989	11/17/2013	05:29:51	2E12310	26.13
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310	26.04
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310	
056	C6124	7270995	11/17/2013	07:37:16	2E12310	25.86
057	C6130	7271001	11/17/2013	08:19:42	2E12310	25.71
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310	25.67
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310	25.60
062	R2N51	7265223	11/17/2013	11:51:56	3E12310	25.43
063	R2N52	7265224	11/17/2013	12:34:25	3E12310	25.78
064	R2M61	7265228	11/17/2013	13:16:50	3E12310	25.73
065	R2163	7265230	11/17/2013	13:59:19	3E12310	25.57
066	R2163	7265231	11/17/2013	14:41:48	3E12310	25.59

	ICAL Dates		ICAL RT	QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310	25.63
068	E2161	7265235	11/17/2013	16:06:43	3E12310	25.69
069	R2141	7265238	11/17/2013	16:49:08	3E12310	25.66
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310	25.68
071	R2142	7265240	11/17/2013	18:14:03	3E12310	25.78
072	R2122	7265243	11/17/2013	18:56:31	3E12310	25.22 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310	25.62
074	FBX02	7265248	11/17/2013	20:21:28	3E12310	25.50
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310	25.37 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310	25.41
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310	23.69 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310	25.50
079	FB206	7266799	11/17/2013	23:53:49	3E12310	24.89 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310	25.51
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310	25.10 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310	25.47
083	2D123	7266810	11/18/2013	02:43:40	3E12310	25.33 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310	25.34 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310	25.38 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310	24.56 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310	25.29 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310	25.30 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310	25.30 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310	24.73 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310	25.28 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310	24.77 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310	25.27 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310	25.22 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310	25.20 *

	ICAL Dates		ICAL RT QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75 (25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310B	26.22
002		CONDITIONER	11/15/2013	17:25:53	2E12310B	26.12
003		CONDITIONER	11/15/2013	18:08:16	2E12310B	26.04
004		CONDITIONER	11/15/2013	18:50:40	2E12310B	25.96
005		CONDITIONER	11/15/2013	19:33:09	2E12310B	26.02
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310B	25.89
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310B	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310B	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310B	26.39
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310B	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310B	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310B	26.02
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310B	26.16
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310B	26.03
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310B	
016	C5605	7269438	11/16/2013	03:19:46	2E12310B	26.24
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310B	26.27
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310B	26.33
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310B	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310B	26.10
021	C5611	7269454	11/16/2013	06:51:59	2E12310B	26.02
022	C5621	7269467	11/16/2013	07:34:27	2E12310B	26.02
023	C5626	7269472	11/16/2013	08:16:55	2E12310B	26.25
024	C5629	7269475	11/16/2013	08:59:20	2E12310B	26.17
025	C5632	7269478	11/16/2013	09:41:45	2E12310B	26.00
026	C5638	7269484	11/16/2013	10:24:11	2E12310B	26.21
027	C5641	7269487	11/16/2013	11:06:32	2E12310B	26.17
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310B	26.09
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310B	26.00
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310B	26.14
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310B	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310B	25.72
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310B	25.92

ICAL Dates ICAL RT QC Limits

3E12310B 11/17/2013 - 11/17/2013 NMX = 2-NMX 25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310B	26.16
035	C5905	7269504	11/16/2013	16:46:09	2E12310B	26.09
036	C5915	7269514	11/16/2013	17:28:35	2E12310B	26.26
037	C5921	7269520	11/16/2013	18:11:00	2E12310B	26.03
038	C5927	7269526	11/16/2013	18:53:29	2E12310B	26.18
039	C5930	7269529	11/16/2013	19:35:53	2E12310B	26.18
040	C5933	7269532	11/16/2013	20:18:18	2E12310B	26.19
041	C5939	7269538	11/16/2013	21:00:45	2E12310B	26.09
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310B	26.11
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310B	
044	C5942	7269541	11/16/2013	23:07:56	2E12310B	26.25
045	C5945	7269544	11/16/2013	23:50:21	2E12310B	26.15
046	C5951	7269550	11/17/2013	00:32:48	2E12310B	26.36
047	C5954	7269553	11/17/2013	01:15:16	2E12310B	26.41
048	C5960	7269559	11/17/2013	01:57:42	2E12310B	26.10
049	C6109	7270974	11/17/2013	02:40:06	2E12310B	26.06
050	C6109	7270975	11/17/2013	03:22:32	2E12310B	26.23
051	C6109	7270976	11/17/2013	04:05:01	2E12310B	26.23
052	C6115	7270986	11/17/2013	04:47:25	2E12310B	26.18
053	C6118	7270989	11/17/2013	05:29:51	2E12310B	26.26
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310B	26.22
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310B	
056	C6124	7270995	11/17/2013	07:37:16	2E12310B	26.00
057	C6130	7271001	11/17/2013	08:19:42	2E12310B	25.85
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310B	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310B	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310B	25.85
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310B	25.81
062	R2N51	7265223	11/17/2013	11:51:56	3E12310B	
063	R2N52	7265224	11/17/2013	12:34:25	3E12310B	25.92
064	R2M61	7265228	11/17/2013	13:16:50	3E12310B	25.94
065	R2163	7265230	11/17/2013	13:59:19	3E12310B	25.71
066	R2163	7265231	11/17/2013	14:41:48	3E12310B	25.70

	ICAL Dates		ICAL RT	QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91	(25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310B	25.79
068	E2161	7265235	11/17/2013	16:06:43	3E12310B	25.82
069	R2141	7265238	11/17/2013	16:49:08	3E12310B	25.80
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310B	25.81
071	R2142	7265240	11/17/2013	18:14:03	3E12310B	25.87
072	R2122	7265243	11/17/2013	18:56:31	3E12310B	25.36 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310B	25.77
074	FBX02	7265248	11/17/2013	20:21:28	3E12310B	25.62
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310B	25.50 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310B	25.58
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310B	23.84 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310B	25.63
079	FB206	7266799	11/17/2013	23:53:49	3E12310B	25.07 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310B	25.65
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310B	25.23 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310B	25.61
083	2D123	7266810	11/18/2013	02:43:40	3E12310B	25.49 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310B	25.49 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310B	25.52 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310B	24.67 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310B	25.45 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310B	25.45 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310B	25.44 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310B	24.89 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310B	25.47 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310B	24.92 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310B	25.42 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310B	25.32 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310B	25.35 *

	ICAL Dates		ICAL RT QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310	27.44
002		CONDITIONER	11/18/2013	19:10:45	4E12310	27.11
003		CONDITIONER	11/18/2013	19:53:12	4E12310	27.36
004		CONDITIONER	11/18/2013	20:35:36	4E12310	27.33
005		CONDITIONER	11/18/2013	21:18:04	4E12310	27.27
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310	27.10
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310	27.26
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310	27.16
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310	27.21
011	DDHER	7263056	11/19/2013	01:32:32	4E12310	27.26
012	EEHER	7263057	11/19/2013	02:14:57	4E12310	27.42
013	F1HER	7263058	11/19/2013	02:57:29	4E12310	27.41
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310	27.34
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310	27.37
016	-K46C	7264286	11/19/2013	05:04:44	4E12310	27.40
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310	27.25
018	-L45C	7264287	11/19/2013	06:29:35	4E12310	27.31
019	-M44C	7264288	11/19/2013	07:12:02	4E12310	27.27
020	-N44A	7264289	11/19/2013	07:54:27	4E12310	27.40
021	-044C	7264290	11/19/2013	08:36:57	4E12310	27.31
022	77M44	7266116	11/19/2013	09:19:26	4E12310	27.34
023	70J23	7266117	11/19/2013	10:01:49	4E12310	27.28
024	152-2	7266118	11/19/2013	10:44:12	4E12310	27.28
025	152-2	7266119	11/19/2013	11:26:35	4E12310	27.35
026	152-2	7266120	11/19/2013	12:09:02	4E12310	27.30
027	44M43	7266121	11/19/2013	12:51:30	4E12310	27.37
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310	27.29
029	55P43	7266122	11/19/2013	14:16:11	4E12310	27.35
030	22K46	7266123	11/19/2013	14:58:37	4E12310	27.48
031	04L45	7266124	11/19/2013	15:41:05	4E12310	27.30
032	47N42	7266127	11/19/2013	16:23:29	4E12310	27.26
033	S1522	7266128	11/19/2013	17:05:54	4E12310	27.37

	ICAL Dates		ICAL RT QC Limits	
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310	27.14
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310	27.13
036	R2M71	7265229	11/19/2013	19:13:13	4E12310	27.11
037	R2F14	7265239	11/19/2013	19:55:39	4E12310	27.25
038	2E131	7266809	11/19/2013	20:38:08	4E12310	27.31
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310	27.28
040	2C126	7266812	11/19/2013	22:02:59	4E12310	27.32
041	2C111	7266813	11/19/2013	22:45:27	4E12310	27.06
042	2E101	7266814	11/19/2013	23:27:51	4E12310	27.27
043	2E101	7266815	11/20/2013	00:10:16	4E12310	27.26
044	2E101	7266816	11/20/2013	00:52:39	4E12310	27.14
045	2E102	7266818	11/20/2013	01:35:05	4E12310	27.10
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310	27.23
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310	27.21
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310	27.25
049	75Q40	7270115	11/20/2013	04:24:52	4E12310	27.12
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310	27.35
051	83O39	7270116	11/20/2013	05:49:42	4E12310	27.20
052	83OFD	7270117	11/20/2013	06:32:07	4E12310	27.24
053	93O40	7270118	11/20/2013	07:14:33	4E12310	27.24
054	92P41	7270119	11/20/2013	07:57:03	4E12310	27.35
055	DW104	7270953	11/20/2013	08:39:27	4E12310	26.70 *
056	I1512	7270954	11/20/2013	09:21:52	4E12310	27.27
057	D1512	7270955	11/20/2013	10:04:19	4E12310	27.09
058	S1512	7270956	11/20/2013	10:46:50	4E12310	27.13
059	S1511	7270958	11/20/2013	11:29:15	4E12310	27.19
060	D-151	7270959	11/20/2013	12:11:40	4E12310	27.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310	27.21
062	IW104	7270960	11/20/2013	13:36:38	4E12310	27.14
063	I1511	7270961	11/20/2013	14:19:07	4E12310	26.99
064	M1041	7270962	11/20/2013	15:01:33	4E12310	27.06
065	FB-11	7274073	11/20/2013	15:43:59	4E12310	27.08
066	FB-12	7274074	11/20/2013	16:26:24	4E12310	26.95

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310	27.21

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310B	27.60
002		CONDITIONER	11/18/2013	19:10:45	4E12310B	27.27
003		CONDITIONER	11/18/2013	19:53:12	4E12310B	27.54
004		CONDITIONER	11/18/2013	20:35:36	4E12310B	27.52
005		CONDITIONER	11/18/2013	21:18:04	4E12310B	27.42
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310B	27.23
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310B	27.43
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310B	27.36
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310B	27.37
011	DDHER	7263056	11/19/2013	01:32:32	4E12310B	27.44
012	EEHER	7263057	11/19/2013	02:14:57	4E12310B	27.57
013	F1HER	7263058	11/19/2013	02:57:29	4E12310B	27.55
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310B	27.44
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310B	27.54
016	-K46C	7264286	11/19/2013	05:04:44	4E12310B	27.56
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310B	27.42
018	-L45C	7264287	11/19/2013	06:29:35	4E12310B	27.44
019	-M44C	7264288	11/19/2013	07:12:02	4E12310B	27.42
020	-N44A	7264289	11/19/2013	07:54:27	4E12310B	27.58
021	-044C	7264290	11/19/2013	08:36:57	4E12310B	27.44
022	77M44	7266116	11/19/2013	09:19:26	4E12310B	27.47
023	70J23	7266117	11/19/2013	10:01:49	4E12310B	27.44
024	152-2	7266118	11/19/2013	10:44:12	4E12310B	27.48
025	152-2	7266119	11/19/2013	11:26:35	4E12310B	27.52
026	152-2	7266120	11/19/2013	12:09:02	4E12310B	27.48
027	44M43	7266121	11/19/2013	12:51:30	4E12310B	27.54
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310B	27.44
029	55P43	7266122	11/19/2013	14:16:11	4E12310B	27.50
030	22K46	7266123	11/19/2013	14:58:37	4E12310B	27.62
031	04L45	7266124	11/19/2013	15:41:05	4E12310B	27.44
032	47N42	7266127	11/19/2013	16:23:29	4E12310B	27.43
033	S1522	7266128	11/19/2013	17:05:54	4E12310B	27.52

	ICAL Dates		ICAL RT QC Limits	
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310B	27.28
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310B	27.35
036	R2M71	7265229	11/19/2013	19:13:13	4E12310B	27.30
037	R2F14	7265239	11/19/2013	19:55:39	4E12310B	27.42
038	2E131	7266809	11/19/2013	20:38:08	4E12310B	27.41
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310B	27.42
040	2C126	7266812	11/19/2013	22:02:59	4E12310B	27.48
041	2C111	7266813	11/19/2013	22:45:27	4E12310B	27.21
042	2E101	7266814	11/19/2013	23:27:51	4E12310B	27.37
043	2E101	7266815	11/20/2013	00:10:16	4E12310B	27.39
044	2E101	7266816	11/20/2013	00:52:39	4E12310B	27.36
045	2E102	7266818	11/20/2013	01:35:05	4E12310B	27.30
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310B	27.36
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310B	27.35
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310B	27.39
049	75Q40	7270115	11/20/2013	04:24:52	4E12310B	27.30
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310B	27.48
051	83O39	7270116	11/20/2013	05:49:42	4E12310B	27.33
052	83OFD	7270117	11/20/2013	06:32:07	4E12310B	27.39
053	93O40	7270118	11/20/2013	07:14:33	4E12310B	27.46
054	92P41	7270119	11/20/2013	07:57:03	4E12310B	27.50
055	DW104	7270953	11/20/2013	08:39:27	4E12310B	27.19
056	I1512	7270954	11/20/2013	09:21:52	4E12310B	27.37
057	D1512	7270955	11/20/2013	10:04:19	4E12310B	27.28
058	S1512	7270956	11/20/2013	10:46:50	4E12310B	27.25
059	S1511	7270958	11/20/2013	11:29:15	4E12310B	27.33
060	D-151	7270959	11/20/2013	12:11:40	4E12310B	27.29
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310B	27.35
062	IW104	7270960	11/20/2013	13:36:38	4E12310B	27.28
063	I1511	7270961	11/20/2013	14:19:07	4E12310B	27.15
064	M1041	7270962	11/20/2013	15:01:33	4E12310B	27.17
065	FB-11	7274073	11/20/2013	15:43:59	4E12310B	27.21
066	FB-12	7274074	11/20/2013	16:26:24	4E12310B	27.11

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310B	27.39

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 2C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/10/2013	20:11:42	2C12310	
002		CONDITIONER	11/10/2013	20:54:10	2C12310	
003		CONDITIONER	11/10/2013	21:36:43	2C12310	
004		CONDITIONER	11/10/2013	22:19:06	2C12310	
005		CONDITIONER	11/10/2013	23:01:26	2C12310	
006	NITR3NU	NITR31324L	11/10/2013	23:43:52	2C12310	
007	PBLK25305	BLANKA	11/11/2013	00:26:16	2C12310	
008	LCS25305	LCSA	11/11/2013	01:08:42	2C12310	
009	LCSD25305	LCSDA	11/11/2013	01:51:07	2C12310	
010	FV-IN	7257293	11/11/2013	02:33:37	2C12310	
011	FV1EF	7257294	11/11/2013	03:16:12	2C12310	
012	FV3EF	7257295	11/11/2013	03:58:36	2C12310	
013	MMH--	7257296	11/11/2013	04:41:00	2C12310	
014	BW-9-	7257297	11/11/2013	05:23:24	2C12310	
015	M85L9	7257298	11/11/2013	06:05:50	2C12310	
016	BW-4-	7257299	11/11/2013	06:48:14	2C12310	
017	NITR3NW	NITR31324L	11/11/2013	07:30:39	2C12310	
018	MW-3B	7257301	11/11/2013	08:13:06	2C12310	
019	PBLK16306	BLANKA	11/11/2013	08:55:36	2C12310	
020	LCS16306	LCSA	11/11/2013	09:37:59	2C12310	
021	GB227	7258858	11/11/2013	10:20:25	2C12310	
022	2AL26	7258859	11/11/2013	11:02:51	2C12310	
023	2DO25	7258860	11/11/2013	11:45:15	2C12310	
024	BT235	7258861	11/11/2013	12:27:41	2C12310	
025	2AT35	7258862	11/11/2013	13:10:06	2C12310	
026	GB135	7258863	11/11/2013	13:52:29	2C12310	
027	UB637	7258864	11/11/2013	14:34:59	2C12310	
028	NITR3NY	NITR31324L	11/11/2013	15:17:23	2C12310	
029	UB437	7258865	11/11/2013	15:59:49	2C12310	
030	UB537	7258866	11/11/2013	16:42:15	2C12310	
031	3AJ38	7258867	11/11/2013	17:24:41	2C12310	
032	BT330	7258868	11/11/2013	18:07:04	2C12310	
033	BT330	7258869	11/11/2013	18:49:31	2C12310	
034	BT330	7258870	11/11/2013	19:31:56	2C12310	
035	BT144	7258871	11/11/2013	20:14:23	2C12310	
036	UBO44	7258872	11/11/2013	20:56:50	2C12310	

8D
ANALYTICAL SEQUENCE

Sequence: 2C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
037	BT145	7258873	11/11/2013	21:39:15	2C12310	
038	537UB	7258874	11/11/2013	22:21:43	2C12310	
039	NITR3OA	NITR31324L	11/11/2013	23:04:06	2C12310	
040	NITR3OB	NITR31324M	11/11/2013	23:46:32	2C12310	
041	EBHOL	7258875	11/12/2013	00:28:59	2C12310	
042	MW251	7260790	11/12/2013	01:11:27	2C12310	
043	PBLK05311	BLANKA	11/12/2013	01:53:55	2C12310	
044	LCS05311	LCSA	11/12/2013	02:36:20	2C12310	
045	LCSD05311	LCSDDIA	11/12/2013	03:18:46	2C12310	
046	LCS05311	LCSDIA	11/12/2013	04:01:12	2C12310	
047	C4904	7264409	11/12/2013	04:43:42	2C12310	
048	C4904MS	7264409	11/12/2013	05:26:06	2C12310	
049	C4904MSD	7264409	11/12/2013	06:08:30	2C12310	
050	C4910	7264415	11/12/2013	06:50:56	2C12310	
051	NITR3OC	NITR31324L	11/12/2013	07:33:23	2C12310	
052	NITR3OD	NITR31324M	11/12/2013	08:15:49	2C12310	
053	C4913	7264418	11/12/2013	08:58:14	2C12310	
054	C4916	7264421	11/12/2013	09:40:40	2C12310	
055	C4919	7264424	11/12/2013	10:23:04	2C12310	
056	C4928	7264433	11/12/2013	11:05:31	2C12310	
057	C4934	7264439	11/12/2013	11:47:56	2C12310	
058	C4940	7264445	11/12/2013	12:30:20	2C12310	
059	C5001	7264575	11/12/2013	13:12:50	2C12310	
060	C5011	7264585	11/12/2013	13:55:15	2C12310	
061	C5016	7264590	11/12/2013	14:37:46	2C12310	
062	C5019	7264593	11/12/2013	15:20:11	2C12310	
063	NITR3OE	NITR31324L	11/12/2013	16:02:40	2C12310	
064	NITR3OF	NITR31324M	11/12/2013	16:45:08	2C12310	
065	C5201	7266316	11/12/2013	17:27:39	2C12310	
066	C5204	7266319	11/12/2013	18:10:07	2C12310	
067	C5210	7266325	11/12/2013	18:52:35	2C12310	
068	C5213	7266328	11/12/2013	19:35:02	2C12310	
069	C5219	7266344	11/12/2013	20:17:29	2C12310	
070	PBLK04311	BLANKA	11/12/2013	20:59:54	2C12310	

8D
ANALYTICAL SEQUENCE

Sequence: 2C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/10/2013	20:11:42	2C12310B	
002		CONDITIONER	11/10/2013	20:54:10	2C12310B	
003		CONDITIONER	11/10/2013	21:36:43	2C12310B	
004		CONDITIONER	11/10/2013	22:19:06	2C12310B	
005		CONDITIONER	11/10/2013	23:01:26	2C12310B	
006	NITR3NU	NITR31324L	11/10/2013	23:43:52	2C12310B	
007	PBLK25305	BLANKA	11/11/2013	00:26:16	2C12310B	
008	LCS25305	LCSA	11/11/2013	01:08:42	2C12310B	
009	LCSD25305	LCSDA	11/11/2013	01:51:07	2C12310B	
010	FV-IN	7257293	11/11/2013	02:33:37	2C12310B	
011	FV1EF	7257294	11/11/2013	03:16:12	2C12310B	
012	FV3EF	7257295	11/11/2013	03:58:36	2C12310B	
013	MMH--	7257296	11/11/2013	04:41:00	2C12310B	
014	BW-9-	7257297	11/11/2013	05:23:24	2C12310B	
015	M85L9	7257298	11/11/2013	06:05:50	2C12310B	
016	BW-4-	7257299	11/11/2013	06:48:14	2C12310B	
017	NITR3NW	NITR31324L	11/11/2013	07:30:39	2C12310B	
018	MW-3B	7257301	11/11/2013	08:13:06	2C12310B	
019	PBLK16306	BLANKA	11/11/2013	08:55:36	2C12310B	
020	LCS16306	LCSA	11/11/2013	09:37:59	2C12310B	
021	GB227	7258858	11/11/2013	10:20:25	2C12310B	
022	2AL26	7258859	11/11/2013	11:02:51	2C12310B	
023	2DO25	7258860	11/11/2013	11:45:15	2C12310B	
024	BT235	7258861	11/11/2013	12:27:41	2C12310B	
025	2AT35	7258862	11/11/2013	13:10:06	2C12310B	
026	GB135	7258863	11/11/2013	13:52:29	2C12310B	
027	UB637	7258864	11/11/2013	14:34:59	2C12310B	
028	NITR3NY	NITR31324L	11/11/2013	15:17:23	2C12310B	
029	UB437	7258865	11/11/2013	15:59:49	2C12310B	
030	UB537	7258866	11/11/2013	16:42:15	2C12310B	
031	3AJ38	7258867	11/11/2013	17:24:41	2C12310B	
032	BT330	7258868	11/11/2013	18:07:04	2C12310B	
033	BT330	7258869	11/11/2013	18:49:31	2C12310B	
034	BT330	7258870	11/11/2013	19:31:56	2C12310B	
035	BT144	7258871	11/11/2013	20:14:23	2C12310B	
036	UBO44	7258872	11/11/2013	20:56:50	2C12310B	

8D
ANALYTICAL SEQUENCE

Sequence: 2C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
037	BT145	7258873	11/11/2013	21:39:15	2C12310B	
038	537UB	7258874	11/11/2013	22:21:43	2C12310B	
039	NITR3OA	NITR31324L	11/11/2013	23:04:06	2C12310B	
040	NITR3OB	NITR31324M	11/11/2013	23:46:32	2C12310B	
041	EBHOL	7258875	11/12/2013	00:28:59	2C12310B	
042	MW251	7260790	11/12/2013	01:11:27	2C12310B	
043	PBLK05311	BLANKA	11/12/2013	01:53:55	2C12310B	
044	LCS05311	LCSA	11/12/2013	02:36:20	2C12310B	
045	LCSD05311	LCSDDIA	11/12/2013	03:18:46	2C12310B	
046	LCS05311	LCSDIA	11/12/2013	04:01:12	2C12310B	
047	C4904	7264409	11/12/2013	04:43:42	2C12310B	
048	C4904MS	7264409	11/12/2013	05:26:06	2C12310B	
049	C4904MSD	7264409	11/12/2013	06:08:30	2C12310B	
050	C4910	7264415	11/12/2013	06:50:56	2C12310B	
051	NITR3OC	NITR31324L	11/12/2013	07:33:23	2C12310B	
052	NITR3OD	NITR31324M	11/12/2013	08:15:49	2C12310B	
053	C4913	7264418	11/12/2013	08:58:14	2C12310B	
054	C4916	7264421	11/12/2013	09:40:40	2C12310B	
055	C4919	7264424	11/12/2013	10:23:04	2C12310B	
056	C4928	7264433	11/12/2013	11:05:31	2C12310B	
057	C4934	7264439	11/12/2013	11:47:56	2C12310B	
058	C4940	7264445	11/12/2013	12:30:20	2C12310B	
059	C5001	7264575	11/12/2013	13:12:50	2C12310B	
060	C5011	7264585	11/12/2013	13:55:15	2C12310B	
061	C5016	7264590	11/12/2013	14:37:46	2C12310B	
062	C5019	7264593	11/12/2013	15:20:11	2C12310B	
063	NITR3OE	NITR31324L	11/12/2013	16:02:40	2C12310B	
064	NITR3OF	NITR31324M	11/12/2013	16:45:08	2C12310B	
065	C5201	7266316	11/12/2013	17:27:39	2C12310B	
066	C5204	7266319	11/12/2013	18:10:07	2C12310B	
067	C5210	7266325	11/12/2013	18:52:35	2C12310B	
068	C5213	7266328	11/12/2013	19:35:02	2C12310B	
069	C5219	7266344	11/12/2013	20:17:29	2C12310B	
070	PBLK04311	BLANKA	11/12/2013	20:59:54	2C12310B	

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001	PBLK17313	BLANKA	11/12/2013	21:53:16	2C12310
002	LCS17313	LCSA	11/12/2013	22:35:42	2C12310
003	LCSD17313	LCSDDIA	11/12/2013	23:18:03	2C12310
004	LCS17313	LCSDIA	11/13/2013	00:00:26	2C12310
005	NITR3OM	NITR31324L	11/13/2013	00:42:51	2C12310
006	NITR3ON	NITR31324M	11/13/2013	01:25:17	2C12310
007	C4010	7259353	11/13/2013	02:07:44	2C12310
008	C3534	7255735	11/13/2013	02:50:08	2C12310
009	C3534	7255736	11/13/2013	03:32:34	2C12310
010	C3534	7255737	11/13/2013	04:14:59	2C12310
011	PBLK18313	BLANKA	11/13/2013	04:57:25	2C12310
012	LCS18313	LCSA	11/13/2013	05:39:48	2C12310
013	LCSD18313	LCSDDIA	11/13/2013	06:22:13	2C12310
014	LCS18313	LCSDIA	11/13/2013	07:04:41	2C12310
015	C4303	7260617	11/13/2013	07:47:04	2C12310
016	C3817	7257006	11/13/2013	08:29:27	2C12310
017	NITR3OO	NITR31324L	11/13/2013	09:11:51	2C12310
018	NITR3OP	NITR31324M	11/13/2013	09:54:17	2C12310
019	C3817MS	7257006	11/13/2013	10:36:45	2C12310
020	C3817MSD	7257006	11/13/2013	11:19:10	2C12310
021	LCS04311	LCSA	11/13/2013	12:01:35	2C12310
022	WHERC	7263052	11/13/2013	12:44:00	2C12310
023	WHERCMS	7263052	11/13/2013	13:26:27	2C12310
024	WHERCMSD	7263052	11/13/2013	14:08:51	2C12310
025	XHERC	7263053	11/13/2013	14:51:16	2C12310
026	PHERC	7263054	11/13/2013	15:33:38	2C12310
027	OHERC	7263055	11/13/2013	16:16:05	2C12310
028	R2041	7265225	11/13/2013	16:58:31	2C12310
029	NITR3OQ	NITR31324L	11/13/2013	17:40:55	2C12310
030	NITR3OR	NITR31324M	11/13/2013	18:23:21	2C12310
031	AA	MS1330124B	11/13/2013	19:05:48	2C12310
032	AA	MS1330824A	11/13/2013	19:48:12	2C12310
033	AA	MS1326324A	11/13/2013	20:30:38	2C12310
034	AA	MS1331724C	11/13/2013	21:13:07	2C12310
035	AA	MS1330924A	11/13/2013	21:55:31	2C12310
036	R2042	7265226	11/13/2013	22:37:56	2C12310

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
037	R2043	7265227	11/13/2013	23:20:21	2C12310
038	R2E16	7265234	11/14/2013	00:02:48	2C12310
039	2E161	7265236	11/14/2013	00:45:15	2C12310
040	2E16D	7265237	11/14/2013	01:27:41	2C12310
041	NITR3OS	NITR31324L	11/14/2013	02:10:07	2C12310
042	NITR3OT	NITR31324M	11/14/2013	02:52:35	2C12310
043	2F142	7265241	11/14/2013	03:35:02	2C12310
044	R2121	7265242	11/14/2013	04:17:27	2C12310
045	R2123	7265244	11/14/2013	04:59:46	2C12310
046	2D141	7265245	11/14/2013	05:42:09	2C12310
047	DUPX1	7265246	11/14/2013	06:24:36	2C12310
048	C3511	7255708	11/14/2013	07:07:03	2C12310
049	C3514	7255711	11/14/2013	07:49:31	2C12310
050	C3520	7255717	11/14/2013	08:31:55	2C12310
051	C3525	7255722	11/14/2013	09:14:21	2C12310
052	C3537	7255744	11/14/2013	09:56:46	2C12310
053	NITR3OU	NITR31324L	11/14/2013	10:39:15	2C12310
054	NITR3OV	NITR31324M	11/14/2013	11:21:43	2C12310
055	C3539	7255746	11/14/2013	12:04:07	2C12310
056	C3545	7255752	11/14/2013	12:46:33	2C12310
057	C3701	7256953	11/14/2013	13:28:58	2C12310
058	C3707	7256959	11/14/2013	14:11:29	2C12310
059	C3710	7256962	11/14/2013	14:53:54	2C12310
060	C3713	7256965	11/14/2013	15:36:22	2C12310
061	C3718	7256970	11/14/2013	16:18:52	2C12310
062	C3721	7256973	11/14/2013	17:01:17	2C12310
063	C3724	7256976	11/14/2013	17:43:44	2C12310
064	C3810	7256999	11/14/2013	18:26:09	2C12310
065	NITR3OY	NITR31324L	11/14/2013	19:09:23	2C12310
066	NITR3OZ	NITR31324M	11/14/2013	19:51:49	2C12310
067	AA	NEW MS	11/14/2013	20:34:15	2C12310
068	AA	NEW LEVEL 3	11/14/2013	21:16:39	2C12310
069	AA	NEW ICV	11/14/2013	21:59:04	2C12310
070	C3822	7257011	11/14/2013	22:41:33	2C12310
071	C3827	7257016	11/14/2013	23:24:05	2C12310
072	C3830	7257019	11/15/2013	00:06:33	2C12310

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
073	C4001	7259344	11/15/2013	00:48:58	2C12310
074	C4016	7259359	11/15/2013	01:31:30	2C12310
075	C4023	7259366	11/15/2013	02:13:56	2C12310
076	C4025	7259368	11/15/2013	02:56:25	2C12310
077	NITR3OW	NITR31324L	11/15/2013	03:38:50	2C12310
078	NITR3OX	NITR31324M	11/15/2013	04:21:20	2C12310
079	C4111	7259386	11/15/2013	05:03:46	2C12310
080	C4116	7259391	11/15/2013	05:46:15	2C12310
081	C4121	7259396	11/15/2013	06:28:45	2C12310
082	C4309	7260623	11/15/2013	07:11:02	2C12310
083	C4320	7260634	11/15/2013	07:53:27	2C12310
084	C4413	7260649	11/15/2013	08:35:49	2C12310
085	NITR3OW	NITR31324L	11/15/2013	09:18:16	2C12310
086	NITR3OX	NITR31324M	11/15/2013	10:00:40	2C12310
087	AA	SS1330824A	11/15/2013	10:43:09	2C12310
088	AA	SS13328724A	11/15/2013	11:25:32	2C12310
089	AA	SS1331724A	11/15/2013	12:08:02	2C12310
090	AA	SS1327424A	11/15/2013	12:50:31	2C12310

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
001	PBLK17313	BLANKA	11/12/2013	21:53:16	2C12310B
002	LCS17313	LCSA	11/12/2013	22:35:42	2C12310B
003	LCSD17313	LCSDDIA	11/12/2013	23:18:03	2C12310B
004	LCS17313	LCSDIA	11/13/2013	00:00:26	2C12310B
005	NITR3OM	NITR31324L	11/13/2013	00:42:51	2C12310B
006	NITR3ON	NITR31324M	11/13/2013	01:25:17	2C12310B
007	C4010	7259353	11/13/2013	02:07:44	2C12310B
008	C3534	7255735	11/13/2013	02:50:08	2C12310B
009	C3534	7255736	11/13/2013	03:32:34	2C12310B
010	C3534	7255737	11/13/2013	04:14:59	2C12310B
011	PBLK18313	BLANKA	11/13/2013	04:57:25	2C12310B
012	LCS18313	LCSA	11/13/2013	05:39:48	2C12310B
013	LCSD18313	LCSDDIA	11/13/2013	06:22:13	2C12310B
014	LCS18313	LCSDIA	11/13/2013	07:04:41	2C12310B
015	C4303	7260617	11/13/2013	07:47:04	2C12310B
016	C3817	7257006	11/13/2013	08:29:27	2C12310B
017	NITR3OO	NITR31324L	11/13/2013	09:11:51	2C12310B
018	NITR3OP	NITR31324M	11/13/2013	09:54:17	2C12310B
019	C3817MS	7257006	11/13/2013	10:36:45	2C12310B
020	C3817MSD	7257006	11/13/2013	11:19:10	2C12310B
021	LCS04311	LCSA	11/13/2013	12:01:35	2C12310B
022	WHERC	7263052	11/13/2013	12:44:00	2C12310B
023	WHERCMS	7263052	11/13/2013	13:26:27	2C12310B
024	WHERCMSD	7263052	11/13/2013	14:08:51	2C12310B
025	XHERC	7263053	11/13/2013	14:51:16	2C12310B
026	PHERC	7263054	11/13/2013	15:33:38	2C12310B
027	OHERC	7263055	11/13/2013	16:16:05	2C12310B
028	R2041	7265225	11/13/2013	16:58:31	2C12310B
029	NITR3OQ	NITR31324L	11/13/2013	17:40:55	2C12310B
030	NITR3OR	NITR31324M	11/13/2013	18:23:21	2C12310B
031	AA	MS1330124B	11/13/2013	19:05:48	2C12310B
032	AA	MS1330824A	11/13/2013	19:48:12	2C12310B
033	AA	MS1326324A	11/13/2013	20:30:38	2C12310B
034	AA	MS1331724C	11/13/2013	21:13:07	2C12310B
035	AA	MS1330924A	11/13/2013	21:55:31	2C12310B
036	R2042	7265226	11/13/2013	22:37:56	2C12310B

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
037	R2043	7265227	11/13/2013	23:20:21	2C12310B
038	R2E16	7265234	11/14/2013	00:02:48	2C12310B
039	2E161	7265236	11/14/2013	00:45:15	2C12310B
040	2E16D	7265237	11/14/2013	01:27:41	2C12310B
041	NITR3OS	NITR31324L	11/14/2013	02:10:07	2C12310B
042	NITR3OT	NITR31324M	11/14/2013	02:52:35	2C12310B
043	2F142	7265241	11/14/2013	03:35:02	2C12310B
044	R2121	7265242	11/14/2013	04:17:27	2C12310B
045	R2123	7265244	11/14/2013	04:59:46	2C12310B
046	2D141	7265245	11/14/2013	05:42:09	2C12310B
047	DUPX1	7265246	11/14/2013	06:24:36	2C12310B
048	C3511	7255708	11/14/2013	07:07:03	2C12310B
049	C3514	7255711	11/14/2013	07:49:31	2C12310B
050	C3520	7255717	11/14/2013	08:31:55	2C12310B
051	C3525	7255722	11/14/2013	09:14:21	2C12310B
052	C3537	7255744	11/14/2013	09:56:46	2C12310B
053	NITR3OU	NITR31324L	11/14/2013	10:39:15	2C12310B
054	NITR3OV	NITR31324M	11/14/2013	11:21:43	2C12310B
055	C3539	7255746	11/14/2013	12:04:07	2C12310B
056	C3545	7255752	11/14/2013	12:46:33	2C12310B
057	C3701	7256953	11/14/2013	13:28:58	2C12310B
058	C3707	7256959	11/14/2013	14:11:29	2C12310B
059	C3710	7256962	11/14/2013	14:53:54	2C12310B
060	C3713	7256965	11/14/2013	15:36:22	2C12310B
061	C3718	7256970	11/14/2013	16:18:52	2C12310B
062	C3721	7256973	11/14/2013	17:01:17	2C12310B
063	C3724	7256976	11/14/2013	17:43:44	2C12310B
064	C3810	7256999	11/14/2013	18:26:09	2C12310B
065	NITR3OY	NITR31324L	11/14/2013	19:09:23	2C12310B
066	NITR3OZ	NITR31324M	11/14/2013	19:51:49	2C12310B
067	AA	NEW MS	11/14/2013	20:34:15	2C12310B
068	AA	NEW LEVEL 3	11/14/2013	21:16:39	2C12310B
069	AA	NEW ICV	11/14/2013	21:59:04	2C12310B
070	C3822	7257011	11/14/2013	22:41:33	2C12310B
071	C3827	7257016	11/14/2013	23:24:05	2C12310B
072	C3830	7257019	11/15/2013	00:06:33	2C12310B

8D
ANALYTICAL SEQUENCE

Sequence: 3C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File
073	C4001	7259344	11/15/2013	00:48:58	2C12310B
074	C4016	7259359	11/15/2013	01:31:30	2C12310B
075	C4023	7259366	11/15/2013	02:13:56	2C12310B
076	C4025	7259368	11/15/2013	02:56:25	2C12310B
077	NITR3OW	NITR31324L	11/15/2013	03:38:50	2C12310B
078	NITR3OX	NITR31324M	11/15/2013	04:21:20	2C12310B
079	C4111	7259386	11/15/2013	05:03:46	2C12310B
080	C4116	7259391	11/15/2013	05:46:15	2C12310B
081	C4121	7259396	11/15/2013	06:28:45	2C12310B
082	C4309	7260623	11/15/2013	07:11:02	2C12310B
083	C4320	7260634	11/15/2013	07:53:27	2C12310B
084	C4413	7260649	11/15/2013	08:35:49	2C12310B
085	NITR3OW	NITR31324L	11/15/2013	09:18:16	2C12310B
086	NITR3OX	NITR31324M	11/15/2013	10:00:40	2C12310B
087	AA	SS1330824A	11/15/2013	10:43:09	2C12310B
088	AA	SS13328724A	11/15/2013	11:25:32	2C12310B
089	AA	SS1331724A	11/15/2013	12:08:02	2C12310B
090	AA	SS1327424A	11/15/2013	12:50:31	2C12310B

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310	34.29
002		CONDITIONER	11/15/2013	17:25:53	2C12310	34.29
003		CONDITIONER	11/15/2013	18:08:16	2C12310	34.29
004		CONDITIONER	11/15/2013	18:50:40	2C12310	34.29
005		CONDITIONER	11/15/2013	19:33:09	2C12310	34.27
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310	34.29
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310	34.25
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310	34.24
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310	34.25
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310	34.24
015	C5605	7269438	11/16/2013	03:19:46	2C12310	34.22
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310	34.18
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310	34.17
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310	34.27
020	C5611	7269454	11/16/2013	06:51:59	2C12310	34.21
021	C5621	7269467	11/16/2013	07:34:27	2C12310	34.22
022	C5626	7269472	11/16/2013	08:16:55	2C12310	34.19
023	C5629	7269475	11/16/2013	08:59:19	2C12310	34.22
024	C5632	7269478	11/16/2013	09:41:45	2C12310	34.24
025	C5638	7269484	11/16/2013	10:24:11	2C12310	34.19
026	C5641	7269487	11/16/2013	11:06:32	2C12310	34.19
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310	34.20
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310	34.28
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310	34.20
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310	34.17
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310	34.24
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310	34.22
033	C5902	7269501	11/16/2013	16:03:43	2C12310	34.20

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310	34.19
035	C5915	7269514	11/16/2013	17:28:35	2C12310	34.15
036	C5921	7269520	11/16/2013	18:11:00	2C12310	34.23
037	C5927	7269526	11/16/2013	18:53:29	2C12310	34.19
038	C5930	7269529	11/16/2013	19:35:53	2C12310	34.17
039	C5933	7269532	11/16/2013	20:18:19	2C12310	34.21
040	C5939	7269538	11/16/2013	21:00:44	2C12310	34.23
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310	34.20
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310	
043	C5942	7269541	11/16/2013	23:07:56	2C12310	34.17
044	C5945	7269544	11/16/2013	23:50:21	2C12310	34.18
045	C5951	7269550	11/17/2013	00:32:48	2C12310	34.16
046	C5954	7269553	11/17/2013	01:15:16	2C12310	34.16
047	C5960	7269559	11/17/2013	01:57:42	2C12310	34.21
048	C6109	7270974	11/17/2013	02:40:06	2C12310	34.22
049	C6109	7270975	11/17/2013	03:22:31	2C12310	34.23
050	C6109	7270976	11/17/2013	04:05:00	2C12310	34.25
051	C6115	7270986	11/17/2013	04:47:25	2C12310	34.19
052	C6118	7270989	11/17/2013	05:29:51	2C12310	34.18
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310	34.20
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310	
055	C6124	7270995	11/17/2013	07:37:16	2C12310	34.21
056	C6130	7271001	11/17/2013	08:19:42	2C12310	34.23
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310	34.21
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310	34.26
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310	34.29
061	R2N51	7265223	11/17/2013	11:51:56	3C12310	34.30
062	R2N52	7265224	11/17/2013	12:34:25	3C12310	34.26
063	R2M61	7265228	11/17/2013	13:16:50	3C12310	34.23
064	R2163	7265230	11/17/2013	13:59:19	3C12310	34.29
065	R2163	7265231	11/17/2013	14:41:48	3C12310	34.34 *
066	R2163	7265232	11/17/2013	15:24:17	3C12310	34.32 *

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310	34.26
068	R2141	7265238	11/17/2013	16:49:08	3C12310	34.27
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310	34.24
070	R2142	7265240	11/17/2013	18:14:03	3C12310	34.26
071	R2122	7265243	11/17/2013	18:56:30	3C12310	34.20
072	FBX01	7265247	11/17/2013	19:38:55	3C12310	34.28
073	FBX02	7265248	11/17/2013	20:21:28	3C12310	34.29
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310	34.30
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310	34.35 *
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310	34.29
077	FB106	7266798	11/17/2013	23:11:20	3C12310	34.30
078	FB206	7266799	11/17/2013	23:53:48	3C12310	34.18
079	2B152	7266805	11/18/2013	00:36:17	3C12310	34.29
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310	34.26
081	2B151	7266807	11/18/2013	02:01:14	3C12310	34.30
082	2D123	7266810	11/18/2013	02:43:40	3C12310	34.31
083	2D121	7266811	11/18/2013	03:25:57	3C12310	34.32 *
084	3--FD	7266819	11/18/2013	04:08:25	3C12310	34.32 *
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310	34.23
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310	34.21
087	2G124	7266800	11/18/2013	06:15:48	3C12310	34.30
088	2G124	7266801	11/18/2013	06:58:17	3C12310	34.30
089	2G124	7266802	11/18/2013	07:40:42	3C12310	34.23
090	2G125	7266804	11/18/2013	08:23:14	3C12310	34.31
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310	34.21
092	2C152	7266806	11/18/2013	09:48:09	3C12310	34.30
093	2C151	7266808	11/18/2013	10:30:40	3C12310	34.32 *
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310B	
002		CONDITIONER	11/15/2013	17:25:53	2C12310B	
003		CONDITIONER	11/15/2013	18:08:16	2C12310B	
004		CONDITIONER	11/15/2013	18:50:40	2C12310B	
005		CONDITIONER	11/15/2013	19:33:09	2C12310B	
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310B	
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310B	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310B	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310B	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310B	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310B	
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310B	
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310B	
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310B	
015	C5605	7269438	11/16/2013	03:19:46	2C12310B	
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310B	
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310B	
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310B	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310B	
020	C5611	7269454	11/16/2013	06:51:59	2C12310B	
021	C5621	7269467	11/16/2013	07:34:27	2C12310B	
022	C5626	7269472	11/16/2013	08:16:55	2C12310B	
023	C5629	7269475	11/16/2013	08:59:19	2C12310B	
024	C5632	7269478	11/16/2013	09:41:45	2C12310B	
025	C5638	7269484	11/16/2013	10:24:11	2C12310B	
026	C5641	7269487	11/16/2013	11:06:32	2C12310B	
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310B	
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310B	
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310B	
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310B	
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310B	
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310B	
033	C5902	7269501	11/16/2013	16:03:43	2C12310B	

ICAL Dates ICAL RT QC Limits

3C12310B 11/17/2013 - 11/17/2013 NMX = 2-NMX .01 (0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310B	
035	C5915	7269514	11/16/2013	17:28:35	2C12310B	
036	C5921	7269520	11/16/2013	18:11:00	2C12310B	
037	C5927	7269526	11/16/2013	18:53:29	2C12310B	
038	C5930	7269529	11/16/2013	19:35:53	2C12310B	
039	C5933	7269532	11/16/2013	20:18:19	2C12310B	
040	C5939	7269538	11/16/2013	21:00:44	2C12310B	
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310B	
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310B	
043	C5942	7269541	11/16/2013	23:07:56	2C12310B	
044	C5945	7269544	11/16/2013	23:50:21	2C12310B	
045	C5951	7269550	11/17/2013	00:32:48	2C12310B	
046	C5954	7269553	11/17/2013	01:15:16	2C12310B	
047	C5960	7269559	11/17/2013	01:57:42	2C12310B	
048	C6109	7270974	11/17/2013	02:40:06	2C12310B	
049	C6109	7270975	11/17/2013	03:22:31	2C12310B	
050	C6109	7270976	11/17/2013	04:05:00	2C12310B	
051	C6115	7270986	11/17/2013	04:47:25	2C12310B	
052	C6118	7270989	11/17/2013	05:29:51	2C12310B	
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310B	
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310B	
055	C6124	7270995	11/17/2013	07:37:16	2C12310B	
056	C6130	7271001	11/17/2013	08:19:42	2C12310B	
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310B	
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310B	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310B	
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310B	
061	R2N51	7265223	11/17/2013	11:51:56	3C12310B	
062	R2N52	7265224	11/17/2013	12:34:25	3C12310B	
063	R2M61	7265228	11/17/2013	13:16:50	3C12310B	
064	R2163	7265230	11/17/2013	13:59:19	3C12310B	
065	R2163	7265231	11/17/2013	14:41:48	3C12310B	
066	R2163	7265232	11/17/2013	15:24:17	3C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310B	
068	R2141	7265238	11/17/2013	16:49:08	3C12310B	
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310B	
070	R2142	7265240	11/17/2013	18:14:03	3C12310B	
071	R2122	7265243	11/17/2013	18:56:30	3C12310B	
072	FBX01	7265247	11/17/2013	19:38:55	3C12310B	
073	FBX02	7265248	11/17/2013	20:21:28	3C12310B	
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310B	
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310B	
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310B	
077	FB106	7266798	11/17/2013	23:11:20	3C12310B	
078	FB206	7266799	11/17/2013	23:53:48	3C12310B	
079	2B152	7266805	11/18/2013	00:36:17	3C12310B	
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310B	
081	2B151	7266807	11/18/2013	02:01:14	3C12310B	
082	2D123	7266810	11/18/2013	02:43:40	3C12310B	
083	2D121	7266811	11/18/2013	03:25:57	3C12310B	
084	3--FD	7266819	11/18/2013	04:08:25	3C12310B	
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310B	
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310B	
087	2G124	7266800	11/18/2013	06:15:48	3C12310B	
088	2G124	7266801	11/18/2013	06:58:17	3C12310B	
089	2G124	7266802	11/18/2013	07:40:42	3C12310B	
090	2G125	7266804	11/18/2013	08:23:14	3C12310B	
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310B	
092	2C152	7266806	11/18/2013	09:48:09	3C12310B	
093	2C151	7266808	11/18/2013	10:30:40	3C12310B	
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310B	

	ICAL Dates		ICAL RT QC Limits	
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310	34.15
002		CONDITIONER	11/18/2013	19:10:45	4C12310	34.18
003		CONDITIONER	11/18/2013	19:53:12	4C12310	34.18
004		CONDITIONER	11/18/2013	20:35:36	4C12310	34.18
005		CONDITIONER	11/18/2013	21:18:04	4C12310	34.18
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310	34.16
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310	34.20
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310	34.19
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310	34.22
011	DDHER	7263056	11/19/2013	01:32:32	4C12310	34.24
012	EEHER	7263057	11/19/2013	02:14:57	4C12310	34.19
013	F1HER	7263058	11/19/2013	02:57:28	4C12310	34.21
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310	34.20
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310	34.18
016	-K46C	7264286	11/19/2013	05:04:44	4C12310	34.17
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310	34.15
018	-L45C	7264287	11/19/2013	06:29:35	4C12310	34.18
019	-M44C	7264288	11/19/2013	07:12:02	4C12310	34.19
020	-N44A	7264289	11/19/2013	07:54:27	4C12310	34.18
021	-044C	7264290	11/19/2013	08:36:57	4C12310	34.18
022	77M44	7266116	11/19/2013	09:19:25	4C12310	34.16
023	70J23	7266117	11/19/2013	10:01:49	4C12310	34.20
024	152-2	7266118	11/19/2013	10:44:12	4C12310	34.19
025	152-2	7266119	11/19/2013	11:26:35	4C12310	34.18
026	152-2	7266120	11/19/2013	12:09:02	4C12310	34.18
027	44M43	7266121	11/19/2013	12:51:29	4C12310	34.15
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310	34.15
029	55P43	7266122	11/19/2013	14:16:11	4C12310	34.19
030	22K46	7266123	11/19/2013	14:58:37	4C12310	34.14
031	04L45	7266124	11/19/2013	15:41:05	4C12310	34.17
032	47N42	7266127	11/19/2013	16:23:28	4C12310	34.17
033	S1522	7266128	11/19/2013	17:05:54	4C12310	34.14

	ICAL Dates		ICAL RT QC Limits	
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310	34.15
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310	34.15
036	R2M71	7265229	11/19/2013	19:13:13	4C12310	34.15
037	R2F14	7265239	11/19/2013	19:55:39	4C12310	34.13
038	2E131	7266809	11/19/2013	20:38:08	4C12310	34.15
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310	34.12
040	2C126	7266812	11/19/2013	22:02:59	4C12310	34.13
041	2C111	7266813	11/19/2013	22:45:27	4C12310	34.15
042	2E101	7266814	11/19/2013	23:27:51	4C12310	34.12
043	2E101	7266815	11/20/2013	00:10:15	4C12310	34.15
044	2E101	7266816	11/20/2013	00:52:39	4C12310	34.15
045	2E102	7266818	11/20/2013	01:35:05	4C12310	34.14
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310	34.14
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310	34.14
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310	34.15
049	75Q40	7270115	11/20/2013	04:24:52	4C12310	34.15
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310	34.10
051	83O39	7270116	11/20/2013	05:49:42	4C12310	34.12
052	83OFD	7270117	11/20/2013	06:32:07	4C12310	34.15
053	93O40	7270118	11/20/2013	07:14:33	4C12310	34.12
054	92P41	7270119	11/20/2013	07:57:03	4C12310	34.13
055	DW104	7270953	11/20/2013	08:39:27	4C12310	34.14
056	I1512	7270954	11/20/2013	09:21:52	4C12310	34.14
057	D1512	7270955	11/20/2013	10:04:19	4C12310	34.13
058	S1512	7270956	11/20/2013	10:46:50	4C12310	34.13
059	S1511	7270958	11/20/2013	11:29:14	4C12310	34.16
060	D-151	7270959	11/20/2013	12:11:40	4C12310	34.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310	34.14
062	IW104	7270960	11/20/2013	13:36:38	4C12310	34.16
063	I1511	7270961	11/20/2013	14:19:07	4C12310	34.16
064	M1041	7270962	11/20/2013	15:01:33	4C12310	34.16
065	FB-11	7274073	11/20/2013	15:43:59	4C12310	34.14
066	FB-12	7274074	11/20/2013	16:26:24	4C12310	34.16

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310	34.12

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310B	
002		CONDITIONER	11/18/2013	19:10:45	4C12310B	
003		CONDITIONER	11/18/2013	19:53:12	4C12310B	
004		CONDITIONER	11/18/2013	20:35:36	4C12310B	
005		CONDITIONER	11/18/2013	21:18:04	4C12310B	
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310B	
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310B	
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310B	
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310B	
011	DDHER	7263056	11/19/2013	01:32:32	4C12310B	
012	EEHER	7263057	11/19/2013	02:14:57	4C12310B	
013	F1HER	7263058	11/19/2013	02:57:28	4C12310B	
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310B	
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310B	
016	-K46C	7264286	11/19/2013	05:04:44	4C12310B	
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310B	
018	-L45C	7264287	11/19/2013	06:29:35	4C12310B	
019	-M44C	7264288	11/19/2013	07:12:02	4C12310B	
020	-N44A	7264289	11/19/2013	07:54:27	4C12310B	
021	-044C	7264290	11/19/2013	08:36:57	4C12310B	
022	77M44	7266116	11/19/2013	09:19:25	4C12310B	
023	70J23	7266117	11/19/2013	10:01:49	4C12310B	
024	152-2	7266118	11/19/2013	10:44:12	4C12310B	
025	152-2	7266119	11/19/2013	11:26:35	4C12310B	
026	152-2	7266120	11/19/2013	12:09:02	4C12310B	
027	44M43	7266121	11/19/2013	12:51:29	4C12310B	
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310B	
029	55P43	7266122	11/19/2013	14:16:11	4C12310B	
030	22K46	7266123	11/19/2013	14:58:37	4C12310B	
031	04L45	7266124	11/19/2013	15:41:05	4C12310B	
032	47N42	7266127	11/19/2013	16:23:28	4C12310B	
033	S1522	7266128	11/19/2013	17:05:54	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310B	
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310B	
036	R2M71	7265229	11/19/2013	19:13:13	4C12310B	
037	R2F14	7265239	11/19/2013	19:55:39	4C12310B	
038	2E131	7266809	11/19/2013	20:38:08	4C12310B	
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310B	
040	2C126	7266812	11/19/2013	22:02:59	4C12310B	
041	2C111	7266813	11/19/2013	22:45:27	4C12310B	
042	2E101	7266814	11/19/2013	23:27:51	4C12310B	
043	2E101	7266815	11/20/2013	00:10:15	4C12310B	
044	2E101	7266816	11/20/2013	00:52:39	4C12310B	
045	2E102	7266818	11/20/2013	01:35:05	4C12310B	
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310B	
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310B	
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310B	
049	75Q40	7270115	11/20/2013	04:24:52	4C12310B	
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310B	
051	83O39	7270116	11/20/2013	05:49:42	4C12310B	
052	83OFD	7270117	11/20/2013	06:32:07	4C12310B	
053	93O40	7270118	11/20/2013	07:14:33	4C12310B	
054	92P41	7270119	11/20/2013	07:57:03	4C12310B	
055	DW104	7270953	11/20/2013	08:39:27	4C12310B	
056	I1512	7270954	11/20/2013	09:21:52	4C12310B	
057	D1512	7270955	11/20/2013	10:04:19	4C12310B	
058	S1512	7270956	11/20/2013	10:46:50	4C12310B	
059	S1511	7270958	11/20/2013	11:29:14	4C12310B	
060	D-151	7270959	11/20/2013	12:11:40	4C12310B	
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310B	
062	IW104	7270960	11/20/2013	13:36:38	4C12310B	
063	I1511	7270961	11/20/2013	14:19:07	4C12310B	
064	M1041	7270962	11/20/2013	15:01:33	4C12310B	
065	FB-11	7274073	11/20/2013	15:43:59	4C12310B	
066	FB-12	7274074	11/20/2013	16:26:24	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

Sample Data

Explosives

Fraction: Explosives

06918: Nitroaromatics/Amines in Solid Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	2,000	6,000	ug/kg
PETN	2,000	6,000	ug/kg
HMX	250	750	ug/kg
RDX	130	300	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
Tetryl	150	300	ug/kg
Nitrobenzene	100	300	ug/kg
2,4,6-Trinitrotoluene	100	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
1-Nitronaphthalene	100	300	ug/kg

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	5.2	15	ug/l
PETN	6.0	18	ug/l
HMX	0.65	2.0	ug/l
RDX	0.20	0.50	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
1,2-Dinitrobenzene	0.20	0.60	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
Tetryl	0.40	0.60	ug/l
Nitrobenzene	0.20	0.60	ug/l
2,4,6-Trinitrotoluene	0.20	0.60	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
1-Nitronaphthalene	0.20	0.60	ug/l

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Data Summary

Sample Name: 7265223 R2N51 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 11:51:56
Instrument	X6329A
Result file	4E12310.62R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 103% (73 - 122) Conc: 10.327606

Analysis Report (B)

Injected on	Nov 17, 2013 11:51:56
Instrument	Y6329A
Result file	4C12310.62R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 122% (73 - 122) Conc: 12.212964

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
2-NMX	25.41	25.43	26.09	17602	10.327606	2-NMX	34.12	34.30	34.32	19461	12.212964

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	10.327606				16.73	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Verified by: Valerie L. Tomayko, Analytical Specialist

Date: NOV 21 2013

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265223 R2N51 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 11:51:56
Instrument : CP12--X6329A
Result file : 4E12310.62R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 103% (73-122) Conc.: 10.327606

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.41	25.43	26.09	17602	10.327606

Analysis Report (B)

Injected on : NOV 17, 2013 11:51:56
Instrument : CP12--X6329B
Result file : 4E12310B.62R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.51	8.77	8.89	16168	2.530045

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	10.327606					
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

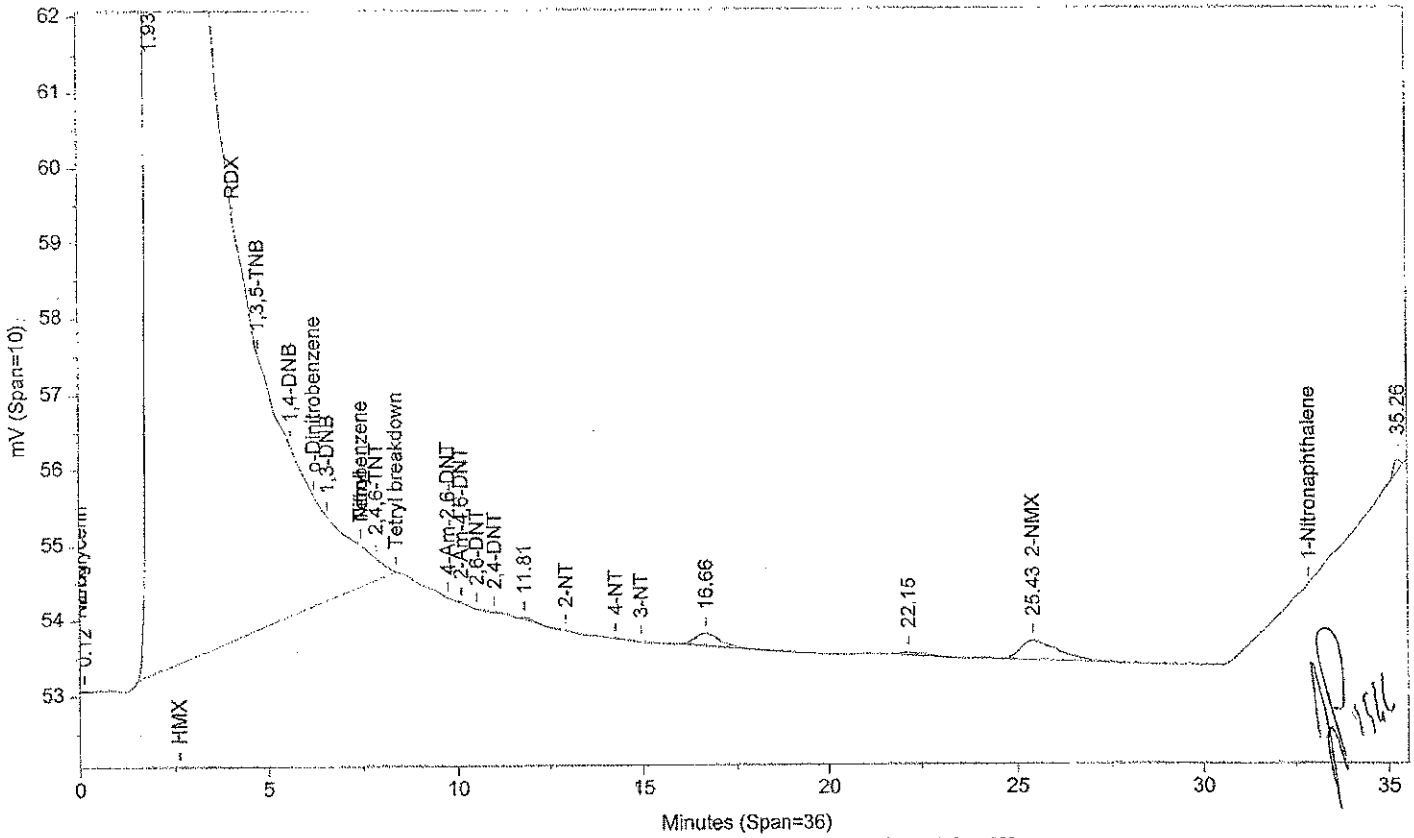
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

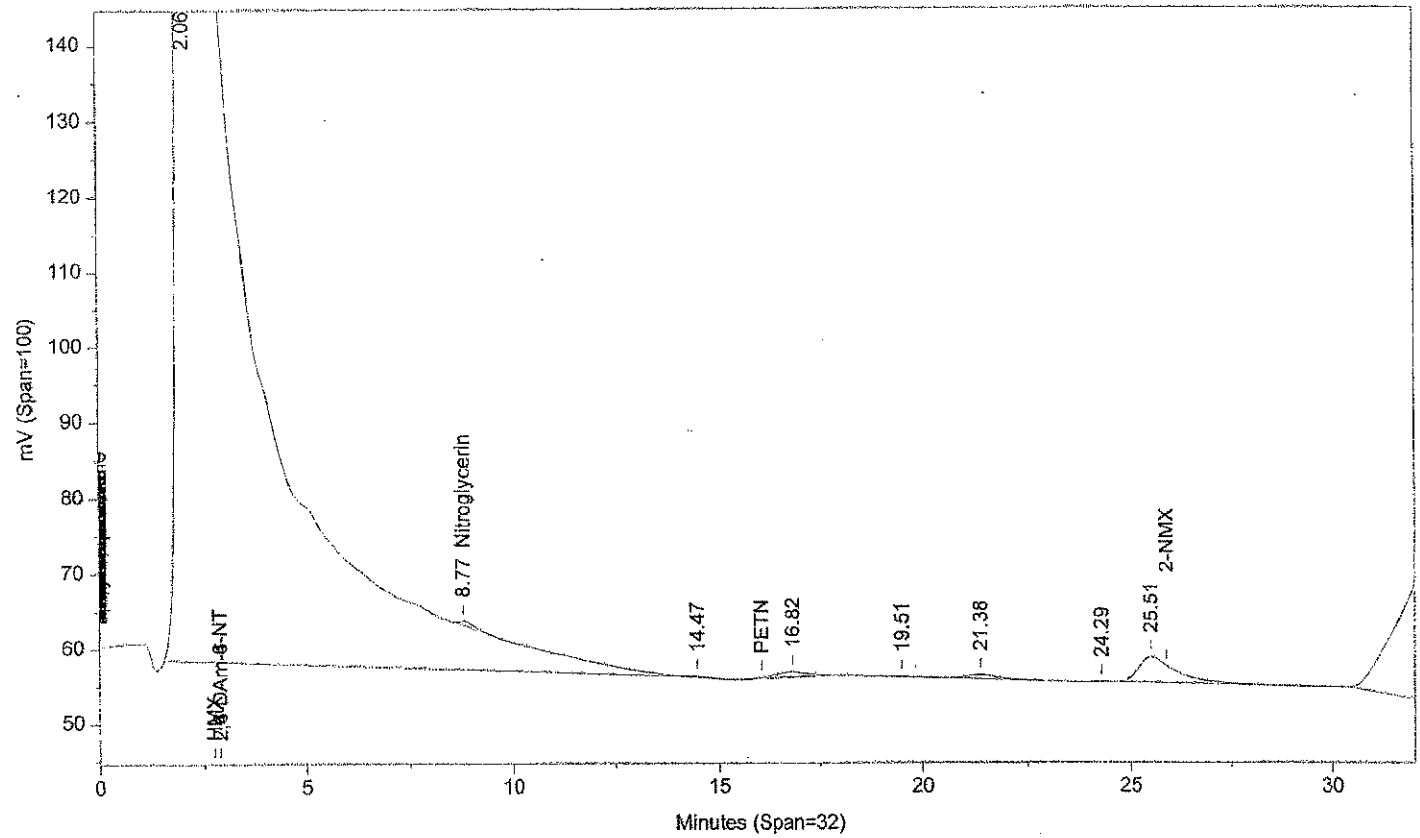
Printed on: 11/20/2013 13:20:59

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.62R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:51:55 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.62R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:51:55 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	Nitroglycerin	8.771	16168	2.53	Nitroglycerin
25.435	17602	10.328	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.62A
Area File: C:\CPWIN\DATA1\4E12310B.62A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:03:08 PM
File Reported On: 11/17/2013 at 10:03:17 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265223 R2N51 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 11:51:56
Instrument : CP12--Y6329A
Result file : 4C12310.62R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 122% (73-122) Conc.: 12.212964

Analysis Report (B)

Injected on : NOV 17, 2013 11:51:56
Instrument : CP12--Y6329B
Result file : 4C12310B.62R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.12	34.30	34.32	19461	12.212964

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	12.212964					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tornayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:32:07

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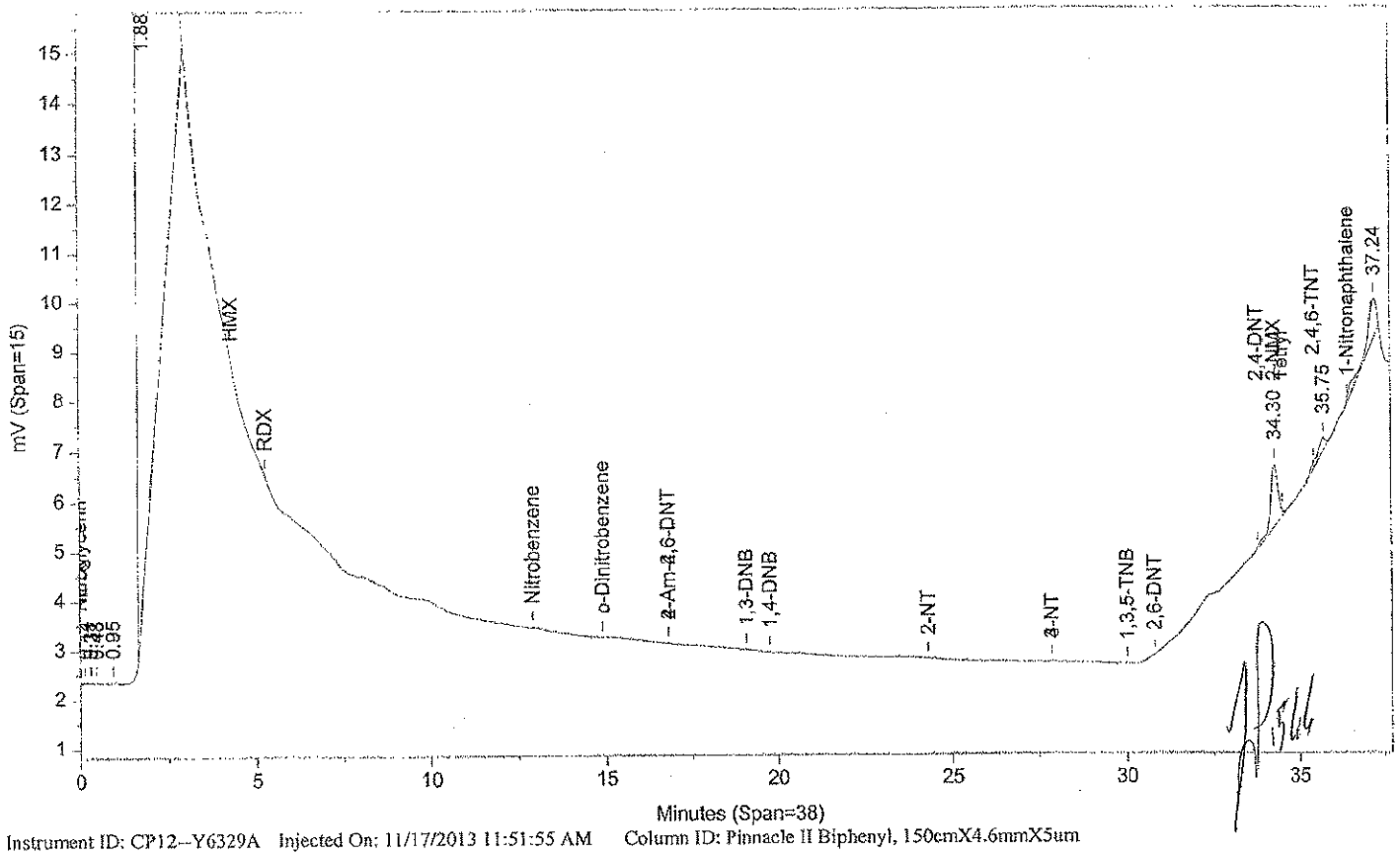
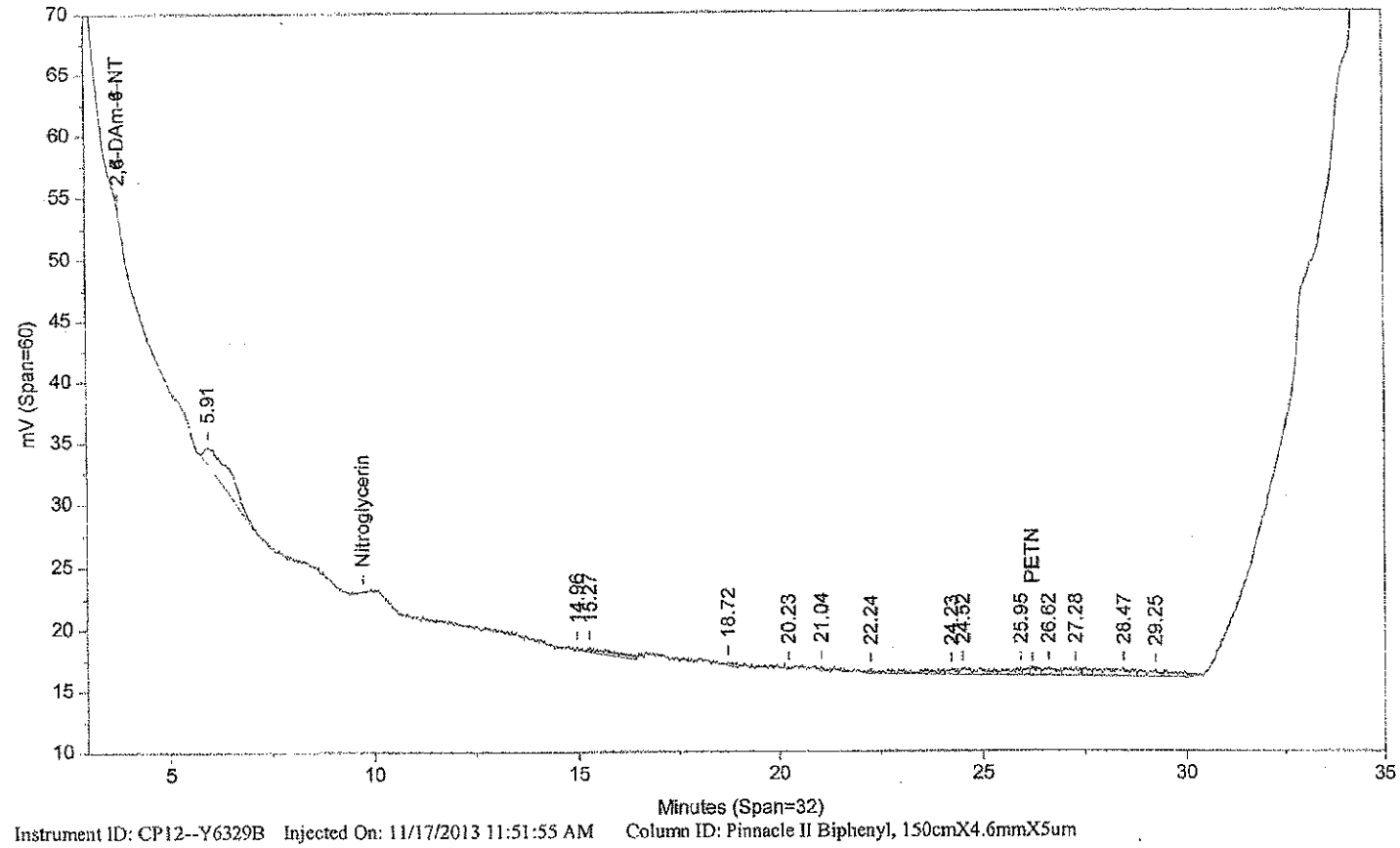
File: C:\CPWIN\DATA1\4C12310.62R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 11:51:55 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.62R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 11:51:55 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.3	19461	12.213	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.62A
Area File: C:\CPWIN\DATA1\4C12310B.62A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:17:14 PM
File Reported On: 11/17/2013 at 10:17:25 PM

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Data Summary

Sample Name: 7265224 R2N52 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 12:34:25
Instrument	X6329A
Result file	4E12310.63R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 105% (73 - 122) Conc: 10.466014

Analysis Report (B)

Injected on	Nov 17, 2013 12:34:25
Instrument	Y6329A
Result file	4C12310.63R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 120% (73 - 122) Conc: 12.006893

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	9.69	9.64	9.97	17492	3.728893	2-NMX	34.12	34.26	34.32	19101	12.006893
2-NMX	25.41	25.78	26.09	17838	10.466014	2,4,6-Trinitrotoluene	35.36	35.47	35.56	391	0.173012

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	10.466014				13.71	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265224 R2N52 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 12:34:25
Instrument : CP12--X6329A
Result file : 4E12310.63R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 105% (73-122) Conc.: 10.466014

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	9.63	9.64	9.91	17492	3.728893
2-NMX	25.41	25.78	26.09	17838	10.466014

Analysis Report (B)

Injected on : NOV 17, 2013 12:34:25
Instrument : CP12--X6329B
Result file : 4E12310B.63R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 93% (73-122) Conc.: 9.338264

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.92	26.24	228073	9.338264

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	3.728893	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	10.466014				11.39	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

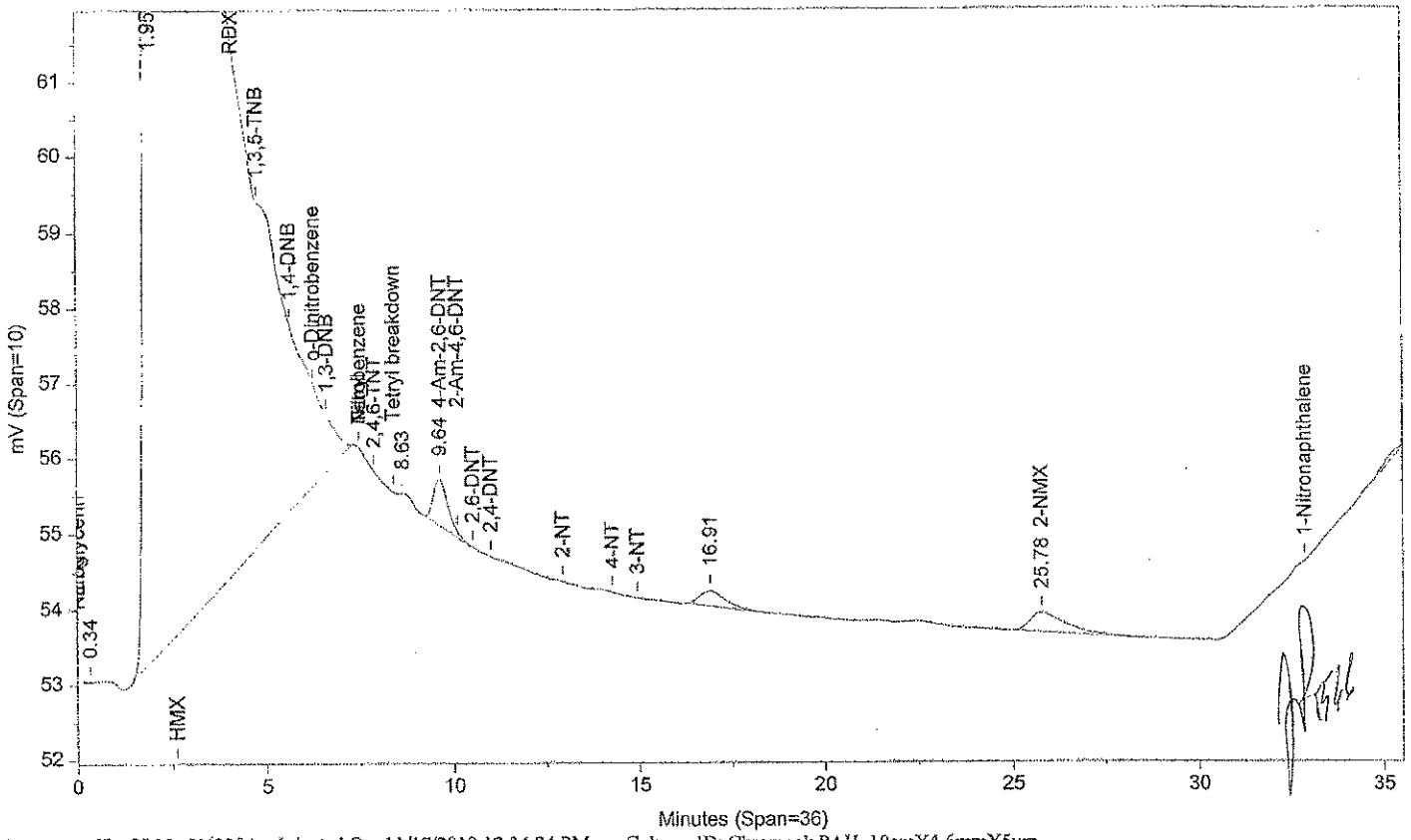
Verified by: Valerie L. Tomayko, Principal Chemist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

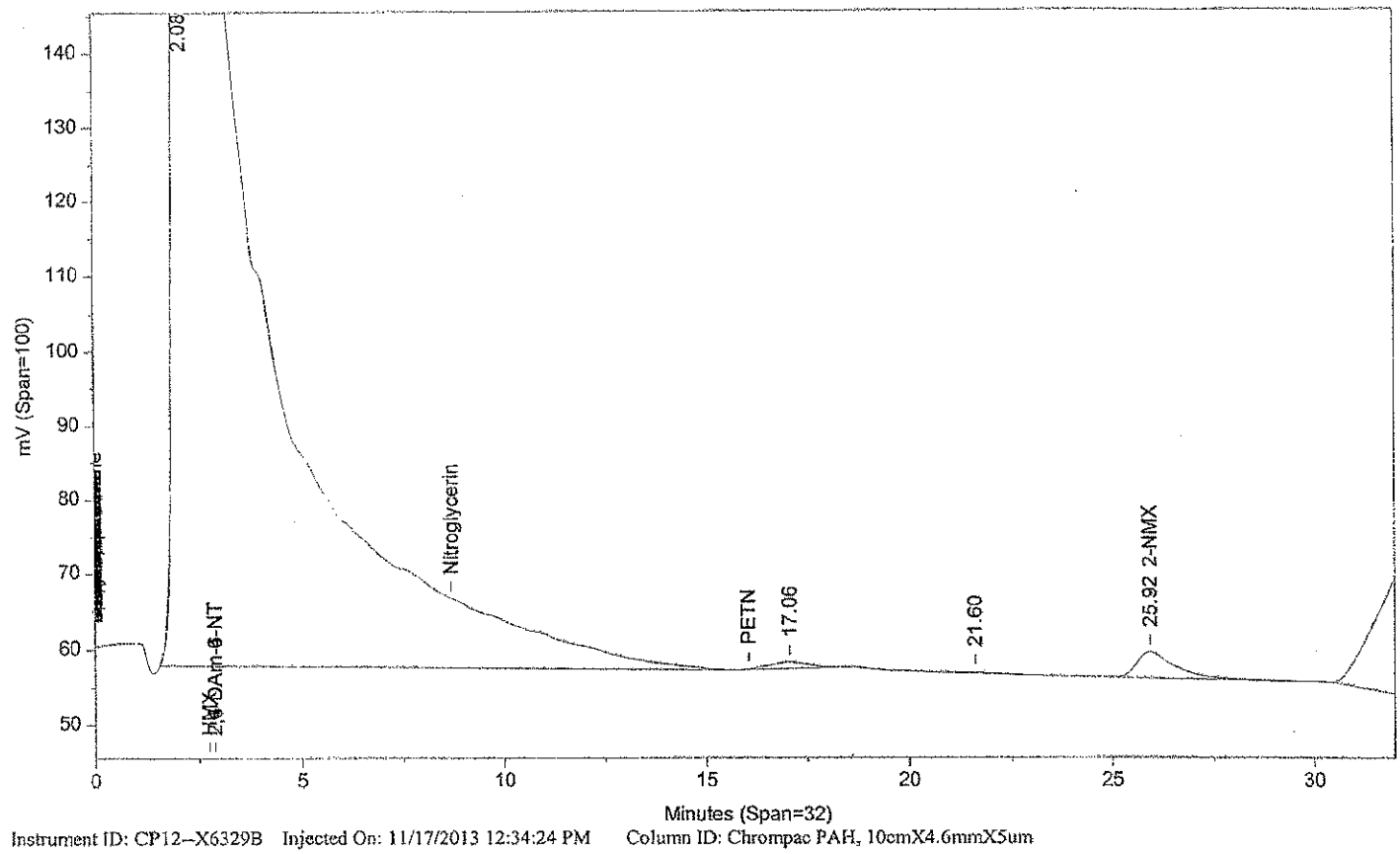
Printed on: 11/20/2013 13:21:13

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.63R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 12:34:24 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.63R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 12:34:24 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
9.637	17492	3.729	4-Am-2,6-DNT		0		4-Am-2,6-DNT
25.777	17838	10.466	2-NMX	25.921	228073	9.338	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.63A
Area File: C:\CPWIN\DATA1\4E12310B.63A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:03:30 PM
File Reported On: 11/17/2013 at 10:03:40 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265224 R2N52 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 12:34:25
Instrument : CP12--Y6329A
Result file : 4C12310.63R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 120% (73-122) Conc.: 12.006893

Analysis Report (B)

Injected on : NOV 17, 2013 12:34:25
Instrument : CP12--Y6329B
Result file : 4C12310B.63R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.12	34.26	34.32	19101	12.006893
2,4,6-TNT	35.36	35.47	35.56	391	0.173012

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	12.006893					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

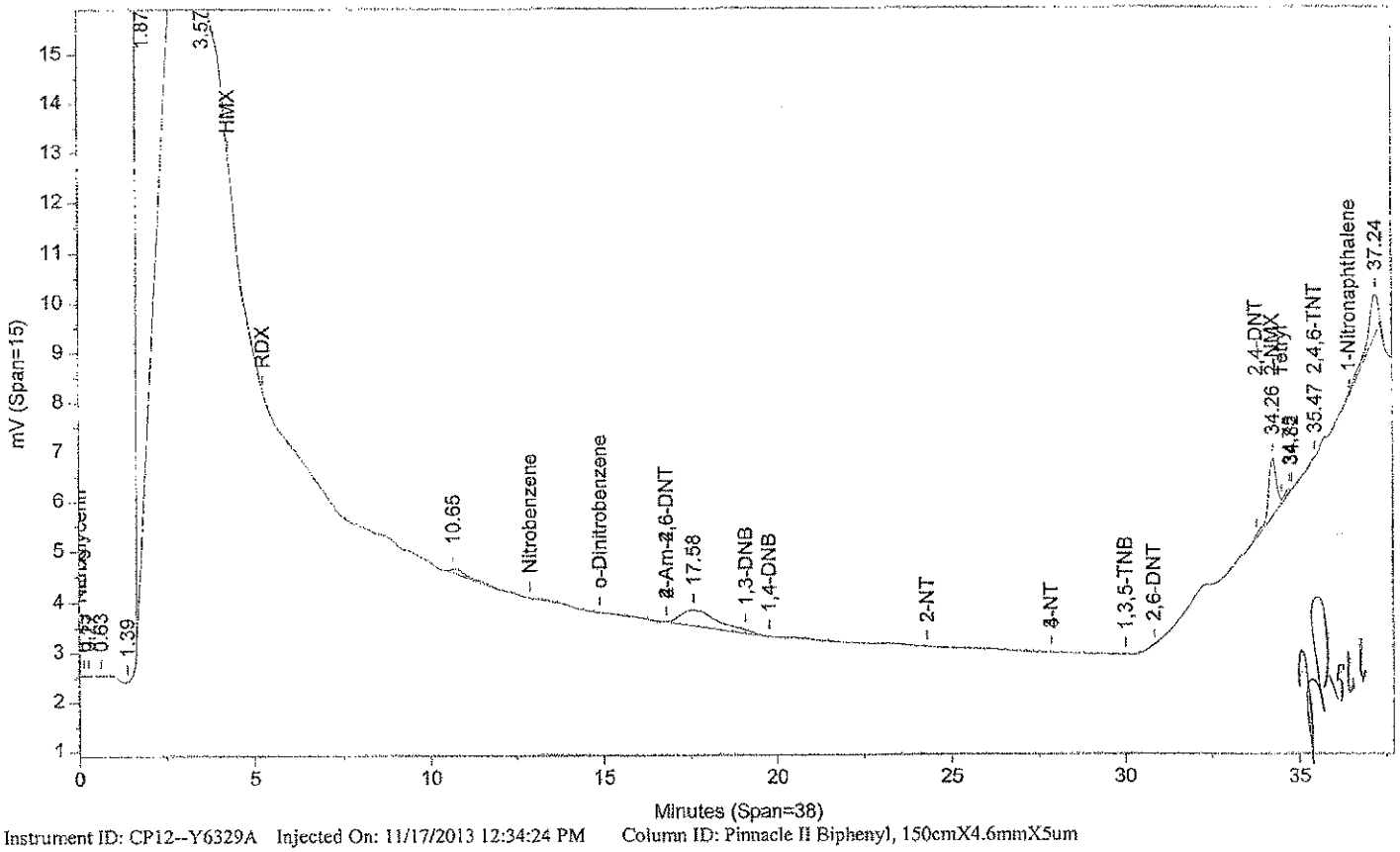
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

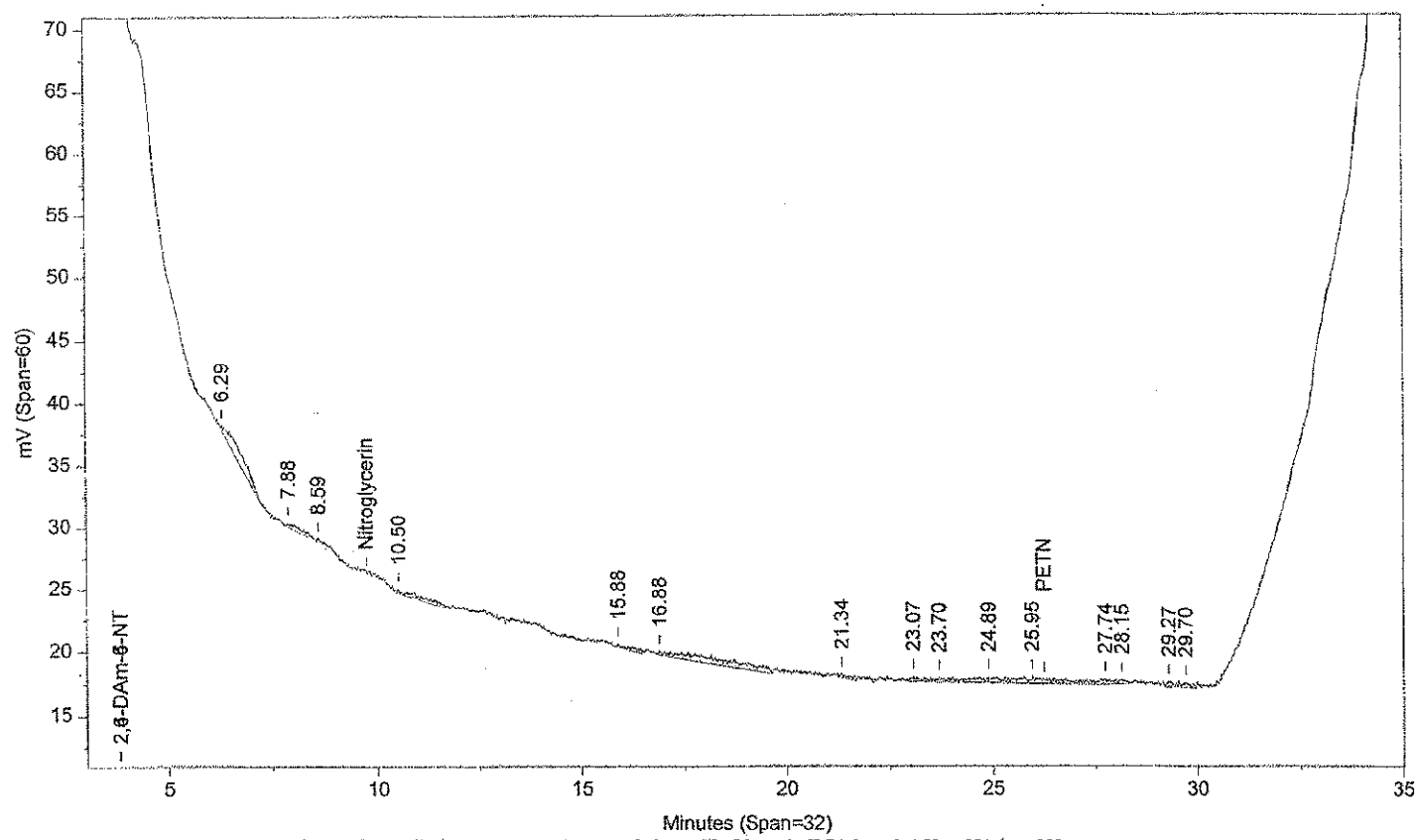
Printed on: 11/20/2013 15:32:19

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.63R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 12:34:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.63R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 12:34:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.257	19101	12.007	2-NMX	.	0	.	2-NMX
35.473	391	.173	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\4C12310.63A
Area File: C:\CPWIN\DATA1\4C12310B.63A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:17:38 PM
File Reported On: 11/17/2013 at 10:17:48 PM

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Data Summary

Sample Name: 7265225 R2041 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 16:58:31
Instrument X6329A
Result file 3E12310.28R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 107% (63 - 150) Conc: 5376.895508

Analysis Report (B)

Injected on Nov 13, 2013 16:58:31
Instrument Y6329A
Result file 3C12310.28R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 109% (63 - 150) Conc: 5427.779297

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.12	4.24	1415	36.439667
Tetryl	7.43	7.67	7.71	25	2.544457
2,4,6-Trinitrotoluene	7.90	8.02	8.10	26	1.137826
2,6-Dinitrotoluene	10.56	10.81	10.84	49	4.00591
2-NMX	25.80	25.66	26.48	18328	5376.895508

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.31	34.35	17092	5427.779297

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5376.895508				0.94	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265225 R2041 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 16:58:31
Instrument : CP12--X6329A
Result file : 3E12310.28R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5376.89550

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.12	4.24	1415	36.439667
Tetryl	7.43	7.67	7.71	25	0.736394
2,4,6-TNT	7.90	8.02	8.10	26	1.137826
Tetryl breakdown	8.62	8.78	8.86	62	1.808063
2,6-DNT	10.56	10.81	10.84	49	4.005910
2-NMX	25.80	25.66	26.48	18328	5376.895508

Analysis Report (B)

Injected on : NOV 13, 2013 16:58:31
Instrument : CP12--X6329B
Result file : 3E12310B.28R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 119% (63-150) Conc.: 5929.49169

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	25.82	26.63	289637	5929.491699

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 relutes		report confirmation +Breakdown = 2.544457
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5376.895508				9.77	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Chemist
Date: NOV 20 2013

James H. Place
Senior Chemist
NOV 21 2013

Verified by: Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:48:10

LANCASTER LABORATORIES

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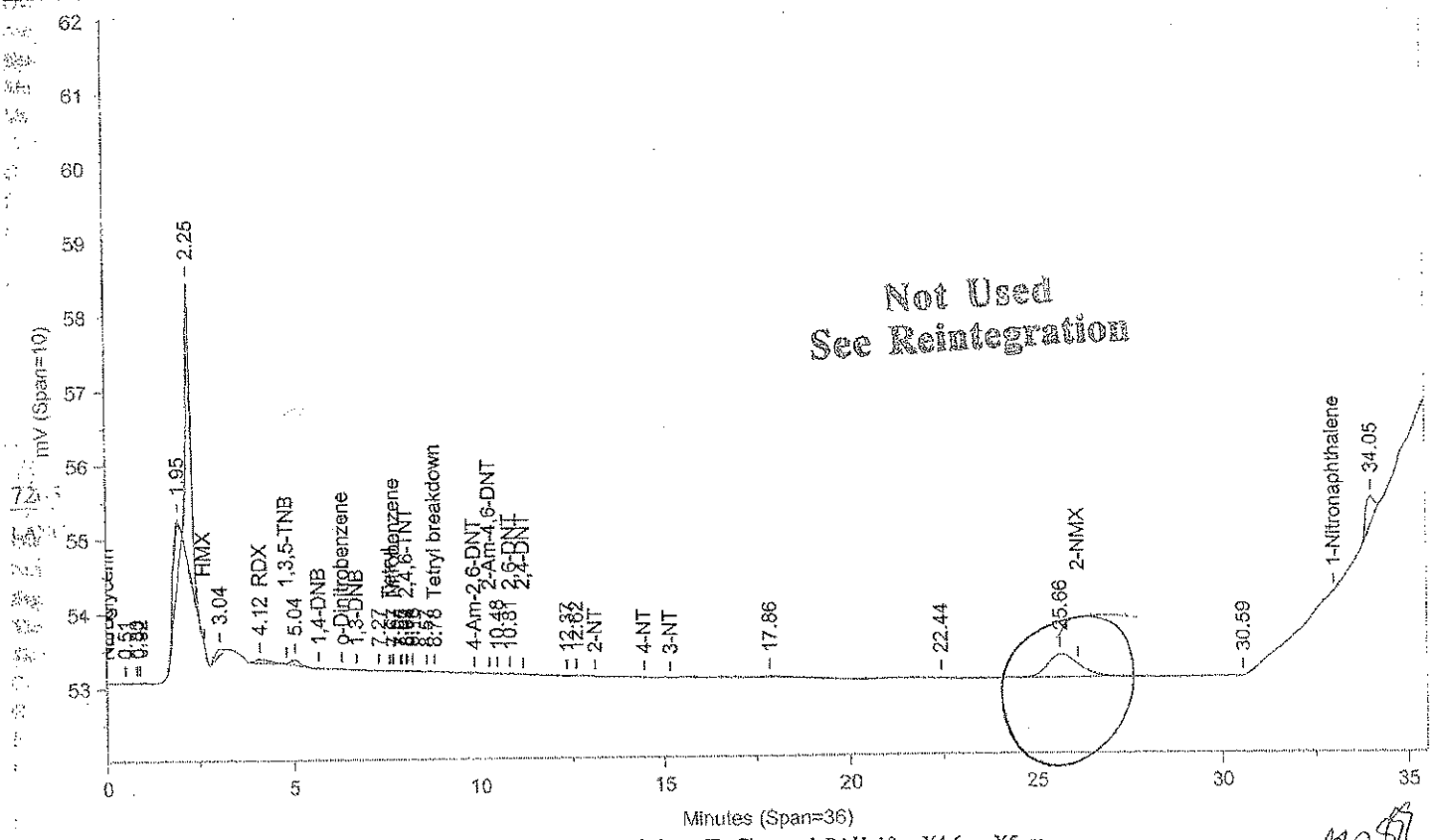
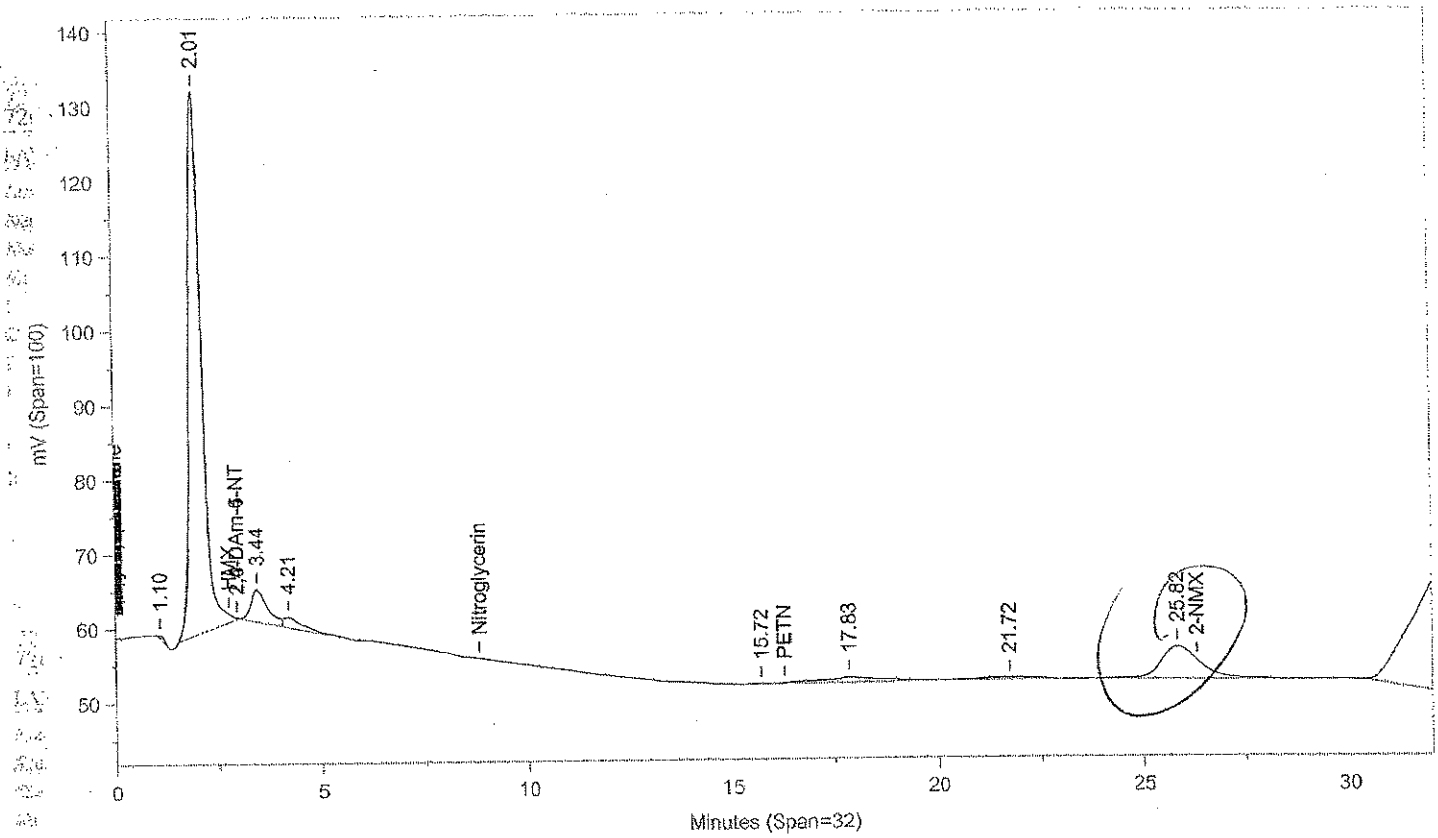


Not Used
See Reintegration

Instrument ID: CP12--X6329A Injected On: 11/13/2013 4:58:30 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

#2.67

File: C:\CPWIN\DATA1\3E12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 4:58:30 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

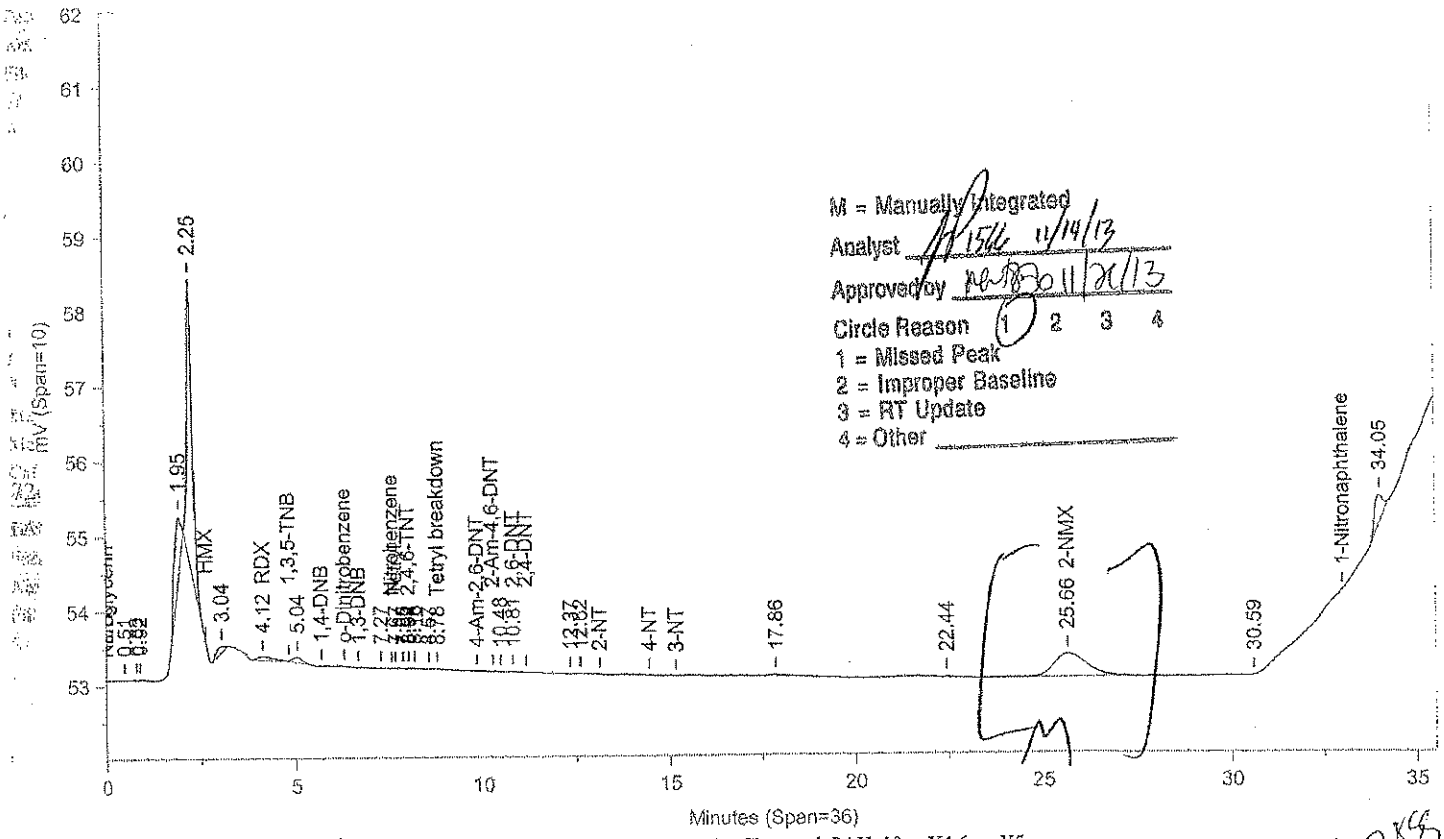
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.118	1415	36.44	RDX	.	0	.	RDX
7.666	25	.739	Nitrobenzene	.	0	.	Nitrobenzene
8.016	26	1.138	2,4,6-TNT	.	0	.	2,4,6-TNT
8.784	62	1.808	Tetryl breakdown	.	0	.	Tetryl breakdown
10.813	49	4.006	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\3E12310.28A
Area File: C:\CPWIN\DATA1\3E12310B.28A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 5:39:10 PM
File Reported On: 11/13/2013 at 5:39:19 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.28R



M = Manually Integrated

Analyst 11/14/13

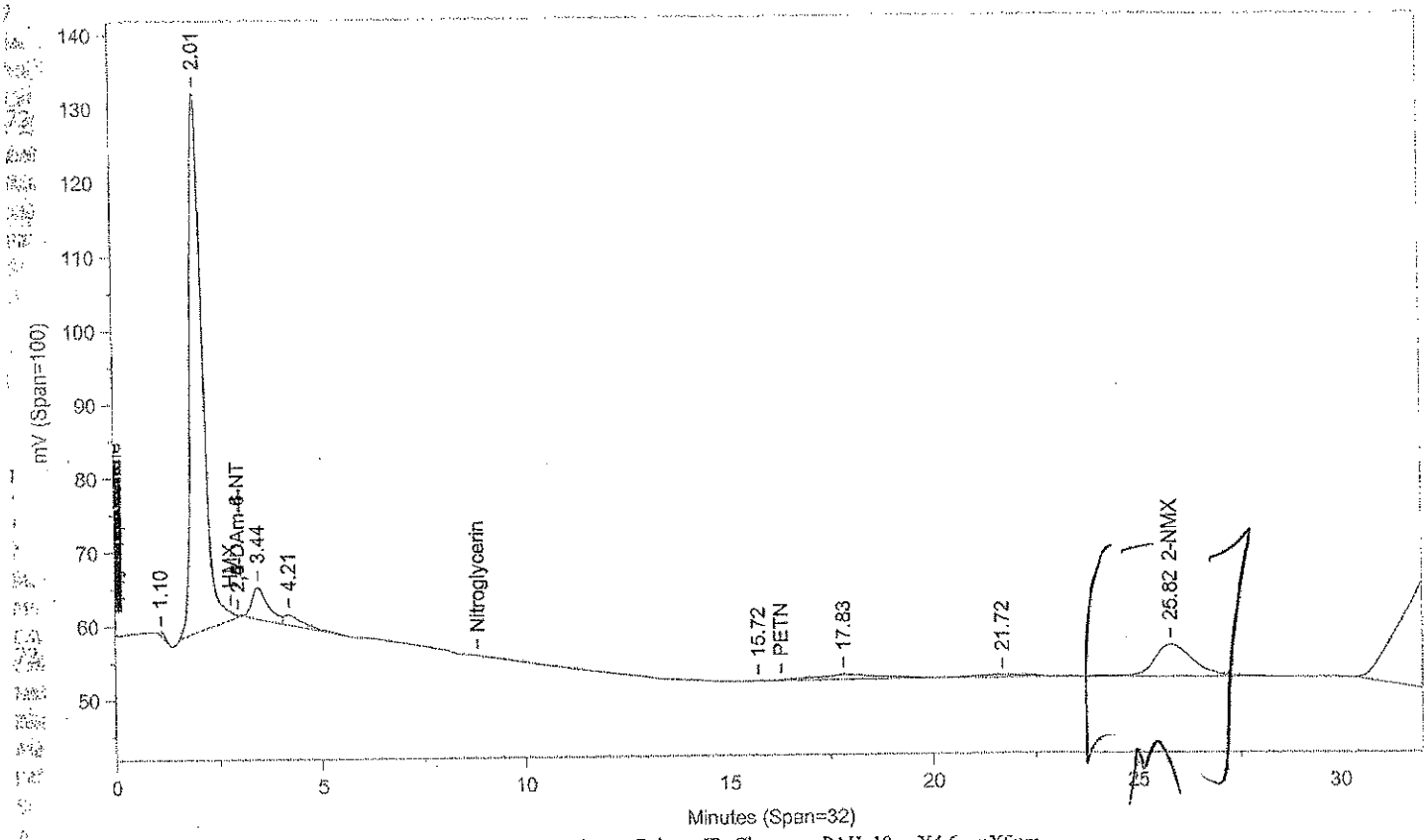
Approved by 11/21/13

Circle Reason 1 2 3 4

1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/13/2013 4:58:30 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 4:58:30 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.118	1415	36.44	RDX	.	0	.	RDX
7.666	25	.736	Tetryl	.	0	.	Tetryl
8.016	26	1.138	2,4,6-TNT	.	0	.	2,4,6-TNT
8.784	62	1.808	Tetryl breakdown	.	0	.	Tetryl breakdown
10.813	49	4.006	2,6-DNT	.	0	.	2,6-DNT
25.656	18328	5376.896	2-NMX	25.819	289637	5929.492	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 10:59:30 AM
File Reported On: 11/14/2013 at 10:59:30 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265225 R2041 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 16:58:31
Instrument : CP12--Y6329A
Result file : 3C12310.28R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 109% (63-150) Conc.: 5427.779297

Analysis Report (B)

Injected on : NOV 13, 2013 16:58:31
Instrument : CP12--Y6329B
Result file : 3C12310B.28R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.26	5.38	442	-196.414566
2-NMX	34.15	34.31	34.35	17092	5427.779297

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutors		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutors		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5427.779297					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist/Group Leader
Date: NOV 21 2013

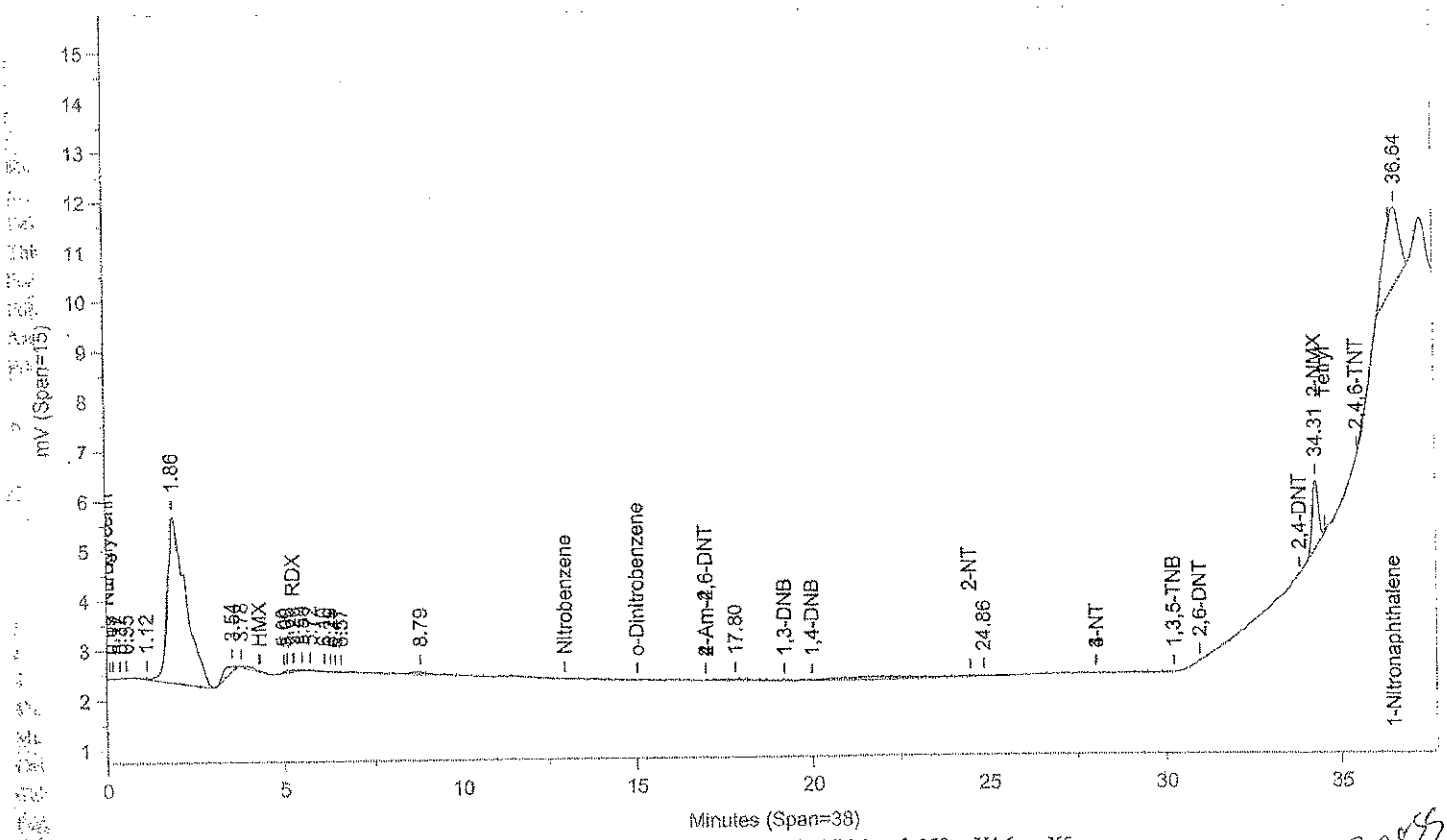
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

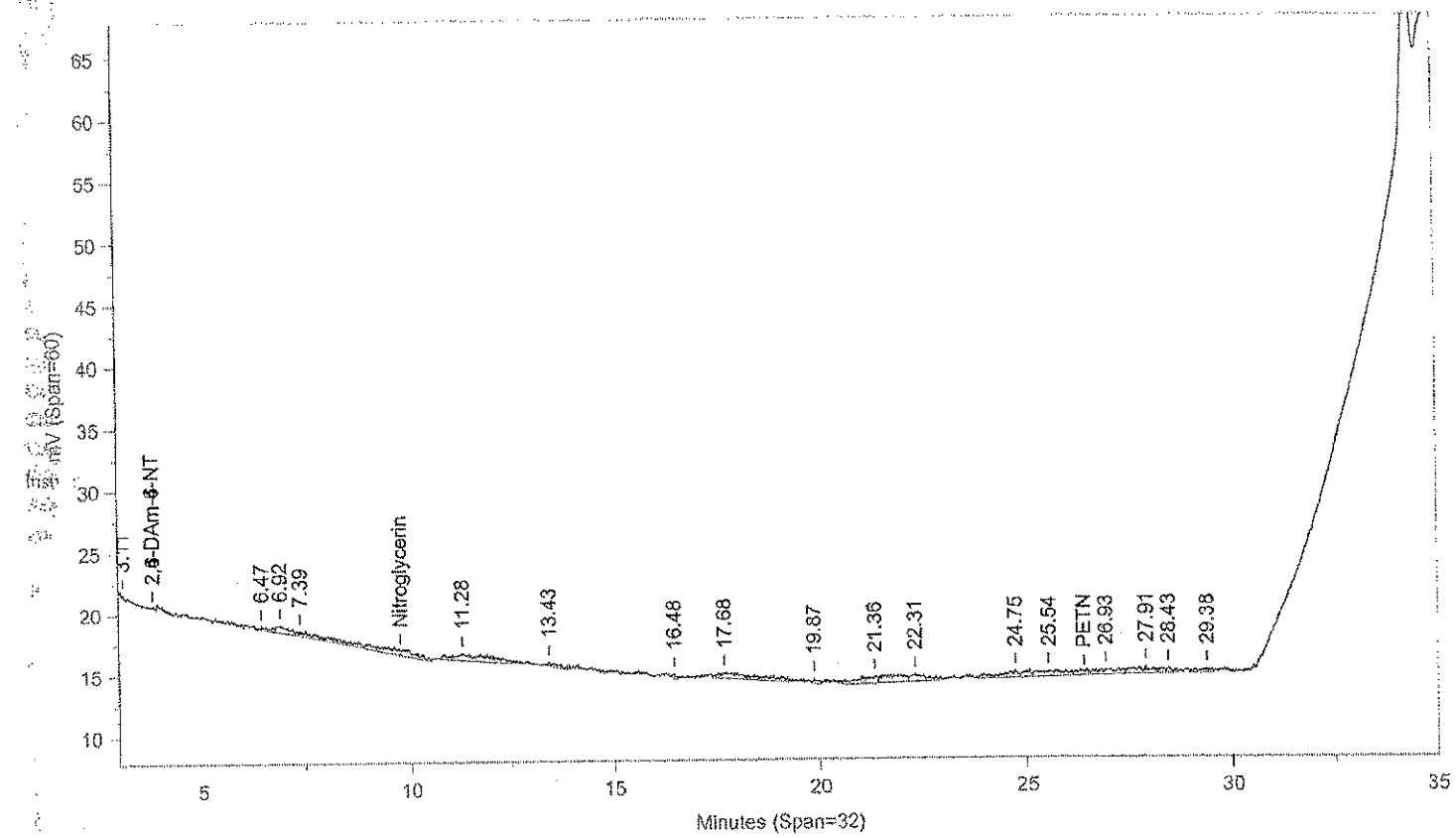
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.28R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 4:58:30 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.28R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 4:58:30 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.259	442	-196.415	RDX			0	RDX
34.31	17092	5427.779	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.28A
Area File: C:\CPWIN\DATA1\3C12310B.28A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 5:38:38 PM
File Reported On: 11/13/2013 at 5:38:48 PM

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Data Summary

Sample Name: 7265226 R2042 Sample ID: AA **Batchnumber:** 133110004A
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 22:37:56
Instrument X6329A
Result file 3E12310.36R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 105% (63 - 150) Conc: 5276.959961

Analysis Report (B)

Injected on Nov 13, 2013 22:37:56
Instrument Y6329A
Result file 3C12310.36R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 107% (63 - 150) Conc: 5343.751953

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.90	8.01	8.10	16	0.690352
2-NMX	25.80	25.94	26.48	17988	5276.959961

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.30	34.35	16798	5343.751953

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5276.959961				1.26	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265226 R2042 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 22:37:56
Instrument : CP12--X6329A
Result file : 3E12310.36R
Calibration file : 2E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 105% (63-150) Conc.: 5276.95996

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.07	4.24	909	-21.266609
2,4,6-TNT	7.90	8.01	8.10	16	0.690352
2-NMX	25.80	25.94	26.48	17988	5276.959961

Analysis Report (B)

Injected on : NOV 13, 2013 22:37:56
Instrument : CP12--X6329B
Result file : 3E12310B.36R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 146% (63-150) Conc.: 7307.79589

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.08	26.63	356963	7307.795898

RDX = $\frac{909}{87.623}\left(\frac{20}{2}\right) = 103.7398854$ 2 MDL

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation 1
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5276.959961				32.27	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

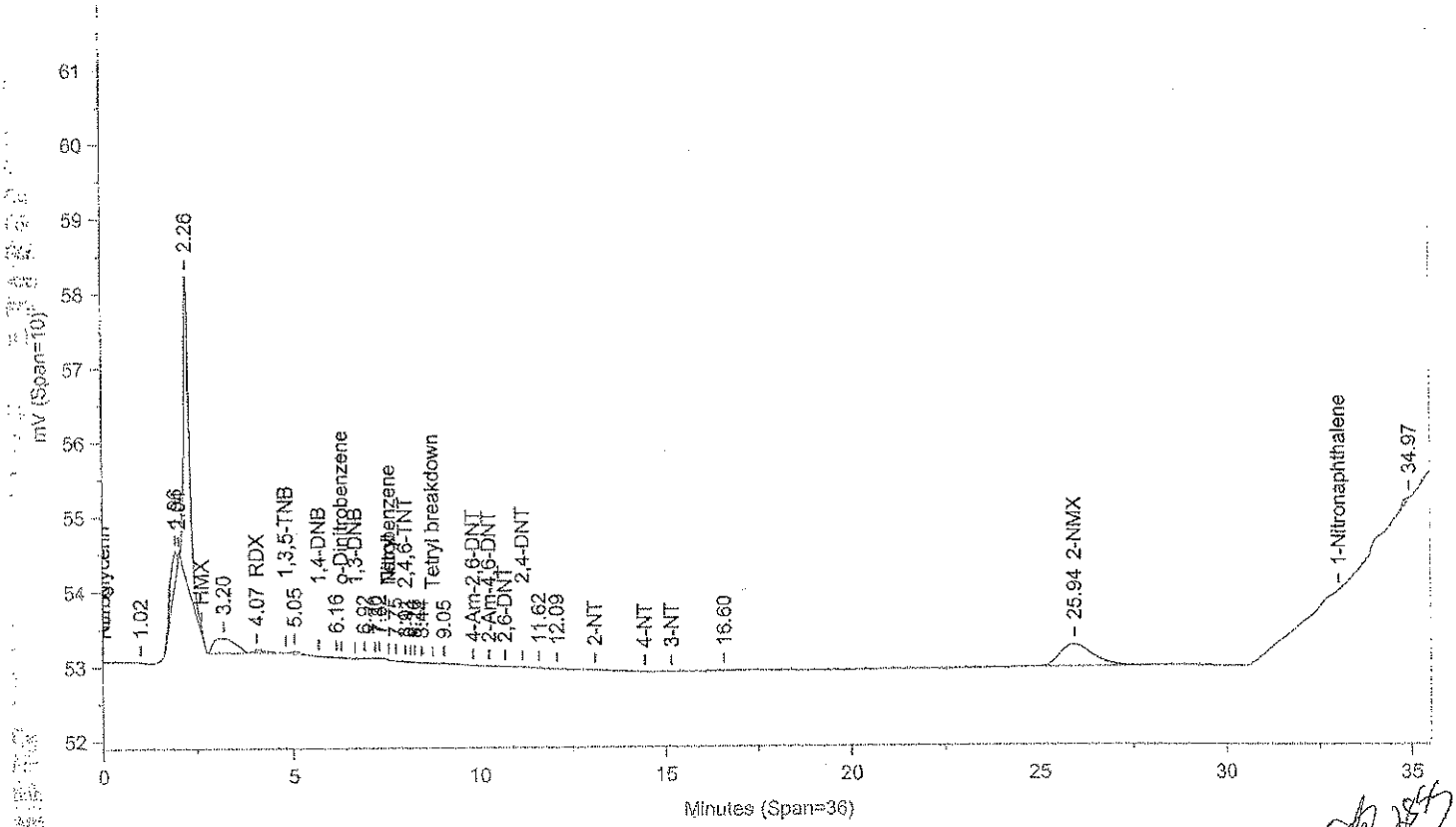
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:48:39

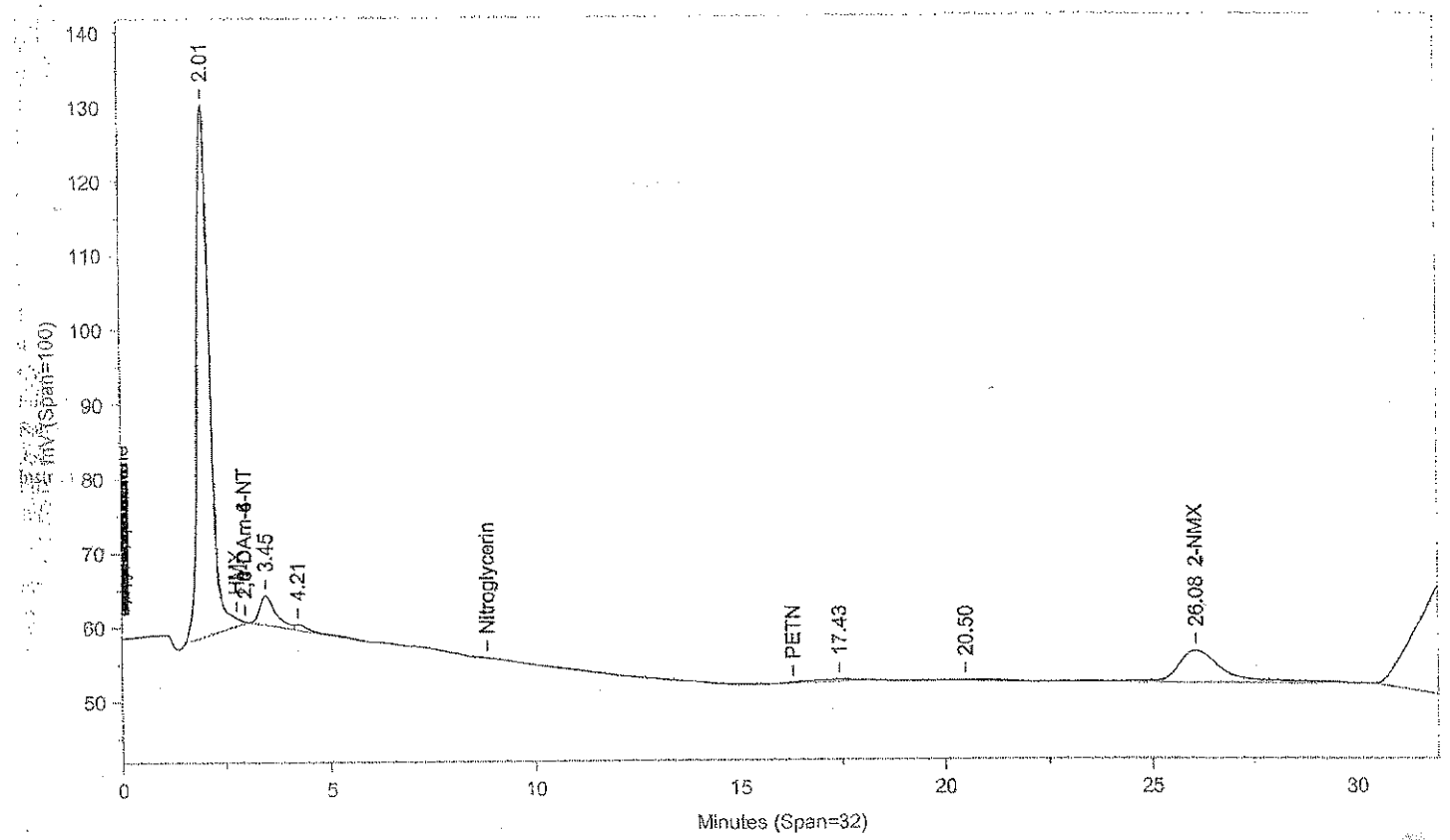
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.36R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 10:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.36R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 10:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.071	909	-21.267	RDX	.	0	.	RDX
8.01	16	.69	2,4,6-TNT	.	0	.	2,4,6-TNT
25.945	17988	5276.96	2-NMX	26.079	356963	7307.796	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.36A
Area File: C:\CPWIN\DATA1\3E12310B.36A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 11:18:42 PM
File Reported On: 11/13/2013 at 11:18:54 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265226 R2042 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 22:37:56
Instrument : CP12--Y6329A
Result file : 3C12310.36R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5343.75195

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.21	5.38	1835	-72.072144
1,4-DNB	19.83	20.11	20.13	1817	-69.305649
2-NMX	34.15	34.30	34.35	16798	5343.751953

Analysis Report (B)

Injected on : NOV 13, 2013 22:37:56
Instrument : CP12--Y6329B
Result file : 3C12310B.36R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.17	26.27	26.59	36424	3067.092041

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	3067.092041	<6000	< 2000	J		NC Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5343.751953					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

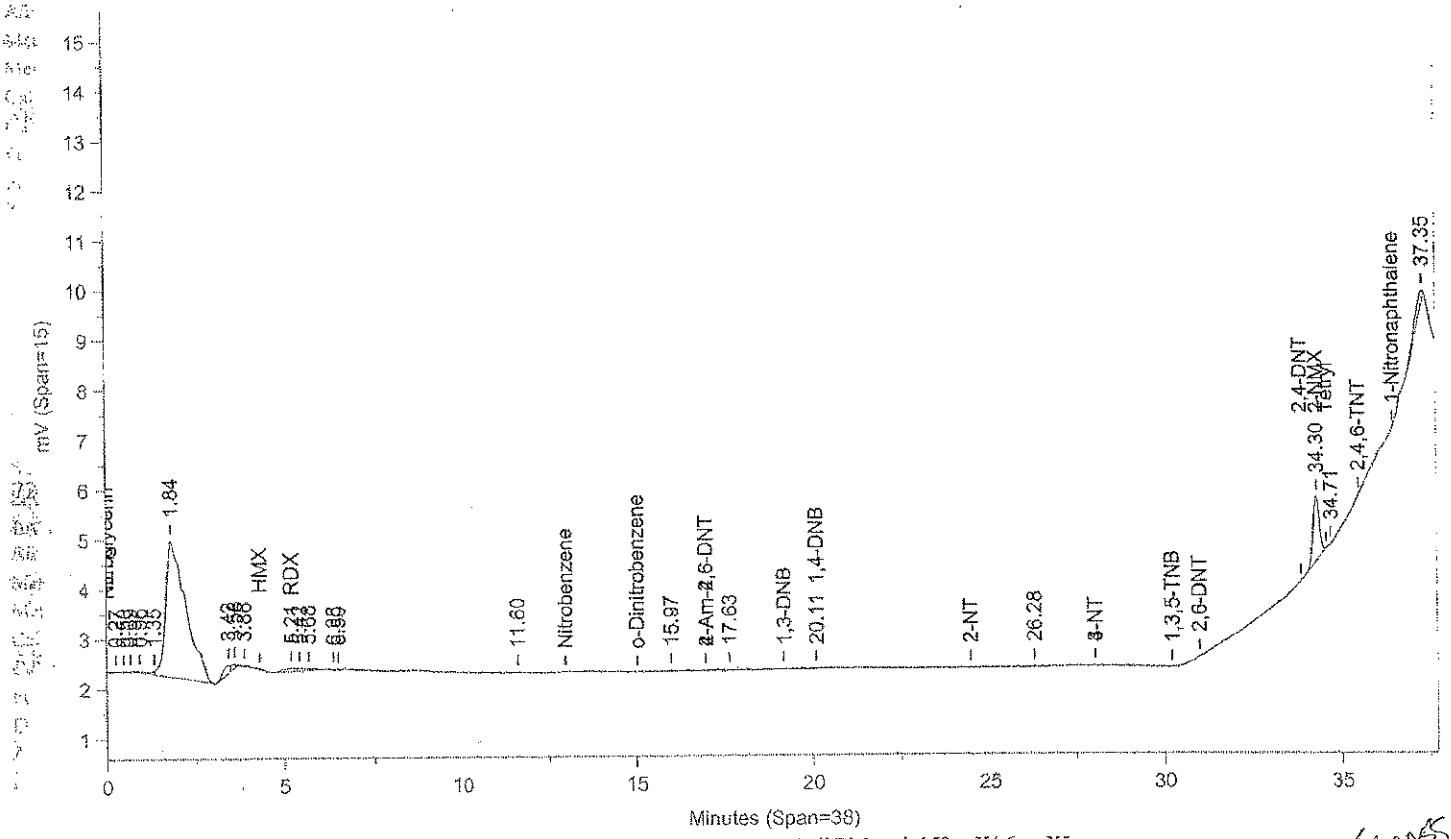
Verified by: Melissa A. McDermott, Senior Chemist/Group Leader
Date: NOV 21 2013

James H. Place, Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

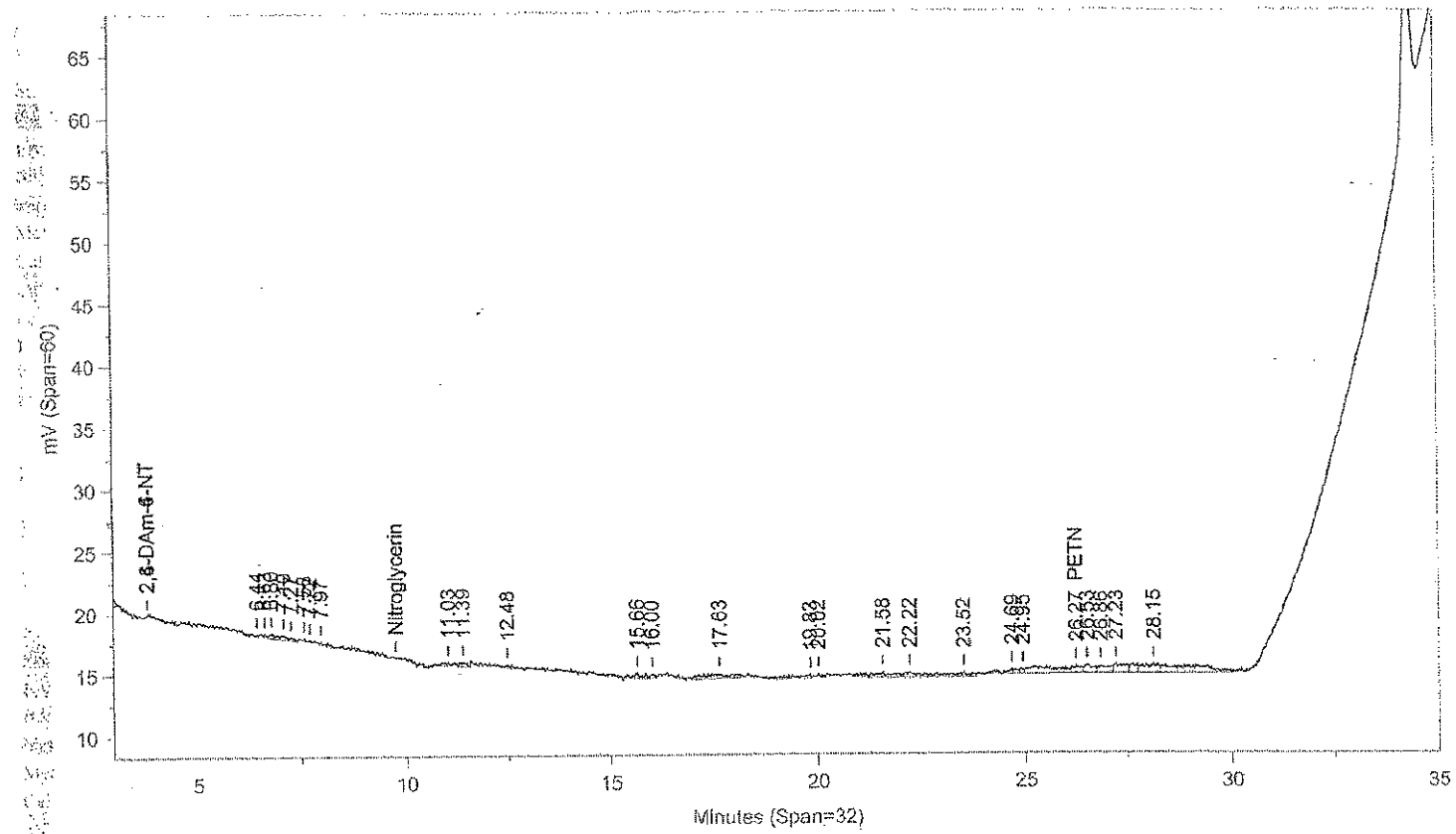
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.36R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 10:37:55 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

285

File: C:\CPWIN\DATA1\3C12310B.36R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 10:37:55 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.206	1835	-72.072	RDX	.	0	.	RDX
20.112	1817	-69.306	1,4-DNB	.	0	.	1,4-DNB
.	0	.	PETN	26.267	36424	3067.092	PETN
34.298	16798	5343.752	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.36A
Area File: C:\CPWIN\DATA1\3C12310B.36A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 11:18:04 PM
File Reported On: 11/13/2013 at 11:18:13 PM
RT

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Data Summary

Sample Name: 7265227 R2043 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 23:20:21
Instrument X6329A
Result file 3E12310.37R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 104% (63 - 150) Conc: 5213.142578

Analysis Report (B)

Injected on Nov 13, 2013 23:20:21
Instrument Y6329A
Result file 3C12310.37R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 114% (63 - 150) Conc: 5719.722656

Single Component Data

Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.20	6.26	6.40	202	19.626465
Tetryl	7.43	7.56	7.71	16	0.452266
2,4,6-Trinitrotoluene	7.90	7.96	8.10	4	0.186632
2-NMX	25.80	25.83	26.48	17770	5213.142578

Compound	Min	RT	Max	Area	Amount
2-Nitrotoluene	24.21	24.45	24.73	905	0.003183
2-NMX	34.15	34.31	34.35	18111	5719.722656

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5213.142578				9.27	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265227 R2043 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 23:20:21
Instrument : CP12--X6329A
Result file : 3E12310.37R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 104% (63-150) Conc.: 5213.14257

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.11	4.24	795	-34.312973
o-Dinitrobenzene	6.20	6.26	6.40	202	19.626465
Tetryl	7.43	7.56	7.71	16	0.452266
2,4,6-TNT	7.90	7.96	8.10	4	0.186632
2-NMX	25.80	25.83	26.48	17770	5213.142578

Analysis Report (B)

Injected on : NOV 13, 2013 23:20:21
Instrument : CP12--X6329B
Result file : 3E12310B.37R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 108% (63-150) Conc.: 5390.84033

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	25.95	26.63	263326	5390.840332

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 Co elutors		report confirmation
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5213.142578				3.35	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

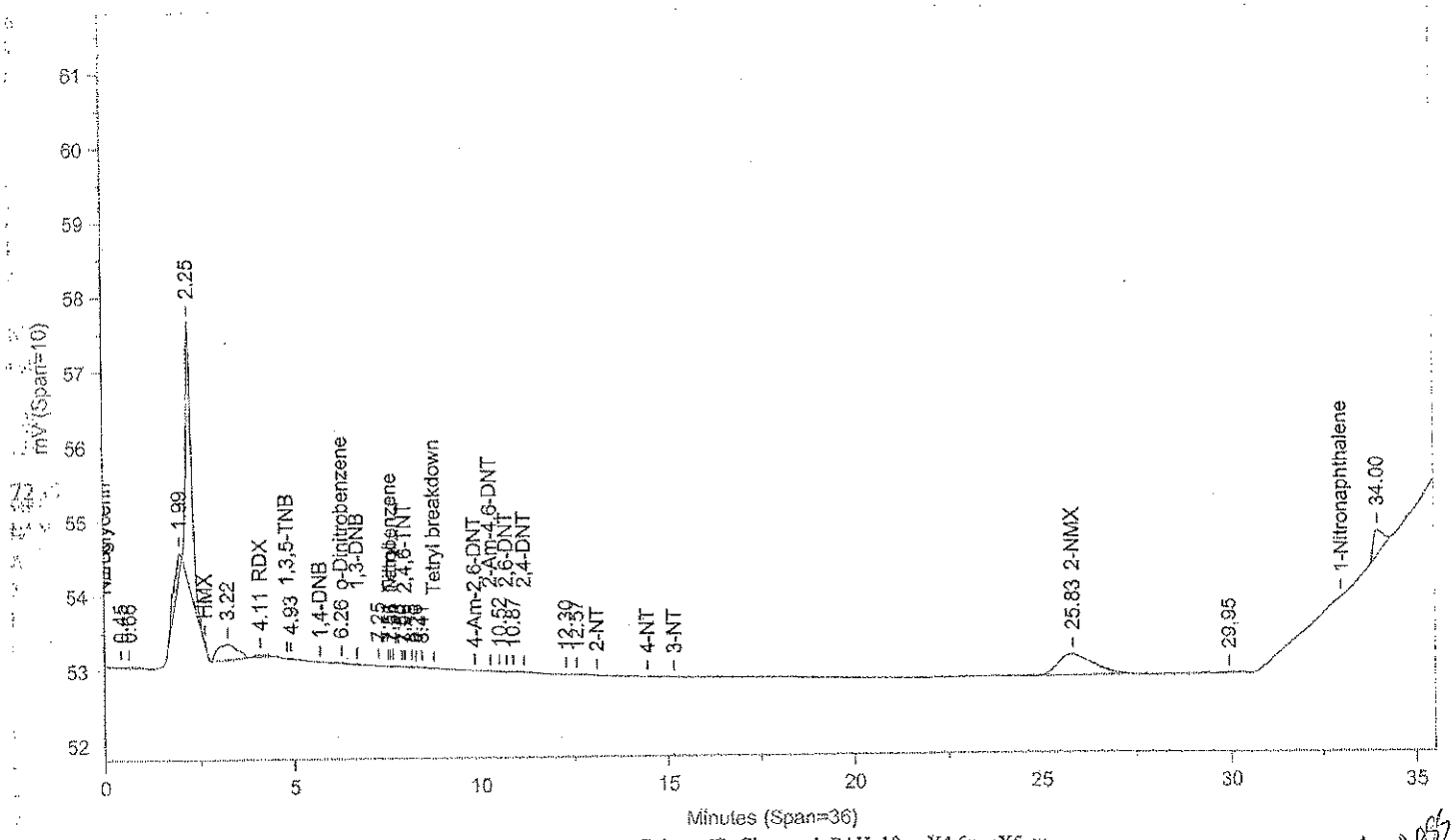
Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

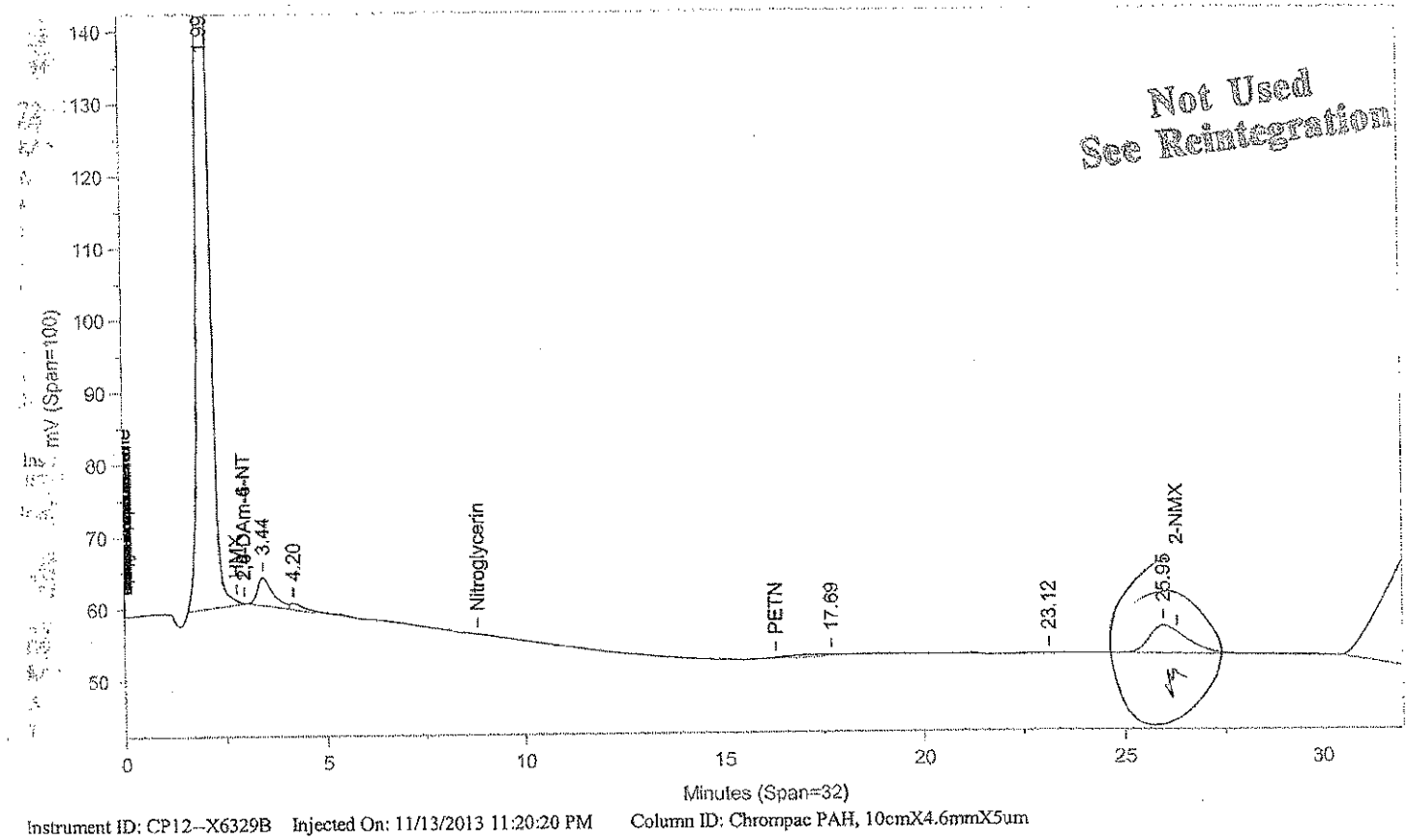
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.37R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 11:20:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.37R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/13/2013 11:20:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,
Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Area Reject: 0
Calibration Type: External
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Area Reject: 0
Calibration Type: External
Quantiation: Height

Sample Weight: 2
Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.11	795	-34.313	RDX	.	0	.	RDX
6.255	202	19.626	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.564	16	.452	Tetryl	.	0	.	Tetryl
7.959	4	.187	2,4,6-TNT	.	0	.	2,4,6-TNT
25.834	17770	5213.143	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.37A
Area File: C:\CPWIN\DATA1\3E12310B.37A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:01:02 AM
File Reported On: 11/14/2013 at 12:01:15 AM

Not Used
See Reintegration

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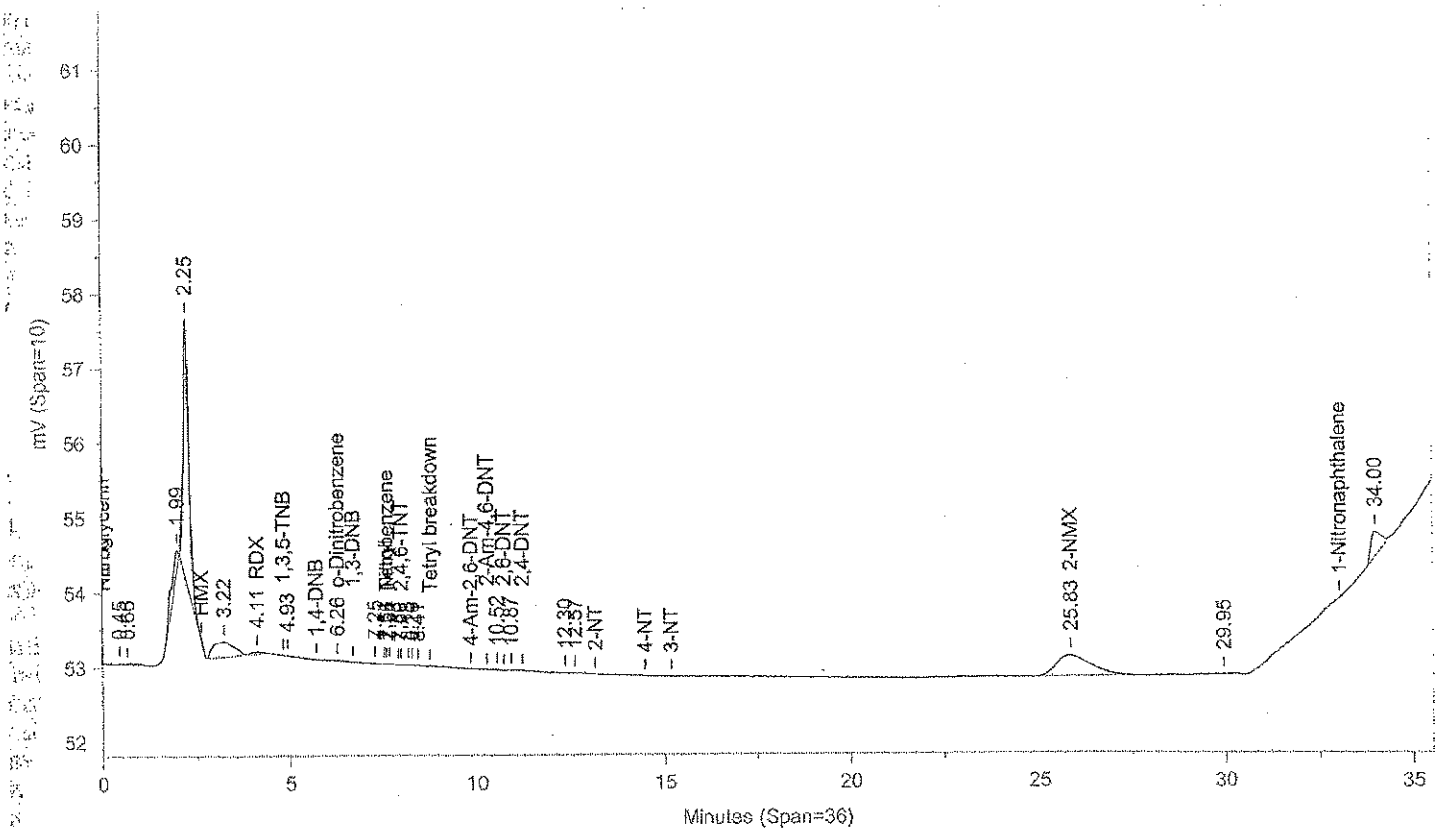
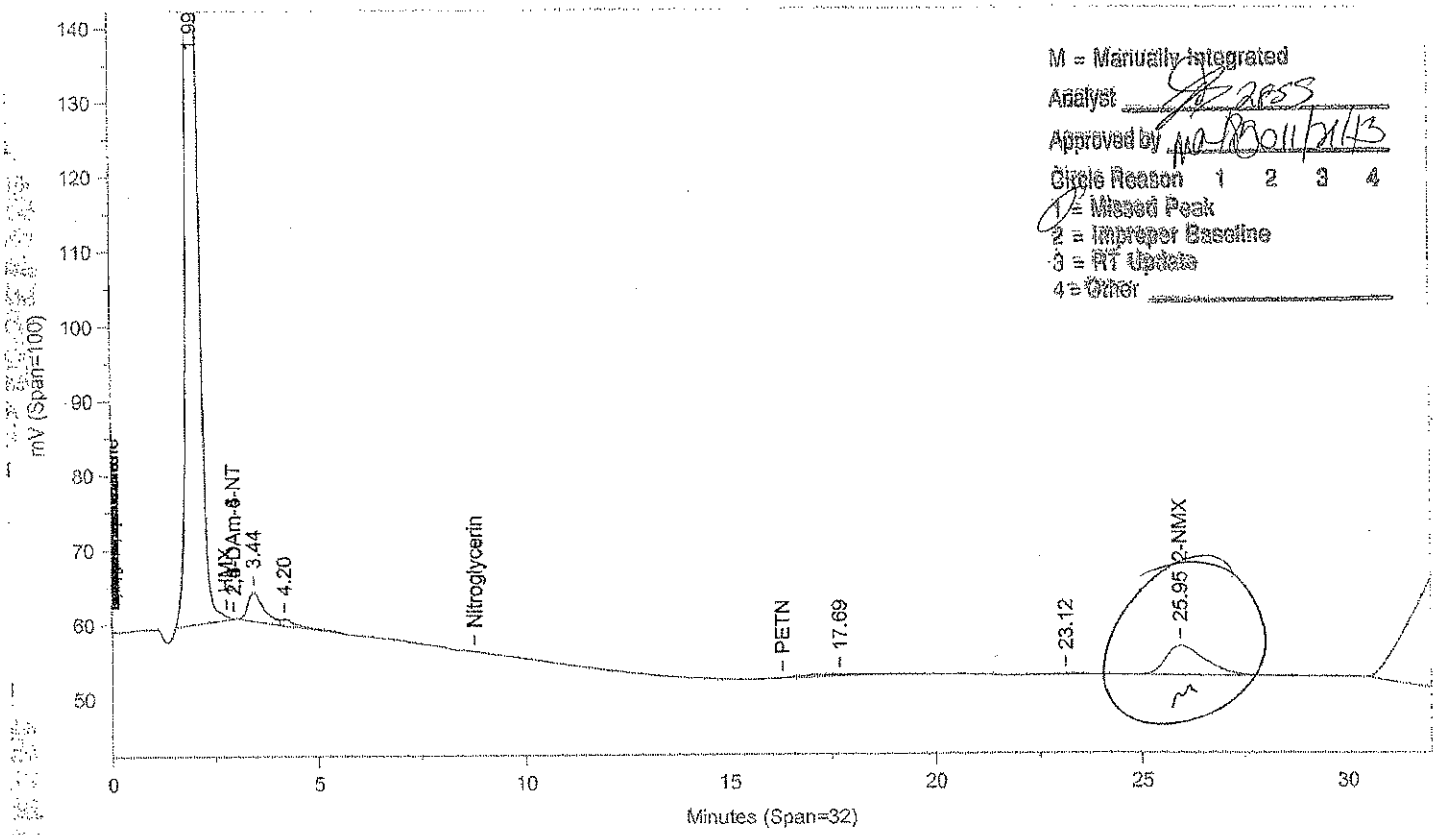
File: C:\CPWIN\DATA1\3E12310.37R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 11:20:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.37R



M = Manually Integrated
Analyst
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 11:20:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.11	795	-34.313	RDX	.	0	.	RDX
6.255	202	19.626	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.564	16	.452	Tetryl	.	0	.	Tetryl
7.959	4	.187	2,4,6-TNT	.	0	.	2,4,6-TNT
25.834	17770	5213.143	2-NMX	25.946	263326	5390.84	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:21:24 PM
File Reported On: 11/20/2013 at 11:21:23 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265227 R2043 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 23:20:21
Instrument : CP12--Y6329A
Result file : 3C12310.37R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 114% (63-150) Conc.: 5719.72265(

Analysis Report (B)

Injected on : NOV 13, 2013 23:20:21
Instrument : CP12--Y6329B
Result file : 3C12310B.37R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NT	24.21	24.45	24.73	905	0.003183
2-NMX	34.15	34.31	34.35	18111	5719.722656

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report Confirmation
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5719.722656					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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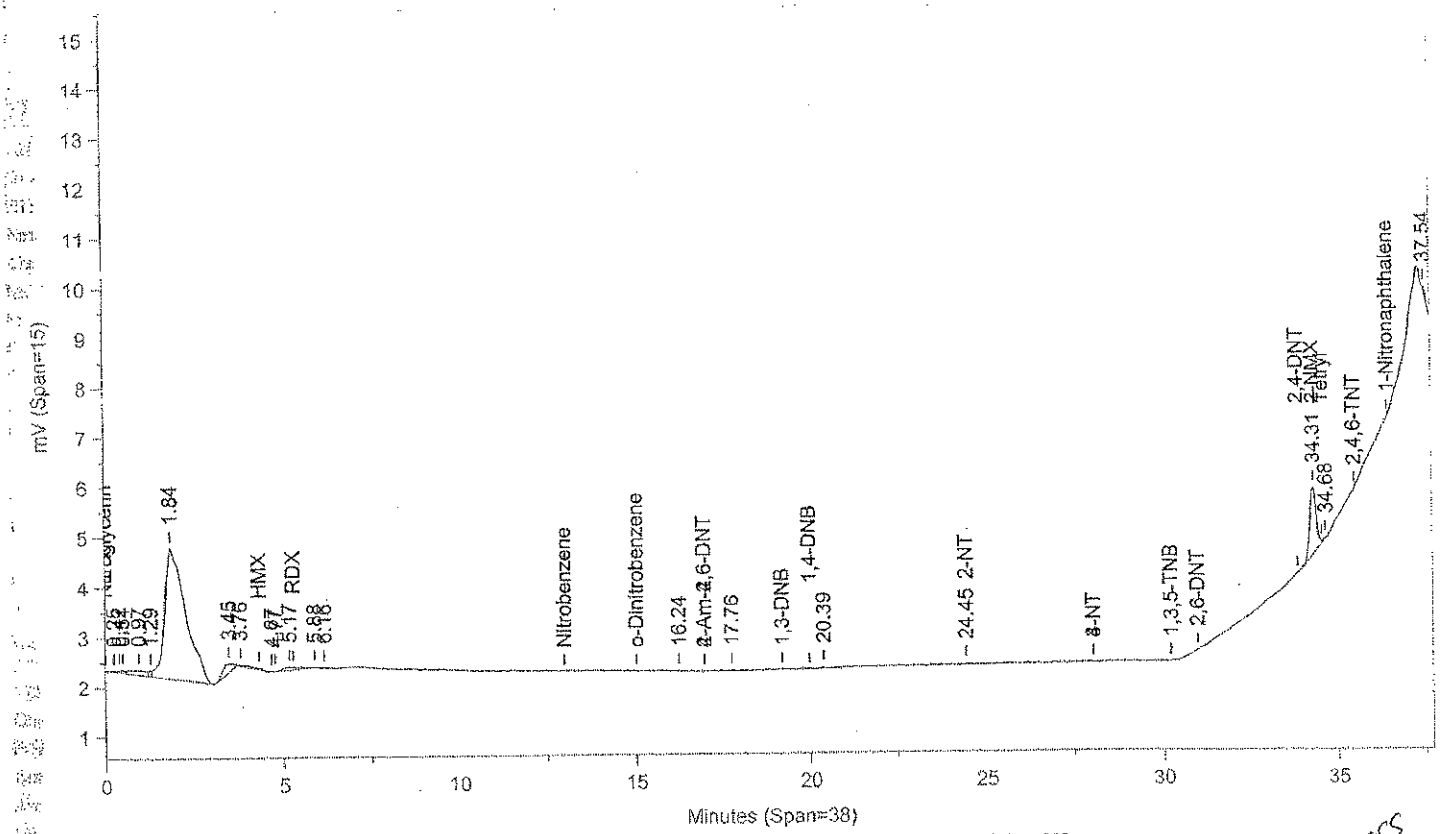
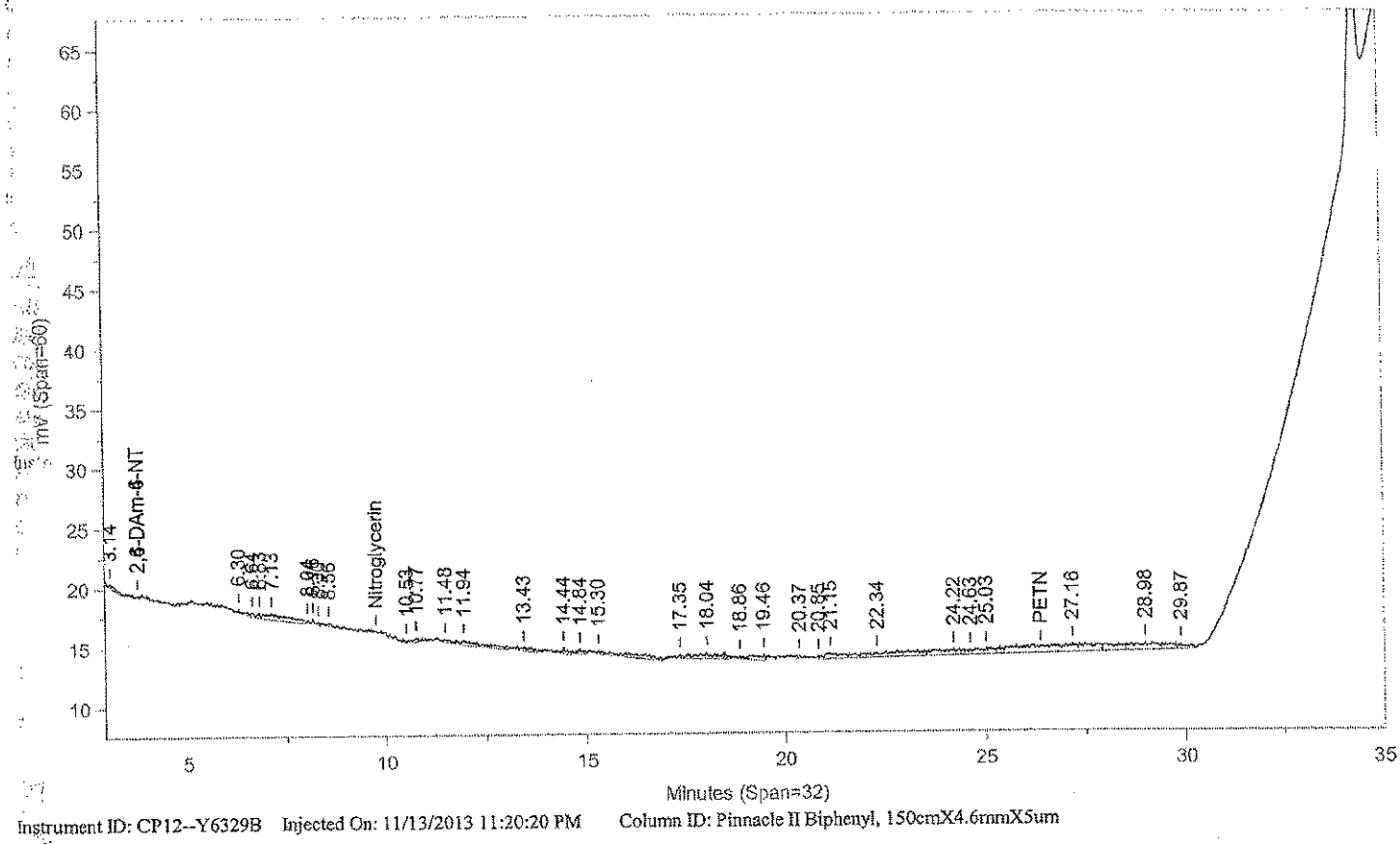
File: C:\CPWIN\DATA1\3C12310.37R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 11:20:20 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.37R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 11:20:20 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
24.446	905	.003	2-NT		0		2-NT
34.311	18111	5719.723	2-NMX		0		2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.37A
Area File: C:\CPWIN\DATA1\3C12310B.37A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:00:28 AM
File Reported On: 11/14/2013 at 12:00:38 AM

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Data Summary

Sample Name: 7265228 R2M61 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 13:16:50
Instrument	X6329A
Result file	4E12310.64R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 99% (73 - 122) Conc: 9.90926

Analysis Report (B)

Injected on	Nov 17, 2013 13:16:50
Instrument	Y6329A
Result file	4C12310.64R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 111% (73 - 122) Conc: 11.129344

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
2-NMX	25.41	25.73	26.09	16889	9.90926	2-NMX	34.12	34.23	34.32	17570	11.129344

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.90926				11.60	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Verified by: Valerie L. Tornayko, Technical Specialist

Date: NOV 21 2013 Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265228 R2M61 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 13:16:50
Instrument : CP12--X6329A
Result file : 4E12310.64R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 99% (73-122) Conc.: 9.90926

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.41	25.73	26.09	16889	9.909260

Analysis Report (B)

Injected on : NOV 17, 2013 13:16:50
Instrument : CP12--X6329B
Result file : 4E12310B.64R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 109% (73-122) Conc.: 10.908348

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.94	26.24	266419	10.908348

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.909260				9.60	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:21:25

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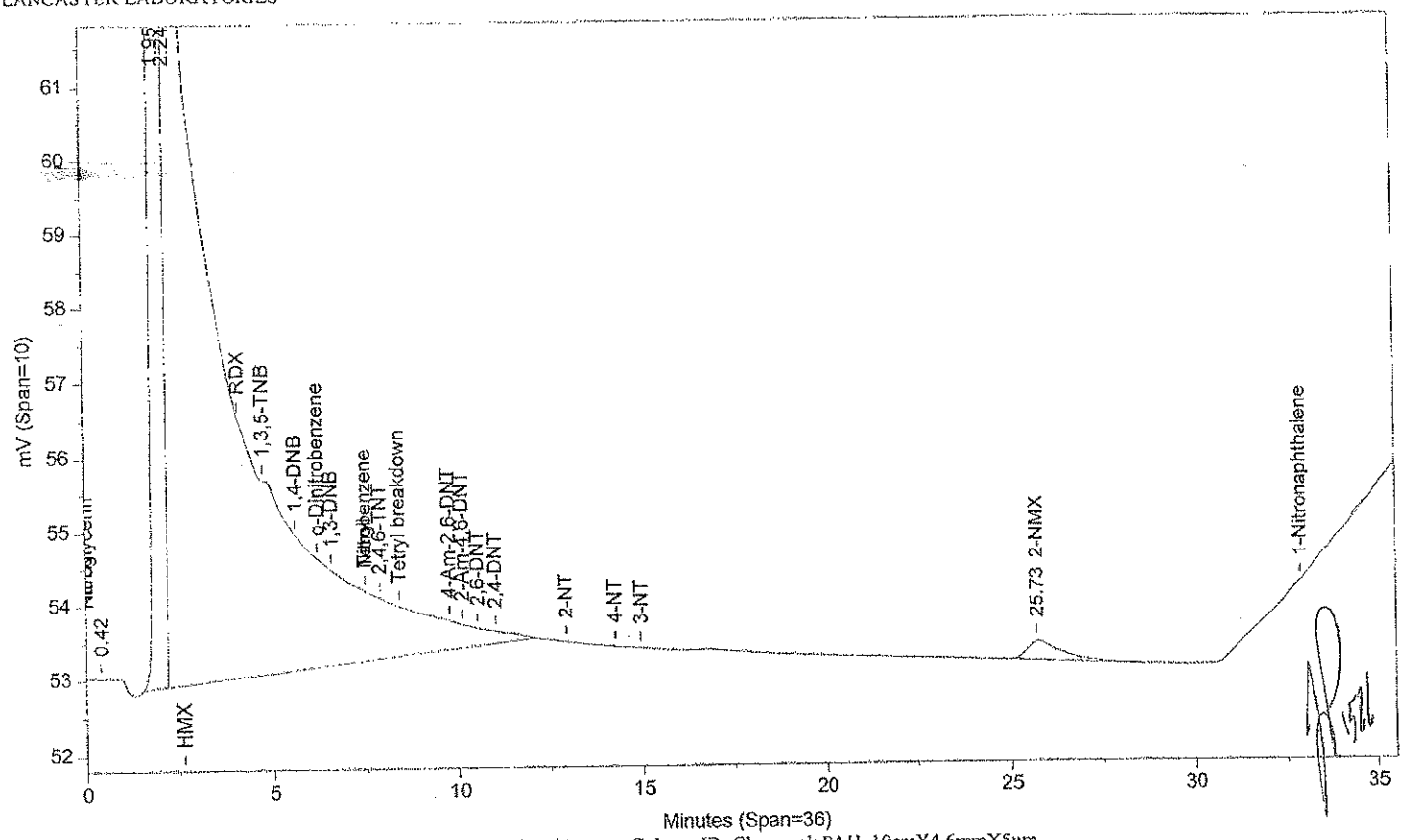
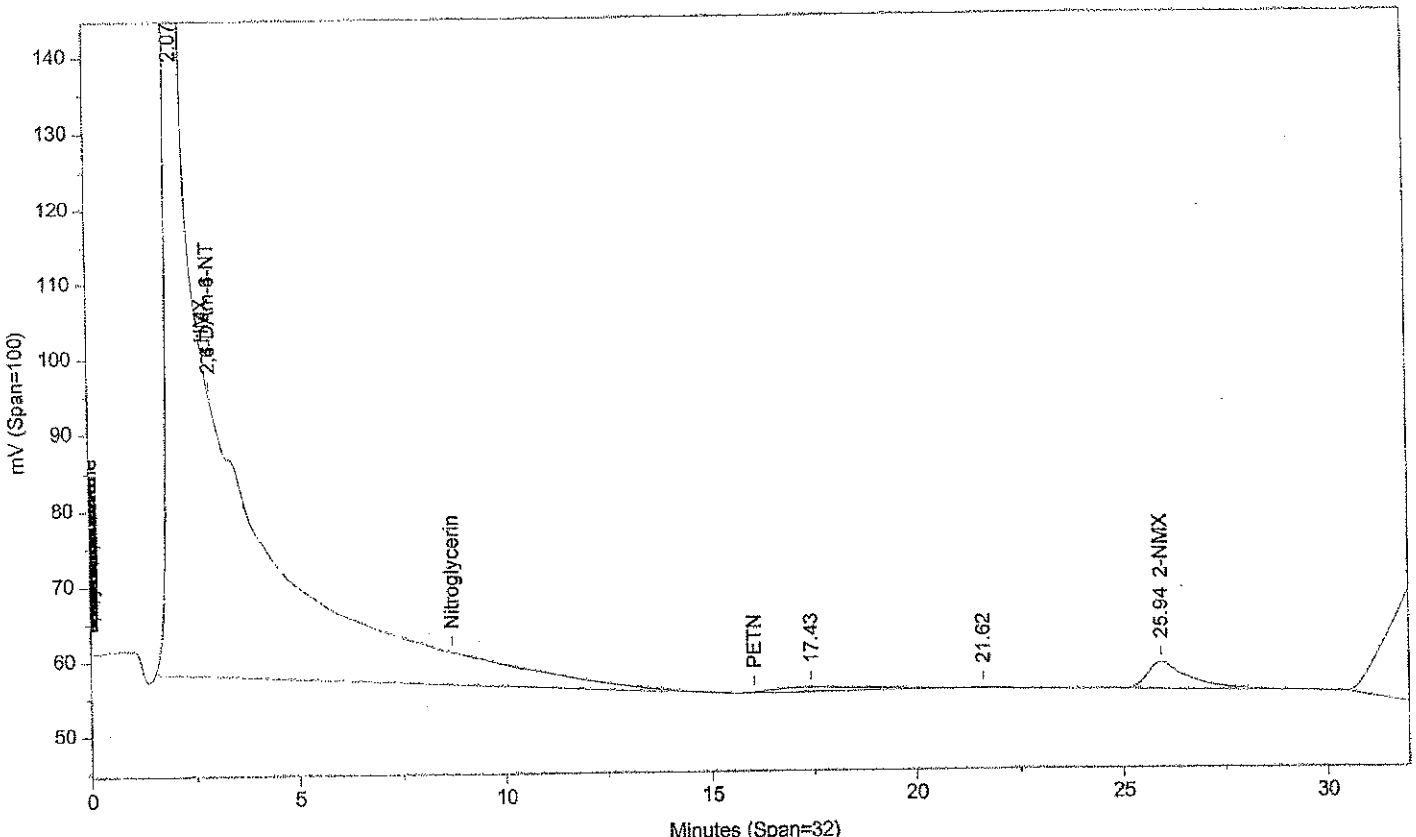
File: C:\CPWIN\DATA1\4E12310.64R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 1:16:49 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.64R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 1:16:49 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
25.733	16889	9.909	2-NMX	25.938	266419	10.908	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.64A
Area File: C:\CPWIN\DATA1\4E12310B.64A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:03:54 PM
File Reported On: 11/17/2013 at 10:04:04 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265228 R2M61 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 13:16:50
Instrument : CP12--Y6329A
Result file : 4C12310.64R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 111% (73-122) Conc.: 11.129344

Analysis Report (B)

Injected on : NOV 17, 2013 13:16:50
Instrument : CP12--Y6329B
Result file : 4C12310B.64R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.12	34.23	34.32	17570	11.129344

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.129344					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Principal Chemist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:32:32

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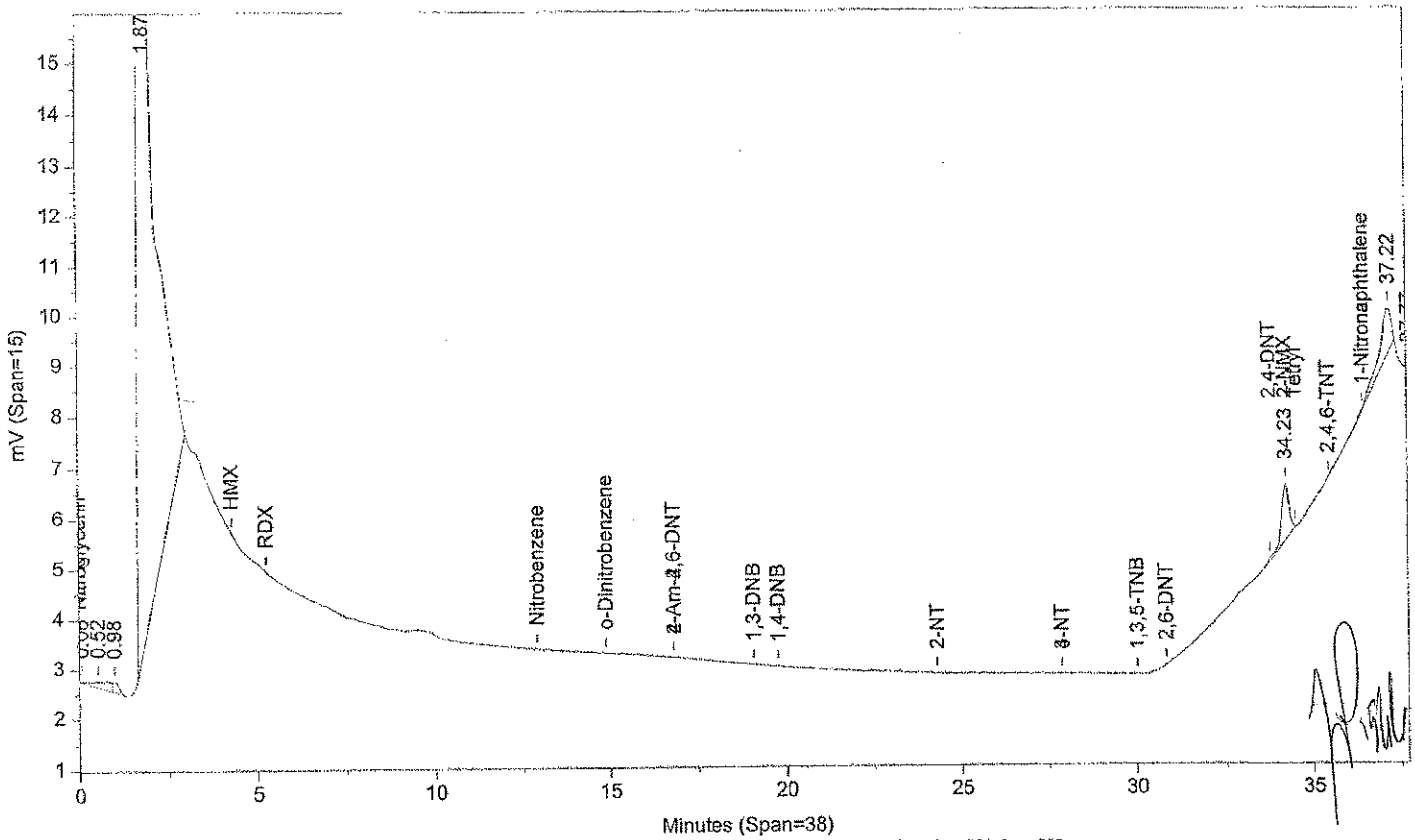
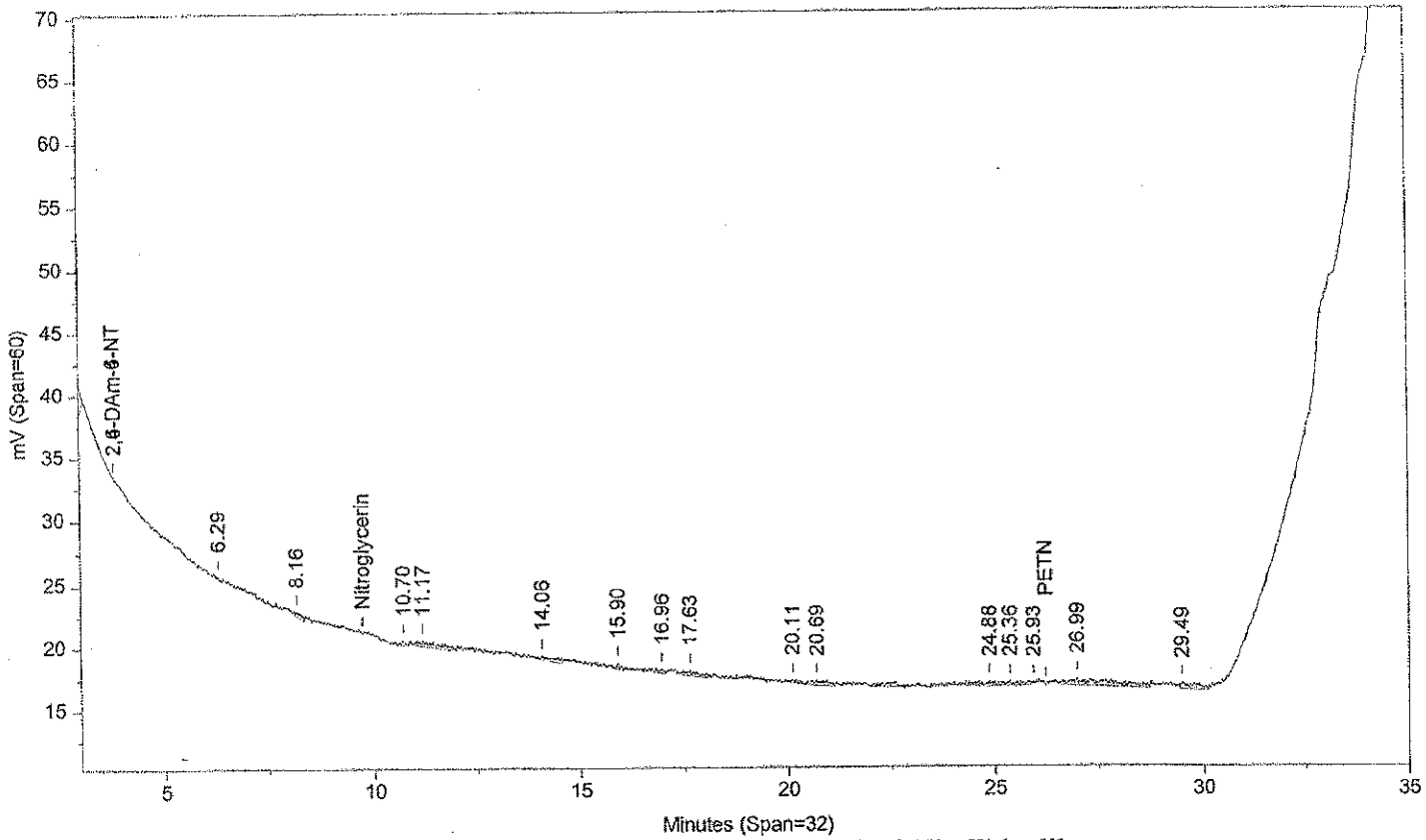
File: C:\CPWIN\DATA1\4C12310.64R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 1:16:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.64R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 1:16:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.235	17570	11.129	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.64A
Area File: C:\CPWIN\DATA1\4C12310B.64A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:18:00 PM
File Reported On: 11/17/2013 at 10:18:11 PM

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Data Summary

Sample Name: 7265229 R2M71 Sample ID: AA **Batchnumber:** 133140020A

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 19, 2013 19:13:13
Instrument	X6329A
Result file	5E12310.36R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 82% (63 - 150) Conc: 4112.802246

Analysis Report (B)

Injected on	Nov 19, 2013 19:13:13
Instrument	Y6329A
Result file	5C12310.36R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 107% (63 - 150) Conc: 5331.148438

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.90	5.02	5.10	43	2.03923
Nitrobenzene	7.71	7.95	7.99	55	1.593203
2,4,6-Trinitrotoluene	8.19	8.28	8.39	34	1.492785
2-Amino-4,6-dinitrotoluer	10.51	10.67	10.80	19	0.847304
2,4-Dinitrotoluene	11.45	11.59	11.74	112	3.377106
2-NMX	26.91	27.11	27.59	14019	4112.802246

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.23	4.33	280	26.665699
2-Amino-4,6-dinitrotoluer	16.61	16.90	16.93	474	12.260889
2-NMX	34.05	34.15	34.25	16754	5331.148438

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	4112.802246				25.80	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265229 R2M71 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 19:13:13
Instrument : CP12--X6329A
Result file : 5E12310.36R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 82% (63-150) Conc.: 4112.80224(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.39	4.40	257	-95.760574
1,3,5-TNB	4.90	5.02	5.10	43	2.039230
Nitrobenzene	7.71	7.95	7.99	55	1.593203
2,4,6-TNT	8.19	8.28	8.39	34	1.492785
2-Am-4,6-DNT	10.51	10.67	10.80	19	0.847304
2,4-DNT	11.45	11.59	11.74	112	3.377106
2-NMX	26.91	27.11	27.59	14019	4112.802246

Analysis Report (B)

Injected on : NOV 19, 2013 19:13:13
Instrument : CP12--X6329B
Result file : 5E12310B.36R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 95% (63-150) Conc.: 4750.36230(

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.30	27.76	232040	4750.362305

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4112.802246				14.39	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Hemingway, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:47:11

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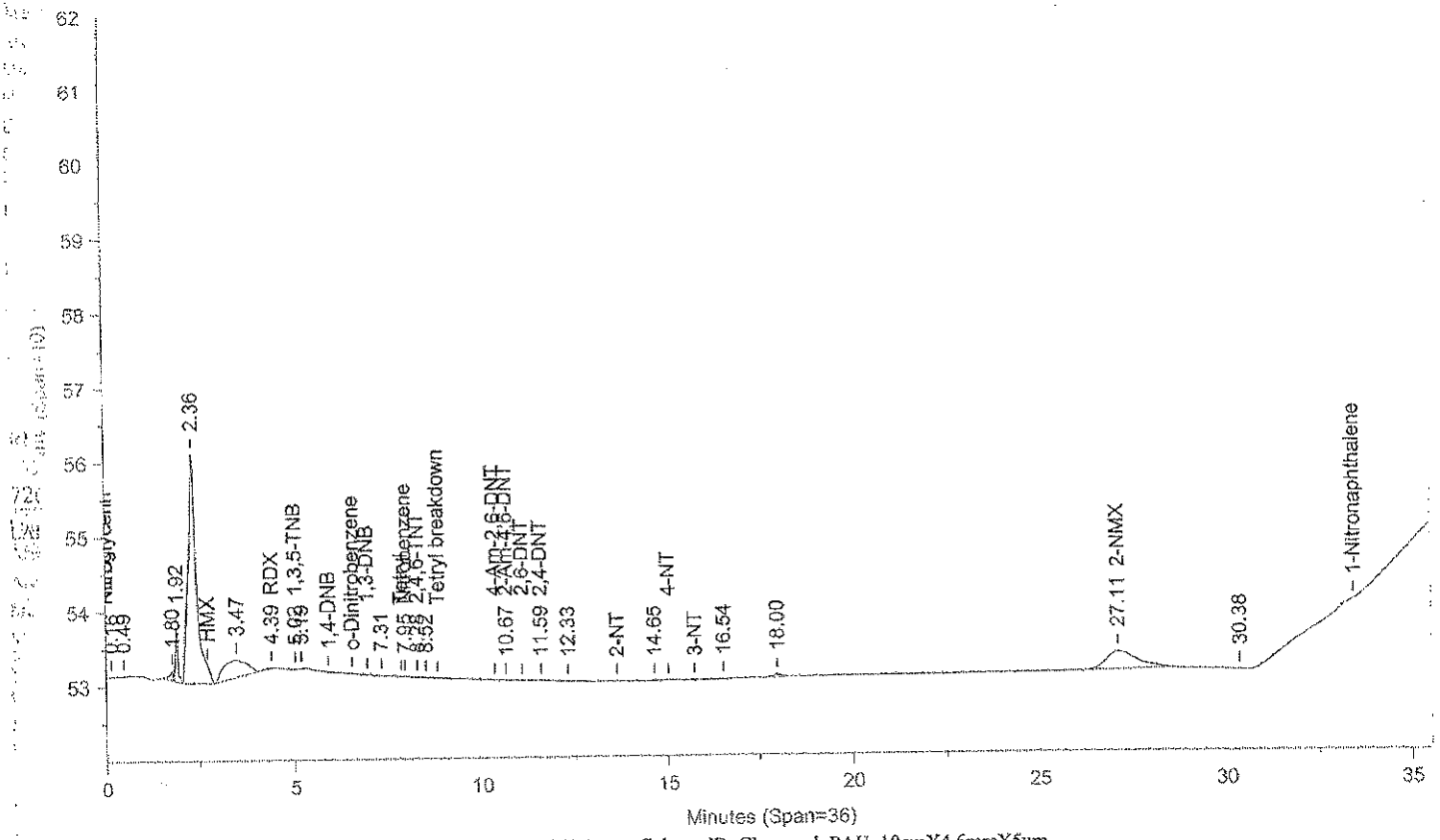
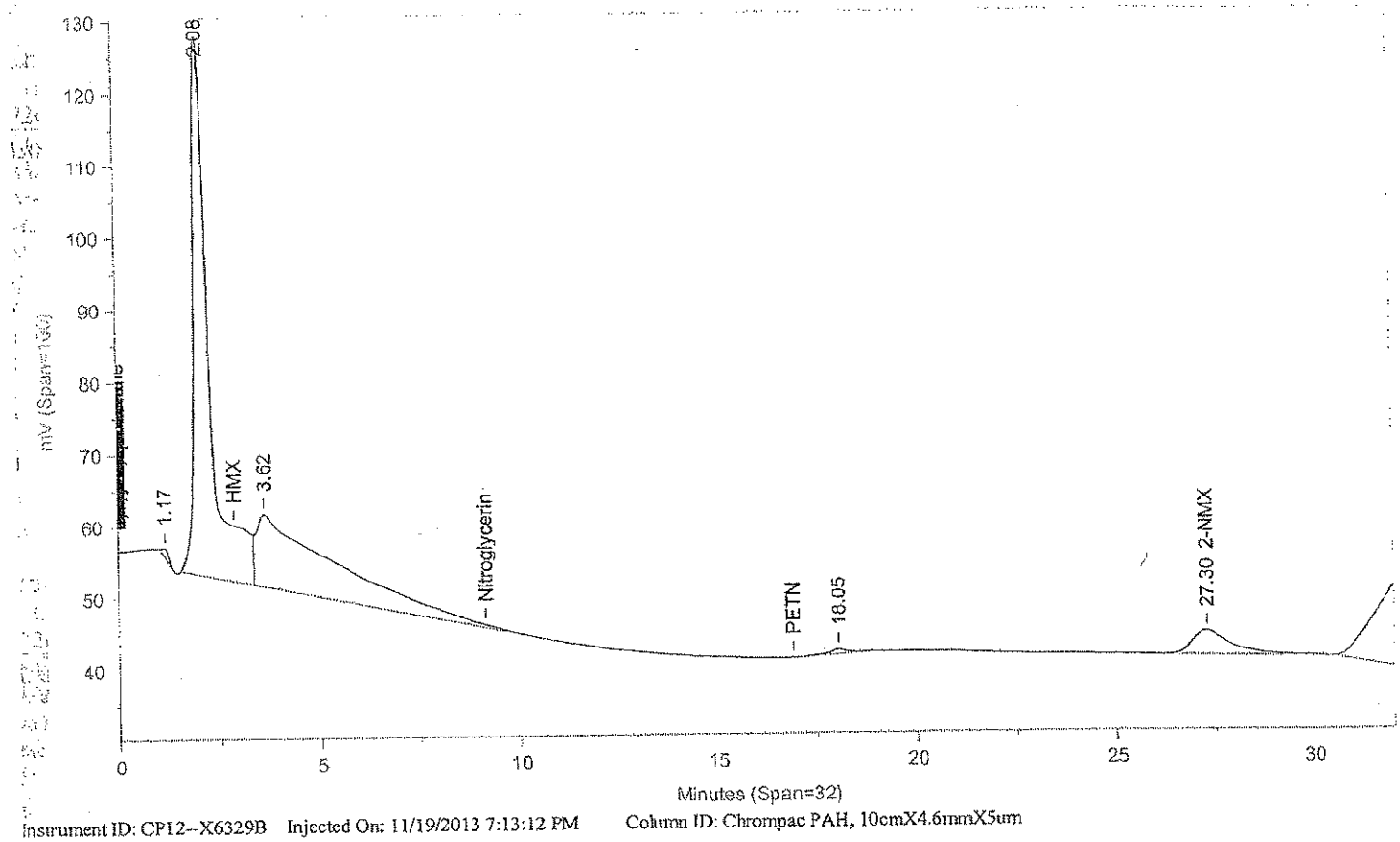


Instrument ID: CP12--X6329A Injected On: 11/19/2013 7:13:12 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\SE12310B.36R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 7:13:12 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.388	257	-95.761	RDX		0		RDX
5.022	43	2.039	1,3,5-TNB		0		1,3,5-TNB
7.951	55	1.593	Nitrobenzene		0		Nitrobenzene
8.276	34	1.493	2,4,6-TNT		0		2,4,6-TNT
10.665	19	.847	2-Am-4,6-DNT		0		2-Am-4,6-DNT
11.59	112	3.377	2,4-DNT		0		2,4-DNT
27.106	14019	4112.802	2-NMX	27.298	232040	4750.362	2-NMX

Files:
Area File: C:\CPWIN\DATA1\SE12310.36A
Area File: C:\CPWIN\DATA1\SE12310B.36A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:50:48 PM
File Reported On: 11/20/2013 at 4:50:59 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265229 R2M71 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 19:13:13
Instrument : CP12--Y6329A
Result file : 5C12310.36R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5331.14843

Analysis Report (B)

Injected on : NOV 19, 2013 19:13:13
Instrument : CP12--Y6329B
Result file : 5C12310B.36R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.23	4.33	280	26.665699
RDX	5.08	5.10	5.28	1528	-99.484634
2-Am-4,6-DNT	16.61	16.90	16.93	474	12.260889
2-NMX	34.05	34.15	34.25	16754	5331.148438

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5331.148438					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 24 2013

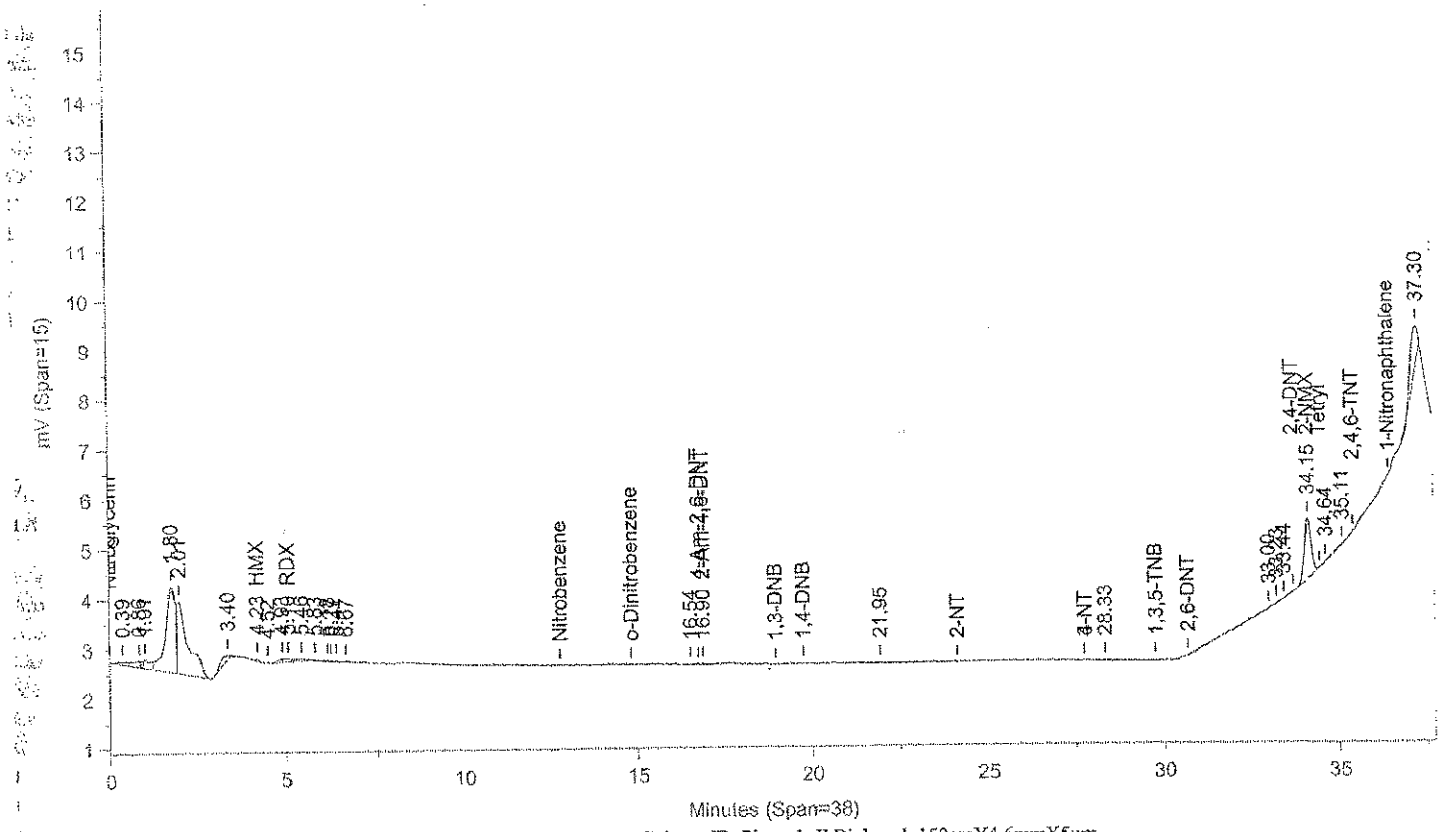
Verified by: _____
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

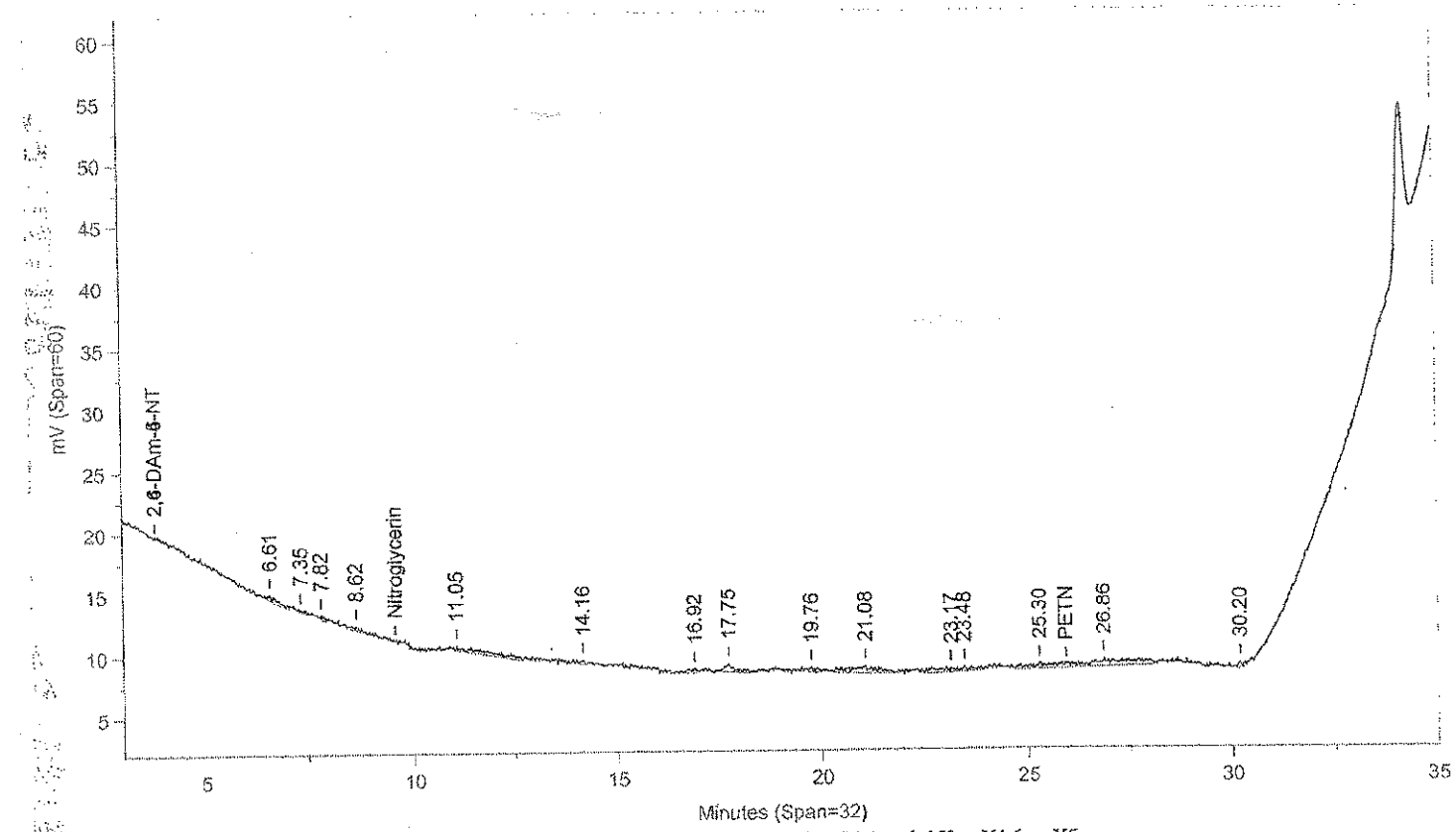
Printed on: 11/22/2013 13:36:26

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.36R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 7:13:12 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.36R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 7:13:12 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5tVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.228	280	26.666	HMX			0	HMX
5.097	1528	-99.485	RDX			0	RDX
16.899	474	12.261	2-Am-4,6-DNT			0	2-Am-4,6-DNT
34.148	16754	5331.148	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.36A
Area File: C:\CPWIN\DATA1\5C12310B.36A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:45:16 PM
File Reported On: 11/20/2013 at 5:45:25 PM

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Data Summary

Sample Name: 7265230 R2163 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 13:59:19
Instrument	X6329A
Result file	4E12310.65R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 94% (73 - 122) Conc: 9.448207

Analysis Report (B)

Injected on	Nov 17, 2013 13:59:19
Instrument	Y6329A
Result file	4C12310.65R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 114% (73 - 122) Conc: 11.439754

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.84	7.98	14	0.001233
4-Amino-2,6-dinitrotoluer	9.69	9.63	9.97	3589	0.765025
2-NMX	25.41	25.57	26.09	16103	9.448207

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.66	16.94	16.98	15133	0.784114
2-NMX	34.12	34.29	34.32	18111	11.439754

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene	A	0.765025	0.6	0.3		2.46	
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.448207				19.07	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylo, Principal Specialist

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265230 R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 13:59:19
Instrument : CP12--X6329A
Result file : 4E12310.65R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 94% (73-122) Conc.: 9.448207

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.84	7.98	14	0.001233
4-Am-2,6-DNT	9.63	9.63	9.91	3589	0.765025
2-NMX	25.41	25.57	26.09	16103	9.448207

Analysis Report (B)

Injected on : NOV 17, 2013 13:59:19
Instrument : CP12--X6329B
Result file : 4E12310B.65R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 98% (73-122) Conc.: 9.838861

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.71	26.24	240299	9.838861

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	0.765025	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.448207				4.05	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

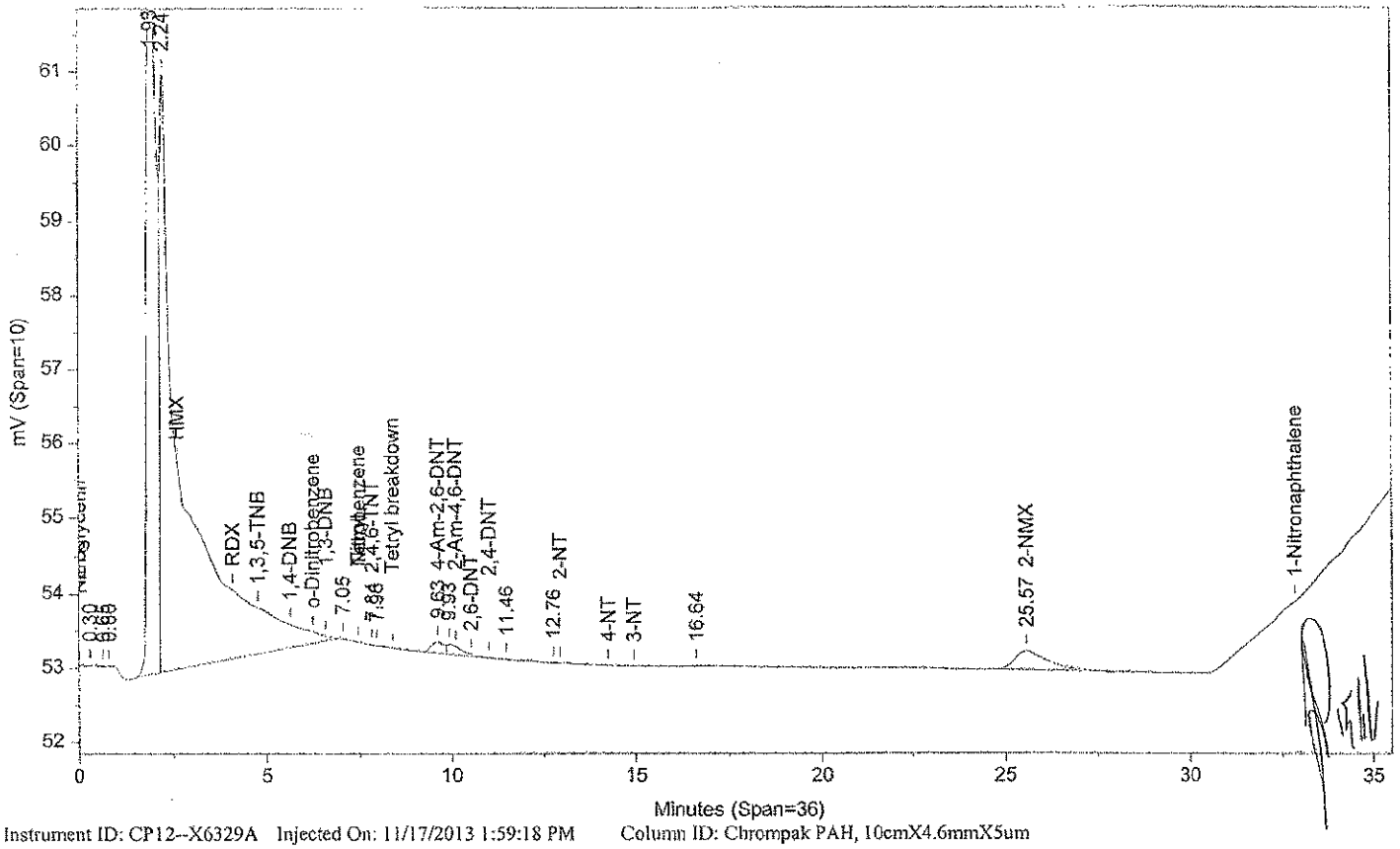
Verified by: Valerie L. Trimpey, Chemical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

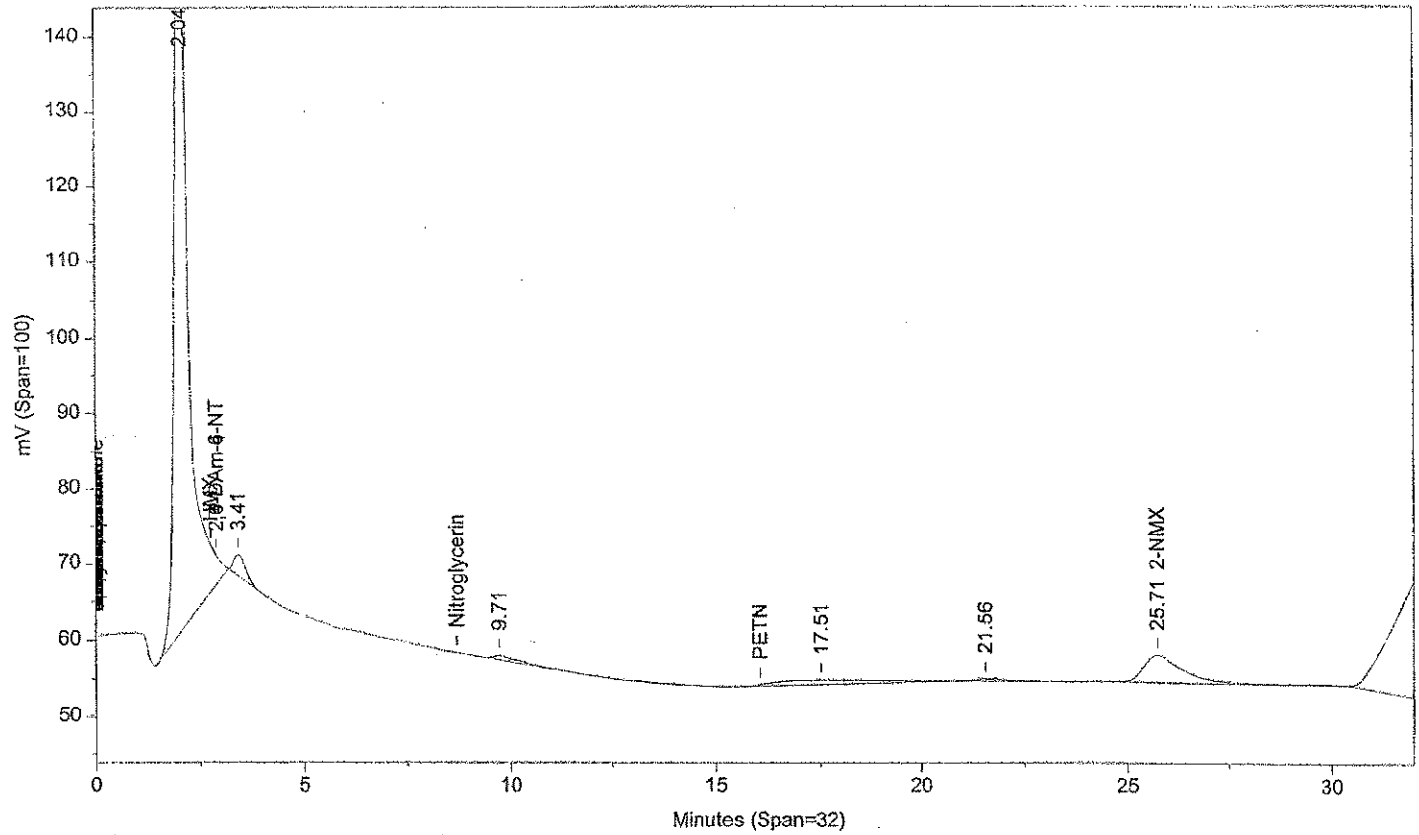
Printed on: 11/20/2013 13:21:36

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.65R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 1:59:18 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.65R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 1:59:18 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.838	14	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
9.634	3589	.765	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
25.572	16103	9.448	2-NMX	25.712	240299	9.839	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.65A
Area File: C:\CPWIN\DATA1\4E12310B.65A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:04:16 PM
File Reported On: 11/17/2013 at 10:04:27 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265230 R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 13:59:19
Instrument : CP12--Y6329A
Result file : 4C12310.65R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 114% (73-122) Conc.: 11.439754

Analysis Report (B)

Injected on : NOV 17, 2013 13:59:19
Instrument : CP12--Y6329B
Result file : 4C12310B.65R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.66	16.94	16.98	15133	0.784114
2-NMX	34.12	34.29	34.32	18111	11.439754

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT	A	0.784114	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.439754					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

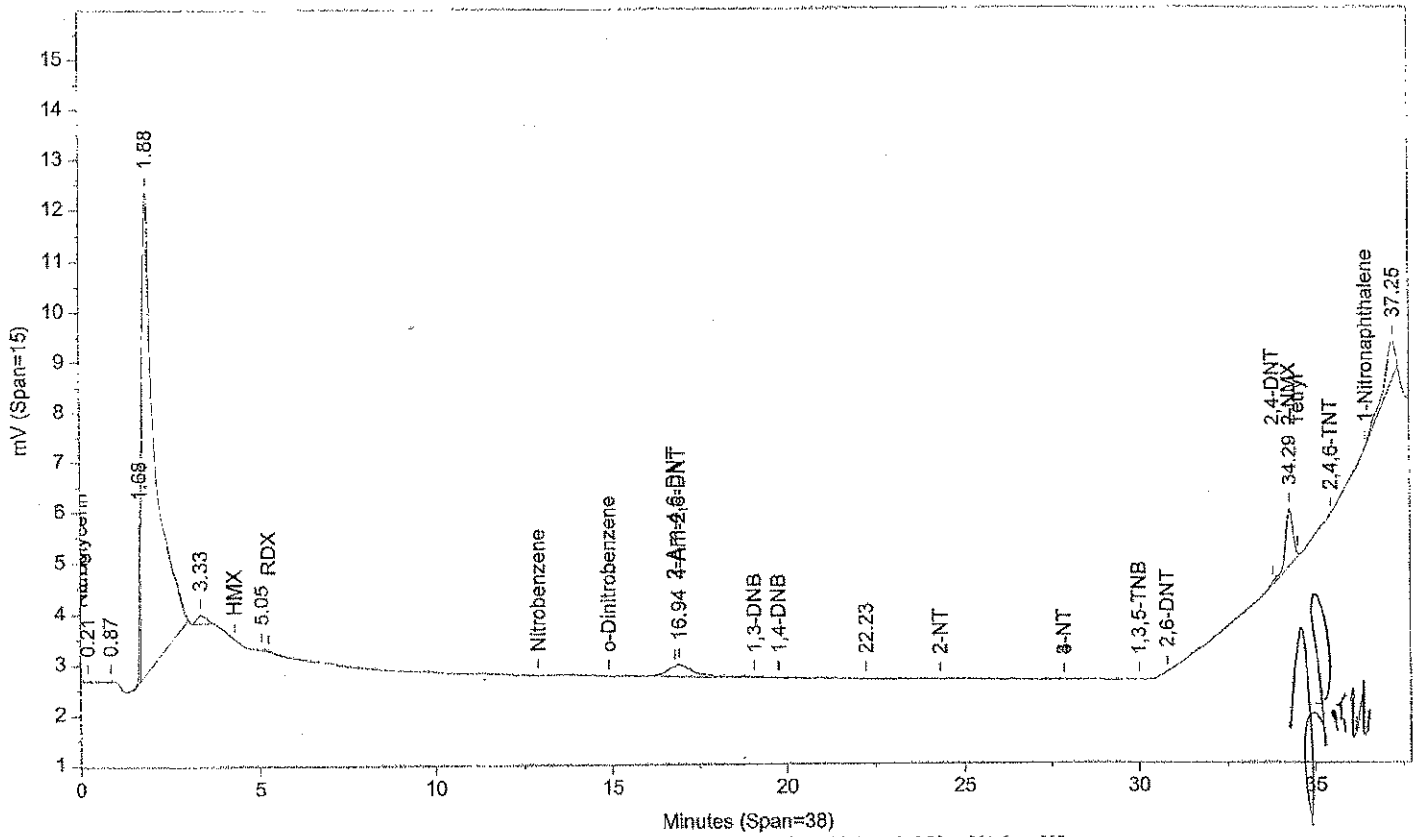
Verified by:
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

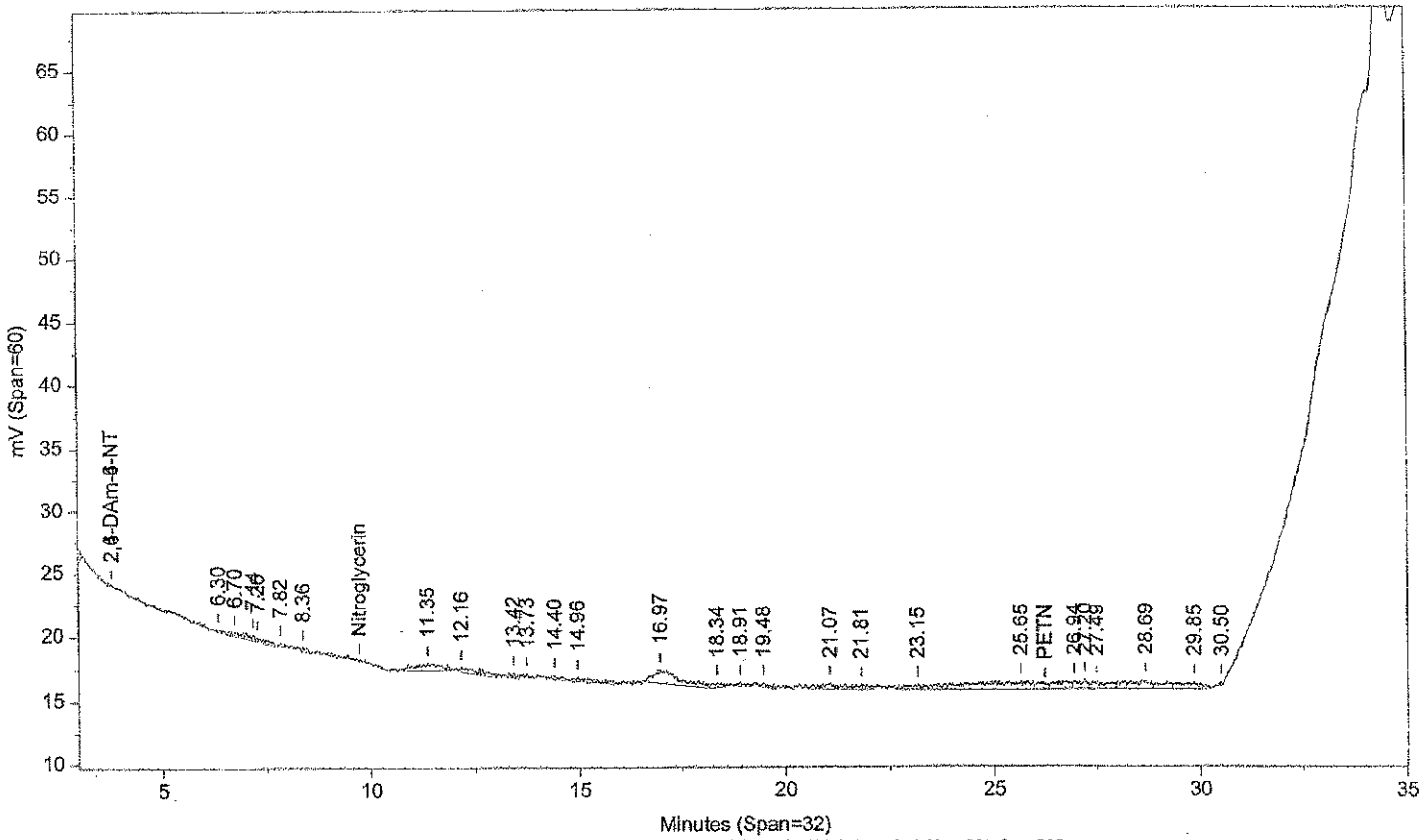
Printed on: 11/20/2013 15:32:44

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.65R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 1:59:18 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.65R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 1:59:18 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
16.938	15133	.784	4-Am-2,6-DNT	-	0	.	4-Am-2,6-DNT
34.286	18111	11.44	2-NMX	-	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.65A
Area File: C:\CPWIN\DATA1\4C12310B.65A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:18:24 PM
File Reported On: 11/17/2013 at 10:18:34 PM

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Data Summary

Sample Name: 7265234 R2E16 Sample ID: AA **Batchnumber:** 133110004A

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 14, 2013 00:02:48
Instrument	X6329A
Result file	3E12310.38R
Calibration file	2E12310
Method file	8330

%SSR(NMX) 101% (63 - 150) Conc: 5042.871582

Analysis Report (B)

Injected on	Nov 14, 2013 00:02:48
Instrument	Y6329A
Result file	3C12310.38R
Calibration file	2C12310
Method file	8330C

%SSR(NMX) 112% (63 - 150) Conc: 5580.521484

Single Component Data

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	7.43	7.70	7.71	11	0.312119
2,4-Dinitrotoluene	11.03	11.06	11.31	41	1.237917
2-NMX	25.80	25.99	26.48	17190	5042.871582

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.30	34.35	17625	5580.521484

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5042.871582				10.12	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Verified by: Melissa A. McDermott, Senior Chemist Group Leader

Date: NOV 21 2013 Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265234 R2E16 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 00:02:48
Instrument : CP12--X6329A
Result file : 3E12310.38R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 101% (63-150) Conc.: 5042.87158

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.22	4.24	1033	-7.138395
Nitrobenzene	7.43	7.70	7.71	11	0.312119
2,4-DNT	11.03	11.06	11.31	41	1.237917
2-NMX	25.80	25.99	26.48	17190	5042.871582

Analysis Report (B)

Injected on : NOV 14, 2013 00:02:48
Instrument : CP12--X6329B
Result file : 3E12310B.38R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 5254.35937

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.07	26.63	256659	5254.359375

$\left(\frac{1033}{87.623}\right)\left(\frac{20}{2}\right) = 117.891432$ 2nd L

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5042.871582				4.11	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

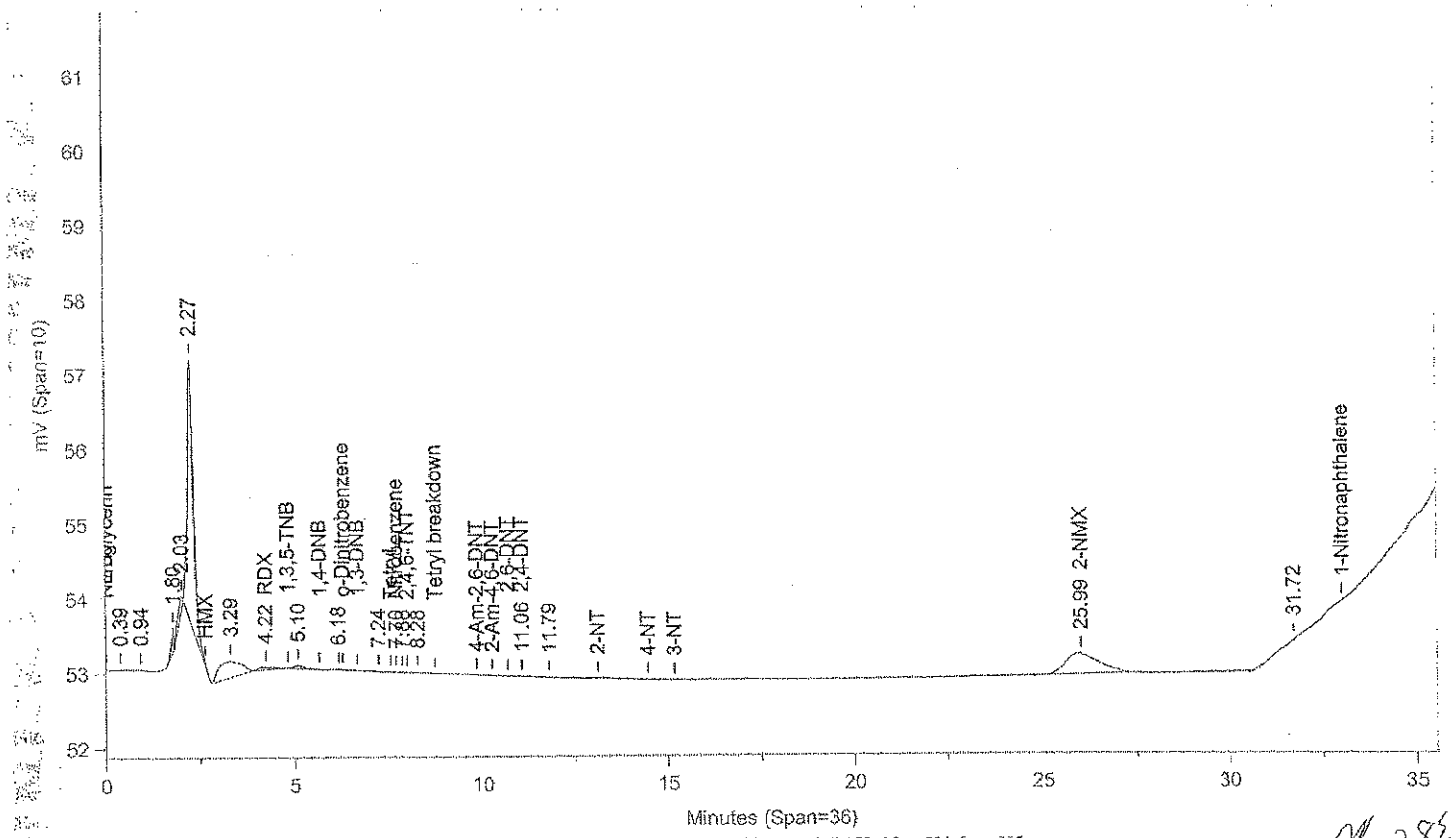
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:49:07

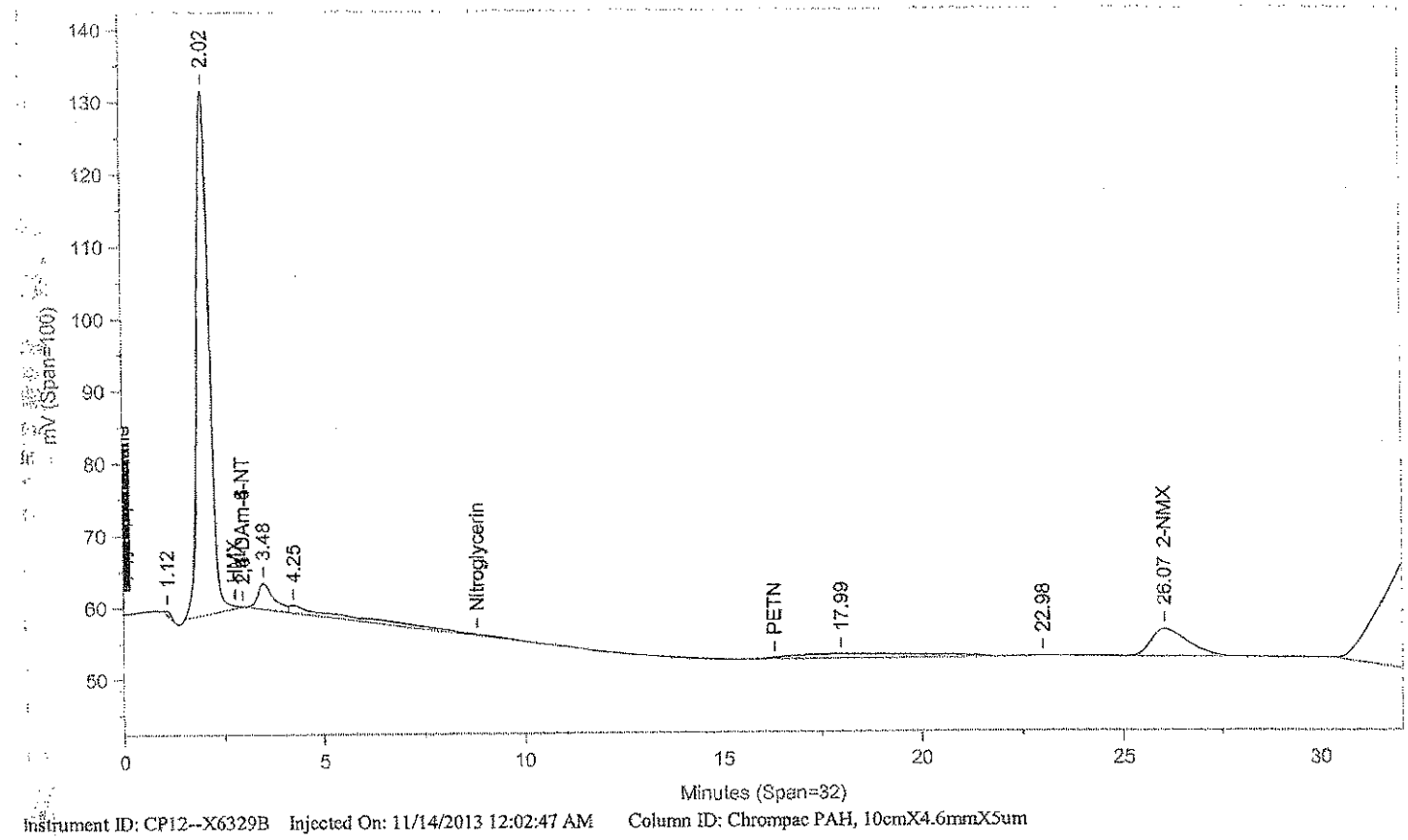
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.38R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 12:02:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

GF 2855

File: C:\CPWIN\DATA1\3E12310B.38R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 12:02:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.215	1033	-7.138	RDX	.	0	.	RDX
7.704	11	.312	Nitrobenzene	.	0	.	Nitrobenzene
11.061	41	1.238	2,4-DNT	.	0	.	2,4-DNT
25.989	17190	5042.872	2-NMX	26.067	256659	5254.359	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.38A
Area File: C:\CPWIN\DATA1\3E12310B.38A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:43:32 AM
File Reported On: 11/14/2013 at 12:43:44 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265234 R2E16 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 00:02:48
Instrument : CP12--Y6329A
Result file : 3C12310.38R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 112% (63-150) Conc.: 5580.521484

Analysis Report (B)

Injected on : NOV 14, 2013 00:02:48
Instrument : CP12--Y6329B
Result file : 3C12310B.38R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.20	5.38	1194	-129.227905
2-NMX	34.15	34.30	34.35	17625	5580.521484

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report 1
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5580.521484					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller Chemist
Date: NOV 20 2013

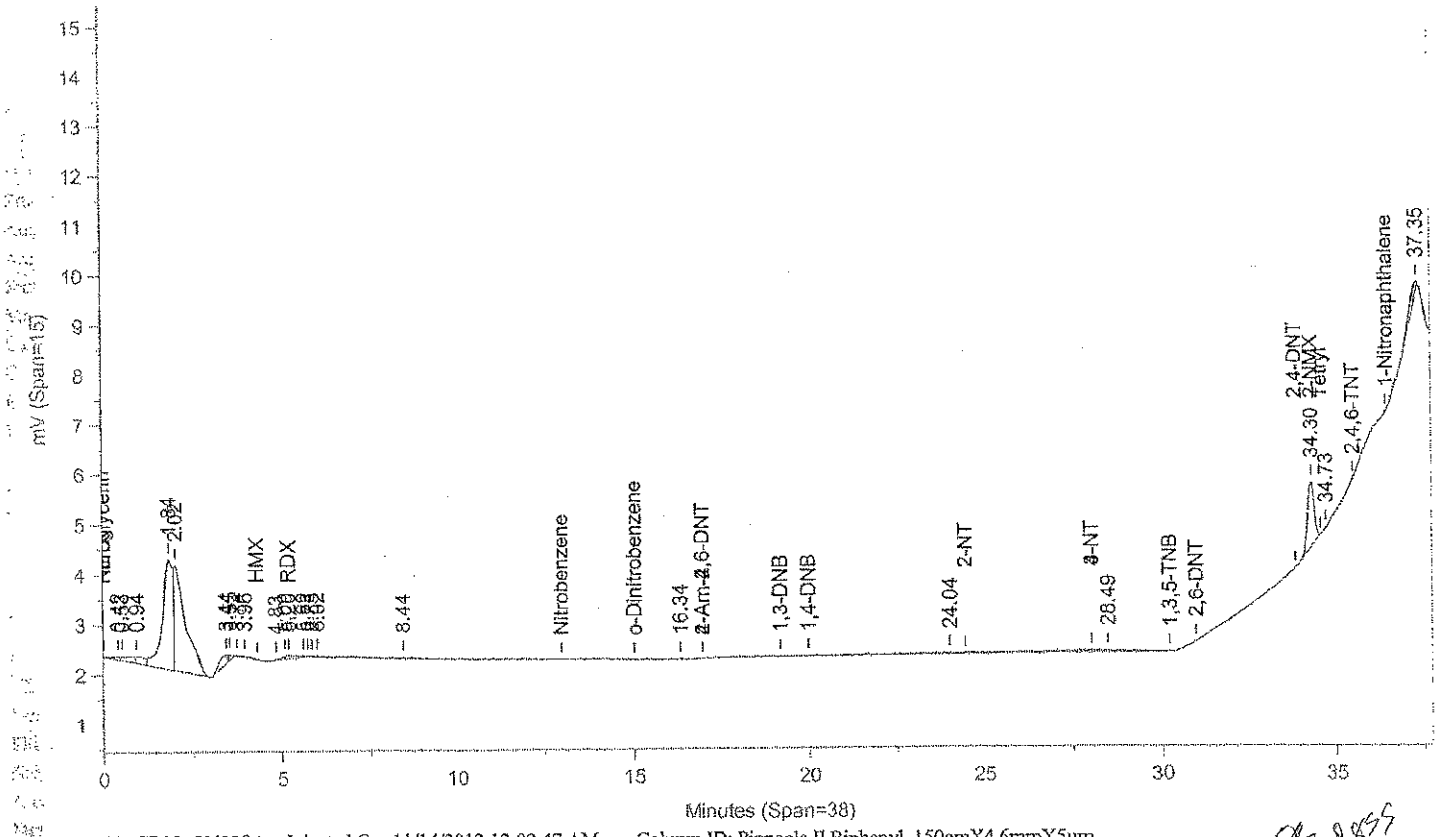
Verified by: Melissa A. McDermott Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

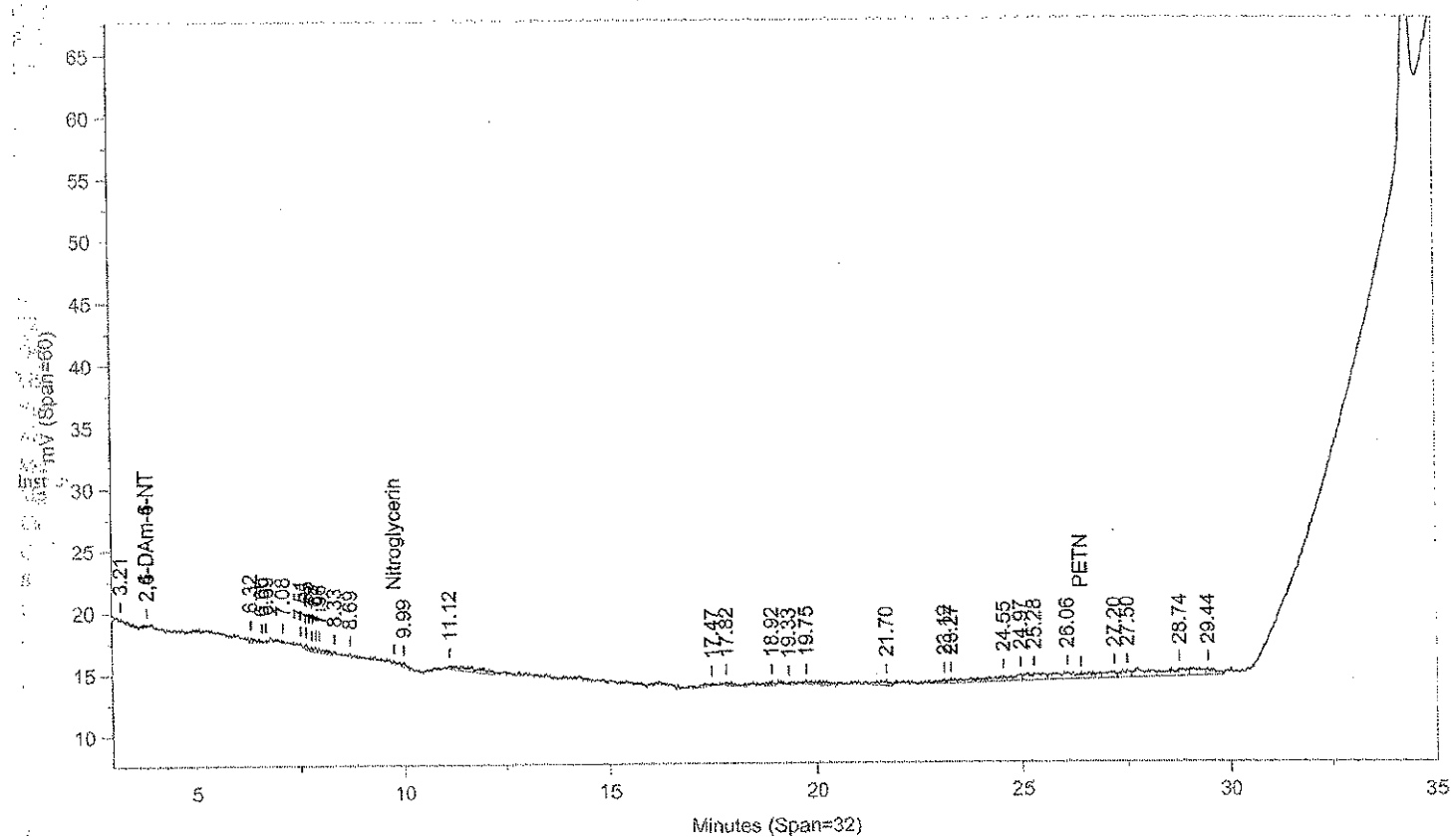
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.38R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 12:02:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.38R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 12:02:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.196	1194	-129.228	RDX			0	RDX
34.304	17625	5580.521	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.38A
Area File: C:\CPWIN\DATA1\3C12310B.38A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:42:56 AM
File Reported On: 11/14/2013 at 12:43:06 AM

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Data Summary

Sample Name: 7265235 E2161 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 16:06:43
Instrument	X6329A
Result file	4E12310.68R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 83% (73 - 122) Conc: 8.347718

Analysis Report (B)

Injected on	Nov 17, 2013 16:06:42
Instrument	Y6329A
Result file	4C12310.68R
Calibration file	3C12310
Method file	8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.56	7.61	48	0.00277
2,4,6-Trinitrotoluene	7.78	7.78	7.98	125	0.011013
4-Amino-2,6-dinitrotoluer	9.69	9.63	9.97	4243	0.904545
2-Amino-4,6-dinitrotoluer	9.97	9.99	10.25	3401	0.310526
2-NMX	25.41	25.69	26.09	14228	8.347718
1-Nitronaphthalene	32.62	32.89	33.11	453	0.068923

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.66	16.86	16.98	10350	0.536288
1,3,5-Trinitrobenzene	29.81	30.04	30.21	362	1.07998
2-NMX	34.12	34.26	34.32	17117	10.869793

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene	A	0.904545	0.6	0.3		51.12	
☑ 2-Amino-4,6-dinitrotoluene	A	0.310526	<0.6	0.2	J	53.32	
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.347718				26.25	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Verified by:

Date: NOV 21 2013 Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265235 E2161 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 16:06:43
Instrument : CP12--X6329A
Result file : 4E12310.68R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 83% (73-122) Conc.: 8.347718

Peak name	Min	R.T.	Max	Area	Amount
Tetryl	7.33	7.56	7.61	48	0.002770
2,4,6-TNT	7.78	7.78	7.98	125	0.011013
4-Am-2,6-DNT	9.63	9.63	9.91	4243	0.904545
2-Am-4,6-DNT	9.97	9.99	10.25	3401	0.310526
2-NMX	25.41	25.69	26.09	14228	8.347718
1-Nitronaphthalene	32.62	32.89	33.11	453	0.068923

Analysis Report (B)

Injected on : NOV 17, 2013 16:06:43
Instrument : CP12--X6329B
Result file : 4E12310B.68R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 97% (73-122) Conc.: 9.713078

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.82	26.24	237227	9.713078

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	0.904545	0.6	0.3			Confirmed
☑ 2-Am-4,6-DNT	A	0.310526	<0.6	0.2	J		
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.347718				15.12	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaydo, Chemical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:22:14

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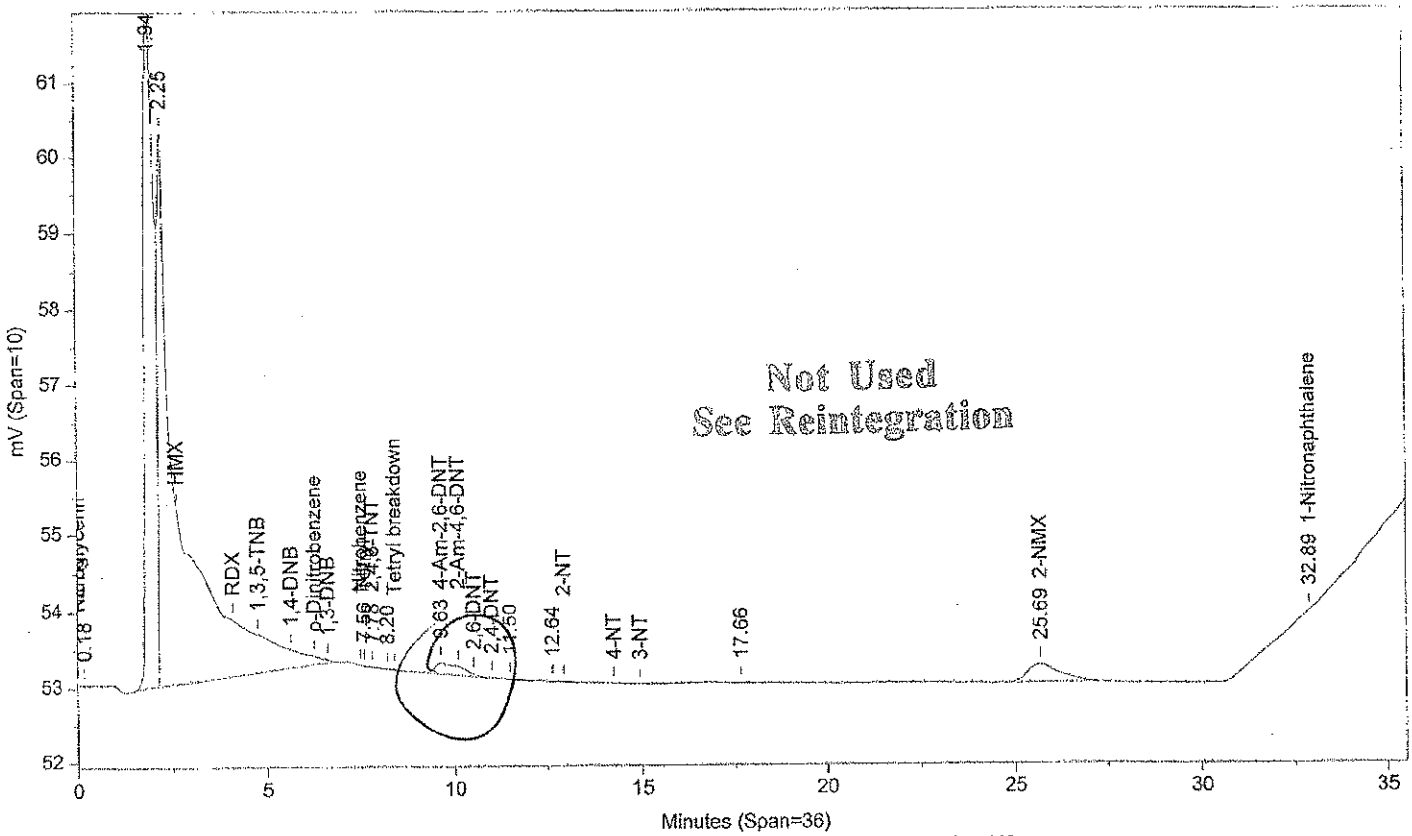
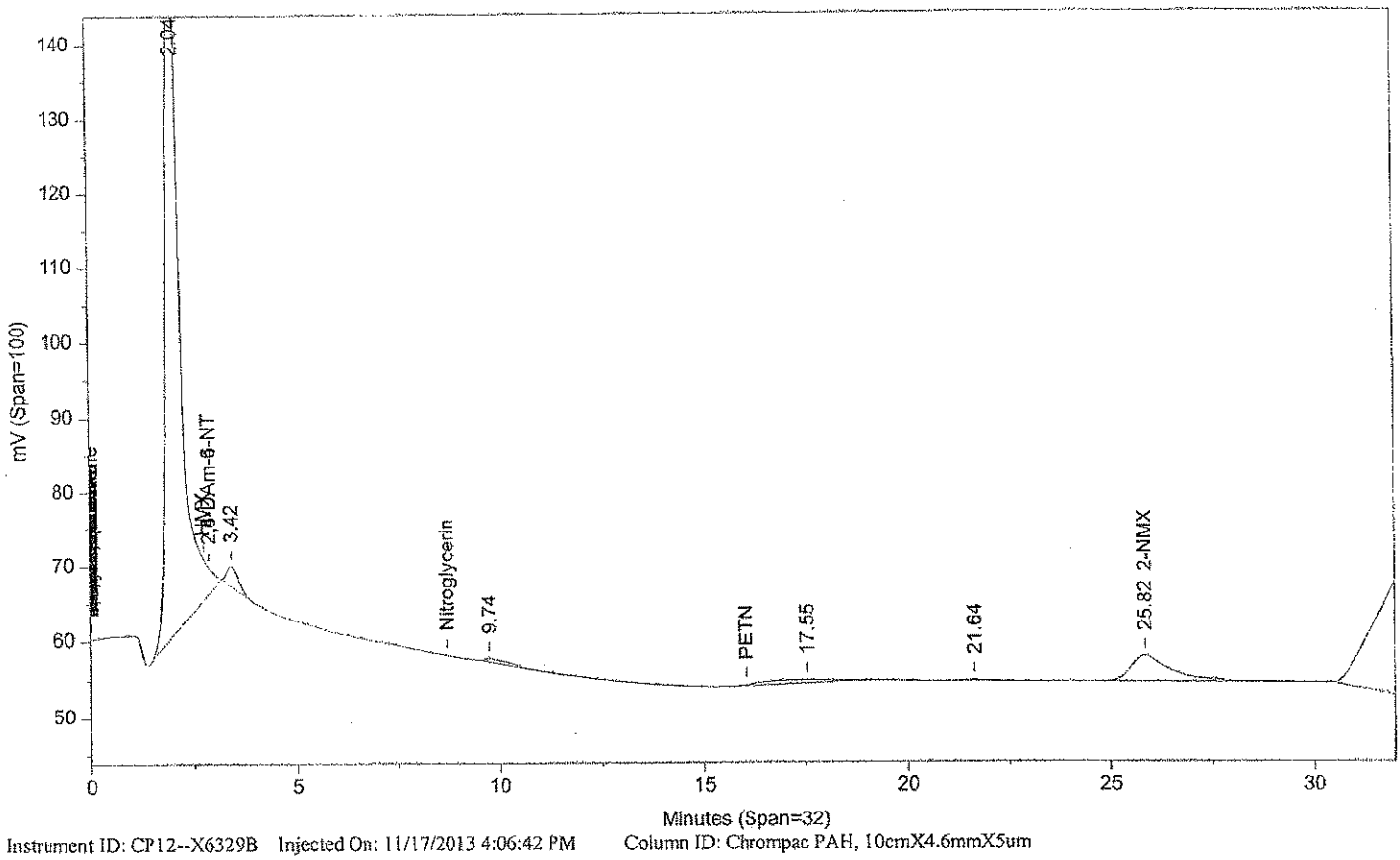


Instrument ID: CP12--X6329A Injected On: 11/17/2013 4:06:42 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.68R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 4:06:42 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.56	48	.003	Tetryl	.	0	.	Tetryl
7.784	125	.011	2,4,6-TNT	.	0	.	2,4,6-TNT
9.629	7644	1.629	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
25.689	14228	8.348	2-NMX	25.817	237227	9.713	2-NMX
32.886	453	.069	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.68A
Area File: C:\CPWIN\DATA1\4E12310B.68A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:05:28 PM
File Reported On: 11/17/2013 at 10:05:38 PM

Not Used
See Reintegration

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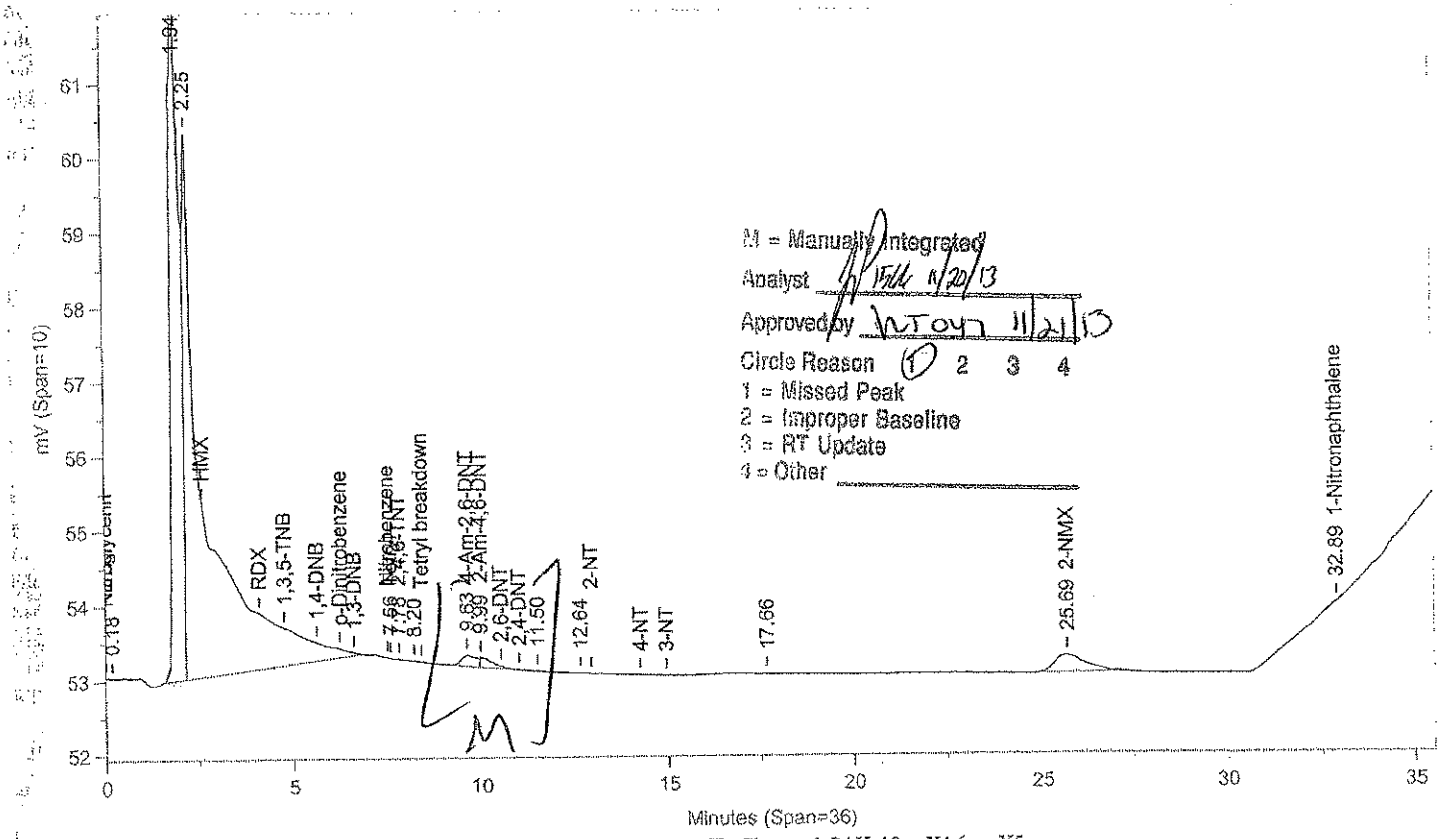
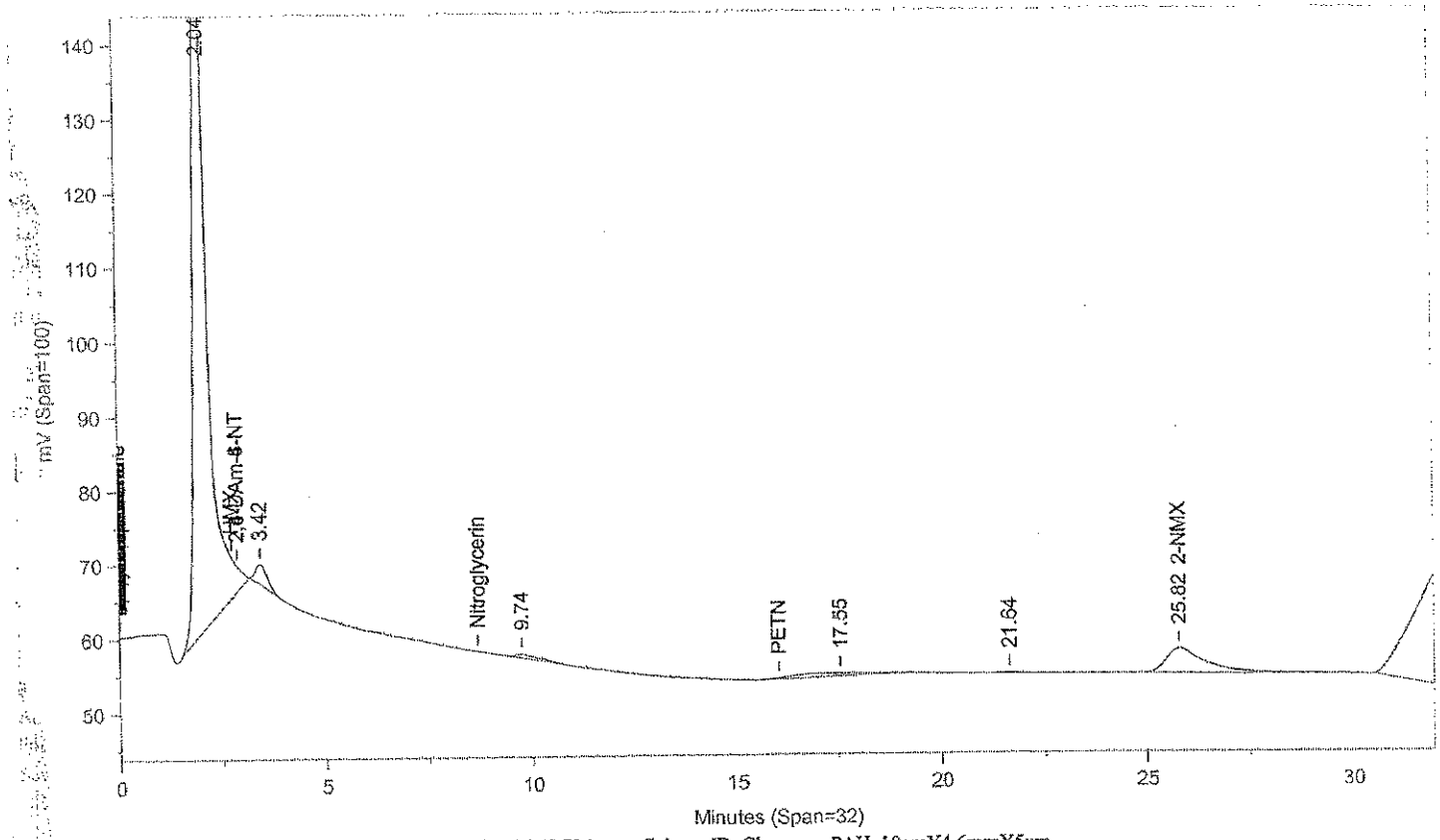
File: C:\CPWIN\DATA1\4B12310.68R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 4:06:42 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.68R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 4:06:42 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.56	48	.003	Tetryl	.	0	.	Tetryl
7.784	125	.011	2,4,6-TNT	.	0	.	2,4,6-TNT
9.629	4243	.905	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.989	3401	.311	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
25.689	14228	8.348	2-NMX	25.817	237227	9.713	2-NMX
32.886	453	.069	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:31:54 AM
File Reported On: 11/20/2013 at 11:31:52 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265235 E2161 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 16:06:42
Instrument : CP12--Y6329A
Result file : 4C12310.68R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 109% (73-122) Conc.: 10.869793

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.66	16.86	16.98	10350	0.536288
1,3,5-TNB	29.81	30.04	30.21	362	1.079980
2-NMX	34.12	34.26	34.32	17117	10.869793

Analysis Report (B)

Injected on : NOV 17, 2013 16:06:42
Instrument : CP12--Y6329B
Result file : 4C12310B.68R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.41	26.44	15824	2.664861

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT	A	0.536288	<0.6	0.3	J		
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	1.079980	0.6	0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.869793					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by:
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:33:32

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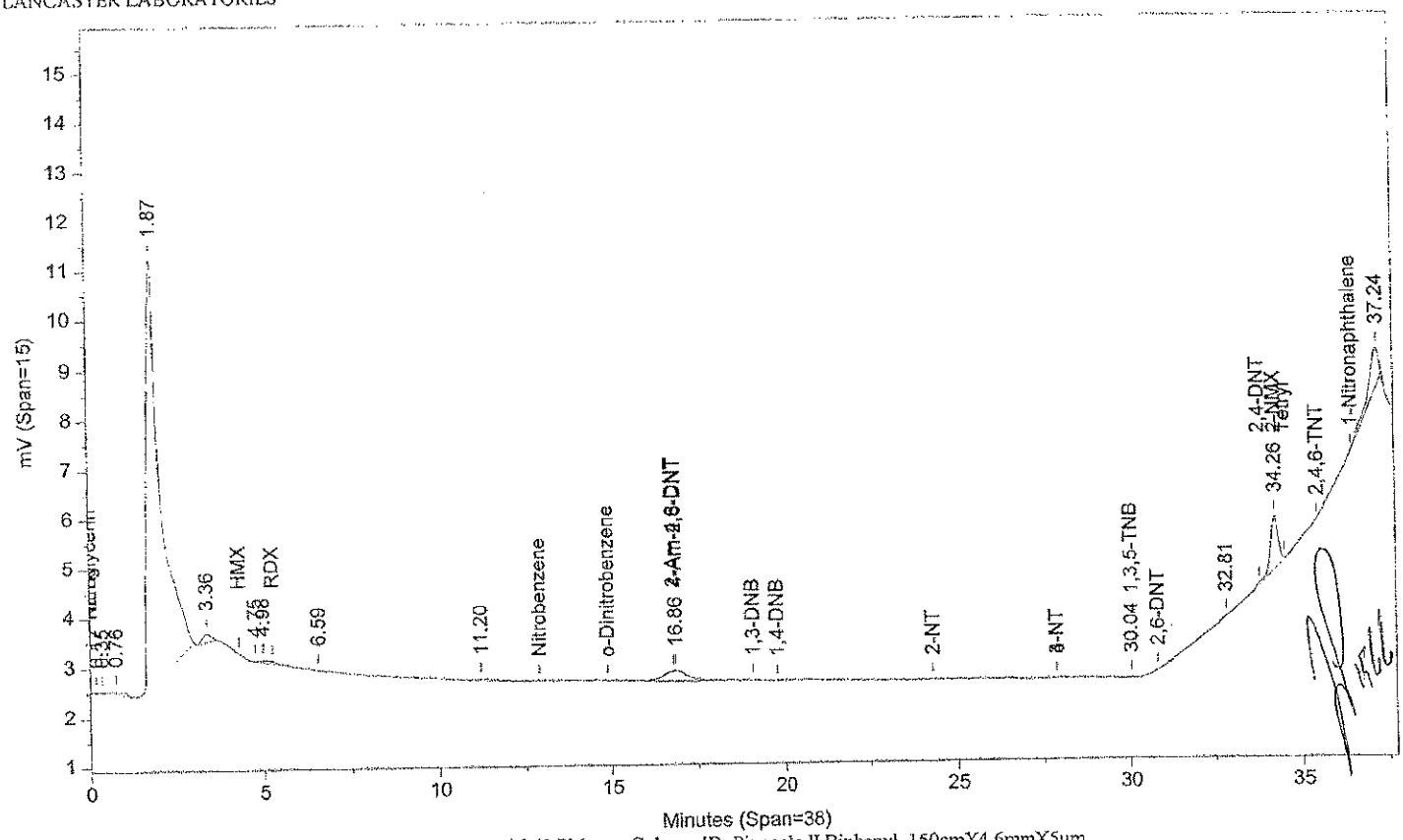
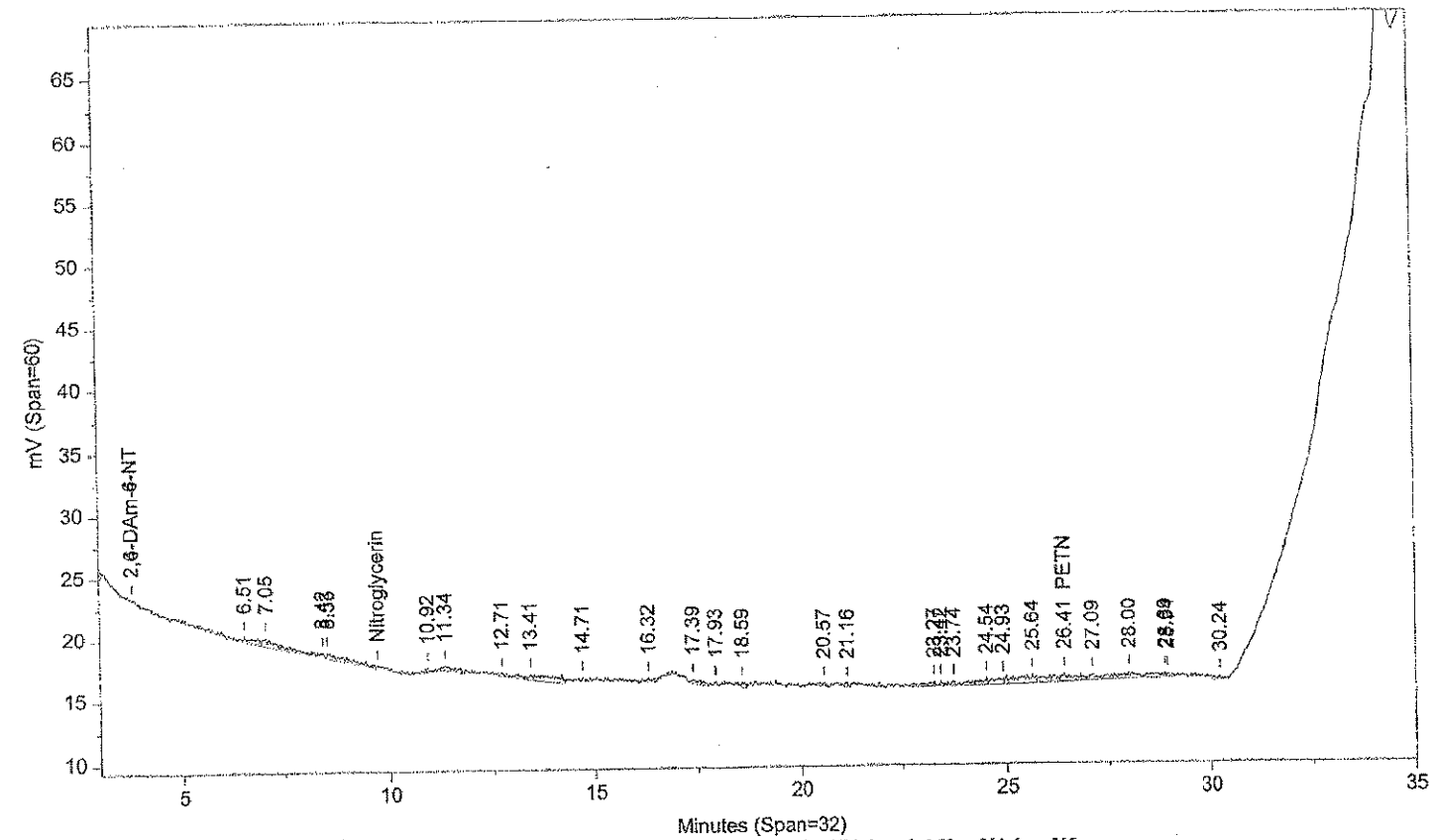
File: C:\CPWIN\DATA1\4C12310.68R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 4:06:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.68R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 4:06:42 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
16.862	10350	.536	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.415	15824	2.665	PETN
30.041	362	1.08	1,3,5-TNB	.	0	.	1,3,5-TNB
34.259	17117	10.87	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.68A
Area File: C:\CPWIN\DATA1\4C12310B.68A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:19:32 PM
File Reported On: 11/17/2013 at 10:19:43 PM

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Data Summary

Sample Name: 7265236 2E161 Sample ID: AA **Batchnumber:** 133110004A

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 00:45:15
Instrument X6329A
Result file 3E12310.39R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 104% (63 - 150) Conc: 5201.902344

Analysis Report (B)

Injected on Nov 14, 2013 00:45:15
Instrument Y6329A
Result file 3C12310.39R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 107% (63 - 150) Conc: 5375.270508

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.43	7.52	7.71	13	1.783334
2,4,6-Trinitrotoluene	7.90	7.93	8.10	24	1.039557
2-NMX	25.80	25.75	26.48	17732	5201.902344

Compound	Min	RT	Max	Area	Amount
2-Amino-4,6-dinitrotoluer	16.81	17.06	17.13	1295	33.509773
2-NMX	34.15	34.29	34.35	16908	5375.270508
Tetryl	34.46	34.66	34.66	47	0

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5201.902344				3.28	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 2 1 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader

Date: NOV 2 1 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265236 2E161 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 00:45:15
Instrument : CP12--X6329A
Result file : 3E12310.39R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 104% (63-150) Conc.: 5201.90234

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.13	4.24	154	-107.507858
Tetryl	7.43	7.52	7.71	13	0.372963
2,4,6-TNT	7.90	7.93	8.10	24	1.039557
Tetryl breakdown	8.62	8.66	8.86	49	1.410371
2-NMX	25.80	25.75	26.48	17732	5201.902344

Analysis Report (B)

Injected on : NOV 14, 2013 00:45:15
Instrument : CP12--X6329B
Result file : 3E12310B.39R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 112% (63-150) Conc.: 5612.36718

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	25.90	26.63	274147	5612.367188

$\frac{154}{87.623}\left(\frac{20}{2}\right) = \cancel{17.572}$ (4) 17.575 29416

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	coeluters		report confirmation + Breakdown = 1.783334
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5201.902344				7.59	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Date: Jessica L. Miller Chemist
NOV 20 2013

Verified by: Melissa A. McDermott Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place Senior Chemist
NOV 21 2013

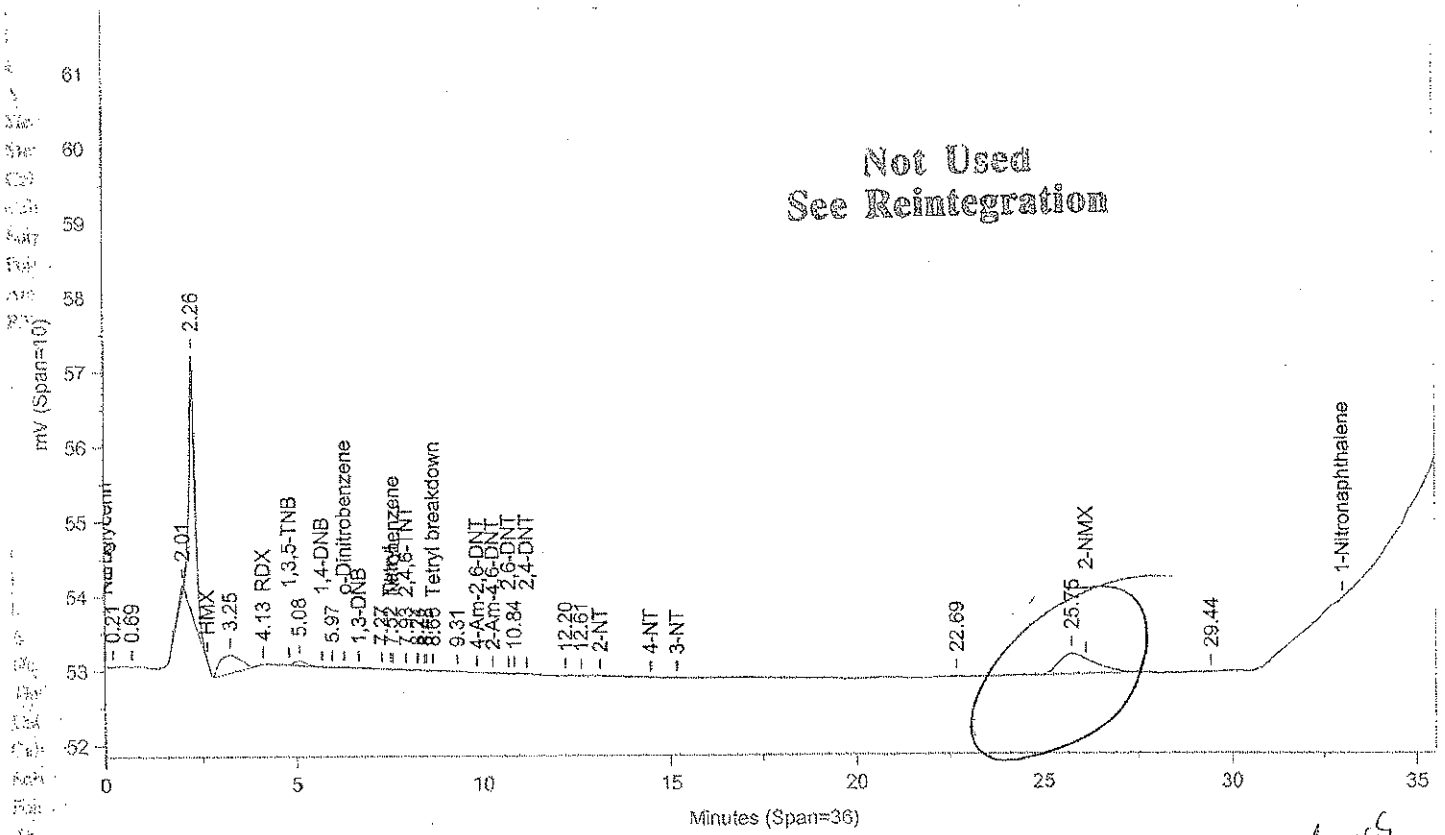
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:49:21

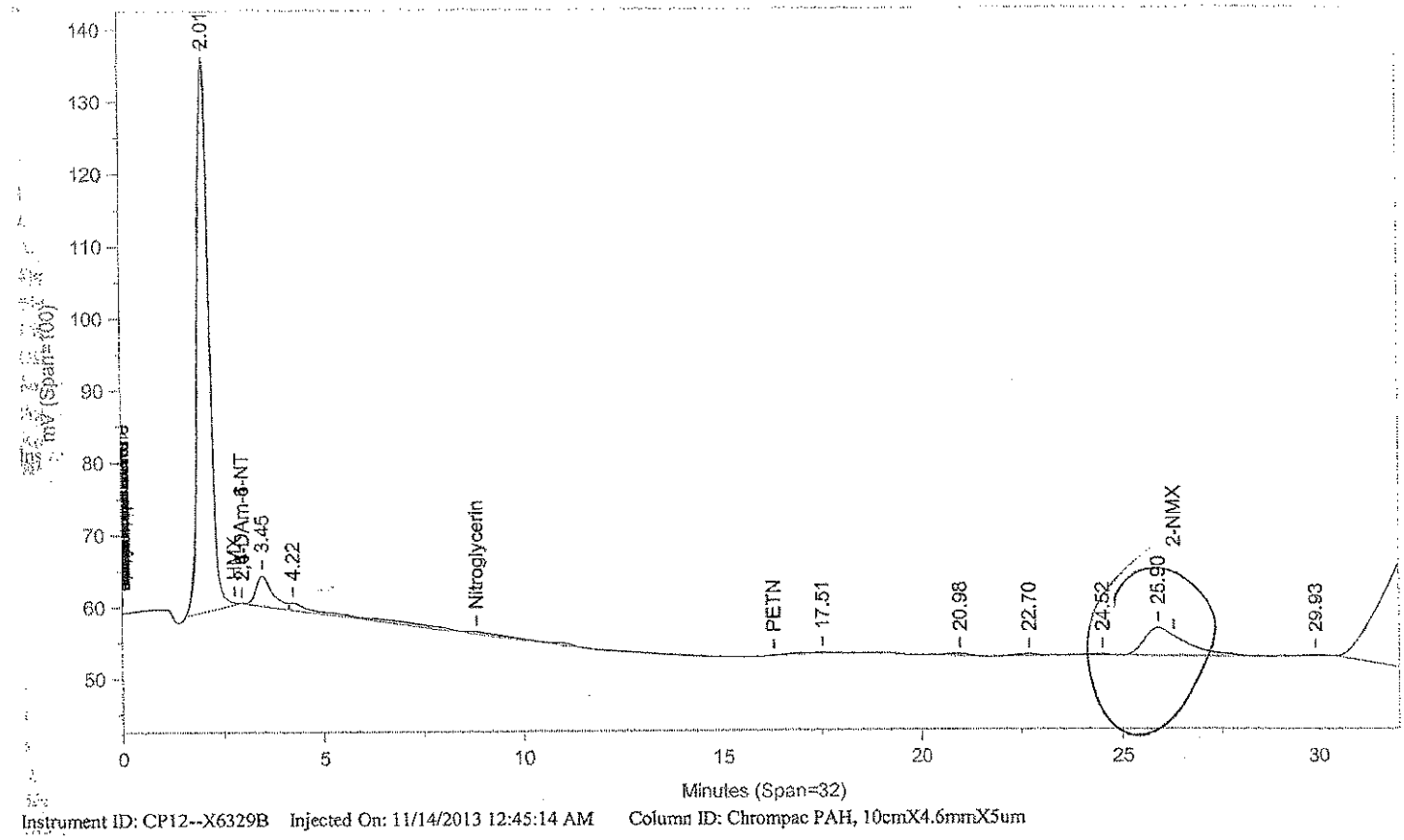
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.39R

Not Used
See Reintegration



Instrument ID: CP12--X6329A Injected On: 11/14/2013 12:45:14 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 12:45:14 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,
Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Area Reject: 0
Calibration Type: External
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Area Reject: 0
Calibration Type: External
Quantiation: Height

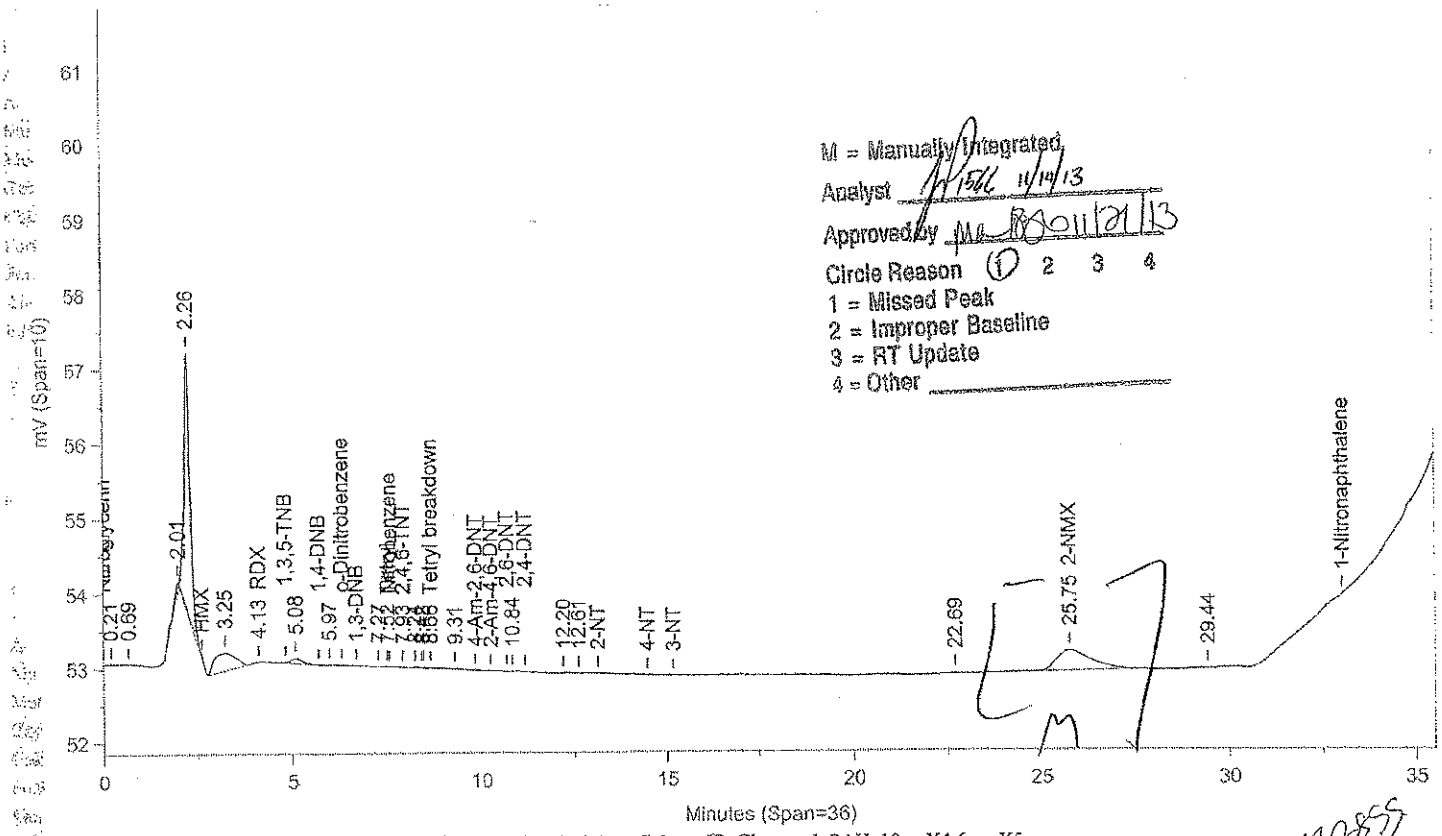
Sample Weight: 2
Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.132	154	-107.508	RDX	.	0	.	RDX
7.517	13	.373	Tetryl	.	0	.	Tetryl
7.933	24	1.04	2,4,6-TNT	.	0	.	2,4,6-TNT
8.659	49	1.41	Tetryl breakdown	.	0	.	Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\3E12310.39A
Area File: C:\CPWIN\DATA1\3E12310B.39A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 1:25:56 AM
File Reported On: 11/14/2013 at 1:26:07 AM

Not Used
See Reintegration

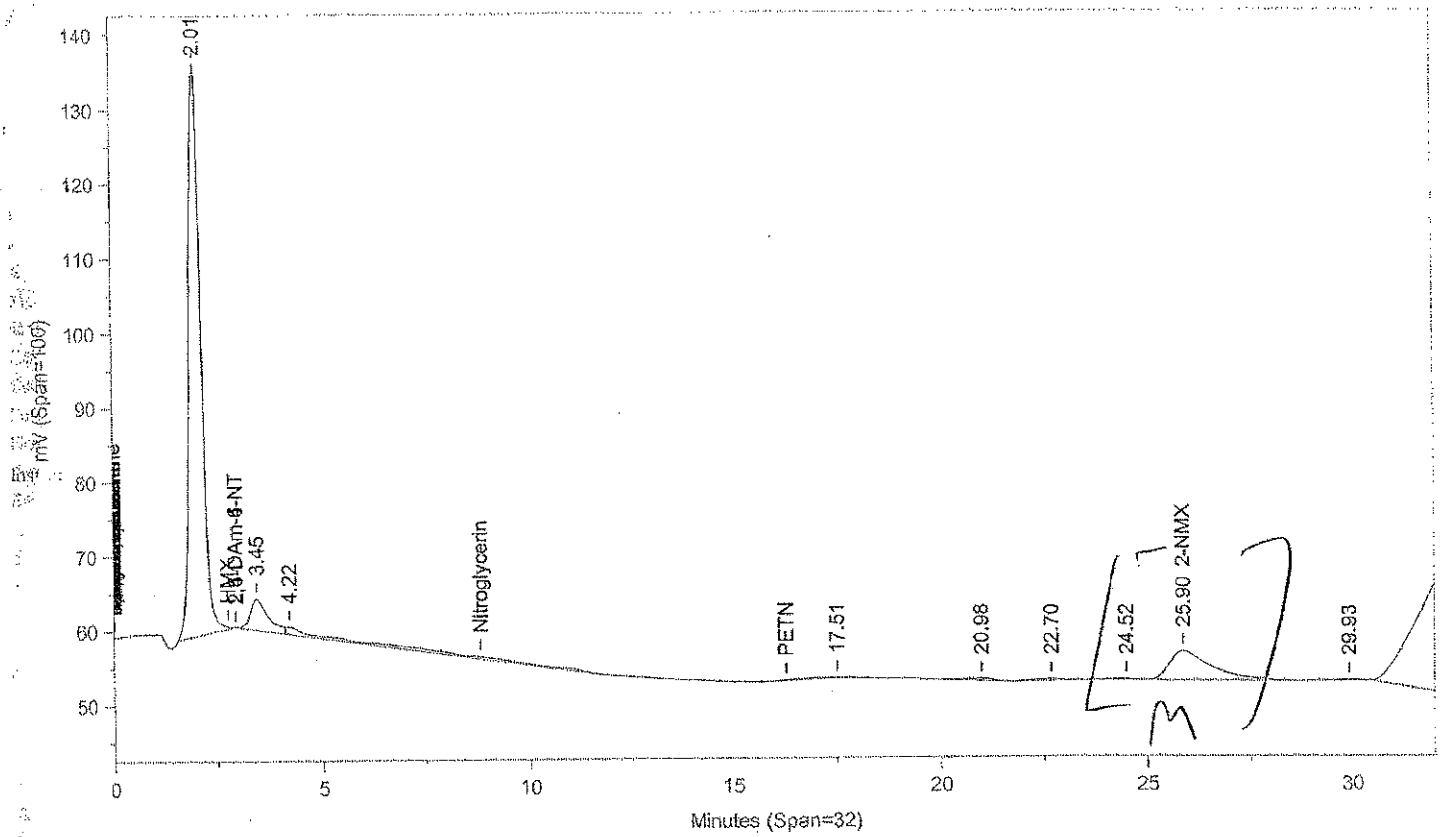
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.39R



M = Manually Integrated
Analyst 11/14/13
Approved by 11/21/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/14/2013 12:45:14 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 12:45:14 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.132	154	-107.508	RDX	.	0	.	RDX
7.517	13	.373	Tetryl	.	0	.	Tetryl
7.933	24	1.04	2,4,6-TNT	.	0	.	2,4,6-TNT
8.659	49	1.41	Tetryl breakdown	.	0	.	Tetryl breakdown
25.75	17732	5201.902	2-NMX	25.9	274147	5612.367	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:25:42 AM
File Reported On: 11/14/2013 at 11:25:40 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265236 2E161 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 00:45:15
Instrument : CP12--Y6329A
Result file : 3C12310.39R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5375.270508

Analysis Report (B)

Injected on : NOV 14, 2013 00:45:15
Instrument : CP12--Y6329B
Result file : 3C12310B.39R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.28	5.38	206	-217.436676
2-Am-4,6-DNT	16.81	17.06	17.13	1295	33.509773
2-NT	24.21	24.22	24.73	809	-8.303680
2-NMX	34.15	34.29	34.35	16908	5375.270508
Tetryl	34.46	34.66	34.66	47	185.464401

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5375.270508					
☑ Tetryl	A	~~185.464401~~ X	<300	< 153	J		N/C
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

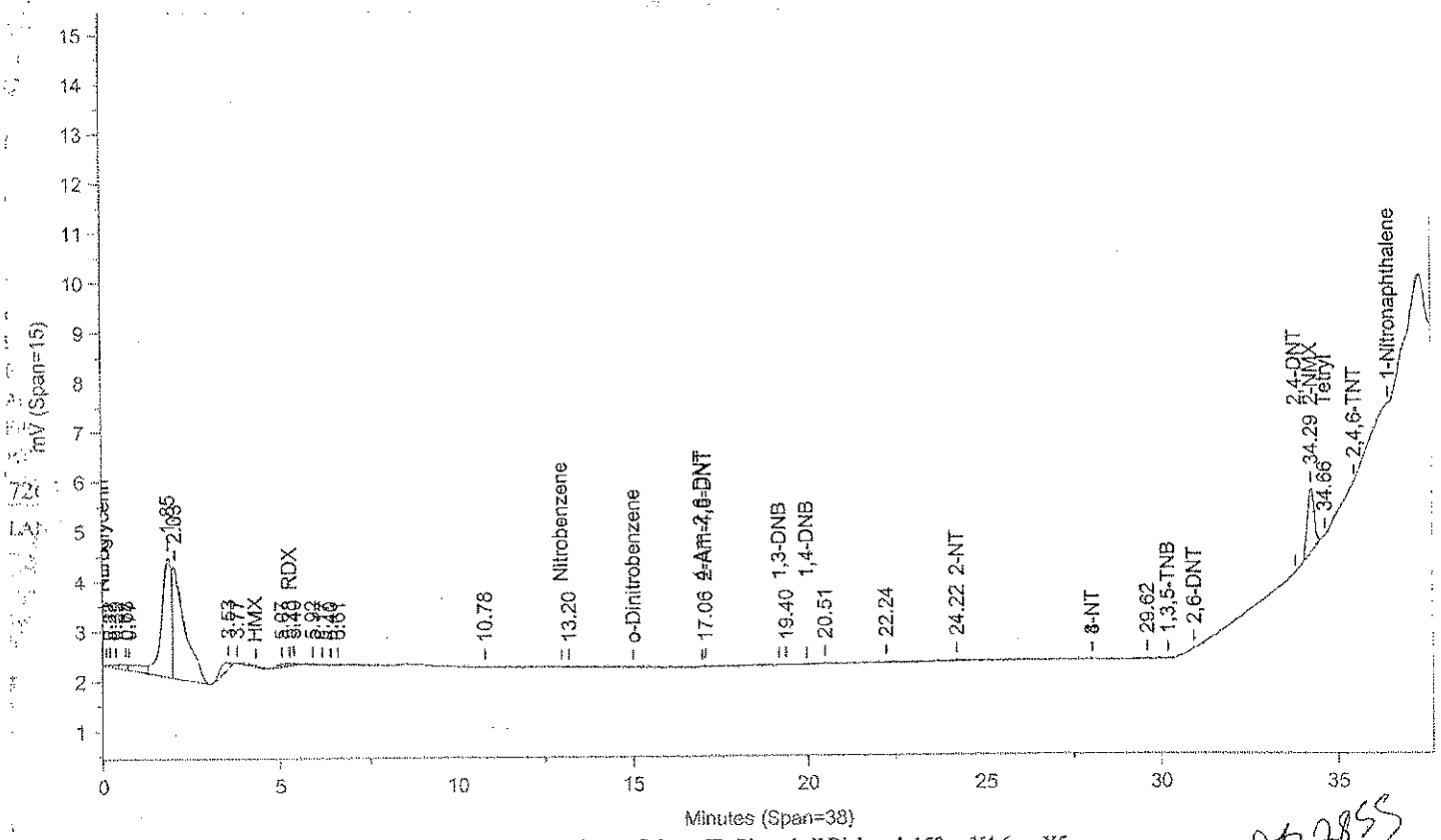
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

LANCASTER LABORATORIES

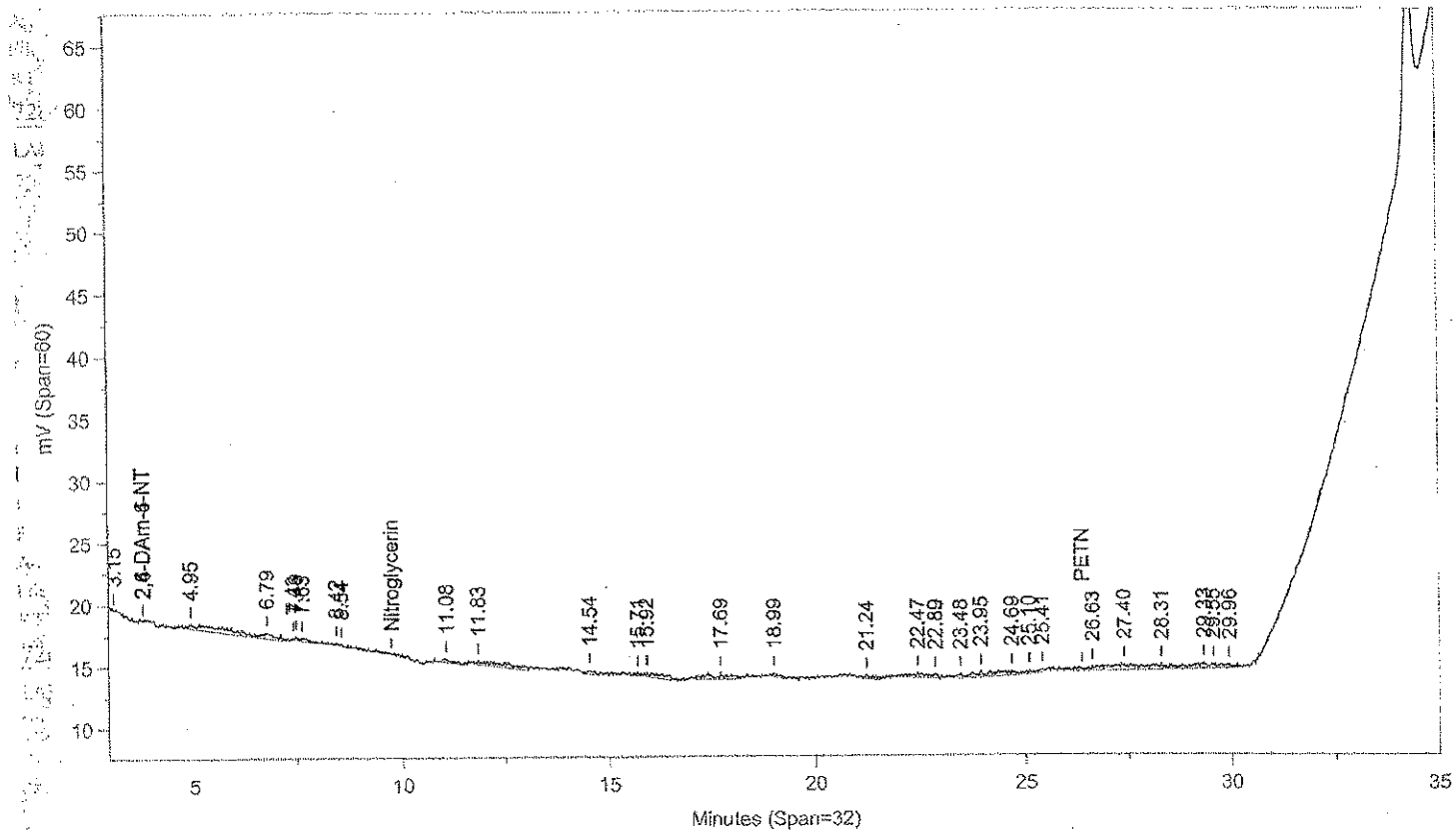
File: C:\CPWIN\DATA1\3C12310.39R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 12:45:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

#72855

File: C:\CPWIN\DATA1\3C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 12:45:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.284	206	-217.437	RDX			0	RDX
17.06	1295	33.51	2-Am-4,6-DNT			0	2-Am-4,6-DNT
24.221	809	-8.304	2-NT			0	2-NT
34.285	16908	5375.271	2-NMX			0	2-NMX
34.661	47	185.464	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\3C12310.39A
Area File: C:\CPWIN\DATA1\3C12310B.39A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 1:25:22 AM
File Reported On: 11/14/2013 at 1:25:33 AM

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Data Summary

Sample Name: 7265237 2E16D Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 01:27:41
Instrument X6329A
Result file 3E12310.40R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 109% (63 - 150) Conc: 5474.505859

Analysis Report (B)

Injected on Nov 14, 2013 01:27:41
Instrument Y6329A
Result file 3C12310.40R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 115% (63 - 150) Conc: 5740.576172

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
Tetryl	7.43	7.56	7.71	15	0.425756	2-NMX	34.15	34.26	34.35	18184	5740.576172
2,4,6-Trinitrotoluene	7.90	8.04	8.10	64	2.819999	Tetryl	34.46	34.55	34.66	122	0
2-NMX	25.80	25.68	26.48	18661	5474.505859						

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5474.505859				4.74	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265237 2E16D Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 01:27:41
Instrument : CP12--X6329A
Result file : 3E12310.40R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 109% (63-150) Conc.: 5474.505859

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.16	4.24	441	-74.680634
Tetryl	7.43	7.56	7.71	15	0.425756
2,4,6-TNT	7.90	8.04	8.10	64	2.819999
2-NMX	25.80	25.68	26.48	18661	5474.505859

Analysis Report (B)

Injected on : NOV 14, 2013 01:27:41
Instrument : CP12--X6329B
Result file : 3E12310B.40R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 113% (63-150) Conc.: 5664.010742

Peak name	Min	R.T.	Max	Area	Amount
PETN	16.01	16.56	16.59	8214	617.735046
2-NMX	25.96	25.83	26.63	276669	5664.010742

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
2,6-DAm-4-NT							
2,4-DAm-6-NT							
Nitroglycerin			<6000	<2000			Report Confirmation.
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-TNB			<300	<100			
1,4-DNB			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153	7 coelutes		report confirmation
Nitrobenzene			<300	<100			report confirmation
2,4,6-TNT			<300	<100			
Tetryl breakdown							
4-Am-2,6-DNT			<300	<150			
2-Am-4,6-DNT			<300	<100			
2,6-DNT			<300	<100			
2,4-DNT			<300	<100			
4-NT			<300	<200			
4-NT			<300	<200			
3-NT			<300	<250			
2-NMX	A	5474.505859				3.40	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

James H. Place
Senior Chemist
NOV 21 2013

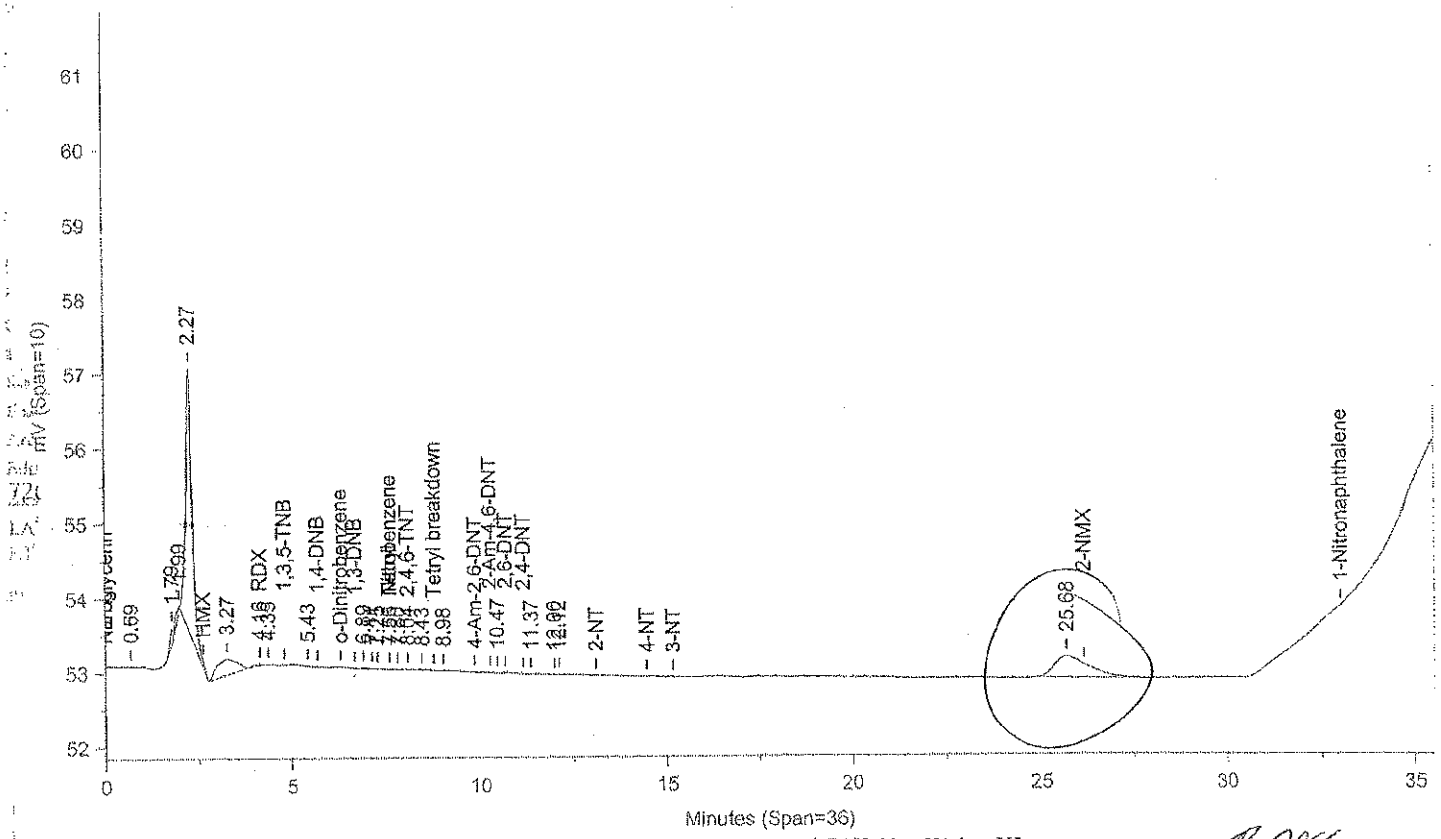
Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 23:34:26

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.40R

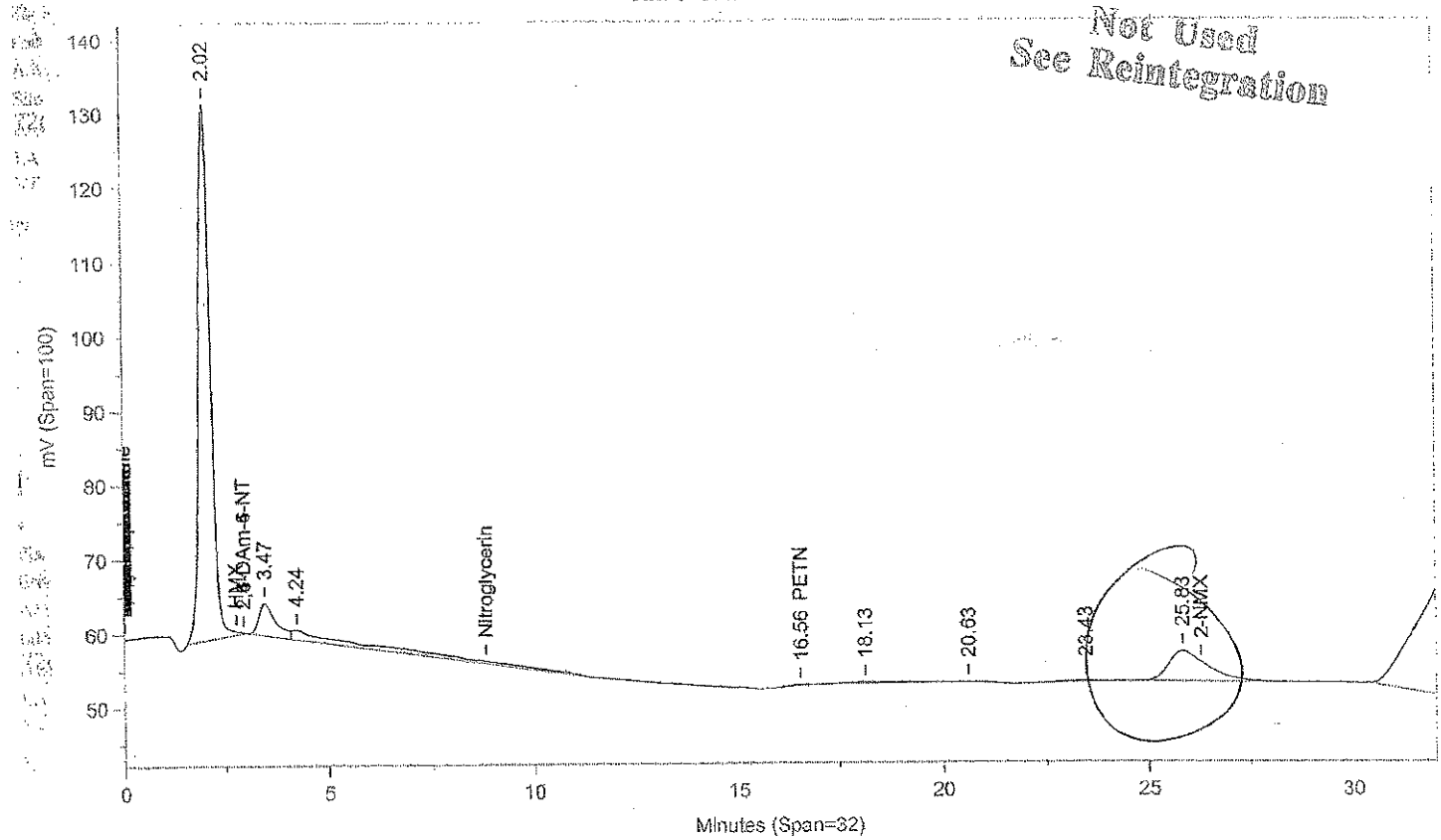


Instrument ID: CP12--X6329A Injected On: 11/14/2013 1:27:40 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.40R

Not Used
See Reintegration



Instrument ID: CP12--X6329B Injected On: 11/14/2013 1:27:40 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2

Dilution Factor: 20

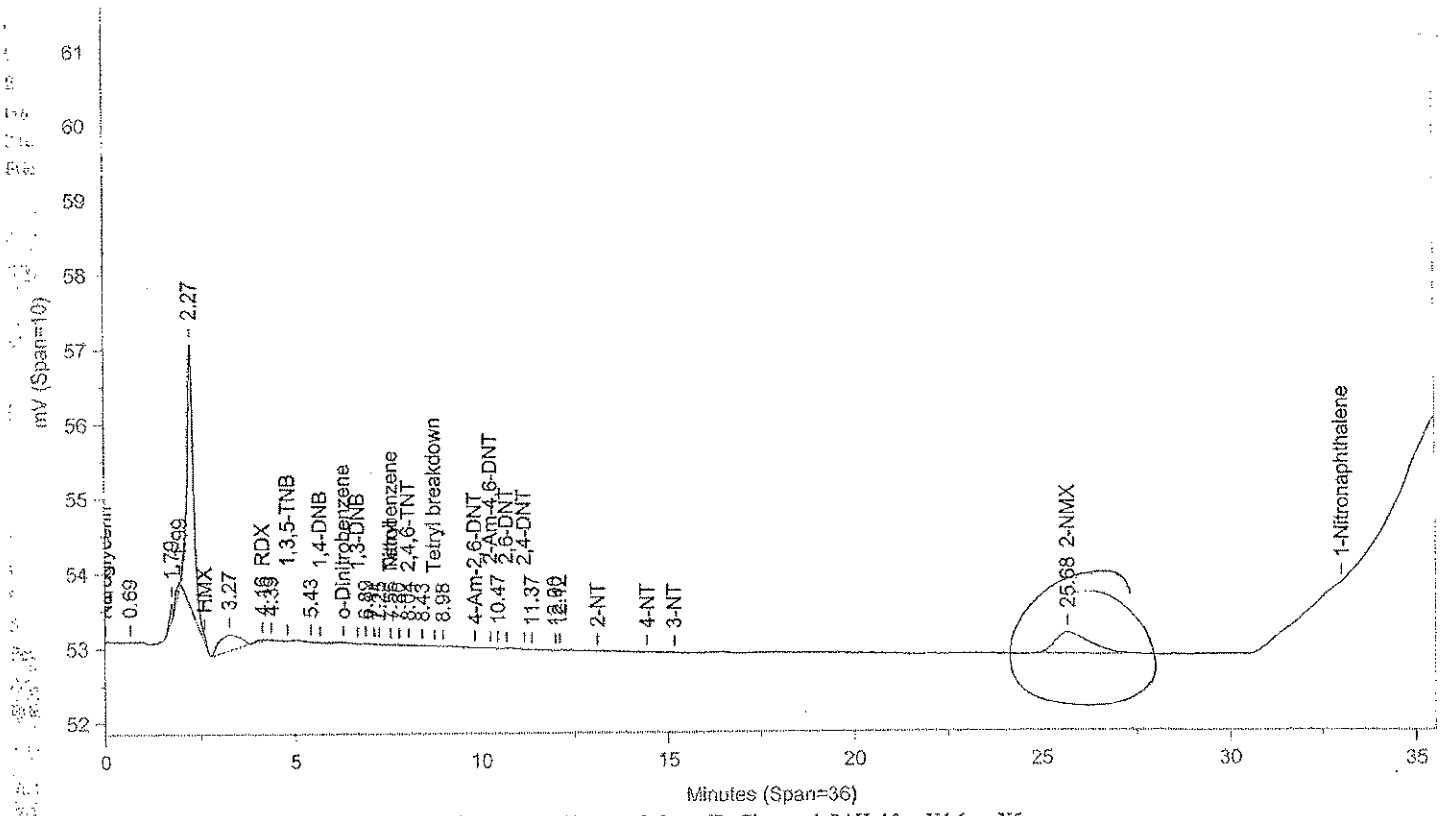
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.161	441	-74.681	RDX		0		RDX
7.561	15	.426	Tetryl		0		Tetryl
8.043	64	2.82	2,4,6-TNT		0		2,4,6-TNT
	0		PETN	16.561	8214	617.735	PETN

Files:
Area File: C:\CPWIN\DATA1\3E12310.40A
Area File: C:\CPWIN\DATA1\3E12310B.40A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 2:08:24 AM
File Reported On: 11/14/2013 at 2:08:38 AM

Not Used
See Reintegration

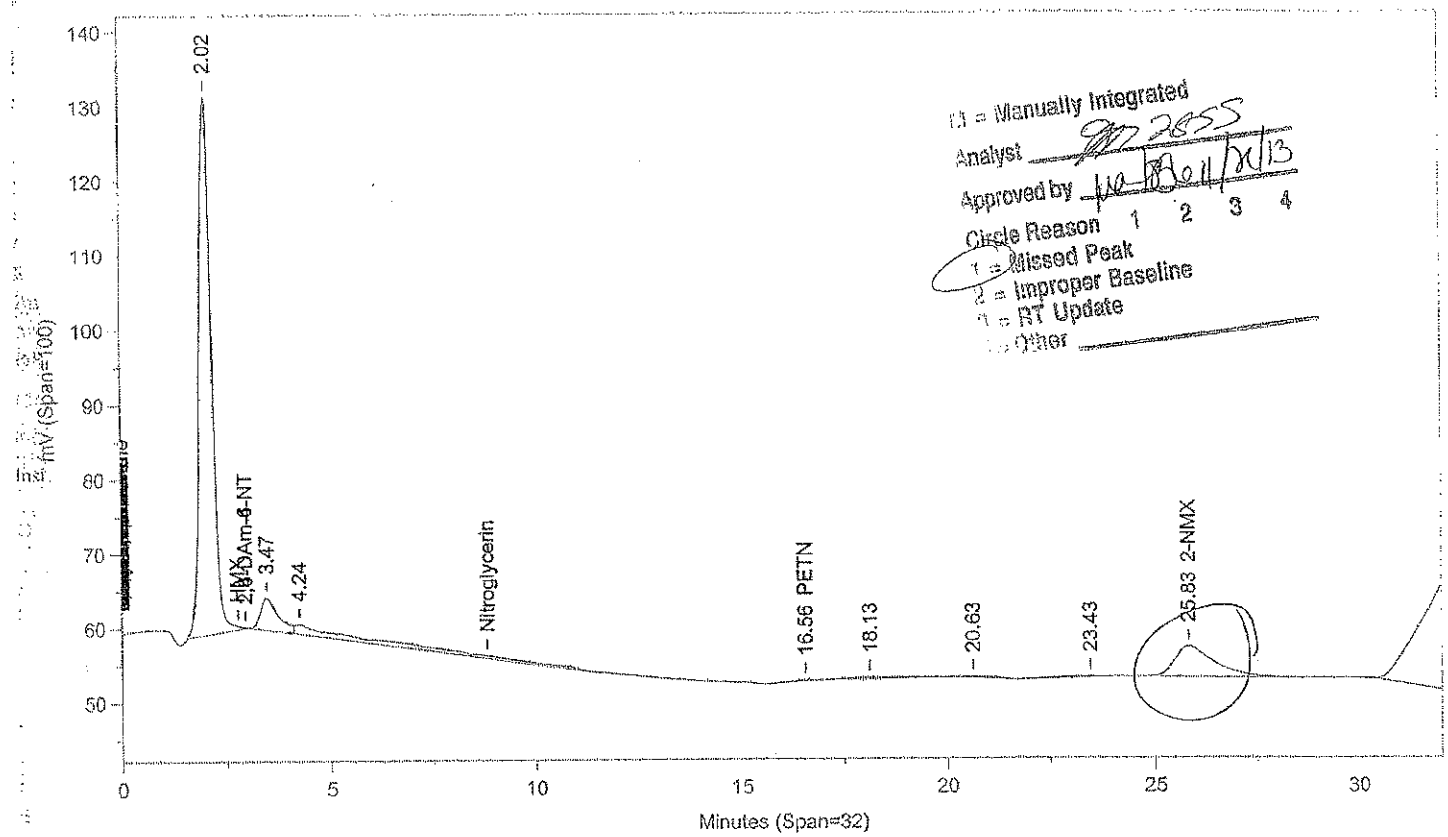
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.40R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 1:27:40 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3E12310B.40R



M = Manually Integrated
Analyst 2855
Approved by 11/20/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/14/2013 1:27:40 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.161	441	-74.681	RDX	.	0	.	RDX
7.561	15	.426	Tetryl	.	0	.	Tetryl
8.043	64	2.82	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	PETN	16.561	8214	617.735	PETN
25.684	18661	5474.506	2-NMX	25.828	276669	5664.011	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:23:54 PM
File Reported On: 11/20/2013 at 11:23:52 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265237 2E16D Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 01:27:41
Instrument : CP12--Y6329A
Result file : 3C12310.40R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 115% (63-150) Conc.: 5740.57617

Analysis Report (B)

Injected on : NOV 14, 2013 01:27:41
Instrument : CP12--Y6329B
Result file : 3C12310B.40R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.15	34.26	34.35	18184	5740.576172
Tetryl	34.46	34.55	34.66	122	190.172424

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutors		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutors		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5740.576172					
☑ Tetryl	A	~~190.172424~~	<300	< 153	J	NC	
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

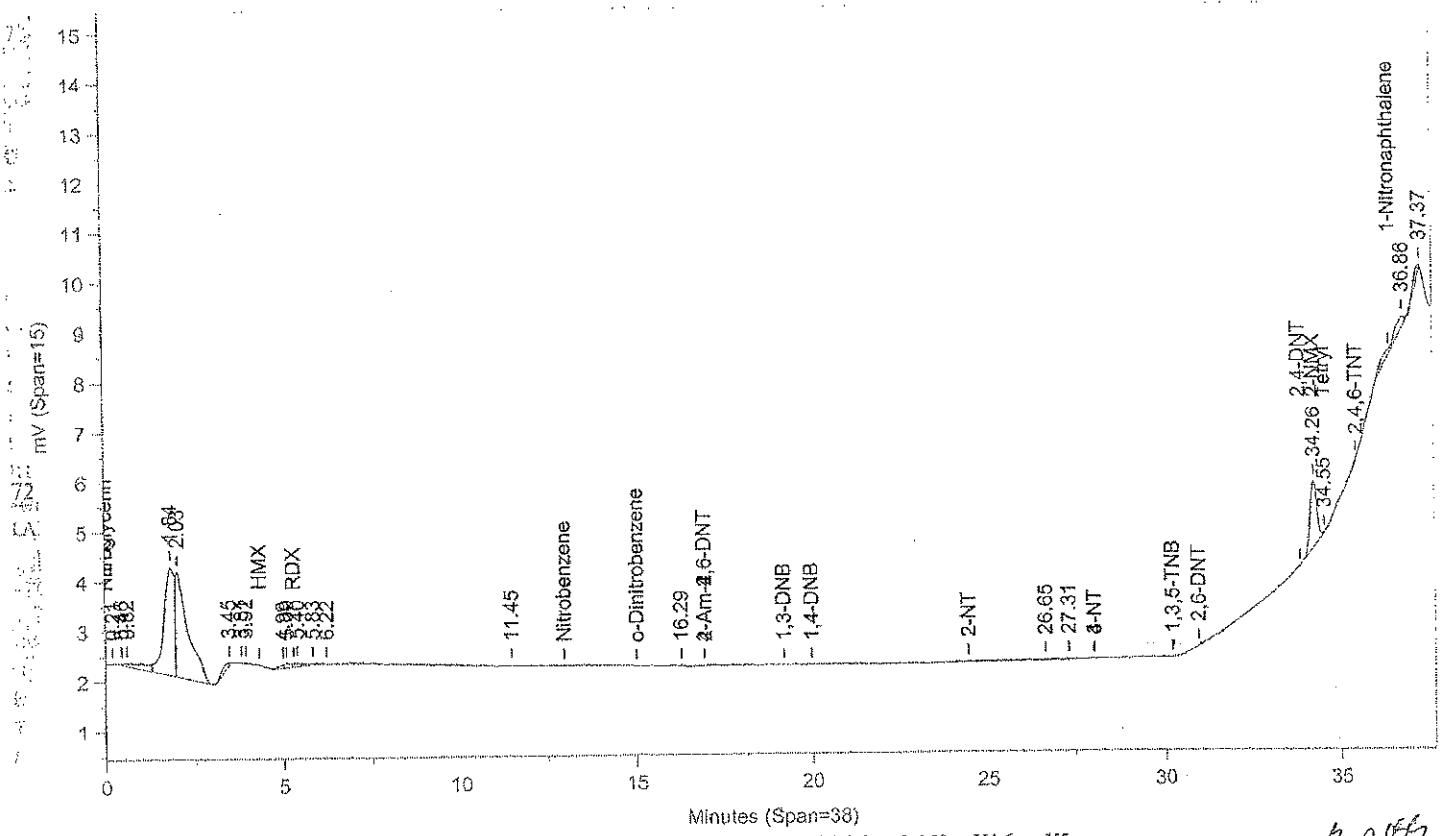
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

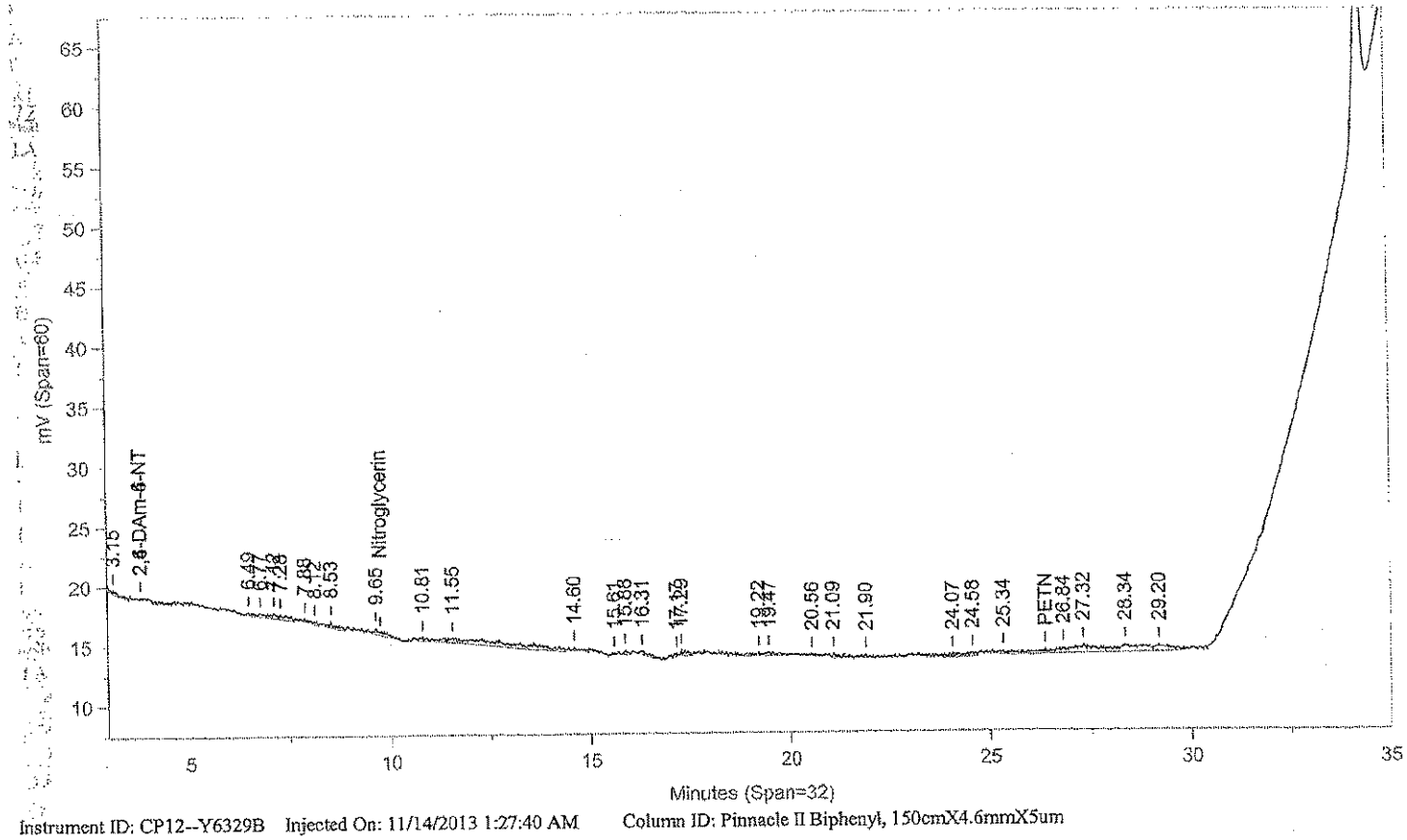
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.40R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 1:27:40 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.40R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 1:27:40 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.257	18184	5740.576	2-NMX			0	2-NMX
34.55	122	190.172	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\3C12310.40A
Area File: C:\CPWIN\DATA1\3C12310B.40A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 2:07:48 AM
File Reported On: 11/14/2013 at 2:07:58 AM

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Data Summary

Sample Name: 7265238 R2141 Sample ID: AA **Batchnumber:** 133130015A

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 16:49:08
Instrument X6329A
Result file 4E12310.69R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 89% (73 - 122) Conc: 8.948514

Analysis Report (B)

Injected on Nov 17, 2013 16:49:08
Instrument Y6329A
Result file 4C12310.69R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 113% (73 - 122) Conc: 11.257297

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.87	7.98	52	0.004522	4-Amino-2,6-dinitrotoluer	16.66	16.92	16.98	1282	0.066405
2-NMX	25.41	25.66	26.09	15252	8.948514	2-NMX	34.12	34.27	34.32	17793	11.257297

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.948514				22.85	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Analytical Specialist
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265238 R2141 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 16:49:08
Instrument : CP12--X6329A
Result file : 4E12310.69R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 89% (73-122) Conc.: 8.948514

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.87	7.98	52	0.004522
2-NMX	25.41	25.66	26.09	15252	8.948514

Analysis Report (B)

Injected on : NOV 17, 2013 16:49:08
Instrument : CP12--X6329B
Result file : 4E12310B.69R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 116% (73-122) Conc.: 11.613031

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.80	26.24	283630	11.613031

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.948514				25.92	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

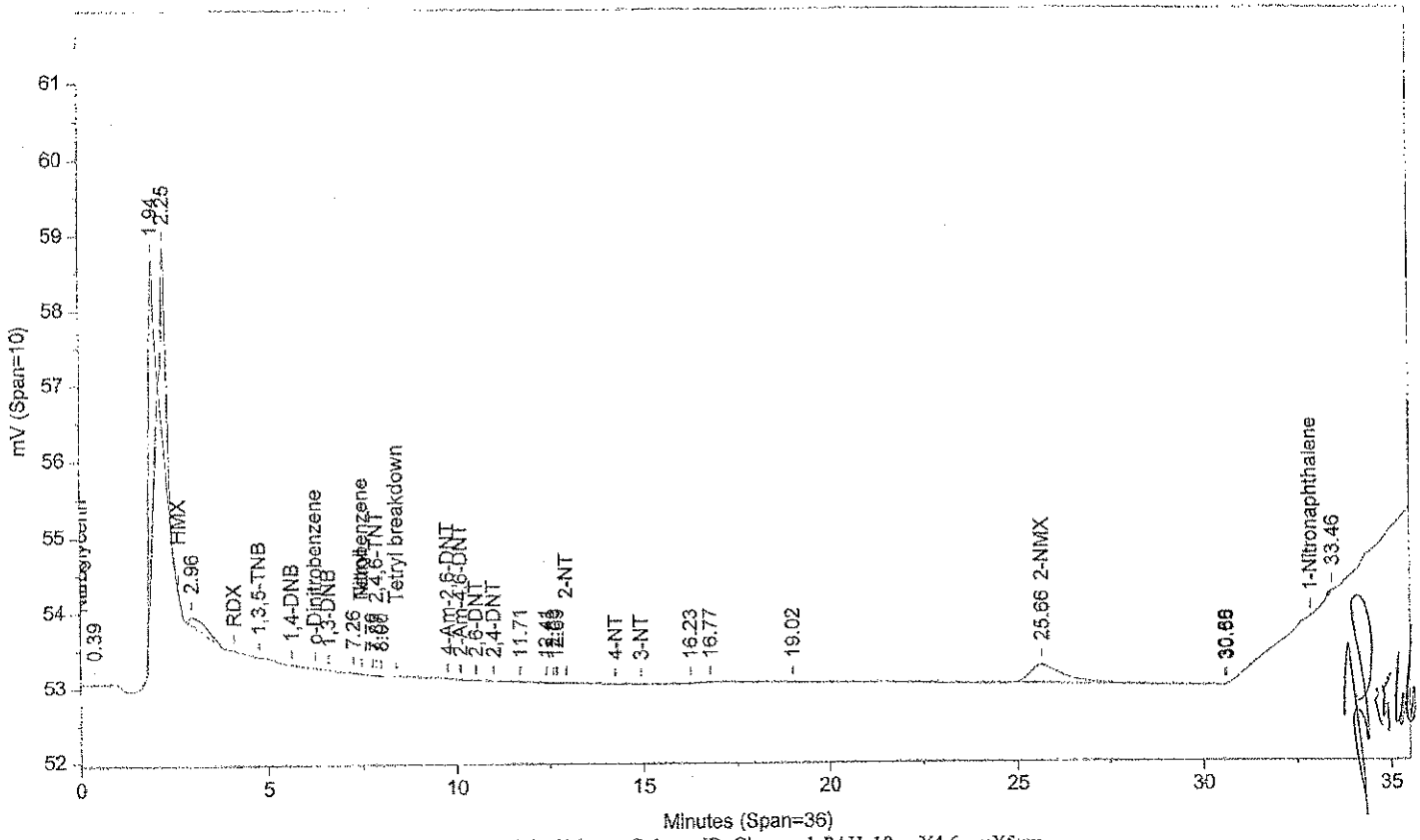
Verified by:
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

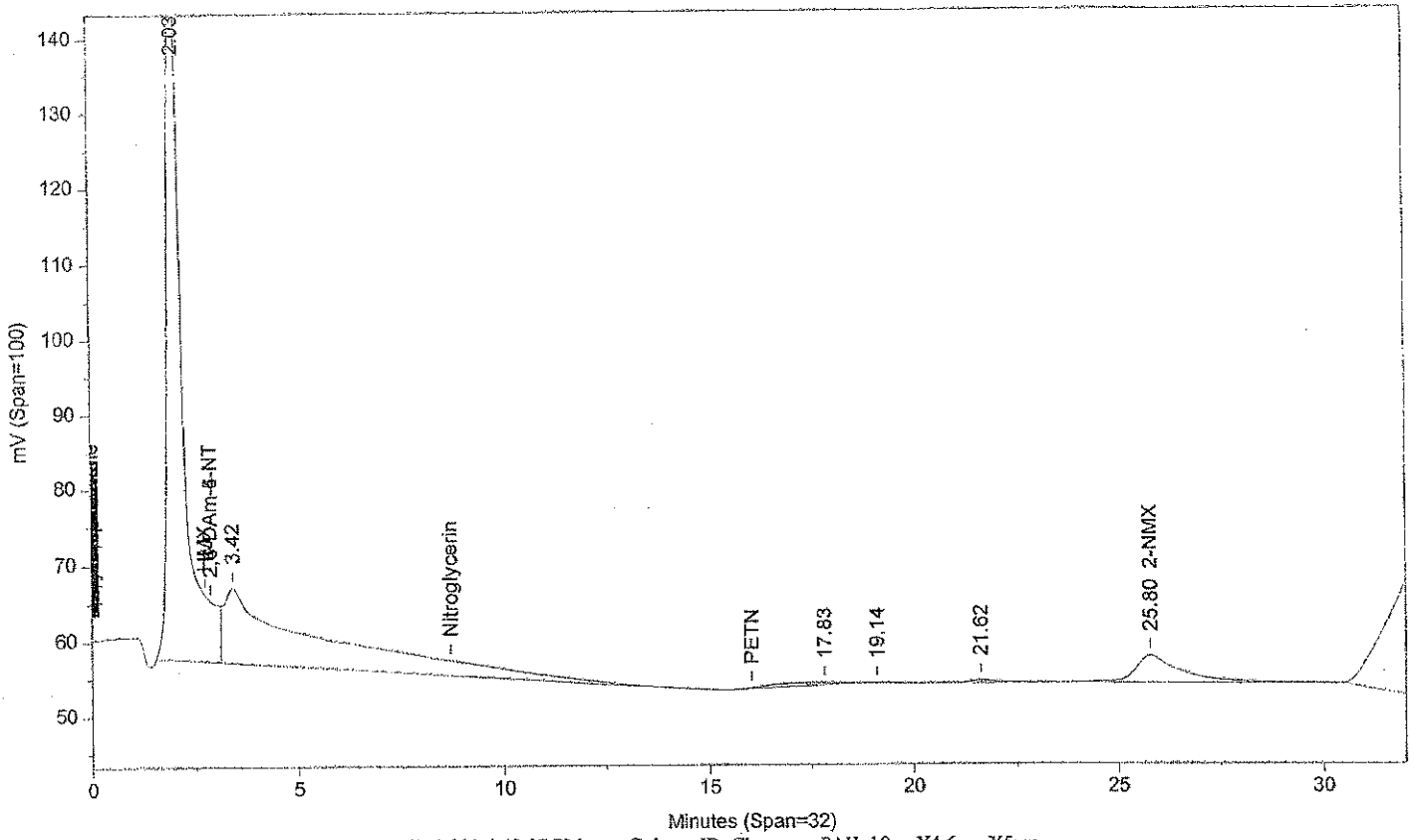
Printed on: 11/20/2013 13:22:27

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.69R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 4:49:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.69R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 4:49:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.866	52	.005	2,4,6-TNT	.	0	.	2,4,6-TNT
25.66	15252	8.949	2-NMX	25.798	283630	11.613	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.69A
Area File: C:\CPWIN\DATA1\4E12310B.69A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:05:50 PM
File Reported On: 11/17/2013 at 10:06:01 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265238 R2141 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 16:49:08
Instrument : CP12--Y6329A
Result file : 4C12310.69R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 113% (73-122) Conc.: 11.257297

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.23	5.36	79	-0.457575
4-Am-2,6-DNT	16.66	16.92	16.98	1282	0.066405
2-NMX	34.12	34.27	34.32	17793	11.257297

Analysis Report (B)

Injected on : NOV 17, 2013 16:49:08
Instrument : CP12--Y6329B
Result file : 4C12310B.69R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.42	26.44	4475	0.753552

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.257297					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

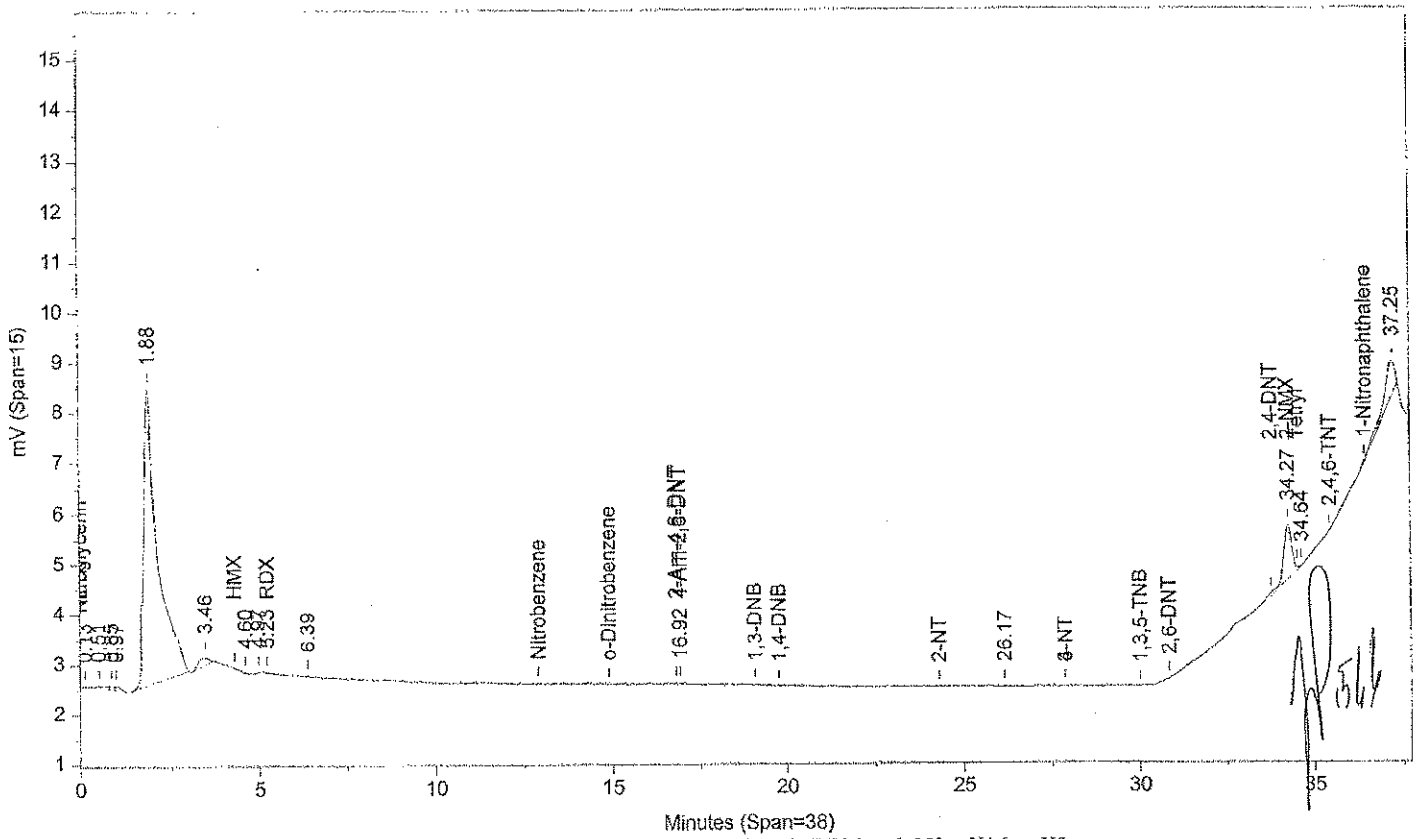
Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

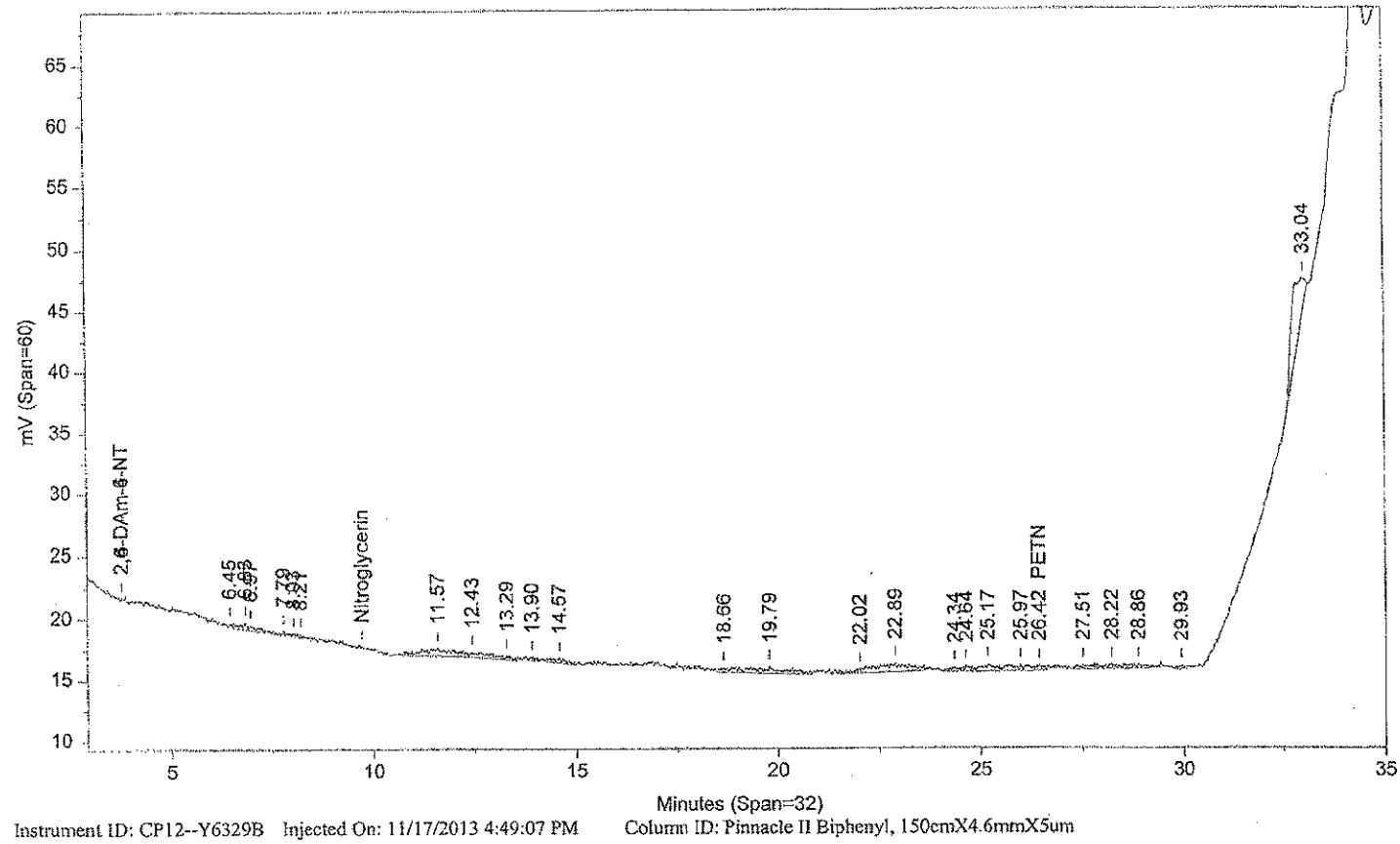
Printed on: 11/20/2013 15:33:45

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.69R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 4:49:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.69R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 4:49:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.231	79	-.458	RDX	.	0	.	RDX
16.916	1282	.066	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.417	4475	.754	PETN
34.268	17793	11.257	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.69A
Area File: C:\CPWIN\DATA1\4C12310B.69A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:19:56 PM
File Reported On: 11/17/2013 at 10:20:06 PM

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Data Summary

Sample Name: 7265239 R2F14 Sample ID: AA **Batchnumber:** 133140020A

Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 19, 2013 19:55:39
Instrument	X6329A
Result file	5E12310.37R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 92% (63 - 150) Conc: 4199.455566

Analysis Report (B)

Injected on	Nov 19, 2013 19:55:39
Instrument	Y6329A
Result file	5C12310.37R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 105% (63 - 150) Conc: 4759.240723

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.71	7.82	7.99	9	0.233412
2,4-Dinitrotoluene	11.45	11.72	11.74	149	4.099375
3-Nitrotoluene	15.60	15.81	15.93	58	3.88146
2-NMX	26.91	27.25	27.59	15746	4199.455566

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.61	16.76	16.93	507	11.936986
1,3-DNB	18.80	18.85	19.10	973	26.102652
2-NMX	34.05	34.13	34.25	16419	4759.240723

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5454.5456	<1818.1819			
☑ PETN			<5454.5456	<1818.1819			
☑ HMX			<681.8182	<227.2727			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-Trinitrobenzene			<272.7273	<90.9091			
☑ 1,4-Dinitrobenzene			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ 2,4,6-Trinitrotoluene			<272.7273	<90.9091			
☑ 4-Amino-2,6-dinitrotoluene			<272.7273	<136.3636			
☑ 2-Amino-4,6-dinitrotoluene			<272.7273	<90.9091			
☑ 2,6-Dinitrotoluene			<272.7273	<90.9091			
☑ 2,4-Dinitrotoluene			<272.7273	<90.9091			
☑ 2-Nitrotoluene			<272.7273	<181.8182			
☑ 4-Nitrotoluene			<272.7273	<181.8182			
☑ 3-Nitrotoluene			<272.7273	<227.2727			
☑ 2-NMX	A	4199.455566				12.50	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 24 2013

Verified by: Valerie L. Tonnyshi, Principal Specialist Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265239 R2F14 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 19:55:39
Instrument : CP12--X6329A
Result file : 5E12310.37R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 92% (63-150) Conc.: 4199.45556(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.30	4.40	392	-73.061783
Tetryl	7.71	7.82	7.99	9	0.233412
2,4-DNT	11.45	11.72	11.74	149	4.099375
3-NT	15.60	15.81	15.93	58	3.881460
2-NMX	26.91	27.25	27.59	15746	4199.455566

Analysis Report (B)

Injected on : NOV 19, 2013 19:55:39
Instrument : CP12--X6329B
Result file : 5E12310B.37R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 93% (63-150) Conc.: 4237.35742(

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.96	9.17	9.34	7789	554.037109
2-NMX	27.09	27.42	27.76	227680	4237.357422

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5454.546	<1818.182			
☑ PETN			<5454.546	<1818.182			
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ 2,4,6-TNT			<272.7273	<90.9091			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☐ 2-NMX	A	4199.455566				0.90	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

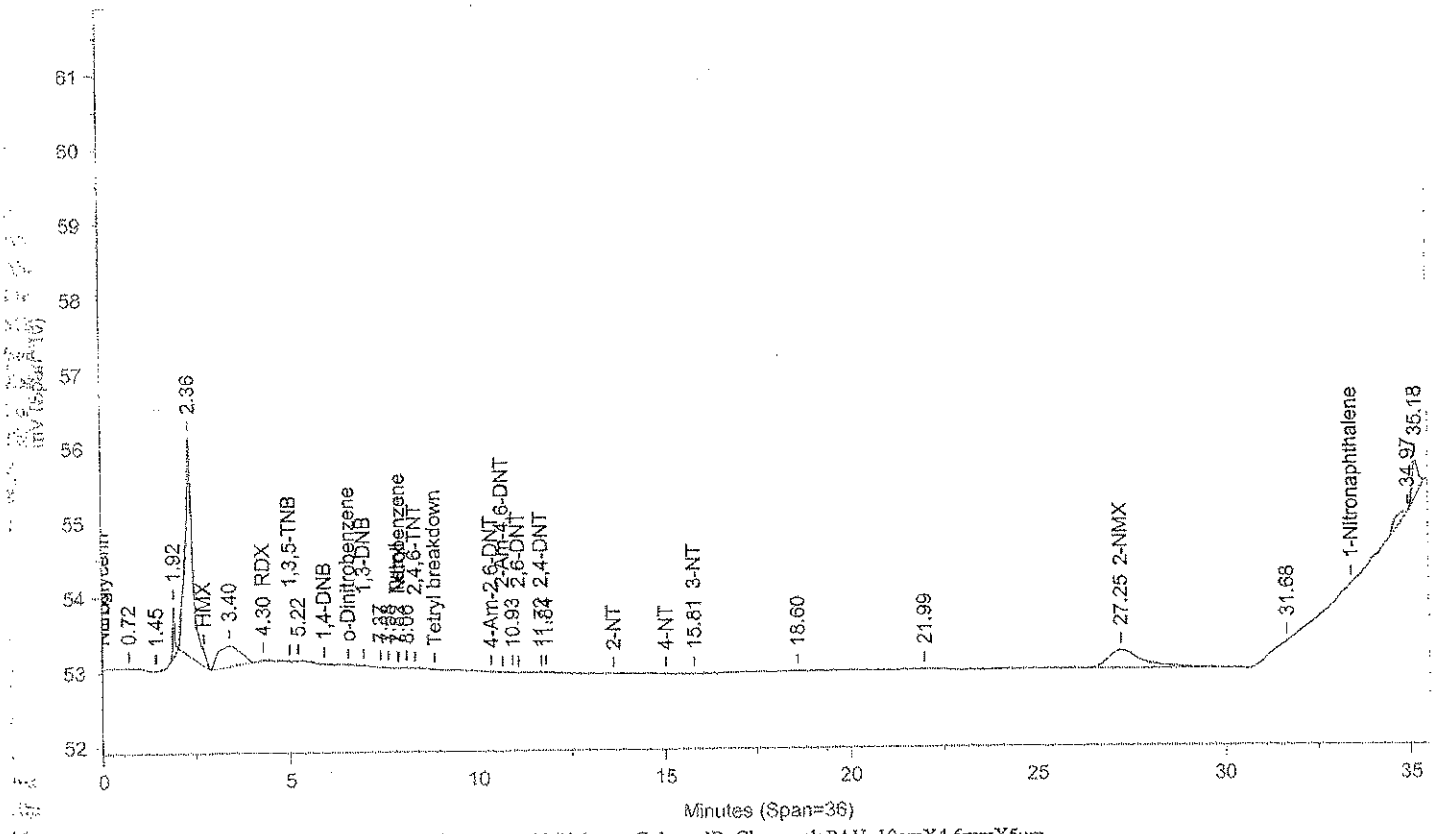
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:47:24

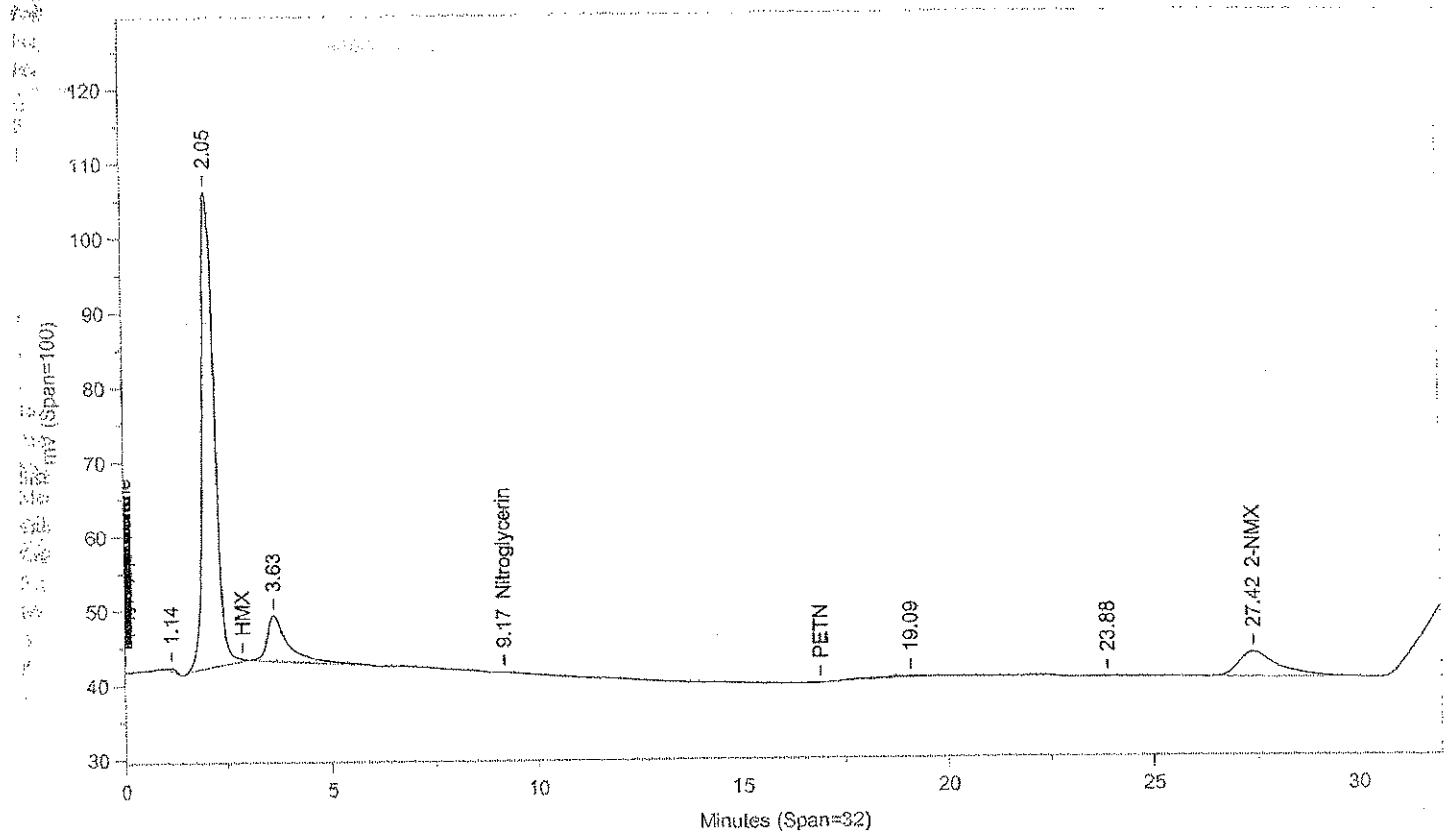
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5E12310.37R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 7:55:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.37R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 7:55:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.3	392	-73.062	RDX	.	0	.	RDX
7.817	9	.233	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	9.172	7789	554.037	Nitroglycerin
11.716	149	4.099	2,4-DNT	.	0	.	2,4-DNT
15.811	58	3.881	3-NT	.	0	.	3-NT
27.25	15746	4199.456	2-NMX	27.417	227680	4237.357	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.37A
Area File: C:\CPWIN\DATA1\5E12310B.37A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:51:18 PM
File Reported On: 11/20/2013 at 4:51:29 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265239 R2F14 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 19:55:39
Instrument : CP12--Y6329A
Result file : 5C12310.37R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 4759.24072:

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.61	16.76	16.93	507	11.936986
1,3-DNB	18.80	18.85	19.10	973	26.102652
2-NMX	34.05	34.13	34.25	16419	4759.240723

Analysis Report (B)

Injected on : NOV 19, 2013 19:55:39
Instrument : CP12--Y6329B
Result file : 5C12310B.37R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	25.73	26.13	26.15	10671	816.853210

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5454.546	<1818.182			
☑ Nitroglycerin			<5454.546	<1818.182			
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☐ 2-NMX	A	4759.240723					
☑ Tetryl			<272.7273	<139.0909			
☑ 2,4,6-TNT			<272.7273	<90.9091			
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tornabene, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:39

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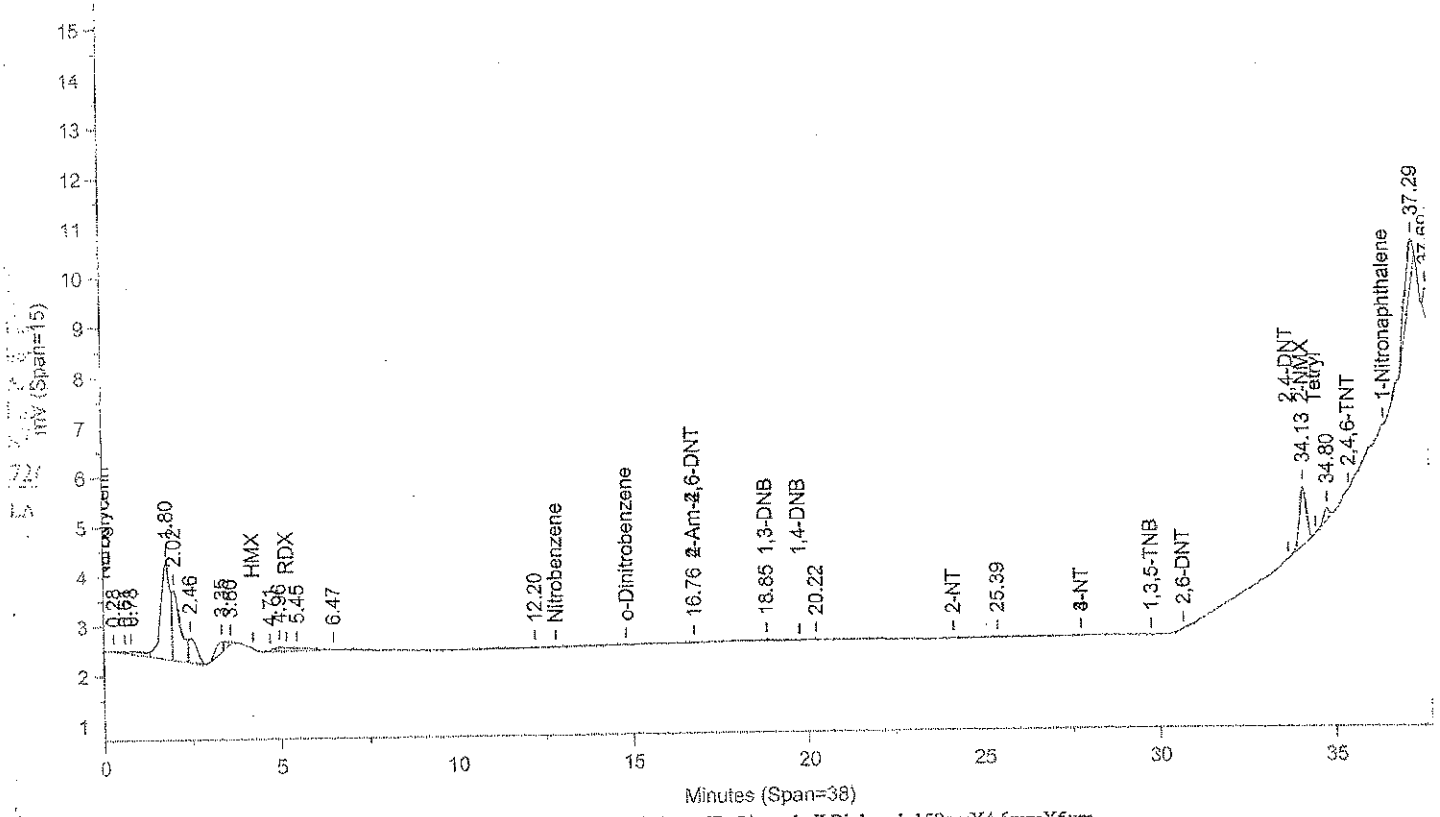
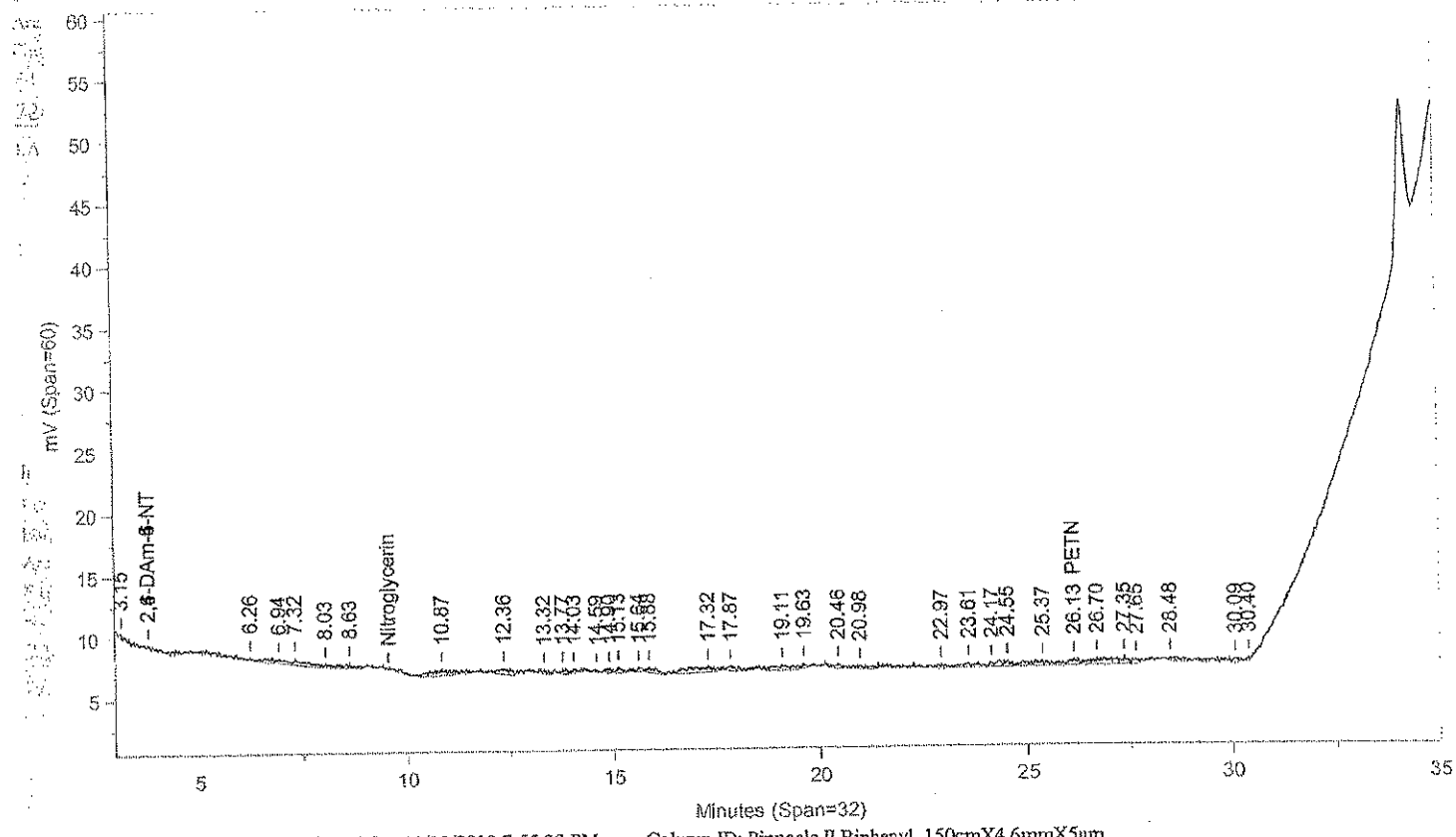
File: C:\CPWIN\DATA1\5C12310.37R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 7:55:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.37R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 7:55:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
16.76	507	11.937	4-Am-2,6-DNT		0	.	4-Am-2,6-DNT
18.845	973	26.103	1,3-DNB		0	.	1,3-DNB
.	0	.	PETN	26.127	10671	816.853	PETN
34.127	16419	4759.241	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.37A
Data File: C:\CPWIN\DATA1\5C12310B.37A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:45:46 PM
File Reported On: 11/20/2013 at 5:45:57 PM

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Data Summary

Sample Name: 7265240 R2142 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 18:14:03
Instrument X6329A
Result file 4E12310.71R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 93% (73 - 122) Conc: 9.346779

Analysis Report (B)

Injected on Nov 17, 2013 18:14:03
Instrument Y6329A
Result file 4C12310.71R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 115% (73 - 122) Conc: 11.548879

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.78	7.98	7	0.000586
2-NMX	25.41	25.78	26.09	15930	9.346779

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.29	4.40	164	0.031296
4-Nitrotoluene	27.60	28.02	28.12	1602	0.407539
2-NMX	34.12	34.26	34.32	18302	11.548879

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.346779				21.08	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Principal Specialist

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265240 R2142 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 18:14:03
Instrument : CP12--X6329A
Result file : 4E12310.71R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 93% (73-122) Conc.: 9.346779

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.78	7.98	7	0.000586
Tetryl breakdown	8.27	8.39	8.52	95	0.005480
2-NMX	25.41	25.78	26.09	15930	9.346779

Analysis Report (B)

Injected on : NOV 17, 2013 18:14:03
Instrument : CP12--X6329B
Result file : 4E12310B.71R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 93% (73-122) Conc.: 9.280292

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.87	26.24	226657	9.280292

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.346779				0.71	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Process Specialist

Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:22:42

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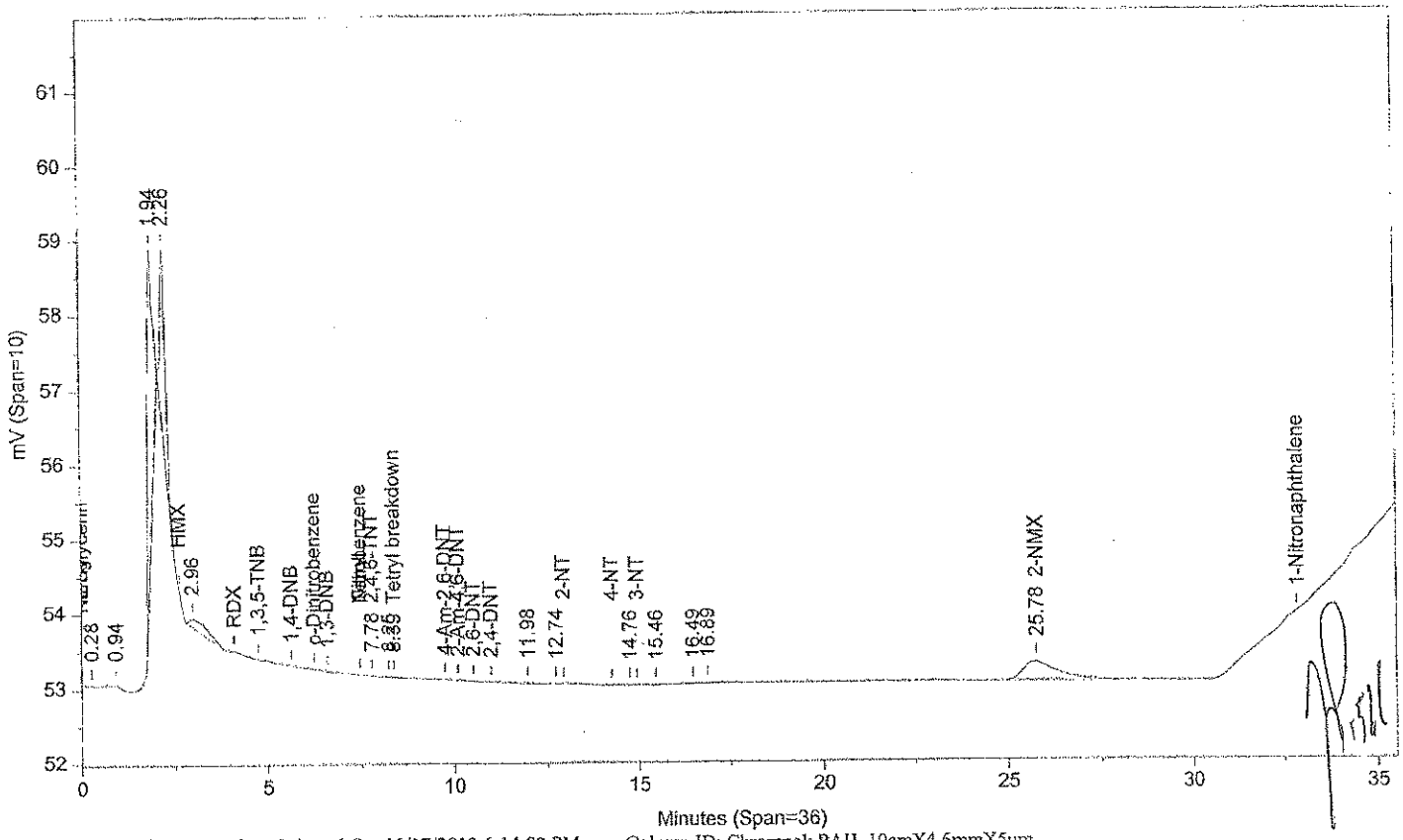
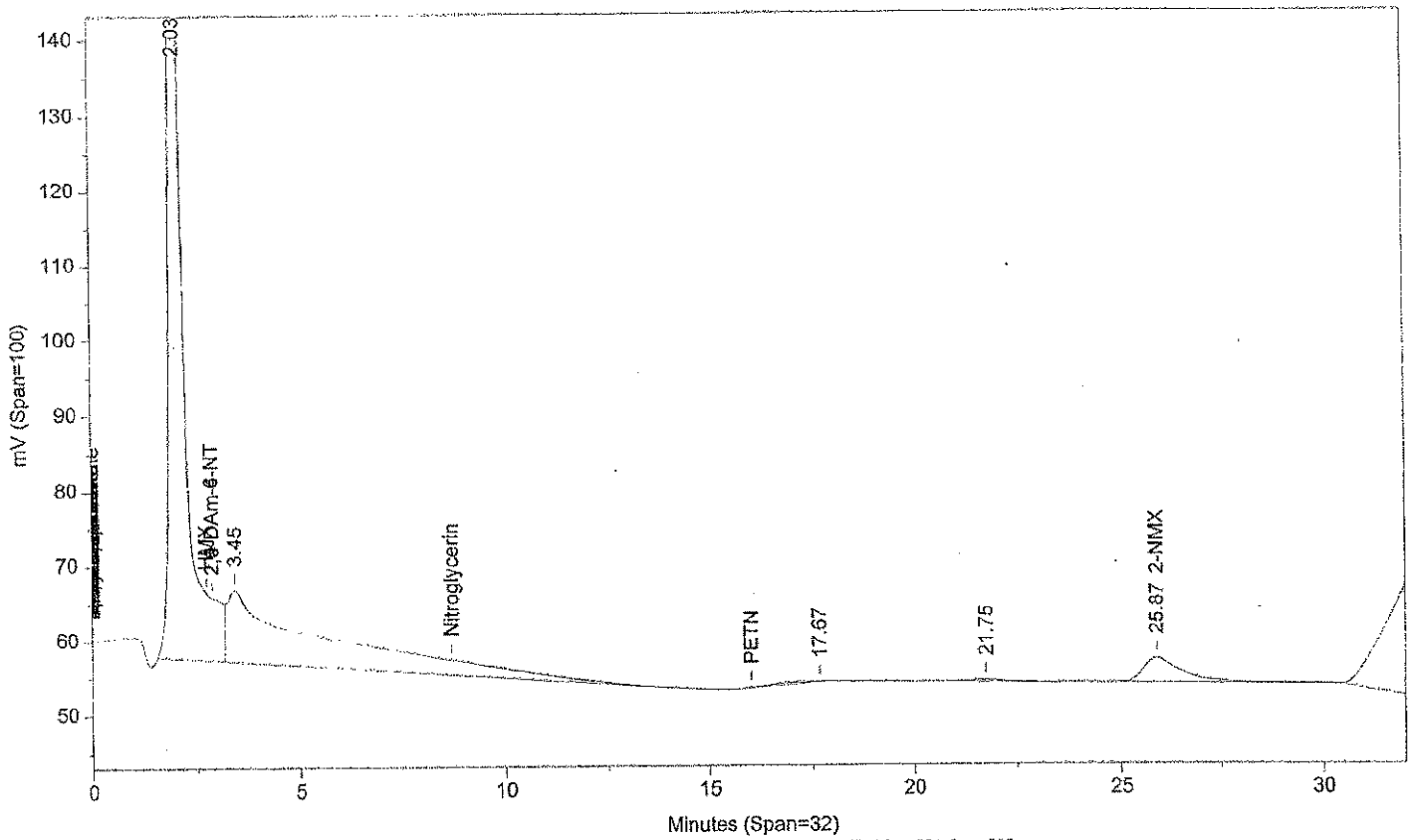
File: C:\CPWIN\DATA1\4E12310.71R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 6:14:02 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.71R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 6:14:02 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.782	7	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
8.389	95	.005	Tetryl breakdown	.	0	.	Tetryl breakdown
25.778	15930	9.347	2-NMX	25.874	226657	9.28	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.71A
Area File: C:\CPWIN\DATA1\4E12310B.71A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:06:38 PM
File Reported On: 11/17/2013 at 10:06:48 PM

Lancaster Laboratories Single Component Data Summary

Sample Name: 7265240 R2142 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 18:14:03
Instrument : CP12--Y6329A
Result file : 4C12310.71R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 115% (73-122) Conc.: 11.548879

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.29	4.40	164	0.031296
4-NT	27.60	28.02	28.12	1602	0.407539
2-NMX	34.12	34.26	34.32	18302	11.548879

Analysis Report (B)

Injected on : NOV 17, 2013 18:14:03
Instrument : CP12--Y6329B
Result file : 4C12310B.71R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.37	26.44	4612	0.776677

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.548879					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

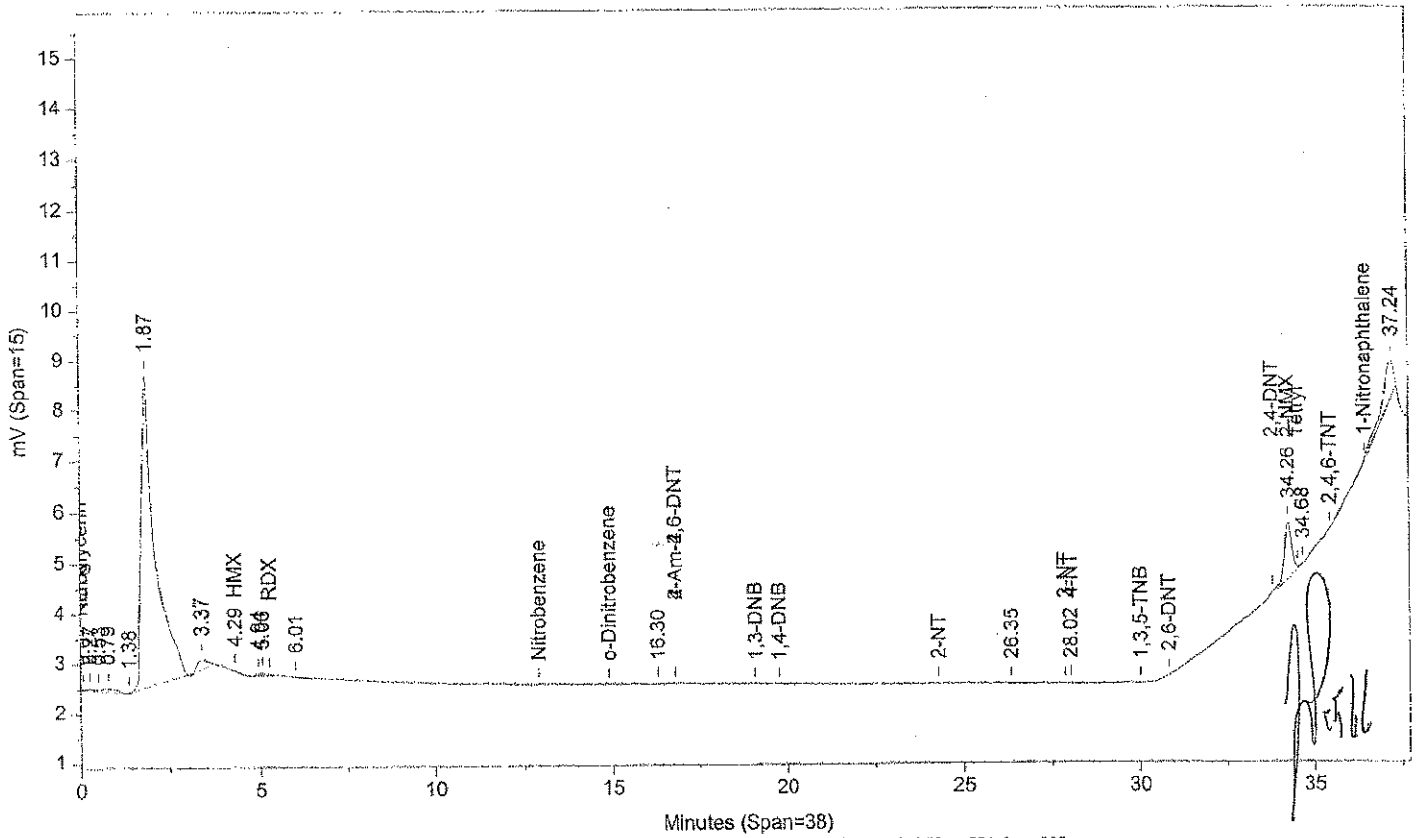
Verified by: Valerie L. Tompkins
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

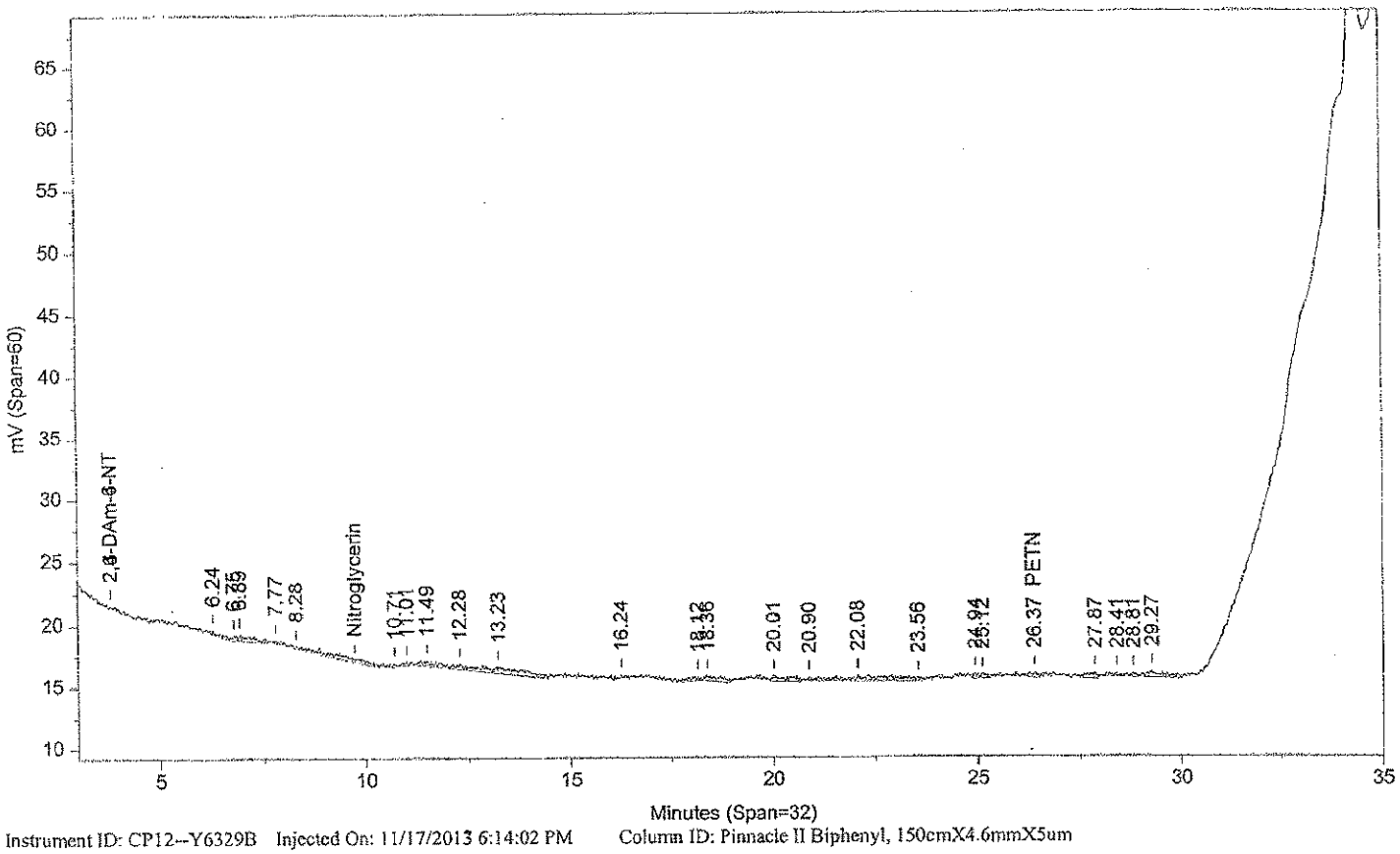
Printed on: 11/20/2013 15:34:02

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.71R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 6:14:02 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.71R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 6:14:02 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Mblume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.292	164	.031	HMX	.	0	.	HMX
.	0	.	PETN	26.371	4612	.777	PETN
28.016	1602	.408	4-NT	.	0	.	4-NT
34.258	18302	11.549	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.71A
Area File: C:\CPWIN\DATA1\4C12310B.71A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:20:42 PM
File Reported On: 11/17/2013 at 10:20:52 PM

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Data Summary

Sample Name: 7265241 2F142 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 03:35:02
Instrument X6329A
Result file 3E12310.43R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 102% (63 - 150) Conc: 5125.116699

Analysis Report (B)

Injected on Nov 14, 2013 03:35:02
Instrument Y6329A
Result file 3C12310.43R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 103% (63 - 150) Conc: 5158.922852

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.13	4.24	1277	20.686295
1,4-Dinitrobenzene	5.59	5.66	5.79	25	0.991078
Tetryl	7.43	7.61	7.71	51	1.476478
2,4,6-Trinitrotoluene	7.90	7.99	8.10	16	0.722203
4-Amino-2,6-dinitrotoluer	9.70	9.75	9.99	219	23.368282
2,6-Dinitrotoluene	10.56	10.58	10.84	63	5.20262
2-NMX	25.80	25.78	26.48	17470	5125.116699

Compound	Min	RT	Max	Area	Amount
1,3-DNB	19.04	19.23	19.34	388	11.449026
2-NMX	34.15	34.33	34.35	16153	5158.922852
1-Nitronaphthalene	36.38	36.40	36.58	127853	8247.378906

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5125.116699				0.66	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265241 2F142 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 03:35:02
Instrument : CP12--X6329A
Result file : 3E12310.43R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 102% (63-150) Conc.: 5125.11669

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.13	4.24	1277	20.686295
1,4-DNB	5.59	5.66	5.79	25	0.991078
Tetryl	7.43	7.61	7.71	51	1.476478
2,4,6-TNT	7.90	7.99	8.10	16	0.722203
4-Am-2,6-DNT	9.70	9.75	9.99	219	23.368282
2,6-DNT	10.56	10.58	10.84	63	5.202620
2-NMX	25.80	25.78	26.48	17470	5125.116699

Analysis Report (B)

Injected on : NOV 14, 2013 03:35:02
Instrument : CP12--X6329B
Result file : 3E12310B.43R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 103% (63-150) Conc.: 5141.38476

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.63	8.66	9.01	10361	810.716248
2-NMX	25.96	25.94	26.63	251141	5141.384766

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	coelutes		report primary (check for low confirmation)
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5125.116699				0.32	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

James H. Place, Senior Chemist
NOV 21 2013

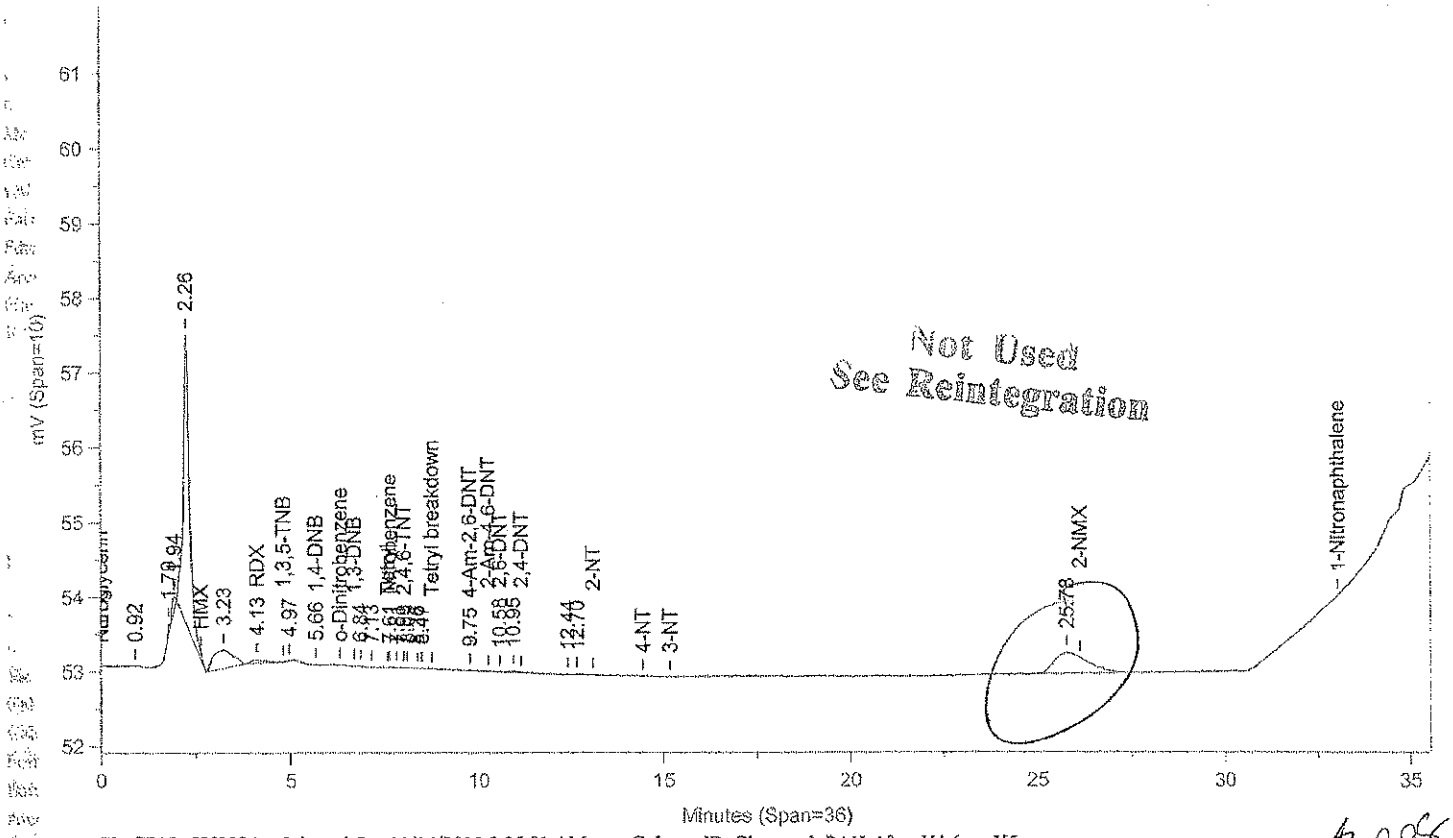
Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:49:50

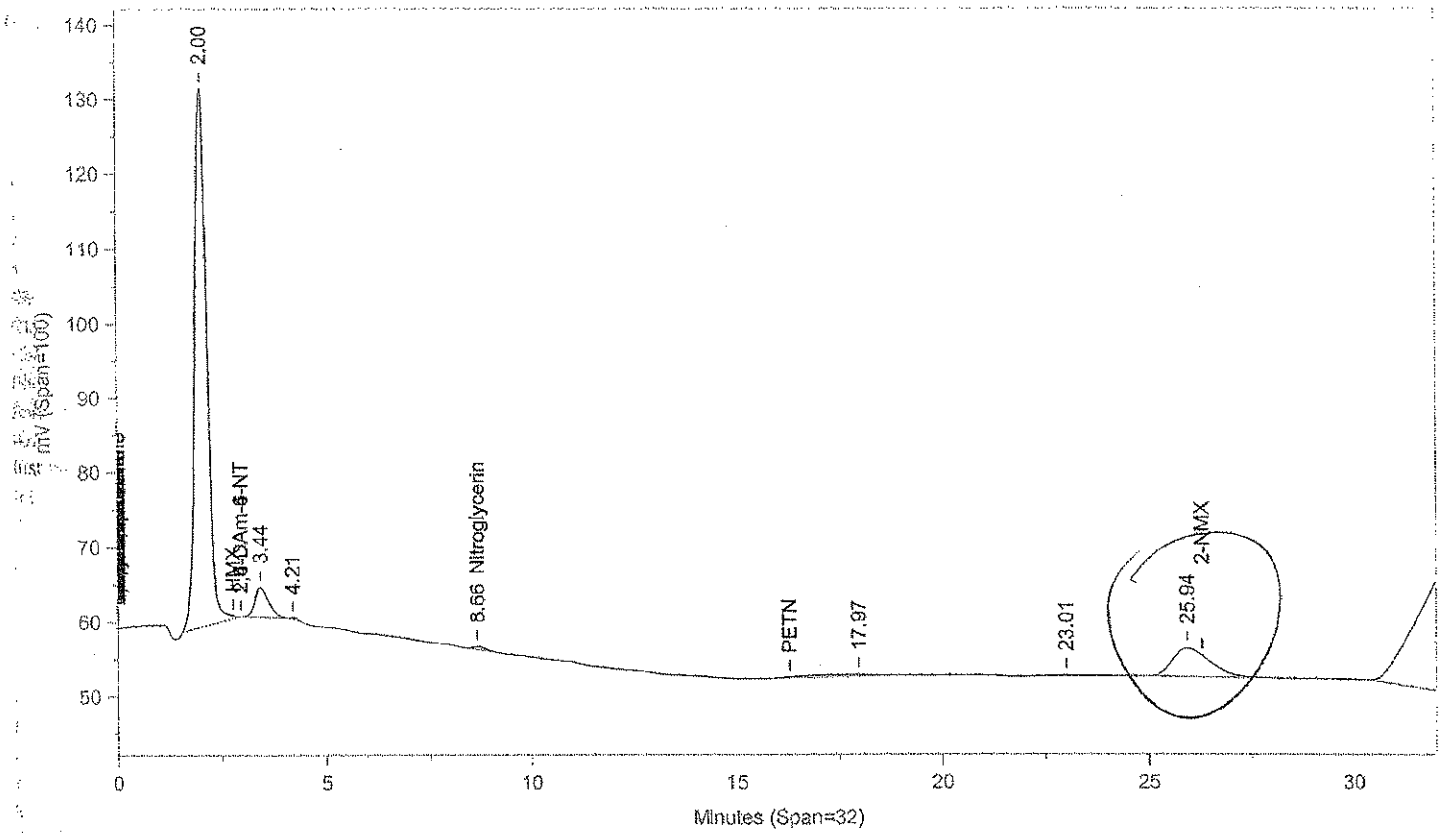
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.43R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 3:35:01 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

11/14 2853

File: C:\CPWIN\DATA1\3E12310B.43R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 3:35:01 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.132	1277	20.686	RDX	.	0	.	RDX
5.664	25	.991	1,4-DNB	.	0	.	1,4-DNB
7.612	51	1.482	Nitrobenzene	.	0	.	Nitrobenzene
8.993	16	.722	2,4,6-TNT	.	0	.	2,4,6-TNT
	0	.	Nitroglycerin	8.656	10361	810.716	Nitroglycerin
9.75	219	23.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.583	63	5.203	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\3E12310.43A
Area File: C:\CPWIN\DATA1\3E12310B.43A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
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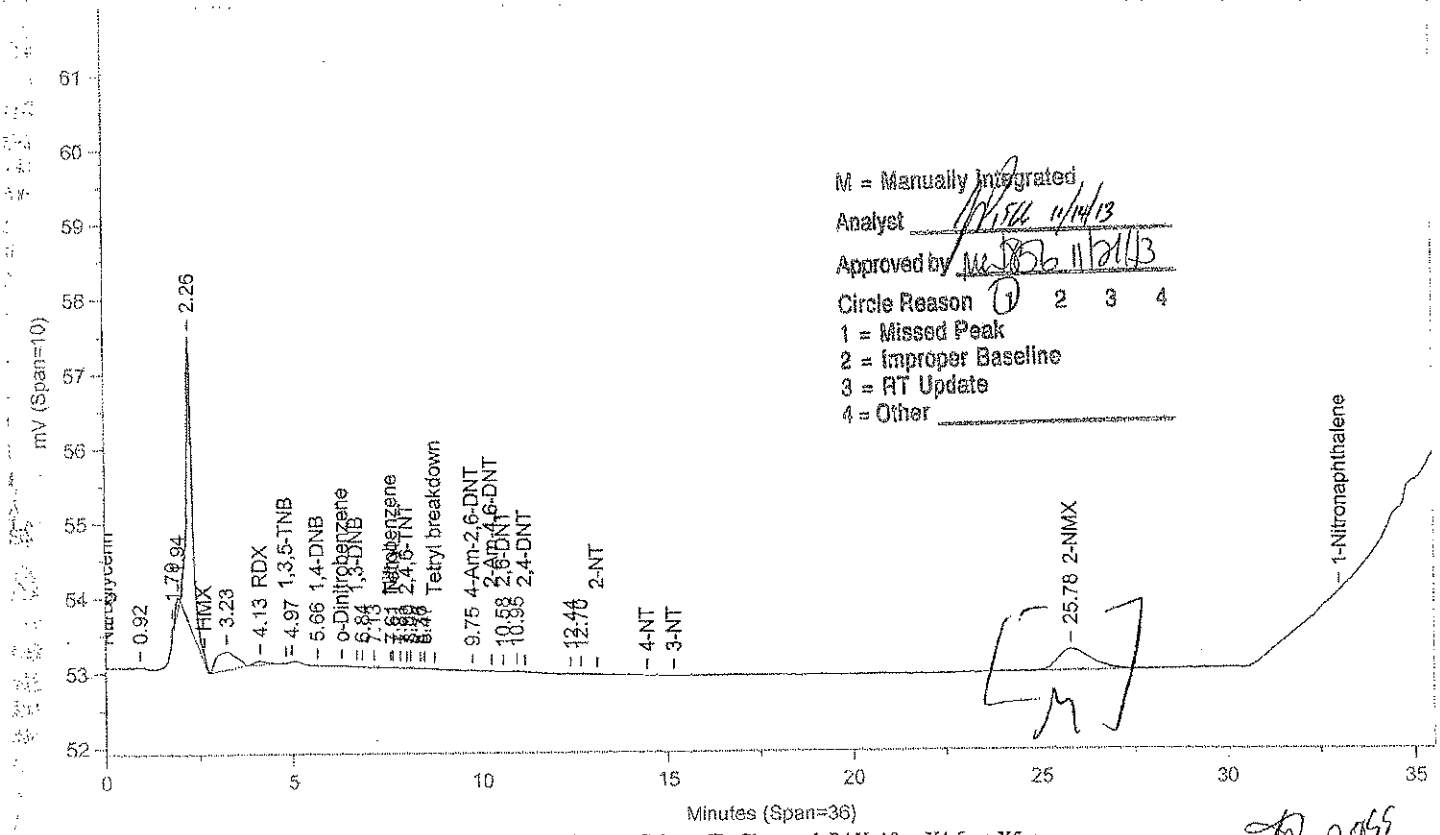
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 4:15:44 AM
File Reported On: 11/14/2013 at 4:15:55 AM

Not Used
See Reintegration

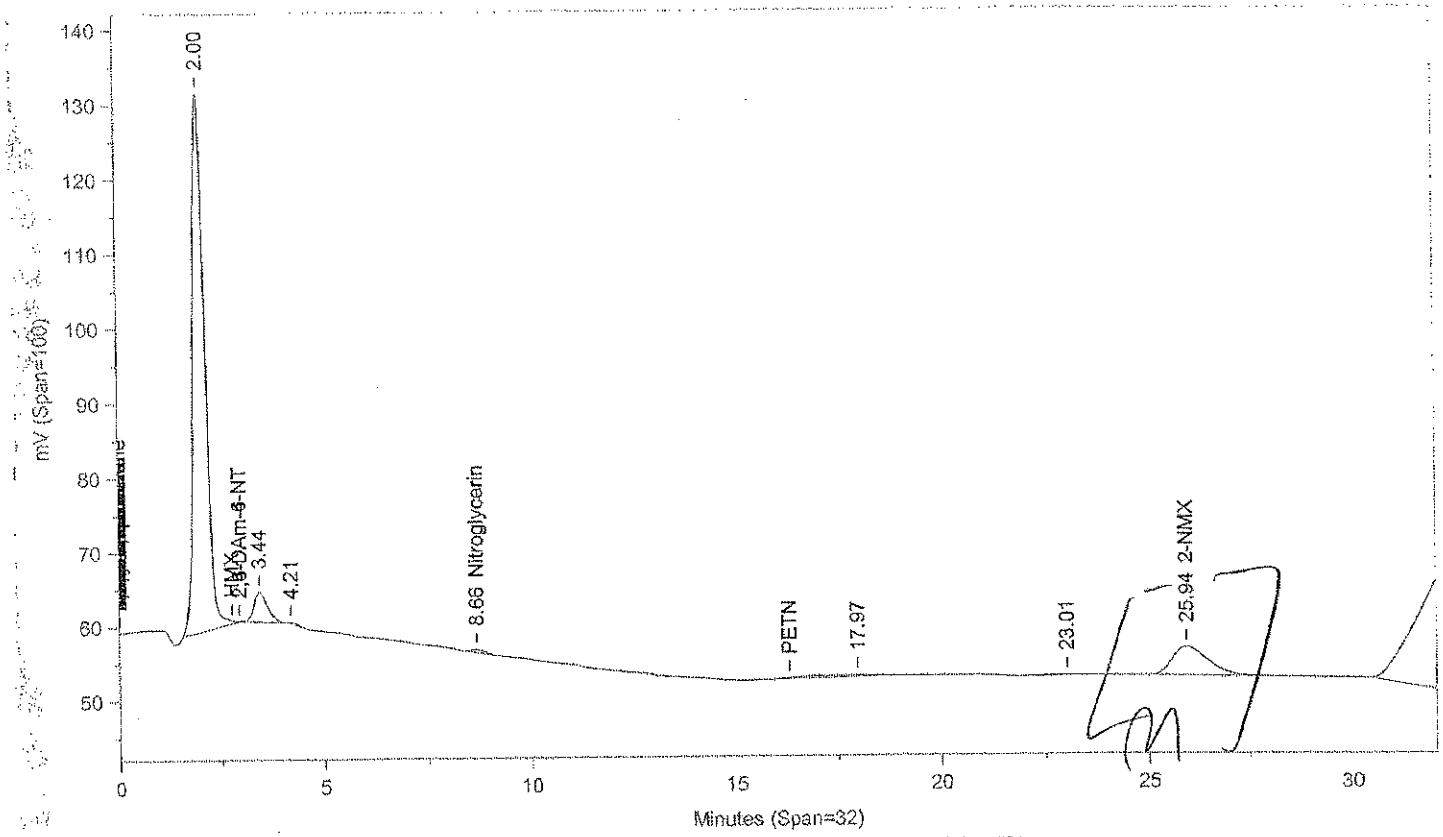
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.43R



M = Manually Integrated
Analyst 11/14/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/14/2013 3:35:01 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.43R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 3:35:01 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.132	1277	20.686	RDX	.	0	.	RDX
5.664	25	.991	1,4-DNB	.	0	.	1,4-DNB
7.612	51	1.476	Tetryl	.	0	.	Tetryl
7.993	16	.722	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.656	10361	810.716	Nitroglycerin
9.75	219	23.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.583	63	5.203	2,6-DNT	.	0	.	2,6-DNT
25.783	17470	5125.117	2-NMX	25.94	251141	5141.385	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:34:06 AM
File Reported On: 11/14/2013 at 11:34:04 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265241 2F142 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 03:35:02
Instrument : CP12--Y6329A
Result file : 3C12310.43R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 103% (63-150) Conc.: 5158.92285

Analysis Report (B)

Injected on : NOV 14, 2013 03:35:02
Instrument : CP12--Y6329B
Result file : 3C12310B.43R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.22	5.38	1674	-86.415482
1,3-DNB	19.04	19.23	19.34	388	11.449026
2-NMX	34.15	34.33	34.35	16153	5158.922852
1-Nitronaphthalene	36.38	36.40	36.58	127853	8247.378906

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			
☑ Nitroglycerin			<6000	<2000			Report
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5158.922852					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	8247.378906	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

James H. Place, Senior Chemist
NOV 21 2013

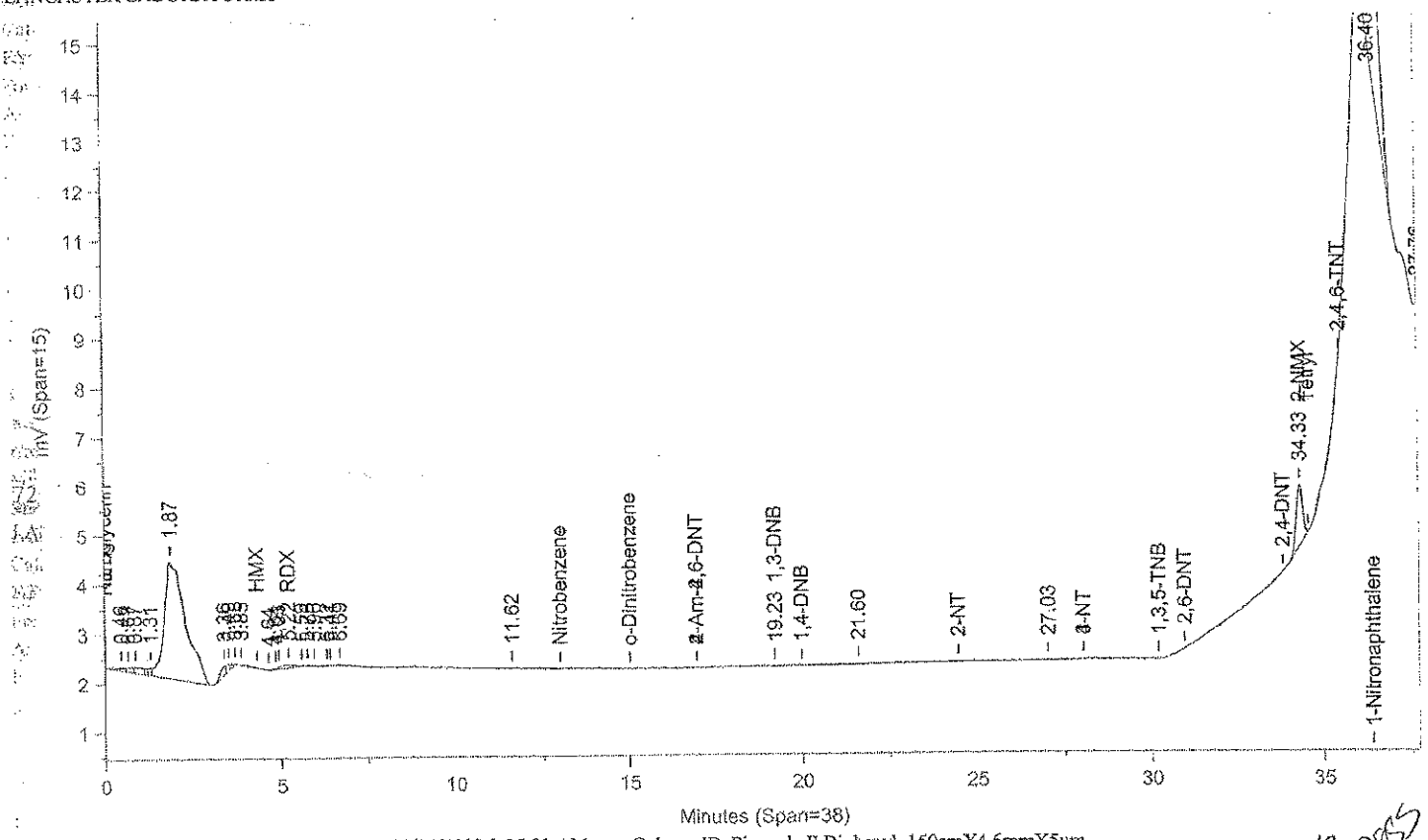
Verified by: Melissa A. McDermott, Wet Chem Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

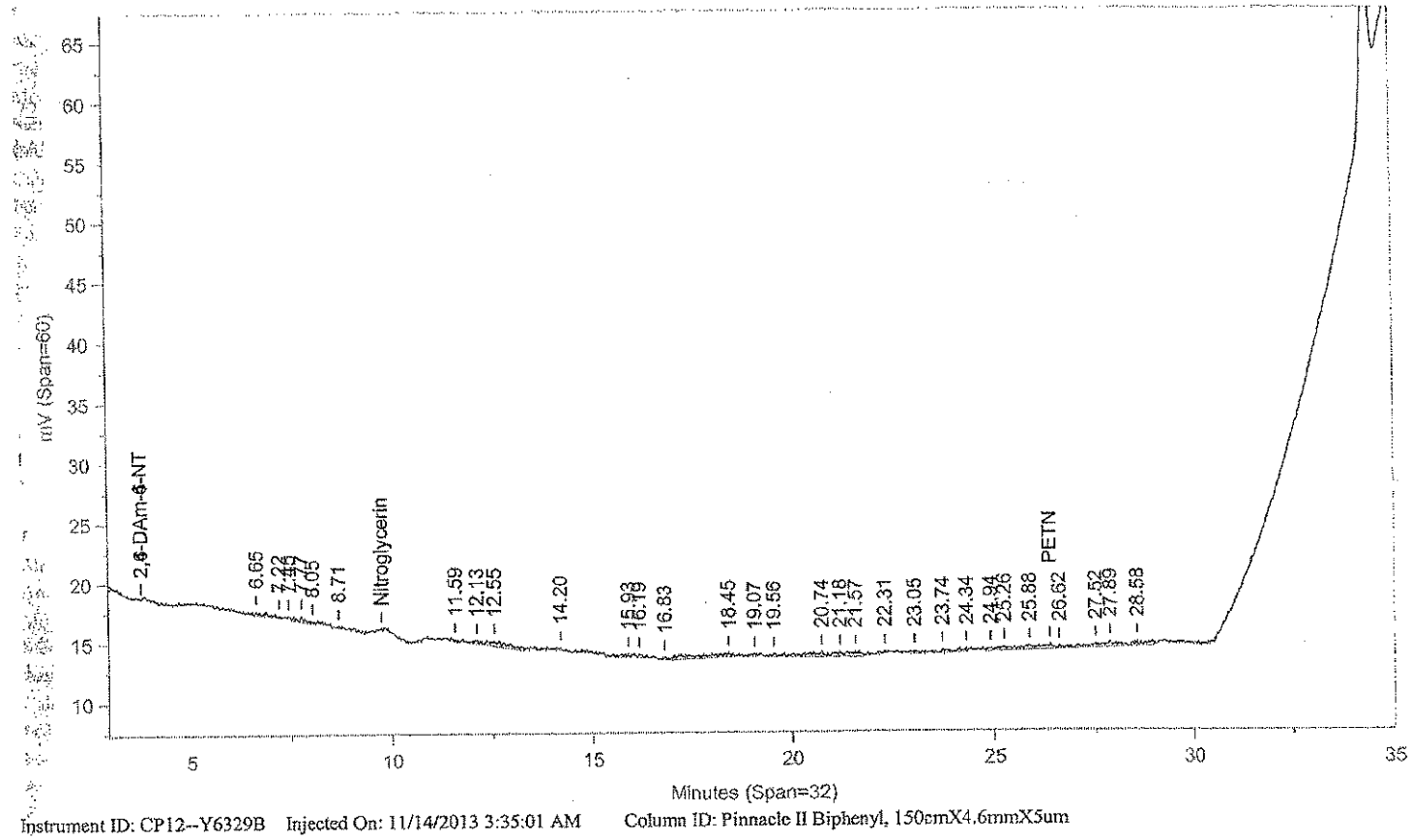
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.43R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 3:35:01 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.43R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 3:35:01 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.217	1674	-86.415	RDX	.	0	.	RDX
19.228	388	11.449	1,3-DNB	.	0	.	1,3-DNB
34.334	16153	5158.923	2-NMX	.	0	.	2-NMX
36.4	127853	8247.379	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.43A
Area File: C:\CPWIN\DATA1\3C12310B.43A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 4:15:10 AM
File Reported On: 11/14/2013 at 4:15:19 AM

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Data Summary

Sample Name: 7265242 R2121 Sample ID: AA **Batchnumber:** 133110004A

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 04:17:28
Instrument X6329A
Result file 3E12310.44R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 117% (63 - 150) Conc: 5854.263184

Analysis Report (B)

Injected on Nov 14, 2013 04:17:27
Instrument Y6329A
Result file 3C12310.44R
Calibration file 2C12310
Method file 8330C

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	12.82	13.72	13.14	28310	1505.800171
2-NMX	34.15	34.32	34.35	16901	5373.200684
1-Nitronaphthalene	36.38	36.40	36.58	7692	756.354004

Single Component Data

Compound	Min	RT	Max	Area	Amount
o-Dinitrobenzene	6.20	6.36	6.40	47	4.57992
Nitrobenzene	7.43	7.22	7.71	28301	822.021545
2,6-Dinitrotoluene	10.56	10.69	10.84	61	5.048502
2,4-Dinitrotoluene	11.03	11.27	11.31	33	1.007686
2-NMX	25.80	25.86	26.48	19956	5854.263184

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<850	<850			
☑ Nitrobenzene			<1510	<1510			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5854.263184				8.57	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Melissa A. McDermott
Senior Chemist Group Leader

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265242 R2121 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 04:17:28
Instrument : CP12--X6329A
Result file : 3E12310.44R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 117% (63-150) Conc.: 5854.26318

Peak name	Min	R.T.	Max	Area	Amount
3,5-Dinitrobenzene	6.20	6.36	6.40	47	4.579920
Nitrobenzene	7.43	7.22	7.71	28301	822.021545
2,6-DNT	10.56	10.69	10.84	61	5.048502
2,4-DNT	11.03	11.27	11.31	33	1.007686
2-NMX	25.80	25.86	26.48	19956	5854.263184

Analysis Report (B)

Injected on : NOV 14, 2013 04:17:28
Instrument : CP12--X6329B
Result file : 3E12310B.44R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 5257.64355

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.03	26.63	256820	5257.643555

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			Repor Confirmation
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 3,5-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<450 <300	<450 <153	J/C		Coelutors need confirmation (confirmation check for low)
☑ Nitrobenzene	A	822.021545	<450 <300	<450 <100	J/C	<1510	need confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5854.263184				10.74	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

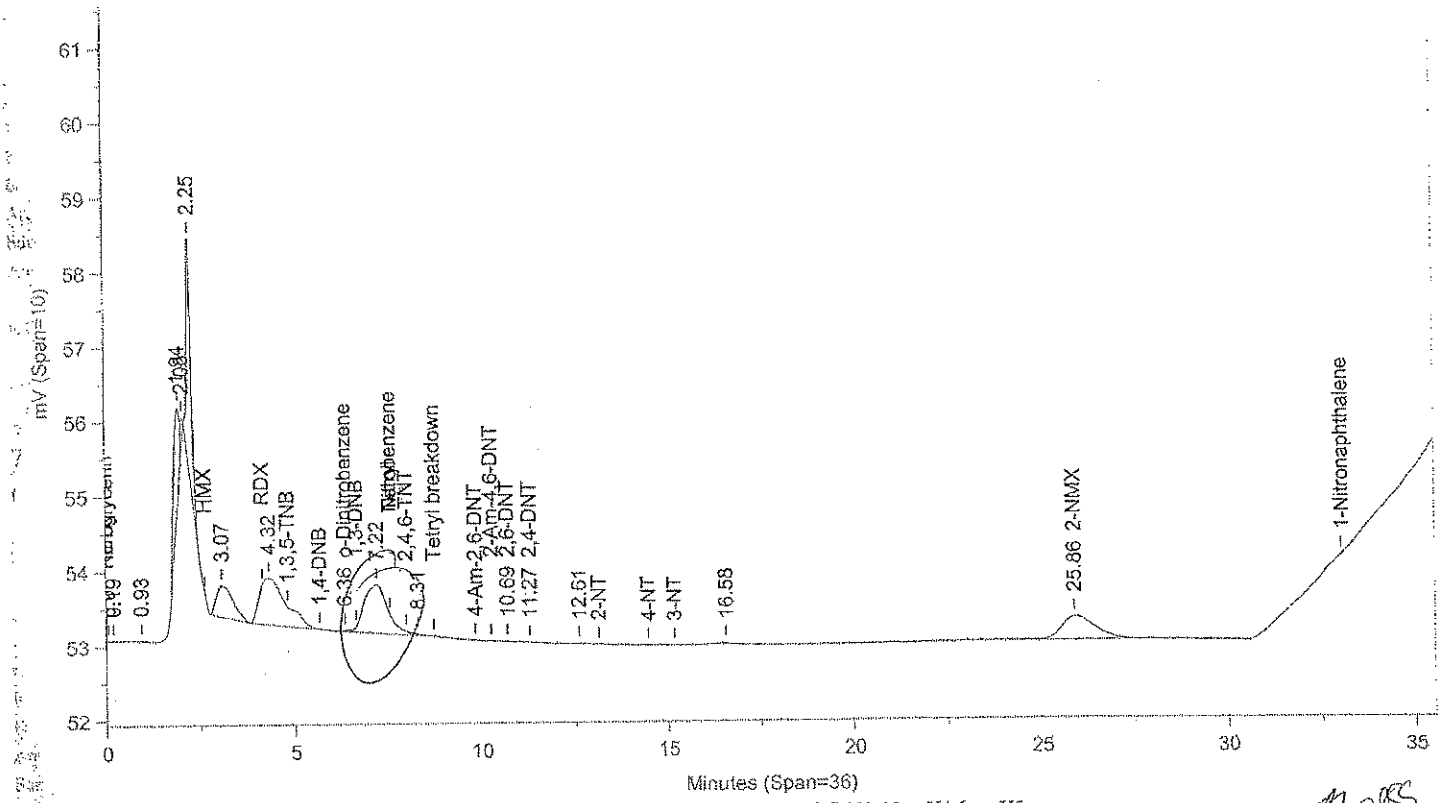
Verified by: Melissa A. McDermott, Senior Chemist or Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

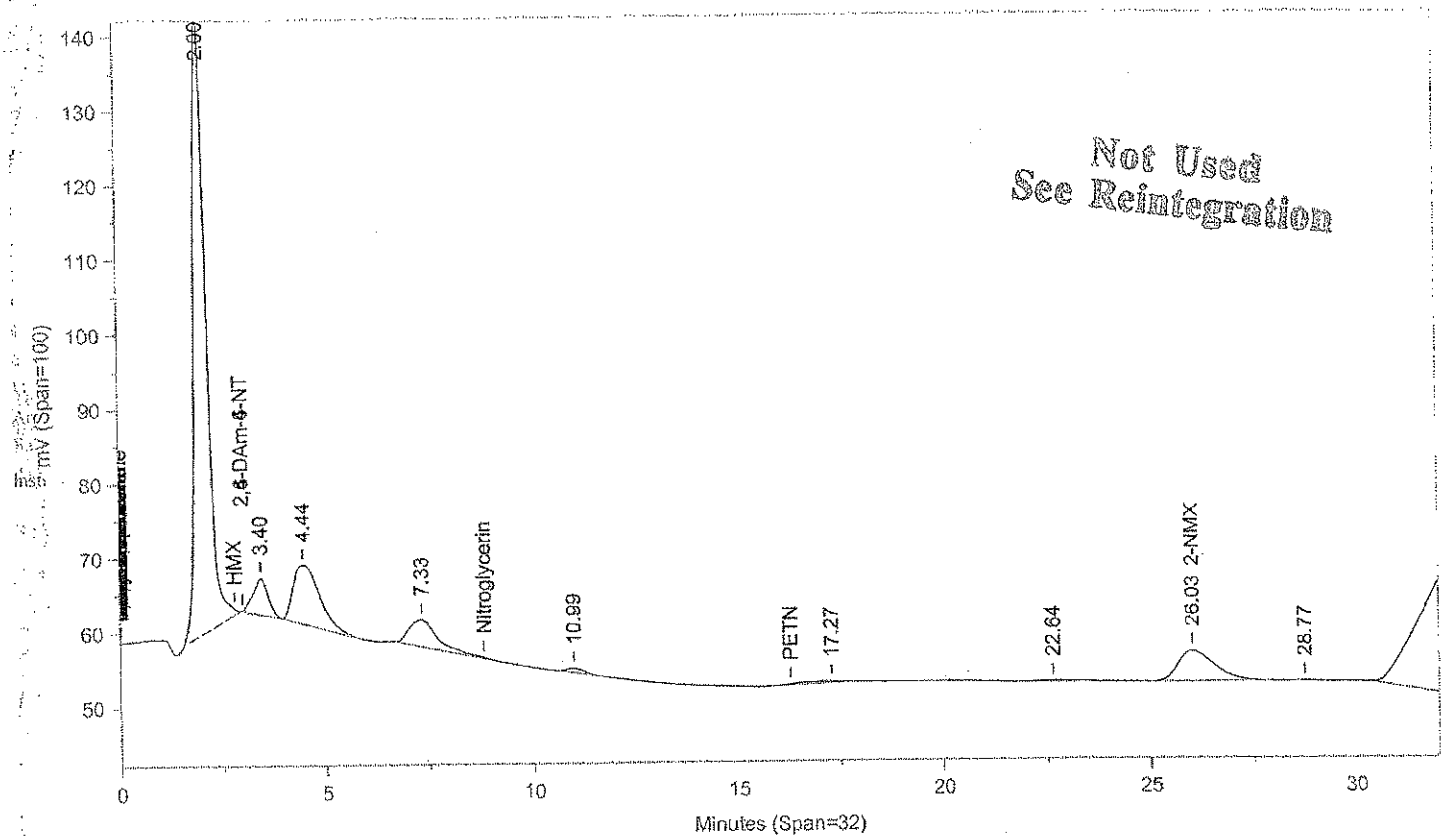
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.44R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 4:17:27 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

285

File: C:\CPWIN\DATA1\3E12310B.44R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/14/2013 4:17:27 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
6.365	47	4.58	o-Dinitrobenzene		0		o-Dinitrobenzene
10.692	61	5.049	2,6-DNT		0		2,6-DNT
11.274	33	1.008	2,4-DNT		0		2,4-DNT
25.855	19956	5854.263	2-NMX	26.033	256820	5257.644	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.44A
Area File: C:\CPWIN\DATA1\3E12310B.44A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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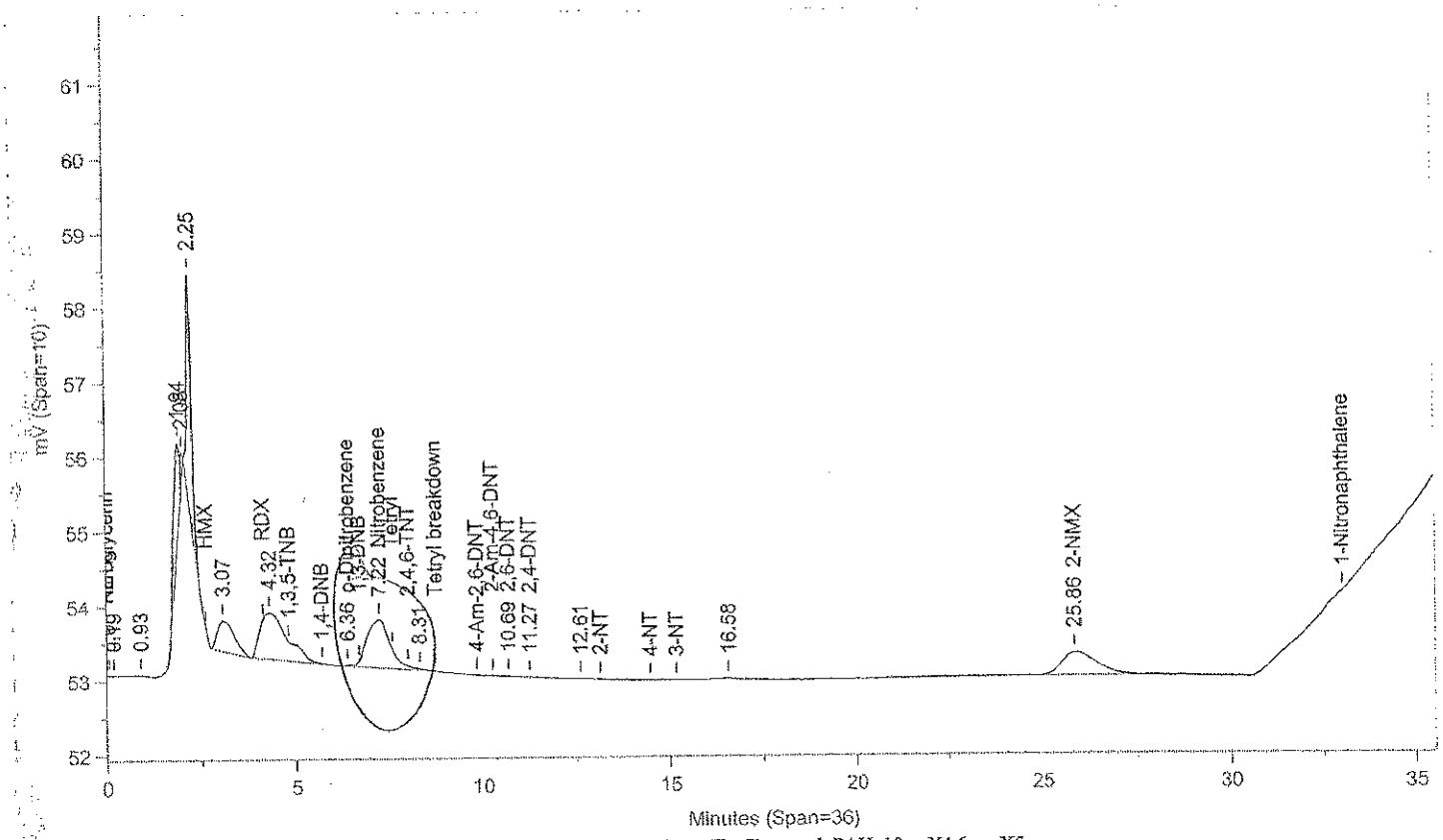
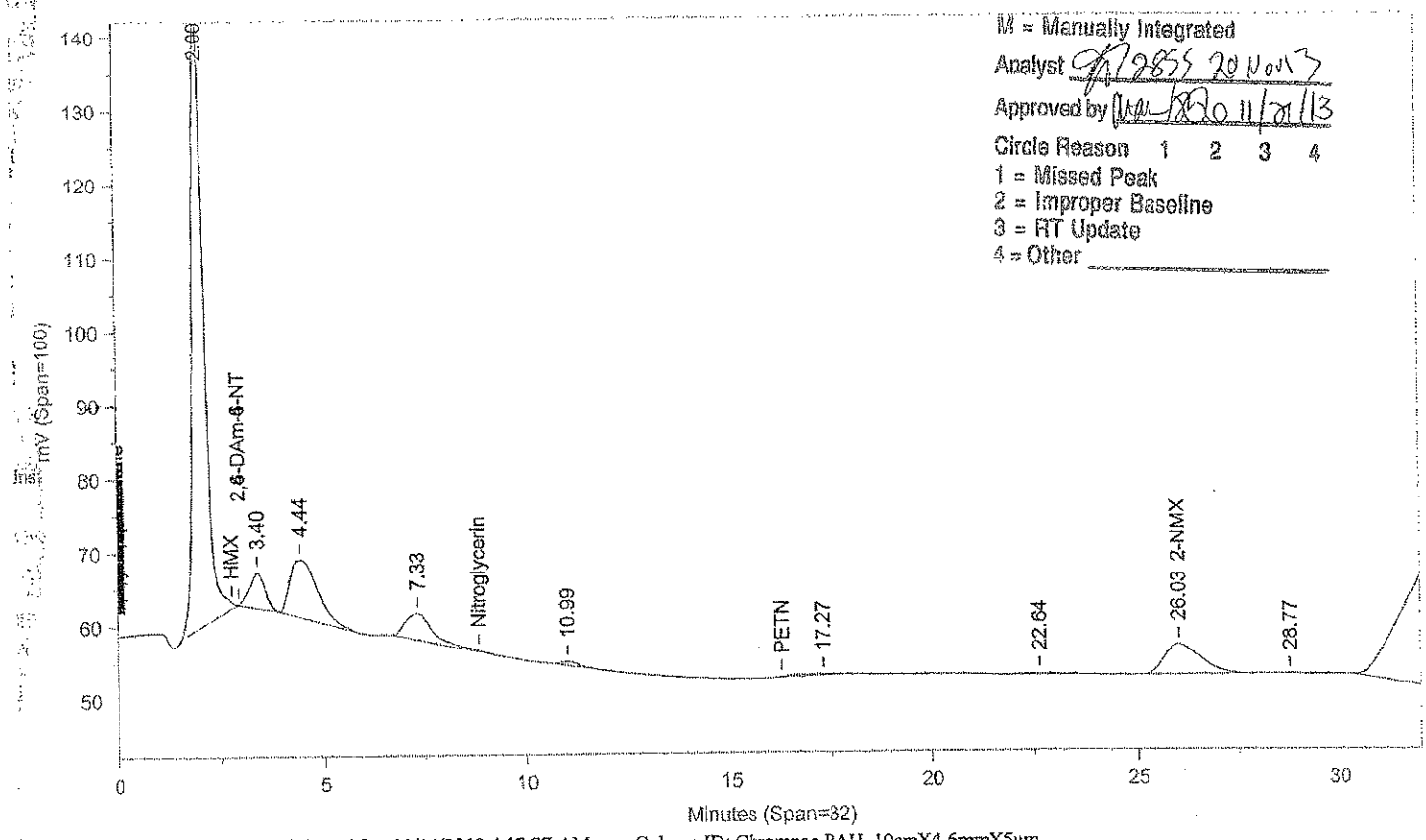
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.44R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 4:17:27 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.44R



M = Manually Integrated
Analyst 11/28/13
Approved by 11/28/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/14/2013 4:17:27 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2

Dilution Factor: 20

Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
6.365	47	4.58	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.22	28301	822.022	Nitrobenzene	.	0	.	Nitrobenzene
10.692	61	5.049	2,6-DNT	.	0	.	2,6-DNT
11.274	33	1.008	2,4-DNT	.	0	.	2,4-DNT
25.855	19956	5854.263	2-NMX	26.033	256820	5257.644	2-NMX

Data Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:27:16 PM
File Reported On: 11/20/2013 at 11:27:15 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265242 R2121 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 04:17:27
Instrument : CP12--Y6329A
Result file : 3C12310.44R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 107% (63-150) Conc.: 5373.20068

Analysis Report (B)

Injected on : NOV 14, 2013 04:17:27
Instrument : CP12--Y6329B
Result file : 3C12310B.44R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitrobenzene	12.82	13.72	13.14	28310	1505.800171
2-NMX	34.15	34.32	34.35	16901	5373.200684
1-Nitronaphthalene	36.38	36.40	36.58	7692	756.354004

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
2,4-DAm-6-NT							
2,6-DAm-4-NT							
PETN			<6000	<2000			Report
Nitroglycerin			<6000	<2000			
HMX			<750	<250			
RDX			<300	125		11/14/13	Report
Nitrobenzene	A	1505.800171	300	100	WC		
o-Dinitrobenzene			<300	<100			
4-Am-2,6-DNT			<300	<150	7 Coeluters		report primary
2-Am-4,6-DNT			<300	<100			report primary
1,3-DNB			<300	<100			
1,4-DNB			<300	<100			
2-NT			<300	<200			
4-NT			<300	<200	7 coeluters		report primary
3-NT			<300	<250			report primary
1,3,5-TNB			<300	<100			Report
2,6-DNT			<300	<100			
2,4-DNT			<300	<100			
2-NMX	A	5373.200684					
Tetryl			<300	<153			report primary
2,4,6-TNT			<300	<100			
1-Nitronaphthalene	A	756.354004	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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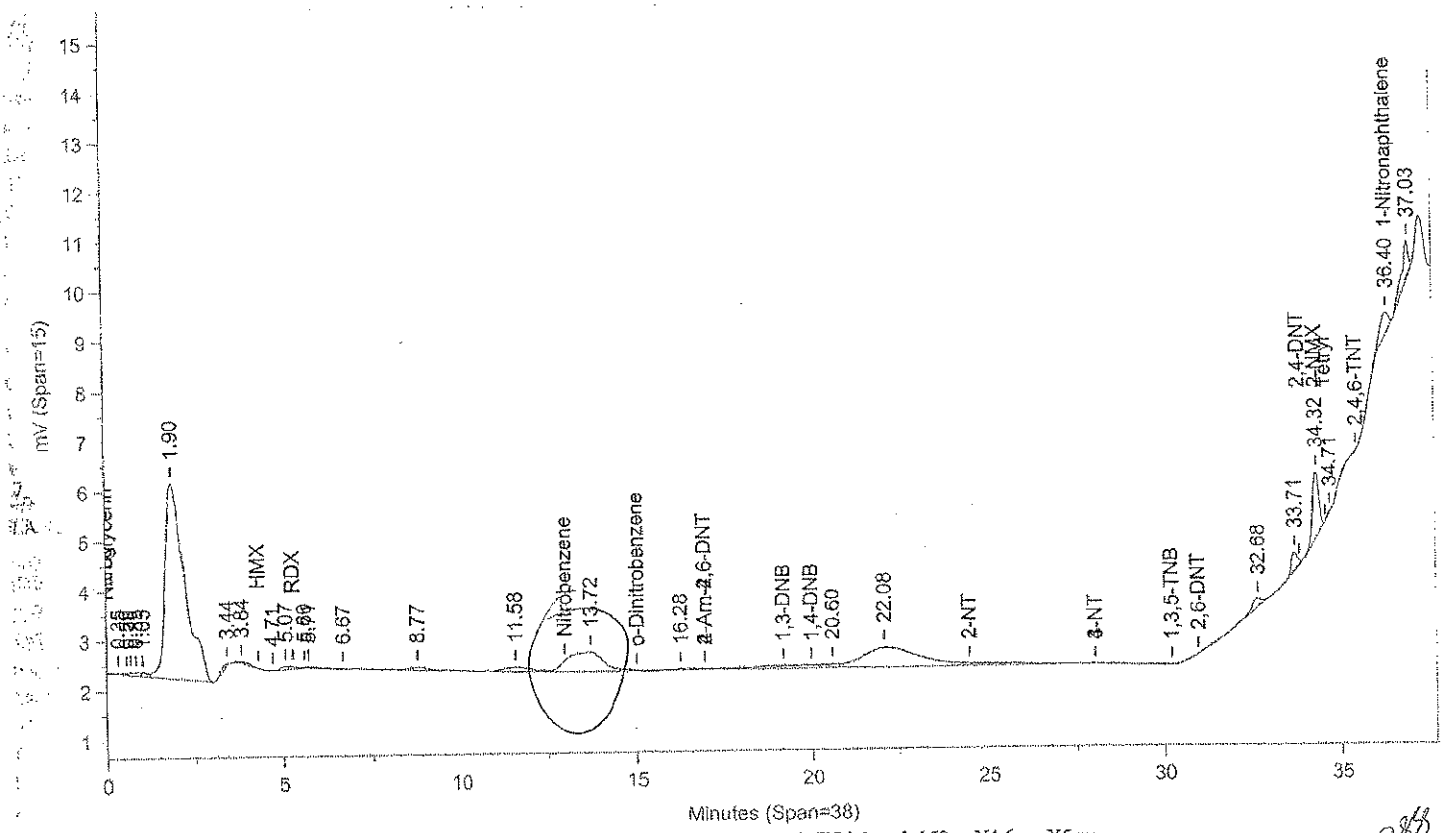
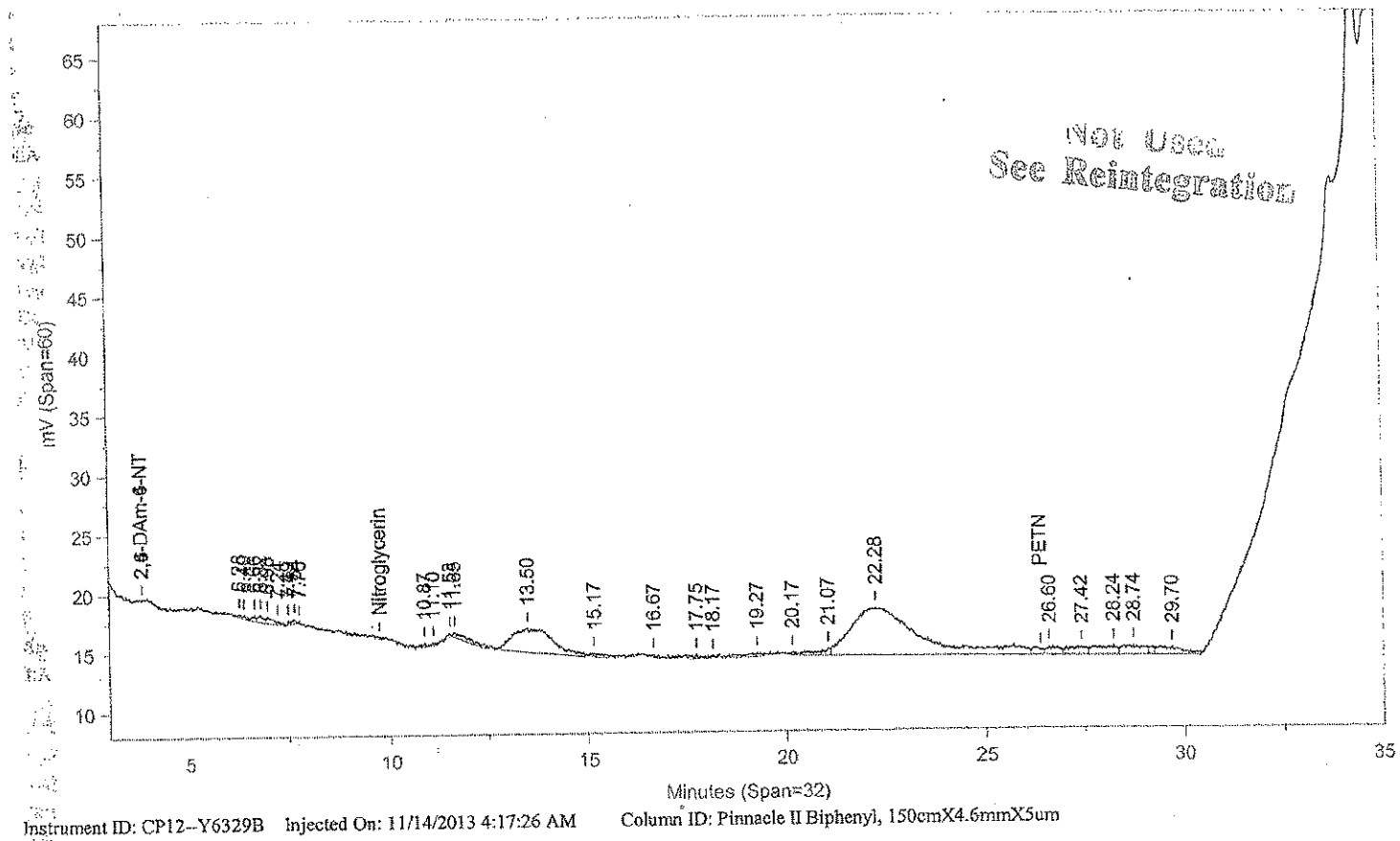
File: C:\CPWIN\DATA1\3C12310.44R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 4:17:26 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.44R



Not Used See Reintegration

Instrument ID: CP12--Y6329B Injected On: 11/14/2013 4:17:26 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

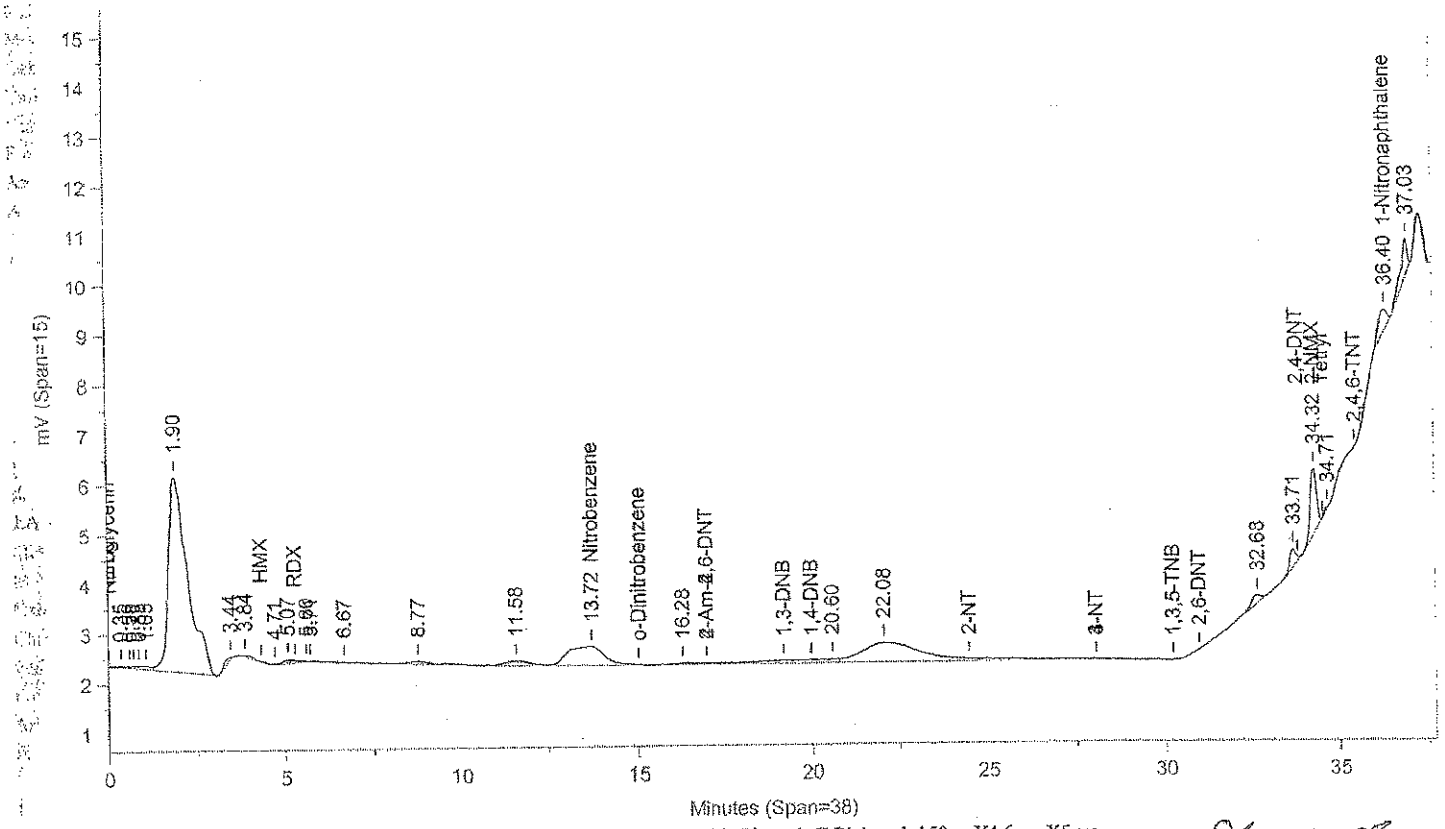
Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.317	16901	5373.201	2-NMX			0	2-NMX
36.405	7692	756.354	1-Nitronaphthalene			0	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.44A
Area File: C:\CPWIN\DATA1\3C12310B.44A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 4:57:34 AM
File Reported On: 11/14/2013 at 4:57:45 AM

Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.44R

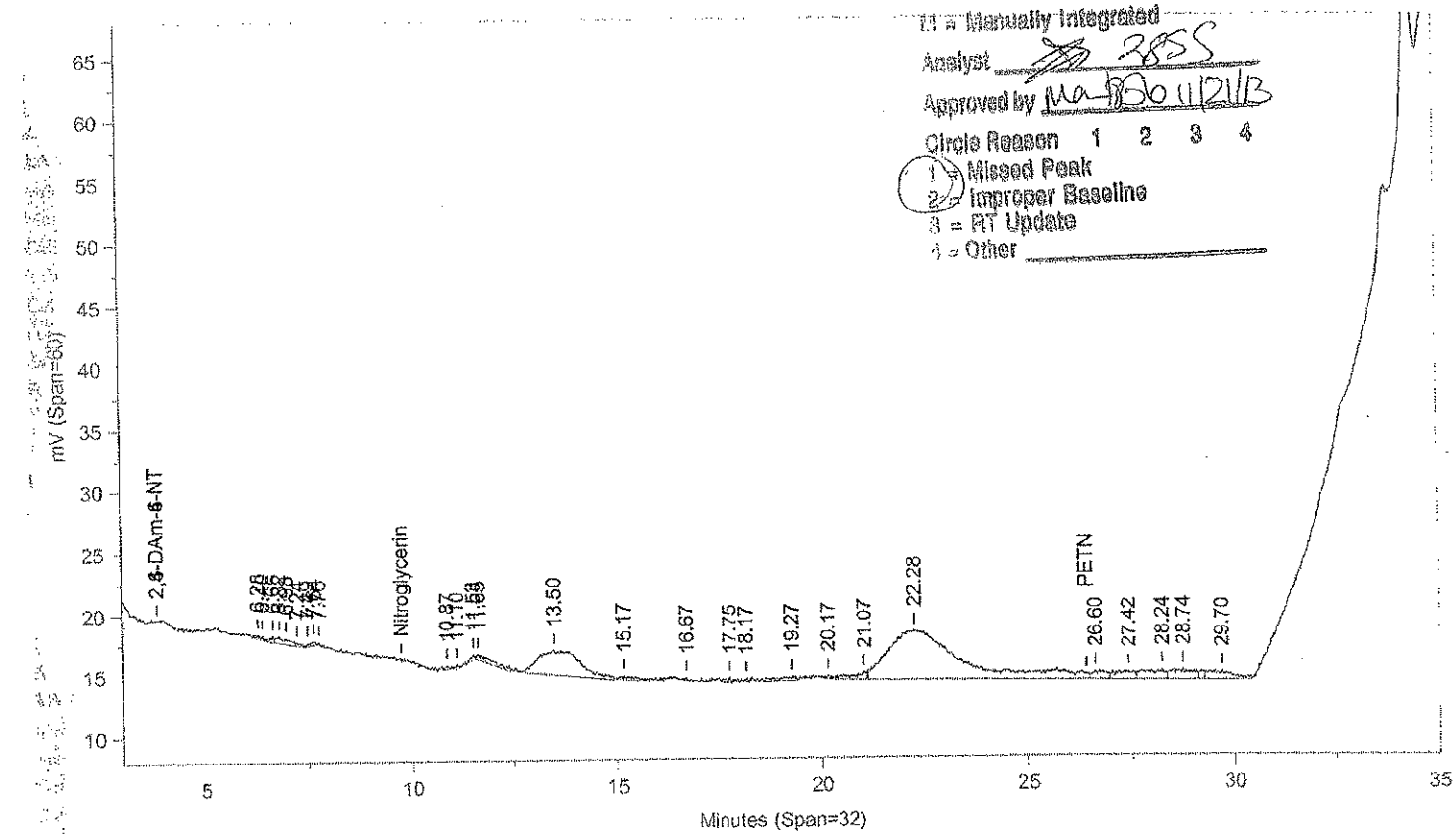


Instrument ID: CP12--Y6329A Injected On: 11/14/2013 4:17:26 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

2855

File: C:\CPWIN\DATA1\3C12310B.44R

M = Manually Integrated
Analyst 2855
Approved by [illegible] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 4:17:26 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
13.721	28310	1505.8	Nitrobenzene	.	0	.	Nitrobenzene
34.317	16901	5373.201	2-NMX	.	0	.	2-NMX
36.405	7692	756.354	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:51:28 PM
File Reported On: 11/20/2013 at 11:51:26 PM

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Data Summary

Sample Name: 7265243 R2122 Sample ID: AA **Batchnumber: 133130015A**

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 18:56:31
Instrument	X6329A
Result file	4E12310.72R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 83% (73 - 122) Conc: 8.291686

Analysis Report (B)

Injected on	Nov 17, 2013 18:56:30
Instrument	Y6329A
Result file	4C12310.72R
Calibration file	3C12310
Method file	8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.92	7.98	4	0.000391
2-NMX	25.41	25.22	26.09	14132	8.291686

Compound	Min	RT	Max	Area	Amount
4-Nitrotoluene	27.60	28.02	28.12	1766	0.424045
2-NMX	34.12	34.20	34.32	17540	11.112123

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.45			
☑ 2-NMX	A	8.291686				29.07	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylo, Principal Specialist

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265243 R2122 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 18:56:31
Instrument : CP12--X6329A
Result file : 4E12310.72R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 83% (73-122) Conc.: 8.291686

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.92	7.98	4	0.000391
Tetryl breakdown	8.27	8.44	8.52	57	0.003325
2-NMX	25.41	25.22	26.09	14132	8.291686

Analysis Report (B)

Injected on : NOV 17, 2013 18:56:31
Instrument : CP12--X6329B
Result file : 4E12310B.72R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 90% (73-122) Conc.: 9.03489

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.36	26.24	220663	9.034890

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.45 ~~<0.4~~			w/c off confirmation
☐ 2-NMX	A	8.291686				8.58	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaghe, Chemical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/21/2013 14:11:29

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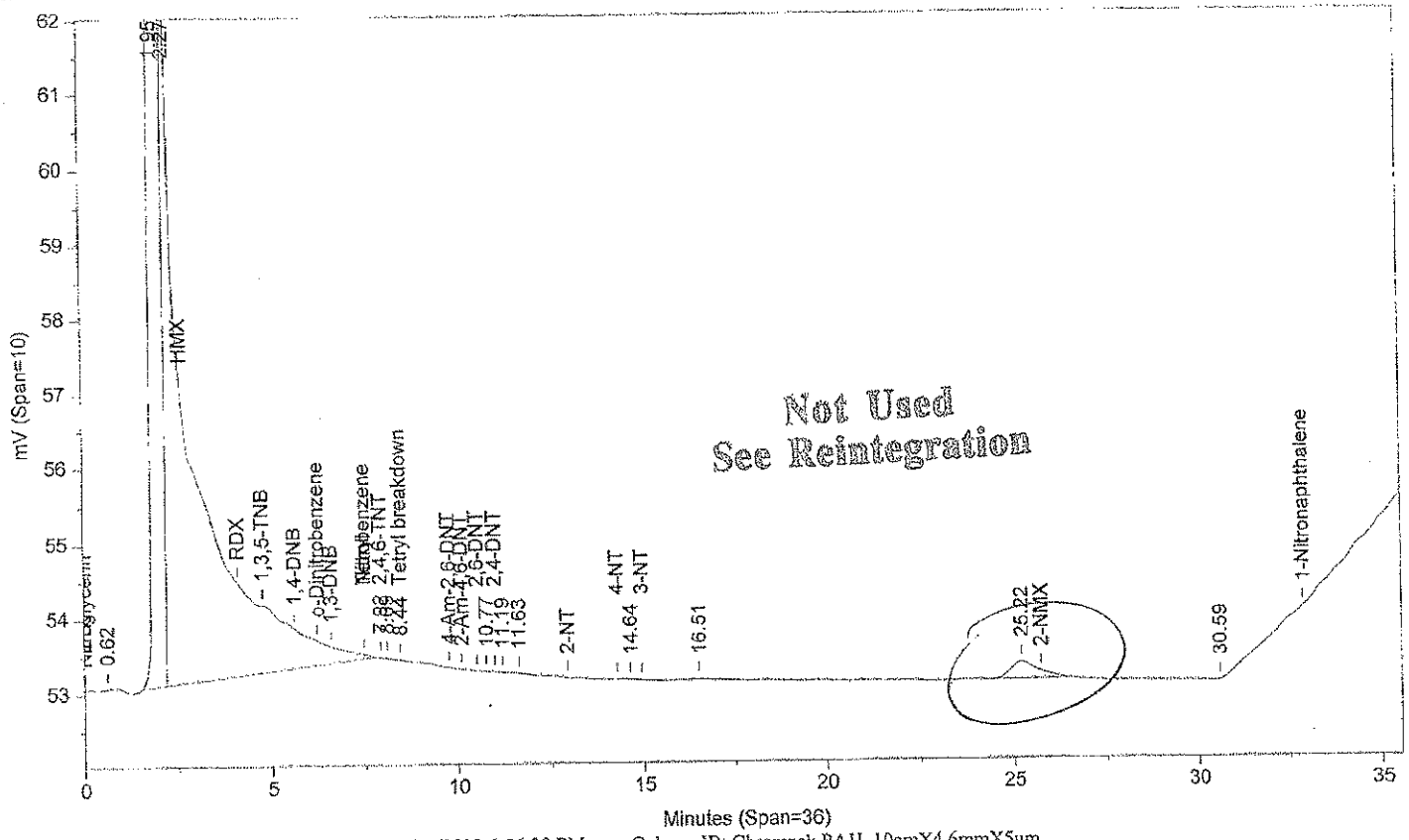
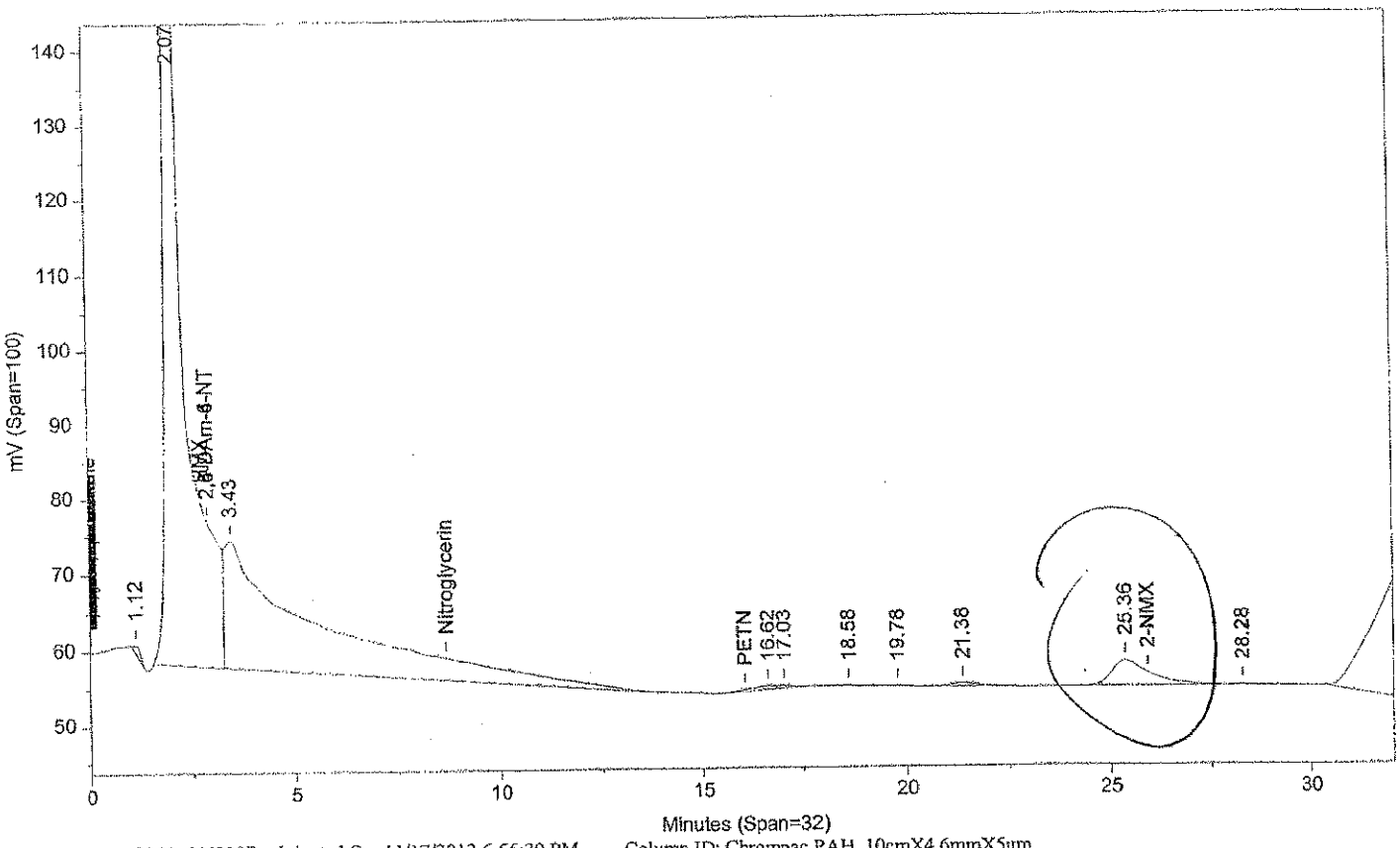


Instrument ID: CP12--X6329A Injected On: 11/17/2013 6:56:30 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.72R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 6:56:30 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.916	4	.	2,4,6-TNT	.	0	.	2,4,6-TNT
8.445	57	.003	Tetryl breakdown	.	0	.	Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\4E12310.72A
Area File: C:\CPWIN\DATA1\4E12310B.72A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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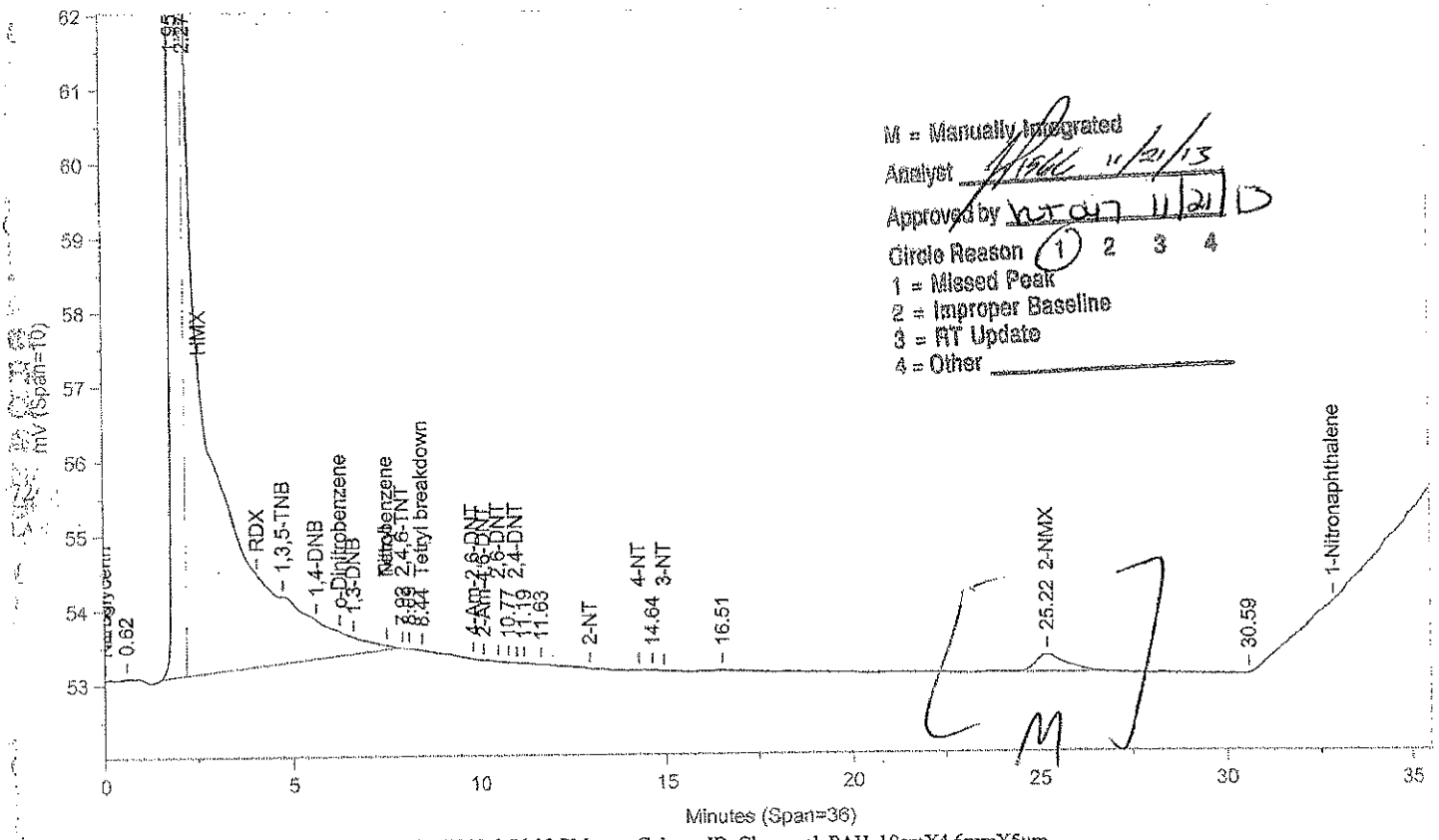
File Reported On: 11/17/2013 at 10:07:11 PM

Not Used
See Reintegration

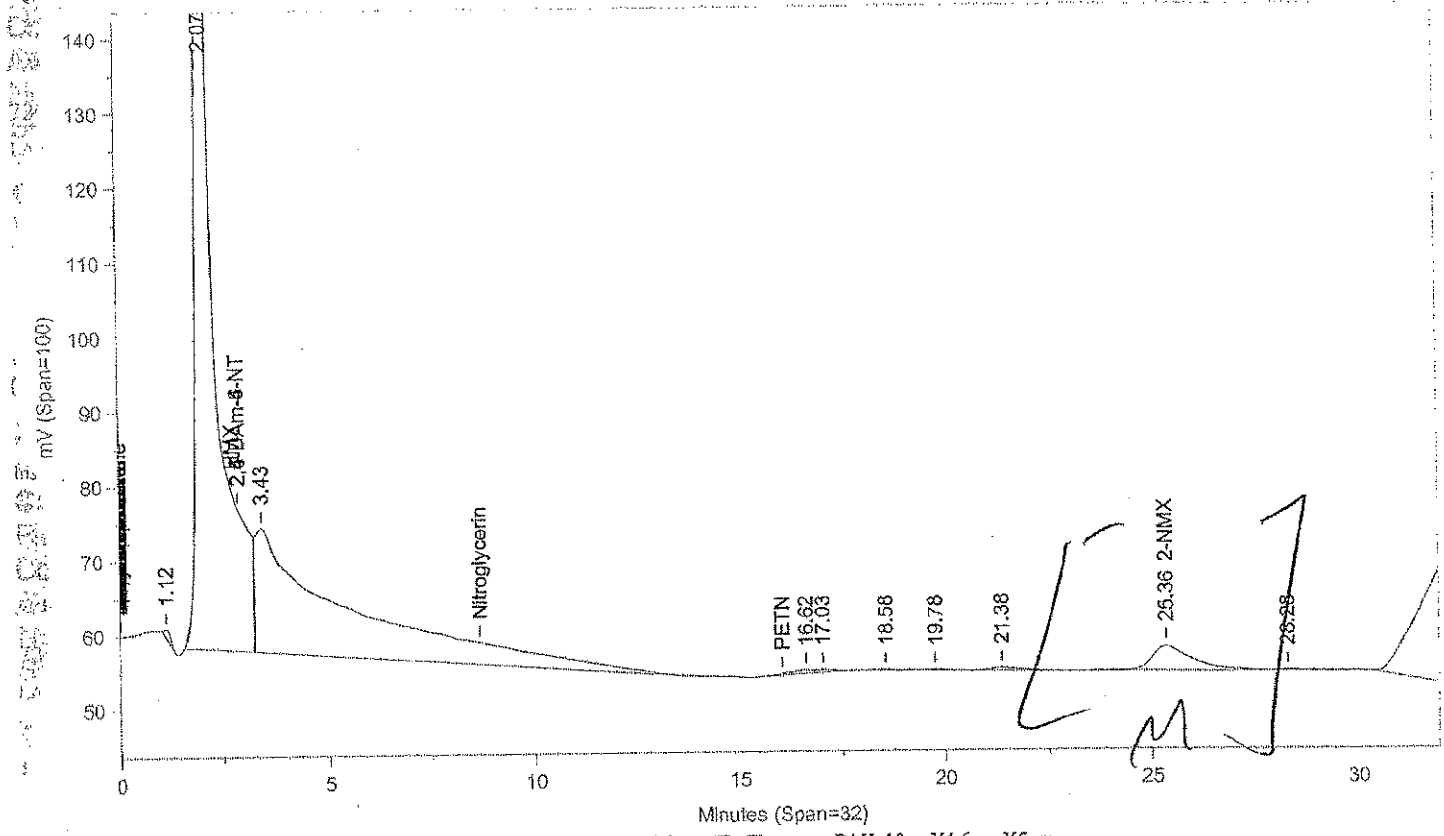
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.72R



M = Manually Integrated
Analyst 11/21/13
Approved by 11/21/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/17/2013 6:56:30 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.72R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 6:56:30 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.916	4	.	2,4,6-TNT	.	0	.	2,4,6-TNT
8.445	57	.003	Tetryl breakdown	.	0	.	Tetryl breakdown
25.217	14132	8.292	2-NMX	25.359	220663	9.035	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/21/2013 2:07:56 PM
File Reported On: 11/21/2013 at 2:07:55 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265243 R2122 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 18:56:30
Instrument	: CP12--Y6329A
Result file	: 4C12310.72R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET
%SSR(2-NMX)	: 111% (73-122) Conc.: 11.112123

Analysis Report (B)

Injected on	: NOV 17, 2013 18:56:30
Instrument	: CP12--Y6329B
Result file	: 4C12310B.72R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET
%SSR(2-NMX)	: *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
4-NT	27.60	28.02	28.12	1766	0.424045
2-NMX	34.12	34.20	34.32	17540	11.112123

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.45 ~~<0.4~~			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.112123					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____

Date: NOV 21 2013

Valerie L. Tomayko
Material Specialist

Verified by: _____

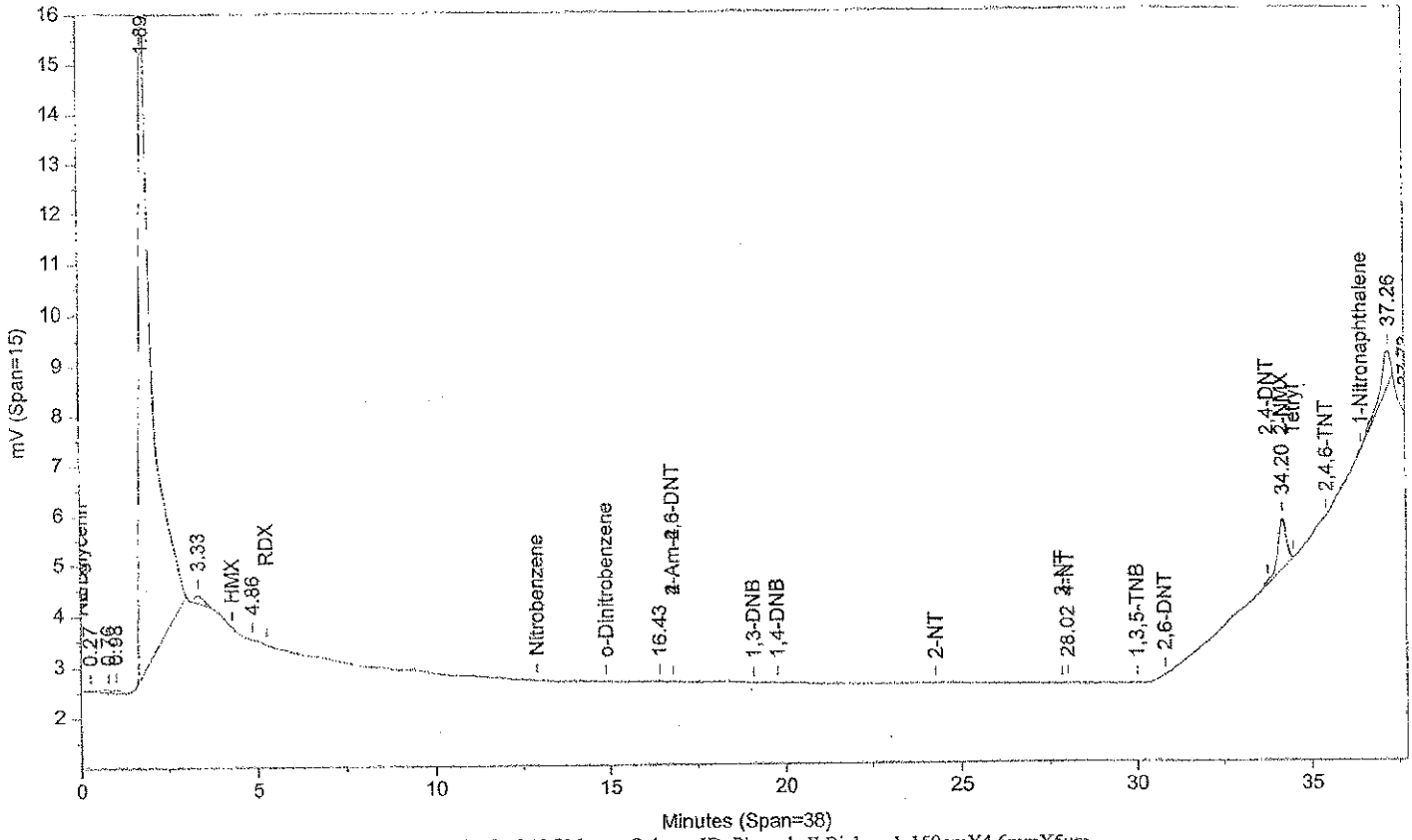
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

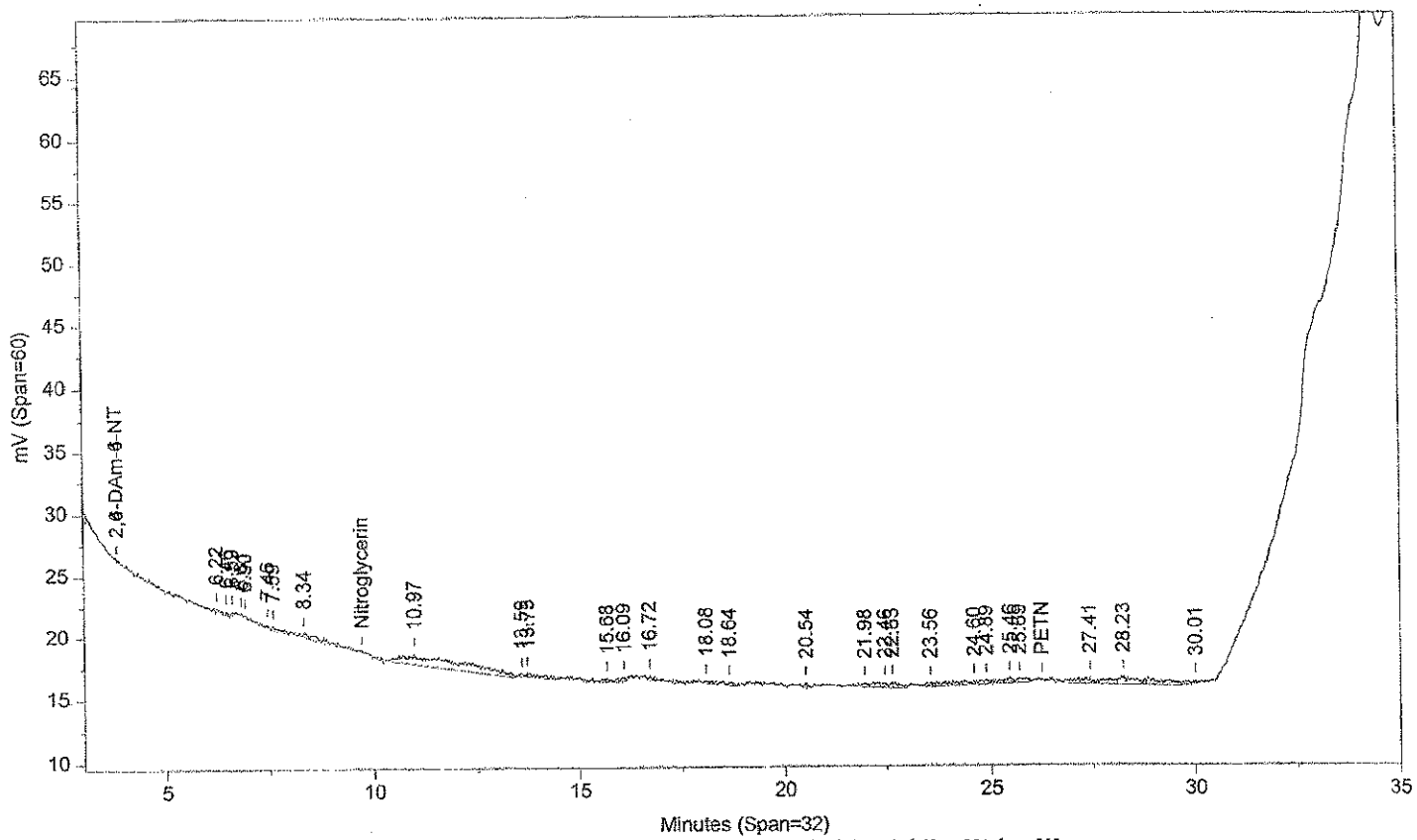
Printed on: 11/20/2013 15:34:15

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.72R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 6:56:29 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.72R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 6:56:29 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
28.023	1766	.424	4-NT	.	0	.	4-NT
34.201	17540	11.112	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.72A
Area File: C:\CPWIN\DATA1\4C12310B.72A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:21:06 PM
File Reported On: 11/17/2013 at 10:21:15 PM

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Data Summary

Sample Name: 7265244 R2123 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 04:59:46
Instrument X6329A
Result file 3E12310.45R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 119% (63 - 150) Conc: 5965.308594

Analysis Report (B)

Injected on Nov 14, 2013 04:59:46
Instrument Y6329A
Result file 3C12310.45R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 113% (63 - 150) Conc: 5651.374512

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
2-NMX	25.80	25.72	26.48	20334	5965.308594	2-NMX	34.15	34.33	34.35	17872	5651.374512

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5965.308594				5.40	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265244 R2123 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 14, 2013 04:59:46
Instrument	: CP12--X6329A
Result file	: 3E12310.45R
Calibration file	: 2E12310.CAL
Method file	: 8330.MET
%SSR(2-NMX)	: 119% (63-150) Conc.: 5965.30859

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.06	4.24	207	-101.412735
2-NMX	25.80	25.72	26.48	20334	5965.308594

Analysis Report (B)

Injected on	: NOV 14, 2013 04:59:46
Instrument	: CP12--X6329B
Result file	: 3E12310B.45R
Calibration file	: 2E12310B.CAL
Method file	: 8330B.MET
%SSR(2-NMX)	: 112% (63-150) Conc.: 5581.83056

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	25.91	26.63	272655	5581.830566

RDX = $\frac{207}{87.623}\left(\frac{20}{2}\right)$ = 23.62393436 <MDL

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			Report Confirmation
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 coeluters		report primary (confirmation check 005 low)
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5965.308594				6.64	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 20 2013

James H. Place
Senior Chemist
NOV 21 2013

Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/14/2013 11:50:21

LANCASTER LABORATORIES

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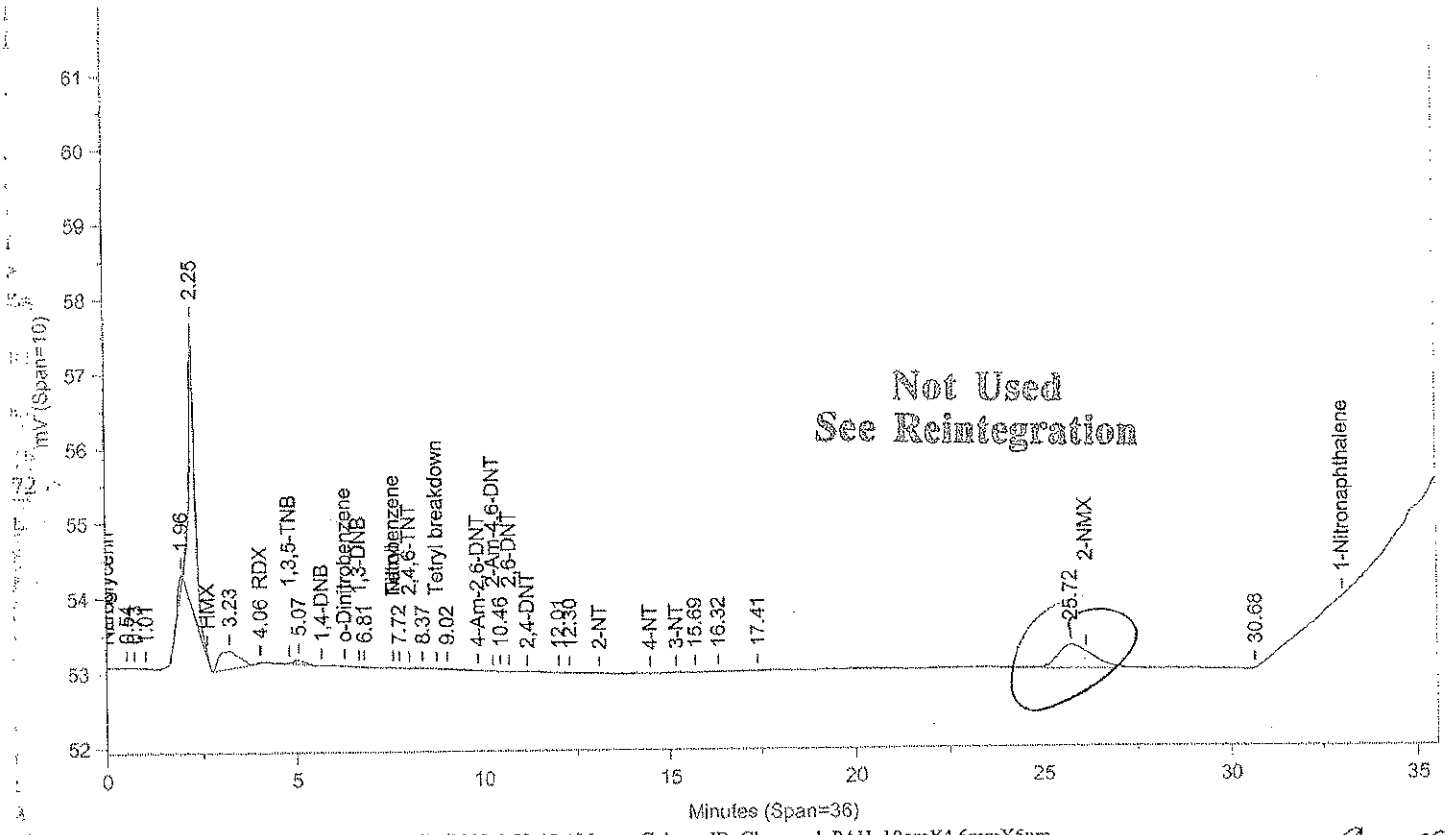

Instrument ID: CP12--X6329A Injected On: 11/14/2013 4:59:45 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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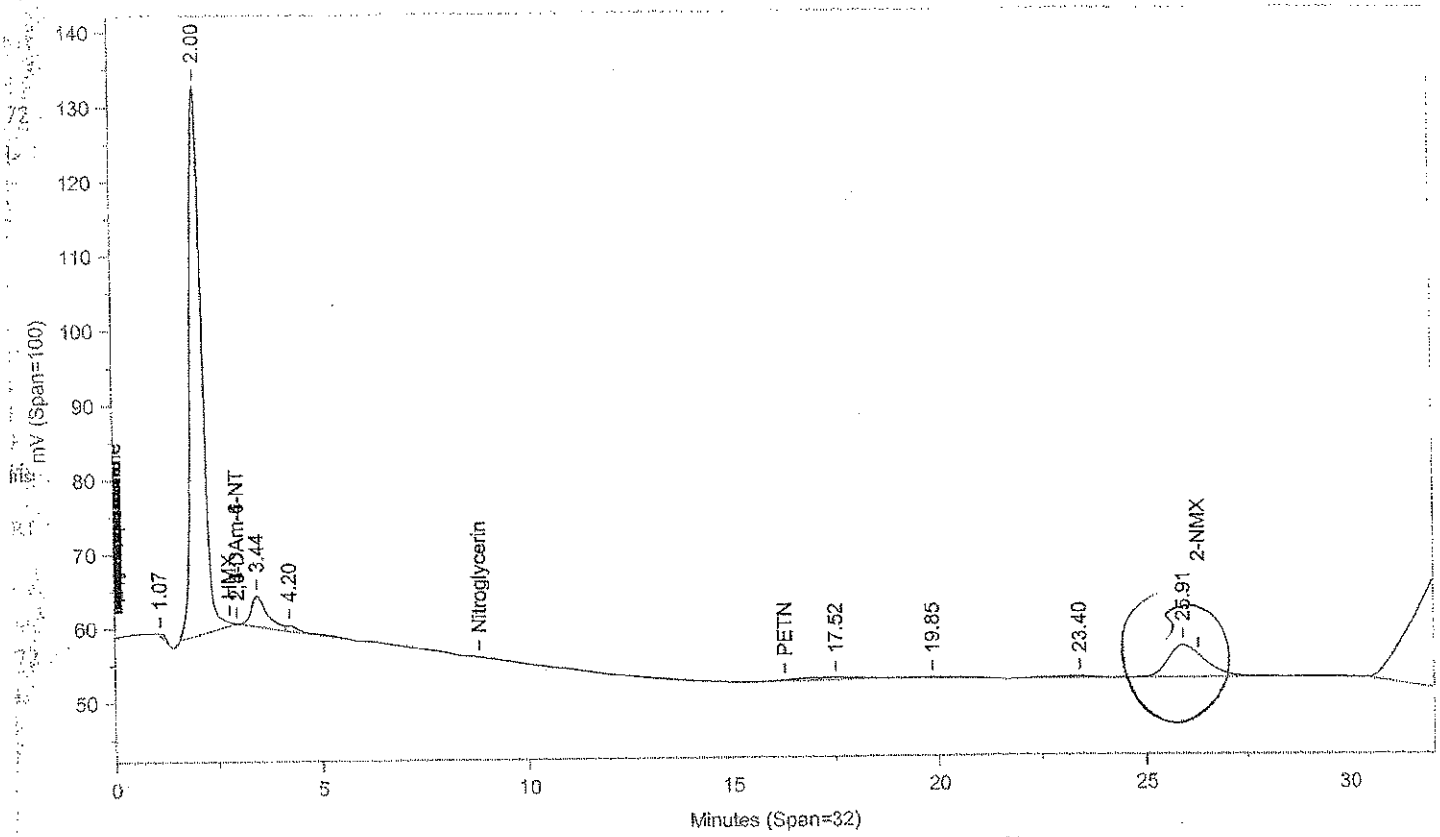


Instrument ID: CP12--X6329B Injected On: 11/14/2013 4:59:45 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

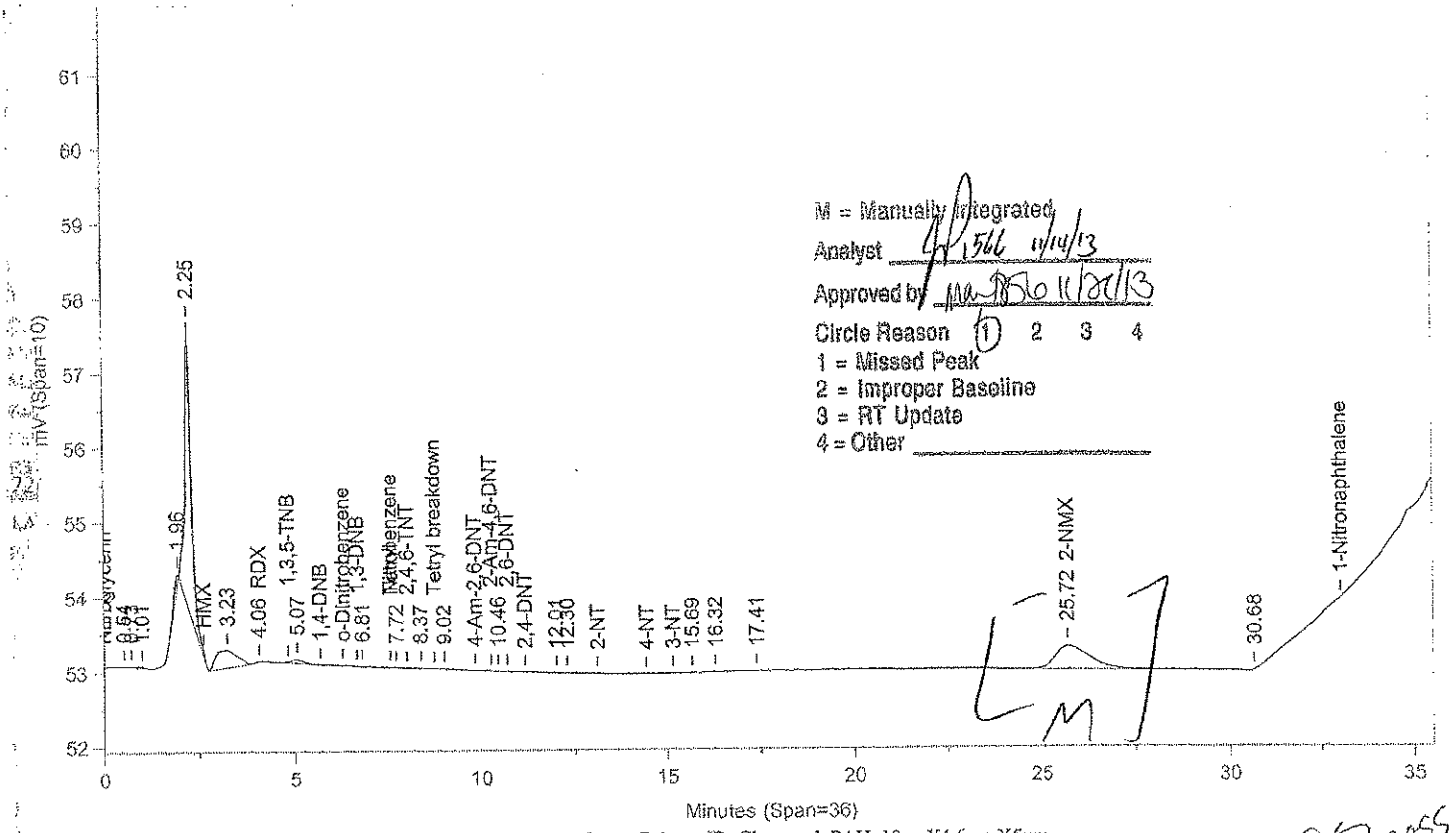
Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.06	207	-101.413	RDX			0	RDX

Files:
Area File: C:\CPWIN\DATA1\3E12310.45A
Area File: C:\CPWIN\DATA1\3E12310B.45A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 5:40:26 AM
File Reported On: 11/14/2013 at 5:40:38 AM

Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.45R

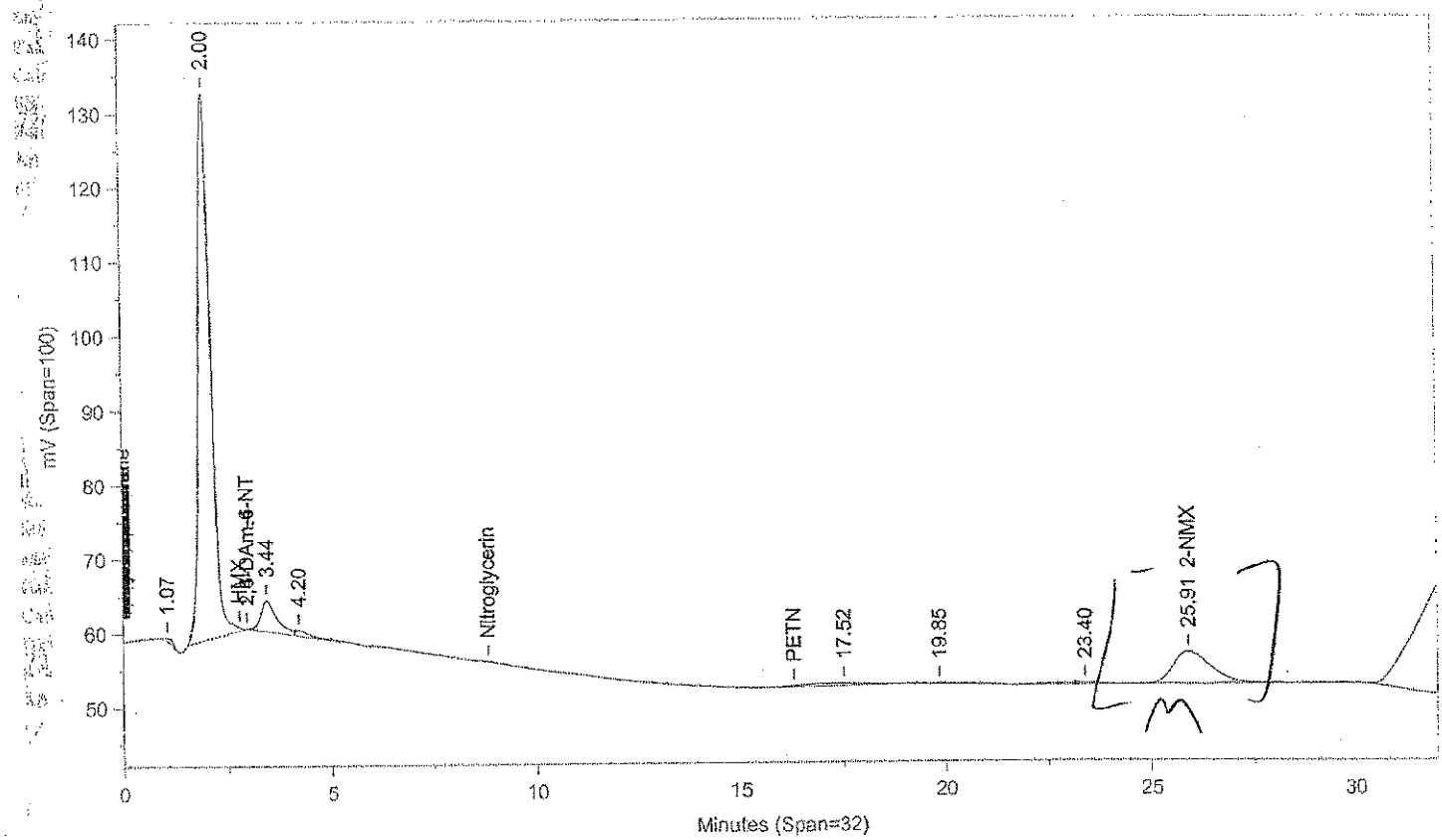


M = Manually Integrated
Analyst 1566 11/14/13
Approved by 1566 11/20/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/14/2013 4:59:45 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

0855

File: C:\CPWIN\DATA1\3E12310B.45R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 4:59:45 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.06	207	-101.413	RDX		0		RDX
25.723	20334	5965.309	2-NMX	25.906	272655	5581.831	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:34:56 AM
File Reported On: 11/14/2013 at 11:34:54 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265244 R2123 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 04:59:46
Instrument : CP12--Y6329A
Result file : 3C12310.45R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 113% (63-150) Conc.: 5651.374512

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.25	5.38	1043	-142.728958
2-NMX	34.15	34.33	34.35	17872	5651.374512

Analysis Report (B)

Injected on : NOV 14, 2013 04:59:46
Instrument : CP12--Y6329B
Result file : 3C12310B.45R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.17	26.35	26.59	1879	158.259705

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5651.374512					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 2 0 2013

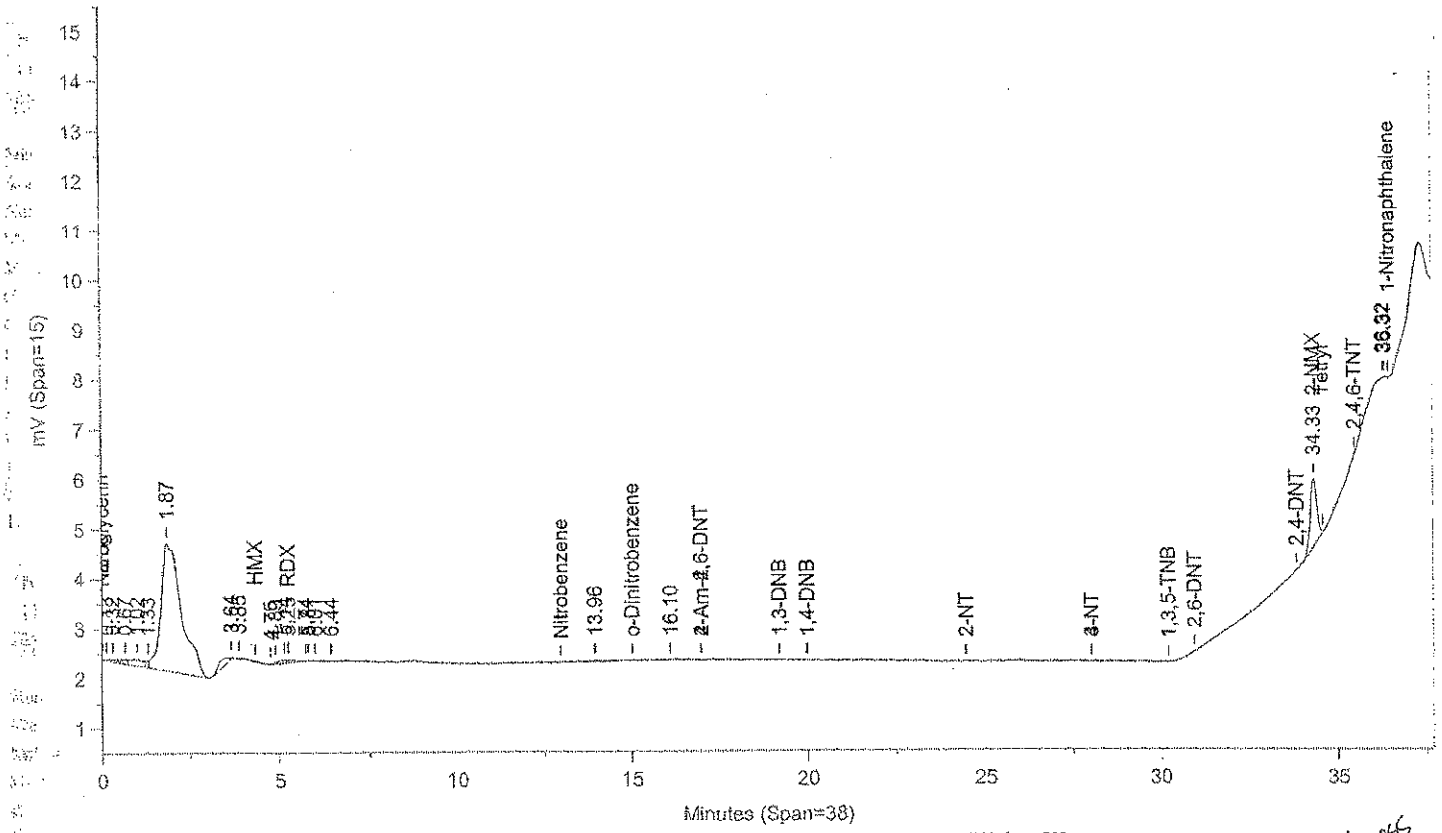
Verified by: Melissa A. McDermott
Melissa A. McDermott
Senior Chemist Group Leader
Date: NOV 2 1 2013

James H. Place
Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

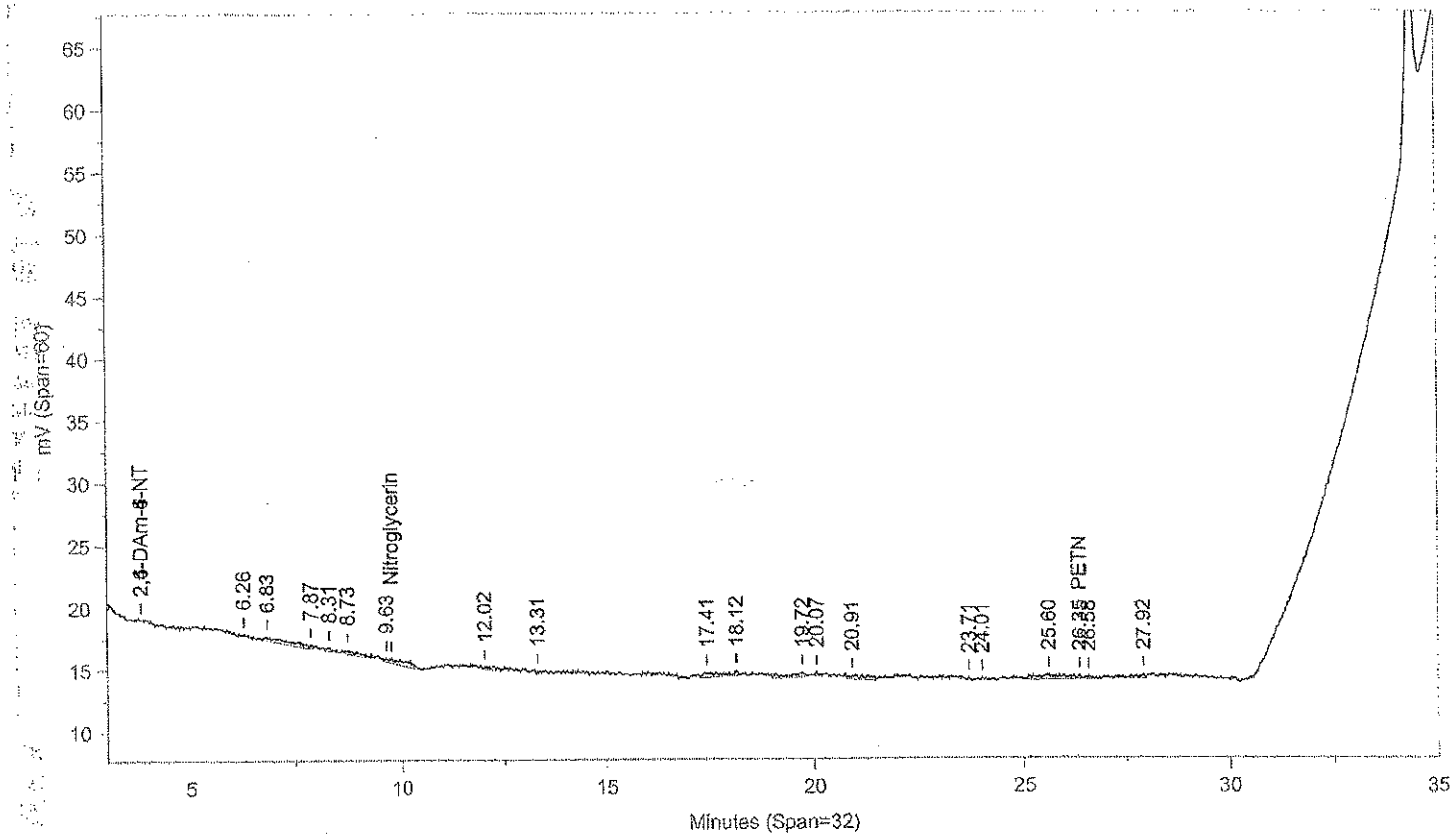
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.45R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 4:59:45 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.45R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 4:59:45 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.249	1043	-142.729	RDX	.	0	.	RDX
.	0	.	PETN	26.352	1879	158.26	PETN
34.328	17872	5651.375	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3C12310.45A
Area File: C:\CPWIN\DATA1\3C12310B.45A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 5:39:54 AM
File Reported On: 11/14/2013 at 5:40:03 AM

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Data Summary

Sample Name: 7265245 2D141 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 14, 2013 05:42:09
Instrument X6329A
Result file 3E12310.46R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 115% (63 - 150) Conc: 5753.93457

Analysis Report (B)

Injected on Nov 14, 2013 05:42:09
Instrument Y6329A
Result file 3C12310.46R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 117% (63 - 150) Conc: 5835.083008

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,4-Dinitrobenzene	5.59	5.76	5.79	25	1.000124
o-Dinitrobenzene	6.20	6.31	6.40	312	30.245499
Nitrobenzene	7.43	7.63	7.71	7	1.189262
2-NMX	25.80	25.99	26.48	19614	5753.93457

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.29	34.35	18513	5835.083008
1-Nitronaphthalene	36.38	36.46	36.58	1263	355.529175

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5753.93457				1.40	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265245 2D141 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 05:42:09
Instrument : CP12--X6329A
Result file : 3E12310.46R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 115% (63-150) Conc.: 5753.93457

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.12	4.24	105	-113.015442
1,4-DNB	5.59	5.76	5.79	25	1.000124
o-Dinitrobenzene	6.20	6.31	6.40	312	30.245499
Nitrobenzene	7.43	7.63	7.71	7	0.191938
Tetryl breakdown	8.62	8.85	8.86	34	0.997324
2-NMX	25.80	25.99	26.48	19614	5753.934570

Analysis Report (B)

Injected on : NOV 14, 2013 05:42:09
Instrument : CP12--X6329B
Result file : 3E12310B.46R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 109% (63-150) Conc.: 5454.22949

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.12	26.63	266422	5454.229492

RDX = 105/87.623 (20/2) = 11.98315511 2MDL

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 correlators		report primary (confirmation check 005 low)
☑ Nitrobenzene			<300	<100			report confirmation + Tetryl breakdown = 1.189262
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5753.934570				5.35	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

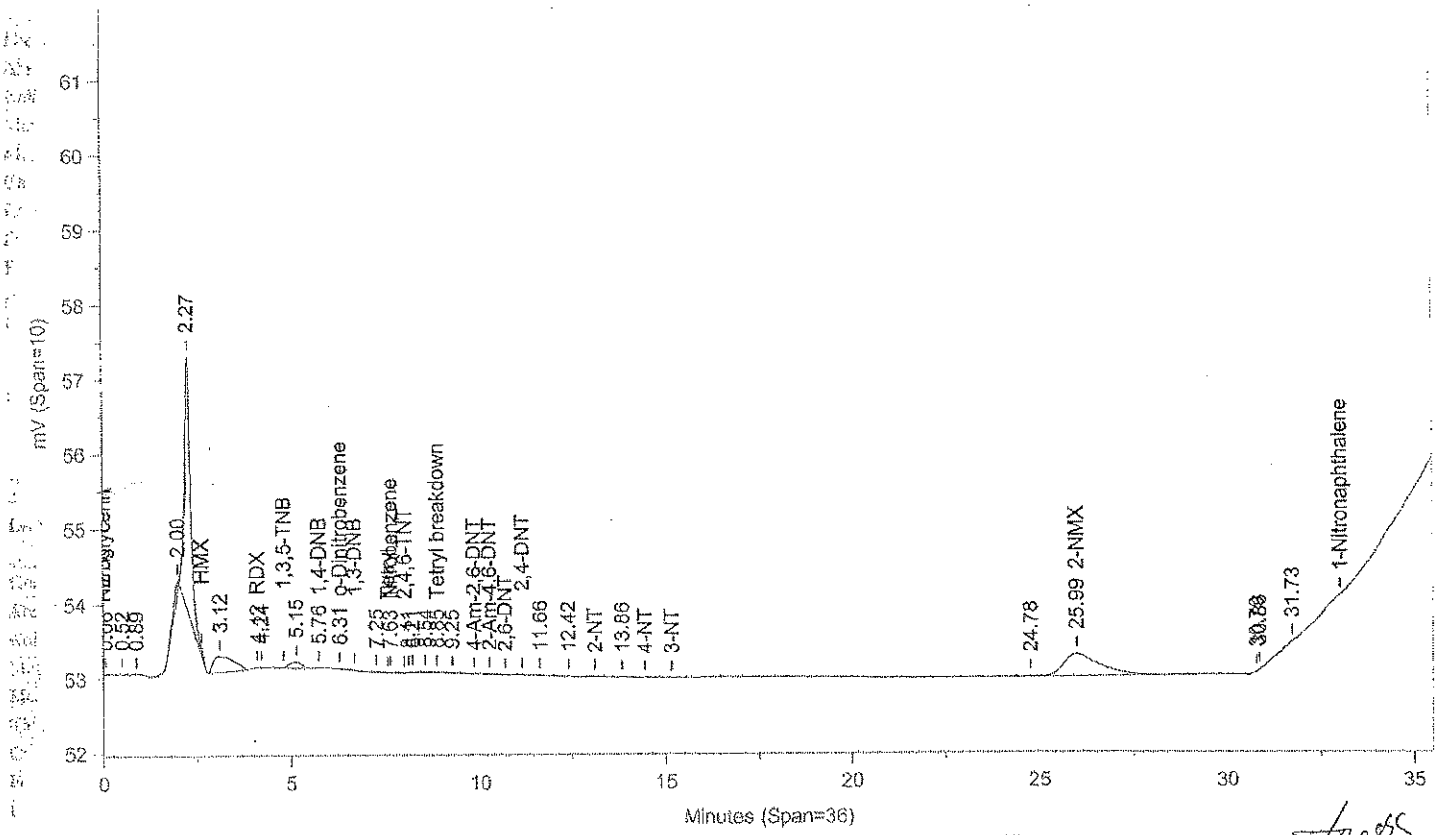
James H. Place, Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

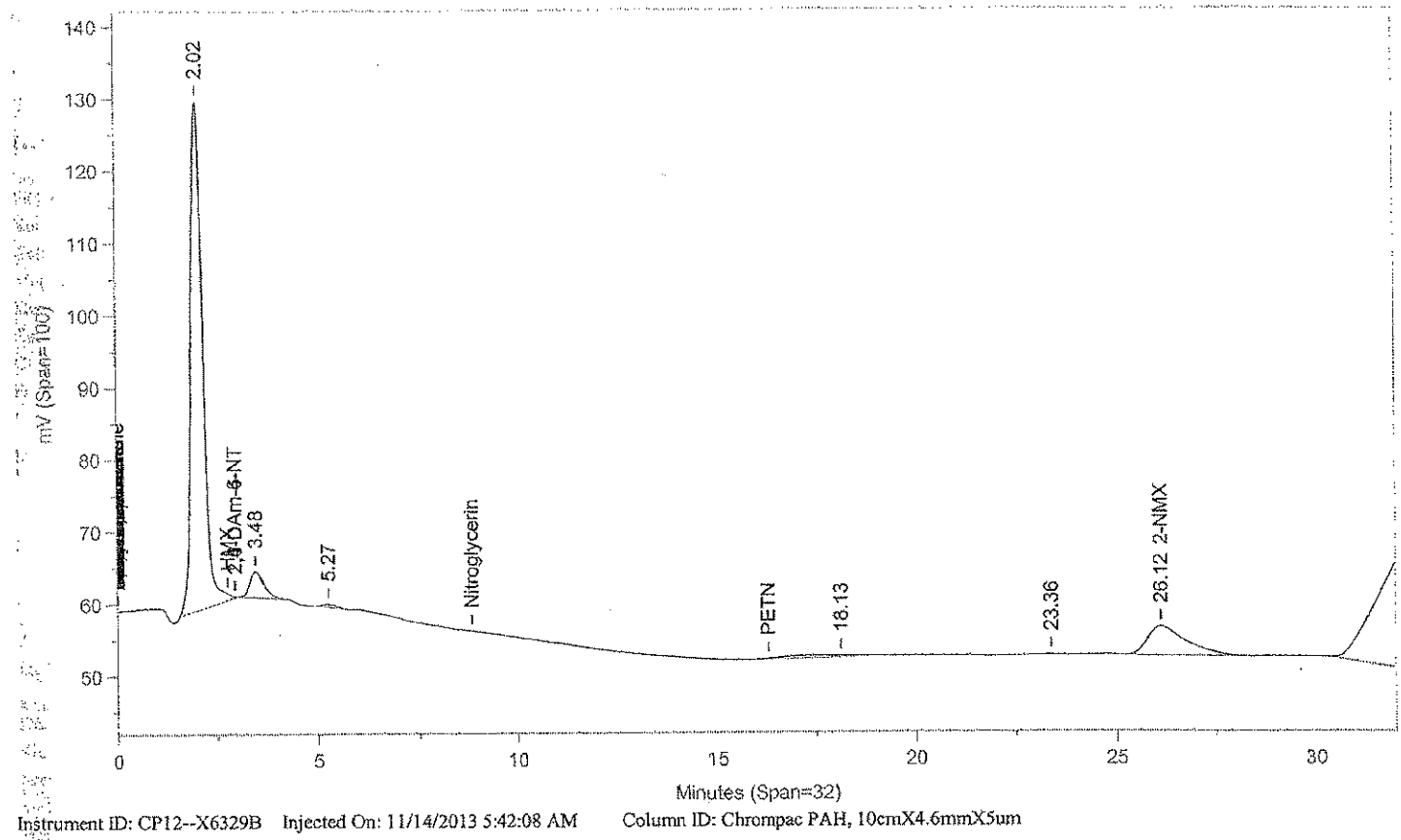
Printed on: 11/14/2013 11:50:38

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3B12310.46R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 5:42:08 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3B12310B.46R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 5:42:08 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.122	105	-113.015	RDX	.	0	.	RDX
5.764	25	1.	1,4-DNB	.	0	.	1,4-DNB
6.306	312	30.245	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.633	7	.192	Nitrobenzene	.	0	.	Nitrobenzene
8.852	34	.997	Tetryl breakdown	.	0	.	Tetryl breakdown
25.99	19614	5753.935	2-NMX	26.119	266422	5454.229	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.46A
Area File: C:\CPWIN\DATA1\3E12310B.46A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 6:22:50 AM
File Reported On: 11/14/2013 at 6:23:03 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265245 2D141 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 05:42:09
Instrument : CP12--Y6329A
Result file : 3C12310.46R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 117% (63-150) Conc.: 5835.08300(

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.21	5.38	1098	-137.839432
2-NMX	34.15	34.29	34.35	18513	5835.083008
1-Nitronaphthalene	36.38	36.46	36.58	1263	355.529175

Analysis Report (B)

Injected on : NOV 14, 2013 05:42:09
Instrument : CP12--Y6329B
Result file : 3C12310B.46R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.17	26.46	26.59	32423	2730.195801

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	~~2730.195801~~	<6000	< 2000	J		NC Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5835.083008					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	355.529175	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 2 0 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 2 1 2013

James H. Place, Senior Chemist
NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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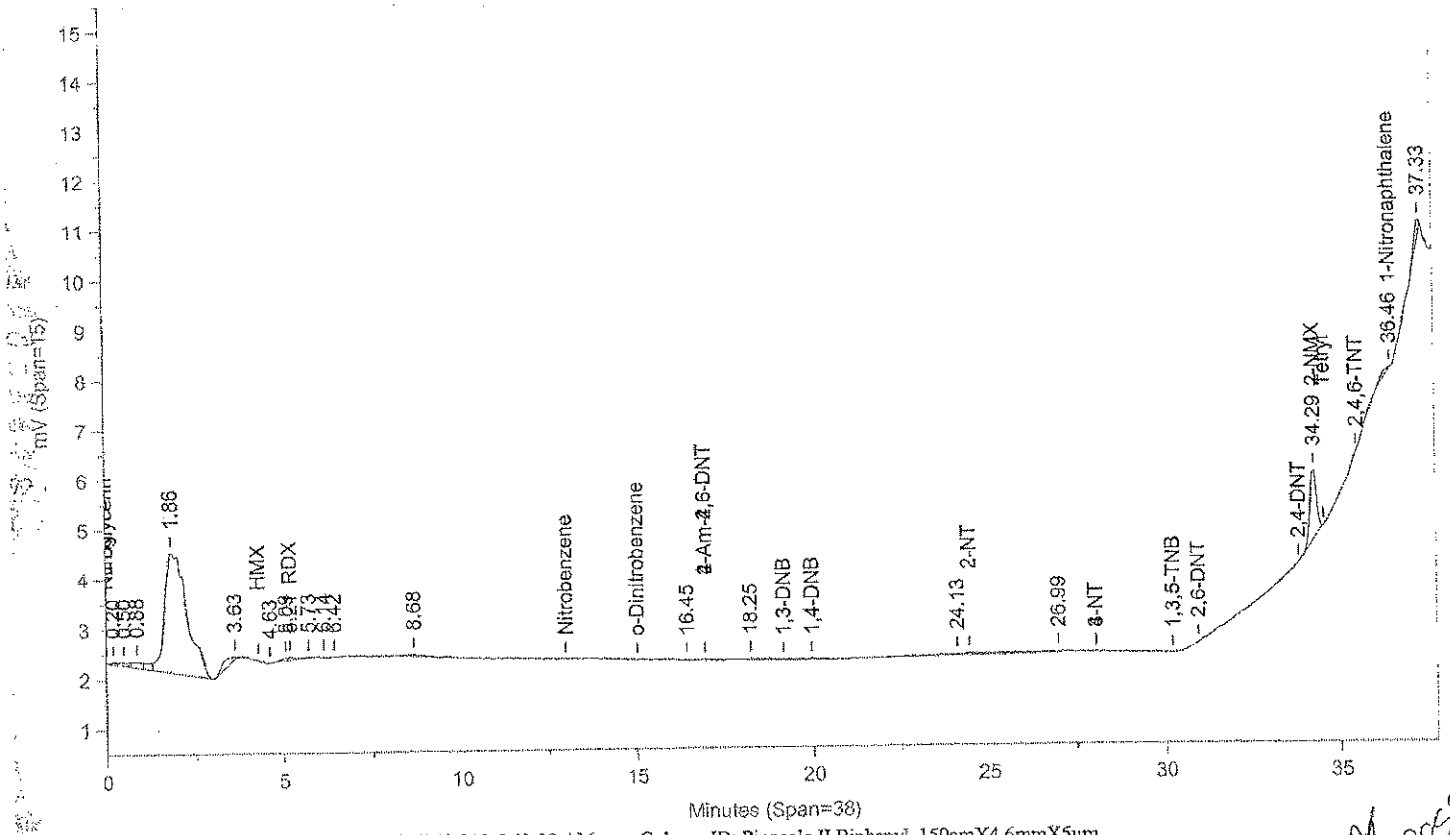
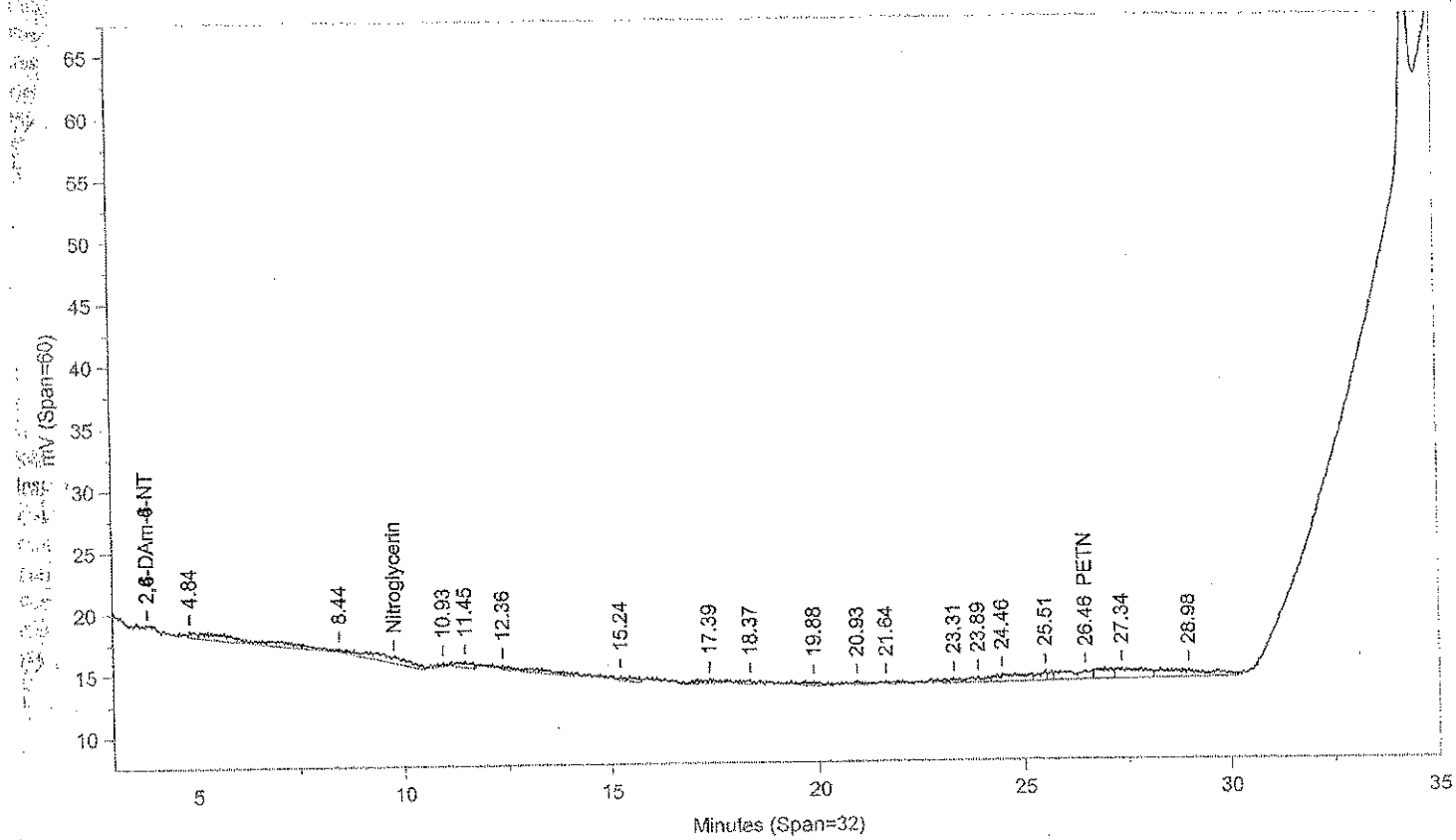
File: C:\CPWIN\DATA1\3C12310.46R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 5:42:08 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.46R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 5:42:08 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.206	1098	-137.839	RDX	.	0	.	RDX
.	0	.	PETN	26.457	32423	2730.196	PETN
34.29	18513	5835.083	2-NMX	.	0	.	2-NMX
36.46	1263	355.529	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.46A
Area File: C:\CPWIN\DATA1\3C12310B.46A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 6:22:16 AM
File Reported On: 11/14/2013 at 6:22:27 AM

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Data Summary

Sample Name: 7265246 DUPX1 Sample ID: AA **Batchnumber:** 133110004A
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 14, 2013 06:24:37
Instrument	X6329A
Result file	3E12310.47R
Calibration file	2E12310
Method file	8330

%SSR(NMX) 109% (63 - 150) Conc: 5470.12793

Analysis Report (B)

Injected on	Nov 14, 2013 06:24:36
Instrument	Y6329A
Result file	3C12310.47R
Calibration file	2C12310
Method file	8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.12	4.24	1718	71.011963
Tetryl	7.43	7.49	7.71	46	1.321718
2,4,6-Trinitrotoluene	7.90	8.02	8.10	18	0.781386
2-NMX	25.80	25.92	26.48	18646	5470.12793

Compound	Min	RT	Max	Area	Amount
2-NMX	34.15	34.30	34.35	17169	5449.800293
Tetryl	34.46	34.63	34.66	39	184.962692

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	5470.12793				0.37	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265246 DUPX1 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 06:24:37
Instrument : CP12--X6329A
Result file : 3E12310.47R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 109% (63-150) Conc.: 5470.12793

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.12	4.24	1718	71.011963
Tetryl	7.43	7.49	7.71	46	1.321718
2,4,6-TNT	7.90	8.02	8.10	18	0.781386
2-NMX	25.80	25.92	26.48	18646	5470.127930

Analysis Report (B)

Injected on : NOV 14, 2013 06:24:37
Instrument : CP12--X6329B
Result file : 3E12310B.47R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 103% (63-150) Conc.: 5146.48877

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.10	26.63	251390	5146.488770

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	7 coeluters		report primary (confirmation check) OOS Low
☑ Nitrobenzene			<300	<100			report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5470.127930				6.10	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

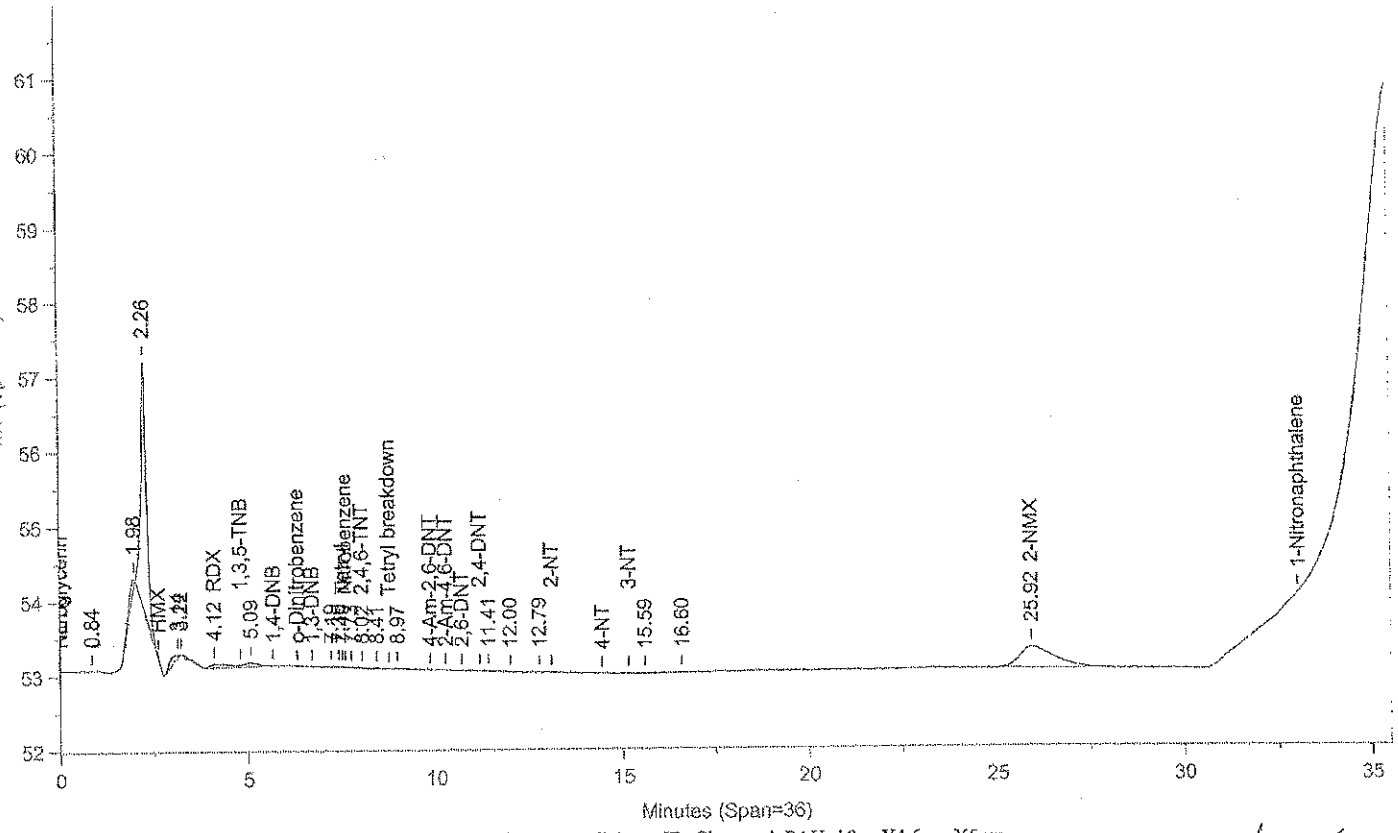
James H. Place, Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

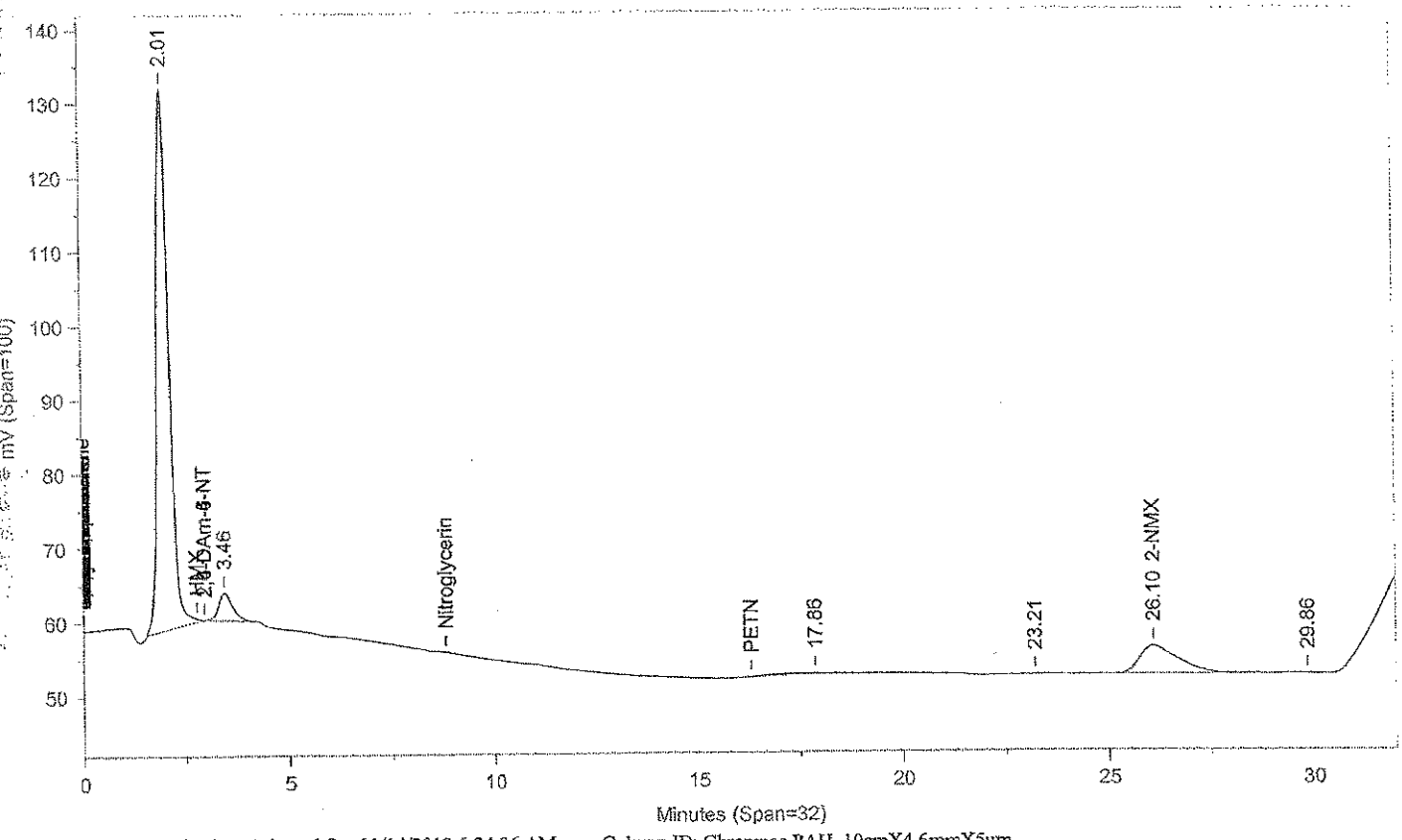
Printed on: 11/14/2013 11:50:52

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.47R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 6:24:36 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.47R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 6:24:36 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.118	1718	71.012	RDX		0		RDX
7.495	46	1.322	Tetryl		0		Tetryl
8.022	18	.781	2,4,6-TNT		0		2,4,6-TNT
25.922	18646	5470.128	2-NMX	26.097	251390	5146.489	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.47A
Area File: C:\CPWIN\DATA1\3E12310B.47A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 7:05:18 AM
File Reported On: 11/14/2013 at 7:05:31 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265246 DUPX1 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 14, 2013 06:24:36
Instrument : CP12--Y6329A
Result file : 3C12310.47R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 109% (63-150) Conc.: 5449.80029

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.18	5.30	5.38	788	-165.462418
2-NMX	34.15	34.30	34.35	17169	5449.800293
Tetryl	34.46	34.63	34.66	39	184.962692

Analysis Report (B)

Injected on : NOV 14, 2013 06:24:36
Instrument : CP12--Y6329B
Result file : 3C12310B.47R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.17	26.22	26.59	3261	274.565918

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			1
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	7 coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	7 coelutes		report primary
☑ 3-NT			<300	<250			report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5449.800293					
☑ Tetryl	A	184.962692	<300	153	J		LC
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

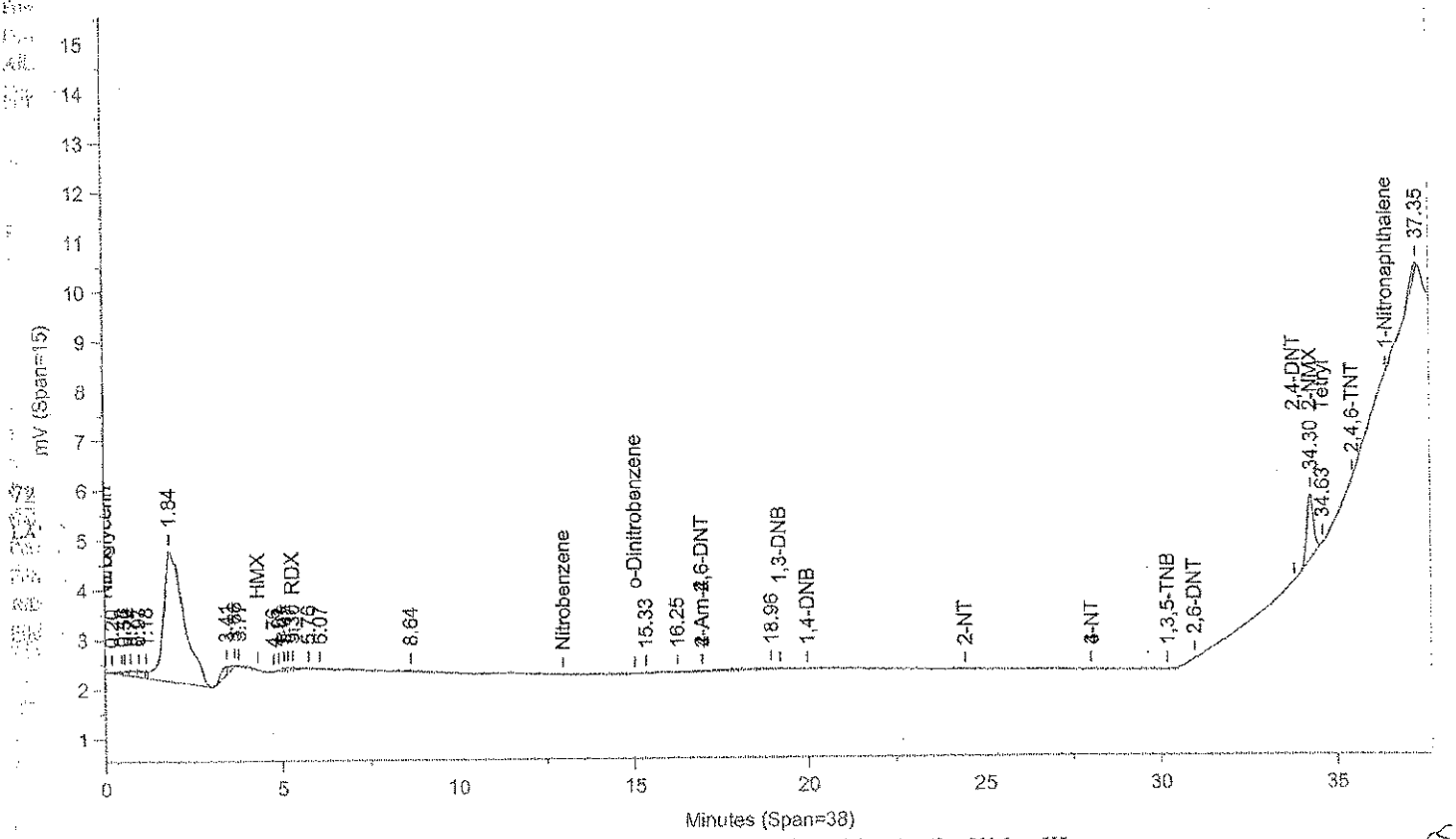
James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

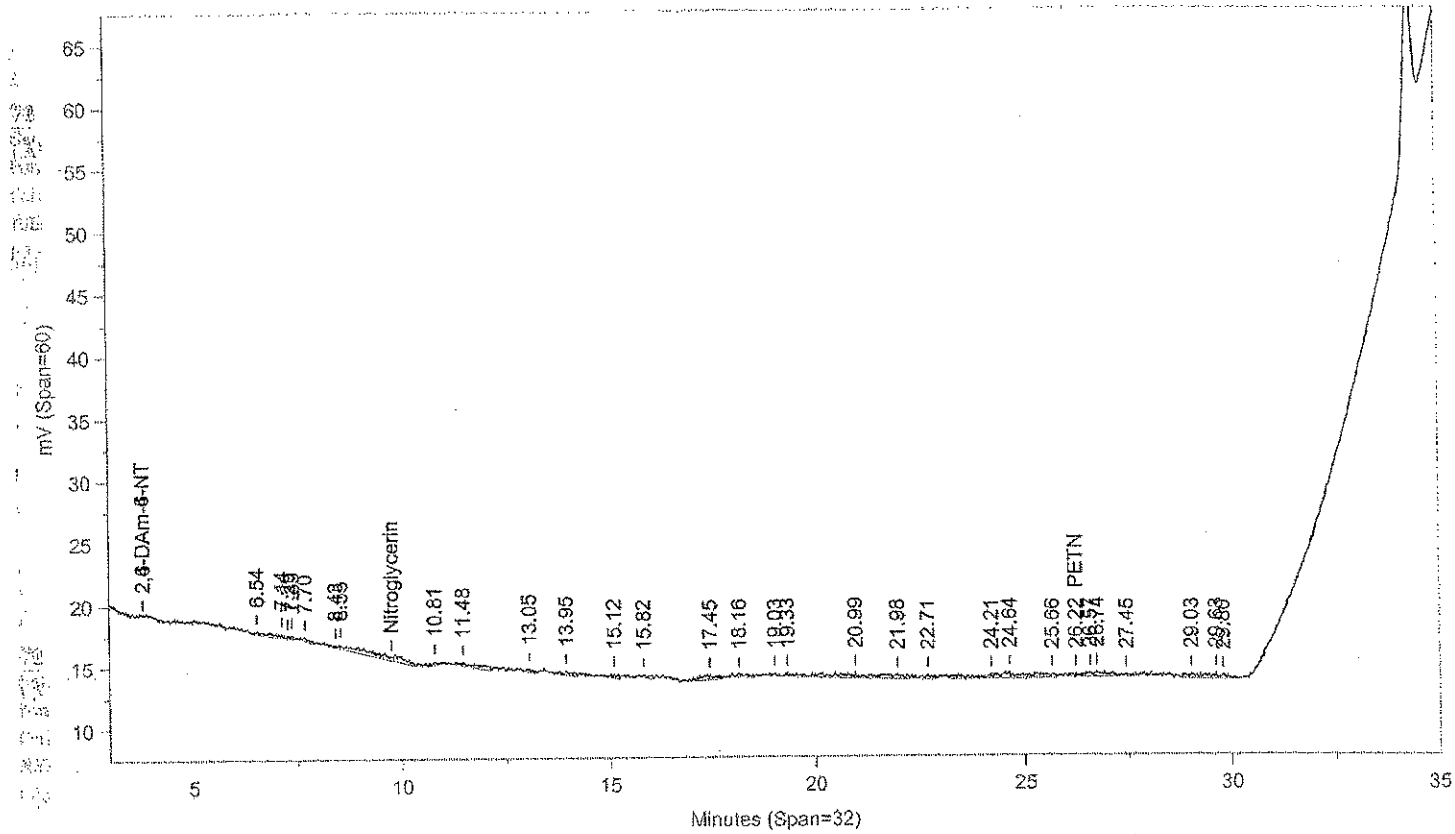
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.47R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 6:24:35 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.47R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 6:24:35 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.3	788	-165.462	RDX	.	0	.	RDX
.	0	.	PETN	26.222	3261	274.566	PETN
34.298	17169	5449.8	2-NMX	.	0	.	2-NMX
34.627	39	184.963	Tetryl	.	0	.	Tetryl

Files:
Area File: C:\CPWIN\DATA1\3C12310.47A
Area File: C:\CPWIN\DATA1\3C12310B.47A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 7:04:44 AM
File Reported On: 11/14/2013 at 7:04:54 AM

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Data Summary

Sample Name: 7265247 FBX01 Sample ID: AA **Batchnumber:** 133130015A

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 19:38:55
Instrument X6329A
Result file 4E12310.73R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 91% (73 - 122) Conc: 9.084301

Analysis Report (B)

Injected on Nov 17, 2013 19:38:55
Instrument Y6329A
Result file 4C12310.73R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 103% (73 - 122) Conc: 10.255118

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.66	4.70	4.86	35	0.003274
o-Dinitrobenzene	6.13	6.19	6.33	666	0.129192
1,3-DNB	6.49	6.69	6.69	52	0.003186
Tetryl	7.33	7.46	7.61	8	0.003124
2,4,6-Trinitrotoluene	7.78	7.80	7.98	25	0.00222
2,6-Dinitrotoluene	10.38	10.49	10.66	55	0.009022
2,4-Dinitrotoluene	10.86	11.03	11.14	20	0.001195
2-NMX	25.41	25.62	26.09	15483	9.084301

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.23	4.40	87	0.016678
2-NMX	34.12	34.28	34.32	16044	10.255118

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.084301				12.11	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Principal Specialist

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265247 FBX01 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 * mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 19:38:55
Instrument : CP12--X6329A
Result file : 4E12310.73R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 91% (73-122) Conc.: 9.084301

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.12	4.20	685	-0.093714
1,3,5-TNB	4.66	4.70	4.86	35	0.003274
o-Dinitrobenzene	6.13	6.19	6.33	666	0.129192
1,3-DNB	6.49	6.69	6.69	52	0.003186
Tetryl	7.33	7.46	7.61	8	0.000461
2,4,6-TNT	7.78	7.80	7.98	25	0.002220
Tetryl breakdown	8.27	8.35	8.52	46	0.002663
2,6-DNT	10.38	10.49	10.66	55	0.009022
2,4-DNT	10.86	11.03	11.14	20	0.001195
2-NMX	25.41	25.62	26.09	15483	9.084301

Analysis Report (B)

Injected on : NOV 17, 2013 19:38:55
Instrument : CP12--X6329B
Result file : 4E12310B.73R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 92% (73-122) Conc.: 9.23222

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.77	26.24	225483	9.232220

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			+Breakdown = 0.003124
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.084301				1.62	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

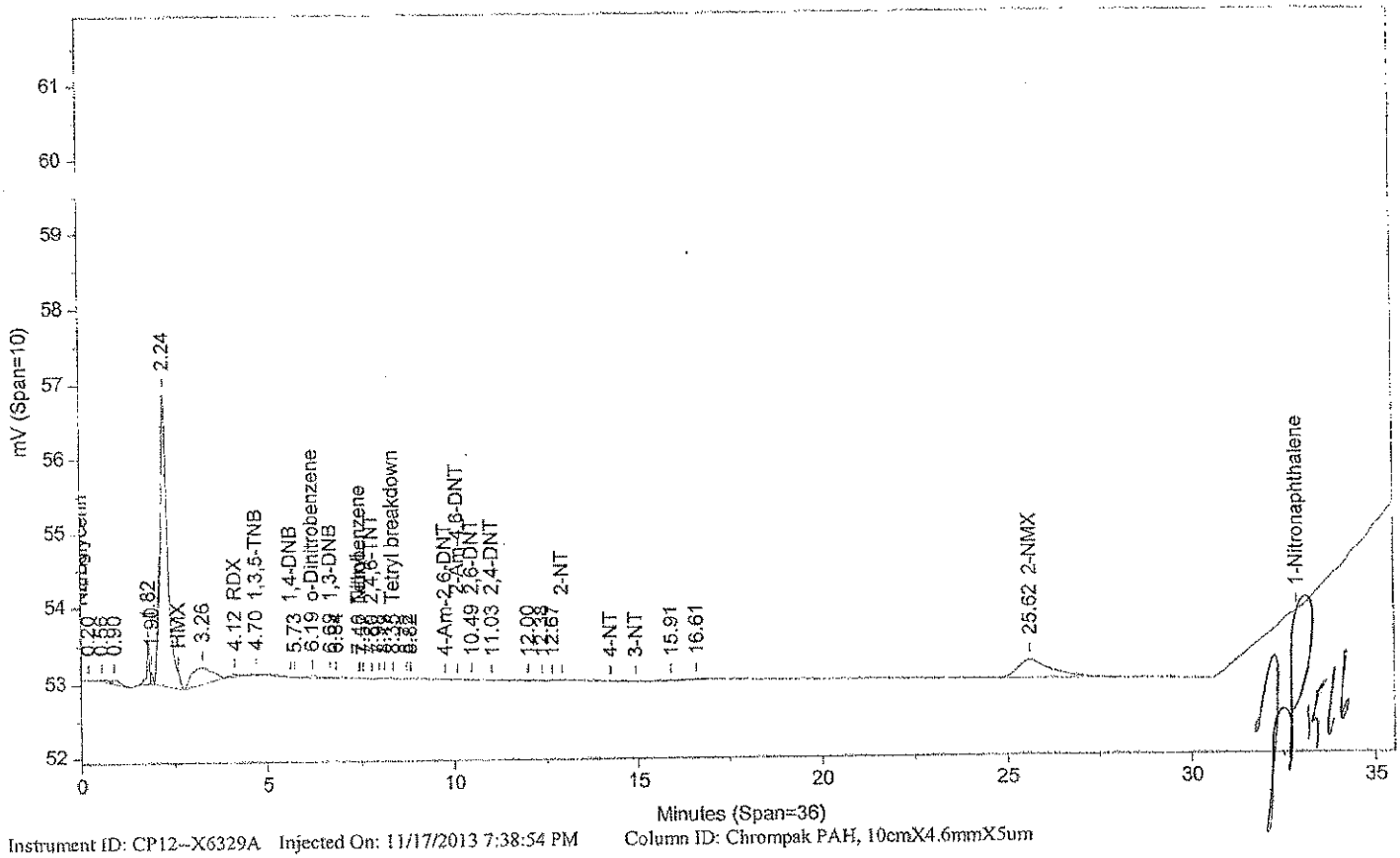
Verified by: Valerie L. Tomayko, Technical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

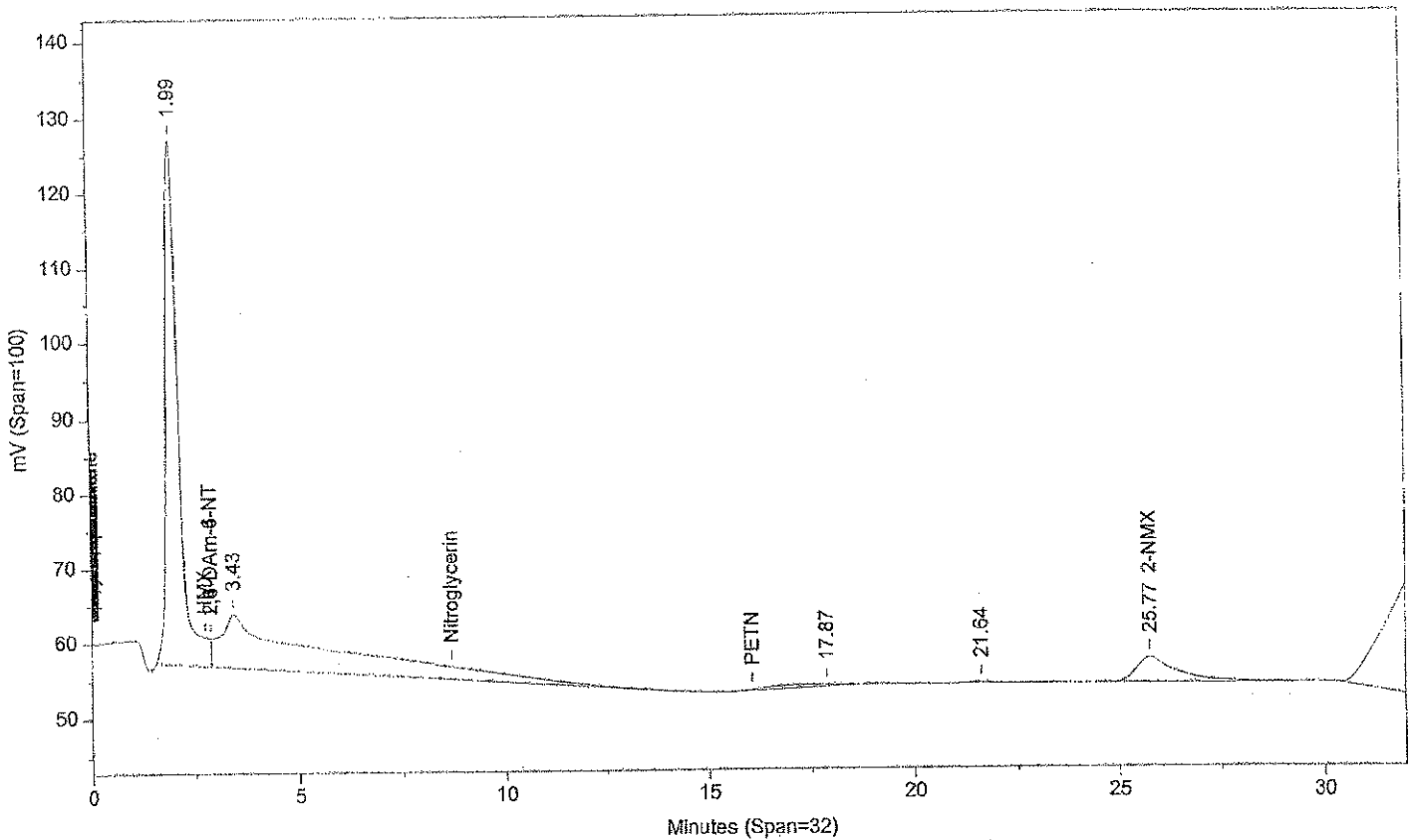
Printed on: 11/20/2013 13:23:08

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.73R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 7:38:54 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.73R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 7:38:54 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.123	685	-.094	RDX	.	0	.	RDX
4.697	35	.003	1,3,5-TNB	.	0	.	1,3,5-TNB
6.194	666	.129	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.686	52	.003	1,3-DNB	.	0	.	1,3-DNB
7.456	8	.	Tetryl	.	0	.	Tetryl
7.799	25	.002	2,4,6-TNT	.	0	.	2,4,6-TNT
8.351	46	.003	Tetryl breakdown	.	0	.	Tetryl breakdown
10.494	55	.009	2,6-DNT	.	0	.	2,6-DNT
11.033	20	.001	2,4-DNT	.	0	.	2,4-DNT
25.617	15483	9.084	2-NMX	25.766	225483	9.232	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.73A
Area File: C:\CPWIN\DATA1\4E12310B.73A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:07:24 PM
File Reported On: 11/17/2013 at 10:07:34 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265247 FBX01 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 19:38:55
Instrument : CP12--Y6329A
Result file : 4C12310.73R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.255118

Analysis Report (B)

Injected on : NOV 17, 2013 19:38:55
Instrument : CP12--Y6329B
Result file : 4C12310B.73R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.23	4.40	87	0.016678
2-NMX	34.12	34.28	34.32	16044	10.255118

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.255118					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Piece, Senior Chemist
Date: NOV 21 2013

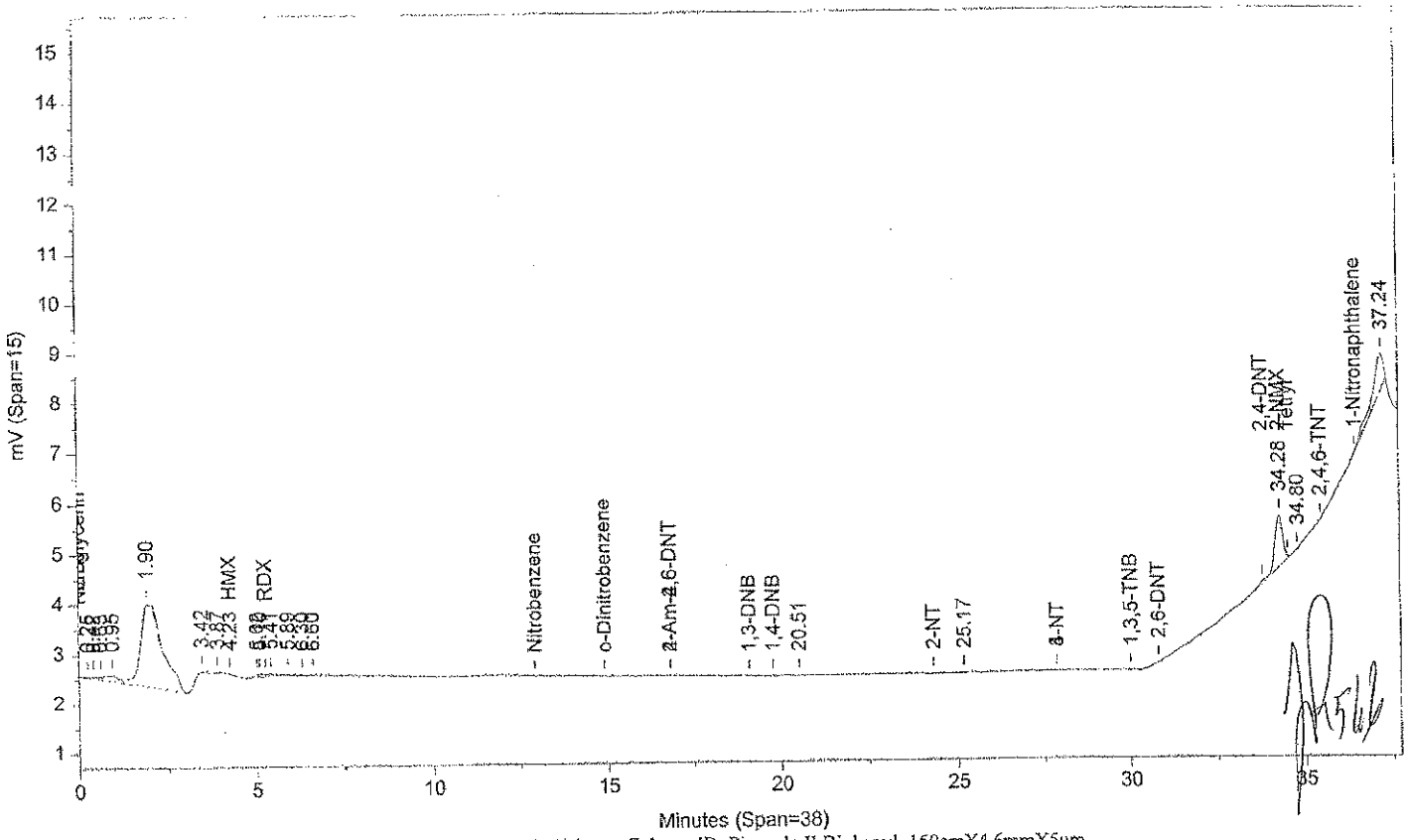
Verified by: Valerie L. Tennyson, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

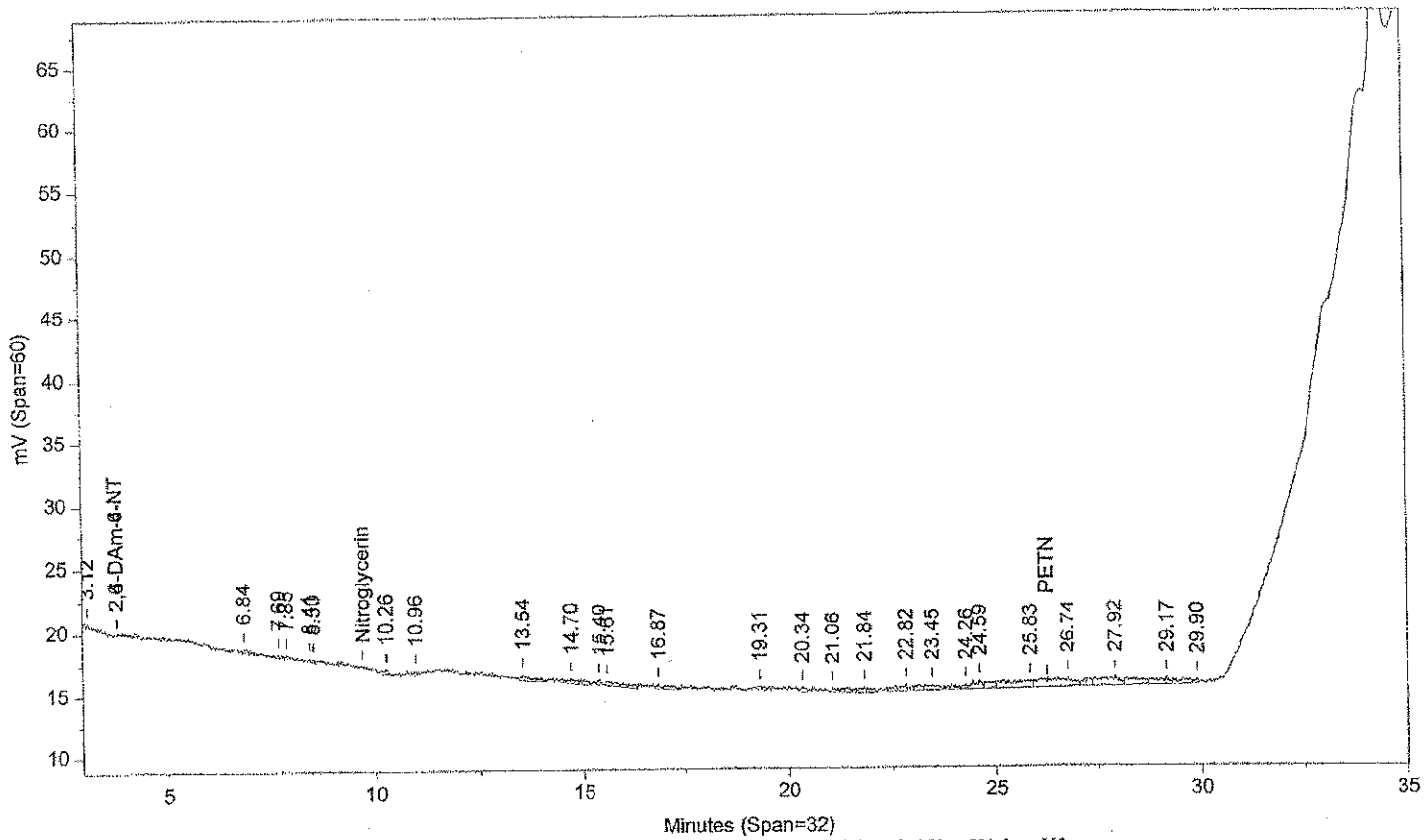
Printed on: 11/20/2013 15:34:28

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.73R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 7:38:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.73R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 7:38:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.23	87	.017	HMX			0	HMX
34.281	16044	10.255	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.73A
Area File: C:\CPWIN\DATA1\4C12310B.73A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:21:28 PM
File Reported On: 11/17/2013 at 10:21:38 PM

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Data Summary

Sample Name: 7265248 FBX02 Sample ID: AA **Batchnumber:** 133130015A

Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 20:21:28
Instrument	X6329A
Result file	4E12310.74R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 82% (73 - 122) Conc: 8.173071

Analysis Report (B)

Injected on	Nov 17, 2013 20:21:28
Instrument	Y6329A
Result file	4C12310.74R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 90% (73 - 122) Conc: 9.020512

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.66	4.68	4.86	61	0.005818
Tetryl	7.33	7.61	7.61	40	0.011834
2,4,6-Trinitrotoluene	7.78	7.79	7.98	71	0.006201
2-NMX	25.41	25.50	26.09	13930	8.173071

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.29	34.32	13889	9.020512

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.173071				9.86	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Technical Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265248 FBX02 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 20:21:28
Instrument : CP12--X6329A
Result file : 4E12310.74R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 82% (73-122) Conc.: 8.173071

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.10	4.20	315	-0.178101
1,3,5-TNB	4.66	4.68	4.86	61	0.005818
Tetryl	7.33	7.61	7.61	40	0.002315
2,4,6-TNT	7.78	7.79	7.98	71	0.006201
Tetryl breakdown	8.27	8.28	8.52	165	0.009519
2-NMX	25.41	25.50	26.09	13930	8.173071

Analysis Report (B)

Injected on : NOV 17, 2013 20:21:28
Instrument : CP12--X6329B
Result file : 4E12310B.74R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 82% (73-122) Conc.: 8.230198

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.62	26.24	201010	8.230198

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			+Breakdown = 0.011834
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.173071				0.70	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
NOV 21 2013
Date: _____

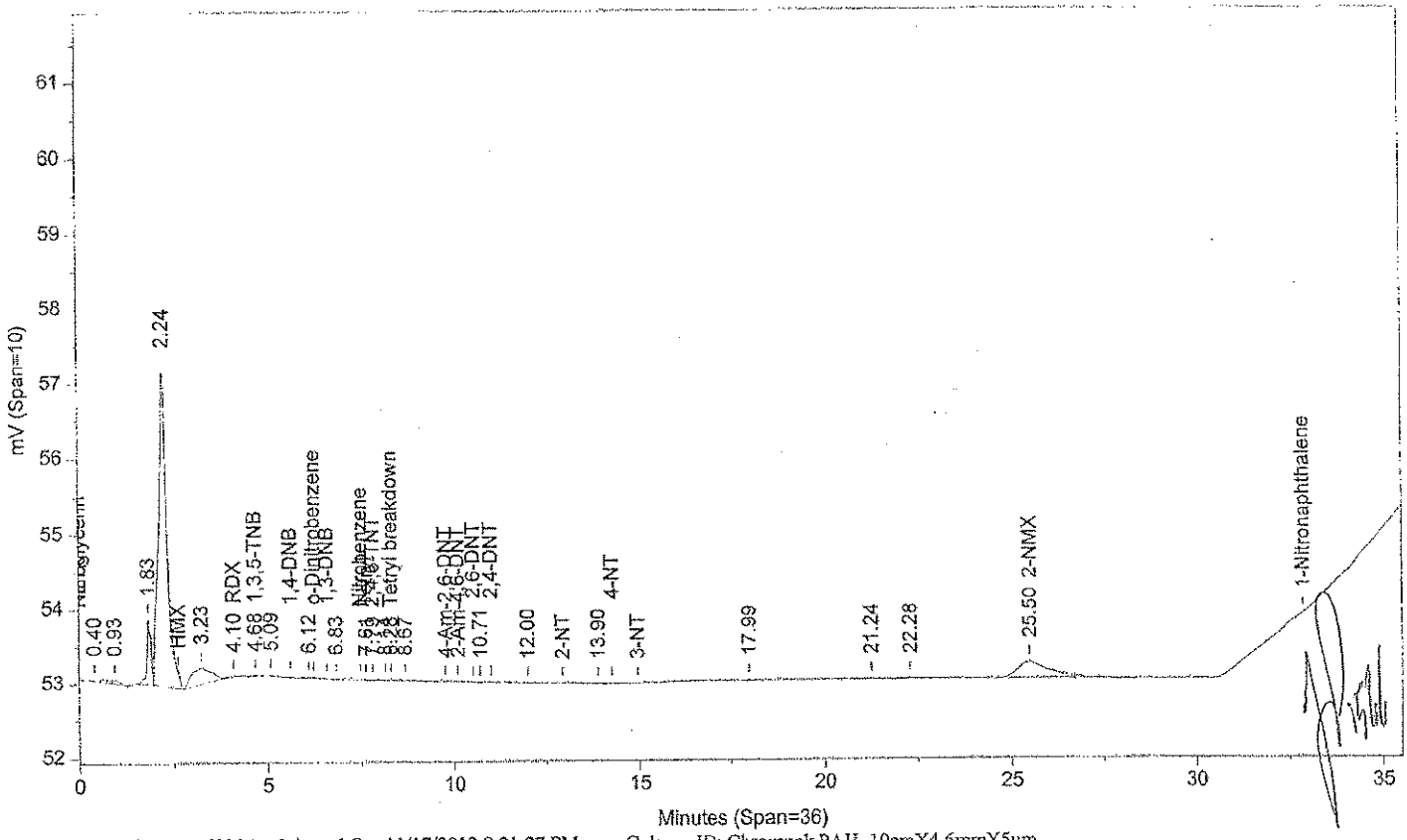
Verified by: _____
NOV 21 2013
Date: _____

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

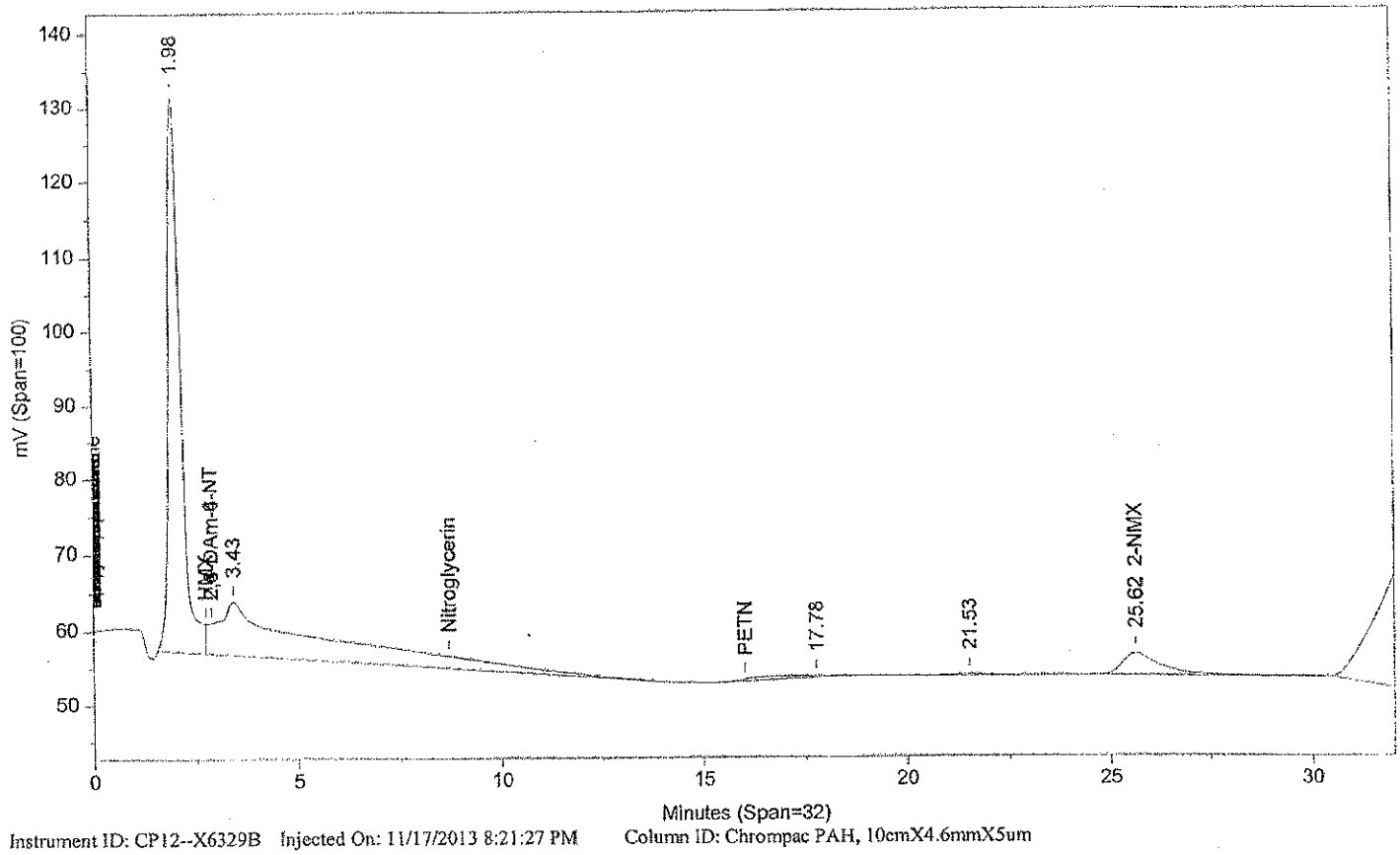
Printed on: 11/20/2013 13:23:19

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.74R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 8:21:27 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.74R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 8:21:27 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.105	315	-.178	RDX	.	0	.	RDX
4.678	61	.006	1,3,5-TNB	.	0	.	1,3,5-TNB
7.607	40	.002	Tetryl	.	0	.	Tetryl
7.793	71	.006	2,4,6-TNT	.	0	.	2,4,6-TNT
8.28	165	.01	Tetryl breakdown	.	0	.	Tetryl breakdown
25.499	13930	8.173	2-NMX	25.62	201010	8.23	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.74A
Area File: C:\CPWIN\DATA1\4E12310B.74A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:07:48 PM
File Reported On: 11/17/2013 at 10:07:57 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265248 FBX02 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 20:21:28
Instrument : CP12--Y6329A
Result file : 4C12310.74R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 90% (73-122) Conc.: 9.020512

Analysis Report (B)

Injected on : NOV 17, 2013 20:21:28
Instrument : CP12--Y6329B
Result file : 4C12310B.74R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.23	5.36	1432	-0.216004
2-NMX	34.12	34.29	34.32	13889	9.020512

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	9.020512					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaszko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:34:41

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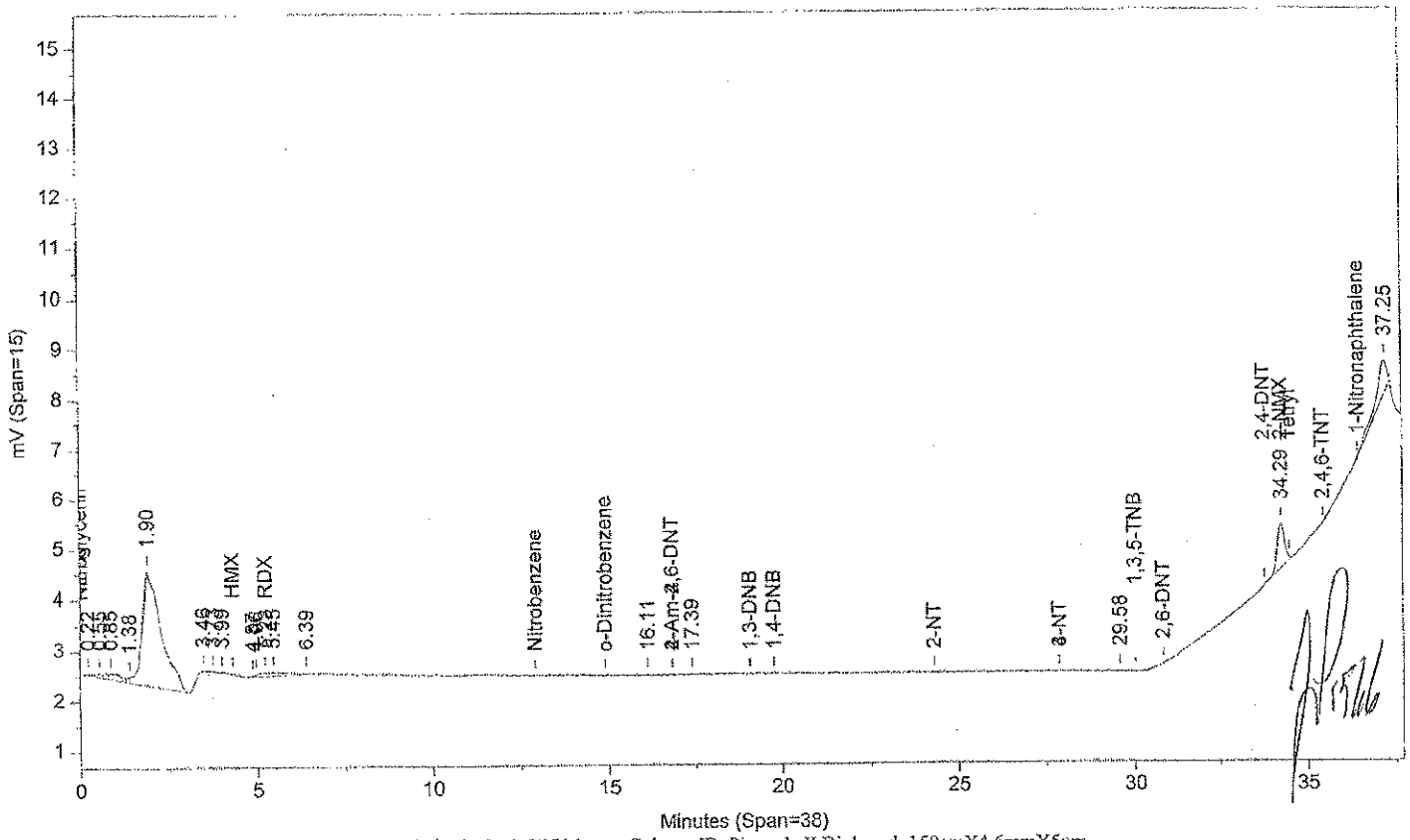
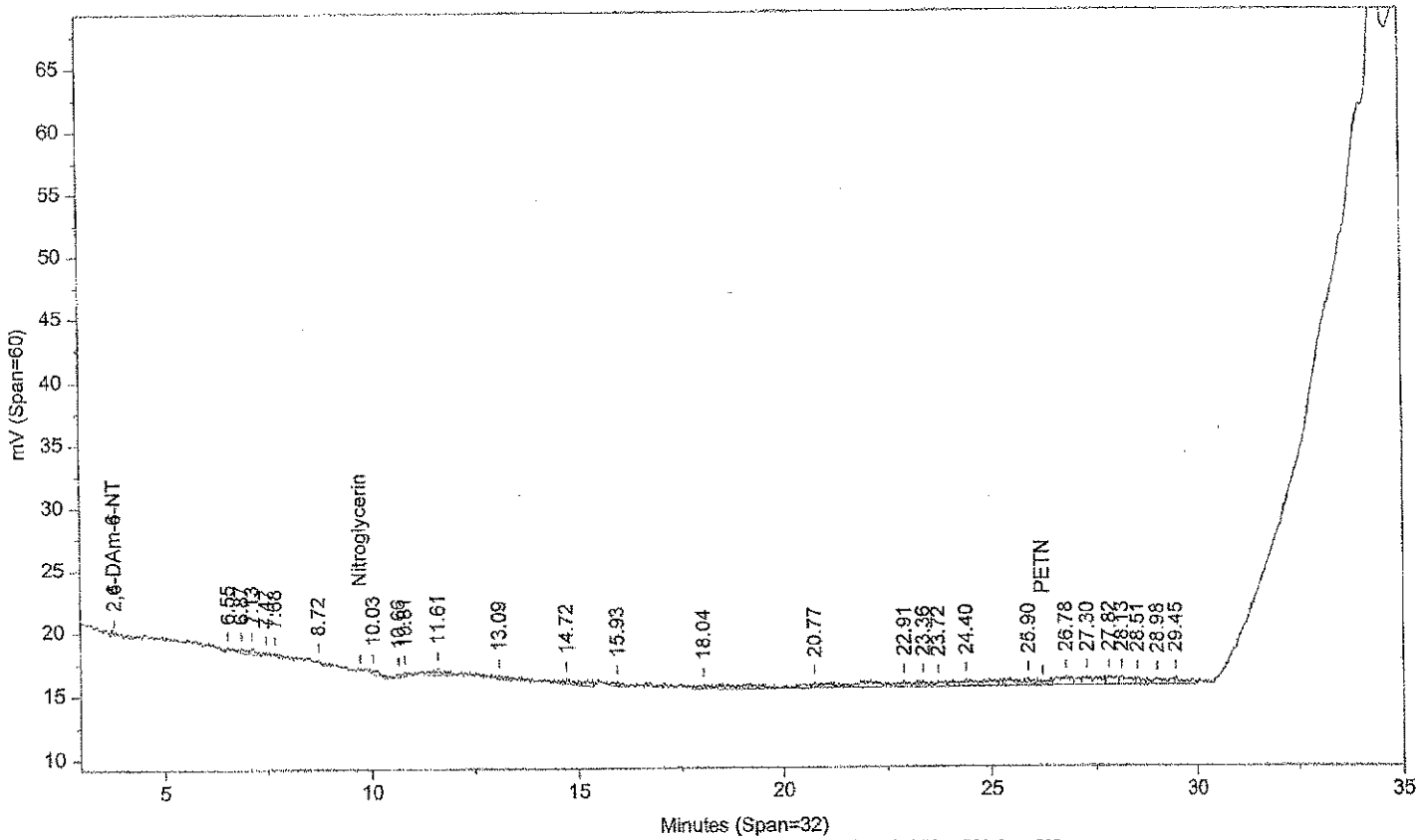


Instrument ID: CP12--Y6329A Injected On: 11/17/2013 8:21:27 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.74R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 8:21:27 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.227	1432	-.216	RDX			0	RDX
34.295	13889	9.021	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.74A
Area File: C:\CPWIN\DATA1\4C12310B.74A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:21:52 PM
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Standards Data

Explosives

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52 NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53 LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54 LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55 7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56 7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57 7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58 7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59 7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60 7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61 7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62 BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63 NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64 NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65 LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66 LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67 LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68 7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69 7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70 7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71 7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72 7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73 7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74 7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75 NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76 NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77 7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78 7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79 7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80 7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81 7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82 7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83 7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84 7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85 7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86 7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87 NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88 NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89 7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90 BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91 LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92 LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93 7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94 7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95 NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96 NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13
11/8/2013

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Sequence File: \\Cp12\c-drive\CPWIN\DATA1\2e12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 70

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1331399999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1331399999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1331399999	
4	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1331399999	
5	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1331399999	
6	NITR31324L		CCAL	NU		8330.MET	1	1	1	0	1331399999	
7	BLANKA 11/2/13		BLK	AA		8330.MET	500	10	1	0	133050025A	06916
8	LCSA 11/2/13		LCS	AA		8330.MET	500	10	1	0	133050025A	06916
9	LCSDA 11/2/13		LCSD	AA		8330.MET	500	10	1	0	133050025A	06916
10	7257293		T	AA		8330.MET	500	10	1	0	133050025A	06916
11	7257294		T	AA		8330.MET	500	10	1	0	133050025A	06916
12	7257295		T	AA		8330.MET	500	10	1	0	133050025A	06916
13	7257296		T	AA		8330.MET	500	10	1	0	133050025A	06916
14	7257297		T	AA		8330.MET	500	10	1	0	133050025A	06916
15	7257298		T	AA		8330.MET	500	10	1	0	133050025A	06916
16	7257299		T	AA		8330.MET	500	10	1	0	133050025A	06916
17	NITR31324L		CCAL	NW		8330.MET	1	1	1	0	1331399999	
18	7257301		T	AA		8330.MET	500	10	1	0	133050025A	06916
19	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060016A	06916
20	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060016A	06916
21	7258858		T	AA		8330.MET	500	10	1	0	133060016A	06916
22	7258859		T	AA		8330.MET	500	10	1	0	133060016A	06916
23	7258860		T	AA		8330.MET	500	10	1	0	133060016A	06916
24	7258861		T	AA		8330.MET	500	10	1	0	133060016A	06916
25	7258862		T	AA		8330.MET	500	10	1	0	133060016A	06916
26	7258863		T	AA		8330.MET	500	10	1	0	133060016A	06916
27	7258864		T	AA		8330.MET	500	10	1	0	133060016A	06916
28	NITR31324L		CCAL	NY		8330.MET	1	1	1	0	1331399999	
29	7258865		T	AA		8330.MET	500	10	1	0	133060016A	06916
30	7258866		T	AA		8330.MET	500	10	1	0	133060016A	06916
31	7258867		T	AA		8330.MET	500	10	1	0	133060016A	06916
32	7258868		T	AA		8330.MET	500	10	1	0	133060016A	06916
33	7258869MS		MS	AA		8330.MET	500	10	1	0	133060016A	06916
34	7258870MSD		MSD	AA		8330.MET	500	10	1	0	133060016A	06916
35	7258871		T	AA		8330.MET	500	10	1	0	133060016A	06916
36	7258872		T	AA		8330.MET	500	10	1	0	133060016A	06916
37	7258873		T	AA		8330.MET	500	10	1	0	133060016A	06916
38	7258874		T	AA		8330.MET	500	10	1	0	133060016A	06916
39	NITR31324L		CCAL	OA		8330.MET	1	1	1	0	1331399999	
40	NITR31324M		CCAL	OB		8330.MET	1	1	1	0	1331399999	
41	7258875		T	AA		8330.MET	500	10	1	0	133060016A	06916
42	7260790		T	AA		8330.MET	500	10	1	0	133060016A	06916
43	BLANKA 11/7/13		BLK	AA		8330.MET	2	20	1	0	133110005A	10132
44	LCSA 11/7/13		LCS	AA		8330.MET	2	20	1	0	133110005A	10132
45	LCSDDIA 11/7/13		LCSD	AA		8330.MET	2	20	1	0	133110005A	10132
46	LCSDIA 11/7/13		LCS	AA		8330.MET	2	20	1	0	133110005A	10132
47	7264409		T	AA		8330.MET	2	20	1	0	133110005A	10132
48	7264409MS		MS	AA		8330.MET	2	20	1	0	133110005A	10132
49	7264409MSD		MSD	AA		8330.MET	2	20	1	0	133110005A	10132
50	7264415		T	AA		8330.MET	2	20	1	0	133110005A	10132

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 70

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 NITR31324L		CCAL	OC		8330.MET	1	1	1	0	1331399999	
52 NITR31324M		CCAL	OD		8330.MET	1	1	1	0	1331399999	
53 7264418		T	AA		8330.MET	2	20	1	0	133110005A	10132
54 7264421		T	AA		8330.MET	2	20	1	0	133110005A	10132
55 7264424		T	AA		8330.MET	2	20	1	0	133110005A	10132
56 7264433		T	AA		8330.MET	2	20	1	0	133110005A	10132
57 7264439		T	AA		8330.MET	2	20	1	0	133110005A	10132
58 7264445		T	AA		8330.MET	2	20	1	0	133110005A	10132
59 7264575		T	AA		8330.MET	2	20	1	0	133110005A	10132
60 7264585		T	AA		8330.MET	2	20	1	0	133110005A	10132
61 7264590		T	AA		8330.MET	2	20	1	0	133110005A	10132
62 7264593		T	AA		8330.MET	2	20	1	0	133110005A	10132
63 NITR31324L		CCAL	OE		8330.MET	1	1	1	0	1331399999	
64 NITR31324M		CCAL	OF		8330.MET	1	1	1	0	1331399999	
65 7266316		T	AA		8330.MET	2	20	1	0	133110005A	10132
66 7266319		T	AA		8330.MET	2	20	1	0	133110005A	10132
67 7266325		T	AA		8330.MET	2	20	1	0	133110005A	10132
68 7266328		T	AA		8330.MET	2	20	1	0	133110005A	10132
69 7266344		T	AA		8330.MET	2	20	1	0	133110005A	10132
70 BLANKA 11/7/13		BLK	AA		8330.MET	2	20	1	0	133110004A	06918

Ending checks on 3E12310 inj's 5 & 6. JLM 28SS 12Nov13

Set-up by: 28SS Date: 12Nov13

11/12/13

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\3E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 90

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	BLANKA 11/11/13		BLK	AA		8330.MET	2	20	1	0	133130017A	10132
2	LCSA 11/11/13		LCS	AA		8330.MET	2	20	1	0	133130017A	10132
3	LCSDDIA 11/11/13		LCSD	AA		8330.MET	2	20	1	0	133130017A	10132
4	LCSDIA 11/11/13		LCS	AA		8330.MET	2	20	1	0	133130017A	10132
5	NITR31324L		CCAL	OM		8330.MET	1	1	1	0	1331599999	
6	NITR31324M		CCAL	ON		8330.MET	1	1	1	0	1331599999	
7	7259353R		T	AA		8330.MET	2	20	1	0	133130017A	10132
8	7255735R		T	AA		8330.MET	2	20	1	0	133130017A	10132
9	7255736RMS		MS	AA		8330.MET	2	20	1	0	133130017A	10132
10	7255737RMSD		MSD	AA		8330.MET	2	20	1	0	133130017A	10132
11	BLANKA 11/11/13		BLK	AA		8330.MET	2	20	1	0	133130018A	10132
12	LCSA 11/11/13		LCS	AA		8330.MET	2	20	1	0	133130018A	10132
13	LCSDDIA 11/11/13		LCSD	AA		8330.MET	2	20	1	0	133130018A	10132
14	LCSDIA 11/11/13		LCS	AA		8330.MET	2	20	1	0	133130018A	10132
15	7260617R		T	AA		8330.MET	2.1	20	1	0	133130018A	10132
16	7257006R		T	AA		8330.MET	2	20	1	0	133130018A	10132
17	NITR31324L		CCAL	OO		8330.MET	1	1	1	0	1331599999	
18	NITR31324M		CCAL	OP		8330.MET	1	1	1	0	1331599999	
19	7257006RMS		MS	AA		8330.MET	2	20	1	0	133130018A	10132
20	7257006RMSD		MSD	AA		8330.MET	2	20	1	0	133130018A	10132
21	LCSA 11/7/13		LCS	AA		8330.MET	2	20	1	0	133110004A	06918
22	7263052		T	AA		8330.MET	2	20	1	0	133110004A	06918
23	7263052MS		MS	AA		8330.MET	2	20	1	0	133110004A	06918
24	7263052MSD		MSD	AA		8330.MET	2	20	1	0	133110004A	06918
25	7263053		T	AA		8330.MET	2	20	1	0	133110004A	06918
26	7263054		T	AA		8330.MET	2	20	1	0	133110004A	06918
27	7263055		T	AA		8330.MET	2	20	1	0	133110004A	06918
28	7265225		T	AA		8330.MET	2	20	1	0	133110004A	06918
29	NITR31324L		CCAL	OQ		8330.MET	1	1	1	0	1331599999	
30	NITR31324M		CCAL	OR		8330.MET	1	1	1	0	1331599999	
31	MS1330124B		MISC	AA		8330.MET	1	50	1	0	1331599999	
32	MS1330824A		MISC	AA		8330.MET	1	50	1	0	1331599999	
33	MS1326324A		MISC	AA		8330.MET	1	50	1	0	1331599999	
34	MS1331724C		MISC	AA		8330.MET	1	50	1	0	1331599999	
35	MS1330924A		MISC	AA		8330.MET	1	50	1	0	1331599999	
36	7265226		T	AA		8330.MET	2	20	1	0	133110004A	06918
37	7265227		T	AA		8330.MET	2	20	1	0	133110004A	06918
38	7265234		T	AA		8330.MET	2	20	1	0	133110004A	06918
39	7265236		T	AA		8330.MET	2	20	1	0	133110004A	06918
40	7265237		T	AA		8330.MET	2	20	1	0	133110004A	06918
41	NITR31324L		CCAL	OS		8330.MET	1	1	1	0	1331599999	
42	NITR31324M		CCAL	OT		8330.MET	1	1	1	0	1331599999	
43	7265241		T	AA		8330.MET	2	20	1	0	133110004A	06918
44	7265242		T	AA		8330.MET	2	20	1	0	133110004A	06918
45	7265244		T	AA		8330.MET	2	20	1	0	133110004A	06918
46	7265245		T	AA		8330.MET	2	20	1	0	133110004A	06918
47	7265246		T	AA		8330.MET	2	20	1	0	133110004A	06918
48	7255708R		T	AA		8330.MET	2	20	1	0	133130017A	10132
49	7255711R		T	AA		8330.MET	2.1	20	1	0	133130017A	10132
50	7255717R		T	AA		8330.MET	2	20	1	0	133130017A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\3E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 90

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7255722R		T	AA		8330.MET	2.1	20	1	0	133130017A	10132
52 7255744R		T	AA		8330.MET	2	20	1	0	133130017A	10132
53 NITR31324L		CCAL	OU		8330.MET	1	1	1	0	1331599999	
54 NITR31324M		CCAL	OV		8330.MET	1	1	1	0	1331599999	
55 7255746R		T	AA		8330.MET	2.2	20	1	0	133130017A	10132
56 7255752R		T	AA		8330.MET	2	20	1	0	133130017A	10132
57 7256953R		T	AA		8330.MET	2.1	20	1	0	133130017A	10132
58 7256959R		T	AA		8330.MET	2	20	1	0	133130017A	10132
59 7256962R		T	AA		8330.MET	2	20	1	0	133130017A	10132
60 7256965R		T	AA		8330.MET	2.1	20	1	0	133130017A	10132
61 7256970R		T	AA		8330.MET	2	20	1	0	133130017A	10132
62 7256973R		T	AA		8330.MET	2	20	1	0	133130017A	10132
63 7256976R		T	AA		8330.MET	2	20	1	0	133130017A	10132
64 7256999R		T	AA		8330.MET	2	20	1	0	133130018A	10132
65 NITR31324L		CCAL	OY		8330.MET	1	1	1	0	1331599999	
66 NITR31324M		CCAL	OZ		8330.MET	1	1	1	0	1331599999	
67 NEW MS		MISC	AA		8330.MET	1	50	1	0	1331599999	
68 NEW LEVEL 3		MISC	AA		8330.MET	1	1	1	0	1331599999	
69 NEW ICV		MISC	AA		8330.MET	1	1	1	0	1331599999	
70 7257011R		T	AA		8330.MET	2.1	20	1	0	133130018A	10132
71 7257016R		T	AA		8330.MET	2	20	1	0	133130018A	10132
72 7257019R		T	AA		8330.MET	2.1	20	1	0	133130018A	10132
73 7259344R		T	AA		8330.MET	2	20	1	0	133130018A	10132
74 7259359R		T	AA		8330.MET	2.2	20	1	0	133130018A	10132
75 7259366R		T	AA		8330.MET	2	20	1	0	133130018A	10132
76 7259368R		T	AA		8330.MET	2.2	20	1	0	133130018A	10132
77 NITR31324L		CCAL	OW		8330.MET	1	1	1	0	1331599999	
78 NITR31324M		CCAL	OX		8330.MET	1	1	1	0	1331599999	
79 7259386R		T	AA		8330.MET	2	20	1	0	133130018A	10132
80 7259391R		T	AA		8330.MET	2.1	20	1	0	133130018A	10132
81 7259396R		T	AA		8330.MET	2	20	1	0	133130018A	10132
82 7260623R		T	AA		8330.MET	2.2	20	1	0	133130018A	10132
83 7260634R		T	AA		8330.MET	2	20	1	0	133130018A	10132
84 7260649R		T	AA		8330.MET	2	20	1	0	133130018A	10132
85 NITR31324L		CCAL	OW		8330.MET	1	1	1	0	1331599999	
86 NITR31324M		CCAL	OX		8330.MET	1	1	1	0	1331599999	
87 SS1330824A		MISC	AA		8330.MET	1	20	1	0	1331599999	
88 SS13328724A		MISC	AA		8330.MET	1	20	1	0	1331599999	
89 SS1331724A		MISC	AA		8330.MET	1	100	1	0	1331599999	
90 SS1327424A		MISC	AA		8330.MET	1	100	1	0	1331599999	

Set-up by: _____ Date: 11/20/13

11/14/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1331899999	
2 CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1331899999	
3 CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1331899999	
4 CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1331899999	
5 CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1331899999	
6 NITR31324O	6	CCAL	PV		8330.MET	1	1	1	0	1331899999	
7 NITR31324M	7	CCAL	PX		8330.MET	1	1	1	0	1331899999	
8 MS1330124B	8	CCAL	AH		8330.MET	1	50	1	0	1331899999	
9 MS1330124B	9	CCAL	AH		8330.MET	1	50	1	0	1331899999	
10 MS1330124B	10	CCAL	AH		8330.MET	1	50	1	0	1331899999	
11 MS1330124B	11	CCAL	AH		8330.MET	1	50	1	0	1331899999	
12 BLANKA 11/12/13	12	BLK	AA		8330.MET	2	20	1	0	133140021A	10132
13 LCSA 11/12/13	13	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
14 LCSDDIA 11/12/13	14	LCSD	AA		8330.MET	2	20	1	0	133140021A	10132
15 LCSDIA 11/12/13	15	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
16 7269438	16	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
17 7269438MS	17	MS	AA		8330.MET	2	20	1	0	133140021A	10132
18 NITR31324O	18	CCAL	PV		8330.MET	1	1	1	0	1331899999	
19 NITR31324M	19	CCAL	PX		8330.MET	1	1	1	0	1331899999	
20 7269438MSD	20	MSD	AA		8330.MET	2.2	20	1	0	133140021A	10132
21 7269454	21	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
22 7269467	22	T	AA		8330.MET	2	20	1	0	133140021A	10132
23 7269472	23	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
24 7269475	24	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
25 7269478	25	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
26 7269484	26	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
27 7269487	27	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
28 BLANKA 11/12/13	28	BLK	AA		8330.MET	2	20	1	0	133160009A	10132
29 LCSA 11/12/13	29	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
30 NITR31324O	30	CCAL	PV		8330.MET	1	1	1	0	1331899999	
31 NITR31324M	31	CCAL	PX		8330.MET	1	1	1	0	1331899999	
32 LCSDDIA 11/12/13	32	LCSD	AA		8330.MET	2	20	1	0	133160009A	10132
33 LCSDIA 11/12/13	33	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
34 7269501	34	T	AA		8330.MET	2	20	1	0	133160009A	10132
35 7269504	35	T	AA		8330.MET	2	20	1	0	133160009A	10132
36 7269514	36	T	AA		8330.MET	2	20	1	0	133160009A	10132
37 7269520	37	T	AA		8330.MET	2	20	1	0	133160009A	10132
38 7269526	38	T	AA		8330.MET	2	20	1	0	133160009A	10132
39 7269529	39	T	AA		8330.MET	2	20	1	0	133160009A	10132
40 7269532	40	T	AA		8330.MET	2	20	1	0	133160009A	10132
41 7269538	41	T	AA		8330.MET	2	20	1	0	133160009A	10132
42 NITR31324O	42	CCAL	PV		8330.MET	1	1	1	0	1331899999	
43 NITR31324M	43	CCAL	PX		8330.MET	1	1	1	0	1331899999	
44 7269541	44	T	AA		8330.MET	2	20	1	0	133160009A	10132
45 7269544	45	T	AA		8330.MET	2	20	1	0	133160009A	10132
46 7269550	46	T	AA		8330.MET	2	20	1	0	133160009A	10132
47 7269553	47	T	AA		8330.MET	2	20	1	0	133160009A	10132
48 7269559	48	T	AA		8330.MET	2	20	1	0	133160009A	10132
49 7270974	49	T	AA		8330.MET	2	20	1	0	133160009A	10132
50 7270975MS	50	MS	AA		8330.MET	2	20	1	0	133160009A	10132



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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270976MSD	51	MSD	AA		8330.MET	2	20	1	0	133160009A	10132
52 7270986	52	T	AA		8330.MET	2	20	1	0	133160009A	10132
53 7270989	53	T	AA		8330.MET	2	20	1	0	133160009A	10132
54 NITR31324O	54	CCAL	PV		8330.MET	1	1	1	0	1331899999	
55 NITR31324M	55	CCAL	PX		8330.MET	1	1	1	0	1331899999	
56 7270995	56	T	AA		8330.MET	2	20	1	0	133160009A	10132
57 7271001	57	T	AA		8330.MET	2	20	1	0	133160009A	10132
58 NITR31324O	58	CCAL	PV		8330.MET	1	1	1	0	1331899999	
59 NITR31324M	59	CCAL	PX		8330.MET	1	1	1	0	1331899999	
60 BLANKA 11/11/13	60	BLK	AA		8330.MET	500	10	1	0	133130015A	06916
61 LCSA 11/11/13	61	LCS	AA		8330.MET	500	10	1	0	133130015A	06916
62 7265223	62	T	AA		8330.MET	500	10	1	0	133130015A	06916
63 7265224	63	T	AA		8330.MET	500	10	1	0	133130015A	06916
64 7265228	64	T	AA		8330.MET	500	10	1	0	133130015A	06916
65 7265230	65	T	AA		8330.MET	500	10	1	0	133130015A	06916
66 7265231MS	66	MS	AA		8330.MET	500	10	1	0	133130015A	06916
67 7265232MSD	67	MSD	AA		8330.MET	500	10	1	0	133130015A	06916
68 7265235	68	T	AA		8330.MET	500	10	1	0	133130015A	06916
69 7265238	69	T	AA		8330.MET	500	10	1	0	133130015A	06916
70 NITR31324O	70	CCAL	PV		8330.MET	1	1	1	0	1331899999	
71 7265240	71	T	AA		8330.MET	500	10	1	0	133130015A	06916
72 7265243	72	T	AA		8330.MET	500	10	1	0	133130015A	06916
73 7265247	73	T	AA		8330.MET	500	10	1	0	133130015A	06916
74 7265248	74	T	AA		8330.MET	500	10	1	0	133130015A	06916
75 BLANKA 11/12/13	75	BLK	AA		8330.MET	500	10	1	0	133140016A	06916
76 LCSA 11/12/13	76	LCS	AA		8330.MET	500	10	1	0	133140016A	06916
77 LCSDA 11/12/13	77	LCSD	AA		8330.MET	500	10	1	0	133140016A	06916
78 7266798	78	T	AA		8330.MET	500	10	1	0	133140016A	06916
79 7266799	79	T	AA		8330.MET	500	10	1	0	133140016A	06916
80 7266805	80	T	AA		8330.MET	500	10	1	0	133140016A	06916
81 NITR31324O	81	CCAL	PV		8330.MET	1	1	1	0	1331899999	
82 7266807	82	T	AA		8330.MET	500	10	1	0	133140016A	06916
83 7266810	83	T	AA		8330.MET	500	10	1	0	133140016A	06916
84 7266811	84	T	AA		8330.MET	500	10	1	0	133140016A	06916
85 7266819	85	T	AA		8330.MET	500	10	1	0	133140016A	06916
86 BLANKA 11/12/13	86	BLK	AA		8330.MET	2	20	1	0	133140019A	06918
87 LCSA 11/12/13	87	LCS	AA		8330.MET	2	20	1	0	133140019A	06918
88 7266800	88	T	AA		8330.MET	2	20	1	0	133140019A	06918
89 7266801MS	89	MS	AA		8330.MET	2.3	20	1	0	133140019A	06918
90 7266802MSD	90	MSD	AA		8330.MET	2.3	20	1	0	133140019A	06918
91 7266804	91	T	AA		8330.MET	2.4	20	1	0	133140019A	06918
92 NITR31324O	92	CCAL	PV		8330.MET	1	1	1	0	1331899999	
93 7266806	93	T	AA		8330.MET	2.2	20	1	0	133140019A	06918
94 7266808	94	T	AA		8330.MET	2.3	20	1	0	133140019A	06918
95 NITR31324O	95	CCAL	PV		8330.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/20/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1332199999	
2 CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1332199999	
3 CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1332199999	
4 CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1332199999	
5 CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1332199999	
6 NITR31324P	6	CCAL	QD		8330.MET	1	1	1	0	1332199999	
7 MS1330124B	7	MISC	AA		8330.MET	1	50	1	0	1332199999	
8 BLANKA 11/8/13	8	BLK	AA		8330.MET	500	10	1	0	133110017A	06916
9 LCSA 11/8/13	9	LCS	AA		8330.MET	500	10	1	0	133110017A	06916
10 7263051	10	T	AA		8330.MET	500	10	1	0	133110017A	06916
11 7263056	11	T	AA		8330.MET	500	10	1	0	133110017A	06916
12 7263057	12	T	AA		8330.MET	500	10	1	0	133110017A	06916
13 7263058	13	T	AA		8330.MET	500	10	1	0	133110017A	06916
14 7263059	14	T	AA		8330.MET	500	10	1	0	133110017A	06916
15 7263060	15	T	AA		8330.MET	500	10	1	0	133110017A	06916
16 7264286	16	T	AA		8330.MET	500	10	1	0	133110017A	06916
17 NITR31324P	17	CCAL	QF		8330.MET	1	1	1	0	1332199999	
18 7264287	18	T	AA		8330.MET	500	10	1	0	133110017A	06916
19 7264288	19	T	AA		8330.MET	500	10	1	0	133110017A	06916
20 7264289	20	T	AA		8330.MET	500	10	1	0	133110017A	06916
21 7264290	21	T	AA		8330.MET	500	10	1	0	133110017A	06916
22 7266116	22	T	AA		8330.MET	500	10	1	0	133110017A	06916
23 7266117	23	T	AA		8330.MET	500	10	1	0	133110017A	06916
24 7266118	24	T	AA		8330.MET	500	10	1	0	133110017A	06916
25 7266119MS	25	MS	AA		8330.MET	500	10	1	0	133110017A	06916
26 7266120MSD	26	MSD	AA		8330.MET	500	10	1	0	133110017A	06916
27 7266121	27	T	AA		8330.MET	500	10	1	0	133110017A	06916
28 NITR31324P	28	CCAL	QG		8330.MET	1	1	1	0	1332199999	
29 7266122	29	T	AA		8330.MET	500	10	1	0	133110017A	06916
30 7266123	30	T	AA		8330.MET	500	10	1	0	133110017A	06916
31 7266124	31	T	AA		8330.MET	500	10	1	0	133110017A	06916
32 7266127	32	T	AA		8330.MET	500	10	1	0	133110017A	06916
33 7266128	33	T	AA		8330.MET	500	10	1	0	133110017A	06916
34 BLANKA 11/12/13	34	BLK	AA		8330.MET	2	20	1	0	133140020A	06918
35 LCSA 11/12/13	35	LCS	AA		8330.MET	2	20	1	0	133140020A	06918
36 7265229	36	T	AA		8330.MET	2	20	1	0	133140020A	06918
37 7265239	37	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
38 7266809	38	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
39 NITR31324P	39	CCAL	QH		8330.MET	1	1	1	0	1332199999	
40 7266812	40	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
41 7266813	41	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
42 7266814	42	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
43 7266815MS	43	MS	AA		8330.MET	2.3	20	1	0	133140020A	06918
44 7266816MSD	44	MSD	AA		8330.MET	2.3	20	1	0	133140020A	06918
45 7266818	45	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
46 BLANKA 11/14/13	46	BLK	AA		8330.MET	500	10	1	0	133170019A	06916
47 LCSA 11/14/13	47	LCS	AA		8330.MET	500	10	1	0	133170019A	06916
48 LCSDA 11/14/13	48	LCSD	AA		8330.MET	500	10	1	0	133170019A	06916
49 7270115	49	T	AA		8330.MET	500	10	1	0	133170019A	06916
50 NITR31324P	50	CCAL	QI		8330.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

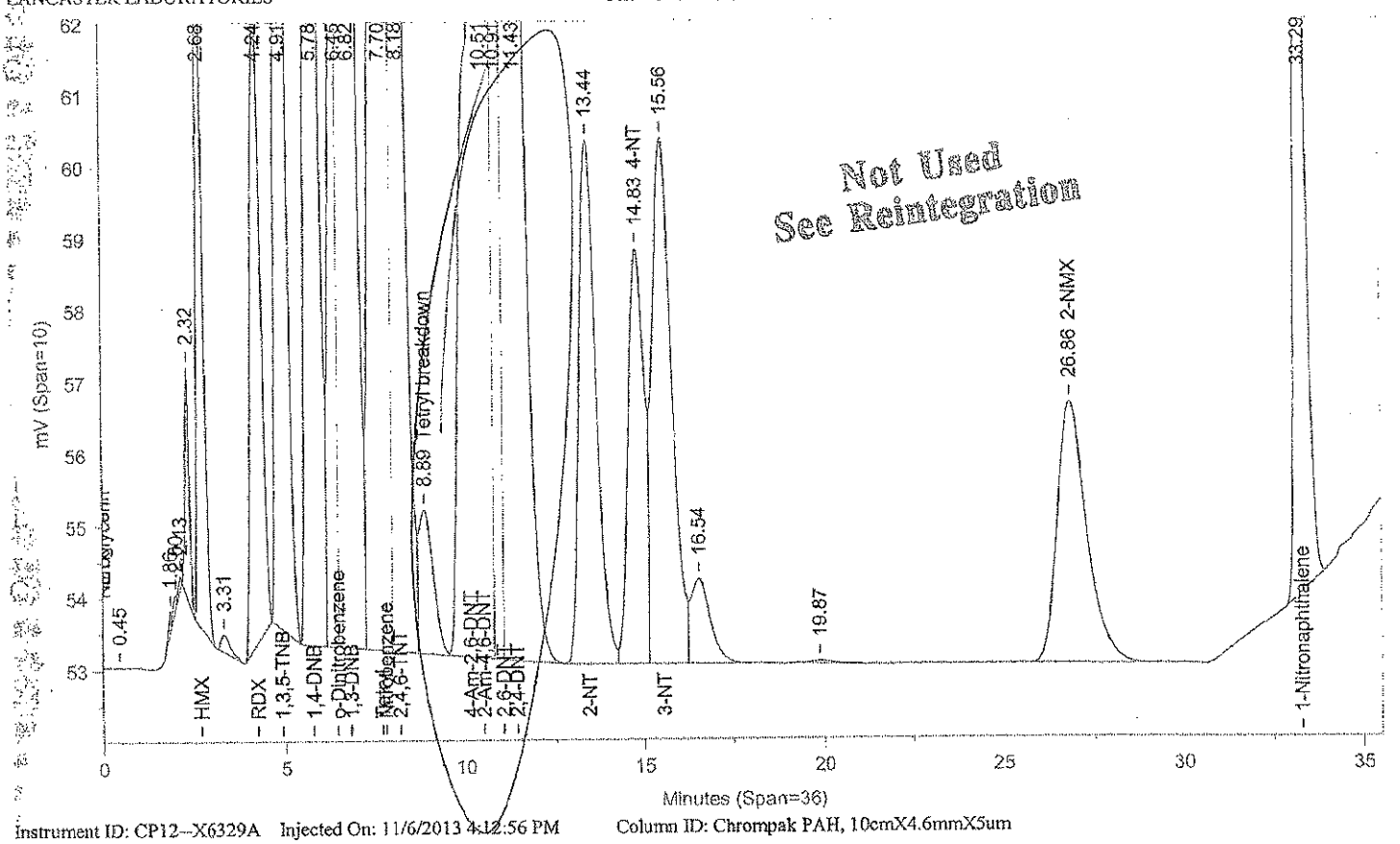
Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/20/18

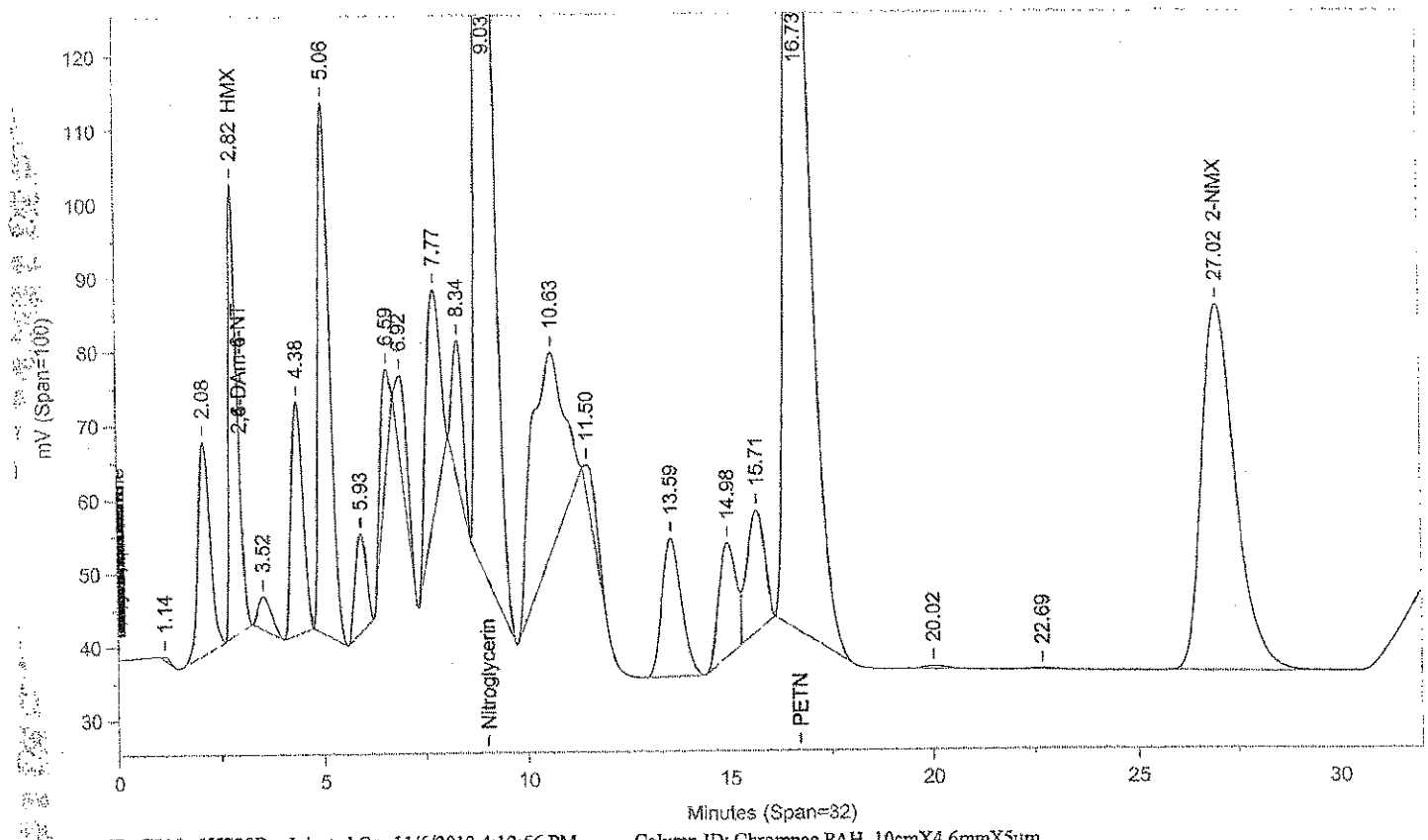
11/18/2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.04R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	2030.674	HMX
4.236	173918	1997.862	RDX	.	0	.	RDX
4.915	403513	1913.478	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	1961.54	1,4-DNB	.	0	.	1,4-DNB
6.454	152192	1597.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	685139	2107.093	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	1762.438	Tetryl	.	0	.	Tetryl
8.184	451815	2029.189	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	153.795	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	38324.7	Nitroglycerin
10.513	624304	2944.329	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.432	677076	2101.777	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	1962.143	2-NT	.	0	.	2-NT
14.835	183964	2051.322	4-NT	.	0	.	4-NT
15.56	279402	2045.584	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	39994.64	PETN
26.863	207607	5974.572	2-NMX	27.017	2865768	5842.708	2-NMX
33.287	288442	2013.93	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.04A
Area File: C:\CPWIN\DATA1\1E12310B.04A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:04 PM
File Reported On: 11/7/2013 at 2:18:21 PM

Not Used
See Reintegration

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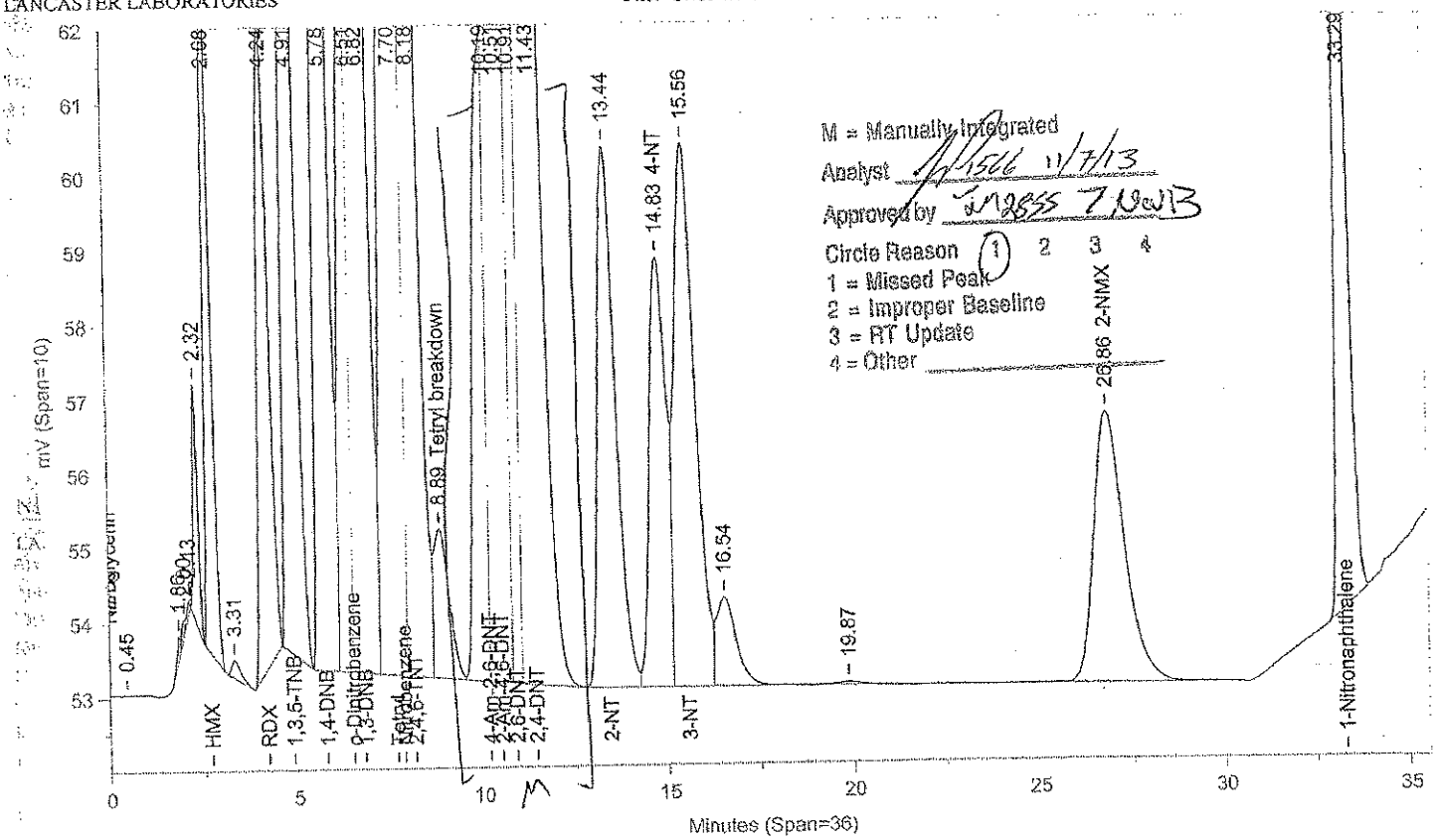
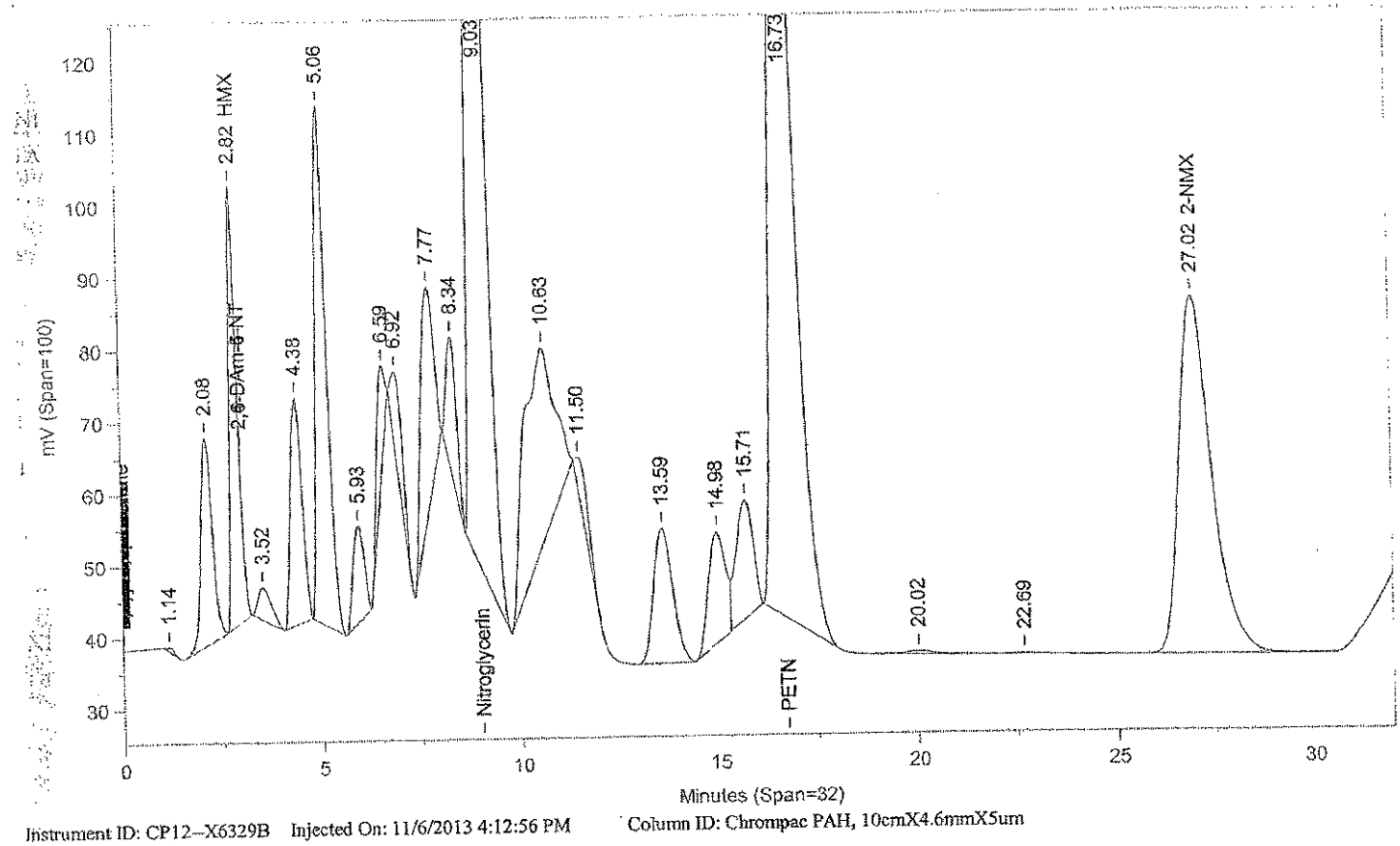
File: C:\CPWIN\DATA1\1E12310.04R

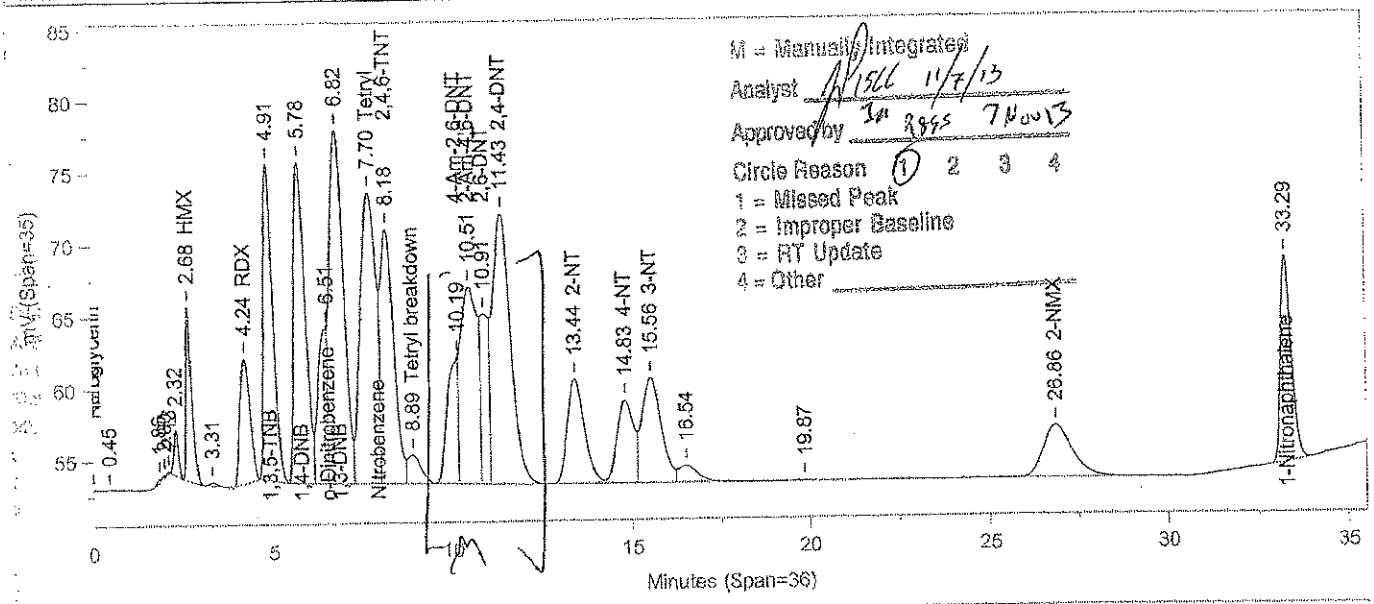


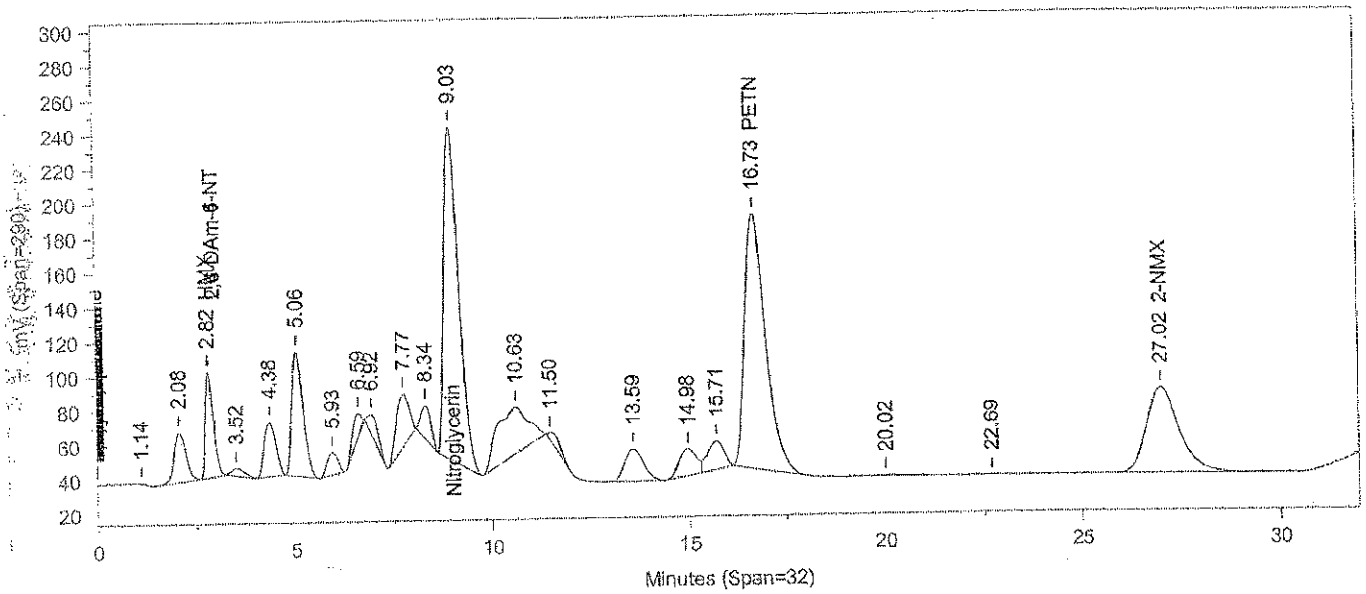
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.45
2.32
2.68 HMX
3.31
4.24 RDX
4.91
5.78
1,3,5-TNB
1,3-DNB
1,4-DNB
Dinitrobenzene
6.51
6.82
Tetryl
2,4,6-TNT
7.70
8.18
Nitrobenzene
8.89 Tetryl breakdown
10.19
4-Am-2,6-DNT
10.51
2,6-DNT
10.91
11.43 2,4-DNT
13.44 2-NT
14.83 4-NT
15.56 3-NT
16.54
19.87
26.86 2-NMX
33.29
1-Nitronaphthalene
Minutes (Span=36)


1.14
2.08
2.82 HMX
4-Am-2-NT
3.52
4.38
5.06
5.93
6.59
6.82
7.77
8.34
9.03
Nitroglycerin
10.63
11.50
13.59
14.98
15.71
16.73 PETN
20.02
22.69
27.02 2-NMX
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	1984.604	HMX
4.236	173918	1972.348	RDX	.	0	.	RDX
4.915	403513	1976.331	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	2360.433	1,4-DNB	.	0	.	1,4-DNB
6.511	177323	2224.521	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	660009	2472.194	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	3148.742	Tetryl + Breakdown = 672829	.	0	.	Tetryl
8.184	451815	2717.684	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	3636.271	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	45613.86	Nitroglycerin
10.189	180347	1818.67	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.513	443957	2009.276	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.91	183813	3932.204	2,6-DNT	.	0	.	2,6-DNT
11.432	677076	2478.647	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	2251.094	2-NT	.	0	.	2-NT
14.835	183964	2373.201	4-NT	.	0	.	4-NT
15.56	279402	2573.633	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	55137.47	PETN
26.863	207607	7934.855	2-NMX	27.017	2865768	6985.688	2-NMX
33.287	288442	2400.829	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:25:24 PM
File Reported On: 11/7/2013 at 3:25:22 PM

James H. Place
Senior Chemist

NOV 07 2013

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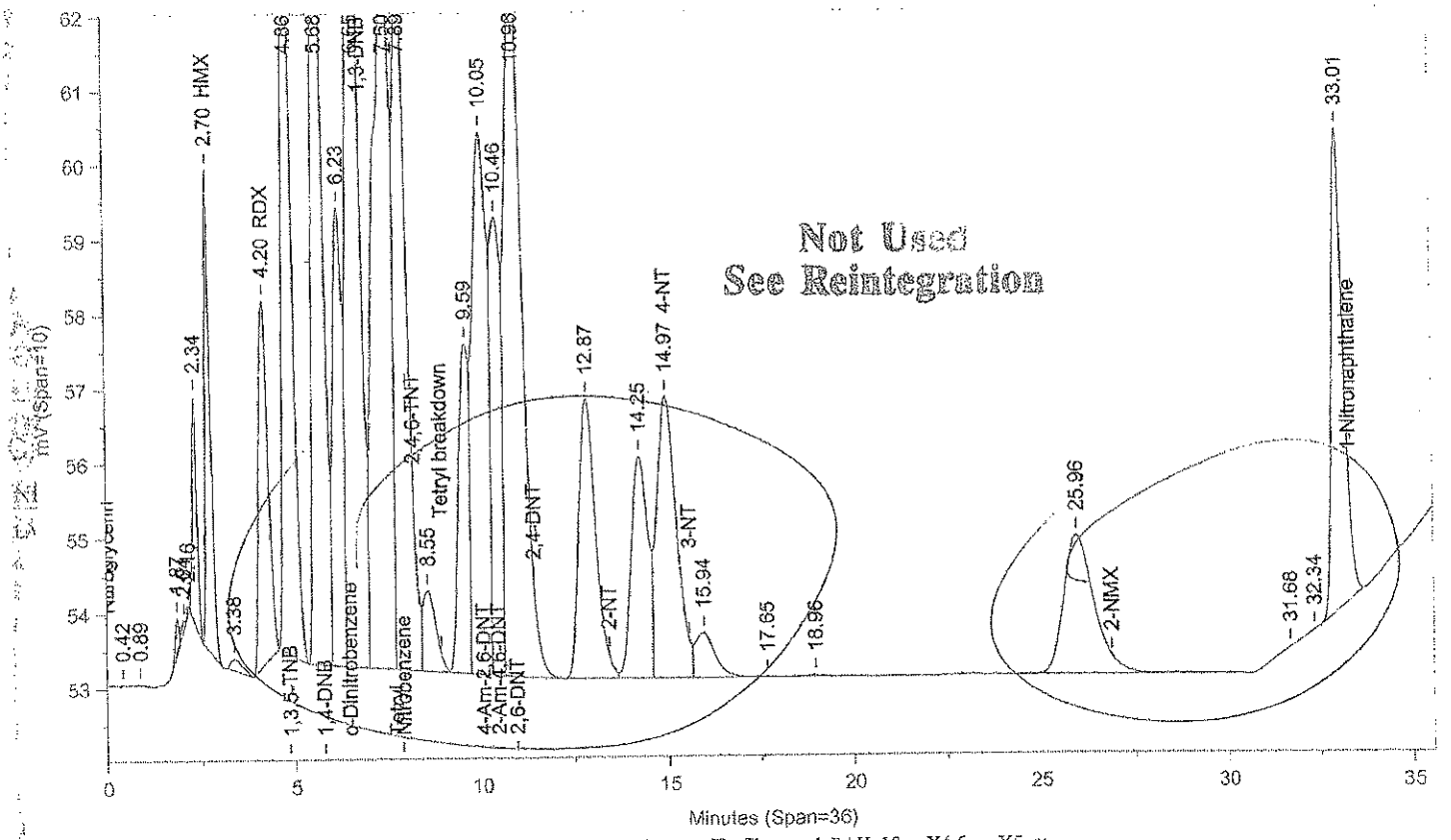
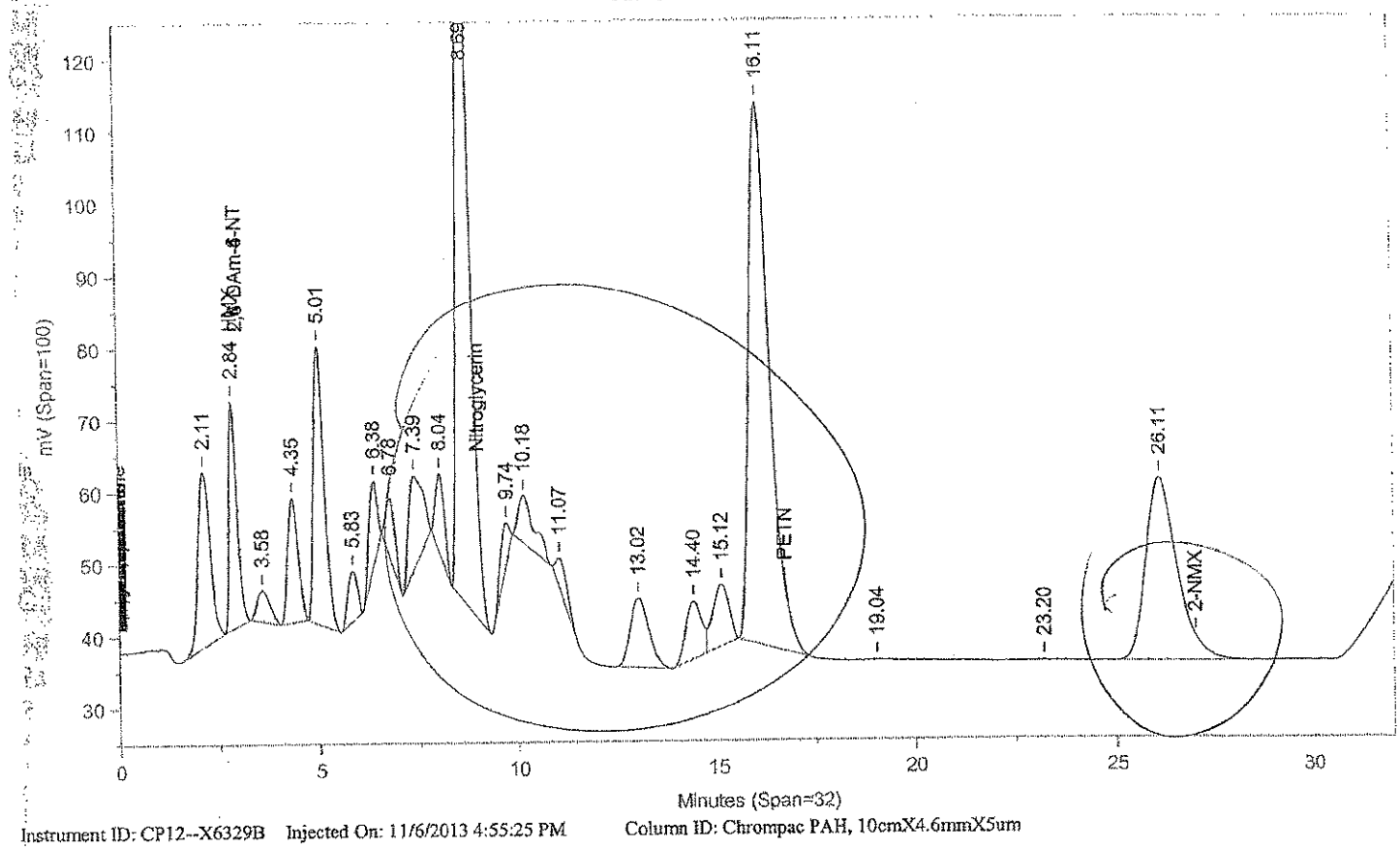
File: C:\CPWIN\DATA1\1E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1024.722	HMX
4.202	87948	996.505	RDX	.	0	.	RDX
4.861	205100	973.585	1,3,5-TNB	.	0	.	1,3,5-TNB
7.887	229234	785.825	Nitrobenzene	.	0	.	Nitrobenzene
10.049	212049	2649.713	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.461	118086	509.17	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.956	313494	33930.22	2,6-DNT	.	0	.	2,6-DNT
14.966	137062	1528.788	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.05A
Area File: C:\CPWIN\DATA1\1E12310B.05A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:48 PM
File Reported On: 11/7/2013 at 2:19:04 PM

Not Used
See Reintegration

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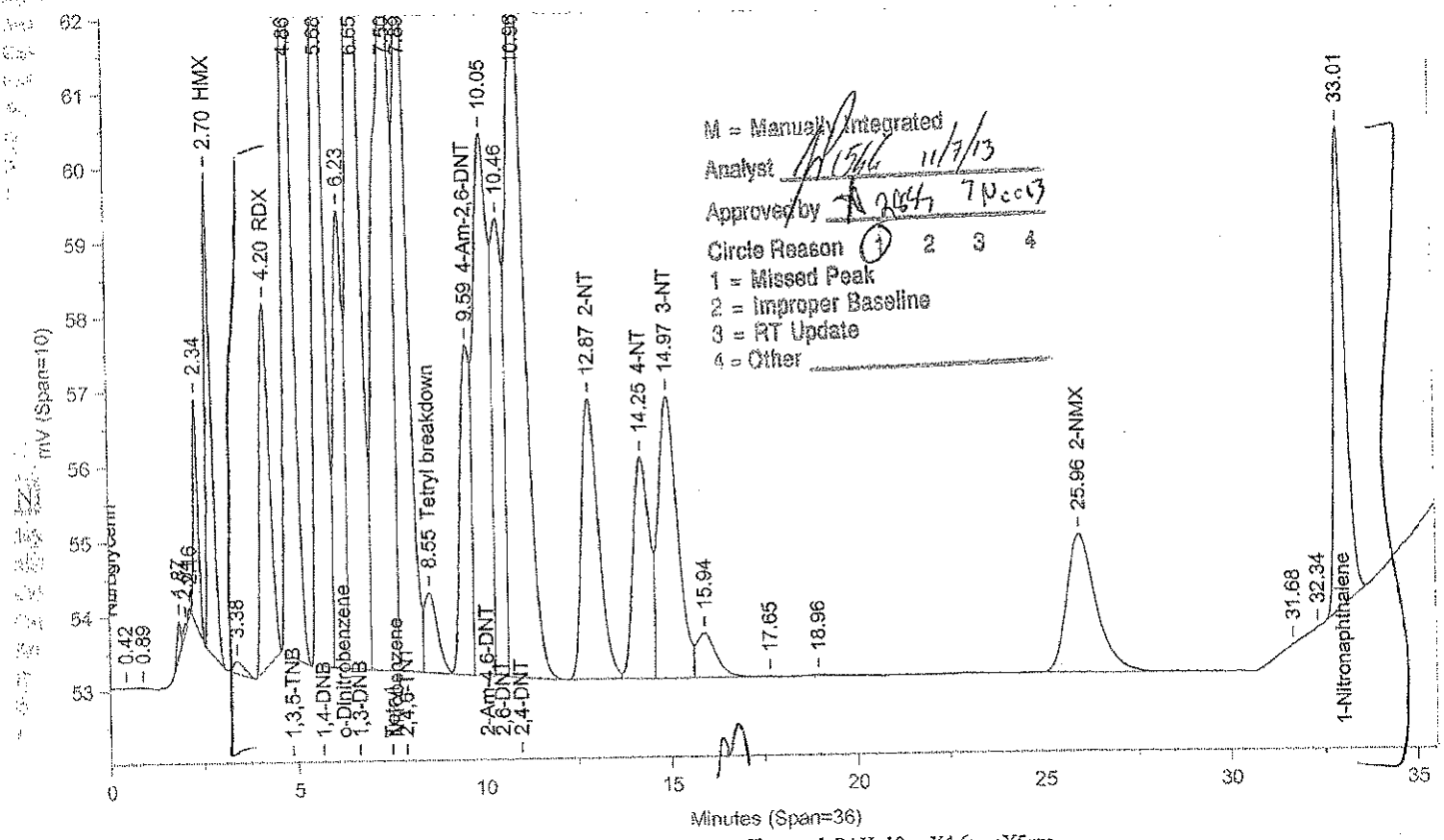
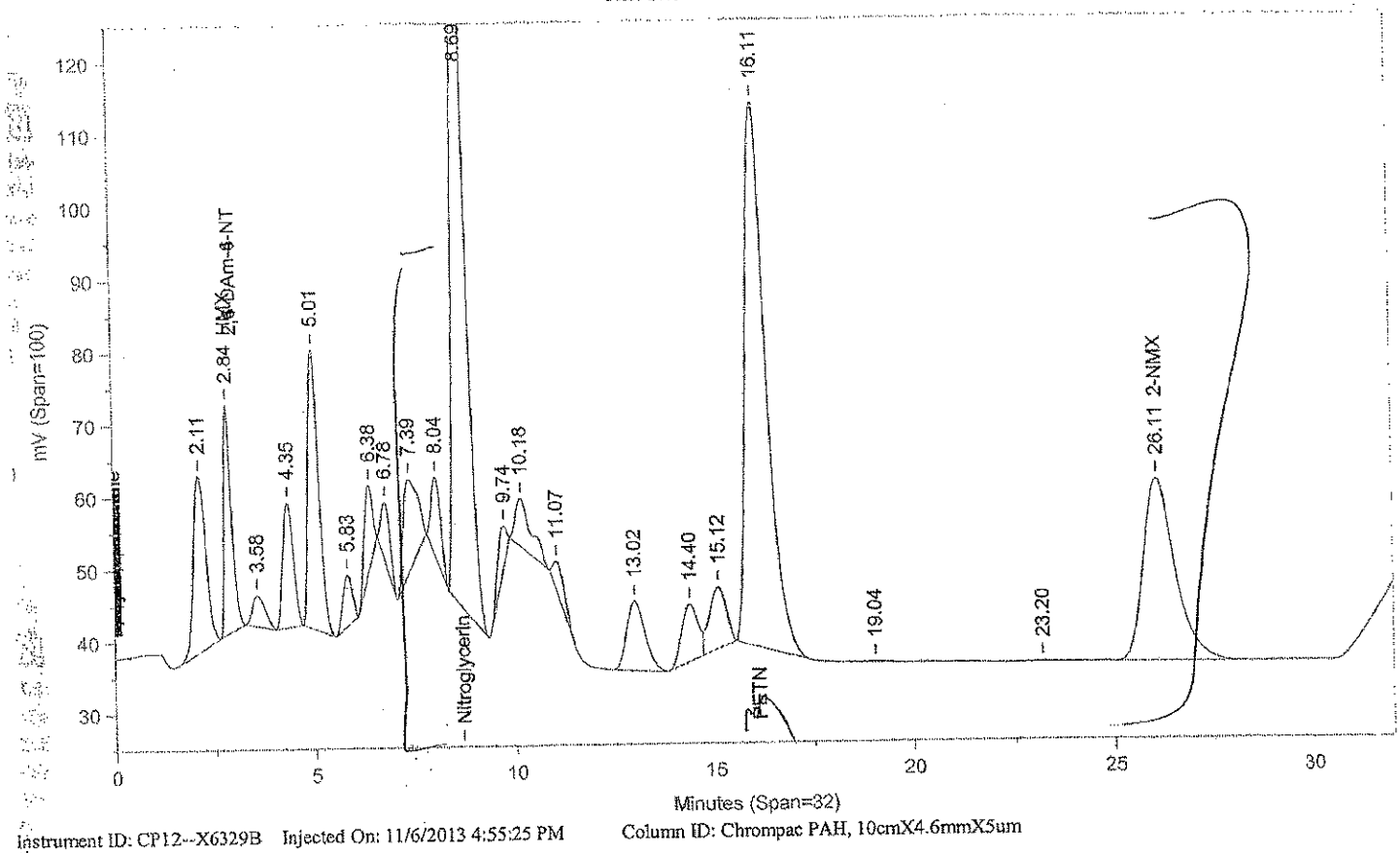
File: C:\CPWIN\DATA1\1E12310.05R

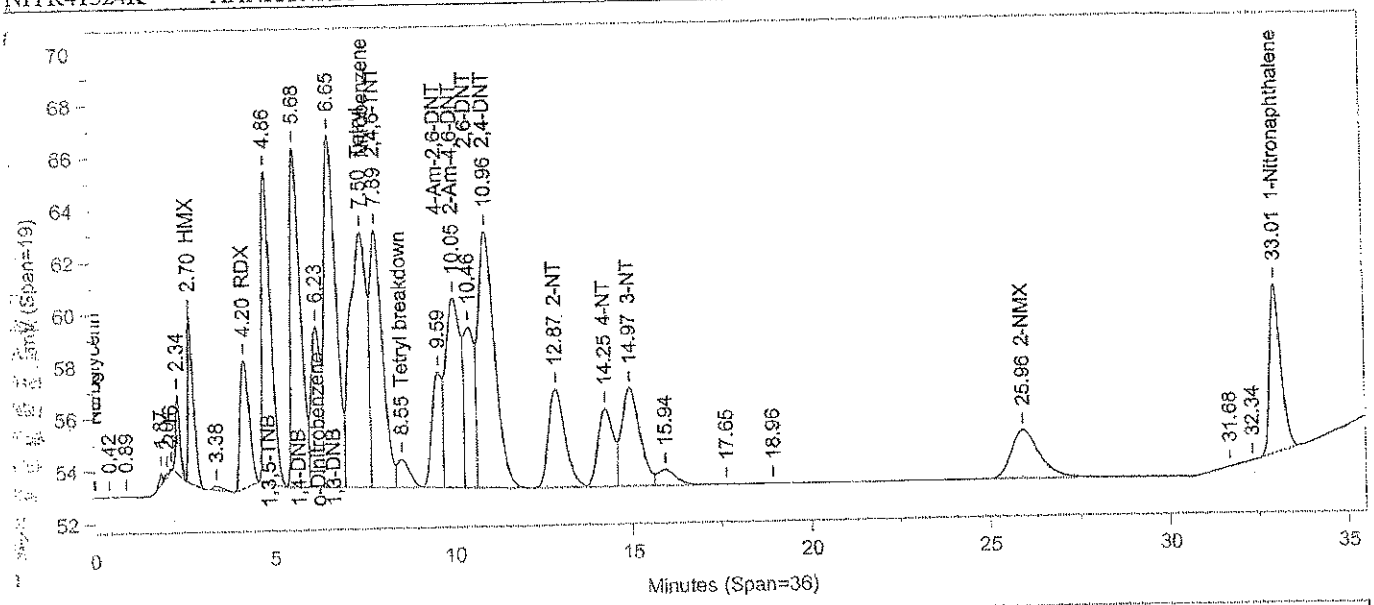


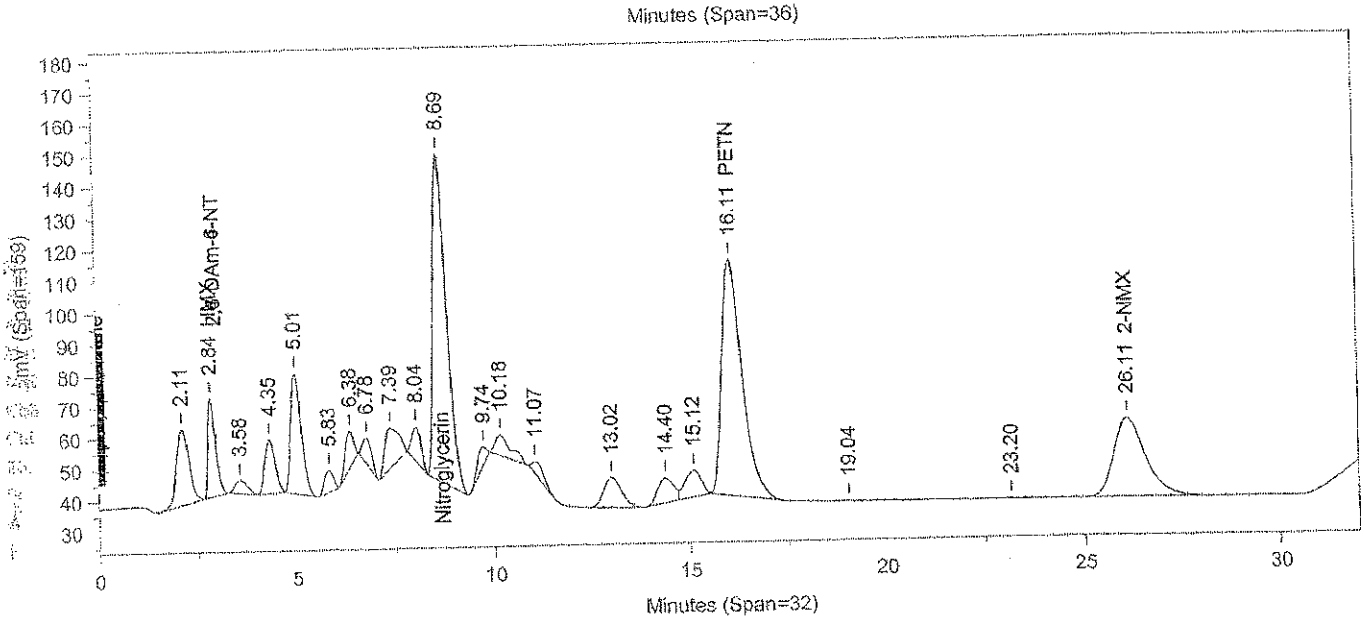
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


Nitroglycerin
0.42
0.89
1.87
2.34
2.70 HMX
3.38
4.20 RDX
4.86
5.68
6.65
1,3,5-TNB
1,4-DNB
Dinitrobenzene
1,3-DNB
6.23
7.50 Tetryl
7.89 2,4,6-TNT
8.55 Tetryl breakdown
9.59
4-Am-2,6-DNT
2-Am-4,6-DNT
10.05
10.46 2,6-DNT
10.96 2,4-DNT
12.87 2-NT
14.25 4-NT
14.97 3-NT
15.94
17.65
18.96
25.96 2-NMX
31.68
32.34
33.01 1-Nitronaphthalene
Minutes (Span=36)


2.11
2.84 HMX
3.58
4-Am-6-NT
4.35
5.01
5.83
6.38
6.78
7.39
8.04
8.69
Nitroglycerin
9.74
10.18
11.07
13.02
14.40
15.12
16.11 PETN
19.04
23.20
26.11 2-NMX
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1012.248	HMX
4.202	87948	991.209	RDX	.	0	.	RDX
4.861	205100	1004.541	1,3,5-TNB	.	0	.	1,3,5-TNB
5.682	248639	1195.627	1,4-DNB	.	0	.	1,4-DNB
6.226	112229	1407.916	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.65	306036	1146.317	1,3-DNB	.	0	.	1,3-DNB
7.496	315157	1603.592	Tetryl + Breakdown = 340,823	.	0	.	Tetryl
7.887	229234	1378.849	2,4,6-TNT	.	0	.	2,4,6-TNT
8.549	25666	1728.286	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.694	2450463	22806.54	Nitroglycerin
9.594	89879	906.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.049	212049	959.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.461	118086	2097.385	2,6-DNT	.	0	.	2,6-DNT
10.956	313494	1147.641	2,4-DNT	.	0	.	2,4-DNT
12.871	120282	1103.257	2-NT	.	0	.	2-NT
14.253	91440	1179.606	4-NT	.	0	.	4-NT
14.966	137062	1262.512	3-NT	.	0	.	3-NT
.	0	.	PETN	16.108	2722253	27468.08	PETN
25.961	102777	3928.2	2-NMX	26.113	1408885	3434.344	2-NMX
33.014	142444	1239.326	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:34:34 PM
File Reported On: 11/7/2013 at 3:34:33 PM

James H. Place
Senior Chemist

NOV 07 2013

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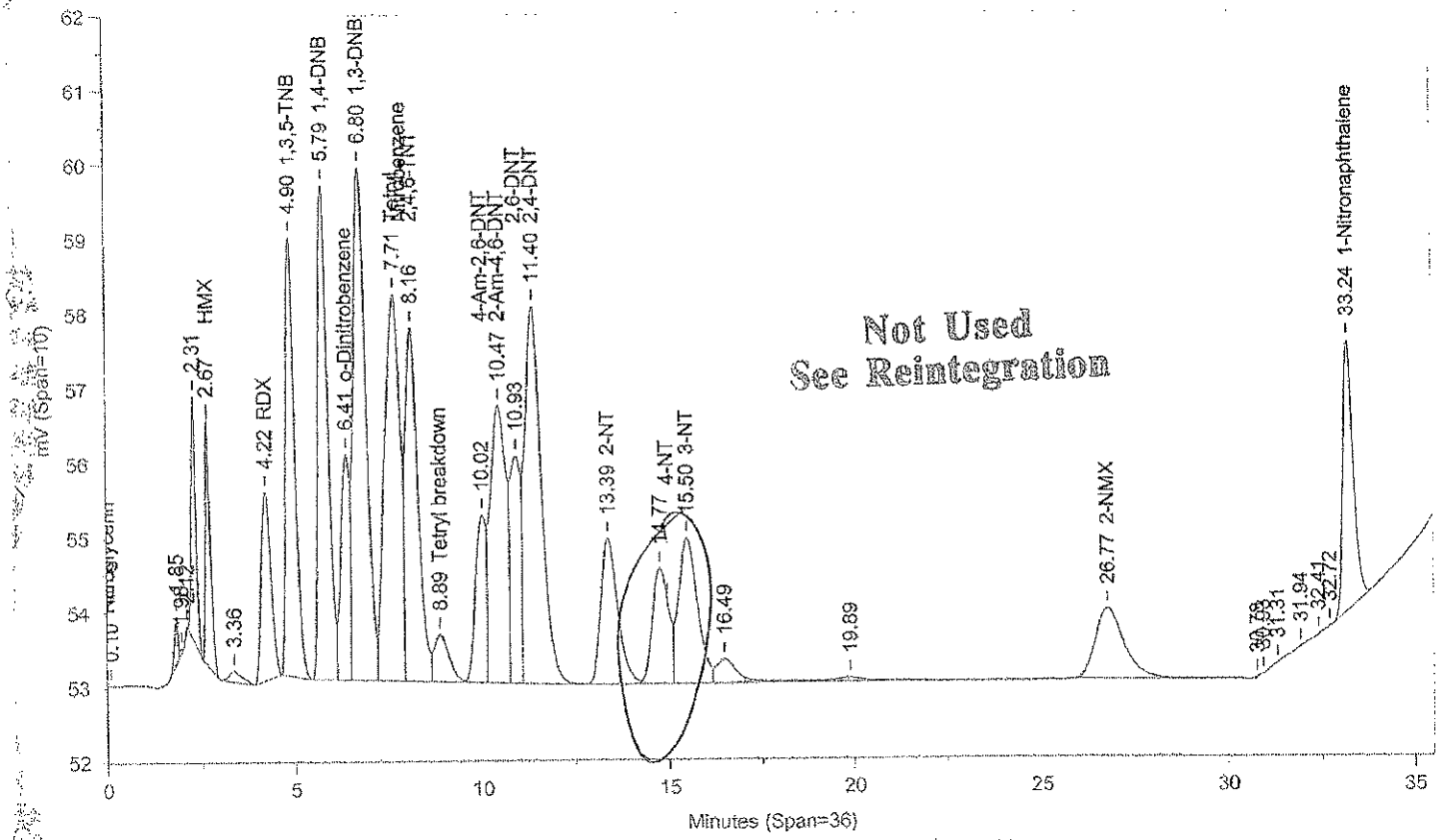
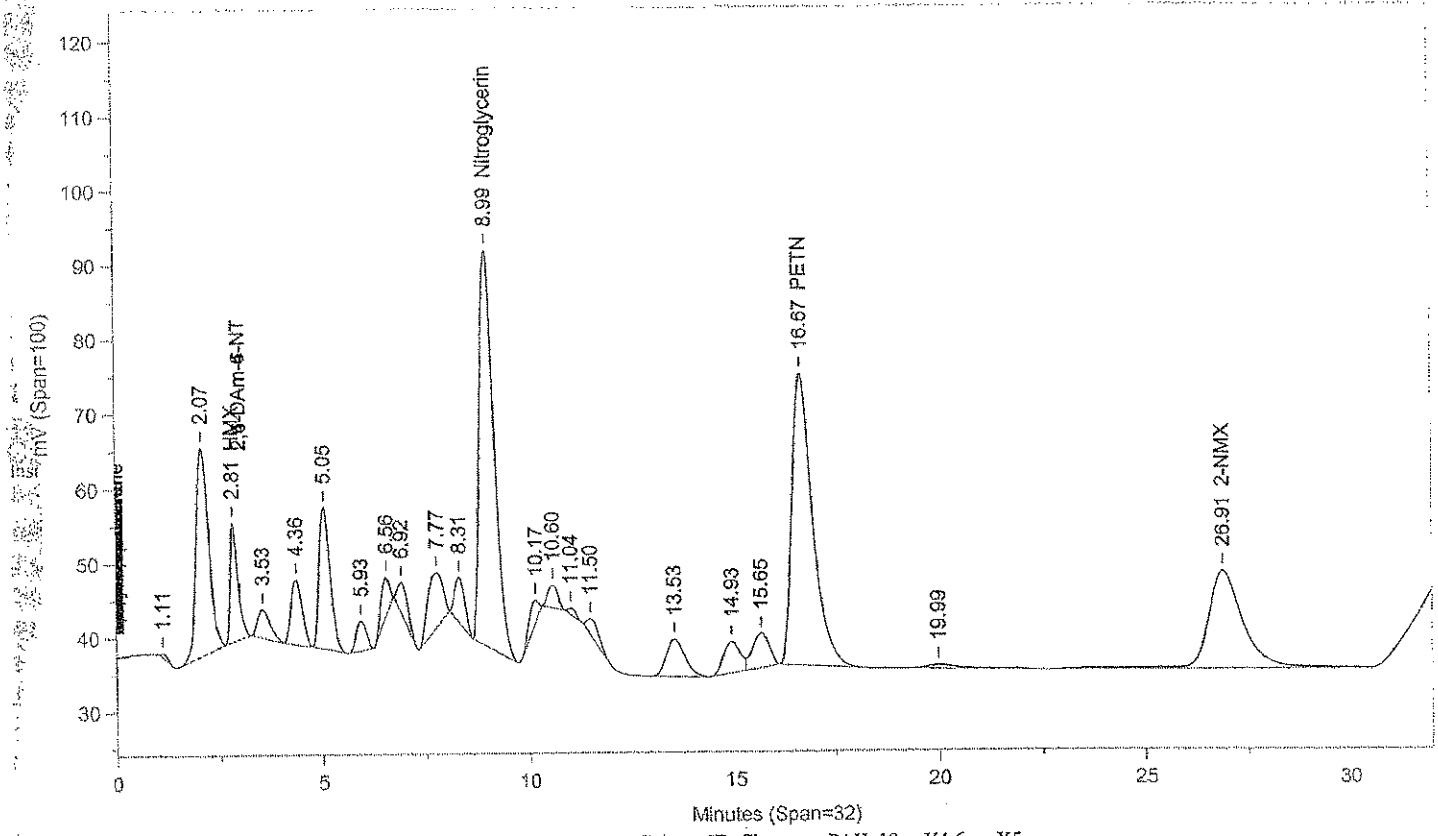
File: C:\CPWIN\DATA1\E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	511.198	HMX
4.216	45161	503.754	RDX	.	0	.	RDX
4.899	101540	481.274	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	597.575	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	638.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	589.429	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	527.707	Tetryl	.	0	.	Tetryl
8.159	109953	592.518	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	72.629	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11816.78	Nitroglycerin
10.022	44007	436.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	501.563	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	456.94	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	596.64	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	583.272	2-NT	.	0	.	2-NT
15.496	68775	607.768	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	12349.17	PETN
26.768	51441	1767.312	2-NMX	26.91	804532	1952.055	2-NMX
33.236	71524	677.433	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.06A
Area File: C:\CPWIN\DATA1\1E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:19:30 PM
File Reported On: 11/7/2013 at 2:19:47 PM

Not Used
See Reintegration

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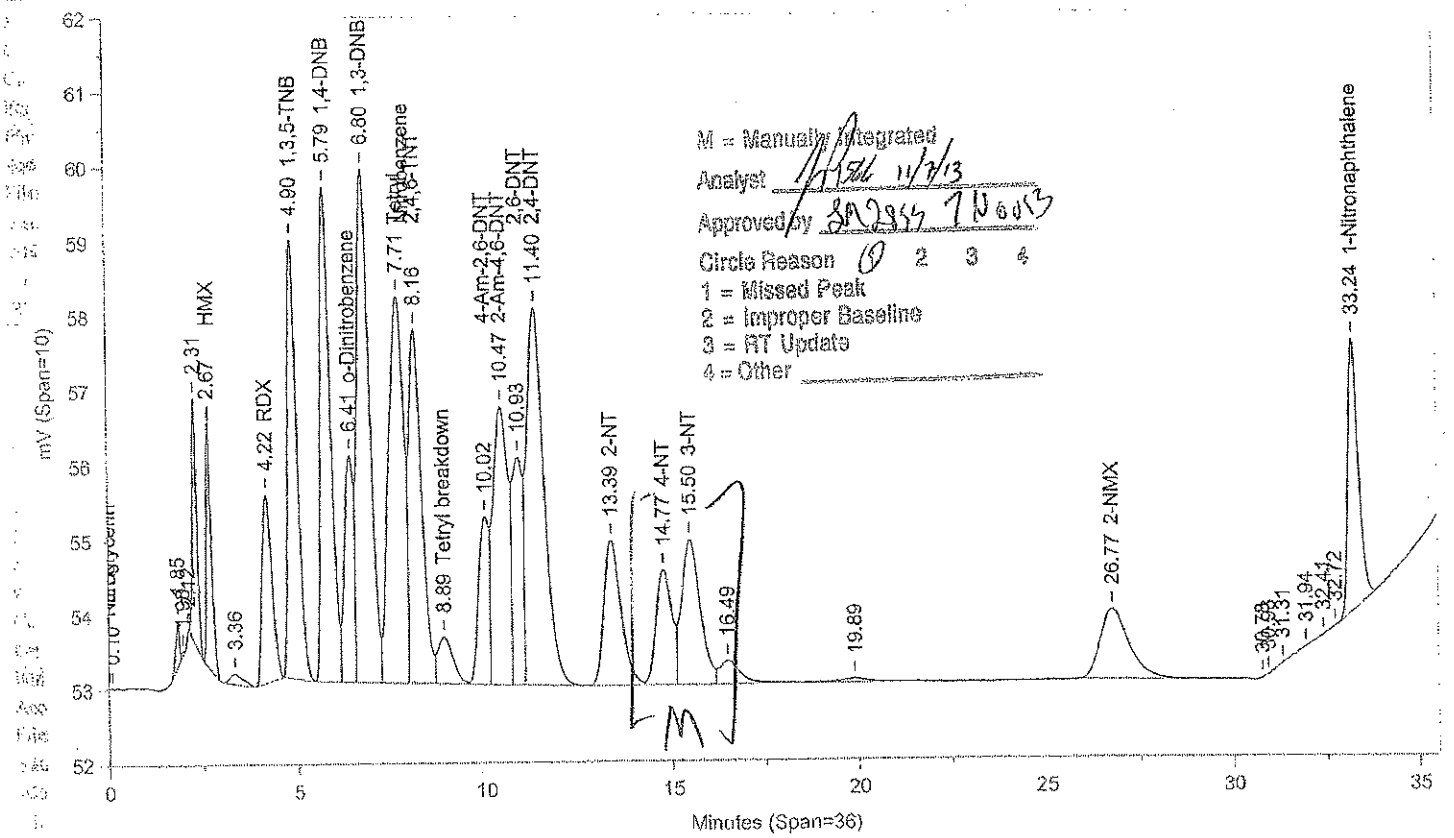
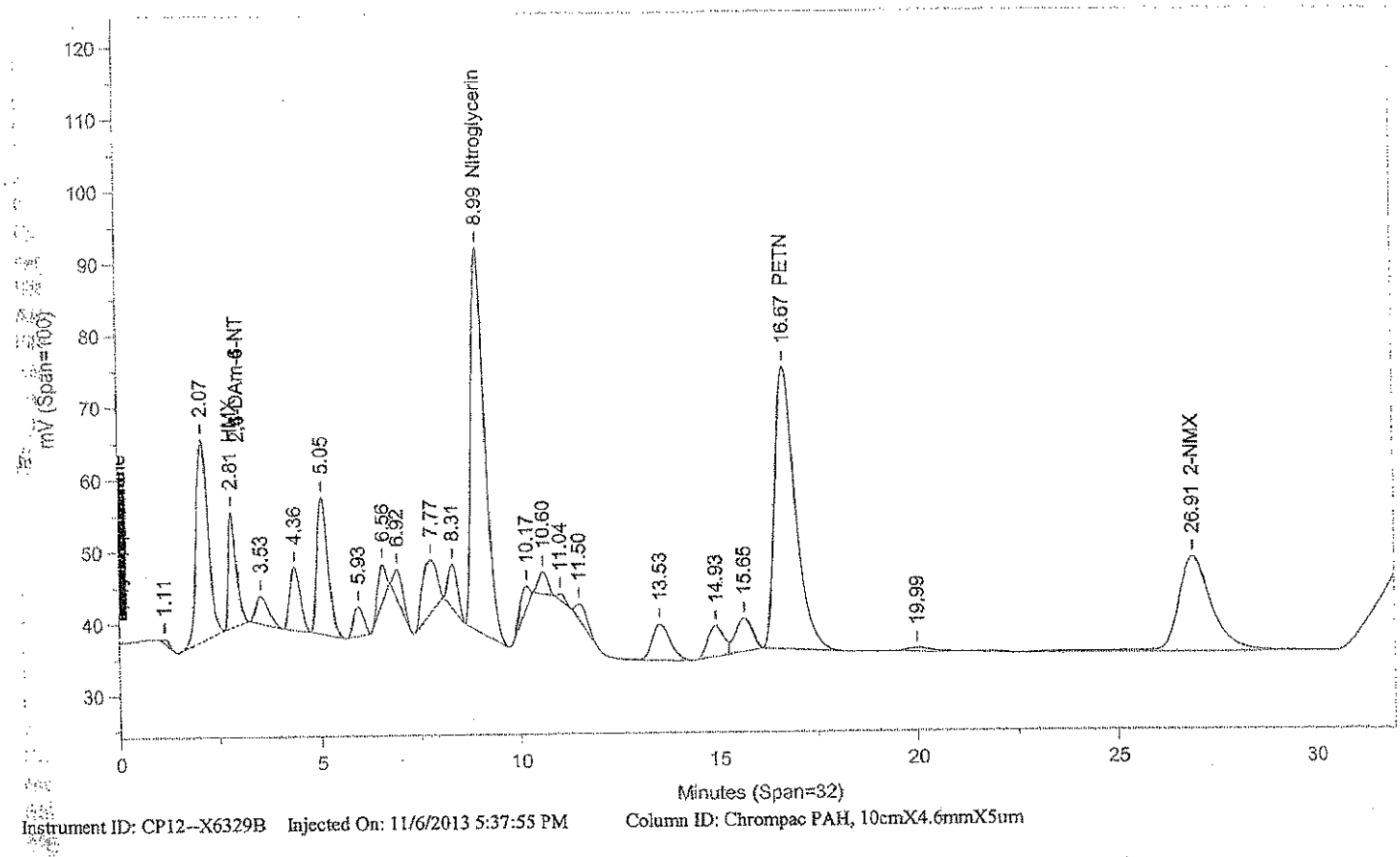
File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	510.519	HMX
4.216	45161	502.899	RDX	.	0	.	RDX
4.899	101540	497.322	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	601.558	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	636.928	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	600.669	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	767.889	Tetryl + Breakdown = 168264	.	0	.	Tetryl
8.159	109953	661.368	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	1168.216	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11854.74	Nitroglycerin
10.022	44007	443.776	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	489.236	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	477.694	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	583.866	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	560.392	2-NT	.	0	.	2-NT
14.774	46394	598.498	4-NT	.	0	.	4-NT
15.496	68775	633.506	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	14148.57	PETN
26.768	51441	1966.102	2-NMX	26.91	804532	1961.154	2-NMX
33.236	71524	675.115	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:56:28 PM
File Reported On: 11/7/2013 at 3:56:27 PM

James H. Place
Senior Chemist

NOV 07 2013

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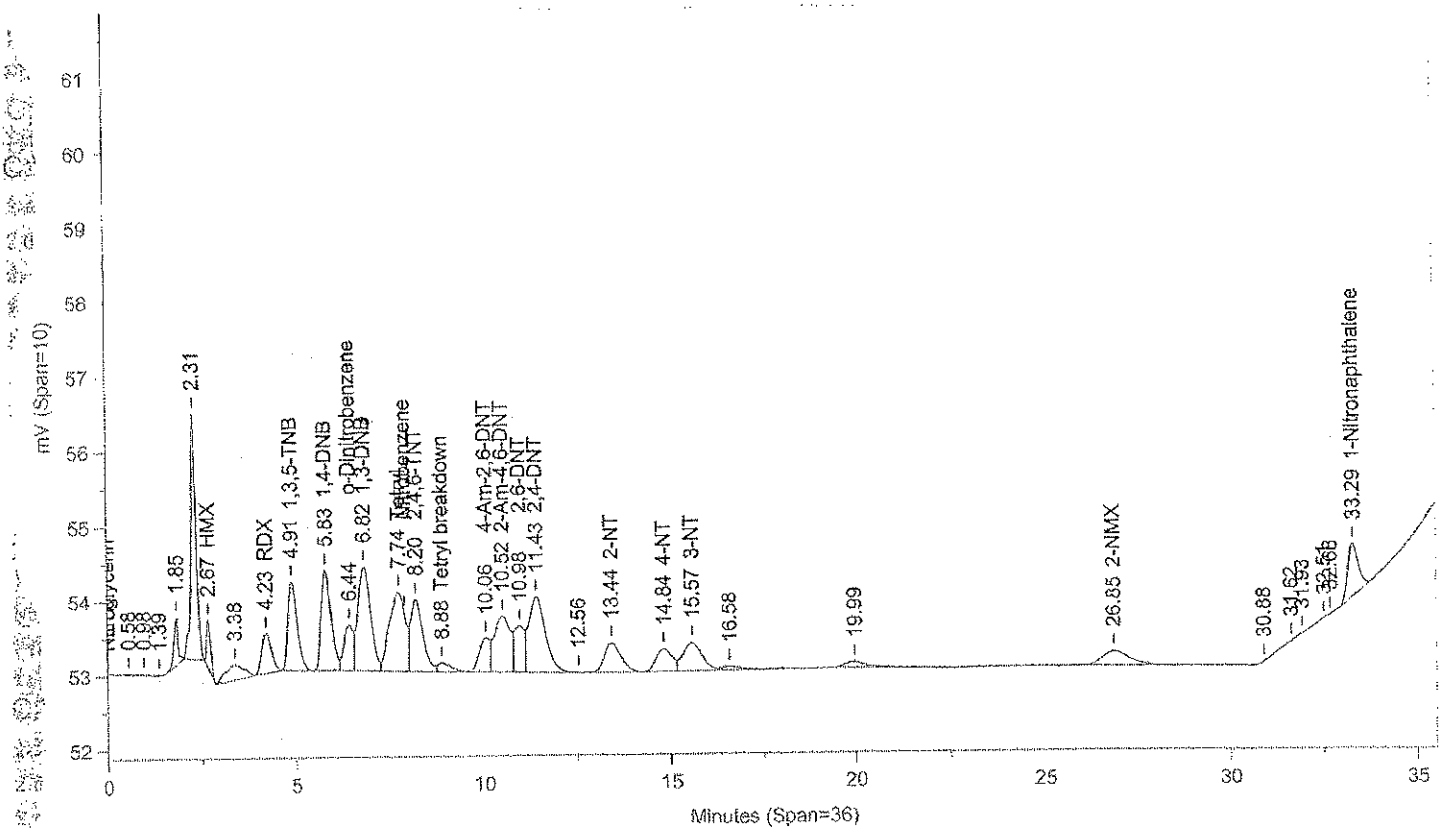
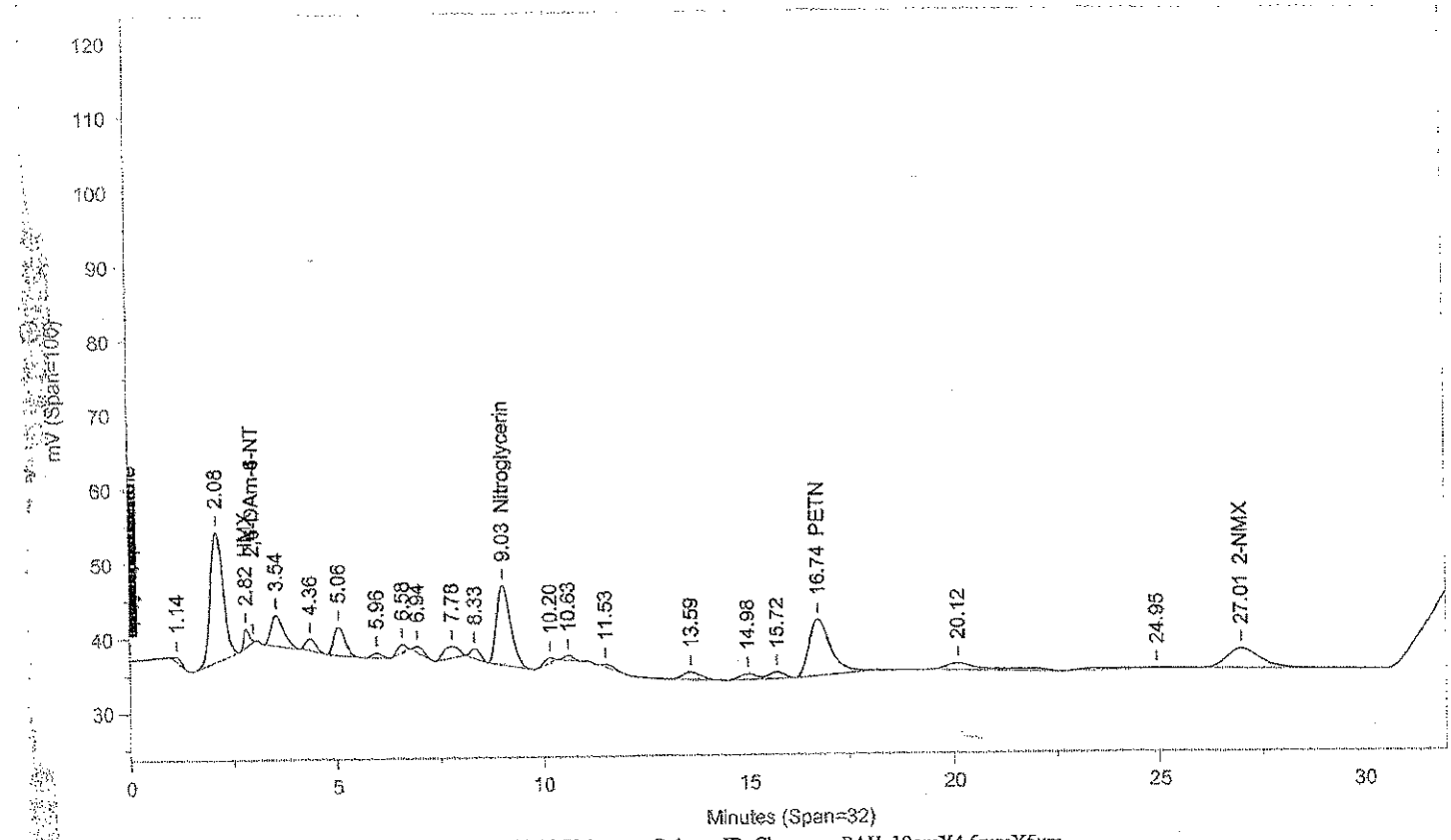
File: C:\CPWIN\DATA1\1E12310.07R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.07R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.817	24794	69.601	HMX
4.233	9542	95.872	RDX	.	0	.	RDX
4.913	20537	97.357	1,3,5-TNB	.	0	.	1,3,5-TNB
5.828	24892	118.679	1,4-DNB	.	0	.	1,4-DNB
6.439	10260	128.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.822	31744	116.544	1,3-DNB	.	0	.	1,3-DNB
7.741	31577	113.932	Tetryl + Breakdown = 34309	.	0	.	Tetryl
8.199	21629	116.547	2,4,6-TNT	.	0	.	2,4,6-TNT
8.878	2732	14.728	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	254397	2350.772	Nitroglycerin
10.065	9029	89.976	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.517	22305	103.167	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.983	11803	-905.124	2,6-DNT	.	0	.	2,6-DNT
11.432	31810	118.828	2,4-DNT	.	0	.	2,4-DNT
13.444	12318	117.604	2-NT	.	0	.	2-NT
14.842	9006	110.395	4-NT	.	0	.	4-NT
15.573	13215	117.012	3-NT	.	0	.	3-NT
.	0	.	PETN	16.741	278777	2451.791	PETN
26.846	10728	369.242	2-NMX	27.013	151561	363.794	2-NMX
33.294	13694	217.299	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.07A
Area File: C:\CPWIN\DATA1\1E12310B.07A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:14 PM
File Reported On: 11/7/2013 at 2:20:30 PM

James H. Place
Senior Chemist

NOV 07 2013

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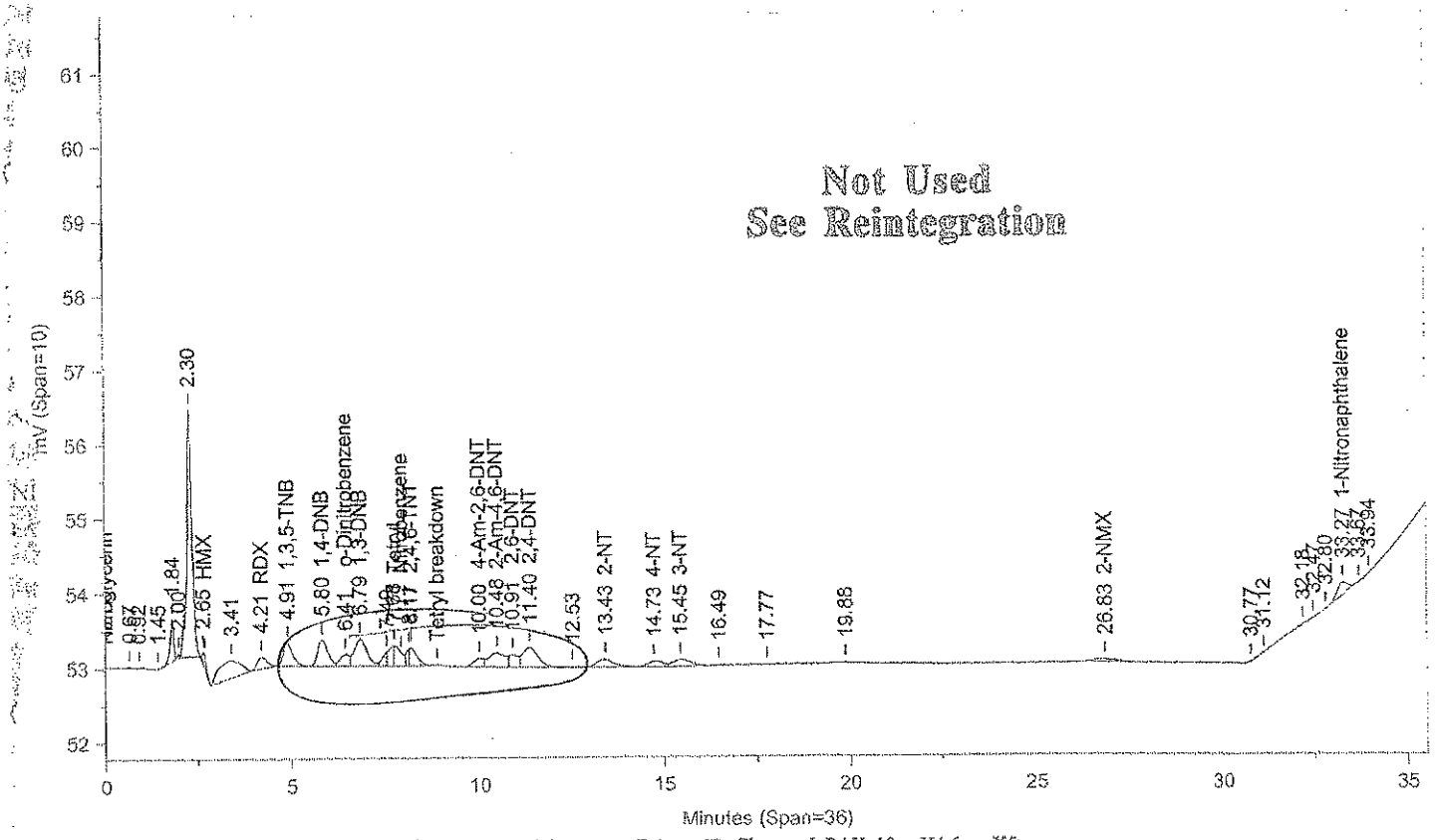
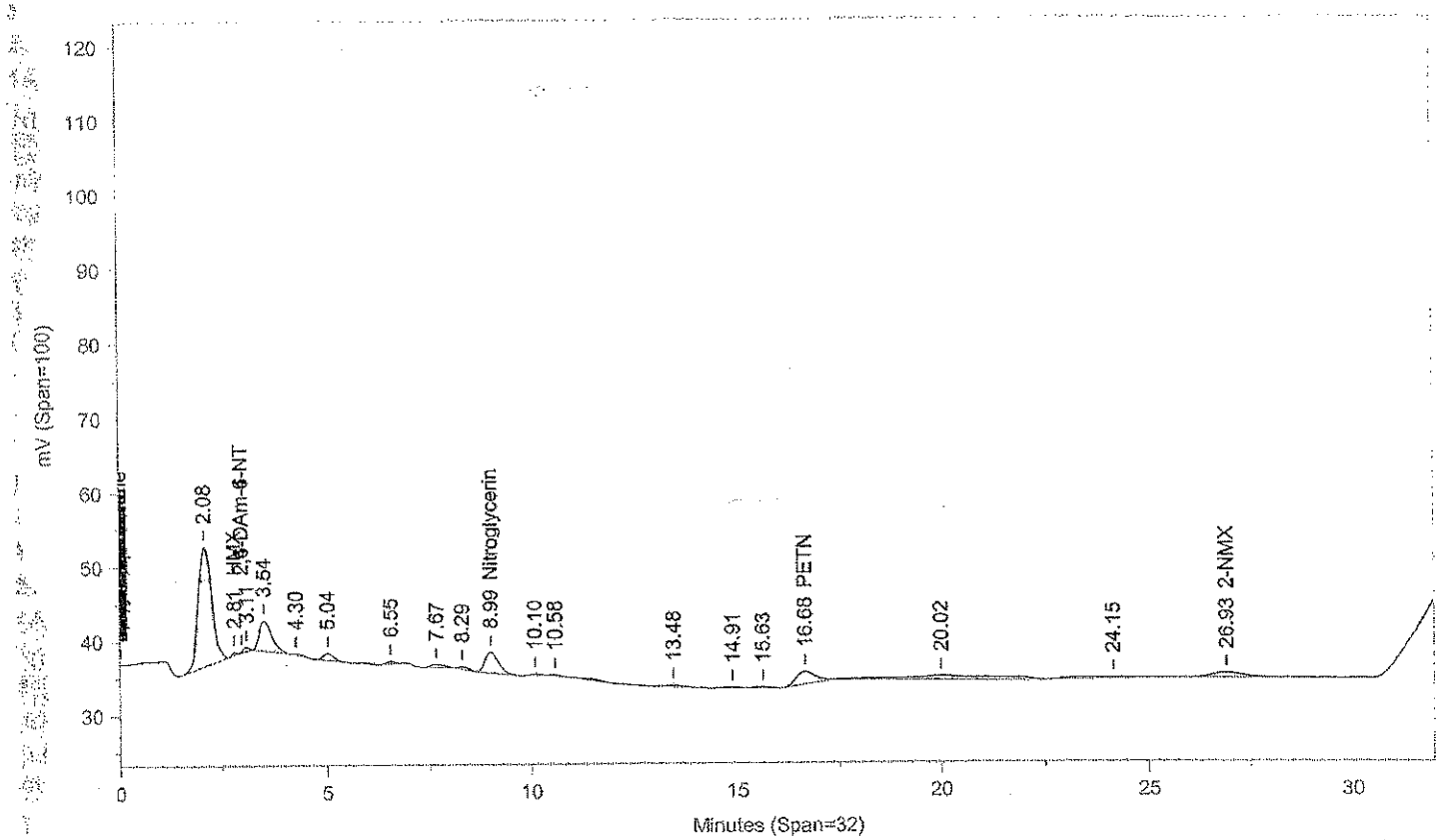
File: C:\CPWIN\DATA1\1E12310.08R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	24.521	HMX
4.208	2956	20.84	RDX	.	0	.	RDX
4.907	5333	25.317	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6450	30.761	1,4-DNB	.	0	.	1,4-DNB
6.412	2688	33.602	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8139	29.978	1,3-DNB	.	0	.	1,3-DNB
7.715	3855	14.308	Tetryl	.	0	.	Tetryl
8.166	3527	19.204	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.991	66170	609.364	Nitroglycerin
9.997	2141	21.334	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	6131	28.312	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	2702	-1152.824	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	29.313	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	31.816	2-NT	.	0	.	2-NT
14.733	2115	26.078	4-NT	.	0	.	4-NT
15.451	3131	28.146	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	487.427	PETN
26.83	2335	79.388	2-NMX	26.928	37099	88.281	2-NMX
33.267	3188	133.477	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.08A
Area File: C:\CPWIN\DATA1\1E12310B.08A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:58 PM
File Reported On: 11/7/2013 at 2:21:13 PM

Not Used
See Reintegration

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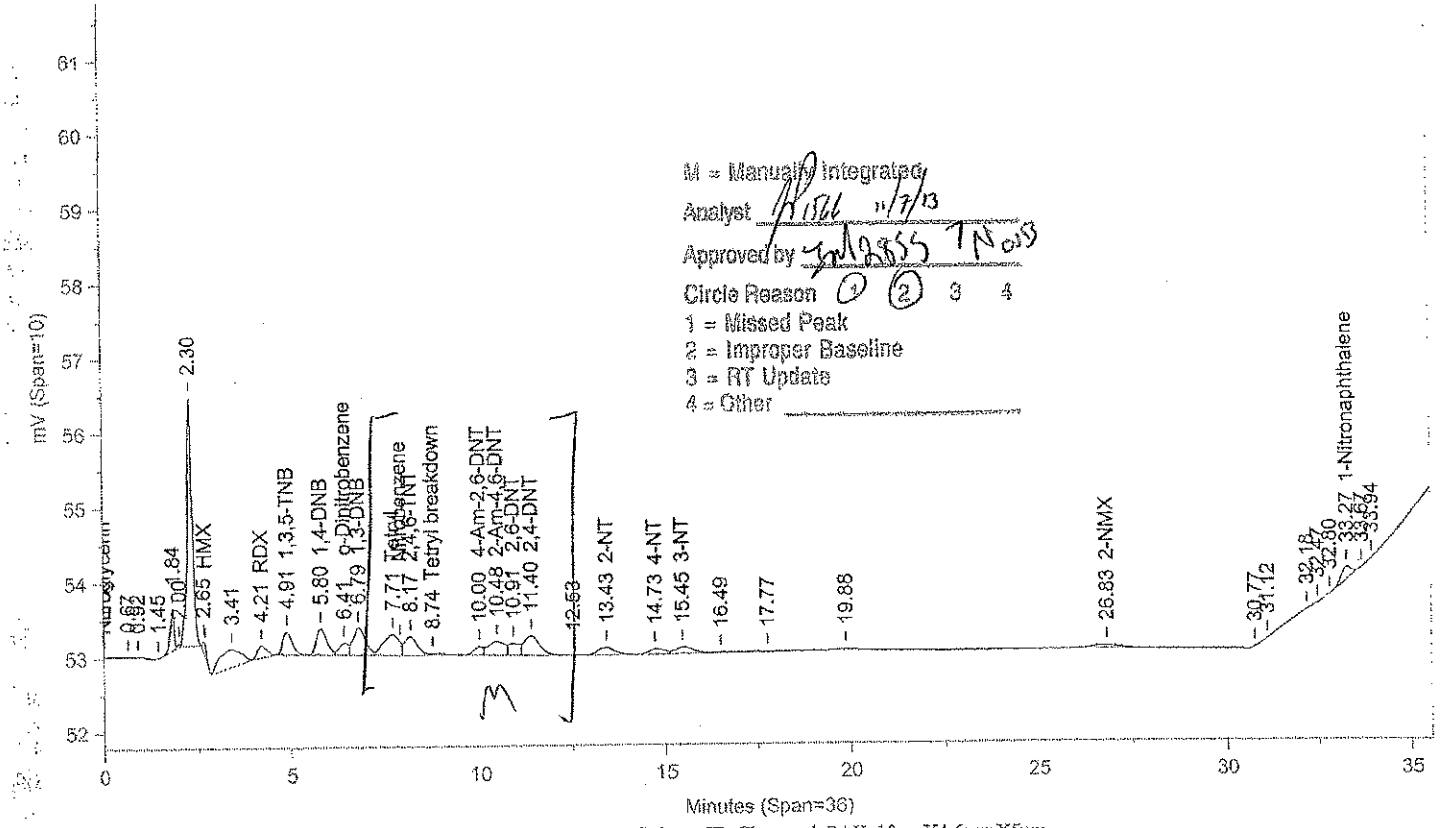
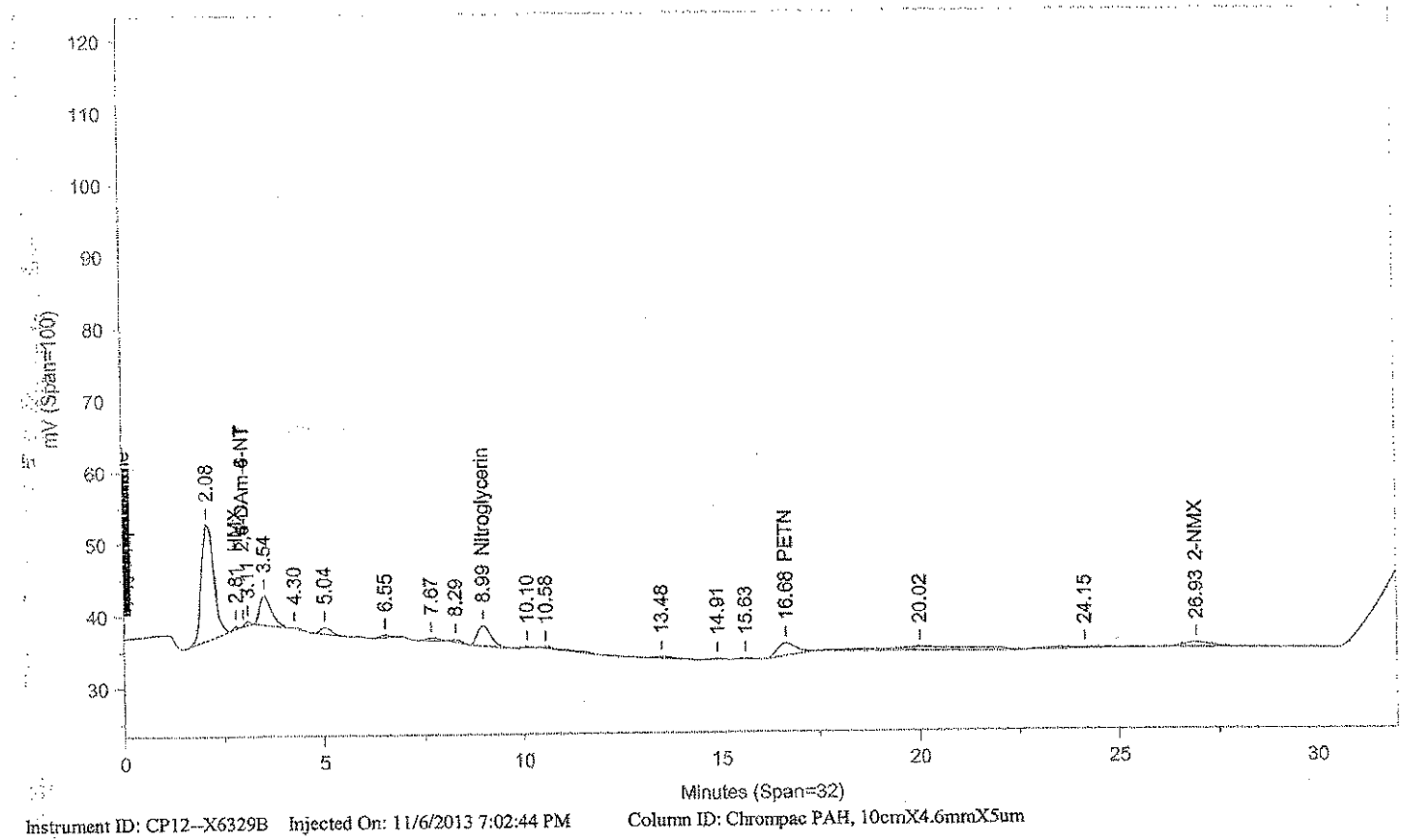
File: C:\CPWIN\DATA1\1E12310.08R

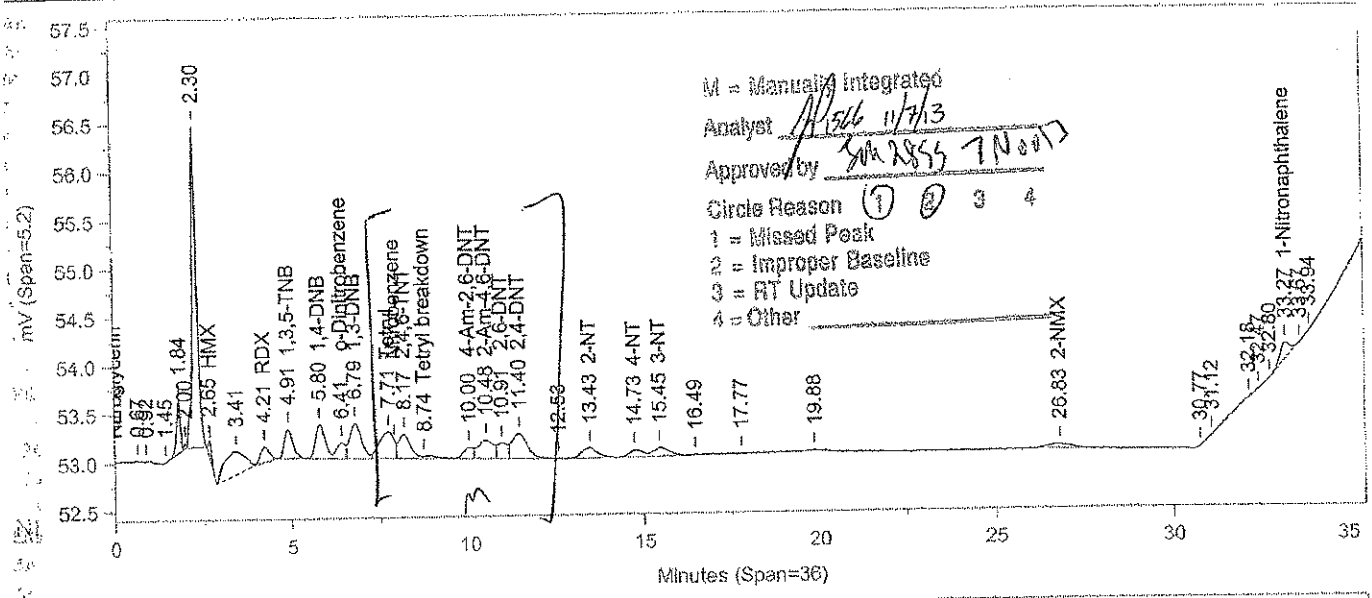


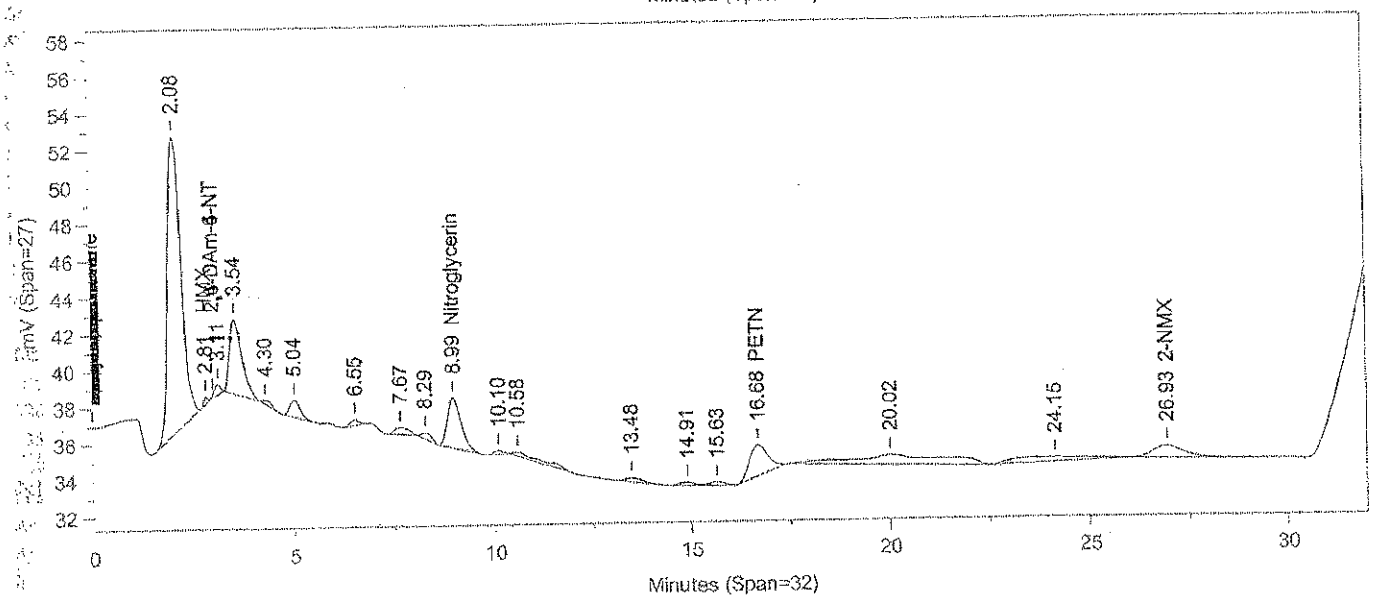
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


mV (Span=5.2)
Minutes (Span=36)
M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
Nitroglycerin
HMX
RDX
1,3,5-TNB
1,4-DNB
1,3-DNB
Tetryl breakdown
4-Am-2,6-DNT
2-Am-4,6-DNT
2,6-DNT
2,4-DNT
2-NT
4-NT
3-NT
2-NMX
1-Nitronaphthalene


mV (Span=27)
Minutes (Span=32)
Nitroglycerin
HMX
2,6-Am-4-NT
Nitroglycerin
PETN
2-NMX

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	23.632	HMX
4.208	2956	21.232	RDX	.	0	.	RDX
4.907	5333	26.121	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6512	31.316	1,4-DNB	.	0	.	1,4-DNB
6.412	2784	34.922	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8427	31.566	1,3-DNB	.	0	.	1,3-DNB
7.715	8012	40.766	Tetryl + Breakdown = 8798	.	0	.	Tetryl
8.166	5917	35.592	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	786	52.959	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.991	66170	615.85	Nitroglycerin
9.997	2141	21.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	5748	26.017	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	3229	-1108.926	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	28.758	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	30.48	2-NT	.	0	.	2-NT
14.733	2115	27.284	4-NT	.	0	.	4-NT
15.451	3131	28.84	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	559.844	PETN
26.83	2335	89.238	2-NMX	26.928	37099	90.433	2-NMX
33.267	3188	131.465	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:03:50 PM
File Reported On: 11/7/2013 at 4:03:49 PM

James H. Place
Senior Chemist

NOV 07 2013

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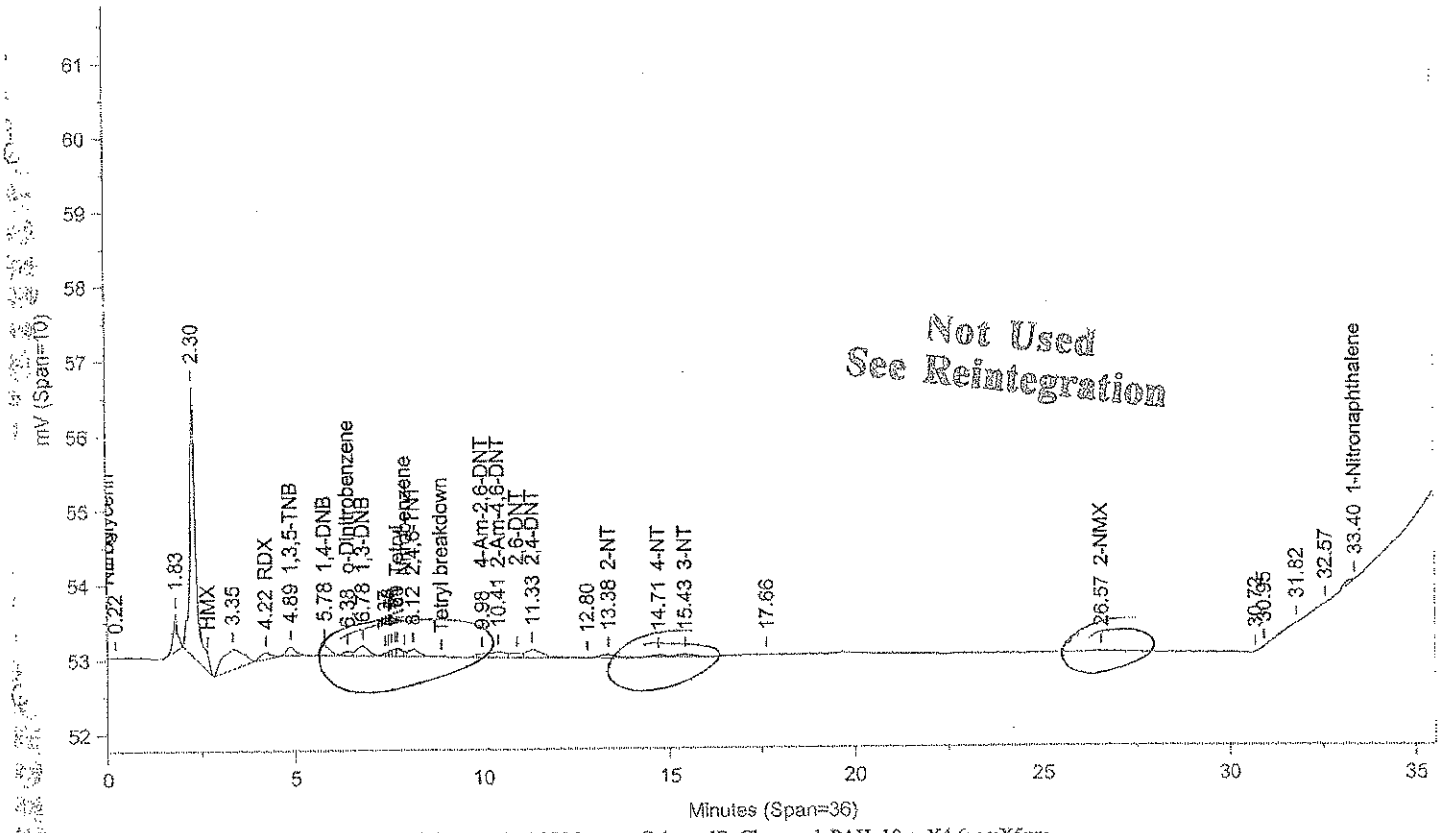
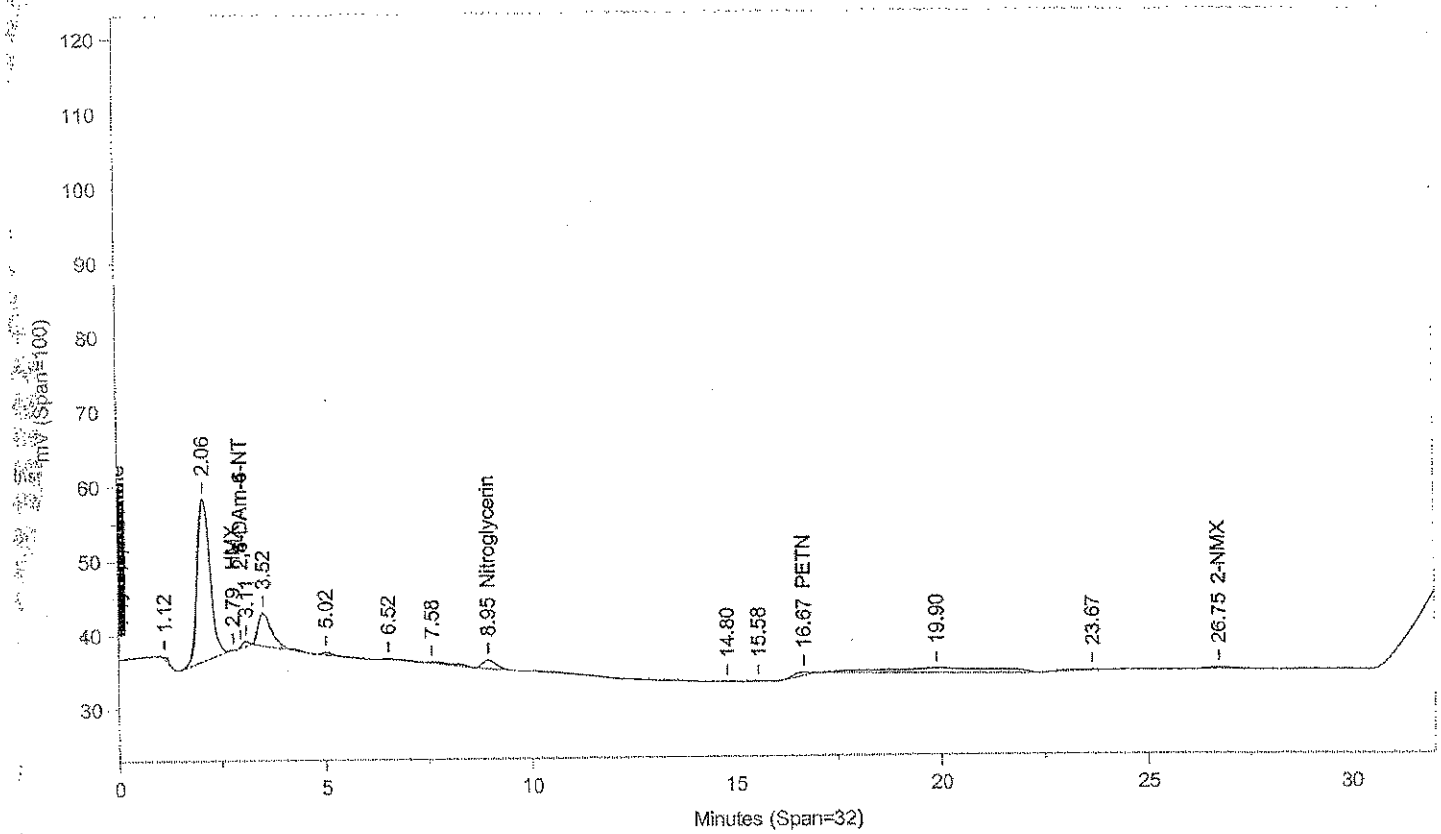
File: C:\CPWIN\DATA1\1E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

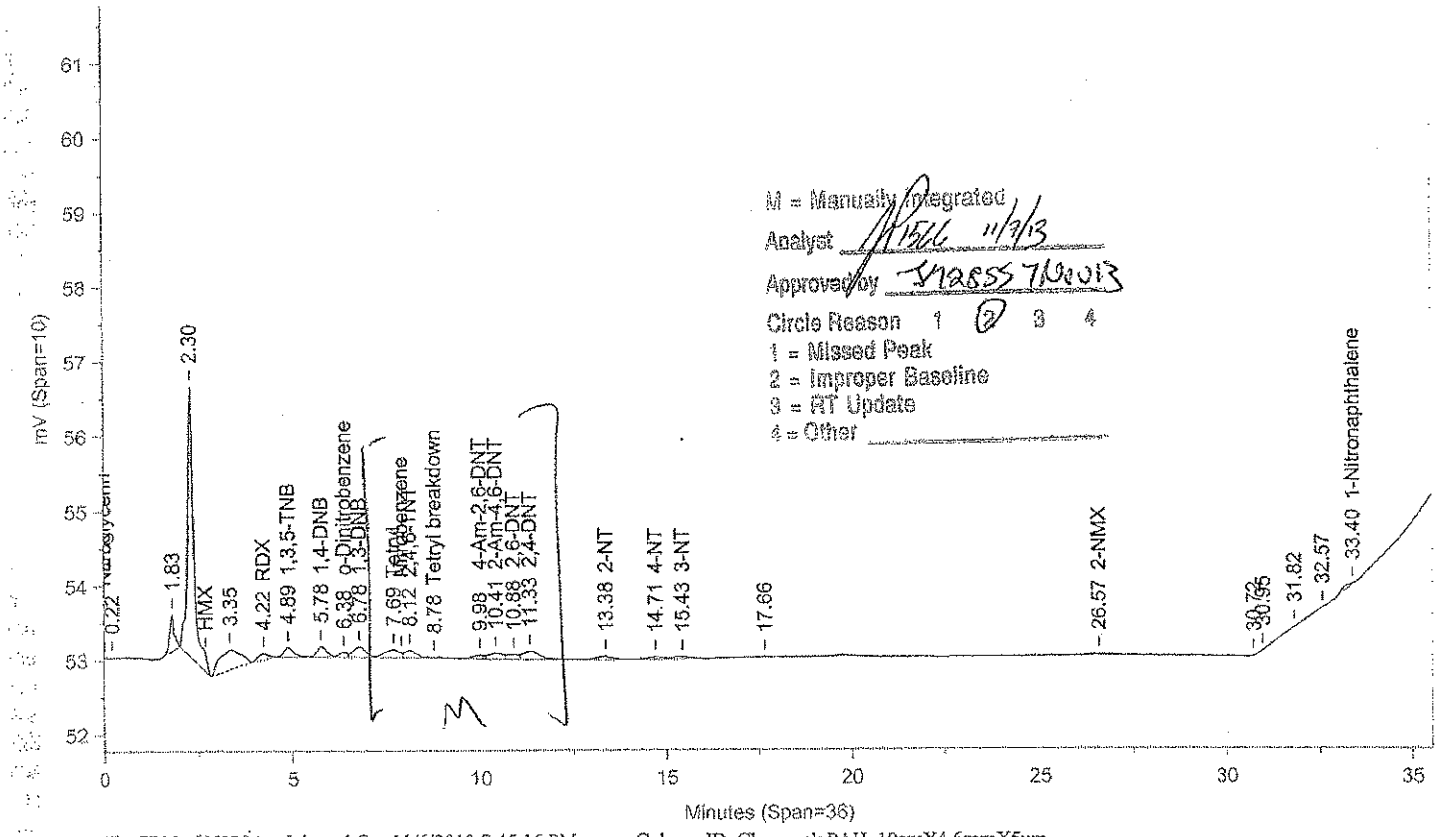
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.787	HMX
4.225	1736	7.531	RDX	.	0	.	RDX
4.89	1977	9.425	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2377	11.319	1,4-DNB	.	0	.	1,4-DNB
6.383	924	11.363	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	2972	10.921	1,3-DNB	.	0	.	1,3-DNB
7.688	968	4.046	Tetryl	.	0	.	Tetryl
8.317	1973	11.416	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.948	27434	252.901	Nitroglycerin
9.982	1196	12.208	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2110	9.538	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.328	3508	13.173	2,4-DNT	.	0	.	2,4-DNT
13.377	1479	14.488	2-NT	.	0	.	2-NT
14.712	591	7.36	4-NT	.	0	.	4-NT
15.433	1102	9.95	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	121.455	PETN
26.571	638	22.009	2-NMX	26.751	13456	31.305	2-NMX
33.395	956	114.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.09A
Area File: C:\CPWIN\DATA1\1E12310B.09A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:21:40 PM
File Reported On: 11/7/2013 at 2:21:56 PM

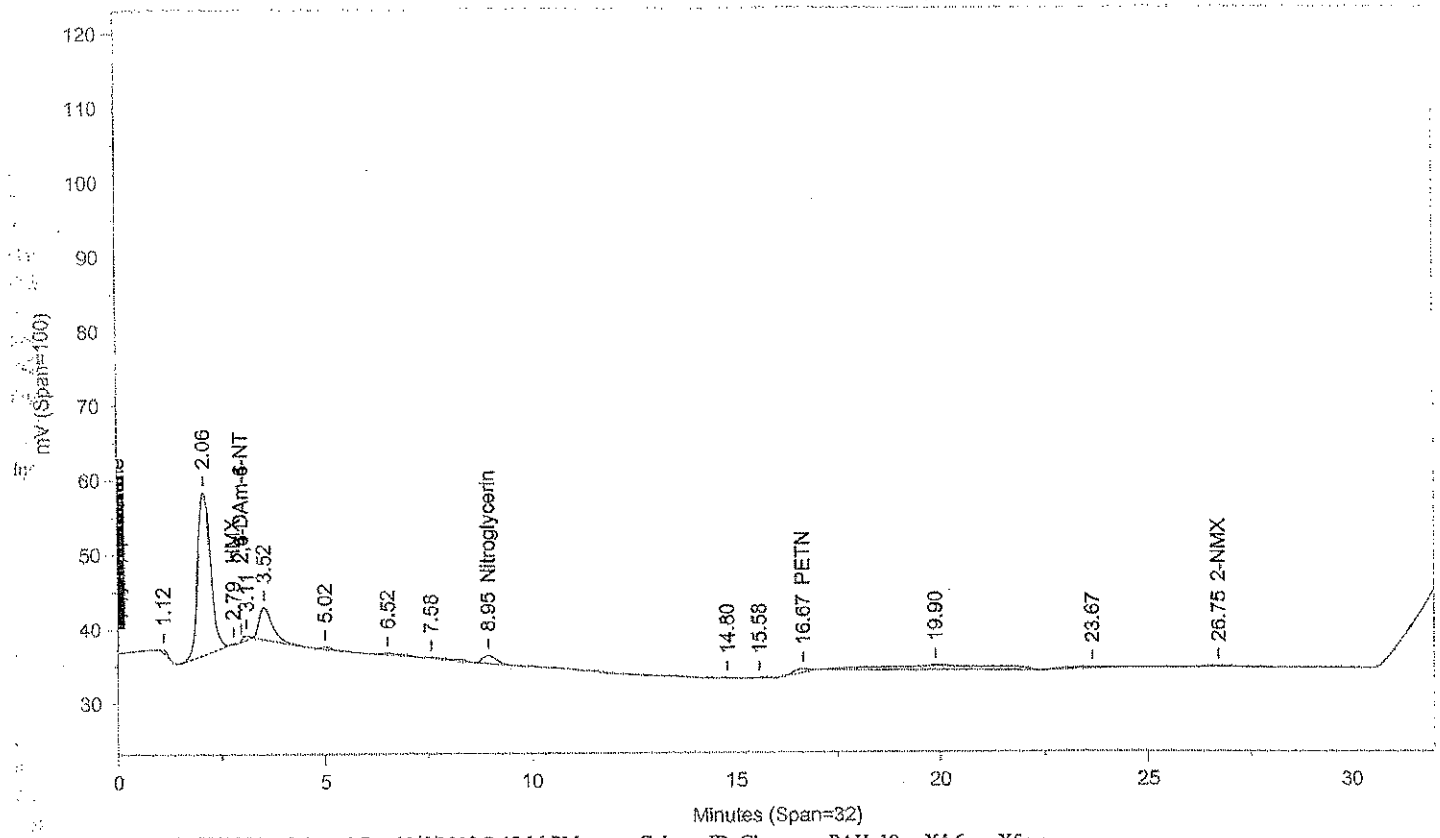
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.09R

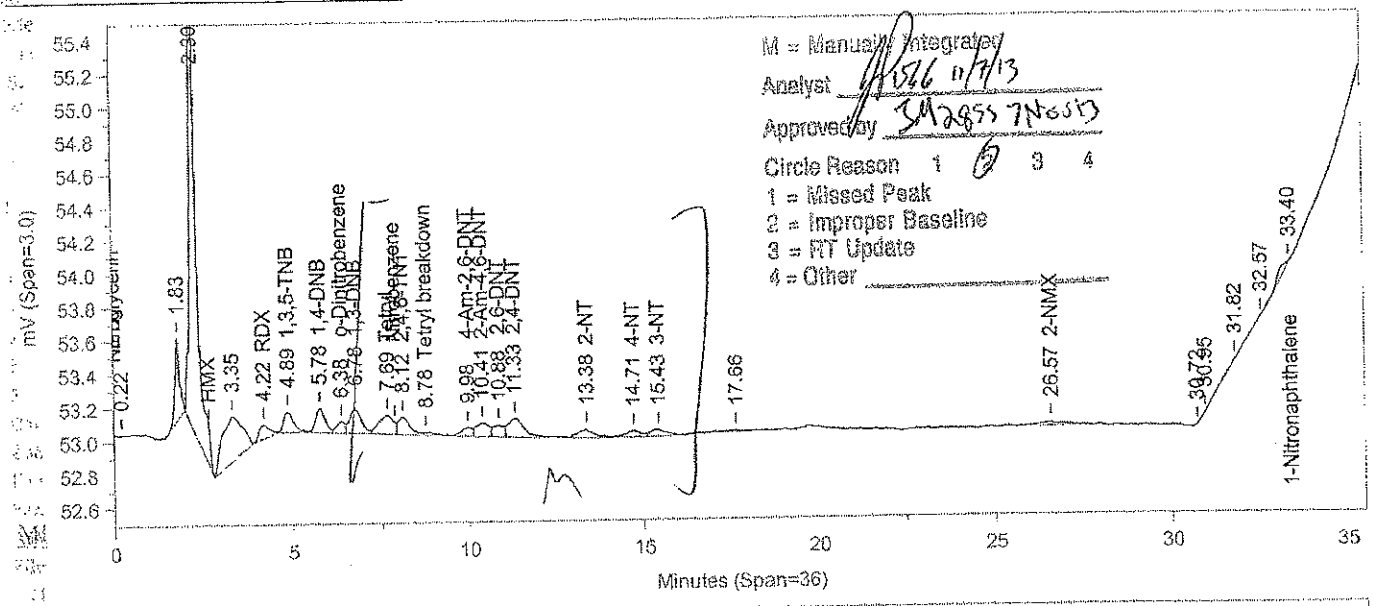


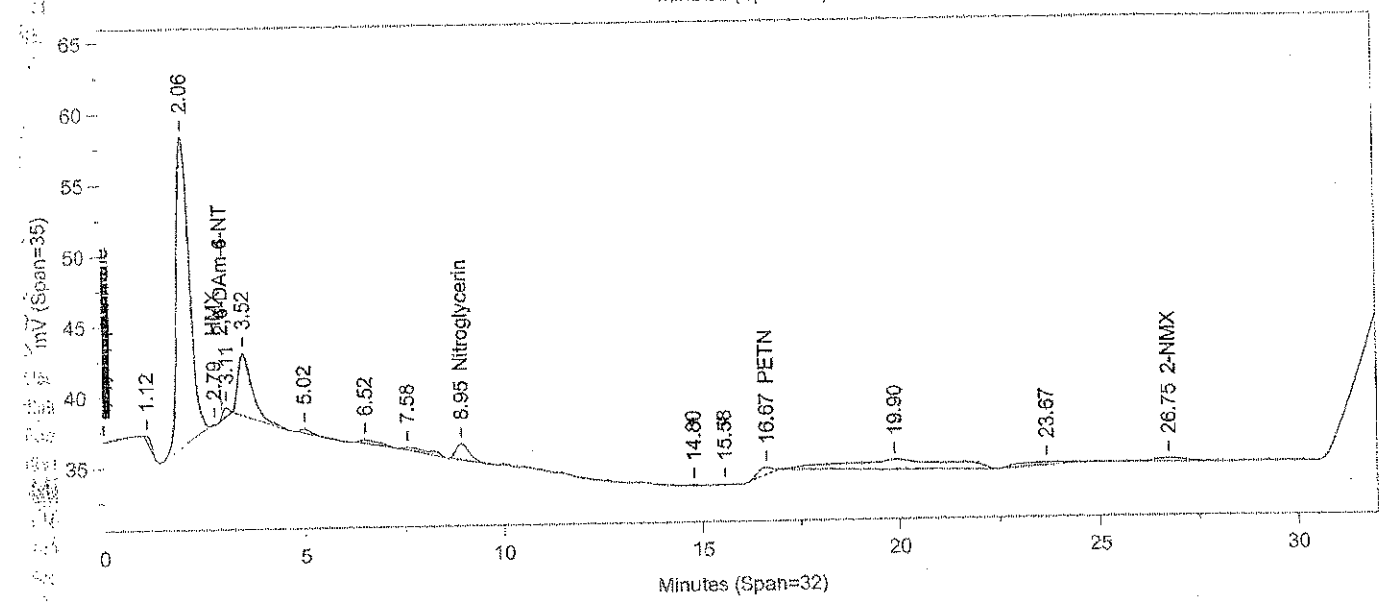
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=3.0)
Minutes (Span=36)
0.22 Nitroglycerin
1.83
2.30
HMX
3.35
4.22 RDX
4.89 1,3,5-TNB
5.78 1,4-DNB
6.38 o-Dinitrobenzene
6.78 1,3-DNB
7.69 Tetryl
8.12 2,4,6-TNT
8.78 Tetryl breakdown
9.98 4-Am-2,6-DNT
10.41 2-Am-4,6-DNT
10.88 2,6-DNT
11.33 2,4-DNT
13.38 2-NT
14.71 4-NT
15.43 3-NT
17.66
26.57 2-NMX
30.72
30.95
31.82
32.57
33.40
1-Nitronaphthalene


mV (Span=35)
Minutes (Span=32)
1.12
2.06
2.79 HMX
3.11 2,6-DAm-6-NT
3.52
5.02
6.52
7.58
8.95 Nitroglycerin
14.80
15.58
16.67 PETN
19.90
23.67
26.75 2-NMX

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.592	HMX
4.225	1736	7.303	RDX	.	0	.	RDX
4.89	2392	11.716	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2658	12.781	1,4-DNB	.	0	.	1,4-DNB
6.383	1043	13.088	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	3377	12.648	1,3-DNB	.	0	.	1,3-DNB
7.688	3245	16.513	Tetryl + Breakdown = 3632	.	0	.	Tetryl
8.117	2433	14.635	2,4,6-TNT	.	0	.	2,4,6-TNT
8.783	387	26.066	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.948	27434	255.328	Nitroglycerin
9.982	1195	12.047	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2109	9.545	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.884	1529	-1156.4	2,6-DNT	.	0	.	2,6-DNT
11.328	3833	14.033	2,4-DNT	.	0	.	2,4-DNT
13.377	1661	15.232	2-NT	.	0	.	2-NT
14.712	1093	14.101	4-NT	.	0	.	4-NT
15.433	1326	12.218	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	133.712	PETN
26.571	1037	39.626	2-NMX	26.751	13456	32.801	2-NMX
33.395	956	113.71	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:17:50 PM
File Reported On: 11/7/2013 at 4:17:49 PM

James H. Place
Senior Chemist

NOV 07 2013

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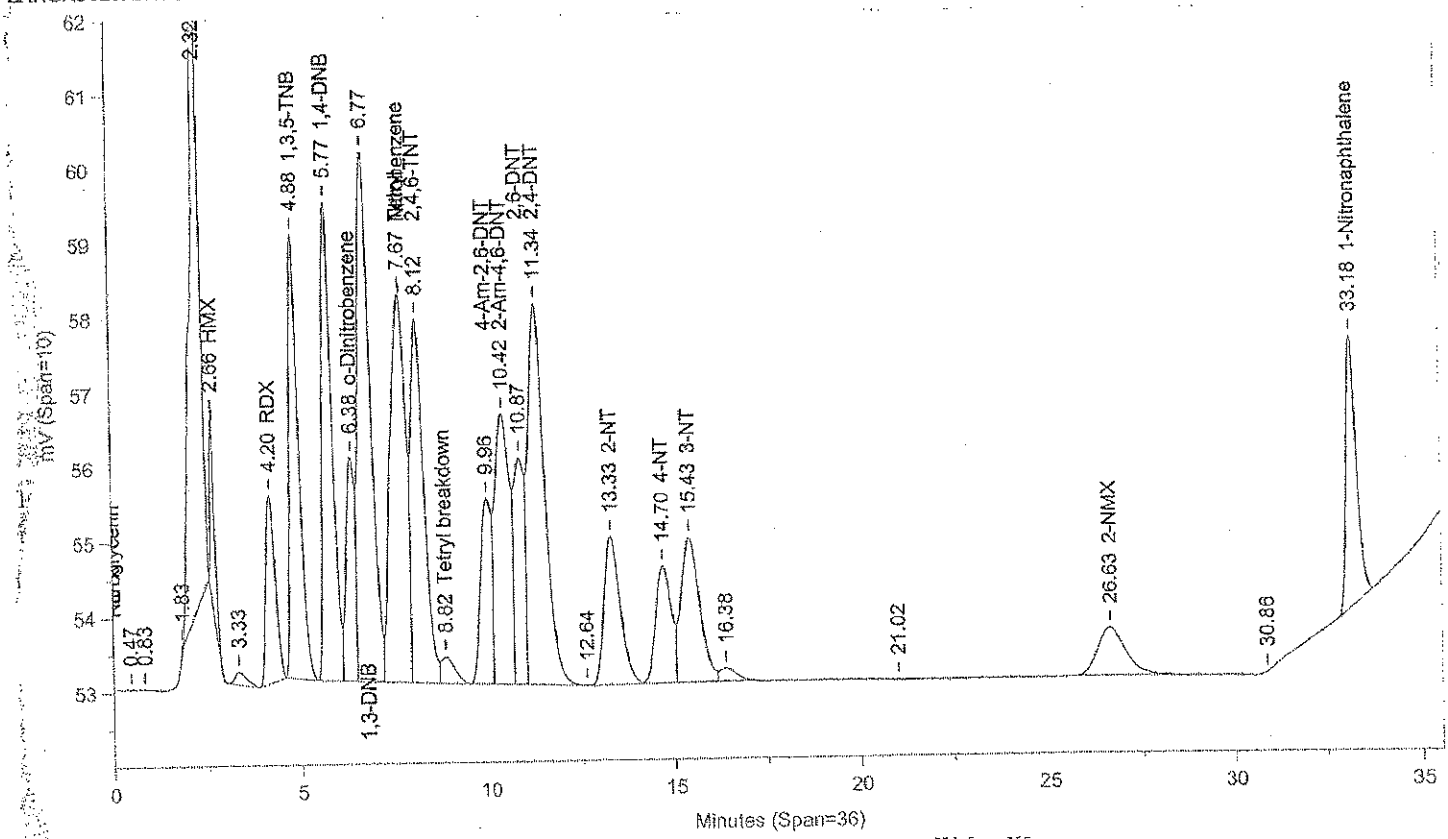
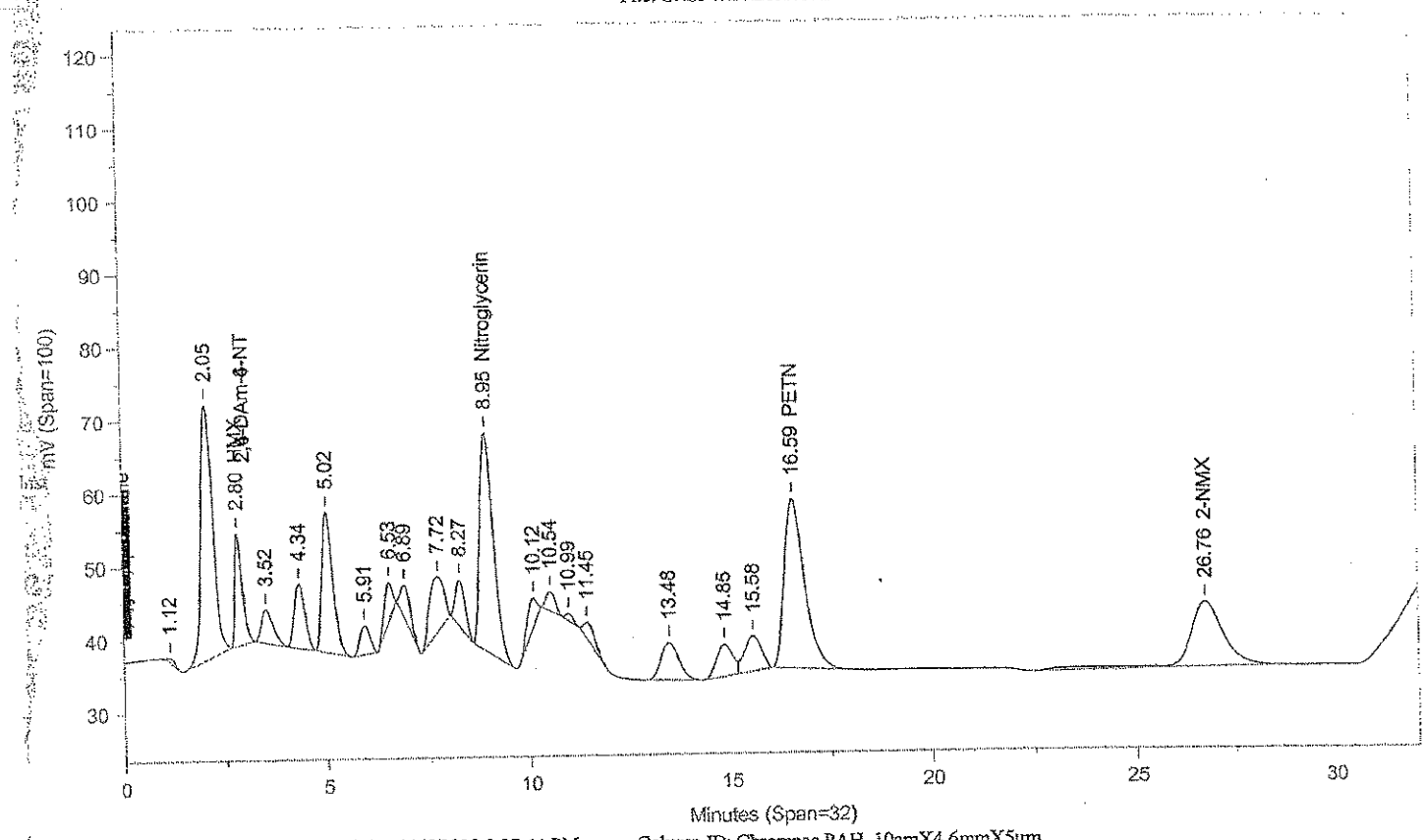
File: C:\CPWIN\DATA1\1E12310.10R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.10R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.799	203173	485.075	HMX
4.196	44563	496.073	RDX	.	0	.	RDX
4.878	103862	492.035	1,3,5-TNB	.	0	.	1,3,5-TNB
5.766	118827	466.405	1,4-DNB	.	0	.	1,4-DNB
6.38	49974	485.012	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.767	162830	501.796	1,3-DNB	.	0	.	1,3-DNB
7.669	151315	437.752	Tetryl	.	0	.	Tetryl
8.122	112252	492.632	2,4,6-TNT	.	0	.	2,4,6-TNT
8.816	8751	25.317	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.952	693352	5425.07	Nitroglycerin
9.965	51904	553.225	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.417	101911	465.313	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.873	59347	488.148	2,6-DNT	.	0	.	2,6-DNT
11.337	159047	480.845	2,4-DNT	.	0	.	2,4-DNT
13.328	60902	460.363	2-NT	.	0	.	2-NT
14.7	46563	496.259	4-NT	.	0	.	4-NT
15.426	67550	498.877	3-NT	.	0	.	3-NT
.	0	.	PETN	16.585	811052	5923.12	PETN
26.628	33626	986.469	2-NMX	26.76	543834	1113.345	2-NMX
33.185	71489	544.173	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.10A
Area File: C:\CPWIN\DATA1\1E12310B.10A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:31:48 PM
File Reported On: 11/7/2013 at 4:31:57 PM

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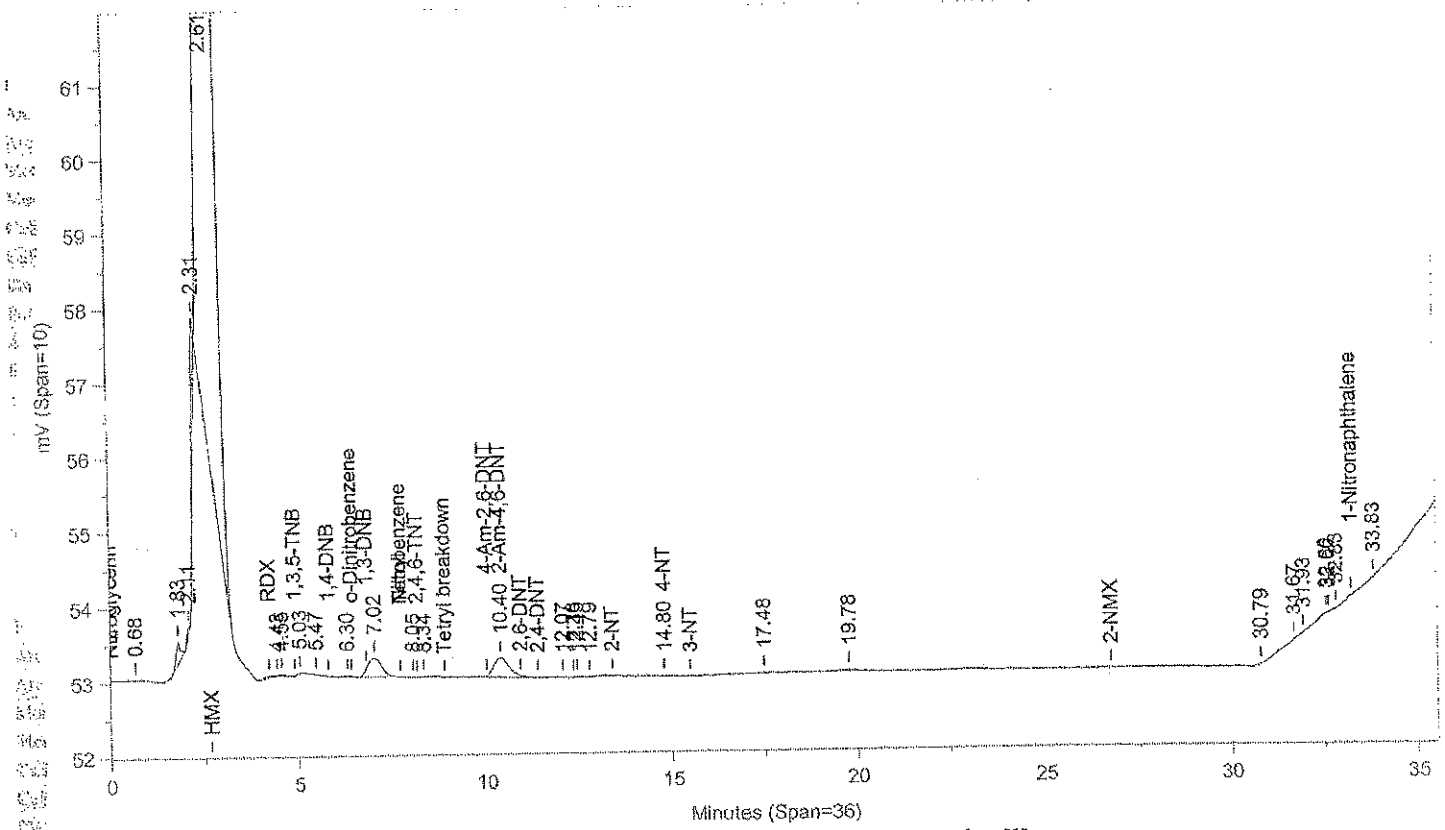
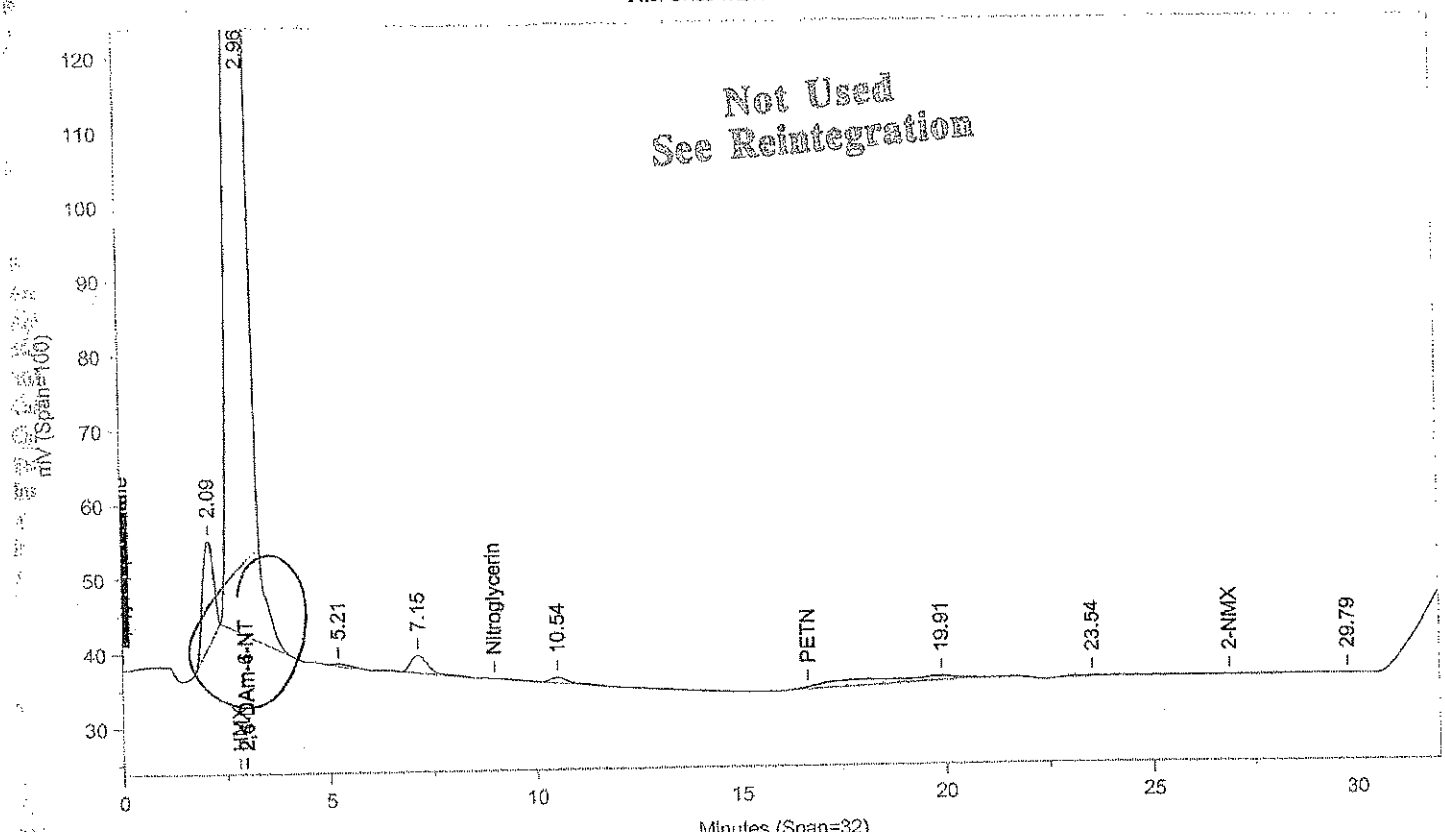
File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R

Not Used
See Reintegration



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	2.958	5296932	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.11A
Area File: C:\CPWIN\DATA1\1E12310B.11A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:18 PM
File Reported On: 11/7/2013 at 4:32:28 PM

Not Used
See Reintegration

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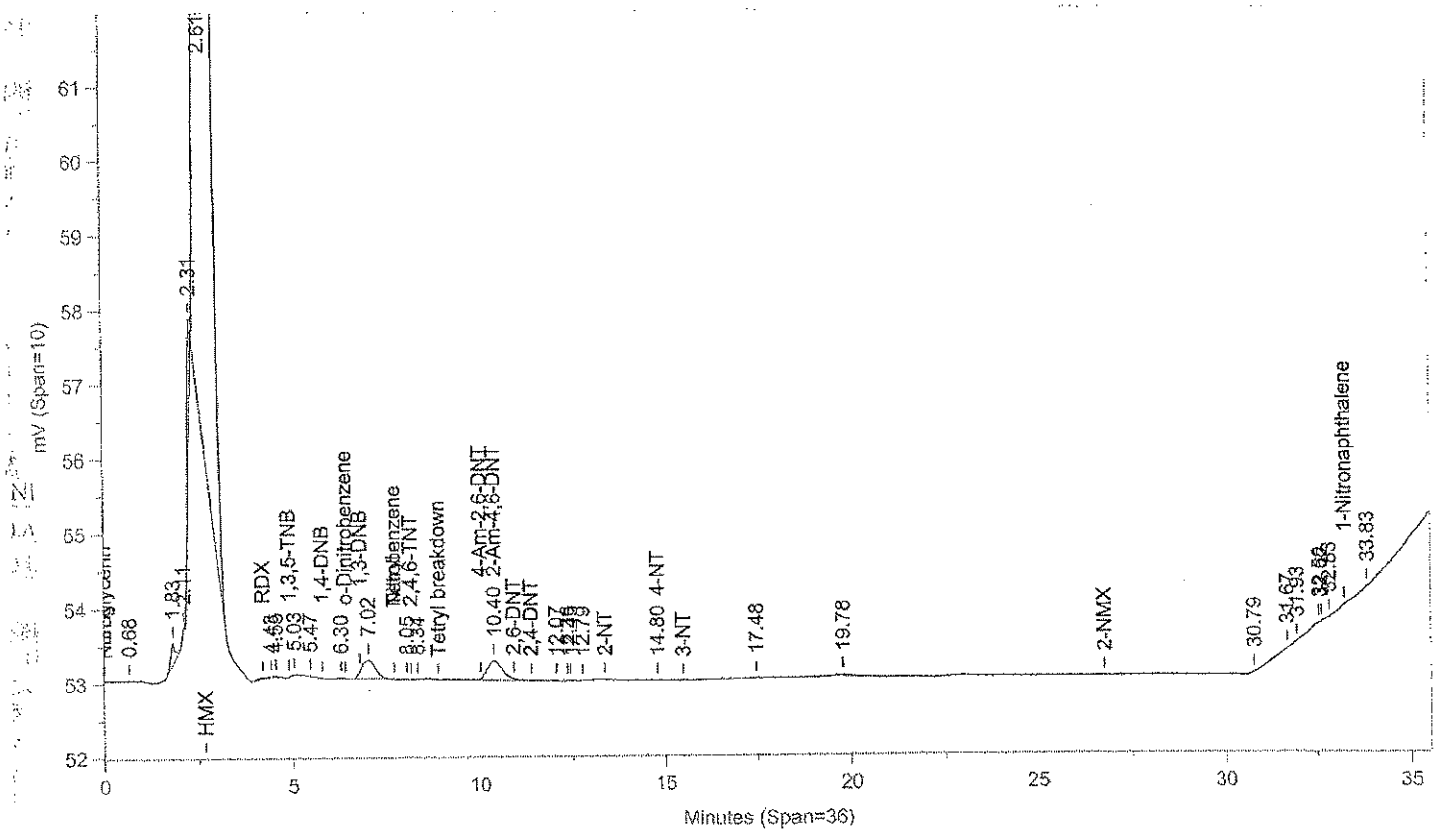
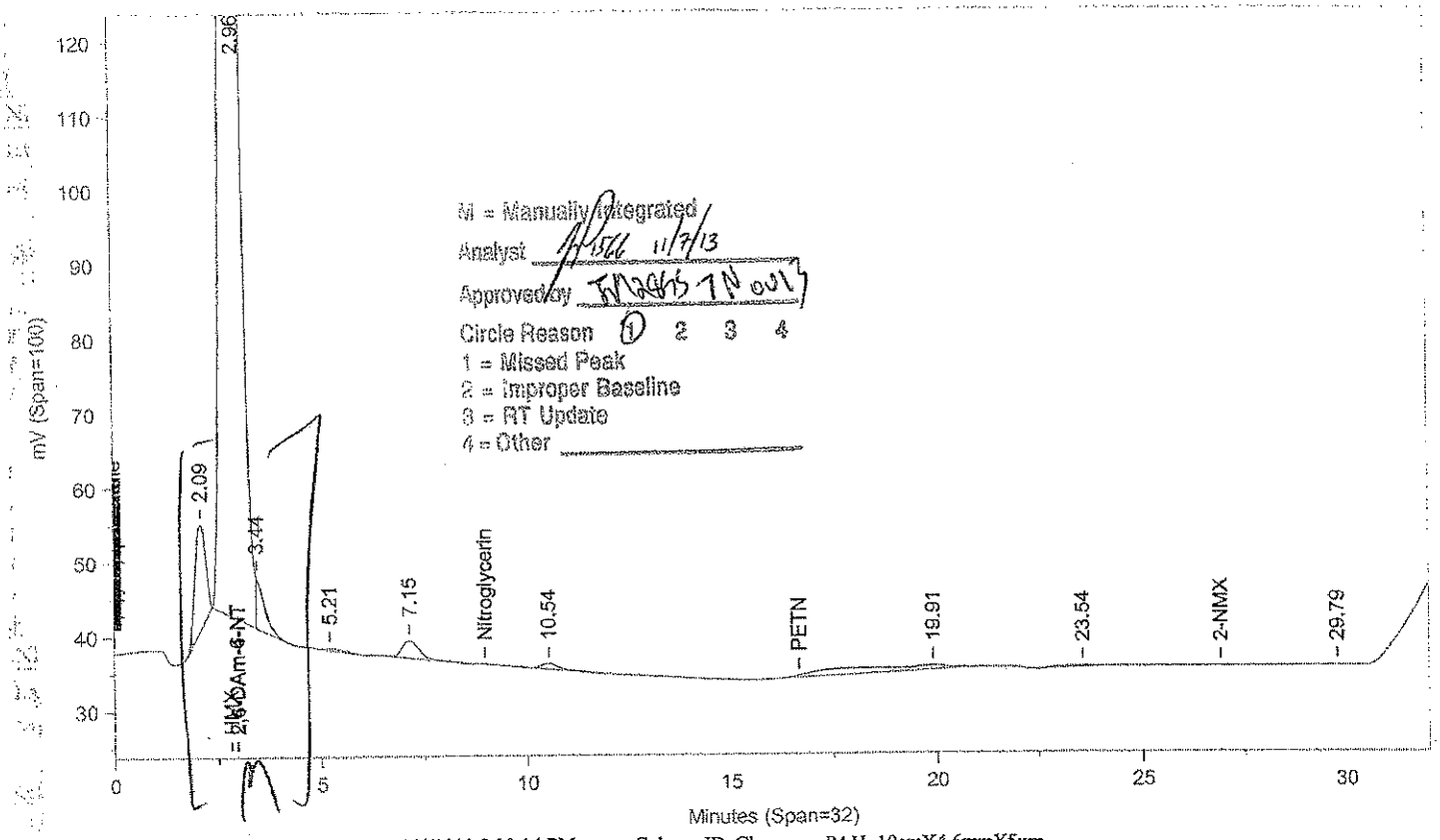
File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



M = Manually Integrated
Analyst 11/7/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5203836	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:38:00 PM
File Reported On: 11/7/2013 at 4:37:58 PM

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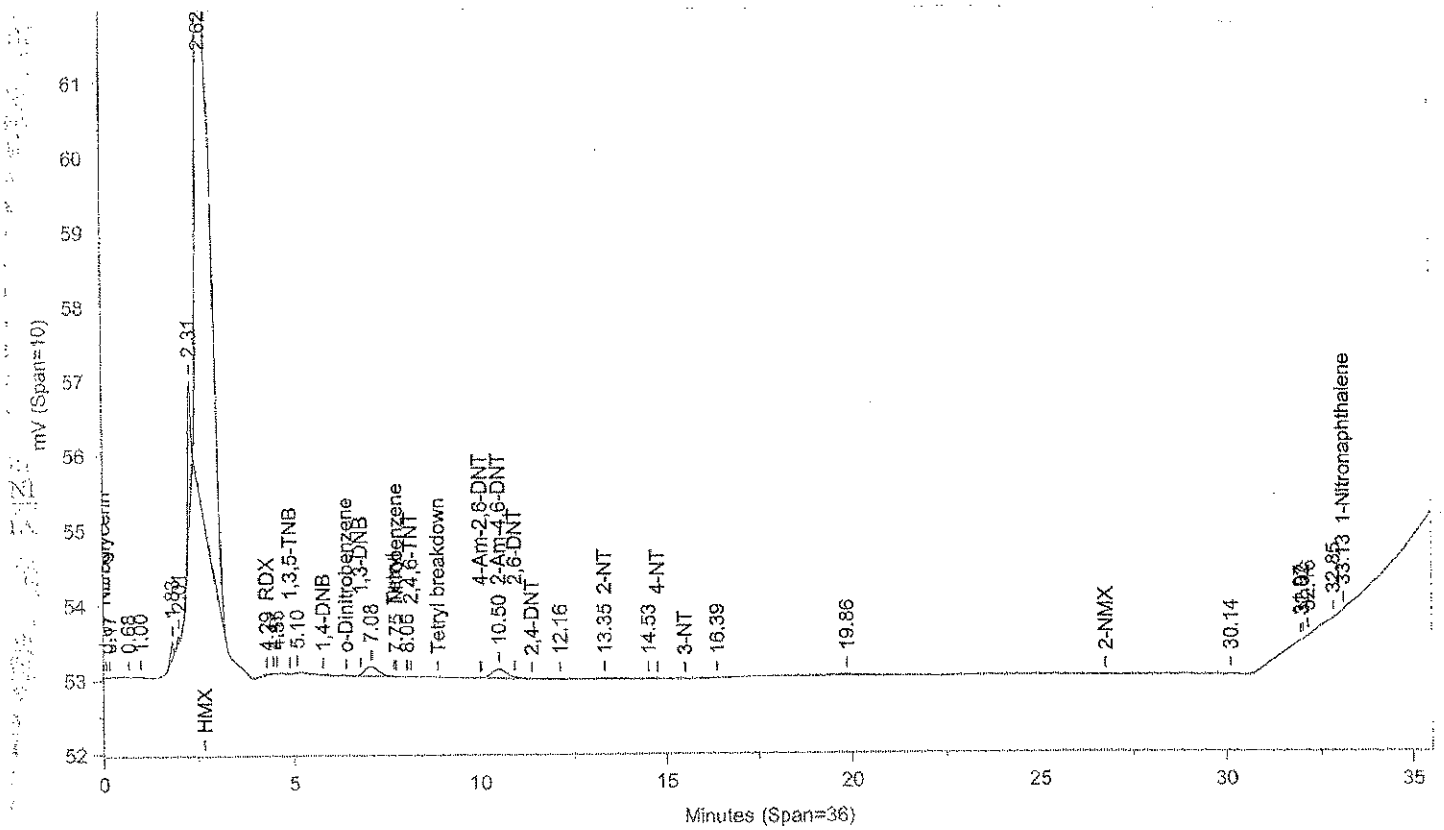
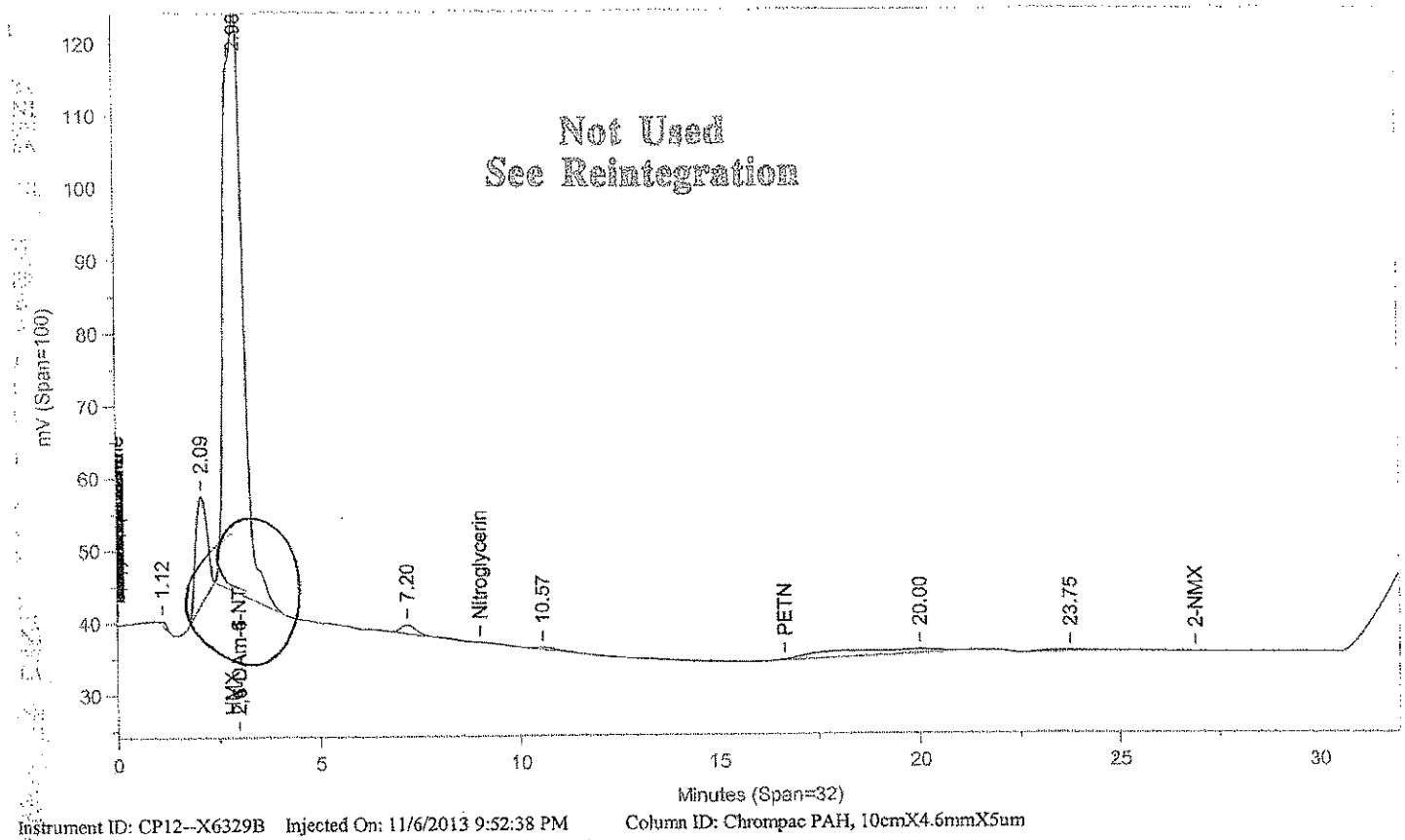
File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

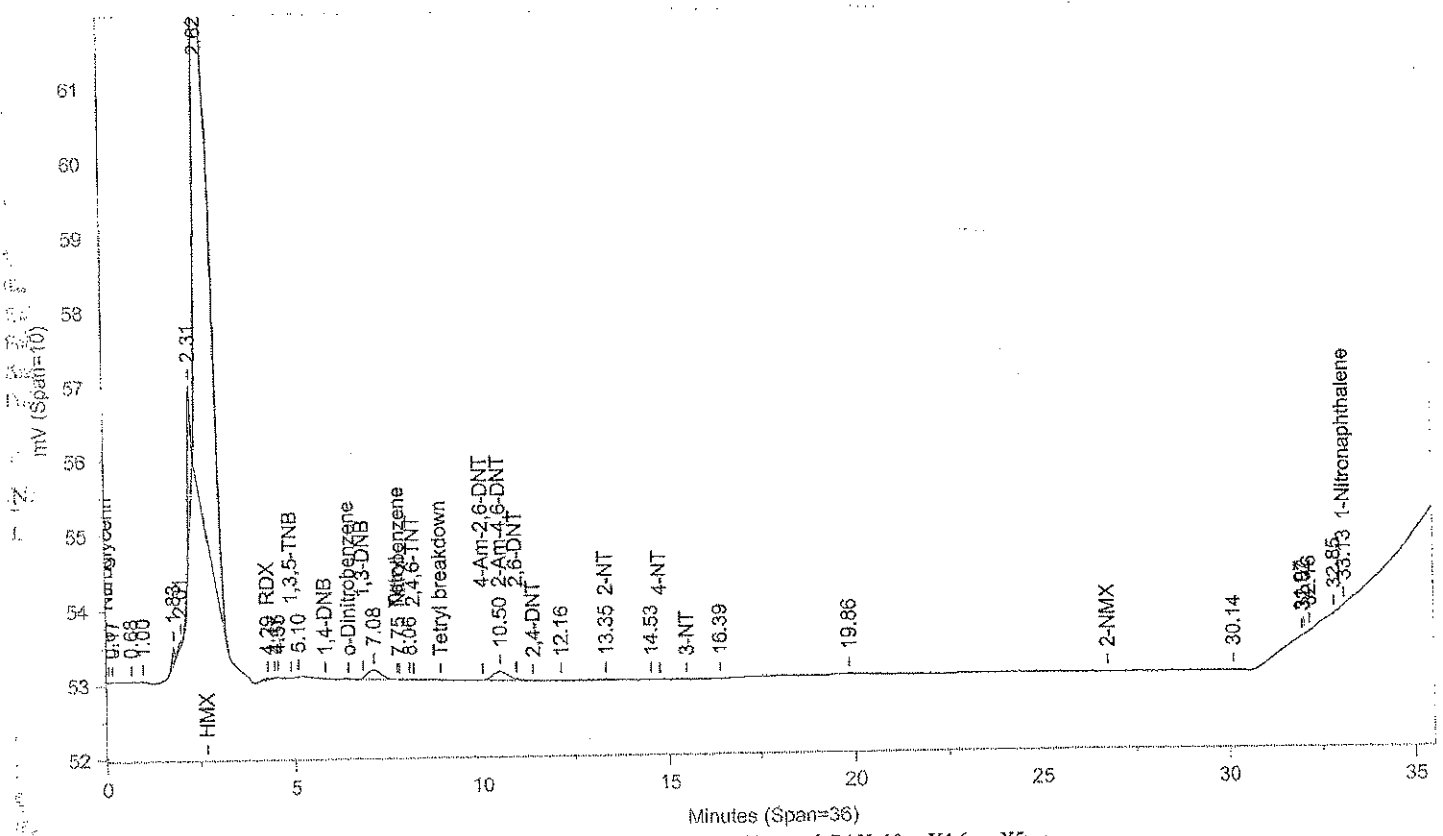
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.984	2610277		2,4-DAm-6-NT
4.286	315	-8.906	RDX		0		RDX
7.752	6	.019	Nitrobenzene		0		Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT		0		2-Am-4,6-DNT
13.345	694	5.246	2-NT		0		2-NT
33.134	9	.07	1-Nitronaphthalene		0		1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.12A
Area File: C:\CPWIN\DATA1\1E12310B.12A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:48 PM
File Reported On: 11/7/2013 at 4:32:58 PM

Not Used
See Reintegration

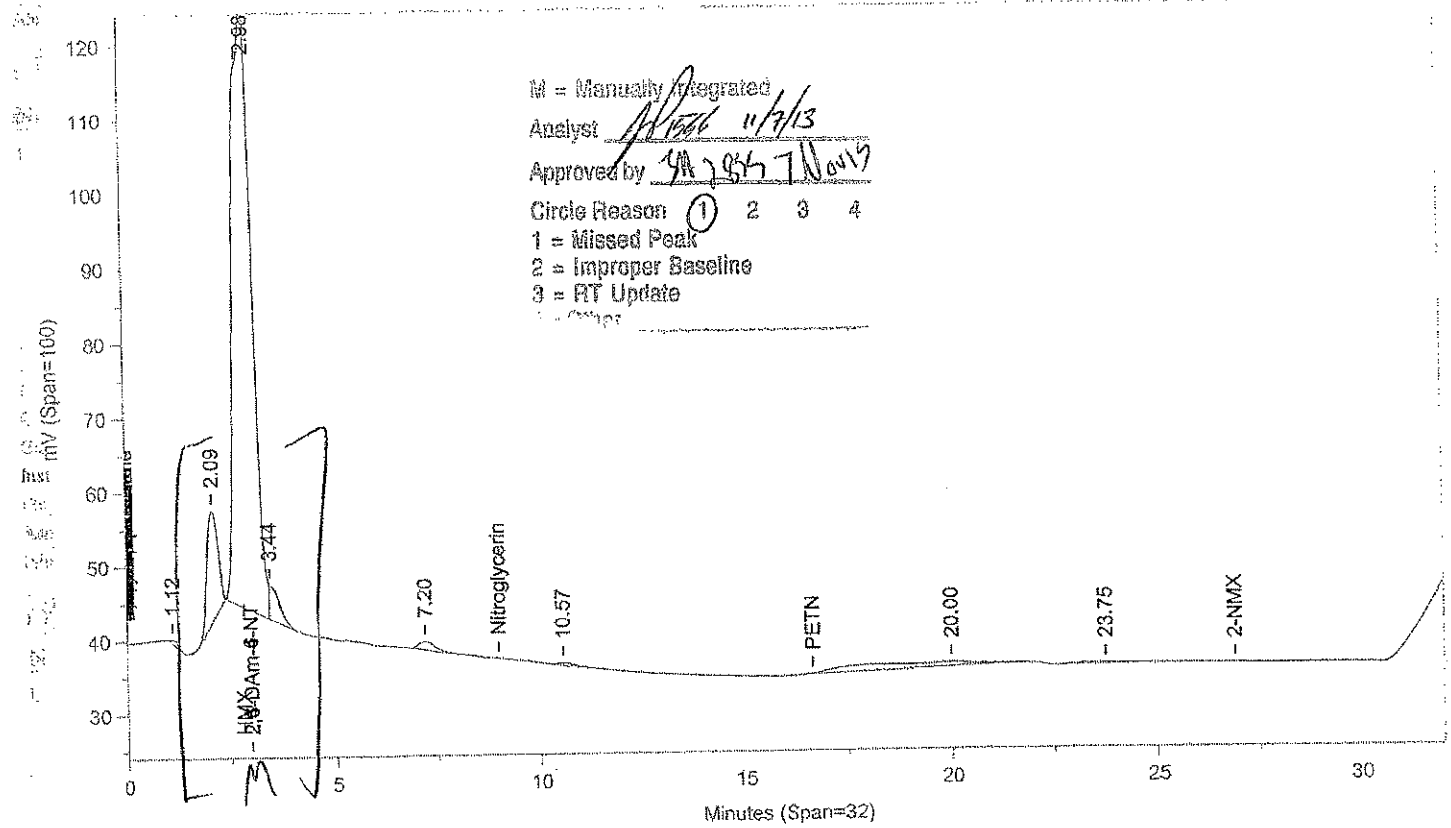
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R

M = Manually Integrated
Analyst [signature] 11/7/13
Approved by [signature] 11/7/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.984	2533808		2,4-DAm-6-NT
4.286	315	-8.906	RDX		0		RDX
7.752	6	.019	Nitrobenzene		0		Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT		0		2-Am-4,6-DNT
13.345	694	5.246	2-NT		0		2-NT
23.134	9	.07	1-Nitronaphthalene		0		1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:39:16 PM
File Reported On: 11/7/2013 at 4:39:14 PM

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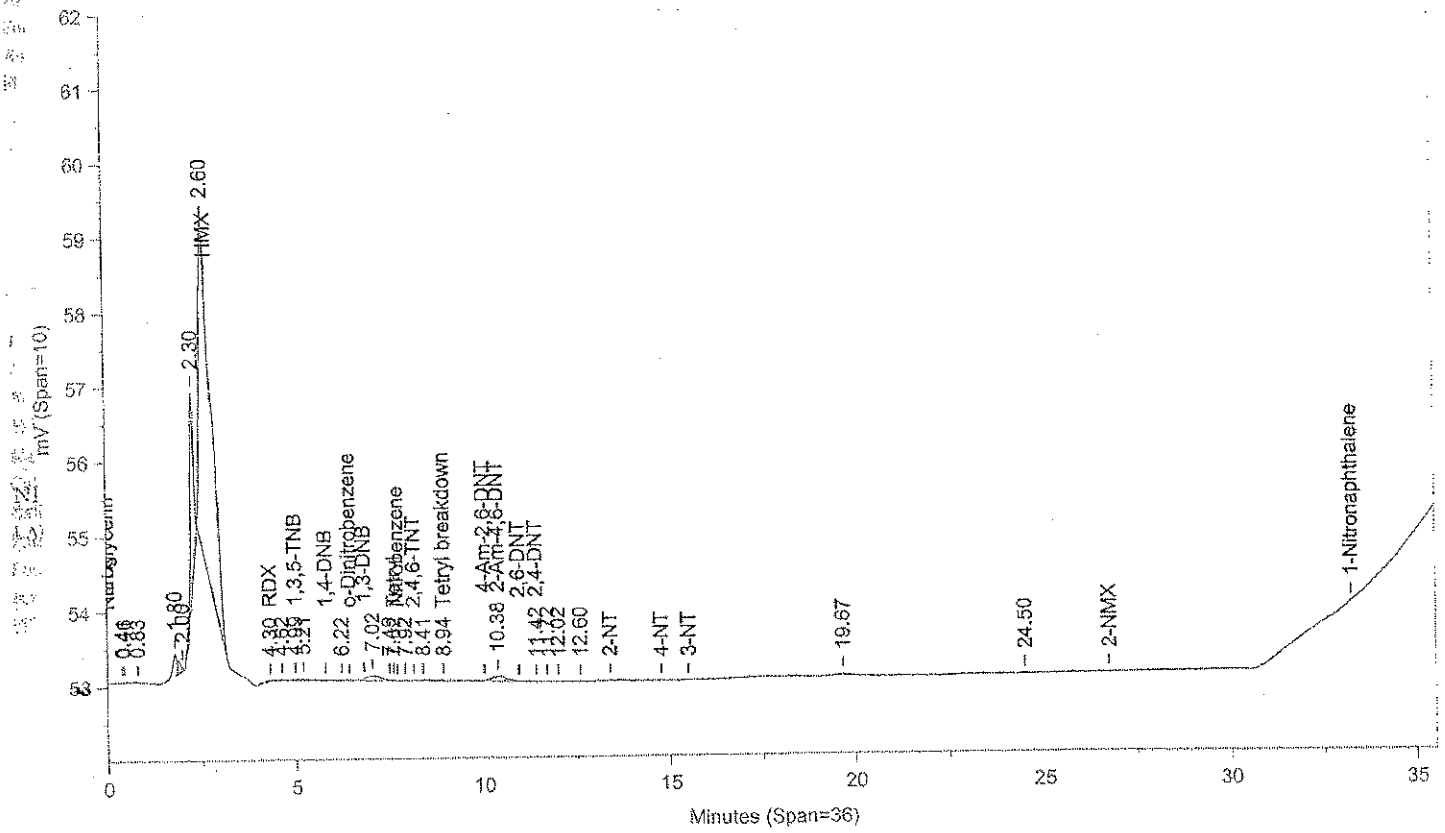
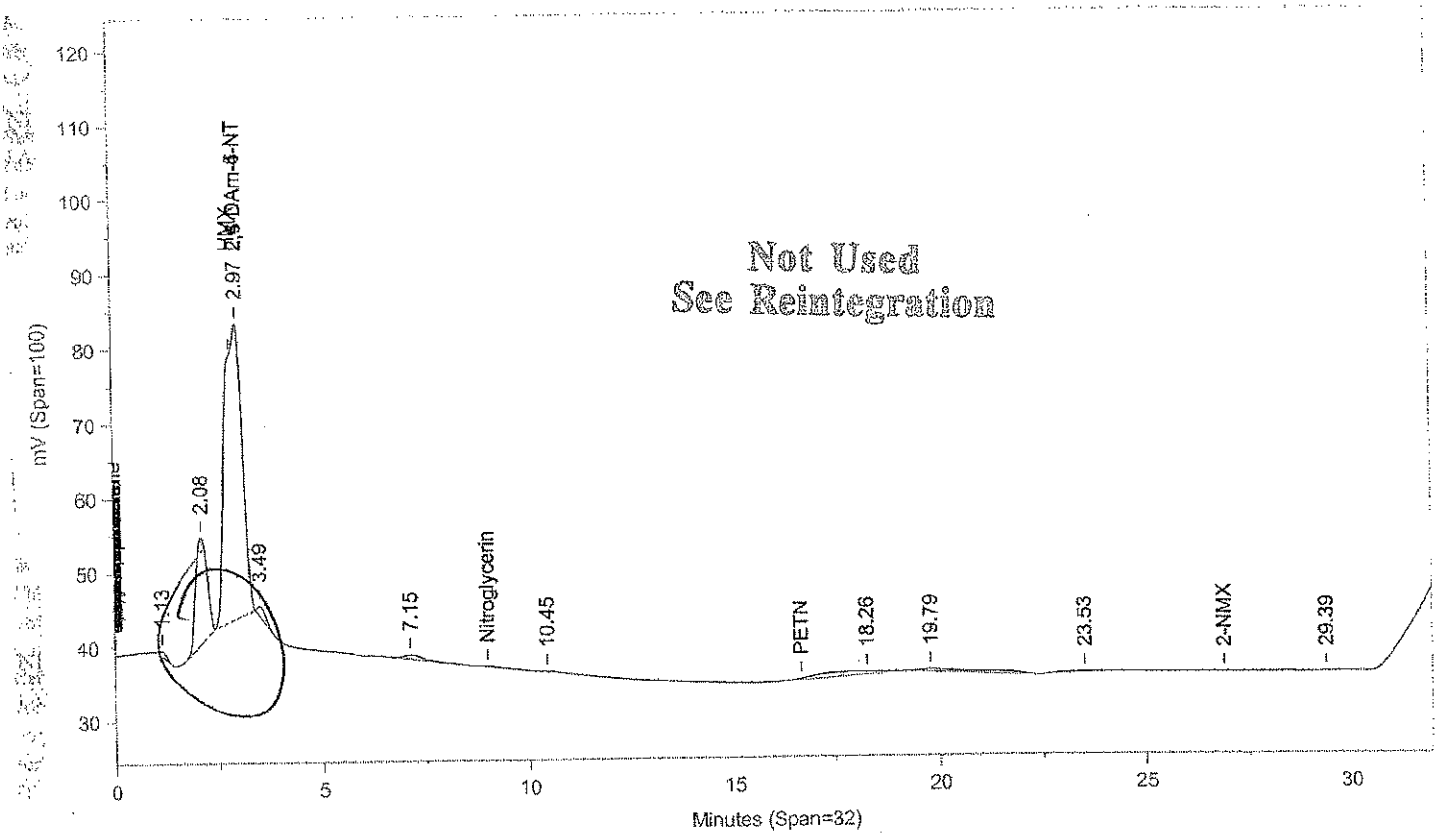
File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1176025	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.13A
Area File: C:\CPWIN\DATA1\1E12310B.13A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:18 PM
File Reported On: 11/7/2013 at 4:33:28 PM

Not Used
See Reintegration

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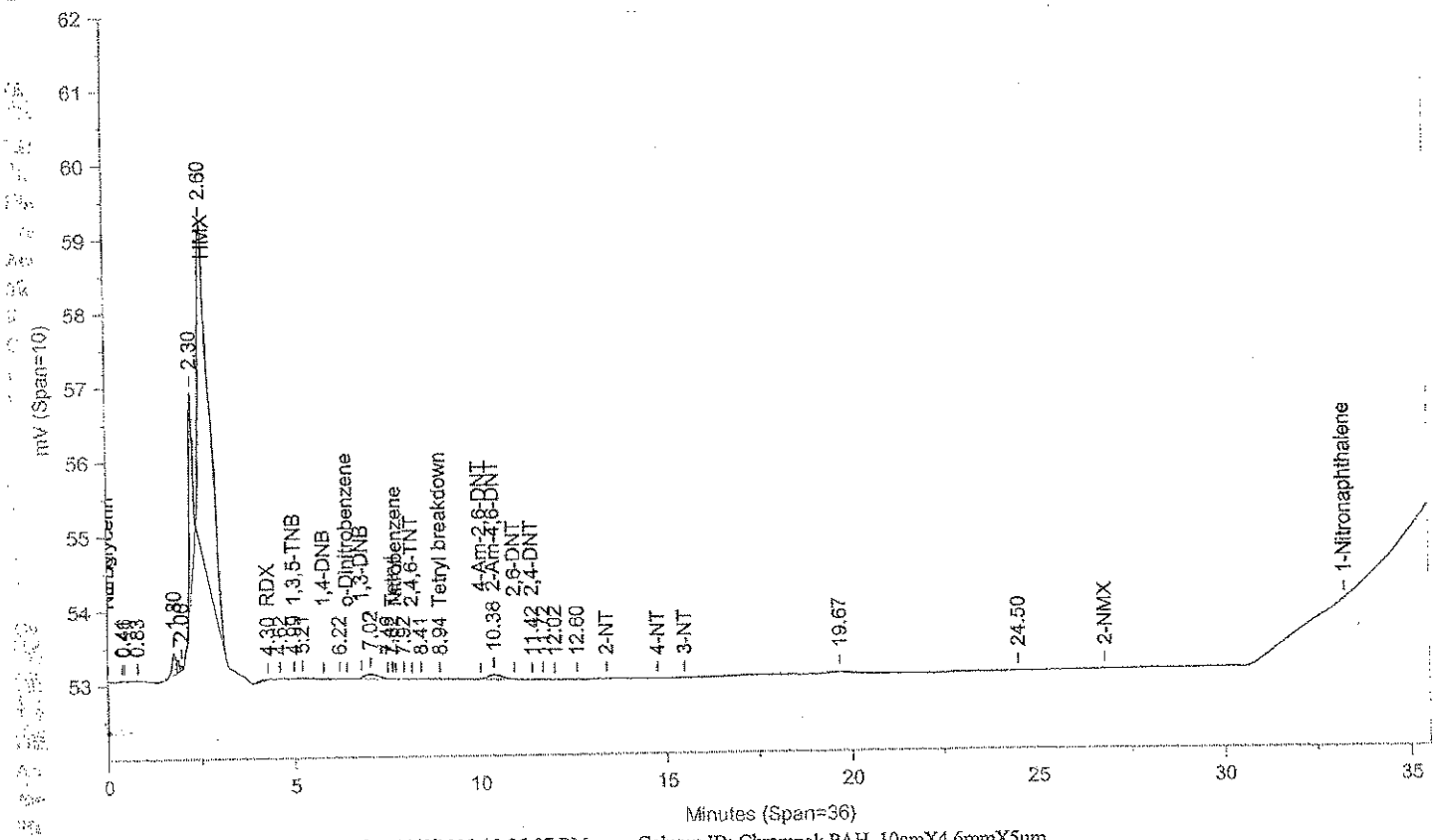
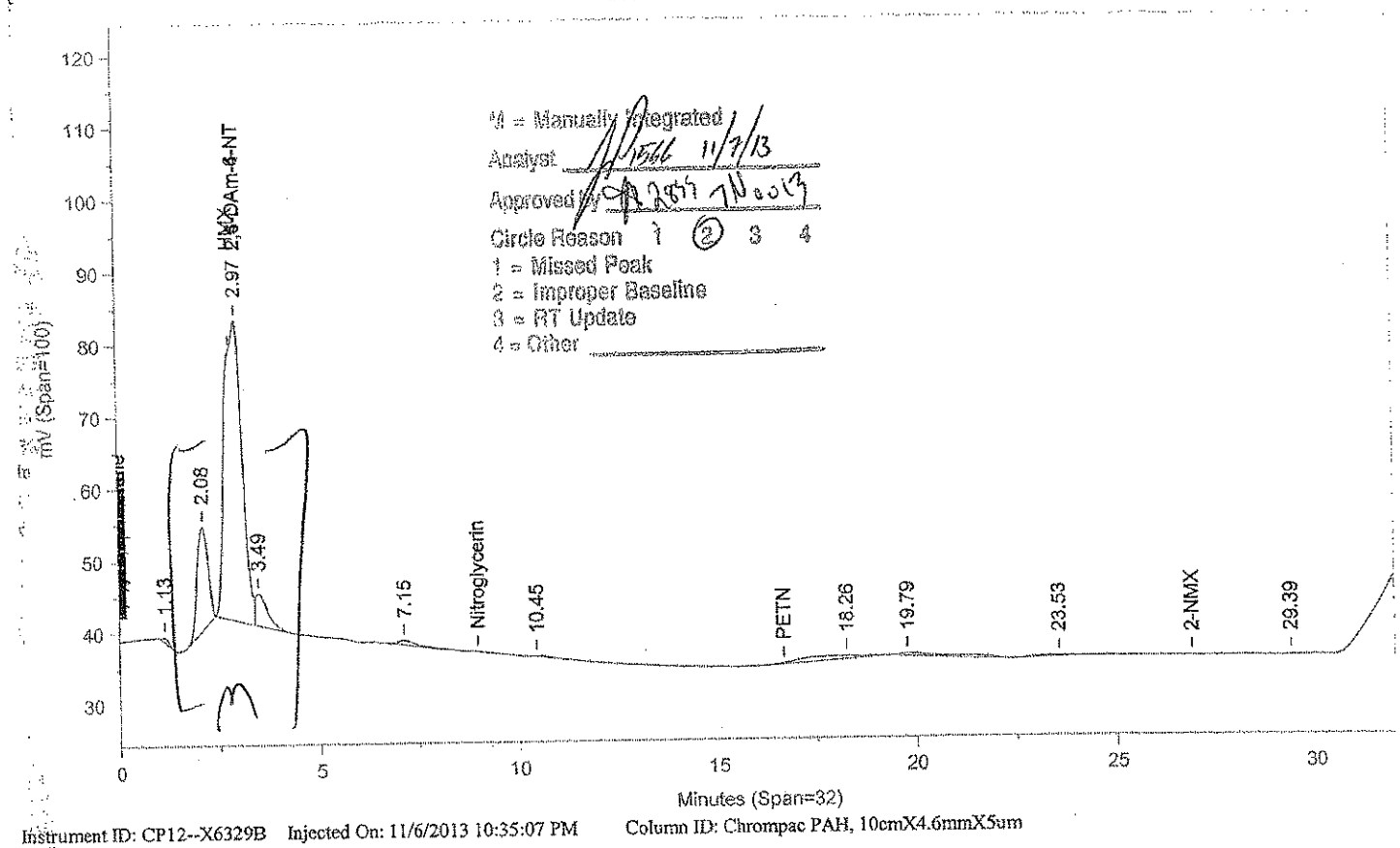
File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



M = Manually Integrated
Analyst 11/7/13
Approved 7/Nov/13
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

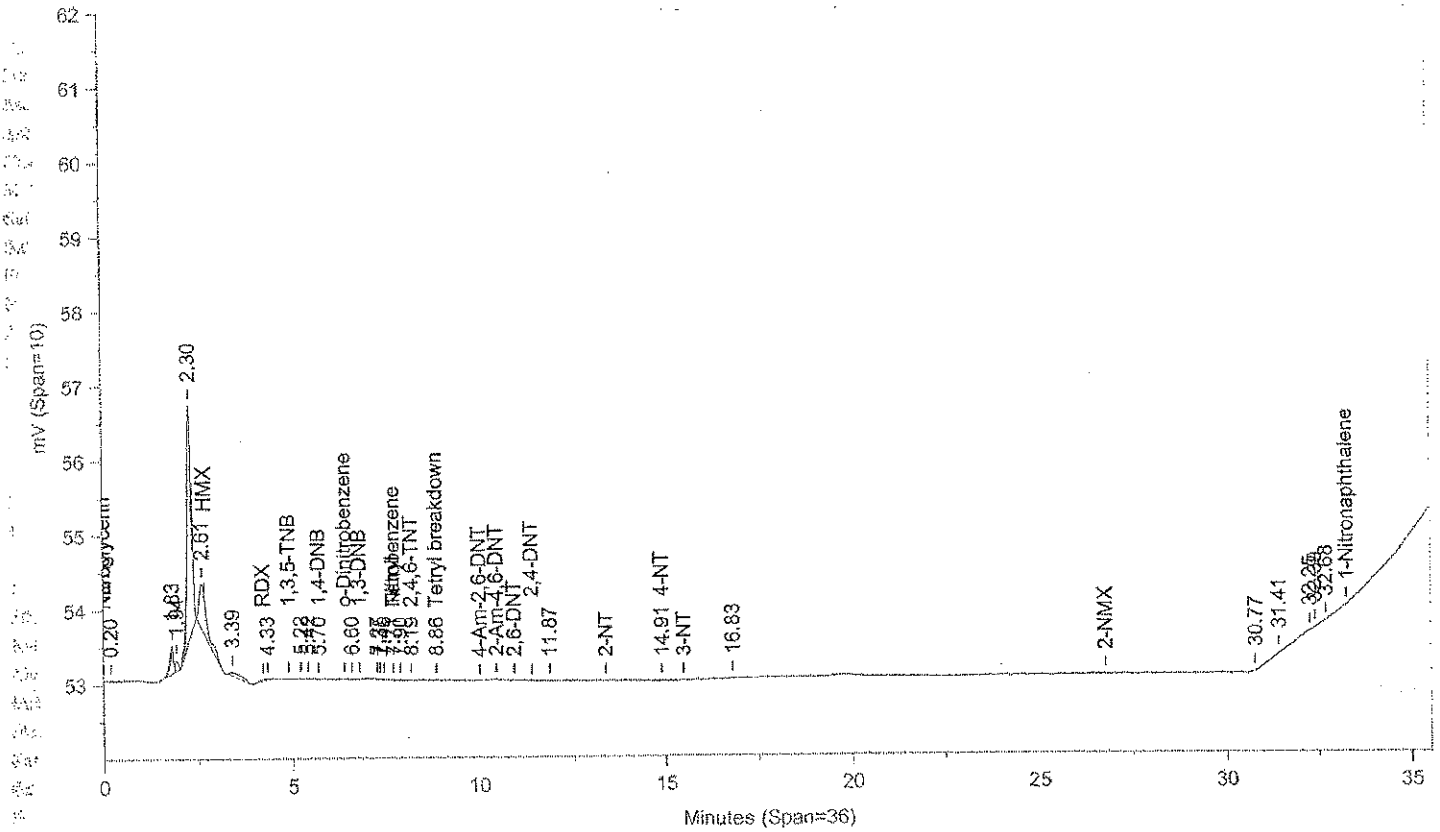
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.969	1287697		2,4-DAm-6-NT
4.3	314	-8.921	RDX		0		RDX
4.99	83	.394	1,3,5-TNB		0		1,3,5-TNB
7.617	88	.254	Tetryl		0		Tetryl
8.938	52	.15	Tetryl breakdown		0		Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT		0		2-Am-4,6-DNT
11.418	51	.154	2,4-DNT		0		2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:40:44 PM
File Reported On: 11/7/2013 at 4:40:42 PM

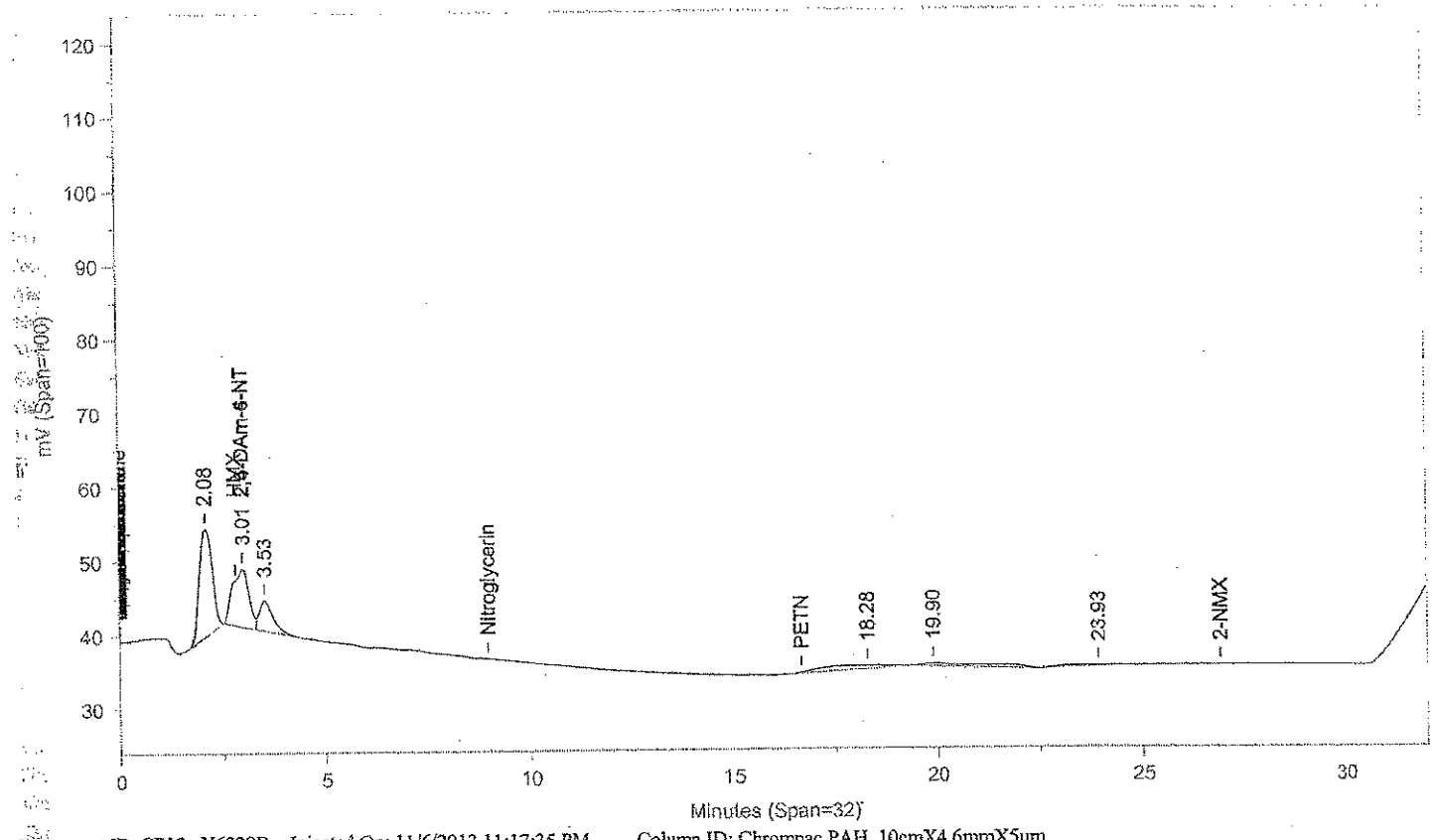
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.14R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.14R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

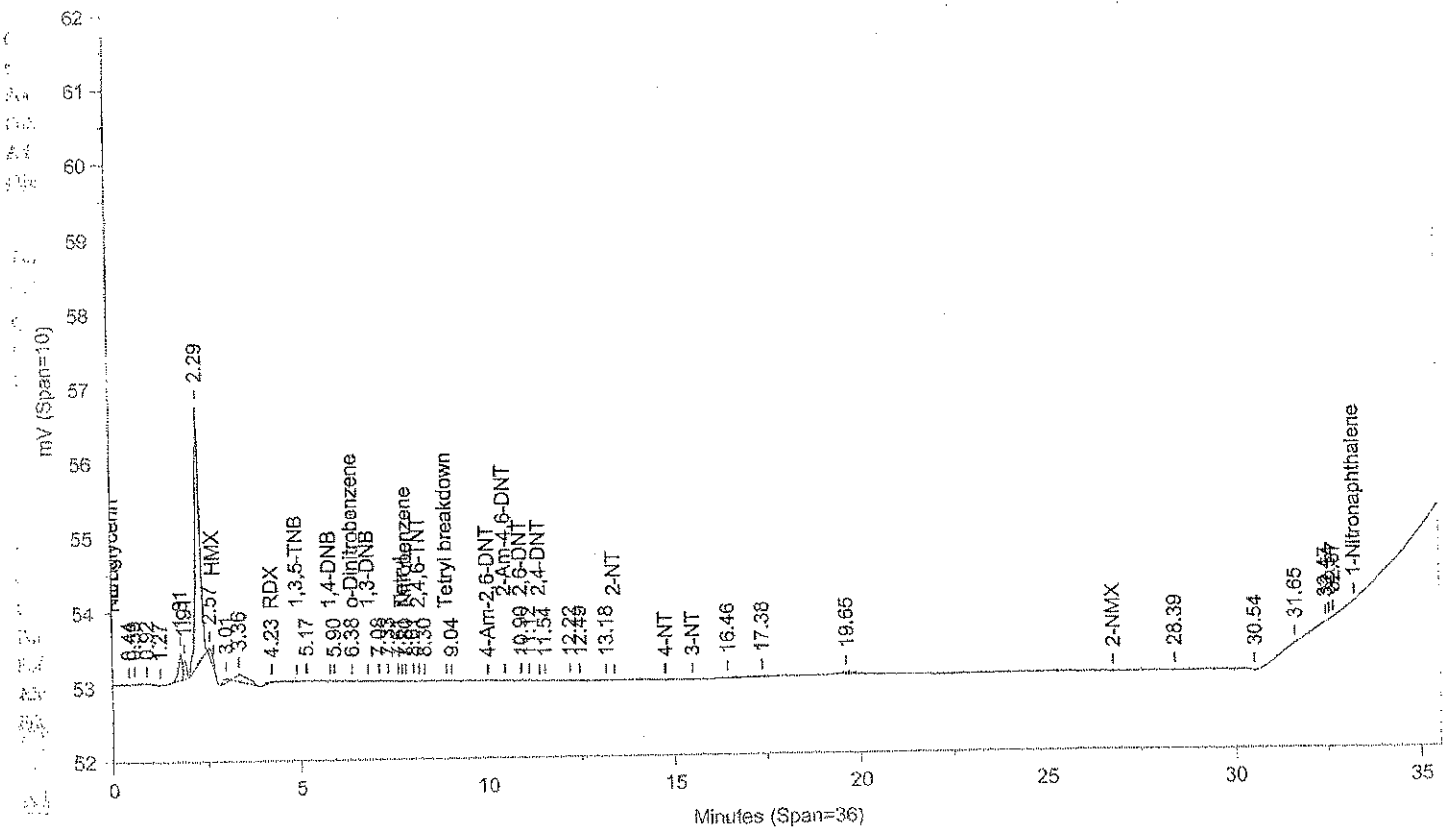
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.006	225601	.	2,4-DAm-6-NT
5.701	20	.078	1,4-DNB	.	0	.	1,4-DNB
7.706	5	.014	Tetryl	.	0	.	Tetryl
8.189	38	.167	2,4,6-TNT	.	0	.	2,4,6-TNT
8.865	15	.044	Tetryl breakdown	.	0	.	Tetryl breakdown
14.91	201	2.138	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.14A
Area File: C:\CPWIN\DATA1\1E12310B.14A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:50 PM
File Reported On: 11/7/2013 at 4:33:59 PM

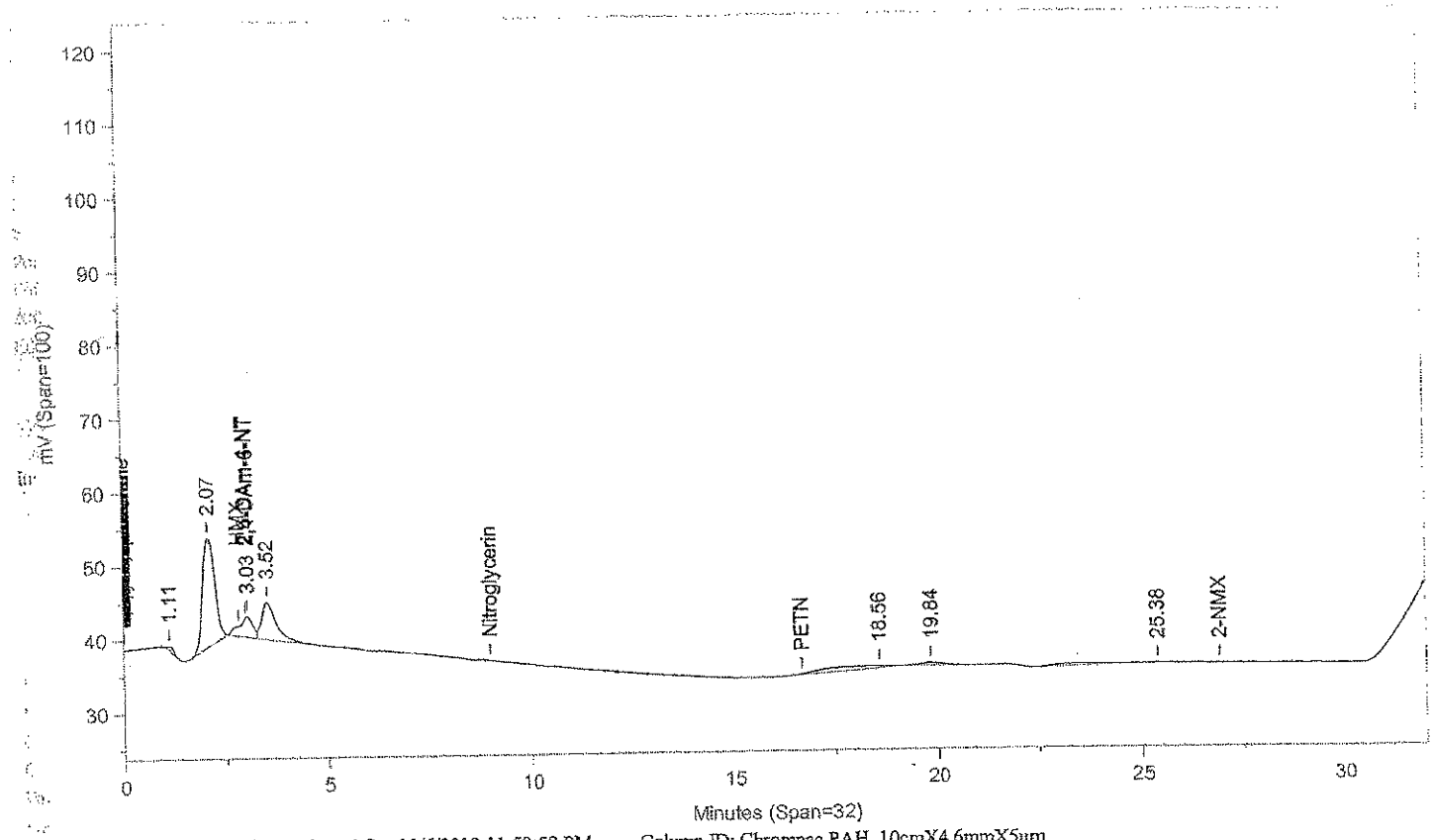
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.15R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.15R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

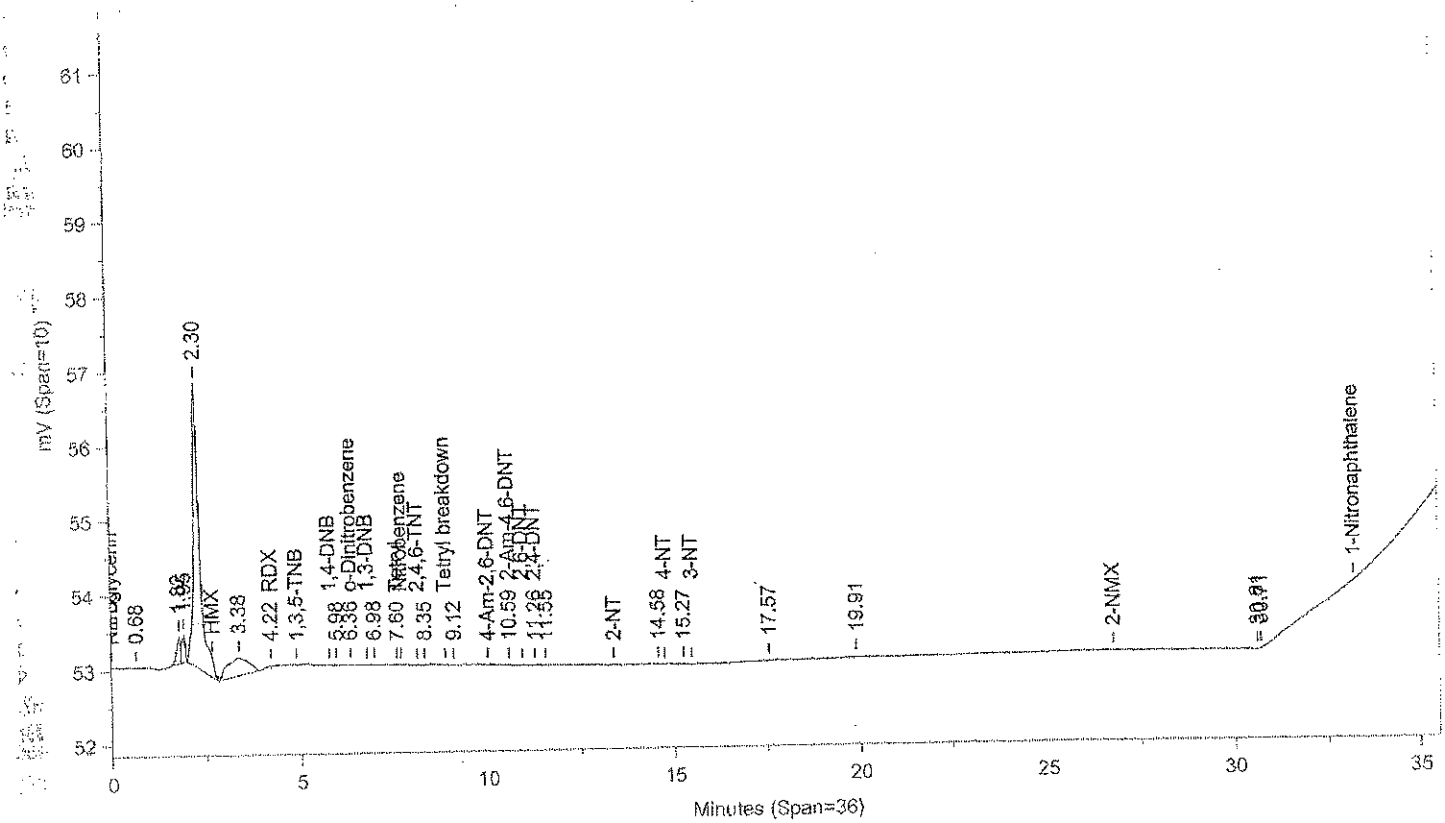
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	3.033	66258	.	2,4-DAm-6-NT
4.231	292	-9.173	RDX	.	0	.	RDX
6.378	115	1.119	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.8	52	.151	Nitrobenzene	.	0	.	Nitrobenzene
10.905	31	.257	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.15A
Area File: C:\CPWIN\DATA1\1E12310B.15A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:20 PM
File Reported On: 11/7/2013 at 4:34:29 PM

LANCASTER LABORATORIES

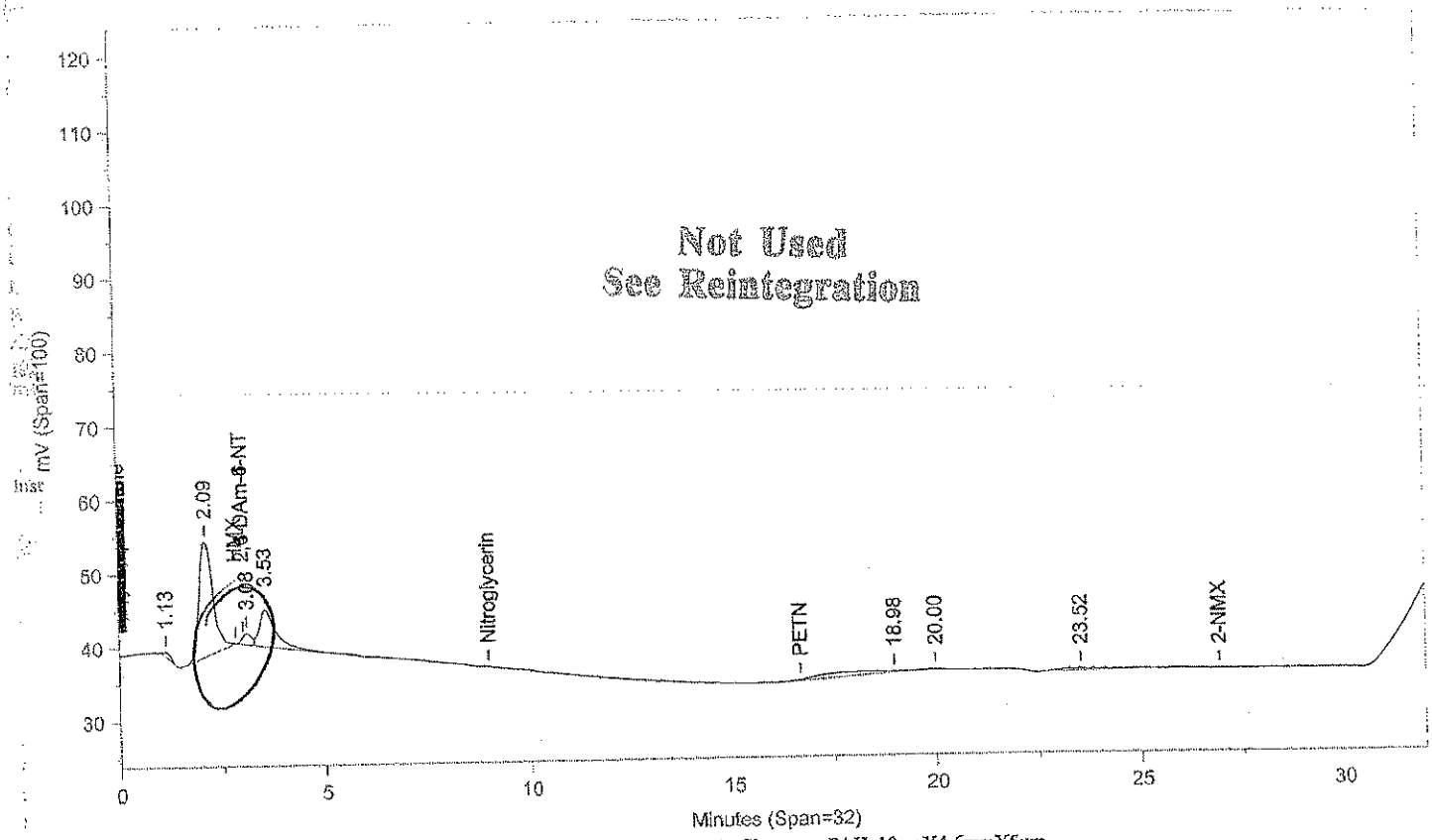
File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R

Not Used
See Reintegration



Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

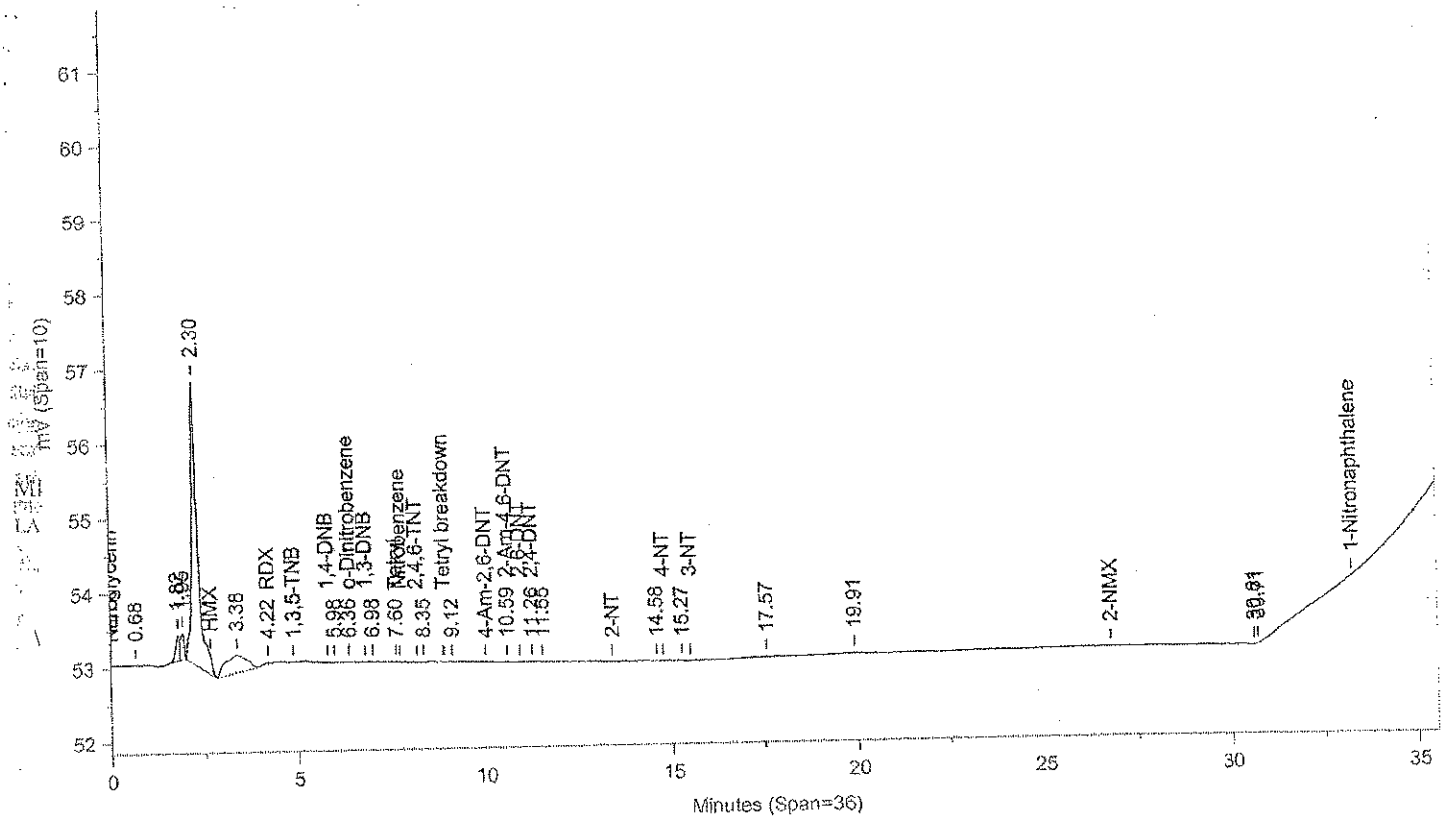
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.16A
Area File: C:\CPWIN\DATA1\1E12310B.16A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:50 PM
File Reported On: 11/7/2013 at 4:35:00 PM

Not Used
See Reintegration

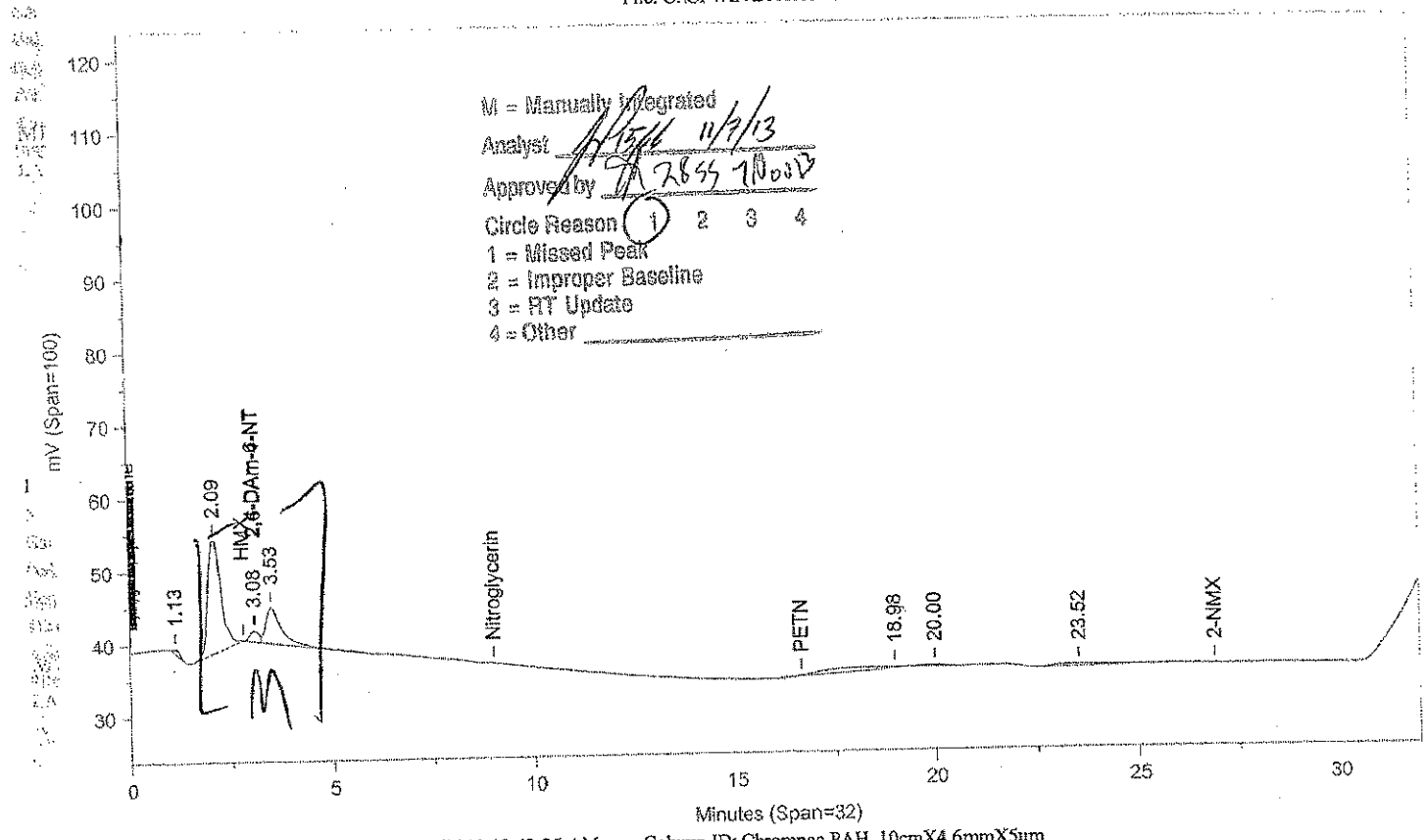
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



M = Manually Integrated
Analyst 11/7/13
Approved by 11/8/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

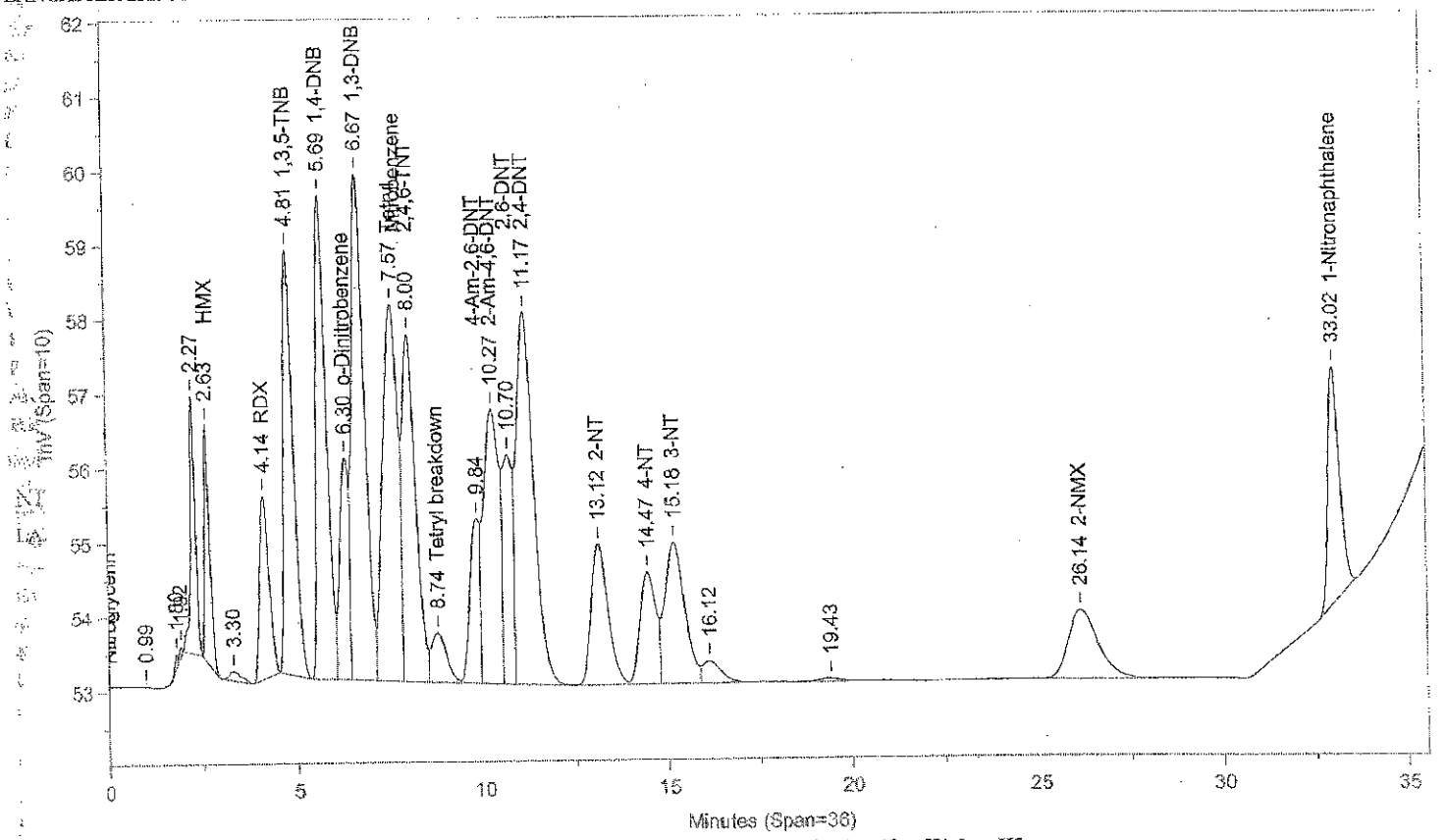
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.084	23496	.	2,4-DAm-6-NT
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

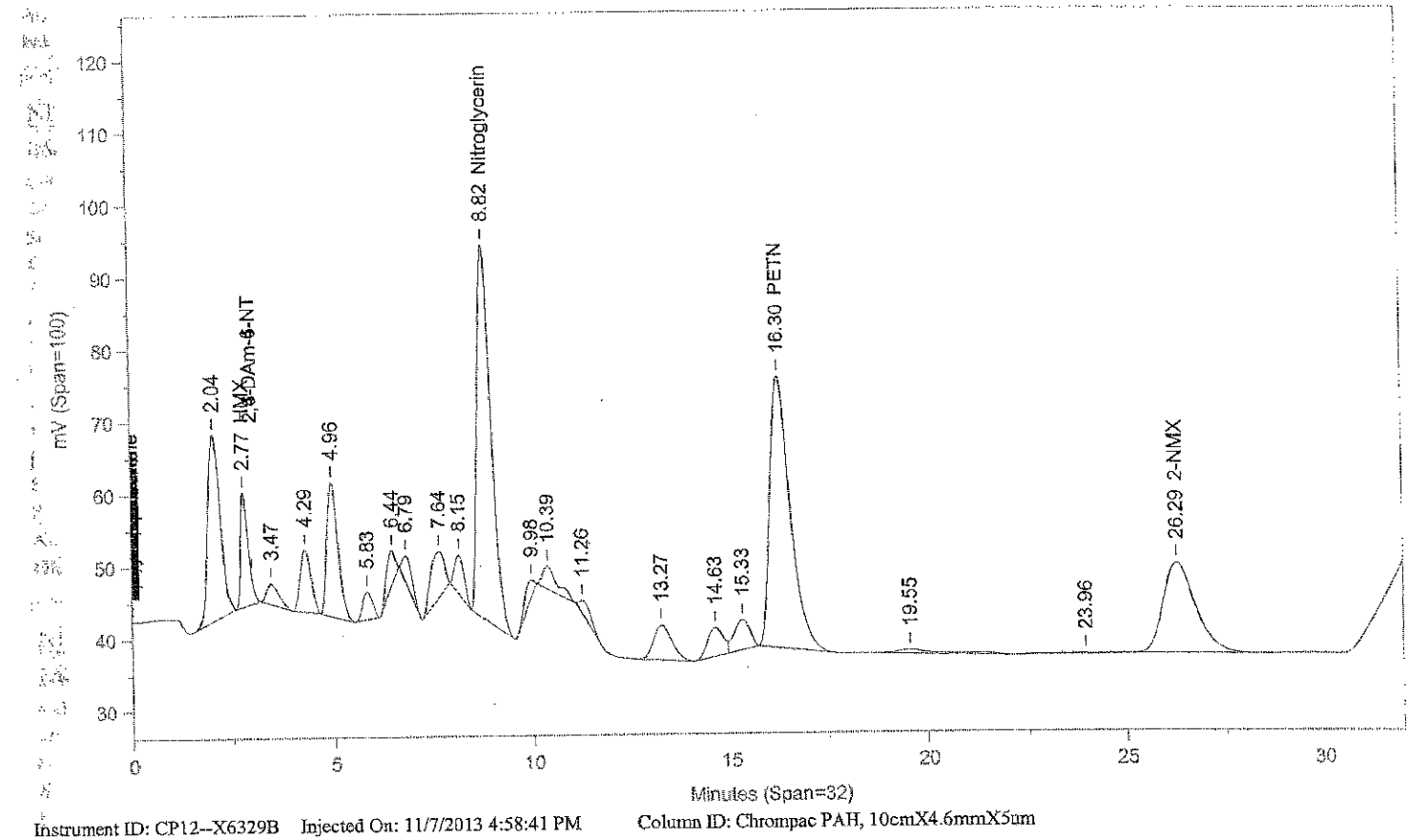
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:44:58 PM
File Reported On: 11/7/2013 at 4:44:56 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

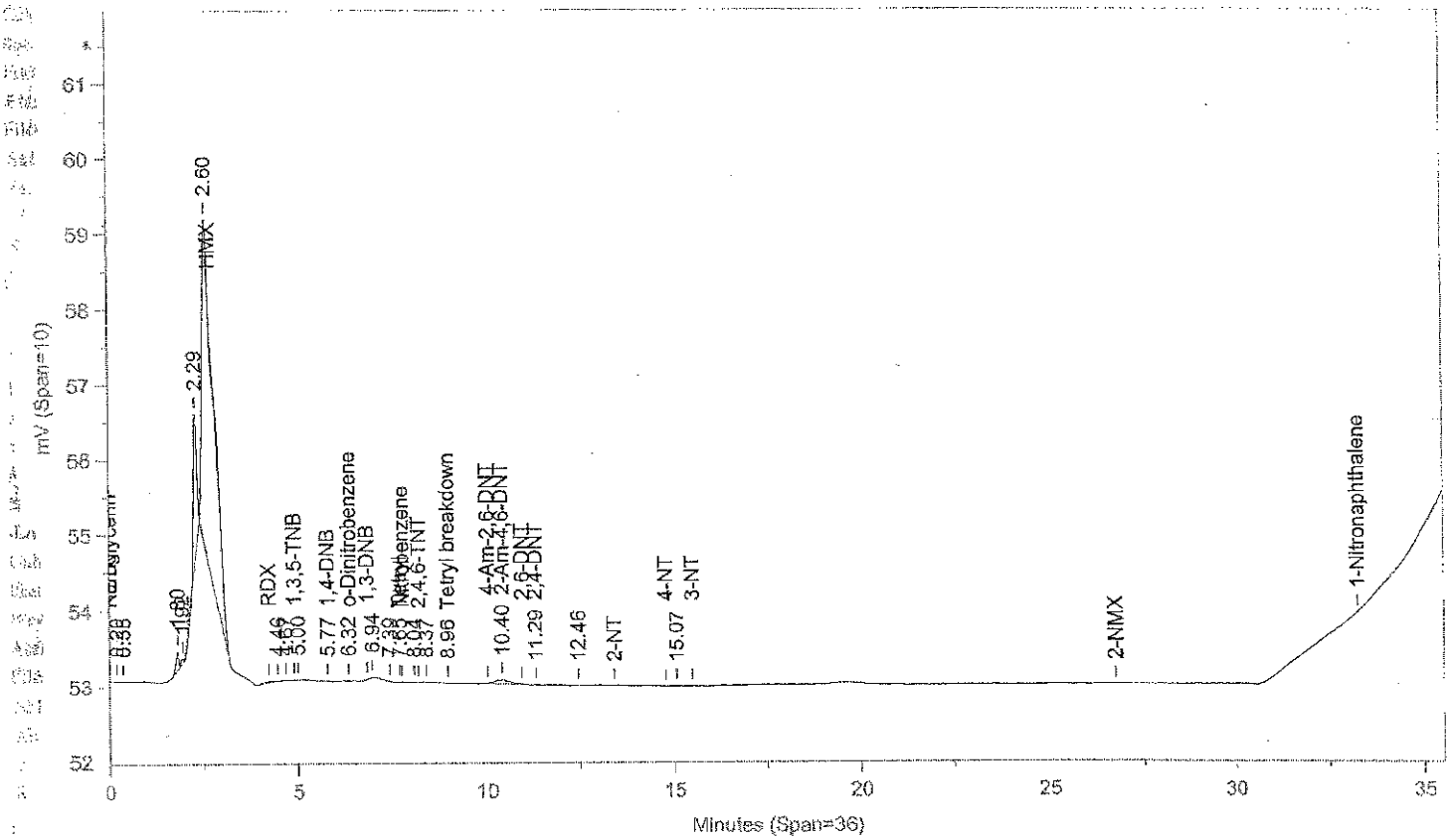
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.769	211572	504.407	HMX
4.144	44221	492.169	RDX	.	0	.	RDX
4.814	100245	474.9	1,3,5-TNB	.	0	.	1,3,5-TNB
5.688	125052	490.836	1,4-DNB	.	0	.	1,4-DNB
6.295	48820	473.808	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.675	162581	501.027	1,3-DNB	.	0	.	1,3-DNB
7.568	145022	419.546	Tetryl	.	0	.	Tetryl
8.004	109830	482.003	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	19154	55.413	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.821	1259876	9857.789	Nitroglycerin
9.844	41479	442.106	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.268	109243	498.79	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.697	56843	467.555	2,6-DNT	.	0	.	2,6-DNT
11.171	163706	494.931	2,4-DNT	.	0	.	2,4-DNT
13.121	60215	455.169	2-NT	.	0	.	2-NT
14.473	45093	480.588	4-NT	.	0	.	4-NT
15.178	69225	511.244	3-NT	.	0	.	3-NT
.	0	.	PETN	16.299	1376269	10049.65	PETN
26.14	52315	1534.716	2-NMX	26.295	704594	1442.454	2-NMX
33.023	69722	530.724	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

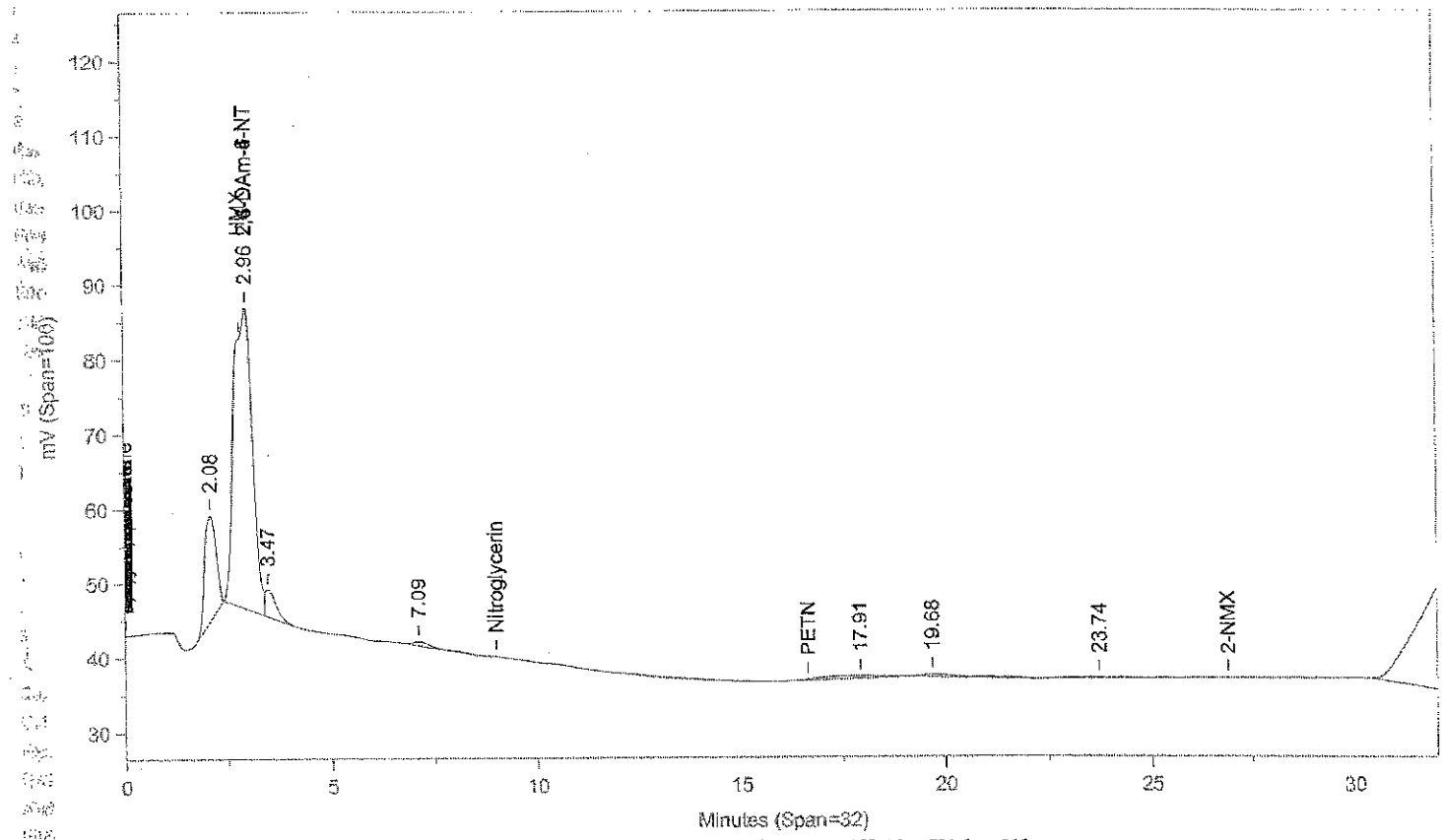
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:03:00 PM
File Reported On: 11/8/2013 at 1:02:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.40R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.40R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

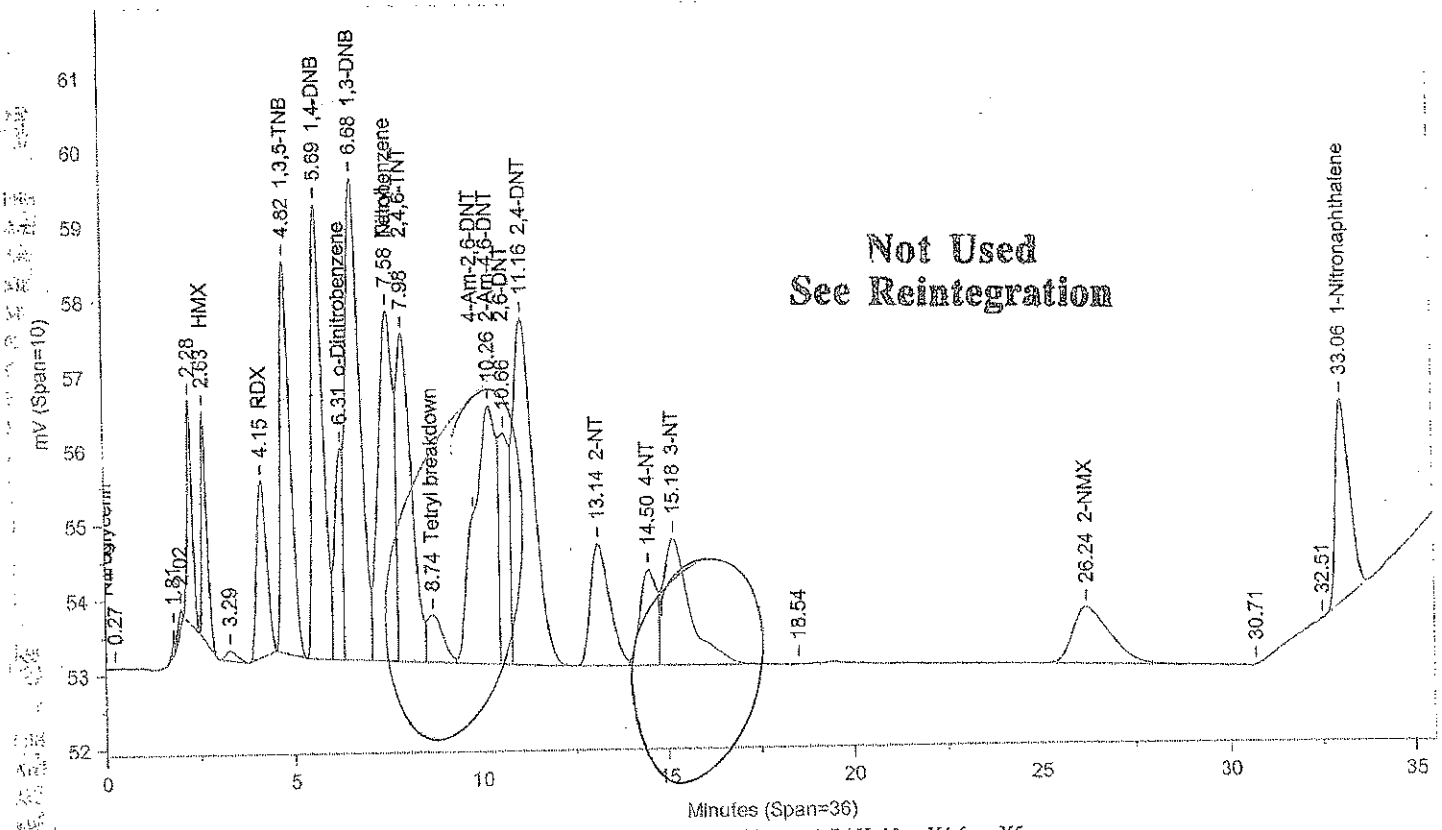
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.957	1233081	511.388	2,4-DAm-6-NT
5.772	41	.163	1,4-DNB		0		1,4-DNB
6.317	71	.692	o-Dinitrobenzene		0		o-Dinitrobenzene
7.65	66	.19	Tetryl		0		Tetryl
8.958	36	.105	Tetryl breakdown		0		Tetryl breakdown
10.398	1681	7.677	2-Am-4,6-DNT		0		2-Am-4,6-DNT
11.291	91	.275	2,4-DNT		0		2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:04:58 PM
File Reported On: 11/8/2013 at 1:04:58 PM

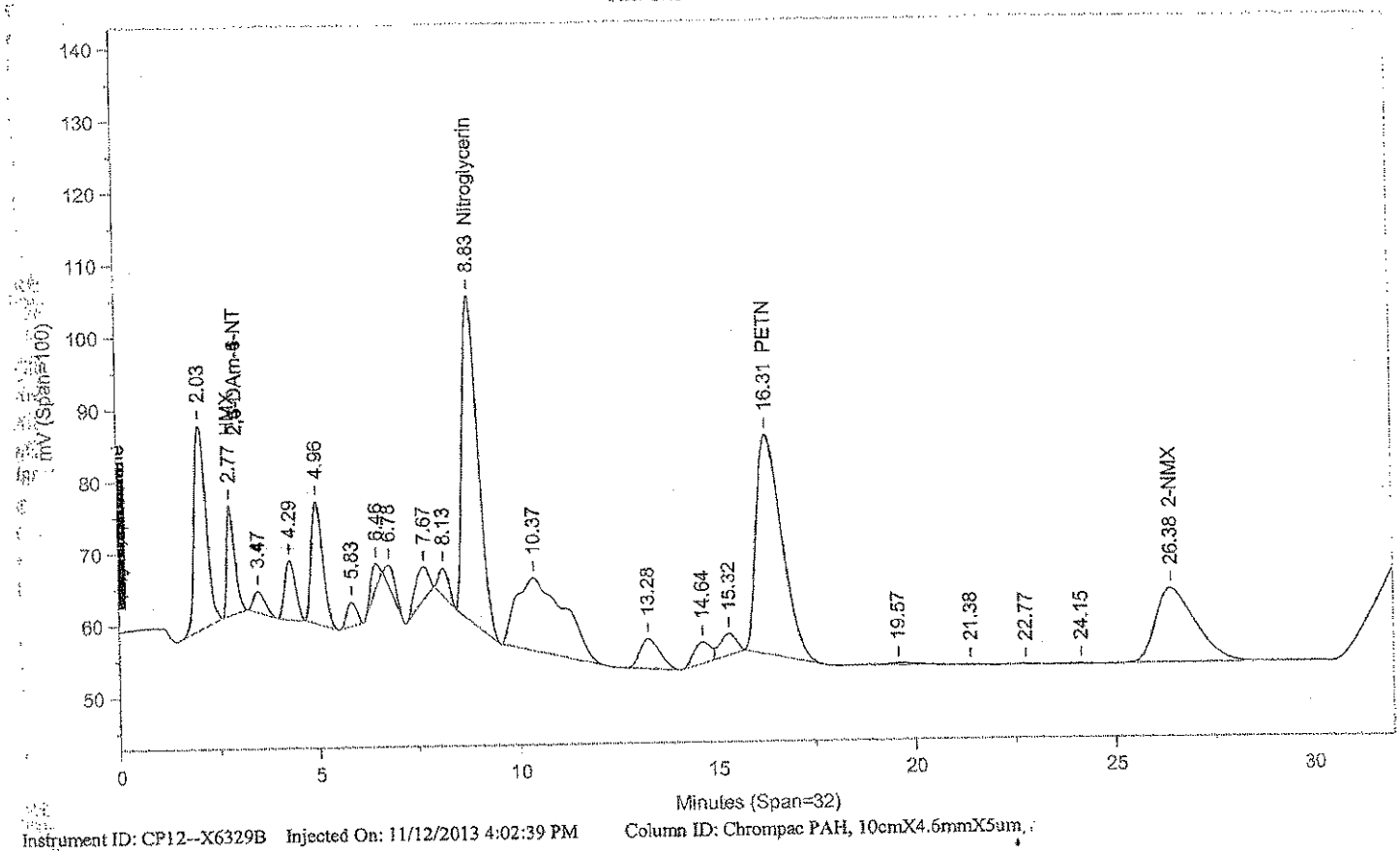
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\2E12310.63R



Instrument ID: CP12--X6329A Injected On: 11/12/2013 4:02:39 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\2E12310B.63R



Instrument ID: CP12--X6329B Injected On: 11/12/2013 4:02:39 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

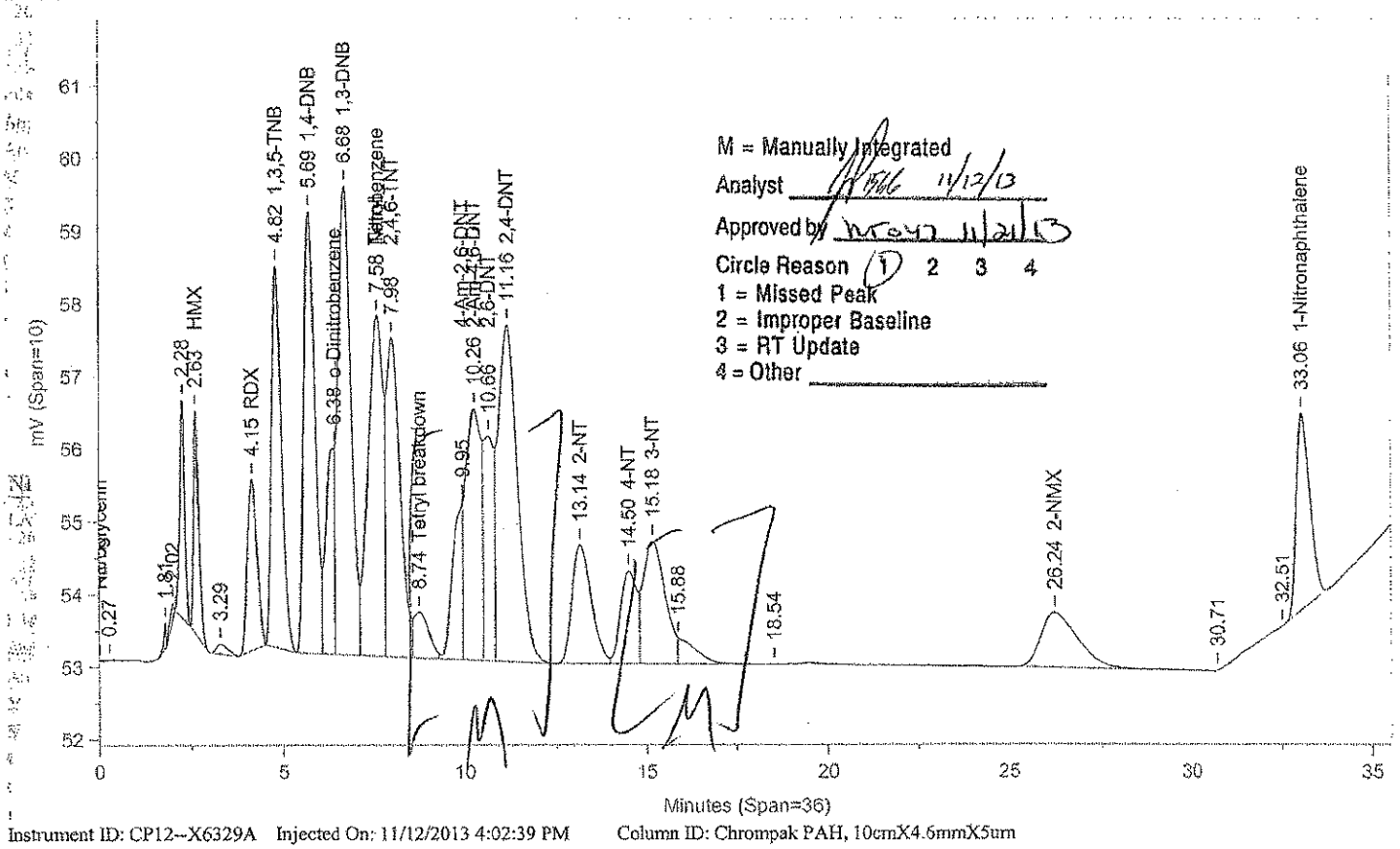
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.769	212007	505.409	HMX
4.146	43721	486.468	RDX	.	0	.	RDX
4.817	98301	465.687	1,3,5-TNB	.	0	.	1,3,5-TNB
5.694	125978	494.47	1,4-DNB	.	0	.	1,4-DNB
6.313	41344	401.255	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.678	172493	531.573	1,3-DNB	.	0	.	1,3-DNB
7.578	134274	390.007	Nitrobenzene	.	0	.	Nitrobenzene
7.98	117504	515.681	2,4,6-TNT	.	0	.	2,4,6-TNT
8.737	18471	53.437	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1230571	9628.495	Nitroglycerin
10.262	142278	649.622	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.656	57614	473.893	2,6-DNT	.	0	.	2,6-DNT
11.165	175066	529.275	2,4-DNT	.	0	.	2,4-DNT
13.142	59990	453.475	2-NT	.	0	.	2-NT
14.5	39567	421.7	4-NT	.	0	.	4-NT
15.184	86297	637.329	3-NT	.	0	.	3-NT
.	0	.	PETN	16.313	1347926	9842.727	PETN
26.243	52148	1529.827	2-NMX	26.385	707027	1447.434	2-NMX
33.065	72368	550.868	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\2E12310.63A
Area File: C:\CPWIN\DATA1\2E12310B.63A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 4:42:46 PM
File Reported On: 11/12/2013 at 4:43:01 PM

Not Used
See Reintegration

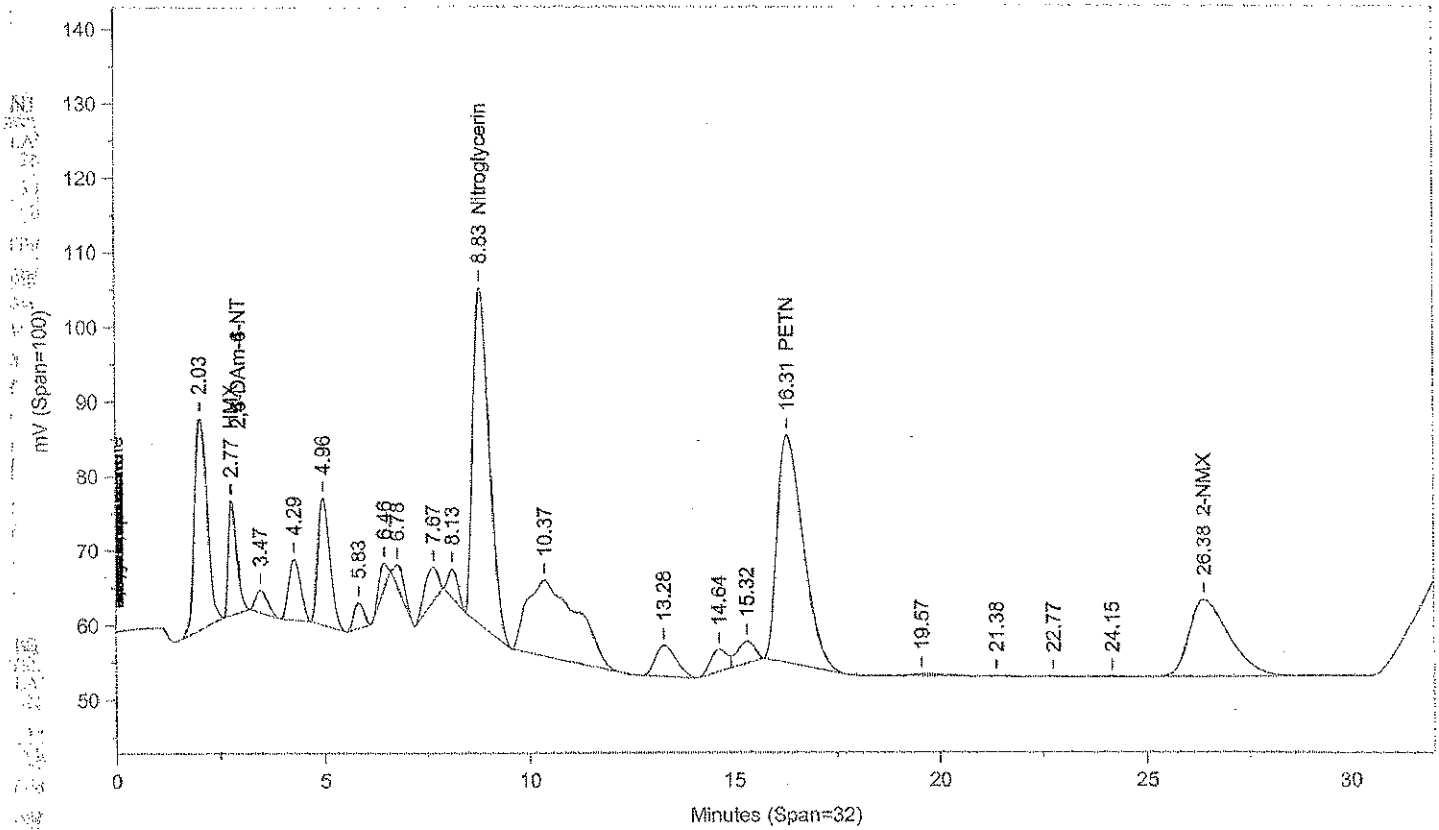
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\2E12310.63R



Instrument ID: CP12--X6329A Injected On: 11/12/2013 4:02:39 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\2E12310B.63R



Instrument ID: CP12--X6329B Injected On: 11/12/2013 4:02:39 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

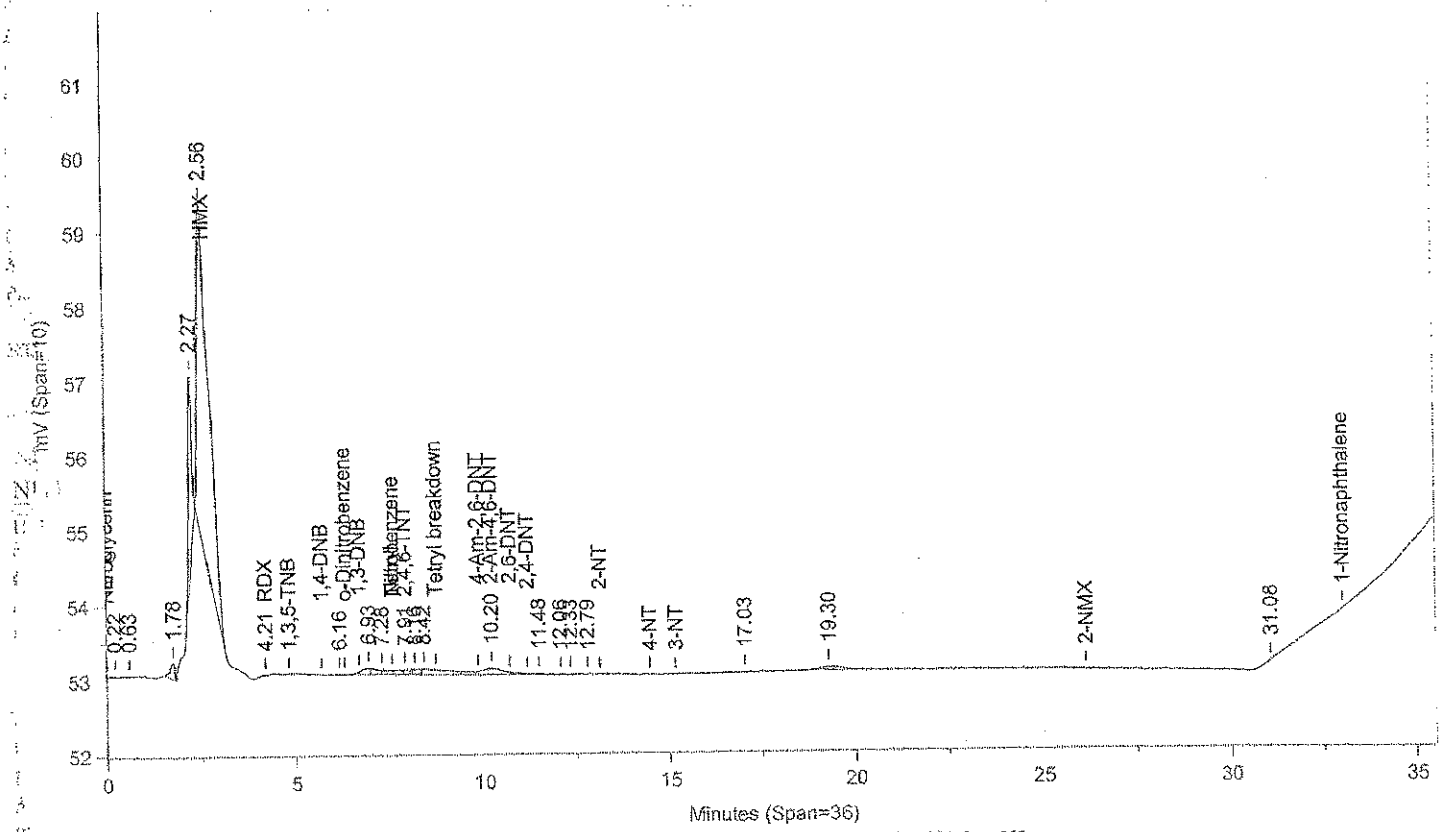
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.769	212007	505.409	HMX
4.146	43721	486.468	RDX	.	0	.	RDX
4.817	98301	465.687	1,3,5-TNB	.	0	.	1,3,5-TNB
5.694	125207	491.446	1,4-DNB	.	0	.	1,4-DNB
6.383	45874	445.221	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.678	168733	519.987	1,3-DNB	.	0	.	1,3-DNB
7.578	134274	390.007	Nitrobenzene	.	0	.	Nitrobenzene
7.98	117504	515.681	2,4,6-TNT	.	0	.	2,4,6-TNT
8.737	18213	52.691	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1230571	9628.495	Nitroglycerin
9.95	41931	446.931	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.262	100604	459.346	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.656	57614	473.893	2,6-DNT	.	0	.	2,6-DNT
11.165	175066	529.275	2,4-DNT	.	0	.	2,4-DNT
13.142	59990	453.475	2-NT	.	0	.	2-NT
14.5	41542	442.748	4-NT	.	0	.	4-NT
15.184	72048	532.092	3-NT	.	0	.	3-NT
.	0	.	PETN	16.313	1347926	9842.727	PETN
26.243	52148	1529.827	2-NMX	26.385	707027	1447.434	2-NMX
33.065	72368	550.868	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 4:50:28 PM
File Reported On: 11/12/2013 at 4:50:27 PM

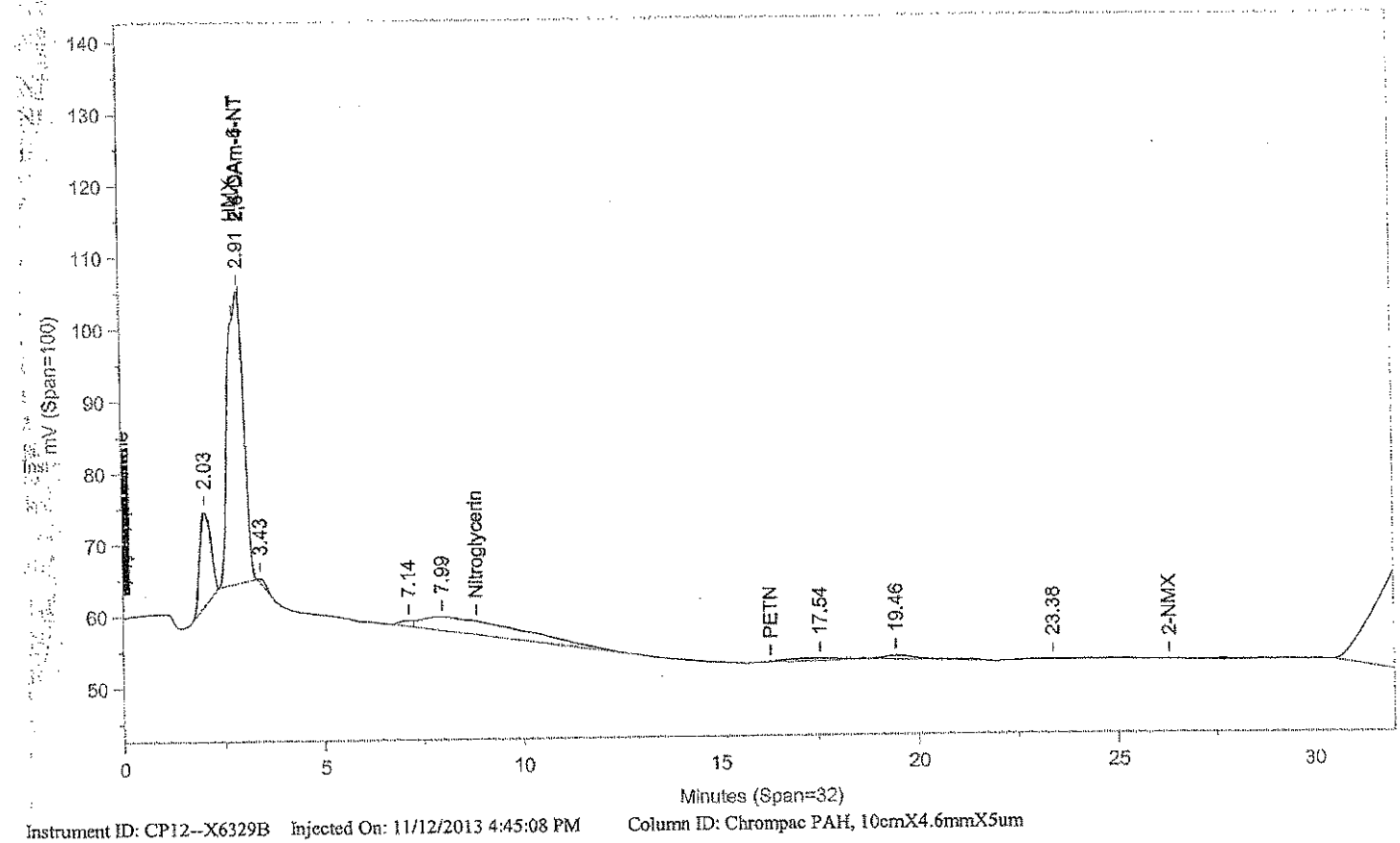
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\2E12310.64R



Instrument ID: CP12--X6329A Injected On: 11/12/2013 4:45:08 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\2E12310B.64R



Instrument ID: CP12--X6329B Injected On: 11/12/2013 4:45:08 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

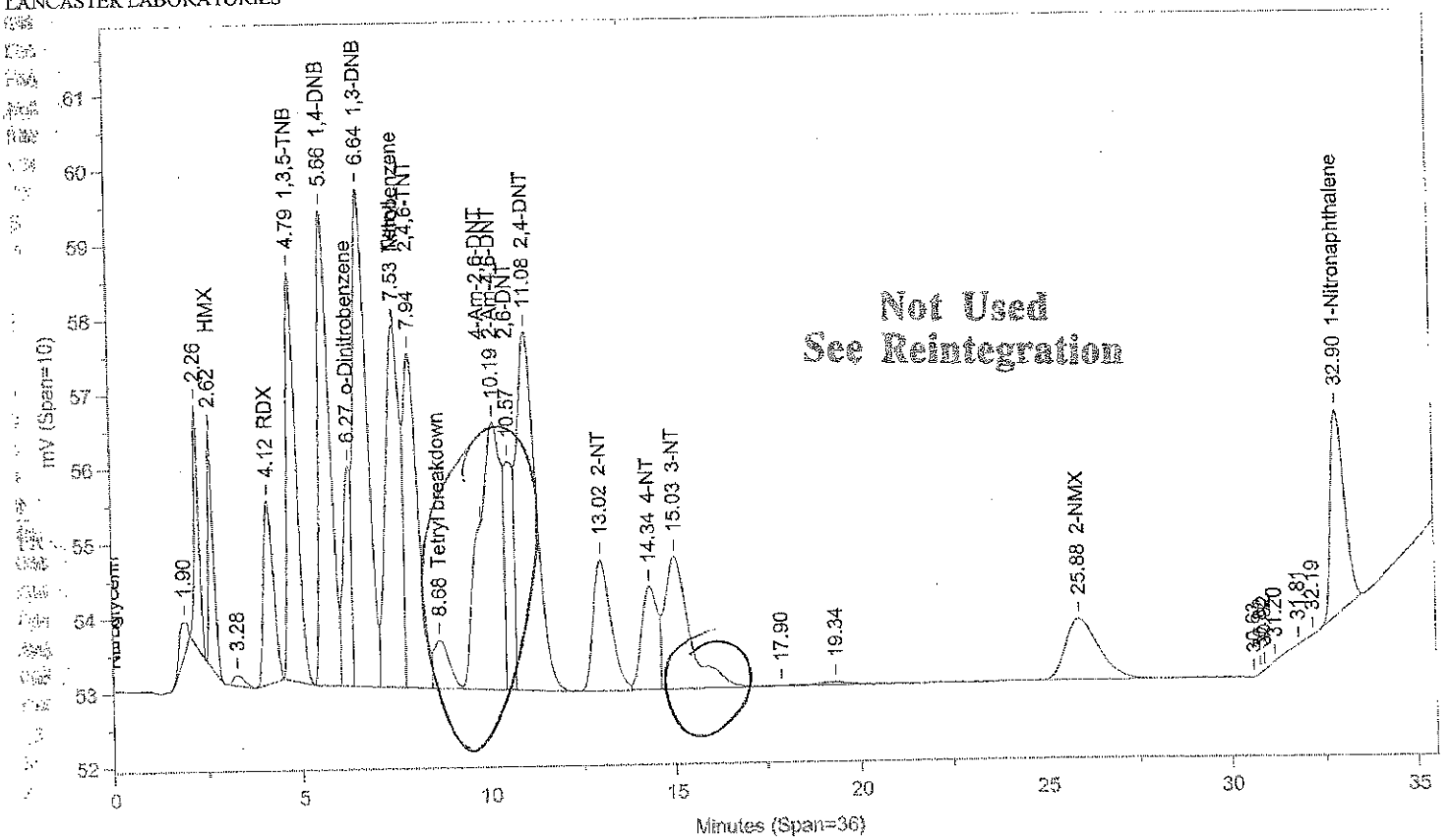
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.91	1181076	489.82	2,4-DAm-6-NT
4.205	335	-8.679	RDX	.	0	.	RDX
7.906	681	2.99	2,4,6-TNT	.	0	.	2,4,6-TNT
10.197	3559	16.252	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

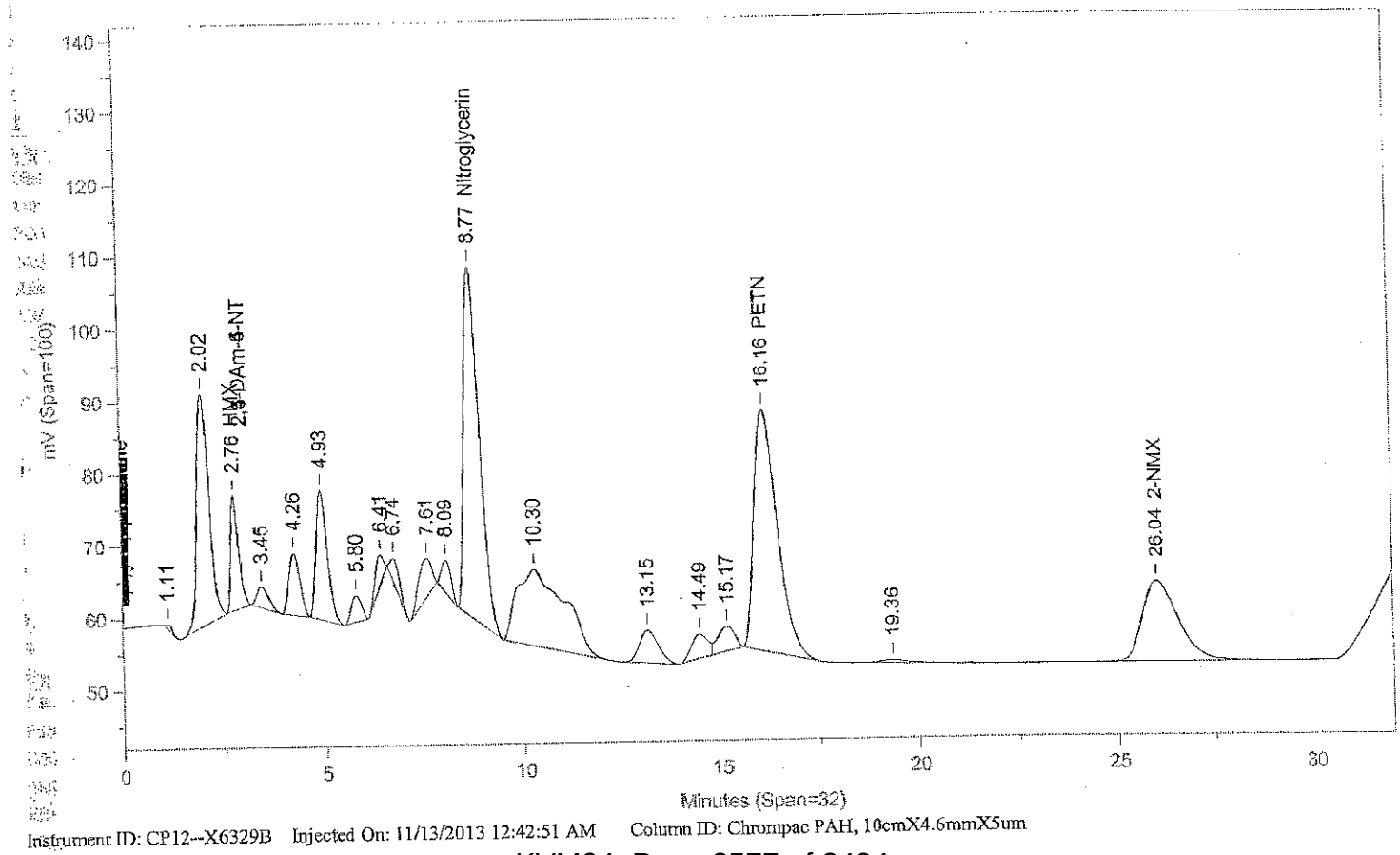
Files:
Area File: C:\CPWIN\DATA1\2E12310.64A
Area File: C:\CPWIN\DATA1\2E12310B.64A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 5:25:50 PM
File Reported On: 11/12/2013 at 5:25:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:42:51 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:42:51 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

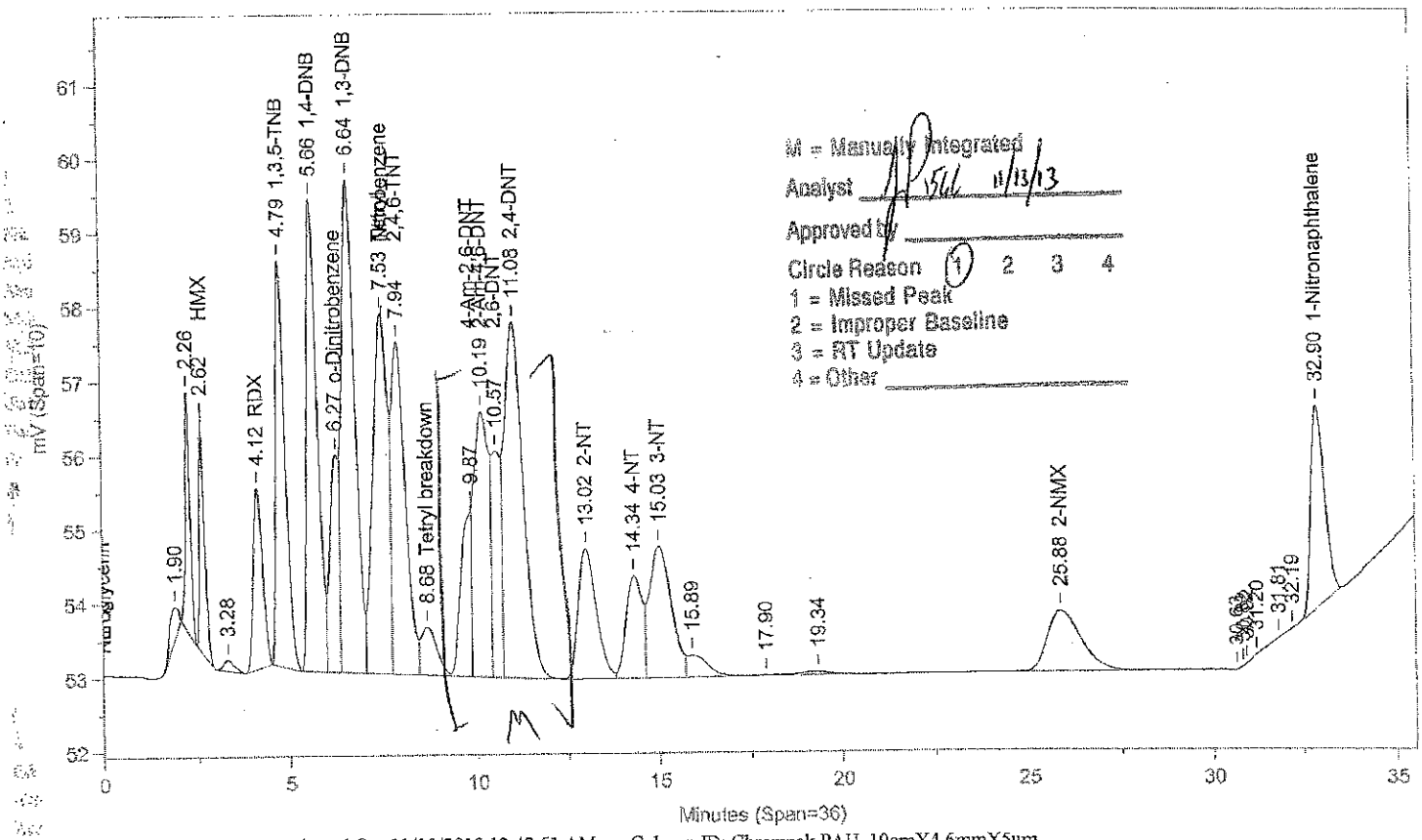
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.756	214184	510.419	HMX
4.121	44418	494.417	RDX	.	0	.	RDX
4.791	98817	468.133	1,3,5-TNB	.	0	.	1,3,5-TNB
5.66	126262	495.586	1,4-DNB	.	0	.	1,4-DNB
6.268	43745	424.555	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.635	168465	519.162	1,3-DNB	.	0	.	1,3-DNB
7.528	136482	394.842	Tetryl	.	0	.	Tetryl
7.944	112879	495.384	2,4,6-TNT	.	0	.	2,4,6-TNT
8.677	18559	53.691	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.767	1242476	9721.648	Nitroglycerin
10.185	150388	686.651	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.573	48389	398.016	2,6-DNT	.	0	.	2,6-DNT
11.077	173247	523.775	2,4-DNT	.	0	.	2,4-DNT
13.018	60400	456.568	2-NT	.	0	.	2-NT
14.338	42996	458.247	4-NT	.	0	.	4-NT
15.029	83350	615.565	3-NT	.	0	.	3-NT
RT	0	.	PETN	16.16	1354877	9893.474	PETN
25.882	51589	1513.422	2-NMX	26.043	709381	1452.254	2-NMX
32.903	71361	543.199	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.05A
Area File: C:\CPWIN\DATA1\3E12310B.05A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:23:34 AM
File Reported On: 11/13/2013 at 1:23:46 AM

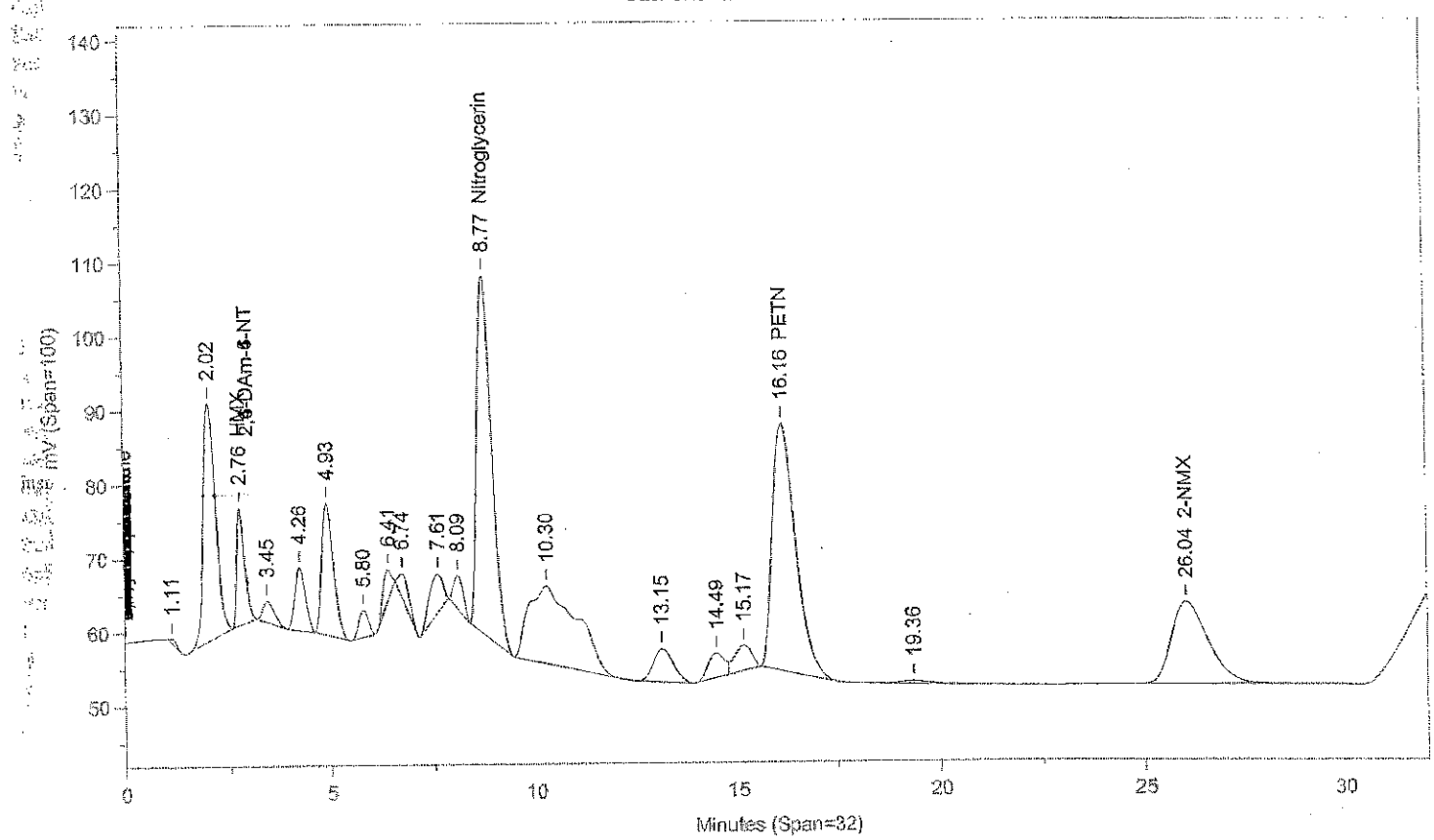
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:42:51 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:42:51 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.756	214184	510.419	HMX
4.121	44418	494.417	RDX	.	0	.	RDX
4.791	98817	468.133	1,3,5-TNB	.	0	.	1,3,5-TNB
5.66	126262	495.586	1,4-DNB	.	0	.	1,4-DNB
6.268	47598	461.955	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.635	164612	507.286	1,3-DNB	.	0	.	1,3-DNB
7.528	136482	394.842	Tetryl	.	0	.	Tetryl
7.944	112879	495.384	2,4,6-TNT	.	0	.	2,4,6-TNT
8.677	18559	53.691	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.767	1242476	9721.648	Nitroglycerin
9.872	43220	460.662	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.185	104164	475.601	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.573	55377	455.496	2,6-DNT	.	0	.	2,6-DNT
11.077	169262	511.728	2,4-DNT	.	0	.	2,4-DNT
13.018	60400	456.568	2-NT	.	0	.	2-NT
14.338	42996	458.247	4-NT	.	0	.	4-NT
15.029	71519	528.185	3-NT	.	0	.	3-NT
.	0	.	PETN	16.16	1354877	9893.474	PETN
25.882	51589	1513.422	2-NMX	26.043	709381	1452.254	2-NMX
32.903	71361	543.199	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:19:04 PM
File Reported On: 11/13/2013 at 1:19:03 PM

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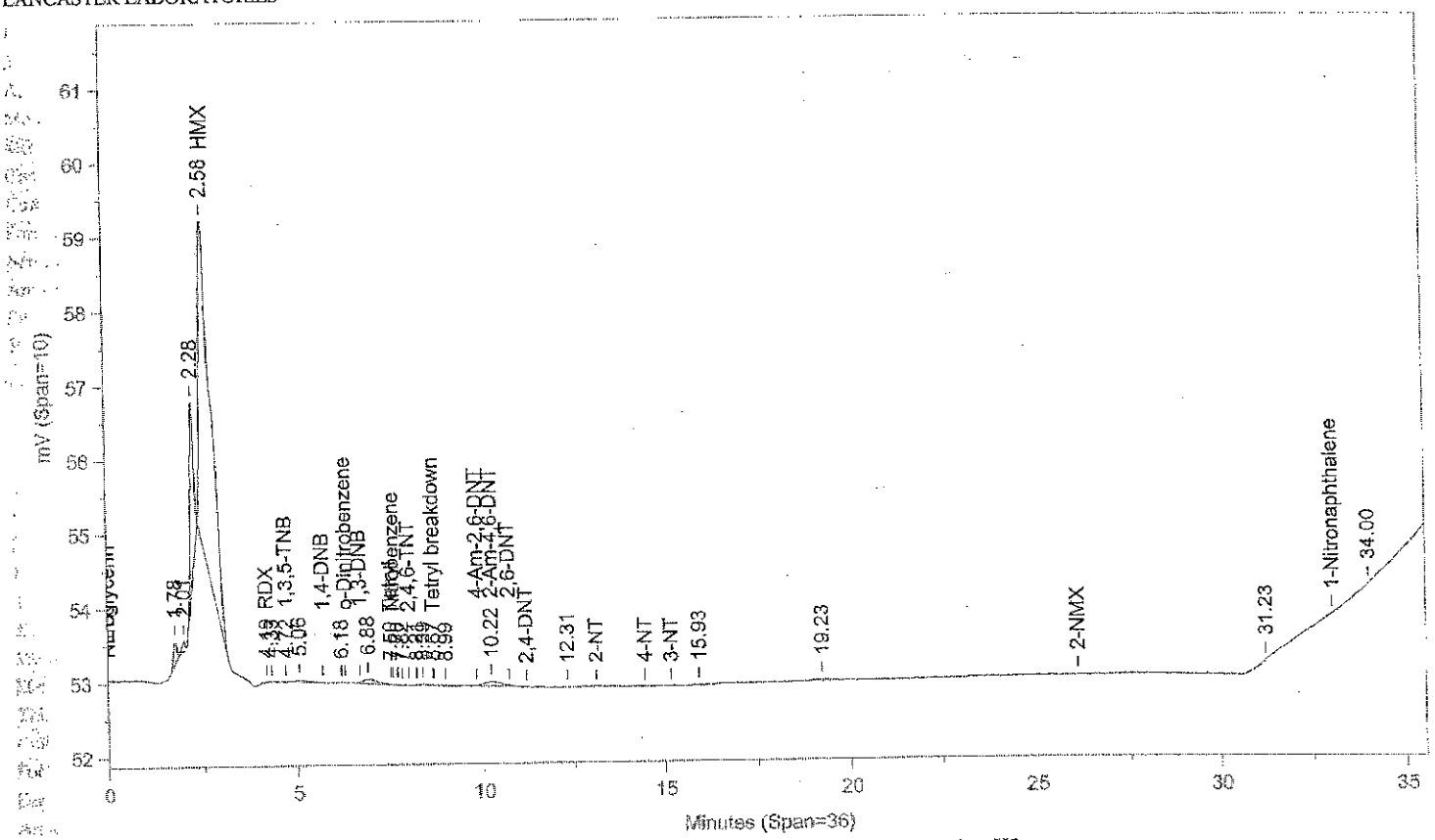
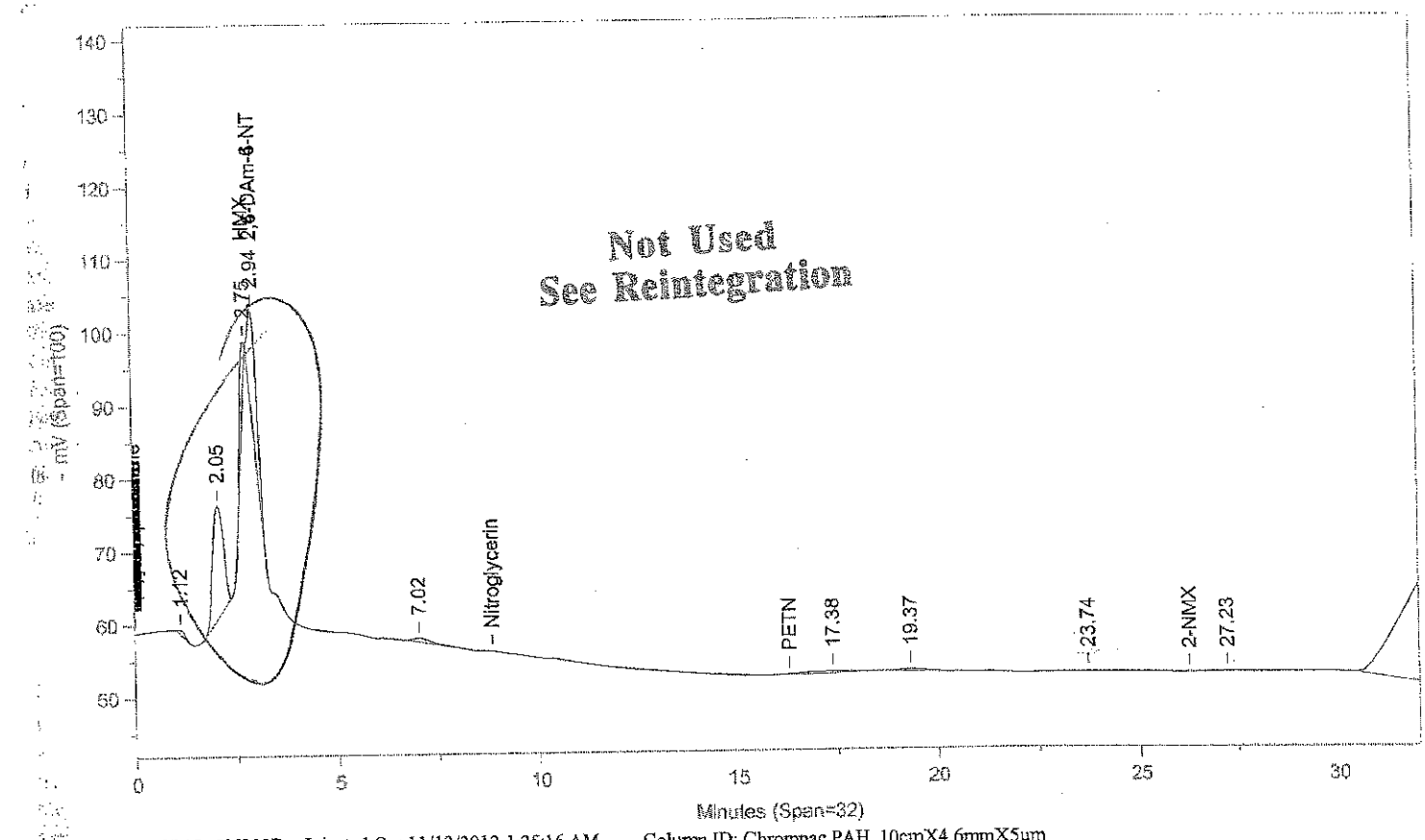
File: C:\CPWIN\DATA1\3E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 1:25:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 1:25:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	HMX	2.754	81216	204.362	HMX
	0	.	2,4-DAm-6-NT	2.944	207565	86.082	2,4-DAm-6-NT
4.192	186	-10.379	RDX	.	0	.	RDX
4.716	28	.134	1,3,5-TNB	.	0	.	1,3,5-TNB
7.502	43	.123	Tetryl	.	0	.	Tetryl
8.667	36	.103	Tetryl breakdown	.	0	.	Tetryl breakdown
10.222	1878	8.575	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\3E12310.06A
Area File: C:\CPWIN\DATA1\3E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:06:02 AM
File Reported On: 11/13/2013 at 2:06:15 AM

Not Used
See Reintegration

NITR31324M ONNITR3ON CCAL 1331599999

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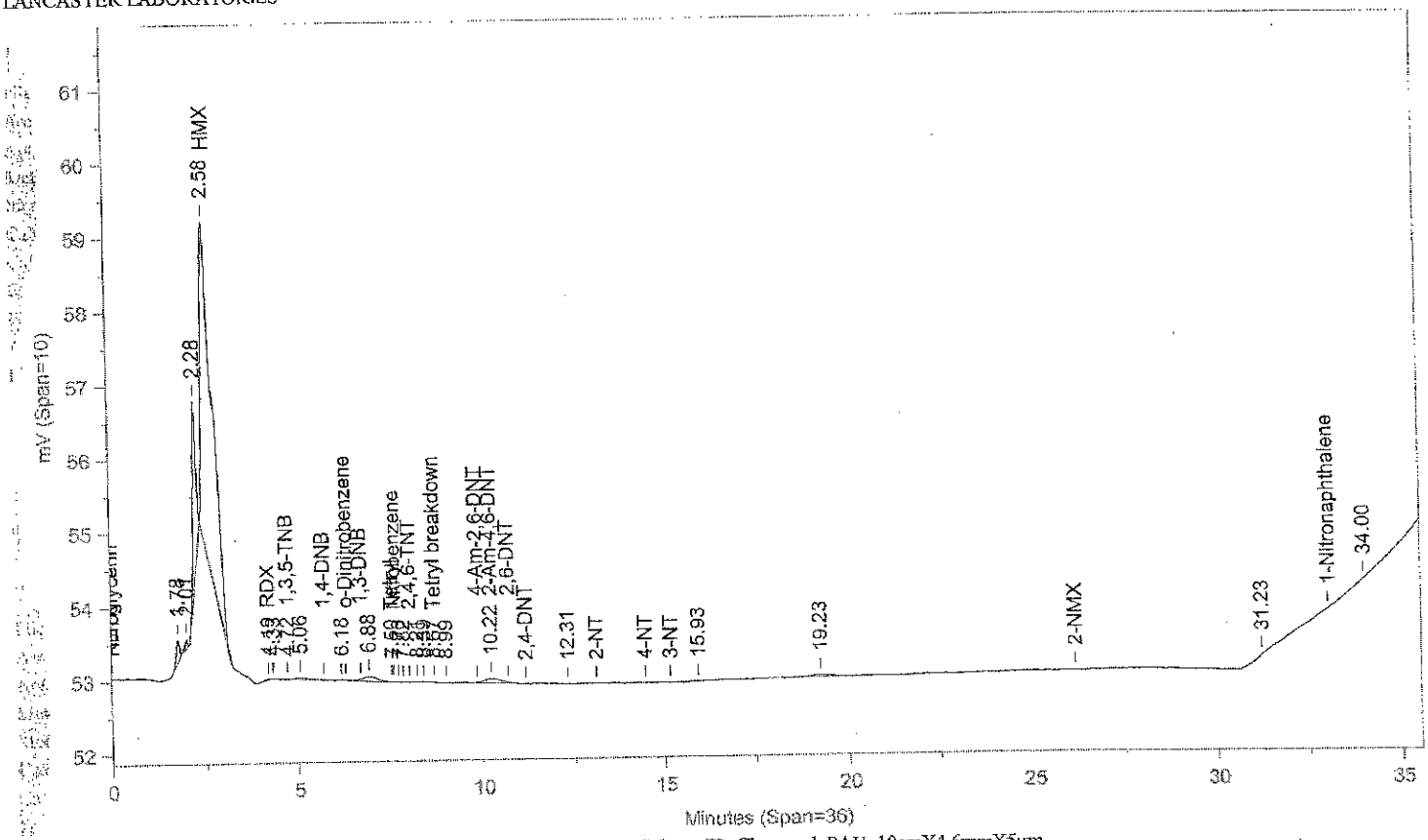
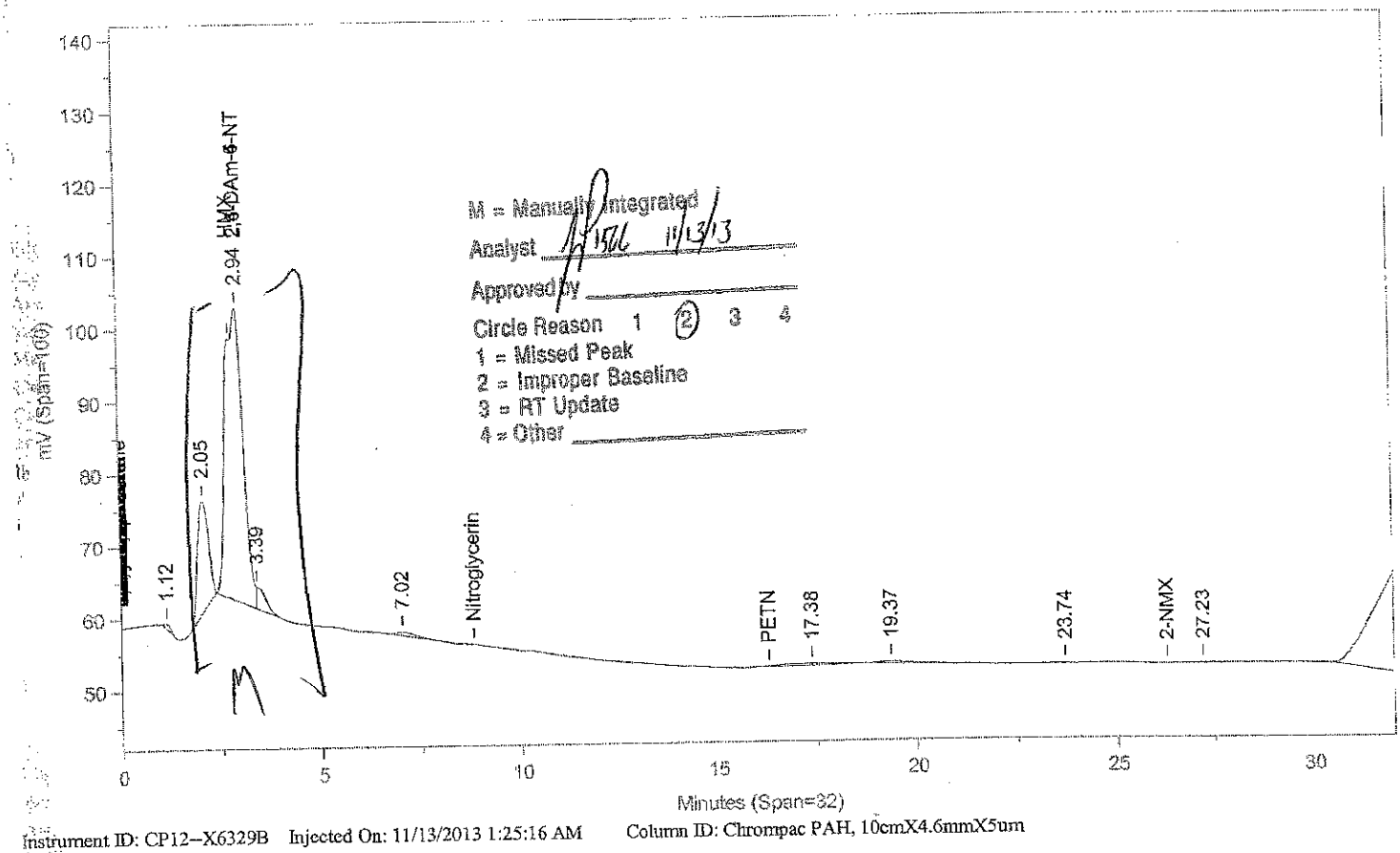
File: C:\CPWIN\DATA1\3E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 1:25:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.06R



M = Manually Integrated

Analyst [signature] 11/13/13

Approved by _____

Circle Reason 1 (2) 3 4

1 = Missed Peak

2 = Improper Baseline

3 = RT Update

4 = Other _____

Instrument ID: CP12--X6329B Injected On: 11/13/2013 1:25:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	2.944	1240202	514.341	2,4-DAm-6-NT
4.192	186	-10.379	RDX	.	0	.	RDX
4.716	28	.134	1,3,5-TNB	.	0	.	1,3,5-TNB
7.502	43	.123	Tetryl	.	0	.	Tetryl
8.667	36	.103	Tetryl breakdown	.	0	.	Tetryl breakdown
10.222	1878	8.575	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:21:16 PM
File Reported On: 11/13/2013 at 1:21:14 PM

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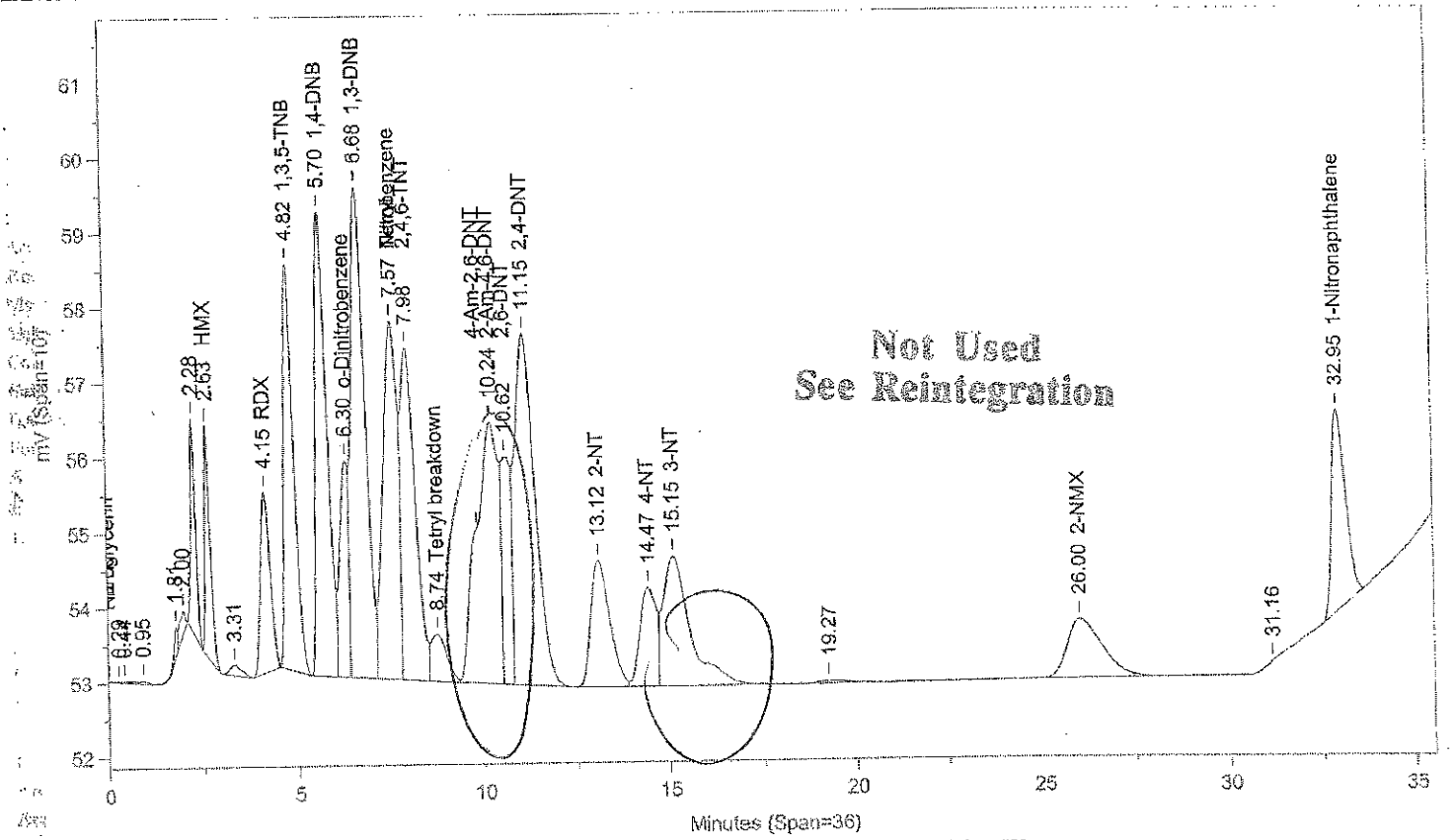
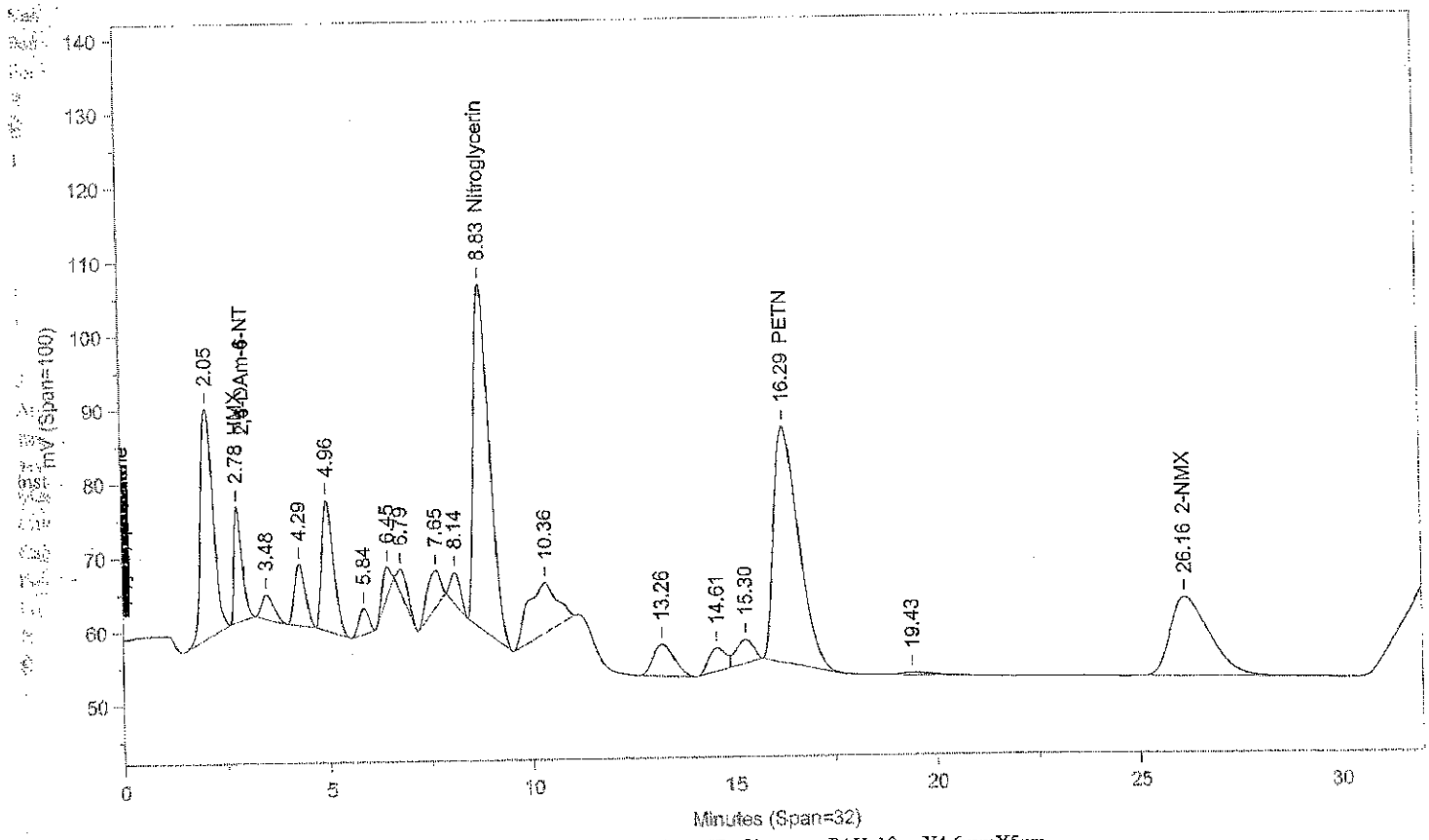
File: C:\CPWIN\DATA1\3E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

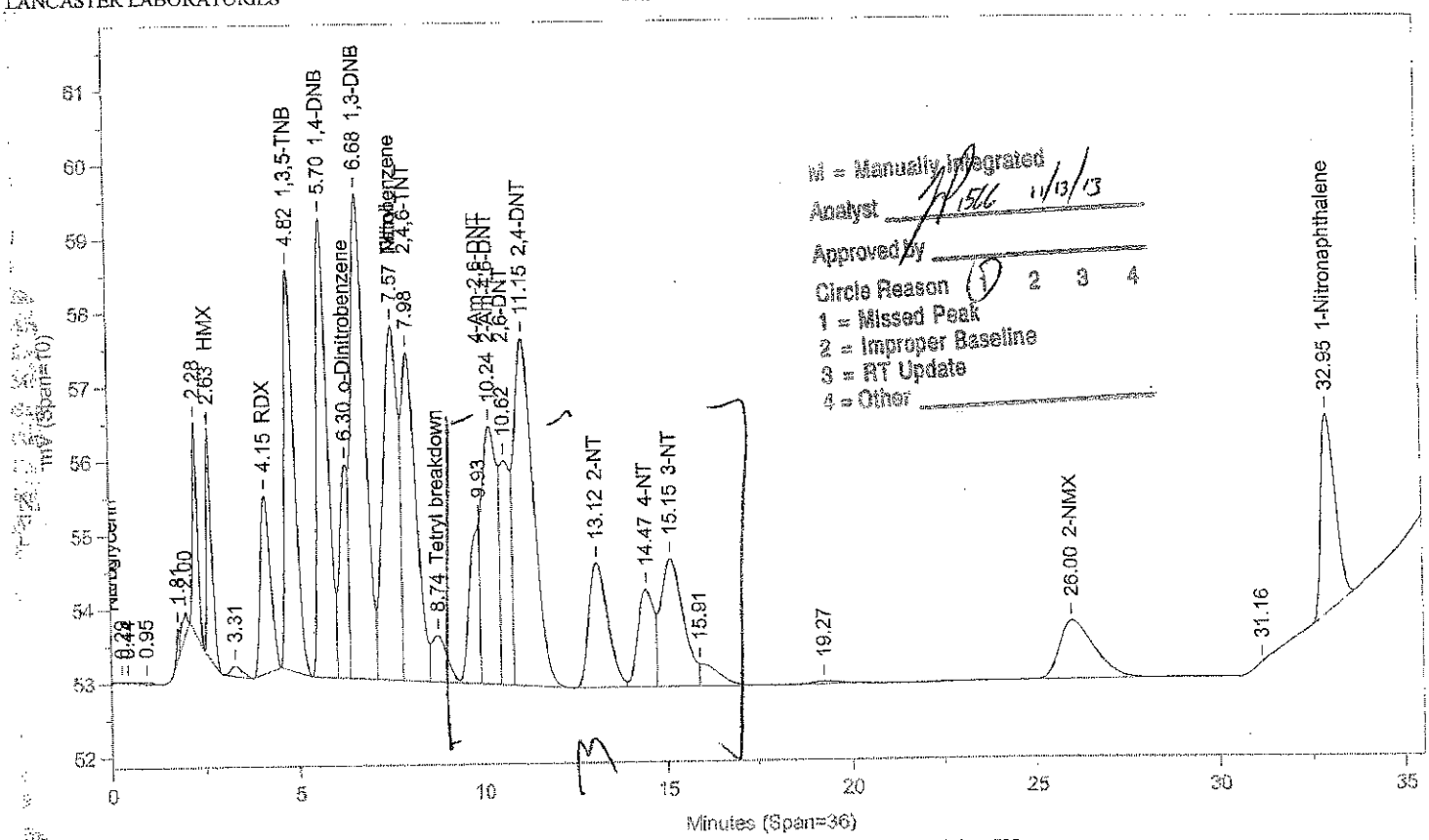
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.776	212668	506.929	HMX
4.146	43972	489.329	RDX	.	0	.	RDX
4.82	99768	472.64	1,3,5-TNB	.	0	.	1,3,5-TNB
5.696	126004	494.573	1,4-DNB	.	0	.	1,4-DNB
6.302	45237	439.041	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.677	168474	519.189	1,3-DNB	.	0	.	1,3-DNB
7.574	136822	397.409	Nitrobenzene	.	0	.	Nitrobenzene
7.983	115550	507.107	2,4,6-TNT	.	0	.	2,4,6-TNT
8.739	18611	53.841	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1238190	9688.115	Nitroglycerin
10.236	147818	674.917	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.623	49809	409.699	2,6-DNT	.	0	.	2,6-DNT
11.149	174514	527.605	2,4-DNT	.	0	.	2,4-DNT
13.117	60208	455.12	2-NT	.	0	.	2-NT
14.467	40977	436.726	4-NT	.	0	.	4-NT
15.151	85683	632.789	3-NT	.	0	.	3-NT
.	0	.	PETN	16.288	1360190	9932.261	PETN
26.001	51878	1521.922	2-NMX	26.159	726325	1486.941	2-NMX
32.95	71925	547.492	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.17A
Area File: C:\CPWIN\DATA1\3E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 9:51:58 AM
File Reported On: 11/13/2013 at 9:52:08 AM

Not Used
See Reintegration

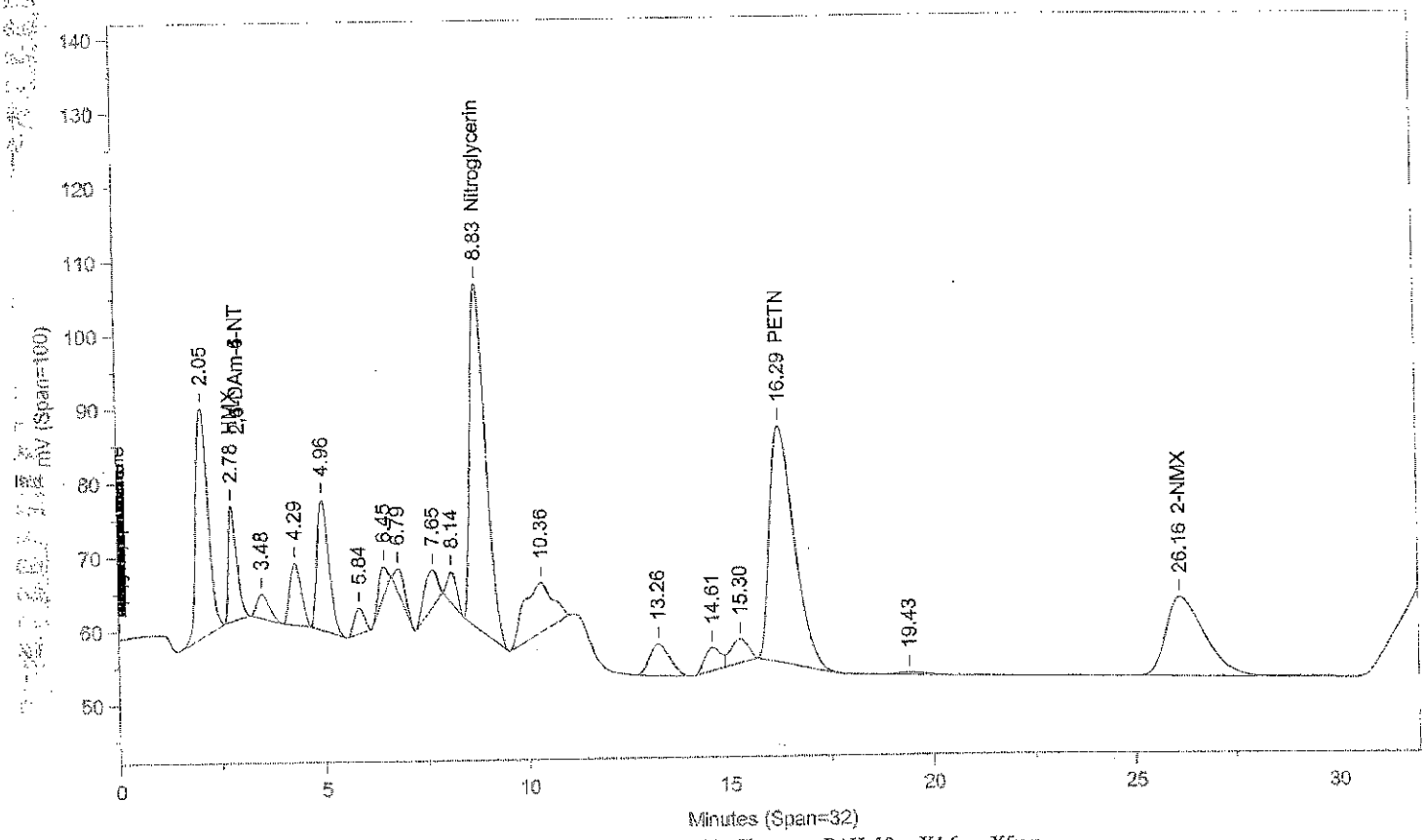
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:11:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

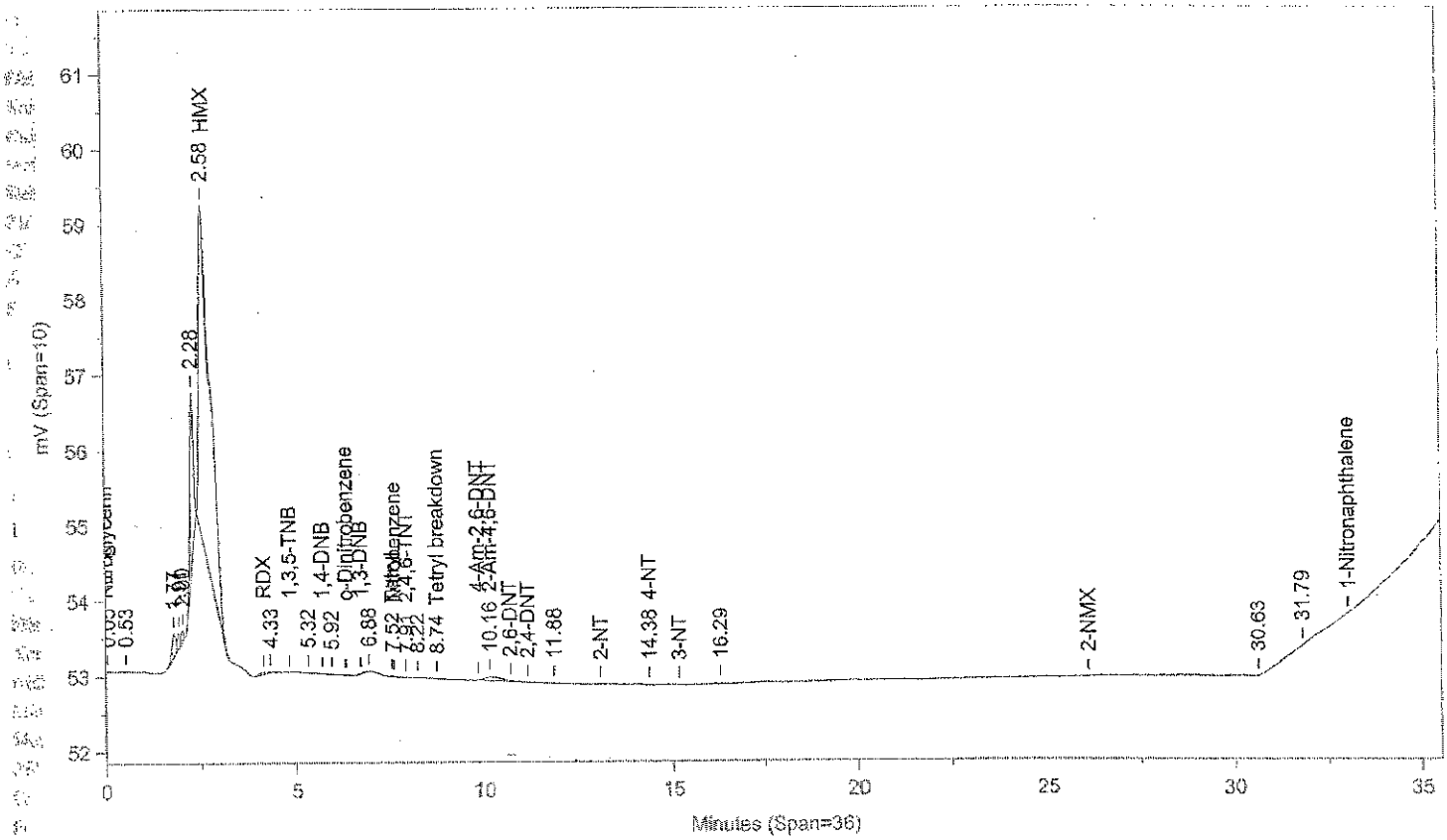
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.776	212668	506.929	HMX
4.146	43972	489.329	RDX	.	0	.	RDX
4.82	99768	472.64	1,3,5-TNB	.	0	.	1,3,5-TNB
5.696	126004	494.573	1,4-DNB	.	0	.	1,4-DNB
6.302	45237	439.041	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.677	168474	519.189	1,3-DNB	.	0	.	1,3-DNB
7.574	136822	397.409	Nitrobenzene	.	0	.	Nitrobenzene
7.983	115550	507.107	2,4,6-TNT	.	0	.	2,4,6-TNT
8.739	18611	53.841	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.826	1238190	9688.115	Nitroglycerin
9.933	42168	449.451	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.236	102688	468.862	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.623	58595	481.964	2,6-DNT	.	0	.	2,6-DNT
11.149	168689	509.997	2,4-DNT	.	0	.	2,4-DNT
13.117	60208	455.12	2-NT	.	0	.	2-NT
14.467	40977	436.726	4-NT	.	0	.	4-NT
15.151	74769	552.188	3-NT	.	0	.	3-NT
.	0	.	PETN	16.288	1360190	9932.261	PETN
26.001	51878	1521.922	2-NMX	26.159	726325	1486.941	2-NMX
32.95	71925	547.492	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

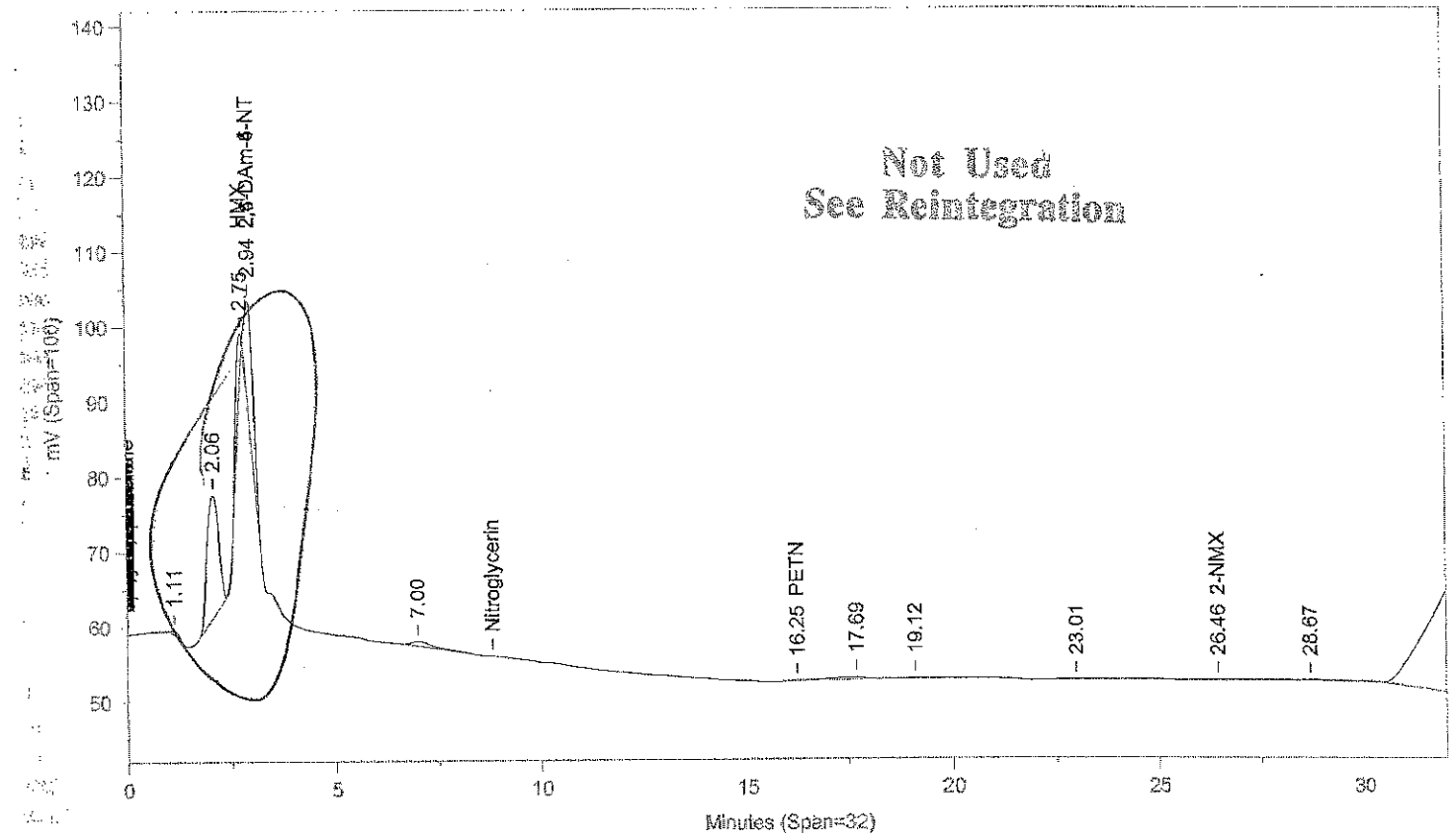
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:45:10 PM
File Reported On: 11/13/2013 at 1:45:10 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.18R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.18R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

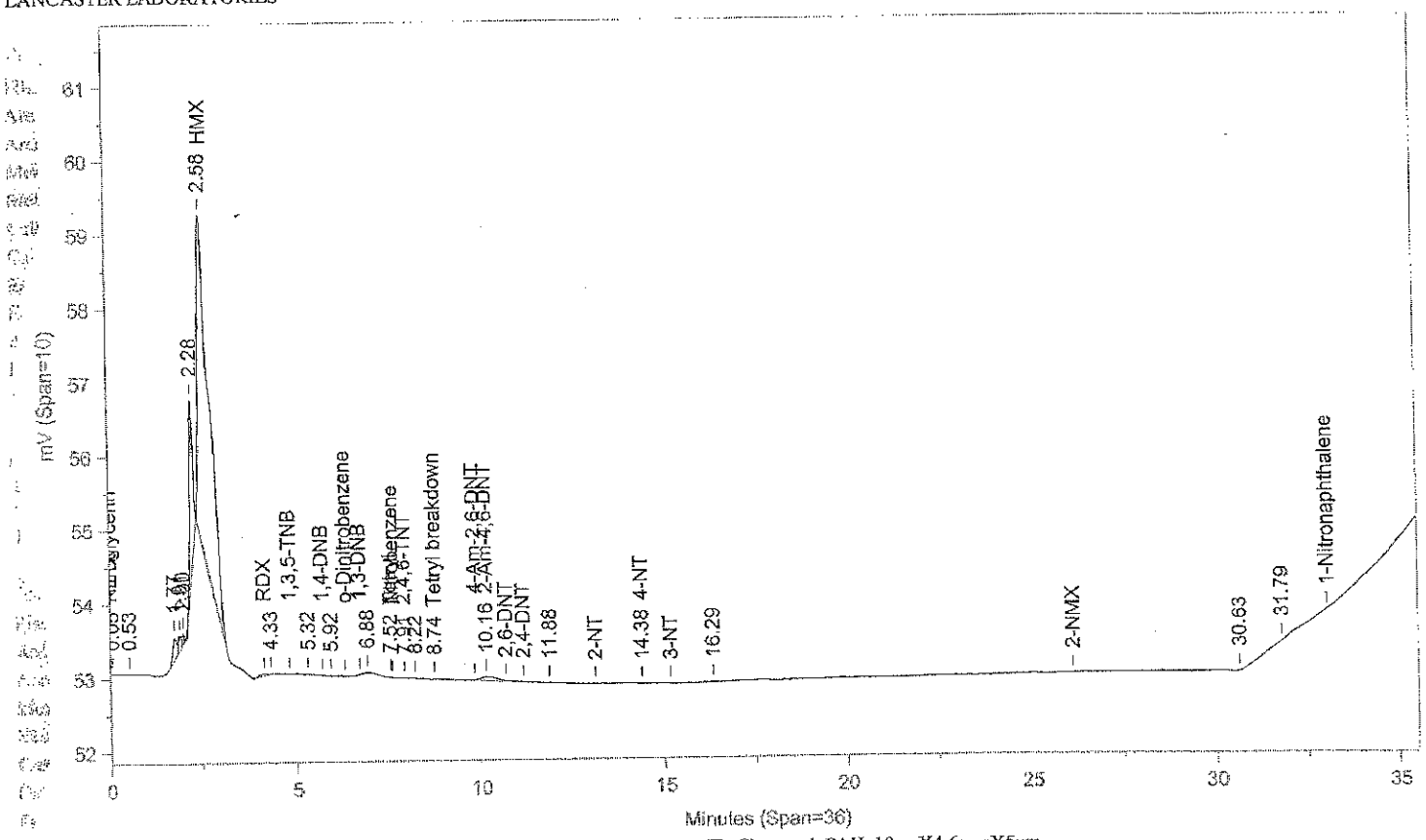
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.754	80828	203.468	HMX
.	0	.	2,4-DAm-6-NT	2.945	211445	87.691	2,4-DAm-6-NT
7.517	50	.146	Tetryl	.	0	.	Tetryl
7.91	9	.041	2,4,6-TNT	.	0	.	2,4,6-TNT
8.744	267	.774	Tetryl breakdown	.	0	.	Tetryl breakdown
10.16	1933	8.826	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.383	184	1.966	4-NT	.	0	.	4-NT
.	0	.	PETN	16.246	929	8.587	PETN
.	0	.	2-NMX	26.456	16280	33.329	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.18A
Area File: C:\CPWIN\DATA1\3E12310B.18A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 10:34:54 AM
File Reported On: 11/13/2013 at 10:35:05 AM

Not Used
See Reintegration

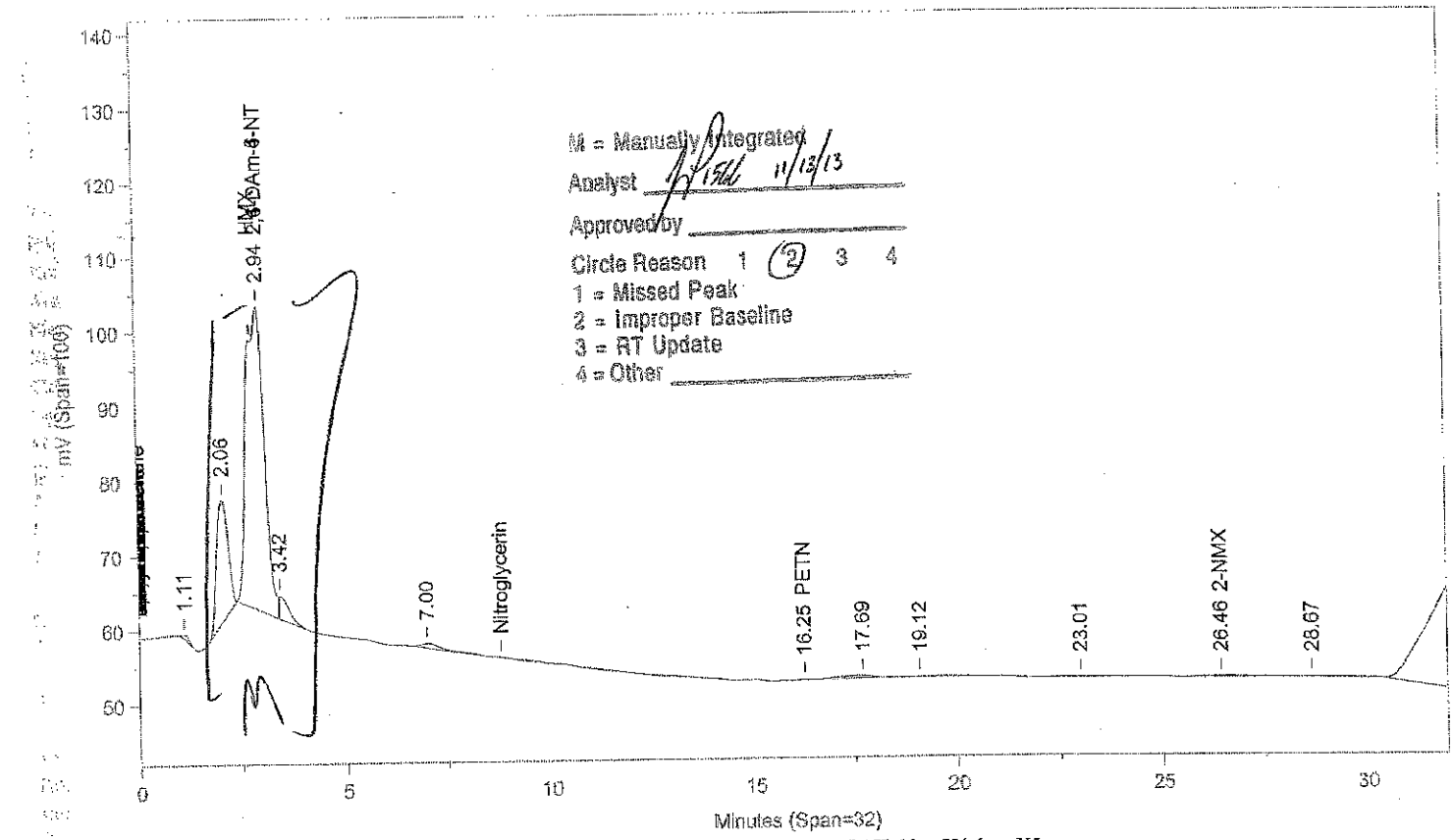
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.18R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.18R



M = Manually Integrated
Analyst 11/13/13
Approved by
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 9:54:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

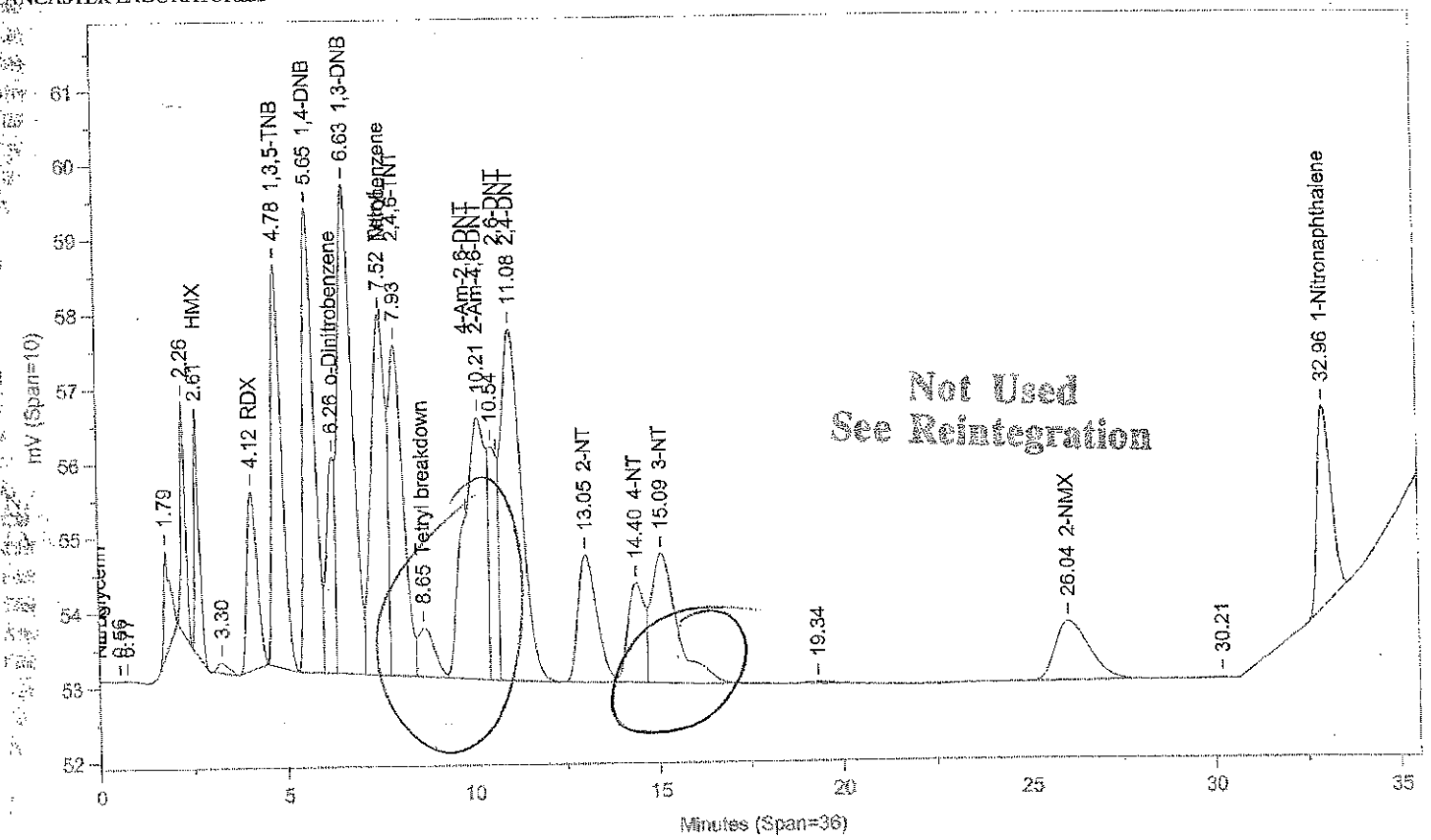
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.945	1240079	514.29	2,4-DAm-6-NT
7.517	50	.146	Tetryl	.	0	.	Tetryl
7.91	9	.041	2,4,6-TNT	.	0	.	2,4,6-TNT
8.744	267	.774	Tetryl breakdown	.	0	.	Tetryl breakdown
10.16	1933	8.826	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.383	184	1.966	4-NT	.	0	.	4-NT
.	0	.	PETN	16.246	929	8.587	PETN
.	0	.	2-NMX	26.456	16280	33.329	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:48:50 PM
File Reported On: 11/13/2013 at 1:48:49 PM

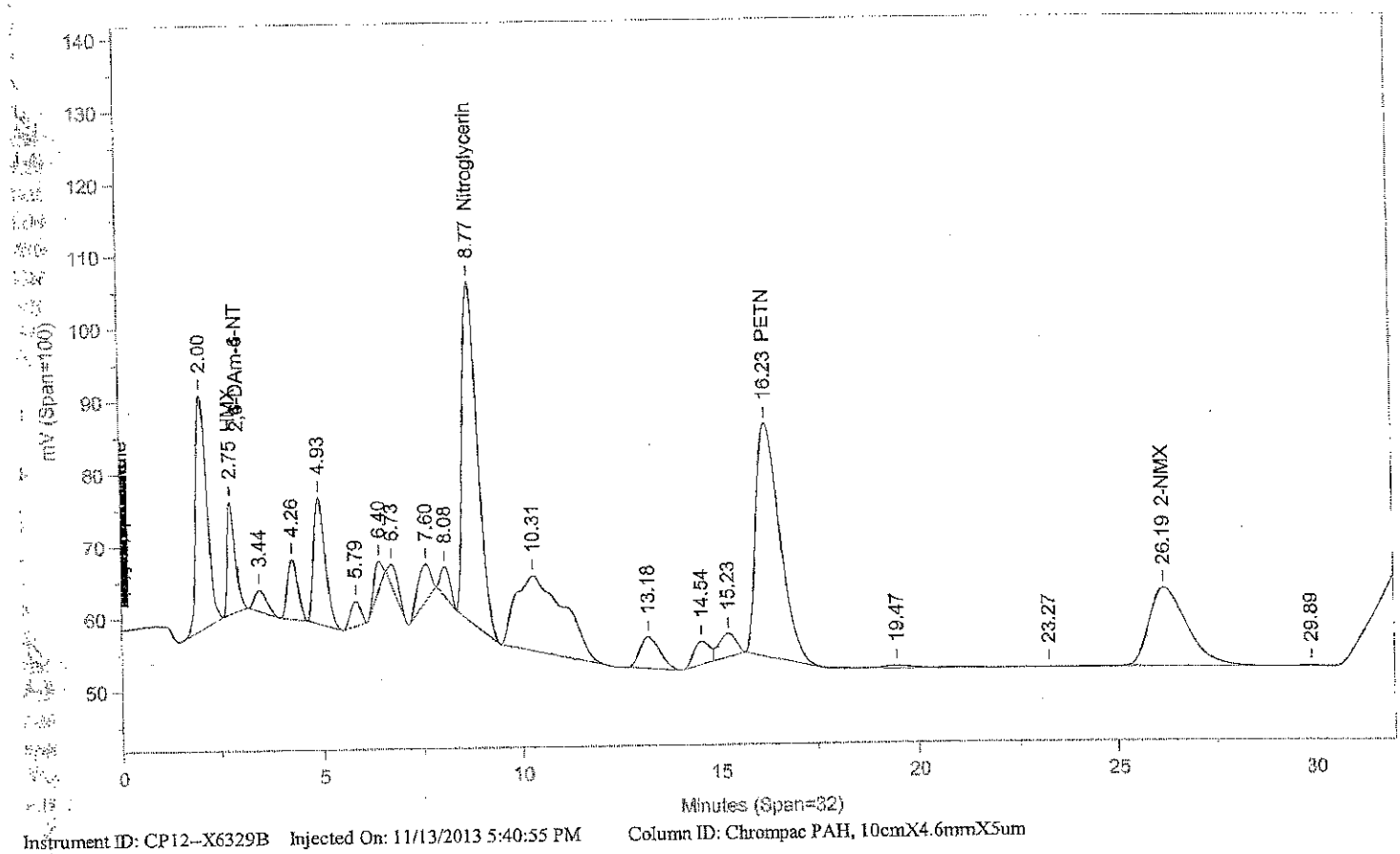
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.29R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.29R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.752	212356	506.211	HMX
4.116	43864	488.096	RDX	.	0	.	RDX
4.785	99256	470.215	1,3,5-TNB	.	0	.	1,3,5-TNB
5.651	125906	494.187	1,4-DNB	.	0	.	1,4-DNB
6.256	43436	421.558	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.628	171127	527.365	1,3-DNB	.	0	.	1,3-DNB
7.519	135171	391.048	Tetryl	.	0	.	Tetryl
7.933	117092	513.876	2,4,6-TNT	.	0	.	2,4,6-TNT
8.65	19681	56.937	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.766	1241157	9711.327	Nitroglycerin
10.206	150228	685.92	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	174960	528.955	2,4-DNT	.	0	.	2,4-DNT
13.046	60299	455.809	2-NT	.	0	.	2-NT
14.397	42044	448.093	4-NT	.	0	.	4-NT
15.085	84259	622.275	3-NT	.	0	.	3-NT
.	0	.	PETN	16.227	1359254	9925.426	PETN
26.039	51875	1521.817	2-NMX	26.191	721434	1476.929	2-NMX
32.96	70955	540.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.29A
Area File: C:\CPWIN\DATA1\3E12310B.29A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 6:21:32 PM
File Reported On: 11/13/2013 at 6:21:43 PM

Not Used
See Reintegration

NITR31324L OQNITR3OQ CCAL 1331599999

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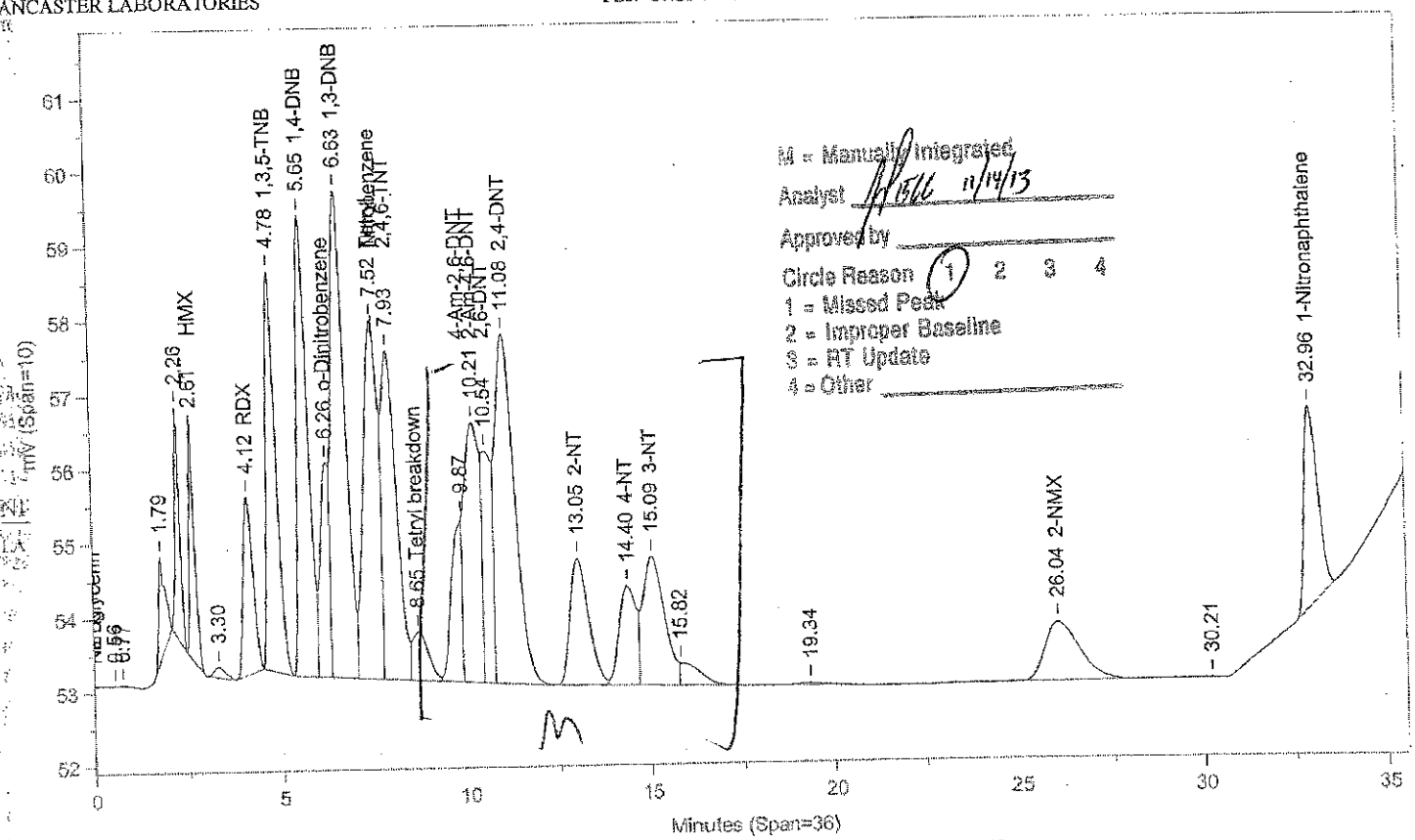
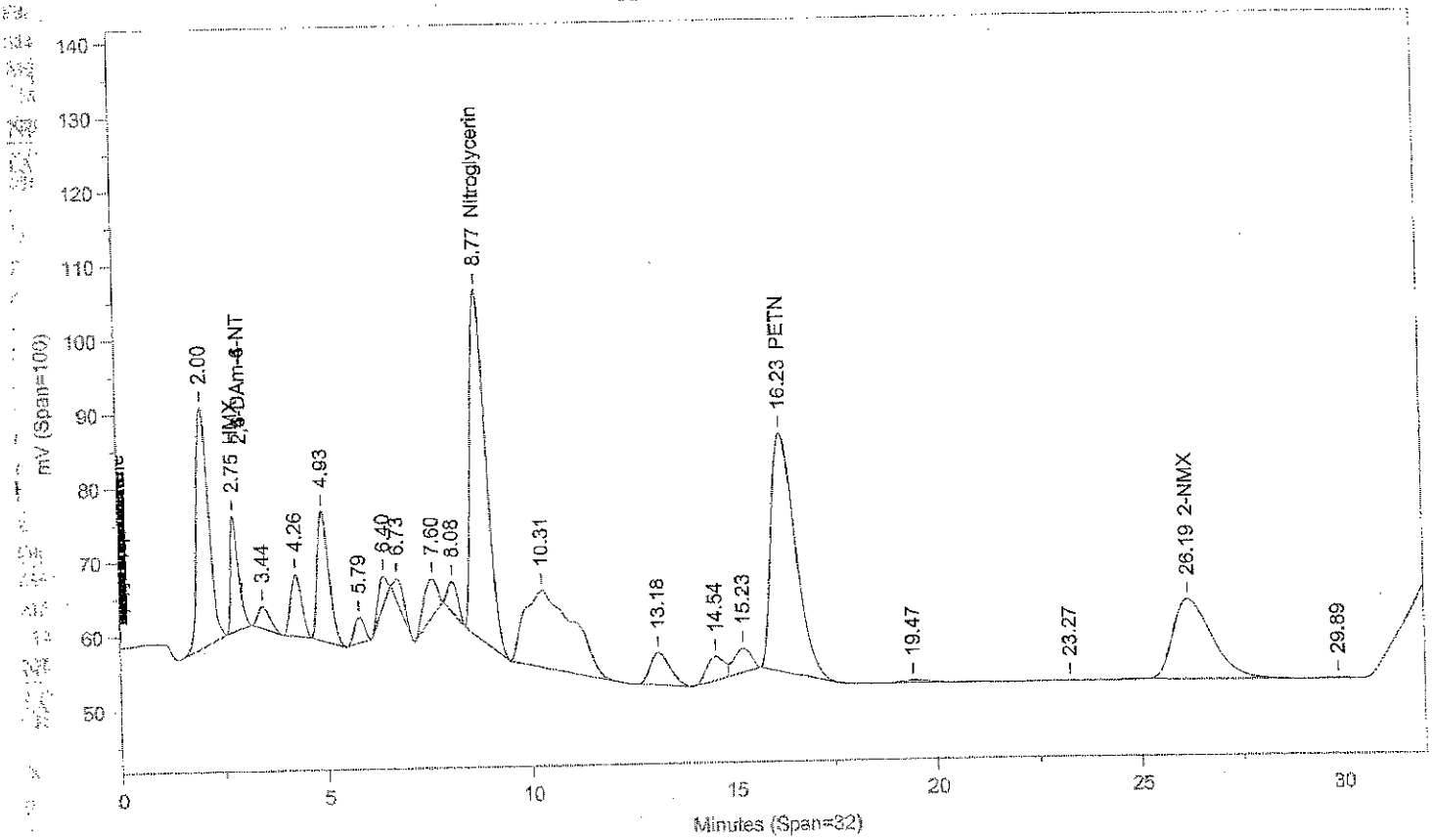
File: C:\CPWIN\DATA1\3E12310.29R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.29R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 5:40:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.752	212356	506.211	HMX
4.116	43864	488.096	RDX	.	0	.	RDX
4.785	99256	470.215	1,3,5-TNB	.	0	.	1,3,5-TNB
5.651	125906	494.187	1,4-DNB	.	0	.	1,4-DNB
6.256	47243	458.502	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.628	167320	515.634	1,3-DNB	.	0	.	1,3-DNB
7.519	135171	391.048	Tetryl	.	0	.	Tetryl
7.933	117092	513.876	2,4,6-TNT	.	0	.	2,4,6-TNT
8.65	19681	56.937	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.766	1241157	9711.327	Nitroglycerin
9.867	41131	438.399	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.206	104964	479.253	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.542	57337	471.619	2,6-DNT	.	0	.	2,6-DNT
11.084	172973	522.947	2,4-DNT	.	0	.	2,4-DNT
13.046	60299	455.809	2-NT	.	0	.	2-NT
14.397	42044	448.093	4-NT	.	0	.	4-NT
15.085	73237	540.875	3-NT	.	0	.	3-NT
.	0	.	PETN	16.227	1359254	9925.426	PETN
26.039	51875	1521.817	2-NMX	26.191	721434	1476.929	2-NMX
32.96	70955	540.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:04:48 AM
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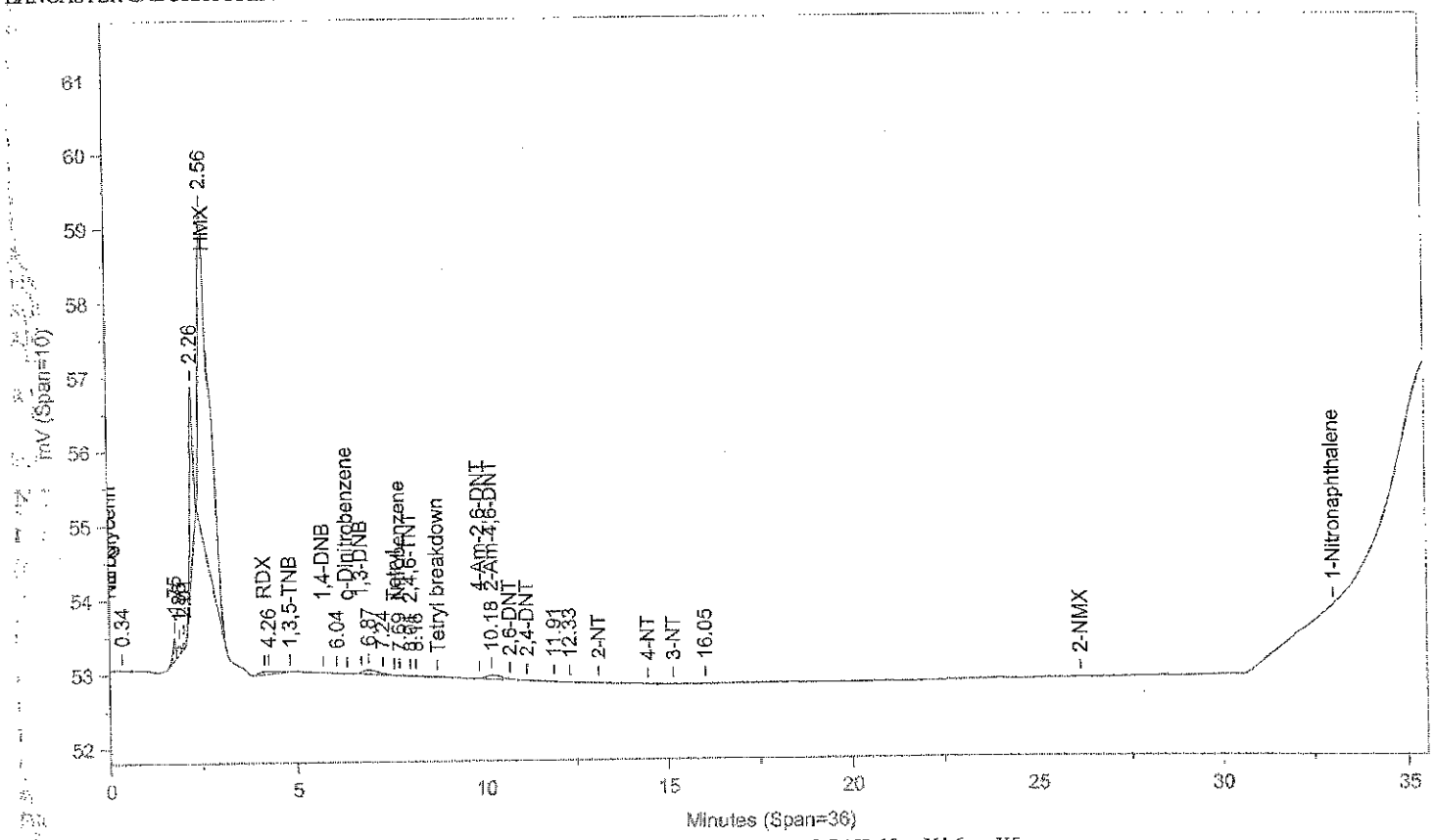
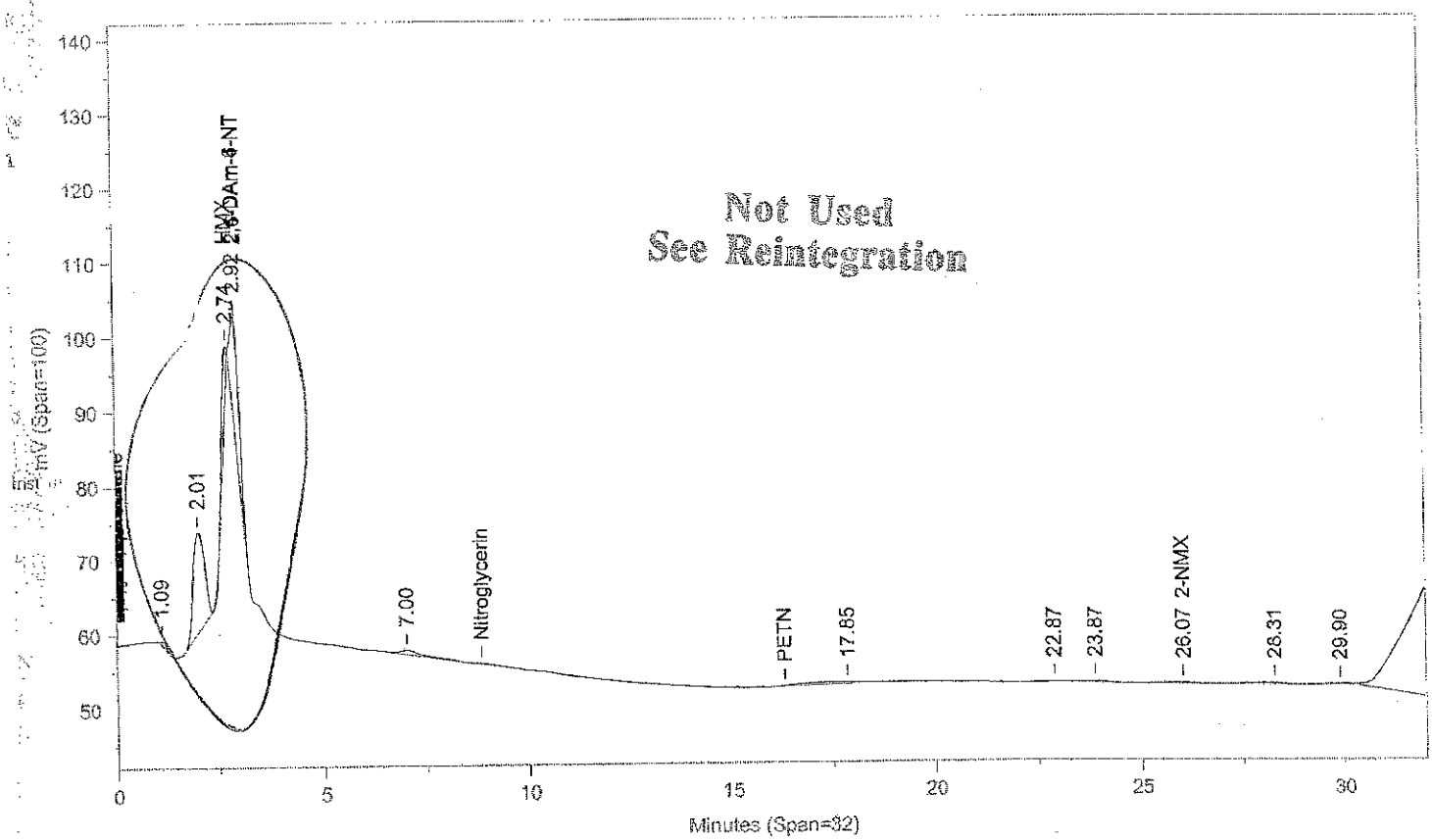
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.30R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.30R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

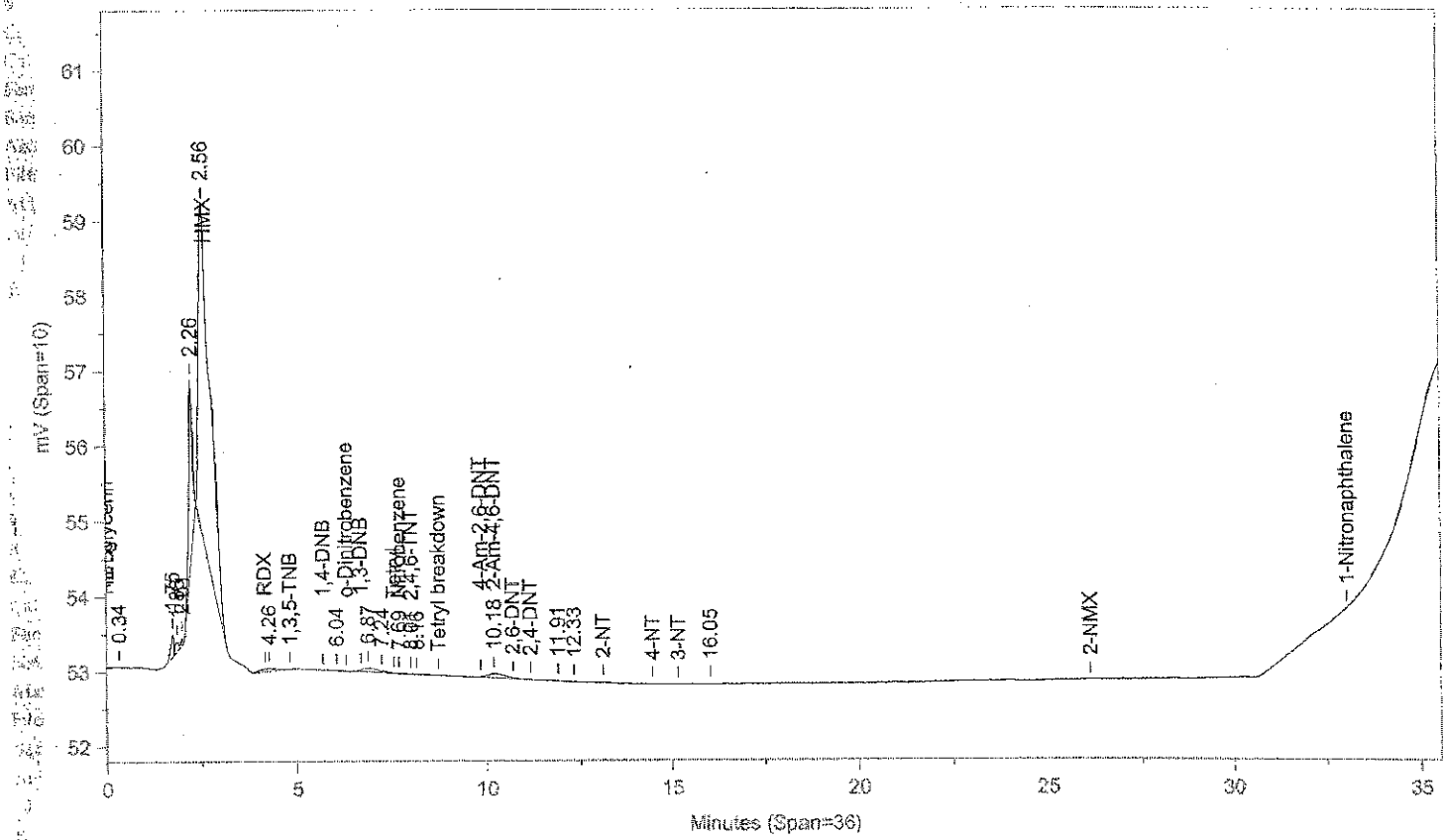
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.739	79998	201.559	HMX
.	0	.	2,4-DAm-6-NT	2.924	203362	84.339	2,4-DAm-6-NT
7.695	47	.136	Nitrobenzene	.	0	.	Nitrobenzene
8.005	47	.205	2,4,6-TNT	.	0	.	2,4,6-TNT
10.183	2011	9.18	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
D.	0	.	2-NMX	26.072	7480	15.313	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.30A
Area File: C:\CPWIN\DATA1\3E12310B.30A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 7:04:06 PM
File Reported On: 11/13/2013 at 7:04:19 PM

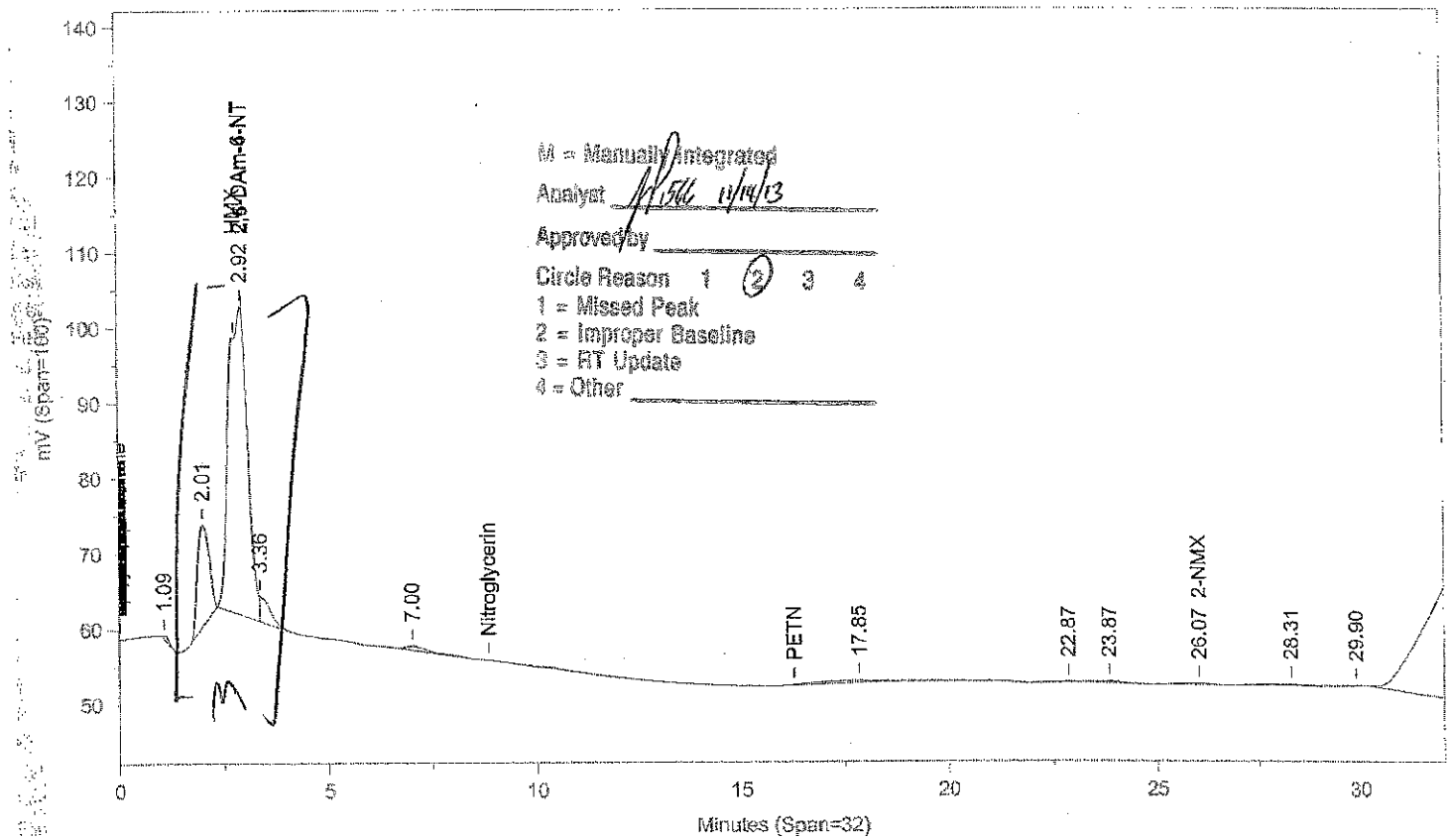
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.30R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.30R



M = Manually Integrated
Analyst 11/14/13
Approved by
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/13/2013 6:23:20 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

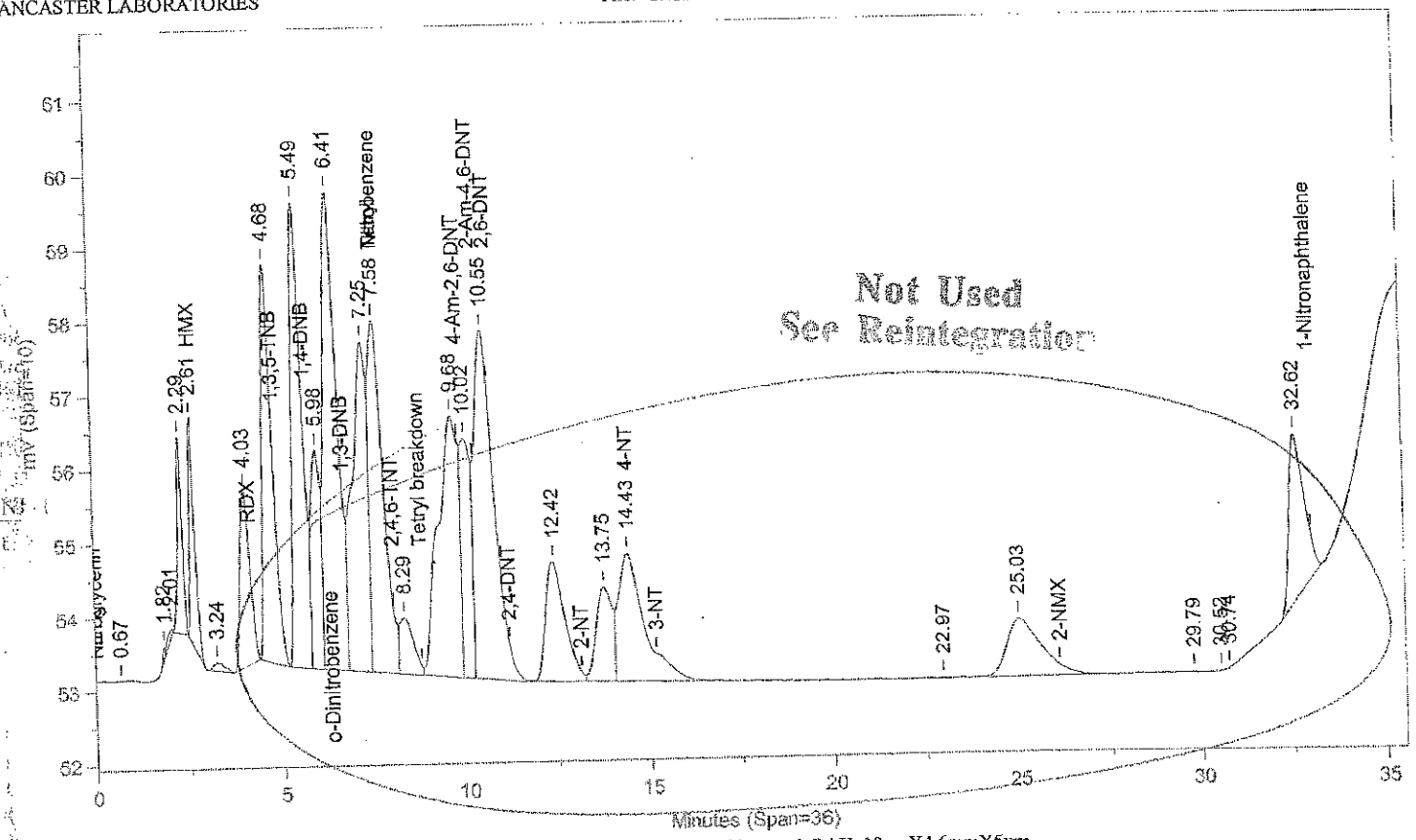
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	2.924	1258578	521.962	2,4-DAm-6-NT
7.695	47	.136	Nitrobenzene		0	.	Nitrobenzene
8.005	47	.205	2,4,6-TNT		0	.	2,4,6-TNT
10.183	2011	9.18	2-Am-4,6-DNT		0	.	2-Am-4,6-DNT
	0	.	2-NMX	26.072	7480	15.313	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:07:48 AM
File Reported On: 11/14/2013 at 11:07:46 AM

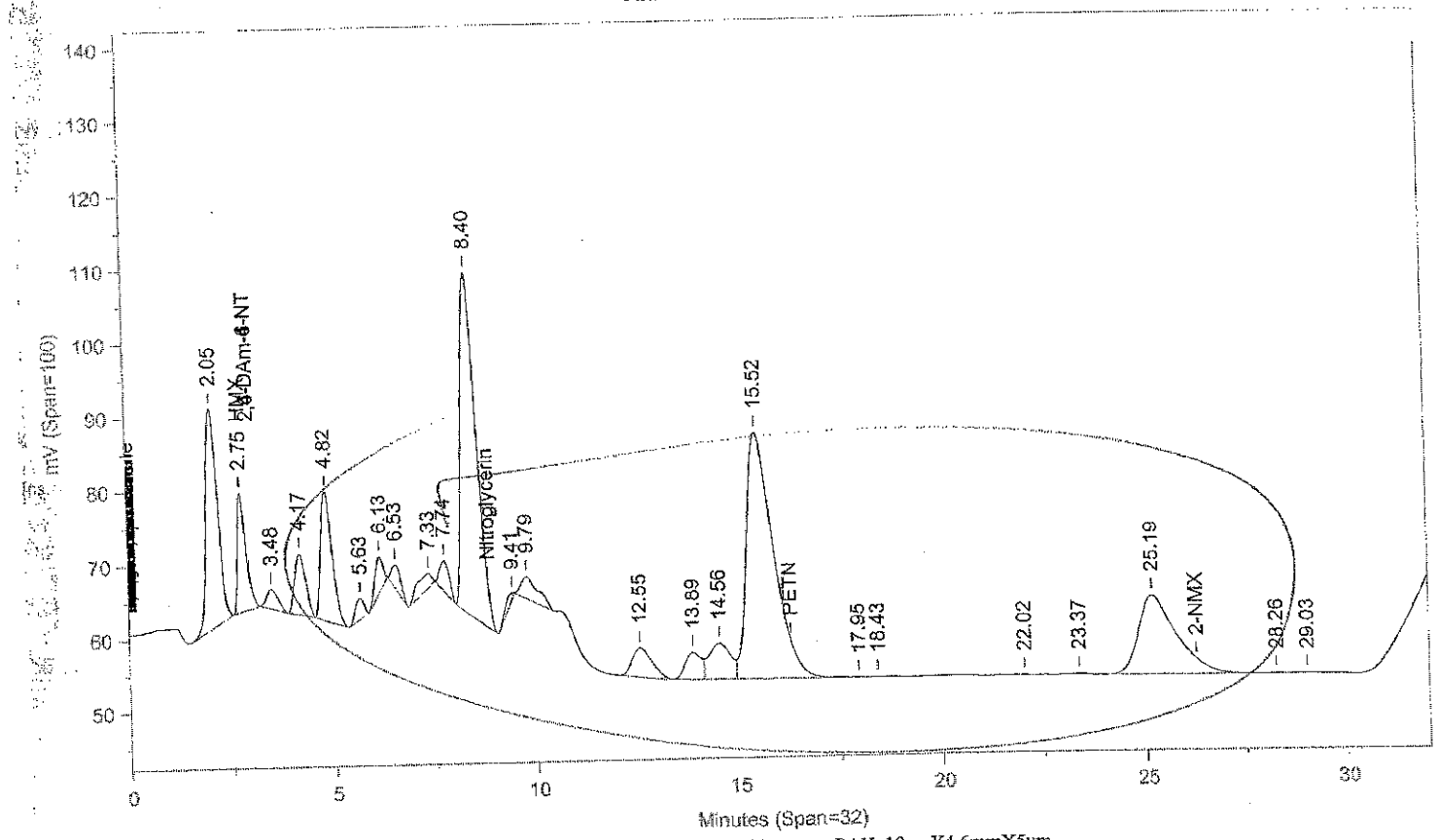
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.41R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 2:10:06 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.41R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 2:10:06 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

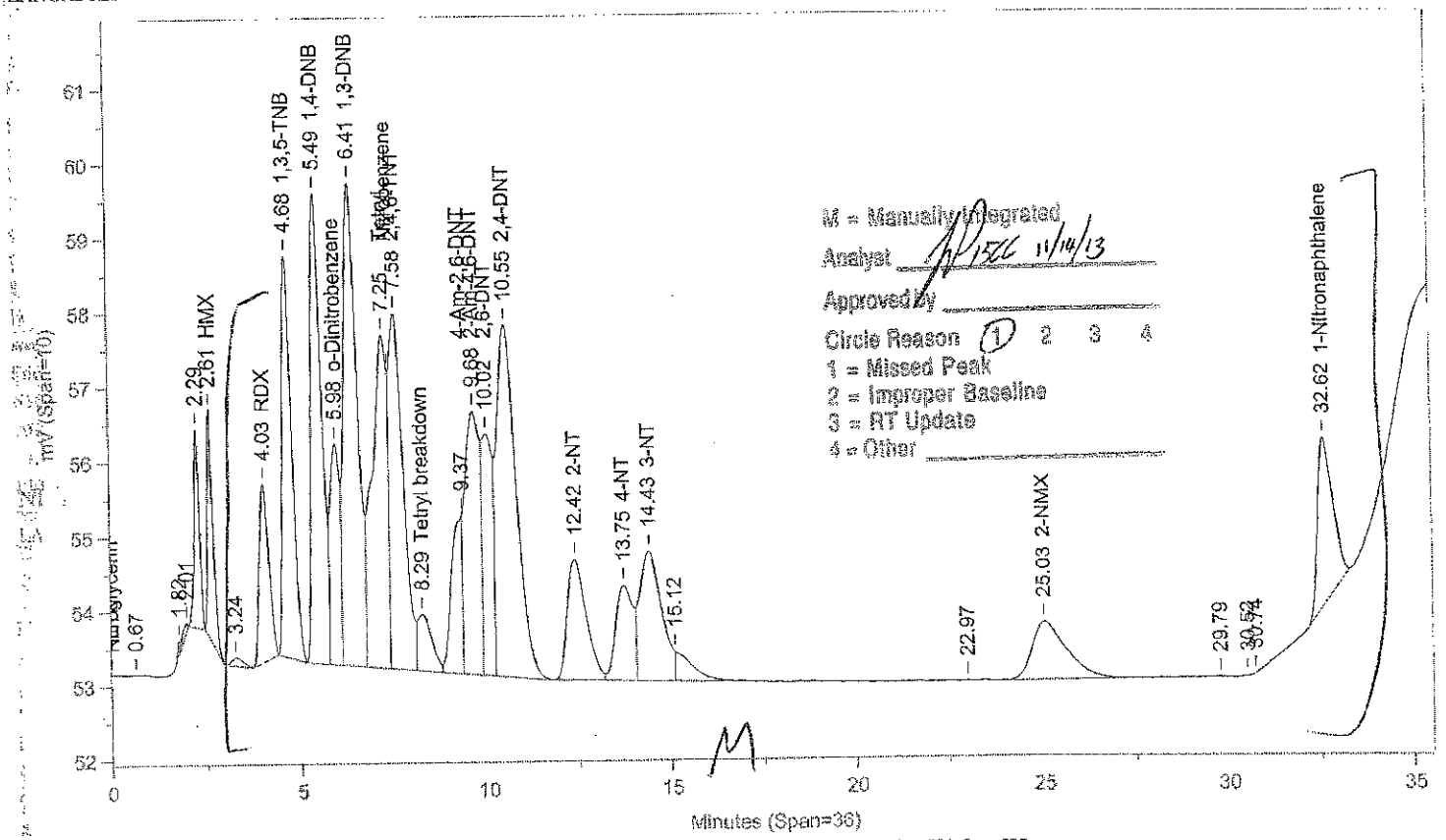
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		HMX	2.749	227230	540.447	HMX
7.582	125186	363.613	Nitrobenzene		0		Nitrobenzene
14.426	86495	921.849	4-NT		0		4-NT

Files:
Area File: C:\CPWIN\DATA1\3E12310.41A
Area File: C:\CPWIN\DATA1\3E12310B.41A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 2:50:54 AM
File Reported On: 11/14/2013 at 2:51:10 AM

Not Used
See Reintegration

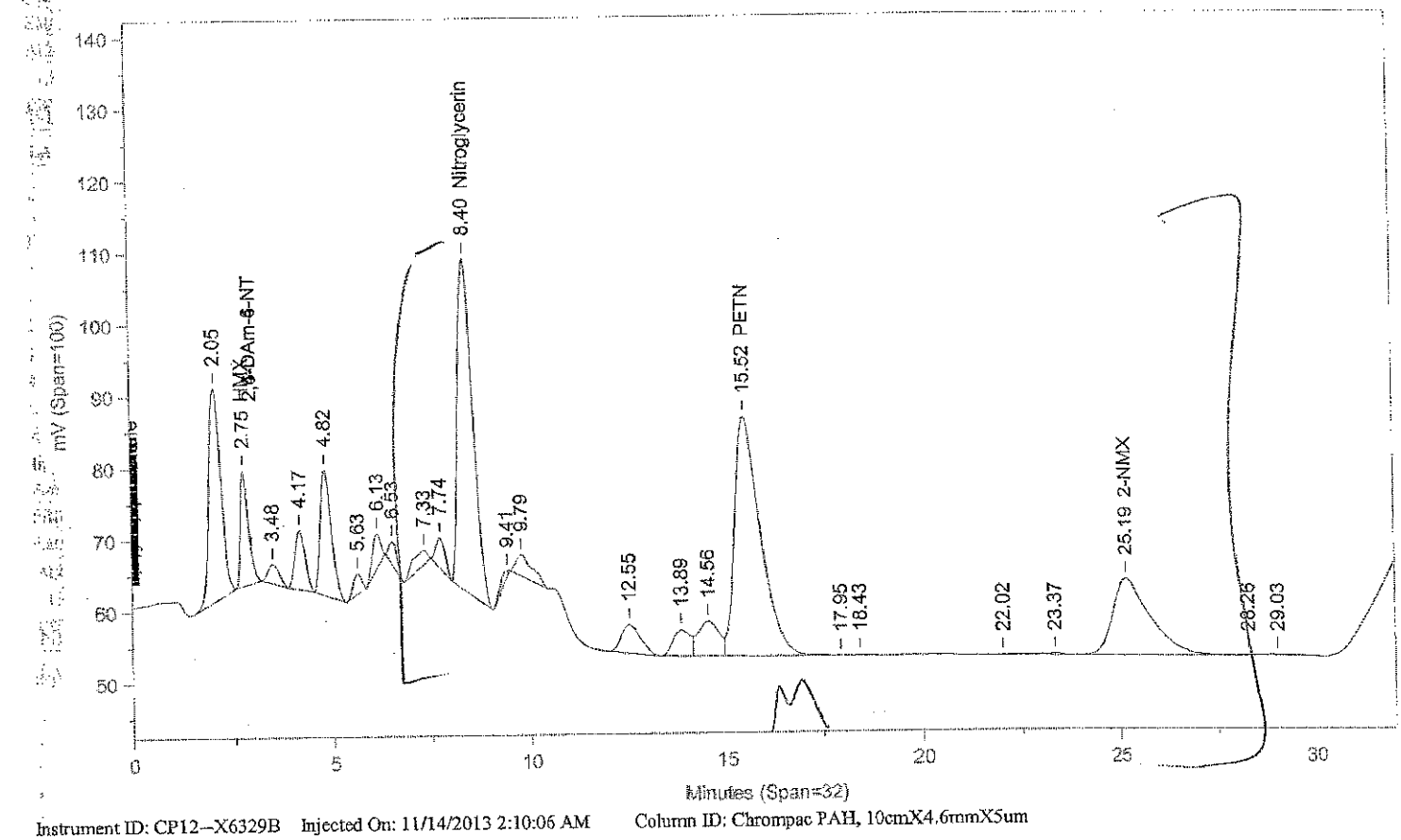
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.41R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 2:10:06 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.41R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 2:10:06 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

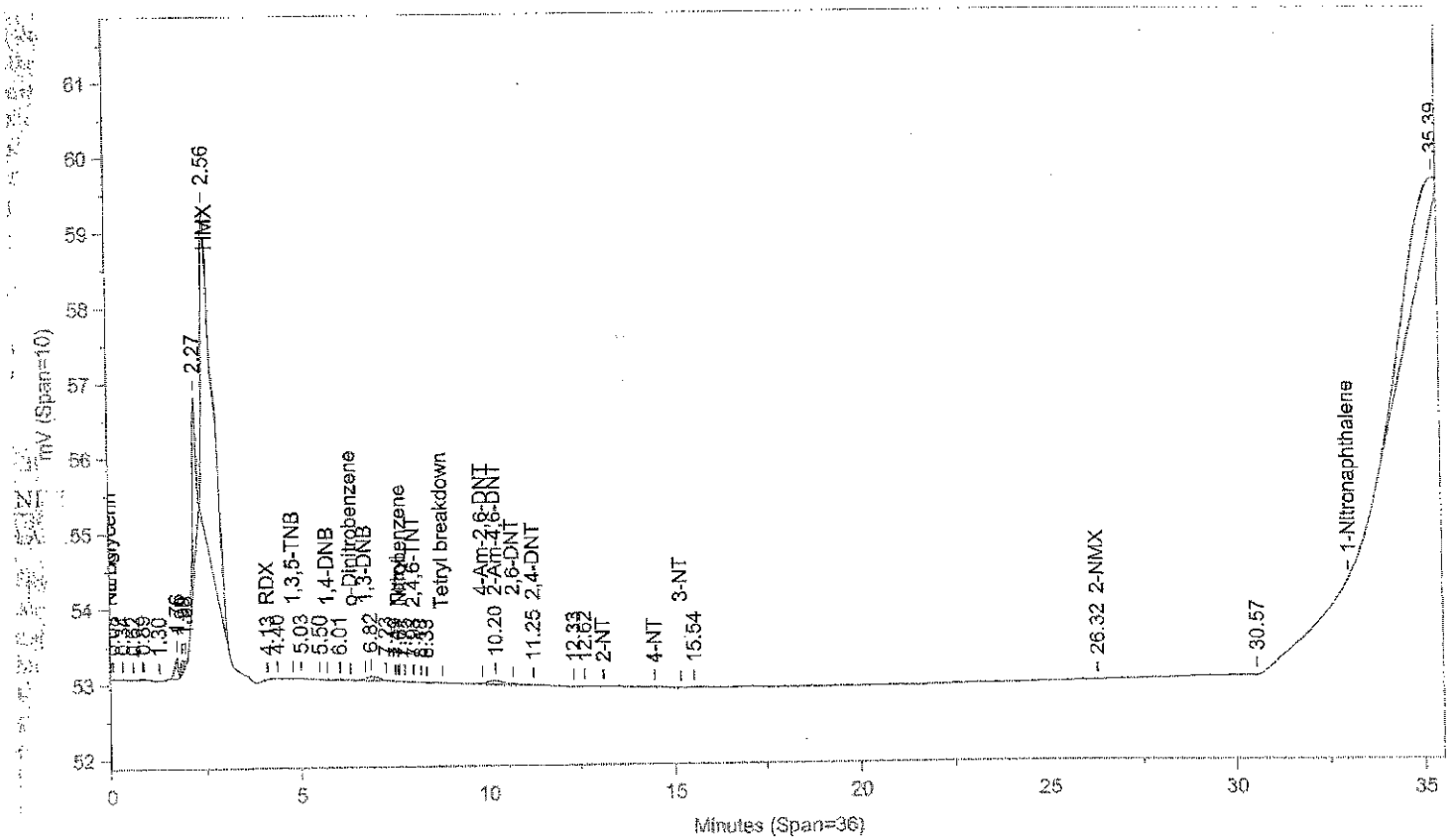
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.749	227230	540.447	HMX
4.031	43111	479.497	RDX	.	0	.	RDX
4.678	98880	468.43	1,3,5-TNB	.	0	.	1,3,5-TNB
5.486	125419	492.276	1,4-DNB	.	0	.	1,4-DNB
5.982	52079	505.445	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.41	161338	497.198	1,3-DNB	.	0	.	1,3-DNB
7.248	129219	373.828	Tetryl	.	0	.	Tetryl
7.582	125186	549.398	2,4,6-TNT	.	0	.	2,4,6-TNT
8.289	19960	57.744	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.396	1204770	9426.623	Nitroglycerin
9.367	41834	445.892	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.683	98025	447.568	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.024	62769	516.299	2,6-DNT	.	0	.	2,6-DNT
10.554	171636	518.905	2,4-DNT	.	0	.	2,4-DNT
12.424	59086	446.64	2-NT	.	0	.	2-NT
13.751	41364	440.852	4-NT	.	0	.	4-NT
14.426	71785	530.149	3-NT	.	0	.	3-NT
.	0	.	PETN	15.518	1523848	11127.1	PETN
25.028	51806	1519.8	2-NMX	25.19	722376	1478.858	2-NMX
32.619	65756	500.533	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

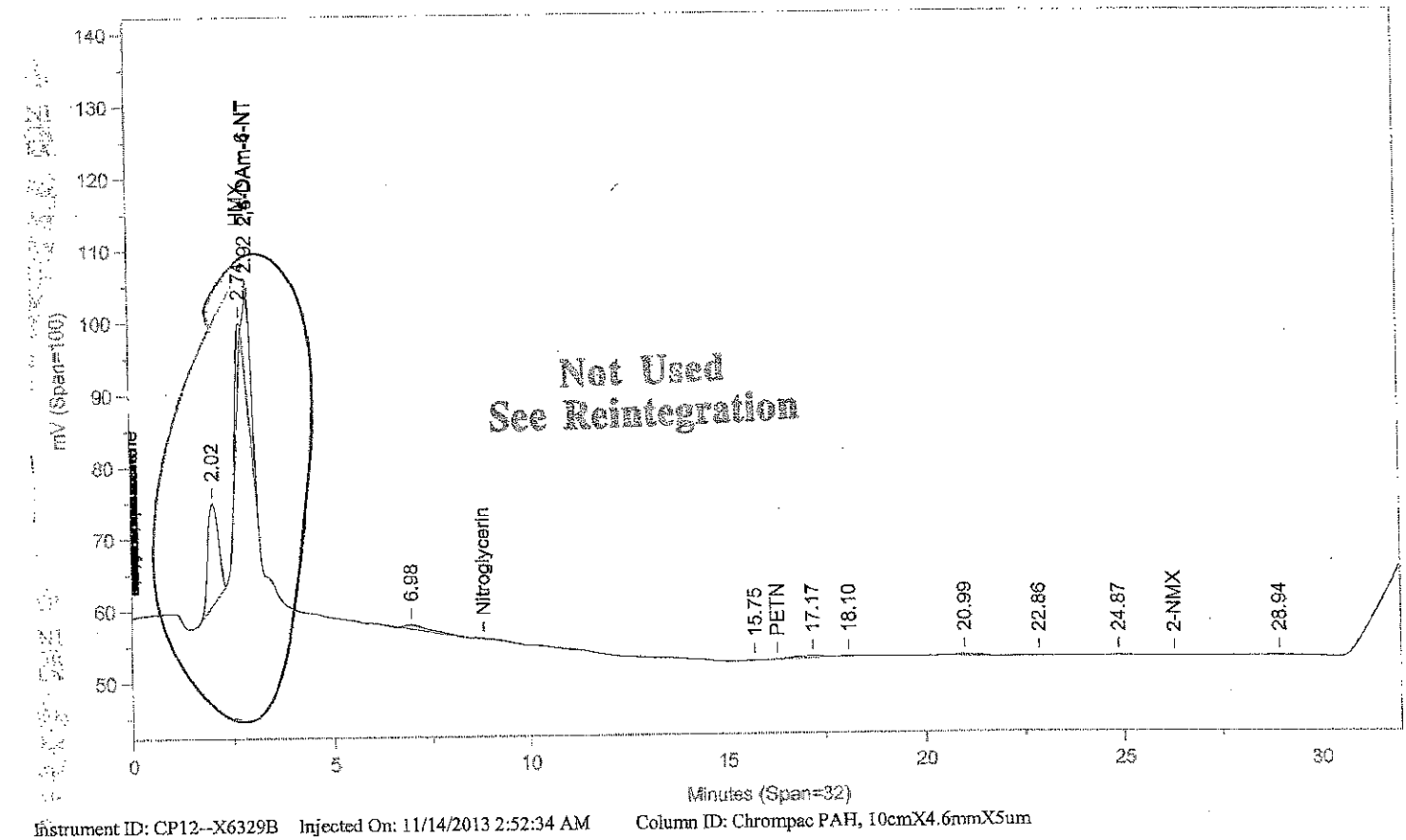
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:30:02 AM
File Reported On: 11/14/2013 at 11:30:01 AM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.42R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 2:52:34 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.42R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 2:52:34 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

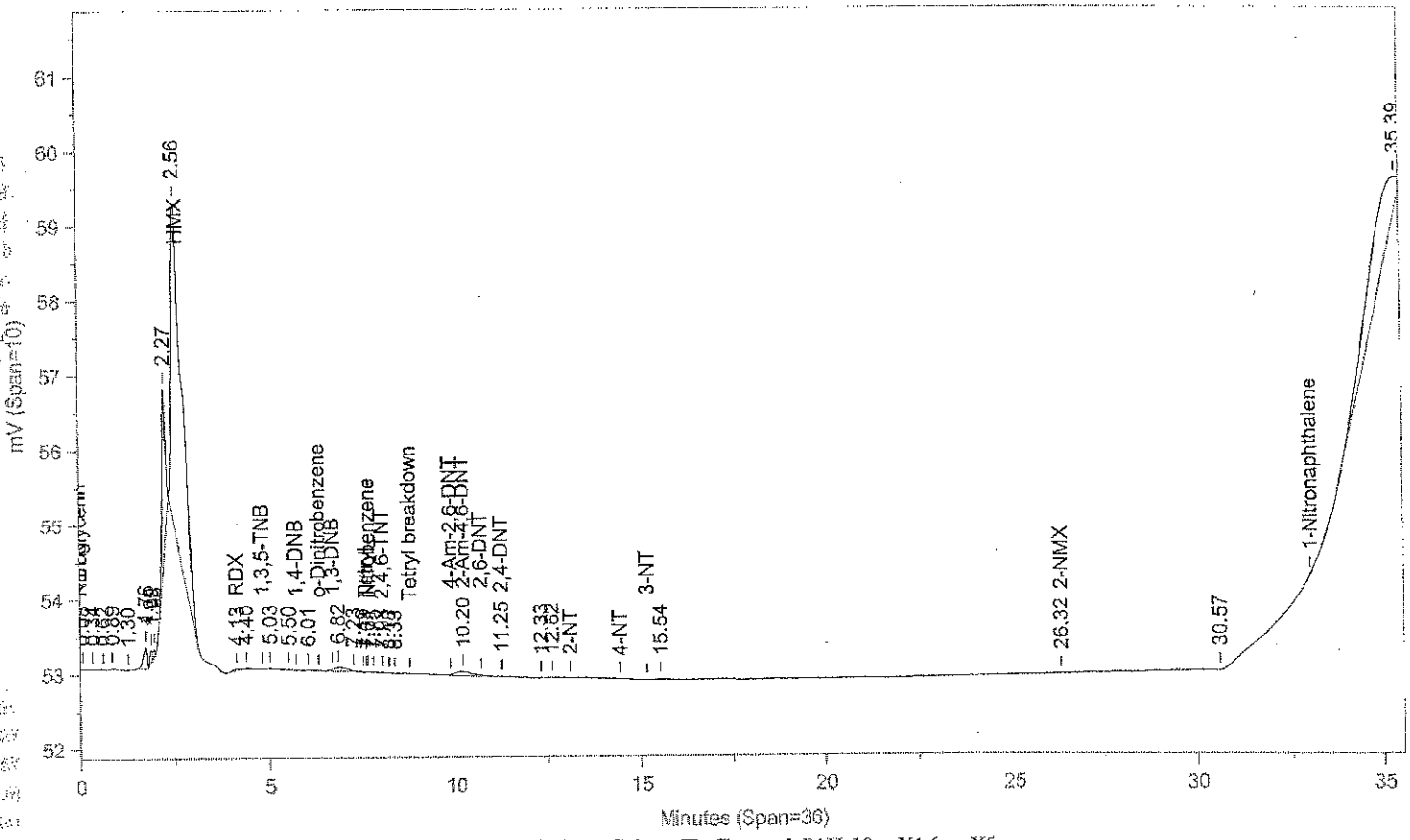
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	80911	203.659	HMX
.	0	.	2,4-DAm-6-NT	2.92	195830	81.215	2,4-DAm-6-NT
4.133	164	-10.634	RDX	.	0	.	RDX
7.61	36	.105	Nitrobenzene	.	0	.	Nitrobenzene
7.977	41	.18	2,4,6-TNT	.	0	.	2,4,6-TNT
10.205	1920	8.768	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.251	59	.178	2,4-DNT	.	0	.	2,4-DNT
26.317	166	4.866	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\3E12310.42A
Area File: C:\CPWIN\DATA1\3E12310B.42A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 3:33:16 AM
File Reported On: 11/14/2013 at 3:33:29 AM

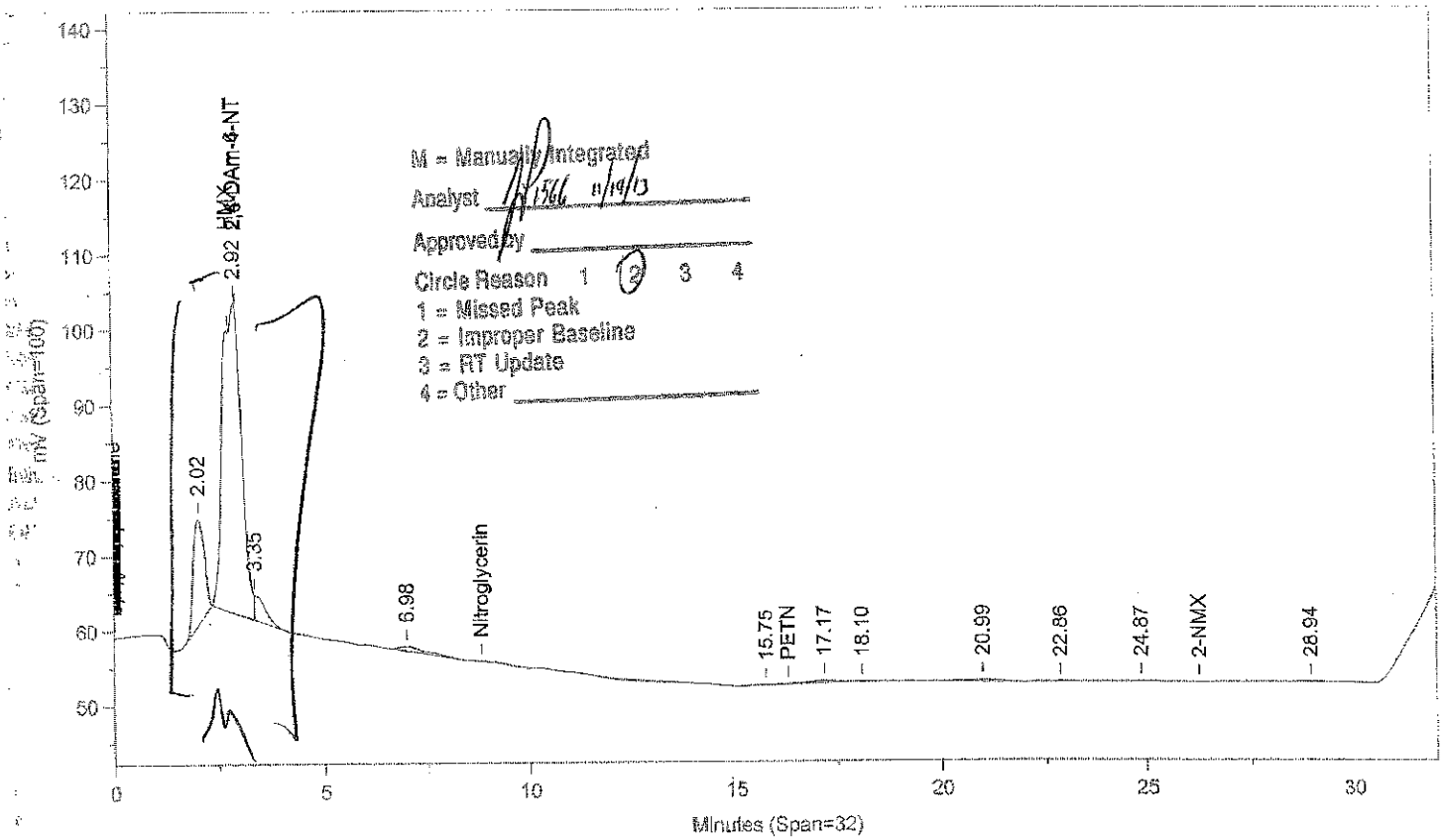
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.42R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 2:52:34 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.42R



M = Manually Integrated
Analyst 11/14/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/14/2013 2:52:34 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.92	1265567	524.861	2,4-DAm-6-NT
4.133	164	-10.634	RDX	.	0	.	RDX
7.61	36	.105	Nitrobenzene	.	0	.	Nitrobenzene
7.977	41	.18	2,4,6-TNT	.	0	.	2,4,6-TNT
10.205	1920	8.768	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.251	59	.178	2,4-DNT	.	0	.	2,4-DNT
16.317	166	4.866	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:32:18 AM
File Reported On: 11/14/2013 at 11:32:17 AM

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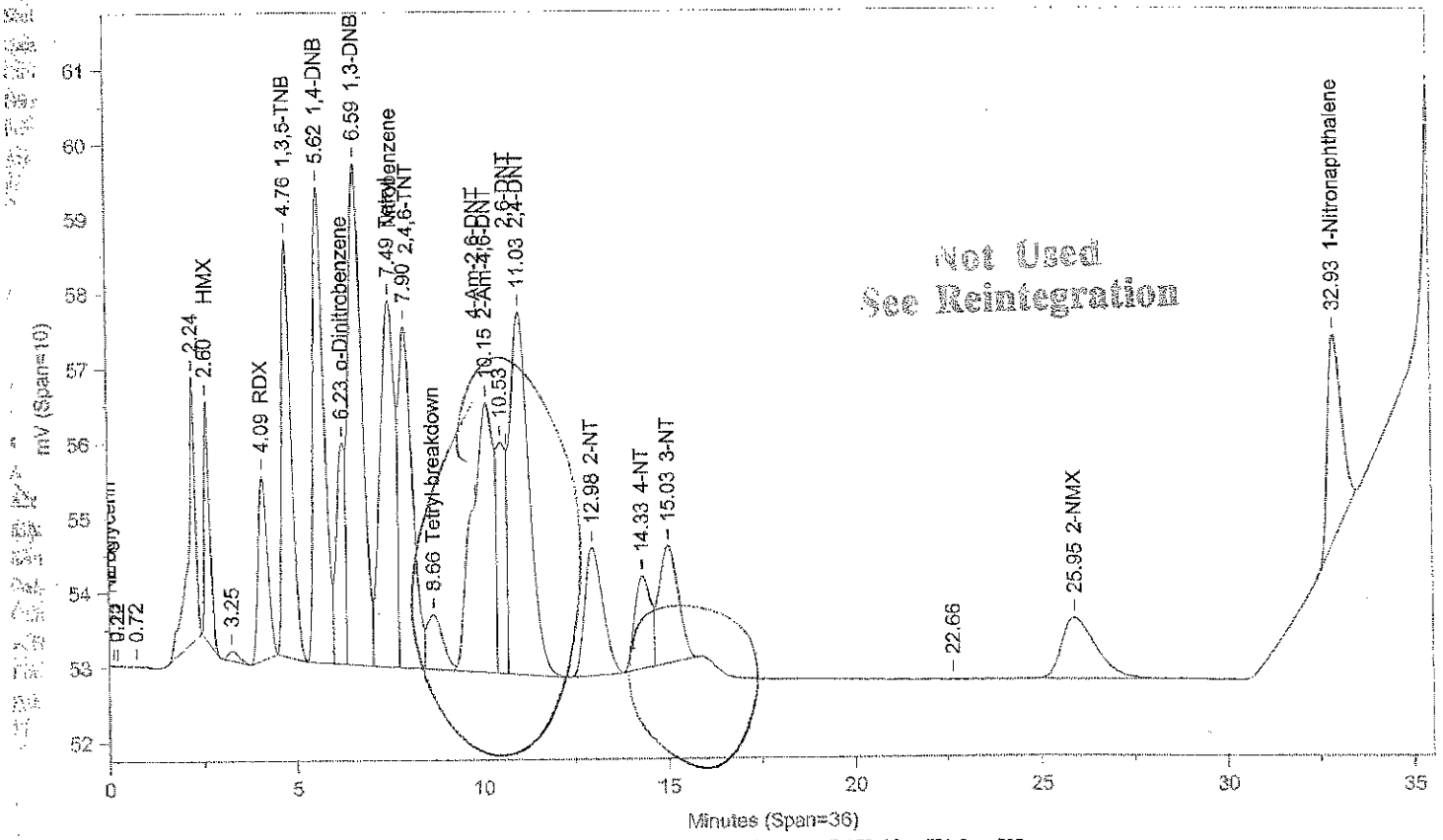
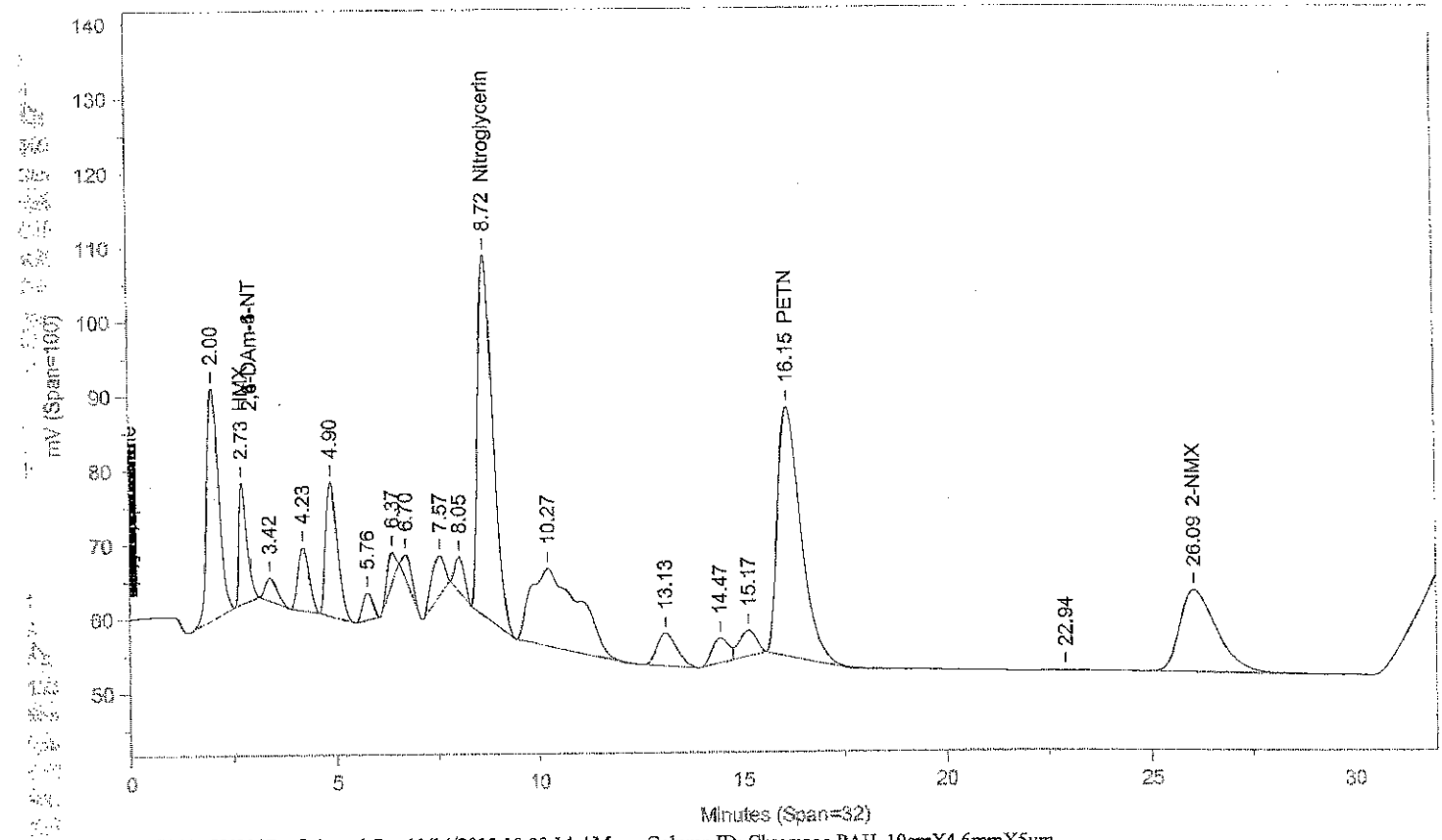
File: C:\CPWIN\DATA1\3E12310.53R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 10:39:14 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.53R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 10:39:14 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

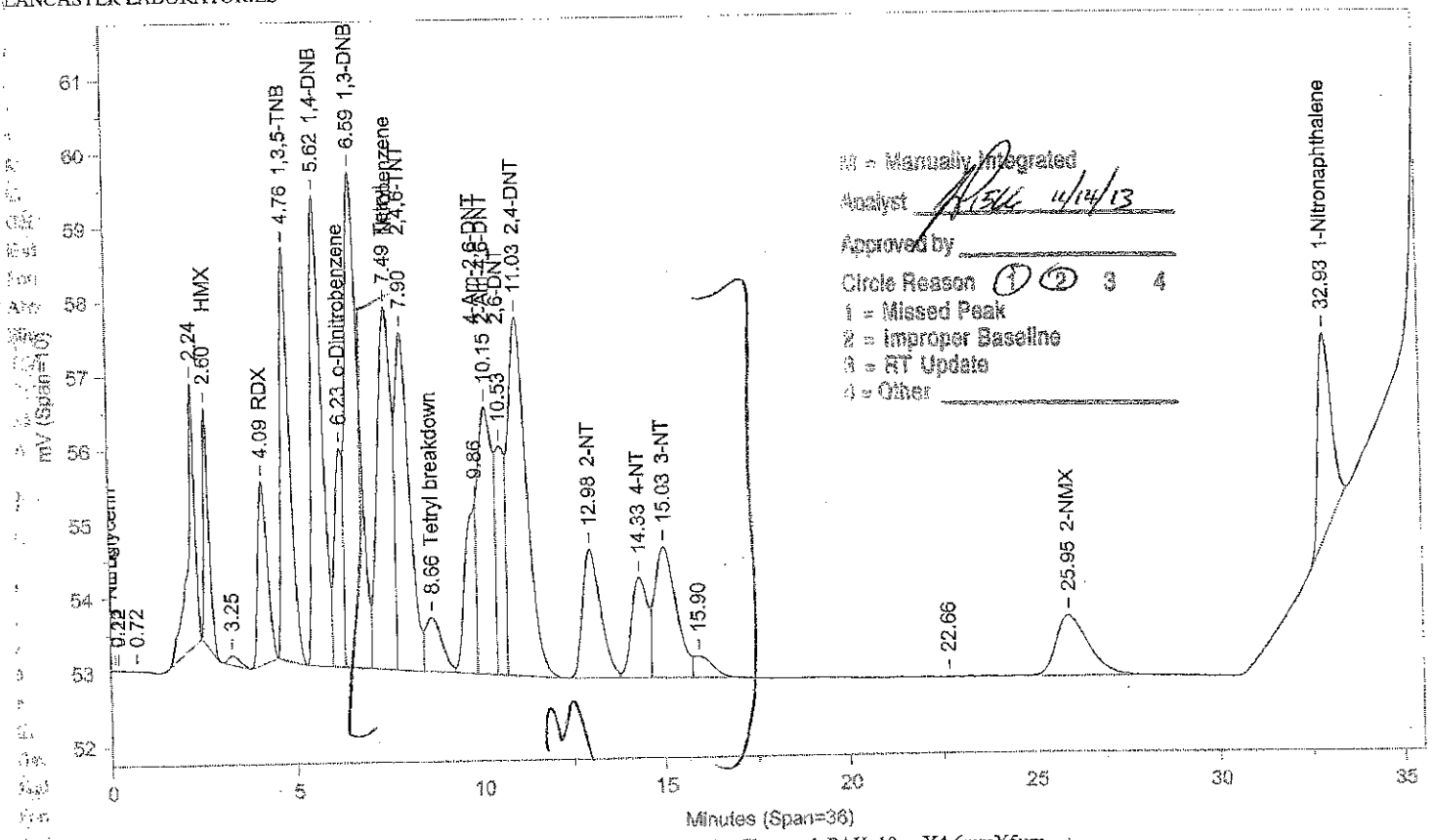
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.735	220563	525.101	HMX
4.094	44386	494.059	RDX	.	0	.	RDX
4.758	100316	475.234	1,3,5-TNB	.	0	.	1,3,5-TNB
5.621	125522	492.682	1,4-DNB	.	0	.	1,4-DNB
6.229	44894	435.704	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.595	169168	521.326	1,3-DNB	.	0	.	1,3-DNB
7.488	136019	393.501	Tetryl	.	0	.	Tetryl
8.66	21891	63.33	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.724	1254647	9816.875	Nitroglycerin
10.153	150367	686.555	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.035	174684	528.121	2,4-DNT	.	0	.	2,4-DNT
12.984	57095	431.59	2-NT	.	0	.	2-NT
14.334	36651	390.623	4-NT	.	0	.	4-NT
15.027	56984	420.843	3-NT	.	0	.	3-NT
.	0	.	PETN	16.148	1368967	9996.341	PETN
25.95	51703	1516.767	2-NMX	26.086	711921	1457.454	2-NMX
32.927	69480	528.881	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.53A
Area File: C:\CPWIN\DATA1\3E12310B.53A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:19:52 AM
File Reported On: 11/14/2013 at 11:20:01 AM

Not Used
See Reintegration

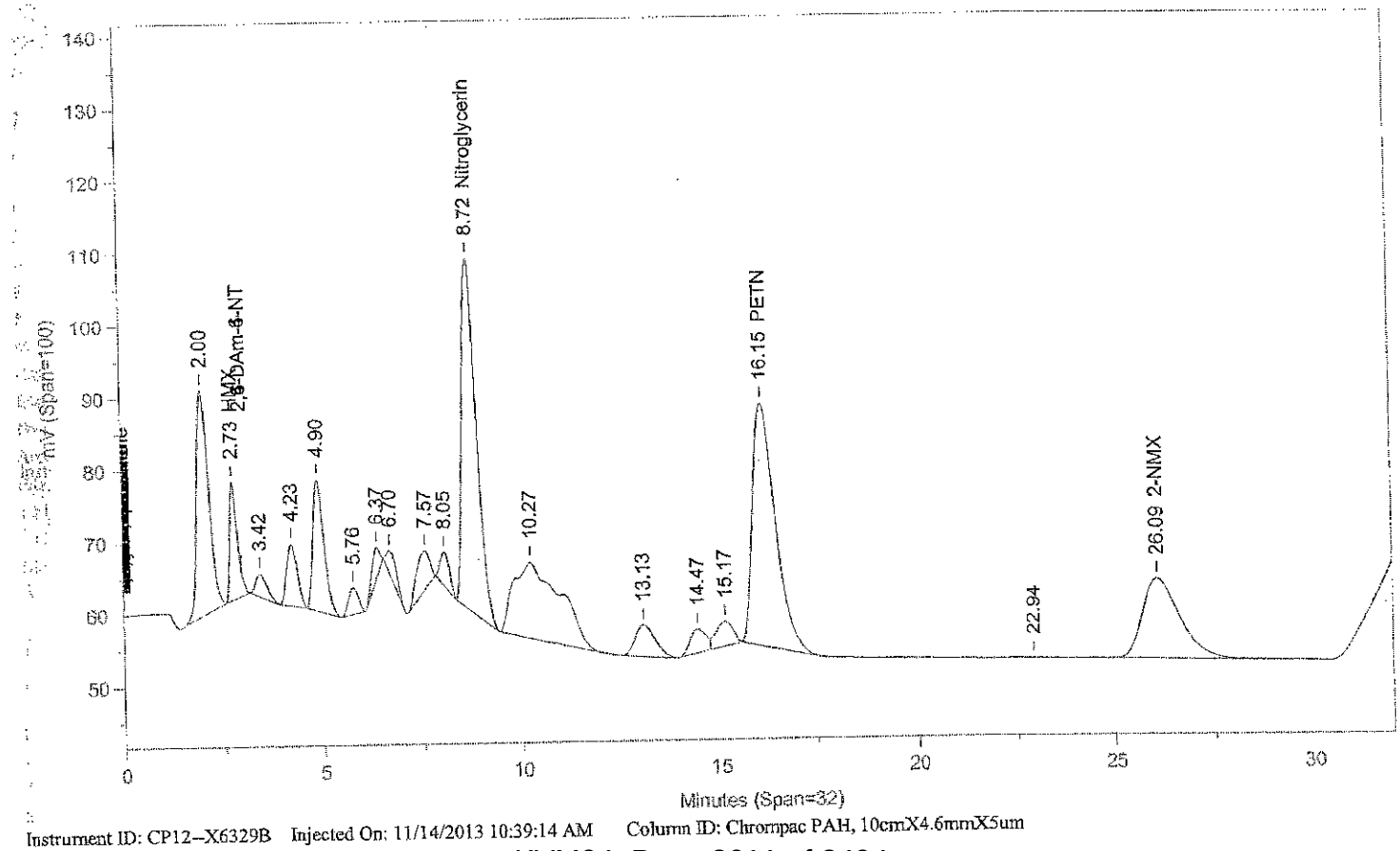
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3E12310.53R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 10:39:14 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.53R



Instrument ID: CP12--X6329B Injected On: 11/14/2013 10:39:14 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.735	220563	525.101	HMX
4.094	44386	494.059	RDX	.	0	.	RDX
4.758	100316	475.234	1,3,5-TNB	.	0	.	1,3,5-TNB
5.621	125517	492.661	1,4-DNB	.	0	.	1,4-DNB
6.229	44887	435.643	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.595	169146	521.26	1,3-DNB	.	0	.	1,3-DNB
7.488	135987	393.41	Tetryl	.	0	.	Tetryl
7.903	116443	511.027	2,4,6-TNT	.	0	.	2,4,6-TNT
8.66	21826	63.142	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.724	1254647	9816.875	Nitroglycerin
9.856	45997	490.262	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.153	104253	476.008	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.534	51781	425.919	2,6-DNT	.	0	.	2,6-DNT
11.035	174447	527.405	2,4-DNT	.	0	.	2,4-DNT
12.984	59470	449.543	2-NT	.	0	.	2-NT
14.334	43225	460.68	4-NT	.	0	.	4-NT
15.027	69802	515.508	3-NT	.	0	.	3-NT
.	0	.	PETN	16.148	1368967	9996.341	PETN
25.95	51703	1516.767	2-NMX	26.086	711921	1457.454	2-NMX
32.927	69480	528.881	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:43:24 AM
File Reported On: 11/14/2013 at 11:43:23 AM

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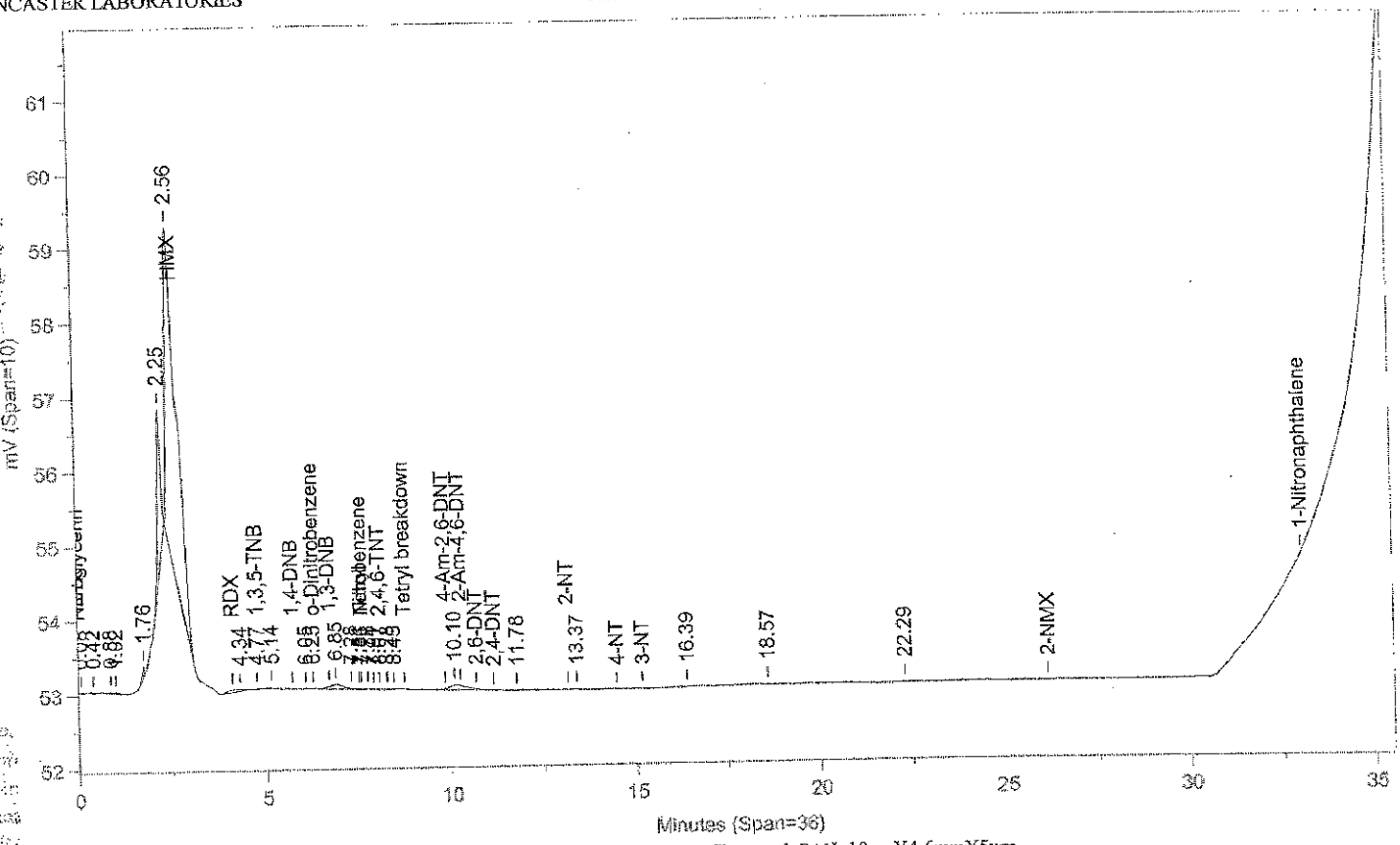
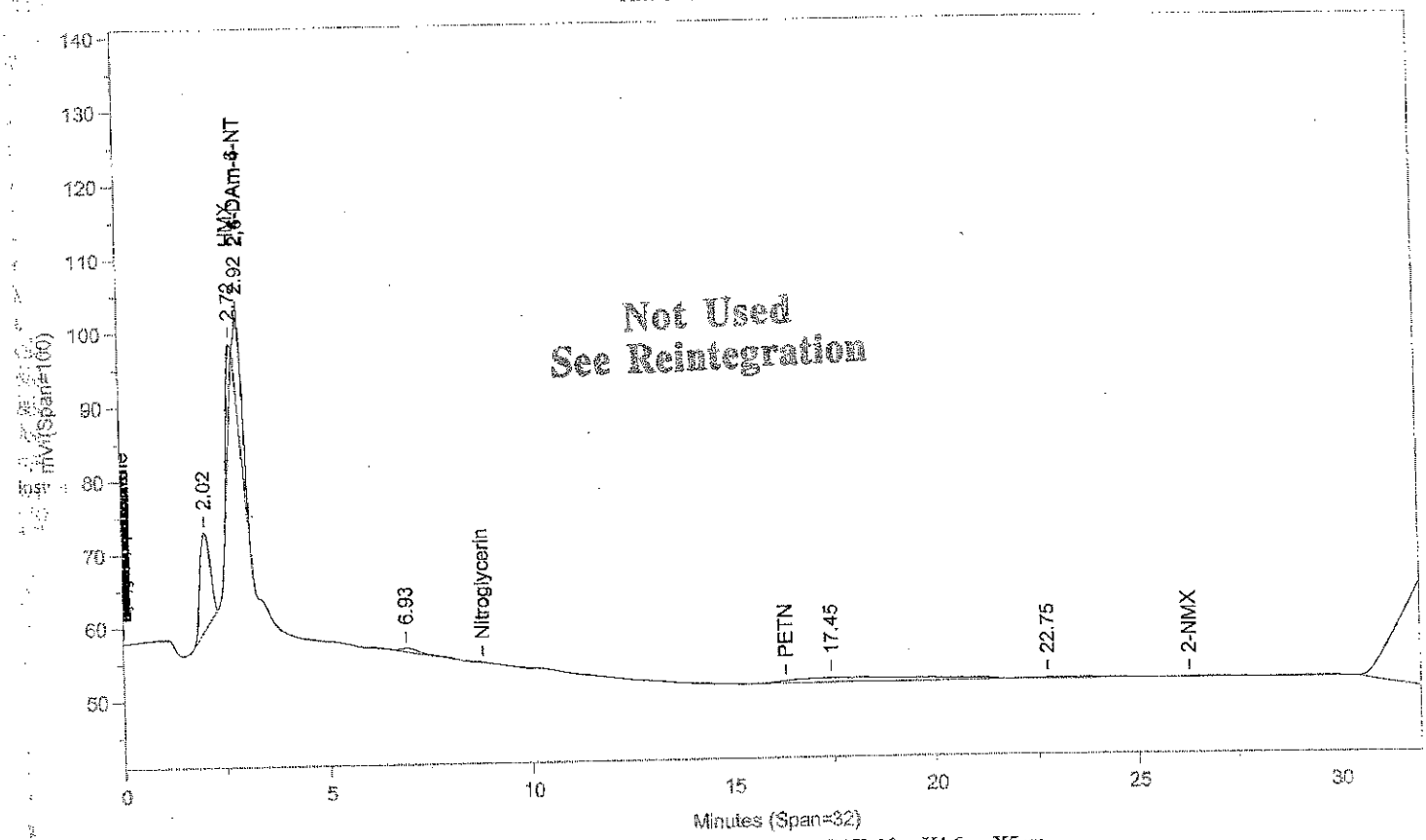
File: C:\CPWIN\DATA1\3E12310.54R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 11:21:42 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.54R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/14/2013 11:21:42 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

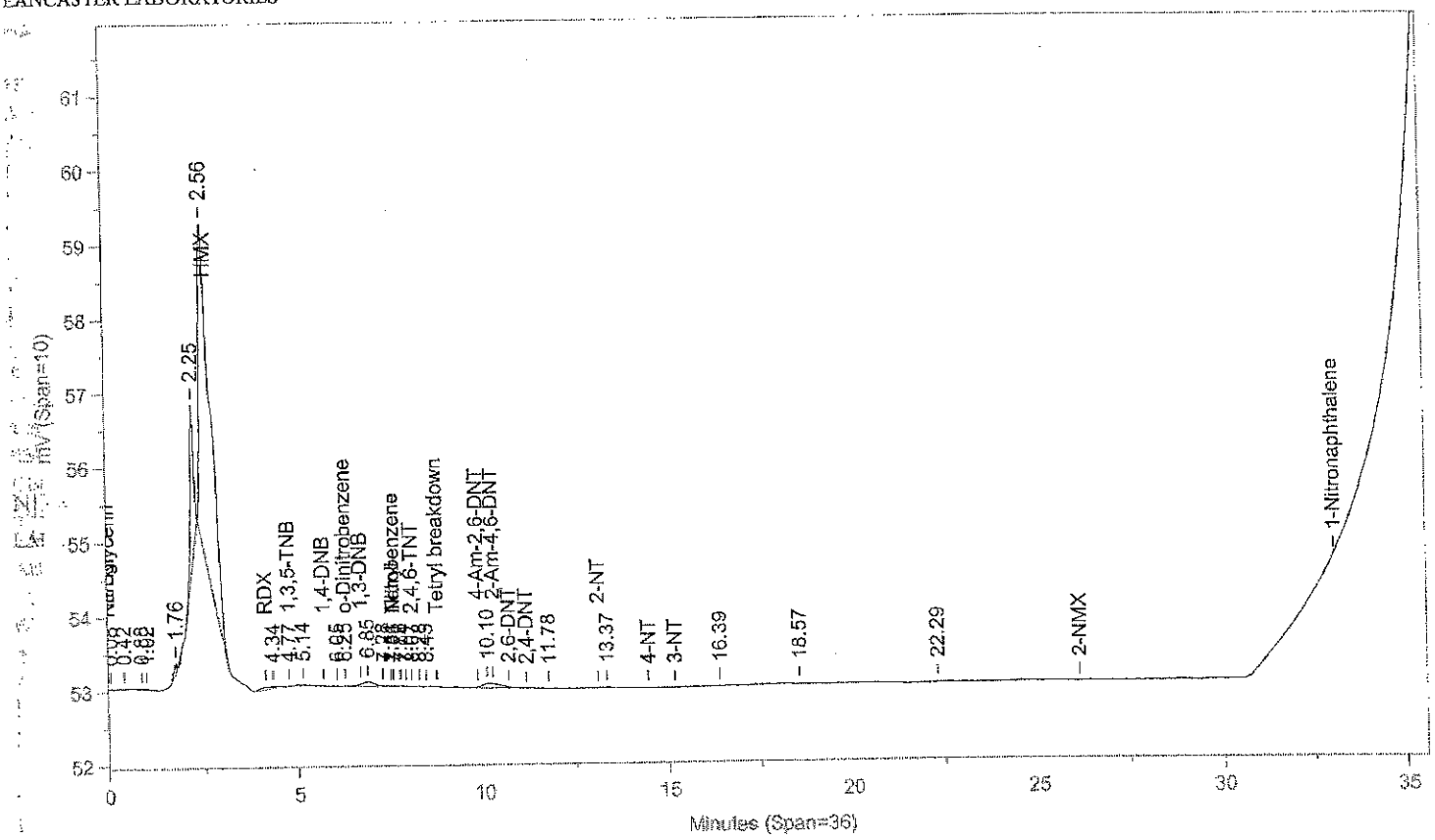
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.724	93226	232.007	HMX
.	0	.	2,4-DAm-6-NT	2.917	184152	76.372	2,4-DAm-6-NT
4.775	33	.157	1,3,5-TNB	.	0	.	1,3,5-TNB
6.255	101	.981	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.557	17	.05	Tetryl	.	0	.	Tetryl
8.072	34	.15	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\3E12310.54A
Area File: C:\CPWIN\DATA1\3E12310B.54A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:02:20 PM
File Reported On: 11/14/2013 at 12:02:29 PM

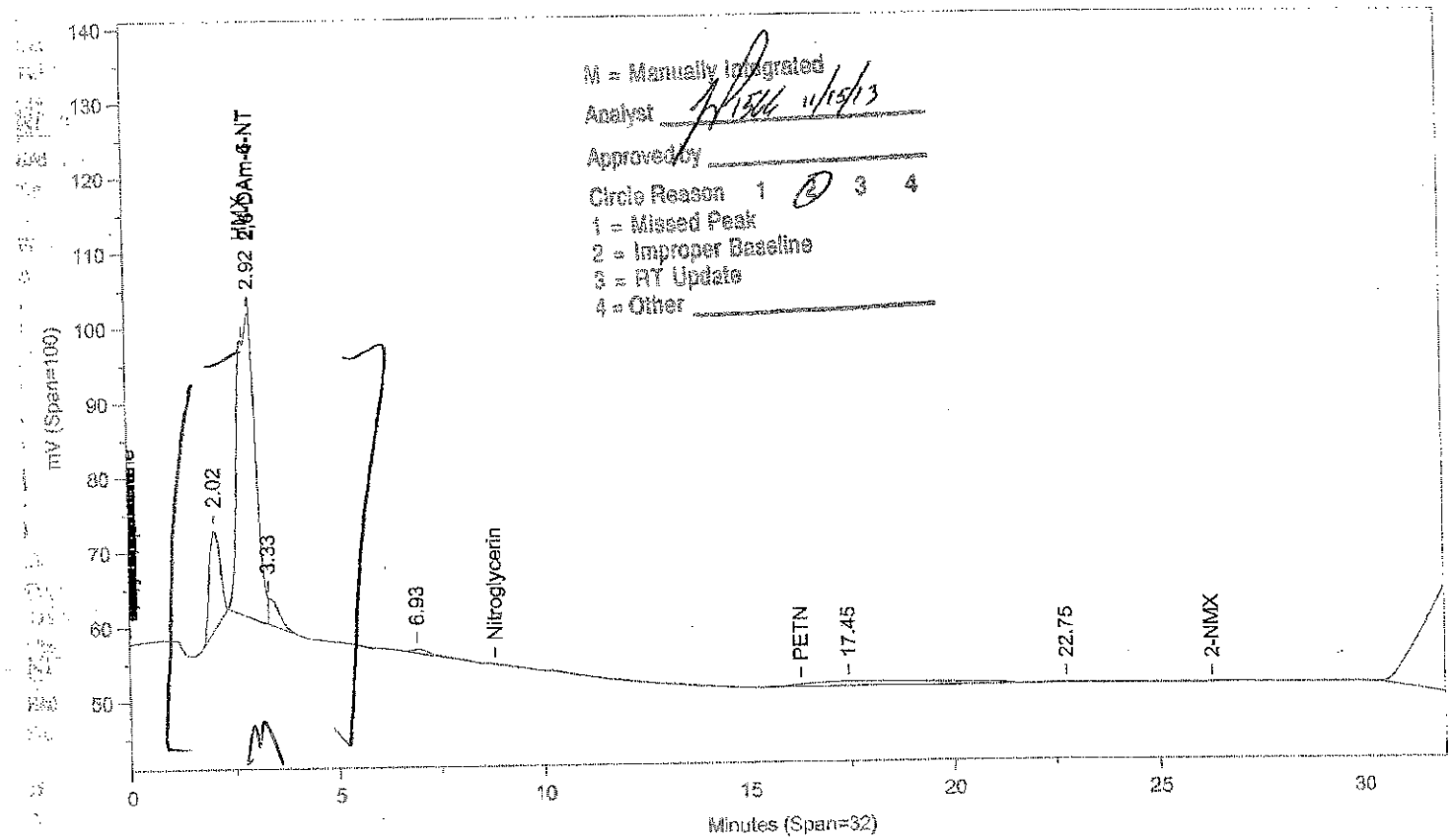
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3E12310.54R



Instrument ID: CP12--X6329A Injected On: 11/14/2013 11:21:42 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.54R



M = Manually Integrated
Analyst 11/15/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/14/2013 11:21:42 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantitation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

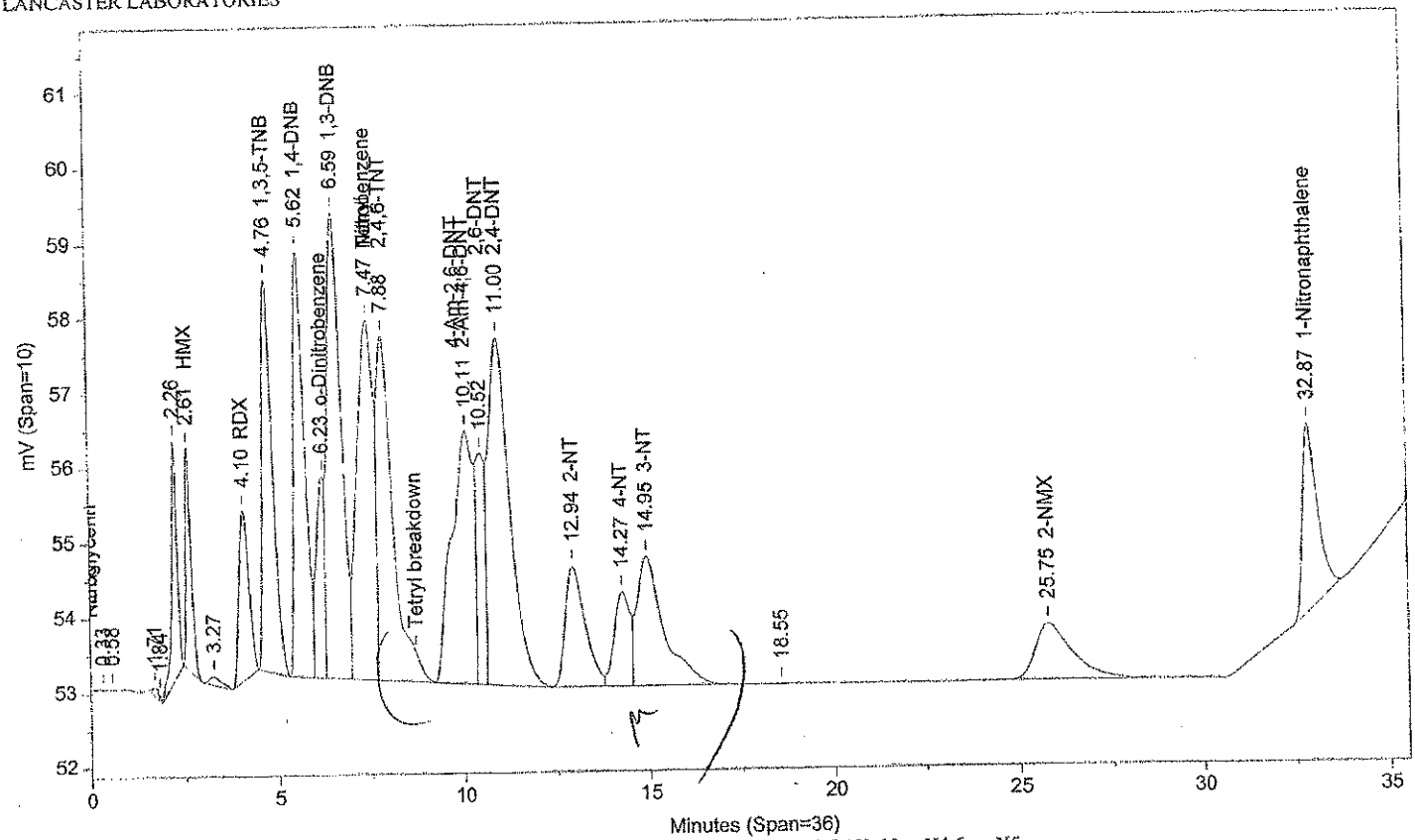
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	2.917	1246071	516.775	2,4-DAm-6-NT
4.775	33	.157	1,3,5-TNB	.	0	.	1,3,5-TNB
6.255	101	.981	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.557	17	.05	Tetryl	.	0	.	Tetryl
8.072	34	.15	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/15/2013 10:27:40 AM
File Reported On: 11/15/2013 at 10:27:38 AM

NITR31324O PVNITR3PV CCAL 1331899999

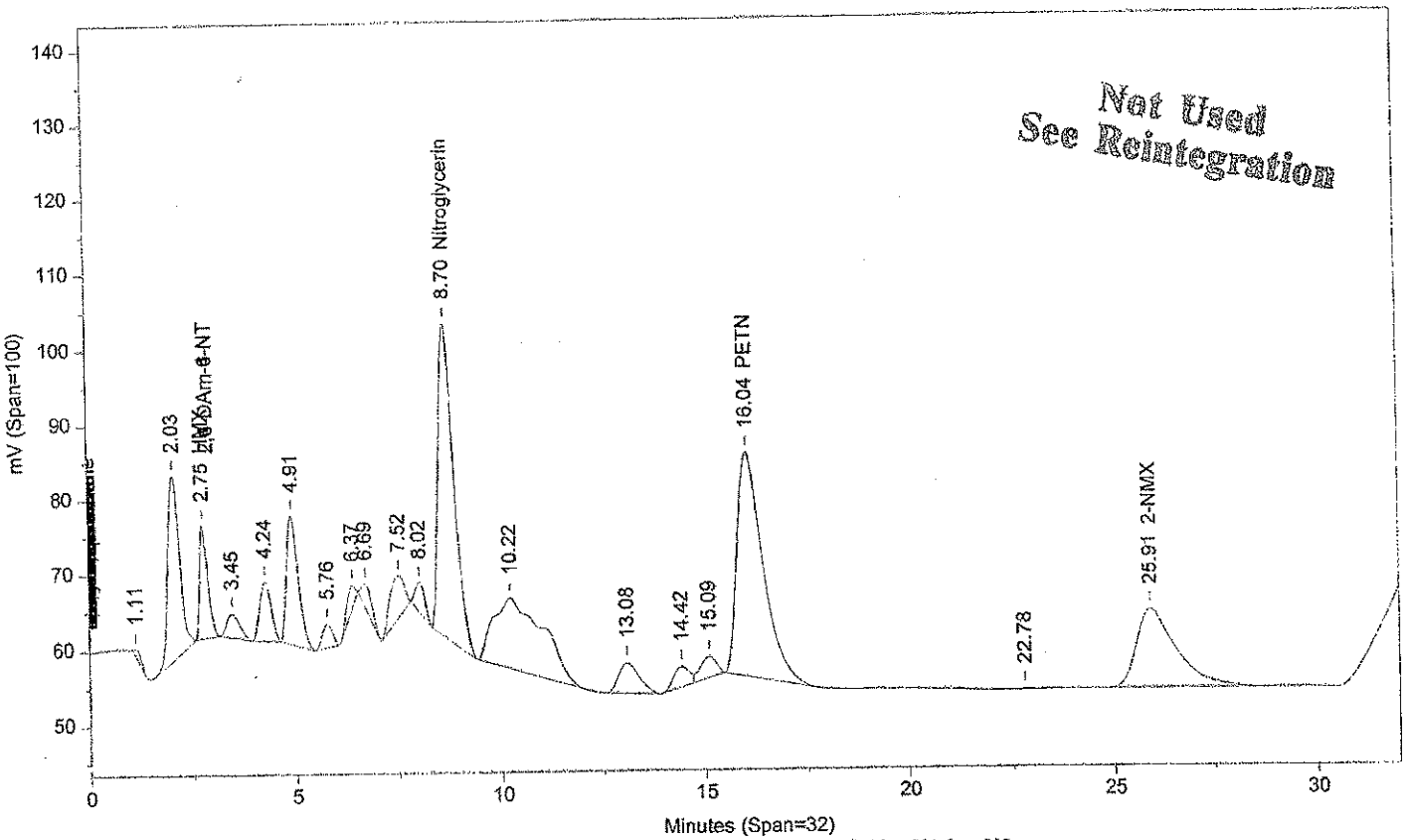
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

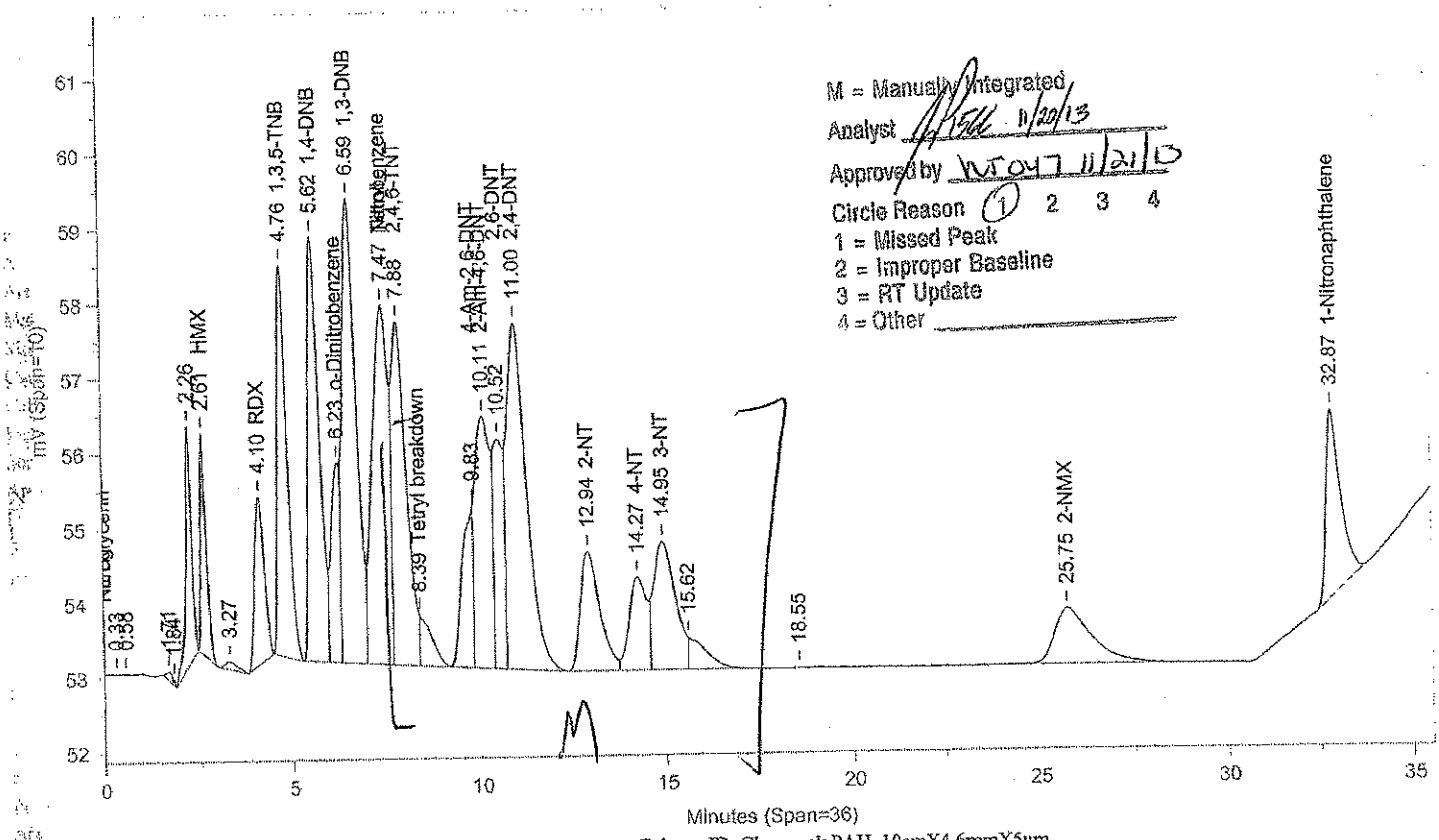
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	40946	397.391	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	164441	506.762	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	134888	591.974	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
10.111	141225	644.817	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	50399	414.552	2,6-DNT	.	0	.	2,6-DNT
10.997	178956	541.037	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	38746	412.947	4-NT	.	0	.	4-NT
14.953	86090	635.799	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.58A
Area File: C:\CPWIN\DATA1\4E12310B.58A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:34:44 PM
File Reported On: 11/17/2013 at 9:34:54 PM

Not Used
See Reintegration

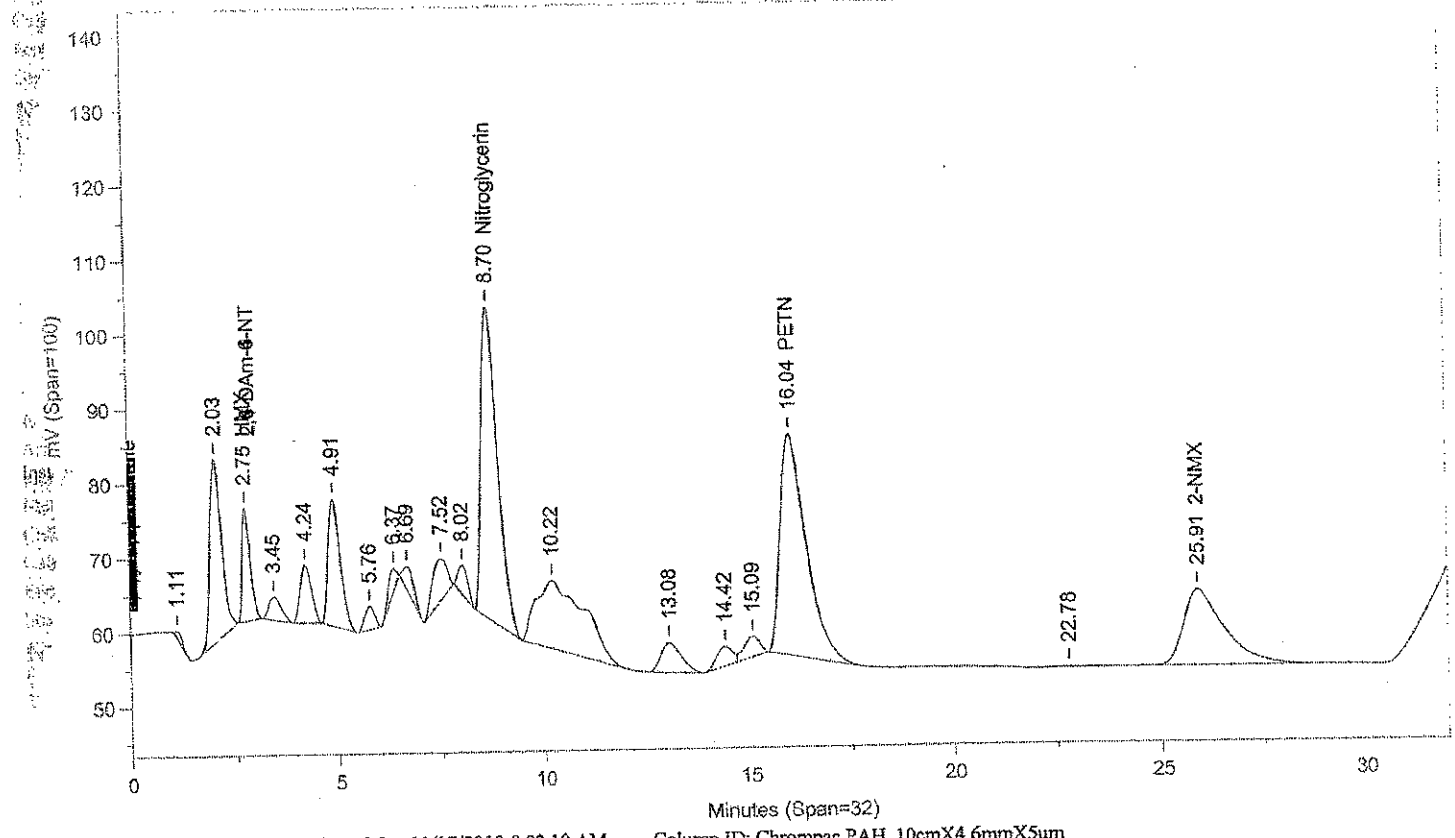
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	44487	431.76	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	160900	495.849	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	120242	527.699	2,4,6-TNT	.	0	.	2,4,6-TNT
8.394	14646	42.37	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
9.828	43098	459.362	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.111	98128	448.039	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	57322	471.496	2,6-DNT	.	0	.	2,6-DNT
10.997	172033	520.107	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	41535	442.67	4-NT	.	0	.	4-NT
14.953	69382	512.407	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:02:00 PM
File Reported On: 11/20/2013 at 2:01:58 PM

NITR31324M PXNITR3PX CCAL 1331899999

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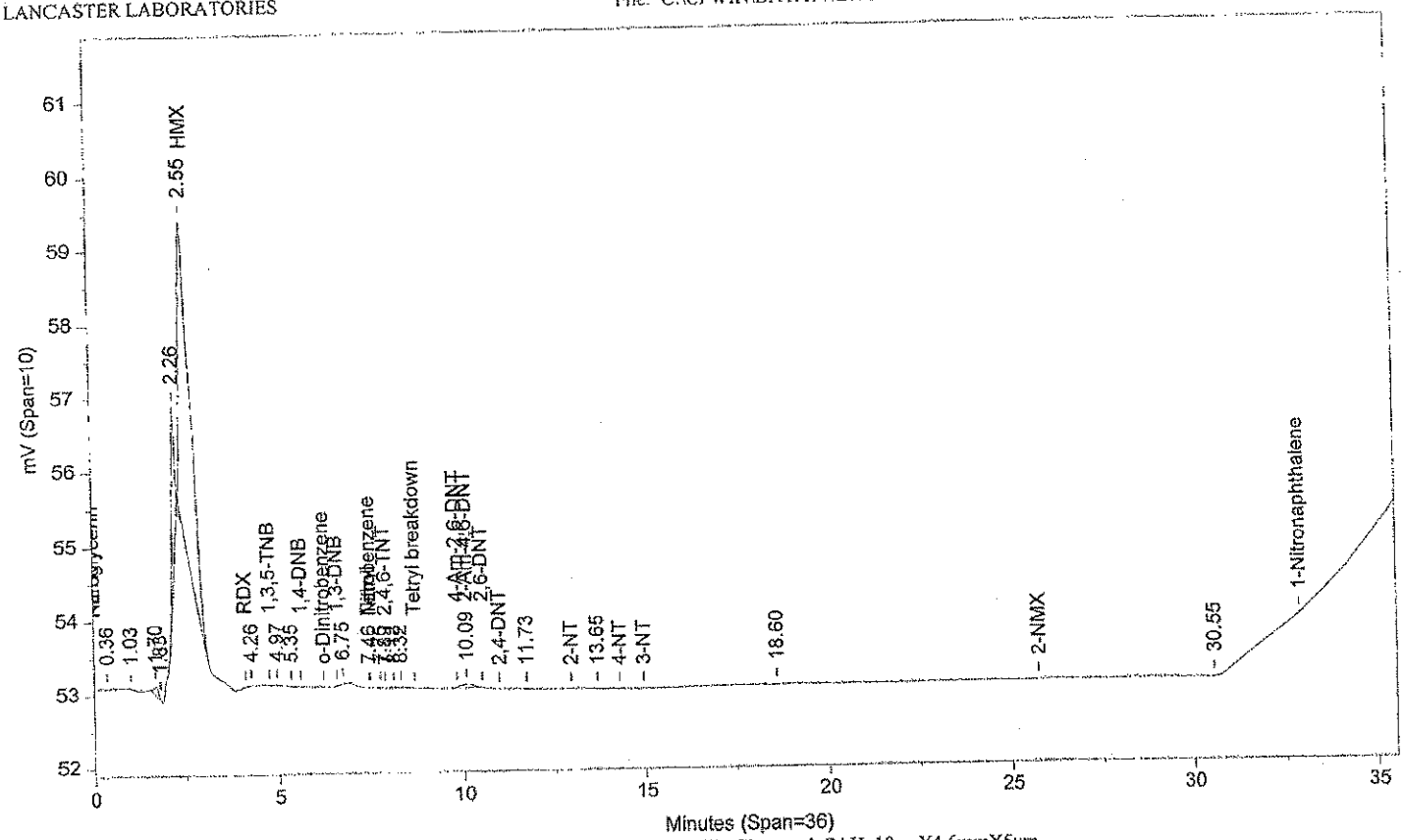
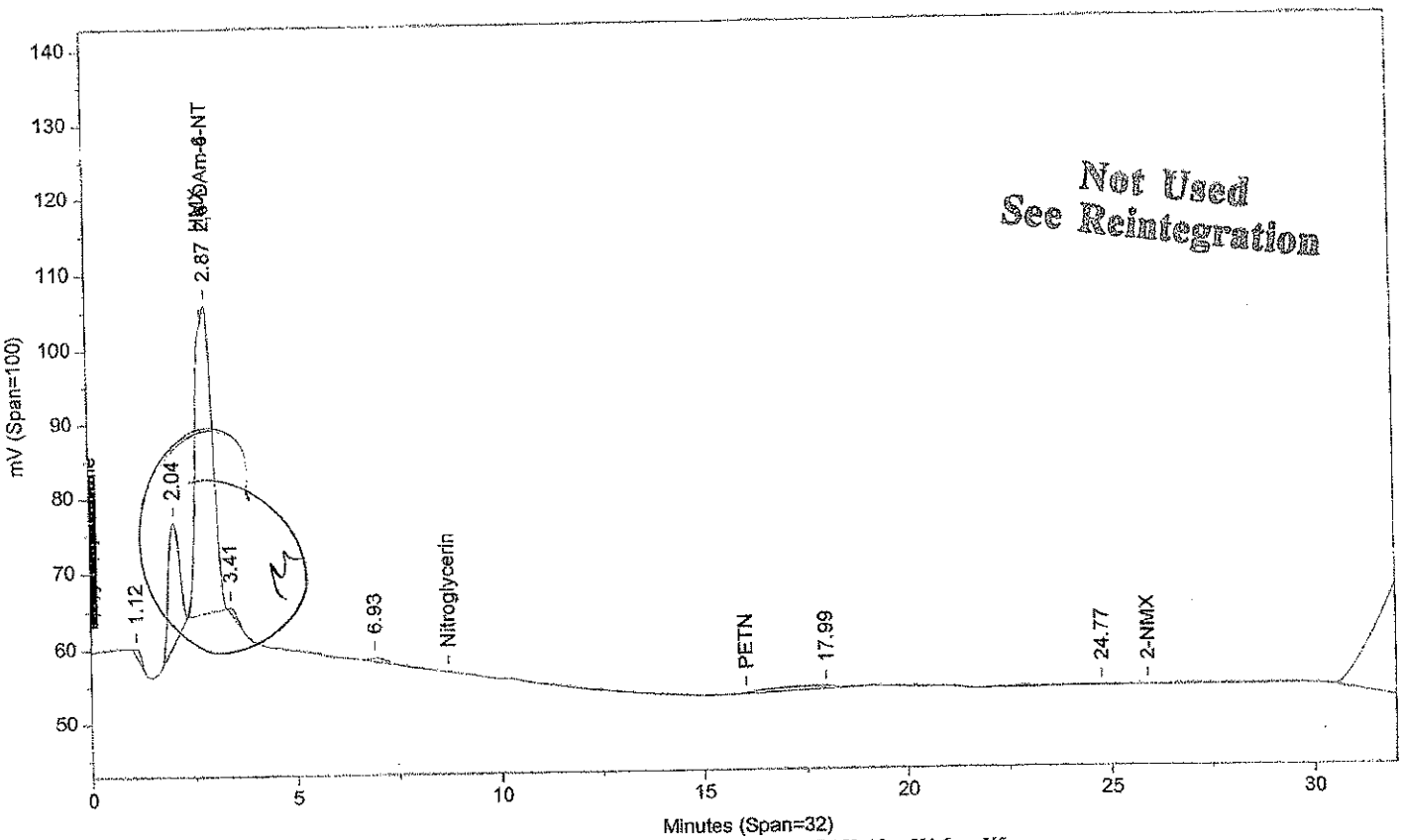
File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

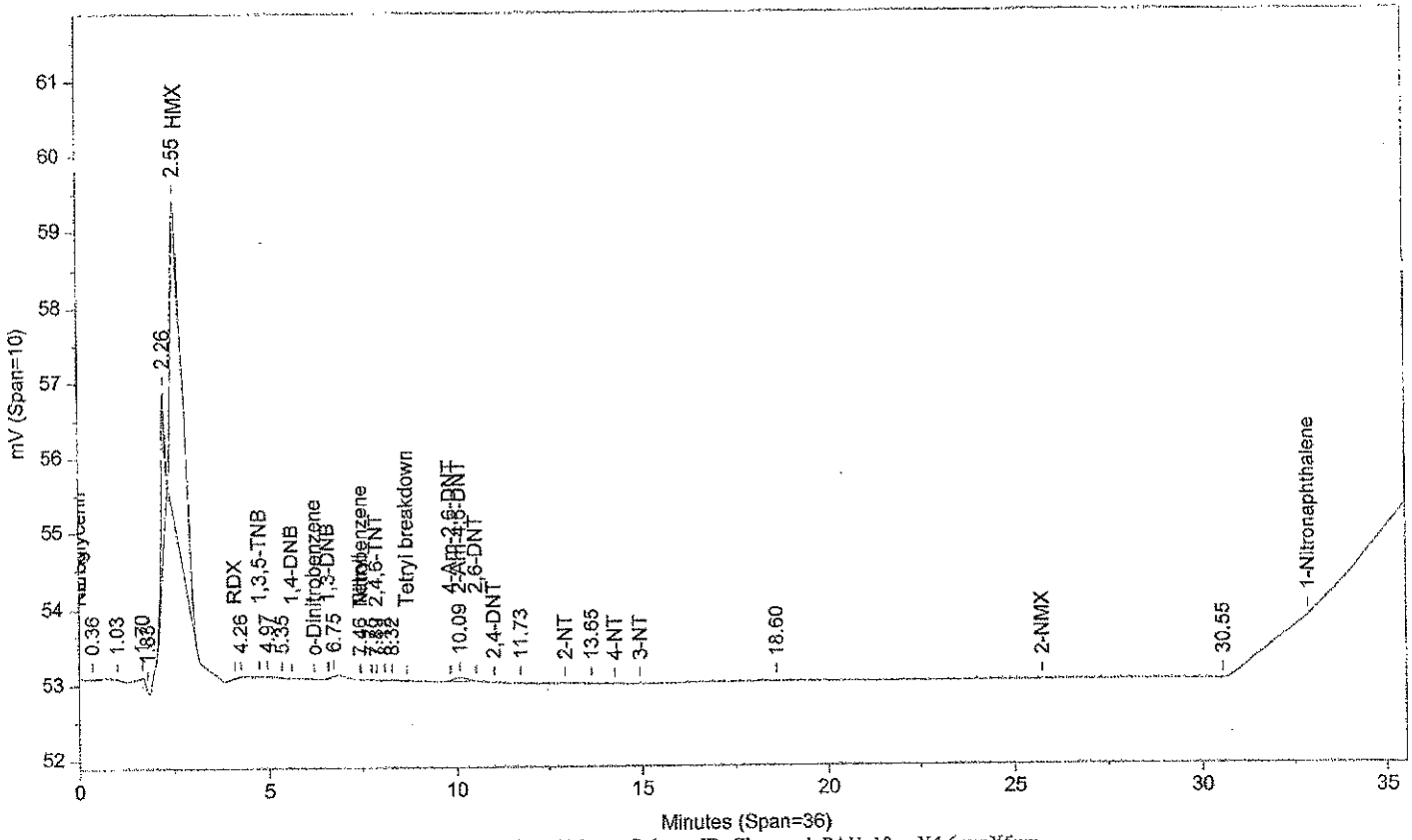
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.872	1178739	488.851	2,4-DAm-6-NT
7.46	8	.024	Tetryl	.	0	.	Tetryl
7.893	3	.014	2,4,6-TNT	.	0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.59A
Area File: C:\CPWIN\DATA1\4E12310B.59A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:35:08 PM
File Reported On: 11/17/2013 at 9:35:18 PM

Not Used
See Reintegration

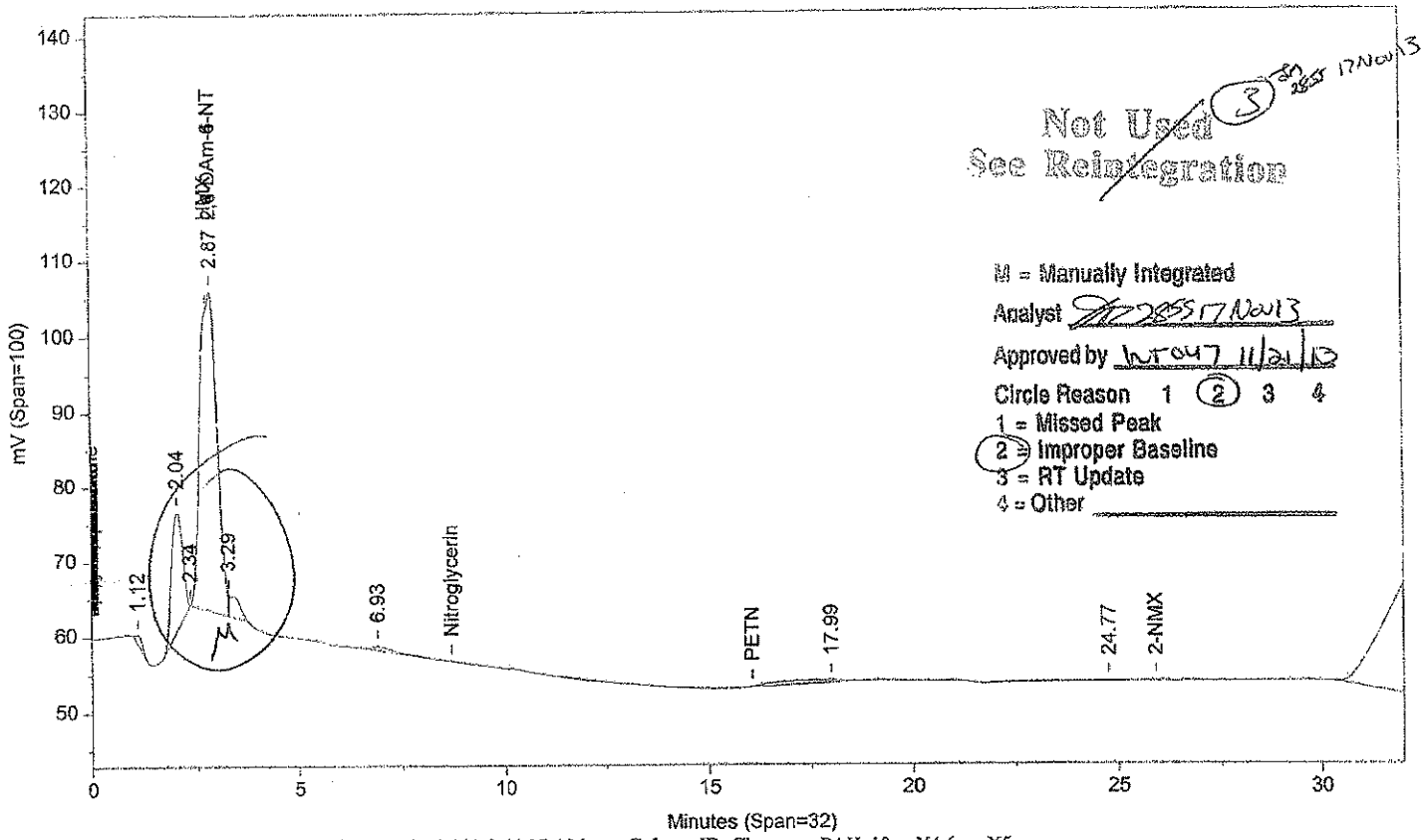
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



Not Used (3) 30 2855 17Nov13
See Reintegration

M = Manually Integrated
Analyst 2855 17Nov13
Approved by [illegible] 11/21/13
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

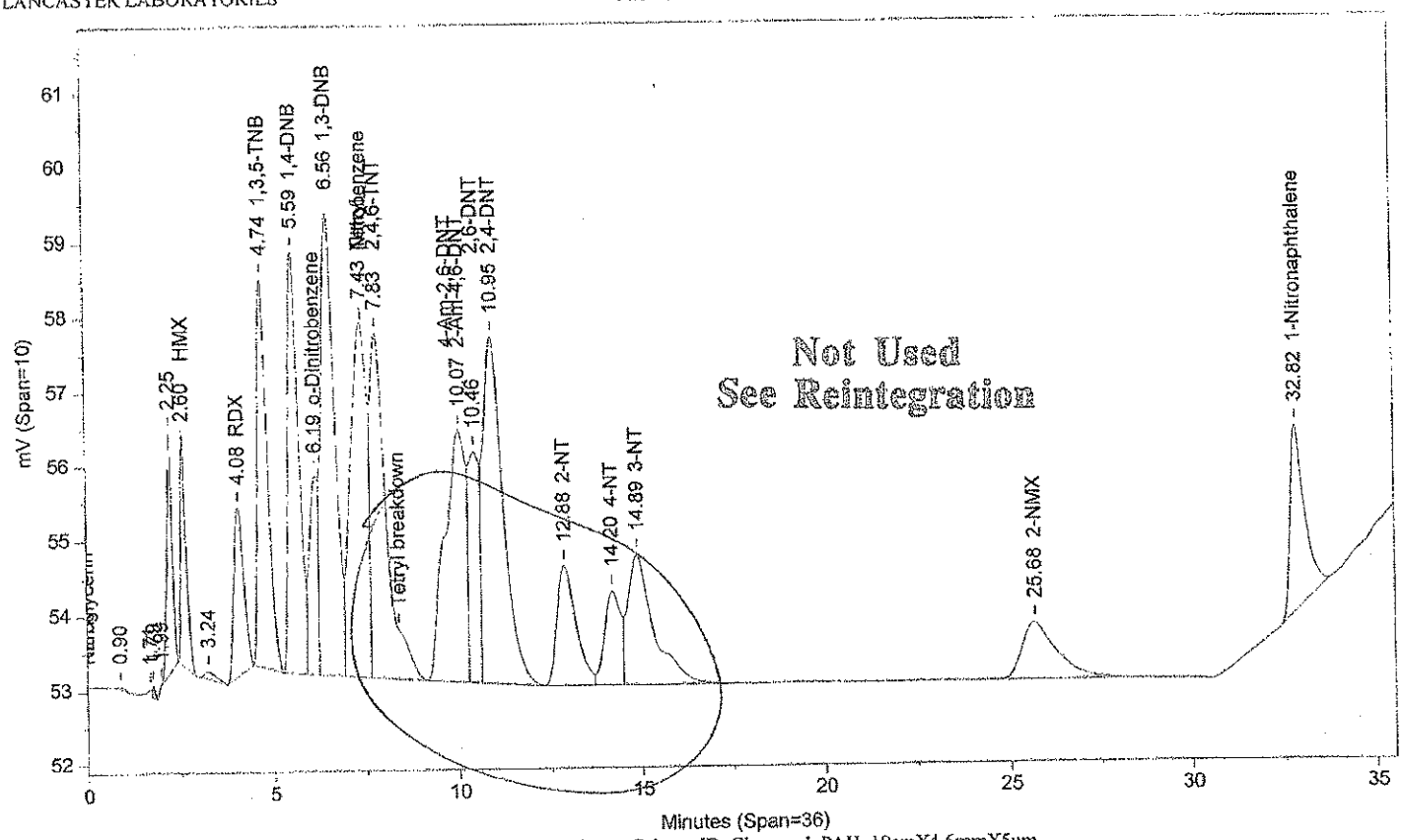
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.872	1248850	517.928	2,4-DAm-6-NT
7.46	8	.024	Tetryl	.	0	.	Tetryl
7.893	3	.014	2,4,6-TNT	.	0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:39:42 PM
File Reported On: 11/17/2013 at 9:39:40 PM

3 AM 2855 17/Nov/13
Not Used
See Reintegration

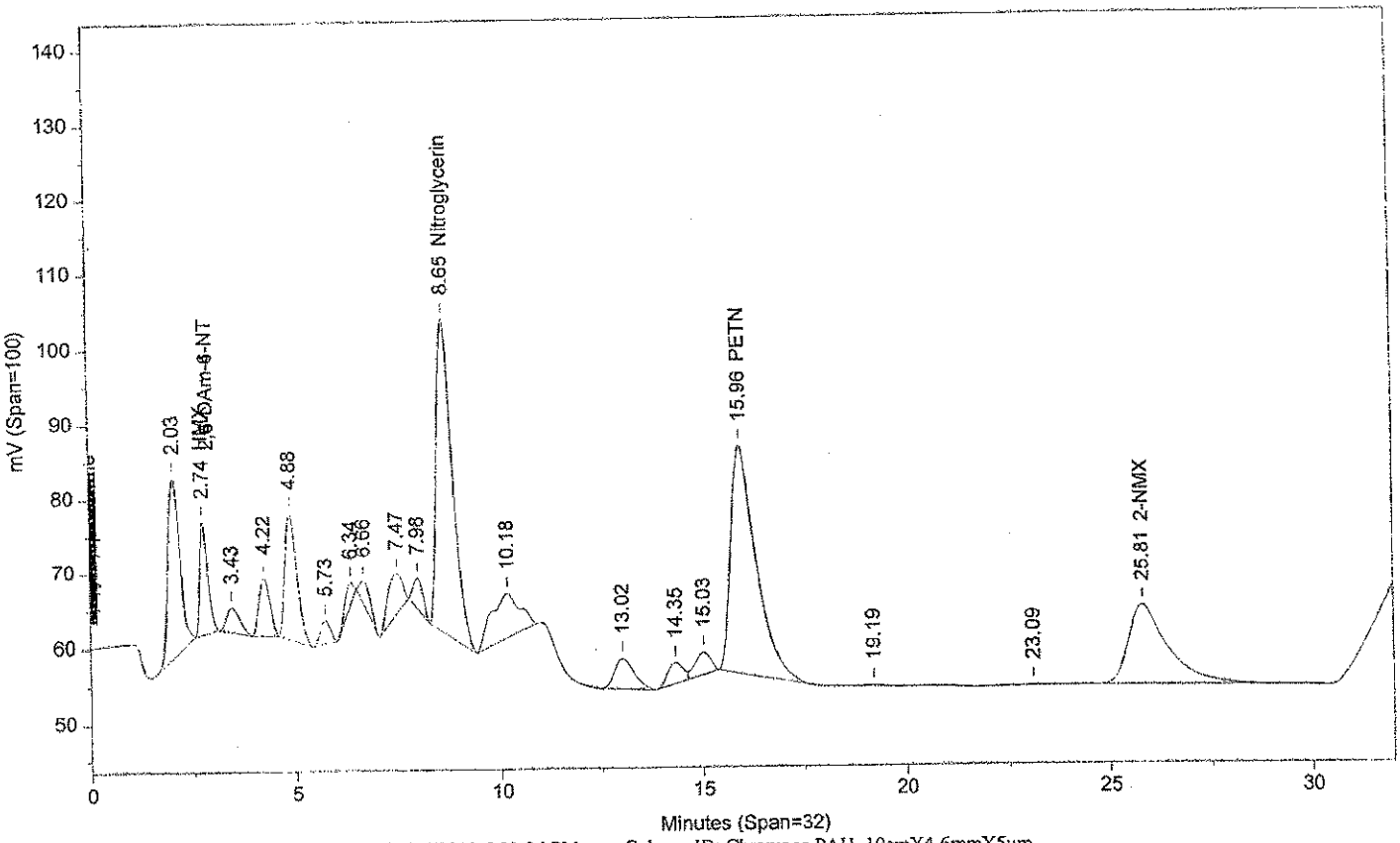
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
5.594	115984	455.243	1,4-DNB	.	0	.	1,4-DNB
6.185	41369	401.496	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	162842	501.834	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	136262	598.005	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
10.066	131566	600.715	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	61117	502.711	2,6-DNT	.	0	.	2,6-DNT
10.945	175735	531.298	2,4-DNT	.	0	.	2,4-DNT
12.88	58146	439.533	2-NT	.	0	.	2-NT
14.195	39023	415.902	4-NT	.	0	.	4-NT
14.893	86814	641.143	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

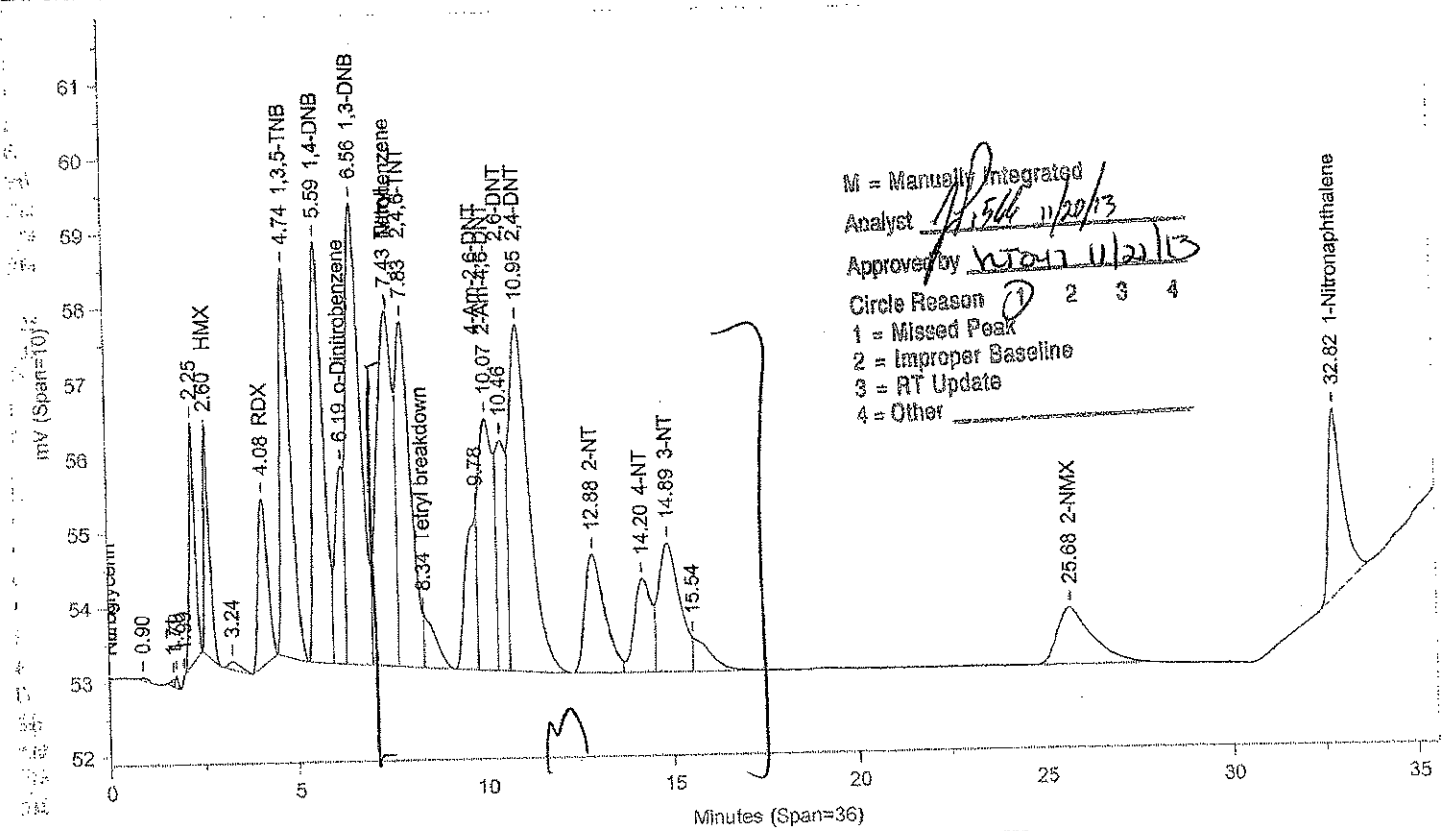
Files:
Area File: C:\CPWIN\DATA1\4E12310.70A
Area File: C:\CPWIN\DATA1\4E12310B.70A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:06:14 PM
File Reported On: 11/17/2013 at 10:06:24 PM

Not Used
See Reintegration

NITR31324O PVNITR3PV CCAL 1331899999

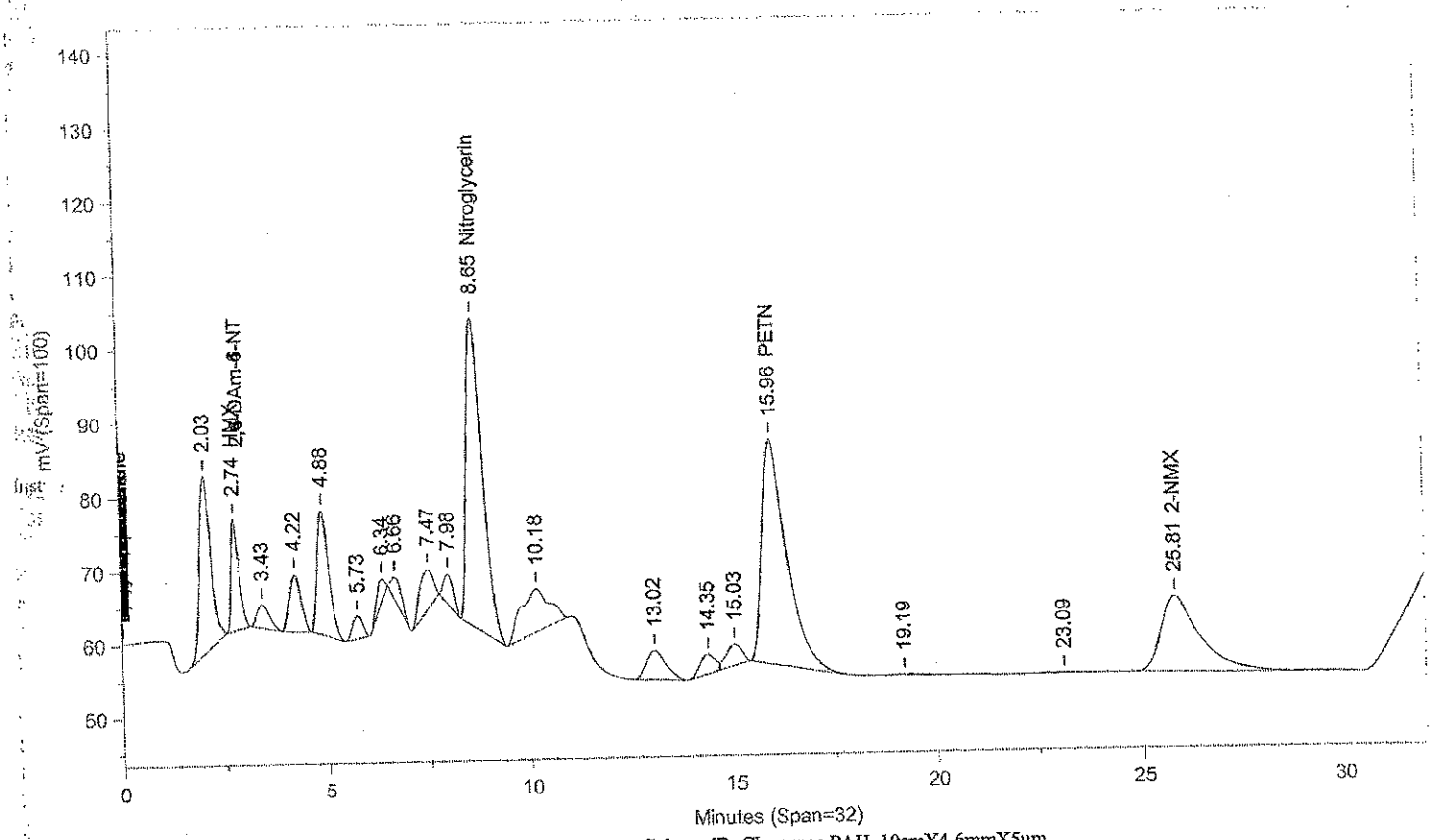
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
6.594	115148	451.963	1,4-DNB	.	0	.	1,4-DNB
6.185	43947	426.516	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	161100	496.466	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	120817	530.221	2,4,6-TNT	.	0	.	2,4,6-TNT
8.339	15445	44.683	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
9.783	42586	453.907	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.066	95774	437.294	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	57266	471.029	2,6-DNT	.	0	.	2,6-DNT
10.945	172793	522.403	2,4-DNT	.	0	.	2,4-DNT
12.88	57944	438.009	2-NT	.	0	.	2-NT
14.195	40855	435.427	4-NT	.	0	.	4-NT
14.893	69741	515.059	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:38:36 AM
File Reported On: 11/20/2013 at 11:38:35 AM

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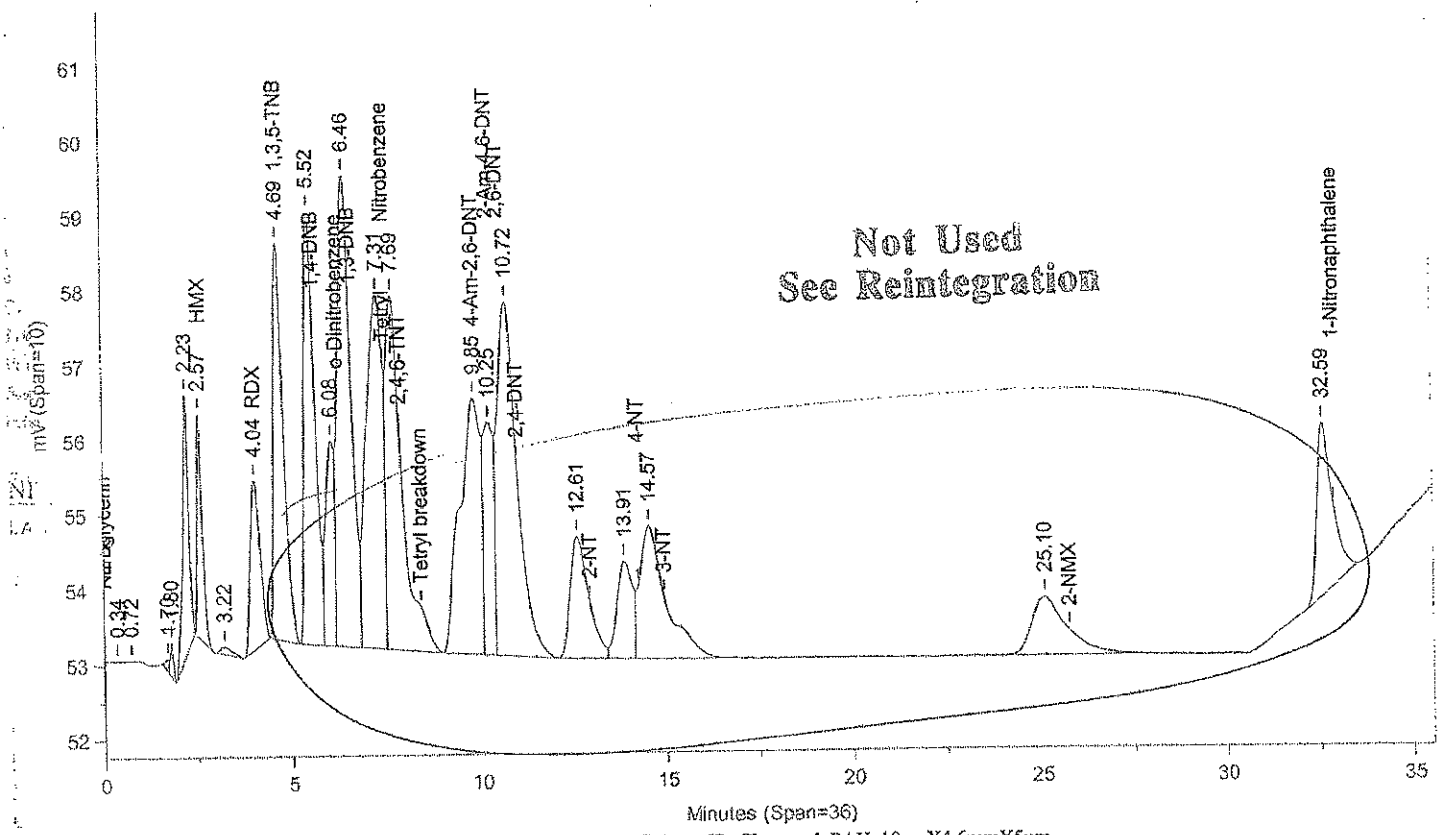
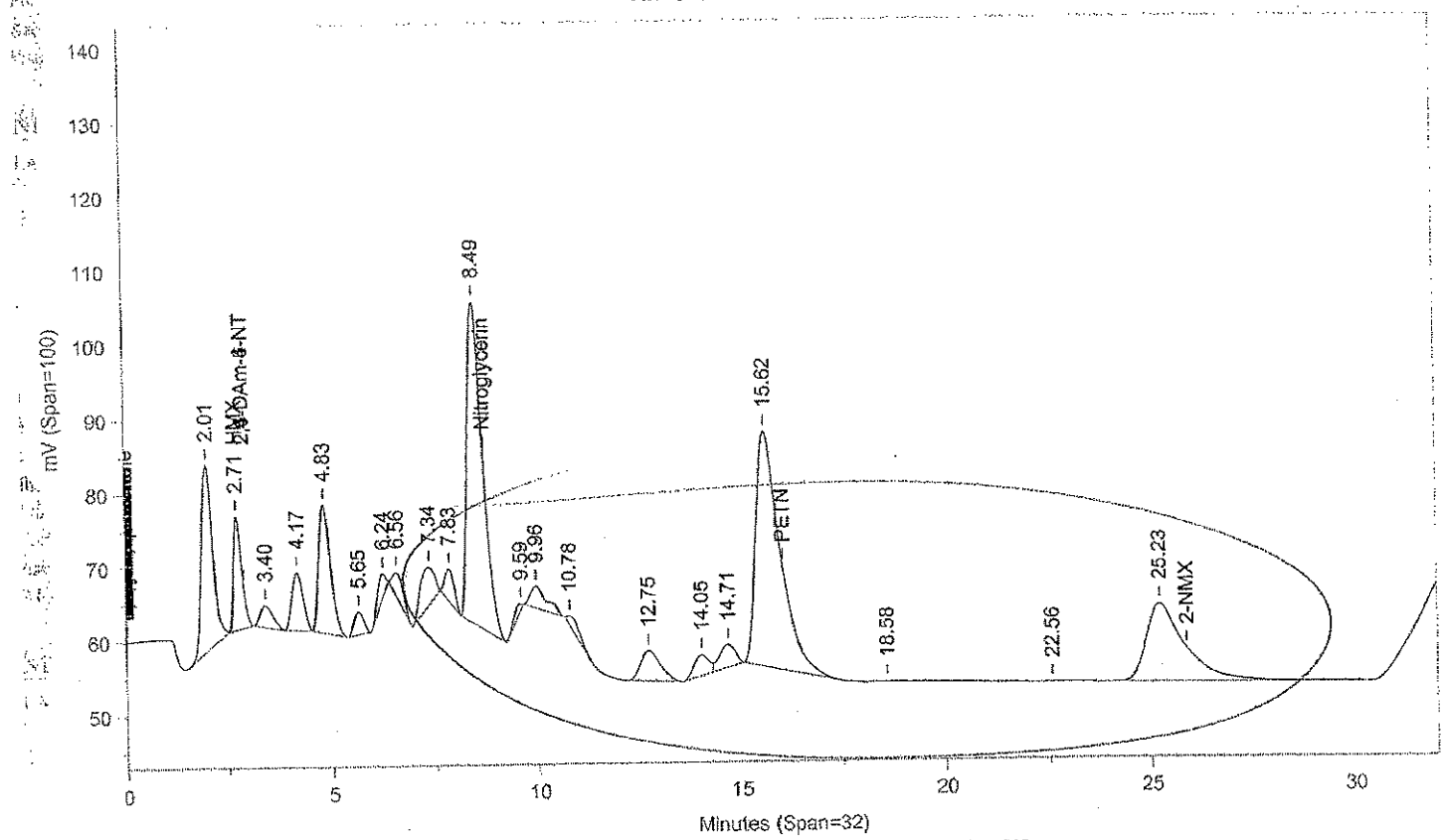
File: C:\CPWIN\DATA1\4E12310.81R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX		0		RDX
4.686	97867	463.633	1,3,5-TNB		0		1,3,5-TNB
9.847	132871	1416.217	4-Am-2,6-DNT		0		4-Am-2,6-DNT
10.245	58432	266.792	2-Am-4,6-DNT		0		2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.81A
Area File: C:\CPWIN\DATA1\4E12310B.81A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:54:56 PM
File Reported On: 11/18/2013 at 2:55:05 PM

Not Used
See Reintegration

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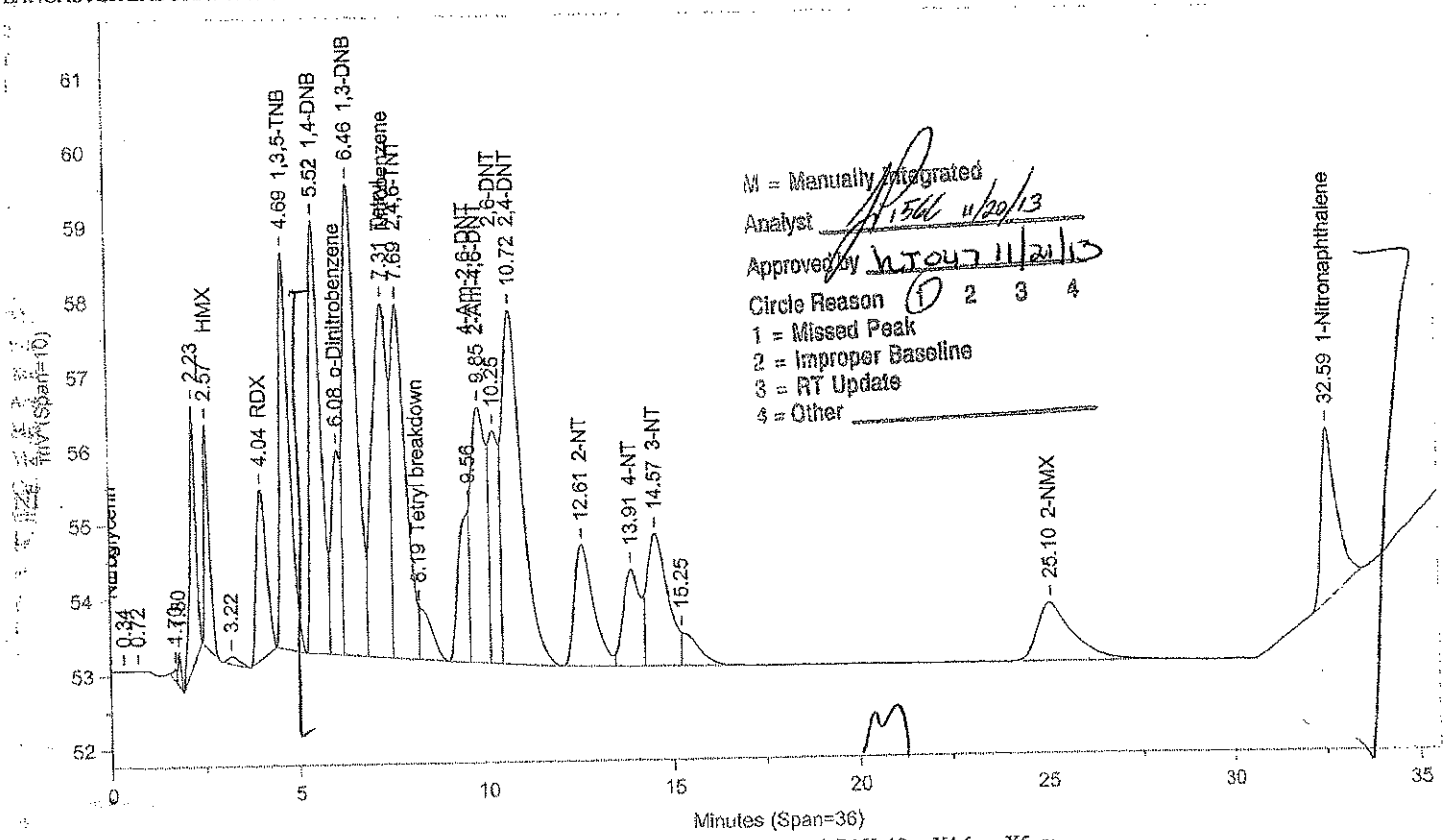
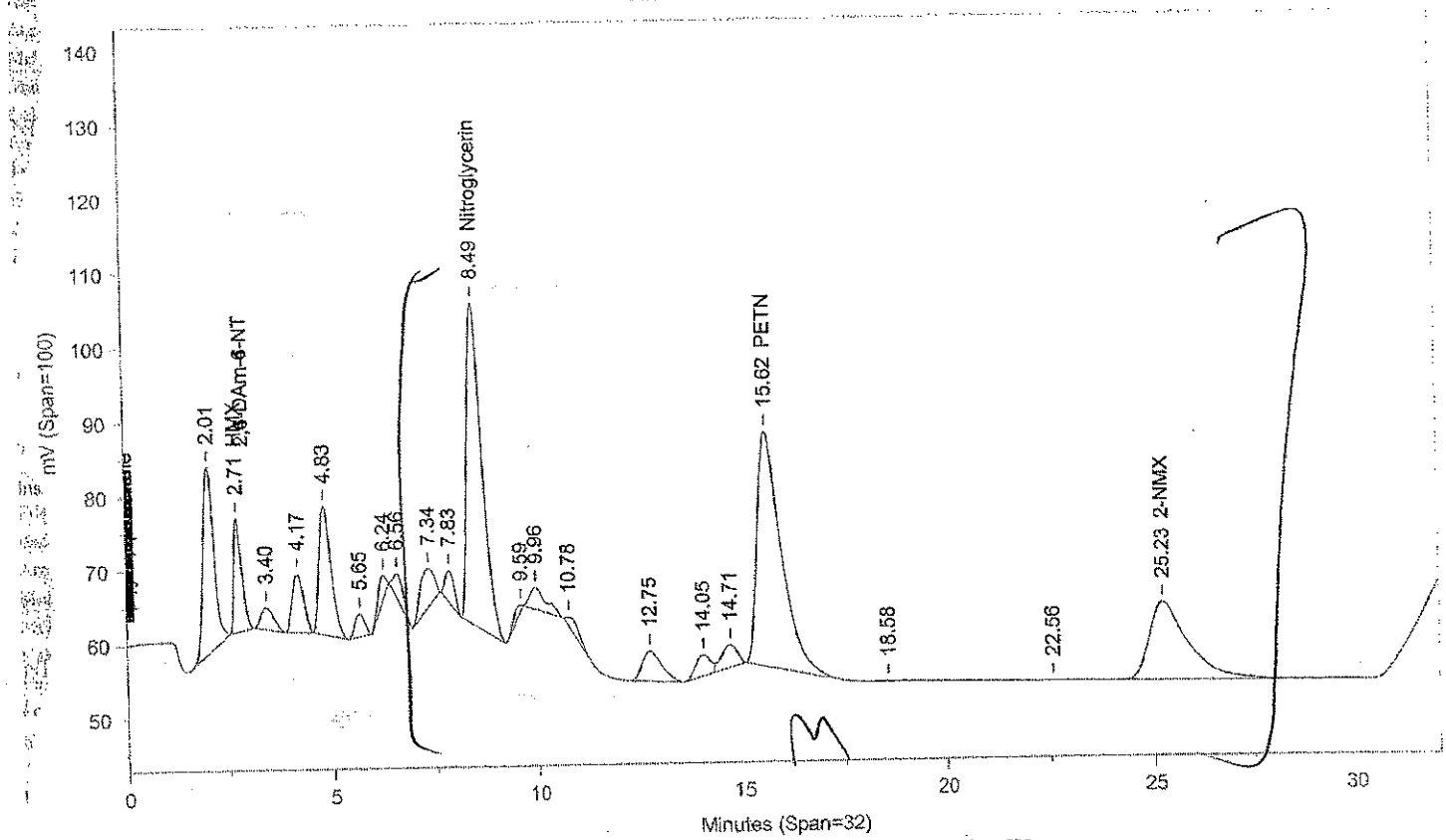
File: C:\CPWIN\DATA1\4E12310.81R



M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX	.	0	.	RDX
4.686	97867	463.633	1,3,5-TNB	.	0	.	1,3,5-TNB
5.519	115053	451.59	1,4-DNB	.	0	.	1,4-DNB
6.079	47815	464.059	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.458	154985	477.621	1,3-DNB	.	0	.	1,3-DNB
7.307	143270	414.478	Tetryl	.	0	.	Tetryl
7.693	120080	526.989	2,4,6-TNT	.	0	.	2,4,6-TNT
8.194	15765	45.608	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.486	1114974	8724.021	Nitroglycerin
9.561	40042	426.794	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.847	96727	441.642	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.245	58451	480.778	2,6-DNT	.	0	.	2,6-DNT
10.722	170170	514.474	2,4-DNT	.	0	.	2,4-DNT
12.608	57529	434.872	2-NT	.	0	.	2-NT
13.906	41793	445.426	4-NT	.	0	.	4-NT
14.565	67914	501.566	3-NT	.	0	.	3-NT
.	0	.	PETN	15.621	1294734	9454.381	PETN
25.103	50813	1490.667	2-NMX	25.232	709127	1451.734	2-NMX
32.587	66811	508.567	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:12:06 PM
File Reported On: 11/20/2013 at 12:12:06 PM

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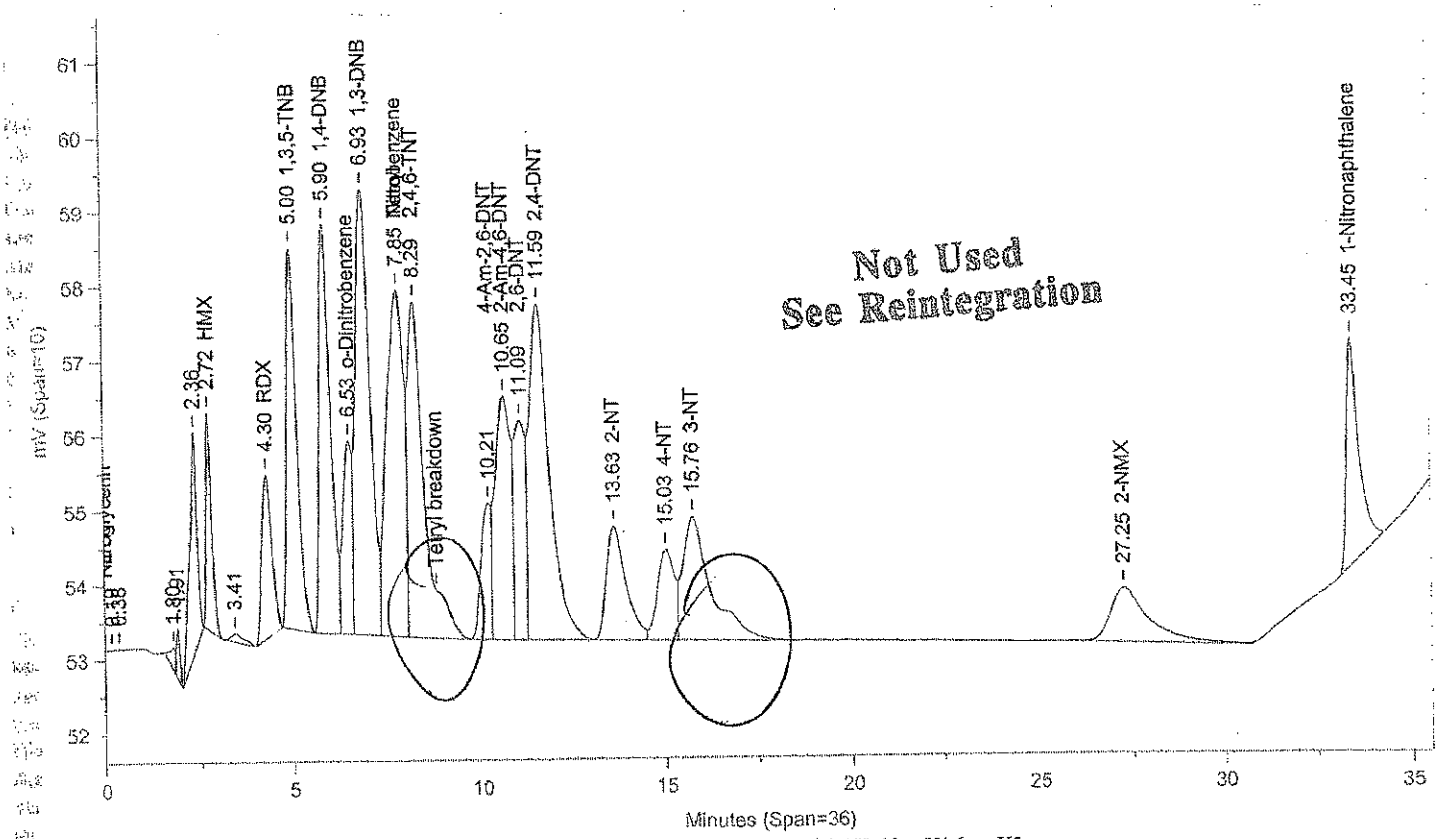
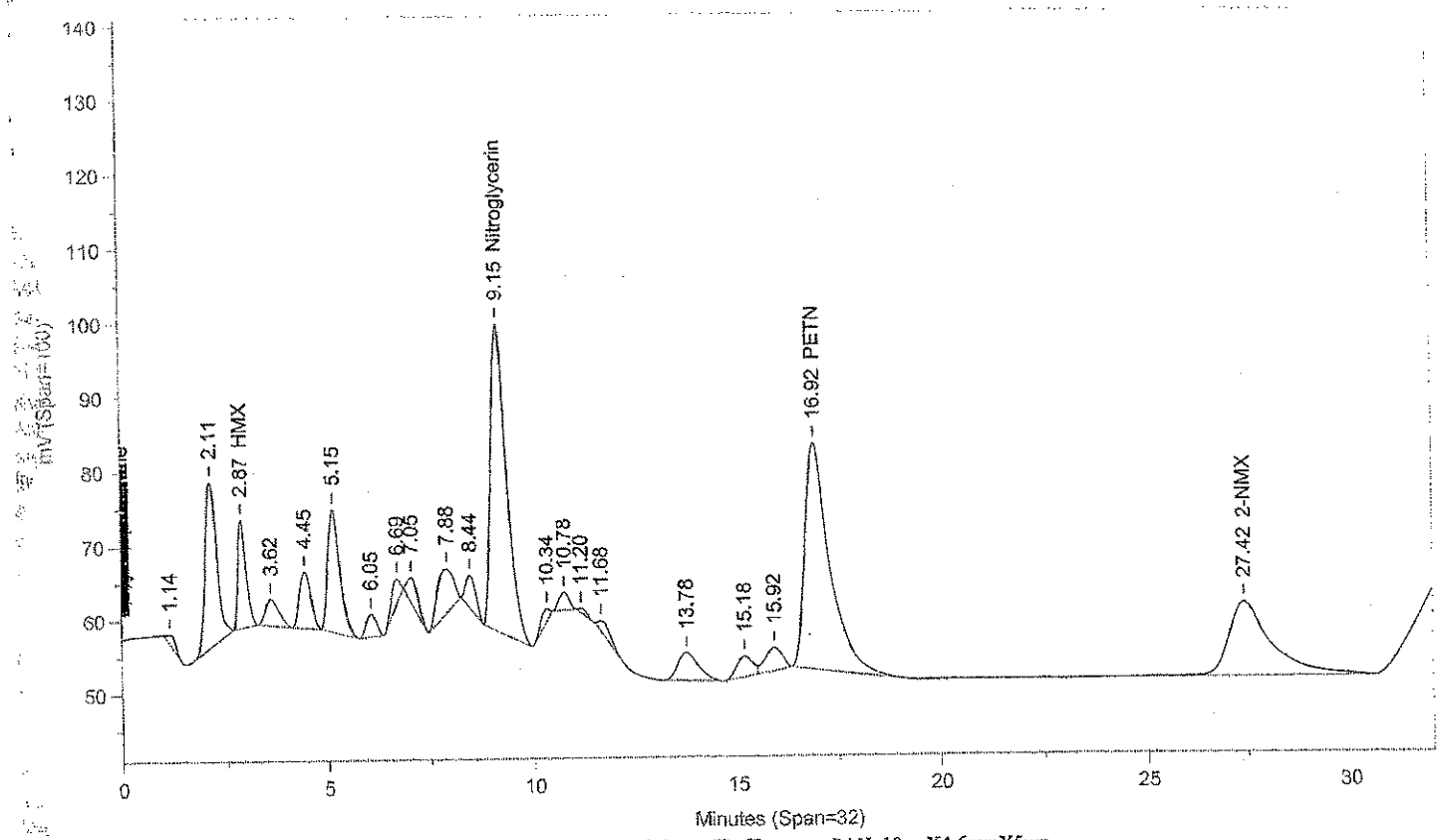
File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	134593	590.678	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.212	34931	372.32	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	97348	444.477	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	62135	511.08	2,6-DNT	.	0	.	2,6-DNT
11.593	170959	516.86	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	39770	423.863	4-NT	.	0	.	4-NT
15.763	86127	636.068	3-NT	.	0	.	3-NT
RT .	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.17A
Area File: C:\CPWIN\DATA1\5E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:41:08 PM
File Reported On: 11/20/2013 at 4:41:19 PM

Not Used
See Reintegration

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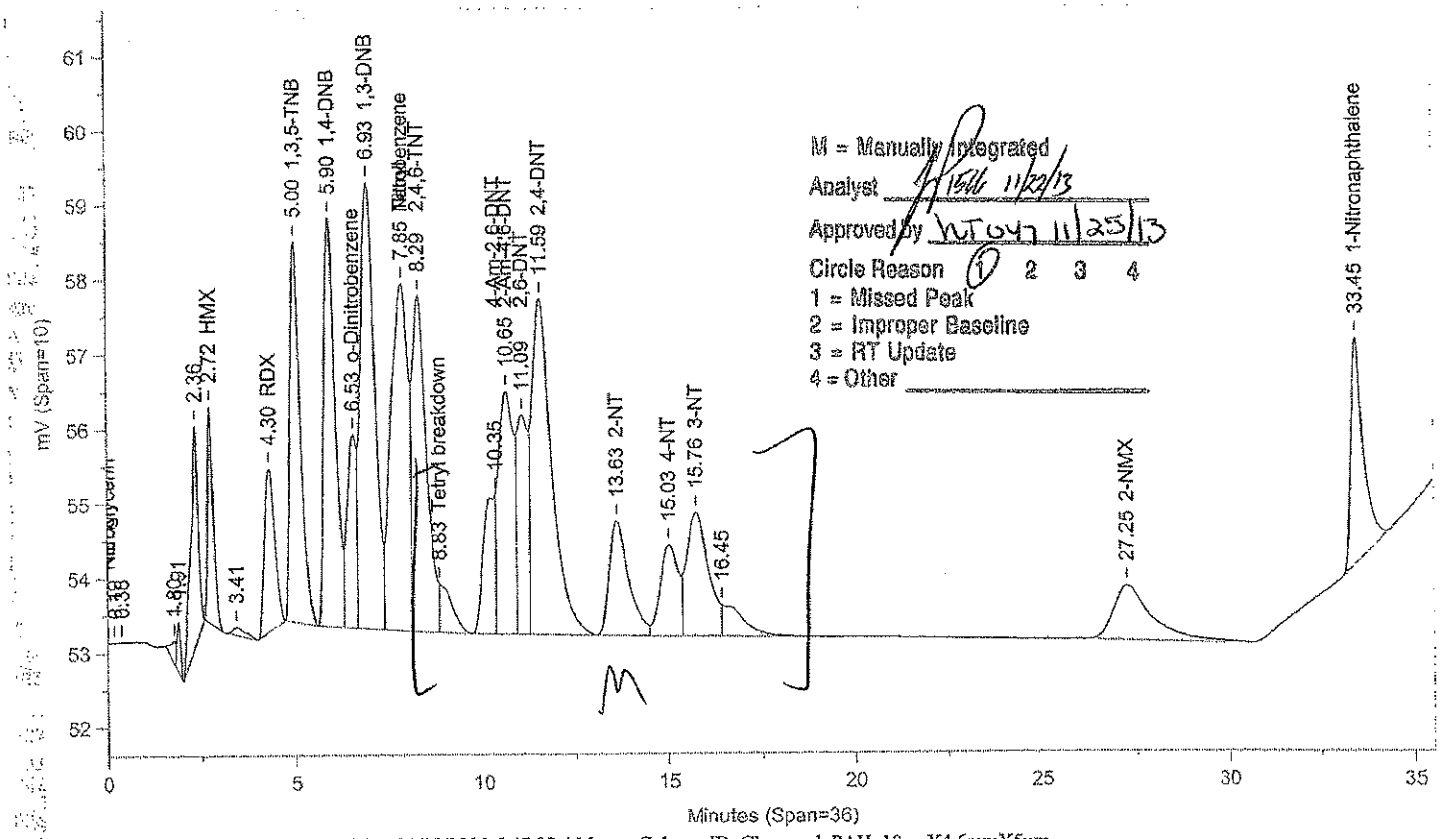
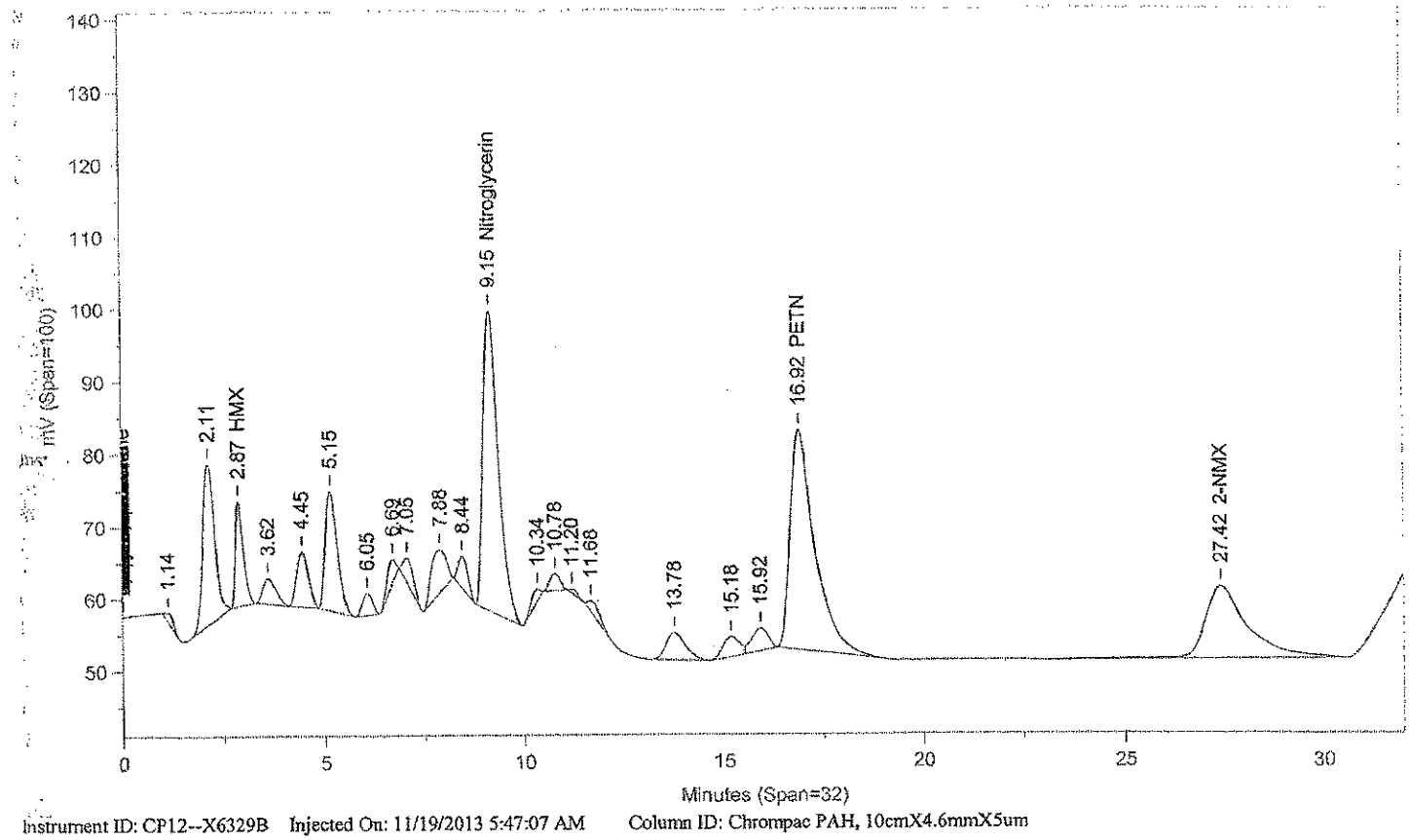
File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	119463	524.279	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	15130	43.77	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.35	41040	437.426	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	96606	441.092	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	60419	496.964	2,6-DNT	.	0	.	2,6-DNT
11.593	167308	505.822	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	41107	438.115	4-NT	.	0	.	4-NT
15.763	67848	501.073	3-NT	.	0	.	3-NT
.	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:01:12 PM
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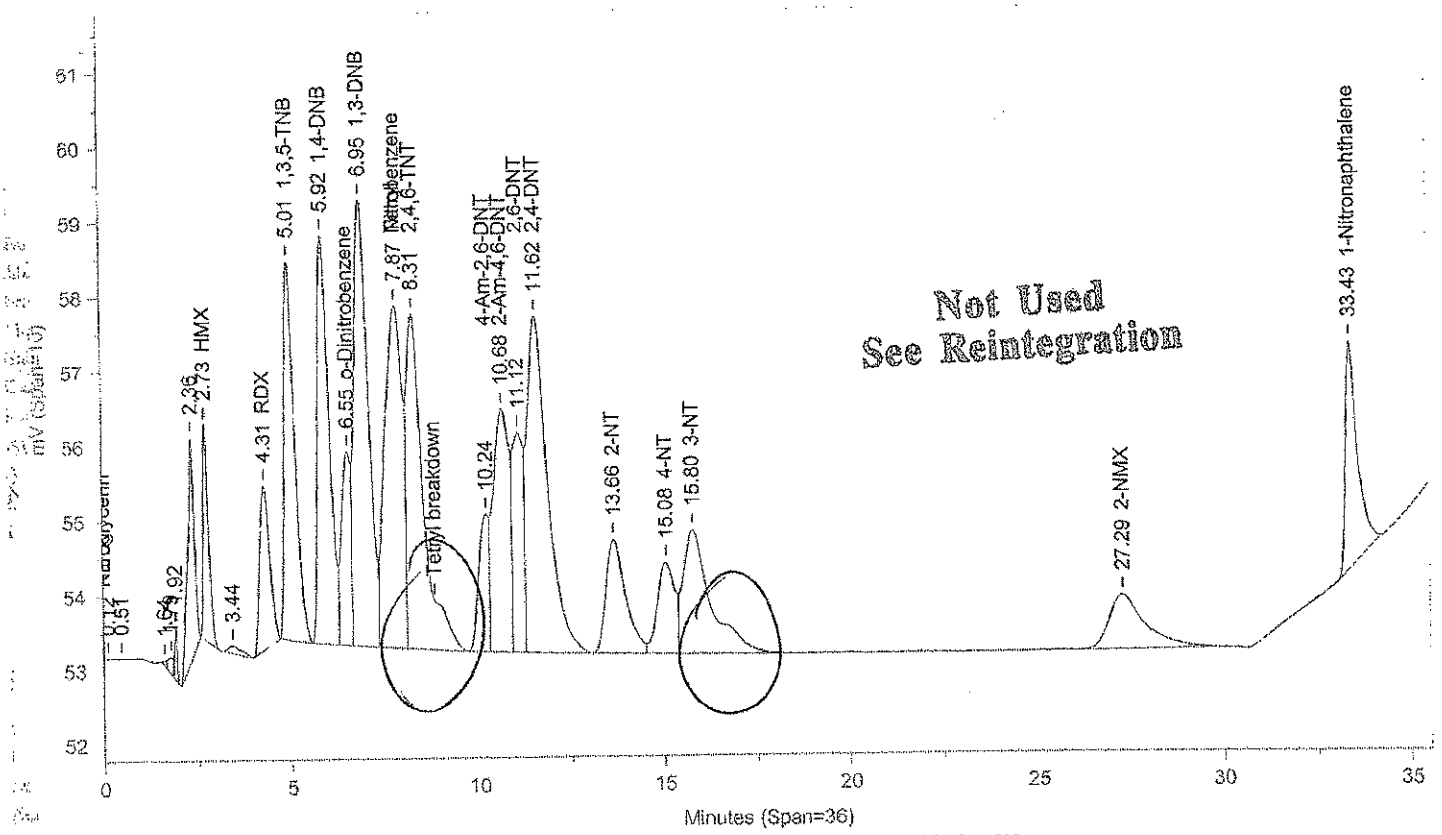
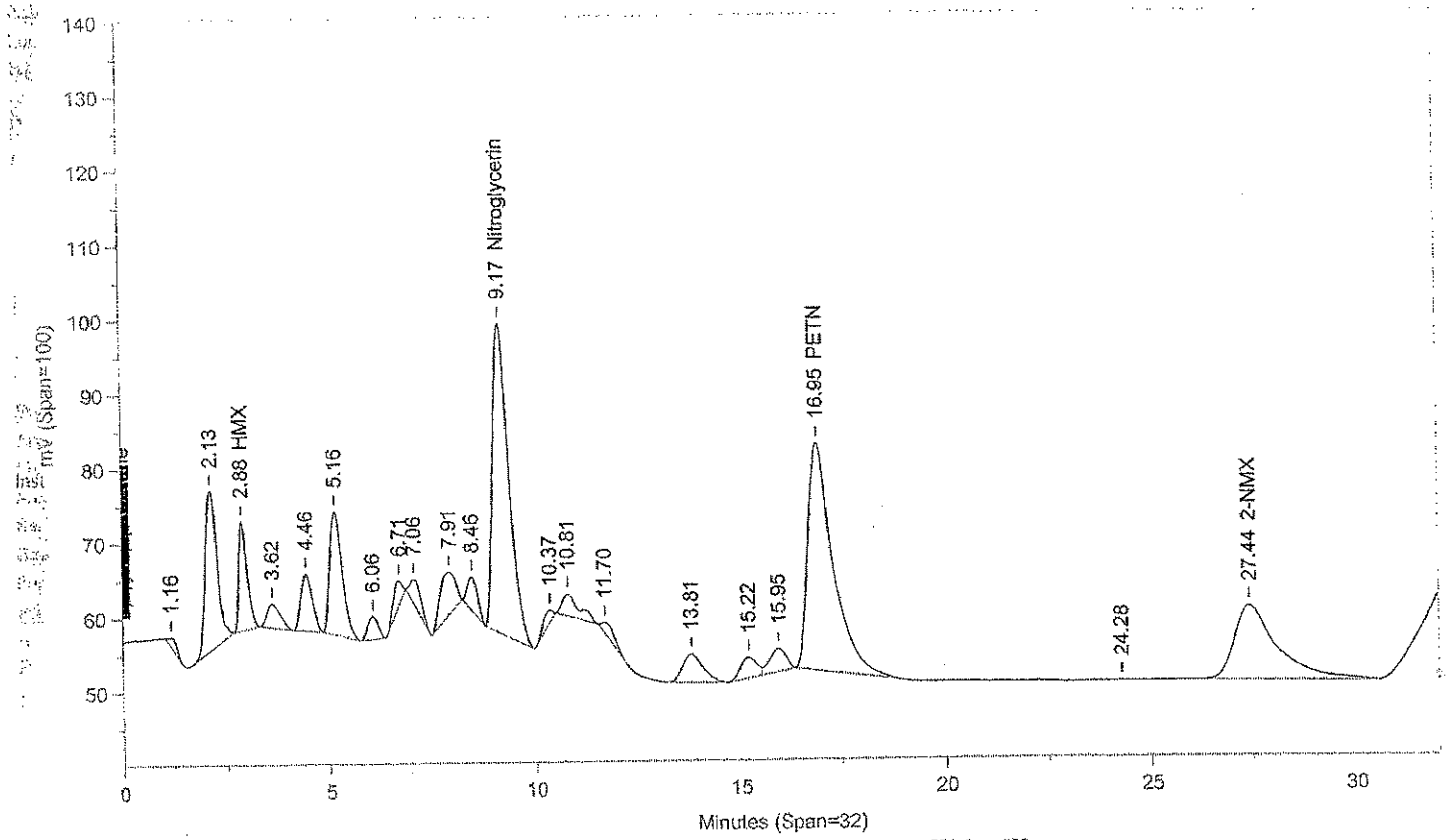
File: C:\CPWIN\DATA1\SE12310.28R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\SE12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.876	207080	494.067	HMX
4.31	42015	466.997	RDX	.	0	.	RDX
5.007	97875	463.669	1,3,5-TNB	.	0	.	1,3,5-TNB
5.916	115161	452.014	1,4-DNB	.	0	.	1,4-DNB
6.551	45364	440.265	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.946	157760	486.172	1,3-DNB	.	0	.	1,3-DNB
7.869	149192	433.339	Nitrobenzene	.	0	.	Nitrobenzene
8.31	135777	595.875	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.171	1126814	8816.657	Nitroglycerin
9.242	34711	369.97	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.68	97994	447.427	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.123	62244	511.974	2,6-DNT	.	0	.	2,6-DNT
11.618	171386	518.151	2,4-DNT	.	0	.	2,4-DNT
13.656	55836	422.074	2-NT	.	0	.	2-NT
15.083	39507	421.055	4-NT	.	0	.	4-NT
15.798	84401	623.327	3-NT	.	0	.	3-NT
.	0	.	PETN	16.949	1295045	9456.654	PETN
27.292	49661	1456.877	2-NMX	27.437	711138	1455.852	2-NMX
33.43	68499	521.412	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.28A
Area File: C:\CPWIN\DATA1\5E12310B.28A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:46:44 PM
File Reported On: 11/20/2013 at 4:46:55 PM

Not Used
See Reintegration

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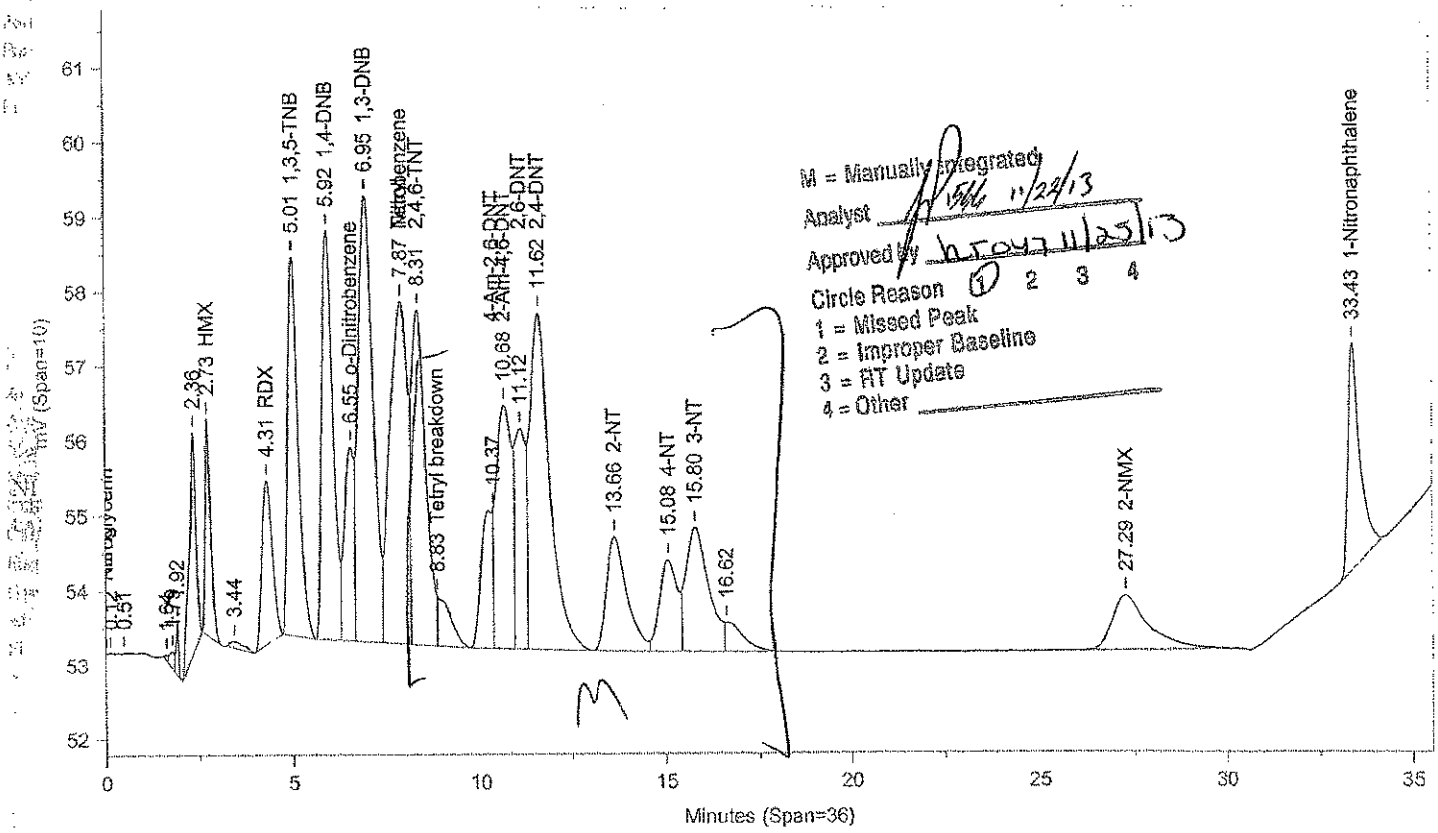
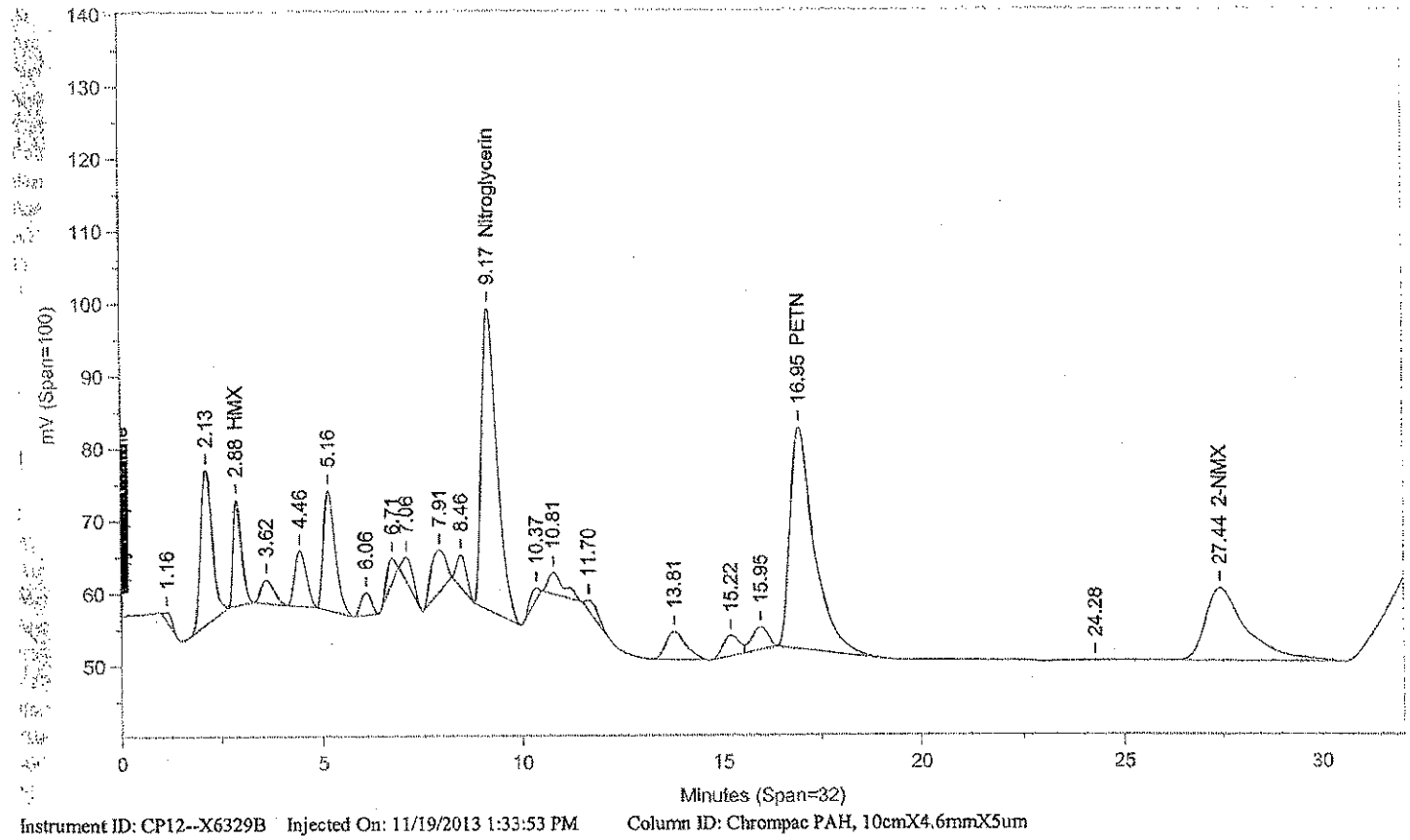
File: C:\CPWIN\DATA1\5E12310.28R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

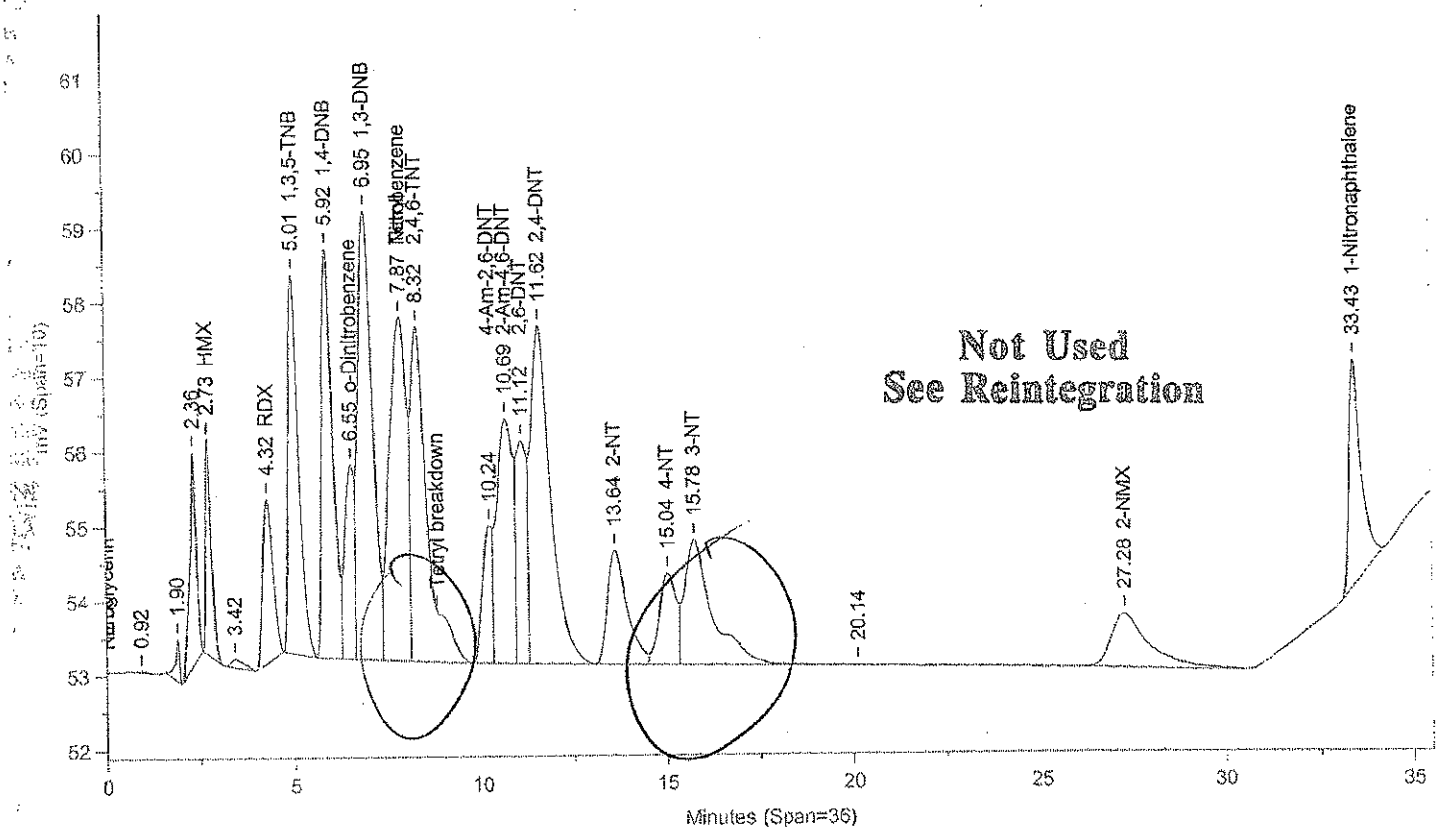
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.876	207080	494.067	HMX
4.31	42015	466.997	RDX	.	0	.	RDX
5.007	97875	463.669	1,3,5-TNB	.	0	.	1,3,5-TNB
5.916	115161	452.014	1,4-DNB	.	0	.	1,4-DNB
6.551	45364	440.265	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.946	157760	486.172	1,3-DNB	.	0	.	1,3-DNB
7.869	149192	433.339	Nitrobenzene	.	0	.	Nitrobenzene
8.31	119068	522.545	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	16709	48.339	Tetryl breakdown	.	0	.	Tetryl breakdown
De. .	0	.	Nitroglycerin	9.171	1126814	8816.657	Nitroglycerin
10.367	40182	428.284	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
Cal0.68	97005	442.913	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.123	61412	505.138	2,6-DNT	.	0	.	2,6-DNT
11.618	167735	507.112	2,4-DNT	.	0	.	2,4-DNT
13.656	56229	425.039	2-NT	.	0	.	2-NT
15.083	41248	439.611	4-NT	.	0	.	4-NT
15.798	68564	506.36	3-NT	.	0	.	3-NT
.	0	.	PETN	16.949	1295045	9456.654	PETN
27.292	49661	1456.877	2-NMX	27.437	711138	1455.852	2-NMX
33.43	68499	521.412	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

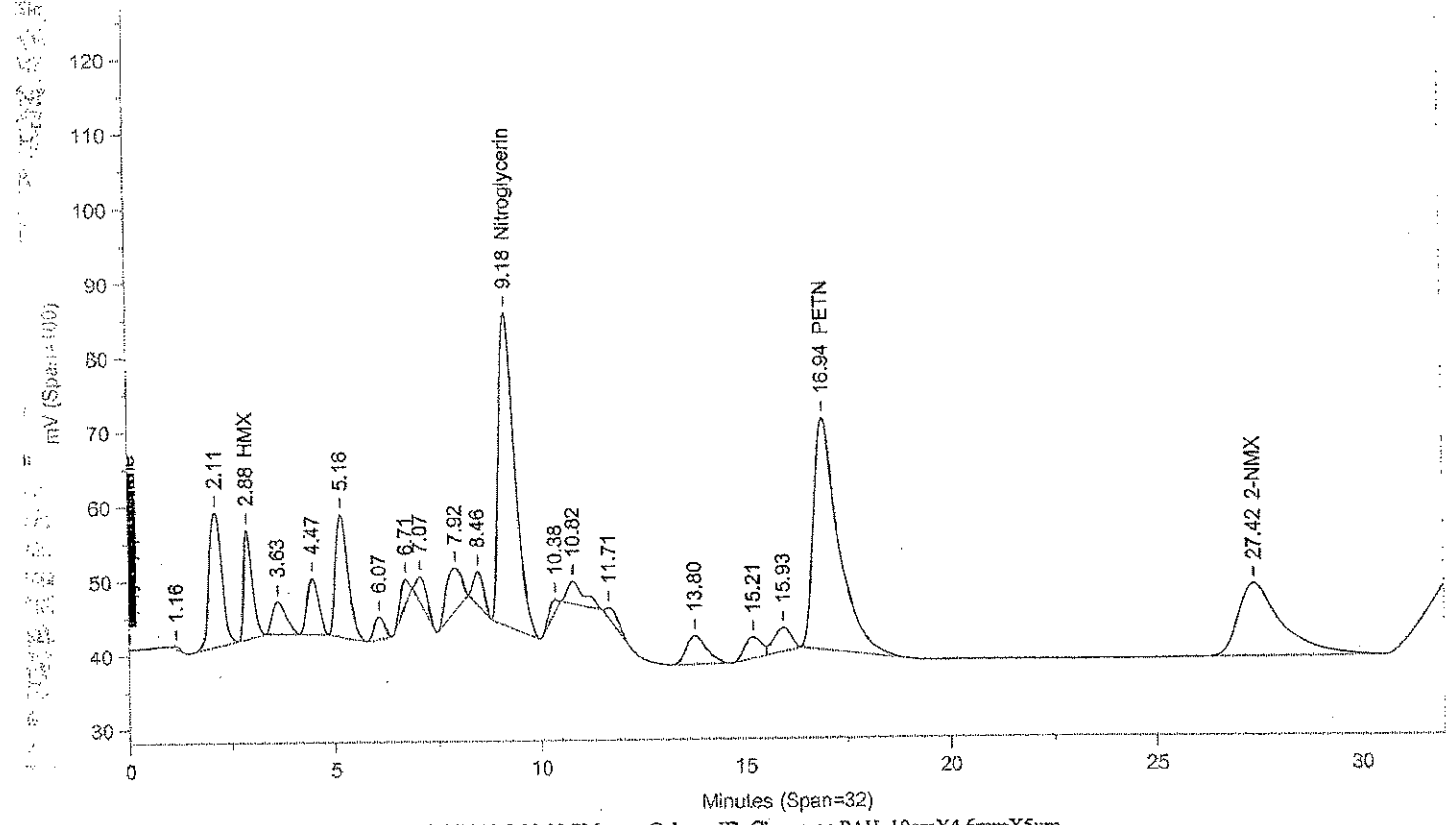
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:14:08 PM
File Reported On: 11/22/2013 at 3:14:07 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

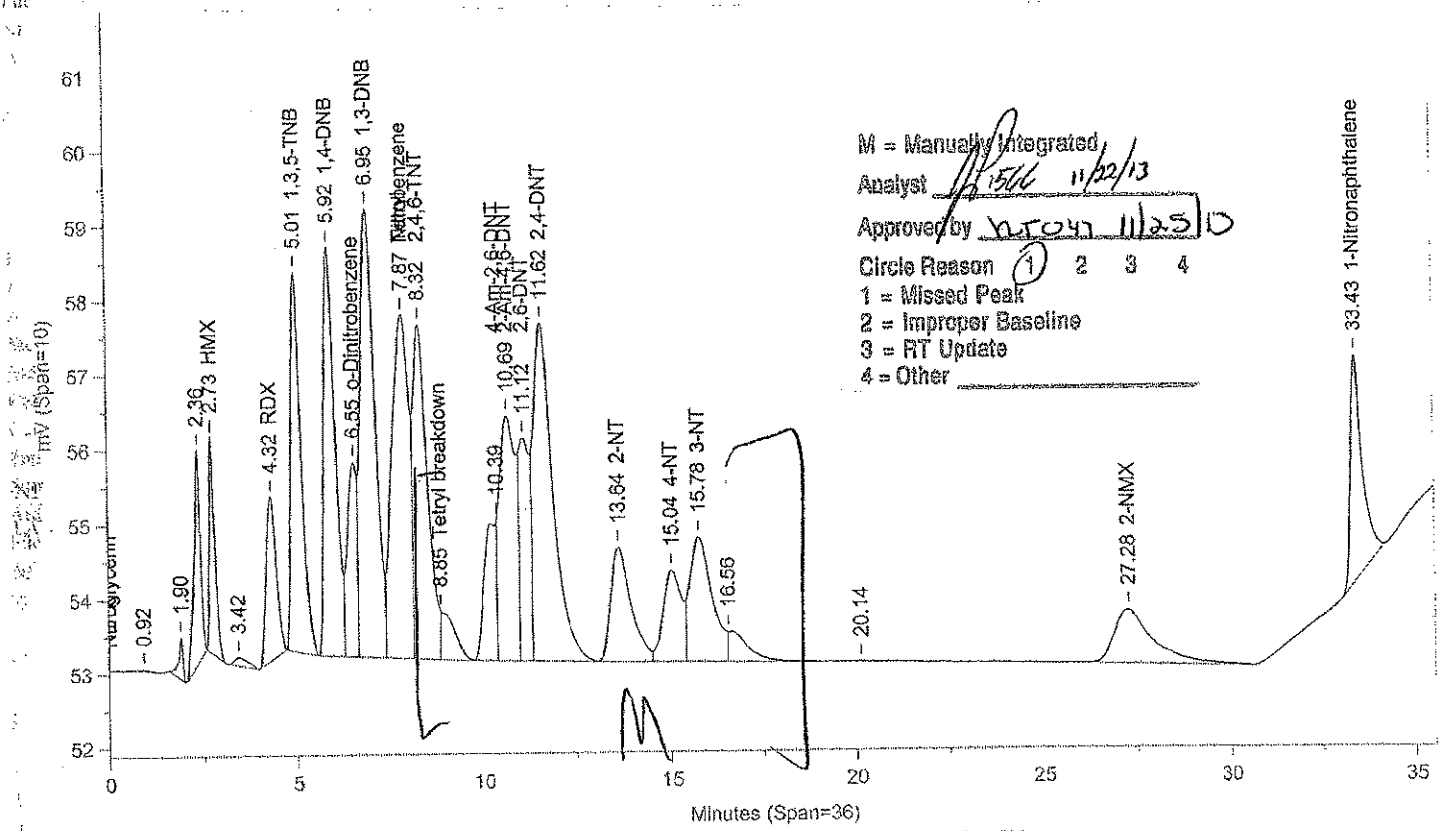
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.878	211627	504.534	HMX
4.318	42147	468.498	RDX	.	0	.	RDX
5.014	98530	466.773	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	115527	453.452	1,4-DNB	.	0	.	1,4-DNB
6.552	45426	440.876	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.954	159900	492.767	1,3-DNB	.	0	.	1,3-DNB
7.868	146669	426.012	Nitrobenzene	.	0	.	Nitrobenzene
8.315	136996	601.225	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.177	1142318	8937.969	Nitroglycerin
10.244	33677	358.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.686	100112	457.101	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.116	61468	505.591	2,6-DNT	.	0	.	2,6-DNT
11.616	172883	522.676	2,4-DNT	.	0	.	2,4-DNT
13.636	56847	429.716	2-NT	.	0	.	2-NT
15.044	39827	424.473	4-NT	.	0	.	4-NT
15.777	87442	645.779	3-NT	.	0	.	3-NT
.	0	.	PETN	16.94	1317398	9619.846	PETN
27.277	51711	1517.002	2-NMX	27.423	697382	1427.689	2-NMX
33.435	67959	517.305	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\SE12310.39A
Area File: C:\CPWIN\DATA1\SE12310B.39A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:52:20 PM
Report Reported On: 11/20/2013 at 4:52:30 PM

Not Used
See Reintegration

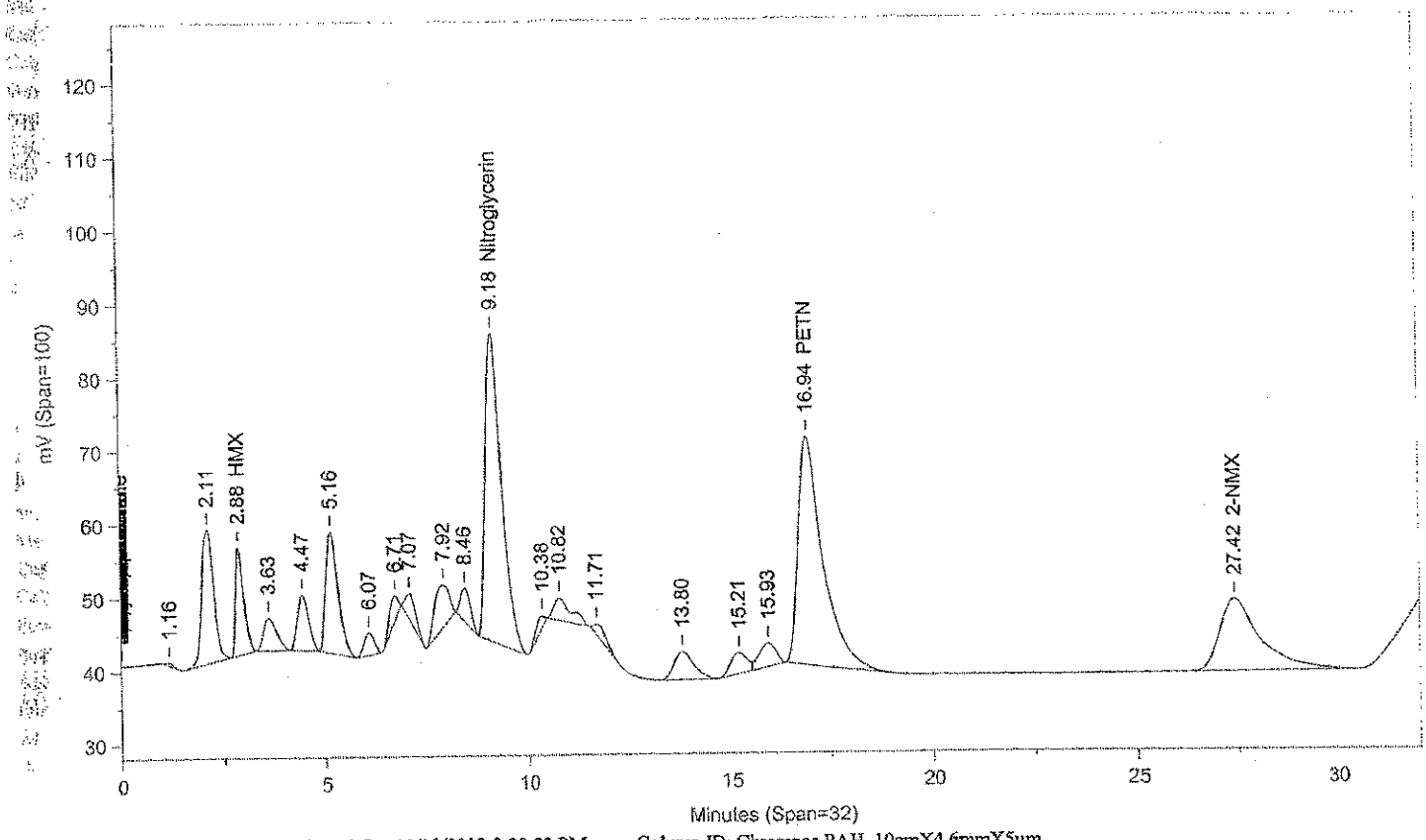
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.878	211627	504.534	HMX
4.318	42147	468.498	RDX	.	0	.	RDX
5.014	98530	466.773	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	115527	453.452	1,4-DNB	.	0	.	1,4-DNB
6.552	45426	440.876	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.954	159900	492.767	1,3-DNB	.	0	.	1,3-DNB
7.868	146669	426.012	Nitrobenzene	.	0	.	Nitrobenzene
8.315	120152	527.304	2,4,6-TNT	.	0	.	2,4,6-TNT
8.85	16844	48.729	Tetryl breakdown	.	0	.	Tetryl breakdown
Det. . .	0	.	Nitroglycerin	9.177	1142318	8937.969	Nitroglycerin
10.389	42252	450.344	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.686	100799	460.237	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.116	59639	490.551	2,6-DNT	.	0	.	2,6-DNT
11.616	165450	500.205	2,4-DNT	.	0	.	2,4-DNT
13.636	56847	429.716	2-NT	.	0	.	2-NT
15.044	42017	447.806	4-NT	.	0	.	4-NT
15.777	70113	517.805	3-NT	.	0	.	3-NT
.	0	.	PETN	16.94	1317398	9619.846	PETN
27.277	51711	1517.002	2-NMX	27.423	697382	1427.689	2-NMX
33.435	67959	517.305	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:44:36 PM
File Reported On: 11/22/2013 at 3:44:35 PM

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131

update MSH 51 12/18/13

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\2c12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 70

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1331399999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1331399999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1331399999	
4	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1331399999	
5	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1331399999	
6	NITR31324L		CCAL	NU		8330C.MET	1	1	1	0	1331399999	
7	BLANKA 11/2/13		BLK	AA		8330C.MET	500	10	1	0	133050025A	06916
8	LCSA 11/2/13		LCS	AA		8330C.MET	500	10	1	0	133050025A	06916
9	LCSDA 11/2/13		LCSD	AA		8330C.MET	500	10	1	0	133050025A	06916
10	7257293		T	AA		8330C.MET	500	10	1	0	133050025A	06916
11	7257294		T	AA		8330C.MET	500	10	1	0	133050025A	06916
12	7257295		T	AA		8330C.MET	500	10	1	0	133050025A	06916
13	7257296		T	AA		8330C.MET	500	10	1	0	133050025A	06916
14	7257297		T	AA		8330C.MET	500	10	1	0	133050025A	06916
15	7257298		T	AA		8330C.MET	500	10	1	0	133050025A	06916
16	7257299		T	AA		8330C.MET	500	10	1	0	133050025A	06916
17	NITR31324L		CCAL	NW		8330C.MET	1	1	1	0	1331399999	
18	7257301		T	AA		8330C.MET	500	10	1	0	133050025A	06916
19	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060016A	06916
20	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060016A	06916
21	7258858		T	AA		8330C.MET	500	10	1	0	133060016A	06916
22	7258859		T	AA		8330C.MET	500	10	1	0	133060016A	06916
23	7258860		T	AA		8330C.MET	500	10	1	0	133060016A	06916
24	7258861		T	AA		8330C.MET	500	10	1	0	133060016A	06916
25	7258862		T	AA		8330C.MET	500	10	1	0	133060016A	06916
26	7258863		T	AA		8330C.MET	500	10	1	0	133060016A	06916
27	7258864		T	AA		8330C.MET	500	10	1	0	133060016A	06916
28	NITR31324L		CCAL	NY		8330C.MET	1	1	1	0	1331399999	
29	7258865		T	AA		8330C.MET	500	10	1	0	133060016A	06916
30	7258866		T	AA		8330C.MET	500	10	1	0	133060016A	06916
31	7258867		T	AA		8330C.MET	500	10	1	0	133060016A	06916
32	7258868		T	AA		8330C.MET	500	10	1	0	133060016A	06916
33	7258869MS		MS	AA		8330C.MET	500	10	1	0	133060016A	06916
34	7258870MSD		MSD	AA		8330C.MET	500	10	1	0	133060016A	06916
35	7258871		T	AA		8330C.MET	500	10	1	0	133060016A	06916
36	7258872		T	AA		8330C.MET	500	10	1	0	133060016A	06916
37	7258873		T	AA		8330C.MET	500	10	1	0	133060016A	06916
38	7258874		T	AA		8330C.MET	500	10	1	0	133060016A	06916
39	NITR31324L		CCAL	OA		8330C.MET	1	1	1	0	1331399999	
40	NITR31324M		CCAL	OB		8330C.MET	1	1	1	0	1331399999	
41	7258875		T	AA		8330C.MET	500	10	1	0	133060016A	06916
42	7260790		T	AA		8330C.MET	500	10	1	0	133060016A	06916
43	BLANKA 11/7/13		BLK	AA		8330C.MET	2	20	1	0	133110005A	10132
44	LCSA 11/7/13		LCS	AA		8330C.MET	2	20	1	0	133110005A	10132
45	LCSDDIA 11/7/13		LCSD	AA		8330C.MET	2	20	1	0	133110005A	10132
46	LCSDIA 11/7/13		LCS	AA		8330C.MET	2	20	1	0	133110005A	10132
47	7264409		T	AA		8330C.MET	2	20	1	0	133110005A	10132
48	7264409MS		MS	AA		8330C.MET	2	20	1	0	133110005A	10132
49	7264409MSD		MSD	AA		8330C.MET	2	20	1	0	133110005A	10132
50	7264415		T	AA		8330C.MET	2	20	1	0	133110005A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\2c12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 70

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	OC		8330C.MET	1	1	1	0	1331399999	
52	NITR31324M		CCAL	OD		8330C.MET	1	1	1	0	1331399999	
53	7264418		T	AA		8330C.MET	2	20	1	0	133110005A	10132
54	7264421		T	AA		8330C.MET	2	20	1	0	133110005A	10132
55	7264424		T	AA		8330C.MET	2	20	1	0	133110005A	10132
56	7264433		T	AA		8330C.MET	2	20	1	0	133110005A	10132
57	7264439		T	AA		8330C.MET	2	20	1	0	133110005A	10132
58	7264445		T	AA		8330C.MET	2	20	1	0	133110005A	10132
59	7264575		T	AA		8330C.MET	2	20	1	0	133110005A	10132
60	7264585		T	AA		8330C.MET	2	20	1	0	133110005A	10132
61	7264590		T	AA		8330C.MET	2	20	1	0	133110005A	10132
62	7264593		T	AA		8330C.MET	2	20	1	0	133110005A	10132
63	NITR31324L		CCAL	OE		8330C.MET	1	1	1	0	1331399999	
64	NITR31324M		CCAL	OF		8330C.MET	1	1	1	0	1331399999	
65	7266316		T	AA		8330C.MET	2	20	1	0	133110005A	10132
66	7266319		T	AA		8330C.MET	2	20	1	0	133110005A	10132
67	7266325		T	AA		8330C.MET	2	20	1	0	133110005A	10132
68	7266328		T	AA		8330C.MET	2	20	1	0	133110005A	10132
69	7266344		T	AA		8330C.MET	2	20	1	0	133110005A	10132
70	BLANKA 11/7/13		BLK	AA		8330C.MET	2	20	1	0	133110004A	06918

Ending check ison 3C12310 inj's 5 & 6. 5m 2855 12Nov13

Set-up by: 2855 Date: 12Nov13
11/12/13

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\3C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 90

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	BLANKA 11/11/13		BLK	AA		8330C.MET	2	20	1	0	133130017A	10132
2	LCSA 11/11/13		LCS	AA		8330C.MET	2	20	1	0	133130017A	10132
3	LCSDDIA 11/11/13		LCSD	AA		8330C.MET	2	20	1	0	133130017A	10132
4	LCSDIA 11/11/13		LCS	AA		8330C.MET	2	20	1	0	133130017A	10132
5	NITR31324L		CCAL	OM		8330C.MET	1	1	1	0	1331599999	
6	NITR31324M		CCAL	ON		8330C.MET	1	1	1	0	1331599999	
7	7259353R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
8	7255735R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
9	7255736RMS		MS	AA		8330C.MET	2	20	1	0	133130017A	10132
10	7255737RMSD		MSD	AA		8330C.MET	2	20	1	0	133130017A	10132
11	BLANKA 11/11/13		BLK	AA		8330C.MET	2	20	1	0	133130018A	10132
12	LCSA 11/11/13		LCS	AA		8330C.MET	2	20	1	0	133130018A	10132
13	LCSDDIA 11/11/13		LCSD	AA		8330C.MET	2	20	1	0	133130018A	10132
14	LCSDIA 11/11/13		LCS	AA		8330C.MET	2	20	1	0	133130018A	10132
15	7260617R		T	AA		8330C.MET	2.1	20	1	0	133130018A	10132
16	7257006R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
17	NITR31324L		CCAL	OO		8330C.MET	1	1	1	0	1331599999	
18	NITR31324M		CCAL	OP		8330C.MET	1	1	1	0	1331599999	
19	7257006RMS		MS	AA		8330C.MET	2	20	1	0	133130018A	10132
20	7257006RMSD		MSD	AA		8330C.MET	2	20	1	0	133130018A	10132
21	LCSA 11/7/13		LCS	AA		8330C.MET	2	20	1	0	133110004A	06918
22	7263052		T	AA		8330C.MET	2	20	1	0	133110004A	06918
23	7263052MS		MS	AA		8330C.MET	2	20	1	0	133110004A	06918
24	7263052MSD		MSD	AA		8330C.MET	2	20	1	0	133110004A	06918
25	7263053		T	AA		8330C.MET	2	20	1	0	133110004A	06918
26	7263054		T	AA		8330C.MET	2	20	1	0	133110004A	06918
27	7263055		T	AA		8330C.MET	2	20	1	0	133110004A	06918
28	7265225		T	AA		8330C.MET	2	20	1	0	133110004A	06918
29	NITR31324L		CCAL	OQ		8330C.MET	1	1	1	0	1331599999	
30	NITR31324M		CCAL	OR		8330C.MET	1	1	1	0	1331599999	
31	MS1330124B		MISC	AA		8330C.MET	1	50	1	0	1331599999	
32	MS1330824A		MISC	AA		8330C.MET	1	50	1	0	1331599999	
33	MS1326324A		MISC	AA		8330C.MET	1	50	1	0	1331599999	
34	MS1331724C		MISC	AA		8330C.MET	1	50	1	0	1331599999	
35	MS1330924A		MISC	AA		8330C.MET	1	50	1	0	1331599999	
36	7265226		T	AA		8330C.MET	2	20	1	0	133110004A	06918
37	7265227		T	AA		8330C.MET	2	20	1	0	133110004A	06918
38	7265234		T	AA		8330C.MET	2	20	1	0	133110004A	06918
39	7265236		T	AA		8330C.MET	2	20	1	0	133110004A	06918
40	7265237		T	AA		8330C.MET	2	20	1	0	133110004A	06918
41	NITR31324L		CCAL	OS		8330C.MET	1	1	1	0	1331599999	
42	NITR31324M		CCAL	OT		8330C.MET	1	1	1	0	1331599999	
43	7265241		T	AA		8330C.MET	2	20	1	0	133110004A	06918
44	7265242		T	AA		8330C.MET	2	20	1	0	133110004A	06918
45	7265244		T	AA		8330C.MET	2	20	1	0	133110004A	06918
46	7265245		T	AA		8330C.MET	2	20	1	0	133110004A	06918
47	7265246		T	AA		8330C.MET	2	20	1	0	133110004A	06918
48	7255708R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
49	7255711R		T	AA		8330C.MET	2.1	20	1	0	133130017A	10132
50	7255717R		T	AA		8330C.MET	2	20	1	0	133130017A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\3C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 90

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7255722R		T	AA		8330C.MET	2.1	20	1	0	133130017A	10132
52	7255744R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
53	NITR31324L		CCAL	OU		8330C.MET	1	1	1	0	1331599999	
54	NITR31324M		CCAL	OV		8330C.MET	1	1	1	0	1331599999	
55	7255746R		T	AA		8330C.MET	2.2	20	1	0	133130017A	10132
56	7255752R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
57	7256953R		T	AA		8330C.MET	2.1	20	1	0	133130017A	10132
58	7256959R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
59	7256962R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
60	7256965R		T	AA		8330C.MET	2.1	20	1	0	133130017A	10132
61	7256970R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
62	7256973R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
63	7256976R		T	AA		8330C.MET	2	20	1	0	133130017A	10132
64	7256999R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
65	NITR31324L		CCAL	OY		8330C.MET	1	1	1	0	1331599999	
66	NITR31324M		CCAL	OZ		8330C.MET	1	1	1	0	1331599999	
67	NEW MS		MISC	AA		8330C.MET	1	50	1	0	1331599999	
68	NEW LEVEL 3		MISC	AA		8330C.MET	1	1	1	0	1331599999	
69	NEW ICV		MISC	AA		8330C.MET	1	1	1	0	1331599999	
70	7257011R		T	AA		8330C.MET	2.1	20	1	0	133130018A	10132
71	7257016R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
72	7257019R		T	AA		8330C.MET	2.1	20	1	0	133130018A	10132
73	7259344R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
74	7259359R		T	AA		8330C.MET	2.2	20	1	0	133130018A	10132
75	7259366R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
76	7259368R		T	AA		8330C.MET	2.2	20	1	0	133130018A	10132
77	NITR31324L		CCAL	OW		8330C.MET	1	1	1	0	1331599999	
78	NITR31324M		CCAL	OX		8330C.MET	1	1	1	0	1331599999	
79	7259386R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
80	7259391R		T	AA		8330C.MET	2.1	20	1	0	133130018A	10132
81	7259396R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
82	7260623R		T	AA		8330C.MET	2.2	20	1	0	133130018A	10132
83	7260634R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
84	7260649R		T	AA		8330C.MET	2	20	1	0	133130018A	10132
85	NITR31324L		CCAL	OW		8330C.MET	1	1	1	0	1331599999	
86	NITR31324M		CCAL	OX		8330C.MET	1	1	1	0	1331599999	
87	SS1330824A		MISC	AA		8330C.MET	1	20	1	0	1331599999	
88	SS13328724A		MISC	AA		8330C.MET	1	20	1	0	1331599999	
89	SS1331724A		MISC	AA		8330C.MET	1	100	1	0	1331599999	
90	SS1327424A		MISC	AA		8330C.MET	1	100	1	0	1331599999	

Set-up by: 2855 Date: 11/21/13

11/17/13

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1331899999	
2 CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1331899999	
3 CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1331899999	
4 CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1331899999	
5 CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1331899999	
6 NITR31324O	6	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
7 NITR31324M	7	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
8 MS1330124B	8	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
9 MS1330124B	9	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
10 MS1330124B	10	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
11 MS1330124B	11	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
12 BLANKA 11/12/13	12	BLK	AA		8330C.MET	2	20	1	0	133140021A	10132
13 LCSA 11/12/13	13	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
14 LCSDDIA 11/12/13	14	LCSD	AA		8330C.MET	2	20	1	0	133140021A	10132
15 LCSDiA 11/12/13	15	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
16 7269438	16	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
17 7269438MS	17	MS	AA		8330C.MET	2	20	1	0	133140021A	10132
18 NITR31324O	18	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
19 NITR31324M	19	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
20 7269438MSD	20	MSD	AA		8330C.MET	2.2	20	1	0	133140021A	10132
21 7269454	21	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
22 7269467	22	T	AA		8330C.MET	2	20	1	0	133140021A	10132
23 7269472	23	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
24 7269475	24	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
25 7269478	25	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
26 7269484	26	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
27 7269487	27	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
28 BLANKA 11/12/13	28	BLK	AA		8330C.MET	2	20	1	0	133160009A	10132
29 LCSA 11/12/13	29	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
30 NITR31324O	30	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
31 NITR31324M	31	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
32 LCSDDIA 11/12/13	32	LCSD	AA		8330C.MET	2	20	1	0	133160009A	10132
33 LCSDIA 11/12/13	33	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
34 7269501	34	T	AA		8330C.MET	2	20	1	0	133160009A	10132
35 7269504	35	T	AA		8330C.MET	2	20	1	0	133160009A	10132
36 7269514	36	T	AA		8330C.MET	2	20	1	0	133160009A	10132
37 7269520	37	T	AA		8330C.MET	2	20	1	0	133160009A	10132
38 7269526	38	T	AA		8330C.MET	2	20	1	0	133160009A	10132
39 7269529	39	T	AA		8330C.MET	2	20	1	0	133160009A	10132
40 7269532	40	T	AA		8330C.MET	2	20	1	0	133160009A	10132
41 7269538	41	T	AA		8330C.MET	2	20	1	0	133160009A	10132
42 NITR31324O	42	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
43 NITR31324M	43	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
44 7269541	44	T	AA		8330C.MET	2	20	1	0	133160009A	10132
45 7269544	45	T	AA		8330C.MET	2	20	1	0	133160009A	10132
46 7269550	46	T	AA		8330C.MET	2	20	1	0	133160009A	10132
47 7269553	47	T	AA		8330C.MET	2	20	1	0	133160009A	10132
48 7269559	48	T	AA		8330C.MET	2	20	1	0	133160009A	10132
49 7270974	49	T	AA		8330C.MET	2	20	1	0	133160009A	10132
50 7270975MS	50	MS	AA		8330C.MET	2	20	1	0	133160009A	10132



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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270976MSD	51	MSD	AA		8330C.MET	2	20	1	0	133160009A	10132
52 7270986	52	T	AA		8330C.MET	2	20	1	0	133160009A	10132
53 7270989	53	T	AA		8330C.MET	2	20	1	0	133160009A	10132
54 NITR31324O	54	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
55 NITR31324M	55	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
56 7270995	56	T	AA		8330C.MET	2	20	1	0	133160009A	10132
57 7271001	57	T	AA		8330C.MET	2	20	1	0	133160009A	10132
58 NITR31324O	58	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
59 NITR31324M	59	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
60 BLANKA 11/11/13	60	BLK	AA		8330C.MET	500	10	1	0	133130015A	06916
61 LCSA 11/11/13	61	LCS	AA		8330C.MET	500	10	1	0	133130015A	06916
62 7265223	62	T	AA		8330C.MET	500	10	1	0	133130015A	06916
63 7265224	63	T	AA		8330C.MET	500	10	1	0	133130015A	06916
64 7265228	64	T	AA		8330C.MET	500	10	1	0	133130015A	06916
65 7265230	65	T	AA		8330C.MET	500	10	1	0	133130015A	06916
66 7265231MS	66	MS	AA		8330C.MET	500	10	1	0	133130015A	06916
67 7265232MSD	67	MSD	AA		8330C.MET	500	10	1	0	133130015A	06916
68 7265235	68	T	AA		8330C.MET	500	10	1	0	133130015A	06916
69 7265238	69	T	AA		8330C.MET	500	10	1	0	133130015A	06916
70 NITR31324O	70	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
71 7265240	71	T	AA		8330C.MET	500	10	1	0	133130015A	06916
72 7265243	72	T	AA		8330C.MET	500	10	1	0	133130015A	06916
73 7265247	73	T	AA		8330C.MET	500	10	1	0	133130015A	06916
74 7265248	74	T	AA		8330C.MET	500	10	1	0	133130015A	06916
75 BLANKA 11/12/13	75	BLK	AA		8330C.MET	500	10	1	0	133140016A	06916
76 LCSA 11/12/13	76	LCS	AA		8330C.MET	500	10	1	0	133140016A	06916
77 LCSDA 11/12/13	77	LCSD	AA		8330C.MET	500	10	1	0	133140016A	06916
78 7266798	78	T	AA		8330C.MET	500	10	1	0	133140016A	06916
79 7266799	79	T	AA		8330C.MET	500	10	1	0	133140016A	06916
80 7266805	80	T	AA		8330C.MET	500	10	1	0	133140016A	06916
81 NITR31324O	81	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
82 7266807	82	T	AA		8330C.MET	500	10	1	0	133140016A	06916
83 7266810	83	T	AA		8330C.MET	500	10	1	0	133140016A	06916
84 7266811	84	T	AA		8330C.MET	500	10	1	0	133140016A	06916
85 7266819	85	T	AA		8330C.MET	500	10	1	0	133140016A	06916
86 BLANKA 11/12/13	86	BLK	AA		8330C.MET	2	20	1	0	133140019A	06918
87 LCSA 11/12/13	87	LCS	AA		8330C.MET	2	20	1	0	133140019A	06918
88 7266800	88	T	AA		8330C.MET	2	20	1	0	133140019A	06918
89 7266801MS	89	MS	AA		8330C.MET	2.3	20	1	0	133140019A	06918
90 7266802MSD	90	MSD	AA		8330C.MET	2.3	20	1	0	133140019A	06918
91 7266804	91	T	AA		8330C.MET	2.4	20	1	0	133140019A	06918
92 NITR31324O	92	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
93 7266806	93	T	AA		8330C.MET	2.2	20	1	0	133140019A	06918
94 7266808	94	T	AA		8330C.MET	2.3	20	1	0	133140019A	06918
95 NITR31324O	95	CCAL	PV		8330C.MET	1	1	1	0	1331899999	

update MS 12/18/13

Set-up by: _____ Date: 11/20/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

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1	CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330C.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330C.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330C.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330C.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330C.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330C.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330C.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330C.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330C.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330C.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330C.MET	500	10	1	0	133110017A	06916
17	NITR31324P update MSK13	17	CCAL	QF		8330C.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330C.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330C.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330C.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330C.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330C.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330C.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330C.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330C.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330C.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330C.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330C.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330C.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330C.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330C.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330C.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330C.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330C.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330C.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330C.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330C.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330C.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330C.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330C.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330C.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330C.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330C.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330C.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330C.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330C.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330C.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330C.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330C.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330C.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330C.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330C.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330C.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330C.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330C.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330C.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330C.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330C.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330C.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330C.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330C.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/22/13

11/18/2013

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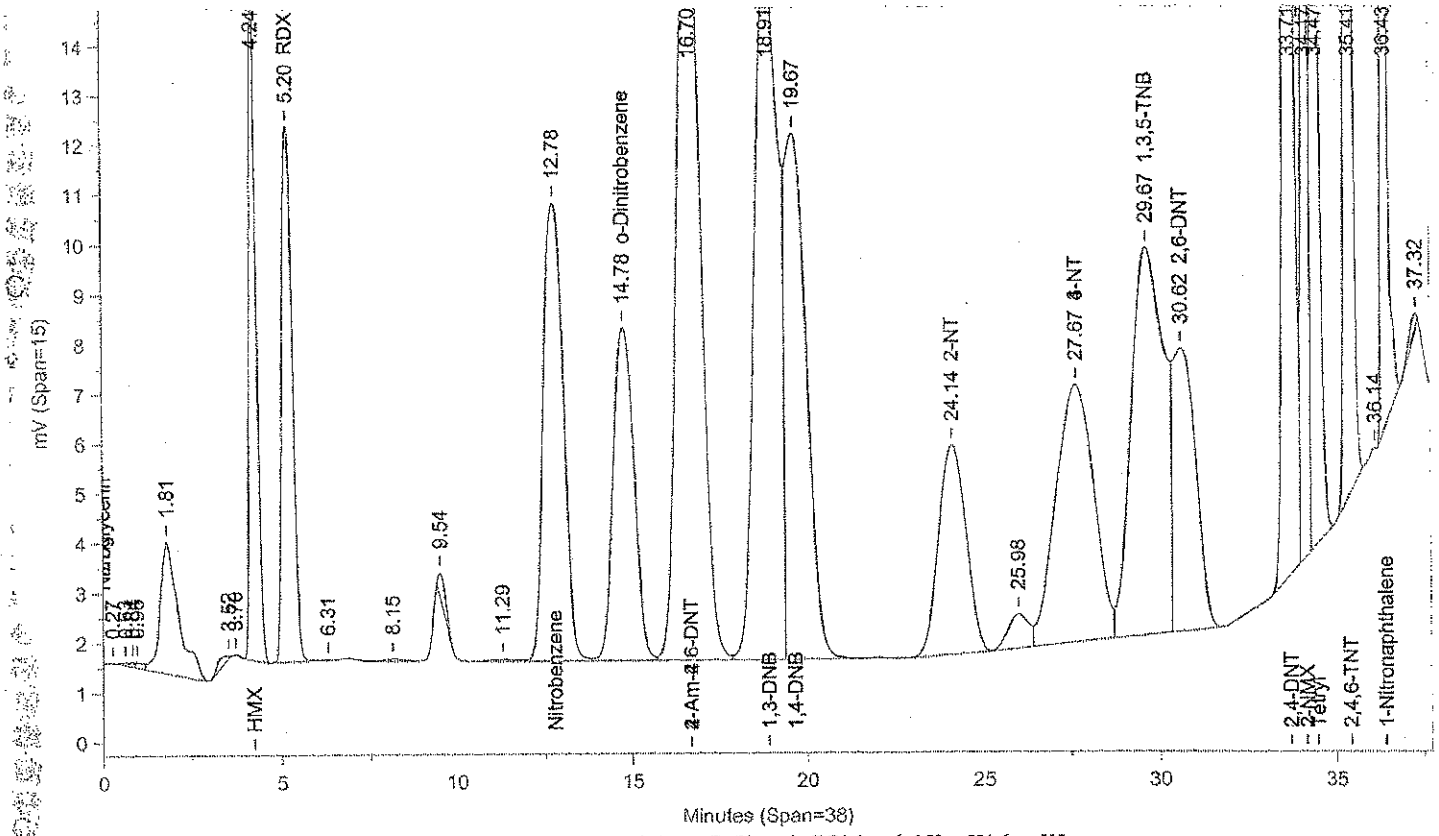
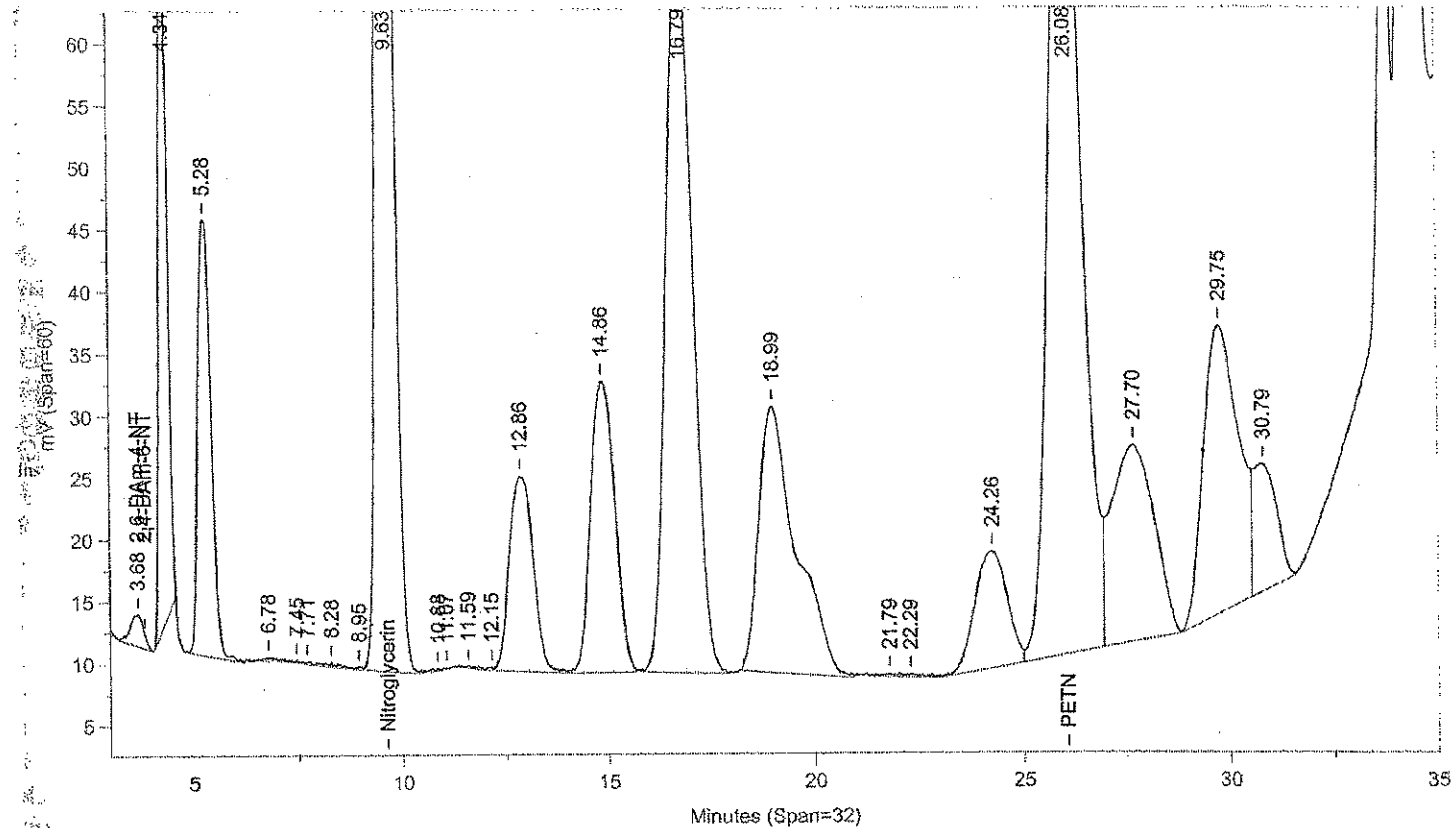


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.04R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.679	57898	3967.84	2,6-DAm-4-NT
4.245	191071	1822.663	HMX	.	0	.	HMX
5.199	224070	1976.111	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.628	3769975	43871.91	Nitroglycerin
12.782	369767	2065.282	Nitrobenzene	.	0	.	Nitrobenzene
14.784	274911	2411.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.703	761872	6863.797	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
18.907	676453	2411.108	1,3-DNB	.	0	.	1,3-DNB
19.671	450747	-43499.	1,4-DNB	.	0	.	1,4-DNB
24.138	229577	2379.561	2-NT	.	0	.	2-NT
.	0	.	PETN	26.077	4139229	-934754.9	PETN
27.667	397033	-52385.42	4-NT	.	0	.	4-NT
29.671	491541	-87636.54	1,3,5-TNB	.	0	.	1,3,5-TNB
30.618	255956	-73129.59	2,6-DNT	.	0	.	2,6-DNT
33.71	552207	6048.482	2,4-DNT	.	0	.	2,4-DNT
34.167	208653	6174.048	2-NMX	.	0	.	2-NMX
34.468	312750	2032.832	Tetryl	.	0	.	Tetryl
35.408	426797	2008.424	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	322421	2019.438	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

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Area File: C:\CPWIN\DATA1\1C12310.04A
Area File: C:\CPWIN\DATA1\1C12310B.04A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
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Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:27:54 PM
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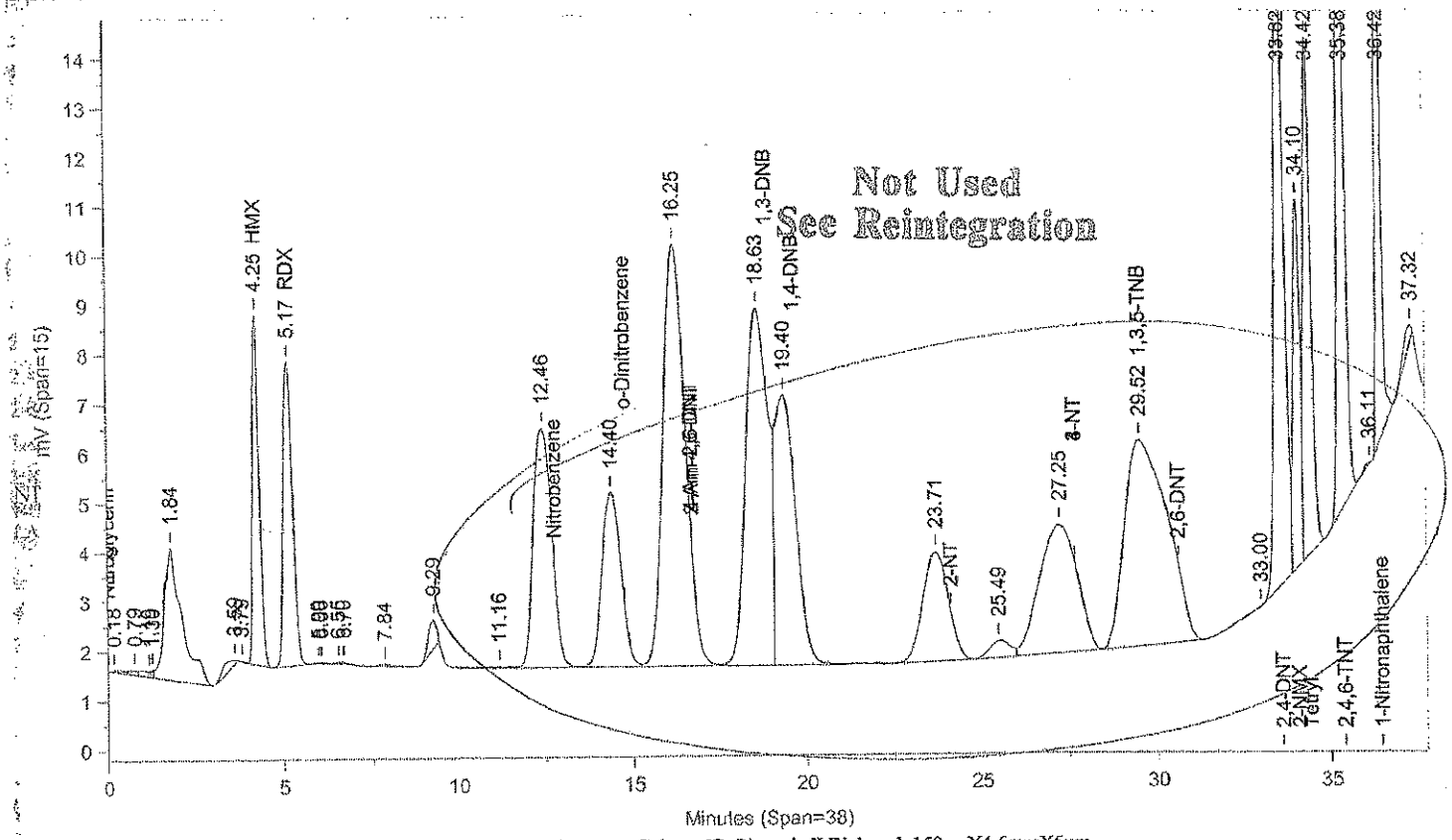

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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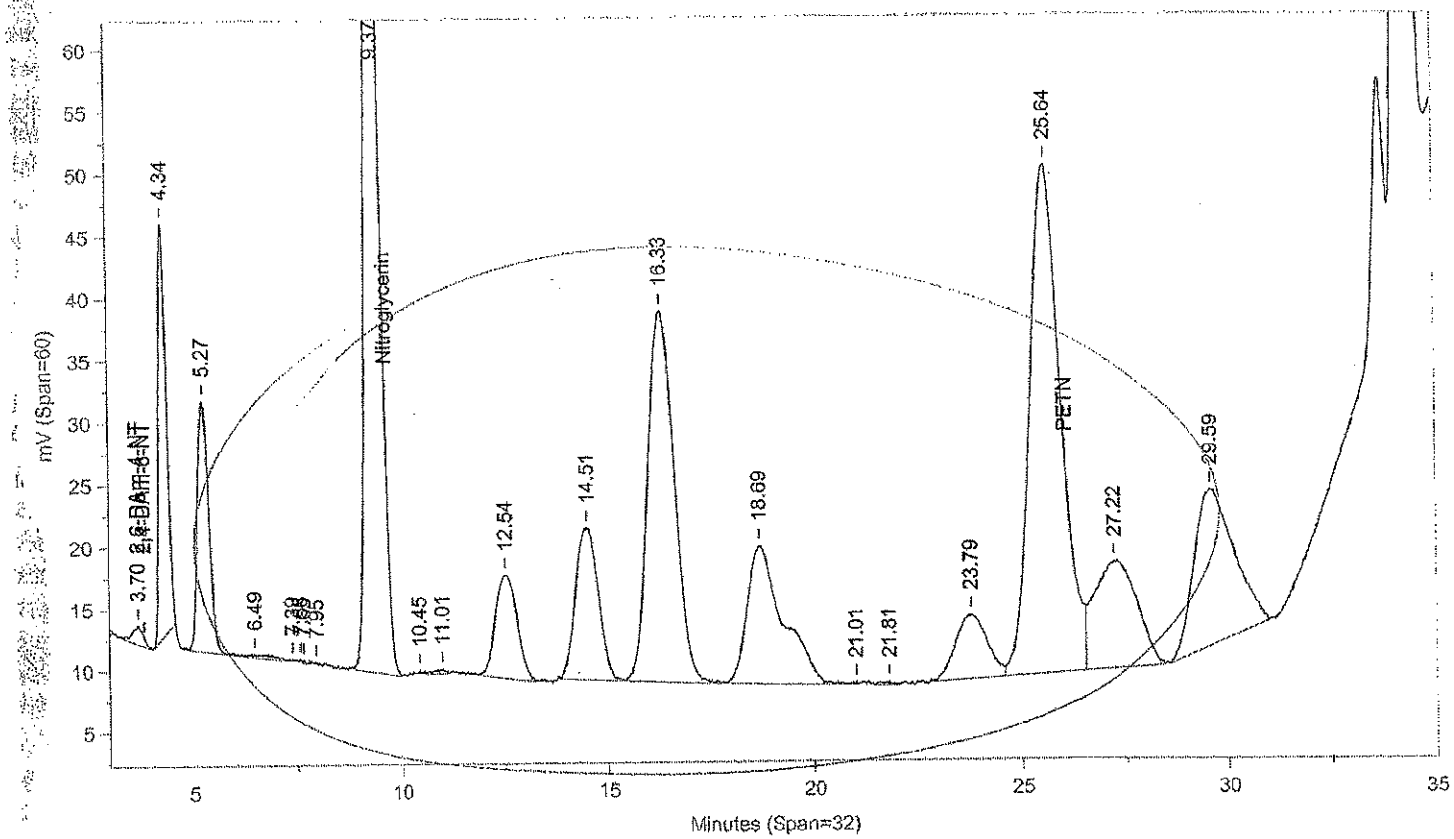

Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
29.524	356142	1778.783	1,3,5-TNB	.	0	.	1,3,5-TNB
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	156160	990.7	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Del
Files:
Area File: C:\CPWIN\DATA1\1C12310.05A
Area File: C:\CPWIN\DATA1\1C12310B.05A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:28:36 PM
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Not Used
See Reintegration

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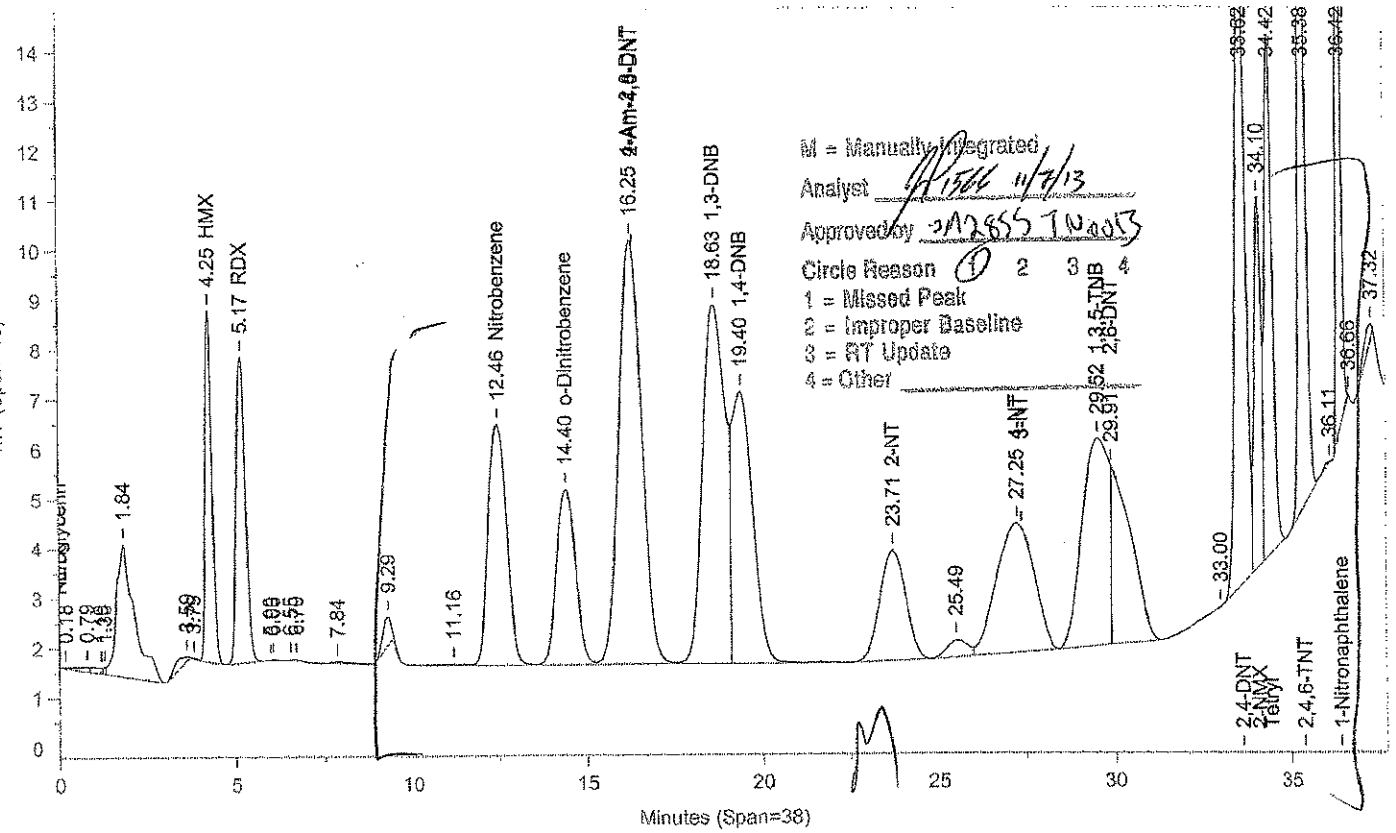

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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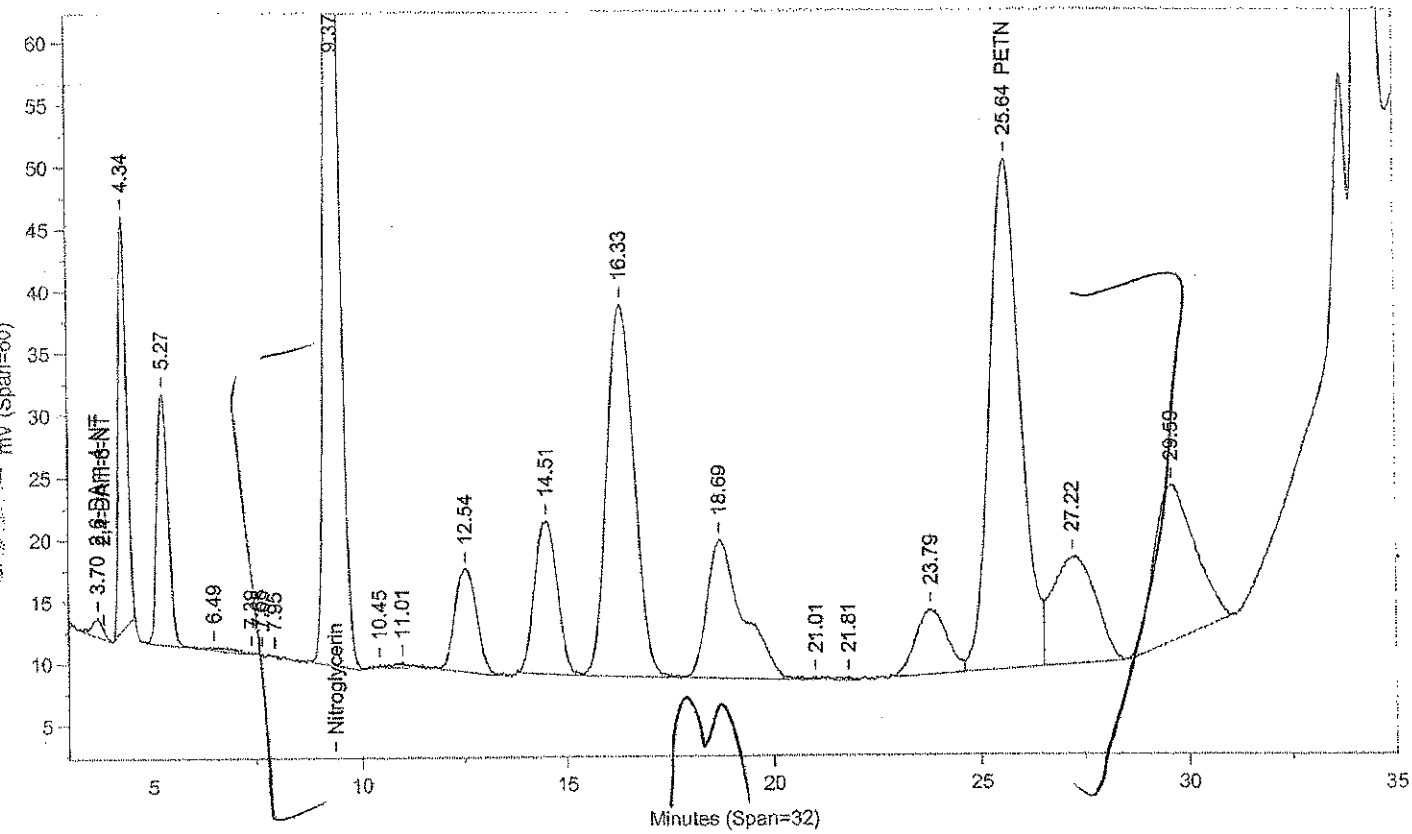

Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.372	1890557	22000.77	Nitroglycerin
12.462	181116	1011.597	Nitrobenzene	.	0	.	Nitrobenzene
14.4	137002	1246.378	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.246	375569	16890.87	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.63	329986	979.561	1,3-DNB	.	0	.	1,3-DNB
19.399	228175	1342.629	1,4-DNB	.	0	.	1,4-DNB
23.714	114933	1238.688	2-NT	.	0	.	2-NT
.	0	.	PETN	25.643	2110257	25588.42	PETN
27.246	192701	1298.439	4-NT	.	0	.	4-NT
29.524	218305	892.047	1,3,5-TNB	.	0	.	1,3,5-TNB
29.911	137837	1423.023	2,6-DNT	.	0	.	2,6-DNT
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	148002	940.223	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
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Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
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Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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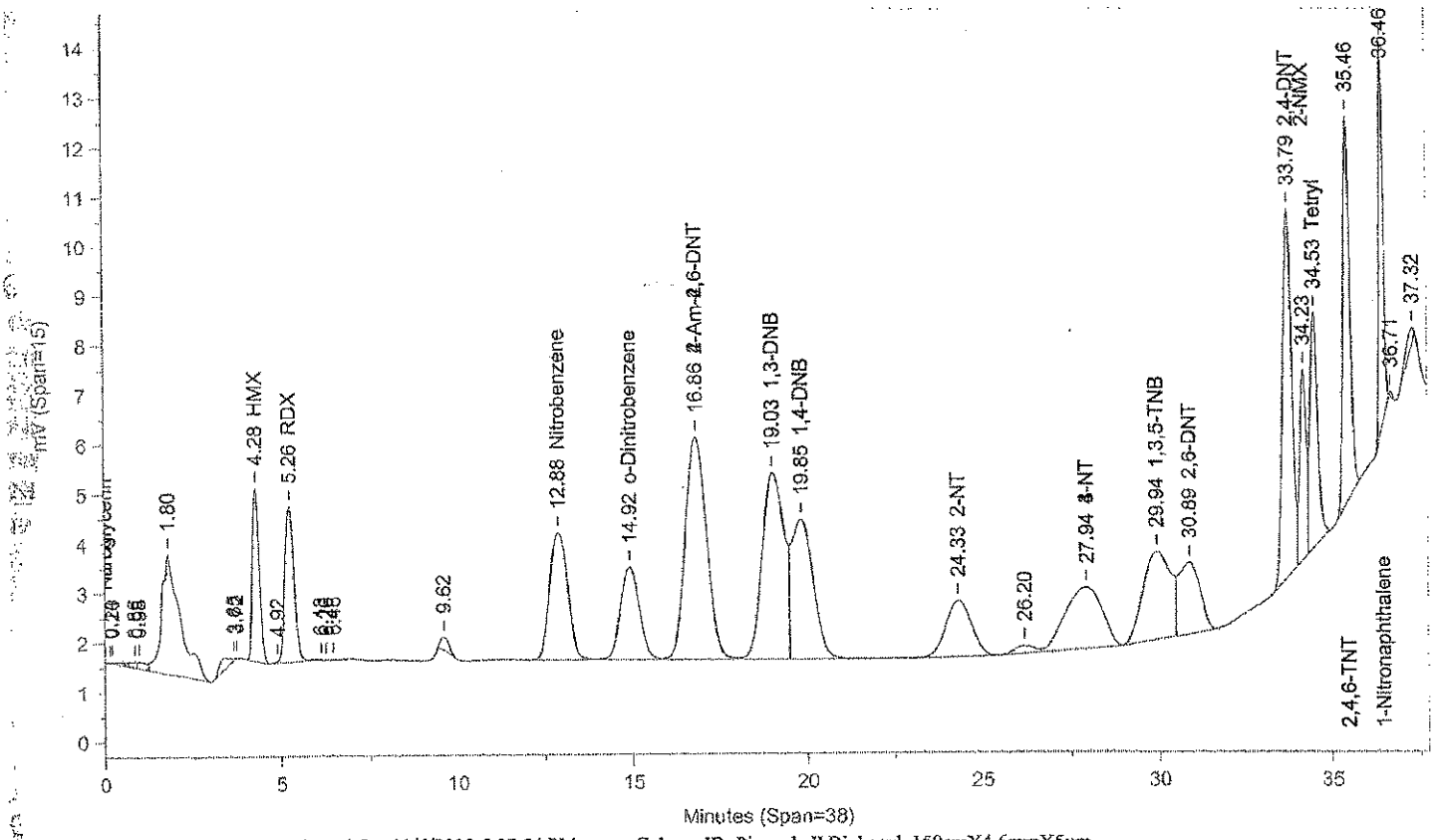

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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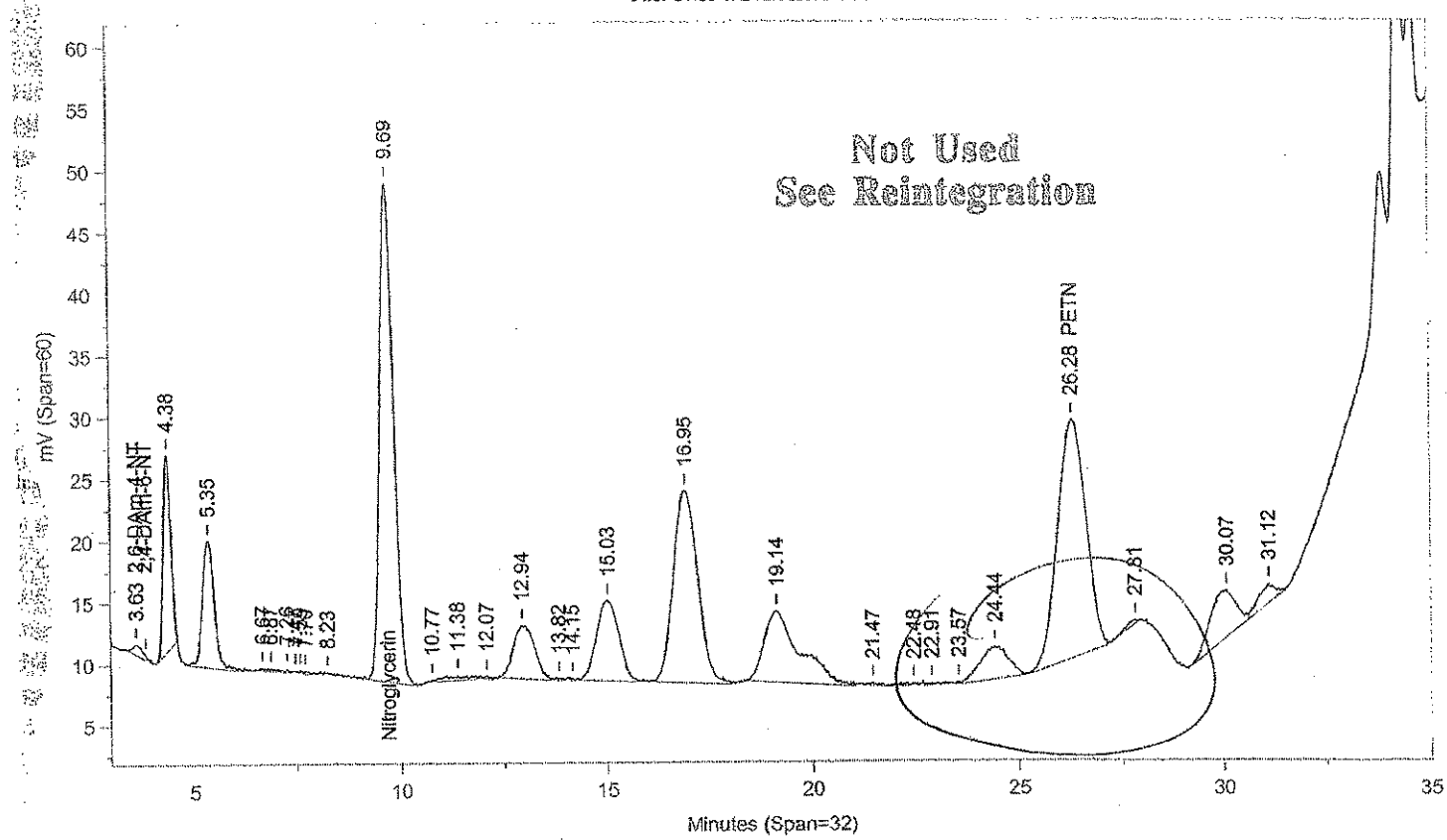


Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

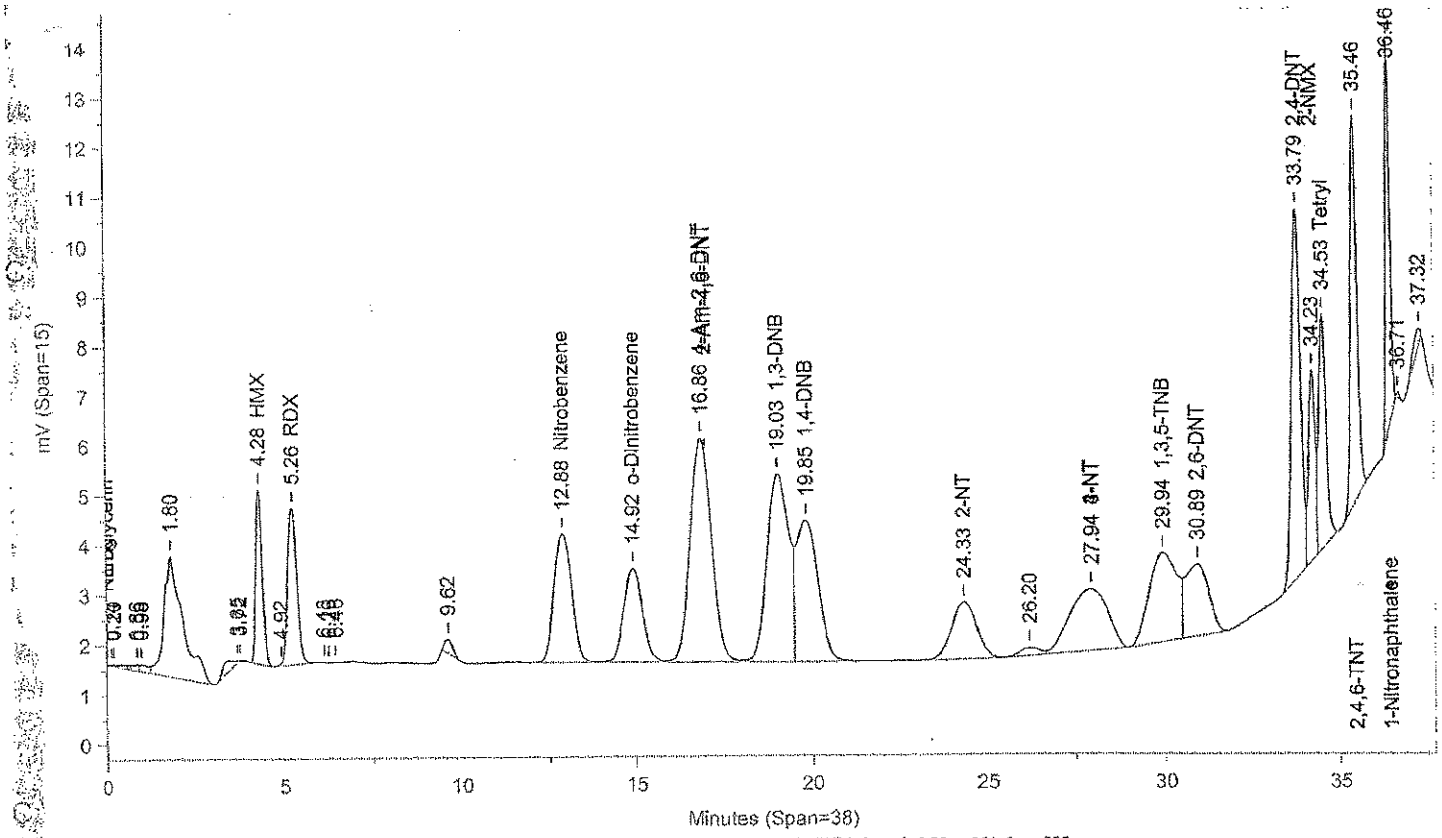
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	524.855	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	638.922	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
Thr .	0	.	PETN	26.283	902583	12224.59	PETN
27.943	89504	537.507	3-NT	.	0	.	3-NT
29.943	96529	519.996	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	592.811	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	1484.672	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1763.87	2-NMX	.	0	.	2-NMX
34.529	70299	551.1	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.06A
Area File: C:\CPWIN\DATA1\1C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:04 PM
File Reported On: 11/7/2013 at 5:55:20 PM

Not Used
See Reintegration

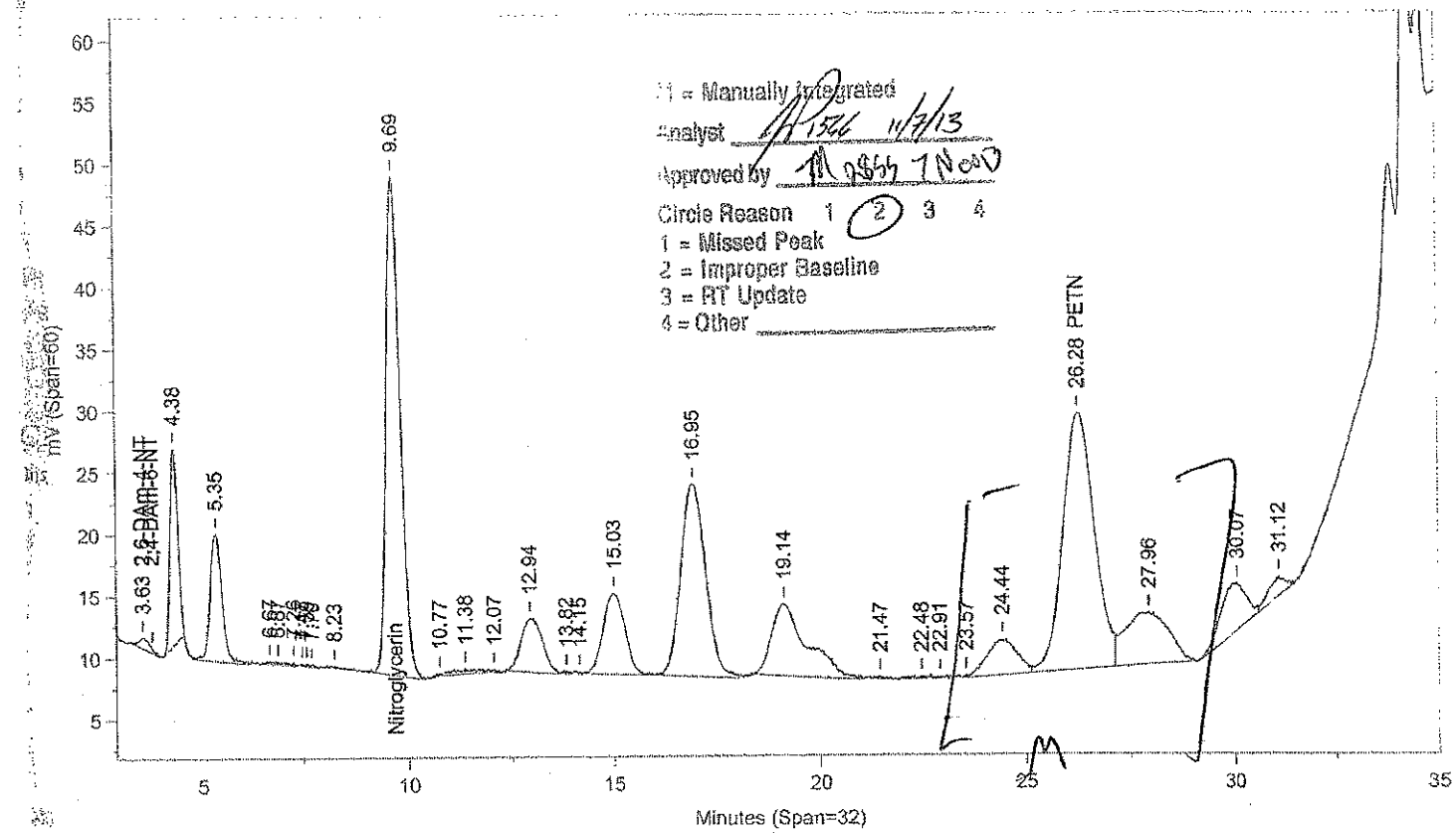
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	903.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	527.832	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
.	0	.	PETN	26.283	1060666	13973.9	PETN
27.943	89504	484.021	3-NT	.	0	.	3-NT
29.943	96529	444.725	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	502.767	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	524.804	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1480.088	2-NMX	.	0	.	2-NMX
34.529	70299	461.521	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:01:06 PM
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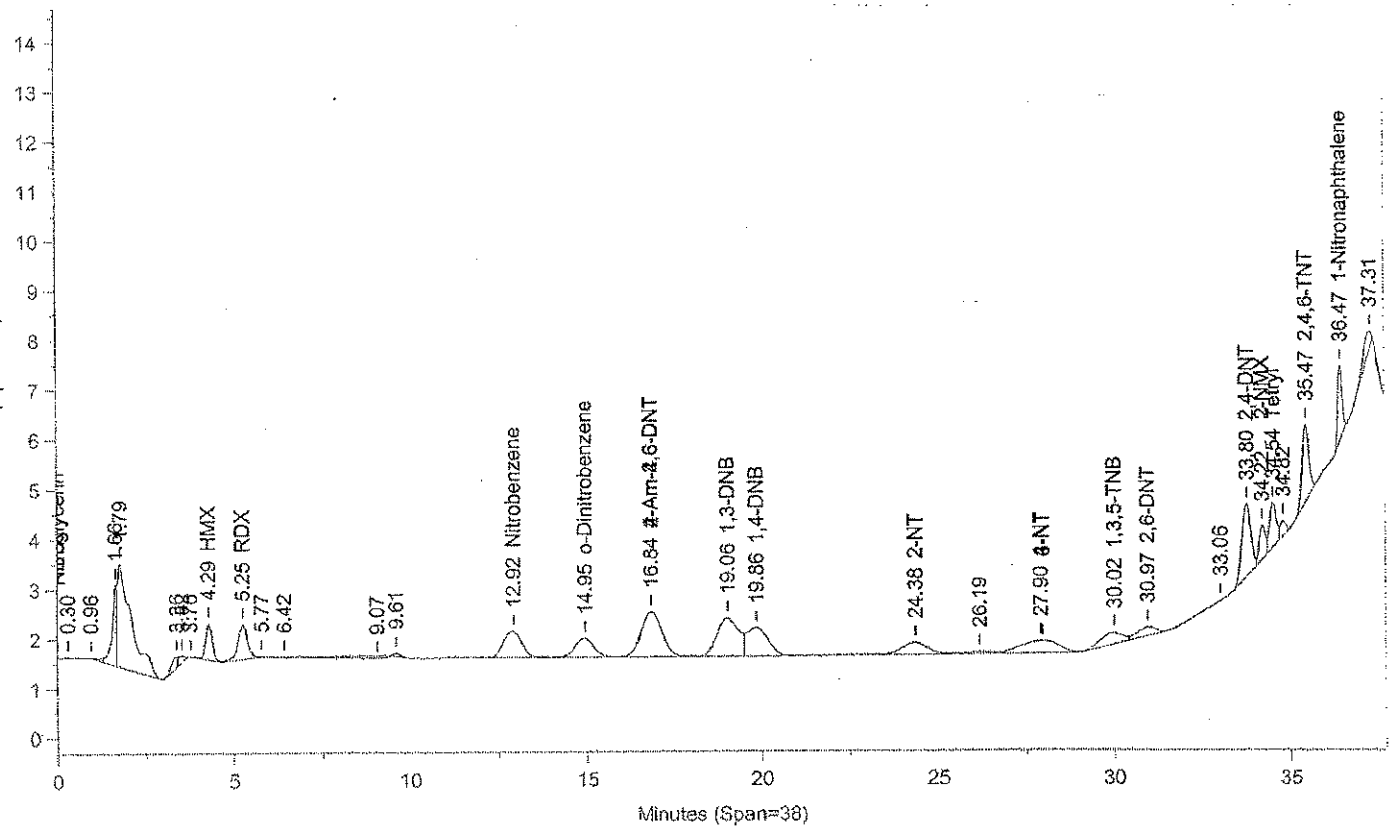
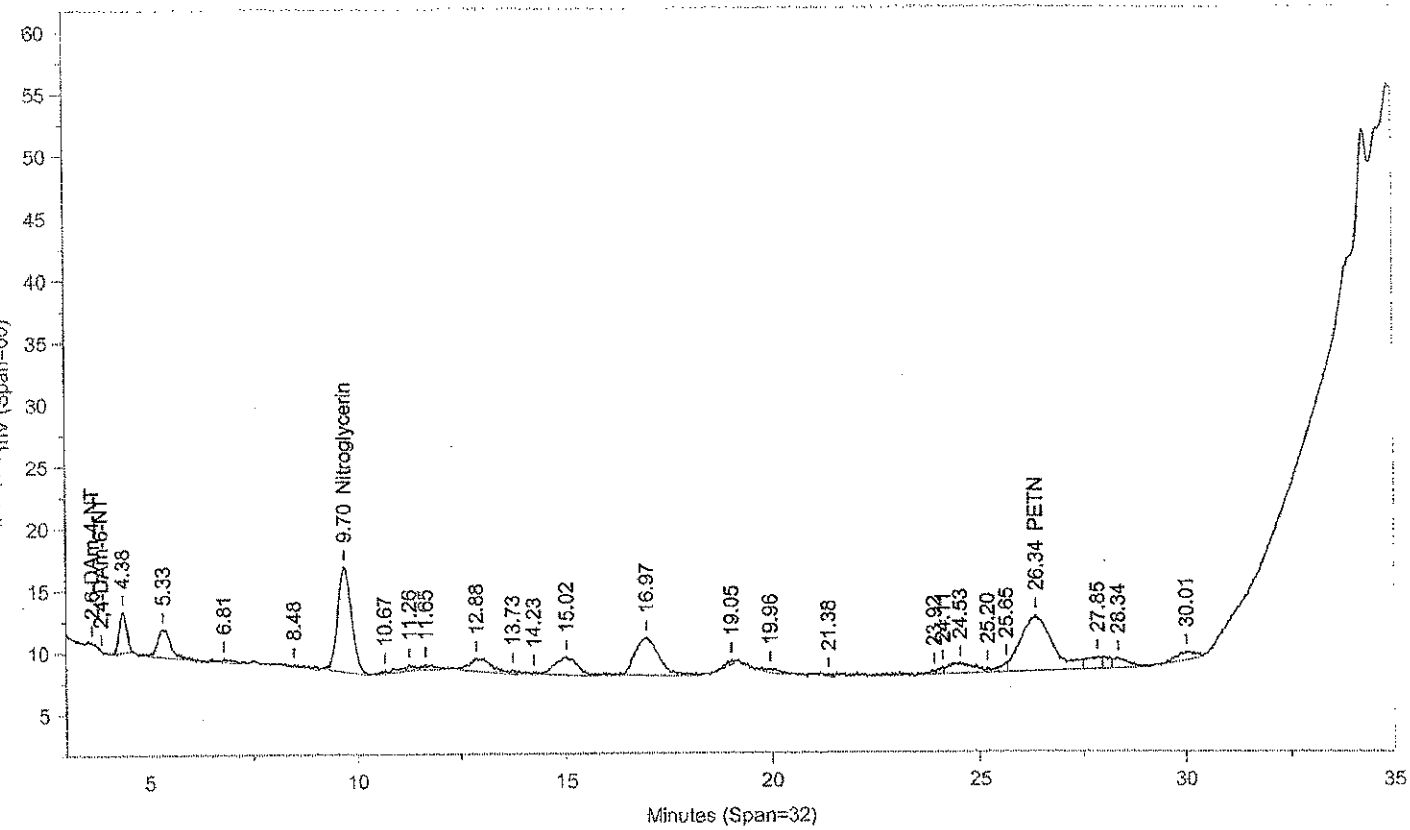
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.07R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.07R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	9705	92.578	HMX	.	0	.	HMX
5.25	13260	94.755	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	201241	2341.884	Nitroglycerin
12.918	19313	92.346	Nitrobenzene	.	0	.	Nitrobenzene
14.954	14700	96.405	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
26.843	38007	256.469	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.055	33551	85.63	1,3-DNB	.	0	.	1,3-DNB
19.864	23955	130.294	1,4-DNB	.	0	.	1,4-DNB
24.378	12732	104.748	2-NT	.	0	.	2-NT
.	0	.	PETN	26.336	230586	4788.424	PETN
27.904	18291	216.058	4-NT	.	0	.	4-NT
30.021	10514	108.133	1,3,5-TNB	.	0	.	1,3,5-TNB
30.969	6696	79.784	2,6-DNT	.	0	.	2,6-DNT
33.797	25689	188.292	2,4-DNT	.	0	.	2,4-DNT
34.223	8406	365.011	2-NMX	.	0	.	2-NMX
34.535	12114	116.624	Tetryl	.	0	.	Tetryl
35.47	20303	102.873	2,4,6-TNT	.	0	.	2,4,6-TNT
36.465	13423	112.718	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.07A
Area File: C:\CPWIN\DATA1\1C12310B.07A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:46 PM
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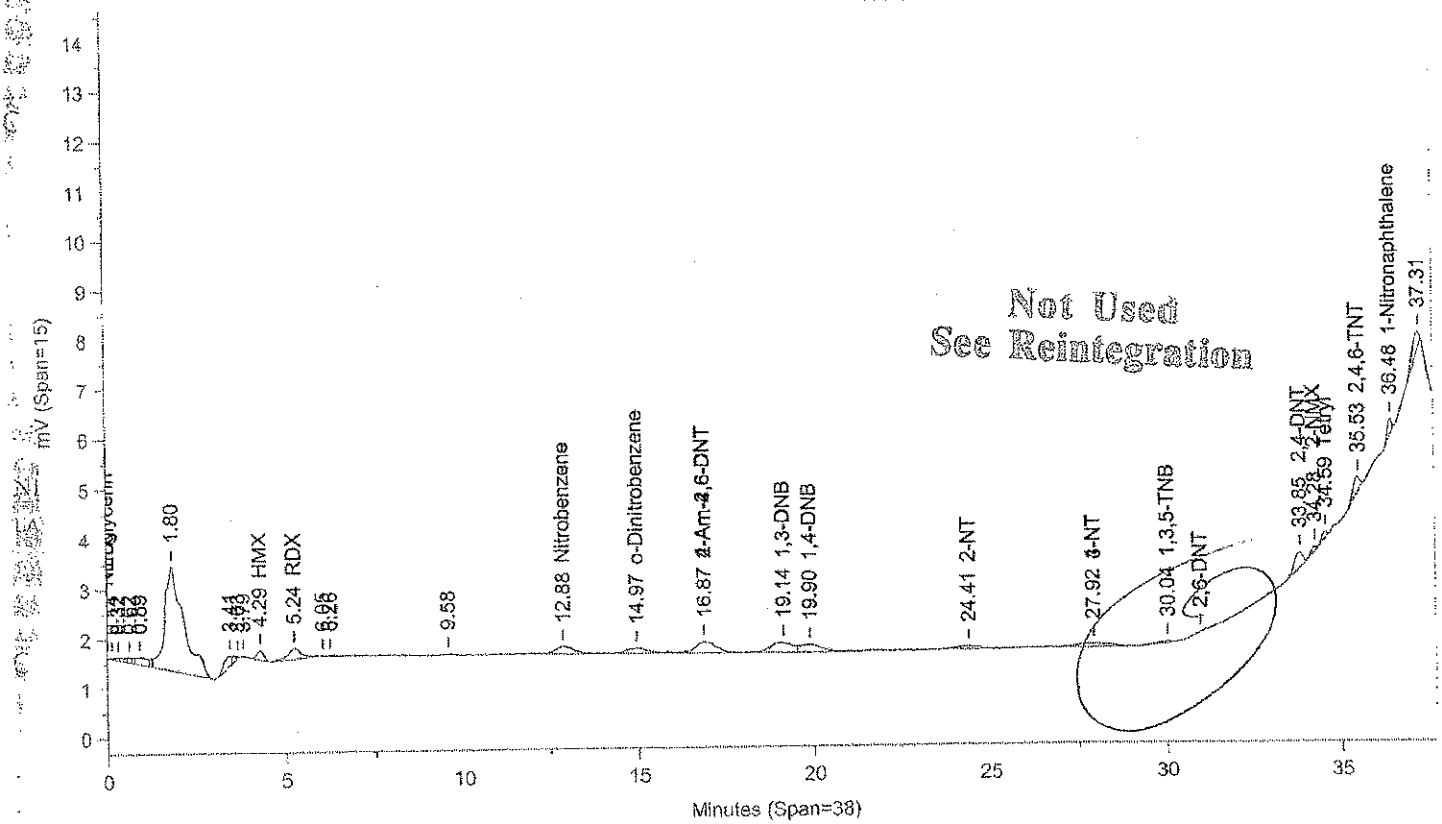
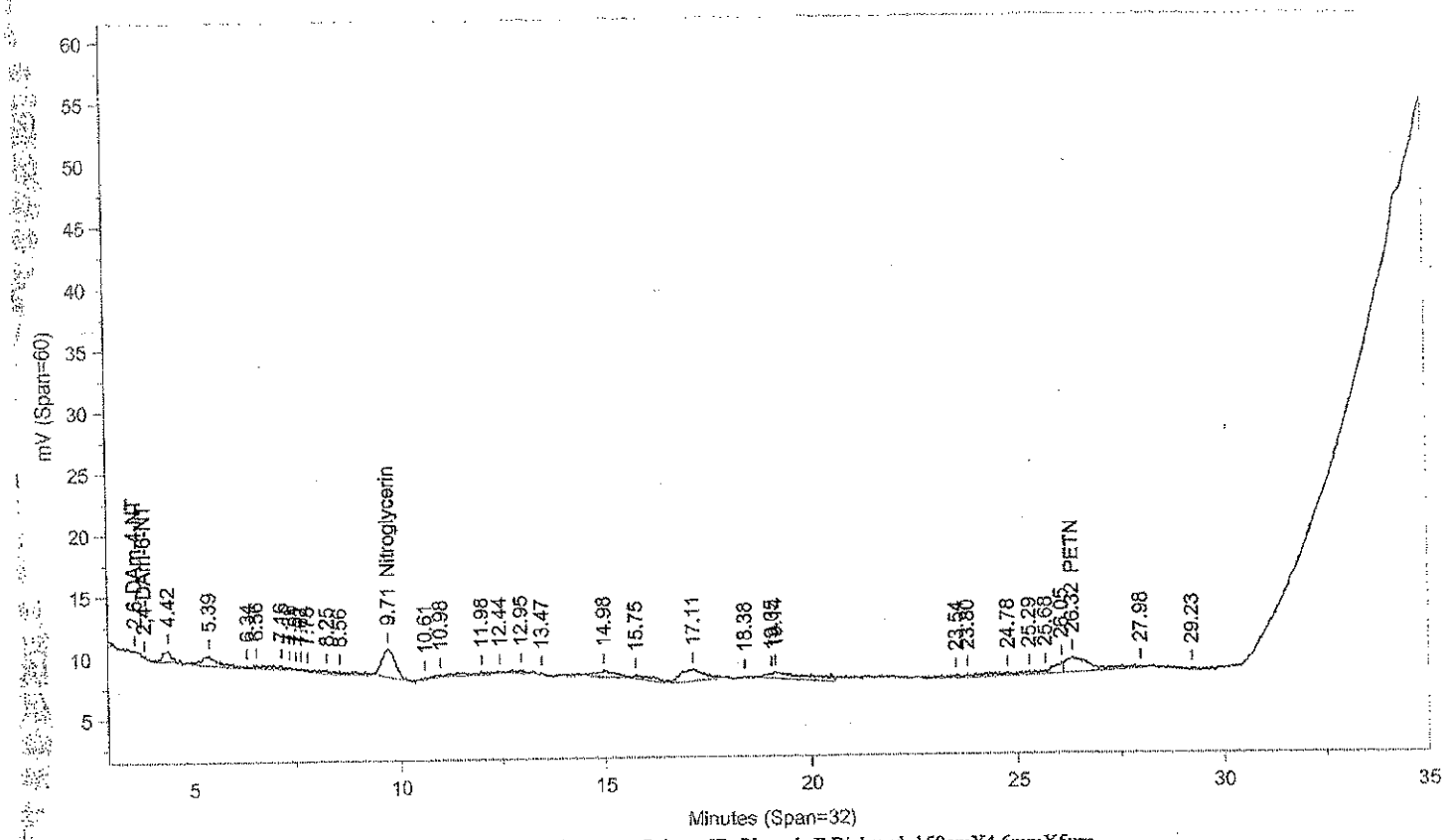
File: C:\CPWIN\DATA1\1C12310.08R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

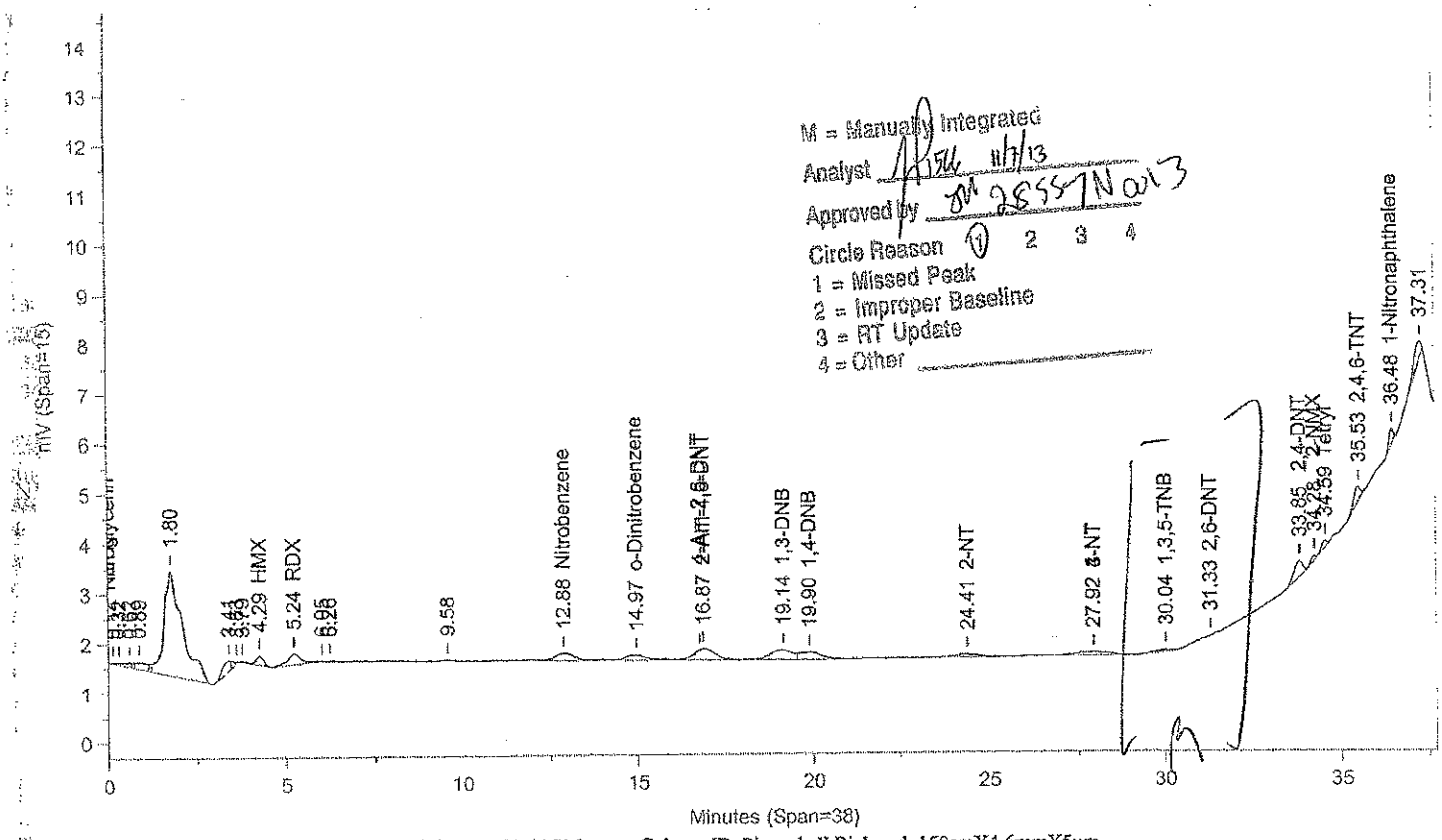
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	31.978	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
.	0	.	PETN	26.317	53186	2825.361	PETN
27.921	5159	130.897	4-NT	.	0	.	4-NT
30.044	1535	61.155	1,3,5-TNB	.	0	.	1,3,5-TNB
33.849	5674	31.663	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	94.822	2-NMX	.	0	.	2-NMX
34.589	1463	30.879	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.08A
Area File: C:\CPWIN\DATA1\1C12310B.08A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:56:30 PM
File Reported On: 11/7/2013 at 5:56:46 PM

Not Used
See Reintegration

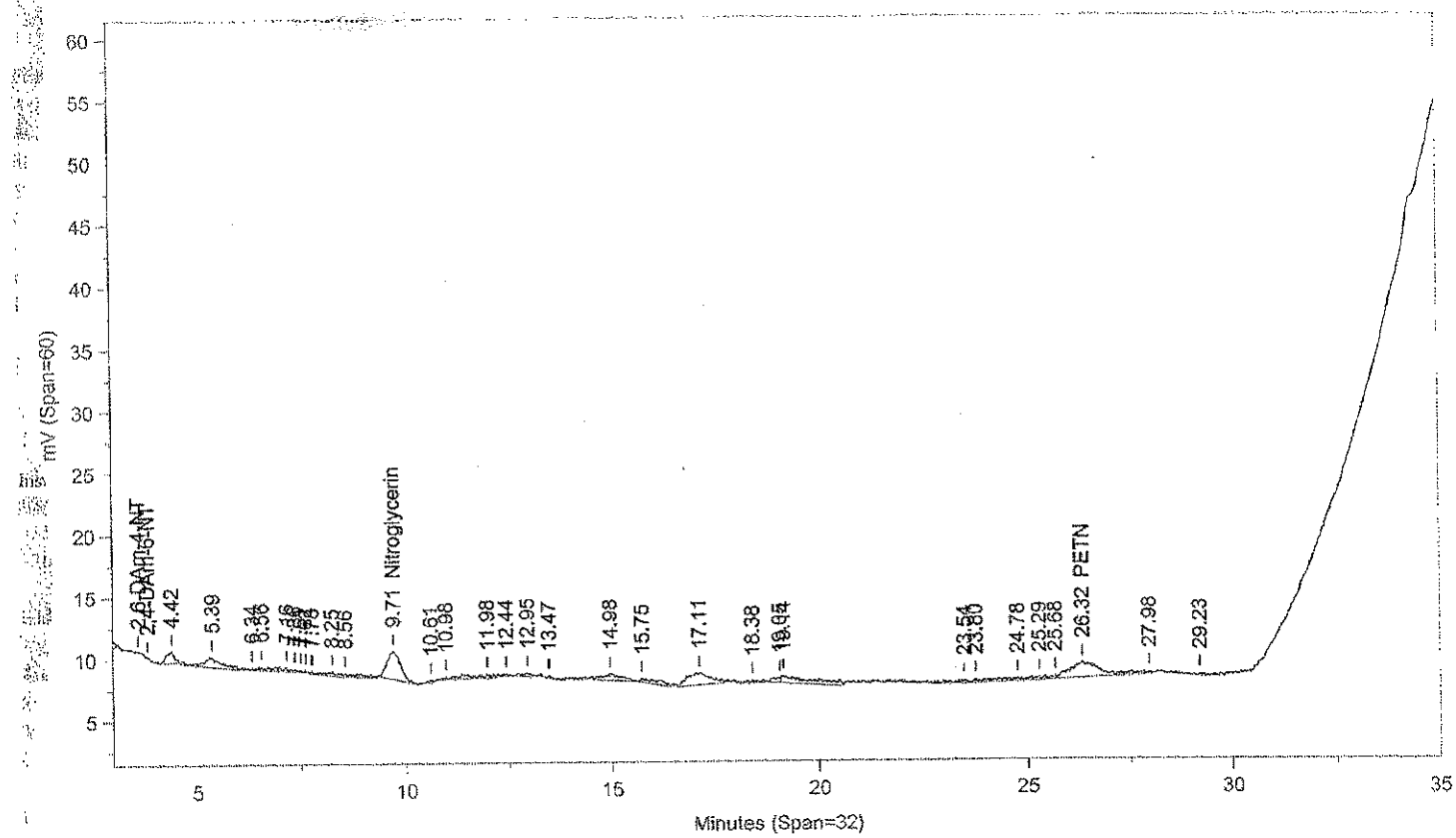
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.08R



M = Manually Integrated
Analyst 11/7/13
Approved by 28557 NOV 13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5tVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	22.972	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
De .	0	.	PETN	26.317	65376	2960.251	PETN
27.921	5159	124.367	4-NT	.	0	.	4-NT
30.044	1535	59.474	1,3,5-TNB	.	0	.	1,3,5-TNB
31.327	842	22.119	2,6-DNT	.	0	.	2,6-DNT
33.849	5674	21.969	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	86.759	2-NMX	.	0	.	2-NMX
34.589	1463	28.339	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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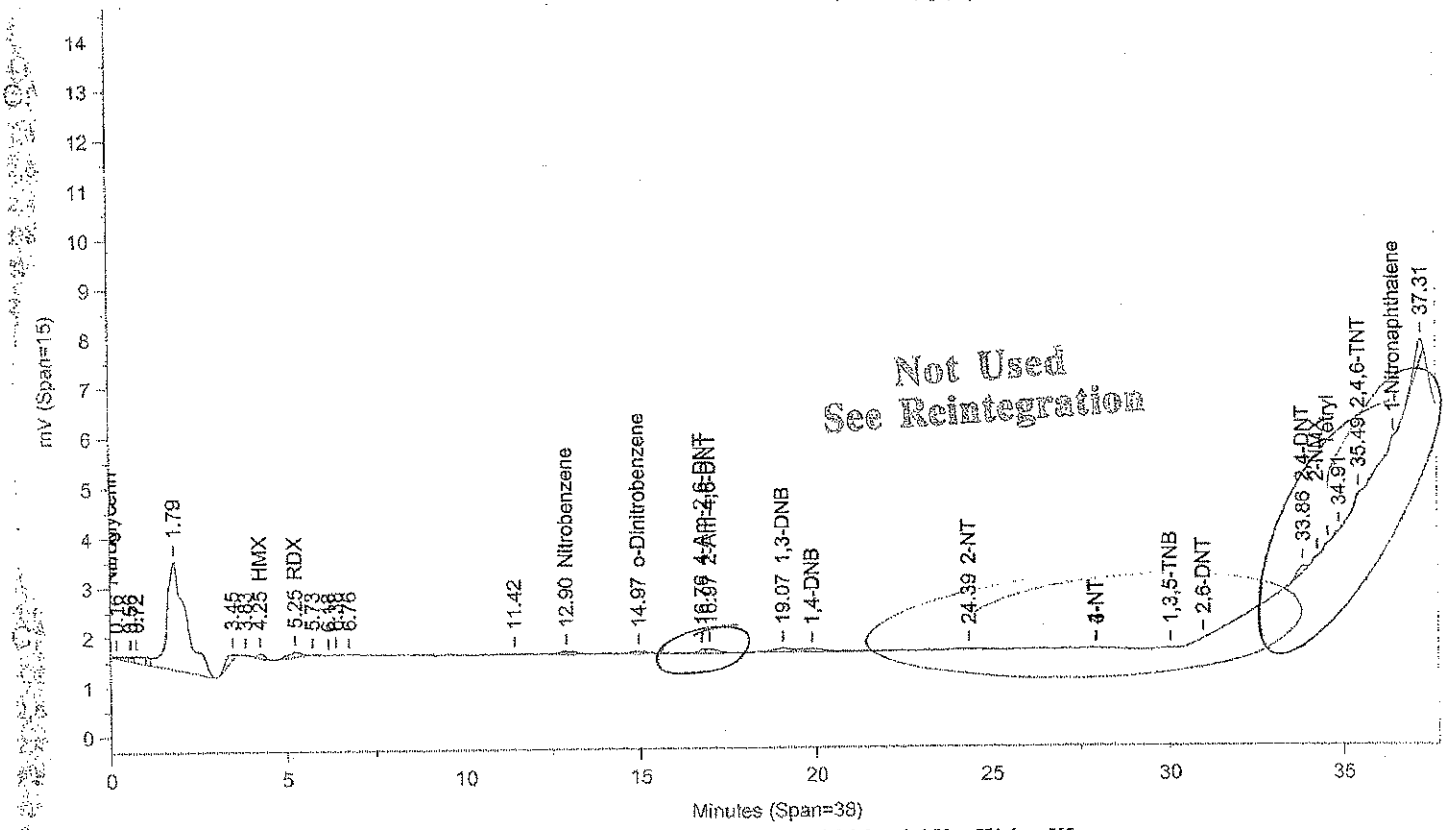
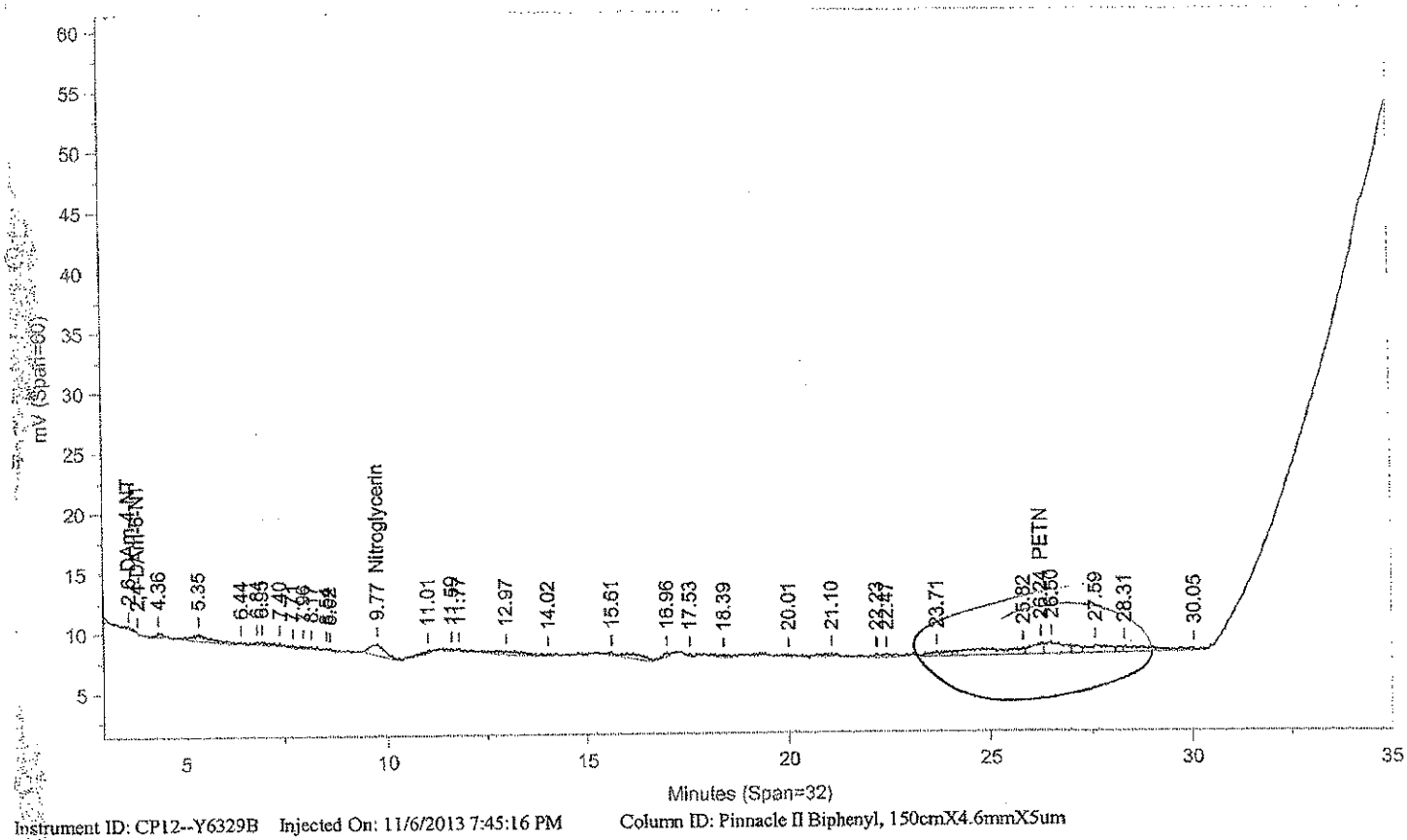


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.764	1335	6.315	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
16.971	2667	8.868	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	6671	17.025	1,3-DNB	.	0	.	1,3-DNB
24.388	1102	3.981	2-NT	.	0	.	2-NT
.	0	.	PETN	26.245	18259	2438.867	PETN
33.863	2480	11.429	2,4-DNT	.	0	.	2,4-DNT
35.493	474	9.918	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.09A
Area File: C:\CPWIN\DATA1\1C12310B.09A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:57:12 PM
File Reported On: 11/7/2013 at 5:57:29 PM

Not Used
See Reintegration

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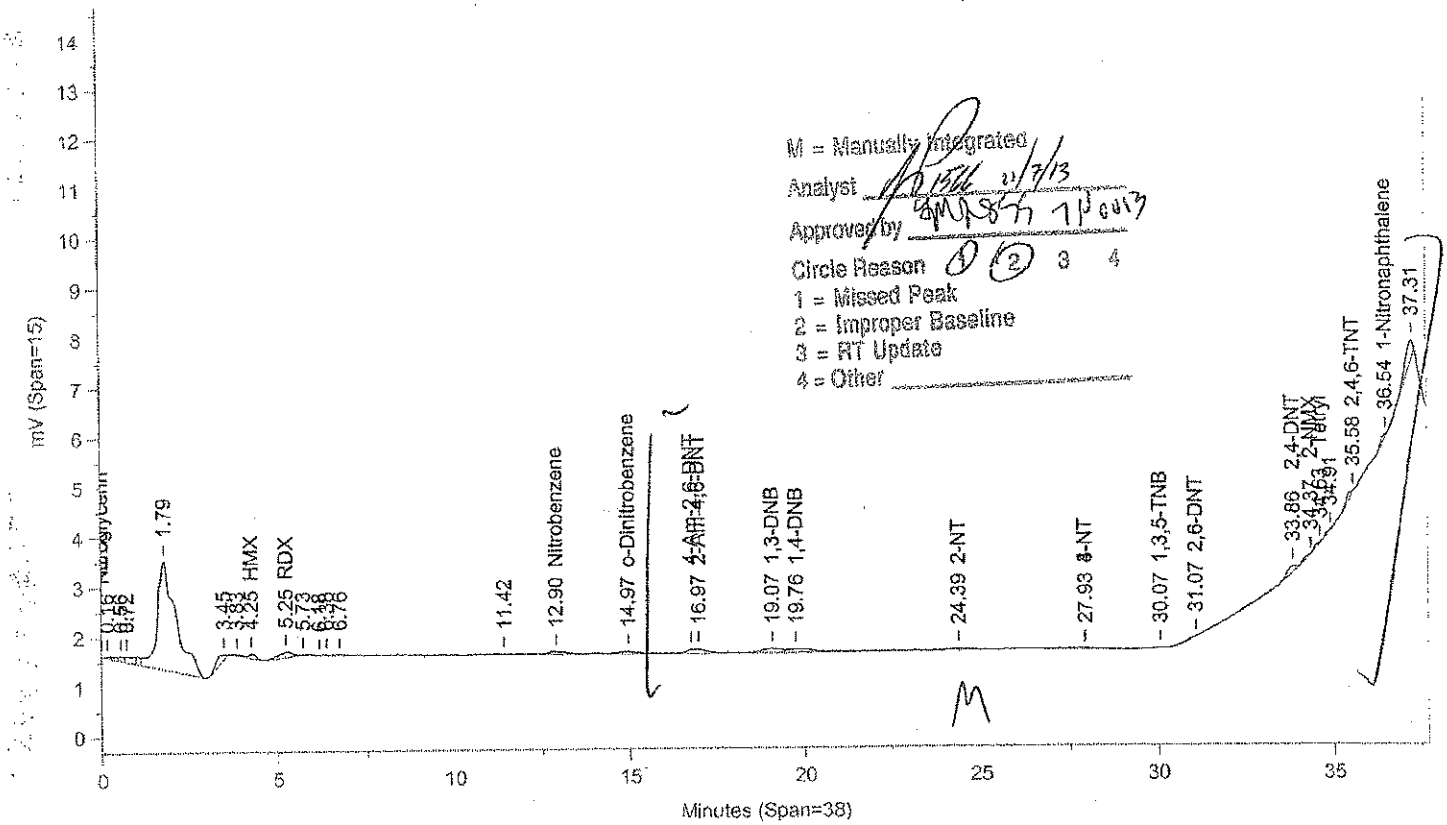
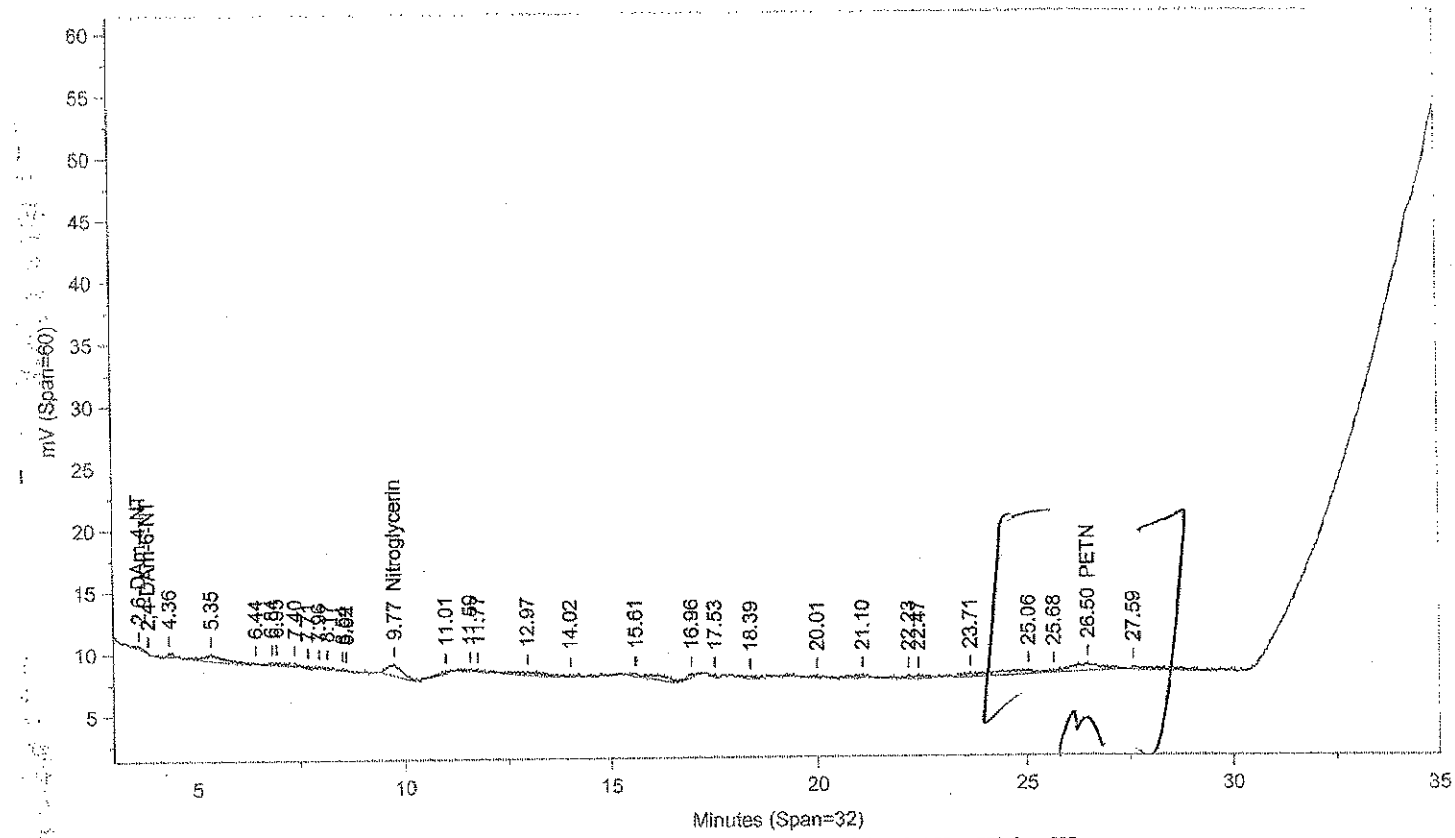
File: C:\CPWIN\DATA1\1C12310.09R

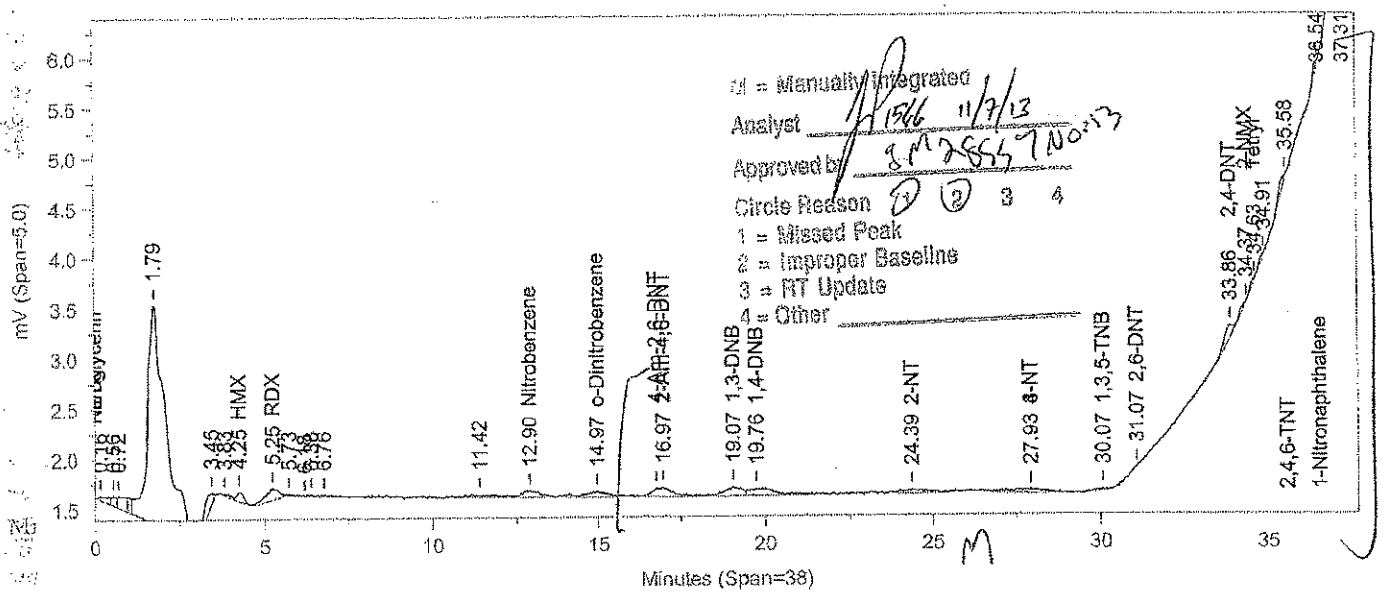


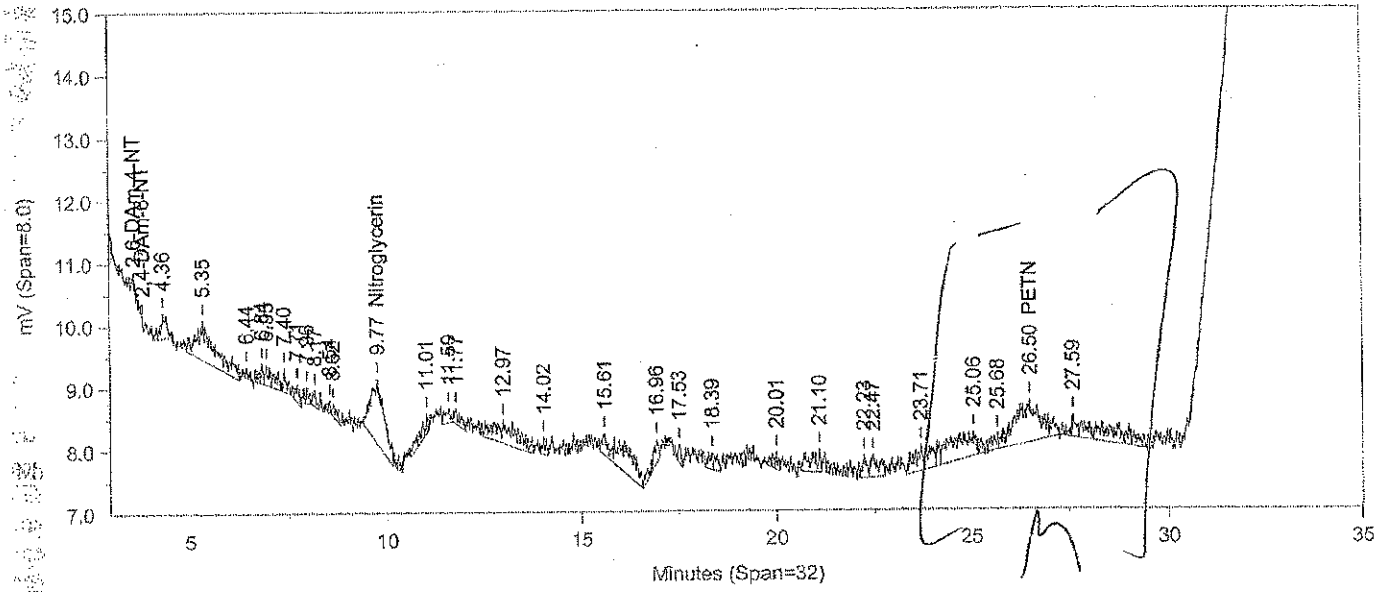
Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um


mV (Span=5.0)
Minutes (Span=38)
M = Manually Integrated
Analyst
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
1.79
HMX
RDX
11.42
12.90 Nitrobenzene
14.97 o-Dinitrobenzene
16.97 2-Am-4,6-DNT
19.07 1,3-DNB
19.76 1,4-DNB
24.39 2-NT
27.93 4-NT
30.07 1,3,5-TNB
31.07 2,6-DNT
33.86 2,4-DNT
34.91 2-NMX
35.58 4-NMX
36.54
37.31
2,4,6-TNT
1-Nitronaphthalene


mV (Span=8.0)
Minutes (Span=32)
2,6-DNT
4-NT
4.36
5.35
9.77 Nitroglycerin
11.01
12.97
14.02
15.61
16.96
17.53
18.39
20.01
21.10
23.71
25.06
25.68
26.50 PETN
27.59

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.971	4003	13.308	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	3481	8.885	1,3-DNB	.	0	.	1,3-DNB
19.76	4154	8.624	1,4-DNB	.	0	.	1,4-DNB
24.388	2024	11.972	2-NT	.	0	.	2-NT
.	0	.	PETN	26.497	30004	2568.832	PETN
27.935	2865	60.908	3-NT	.	0	.	3-NT
30.067	645	55.864	1,3,5-TNB	.	0	.	1,3,5-TNB
31.068	286	17.88	2,6-DNT	.	0	.	2,6-DNT
33.863	2480	9.602	2,4-DNT	.	0	.	2,4-DNT
34.367	547	73.17	2-NMX	.	0	.	2-NMX
34.63	498	22.266	Tetryl	.	0	.	Tetryl
35.583	1137	13.028	2,4,6-TNT	.	0	.	2,4,6-TNT
36.542	828	34.277	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:17:14 PM
File Reported On: 11/7/2013 at 6:17:13 PM

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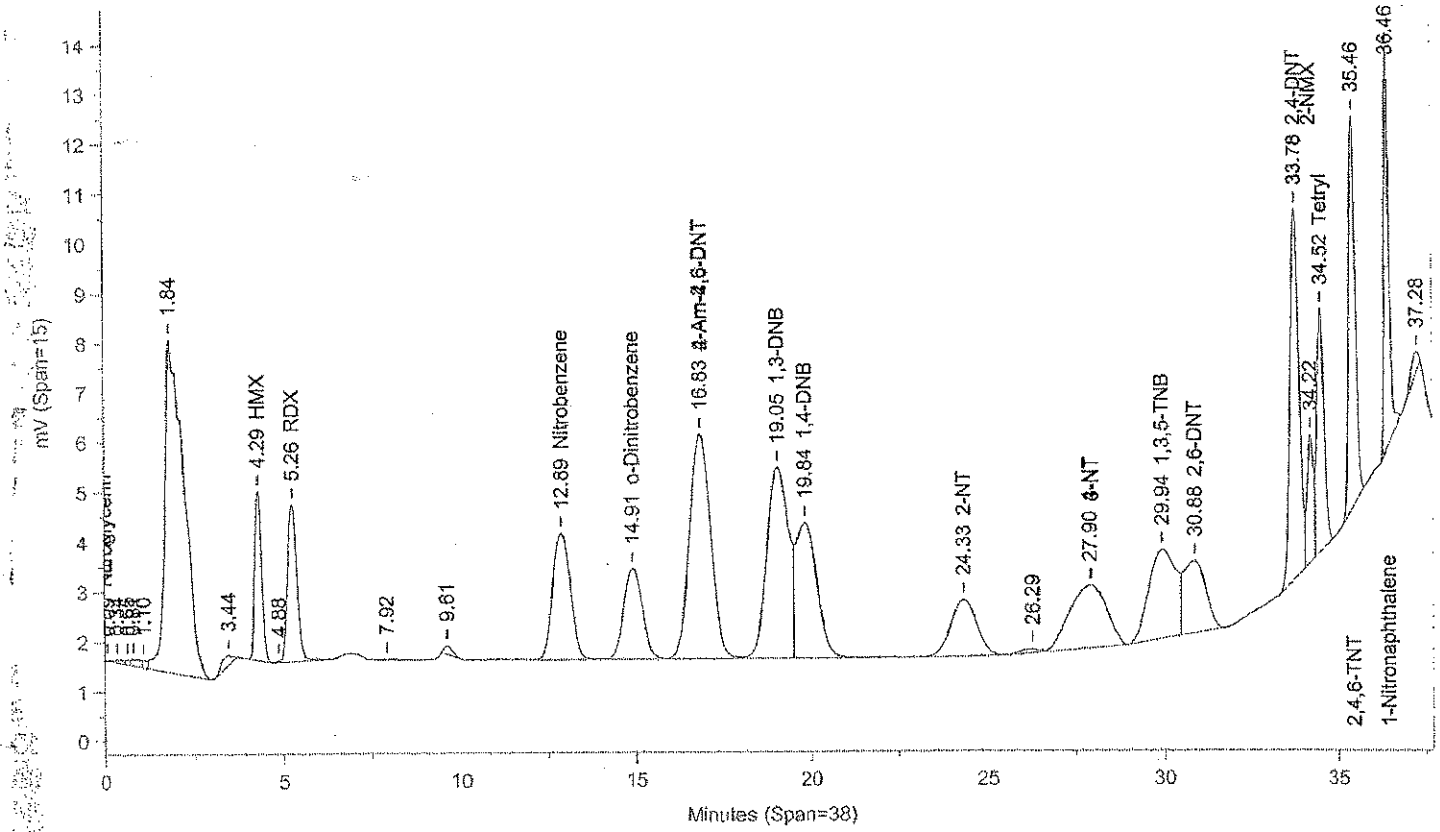
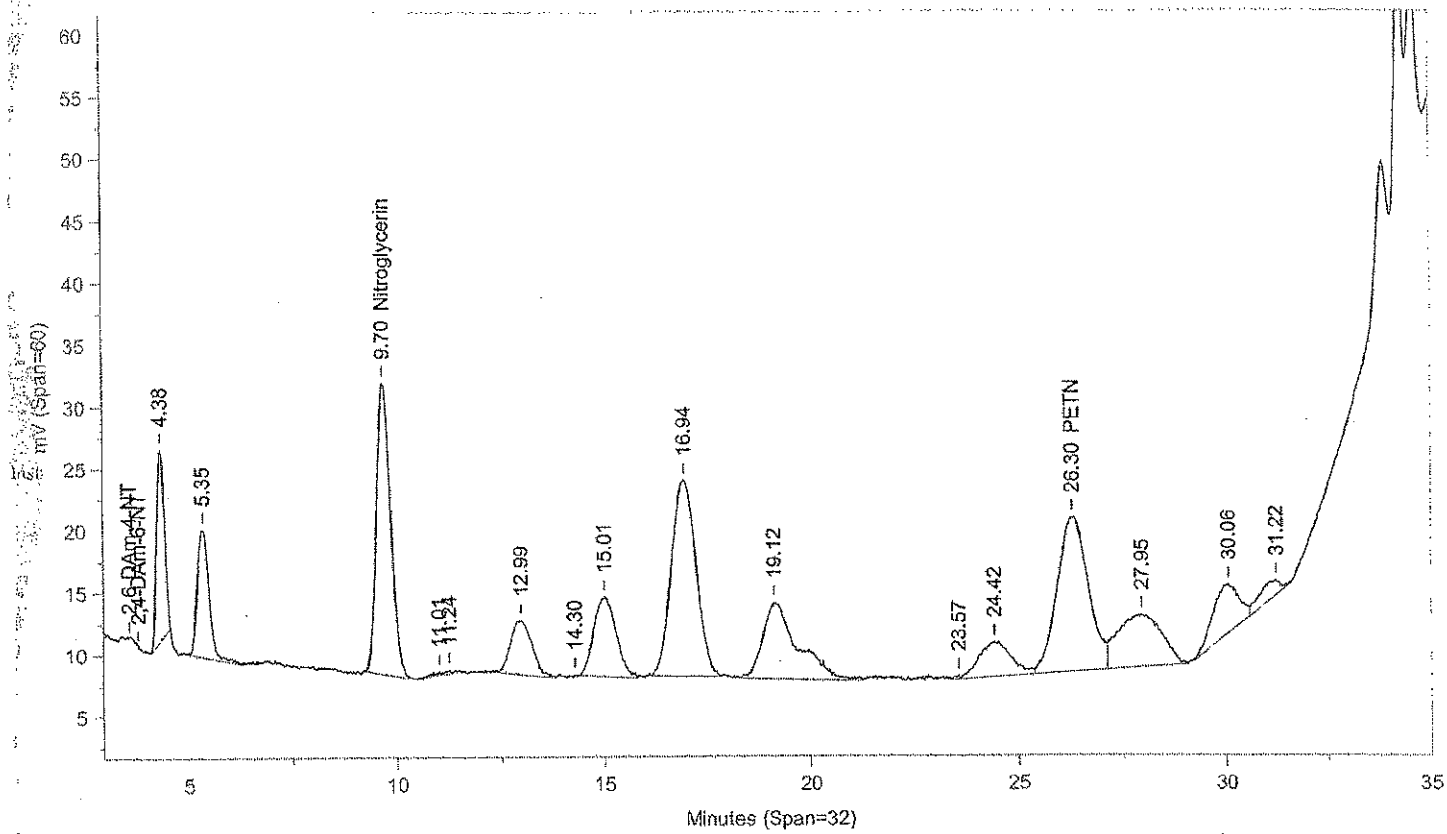
File: C:\CPWIN\DATA1\1C12310.10R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.10R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.287	46501	443.578	HMX	.	0	.	HMX
5.259	58978	502.759	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	556021	5470.547	Nitroglycerin
12.894	91644	496.281	Nitrobenzene	.	0	.	Nitrobenzene
14.913	69876	502.214	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.833	192980	499.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.051	169180	499.488	1,3-DNB	.	0	.	1,3-DNB
19.836	116438	500.616	1,4-DNB	.	0	.	1,4-DNB
24.331	58749	501.957	2-NT	.	0	.	2-NT
.	0	.	PETN	26.296	636924	5363.191	PETN
27.897	90471	466.62	4-NT	.	0	.	4-NT
29.945	96363	443.532	1,3,5-TNB	.	0	.	1,3,5-TNB
30.883	63428	498.299	2,6-DNT	.	0	.	2,6-DNT
33.782	136607	528.912	2,4-DNT	.	0	.	2,4-DNT
34.22	32718	990.46	2-NMX	.	0	.	2-NMX
34.522	72541	475.026	Tetryl	.	0	.	Tetryl
35.457	105784	503.005	2,4,6-TNT	.	0	.	2,4,6-TNT
36.455	78595	517.657	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\IC12310.10A
Area File: C:\CPWIN\DATA1\IC12310B.10A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\IC12310.CAL
Calibration File B: C:\CPWIN\DATA1\IC12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:18 PM
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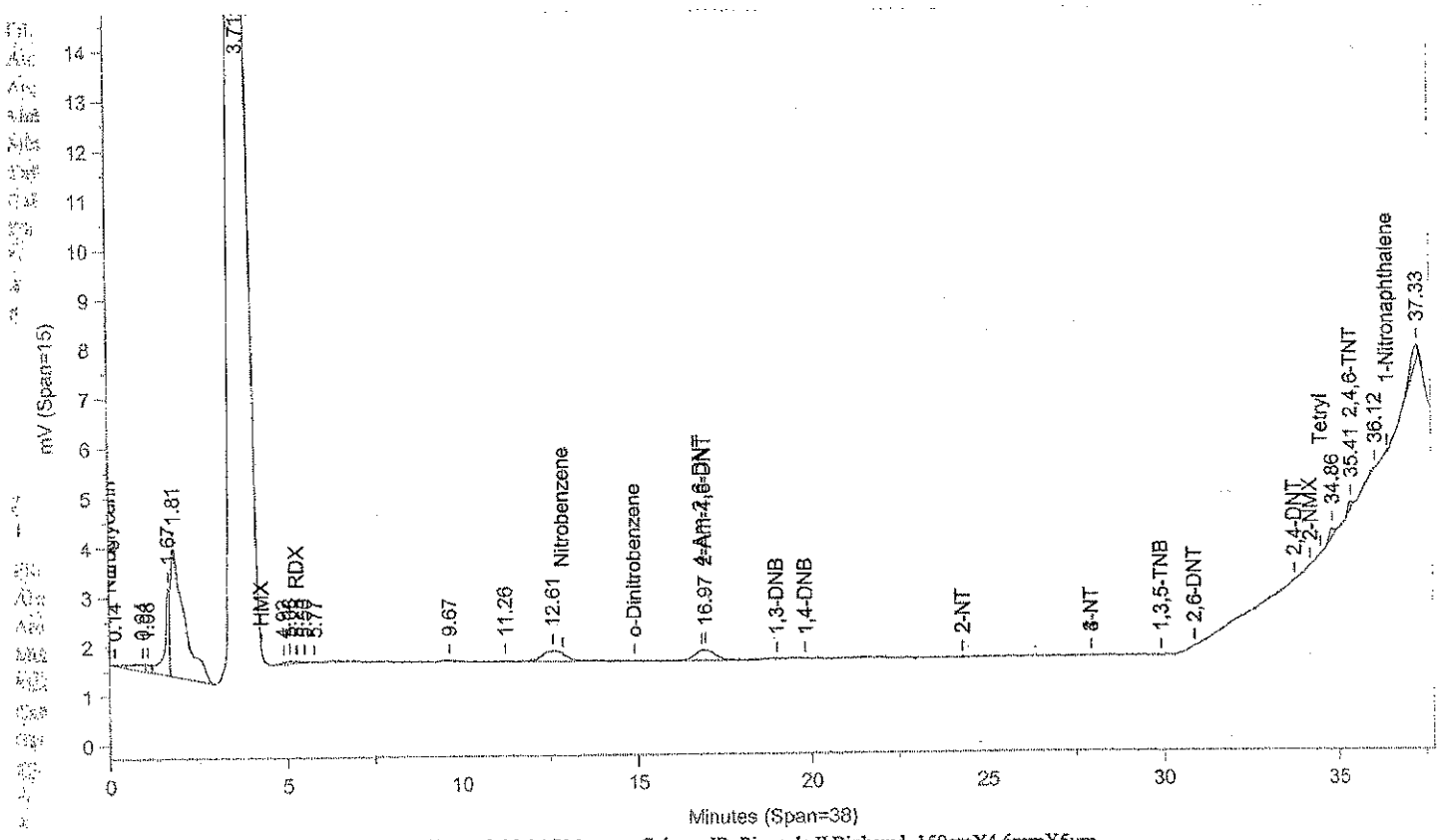
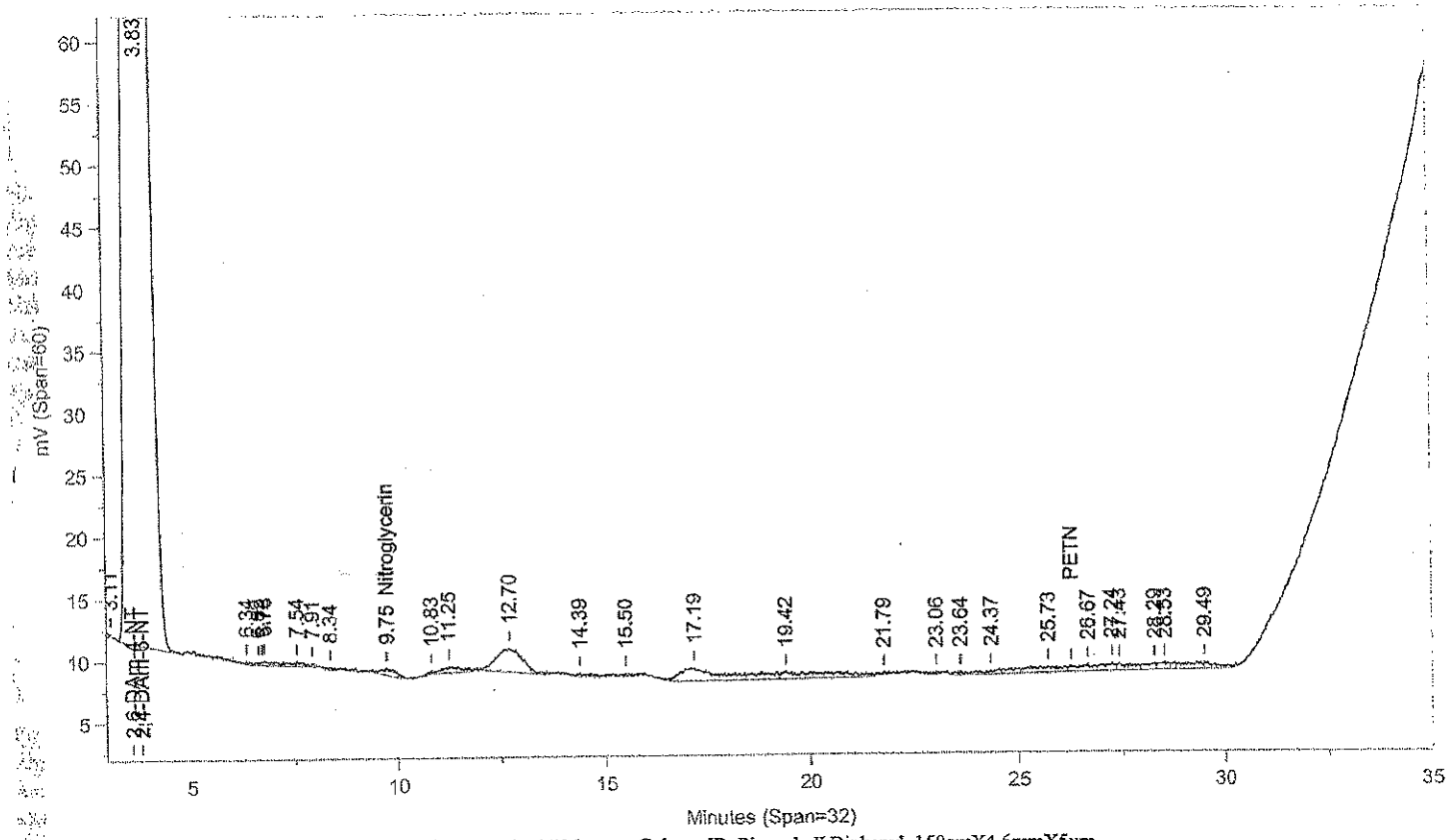
File: C:\CPWIN\DATA1\1C12310.11R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.11R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.832	4661927	.	2,4-DAm-6-NT
5.279	536	-18.797	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.75	14347	141.154	Nitroglycerin
16.969	9184	23.769	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
35.414	1426	13.506	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.11A
Area File: C:\CPWIN\DATA1\1C12310B.11A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:48 PM
File Reported On: 11/7/2013 at 6:27:56 PM

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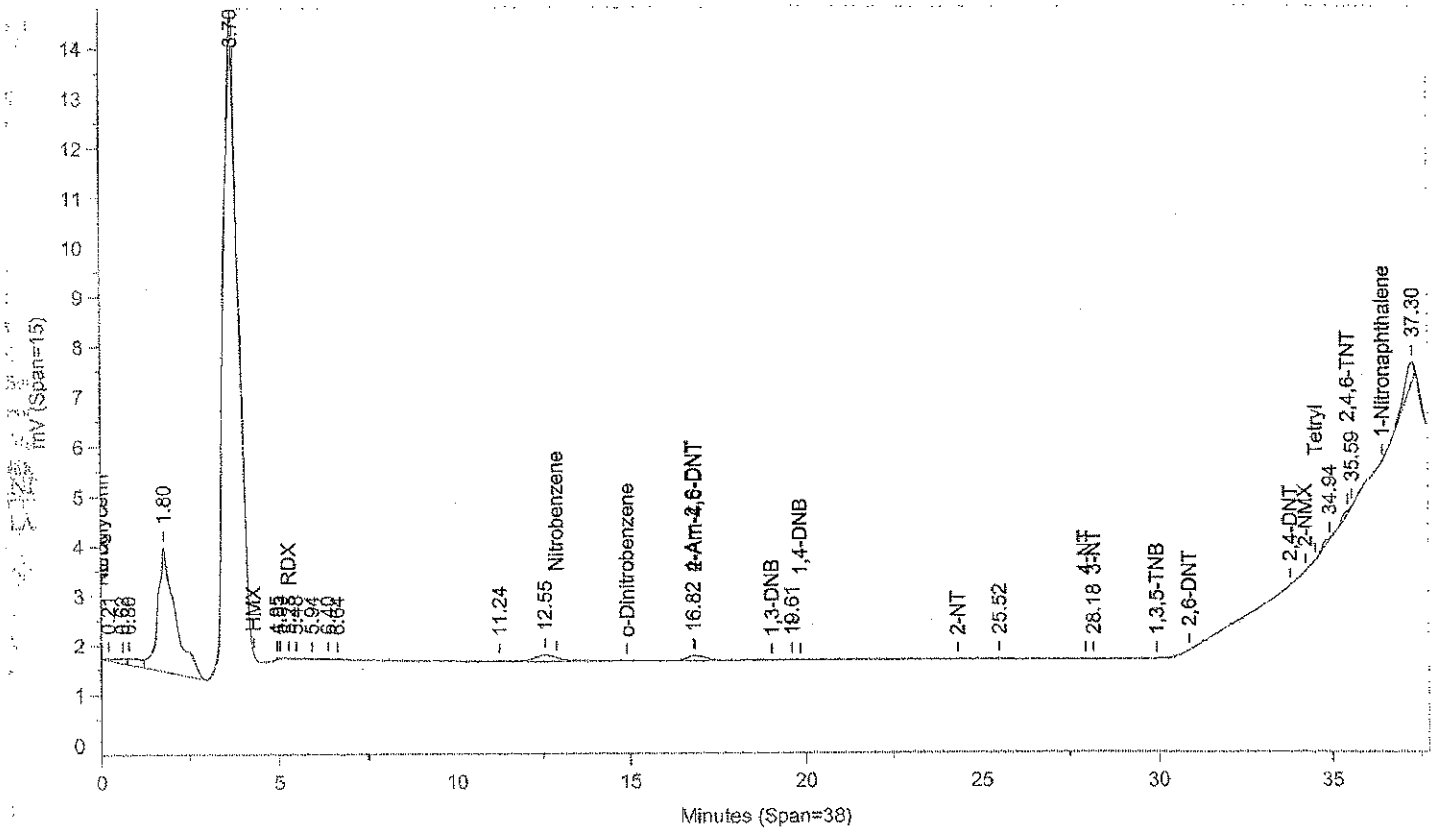
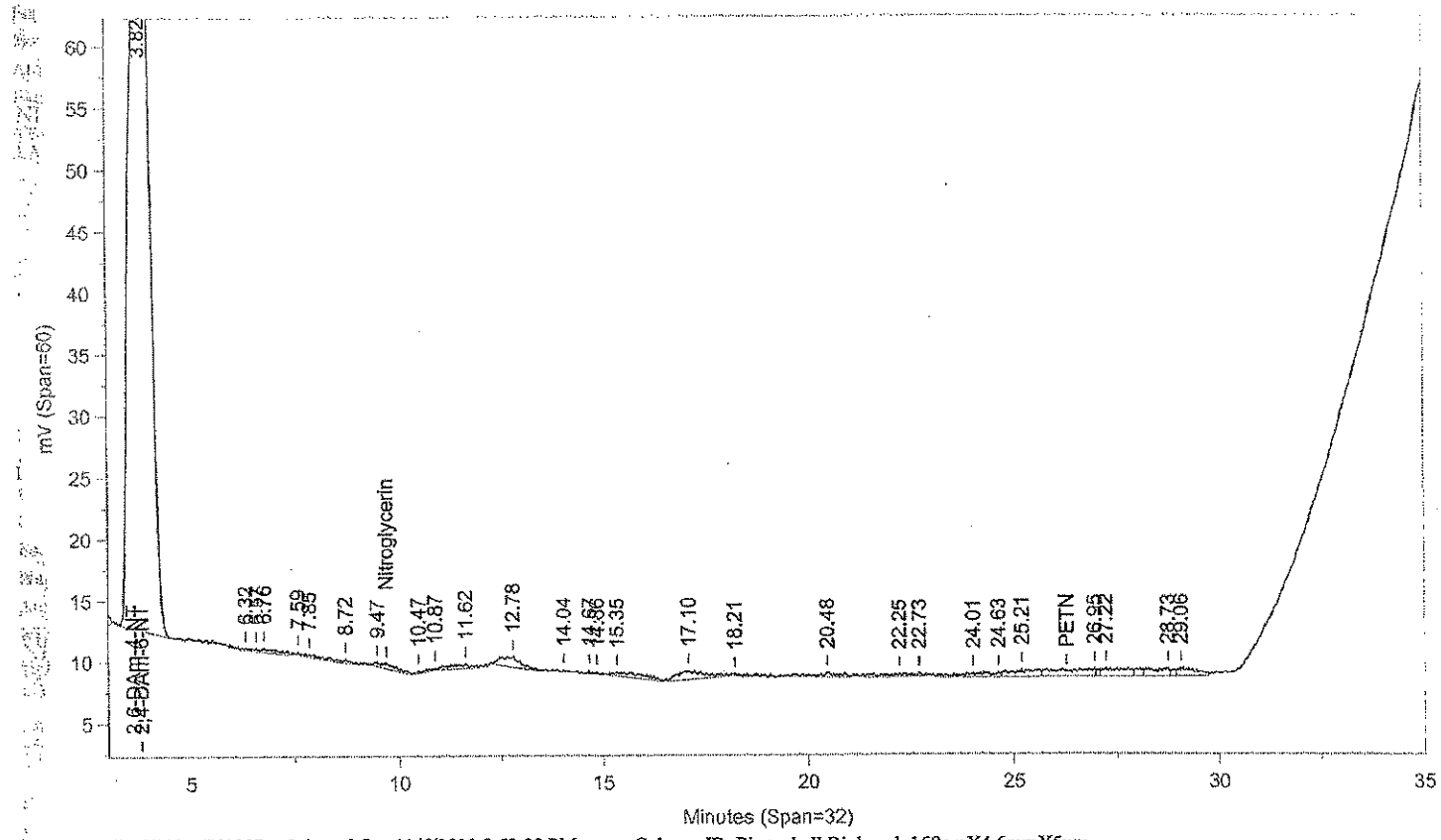
File: C:\CPWIN\DATA1\1C12310.12R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.12R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	3.823	2340450		2,4-DAm-6-NT
5.279	49	-23.145	RDX		0		RDX
16.818	4954	12.834	4-Am-2,6-DNT		0		4-Am-2,6-DNT
28.178	393	14.232	3-NT		0		3-NT

Files:
Area File: C:\CPWIN\DATA1\1C12310.12A
Area File: C:\CPWIN\DATA1\1C12310B.12A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:16 PM
File Reported On: 11/7/2013 at 6:28:25 PM

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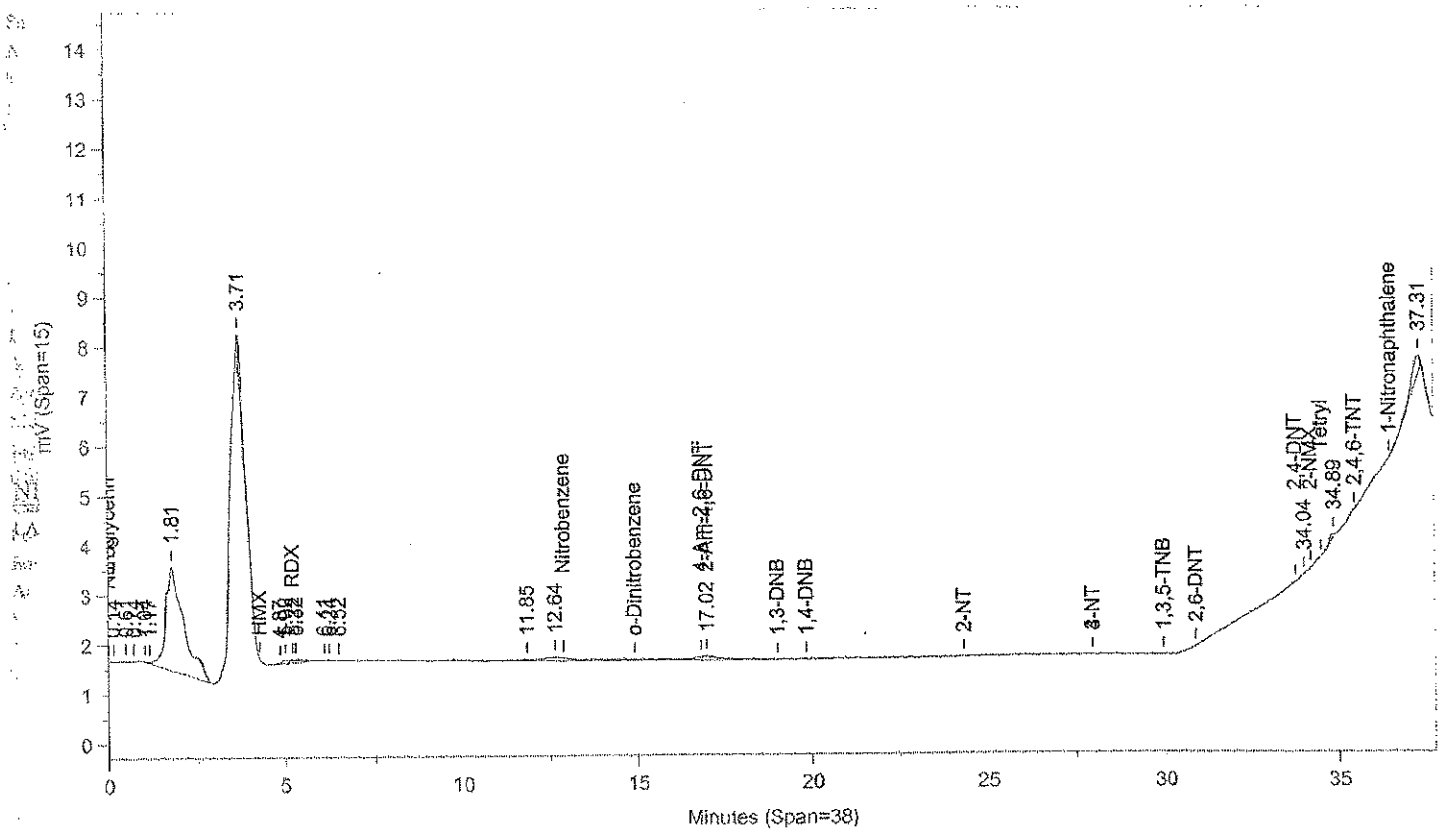
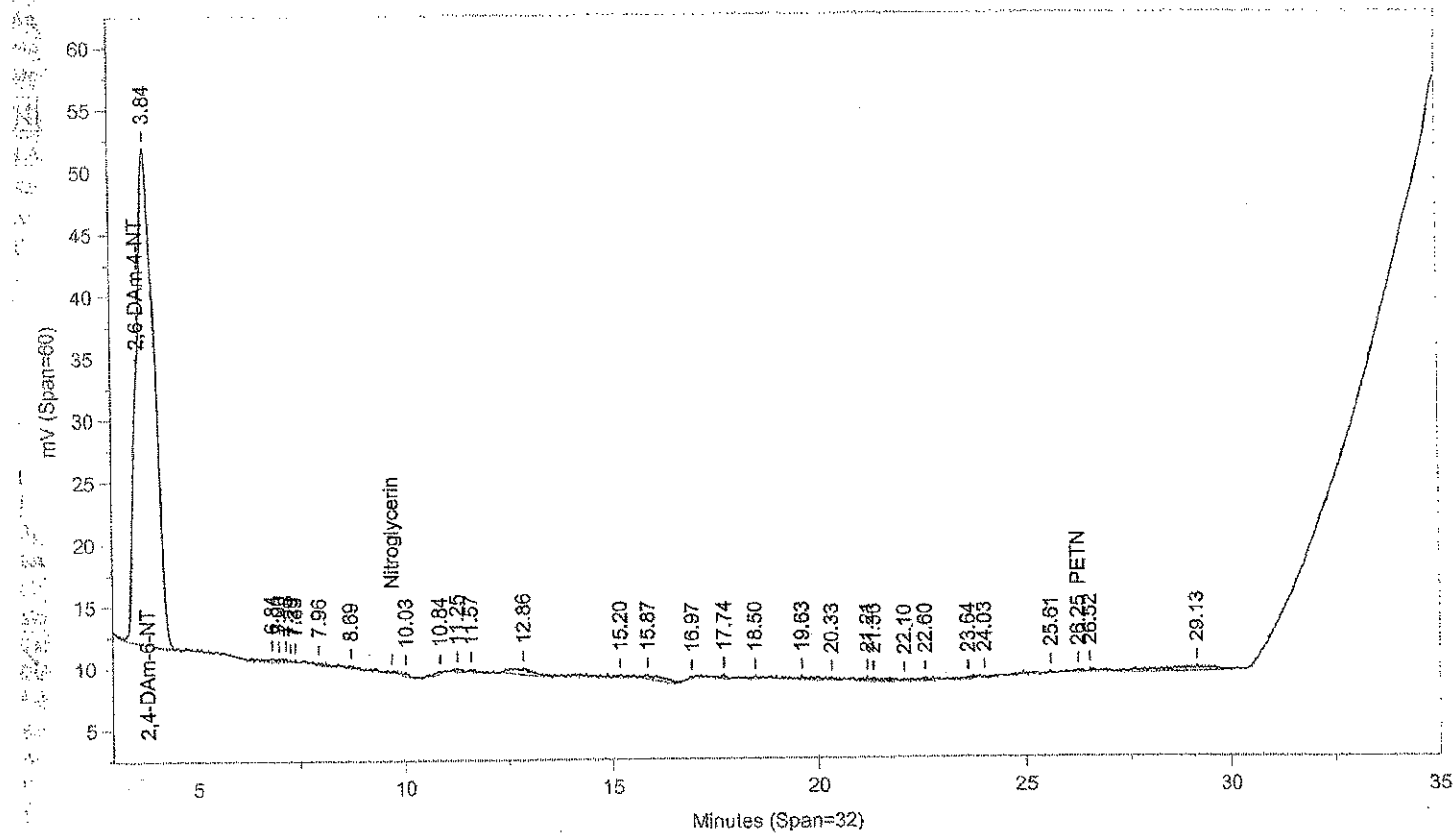
File: C:\CPWIN\DATA1\1C12310.13R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.13R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.836	1186674	.	2,4-DAm-6-NT
5.219	575	-18.452	RDX	.	0	.	RDX
17.017	5070	13.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.249	2969	25.002	PETN

Files:
Area File: C:\CPWIN\DATA1\1C12310.13A
Area File: C:\CPWIN\DATA1\1C12310B.13A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:46 PM
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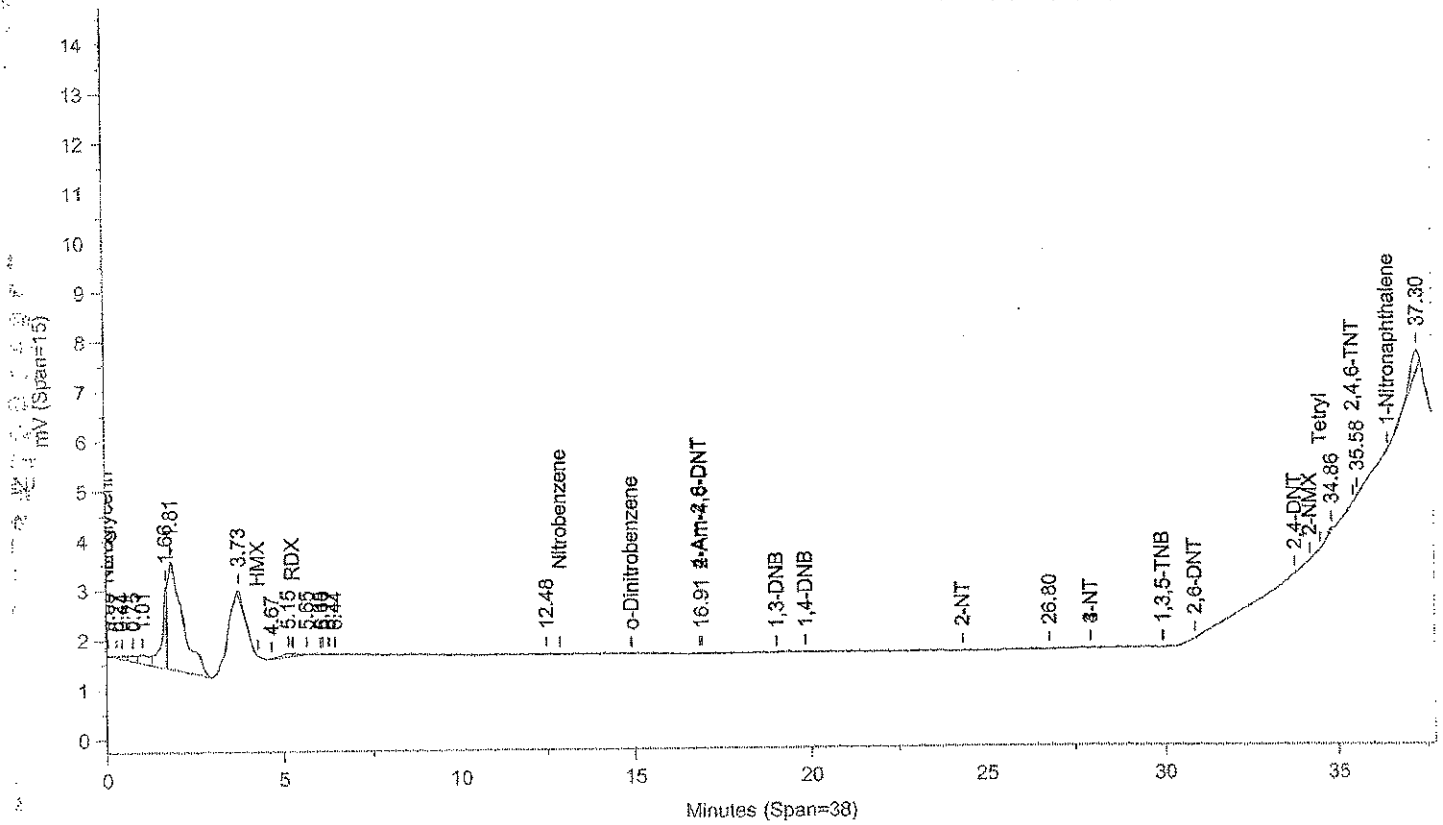
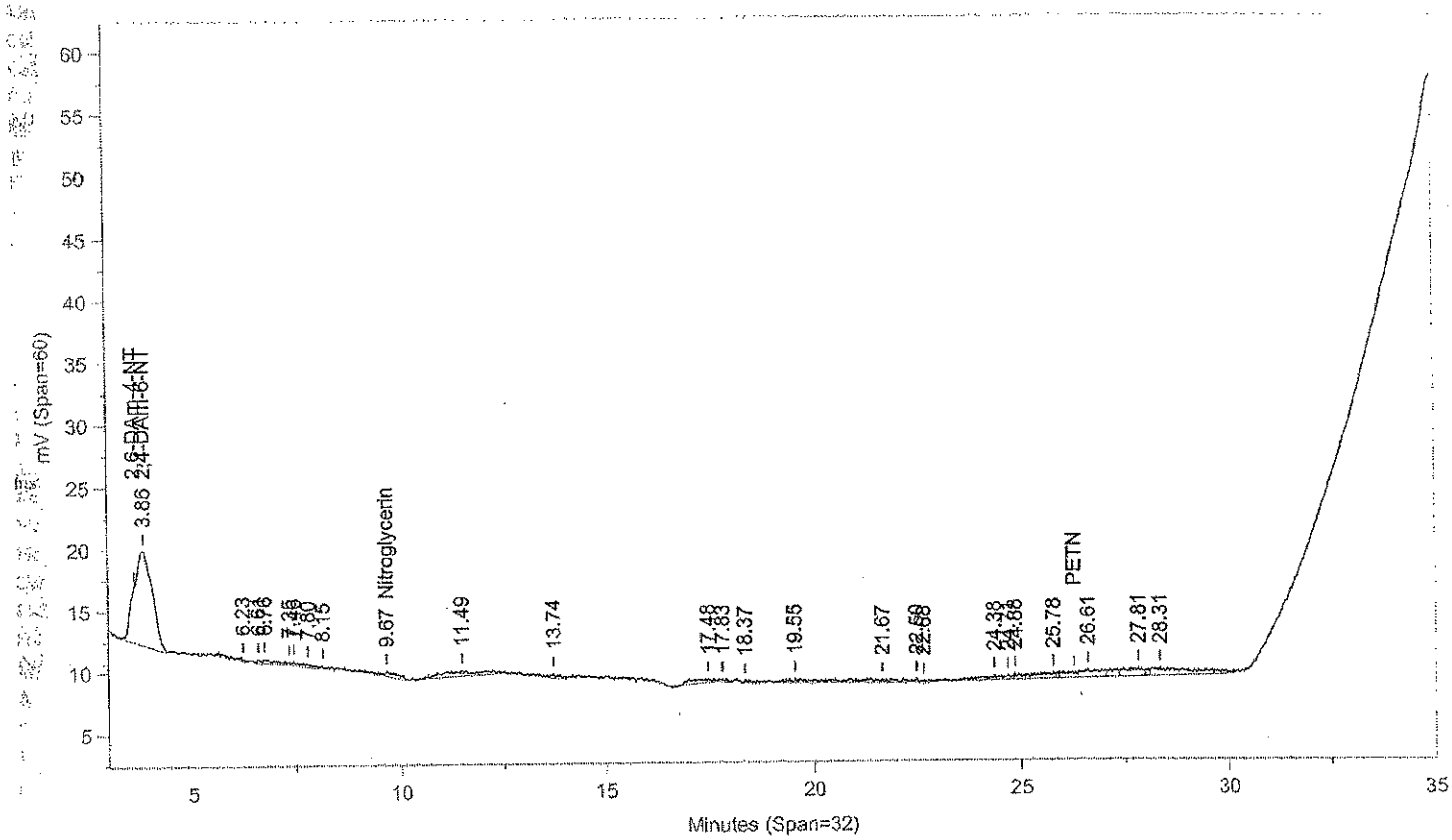
File: C:\CPWIN\DATA1\1C12310.14R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.14R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	3.856	229995		2,4-DAm-6-NT
	0		Nitroglycerin	9.671	8117	79.86	Nitroglycerin
16.913	1854	4.799	2-Am-4,6-DNT		0		2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.14A
Area File: C:\CPWIN\DATA1\1C12310B.14A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:14 PM
File Reported On: 11/7/2013 at 6:29:23 PM

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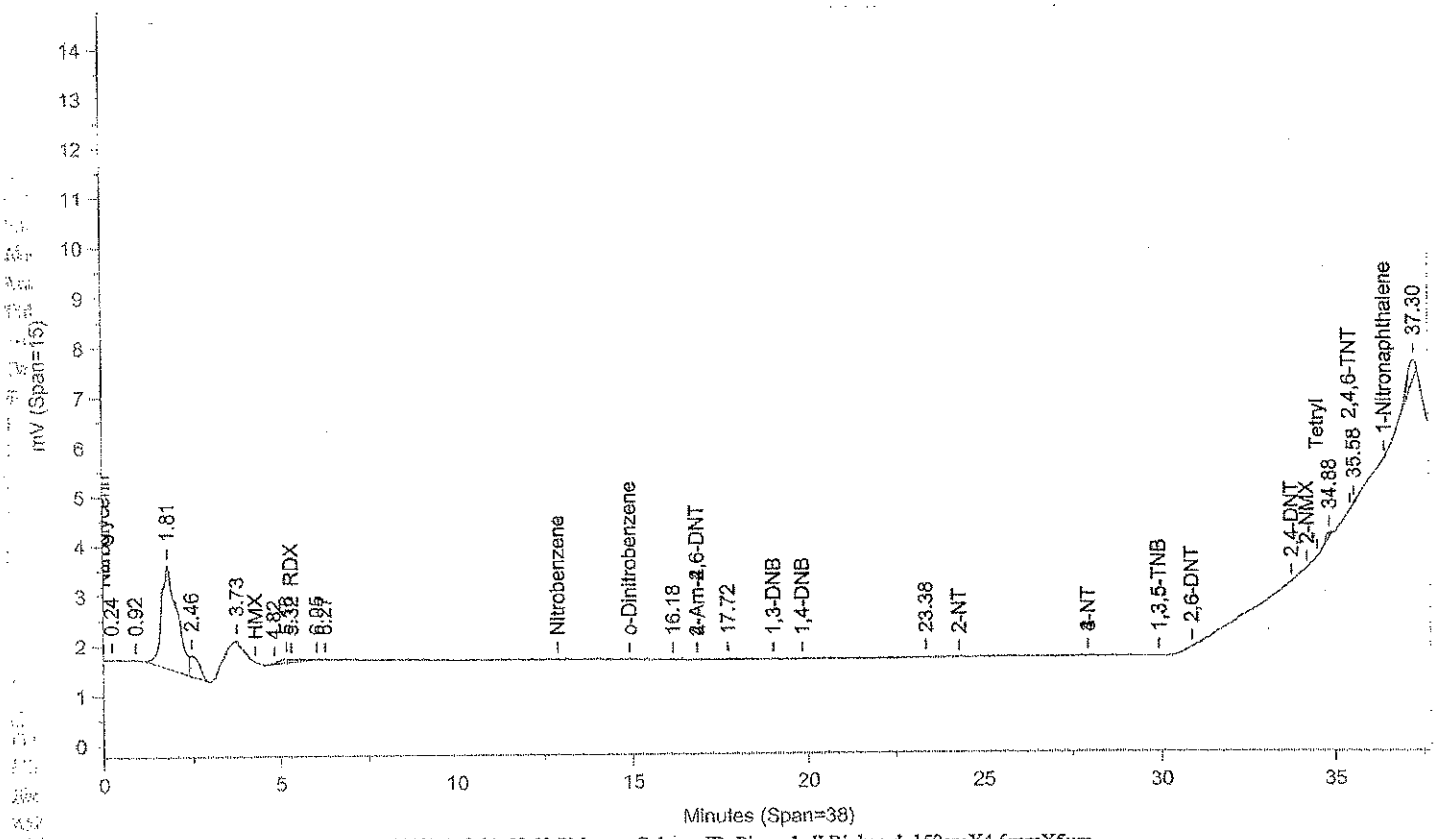
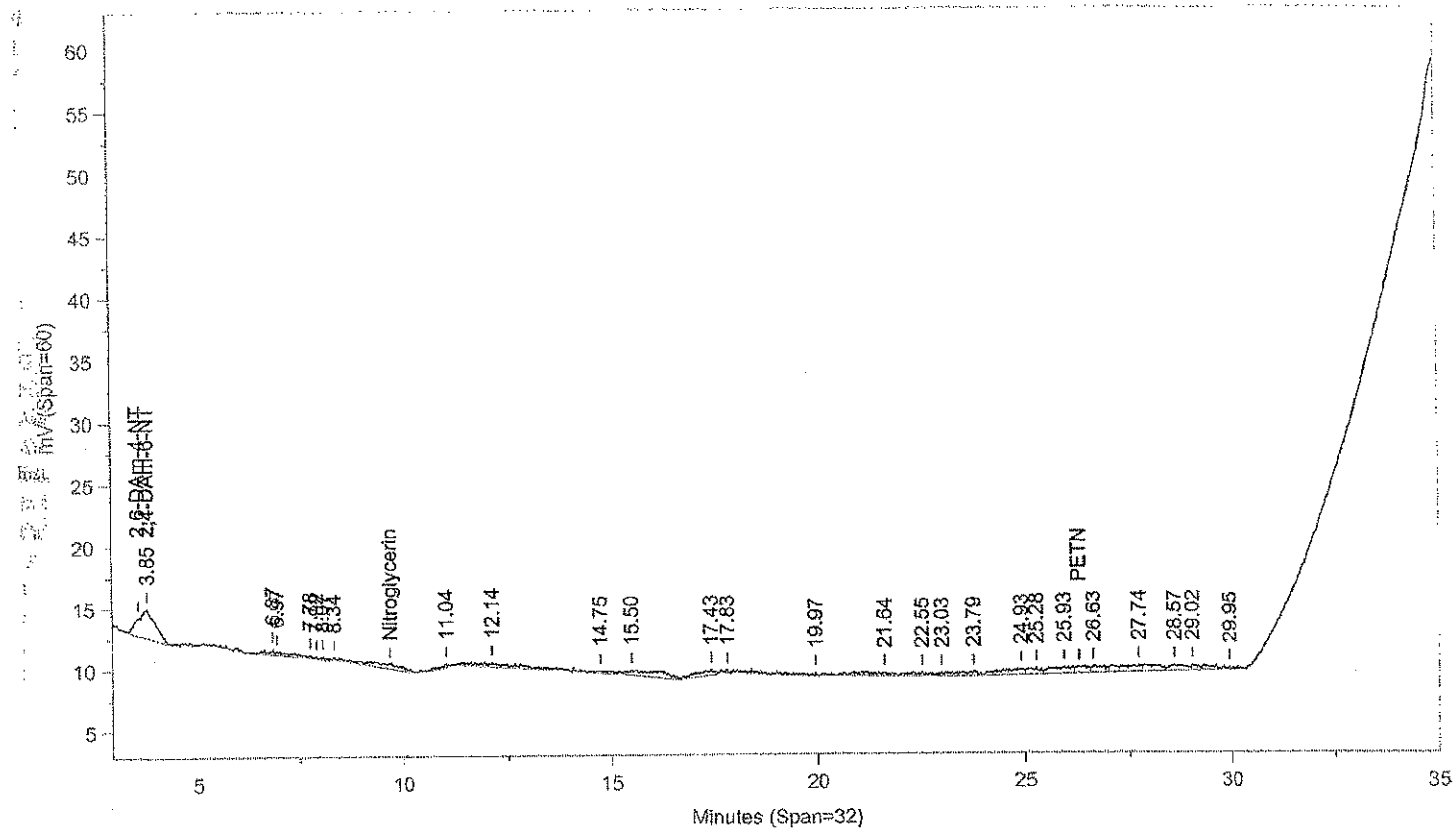
File: C:\CPWIN\DATA1\1C12310.15R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.15R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

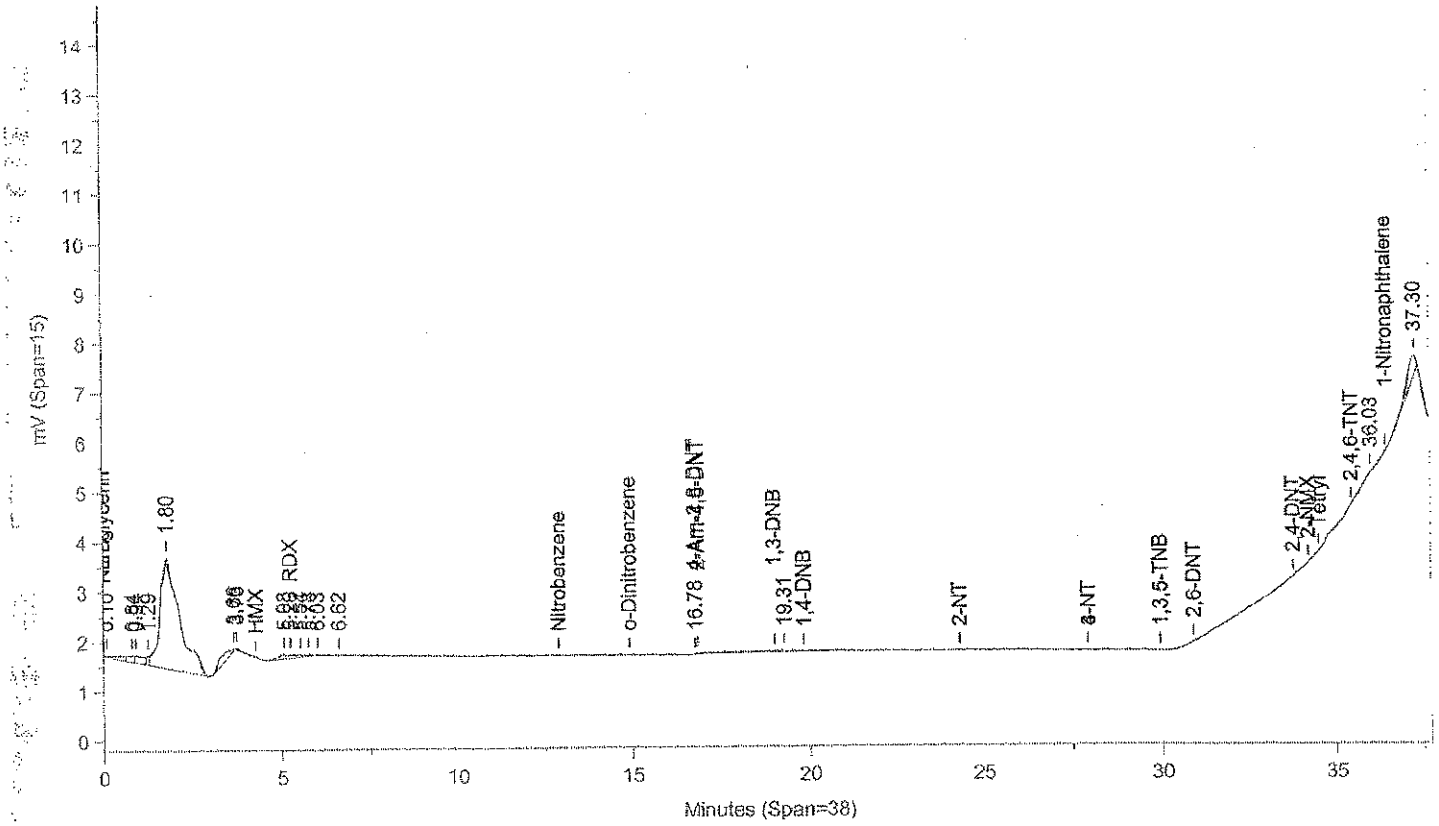
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	3.849	68461	.	2,4-DAm-6-NT
5.316	1474	-10.427	RDX		0	.	RDX

Files:
Area File: C:\CPWIN\DATA1\1C12310.15A
Area File: C:\CPWIN\DATA1\1C12310B.15A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:44 PM
File Reported On: 11/7/2013 at 6:29:53 PM

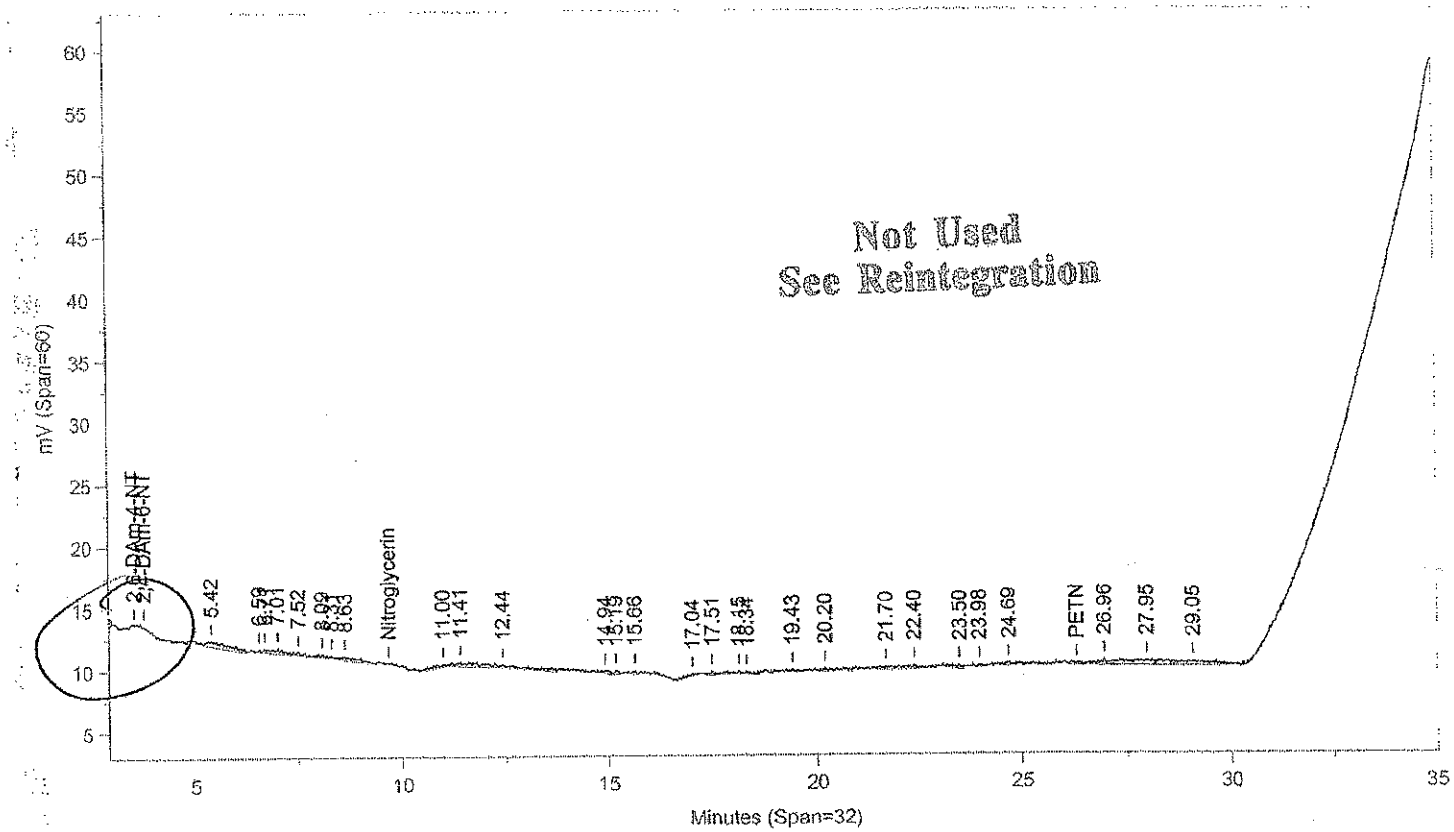
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.26	863	-15.881	RDX			0	RDX
16.782	22	.057	4-Am-2,6-DNT			0	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.16A
Area File: C:\CPWIN\DATA1\1C12310B.16A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:30:14 PM
File Reported On: 11/7/2013 at 6:30:23 PM

Not Used
See Reintegration

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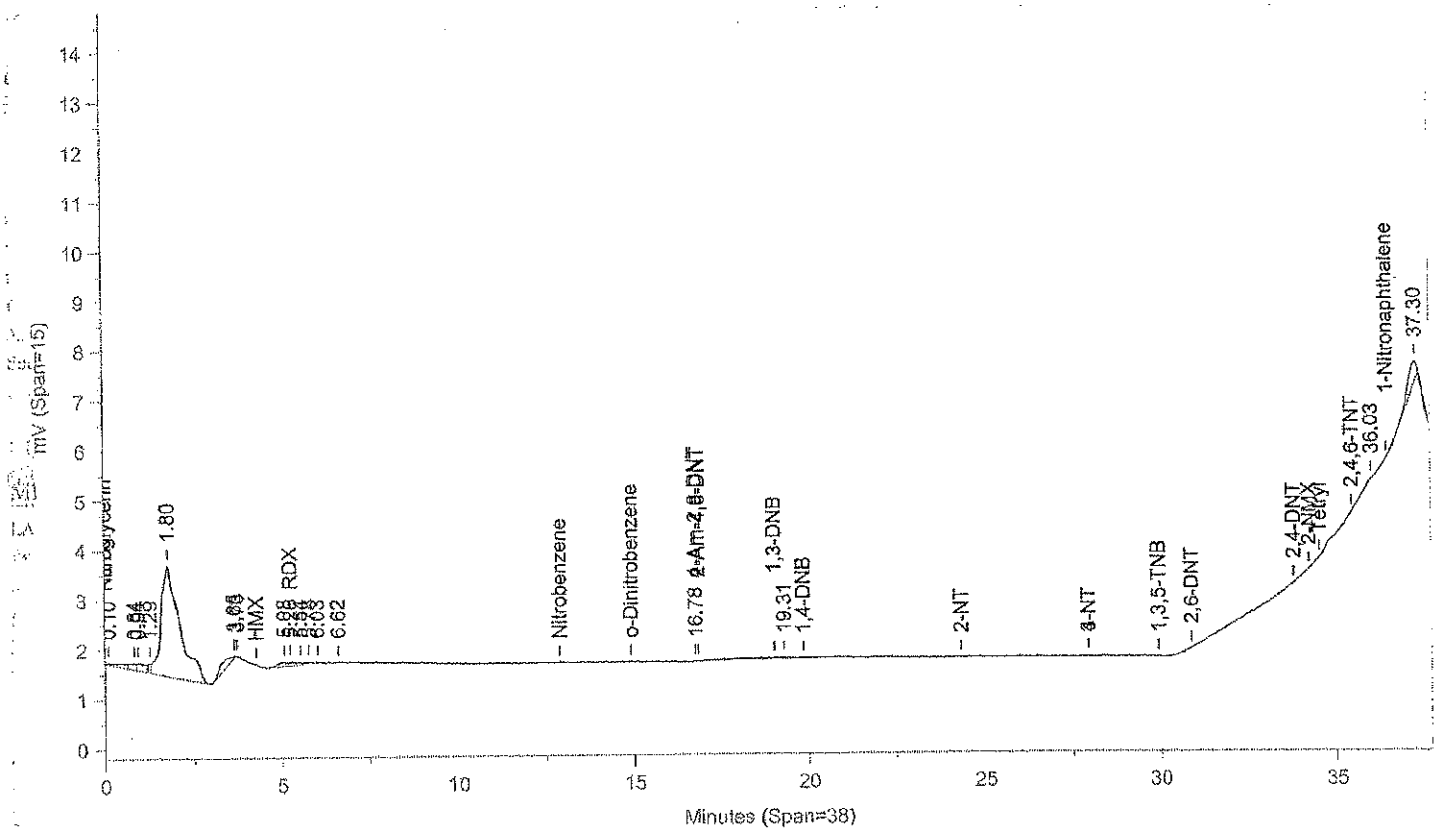
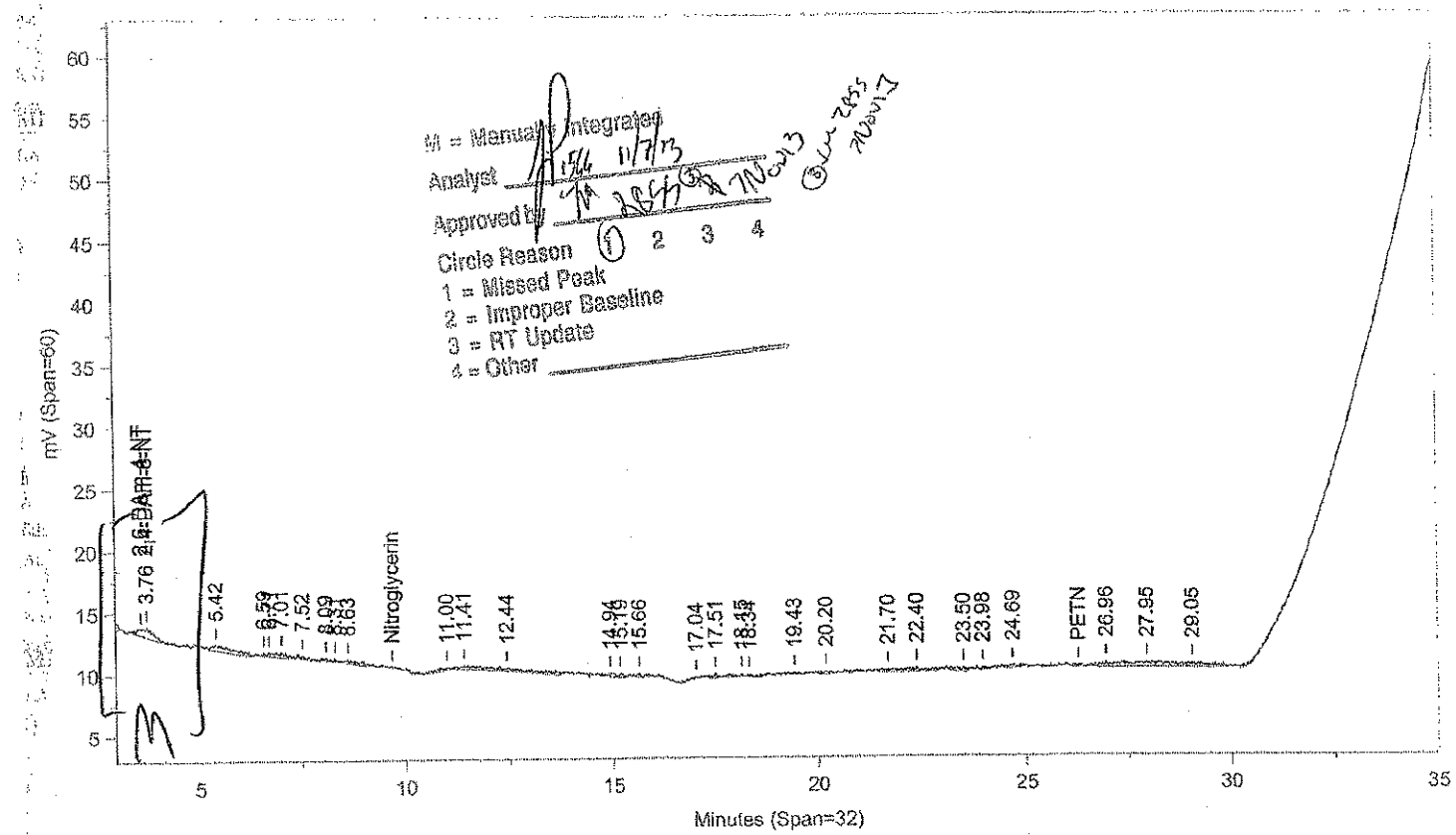
File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	3.761	17579		2,4-DAm-6-NT
5.26	863	-15.881	RDX		0		RDX
16.782	22	.057	4-Am-2,6-DNT		0		4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:35:30 PM
File Reported On: 11/7/2013 at 6:35:29 PM

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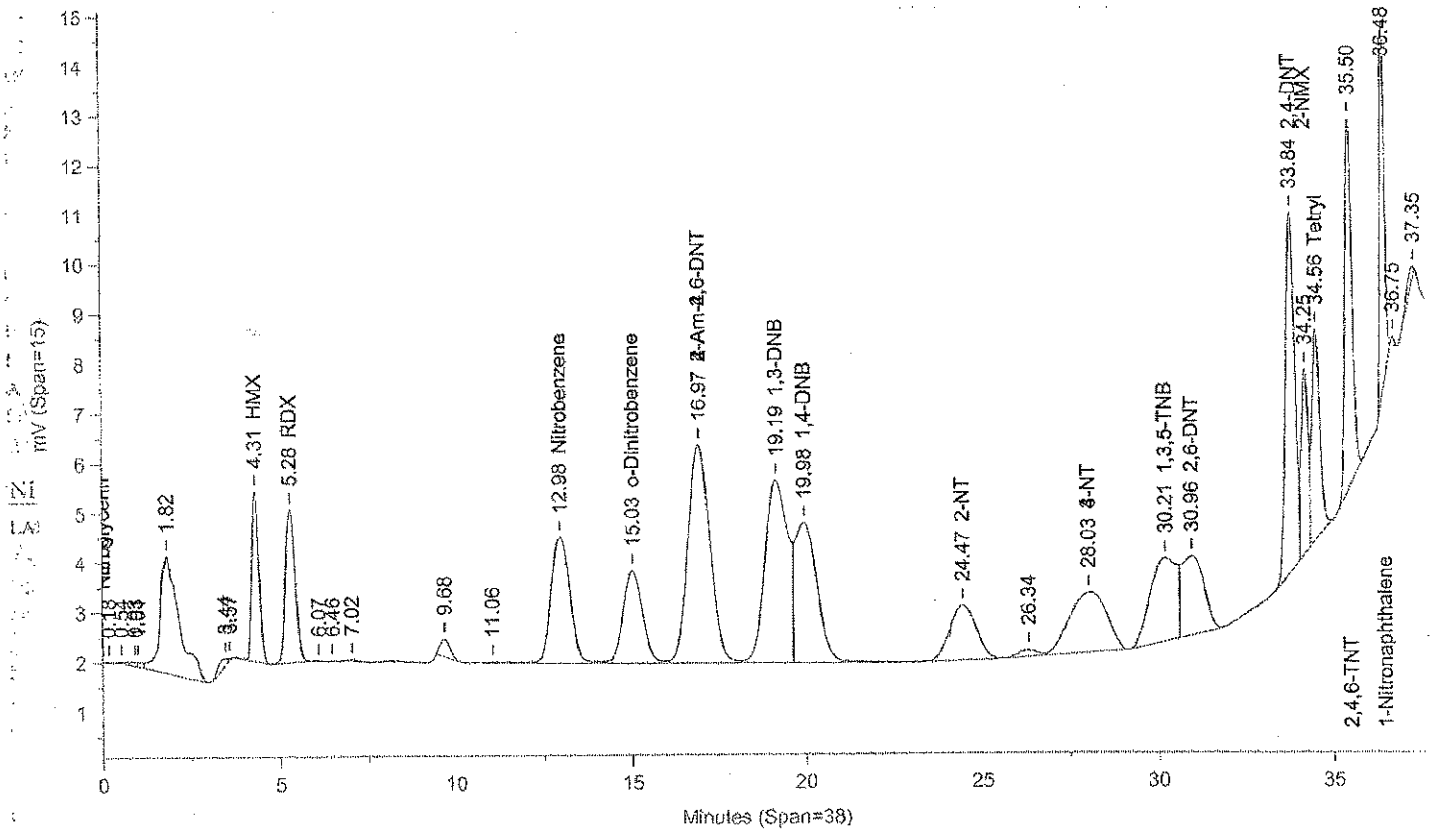
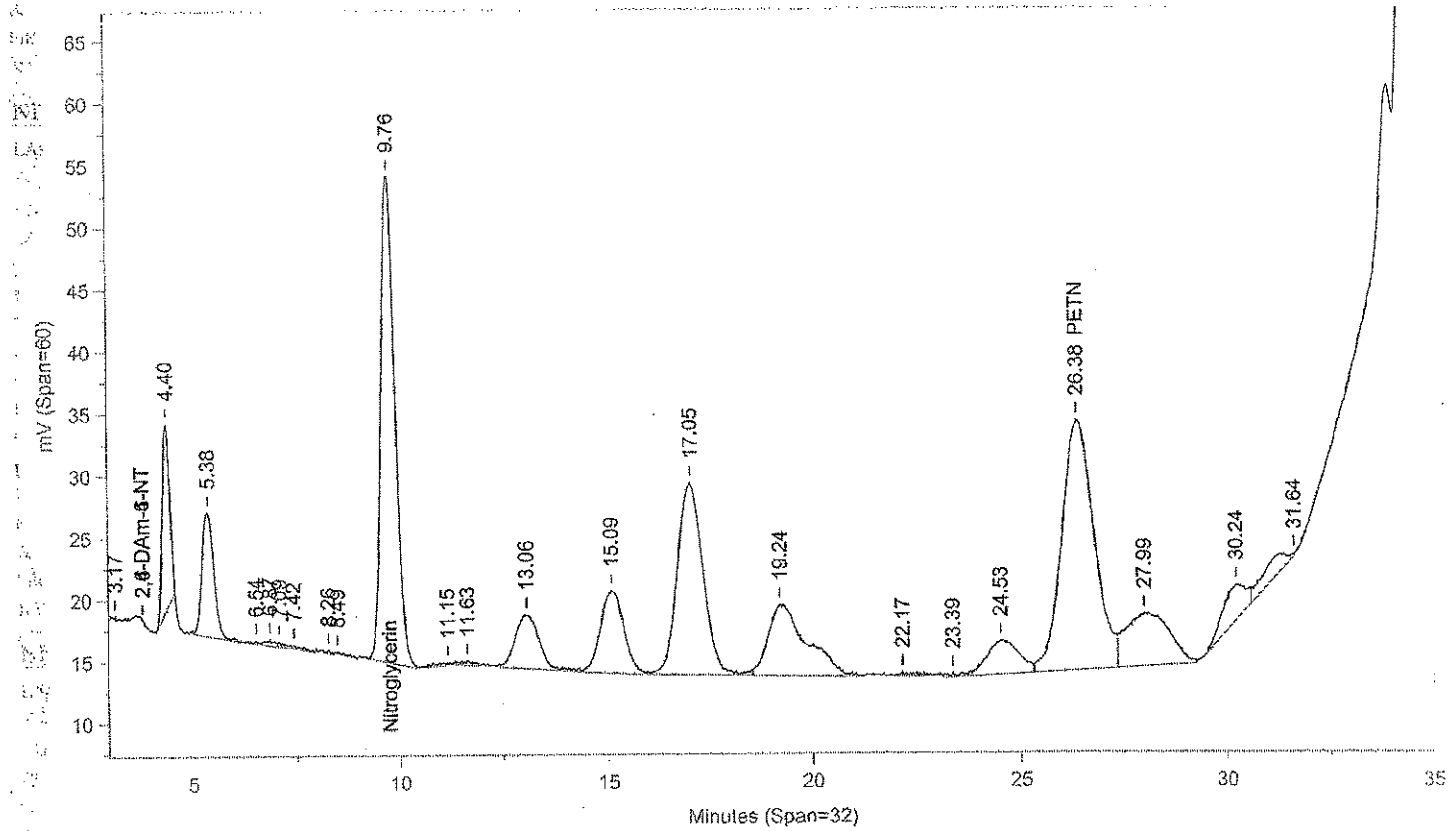
File: C:\CPWIN\DATA1\1C12310.39R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.311	47688	454.906	HMX	.	0	.	HMX
5.284	58311	496.808	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.76	965616	9500.457	Nitroglycerin
12.977	95535	517.516	Nitrobenzene	.	0	.	Nitrobenzene
15.029	73460	528.576	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.965	193472	500.711	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.194	170028	501.992	1,3-DNB	.	0	.	1,3-DNB
19.984	122864	529.074	1,4-DNB	.	0	.	1,4-DNB
24.467	57690	492.764	2-NT	.	0	.	2-NT
Del .	0	.	PETN	26.381	1091611	9191.866	PETN
28.029	88638	457.418	4-NT	.	0	.	4-NT
29.212	87708	408.416	1,3,5-TNB	.	0	.	1,3,5-TNB
30.964	71686	561.447	2,6-DNT	.	0	.	2,6-DNT
33.841	135149	523.268	2,4-DNT	.	0	.	2,4-DNT
34.248	50237	1492.375	2-NMX	.	0	.	2-NMX
34.565	65961	433.595	Tetryl	.	0	.	Tetryl
R 35.5	104716	497.999	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	69797	462.81	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.39A
Area File: C:\CPWIN\DATA1\1C12310B.39A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 2:06:02 PM
File Reported On: 11/8/2013 at 2:06:11 PM

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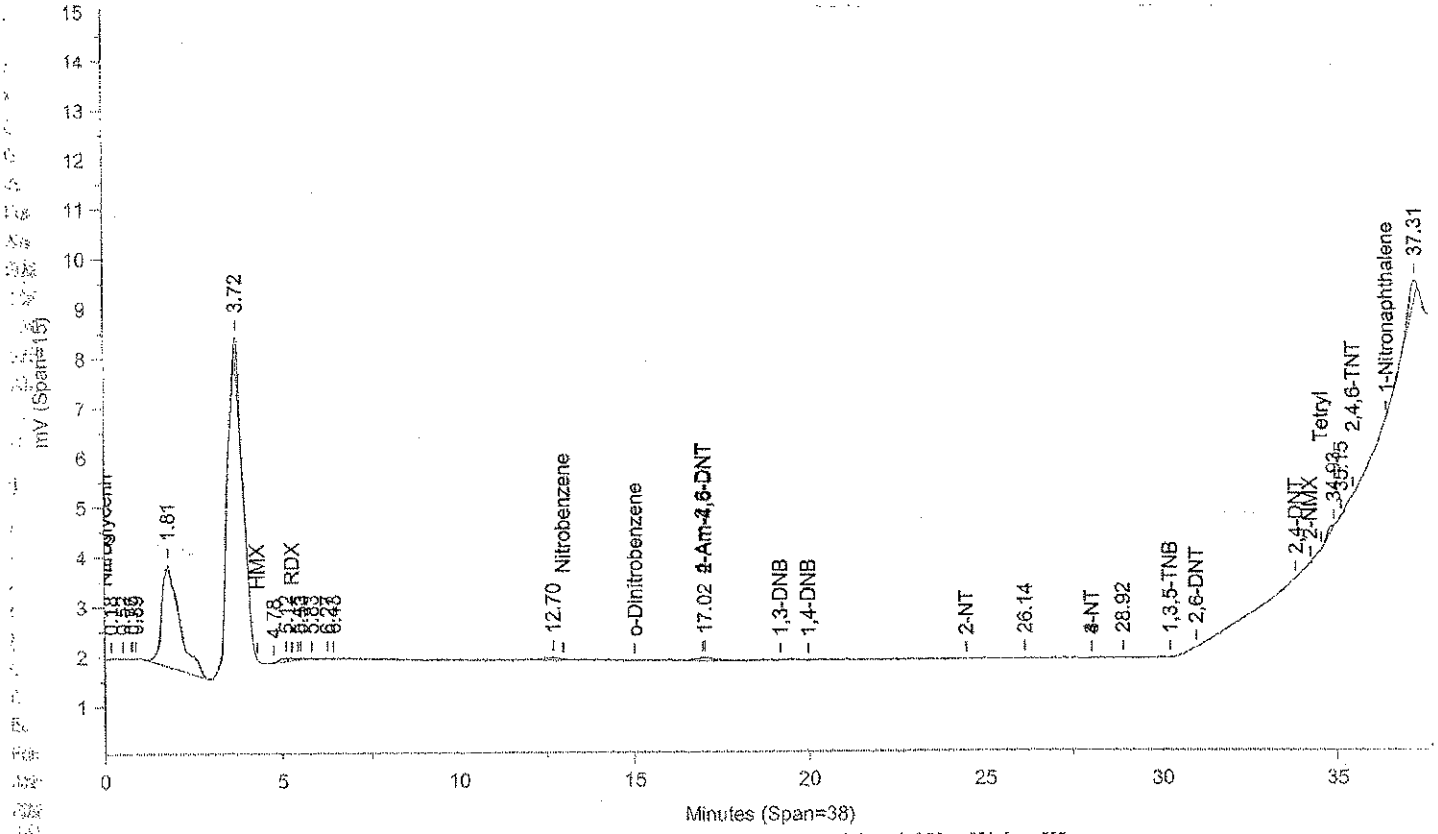
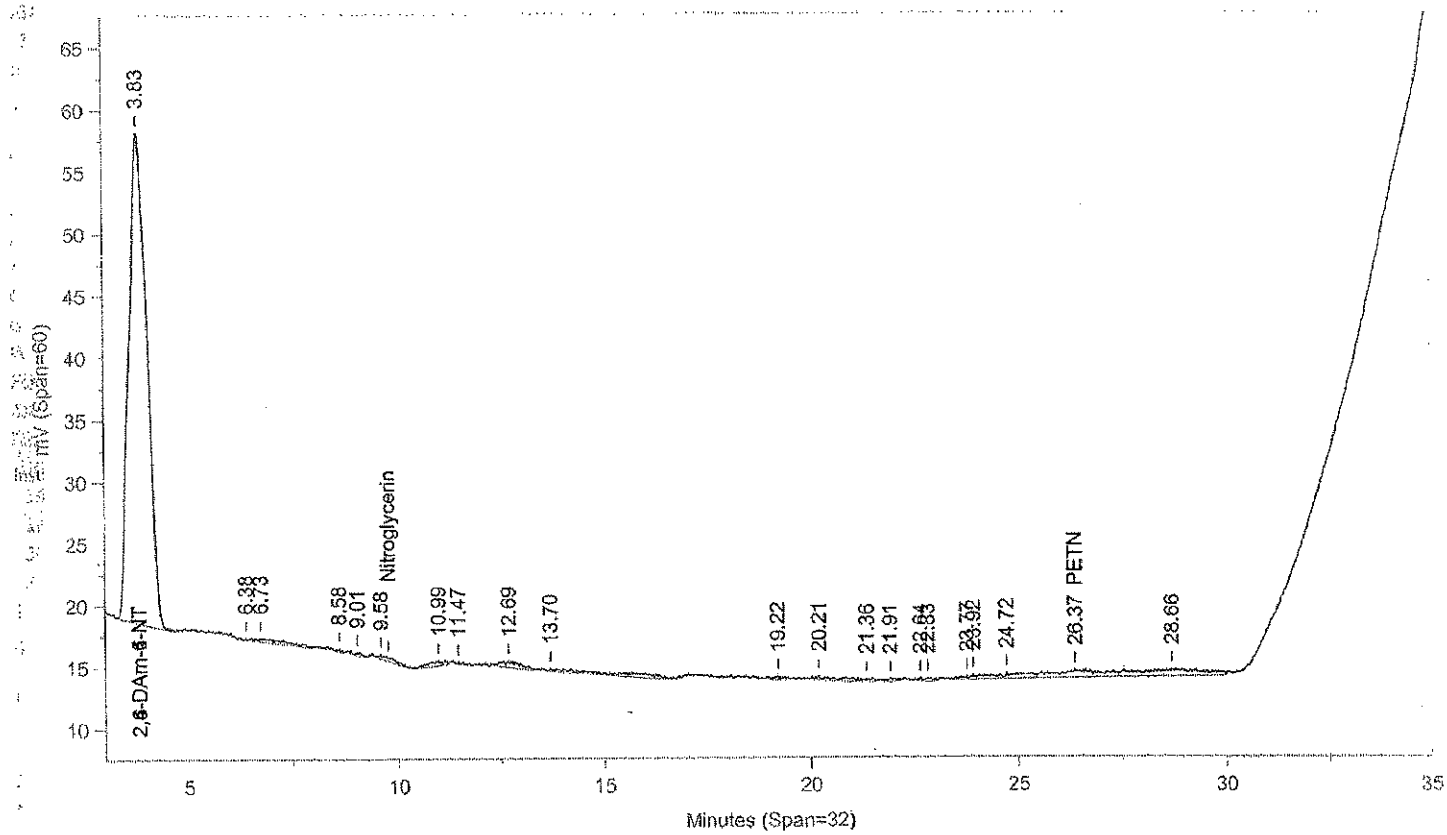
File: C:\CPWIN\DATA1\1C12310.40R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.40R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

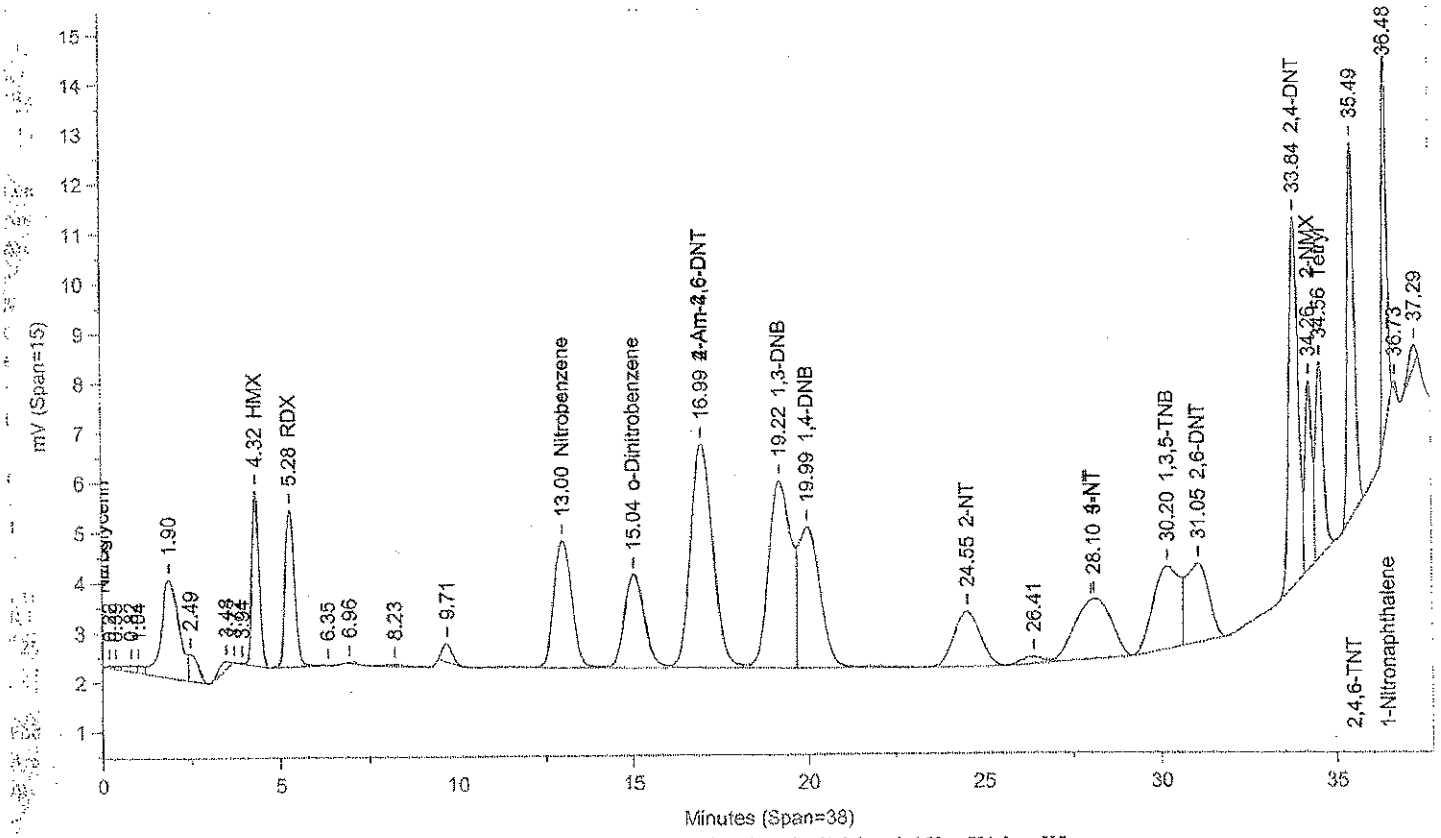
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.834	1187636	538.776	2,6-DAm-4-NT
7.016	3106	8.038	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.366	46924	395.12	PETN

Files:
Area File: C:\CPWIN\DATA1\1C12310.40A
Area File: C:\CPWIN\DATA1\1C12310B.40A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 2:06:32 PM
File Reported On: 11/8/2013 at 2:06:42 PM

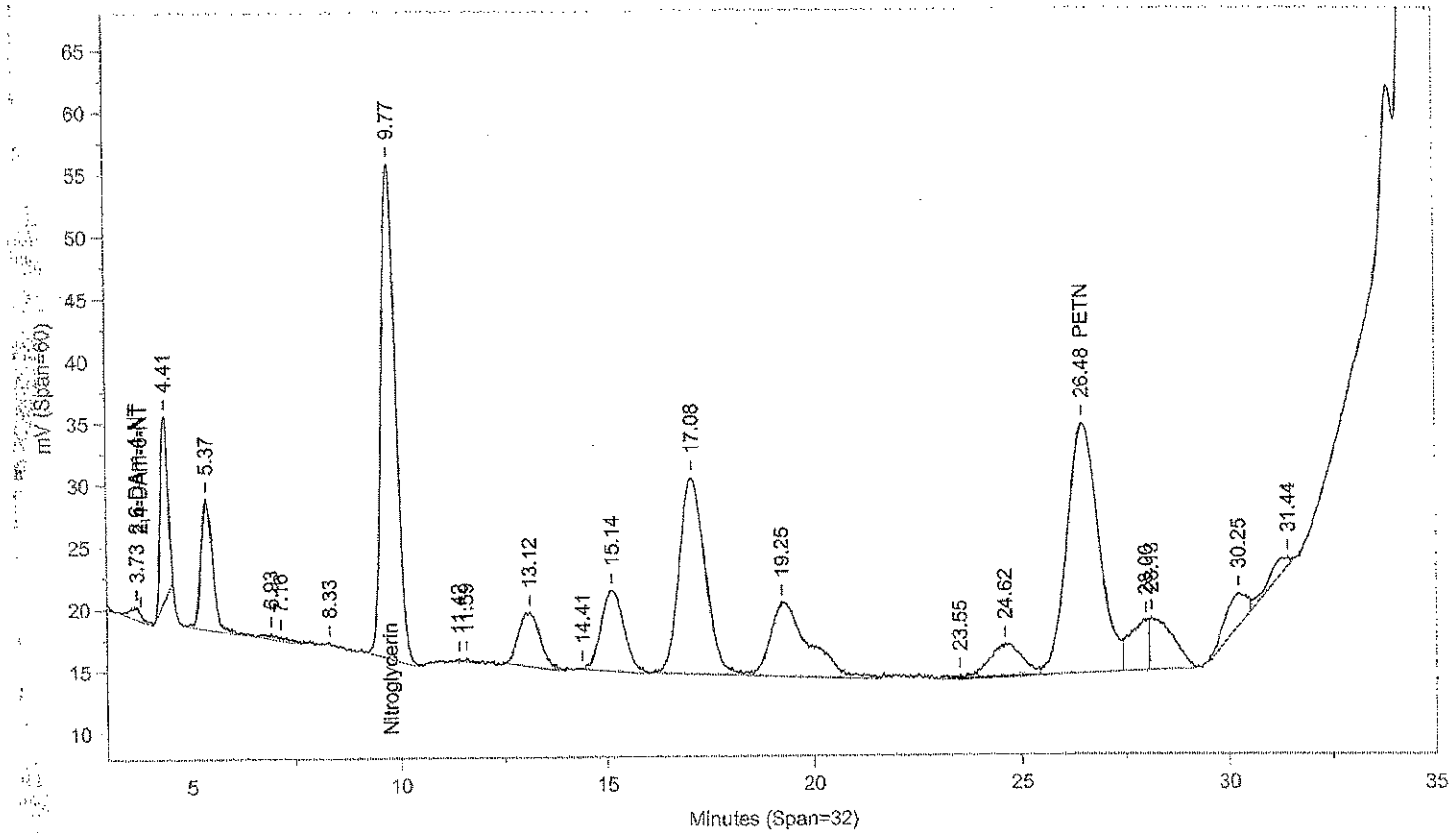
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\2C12310.63R



Instrument ID: CP12--Y6329A Injected On: 11/12/2013 4:02:39 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\2C12310B.63R



Instrument ID: CP12--Y6329B Injected On: 11/12/2013 4:02:39 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

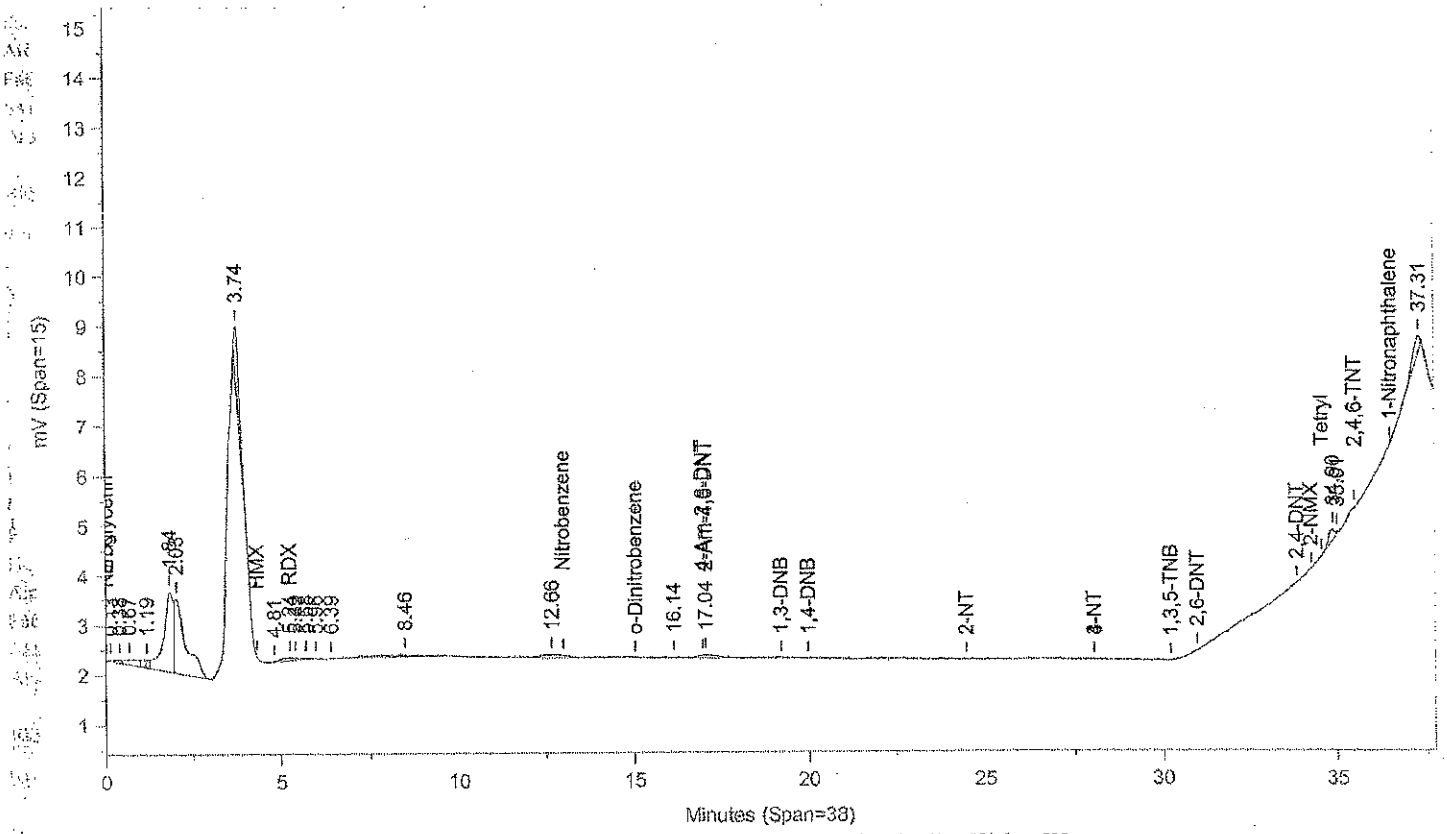
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.735	20555	9.325	2,6-DAm-4-NT
4.318	49305	470.327	HMX	.	0	.	HMX
5.284	59812	510.201	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.768	971823	9561.525	Nitroglycerin
13.	94320	510.887	Nitrobenzene	.	0	.	Nitrobenzene
15.038	74845	538.762	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.991	196980	509.792	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.22	171740	507.045	1,3-DNB	.	0	.	1,3-DNB
19.994	123699	532.77	1,4-DNB	.	0	.	1,4-DNB
24.555	58359	498.569	2-NT	.	0	.	2-NT
.	0	.	PETN	26.479	1074583	9048.481	PETN
28.1	87123	447.549	3-NT	.	0	.	3-NT
30.199	85605	399.88	1,3,5-TNB	.	0	.	1,3,5-TNB
31.055	72072	564.398	2,6-DNT	.	0	.	2,6-DNT
33.843	136673	529.169	2,4-DNT	.	0	.	2,4-DNT
34.255	51778	1536.505	2-NMX	.	0	.	2-NMX
34.564	58539	386.86	Tetryl	.	0	.	Tetryl
35.494	104189	495.528	2,4,6-TNT	.	0	.	2,4,6-TNT
36.482	68988	457.764	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

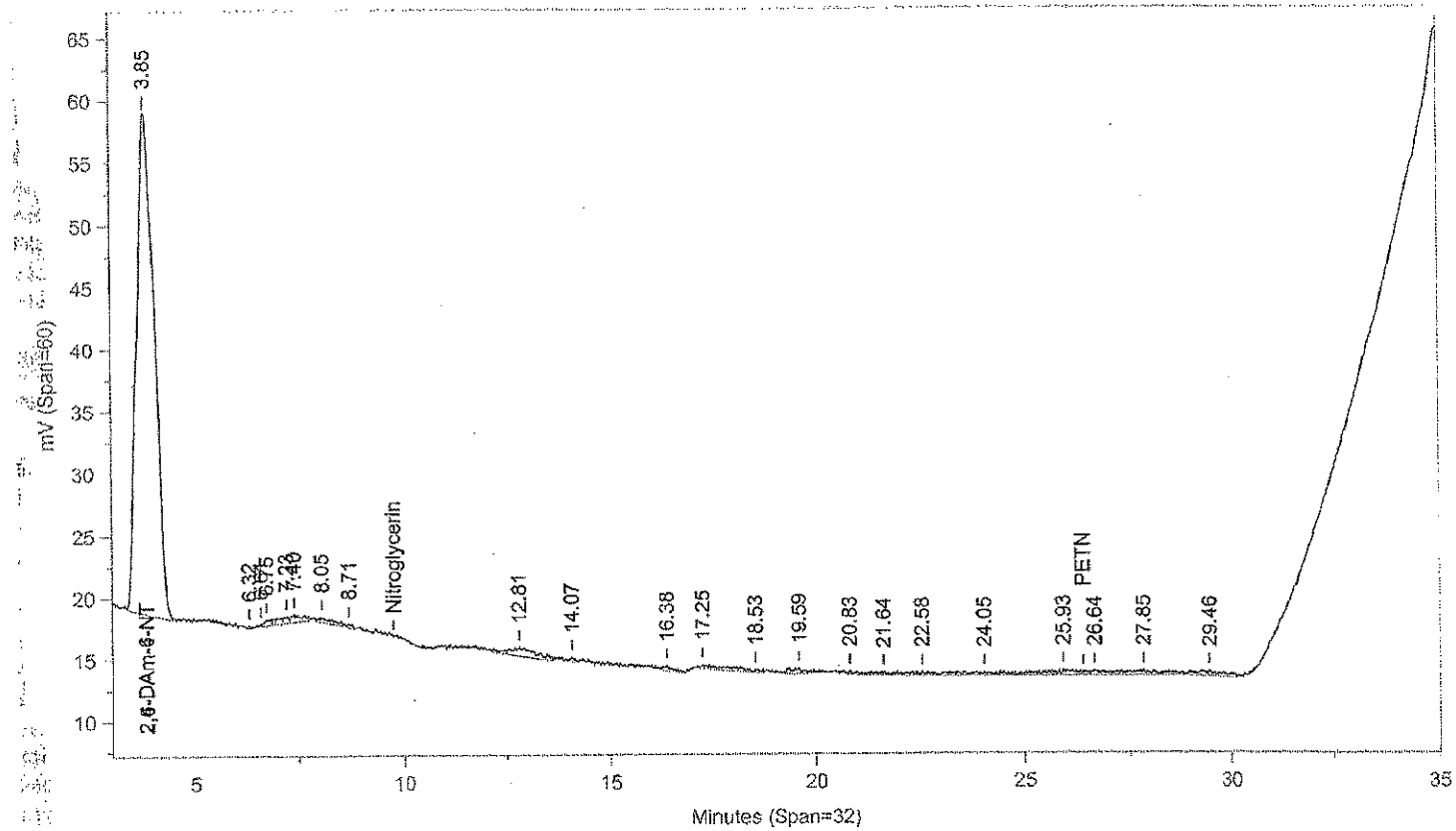
Files:
Area File: C:\CPWIN\DATA1\2C12310.63A
Area File: C:\CPWIN\DATA1\2C12310B.63A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 4:43:22 PM
File Reported On: 11/12/2013 at 4:43:32 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\2C12310.64R



Instrument ID: CP12--Y6329A Injected On: 11/12/2013 4:45:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\2C12310B.64R



Instrument ID: CP12--Y6329B Injected On: 11/12/2013 4:45:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

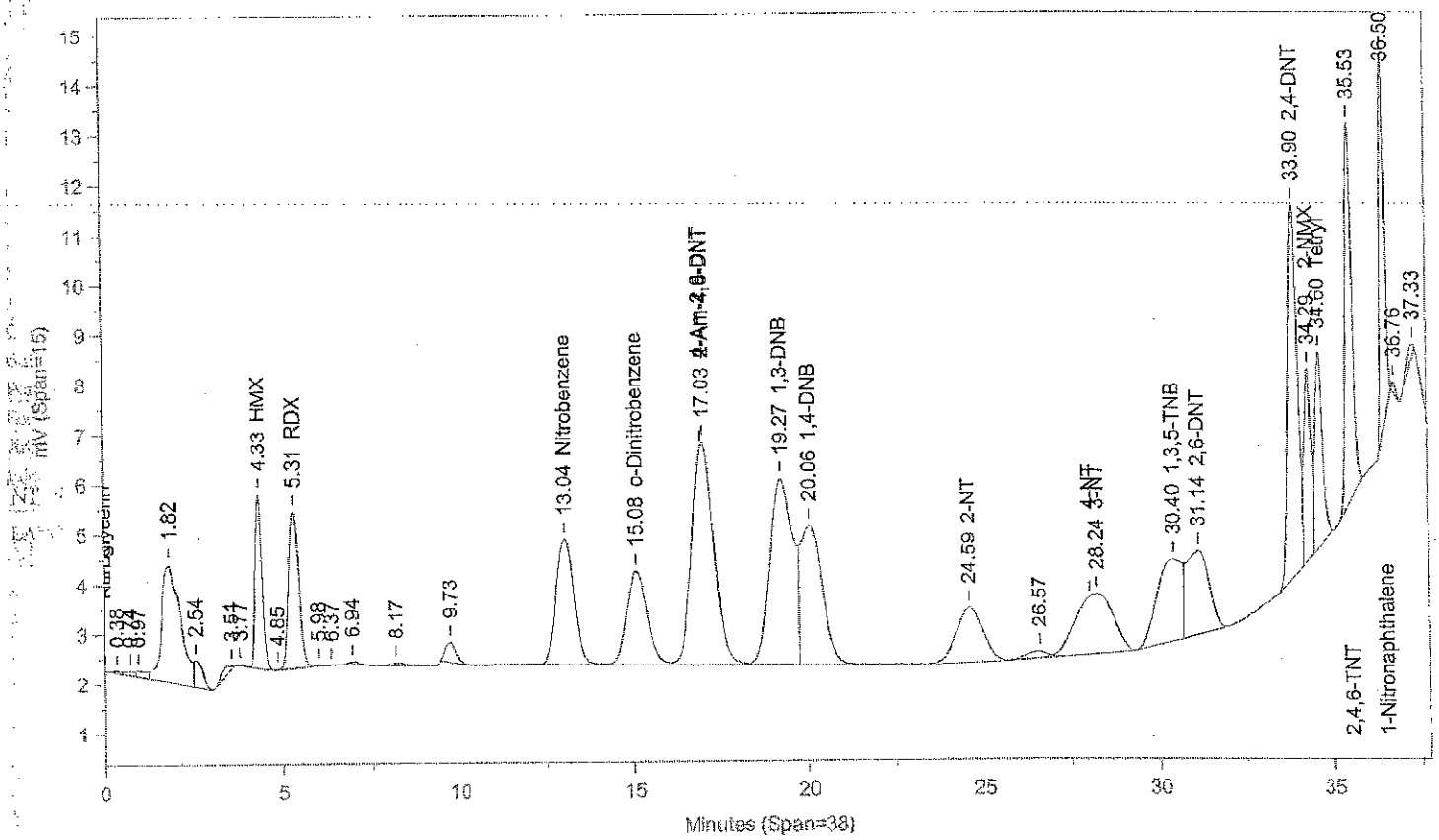
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.85	1200306	544.524	2,6-DAm-4-NT
5.238	1113	-13.648	RDX	.	0	.	RDX
17.039	3746	9.694	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\2C12310.64A
Area File: C:\CPWIN\DATA1\2C12310B.64A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 5:25:16 PM
File Reported On: 11/12/2013 at 5:25:29 PM

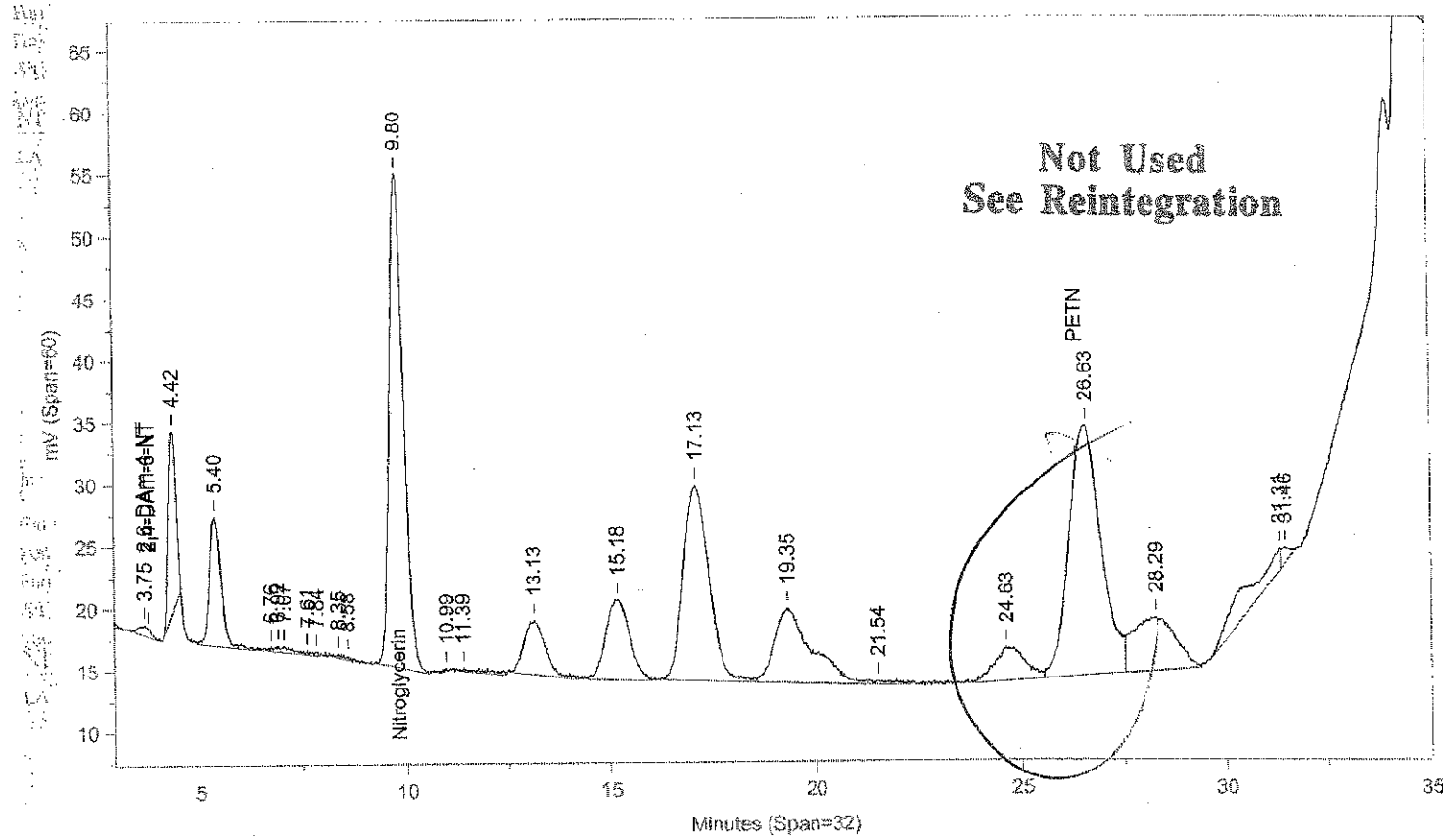
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 12:42:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 12:42:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

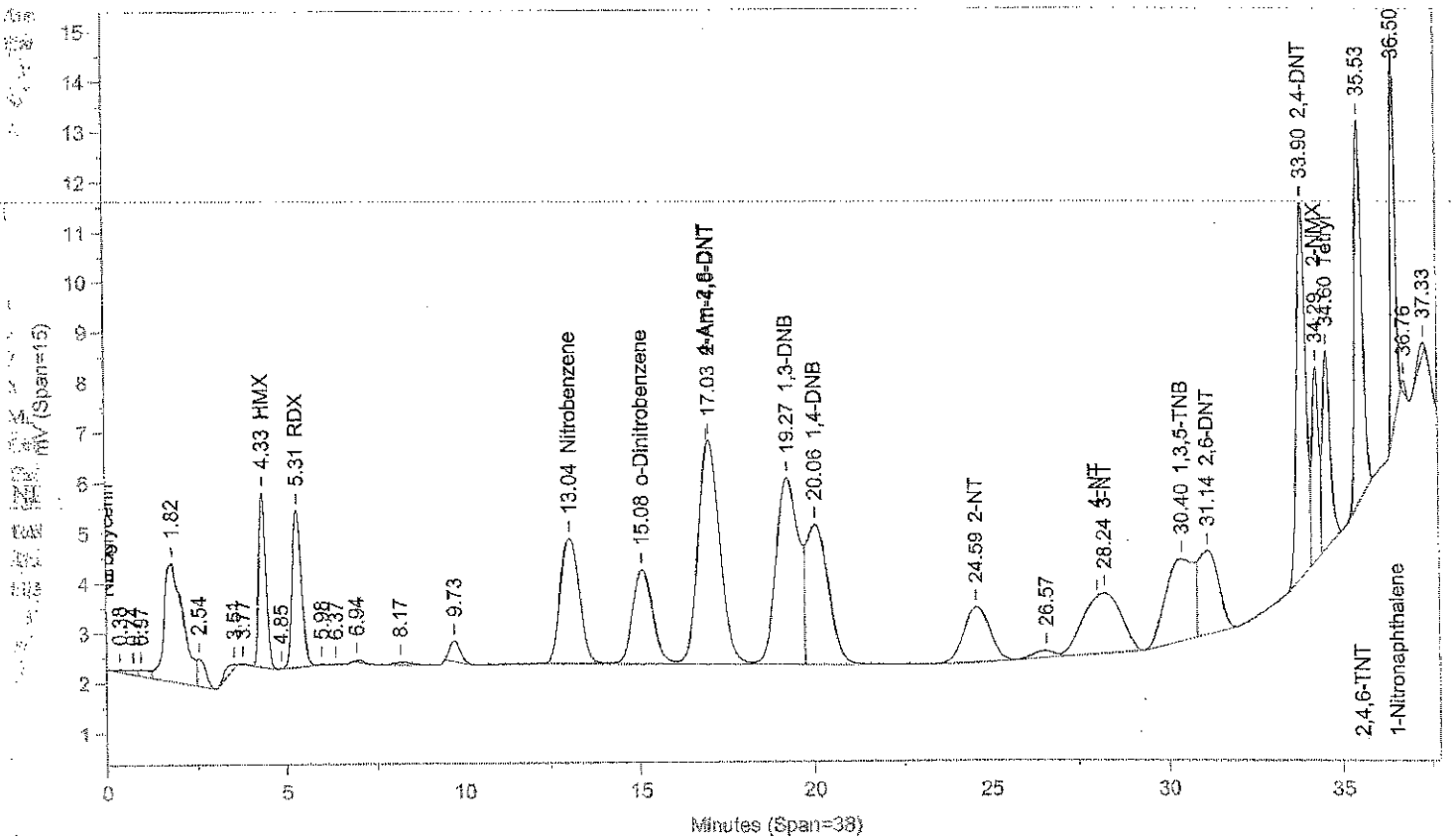
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.748	16052	7.282	2,6-DAm-4-NT
4.332	48458	462.25	HMX	.	0	.	HMX
5.309	58764	500.847	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.801	971750	9560.802	Nitroglycerin
13.035	92524	501.086	Nitrobenzene	.	0	.	Nitrobenzene
15.085	74381	535.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.083	196221	507.828	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.272	170543	503.514	1,3-DNB	.	0	.	1,3-DNB
20.055	119434	513.883	1,4-DNB	.	0	.	1,4-DNB
24.59	58639	501.002	2-NT	.	0	.	2-NT
28.238	88791	455.879	3-NT	.	0	.	3-NT
30.395	80939	380.95	1,3,5-TNB	.	0	.	1,3,5-TNB
31.138	79005	617.417	2,6-DNT	.	0	.	2,6-DNT
33.897	136337	527.866	2,4-DNT	.	0	.	2,4-DNT
34.289	52609	1560.313	2-NMX	.	0	.	2-NMX
34.604	60207	397.359	Tetryl	.	0	.	Tetryl
35.533	105918	503.633	2,4,6-TNT	.	0	.	2,4,6-TNT
36.496	69110	458.522	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.05A
Area File: C:\CPWIN\DATA1\3C12310B.05A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:23:00 AM
File Reported On: 11/13/2013 at 1:23:10 AM

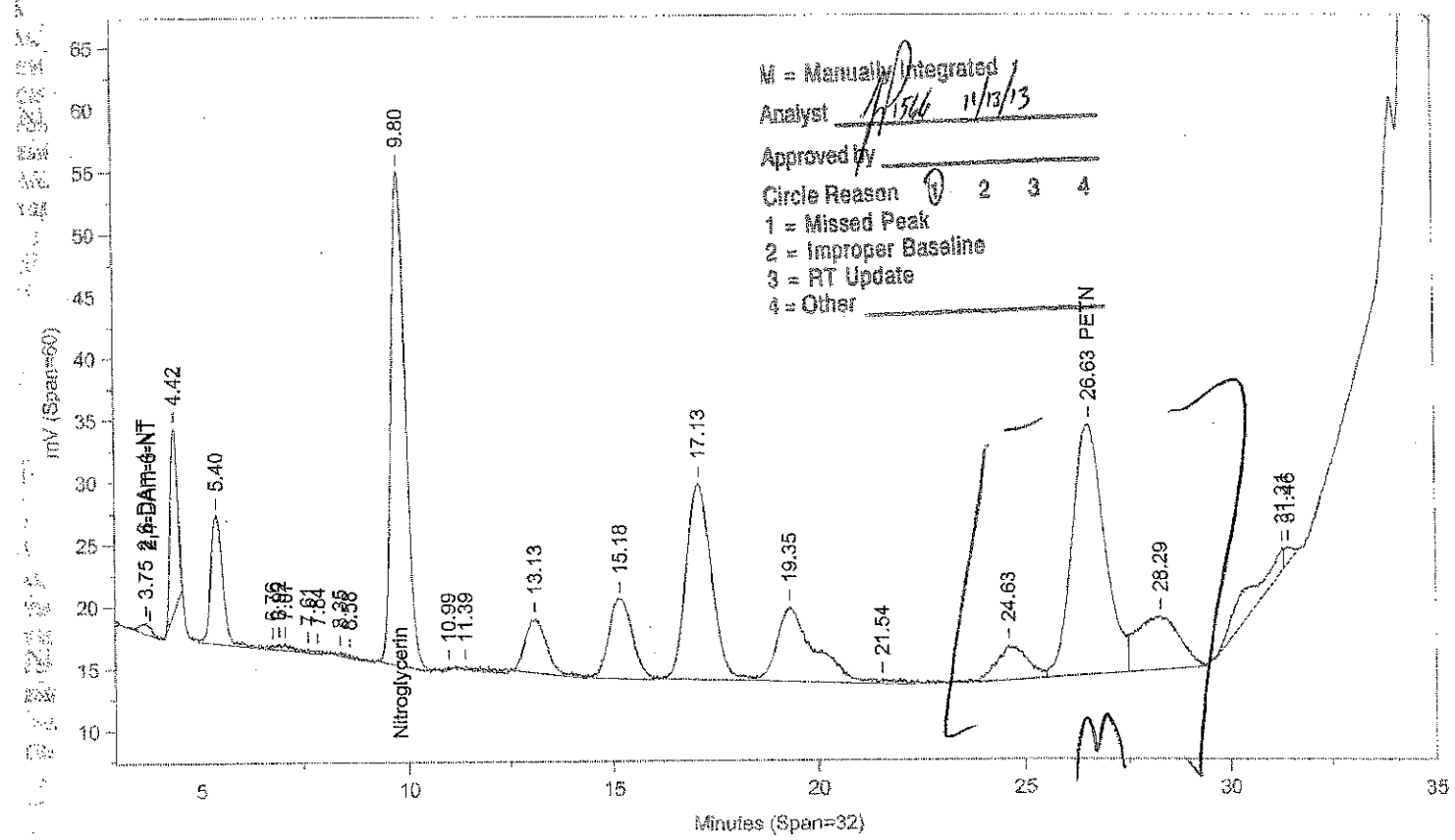
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 12:42:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.05R



M = Manually Integrated
Analyst 11/13/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329B Injected On: 11/13/2013 12:42:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

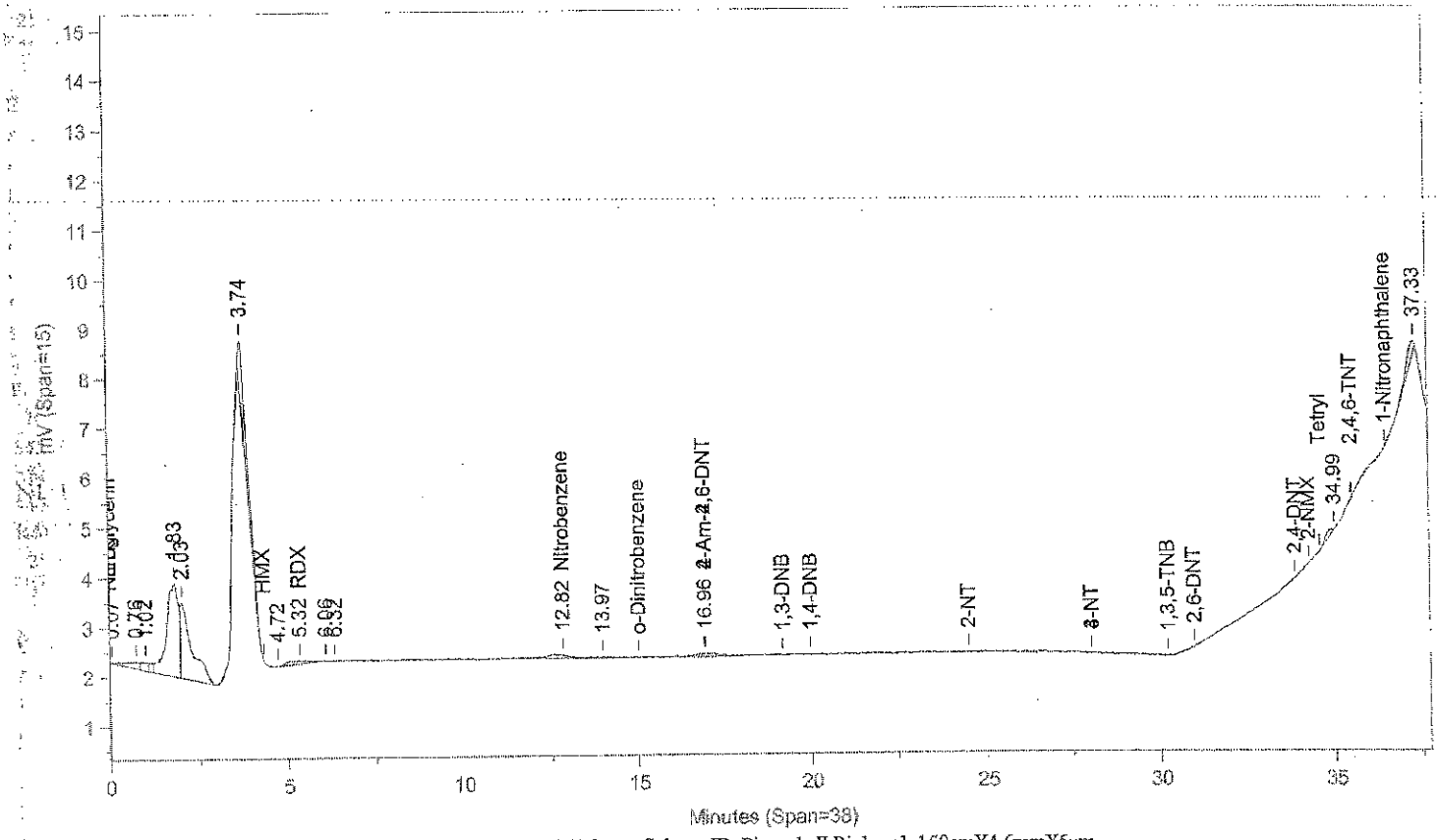
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.748	16052	7.282	2,6-DAm-4-NT
4.332	48458	462.25	HMX	.	0	.	HMX
5.309	58764	500.847	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.801	971750	9560.802	Nitroglycerin
13.035	92524	501.086	Nitrobenzene	.	0	.	Nitrobenzene
15.085	74381	535.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.033	196221	507.828	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.272	170543	503.514	1,3-DNB	.	0	.	1,3-DNB
20.055	119434	513.883	1,4-DNB	.	0	.	1,4-DNB
24.59	58639	501.002	2-NT	.	0	.	2-NT
.	0	.	PETN	26.627	1094501	9216.201	PETN
28.238	88791	455.879	3-NT	.	0	.	3-NT
30.395	93460	431.753	1,3,5-TNB	.	0	.	1,3,5-TNB
31.138	66485	521.678	2,6-DNT	.	0	.	2,6-DNT
33.897	136471	528.388	2,4-DNT	.	0	.	2,4-DNT
34.289	51482	1528.023	2-NMX	.	0	.	2-NMX
34.604	61937	408.257	Tetryl	.	0	.	Tetryl
35.533	105918	503.633	2,4,6-TNT	.	0	.	2,4,6-TNT
36.496	69110	458.522	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

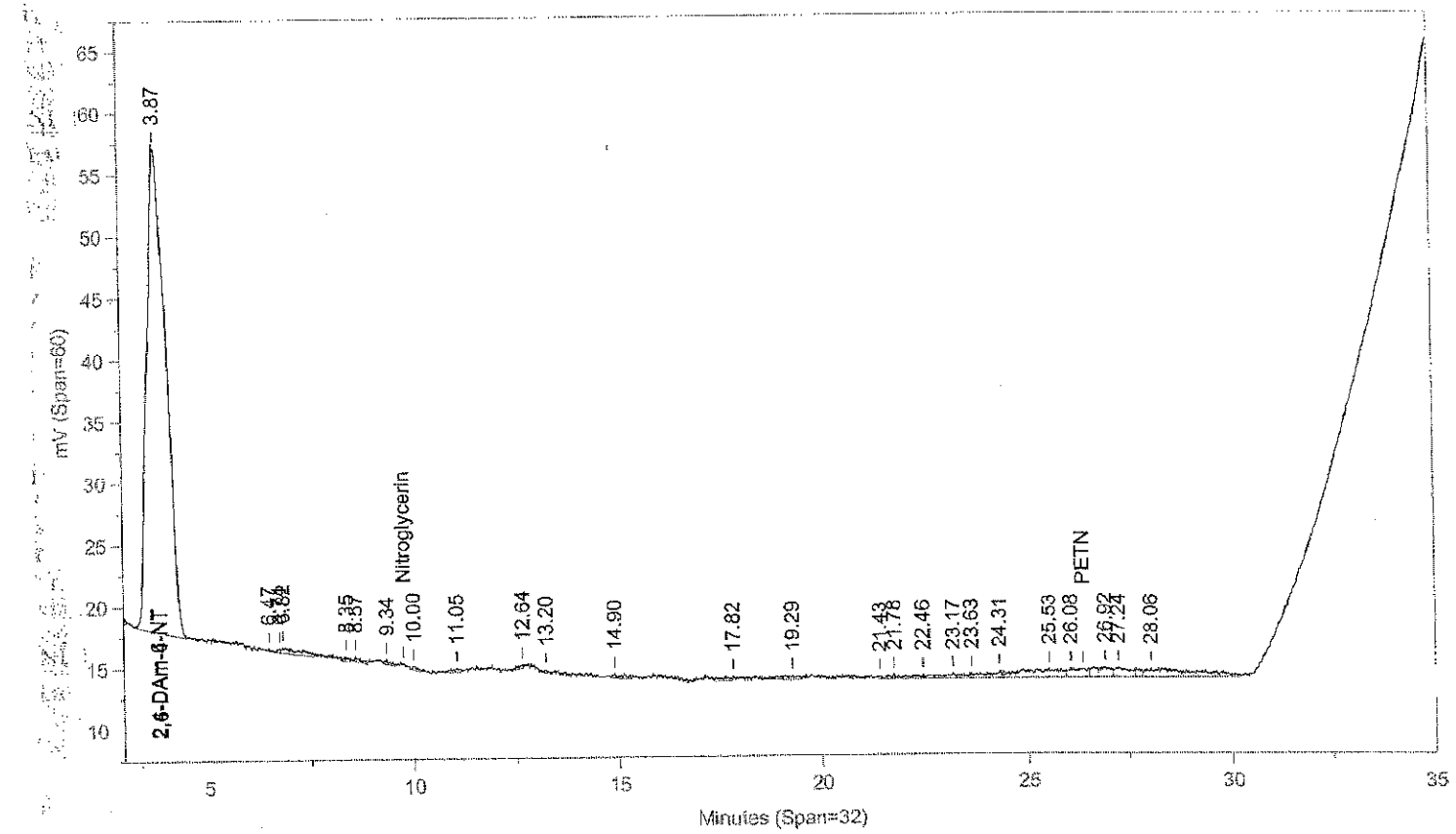
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:01:26 PM
File Reported On: 11/13/2013 at 1:01:25 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 1:25:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 1:25:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

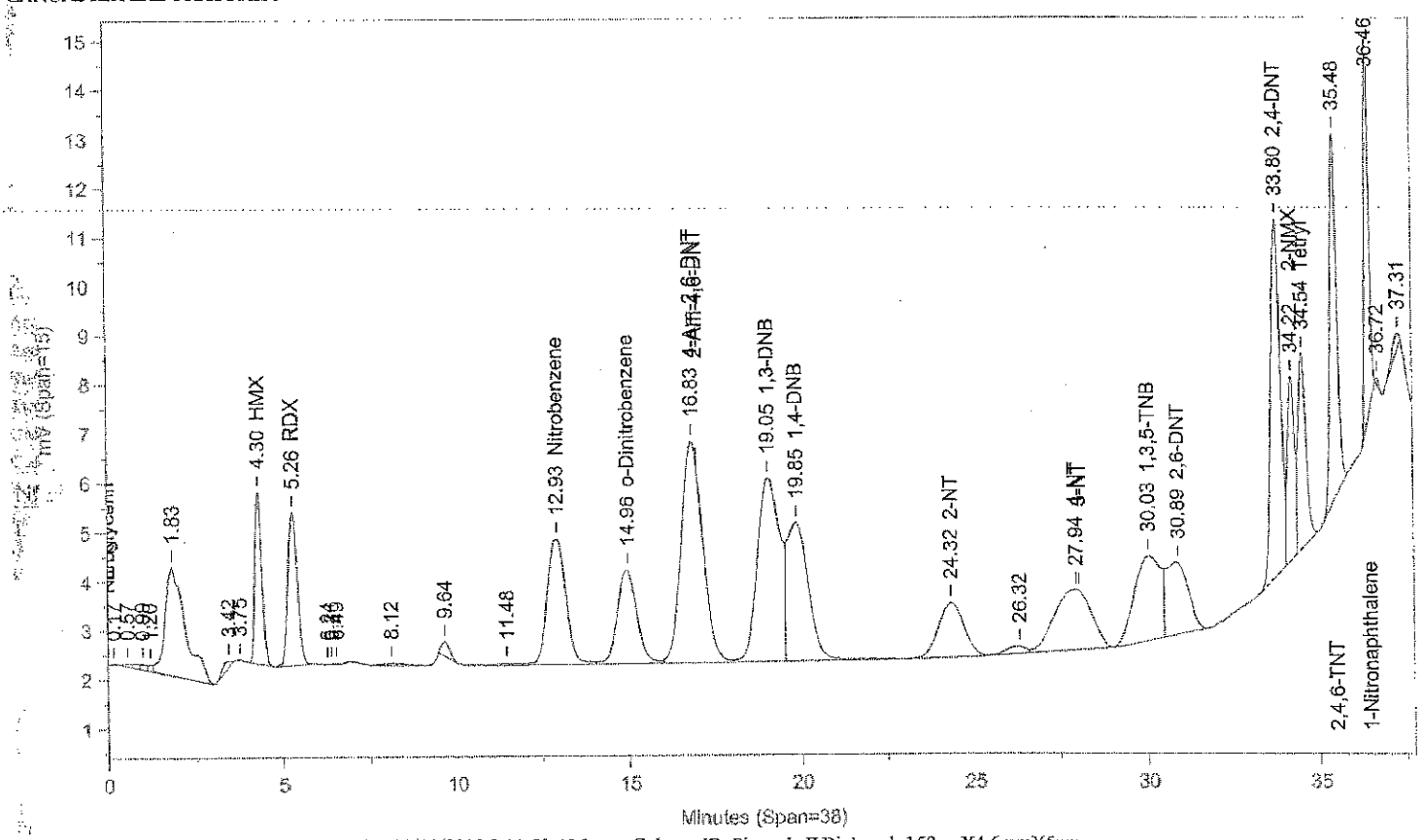
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,6-DAm-4-NT	3.865	1195092	542.158	2,6-DAm-4-NT
5.323	2772	1.161	RDX		0		RDX
12.821	3138	13.185	Nitrobenzene		0		Nitrobenzene
16.962	3426	8.875	4-Am-2,6-DNT		0		4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\3C12310.06A
Area File: C:\CPWIN\DATA1\3C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 2:05:24 AM
File Reported On: 11/13/2013 at 2:05:34 AM

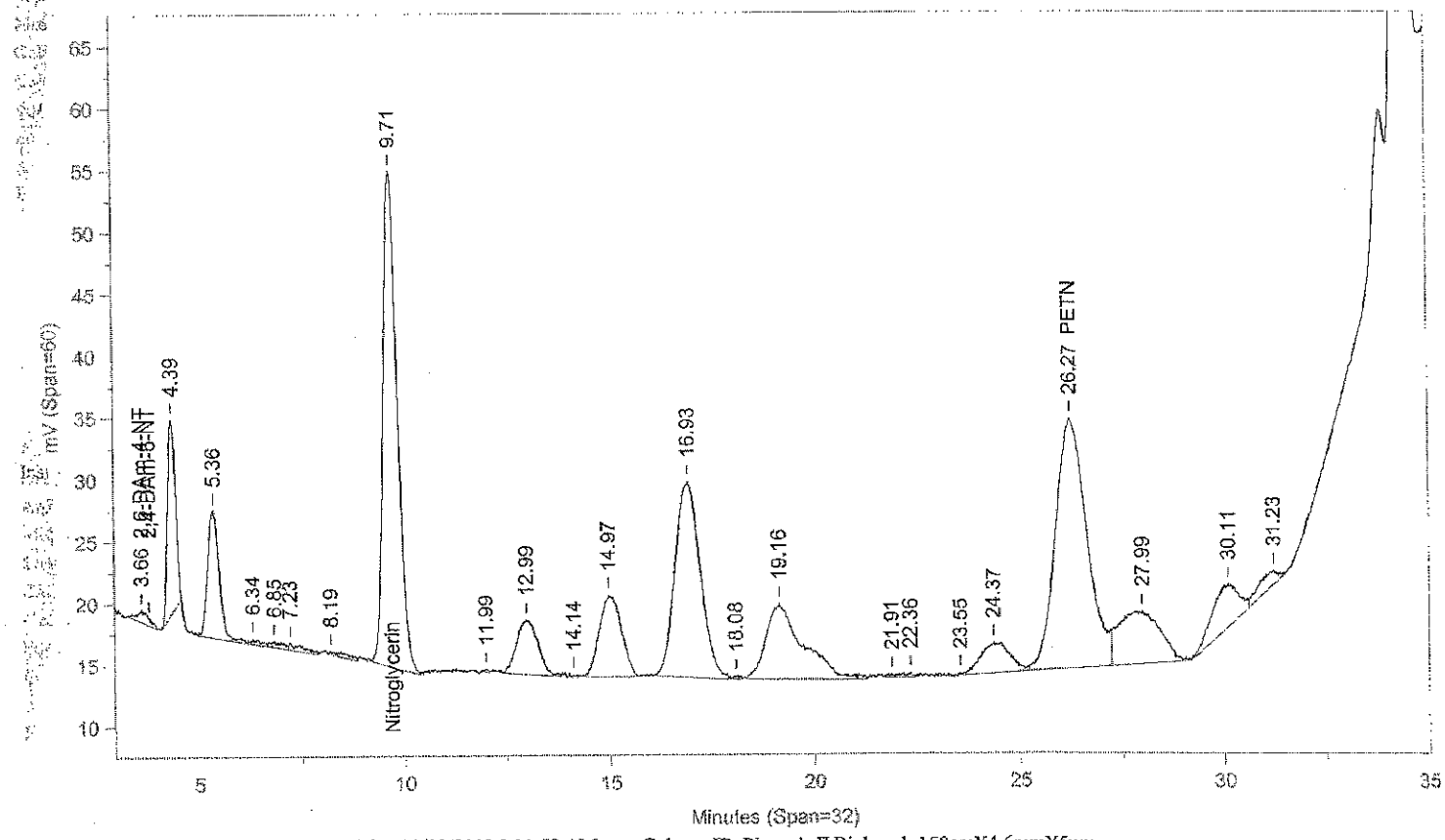
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.17R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 9:11:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3CI2310B.17R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 9:11:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.656	20016	9.08	2,6-DAm-4-NT
4.299	48434	462.025	HMX	.	0	.	HMX
5.263	58040	494.39	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	975438	9597.094	Nitroglycerin
12.926	96797	524.405	Nitrobenzene	.	0	.	Nitrobenzene
14.96	76262	549.179	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.831	195627	506.813	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.652	169583	500.679	1,3-DNB	.	0	.	1,3-DNB
19.853	123334	531.155	1,4-DNB	.	0	.	1,4-DNB
24.316	58289	497.967	2-NT	.	0	.	2-NT
.	0	.	PETN	26.274	1075583	9056.908	PETN
27.942	90616	467.35	4-NT	.	0	.	4-NT
30.027	92359	427.288	1,3,5-TNB	.	0	.	1,3,5-TNB
30.895	66935	525.116	2,6-DNT	.	0	.	2,6-DNT
33.8	137771	533.42	2,4-DNT	.	0	.	2,4-DNT
34.217	51824	1537.832	2-NMX	.	0	.	2-NMX
34.538	62031	408.847	Tetryl	.	0	.	Tetryl
35.48	106072	504.359	2,4,6-TNT	.	0	.	2,4,6-TNT
36.463	70393	466.525	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.17A
Area File: C:\CPWIN\DATA1\3C12310B.17A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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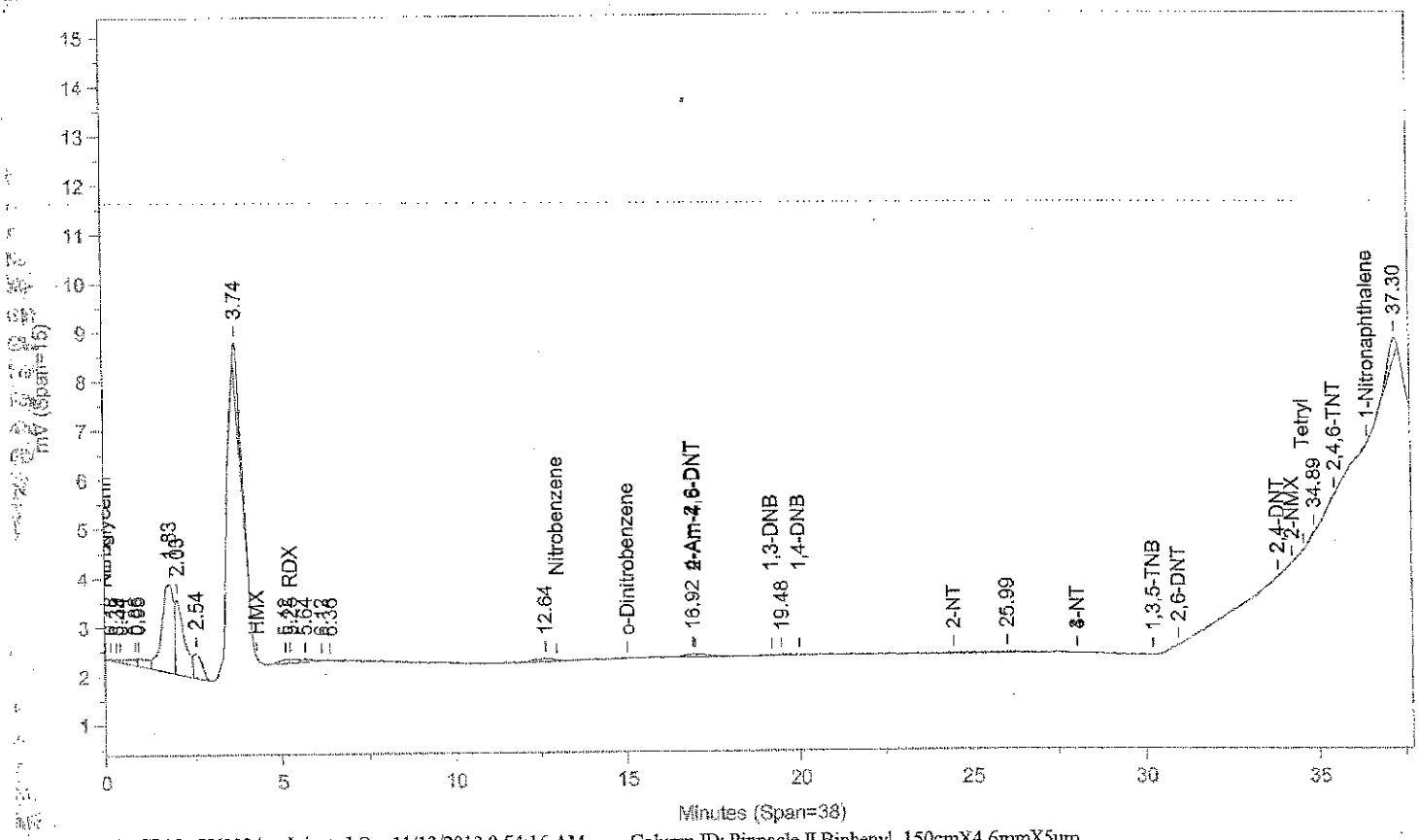
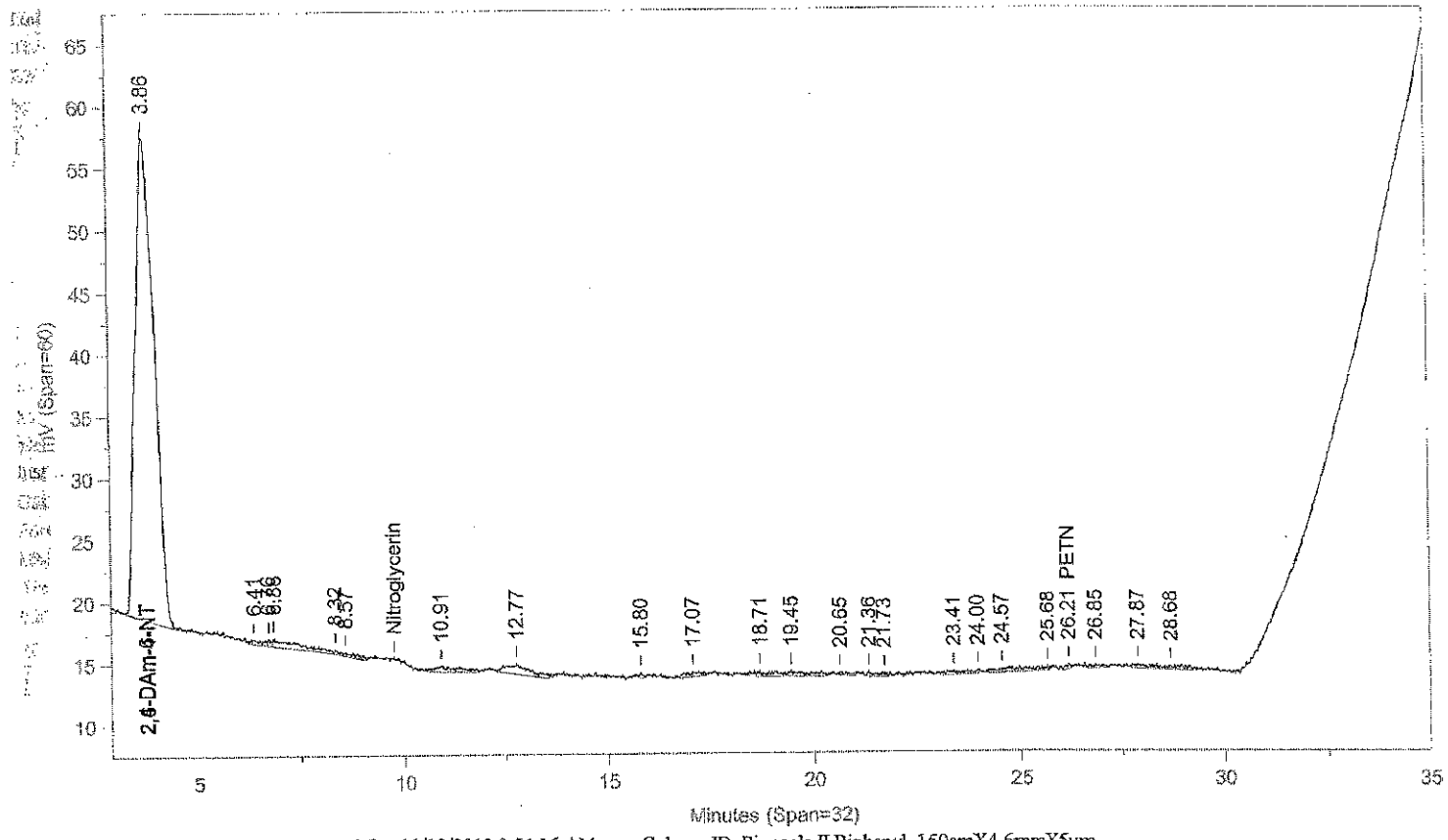


Instrument ID: CP12--Y6329A Injected On: 11/13/2013 9:54:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.18R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 9:54:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

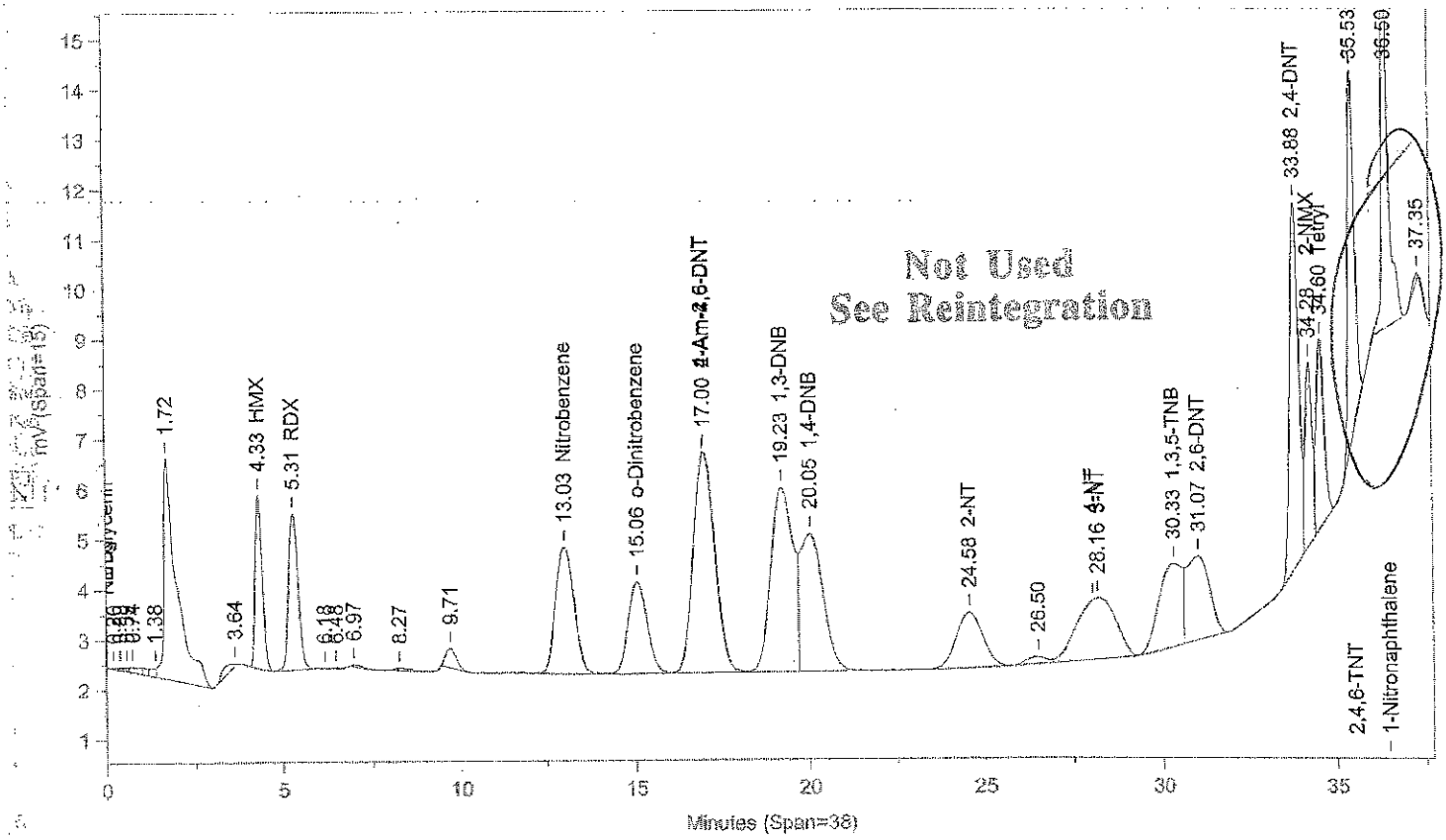
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.856	1182799	536.582	2,6-DAm-4-NT
5.248	1218	-12.712	RDX	.	0	.	RDX
16.918	3051	7.905	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.211	2981	25.098	PETN

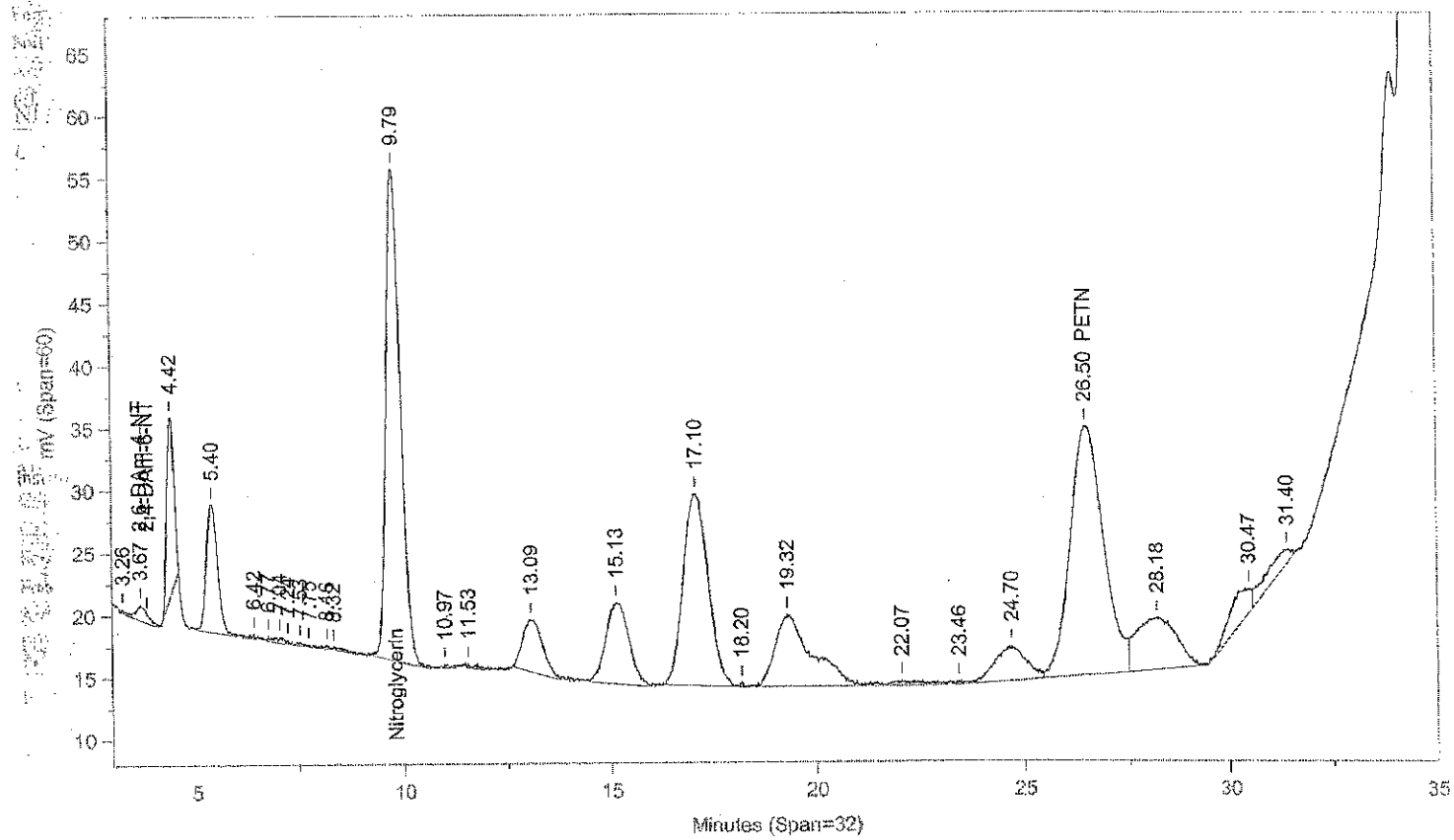
Files:
Area File: C:\CPWIN\DATA1\3C12310.18A
Area File: C:\CPWIN\DATA1\3C12310B.18A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 10:34:24 AM
File Reported On: 11/13/2013 at 10:34:33 AM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.29R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 5:40:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.29R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 5:40:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.673	21894	9.932	2,6-DAm-4-NT
4.331	48322	460.95	HMX	.	0	.	HMX
5.311	59077	503.641	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.789	971163	9555.028	Nitroglycerin
13.028	92236	499.511	Nitrobenzene	.	0	.	Nitrobenzene
15.062	70108	503.924	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.002	190203	492.252	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.233	166322	491.049	1,3-DNB	.	0	.	1,3-DNB
20.048	119308	513.328	1,4-DNB	.	0	.	1,4-DNB
24.581	58801	502.41	2-NT	.	0	.	2-NT
.	0	.	PETN	26.498	1081265	9104.754	PETN
28.161	89534	459.592	3-NT	.	0	.	3-NT
30.327	81708	384.068	1,3,5-TNB	.	0	.	1,3,5-TNB
31.073	78749	615.46	2,6-DNT	.	0	.	2,6-DNT
33.884	134478	520.669	2,4-DNT	.	0	.	2,4-DNT
34.278	49947	1484.068	2-NMX	.	0	.	2-NMX
34.603	57166	378.213	Tetryl	.	0	.	Tetryl
35.531	100057	476.146	2,4,6-TNT	.	0	.	2,4,6-TNT
36.497	103729	674.347	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.29A
Area File: C:\CPWIN\DATA1\3C12310B.29A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 6:21:02 PM
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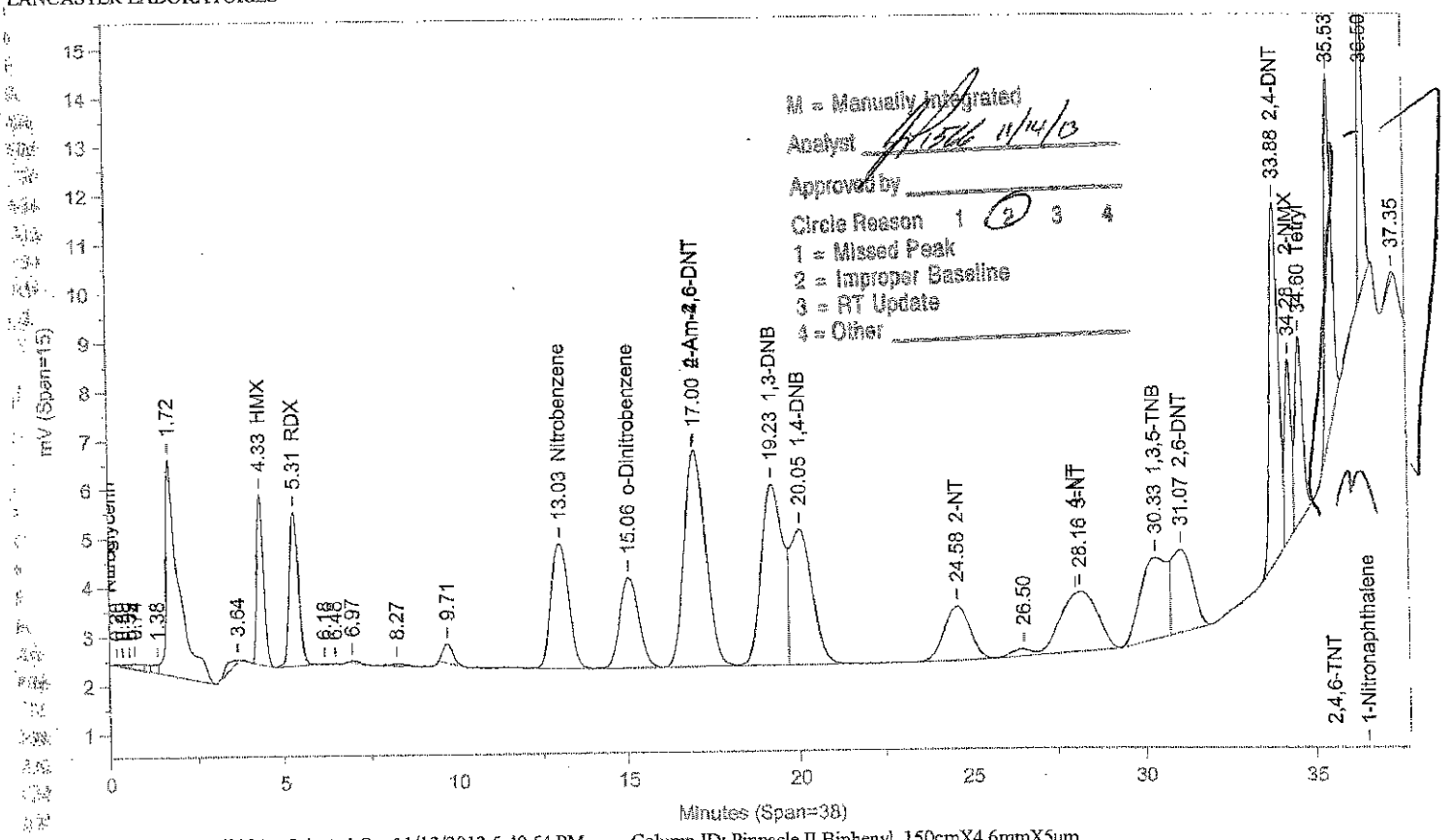
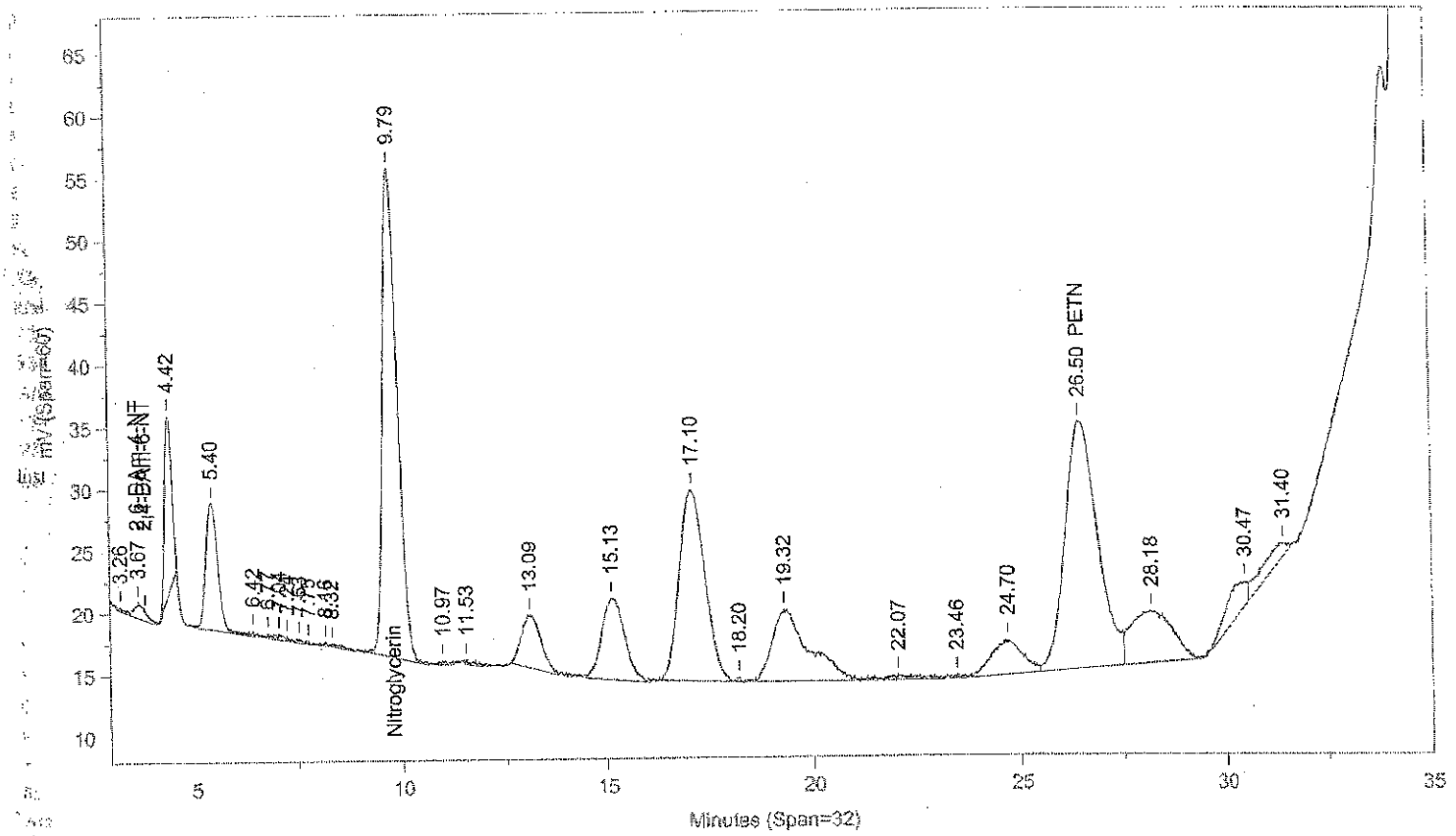
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.29R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 5:40:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.29R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 5:40:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.673	21894	9.932	2,6-DAm-4-NT
14.331	48322	460.95	HMX	.	0	.	HMX
15.311	59077	503.641	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.789	971163	9555.028	Nitroglycerin
13.028	92236	499.511	Nitrobenzene	.	0	.	Nitrobenzene
15.062	70108	503.924	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.002	190203	492.252	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.233	166322	491.049	1,3-DNB	.	0	.	1,3-DNB
20.048	119308	513.328	1,4-DNB	.	0	.	1,4-DNB
24.581	58801	502.41	2-NT	.	0	.	2-NT
.	0	.	PETN	26.498	1081265	9104.754	PETN
28.161	89534	459.592	3-NT	.	0	.	3-NT
30.327	92279	426.964	1,3,5-TNB	.	0	.	1,3,5-TNB
31.073	68178	534.622	2,6-DNT	.	0	.	2,6-DNT
33.884	134693	521.504	2,4-DNT	.	0	.	2,4-DNT
34.278	48401	1439.782	2-NMX	.	0	.	2-NMX
34.603	59544	393.186	Tetryl	.	0	.	Tetryl
35.531	100057	476.146	2,4,6-TNT	.	0	.	2,4,6-TNT
36.497	72683	480.8	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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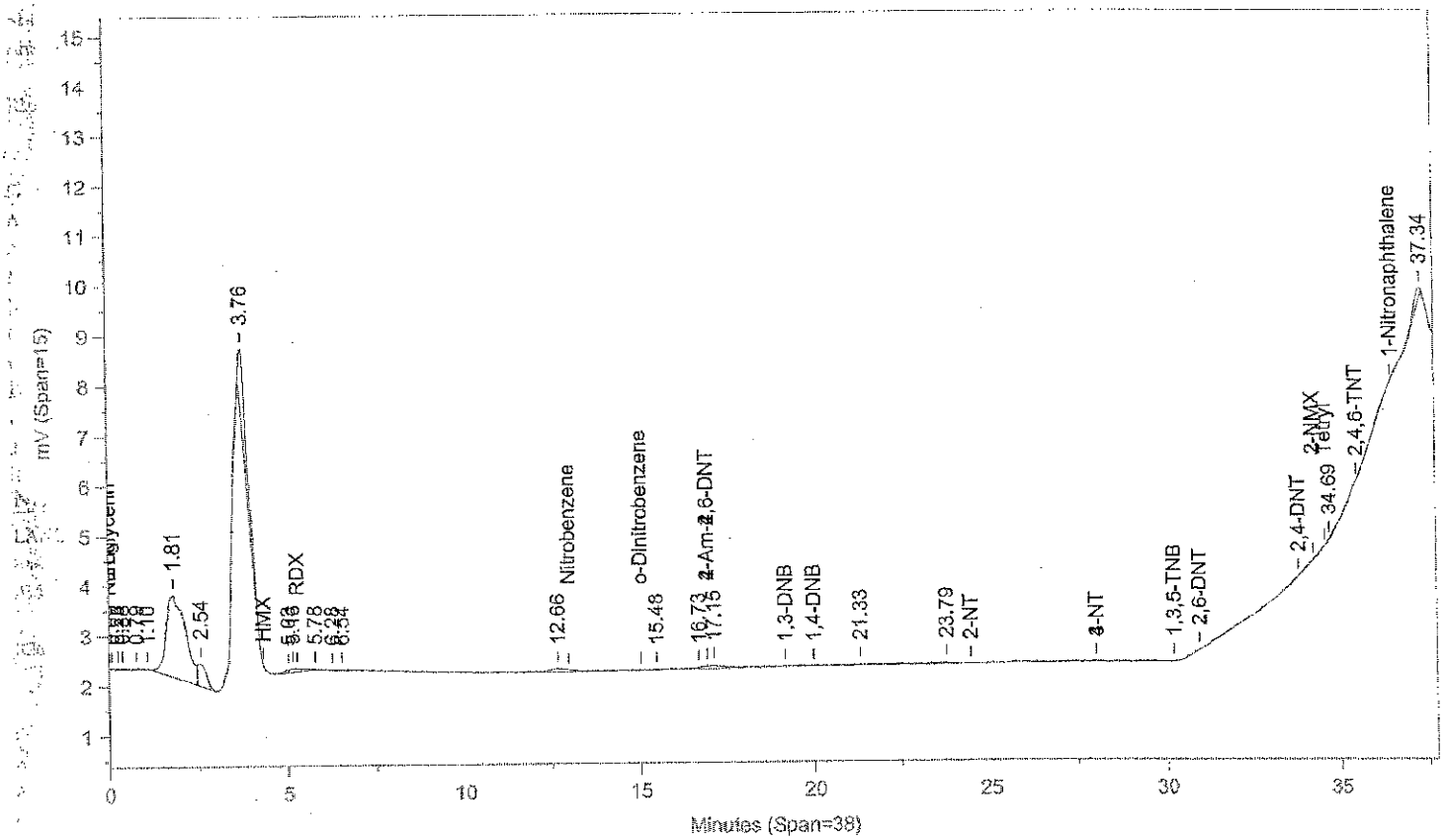
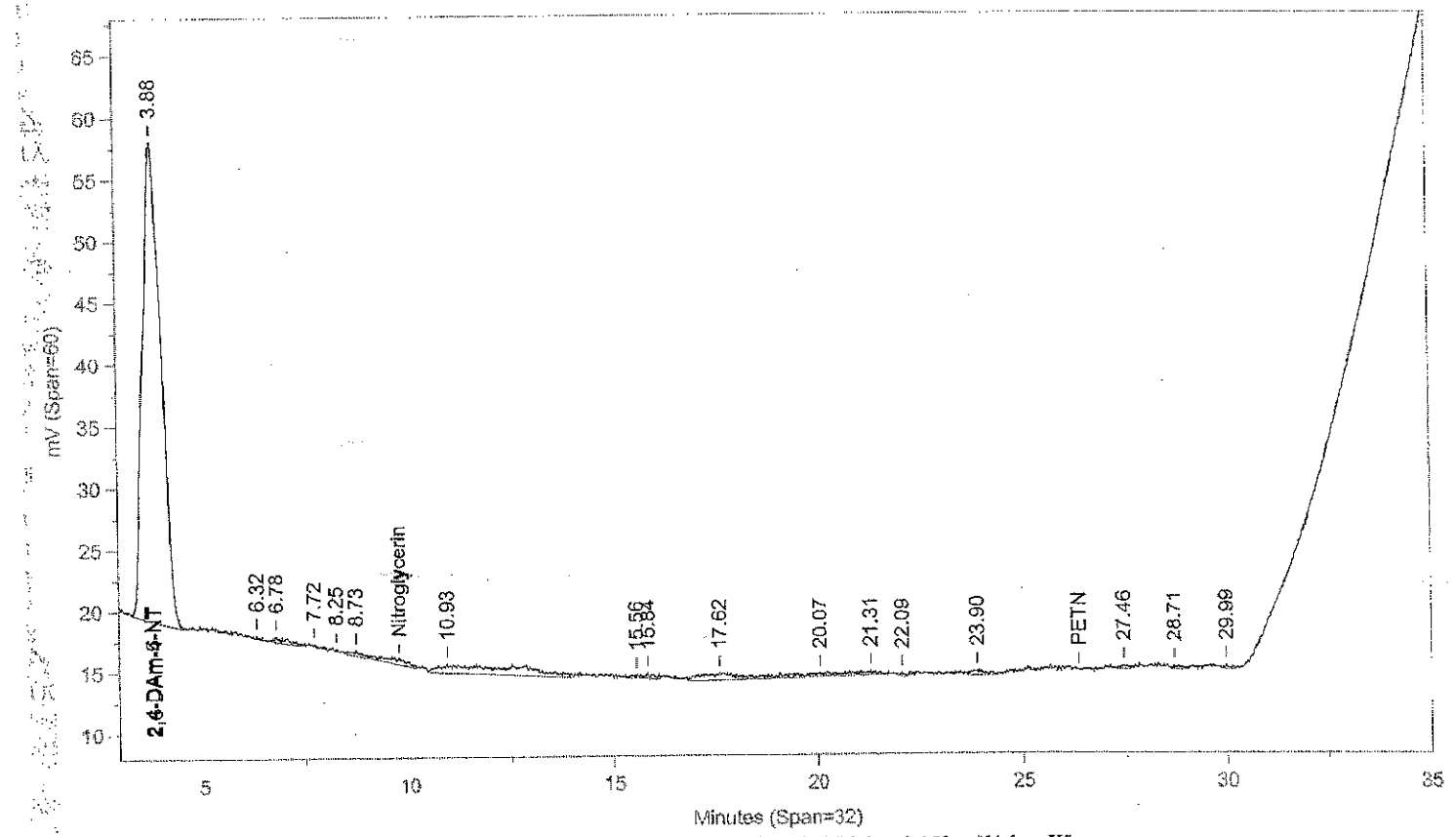
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.30R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 6:23:20 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.30R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 6:23:20 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,6-DAm-4-NT	3.882	1192057	540.781	2,6-DAm-4-NT

Files:
Area File: C:\CPWIN\DATA1\3C12310.30A
Area File: C:\CPWIN\DATA1\3C12310B.30A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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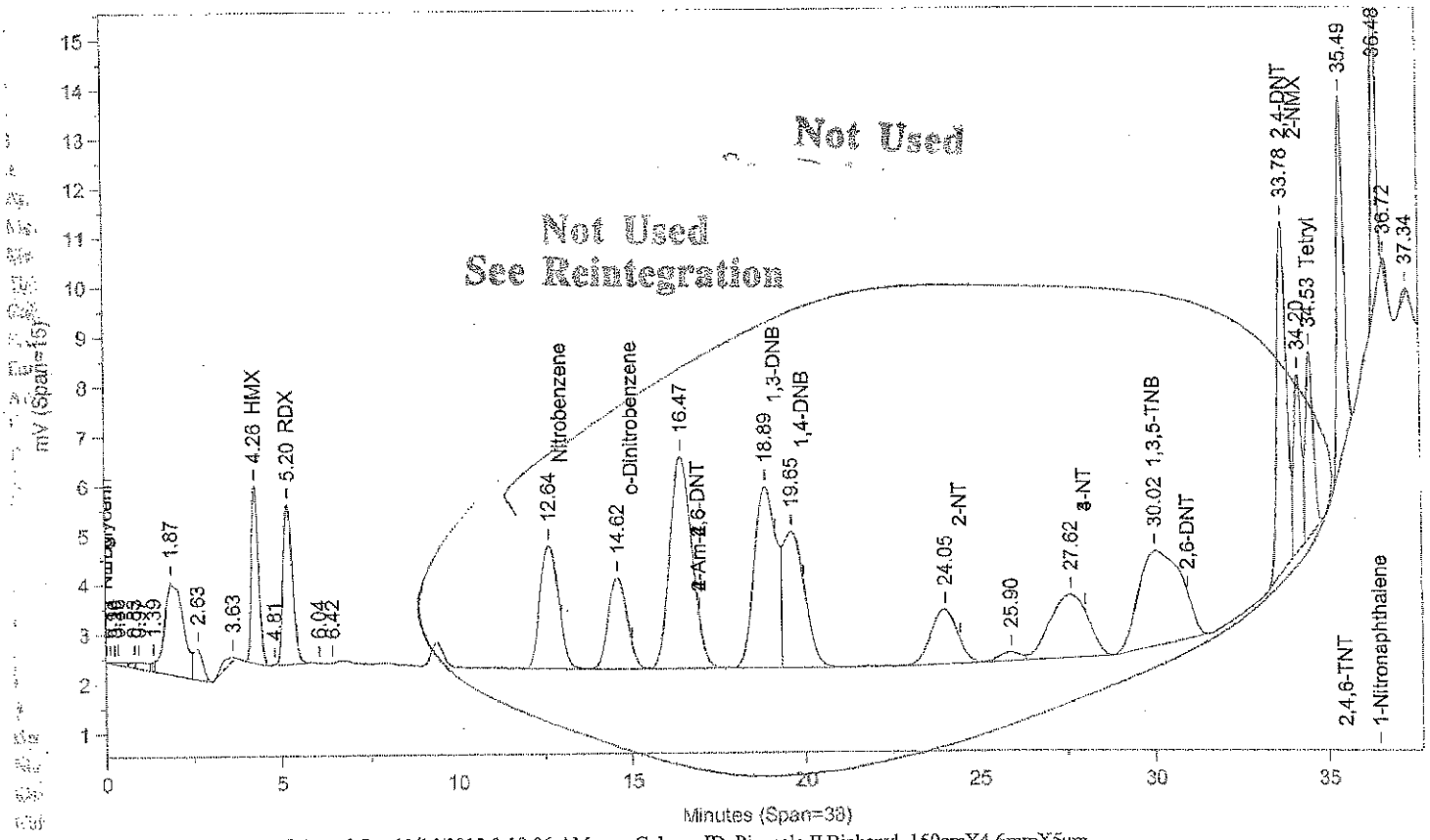
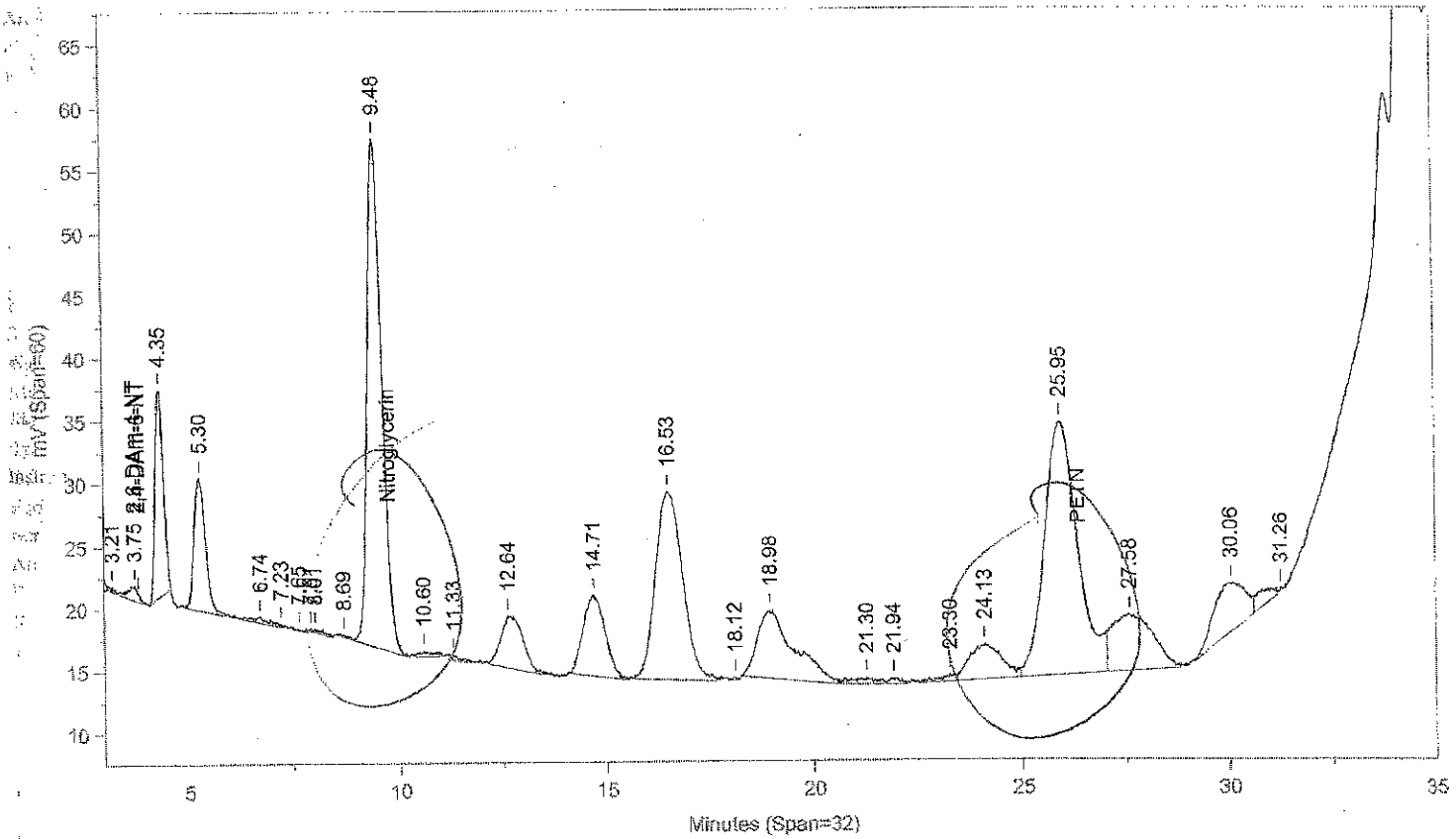
File Reported On: 11/13/2013 at 7:03:39 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.41R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 2:10:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.41R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 2:10:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,6-DAm-4-NT	3.745	18370	8.334	2,6-DAm-4-NT
4.259	49589	473.035	HMX	.	0	.	HMX
5.203	59216	504.882	RDX	.	0	.	RDX
30.019	164419	719.676	1,3,5-TNB	.	0	.	1,3,5-TNB
33.776	135688	525.353	2,4-DNT	.	0	.	2,4-DNT
34.199	51004	1514.332	2-NMX	.	0	.	2-NMX
34.528	56730	375.466	Tetryl	.	0	.	Tetryl
35.488	100761	479.446	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	70980	470.181	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.41A
Area File: C:\CPWIN\DATA1\3C12310B.41A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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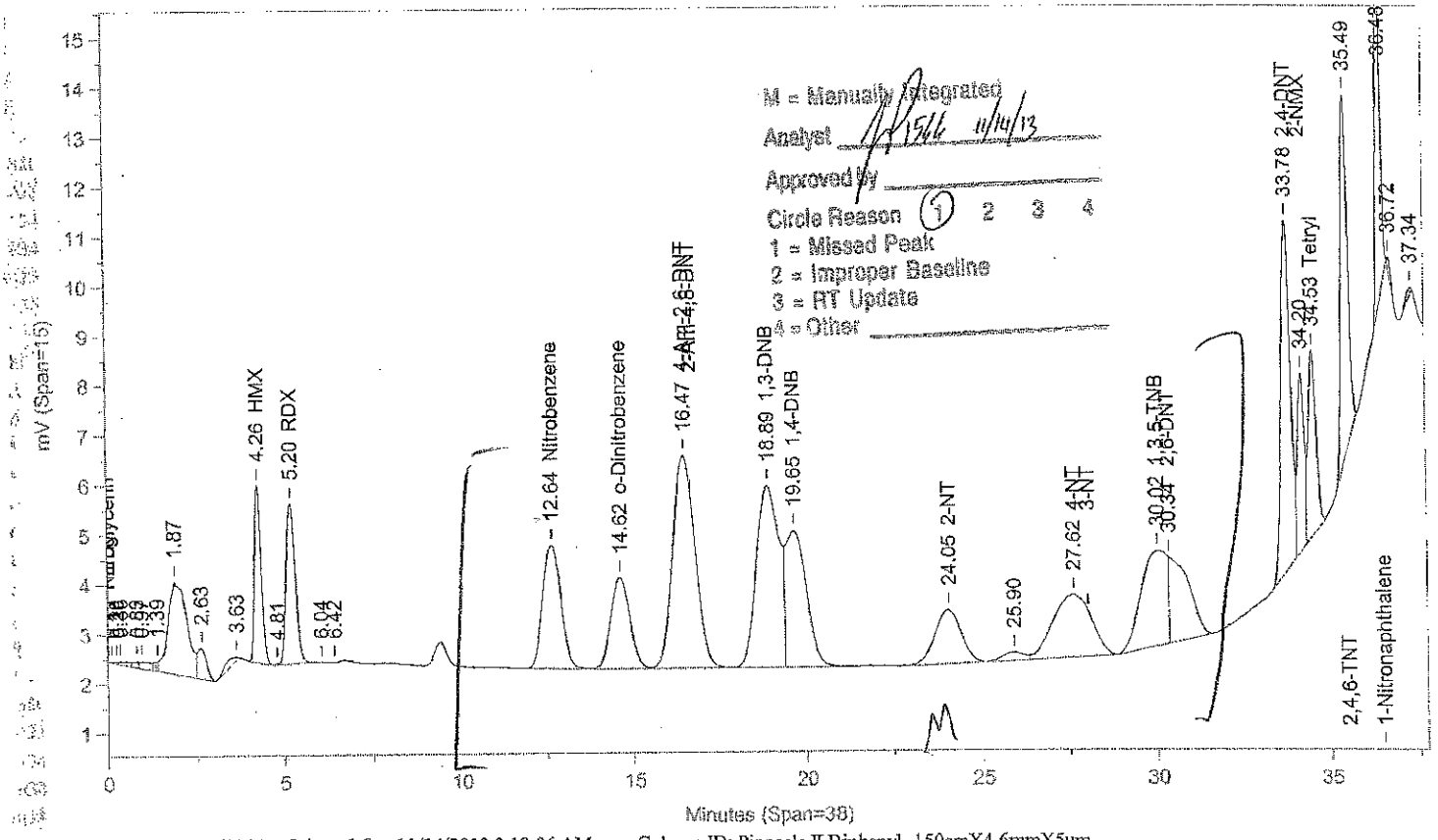
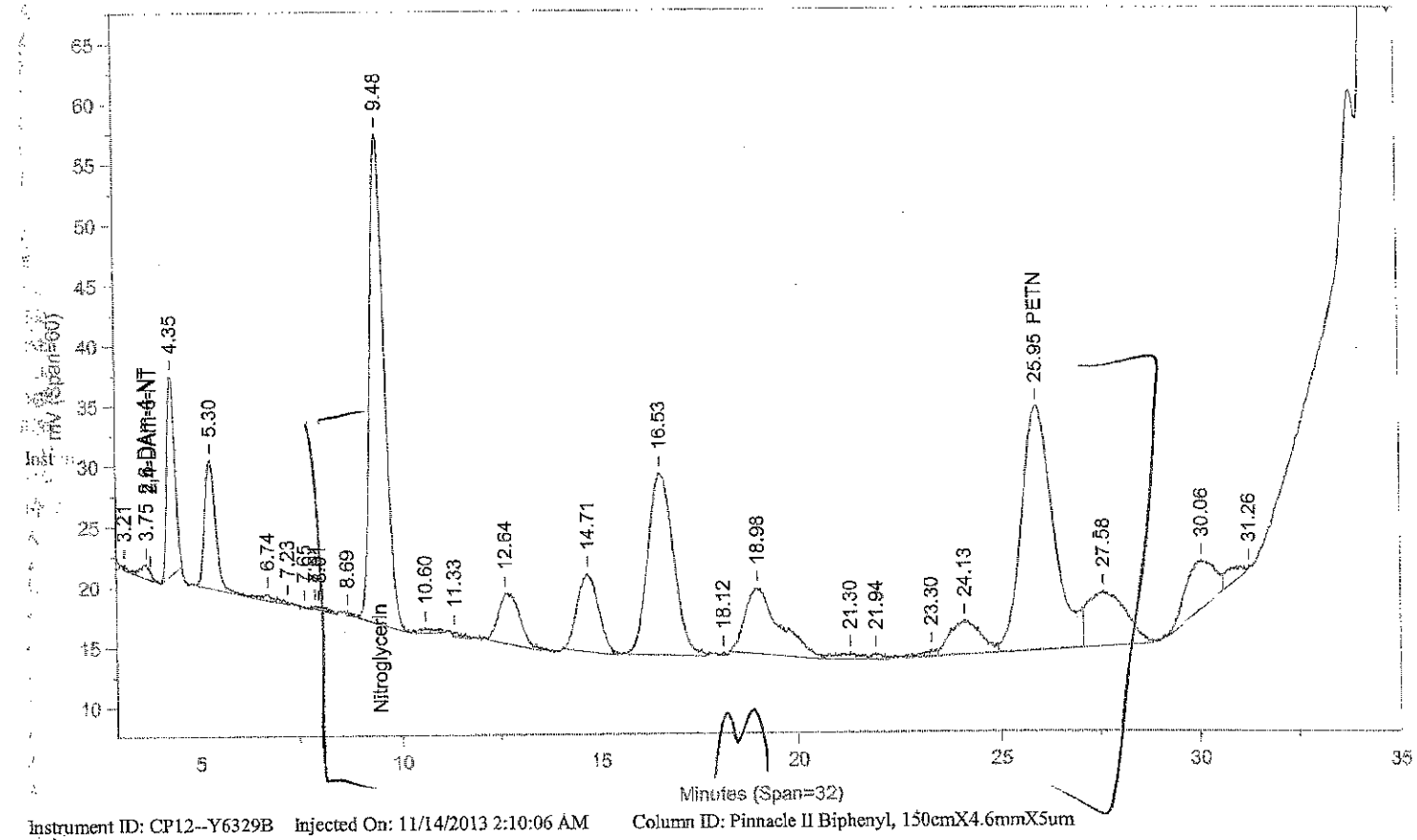
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.41R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 2:10:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.41R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 2:10:06 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

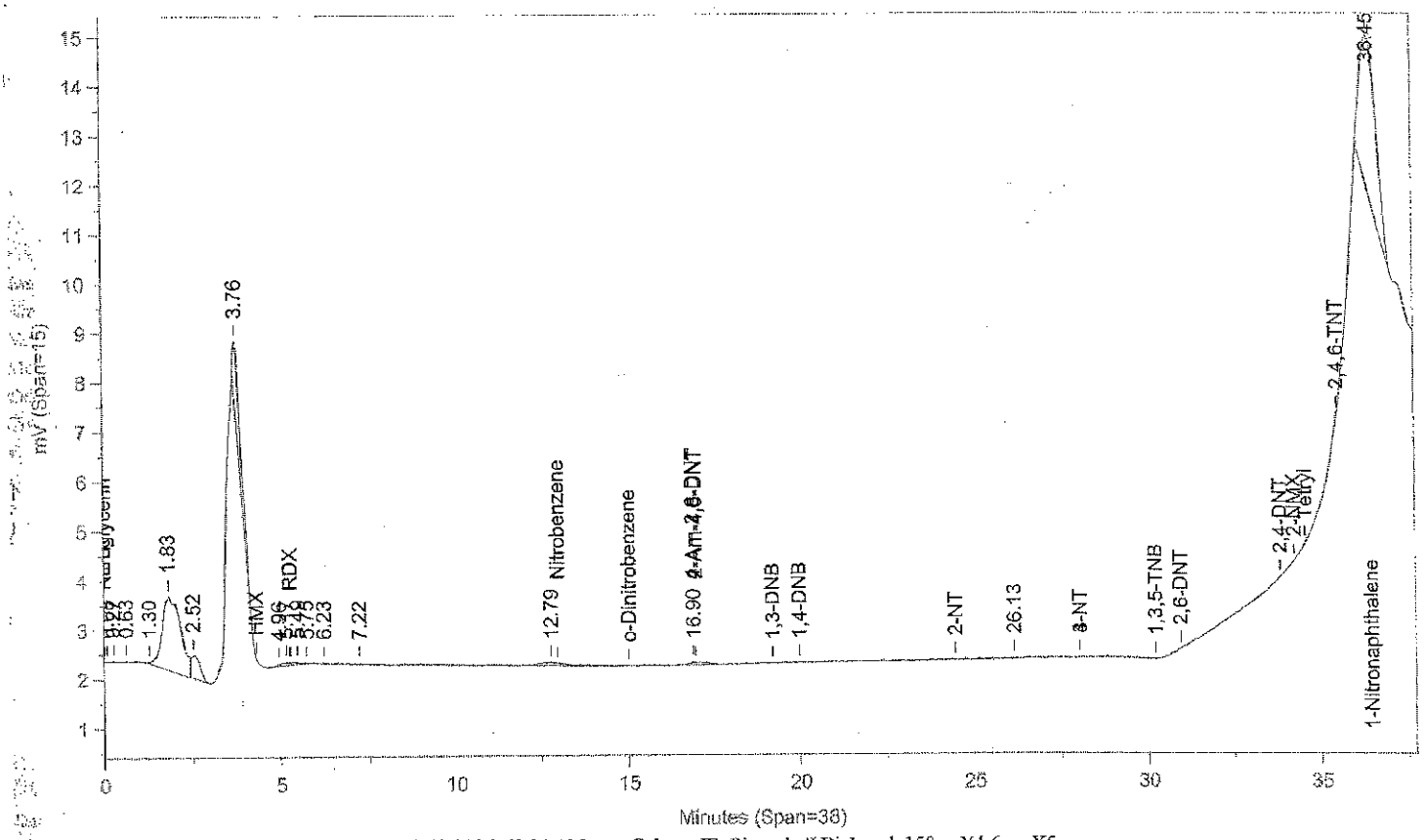
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.745	18370	8.334	2,6-DAm-4-NT
4.259	49589	473.035	HMX	.	0	.	HMX
5.203	59216	504.882	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.475	977763	9619.965	Nitroglycerin
12.637	91906	497.71	Nitrobenzene	.	0	.	Nitrobenzene
14.622	71195	511.911	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.475	191411	495.89	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.889	168169	496.504	1,3-DNB	.	0	.	1,3-DNB
19.654	116822	502.317	1,4-DNB	.	0	.	1,4-DNB
24.045	58542	500.161	2-NT	.	0	.	2-NT
.	0	.	PETN	25.951	1131862	9530.803	PETN
27.622	96918	498.992	4-NT	.	0	.	4-NT
30.019	98811	453.467	1,3,5-TNB	.	0	.	1,3,5-TNB
30.339	65607	514.966	2,6-DNT	.	0	.	2,6-DNT
33.776	135744	525.571	2,4-DNT	.	0	.	2,4-DNT
34.199	48744	1449.595	2-NMX	.	0	.	2-NMX
34.528	59195	390.986	Tetryl	.	0	.	Tetryl
35.488	100761	479.446	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	70980	470.181	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

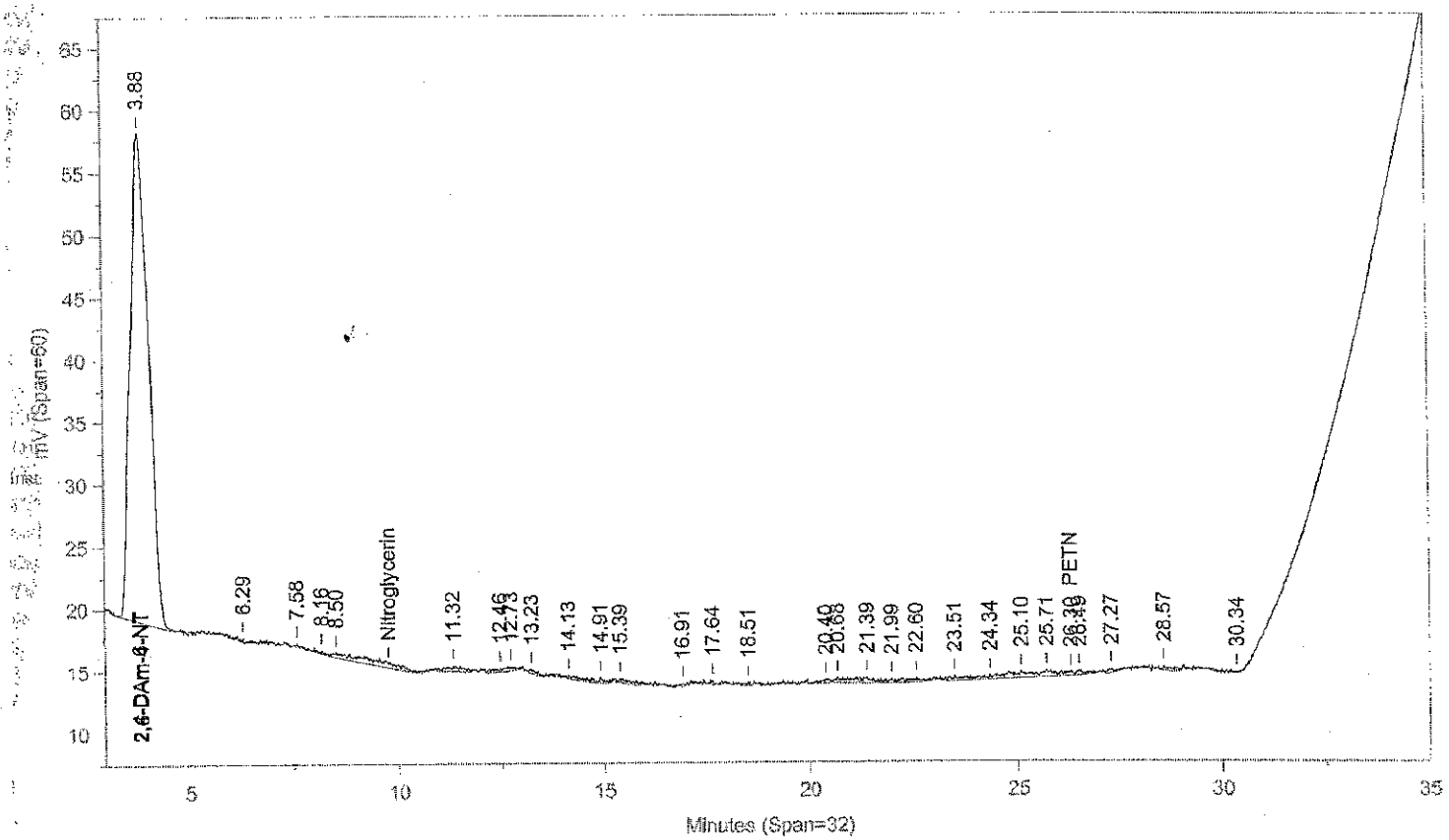
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 3:13:18 PM
File Reported On: 11/14/2013 at 3:13:17 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.42R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 2:52:34 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.42R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 2:52:34 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

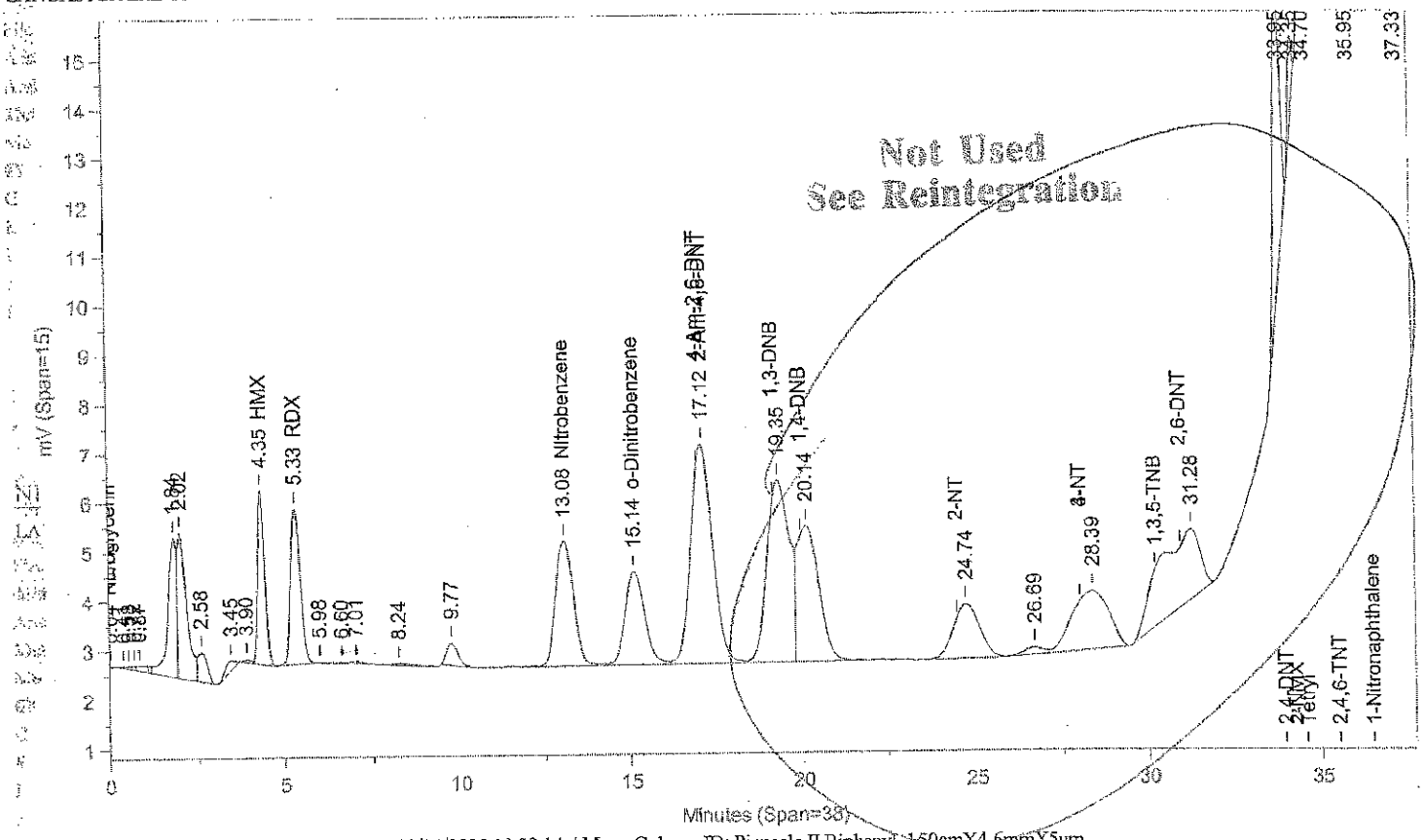
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.879	1191379	540.474	2,6-DAm-4-NT
16.896	2106	5.455	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.295	4149	34.938	PETN
36.452	102740	668.179	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.42A
Area File: C:\CPWIN\DATA1\3C12310B.42A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 3:32:42 AM
File Reported On: 11/14/2013 at 3:32:52 AM

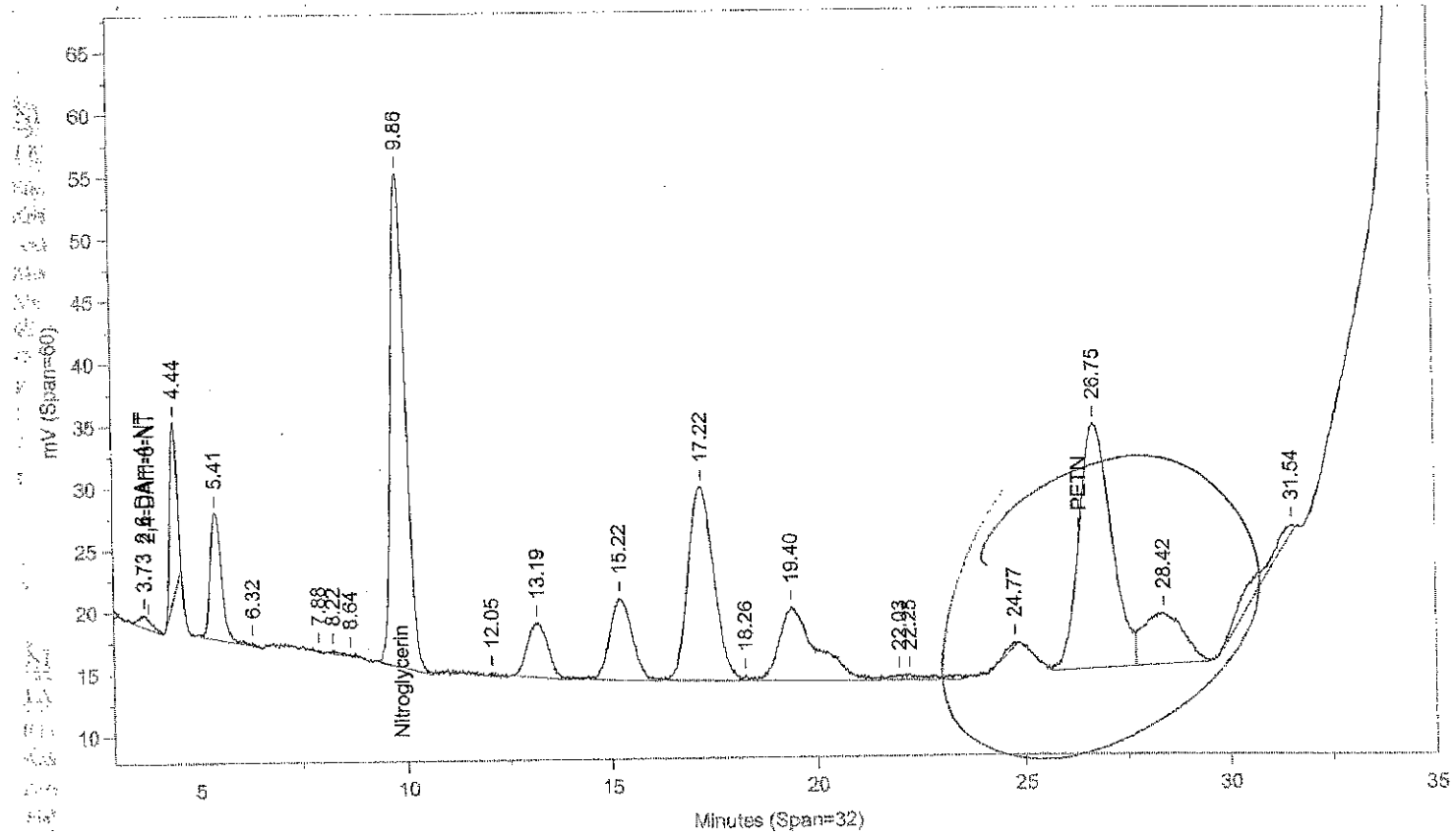
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\3C12310.53R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 10:39:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.53R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 10:39:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

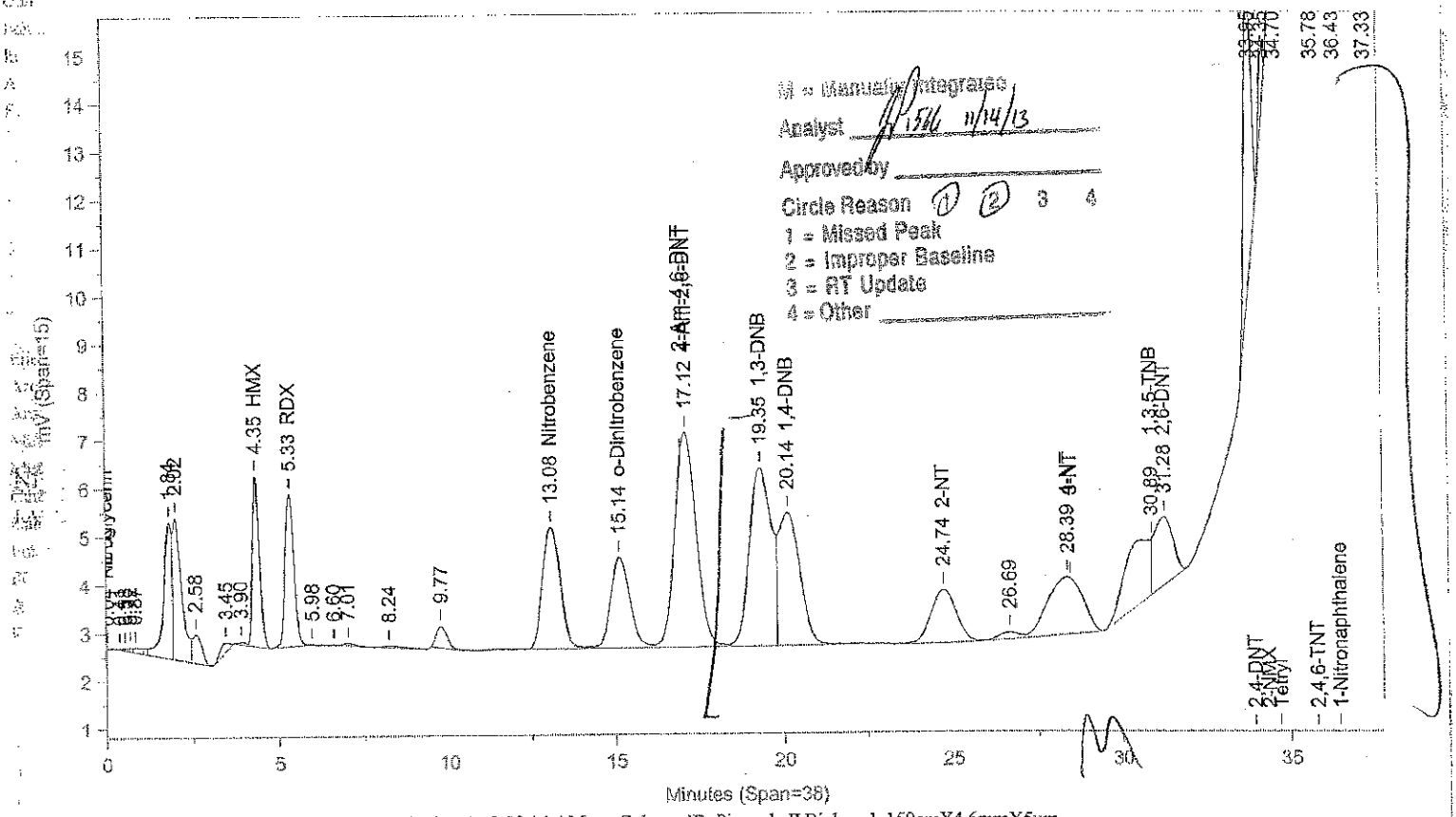
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.733	20492	9.296	2,6-DAm-4-NT
4.349	49102	468.396	HMX	.	0	.	HMX
5.33	58574	499.151	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.857	973182	9574.895	Nitroglycerin
13.083	93121	504.339	Nitrobenzene	.	0	.	Nitrobenzene
15.136	74767	538.188	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.117	196862	509.485	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
33.95	95948	371.488	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\3C12310.53A
Area File: C:\CPWIN\DATA1\3C12310B.53A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 11:19:22 AM
File Reported On: 11/14/2013 at 11:19:31 AM

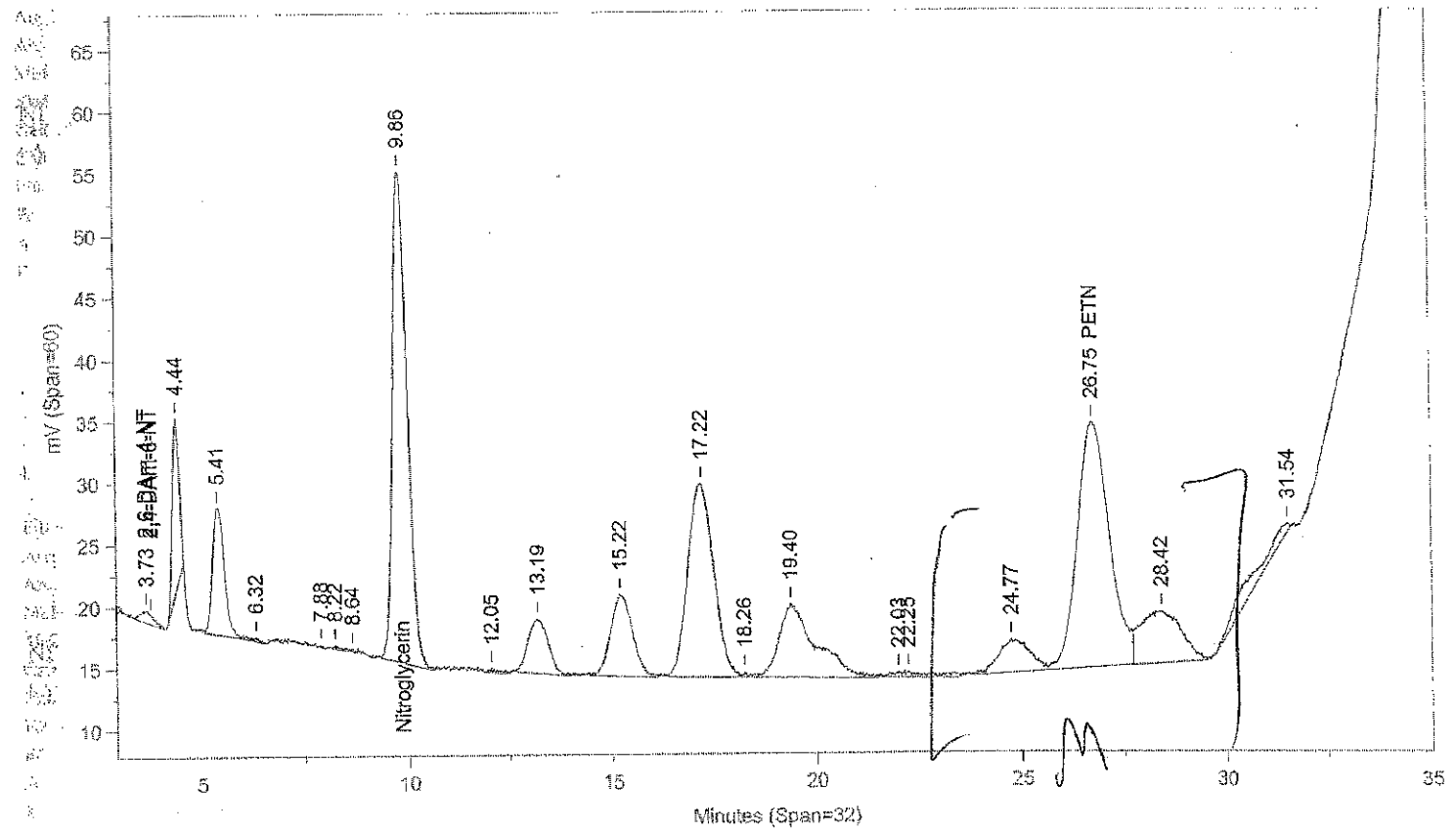
Not Used
See Reintegratio

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.53R

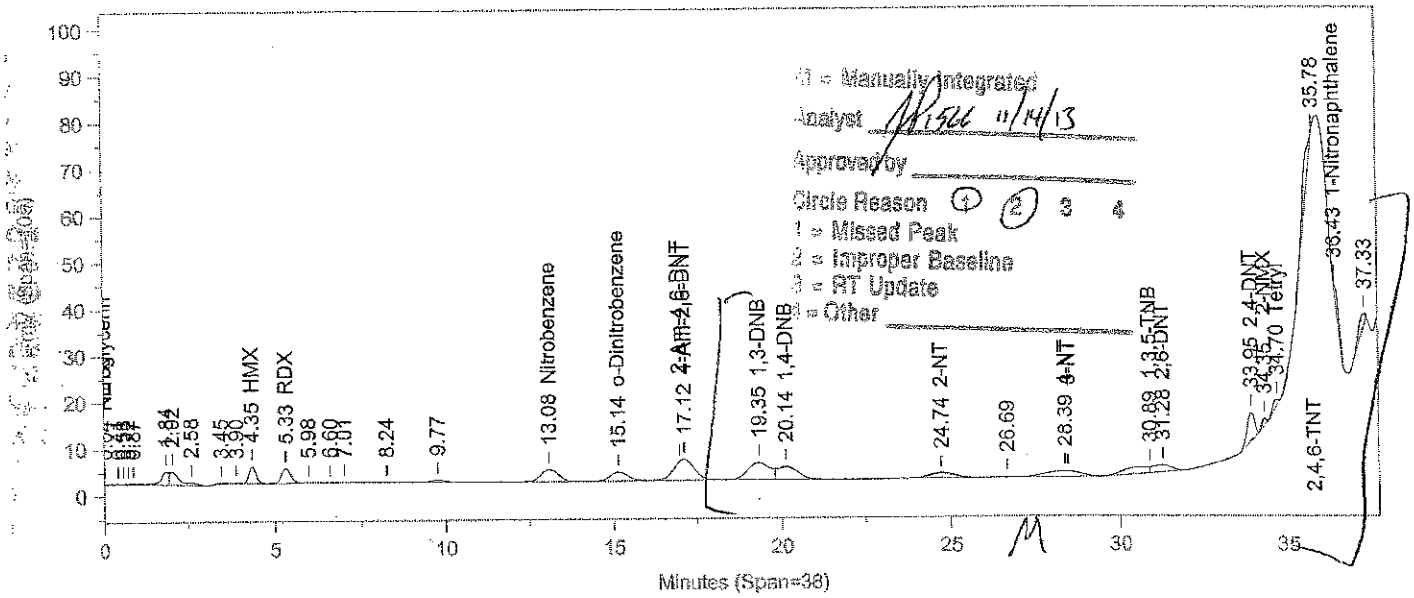


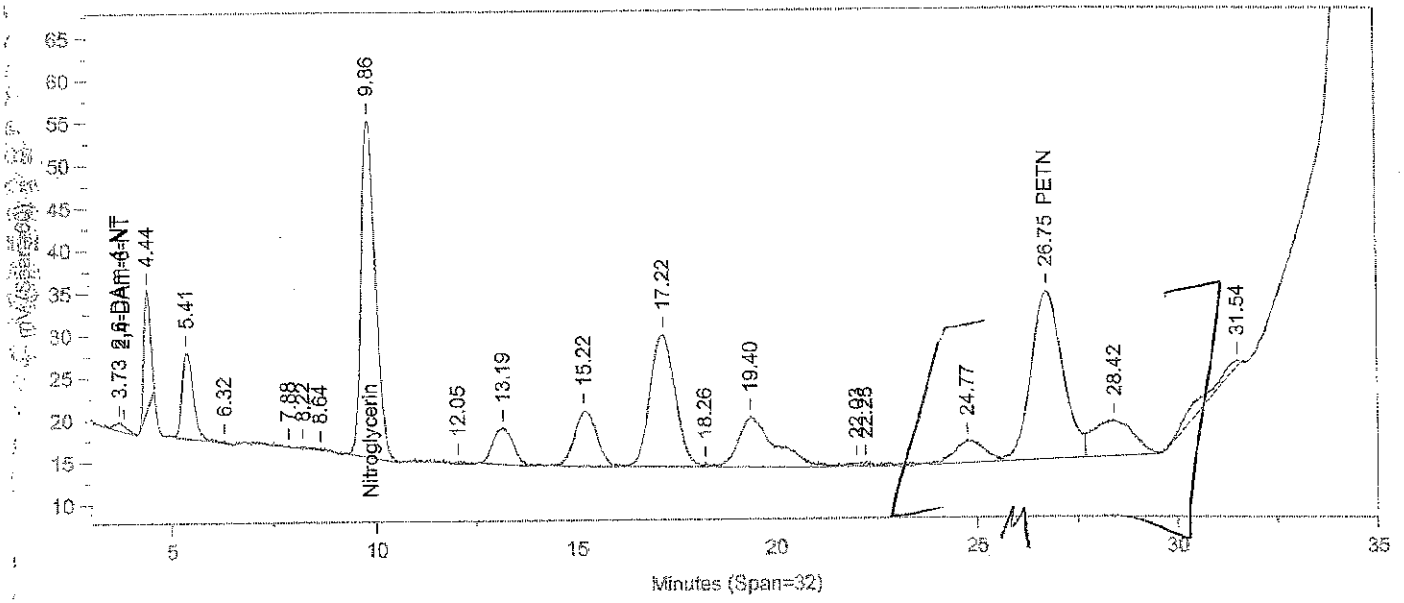
Instrument ID: CP12--Y6329A Injected On: 11/14/2013 10:39:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.53R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 10:39:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um


M = Manually Integrated
Analyst MR566 11/14/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
Nitroglycerin
2.84
2.58
3.45
4.35 HMX
5.33 RDX
8.24
9.77
13.08 Nitrobenzene
15.14 o-Dinitrobenzene
17.12 4-Am-2,6-BNT
19.35 1,3-DNB
20.14 1,4-DNB
24.74 2-NT
26.69
28.39 4-NT
30.89 1,3,5-TNB
31.28 2,6-DNT
33.95 2,4-DNT
34.70 Tetryl
35.78 1-Nitronaphthalene
37.33
2,4,6-TNT
Minutes (Span=38)


3.73 2,6-DAm-4-NT
4.44
5.41
6.32
7.88
8.22
8.64
9.86
Nitroglycerin
12.05
13.19
15.22
17.22
18.26
19.40
22.93
24.77
26.75 PETN
28.42
31.54
Minutes (Span=32)

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

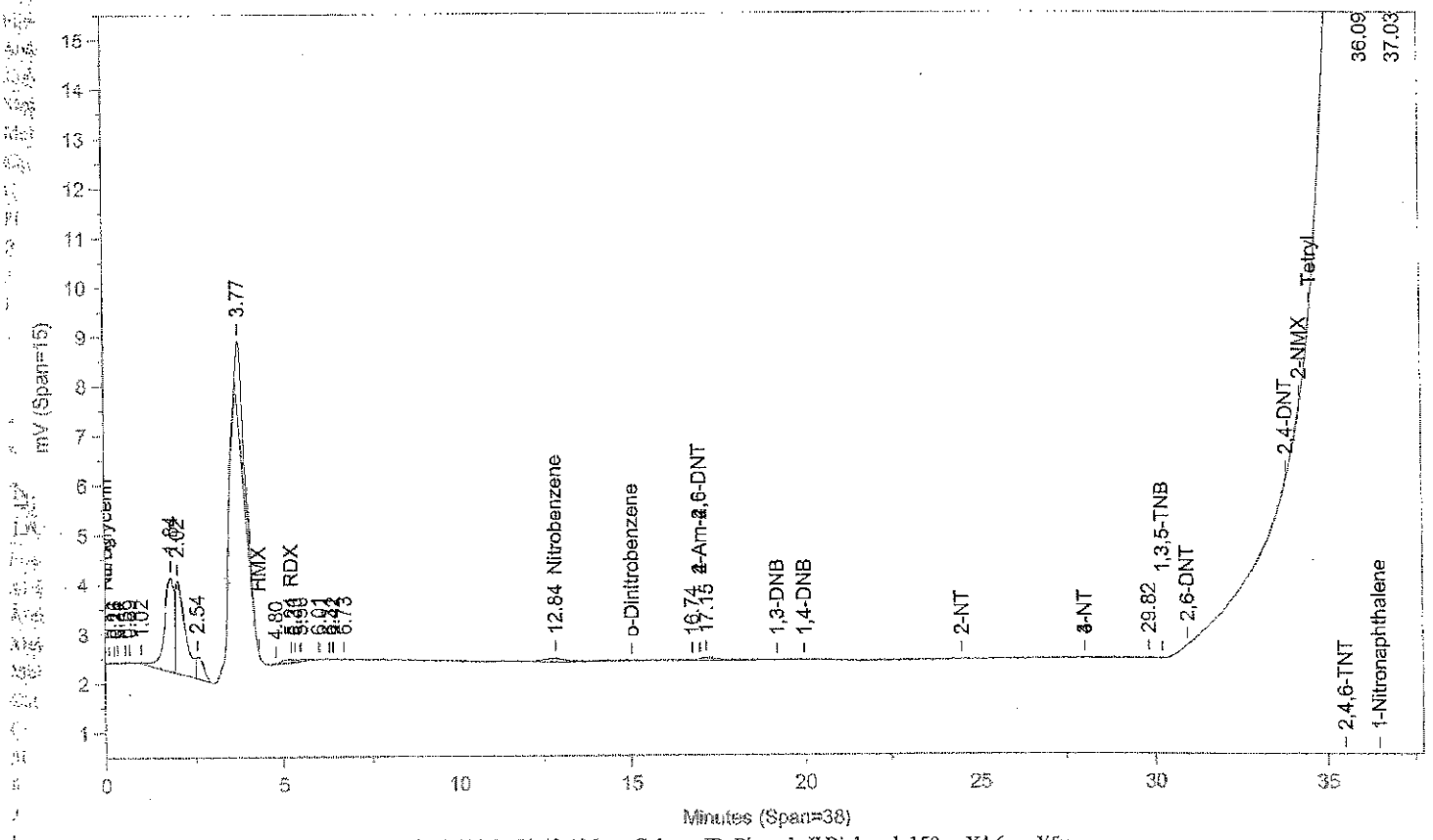
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.733	20492	9.296	2,6-DAm-4-NT
4.349	49102	468.396	HMX	.	0	.	HMX
5.33	58574	499.151	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.857	973182	9574.895	Nitroglycerin
13.083	93121	504.339	Nitrobenzene	.	0	.	Nitrobenzene
15.136	74767	538.188	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.117	196862	510.013	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.35	167927	495.788	1,3-DNB	.	0	.	1,3-DNB
20.137	118486	509.685	1,4-DNB	.	0	.	1,4-DNB
24.736	58540	500.141	2-NT	.	0	.	2-NT
.	0	.	PETN	26.749	1085870	9143.529	PETN
28.394	86736	447.868	4-NT	.	0	.	4-NT
30.889	71343	342.011	1,3,5-TNB	.	0	.	1,3,5-TNB
31.283	55668	438.963	2,6-DNT	.	0	.	2,6-DNT
33.95	97109	375.983	2,4-DNT	.	0	.	2,4-DNT
34.354	14494	468.358	2-NMX	.	0	.	2-NMX
34.7	18170	132.659	Tetryl	.	0	.	Tetryl
35.778	112627	535.104	2,4,6-TNT	.	0	.	2,4,6-TNT
36.433	25900	189.147	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

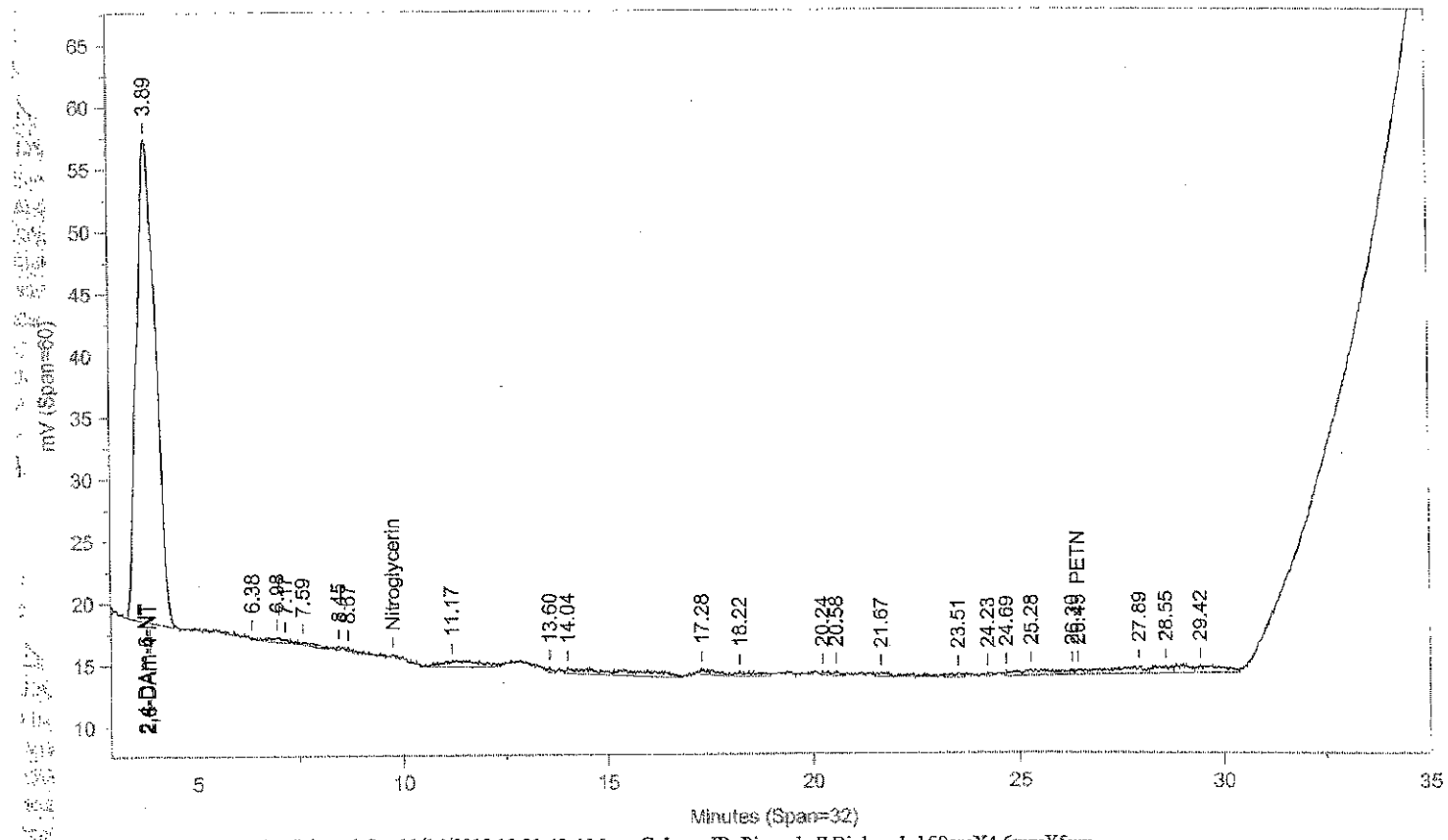
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 3:29:42 PM
File Reported On: 11/14/2013 at 3:29:41 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\3C12310.54R



Instrument ID: CP12--Y6329A Injected On: 11/14/2013 11:21:42 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.54R



Instrument ID: CP12--Y6329B Injected On: 11/14/2013 11:21:42 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

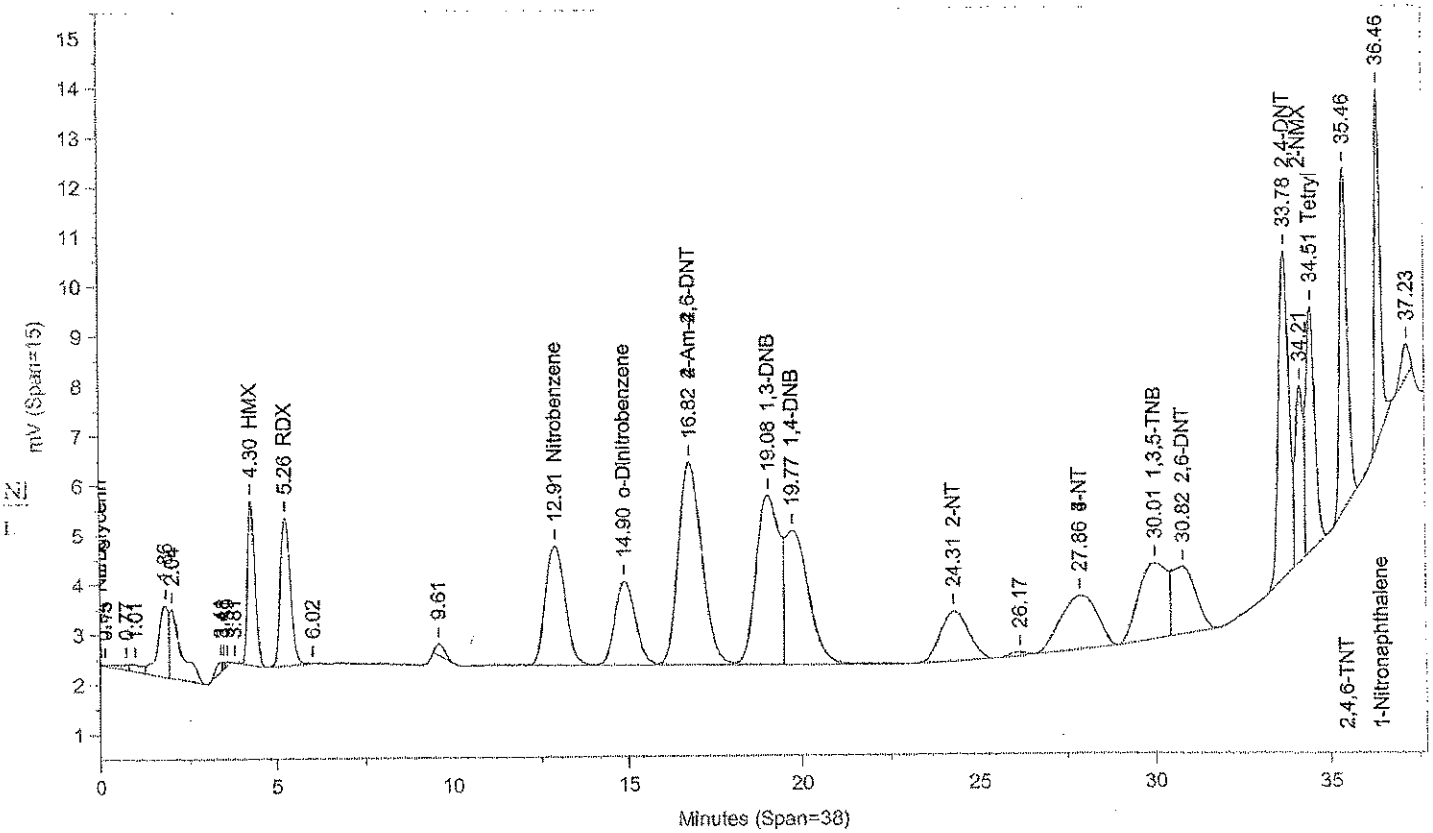
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.888	1186353	538.194	2,6-DAm-4-NT
5.236	1367	-11.384	RDX	.	0	.	RDX
12.837	3302	14.081	Nitrobenzene	.	0	.	Nitrobenzene
.	0	.	PETN	26.452	6255	52.666	PETN

Files:
Area File: C:\CPWIN\DATA1\3C12310.54A
Area File: C:\CPWIN\DATA1\3C12310B.54A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/14/2013 12:01:50 PM
File Reported On: 11/14/2013 at 12:01:59 PM

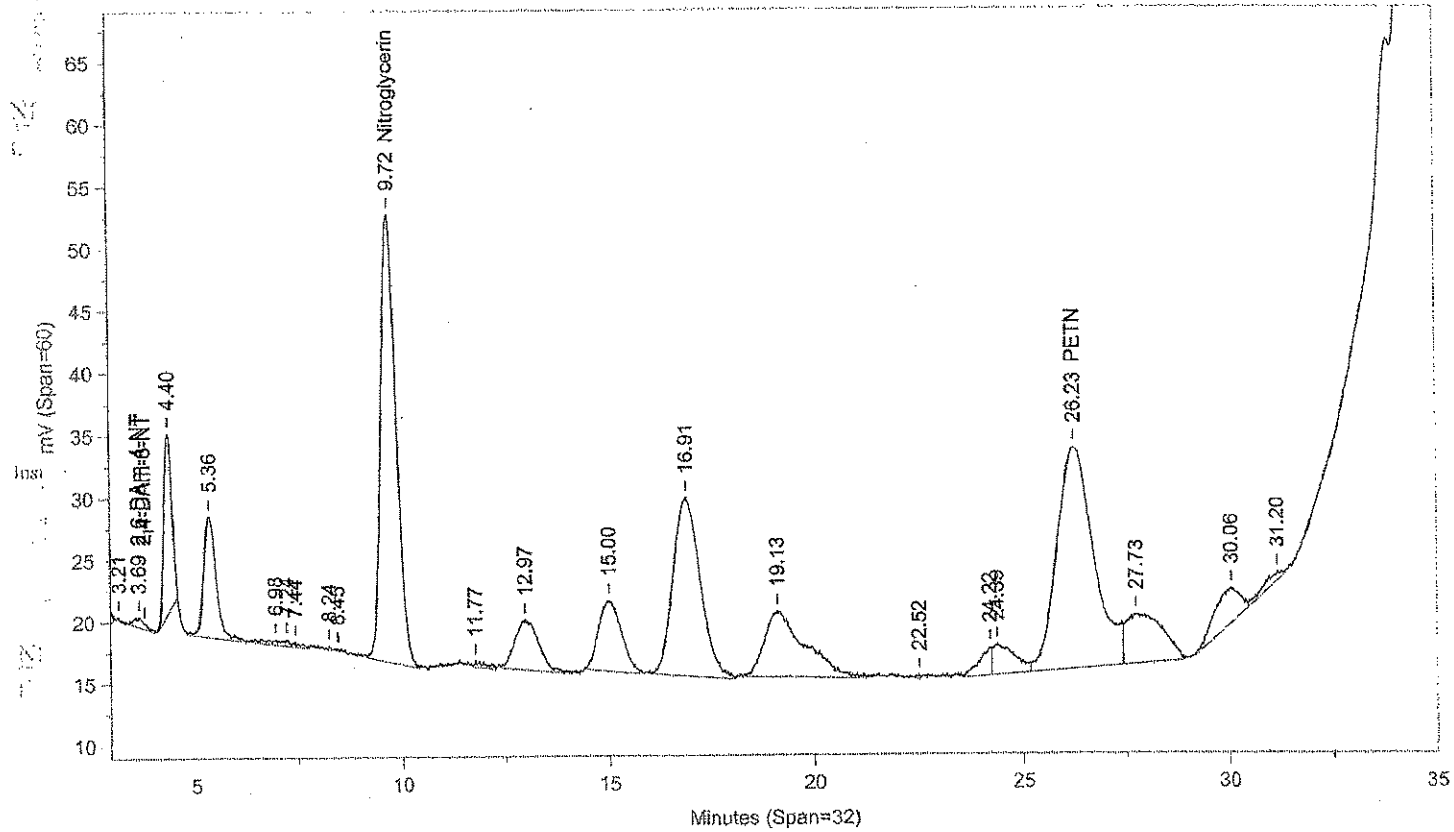
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.58R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.58R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

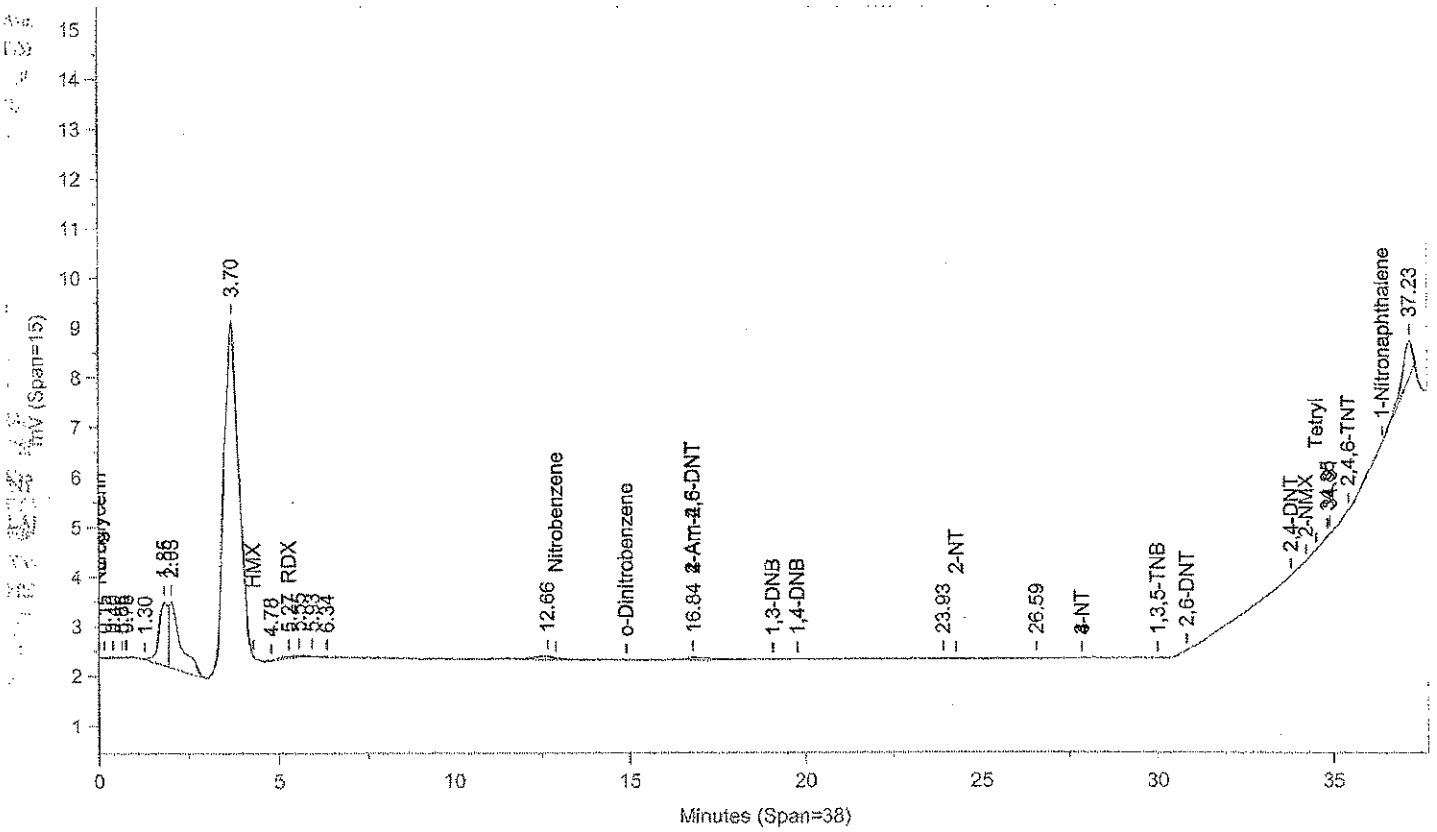
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.694	14543	6.598	2,6-DAm-4-NT
4.297	48637	463.959	HMX	.	0	.	HMX
5.262	58707	500.342	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.719	943360	9281.488	Nitroglycerin
12.911	93190	504.717	Nitrobenzene	.	0	.	Nitrobenzene
14.9	69827	501.855	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.817	192246	498.054	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.078	163081	481.48	1,3-DNB	.	0	.	1,3-DNB
19.773	124527	536.437	1,4-DNB	.	0	.	1,4-DNB
24.306	55862	476.901	2-NT	.	0	.	2-NT
.	0	.	PETN	26.233	1085988	9144.518	PETN
27.861	76417	396.049	4-NT	.	0	.	4-NT
30.009	85309	398.681	1,3,5-TNB	.	0	.	1,3,5-TNB
30.816	64444	506.07	2,6-DNT	.	0	.	2,6-DNT
33.782	135750	525.596	2,4-DNT	.	0	.	2,4-DNT
34.215	52158	1547.416	2-NMX	.	0	.	2-NMX
34.513	83687	545.21	Tetryl	.	0	.	Tetryl
35.458	105419	501.296	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	78051	514.265	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

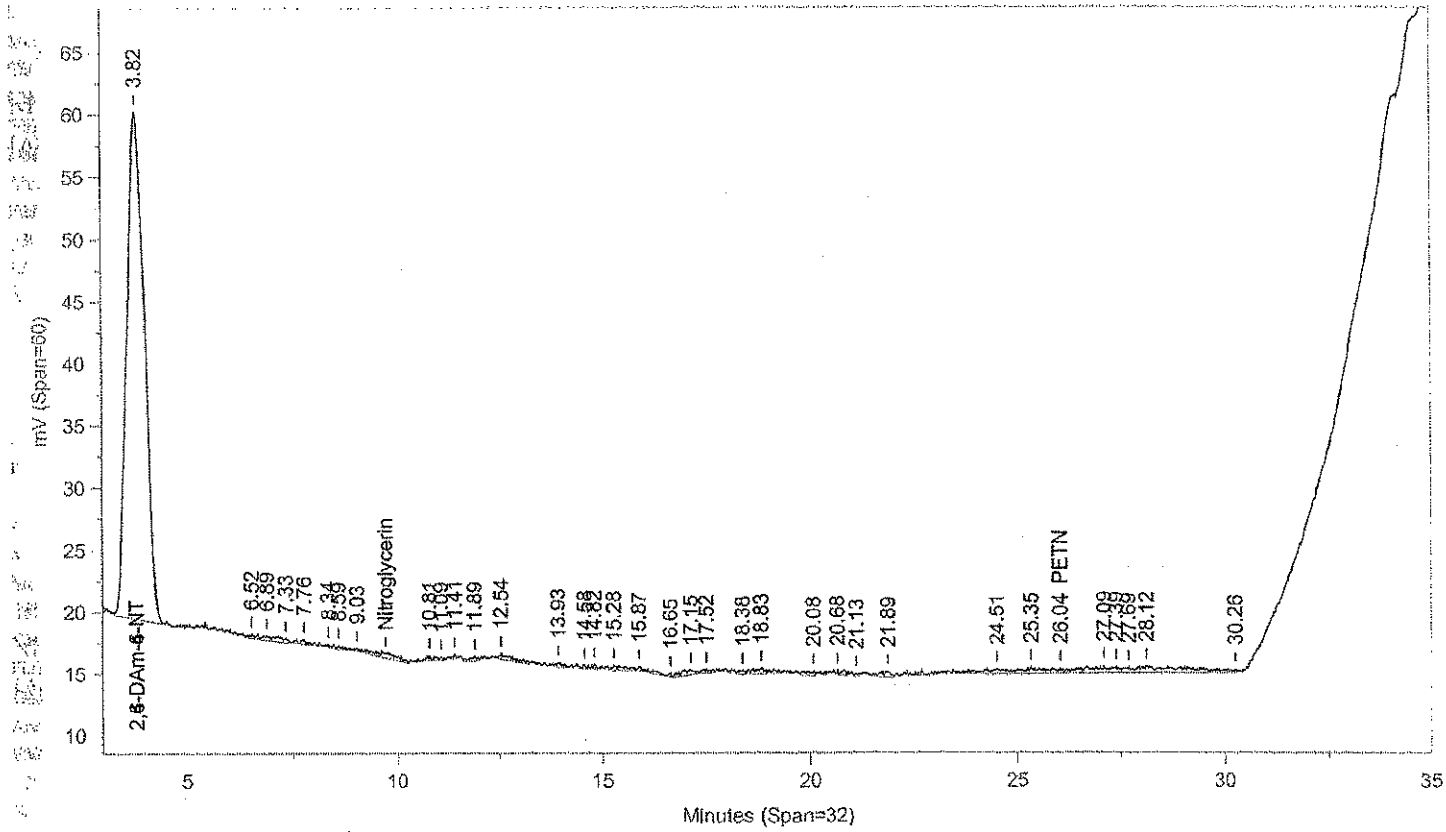
Files:
Area File: C:\CPWIN\DATA1\4C12310.58A
Area File: C:\CPWIN\DATA1\4C12310B.58A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:33:14 PM
File Reported On: 11/20/2013 at 2:33:25 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.59R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.59R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

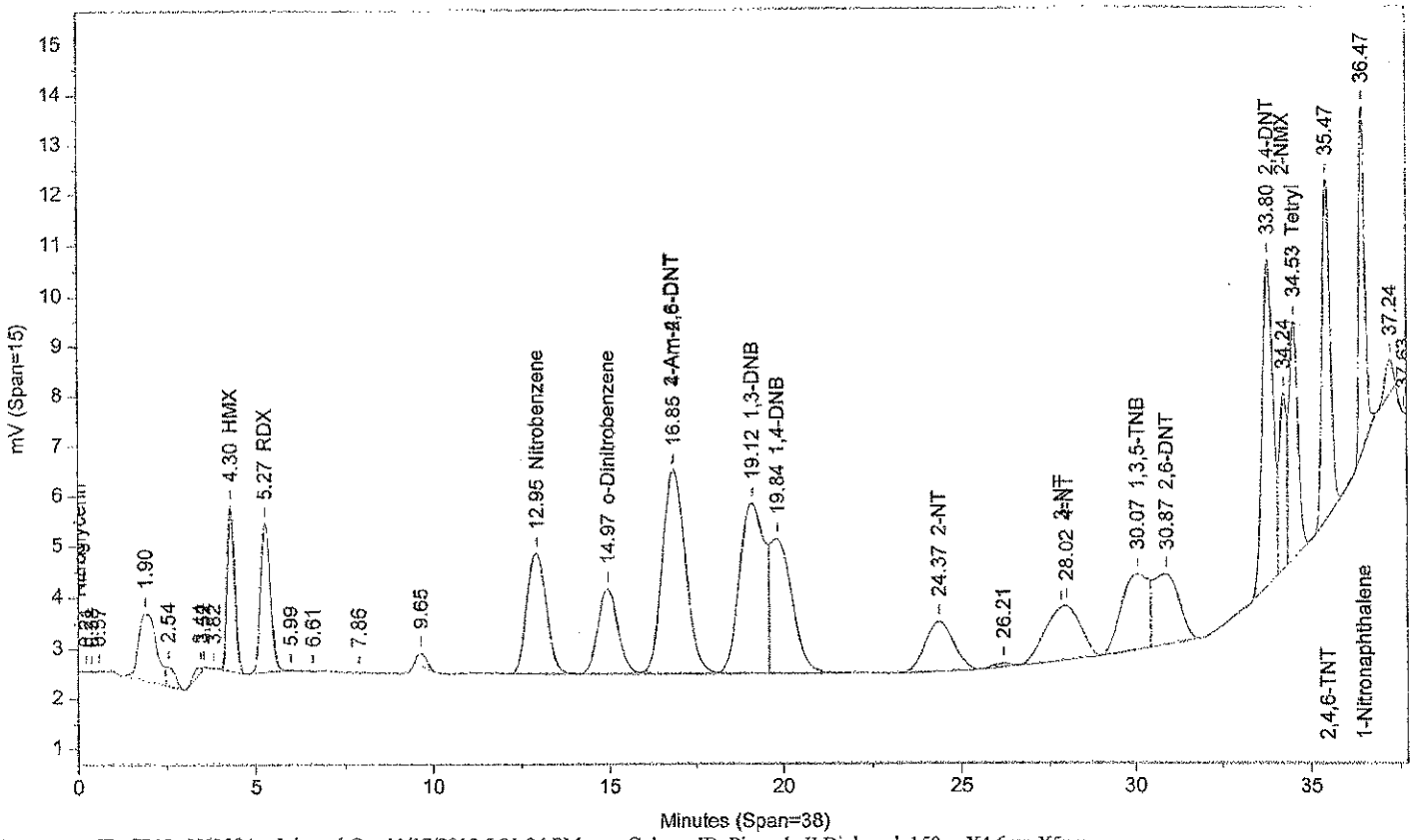
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.818	1194434	541.86	2,6-DAm-4-NT
5.271	1214	-12.751	RDX	.	0	.	RDX
16.844	3478	9.011	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.04	9091	76.554	PETN

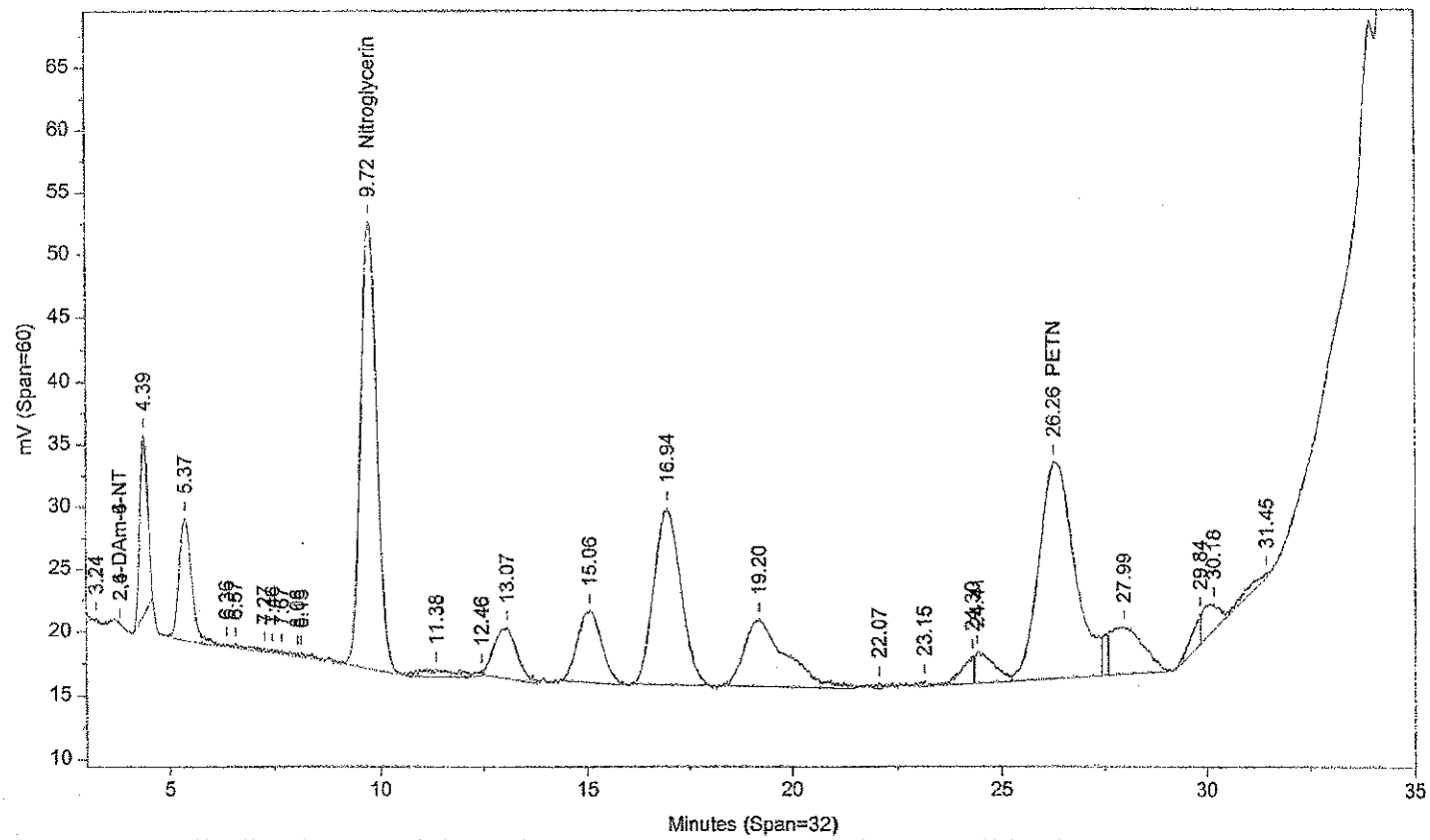
Files:
Area File: C:\CPWIN\DATA1\4C12310.59A
Area File: C:\CPWIN\DATA1\4C12310B.59A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:33:46 PM
File Reported On: 11/20/2013 at 2:33:55 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.70R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.70R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.301	48255	460.316	HMX	.	0	.	HMX
5.268	57969	493.76	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.722	947131	9318.583	Nitroglycerin
12.947	92582	501.4	Nitrobenzene	.	0	.	Nitrobenzene
14.966	69092	496.444	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.854	190987	494.793	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.121	168398	497.18	1,3-DNB	.	0	.	1,3-DNB
19.842	114801	493.37	1,4-DNB	.	0	.	1,4-DNB
24.372	55388	472.786	2-NT	.	0	.	2-NT
.	0	.	PETN	26.261	1046086	8808.525	PETN
28.017	75737	392.638	4-NT	.	0	.	4-NT
30.066	77417	366.656	1,3,5-TNB	.	0	.	1,3,5-TNB
30.871	70888	555.345	2,6-DNT	.	0	.	2,6-DNT
33.798	136400	528.11	2,4-DNT	.	0	.	2,4-DNT
34.237	51099	1517.054	2-NMX	.	0	.	2-NMX
34.531	83024	541.032	Tetryl	.	0	.	Tetryl
35.47	106258	505.23	2,4,6-TNT	.	0	.	2,4,6-TNT
36.472	76815	506.558	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.70A
Area File: C:\CPWIN\DATA1\4C12310B.70A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:20:20 PM
File Reported On: 11/17/2013 at 10:20:29 PM

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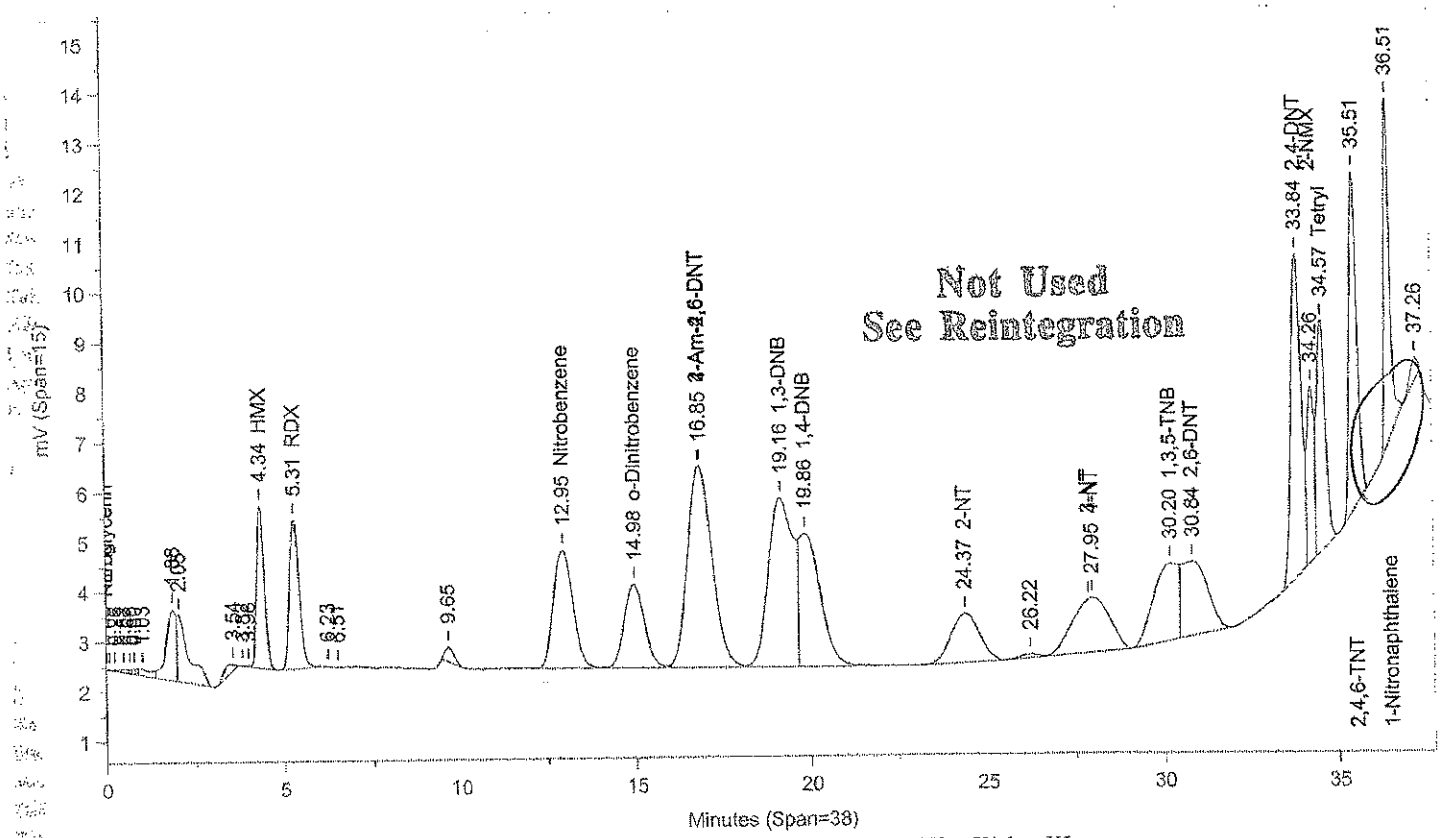
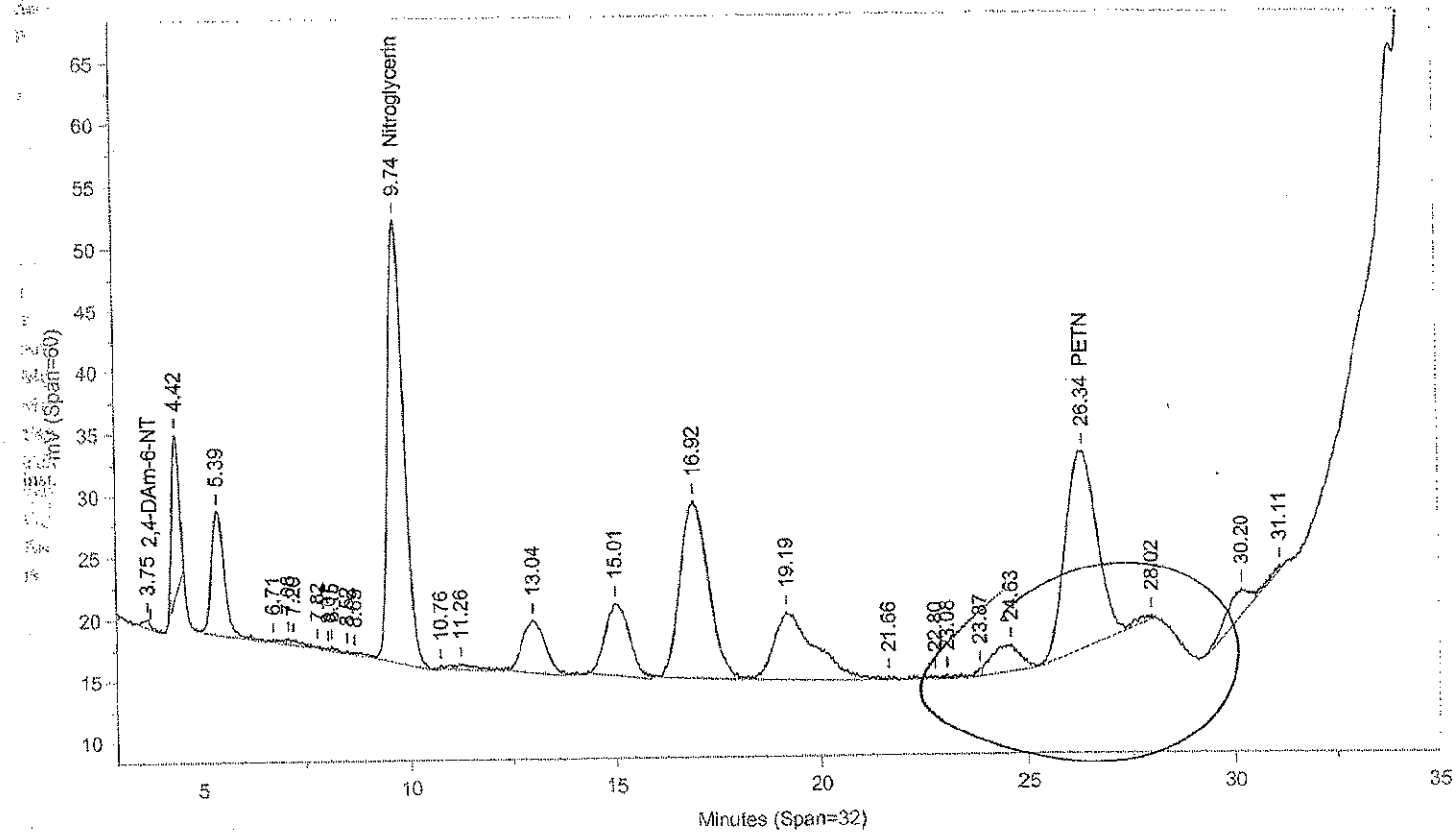
File: C:\CPWIN\DATA1\4C12310.81R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.81R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	852692	7180.06	PETN
27.95	80386	415.982	4-NT	.	0	.	4-NT
30.199	76457	362.763	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	76891	601.25	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	79216	521.527	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.81A
Area File: C:\CPWIN\DATA1\4C12310B.81A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:21:30 PM
File Reported On: 11/18/2013 at 3:21:40 PM

Not Used
See Reintegration

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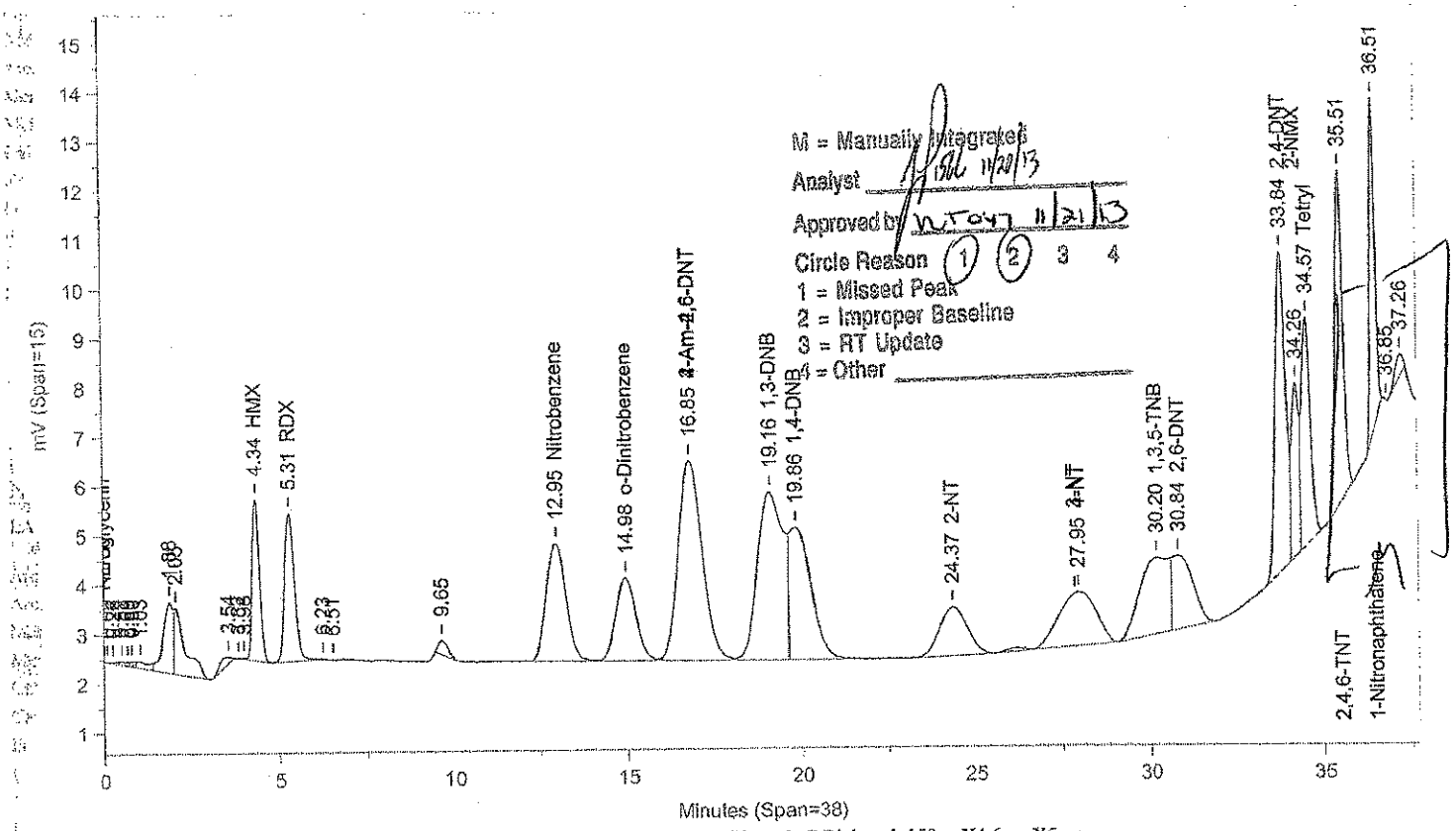
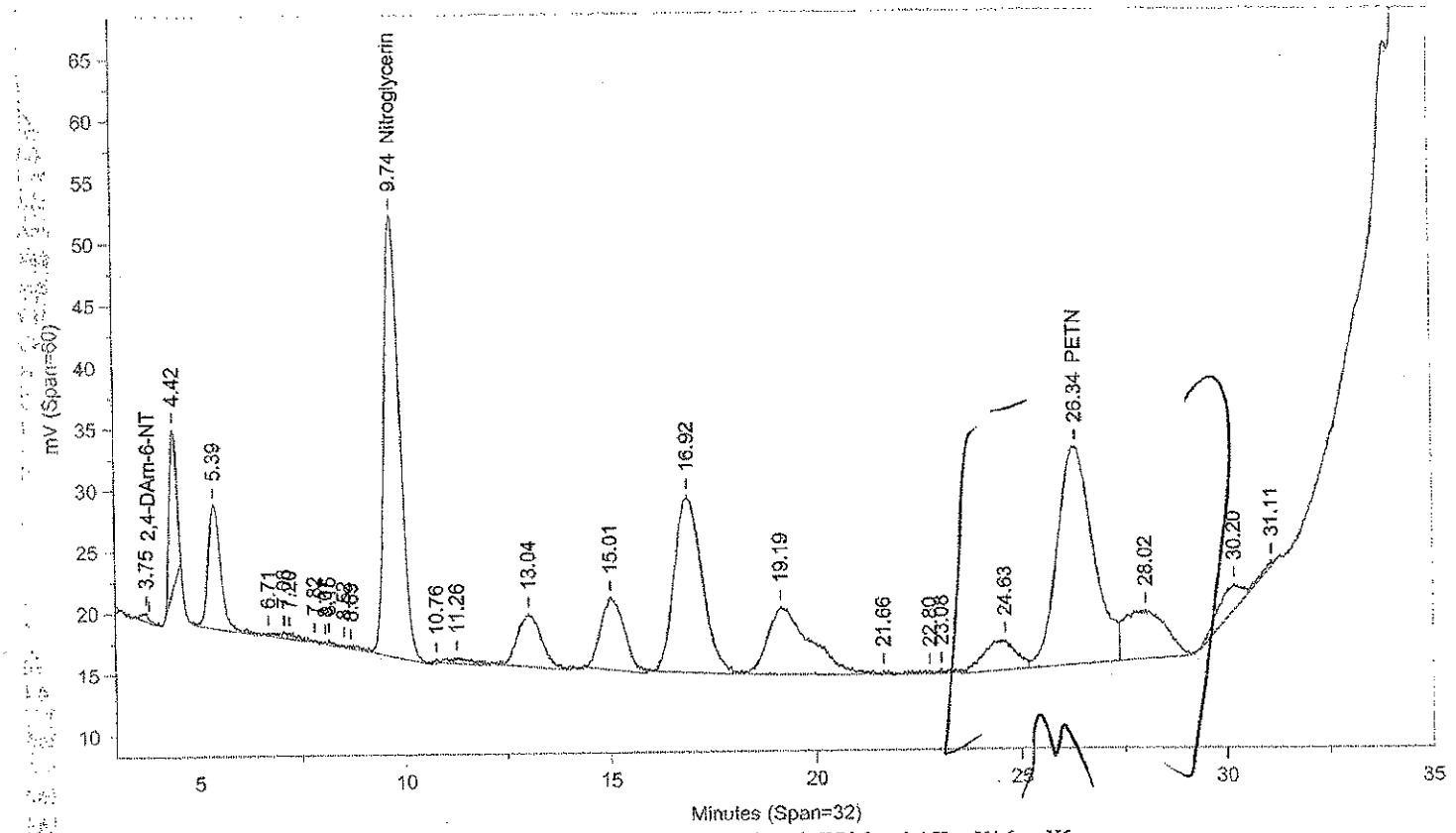


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.81R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	1069600	9006.529	PETN
27.95	83244	430.33	4-NT	.	0	.	4-NT
30.199	91228	422.696	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	62120	488.303	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	71874	475.755	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:49:40 PM
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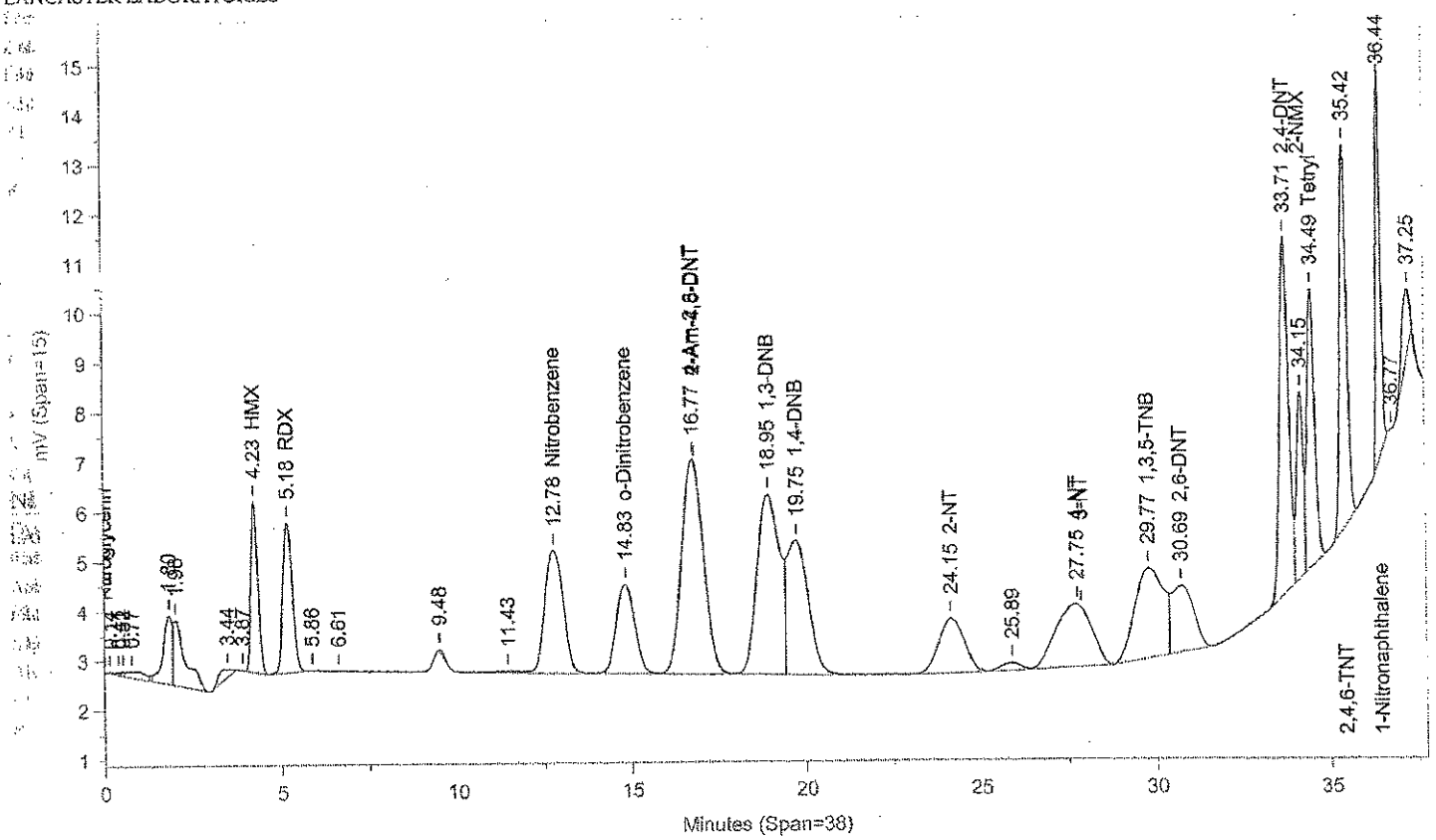
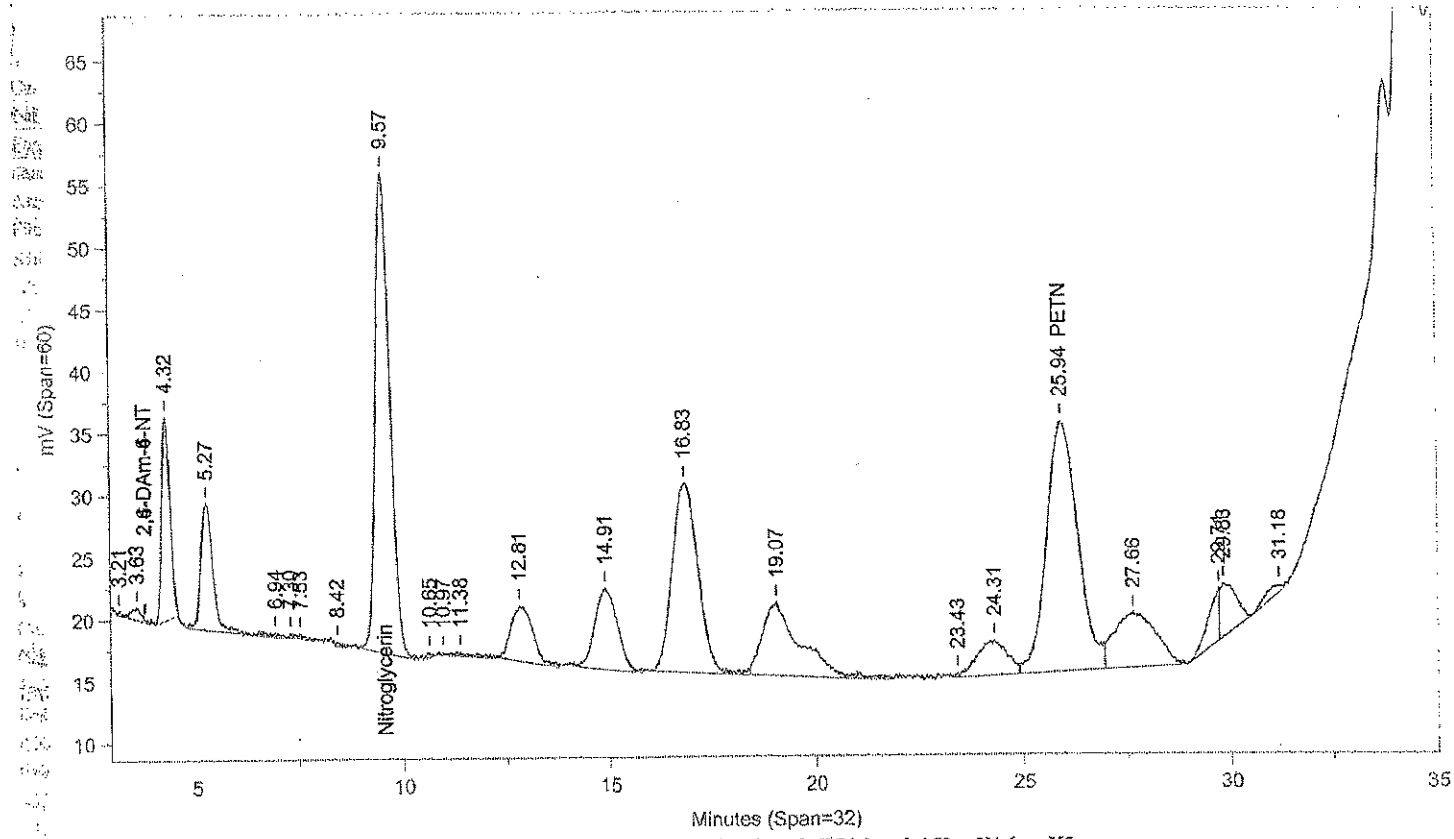
File: C:\CPWIN\DATA1\5C12310.17R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.17R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.228	47738	455.377	HMX	.	0	.	HMX
5.179	57500	489.574	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.567	940962	9257.887	Nitroglycerin
12.784	92389	500.349	Nitrobenzene	.	0	.	Nitrobenzene
14.833	68361	491.074	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.77	188252	487.706	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.952	164604	485.977	1,3-DNB	.	0	.	1,3-DNB
19.754	114385	491.527	1,4-DNB	.	0	.	1,4-DNB
24.15	56689	484.078	2-NT	.	0	.	2-NT
.	0	.	PETN	25.939	1048578	8829.507	PETN
27.749	89761	463.058	4-NT	.	0	.	4-NT
29.768	101930	466.122	1,3,5-TNB	.	0	.	1,3,5-TNB
30.691	58807	462.967	2,6-DNT	.	0	.	2,6-DNT
33.711	135888	526.13	2,4-DNT	.	0	.	2,4-DNT
34.153	50306	1494.359	2-NMX	.	0	.	2-NMX
34.486	84850	552.531	Tetryl	.	0	.	Tetryl
35.417	106047	504.24	2,4,6-TNT	.	0	.	2,4,6-TNT
36.435	74201	490.263	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:51:04 PM
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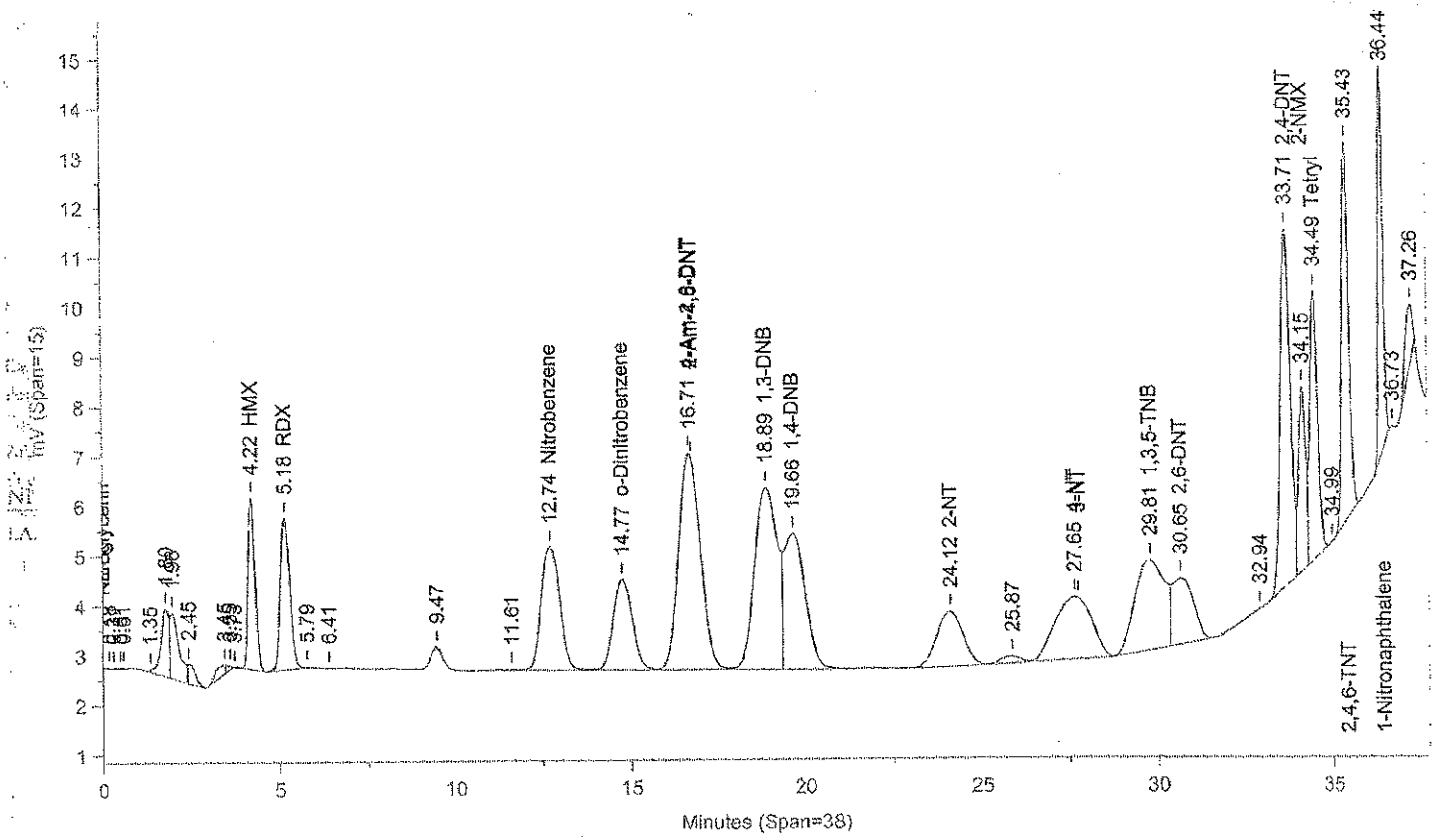
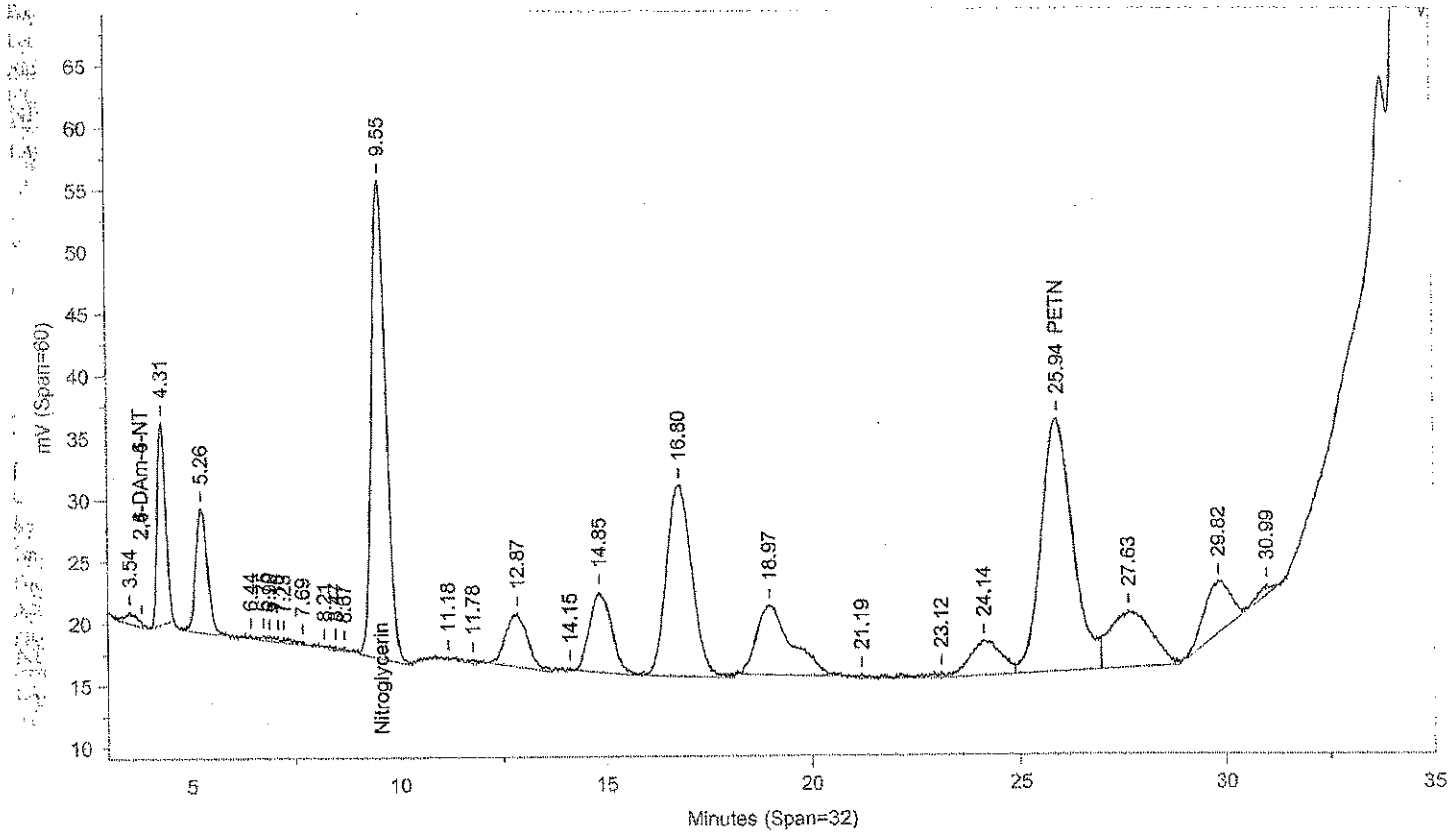


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.28R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.223	48085	458.688	HMX	.	0	.	HMX
5.181	57711	491.456	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.554	942371	9271.751	Nitroglycerin
12.735	92280	499.749	Nitrobenzene	.	0	.	Nitrobenzene
14.772	69295	497.943	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.709	190154	492.634	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.893	166418	491.335	1,3-DNB	.	0	.	1,3-DNB
19.664	116414	500.512	1,4-DNB	.	0	.	1,4-DNB
24.121	57078	487.458	2-NT	.	0	.	2-NT
Del .	0	.	PETN	25.937	1079753	9092.018	PETN
27.65	90136	464.941	4-NT	.	0	.	4-NT
29.806	105321	479.882	1,3,5-TNB	.	0	.	1,3,5-TNB
30.645	56831	447.858	2,6-DNT	.	0	.	2,6-DNT
Su33.71	137740	533.299	2,4-DNT	.	0	.	2,4-DNT
A34.153	50409	1497.283	2-NMX	.	0	.	2-NMX
34.486	83543	544.302	Tetryl	.	0	.	Tetryl
35.428	105888	503.493	2,4,6-TNT	.	0	.	2,4,6-TNT
36.44	73471	485.713	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.28A
Area File: C:\CPWIN\DATA1\5C12310B.28A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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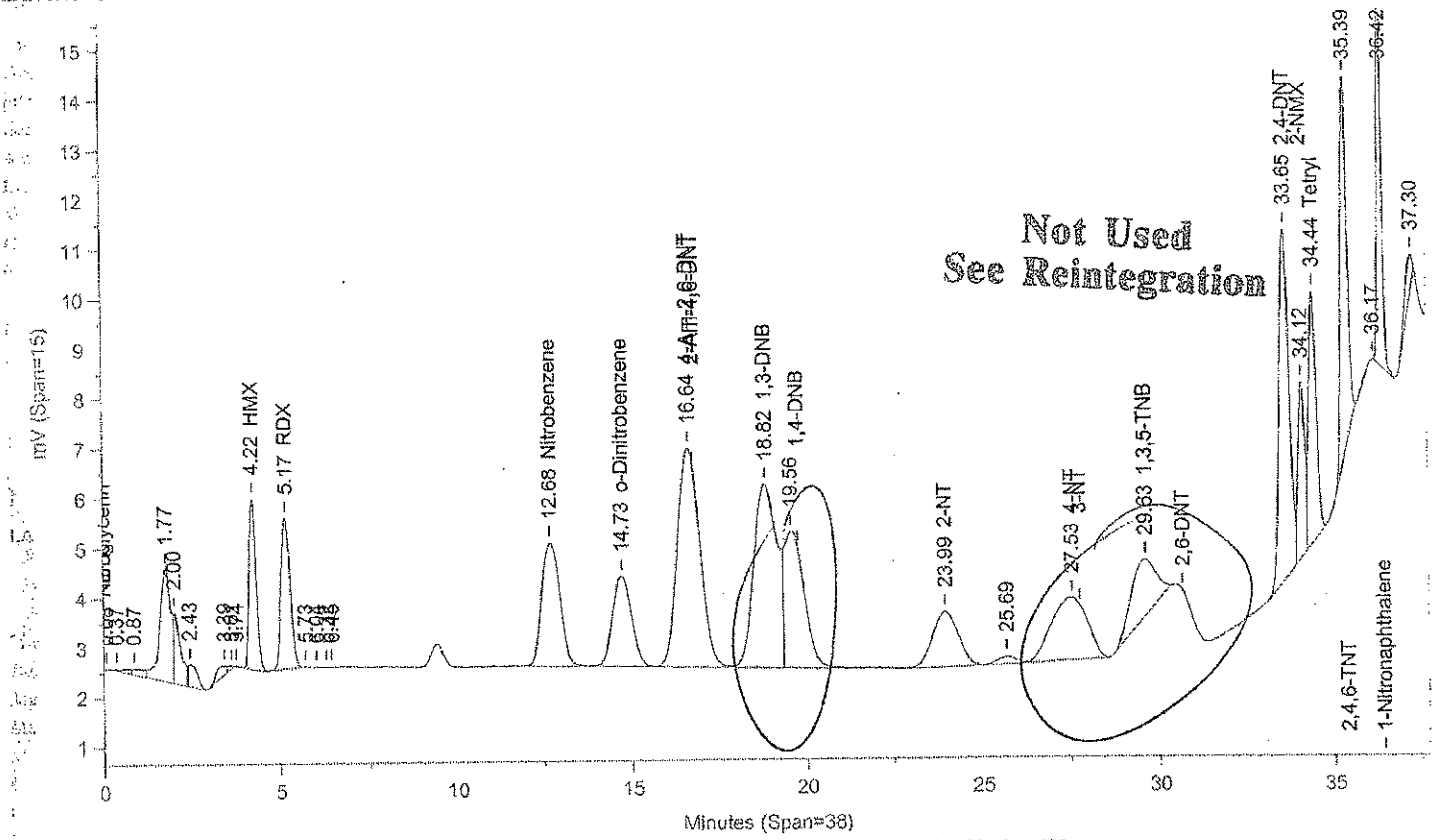
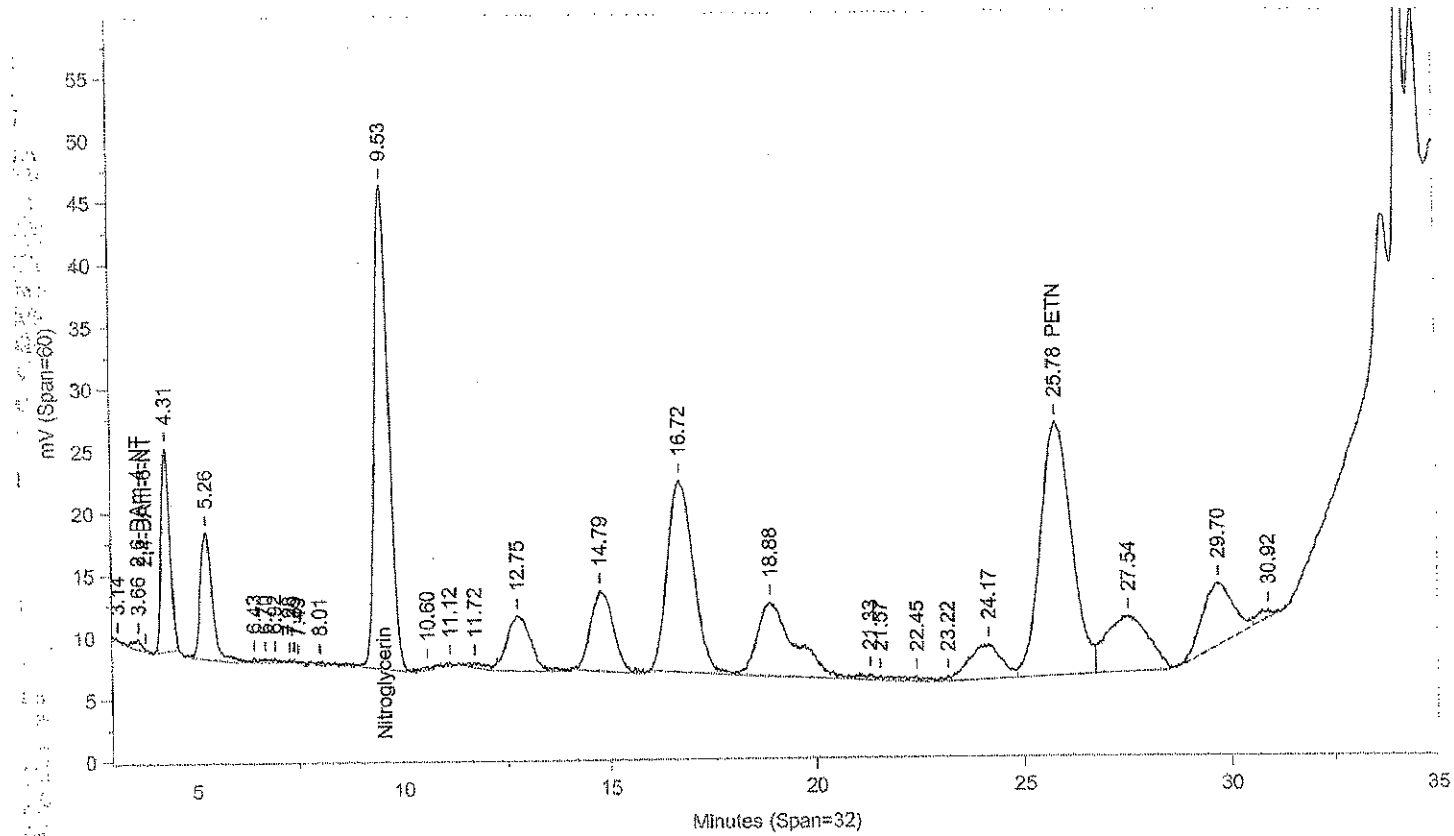


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.657	13382	6.071	2,6-DAm-4-NT
4.219	47536	453.456	HMX	.	0	.	HMX
5.175	57083	485.851	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.53	944882	9296.459	Nitroglycerin
12.683	92195	499.285	Nitrobenzene	.	0	.	Nitrobenzene
14.733	69218	497.372	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.639	190635	493.879	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.821	172394	508.978	1,3-DNB	.	0	.	1,3-DNB
23.989	57224	488.717	2-NT	.	0	.	2-NT
.	0	.	PETN	25.785	1058708	8914.813	PETN
27.535	88783	458.143	4-NT	.	0	.	4-NT
29.627	56314	281.03	1,3,5-TNB	.	0	.	1,3,5-TNB
33.654	135120	523.156	2,4-DNT	.	0	.	2,4-DNT
34.116	47057	1401.25	2-NMX	.	0	.	2-NMX
34.445	76327	498.862	Tetryl	.	0	.	Tetryl
35.386	102737	488.717	2,4,6-TNT	.	0	.	2,4,6-TNT
36.416	73007	482.816	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.39A
Area File: C:\CPWIN\DATA1\5C12310B.39A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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Not Used
See Reintegration

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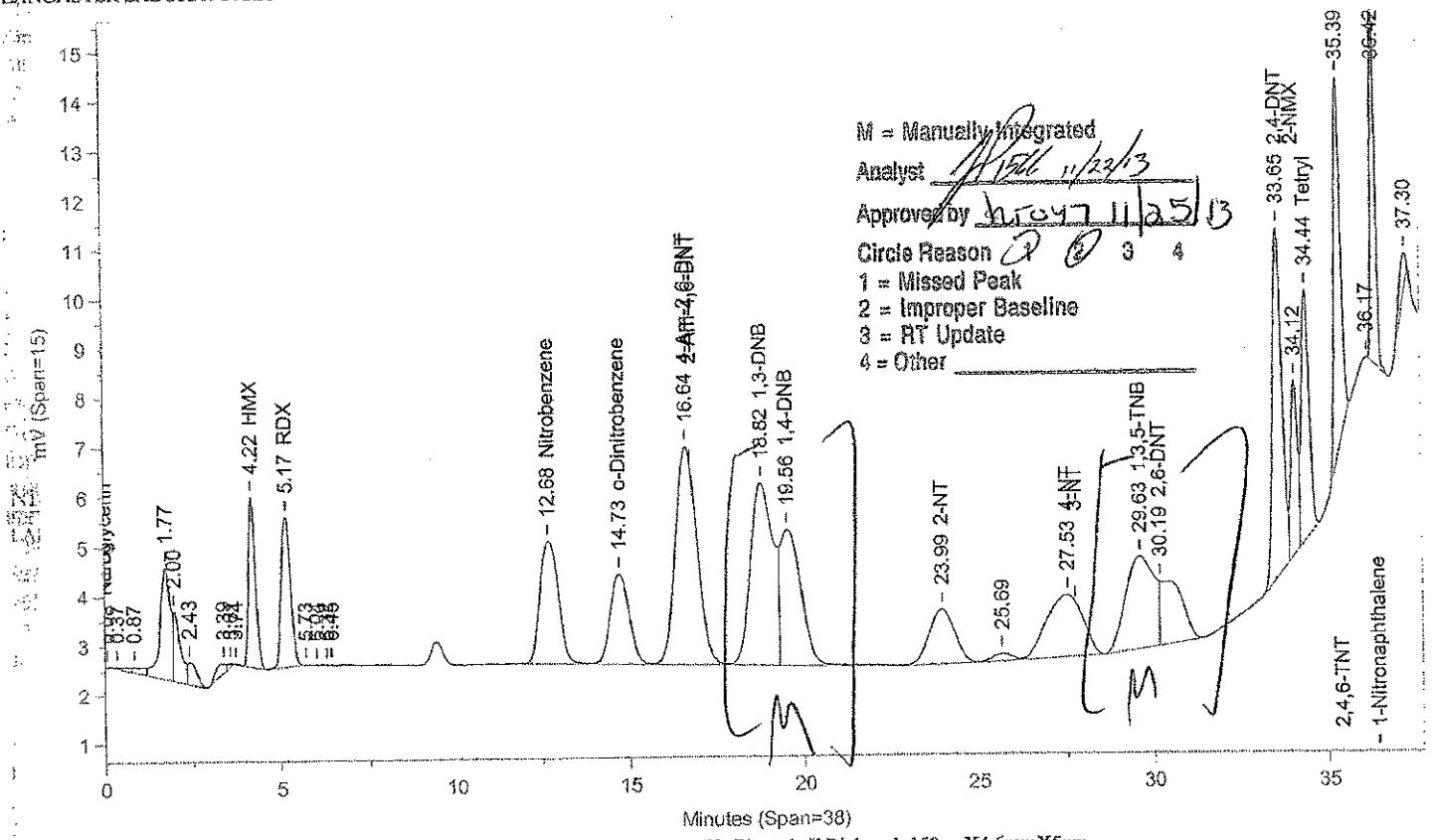
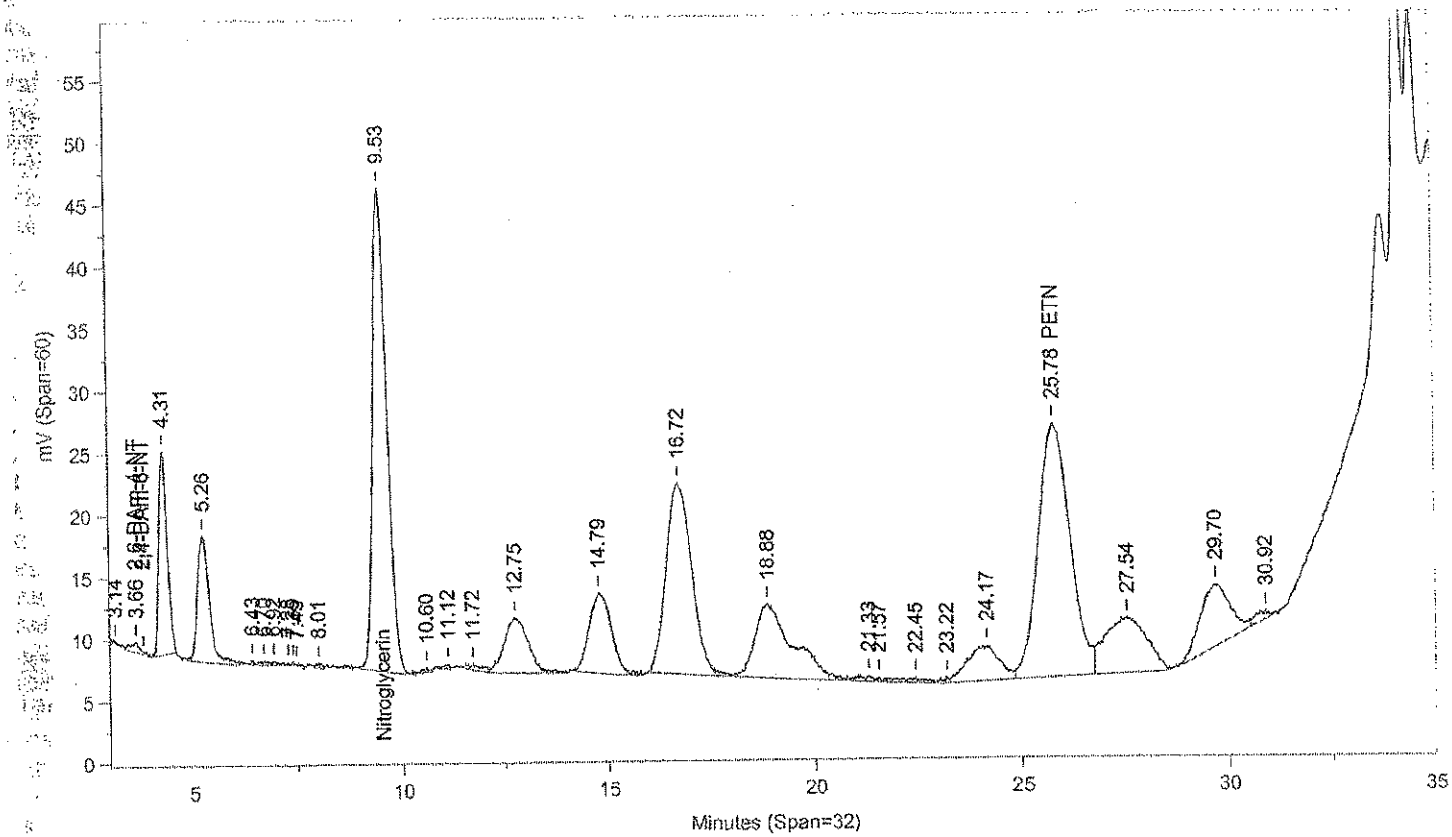
File: C:\CPWIN\DATA1\5C12310.39R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.657	13382	6.071	2,6-DAm-4-NT
4.219	47536	453.456	HMX	.	0	.	HMX
5.175	57083	485.851	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.53	944882	9296.459	Nitroglycerin
12.683	92195	499.285	Nitrobenzene	.	0	.	Nitrobenzene
14.733	69218	497.372	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.639	190635	493.879	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.821	172394	508.978	1,3-DNB	.	0	.	1,3-DNB
19.559	110352	473.669	1,4-DNB	.	0	.	1,4-DNB
23.989	57224	488.717	2-NT	.	0	.	2-NT
.	0	.	PETN	25.785	1058708	8914.813	PETN
27.535	88783	458.143	4-NT	.	0	.	4-NT
29.627	106783	485.813	1,3,5-TNB	.	0	.	1,3,5-TNB
30.194	56879	448.224	2,6-DNT	.	0	.	2,6-DNT
33.654	135120	523.156	2,4-DNT	.	0	.	2,4-DNT
34.116	47057	1401.25	2-NMX	.	0	.	2-NMX
34.445	76327	498.862	Tetryl	.	0	.	Tetryl
35.386	102737	488.717	2,4,6-TNT	.	0	.	2,4,6-TNT
36.416	73007	482.816	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 1:08:02 PM
File Reported On: 11/22/2013 at 1:08:00 PM

Raw QC Data

Explosives

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Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 BLK Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 12, 2013 20:59:54
Instrument X6329A
Result file 2E12310.70R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 106% (63 - 150) Conc: 5290.549316

Analysis Report (B)

Injected on Nov 12, 2013 20:59:54
Instrument Y6329A
Result file 2C12310.70R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 114% (63 - 150) Conc: 5724.731445

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.71	4.82	4.91	112	5.300833
Tetryl	7.43	7.53	7.71	40	1.155025
2,4-Dinitrotoluene	11.03	11.22	11.31	34	1.02599
2-NMX	25.80	26.06	26.48	18034	5290.549316

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.26	4.41	110	10.528544
2-Amino-4,6-dinitrotoluer	16.81	17.03	17.13	212	5.490159
2-Nitrotoluene	24.21	24.27	24.73	1722	70.919876
2-NMX	34.15	34.30	34.35	18128	5724.731445
1-Nitronaphthalene	36.38	36.51	36.58	13	277.593536

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<6000	<2000			
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-Trinitrobenzene			<300	<100			
1,4-Dinitrobenzene			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153			
Nitrobenzene			<300	<100			
2,4,6-Trinitrotoluene			<300	<100			
4-Amino-2,6-dinitrotoluene			<300	<150			
2-Amino-4,6-dinitrotoluene			<300	<100			
2,6-Dinitrotoluene			<300	<100			
2,4-Dinitrotoluene			<300	<100			
2-Nitrotoluene			<300	<200			
4-Nitrotoluene			<300	<200			
3-Nitrotoluene			<300	<250			
2-NMX	A	5290.549316				7.88	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Melissa A. McFarland, Senior Chemist Group Leader
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--X6329A
Result file : 2E12310.70R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 106% (63-150) Conc.: 5290.54931

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.17	4.24	466	-71.816254
1,3,5-TNB	4.71	4.82	4.91	112	5.300833
Tetryl	7.43	7.53	7.71	40	1.155025
2,4-DNT	11.03	11.22	11.31	34	1.025990
2-NMX	25.80	26.06	26.48	18034	5290.549316

Analysis Report (B)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--X6329B
Result file : 2E12310B.70R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 5267.67480

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.96	26.24	26.63	257310	5267.674805

RDX $\frac{112}{87.623}\left(\frac{20}{2}\right) = 12.78207211$ conc

RDX $\frac{466}{110.0628} \times \frac{20}{2} = 42.3395$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153	Y coelutes		report confirmation
☑ Nitrobenzene			<300	<100	/		report confirmation
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	5290.549316				0.43	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: Jessica L. Miller
Jessica L. Miller
Chemist
Date: NOV 2 0 2013

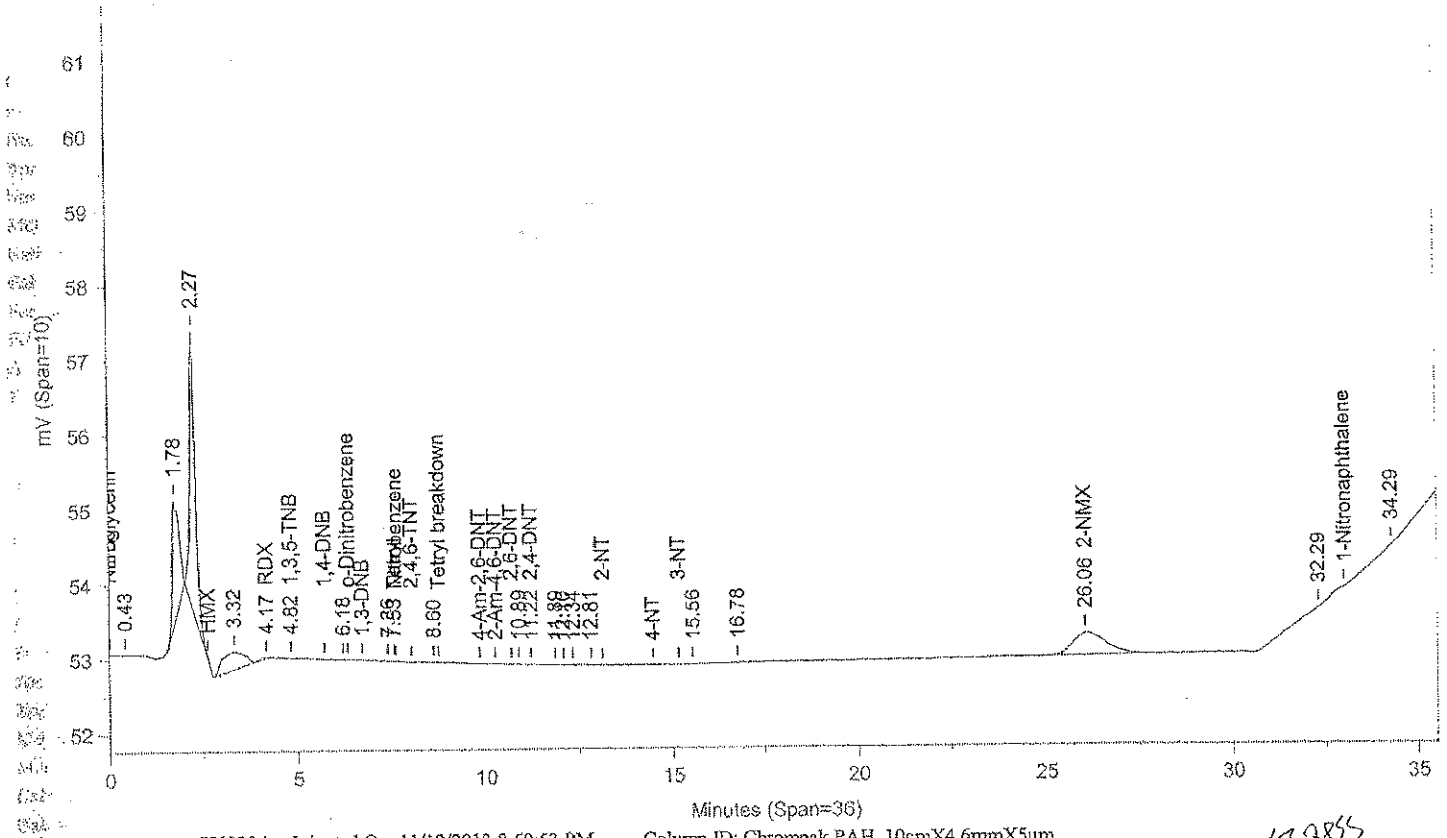
James H. Place
Senior Chemist
NOV 2 1 2013

Verified by: Melissa A. McDermitt
Melissa A. McDermitt
Senior Chemist Group Leader
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

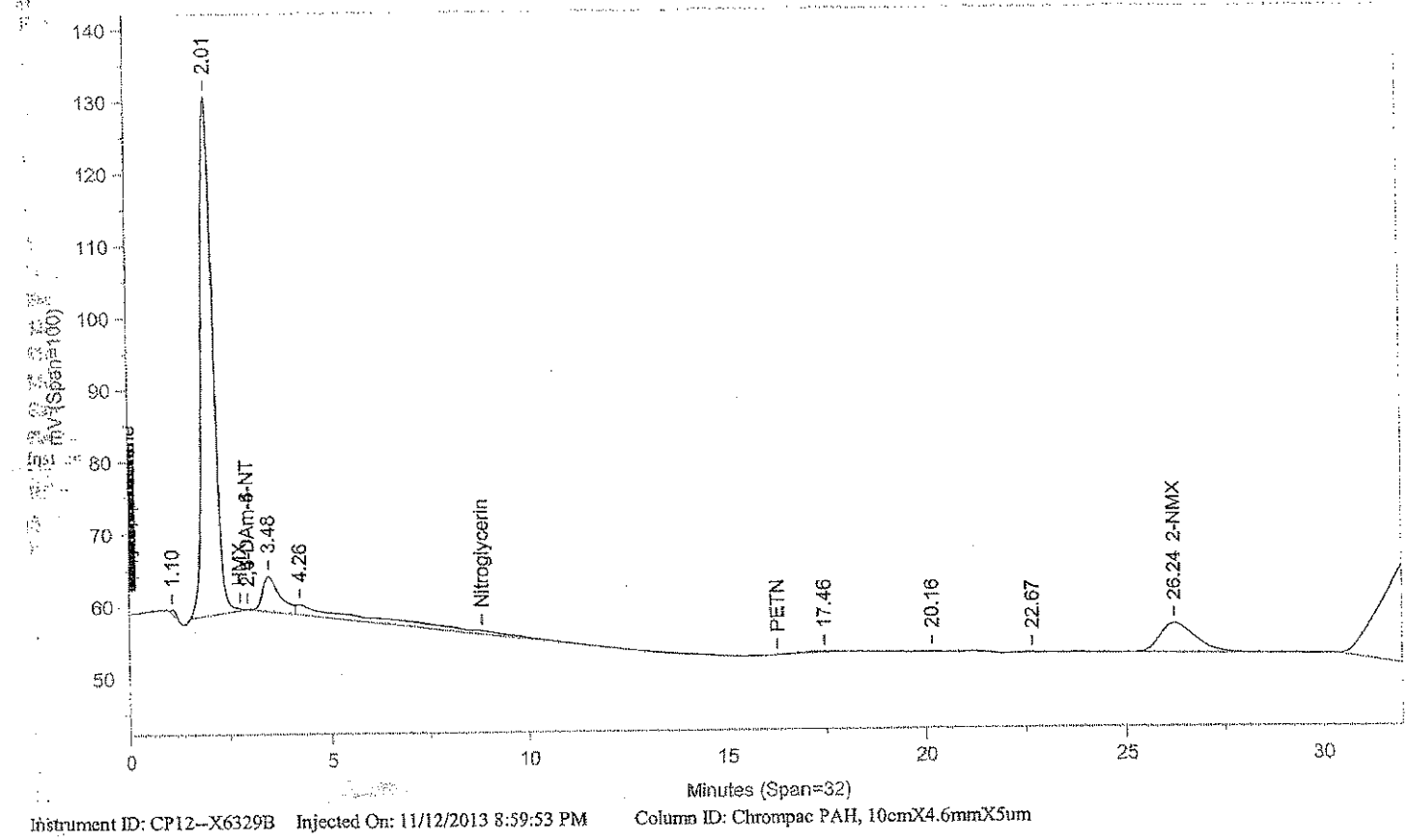
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\2E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/12/2013 8:59:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\2E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/12/2013 8:59:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.172	466	-71.816	RDX		0		RDX
4.817	112	5.301	1,3,5-TNB		0		1,3,5-TNB
7.534	40	1.155	Tetryl		0		Tetryl
11.216	34	1.026	2,4-DNT		0		2,4-DNT
26.055	18034	5290.549	2-NMX	26.238	257310	5267.675	2-NMX

Files:
Area File: C:\CPWIN\DATA1\2E12310.70A
Area File: C:\CPWIN\DATA1\2E12310B.70A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 9:40:32 PM
File Reported On: 11/12/2013 at 9:40:41 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/7/13 PBLK04311 **Sample ID:** AA **Batchnumber:** 133110004A
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--Y6329A
Result file : 2C12310.70R
Calibration file : 2C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 114% (63-150) Conc.: 5724.73144

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.26	4.41	110	10.528544
RDX	5.18	5.34	5.38	1984	-58.781509
2-Am-4,6-DNT	16.81	17.03	17.13	212	5.490153
2-NT	24.21	24.27	24.73	1722	70.919876
2-NMX	34.15	34.30	34.35	18128	5724.731445
1-Nitronaphthalene	36.38	36.51	36.58	13	277.593536

Analysis Report (B)

Injected on : NOV 12, 2013 20:59:54
Instrument : CP12--Y6329B
Result file : 2C12310B.70R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.87	4.01	8936	40.537300

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150	? coelutes		report primary
☑ 2-Am-4,6-DNT			<300	<100			report primary
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200	? coelutes		report primary
☑ 3-NT			<300	<250	?		report primary
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5724.731445					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene	A	277.593536	<300	100	J		

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

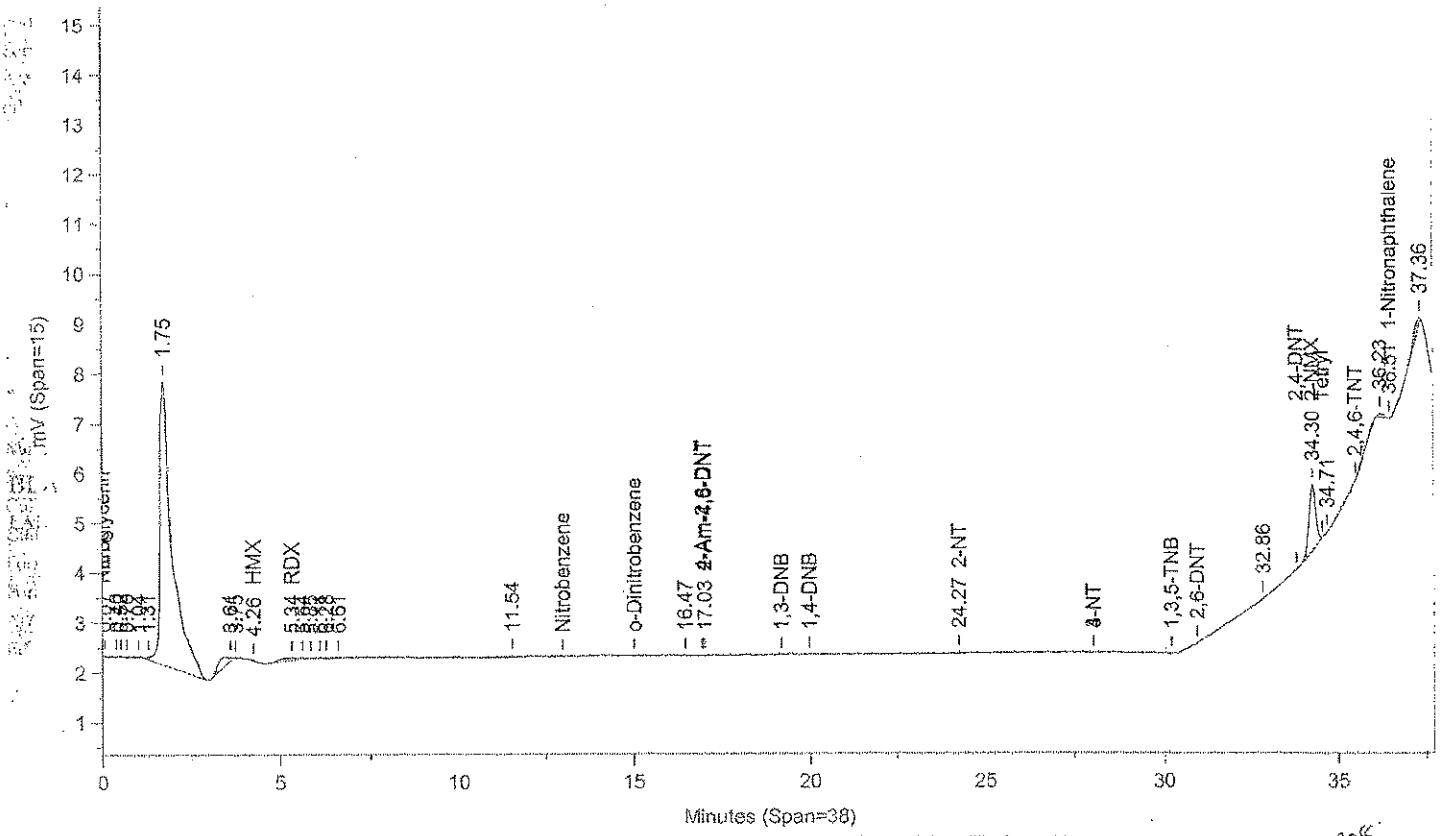
Verified by: Melissa A. McDermott, Senior Chemist/Group Leader
Date: NOV 21 2013

James H. Place
Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

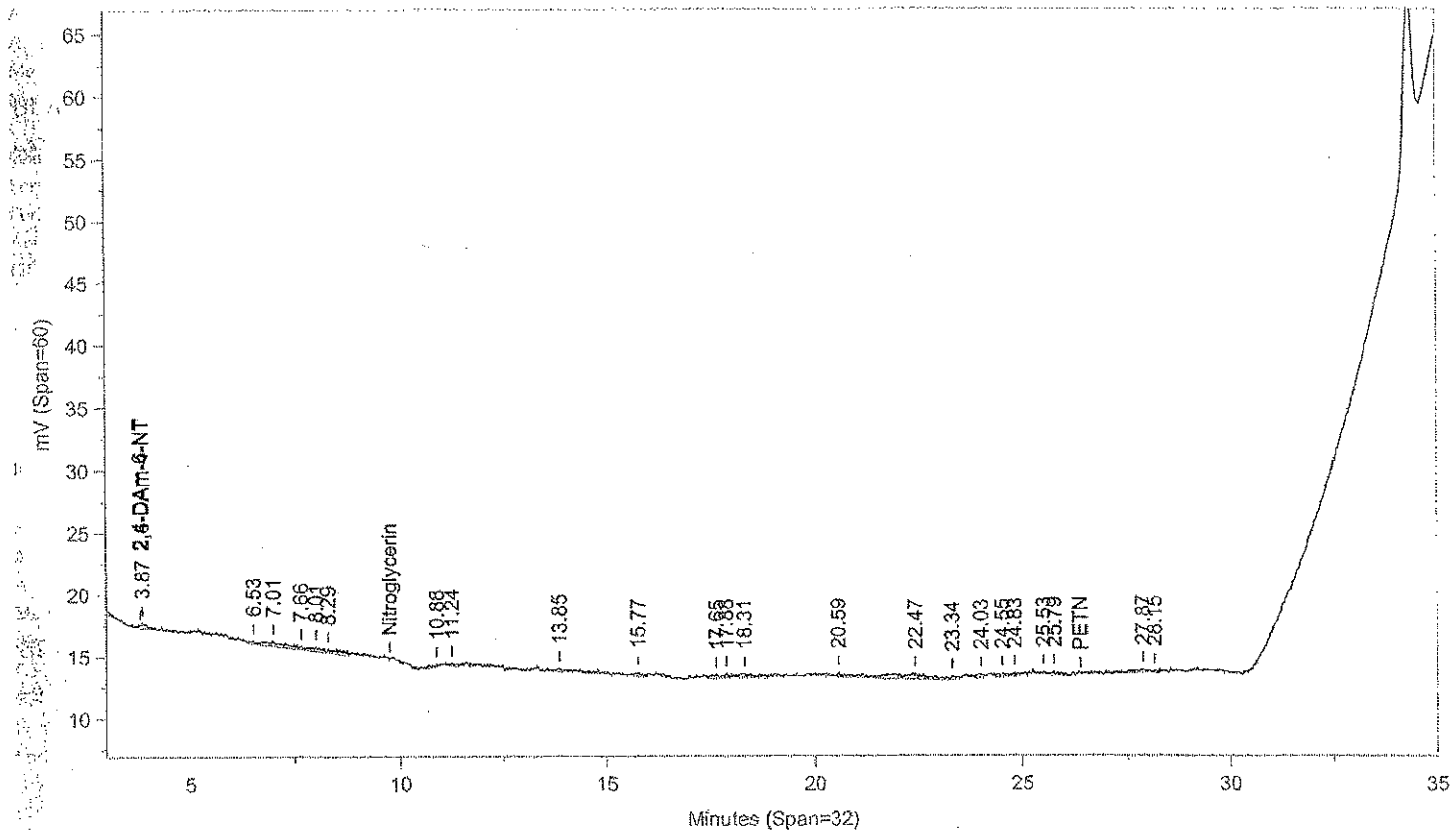
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\2C12310.70R



Instrument ID: CP12--Y6329A Injected On: 11/12/2013 8:59:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\2C12310B.70R



Instrument ID: CP12--Y6329B Injected On: 11/12/2013 8:59:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,6-DAm-4-NT	3.874	8936	40.537	2,6-DAm-4-NT
4.258	110	10.529	HMX	.	0	.	HMX
5.339	1984	-58.782	RDX	.	0	.	RDX
17.027	212	5.49	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
24.267	1722	70.92	2-NT	.	0	.	2-NT
34.295	18128	5724.731	2-NMX	.	0	.	2-NMX
36.507	13	277.594	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\2C12310.70A
Area File: C:\CPWIN\DATA1\2C12310B.70A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/12/2013 9:40:00 PM
File Reported On: 11/12/2013 at 9:40:10 PM

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Data Summary

Sample Name: LCSA 11/7/13 LCS04311 LCS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 13, 2013 12:01:35
Instrument X6329A
Result file 3E12310.21R
Calibration file 2E12310
Method file 8330

%SSR(NMX) 111% (63 - 150) Conc: 5560.380371

Analysis Report (B)

Injected on Nov 13, 2013 12:01:35
Instrument Y6329A
Result file 3C12310.21R
Calibration file 2C12310
Method file 8330C

%SSR(NMX) 91% (63 - 150) Conc: 4541.055664

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.04	4.13	4.24	47504	5296.381348
1,3,5-Trinitrobenzene	4.71	4.81	4.91	109603	5192.295898
1,4-Dinitrobenzene	5.59	5.68	5.79	270711	10625.580078
o-Dinitrobenzene	6.20	6.27	6.40	121365	11778.813477
1,3-DNB	6.58	6.63	6.78	193620	5966.815918
Tetryl	7.43	7.53	7.71	161154	4811.008606
2,4,6-Trinitrotoluene	7.90	7.95	8.10	132315	5806.819336
4-Amino-2,6-dinitrotoluer	9.70	9.88	9.99	48552	5174.953613
2-Amino-4,6-dinitrotoluer	10.13	10.18	10.41	107872	4925.307129
2,6-Dinitrotoluene	10.56	10.59	10.84	63095	5189.772949
2,4-Dinitrotoluene	11.03	11.08	11.31	191803	5798.755371
2-Nitrotoluene	12.98	13.03	13.26	66003	4989.265137
4-Nitrotoluene	14.31	14.37	14.64	46272	4931.598633
3-Nitrotoluene	15.02	15.06	15.34	85360	6304.069824
2-NMX	25.80	25.86	26.48	18954	5560.380371
1-Nitronaphthalene	32.78	32.90	33.26	166011	12636.717773

Compound	Min	RT	Max	Area	Amount
HMX	4.21	4.30	4.41	38672	3689.013916
RDX	5.18	5.27	5.38	63133	5398.44043
Nitrobenzene	12.82	12.95	13.14	100383	5439.779785
o-Dinitrobenzene	14.85	14.96	15.21	156405	11386.141602
4-Amino-2,6-dinitrotoluer	16.81	16.87	17.13	212319	5500.573242
1,3-DNB	19.04	19.14	19.34	167704	4951.299316
1,4-Dinitrobenzene	19.83	19.91	20.13	279305	12218.036133
2-Nitrotoluene	24.21	24.43	24.73	66587	5699.666992
3-Nitrotoluene	27.77	28.04	28.29	103484	5292.918945
1,3,5-Trinitrobenzene	30.01	30.15	30.41	105688	4813.710449
2,6-Dinitrotoluene	30.76	30.94	31.16	72832	5702.102051
2,4-Dinitrotoluene	33.73	33.84	33.95	152217	5893.522949
2-NMX	34.15	34.25	34.35	13997	4541.055664
Tetryl	34.46	34.57	34.66	84865	5526.286133
2,4,6-Trinitrotoluene	35.40	35.50	35.60	116342	5525.322266
1-Nitronaphthalene	36.38	36.48	36.58	177416	11337.234375

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	20010.5625	6000	2000		37.21	
PETN	B	19768.390625	6000	2000		21.17	
HMX	A	3729.645508	750	250		1.10	
RDX	A	5296.381348	300	125		1.91	
1,3,5-Trinitrobenzene	A	5192.295898	300	100		7.57	
1,4-Dinitrobenzene	A	10625.580078	300	100		13.94	
o-Dinitrobenzene	A	11778.813477	300	100		3.39	
1,3-DNB	A	5966.815918	300	100		18.60	
Tetryl	B	5526.286133	300	153		13.84	
Nitrobenzene	B	5439.779785	300	100		12.27	
2,4,6-Trinitrotoluene	A	5806.819336	300	100		4.97	
4-Amino-2,6-dinitrotoluene	A	5174.953613	300	150		6.10	
2-Amino-4,6-dinitrotoluene	A	4925.307129	300	100		11.04	
2,6-Dinitrotoluene	A	5189.772949	300	100		9.41	
2,4-Dinitrotoluene	A	5798.755371	300	100		1.62	
2-Nitrotoluene	A	4989.265137	300	200		13.29	
4-Nitrotoluene	A	4931.598633	300	200		7.07	
3-Nitrotoluene	A	6304.069824	300	250		17.44	
2-NMX	A	5560.380371				20.18	
1-Nitronaphthalene	A	12636.717773	300	100		10.84	

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Data Summary

Sample Name: LCSA 11/7/13 LCS04311 LCS Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	Nov 13, 2013 12:01:35
Instrument	X6329A
Result file	3E12310.21R
Calibration file	2E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 13, 2013 12:01:35
Instrument	Y6329A
Result file	3C12310.21R
Calibration file	2C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329A
Result file : 3E12310.21R
Calibration file : 2E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 111% (63-150) Conc.: 5560.38037

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.04	4.13	4.24	47504	5296.381348
1,3,5-TNB	4.71	4.81	4.91	109603	5192.295898
1,4-DNB	5.59	5.68	5.79	270711	10625.580078
o-Dinitrobenzene	6.20	6.27	6.40	121365	11778.813477
1,3-DNB	6.58	6.63	6.78	193620	5966.815918
Tetryl	7.43	7.53	7.71	161154	4662.155273
2,4,6-TNT	7.90	7.95	8.10	132315	5806.819336
Tetryl breakdown	8.62	8.57	8.86	5145	148.853333
4-Am-2,6-DNT	9.70	9.88	9.99	48552	5174.953613
2-Am-4,6-DNT	10.13	10.18	10.41	107872	4925.307129
2,6-DNT	10.56	10.59	10.84	63095	5189.772949
2,4-DNT	11.03	11.08	11.31	191803	5798.755371
2-NT	12.98	13.03	13.26	66003	4989.265137
4-NT	14.31	14.37	14.64	46272	4931.598633
3-NT	15.02	15.06	15.34	85360	6304.069824
2-NMX	25.80	25.86	26.48	18954	5560.380371
1-Nitronaphthalene	32.78	32.90	33.26	166011	12636.717773

Analysis Report (B)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--X6329B
Result file : 3E12310B.21R
Calibration file : 2E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 106% (63-150) Conc.: 5295.91259

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.67	2.77	2.87	154466	3729.645508
Nitroglycerin	8.63	8.78	9.01	175510	13732.622070
PETN	16.01	16.19	16.59	218680	15983.392578
2-NMX	25.96	26.04	26.63	258689	5295.912598

4662.155273 + 148.853333 = 4811.008606

(B) tetryl Breakdown added

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	13732.622070	6000	2000			Report Confirmatio
☑ PETN	B	15983.392578	6000	2000			
☑ HMX	B	3729.645508	750	250			Corrected Value = 393.625 See LOAR 7295
☑ RDX	A	5296.381348	300	125			
☑ 1,3,5-TNB	A	5192.295898	300	100			
☑ 1,4-DNB	A	10625.580078	300	100			
☑ o-Dinitrobenzene	A	11778.813477	300	100			
☑ 1,3-DNB	A	5966.815918	300	100			
☑ Tetryl	A	4811.008606 (B)	300	153	7		report confirmation
☑ Nitrobenzene		4811.008606 (B)	<300	<100			report confirmatio
☑ 2,4,6-TNT	A	5806.819336	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	5174.953613	300	150			
☑ 2-Am-4,6-DNT	A	4925.307129	300	100			
☑ 2,6-DNT	A	5189.772949	300	100			
☑ 2,4-DNT	A	5798.755371	300	100			
☑ 2-NT	A	4989.265137	300	200			
☑ 4-NT	A	4931.598633	300	200			
☑ 3-NT	A	6304.069824	300	250			
☐ 2-NMX	A	5560.380371				4.87	

(1), (B) Jessica L. Miller
Jessica L. Miller
Chemist

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

NOV 20 2013

Printed on: 11/13/2013 14:07:02

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 13, 2013 12:01:35
Instrument	: CP12--X6329A
Result file	: 3E12310.21R
Calibration file	: 2E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 13, 2013 12:01:35
Instrument	: CP12--X6329B
Result file	: 3E12310B.21R
Calibration file	: 2E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	12636.717773	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/13/2013 14:07:02

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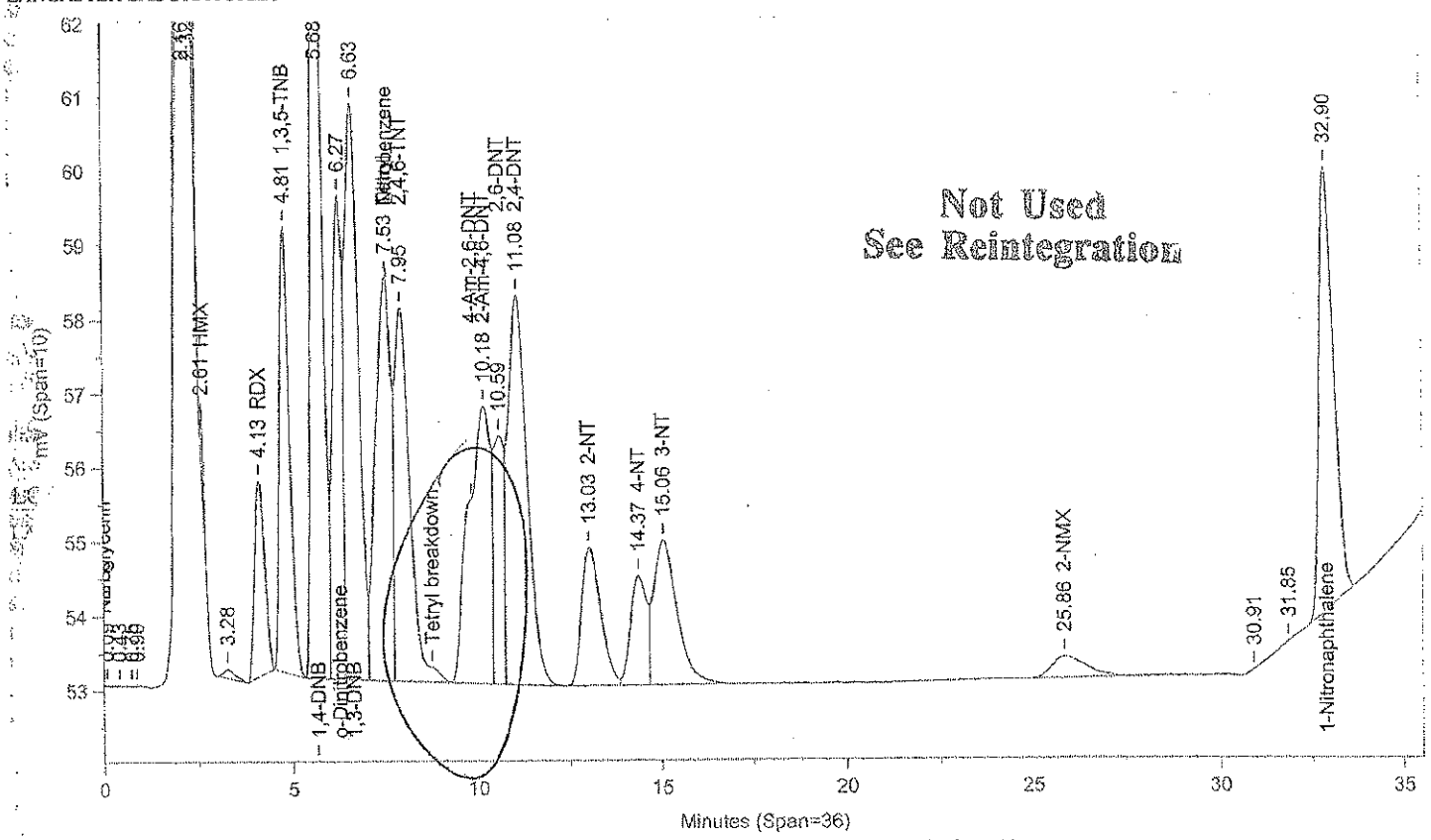
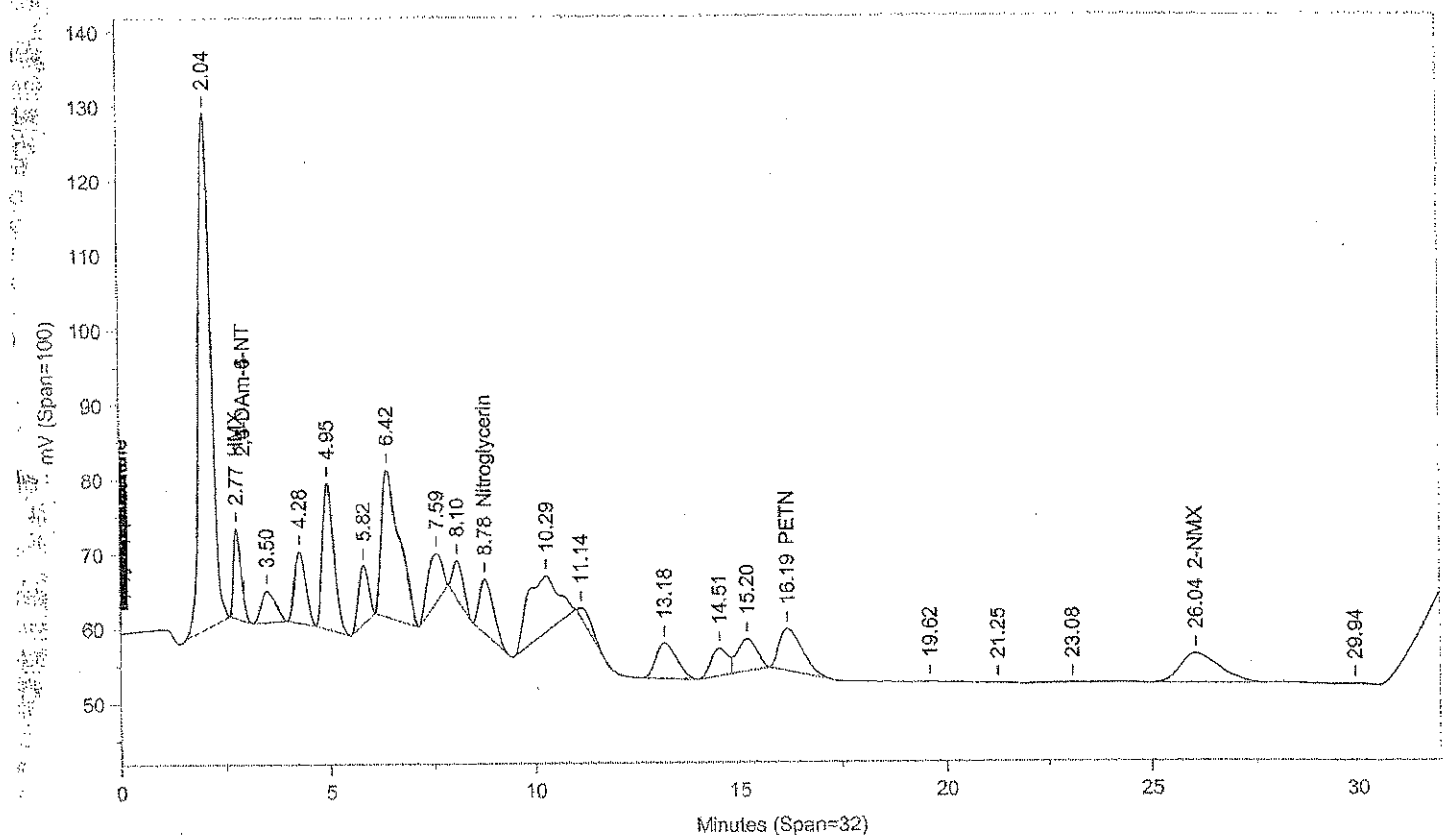
File: C:\CPWIN\DATA1\3E12310.21R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.21R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.768	154466	3729.646	HMX
4.133	47504	5296.381	RDX	.	0	.	RDX
4.806	109603	5192.296	1,3,5-TNB	.	0	.	1,3,5-TNB
5.681	270711	10625.58	1,4-DNB	.	0	.	1,4-DNB
6.27	121365	11778.81	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.632	193620	5966.816	1,3-DNB	.	0	.	1,3-DNB
7.533	161154	4662.155	Tetryl	.	0	.	Tetryl
7.95	137460	6032.629	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.78	175510	13732.62	Nitroglycerin
10.18	156424	7142.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.59	63095	5189.773	2,6-DNT	.	0	.	2,6-DNT
11.085	191803	5798.755	2,4-DNT	.	0	.	2,4-DNT
13.03	66003	4989.265	2-NT	.	0	.	2-NT
14.372	46272	4931.599	4-NT	.	0	.	4-NT
15.063	85360	6304.07	3-NT	.	0	.	3-NT
.	0	.	PETN	16.186	218680	15983.39	PETN
25.859	18954	5560.38	2-NMX	26.039	258689	5295.913	2-NMX
32.898	166011	12636.72	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3E12310.21A
Area File: C:\CPWIN\DATA1\3E12310B.21A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 12:42:12 PM
Eild Reported On: 11/13/2013 at 12:42:23 PM

Not Used
See Reintegration

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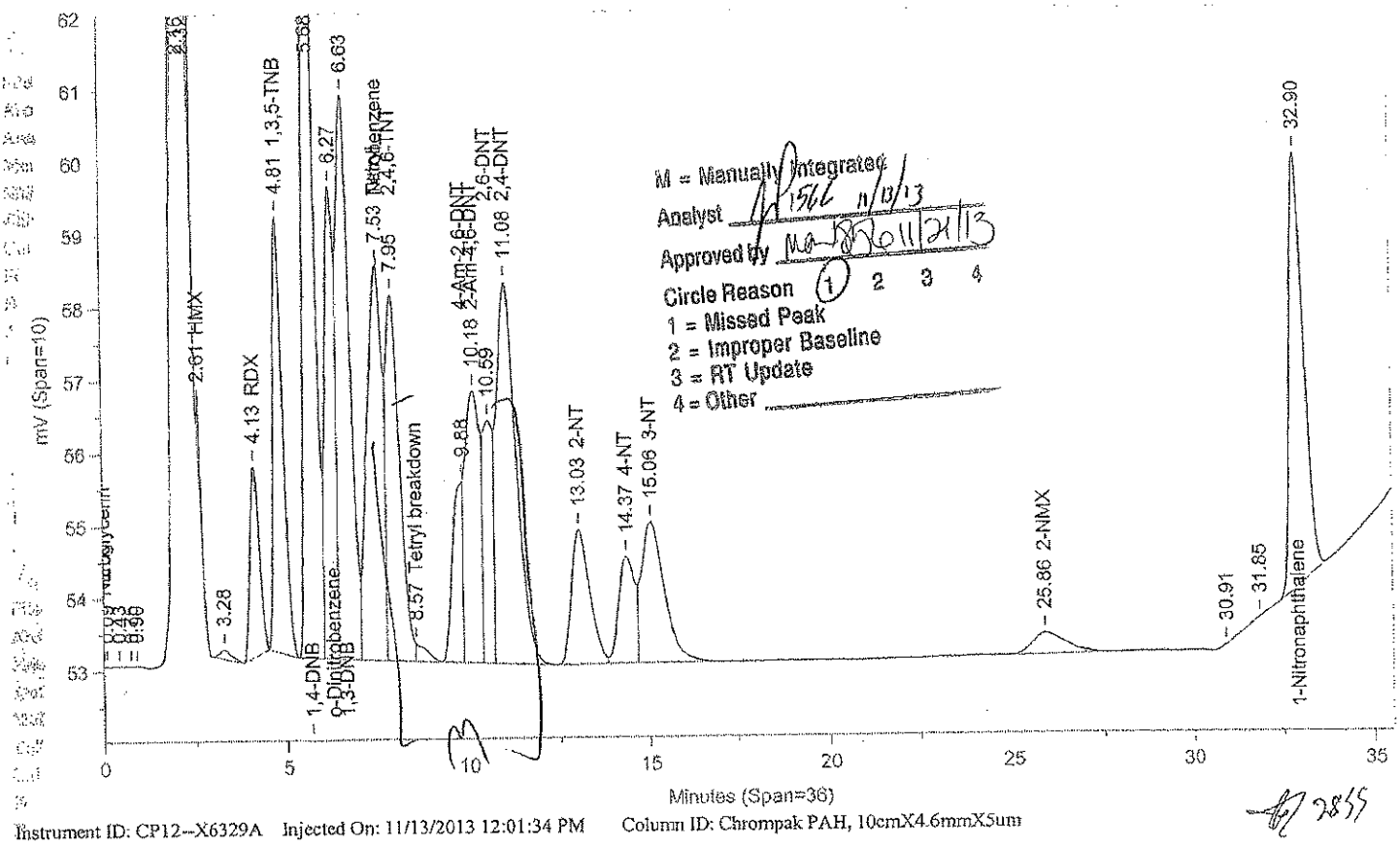
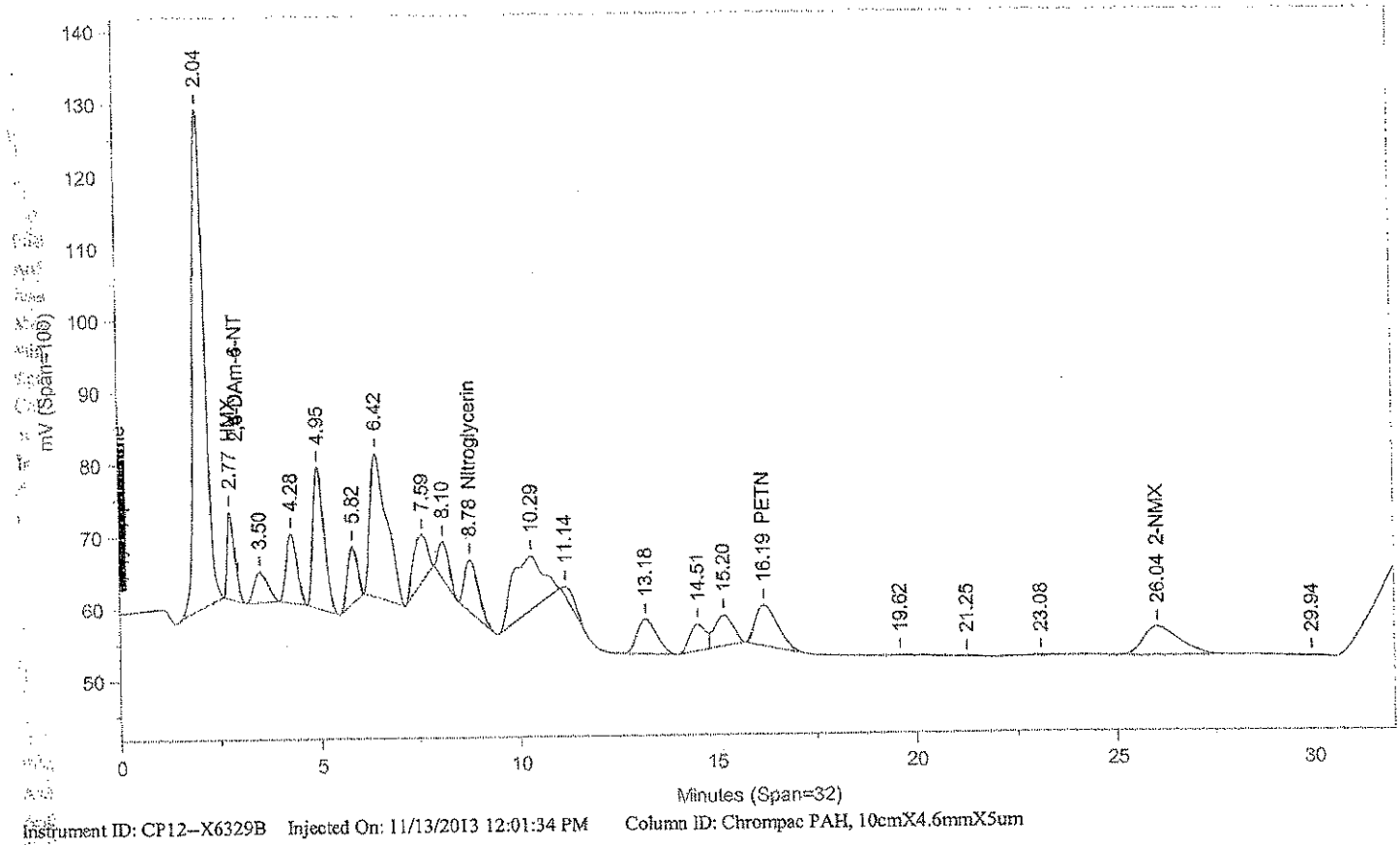
File: C:\CPWIN\DATA1\3E12310.21R



Instrument ID: CP12--X6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\3E12310B.21R



Instrument ID: CP12--X6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.768	154466	3729.646	HMX
4.133	47504	5296.381	RDX	.	0	.	RDX
4.806	109603	5192.296	1,3,5-TNB	.	0	.	1,3,5-TNB
5.681	270711	10625.58	1,4-DNB	.	0	.	1,4-DNB
6.27	121365	11778.81	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.632	193620	5966.816	1,3-DNB	.	0	.	1,3-DNB
7.533	161154	4662.155	Tetryl	.	0	.	Tetryl
7.95	132315	5806.819	2,4,6-TNT	.	0	.	2,4,6-TNT
8.572	5145	148.853	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.78	175510	13732.62	Nitroglycerin
9.878	48552	5174.954	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.18	107872	4925.307	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.59	63095	5189.773	2,6-DNT	.	0	.	2,6-DNT
11.085	191803	5798.755	2,4-DNT	.	0	.	2,4-DNT
13.03	66003	4989.265	2-NT	.	0	.	2-NT
14.372	46272	4931.599	4-NT	.	0	.	4-NT
15.063	85360	6304.07	3-NT	.	0	.	3-NT
.	0	.	PETN	16.186	218680	15983.39	PETN
25.859	18954	5560.38	2-NMX	26.039	258689	5295.913	2-NMX
32.898	166011	12636.72	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\2E12310.CAL
Calibration File B: C:\CPWIN\DATA1\2E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 1:54:18 PM
File Reported On: 11/13/2013 at 1:54:17 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329A
Result file : 3C12310.21R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 91% (63-150) Conc.: 4541.05566

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.21	4.30	4.41	38672	3689.013916
RDX	5.18	5.27	5.38	63133	5398.440430
Nitrobenzene	12.82	12.95	13.14	100383	5439.779785
o-Dinitrobenzene	14.85	14.96	15.21	156405	11386.141602
4-Am-2,6-DNT	16.81	16.87	17.13	212319	5500.573242
1,3-DNB	19.04	19.14	19.34	167704	4951.299316
1,4-DNB	19.83	19.91	20.13	279305	12218.036133
2-NT	24.21	24.43	24.73	66587	5699.666992
3-NT	27.77	28.04	28.29	103484	5292.918945
1,3,5-TNB	30.01	30.15	30.41	105688	4813.710449
2,6-DNT	30.76	30.94	31.16	72832	5702.102051
2,4-DNT	33.73	33.84	33.95	152217	5893.522949
2-NMX	34.15	34.25	34.35	13997	4541.055664
Tetryl	34.46	34.57	34.66	84865	5526.286133
2,4,6-TNT	35.40	35.50	35.60	116342	5525.322266
1-Nitronaphthalene	36.38	36.48	36.58	177416	11337.234375

Analysis Report (B)

Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329B
Result file : 3C12310B.21R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.65	3.73	4.01	21692	98.405823
Nitroglycerin	9.66	9.74	9.86	203385	20010.562500
PETN	26.17	26.39	26.59	234766	19768.390625

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	19768.390625	6000	2000			
☑ Nitroglycerin	B	20010.562500	6000	2000			
☑ HMX	A	3689.013916	750	250			
☑ RDX	A	5398.440430	300	125			
☑ Nitrobenzene	A	5439.779785	300	100			
☑ o-Dinitrobenzene	A	11386.141602	300	100			
☑ 4-Am-2,6-DNT	A	5500.573242	300	150	7 co elutes		report primary
☑ 2-Am-4,6-DNT		5500.573242	<300	<100	7		report primary
☑ 1,3-DNB	A	4951.299316	300	100			
☑ 1,4-DNB	A	12218.036133	300	100			
☑ 2-NT	A	5699.666992	300	200			
☑ 4-NT		5292.918945	<300	<200	7 Coelutes		report primary
☑ 3-NT	A	5292.918945	300	250			report primary
☑ 1,3,5-TNB	A	4813.710449	300	100			
☑ 2,6-DNT	A	5702.102051	300	100			
☑ 2,4-DNT	A	5893.522949	300	100			
☐ 2-NMX	A	4541.055664					
☑ Tetryl	A	5526.286133	300	153			
☑ 2,4,6-TNT	A	5525.322266	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/13/2013 14:11:43

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/7/13 LCS04311 Sample ID: AA **Batchnumber: 133110004A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)
Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329A
Result file : 3C12310.21R
Calibration file : 2C12310.CAL
Method file : 8330C.MET

Analysis Report (B)
Injected on : NOV 13, 2013 12:01:35
Instrument : CP12--Y6329B
Result file : 3C12310B.21R
Calibration file : 2C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11337.234375	300	100			

Units: ug/kg

Reviewed by: Jessica L. Miller, Chemist
Date: NOV 20 2013

Verified by: Melissa A. McDermott, Senior Chemist Group Leader
Date: NOV 21 2013

James H. Place, Senior Chemist
NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/13/2013 14:11:43

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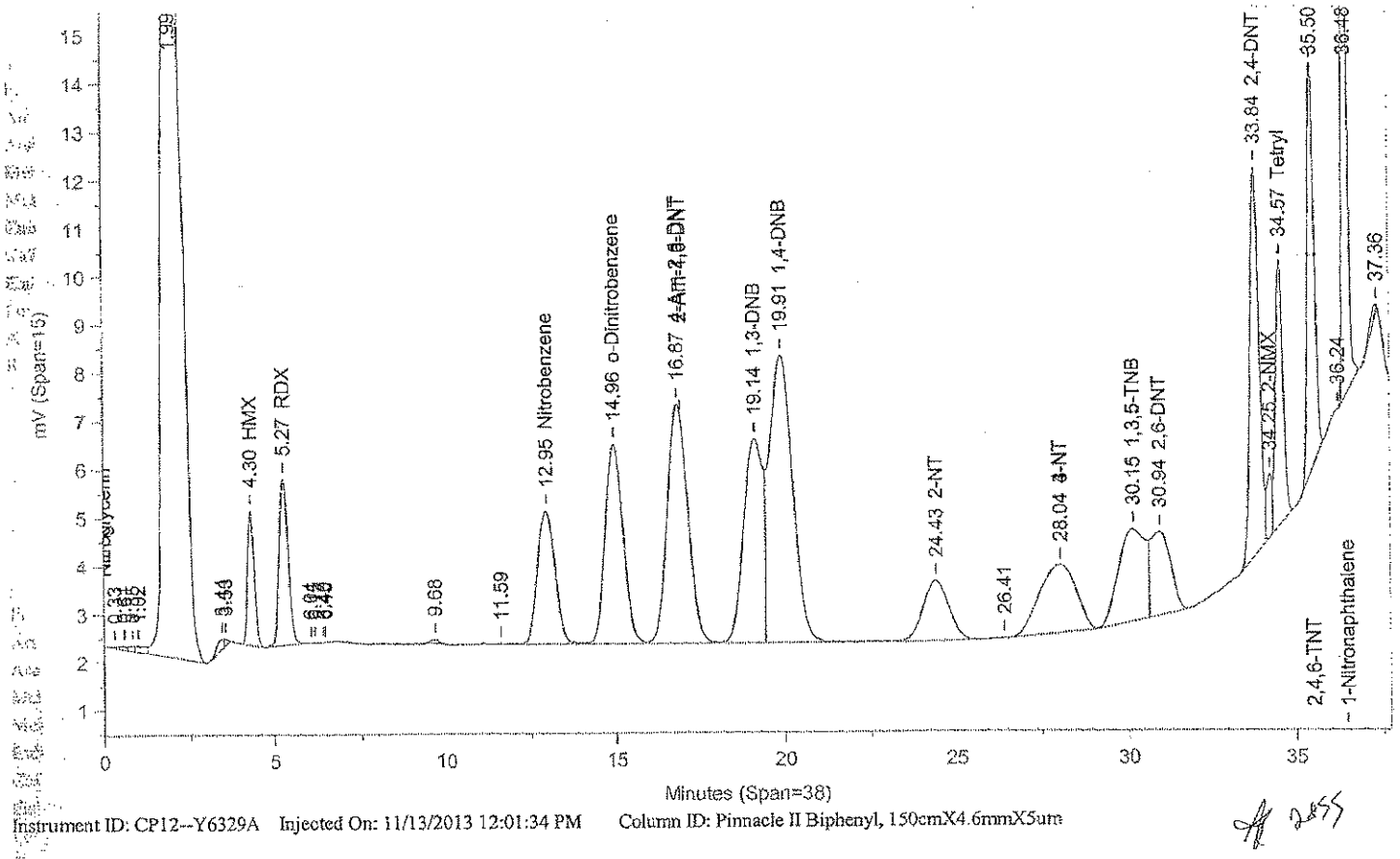
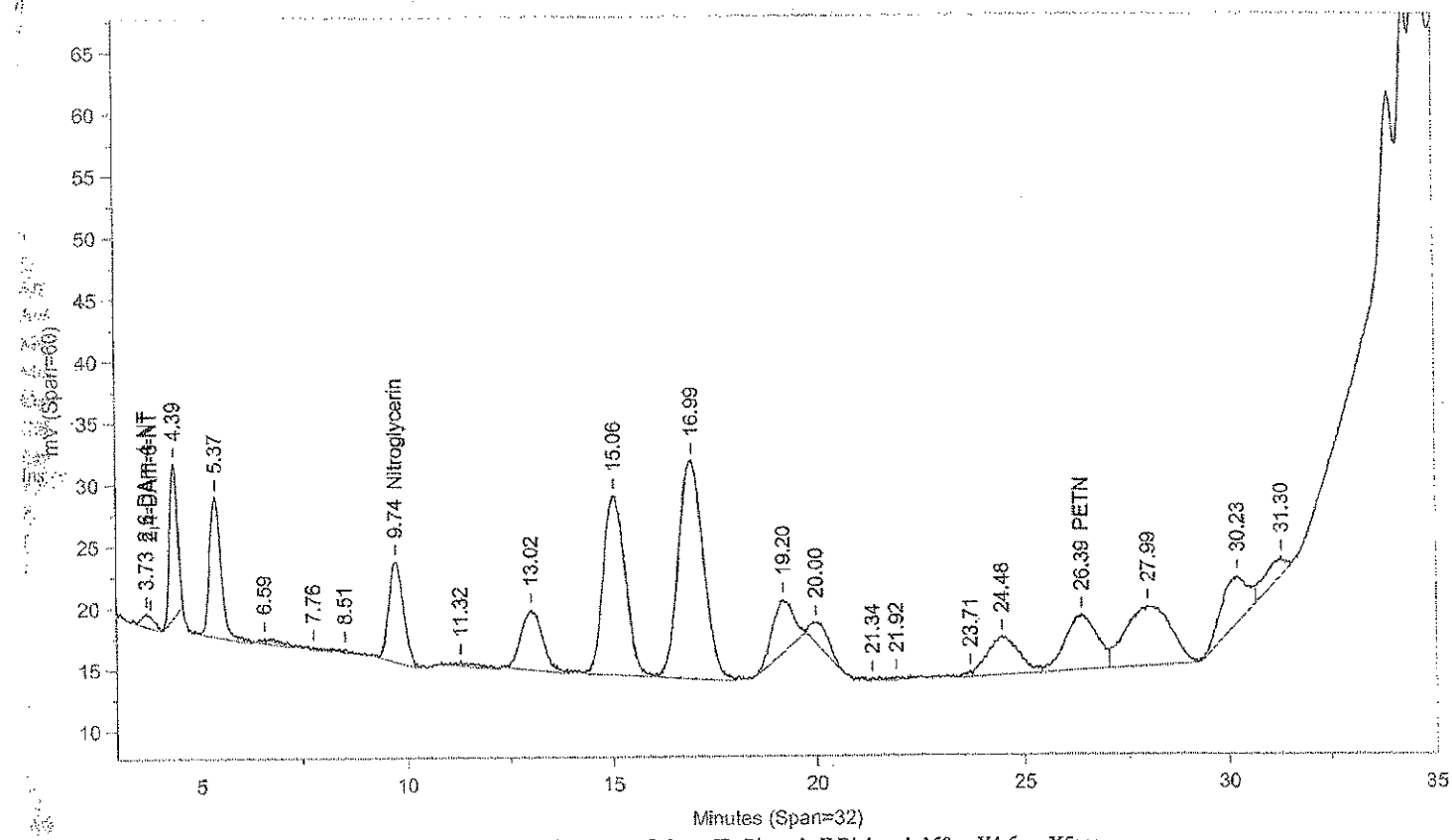
File: C:\CPWIN\DATA1\3C12310.21R



Instrument ID: CP12--Y6329A Injected On: 11/13/2013 12:01:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\3C12310B.21R



Instrument ID: CP12--Y6329B Injected On: 11/13/2013 12:01:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.727	21692	98.406	2,6-DAm-4-NT
4.304	38672	3689.014	HMX	.	0	.	HMX
5.273	63133	5398.44	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.739	203385	20010.56	Nitroglycerin
12.948	100383	5439.78	Nitrobenzene	.	0	.	Nitrobenzene
14.961	156405	11386.14	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.874	212319	5500.573	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.141	167704	4951.299	1,3-DNB	.	0	.	1,3-DNB
19.913	279305	12218.04	1,4-DNB	.	0	.	1,4-DNB
24.429	66587	5699.667	2-NT	.	0	.	2-NT
.	0	.	PETN	26.389	234766	19768.39	PETN
28.038	103484	5292.919	3-NT	.	0	.	3-NT
30.151	105688	4813.71	1,3,5-TNB	.	0	.	1,3,5-TNB
30.945	72832	5702.102	2,6-DNT	.	0	.	2,6-DNT
33.838	152217	5893.523	2,4-DNT	.	0	.	2,4-DNT
34.254	13997	4541.056	2-NMX	.	0	.	2-NMX
34.567	84865	5526.286	Tetryl	.	0	.	Tetryl
35.502	116342	5525.322	2,4,6-TNT	.	0	.	2,4,6-TNT
36.476	177416	11337.23	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\3C12310.21A
Area File: C:\CPWIN\DATA1\3C12310B.21A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\2C12310.CAL
Calibration File B: C:\CPWIN\DATA1\2C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/13/2013 12:41:42 PM
File Reported On: 11/13/2013 at 12:41:51 PM

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Data Summary

Sample Name: BLANKA 11/11/13 PBLK15313 BLK Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 10:27:04
Instrument X6329A
Result file 4E12310.60R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 98% (73 - 122) Conc: 9.797061

Analysis Report (B)

Injected on Nov 17, 2013 10:27:04
Instrument Y6329A
Result file 4C12310.60R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 110% (73 - 122) Conc: 11.045409

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,4-Dinitrobenzene	5.52	5.63	5.72	53	0.00417
o-Dinitrobenzene	6.13	6.24	6.33	392	0.076029
Tetryl	7.33	7.37	7.61	13	0.00157
2,4,6-Trinitrotoluene	7.78	7.88	7.98	29	0.002583
2,4-Dinitrotoluene	10.86	11.03	11.14	72	0.004381
2-NMX	25.41	25.67	26.09	16698	9.797061

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	29.81	29.96	30.21	486	1.090049
2-NMX	34.12	34.26	34.32	17423	11.045409

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<15	<5.2			
PETN			<18	<6			
HMX			<2	<0.65			
RDX			<0.5	<0.2			
1,3,5-Trinitrobenzene			<0.6	<0.2			
1,4-Dinitrobenzene			<0.6	<0.3			
o-Dinitrobenzene			<0.6	<0.2			
1,3-DNB			<0.6	<0.2			
Tetryl			<0.6	<0.4			
Nitrobenzene			<0.6	<0.2			
2,4,6-Trinitrotoluene			<0.6	<0.2			
4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
2,6-Dinitrotoluene			<1.3	<0.45			
2,4-Dinitrotoluene			<2	<0.72			
2-Nitrotoluene			<0.75	<0.25			
4-Nitrotoluene			<1.2	<0.6			
3-Nitrotoluene			<1.2	<0.4			
2-NMX	A	9.797061				11.98	
1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 2 1 2013

Verified by: Valerie L. Tomaydo, Principal Specialist
Date: NOV 2 1 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/11/13 PBLK15313Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 10:27:04
Instrument : CP12--X6329A
Result file : 4E12310.60R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 98% (73-122) Conc.: 9.797061

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.17	4.20	240	-0.195395
1,4-DNB	5.52	5.63	5.72	53	0.004170
o-Dinitrobenzene	6.13	6.24	6.33	392	0.076029
Tetryl	7.33	7.37	7.61	13	0.000744
2,4,6-TNT	7.78	7.88	7.98	29	0.002583
Tetryl breakdown	8.27	8.45	8.52	14	0.000826
2,4-DNT	10.86	11.03	11.14	72	0.004381
2-NMX	25.41	25.67	26.09	16698	9.797061

Analysis Report (B)

Injected on : NOV 17, 2013 10:27:04
Instrument : CP12--X6329B
Result file : 4E12310B.60R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.340561

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.85	26.24	252552	10.340561

$RDX \frac{240}{110.0628} \times \frac{10}{500} = 0.043611$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			*Breakdown = 0.00157
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.797061				5.40	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

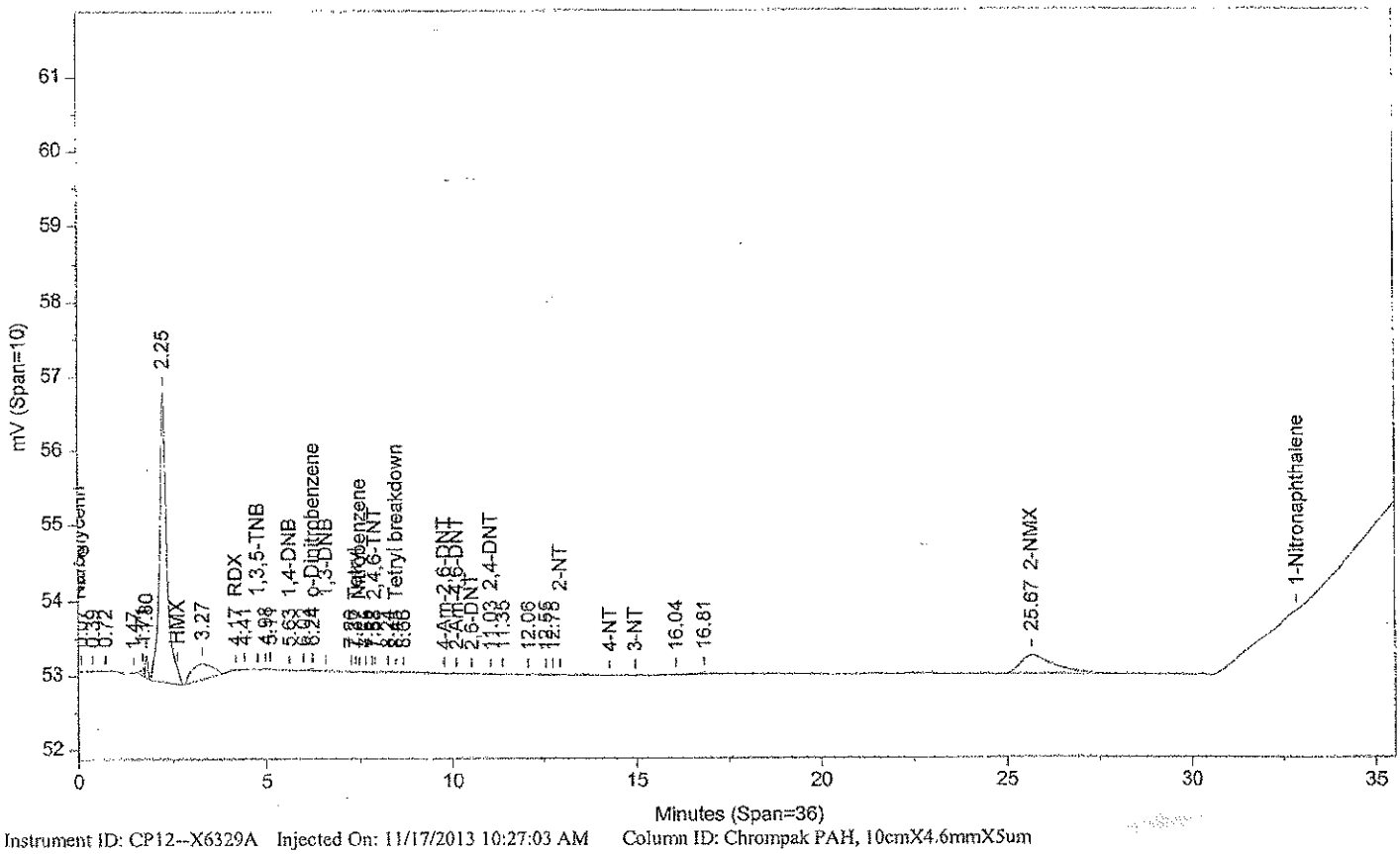
Verified by: Valerio L. Tomaselli, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

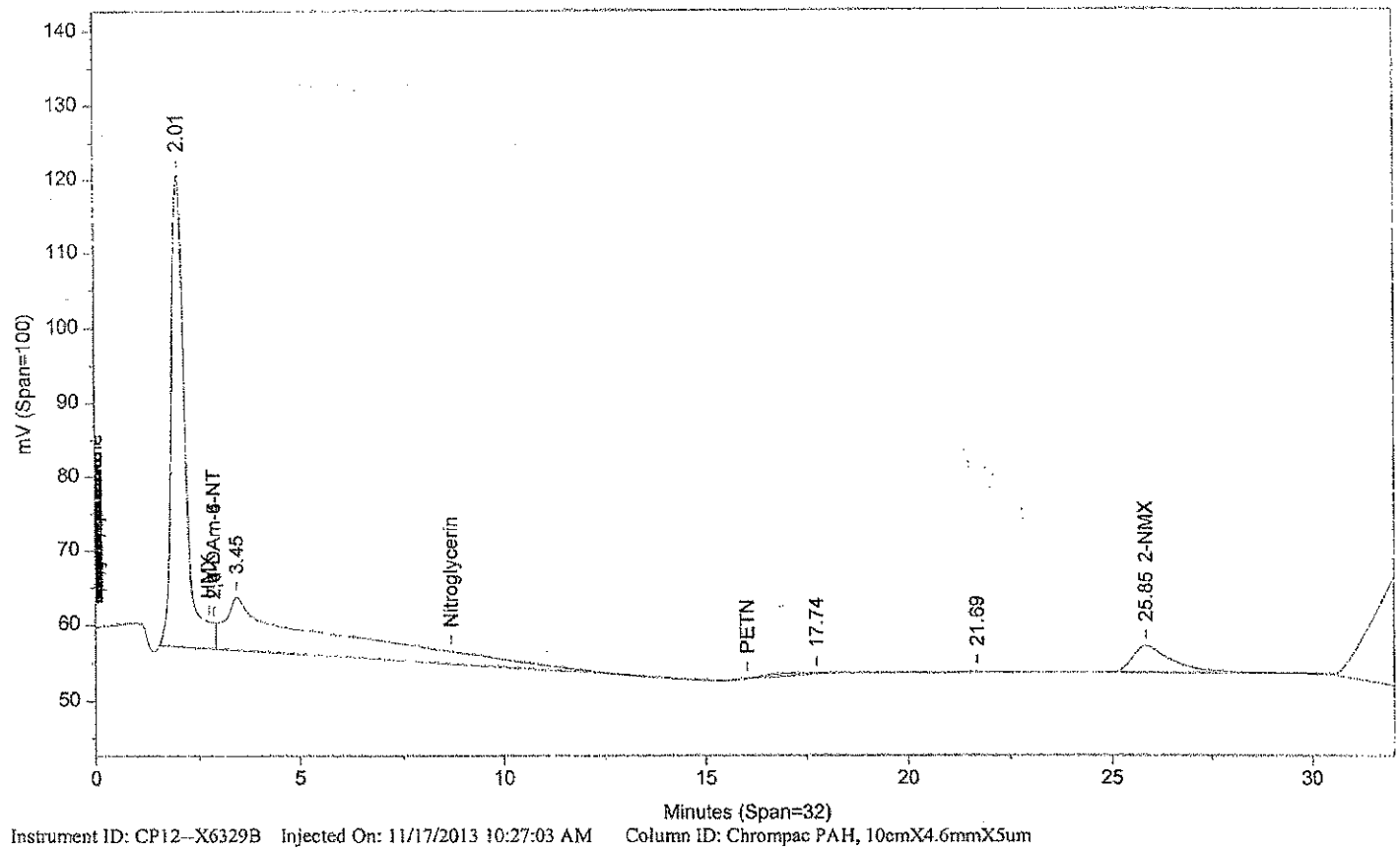
Printed on: 11/20/2013 13:20:33

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.60R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 10:27:03 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.60R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 10:27:03 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.174	240	-.195	RDX	.	0	.	RDX
5.628	53	.004	1,4-DNB	.	0	.	1,4-DNB
6.245	392	.076	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.373	13	.001	Tetryl	.	0	.	Tetryl
7.878	29	.003	2,4,6-TNT	.	0	.	2,4,6-TNT
8.449	14	.001	Tetryl breakdown	.	0	.	Tetryl breakdown
11.033	72	.004	2,4-DNT	.	0	.	2,4-DNT
25.666	16698	9.797	2-NMX	25.849	252552	10.341	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.60A
Area File: C:\CPWIN\DATA1\4E12310B.60A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:02:20 PM
File Reported On: 11/17/2013 at 10:02:29 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/11/13 PBLK15313Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 10:27:04
Instrument : CP12--Y6329A
Result file : 4C12310.60R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 110% (73-122) Conc.: 11.045409

Peak name	Min	R.T.	Max	Area	Amount
1,3,5-TNB	29.81	29.96	30.21	486	1.090049
2-NMX	34.12	34.26	34.32	17423	11.045409

Analysis Report (B)

Injected on : NOV 17, 2013 10:27:04
Instrument : CP12--Y6329B
Result file : 4C12310B.60R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.19	26.44	4786	0.806038

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	1.090049	0.6	0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.045409					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

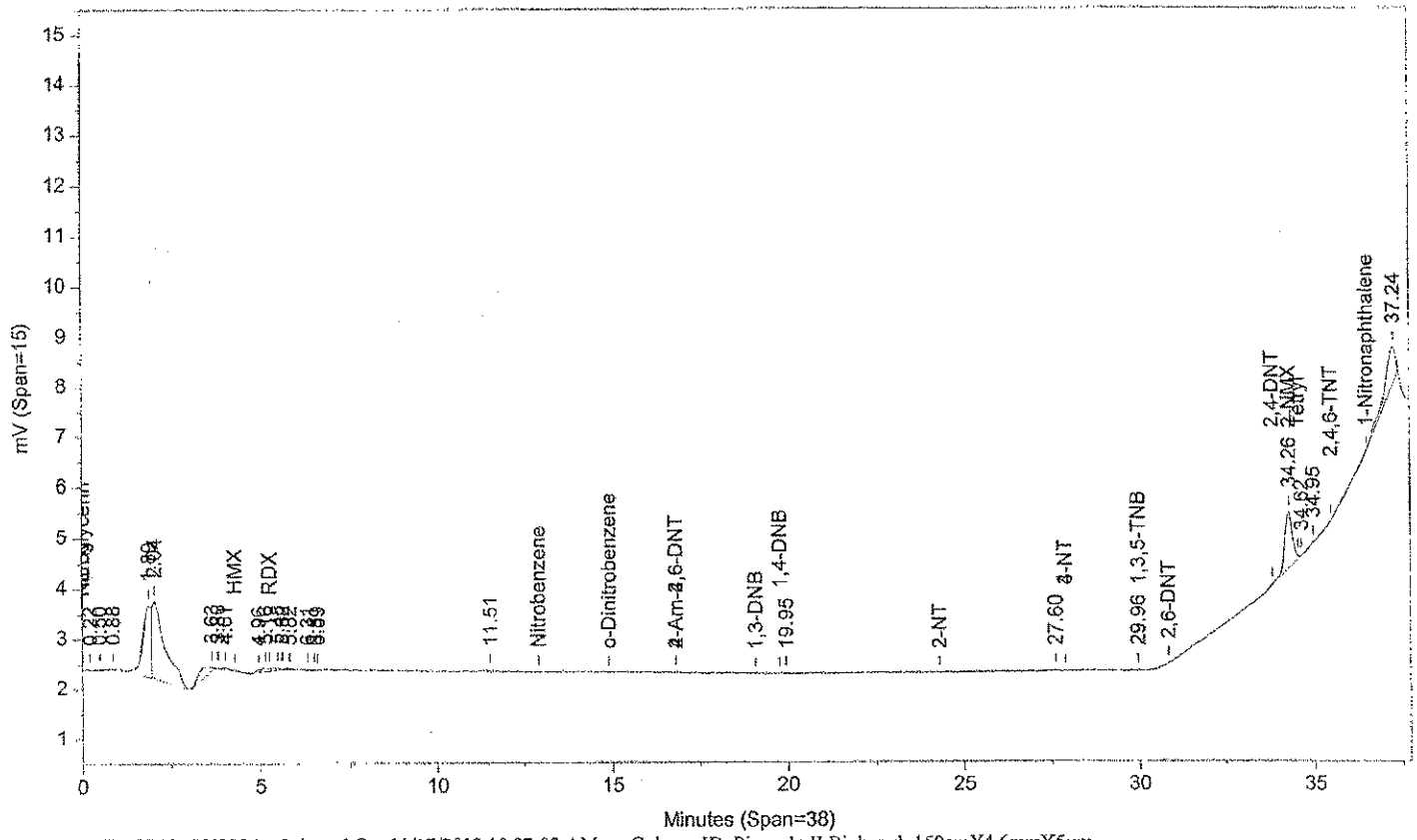
Verified by: Valerie L. Tomayko, Analytical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

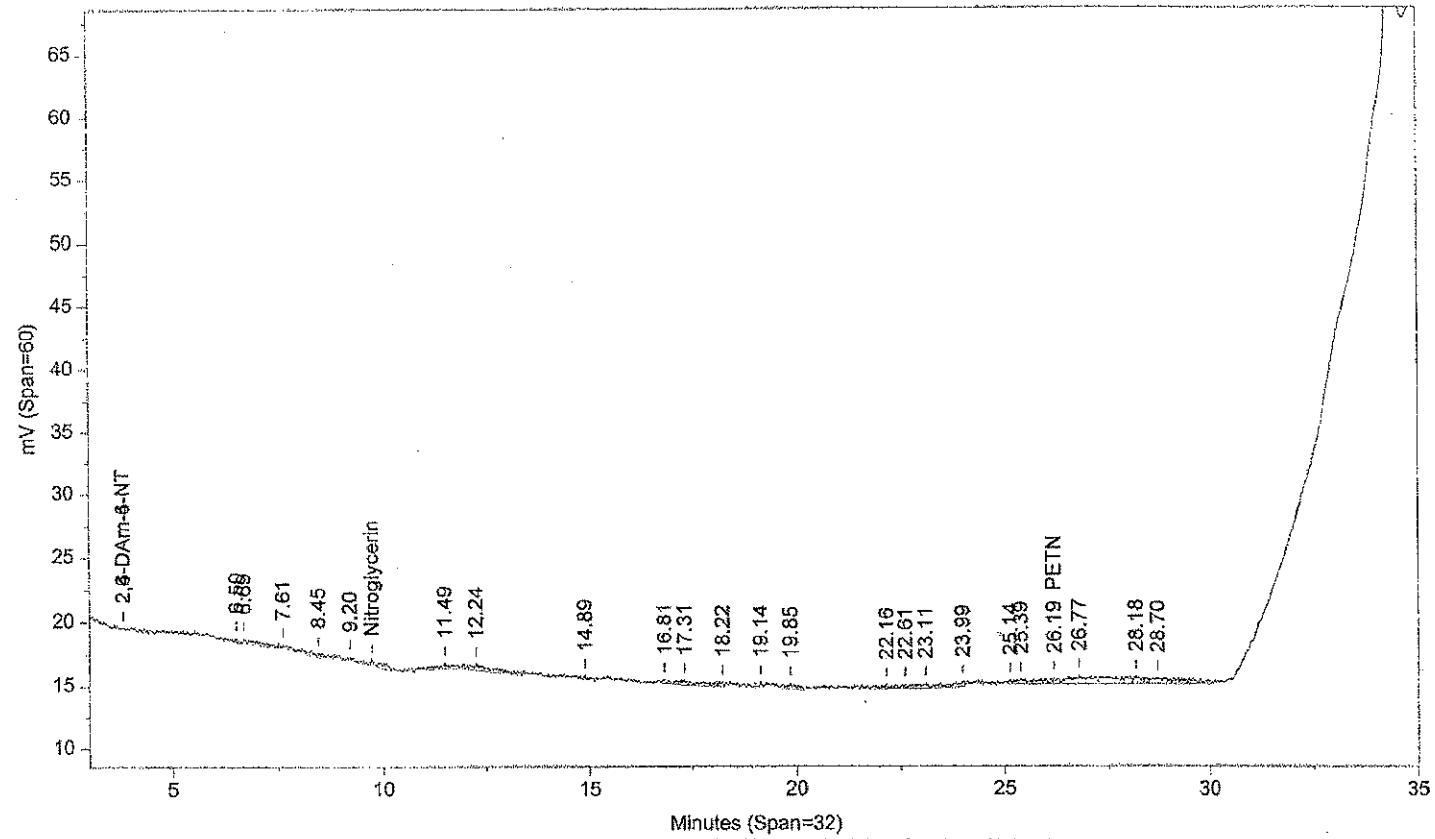
Printed on: 11/20/2013 15:31:45

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.60R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 10:27:03 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.60R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 10:27:03 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	PETN	26.193	4786	.806	PETN
29.956	486	1.09	1,3,5-TNB	.	0	.	1,3,5-TNB
34.262	17423	11.045	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.60A
Area File: C:\CPWIN\DATA1\4C12310B.60A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:16:28 PM
File Reported On: 11/17/2013 at 10:16:39 PM

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Data Summary

Sample Name: LCSA 11/11/13 LCS15313 LCS Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:

Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 11:09:31
Instrument X6329A
Result file 4E12310.61R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 85% (73 - 122) Conc: 8.49369

Analysis Report (B)

Injected on Nov 17, 2013 11:09:31
Instrument Y6329A
Result file 4C12310.61R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 73% (73 - 122) Conc: 7.258596

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.08	4.20	39746	8.821916
1,3,5-Trinitrobenzene	4.66	4.74	4.86	94462	8.950069
1,4-Dinitrobenzene	5.52	5.60	5.72	224008	17.584942
o-Dinitrobenzene	6.13	6.19	6.33	101069	19.618122
1,3-DNB	6.49	6.55	6.69	163768	10.093712
Tetryl	7.33	7.44	7.61	134371	8.707817
2,4,6-Trinitrotoluene	7.78	7.84	7.98	114511	10.050978
4-Amino-2,6-dinitrotoluer	9.69	9.63	9.97	41904	8.932781
2-Amino-4,6-dinitrotoluer	9.97	10.06	10.25	87881	8.025051
2,6-Dinitrotoluene	10.38	10.48	10.66	57236	9.415719
2,4-Dinitrotoluene	10.86	10.95	11.14	159586	9.649528
2-Nitrotoluene	12.80	12.88	13.08	53187	8.040927
4-Nitrotoluene	14.10	14.20	14.43	37612	8.017232
3-Nitrotoluene	14.79	14.88	15.12	64929	9.5904
2-NMX	25.41	25.60	26.09	14476	8.49369
1-Nitronaphthalene	32.62	32.81	33.11	123917	18.86517

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.33	4.40	38780	7.398491
RDX	5.16	5.31	5.36	54948	9.335842
Nitrobenzene	12.75	13.01	13.07	82765	8.95635€
o-Dinitrobenzene	14.72	15.03	15.08	130717	18.993654
4-Amino-2,6-dinitrotoluer	16.66	16.94	16.98	175645	9.10089
1,3-DNB	18.93	19.17	19.23	137308	8.107772
2-Nitrotoluene	24.05	24.45	24.57	49883	8.500304
4-Nitrotoluene	27.60	28.06	28.12	73018	7.579657
1,3,5-Trinitrobenzene	29.81	30.07	30.21	73968	7.053281
2,6-Dinitrotoluene	30.62	30.91	31.02	68865	10.797486
2,4-Dinitrotoluene	33.67	33.82	33.89	131039	10.1471
2-NMX	34.12	34.29	34.32	10814	7.25859€
Tetryl	34.41	34.54	34.61	77586	10.135882
2,4,6-Trinitrotoluene	35.36	35.48	35.56	100749	9.58776€
1-Nitronaphthalene	36.36	36.48	36.56	133561	17.20645

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	199.683304	15	5.2		3.44	
PETN	A	217.845993	18	6		3.86	
HMX	A	7.618611	2	0.65		2.93	
RDX	A	8.821916	0.5	0.2		5.66	
1,3,5-Trinitrobenzene	A	8.950069	0.6	0.2		23.70	
1,4-Dinitrobenzene	A	17.584942	0.6	0.3		200.00	
o-Dinitrobenzene	A	19.618122	0.6	0.2		3.23	
1,3-DNB	A	10.093712	0.6	0.2		21.82	
Tetryl	B	10.135882	0.6	0.4		15.16	
Nitrobenzene	B	8.956356	0.6	0.2		2.81	
2,4,6-Trinitrotoluene	A	10.050978	0.6	0.2		4.72	
4-Amino-2,6-dinitrotoluene	A	8.932781	0.6	0.3		1.86	
2-Amino-4,6-dinitrotoluene	A	8.025051	0.6	0.2		12.56	
2,6-Dinitrotoluene	A	9.415719	1.3	0.45		13.67	
2,4-Dinitrotoluene	A	9.649528	2	0.72		5.03	
2-Nitrotoluene	A	8.040927	0.75	0.25		5.55	
4-Nitrotoluene	A	8.017232	1.2	0.6		5.61	
3-Nitrotoluene	A	9.5904	1.2	0.4		23.42	
2-NMX	A	8.49369				15.68	
1-Nitronaphthalene	A	18.86517	0.6	0.2		9.20	

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Data Summary

Sample Name: LCSA 11/11/13 LCS15313 LCS Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 11:09:31
Instrument	X6329A
Result file	4E12310.61R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 11:09:31
Instrument	Y6329A
Result file	4C12310.61R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/11/13 LCS15313 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 11:09:31
Instrument : CP12--X6329A
Result file : 4E12310.61R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 85% (73-122) Conc.: 8.49369

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.08	4.20	39746	8.821916
1,3,5-TNB	4.66	4.74	4.86	94462	8.950069
1,4-DNB	5.52	5.60	5.72	224008	17.584942
o-Dinitrobenzene	6.13	6.19	6.33	101069	19.618122
1,3-DNB	6.49	6.55	6.69	163768	10.093712
Tetryl	7.33	7.44	7.61	134371	7.774701
2,4,6-TNT	7.78	7.84	7.98	114511	10.050978
Tetryl breakdown	8.27	8.32	8.52	16127	0.933116
4-Am-2,6-DNT	9.63	9.63	9.91	41904	8.932781
2-Am-4,6-DNT	9.97	10.06	10.25	87881	8.025051
2,6-DNT	10.38	10.48	10.66	57236	9.415719
2,4-DNT	10.86	10.95	11.14	159586	9.649528
2-NT	12.80	12.88	13.08	53187	8.040927
4-NT	14.10	14.20	14.43	37612	8.017232
3-NT	14.79	14.88	15.12	64929	9.590400
2-NMX	25.41	25.60	26.09	14476	8.493690
1-Nitronaphthalene	32.62	32.81	33.11	123917	18.865170

Analysis Report (B)

Injected on : NOV 17, 2013 11:09:31
Instrument : CP12--X6329B
Result file : 4E12310B.61R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 87% (73-122) Conc.: 8.681613

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.73	2.85	157927	7.618611
Nitroglycerin	8.51	8.64	8.89	1276027	199.683304
PETN	15.75	15.95	16.33	1491688	217.845993
2-NMX	25.57	25.81	26.24	212035	8.681613

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	199.683304	15	5.2			
☑ PETN	B	217.845993	18	6			
☑ HMX	B	7.618611	2	0.65			
☑ RDX	A	8.821916	0.5	0.2			
☑ 1,3,5-TNB	A	8.950069	0.6	0.2			
☑ 1,4-DNB	A	17.584942	0.6	0.3			
☑ o-Dinitrobenzene	A	19.618122	0.6	0.2			
☑ 1,3-DNB	A	10.093712	0.6	0.2			
☑ Tetryl	A	7.774701	0.6	0.4			+Tetryl breakdown = 8.707817
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.050978	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	8.932781	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.025051	0.6	0.2			
☑ 2,6-DNT	A	9.415719	1.3	0.45			
☑ 2,4-DNT	A	9.649528	2	0.72			
☑ 2-NT	A	8.040927	0.75	0.25			
☑ 4-NT	A	8.017232	1.2	0.6			
☑ 3-NT	A	9.590400	1.2	0.4			
☐ 2-NMX	A	8.493690				2.19	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:41:29

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/11/13 LCS15313 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 11:09:31
Instrument	: CP12--X6329A
Result file	: 4E12310.61R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 11:09:31
Instrument	: CP12--X6329B
Result file	: 4E12310B.61R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	18.865170	0.6	0.2			

Units: ug/l

Reviewed by: James H. Piece, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylla, Principal Specialist

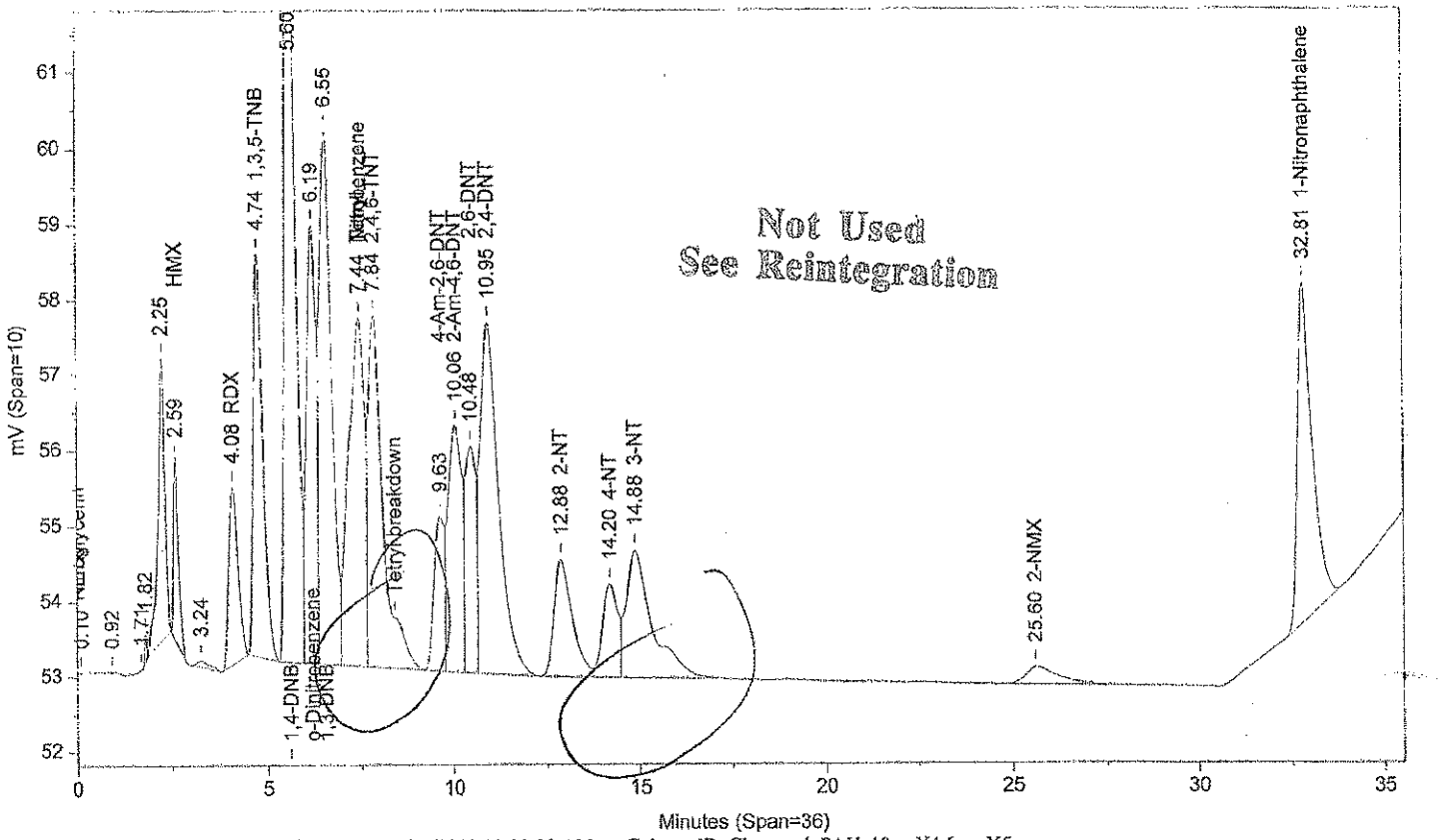
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

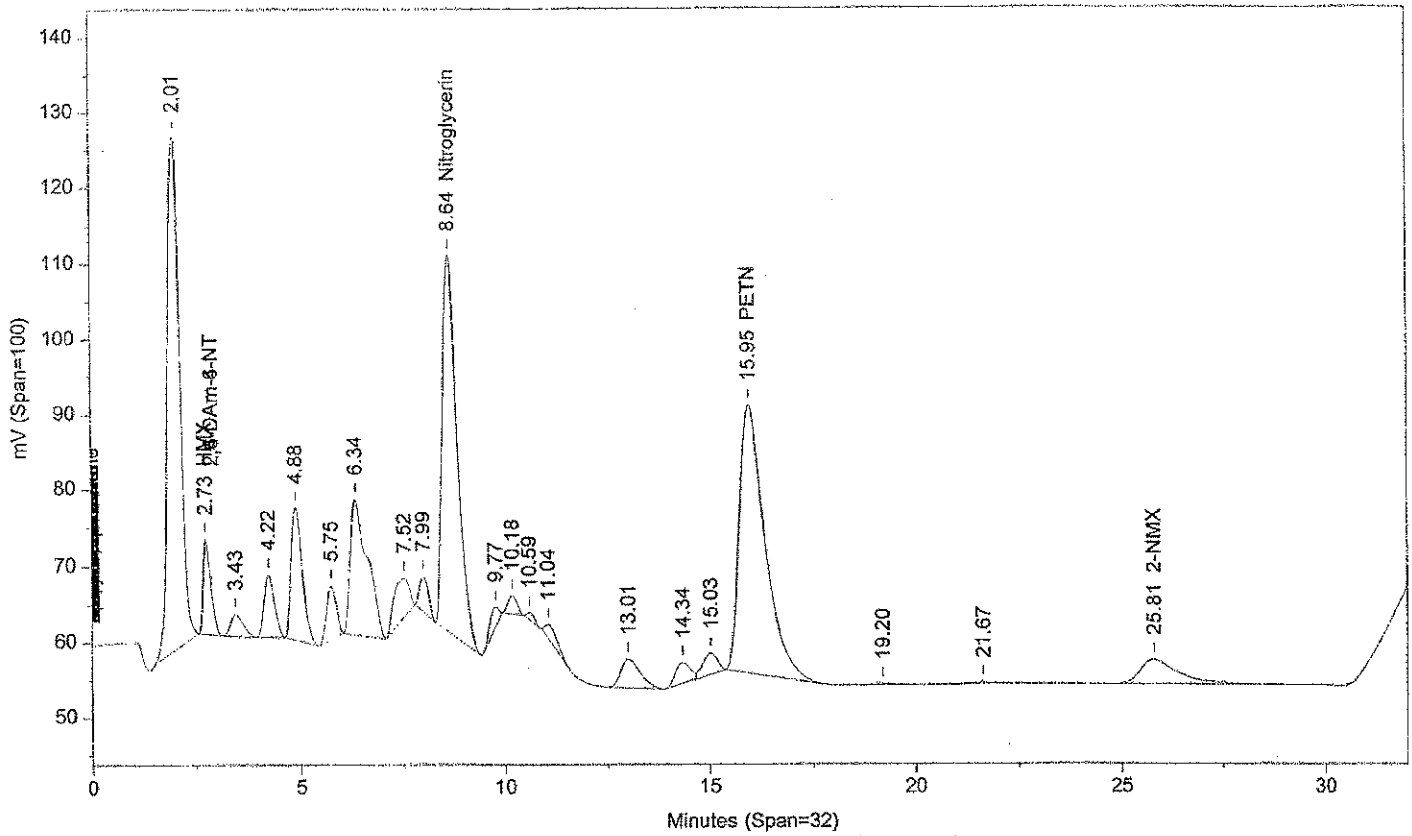
Printed on: 11/20/2013 13:41:29

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.61R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:09:30 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.61R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:09:30 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.731	157927	7.619	HMX
4.08	39746	8.822	RDX	.	0	.	RDX
4.738	94462	8.95	1,3,5-TNB	.	0	.	1,3,5-TNB
5.603	222004	17.428	1,4-DNB	.	0	.	1,4-DNB
6.188	103074	20.007	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.551	163768	10.094	1,3-DNB	.	0	.	1,3-DNB
7.445	134371	7.775	Tetryl	.	0	.	Tetryl
7.843	130638	11.467	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.643	1276027	199.683	Nitroglycerin
9.633	39983	8.523	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.057	86368	7.887	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.481	60670	9.981	2,6-DNT	.	0	.	2,6-DNT
10.946	159586	9.65	2,4-DNT	.	0	.	2,4-DNT
12.876	52881	7.995	2-NT	.	0	.	2-NT
14.204	36061	7.687	4-NT	.	0	.	4-NT
14.882	81310	12.01	3-NT	.	0	.	3-NT
.	0	.	PETN	15.947	1491688	217.846	PETN
25.597	14476	8.494	2-NMX	25.808	212035	8.682	2-NMX
32.807	123917	18.865	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.61A
Area File: C:\CPWIN\DATA1\4E12310B.61A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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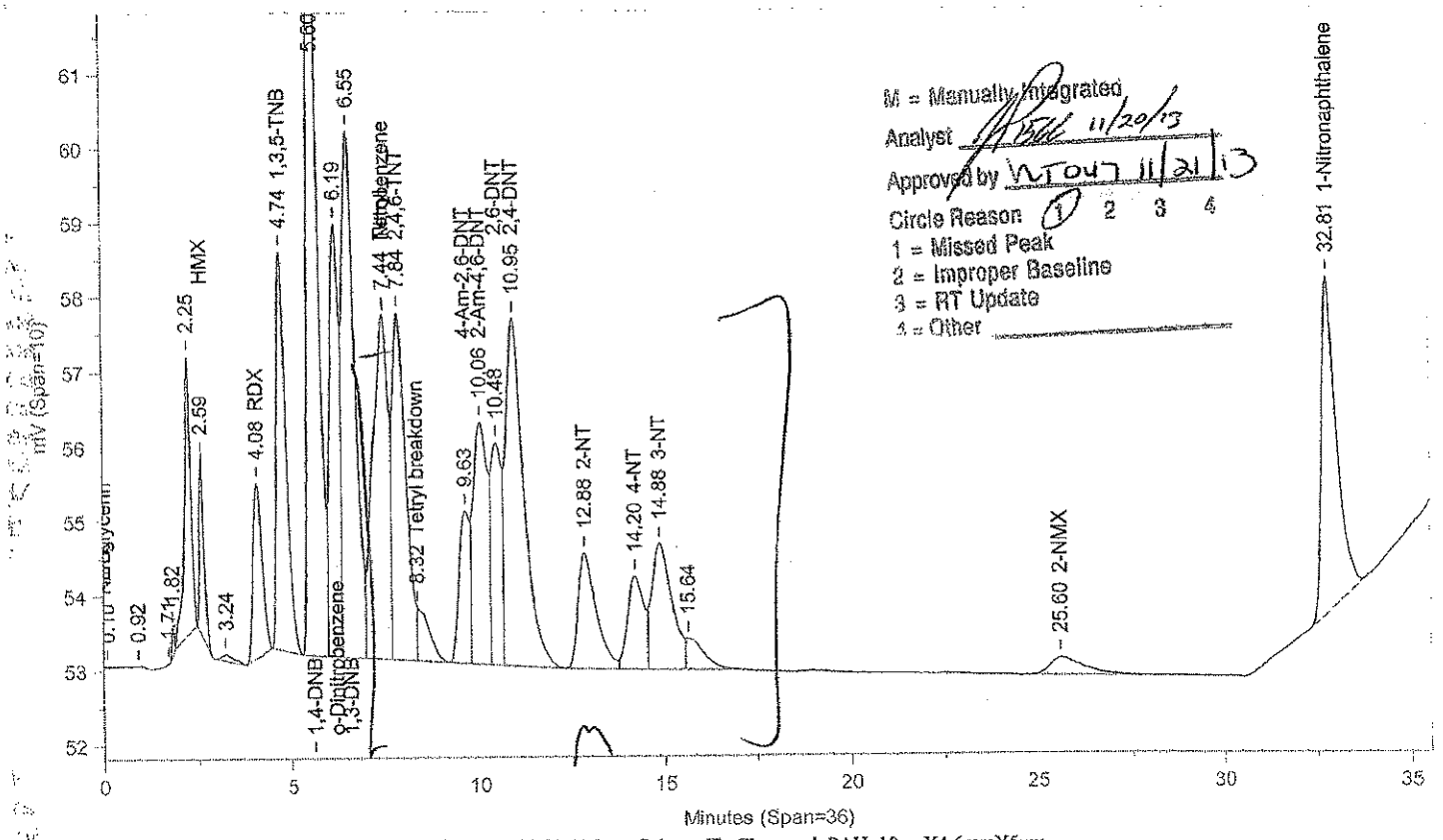
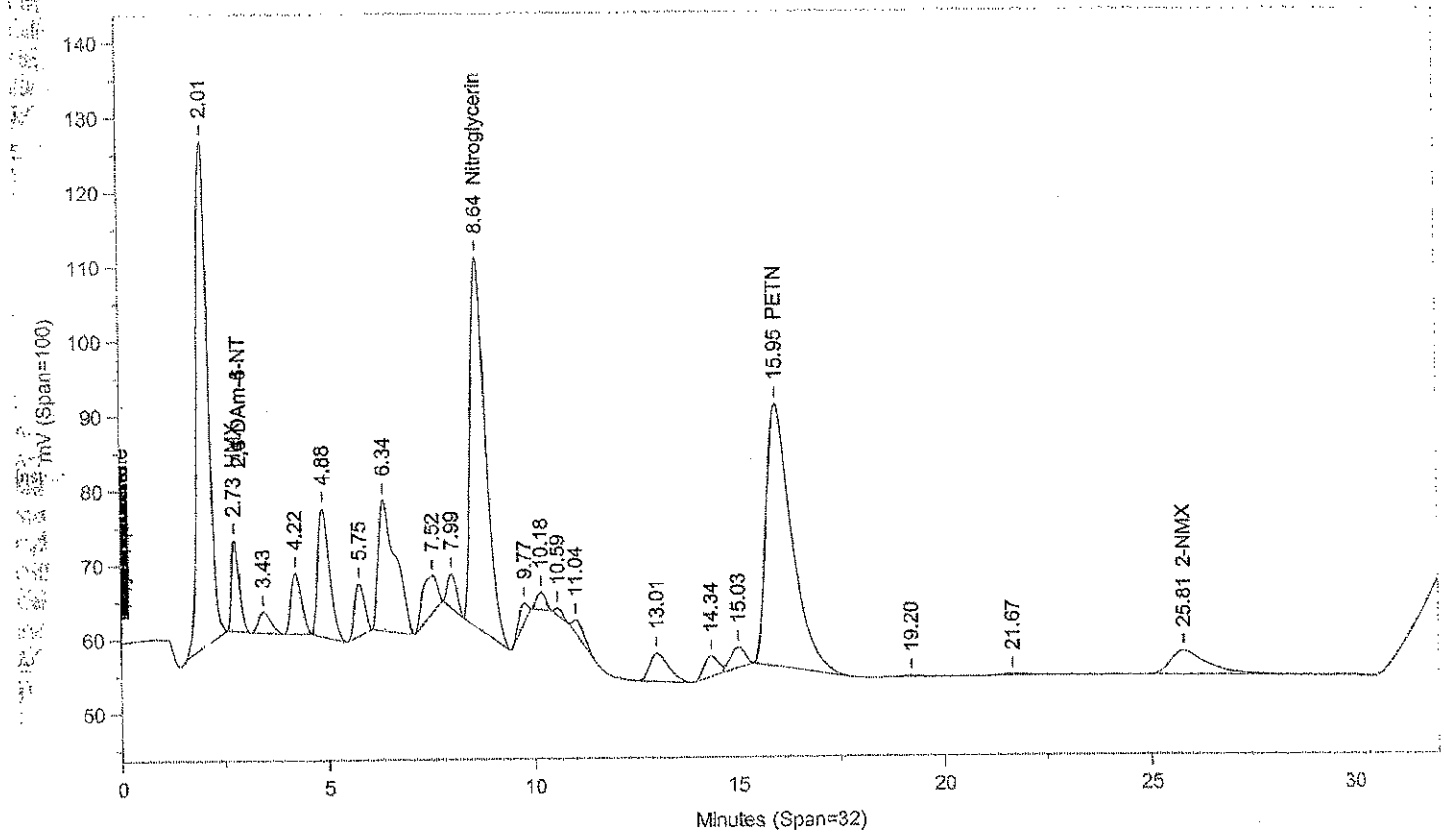
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.61R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:09:30 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.61R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:09:30 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.731	157927	7.619	HMX
4.08	39746	8.822	RDX	.	0	.	RDX
4.738	94462	8.95	1,3,5-TNB	.	0	.	1,3,5-TNB
5.603	224008	17.585	1,4-DNB	.	0	.	1,4-DNB
6.188	101069	19.618	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.551	163768	10.094	1,3-DNB	.	0	.	1,3-DNB
7.445	134371	7.775	Tetryl	.	0	.	Tetryl
7.843	114511	10.051	2,4,6-TNT	.	0	.	2,4,6-TNT
8.322	16127	.933	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.643	1276027	199.683	Nitroglycerin
9.633	41904	8.933	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.057	87881	8.025	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.481	57236	9.416	2,6-DNT	.	0	.	2,6-DNT
10.946	159586	9.65	2,4-DNT	.	0	.	2,4-DNT
12.876	53187	8.041	2-NT	.	0	.	2-NT
14.204	37612	8.017	4-NT	.	0	.	4-NT
14.882	64929	9.59	3-NT	.	0	.	3-NT
.	0	.	PETN	15.947	1491688	217.846	PETN
25.597	14476	8.494	2-NMX	25.808	212035	8.682	2-NMX
32.807	123917	18.865	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 1:26:40 PM
File Reported On: 11/20/2013 at 1:26:40 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/11/13 LCS15313 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 11:09:31
Instrument : CP12--Y6329A
Result file : 4C12310.61R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 73% (73-122) Conc.: 7.258596

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.33	4.40	38780	7.398491
RDX	5.16	5.31	5.36	54948	9.335842
Nitrobenzene	12.75	13.01	13.07	82765	8.956356
o-Dinitrobenzene	14.72	15.03	15.08	130717	18.993654
4-Am-2,6-DNT	16.66	16.94	16.98	175645	9.100890
1,3-DNB	18.93	19.17	19.23	137308	8.107772
2-NT	24.05	24.45	24.57	49883	8.500304
4-NT	27.60	28.06	28.12	73018	7.579657
1,3,5-TNB	29.81	30.07	30.21	73968	7.053281
2,6-DNT	30.62	30.91	31.02	68865	10.797486
2,4-DNT	33.67	33.82	33.89	131039	10.147100
2-NMX	34.12	34.29	34.32	10814	7.258596
Tetryl	34.41	34.54	34.61	77586	10.135882
2,4,6-TNT	35.36	35.48	35.56	100749	9.587765
1-Nitronaphthalene	36.36	36.48	36.56	133561	17.206450

Analysis Report (B)

Injected on : NOV 17, 2013 11:09:31
Instrument : CP12--Y6329B
Result file : 4C12310B.61R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.78	9.82	1050258	206.664566
PETN	26.02	26.35	26.44	1244592	209.600723

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	209.600723	18	6			
☑ Nitroglycerin	B	206.664566	15	5.2			
☑ HMX	A	7.398491	2	0.65			
☑ RDX	A	9.335842	0.5	0.2			
☑ Nitrobenzene	A	8.956356	0.6	0.2			
☑ o-Dinitrobenzene	A	18.993654	0.6	0.2			
☑ 4-Am-2,6-DNT	A	9.100890	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.107772	0.6	0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT	A	8.500304	0.75	0.25			
☑ 4-NT	A	7.579657	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	7.053281	0.6	0.2			
☑ 2,6-DNT	A	10.797486	1.3	0.45			
☑ 2,4-DNT	A	10.147100	2	0.72			
☐ 2-NMX	A	7.258596					
☑ Tetryl	A	10.135882	0.6	0.4			
☑ 2,4,6-TNT	A	9.587765	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:31:56

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/11/13 LCS15313 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 11:09:31
Instrument	: CP12--Y6329A
Result file	: 4C12310.61R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 11:09:31
Instrument	: CP12--Y6329B
Result file	: 4C12310B.61R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	17.206450	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

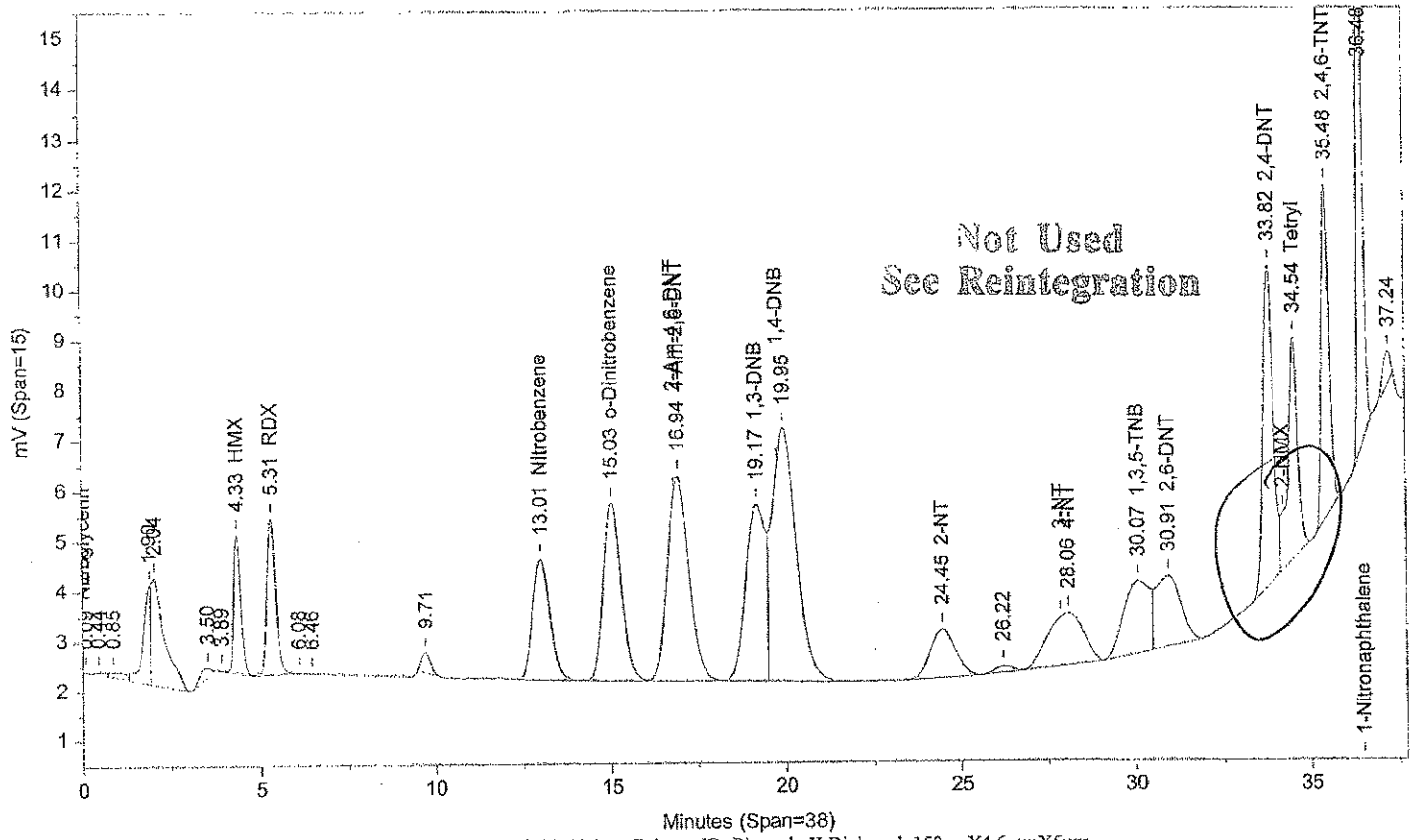
Verified by: Valerie L. Tomaylla, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

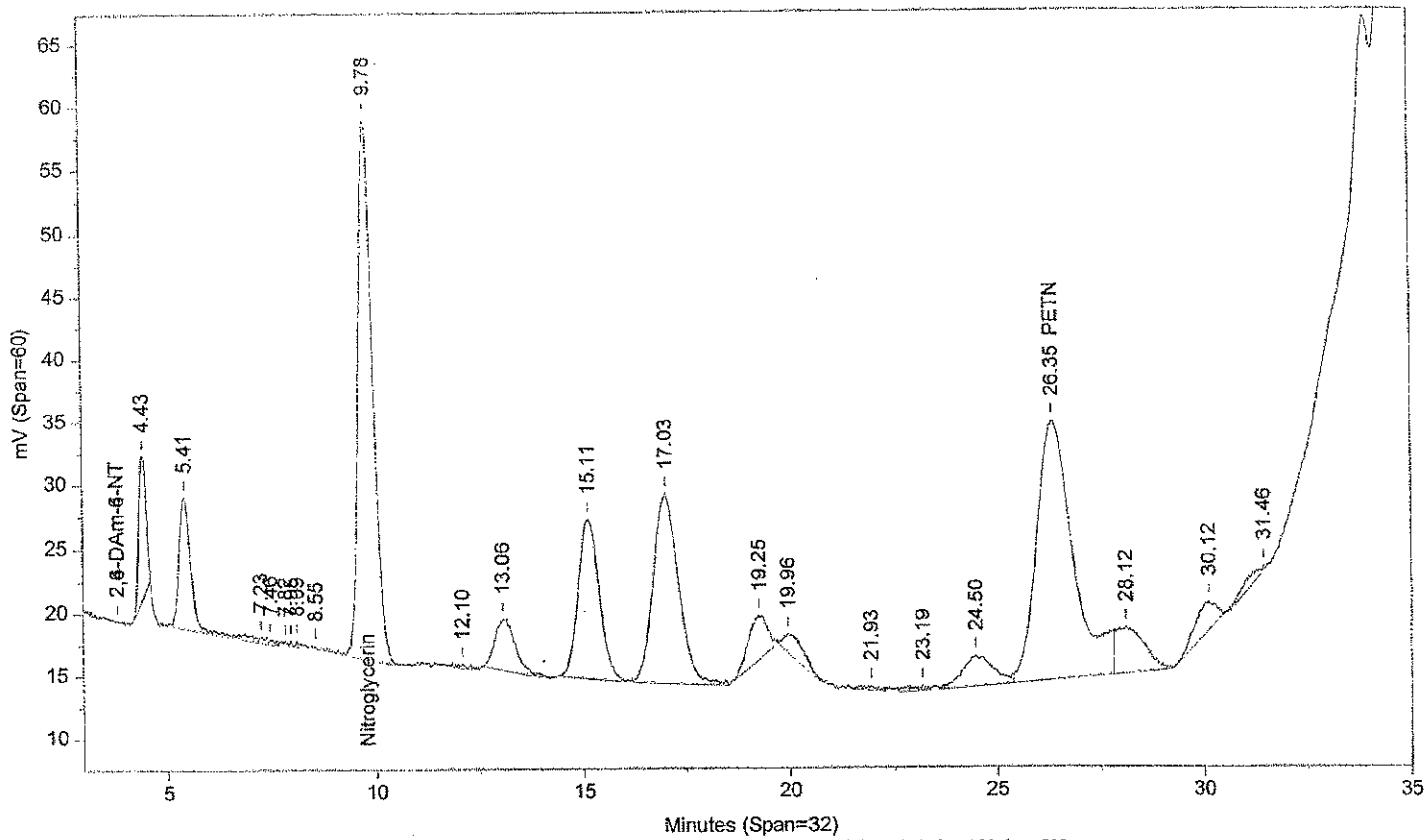
Printed on: 11/20/2013 15:31:56

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.61R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 11:09:30 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.61R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 11:09:30 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.333	38780	7.398	HMX	.	0	.	HMX
5.314	54948	9.336	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.778	1050258	206.665	Nitroglycerin
13.01	82765	8.956	Nitrobenzene	.	0	.	Nitrobenzene
15.029	130717	18.994	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.936	175645	9.101	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.17	137308	8.108	1,3-DNB	.	0	.	1,3-DNB
24.451	49883	8.5	2-NT	.	0	.	2-NT
.	0	.	PETN	26.348	1244592	209.601	PETN
28.061	73018	7.58	4-NT	.	0	.	4-NT
30.066	73968	7.053	1,3,5-TNB	.	0	.	1,3,5-TNB
30.914	68865	10.797	2,6-DNT	.	0	.	2,6-DNT
33.816	131039	10.147	2,4-DNT	.	0	.	2,4-DNT
34.544	88400	11.498	Tetryl	.	0	.	Tetryl
35.484	100749	9.588	2,4,6-TNT	.	0	.	2,4,6-TNT
36.482	133561	17.206	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.61A
Area File: C:\CPWIN\DATA1\4C12310B.61A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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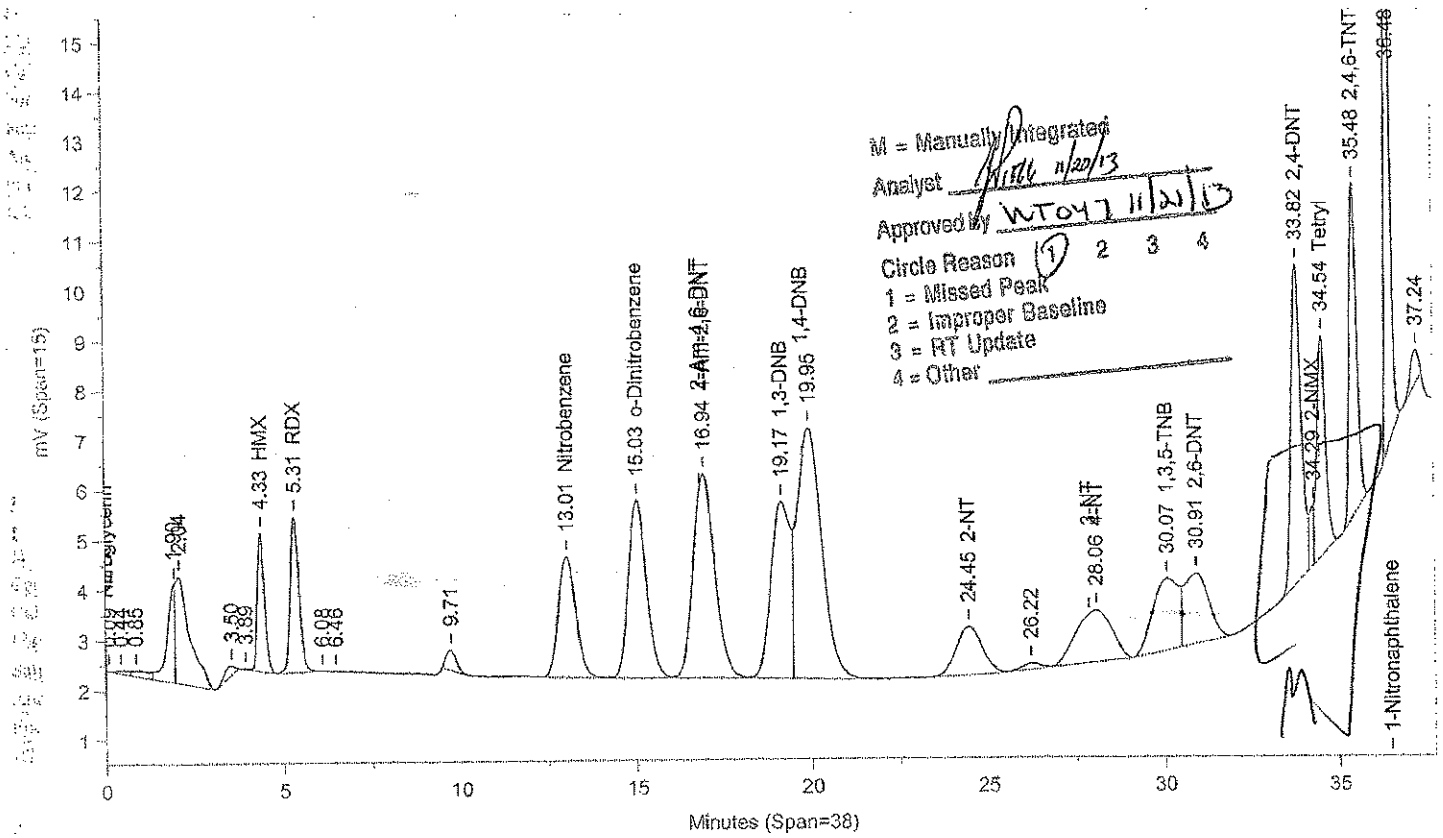
File Reported On: 11/17/2013 at 10:17:02 PM

Not Used
See Reintegration

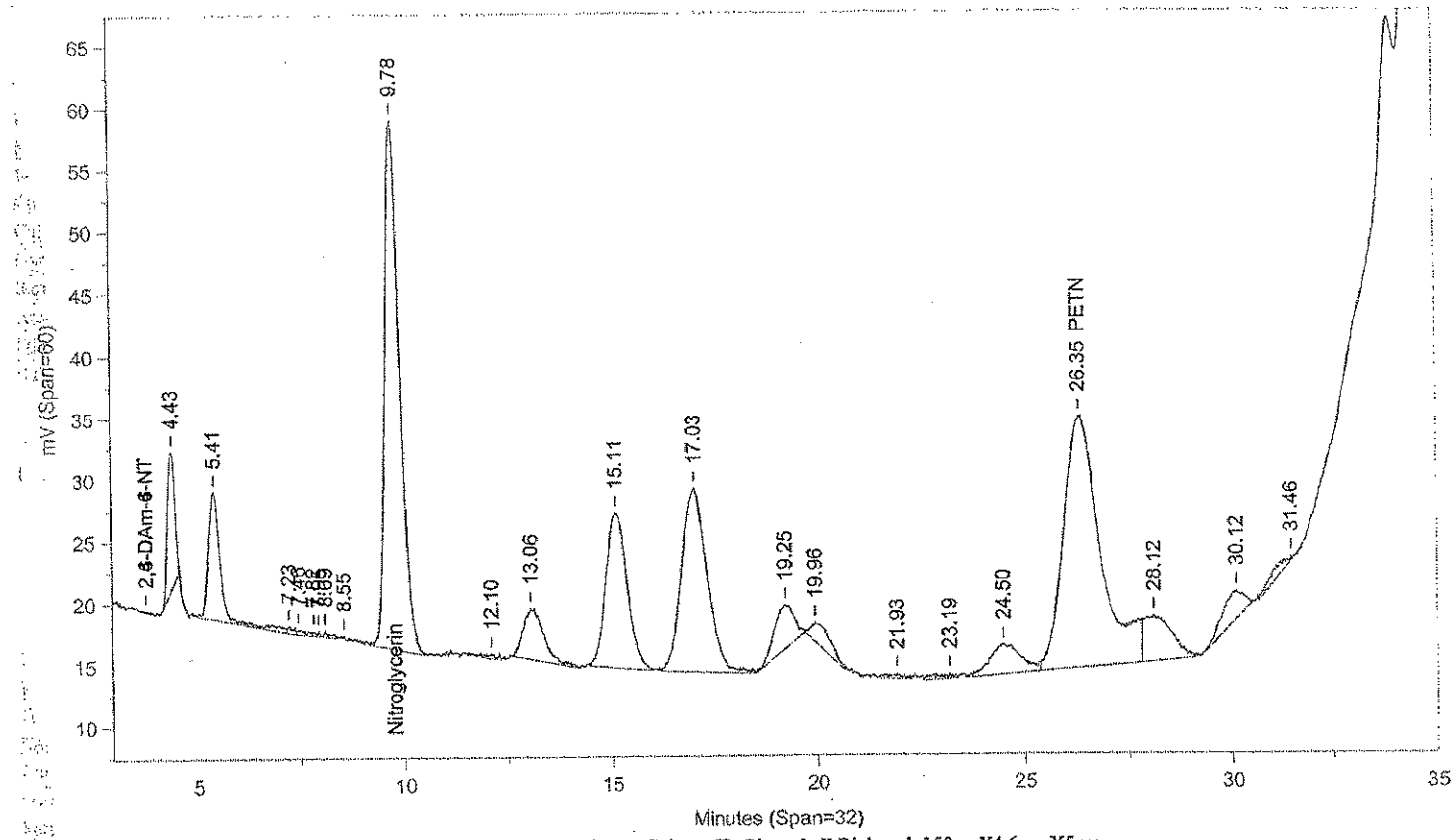
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.61R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 11:09:30 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.61R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 11:09:30 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.333	38780	7.398	HMX	.	0	.	HMX
5.314	54948	9.336	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.778	1050258	206.665	Nitroglycerin
13.01	82765	8.956	Nitrobenzene	.	0	.	Nitrobenzene
15.029	130717	18.994	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.936	175645	9.101	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.17	137308	8.108	1,3-DNB	.	0	.	1,3-DNB
24.451	49883	8.5	2-NT	.	0	.	2-NT
.	0	.	PETN	26.348	1244592	209.601	PETN
28.061	73018	7.58	4-NT	.	0	.	4-NT
30.066	73968	7.053	1,3,5-TNB	.	0	.	1,3,5-TNB
30.914	68865	10.797	2,6-DNT	.	0	.	2,6-DNT
33.816	131039	10.147	2,4-DNT	.	0	.	2,4-DNT
34.294	10814	7.259	2-NMX	.	0	.	2-NMX
34.544	77586	10.136	Tetryl	.	0	.	Tetryl
35.484	100749	9.588	2,4,6-TNT	.	0	.	2,4,6-TNT
36.482	133561	17.206	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:36:06 PM
File Reported On: 11/20/2013 at 2:36:04 PM

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Data Summary

Sample Name: 7265231 MS R2163 MS Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 14:41:48
Instrument X6329A
Result file 4E12310.66R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 89% (73 - 122) Conc: 8.860081

Analysis Report (B)

Injected on Nov 17, 2013 14:41:48
Instrument Y6329A
Result file 4C12310.66R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 78% (73 - 122) Conc: 7.851518

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.06	4.20	39371	8.736485	HMX	4.20	4.34	4.40	37073	7.072952
1,3,5-Trinitrobenzene	4.66	4.72	4.86	91458	8.665382	RDX	5.16	5.31	5.36	53199	9.023819
1,4-Dinitrobenzene	5.52	5.58	5.72	220800	17.333057	Nitrobenzene	12.75	13.02	13.07	83634	9.051207
o-Dinitrobenzene	6.13	6.16	6.33	103505	20.09096	o-Dinitrobenzene	14.72	15.06	15.08	133360	19.382536
1,3-DNB	6.49	6.52	6.69	160141	9.870203	4-Amino-2,6-dinitrotoluer	16.66	16.95	16.98	186077	9.641437
Tetryl	7.33	7.42	7.61	125867	8.17486	1,3-DNB	18.93	19.21	19.23	138903	8.20199
2,4,6-Trinitrotoluene	7.78	7.81	7.98	111036	9.74597	1,4-Dinitrobenzene	19.62	20.01	19.92	242131	21.143906
4-Amino-2,6-dinitrotoluer	9.69	9.59	9.97	42103	8.975164	2-Nitrotoluene	24.05	24.53	24.57	50288	8.570639
2-Amino-4,6-dinitrotoluer	9.97	10.01	10.25	90278	8.24395	4-Nitrotoluene	27.60	28.12	28.12	72557	7.533416
2,6-Dinitrotoluene	10.38	10.43	10.66	61519	10.120284	1,3,5-Trinitrobenzene	29.81	30.22	30.21	66537	6.450206
2,4-Dinitrotoluene	10.86	10.90	11.14	160790	9.722268	2,6-Dinitrotoluene	30.62	31.00	31.02	70099	10.986302
2-Nitrotoluene	12.80	12.82	13.08	52427	7.926107	2,4-Dinitrotoluene	33.67	33.86	33.89	134013	10.377362
4-Nitrotoluene	14.10	14.13	14.43	37309	7.952732	2-NMX	34.12	34.34	34.32	11849	7.851518
3-Nitrotoluene	14.79	14.82	15.12	62419	9.219641	Tetryl	34.41	34.57	34.61	68162	8.948999
2-NMX	25.41	25.59	26.09	15101	8.860081	2,4,6-Trinitrotoluene	35.36	35.51	35.56	99771	9.49601
1-Nitronaphthalene	32.62	32.78	33.11	120349	18.321968	1-Nitronaphthalene	36.36	36.49	36.56	132169	17.032864

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	A	204.929138	15	5.2		3.64	
☑ PETN	A	224.521057	18	6		5.75	
☑ HMX	A	7.096996	2	0.65		0.34	
☑ RDX	A	8.736485	0.5	0.2		3.24	
☑ 1,3,5-Trinitrobenzene	A	8.665382	0.6	0.2		29.31	
☑ 1,4-Dinitrobenzene	A	17.333057	0.6	0.3		19.81	
☑ o-Dinitrobenzene	A	20.09096	0.6	0.2		3.59	
☑ 1,3-DNB	A	9.870203	0.6	0.2		18.46	
☑ Tetryl	B	8.948999	0.6	0.4		9.04	
☑ Nitrobenzene	B	9.051207	0.6	0.2		10.17	
☑ 2,4,6-Trinitrotoluene	A	9.74597	0.6	0.2		2.60	
☑ 4-Amino-2,6-dinitrotoluene	A	8.975164	0.6	0.3		7.16	
☑ 2-Amino-4,6-dinitrotoluene	A	8.24395	0.6	0.2		15.63	
☑ 2,6-Dinitrotoluene	A	10.120284	1.3	0.45		8.21	
☑ 2,4-Dinitrotoluene	A	9.722268	2	0.72		6.52	
☑ 2-Nitrotoluene	A	7.926107	0.75	0.25		7.81	
☑ 4-Nitrotoluene	A	7.952732	1.2	0.6		5.42	
☑ 3-Nitrotoluene	A	9.219641	1.2	0.4		20.13	
☑ 2-NMX	A	8.860081				12.07	
☑ 1-Nitronaphthalene	A	18.321968	0.6	0.2		7.29	

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Data Summary

Sample Name: 7265231 MS R2163 MS Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 14:41:48
Instrument	X6329A
Result file	4E12310.66R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 14:41:48
Instrument	Y6329A
Result file	4C12310.66R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Valerie L. Tompkins, Principal Specialist Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265231 MS R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 14:41:48
Instrument : CP12--X6329A
Result file : 4E12310.66R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 89% (73-122) Conc.: 8.860081

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.06	4.20	39371	8.736485
1,3,5-TNB	4.66	4.72	4.86	91458	8.665382
1,4-DNB	5.52	5.58	5.72	220800	17.333057
o-Dinitrobenzene	6.13	6.16	6.33	103505	20.090960
1,3-DNB	6.49	6.52	6.69	160141	9.870203
Tetryl	7.33	7.42	7.61	125867	7.282648
2,4,6-TNT	7.78	7.81	7.98	111036	9.745970
Tetryl breakdown	8.27	8.29	8.52	15420	0.892212
4-Am-2,6-DNT	9.63	9.59	9.91	42103	8.975164
2-Am-4,6-DNT	9.97	10.01	10.25	90278	8.243950
2,6-DNT	10.38	10.43	10.66	61519	10.120284
2,4-DNT	10.86	10.90	11.14	160790	9.722268
2-NT	12.80	12.82	13.08	52427	7.926107
4-NT	14.10	14.13	14.43	37309	7.952732
3-NT	14.79	14.82	15.12	62419	9.219641
2-NMX	25.41	25.59	26.09	15101	8.860081
1-Nitronaphthalene	32.62	32.78	33.11	120349	18.321968

Analysis Report (B)

Injected on : NOV 17, 2013 14:41:48
Instrument : CP12--X6329B
Result file : 4E12310B.66R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 91% (73-122) Conc.: 9.129637

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.72	2.85	146596	7.096996
Nitroglycerin	8.51	8.60	8.89	1309549	204.929138
PETN	15.75	15.87	16.33	1537403	224.521057
2-NMX	25.57	25.70	26.24	222977	9.129637

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	204.929138	15	5.2			
☑ PETN	B	224.521057	18	6			
☑ HMX	B	7.096996	2	0.65			
☑ RDX	A	8.736485	0.5	0.2			
☑ 1,3,5-TNB	A	8.665382	0.6	0.2			
☑ 1,4-DNB	A	17.333057	0.6	0.3			
☑ o-Dinitrobenzene	A	20.090960	0.6	0.2			
☑ 1,3-DNB	A	9.870203	0.6	0.2			
☑ Tetryl	A	7.282648	0.6	0.4			+Breakdown = 8.17486
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	9.745970	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	8.975164	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.243950	0.6	0.2			
☑ 2,6-DNT	A	10.120284	1.3	0.45			
☑ 2,4-DNT	A	9.722268	2	0.72			
☑ 2-NT	A	7.926107	0.75	0.25			
☑ 4-NT	A	7.952732	1.2	0.6			
☑ 3-NT	A	9.219641	1.2	0.4			
☐ 2-NMX	A	8.860081				3.00	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:21:47

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265231** MS R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 14:41:48
Instrument	: CP12--X6329A
Result file	: 4E12310.66R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 14:41:48
Instrument	: CP12--X6329B
Result file	: 4E12310B.66R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	18.321968	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by:

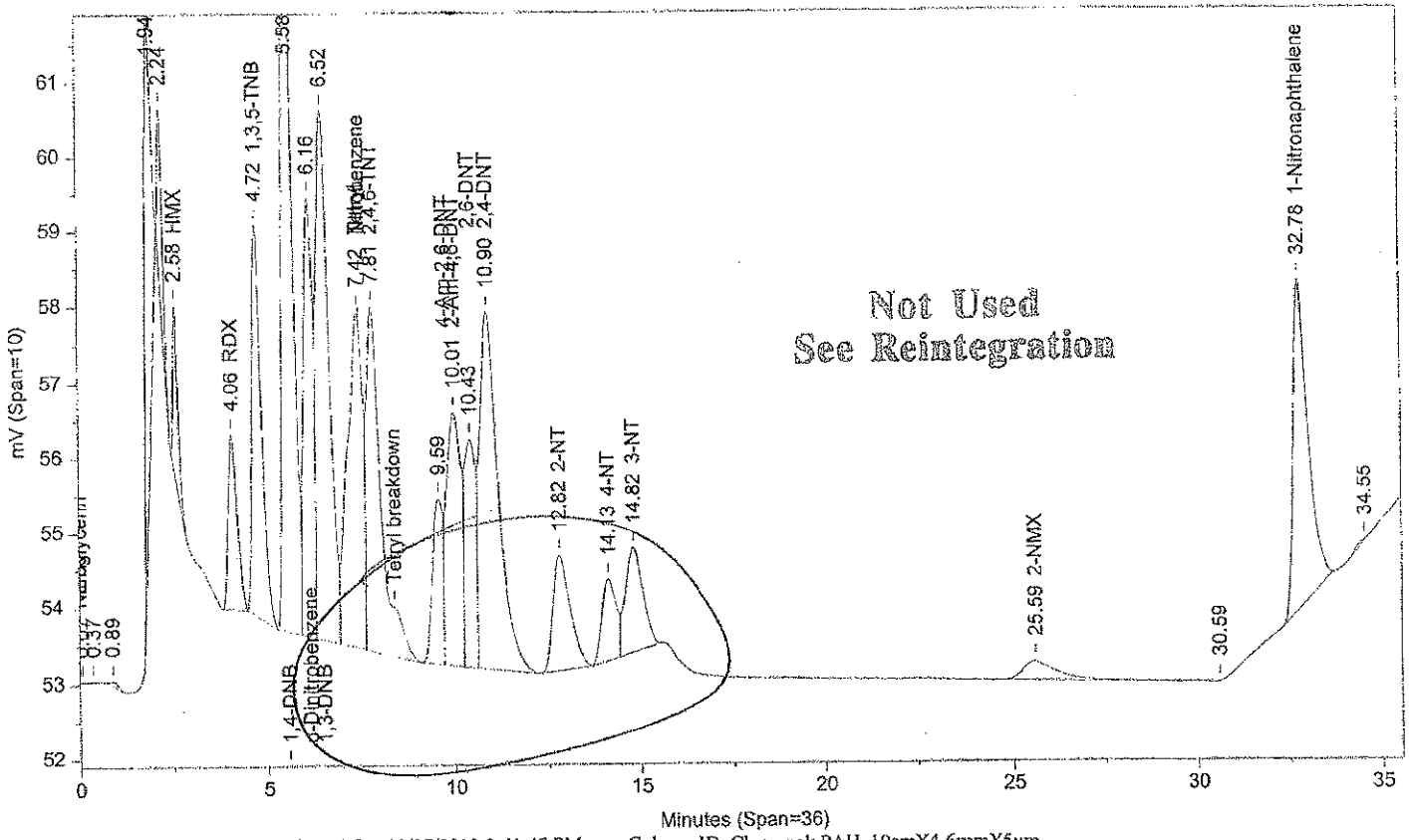
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

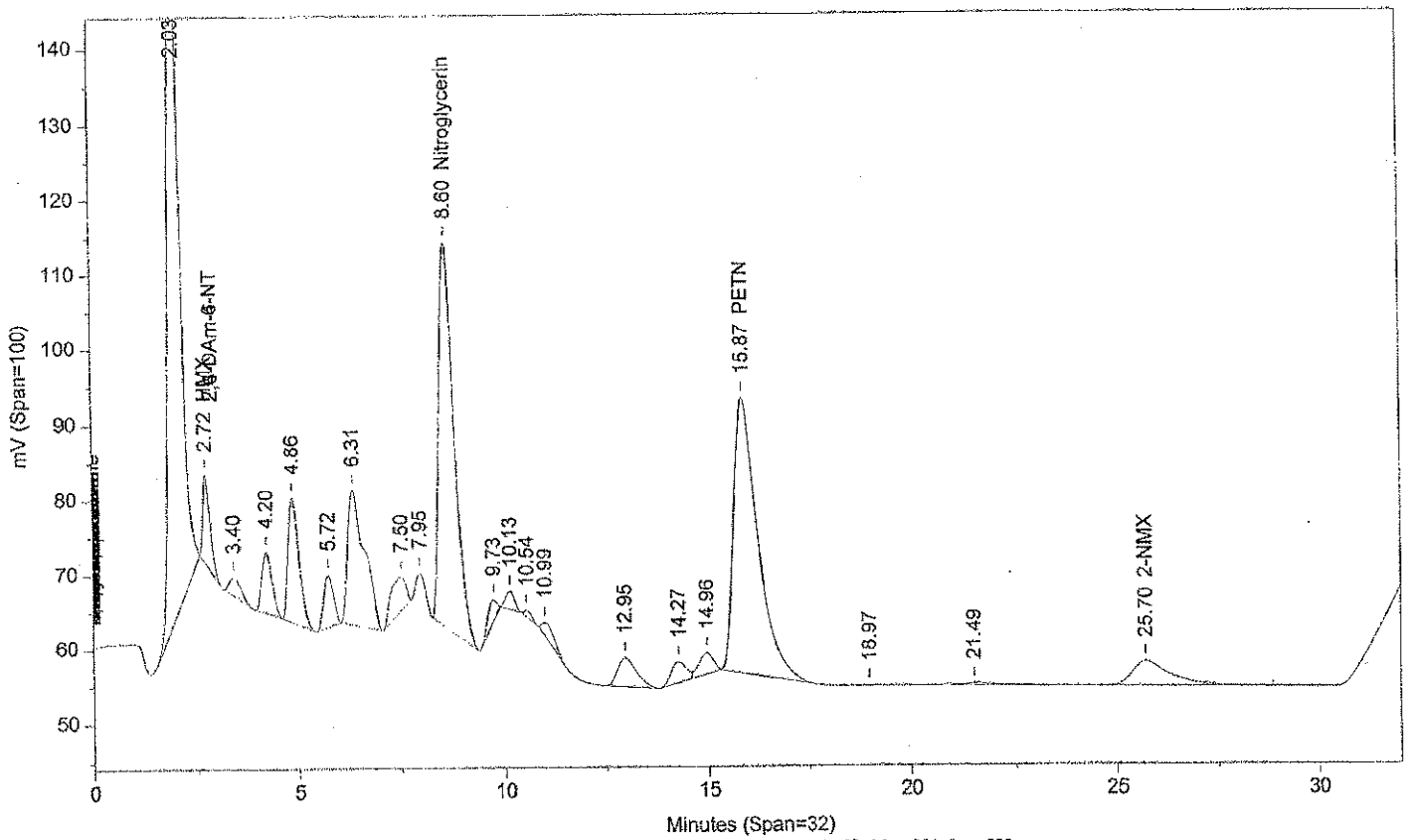
Printed on: 11/20/2013 13:21:47

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.66R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 2:41:47 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.66R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 2:41:47 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

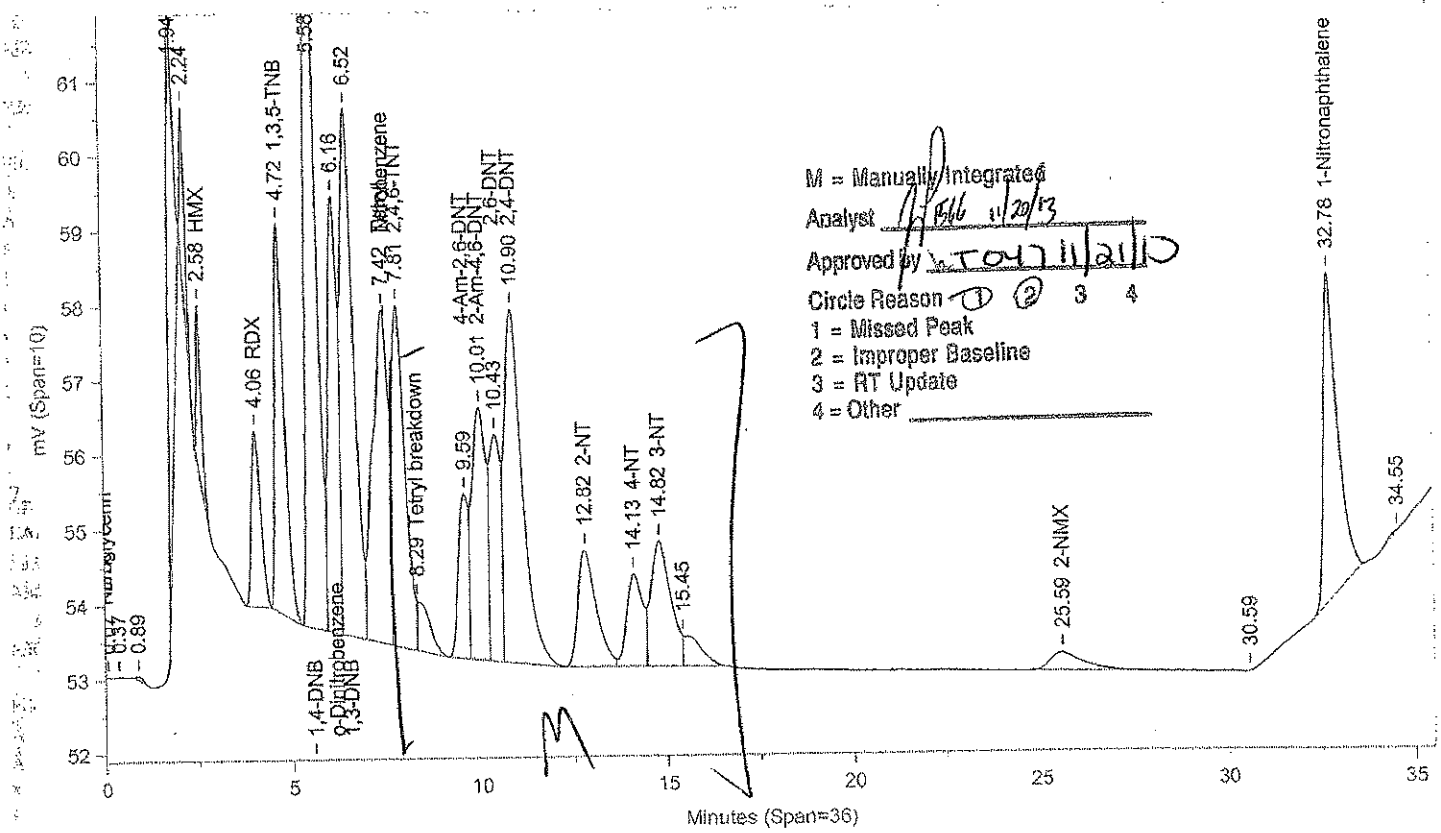
Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.717	146596	7.097	HMX
4.063	39371	8.736	RDX	.	0	.	RDX
4.719	91458	8.665	1,3,5-TNB	.	0	.	1,3,5-TNB
5.58	220800	17.333	1,4-DNB	.	0	.	1,4-DNB
6.16	103505	20.091	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.522	160141	9.87	1,3-DNB	.	0	.	1,3-DNB
7.422	125867	7.283	Tetryl	.	0	.	Tetryl
7.809	126457	11.099	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.605	1309549	204.929	Nitroglycerin
10.012	90278	8.244	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.433	61519	10.12	2,6-DNT	.	0	.	2,6-DNT
10.898	160790	9.722	2,4-DNT	.	0	.	2,4-DNT
12.821	48794	7.377	2-NT	.	0	.	2-NT
14.132	28530	6.081	4-NT	.	0	.	4-NT
14.821	46186	6.822	3-NT	.	0	.	3-NT
.	0	.	PETN	15.875	1537403	224.521	PETN
25.59	15101	8.86	2-NMX	25.703	222977	9.13	2-NMX
32.778	120349	18.322	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.66A
Area File: C:\CPWIN\DATA1\4E12310B.66A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:04:40 PM
File Reported On: 11/17/2013 at 10:04:50 PM

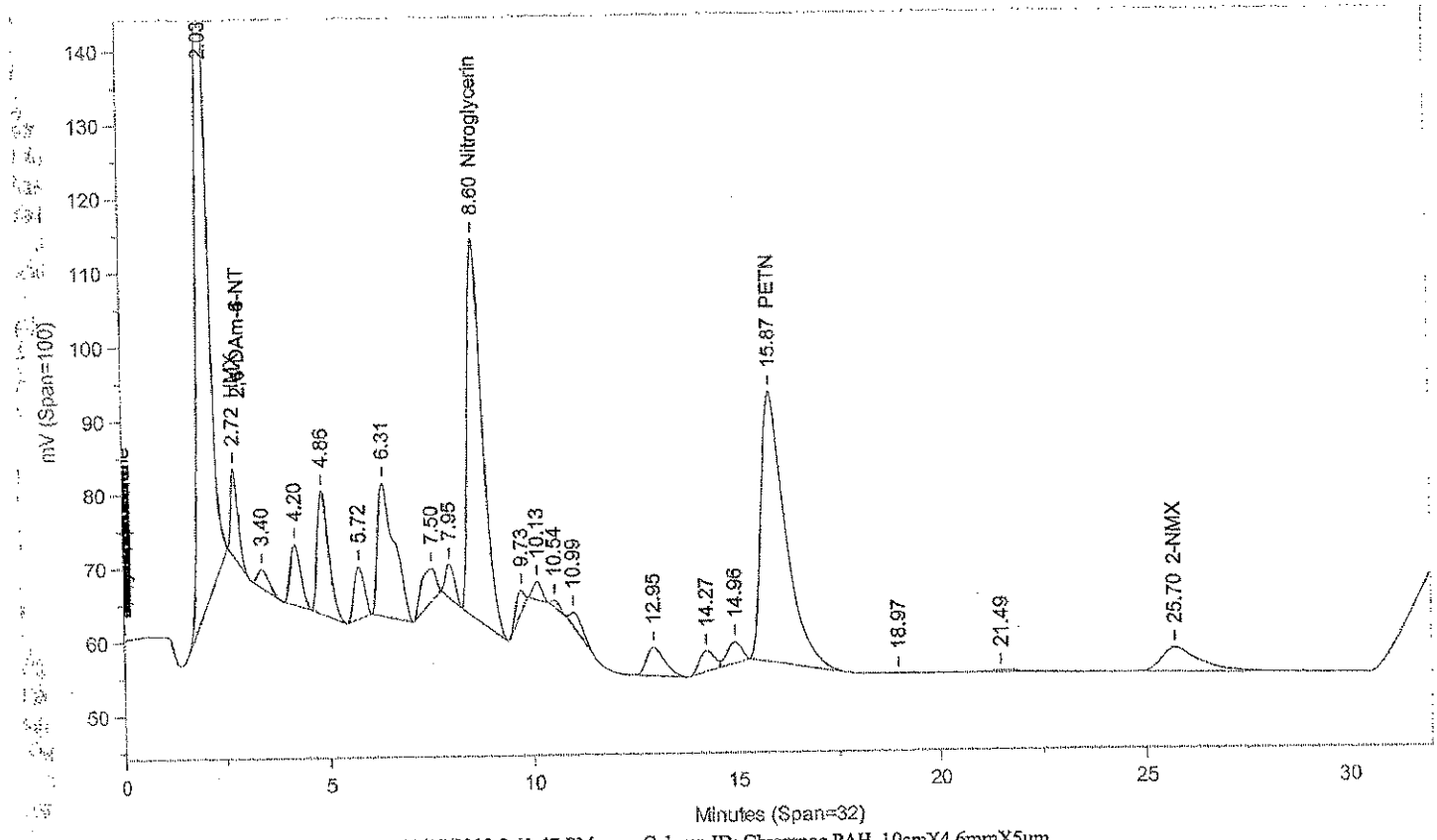
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.66R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 2:41:47 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.66R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 2:41:47 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.717	146596	7.097	HMX
4.063	39371	8.736	RDX	.	0	.	RDX
4.719	91458	8.665	1,3,5-TNB	.	0	.	1,3,5-TNB
5.58	220800	17.333	1,4-DNB	.	0	.	1,4-DNB
6.16	103505	20.091	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.522	160141	9.87	1,3-DNB	.	0	.	1,3-DNB
7.422	125867	7.283	Tetryl	.	0	.	Tetryl
7.809	111036	9.746	2,4,6-TNT	.	0	.	2,4,6-TNT
8.289	15420	.892	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.605	1309549	204.929	Nitroglycerin
9.588	42103	8.975	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.012	90278	8.244	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.433	61519	10.12	2,6-DNT	.	0	.	2,6-DNT
10.898	160790	9.722	2,4-DNT	.	0	.	2,4-DNT
12.821	52427	7.926	2-NT	.	0	.	2-NT
14.132	37309	7.953	4-NT	.	0	.	4-NT
14.821	62419	9.22	3-NT	.	0	.	3-NT
.	0	.	PETN	15.875	1537403	224.521	PETN
25.59	15101	8.86	2-NMX	25.703	222977	9.13	2-NMX
32.778	120349	18.322	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:25:48 AM
File Reported On: 11/20/2013 at 11:25:47 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7265231 MS R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 14:41:48
Instrument : CP12--Y6329A
Result file : 4C12310.66R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 78% (73-122) Conc.: 7.851518

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.34	4.40	37073	7.072952
RDX	5.16	5.31	5.36	53199	9.023819
Nitrobenzene	12.75	13.02	13.07	83634	9.051207
o-Dinitrobenzene	14.72	15.06	15.08	133360	19.382536
4-Am-2,6-DNT	16.66	16.95	16.98	186077	9.641437
1,3-DNB	18.93	19.21	19.23	138903	8.201990
1,4-DNB	19.62	20.01	19.92	242131	21.143906
2-NT	24.05	24.53	24.57	50288	8.570639
4-NT	27.60	28.12	28.12	72557	7.533416
1,3,5-TNB	29.81	30.22	30.21	66537	6.450206
2,6-DNT	30.62	31.00	31.02	70099	10.986302
2,4-DNT	33.67	33.86	33.89	134013	10.377362
2-NMX	34.12	34.34	34.32	11849	7.851518
Tetryl	34.41	34.57	34.61	68162	8.948999
2,4,6-TNT	35.36	35.51	35.56	99771	9.496010
1-Nitronaphthalene	36.36	36.49	36.56	132169	17.032864

Analysis Report (B)

Injected on : NOV 17, 2013 14:41:48
Instrument : CP12--Y6329B
Result file : 4C12310B.66R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.80	9.82	1080065	212.529846
PETN	26.02	26.43	26.44	1258619	211.963058

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	211.963058	18	6			
☑ Nitroglycerin	B	212.529846	15	5.2			
☑ HMX	A	7.072952	2	0.65			
☑ RDX	A	9.023819	0.5	0.2			
☑ Nitrobenzene	A	9.051207	0.6	0.2			
☑ o-Dinitrobenzene	A	19.382536	0.6	0.2			
☑ 4-Am-2,6-DNT	A	9.641437	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.201990	0.6	0.2			
☑ 1,4-DNB	A	21.143906	0.6	0.3			
☑ 2-NT	A	8.570639	0.75	0.25			
☑ 4-NT	A	7.533416	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	6.450206	0.6	0.2			
☑ 2,6-DNT	A	10.986302	1.3	0.45			
☑ 2,4-DNT	A	10.377362	2	0.72			
☐ 2-NMX	A	7.851518					
☑ Tetryl	A	8.948999	0.6	0.4			
☑ 2,4,6-TNT	A	9.496010	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:32:59

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265231** MS R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 14:41:48
Instrument	: CP12--Y6329A
Result file	: 4C12310.66R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 14:41:48
Instrument	: CP12--Y6329B
Result file	: 4C12310B.66R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	17.032864	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Analytical Chemist

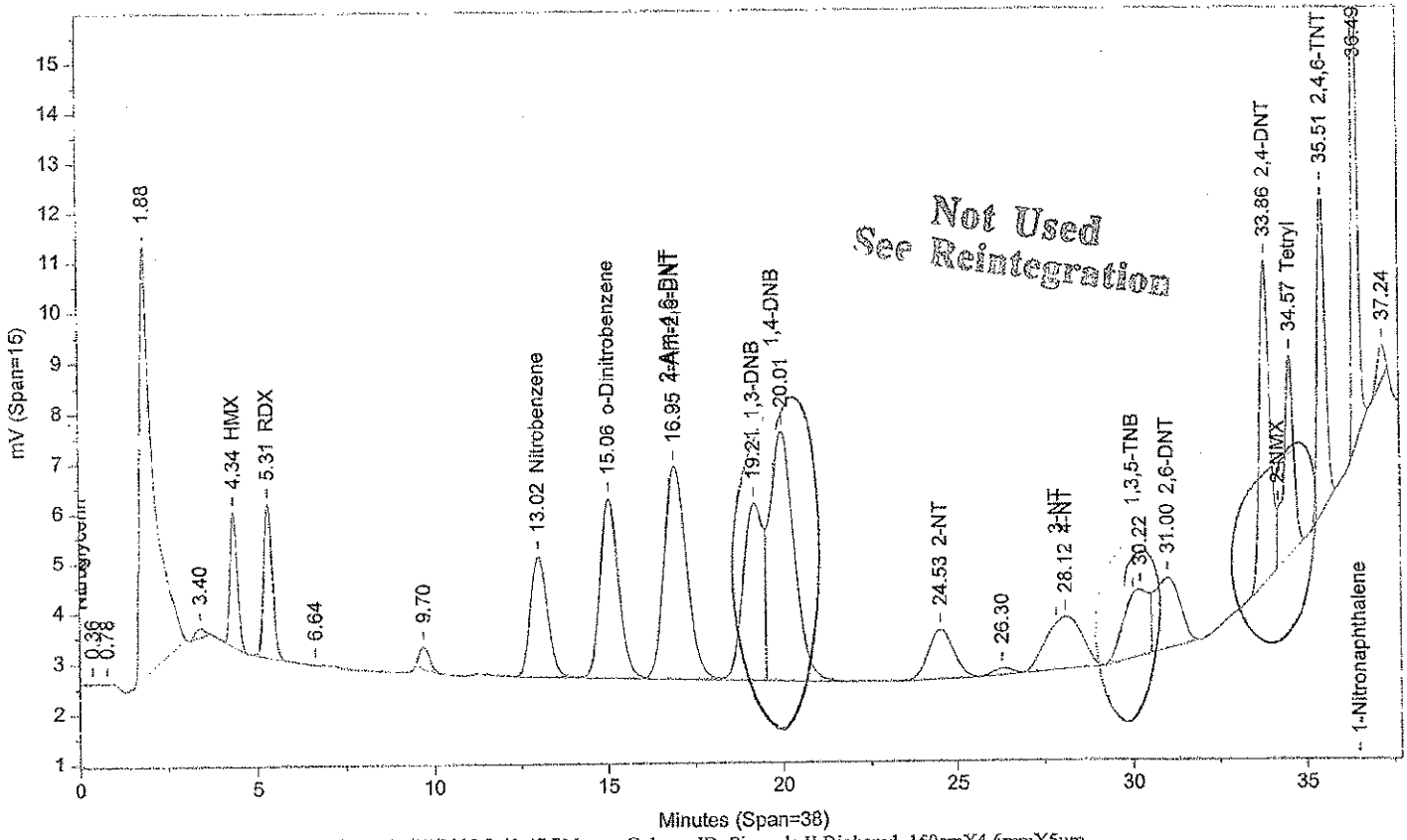
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

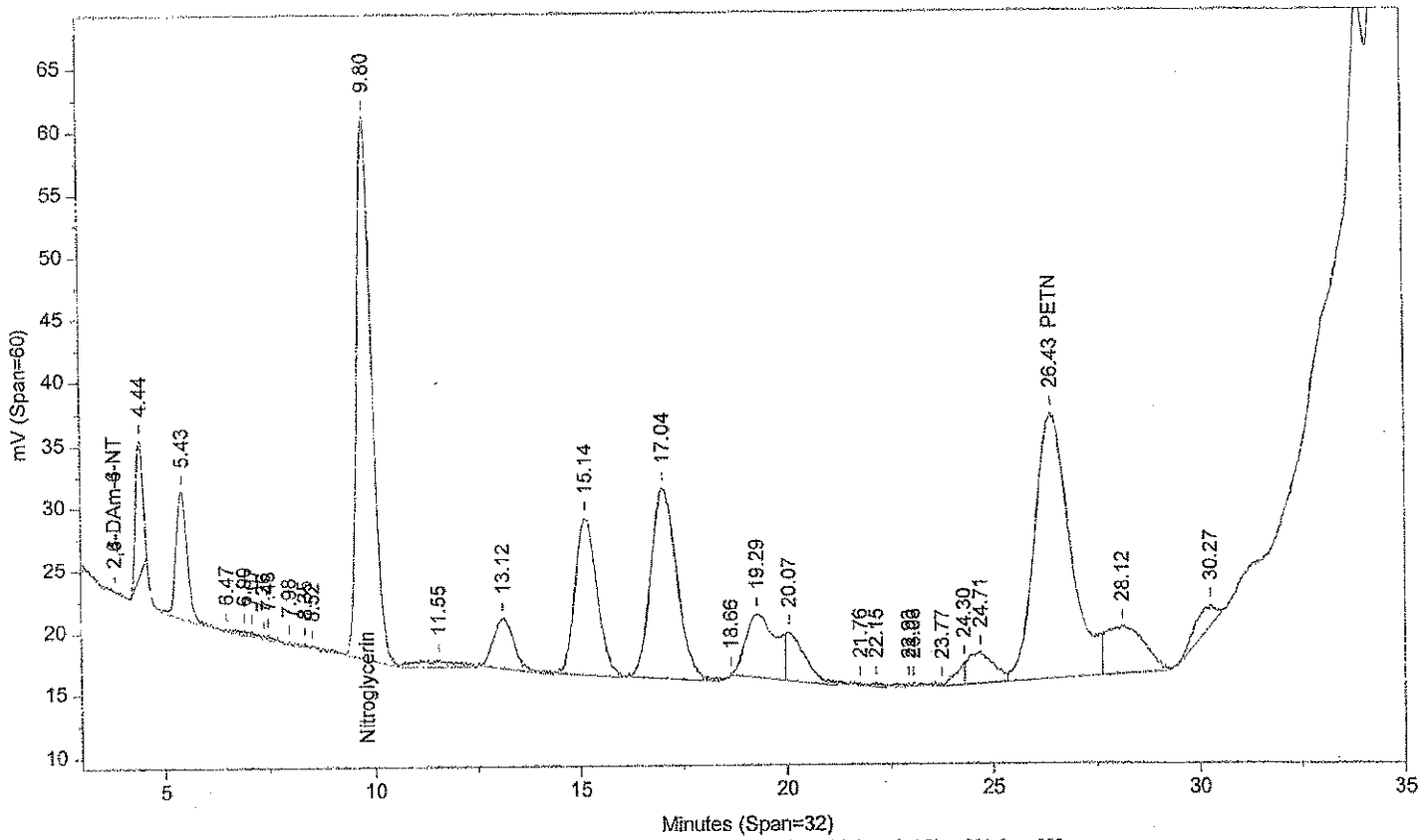
Printed on: 11/20/2013 15:32:59

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.66R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 2:41:47 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.66R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 2:41:47 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.336	37073	7.073	HMX	.	0	.	HMX
5.315	53199	9.024	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.8	1080065	212.53	Nitroglycerin
13.022	83634	9.051	Nitrobenzene	.	0	.	Nitrobenzene
15.056	133360	19.383	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.947	186077	9.641	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.206	138903	8.202	1,3-DNB	.	0	.	1,3-DNB
24.529	50288	8.571	2-NT	.	0	.	2-NT
.	0	.	PETN	26.432	1258619	211.963	PETN
28.117	72557	7.533	4-NT	.	0	.	4-NT
30.997	70099	10.986	2,6-DNT	.	0	.	2,6-DNT
33.86	134013	10.377	2,4-DNT	.	0	.	2,4-DNT
34.574	80011	10.441	Tetryl	.	0	.	Tetryl
35.508	99771	9.496	2,4,6-TNT	.	0	.	2,4,6-TNT
36.494	132169	17.033	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
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Area File: C:\CPWIN\DATA1\4C12310B.66A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:18:46 PM
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Not Used
See Reintegration

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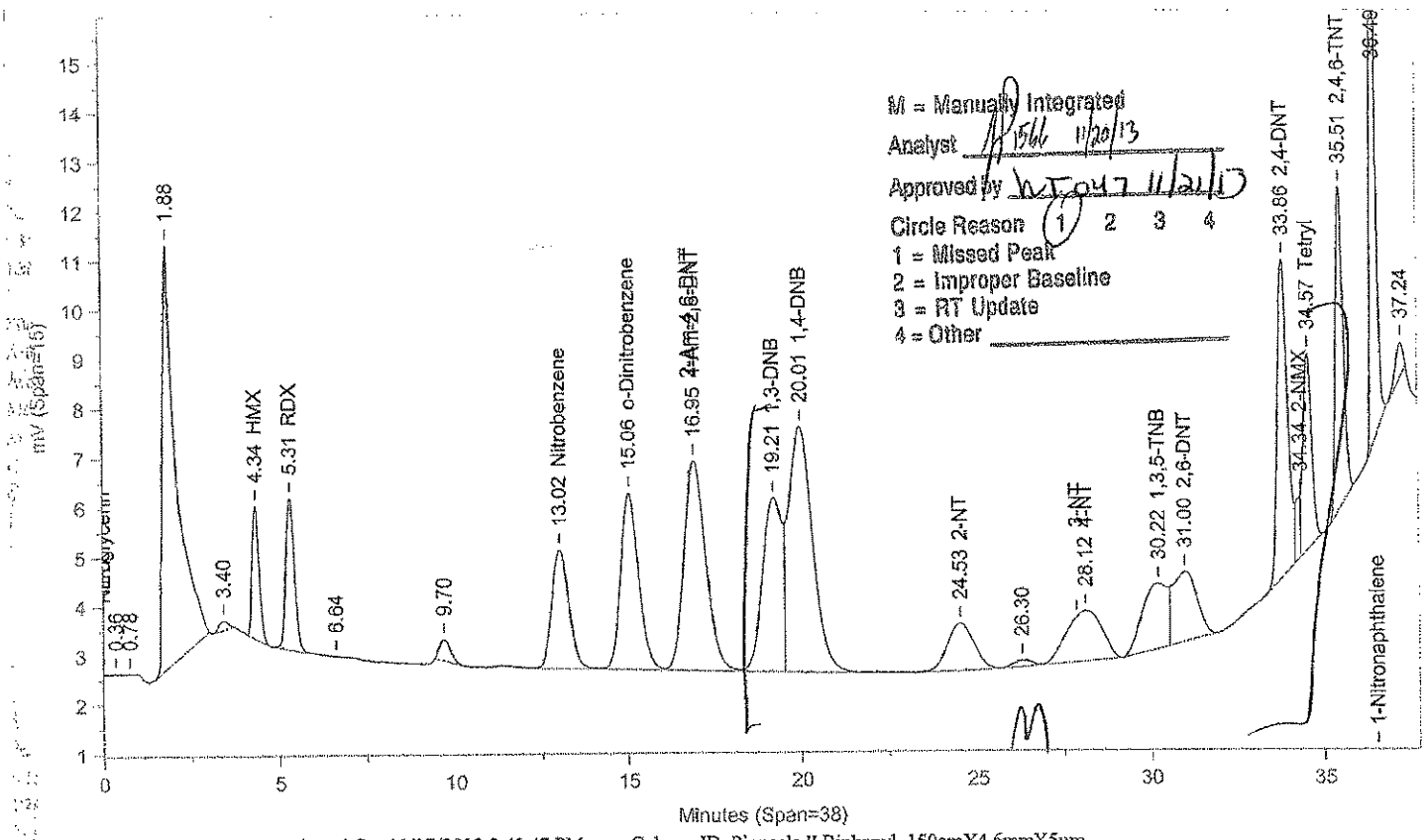
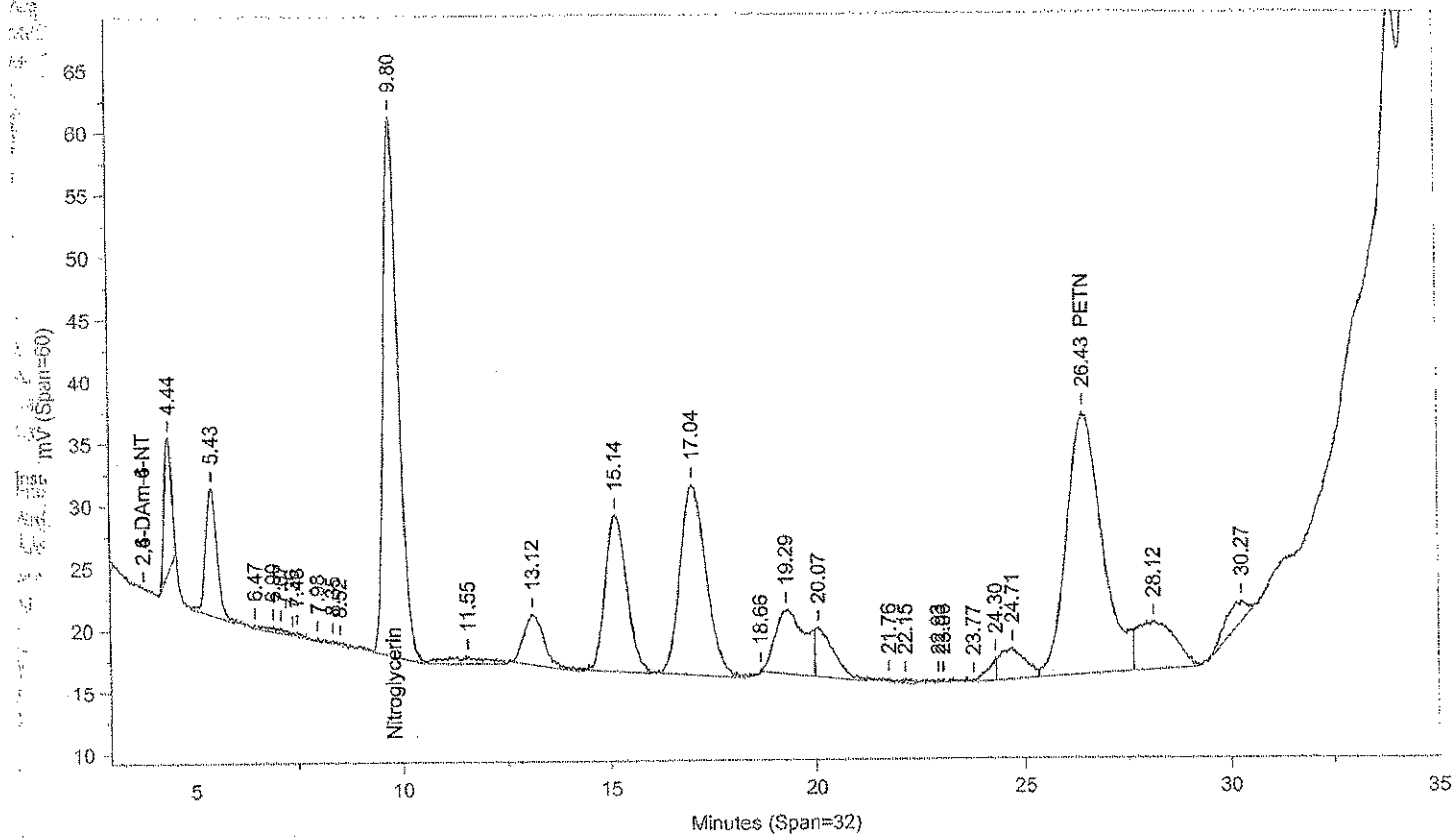


Instrument ID: CP12--Y6329A Injected On: 11/17/2013 2:41:47 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.66R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 2:41:47 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.336	37073	7.073	HMX	.	0	.	HMX
5.315	53199	9.024	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.8	1080065	212.53	Nitroglycerin
13.022	83634	9.051	Nitrobenzene	.	0	.	Nitrobenzene
15.056	133360	19.383	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.947	186077	9.641	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.206	138903	8.202	1,3-DNB	.	0	.	1,3-DNB
20.009	242131	21.144	1,4-DNB	.	0	.	1,4-DNB
24.529	50288	8.571	2-NT	.	0	.	2-NT
.	0	.	PETN	26.432	1258619	211.963	PETN
28.117	72557	7.533	4-NT	.	0	.	4-NT
30.221	66537	6.45	1,3,5-TNB	.	0	.	1,3,5-TNB
30.997	70099	10.986	2,6-DNT	.	0	.	2,6-DNT
33.86	134013	10.377	2,4-DNT	.	0	.	2,4-DNT
34.344	11849	7.852	2-NMX	.	0	.	2-NMX
34.574	68162	8.949	Tetryl	.	0	.	Tetryl
35.508	99771	9.496	2,4,6-TNT	.	0	.	2,4,6-TNT
36.494	132169	17.033	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:38:54 PM
File Reported On: 11/20/2013 at 2:38:53 PM

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Data Summary

Sample Name: 7265232 MSD R2163 MSD Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 15:24:17
Instrument X6329A
Result file 4E12310.67R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 81% (73 - 122) Conc: 8.082097

Analysis Report (B)

Injected on Nov 17, 2013 15:24:17
Instrument Y6329A
Result file 4C12310.67R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 77% (73 - 122) Conc: 7.670925

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.09	4.20	35270	7.80036	HMX	4.20	4.33	4.40	33564	6.403416
1,3,5-Trinitrobenzene	4.66	4.74	4.86	81572	7.728737	RDX	5.16	5.30	5.36	46710	7.865474
1,4-Dinitrobenzene	5.52	5.61	5.72	197762	15.524549	Nitrobenzene	12.75	12.96	13.07	77209	8.349779
o-Dinitrobenzene	6.13	6.20	6.33	93175	18.085688	o-Dinitrobenzene	14.72	15.03	15.08	120469	17.486277
1,3-DNB	6.49	6.56	6.69	145193	8.948875	4-Amino-2,6-dinitrotoluer	16.66	16.91	16.98	175565	9.096789
Tetryl	7.33	7.46	7.61	115005	7.452556	1,3-DNB	18.93	19.18	19.23	125405	7.404942
2,4,6-Trinitrotoluene	7.78	7.85	7.98	97692	8.574669	1,4-Dinitrobenzene	19.62	19.97	19.92	221275	19.296831
4-Amino-2,6-dinitrotoluer	9.69	9.63	9.97	40143	8.557301	2-Nitrotoluene	24.05	24.50	24.57	46563	7.924186
2-Amino-4,6-dinitrotoluer	9.97	10.06	10.25	82847	7.565373	4-Nitrotoluene	27.60	28.08	28.12	67895	7.065176
2,6-Dinitrotoluene	10.38	10.49	10.66	56330	9.266705	1,3,5-Trinitrobenzene	29.81	30.15	30.21	54468	5.470792
2,4-Dinitrotoluene	10.86	10.95	11.14	147618	8.925821	2,6-Dinitrotoluene	30.62	30.95	31.02	65857	10.337524
2-Nitrotoluene	12.80	12.87	13.08	49254	7.446285	2,4-Dinitrotoluene	33.67	33.84	33.89	121221	9.386847
4-Nitrotoluene	14.10	14.20	14.43	34536	7.361526	2-NMX	34.12	34.32	34.32	11534	7.670925
3-Nitrotoluene	14.79	14.88	15.12	58830	8.68952	Tetryl	34.41	34.56	34.61	61063	8.055061
2-NMX	25.41	25.63	26.09	13775	8.082097	2,4,6-Trinitrotoluene	35.36	35.50	35.56	88217	8.412149
1-Nitronaphthalene	32.62	32.81	33.11	120580	18.35708	1-Nitronaphthalene	36.36	36.49	36.56	131132	16.903645

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	A	178.337936	15	5.2		3.63	
☑ PETN	A	196.107849	18	6		9.32	
☑ HMX	A	6.763479	2	0.65		5.47	
☑ RDX	A	7.80036	0.5	0.2		0.83	
☑ 1,3,5-Trinitrobenzene	A	7.728737	0.6	0.2		34.21	
☑ 1,4-Dinitrobenzene	A	15.524549	0.6	0.3		21.67	
☑ o-Dinitrobenzene	A	18.085688	0.6	0.2		3.37	
☑ 1,3-DNB	A	8.948875	0.6	0.2		18.88	
☑ Tetryl	B	8.055061	0.6	0.4		7.77	
☑ Nitrobenzene	B	8.349779	0.6	0.2		11.36	
☑ 2,4,6-Trinitrotoluene	A	8.574669	0.6	0.2		1.91	
☑ 4-Amino-2,6-dinitrotoluene	A	8.557301	0.6	0.3		6.11	
☑ 2-Amino-4,6-dinitrotoluene	A	7.565373	0.6	0.2		18.38	
☑ 2,6-Dinitrotoluene	A	9.266705	1.3	0.45		10.92	
☑ 2,4-Dinitrotoluene	A	8.925821	2	0.72		5.04	
☑ 2-Nitrotoluene	A	7.446285	0.75	0.25		6.22	
☑ 4-Nitrotoluene	A	7.361526	1.2	0.6		4.11	
☑ 3-Nitrotoluene	A	8.68952	1.2	0.4		20.62	
☑ 2-NMX	A	8.082097				5.22	
☑ 1-Nitronaphthalene	A	18.35708	0.6	0.2		8.24	

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Data Summary

Sample Name: 7265232 MSD R2163 MSD Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 15:24:17
Instrument	X6329A
Result file	4E12310.67R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 15:24:17
Instrument	Y6329A
Result file	4C12310.67R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Technical Specialist
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265232** MSD R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 15:24:17
Instrument : CP12--X6329A
Result file : 4E12310.67R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 81% (73-122) Conc.: 8.082097

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.09	4.20	35270	7.800360
1,3,5-TNB	4.66	4.74	4.86	81572	7.728737
1,4-DNB	5.52	5.61	5.72	197762	15.524549
o-Dinitrobenzene	6.13	6.20	6.33	93175	18.085688
1,3-DNB	6.49	6.56	6.69	145193	8.948875
Tetryl	7.33	7.46	7.61	115005	6.654176
2,4,6-TNT	7.78	7.85	7.98	97692	8.574669
Tetryl breakdown	8.27	8.33	8.52	13799	0.798380
4-Am-2,6-DNT	9.63	9.63	9.91	40143	8.557301
2-Am-4,6-DNT	9.97	10.06	10.25	82847	7.565373
2,6-DNT	10.38	10.49	10.66	56330	9.266705
2,4-DNT	10.86	10.95	11.14	147618	8.925821
2-NT	12.80	12.87	13.08	49254	7.446285
4-NT	14.10	14.20	14.43	34536	7.361526
3-NT	14.79	14.88	15.12	58830	8.689520
2-NMX	25.41	25.63	26.09	13775	8.082097
1-Nitronaphthalene	32.62	32.81	33.11	120580	18.357080

Analysis Report (B)

Injected on : NOV 17, 2013 15:24:17
Instrument : CP12--X6329B
Result file : 4E12310B.67R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 82% (73-122) Conc.: 8.159248

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.73	2.85	139351	6.763479
Nitroglycerin	8.51	8.65	8.89	1139625	178.337936
PETN	15.75	15.95	16.33	1342813	196.107849
2-NMX	25.57	25.79	26.24	199277	8.159248

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	178.337936	15	5.2			
☑ PETN	B	196.107849	18	6			
☑ HMX	B	6.763479	2	0.65			
☑ RDX	A	7.800360	0.5	0.2			
☑ 1,3,5-TNB	A	7.728737	0.6	0.2			
☑ 1,4-DNB	A	15.524549	0.6	0.3			
☑ o-Dinitrobenzene	A	18.085688	0.6	0.2			
☑ 1,3-DNB	A	8.948875	0.6	0.2			
☑ Tetryl	A	6.654176	0.6	0.4			+ Breakdown = 7.45255%
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	8.574669	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	8.557301	0.6	0.3			
☑ 2-Am-4,6-DNT	A	7.565373	0.6	0.2			
☑ 2,6-DNT	A	9.266705	1.3	0.45			
☑ 2,4-DNT	A	8.925821	2	0.72			
☑ 2-NT	A	7.446285	0.75	0.25			
☑ 4-NT	A	7.361526	1.2	0.6			
☑ 3-NT	A	8.689520	1.2	0.4			
☐ 2-NMX	A	8.082097				0.95	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:22:03

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265232** MSD R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 15:24:17
Instrument	: CP12--X6329A
Result file	: 4E12310.67R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 15:24:17
Instrument	: CP12--X6329B
Result file	: 4E12310B.67R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	18.357080	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylo Personal Specialist

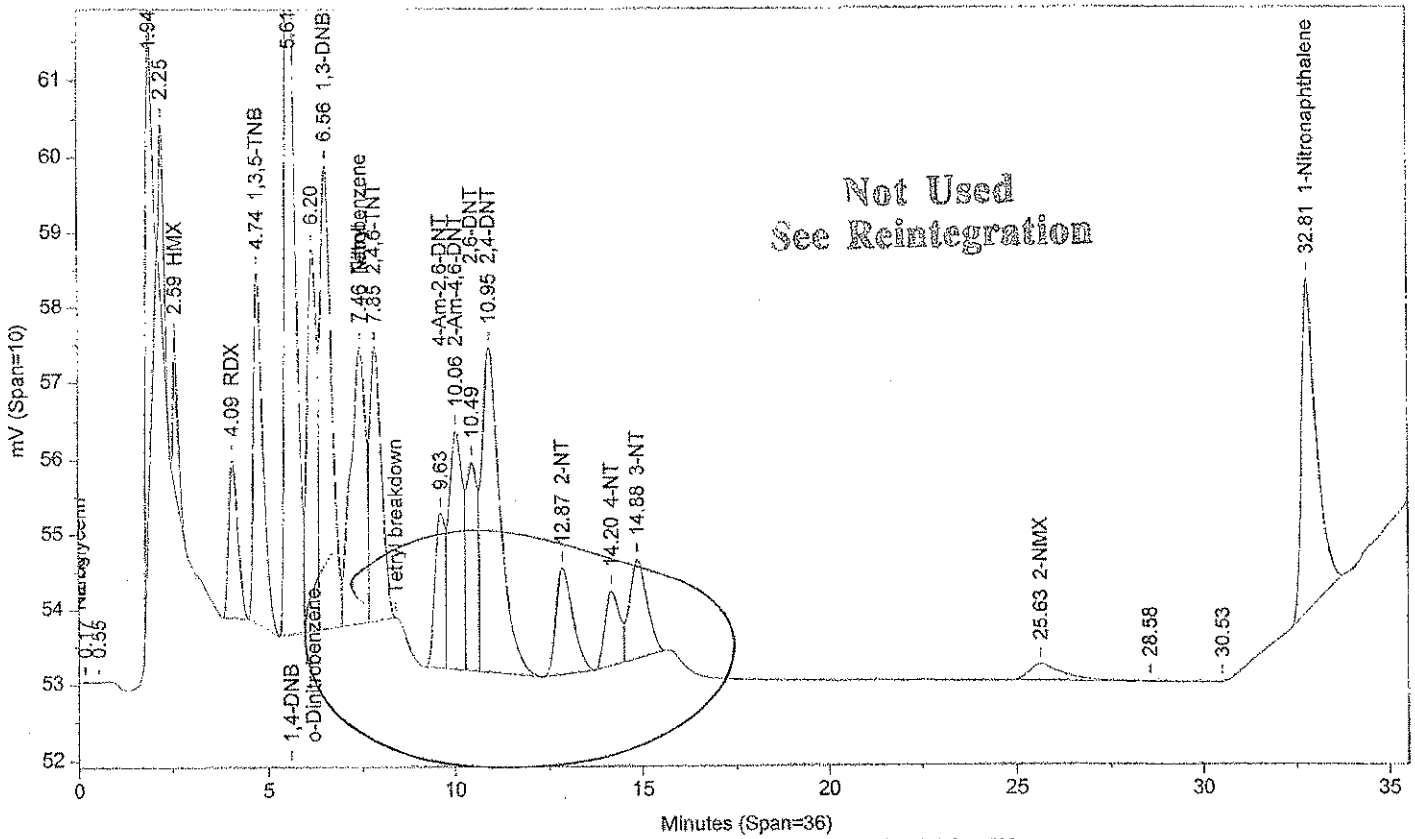
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

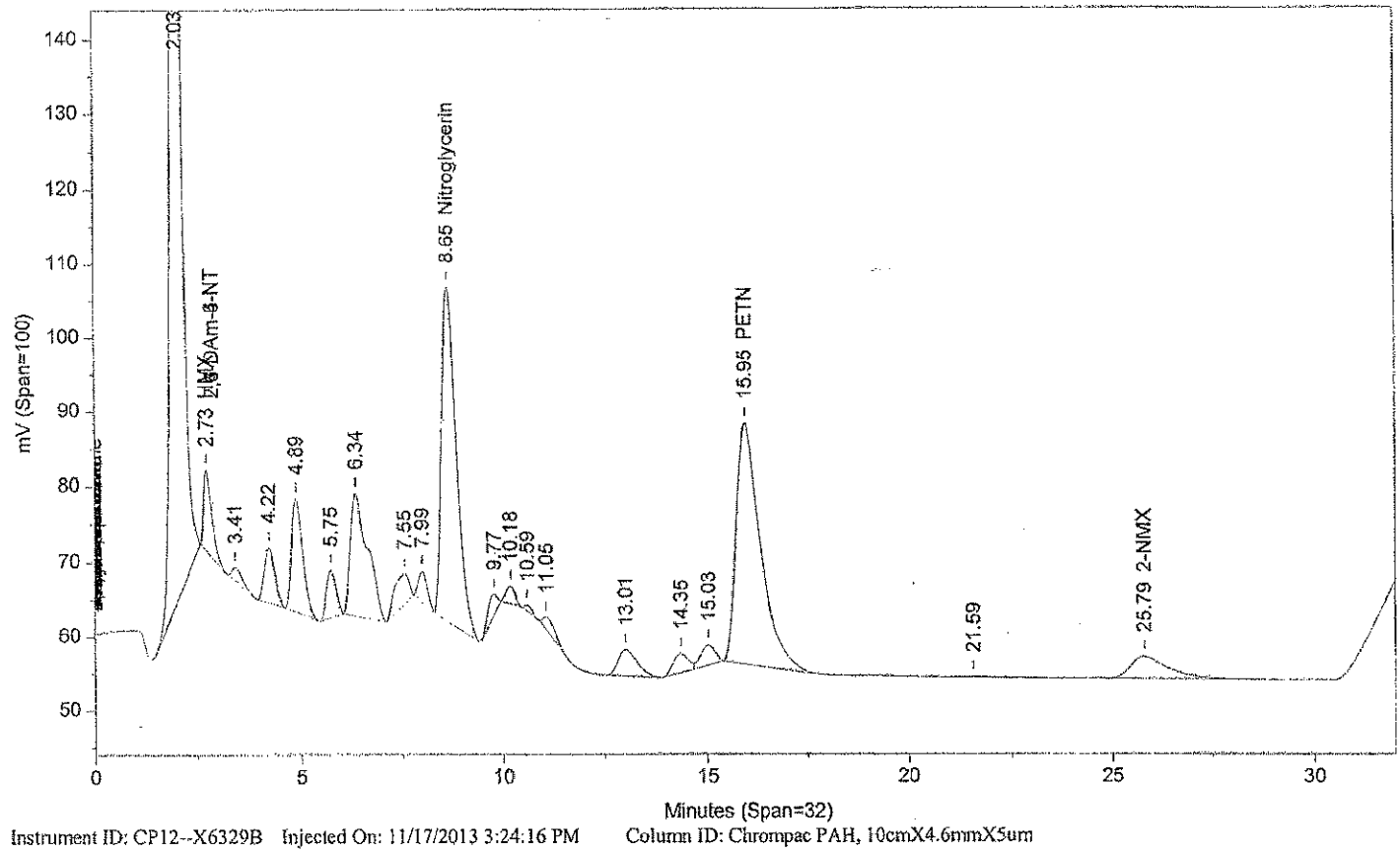
Printed on: 11/20/2013 13:22:03

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.67R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 3:24:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.67R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 3:24:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.732	139351	6.763	HMX
4.086	35270	7.8	RDX	.	0	.	RDX
4.744	81572	7.729	1,3,5-TNB	.	0	.	1,3,5-TNB
5.611	195383	15.338	1,4-DNB	.	0	.	1,4-DNB
6.196	89450	17.363	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	135919	8.377	1,3-DNB	.	0	.	1,3-DNB
7.464	99521	5.758	Tetryl	.	0	.	Tetryl
7.846	78246	6.868	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.651	1139625	178.338	Nitroglycerin
9.627	40143	8.557	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.056	82847	7.565	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.488	56330	9.267	2,6-DNT	.	0	.	2,6-DNT
10.95	147618	8.926	2,4-DNT	.	0	.	2,4-DNT
12.874	45269	6.844	2-NT	.	0	.	2-NT
14.204	26879	5.729	4-NT	.	0	.	4-NT
14.88	43242	6.387	3-NT	.	0	.	3-NT
.	0	.	PETN	15.945	1342813	196.108	PETN
25.635	13775	8.082	2-NMX	25.785	199277	8.159	2-NMX
32.813	120580	18.357	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.67A
Area File: C:\CPWIN\DATA1\4E12310B.67A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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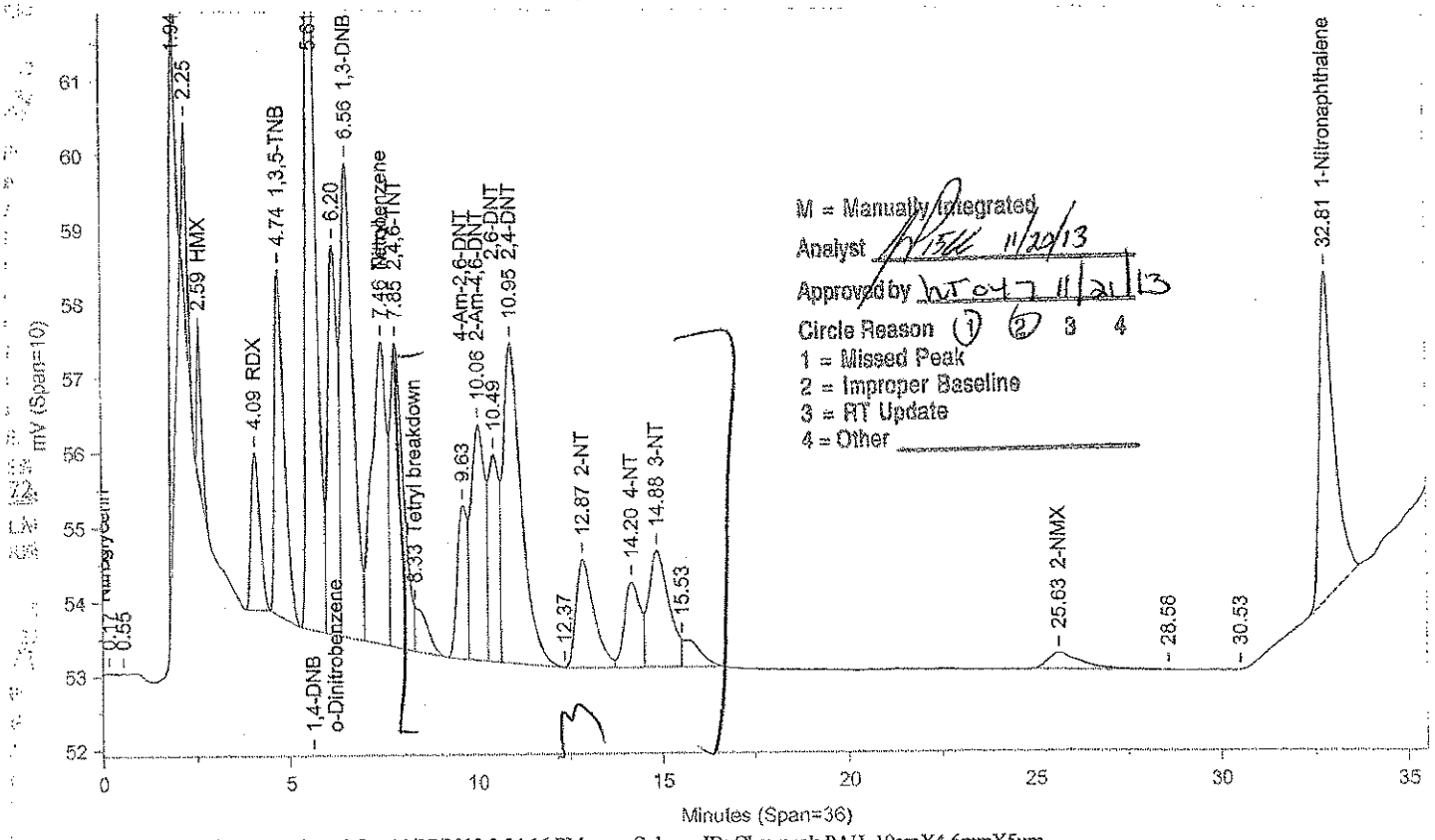
Not Used
See Reintegration

LANCASTER LABORATORIES

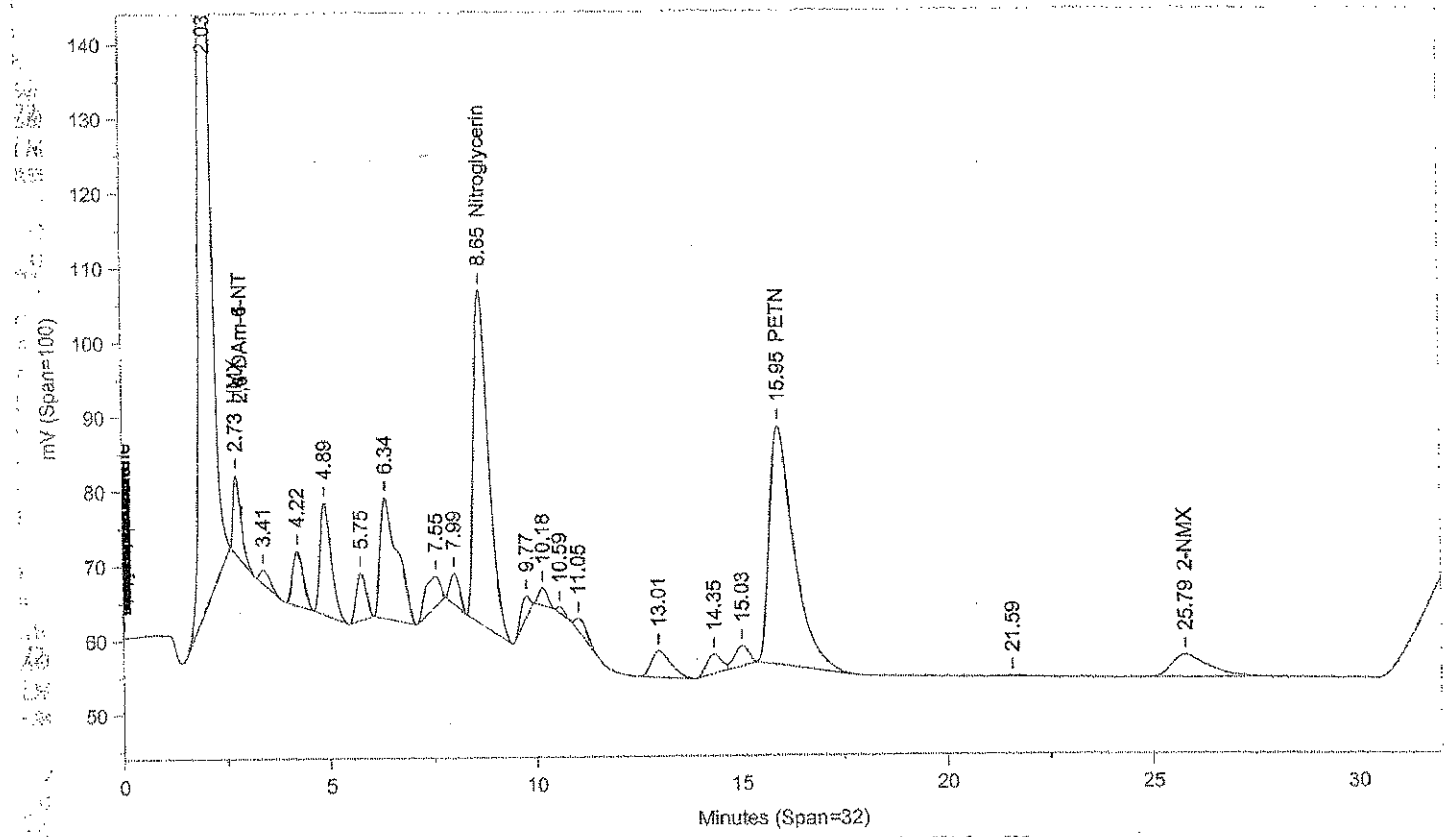
File: C:\CPWIN\DATA1\4E12310.67R



M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason (1) (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/17/2013 3:24:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.67R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 3:24:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.732	139351	6.763	HMX
4.086	35270	7.8	RDX	.	0	.	RDX
4.744	81572	7.729	1,3,5-TNB	.	0	.	1,3,5-TNB
5.611	197762	15.525	1,4-DNB	.	0	.	1,4-DNB
6.196	93175	18.086	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	145193	8.949	1,3-DNB	.	0	.	1,3-DNB
7.464	115005	6.654	Tetryl	.	0	.	Tetryl
7.846	97692	8.575	2,4,6-TNT	.	0	.	2,4,6-TNT
8.328	13799	.798	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.651	1139625	178.338	Nitroglycerin
9.627	40143	8.557	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.056	82847	7.565	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.488	56330	9.267	2,6-DNT	.	0	.	2,6-DNT
10.95	147618	8.926	2,4-DNT	.	0	.	2,4-DNT
12.874	49254	7.446	2-NT	.	0	.	2-NT
14.204	34536	7.362	4-NT	.	0	.	4-NT
14.88	58830	8.69	3-NT	.	0	.	3-NT
.	0	.	PETN	15.945	1342813	196.108	PETN
25.635	13775	8.082	2-NMX	25.785	199277	8.159	2-NMX
32.813	120580	18.357	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:28:00 AM
File Reported On: 11/20/2013 at 11:27:58 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265232** MSD R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 15:24:17
Instrument : CP12--Y6329A
Result file : 4C12310.67R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 77% (73-122) Conc.: 7.670925

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.33	4.40	33564	6.403416
RDX	5.16	5.30	5.36	46710	7.865474
Nitrobenzene	12.75	12.96	13.07	77209	8.349779
o-Dinitrobenzene	14.72	15.03	15.08	120469	17.486277
4-Am-2,6-DNT	16.66	16.91	16.98	175565	9.096789
1,3-DNB	18.93	19.18	19.23	125405	7.404942
1,4-DNB	19.62	19.97	19.92	221275	19.296831
2-NT	24.05	24.50	24.57	46563	7.924186
4-NT	27.60	28.08	28.12	67895	7.065176
1,3,5-TNB	29.81	30.15	30.21	54468	5.470792
2,6-DNT	30.62	30.95	31.02	65857	10.337524
2,4-DNT	33.67	33.84	33.89	121221	9.386847
2-NMX	34.12	34.32	34.32	11534	7.670925
Tetryl	34.41	34.56	34.61	61063	8.055061
2,4,6-TNT	35.36	35.50	35.56	88217	8.412149
1-Nitronaphthalene	36.36	36.49	36.56	131132	16.903645

Analysis Report (B)

Injected on : NOV 17, 2013 15:24:17
Instrument : CP12--Y6329B
Result file : 4C12310B.67R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.77	9.82	939787	184.926651
PETN	26.02	26.39	26.44	1060742	178.638672

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	178.638672	18	6			
☑ Nitroglycerin	B	184.926651	15	5.2			
☑ HMX	A	6.403416	2	0.65			
☑ RDX	A	7.865474	0.5	0.2			
☑ Nitrobenzene	A	8.349779	0.6	0.2			
☑ o-Dinitrobenzene	A	17.486277	0.6	0.2			
☑ 4-Am-2,6-DNT	A	9.096789	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	7.404942	0.6	0.2			
☑ 1,4-DNB	A	19.296831	0.6	0.3			
☑ 2-NT	A	7.924186	0.75	0.25			
☑ 4-NT	A	7.065176	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	5.470792	0.6	0.2			
☑ 2,6-DNT	A	10.337524	1.3	0.45			
☑ 2,4-DNT	A	9.386847	2	0.72			
☐ 2-NMX	A	7.670925					
☑ Tetryl	A	8.055061	0.6	0.4			
☑ 2,4,6-TNT	A	8.412149	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:33:16

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7265232** MSD R2163 Sample ID: AA **Batchnumber: 133130015A**
Sample Amount: 500 mL Total Volume: 10 ml Analyst: 1566 SDG: KVM04 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 15:24:17
Instrument	: CP12--Y6329A
Result file	: 4C12310.67R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 15:24:17
Instrument	: CP12--Y6329B
Result file	: 4C12310B.67R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	16.903645	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tompkins Principal Specialist

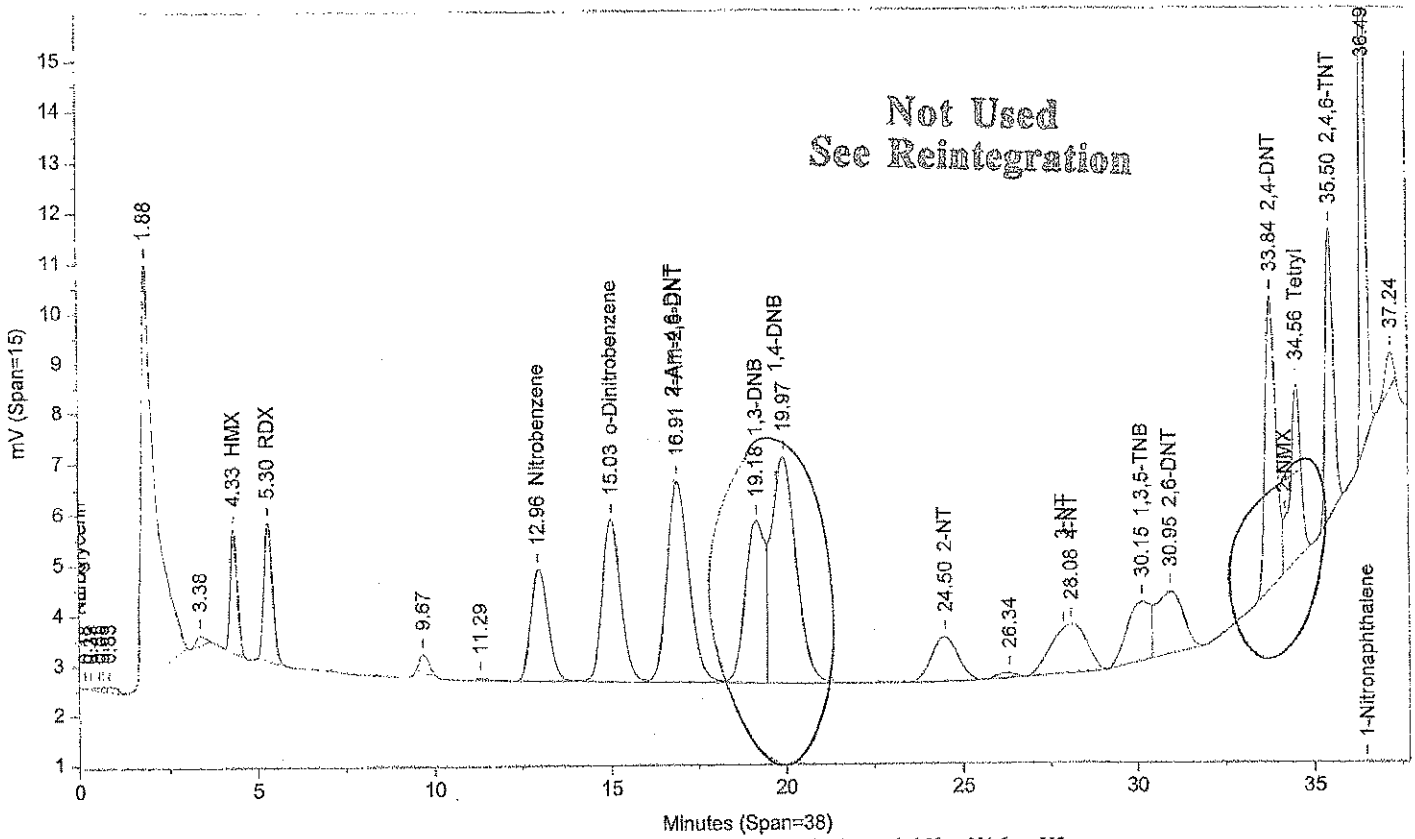
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

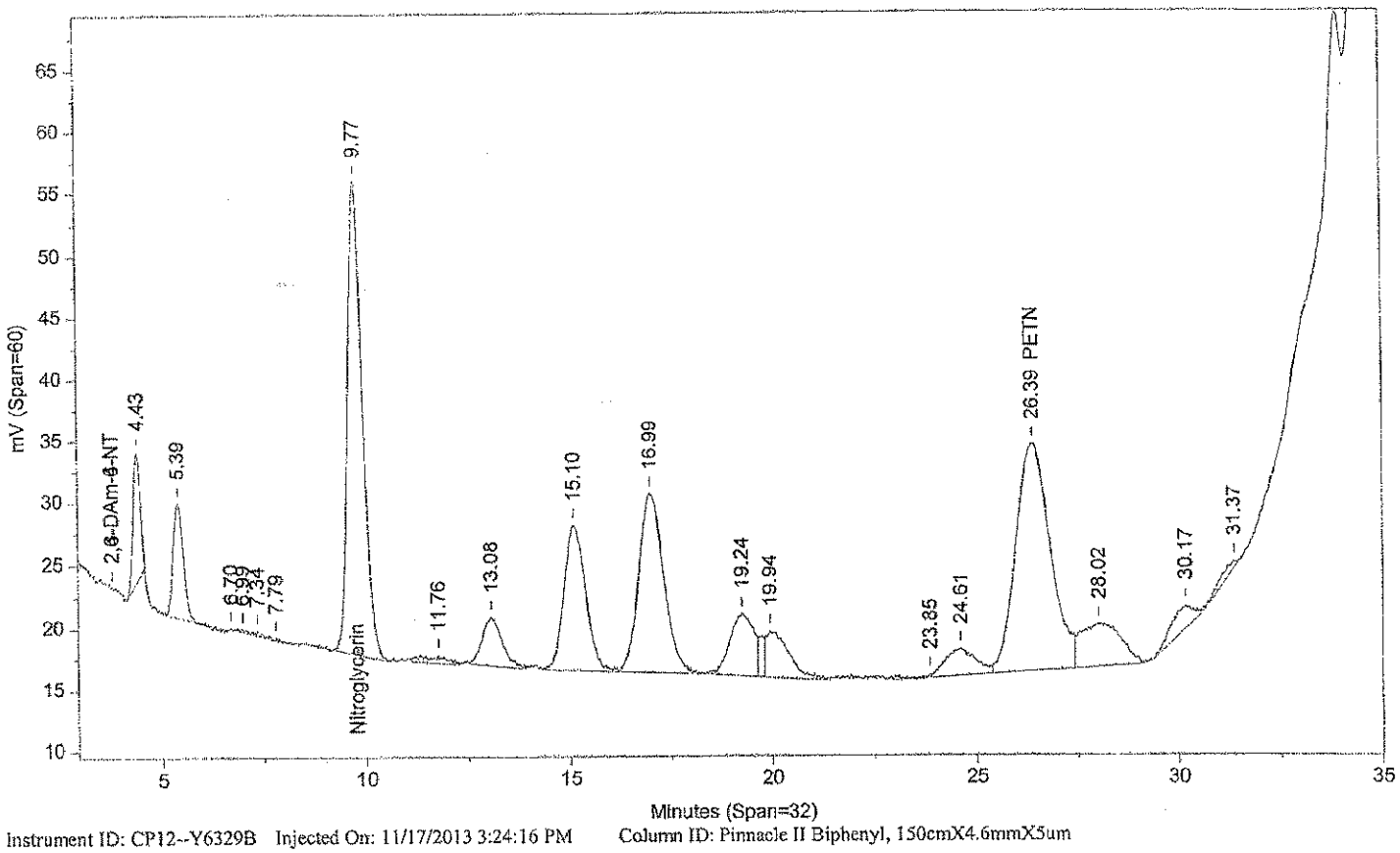
Printed on: 11/20/2013 15:33:16

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.67R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 3:24:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.67R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 3:24:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Mblume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.326	33564	6.403	HMX	.	0	.	HMX
5.298	46710	7.865	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.774	939787	184.927	Nitroglycerin
12.96	77209	8.35	Nitrobenzene	.	0	.	Nitrobenzene
15.026	120469	17.486	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.908	175565	9.097	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.182	125405	7.405	1,3-DNB	.	0	.	1,3-DNB
24.498	46563	7.924	2-NT	.	0	.	2-NT
.	0	.	PETN	26.386	1060742	178.639	PETN
28.078	67895	7.065	4-NT	.	0	.	4-NT
30.147	54468	5.471	1,3,5-TNB	.	0	.	1,3,5-TNB
30.951	65857	10.338	2,6-DNT	.	0	.	2,6-DNT
33.837	121221	9.387	2,4-DNT	.	0	.	2,4-DNT
34.56	72597	9.508	Tetryl	.	0	.	Tetryl
35.498	88217	8.412	2,4,6-TNT	.	0	.	2,4,6-TNT
36.485	131132	16.904	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.67A
Area File: C:\CPWIN\DATA1\4C12310B.67A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:19:10 PM
File Reported On: 11/17/2013 at 10:19:20 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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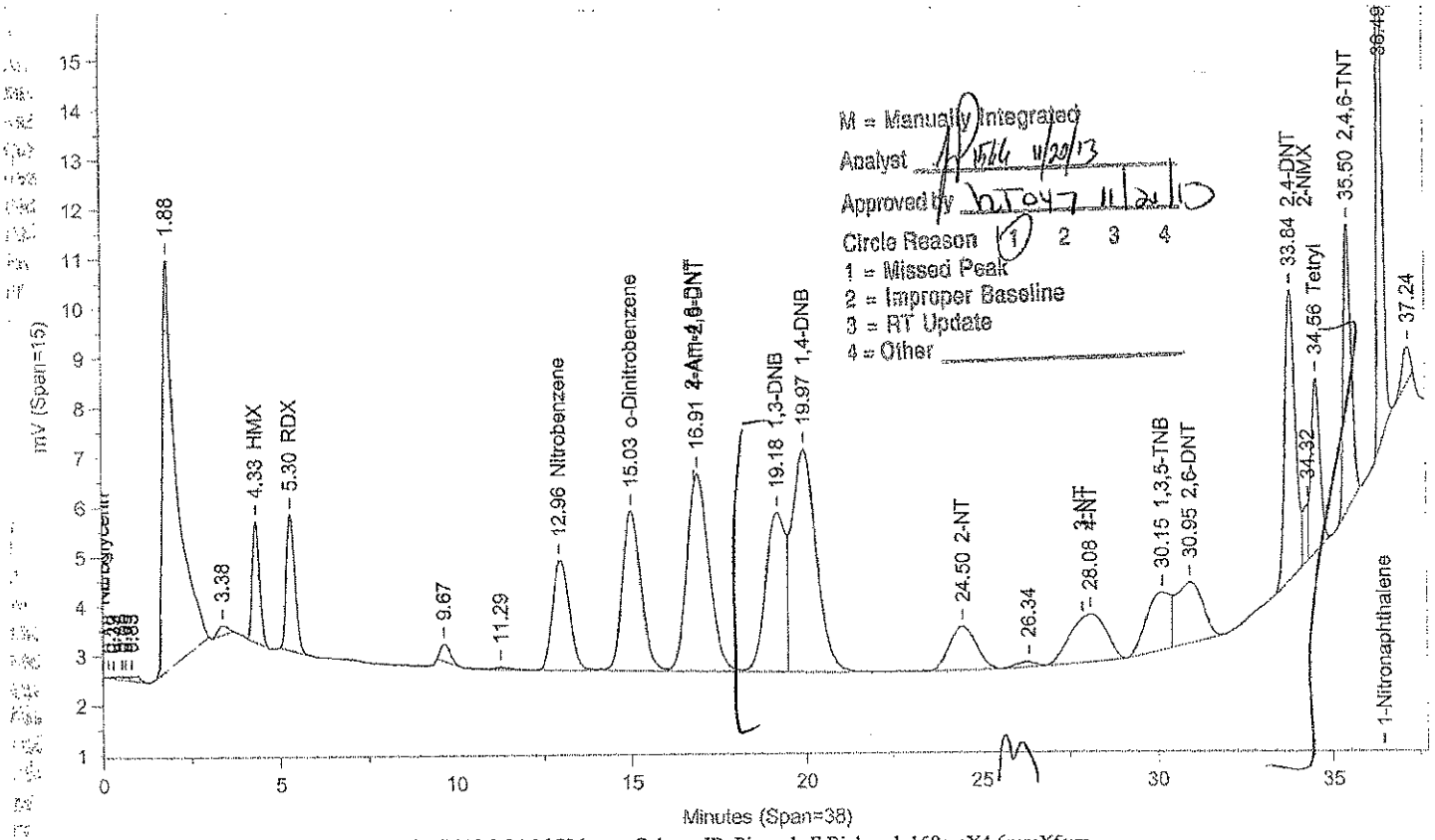
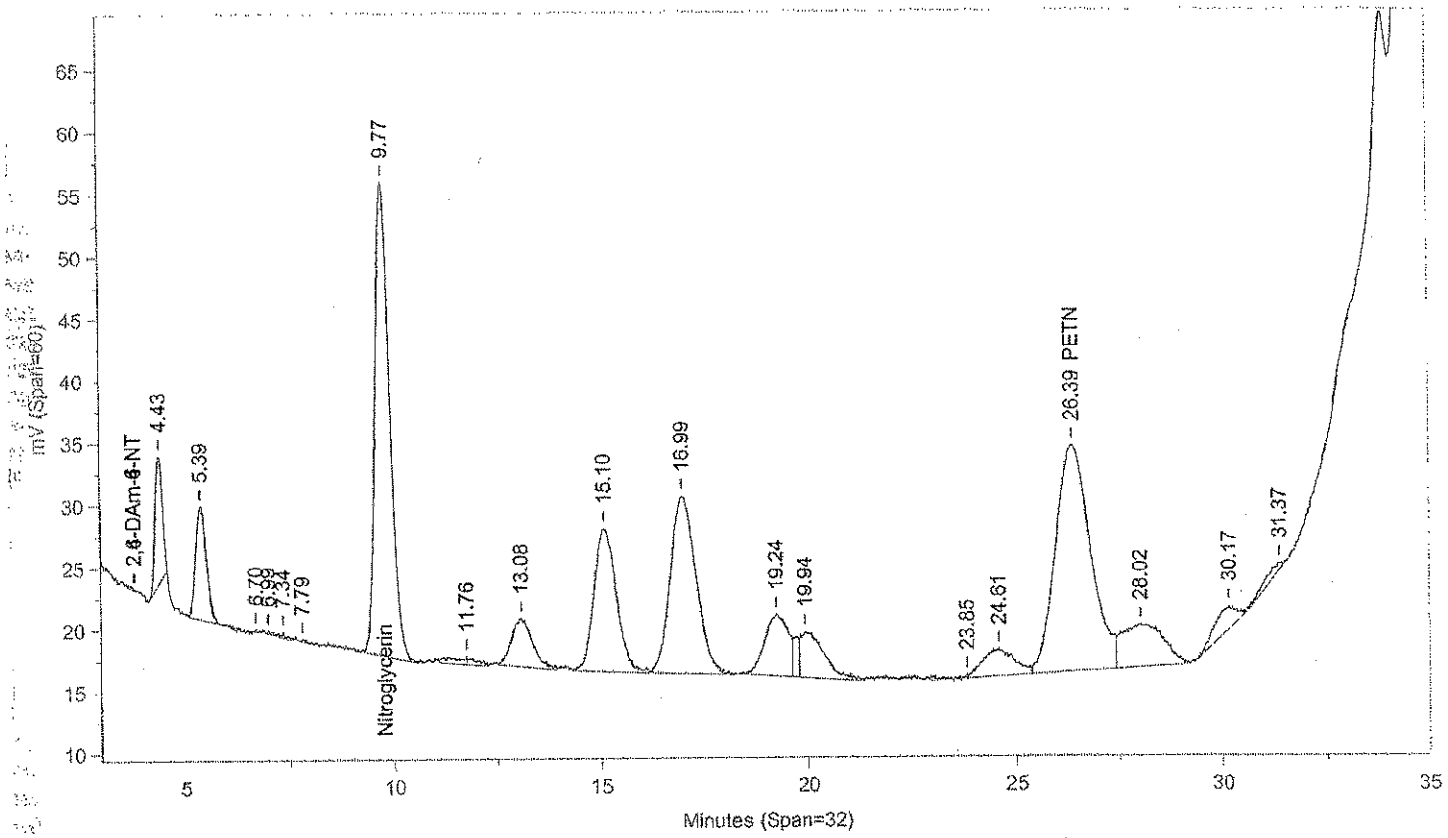


Instrument ID: CP12--Y6329A Injected On: 11/17/2013 3:24:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.67R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 3:24:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.326	33564	6.403	HMX	.	0	.	HMX
7.298	46710	7.865	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.774	939787	184.927	Nitroglycerin
12.96	77209	8.35	Nitrobenzene	.	0	.	Nitrobenzene
15.026	120469	17.486	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.908	175565	9.097	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.182	125405	7.405	1,3-DNB	.	0	.	1,3-DNB
19.971	221275	19.297	1,4-DNB	.	0	.	1,4-DNB
24.498	46563	7.924	2-NT	.	0	.	2-NT
.	0	.	PETN	26.386	1060742	178.639	PETN
28.078	67895	7.065	4-NT	.	0	.	4-NT
30.147	54468	5.471	1,3,5-TNB	.	0	.	1,3,5-TNB
30.951	65857	10.338	2,6-DNT	.	0	.	2,6-DNT
33.837	121221	9.387	2,4-DNT	.	0	.	2,4-DNT
34.322	11534	7.671	2-NMX	.	0	.	2-NMX
34.56	61063	8.055	Tetryl	.	0	.	Tetryl
35.498	88217	8.412	2,4,6-TNT	.	0	.	2,4,6-TNT
36.485	131132	16.904	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:40:34 PM
File Reported On: 11/20/2013 at 2:40:32 PM

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Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314 BLK Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 17:48:25
Instrument X6329A
Result file 5E12310.34R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 89% (63 - 150) Conc: 4440.551758

Analysis Report (B)

Injected on Nov 19, 2013 17:48:25
Instrument Y6329A
Result file 5C12310.34R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 112% (63 - 150) Conc: 5582.893066

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,4-Dinitrobenzene	5.80	5.91	6.00	35	1.371956
o-Dinitrobenzene	6.43	6.50	6.63	123	11.937737
2,4,6-Trinitrotoluene	8.19	8.28	8.39	10	0.450693
2,6-Dinitrotoluene	10.95	11.08	11.23	39	3.193529
2,4-Dinitrotoluene	11.45	11.59	11.74	28	0.861124
2-NMX	26.91	27.14	27.59	15137	4440.551758

Compound	Min	RT	Max	Area	Amount
2,4-Dinitrotoluene	33.60	33.66	33.82	347	13.423467
2-NMX	34.05	34.15	34.25	17633	5582.893066
Tetryl	34.39	34.58	34.59	250	C

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<6000	<2000			
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-Trinitrobenzene			<300	<100			
1,4-Dinitrobenzene			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153			
Nitrobenzene			<300	<100			
2,4,6-Trinitrotoluene			<300	<100			
4-Amino-2,6-dinitrotoluene			<300	<150			
2-Amino-4,6-dinitrotoluene			<300	<100			
2,6-Dinitrotoluene			<300	<100			
2,4-Dinitrotoluene			<300	<100			
2-Nitrotoluene			<300	<200			
4-Nitrotoluene			<300	<200			
3-Nitrotoluene			<300	<250			
2-NMX	A	4440.551758				22.79	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomeyko, Principal Specialist
Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--X6329A
Result file : 5E12310.34R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 89% (63-150) Conc.: 4440.55175(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.36	4.40	512	-66.635361
1,4-DNB	5.80	5.91	6.00	35	1.371956
o-Dinitrobenzene	6.43	6.50	6.63	123	11.937737
2,4,6-TNT	8.19	8.28	8.39	10	0.450693
2,6-DNT	10.95	11.08	11.23	39	3.193529
2,4-DNT	11.45	11.59	11.74	28	0.861124
2-NMX	26.91	27.14	27.59	15137	4440.551758

Analysis Report (B)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--X6329B
Result file : 5E12310B.34R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 105% (63-150) Conc.: 5234.70263:

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.28	27.76	255699	5234.702637

RDX $\frac{512}{110.0628} \times \frac{20}{2} = 46.518896$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4440.551758				16.42	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

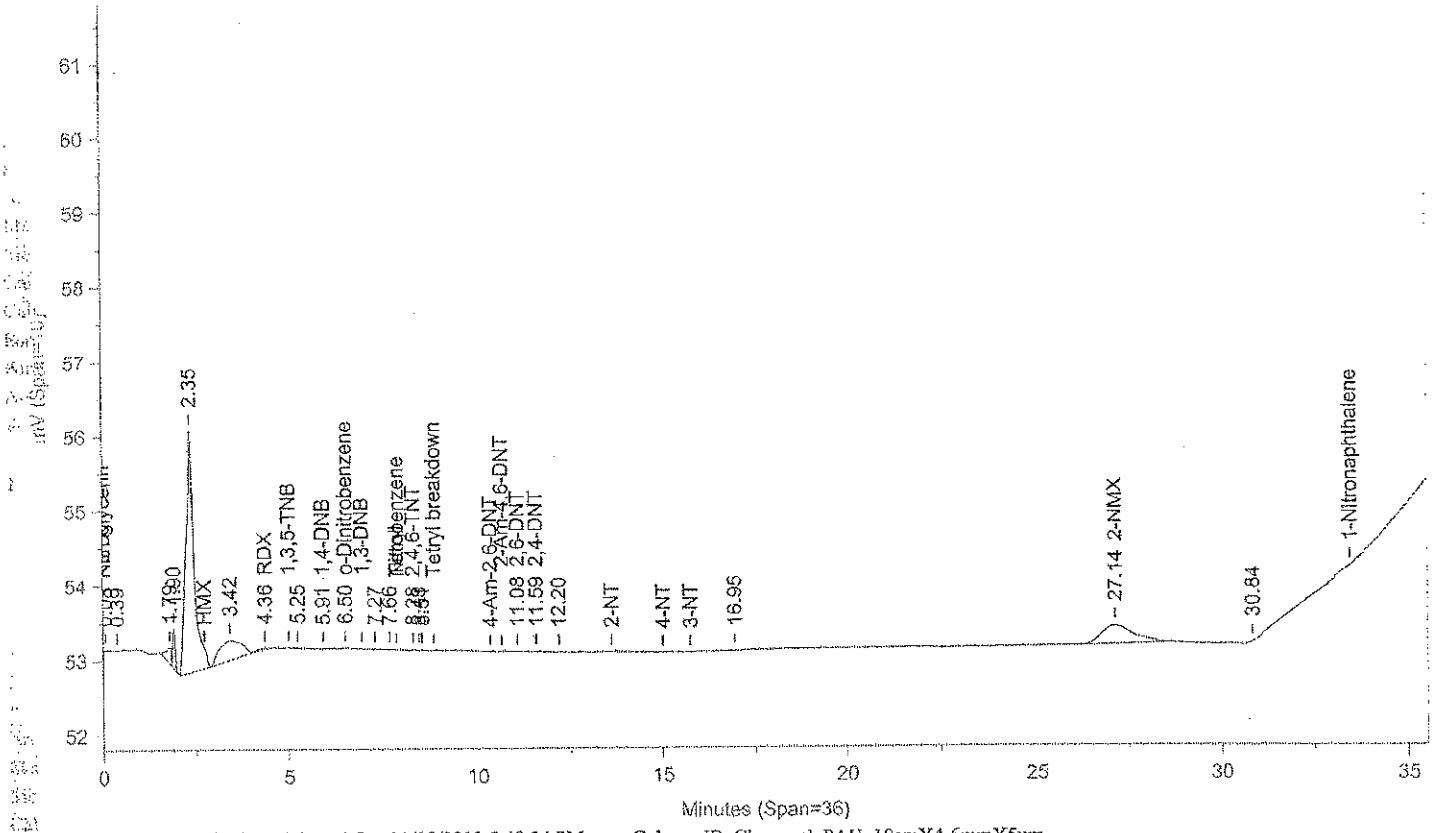
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

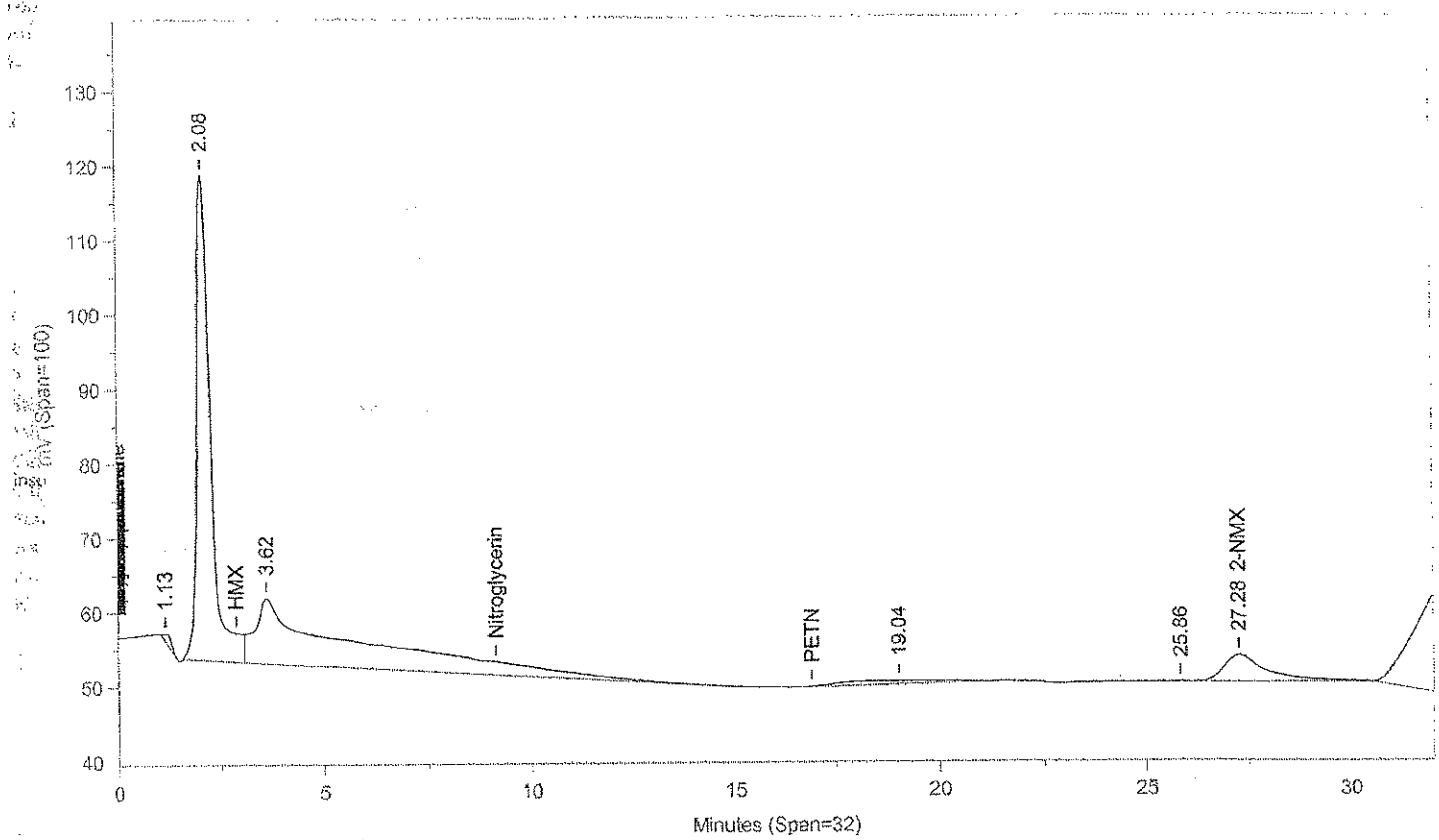
Printed on: 11/22/2013 16:46:45

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.34R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:48:24 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.34R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:48:24 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.356	512	-66.635	RDX		0		RDX
5.911	35	1.372	1,4-DNB		0		1,4-DNB
6.495	123	11.938	o-Dinitrobenzene		0		o-Dinitrobenzene
8.283	10	.451	2,4,6-TNT		0		2,4,6-TNT
11.082	39	3.194	2,6-DNT		0		2,6-DNT
11.588	28	.861	2,4-DNT		0		2,4-DNT
27.139	15137	4440.552	2-NMX	27.283	255699	5234.703	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.34A
Area File: C:\CPWIN\DATA1\5E12310B.34A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:49:48 PM
File Reported On: 11/20/2013 at 4:49:57 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--Y6329A
Result file : 5C12310.34R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 112% (63-150) Conc.: 5582.89306(

Analysis Report (B)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--Y6329B
Result file : 5C12310B.34R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.08	5.18	5.28	73	-229.267502
2,4-DNT	33.60	33.66	33.82	347	13.423467
2-NMX	34.05	34.15	34.25	17633	5582.893066
Tetryl	34.39	34.58	34.59	250	198.250275

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			1
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5582.893066					
☑ Tetryl	A	198.250275	<300	153	J		N/C
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie J. Temeyko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:35:57

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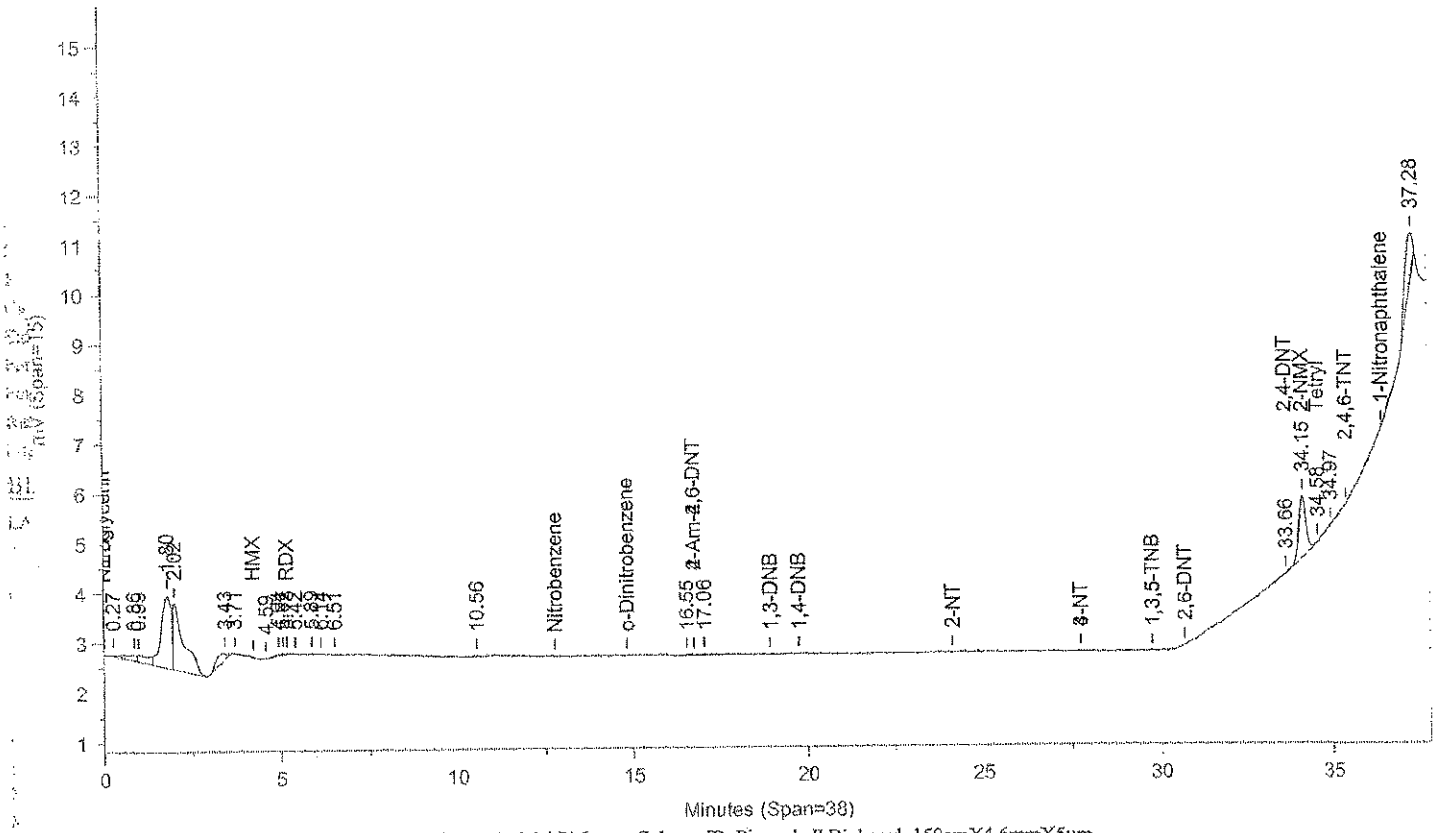
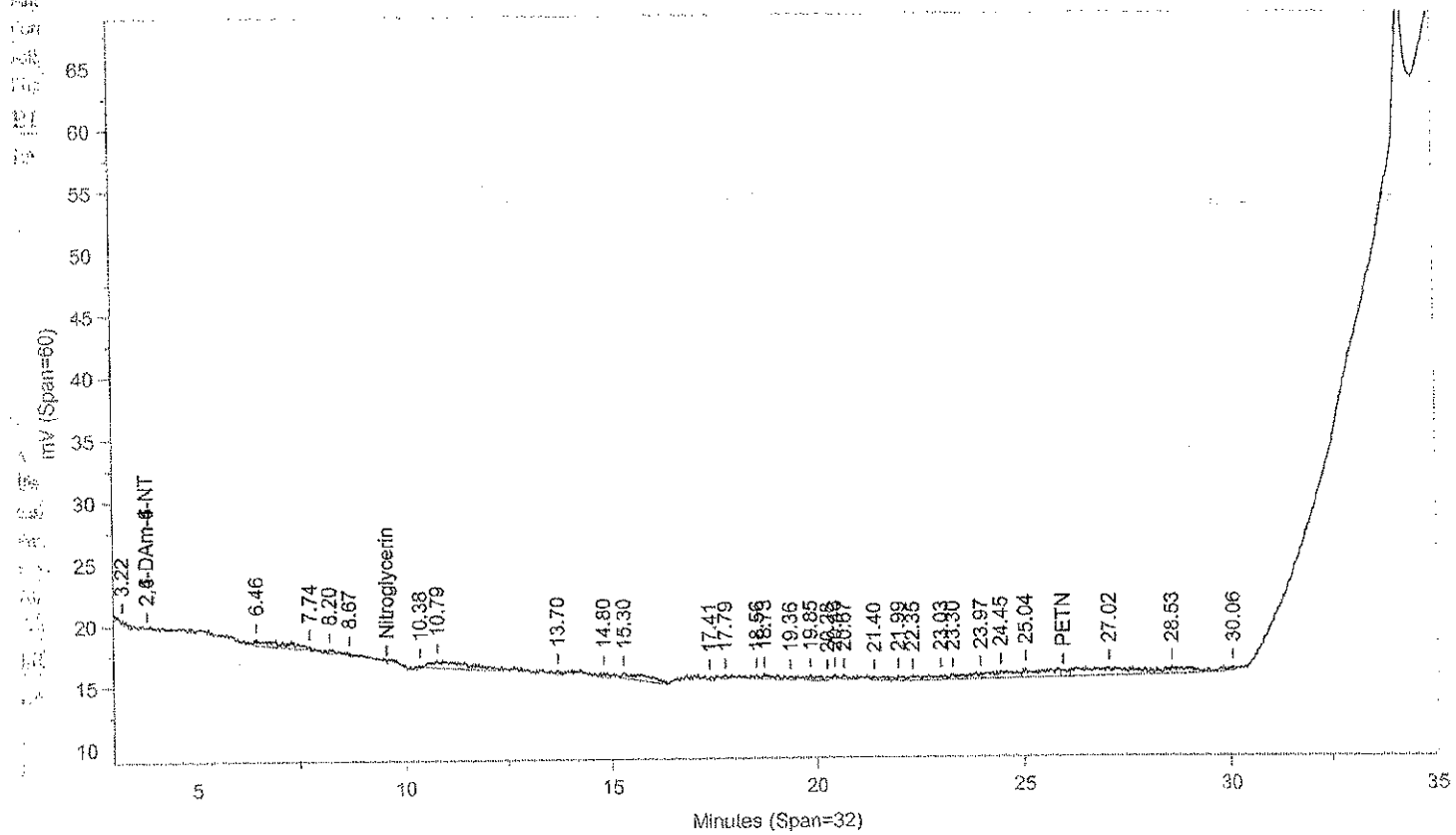
File: C:\CPWIN\DATA1\5C12310.34R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:48:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.34R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:48:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.178	73	-229.268	RDX			0	RDX
33.656	347	13.423	2,4-DNT			0	2,4-DNT
34.15	17633	5582.893	2-NMX			0	2-NMX
34.577	250	198.25	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.34A
Area File: C:\CPWIN\DATA1\5C12310B.34A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:44:14 PM
File Reported On: 11/20/2013 at 5:44:23 PM

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Data Summary

Sample Name: LCSA 11/12/13 LCS20314 LCS Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 18:30:49
Instrument X6329A
Result file 5E12310.35R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 97% (63 - 150) Conc: 4840.435059

Analysis Report (B)

Injected on Nov 19, 2013 18:30:49
Instrument Y6329A
Result file 5C12310.35R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 92% (63 - 150) Conc: 4606.641602

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.20	4.30	4.40	42652	4742.681152
1,3,5-Trinitrobenzene	4.90	5.00	5.10	99221	4700.475586
1,4-Dinitrobenzene	5.80	5.91	6.00	240515	9440.367188
o-Dinitrobenzene	6.43	6.53	6.63	113699	11034.770508
1,3-DNB	6.83	6.91	7.03	179846	5542.35791
Tetryl	7.71	7.85	7.99	149664	4555.140777
2,4,6-Trinitrotoluene	8.19	8.29	8.39	126988	5573.057617
4-Amino-2,6-dinitrotoluer	10.21	10.20	10.49	46626	4969.726074
2-Amino-4,6-dinitrotoluer	10.51	10.65	10.80	99741	4554.069336
2,6-Dinitrotoluene	10.95	11.08	11.23	65263	5368.086914
2,4-Dinitrotoluene	11.45	11.58	11.74	173267	5238.368652
2-Nitrotoluene	13.49	13.61	13.77	60104	4543.366211
4-Nitrotoluene	14.87	15.02	15.19	43984	4687.738281
3-Nitrotoluene	15.60	15.74	15.93	75004	5539.245605
2-NMX	26.91	27.13	27.59	16500	4840.435059
1-Nitronaphthalene	33.20	33.41	33.69	156013	11875.675781

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.23	4.33	35954	3429.75708
RDX	5.08	5.19	5.28	59070	5035.84668
Nitrobenzene	12.62	12.73	12.94	90037	4875.074219
o-Dinitrobenzene	14.65	14.75	15.01	143608	10444.92675
4-Amino-2,6-dinitrotoluer	16.61	16.66	16.93	195914	5075.560547
1,3-DNB	18.80	18.84	19.10	157025	4636.024414
1,4-Dinitrobenzene	19.60	19.62	19.90	256163	11193.30078
2-Nitrotoluene	23.89	24.02	24.41	58942	5036.26513
4-Nitrotoluene	27.49	27.52	28.01	96157	4951.70898
1,3,5-Trinitrobenzene	29.57	29.62	29.97	115743	5221.70800
2,6-Dinitrotoluene	30.49	30.52	30.89	50141	3966.96069
2,4-Dinitrotoluene	33.60	33.67	33.82	142728	5526.11084
2-NMX	34.05	34.15	34.25	14226	4606.64160
Tetryl	34.39	34.46	34.59	82700	5389.92187
2,4,6-Trinitrotoluene	35.32	35.40	35.52	112245	5333.14160
1-Nitronaphthalene	36.34	36.43	36.54	167853	10741.03515

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	19662.185547	6000	2000		55.27	
PETN	B	17711.814453	6000	2000		27.60	
HMX	A	3450.964844	750	250		0.62	
RDX	A	4742.681152	300	125		6.00	
1,3,5-Trinitrobenzene	A	4700.475586	300	100		10.51	
1,4-Dinitrobenzene	A	9440.367188	300	100		16.99	
o-Dinitrobenzene	A	11034.770508	300	100		5.49	
1,3-DNB	A	5542.35791	300	100		17.81	
Tetryl	B	5389.921875	300	153		16.79	
Nitrobenzene	B	4875.074219	300	100		6.79	
2,4,6-Trinitrotoluene	A	5573.057617	300	100		4.40	
4-Amino-2,6-dinitrotoluene	A	4969.726074	300	150		2.11	
2-Amino-4,6-dinitrotoluene	A	4554.069336	300	100		10.83	
2,6-Dinitrotoluene	A	5368.086914	300	100		30.02	
2,4-Dinitrotoluene	A	5238.368652	300	100		5.35	
2-Nitrotoluene	A	4543.366211	300	200		10.29	
4-Nitrotoluene	A	4687.738281	300	200		5.48	
3-Nitrotoluene	A	5539.245605	300	250		11.20	
2-NMX	A	4840.435059				4.95	
1-Nitronaphthalene	A	11875.675781	300	100		10.03	

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Data Summary

Sample Name: LCSA 11/12/13 LCS20314 LCS Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	Nov 19, 2013 18:30:49
Instrument	X6329A
Result file	5E12310.35R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 19, 2013 18:30:49
Instrument	Y6329A
Result file	5C12310.35R
Calibration file	4C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tennyson, Principal Specialist
Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329A
Result file : 5E12310.35R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 97% (63-150) Conc.: 4840.43505

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.30	4.40	42652	4742.681152
1,3,5-TNB	4.90	5.00	5.10	99221	4700.475586
1,4-DNB	5.80	5.91	6.00	240515	9440.367188
o-Dinitrobenzene	6.43	6.53	6.63	113699	11034.770508
1,3-DNB	6.83	6.91	7.03	179846	5542.357910
Tetryl	7.71	7.85	7.99	149664	4329.774902
2,4,6-TNT	8.19	8.29	8.39	126988	5573.057617
Tetryl breakdown	8.71	8.85	8.95	7790	225.365875
4-Am-2,6-DNT	10.21	10.20	10.49	46626	4969.726074
2-Am-4,6-DNT	10.51	10.65	10.80	99741	4554.069336
2,6-DNT	10.95	11.08	11.23	65263	5368.086914
2,4-DNT	11.45	11.58	11.74	173267	5238.368652
2-NT	13.49	13.61	13.77	60104	4543.366211
4-NT	14.87	15.02	15.19	43984	4687.738281
3-NT	15.60	15.74	15.93	75004	5539.245605
2-NMX	26.91	27.13	27.59	16500	4840.435059
1-Nitronaphthalene	33.20	33.41	33.69	156013	11875.675781

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329B
Result file : 5E12310B.35R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 104% (63-150) Conc.: 5226.40625

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.77	2.87	2.97	142359	3450.964844
Nitroglycerin	8.96	9.12	9.34	142475	11147.800781
PETN	16.63	16.87	17.20	183512	13415.883789
2-NMX	27.09	27.35	27.76	255294	5226.406250

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	11147.800781	6000	2000			
☑ PETN	B	13415.883789	6000	2000			Corrected Value = 3936.25 88% Recovery
☑ HMX	B	3450.964844	750	250			
☑ RDX	A	4742.681152	300	125			
☑ 1,3,5-TNB	A	4700.475586	300	100			
☑ 1,4-DNB	A	9440.367188	300	100			
☑ o-Dinitrobenzene	A	11034.770508	300	100			
☑ 1,3-DNB	A	5542.357910	300	100			
☑ Tetryl	A	4329.774902	300	153			+Breakdown = 4555.140777
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT	A	5573.057617	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	4969.726074	300	150			
☑ 2-Am-4,6-DNT	A	4554.069336	300	100			
☑ 2,6-DNT	A	5368.086914	300	100			
☑ 2,4-DNT	A	5238.368652	300	100			
☑ 2-NT	A	4543.366211	300	200			
☑ 4-NT	A	4687.738281	300	200			
☑ 3-NT	A	5539.245605	300	250			
☐ 2-NMX	A	4840.435059				7.67	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/24/2013 15:37:46

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329A
Result file : 5E12310.35R
Calibration file : 4E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329B
Result file : 5E12310B.35R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11875.675781	300	100			

Units: ug/kg

Reviewed by: James H. Place Senior Chemist
Date: NOV 24 2013

Verified by:
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/24/2013 15:37:46

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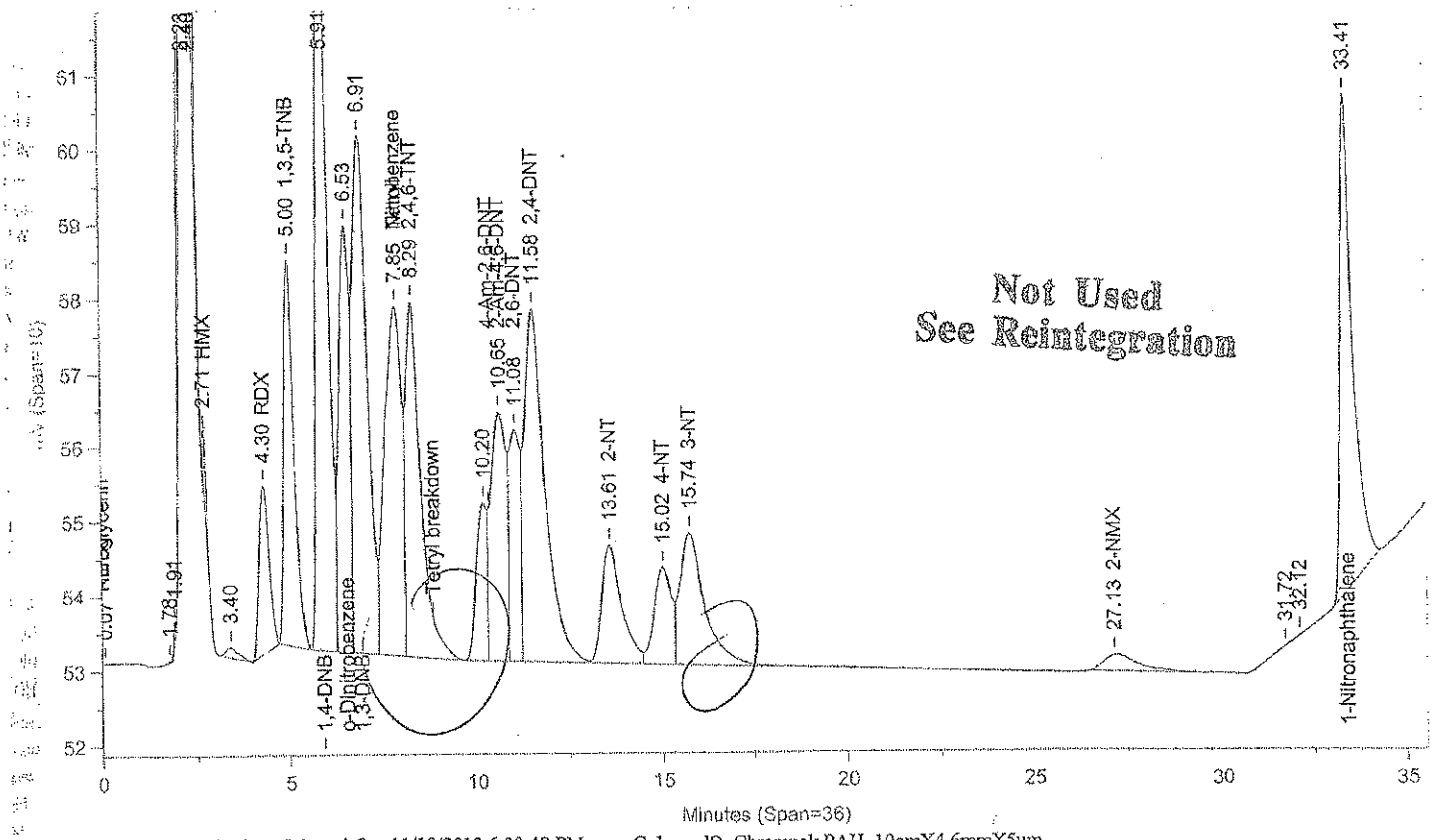
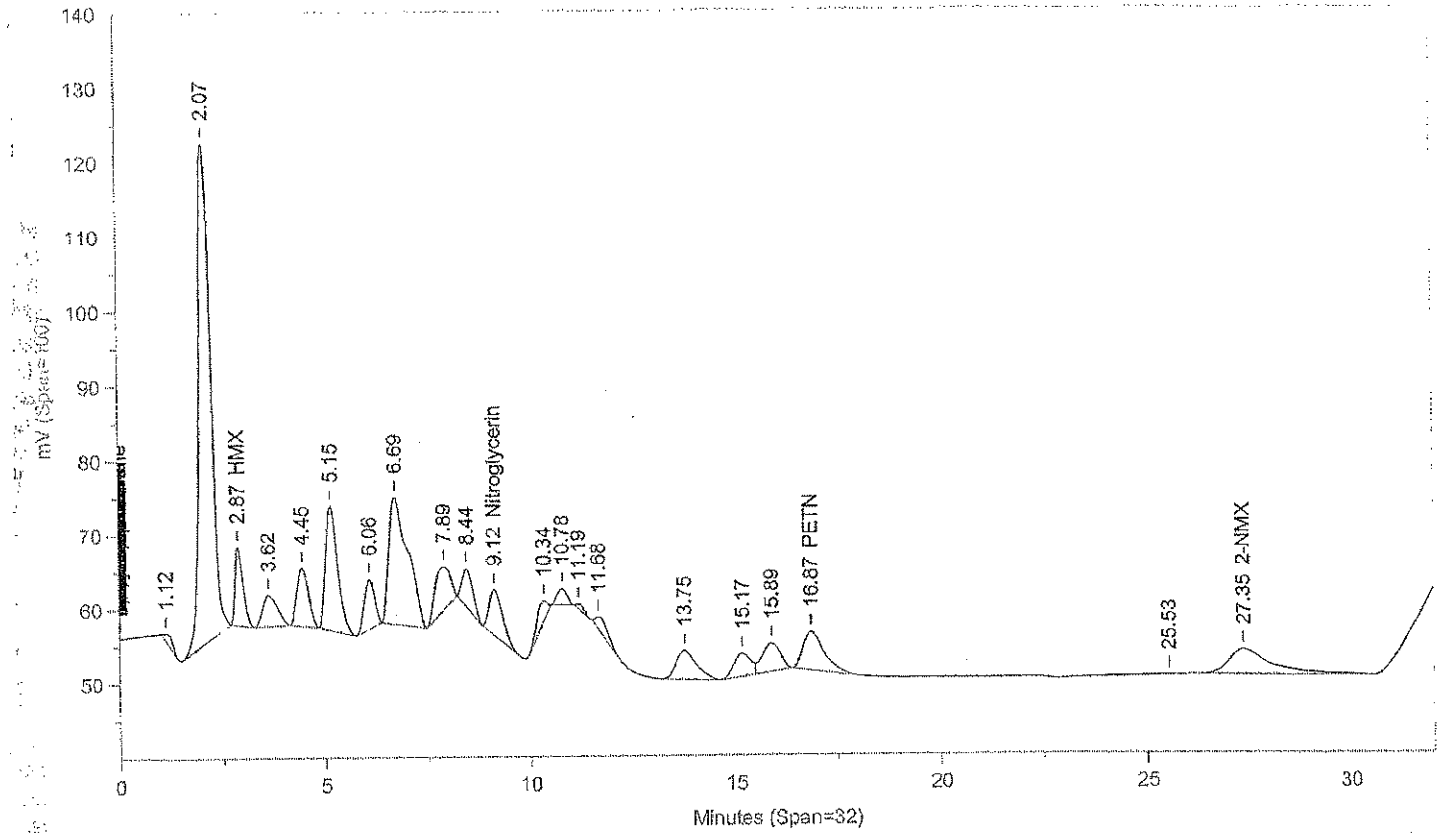
File: C:\CPWIN\DATA1\5E12310.35R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.35R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	142359	3450.965	HMX
4.304	42652	4742.681	RDX	.	0	.	RDX
4.998	99221	4700.476	1,3,5-TNB	.	0	.	1,3,5-TNB
5.912	240515	9440.367	1,4-DNB	.	0	.	1,4-DNB
6.532	113699	11034.77	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.914	179846	5542.358	1,3-DNB	.	0	.	1,3-DNB
7.848	149664	4329.775	Tetryl	.	0	.	Tetryl
8.288	134778	5914.936	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.125	142475	11147.8	Nitroglycerin
10.652	97488	4451.202	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	65206	5363.373	2,6-DNT	.	0	.	2,6-DNT
11.583	179316	5421.258	2,4-DNT	.	0	.	2,4-DNT
13.606	58677	4435.458	2-NT	.	0	.	2-NT
15.021	41621	4435.85	4-NT	.	0	.	4-NT
15.74	82788	6114.087	3-NT	.	0	.	3-NT
.	0	.	PETN	16.868	183512	13415.88	PETN
27.135	14780	4335.913	2-NMX	27.353	255294	5226.406	2-NMX
33.405	156013	11875.68	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.35A
Area File: C:\CPWIN\DATA1\5E12310B.35A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:50:18 PM
File Reported On: 11/20/2013 at 4:50:28 PM

Not Used
See Reintegration

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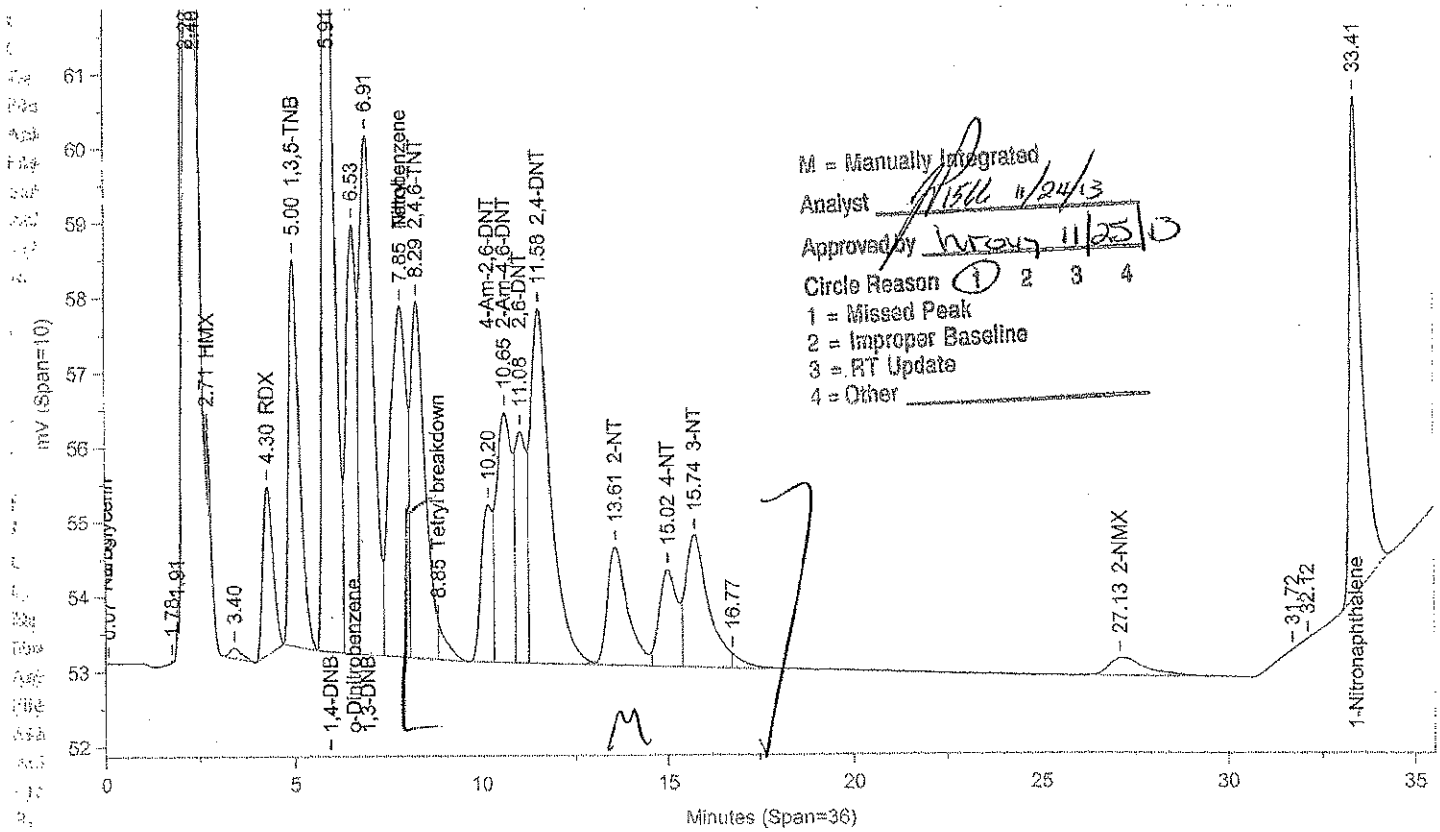
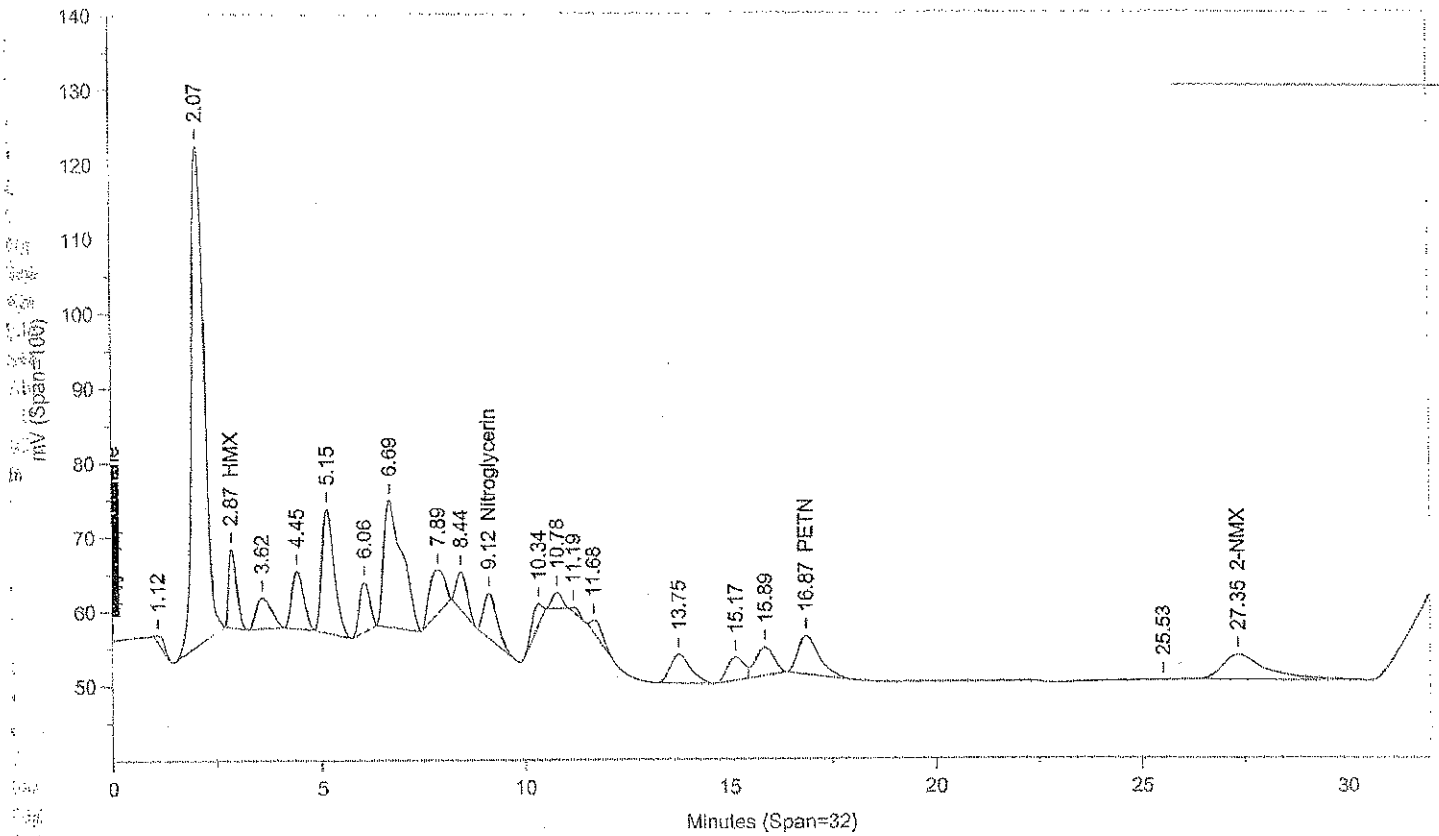


M = Manually Integrated
Analyst [signature] 11/24/13
Approved by [signature] 11/25/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.35R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	142359	3450.965	HMX
4.304	42652	4742.681	RDX	.	0	.	RDX
4.998	99221	4700.476	1,3,5-TNB	.	0	.	1,3,5-TNB
5.912	240515	9440.367	1,4-DNB	.	0	.	1,4-DNB
6.532	113699	11034.77	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.914	179846	5542.358	1,3-DNB	.	0	.	1,3-DNB
7.848	149664	4329.775	Tetryl	.	0	.	Tetryl
8.288	126988	5573.058	2,4,6-TNT	.	0	.	2,4,6-TNT
8.85	7790	225.366	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.125	142475	11147.8	Nitroglycerin
10.204	46626	4969.726	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.652	99741	4554.069	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	65263	5368.087	2,6-DNT	.	0	.	2,6-DNT
11.583	173267	5238.369	2,4-DNT	.	0	.	2,4-DNT
13.606	60104	4543.366	2-NT	.	0	.	2-NT
15.021	43984	4687.738	4-NT	.	0	.	4-NT
15.74	75004	5539.246	3-NT	.	0	.	3-NT
.	0	.	PETN	16.868	183512	13415.88	PETN
27.135	16500	4840.435	2-NMX	27.353	255294	5226.406	2-NMX
33.405	156013	11875.68	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/24/2013 3:33:38 PM
File Reported On: 11/24/2013 at 3:33:37 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329A
Result file : 5C12310.35R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 92% (63-150) Conc.: 4606.64160

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.23	4.33	35954	3429.757080
RDX	5.08	5.19	5.28	59070	5035.846680
Nitrobenzene	12.62	12.73	12.94	90037	4875.074219
o-Dinitrobenzene	14.65	14.75	15.01	143608	10444.926758
4-Am-2,6-DNT	16.61	16.66	16.93	195914	5075.560547
1,3-DNB	18.80	18.84	19.10	157025	4636.024414
1,4-DNB	19.60	19.62	19.90	256163	11193.300781
2-NT	23.89	24.02	24.41	58942	5036.265137
4-NT	27.49	27.52	28.01	96157	4951.708984
1,3,5-TNB	29.57	29.62	29.97	115743	5221.708008
2,6-DNT	30.49	30.52	30.89	50141	3966.960693
2,4-DNT	33.60	33.67	33.82	142728	5526.110840
2-NMX	34.05	34.15	34.25	14226	4606.641602
Tetryl	34.39	34.46	34.59	82700	5389.921875
2,4,6-TNT	35.32	35.40	35.52	112245	5333.141602
1-Nitronaphthalene	36.34	36.43	36.54	167853	10741.035156

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329B
Result file : 5C12310B.35R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.53	9.67	199844	19662.185547
PETN	25.73	25.84	26.15	210343	17711.814453

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	17711.814453	6000	2000			Report
☑ Nitroglycerin	B	19662.185547	6000	2000			
☑ HMX	A	3429.757080	750	250			
☑ RDX	A	5035.846680	300	125			
☑ Nitrobenzene	A	4875.074219	300	100			
☑ o-Dinitrobenzene	A	10444.926758	300	100			
☑ 4-Am-2,6-DNT	A	5075.560547	300	150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB	A	4636.024414	300	100			
☑ 1,4-DNB	A	11193.300781	300	100			
☑ 2-NT	A	5036.265137	300	200			
☑ 4-NT	A	4951.708984	300	200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB	A	5221.708008	300	100			
☑ 2,6-DNT	A	3966.960693	300	100			
☑ 2,4-DNT	A	5526.110840	300	100			
☐ 2-NMX	A	4606.641602					
☑ Tetryl	A	5389.921875	300	153			
☑ 2,4,6-TNT	A	5333.141602	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:10

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329A
Result file : 5C12310.35R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329B
Result file : 5C12310B.35R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	10741.035156	300	100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

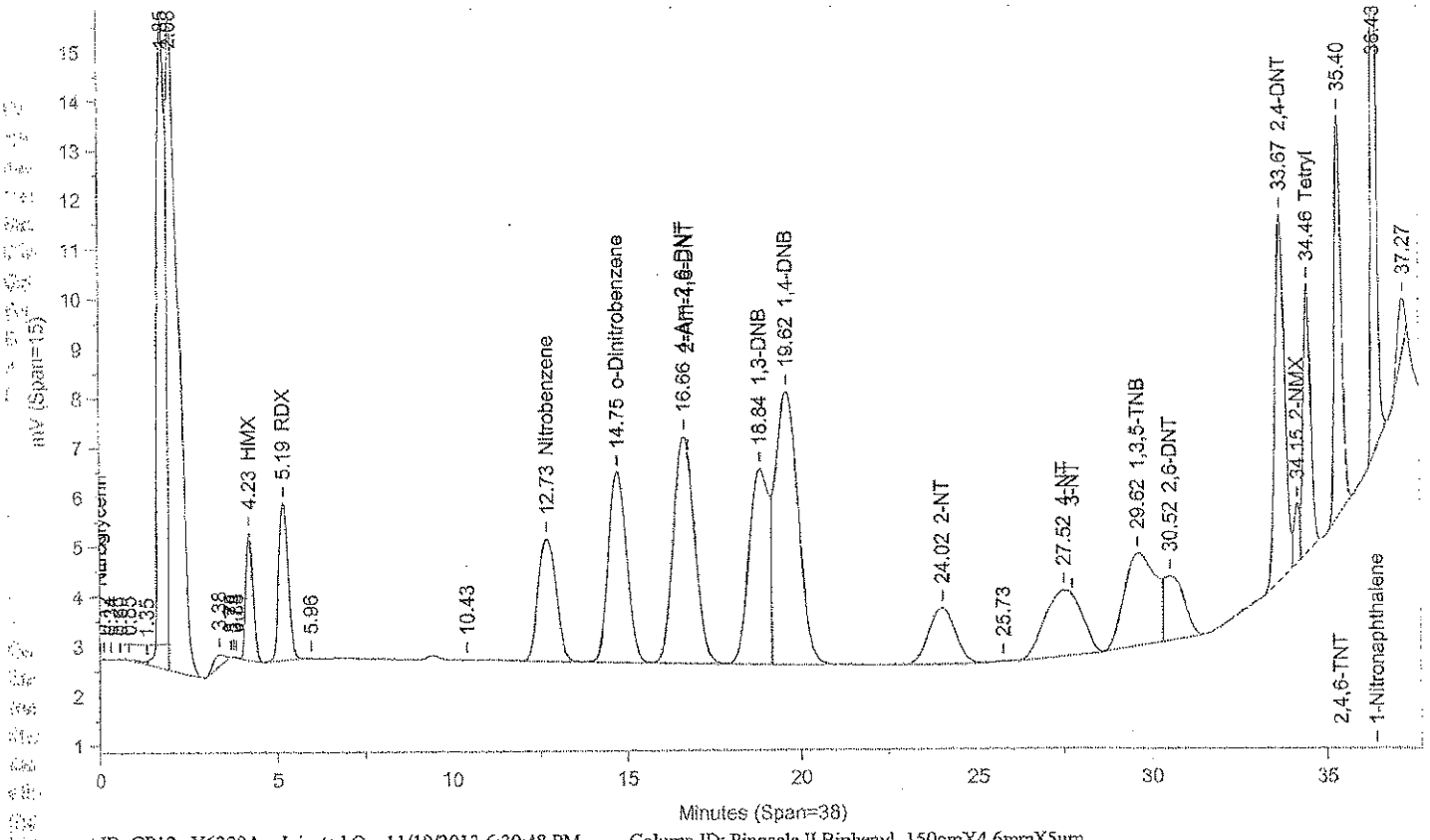
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:10

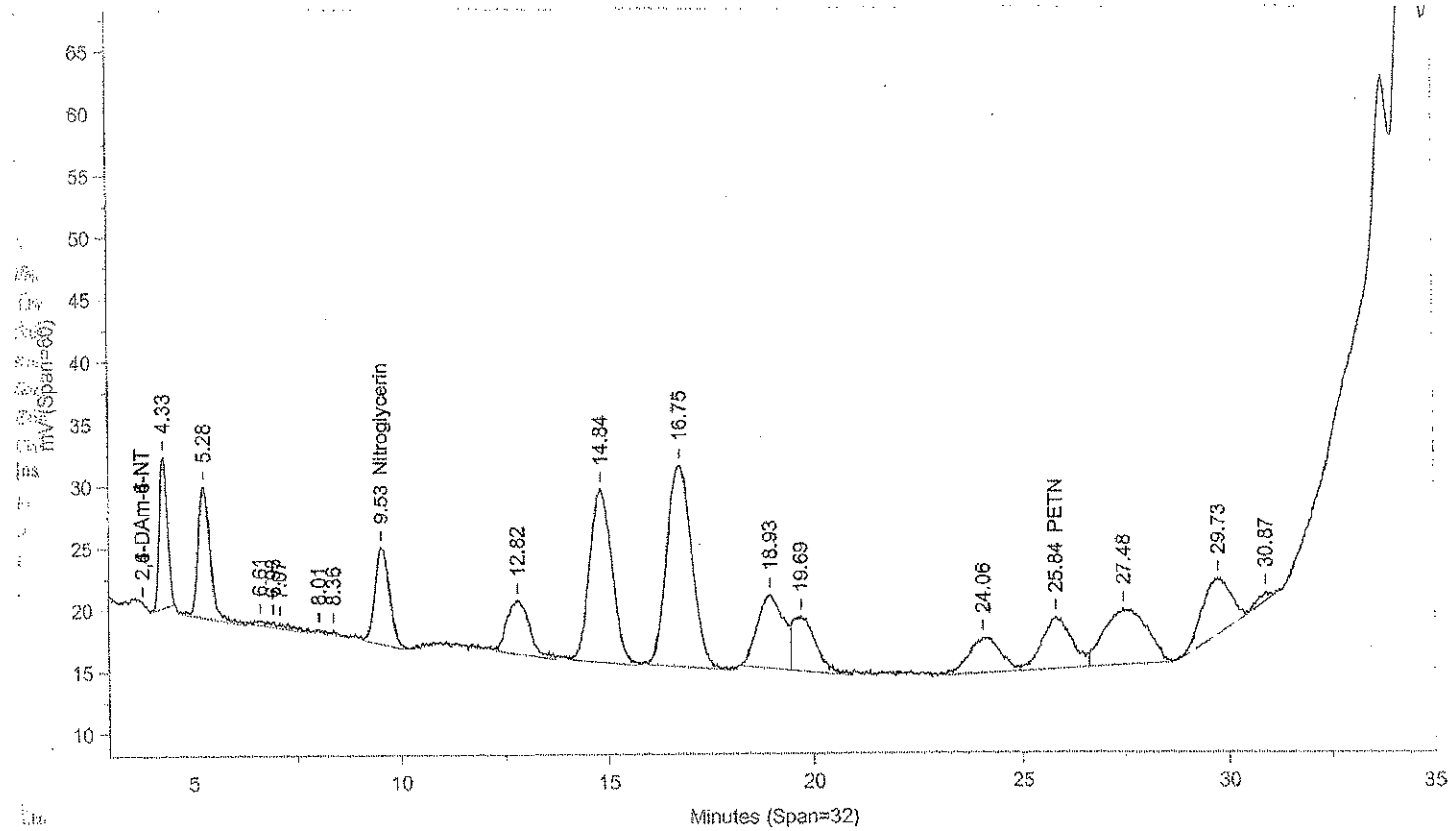
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5C12310.35R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.35R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.229	35954	3429.757	HMX	.	0	.	HMX
5.185	59070	5035.847	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.535	199844	19662.19	Nitroglycerin
12.728	90037	4875.074	Nitrobenzene	.	0	.	Nitrobenzene
14.75	143608	10444.93	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.658	195914	5075.561	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.844	157025	4636.024	1,3-DNB	.	0	.	1,3-DNB
19.621	256163	11193.3	1,4-DNB	.	0	.	1,4-DNB
24.023	58942	5036.265	2-NT	.	0	.	2-NT
.	0	.	PETN	25.837	210343	17711.81	PETN
27.518	96157	4951.709	4-NT	.	0	.	4-NT
29.62	115743	5221.708	1,3,5-TNB	.	0	.	1,3,5-TNB
30.521	50141	3966.961	2,6-DNT	.	0	.	2,6-DNT
33.67	142728	5526.111	2,4-DNT	.	0	.	2,4-DNT
34.147	14226	4606.642	2-NMX	.	0	.	2-NMX
34.459	82700	5389.922	Tetryl	.	0	.	Tetryl
35.396	112245	5333.142	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	167853	10741.04	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.35A
Area File: C:\CPWIN\DATA1\5C12310B.35A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:44:44 PM
File Reported On: 11/20/2013 at 5:44:54 PM

Extraction/Distillation/Digestion Logs

Explosives

Organic Extraction Batchlog Assigned to: 712 Wanda Oswald Reviewed by: JKM2855 Start Date: 11-7-13 Start time: 15:00

133110004A

Tech 1: WO712 Tech 2:

Dept: 24	Prep Analysis: 06917 Nitroaromatics/Amines Sol Ext							Nitroaromatics/Amines in Solid			
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7263052MSD	WHERCMSD	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	20A	
7263052MS	WHERCMS	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	20A	
BLANKA	PBLK04311	2	SS1327424A	0.1			20	Z	Z		
LCSA	LCS04311	2	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z		

Solvent Used	Lot No.
Acetonitrile	47097
CaCl2 solution	2D51041BA
Syringe Filter	21820316

Start Time: 15:30
Stop Time: 12:00

Spike Solutions:
MS1330124B
SS1327424A

Witness: NA
SOIL EXPLOSIVE SPIKE
EXPLOSIVE SOIL SURROGATE

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7263052	WHERC	2	SS1327424A	0.1	20	Z	Z	20A	slimy black	06918		11/14/2013	N
2	7263053	XHERC	2	SS1327424A	0.1	20	Z	Z	20A	↓	06918		11/14/2013	N
3	7263054	PHERC	2	SS1327424A	0.1	20	Z	Z	20A	spongy black	06918		11/14/2013	N
4	7263055	OHERC	2	SS1327424A	0.1	20	Z	Z	20A	↓	06918		11/14/2013	N
5	7265225	R2041	2	SS1327424A	0.1	20	Z	Z	20A	slimy black wet	06918	1688	11/15/2013	N
6	7265226	R2042	2	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
7	7265227	R2043	2	SS1327424A	0.1	20	Z	Z	20A	black stoney	06918	1688	11/15/2013	N
8	7265234	R2E16	2	SS1327424A	0.1	20	Z	Z	20A		06918	1688	11/15/2013	N
9	7265236	2E161	2	SS1327424A	0.1	20	Z	Z	20A		06918	1688	11/15/2013	N
10	7265237	2E16D	2	SS1327424A	0.1	20	Z	Z	20A		06918	1688	11/15/2013	N
11	7265241	2F142	2	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N
12	7265242	R2121	2	SS1327424A	0.1	20	Z	Z	20A	spongy black	06918	1688	11/15/2013	N
13	7265244	R2123	2	SS1327424A	0.1	20	Z	Z	20A	slimy black/brown	06918	1688	11/15/2013	N
14	7265245	2D141	2	SS1327424A	0.1	20	Z	Z	20A		06918	1688	11/15/2013	N
15	7265246	DUPX1	2	SS1327424A	0.1	20	Z	Z	20A	↓	06918	1688	11/15/2013	N

NA WO712 11-7-13

Rack ID:		Work Station	Soils Rm
Internal Standard		Balance #	17609

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133110004A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2125 Kelli Barto

Reviewed by: _____ Start Date: 11/11/13 Start time: 15:00

133130015A

Tech 1: KMB2125 Tech 2: _____

Dept: 24 Prep Analysis: 06915 Nitroaromatics/Amines Wat Ext Nitroaromatics/Amines in Water

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7265231MS	R2163	500	SS1330824A	0.5	MS1326324A	0.5	10	NA	NA	162A	cloudy, yellow
7265232MSD	R2163	500	SS1330824A	0.5	MS1326324A	0.5	10	↓	↓	162A	↓
BLANKA	PBLK15313	500	SS1330824A	0.5	—	—	10	↓	↓	—	DI H2O
LCSA	LCS15313	500	SS1330824A	0.5	MS1326324A	0.5	10	↓	↓	—	↓

Solvent Used	Lot No.
ACN	47097
CaCl2 sol'n	2125110413A
Poropak cart.	00383115A
Syringe Filter	21781399

Spike Solutions: Witness: NA

MS1326324A WATER EXPLOSIVES SPIKE

SS1330824A EXPLOSIVE WATER SURROGAT

*Filtered to avoid clogging cartridge KMB2125 11/11/13

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7265223	R2N51	500	SS1330824A	0.5	10	NA	NA	162A	cloudy, yellow *	06916	1225	11/15/2013	N
2 7265224	R2N52	500	SS1330824A	0.5	10	↓	↓	~~162A~~ 162A	↓ *	06916	1225	11/15/2013	N
3 7265228	R2M61	500	SS1330824A	0.5	10	↓	↓	162A	*	06916	1225	11/15/2013	N
4 7265230BKG	R2163	500	SS1330824A	0.5	10	↓	↓	162A	*	06916	1225	11/15/2013	N
5 7265235	E2161	500	SS1330824A	0.5	10	↓	↓	162A	*	06916	1225	11/15/2013	N
6 7265238	R2141	500	SS1330824A	0.5	10	↓	↓	162A	*	06916	1225	11/15/2013	N
7 7265240	R2142	500	SS1330824A	0.5	10	↓	↓	162A	clear, colorless	06916	1225	11/15/2013	N
8 7265243	R2122	500	SS1330824A	0.5	10	↓	↓	162A	cloudy, yellow *	06916	1225	11/15/2013	N
9 7265247	FBX01	500	SS1330824A	0.5	10	↓	↓	162A	clear, colorless	06916	1225	11/15/2013	N
10 7265248	FBX02	500	SS1330824A	0.5	10	↓	↓	162A	↓ ↓	06916	1225	11/15/2013	N

NA KMB2125 11/11/13

Rack ID:		Work Station	Waters Room
Internal Standard		Balance #	—

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133130015A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2991 William Saadeh Reviewed by: [illegible] Start Date: 11/12/13 Start time: 11:00

133140020A Tech 1: WHS 2991 Tech 2: [illegible] 11-13-13 Finished

Dept: 24	Prep Analysis: 06917 Nitroaromatics/Amines Sol Ext										Nitroaromatics/Amines in Solid
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266815MS	2E101	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	Brown soil
7266816MSD	2E101	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	↓
BLANKA	PBLK20314	2.0	SS1327424A	0.1			20	Z	Z	Z	Sand
LCSA	LCS20314	2.0	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z		↓

Solvent Used	Lot No.
Acetonitrile	47097
CaCl2 solution	712 111213A
Syringe Filter	2182-9691
Sand	013021-AF

Start Time: 12:30
Stop Time: 9:45 11-13-13

Spike Solutions: Witness:
MS1330124B SOIL EXPLOSIVE SPIKE
SS1327424A EXPLOSIVE SOIL SURROGATE

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
17265229	R2M71	2.0	SS1327424A	0.6	20	Z	Z	34A	Wet rocky mud	06918	1688	11/19/2013	N
27265239	R2F14	2.2	SS1327424A	0.1	20	Z	Z	34A	Brown mud	06918	1688	11/19/2013	N
37266809	2E131	2.1	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N
47266812	2C126	2.3	SS1327424A	0.1	20	Z	Z	34A	Brown dirt	06918	1688	11/18/2013	N
57266813	2C111	2.3	SS1327424A	0.1	20	Z	Z	34A		06918	1688	11/18/2013	N
67266814BKG	2E101	2.1	SS1327424A	0.1	20	Z	Z	34A		06918	1688	11/18/2013	N
77266818	2E102	2.2	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N

KVM04 Page 2838 of 3494

NA 11-13-13

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133140020A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7265223	SW-R2-N-5-1	X		
7265224	SW-R2-N-5-2	X		
7265228	SW-R2-M-6-1	X		
7265230	SW-R2-E-16-3	X		Background/Unspiked
7265231	SW-R2-E-16-3_MS	X		Matrix Spike
7265232	SW-R2-E-16-3_MSD	X		Matrix Spike Duplicate
7265233	SW-R2-E-16-3_DUP	X		Duplicate
7265235	SW-R2-E-16-1	X		
7265238	SW-R2-F-14-1	X		
7265240	SW-R2-F-14-2	X		
7265243	SW-R2-G-12-2	X		
7265247	FB-01_11052013	X		Field Blank
7265248	FB-02_11052013	X		Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Method defined actions are taken for any failed matrix QC.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

ICP Metals

Fraction: Metals in Liquid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265223 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	605			P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	1.3	B		MS
7440-39-3	Barium	33.2			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	3030			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	5.2	B		P
7439-89-6	Iron	1080			P
7439-92-1	Lead	5.0			MS
7439-95-4	Magnesium	901			P
7439-96-5	Manganese	140			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1100			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	1270			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	4.3	B		P
7440-66-6	Zinc	20.4			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265224 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	433			P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	1.1	B		MS
7440-39-3	Barium	25.6			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	2480			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	874			P
7439-92-1	Lead	2.9			MS
7439-95-4	Magnesium	730			P
7439-96-5	Manganese	87.7			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1390			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	1650			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	11.6	B		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265228 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.89	B		MS
7440-39-3	Barium	20.9			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	9030			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	184	B		P
7439-92-1	Lead	0.99	B		MS
7439-95-4	Magnesium	3700			P
7439-96-5	Manganese	9.2			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	608			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	5230			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265230BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	148	B		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	39.4			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	36100			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	1450			P
7439-92-1	Lead	0.73	B		MS
7439-95-4	Magnesium	14400			P
7439-96-5	Manganese	739			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1960			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	71600			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.1	B		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265231MS % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2120			P
7440-36-0	Antimony	6.2			MS
7440-38-2	Arsenic	10.9			MS
7440-39-3	Barium	2050			P
7440-41-7	Beryllium	52.7			P
7440-43-9	Cadmium	50.6			P
7440-70-2	Calcium	40400			P
7440-47-3	Chromium	207			P
7440-48-4	Cobalt	506			P
7440-50-8	Copper	258			P
7439-89-6	Iron	1970			P
7439-92-1	Lead	15.4			MS
7439-95-4	Magnesium	16400			P
7439-96-5	Manganese	1140			P
7439-97-6	Mercury	0.94			CV
7440-02-0	Nickel	512			P
7440-09-7	Potassium	12200			P
7782-49-2	Selenium	152			P
7440-22-4	Silver	56.5			P
7440-23-5	Sodium	81900			P
7440-28-0	Thallium	2.0			MS
7440-62-2	Vanadium	534			P
7440-66-6	Zinc	508			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265232MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	2080			P
7440-36-0	Antimony	6.6			MS
7440-38-2	Arsenic	9.9			MS
7440-39-3	Barium	2050			P
7440-41-7	Beryllium	52.8			P
7440-43-9	Cadmium	50.9			P
7440-70-2	Calcium	40900			P
7440-47-3	Chromium	207			P
7440-48-4	Cobalt	508			P
7440-50-8	Copper	259			P
7439-89-6	Iron	1940			P
7439-92-1	Lead	14.8			MS
7439-95-4	Magnesium	16600			P
7439-96-5	Manganese	1140			P
7439-97-6	Mercury	0.91			CV
7440-02-0	Nickel	516			P
7440-09-7	Potassium	12200			P
7782-49-2	Selenium	159			P
7440-22-4	Silver	56.4			P
7440-23-5	Sodium	82800			P
7440-28-0	Thallium	2.0			MS
7440-62-2	Vanadium	535			P
7440-66-6	Zinc	513			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265233DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	137	B		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	40.4			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	36300			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	1430			P
7439-92-1	Lead	0.70	B		MS
7439-95-4	Magnesium	14600			P
7439-96-5	Manganese	750			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1920			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	72100			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265235 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	37.8			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	36300			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	926			P
7439-92-1	Lead	0.35	B		MS
7439-95-4	Magnesium	14600			P
7439-96-5	Manganese	631			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1990			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	72200			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265238 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	107	B		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	38.3			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	57600			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	275			P
7439-92-1	Lead	1.9			MS
7439-95-4	Magnesium	22300			P
7439-96-5	Manganese	100			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1750			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	82700			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265240 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	37.5			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	56500			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	118	B		P
7439-92-1	Lead	0.54	B		MS
7439-95-4	Magnesium	21900			P
7439-96-5	Manganese	75.6			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	1810			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	89600			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265243 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	37.8			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	51100			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	142	B		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	20800			P
7439-96-5	Manganese	210			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	3100			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	86600			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265247 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	58.1	B		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7265248 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	73.2	B		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM04
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Aluminum	P31105F	7265223
Barium		7265224
Beryllium		7265228
Cadmium		7265230BKG
Calcium		7265231MS
Chromium		7265232MSD
Cobalt		7265233DUP
Copper		7265235
Iron		7265238
Magnesium		7265240
Manganese		7265243
Nickel		7265247
Potassium		7265248
Selenium		P31105FB
Silver		P31105FQ
Sodium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM04
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Antimony	P31150D	7265223
Arsenic		7265224
Lead		7265228
Thallium		7265230BKG
		7265231MS
		7265232MSD
		7265233DUP
		7265235
		7265238
		7265240
		7265243
		7265247
		7265248
		P31150DB
		P31150DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM04
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Mercury	P31013D	7265223
		7265224
		7265228
		7265230BKG
		7265231MS
		7265232MSD
		7265233DUP
		7265235
		7265238
		7265240
		7265243
		7265247
		7265248
		P31013DB
		P31013DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)
Aluminum		30000.0	30176.99	100.6	25000.0	24955.95	99.8	25000.0	24726.46	98.9
Barium		600.0	609.15	101.5	500.0	499.68	99.9	500.0	496.82	99.4
Beryllium		600.0	593.69	98.9	500.0	488.66	97.7	500.0	494.36	98.9
Cadmium		600.0	597.55	99.6	500.0	492.78	98.6	500.0	493.39	98.7
Calcium		30000.0	29827.29	99.4	25000.0	24490.30	98.0	25000.0	24603.43	98.4
Chromium		600.0	604.82	100.8	500.0	490.15	98.0	500.0	497.80	99.6
Cobalt		600.0	597.72	99.6	500.0	490.31	98.1	500.0	495.22	99.0
Copper		600.0	610.50	101.8	500.0	496.11	99.2	500.0	492.97	98.6
Iron		30000.0	29995.66	100.0	25000.0	24716.42	98.9	25000.0	24622.22	98.5
Magnesium		30000.0	29645.04	98.8	25000.0	24462.84	97.9	25000.0	24155.72	96.6
Manganese		600.0	598.46	99.7	500.0	493.88	98.8	500.0	485.39	97.1
Nickel		600.0	600.88	100.1	500.0	493.24	98.6	500.0	496.83	99.4
Potassium		30000.0	29994.13	100.0	25000.0	24625.67	98.5	25000.0	24752.09	99.0
Selenium		600.0	600.32	100.1	500.0	493.84	98.8	500.0	492.14	98.4
Silver		600.0	608.96	101.5	500.0	500.97	100.2	500.0	491.58	98.3
Sodium		30000.0	29765.38	99.2	25000.0	24526.94	98.1	25000.0	24354.94	97.4
Vanadium		600.0	612.87	102.1	500.0	499.38	99.9	500.0	499.91	100.0
Zinc		600.0	601.98	100.3	500.0	493.07	98.6	500.0	493.28	98.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24696.12	98.8	25000.0	24803.55	99.2
Barium					500.0	503.83	100.8	500.0	497.85	99.6
Beryllium					500.0	493.68	98.7	500.0	496.89	99.4
Cadmium					500.0	491.82	98.4	500.0	495.61	99.1
Calcium					25000.0	24539.08	98.2	25000.0	24684.15	98.7
Chromium					500.0	497.51	99.5	500.0	502.03	100.4
Cobalt					500.0	493.97	98.8	500.0	491.69	98.3
Copper					500.0	499.11	99.8	500.0	491.78	98.4
Iron					25000.0	24634.85	98.5	25000.0	24617.89	98.5
Magnesium					25000.0	24255.20	97.0	25000.0	24100.07	96.4
Manganese					500.0	489.70	97.9	500.0	496.55	99.3
Nickel					500.0	495.04	99.0	500.0	494.73	98.9
Potassium					25000.0	24764.57	99.1	25000.0	24793.57	99.2
Selenium					500.0	491.77	98.4	500.0	480.23	96.0
Silver					500.0	499.06	99.8	500.0	500.08	100.0
Sodium					25000.0	24413.96	97.7	25000.0	24309.18	97.2
Vanadium					500.0	502.32	100.5	500.0	505.78	101.2
Zinc					500.0	493.01	98.6	500.0	490.44	98.1

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium		30000.0	30752.96	102.5	25000.0	24976.56	99.9	25000.0	25683.00	102.7
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium					25000.0	25355.25	101.4	25000.0	25128.45	100.5
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	55.03	110.1	25.0	26.66	106.6	25.0	26.82	107.3
Arsenic	75	500.0	527.62	105.5	250.0	262.48	105.0	250.0	265.46	106.2
Lead	208	50.0	51.98	104.0	25.0	26.10	104.4	25.0	25.88	103.5
Thallium	203	50.0	50.82	101.6	25.0	25.60	102.4	25.0	25.62	102.5

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	27.19	108.8	25.0	27.39	109.6
Arsenic	75				250.0	264.97	106.0	250.0	261.40	104.6
Lead	208				25.0	26.51	106.0	25.0	26.43	105.7
Thallium	203				25.0	26.09	104.4	25.0	25.90	103.6

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	54.97	109.9	25.0	25.99	104.0	25.0	25.31	101.2
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	25.09	100.4	25.0	25.98	103.9
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.51	100.4	1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	0.97	97.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.96	96.0	1.0	0.94	94.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	1.01	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.00	100.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	188.38	94.2	203.93	102.0
Barium		5.0	5.36	107.2	5.29	105.8
Beryllium		5.0	4.89	97.8	4.95	99.0
Cadmium		5.0	5.42	108.4	5.34	106.8
Calcium		200.0	184.37	92.2	190.68	95.3
Chromium		15.0	14.63	97.5	14.96	99.7
Cobalt		5.0	4.58	91.6	4.41	88.2
Copper		10.0	9.89	98.9	9.31	93.1
Iron		200.0	191.73	95.9	198.04	99.0
Magnesium		100.0	97.59	97.6	97.80	97.8
Manganese		5.0	5.18	103.6	5.12	102.4
Nickel		10.0	10.29	102.9	10.07	100.7
Potassium		500.0	530.32	106.1	545.74	109.1
Selenium		20.0	20.74	103.7	20.68	103.4
Silver		5.0	5.35	107.0	5.18	103.6
Sodium		1000.0	948.70	94.9	941.03	94.1
Vanadium		5.0	5.06	101.2	5.12	102.4
Zinc		20.0	17.26	86.3	19.74	98.7

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium						
Silver						
Sodium		1000.0	980.32	98.0	975.31	97.5
Vanadium						
Zinc						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.42	142.0	0.81	81.0
Arsenic	75	2.0	2.00	100.0	2.01	100.5
Lead	208	1.0	0.99	99.0	1.07	107.0
Thallium	203	0.5	0.52	104.0	0.45	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.15	115.0	1.04	104.0
Arsenic						
Lead						
Thallium						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Concentration Units: UG/L

		Initial			Final	
Analyte	Mass	True	Found	%R	Found	%R
Mercury		0.2	0.20	100.0	0.19	95.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U		82.800	U	P31105FB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.330	U	P31105FB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.670	U	P31105FB
Cadmium		0.49	B	0.43	B	0.33	B	0.34	B		0.760	U	P31105FB
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		33.400	U	P31105FB
Chromium		0.55	U	-0.57	B	0.55	U	0.55	U		1.600	U	P31105FB
Cobalt		0.44	U	0.44	U	0.44	U	0.44	U		1.300	U	P31105FB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		2.700	U	P31105FB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		43.000	U	P31105FB
Magnesium		16.7	U	16.7	U	16.7	U	16.7	U		16.700	U	P31105FB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.830	U	P31105FB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		1.500	U	P31105FB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		98.000	U	P31105FB
Selenium		2.4	U	2.4	U	2.4	U	3.1	B		8.400	U	P31105FB
Silver		0.75	U	0.75	U	0.75	U	0.75	U		2.100	U	P31105FB
Sodium		167	U	167	U	167	U	167	U		167.000	U	P31105FB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		2.000	U	P31105FB
Zinc		-2.3	B	-2.4	B	-2.4	B	-2.4	B		-2.610	B	P31105FB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.47	B								
Calcium				33.4	U								
Chromium				0.55	U								
Cobalt				-0.50	B								
Copper				1.7	U								
Iron				33.4	U								
Magnesium				16.7	U								
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				2.4	U								
Silver				0.75	U								
Sodium				167	U								
Vanadium				0.83	U								
Zinc				-2.5	B								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium		167	U	167	U	167	U	167	U				
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium				167	U								
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.74	B	0.33	U	0.33	U	0.33	U				
Arsenic	75	0.40	U	0.40	U	0.40	U	0.40	U	75	0.420	U	P31150DB
Lead	208	0.026	U	0.026	U	0.026	U	0.026	U	208	0.085	U	P31150DB
Thallium	203	0.15	U	0.15	U	0.15	U	0.15	U	203	0.150	U	P31150DB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Antimony	121			0.39	B								
Arsenic	75			0.40	U								
Lead	208			0.026	U								
Thallium	203			0.15	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.96	B	0.33	U	0.33	U	0.33	U	121	0.340	U	P31150DB
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121			0.33	U								
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.060	U	P31013DB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331202M07
Calibration Date(s): 11/08/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U						

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 16315
Run Name: 1331501T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	495613	99.1	494019.8	98.8	497664	99.5	495788.0	99.2
Barium	0	500	0		497.0	99.4	0		497.0	99.4
Beryllium	0	500	0		508.8	101.8	0		514.8	103.0
Cadmium	0	1000	1		963.6	96.4	0		960.1	96.0
Calcium	500000	500000	493688	98.7	495171.2	99.0	498282	99.7	501223.9	100.2
Chromium	0	500	2		484.5	96.9	2		494.0	98.8
Cobalt	0	500	2		491.9	98.4	2		491.1	98.2
Copper	0	500	-1		531.1	106.2	-1		528.8	105.8
Iron	200000	200000	198567	99.3	198022.4	99.0	199502	99.8	199163.0	99.6
Magnesium	500000	500000	496854	99.4	492973.0	98.6	493002	98.6	490047.4	98.0
Manganese	0	500	3		482.5	96.5	3		485.2	97.0
Nickel	0	1000	3		976.9	97.7	3		973.6	97.4
Potassium	0	0	19		50.3		44		21.5	
Selenium	0	50	3		51.6	103.2	2		51.7	103.4
Silver	0	200	0		219.1	109.6	1		219.3	109.7
Sodium	0	0	53		47.1		15		-2.0	
Vanadium	0	500	-2		495.7	99.1	-2		499.8	100.0
Zinc	0	1000	11		1035.2	103.5	11		1022.0	102.2

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 16315
Run Name: 1331606T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	510447	102.1	506971.8	101.4	511505	102.3	514188.8	102.8
Barium										
Beryllium										
Cadmium										
Calcium	500000	500000	509853	102.0	508042.2	101.6	504768	101.0	508460.1	101.7
Chromium										
Cobalt										
Copper										
Iron	200000	200000	204106	102.1	202940.9	101.5	203974	102.0	205641.1	102.8
Magnesium	500000	500000	507940	101.6	510903.9	102.2	516065	103.2	517468.0	103.5
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium	0	0	40		31.6		24		23.3	
Vanadium										
Zinc										

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9696	97.0	9618.4	96.2
Antimony	121	0	0	0		0.1	
Arsenic	75	0	20	0		19.0	95.0
Calcium	44	10000	10000	9010	90.1	8923.0	89.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9709	97.1	9588.2	95.9
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9569	95.7	9585.4	95.9
Molybdenum	98	200	200	197	98.5	198.5	99.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9510	95.1	9612.0	96.1
Sodium	23	10000	10000	9494	94.9	9495.1	95.0
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	202	101.0	187.4	93.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9807	98.1	10019.6	100.2
Antimony	121	0	0	0		-0.1	
Arsenic	75	0	20	0		19.5	97.5
Calcium	44	10000	10000	9551	95.5	9713.4	97.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9733	97.3	10129.2	101.3
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9688	96.9	9908.7	99.1
Molybdenum	98	200	200	198	99.0	199.5	99.8
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9824	98.2	10198.7	102.0
Sodium	23	10000	10000	9677	96.8	10063.8	100.6
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	196	98.0	204.1	102.1

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9625	96.3	9589.2	95.9
Antimony	121	0	0	0		0.1	
Arsenic							
Calcium	44	10000	10000	9804	98.0	9725.1	97.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9730	97.3	9719.1	97.2
Lead							
Magnesium	24	10000	10000	9580	95.8	9592.4	95.9
Molybdenum	98	200	200	200	100.0	201.3	100.7
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9818	98.2	9799.8	98.0
Sodium	23	10000	10000	9659	96.6	9667.2	96.7
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	211	105.5	203.0	101.5

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9480	94.8	9915.5	99.2
Antimony	121	0	0	0		0.0	
Arsenic							
Calcium	44	10000	10000	9516	95.2	9934.2	99.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9743	97.4	10135.0	101.4
Lead							
Magnesium	24	10000	10000	9362	93.6	9819.0	98.2
Molybdenum	98	200	200	193	96.5	201.1	100.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9750	97.5	10311.7	103.1
Sodium	23	10000	10000	9410	94.1	9888.2	98.9
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	195	97.5	201.2	100.6

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 7265230BKG Matrix Spike Lab Sample ID: 7265231MS Matrix Spike Duplicate Lab Sample ID: 7265232MSD
Batch Id(s): P31105F, P31150D, P31013D

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Aluminum		147.9800	B	2116.6800		2075.7100		2000.0000	2000.0000	UG/L	98		96		2		75 - 125	20	P
Antimony	121	0.3400	U	6.1850		6.6250		6.0000	6.0000	UG/L	103		110		7		75 - 125	20	MS
Arsenic	75	0.4200	U	10.8980		9.8960		10.0000	10.0000	UG/L	109		99		10		75 - 125	20	MS
Barium		39.3600		2048.3900		2049.3500		2000.0000	2000.0000	UG/L	100		100		0		78 - 118	20	P
Beryllium		0.6700	U	52.7100		52.8000		50.0000	50.0000	UG/L	105		106		0		87 - 114	20	P
Cadmium		0.7600	U	50.6000		50.8600		50.0000	50.0000	UG/L	101		102		1		83 - 116	20	P
Calcium		36101.7400		40408.7000		40909.2700		4000.0000	4000.0000	UG/L	108		120		1			20	P
Chromium		1.6000	U	207.4100		207.4200		200.0000	200.0000	UG/L	104		104		0		76 - 120	20	P
Cobalt		1.3000	U	505.8200		508.1600		500.0000	500.0000	UG/L	101		102		0		82 - 112	20	P
Copper		2.7000	U	257.6000		259.4500		250.0000	250.0000	UG/L	103		104		1		86 - 122	20	P
Iron		1448.7200		1971.7900		1944.4100		1000.0000	1000.0000	UG/L	52	N	50	N	1		75 - 125	20	P
Lead	208	0.7250	B	15.4440		14.8150		15.0000	15.0000	UG/L	98		94		4		89 - 120	20	MS
Magnesium		14386.8200		16408.9000		16606.2400		2000.0000	2000.0000	UG/L	101		111		1			20	P
Manganese		739.0500		1142.1200		1140.4400		500.0000	500.0000	UG/L	81		80		0		75 - 125	20	P
Mercury		0.0600	U	0.9430		0.9135		1.0000	1.0000	UG/L	94		91		3		80 - 120	20	CV
Nickel		1.5000	U	511.6100		515.6100		500.0000	500.0000	UG/L	102		103		1		86 - 115	20	P
Potassium		1957.7300		12155.6600		12224.3100		10000.0000	10000.0000	UG/L	102		103		1		77 - 128	20	P
Selenium		8.4000	U	152.4000		158.7100		150.0000	150.0000	UG/L	102		106		4		75 - 125	20	P
Silver		2.1000	U	56.4700		56.4400		50.0000	50.0000	UG/L	113		113		0		75 - 125	20	P
Sodium		71595.0200		81855.5900		82802.9100		10000.0000	10000.0000	UG/L	103		112		1			20	P
Thallium	203	0.1500	U	1.9630		1.9850		2.0000	2.0000	UG/L	98		99		1		85 - 125	20	MS
Vanadium		2.0000	U	533.5100		534.7300		500.0000	500.0000	UG/L	107		107		0		90 - 117	20	P
Zinc		2.0700	B	508.3400		512.7500		500.0000	500.0000	UG/L	101		102		1		85 - 117	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
CV = Cold Vapor
MS = ICP Mass Spectrometry
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 5B
POST DIGEST SPIKE SAMPLE RECOVERY
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 7265230BKG Post Digest Spike Lab Sample ID: 7265230A
Batch ID(s): P31105F
Concentration Units: UG/L

Analyte	Mass	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Iron			1920.2100		1448.7200		500.0000	94		P

Comments:
_____
_____
_____
_____

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 7265230BKG Duplicate Lab Sample ID: 7265233DUP
Batch ID(s): P31105F, P31150D, P31013D
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			147.9800	B	137.0900	B	8		P
Antimony	121		0.3400	U	0.3400	U			MS
Arsenic	75		0.4200	U	0.4200	U			MS
Barium			39.3600		40.3600		3		P
Beryllium			0.6700	U	0.6700	U			P
Cadmium			0.7600	U	0.7600	U			P
Calcium			36101.7400		36314.8200		1		P
Chromium			1.6000	U	1.6000	U			P
Cobalt			1.3000	U	1.3000	U			P
Copper			2.7000	U	2.7000	U			P
Iron			1448.7200		1429.1000		1		P
Lead	208		0.7250	B	0.7020	B	3		MS
Magnesium			14386.8200		14610.2300		2		P
Manganese			739.0500		749.7200		1		P
Mercury			0.0600	U	0.0600	U			CV
Nickel			1.5000	U	1.5000	U			P
Potassium		500.0	1957.7300		1923.1300		2		P
Selenium			8.4000	U	8.4000	U			P
Silver			2.1000	U	2.1000	U			P
Sodium			71595.0200		72131.4100		1		P
Thallium	203		0.1500	U	0.1500	U			MS
Vanadium			2.0000	U	2.0000	U			P
Zinc			2.0700	B	2.0000	U	200		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM04
Matrix: WATER

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31105FQ	UG/L	2000.00	2088.05		90 - 112	104	P	Yes
Antimony	121	P31150DQ	UG/L	6.00	5.63		80 - 120	94	MS	Yes
Arsenic	75	P31150DQ	UG/L	10.00	10.03		86 - 120	100	MS	Yes
Barium		P31105FQ	UG/L	2000.00	2058.61		90 - 110	103	P	Yes
Beryllium		P31105FQ	UG/L	50.00	51.26		90 - 111	103	P	Yes
Cadmium		P31105FQ	UG/L	50.00	51.09		90 - 112	102	P	Yes
Calcium		P31105FQ	UG/L	4000.00	4098.01		90 - 112	102	P	Yes
Chromium		P31105FQ	UG/L	200.00	205.97		90 - 110	103	P	Yes
Cobalt		P31105FQ	UG/L	500.00	512.50		90 - 110	103	P	Yes
Copper		P31105FQ	UG/L	250.00	260.00		90 - 112	104	P	Yes
Iron		P31105FQ	UG/L	1000.00	1010.17		90 - 112	101	P	Yes
Lead	208	P31150DQ	UG/L	15.00	14.80		90 - 110	99	MS	Yes
Magnesium		P31105FQ	UG/L	2000.00	2017.59		89 - 110	101	P	Yes
Manganese		P31105FQ	UG/L	500.00	511.47		90 - 110	102	P	Yes
Mercury		P31013DQ	UG/L	1.00	0.95		80 - 120	95	CV	Yes
Nickel		P31105FQ	UG/L	500.00	522.14		90 - 111	104	P	Yes
Potassium		P31105FQ	UG/L	10000.00	10156.07		90 - 110	102	P	Yes
Selenium		P31105FQ	UG/L	150.00	156.07		80 - 120	104	P	Yes
Silver		P31105FQ	UG/L	50.00	56.23		80 - 120	112	P	Yes
Sodium		P31105FQ	UG/L	10000.00	10152.52		87 - 114	102	P	Yes
Thallium	203	P31150DQ	UG/L	2.00	1.86		90 - 115	93	MS	Yes
Vanadium		P31105FQ	UG/L	500.00	525.39		90 - 110	105	P	Yes
Zinc		P31105FQ	UG/L	500.00	508.29		90 - 110	102	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM04
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 7265230BKG Serial Dilution Lab Sample ID: 7265230L
Batch ID(s): P31105F, P31150D
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		147.9800	B	414.0000	U	100		P
Antimony	121	0.3400	U	1.7000	U			MS
Arsenic	75	0.4200	U	2.1000	U			MS
Barium		39.3600		40.7000		3		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		36101.7400		36750.4500		2		P
Chromium		1.6000	U	8.0000	U			P
Cobalt		1.3000	U	6.5000	U			P
Copper		2.7000	U	13.5000	U			P
Iron		1448.7200		1419.5500		2		P
Lead	208	0.7250	B	0.7550	B	4		MS
Magnesium		14386.8200		14718.5000		2		P
Manganese		739.0500		751.7500		2		P
Nickel		1.5000	U	7.5000	U			P
Potassium		1957.7300		1964.1000	B	0		P
Selenium		8.4000	U	42.0000	U			P
Silver		2.1000	U	10.5000	U			P
Sodium		71595.0200		73022.3500		2		P
Thallium	203	0.1500	U	0.7500	U			MS
Vanadium		2.0000	U	10.0000	U			P
Zinc		2.0700	B	10.0000	U	100		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.55
Cobalt	228.62		0.44
Copper	327.40		1.7
Iron	261.19		33.4
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		2.4
Silver	328.06		0.75
Sodium	589.59		167
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: MS
Instrument ID: 19204
Date: 10/2013

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.33
Arsenic	75		0.40
Lead	208		0.026
Thallium	203		0.15

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM04
Matrix: WATER

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	82.8
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	1.3
Copper	327.40		10.0	2.7
Iron	261.19		200	43.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.5
Potassium	766.49		500	98.0
Selenium	196.09		20.0	8.4
Silver	328.06		5.0	2.1
Sodium	589.59		1000	167
Vanadium	292.40		5.0	2.0
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM04
Matrix: WATER

Method: MS
Date: 06/2013

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		1.0	0.34
Arsenic	75		2.0	0.42
Lead	208		1.0	0.085
Thallium	203		0.50	0.15

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM04
Matrix: WATER

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000770	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	-0.0000200	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000150	0.0000000	0.0002620
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0001000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0099760
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002000	0.0000000	0.0000000	-0.0000040
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	0.0002000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0001180	0.0000000	0.0000000	0.0000000	0.0018400
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0004790	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	-0.0000600	-0.0094600
Zinc	213.86	0.0000000	0.0000000	0.0012000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	TI	V	ZR	--
Aluminum	308.21	0.0000000	0.0000000	0.0100000	0.0000000	
Beryllium	313.04	0.0000000	0.0000040	0.0001160	0.0000000	
Cadmium	226.50	-0.0000780	0.0000000	0.0000000	0.0000000	
Cobalt	228.62	0.0001140	0.0020220	0.0000000	0.0000000	
Copper	327.40	0.0000000	0.0001460	-0.0000340	0.0000000	
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0006500	
Vanadium	292.40	0.0000000	0.0007950	0.0000000	0.0000000	
Zinc	213.86	0.0053800	0.0000000	0.0000000	0.0000000	

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM04

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Barium	455.4	10.00	5000.0
Beryllium	313.04	10.00	5000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	10000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	10000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM04

Method: P
Batch ID: P31105F

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7265223	11/09/2013	50.00	50
7265224	11/09/2013	50.00	50
7265228	11/09/2013	50.00	50
7265235	11/09/2013	50.00	50
7265238	11/09/2013	50.00	50
7265240	11/09/2013	50.00	50
7265243	11/09/2013	50.00	50
7265247	11/09/2013	50.00	50
7265248	11/09/2013	50.00	50
7265230BKG	11/09/2013	50.00	50
7265233DUP	11/09/2013	50.00	50
7265232MSD	11/09/2013	50.00	50
7265231MS	11/09/2013	50.00	50
P31105FB	11/09/2013	50.00	50
P31105FQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM04

Method: MS
Batch ID: P31150D

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7265223	11/09/2013	50.00	50
7265224	11/09/2013	50.00	50
7265228	11/09/2013	50.00	50
7265235	11/09/2013	50.00	50
7265238	11/09/2013	50.00	50
7265240	11/09/2013	50.00	50
7265243	11/09/2013	50.00	50
7265247	11/09/2013	50.00	50
7265248	11/09/2013	50.00	50
7265230BKG	11/09/2013	50.00	50
7265233DUP	11/09/2013	50.00	50
7265232MSD	11/09/2013	50.00	50
7265231MS	11/09/2013	50.00	50
P31150DB	11/09/2013	50.00	50
P31150DQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM04

Method: CV
Batch ID: P31013D

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7265223	11/07/2013	40.00	40
7265224	11/07/2013	40.00	40
7265228	11/07/2013	40.00	40
7265235	11/07/2013	40.00	40
7265238	11/07/2013	40.00	40
7265240	11/07/2013	40.00	40
7265243	11/07/2013	40.00	40
7265247	11/07/2013	40.00	40
7265248	11/07/2013	40.00	40
7265230BKG	11/07/2013	40.00	40
7265233DUP	11/07/2013	40.00	40
7265232MSD	11/07/2013	40.00	40
7265231MS	11/07/2013	40.00	40
P31013DB	11/07/2013	40.00	40
P31013DQ	11/07/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	00:43	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
S	1.00	00:46	X						X				X		X				X			X										
S	1.00	00:50				X	X	X			X	X				X		X		X	X				X							
S	1.00	00:54								X														X								
ICV	1.00	00:58	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICB	1.00	01:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
LLC	1.00	01:05	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	01:09	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	01:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	01:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	01:21	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FB	1.00	01:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FQ	1.00	01:29	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265230BKG	1.00	01:32	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265230A	1.00	01:36											X																				
7265233DUP	1.00	01:40	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265231MS	1.00	01:43	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265232MSD	1.00	01:47	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265230L	5.00	01:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265223	1.00	01:55	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265224	1.00	01:58	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	02:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:06	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265228	1.00	02:10	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265235	1.00	02:14	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265238	1.00	02:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X			X	X							
7265240	1.00	02:21	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265243	1.00	02:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265247	1.00	02:29	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7265248	1.00	02:32	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:36																															
ZZZZZZ	1.00	02:40																															
ZZZZZZ	1.00	02:44																															
CCV	1.00	02:47	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:55																															
ZZZZZZ	1.00	02:59																															
ZZZZZZ	1.00	03:02																															

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	03:06																													
LLC	1.00	03:10	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	03:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	03:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	03:22	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	03:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16315
Run Name: 1331606T71

Run Start Date: 11/12/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	22:56																				X										
S	1.00	23:00																				X										
S	1.00	23:04																														
S	1.00	23:08																														
ICV	1.00	23:11																				X										
ICB	1.00	23:15																				X										
LLC	1.00	23:19																				X										
ICSA	1.00	23:23																				X										
ICSAB	1.00	23:27																				X										
CCV	1.00	23:31																				X										
CCB	1.00	23:35																				X										
ZZZZZZ	5.00	23:38																														
ZZZZZZ	5.00	23:42																														
ZZZZZZ	5.00	23:46																														
ZZZZZZ	5.00	23:50																														
ZZZZZZ	5.00	23:53																														
ZZZZZZ	25.00	23:57																														
ZZZZZZ	5.00	00:01																														
ZZZZZZ	5.00	00:05																														
ZZZZZZ	5.00	00:09																														
ZZZZZZ	5.00	00:12																														
CCV	1.00	00:16																				X										
CCB	1.00	00:20																				X										
ZZZZZZ	5.00	00:24																														
ZZZZZZ	5.00	00:27																														
ZZZZZZ	5.00	00:31																														
ZZZZZZ	25.00	00:35																														
ZZZZZZ	5.00	00:39																														
ZZZZZZ	5.00	00:42																														
ZZZZZZ	5.00	00:46																														
ZZZZZZ	5.00	00:51																														
ZZZZZZ	5.00	00:54																														
7265238	2.00	00:58																				X										
CCV	1.00	01:02																				X										
CCB	1.00	01:06																				X										
ZZZZZZ	2.00	01:10																														
LLC	1.00	01:13																				X										
ICSA	1.00	01:17																				X										

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16315
Run Name: 1331606T71

Run Start Date: 11/12/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ICSAB	1.00	01:21																				X										
CCV	1.00	01:25																				X										
CCB	1.00	01:29																				X										

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	02:11		X	X									X									X										
S	1.00	02:13		X	X									X									X										
CCS	1.00	02:15		X	X									X									X										
CCS	1.00	02:17		X	X									X									X										
ICV	1.00	02:19		X	X									X									X										
ICB	1.00	02:21		X	X									X									X										
LLC	1.00	02:23		X	X									X									X										
ICSA	1.00	02:25		X	X									X									X										
ICSAB	1.00	02:27		X	X									X									X										
CCV	1.00	02:29		X	X									X									X										
CCB	1.00	02:31		X	X									X									X										
P31150DB	1.00	02:33			X									X									X										
P31150DQ	1.00	02:35			X									X									X										
7265230BKG	1.00	02:37		X	X									X									X										
7265230A	1.00	02:39																															
7265233DUP	1.00	02:41		X	X									X									X										
7265231MS	1.00	02:43			X									X									X										
7265232MSD	1.00	02:45			X									X									X										
7265230L	5.00	02:47		X	X									X									X										
ZZZZZZ	1.00	02:49																															
ZZZZZZ	1.00	02:51																															
CCV	1.00	02:53		X	X									X									X										
CCB	1.00	02:55		X	X									X									X										
7265223	1.00	02:57		X	X									X									X										
7265224	1.00	02:59		X	X									X									X										
7265228	1.00	03:01		X	X									X									X										
7265235	1.00	03:03		X	X									X									X										
7265238	1.00	03:05		X	X									X									X										
7265240	1.00	03:07		X	X									X									X										
ZZZZZZ	1.00	03:09																															
ZZZZZZ	1.00	03:11																															
7265243	1.00	03:13		X	X									X									X										
7265247	1.00	03:15		X	X									X									X										
CCV	1.00	03:17		X	X									X									X										
CCB	1.00	03:19		X	X									X									X										
ZZZZZZ	1.00	03:21																															
ZZZZZZ	1.00	03:23																															
ZZZZZZ	1.00	03:25																															

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN								
7265248	1.00	03:27		X	X									X									X										
LLC	1.00	03:29		X	X									X									X										
ICSA	1.00	03:31		X	X									X									X										
ICSAB	1.00	03:33		X	X									X									X										
CCV	1.00	03:35		X	X									X									X										
CCB	1.00	03:37		X	X									X									X										

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM04
No.:

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	21:54		X																												
S	1.00	21:56		X																												
CCS	1.00	21:58		X																												
CCS	1.00	22:00		X																												
ICV	1.00	22:02		X																												
ICB	1.00	22:04		X																												
LLC	1.00	22:06		X																												
ICSA	1.00	22:08		X																												
ICSAB	1.00	22:10		X																												
CCV	1.00	22:12		X																												
CCB	1.00	22:14		X																												
ZZZZZZ	1.00	22:16																														
ZZZZZZ	1.00	22:18																														
ZZZZZZ	1.00	22:20																														
ZZZZZZ	1.00	22:22																														
ZZZZZZ	1.00	22:24																														
ZZZZZZ	1.00	22:26																														
ZZZZZZ	1.00	22:28																														
ZZZZZZ	5.00	22:30																														
ZZZZZZ	1.00	22:32																														
ZZZZZZ	1.00	22:34																														
CCV	1.00	22:36		X																												
CCB	1.00	22:38		X																												
ZZZZZZ	1.00	22:40																														
ZZZZZZ	5.00	22:42																														
P31150DB	1.00	22:44		X																												
P31150DQ	1.00	22:46		X																												
7265230A	1.00	22:48																														
7265231MS	1.00	22:50		X																												
7265232MSD	1.00	22:52		X																												
ZZZZZZ	1.00	22:54																														
ZZZZZZ	1.00	22:56																														
CCV	1.00	22:58		X																												
CCB	1.00	23:00		X																												
LLC	1.00	23:02		X																												
ICSA	1.00	23:04		X																												
ICSAB	1.00	23:06		X																												
CCV	1.00	23:08		X																												

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN							
CCB	1.00	23:10		X																												

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM04
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	07:04															X															
S0.2	1.00	07:06															X															
S0.5	1.00	07:08															X															
S1.0	1.00	07:10															X															
S2.5	1.00	07:12															X															
S5.0	1.00	07:14															X															
ICV	1.00	07:16															X															
ICB	1.00	07:18															X															
CRA	1.00	07:20															X															
CCV	1.00	07:22															X															
CCB	1.00	07:24															X															
ZZZZZZ	1.00	07:26																														
ZZZZZZ	1.00	07:28																														
ZZZZZZ	1.00	07:30																														
ZZZZZZ	1.00	07:32																														
ZZZZZZ	1.00	07:34																														
ZZZZZZ	1.00	07:36																														
ZZZZZZ	1.00	07:38																														
ZZZZZZ	1.00	07:41																														
ZZZZZZ	1.00	07:43																														
ZZZZZZ	1.00	07:45																														
CCV	1.00	07:47															X															
CCB	1.00	07:49															X															
ZZZZZZ	1.00	07:51																														
ZZZZZZ	1.00	07:53																														
ZZZZZZ	1.00	07:55																														
ZZZZZZ	1.00	07:57																														
ZZZZZZ	1.00	07:59																														
ZZZZZZ	1.00	08:01																														
ZZZZZZ	1.00	08:03																														
ZZZZZZ	1.00	08:05																														
ZZZZZZ	1.00	08:07																														
ZZZZZZ	1.00	08:09																														
CCV	1.00	08:11															X															
CCB	1.00	08:13															X															
ZZZZZZ	1.00	08:15																														
ZZZZZZ	1.00	08:17																														
ZZZZZZ	1.00	08:19																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:21																													
ZZZZZZ	1.00	08:23																													
ZZZZZZ	1.00	08:25																													
ZZZZZZ	1.00	08:27																													
ZZZZZZ	1.00	08:29																													
ZZZZZZ	1.00	08:32																													
ZZZZZZ	1.00	08:34																													
CCV	1.00	08:36															X														
CCB	1.00	08:38															X														
ZZZZZZ	1.00	08:40																													
ZZZZZZ	1.00	08:42																													
ZZZZZZ	1.00	08:44																													
ZZZZZZ	1.00	08:46																													
ZZZZZZ	1.00	08:48																													
ZZZZZZ	1.00	08:50																													
ZZZZZZ	1.00	08:52																													
ZZZZZZ	1.00	08:54																													
ZZZZZZ	1.00	08:56																													
ZZZZZZ	1.00	08:58																													
CCV	1.00	09:00															X														
CCB	1.00	09:02															X														
ZZZZZZ	1.00	09:04																													
ZZZZZZ	1.00	09:06																													
ZZZZZZ	1.00	09:08																													
ZZZZZZ	1.00	09:10																													
ZZZZZZ	1.00	09:12																													
ZZZZZZ	1.00	09:14																													
ZZZZZZ	1.00	09:16																													
ZZZZZZ	1.00	09:19																													
ZZZZZZ	1.00	09:21																													
ZZZZZZ	1.00	09:23																													
CCV	1.00	09:25															X														
CCB	1.00	09:27															X														
ZZZZZZ	1.00	09:29																													
ZZZZZZ	1.00	09:31																													
ZZZZZZ	1.00	09:33																													
ZZZZZZ	1.00	09:35																													
ZZZZZZ	1.00	09:37																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	09:39																													
ZZZZZZ	1.00	09:41																													
ZZZZZZ	1.00	09:43																													
ZZZZZZ	1.00	09:45																													
ZZZZZZ	1.00	09:47																													
CCV	1.00	09:49															X														
CCB	1.00	09:51															X														
ZZZZZZ	1.00	09:55																													
ZZZZZZ	1.00	09:57																													
ZZZZZZ	1.00	09:59																													
ZZZZZZ	1.00	10:01																													
ZZZZZZ	1.00	10:03																													
ZZZZZZ	1.00	10:05																													
ZZZZZZ	1.00	10:07																													
ZZZZZZ	1.00	10:09																													
P31013DB	1.00	10:11															X														
P31013DQ	1.00	10:13															X														
CCV	1.00	10:15															X														
CCB	1.00	10:17															X														
ZZZZZZ	1.00	10:19																													
ZZZZZZ	1.00	10:21																													
ZZZZZZ	1.00	10:23																													
ZZZZZZ	1.00	10:25																													
ZZZZZZ	1.00	10:27																													
ZZZZZZ	1.00	10:29																													
7265223	1.00	10:31															X														
7265224	1.00	10:33															X														
7265228	1.00	10:35															X														
7265230BKG	1.00	10:37															X														
CCV	1.00	10:39															X														
CCB	1.00	10:41															X														
7265233DUP	1.00	10:44															X														
7265231MS	1.00	10:46															X														
7265232MSD	1.00	10:48															X														
7265235	1.00	10:50															X														
7265238	1.00	10:52															X														
7265240	1.00	10:54															X														
7265243	1.00	10:56															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7265247	1.00	10:58															X															
7265248	1.00	11:00															X															
ZZZZZZ	1.00	11:02																														
CCV	1.00	11:04															X															
CCB	1.00	11:06															X															
ZZZZZZ	1.00	11:08																														
ZZZZZZ	1.00	11:10																														
ZZZZZZ	1.00	11:12																														
ZZZZZZ	1.00	11:14																														
ZZZZZZ	1.00	11:16																														
ZZZZZZ	1.00	11:18																														
ZZZZZZ	1.00	11:20																														
ZZZZZZ	1.00	11:22																														
ZZZZZZ	1.00	11:24																														
ZZZZZZ	1.00	11:26																														
CCV	1.00	11:28															X															
CCB	1.00	11:30															X															
ZZZZZZ	1.00	11:33																														
ZZZZZZ	1.00	11:35																														
ZZZZZZ	1.00	11:37																														
ZZZZZZ	1.00	11:39																														
ZZZZZZ	1.00	11:41																														
ZZZZZZ	1.00	11:43																														
ZZZZZZ	1.00	11:45																														
ZZZZZZ	1.00	11:47																														
ZZZZZZ	1.00	11:49																														
ZZZZZZ	1.00	11:51																														
CCV	1.00	11:53															X															
CCB	1.00	11:55															X															
ZZZZZZ	1.00	11:57																														
ZZZZZZ	1.00	11:59																														
ZZZZZZ	1.00	12:01																														
ZZZZZZ	1.00	12:03																														
ZZZZZZ	1.00	12:05																														
ZZZZZZ	1.00	12:07																														
ZZZZZZ	1.00	12:09																														
ZZZZZZ	1.00	12:12																														
ZZZZZZ	1.00	12:14																														

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331202M07

Run Start Date: 11/08/2013
Run End Date: 11/08/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	12:16																													
CCV	1.00	12:18															X														
CCB	1.00	12:20															X														
ZZZZZZ	1.00	12:22																													
ZZZZZZ	1.00	12:24																													
ZZZZZZ	1.00	12:26																													
CRA	1.00	12:28															X														
CCV	1.00	12:30															X														
CCB	1.00	12:32															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331901E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	02:11	100		100											
S	02:13	99		102											
CCS	02:15	102		103											
CCS	02:17	102		102											
ICV	02:19	98		101											
ICB	02:21	99		99											
LLC	02:23	97		100											
ICSA	02:25	95		101											
ICSAB	02:27	93		99											
CCV	02:29	96		99											
CCB	02:31	93		95											
P31150DB	02:33	94		99											
P31150DQ	02:35	93		96											
7265230BKG	02:37	87		89											
7265230A	02:39	88		90											
7265233DUP	02:41	88		89											
7265231MS	02:43	90		93											
7265232MSD	02:45	92		95											
7265230L	02:47	93		96											
ZZZZZZ	02:49														
ZZZZZZ	02:51														
CCV	02:53	96		99											
CCB	02:55	95		97											
7265223	02:57	97		103											
7265224	02:59	99		103											
7265228	03:01	98		100											
7265235	03:03	93		95											
7265238	03:05	93		94											
7265240	03:07	89		93											
ZZZZZZ	03:09														
ZZZZZZ	03:11														
7265243	03:13	91		94											
7265247	03:15	93		98											
CCV	03:17	96		98											
CCB	03:19	95		97											
ZZZZZZ	03:21														
ZZZZZZ	03:23														
ZZZZZZ	03:25														

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

FLAG:
- R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS
- BE = Beryllium
- BI = Bismuth
- GE = Germanium
- HO = Holmium
- IN = Indium
- LI = Lithium
- SC = Scandium
- TB = Terbium
- Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM04

Instrument ID: 19204 Start Date: 11/15/2013
Run Name: 1331901E05 End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
7265248	03:27	95		99											
LLC	03:29	92		96											
ICSA	03:31	92		96											
ICSAB	03:33	93		96											
CCV	03:35	95		96											
CCB	03:37	92		94											

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331906E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	21:54	100													
S	21:56	97													
CCS	21:58	98													
CCS	22:00	103													
ICV	22:02	99													
ICB	22:04	100													
LLC	22:06	98													
ICSA	22:08	97													
ICSAB	22:10	98													
CCV	22:12	99													
CCB	22:14	101													
ZZZZZZ	22:16														
ZZZZZZ	22:18														
ZZZZZZ	22:20														
ZZZZZZ	22:22														
ZZZZZZ	22:24														
ZZZZZZ	22:26														
ZZZZZZ	22:28														
ZZZZZZ	22:30														
ZZZZZZ	22:32														
ZZZZZZ	22:34														
CCV	22:36	98													
CCB	22:38	98													
ZZZZZZ	22:40														
ZZZZZZ	22:42														
P31150DB	22:44	101													
P31150DQ	22:46	95													
7265230A	22:48	93													
7265231MS	22:50	94													
7265232MSD	22:52	95													
ZZZZZZ	22:54														
ZZZZZZ	22:56														
CCV	22:58	100													
CCB	23:00	101													
LLC	23:02	99													
ICSA	23:04	97													
ICSAB	23:06	98													
CCV	23:08	98													

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

FLAG:
- R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS
- BE = Beryllium
- BI = Bismuth
- GE = Germanium
- HO = Holmium
- IN = Indium
- LI = Lithium
- SC = Scandium
- TB = Terbium
- Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM04

Instrument ID: 19204
Run Name: 1331906E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
CCB	23:10	101													

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

Raw Data

Metals in Liquid

ICP Data

Metals in Liquid

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ICP-AES Run Data Report

1331501T71

Reviewed By
Joanne M Gates

Reviewed Date
11/11/2013 5:07AM

Data File Name 1331501T71.TXT
Run Name: 1331501T71

Verified By:
Deborah A Krady
Jennifer L Moyer

Verified Date
11/11/2013 1:32PM
11/14/2013 10:10AM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2106

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/11/2013 00:43

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00198	43.897	-0.00293	-0.00175	-0.00124
AL	0.000	0.00492	9.393	0.00546	0.00472	0.00460
AS	0.000	-0.00591	75.918	-0.00753	-0.00084	-0.00937
B	0.000	-0.00001	22.956	-0.00001	-0.00001	-0.00001
BA	0.000	0.00030	4.681	0.00031	0.00029	0.00029
BE	0.000	-0.00750	5.383	-0.00787	-0.00756	-0.00707
CA	0.000	0.00256	3.377	0.00264	0.00247	0.00255
CD	0.000	0.00560	51.652	0.00686	0.00229	0.00764
CO	0.000	-0.00554	78.803	-0.01056	-0.00258	-0.00349
CR	0.000	-0.00001	235.266	0.00001	0.00000	-0.00002
CU	0.000	0.01467	6.546	0.01536	0.01357	0.01508
FE	0.000	0.00015	43.391	0.00009	0.00023	0.00014
K	0.000	0.15292	8.334	0.15453	0.13944	0.16477
LI	0.000	0.00239	13.097	0.00216	0.00225	0.00274
MG	0.000	0.00019	29.400	0.00014	0.00025	0.00019
MN	0.000	0.00107	27.801	0.00109	0.00076	0.00135
MO	0.000	0.00844	28.584	0.01010	0.00567	0.00954
NA	0.000	0.00532	5.233	0.00500	0.00550	0.00547
NI	0.000	0.05895	8.513	0.05637	0.06473	0.05575
P	0.000	0.00003	136.118	0.00006	0.00005	-0.00002
PB	0.000	0.00688	53.308	0.00929	0.00266	0.00870
S	0.000	0.00005	142.075	-0.00003	0.00009	0.00009
SB	0.000	-0.00030	13.693	-0.00028	-0.00035	-0.00027
SE	0.000	0.01245	4.900	0.01266	0.01176	0.01292
SI	0.000	0.00013	38.423	0.00018	0.00010	0.00010
SN	0.000	0.00604	36.062	0.00850	0.00525	0.00436
SR	0.000	-0.00006	12.051	-0.00007	-0.00005	-0.00005
TI	0.000	0.00214	27.232	0.00156	0.00214	0.00272
TL	0.000	-0.00017	916.219	0.00160	-0.00145	-0.00067
V	0.000	-0.00050	58.565	-0.00084	-0.00032	-0.00034
Y1	0.000	15892.46559	0.369	15845.33360	15874.02040	15958.04277
Y2A	0.000	624556.14646	0.841	618494.37086	627828.34331	627345.72522
Y2R	0.000	33265.31116	0.477	33335.41750	33376.99960	33083.51637
ZN	0.000	0.11659	3.231	0.11688	0.12021	0.11269
ZR	0.000	0.00007	74.751	0.00013	0.00002	0.00008

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/11/2013 00:46

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.43631	0.157	12.45836	12.42918	12.42139
CA	50.000	1.61130	0.504	1.61990	1.60377	1.61023
FE	50.000	0.57155	0.418	0.57388	0.56910	0.57166
K	50.000	20.28594	0.266	20.34023	20.23228	20.28533
MG	50.000	3.76321	0.355	3.77606	3.74938	3.76418
NA	50.000	1.88416	0.409	1.89125	1.87596	1.88527
S	50.000	0.84945	0.152	0.84837	0.85088	0.84910
SI	50.000	0.36637	0.333	0.36701	0.36496	0.36713
Y1	50.000	15521.98611	0.018	15523.81168	15523.37041	15518.77624
Y2R	50.000	32754.02165	0.246	32661.32649	32807.47500	32793.26347

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/11/2013 00:50

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.45383	0.105	1.45469	1.45206	1.45472
AS	1.000	1.44089	0.307	1.43816	1.44600	1.43851
B	1.000	0.00608	0.356	0.00605	0.00608	0.00610
BA	1.000	1.40908	0.189	1.40600	1.41080	1.41042
BE	1.000	43.07968	0.219	43.13816	43.12995	42.97093
CD	1.000	32.46134	0.245	32.40792	32.55283	32.42327
CO	1.000	15.78943	0.255	15.76005	15.83524	15.77301
CU	1.000	1.24554	0.279	1.24953	1.24319	1.24389
LI	1.000	0.22134	0.873	0.22107	0.21956	0.22340
MN	1.000	5.62630	0.160	5.63626	5.61871	5.62392
NI	1.000	8.53442	0.409	8.52221	8.57380	8.50725
P	1.000	0.03205	0.180	0.03212	0.03205	0.03200
PB	1.000	2.92276	0.637	2.90876	2.94389	2.91563
SE	1.000	1.23479	0.505	1.23368	1.24150	1.22918
SR	1.000	1.50627	0.207	1.50675	1.50912	1.50293
TL	1.000	1.65730	0.480	1.65239	1.66648	1.65302
Y1	1.000	15672.87765	0.210	15684.52503	15635.73085	15698.37708
Y2A	1.000	600124.05603	0.362	597642.41871	601691.92588	601037.82349
Y2R	1.000	32957.05530	0.659	33017.28963	33137.79488	32716.08140
ZN	1.000	28.96500	0.327	28.94274	29.06897	28.88329

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 4 Date/Time: 11/11/2013 00:54

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.01817	0.515	0.01826	0.01807	0.01817
MO	1.000	10.22952	0.527	10.17537	10.23002	10.28316
SB	1.000	0.03945	0.312	0.03934	0.03944	0.03958
SN	1.000	3.38757	0.656	3.36498	3.38829	3.40944
TI	1.000	5.20647	0.620	5.23422	5.17103	5.21415
V	1.000	1.59681	0.661	1.60666	1.58568	1.59807
Y1	1.000	15972.32475	0.277	16021.27048	15960.49271	15935.21108
Y2A	1.000	626377.35287	0.994	620364.82462	632802.40066	625964.83333
Y2R	1.000	33294.85985	0.739	33418.03974	33454.90206	33011.63776
ZR	1.000	0.08301	0.805	0.08242	0.08287	0.08374

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/11/2013 00:58

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60896	10,554.22	0.258	0.60888	0.60742	0.61057
AL	30.17699	4,947.53	1.001	30.06254	30.51960	29.94883
AS	0.60053	267.53	0.602	0.60129	0.59660	0.60371
B	0.60138	2,234.12	0.229	0.60192	0.59982	0.60241
BA	0.60915	512,064.72	0.303	0.61083	0.60717	0.60944
BE	0.59369	305,111.84	0.385	0.59505	0.59498	0.59106
CA	29.82729	31,776.67	0.906	29.64906	30.13804	29.69476
CD	0.59755	6,123.69	0.007	0.59752	0.59759	0.59753
CO	0.59772	2,963.00	0.202	0.59881	0.59793	0.59642
CR	0.60482	6,553.05	0.202	0.60523	0.60345	0.60579
CU	0.61050	9,146.39	0.411	0.61305	0.60803	0.61043
FE	29.99566	11,349.00	0.946	29.82114	30.32318	29.84266
K	29.99413	8,069.30	0.820	29.77201	30.25831	29.95206
LI	0.60434	4,447.14	0.778	0.60123	0.60975	0.60205
MG	29.64504	74,173.05	0.959	29.51961	29.97037	29.44512
MN	0.59846	40,174.83	0.188	0.59952	0.59728	0.59858
MO	0.61667	1,977.03	0.044	0.61640	0.61694	0.61666
NA	29.76538	37,072.97	0.767	29.64526	30.02853	29.62235
NI	0.60088	1,615.04	0.067	0.60109	0.60113	0.60041
P	0.61163	307.23	0.378	0.61130	0.60950	0.61408
PB	0.60444	562.15	0.349	0.60685	0.60357	0.60291
S	29.98723	7,979.49	0.253	30.07436	29.95193	29.93540
SB	0.62984	387.57	0.414	0.62683	0.63142	0.63126
SE	0.60032	234.13	0.449	0.59799	0.59971	0.60327
SI	30.60082	7,398.46	0.804	30.41000	30.87853	30.51393
SN	0.60988	647.90	0.290	0.61120	0.61056	0.60787
SR	0.60234	541,180.92	0.591	0.60238	0.59876	0.60588
TI	0.62125	38,596.94	0.211	0.62275	0.62056	0.62042
TL	0.59387	308.93	0.688	0.59774	0.58959	0.59427
V	0.61287	11,684.38	0.327	0.61419	0.61057	0.61385
Y1	15662.29696	15,662.30	0.266	15615.26393	15676.82142	15694.80554
Y2A	596502.95842	596,502.96	0.280	594574.31984	597479.84406	597454.71135
Y2R	32989.70060	32,989.70	0.611	33064.93604	32761.21603	33142.94974
ZN	0.60198	5,503.31	0.208	0.60325	0.60074	0.60194
ZR	0.60519	1,658.17	1.243	0.60197	0.61378	0.59981

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 6 Date/Time: 11/11/2013 01:02

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.87	237.471	0.00029	-0.00023	0.00033
AL	0.00178	3.56	772.897	-0.01077	0.01642	-0.00033
AS	0.00006	-1.64	3116.433	0.00009	0.00175	-0.00167
B	0.00120	-2.20	75.367	0.00022	0.00201	0.00138
BA	-0.00001	173.15	131.697	-0.00001	0.00000	-0.00003
BE	0.00008	-81.23	3.898	0.00008	0.00008	0.00008
CA	-0.01384	69.86	19.665	-0.01672	-0.01350	-0.01131
CD	0.00049	2.10	4.155	0.00052	0.00048	0.00048
CO	-0.00017	-1.12	32.089	-0.00019	-0.00020	-0.00011
CR	-0.00012	-4.58	285.976	0.00004	0.00011	-0.00051
CU	-0.00003	181.63	958.680	-0.00020	0.00031	-0.00021
FE	-0.00422	3.49	17.844	-0.00461	-0.00336	-0.00470
K	0.04328	112.86	140.040	0.08684	0.06893	-0.02594
LI	-0.00179	66.02	66.770	-0.00311	-0.00079	-0.00147
MG	0.00017	0.38	1174.036	0.00069	0.00180	-0.00199
MN	-0.00008	7.50	104.780	0.00002	-0.00014	-0.00012
MO	0.00015	3.17	119.567	0.00030	0.00020	-0.00005
NA	-0.02563	144.37	18.384	-0.02423	-0.02177	-0.03088
NI	0.00021	19.28	171.901	-0.00019	0.00049	0.00032
P	-0.00206	-0.59	42.420	-0.00112	-0.00284	-0.00222
PB	0.00382	2.41	14.267	0.00323	0.00431	0.00392
S	0.00232	1.43	65.444	0.00403	0.00114	0.00178
SB	-0.00082	-5.08	22.669	-0.00089	-0.00097	-0.00061
SE	-0.00155	3.35	30.307	-0.00117	-0.00140	-0.00207
SI	0.00488	5.38	212.007	-0.00293	0.00096	0.01659
SN	-0.00069	1.18	121.899	-0.00132	0.00026	-0.00100
SR	0.00004	-13.74	50.497	0.00005	0.00002	0.00004
TI	-0.00009	21.10	18.949	-0.00007	-0.00010	-0.00008
TL	-0.00139	-0.79	41.089	-0.00081	-0.00142	-0.00196
V	-0.00014	-10.83	226.068	0.00018	-0.00015	-0.00043
Y1	15884.91125	15,884.91	0.226	15846.07345	15891.95387	15916.70642
Y2A	620823.16667	620,823.17	0.434	618485.00000	620210.41667	623774.08333
Y2R	33118.98907	33,118.99	0.346	33099.75075	33242.05361	33015.16287
ZN	-0.00234	15.73	4.452	-0.00223	-0.00244	-0.00235
ZR	0.00191	7.73	25.401	0.00160	0.00166	0.00247

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/11/2013 01:05

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00535	74.37	3.884	0.00537	0.00555	0.00513
AL	0.18838	34.15	7.905	0.17255	0.19046	0.20212
AS	0.01875	6.97	9.003	0.01700	0.01887	0.02037
B	0.04735	171.40	3.714	0.04854	0.04533	0.04817
BA	0.00536	4,836.85	0.714	0.00538	0.00538	0.00531
BE	0.00489	2,474.03	0.682	0.00493	0.00488	0.00486
CA	0.18437	281.41	1.907	0.18308	0.18167	0.18834
CD	0.00542	53.49	2.427	0.00557	0.00533	0.00535
CO	0.00458	22.95	7.844	0.00498	0.00448	0.00428
CR	0.01463	160.68	0.672	0.01474	0.01457	0.01457
CU	0.00989	331.02	4.684	0.00970	0.01042	0.00955
FE	0.19173	78.20	4.725	0.19073	0.20125	0.18321
K	0.53032	242.56	4.766	0.55312	0.50314	0.53471
LI	0.01780	207.92	8.451	0.01607	0.01879	0.01855
MG	0.09759	247.66	1.068	0.09769	0.09858	0.09650
MN	0.00518	372.53	1.367	0.00513	0.00515	0.00526
MO	0.00993	35.08	3.152	0.01006	0.01015	0.00957
NA	0.94870	1,355.95	0.052	0.94917	0.94819	0.94872
NI	0.01029	46.70	8.274	0.01066	0.01090	0.00932
P	0.09586	49.30	0.976	0.09547	0.09692	0.09517
PB	0.01771	15.44	4.934	0.01832	0.01671	0.01810
S	0.47788	130.40	0.109	0.47848	0.47759	0.47756
SB	0.01943	7.75	13.622	0.01730	0.01860	0.02240
SE	0.02074	12.07	14.823	0.02356	0.02120	0.01746
SI	0.06258	19.38	11.234	0.07066	0.05922	0.05786
SN	0.01938	22.84	3.366	0.02012	0.01910	0.01891
SR	0.00521	4,789.55	0.456	0.00522	0.00522	0.00518
TI	0.01000	668.00	1.293	0.00994	0.01014	0.00991
TL	0.02958	15.58	2.468	0.03037	0.02893	0.02944
V	0.00506	90.83	1.900	0.00517	0.00499	0.00502
Y1	15963.18376	15,963.18	0.433	15987.98242	15885.02100	16016.54786
Y2A	616585.78699	616,585.79	0.534	613698.15859	615885.20239	620174.00000
Y2R	33095.53084	33,095.53	0.825	33290.40379	33212.88362	32783.30510
ZN	0.01726	195.91	0.652	0.01729	0.01713	0.01735
ZR	0.04642	129.91	1.769	0.04685	0.04694	0.04547

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 8

Date/Time: 11/11/2013 01:09

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00046	-42.60	79.543	0.00089	0.00022	0.00028
AL	495.61294	79,440.67	0.949	500.11354	495.99173	490.73354
AS	0.00466	0.30	31.819	0.00462	0.00320	0.00616
B	0.00480	344.65	50.532	0.00204	0.00661	0.00573
BA	0.00041	461.77	0.653	0.00040	0.00041	0.00040
BE	-0.00028	-236.37	8.171	-0.00028	-0.00031	-0.00026
CA	493.68847	482,943.49	0.823	494.05668	497.55287	489.45584
CD	0.00085	296.31	69.236	0.00018	0.00107	0.00129
CO	0.00217	9.43	15.554	0.00186	0.00253	0.00211
CR	0.00238	20.28	24.080	0.00299	0.00231	0.00185
CU	-0.00086	280.32	14.447	-0.00100	-0.00077	-0.00081
FE	198.56706	68,963.40	0.950	200.40892	198.65345	196.63881
K	0.01934	100.06	299.510	0.05962	-0.04705	0.04547
LI	0.00100	131.53	74.458	0.00084	0.00182	0.00035
MG	496.85419	966,298.47	1.451	502.72024	499.03999	488.80235
MN	0.00332	209.82	0.917	0.00328	0.00334	0.00333
MO	-0.00142	-1.73	39.588	-0.00181	-0.00078	-0.00168
NA	0.05339	228.07	10.966	0.06013	0.04962	0.05041
NI	0.00276	13.09	17.820	0.00304	0.00219	0.00305
P	0.01438	6.88	4.484	0.01505	0.01432	0.01377
PB	0.00316	81.04	121.853	0.00708	-0.00061	0.00299
S	-0.00215	0.20	187.799	0.00113	-0.00092	-0.00664
SB	-0.01409	-11.95	22.283	-0.01279	-0.01181	-0.01767
SE	0.00261	6.65	124.026	0.00419	-0.00111	0.00476
SI	0.01995	8.50	41.113	0.02702	0.01096	0.02185
SN	0.00448	5.98	4.147	0.00458	0.00460	0.00427
SR	0.00246	1,931.99	1.213	0.00246	0.00243	0.00249
TI	-0.00048	-3.58	17.113	-0.00054	-0.00051	-0.00038
TL	0.00549	2.52	53.758	0.00505	0.00279	0.00864
V	-0.00212	36.62	10.918	-0.00200	-0.00239	-0.00197
Y1	14114.67699	14,114.68	0.099	14117.51365	14099.52058	14126.99673
Y2A	532123.42402	532,123.42	0.204	531915.06304	533297.36231	531157.84672
Y2R	31125.56029	31,125.56	0.761	30953.85689	31027.09458	31395.72940
ZN	0.01092	282.04	2.497	0.01064	0.01093	0.01119
ZR	0.00446	13.86	31.076	0.00288	0.00502	0.00548

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 9

Date/Time: 11/11/2013 01:13

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21906	3,350.53	0.442	0.21795	0.21965	0.21960
AL	494.01979	79,359.63	0.539	494.00211	491.36411	496.69317
AS	0.10142	39.83	1.423	0.10303	0.10023	0.10101
B	0.00641	349.61	23.927	0.00496	0.00625	0.00802
BA	0.49704	373,500.50	0.511	0.49457	0.49964	0.49692
BE	0.50875	233,681.85	0.383	0.50650	0.50976	0.50998
CA	495.17121	485,481.81	0.349	493.44400	496.90008	495.16955
CD	0.96364	9,119.92	0.201	0.96456	0.96141	0.96494
CO	0.49192	2,192.98	0.099	0.49143	0.49193	0.49241
CR	0.48451	4,691.61	0.638	0.48106	0.48542	0.48704
CU	0.53107	7,263.03	0.224	0.53012	0.53240	0.53068
FE	198.02243	68,939.52	0.563	197.90126	196.97385	199.19219
K	0.05026	108.04	20.386	0.04293	0.06197	0.04588
LI	0.00051	128.63	93.782	0.00080	0.00077	-0.00004
MG	492.97299	962,650.86	1.637	486.93749	489.83964	502.14184
MN	0.48246	28,951.85	0.347	0.48053	0.48352	0.48334
MO	-0.00122	-1.14	21.634	-0.00152	-0.00110	-0.00104
NA	0.04709	221.22	7.239	0.04318	0.04866	0.04942
NI	0.97688	2,343.42	0.124	0.97610	0.97627	0.97828
P	0.01350	7.66	9.604	0.01458	0.01206	0.01385
PB	0.05375	122.88	2.699	0.05498	0.05413	0.05215
S	-0.00112	0.44	471.058	-0.00498	0.00492	-0.00331
SB	0.62146	346.14	0.734	0.62146	0.62602	0.61689
SE	0.05163	23.62	1.309	0.05088	0.05178	0.05221
SI	0.01989	8.51	17.405	0.02382	0.01854	0.01730
SN	0.00345	5.00	58.223	0.00140	0.00542	0.00355
SR	0.00244	1,914.24	0.247	0.00243	0.00244	0.00244
TI	-0.00030	13.55	50.733	-0.00021	-0.00048	-0.00022
TL	0.10716	50.99	1.568	0.10860	0.10531	0.10756
V	0.49573	8,590.70	0.319	0.49390	0.49669	0.49659
Y1	14113.49081	14,113.49	0.089	14125.75067	14114.00400	14100.71776
Y2A	533180.98872	533,180.99	0.344	535267.99934	531828.21831	532446.74851
Y2R	31196.83505	31,196.84	0.616	31282.76360	31330.94692	30976.79462
ZN	1.03521	8,615.39	0.154	1.03337	1.03603	1.03622
ZR	0.00692	20.27	36.177	0.00905	0.00756	0.00416

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 10

Date/Time: 11/11/2013 01:17

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50097	8,715.49	1.105	0.50719	0.49917	0.49656
AL	24.95595	4,048.92	0.332	24.99187	24.86116	25.01481
AS	0.49327	219.26	0.248	0.49468	0.49265	0.49248
B	0.48068	1,793.43	1.140	0.48450	0.47441	0.48314
BA	0.49968	421,840.52	1.427	0.50745	0.49815	0.49344
BE	0.48866	252,169.15	1.226	0.49558	0.48525	0.48515
CA	24.49030	25,848.44	0.226	24.46201	24.45487	24.55402
CD	0.49278	5,046.48	0.190	0.49381	0.49199	0.49253
CO	0.49031	2,428.95	0.234	0.49141	0.49038	0.48912
CR	0.49015	5,332.35	1.290	0.49744	0.48615	0.48686
CU	0.49611	7,497.15	0.788	0.50059	0.49342	0.49431
FE	24.71642	9,265.38	0.292	24.66796	24.68187	24.79943
K	24.62567	6,575.67	0.133	24.60645	24.60713	24.66343
LI	0.49792	3,640.53	0.443	0.49925	0.49913	0.49537
MG	24.46284	60,704.90	0.102	24.44879	24.44801	24.49171
MN	0.49388	33,295.70	1.342	0.50146	0.49101	0.48917
MO	0.50441	1,616.67	0.118	0.50496	0.50451	0.50377
NA	24.52694	30,269.15	0.086	24.52889	24.50490	24.54702
NI	0.49324	1,328.25	0.253	0.49453	0.49315	0.49205
P	0.49869	250.43	0.178	0.49830	0.49970	0.49806
PB	0.49633	461.18	0.549	0.49848	0.49724	0.49326
S	24.49771	6,515.07	0.078	24.51425	24.50205	24.47685
SB	0.51504	315.91	0.435	0.51741	0.51295	0.51477
SE	0.49384	193.18	0.727	0.49756	0.49358	0.49039
SI	25.44051	6,089.13	0.312	25.45226	25.35589	25.51336
SN	0.50211	533.44	0.159	0.50303	0.50170	0.50161
SR	0.49637	447,846.97	0.941	0.50174	0.49321	0.49416
TI	0.50134	31,283.98	1.120	0.50781	0.49777	0.49844
TL	0.48753	253.45	0.237	0.48845	0.48792	0.48623
V	0.49938	9,558.85	1.281	0.50675	0.49542	0.49596
Y1	15653.05763	15,653.06	0.229	15618.06877	15651.45599	15689.64814
Y2A	599071.96970	599,071.97	1.225	590654.44592	602413.40411	604148.05906
Y2R	32654.04074	32,654.04	0.122	32696.52847	32647.69092	32617.90284
ZN	0.49307	4,511.79	0.118	0.49359	0.49245	0.49318
ZR	0.49749	1,349.72	0.768	0.49571	0.49489	0.50188

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 11

Date/Time: 11/11/2013 01:21

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-24.03	169.564	0.00009	-0.00021	-0.00017
AL	0.00606	4.25	472.079	-0.02661	0.01821	0.02657
AS	-0.00132	-2.27	126.605	-0.00212	-0.00245	0.00060
B	0.00021	-5.97	423.463	-0.00053	0.00122	-0.00005
BA	-0.00005	137.52	50.034	-0.00008	-0.00003	-0.00005
BE	0.00008	-80.52	23.574	0.00011	0.00008	0.00007
CA	-0.00636	77.56	62.828	-0.00749	-0.00192	-0.00967
CD	0.00043	1.43	23.623	0.00052	0.00032	0.00045
CO	-0.00031	-1.85	49.948	-0.00032	-0.00016	-0.00047
CR	-0.00057	-9.72	53.516	-0.00023	-0.00081	-0.00068
CU	-0.00023	178.68	331.323	-0.00093	-0.00034	0.00058
FE	-0.00445	3.40	94.024	-0.00917	-0.00294	-0.00123
K	0.02582	107.80	69.417	0.01431	0.01667	0.04646
LI	-0.00380	51.28	54.235	-0.00149	-0.00545	-0.00445
MG	0.00825	20.83	14.390	0.00937	0.00701	0.00838
MN	-0.00010	6.02	13.992	-0.00009	-0.00011	-0.00012
MO	0.00024	3.45	79.056	0.00037	0.00002	0.00032
NA	-0.03836	128.07	16.585	-0.03425	-0.04569	-0.03515
NI	-0.00004	18.61	1458.778	0.00022	-0.00065	0.00032
P	-0.00176	-0.44	27.316	-0.00222	-0.00180	-0.00126
PB	0.00336	1.98	70.654	0.00602	0.00263	0.00144
S	0.00183	1.30	67.488	0.00245	0.00263	0.00041
SB	-0.00175	-5.65	188.660	-0.00263	0.00190	-0.00452
SE	0.00147	4.52	259.131	0.00281	-0.00283	0.00444
SI	0.00133	4.51	289.762	0.00576	-0.00050	-0.00127
SN	-0.00024	1.66	161.386	-0.00019	-0.00064	0.00012
SR	0.00004	-14.47	30.183	0.00002	0.00004	0.00005
TI	-0.00007	22.10	98.012	-0.00002	-0.00005	-0.00015
TL	-0.00073	-0.44	85.138	-0.00133	-0.00009	-0.00078
V	0.00002	-7.78	651.506	-0.00011	0.00011	0.00005
Y1	15864.00989	15,864.01	0.123	15841.46904	15876.44957	15874.11106
Y2A	621009.00557	621,009.01	0.593	620313.65894	617725.58333	624987.77445
Y2R	32998.37826	32,998.38	0.684	32975.33420	32785.22251	33234.57808
ZN	-0.00235	15.64	6.362	-0.00243	-0.00217	-0.00244
ZR	-0.00074	0.43	322.461	0.00154	-0.00054	-0.00323

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/11/2013 01:25

Sample Number: **PBW** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-19.28	46.297	0.00027	0.00012	0.00014
AL	0.02746	7.91	146.337	0.01094	-0.00183	0.07327
AS	-0.00259	-2.86	38.567	-0.00352	-0.00273	-0.00153
B	0.00194	0.57	14.526	0.00165	0.00194	0.00222
BA	0.00006	238.32	18.941	0.00006	0.00007	0.00005
BE	0.00007	-90.20	6.655	0.00007	0.00007	0.00007
CA	0.03075	119.36	4.036	0.03207	0.03058	0.02961
CD	0.00041	1.28	23.141	0.00051	0.00032	0.00041
CO	-0.00058	-3.18	60.894	-0.00019	-0.00067	-0.00088
CR	-0.00011	-4.52	449.364	0.00011	-0.00067	0.00023
CU	-0.00040	178.37	154.994	0.00016	-0.00105	-0.00029
FE	-0.00404	3.62	174.302	0.00156	-0.01195	-0.00173
K	0.02017	108.37	208.884	-0.02079	0.01792	0.06337
LI	-0.00310	57.35	51.877	-0.00231	-0.00205	-0.00496
MG	0.00587	15.09	8.179	0.00555	0.00564	0.00642
MN	-0.00008	7.93	101.226	-0.00014	-0.00010	0.00001
MO	-0.00003	2.59	761.843	0.00019	-0.00005	-0.00022
NA	-0.03843	130.46	9.825	-0.04240	-0.03800	-0.03489
NI	0.00022	19.35	84.395	0.00001	0.00032	0.00034
P	-0.00022	0.34	95.455	0.00001	-0.00029	-0.00039
PB	0.00229	0.99	28.113	0.00184	0.00201	0.00303
S	0.00065	0.98	347.501	-0.00194	0.00181	0.00207
SB	-0.00077	-5.05	278.678	0.00165	-0.00153	-0.00243
SE	0.00268	5.00	37.904	0.00151	0.00318	0.00334
SI	0.00026	4.34	2144.175	-0.00316	-0.00276	0.00670
SN	0.01363	16.57	4.963	0.01392	0.01411	0.01285
SR	0.00025	192.10	4.054	0.00026	0.00026	0.00024
TI	-0.00012	18.95	69.168	-0.00021	-0.00005	-0.00010
TL	-0.00190	-1.05	87.263	-0.00336	-0.00224	-0.00010
V	0.00007	-6.68	392.655	-0.00021	0.00006	0.00037
Y1	15900.74112	15,900.74	0.161	15882.00227	15890.32709	15929.89401
Y2A	628865.21713	628,865.22	0.205	627750.58333	628570.41667	630274.65139
Y2R	33640.54231	33,640.54	0.450	33625.72283	33497.17951	33798.72459
ZN	-0.00261	13.27	2.132	-0.00257	-0.00260	-0.00268
ZR	-0.00070	0.55	351.857	0.00133	0.00001	-0.00345

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/11/2013 01:29

Sample Number: **LCSW** Class: **** Batch: 133115705006

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05623	995.78	1.795	0.05630	0.05720	0.05519
AL	2.08805	352.04	1.525	2.10468	2.10812	2.05134
AS	0.15272	68.38	1.189	0.15384	0.15062	0.15369
B	2.00409	7,506.48	0.580	1.99882	2.01742	1.99604
BA	2.05861	1,785,566.57	0.595	2.05708	2.07155	2.04719
BE	0.05126	27,107.44	0.802	0.05123	0.05169	0.05087
CA	4.09801	4,487.07	0.419	4.10842	4.07818	4.10744
CD	0.05109	522.26	0.153	0.05101	0.05117	0.05110
CO	0.51250	2,566.16	0.166	0.51227	0.51179	0.51344
CR	0.20597	2,300.98	0.703	0.20613	0.20732	0.20444
CU	0.26000	4,131.79	1.083	0.25903	0.26317	0.25780
FE	1.01017	392.60	0.462	1.01444	1.00520	1.01087
K	10.15607	2,825.81	0.438	10.20313	10.11463	10.15046
LI	1.02631	7,564.05	0.271	1.02861	1.02321	1.02711
MG	2.01759	5,149.58	0.347	2.01533	2.01200	2.02545
MN	0.51147	35,437.47	0.828	0.51162	0.51563	0.50716
MO	2.07716	6,707.61	0.041	2.07699	2.07640	2.07807
NA	10.15252	12,882.99	0.310	10.18220	10.11954	10.15581
NI	0.52214	1,426.04	0.080	0.52193	0.52186	0.52262
P	1.03462	522.48	0.285	1.03135	1.03548	1.03705
PB	0.15329	140.67	1.532	0.15070	0.15391	0.15527
S	1.00782	271.15	0.371	1.01166	1.00419	1.00761
SB	0.53312	324.68	0.462	0.53057	0.53330	0.53549
SE	0.15607	64.26	2.045	0.15326	0.15541	0.15954
SI	1.07237	265.83	0.667	1.07956	1.07227	1.06527
SN	4.10897	4,390.00	0.137	4.11221	4.10246	4.11224
SR	1.02669	952,035.96	0.868	1.03212	1.03154	1.01640
TI	1.04604	67,038.74	0.745	1.04407	1.05463	1.03941
TL	0.15302	80.54	1.626	0.15199	0.15586	0.15121
V	0.52539	10,042.35	0.698	0.52567	0.52890	0.52159
Y1	15790.61989	15,790.62	0.118	15777.44567	15811.89448	15782.51950
Y2A	615642.53552	615,642.54	0.785	616307.58333	610511.03185	620108.99137
Y2R	33305.05766	33,305.06	0.419	33148.64797	33416.52500	33350.00000
ZN	0.50829	4,666.56	0.106	0.50809	0.50889	0.50787
ZR	1.02277	2,827.50	0.304	1.02474	1.01919	1.02438

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/11/2013 01:32

Sample Number: **7265230** Class: U*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00006	-22.83	816.844	0.00032	-0.00066	0.00015
AL	0.14798	27.45	11.932	0.14769	0.16578	0.13047
AS	-0.00062	-2.12	391.176	-0.00125	-0.00269	0.00206
B	0.02871	100.48	2.405	0.02933	0.02797	0.02883
BA	0.03936	33,247.92	0.669	0.03952	0.03906	0.03950
BE	0.00007	-83.45	26.576	0.00007	0.00006	0.00009
CA	36.10174	38,423.67	1.066	36.11494	35.71059	36.47969
CD	0.00047	4.24	21.016	0.00040	0.00058	0.00043
CO	0.00016	0.59	286.469	0.00056	-0.00035	0.00027
CR	0.00085	6.14	78.599	0.00136	0.00111	0.00009
CU	0.00017	192.27	480.425	0.00033	-0.00070	0.00086
FE	1.44872	555.35	0.973	1.44516	1.43675	1.46425
K	1.95773	620.80	3.543	1.93849	1.90001	2.03468
LI	-0.00060	78.43	551.349	-0.00143	0.00304	-0.00340
MG	14.38682	36,196.96	0.978	14.41747	14.23339	14.50961
MN	0.73905	49,599.99	0.811	0.74162	0.73219	0.74332
MO	0.00043	4.03	62.081	0.00022	0.00033	0.00073
NA	71.59502	88,909.58	0.865	71.62095	70.96297	72.20113
NI	-0.00048	17.18	112.871	-0.00108	-0.00006	-0.00028
P	0.03141	16.20	4.482	0.03300	0.03088	0.03034
PB	0.00965	8.64	25.362	0.00700	0.01183	0.01010
S	5.03989	1,346.22	0.684	5.07006	5.04729	5.00231
SB	-0.00004	-4.53	1783.541	-0.00042	0.00075	-0.00044
SE	-0.00012	4.02	1633.879	0.00207	-0.00153	-0.00089
SI	8.45978	2,047.98	1.072	8.49767	8.35629	8.52536
SN	0.00019	2.10	462.651	0.00112	0.00010	-0.00064
SR	0.10686	95,948.92	0.742	0.10734	0.10594	0.10729
TI	0.00525	351.56	2.419	0.00536	0.00528	0.00511
TL	0.00047	0.47	248.702	0.00070	-0.00079	0.00150
V	0.00042	0.11	81.051	0.00077	0.00040	0.00009
Y1	15714.63478	15,714.63	0.481	15648.47144	15698.50697	15796.92595
Y2A	596416.16899	596,416.17	0.907	592873.25813	602645.98540	593729.26344
Y2R	32984.79468	32,984.79	1.052	32884.12318	33370.95808	32699.30279
ZN	0.00207	56.57	7.716	0.00225	0.00202	0.00194
ZR	-0.00254	-4.49	27.725	-0.00290	-0.00300	-0.00173

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/11/2013 01:36

Sample Number: **7265230** Class: UP** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02581	436.57	1.051	0.02551	0.02604	0.02588
AL	1.15395	190.77	3.101	1.12455	1.14349	1.19380
AS	0.50178	225.55	0.729	0.49959	0.50600	0.49974
B	0.22618	816.24	0.263	0.22647	0.22549	0.22657
BA	0.09025	75,809.51	0.624	0.08967	0.09030	0.09079
BE	0.02079	10,542.02	0.808	0.02063	0.02077	0.02096
CA	36.27031	38,300.71	1.381	36.57403	35.69239	36.54451
CD	0.05067	515.58	1.271	0.04995	0.05119	0.05087
CO	0.10029	497.19	0.515	0.09994	0.10088	0.10004
CR	0.20125	2,172.36	0.678	0.19970	0.20179	0.20226
CU	0.51031	7,661.19	0.518	0.50791	0.50988	0.51315
FE	1.92021	728.62	1.729	1.94135	1.88194	1.93735
K	3.92499	1,134.49	1.678	3.89430	3.88009	4.00058
LI	1.00721	7,299.07	1.133	1.01678	0.99459	1.01026
MG	15.25597	38,071.08	1.404	15.37260	15.00877	15.38653
MN	0.78819	52,760.68	0.666	0.78298	0.78811	0.79348
MO	0.20752	667.22	0.904	0.20541	0.20899	0.20818
NA	72.14205	88,887.71	1.214	72.74881	71.13807	72.53927
NI	0.15137	421.25	0.642	0.15025	0.15178	0.15206
P	1.07994	540.96	0.725	1.07091	1.08406	1.08486
PB	0.51085	468.23	0.631	0.50742	0.51382	0.51129
S	4.95652	1,319.87	0.646	4.91966	4.97261	4.97729
SB	0.41705	254.74	1.044	0.41208	0.42015	0.41893
SE	0.81691	316.78	0.863	0.80899	0.81922	0.82252
SI	8.35317	2,006.50	1.103	8.43982	8.25632	8.36336
SN	0.61520	653.68	0.666	0.61099	0.61917	0.61543
SR	0.12592	112,785.98	0.648	0.12510	0.12593	0.12673
TI	0.10705	6,655.09	0.584	0.10646	0.10698	0.10771
TL	1.00501	521.33	0.378	1.00062	1.00721	1.00719
V	0.10424	1,954.53	0.564	0.10416	0.10369	0.10486
Y1	15665.98071	15,665.98	0.412	15731.50736	15602.31988	15664.11490
Y2A	594860.42911	594,860.43	0.560	597207.86330	596324.40279	591049.02123
Y2R	32728.21619	32,728.22	1.207	32580.22537	33175.96942	32428.45378
ZN	0.12283	1,154.01	0.536	0.12207	0.12323	0.12318
ZR	1.01181	2,748.48	1.493	1.01759	0.99467	1.02318

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/11/2013 01:40

Sample Number: **7265233** Class: D*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-19.59	655.885	-0.00028	0.00087	-0.00028
AL	0.13709	25.73	15.589	0.13655	0.15872	0.11599
AS	-0.00057	-2.08	306.014	0.00088	-0.00251	-0.00008
B	0.02733	94.47	1.779	0.02721	0.02691	0.02786
BA	0.04036	33,738.62	1.468	0.04103	0.03990	0.04015
BE	0.00006	-91.31	16.821	0.00005	0.00006	0.00006
CA	36.31482	38,789.86	0.585	36.37759	36.48881	36.07806
CD	0.00052	4.68	15.221	0.00051	0.00045	0.00061
CO	0.00004	-0.03	570.293	0.00021	0.00011	-0.00021
CR	0.00055	2.86	48.708	0.00040	0.00086	0.00039
CU	0.00014	190.15	88.917	0.00021	0.00022	0.00000
FE	1.42910	549.88	0.571	1.43610	1.43106	1.42014
K	1.92313	613.94	1.632	1.90157	1.90867	1.95913
LI	-0.00168	70.76	74.419	-0.00262	-0.00026	-0.00214
MG	14.61023	36,889.18	0.597	14.67254	14.64756	14.51060
MN	0.74972	49,802.40	1.341	0.76079	0.74115	0.74721
MO	0.00055	4.40	29.993	0.00060	0.00069	0.00037
NA	72.13141	89,898.30	0.588	72.32117	72.42765	71.64541
NI	0.00020	18.85	321.733	-0.00004	-0.00028	0.00091
P	0.03339	17.08	4.545	0.03254	0.03248	0.03514
PB	0.00798	7.06	10.529	0.00709	0.00809	0.00876
S	5.10862	1,355.85	0.455	5.12918	5.11332	5.08337
SB	-0.00127	-5.27	108.619	-0.00237	-0.00172	0.00028
SE	0.00157	4.64	211.357	0.00048	0.00529	-0.00106
SI	8.47716	2,059.60	1.169	8.51875	8.54873	8.36401
SN	-0.00048	1.37	43.595	-0.00046	-0.00070	-0.00028
SR	0.10958	97,390.48	1.384	0.11126	0.10831	0.10916
TI	0.00495	329.04	5.232	0.00503	0.00515	0.00465
TL	-0.00261	-1.12	26.918	-0.00181	-0.00287	-0.00314
V	0.00054	2.33	34.215	0.00042	0.00075	0.00045
Y1	15614.04288	15,614.04	0.366	15578.68363	15583.45700	15679.98801
Y2A	590368.28135	590,368.28	1.303	581596.88122	595963.91838	593544.04446
Y2R	33102.75239	33,102.75	0.524	32966.77310	33043.32669	33298.15737
ZN	0.00194	55.09	4.701	0.00205	0.00187	0.00191
ZR	0.00195	7.80	147.531	0.00495	0.00164	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/11/2013 01:43

Sample Number: **7265231** Class: R*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05647	955.99	1.761	0.05545	0.05652	0.05744
AL	2.11668	352.25	1.897	2.16249	2.08752	2.10004
AS	0.15493	68.68	1.297	0.15363	0.15391	0.15724
B	2.09032	7,486.96	1.488	2.06249	2.08460	2.12389
BA	2.04839	1,698,483.79	1.837	2.01512	2.04082	2.08923
BE	0.05271	26,649.19	1.667	0.05189	0.05261	0.05364
CA	40.40870	42,856.52	0.537	40.60408	40.44665	40.17537
CD	0.05060	514.34	0.465	0.05075	0.05072	0.05033
CO	0.50582	2,511.32	0.398	0.50813	0.50489	0.50444
CR	0.20741	2,215.18	1.824	0.20347	0.20776	0.21101
CU	0.25760	3,930.26	1.599	0.25398	0.25673	0.26208
FE	1.97179	751.66	0.558	1.96881	1.98398	1.96257
K	12.15566	3,319.40	0.638	12.24481	12.11867	12.10349
LI	1.01793	7,411.58	0.433	1.01932	1.02148	1.01299
MG	16.40890	41,127.25	0.341	16.44279	16.43953	16.34437
MN	1.14212	75,635.23	1.552	1.12675	1.13808	1.16151
MO	2.08458	6,673.98	0.307	2.09035	2.08571	2.07769
NA	81.85559	101,315.01	0.482	82.06709	82.09943	81.40026
NI	0.51161	1,385.89	0.417	0.51367	0.51175	0.50941
P	1.07571	538.52	0.639	1.08218	1.07645	1.06849
PB	0.15480	141.69	0.926	0.15617	0.15331	0.15492
S	6.05167	1,610.27	0.301	6.06350	6.06080	6.03070
SB	0.53449	322.74	0.398	0.53694	0.53343	0.53311
SE	0.15240	62.43	1.298	0.15262	0.15425	0.15032
SI	9.41826	2,272.56	0.771	9.49145	9.41710	9.34622
SN	4.13345	4,378.35	0.448	4.15081	4.13558	4.11397
SR	1.11425	987,757.21	1.814	1.09656	1.10993	1.13628
TI	1.05949	64,913.24	1.611	1.04435	1.05614	1.07799
TL	0.15440	80.80	0.918	0.15411	0.15316	0.15594
V	0.53351	9,753.11	1.563	0.52654	0.53123	0.54275
Y1	15655.59535	15,655.60	0.326	15602.23452	15660.74069	15703.81086
Y2A	588613.38753	588,613.39	1.297	595272.22960	590289.23358	580278.69940
Y2R	32882.11148	32,882.11	0.443	32723.02894	32914.83051	33008.47500
ZN	0.50834	4,627.41	0.445	0.51084	0.50774	0.50644
ZR	1.02864	2,807.58	0.575	1.03404	1.02957	1.02232

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/11/2013 01:47

Sample Number: **7265232** Class: M*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05644	958.27	1.721	0.05599	0.05756	0.05578
AL	2.07571	345.19	1.195	2.04852	2.08149	2.09712
AS	0.15544	68.27	0.932	0.15654	0.15380	0.15598
B	2.10293	7,553.65	0.618	2.10707	2.11335	2.08837
BA	2.04935	1,704,241.48	0.257	2.04330	2.05293	2.05181
BE	0.05280	26,769.12	0.555	0.05286	0.05305	0.05248
CA	40.90927	43,332.21	0.856	40.53617	41.23039	40.96123
CD	0.05086	512.13	0.349	0.05091	0.05066	0.05101
CO	0.50816	2,499.31	0.382	0.51030	0.50767	0.50650
CR	0.20742	2,221.62	0.583	0.20713	0.20875	0.20638
CU	0.25945	3,968.72	0.749	0.25969	0.26127	0.25740
FE	1.94441	740.40	0.499	1.93321	1.94964	1.95038
K	12.22431	3,333.56	0.959	12.09217	12.26468	12.31607
LI	1.01467	7,379.16	0.469	1.00985	1.01936	1.01480
MG	16.60624	41,568.09	0.608	16.49356	16.68825	16.63692
MN	1.14044	75,740.83	0.613	1.14357	1.14532	1.13243
MO	2.09804	6,654.26	0.525	2.10968	2.09663	2.08780
NA	82.80291	102,360.16	0.754	82.13870	83.37799	82.89205
NI	0.51561	1,383.52	0.411	0.51784	0.51537	0.51362
P	1.08336	537.28	0.584	1.08852	1.08525	1.07629
PB	0.15406	139.70	0.225	0.15369	0.15412	0.15437
S	6.19029	1,631.75	0.248	6.20749	6.18550	6.17790
SB	0.54234	324.53	0.331	0.54253	0.54402	0.54045
SE	0.15871	64.24	1.267	0.15991	0.15983	0.15639
SI	9.54471	2,300.20	1.067	9.44728	9.65037	9.53649
SN	4.14278	4,347.22	0.441	4.16235	4.13984	4.12614
SR	1.11522	991,486.49	0.337	1.11939	1.11417	1.11209
TI	1.06175	65,238.69	0.571	1.06004	1.06848	1.05673
TL	0.15509	80.40	1.060	0.15696	0.15387	0.15444
V	0.53473	9,802.08	0.461	0.53470	0.53721	0.53228
Y1	15509.34396	15,509.34	0.318	15455.20751	15520.86192	15551.96243
Y2A	590237.47512	590,237.48	0.597	588860.65030	587612.88985	594238.88520
Y2R	32842.48458	32,842.48	0.629	32997.60000	32608.20040	32921.65335
ZN	0.51275	4,623.56	0.293	0.51437	0.51247	0.51140
ZR	1.02867	2,804.20	0.964	1.02079	1.03980	1.02542

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/11/2013 01:51

Sample Number: **7265230** Class: UL** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00016	-19.46	101.929	-0.00003	0.00025	0.00025
AL	0.02470	7.36	46.528	0.02402	0.01357	0.03652
AS	-0.00147	-2.37	73.554	-0.00247	-0.00163	-0.00032
B	0.00889	27.40	6.629	0.00930	0.00822	0.00916
BA	0.00814	7,297.33	0.540	0.00812	0.00819	0.00811
BE	0.00006	-93.42	22.265	0.00004	0.00006	0.00007
CA	7.35009	7,977.97	0.516	7.31313	7.38895	7.34818
CD	0.00042	1.86	13.454	0.00047	0.00044	0.00036
CO	-0.00024	-1.46	89.479	-0.00035	-0.00038	0.00001
CR	0.00016	-1.43	57.928	0.00021	0.00022	0.00005
CU	-0.00016	182.67	497.375	-0.00101	-0.00009	0.00061
FE	0.28391	114.02	2.808	0.27522	0.29088	0.28564
K	0.39282	207.23	16.213	0.45508	0.32779	0.39560
LI	-0.00357	54.19	43.030	-0.00509	-0.00361	-0.00202
MG	2.94370	7,509.71	0.496	2.93231	2.96017	2.93863
MN	0.15035	10,507.10	0.730	0.15023	0.15150	0.14931
MO	0.00060	4.62	34.288	0.00077	0.00066	0.00037
NA	14.60447	18,452.27	0.305	14.56313	14.65175	14.59852
NI	-0.00042	17.53	64.954	-0.00070	-0.00040	-0.00016
P	0.00676	3.86	2.761	0.00693	0.00656	0.00678
PB	0.00468	3.39	55.975	0.00172	0.00561	0.00671
S	0.99842	269.39	0.686	1.00613	0.99611	0.99303
SB	-0.00113	-5.25	106.705	-0.00194	0.00025	-0.00169
SE	0.00299	5.13	89.443	0.00065	0.00590	0.00241
SI	1.70992	421.31	0.798	1.69437	1.71984	1.71556
SN	-0.00056	1.32	155.773	-0.00134	0.00037	-0.00070
SR	0.02175	20,280.01	0.605	0.02173	0.02189	0.02163
TI	0.00128	109.42	5.583	0.00122	0.00126	0.00136
TL	-0.00113	-0.59	131.284	-0.00271	0.00021	-0.00088
V	0.00028	-2.58	24.355	0.00022	0.00027	0.00036
Y1	15835.92333	15,835.92	0.462	15764.40845	15832.78396	15910.57758
Y2A	620414.96242	620,414.96	0.519	622133.15037	616699.23689	622412.50000
Y2R	33300.94447	33,300.94	0.521	33332.65000	33113.77470	33456.40872
ZN	-0.00205	18.57	3.482	-0.00213	-0.00200	-0.00201
ZR	0.00049	3.83	389.756	-0.00045	0.00267	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/11/2013 01:55

Sample Number: **7265223** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00019	-25.98	53.678	-0.00009	-0.00018	-0.00029
AL	0.60546	104.70	2.908	0.58794	0.60529	0.62315
AS	-0.00017	-1.88	521.602	-0.00030	-0.00101	0.00079
B	0.01525	53.33	4.612	0.01605	0.01498	0.01472
BA	0.03323	29,416.50	0.597	0.03306	0.03345	0.03318
BE	0.00014	-53.20	2.034	0.00014	0.00013	0.00014
CA	3.02895	3,388.94	0.892	3.00731	3.05921	3.02033
CD	0.00047	3.70	12.142	0.00051	0.00050	0.00041
CO	0.00001	-0.10	3530.348	0.00011	0.00021	-0.00030
CR	0.00066	4.21	58.709	0.00065	0.00105	0.00027
CU	0.00524	264.75	7.296	0.00482	0.00535	0.00556
FE	1.08428	427.32	1.145	1.07212	1.09693	1.08378
K	1.09610	401.82	2.526	1.12675	1.08863	1.07291
LI	-0.00254	62.29	154.380	0.00180	-0.00583	-0.00360
MG	0.90104	2,335.14	0.844	0.89232	0.90444	0.90635
MN	0.14039	9,875.26	0.482	0.13976	0.14110	0.14029
MO	0.00015	3.18	247.358	-0.00014	0.00002	0.00057
NA	1.27223	1,795.87	1.793	1.25124	1.29650	1.26896
NI	0.00115	21.80	5.264	0.00114	0.00121	0.00109
P	0.47416	241.26	0.426	0.47573	0.47488	0.47188
PB	0.00971	8.46	13.155	0.00990	0.01088	0.00835
S	2.01787	546.34	0.434	2.01208	2.02795	2.01360
SB	-0.00148	-5.50	91.694	-0.00302	-0.00048	-0.00093
SE	0.00299	5.16	12.762	0.00302	0.00260	0.00336
SI	4.27313	1,062.34	0.922	4.22999	4.30722	4.28220
SN	-0.00009	1.83	1169.143	-0.00082	-0.00051	0.00107
SR	0.01939	18,186.49	0.775	0.01924	0.01954	0.01938
TI	0.01350	904.04	0.564	0.01351	0.01357	0.01342
TL	-0.00057	-0.30	207.151	-0.00100	0.00077	-0.00148
V	0.00433	79.63	5.278	0.00458	0.00413	0.00429
Y1	15914.33544	15,914.34	0.234	15909.90735	15879.52727	15953.57171
Y2A	624421.13660	624,421.14	0.362	626471.64005	621995.76974	624796.00000
Y2R	33805.21225	33,805.21	0.753	34076.24750	33571.37145	33768.01779
ZN	0.02038	224.07	0.367	0.02034	0.02046	0.02032
ZR	0.00027	3.30	546.835	0.00053	0.00163	-0.00133

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/11/2013 01:58

Sample Number: **7265224** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00027	-27.56	213.780	0.00030	-0.00087	-0.00025
AL	0.43297	75.64	8.779	0.41423	0.47671	0.40796
AS	-0.00153	-2.47	64.651	-0.00040	-0.00197	-0.00222
B	0.01431	49.38	8.283	0.01323	0.01558	0.01413
BA	0.02563	22,736.43	1.030	0.02556	0.02540	0.02592
BE	0.00012	-60.35	11.244	0.00012	0.00011	0.00014
CA	2.47552	2,776.92	1.032	2.47416	2.45068	2.50173
CD	0.00063	4.95	15.599	0.00053	0.00073	0.00063
CO	0.00007	0.14	493.465	-0.00002	0.00044	-0.00022
CR	0.00073	4.96	68.005	0.00107	0.00016	0.00095
CU	0.00186	212.64	45.836	0.00262	0.00094	0.00202
FE	0.87424	344.52	0.644	0.86878	0.87392	0.88002
K	1.39000	480.49	6.364	1.29083	1.41842	1.46076
LI	-0.00378	52.94	92.894	-0.00745	-0.00343	-0.00045
MG	0.72965	1,885.30	0.949	0.72423	0.72726	0.73745
MN	0.08767	6,174.06	1.156	0.08721	0.08696	0.08883
MO	0.00028	3.59	51.720	0.00039	0.00034	0.00012
NA	1.65171	2,270.81	1.964	1.64653	1.62217	1.68642
NI	0.00115	21.71	35.323	0.00157	0.00076	0.00112
P	0.27063	137.26	0.586	0.27189	0.26885	0.27115
PB	0.00539	4.25	49.219	0.00233	0.00705	0.00680
S	1.47213	396.96	0.326	1.47720	1.47154	1.46764
SB	-0.00123	-5.32	115.271	0.00032	-0.00246	-0.00156
SE	0.00160	4.59	122.273	0.00170	-0.00041	0.00351
SI	2.88288	715.91	0.721	2.87242	2.86940	2.90683
SN	0.00011	2.03	119.493	0.00018	-0.00004	0.00020
SR	0.01733	16,261.22	1.078	0.01725	0.01720	0.01755
TI	0.00708	486.65	1.320	0.00705	0.00700	0.00718
TL	-0.00077	-0.42	240.037	0.00124	-0.00117	-0.00238
V	0.00175	27.50	12.705	0.00201	0.00164	0.00161
Y1	15840.90488	15,840.90	0.084	15839.44715	15828.44714	15854.82035
Y2A	624670.01938	624,670.02	0.687	626621.92282	627636.22754	619751.90776
Y2R	33700.14133	33,700.14	1.586	33162.52495	34231.36971	33706.52933
ZN	0.01156	142.77	0.554	0.01154	0.01163	0.01151
ZR	-0.00116	-0.73	27.076	-0.00092	-0.00152	-0.00105

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 22

Date/Time: 11/11/2013 02:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49158	8,531.03	0.611	0.49108	0.48886	0.49481
AL	24.72646	4,036.85	0.644	24.87211	24.55659	24.75067
AS	0.49257	217.31	1.102	0.49520	0.48633	0.49619
B	0.50213	1,866.84	0.701	0.49962	0.50061	0.50615
BA	0.49682	418,418.05	0.549	0.49767	0.49376	0.49901
BE	0.49436	254,493.31	0.713	0.49267	0.49199	0.49841
CA	24.60343	26,130.43	0.450	24.67771	24.47632	24.65625
CD	0.49339	5,014.68	0.291	0.49342	0.49194	0.49481
CO	0.49522	2,434.97	0.086	0.49562	0.49477	0.49528
CR	0.49780	5,402.59	0.798	0.49554	0.49548	0.50239
CU	0.49297	7,432.93	0.479	0.49087	0.49252	0.49553
FE	24.62222	9,288.21	0.436	24.72378	24.50998	24.63289
K	24.75209	6,650.44	0.593	24.72734	24.61914	24.90978
LI	0.49302	3,628.16	0.659	0.49674	0.49077	0.49155
MG	24.15572	60,326.52	0.238	24.21819	24.10525	24.14371
MN	0.48539	32,645.28	0.635	0.48393	0.48332	0.48893
MO	0.51082	1,624.89	0.171	0.51178	0.51058	0.51008
NA	24.35494	30,246.85	0.531	24.45161	24.20795	24.40528
NI	0.49683	1,327.79	0.330	0.49610	0.49569	0.49871
P	0.50120	249.80	0.141	0.50198	0.50101	0.50061
PB	0.50496	465.50	0.423	0.50706	0.50503	0.50279
S	24.49391	6,465.25	0.201	24.50597	24.43969	24.53607
SB	0.51484	313.42	0.469	0.51464	0.51254	0.51736
SE	0.49214	191.09	0.499	0.49452	0.48962	0.49230
SI	25.06394	6,036.75	0.379	25.13288	24.95553	25.10341
SN	0.50745	535.05	0.175	0.50810	0.50644	0.50781
SR	0.48898	440,092.50	1.354	0.48802	0.48290	0.49603
TI	0.51021	31,759.61	0.689	0.50846	0.50791	0.51426
TL	0.49438	255.07	0.332	0.49327	0.49361	0.49627
V	0.49991	9,545.03	0.834	0.49823	0.49685	0.50466
Y1	15535.75608	15,535.76	0.068	15525.31565	15546.47176	15535.48082
Y2A	597585.21345	597,585.21	0.746	597441.10816	602115.04645	593199.48573
Y2R	32859.40724	32,859.41	0.284	32783.04856	32963.20595	32831.96721
ZN	0.49328	4,479.89	0.240	0.49277	0.49243	0.49463
ZR	0.49680	1,356.31	0.358	0.49871	0.49519	0.49649

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 23 Date/Time: 11/11/2013 02:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-20.35	157.249	0.00017	-0.00008	0.00021
AL	-0.00196	2.91	1030.125	0.00421	0.01445	-0.02455
AS	-0.00016	-1.73	574.370	-0.00114	-0.00007	0.00072
B	0.00030	-5.58	529.761	-0.00110	0.00205	-0.00005
BA	-0.00006	131.97	16.688	-0.00005	-0.00005	-0.00007
BE	0.00008	-80.00	5.902	0.00009	0.00008	0.00008
CA	-0.00678	76.26	7.473	-0.00678	-0.00628	-0.00729
CD	0.00033	0.45	5.153	0.00032	0.00032	0.00035
CO	-0.00032	-1.87	60.832	-0.00046	-0.00010	-0.00040
CR	-0.00038	-7.43	53.140	-0.00057	-0.00017	-0.00038
CU	-0.00051	173.37	57.161	-0.00053	-0.00021	-0.00079
FE	-0.00552	2.96	120.864	-0.01098	0.00192	-0.00750
K	0.00032	99.86	1618.107	0.04276	-0.02643	-0.01538
LI	-0.00301	56.26	66.089	-0.00188	-0.00530	-0.00184
MG	0.00223	5.52	70.960	0.00401	0.00099	0.00169
MN	-0.00003	10.97	168.530	-0.00006	0.00003	-0.00007
MO	0.00014	3.13	125.556	0.00034	0.00009	-0.00001
NA	-0.05809	102.40	10.037	-0.06321	-0.05932	-0.05175
NI	-0.00030	17.86	111.533	0.00004	-0.00031	-0.00062
P	-0.00133	-0.22	62.732	-0.00052	-0.00218	-0.00127
PB	0.00419	2.74	36.743	0.00402	0.00274	0.00580
S	-0.00171	0.34	53.571	-0.00273	-0.00097	-0.00142
SB	-0.00230	-5.99	79.956	-0.00060	-0.00425	-0.00205
SE	0.00108	4.36	165.507	0.00299	-0.00053	0.00077
SI	0.00634	5.67	237.512	0.01661	0.01335	-0.01094
SN	-0.00070	1.16	49.172	-0.00032	-0.00100	-0.00078
SR	0.00003	-23.66	26.498	0.00003	0.00002	0.00003
TI	0.00001	27.17	390.223	0.00000	0.00006	-0.00003
TL	-0.00058	-0.36	230.770	-0.00213	0.00021	0.00018
V	0.00017	-4.80	85.873	0.00013	0.00004	0.00032
Y1	15825.07012	15,825.07	0.068	15823.66216	15836.54254	15815.00567
Y2A	617300.28933	617,300.29	0.740	620023.83333	619848.75000	612028.28467
Y2R	32627.82576	32,627.83	0.788	32587.16580	32902.92766	32393.38382
ZN	-0.00241	15.01	4.407	-0.00253	-0.00233	-0.00237
ZR	-0.00238	-3.97	21.883	-0.00231	-0.00189	-0.00293

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/11/2013 02:10

Sample Number: **7265228** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00033	-28.08	144.399	-0.00071	0.00021	-0.00051
AL	0.06364	13.68	18.951	0.06614	0.05053	0.07425
AS	-0.00059	-1.97	145.497	0.00011	-0.00153	-0.00034
B	0.02215	76.64	8.653	0.02248	0.02009	0.02387
BA	0.02092	18,317.52	0.463	0.02101	0.02093	0.02082
BE	0.00008	-80.41	20.595	0.00010	0.00007	0.00007
CA	9.02627	9,704.50	0.619	9.09076	8.99262	8.99542
CD	0.00051	2.59	17.790	0.00060	0.00042	0.00050
CO	-0.00045	-2.52	12.925	-0.00051	-0.00040	-0.00043
CR	-0.00007	-4.02	808.859	0.00040	-0.00074	0.00012
CU	-0.00010	182.96	259.912	-0.00001	-0.00037	0.00010
FE	0.18386	75.09	3.321	0.19061	0.18226	0.17872
K	0.60815	262.94	9.645	0.63978	0.64420	0.54047
LI	-0.00299	58.20	19.082	-0.00237	-0.00310	-0.00349
MG	3.69702	9,358.90	0.155	3.69910	3.70140	3.69056
MN	0.00920	649.64	0.713	0.00920	0.00926	0.00913
MO	0.00015	3.20	162.727	0.00044	0.00007	-0.00005
NA	5.22630	6,667.16	0.345	5.24253	5.22944	5.20693
NI	0.00043	20.01	101.457	0.00037	0.00090	0.00003
P	0.02749	14.48	1.754	0.02700	0.02752	0.02796
PB	0.00491	3.48	36.529	0.00666	0.00307	0.00501
S	0.71759	195.70	0.077	0.71695	0.71794	0.71789
SB	0.00048	-4.28	289.212	-0.00020	0.00207	-0.00043
SE	0.00069	4.26	278.058	0.00254	-0.00131	0.00086
SI	0.17317	46.12	3.853	0.16552	0.17777	0.17623
SN	-0.00055	1.34	55.621	-0.00021	-0.00062	-0.00081
SR	0.03024	27,976.30	0.621	0.03039	0.03030	0.03003
TI	0.00182	142.79	5.194	0.00182	0.00172	0.00191
TL	0.00064	0.29	49.536	0.00094	0.00031	0.00066
V	0.00035	-0.96	113.078	-0.00010	0.00064	0.00052
Y1	15987.33900	15,987.34	0.209	15979.62941	15958.49977	16023.88782
Y2A	615232.14648	615,232.15	0.638	612282.01725	613724.17219	619690.25000
Y2R	33053.45325	33,053.45	0.315	33025.19960	32966.25675	33168.90341
ZN	-0.00041	33.73	18.617	-0.00043	-0.00032	-0.00047
ZR	-0.00022	1.88	401.191	-0.00116	-0.00008	0.00058

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/11/2013 02:14

Sample Number: **7265235** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-18.17	98.211	0.00027	-0.00002	0.00029
AL	0.01984	6.51	66.167	0.00724	0.01883	0.03344
AS	-0.00077	-2.11	140.354	-0.00005	-0.00024	-0.00201
B	0.02648	90.24	1.634	0.02605	0.02692	0.02646
BA	0.03779	31,521.66	0.669	0.03750	0.03796	0.03791
BE	0.00005	-92.61	39.457	0.00004	0.00004	0.00008
CA	36.32546	38,763.23	0.343	36.36782	36.18523	36.42332
CD	0.00040	2.64	9.144	0.00043	0.00036	0.00041
CO	0.00020	0.75	53.782	0.00029	0.00023	0.00008
CR	0.00043	1.53	128.728	0.00061	-0.00019	0.00087
CU	-0.00107	172.25	28.879	-0.00123	-0.00071	-0.00126
FE	0.92637	357.91	1.200	0.92027	0.91964	0.93920
K	1.98659	630.20	2.041	2.03263	1.95622	1.97091
LI	-0.00308	60.53	77.605	-0.00438	-0.00453	-0.00032
MG	14.56845	36,748.42	0.379	14.56287	14.51627	14.62623
MN	0.63059	41,786.58	0.549	0.62662	0.63220	0.63297
MO	0.00010	2.97	279.671	0.00042	-0.00012	0.00000
NA	72.16331	89,850.19	0.237	72.22104	71.97106	72.29782
NI	0.00002	18.47	1221.134	-0.00033	-0.00046	0.00083
P	0.01651	8.70	9.625	0.01567	0.01834	0.01551
PB	0.00614	5.33	58.890	0.00462	0.01027	0.00353
S	5.02696	1,338.68	0.341	5.04079	5.03233	5.00776
SB	-0.00162	-5.50	38.276	-0.00095	-0.00174	-0.00217
SE	-0.00037	3.89	390.882	0.00124	-0.00083	-0.00152
SI	8.31569	2,018.51	0.331	8.34570	8.30984	8.29154
SN	-0.00067	1.18	55.662	-0.00065	-0.00031	-0.00106
SR	0.10907	96,693.91	0.589	0.10833	0.10938	0.10950
TI	0.00194	143.87	2.802	0.00190	0.00192	0.00200
TL	-0.00066	-0.16	239.454	-0.00179	-0.00134	0.00115
V	0.00031	-2.18	38.244	0.00023	0.00044	0.00025
Y1	15666.61851	15,666.62	0.259	15645.44134	15640.96983	15713.44435
Y2A	588834.88166	588,834.88	0.490	592092.65096	587812.62442	586599.36961
Y2R	33069.85733	33,069.86	0.117	33035.02295	33111.57500	33062.97405
ZN	-0.00094	28.93	0.989	-0.00095	-0.00093	-0.00094
ZR	0.00039	3.56	457.320	-0.00016	-0.00107	0.00241

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/11/2013 02:17

Sample Number: **7265238** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00012	-23.22	370.913	-0.00062	0.00014	0.00012
AL	0.10677	20.65	6.880	0.10987	0.09838	0.11206
AS	0.00088	-1.27	27.652	0.00060	0.00098	0.00104
B	0.04446	153.86	1.867	0.04531	0.04442	0.04365
BA	0.03831	32,030.31	0.596	0.03842	0.03805	0.03847
BE	0.00004	-98.37	73.233	0.00005	0.00007	0.00001
CA	57.60706	61,094.24	0.500	57.93854	57.42116	57.46149
CD	0.00057	3.32	16.163	0.00058	0.00048	0.00066
CO	-0.00036	-1.98	34.037	-0.00035	-0.00024	-0.00049
CR	0.00134	11.35	12.091	0.00135	0.00150	0.00118
CU	-0.00050	190.11	142.499	-0.00130	-0.00025	0.00005
FE	0.27531	109.49	1.434	0.27838	0.27669	0.27085
K	1.74822	564.31	2.990	1.79812	1.75268	1.69386
LI	0.00020	86.26	668.378	-0.00124	0.00147	0.00038
MG	22.27748	55,793.79	0.327	22.35909	22.21932	22.25403
MN	0.10018	6,664.02	0.842	0.10026	0.09929	0.10097
MO	0.00016	3.12	237.278	-0.00022	0.00016	0.00052
NA	90.84912	112,589.78	0.454	91.32435	90.58347	90.63955
NI	0.00019	18.82	229.549	-0.00003	0.00067	-0.00009
P	0.01862	9.69	6.145	0.01993	0.01782	0.01811
PB	0.00832	7.22	10.688	0.00825	0.00923	0.00746
S	8.80954	2,329.90	0.663	8.74220	8.83923	8.84718
SB	-0.00233	-5.90	45.002	-0.00143	-0.00209	-0.00349
SE	0.00176	4.57	16.285	0.00198	0.00144	0.00188
SI	7.88684	1,906.50	0.401	7.92301	7.87298	7.86453
SN	-0.00083	1.01	17.129	-0.00095	-0.00085	-0.00067
SR	0.13190	117,212.09	0.743	0.13201	0.13086	0.13281
TI	0.00505	335.75	1.543	0.00504	0.00498	0.00514
TL	0.00100	0.50	120.689	0.00155	0.00185	-0.00038
V	0.00022	-3.53	191.584	-0.00019	0.00021	0.00063
Y1	15563.44040	15,563.44	0.517	15656.06260	15522.42771	15511.83089
Y2A	590197.35678	590,197.36	0.475	589824.23689	593167.63437	587600.19907
Y2R	32929.46330	32,929.46	0.274	32866.43699	33033.01416	32888.93876
ZN	0.00048	40.84	23.898	0.00035	0.00058	0.00052
ZR	-0.00113	-0.63	146.546	-0.00120	-0.00276	0.00056

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/11/2013 02:21

Sample Number: **7265240** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00024	-16.94	49.367	0.00029	0.00010	0.00032
AL	0.05111	11.63	24.243	0.06347	0.03869	0.05118
AS	-0.00143	-2.29	185.288	0.00131	-0.00163	-0.00399
B	0.04296	146.63	0.168	0.04299	0.04301	0.04288
BA	0.03746	30,996.90	0.467	0.03734	0.03766	0.03737
BE	0.00003	-102.85	13.724	0.00003	0.00003	0.00003
CA	56.53889	60,210.21	0.092	56.50607	56.51158	56.59901
CD	0.00041	1.45	10.250	0.00037	0.00042	0.00045
CO	-0.00036	-1.99	37.862	-0.00050	-0.00023	-0.00035
CR	0.00117	9.36	15.655	0.00104	0.00109	0.00138
CU	-0.00034	189.93	61.903	-0.00057	-0.00015	-0.00032
FE	0.11834	50.17	6.907	0.12754	0.11559	0.11190
K	1.81099	583.33	2.016	1.84299	1.77121	1.81877
LI	-0.00115	76.73	141.118	-0.00076	0.00024	-0.00292
MG	21.88996	55,054.06	0.171	21.84730	21.90598	21.91660
MN	0.07560	4,979.82	0.621	0.07524	0.07613	0.07542
MO	0.00011	2.96	121.467	0.00011	-0.00002	0.00023
NA	89.60207	111,498.52	0.017	89.60601	89.58532	89.61487
NI	0.00077	20.34	22.468	0.00091	0.00057	0.00082
P	0.02190	11.31	7.024	0.02177	0.02043	0.02350
PB	0.00683	5.82	5.003	0.00647	0.00715	0.00688
S	8.81494	2,328.30	0.227	8.82355	8.82916	8.79210
SB	-0.00181	-5.57	89.221	-0.00361	-0.00051	-0.00130
SE	-0.00034	3.76	982.738	-0.00199	-0.00254	0.00351
SI	7.66590	1,860.74	0.139	7.67430	7.65394	7.66945
SN	-0.00074	1.10	82.239	-0.00114	-0.00004	-0.00103
SR	0.13162	115,753.91	0.494	0.13116	0.13236	0.13133
TI	0.00322	220.67	4.539	0.00339	0.00312	0.00315
TL	0.00092	0.45	168.995	0.00263	-0.00042	0.00055
V	0.00056	2.88	81.177	0.00091	0.00072	0.00005
Y1	15542.93632	15,542.94	0.229	15519.50450	15525.32712	15583.97735
Y2A	584082.58682	584,082.59	0.564	586392.91639	580310.46782	585544.37624
Y2R	33063.27100	33,063.27	0.420	33188.30975	33087.55000	32913.95326
ZN	0.00009	37.18	147.176	0.00009	-0.00004	0.00022
ZR	-0.00137	-1.28	72.045	-0.00228	-0.00032	-0.00151

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/11/2013 02:25

Sample Number: **7265243** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00016	-23.67	319.897	-0.00053	0.00042	-0.00037
AL	0.06476	13.88	29.527	0.06093	0.08551	0.04784
AS	-0.00233	-2.70	105.513	-0.00002	-0.00490	-0.00206
B	0.04386	149.93	1.296	0.04427	0.04411	0.04321
BA	0.03777	31,259.56	0.571	0.03797	0.03779	0.03754
BE	0.00002	-107.32	80.202	0.00000	0.00002	0.00004
CA	51.11149	54,525.10	0.277	51.27437	51.01907	51.04102
CD	0.00040	1.35	23.240	0.00048	0.00042	0.00030
CO	-0.00035	-1.97	42.953	-0.00044	-0.00044	-0.00018
CR	0.00079	5.39	20.563	0.00061	0.00086	0.00091
CU	-0.00072	182.27	6.967	-0.00067	-0.00075	-0.00075
FE	0.14220	59.33	4.967	0.14489	0.14752	0.13419
K	3.09687	926.91	1.371	3.11442	3.04846	3.12772
LI	-0.00448	52.04	17.328	-0.00530	-0.00438	-0.00376
MG	20.76692	52,319.84	0.390	20.85925	20.73373	20.70778
MN	0.21029	13,836.06	0.643	0.21176	0.21004	0.20908
MO	0.00019	3.24	76.656	0.00027	0.00027	0.00002
NA	86.57408	107,876.79	0.379	86.95043	86.42045	86.35137
NI	-0.00005	18.23	1258.162	0.00003	0.00057	-0.00076
P	0.04842	24.53	2.544	0.04962	0.04716	0.04848
PB	0.00556	4.31	31.607	0.00382	0.00552	0.00733
S	10.30816	2,730.55	0.081	10.30435	10.30235	10.31778
SB	-0.00184	-5.61	223.577	0.00228	-0.00594	-0.00186
SE	-0.00097	3.55	228.663	-0.00176	-0.00269	0.00154
SI	3.76382	916.92	0.254	3.77261	3.75361	3.76523
SN	-0.00057	1.29	75.267	-0.00008	-0.00087	-0.00075
SR	0.12008	105,637.90	0.593	0.12081	0.12004	0.11938
TI	0.00263	185.15	4.651	0.00265	0.00250	0.00275
TL	0.00062	0.34	149.393	0.00106	0.00124	-0.00045
V	-0.00037	-14.79	58.118	-0.00039	-0.00015	-0.00058
Y1	15588.36163	15,588.36	0.040	15595.17228	15587.14780	15582.76482
Y2A	584297.69409	584,297.69	0.481	581618.77903	584049.76775	587224.53550
Y2R	33106.48857	33,106.49	0.212	33025.53871	33145.46769	33148.45931
ZN	-0.00114	26.32	15.907	-0.00123	-0.00093	-0.00125
ZR	-0.00008	2.26	3045.099	0.00252	-0.00069	-0.00206

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/11/2013 02:29

Sample Number: **7265247** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00002	-21.87	709.796	-0.00005	0.00017	-0.00007
AL	0.04654	10.89	56.353	0.04732	0.07238	0.01994
AS	-0.00113	-2.19	114.037	-0.00061	-0.00259	-0.00018
B	0.07889	290.50	1.093	0.07884	0.07977	0.07805
BA	-0.00003	159.75	34.376	-0.00004	-0.00002	-0.00002
BE	0.00005	-97.45	14.477	0.00005	0.00005	0.00006
CA	0.05805	146.51	4.884	0.05626	0.05658	0.06132
CD	0.00037	0.84	6.498	0.00038	0.00034	0.00039
CO	-0.00054	-3.01	42.346	-0.00045	-0.00080	-0.00037
CR	-0.00029	-6.48	166.371	-0.00010	0.00006	-0.00084
CU	-0.00075	170.10	111.955	-0.00036	-0.00172	-0.00018
FE	-0.00674	2.53	14.994	-0.00569	-0.00683	-0.00771
K	-0.01450	97.36	391.211	0.05015	-0.05596	-0.03769
LI	-0.00328	55.13	89.555	-0.00224	-0.00660	-0.00100
MG	0.00385	9.70	37.283	0.00221	0.00445	0.00489
MN	-0.00007	8.20	76.585	-0.00001	-0.00010	-0.00011
MO	0.00015	3.18	264.281	0.00029	0.00045	-0.00030
NA	0.02737	210.10	4.840	0.02587	0.02791	0.02835
NI	-0.00039	17.77	25.901	-0.00027	-0.00043	-0.00046
P	0.00034	0.63	299.930	0.00138	-0.00065	0.00029
PB	0.00419	2.76	41.416	0.00387	0.00263	0.00605
S	0.00263	1.52	13.135	0.00271	0.00293	0.00225
SB	-0.00017	-4.68	498.900	0.00073	-0.00094	-0.00029
SE	0.00217	4.82	44.743	0.00110	0.00243	0.00299
SI	0.00593	5.64	97.753	0.00237	0.01261	0.00280
SN	-0.00073	1.14	108.514	-0.00001	-0.00060	-0.00159
SR	0.00040	322.70	1.834	0.00039	0.00040	0.00040
TI	0.00007	31.07	174.033	0.00018	-0.00006	0.00009
TL	0.00002	-0.05	5558.652	0.00101	-0.00088	-0.00008
V	-0.00017	-11.48	120.321	0.00002	-0.00014	-0.00039
Y1	15960.34720	15,960.35	0.389	15990.50823	16001.63989	15888.89348
Y2A	618914.95897	618,914.96	0.053	619293.79562	618738.91463	618712.16667
Y2R	33084.71612	33,084.72	0.513	33246.43569	33099.76538	32907.94728
ZN	-0.00052	32.44	19.953	-0.00062	-0.00041	-0.00053
ZR	-0.00154	-1.74	101.571	-0.00329	-0.00030	-0.00101

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/11/2013 02:32

Sample Number: **7265248** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-15.83	5.702	0.00039	0.00035	0.00037
AL	0.04006	9.97	46.806	0.01909	0.04585	0.05522
AS	-0.00282	-2.94	75.609	-0.00476	-0.00054	-0.00315
B	0.00382	7.83	41.393	0.00515	0.00424	0.00207
BA	0.00023	387.93	4.348	0.00024	0.00022	0.00022
BE	0.00007	-86.90	15.730	0.00006	0.00008	0.00008
CA	0.07322	164.97	4.237	0.07681	0.07145	0.07141
CD	0.00045	1.63	15.521	0.00052	0.00045	0.00038
CO	-0.00011	-0.80	135.162	0.00005	-0.00024	-0.00013
CR	-0.00017	-5.22	252.495	-0.00049	0.00032	-0.00034
CU	-0.00083	171.82	103.239	-0.00049	-0.00181	-0.00020
FE	-0.00017	5.11	3714.344	-0.00571	-0.00150	0.00670
K	-0.05142	88.71	32.392	-0.06825	-0.03495	-0.05107
LI	-0.00293	58.53	55.882	-0.00467	-0.00142	-0.00270
MG	0.00322	8.24	35.826	0.00242	0.00270	0.00454
MN	-0.00007	8.65	25.896	-0.00005	-0.00009	-0.00006
MO	0.00030	3.62	35.931	0.00037	0.00035	0.00017
NA	-0.03979	128.33	21.393	-0.03021	-0.04267	-0.04649
NI	-0.00036	17.63	72.886	-0.00006	-0.00051	-0.00050
P	0.00006	0.48	751.774	-0.00030	0.00057	-0.00010
PB	0.00346	2.07	43.361	0.00520	0.00255	0.00264
S	-0.00052	0.66	429.620	-0.00067	0.00179	-0.00268
SB	-0.00060	-4.89	232.169	0.00038	-0.00218	0.00001
SE	0.00208	4.72	91.044	0.00316	0.00320	-0.00011
SI	0.01119	7.00	80.047	0.02109	0.00366	0.00881
SN	-0.00069	1.17	86.816	-0.00094	-0.00001	-0.00112
SR	0.00049	412.17	1.456	0.00048	0.00048	0.00049
TI	0.00003	29.08	392.652	0.00008	-0.00011	0.00013
TL	0.00130	0.62	81.946	0.00010	0.00215	0.00165
V	-0.00020	-12.22	126.951	0.00005	-0.00045	-0.00019
Y1	15753.80175	15,753.80	0.155	15779.85470	15731.48323	15750.06733
Y2A	629702.62181	629,702.62	0.752	632608.94877	632258.75000	624240.16667
Y2R	33544.75261	33,544.75	0.473	33371.07892	33581.07029	33682.10863
ZN	-0.00172	21.15	4.980	-0.00174	-0.00180	-0.00163
ZR	-0.00174	-2.33	29.686	-0.00233	-0.00155	-0.00135

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 31 Date/Time: 11/11/2013 02:36

Sample Number: **7266798** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-17.02	60.988	0.00052	0.00023	0.00017
AL	0.02143	6.87	55.395	0.01558	0.01363	0.03509
AS	-0.00102	-2.12	95.446	0.00010	-0.00167	-0.00147
B	0.00201	0.83	30.240	0.00259	0.00138	0.00206
BA	-0.00008	119.33	11.314	-0.00007	-0.00007	-0.00009
BE	0.00007	-89.78	16.370	0.00007	0.00008	0.00006
CA	0.03271	121.36	10.203	0.03196	0.03636	0.02981
CD	0.00043	1.41	6.277	0.00044	0.00044	0.00040
CO	-0.00064	-3.47	2.407	-0.00063	-0.00064	-0.00066
CR	-0.00015	-5.05	218.453	-0.00030	-0.00039	0.00023
CU	-0.00085	171.97	70.770	-0.00121	-0.00118	-0.00016
FE	-0.00898	1.70	93.883	-0.01467	-0.01299	0.00071
K	-0.01053	99.94	624.195	-0.08459	0.01223	0.04078
LI	-0.00490	44.13	59.646	-0.00799	-0.00451	-0.00219
MG	0.00131	3.31	81.584	0.00010	0.00170	0.00212
MN	-0.00003	11.17	67.771	-0.00005	-0.00001	-0.00004
MO	-0.00010	2.36	319.206	-0.00019	0.00024	-0.00034
NA	-0.05325	111.61	11.242	-0.05949	-0.05269	-0.04756
NI	-0.00007	18.43	334.740	-0.00004	-0.00034	0.00015
P	-0.00087	0.01	112.916	-0.00123	-0.00163	0.00024
PB	0.00496	3.45	49.632	0.00622	0.00654	0.00212
S	-0.00048	0.67	61.598	-0.00014	-0.00060	-0.00070
SB	-0.00200	-5.79	81.078	-0.00387	-0.00094	-0.00120
SE	0.00047	4.11	162.505	0.00057	-0.00034	0.00117
SI	0.00652	5.87	88.721	0.01250	0.00610	0.00096
SN	-0.00071	1.15	18.718	-0.00059	-0.00085	-0.00070
SR	0.00025	184.78	2.845	0.00025	0.00025	0.00024
TI	0.00001	27.57	1712.562	0.00015	-0.00014	0.00002
TL	-0.00037	-0.25	34.692	-0.00030	-0.00029	-0.00052
V	0.00009	-6.42	112.362	0.00010	-0.00002	0.00018
Y1	15803.57805	15,803.58	0.160	15774.62774	15815.32298	15820.78343
Y2A	631154.23005	631,154.23	0.028	631062.12575	631040.75365	631359.81076
Y2R	33605.32205	33,605.32	0.321	33537.78954	33729.77904	33548.39756
ZN	-0.00293	10.31	4.252	-0.00283	-0.00307	-0.00289
ZR	-0.00132	-1.15	82.862	-0.00186	-0.00203	-0.00006

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/11/2013 02:40

Sample Number: **7266799** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00012	-20.38	428.212	-0.00043	0.00056	0.00023
AL	0.01202	5.33	100.145	0.02447	0.00045	0.01113
AS	-0.00189	-2.53	40.358	-0.00258	-0.00202	-0.00107
B	0.00185	0.22	35.571	0.00260	0.00140	0.00154
BA	-0.00007	127.00	15.500	-0.00007	-0.00006	-0.00007
BE	0.00007	-89.00	12.292	0.00007	0.00008	0.00006
CA	0.02402	112.25	8.539	0.02234	0.02340	0.02630
CD	0.00044	1.54	13.430	0.00038	0.00049	0.00045
CO	-0.00044	-2.48	61.705	-0.00074	-0.00035	-0.00022
CR	-0.00013	-4.73	193.798	-0.00041	0.00005	-0.00002
CU	-0.00049	176.82	185.576	-0.00053	0.00044	-0.00138
FE	-0.01059	1.08	20.661	-0.01221	-0.00810	-0.01145
K	-0.06375	85.76	15.062	-0.05269	-0.06852	-0.07003
LI	-0.00391	51.54	18.405	-0.00369	-0.00332	-0.00471
MG	-0.00013	-0.38	144.488	0.00008	-0.00027	-0.00019
MN	-0.00007	8.68	91.758	-0.00009	-0.00011	0.00000
MO	0.00023	3.43	69.588	0.00016	0.00012	0.00042
NA	-0.05674	107.51	7.948	-0.05834	-0.05164	-0.06023
NI	-0.00006	18.57	121.496	-0.00007	-0.00014	0.00002
P	0.00002	0.46	3672.234	-0.00028	-0.00035	0.00068
PB	0.00262	1.29	49.574	0.00282	0.00123	0.00380
S	0.00018	0.85	2145.123	0.00378	0.00044	-0.00370
SB	-0.00104	-5.22	83.330	-0.00137	-0.00171	-0.00006
SE	0.00195	4.72	105.446	0.00316	-0.00043	0.00313
SI	0.01289	7.46	44.616	0.00862	0.01062	0.01943
SN	-0.00044	1.45	2.753	-0.00043	-0.00044	-0.00045
SR	0.00024	177.07	2.080	0.00024	0.00024	0.00023
TI	-0.00007	22.13	154.881	0.00004	-0.00019	-0.00007
TL	0.00062	0.27	99.254	0.00071	0.00119	-0.00004
V	0.00025	-3.15	94.288	0.00036	-0.00002	0.00041
Y1	15892.25682	15,892.26	0.384	15961.17177	15845.20099	15870.39771
Y2A	628551.32515	628,551.33	0.190	627495.75000	629843.68787	628314.53759
Y2R	33700.75184	33,700.75	0.100	33662.21012	33724.84512	33715.20028
ZN	-0.00264	12.97	1.239	-0.00261	-0.00268	-0.00264
ZR	-0.00066	0.70	127.356	-0.00117	-0.00110	0.00031

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 33 Date/Time: 11/11/2013 02:44

Sample Number: **7266805** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-18.73	37.452	0.00053	0.00025	0.00034
AL	1.42833	240.31	0.895	1.41592	1.44146	1.42762
AS	0.00794	-0.62	20.562	0.00723	0.00981	0.00678
B	0.02384	120.46	1.981	0.02371	0.02436	0.02343
BA	0.07064	59,903.28	0.441	0.07092	0.07069	0.07031
BE	0.00043	100.72	1.406	0.00043	0.00044	0.00042
CA	24.95612	27,018.85	1.018	24.66511	25.13280	25.07044
CD	0.00102	41.68	21.148	0.00124	0.00102	0.00081
CO	0.01237	61.48	0.536	0.01242	0.01229	0.01239
CR	0.00647	67.46	9.060	0.00703	0.00653	0.00586
CU	0.01050	335.84	3.783	0.01041	0.01016	0.01094
FE	20.97573	8,071.94	1.167	20.70598	21.18338	21.03783
K	3.17934	960.04	3.181	3.06610	3.26071	3.21121
LI	-0.00047	79.19	597.267	-0.00044	-0.00329	0.00233
MG	9.73402	24,916.63	1.204	9.59911	9.81061	9.79233
MN	1.62296	109,595.65	0.312	1.62858	1.62154	1.61875
MO	0.00175	8.26	19.610	0.00188	0.00136	0.00201
NA	53.06416	66,972.93	1.092	52.40241	53.48084	53.30923
NI	0.00738	36.93	4.612	0.00744	0.00768	0.00701
P	0.33599	168.73	0.396	0.33746	0.33564	0.33487
PB	0.02626	25.70	3.714	0.02644	0.02713	0.02520
S	11.14431	2,971.92	0.070	11.13857	11.15321	11.14114
SB	0.00013	-4.41	253.471	-0.00014	0.00048	0.00004
SE	0.00225	5.33	9.270	0.00240	0.00234	0.00201
SI	13.10309	3,219.36	0.951	12.96053	13.19085	13.15789
SN	-0.00032	1.56	175.198	0.00029	-0.00043	-0.00081
SR	0.09537	86,167.65	0.378	0.09567	0.09546	0.09497
TI	0.04483	2,825.65	1.303	0.04550	0.04443	0.04457
TL	-0.00368	-1.34	52.296	-0.00221	-0.00296	-0.00586
V	0.00564	109.25	5.927	0.00602	0.00550	0.00540
Y1	15693.71749	15,693.72	0.058	15683.36064	15697.30306	15700.48878
Y2A	600163.48706	600,163.49	0.523	596856.17120	600538.81885	603095.47113
Y2R	33500.22888	33,500.23	0.869	33835.72500	33349.27058	33315.69107
ZN	0.06169	610.86	0.718	0.06202	0.06118	0.06186
ZR	-0.00042	1.35	212.146	0.00061	-0.00101	-0.00087

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/11/2013 02:47

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49906	8,669.45	1.025	0.49316	0.50225	0.50176
AL	24.69612	4,056.65	1.176	24.77751	24.37359	24.93727
AS	0.49203	218.02	0.387	0.49014	0.49200	0.49395
B	0.49543	1,844.34	0.644	0.49357	0.49912	0.49360
BA	0.50383	424,723.73	1.360	0.49645	0.50999	0.50505
BE	0.49368	254,393.55	0.873	0.48912	0.49769	0.49422
CA	24.53908	26,222.49	1.001	24.57121	24.27895	24.76707
CD	0.49182	5,020.73	0.523	0.48989	0.49083	0.49474
CO	0.49397	2,439.44	0.549	0.49164	0.49333	0.49695
CR	0.49751	5,404.61	1.047	0.49250	0.50290	0.49713
CU	0.49911	7,530.26	1.055	0.49313	0.50307	0.50111
FE	24.63485	9,350.09	0.885	24.70325	24.39096	24.81034
K	24.76457	6,694.71	0.572	24.78320	24.61442	24.89608
LI	0.49634	3,674.40	1.357	0.49737	0.48915	0.50249
MG	24.25520	60,944.67	0.945	24.30772	24.00420	24.45367
MN	0.48970	32,966.77	0.856	0.48530	0.49364	0.49015
MO	0.50986	1,628.93	0.560	0.50792	0.50852	0.51314
NA	24.41396	30,506.06	0.990	24.47505	24.14760	24.61924
NI	0.49504	1,328.84	0.607	0.49281	0.49386	0.49845
P	0.50222	251.41	0.139	0.50177	0.50302	0.50185
PB	0.50117	464.07	1.260	0.49492	0.50105	0.50755
S	24.53877	6,505.41	0.313	24.46900	24.52630	24.62099
SB	0.51650	315.82	0.372	0.51680	0.51445	0.51825
SE	0.49177	191.78	0.683	0.48832	0.49194	0.49503
SI	25.10166	6,083.01	0.748	25.08676	24.92171	25.29651
SN	0.50415	533.91	0.508	0.50168	0.50398	0.50679
SR	0.49477	445,745.60	1.090	0.49038	0.50079	0.49314
TI	0.50983	31,766.98	0.948	0.50450	0.51394	0.51105
TL	0.49265	255.30	0.682	0.48953	0.49222	0.49621
V	0.50232	9,600.98	0.942	0.49730	0.50670	0.50295
Y1	15603.79777	15,603.80	0.340	15648.14065	15618.13411	15545.11854
Y2A	598182.95178	598,182.95	0.919	603582.36563	592594.55873	598371.93099
Y2R	33062.24687	33,062.25	0.583	33069.49440	33251.17477	32866.07143
ZN	0.49301	4,497.02	0.490	0.49064	0.49290	0.49547
ZR	0.49621	1,363.02	1.164	0.49930	0.48954	0.49978

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 35 Date/Time: 11/11/2013 02:51

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-21.15	504.563	0.00026	0.00028	-0.00033
AL	0.01116	5.07	202.238	0.03463	0.00925	-0.01039
AS	-0.00115	-2.18	3.160	-0.00112	-0.00119	-0.00114
B	0.00024	-5.92	414.912	0.00128	-0.00066	0.00009
BA	-0.00010	101.83	9.866	-0.00010	-0.00009	-0.00010
BE	0.00009	-80.47	25.569	0.00011	0.00007	0.00008
CA	-0.00973	73.98	22.631	-0.01110	-0.00719	-0.01090
CD	0.00034	0.54	32.120	0.00045	0.00023	0.00035
CO	-0.00037	-2.09	43.116	-0.00021	-0.00052	-0.00036
CR	-0.00004	-3.72	568.620	-0.00030	0.00015	0.00003
CU	-0.00077	171.47	82.959	-0.00129	-0.00006	-0.00095
FE	-0.00426	3.46	171.497	-0.00692	-0.00985	0.00400
K	0.03831	111.06	57.248	0.06328	0.02944	0.02220
LI	-0.00231	61.97	83.714	-0.00289	-0.00389	-0.00015
MG	0.00086	2.11	59.061	0.00069	0.00045	0.00143
MN	-0.00002	11.97	31.618	-0.00001	-0.00002	-0.00002
MO	0.00000	2.68	3719.449	-0.00011	0.00024	-0.00012
NA	-0.05586	106.31	9.116	-0.05556	-0.06109	-0.05092
NI	-0.00022	18.05	53.036	-0.00030	-0.00009	-0.00027
P	-0.00115	-0.13	108.636	-0.00096	-0.00001	-0.00248
PB	0.00352	2.12	72.976	0.00635	0.00135	0.00285
S	0.00108	1.09	279.517	-0.00241	0.00295	0.00271
SB	-0.00037	-4.77	432.268	0.00036	0.00074	-0.00221
SE	0.00307	5.12	27.771	0.00220	0.00311	0.00390
SI	0.01242	7.19	15.767	0.01187	0.01079	0.01459
SN	-0.00128	0.54	65.481	-0.00222	-0.00104	-0.00059
SR	0.00004	-13.92	22.466	0.00004	0.00004	0.00003
TI	0.00002	28.15	370.529	0.00011	0.00000	-0.00004
TL	0.00087	0.40	75.878	0.00044	0.00162	0.00054
V	-0.00002	-8.58	852.926	0.00011	0.00006	-0.00024
Y1	15802.85013	15,802.85	0.056	15805.04230	15810.33109	15793.17700
Y2A	624570.29654	624,570.30	0.379	621913.50000	626443.33333	625354.05629
Y2R	32990.65513	32,990.66	0.465	32881.53432	33166.03510	32924.39597
ZN	-0.00236	15.43	1.172	-0.00238	-0.00233	-0.00238
ZR	0.00000	2.47	9838.329	0.00186	0.00138	-0.00324

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 36 Date/Time: 11/11/2013 02:55

Sample Number: **7266807** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.03	518.244	-0.00046	0.00085	0.00000
AL	0.64605	108.42	3.391	0.66408	0.62167	0.65241
AS	-0.00073	-2.25	202.141	-0.00163	0.00098	-0.00154
B	0.03500	121.63	5.434	0.03286	0.03566	0.03649
BA	0.06369	52,262.14	0.627	0.06414	0.06354	0.06339
BE	0.00006	-86.48	33.899	0.00005	0.00005	0.00009
CA	61.71819	65,312.60	0.434	62.01919	61.50669	61.62867
CD	0.00057	6.56	9.089	0.00053	0.00055	0.00063
CO	0.00022	1.06	104.685	-0.00003	0.00041	0.00027
CR	0.00248	23.08	15.992	0.00293	0.00228	0.00222
CU	0.00255	231.73	2.787	0.00258	0.00260	0.00247
FE	2.29238	872.63	0.378	2.28430	2.29131	2.30154
K	3.86486	1,123.51	1.135	3.82568	3.91224	3.85666
LI	-0.00092	78.43	440.038	-0.00001	-0.00536	0.00261
MG	26.32628	65,711.24	0.357	26.43469	26.27250	26.27165
MN	0.41572	27,164.60	0.482	0.41788	0.41537	0.41392
MO	0.00098	5.73	20.037	0.00118	0.00079	0.00097
NA	93.96964	116,234.73	0.407	94.39436	93.65140	93.86316
NI	0.00147	22.04	19.109	0.00177	0.00123	0.00140
P	0.28371	141.05	0.244	0.28432	0.28296	0.28386
PB	0.00985	8.75	10.707	0.00906	0.01105	0.00945
S	4.99977	1,319.85	0.041	5.00030	5.00148	4.99752
SB	-0.00207	-5.73	94.701	-0.00262	-0.00370	0.00011
SE	-0.00027	3.87	343.048	-0.00033	0.00068	-0.00115
SI	7.35845	1,775.74	0.548	7.39319	7.31425	7.36790
SN	-0.00046	1.39	101.921	0.00007	-0.00082	-0.00063
SR	0.18219	159,277.55	0.598	0.18342	0.18181	0.18134
TI	0.02579	1,582.74	0.816	0.02601	0.02559	0.02577
TL	0.00053	0.38	266.421	-0.00053	-0.00002	0.00215
V	0.00200	30.61	7.096	0.00203	0.00185	0.00213
Y1	15530.13683	15,530.14	0.094	15514.24438	15543.11004	15533.05606
Y2A	580549.18713	580,549.19	0.496	577385.20239	581238.88520	583023.47379
Y2R	32867.94320	32,867.94	0.196	32939.98402	32815.55456	32848.29103
ZN	0.01502	172.08	0.166	0.01499	0.01504	0.01503
ZR	0.00037	3.48	73.051	0.00006	0.00058	0.00047

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 37 Date/Time: 11/11/2013 02:59

Sample Number: **7266810** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00043	-18.94	98.275	0.00041	0.00086	0.00002
AL	0.51235	87.50	1.269	0.51747	0.50504	0.51455
AS	0.00848	-1.18	5.880	0.00832	0.00808	0.00904
B	0.03162	161.96	1.796	0.03204	0.03097	0.03184
BA	0.13270	112,216.96	0.119	0.13253	0.13283	0.13275
BE	0.00014	-49.48	8.323	0.00015	0.00013	0.00013
CA	19.70756	21,164.75	0.113	19.69586	19.73322	19.69361
CD	0.00047	47.56	10.815	0.00046	0.00053	0.00043
CO	0.00209	10.29	11.597	0.00213	0.00182	0.00230
CR	0.00204	19.13	16.071	0.00205	0.00171	0.00237
CU	0.00687	277.43	16.106	0.00811	0.00597	0.00654
FE	27.96776	10,650.67	0.072	27.94725	27.96836	27.98768
K	1.92533	616.10	5.641	2.02601	1.93974	1.81025
LI	-0.00141	71.10	120.440	0.00053	-0.00262	-0.00213
MG	7.97699	20,245.55	0.221	7.97740	7.99441	7.95915
MN	2.05605	138,640.10	0.104	2.05484	2.05480	2.05851
MO	-0.00018	2.07	91.453	-0.00037	-0.00010	-0.00007
NA	54.89136	68,638.81	0.194	54.80200	55.00922	54.86285
NI	0.00162	21.25	14.179	0.00186	0.00159	0.00141
P	0.30091	151.38	0.307	0.30178	0.29994	0.30103
PB	0.04353	41.51	1.608	0.04272	0.04389	0.04397
S	4.52715	1,209.54	0.279	4.52964	4.53836	4.51346
SB	0.00000	-4.50	)476.722	0.00037	0.00046	-0.00083
SE	-0.00148	4.07	63.444	-0.00056	-0.00145	-0.00243
SI	9.04604	2,203.50	0.202	9.03082	9.06624	9.04106
SN	-0.00015	1.74	284.332	0.00005	-0.00064	0.00014
SR	0.11219	101,233.55	0.120	0.11204	0.11228	0.11225
TI	0.02056	1,307.94	1.240	0.02057	0.02081	0.02030
TL	-0.00369	-1.20	36.031	-0.00216	-0.00460	-0.00430
V	0.00220	45.32	4.752	0.00215	0.00232	0.00214
Y1	15716.99602	15,717.00	0.114	15703.96776	15709.55896	15737.46133
Y2A	599300.40367	599,300.40	0.135	599748.09224	598367.86662	599785.25216
Y2R	33191.61867	33,191.62	0.364	33174.50199	33080.17551	33320.17850
ZN	0.04211	441.32	0.517	0.04201	0.04195	0.04235
ZR	-0.00073	0.50	222.636	0.00018	-0.00259	0.00023

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 38 Date/Time: 11/11/2013 03:02

Sample Number: **7266811** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-21.90	135.244	0.00002	0.00002	0.00025
AL	0.21870	39.17	4.145	0.20995	0.21811	0.22805
AS	0.00511	-0.92	24.458	0.00366	0.00578	0.00587
B	0.02903	122.74	3.065	0.02841	0.02863	0.03005
BA	0.09936	83,885.38	0.950	0.09835	0.09952	0.10022
BE	0.00009	-75.71	31.018	0.00006	0.00009	0.00011
CA	19.09107	20,477.36	0.184	19.10169	19.11972	19.05181
CD	0.00053	22.73	7.282	0.00048	0.00054	0.00056
CO	0.00082	3.91	49.032	0.00056	0.00129	0.00062
CR	0.00089	6.53	60.155	0.00074	0.00148	0.00044
CU	0.00268	219.38	34.926	0.00248	0.00370	0.00186
FE	12.43872	4,744.73	0.405	12.47247	12.46281	12.38087
K	2.03635	644.93	1.051	2.04228	2.01262	2.05416
LI	-0.00339	56.54	25.103	-0.00416	-0.00247	-0.00353
MG	7.88559	19,986.35	0.267	7.90794	7.88259	7.86622
MN	1.48641	100,014.97	0.720	1.47524	1.48745	1.49656
MO	0.00009	2.92	262.249	-0.00008	0.00034	0.00000
NA	54.71784	68,326.70	0.352	54.87010	54.78193	54.50147
NI	0.00109	20.72	42.827	0.00073	0.00162	0.00093
P	0.14027	70.76	1.137	0.14168	0.13854	0.14059
PB	0.02166	20.28	12.329	0.02173	0.01895	0.02429
S	4.37908	1,169.19	0.235	4.38198	4.38762	4.36765
SB	-0.00113	-5.21	98.700	-0.00214	0.00006	-0.00131
SE	0.00034	4.47	555.360	0.00241	-0.00015	-0.00124
SI	7.70028	1,873.71	0.145	7.68888	7.71120	7.70078
SN	-0.00008	1.81	408.932	0.00013	0.00010	-0.00047
SR	0.10905	98,187.25	0.779	0.10813	0.10922	0.10981
TI	0.00944	613.24	2.082	0.00927	0.00966	0.00941
TL	-0.00282	-0.96	27.386	-0.00218	-0.00261	-0.00368
V	0.00112	17.81	9.175	0.00102	0.00111	0.00123
Y1	15706.01889	15,706.02	0.054	15711.57285	15696.17010	15710.31373
Y2A	598020.07299	598,020.07	0.796	602763.60319	598047.69409	593248.92170
Y2R	33145.27297	33,145.27	0.219	33073.22500	33144.41118	33218.18272
ZN	0.02088	235.86	0.272	0.02081	0.02091	0.02091
ZR	0.00118	5.72	42.200	0.00061	0.00153	0.00139

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 39 Date/Time: 11/11/2013 03:06

Sample Number: **7266819** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-23.81	78.040	0.00002	0.00007	0.00013
AL	1.42952	238.38	0.964	1.43595	1.41370	1.43892
AS	0.00825	-0.49	12.292	0.00708	0.00879	0.00889
B	0.02776	134.10	2.896	0.02684	0.02811	0.02832
BA	0.07289	61,451.29	0.384	0.07262	0.07288	0.07318
BE	0.00041	88.36	2.705	0.00042	0.00040	0.00040
CA	25.30889	27,156.89	0.626	25.47879	25.16552	25.28237
CD	0.00121	44.06	16.131	0.00108	0.00113	0.00144
CO	0.01189	59.57	3.213	0.01231	0.01156	0.01181
CR	0.00601	62.03	3.600	0.00623	0.00600	0.00580
CU	0.01111	342.86	4.750	0.01076	0.01085	0.01171
FE	21.03173	8,021.94	0.549	21.16448	20.97610	20.95461
K	4.13209	1,206.42	0.452	4.14059	4.14500	4.11069
LI	0.00077	87.56	243.061	0.00080	-0.00112	0.00264
MG	9.86497	25,027.92	0.394	9.90738	9.85661	9.83092
MN	1.67241	112,282.15	0.532	1.66573	1.66899	1.68251
MO	0.00182	8.55	19.296	0.00155	0.00170	0.00222
NA	53.56486	67,006.26	0.463	53.85103	53.41555	53.42800
NI	0.00688	35.90	11.688	0.00744	0.00725	0.00596
P	0.37890	191.69	0.660	0.37634	0.38133	0.37902
PB	0.02753	27.08	1.494	0.02711	0.02756	0.02793
S	10.90852	2,931.56	0.241	10.93848	10.89797	10.88912
SB	-0.00057	-4.88	237.467	-0.00176	-0.00084	0.00090
SE	0.00211	5.33	13.979	0.00215	0.00180	0.00239
SI	13.12017	3,195.07	0.366	13.17479	13.08449	13.10124
SN	0.00081	2.77	52.494	0.00126	0.00041	0.00076
SR	0.09654	86,721.82	0.434	0.09613	0.09651	0.09697
TI	0.04409	2,763.30	0.586	0.04390	0.04399	0.04439
TL	-0.00385	-1.42	8.518	-0.00351	-0.00417	-0.00386
V	0.00558	107.46	5.165	0.00590	0.00551	0.00533
Y1	15815.16057	15,815.16	0.255	15770.01665	15827.89232	15847.57275
Y2A	596698.65627	596,698.66	0.490	598434.05773	598340.49436	593321.41672
Y2R	33202.81312	33,202.81	0.442	33040.74351	33326.48881	33241.20703
ZN	0.06154	614.27	0.572	0.06186	0.06116	0.06159
ZR	0.00134	6.19	20.982	0.00124	0.00166	0.00113

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 40

Date/Time: 11/11/2013 03:10

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00518	71.35	4.392	0.00492	0.00527	0.00534
AL	0.20393	36.52	7.831	0.22097	0.20148	0.18932
AS	0.01881	6.96	13.385	0.01752	0.02171	0.01720
B	0.04700	170.22	1.770	0.04604	0.04744	0.04752
BA	0.00529	4,785.13	1.279	0.00522	0.00534	0.00532
BE	0.00495	2,504.90	1.490	0.00487	0.00502	0.00495
CA	0.19068	286.61	0.491	0.18972	0.19071	0.19160
CD	0.00534	52.37	0.681	0.00534	0.00537	0.00530
CO	0.00441	21.97	3.797	0.00436	0.00460	0.00428
CR	0.01496	164.55	0.968	0.01483	0.01512	0.01493
CU	0.00931	322.43	2.217	0.00909	0.00932	0.00950
FE	0.19804	80.13	5.201	0.19324	0.20986	0.19101
K	0.54574	245.30	12.323	0.58809	0.58094	0.46819
LI	0.01679	199.46	16.322	0.01366	0.01876	0.01794
MG	0.09780	246.81	1.125	0.09718	0.09907	0.09714
MN	0.00512	368.20	1.397	0.00505	0.00519	0.00510
MO	0.01017	35.70	1.732	0.01036	0.01014	0.01002
NA	0.94103	1,339.15	0.900	0.93198	0.94234	0.94876
NI	0.01007	45.87	5.312	0.00948	0.01052	0.01022
P	0.09622	49.23	0.924	0.09725	0.09571	0.09571
PB	0.01881	16.39	7.455	0.02005	0.01729	0.01911
S	0.48246	130.95	0.922	0.48044	0.48755	0.47937
SB	0.01919	7.55	8.715	0.02074	0.01940	0.01742
SE	0.02068	11.98	12.843	0.01763	0.02193	0.02249
SI	0.06329	19.43	10.805	0.05731	0.07075	0.06181
SN	0.01948	22.83	0.848	0.01962	0.01930	0.01952
SR	0.00516	4,745.18	1.525	0.00507	0.00522	0.00518
TI	0.00997	666.93	1.500	0.00981	0.01001	0.01010
TL	0.02922	15.31	5.698	0.02796	0.03111	0.02860
V	0.00512	92.05	4.484	0.00485	0.00523	0.00527
Y1	15878.84335	15,878.84	0.146	15898.84290	15853.51542	15884.17172
Y2A	617064.51395	617,064.51	0.988	623834.16667	612003.98142	615355.39378
Y2R	32917.23155	32,917.23	0.898	33117.17348	32577.72564	33056.79554
ZN	0.01974	217.49	0.447	0.01971	0.01967	0.01984
ZR	0.04915	136.64	2.171	0.05035	0.04876	0.04833

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 41

Date/Time: 11/11/2013 03:13

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00069	-38.90	42.155	0.00079	0.00092	0.00036
AL	497.66448	79,514.27	0.807	502.09809	496.61840	494.27696
AS	0.00332	-0.18	120.965	-0.00131	0.00543	0.00585
B	0.00512	344.62	91.003	0.00064	0.00478	0.00995
BA	0.00038	440.20	3.348	0.00037	0.00039	0.00038
BE	-0.00033	-255.17	6.674	-0.00035	-0.00031	-0.00032
CA	498.28175	485,674.02	0.798	502.69836	497.16709	494.97981
CD	0.00039	296.49	93.171	0.00002	0.00040	0.00074
CO	0.00223	9.79	12.117	0.00254	0.00207	0.00208
CR	0.00203	16.70	14.208	0.00198	0.00177	0.00234
CU	-0.00080	280.47	79.510	-0.00152	-0.00055	-0.00033
FE	199.50165	69,044.89	0.798	201.29584	198.94679	198.26231
K	0.04355	105.73	114.481	0.02027	0.10078	0.00959
LI	0.00013	125.63	1370.558	0.00039	-0.00171	0.00170
MG	493.00182	957,322.61	0.502	495.82538	491.97355	491.20654
MN	0.00324	203.93	1.280	0.00329	0.00322	0.00322
MO	-0.00145	-1.82	40.630	-0.00165	-0.00191	-0.00079
NA	0.01526	182.88	34.859	0.00996	0.02060	0.01521
NI	0.00333	14.55	4.553	0.00348	0.00332	0.00318
P	0.01413	6.84	17.770	0.01623	0.01480	0.01135
PB	0.00184	81.12	126.807	0.00452	0.00076	0.00024
S	0.00010	0.75	5556.531	-0.00097	-0.00504	0.00632
SB	-0.01484	-12.50	20.179	-0.01787	-0.01476	-0.01188
SE	0.00153	6.35	216.420	0.00033	-0.00102	0.00528
SI	0.02559	9.76	34.518	0.01539	0.03084	0.03053
SN	0.00276	4.38	59.148	0.00116	0.00268	0.00442
SR	0.00246	1,918.53	0.619	0.00248	0.00245	0.00246
TI	-0.00060	-10.07	23.117	-0.00075	-0.00050	-0.00054
TL	0.00596	2.76	38.211	0.00389	0.00559	0.00840
V	-0.00217	35.87	15.817	-0.00246	-0.00226	-0.00179
Y1	14260.32191	14,260.32	0.088	14252.04022	14274.69616	14254.22936
Y2A	528074.62398	528,074.62	0.386	527643.49701	530291.97080	526288.40411
Y2R	31020.45359	31,020.45	0.547	30876.59553	30977.14785	31207.61738
ZN	0.01107	286.98	1.486	0.01106	0.01091	0.01124
ZR	0.00392	12.42	72.150	0.00065	0.00557	0.00552

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 42

Date/Time: 11/11/2013 03:17

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21925	3,312.16	0.627	0.21882	0.22079	0.21814
AL	495.78798	78,559.79	0.443	498.16642	493.83756	495.35995
AS	0.10240	40.53	3.807	0.09920	0.10674	0.10125
B	0.00676	348.37	20.644	0.00517	0.00735	0.00777
BA	0.49704	368,921.09	0.699	0.49401	0.50083	0.49627
BE	0.51484	233,584.17	0.494	0.51229	0.51737	0.51484
CA	501.22386	484,492.59	0.052	501.49291	500.96843	501.21024
CD	0.96005	9,138.91	0.067	0.95966	0.96079	0.95970
CO	0.49106	2,201.22	0.116	0.49142	0.49135	0.49040
CR	0.49397	4,724.82	0.124	0.49328	0.49444	0.49420
CU	0.52883	7,147.00	0.363	0.52809	0.53101	0.52738
FE	199.16302	68,370.95	0.468	200.20076	198.40071	198.88758
K	0.02154	99.43	57.291	0.03543	0.01734	0.01185
LI	-0.00067	119.52	127.879	-0.00003	-0.00034	-0.00164
MG	490.04744	945,112.20	0.062	489.82318	490.39403	489.92512
MN	0.48518	28,758.35	0.403	0.48470	0.48733	0.48351
MO	-0.00146	-1.83	35.315	-0.00151	-0.00194	-0.00092
NA	-0.00202	161.42	665.048	-0.00027	-0.01622	0.01044
NI	0.97358	2,348.36	0.100	0.97421	0.97407	0.97246
P	0.01207	7.05	1.806	0.01225	0.01183	0.01214
PB	0.05553	125.34	4.805	0.05826	0.05542	0.05293
S	-0.00751	-1.09	57.691	-0.01213	-0.00353	-0.00687
SB	0.61366	343.67	0.706	0.60932	0.61368	0.61799
SE	0.05170	23.79	7.991	0.05589	0.04763	0.05158
SI	0.02086	8.61	35.929	0.01225	0.02442	0.02590
SN	0.00434	5.87	32.445	0.00405	0.00587	0.00310
SR	0.00242	1,875.45	0.644	0.00240	0.00243	0.00242
TI	-0.00014	22.24	15.686	-0.00012	-0.00014	-0.00017
TL	0.10281	49.23	3.097	0.10618	0.10241	0.09985
V	0.49982	8,555.49	0.231	0.49851	0.50068	0.50028
Y1	14191.40307	14,191.40	0.088	14199.71600	14177.06063	14197.43259
Y2A	526653.14643	526,653.15	0.392	528111.97744	524289.06768	527558.39416
Y2R	30767.43977	30,767.44	0.138	30746.82944	30739.13586	30816.35402
ZN	1.02202	8,556.46	0.122	1.02254	1.02293	1.02060
ZR	0.00717	20.59	35.491	0.00546	0.01009	0.00595

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 43

Date/Time: 11/11/2013 03:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50008	8,563.20	0.666	0.49716	0.49936	0.50371
AL	24.80355	3,977.16	0.939	24.70185	25.07007	24.63874
AS	0.48773	217.00	0.031	0.48790	0.48768	0.48762
B	0.48678	1,786.91	0.792	0.48915	0.48233	0.48886
BA	0.49785	413,709.35	0.647	0.49806	0.49454	0.50097
BE	0.49689	252,395.03	0.544	0.49511	0.49557	0.50000
CA	24.68415	25,748.02	0.667	24.63778	24.86692	24.54774
CD	0.49561	5,080.78	0.243	0.49424	0.49612	0.49648
CO	0.49169	2,438.60	0.114	0.49107	0.49217	0.49184
CR	0.50203	5,375.90	0.707	0.50016	0.49980	0.50612
CU	0.49178	7,316.43	0.791	0.48852	0.49073	0.49608
FE	24.61789	9,120.88	0.725	24.59048	24.80851	24.45469
K	24.79357	6,542.49	0.851	24.68149	25.03708	24.66213
LI	0.48922	3,536.57	0.636	0.48701	0.49277	0.48787
MG	24.10007	59,114.48	0.704	24.03453	24.29270	23.97297
MN	0.49655	32,950.66	0.743	0.49377	0.49516	0.50074
MO	0.50453	1,618.84	0.118	0.50519	0.50436	0.50404
NA	24.30918	29,651.74	0.660	24.26967	24.48581	24.17207
NI	0.49473	1,333.70	0.075	0.49472	0.49511	0.49437
P	0.49466	248.70	0.215	0.49475	0.49568	0.49356
PB	0.50211	466.94	0.392	0.49994	0.50260	0.50377
S	24.06911	6,408.21	0.025	24.06830	24.07559	24.06343
SB	0.50807	311.95	0.225	0.50690	0.50813	0.50919
SE	0.48023	188.18	0.620	0.48186	0.47679	0.48203
SI	25.23529	5,969.52	0.698	25.14474	25.43841	25.12272
SN	0.50550	537.62	0.285	0.50547	0.50407	0.50696
SR	0.49446	439,113.14	0.682	0.49096	0.49474	0.49769
TI	0.50865	31,241.47	0.522	0.50760	0.50669	0.51167
TL	0.49173	255.92	0.432	0.49103	0.49004	0.49411
V	0.50578	9,530.61	0.745	0.50280	0.50453	0.51002
Y1	15670.43437	15,670.43	0.168	15697.20379	15644.63538	15669.46394
Y2A	589622.64986	589,622.65	0.549	591744.94028	591226.85800	585896.15129
Y2R	32273.64880	32,273.65	0.613	32410.82134	32046.79705	32363.32801
ZN	0.49044	4,493.14	0.027	0.49029	0.49053	0.49051
ZR	0.49709	1,332.87	1.125	0.49759	0.50241	0.49126

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 44 Date/Time: 11/11/2013 03:25

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00020	-25.43	129.284	-0.00037	0.00010	-0.00032
AL	0.00123	3.36	650.701	0.00372	-0.00775	0.00773
AS	-0.00036	-1.82	59.463	-0.00061	-0.00021	-0.00027
B	-0.00059	-8.85	245.715	0.00075	-0.00038	-0.00214
BA	-0.00008	111.58	15.525	-0.00007	-0.00010	-0.00008
BE	0.00010	-73.23	20.721	0.00011	0.00007	0.00010
CA	-0.00354	78.51	49.645	-0.00190	-0.00332	-0.00539
CD	0.00047	1.86	21.283	0.00043	0.00040	0.00058
CO	-0.00050	-2.77	6.926	-0.00054	-0.00047	-0.00050
CR	-0.00022	-5.68	157.970	0.00014	-0.00024	-0.00057
CU	-0.00014	177.20	546.069	-0.00025	0.00067	-0.00084
FE	-0.00197	4.22	69.736	-0.00268	-0.00039	-0.00285
K	0.01610	102.50	117.218	-0.00552	0.02929	0.02453
LI	-0.00277	57.24	73.889	-0.00513	-0.00161	-0.00156
MG	0.00598	14.67	20.210	0.00736	0.00515	0.00541
MN	-0.00011	5.70	51.912	-0.00006	-0.00010	-0.00017
MO	0.00000	2.65	3429.887	0.00007	-0.00014	0.00006
NA	-0.06696	90.19	11.055	-0.07150	-0.07095	-0.05842
NI	0.00009	18.81	378.997	0.00039	-0.00026	0.00013
P	-0.00178	-0.44	35.432	-0.00106	-0.00226	-0.00200
PB	0.00329	1.90	79.716	0.00046	0.00377	0.00564
S	0.00050	0.93	426.033	0.00261	0.00048	-0.00161
SB	-0.00061	-4.90	231.015	0.00042	-0.00221	-0.00003
SE	0.00212	4.74	62.622	0.00241	0.00327	0.00067
SI	0.00161	4.46	310.905	-0.00013	0.00726	-0.00230
SN	-0.00095	0.89	89.779	-0.00157	-0.00130	0.00002
SR	0.00002	-24.80	52.701	0.00002	0.00004	0.00002
TI	0.00005	29.55	27.764	0.00007	0.00005	0.00004
TL	-0.00040	-0.26	164.748	0.00036	-0.00071	-0.00086
V	0.00046	1.03	45.297	0.00025	0.00045	0.00067
Y1	15755.27011	15,755.27	0.140	15780.65144	15740.45833	15744.70055
Y2A	611050.32073	611,050.32	0.797	607421.78169	616582.36563	609146.81486
Y2R	32149.09891	32,149.10	0.592	32036.31369	32368.78494	32042.19809
ZN	-0.00245	14.65	5.077	-0.00241	-0.00235	-0.00259
ZR	-0.00147	-1.53	76.665	-0.00058	-0.00275	-0.00109

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ICP-AES Run Data Report

1331606T71

Reviewed By
John W Yanzuk

Reviewed Date
11/13/2013 2:07AM

Data File Name 1331606T71.TXT
Run Name: 1331606T71

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:12AM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/12/2013 22:56

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00238	48.039	-0.00120	-0.00245	-0.00347
AL	0.000	0.00472	80.391	0.00086	0.00485	0.00844
AS	0.000	-0.00554	42.860	-0.00790	-0.00315	-0.00556
B	0.000	0.00001	157.260	0.00000	0.00003	0.00000
BA	0.000	0.00018	17.935	0.00016	0.00016	0.00021
BE	0.000	-0.01202	6.859	-0.01281	-0.01210	-0.01117
CA	0.000	0.00332	5.919	0.00311	0.00335	0.00350
CD	0.000	0.00485	76.231	0.00059	0.00726	0.00668
CO	0.000	-0.00713	12.299	-0.00813	-0.00650	-0.00677
CR	0.000	-0.00001	69.201	-0.00001	-0.00002	0.00000
CU	0.000	0.01465	4.816	0.01440	0.01410	0.01545
FE	0.000	0.00011	31.511	0.00008	0.00015	0.00009
K	0.000	0.18493	27.049	0.18052	0.13726	0.23700
LI	0.000	0.00043	69.112	0.00051	0.00010	0.00068
MG	0.000	0.00010	86.782	0.00016	0.00015	0.00000
MN	0.000	0.00104	56.243	0.00098	0.00165	0.00049
MO	0.000	0.00744	18.719	0.00839	0.00808	0.00584
NA	0.000	0.00394	5.746	0.00375	0.00419	0.00387
NI	0.000	0.06271	4.216	0.06288	0.06527	0.05999
P	0.000	0.00001	405.662	0.00002	-0.00003	0.00004
PB	0.000	0.00985	20.730	0.00762	0.01164	0.01029
S	0.000	0.00015	37.149	0.00019	0.00017	0.00008
SB	0.000	-0.00042	4.417	-0.00041	-0.00044	-0.00041
SE	0.000	0.01109	21.281	0.01036	0.00918	0.01373
SI	0.000	0.00017	23.838	0.00014	0.00022	0.00015
SN	0.000	0.00407	22.042	0.00385	0.00330	0.00506
SR	0.000	-0.00012	14.929	-0.00010	-0.00013	-0.00013
TI	0.000	0.00433	30.150	0.00310	0.00570	0.00418
TL	0.000	0.00150	85.723	0.00212	0.00002	0.00235
V	0.000	-0.00114	22.593	-0.00137	-0.00086	-0.00119
Y1	0.000	15738.49110	0.074	15725.14088	15743.61335	15746.71907
Y2A	0.000	452650.81840	0.281	453367.25282	453404.67817	451180.52422
Y2R	0.000	29119.35362	0.452	29109.11089	29255.84894	28993.10104
ZN	0.000	0.05360	4.738	0.05454	0.05554	0.05072
ZR	0.000	0.00028	34.738	0.00026	0.00019	0.00038

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/12/2013 23:00

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	14.65953	0.291	14.64106	14.62927	14.70827
CA	50.000	2.13471	0.419	2.13470	2.12577	2.14367
FE	50.000	0.69077	0.384	0.69040	0.68832	0.69359
K	50.000	27.90847	0.214	27.86480	27.88414	27.97648
MG	50.000	4.40754	0.352	4.40653	4.39255	4.42354
NA	50.000	2.47136	0.305	2.47097	2.46402	2.47909
S	50.000	0.83024	0.159	0.83166	0.82999	0.82906
SI	50.000	0.43194	0.347	0.43117	0.43098	0.43367
Y1	50.000	15288.35431	0.153	15265.52707	15287.19189	15312.34397
Y2R	50.000	28787.34006	0.365	28785.14080	28893.40977	28683.46959

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/12/2013 23:04

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.87086	0.800	1.86220	1.88813	1.86225
AS	1.000	1.45918	0.918	1.46531	1.46842	1.44382
B	1.000	0.02083	0.780	0.02085	0.02098	0.02066
BA	1.000	1.78208	0.699	1.77662	1.79634	1.77328
BE	1.000	60.51794	0.438	60.47255	60.80306	60.27821
CD	1.000	34.72583	0.815	34.89021	34.88817	34.39911
CO	1.000	17.42726	0.898	17.53147	17.50310	17.24721
CU	1.000	1.62109	0.567	1.61772	1.63150	1.61406
LI	1.000	0.32071	0.460	0.31931	0.32057	0.32225
MN	1.000	7.23976	0.983	7.22522	7.31706	7.17701
NI	1.000	9.24308	0.757	9.28578	9.28107	9.16238
P	1.000	0.03289	0.491	0.03293	0.03302	0.03271
PB	1.000	3.38352	0.434	3.39189	3.39210	3.36657
SE	1.000	1.21957	0.866	1.22693	1.22433	1.20747
SR	1.000	1.88198	0.908	1.87391	1.90160	1.87043
TL	1.000	1.84759	0.525	1.85423	1.85208	1.83645
Y1	1.000	15524.49947	0.619	15470.29382	15467.70584	15635.49873
Y2A	1.000	442105.87260	0.679	442386.56271	438975.38155	444955.67352
Y2R	1.000	29259.14826	0.570	29447.47757	29199.41165	29130.55556
ZN	1.000	29.06735	0.746	29.22785	29.15357	28.82063

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 4

Date/Time: 11/12/2013 23:08

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.02542	0.416	0.02534	0.02554	0.02537
MO	1.000	11.55889	0.128	11.57069	11.56364	11.54234
SB	1.000	0.04030	0.209	0.04027	0.04023	0.04039
SN	1.000	3.83129	0.114	3.83204	3.82658	3.83525
TI	1.000	6.11362	0.506	6.10489	6.14796	6.08800
V	1.000	2.10463	0.430	2.09798	2.11492	2.10098
Y1	1.000	15709.42362	0.176	15712.32543	15735.54697	15680.39845
Y2A	1.000	458659.37846	0.400	459314.29993	456587.65760	460076.17784
Y2R	1.000	29384.51464	0.741	29619.76419	29343.38397	29190.39576
ZR	1.000	0.10684	1.161	0.10541	0.10748	0.10764

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/12/2013 23:11

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.61767	10,150.82	0.758	0.62269	0.61688	0.61343
AL	31.44807	5,381.67	0.176	31.45152	31.50154	31.39114
AS	0.61026	271.23	0.387	0.61176	0.61149	0.60754
B	0.60001	5,643.00	0.979	0.60621	0.59929	0.59453
BA	0.61104	478,554.91	0.500	0.61326	0.61230	0.60756
BE	0.60316	320,810.90	0.710	0.60612	0.60510	0.59825
CA	31.07332	38,827.11	0.192	31.00439	31.10863	31.10692
CD	0.60816	6,569.86	0.141	0.60842	0.60886	0.60720
CO	0.60658	3,269.88	0.089	0.60654	0.60714	0.60607
CR	0.60363	6,741.75	0.905	0.60686	0.60672	0.59732
CU	0.61291	8,789.02	0.558	0.61512	0.61463	0.60897
FE	31.13132	12,602.00	0.098	31.10577	31.12326	31.16491
K	30.87172	10,108.17	0.205	30.86135	30.81412	30.93968
LI	0.61416	5,762.70	0.156	0.61378	0.61345	0.61525
MG	30.73315	79,714.02	0.172	30.67765	30.78275	30.73904
MN	0.60799	38,689.73	0.500	0.61100	0.60803	0.60492
MO	0.61862	2,207.69	0.220	0.61901	0.61975	0.61711
NA	30.75296	44,444.97	0.198	30.71091	30.72517	30.82280
NI	0.60965	1,747.99	0.209	0.60910	0.61111	0.60875
P	0.61659	312.97	0.315	0.61438	0.61802	0.61737
PB	0.60979	646.75	0.442	0.60674	0.61184	0.61079
S	30.57631	7,835.36	0.038	30.56818	30.57113	30.58962
SB	0.63032	390.11	0.056	0.63072	0.63005	0.63020
SE	0.60907	230.96	0.177	0.60862	0.61030	0.60829
SI	31.03902	7,834.30	0.100	31.00338	31.05463	31.05906
SN	0.60877	720.30	0.149	0.60786	0.60967	0.60877
SR	0.60660	501,665.75	0.441	0.60939	0.60634	0.60406
TI	0.62785	33,749.84	0.512	0.63037	0.62895	0.62424
TL	0.60317	344.83	0.273	0.60270	0.60500	0.60181
V	0.61546	11,394.87	0.797	0.61983	0.61641	0.61015
Y1	15430.99278	15,430.99	0.042	15424.59877	15437.56894	15430.81063
Y2A	439457.42092	439,457.42	0.606	437355.64035	438563.03915	442453.58328
Y2R	29210.29006	29,210.29	0.099	29183.11390	29207.10012	29240.65616
ZN	0.61376	5,539.81	0.103	0.61450	0.61338	0.61342
ZR	0.60773	1,899.86	0.379	0.60737	0.60563	0.61020

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 6 Date/Time: 11/12/2013 23:15

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00002	-16.33	2360.541	0.00054	-0.00056	-0.00005
AL	0.00302	3.28	427.660	0.01689	-0.00860	0.00076
AS	-0.00102	-2.13	220.516	0.00038	-0.00363	0.00018
B	0.00140	18.03	20.735	0.00140	0.00169	0.00111
BA	0.00002	94.82	62.810	0.00001	0.00003	0.00001
BE	0.00002	-89.07	2.731	0.00002	0.00002	0.00002
CA	-0.00272	93.93	153.162	-0.00377	0.00187	-0.00626
CD	0.00047	1.89	18.659	0.00038	0.00048	0.00056
CO	-0.00036	-2.06	92.426	-0.00043	0.00000	-0.00066
CR	-0.00055	-8.60	41.198	-0.00032	-0.00077	-0.00056
CU	0.00009	135.35	386.147	0.00022	-0.00032	0.00038
FE	-0.00205	2.36	372.954	0.00051	0.00398	-0.01064
K	0.04659	123.62	60.757	0.01516	0.07008	0.05454
LI	0.00084	20.44	158.801	0.00063	-0.00038	0.00225
MG	0.00193	4.33	69.501	0.00038	0.00278	0.00262
MN	-0.00004	7.10	216.957	0.00005	-0.00004	-0.00011
MO	-0.00007	2.07	143.449	-0.00003	0.00001	-0.00019
NA	-0.02032	86.07	39.952	-0.01612	-0.02968	-0.01517
NI	-0.00051	18.20	127.949	-0.00074	0.00023	-0.00102
P	-0.00164	-0.69	120.582	-0.00319	0.00059	-0.00231
PB	0.00464	3.22	19.622	0.00566	0.00435	0.00391
S	0.00098	2.57	258.537	0.00376	0.00034	-0.00117
SB	-0.00069	-5.62	203.008	-0.00214	-0.00061	0.00067
SE	-0.00197	2.73	145.341	-0.00382	0.00132	-0.00340
SI	0.01927	9.84	10.578	0.01788	0.01833	0.02161
SN	-0.00010	1.15	385.997	0.00032	-0.00046	-0.00017
SR	0.00000	-35.90	2059.006	0.00000	-0.00001	0.00000
TI	-0.00016	30.52	77.963	-0.00015	-0.00004	-0.00030
TL	0.00017	0.57	279.489	0.00019	-0.00032	0.00063
V	-0.00001	-5.70	909.303	0.00004	-0.00007	0.00001
Y1	15674.57190	15,674.57	0.110	15686.21342	15682.68249	15654.81980
Y2A	457132.70294	457,132.70	0.481	459581.65229	455330.15926	456486.29728
Y2R	29322.29504	29,322.30	0.417	29201.30608	29445.72684	29319.85221
ZN	-0.00047	12.54	16.045	-0.00040	-0.00045	-0.00055
ZR	-0.00219	1.33	88.380	-0.00402	-0.00016	-0.00239

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/12/2013 23:19

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00507	71.07	7.172	0.00532	0.00465	0.00524
AL	0.22461	41.31	12.946	0.25204	0.19412	0.22766
AS	0.01881	6.98	11.245	0.02112	0.01696	0.01836
B	0.04822	462.77	1.505	0.04740	0.04878	0.04847
BA	0.00540	4,462.82	0.723	0.00538	0.00538	0.00545
BE	0.00492	2,606.98	0.873	0.00489	0.00489	0.00496
CA	0.20553	355.43	3.282	0.20436	0.21279	0.19945
CD	0.00538	55.92	3.248	0.00554	0.00541	0.00520
CO	0.00457	25.08	7.426	0.00496	0.00436	0.00438
CR	0.01467	167.57	2.072	0.01493	0.01434	0.01474
CU	0.01087	292.43	4.704	0.01067	0.01049	0.01145
FE	0.21069	89.33	1.674	0.20694	0.21395	0.21117
K	0.49608	270.13	3.217	0.47860	0.49979	0.50986
LI	0.02139	213.90	8.124	0.02336	0.02005	0.02077
MG	0.10310	271.16	0.951	0.10275	0.10234	0.10420
MN	0.00525	355.47	0.289	0.00525	0.00527	0.00524
MO	0.00993	38.43	1.240	0.00986	0.01008	0.00987
NA	0.98032	1,536.26	0.655	0.98604	0.97337	0.98155
NI	0.01001	48.66	4.615	0.00998	0.00957	0.01049
P	0.09777	50.54	0.550	0.09734	0.09759	0.09837
PB	0.01889	18.47	7.597	0.01732	0.02013	0.01922
S	0.49154	130.63	1.457	0.48343	0.49416	0.49702
SB	0.01947	7.24	8.189	0.01785	0.02103	0.01952
SE	0.01846	10.51	10.220	0.01944	0.01967	0.01629
SI	0.06186	20.66	7.754	0.06727	0.05813	0.06018
SN	0.02027	25.68	0.781	0.02045	0.02019	0.02016
SR	0.00513	4,357.85	0.830	0.00511	0.00510	0.00518
TI	0.01012	602.33	1.736	0.01006	0.00998	0.01032
TL	0.02981	17.75	6.048	0.03125	0.03038	0.02779
V	0.00512	91.82	4.733	0.00538	0.00508	0.00489
Y1	15723.69645	15,723.70	0.119	15727.79177	15739.98533	15703.31224
Y2A	455237.24840	455,237.25	0.616	456404.51228	457270.27206	452036.96085
Y2R	29364.68584	29,364.69	0.681	29558.56431	29376.41773	29159.07548
ZN	0.02300	226.15	0.206	0.02295	0.02304	0.02301
ZR	0.04725	156.03	2.987	0.04562	0.04811	0.04802

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 8 Date/Time: 11/12/2013 23:23

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00048	-37.08	32.898	0.00066	0.00043	0.00035
AL	510.44681	86,753.63	0.204	511.27318	510.79103	509.27622
AS	-0.00036	-1.30	490.915	0.00062	0.00070	-0.00241
B	0.01307	991.88	2.267	0.01339	0.01303	0.01280
BA	0.00047	401.08	4.435	0.00049	0.00045	0.00046
BE	-0.00038	-269.67	2.468	-0.00038	-0.00038	-0.00037
CA	509.85315	593,145.65	0.176	510.53561	510.18415	508.83970
CD	-0.00129	305.88	14.055	-0.00142	-0.00108	-0.00135
CO	0.00225	11.09	14.310	0.00259	0.00195	0.00221
CR	0.00159	14.12	25.040	0.00178	0.00186	0.00113
CU	0.00021	255.88	488.793	-0.00087	0.00117	0.00033
FE	204.10592	76,909.05	0.211	204.57413	204.01935	203.72429
K	0.06842	124.65	41.690	0.08598	0.03551	0.08377
LI	0.00227	100.91	81.872	0.00012	0.00336	0.00333
MG	507.94012	1,034,242.10	0.558	510.00970	509.10114	504.70954
MN	0.00336	201.35	1.919	0.00342	0.00329	0.00336
MO	-0.00111	-1.54	22.920	-0.00138	-0.00087	-0.00109
NA	0.04002	165.40	14.085	0.03445	0.03990	0.04572
NI	0.00315	14.63	26.192	0.00220	0.00354	0.00372
P	0.01126	5.37	4.873	0.01162	0.01062	0.01152
PB	-0.00332	87.44	64.828	-0.00261	-0.00161	-0.00573
S	-0.00134	1.78	243.946	-0.00189	-0.00431	0.00217
SB	-0.01949	-15.91	19.634	-0.01796	-0.01666	-0.02384
SE	0.00364	6.67	22.551	0.00399	0.00423	0.00270
SI	0.02179	10.00	9.782	0.01933	0.02311	0.02293
SN	0.00380	5.28	8.189	0.00399	0.00344	0.00397
SR	0.00248	1,821.86	0.525	0.00249	0.00248	0.00246
TI	0.00286	173.28	6.695	0.00264	0.00301	0.00292
TL	0.00257	1.76	122.637	0.00508	0.00358	-0.00096
V	-0.00398	8.75	17.638	-0.00365	-0.00479	-0.00351
Y1	14170.76959	14,170.77	0.565	14114.40965	14135.53780	14262.36132
Y2A	397547.00685	397,547.01	0.453	395608.11796	397865.54009	399167.36249
Y2R	27962.97318	27,962.97	0.592	27841.59840	27895.76271	28151.55844
ZN	0.01179	278.35	0.560	0.01172	0.01185	0.01179
ZR	0.00340	17.90	23.427	0.00362	0.00406	0.00251

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 9 Date/Time: 11/12/2013 23:27

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22163	3,269.57	0.417	0.22064	0.22247	0.22177
AL	506.97181	86,440.61	0.044	507.23015	506.84459	506.84069
AS	0.10796	43.43	3.093	0.11059	0.10909	0.10421
B	0.01177	980.15	8.492	0.01064	0.01213	0.01254
BA	0.50514	359,419.98	0.342	0.50600	0.50315	0.50626
BE	0.50628	244,625.89	0.437	0.50396	0.50652	0.50837
CA	508.04218	593,154.17	0.184	508.44756	506.97359	508.70539
CD	0.95700	9,693.54	0.515	0.96006	0.95962	0.95131
CO	0.48673	2,393.74	0.592	0.48870	0.48806	0.48342
CR	0.48175	4,887.78	0.484	0.47982	0.48110	0.48434
CU	0.53589	7,127.26	0.387	0.53350	0.53708	0.53710
FE	202.94094	76,750.68	0.022	202.93236	202.98846	202.90200
K	0.04015	116.27	101.832	0.04609	0.07774	-0.00338
LI	0.00145	93.54	138.843	-0.00045	0.00355	0.00123
MG	510.90393	1,042,486.15	0.357	509.50288	510.24188	512.96704
MN	0.48816	28,223.04	0.146	0.48774	0.48898	0.48775
MO	-0.00157	-3.02	17.434	-0.00126	-0.00178	-0.00166
NA	0.03160	154.26	49.519	0.02408	0.04959	0.02113
NI	0.96446	2,504.19	0.455	0.96657	0.96739	0.95942
P	0.01117	6.50	18.490	0.01352	0.01037	0.00962
PB	0.04960	137.36	8.307	0.05405	0.04882	0.04592
S	-0.00652	0.55	55.126	-0.00277	-0.00994	-0.00684
SB	0.61611	350.10	0.767	0.61863	0.61904	0.61065
SE	0.05409	23.90	7.170	0.05275	0.05847	0.05107
SI	0.02489	10.78	14.103	0.02205	0.02881	0.02380
SN	0.00279	4.16	52.324	0.00381	0.00112	0.00345
SR	0.00244	1,803.63	0.441	0.00244	0.00245	0.00243
TI	0.00319	196.63	6.236	0.00326	0.00334	0.00296
TL	0.10245	54.79	3.383	0.10093	0.10641	0.09999
V	0.50183	8,584.60	0.584	0.49844	0.50363	0.50340
Y1	14106.09713	14,106.10	0.376	14064.66707	14087.73506	14165.88925
Y2A	399232.23989	399,232.24	0.258	400177.40225	399382.90258	398136.41484
Y2R	28060.05994	28,060.06	0.186	28109.53047	28005.56444	28065.08492
ZN	1.03615	8,653.34	0.611	1.03763	1.04161	1.02921
ZR	0.00440	20.98	29.278	0.00431	0.00574	0.00317

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 10 Date/Time: 11/12/2013 23:31

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50760	8,372.15	0.872	0.51021	0.50249	0.51011
AL	25.61736	4,393.99	0.198	25.55951	25.63808	25.65449
AS	0.49836	222.85	0.961	0.50349	0.49757	0.49400
B	0.49116	4,638.41	1.063	0.49149	0.48579	0.49621
BA	0.50541	397,404.34	0.921	0.50648	0.50032	0.50944
BE	0.49632	265,011.80	0.797	0.49761	0.49188	0.49947
CA	25.53528	32,018.08	0.332	25.53919	25.61796	25.44868
CD	0.49919	5,434.05	0.163	0.49986	0.49942	0.49829
CO	0.49835	2,707.38	0.180	0.49878	0.49895	0.49732
CR	0.49751	5,578.19	0.809	0.49761	0.49344	0.50149
CU	0.50442	7,284.77	1.083	0.50895	0.49836	0.50596
FE	25.48636	10,354.05	0.288	25.44819	25.57096	25.43994
K	25.15160	8,277.11	0.322	25.12204	25.24324	25.08952
LI	0.50112	4,716.76	0.451	0.50144	0.50320	0.49871
MG	25.23327	65,757.64	0.384	25.21415	25.33831	25.14736
MN	0.50061	31,983.92	0.824	0.50288	0.49585	0.50309
MO	0.50666	1,822.64	0.269	0.50665	0.50803	0.50530
NA	24.97656	36,213.84	0.295	24.99527	25.03898	24.89542
NI	0.49984	1,447.82	0.114	0.50045	0.49973	0.49933
P	0.50680	259.27	0.460	0.50949	0.50539	0.50552
PB	0.49783	531.82	0.274	0.49876	0.49846	0.49626
S	24.96261	6,447.14	0.087	24.97539	24.97492	24.93753
SB	0.51685	321.47	0.364	0.51893	0.51526	0.51637
SE	0.50011	191.74	0.319	0.49922	0.50195	0.49915
SI	25.50787	6,456.17	0.065	25.51108	25.52264	25.48989
SN	0.49899	595.24	0.669	0.50047	0.50132	0.49517
SR	0.50039	415,451.59	1.048	0.50225	0.49447	0.50445
TI	0.51629	27,869.20	0.797	0.51827	0.51156	0.51904
TL	0.49528	285.45	0.410	0.49742	0.49338	0.49504
V	0.50658	9,415.57	0.835	0.50759	0.50194	0.51022
Y1	15551.38126	15,551.38	0.185	15534.25754	15535.26582	15584.62040
Y2A	441201.27184	441,201.27	0.809	439887.19310	445239.71466	438476.90776
Y2R	29287.75701	29,287.76	0.398	29248.16404	29196.15077	29418.95621
ZN	0.50139	4,564.07	0.040	0.50160	0.50136	0.50121
ZR	0.49599	1,556.14	0.522	0.49506	0.49892	0.49400

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 11 Date/Time: 11/12/2013 23:35

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-16.52	804.458	-0.00028	-0.00008	0.00026
AL	0.01404	5.19	180.909	-0.01527	0.02785	0.02953
AS	-0.00077	-2.02	256.991	-0.00124	-0.00249	0.00141
B	0.00042	8.63	113.462	0.00096	0.00009	0.00020
BA	0.00002	99.65	42.187	0.00003	0.00001	0.00003
BE	0.00002	-92.57	87.798	0.00003	0.00000	0.00001
CA	0.00676	105.89	34.562	0.00465	0.00637	0.00927
CD	0.00049	2.11	4.020	0.00051	0.00048	0.00048
CO	-0.00037	-2.11	62.603	-0.00056	-0.00044	-0.00011
CR	-0.00051	-8.17	46.825	-0.00076	-0.00028	-0.00050
CU	0.00005	134.63	1012.816	0.00057	-0.00047	0.00005
FE	-0.00457	1.33	54.357	-0.00229	-0.00722	-0.00419
K	-0.06754	86.53	39.837	-0.03652	-0.08452	-0.08159
LI	0.00127	24.50	40.365	0.00183	0.00084	0.00112
MG	0.00802	20.36	13.722	0.00928	0.00732	0.00745
MN	-0.00008	4.13	117.516	0.00002	-0.00016	-0.00010
MO	-0.00019	1.64	52.791	-0.00024	-0.00008	-0.00027
NA	-0.02433	80.34	36.635	-0.02636	-0.01457	-0.03205
NI	-0.00042	18.49	90.337	-0.00085	-0.00023	-0.00017
P	-0.00342	-1.61	15.727	-0.00352	-0.00390	-0.00284
PB	0.00368	2.21	25.060	0.00470	0.00291	0.00343
S	-0.00012	2.29	144.367	-0.00009	0.00003	-0.00029
SB	0.00022	-5.05	358.553	0.00065	-0.00069	0.00071
SE	0.00032	3.60	530.375	-0.00041	0.00223	-0.00087
SI	0.00904	7.26	34.370	0.00569	0.00960	0.01183
SN	0.00051	1.89	201.666	0.00147	-0.00056	0.00062
SR	-0.00002	-54.03	48.086	-0.00001	-0.00003	-0.00002
TI	-0.00013	32.55	128.335	0.00006	-0.00025	-0.00019
TL	-0.00004	0.45	3136.735	-0.00110	0.00113	-0.00014
V	-0.00022	-9.87	73.519	-0.00041	-0.00009	-0.00017
Y1	15706.20233	15,706.20	0.084	15691.37814	15716.82554	15710.40331
Y2A	456885.21345	456,885.21	0.193	456208.12873	457883.11214	456564.39947
Y2R	29345.01830	29,345.02	0.569	29179.47053	29342.24241	29513.34197
ZN	-0.00048	12.49	10.257	-0.00051	-0.00042	-0.00050
ZR	-0.00091	5.33	181.325	-0.00155	-0.00215	0.00097

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/12/2013 23:38

Sample Number: **7265053** Class: U*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00030	-21.25	38.604	-0.00038	-0.00017	-0.00036
AL	2.31983	399.30	0.446	2.33158	2.31211	2.31580
AS	0.02343	8.68	6.297	0.02221	0.02301	0.02507
B	0.02406	244.77	1.394	0.02427	0.02367	0.02424
BA	0.02093	16,770.27	0.848	0.02091	0.02077	0.02112
BE	0.00019	1.93	6.957	0.00020	0.00019	0.00017
CA	5.50836	6,986.27	0.255	5.51167	5.52044	5.49298
CD	0.00030	5.77	21.592	0.00032	0.00035	0.00023
CO	0.00050	3.17	27.029	0.00034	0.00057	0.00058
CR	0.00589	64.81	2.559	0.00571	0.00598	0.00596
CU	0.00274	172.05	35.446	0.00181	0.00375	0.00267
FE	3.29580	1,345.66	0.319	3.30551	3.28463	3.29725
K	1.14000	478.31	3.172	1.13230	1.10831	1.17939
LI	0.00259	37.62	62.903	0.00166	0.00447	0.00164
MG	2.22741	5,850.80	0.399	2.22239	2.23767	2.22216
MN	0.11063	7,176.56	0.627	0.11048	0.11002	0.11138
MO	0.00077	5.10	28.159	0.00070	0.00101	0.00060
NA	21.78180	31,578.43	0.179	21.81149	21.73751	21.79641
NI	0.00220	25.73	9.645	0.00236	0.00228	0.00196
P	0.03495	18.06	3.860	0.03483	0.03635	0.03366
PB	0.00567	5.41	3.854	0.00590	0.00564	0.00546
S	3.78512	984.93	0.596	3.80949	3.76501	3.78086
SB	-0.00130	-5.97	68.340	-0.00189	-0.00172	-0.00028
SE	0.00190	4.25	43.426	0.00248	0.00226	0.00096
SI	4.49775	1,141.83	0.177	4.50639	4.49067	4.49619
SN	0.00217	3.87	7.200	0.00209	0.00207	0.00235
SR	0.03495	29,398.25	0.808	0.03490	0.03469	0.03525
TI	0.04716	2,616.43	0.878	0.04727	0.04670	0.04750
TL	0.00037	0.74	360.244	-0.00040	-0.00040	0.00190
V	0.00500	91.38	5.334	0.00479	0.00490	0.00530
Y1	15637.16193	15,637.16	0.278	15589.95667	15645.86292	15675.66620
Y2A	447513.80226	447,513.80	0.817	448211.01526	450773.12541	443557.26609
Y2R	29270.76580	29,270.77	0.135	29273.89222	29229.84403	29308.56117
ZN	0.01011	111.05	1.347	0.01018	0.00996	0.01020
ZR	0.00070	10.35	252.428	0.00140	-0.00131	0.00202

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/12/2013 23:42

Sample Number: **7265053** Class: UP** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02384	393.50	0.691	0.02396	0.02365	0.02390
AL	3.44772	593.36	1.296	3.47497	3.47203	3.39616
AS	0.50283	227.61	0.406	0.50194	0.50517	0.50139
B	0.21334	2,011.09	0.143	0.21303	0.21334	0.21364
BA	0.07168	57,227.28	0.301	0.07187	0.07145	0.07173
BE	0.01982	10,641.68	0.481	0.01991	0.01972	0.01983
CA	6.67779	8,458.61	0.265	6.65826	6.68247	6.69265
CD	0.04926	537.07	0.542	0.04908	0.04913	0.04957
CO	0.09828	535.93	0.367	0.09843	0.09787	0.09854
CR	0.20042	2,277.56	0.258	0.20013	0.20101	0.20011
CU	0.49185	7,202.20	0.224	0.49291	0.49071	0.49194
FE	3.91400	1,599.24	0.200	3.90731	3.92258	3.91209
K	3.18151	1,142.35	1.128	3.14705	3.17880	3.21867
LI	0.97158	9,133.04	0.087	0.97061	0.97197	0.97216
MG	3.28038	8,624.14	0.194	3.27461	3.28722	3.27933
MN	0.17308	11,220.17	0.275	0.17318	0.17350	0.17256
MO	0.19760	714.15	0.223	0.19711	0.19773	0.19796
NA	24.54065	35,606.62	0.221	24.48559	24.59422	24.54214
NI	0.15115	453.01	0.449	0.15174	0.15129	0.15041
P	1.02885	526.36	0.658	1.02116	1.03391	1.03148
PB	0.49441	522.08	0.425	0.49245	0.49415	0.49663
S	3.93873	1,021.91	0.208	3.93382	3.93416	3.94819
SB	0.39578	245.21	0.323	0.39458	0.39564	0.39712
SE	0.77845	296.78	0.489	0.77737	0.77530	0.78268
SI	4.65060	1,181.90	0.181	4.65712	4.64108	4.65360
SN	0.58506	699.57	0.232	0.58518	0.58365	0.58636
SR	0.05566	46,837.35	0.135	0.05575	0.05562	0.05563
TI	0.14840	8,151.82	0.769	0.14951	0.14723	0.14845
TL	0.96735	556.59	0.196	0.96521	0.96801	0.96883
V	0.10364	1,932.16	0.135	0.10377	0.10349	0.10364
Y1	15592.87655	15,592.88	0.248	15622.73448	15606.80426	15549.09091
Y2A	447413.12763	447,413.13	0.348	445789.54877	447555.93895	448893.89516
Y2R	29306.34212	29,306.34	0.142	29335.88694	29258.84232	29324.29711
ZN	0.12799	1,183.35	0.446	0.12756	0.12778	0.12864
ZR	0.96827	3,032.05	0.041	0.96835	0.96862	0.96784

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/12/2013 23:46

Sample Number: **7265053** Class: D*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00018	-19.24	67.632	-0.00020	-0.00005	-0.00030
AL	2.50981	430.59	1.062	2.51840	2.53111	2.47992
AS	0.02206	8.00	4.775	0.02159	0.02327	0.02132
B	0.02628	265.28	4.449	0.02552	0.02571	0.02763
BA	0.02168	17,287.08	0.201	0.02167	0.02173	0.02164
BE	0.00020	6.64	3.310	0.00020	0.00019	0.00019
CA	5.67433	7,173.96	0.093	5.66828	5.67654	5.67818
CD	0.00033	6.37	67.568	0.00050	0.00008	0.00040
CO	0.00066	4.11	32.020	0.00042	0.00077	0.00080
CR	0.00615	67.47	2.316	0.00629	0.00601	0.00614
CU	0.00215	162.74	10.719	0.00197	0.00241	0.00206
FE	3.49435	1,422.55	0.127	3.48976	3.49860	3.49470
K	1.22471	504.40	2.985	1.24525	1.18250	1.24637
LI	0.00229	34.73	75.572	0.00223	0.00059	0.00405
MG	2.30458	6,036.69	0.081	2.30302	2.30663	2.30408
MN	0.11413	7,370.28	0.017	0.11412	0.11415	0.11412
MO	0.00075	5.02	14.542	0.00066	0.00087	0.00073
NA	22.45535	32,461.49	0.121	22.42672	22.45832	22.48100
NI	0.00303	27.99	30.220	0.00212	0.00395	0.00301
P	0.03737	19.23	3.012	0.03866	0.03677	0.03667
PB	0.00697	6.84	2.282	0.00684	0.00692	0.00714
S	3.94267	1,022.07	0.342	3.95469	3.94521	3.92812
SB	-0.00132	-5.96	272.992	0.00218	-0.00114	-0.00499
SE	-0.00043	3.36	229.021	-0.00036	-0.00145	0.00052
SI	4.79202	1,212.86	0.253	4.79203	4.80415	4.77987
SN	0.00129	2.81	67.206	0.00118	0.00221	0.00048
SR	0.03598	30,133.54	0.253	0.03597	0.03608	0.03590
TI	0.05156	2,844.23	0.849	0.05203	0.05148	0.05116
TL	0.00014	0.60	613.516	-0.00082	0.00062	0.00061
V	0.00549	100.57	1.772	0.00540	0.00548	0.00560
Y1	15579.68721	15,579.69	0.149	15554.81847	15583.57795	15600.66520
Y2A	445495.20018	445,495.20	0.092	445316.29064	445203.41739	445965.89250
Y2R	29190.06207	29,190.06	0.268	29264.30000	29197.47303	29108.41317
ZN	0.01087	117.67	1.485	0.01105	0.01074	0.01083
ZR	0.00047	9.59	378.827	-0.00156	0.00116	0.00181

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/12/2013 23:50

Sample Number: **7265053** Class: R*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01053	163.56	4.426	0.01038	0.01015	0.01105
AL	4.91312	856.08	0.127	4.90787	4.92003	4.91146
AS	0.05409	22.74	3.824	0.05648	0.05286	0.05294
B	0.39181	3,713.59	0.573	0.39247	0.38931	0.39366
BA	0.41457	334,163.86	0.690	0.41525	0.41142	0.41702
BE	0.00979	5,264.27	0.900	0.00987	0.00969	0.00980
CA	6.28290	8,072.70	0.172	6.29374	6.27216	6.28281
CD	0.00991	111.03	0.750	0.00988	0.00999	0.00985
CO	0.09721	532.13	0.295	0.09748	0.09691	0.09725
CR	0.04605	527.30	1.748	0.04642	0.04513	0.04661
CU	0.05080	873.93	0.939	0.05076	0.05034	0.05129
FE	3.91730	1,622.37	0.036	3.91643	3.91893	3.91655
K	3.54626	1,278.02	1.733	3.47986	3.60116	3.55777
LI	0.19626	1,880.92	0.335	0.19581	0.19702	0.19596
MG	2.74405	7,313.64	0.292	2.75289	2.73724	2.74202
MN	0.20896	13,690.73	0.541	0.20957	0.20765	0.20965
MO	0.38727	1,400.14	0.129	0.38747	0.38763	0.38670
NA	23.79955	35,004.67	0.170	23.75348	23.81538	23.82981
NI	0.10217	314.41	0.762	0.10268	0.10127	0.10255
P	0.23285	119.47	0.256	0.23280	0.23348	0.23229
PB	0.03508	37.32	1.990	0.03550	0.03546	0.03427
S	4.03402	1,048.63	0.124	4.03198	4.03974	4.03036
SB	0.09759	55.80	1.640	0.09607	0.09744	0.09926
SE	0.02732	13.86	3.081	0.02809	0.02642	0.02746
SI	7.78842	2,002.87	0.500	7.77826	7.83143	7.75557
SN	0.76520	916.36	0.194	0.76565	0.76354	0.76640
SR	0.23074	196,358.61	0.537	0.23091	0.22942	0.23188
TI	0.25331	14,033.10	0.930	0.25371	0.25078	0.25543
TL	0.02890	17.30	1.757	0.02898	0.02936	0.02836
V	0.10147	1,878.46	0.423	0.10184	0.10100	0.10156
Y1	15623.37263	15,623.37	0.167	15620.83133	15598.59867	15650.68789
Y2A	452262.28710	452,262.29	0.673	450304.11413	455770.57067	450712.17651
Y2R	29705.05884	29,705.06	0.204	29774.85543	29666.03510	29674.28600
ZN	0.10887	1,006.33	0.068	0.10891	0.10891	0.10879
ZR	0.19198	615.98	0.903	0.19269	0.19324	0.19001

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/12/2013 23:53

Sample Number: **7265053** Class: M*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00976	149.34	2.570	0.00954	0.00971	0.01003
AL	4.89872	851.23	0.263	4.90990	4.90165	4.88462
AS	0.05190	21.64	4.614	0.04933	0.05229	0.05407
B	0.38963	3,662.63	0.962	0.38726	0.38768	0.39395
BA	0.40967	327,502.31	0.636	0.40822	0.40810	0.41267
BE	0.00973	5,188.83	0.927	0.00968	0.00968	0.00983
CA	6.20409	7,950.83	0.071	6.20280	6.20045	6.20901
CD	0.00966	107.88	0.996	0.00957	0.00976	0.00965
CO	0.09539	519.85	0.562	0.09550	0.09481	0.09586
CR	0.04579	519.96	0.540	0.04553	0.04602	0.04580
CU	0.05005	855.97	1.348	0.04980	0.04954	0.05082
FE	3.92237	1,620.00	0.373	3.93131	3.90550	3.93029
K	3.48030	1,252.86	0.690	3.48734	3.45357	3.49999
LI	0.19058	1,821.83	0.733	0.19194	0.19066	0.18915
MG	2.71812	7,224.68	0.269	2.72612	2.71183	2.71641
MN	0.20618	13,397.97	0.720	0.20517	0.20549	0.20789
MO	0.38228	1,375.97	0.188	0.38284	0.38253	0.38147
NA	23.53489	34,521.85	0.213	23.52111	23.49317	23.59040
NI	0.09999	306.76	0.631	0.10062	0.09935	0.10000
P	0.23019	117.58	0.691	0.23193	0.22881	0.22982
PB	0.03498	37.05	5.357	0.03322	0.03695	0.03476
S	3.98163	1,030.42	0.221	3.99157	3.97481	3.97853
SB	0.09425	53.46	2.053	0.09251	0.09391	0.09634
SE	0.02916	14.49	4.411	0.02980	0.02768	0.03001
SI	7.78991	1,997.76	0.134	7.80048	7.78964	7.77962
SN	0.75208	896.66	0.064	0.75261	0.75198	0.75167
SR	0.22738	191,910.14	0.732	0.22640	0.22644	0.22930
TI	0.25053	13,766.07	0.610	0.24963	0.24967	0.25230
TL	0.02797	16.68	8.172	0.02985	0.02543	0.02864
V	0.10036	1,842.82	0.581	0.09975	0.10041	0.10092
Y1	15553.66123	15,553.66	0.166	15526.46847	15577.84277	15556.67244
Y2A	448548.47101	448,548.47	0.712	450378.83212	450404.01460	444862.56631
Y2R	29623.67073	29,623.67	0.301	29557.75604	29725.06491	29588.19126
ZN	0.10663	981.63	0.177	0.10675	0.10672	0.10641
ZR	0.19032	609.04	0.396	0.19118	0.18998	0.18979

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/12/2013 23:57

Sample Number: **7265053** Class: UL** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00042	-22.85	181.951	-0.00008	0.00011	-0.00131
AL	0.47733	84.17	1.832	0.46819	0.48561	0.47820
AS	0.00395	0.07	11.375	0.00421	0.00343	0.00421
B	0.00593	63.20	10.037	0.00625	0.00524	0.00629
BA	0.00445	3,631.68	1.035	0.00450	0.00441	0.00444
BE	0.00003	-83.10	27.506	0.00004	0.00003	0.00002
CA	1.14617	1,527.86	0.418	1.14792	1.14984	1.14074
CD	0.00043	2.60	25.960	0.00038	0.00055	0.00035
CO	-0.00040	-2.14	21.159	-0.00032	-0.00049	-0.00040
CR	0.00119	11.38	19.689	0.00095	0.00142	0.00120
CU	0.00023	134.78	297.751	0.00036	-0.00051	0.00083
FE	0.69307	285.04	0.918	0.69734	0.68576	0.69612
K	0.27457	197.00	15.232	0.25598	0.24525	0.32246
LI	0.00037	16.23	414.117	0.00161	0.00088	-0.00137
MG	0.46928	1,230.40	0.567	0.47042	0.46624	0.47118
MN	0.02342	1,527.57	0.621	0.02342	0.02328	0.02357
MO	0.00026	3.26	65.351	0.00015	0.00018	0.00046
NA	4.57267	6,706.72	0.495	4.54806	4.59254	4.57741
NI	0.00011	19.80	462.082	0.00020	0.00055	-0.00042
P	0.00686	3.65	8.105	0.00662	0.00750	0.00647
PB	0.00572	4.57	17.378	0.00656	0.00597	0.00462
S	0.78419	205.12	0.511	0.78040	0.78378	0.78838
SB	0.00012	-5.06	1275.861	-0.00006	0.00178	-0.00135
SE	-0.00412	1.92	55.493	-0.00153	-0.00585	-0.00498
SI	0.95165	244.99	1.240	0.94766	0.96492	0.94236
SN	-0.00010	1.14	714.812	-0.00082	0.00066	-0.00015
SR	0.00739	6,194.34	0.371	0.00742	0.00737	0.00739
TI	0.00976	572.73	0.250	0.00979	0.00974	0.00975
TL	0.00031	0.66	646.119	-0.00198	0.00119	0.00172
V	0.00104	14.65	22.111	0.00080	0.00105	0.00126
Y1	15578.80110	15,578.80	0.034	15578.43098	15573.70328	15584.26905
Y2A	447775.31520	447,775.32	0.320	446298.10883	449164.00133	447863.83543
Y2R	29211.68048	29,211.68	0.408	29314.29143	29081.14000	29239.61000
ZN	0.00121	28.19	11.480	0.00135	0.00108	0.00119
ZR	-0.00076	5.77	130.431	-0.00005	-0.00190	-0.00033

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/13/2013 00:01

Sample Number: **7265054** Class: **** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00044	-23.11	99.172	-0.00015	-0.00022	-0.00093
AL	0.19775	37.01	7.287	0.18682	0.19235	0.21408
AS	0.00032	-1.59	437.260	0.00177	-0.00104	0.00023
B	0.02779	267.57	0.353	0.02773	0.02790	0.02773
BA	0.01225	9,884.92	0.126	0.01225	0.01224	0.01227
BE	0.00002	-90.70	76.194	0.00001	0.00003	0.00001
CA	1.24143	1,670.57	0.492	1.24378	1.23450	1.24601
CD	0.00035	1.68	11.224	0.00034	0.00032	0.00039
CO	-0.00036	-1.97	16.466	-0.00039	-0.00040	-0.00029
CR	0.00001	-2.06	812.556	0.00008	-0.00006	0.00000
CU	0.00099	146.14	18.848	0.00103	0.00114	0.00078
FE	0.64638	269.90	1.227	0.64655	0.65422	0.63836
K	0.92293	412.88	2.959	0.95339	0.91477	0.90063
LI	0.00344	45.47	74.396	0.00639	0.00196	0.00196
MG	0.63458	1,687.96	0.754	0.63878	0.62937	0.63558
MN	0.05309	3,461.07	0.529	0.05319	0.05278	0.05332
MO	0.00067	4.73	38.733	0.00094	0.00043	0.00063
NA	23.83247	34,968.77	0.296	23.91146	23.77531	23.81065
NI	0.00021	20.17	56.956	0.00008	0.00022	0.00032
P	0.00201	1.18	53.613	0.00077	0.00264	0.00263
PB	0.00373	2.49	40.448	0.00547	0.00292	0.00280
S	3.48596	906.99	0.290	3.47773	3.48292	3.49722
SB	-0.00058	-5.53	193.261	-0.00140	0.00069	-0.00102
SE	-0.00075	3.20	238.120	-0.00172	0.00131	-0.00183
SI	1.54426	400.19	0.955	1.55650	1.54839	1.52789
SN	0.00218	3.89	26.920	0.00282	0.00206	0.00167
SR	0.01492	12,573.07	0.321	0.01486	0.01494	0.01495
TI	0.00452	286.52	2.230	0.00446	0.00445	0.00463
TL	-0.00023	0.36	637.574	0.00144	-0.00095	-0.00116
V	0.00039	2.19	99.695	0.00032	0.00005	0.00082
Y1	15632.21869	15,632.22	0.075	15645.62521	15624.21102	15626.81985
Y2A	449055.22008	449,055.22	0.246	450185.26875	449007.00066	447973.39084
Y2R	29633.92809	29,633.93	0.463	29503.71588	29777.26000	29620.80838
ZN	0.00379	51.50	0.993	0.00382	0.00380	0.00375
ZR	-0.00077	5.83	196.311	-0.00068	0.00070	-0.00233

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/13/2013 00:05

Sample Number: **7265056** Class: **** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00034	-22.20	87.125	-0.00016	-0.00017	-0.00068
AL	2.70328	475.44	0.162	2.69855	2.70722	2.70406
AS	0.00837	1.88	19.154	0.00769	0.00722	0.01020
B	0.02737	277.17	0.814	0.02734	0.02717	0.02761
BA	0.02270	18,518.79	0.019	0.02270	0.02271	0.02270
BE	0.00016	-12.53	9.935	0.00014	0.00016	0.00018
CA	5.78019	7,492.96	0.393	5.75648	5.80174	5.78236
CD	0.00049	6.55	8.678	0.00052	0.00051	0.00044
CO	0.00113	6.77	16.922	0.00092	0.00117	0.00129
CR	0.00679	76.45	6.817	0.00717	0.00691	0.00627
CU	0.00300	179.38	14.752	0.00345	0.00300	0.00256
FE	2.57044	1,074.23	0.496	2.55575	2.57874	2.57683
K	1.23087	519.36	1.489	1.23431	1.24723	1.21107
LI	0.00337	45.94	69.985	0.00224	0.00608	0.00179
MG	2.16569	5,818.36	0.282	2.15894	2.16725	2.17087
MN	0.10740	7,096.35	0.263	0.10720	0.10726	0.10772
MO	0.00107	6.18	3.929	0.00106	0.00103	0.00111
NA	18.53844	27,505.95	0.244	18.50184	18.58891	18.52457
NI	0.00272	27.27	1.763	0.00269	0.00269	0.00277
P	0.01333	6.99	8.468	0.01357	0.01210	0.01432
PB	0.00640	6.27	9.396	0.00576	0.00650	0.00695
S	3.75842	978.06	0.034	3.75976	3.75824	3.75726
SB	-0.00021	-5.28	572.046	0.00066	0.00028	-0.00156
SE	0.00165	4.14	133.102	0.00402	-0.00033	0.00126
SI	5.10302	1,324.31	0.346	5.09947	5.12220	5.08738
SN	0.00088	2.33	17.586	0.00097	0.00070	0.00097
SR	0.03680	31,535.96	0.330	0.03685	0.03667	0.03689
TI	0.06314	3,554.71	0.561	0.06274	0.06342	0.06324
TL	0.00026	0.67	134.052	0.00017	0.00064	-0.00003
V	0.00510	94.94	3.478	0.00526	0.00491	0.00513
Y1	15638.03362	15,638.03	0.162	15639.69069	15611.90435	15662.50583
Y2A	455800.04424	455,800.04	0.204	454882.05043	456738.68613	455779.39615
Y2R	29937.60295	29,937.60	0.521	30111.36863	29809.89022	29891.55000
ZN	0.02912	281.79	0.389	0.02910	0.02924	0.02902
ZR	-0.00081	5.76	49.510	-0.00096	-0.00111	-0.00035

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/13/2013 00:09

Sample Number: **7265057** Class: U*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00039	-22.15	120.885	0.00012	-0.00079	-0.00049
AL	0.04113	9.93	52.529	0.02133	0.03788	0.06417
AS	0.00112	-1.18	81.859	0.00104	0.00025	0.00209
B	0.02563	245.42	0.780	0.02544	0.02560	0.02584
BA	0.01088	8,771.45	0.509	0.01082	0.01093	0.01089
BE	0.00001	-96.45	116.493	0.00000	0.00001	0.00001
CA	1.71213	2,268.21	0.615	1.71486	1.70050	1.72103
CD	0.00050	2.70	6.835	0.00053	0.00047	0.00048
CO	-0.00009	-0.55	179.942	0.00008	-0.00024	-0.00012
CR	0.00028	1.05	112.410	0.00059	-0.00004	0.00030
CU	-0.00017	129.61	84.290	-0.00032	-0.00004	-0.00014
FE	0.32644	138.00	0.582	0.32427	0.32779	0.32727
K	0.70522	341.58	4.541	0.73995	0.67686	0.69883
LI	0.00298	41.30	28.389	0.00304	0.00380	0.00211
MG	0.79166	2,107.30	0.147	0.79294	0.79136	0.79067
MN	0.05159	3,357.84	0.284	0.05156	0.05175	0.05146
MO	0.00102	5.99	31.199	0.00085	0.00138	0.00082
NA	35.57259	52,172.20	0.079	35.54029	35.58738	35.59008
NI	0.00064	21.37	51.835	0.00069	0.00028	0.00094
P	0.00059	0.45	73.484	0.00097	0.00012	0.00067
PB	0.00335	2.06	29.381	0.00221	0.00395	0.00389
S	5.63579	1,461.73	0.122	5.63930	5.62788	5.64019
SB	-0.00254	-6.76	82.351	-0.00213	-0.00069	-0.00481
SE	0.00171	4.12	86.095	0.00127	0.00051	0.00335
SI	1.76114	456.00	0.401	1.76484	1.75300	1.76558
SN	0.00054	1.91	101.829	0.00016	0.00029	0.00116
SR	0.01192	10,023.22	0.073	0.01191	0.01192	0.01193
TI	0.00167	130.37	2.153	0.00165	0.00165	0.00171
TL	-0.00034	0.30	216.263	0.00049	-0.00061	-0.00088
V	-0.00006	-6.82	747.120	-0.00063	0.00018	0.00025
Y1	15598.20261	15,598.20	0.068	15610.24865	15593.92526	15590.43391
Y2A	448311.82261	448,311.82	0.461	450541.93762	446463.00597	447930.52422
Y2R	29653.53665	29,653.54	0.472	29624.47127	29530.36675	29805.77192
ZN	0.00325	46.24	2.366	0.00320	0.00334	0.00320
ZR	-0.00070	6.05	386.010	0.00225	-0.00135	-0.00299

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/13/2013 00:12

Sample Number: **7265057** Class: UP** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02436	402.95	1.134	0.02457	0.02405	0.02447
AL	1.04635	185.17	1.301	1.05332	1.05507	1.03067
AS	0.47839	216.66	0.671	0.47509	0.47857	0.48150
B	0.21355	1,999.12	0.541	0.21424	0.21222	0.21420
BA	0.06085	48,618.31	0.653	0.06099	0.06041	0.06117
BE	0.01944	10,438.67	0.509	0.01941	0.01935	0.01954
CA	2.71930	3,557.63	0.088	2.71721	2.72191	2.71877
CD	0.04888	527.31	0.322	0.04883	0.04906	0.04876
CO	0.09688	527.44	0.354	0.09649	0.09710	0.09706
CR	0.19100	2,171.54	0.322	0.19168	0.19047	0.19085
CU	0.49608	7,265.67	0.706	0.49842	0.49205	0.49777
FE	0.82971	347.05	1.326	0.81821	0.83077	0.84014
K	2.63040	978.34	1.773	2.59562	2.68339	2.61219
LI	0.96919	9,252.47	0.147	0.97082	0.96854	0.96821
MG	1.76517	4,715.49	0.368	1.77265	1.76186	1.76101
MN	0.10980	7,125.17	0.427	0.10979	0.10934	0.11028
MO	0.19713	711.94	0.407	0.19628	0.19722	0.19788
NA	38.18651	56,207.11	0.096	38.14781	38.19129	38.22044
NI	0.14623	438.81	0.361	0.14578	0.14610	0.14681
P	0.99520	508.81	0.207	0.99590	0.99682	0.99289
PB	0.48756	513.56	0.120	0.48811	0.48695	0.48762
S	5.71966	1,481.90	0.256	5.72874	5.72744	5.70279
SB	0.39262	243.02	0.380	0.39093	0.39318	0.39375
SE	0.77581	295.53	0.384	0.77485	0.77343	0.77915
SI	1.83090	475.63	0.967	1.82753	1.81513	1.85004
SN	0.57881	691.62	0.328	0.57675	0.57920	0.58049
SR	0.03139	26,406.76	0.532	0.03144	0.03120	0.03152
TI	0.10052	5,537.72	0.590	0.10052	0.09992	0.10111
TL	0.95849	551.07	0.648	0.95240	0.96483	0.95823
V	0.09760	1,816.36	0.646	0.09702	0.09749	0.09827
Y1	15581.88706	15,581.89	0.211	15619.35746	15558.13953	15568.16419
Y2A	447638.89626	447,638.90	0.487	447299.40279	449969.50896	445647.77704
Y2R	29764.60388	29,764.60	0.378	29646.79449	29870.78337	29776.23377
ZN	0.12221	1,127.59	0.191	0.12204	0.12247	0.12210
ZR	0.95793	3,046.67	0.107	0.95880	0.95820	0.95679

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 22

Date/Time: 11/13/2013 00:16

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50888	8,306.08	0.170	0.50862	0.50985	0.50818
AL	26.19720	4,498.49	0.284	26.14818	26.16053	26.28288
AS	0.50503	223.47	0.269	0.50528	0.50625	0.50357
B	0.50790	4,744.56	0.614	0.50550	0.51142	0.50676
BA	0.51416	400,073.55	0.302	0.51518	0.51492	0.51237
BE	0.50580	267,266.85	0.135	0.50521	0.50655	0.50565
CA	25.51992	32,034.29	0.118	25.55466	25.50136	25.50375
CD	0.50011	5,387.62	0.139	0.49946	0.50084	0.50004
CO	0.50177	2,697.39	0.147	0.50177	0.50251	0.50104
CR	0.50731	5,628.83	0.322	0.50554	0.50876	0.50763
CU	0.51375	7,339.61	0.403	0.51305	0.51607	0.51211
FE	25.96867	10,560.78	0.143	25.93017	25.97173	26.00411
K	25.42932	8,376.53	0.275	25.50864	25.40236	25.37697
LI	0.51518	4,854.02	0.305	0.51379	0.51486	0.51688
MG	25.29377	65,986.72	0.064	25.30454	25.27526	25.30151
MN	0.49885	31,540.06	0.457	0.49691	0.50136	0.49828
MO	0.51258	1,824.54	0.087	0.51249	0.51307	0.51219
NA	25.68300	37,276.03	0.106	25.66853	25.66602	25.71446
NI	0.50590	1,449.72	0.201	0.50595	0.50688	0.50486
P	0.51481	260.60	0.197	0.51427	0.51598	0.51418
PB	0.50709	536.08	0.683	0.51043	0.50731	0.50352
S	25.36414	6,481.97	0.110	25.38484	25.37532	25.33226
SB	0.52679	324.31	0.294	0.52853	0.52557	0.52626
SE	0.50712	192.33	0.267	0.50724	0.50841	0.50571
SI	26.03378	6,596.39	0.303	26.02177	25.96154	26.11803
SN	0.50401	594.91	0.258	0.50551	0.50317	0.50335
SR	0.49998	410,791.76	0.816	0.49537	0.50315	0.50141
TI	0.52498	28,042.84	0.347	0.52345	0.52700	0.52450
TL	0.49860	284.34	0.248	0.49717	0.49932	0.49930
V	0.51514	9,475.61	0.208	0.51472	0.51636	0.51435
Y1	15387.96103	15,387.96	0.172	15387.86086	15361.53272	15414.48951
Y2A	436591.87127	436,591.87	0.202	437287.45853	435602.55474	436885.60053
Y2R	29319.95298	29,319.95	0.449	29232.42273	29471.34742	29256.08878
ZN	0.50848	4,579.78	0.046	0.50839	0.50829	0.50874
ZR	0.51129	1,605.64	0.464	0.51042	0.50947	0.51397

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 23 Date/Time: 11/13/2013 00:20

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-10.70	216.153	-0.00005	-0.00010	0.00110
AL	0.00008	2.83	7840.556	0.00655	-0.00020	-0.00612
AS	-0.00131	-2.27	48.831	-0.00194	-0.00066	-0.00133
B	0.00042	8.77	48.762	0.00019	0.00052	0.00057
BA	0.00001	92.00	114.533	0.00003	0.00001	0.00000
BE	0.00002	-90.90	8.525	0.00002	0.00002	0.00002
CA	-0.00725	89.75	20.044	-0.00839	-0.00561	-0.00774
CD	0.00034	0.46	33.490	0.00042	0.00039	0.00021
CO	-0.00062	-3.45	31.576	-0.00079	-0.00065	-0.00040
CR	-0.00042	-7.17	89.684	-0.00086	-0.00019	-0.00021
CU	-0.00031	130.57	37.385	-0.00024	-0.00044	-0.00024
FE	-0.00663	0.50	33.794	-0.00843	-0.00412	-0.00735
K	0.02618	118.96	55.610	0.03578	0.03333	0.00943
LI	0.00075	20.07	265.609	-0.00112	0.00286	0.00052
MG	0.00165	3.66	46.094	0.00236	0.00175	0.00085
MN	0.00000	9.68	3900.599	0.00007	0.00001	-0.00008
MO	0.00015	2.89	290.145	0.00021	0.00056	-0.00031
NA	-0.02778	76.54	51.043	-0.01765	-0.04398	-0.02171
NI	-0.00039	18.61	47.674	-0.00034	-0.00059	-0.00023
P	-0.00231	-1.04	1.864	-0.00226	-0.00235	-0.00230
PB	0.00308	1.57	33.824	0.00200	0.00316	0.00409
S	0.00282	3.06	95.023	0.00579	0.00057	0.00211
SB	0.00060	-4.81	149.832	0.00039	-0.00018	0.00159
SE	-0.00058	3.27	680.255	-0.00511	0.00221	0.00115
SI	0.00749	6.97	82.256	0.01457	0.00461	0.00330
SN	-0.00002	1.26	3525.944	-0.00009	-0.00063	0.00067
SR	0.00001	-30.02	127.555	0.00001	0.00001	0.00000
TI	-0.00009	35.03	142.902	-0.00015	-0.00017	0.00006
TL	0.00073	0.89	126.767	0.00147	-0.00031	0.00102
V	-0.00021	-9.73	134.068	-0.00012	0.00002	-0.00052
Y1	15731.04720	15,731.05	0.198	15723.57690	15765.27965	15704.28505
Y2A	461262.81796	461,262.82	0.170	462131.78500	460616.19111	461040.47777
Y2R	29822.55622	29,822.56	0.388	29700.86740	29930.92866	29835.87260
ZN	-0.00037	13.45	20.345	-0.00046	-0.00035	-0.00032
ZR	-0.00283	-0.70	66.740	-0.00077	-0.00324	-0.00448

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/13/2013 00:24

Sample Number: **7265057** Class: D*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00027	-20.48	31.816	-0.00033	-0.00017	-0.00030
AL	0.03493	8.98	21.787	0.02652	0.03692	0.04134
AS	0.00066	-1.39	212.109	0.00024	0.00223	-0.00048
B	0.02474	240.76	0.708	0.02453	0.02482	0.02485
BA	0.01044	8,550.22	0.475	0.01048	0.01038	0.01045
BE	0.00002	-93.42	44.070	0.00001	0.00002	0.00001
CA	1.64245	2,213.54	0.171	1.64211	1.64541	1.63983
CD	0.00031	0.63	16.804	0.00025	0.00035	0.00032
CO	-0.00020	-1.13	81.524	-0.00018	-0.00036	-0.00004
CR	0.00018	-0.07	194.906	-0.00023	0.00038	0.00040
CU	0.00039	139.78	108.035	0.00001	0.00032	0.00084
FE	0.30830	132.53	2.150	0.30181	0.30802	0.31506
K	0.70402	346.42	4.246	0.67569	0.73527	0.70110
LI	0.00347	46.61	55.860	0.00398	0.00510	0.00133
MG	0.76048	2,055.57	0.343	0.75787	0.76048	0.76308
MN	0.04962	3,280.68	0.274	0.04962	0.04948	0.04975
MO	0.00130	7.03	19.446	0.00158	0.00124	0.00108
NA	34.28070	51,057.58	0.513	34.26584	34.46358	34.11269
NI	0.00051	21.09	137.751	-0.00011	0.00127	0.00037
P	0.00030	0.31	556.175	-0.00162	0.00126	0.00126
PB	0.00371	2.44	12.974	0.00390	0.00406	0.00316
S	5.48454	1,427.72	0.339	5.46313	5.49644	5.49405
SB	-0.00093	-5.76	80.163	-0.00019	-0.00169	-0.00092
SE	-0.00100	3.11	374.393	-0.00317	0.00333	-0.00317
SI	1.71473	450.95	0.991	1.70506	1.73436	1.70477
SN	0.00119	2.70	36.114	0.00167	0.00084	0.00107
SR	0.01147	9,794.29	0.367	0.01145	0.01144	0.01152
TI	0.00158	127.13	9.407	0.00156	0.00144	0.00173
TL	0.00024	0.63	531.333	0.00120	0.00072	-0.00120
V	-0.00031	-11.75	63.407	-0.00053	-0.00015	-0.00026
Y1	15654.72140	15,654.72	0.053	15663.73842	15647.18444	15653.24135
Y2A	455412.89538	455,412.90	0.344	454933.14532	457161.34705	454144.19376
Y2R	30111.66690	30,111.67	0.593	30216.63674	29905.36177	30213.00220
ZN	0.00314	45.41	1.368	0.00313	0.00319	0.00310
ZR	-0.00166	3.06	35.156	-0.00100	-0.00186	-0.00212

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/13/2013 00:27

Sample Number: **7265057** Class: R*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01027	159.81	5.126	0.00968	0.01069	0.01043
AL	0.50972	92.73	2.653	0.49418	0.51615	0.51883
AS	0.03012	12.19	3.000	0.03047	0.02910	0.03080
B	0.39544	3,731.76	0.816	0.39220	0.39548	0.39865
BA	0.40063	322,989.28	0.283	0.39990	0.40193	0.40004
BE	0.00966	5,196.97	0.872	0.00961	0.00962	0.00976
CA	2.51727	3,318.44	0.286	2.51563	2.51104	2.52514
CD	0.01011	107.77	1.488	0.01017	0.00994	0.01023
CO	0.09751	535.06	0.509	0.09806	0.09711	0.09734
CR	0.03845	439.93	2.079	0.03771	0.03834	0.03929
CU	0.04967	857.03	1.491	0.04935	0.04914	0.05052
FE	0.53434	225.87	0.689	0.53546	0.53733	0.53022
K	2.69340	1,004.49	1.693	2.64137	2.71245	2.72638
LI	0.19769	1,907.95	0.486	0.19864	0.19771	0.19672
MG	1.19350	3,205.94	0.342	1.19441	1.18904	1.19706
MN	0.15001	9,833.00	0.853	0.14914	0.14942	0.15148
MO	0.39203	1,422.43	0.145	0.39138	0.39227	0.39244
NA	38.14575	56,449.21	0.324	38.23704	38.00506	38.19515
NI	0.09967	308.58	0.927	0.09872	0.10057	0.09972
P	0.19891	102.46	0.294	0.19952	0.19884	0.19836
PB	0.03219	32.77	3.792	0.03237	0.03331	0.03089
S	5.93534	1,547.33	0.094	5.94000	5.92914	5.93687
SB	0.10163	58.54	0.808	0.10257	0.10120	0.10111
SE	0.02781	14.04	4.050	0.02828	0.02862	0.02652
SI	2.10415	548.80	0.864	2.12345	2.08733	2.10168
SN	0.77368	929.83	0.307	0.77128	0.77374	0.77602
SR	0.20833	177,319.49	0.504	0.20756	0.20790	0.20953
TI	0.20028	11,105.89	0.616	0.19940	0.19976	0.20169
TL	0.02933	17.57	5.364	0.02752	0.03039	0.03008
V	0.09560	1,762.89	0.789	0.09484	0.09560	0.09635
Y1	15679.52311	15,679.52	0.168	15704.37942	15651.98028	15682.20964
Y2A	452331.64123	452,331.64	0.400	453922.26277	452706.93431	450365.72661
Y2R	29924.79530	29,924.80	0.119	29883.96924	29950.49860	29939.91807
ZN	0.10236	947.94	0.114	0.10249	0.10226	0.10234
ZR	0.18915	611.51	1.353	0.19183	0.18673	0.18890

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/13/2013 00:31

Sample Number: **7265057** Class: M*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00977	149.73	2.598	0.00979	0.00951	0.01001
AL	0.51505	93.30	4.767	0.51170	0.54110	0.49235
AS	0.02979	11.95	12.149	0.03363	0.02643	0.02933
B	0.38330	3,577.22	0.251	0.38403	0.38365	0.38221
BA	0.39152	312,141.30	0.386	0.39244	0.39234	0.38977
BE	0.00934	4,966.18	0.328	0.00935	0.00937	0.00931
CA	2.41211	3,172.54	0.258	2.41885	2.40658	2.41090
CD	0.00961	101.64	2.220	0.00964	0.00939	0.00981
CO	0.09329	508.65	0.474	0.09353	0.09355	0.09278
CR	0.03691	417.54	1.214	0.03726	0.03706	0.03640
CU	0.04755	816.89	1.850	0.04856	0.04712	0.04696
FE	0.52563	221.44	0.913	0.52384	0.52198	0.53107
K	2.55677	955.69	1.804	2.59334	2.50495	2.57204
LI	0.18894	1,817.52	0.120	0.18881	0.18881	0.18920
MG	1.13934	3,049.49	0.296	1.14322	1.13758	1.13721
MN	0.14278	9,255.93	0.123	0.14293	0.14283	0.14259
MO	0.37688	1,358.78	0.093	0.37727	0.37674	0.37662
NA	36.66633	54,069.43	0.106	36.64285	36.64499	36.71116
NI	0.09639	297.14	0.079	0.09632	0.09637	0.09647
P	0.19094	97.73	0.673	0.19242	0.19033	0.19008
PB	0.03271	33.11	2.787	0.03166	0.03333	0.03313
S	5.66641	1,467.86	0.288	5.66809	5.68181	5.64934
SB	0.09754	55.62	1.886	0.09651	0.09966	0.09645
SE	0.02873	14.30	8.587	0.02951	0.02596	0.03070
SI	2.03371	528.69	0.492	2.04507	2.02623	2.02982
SN	0.74489	889.54	0.275	0.74422	0.74719	0.74326
SR	0.19935	167,786.93	0.282	0.19951	0.19980	0.19872
TI	0.19337	10,604.73	0.337	0.19408	0.19280	0.19322
TL	0.02796	16.66	2.574	0.02851	0.02823	0.02714
V	0.09187	1,675.13	0.321	0.09187	0.09216	0.09157
Y1	15579.09334	15,579.09	0.167	15549.14011	15594.79280	15593.34710
Y2A	447312.78478	447,312.78	0.346	446318.57996	446524.45255	449095.32183
Y2R	29817.19064	29,817.19	0.111	29842.07950	29829.74620	29779.74620
ZN	0.09824	904.63	0.369	0.09837	0.09852	0.09783
ZR	0.18390	592.61	0.372	0.18315	0.18450	0.18404

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/13/2013 00:35

Sample Number: **7265057** Class: UL** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00043	-23.28	39.179	-0.00061	-0.00028	-0.00040
AL	0.02216	6.69	66.286	0.03912	0.01354	0.01382
AS	-0.00033	-1.82	745.210	-0.00320	0.00112	0.00109
B	0.00557	58.10	5.463	0.00562	0.00585	0.00525
BA	0.00230	1,955.83	0.474	0.00230	0.00229	0.00231
BE	0.00000	-103.08	298.864	0.00000	0.00000	0.00000
CA	0.35522	553.47	1.043	0.35891	0.35150	0.35524
CD	0.00045	1.75	21.797	0.00046	0.00054	0.00035
CO	-0.00031	-1.76	99.767	0.00003	-0.00058	-0.00037
CR	-0.00021	-4.65	327.959	-0.00088	-0.00024	0.00049
CU	-0.00019	131.32	318.944	-0.00003	-0.00086	0.00032
FE	0.06628	30.87	4.510	0.06364	0.06953	0.06567
K	0.12885	153.40	32.034	0.08633	0.16876	0.13145
LI	-0.00055	7.71	394.660	-0.00279	-0.00036	0.00151
MG	0.16657	446.80	0.686	0.16533	0.16758	0.16679
MN	0.01063	712.95	0.323	0.01061	0.01060	0.01067
MO	0.00026	3.26	15.966	0.00024	0.00030	0.00022
NA	7.43734	11,097.60	0.237	7.41806	7.45254	7.44140
NI	-0.00032	18.73	95.197	-0.00016	-0.00012	-0.00067
P	-0.00025	0.03	96.342	0.00003	-0.00039	-0.00037
PB	0.00366	2.22	33.184	0.00233	0.00395	0.00470
S	1.16857	306.16	0.105	1.16904	1.16718	1.16950
SB	-0.00199	-6.44	144.615	-0.00072	0.00003	-0.00529
SE	0.00068	3.73	21.142	0.00073	0.00052	0.00079
SI	0.37261	101.32	0.795	0.37292	0.37540	0.36950
SN	0.00014	1.44	245.490	0.00032	-0.00025	0.00034
SR	0.00252	2,135.27	0.616	0.00252	0.00251	0.00254
TI	0.00016	48.28	66.736	0.00010	0.00028	0.00009
TL	0.00029	0.64	268.351	-0.00060	0.00085	0.00063
V	-0.00013	-8.08	355.850	0.00036	-0.00053	-0.00021
Y1	15661.86459	15,661.86	0.083	15673.97589	15663.50777	15648.11013
Y2A	457223.16965	457,223.17	0.389	457588.65295	458791.87127	455288.98474
Y2R	29915.82168	29,915.82	0.225	29849.71046	29913.38520	29984.36938
ZN	-0.00018	15.21	92.443	0.00001	-0.00026	-0.00029
ZR	-0.00130	4.19	124.722	-0.00264	0.00050	-0.00175

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/13/2013 00:39

Sample Number: **7263023** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00008	-14.39	472.861	-0.00014	0.00054	-0.00015
AL	0.44218	79.77	3.299	0.43287	0.45899	0.43467
AS	-0.00022	-1.82	602.245	0.00073	-0.00173	0.00034
B	0.01806	176.59	1.048	0.01789	0.01826	0.01802
BA	0.01184	9,583.75	0.813	0.01195	0.01178	0.01179
BE	0.00004	-80.55	5.576	0.00004	0.00004	0.00004
CA	5.97983	7,714.94	0.218	5.96607	5.99200	5.98142
CD	0.00059	4.05	10.248	0.00059	0.00065	0.00053
CO	0.00044	2.42	21.287	0.00036	0.00054	0.00041
CR	0.00073	6.17	68.210	0.00130	0.00050	0.00039
CU	0.00039	140.06	205.952	0.00010	0.00130	-0.00023
FE	0.52676	221.85	1.151	0.52616	0.52101	0.53309
K	0.86122	394.93	2.481	0.88586	0.84765	0.85016
LI	0.00158	28.77	76.848	0.00022	0.00256	0.00196
MG	1.35696	3,630.74	0.467	1.35106	1.36365	1.35617
MN	0.14569	9,510.60	1.092	0.14751	0.14498	0.14458
MO	0.00056	4.35	3.756	0.00055	0.00059	0.00055
NA	29.17053	43,027.52	0.074	29.15867	29.15731	29.19560
NI	0.00138	23.51	24.851	0.00102	0.00171	0.00139
P	0.00684	3.66	17.083	0.00809	0.00667	0.00577
PB	0.00376	2.60	33.553	0.00406	0.00484	0.00237
S	7.53964	1,958.20	0.193	7.55439	7.53923	7.52530
SB	-0.00133	-6.00	170.927	-0.00196	-0.00320	0.00119
SE	-0.00014	3.45	2175.926	0.00191	0.00118	-0.00349
SI	2.00690	521.64	0.637	2.02155	2.00108	1.99806
SN	0.09204	111.36	1.081	0.09149	0.09145	0.09319
SR	0.02803	23,728.97	0.795	0.02829	0.02789	0.02791
TI	0.01076	631.18	2.003	0.01052	0.01083	0.01093
TL	0.00003	0.55	3436.628	0.00119	-0.00015	-0.00094
V	0.00087	11.21	26.467	0.00113	0.00070	0.00078
Y1	15625.73361	15,625.73	0.184	15659.00766	15608.69061	15609.50256
Y2A	450495.15594	450,495.16	0.855	446049.17054	452565.12940	452871.16788
Y2R	29808.58691	29,808.59	0.143	29795.51614	29774.12316	29856.12143
ZN	0.04483	421.09	0.331	0.04473	0.04500	0.04475
ZR	-0.00059	6.43	349.053	-0.00293	0.00092	0.00024

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/13/2013 00:42

Sample Number: **7263026** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00076	-29.16	20.584	-0.00070	-0.00094	-0.00065
AL	1.12747	200.15	1.485	1.11363	1.14609	1.12268
AS	0.00262	-0.65	32.478	0.00325	0.00296	0.00165
B	0.02353	235.26	6.303	0.02524	0.02260	0.02275
BA	0.01469	11,986.10	2.240	0.01507	0.01454	0.01447
BE	0.00010	-46.38	28.376	0.00013	0.00008	0.00009
CA	2.31316	3,062.28	0.268	2.32012	2.30821	2.31115
CD	0.00038	3.61	43.813	0.00032	0.00024	0.00056
CO	0.00042	2.50	37.724	0.00024	0.00049	0.00054
CR	0.00397	43.75	5.179	0.00393	0.00420	0.00379
CU	0.00186	160.95	36.190	0.00148	0.00145	0.00263
FE	1.58595	664.92	0.291	1.58990	1.58708	1.58087
K	0.81655	382.25	6.221	0.75817	0.84088	0.85061
LI	0.00143	26.92	12.823	0.00159	0.00146	0.00123
MG	1.15971	3,120.11	0.255	1.15917	1.16290	1.15706
MN	0.08374	5,522.25	0.046	0.08375	0.08377	0.08370
MO	0.00093	5.71	31.074	0.00098	0.00120	0.00062
NA	19.51459	28,981.49	0.103	19.51988	19.49243	19.53147
NI	0.00142	23.64	51.470	0.00119	0.00083	0.00224
P	0.01892	9.86	5.981	0.02022	0.01834	0.01819
PB	0.00659	5.87	49.191	0.01002	0.00358	0.00615
S	2.73429	713.36	0.268	2.72583	2.73842	2.73862
SB	-0.00139	-6.05	71.731	-0.00044	-0.00130	-0.00242
SE	0.00231	4.38	34.116	0.00141	0.00260	0.00290
SI	2.66385	694.53	0.523	2.67920	2.65200	2.66035
SN	0.00096	2.43	102.674	0.00008	0.00078	0.00203
SR	0.02305	19,693.43	0.973	0.02330	0.02299	0.02286
TI	0.02294	1,313.34	0.158	0.02297	0.02293	0.02290
TL	0.00023	0.64	308.711	-0.00041	0.00100	0.00010
V	0.00247	42.90	2.502	0.00253	0.00246	0.00241
Y1	15663.96109	15,663.96	0.062	15671.56169	15652.96822	15667.35335
Y2A	454718.76797	454,718.77	0.496	452800.63039	454151.99071	457203.68281
Y2R	29971.95199	29,971.95	0.056	29963.05821	29991.18705	29961.61071
ZN	0.00569	69.69	0.548	0.00567	0.00568	0.00573
ZR	-0.00018	7.76	1305.771	0.00255	-0.00132	-0.00178

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/13/2013 00:46

Sample Number: **7263027** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-57.32	350.907	0.00025	0.00019	-0.00022
AL	83.41717	15,410.82	0.351	83.09942	83.47693	83.67518
AS	0.04909	16.66	4.038	0.04904	0.05109	0.04712
B	0.04767	1,663.40	2.891	0.04872	0.04611	0.04818
BA	0.59074	493,625.25	0.391	0.59221	0.58808	0.59194
BE	0.00875	4,878.42	0.101	0.00874	0.00875	0.00876
CA	13.80818	18,636.62	0.207	13.77703	13.83333	13.81418
CD	-0.00221	399.69	13.750	-0.00189	-0.00249	-0.00226
CO	0.08071	472.86	0.360	0.08062	0.08047	0.08103
CR	0.32129	3,827.61	0.348	0.32258	0.32055	0.32076
CU	0.11618	1,824.60	0.917	0.11718	0.11506	0.11629
FE	234.75973	98,915.05	0.284	233.99333	235.07280	235.21305
K	5.40435	1,999.56	1.163	5.34558	5.39689	5.47059
LI	0.10045	1,026.63	2.046	0.10276	0.09976	0.09883
MG	16.95118	47,545.99	0.206	16.91242	16.96125	16.97988
MN	2.27216	154,239.69	0.675	2.27035	2.25781	2.28831
MO	0.02083	81.45	0.449	0.02094	0.02076	0.02079
NA	11.83109	18,471.10	0.253	11.79659	11.84936	11.84732
NI	0.12300	376.30	0.529	0.12348	0.12327	0.12226
P	4.27232	2,298.43	0.133	4.26610	4.27363	4.27725
PB	0.06179	100.75	1.806	0.06303	0.06088	0.06145
S	1.14655	314.94	0.103	1.14691	1.14523	1.14751
SB	0.00316	-2.43	33.747	0.00205	0.00327	0.00417
SE	-0.00514	5.07	82.682	-0.00567	-0.00911	-0.00065
SI	13.10913	3,562.70	0.079	13.11285	13.11712	13.09741
SN	0.00932	13.05	4.068	0.00967	0.00937	0.00891
SR	0.14028	123,745.33	0.420	0.14018	0.13974	0.14091
TI	0.92412	52,971.81	0.355	0.92459	0.92063	0.92714
TL	-0.00895	-3.48	22.124	-0.01018	-0.01001	-0.00667
V	0.22396	4,571.59	0.402	0.22432	0.22294	0.22463
Y1	16418.40823	16,418.41	0.077	16406.32343	16417.47650	16431.42477
Y2A	468864.20040	468,864.20	0.446	468415.16257	471143.62973	467033.80889
Y2R	31424.95428	31,424.95	0.085	31443.80496	31394.28144	31436.77645
ZN	0.37838	3,828.67	0.054	0.37814	0.37845	0.37853
ZR	0.02921	106.58	3.939	0.02886	0.03050	0.02828

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 31 Date/Time: 11/13/2013 00:51

Sample Number: **7266685** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00083	-29.89	69.240	-0.00062	-0.00148	-0.00039
AL	0.01482	5.35	61.417	0.02493	0.01223	0.00729
AS	0.01040	2.60	19.388	0.01083	0.01218	0.00821
B	0.11861	1,119.24	0.193	0.11883	0.11838	0.11862
BA	0.05424	43,005.99	0.504	0.05399	0.05420	0.05453
BE	-0.00001	-104.76	126.792	-0.00002	-0.00001	0.00000
CA	13.81714	17,546.10	0.163	13.79746	13.84166	13.81229
CD	0.00040	7.50	18.280	0.00034	0.00048	0.00039
CO	-0.00053	-2.93	50.012	-0.00084	-0.00035	-0.00042
CR	0.00016	-0.28	191.300	0.00044	-0.00018	0.00023
CU	0.00068	144.49	68.174	0.00038	0.00044	0.00121
FE	3.68972	1,521.26	0.256	3.68417	3.70062	3.68437
K	2.65725	980.62	1.558	2.69644	2.61394	2.66136
LI	0.00571	68.73	10.955	0.00587	0.00623	0.00502
MG	3.94666	10,465.64	0.121	3.94188	3.95142	3.94667
MN	0.30539	19,645.29	0.528	0.30352	0.30633	0.30631
MO	0.00040	3.76	18.696	0.00048	0.00034	0.00039
NA	47.97282	70,113.14	0.196	48.03003	47.86458	48.02385
NI	-0.00047	17.95	134.363	-0.00116	-0.00032	0.00008
P	0.04853	24.88	0.499	0.04850	0.04879	0.04830
PB	0.00549	4.77	50.391	0.00256	0.00586	0.00806
S	0.08559	24.40	1.562	0.08512	0.08710	0.08455
SB	-0.00220	-6.53	37.399	-0.00257	-0.00125	-0.00276
SE	-0.00273	2.52	45.086	-0.00188	-0.00218	-0.00415
SI	3.88308	996.44	0.624	3.85785	3.88523	3.90617
SN	-0.00010	1.15	620.234	-0.00078	0.00025	0.00024
SR	0.10146	84,777.75	0.572	0.10085	0.10154	0.10200
TI	0.00289	195.14	4.424	0.00285	0.00279	0.00303
TL	-0.00132	-0.16	67.197	-0.00042	-0.00219	-0.00133
V	-0.00001	-4.42	3035.846	-0.00040	0.00003	0.00033
Y1	15555.32715	15,555.33	0.033	15552.67835	15552.02718	15561.27591
Y2A	444138.19951	444,138.20	0.372	445764.86397	444186.86131	442462.87326
Y2R	29567.06910	29,567.07	0.069	29588.85223	29548.59056	29563.76449
ZN	0.00089	27.98	11.536	0.00081	0.00101	0.00087
ZR	-0.00047	6.76	500.723	0.00211	-0.00106	-0.00245

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/13/2013 00:54

Sample Number: **7266686** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00032	-21.46	80.241	-0.00060	-0.00025	-0.00010
AL	0.01807	5.96	44.087	0.02005	0.00930	0.02485
AS	0.01059	2.71	3.473	0.01068	0.01019	0.01091
B	0.11837	1,118.80	0.442	0.11845	0.11885	0.11781
BA	0.05348	42,492.18	0.678	0.05389	0.05332	0.05322
BE	-0.00001	-107.00	93.301	0.00000	-0.00003	-0.00001
CA	13.93879	17,871.24	0.144	13.96204	13.92681	13.92752
CD	0.00038	7.06	33.768	0.00025	0.00038	0.00051
CO	-0.00041	-2.25	81.601	-0.00043	-0.00073	-0.00006
CR	0.00015	-0.42	229.605	-0.00001	0.00056	-0.00009
CU	-0.00006	134.36	882.681	-0.00038	0.00055	-0.00035
FE	3.55037	1,478.16	0.264	3.55530	3.55624	3.53958
K	2.64350	985.54	2.841	2.72538	2.57781	2.62732
LI	0.00523	64.81	31.326	0.00679	0.00352	0.00538
MG	3.97251	10,636.28	0.250	3.97804	3.97846	3.96104
MN	0.30766	19,834.70	0.568	0.30968	0.30673	0.30658
MO	0.00045	3.94	65.332	0.00012	0.00053	0.00069
NA	47.73990	70,449.75	0.140	47.77290	47.66289	47.78391
NI	-0.00037	18.30	26.789	-0.00034	-0.00028	-0.00047
P	0.03651	18.80	5.758	0.03803	0.03739	0.03411
PB	0.00527	4.53	34.689	0.00607	0.00318	0.00655
S	0.08618	24.61	4.183	0.09028	0.08349	0.08478
SB	-0.00121	-5.91	101.328	-0.00216	-0.00163	0.00017
SE	-0.00144	3.02	84.120	-0.00038	-0.00117	-0.00275
SI	3.86646	1,001.82	0.247	3.86731	3.85652	3.87557
SN	0.00065	2.05	138.795	0.00001	0.00169	0.00026
SR	0.10278	86,065.24	0.697	0.10360	0.10246	0.10228
TI	0.00276	188.33	5.563	0.00289	0.00279	0.00259
TL	-0.00042	0.35	333.791	-0.00190	0.00090	-0.00027
V	0.00010	-2.46	265.037	0.00009	0.00035	-0.00015
Y1	15592.39143	15,592.39	0.133	15574.04783	15614.78835	15588.33811
Y2A	445113.42623	445,113.43	0.657	442022.92634	445482.44857	447834.90378
Y2R	29853.80500	29,853.81	0.223	29792.33153	29924.59016	29844.49330
ZN	0.00096	28.55	10.607	0.00094	0.00108	0.00088
ZR	-0.00114	4.70	161.080	-0.00301	0.00066	-0.00107

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 33 Date/Time: 11/13/2013 00:58

Sample Number: **7265238** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 2.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00037	-21.63	177.382	-0.00109	-0.00018	0.00017
AL	0.06076	13.29	17.378	0.07034	0.04944	0.06251
AS	0.00046	-1.45	380.415	0.00210	-0.00139	0.00068
B	0.01822	173.69	2.395	0.01820	0.01866	0.01779
BA	0.01751	13,940.79	0.311	0.01753	0.01755	0.01745
BE	-0.00002	-112.64	15.601	-0.00002	-0.00002	-0.00003
CA	26.09701	33,066.86	0.132	26.13610	26.07120	26.08372
CD	0.00046	1.95	16.238	0.00038	0.00053	0.00046
CO	-0.00045	-2.43	44.533	-0.00067	-0.00030	-0.00037
CR	0.00049	3.38	49.752	0.00033	0.00037	0.00077
CU	0.00042	147.03	42.875	0.00022	0.00058	0.00047
FE	0.12248	53.70	1.962	0.12428	0.12340	0.11975
K	0.77930	365.26	5.235	0.80788	0.73258	0.79743
LI	0.00358	50.42	25.239	0.00287	0.00328	0.00460
MG	10.29428	27,263.73	0.133	10.30959	10.29013	10.28314
MN	0.04541	2,930.20	0.089	0.04540	0.04545	0.04537
MO	-0.00002	2.25	1959.973	0.00013	0.00019	-0.00036
NA	41.37004	60,543.54	0.102	41.41852	41.34485	41.34674
NI	0.00020	19.99	219.081	0.00038	-0.00029	0.00050
P	0.00770	4.06	15.492	0.00699	0.00908	0.00703
PB	0.00652	5.56	30.140	0.00706	0.00817	0.00434
S	3.96803	1,023.31	0.328	3.96733	3.95538	3.98139
SB	-0.00090	-5.68	196.048	-0.00191	0.00113	-0.00191
SE	-0.00006	3.42	5913.291	0.00293	-0.00441	0.00129
SI	3.54240	910.43	0.421	3.53236	3.55952	3.53533
SN	-0.00007	1.18	340.262	-0.00023	0.00021	-0.00021
SR	0.05975	49,934.25	0.044	0.05972	0.05975	0.05978
TI	0.00555	339.56	2.228	0.00560	0.00564	0.00541
TL	0.00003	0.50	3300.620	0.00069	0.00171	-0.00232
V	-0.00016	-8.42	256.809	0.00031	-0.00046	-0.00034
Y1	15499.18823	15,499.19	0.202	15477.13543	15534.98634	15485.44291
Y2A	444336.17562	444,336.18	0.211	443252.15660	444866.12475	444890.24552
Y2R	29598.60661	29,598.61	0.047	29591.20352	29614.81815	29589.79816
ZN	0.00070	23.02	19.268	0.00064	0.00086	0.00061
ZR	-0.00067	6.13	182.466	0.00068	-0.00100	-0.00169

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/13/2013 01:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51225	8,468.70	0.757	0.51654	0.51122	0.50900
AL	25.95635	4,508.84	0.201	26.00178	25.89927	25.96799
AS	0.50872	225.97	0.294	0.50717	0.51015	0.50885
B	0.49791	4,712.43	0.911	0.50275	0.49724	0.49375
BA	0.51095	402,689.66	0.869	0.51586	0.50980	0.50720
BE	0.49775	266,387.52	1.016	0.50274	0.49787	0.49263
CA	25.44614	32,313.02	0.133	25.48484	25.42229	25.43129
CD	0.50121	5,418.26	0.130	0.50188	0.50117	0.50058
CO	0.50159	2,706.04	0.069	0.50188	0.50168	0.50121
CR	0.49805	5,597.17	0.741	0.50160	0.49832	0.49423
CU	0.51255	7,416.97	1.001	0.51821	0.51124	0.50820
FE	25.71612	10,579.96	0.055	25.73040	25.71593	25.70203
K	25.28016	8,424.76	0.174	25.32259	25.23461	25.28328
LI	0.50860	4,847.89	0.262	0.50947	0.50926	0.50707
MG	25.23485	66,599.02	0.126	25.27137	25.21947	25.21372
MN	0.50167	32,126.02	0.786	0.50583	0.50118	0.49800
MO	0.51140	1,826.87	0.159	0.51187	0.51186	0.51046
NA	25.35525	37,229.17	0.180	25.38840	25.37412	25.30322
NI	0.50570	1,454.38	0.254	0.50683	0.50597	0.50430
P	0.51346	260.85	0.635	0.51621	0.51430	0.50986
PB	0.50214	532.74	0.856	0.50672	0.49820	0.50150
S	25.36862	6,506.37	0.087	25.39338	25.36125	25.35123
SB	0.52342	323.34	0.663	0.52735	0.52217	0.52076
SE	0.50881	193.65	0.364	0.50668	0.51008	0.50967
SI	25.80473	6,614.36	0.135	25.84170	25.77244	25.80005
SN	0.50269	595.48	0.155	0.50223	0.50359	0.50224
SR	0.50181	417,606.41	0.598	0.50528	0.50010	0.50005
TI	0.52194	28,239.18	0.786	0.52575	0.52248	0.51760
TL	0.49673	284.29	0.239	0.49797	0.49664	0.49560
V	0.50954	9,492.27	0.924	0.51468	0.50852	0.50543
Y1	15443.16712	15,443.17	0.176	15414.96670	15445.29169	15469.24296
Y2A	442225.51427	442,225.51	0.872	438284.20703	442399.33643	445992.99934
Y2R	29660.41893	29,660.42	0.124	29618.02639	29679.74405	29683.48633
ZN	0.50846	4,595.84	0.133	0.50922	0.50825	0.50792
ZR	0.50411	1,601.60	0.605	0.50639	0.50529	0.50065

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 35 Date/Time: 11/13/2013 01:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00058	-26.07	66.571	-0.00041	-0.00031	-0.00103
AL	0.00011	2.83	1611.652	0.00859	-0.01472	0.00646
AS	0.00023	-1.55	121.474	0.00003	0.00010	0.00054
B	0.00059	10.28	40.389	0.00033	0.00079	0.00063
BA	-0.00001	77.32	139.968	-0.00001	0.00000	-0.00001
BE	0.00003	-88.65	52.490	0.00002	0.00004	0.00002
CA	-0.00010	98.50	3544.911	0.00363	-0.00031	-0.00362
CD	0.00039	1.04	45.673	0.00047	0.00052	0.00019
CO	-0.00039	-2.22	6.071	-0.00038	-0.00038	-0.00042
CR	-0.00062	-9.45	22.724	-0.00046	-0.00074	-0.00066
CU	0.00012	136.38	527.392	0.00072	0.00021	-0.00056
FE	-0.00541	1.00	69.948	-0.00722	-0.00106	-0.00795
K	0.00114	110.26	4201.916	0.03144	0.02618	-0.05419
LI	0.00127	24.86	43.616	0.00069	0.00133	0.00179
MG	0.00504	12.68	101.858	0.01074	0.00358	0.00079
MN	-0.00003	7.90	190.719	-0.00007	-0.00004	0.00003
MO	0.00014	2.83	262.448	-0.00018	0.00053	0.00007
NA	-0.03103	71.53	22.359	-0.02869	-0.02556	-0.03883
NI	0.00004	19.75	461.518	-0.00002	0.00022	-0.00010
P	-0.00224	-0.99	49.988	-0.00287	-0.00095	-0.00289
PB	0.00312	1.60	59.999	0.00519	0.00154	0.00264
S	0.00037	2.41	354.340	0.00184	-0.00008	-0.00065
SB	-0.00174	-6.28	63.925	-0.00221	-0.00047	-0.00255
SE	0.00194	4.21	6.501	0.00180	0.00196	0.00205
SI	0.01078	7.80	76.376	0.02028	0.00569	0.00638
SN	-0.00067	0.47	27.739	-0.00073	-0.00046	-0.00082
SR	0.00000	-34.87	1283.284	0.00000	0.00002	-0.00001
TI	-0.00015	31.62	131.627	0.00007	-0.00030	-0.00020
TL	0.00072	0.88	91.272	0.00054	0.00145	0.00017
V	0.00013	-3.20	182.970	-0.00007	0.00038	0.00007
Y1	15664.44589	15,664.45	0.188	15646.58363	15698.47610	15648.27793
Y2A	459259.59965	459,259.60	0.185	458322.06370	459479.52887	459977.20637
Y2R	29716.25262	29,716.25	0.323	29732.06793	29613.38183	29803.30809
ZN	-0.00024	14.66	38.647	-0.00013	-0.00028	-0.00030
ZR	-0.00158	3.27	45.333	-0.00216	-0.00181	-0.00078

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 36 Date/Time: 11/13/2013 01:10

Sample Number: **7266807** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 2.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00057	-25.27	54.454	-0.00076	-0.00021	-0.00074
AL	0.29449	53.61	9.025	0.31251	0.30699	0.26396
AS	0.00080	-1.41	114.631	0.00136	0.00129	-0.00026
B	0.01406	139.98	5.086	0.01461	0.01325	0.01432
BA	0.02719	21,678.79	0.356	0.02725	0.02708	0.02723
BE	0.00002	-86.95	27.314	0.00003	0.00002	0.00002
CA	26.80342	33,909.56	0.237	26.87671	26.76555	26.76800
CD	0.00045	3.39	34.901	0.00045	0.00061	0.00030
CO	-0.00030	-1.54	58.974	-0.00021	-0.00018	-0.00050
CR	0.00093	8.43	7.154	0.00088	0.00101	0.00091
CU	0.00113	157.75	42.899	0.00062	0.00120	0.00158
FE	1.00756	417.78	0.383	1.00457	1.00619	1.01191
K	1.63240	644.35	1.802	1.60099	1.63690	1.65931
LI	0.00102	26.21	94.058	0.00164	0.00152	-0.00009
MG	11.51272	30,433.29	0.046	11.51637	11.50671	11.51507
MN	0.17686	11,424.86	0.224	0.17731	0.17661	0.17665
MO	0.00000	2.30	9722.503	-0.00004	-0.00019	0.00023
NA	40.99562	59,910.77	0.202	40.91047	41.00087	41.07552
NI	0.00037	20.40	69.074	0.00015	0.00030	0.00064
P	0.12112	61.59	1.670	0.12016	0.12344	0.11974
PB	0.00657	5.65	16.355	0.00608	0.00582	0.00780
S	2.15195	555.49	0.657	2.13668	2.16458	2.15460
SB	-0.00063	-5.51	40.470	-0.00068	-0.00087	-0.00036
SE	-0.00111	3.07	225.680	0.00037	-0.00399	0.00030
SI	3.13567	805.31	0.937	3.10811	3.16657	3.13232
SN	0.00056	1.92	84.109	0.00041	0.00019	0.00109
SR	0.07699	64,568.94	0.287	0.07709	0.07674	0.07714
TI	0.01410	806.60	0.881	0.01413	0.01397	0.01421
TL	0.00103	1.13	59.388	0.00161	0.00039	0.00109
V	0.00053	5.04	24.832	0.00046	0.00068	0.00045
Y1	15484.76225	15,484.76	0.179	15515.46393	15461.82169	15477.00113
Y2A	445844.89051	445,844.89	0.425	444675.87923	448031.61911	444827.17319
Y2R	29556.28508	29,556.29	0.148	29606.05547	29524.44045	29538.35931
ZN	0.00936	101.04	1.737	0.00928	0.00954	0.00924
ZR	-0.00059	6.37	209.232	0.00082	-0.00109	-0.00150

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 37

Date/Time: 11/13/2013 01:13

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00471	64.92	10.465	0.00451	0.00435	0.00527
AL	0.21233	39.75	0.738	0.21234	0.21076	0.21389
AS	0.01870	6.91	5.101	0.01786	0.01974	0.01852
B	0.04841	465.03	1.525	0.04756	0.04892	0.04874
BA	0.00545	4,503.58	0.520	0.00547	0.00542	0.00545
BE	0.00495	2,631.30	0.081	0.00496	0.00495	0.00496
CA	0.20876	364.52	1.745	0.20760	0.21284	0.20583
CD	0.00548	56.80	1.059	0.00541	0.00552	0.00551
CO	0.00443	24.30	3.141	0.00447	0.00455	0.00428
CR	0.01452	165.98	3.836	0.01509	0.01448	0.01398
CU	0.01008	281.10	0.431	0.01003	0.01009	0.01011
FE	0.21011	90.35	5.575	0.19943	0.20825	0.22263
K	0.47459	266.84	5.003	0.45946	0.50195	0.46235
LI	0.02164	219.23	7.977	0.01983	0.02182	0.02327
MG	0.10209	272.28	0.476	0.10215	0.10157	0.10253
MN	0.00519	351.60	0.872	0.00523	0.00519	0.00514
MO	0.01016	39.15	0.715	0.01013	0.01024	0.01011
NA	0.97531	1,550.49	0.204	0.97691	0.97308	0.97592
NI	0.01006	48.66	1.922	0.00988	0.01002	0.01026
P	0.09848	50.77	1.287	0.09888	0.09950	0.09706
PB	0.01849	17.99	9.393	0.02043	0.01797	0.01707
S	0.49879	132.18	0.871	0.50256	0.49975	0.49404
SB	0.01862	6.68	5.131	0.01752	0.01921	0.01913
SE	0.02134	11.57	13.779	0.02168	0.02409	0.01824
SI	0.06267	21.16	8.534	0.06201	0.05768	0.06832
SN	0.02036	25.72	3.431	0.02117	0.01998	0.01993
SR	0.00514	4,373.66	0.739	0.00518	0.00510	0.00515
TI	0.01012	603.03	0.632	0.01006	0.01018	0.01012
TL	0.02940	17.47	5.654	0.03000	0.02752	0.03068
V	0.00499	89.42	5.816	0.00516	0.00466	0.00516
Y1	15682.91299	15,682.91	0.073	15683.46731	15694.05240	15671.21925
Y2A	455672.51714	455,672.52	0.531	453001.12807	457722.46184	456293.96151
Y2R	29777.69218	29,777.69	0.185	29835.53340	29726.01634	29771.52681
ZN	0.02344	229.53	0.442	0.02332	0.02348	0.02352
ZR	0.04675	156.63	2.312	0.04563	0.04682	0.04779

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 38 Date/Time: 11/13/2013 01:17

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00033	-39.38	23.125	0.00038	0.00036	0.00024
AL	511.50514	87,383.13	0.370	512.20313	512.94764	509.36466
AS	0.00375	0.42	29.702	0.00491	0.00269	0.00365
B	0.00993	968.00	27.926	0.00677	0.01196	0.01105
BA	0.00045	390.12	5.994	0.00043	0.00044	0.00048
BE	-0.00038	-273.00	1.246	-0.00039	-0.00038	-0.00038
CA	504.76777	590,382.82	0.104	505.37400	504.43887	504.49044
CD	-0.00089	306.47	22.264	-0.00066	-0.00097	-0.00103
CO	0.00222	10.80	6.786	0.00220	0.00237	0.00208
CR	0.00147	13.08	66.955	0.00259	0.00112	0.00071
CU	0.00070	261.02	40.349	0.00045	0.00065	0.00101
FE	203.97442	77,252.28	0.392	204.19436	204.64044	203.08847
K	0.01715	109.27	242.069	0.02918	0.05133	-0.02905
LI	0.00103	89.51	163.329	-0.00039	0.00288	0.00059
MG	516.06471	1,052,189.77	0.879	515.21047	520.96634	512.01732
MN	0.00333	200.30	1.214	0.00330	0.00330	0.00337
MO	-0.00114	-1.60	43.473	-0.00129	-0.00154	-0.00058
NA	0.02439	144.56	39.401	0.01776	0.01999	0.03541
NI	0.00356	15.53	7.835	0.00383	0.00328	0.00357
P	0.01148	5.42	14.422	0.01057	0.01339	0.01048
PB	-0.00022	89.66	1441.138	-0.00336	0.00307	-0.00038
S	-0.00114	1.80	751.805	0.00544	0.00194	-0.01079
SB	-0.01838	-15.11	5.425	-0.01802	-0.01951	-0.01762
SE	0.00154	5.89	298.591	0.00679	-0.00177	-0.00040
SI	0.01528	8.47	82.420	0.01310	0.00391	0.02881
SN	0.00304	4.40	32.876	0.00396	0.00198	0.00316
SR	0.00245	1,803.32	1.158	0.00241	0.00245	0.00247
TI	0.00290	175.78	6.537	0.00279	0.00279	0.00312
TL	0.00371	2.33	101.782	0.00254	0.00793	0.00065
V	-0.00347	17.52	12.200	-0.00356	-0.00300	-0.00383
Y1	14027.60998	14,027.61	0.283	14001.31043	14008.19284	14073.32667
Y2A	398699.06684	398,699.07	0.951	402326.73956	399008.13492	394762.32604
Y2R	28105.24825	28,105.25	0.321	28017.07293	28101.26924	28197.40260
ZN	0.01487	300.38	1.151	0.01506	0.01483	0.01472
ZR	0.00488	22.45	27.256	0.00545	0.00336	0.00583

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 39

Date/Time: 11/13/2013 01:21

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22296	3,251.92	0.104	0.22282	0.22284	0.22323
AL	514.18879	87,368.13	0.276	512.58434	515.28493	514.69708
AS	0.10226	40.91	2.573	0.10321	0.10429	0.09929
B	0.01087	973.25	7.008	0.01126	0.01136	0.01000
BA	0.51212	360,264.87	0.174	0.51217	0.51297	0.51120
BE	0.51450	245,787.26	0.253	0.51300	0.51520	0.51530
CA	508.46009	591,242.87	0.545	505.61262	511.14682	508.62084
CD	0.96266	9,656.91	0.689	0.96714	0.96581	0.95504
CO	0.48842	2,378.33	0.825	0.49137	0.49005	0.48382
CR	0.49073	4,922.64	0.210	0.48966	0.49172	0.49082
CU	0.54666	7,182.69	0.089	0.54707	0.54679	0.54612
FE	205.64114	77,426.13	0.212	205.14355	205.82618	205.95369
K	-0.03088	93.82	95.828	0.00307	-0.05124	-0.04447
LI	0.00050	84.72	239.447	-0.00085	0.00142	0.00092
MG	517.46795	1,048,473.94	0.175	516.42623	517.92724	518.05038
MN	0.48948	27,979.59	0.345	0.48755	0.49022	0.49068
MO	-0.00136	-2.30	36.410	-0.00107	-0.00193	-0.00107
NA	0.02329	142.19	35.967	0.02011	0.03280	0.01698
NI	0.97276	2,500.56	0.794	0.97953	0.97440	0.96435
P	0.01060	6.19	15.523	0.00878	0.01101	0.01199
PB	0.04673	134.58	7.877	0.05011	0.04281	0.04728
S	-0.00095	1.85	850.583	-0.00741	-0.00351	0.00808
SB	0.62316	350.67	0.811	0.62698	0.62507	0.61743
SE	0.05286	23.27	9.855	0.05526	0.05644	0.04688
SI	0.01916	9.35	27.253	0.01930	0.02431	0.01387
SN	0.00293	4.27	46.595	0.00293	0.00156	0.00429
SR	0.00246	1,793.54	0.407	0.00246	0.00246	0.00244
TI	0.00327	198.61	4.086	0.00328	0.00314	0.00340
TL	0.10035	53.19	3.494	0.09926	0.09752	0.10427
V	0.51065	8,636.44	0.348	0.50872	0.51101	0.51221
Y1	13966.82363	13,966.82	0.554	13894.33067	13957.86138	14048.27885
Y2A	394718.03623	394,718.04	0.262	395762.55799	393691.55070	394700.00000
Y2R	27947.75980	27,947.76	0.416	28073.65902	27844.57542	27925.04496
ZN	1.05008	8,682.53	0.836	1.05589	1.05436	1.03997
ZR	0.00444	20.99	66.465	0.00135	0.00723	0.00474

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 40

Date/Time: 11/13/2013 01:25

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50790	8,381.47	0.887	0.50302	0.51190	0.50879
AL	25.94312	4,395.27	0.176	25.94867	25.98563	25.89507
AS	0.50548	224.90	0.154	0.50489	0.50637	0.50519
B	0.49118	4,641.98	0.545	0.48914	0.49421	0.49018
BA	0.50268	395,459.16	0.734	0.49842	0.50472	0.50489
BE	0.49450	264,174.40	0.434	0.49283	0.49692	0.49374
CA	25.41106	31,471.85	0.345	25.50446	25.33059	25.39814
CD	0.50258	5,442.53	0.084	0.50291	0.50272	0.50210
CO	0.49890	2,696.29	0.161	0.49857	0.49831	0.49982
CR	0.49595	5,563.42	0.688	0.49425	0.49988	0.49371
CU	0.50439	7,287.98	1.030	0.49907	0.50945	0.50465
FE	25.69348	10,309.68	0.220	25.74175	25.70739	25.63129
K	24.99332	8,124.70	0.464	25.10172	24.87125	25.00701
LI	0.50181	4,665.36	0.930	0.49885	0.50719	0.49939
MG	25.23191	64,946.98	0.296	25.31571	25.17234	25.20766
MN	0.50031	31,981.44	0.526	0.49733	0.50233	0.50126
MO	0.50674	1,813.43	0.082	0.50721	0.50652	0.50648
NA	25.12845	35,986.12	0.279	25.20069	25.12385	25.06080
NI	0.50399	1,452.05	0.060	0.50376	0.50433	0.50387
P	0.51032	259.72	0.459	0.50920	0.51301	0.50875
PB	0.49975	531.18	0.349	0.50163	0.49818	0.49945
S	25.19448	6,473.12	0.110	25.22363	25.16849	25.19132
SB	0.52266	323.44	0.280	0.52359	0.52098	0.52342
SE	0.50341	191.98	0.237	0.50206	0.50387	0.50431
SI	25.90551	6,476.24	0.124	25.92015	25.92770	25.86869
SN	0.49980	593.11	0.123	0.49987	0.50038	0.49915
SR	0.49616	412,156.78	0.458	0.49371	0.49820	0.49657
TI	0.52051	28,110.96	0.648	0.51672	0.52316	0.52165
TL	0.49588	284.30	0.291	0.49633	0.49427	0.49704
V	0.50653	9,419.49	0.466	0.50409	0.50880	0.50669
Y1	15470.41395	15,470.41	0.189	15439.08703	15497.17846	15474.97634
Y2A	441410.35169	441,410.35	0.257	441340.80956	440313.50365	442576.74187
Y2R	28928.17191	28,928.17	0.340	28814.58000	28980.14368	28989.79204
ZN	0.50881	4,606.86	0.090	0.50925	0.50884	0.50834
ZR	0.50132	1,553.44	0.600	0.50460	0.50065	0.49870

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 41 Date/Time: 11/13/2013 01:29

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00029	-20.93	197.626	-0.00061	-0.00064	0.00037
AL	0.02646	7.37	56.163	0.02148	0.04316	0.01473
AS	-0.00001	-1.66	5118.575	0.00121	-0.00141	0.00017
B	-0.00004	4.27	296.541	-0.00014	0.00010	-0.00009
BA	0.00003	104.18	52.007	0.00001	0.00004	0.00003
BE	0.00003	-84.70	23.219	0.00003	0.00004	0.00003
CA	0.00422	103.67	69.790	0.00166	0.00744	0.00356
CD	0.00069	4.24	56.199	0.00044	0.00113	0.00048
CO	-0.00014	-0.83	260.426	-0.00051	0.00021	-0.00012
CR	-0.00060	-9.20	71.033	-0.00012	-0.00077	-0.00092
CU	-0.00018	131.30	116.500	-0.00041	-0.00004	-0.00007
FE	-0.00015	3.16	2151.246	0.00285	-0.00372	0.00040
K	0.00086	109.83	2884.696	0.02843	-0.00675	-0.01912
LI	0.00234	34.90	32.629	0.00270	0.00146	0.00285
MG	0.01003	25.93	4.088	0.00956	0.01021	0.01033
MN	-0.00007	4.65	93.228	-0.00012	0.00001	-0.00011
MO	0.00032	3.50	29.637	0.00024	0.00043	0.00030
NA	-0.02725	76.85	25.555	-0.03223	-0.03022	-0.01929
NI	0.00004	19.77	1042.645	-0.00048	0.00041	0.00020
P	-0.00230	-1.03	15.855	-0.00221	-0.00198	-0.00270
PB	0.00387	2.40	52.080	0.00483	0.00523	0.00155
S	0.00221	2.89	547.052	-0.00806	0.01554	-0.00085
SB	-0.00145	-6.10	50.953	-0.00201	-0.00061	-0.00174
SE	-0.00131	2.98	148.686	0.00091	-0.00213	-0.00273
SI	0.01148	7.95	16.951	0.01359	0.00976	0.01107
SN	-0.00005	1.22	1076.444	-0.00061	0.00020	0.00027
SR	0.00001	-31.01	171.683	0.00001	0.00001	-0.00001
TI	-0.00006	35.93	182.233	0.00006	-0.00009	-0.00017
TL	0.00067	0.85	122.190	-0.00017	0.00146	0.00072
V	-0.00002	-5.98	2895.025	-0.00033	0.00054	-0.00025
Y1	15660.29120	15,660.29	0.206	15623.23320	15675.85104	15681.78935
Y2A	456854.88830	456,854.89	0.166	457420.93563	455993.29794	457150.43132
Y2R	29622.32873	29,622.33	0.222	29555.60440	29687.30032	29624.08147
ZN	-0.00001	16.69	4466.649	-0.00034	0.00058	-0.00027
ZR	-0.00125	4.31	107.992	-0.00280	-0.00058	-0.00037

ICP-MS Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

ICP-MS Run Data Report

1331901E05

Date File Name: 13K15A01.E05

Run Name: 1331901E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 6020

Reviewed By:	Reviewed Date
Deborah A Krady	11/15/2013 07:18

Verified By:	Verified Date
Deborah A Krady	11/18/2013 06:49
Nina C Haller	11/15/2013 10:20

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331901E05 Date/Time: 11/15/2013 2:11:30
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	8022.12000	0.000	1.94570	1.27756	-3.22326
MG	24	0.00000	16.67000	0.000	0.10367	-0.17674	0.07307
AL	27	0.00000	6.67000	0.000	-0.60501	-0.60501	1.21001
K	39	0.00000	1746.83000	0.000	0.18847	-2.22000	2.03153
CA	44	0.00000	6.67000	0.000	-4.08813	-4.08813	8.17626
SC-1	45	23903.20000	0.00000	0.000	23205.73000	23916.55000	24587.33000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	0.000	0.02278	-0.01139	-0.01139
CR	52	0.00000	243.35000	0.000	-0.13876	0.12518	0.01359
MN	55	0.00000	40.00000	0.000	-0.02836	0.03161	-0.00325
FE	57	0.00000	10.00000	0.000	0.01352	0.65511	-0.66863
CO	59	0.00000	30.00000	0.000	-0.00585	0.00602	-0.00017
NI	60	0.00000	23.33000	0.000	0.01607	0.01519	-0.03126
CU	63	0.00000	216.68000	0.000	0.00449	0.04137	-0.04585
ZN	66	0.00000	16.67000	0.000	-0.11512	0.23024	-0.11512
GE-1	72	9886.55000	0.00000	0.000	9432.95000	10043.36000	10183.34000
AS	75	0.00000	6.67000	0.000	0.06056	0.01429	-0.07485
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01543
MO	98	0.00000	30.00000	0.000	0.01644	-0.00014	-0.01630
AG	107	0.00000	43.33000	0.000	-0.01277	0.01418	-0.00141
CD	111	0.00000	1.33000	0.000	-0.00481	0.00962	-0.00481
IN-1	115	49602.46000	0.00000	0.000	49016.69000	49643.14000	50147.54000
SN	120	0.00000	1892.75000	0.000	-1.30296	-1.03099	2.33395
SB	121	0.00000	110.01000	0.000	0.00177	0.05975	-0.06152
BA	137	0.00000	10.00000	0.000	0.00056	-0.03695	0.03638
TB-1	159	267842.84000	0.00000	0.000	265946.97000	269299.53000	268282.01000
TL	203	0.00000	43.33000	0.000	0.00842	-0.00739	-0.00103
PB	208	0.00000	260.02000	0.000	0.00273	0.00127	-0.00400
BI-1	209	224786.42000	0.00000	0.000	226921.25000	222565.23000	224872.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:13:30
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24317.03000	0.00000	0.000	25448.75000	23706.10000	23796.23000
AL	27	10000.00000	108892.77000	3.600	9638.49150	10366.79212	9994.71639
CA	44	10000.00000	16134.39000	0.500	9989.88170	9960.48061	10049.63769
CR	52	1000.00000	793257.41000	3.200	965.55481	1029.97663	1004.46856
FE	57	10000.00000	153460.75000	4.000	9532.86042	10216.72730	10250.41229
K	39	10000.00000	263636.00000	2.500	9742.37893	10234.65326	10022.96781
MG	24	10000.00000	384508.39000	3.100	9646.11814	10155.72199	10198.15986
MN	55	1000.00000	323296.51000	3.000	965.51710	1015.46624	1019.01666
NA	23	10000.00000	816433.32000	3.600	9579.82507	10213.33795	10206.83698
TI	47	1000.00000	13332.16000	0.400	998.03580	1004.41868	997.54552
V	51	1000.00000	612839.58000	3.500	960.19232	1022.30212	1017.50557
IN-1	115	49032.99000	0.00000	0.000	48975.41000	48686.03000	49437.54000
AG	107	100.00000	256064.42000	2.300	101.65997	100.92012	97.41990
AS	75	1000.00000	88649.93000	1.700	1010.21805	1009.85278	979.92917
BA	137	1000.00000	266665.85000	1.800	1014.06862	1006.75992	979.17146
CD	111	100.00000	27368.27000	2.500	101.76719	101.08970	97.14312
CO	59	1000.00000	1643536.85000	0.900	1004.25124	1005.89852	989.85024
CU	63	1000.00000	1264171.07000	1.500	1011.90290	1004.45233	983.64477
MO	98	100.00000	122935.30000	2.100	101.45098	100.92294	97.62608
NI	60	1000.00000	427414.77000	2.000	1019.16509	1001.18527	979.64964
SB	121	100.00000	65841.51000	2.100	100.88270	101.54382	97.57348
SN	120	100.00000	85477.55000	0.400	100.48908	99.71985	99.79107
SR	88	100.00000	42231.82000	2.400	100.96132	101.72786	97.31082
ZN	66	1000.00000	142993.74000	2.600	1012.50464	1017.66455	969.83080
BI-1	209	230119.42000	0.00000	0.000	229828.92000	230378.92000	230150.41000
PB	208	100.00000	1024355.64000	1.100	101.28137	99.57518	99.14345
TL	203	100.00000	318322.19000	0.500	100.52844	99.54175	99.92981
GE-1	72	10213.34000	0.00000	0.000	10813.67000	9492.87000	10333.49000
TB-1	159	272294.64000	0.00000	0.000	273994.82000	268178.96000	274710.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:15:31
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24333.84000	0.00000	0.000	24707.69000	24327.09000	23966.75000
AL	27	1.86400	26.67000	125.600	-0.60501	2.14664	4.05003
CA	44	6.11400	16.67000	207.500	20.32117	2.10967	-4.08813
CR	52	-0.06300	196.68000	0.000	-0.08720	-0.00812	-0.09308
FE	57	4.33900	76.67000	47.700	2.53475	3.88627	6.59735
K	39	10.81300	2063.55000	118.300	24.60691	-0.65559	8.48696
MG	24	2.15500	100.00000	52.500	1.60513	3.45574	1.40472
MN	55	0.13100	83.33000	32.900	0.17869	0.12165	0.09400
NA	23	-6.65000	7631.89000	0.000	-6.98568	-6.87524	-6.08894
TI	47	1.00700	13.33000	86.600	0.00000	1.49944	1.52198
V	51	0.14000	93.34000	34.000	0.18116	0.15159	0.08786
IN-1	115	50456.74000	0.00000	0.000	51037.51000	49329.03000	51003.67000
AG	107	0.06700	220.01000	39.600	0.06212	0.09590	0.04340
AS	75	0.35000	38.67000	24.300	0.33697	0.44093	0.27217
BA	137	0.14400	50.00000	65.200	0.17921	0.03760	0.21540
CD	111	0.01900	6.67000	79.500	0.02327	0.03151	0.00221
CO	59	0.14300	273.34000	14.800	0.14566	0.12109	0.16331
CU	63	0.22700	516.69000	22.600	0.22562	0.17639	0.27912
MO	98	0.20500	290.01000	11.800	0.17897	0.22645	0.21040
NI	60	0.20400	113.34000	19.500	0.17063	0.24821	0.19330
SB	121	1.14900	886.73000	29.100	0.81357	1.48261	1.15060
SN	120	-0.88100	1156.75000	0.000	-1.16708	-0.99970	-0.47650
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01505
ZN	66	0.40700	76.67000	22.000	0.35518	0.51049	0.35549
BI-1	209	232567.35000	0.00000	0.000	234537.77000	229524.78000	233639.51000
PB	208	0.00900	360.02000	70.100	0.00180	0.01122	0.01345
TL	203	0.04600	193.34000	39.000	0.03236	0.03967	0.06657
GE-1	72	10019.87000	0.00000	0.000	10413.44000	9562.91000	10083.27000
TB-1	159	276709.07000	0.00000	0.000	276466.17000	276971.48000	276689.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:17:32
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24267.04000	0.00000	0.000	23816.50000	23946.58000	25038.04000
AL	27	3.04300	40.00000	78.000	0.33187	4.05395	4.74203
CA	44	-0.07400	6.67000	0.000	-4.08813	-4.08813	7.95549
CR	52	-0.21300	76.67000	0.000	-0.15603	-0.23365	-0.24923
FE	57	0.84600	23.33000	87.200	-0.00398	1.31449	1.22804
K	39	-5.29200	1633.48000	0.000	-5.45192	-2.30225	-8.12329
MG	24	1.38700	70.00000	22.000	1.68169	1.40627	1.07336
MN	55	0.07000	63.33000	90.500	0.00071	0.12558	0.08461
NA	23	-9.79500	7355.13000	0.000	-4.22783	-14.17000	-10.98682
TI	47	0.24300	3.33000	173.200	0.00000	0.00000	0.72843
V	51	0.07100	50.00000	42.500	0.08848	0.08794	0.03611
IN-1	115	50748.13000	0.00000	0.000	49042.37000	50548.88000	52653.14000
AG	107	0.01100	73.33000	40.200	0.01456	0.00605	0.01242
AS	75	0.06500	12.67000	109.300	0.12816	0.07834	-0.01182
BA	137	0.02400	16.67000	182.500	0.07553	-0.00057	-0.00203
CD	111	0.00400	2.67000	233.600	0.00249	-0.00481	0.01560
CO	59	0.03900	96.67000	61.300	0.05498	0.01149	0.04997
CU	63	0.14900	416.69000	24.500	0.17051	0.10665	0.16929
MO	98	0.05500	100.00000	39.500	0.04896	0.07835	0.03636
NI	60	-0.00900	20.00000	0.000	-0.05414	0.03664	-0.01056
SB	121	0.20500	253.35000	47.200	0.15376	0.14425	0.31603
SN	120	-1.25800	836.73000	0.000	-1.24365	-1.31929	-1.21064
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01433
ZN	66	0.49900	90.01000	61.600	0.65406	0.69897	0.14537
BI-1	209	228559.81000	0.00000	0.000	227817.69000	227395.35000	230466.40000
PB	208	-0.00400	220.01000	0.000	-0.00429	-0.00128	-0.00746
TL	203	0.01800	100.01000	30.200	0.02103	0.01155	0.02062
GE-1	72	10139.96000	0.00000	0.000	10373.43000	10113.21000	9933.25000
TB-1	159	276142.45000	0.00000	0.000	272873.18000	275129.04000	280425.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:19:32
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24393.93000	0.00000	0.000	24266.98000	24858.07000	24056.74000
AL	27	4975.93500	54383.95000	3.600	5033.83116	4776.29893	5117.67526
CA	44	4847.40500	7845.30000	4.900	5023.64805	4576.42395	4942.14417
CR	52	509.03100	405440.55000	1.800	510.12511	499.34710	517.62187
FE	57	4978.66100	76720.85000	1.800	5064.41099	4884.49908	4987.07314
K	39	5049.85800	134473.60000	2.900	5067.92147	4894.29537	5187.35665
MG	24	5005.99200	193226.58000	1.500	5024.05920	4921.08723	5072.83016
MN	55	505.69900	164108.21000	2.700	510.31474	490.09008	516.69350
NA	23	4949.41300	409812.12000	1.900	4952.11463	4856.27341	5039.85029
TI	47	494.73000	6614.84000	4.400	517.20347	474.07925	492.90644
V	51	510.66100	314185.03000	1.600	509.76364	502.93424	519.28629
IN-1	115	48371.31000	0.00000	0.000	48272.54000	48244.74000	48596.66000
AG	107	51.55400	130256.96000	2.000	51.72117	52.50277	50.43851
AS	75	527.62000	46150.63000	1.500	519.41880	528.52360	534.91902
BA	137	519.86600	136772.79000	0.700	522.21945	521.51147	515.86755
CD	111	51.61500	13937.01000	1.700	51.97326	52.26326	50.60806
CO	59	486.47200	788798.87000	0.500	483.75440	488.08633	487.57674
CU	63	524.49100	654228.42000	0.700	523.75593	528.61494	521.10241
MO	98	51.81400	62858.06000	0.200	51.79316	51.91400	51.73529
NI	60	529.73400	223387.68000	0.200	528.67861	529.39229	531.13147
SB	121	55.02700	35791.83000	2.100	55.30164	56.00034	53.77882
SN	120	51.51900	44331.87000	0.600	51.58803	51.81365	51.15583
SR	88	52.40100	21834.34000	1.600	52.72210	53.04191	51.43831
ZN	66	514.55000	72597.83000	2.300	524.98860	516.58516	502.07615
BI-1	209	227649.72000	0.00000	0.000	229139.90000	227002.30000	226806.95000
PB	208	51.98100	526891.73000	0.500	52.23641	51.94923	51.75646
TL	203	50.82400	160070.62000	1.000	50.89523	51.30335	50.27296
GE-1	72	10626.89000	0.00000	0.000	10553.54000	10703.58000	10623.55000
TB-1	159	270475.38000	0.00000	0.000	270485.86000	272501.50000	268438.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:21:32
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23809.66000	0.00000	0.000	23916.39000	23856.34000	23656.24000
AL	27	1.26200	20.00000	147.800	3.12686	1.26563	-0.60501
CA	44	-4.08800	0.00000	0.000	-4.08813	-4.08813	-4.08813
CR	52	-0.16900	110.01000	0.000	-0.16949	-0.13060	-0.20680
FE	57	1.33100	30.00000	132.700	-0.66863	1.98553	2.67713
K	39	-0.24700	1733.50000	0.000	0.49752	2.61455	-3.85218
MG	24	2.39500	106.67000	53.200	1.93705	1.41326	3.83338
MN	55	0.09500	70.00000	200.800	0.31450	-0.03101	0.00156
NA	23	-14.96400	6808.22000	0.000	-12.04926	-23.42129	-9.42001
TI	47	1.52500	20.00000	173.200	4.57556	0.00000	0.00000
V	51	0.14400	93.34000	56.600	0.23726	0.08832	0.10592
IN-1	115	49111.73000	0.00000	0.000	49102.61000	49674.13000	48558.46000
AG	107	0.04300	153.34000	27.100	0.03012	0.05272	0.04642
AS	75	0.23300	27.33000	52.900	0.35319	0.23692	0.10740
BA	137	0.13800	46.67000	68.600	0.22517	0.03708	0.15238
CD	111	0.00700	3.33000	151.000	-0.00481	0.01683	0.00995
CO	59	0.19700	353.35000	20.100	0.18857	0.16217	0.24003
CU	63	0.16600	426.69000	78.700	0.17799	0.29114	0.03009
MO	98	0.09800	150.01000	23.400	0.08949	0.08015	0.12363
NI	60	0.07900	56.67000	139.100	0.01595	0.01514	0.20576
SB	121	0.74100	596.70000	27.900	0.50277	0.84045	0.87892
SN	120	2.45500	3936.16000	121.400	3.76208	4.55852	-0.95610
SR	88	0.03200	16.67000	155.900	0.08686	0.01566	-0.00772
ZN	66	0.02500	20.00000	283.300	0.09438	-0.04609	0.02611
BI-1	209	223283.69000	0.00000	0.000	224171.34000	223315.02000	222364.72000
PB	208	0.02500	503.36000	34.800	0.01812	0.03439	0.02151
TL	203	0.03000	136.68000	16.100	0.03450	0.02497	0.03164
GE-1	72	9736.43000	0.00000	0.000	9592.99000	9833.17000	9783.13000
TB-1	159	268067.66000	0.00000	0.000	272804.37000	268013.79000	263384.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:23:32
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23082.16000	0.00000	0.000	22885.26000	23846.73000	22514.49000
AL	27	111.93900	1163.41000	5.500	118.35327	106.07242	111.39175
CA	44	187.92300	293.35000	14.100	213.33809	160.30691	190.12490
CR	52	2.00000	1743.49000	17.000	2.23356	2.15670	1.60856
FE	57	109.71700	1610.14000	13.000	93.40957	116.17206	119.57039
K	39	212.09000	6958.27000	4.600	205.58448	207.40656	223.27973
MG	24	99.89500	3663.88000	3.300	103.67552	97.35718	98.65137
MN	55	2.50800	806.72000	22.500	3.12629	2.01799	2.37849
NA	23	195.76300	22778.10000	6.100	209.49933	187.63893	190.15075
TI	47	15.51300	196.68000	28.800	10.36118	18.35646	17.82250
V	51	0.61100	363.35000	11.400	0.62958	0.67023	0.53449
IN-1	115	48067.40000	0.00000	0.000	47372.47000	49140.70000	47689.02000
AG	107	0.50200	1300.11000	9.800	0.54122	0.44710	0.51744
AS	75	2.00400	180.67000	0.700	2.00342	2.01868	1.98962
BA	137	2.33900	620.04000	15.500	2.40842	1.94623	2.66212
CD	111	0.53700	145.33000	10.300	0.48681	0.52745	0.59624
CO	59	0.59300	983.41000	18.300	0.71256	0.56483	0.50125
CU	63	2.14700	2873.71000	9.900	2.09887	2.38045	1.96179
MO	98	0.57500	723.38000	19.900	0.50630	0.70639	0.51113
NI	60	2.25100	966.73000	7.100	2.10126	2.42061	2.23128
SB	121	1.41900	1020.08000	9.800	1.47196	1.26122	1.52364
SN	120	0.69300	2390.27000	14.700	0.79647	0.59235	0.69032
SR	88	1.21800	506.70000	13.700	1.26679	1.03187	1.35571
ZN	66	16.19000	2283.58000	14.500	15.23161	14.47019	18.86963
BI-1	209	223870.08000	0.00000	0.000	222902.97000	225480.70000	223226.56000
PB	208	0.99100	10131.69000	2.400	1.00948	0.96476	0.99893
TL	203	0.51600	1640.16000	6.800	0.53758	0.53448	0.47523
GE-1	72	9903.19000	0.00000	0.000	10253.40000	9092.68000	10363.50000
TB-1	159	261949.60000	0.00000	0.000	263538.04000	261028.61000	261282.16000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:25:32
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23302.29000	0.00000	0.000	23155.46000	22824.86000	23926.56000
AL	27	9696.41600	101233.04000	2.200	9735.41816	9885.19101	9468.63997
CA	44	9009.88900	13935.89000	3.600	9252.64890	8646.20569	9130.81224
CR	52	-0.19200	90.00000	0.000	-0.19133	-0.20303	-0.18236
FE	57	9709.47400	142885.70000	2.300	9778.92292	9894.51331	9454.98557
K	39	9510.23200	240398.67000	2.400	9594.32800	9684.88411	9251.48501
MG	24	9568.80500	352769.64000	1.800	9669.57372	9663.25657	9373.58524
MN	55	0.05700	56.67000	138.100	-0.02815	0.07206	0.12579
NA	23	9494.13000	743608.89000	2.500	9575.95863	9677.09265	9229.33748
TI	47	202.16800	2580.29000	6.600	208.75169	210.97623	186.77718
V	51	0.01700	16.67000	56.000	0.02285	0.00598	0.02175
IN-1	115	47029.39000	0.00000	0.000	46859.32000	46026.77000	48202.07000
AG	107	-0.00200	36.67000	0.000	-0.00033	-0.01252	0.00716
AS	75	0.00200	6.67000	4010.100	-0.07485	-0.02678	0.10875
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00300	2.00000	276.700	0.01048	-0.00481	0.00262
CO	59	0.02200	63.34000	88.300	0.00745	0.01439	0.04388
CU	63	0.14400	380.02000	11.100	0.12840	0.14222	0.16034
MO	98	196.83500	232016.85000	2.600	201.45639	197.75920	191.28903
NI	60	0.00300	23.33000	506.600	0.01931	-0.00429	-0.00654
SB	121	0.11900	180.01000	121.800	0.28008	-0.00356	0.08196
SN	120	-0.92500	1040.63000	0.000	-1.58592	-0.42624	-0.76359
SR	88	0.05800	26.67000	51.400	0.04184	0.09318	0.04045
ZN	66	0.41700	73.34000	53.000	0.25076	0.33188	0.66746
BI-1	209	226144.62000	0.00000	0.000	225631.85000	226331.31000	226470.70000
PB	208	0.01700	433.35000	41.000	0.01086	0.02465	0.01569
TL	203	0.00200	50.00000	455.900	0.01175	0.00209	-0.00750
GE-1	72	9416.24000	0.00000	0.000	9883.21000	9472.99000	8892.52000
TB-1	159	261865.85000	0.00000	0.000	262194.82000	259258.10000	264144.62000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:27:32
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23212.41000	0.00000	0.000	22825.01000	23966.71000	22845.50000
AL	27	9618.38400	100040.68000	1.700	9603.31877	9465.81363	9786.01829
CA	44	8923.02400	13735.66000	3.900	9300.58527	8605.47954	8863.00605
CR	52	20.30500	15610.73000	3.700	21.13712	19.69336	20.08447
FE	57	9588.20300	140536.64000	2.800	9772.79494	9279.93142	9711.88227
K	39	9611.97600	242086.55000	1.000	9723.16180	9560.29917	9552.46670
MG	24	9585.35600	351967.90000	2.200	9721.75921	9343.63943	9690.66977
MN	55	19.27000	5974.57000	14.300	19.99951	16.21721	21.59436
NA	23	9495.12100	740751.71000	3.100	9792.22445	9212.85768	9480.28073
TI	47	187.37200	2386.95000	9.800	166.21970	197.88373	198.01218
V	51	-0.00600	3.33000	0.000	0.00598	-0.01139	-0.01139
IN-1	115	46209.32000	0.00000	0.000	48741.49000	44963.40000	44923.08000
AG	107	19.94900	48148.02000	3.000	19.50693	20.63492	19.70427
AS	75	19.04600	1593.42000	8.100	17.28805	19.70659	20.14297
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.96400	5142.14000	5.300	18.75046	20.41401	20.72760
CO	59	19.15100	29658.61000	3.600	18.37813	19.69805	19.37656
CU	63	20.67100	24791.45000	4.600	19.60563	21.01724	21.39034
MO	98	198.51200	229600.47000	5.200	186.52552	204.22823	204.78136
NI	60	19.33200	7802.01000	2.800	18.70911	19.57087	19.71632
SB	121	0.05300	133.34000	231.400	-0.05851	0.18274	0.03362
SN	120	-1.09200	883.61000	0.000	-1.49026	-1.19380	-0.59161
SR	88	0.08500	36.67000	64.500	0.06374	0.14721	0.04397
ZN	66	19.82300	2676.99000	14.100	17.12262	22.69000	19.65673
BI-1	209	221562.93000	0.00000	0.000	220215.99000	222513.86000	221958.94000
PB	208	0.01100	366.68000	67.300	0.01993	0.00734	0.00641
TL	203	-0.00200	36.67000	0.000	-0.00732	-0.00089	0.00240
GE-1	72	9556.28000	0.00000	0.000	8922.67000	9943.14000	9803.02000
TB-1	159	257628.15000	0.00000	0.000	257299.59000	261886.79000	253698.06000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:29:32
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	22521.38000	0.00000	0.000	23095.30000	22885.11000	21583.73000
AL	27	2616.59400	26389.93000	4.100	2532.57856	2579.27135	2737.93334
CA	44	2543.78400	3810.57000	7.700	2503.19269	2756.85163	2371.30844
CR	52	267.98700	197049.32000	3.400	262.13631	263.24576	278.57783
FE	57	2573.03000	36581.58000	4.000	2494.73212	2535.00883	2689.34762
K	39	2613.63300	65036.17000	2.400	2550.84093	2612.35374	2677.70505
MG	24	2581.58100	91954.75000	3.600	2478.01058	2605.14337	2661.58786
MN	55	267.45500	80108.34000	3.400	262.35741	261.99672	278.01173
NA	23	2555.87700	198923.70000	3.300	2492.84294	2522.12036	2652.66881
TI	47	264.46500	3250.46000	19.800	240.10105	228.75560	324.53709
V	51	271.27300	153961.44000	4.400	260.18833	269.79246	283.83798
IN-1	115	47410.95000	0.00000	0.000	46368.97000	48764.21000	47099.67000
AG	107	25.84900	64016.23000	2.100	26.47282	25.43143	25.64130
AS	75	262.47700	22495.55000	2.600	269.22248	255.63173	262.57596
BA	137	258.84600	66733.09000	1.900	263.74135	253.92987	258.86802
CD	111	25.78600	6824.71000	1.200	25.72371	25.51848	26.11609
CO	59	243.78700	387306.40000	2.300	249.05843	238.00062	244.30224
CU	63	263.02200	321558.35000	2.300	269.41008	257.51742	262.13787
MO	98	26.81600	31883.41000	6.000	28.56562	26.44013	25.44095
NI	60	266.90600	110297.09000	1.700	270.70915	261.90559	268.10247
SB	121	26.65700	17042.54000	2.700	27.40383	25.97300	26.59550
SN	120	25.04300	22048.33000	1.500	24.62901	25.13987	25.35904
SR	88	25.67900	10490.22000	0.400	25.64010	25.78569	25.61185
ZN	66	267.11600	36932.38000	3.100	276.38376	261.03967	263.92405
BI-1	209	223353.66000	0.00000	0.000	224305.56000	223249.14000	222506.27000
PB	208	26.10000	259682.57000	1.800	25.61436	26.55312	26.13298
TL	203	25.59800	79118.96000	1.700	25.31289	26.09946	25.38065
GE-1	72	9613.01000	0.00000	0.000	9572.98000	9372.94000	9893.10000
TB-1	159	261234.37000	0.00000	0.000	261091.32000	262686.73000	259925.05000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:31:32
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22447.99000	0.00000	0.000	22434.62000	22334.67000	22574.68000
AL	27	4.36000	50.00000	81.900	0.38958	5.38923	7.30234
CA	44	4.85900	13.33000	211.400	16.07370	-4.08813	2.59078
CR	52	-0.20600	76.67000	0.000	-0.24213	-0.13207	-0.24256
FE	57	2.85800	50.00000	42.800	4.27050	2.16636	2.13622
K	39	0.68200	1656.81000	778.700	5.42203	-5.05432	1.67763
MG	24	2.18400	93.34000	31.800	2.09412	1.53959	2.91845
MN	55	0.09800	66.67000	53.400	0.10900	0.14370	0.04095
NA	23	-16.36100	6314.70000	0.000	-12.88143	-15.44881	-20.75220
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07100	46.67000	13.900	0.07696	0.05961	0.07641
IN-1	115	45998.29000	0.00000	0.000	45859.90000	46131.73000	46003.24000
AG	107	0.01800	83.34000	135.800	0.04596	0.00823	-0.00003
AS	75	0.11000	15.33000	104.200	0.23873	0.06903	0.02134
BA	137	0.05600	23.33000	147.600	0.08333	0.12248	-0.03695
CD	111	0.01100	4.00000	72.600	0.01863	0.01072	0.00298
CO	59	0.08800	163.34000	30.200	0.11860	0.07252	0.07278
CU	63	0.15700	386.69000	68.300	0.27025	0.14151	0.05805
MO	98	0.15800	210.01000	47.000	0.14973	0.08817	0.23590
NI	60	0.02100	30.00000	319.400	-0.02912	-0.00440	0.09551
SB	121	0.29900	286.68000	40.700	0.37111	0.36795	0.15865
SN	120	-1.21300	793.39000	0.000	-1.23955	-1.25806	-1.14063
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.18300	40.00000	71.000	0.33350	0.10787	0.10849
BI-1	209	213061.92000	0.00000	0.000	216030.52000	216071.11000	207084.14000
PB	208	0.00600	303.34000	73.600	0.00522	0.00209	0.01091
TL	203	0.02700	120.01000	31.100	0.02293	0.03631	0.02103
GE-1	72	9259.41000	0.00000	0.000	8882.51000	9472.91000	9422.82000
TB-1	159	253861.50000	0.00000	0.000	255713.43000	251971.99000	253899.08000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:33:32
Tube Number: 12 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22481.42000	0.00000	0.000	22474.61000	22765.21000	22204.43000
AL	27	0.39200	10.00000	256.600	-0.60501	0.37514	1.40479
CA	44	2.61900	10.00000	3.200	2.62052	2.53488	2.70215
CR	52	-0.27900	23.33000	0.000	-0.26952	-0.29696	-0.26902
FE	57	0.74300	20.00000	96.600	0.03571	0.72206	1.47009
K	39	6.67700	1803.51000	99.400	13.13837	-0.12526	7.01834
MG	24	2.84500	116.67000	26.300	2.93313	2.05758	3.54366
MN	55	0.13100	76.67000	65.200	0.20891	0.03956	0.14528
NA	23	4.32300	7871.98000	83.700	8.50118	2.21815	2.25082
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	5497.500	0.02389	-0.01139	-0.01139
IN-1	115	46537.09000	0.00000	0.000	46724.28000	45753.75000	47133.25000
AG	107	0.01200	70.00000	154.200	0.00791	-0.00412	0.03208
AS	75	-0.02000	4.67000	0.000	0.01985	-0.05067	-0.02791
BA	137	2.75800	706.71000	15.700	2.28494	3.13796	2.84995
CD	111	-0.00200	0.67000	0.000	-0.00481	-0.00481	0.00279
CO	59	0.03300	80.00000	38.900	0.04583	0.03414	0.01996
CU	63	0.07500	293.35000	52.800	0.06285	0.04234	0.11844
MO	98	0.07900	120.00000	18.500	0.09528	0.07165	0.06885
NI	60	-0.03000	10.00000	0.000	-0.02959	-0.05414	-0.00546
SB	121	0.01000	110.00000	1132.700	0.13768	-0.08412	-0.02321
SN	120	6.25500	6728.59000	5.500	6.58843	6.27519	5.90257
SR	88	1.61200	650.05000	14.000	1.60751	1.38800	1.83982
ZN	66	0.59200	96.67000	79.400	0.61875	0.10971	1.04896
BI-1	209	221545.11000	0.00000	0.000	220675.21000	221784.84000	222175.27000
PB	208	-0.00100	243.34000	0.000	-0.00766	-0.00370	0.00739
TL	203	0.00500	56.67000	216.400	-0.00406	0.01546	0.00238
GE-1	72	9426.15000	0.00000	0.000	9442.83000	9332.73000	9502.90000
TB-1	159	254102.34000	0.00000	0.000	259358.73000	252380.17000	250568.12000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:35:33
Tube Number: 13 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23105.41000	22374.24000	23015.41000
AL	27	1966.23500	20131.70000	2.700	1998.64708	1905.23896	1994.82046
CA	44	3778.02800	5727.82000	1.100	3774.93364	3736.63806	3822.51216
CR	52	51.02200	38244.94000	1.900	50.95841	52.00231	50.10483
FE	57	1015.82000	14653.24000	4.700	983.57233	1070.26650	993.62081
K	39	9905.22400	245338.88000	0.600	9911.29187	9961.17721	9843.20282
MG	24	1981.29400	71585.40000	1.800	1950.88688	2021.78007	1971.21365
MN	55	50.32000	15317.10000	3.400	48.88864	52.23961	49.83279
NA	23	9776.49500	750207.12000	1.400	9692.04553	9935.15287	9702.28570
TI	47	258.70700	3237.10000	7.900	235.25826	268.22260	272.64024
V	51	50.52700	29090.98000	4.900	49.61438	53.31297	48.65304
IN-1	115	46365.85000	0.00000	0.000	46058.63000	46883.91000	46155.01000
AG	107	49.13600	118991.23000	2.300	49.53891	47.84501	50.02419
AS	75	10.03300	846.70000	11.500	10.99765	8.74978	10.35126
BA	137	48.72700	12298.41000	2.000	48.24644	49.86899	48.06510
CD	111	5.01700	1300.06000	4.700	4.99742	5.26095	4.79290
CO	59	233.54900	362991.54000	0.600	234.89031	232.12980	233.62724
CU	63	50.77400	60891.11000	3.100	52.30794	50.88533	49.12872
MO	98	48.92300	56890.41000	2.100	49.96372	48.88732	47.91708
NI	60	52.12000	21086.35000	3.500	54.02835	51.92464	50.40742
SB	121	5.41800	3470.51000	2.500	5.34105	5.33964	5.57202
SN	120	60.95200	49952.28000	1.400	61.84840	60.88685	60.12070
SR	88	41.50800	16578.45000	1.500	41.60474	40.84781	42.07169
ZN	66	50.42400	6831.57000	5.000	52.53203	47.65440	51.08460
BI-1	209	216388.39000	0.00000	0.000	215309.72000	216435.99000	217419.47000
PB	208	14.80200	142783.28000	1.700	15.03933	14.83882	14.52760
TL	203	1.86300	5617.89000	3.900	1.94428	1.80708	1.83877
GE-1	72	9466.23000	0.00000	0.000	9112.73000	9552.93000	9733.03000
TB-1	159	246982.99000	0.00000	0.000	246957.83000	247931.72000	246059.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:37:33
Tube Number: 14 Batch: 133116050004A
Sample Number: **7265230** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21760.35000	0.00000	0.000	22524.70000	21223.01000	21533.35000
AL	27	19.79100	200.01000	27.900	26.14249	16.21795	17.01172
CA	44	35136.81300	50681.90000	3.300	33866.99248	36158.86671	35384.57924
CR	52	-0.07000	170.01000	0.000	-0.17439	-0.09385	0.05956
FE	57	984.52100	13548.99000	3.000	1002.62427	950.69375	1000.24501
K	39	1983.48600	48057.50000	4.100	1890.23089	2038.82434	2021.40128
MG	24	14844.45300	510868.89000	2.900	14350.77088	15182.42689	15000.16056
MN	55	655.07200	189573.14000	3.100	637.63508	677.07694	650.50342
NA	23	73633.85700	5335204.51000	2.900	71380.58543	75623.99323	73896.99220
TI	47	0.27000	3.33000	173.200	0.80971	0.00000	0.00000
V	51	0.11700	70.00000	64.500	0.11181	0.19410	0.04384
IN-1	115	43133.51000	0.00000	0.000	42403.43000	44618.23000	42378.86000
AG	107	0.01300	66.67000	43.400	0.01945	0.00907	0.01043
AS	75	0.40000	36.67000	56.000	0.47299	0.14829	0.57772
BA	137	38.28800	8999.43000	5.400	36.31067	40.44350	38.11076
CD	111	0.00100	1.33000	1183.700	-0.00481	-0.00481	0.01210
CO	59	0.49000	733.38000	13.500	0.56597	0.45005	0.45366
CU	63	0.44600	683.38000	17.100	0.50738	0.36074	0.47115
MO	98	0.26000	306.68000	39.900	0.20154	0.19927	0.38053
NI	60	0.41000	173.34000	51.400	0.64929	0.25442	0.32487
SB	121	0.01900	106.67000	140.400	-0.00731	0.01825	0.04557
SN	120	-0.86300	1003.41000	0.000	-1.22843	-0.69954	-0.66049
SR	88	109.66800	40718.19000	3.800	113.31776	105.16075	110.52563
ZN	66	6.85800	876.72000	3.900	7.16327	6.64820	6.76285
BI-1	209	200673.84000	0.00000	0.000	201038.43000	200883.51000	200099.57000
PB	208	0.72500	6704.18000	5.700	0.75428	0.74257	0.67707
TL	203	0.00800	60.00000	186.700	0.00769	-0.00669	0.02225
GE-1	72	8619.14000	0.00000	0.000	8512.55000	8642.44000	8702.42000
TB-1	159	235528.46000	0.00000	0.000	237468.38000	234553.14000	234563.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:39:33
Tube Number: 15 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22050.85000	0.00000	0.000	22765.28000	21403.22000	21984.06000
AL	27	217.59100	2153.55000	12.800	191.52155	214.17328	247.07673
CA	44	34955.29300	51109.52000	2.600	34618.08206	35967.00323	34280.79382
CR	52	3.88700	3020.38000	10.200	3.64694	3.66969	4.34514
FE	57	1156.57100	16114.52000	2.900	1147.91358	1193.61418	1128.18459
K	39	2346.84600	57354.41000	2.100	2324.16484	2402.91297	2313.46057
MG	24	14534.94600	506891.46000	3.000	14050.62265	14911.86900	14642.34676
MN	55	621.75600	182334.45000	3.300	598.11409	630.41019	636.74427
NA	23	71473.10700	5247441.90000	3.400	69015.43748	73858.79587	71545.08830
TI	47	28.42700	343.35000	6.300	26.43965	28.97435	29.86807
V	51	1.21500	680.04000	15.700	1.08575	1.43341	1.12473
IN-1	115	43426.36000	0.00000	0.000	44646.45000	41819.25000	43813.39000
AG	107	1.05200	2426.96000	14.100	0.99571	0.94047	1.22042
AS	75	4.40900	352.67000	9.300	4.55859	3.94588	4.72243
BA	137	40.63800	9586.42000	11.000	39.22316	45.66017	37.02993
CD	111	0.93300	227.33000	7.600	0.86994	0.92051	1.00924
CO	59	1.39400	2046.88000	19.500	1.13809	1.68003	1.36436
CU	63	4.24800	4937.52000	9.600	3.78429	4.54333	4.41738
MO	98	1.14900	1276.77000	8.500	1.05695	1.13960	1.25052
NI	60	4.80500	1836.84000	7.500	4.39146	5.04868	4.97363
SB	121	2.26300	1413.46000	2.700	2.24024	2.33157	2.21791
SN	120	2.91600	3800.61000	14.000	2.79390	3.37155	2.58136
SR	88	107.09900	40053.49000	3.100	103.66087	107.24791	110.38770
ZN	66	38.00900	4824.21000	3.700	36.67989	39.49582	37.84979
BI-1	209	202665.95000	0.00000	0.000	204107.69000	201453.69000	202436.46000
PB	208	2.62000	23864.71000	2.200	2.62702	2.67312	2.56006
TL	203	1.03000	2927.06000	3.400	1.03477	1.06295	0.99343
GE-1	72	9222.74000	0.00000	0.000	8532.35000	9552.98000	9582.89000
TB-1	159	240469.64000	0.00000	0.000	240558.73000	238529.94000	242320.25000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:41:33
Tube Number: 16 Batch: 133116050004A
Sample Number: **7265233** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21476.83000	0.00000	0.000	22094.24000	21583.69000	20752.57000
AL	27	29.44500	290.02000	13.100	32.72408	30.41106	25.20093
CA	44	35330.11200	50330.92000	0.100	35300.62830	35357.98210	35331.72413
CR	52	-0.07800	163.34000	0.000	0.00855	-0.14006	-0.10371
FE	57	981.96000	13312.05000	8.300	888.07875	1020.66452	1037.13685
K	39	1972.61100	47208.73000	3.200	1911.11522	2038.96034	1967.75733
MG	24	14603.68400	496194.69000	1.800	14299.62641	14764.76412	14746.66251
MN	55	637.74000	182158.93000	2.700	619.27975	641.09695	652.84205
NA	23	73380.92700	5248140.65000	2.400	71518.22748	73569.23433	75055.31795
TI	47	0.56800	6.67000	86.700	0.82549	0.00000	0.87885
V	51	0.06800	43.33000	28.400	0.07832	0.08045	0.04592
IN-1	115	43723.54000	0.00000	0.000	43301.48000	44801.54000	43067.61000
AG	107	-0.00600	23.33000	0.000	-0.00784	-0.01241	0.00111
AS	75	0.41300	38.67000	28.800	0.30835	0.54244	0.38749
BA	137	37.66200	8966.16000	5.000	39.42296	37.85538	35.70747
CD	111	0.00100	1.33000	751.300	-0.00481	0.00319	0.00351
CO	59	0.48500	736.72000	6.400	0.51941	0.47478	0.45997
CU	63	0.21200	430.03000	14.200	0.20664	0.18539	0.24472
MO	98	0.18500	230.01000	29.400	0.12316	0.22507	0.20732
NI	60	0.30500	136.67000	13.400	0.26378	0.30437	0.34544
SB	121	-0.12000	26.67000	0.000	-0.09673	-0.14898	-0.11368
SN	120	-1.41600	603.40000	0.000	-1.34376	-1.33410	-1.57059
SR	88	104.23600	39241.46000	4.200	108.81555	100.18603	103.70619
ZN	66	2.51700	336.68000	29.100	1.78548	3.25267	2.51245
BI-1	209	199792.09000	0.00000	0.000	198865.47000	201831.60000	198679.20000
PB	208	0.70200	6470.82000	5.000	0.71082	0.73117	0.66287
TL	203	0.00300	46.67000	277.400	0.00793	-0.00672	0.00795
GE-1	72	8955.94000	0.00000	0.000	9262.81000	8922.60000	8682.42000
TB-1	159	237212.35000	0.00000	0.000	234819.47000	242689.02000	234128.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:43:33
Tube Number: 17 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21930.66000	0.00000	0.000	22053.98000	21383.33000	22354.66000
AL	27	2094.88000	20582.12000	4.400	2050.39484	2201.43349	2032.81241
CA	44	40728.28800	59213.86000	3.800	39938.71231	42499.95481	39746.19666
CR	52	52.87900	38067.65000	2.500	51.36963	53.69386	53.57251
FE	57	1992.77500	27612.01000	3.600	1911.51360	2044.87556	2021.93505
K	39	12476.63000	296384.53000	2.400	12134.74140	12721.32185	12573.82699
MG	24	17375.12100	602785.25000	2.700	17049.84982	17911.21627	17164.29557
MN	55	715.19900	208650.03000	2.400	699.94441	733.29866	712.35372
NA	23	85628.88700	6253954.70000	1.900	84248.61574	87377.72983	85260.31617
TI	47	257.88100	3100.40000	5.200	242.34095	265.29342	266.00911
V	51	52.90900	29261.36000	4.900	50.26988	55.48715	52.96930
IN-1	115	44690.35000	0.00000	0.000	43711.29000	44919.15000	45440.61000
AG	107	50.83400	118658.23000	2.200	50.91203	51.91163	49.67843
AS	75	10.89800	886.70000	6.800	10.52923	11.74643	10.41780
BA	137	89.86400	21851.55000	2.900	90.67160	86.92079	92.00085
CD	111	4.87600	1217.39000	10.300	5.14309	4.29468	5.19161
CO	59	241.83600	362303.57000	0.100	241.73125	241.77863	241.99914
CU	63	51.25300	59249.14000	0.700	50.87063	51.29031	51.59935
MO	98	52.03500	58329.25000	1.000	51.46741	52.24809	52.38859
NI	60	52.66200	20532.49000	1.600	53.30728	52.97130	51.70610
SB	121	6.86200	4207.36000	6.600	7.22410	7.00879	6.35177
SN	120	51.32600	40816.37000	1.400	50.62640	52.04496	51.30615
SR	88	152.40900	58659.04000	1.700	154.24906	153.57479	149.40297
ZN	66	56.49500	7378.48000	3.200	56.85073	54.55511	58.07981
BI-1	209	209080.61000	0.00000	0.000	207250.37000	208359.63000	211631.83000
PB	208	15.44400	143943.87000	0.700	15.33207	15.55263	15.44683
TL	203	1.96300	5717.97000	4.400	1.88432	2.05474	1.95096
GE-1	72	9182.78000	0.00000	0.000	8892.63000	9232.77000	9422.95000
TB-1	159	248948.97000	0.00000	0.000	244395.45000	251533.49000	250917.97000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:45:33
Tube Number: 18 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22931.94000	0.00000	0.000	22404.60000	22855.20000	23536.01000
AL	27	1977.39500	20328.59000	2.700	1939.54034	2039.10895	1953.53477
CA	44	38330.23400	58280.83000	2.400	39205.26185	38439.15960	37346.27964
CR	52	49.98600	37640.03000	2.900	51.30067	48.40267	50.25457
FE	57	1882.60000	27268.23000	5.700	1875.21179	1993.62299	1778.96623
K	39	11762.20900	292211.32000	2.200	11960.35216	11853.30532	11472.97097
MG	24	16295.12700	591178.22000	1.800	16510.25285	16410.11945	15965.00804
MN	55	670.40300	204518.33000	2.200	672.76515	683.56757	654.87691
NA	23	81325.35700	6210851.37000	1.700	82580.08410	81594.36299	79801.62379
TI	47	250.39100	3147.09000	2.400	254.01540	253.80097	243.35590
V	51	51.82100	29972.45000	2.100	52.69087	52.19089	50.57976
IN-1	115	45701.28000	0.00000	0.000	45330.78000	45680.92000	46092.15000
AG	107	49.07500	117154.56000	1.000	48.91767	49.64074	48.66616
AS	75	9.89600	824.03000	4.600	9.68673	9.58757	10.41348
BA	137	87.31700	21714.90000	2.100	85.27999	87.88933	88.78291
CD	111	4.83800	1235.39000	2.700	4.80106	4.98388	4.72945
CO	59	233.17100	357236.40000	0.900	230.70888	234.56570	234.23753
CU	63	51.70400	61121.91000	2.000	50.55685	51.92381	52.63283
MO	98	50.13600	57459.24000	2.000	51.04903	50.32463	49.03346
NI	60	49.98500	19935.17000	2.400	50.43730	48.64348	50.87496
SB	121	6.07700	3827.27000	12.300	5.21559	6.44812	6.56723
SN	120	49.24000	40111.65000	2.700	49.47778	47.83272	50.41025
SR	88	147.23200	57956.76000	0.900	148.09527	147.85190	145.74990
ZN	66	53.44900	7138.37000	3.300	53.22577	55.29574	51.82420
BI-1	209	213356.84000	0.00000	0.000	213817.38000	214043.96000	212209.18000
PB	208	14.81500	140910.08000	1.100	14.72289	14.71502	15.00709
TL	203	1.98500	5898.01000	3.500	2.00190	2.04371	1.90814
GE-1	72	9282.84000	0.00000	0.000	8832.65000	9432.81000	9583.07000
TB-1	159	251288.33000	0.00000	0.000	249830.99000	253430.41000	250603.59000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:47:33
Tube Number: 19 Batch: 133116050004A
Sample Number: **7265230** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22915.23000	0.00000	0.000	23675.99000	22614.92000	22454.78000
AL	27	6.27800	70.00000	56.000	2.22232	8.27493	8.33826
CA	44	7082.32600	10760.23000	6.700	6646.52507	7592.25328	7008.20053
CR	52	-0.21700	70.00000	0.000	-0.21983	-0.21558	-0.21491
FE	57	186.80600	2710.31000	9.100	170.51022	204.44393	185.46301
K	39	402.82600	11617.44000	2.200	396.07901	399.36561	413.03358
MG	24	2974.53200	107833.58000	2.300	2900.55931	2991.64193	3031.39476
MN	55	129.16400	39377.47000	5.200	121.47302	133.73995	132.27898
NA	23	14844.84100	1139433.00000	0.700	14810.64973	14757.82755	14966.04463
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02900	23.33000	68.300	0.03884	0.00614	0.04157
IN-1	115	46297.95000	0.00000	0.000	47168.24000	45534.24000	46191.37000
AG	107	0.00800	60.00000	92.400	0.00362	0.01696	0.00405
AS	75	0.09300	14.00000	53.500	0.08932	0.14380	0.04489
BA	137	7.48800	1893.53000	9.200	7.33121	8.24185	6.88983
CD	111	0.00500	2.67000	162.500	0.01038	0.01093	-0.00481
CO	59	0.20100	340.02000	1.900	0.19704	0.20475	0.20159
CU	63	0.06100	273.35000	176.500	-0.06271	0.12856	0.11592
MO	98	0.20300	263.35000	18.400	0.16182	0.21230	0.23485
NI	60	0.09500	60.00000	53.500	0.04315	0.09703	0.14455
SB	121	-0.04200	76.67000	0.000	-0.07075	-0.00181	-0.05260
SN	120	-1.10500	883.40000	0.000	-1.17983	-1.18098	-0.95461
SR	88	21.70300	8659.14000	6.400	22.64392	22.35961	20.10534
ZN	66	1.51400	220.01000	3.000	1.55698	1.46637	1.51811
BI-1	209	216132.14000	0.00000	0.000	213766.38000	217418.04000	217211.99000
PB	208	0.15100	1700.12000	4.100	0.15483	0.15386	0.14368
TL	203	-0.01300	3.33000	0.000	-0.01389	-0.01389	-0.01056
GE-1	72	9319.45000	0.00000	0.000	9332.79000	9122.69000	9502.88000
TB-1	159	252957.09000	0.00000	0.000	254069.47000	249723.06000	255078.73000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:49:33
Tube Number: 20 Batch: 133116050004A
Sample Number: **7266798** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22251.15000	0.00000	0.000	22434.74000	22184.36000	22134.34000
AL	27	2.39600	30.00000	82.800	4.36791	0.40080	2.41924
CA	44	2.66300	10.00000	252.400	9.35302	-4.08813	2.72365
CR	52	-0.23700	53.34000	0.000	-0.29676	-0.22755	-0.18582
FE	57	-0.19200	6.67000	0.000	-0.66863	-0.66863	0.76170
K	39	6.83000	1790.16000	92.300	14.10998	3.31888	3.06074
MG	24	2.59300	106.67000	62.700	1.24908	4.40182	2.12851
MN	55	0.08800	63.33000	133.000	0.20951	-0.02389	0.07822
NA	23	3.05900	7698.62000	255.000	6.95470	-5.92353	8.14675
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00700	10.00000	275.200	-0.01139	0.00648	0.02443
IN-1	115	45824.40000	0.00000	0.000	45897.44000	45512.22000	46063.53000
AG	107	-0.00100	36.67000	0.000	-0.00416	-0.01247	0.01242
AS	75	-0.05900	1.33000	0.000	-0.07485	-0.05054	-0.05083
BA	137	-0.01000	6.67000	0.000	-0.03695	0.04385	-0.03695
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00306	-0.00481
CO	59	0.01700	53.33000	21.500	0.01448	0.01476	0.02084
CU	63	0.23400	476.69000	42.300	0.27834	0.12018	0.30199
MO	98	0.05100	86.67000	55.000	0.07136	0.06340	0.01905
NI	60	-0.02900	10.00000	0.000	-0.00415	-0.05414	-0.02923
SB	121	-0.07300	56.67000	0.000	-0.06813	-0.10008	-0.05229
SN	120	-0.95700	990.28000	0.000	-0.56236	-1.09026	-1.21844
SR	88	0.00100	3.33000	2043.700	0.01758	-0.00772	-0.00772
ZN	66	0.06000	23.33000	74.400	0.03430	0.11090	0.03376
BI-1	209	219660.31000	0.00000	0.000	219294.92000	221000.09000	218685.93000
PB	208	0.02300	483.36000	51.900	0.02115	0.01265	0.03669
TL	203	-0.00500	26.67000	0.000	0.00260	-0.00734	-0.01058
GE-1	72	9262.82000	0.00000	0.000	9652.96000	8992.71000	9142.80000
TB-1	159	251165.55000	0.00000	0.000	249033.65000	254569.08000	249893.92000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:51:33
Tube Number: 21 Batch: 133116050004A
Sample Number: **7266799** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22491.33000	0.00000	0.000	23355.76000	22184.25000	21933.97000
AL	27	1.38100	20.00000	4.800	1.30572	1.40662	1.42958
CA	44	-1.82300	3.33000	0.000	-4.08813	2.70833	-4.08813
CR	52	-0.28800	16.67000	0.000	-0.29730	-0.26899	-0.29645
FE	57	0.72500	20.00000	90.500	1.36466	0.75848	0.05307
K	39	0.11700	1646.81000	3510.300	0.94457	3.73758	-4.33193
MG	24	2.50200	103.34000	76.300	0.64130	2.40758	4.45710
MN	55	-0.01400	33.33000	0.000	-0.02898	-0.09165	0.08008
NA	23	-6.68100	7048.27000	0.000	-10.94643	3.96992	-13.06604
TI	47	0.27400	3.33000	173.200	0.00000	0.82214	0.00000
V	51	0.01900	16.67000	148.200	-0.01139	0.02435	0.04283
IN-1	115	46673.65000	0.00000	0.000	46186.54000	46846.99000	46987.42000
AG	107	0.00400	50.00000	284.500	-0.00839	0.01193	0.00777
AS	75	-0.02800	4.00000	0.000	-0.05090	-0.00401	-0.02776
BA	137	-0.02400	3.33000	0.000	0.00286	-0.03695	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00300	33.33000	402.700	0.01428	-0.01165	0.00738
CU	63	0.07700	296.68000	84.600	0.09915	0.12848	0.00375
MO	98	0.01600	46.67000	175.900	0.03621	-0.01574	0.02669
NI	60	-0.01300	16.67000	0.000	0.02038	-0.00516	-0.05414
SB	121	-0.10200	40.00000	0.000	-0.13333	-0.10195	-0.07039
SN	120	-1.55000	536.71000	0.000	-1.47503	-1.59829	-1.57520
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.69200	110.01000	20.300	0.55306	0.69010	0.83365
BI-1	209	222016.39000	0.00000	0.000	224807.65000	220912.42000	220329.10000
PB	208	-0.00600	193.34000	0.000	-0.00600	-0.00463	-0.00865
TL	203	-0.00500	26.67000	0.000	-0.00745	-0.01061	0.00252
GE-1	72	9436.21000	0.00000	0.000	9352.81000	9753.13000	9202.70000
TB-1	159	253344.12000	0.00000	0.000	251921.40000	252645.60000	255465.35000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:53:33
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	23192.07000	0.00000	0.000	24076.65000	23255.46000	22244.11000
AL	27	2575.36900	26746.91000	4.200	2454.34903	2613.11305	2658.64423
CA	44	2523.85800	3887.26000	5.600	2407.24715	2680.45291	2483.87316
CR	52	265.15200	200790.46000	2.900	256.58368	267.09871	271.77291
FE	57	2586.08300	37857.49000	4.900	2441.09448	2655.62565	2661.52848
K	39	2566.33400	65778.91000	3.800	2538.09607	2485.97087	2674.93546
MG	24	2585.09200	94828.78000	3.300	2488.83896	2643.90635	2622.53103
MN	55	263.35000	81213.33000	3.800	253.60237	262.78854	273.66037
NA	23	2535.24200	203205.67000	4.200	2451.72008	2500.45018	2653.55698
TI	47	260.72000	3310.44000	5.700	248.49962	256.48795	277.17186
V	51	270.62300	158150.46000	4.300	258.30150	272.08379	281.48320
IN-1	115	47844.94000	0.00000	0.000	48262.39000	47609.29000	47663.13000
AG	107	25.57500	63935.99000	2.400	25.24235	26.28332	25.20061
AS	75	265.45500	22968.15000	0.800	263.10970	265.95293	267.30177
BA	137	256.92200	66856.20000	2.500	249.37661	261.09417	260.29647
CD	111	26.05100	6958.12000	2.500	25.61311	26.81529	25.72468
CO	59	243.11200	389901.20000	1.100	240.39075	245.46290	243.48197
CU	63	262.93500	324506.81000	0.500	261.50520	263.14523	264.15353
MO	98	25.93000	31125.23000	2.500	25.19170	26.41030	26.18790
NI	60	262.86600	109649.70000	1.500	260.61629	267.36436	260.61652
SB	121	26.82200	17309.43000	2.900	26.01241	26.88963	27.56357
SN	120	25.11700	22305.46000	5.700	24.20797	24.37329	26.77037
SR	88	25.40900	10470.23000	8.000	23.11738	26.06970	27.03976
ZN	66	262.11100	36588.68000	0.700	261.98122	260.44814	263.90328
BI-1	209	221908.83000	0.00000	0.000	221788.04000	222701.11000	221237.34000
PB	208	25.88000	255830.71000	0.900	25.98026	25.60918	26.05033
TL	203	25.62000	78676.43000	2.000	26.17980	25.48212	25.19769
GE-1	72	9636.40000	0.00000	0.000	9022.77000	9743.12000	10143.31000
TB-1	159	256863.67000	0.00000	0.000	260234.66000	259903.57000	250452.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:55:34
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.34000	0.00000	0.000	22574.70000	21923.98000	24577.34000
AL	27	2.88800	36.67000	61.500	1.37183	2.44826	4.84317
CA	44	2.65700	10.00000	251.400	9.26969	2.78901	-4.08813
CR	52	-0.21600	70.00000	0.000	-0.13397	-0.24054	-0.27302
FE	57	1.13200	26.67000	85.100	1.43501	0.05340	1.90767
K	39	0.49900	1686.83000	1629.300	5.37917	5.01105	-8.89223
MG	24	1.60400	73.33000	57.000	2.35831	1.86493	0.58751
MN	55	0.05200	53.34000	375.000	0.27406	-0.02268	-0.09495
NA	23	-11.89900	6788.23000	0.000	-8.23314	-3.97235	-23.49232
TI	47	0.49500	6.67000	173.200	0.00000	0.00000	1.48417
V	51	0.06900	46.67000	65.900	0.02373	0.11518	0.06926
IN-1	115	47146.78000	0.00000	0.000	48869.64000	44793.89000	47776.82000
AG	107	0.01600	80.00000	33.400	0.01467	0.02180	0.01138
AS	75	0.13200	18.00000	109.800	0.28733	-0.00076	0.11038
BA	137	0.01700	13.33000	372.100	-0.03695	0.08619	0.00154
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.06800	133.34000	61.800	0.03693	0.11519	0.05067
CU	63	0.07200	290.02000	173.600	0.03676	0.21143	-0.03159
MO	98	0.10800	156.68000	8.100	0.10636	0.10043	0.11770
NI	60	0.04300	40.00000	198.900	-0.03066	0.02269	0.13795
SB	121	0.27900	280.02000	24.300	0.20068	0.31728	0.31836
SN	120	-0.94000	1026.78000	0.000	-1.20411	-0.69235	-0.92308
SR	88	0.04100	20.00000	57.300	0.03980	0.01820	0.06518
ZN	66	0.03600	20.00000	559.100	-0.11512	0.26763	-0.04335
BI-1	209	218400.51000	0.00000	0.000	218217.59000	219588.47000	217395.47000
PB	208	0.00200	270.01000	354.500	-0.00333	0.00881	-0.00015
TL	203	0.00800	66.67000	92.800	0.01262	0.01245	-0.00058
GE-1	72	10019.90000	0.00000	0.000	9943.18000	9893.17000	10223.35000
TB-1	159	260067.29000	0.00000	0.000	258764.23000	260082.75000	261354.90000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:57:34
Tube Number: 24 Batch: 133116050004A
Sample Number: **7265223** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23405.96000	0.00000	0.000	23365.90000	23235.85000	23616.14000
AL	27	622.42400	6534.75000	2.700	639.34669	622.76520	605.15901
CA	44	3019.91000	4694.12000	1.900	3080.89532	3013.70272	2965.13287
CR	52	0.65100	733.39000	33.400	0.63376	0.87643	0.44211
FE	57	1114.39400	16491.48000	4.500	1093.96864	1078.27455	1170.93964
K	39	1113.61200	29792.03000	2.600	1106.46392	1145.06404	1089.30744
MG	24	907.16800	33618.32000	0.900	910.47951	898.13532	912.89017
MN	55	141.95200	44235.45000	3.000	140.68994	146.76464	138.40217
NA	23	1288.92700	108231.19000	0.500	1293.53772	1292.33790	1280.90391
TI	47	9.88000	126.67000	18.900	10.92861	10.98978	7.72288
V	51	4.05300	2400.27000	6.000	4.23065	3.77656	4.15211
IN-1	115	48329.42000	0.00000	0.000	48411.67000	48518.95000	48057.64000
AG	107	0.03300	126.67000	44.500	0.05057	0.02674	0.02317
AS	75	1.31300	121.33000	34.000	1.82171	1.13353	0.98400
BA	137	30.60100	8052.28000	3.800	30.92556	29.30227	31.57466
CD	111	0.09900	28.00000	20.400	0.09140	0.08380	0.12193
CO	59	0.58100	970.06000	10.200	0.64756	0.56000	0.53451
CU	63	4.64400	5997.91000	5.300	4.37449	4.86034	4.69862
MO	98	0.17100	236.68000	11.500	0.18176	0.14841	0.18328
NI	60	2.35100	1013.41000	6.400	2.24456	2.52328	2.28539
SB	121	0.21000	243.35000	73.700	0.37364	0.18796	0.06719
SN	120	-1.02900	983.67000	0.000	-1.33990	-1.25725	-0.49042
SR	88	18.42200	7671.99000	0.500	18.51124	18.32617	18.42993
ZN	66	23.35700	3308.78000	6.100	24.82053	23.28083	21.97093
BI-1	209	231848.94000	0.00000	0.000	231070.06000	232721.81000	231754.94000
PB	208	5.04100	52285.76000	0.200	5.03228	5.03891	5.05322
TL	203	0.03700	163.34000	13.300	0.04244	0.03272	0.03603
GE-1	72	9683.11000	0.00000	0.000	10003.34000	9913.23000	9132.75000
TB-1	159	261619.98000	0.00000	0.000	258760.07000	259300.43000	266799.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:59:34
Tube Number: 25 Batch: 133116050004A
Sample Number: **7265224** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.30000	0.00000	0.000	22644.72000	23756.37000	22674.80000
AL	27	457.26400	4720.80000	11.200	424.15150	431.52231	516.11760
CA	44	2786.32200	4260.68000	5.600	2952.67069	2763.48850	2642.80829
CR	52	0.51500	620.04000	10.100	0.51499	0.46347	0.56795
FE	57	961.20900	13985.85000	3.800	942.71843	937.25637	1003.65368
K	39	1482.09500	38418.14000	5.200	1518.75298	1392.83268	1534.69968
MG	24	802.35000	29230.51000	4.100	833.52875	767.33485	806.18584
MN	55	94.30400	28920.58000	1.300	95.51628	93.06903	94.32774
NA	23	1822.88400	147296.29000	3.500	1881.44481	1755.42745	1831.77987
TI	47	8.41100	106.67000	53.500	3.22167	10.74898	11.26170
V	51	1.78500	1043.41000	1.900	1.77443	1.75758	1.82449
IN-1	115	49162.94000	0.00000	0.000	48602.13000	49884.14000	49002.55000
AG	107	0.01400	80.00000	94.500	0.00302	0.02939	0.01068
AS	75	1.14900	108.67000	12.500	1.26802	0.98958	1.18932
BA	137	27.67000	7405.28000	4.700	28.64680	26.17595	28.18710
CD	111	0.02700	8.67000	78.300	0.00256	0.03828	0.03906
CO	59	0.56100	953.40000	6.300	0.58358	0.52026	0.57865
CU	63	1.97900	2723.66000	4.400	2.00955	2.04686	1.88087
MO	98	0.14100	203.34000	30.600	0.18916	0.12770	0.10601
NI	60	1.73500	766.71000	9.000	1.62181	1.67073	1.91250
SB	121	0.17300	223.34000	11.300	0.17200	0.19323	0.15402
SN	120	-1.20700	853.39000	0.000	-1.43991	-1.18966	-0.99153
SR	88	17.23700	7301.83000	3.700	17.84088	17.28920	16.58115
ZN	66	14.82800	2140.22000	12.200	15.97252	12.74022	15.77094
BI-1	209	231288.26000	0.00000	0.000	229288.26000	230659.31000	233917.22000
PB	208	2.89800	30092.35000	0.500	2.89269	2.91337	2.88683
TL	203	0.03000	140.01000	9.500	0.03026	0.02687	0.03248
GE-1	72	9699.72000	0.00000	0.000	10243.40000	9693.07000	9162.68000
TB-1	159	260944.53000	0.00000	0.000	261091.87000	261781.73000	259960.00000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:01:34
Tube Number: 26 Batch: 133116050004A
Sample Number: **7265228** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23632.71000	0.00000	0.000	24186.66000	22264.33000	24447.15000
AL	27	34.66900	376.69000	30.000	32.60836	25.45309	45.94607
CA	44	9114.61900	14282.86000	2.100	8976.48521	9338.40699	9028.96595
CR	52	-0.17100	106.67000	0.000	-0.19641	-0.11774	-0.19762
FE	57	182.25900	2727.02000	13.400	202.90209	188.47787	155.39800
K	39	605.26900	17115.31000	4.800	598.65416	636.99961	580.15293
MG	24	3732.25600	139433.82000	3.500	3695.89207	3876.38311	3624.49317
MN	55	9.24100	2937.04000	8.200	9.07438	10.07141	8.57671
NA	23	5263.94500	421133.33000	5.100	5176.82867	5564.11744	5050.88816
TI	47	0.49700	6.67000	173.200	0.00000	0.00000	1.49207
V	51	0.38400	233.34000	38.000	0.25087	0.54060	0.36159
IN-1	115	48505.38000	0.00000	0.000	49373.90000	47829.71000	48312.52000
AG	107	-0.01000	16.67000	0.000	-0.01280	-0.00867	-0.00875
AS	75	0.89100	84.67000	2.000	0.88856	0.87340	0.90972
BA	137	19.70800	5207.69000	3.300	19.40602	20.45656	19.26210
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.04300	100.01000	48.700	0.05449	0.05684	0.01903
CU	63	0.86600	1293.44000	10.100	0.76538	0.92533	0.90637
MO	98	0.17300	240.01000	32.700	0.20198	0.20929	0.10787
NI	60	0.30000	150.01000	26.600	0.38734	0.28167	0.23083
SB	121	0.21400	246.68000	16.600	0.24226	0.22424	0.17403
SN	120	-1.37400	703.38000	0.000	-1.32149	-1.24332	-1.55657
SR	88	28.97300	12101.34000	5.300	27.20854	29.81171	29.89873
ZN	66	3.11400	456.69000	11.200	3.21858	3.39798	2.72402
BI-1	209	225375.01000	0.00000	0.000	225244.22000	224756.99000	226123.82000
PB	208	0.99400	10225.12000	1.500	0.99973	1.00395	0.97685
TL	203	-0.00900	16.67000	0.000	-0.00426	-0.01067	-0.01069
GE-1	72	9886.43000	0.00000	0.000	9973.02000	10133.44000	9552.83000
TB-1	159	261558.07000	0.00000	0.000	263354.20000	262299.25000	259020.76000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:03:34
Tube Number: 27 Batch: 133116050004A
Sample Number: **7265235** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22521.35000	0.00000	0.000	22514.79000	22764.95000	22284.31000
AL	27	9.62700	103.34000	14.900	8.31442	11.15785	9.40897
CA	44	36028.73500	53816.91000	1.500	35956.98815	35521.78166	36607.43615
CR	52	-0.11100	146.68000	0.000	-0.11989	-0.13544	-0.07667
FE	57	1009.23000	14366.33000	1.800	1008.68627	991.33371	1027.66910
K	39	2000.03200	50180.23000	1.400	2032.44529	1983.21231	1984.43947
MG	24	15168.52200	540557.81000	1.300	15174.37312	14964.47763	15366.71414
MN	55	641.08600	192116.04000	0.600	639.09858	638.81748	645.34084
NA	23	75441.45500	5659764.29000	1.900	75267.04855	74136.13810	76921.17771
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.13500	83.34000	26.500	0.16469	0.14535	0.09535
IN-1	115	46287.86000	0.00000	0.000	46267.73000	46394.72000	46201.13000
AG	107	-0.00800	20.00000	0.000	-0.01254	0.00396	-0.01668
AS	75	0.37900	38.00000	54.700	0.23597	0.61661	0.28430
BA	137	38.41300	9679.92000	3.300	37.37063	39.84560	38.02135
CD	111	0.00600	2.67000	324.400	0.02616	-0.00481	-0.00481
CO	59	0.45300	730.04000	20.000	0.39467	0.40640	0.55671
CU	63	0.12400	350.02000	60.600	0.09867	0.06450	0.20822
MO	98	0.16300	216.68000	11.200	0.14819	0.15632	0.18300
NI	60	0.25100	123.34000	54.300	0.39219	0.24258	0.11967
SB	121	-0.02600	86.67000	0.000	-0.00441	-0.03702	-0.03648
SN	120	-1.29100	736.72000	0.000	-1.48906	-1.04865	-1.33564
SR	88	108.49100	43258.03000	1.200	107.49863	109.96508	108.00883
ZN	66	2.13200	303.35000	12.000	2.10838	2.39793	1.88885
BI-1	209	214246.21000	0.00000	0.000	213851.27000	215925.74000	212961.62000
PB	208	0.34700	3553.64000	9.000	0.33445	0.38199	0.32329
TL	203	-0.00500	26.67000	0.000	-0.01051	0.00286	-0.00710
GE-1	72	9683.08000	0.00000	0.000	9673.06000	9402.90000	9973.27000
TB-1	159	255273.73000	0.00000	0.000	254093.24000	256801.48000	254926.48000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:05:34
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265238** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23696.19000	22965.14000	21833.75000
AL	27	73.05000	753.38000	1.500	71.90578	73.24241	74.00318
CA	44	54035.28900	81736.93000	4.300	52250.49907	53189.06602	56666.30132
CR	52	0.55800	643.38000	34.200	0.40078	0.50347	0.77019
FE	57	258.90100	3743.88000	1.300	261.23765	255.09363	260.37029
K	39	1672.00800	42744.16000	5.300	1606.93322	1636.74297	1772.34653
MG	24	22203.29300	801371.99000	4.000	21294.97886	22266.79273	23048.10735
MN	55	99.37500	30192.85000	3.800	95.59332	99.46134	103.07012
NA	23	89388.17300	6790769.69000	3.900	86297.65183	88748.66623	93118.20051
TI	47	0.55700	6.67000	173.200	0.00000	0.00000	1.67067
V	51	0.56900	336.69000	27.700	0.67456	0.64464	0.38808
IN-1	115	45897.66000	0.00000	0.000	46349.62000	45208.00000	46135.37000
AG	107	0.00000	40.00000	0.000	0.00811	0.00026	-0.00838
AS	75	0.18100	21.33000	85.200	0.33089	0.02303	0.18890
BA	137	36.37600	9086.18000	4.800	35.79575	38.32865	35.00491
CD	111	0.01100	4.00000	143.400	0.02611	0.01104	-0.00481
CO	59	0.30900	503.36000	4.700	0.31670	0.29216	0.31825
CU	63	0.86900	1226.76000	20.100	0.83475	1.05749	0.71328
MO	98	0.11500	160.01000	14.800	0.13068	0.11694	0.09681
NI	60	0.38800	176.68000	17.400	0.39140	0.45340	0.31887
SB	121	-0.08900	46.67000	0.000	-0.14954	-0.03364	-0.08480
SN	120	-1.36700	670.04000	0.000	-1.36382	-1.18644	-1.55050
SR	88	130.97200	51763.85000	3.600	127.57626	136.28565	129.05305
ZN	66	4.48700	616.70000	21.200	4.24997	3.67756	5.53390
BI-1	209	212305.13000	0.00000	0.000	209399.06000	213684.94000	213831.40000
PB	208	1.88700	18074.96000	3.000	1.82130	1.91365	1.92494
TL	203	-0.00500	26.67000	0.000	-0.00353	-0.00374	-0.00712
GE-1	72	8929.28000	0.00000	0.000	8302.39000	9142.71000	9342.74000
TB-1	159	251229.14000	0.00000	0.000	251029.45000	251149.47000	251508.49000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:07:34
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265240** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22985.28000	0.00000	0.000	23395.87000	23485.96000	22074.00000
AL	27	27.31400	286.68000	14.500	26.10024	24.09767	31.74380
CA	44	54331.74700	82796.00000	2.400	54540.71052	52919.25513	55535.27569
CR	52	0.21400	393.35000	21.400	0.17416	0.26362	0.20318
FE	57	126.50200	1846.84000	8.600	115.71729	137.51567	126.27319
K	39	1800.66800	46242.64000	3.500	1747.71129	1783.52982	1870.76213
MG	24	22272.81500	809569.94000	3.100	21864.08564	21874.54609	23079.81257
MN	55	76.77400	23509.37000	2.800	74.33162	78.05144	77.93930
NA	23	90114.84400	6893409.69000	3.900	89373.64923	87075.19892	93895.68506
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.33400	200.01000	15.800	0.37835	0.27558	0.34781
IN-1	115	44386.04000	0.00000	0.000	45004.41000	44612.43000	43541.28000
AG	107	-0.00400	30.00000	0.000	0.00460	-0.00380	-0.01228
AS	75	0.28400	28.67000	59.400	0.12179	0.27230	0.45868
BA	137	38.53100	9309.64000	1.500	37.88918	39.00523	38.69835
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00322	-0.00481
CO	59	0.22600	363.35000	17.300	0.24715	0.24948	0.18069
CU	63	0.34900	593.37000	44.100	0.47686	0.17820	0.39169
MO	98	0.08700	123.34000	35.700	0.06439	0.07412	0.12235
NI	60	0.45200	196.68000	69.000	0.37923	0.79449	0.18299
SB	121	-0.09200	43.33000	0.000	-0.13249	-0.08204	-0.06285
SN	120	-1.40400	620.06000	0.000	-1.68994	-1.14619	-1.37568
SR	88	135.96700	51964.30000	3.400	131.69999	135.23269	140.96816
ZN	66	2.33500	316.68000	34.100	2.70414	1.42219	2.87763
BI-1	209	208998.34000	0.00000	0.000	210365.33000	206444.76000	210184.94000
PB	208	0.54400	5303.92000	1.200	0.55088	0.54442	0.53748
TL	203	-0.00700	20.00000	0.000	-0.01389	0.00012	-0.00701
GE-1	72	9483.01000	0.00000	0.000	9543.08000	9152.78000	9753.17000
TB-1	159	246797.33000	0.00000	0.000	244514.10000	246473.43000	249404.47000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:09:34
Tube Number: 30 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22541.30000	0.00000	0.000	21403.20000	22614.59000	23606.11000
AL	27	1294.86100	13061.75000	6.600	1393.80331	1246.02648	1244.75338
CA	44	24135.74700	36026.76000	5.600	25275.95706	24483.14614	22648.13777
CR	52	5.52500	4280.68000	9.600	6.13254	5.29948	5.14170
FE	57	21037.91900	299019.81000	5.900	22386.85363	20763.43831	19963.46590
K	39	3285.47100	81263.90000	7.100	3538.02355	3236.89196	3081.49750
MG	24	10008.96800	356500.11000	4.700	10441.61119	10085.25442	9500.03767
MN	55	1650.59200	494208.90000	5.100	1738.32099	1643.40155	1570.05274
NA	23	54596.50800	4094941.81000	5.500	57445.54722	54859.73987	51484.23762
TI	47	38.22900	470.03000	22.700	47.72225	30.64828	36.31606
V	51	5.54300	3160.41000	5.500	5.28651	5.87940	5.46402
IN-1	115	44151.75000	0.00000	0.000	44588.69000	42625.83000	45240.72000
AG	107	0.01700	76.67000	53.800	0.02627	0.01477	0.00872
AS	75	3.80500	310.01000	6.900	3.64665	3.66218	4.10650
BA	137	70.01700	16818.98000	1.000	69.44143	70.78472	69.82414
CD	111	0.74200	184.00000	2.300	0.72643	0.76010	0.73965
CO	59	12.07600	17876.13000	6.700	12.26609	12.77576	11.18475
CU	63	11.52700	13312.22000	5.500	10.82252	11.72026	12.03705
MO	98	2.28300	2550.31000	7.900	2.38265	2.39053	2.07457
NI	60	8.62300	3335.44000	9.200	9.14499	9.01673	7.70613
SB	121	0.44300	360.02000	27.500	0.30276	0.51683	0.51035
SN	120	-1.08400	860.06000	0.000	-1.00103	-1.23363	-1.01867
SR	88	98.71700	37514.73000	3.900	98.21173	102.76211	95.17668
ZN	66	68.70200	8852.57000	6.200	64.50089	73.02972	68.57491
BI-1	209	208380.44000	0.00000	0.000	204692.32000	211626.81000	208822.20000
PB	208	22.53000	209145.58000	1.300	22.84513	22.29755	22.44766
TL	203	0.08200	276.68000	16.000	0.08149	0.09545	0.06921
GE-1	72	9482.96000	0.00000	0.000	9372.90000	9482.85000	9593.13000
TB-1	159	247114.96000	0.00000	0.000	244492.67000	244632.36000	252219.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:11:37
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266807** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22181.14000	0.00000	0.000	22064.43000	22264.67000	22214.32000
AL	27	559.21300	5564.42000	5.000	575.93532	526.63916	575.06453
CA	44	59826.23000	88015.53000	1.800	60927.91134	59766.30240	58784.47696
CR	52	1.03000	970.07000	11.600	1.16163	0.92818	0.99998
FE	57	2330.58300	32664.00000	3.700	2412.21253	2340.65413	2238.88117
K	39	3916.45800	95227.51000	0.600	3891.52874	3925.04724	3932.79757
MG	24	27008.44300	948006.81000	1.000	27240.47548	26722.71622	27062.13797
MN	55	426.93700	126017.41000	2.100	437.16116	420.07389	423.57675
NA	23	96634.82800	7138598.64000	2.200	98633.89285	94345.24829	96925.34410
TI	47	16.45600	200.01000	23.400	20.66584	15.56498	13.13719
V	51	1.94300	1093.42000	9.300	2.07291	2.01859	1.73763
IN-1	115	44825.62000	0.00000	0.000	46115.98000	44280.10000	44080.79000
AG	107	0.00300	46.67000	323.900	-0.00838	0.01359	0.00504
AS	75	0.54600	50.00000	54.400	0.30895	0.44978	0.87876
BA	137	62.77800	15307.36000	3.400	61.07389	62.06996	65.18994
CD	111	0.10200	26.67000	11.500	0.08842	0.10847	0.10898
CO	59	0.54100	840.06000	12.700	0.53837	0.47384	0.61143
CU	63	3.82200	4610.81000	6.500	3.70880	4.10625	3.65017
MO	98	0.40200	476.69000	32.400	0.25256	0.46225	0.49160
NI	60	0.67200	283.34000	7.900	0.61754	0.72311	0.67458
SB	121	0.11900	170.01000	96.600	0.01228	0.10389	0.24048
SN	120	-0.53900	1279.08000	0.000	-1.44848	1.01655	-1.18651
SR	88	182.14400	70324.98000	0.400	181.55613	182.89684	181.97806
ZN	66	19.98700	2626.99000	2.700	19.51706	20.56350	19.87911
BI-1	209	203722.19000	0.00000	0.000	204533.14000	203803.41000	202830.02000
PB	208	4.97600	45350.77000	2.400	5.02091	4.83913	5.06878
TL	203	0.00400	50.00000	318.500	0.01086	-0.01034	0.01107
GE-1	72	8952.58000	0.00000	0.000	8982.60000	8752.45000	9122.68000
TB-1	159	243422.16000	0.00000	0.000	246637.52000	242192.38000	241436.58000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:13:37
Tube Number: 32 Batch: 133116050004A
Sample Number: **7265243** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22511.48000	0.00000	0.000	22755.16000	22174.36000	22604.91000
AL	27	21.19600	220.01000	15.800	19.00754	19.52124	25.06048
CA	44	50462.21200	75339.72000	1.800	49427.47173	51084.51446	50874.64891
CR	52	-0.20100	80.00000	0.000	-0.27002	-0.18606	-0.14776
FE	57	156.72500	2236.91000	8.700	154.47875	171.39282	144.30280
K	39	3199.71400	79228.82000	4.300	3100.99231	3357.13059	3141.01825
MG	24	21830.96900	777553.19000	2.400	21324.13279	22351.79592	21816.97829
MN	55	212.22000	63583.09000	3.600	203.47332	215.94742	217.23819
NA	23	91155.62900	6834706.98000	0.900	91395.86741	91840.18943	90230.83085
TI	47	1.35000	16.67000	124.200	0.00000	0.82250	3.22735
V	51	0.18200	110.00000	25.000	0.16283	0.14951	0.23415
IN-1	115	45255.74000	0.00000	0.000	45833.60000	44540.27000	45393.34000
AG	107	0.00000	40.00000	7556.700	0.00003	-0.01238	0.01285
AS	75	0.35000	34.67000	40.300	0.21478	0.49638	0.33943
BA	137	38.92700	9586.47000	4.300	37.52429	40.76204	38.49581
CD	111	0.00000	1.33000	2023.300	-0.00481	-0.00481	0.01097
CO	59	0.27200	440.02000	4.700	0.27490	0.28341	0.25802
CU	63	0.62800	930.06000	17.500	0.54981	0.57942	0.75336
MO	98	0.38500	463.36000	26.900	0.31521	0.50420	0.33607
NI	60	0.49700	216.68000	55.000	0.19616	0.56404	0.72935
SB	121	-0.07300	56.67000	0.000	-0.00288	-0.14889	-0.06704
SN	120	-0.09300	1646.67000	0.000	-1.32854	-1.06553	2.11614
SR	88	121.57700	47378.36000	4.500	120.78416	127.45320	116.49294
ZN	66	2.63100	363.36000	27.400	3.32653	1.88667	2.68006
BI-1	209	211369.41000	0.00000	0.000	215024.20000	212332.54000	206751.50000
PB	208	0.07900	993.39000	20.000	0.09315	0.08302	0.06205
TL	203	-0.00600	23.33000	0.000	-0.00380	-0.00367	-0.01039
GE-1	72	9472.87000	0.00000	0.000	9212.74000	9342.84000	9863.04000
TB-1	159	249814.98000	0.00000	0.000	254312.18000	248367.95000	246764.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:15:37
Tube Number: 33 Batch: 133116050004A
Sample Number: **7265247** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23422.42000	0.00000	0.000	22975.04000	23816.49000	23475.72000
AL	27	0.33200	10.00000	489.000	-0.60501	2.20564	-0.60501
CA	44	17.35200	33.33000	85.300	9.03693	8.57321	34.44727
CR	52	-0.24900	46.67000	0.000	-0.24374	-0.25896	-0.24516
FE	57	1.38400	30.00000	149.400	3.46533	-0.66863	1.35427
K	39	5.14800	1840.17000	145.400	11.78006	6.62870	-2.96508
MG	24	5.49800	220.01000	25.800	6.43555	6.19260	3.86624
MN	55	0.20700	103.34000	64.600	0.33252	0.22166	0.06658
NA	23	81.37700	14199.32000	13.600	93.03951	79.99846	71.09428
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00500	10.00000	311.700	-0.01139	0.00526	0.02238
IN-1	115	46363.09000	0.00000	0.000	44619.46000	45595.98000	48873.84000
AG	107	-0.01500	3.33000	0.000	-0.01668	-0.01248	-0.01668
AS	75	0.02900	8.67000	61.100	0.04911	0.02220	0.01569
BA	137	0.04500	20.00000	241.700	0.16909	0.00338	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00500	36.67000	463.600	-0.00465	-0.01148	0.03081
CU	63	0.02400	230.01000	218.800	0.03903	0.06859	-0.03469
MO	98	0.02100	53.33000	187.700	-0.02425	0.04574	0.04105
NI	60	-0.03800	6.67000	0.000	-0.02843	-0.05414	-0.03067
SB	121	-0.12700	23.33000	0.000	-0.13220	-0.08384	-0.16563
SN	120	-1.47400	593.37000	0.000	-1.46189	-1.50395	-1.45626
SR	88	0.05100	23.33000	104.900	0.09636	-0.00772	0.06355
ZN	66	0.45200	76.67000	9.800	0.49967	0.41130	0.44616
BI-1	209	219392.35000	0.00000	0.000	224290.80000	210964.61000	222921.64000
PB	208	-0.00900	166.67000	0.000	-0.01296	-0.00149	-0.01188
TL	203	-0.01100	10.00000	0.000	-0.01066	-0.01046	-0.01064
GE-1	72	9382.88000	0.00000	0.000	9382.90000	9032.73000	9733.02000
TB-1	159	253242.66000	0.00000	0.000	255489.35000	247433.84000	256804.78000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:17:37
Tube Number: 34
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23325.81000	0.00000	0.000	22654.95000	23195.61000	24126.87000
AL	27	2545.46500	26600.25000	3.200	2637.05865	2514.87464	2484.46299
CA	44	2637.12300	4077.32000	11.800	2991.28035	2505.33714	2414.75142
CR	52	264.13500	201166.53000	3.700	273.07511	265.60570	253.72451
FE	57	2594.51700	38234.85000	1.500	2590.15120	2635.07472	2558.32468
K	39	2577.68200	66451.86000	2.900	2651.12804	2580.10845	2501.81037
MG	24	2604.55300	96074.94000	4.000	2688.21163	2637.32562	2488.12324
MN	55	266.43300	82703.57000	1.000	269.26061	266.07036	263.96861
NA	23	2559.13300	206257.88000	4.400	2655.46095	2584.69571	2437.24257
TI	47	256.97500	3283.79000	4.100	264.09248	261.87142	244.96012
V	51	267.99200	157619.57000	2.700	270.06458	274.04566	259.86433
IN-1	115	47705.70000	0.00000	0.000	46396.80000	48185.88000	48534.41000
AG	107	26.45600	65933.20000	1.800	26.85861	26.57481	25.93601
AS	75	264.96600	22855.33000	1.400	268.60723	264.88412	261.40648
BA	137	259.42700	67301.82000	1.900	264.85471	254.90775	258.51798
CD	111	26.33700	7009.46000	5.100	27.82519	25.24460	25.94215
CO	59	245.86300	393056.94000	2.100	251.42124	244.75054	241.41720
CU	63	267.19200	328689.87000	2.200	274.03576	263.85587	263.68432
MO	98	26.65100	31883.67000	3.400	27.69595	26.21875	26.03893
NI	60	269.70900	112117.77000	3.500	280.51946	265.79359	262.81375
SB	121	27.18500	17492.95000	0.300	27.22591	27.24739	27.08147
SN	120	24.94500	22088.38000	4.700	26.24543	24.59117	23.99901
SR	88	25.72000	10566.91000	3.000	26.50082	25.70966	24.95018
ZN	66	265.31800	36922.36000	1.000	268.44002	263.96023	263.55404
BI-1	209	220273.01000	0.00000	0.000	220358.24000	221787.18000	218673.61000
PB	208	26.51200	260139.31000	0.900	26.63634	26.23120	26.66944
TL	203	26.09100	79530.66000	3.000	25.17947	26.47480	26.61964
GE-1	72	9532.97000	0.00000	0.000	10123.30000	9653.07000	8822.55000
TB-1	159	257498.71000	0.00000	0.000	259524.76000	253791.64000	259179.72000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:19:38
Tube Number: 35
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23335.81000	0.00000	0.000	23466.08000	23976.44000	22564.90000
AL	27	3.55300	43.33000	67.700	6.05109	1.25626	3.35038
CA	44	0.10400	6.67000	6971.200	-4.08813	8.48875	-4.08813
CR	52	-0.20600	80.00000	0.000	-0.08844	-0.27208	-0.25611
FE	57	1.37700	30.00000	53.100	0.68052	1.31202	2.13744
K	39	1.45700	1740.16000	249.700	-1.75197	0.71314	5.41095
MG	24	2.82000	120.01000	20.300	2.52154	2.45822	3.48000
MN	55	0.08800	66.67000	145.700	0.22685	0.06257	-0.02560
NA	23	-9.19400	7111.67000	0.000	-10.85721	-14.52976	-2.19553
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07800	53.33000	96.900	0.15755	0.07128	0.00618
IN-1	115	46884.59000	0.00000	0.000	46977.60000	46610.05000	47066.11000
AG	107	-0.00300	33.33000	0.000	0.01185	-0.01668	-0.00447
AS	75	0.11400	16.00000	143.300	0.30191	0.02009	0.01917
BA	137	0.17200	53.34000	102.400	0.35448	0.16029	0.00212
CD	111	0.02300	7.33000	155.300	0.06383	0.01056	-0.00481
CO	59	0.07500	146.68000	17.300	0.08995	0.06519	0.07073
CU	63	0.09200	316.68000	68.400	0.11114	0.02180	0.14358
MO	98	0.04700	83.33000	45.600	0.02670	0.04422	0.06898
NI	60	0.04400	40.00000	147.700	0.11680	0.01970	-0.00539
SB	121	0.23200	250.01000	56.600	0.08842	0.34646	0.26226
SN	120	-1.39900	660.04000	0.000	-1.38781	-1.46928	-1.33955
SR	88	0.00900	6.67000	323.600	-0.00772	0.04210	-0.00772
ZN	66	0.20200	43.33000	41.200	0.24984	0.10558	0.24915
BI-1	209	217643.36000	0.00000	0.000	216713.06000	218117.07000	218099.96000
PB	208	0.00600	310.01000	92.700	0.01238	0.00183	0.00389
TL	203	0.01000	73.33000	72.800	0.00613	0.01926	0.00600
GE-1	72	9983.17000	0.00000	0.000	10373.34000	9733.08000	9843.09000
TB-1	159	257895.51000	0.00000	0.000	258208.86000	259065.52000	256412.14000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:21:38
Tube Number: 36 Batch: 133116050004A
Sample Number: **7266810** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22861.84000	0.00000	0.000	23175.49000	22244.23000	23165.80000
AL	27	483.56000	4957.56000	5.100	456.80197	506.05349	487.82522
CA	44	20609.37600	31244.22000	3.700	19738.27045	21182.84635	20907.01166
CR	52	1.62600	1443.45000	7.400	1.50092	1.74208	1.63396
FE	57	29124.73200	420533.89000	1.700	28962.82583	29678.53390	28732.83761
K	39	2038.67400	51871.53000	3.600	2061.72215	2097.74727	1956.55327
MG	24	8504.71000	307636.86000	1.900	8556.65910	8633.04654	8324.42570
MN	55	2191.60700	666377.13000	2.400	2167.19060	2252.27247	2155.35682
NA	23	59133.78000	4503840.76000	2.700	57762.43963	60889.75762	58749.14274
TI	47	17.51500	220.01000	16.300	20.46285	14.75936	17.32142
V	51	2.17300	1260.10000	9.200	2.40069	2.09172	2.02517
IN-1	115	45755.83000	0.00000	0.000	47077.32000	43876.57000	46313.59000
AG	107	0.01400	73.33000	63.300	0.02400	0.00951	0.00813
AS	75	5.00200	420.68000	9.000	5.02427	4.53904	5.44275
BA	137	137.81200	34268.96000	4.700	130.85685	143.59718	138.98163
CD	111	0.16800	44.00000	12.600	0.16263	0.19117	0.14992
CO	59	2.63900	4080.63000	11.700	2.97989	2.55932	2.37859
CU	63	7.88400	9486.18000	8.600	7.92431	8.54143	7.18633
MO	98	0.33200	410.02000	15.200	0.37403	0.27579	0.34614
NI	60	2.08000	850.06000	6.500	2.06606	2.22070	1.95235
SB	121	0.12800	180.01000	5.300	0.13541	0.12337	0.12427
SN	120	-0.14800	1582.45000	0.000	-1.37713	2.16912	-1.23653
SR	88	119.11000	46900.31000	3.900	115.24241	124.31366	117.77325
ZN	66	46.78800	6248.04000	7.700	45.41849	50.85073	44.09480
BI-1	209	217179.85000	0.00000	0.000	216391.60000	219596.85000	215551.11000
PB	208	39.57000	382672.16000	1.100	39.73356	39.07008	39.90637
TL	203	0.01300	80.00000	53.400	0.01953	0.00587	0.01295
GE-1	72	9686.36000	0.00000	0.000	10153.22000	9733.05000	9172.80000
TB-1	159	256745.17000	0.00000	0.000	257163.77000	253040.70000	260031.03000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:23:38
Tube Number: 37 Batch: 133116050004A
Sample Number: **7266811** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23923.21000	0.00000	0.000	23586.01000	24026.75000	24156.88000
AL	27	184.71900	1986.86000	14.600	179.15700	213.94569	161.05371
CA	44	18810.00700	29848.75000	1.400	19113.06538	18655.65584	18661.29931
CR	52	0.47500	613.37000	19.200	0.46906	0.56953	0.38721
FE	57	12582.54300	190157.45000	0.800	12678.42532	12591.53341	12477.67103
K	39	2010.31600	53562.78000	2.600	2032.14082	2049.01528	1949.79126
MG	24	8061.85700	305180.31000	1.500	8199.95512	8016.14102	7969.47623
MN	55	1493.71600	475390.21000	1.700	1518.66674	1493.35217	1469.12954
NA	23	55833.55100	4451892.12000	0.700	56281.37826	55610.25189	55609.02243
TI	47	5.84300	76.67000	14.700	5.41292	6.83181	5.28501
V	51	0.87700	536.70000	13.000	0.76182	0.87963	0.98972
IN-1	115	47043.55000	0.00000	0.000	47838.17000	46336.73000	46955.75000
AG	107	-0.00100	40.00000	0.000	0.00734	-0.01668	0.00779
AS	75	2.09500	184.67000	10.200	2.30692	2.09762	1.88051
BA	137	98.78400	25276.48000	3.000	95.31760	100.51288	100.52076
CD	111	0.10700	29.33000	23.400	0.08507	0.13437	0.10202
CO	59	1.42800	2280.25000	7.500	1.37904	1.35348	1.55148
CU	63	3.66800	4657.48000	7.100	3.96661	3.56472	3.47415
MO	98	0.18300	243.35000	25.600	0.14253	0.23404	0.17115
NI	60	1.29000	550.04000	22.400	1.00110	1.57996	1.28968
SB	121	0.02400	120.01000	319.800	0.09944	-0.05296	0.02500
SN	120	-1.04000	947.18000	0.000	-1.28027	-0.64048	-1.20009
SR	88	111.70900	45246.06000	4.500	106.69442	116.68369	111.74885
ZN	66	22.90300	3157.06000	3.000	22.10802	23.19842	23.40204
BI-1	209	219487.68000	0.00000	0.000	218163.84000	220429.98000	219869.22000
PB	208	17.11500	167424.26000	1.300	17.36366	16.90726	17.07471
TL	203	0.00400	53.33000	226.400	0.01263	0.00251	-0.00402
GE-1	72	9973.19000	0.00000	0.000	9733.07000	9903.07000	10283.43000
TB-1	159	256981.53000	0.00000	0.000	258628.10000	254497.48000	257819.02000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:25:38
Tube Number: 38 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22818.51000	0.00000	0.000	23145.83000	23135.52000	22174.18000
AL	27	1280.88300	13088.54000	7.900	1242.50857	1204.46593	1395.67553
CA	44	25226.49300	38177.98000	3.800	24149.33356	26008.61386	25521.53138
CR	52	5.07500	4010.61000	5.300	5.34290	4.80219	5.07922
FE	57	21245.99300	306127.84000	3.200	21183.39695	20597.48758	21957.09399
K	39	4277.38200	106814.32000	1.300	4234.23885	4256.81355	4341.09485
MG	24	10294.79200	371613.50000	2.300	10128.58887	10184.62953	10571.15706
MN	55	1721.36300	522335.86000	3.200	1685.65885	1693.86760	1784.56367
NA	23	56362.62400	4285332.85000	2.000	55604.79030	55823.85417	57659.22694
TI	47	33.41400	416.69000	23.800	33.88554	25.22741	41.12793
V	51	5.57500	3213.76000	3.800	5.35021	5.60963	5.76397
IN-1	115	45587.72000	0.00000	0.000	46072.43000	44549.91000	46140.81000
AG	107	0.06200	186.68000	6.800	0.05814	0.06070	0.06633
AS	75	4.15100	348.68000	8.900	4.36716	3.72438	4.36058
BA	137	74.85500	18567.55000	6.500	79.59057	75.03802	69.93666
CD	111	0.77500	198.67000	4.600	0.78842	0.73511	0.80278
CO	59	11.30500	17298.92000	1.800	11.13168	11.52599	11.25749
CU	63	11.48700	13699.09000	3.700	11.93450	11.44199	11.08371
MO	98	2.18000	2516.95000	6.100	2.07996	2.33101	2.12872
NI	60	8.43700	3377.15000	8.600	8.21373	7.85232	9.24593
SB	121	0.43600	366.69000	24.200	0.35245	0.55432	0.40018
SN	120	-0.65300	1223.43000	0.000	-0.69675	-0.86834	-0.39397
SR	88	98.84500	38800.60000	3.200	98.60929	102.10997	95.81509
ZN	66	69.45500	9246.10000	3.700	66.66388	71.64194	70.06064
BI-1	209	215456.87000	0.00000	0.000	217928.18000	212981.27000	215461.15000
PB	208	21.62600	207595.66000	1.000	21.58099	21.86037	21.43571
TL	203	0.07100	253.35000	5.900	0.07570	0.06759	0.07001
GE-1	72	9646.35000	0.00000	0.000	9873.21000	9002.59000	10063.24000
TB-1	159	251762.65000	0.00000	0.000	253081.54000	251960.07000	250246.34000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:27:39
Tube Number: 39 Batch: 133116050004A
Sample Number: **7265248** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22524.83000	0.00000	0.000	23856.78000	21082.91000	22634.79000
AL	27	2.61200	33.34000	112.600	5.94302	1.51171	0.38079
CA	44	-1.98100	3.33000	0.000	2.23185	-4.08813	-4.08813
CR	52	-0.27000	30.00000	0.000	-0.27189	-0.29589	-0.24274
FE	57	11.18000	170.01000	40.000	15.92022	10.59454	7.02422
K	39	3.81200	1733.48000	151.000	-2.83449	7.03465	7.23496
MG	24	4.57100	176.68000	30.500	3.53256	6.15350	4.02627
MN	55	0.46100	176.68000	20.100	0.56765	0.40929	0.40583
NA	23	11.24400	8392.23000	41.500	7.96059	16.58150	9.18909
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00500	3.33000	0.000	-0.01139	0.00741	-0.01139
IN-1	115	47216.49000	0.00000	0.000	46158.14000	47338.84000	48152.50000
AG	107	-0.01000	16.67000	0.000	-0.01668	-0.00454	-0.00873
AS	75	-0.00400	6.00000	0.000	-0.00295	0.01862	-0.02890
BA	137	0.18400	56.67000	53.800	0.20206	0.27378	0.07761
CD	111	0.00000	1.33000	5768.300	-0.00481	-0.00481	0.01007
CO	59	0.00300	33.33000	132.600	0.00783	0.00089	0.00057
CU	63	0.18200	426.69000	25.800	0.21698	0.19913	0.12846
MO	98	0.01000	40.00000	7.500	0.01032	0.00946	0.00889
NI	60	0.05100	43.33000	69.700	0.04528	0.01856	0.08881
SB	121	-0.03500	83.34000	0.000	-0.11715	-0.03958	0.05124
SN	120	-1.43300	636.71000	0.000	-1.39837	-1.38181	-1.51782
SR	88	0.11500	50.00000	35.500	0.06774	0.13943	0.13695
ZN	66	1.92000	280.02000	33.100	2.33652	1.18878	2.23498
BI-1	209	221849.88000	0.00000	0.000	223085.41000	218587.11000	223877.11000
PB	208	0.01700	426.68000	27.100	0.02135	0.01822	0.01215
TL	203	-0.00800	16.67000	0.000	-0.00741	-0.01389	-0.00420
GE-1	72	9589.62000	0.00000	0.000	9182.82000	10023.12000	9562.91000
TB-1	159	251633.56000	0.00000	0.000	252560.50000	249361.30000	252978.88000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:29:40
Tube Number: 40
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21954.03000	0.00000	0.000	21543.66000	21513.36000	22805.06000
AL	27	90.17200	890.06000	17.900	106.08253	90.67302	73.76078
CA	44	215.60500	320.02000	13.200	184.87970	241.22010	220.71417
CR	52	1.87800	1566.80000	17.100	1.62391	2.23911	1.77220
FE	57	100.02200	1396.78000	9.700	89.71394	108.97583	101.37721
K	39	211.73900	6618.15000	5.100	210.10985	201.87049	223.23672
MG	24	108.32600	3773.88000	8.100	118.08044	105.90717	100.99136
MN	55	2.41500	743.38000	10.500	2.14247	2.46011	2.64326
NA	23	199.85900	21950.38000	7.000	213.88085	199.91989	185.77718
TI	47	19.76500	236.68000	27.900	25.39914	19.49965	14.39640
V	51	0.60600	340.02000	35.600	0.83512	0.57831	0.40583
IN-1	115	45812.42000	0.00000	0.000	44607.27000	46862.94000	45967.04000
AG	107	0.49900	1233.43000	5.900	0.51999	0.46555	0.51245
AS	75	2.00600	172.00000	13.900	2.23144	1.69554	2.09102
BA	137	1.85200	470.03000	9.400	1.94169	1.65024	1.96316
CD	111	0.47600	123.33000	14.800	0.39680	0.53038	0.50184
CO	59	0.54200	860.06000	5.300	0.55050	0.51039	0.56613
CU	63	2.04200	2610.30000	6.700	2.17858	2.04074	1.90656
MO	98	0.51100	616.70000	24.800	0.38713	0.63975	0.50515
NI	60	2.01400	826.72000	11.700	1.77190	2.02675	2.24205
SB	121	0.81100	600.04000	17.700	0.88782	0.90080	0.64574
SN	120	0.69500	2276.92000	41.300	1.02319	0.49143	0.56984
SR	88	1.00000	400.03000	41.600	0.72109	1.47884	0.80056
ZN	66	17.38800	2340.26000	7.000	16.95204	18.76519	16.44695
BI-1	209	215334.25000	0.00000	0.000	217134.12000	212562.91000	216305.72000
PB	208	1.07100	10505.16000	3.800	1.04840	1.11802	1.04522
TL	203	0.45300	1390.13000	22.300	0.55224	0.45554	0.35048
GE-1	72	9569.67000	0.00000	0.000	8862.57000	9983.20000	9863.23000
TB-1	159	250587.36000	0.00000	0.000	249576.68000	252153.80000	250031.60000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:31:41
Tube Number: 41
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22548.02000	0.00000	0.000	22234.09000	22354.71000	23055.26000
AL	27	9806.83100	99094.80000	1.100	9925.00685	9779.07669	9716.40903
CA	44	9550.51100	14292.88000	2.300	9344.35937	9523.46458	9783.70968
CR	52	-0.12900	133.34000	0.000	-0.13126	-0.07741	-0.17752
FE	57	9733.30900	138625.39000	1.600	9876.24197	9750.11953	9573.56631
K	39	9823.86300	240234.92000	3.400	10179.56626	9770.97235	9521.05020
MG	24	9688.15400	345591.69000	2.500	9904.38366	9733.49994	9426.57734
MN	55	0.00700	40.00000	909.200	-0.05792	0.00896	0.07008
NA	23	9677.05900	733363.27000	1.900	9814.25323	9751.96610	9464.95788
TI	47	196.28100	2423.58000	11.000	199.35253	216.22758	173.26231
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	45747.90000	0.00000	0.000	46075.99000	45482.76000	45684.95000
AG	107	-0.00600	26.67000	0.000	-0.00421	0.00437	-0.01668
AS	75	-0.07500	0.00000	0.000	-0.07485	-0.07485	-0.07485
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00600	2.67000	160.700	0.01074	0.01094	-0.00481
CO	59	-0.00700	16.67000	0.000	-0.01154	-0.00490	-0.00496
CU	63	0.01400	216.68000	71.400	0.00718	0.00949	0.02567
MO	98	197.55400	226584.05000	0.500	197.43238	198.51305	196.71625
NI	60	0.01200	26.67000	502.900	0.07035	-0.05414	0.02119
SB	121	-0.11700	30.00000	0.000	-0.10088	-0.08364	-0.16563
SN	120	-1.52000	550.04000	0.000	-1.39689	-1.60530	-1.55669
SR	88	0.04300	20.00000	118.300	0.04268	-0.00772	0.09394
ZN	66	0.33400	60.00000	44.200	0.48031	0.33722	0.18511
BI-1	209	216591.06000	0.00000	0.000	216958.90000	219484.59000	213329.70000
PB	208	0.00900	340.02000	63.300	0.00612	0.01599	0.00561
TL	203	-0.00700	20.00000	0.000	-0.00389	-0.00730	-0.01050
GE-1	72	9166.03000	0.00000	0.000	9502.84000	9192.71000	8802.54000
TB-1	159	249449.51000	0.00000	0.000	250730.48000	250340.25000	247277.79000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:33:41
Tube Number: 42
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22141.12000	0.00000	0.000	22244.52000	22204.36000	21974.49000
AL	27	10019.56300	99430.37000	1.300	9928.43683	10170.67823	9959.57373
CA	44	9713.35100	14269.41000	2.400	9455.22318	9900.56235	9784.26676
CR	52	21.32800	15637.32000	0.900	21.55882	21.19807	21.22764
FE	57	10129.22500	141685.49000	1.300	10210.83840	9977.01846	10199.81694
K	39	10198.68200	244918.70000	1.400	10056.34268	10206.43628	10333.26749
MG	24	9908.73000	347177.66000	0.900	9841.65234	9868.73481	10015.80211
MN	55	20.35200	6031.27000	7.500	18.69937	21.71364	20.64166
NA	23	10063.82500	748758.22000	1.300	9941.58189	10040.80195	10209.09214
TI	47	204.06400	2476.97000	8.300	185.32307	218.51720	208.35081
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	46176.90000	0.00000	0.000	44959.34000	47260.68000	46310.67000
AG	107	19.86800	47927.74000	2.800	20.31686	19.25306	20.03406
AS	75	19.49900	1631.42000	10.200	21.50464	17.52779	19.46553
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.80900	5106.79000	0.700	19.93761	19.82340	19.66521
CO	59	19.10100	29575.19000	3.800	19.90617	18.52463	18.87265
CU	63	20.24100	24287.20000	3.000	20.57809	19.55135	20.59316
MO	98	199.47900	230826.12000	3.100	204.73369	192.62796	201.07673
NI	60	20.79700	8388.96000	3.200	21.30868	20.04969	21.03234
SB	121	-0.08000	53.34000	0.000	-0.11586	-0.00780	-0.11731
SN	120	-1.20900	803.81000	0.000	-1.36331	-0.65913	-1.60371
SR	88	0.09300	40.00000	47.200	0.12140	0.11511	0.04242
ZN	66	21.50600	2907.01000	10.600	24.14139	20.20243	20.17503
BI-1	209	215923.44000	0.00000	0.000	219368.36000	214346.85000	214055.11000
PB	208	0.01900	430.02000	59.200	0.01191	0.03167	0.01285
TL	203	-0.00100	40.00000	0.000	0.00589	0.00298	-0.01051
GE-1	72	9416.20000	0.00000	0.000	9092.68000	9372.86000	9783.05000
TB-1	159	251066.32000	0.00000	0.000	250693.77000	251699.18000	250806.01000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:35:40
Tube Number: 43
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22538.07000	0.00000	0.000	22104.30000	24276.93000	21232.97000
AL	27	2583.79900	25985.86000	10.000	2600.62531	2318.13636	2832.63656
CA	44	2583.78800	3870.58000	5.500	2731.57274	2573.70323	2446.08931
CR	52	268.13700	196917.88000	6.000	271.22159	250.59984	282.58968
FE	57	2646.86500	37576.93000	7.000	2747.27973	2433.42009	2759.89599
K	39	2651.99600	65849.14000	6.800	2724.70916	2446.80833	2784.47058
MG	24	2645.18700	94088.52000	6.200	2703.46964	2460.72946	2771.36284
MN	55	265.90200	79572.31000	5.500	265.72146	251.47706	280.50817
NA	23	2583.59600	200542.33000	8.500	2634.25016	2343.43675	2773.10080
TI	47	266.90700	3283.79000	11.700	294.60701	232.92523	273.18744
V	51	272.52400	154482.80000	6.500	274.60178	253.91458	289.05507
IN-1	115	47190.07000	0.00000	0.000	46376.13000	48127.99000	47066.08000
AG	107	25.85700	63758.12000	0.900	26.05396	25.91171	25.60613
AS	75	261.40200	22302.63000	2.600	264.57192	253.74184	265.89252
BA	137	259.18200	66518.77000	1.300	262.90730	256.01966	258.61889
CD	111	26.28500	6922.76000	2.800	26.70143	25.43883	26.71356
CO	59	244.71700	387060.48000	1.300	247.08876	241.03474	246.02673
CU	63	263.04900	320159.28000	1.400	267.28721	260.05907	261.80088
MO	98	26.05300	30841.61000	1.800	26.43292	25.53630	26.18922
NI	60	267.34900	109971.37000	1.900	271.71190	261.69914	268.63506
SB	121	27.38600	17426.17000	3.600	27.47991	26.36475	28.31203
SN	120	24.13100	21197.27000	5.200	25.46029	22.93982	23.99415
SR	88	25.40900	10320.13000	8.600	27.71509	23.37484	25.13686
ZN	66	263.40300	36254.50000	2.700	267.52361	255.21352	267.47254
BI-1	209	216372.26000	0.00000	0.000	219008.88000	215874.90000	214233.00000
PB	208	26.42500	254666.08000	1.700	25.90694	26.62806	26.73888
TL	203	25.89800	77540.93000	1.200	25.56371	26.14354	25.98785
GE-1	72	9949.79000	0.00000	0.000	9452.82000	10373.31000	10023.25000
TB-1	159	252087.02000	0.00000	0.000	250036.19000	250732.77000	255492.09000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:37:41
Tube Number: 44
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23098.73000	0.00000	0.000	23495.89000	23145.36000	22654.94000
AL	27	1.94700	26.67000	113.500	3.19365	3.25118	-0.60501
CA	44	0.25500	6.67000	2953.400	-4.08813	8.94034	-4.08813
CR	52	-0.18800	93.34000	0.000	-0.10176	-0.19128	-0.26985
FE	57	1.15300	26.67000	123.200	0.67881	2.75098	0.03010
K	39	-5.53200	1546.80000	0.000	-9.73673	-16.07557	9.21687
MG	24	1.20300	60.00000	24.500	1.17275	0.92417	1.51159
MN	55	0.10200	70.00000	4.100	0.09840	0.10179	0.10672
NA	23	-23.27100	5964.56000	0.000	-24.66402	-26.23602	-18.91379
TI	47	1.05100	13.33000	173.200	0.00000	3.15199	0.00000
V	51	0.12600	80.00000	26.300	0.15735	0.09138	0.12860
IN-1	115	45486.74000	0.00000	0.000	43539.38000	48371.46000	44549.38000
AG	107	0.00900	60.00000	175.300	0.01411	-0.00876	0.02201
AS	75	0.15300	18.67000	67.400	0.25544	0.15384	0.04931
BA	137	0.07100	26.67000	90.000	0.13197	0.07709	0.00433
CD	111	0.00300	2.00000	262.200	0.01165	0.00260	-0.00481
CO	59	0.06400	123.34000	75.700	0.11903	0.04366	0.02886
CU	63	0.01300	213.34000	361.700	0.06203	0.00681	-0.03030
MO	98	0.17000	223.35000	33.400	0.17732	0.22317	0.11007
NI	60	0.07800	53.33000	70.700	0.02491	0.13559	0.07462
SB	121	0.39300	340.02000	14.300	0.38259	0.34324	0.45387
SN	120	-1.40100	636.71000	0.000	-1.34869	-1.46040	-1.39488
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	-0.06500	6.67000	0.000	-0.03637	-0.04423	-0.11512
BI-1	209	211989.68000	0.00000	0.000	212746.77000	212635.23000	210587.03000
PB	208	0.00100	250.01000	900.000	-0.00275	0.00572	-0.00145
TL	203	0.01400	83.34000	88.300	0.02010	0.02352	-0.00015
GE-1	72	9282.81000	0.00000	0.000	9492.88000	8622.42000	9733.14000
TB-1	159	252058.98000	0.00000	0.000	254095.21000	251138.47000	250943.26000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:39:41
Tube Number: 45
Sample Number: **LRS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22902.00000	0.00000	0.000	22765.28000	23996.78000	21943.94000
AL	27	49907.15100	511504.25000	4.800	50243.94927	47351.15040	52126.35309
CA	44	49899.52900	75734.21000	3.000	50343.04895	48238.83562	51116.70350
CR	52	509.97300	380898.72000	4.600	514.23984	484.70992	530.97000
FE	57	49743.64400	718953.27000	3.400	50003.51786	47933.08602	51294.32892
K	39	53502.80400	1319932.58000	5.200	53546.32107	50713.17129	56248.91861
MG	24	50889.42900	1841430.34000	5.200	51556.08882	47948.97602	53163.22325
MN	55	507.51200	154424.04000	5.500	503.98102	481.71028	536.84589
NA	23	50730.60500	3867933.48000	4.900	51996.69779	47884.47704	52310.63891
TI	47	526.80600	6611.46000	1.800	527.28194	516.93919	536.19615
V	51	517.36100	298411.84000	5.300	521.58415	487.96713	542.53036
IN-1	115	44912.15000	0.00000	0.000	45586.97000	44254.29000	44895.18000
AG	107	509.40000	1194553.84000	1.600	503.75234	518.69437	505.75227
AS	75	532.08800	43204.74000	1.700	522.53608	539.92821	533.80054
BA	137	519.64200	126921.22000	2.300	517.08850	532.45302	509.38458
CD	111	511.73900	128286.79000	0.800	511.14603	516.34448	507.72779
CO	59	483.73300	728167.31000	1.400	478.42358	491.27115	481.50439
CU	63	515.75800	597299.00000	1.400	515.45542	523.01905	508.79839
MO	98	533.88700	601028.33000	1.500	527.19312	542.40799	532.05930
NI	60	522.49300	204561.89000	0.800	519.39624	527.04468	521.03902
SB	121	447.05200	269244.08000	2.100	441.70335	457.67452	441.77900
SN	120	528.94000	406781.66000	1.100	525.34047	535.84847	525.63216
SR	88	528.43500	204398.25000	2.000	526.40939	540.02407	518.87158
ZN	66	516.76800	67691.82000	1.400	511.29019	524.66569	514.34933
BI-1	209	207984.13000	0.00000	0.000	208145.58000	209544.66000	206262.15000
PB	208	538.58100	4985023.28000	1.000	537.90793	533.54062	544.29512
TL	203	549.03200	1579373.98000	0.900	553.81935	544.17867	549.09735
GE-1	72	9819.76000	0.00000	0.000	9813.08000	9853.10000	9793.11000
TB-1	159	254038.68000	0.00000	0.000	250571.09000	259187.87000	252357.07000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:41:40
Tube Number: 46
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21970.85000	0.00000	0.000	20422.42000	22765.25000	22724.89000
AL	27	16.15200	166.68000	46.900	11.41342	24.88069	12.16048
CA	44	12.12500	23.33000	117.200	18.06023	22.40389	-4.08813
CR	52	-0.06700	170.01000	0.000	0.10967	-0.05469	-0.25649
FE	57	15.89700	226.68000	40.400	22.58624	15.32493	9.78072
K	39	13.29300	1906.86000	106.300	28.99928	9.25255	1.62797
MG	24	14.44300	513.36000	22.000	17.81624	13.99425	11.51719
MN	55	0.05200	50.00000	317.000	0.24252	-0.05950	-0.02630
NA	23	3.58200	7591.88000	445.300	21.85351	-7.55508	-3.55333
TI	47	0.80200	10.00000	99.900	0.00000	1.60231	0.80258
V	51	0.14500	86.67000	60.200	0.14390	0.05827	0.23285
IN-1	115	46669.42000	0.00000	0.000	44774.89000	46693.90000	48539.48000
AG	107	0.28900	740.05000	29.000	0.38538	0.24991	0.23189
AS	75	0.16300	20.00000	29.800	0.19692	0.18575	0.10747
BA	137	0.09600	33.33000	109.000	0.20944	0.00243	0.07669
CD	111	0.09900	26.67000	56.500	0.16323	0.07192	0.06162
CO	59	0.10400	190.01000	26.300	0.13523	0.08421	0.09262
CU	63	0.23100	480.03000	22.000	0.27224	0.24577	0.17403
MO	98	1.07500	1286.77000	1.500	1.07167	1.06081	1.09353
NI	60	0.15100	83.34000	23.800	0.12521	0.19154	0.13496
SB	121	10.28100	6551.52000	8.700	9.48148	10.10765	11.25433
SN	120	2.03100	3392.69000	17.500	1.83184	1.82016	2.43969
SR	88	0.09400	40.00000	83.900	0.17379	0.09174	0.01620
ZN	66	0.39800	70.00000	35.200	0.26779	0.54580	0.37938
BI-1	209	212678.22000	0.00000	0.000	210481.50000	210388.49000	217164.68000
PB	208	0.12700	1446.76000	22.700	0.15765	0.12355	0.10025
TL	203	0.22700	706.72000	31.900	0.25063	0.28511	0.14593
GE-1	72	9716.35000	0.00000	0.000	10213.26000	9743.07000	9192.71000
TB-1	159	254720.30000	0.00000	0.000	251596.19000	254838.63000	257726.09000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

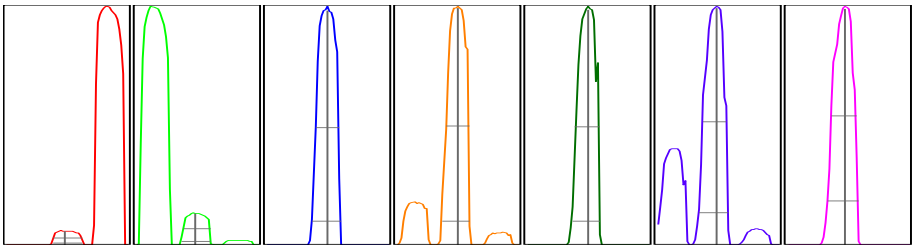
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		8.0 V	Deflect		13.2 V	
Extract 2		-170.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-90 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

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ICP-MS Run Data Report

1331906E05

Date File Name: 13K15J03.E05

Run Name: 1331906E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 3020A
SW-846 6020

Reviewed By: John P Hook
Reviewed Date: 11/17/2013 12:12

Verified By: Deborah A Krady
Verified Date: 11/18/2013 06:49

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331906E05 Date/Time: 11/15/2013 21:54:03
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	1246.77000	0.000	2.74033	-3.77416	1.03382
MG	24	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AL	27	0.00000	13.33000	0.000	0.72569	0.84106	-1.56674
K	39	0.00000	880.06000	0.000	-2.94931	-2.96282	5.91214
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	16381.35000	0.00000	0.000	16498.02000	15707.51000	16938.53000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.00000	86.67000	0.000	-0.04821	-0.04271	0.09092
MN	55	0.00000	60.00000	0.000	-0.04689	0.05664	-0.00975
FE	57	0.00000	6.67000	0.000	-0.59689	-0.59689	1.19377
CO	59	0.00000	306.68000	0.000	0.06703	-0.01260	-0.05443
NI	60	0.00000	86.67000	0.000	0.05228	0.15246	-0.20474
CU	63	0.00000	320.02000	0.000	-0.03453	0.15305	-0.11852
ZN	66	0.00000	6.67000	0.000	0.14749	-0.07374	-0.07374
GE-1	72	5834.54000	0.00000	0.000	6021.24000	5741.17000	5741.22000
AS	75	0.00000	27.33000	0.000	-0.17436	0.34433	-0.16997
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AG	107	0.00000	6.67000	0.000	-0.00404	0.00808	-0.00404
CD	111	0.00000	4.00000	0.000	-0.02292	0.01086	0.01206
IN-1	115	31328.11000	0.00000	0.000	31224.36000	31926.66000	30833.32000
SN	120	0.00000	523.37000	0.000	0.05125	-0.15315	0.10190
SB	121	0.00000	30.00000	0.000	0.04439	-0.06753	0.02314
BA	137	0.00000	23.33000	0.000	-0.13751	0.03578	0.10173
TB-1	159	188070.14000	0.00000	0.000	185017.85000	191684.61000	187507.95000
TL	203	0.00000	10.00000	0.000	0.00910	-0.00455	-0.00455
PB	208	0.00000	70.00000	0.000	-0.00261	0.00123	0.00138
BI-1	209	164481.53000	0.00000	0.000	161396.94000	167185.02000	164862.63000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:56:03
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14853.30000	0.00000	0.000	15567.30000	14536.25000	14456.35000
AL	27	10000.00000	78490.57000	3.400	9632.59002	10289.88471	10077.52527
CA	44	10000.00000	10093.24000	1.400	10160.13077	9948.49278	9891.37645
CR	52	1000.00000	493735.77000	4.100	953.81736	1033.84886	1012.33379
FE	57	10000.00000	97915.56000	1.200	9869.26434	10037.62990	10093.10576
K	39	10000.00000	166758.74000	2.900	9673.11030	10110.16203	10216.72767
MG	24	10000.00000	271777.42000	3.000	9650.13151	10173.28823	10176.58026
MN	55	1000.00000	204440.93000	3.100	964.64549	1019.04978	1016.30472
NA	23	10000.00000	554987.18000	4.200	9522.13830	10330.33630	10147.52540
TI	47	1000.00000	8469.02000	9.900	886.72971	1066.39832	1046.87197
V	51	1000.00000	374931.49000	3.200	963.76039	1023.34481	1012.89480
IN-1	115	30463.04000	0.00000	0.000	30716.58000	30386.26000	30286.29000
AG	107	100.00000	157554.55000	1.400	101.54318	99.44085	99.01597
AS	75	1000.00000	50785.82000	1.400	984.46970	1011.06204	1004.46827
BA	137	1000.00000	165206.86000	1.000	992.28825	1010.91679	996.79497
CD	111	100.00000	16947.69000	1.100	98.85765	101.02244	100.11991
CO	59	1000.00000	938849.10000	0.800	1007.84926	999.24686	992.90388
CU	63	1000.00000	781067.15000	1.200	993.94442	1013.79186	992.26373
MO	98	100.00000	74620.31000	0.400	99.85569	100.45524	99.68907
NI	60	1000.00000	264379.43000	1.300	985.55839	1011.61020	1002.83141
SB	121	100.00000	43610.11000	2.500	97.23805	100.57848	102.18346
SN	120	100.00000	52962.50000	1.100	99.25747	99.50422	101.23831
SR	88	100.00000	26671.23000	0.600	100.32964	99.27496	100.39541
ZN	66	1000.00000	88204.09000	1.100	998.77085	990.10292	1011.12624
BI-1	209	159267.35000	0.00000	0.000	159233.46000	159061.74000	159506.86000
PB	208	100.00000	699110.77000	1.300	101.54958	99.09744	99.35298
TL	203	100.00000	216923.57000	0.800	100.83092	99.20754	99.96154
GE-1	72	5827.87000	0.00000	0.000	6111.31000	5040.92000	6331.38000
TB-1	159	181604.00000	0.00000	0.000	184643.08000	180760.19000	179408.73000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:58:05
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15667.33000	0.00000	0.000	15317.17000	15687.28000	15997.54000
AL	27	10.56400	100.00000	54.800	16.95321	5.66598	9.07193
CA	44	9.46000	10.00000	99.200	9.61132	18.76912	0.00000
CR	52	1.00700	603.37000	48.300	1.54970	0.85798	0.61283
FE	57	12.95200	140.01000	6.600	12.27543	13.90522	12.67597
K	39	9.13300	1000.06000	98.500	13.36427	-1.19464	15.22895
MG	24	7.69400	220.01000	39.400	8.19997	10.44317	4.43780
MN	55	1.09400	293.35000	11.400	1.20270	1.12169	0.95864
NA	23	4.81200	1466.79000	101.600	6.61709	8.54300	-0.72498
TI	47	1.51400	13.33000	115.400	3.42576	1.11498	0.00000
V	51	1.00800	396.69000	39.800	1.39552	1.03458	0.59384
IN-1	115	30827.57000	0.00000	0.000	30981.19000	30689.72000	30811.81000
AG	107	0.17600	286.68000	16.000	0.20819	0.15979	0.15914
AS	75	1.32200	94.67000	19.300	1.53293	1.39599	1.03782
BA	137	0.95900	183.34000	45.800	1.29114	1.12444	0.46107
CD	111	0.07400	16.67000	47.700	0.10474	0.08252	0.03542
CO	59	1.02600	1276.77000	12.300	1.15976	0.90934	1.00983
CU	63	1.05800	1150.09000	24.700	1.35375	0.96349	0.85679
MO	98	0.26900	203.35000	62.200	0.46122	0.15964	0.18551
NI	60	1.06600	370.02000	20.400	1.28286	0.84740	1.06722
SB	121	0.95400	450.02000	25.500	0.69953	1.18509	0.97595
SN	120	0.56700	816.72000	40.100	0.39671	0.82606	0.47963
SR	88	0.03700	10.00000	0.500	0.03687	0.03722	0.03707
ZN	66	0.93500	90.00000	24.500	0.70664	1.16434	0.93513
BI-1	209	164095.73000	0.00000	0.000	165376.54000	158521.06000	168389.59000
PB	208	0.11100	866.71000	30.600	0.14601	0.10819	0.07828
TL	203	0.12000	276.68000	34.100	0.15973	0.12052	0.07830
GE-1	72	6157.98000	0.00000	0.000	6171.27000	6091.33000	6211.34000
TB-1	159	185192.34000	0.00000	0.000	183775.92000	184475.92000	187325.19000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:00:06
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	16514.88000	0.00000	0.000	17549.17000	15817.49000	16177.97000
AL	27	-0.38900	10.00000	0.000	-1.56674	-0.37121	0.77104
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.04700	113.34000	97.600	0.09940	0.01350	0.02827
FE	57	1.22900	20.00000	152.700	1.13146	-0.59689	3.15280
K	39	-1.43400	856.72000	0.000	-5.13521	0.68256	0.15186
MG	24	1.03700	33.33000	173.200	3.11163	0.00000	0.00000
MN	55	0.00800	63.33000	1159.800	0.10543	-0.08333	0.00235
NA	23	-4.21400	993.40000	0.000	-3.67842	-3.55048	-5.41447
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09000	36.67000	86.000	0.02255	0.17517	0.07340
IN-1	115	32342.37000	0.00000	0.000	32777.90000	33015.86000	31233.36000
AG	107	0.01400	30.00000	147.800	0.00186	0.03696	0.00215
AS	75	-0.09900	22.67000	0.000	0.06556	-0.30219	-0.05918
BA	137	-0.04300	16.67000	0.000	0.08754	-0.13751	-0.07846
CD	111	-0.01200	2.00000	0.000	-0.02292	-0.00114	-0.01141
CO	59	0.13300	450.03000	68.500	0.23697	0.09531	0.06692
CU	63	0.07200	390.02000	93.900	0.13875	0.07582	0.00283
MO	98	0.05000	40.00000	23.000	0.06227	0.04946	0.03921
NI	60	-0.09900	60.00000	0.000	-0.24655	-0.17724	0.12594
SB	121	0.19900	123.34000	4.900	0.18837	0.20769	0.20102
SN	120	0.07300	583.37000	238.800	0.25083	0.06610	-0.09781
SR	88	0.01200	3.33000	173.200	0.00000	0.00000	0.03657
ZN	66	0.17500	23.33000	91.400	0.34775	0.03087	0.14742
BI-1	209	168448.56000	0.00000	0.000	166851.25000	168518.24000	169976.19000
PB	208	0.00700	123.34000	64.100	0.01218	0.00520	0.00373
TL	203	0.00800	30.00000	223.500	-0.00455	-0.00019	0.03001
GE-1	72	6291.36000	0.00000	0.000	6671.47000	5861.22000	6341.40000
TB-1	159	188512.99000	0.00000	0.000	186786.79000	189204.72000	189547.46000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:02:06
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15433.75000	0.00000	0.000	16097.79000	15016.68000	15186.78000
AL	27	5173.44100	42189.37000	4.600	4900.32781	5270.89223	5349.10291
CA	44	5105.18300	5344.33000	7.400	4728.94160	5098.83710	5487.77007
CR	52	517.11700	265416.14000	3.200	498.10008	526.33140	526.92090
FE	57	5047.28400	51330.90000	3.200	4863.90034	5150.27092	5127.67935
K	39	5186.00200	90249.44000	3.600	4970.24865	5304.05565	5283.70151
MG	24	5088.82300	143666.52000	5.100	4806.68708	5136.95824	5322.82283
MN	55	515.10600	109478.31000	2.400	500.91759	523.71777	520.68259
NA	23	5084.21400	293944.25000	2.500	4948.33886	5098.22881	5206.07549
TI	47	503.77300	4440.71000	4.700	482.50165	528.89469	499.92366
V	51	529.13900	206179.66000	2.800	512.01597	536.39423	539.00588
IN-1	115	31001.44000	0.00000	0.000	30977.48000	30469.41000	31557.43000
AG	107	52.31600	83863.32000	1.800	52.65322	53.03989	51.25441
AS	75	538.61200	27846.42000	1.500	538.99810	546.61181	530.22498
BA	137	526.40700	88508.63000	2.000	538.04178	524.07215	517.10825
CD	111	52.69000	9087.78000	2.400	53.62862	53.16551	51.27474
CO	59	534.85300	511027.61000	2.000	539.24281	542.86938	522.44559
CU	63	536.79200	426682.34000	3.400	547.88238	547.00035	515.49208
MO	98	55.44300	42091.80000	2.700	56.48828	56.11372	53.72585
NI	60	544.83300	146603.06000	2.300	553.76176	550.30033	530.43608
SB	121	54.97000	24418.29000	2.000	54.97946	53.87722	56.05316
SN	120	53.54700	29086.80000	5.500	55.11822	55.34672	50.17651
SR	88	52.16300	14159.60000	4.600	54.85272	50.32774	51.30887
ZN	66	519.67700	46645.45000	1.200	522.31925	524.21199	512.49903
BI-1	209	161228.65000	0.00000	0.000	163557.39000	159025.82000	161102.75000
PB	208	53.79500	380710.03000	1.200	53.09123	54.37388	53.92121
TL	203	52.45300	115174.77000	1.200	51.79760	53.02751	52.53244
GE-1	72	6208.07000	0.00000	0.000	6191.41000	6461.52000	5971.27000
TB-1	159	184802.67000	0.00000	0.000	187544.24000	182692.75000	184171.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:04:07
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15457.23000	0.00000	0.000	15657.31000	14866.91000	15847.46000
AL	27	2.95900	36.67000	67.700	3.26430	4.79311	0.81979
CA	44	12.53700	13.33000	173.200	37.61009	0.00000	0.00000
CR	52	0.44100	306.68000	43.300	0.57196	0.52988	0.22181
FE	57	2.32400	30.00000	69.500	1.34030	1.44329	4.18797
K	39	-2.07300	793.38000	0.000	3.46461	-4.63022	-5.05350
MG	24	4.22900	120.01000	11.400	4.53423	3.67302	4.47983
MN	55	0.46800	156.67000	79.900	0.89248	0.31914	0.19124
NA	23	1.15300	1240.10000	263.900	4.66293	-0.49623	-0.70830
TI	47	0.74500	6.67000	173.200	2.23422	0.00000	0.00000
V	51	0.47800	186.68000	54.000	0.75843	0.42601	0.24979
IN-1	115	31320.59000	0.00000	0.000	31365.28000	30752.45000	31844.04000
AG	107	0.04500	80.00000	14.900	0.03912	0.05255	0.04454
AS	75	0.48700	52.67000	78.100	0.89553	0.14318	0.42196
BA	137	0.31400	76.67000	21.600	0.39165	0.28226	0.26787
CD	111	0.03500	10.00000	67.000	0.05732	0.03554	0.01095
CO	59	0.59600	880.06000	33.600	0.71730	0.70628	0.36535
CU	63	0.35100	600.04000	45.500	0.51121	0.35168	0.19123
MO	98	0.27400	210.01000	10.300	0.29937	0.27879	0.24359
NI	60	0.67700	270.02000	42.900	0.34459	0.88250	0.80520
SB	121	0.95900	460.03000	8.500	1.04669	0.88708	0.94215
SN	120	0.85400	977.87000	139.200	0.17628	2.22637	0.15901
SR	88	0.08500	23.33000	107.100	0.18208	0.07428	0.00000
ZN	66	0.66300	66.67000	67.300	1.13767	0.60013	0.25165
BI-1	209	159251.88000	0.00000	0.000	158932.52000	157921.71000	160901.41000
PB	208	0.05000	420.02000	23.500	0.05484	0.05958	0.03706
TL	203	0.06800	156.68000	37.400	0.09248	0.04194	0.06847
GE-1	72	6258.01000	0.00000	0.000	6391.40000	6371.36000	6011.28000
TB-1	159	182569.90000	0.00000	0.000	181390.00000	185464.29000	180855.41000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:06:06
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14946.70000	0.00000	0.000	15687.32000	14045.82000	15106.96000
AL	27	104.96100	836.72000	17.200	90.05353	124.99757	99.83208
CA	44	235.18900	240.01000	13.900	262.77639	199.15486	243.63622
CR	52	2.22400	1180.09000	10.000	2.00761	2.45327	2.21020
FE	57	103.58000	1023.41000	16.900	84.48108	107.38274	118.87477
K	39	202.22700	4177.32000	6.200	188.66926	204.85678	213.15355
MG	24	107.69100	2950.37000	3.900	112.44972	106.14808	104.47550
MN	55	2.17000	500.03000	12.600	2.09380	2.47314	1.94412
NA	23	203.88700	12491.34000	5.600	190.81612	210.91231	209.93226
TI	47	13.67300	116.67000	35.300	16.72573	16.18987	8.10466
V	51	0.71600	270.01000	4.200	0.68128	0.73272	0.73366
IN-1	115	30706.32000	0.00000	0.000	30261.07000	31503.36000	30354.52000
AG	107	0.53500	856.73000	15.300	0.59667	0.56685	0.44191
AS	75	2.06700	132.67000	22.300	2.13706	2.48944	1.57531
BA	137	2.06900	366.69000	22.600	2.60502	1.73582	1.86742
CD	111	0.53600	95.33000	11.800	0.60682	0.51351	0.48643
CO	59	0.67200	936.73000	20.800	0.78726	0.71277	0.51650
CU	63	2.06500	1936.86000	12.800	2.34967	2.01839	1.82697
MO	98	0.50200	376.69000	19.600	0.56663	0.38878	0.55144
NI	60	2.25400	683.37000	17.700	2.38744	1.80516	2.56900
SB	121	1.14500	533.37000	23.800	0.83327	1.26371	1.33710
SN	120	1.93800	1543.48000	31.500	1.54249	2.64178	1.63041
SR	88	0.79100	213.34000	26.400	0.75492	1.01520	0.60208
ZN	66	16.69500	1490.13000	5.400	17.73317	16.15389	16.19891
BI-1	209	158768.62000	0.00000	0.000	162731.17000	158185.94000	155388.74000
PB	208	1.08800	7651.06000	5.100	1.10495	1.02604	1.13415
TL	203	0.50900	1110.09000	10.000	0.46022	0.56177	0.50582
GE-1	72	5601.14000	0.00000	0.000	5511.17000	5741.17000	5551.07000
TB-1	159	180140.09000	0.00000	0.000	179670.19000	180944.51000	179805.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:08:06
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.08000	0.00000	0.000	15567.25000	14886.57000	14666.41000
AL	27	9625.48900	76525.59000	2.600	9337.50881	9719.85533	9819.10397
CA	44	9803.53700	10009.80000	6.100	9649.11152	9298.77954	10462.72070
CR	52	0.05000	103.34000	58.300	0.01625	0.06457	0.06793
FE	57	9729.96100	96457.54000	2.200	9509.92562	9743.89923	9936.05872
K	39	9817.54800	165831.74000	2.600	9534.74736	9888.13004	10029.76771
MG	24	9579.92400	263696.88000	3.000	9287.07372	9589.53318	9863.16465
MN	55	0.00500	56.67000	2779.900	0.10620	-0.16940	0.07961
NA	23	9658.67000	543071.86000	3.500	9339.09232	9632.23049	10004.68813
TI	47	210.83800	1813.53000	2.700	215.74870	204.46343	212.30302
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30480.44000	0.00000	0.000	30193.83000	29731.78000	31515.70000
AG	107	-0.00200	3.33000	0.000	-0.00404	0.00247	-0.00404
AS	75	-0.28400	12.00000	0.000	-0.36130	-0.23773	-0.25372
BA	137	-0.07600	10.00000	0.000	0.04572	-0.13751	-0.13751
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01151
CO	59	0.05600	350.02000	90.300	0.10166	0.06450	0.00168
CU	63	0.07000	363.35000	102.000	0.06830	0.14114	-0.00074
MO	98	199.92200	149174.32000	3.800	206.72523	201.32398	191.71796
NI	60	-0.11600	53.33000	0.000	-0.12602	-0.12305	-0.09745
SB	121	0.07800	63.33000	47.800	0.11765	0.07351	0.04335
SN	120	-0.16500	423.36000	0.000	-0.43321	0.02446	-0.08721
SR	88	0.08800	23.33000	137.300	0.22697	0.03842	0.00000
ZN	66	0.52600	53.33000	45.600	0.38382	0.39093	0.80300
BI-1	209	156162.01000	0.00000	0.000	154650.81000	154578.44000	159256.77000
PB	208	0.02100	206.68000	28.100	0.02716	0.01686	0.01751
TL	203	0.00300	16.67000	219.200	-0.00455	0.00495	0.00928
GE-1	72	6057.96000	0.00000	0.000	5851.19000	6071.29000	6251.40000
TB-1	159	182258.51000	0.00000	0.000	180428.32000	184776.19000	181571.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:10:06
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15333.77000	0.00000	0.000	15627.42000	15176.91000	15196.97000
AL	27	9589.20100	77736.99000	3.700	9180.02933	9735.20057	9852.37225
CA	44	9725.05900	10129.87000	2.300	9772.17427	9479.95093	9923.05237
CR	52	19.71000	10139.98000	6.400	20.46693	18.24542	20.41749
FE	57	9719.06000	98246.80000	2.900	9438.11420	9994.54633	9724.52063
K	39	9799.82600	168833.31000	1.300	9656.44381	9888.80984	9854.22309
MG	24	9592.37800	269286.63000	2.400	9324.35769	9727.91431	9724.86147
MN	55	20.89800	4467.42000	4.300	19.85508	21.50555	21.33333
NA	23	9667.16600	554371.20000	2.700	9369.17037	9851.84420	9780.48269
TI	47	202.98200	1780.18000	9.600	210.44214	180.95419	217.55035
V	51	0.01700	6.67000	173.200	0.00000	0.00000	0.05209
IN-1	115	30601.08000	0.00000	0.000	31606.83000	30305.29000	29891.11000
AG	107	19.47800	30821.89000	1.500	19.14482	19.66050	19.62832
AS	75	20.09000	1048.71000	12.100	17.28978	21.73827	21.24343
BA	137	-0.07600	10.00000	0.000	-0.13751	-0.13751	0.04758
CD	111	20.05800	3413.04000	7.600	18.38552	20.43401	21.35507
CO	59	20.48200	19594.74000	6.500	19.32871	21.93099	20.18514
CU	63	20.26000	16197.96000	4.300	19.79621	21.26908	19.71412
MO	98	201.28500	150773.67000	3.600	192.92277	204.35913	206.57342
NI	60	19.47300	5247.64000	6.900	17.91888	20.26203	20.23848
SB	121	0.06200	56.67000	57.800	0.06515	0.02472	0.09615
SN	120	-0.27100	370.02000	0.000	-0.12651	-0.53100	-0.15571
SR	88	0.03600	10.00000	173.200	0.10841	0.00000	0.00000
ZN	66	20.16600	1790.17000	9.000	18.06786	21.24060	21.18941
BI-1	209	158775.14000	0.00000	0.000	156689.27000	160064.26000	159571.89000
PB	208	0.02400	233.34000	14.800	0.02377	0.02734	0.02031
TL	203	0.00600	23.33000	301.200	-0.00455	0.02756	-0.00455
GE-1	72	5754.50000	0.00000	0.000	5751.15000	5931.23000	5581.11000
TB-1	159	182323.13000	0.00000	0.000	179793.92000	183977.40000	183198.06000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:12:06
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15737.45000	0.00000	0.000	15457.19000	16508.05000	15247.11000
AL	27	2483.63300	20648.95000	5.700	2570.35394	2319.45578	2561.08828
CA	44	2614.12300	2790.33000	6.600	2552.80505	2479.48862	2810.07392
CR	52	250.56900	131151.91000	3.500	254.99685	240.38151	256.32909
FE	57	2529.56400	26229.69000	3.600	2589.58106	2425.62578	2573.48588
K	39	2492.62800	44645.67000	5.400	2497.31400	2356.45384	2624.11575
MG	24	2457.58700	70732.41000	4.700	2515.96011	2324.89779	2531.90324
MN	55	254.61900	55174.97000	4.700	254.15837	242.95160	266.74632
NA	23	2437.09300	144252.90000	3.000	2441.57392	2360.73308	2508.97249
TI	47	254.42200	2286.92000	4.500	250.10621	245.84111	267.31825
V	51	254.80100	101192.26000	4.000	257.42839	243.57158	263.40303
IN-1	115	31053.05000	0.00000	0.000	30118.72000	31938.47000	31101.97000
AG	107	25.45000	40852.53000	3.200	26.03551	24.50953	25.80433
AS	75	264.83900	13726.03000	2.400	271.95777	262.15014	260.40762
BA	137	262.78700	44259.09000	2.000	268.70555	260.39507	259.26068
CD	111	26.09800	4509.29000	3.000	26.97302	25.47991	25.84206
CO	59	260.62900	249538.58000	2.400	265.28058	253.62769	262.97727
CU	63	261.94000	208757.41000	1.500	265.88417	261.84636	258.08931
MO	98	26.25000	19962.18000	1.300	26.62293	26.00211	26.12347
NI	60	268.27600	72333.53000	2.400	274.92073	262.34885	267.55768
SB	121	25.98700	11571.08000	5.600	27.30278	26.24614	24.41295
SN	120	26.22900	14546.77000	5.100	25.32072	25.58810	27.77952
SR	88	25.88700	7031.72000	4.900	27.34907	24.96797	25.34519
ZN	66	273.84800	24614.39000	2.700	281.88791	267.01113	272.64411
BI-1	209	161103.25000	0.00000	0.000	159408.35000	161283.63000	162617.77000
PB	208	26.28800	185939.68000	1.200	26.64260	26.05372	26.16790
TL	203	25.53500	56035.44000	0.500	25.59464	25.61690	25.39290
GE-1	72	5827.87000	0.00000	0.000	5511.11000	6411.42000	5561.09000
TB-1	159	184242.17000	0.00000	0.000	181078.59000	185939.57000	185708.34000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:14:07
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15977.63000	0.00000	0.000	16427.97000	16678.35000	14826.58000
AL	27	4.60400	53.33000	83.500	4.18877	8.63766	0.98412
CA	44	5.97400	6.67000	173.200	17.92287	0.00000	0.00000
CR	52	0.19800	186.67000	54.200	0.19011	0.09477	0.30875
FE	57	2.87400	36.67000	35.000	4.01889	2.13100	2.47170
K	39	-6.22200	743.39000	0.000	-1.66820	-13.08819	-3.90925
MG	24	3.80600	113.34000	46.800	5.31872	4.25665	1.84151
MN	55	0.16600	96.67000	112.600	0.35189	0.16841	-0.02208
NA	23	0.70500	1250.10000	281.200	1.37112	-1.52459	2.26794
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.16300	66.67000	33.700	0.21685	0.16613	0.10679
IN-1	115	31518.18000	0.00000	0.000	32656.93000	30684.49000	31213.11000
AG	107	0.04100	73.33000	11.500	0.03741	0.04638	0.03933
AS	75	0.34400	45.33000	64.300	0.32500	0.57491	0.13338
BA	137	0.21400	60.00000	73.300	0.25778	0.34329	0.03974
CD	111	0.00000	4.00000	0.000	0.01011	-0.02292	0.01164
CO	59	0.39800	696.71000	25.500	0.50739	0.38059	0.30636
CU	63	0.28400	550.03000	5.700	0.29608	0.28976	0.26561
MO	98	0.28900	223.35000	42.700	0.27503	0.17297	0.41856
NI	60	0.11300	116.67000	189.100	-0.03454	0.35926	0.01545
SB	121	0.23400	136.67000	31.500	0.31772	0.20582	0.17878
SN	120	0.06600	563.37000	49.100	0.09529	0.03138	0.07021
SR	88	0.06100	16.67000	70.200	0.03498	0.03722	0.10978
ZN	66	0.14400	20.00000	71.900	0.24355	0.15138	0.03691
BI-1	209	163622.12000	0.00000	0.000	164881.46000	165780.94000	160203.97000
PB	208	0.02600	253.35000	42.600	0.03731	0.02331	0.01593
TL	203	0.03900	96.67000	12.100	0.03553	0.04417	0.03670
GE-1	72	6211.33000	0.00000	0.000	6071.25000	6671.51000	5891.22000
TB-1	159	183184.42000	0.00000	0.000	184575.56000	186365.90000	178611.79000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:16:08
Tube Number: 12 Batch: 133156050001A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15944.26000	0.00000	0.000	16147.77000	15357.05000	16327.95000
AL	27	-0.38000	10.00000	0.000	-0.39567	-0.33537	-0.40859
CA	44	6.07800	6.67000	173.200	18.23388	0.00000	0.00000
CR	52	-0.08800	36.67000	0.000	-0.02723	-0.07923	-0.15751
FE	57	0.35800	10.00000	262.200	1.28146	0.39064	-0.59689
K	39	-0.02300	853.39000	0.000	-0.31199	2.72218	-2.48067
MG	24	1.47400	43.33000	51.000	1.01450	1.06674	2.34105
MN	55	0.07000	73.33000	213.000	0.09278	0.20587	-0.08907
NA	23	0.11300	1213.43000	2202.200	-2.23437	2.70915	-0.13677
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.05800	23.33000	50.700	0.07354	0.07732	0.02424
IN-1	115	31665.21000	0.00000	0.000	31514.36000	31765.05000	31716.21000
AG	107	0.00600	16.67000	286.200	0.02664	-0.00404	-0.00404
AS	75	-0.09000	22.67000	0.000	0.05097	-0.18025	-0.14188
BA	137	-0.07900	10.00000	0.000	-0.07899	-0.07945	-0.07936
CD	111	0.00400	4.67000	811.200	-0.02292	-0.00028	0.03376
CO	59	0.03800	346.68000	210.200	0.12529	0.01961	-0.03105
CU	63	-0.07300	263.35000	0.000	-0.14930	-0.00385	-0.06476
MO	98	0.09500	73.33000	20.800	0.09068	0.07711	0.11584
NI	60	-0.09800	60.00000	0.000	-0.09744	-0.20803	0.01018
SB	121	0.00600	33.33000	556.700	-0.00100	-0.02352	0.04265
SN	120	-0.14000	453.36000	0.000	0.04184	-0.18559	-0.27593
SR	88	0.02400	6.67000	173.200	0.00000	0.07191	0.00000
ZN	66	2.36200	223.34000	28.200	2.22791	1.77482	3.08447
BI-1	209	164881.30000	0.00000	0.000	167182.03000	165541.23000	161920.64000
PB	208	0.01500	180.00000	15.600	0.01758	0.01510	0.01284
TL	203	0.00100	13.33000	699.600	-0.00455	-0.00455	0.01359
GE-1	72	6301.41000	0.00000	0.000	6201.38000	6461.50000	6241.36000
TB-1	159	186786.79000	0.00000	0.000	187075.70000	185908.65000	187376.03000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:18:10
Tube Number: 13 Batch: 133156050001A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15947.51000	0.00000	0.000	16057.63000	15927.44000	15857.47000
AL	27	1997.58600	16858.40000	2.400	1953.10602	2047.54225	1992.11042
CA	44	4214.34900	4564.09000	6.000	3924.57711	4326.46180	4392.00835
CR	52	49.50200	26350.23000	0.800	49.93148	49.11194	49.46295
FE	57	1060.11000	11153.95000	4.700	1079.29859	1003.31714	1097.71325
K	39	10089.45400	180778.48000	0.300	10051.65280	10117.27707	10099.43144
MG	24	1978.35100	57773.98000	2.400	1938.65594	2030.15532	1966.24054
MN	55	52.06800	11494.09000	3.200	51.16521	54.00345	51.03552
NA	23	9929.69100	592326.31000	2.200	9717.83175	10146.19574	9925.04440
TI	47	271.95700	2480.28000	8.100	296.31400	253.70250	265.85536
V	51	50.77700	20459.17000	2.600	51.15567	51.84718	49.32734
IN-1	115	31603.51000	0.00000	0.000	31238.56000	31396.61000	32175.35000
AG	107	52.53200	85863.66000	1.400	51.85824	53.29333	52.44522
AS	75	10.39700	574.01000	19.100	12.58166	9.91603	8.69358
BA	137	54.27600	9319.63000	5.400	56.25817	55.68095	50.88876
CD	111	5.20500	918.70000	7.300	5.64033	4.92462	5.05073
CO	59	267.69900	260931.68000	1.200	267.48178	270.90249	264.71288
CU	63	54.78400	44687.00000	2.000	55.77951	54.94911	53.62207
MO	98	53.51600	41420.44000	4.100	52.47993	56.05994	52.00729
NI	60	53.50500	14756.60000	1.100	53.79493	53.89032	52.82981
SB	121	6.20700	2837.03000	6.900	6.62298	5.76558	6.23273
SN	120	53.36400	29566.62000	1.200	54.10691	52.93919	53.04543
SR	88	43.14000	11937.89000	1.100	42.79480	42.94320	43.68055
ZN	66	54.03000	4950.91000	1.700	54.55474	52.95975	54.57656
BI-1	209	165454.26000	0.00000	0.000	164326.33000	164903.08000	167133.38000
PB	208	15.83200	115039.45000	0.400	15.88165	15.85338	15.76106
TL	203	2.06200	4655.87000	4.400	2.09591	2.13087	1.95955
GE-1	72	6568.17000	0.00000	0.000	6281.41000	6671.56000	6751.53000
TB-1	159	186830.22000	0.00000	0.000	188316.97000	183098.86000	189074.84000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:20:13
Tube Number: 14 Batch: 133156050001A
Sample Number: **7265131** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14793.32000	0.00000	0.000	14836.63000	15267.19000	14276.13000
AL	27	16.74300	143.34000	37.200	23.92588	13.29797	13.00395
CA	44	64176.25100	64458.18000	2.100	64214.88880	62829.37204	65484.49142
CR	52	0.59100	370.02000	27.000	0.71360	0.64966	0.41094
FE	57	53841.48400	524847.45000	3.200	54400.37139	51883.94426	55240.13494
K	39	9434.65900	156757.77000	3.200	9509.73659	9102.54712	9691.69323
MG	24	20939.40900	566851.22000	3.400	21143.84962	20140.04125	21534.33704
MN	55	1195.49400	243484.43000	2.700	1210.60851	1157.87985	1217.99425
NA	23	61996.66000	3423332.97000	2.000	61972.50823	60754.18223	63263.28808
TI	47	1.58700	13.33000	113.100	3.53671	0.00000	1.22519
V	51	1.13900	426.69000	9.600	1.14723	1.24451	1.02591
IN-1	115	29379.28000	0.00000	0.000	30298.70000	29160.15000	28679.00000
AG	107	0.04200	70.00000	12.700	0.04702	0.04238	0.03642
AS	75	60.23500	2971.61000	5.200	56.60660	62.08912	62.00957
BA	137	164.42300	26217.96000	2.100	163.90906	168.03428	161.32481
CD	111	0.00100	4.00000	2120.100	0.02455	0.00174	-0.02292
CO	59	1.10000	1286.77000	19.000	1.30017	1.11842	0.88217
CU	63	0.28200	510.03000	43.400	0.18258	0.24536	0.41941
MO	98	1.39800	1006.74000	15.000	1.36097	1.62412	1.21004
NI	60	0.77000	276.68000	29.500	0.59611	1.02701	0.68790
SB	121	0.98200	440.03000	24.800	0.73988	1.22683	0.98047
SN	120	0.33400	660.05000	64.800	0.17835	0.58178	0.24330
SR	88	346.32500	89058.74000	1.500	341.62434	345.43817	351.91134
ZN	66	4.52000	390.03000	25.700	3.68832	5.84890	4.02134
BI-1	209	152222.23000	0.00000	0.000	152674.22000	151885.45000	152107.01000
PB	208	0.09200	676.71000	1.200	0.09032	0.09234	0.09219
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00028	0.00028
GE-1	72	6027.96000	0.00000	0.000	6131.39000	5751.10000	6201.40000
TB-1	159	177016.78000	0.00000	0.000	177094.47000	175578.40000	178377.48000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:22:12
Tube Number: 15 Batch: 133156050001A
Sample Number: **7265131** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13655.69000	0.00000	0.000	14056.06000	13825.73000	13085.28000
AL	27	234.43600	1703.49000	6.300	219.08779	248.75671	235.46220
CA	44	66600.50300	61759.00000	2.600	64670.50961	68033.30863	67097.69037
CR	52	4.69900	2203.55000	5.800	4.52571	4.56032	5.01097
FE	57	55627.29500	500513.59000	3.100	54033.75439	55365.64658	57482.48373
K	39	10103.37600	154893.56000	3.300	9760.79337	10119.35186	10429.98225
MG	24	21645.18600	540882.23000	3.100	21065.96082	21500.01801	22369.57995
MN	55	1230.89300	231357.44000	3.200	1198.82704	1219.37399	1274.47761
NA	23	63573.85900	3238756.20000	3.900	61541.46695	62819.50110	66360.60786
TI	47	33.01200	256.68000	31.200	36.08802	21.50800	41.44005
V	51	2.25200	776.72000	9.800	2.05582	2.49091	2.20831
IN-1	115	28514.12000	0.00000	0.000	28978.20000	28617.58000	27946.59000
AG	107	0.93200	1380.11000	1.100	0.94360	0.92851	0.92322
AS	75	60.30500	2890.26000	0.500	60.61822	60.17218	60.12582
BA	137	167.55800	25934.23000	1.900	171.25871	166.06106	165.35560
CD	111	1.07100	173.33000	8.400	1.03176	1.00736	1.17362
CO	59	1.82300	1880.18000	4.400	1.74358	1.90568	1.81964
CU	63	4.28000	3417.13000	6.200	4.32965	3.99376	4.51807
MO	98	2.30700	1610.14000	8.600	2.08517	2.36826	2.46895
NI	60	5.26200	1380.12000	1.800	5.17231	5.36222	5.25113
SB	121	2.95100	1230.10000	9.500	2.70636	2.88785	3.25895
SN	120	4.00200	2443.62000	10.900	4.01896	4.42693	3.55892
SR	88	347.43100	86721.12000	1.300	343.09414	346.93394	352.26526
ZN	66	33.49400	2773.65000	11.400	33.42244	37.34519	29.71410
BI-1	209	149076.80000	0.00000	0.000	148463.89000	151351.01000	147415.50000
PB	208	2.06900	13599.57000	0.700	2.07632	2.05311	2.07724
TL	203	1.02200	2083.56000	7.600	1.02920	0.94156	1.09632
GE-1	72	5587.78000	0.00000	0.000	5431.08000	5811.14000	5521.12000
TB-1	159	171632.66000	0.00000	0.000	171699.65000	173204.51000	169993.81000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:24:15
Tube Number: 16 Batch: 133156050001A
Sample Number: **7265134** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13945.88000	0.00000	0.000	14226.09000	14836.57000	12774.98000
AL	27	9.67700	83.34000	58.400	3.75033	15.00398	10.27533
CA	44	63901.50800	60270.57000	8.700	61312.10785	60092.29386	70300.12112
CR	52	0.57300	336.69000	21.600	0.64535	0.43000	0.64244
FE	57	54504.00800	499715.46000	6.000	54259.20585	51375.84130	57876.97601
K	39	9508.85100	148594.08000	6.000	9503.40312	8937.91242	10085.23822
MG	24	21014.12000	534790.64000	7.100	20948.42833	19561.35388	22532.57857
MN	55	1205.54200	230632.68000	8.200	1188.73259	1116.12903	1311.76436
NA	23	62407.02500	3238593.18000	7.100	62281.06443	58029.14505	66910.86427
TI	47	1.68600	13.33000	110.600	3.68850	0.00000	1.36916
V	51	1.24900	440.03000	13.700	1.05735	1.38737	1.30142
IN-1	115	28119.22000	0.00000	0.000	29350.41000	27939.34000	27067.90000
AG	107	-0.00400	0.00000	0.000	-0.00404	-0.00404	-0.00404
AS	75	58.22900	2752.90000	2.600	58.98393	56.48969	59.21215
BA	137	164.84500	25156.19000	0.900	165.49649	163.08426	165.95382
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.78500	956.73000	18.300	0.89895	0.62347	0.83365
CU	63	0.03900	313.35000	257.500	0.01520	-0.04779	0.15085
MO	98	1.23000	846.72000	15.300	1.11279	1.44664	1.13123
NI	60	0.89900	296.68000	6.000	0.93980	0.83822	0.91803
SB	121	1.06400	453.36000	17.800	0.90884	1.00821	1.27523
SN	120	0.07200	503.37000	229.500	-0.10110	0.08837	0.22980
SR	88	349.33700	85950.39000	2.500	342.73026	345.86597	359.41612
ZN	66	4.60500	380.02000	23.400	4.63361	3.51152	5.66869
BI-1	209	148282.64000	0.00000	0.000	149209.75000	148767.09000	146871.08000
PB	208	0.05700	433.36000	18.100	0.04530	0.06078	0.06479
TL	203	-0.00100	6.67000	0.000	0.00529	-0.00455	-0.00455
GE-1	72	5230.96000	0.00000	0.000	5711.12000	5190.96000	4790.81000
TB-1	159	170974.00000	0.00000	0.000	175051.50000	167878.42000	169992.07000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:26:15
Tube Number: 17 Batch: 133156050001A
Sample Number: **7265132** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13418.76000	0.00000	0.000	12845.08000	13565.52000	13845.68000
AL	27	2030.24700	14412.82000	1.900	2069.20085	1991.29506	2030.24373
CA	44	71181.88700	64839.61000	2.800	72905.57070	71615.98087	69024.11027
CR	52	50.41300	22554.82000	4.100	52.59377	50.14691	48.49912
FE	57	57676.66000	509768.72000	4.500	60231.34220	57807.99712	54990.64106
K	39	20391.10700	306328.74000	4.700	21430.00238	20179.47159	19563.84769
MG	24	23995.11200	589011.10000	4.200	25099.69725	23760.30785	23125.33180
MN	55	1272.54000	234993.60000	4.200	1318.04054	1285.08277	1214.49647
NA	23	75233.08100	3765867.86000	4.100	78357.89703	75094.64937	72246.69721
TI	47	271.84800	2083.56000	11.900	292.79779	234.68705	288.05923
V	51	51.52300	17442.34000	5.600	54.53985	51.23482	48.79556
IN-1	115	27112.13000	0.00000	0.000	27234.18000	27602.61000	26499.59000
AG	107	48.40700	67870.36000	0.800	48.59502	47.94508	48.68157
AS	75	69.42200	3158.31000	6.100	72.64388	64.66539	70.95743
BA	137	225.64400	33186.84000	1.600	225.91709	221.96618	229.04800
CD	111	5.61100	850.03000	3.500	5.52237	5.83914	5.47256
CO	59	252.61900	211257.44000	1.200	255.25797	249.44904	253.15127
CU	63	51.39700	35983.59000	1.400	51.05868	50.89619	52.23470
MO	98	54.30300	36061.94000	0.800	54.68271	53.80455	54.42318
NI	60	53.11400	12568.22000	2.100	51.79927	53.77742	53.76554
SB	121	7.44600	2920.37000	15.600	7.17045	8.71999	6.44769
SN	120	52.07700	24755.57000	3.400	52.59349	50.12973	53.50758
SR	88	409.08600	97111.30000	0.500	410.75986	409.73356	406.76397
ZN	66	53.05200	4167.34000	5.400	51.17051	51.61294	56.37201
BI-1	209	140973.15000	0.00000	0.000	143254.76000	142219.58000	137445.12000
PB	208	16.08300	99553.57000	1.500	15.90382	15.98906	16.35725
TL	203	2.12600	4087.36000	7.900	1.93317	2.20551	2.23952
GE-1	72	5324.33000	0.00000	0.000	5371.01000	5551.08000	5050.91000
TB-1	159	165180.06000	0.00000	0.000	165902.09000	166586.25000	163051.83000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:28:17
Tube Number: 18 Batch: 133156050001A
Sample Number: **7265133** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13799.15000	0.00000	0.000	14065.96000	13785.84000	13545.65000
AL	27	1988.53800	14519.67000	1.500	1968.83429	1973.18092	2023.59946
CA	44	67700.83200	63458.10000	1.400	68215.95104	66645.32558	68241.22080
CR	52	49.15200	22641.71000	0.900	49.57716	49.21244	48.66602
FE	57	54982.34000	500272.56000	0.500	54964.14764	54693.05489	55289.81739
K	39	19317.94100	298768.84000	1.600	18983.66655	19375.74011	19594.41533
MG	24	22564.45800	570146.45000	1.500	22513.51310	22256.49890	22923.36172
MN	55	1198.74300	227859.36000	0.600	1201.53178	1190.15728	1204.54077
NA	23	71036.18900	3660266.19000	0.400	70735.09457	71322.06016	71051.41158
TI	47	266.62900	2103.54000	2.100	269.86714	260.11792	269.90051
V	51	51.81900	18059.65000	2.600	50.76403	51.36413	53.32810
IN-1	115	27069.00000	0.00000	0.000	27058.19000	27181.59000	26967.22000
AG	107	48.99200	68586.62000	2.500	50.38857	48.18874	48.39867
AS	75	67.76900	3080.29000	2.400	69.65924	66.82333	66.82436
BA	137	223.34100	32802.93000	0.200	223.08696	223.09395	223.84339
CD	111	4.86000	735.35000	7.700	5.21287	4.89808	4.47053
CO	59	252.76400	211053.25000	0.900	254.22999	250.18111	253.87951
CU	63	50.64100	35412.72000	3.900	51.17704	52.28090	48.46634
MO	98	53.24000	35300.02000	2.100	54.20646	51.98888	53.52400
NI	60	53.63200	12671.67000	5.800	56.52895	54.02163	50.34689
SB	121	6.88700	2693.67000	4.000	7.14006	6.92725	6.59396
SN	120	52.43700	24892.05000	3.600	53.69350	50.25676	53.36022
SR	88	404.44300	95845.05000	2.700	412.07881	391.99869	409.25100
ZN	66	52.75700	4140.64000	4.700	55.46138	52.28645	50.52446
BI-1	209	140526.96000	0.00000	0.000	141531.72000	138325.32000	141723.84000
PB	208	15.91200	98198.08000	2.200	16.22970	15.95714	15.54819
TL	203	2.06900	3967.32000	4.000	2.06056	2.15621	1.99039
GE-1	72	5374.33000	0.00000	0.000	5421.02000	5421.00000	5280.98000
TB-1	159	162868.41000	0.00000	0.000	163610.64000	161256.37000	163738.22000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:30:17
Tube Number: 19 Batch: 133156050001A
Sample Number: **7265131** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14082.76000	0.00000	0.000	14105.93000	14146.22000	13996.13000
AL	27	7.38700	66.67000	11.000	7.81740	6.45390	7.89101
CA	44	12828.24200	12271.31000	1.500	13029.87865	12659.51854	12795.32774
CR	52	0.08400	113.34000	80.100	0.05555	0.16120	0.03575
FE	57	11345.63800	105353.73000	2.100	11167.66000	11246.88136	11622.37360
K	39	1964.04400	31685.05000	1.700	2003.53016	1947.05130	1941.55201
MG	24	4280.86200	110391.79000	2.500	4285.36981	4171.89137	4385.32342
MN	55	246.23300	47804.11000	2.300	243.38093	242.63608	252.68055
NA	23	12376.68600	651739.94000	0.900	12506.74663	12284.24441	12339.06841
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.42100	150.01000	11.100	0.44900	0.44772	0.36768
IN-1	115	28838.82000	0.00000	0.000	29761.10000	28628.31000	28127.04000
AG	107	0.17600	266.68000	28.600	0.11942	0.19185	0.21597
AS	75	11.44100	574.01000	13.200	10.08627	13.06355	11.17185
BA	137	33.87000	5317.76000	0.600	33.76439	33.75265	34.09417
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.48200	710.05000	9.500	0.46770	0.53279	0.44407
CU	63	0.12800	386.69000	69.600	0.03573	0.13462	0.21346
MO	98	0.45700	320.02000	41.500	0.26064	0.47061	0.63867
NI	60	0.00400	80.00000	1298.500	-0.04575	0.04545	0.01094
SB	121	0.14400	86.67000	57.000	0.04989	0.20102	0.18098
SN	120	0.25800	610.04000	33.700	0.16009	0.32659	0.28779
SR	88	68.16700	17192.43000	6.000	64.31634	67.73987	72.44409
ZN	66	1.08000	96.67000	19.800	1.31902	1.01207	0.90863
BI-1	209	149672.63000	0.00000	0.000	151503.02000	148807.20000	148707.67000
PB	208	0.03200	270.01000	39.500	0.01740	0.04086	0.03629
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00532	-0.00455
GE-1	72	5821.21000	0.00000	0.000	5621.16000	6031.32000	5811.16000
TB-1	159	170019.26000	0.00000	0.000	171173.83000	168052.30000	170831.66000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:32:19
Tube Number: 20 Batch: 133156050001A
Sample Number: **7265741** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14079.40000	0.00000	0.000	14866.60000	14316.43000	13055.17000
AL	27	1.97600	26.67000	68.100	3.52125	1.07502	1.33024
CA	44	4112.32100	3923.93000	6.300	4050.82309	3887.58147	4398.55913
CR	52	-0.05300	50.00000	0.000	0.04465	-0.11553	-0.08845
FE	57	532.91600	4944.24000	4.000	515.67960	525.97745	557.09242
K	39	1538.04900	24877.75000	8.700	1411.19419	1524.16786	1678.78529
MG	24	3742.52800	96259.28000	5.700	3535.70662	3733.31950	3958.55733
MN	55	14.86100	2923.70000	9.600	13.21504	15.55947	15.80873
NA	23	66034.23200	3461231.09000	6.900	61915.51555	65207.03390	70980.14666
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04500	16.67000	92.600	0.05325	0.08294	0.00000
IN-1	115	28878.90000	0.00000	0.000	28083.19000	29671.73000	28881.77000
AG	107	0.05000	80.00000	36.100	0.04416	0.03506	0.06961
AS	75	2.25300	133.33000	6.800	2.42861	2.14939	2.18085
BA	137	23.88200	3757.28000	7.500	25.93660	23.11112	22.59704
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.17300	436.70000	45.700	0.09849	0.16374	0.25559
CU	63	0.21600	453.36000	45.300	0.27000	0.27374	0.10294
MO	98	0.19900	140.01000	33.900	0.27621	0.15136	0.16963
NI	60	0.37400	173.34000	19.100	0.29877	0.38234	0.44137
SB	121	-0.04300	10.00000	0.000	-0.06753	-0.06753	0.00507
SN	120	-0.03300	466.70000	0.000	0.02090	-0.05181	-0.06687
SR	88	38.51400	9736.39000	2.400	39.34110	38.66036	37.54137
ZN	66	2.60100	223.34000	9.300	2.87809	2.48725	2.43771
BI-1	209	149020.68000	0.00000	0.000	148361.30000	150128.55000	148572.18000
PB	208	0.01200	143.34000	6.000	0.01183	0.01309	0.01180
TL	203	0.01000	30.00000	127.900	0.02514	0.00523	0.00039
GE-1	72	5581.10000	0.00000	0.000	5381.04000	5851.20000	5511.07000
TB-1	159	172509.54000	0.00000	0.000	172708.63000	174881.72000	169938.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:34:20
Tube Number: 21 Batch: 133156050001A
Sample Number: **7265742** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14696.50000	0.00000	0.000	14496.34000	14486.19000	15106.96000
AL	27	-1.56700	0.00000	0.000	-1.56674	-1.56674	-1.56674
CA	44	3748.77700	3743.88000	2.600	3707.32188	3679.42134	3859.58906
CR	52	0.05400	103.34000	98.200	0.00835	0.11223	0.04146
FE	57	27.02900	266.68000	31.000	25.55828	36.04664	19.48170
K	39	1498.17100	25388.69000	5.200	1528.75574	1555.84057	1409.91647
MG	24	3602.60900	96922.66000	2.400	3672.17783	3629.30318	3506.34464
MN	55	10.96500	2270.25000	9.600	11.05447	11.96480	9.87575
NA	23	63485.77200	3482245.16000	3.500	65012.90927	64468.48744	60975.91933
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30385.15000	0.00000	0.000	32277.06000	29129.69000	29748.70000
AG	107	0.02000	36.67000	131.600	-0.00404	0.01588	0.04797
AS	75	1.77700	116.67000	11.500	2.00826	1.70463	1.61799
BA	137	22.35200	3693.89000	10.200	20.43409	24.87313	21.74830
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.16300	450.03000	17.800	0.17517	0.18384	0.12975
CU	63	0.33200	566.70000	60.800	0.25588	0.17907	0.56056
MO	98	0.10400	76.67000	65.400	0.07589	0.18220	0.05489
NI	60	0.38500	183.35000	83.700	0.25449	0.75149	0.14808
SB	121	-0.03600	13.33000	0.000	-0.04588	0.00445	-0.06753
SN	120	0.37200	710.31000	110.900	0.82885	0.26457	0.02389
SR	88	36.31800	9646.35000	4.400	34.47737	37.26099	37.21592
ZN	66	3.71600	330.02000	28.500	2.49455	4.31357	4.33838
BI-1	209	153408.08000	0.00000	0.000	153690.44000	154074.93000	152458.87000
PB	208	0.09500	703.37000	0.700	0.09410	0.09532	0.09494
TL	203	0.01000	30.00000	48.500	0.00501	0.01451	0.00990
GE-1	72	5704.51000	0.00000	0.000	5421.11000	5641.16000	6051.26000
TB-1	159	177177.38000	0.00000	0.000	177527.60000	177145.00000	176859.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:36:21
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.15000	0.00000	0.000	15307.01000	15317.05000	14496.38000
AL	27	2441.83300	19424.29000	3.100	2462.01109	2359.04253	2504.44403
CA	44	2859.26500	2927.03000	10.600	2895.29289	3143.33941	2539.16329
CR	52	250.37500	125298.06000	2.800	244.74455	248.04339	258.33709
FE	57	2466.80900	24480.88000	2.100	2499.92601	2494.35822	2406.14387
K	39	2485.69400	42584.03000	3.300	2413.93751	2466.17587	2576.96738
MG	24	2463.36200	67802.04000	3.300	2428.21043	2406.58947	2555.28712
MN	55	254.70900	52798.41000	1.400	252.90108	252.40320	258.82154
NA	23	2510.95200	142026.05000	3.300	2475.77865	2452.16038	2604.91768
TI	47	261.00300	2240.22000	9.700	259.41497	236.39953	287.19484
V	51	253.48100	96265.57000	2.700	247.70880	251.80626	260.92814
IN-1	115	30717.23000	0.00000	0.000	31360.45000	31215.59000	29575.64000
AG	107	25.19800	40027.56000	0.800	25.19014	25.00270	25.39985
AS	75	263.86400	13528.54000	1.500	262.20318	260.99777	268.39157
BA	137	257.33000	42862.35000	2.500	253.22832	253.99121	264.77083
CD	111	25.17000	4297.90000	7.300	23.51865	24.83765	27.15251
CO	59	255.54100	241990.09000	2.700	251.55874	251.51164	263.55141
CU	63	257.61700	202971.80000	3.600	250.61979	253.93380	268.29846
MO	98	25.86000	19451.51000	1.500	25.69927	25.56973	26.31050
NI	60	257.90300	68776.06000	3.000	252.32192	254.79553	266.59106
SB	121	25.30500	11137.46000	5.900	23.98844	24.99610	26.92986
SN	120	25.51900	14002.98000	5.500	23.90933	26.37100	26.27551
SR	88	25.31300	6798.34000	7.100	25.02771	23.67902	27.23321
ZN	66	258.86200	23008.95000	4.000	250.65288	255.47350	270.45973
BI-1	209	161404.02000	0.00000	0.000	164356.52000	160406.82000	159448.71000
PB	208	25.87400	183336.59000	1.900	25.39173	26.36216	25.86762
TL	203	25.24400	55493.95000	1.600	24.89133	25.15537	25.68535
GE-1	72	6094.64000	0.00000	0.000	6001.25000	6101.26000	6181.42000
TB-1	159	181798.70000	0.00000	0.000	183988.81000	182319.00000	179088.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:38:22
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14990.09000	0.00000	0.000	14526.40000	14806.65000	15637.23000
AL	27	0.57800	16.67000	338.300	1.03683	2.26470	-1.56674
CA	44	6.69200	6.67000	86.600	10.13453	9.94271	0.00000
CR	52	0.11300	133.34000	114.800	0.23562	0.12669	-0.02297
FE	57	4.93400	53.34000	141.600	12.97616	1.45159	0.37295
K	39	-6.04900	703.38000	0.000	-14.08164	0.98173	-5.04820
MG	24	3.78000	103.34000	32.600	3.38321	5.16353	2.79366
MN	55	0.48700	153.34000	94.600	0.93275	0.51773	0.01166
NA	23	5.53500	1446.79000	47.800	3.28824	8.45035	4.86631
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.17800	66.67000	46.300	0.27248	0.13366	0.12656
IN-1	115	30782.23000	0.00000	0.000	29669.19000	31834.63000	30842.87000
AG	107	0.06700	113.34000	6.300	0.06766	0.06278	0.07120
AS	75	0.19000	36.00000	193.300	0.49103	-0.21869	0.29689
BA	137	0.04300	30.00000	150.100	0.11112	0.03628	-0.01793
CD	111	0.00800	5.33000	219.400	-0.01080	0.01096	0.02371
CO	59	0.31300	596.70000	22.300	0.38260	0.24319	0.31386
CU	63	-0.07600	253.35000	0.000	-0.08130	-0.05373	-0.09331
MO	98	0.11600	86.67000	41.400	0.12384	0.06412	0.15885
NI	60	0.00100	83.34000	24606.300	0.22702	-0.28067	0.05681
SB	121	0.32400	173.34000	22.900	0.23873	0.37158	0.36304
SN	120	0.61000	851.00000	180.400	-0.20835	1.86105	0.17705
SR	88	0.01300	3.33000	173.200	0.03850	0.00000	0.00000
ZN	66	0.19300	23.33000	152.700	0.50832	0.14325	-0.07374
BI-1	209	157021.35000	0.00000	0.000	156217.65000	156631.63000	158214.78000
PB	208	0.02300	223.34000	102.700	0.04575	-0.00094	0.02345
TL	203	0.02200	56.67000	65.300	0.00955	0.03764	0.01865
GE-1	72	5881.21000	0.00000	0.000	5561.14000	6051.24000	6031.25000
TB-1	159	177887.13000	0.00000	0.000	179297.58000	177420.66000	176943.16000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:40:22
Tube Number: 24 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15447.16000	0.00000	0.000	16187.76000	15707.45000	14446.27000
AL	27	2.91700	36.67000	46.200	1.93781	4.45278	2.36028
CA	44	31.23100	33.33000	64.800	54.56649	18.74502	20.38148
CR	52	0.04300	103.34000	100.700	0.02817	0.09125	0.00893
FE	57	4.02000	46.67000	58.500	5.02424	1.33412	5.70186
K	39	-6.05700	713.38000	0.000	-21.42438	-6.37862	9.63118
MG	24	1.06300	30.00000	6.000	1.01200	1.04294	1.13399
MN	55	0.16400	93.34000	155.400	0.22650	0.38028	-0.11616
NA	23	40.11900	3467.12000	20.300	32.47708	39.20832	48.67098
TI	47	0.72000	6.67000	173.200	2.16101	0.00000	0.00000
V	51	0.07400	30.00000	99.000	0.14671	0.07560	0.00000
IN-1	115	30473.78000	0.00000	0.000	31306.89000	30734.28000	29380.16000
AG	107	0.02400	43.33000	19.600	0.02067	0.02113	0.02887
AS	75	-0.21600	15.33000	0.000	-0.32862	-0.20789	-0.11179
BA	137	0.04400	30.00000	236.300	-0.01970	0.16251	-0.01197
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.27400	556.70000	30.300	0.35634	0.27384	0.19061
CU	63	0.10300	390.02000	162.900	-0.06042	0.27594	0.09446
MO	98	0.05000	36.67000	60.100	0.02608	0.03985	0.08337
NI	60	0.11000	113.34000	99.400	0.23538	0.05813	0.03622
SB	121	0.09400	70.00000	67.000	0.02177	0.13714	0.12280
SN	120	-0.27300	366.68000	0.000	-0.17408	-0.42378	-0.22060
SR	88	0.03700	10.00000	100.600	0.03648	0.07433	0.00000
ZN	66	3.13700	283.35000	10.700	2.90522	3.52262	2.98290
BI-1	209	159566.64000	0.00000	0.000	163368.64000	160003.41000	155327.88000
PB	208	0.06600	526.69000	6.200	0.06146	0.06580	0.06954
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00463	-0.00455
GE-1	72	5907.87000	0.00000	0.000	6231.33000	5921.24000	5571.05000
TB-1	159	180252.29000	0.00000	0.000	180681.52000	183186.81000	176888.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:42:22
Tube Number: 25 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15937.55000	0.00000	0.000	15356.93000	15827.39000	16628.34000
AL	27	1.23200	23.33000	155.900	3.35879	-0.37196	0.70772
CA	44	15.59700	16.67000	123.900	9.58644	37.20594	0.00000
CR	52	0.03300	100.00000	341.100	0.15565	-0.06257	0.00516
FE	57	1.96700	26.67000	61.100	3.35327	1.31948	1.22718
K	39	-2.50800	810.06000	0.000	1.55852	-10.08423	1.00098
MG	24	1.35400	40.00000	46.500	0.71116	1.38005	1.97036
MN	55	0.20800	103.34000	99.500	0.44233	0.05419	0.12610
NA	23	3.96200	1446.79000	40.000	3.23262	2.87093	5.78216
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	91.000	0.05155	0.07503	0.00000
IN-1	115	31063.65000	0.00000	0.000	30845.32000	31642.84000	30702.80000
AG	107	0.01900	36.67000	36.100	0.01477	0.02652	0.01486
AS	75	-0.14600	19.33000	0.000	-0.01447	-0.29273	-0.12939
BA	137	-0.01800	20.00000	0.000	0.10164	-0.13751	-0.01738
CD	111	-0.01500	1.33000	0.000	0.00039	-0.02292	-0.02292
CO	59	0.15300	450.03000	78.300	0.05071	0.12350	0.28502
CU	63	-0.06200	266.68000	0.000	-0.04272	-0.07632	-0.06651
MO	98	0.05700	43.33000	58.700	0.09265	0.02580	0.05319
NI	60	0.10300	113.34000	104.900	0.13155	0.19309	-0.01657
SB	121	0.04500	50.00000	46.800	0.02311	0.06500	0.04629
SN	120	-0.03900	500.03000	0.000	-0.04916	0.20290	-0.27188
SR	88	0.02400	6.67000	173.200	0.00000	0.07219	0.00000
ZN	66	1.52200	143.34000	12.600	1.49401	1.34535	1.72628
BI-1	209	162010.62000	0.00000	0.000	160700.65000	162275.71000	163055.50000
PB	208	0.02600	253.34000	24.000	0.02577	0.01981	0.03225
TL	203	-0.00300	3.33000	0.000	-0.00455	-0.00455	-0.00005
GE-1	72	6014.60000	0.00000	0.000	5961.23000	6001.28000	6081.29000
TB-1	159	182178.47000	0.00000	0.000	185353.63000	181227.89000	179953.90000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:44:22
Tube Number: 26 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15326.99000	0.00000	0.000	15797.30000	15146.85000	15036.83000
AL	27	0.90200	20.00000	7.200	0.82737	0.93018	0.94845
CA	44	32.48100	33.34000	149.000	9.31920	0.00000	88.12437
CR	52	-0.13200	13.33000	0.000	-0.11946	-0.11783	-0.15751
FE	57	1.35100	20.00000	142.200	3.24315	1.40558	-0.59689
K	39	0.13100	823.39000	3727.000	-2.65239	5.78746	-2.74078
MG	24	5.47700	153.34000	18.200	4.49405	6.48961	5.44764
MN	55	0.23900	106.67000	77.200	0.14673	0.45217	0.11936
NA	23	17.17900	2143.57000	19.900	14.61726	21.07036	15.84979
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	173.200	0.12528	0.00000	0.00000
IN-1	115	31535.84000	0.00000	0.000	31536.13000	31607.44000	31463.96000
AG	107	0.02700	50.00000	40.100	0.03275	0.01432	0.03284
AS	75	-0.33000	10.00000	0.000	-0.06360	-0.44436	-0.48216
BA	137	2.65000	476.70000	5.300	2.72799	2.48820	2.73468
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01150
CO	59	0.25900	560.04000	44.800	0.39262	0.18561	0.19822
CU	63	-0.10800	233.35000	0.000	-0.14947	-0.00189	-0.17370
MO	98	0.00900	6.67000	173.200	0.00000	0.00000	0.02595
NI	60	-0.01200	83.34000	0.000	-0.13414	0.08427	0.01280
SB	121	-0.02300	20.00000	0.000	0.02112	-0.02330	-0.06753
SN	120	7.35300	4520.90000	10.400	8.09027	7.40859	6.56023
SR	88	1.90800	526.70000	10.700	1.77479	1.80693	2.14188
ZN	66	0.87500	86.67000	68.800	0.25482	1.45621	0.91421
BI-1	209	163024.71000	0.00000	0.000	162892.56000	166367.95000	159813.62000
PB	208	0.01200	156.67000	26.600	0.00851	0.01361	0.01457
TL	203	0.00000	10.00000	0.000	-0.00455	0.00428	0.00005
GE-1	72	5961.24000	0.00000	0.000	5741.17000	5871.19000	6271.36000
TB-1	159	182796.35000	0.00000	0.000	185675.78000	183961.56000	178751.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:46:22
Tube Number: 27 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.23000	0.00000	0.000	15567.45000	15006.71000	14726.52000
AL	27	1874.80700	15000.06000	7.400	1966.03531	1942.41884	1715.96649
CA	44	3840.64900	3937.28000	3.200	3745.48742	3797.11045	3979.35000
CR	52	49.43300	24907.87000	1.600	48.68561	49.38679	50.22712
FE	57	939.59200	9352.74000	5.700	879.34076	979.96708	959.46899
K	39	9837.32100	166882.26000	1.300	9695.61079	9917.18808	9899.16322
MG	24	1874.32900	51813.67000	1.700	1837.19833	1887.58421	1898.20306
MN	55	48.49300	10129.97000	5.500	45.45811	49.68384	50.33734
NA	23	9529.43000	538096.09000	2.400	9318.53426	9504.75067	9765.00620
TI	47	231.02800	1996.86000	7.100	243.83717	236.62612	212.62179
V	51	49.88300	19027.47000	2.000	49.12593	51.04067	49.48297
IN-1	115	29873.99000	0.00000	0.000	29233.48000	30779.90000	29608.59000
AG	107	51.16800	79021.96000	2.600	52.45267	49.83628	51.21649
AS	75	10.24800	536.01000	1.500	10.15454	10.16413	10.42466
BA	137	52.00400	8439.15000	8.900	50.78522	48.10691	57.11926
CD	111	5.17000	862.70000	2.900	5.08162	5.08216	5.34484
CO	59	257.99400	237648.70000	2.300	263.70387	252.06284	258.21513
CU	63	52.33100	40353.24000	2.800	52.87681	50.64541	53.46941
MO	98	51.18800	37444.55000	3.300	53.11164	50.37670	50.07599
NI	60	53.26900	13879.22000	4.100	54.98223	50.81627	54.00807
SB	121	5.63200	2433.62000	9.500	5.52761	5.15568	6.21221
SN	120	64.66200	33759.66000	4.200	62.64053	63.62361	67.72125
SR	88	40.53300	10590.35000	5.800	42.32934	37.86264	41.40612
ZN	66	53.67200	4644.11000	5.600	55.46558	50.20553	55.34557
BI-1	209	157119.07000	0.00000	0.000	158682.90000	155265.40000	157408.91000
PB	208	15.35000	105918.65000	0.900	15.19864	15.40665	15.44503
TL	203	1.99000	4267.46000	2.100	1.98087	1.95361	2.03423
GE-1	72	5687.81000	0.00000	0.000	5491.07000	6131.31000	5441.04000
TB-1	159	177792.41000	0.00000	0.000	177357.50000	178126.40000	177893.32000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:48:22
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14222.82000	0.00000	0.000	13825.78000	15016.90000	13825.77000
AL	27	222.43700	1683.49000	13.700	255.59868	216.30537	195.40663
CA	44	36626.32300	35322.03000	5.500	37678.99673	34296.97483	37902.99617
CR	52	4.21400	2066.87000	3.700	4.38631	4.08598	4.16890
FE	57	1164.79300	10917.14000	3.700	1203.13751	1117.76602	1173.47586
K	39	2409.96500	39042.42000	4.000	2480.58698	2299.18199	2450.12589
MG	24	14513.58400	377535.41000	4.000	14923.20679	13845.43101	14772.11400
MN	55	642.90600	125893.30000	2.200	652.14620	626.59244	649.97860
NA	23	72819.85600	3863105.15000	3.500	74722.07038	69880.35181	73857.14661
TI	47	27.33200	220.01000	74.000	50.60643	17.47244	13.91735
V	51	1.05000	376.69000	10.300	1.17385	1.00167	0.97345
IN-1	115	29215.62000	0.00000	0.000	29225.88000	29352.12000	29068.85000
AG	107	1.05700	1603.47000	12.700	1.18703	0.91835	1.06705
AS	75	3.73800	207.33000	11.300	3.33999	4.18208	3.69115
BA	137	42.45500	6748.34000	3.200	41.96010	43.97897	41.42648
CD	111	0.93600	156.00000	20.100	1.04743	1.04282	0.71924
CO	59	1.71600	1830.16000	15.800	1.40397	1.86109	1.88229
CU	63	4.41700	3603.86000	12.900	3.91573	4.29608	5.03990
MO	98	1.27200	910.07000	6.400	1.35504	1.26576	1.19382
NI	60	4.18300	1140.08000	15.700	4.37631	3.45296	4.71889
SB	121	2.13400	920.06000	12.200	2.32409	1.83751	2.24079
SN	120	4.01100	2506.98000	9.200	3.73825	4.43041	3.86352
SR	88	108.24800	27686.22000	3.400	110.49684	103.98072	110.26751
ZN	66	37.88700	3210.43000	9.700	41.17642	33.93756	38.54727
BI-1	209	153557.80000	0.00000	0.000	153571.56000	156297.16000	150804.69000
PB	208	2.73400	18491.76000	2.000	2.68374	2.79286	2.72411
TL	203	0.91200	1916.86000	4.600	0.89917	0.87871	0.95958
GE-1	72	5481.10000	0.00000	0.000	4770.82000	5851.29000	5821.19000
TB-1	159	175526.92000	0.00000	0.000	176931.36000	178155.21000	171494.18000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:50:22
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14149.50000	0.00000	0.000	14366.36000	14676.53000	13405.62000
AL	27	2111.81500	15793.99000	4.000	2062.00276	2063.52954	2209.91366
CA	44	42418.14300	40726.59000	3.300	42042.55660	41224.12567	43987.74575
CR	52	51.44300	24267.08000	4.600	49.06052	51.44548	53.82247
FE	57	2005.88300	18686.85000	5.800	1969.20999	1913.11618	2135.32374
K	39	12592.00900	199625.53000	6.000	12207.06823	12103.26494	13465.69235
MG	24	16961.08300	438834.11000	4.800	16619.61320	16371.56754	17892.06954
MN	55	710.64300	138386.59000	3.400	704.97666	689.86982	737.08123
NA	23	85516.67900	4512896.39000	3.800	84690.92589	82792.47808	89066.63190
TI	47	256.35100	2073.55000	10.900	225.25955	278.90375	264.88999
V	51	53.25600	19004.10000	5.900	53.26076	50.11032	56.39775
IN-1	115	29526.65000	0.00000	0.000	29937.14000	30033.15000	28609.67000
AG	107	49.50600	75552.71000	3.600	49.02574	48.03492	51.45801
AS	75	9.80200	508.01000	2.400	9.66308	10.07012	9.67412
BA	137	90.47400	14503.48000	1.800	90.21080	89.00135	92.21066
CD	111	4.80500	791.36000	12.500	4.22894	4.75415	5.43171
CO	59	250.06200	227740.96000	0.500	249.55660	249.04341	251.58702
CU	63	50.59700	38599.01000	2.500	49.80832	52.04398	49.93781
MO	98	52.65200	38075.95000	0.900	52.64261	52.18738	53.12594
NI	60	49.89200	12855.17000	3.400	48.63454	49.20804	51.83362
SB	121	6.18500	2643.66000	8.300	6.77380	5.93724	5.84507
SN	120	50.46800	26144.32000	2.600	49.03964	50.70027	51.66438
SR	88	145.31800	37561.16000	3.000	140.43704	148.60255	146.91418
ZN	66	54.48400	4664.15000	6.100	57.96892	51.34160	54.14039
BI-1	209	150673.64000	0.00000	0.000	149521.94000	152459.89000	150039.10000
PB	208	15.93500	105445.15000	0.400	16.01275	15.87213	15.92099
TL	203	1.93400	3980.67000	7.600	1.87652	2.10041	1.82599
GE-1	72	5874.57000	0.00000	0.000	5971.25000	5240.99000	6411.48000
TB-1	159	176366.30000	0.00000	0.000	175304.04000	178367.30000	175427.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:52:22
Tube Number: 30 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15000.08000	0.00000	0.000	14786.53000	14406.29000	15807.43000
AL	27	1981.71800	15727.24000	2.700	1930.40447	2037.88648	1976.86204
CA	44	38437.96500	39096.22000	5.400	38882.03750	40266.33495	36165.52203
CR	52	48.29700	24130.38000	7.400	50.98010	49.69775	44.21206
FE	57	1840.13700	18173.20000	5.800	1889.67051	1912.13407	1718.60652
K	39	11516.44500	193665.01000	5.000	11730.39309	11956.60073	10862.34223
MG	24	15635.53900	428707.67000	5.800	15714.72023	16503.39127	14688.50642
MN	55	659.92100	136210.18000	3.900	668.30652	680.57982	630.87636
NA	23	78635.52700	4398138.16000	4.500	80212.91122	81120.69694	74572.97388
TI	47	222.38800	1896.85000	17.400	222.40733	261.06243	183.69489
V	51	48.73600	18446.62000	4.100	48.39722	50.88422	46.92588
IN-1	115	29655.66000	0.00000	0.000	30879.36000	28827.25000	29260.38000
AG	107	48.47500	74273.43000	4.300	46.07080	49.65334	49.70228
AS	75	9.87500	513.34000	7.000	9.70217	10.63804	9.28333
BA	137	87.08200	14013.05000	4.800	82.79166	87.28732	91.16675
CD	111	4.67600	776.02000	5.500	4.91435	4.40511	4.70822
CO	59	244.45600	223492.84000	2.600	237.38139	250.05076	245.93464
CU	63	48.92100	37470.18000	2.300	47.80834	48.86670	50.08823
MO	98	49.89200	36218.70000	2.900	48.46557	51.34863	49.86093
NI	60	48.94900	12681.60000	1.900	49.97929	48.67878	48.18978
SB	121	6.62500	2837.03000	4.600	6.33865	6.94025	6.59751
SN	120	51.24000	26658.70000	0.600	50.99755	51.58957	51.13333
SR	88	143.07400	37136.90000	1.200	141.15657	144.61374	143.45126
ZN	66	53.84700	4627.45000	2.500	52.84076	55.40942	53.28933
BI-1	209	151381.12000	0.00000	0.000	151573.51000	151924.28000	150645.56000
PB	208	15.75500	104738.50000	1.700	15.73253	15.49289	16.03891
TL	203	2.07300	4284.09000	8.100	2.26779	1.97245	1.97951
GE-1	72	5821.23000	0.00000	0.000	6221.48000	5931.17000	5311.04000
TB-1	159	177536.59000	0.00000	0.000	181783.42000	177156.64000	173669.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:54:23
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14723.22000	0.00000	0.000	14426.29000	14316.23000	15427.15000
AL	27	1272.88800	9889.79000	12.000	1339.82562	1380.55560	1098.28261
CA	44	24669.79500	24630.79000	6.300	24978.71236	26035.68256	22994.99067
CR	52	5.16400	2606.96000	2.900	5.32246	5.02858	5.14218
FE	57	20647.56500	200211.58000	4.600	21339.49824	21037.89316	19565.30509
K	39	3218.26500	53679.51000	6.500	3317.49956	3359.04176	2978.25291
MG	24	9904.91200	266659.00000	5.500	10224.81606	10208.54287	9281.37667
MN	55	1626.94500	329518.14000	5.000	1691.49068	1652.84681	1536.49631
NA	23	54685.13900	3002343.08000	5.500	56806.97671	55989.96743	51258.47207
TI	47	39.60900	333.35000	18.200	47.28744	32.98867	38.55071
V	51	5.27900	1956.87000	15.100	5.13133	6.13855	4.56744
IN-1	115	29236.52000	0.00000	0.000	29526.25000	29476.27000	28707.03000
AG	107	0.12600	196.68000	32.900	0.17279	0.09437	0.11048
AS	75	3.52800	197.33000	7.900	3.82916	3.47007	3.28433
BA	137	72.52900	11521.08000	1.300	73.65390	71.90086	72.03115
CD	111	0.72100	120.67000	25.500	0.74427	0.52600	0.89142
CO	59	13.30700	12274.60000	2.300	13.62709	13.26509	13.02930
CU	63	12.21200	9452.93000	5.700	12.26632	12.88371	11.48544
MO	98	2.38000	1703.50000	18.100	2.72408	1.89759	2.51734
NI	60	8.01900	2113.57000	7.400	7.33475	8.32540	8.39634
SB	121	0.46000	220.01000	32.900	0.45326	0.31187	0.61420
SN	120	1.25600	1117.05000	69.500	0.60183	0.91983	2.24686
SR	88	97.10100	24848.46000	2.800	96.43167	94.81137	100.06100
ZN	66	68.39600	5797.86000	10.500	63.34063	76.57579	65.27037
BI-1	209	151679.24000	0.00000	0.000	154457.12000	151379.40000	149201.21000
PB	208	23.00800	153237.60000	0.000	23.01777	23.00171	23.00433
TL	203	0.05700	126.68000	11.300	0.06201	0.05851	0.04959
GE-1	72	5661.12000	0.00000	0.000	5881.22000	5331.00000	5771.15000
TB-1	159	176646.90000	0.00000	0.000	178327.05000	176954.33000	174659.33000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:56:23
Tube Number: 32 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.15000	0.00000	0.000	15136.97000	14486.14000	15677.33000
AL	27	1205.10000	9629.57000	2.500	1191.84766	1238.94853	1184.50454
CA	44	26293.49800	26947.45000	3.200	26552.60892	26982.08606	25345.80042
CR	52	4.90400	2543.65000	5.300	5.20420	4.71882	4.78923
FE	57	20695.51500	205848.49000	4.100	20432.50479	21654.75545	19999.28471
K	39	4149.46600	70807.68000	4.300	4033.85897	4354.14664	4060.39312
MG	24	9897.59900	273395.33000	4.300	9981.90306	10271.51970	9439.37331
MN	55	1700.25000	353323.25000	3.400	1686.70496	1763.98630	1650.05891
NA	23	55752.98600	3140133.39000	4.600	55599.11246	58404.37773	53255.46899
TI	47	37.40900	323.35000	10.400	33.51102	37.43266	41.28257
V	51	4.94800	1886.85000	12.400	5.64879	4.70016	4.49452
IN-1	115	29985.38000	0.00000	0.000	30158.70000	29709.24000	30088.21000
AG	107	0.06700	110.00000	61.100	0.03443	0.11313	0.05380
AS	75	3.87100	219.33000	9.300	3.65835	4.28715	3.66814
BA	137	72.87700	11871.32000	2.500	73.81950	74.06916	70.74231
CD	111	0.62400	108.00000	7.100	0.62088	0.58221	0.67019
CO	59	12.25600	11614.15000	5.100	12.55935	12.66652	11.54215
CU	63	11.00100	8759.21000	5.100	11.49591	11.11085	10.39496
MO	98	2.16000	1586.83000	21.200	1.88172	1.91023	2.68677
NI	60	8.16700	2206.88000	4.400	7.74753	8.37390	8.37935
SB	121	0.56900	273.35000	9.700	0.55821	0.52062	0.62938
SN	120	0.59100	806.72000	23.300	0.43404	0.68990	0.64967
SR	88	100.61800	26410.92000	3.200	99.71954	104.15676	97.97717
ZN	66	66.76300	5801.19000	7.800	60.74987	69.34613	70.19422
BI-1	209	153197.58000	0.00000	0.000	150492.29000	154985.08000	154115.38000
PB	208	22.25000	149663.85000	1.000	22.48690	22.22758	22.03644
TL	203	0.06300	140.01000	40.600	0.07840	0.03335	0.07645
GE-1	72	5937.93000	0.00000	0.000	6241.49000	5761.14000	5811.15000
TB-1	159	178544.36000	0.00000	0.000	178187.56000	181834.35000	175611.17000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:58:24
Tube Number: 33
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15430.48000	0.00000	0.000	15727.41000	14846.71000	15717.32000
AL	27	2479.09800	20225.16000	3.800	2414.21838	2586.84991	2436.22518
CA	44	2327.91300	2436.95000	7.100	2153.15653	2479.27774	2351.30344
CR	52	249.47900	128083.51000	3.000	247.26204	257.76308	243.41280
FE	57	2509.36100	25522.46000	3.400	2516.16804	2590.78942	2421.12634
K	39	2465.31500	43339.01000	3.200	2456.99950	2548.20773	2390.73861
MG	24	2420.88300	68373.52000	2.900	2428.09094	2486.50947	2348.04809
MN	55	255.02400	54229.19000	2.200	254.93323	260.60022	249.53813
NA	23	2486.95500	144361.12000	2.300	2477.55205	2548.28350	2435.02896
TI	47	274.78500	2423.60000	1.200	274.72557	278.06185	271.56785
V	51	253.37700	98726.05000	2.600	253.23696	260.15602	246.73879
IN-1	115	31459.50000	0.00000	0.000	31003.72000	31233.52000	32141.27000
AG	107	25.28100	41129.77000	3.700	26.28611	24.43610	25.12045
AS	75	253.19300	13299.02000	0.900	254.33929	254.54116	250.69985
BA	137	254.68200	43467.02000	1.200	253.34032	258.16448	252.53978
CD	111	25.22300	4416.59000	2.200	25.51794	25.57184	24.58043
CO	59	253.78900	246208.22000	2.500	259.59888	254.70899	247.06023
CU	63	256.29600	206933.61000	1.600	260.24254	256.49074	252.15536
MO	98	25.26200	19468.33000	1.700	25.57308	24.75729	25.45656
NI	60	251.10800	68614.64000	1.900	256.57090	249.27368	247.47804
SB	121	25.09000	11320.84000	2.600	25.09948	25.74292	24.42669
SN	120	29.67700	16589.53000	14.400	27.75757	34.56265	26.70968
SR	88	24.76500	6814.99000	7.000	26.01568	25.49471	22.78398
ZN	66	253.77600	23118.98000	1.800	251.97310	259.09060	250.26370
BI-1	209	163947.21000	0.00000	0.000	164779.61000	163253.93000	163808.10000
PB	208	25.73900	185282.50000	0.200	25.80493	25.73449	25.67684
TL	203	25.04700	55938.68000	2.000	25.51597	25.11371	24.51128
GE-1	72	5794.53000	0.00000	0.000	5781.16000	5451.13000	6151.30000
TB-1	159	183672.01000	0.00000	0.000	184172.17000	180479.72000	186364.14000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:00:25
Tube Number: 34
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15283.80000	0.00000	0.000	14496.51000	16147.91000	15206.99000
AL	27	2.52200	33.33000	51.100	1.04220	3.11752	3.40736
CA	44	6.61200	6.67000	86.700	10.15542	0.00000	9.68096
CR	52	0.11400	136.67000	165.600	0.29863	0.12169	-0.07846
FE	57	7.14500	76.67000	71.900	13.00414	5.03811	3.39222
K	39	5.27500	903.41000	188.000	14.36797	-5.29603	6.75169
MG	24	3.87100	106.67000	43.000	5.27399	2.02899	4.30941
MN	55	0.58900	180.01000	35.600	0.48443	0.45255	0.83131
NA	23	1.68300	1250.10000	237.100	6.10888	0.58573	-1.64411
TI	47	1.85000	16.67000	90.300	0.00000	3.24952	2.30038
V	51	0.20800	80.00000	34.200	0.19113	0.14707	0.28634
IN-1	115	31529.55000	0.00000	0.000	31234.34000	32436.57000	30917.73000
AG	107	0.04900	86.67000	6.900	0.04549	0.04962	0.05225
AS	75	0.01100	28.00000	907.300	-0.09762	0.10873	0.02317
BA	137	0.05800	33.33000	157.300	0.15770	0.03305	-0.01822
CD	111	-0.00400	3.33000	0.000	-0.01141	0.01033	-0.01129
CO	59	0.34500	643.37000	47.100	0.52418	0.30284	0.20733
CU	63	0.04500	356.69000	149.600	0.02782	-0.01198	0.12050
MO	98	0.08100	63.34000	101.400	0.07842	0.16363	0.00000
NI	60	0.18500	136.67000	69.100	0.27356	0.03845	0.24233
SB	121	0.31000	170.01000	41.600	0.20101	0.27725	0.45245
SN	120	0.01700	536.70000	373.400	0.08809	-0.04069	0.00505
SR	88	0.06000	16.67000	92.600	0.10970	0.07043	0.00000
ZN	66	0.44200	46.67000	118.400	1.03206	0.03274	0.26139
BI-1	209	160647.12000	0.00000	0.000	160114.56000	161850.85000	159975.95000
PB	208	0.02400	240.01000	57.400	0.02448	0.03819	0.01027
TL	203	0.02300	60.00000	53.300	0.03672	0.01360	0.01840
GE-1	72	5827.90000	0.00000	0.000	6081.33000	5321.01000	6081.35000
TB-1	159	183087.54000	0.00000	0.000	183536.56000	181866.38000	183859.68000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:02:28
Tube Number: 35
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15010.08000	0.00000	0.000	15197.03000	14736.48000	15096.73000
AL	27	86.30000	696.71000	10.000	79.32041	95.96513	83.61438
CA	44	186.27100	190.01000	8.100	203.44302	179.83094	175.53968
CR	52	1.91000	1033.41000	15.000	1.82036	1.67818	2.23171
FE	57	97.73500	973.40000	21.200	81.23831	91.00070	120.96485
K	39	204.86800	4244.01000	3.100	212.19571	202.11499	200.29384
MG	24	93.69600	2576.94000	7.000	93.79308	87.08922	100.20504
MN	55	2.03400	476.70000	25.100	2.21774	1.45770	2.42669
NA	23	198.24500	12237.93000	8.700	194.09995	217.18103	183.45265
TI	47	19.07600	163.34000	60.300	25.32196	26.11333	5.79296
V	51	0.55400	210.01000	6.100	0.54699	0.59094	0.52440
IN-1	115	30948.85000	0.00000	0.000	31544.50000	31035.81000	30266.23000
AG	107	0.48900	790.05000	7.100	0.50479	0.51313	0.44960
AS	75	1.76700	118.00000	19.600	2.02894	1.37462	1.89867
BA	137	2.04100	366.69000	28.300	2.25959	2.47714	1.38582
CD	111	0.45900	82.67000	30.400	0.39882	0.35939	0.61860
CO	59	0.58000	856.73000	12.500	0.65999	0.56096	0.51895
CU	63	2.30600	2143.55000	11.300	2.08947	2.59539	2.23314
MO	98	0.65600	496.70000	14.900	0.60830	0.59196	0.76889
NI	60	1.75400	556.70000	27.200	1.61971	2.28280	1.35873
SB	121	1.03700	490.03000	13.200	1.12899	1.10356	0.87930
SN	120	1.91200	1536.81000	5.200	1.88210	2.02247	1.82994
SR	88	1.11800	303.35000	22.100	1.37599	0.88328	1.09447
ZN	66	17.34600	1560.14000	3.700	16.89918	17.06597	18.07260
BI-1	209	160323.17000	0.00000	0.000	161064.08000	159941.97000	159963.45000
PB	208	1.12400	7981.13000	3.000	1.14761	1.14006	1.08577
TL	203	0.51100	1126.76000	8.200	0.55622	0.47292	0.50500
GE-1	72	5877.89000	0.00000	0.000	5761.18000	5821.19000	6051.31000
TB-1	159	180267.73000	0.00000	0.000	180693.83000	179296.23000	180813.12000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:04:28
Tube Number: 36
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14900.12000	0.00000	0.000	15647.49000	15086.92000	13965.96000
AL	27	9479.86100	74511.16000	7.100	8776.35053	9540.46026	10122.77074
CA	44	9515.78800	9612.98000	5.300	8968.95622	9624.49433	9953.91314
CR	52	0.03200	93.34000	384.000	-0.08068	0.16125	0.01465
FE	57	9743.13400	95526.90000	5.600	9319.87738	9546.04414	10363.48112
K	39	9750.41700	162904.40000	5.700	9323.01212	9544.28835	10383.94976
MG	24	9362.11800	254846.47000	6.300	8823.55257	9275.98789	9986.81401
MN	55	0.18400	93.34000	65.600	0.24354	0.26251	0.04500
NA	23	9410.15800	523334.82000	6.100	8948.16258	9226.77639	10055.53593
TI	47	194.84700	1663.49000	13.400	222.46815	170.43776	191.63589
V	51	0.02600	10.00000	173.200	0.00000	0.07871	0.00000
IN-1	115	30490.85000	0.00000	0.000	31334.99000	29692.40000	30445.15000
AG	107	0.02300	43.33000	107.900	0.04533	0.02852	-0.00404
AS	75	-0.27400	12.67000	0.000	-0.02237	-0.39904	-0.40204
BA	137	-0.05700	13.33000	0.000	-0.01980	-0.01329	-0.13751
CD	111	-0.00700	2.67000	0.000	-0.02292	0.00130	0.00070
CO	59	0.11900	410.03000	30.600	0.13819	0.14154	0.07687
CU	63	-0.01000	303.35000	0.000	0.06381	-0.09468	0.00038
MO	98	193.24000	144252.41000	2.900	187.56606	198.83130	193.32204
NI	60	-0.11400	53.33000	0.000	-0.20653	-0.08398	-0.05188
SB	121	-0.00600	26.67000	0.000	-0.02292	0.00309	0.00134
SN	120	-0.08300	466.70000	0.000	-0.21185	-0.22850	0.19189
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.44900	46.67000	123.300	1.02851	0.39155	-0.07374
BI-1	209	155596.36000	0.00000	0.000	154458.45000	155549.13000	156781.51000
PB	208	0.01600	176.67000	22.200	0.01688	0.01230	0.01939
TL	203	0.00000	10.00000	6056.800	-0.00455	-0.00455	0.00950
GE-1	72	5731.16000	0.00000	0.000	6111.31000	5541.11000	5541.06000
TB-1	159	179126.86000	0.00000	0.000	179095.99000	179682.48000	178602.11000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:06:28
Tube Number: 37
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14803.13000	0.00000	0.000	15196.68000	14576.34000	14636.38000
AL	27	9915.54900	77593.49000	3.300	9542.72590	10076.61963	10127.30095
CA	44	9934.18300	9989.79000	4.100	10029.73669	10285.00680	9487.80471
CR	52	20.49300	10166.56000	2.800	19.86361	21.00467	20.60986
FE	57	10134.99100	98917.52000	1.200	10006.73952	10160.54972	10237.68249
K	39	10311.66000	171442.60000	2.000	10103.43298	10314.93408	10516.61202
MG	24	9819.02900	266149.50000	0.800	9730.50314	9870.22961	9856.35543
MN	55	20.56100	4240.68000	8.800	18.56144	22.05357	21.06893
NA	23	9888.22900	547452.98000	1.300	9743.23761	9991.08874	9930.36204
TI	47	201.20600	1703.49000	8.500	208.34442	213.61128	181.66177
V	51	0.01800	6.67000	173.200	0.00000	0.00000	0.05409
IN-1	115	30681.37000	0.00000	0.000	30563.46000	31396.65000	30083.99000
AG	107	20.24800	32130.72000	1.700	19.87442	20.29111	20.57767
AS	75	19.82500	1040.04000	1.200	20.01854	19.54994	19.90703
BA	137	0.00100	23.33000	6020.300	-0.01683	0.09744	-0.07621
CD	111	19.91700	3401.70000	3.100	20.37880	19.21891	20.15411
CO	59	20.70400	19861.74000	3.700	20.37186	20.15391	21.58701
CU	63	20.23200	16217.88000	1.700	20.39596	19.83196	20.46757
MO	98	201.09500	151081.20000	2.400	200.78597	196.34864	206.14982
NI	60	21.40400	5781.18000	1.800	21.10664	21.27273	21.83142
SB	121	-0.01400	23.33000	0.000	0.02394	-0.02301	-0.04430
SN	120	-0.13600	443.36000	0.000	-0.19268	0.13812	-0.35400
SR	88	0.11300	30.00000	100.500	0.11211	0.00000	0.22780
ZN	66	22.57700	2013.54000	6.300	23.32093	23.47048	20.93850
BI-1	209	157909.96000	0.00000	0.000	159852.69000	159630.15000	154247.05000
PB	208	0.02100	213.34000	54.500	0.01456	0.01459	0.03464
TL	203	0.00000	10.00000	9967.400	0.00464	0.00005	-0.00455
GE-1	72	5771.18000	0.00000	0.000	5821.19000	5631.15000	5861.20000
TB-1	159	180496.23000	0.00000	0.000	182480.62000	180165.84000	178842.24000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:08:28
Tube Number: 38
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15090.29000	0.00000	0.000	14866.87000	15447.30000	14956.70000
AL	27	2458.75200	19627.80000	3.400	2433.08659	2391.82687	2551.34194
CA	44	2631.91600	2696.97000	7.400	2505.58345	2535.35017	2854.81305
CR	52	254.80900	127946.36000	3.900	259.93443	243.28721	261.20563
FE	57	2519.03500	25061.73000	3.800	2628.09435	2450.69535	2478.31406
K	39	2565.90700	44097.54000	2.600	2548.91412	2509.37100	2639.43648
MG	24	2455.10000	67821.80000	2.700	2479.06759	2379.52922	2506.70189
MN	55	258.08500	53660.80000	4.800	271.27133	246.82931	256.15416
NA	23	2475.54300	140535.74000	3.500	2558.98628	2384.46159	2483.18119
TI	47	268.39200	2316.91000	9.600	281.21195	285.37440	238.58909
V	51	257.55200	98172.63000	1.800	256.88671	253.26596	262.50452
IN-1	115	30570.14000	0.00000	0.000	30556.49000	29574.88000	31579.05000
AG	107	25.80900	40799.19000	1.000	25.91670	25.99657	25.51253
AS	75	267.84200	13663.32000	2.900	272.96786	271.81024	258.74853
BA	137	263.36100	43657.63000	2.300	263.10091	269.65242	257.33103
CD	111	26.26700	4467.28000	3.400	26.63327	26.91006	25.25774
CO	59	260.64300	245623.12000	3.000	262.88606	266.96295	252.07911
CU	63	259.14300	203195.82000	3.500	260.13154	267.80176	249.49536
MO	98	26.46800	19805.28000	3.700	26.89738	27.15417	25.35293
NI	60	261.93400	69518.09000	3.100	266.68996	266.63685	252.47651
SB	121	25.97500	11377.73000	5.400	26.42989	27.09624	24.39782
SN	120	26.04100	14216.49000	1.000	26.06631	26.27652	25.78024
SR	88	26.12600	6988.36000	4.200	27.10651	26.34469	24.92680
ZN	66	267.51900	23669.82000	2.800	268.23037	274.67759	259.64797
BI-1	209	162871.56000	0.00000	0.000	160629.98000	164839.70000	163145.00000
PB	208	25.60000	183058.52000	1.300	25.97178	25.43605	25.39311
TL	203	24.80100	55025.65000	0.500	24.66186	24.90763	24.83231
GE-1	72	5831.18000	0.00000	0.000	5761.16000	5891.17000	5841.21000
TB-1	159	183042.03000	0.00000	0.000	185537.48000	181147.38000	182441.23000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:10:28
Tube Number: 39
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14583.17000	0.00000	0.000	14086.16000	14196.11000	15467.24000
AL	27	2.62500	33.33000	146.300	1.11820	-0.23467	6.99147
CA	44	17.00000	16.67000	127.800	0.00000	41.48128	9.51807
CR	52	0.12600	136.67000	84.300	0.24791	0.05420	0.07568
FE	57	6.97200	73.33000	67.800	10.16940	1.53969	9.20807
K	39	-0.37400	776.72000	0.000	0.30986	-3.21418	1.78365
MG	24	3.32300	86.67000	125.600	8.14164	0.76932	1.05914
MN	55	0.08400	70.00000	170.300	0.24853	-0.01121	0.01472
NA	23	1.29800	1176.76000	21.200	1.55344	1.00666	1.33261
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.26300	96.67000	10.900	0.28100	0.27882	0.23032
IN-1	115	31588.63000	0.00000	0.000	32266.77000	31876.16000	30622.95000
AG	107	0.06500	113.34000	70.300	0.10384	0.07483	0.01491
AS	75	-0.01100	26.67000	0.000	0.03764	-0.29439	0.22437
BA	137	0.03500	30.00000	491.000	0.03395	0.20961	-0.13751
CD	111	0.01100	6.00000	107.300	0.01051	-0.00036	0.02404
CO	59	0.32300	623.37000	33.500	0.24575	0.44614	0.27598
CU	63	0.04700	360.02000	258.500	0.18353	-0.04195	-0.00194
MO	98	0.20500	160.00000	52.100	0.32897	0.14088	0.14664
NI	60	0.14500	126.67000	93.200	0.04032	0.29783	0.09717
SB	121	0.22800	133.34000	5.600	0.21408	0.23946	0.22920
SN	120	-0.00400	526.70000	0.000	0.05420	-0.06078	-0.00453
SR	88	0.01200	3.33000	173.200	0.03540	0.00000	0.00000
ZN	66	0.32000	36.67000	117.400	0.67555	0.35967	-0.07374
BI-1	209	159761.38000	0.00000	0.000	159346.68000	158742.50000	161194.95000
PB	208	0.01600	180.00000	131.600	0.04037	0.00468	0.00305
TL	203	0.02500	63.33000	57.600	0.03692	0.02783	0.00912
GE-1	72	5807.84000	0.00000	0.000	5661.12000	6081.29000	5681.10000
TB-1	159	183078.54000	0.00000	0.000	183340.78000	183564.51000	182330.33000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

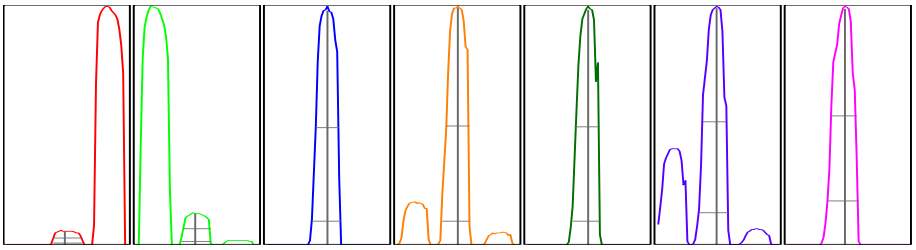
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		8.0 V	Deflect		13.2 V	
Extract 2		-170.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-90 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

1331202M07

Mercury Run Data Report

Data File Name: 1331202.M07

Run Name: 1331202M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By	Reviewed Date
Damary Valentin	11/08/2013 1:26PM

Method Reference Name(s):

EPA 245.1 rev 3

SW-846 7470A

Verified By:	Verified Date
Jennifer L Moyer	11/08/2013 2:20PM
Robert Strocko	11/10/2013 8:26AM

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/08/2013 07:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	-23.0

2 Burn Date/Time: 11/08/2013 07:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1312.0

3 Burn Date/Time: 11/08/2013 07:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3312.0

4 Burn Date/Time: 11/08/2013 07:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6723.0

5 Burn Date/Time: 11/08/2013 07:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	17288.0

6 Burn Date/Time: 11/08/2013 07:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33001.0

CorrelationCoefficient = 1.00000
Slope = 6639.7721500000
Y-Intercept = 87.8493700000

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/08/2013 07:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.5107	16762.0

8 Burn Date/Time: 11/08/2013 07:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0328	-136.0

9 Burn Date/Time: 11/08/2013 07:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1964	1387.0

10 Burn Date/Time: 11/08/2013 07:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9877	6644.0

11 Burn Date/Time: 11/08/2013 07:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0254	-87.0

12 Burn Date/Time: 11/08/2013 07:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0141	-12.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/08/2013 07:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9170	6174.0		

14 Burn Date/Time: 11/08/2013 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	U*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0206	-55.0		

15 Burn Date/Time: 11/08/2013 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	D*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

16 Burn Date/Time: 11/08/2013 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7246286	R*********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9676	6510.0		

17 Burn Date/Time: 11/08/2013 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266607	**********	40	40	1.00	133095714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0167	-29.0		

18 Burn Date/Time: 11/08/2013 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0054	46.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/08/2013 07:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9521	6407.0		

20 Burn Date/Time: 11/08/2013 07:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264692	**********	8	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.8894	19278.0		

21 Burn Date/Time: 11/08/2013 07:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264889	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0482	-238.0		

22 Burn Date/Time: 11/08/2013 07:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9837	6617.0

23 Burn Date/Time: 11/08/2013 07:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0251	-85.0

24 Burn Date/Time: 11/08/2013 07:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264890	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0010	75.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/08/2013 07:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261320	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0396	345.0		

26 Burn Date/Time: 11/08/2013 07:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265746	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0404	350.0		

27 Burn Date/Time: 11/08/2013 07:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263711	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4353	2974.0		

28 Burn Date/Time: 11/08/2013 07:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264230	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0069	36.0		

29 Burn Date/Time: 11/08/2013 08:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266437	**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0515	424.0		

30 Burn Date/Time: 11/08/2013 08:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	U**********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0126	-2.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/08/2013 08:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	D*********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0104	13.0		

32 Burn Date/Time: 11/08/2013 08:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266438	R*********	40	40	1.00	133105714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9894	6655.0		

33 Burn Date/Time: 11/08/2013 08:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0274	-100.0		

34 Burn Date/Time: 11/08/2013 08:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9852	6627.0

35 Burn Date/Time: 11/08/2013 08:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0245	-81.0

36 Burn Date/Time: 11/08/2013 08:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9269	6240.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/08/2013 08:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265645	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0132	-6.0		

38 Burn Date/Time: 11/08/2013 08:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266278	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1880	1331.0		

39 Burn Date/Time: 11/08/2013 08:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266279	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4308	2944.0		

40 Burn Date/Time: 11/08/2013 08:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266280	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.7038	18045.0		

41 Burn Date/Time: 11/08/2013 08:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262069	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0320	-131.0		

42 Burn Date/Time: 11/08/2013 08:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262070	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/08/2013 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262318	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

44 Burn Date/Time: 11/08/2013 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262319	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0174	-34.0		

45 Burn Date/Time: 11/08/2013 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262320	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0081	28.0		

46 Burn Date/Time: 11/08/2013 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9796	6590.0

47 Burn Date/Time: 11/08/2013 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0183	-40.0

48 Burn Date/Time: 11/08/2013 08:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262321	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	-28.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/08/2013 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262322	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

50 Burn Date/Time: 11/08/2013 08:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262323	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0056	45.0		

51 Burn Date/Time: 11/08/2013 08:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262324	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0078	30.0		

52 Burn Date/Time: 11/08/2013 08:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262325	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

53 Burn Date/Time: 11/08/2013 08:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262326	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0144	-14.0		

54 Burn Date/Time: 11/08/2013 08:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262327	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0078	134.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/08/2013 08:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262328	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0137	-9.0		

56 Burn Date/Time: 11/08/2013 08:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265131	U*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0129	-4.0		

57 Burn Date/Time: 11/08/2013 08:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265134	D*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

58 Burn Date/Time: 11/08/2013 09:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9731	6547.0

59 Burn Date/Time: 11/08/2013 09:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0150	-18.0

60 Burn Date/Time: 11/08/2013 09:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265132	R*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9239	6220.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/08/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265133	M*********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9102	6129.0		

62 Burn Date/Time: 11/08/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265140	**********	40	40	1.00	133105713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0284	-107.0		

63 Burn Date/Time: 11/08/2013 09:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0131	-5.0		

64 Burn Date/Time: 11/08/2013 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9362	6302.0		

65 Burn Date/Time: 11/08/2013 09:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262329	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0238	-76.0		

66 Burn Date/Time: 11/08/2013 09:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262330	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0117	4.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/08/2013 09:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262331	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0034	59.0		

68 Burn Date/Time: 11/08/2013 09:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263088	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0331	302.0		

69 Burn Date/Time: 11/08/2013 09:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263089	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0045	52.0		

70 Burn Date/Time: 11/08/2013 09:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9712	6534.0

71 Burn Date/Time: 11/08/2013 09:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0152	-19.0

72 Burn Date/Time: 11/08/2013 09:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263090	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0101	15.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/08/2013 09:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263091	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0162	-26.0		

74 Burn Date/Time: 11/08/2013 09:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263092	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0108	10.0		

75 Burn Date/Time: 11/08/2013 09:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263093	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	-20.0		

76 Burn Date/Time: 11/08/2013 09:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263094	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0110	9.0		

77 Burn Date/Time: 11/08/2013 09:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264065	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0077	31.0		

78 Burn Date/Time: 11/08/2013 09:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264067	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0060	42.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/08/2013 09:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264069	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2091	1471.0		

80 Burn Date/Time: 11/08/2013 09:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264071	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

81 Burn Date/Time: 11/08/2013 09:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264267	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0062	41.0		

82 Burn Date/Time: 11/08/2013 09:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9769	6572.0

83 Burn Date/Time: 11/08/2013 09:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0250	-84.0

84 Burn Date/Time: 11/08/2013 09:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265658	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0090	22.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/08/2013 09:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265659	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0162	-26.0		

86 Burn Date/Time: 11/08/2013 09:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265660	U*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0128	-3.0		

87 Burn Date/Time: 11/08/2013 10:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265663	D*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0074	33.0		

88 Burn Date/Time: 11/08/2013 10:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265661	R*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9596	6457.0		

89 Burn Date/Time: 11/08/2013 10:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265662	M*********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9370	6307.0		

90 Burn Date/Time: 11/08/2013 10:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265664	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0174	-34.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/08/2013 10:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265665	**********	40	40	1.00	133105713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0446	378.0		

92 Burn Date/Time: 11/08/2013 10:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0171	-32.0		

93 Burn Date/Time: 11/08/2013 10:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9496	6391.0		

94 Burn Date/Time: 11/08/2013 10:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9629	6479.0

95 Burn Date/Time: 11/08/2013 10:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0226	-68.0

96 Burn Date/Time: 11/08/2013 10:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263051	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0270	261.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/08/2013 10:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263056	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0040	55.0		

98 Burn Date/Time: 11/08/2013 10:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263057	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

99 Burn Date/Time: 11/08/2013 10:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263058	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0006	78.0		

100 Burn Date/Time: 11/08/2013 10:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263059	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

101 Burn Date/Time: 11/08/2013 10:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263060	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0119	3.0		

102 Burn Date/Time: 11/08/2013 10:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265223	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0045	52.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/08/2013 10:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265224	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0102	14.0		

104 Burn Date/Time: 11/08/2013 10:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265228	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

105 Burn Date/Time: 11/08/2013 10:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265230	U*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0068	37.0		

106 Burn Date/Time: 11/08/2013 10:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9648	6492.0

107 Burn Date/Time: 11/08/2013 10:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0232	-72.0

108 Burn Date/Time: 11/08/2013 10:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265233	D*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0016	71.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/08/2013 10:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265231	R*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9430	6347.0		

110 Burn Date/Time: 11/08/2013 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265232	M*********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9135	6151.0		

111 Burn Date/Time: 11/08/2013 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265235	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0209	-57.0		

112 Burn Date/Time: 11/08/2013 10:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265238	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0021	96.0		

113 Burn Date/Time: 11/08/2013 10:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265240	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0229	-70.0		

114 Burn Date/Time: 11/08/2013 10:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265243	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0138	-10.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/08/2013 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265247	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0211	-58.0		

116 Burn Date/Time: 11/08/2013 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265248	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0132	-6.0		

117 Burn Date/Time: 11/08/2013 11:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265525	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0205	218.0		

118 Burn Date/Time: 11/08/2013 11:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
0.9362	6302.0

119 Burn Date/Time: 11/08/2013 11:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0053	47.0

120 Burn Date/Time: 11/08/2013 11:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265527	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0145	178.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

121 Burn Date/Time: 11/08/2013 11:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265529	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0140	-11.0		

122 Burn Date/Time: 11/08/2013 11:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265531	**********	40	40	1.00	133105713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0042	110.0		

123 Burn Date/Time: 11/08/2013 11:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0110	9.0		

124 Burn Date/Time: 11/08/2013 11:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9685	6516.0		

125 Burn Date/Time: 11/08/2013 11:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262193	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0283	-106.0		

126 Burn Date/Time: 11/08/2013 11:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263628	U*1*******	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0053	47.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

127 Burn Date/Time: 11/08/2013 11:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263628	R*1*******	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4930	10001.0		

128 Burn Date/Time: 11/08/2013 11:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264111	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0301	-118.0		

129 Burn Date/Time: 11/08/2013 11:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264122	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

130 Burn Date/Time: 11/08/2013 11:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 11		1	1	1.00

AVG (ppb)	Intensity
0.9654	6496.0

131 Burn Date/Time: 11/08/2013 11:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 11		1	1	1.00

AVG (ppb)	Intensity
-0.0099	16.0

132 Burn Date/Time: 11/08/2013 11:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	U*********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0069	36.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

133 Burn Date/Time: 11/08/2013 11:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	D*********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0037	57.0		

134 Burn Date/Time: 11/08/2013 11:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	R*********	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5457	10351.0		

135 Burn Date/Time: 11/08/2013 11:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261311	M*********	4	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5195	10177.0		

136 Burn Date/Time: 11/08/2013 11:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262715	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0284	-107.0		

137 Burn Date/Time: 11/08/2013 11:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261866	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0191	-45.0		

138 Burn Date/Time: 11/08/2013 11:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261872	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	-28.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

139 Burn Date/Time: 11/08/2013 11:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261886	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0471	395.0		

140 Burn Date/Time: 11/08/2013 11:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261463	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0292	276.0		

141 Burn Date/Time: 11/08/2013 11:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261466	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0143	-13.0		

142 Burn Date/Time: 11/08/2013 11:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 12		1	1	1.00

AVG (ppb)	Intensity
1.0142	6820.0

143 Burn Date/Time: 11/08/2013 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 12		1	1	1.00

AVG (ppb)	Intensity
-0.0224	-67.0

144 Burn Date/Time: 11/08/2013 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265197	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0068	37.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

145 Burn Date/Time: 11/08/2013 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264454	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0343	310.0		

146 Burn Date/Time: 11/08/2013 12:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266829	**********	40	40	1.00	133115713001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0134	-7.0		

147 Burn Date/Time: 11/08/2013 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0117	4.0		

148 Burn Date/Time: 11/08/2013 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9168	6173.0		

149 Burn Date/Time: 11/08/2013 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262237	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	186.0		

150 Burn Date/Time: 11/08/2013 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7256103	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0116	5.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

151 Burn Date/Time: 11/08/2013 12:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	U*********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0003	80.0		

152 Burn Date/Time: 11/08/2013 12:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	D*********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0099	16.0		

153 Burn Date/Time: 11/08/2013 12:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	R*********	4	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5192	10175.0		

154 Burn Date/Time: 11/08/2013 12:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 13		1	1	1.00

AVG (ppb)	Intensity
1.0010	6732.0

155 Burn Date/Time: 11/08/2013 12:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 13		1	1	1.00

AVG (ppb)	Intensity
-0.0193	-46.0

156 Burn Date/Time: 11/08/2013 12:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261860	M*********	4	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5302	10248.0		

LANCASTER LABORATORIES

Run Name: 1331202M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

157 Burn Date/Time: 11/08/2013 12:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7261875	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0191	-45.0		

158 Burn Date/Time: 11/08/2013 12:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266830	**********	40	40	1.00	133115713002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0281	-105.0		

159 Burn Date/Time: 11/08/2013 12:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1886	1335.0

160 Burn Date/Time: 11/08/2013 12:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 14		1	1	1.00

AVG (ppb)	Intensity
0.9611	6467.0

161 Burn Date/Time: 11/08/2013 12:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 14		1	1	1.00

AVG (ppb)	Intensity
-0.0200	-51.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 5705 ICP SW846 Water

Batch# 13 311 5705 006

Balance ID#: CLEAR **Start Time:** 11/9/13 8:30 **End Time:** 11/9/13 12:39 **Hot Block:** 12

Pipette ID: W/1000

Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HCL	P13301C	5.00
HNO3	1113030	3.00
ICP Spike 1A	1317716#29	1.00
ICP Spike 1B	1317717#29	1.00
LCS A1	1317716#29	1.00
LCS B1	1317717#29	1.00

Method Ref: SW-846 3010A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184

11/9/2013

v 1.0.1

Batch# 13 311 5705 006

LLENS Batch Chronology and Change Log - ICP SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:07	01184
2)	Sample Vol		11/9/13 9:43	01184
3)	Final Vol	CLEAR	11/9/13 9:43	01184
4)	Trial		11/9/13 9:43	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:43	01184

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5705 ICP SW846 Water

Batch# 13 311 5705 006

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Balance ID#: CLEAR **Start Time:** 11/9/13 8:37 **End Time:** 11/9/13 12:48 **Hot Block:** 13

Pipette ID: JU06758
Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	1113030	3.00
ICP/MS Spike	1316309#5	0.50
LCS	1316309#5	0.50

Method Ref: SW-846 3010A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184
11/9/2013
v 1.0.1

Batch# 13 311 6050 004

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:10	01184
2)	Sample Vol		11/9/13 9:41	01184
3)	Final Vol	CLEAR	11/9/13 9:41	01184
4)	Trial		11/9/13 9:41	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:41	01184

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 13 310 5713 004

Balance ID#: CLEAR **Start Time:** 11/7/13 16:00 **End Time:** 11/7/13 18:00 **Hot Block:** 15

Pipette ID: HJ29630

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	H13-297 S	3.20
5%KMnO4	H13-305 B	6.00
H2SO4	135111	2.00
HNO3	1113030	1.00
LCS	H13-311 A	0.04
Spike 1ppm Hg	H13-311 A	0.04

Method Ref: SW-846 7470A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7263051	11/14/13 19:30		WW	N8			008a	1306159	
4)	7263056	11/14/13 19:30		WW	N8			008a	1306159	
5)	7263057	11/14/13 19:30		WW	N8			008a	1306159	
6)	7263058FD	11/14/13 19:30		WW	N8			008a	1306159	
7)	7263059FB	11/14/13 19:30		WW	N8			008a	1306159	
8)	7263060FB	11/14/13 19:30		WW	N8			008a	1306159	
9)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
12)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
13)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
14)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
15)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
16)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
17)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
18)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
19)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
20)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
21)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
22)	7265525	11/18/13 09:05		WW	P8			008a	1306159	
23)	7265527	11/18/13 09:05		WW	P8			008a	1306159	
24)	7265529	11/18/13 09:05		WW	P8			008a	1306159	

Prep Employee: NSM00823

11/7/2013

v 1.0.1

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
25)	7265531FD	11/18/13 09:05		WW	P8			008a	1306159	

Batch# 13 310 5713 004

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/6/13 17:59	00823
2)	Sample Vol		11/7/13 18:39	00823
3)	Final Vol	CLEAR	11/7/13 18:39	00823
4)	Trial		11/7/13 18:39	00823
5)	Upload Prep	US19VDIELA01	11/7/13 18:39	00823

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 13 310 5713 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
7263051	11/14/13	N8	FFHEC	KVM03-01	40.0000		40.0000	1
7263056	11/14/13	N8	DDHER	KVM03-06	40.0000		40.0000	1
7263057	11/14/13	N8	EEHER	KVM03-07	40.0000		40.0000	1
7263058FD	11/14/13	N8	F1HER	KVM03-08FD	40.0000		40.0000	1
7263059FB	11/14/13	N8	FB1HE	KVM03-09FB	40.0000		40.0000	1
7263060FB	11/14/13	N8	FB2HE	KVM03-10FB	40.0000		40.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	40.0000		40.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	40.0000		40.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	40.0000		40.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	40.0000		40.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	40.0000		40.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	40.0000		40.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	40.0000		40.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	40.0000		40.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	40.0000		40.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	40.0000		40.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	40.0000		40.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	40.0000		40.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	40.0000		40.0000	1
7265525	11/18/13	P8	3-004		40.0000		40.0000	1
7265527	11/18/13	P8	4D004		40.0000		40.0000	1
7265529	11/18/13	P8	8D004		40.0000		40.0000	1
7265531FD	11/18/13	P8	D2004	FD	40.0000		40.0000	1

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5701 CCV	H13-301G	Hg 1.0 mg/L Cont		11-04-13	H13-301C	.10 ml			
2	CCV	H	↓			↓	.10			
3	CRA	I	Hg 0.1 mg/L Cont			H13-301D	.20			
4	Std Cal	J	Hg 0.1 mg/L Cal			H13-301B	.30			
5	↓	K	↓			↓	.50			
6		L	Hg 1.0 mg/L Cal			H13-301A	.10			
7		m	↓			↓	.25			
8		N	↓		↓	↓	.50 ↓			
9	↓	O								
10	SI	P	Hg 0.1 mg/L Cal		11-04-13	H13-301B	.10 ml			
11	CRA	Q	Hg 0.1 mg/L Cont		↓	H13-301D	.10			
12	CRA	R	↓		↓	↓	.40 ↓			
13	Aqua Regia	↓ S						19	4	111330
14	Hydroxylamine	H13-301T	$NH_2OH \cdot HCl$	6	10-26-17	54809 #1	240.00g			
15	↓	↓	NaCl	1	3-17-18	48151 #1	240.03g			
16		H13-301U	$NH_2OH \cdot HCl$		10-26-17	54809 #1-2	240.02g			
17		↓	NaCl		3-17-18	48151 #1	240.02g			
18		H13-301V	$NH_2OH \cdot HCl$		10-26-17	54809 #2	240.0 lg			
19	↓	↓	NaCl	↓	3-17-18	48151 #1	240.02g			
20	Hg 1.0 mg/L Inter Cont	H13-302A	Hg 10 mg/L Cont	—	1-11-14	H13-1921D	1.0 ml			

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Key – Manufacturer (M•)

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5 – High-Purity Standards
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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5mlAqua Regia 15mlHNO3		HI3-2015 HI3-2951C	100	1.0ug/L	DW354	10-28-13	11-04-13	RT
2								1.0				
3								0.2				
4								0.2				
5								0.5				
6								1.0				
7								2.5				
8								5.0				
9								6.0				
10								0.1				
11								0.1				
12								0.4				
13	57	6	40272				76	1:3			10-28-13	
14							2000	12%			4-28-14	
15												
16												
17												
18												
19												
20				To vol w/0.15% HNO3		HI3-1616CC	10	1.0ml	DW354	10-29-13	11-05-13	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-0.1mg/L InterCont	H13-302B	Hg-1.0mg/L Cont	–	11-05-13	H13-302A	1.0ml			
2	Potassium Permanganate	H13-302C	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
3	↓ ↓	↓ D	↓ ↓	↓	↓	↓	100.07g			
4	↓ ↓	↓ E	↓ ↓	↓	↓	↓	100.01g			
5	Hg-1.0mg/L InterCal	H13-303A	Hg-10mg/L Cal	7	1-11-14	H13-192C	1.0ml			
6	0.1mg/L InterCal	B	10mg/L Cal	↓	11-06-13	H13-303A	↓			
7	1.0mg/L InterCont	C	10mg/L Cont	↓	1-11-14	H13-192D	↓			
8	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont	↓	11-06-13	H13-303C	↓			
9	Hg-5700 ICV	E	↓	↓	↓	↓	.25ml	1	2	111330
10	↓ CCV	F	↓	↓	↓	↓	.20	↓	↓	↓
11	↓ CRA	G	Hg-0.1mg/L Cont	↓	↓	H13-303D	.20	↓	↓	↓
12	↓ Std Cal	H	Hg-0.1mg/L Cal	↓	↓	H13-303B	.20	↓	↓	↓
13	↓ ↓	I	↓	↓	↓	↓	.50	↓	↓	↓
14	↓ ↓	J	Hg-1.0mg/L Cal	↓	↓	H13-303A	.20	↓	↓	↓
15	↓ ↓	K	↓	↓	↓	↓	.25	↓	↓	↓
16	↓ ↓	L	↓	↓	↓	↓	.50	↓	↓	↓
17	↓ ↓	M						↓	↓	↓
18	Hg-1.0mg/L InterCal	H13-304A	Hg-10mg/L Cal	7	1-11-14	H13-192C	1.0ml			
19	0.1mg/L InterCal	B	10mg/L Cal	↓	11-07-13	H13-304A	↓			
20	↓ 1.0mg/L InterCont	C	↓ 10mg/L Cont	↓	1-11-14	H13-192D	↓			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/ 0.15%	HNO3	HI3-1161CC	10	0.1	DW354	10-29-13	11-05-13	RT
2				to volume w/ DI H2O			2000	5%	NSM823	10-29-13	4-29-14	RT
3				↓		↓	↓	↓	↓	↓	↓	↓
4				↓		↓	↓	↓	↓	↓	↓	↓
5				To vol w/ 0.15%	HNO3	HI3-1161CC	10	1.0	DW354	10-30-13	11-06-13	RT
6				↓	↓	↓	↓	0.1	↓	↓	↓	↓
7				↓	↓	↓	↓	1.0	↓	↓	↓	↓
8				↓	↓	↓	↓	0.1	↓	↓	↓	↓
9	2ml H2SO4	4	135111	3.2ml K2S2O8 1ml KmNO3		HI3-2910K HI3-2998F	100	2.5	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
18				To vol w/ 0.15%	HNO3	HI3-1161CC	10	1.0	DW354	10-31-13	11-07-13	RT
19				↓	↓	↓	↓	0.1	↓	↓	↓	↓
20				↓	↓	↓	↓	1.0	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 1.0 mg/L Inter Cont	H13-304D	Hg 1.0 mg/L Cont	7	11-07-13	H13-304C	1.0 ml			
2	Hg 5701 ICV	E					.25			
3	CCV	F					.10			
4	CCV	G					.10			
5	CCV	H					.10			
6	CCV	I	↓	↓		↓	.10			
7	CRA	J	Hg 0.1 mg/L Cont	7		H13-304D	.20			
8	Std Cal	K	Hg 0.1 mg/L Cal			H13-304B	.20			
9		L	↓			↓	.50			
10		m	Hg 1.0 mg/L Cal			H13-304A	.10			
11		N	↓			↓	.25			
12		O	↓	↓	↓	↓	.50 ↓			
13	↓	P								
14	S1	Q	Hg 0.1 mg/L Cal	7	11-07-13	H13-304B	.10 ml			
15	CRA	R	Hg 0.1 mg/L Cont			H13-304D	.10			
16	CRA	S	↓	↓	↓	↓	.40 ↓			
17	Aqua Regia	T						20	A	1113030
18	Stannous Chloride	U	$SnCl_2 \cdot 2H_2O$	6	8-06-18	55057 #1	200.03g			
19	Stannous Chloride	V	↓	6	↓	↓ #12	200.04g			
20	Hg 1.0 mg/L Inter Cont	H13-305A	Hg 10 ug/L CONT	—	1-11-14	H13-192D	1.0 mL			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/ 0.15% HNO3		H13-161CC	10	0.1	DU354	10-31-13	11-07-13	RT
2				5ml Aqua Regia 15ml Am NO4		H13-304T H13-298F	100	2.5 ug/L				
3								1.0				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17	60	4	40272				80	1.3			10-31-13	
18	200						2000	10%			4-30-14	
19	200						2000	10%				
20				to volume w/ 0.15% HNO3 - H13-161CC			10	1.0	NSM823	11-01-13	11-08-13	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	1113-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	✓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C				
9	Hg-5700 ICV	E					.25ml	1	4	1113030
10	CCV	F					.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13		I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume	w/DI	H_2O	2000	5%	NSM323	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/0.15%	HNO3	HI3-116CC	10	1.0	DW354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/0.15%	HNO3	HI3-116CC	10	1.0	DW354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8								0.1				
9	2ml H_2SO_4	4	135111	3.2ml H_2O_2 6ml KMnO4		HI3-297R HI3-302C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16								5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.04	↓	↓	↓	↓
18				to volume	w/DI	H_2O	2000	5%	NSM323	11-04-13	5-04-14	RT
19				To vol w/0.15%	HNO3	HI3-116CC	10	1.0	DW354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L InterCont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-288D	1.0ml			
2	Hg-0.1mg/L InterCont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		m	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	91	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15% HNO3	H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 Std Cal	H13-309W	Hg-0.1mg/L Cal		11-12-13	H13-309B	.50ml			
2	↓	X	Hg-1.0mg/L Cal		↓	H13-309A	.10			
3		Y	↓			↓	.25			
4		Z	↓		↓	↓	.50			
5	↓	AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-1.0mg/L Inter Cal	H13-310A	Hg-10mg/L Cal		H-15-14	H13-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	H13-310N	↓			
9	1.0mg/L Inter Cont	C	10mg/L Cont		H-15-14	H13-288D				
10	↓ 0.1mg/L Inter Cont	D	↓ 1.0mg/L Cont		11-13-13	H13-310C	↓			
11	Hg-5700 ICV	E	↓		↓	↓	.25ml	1	H	1113030
12	CCV	F	11-6-13 DV355y ③		↓	↓	.20	↓	↓	↓
13	CRA	G	Hg-0.1mg/L ~~Std~~ Cont			H13-310D	.20			
14	Std Cal	H	Hg-0.1mg/L Cal			H13-310B	.20			
15	↓	I	↓			↓	.50			
16		J	Hg-1.0mg/L Cal			H13-310A	.20			
17		K				↓	.25			
18		L	↓		↓	↓	.50			
19	↓	M						↓	↓	↓
20	Potassium Permanganate	H13-310N	$KMnO_4$ # 1	6	4-10-18	46760	100.04g			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua Regia 25ml Km	Aqua Regia NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1:3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O3 6ml KmNO4		H13-297R H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Metals in Solid Data

Case Narrative/Conformance Summary

Metals in Solid

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

ICP Metals

Fraction: Metals in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7265225	SD-R2-0-4-1		X	
7265226	SD-R2-0-4-2		X	
7265227	SD-R2-0-4-3		X	
7265229	SD-R2-M-7-01D		X	
7265234	SD-R2-E16-3		X	
7265236	SD-R2-E-16-1		X	
7265237	SD-R2-E-16-1D		X	
7265239	SD-R2-F-14-1		X	
7265241	SD-R2-F-14-2		X	
7265242	SD-R2-G-12-1		X	
7265244	SD-R2-G-12-3		X	
7265245	SD-R2-D-14-1		X	
7265246	DUP-02		X	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

ICP Metals

Fraction: Metals in Solid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

(Sample number(s): 7265242, 7265245: Analysis: 06972)
Reporting limits for ICP metals were raised due to interference from the sample matrix.

(Sample number(s): 7265225: Analysis: 06971)
Reporting limits for ICP metals were raised due to interference from the sample matrix.

(Sample number(s): 7265226-7265227, 7265229, 7265234, 7265241, 7265244: Analysis: 06966)
Reporting limits for ICP metals were raised due to interference from the sample matrix.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Solid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265225 % Solids: 9.8
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	12200			P
7440-36-0	Antimony	73.3	U		P
7440-38-2	Arsenic	69.3	U		P
7440-39-3	Barium	153			P
7440-41-7	Beryllium	6.6	U		P
7440-43-9	Cadmium	7.5	U		P
7440-70-2	Calcium	6970			P
7440-47-3	Chromium	21.4	B		P
7440-48-4	Cobalt	9.8	U		P
7440-50-8	Copper	98.7	B		P
7439-89-6	Iron	9200			P
7439-92-1	Lead	214			P
7439-95-4	Magnesium	1220			P
7439-96-5	Manganese	135			P
7439-97-6	Mercury	0.10	U		CV
7440-02-0	Nickel	17.5	B		P
7440-09-7	Potassium	826	U		P
7782-49-2	Selenium	79.3	U		P
7440-22-4	Silver	16.8	U		P
7440-23-5	Sodium	1650	U		P
7440-28-0	Thallium	51.5	U		P
7440-62-2	Vanadium	12.9	U		P
7440-66-6	Zinc	279			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265226 % Solids: 37.2
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15600			P
7440-36-0	Antimony	19.5	U		P
7440-38-2	Arsenic	18.4	U		P
7440-39-3	Barium	119			P
7440-41-7	Beryllium	1.8	U		P
7440-43-9	Cadmium	2.0	U		P
7440-70-2	Calcium	706			P
7440-47-3	Chromium	16.3	B		P
7440-48-4	Cobalt	2.6	U		P
7440-50-8	Copper	31.0			P
7439-89-6	Iron	2340			P
7439-92-1	Lead	42.4			P
7439-95-4	Magnesium	443			P
7439-96-5	Manganese	46.0			P
7439-97-6	Mercury	0.067	B		CV
7440-02-0	Nickel	7.5	B		P
7440-09-7	Potassium	412			P
7782-49-2	Selenium	21.1	U		P
7440-22-4	Silver	5.1	B		P
7440-23-5	Sodium	46.3	B		P
7440-28-0	Thallium	13.7	U		P
7440-62-2	Vanadium	20.1			P
7440-66-6	Zinc	67.1			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265227 % Solids: 54.5
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	38000			P
7440-36-0	Antimony	13.4	U		P
7440-38-2	Arsenic	12.7	U		P
7440-39-3	Barium	191			P
7440-41-7	Beryllium	1.2	U		P
7440-43-9	Cadmium	1.4	U		P
7440-70-2	Calcium	490			P
7440-47-3	Chromium	25.8	B		P
7440-48-4	Cobalt	2.0	B		P
7440-50-8	Copper	15.0	B		P
7439-89-6	Iron	4640			P
7439-92-1	Lead	39.4			P
7439-95-4	Magnesium	1240			P
7439-96-5	Manganese	25.6			P
7439-97-6	Mercury	0.17	B		CV
7440-02-0	Nickel	17.6	B		P
7440-09-7	Potassium	665			P
7782-49-2	Selenium	14.5	U		P
7440-22-4	Silver	3.1	B		P
7440-23-5	Sodium	37.7	B		P
7440-28-0	Thallium	9.4	U		P
7440-62-2	Vanadium	26.1			P
7440-66-6	Zinc	63.2			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265229 % Solids: 65.4
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	27200			P
7440-36-0	Antimony	11.2	U		P
7440-38-2	Arsenic	10.6	U		P
7440-39-3	Barium	111			P
7440-41-7	Beryllium	1.0	U		P
7440-43-9	Cadmium	1.2	U		P
7440-70-2	Calcium	1130			P
7440-47-3	Chromium	857			P
7440-48-4	Cobalt	5.4	B		P
7440-50-8	Copper	9.4	B		P
7439-89-6	Iron	11500			P
7439-92-1	Lead	16.2	B		P
7439-95-4	Magnesium	2560			P
7439-96-5	Manganese	90.7			P
7439-97-6	Mercury	0.084	B		CV
7440-02-0	Nickel	16.0			P
7440-09-7	Potassium	924			P
7782-49-2	Selenium	12.1	U		P
7440-22-4	Silver	2.6	U		P
7440-23-5	Sodium	253	U		P
7440-28-0	Thallium	7.9	U		P
7440-62-2	Vanadium	26.9			P
7440-66-6	Zinc	121			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265234 % Solids: 79.6
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4910			P
7440-36-0	Antimony	9.3	U		P
7440-38-2	Arsenic	8.8	U		P
7440-39-3	Barium	31.9			P
7440-41-7	Beryllium	0.84	U		P
7440-43-9	Cadmium	0.95	U		P
7440-70-2	Calcium	2150			P
7440-47-3	Chromium	15.5	B		P
7440-48-4	Cobalt	3.0	B		P
7440-50-8	Copper	10.5	B		P
7439-89-6	Iron	13700			P
7439-92-1	Lead	40.1			P
7439-95-4	Magnesium	1480			P
7439-96-5	Manganese	109			P
7439-97-6	Mercury	0.035	B		CV
7440-02-0	Nickel	4.7	B		P
7440-09-7	Potassium	551	B		P
7782-49-2	Selenium	10.1	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	210	U		P
7440-28-0	Thallium	6.5	U		P
7440-62-2	Vanadium	13.6			P
7440-66-6	Zinc	62.9			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265236 % Solids: 72.8
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6240			P
7440-36-0	Antimony	1.0	U		P
7440-38-2	Arsenic	1.3	B		P
7440-39-3	Barium	39.5			P
7440-41-7	Beryllium	0.28	B		P
7440-43-9	Cadmium	0.10	U		P
7440-70-2	Calcium	1780			P
7440-47-3	Chromium	12.2			P
7440-48-4	Cobalt	4.1			P
7440-50-8	Copper	16.3			P
7439-89-6	Iron	23100			P
7439-92-1	Lead	56.2			P
7439-95-4	Magnesium	1390			P
7439-96-5	Manganese	394			P
7439-97-6	Mercury	0.12	B		CV
7440-02-0	Nickel	6.8			P
7440-09-7	Potassium	362			P
7782-49-2	Selenium	1.1	U		P
7440-22-4	Silver	0.23	U		P
7440-23-5	Sodium	134	B		P
7440-28-0	Thallium	0.70	U		P
7440-62-2	Vanadium	24.0			P
7440-66-6	Zinc	74.2			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265237 % Solids: 78.9
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8490			P
7440-36-0	Antimony	0.90	U		P
7440-38-2	Arsenic	1.8	B		P
7440-39-3	Barium	59.7			P
7440-41-7	Beryllium	0.34	B		P
7440-43-9	Cadmium	0.093	U		P
7440-70-2	Calcium	3030			P
7440-47-3	Chromium	16.1			P
7440-48-4	Cobalt	3.9			P
7440-50-8	Copper	24.3			P
7439-89-6	Iron	25400			P
7439-92-1	Lead	57.2			P
7439-95-4	Magnesium	2410			P
7439-96-5	Manganese	281			P
7439-97-6	Mercury	0.11	B		CV
7440-02-0	Nickel	7.4			P
7440-09-7	Potassium	388			P
7782-49-2	Selenium	0.97	U		P
7440-22-4	Silver	0.21	U		P
7440-23-5	Sodium	176			P
7440-28-0	Thallium	1.0	B		P
7440-62-2	Vanadium	27.6			P
7440-66-6	Zinc	79.9			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265239 % Solids: 25.0
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18300			P
7440-36-0	Antimony	2.8	U		P
7440-38-2	Arsenic	22.6			P
7440-39-3	Barium	71.1			P
7440-41-7	Beryllium	1.4	B		P
7440-43-9	Cadmium	1.5	B		P
7440-70-2	Calcium	10600			P
7440-47-3	Chromium	246			P
7440-48-4	Cobalt	8.8			P
7440-50-8	Copper	91.6			P
7439-89-6	Iron	28300			P
7439-92-1	Lead	1120			P
7439-95-4	Magnesium	3080			P
7439-96-5	Manganese	66.7			P
7439-97-6	Mercury	11.0			CV
7440-02-0	Nickel	17.2			P
7440-09-7	Potassium	639			P
7782-49-2	Selenium	3.1	U		P
7440-22-4	Silver	3.0			P
7440-23-5	Sodium	624			P
7440-28-0	Thallium	2.0	U		P
7440-62-2	Vanadium	43.5			P
7440-66-6	Zinc	390			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265241 % Solids: 19.7
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16300			P
7440-36-0	Antimony	37.2	U		P
7440-38-2	Arsenic	35.2	U		P
7440-39-3	Barium	78.2			P
7440-41-7	Beryllium	3.4	U		P
7440-43-9	Cadmium	3.8	U		P
7440-70-2	Calcium	10200			P
7440-47-3	Chromium	64.5	B		P
7440-48-4	Cobalt	10.4	B		P
7440-50-8	Copper	58.0			P
7439-89-6	Iron	17700			P
7439-92-1	Lead	386			P
7439-95-4	Magnesium	3330			P
7439-96-5	Manganese	118			P
7439-97-6	Mercury	4.3			CV
7440-02-0	Nickel	21.1	B		P
7440-09-7	Potassium	481	B		P
7782-49-2	Selenium	40.2	U		P
7440-22-4	Silver	11.1	B		P
7440-23-5	Sodium	839	U		P
7440-28-0	Thallium	26.1	U		P
7440-62-2	Vanadium	49.1			P
7440-66-6	Zinc	371			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265242 % Solids: 13.1
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6210			P
7440-36-0	Antimony	55.9	U		P
7440-38-2	Arsenic	52.9	U		P
7440-39-3	Barium	52.8			P
7440-41-7	Beryllium	5.1	U		P
7440-43-9	Cadmium	5.7	U		P
7440-70-2	Calcium	10000			P
7440-47-3	Chromium	53.1	B		P
7440-48-4	Cobalt	7.5	U		P
7440-50-8	Copper	92.5			P
7439-89-6	Iron	12600			P
7439-92-1	Lead	720			P
7439-95-4	Magnesium	2460			P
7439-96-5	Manganese	81.8			P
7439-97-6	Mercury	3.0			CV
7440-02-0	Nickel	28.0	B		P
7440-09-7	Potassium	630	U		P
7782-49-2	Selenium	60.5	U		P
7440-22-4	Silver	13.4	B		P
7440-23-5	Sodium	1260	U		P
7440-28-0	Thallium	39.3	U		P
7440-62-2	Vanadium	62.4			P
7440-66-6	Zinc	140	B		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265244 % Solids: 45.5
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	7350			P
7440-36-0	Antimony	16.1	U		P
7440-38-2	Arsenic	15.2	U		P
7440-39-3	Barium	50.8			P
7440-41-7	Beryllium	1.5	U		P
7440-43-9	Cadmium	1.7	U		P
7440-70-2	Calcium	2820			P
7440-47-3	Chromium	22.2	B		P
7440-48-4	Cobalt	4.6	B		P
7440-50-8	Copper	18.3	B		P
7439-89-6	Iron	19400			P
7439-92-1	Lead	36.2			P
7439-95-4	Magnesium	1380			P
7439-96-5	Manganese	137			P
7439-97-6	Mercury	0.33			CV
7440-02-0	Nickel	7.6	B		P
7440-09-7	Potassium	181	U		P
7782-49-2	Selenium	17.4	U		P
7440-22-4	Silver	3.8	B		P
7440-23-5	Sodium	363	U		P
7440-28-0	Thallium	11.3	U		P
7440-62-2	Vanadium	22.0			P
7440-66-6	Zinc	105			P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265245 % Solids: 6.7
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1670	B		P
7440-36-0	Antimony	109	U		P
7440-38-2	Arsenic	103	U		P
7440-39-3	Barium	64.1	B		P
7440-41-7	Beryllium	9.9	U		P
7440-43-9	Cadmium	11.2	U		P
7440-70-2	Calcium	16500			P
7440-47-3	Chromium	23.6	U		P
7440-48-4	Cobalt	14.6	U		P
7440-50-8	Copper	42.9	U		P
7439-89-6	Iron	22200			P
7439-92-1	Lead	81.0	B		P
7439-95-4	Magnesium	2060			P
7439-96-5	Manganese	2400			P
7439-97-6	Mercury	0.22	B		CV
7440-02-0	Nickel	19.2	U		P
7440-09-7	Potassium	1230	U		P
7782-49-2	Selenium	118	U		P
7440-22-4	Silver	25.1	U		P
7440-23-5	Sodium	2470	U		P
7440-28-0	Thallium	76.8	U		P
7440-62-2	Vanadium	19.2	U		P
7440-66-6	Zinc	207	B		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7265246 % Solids: 60.0
Concentration Units: MG/KG Date Received: 11/05/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6330			P
7440-36-0	Antimony	1.2	U		P
7440-38-2	Arsenic	4.6			P
7440-39-3	Barium	52.0			P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	0.13	U		P
7440-70-2	Calcium	2330			P
7440-47-3	Chromium	17.8			P
7440-48-4	Cobalt	5.5			P
7440-50-8	Copper	18.5			P
7439-89-6	Iron	32800			P
7439-92-1	Lead	21.3			P
7439-95-4	Magnesium	1920			P
7439-96-5	Manganese	501			P
7439-97-6	Mercury	0.17			CV
7440-02-0	Nickel	5.7			P
7440-09-7	Potassium	415			P
7782-49-2	Selenium	1.3	U		P
7440-22-4	Silver	0.36	B		P
7440-23-5	Sodium	210			P
7440-28-0	Thallium	0.87	U		P
7440-62-2	Vanadium	23.7			P
7440-66-6	Zinc	102			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Solid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM04
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Aluminum	P31208C	7265225
Antimony		7265226
Arsenic		7265227
Barium		7265229
Beryllium		7265234
Cadmium		7265236
Calcium		7265237
Chromium		7265239
Cobalt		7265241
Copper		7265242
Iron		7265244
Lead		7265245
Magnesium		7265246
Manganese		*66814BKG
Nickel		P31208CB
Potassium		P31208CQ
Selenium		
Silver		
Sodium		
Thallium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM04
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Mercury	P31211C	7265225
		7265226
		7265227
		7265229
		7265234
		7265236
		7265237
		7265239
		7265241
		7265242
		7265244
		7265245
		7265246
		P31211CB
		P31211CQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	31180.27	103.9	25000.0	25616.01	102.5	25000.0	27352.29	109.4
Antimony		600.0	637.89	106.3	500.0	519.75	104.0	500.0	549.77	110.0
Arsenic		600.0	614.28	102.4	500.0	500.84	100.2	500.0	526.41	105.3
Barium		600.0	626.42	104.4	500.0	506.76	101.4	500.0	538.93	107.8
Beryllium		600.0	606.79	101.1	500.0	491.02	98.2	500.0	519.47	103.9
Cadmium		600.0	613.62	102.3	500.0	503.18	100.6	500.0	526.79	105.4
Calcium		30000.0	30663.41	102.2	25000.0	25421.78	101.7	25000.0	27208.61	108.8
Chromium		600.0	603.90	100.7	500.0	488.90	97.8	500.0	517.78	103.6
Cobalt		600.0	611.15	101.9	500.0	501.80	100.4	500.0	524.87	105.0
Copper		600.0	623.89	104.0	500.0	503.83	100.8	500.0	539.65	107.9
Iron		30000.0	30564.81	101.9	25000.0	25211.31	100.8	25000.0	27053.62	108.2
Lead		600.0	619.01	103.2	500.0	509.49	101.9	500.0	532.78	106.6
Magnesium										
Manganese		600.0	614.49	102.4	500.0	499.03	99.8	500.0	526.26	105.3
Nickel		600.0	615.51	102.6	500.0	504.86	101.0	500.0	529.51	105.9
Potassium		30000.0	30501.45	101.7	25000.0	25166.35	100.7	25000.0	26953.14	107.8
Selenium		600.0	615.66	102.6	500.0	501.02	100.2	500.0	527.71	105.5
Silver		600.0	622.14	103.7	500.0	504.02	100.8	500.0	535.03	107.0
Sodium		30000.0	30353.06	101.2	25000.0	25034.98	100.1	25000.0	26639.92	106.6
Thallium		600.0	610.45	101.7	500.0	504.51	100.9	500.0	527.35	105.5
Vanadium		600.0	613.02	102.2	500.0	495.36	99.1	500.0	524.49	104.9
Zinc		600.0	622.11	103.7	500.0	506.68	101.3	500.0	533.83	106.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	26170.54	104.7	25000.0	25616.80	102.5
Antimony					500.0	535.74	107.1	500.0	535.44	107.1
Arsenic					500.0	509.83	102.0	500.0	508.91	101.8
Barium					500.0	522.65	104.5	500.0	522.85	104.6
Beryllium					500.0	507.02	101.4	500.0	507.67	101.5
Cadmium					500.0	513.82	102.8	500.0	514.50	102.9
Calcium					25000.0	26035.94	104.1	25000.0	25435.43	101.7
Chromium					500.0	507.99	101.6	500.0	506.18	101.2
Cobalt					500.0	509.30	101.9	500.0	512.09	102.4
Copper					500.0	527.85	105.6	500.0	521.73	104.3
Iron					25000.0	25937.12	103.7	25000.0	25301.64	101.2
Lead					500.0	519.80	104.0	500.0	518.59	103.7
Magnesium										
Manganese					500.0	512.24	102.4	500.0	512.11	102.4
Nickel					500.0	515.88	103.2	500.0	516.57	103.3
Potassium					25000.0	26112.93	104.5	25000.0	25486.89	101.9
Selenium					500.0	513.56	102.7	500.0	513.47	102.7
Silver					500.0	521.60	104.3	500.0	518.78	103.8
Sodium					25000.0	25882.82	103.5	25000.0	25257.18	101.0
Thallium					500.0	516.26	103.3	500.0	513.58	102.7
Vanadium					500.0	512.16	102.4	500.0	510.28	102.1
Zinc					500.0	520.42	104.1	500.0	519.75	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	30183.33	100.6	25000.0	25054.10	100.2	25000.0	25243.50	101.0
Antimony		600.0	615.71	102.6	500.0	506.48	101.3	500.0	516.24	103.2
Arsenic		600.0	599.38	99.9	500.0	488.74	97.7	500.0	497.05	99.4
Barium		600.0	602.15	100.4	500.0	507.18	101.4	500.0	508.01	101.6
Beryllium		600.0	585.94	97.7	500.0	489.60	97.9	500.0	488.63	97.7
Cadmium		600.0	596.64	99.4	500.0	494.26	98.9	500.0	497.82	99.6
Calcium		30000.0	29740.65	99.1	25000.0	24803.37	99.2	25000.0	24934.56	99.7
Chromium		600.0	578.29	96.4	500.0	490.18	98.0	500.0	487.53	97.5
Cobalt		600.0	595.49	99.2	500.0	492.12	98.4	500.0	496.90	99.4
Copper		600.0	600.77	100.1	500.0	506.09	101.2	500.0	513.49	102.7
Iron		30000.0	29666.99	98.9	25000.0	24673.44	98.7	25000.0	24822.70	99.3
Lead		600.0	599.27	99.9	500.0	500.26	100.1	500.0	508.13	101.6
Magnesium		30000.0	29283.15	97.6	25000.0	24416.97	97.7	25000.0	24477.44	97.9
Manganese		600.0	593.54	98.9	500.0	497.47	99.5	500.0	497.76	99.6
Nickel		600.0	597.26	99.5	500.0	496.24	99.2	500.0	499.77	100.0
Potassium		30000.0	29751.65	99.2	25000.0	24799.80	99.2	25000.0	24971.51	99.9
Selenium										
Silver		600.0	605.51	100.9	500.0	506.89	101.4	500.0	512.35	102.5
Sodium		30000.0	29484.66	98.3	25000.0	24551.01	98.2	25000.0	24704.28	98.8
Thallium		600.0	590.38	98.4	500.0	497.38	99.5	500.0	502.75	100.6
Vanadium		600.0	593.86	99.0	500.0	496.82	99.4	500.0	497.64	99.5
Zinc		600.0	603.19	100.5	500.0	498.15	99.6	500.0	503.70	100.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	25323.94	101.3	25000.0	25145.09	100.6
Antimony					500.0	513.32	102.7	500.0	507.70	101.5
Arsenic					500.0	491.45	98.3	500.0	489.42	97.9
Barium					500.0	513.09	102.6	500.0	514.00	102.8
Beryllium					500.0	494.23	98.8	500.0	496.28	99.3
Cadmium					500.0	498.69	99.7	500.0	495.66	99.1
Calcium					25000.0	24969.17	99.9	25000.0	24955.89	99.8
Chromium					500.0	491.34	98.3	500.0	494.04	98.8
Cobalt					500.0	497.73	99.5	500.0	494.15	98.8
Copper					500.0	512.74	102.5	500.0	511.49	102.3
Iron					25000.0	24880.39	99.5	25000.0	24811.28	99.2
Lead					500.0	506.28	101.3	500.0	502.17	100.4
Magnesium					25000.0	24548.57	98.2	25000.0	24330.99	97.3
Manganese					500.0	502.35	100.5	500.0	500.84	100.2
Nickel					500.0	501.97	100.4	500.0	498.17	99.6
Potassium					25000.0	24882.95	99.5	25000.0	24710.13	98.8
Selenium										
Silver					500.0	515.07	103.0	500.0	511.91	102.4
Sodium					25000.0	24712.10	98.8	25000.0	24446.68	97.8
Thallium					500.0	500.66	100.1	500.0	498.45	99.7
Vanadium					500.0	501.91	100.4	500.0	501.76	100.4
Zinc					500.0	502.79	100.6	500.0	498.84	99.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24990.60	100.0			
Antimony					500.0	507.48	101.5			
Arsenic					500.0	490.85	98.2			
Barium					500.0	504.21	100.8			
Beryllium					500.0	490.71	98.1			
Cadmium					500.0	496.38	99.3			
Calcium					25000.0	24568.96	98.3			
Chromium					500.0	486.05	97.2			
Cobalt					500.0	496.36	99.3			
Copper					500.0	504.05	100.8			
Iron					25000.0	24482.10	97.9			
Lead					500.0	501.38	100.3			
Magnesium					25000.0	24132.26	96.5			
Manganese					500.0	498.22	99.6			
Nickel					500.0	498.12	99.6			
Potassium					25000.0	24510.17	98.0			
Selenium										
Silver					500.0	506.70	101.3			
Sodium					25000.0	24326.21	97.3			
Thallium					500.0	496.47	99.3			
Vanadium					500.0	497.96	99.6			
Zinc					500.0	499.40	99.9			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium		600.0	607.62	101.3	500.0	505.46	101.1	500.0	503.55	100.7
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium					500.0	502.89	100.6			
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.44	97.6	1.0	1.03	103.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.04	104.0	1.0	0.95	95.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.01	101.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.02	102.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	1.01	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.03	103.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.02	102.0			

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	340.24	170.1	230.17	115.1
Antimony		20.0	22.26	111.3	23.51	117.6
Arsenic		20.0	20.97	104.9	21.79	109.0
Barium		5.0	5.79	115.8	5.75	115.0
Beryllium		5.0	4.73	94.6	4.75	95.0
Cadmium		5.0	5.17	103.4	4.99	99.8
Calcium		200.0	283.54	141.8	217.37	108.7
Chromium		15.0	15.11	100.7	15.70	104.7
Cobalt		5.0	5.34	106.8	5.29	105.8
Copper		10.0	10.14	101.4	9.69	96.9
Iron		200.0	255.72	127.9	229.89	114.9
Lead		15.0	19.66	131.1	17.43	116.2
Magnesium						
Manganese		5.0	5.68	113.6	5.81	116.2
Nickel		10.0	10.46	104.6	10.86	108.6
Potassium		500.0	437.72	87.5	422.68	84.5
Selenium		20.0	19.09	95.5	20.58	102.9
Silver		5.0	6.40	128.0	6.89	137.8
Sodium		1000.0	1000.31	100.0	1008.84	100.9
Thallium		30.0	33.03	110.1	33.84	112.8
Vanadium		5.0	4.51	90.2	4.50	90.0
Zinc		20.0	20.48	102.4	20.70	103.5

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	190.03	95.0	193.70	96.9
Antimony		20.0	21.77	108.9	21.34	106.7
Arsenic		20.0	17.55	87.8	18.35	91.8
Barium		5.0	5.50	110.0	5.30	106.0
Beryllium		5.0	4.02	80.4	3.91	78.2
Cadmium		5.0	5.01	100.2	4.94	98.8
Calcium		200.0	212.35	106.2	202.53	101.3
Chromium		15.0	15.29	101.9	15.20	101.3
Cobalt		5.0	5.37	107.4	5.14	102.8
Copper		10.0	9.91	99.1	9.11	91.1
Iron		200.0	214.31	107.2	199.63	99.8
Lead		15.0	17.20	114.7	18.25	121.7
Magnesium		100.0	108.60	108.6	97.25	97.3
Manganese		5.0	5.36	107.2	5.18	103.6
Nickel		10.0	10.76	107.6	10.58	105.8
Potassium		500.0	467.97	93.6	421.65	84.3
Selenium						
Silver		5.0	6.81	136.2	6.53	130.6
Sodium		1000.0	998.21	99.8	998.42	99.8
Thallium		30.0	30.68	102.3	30.53	101.8
Vanadium		5.0	3.76	75.2	3.50	70.0
Zinc		20.0	20.50	102.5	21.87	109.4

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium		20.0	22.22	111.1	20.68	103.4
Silver						
Sodium						
Thallium						
Vanadium						
Zinc						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.19	95.0	0.17	85.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		68.4	B	60.2	B	33.4	U	33.4	U		8.996	B	P31208CB
Antimony		2.0	U	2.0	U	2.0	U	2.0	B		0.740	U	P31208CB
Arsenic		2.3	U	2.3	U	2.3	U	2.3	U		0.700	U	P31208CB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.033	U	P31208CB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.067	U	P31208CB
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U		0.076	U	P31208CB
Calcium		33.4	U	49.2	B	33.4	U	33.4	U				
Chromium		0.61	U	0.61	U	0.61	U	0.61	U		0.160	U	P31208CB
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U		0.099	U	P31208CB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		0.290	U	P31208CB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		3.600	U	P31208CB
Lead		2.0	B	1.8	B	1.9	B	1.8	U		0.500	U	P31208CB
Magnesium													
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.083	U	P31208CB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		0.130	U	P31208CB
Potassium		83.4	U	-98.4	B	-109	B	-104	B		8.300	U	P31208CB
Selenium		3.4	U	3.4	U	3.4	U	3.4	U		0.800	U	P31208CB
Silver		1.2	B	1.9	B	1.7	B	1.3	B		0.170	U	P31208CB
Sodium		167	U	167	U	167	U	167	U		16.700	U	P31208CB
Thallium		1.9	U	1.9	U	1.9	U	1.9	U		0.520	U	P31208CB
Vanadium		0.83	U	0.83	U	0.83	U	-0.97	B		0.130	U	P31208CB
Zinc		2.0	U	2.0	U	2.0	U	2.0	U		0.200	U	P31208CB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (MG/KG) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Antimony				2.0	U								
Arsenic				2.3	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.33	U								
Calcium				33.4	U								
Chromium				0.61	U								
Cobalt				0.26	U								
Copper				1.7	U								
Iron				33.4	U								
Lead				1.8	U								
Magnesium													
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				3.4	U								
Silver				1.1	B								
Sodium				167	U								
Thallium				1.9	U								
Vanadium				-0.92	B								
Zinc				2.0	U								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	-38.2	B				
Antimony		2.0	U	2.0	U	2.0	U	2.1	B				
Arsenic		2.3	U	2.3	U	2.3	U	-2.9	B				
Barium		0.33	U	0.33	U	0.33	U	0.33	U				
Beryllium		-0.80	B	-0.83	B	-0.93	B	-0.86	B				
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U				
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		10.107	B	P31208CB
Chromium		0.61	U	0.61	U	0.61	U	0.61	U				
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U				
Copper		-1.8	B	1.7	U	-1.8	B	1.7	U				
Iron		33.4	U	33.4	U	33.4	U	33.4	U				
Lead		1.8	U	1.8	U	1.8	B	1.8	U				
Magnesium		16.7	U	34.0	B	16.7	U	16.7	U		2.197	B	P31208CB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U				
Nickel		1.0	U	1.0	U	1.0	U	1.0	U				
Potassium		83.4	U	-135	B	-105	B	-111	B				
Selenium													
Silver		2.0	B	1.9	B	2.0	B	1.9	B				
Sodium		167	U	167	U	167	U	167	U				
Thallium		-2.1	B	-2.3	B	-2.9	B	-2.6	B				
Vanadium		-1.3	B	-1.3	B	-1.3	B	-1.2	B				
Zinc		2.0	U	2.0	U	2.0	U	2.0	U				

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum				-34.9	B	33.4	U						
Antimony				2.0	U	2.0	U						
Arsenic				2.3	U	2.3	U						
Barium				0.33	U	0.33	U						
Beryllium				-0.85	B	-0.78	B						
Cadmium				0.33	U	0.33	U						
Calcium				33.4	U	33.7	B						
Chromium				0.61	U	0.61	U						
Cobalt				0.26	U	0.26	U						
Copper				-1.7	B	1.7	U						
Iron				33.4	U	33.4	U						
Lead				1.8	U	1.9	B						
Magnesium				16.7	U	31.6	B						
Manganese				0.83	U	0.83	U						
Nickel				1.0	U	1.0	U						
Potassium				-88.6	B	83.4	U						
Selenium													
Silver				1.2	B	2.0	B						
Sodium				167	U	167	U						
Thallium				-3.1	B	1.9	U						
Vanadium				-1.6	B	-1.2	B						
Zinc				2.0	U	2.0	U						

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Antimony													
Arsenic													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Lead													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium		3.4	U	3.4	U	3.4	U	3.4	U				
Silver													
Sodium													
Thallium													
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.010	U	P31211CB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM04

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 16417
Run Name: 1331606T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	511424	102.3	509828.8	102.0	532788	106.6	524372.4	104.9
Antimony	0	600	-6		643.8	107.3	-9		669.5	111.6
Arsenic	0	100	-4		98.4	98.4	-7		97.5	97.5
Barium	0	500	0		511.9	102.4	0		515.2	103.0
Beryllium	0	500	0		515.9	103.2	-1		517.8	103.6
Cadmium	0	1000	1		942.3	94.2	2		969.2	96.9
Calcium	500000	500000	518109	103.6	517388.7	103.5	550664	110.1	535069.0	107.0
Chromium	0	500	2		482.2	96.4	2		491.2	98.2
Cobalt	0	500	0		460.7	92.1	0		470.9	94.2
Copper	0	500	5		544.9	109.0	5		549.9	110.0
Iron	200000	200000	207326	103.7	206524.9	103.3	218285	109.1	214370.6	107.2
Lead	0	50	8		53.1	106.2	3		53.4	106.8
Magnesium	500000	500000	562066	112.4	556200.9	111.2	608393	121.7	583166.1	116.6
Manganese	0	500	4		493.9	98.8	4		490.5	98.1
Nickel	0	1000	3		923.6	92.4	3		949.9	95.0
Potassium	0	0	-128		-108.4		-172		-99.6	
Selenium	0	50	0		51.4	102.8	-1		55.5	111.0
Silver	0	200	1		223.3	111.7	2		223.0	111.5
Sodium	0	0	-5		-2.3		-4		2.9	
Thallium	0	100	0		93.2	93.2	-1		91.4	91.4
Vanadium	0	500	-5		498.3	99.7	-5		496.8	99.4
Zinc	0	1000	6		1049.6	105.0	7		1083.4	108.3

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 16417
Run Name: 1331705T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	506656	101.3	496723.4	99.3	507306	101.5	503756.7	100.8
Antimony	0	600	-8		630.2	105.0	-12		624.6	104.1
Arsenic	0	100	-8		92.9	92.9	-8		91.5	91.5
Barium	0	500	0		503.0	100.6	0		502.0	100.4
Beryllium	0	500	-1		507.9	101.6	-1		504.8	101.0
Cadmium	0	1000	5		945.5	94.6	5		944.0	94.4
Calcium	500000	500000	513288	102.7	498201.1	99.6	515772	103.2	508547.3	101.7
Chromium	0	500	3		476.0	95.2	3		468.8	93.8
Cobalt	0	500	0		459.3	91.9	0		460.1	92.0
Copper	0	500	3		525.2	105.0	3		523.7	104.7
Iron	200000	200000	205186	102.6	199977.7	100.0	204782	102.4	202641.2	101.3
Lead	0	50	4		52.8	105.6	5		50.4	100.8
Magnesium	500000	500000	551714	110.3	530532.4	106.1	552566	110.5	545216.6	109.0
Manganese	0	500	4		482.9	96.6	4		482.0	96.4
Nickel	0	1000	3		917.8	91.8	4		919.1	91.9
Potassium	0	0	-122		-109.5		-171		-122.6	
Selenium										
Silver	0	200	2		218.3	109.2	2		218.2	109.1
Sodium	0	0	-5		5.6		-1		7.2	
Thallium	0	100	-3		87.7	87.7	-3		85.2	85.2
Vanadium	0	500	-6		488.7	97.7	-6		487.9	97.6
Zinc	0	1000	8		1050.7	105.1	8		1047.2	104.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM04

Instrument ID: 16417
Run Name: 1331707T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	487089	97.4	491321.2	98.3	480308	96.1	486442.6	97.3
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	500000	500000	486481	97.3	487886.9	97.6	483548	96.7	484290.3	96.9
Chromium										
Cobalt										
Copper										
Iron	200000	200000	195032	97.5	196360.4	98.2	191749	95.9	194230.7	97.1
Lead										
Magnesium	500000	500000	521484	104.3	524726.6	104.9	514321	102.9	518158.8	103.6
Manganese										
Nickel										
Potassium										
Selenium	0	50	1		54.3	108.6	3		53.5	107.0
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM04
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31208CQ	UG/L	200000.0	220843.0		80 - 120	110	P	Yes
Antimony		P31208CQ	UG/L	50000.0	49517.0		80 - 120	99	P	Yes
Arsenic		P31208CQ	UG/L	15000.0	15805.0		80 - 120	105	P	Yes
Barium		P31208CQ	UG/L	200000.0	205077.0		80 - 120	103	P	Yes
Beryllium		P31208CQ	UG/L	5000.0	4813.0		80 - 120	96	P	Yes
Cadmium		P31208CQ	UG/L	5000.0	5120.0		80 - 120	102	P	Yes
Calcium		P31208CQ	UG/L	400000.0	418205.0		80 - 120	105	P	Yes
Chromium		P31208CQ	UG/L	20000.0	19911.0		80 - 120	100	P	Yes
Cobalt		P31208CQ	UG/L	50000.0	51742.0		80 - 120	103	P	Yes
Copper		P31208CQ	UG/L	25000.0	26134.0		80 - 120	105	P	Yes
Iron		P31208CQ	UG/L	100000.0	102368.0		80 - 120	102	P	Yes
Lead		P31208CQ	UG/L	15000.0	15963.0		80 - 120	106	P	Yes
Magnesium		P31208CQ	UG/L	200000.0	200992.0		80 - 120	100	P	Yes
Manganese		P31208CQ	UG/L	50000.0	51233.0		80 - 120	102	P	Yes
Mercury		P31211CQ	UG/L	100.0	99.0		80 - 120	99	CV	Yes
Nickel		P31208CQ	UG/L	50000.0	52797.0		80 - 120	106	P	Yes
Potassium		P31208CQ	UG/L	1000000.0	1014154.0		80 - 120	101	P	Yes
Selenium		P31208CQ	UG/L	15000.0	15424.0		80 - 120	103	P	Yes
Silver		P31208CQ	UG/L	5000.0	5256.0		80 - 120	105	P	Yes
Sodium		P31208CQ	UG/L	1000000.0	1013440.0		80 - 120	101	P	Yes
Thallium		P31208CQ	UG/L	15000.0	16024.0		80 - 120	107	P	Yes
Vanadium		P31208CQ	UG/L	50000.0	48853.0		80 - 120	98	P	Yes
Zinc		P31208CQ	UG/L	50000.0	51366.0		80 - 120	103	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM04
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: *66814BKG Serial Dilution Lab Sample ID: *66814L
Batch ID(s): P31208C
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		1149.0700		976.1500	B	15		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		7.0000	U	35.0000	U			P
Barium		28.0100		27.0500		3		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		3176.7400		3023.4500		5		P
Chromium		3.3700	B	8.0000	U	100		P
Cobalt		3.2400	B	4.9500	U	100		P
Copper		13.4100		14.5000	U	100		P
Iron		9702.8300		9171.7000		5		P
Lead		2743.5900		2659.7000		3		P
Magnesium		401.6100		374.3500	B	7		P
Manganese		298.4200		289.3500		3		P
Nickel		7.0800	B	6.5000	B	8		P
Potassium		83.4000	U	417.0000	U			P
Selenium		8.0000	U	40.0000	U			P
Silver		1.9000	B	8.9000	B	368		P
Sodium		167.0000	U	835.0000	U			P
Thallium		5.2000	U	26.0000	U			P
Vanadium		9.2500		6.5000	U	100		P
Zinc		18.0200	B	14.5500	B	19		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Antimony	206.83		2.0
Arsenic	189.04		2.3
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.61
Cobalt	228.62		0.26
Copper	327.40		1.7
Iron	261.19		33.4
Lead	220.35		1.8
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		3.4
Silver			
Sodium	589.59		167
Thallium	190.86		1.9
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: P
Instrument ID: 16417
Date: 11/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Nickel			
Potassium			
Selenium			
Silver	328.06		0.75
Sodium			
Thallium			
Vanadium			
Zinc			

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM04
Matrix: SOIL

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	72.1
Antimony	206.83		20.0	7.4
Arsenic	189.04		20.0	7.0
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	0.99
Copper	327.40		10.0	2.9
Iron	261.19		200	36.2
Lead	220.35		15.0	5.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.3
Potassium	766.49		500	83.4
Selenium	196.09		20.0	8.0
Silver	328.06		5.0	1.7
Sodium	589.59		1000	167
Thallium	190.86		30.0	5.2
Vanadium	292.40		5.0	1.3
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM04
Matrix: SOIL

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.60	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0000000	0.0000000	0.0000170	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0001240	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000810	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0001340	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	-0.0000580	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	-0.0000140	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0278000
Antimony	206.83	0.0000000	0.0160000	0.0000000	0.0000000	-0.0026800
Arsenic	189.04	0.0000000	0.0004690	0.0000000	0.0000000	0.0012120
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	-0.0000400	0.0000160	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002200	0.0000000	0.0000000	0.0000710
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	-0.0007830
Lead	220.35	-0.0007200	-0.0000520	0.0001970	0.0000000	-0.0021700
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0005900	0.0000000	0.0000000	0.0000000	0.0007680
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0039800	0.0002880	0.0000000	0.0009070	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0045500
Zinc	213.86	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM04

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	SI	TI	V	ZR
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0320000	0.0000000
Antimony	206.83	0.0001630	0.0000000	0.0000000	0.0004560	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	-0.0000140	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0001240	0.0000000	0.0023400	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000000	-0.0057500	0.0000000	0.0000000
Lead	220.35	-0.0000500	0.0000280	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0080000
Thallium	190.86	0.0000000	0.0000000	-0.0018400	-0.0418000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0003400	0.0000000	0.0000000
Zinc	213.86	0.0049600	0.0000000	0.0000000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM04

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Antimony	206.83	10.00	10000.0
Arsenic	189.04	10.00	20000.0
Barium	455.4	10.00	10000.0
Beryllium	313.04	10.00	10000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Lead	220.35	10.00	10000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	20000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	20000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Thallium	190.86	10.00	10000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM04

Method: P
Batch ID: P31208C

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7265225	11/11/2013	1.03	100
7265226	11/11/2013	1.02	100
7265227	11/11/2013	1.01	100
7265229	11/11/2013	1.01	100
7265234	11/11/2013	1.00	100
7265236	11/11/2013	1.02	100
7265237	11/11/2013	1.04	100
7265239	11/11/2013	1.04	100
7265241	11/11/2013	1.01	100
7265242	11/11/2013	1.01	100
7265244	11/11/2013	1.01	100
7265245	11/11/2013	1.01	100
7265246	11/11/2013	1.00	100
*66814BKG	11/11/2013	1.00	100
P31208CB	11/11/2013	1.00	100
P31208CQ	11/11/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM04

Method: CV
Batch ID: P31211C

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7265225	11/11/2013	0.61	100
7265226	11/11/2013	0.61	100
7265227	11/11/2013	0.61	100
7265229	11/11/2013	0.61	100
7265234	11/11/2013	0.63	100
7265236	11/11/2013	0.63	100
7265237	11/11/2013	0.64	100
7265239	11/11/2013	0.62	100
7265241	11/11/2013	0.63	100
7265242	11/11/2013	0.63	100
7265244	11/11/2013	0.63	100
7265245	11/11/2013	0.62	100
7265246	11/11/2013	0.64	100
P31211CB	11/11/2013	0.60	100
P31211CQ	11/11/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM04
No.:

Method: P
Instrument ID: 16417
Run Name: 1331606T72

Run Start Date: 11/12/2013
Run End Date: 11/12/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	18:44	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
S	1.00	18:48	X						X				X						X			X										
S	1.00	18:52			X	X	X	X			X	X		X		X		X		X	X		X		X							
S	1.00	18:56		X						X														X								
ICV	1.00	19:00	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICB	1.00	19:05	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
LLC	1.00	19:09	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSA	1.00	19:13	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSAB	1.00	19:17	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCV	1.00	19:22	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	19:26	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
P31208CB	1.00	19:30	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X	X	X	X	X	X							
P31208CQ	1.00	19:34	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	19:38																														
ZZZZZZ	1.00	19:42																														
ZZZZZZ	1.00	19:46																														
ZZZZZZ	1.00	19:50																														
ZZZZZZ	1.00	19:55																														
ZZZZZZ	5.00	19:59																														
ZZZZZZ	1.00	20:03																														
7265226	1.00	20:07	X						X				X						X			X										
CCV	1.00	20:11	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	20:15	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
7265227	1.00	20:19	X										X						X			X										
ZZZZZZ	1.00	20:24																														
ZZZZZZ	1.00	20:28																														
7265236	1.00	20:32	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
7265237	1.00	20:36	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	20:40																														
ZZZZZZ	1.00	20:44																														
ZZZZZZ	1.00	20:48																														
ZZZZZZ	1.00	20:52																														
ZZZZZZ	1.00	20:56																														
CCV	1.00	21:00	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	21:05	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	21:09																														
ZZZZZZ	1.00	21:13																														
ZZZZZZ	1.00	21:17																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16417
Run Name: 1331606T72

Run Start Date: 11/12/2013
Run End Date: 11/12/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	21:21																													
ZZZZZZ	1.00	21:25																													
7265239	1.00	21:30	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X		X	X	X	X							
7265246	1.00	21:34	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X		X	X	X	X							
LLC	1.00	21:38	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSA	1.00	21:42	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSAB	1.00	21:46	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCV	1.00	21:51	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	21:55	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16417
Run Name: 1331705T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	15:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
S	1.00	15:41	X						X				X		X				X			X										
S	1.00	15:45			X	X	X	X			X	X		X		X		X			X		X		X							
S	1.00	15:50		X						X														X								
ICV	1.00	15:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICB	1.00	15:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
LLC	1.00	16:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSA	1.00	16:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSAB	1.00	16:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	16:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
P31208CB	1.00	16:24							X						X																	
P31208CB	1.00	16:28																														
P31208CQ	1.00	16:32													X																	
*66814BKG	10.00	16:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ZZZZZZ	10.00	16:41																														
ZZZZZZ	10.00	16:44																														
ZZZZZZ	10.00	16:49																														
ZZZZZZ	10.00	16:53																														
*66814L	50.00	16:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265225	10.00	17:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	17:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	17:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265226	10.00	17:14		X	X	X	X	X		X	X	X		X	X	X		X			X		X	X	X							
7265227	10.00	17:18		X	X	X	X	X	X	X	X	X		X	X	X		X			X		X	X	X							
7265229	10.00	17:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265234	10.00	17:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265236	1.00	17:30													X																	
7265237	1.00	17:34													X																	
7265241	10.00	17:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265242	10.00	17:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265244	10.00	17:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265245	10.00	17:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	17:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7265246	1.00	18:04													X						X											
ZZZZZZ	1.00	18:08																														
ZZZZZZ	1.00	18:12																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16417
Run Name: 1331705T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	18:16																													
ZZZZZZ	1.00	18:21																													
ZZZZZZ	1.00	18:25																													
7265239	1.00	18:29													X						X										
ZZZZZZ	5.00	18:33																													
ZZZZZZ	10.00	18:37																													
CCV	1.00	18:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	18:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
LLC	1.00	18:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSA	1.00	18:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSAB	1.00	18:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	19:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: P
Instrument ID: 16417
Run Name: 1331707T72

Run Start Date: 11/13/2013
Run End Date: 11/14/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	22:48																		X												
S	1.00	22:52																														
S	1.00	22:56																		X												
S	1.00	23:01																														
ICV	1.00	23:05																		X												
ICB	1.00	23:09																		X												
LLC	1.00	23:13																		X												
ICSA	1.00	23:17																		X												
ICSAB	1.00	23:22																		X												
CCV	1.00	23:26																		X												
CCB	1.00	23:30																		X												
*66814BKG	10.00	23:35																		X												
ZZZZZZ	10.00	23:39																														
ZZZZZZ	10.00	23:43																														
ZZZZZZ	10.00	23:47																														
ZZZZZZ	10.00	23:51																														
*66814L	50.00	23:55																		X												
7265225	10.00	23:59																		X												
7265226	10.00	00:03																		X												
7265227	10.00	00:08																		X												
7265229	10.00	00:12																		X												
CCV	1.00	00:16																		X												
CCB	1.00	00:20																		X												
7265234	10.00	00:24																		X												
7265241	10.00	00:29																		X												
7265242	10.00	00:33																		X												
7265244	10.00	00:37																		X												
7265245	10.00	00:41																		X												
ZZZZZZ	10.00	00:45																														
LLC	1.00	00:49																		X												
ICSA	1.00	00:54																		X												
ICSAB	1.00	00:58																		X												
CCV	1.00	01:03																		X												
CCB	1.00	01:07																		X												

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM04
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	06:47															X															
S0.2	1.00	06:49															X															
S0.5	1.00	06:51															X															
S1.0	1.00	06:53															X															
S2.5	1.00	06:55															X															
S5.0	1.00	06:57															X															
ICV	1.00	06:59															X															
ICB	1.00	07:01															X															
CRA	1.00	07:03															X															
CCV	1.00	07:05															X															
CCB	1.00	07:07															X															
ZZZZZZ	1.00	07:09																														
ZZZZZZ	1.00	07:11																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:17																														
ZZZZZZ	1.00	07:19																														
ZZZZZZ	1.00	07:21																														
ZZZZZZ	1.00	07:23																														
ZZZZZZ	1.00	07:25																														
ZZZZZZ	1.00	07:27																														
CCV	1.00	07:30															X															
CCB	1.00	07:32															X															
ZZZZZZ	1.00	07:34																														
ZZZZZZ	1.00	07:36																														
ZZZZZZ	1.00	07:38																														
ZZZZZZ	1.00	07:40																														
ZZZZZZ	1.00	07:42																														
ZZZZZZ	1.00	07:44																														
ZZZZZZ	1.00	07:46																														
ZZZZZZ	1.00	07:48																														
ZZZZZZ	1.00	07:50																														
ZZZZZZ	1.00	07:52																														
CCV	1.00	07:54															X															
CCB	1.00	07:56															X															
ZZZZZZ	1.00	07:58																														
ZZZZZZ	1.00	08:00																														
ZZZZZZ	1.00	08:02																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:04																													
ZZZZZZ	1.00	08:06																													
ZZZZZZ	1.00	08:08																													
ZZZZZZ	1.00	08:10																													
ZZZZZZ	1.00	08:12																													
ZZZZZZ	1.00	08:14																													
ZZZZZZ	1.00	08:16																													
CCV	1.00	08:18															X														
CCB	1.00	08:20															X														
ZZZZZZ	5.00	08:30																													
ZZZZZZ	5.00	08:32																													
ZZZZZZ	1.00	08:34																													
ZZZZZZ	5.00	08:36																													
ZZZZZZ	5.00	08:38																													
ZZZZZZ	1.00	08:42																													
ZZZZZZ	1.00	08:45																													
ZZZZZZ	1.00	08:47																													
ZZZZZZ	1.00	08:49																													
ZZZZZZ	1.00	08:51																													
CCV	1.00	08:53															X														
CCB	1.00	08:55															X														
ZZZZZZ	1.00	08:57																													
ZZZZZZ	1.00	08:59																													
ZZZZZZ	1.00	09:01																													
ZZZZZZ	1.00	09:03																													
ZZZZZZ	1.00	09:06																													
ZZZZZZ	1.00	09:08																													
ZZZZZZ	1.00	09:10																													
ZZZZZZ	1.00	09:12																													
ZZZZZZ	1.00	09:14																													
ZZZZZZ	1.00	09:16																													
CCV	1.00	09:18															X														
CCB	1.00	09:20															X														
ZZZZZZ	1.00	09:22																													
ZZZZZZ	1.00	09:24																													
ZZZZZZ	1.00	09:26																													
ZZZZZZ	1.00	09:28																													
ZZZZZZ	1.00	09:30																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	09:32																													
ZZZZZZ	1.00	09:34																													
ZZZZZZ	5.00	09:36																													
P31211CB	1.00	09:38															X														
P31211CQ	1.00	09:40															X														
CCV	1.00	09:42															X														
CCB	1.00	09:44															X														
ZZZZZZ	1.00	09:46																													
ZZZZZZ	1.00	09:48																													
ZZZZZZ	1.00	09:50																													
ZZZZZZ	1.00	09:52																													
ZZZZZZ	1.00	09:54																													
ZZZZZZ	1.00	09:56																													
ZZZZZZ	1.00	09:58																													
ZZZZZZ	1.00	10:00																													
ZZZZZZ	1.00	10:02																													
ZZZZZZ	1.00	10:04																													
CCV	1.00	10:06															X														
CCB	1.00	10:08															X														
ZZZZZZ	1.00	10:28																													
7265239	1.00	10:30																													
7265225	1.00	10:32															X														
7265226	1.00	10:34															X														
7265227	1.00	10:36															X														
7265229	1.00	10:38															X														
7265234	1.00	10:40															X														
7265236	1.00	10:42															X														
7265237	1.00	10:44															X														
7265241	1.00	10:46																													
CCV	1.00	10:48															X														
CCB	1.00	10:50															X														
7265242	1.00	10:52															X														
7265244	1.00	10:54															X														
7265245	1.00	10:56															X														
7265246	1.00	10:58															X														
7265239	10.00	11:00															X														
7265241	2.50	11:02															X														
ZZZZZZ	1.00	11:04																													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
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Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM04

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	11:06																													
ZZZZZZ	1.00	11:08																													
ZZZZZZ	1.00	11:10																													
CCV	1.00	11:12															X														
CCB	1.00	11:14															X														
ZZZZZZ	1.00	11:16																													
ZZZZZZ	1.00	11:18																													
ZZZZZZ	1.00	11:20																													
ZZZZZZ	1.00	11:23																													
ZZZZZZ	1.00	11:25																													
ZZZZZZ	1.00	11:27																													
ZZZZZZ	1.00	11:29																													
ZZZZZZ	1.00	11:31																													
ZZZZZZ	1.00	11:33																													
ZZZZZZ	1.00	11:35																													
CCV	1.00	11:37															X														
CCB	1.00	11:39															X														
ZZZZZZ	1.00	11:41																													
ZZZZZZ	1.00	11:43																													
ZZZZZZ	1.00	11:45																													
ZZZZZZ	1.00	11:47																													
ZZZZZZ	1.00	11:49																													
ZZZZZZ	1.00	11:51																													
ZZZZZZ	1.00	11:53																													
ZZZZZZ	1.00	11:55																													
ZZZZZZ	1.00	11:57																													
ZZZZZZ	1.00	11:59																													
CCV	1.00	12:03															X														
CCB	1.00	12:05															X														
ZZZZZZ	5.00	12:07																													
CRA	1.00	12:09															X														
CCV	1.00	12:11															X														
CCB	1.00	12:13															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

Raw Data

Metals in Solid

ICP Data

Metals in Solid

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ICP-AES Run Data Report

1331606T72

Reviewed By
Katlin N Cataldi

Reviewed Date
11/12/2013 10:15PM

Data File Name 1331606T72.TXT
Run Name: 1331606T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:54AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 3282

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/12/2013 18:44

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00264	70.479	-0.00246	-0.00087	-0.00458
AL	0.000	0.00320	209.151	0.01018	-0.00315	0.00257
AS	0.000	-0.00690	22.952	-0.00507	-0.00782	-0.00780
B	0.000	0.00002	27.712	0.00002	0.00001	0.00002
BA	0.000	0.00012	33.560	0.00010	0.00016	0.00008
BE	0.000	-0.07770	1.839	-0.07885	-0.07610	-0.07814
CA	0.000	0.00389	3.536	0.00374	0.00393	0.00401
CD	0.000	-0.00815	16.112	-0.00664	-0.00876	-0.00905
CO	0.000	0.00866	13.660	0.00963	0.00734	0.00902
CR	0.000	-0.00001	266.971	0.00001	-0.00002	-0.00002
CU	0.000	-0.00630	32.205	-0.00515	-0.00511	-0.00864
FE	0.000	-0.00002	300.143	0.00001	-0.00010	0.00002
K	0.000	-0.05652	29.929	-0.05974	-0.03822	-0.07159
LI	0.000	0.00189	15.099	0.00199	0.00212	0.00157
MG	0.000	-0.00020	48.939	-0.00027	-0.00009	-0.00025
MN	0.000	0.00196	18.194	0.00221	0.00155	0.00212
MO	0.000	0.00125	13.347	0.00109	0.00125	0.00142
NA	0.000	-0.00078	82.872	-0.00062	-0.00149	-0.00023
NI	0.000	0.02789	4.268	0.02678	0.02914	0.02774
P	0.000	-0.00002	86.792	0.00000	-0.00004	-0.00003
PB	0.000	0.00687	13.870	0.00660	0.00607	0.00792
S	0.000	-0.00027	5.964	-0.00028	-0.00029	-0.00026
SB	0.000	0.00006	40.763	0.00006	0.00009	0.00004
SE	0.000	0.00086	362.911	0.00399	-0.00223	0.00081
SI	0.000	0.00010	26.974	0.00008	0.00013	0.00009
SN	0.000	0.00719	25.449	0.00929	0.00599	0.00628
SR	0.000	-0.00054	4.788	-0.00055	-0.00055	-0.00051
TI	0.000	0.00299	32.115	0.00410	0.00249	0.00239
TL	0.000	-0.01224	2.988	-0.01235	-0.01183	-0.01254
V	0.000	-0.00280	6.757	-0.00259	-0.00285	-0.00296
Y1	0.000	22782.51679	0.559	22853.94527	22858.03690	22635.56821
Y2A	0.000	310021.46763	1.458	312431.54762	312825.44970	304807.40557
Y2R	0.000	20424.13231	0.604	20322.84603	20561.60180	20387.94910
ZN	0.000	0.03883	7.561	0.04220	0.03740	0.03687
ZR	0.000	0.00009	136.147	0.00020	0.00009	-0.00003

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/12/2013 18:48

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.45868	0.502	12.44245	12.40589	12.52770
CA	50.000	2.33412	0.161	2.33219	2.33172	2.33845
FE	50.000	0.67624	0.370	0.67514	0.67447	0.67910
K	50.000	41.11133	0.049	41.12226	41.12366	41.08808
MG	50.000	4.04073	0.207	4.03267	4.04014	4.04939
NA	50.000	2.43295	0.299	2.42456	2.43724	2.43704
S	50.000	0.43202	0.917	0.42754	0.43508	0.43343
SI	50.000	0.44712	0.326	0.44549	0.44760	0.44828
Y1	50.000	21732.17871	0.727	21901.87517	21589.50876	21705.15220
Y2R	50.000	19929.40056	0.448	19884.85136	20032.26048	19871.08986

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/12/2013 18:52

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.19249	0.216	2.18949	2.19001	2.19795
AS	1.000	0.88820	0.100	0.88719	0.88882	0.88858
B	1.000	0.02661	0.527	0.02658	0.02649	0.02677
BA	1.000	2.10400	2.676	2.14027	2.03915	2.13258
BE	1.000	72.80397	0.586	72.42235	72.72474	73.26482
CD	1.000	36.39178	0.174	36.33386	36.45968	36.38180
CO	1.000	12.20903	0.247	12.18171	12.24140	12.20397
CU	1.000	2.03221	0.421	2.02386	2.03182	2.04097
LI	1.000	0.27860	0.801	0.27762	0.28115	0.27702
MN	1.000	10.39027	0.191	10.40113	10.36733	10.40235
NI	1.000	8.57778	0.128	8.56544	8.58638	8.58152
P	1.000	0.02384	0.287	0.02377	0.02386	0.02390
PB	1.000	2.92739	0.407	2.91653	2.94015	2.92550
SE	1.000	0.76872	0.491	0.76452	0.76984	0.77182
SR	1.000	2.44890	0.228	2.45535	2.44534	2.44602
TL	1.000	1.55853	0.319	1.55334	1.56324	1.55901
Y1	1.000	22008.21795	0.123	22013.74842	21978.91474	22031.99068
Y2A	1.000	293878.20300	0.209	293536.69649	294587.80649	293510.10603
Y2R	1.000	19828.77874	0.175	19835.47372	19791.15945	19859.70306
ZN	1.000	27.30224	0.182	27.24781	27.34536	27.31355

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 4

Date/Time: 11/12/2013 18:56

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03524	0.443	0.03532	0.03534	0.03506
MO	1.000	10.09785	0.077	10.08928	10.09983	10.10446
SB	1.000	0.03383	0.331	0.03385	0.03372	0.03394
SN	1.000	2.72075	0.133	2.72092	2.72430	2.71704
TI	1.000	9.90181	0.730	9.91628	9.96576	9.82338
V	1.000	2.31698	0.641	2.31768	2.33147	2.30179
Y1	1.000	22698.45868	0.029	22697.84376	22692.21985	22705.31242
Y2A	1.000	305523.95111	0.970	304573.49537	303151.83897	308846.51899
Y2R	1.000	20028.47405	0.189	20004.32241	20072.19612	20008.90363
ZR	1.000	0.11244	0.426	0.11241	0.11198	0.11294

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/12/2013 19:00

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.62214	8,065.37	1.458	0.61410	0.63197	0.62034
AL	31.18027	3,120.43	0.514	31.30218	30.99876	31.23987
AS	0.61428	237.61	0.621	0.61868	0.61227	0.61189
B	0.60497	4,894.45	1.746	0.59442	0.61555	0.60495
BA	0.62642	387,191.51	1.273	0.62767	0.63370	0.61789
BE	0.60679	259,402.67	1.504	0.59898	0.61683	0.60456
CA	30.66341	28,828.69	0.731	30.87450	30.42791	30.68781
CD	0.61362	9,875.92	0.245	0.61535	0.61285	0.61265
CO	0.61115	3,291.57	0.256	0.61287	0.61075	0.60982
CR	0.60390	6,241.40	1.797	0.59591	0.61625	0.59954
CU	0.62389	7,394.38	1.925	0.61155	0.63554	0.62458
FE	30.56481	8,361.01	0.573	30.72667	30.37888	30.58888
K	30.50145	10,063.21	0.499	30.66320	30.36100	30.48013
LI	0.61199	3,454.49	0.352	0.61446	0.61052	0.61099
MG	30.19835	49,461.17	0.364	30.32139	30.10979	30.16388
MN	0.61449	37,516.70	1.380	0.60764	0.62398	0.61185
MO	0.61908	2,749.42	0.199	0.62044	0.61879	0.61802
NA	30.35306	29,631.74	0.213	30.41342	30.28463	30.36112
NI	0.61551	2,324.96	0.015	0.61559	0.61555	0.61541
P	0.62692	328.51	0.380	0.62689	0.62932	0.62456
PB	0.61901	804.62	0.301	0.62116	0.61795	0.61792
S	30.44124	5,780.80	0.336	30.53408	30.45811	30.33153
SB	0.63789	476.77	0.290	0.63581	0.63933	0.63852
SE	0.61566	207.98	0.340	0.61808	0.61442	0.61449
SI	31.08659	5,579.88	0.564	31.28224	30.94361	31.03392
SN	0.60186	721.39	0.156	0.60192	0.60277	0.60089
SR	0.61289	440,920.69	1.391	0.60610	0.62245	0.61012
TI	0.61681	35,934.97	1.694	0.60702	0.62781	0.61561
TL	0.61045	397.98	0.280	0.60857	0.61087	0.61190
V	0.61302	8,346.05	1.360	0.60492	0.62158	0.61257
Y1	21988.71550	21,988.72	0.066	21999.59052	21972.14895	21994.40704
Y2A	293788.90546	293,788.91	0.999	294395.54341	290597.58118	296373.59178
Y2R	20067.11560	20,067.12	0.435	19973.55145	20146.40291	20081.39244
ZN	0.62211	7,514.95	0.165	0.62273	0.62267	0.62092
ZR	0.60833	1,373.25	0.678	0.61300	0.60522	0.60675

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/12/2013 19:05

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00118	-16.08	46.362	0.00180	0.00078	0.00094
AL	0.06836	8.12	41.871	0.05452	0.10127	0.04928
AS	-0.00051	-2.92	331.830	-0.00088	-0.00198	0.00134
B	-0.00018	4.05	138.582	-0.00047	-0.00009	0.00001
BA	0.00019	155.44	16.027	0.00022	0.00018	0.00016
BE	-0.00018	-463.27	8.044	-0.00017	-0.00019	-0.00019
CA	0.03204	108.41	19.594	0.03773	0.03309	0.02530
CD	-0.00007	-4.92	34.357	-0.00010	-0.00006	-0.00006
CO	-0.00002	3.83	913.576	0.00015	-0.00018	-0.00002
CR	0.00017	-1.62	284.154	-0.00037	0.00056	0.00032
CU	0.00024	-28.92	161.439	0.00015	-0.00009	0.00065
FE	0.01474	3.81	49.188	0.01090	0.02309	0.01021
K	-0.08286	-32.38	10.248	-0.09204	-0.07528	-0.08126
LI	0.00382	59.25	46.295	0.00569	0.00357	0.00219
MG	0.02706	40.94	6.714	0.02895	0.02690	0.02533
MN	0.00028	29.20	16.318	0.00032	0.00027	0.00023
MO	0.00045	2.62	77.362	0.00017	0.00034	0.00084
NA	-0.02196	-37.14	18.448	-0.02371	-0.01733	-0.02484
NI	-0.00012	12.18	75.534	-0.00002	-0.00020	-0.00013
P	0.00155	0.32	66.043	0.00239	0.00041	0.00184
PB	0.00197	5.74	93.578	0.00090	0.00409	0.00091
S	-0.00268	-5.29	130.256	-0.00046	-0.00088	-0.00671
SB	-0.00004	1.42	3290.807	0.00072	-0.00141	0.00058
SE	0.00264	0.85	77.656	0.00406	0.00029	0.00355
SI	0.02058	5.75	27.529	0.02294	0.01412	0.02469
SN	-0.00049	2.66	93.158	0.00003	-0.00081	-0.00068
SR	-0.00010	-66.35	9.530	-0.00010	-0.00010	-0.00012
TI	0.00018	28.75	30.984	0.00011	0.00022	0.00020
TL	0.00080	-5.14	23.649	0.00091	0.00058	0.00090
V	-0.00034	-10.27	81.729	-0.00002	-0.00051	-0.00049
Y1	22648.98991	22,648.99	0.277	22609.09908	22721.42952	22616.44114
Y2A	303202.83852	303,202.84	1.150	302614.14844	300047.05103	306947.31610
Y2R	20085.14553	20,085.15	0.202	20103.85883	20112.98365	20038.59412
ZN	-0.00008	16.65	74.742	-0.00001	-0.00012	-0.00010
ZR	-0.00015	1.38	948.401	0.00149	-0.00105	-0.00089

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/12/2013 19:09

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00640	59.88	4.981	0.00671	0.00640	0.00608
AL	0.34024	35.21	14.881	0.37633	0.36203	0.28237
AS	0.02097	5.78	12.108	0.01804	0.02233	0.02254
B	0.05010	418.13	1.390	0.04944	0.05083	0.05003
BA	0.00579	3,793.95	1.404	0.00588	0.00579	0.00571
BE	0.00473	1,736.42	1.030	0.00477	0.00474	0.00468
CA	0.28354	344.13	1.183	0.28712	0.28303	0.28047
CD	0.00517	82.05	1.480	0.00513	0.00512	0.00526
CO	0.00534	33.61	3.343	0.00551	0.00535	0.00516
CR	0.01511	160.67	1.807	0.01527	0.01527	0.01479
CU	0.01014	94.22	3.930	0.01023	0.01049	0.00970
FE	0.25572	70.35	3.166	0.26353	0.25626	0.24737
K	0.43772	139.09	6.140	0.40699	0.44932	0.45684
LI	0.02153	157.23	6.195	0.02146	0.02023	0.02289
MG	0.17748	290.20	2.245	0.18208	0.17526	0.17510
MN	0.00568	375.73	2.522	0.00579	0.00573	0.00551
MO	0.01042	48.26	1.300	0.01056	0.01042	0.01029
NA	1.00031	958.69	2.461	0.97394	1.00429	1.02270
NI	0.01046	53.20	3.369	0.01011	0.01081	0.01046
P	0.10040	53.54	1.419	0.09991	0.09928	0.10200
PB	0.01966	29.21	0.547	0.01958	0.01978	0.01961
S	0.49101	91.42	1.011	0.49674	0.48828	0.48801
SB	0.02226	18.43	5.763	0.02316	0.02079	0.02282
SE	0.01909	6.59	20.457	0.01642	0.01729	0.02357
SI	0.12557	24.52	6.609	0.11734	0.12543	0.13393
SN	0.02022	28.13	1.408	0.01991	0.02030	0.02046
SR	0.00522	3,951.70	1.563	0.00529	0.00524	0.00513
TI	0.01010	635.82	2.019	0.01026	0.01018	0.00987
TL	0.03303	17.57	1.803	0.03318	0.03354	0.03237
V	0.00451	58.63	5.883	0.00438	0.00482	0.00434
Y1	22663.47250	22,663.47	0.240	22667.09948	22715.87397	22607.44404
Y2A	308374.96027	308,374.96	0.282	307727.51499	308035.86812	309361.49768
Y2R	20011.74102	20,011.74	0.380	20077.72900	20028.89410	19928.59996
ZN	0.02048	270.22	0.551	0.02053	0.02035	0.02055
ZR	0.05025	114.69	2.854	0.04876	0.05162	0.05037

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/12/2013 19:13

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00149	-9.72	27.243	0.00169	0.00176	0.00102
AL	511.42404	49,218.40	0.431	509.92973	513.95699	510.38541
AS	-0.00436	-14.42	62.268	-0.00734	-0.00202	-0.00372
B	-0.02710	800.37	6.202	-0.02871	-0.02723	-0.02536
BA	0.00034	216.57	7.399	0.00036	0.00034	0.00031
BE	-0.00035	-463.40	11.008	-0.00030	-0.00038	-0.00036
CA	518.10898	431,010.04	1.366	515.68450	526.07983	512.56262
CD	0.00146	364.19	20.935	0.00130	0.00126	0.00181
CO	-0.00026	2.15	111.508	0.00006	-0.00032	-0.00051
CR	0.00207	-40.45	11.634	0.00205	0.00231	0.00183
CU	0.00455	148.03	16.838	0.00388	0.00437	0.00538
FE	207.32573	49,957.16	0.416	206.94499	208.31412	206.71808
K	-0.12812	-44.89	11.881	-0.13560	-0.11060	-0.13814
LI	-0.00143	323.29	86.650	-0.00177	-0.00006	-0.00246
MG	562.06572	641,084.77	0.700	557.61135	565.06657	563.51925
MN	0.00379	216.90	0.999	0.00375	0.00378	0.00383
MO	-0.00098	-3.43	25.101	-0.00081	-0.00087	-0.00127
NA	-0.00529	-19.81	347.948	-0.02623	0.00832	0.00203
NI	0.00284	-0.40	19.752	0.00349	0.00249	0.00254
P	0.01181	5.11	9.712	0.01297	0.01068	0.01178
PB	0.00810	130.22	48.762	0.00604	0.00560	0.01265
S	-0.13339	-27.97	3.621	-0.12789	-0.13532	-0.13696
SB	-0.00638	9.11	45.777	-0.00378	-0.00954	-0.00581
SE	0.00007	-2.03	3169.579	-0.00493	0.00389	0.00125
SI	0.03195	7.39	19.540	0.03621	0.02479	0.03487
SN	0.00505	8.27	23.438	0.00369	0.00580	0.00567
SR	0.00199	1,287.83	0.956	0.00198	0.00201	0.00198
TI	-0.00397	-190.33	7.177	-0.00365	-0.00418	-0.00407
TL	0.00022	-4.62	760.282	0.00014	-0.00142	0.00195
V	-0.00491	-44.85	5.943	-0.00459	-0.00517	-0.00496
Y1	19789.01710	19,789.02	0.176	19826.35153	19783.38553	19757.31423
Y2A	262517.67742	262,517.68	0.579	264237.74023	261965.12591	261350.16611
Y2R	19040.69880	19,040.70	0.640	19129.14420	18901.61274	19091.33945
ZN	0.00641	324.46	3.470	0.00638	0.00665	0.00621
ZR	0.00587	14.20	30.377	0.00767	0.00411	0.00584

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 9 Date/Time: 11/12/2013 19:17

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22329	2,532.96	1.027	0.22549	0.22348	0.22091
AL	509.82878	49,335.62	0.283	509.05486	511.49401	508.93748
AS	0.09836	22.00	5.034	0.09265	0.10087	0.10155
B	-0.02580	798.16	0.675	-0.02596	-0.02582	-0.02561
BA	0.51189	280,925.42	0.099	0.51130	0.51223	0.51214
BE	0.51594	195,776.57	0.497	0.51703	0.51778	0.51301
CA	517.38870	432,854.56	0.453	515.89417	520.08764	516.18428
CD	0.94233	13,883.83	0.184	0.94213	0.94415	0.94070
CO	0.46074	2,223.47	0.238	0.46200	0.46009	0.46011
CR	0.48222	4,375.02	0.117	0.48204	0.48285	0.48177
CU	0.54487	5,889.34	0.766	0.54499	0.54898	0.54064
FE	206.52490	50,056.88	0.512	205.79823	207.73681	206.03967
K	-0.10843	-38.92	24.341	-0.13669	-0.08443	-0.10416
LI	-0.00021	331.15	553.424	0.00036	-0.00155	0.00056
MG	556.20085	640,411.75	1.620	560.12282	562.58549	545.89425
MN	0.49388	26,772.99	0.722	0.49698	0.49467	0.48999
MO	-0.00130	-4.68	38.461	-0.00073	-0.00151	-0.00165
NA	-0.00234	-17.14	391.893	-0.00309	0.00718	-0.01110
NI	0.92361	3,108.75	0.173	0.92542	0.92240	0.92301
P	0.01018	5.65	18.159	0.01220	0.00977	0.00858
PB	0.05308	181.11	2.824	0.05277	0.05176	0.05471
S	-0.14308	-29.55	4.320	-0.14330	-0.14916	-0.13680
SB	0.64378	441.90	0.481	0.64729	0.64262	0.64144
SE	0.05137	13.55	3.439	0.05339	0.05061	0.05011
SI	0.04810	10.19	20.411	0.04023	0.04496	0.05910
SN	0.00432	7.47	41.543	0.00233	0.00483	0.00581
SR	0.00194	1,250.56	1.206	0.00196	0.00195	0.00192
TI	-0.00376	-159.45	3.816	-0.00372	-0.00392	-0.00364
TL	0.09321	41.30	1.529	0.09158	0.09386	0.09419
V	0.49832	6,065.55	0.463	0.49933	0.49995	0.49568
Y1	19740.69336	19,740.69	0.016	19738.41516	19739.25455	19744.41037
Y2A	260823.57719	260,823.58	0.681	260391.35126	259303.28685	262776.09344
Y2R	19145.87828	19,145.88	0.349	19151.88736	19076.24078	19209.50669
ZN	1.04957	11,537.88	0.040	1.04993	1.04968	1.04910
ZR	0.00495	12.29	44.664	0.00272	0.00714	0.00500

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/12/2013 19:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50402	6,598.73	0.829	0.49946	0.50490	0.50768
AL	25.61601	2,527.82	0.590	25.75555	25.63698	25.45548
AS	0.50084	193.22	0.204	0.50055	0.50197	0.49998
B	0.48554	3,974.84	0.529	0.48423	0.48389	0.48850
BA	0.50676	316,584.71	0.368	0.50556	0.50580	0.50891
BE	0.49102	212,083.41	0.386	0.48942	0.49053	0.49311
CA	25.42178	23,599.24	0.647	25.41872	25.58779	25.25883
CD	0.50318	8,097.57	0.162	0.50293	0.50409	0.50251
CO	0.50180	2,703.02	0.171	0.50196	0.50256	0.50087
CR	0.48890	5,106.25	0.301	0.48742	0.48891	0.49037
CU	0.50383	6,029.28	0.664	0.50036	0.50408	0.50704
FE	25.21131	6,815.75	0.489	25.23231	25.32261	25.07899
K	25.16635	8,187.21	0.160	25.15127	25.21203	25.13576
LI	0.50641	2,825.42	0.139	0.50679	0.50684	0.50560
MG	24.93614	40,381.76	0.423	24.93661	25.04136	24.83044
MN	0.49903	30,795.20	0.362	0.49700	0.49961	0.50046
MO	0.50523	2,243.72	0.104	0.50490	0.50583	0.50495
NA	25.03498	24,098.64	0.350	25.02429	25.12734	24.95331
NI	0.50486	1,909.05	0.258	0.50443	0.50632	0.50383
P	0.50967	266.95	0.191	0.50881	0.50948	0.51073
PB	0.50949	662.76	0.413	0.50973	0.51146	0.50728
S	24.85107	4,718.07	0.204	24.84649	24.90395	24.80276
SB	0.51975	388.69	0.073	0.51939	0.52015	0.51971
SE	0.50102	169.23	0.414	0.49982	0.49983	0.50342
SI	25.80415	4,567.89	0.453	25.76230	25.93622	25.71394
SN	0.49378	592.37	0.164	0.49468	0.49352	0.49313
SR	0.49541	360,221.28	0.455	0.49556	0.49758	0.49309
TI	0.49849	29,355.89	0.623	0.49587	0.49767	0.50193
TL	0.50451	328.25	0.482	0.50299	0.50731	0.50322
V	0.49536	6,814.83	0.360	0.49380	0.49497	0.49730
Y1	21987.32391	21,987.32	0.038	21989.15606	21978.31534	21994.50033
Y2A	296910.06737	296,910.07	0.325	298023.69119	296376.98807	296329.52286
Y2R	19789.09821	19,789.10	0.428	19802.12076	19698.70000	19866.47387
ZN	0.50668	6,123.98	0.150	0.50676	0.50740	0.50589
ZR	0.50041	1,114.30	0.442	0.50060	0.50252	0.49811

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/12/2013 19:26

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00194	-5.93	29.864	0.00198	0.00250	0.00134
AL	0.06016	7.18	11.525	0.05217	0.06463	0.06366
AS	0.00189	-1.94	23.502	0.00141	0.00229	0.00198
B	0.00003	5.87	1671.878	0.00017	0.00049	-0.00057
BA	0.00014	122.32	13.986	0.00012	0.00016	0.00013
BE	-0.00013	-441.58	11.473	-0.00011	-0.00013	-0.00013
CA	0.04920	122.61	4.026	0.05077	0.04985	0.04697
CD	0.00002	-3.30	339.477	-0.00007	0.00008	0.00005
CO	-0.00007	3.55	156.355	-0.00007	-0.00016	0.00004
CR	0.00006	-2.77	746.056	0.00060	-0.00017	-0.00024
CU	-0.00062	-39.80	94.882	-0.00072	0.00001	-0.00114
FE	0.02165	5.63	31.527	0.01400	0.02385	0.02711
K	-0.09843	-36.97	23.406	-0.10036	-0.12045	-0.07449
LI	0.00203	48.54	37.040	0.00274	0.00124	0.00212
MG	0.04695	72.84	6.092	0.04808	0.04370	0.04907
MN	0.00012	19.87	84.881	0.00011	0.00003	0.00024
MO	0.00047	2.72	39.780	0.00043	0.00067	0.00031
NA	-0.00909	-24.22	278.070	-0.03250	-0.01246	0.01770
NI	0.00005	12.77	44.648	0.00003	0.00003	0.00007
P	0.00079	-0.09	100.855	0.00017	0.00051	0.00169
PB	0.00177	5.46	29.966	0.00220	0.00118	0.00194
S	-0.00484	-5.70	91.413	-0.00531	-0.00020	-0.00902
SB	0.00185	2.84	14.427	0.00202	0.00199	0.00155
SE	-0.00117	-0.47	43.120	-0.00059	-0.00151	-0.00142
SI	0.01148	4.06	39.132	0.01031	0.01644	0.00768
SN	-0.00023	2.97	145.063	-0.00046	0.00015	-0.00037
SR	-0.00014	-93.68	10.653	-0.00012	-0.00015	-0.00015
TI	0.00003	20.55	139.951	0.00008	0.00005	-0.00002
TL	0.00066	-5.21	285.972	0.00065	-0.00122	0.00256
V	-0.00066	-14.93	44.410	-0.00096	-0.00064	-0.00038
Y1	22592.66727	22,592.67	0.026	22586.01746	22595.09059	22596.89375
Y2A	305730.62797	305,730.63	0.913	308607.39087	303033.13453	305551.35852
Y2R	19767.64840	19,767.65	0.813	19718.91192	19946.99920	19637.03408
ZN	-0.00015	15.67	20.978	-0.00014	-0.00013	-0.00019
ZR	-0.00020	1.25	380.269	-0.00045	0.00066	-0.00083

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/12/2013 19:30

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00092	-20.02	67.901	0.00147	0.00024	0.00104
AL	0.08996	10.39	34.478	0.05982	0.08827	0.12179
AS	0.00284	-1.60	36.154	0.00167	0.00358	0.00328
B	0.00507	48.03	9.478	0.00551	0.00515	0.00456
BA	0.00024	194.77	5.787	0.00025	0.00025	0.00023
BE	-0.00019	-482.90	4.735	-0.00019	-0.00019	-0.00020
CA	0.13093	203.84	0.704	0.13051	0.13198	0.13029
CD	-0.00001	-3.88	1088.359	-0.00001	-0.00007	0.00006
CO	0.00011	4.63	279.786	0.00021	-0.00023	0.00034
CR	0.00037	0.52	125.006	0.00075	0.00050	-0.00014
CU	-0.00069	-41.72	18.123	-0.00077	-0.00055	-0.00077
FE	0.02640	7.12	25.979	0.03432	0.02218	0.02270
K	-0.06096	-25.46	80.455	-0.00878	-0.06800	-0.10611
LI	0.00129	45.85	248.017	-0.00071	-0.00040	0.00498
MG	0.03999	63.16	0.906	0.03973	0.03984	0.04040
MN	0.00022	26.62	23.748	0.00021	0.00018	0.00028
MO	0.00036	2.27	51.251	0.00017	0.00038	0.00053
NA	-0.02042	-35.97	61.761	-0.02691	-0.02846	-0.00588
NI	-0.00021	12.11	24.768	-0.00026	-0.00022	-0.00016
P	0.01509	7.79	3.664	0.01528	0.01446	0.01552
PB	0.00146	5.20	65.060	0.00064	0.00123	0.00250
S	0.00074	-4.73	408.271	0.00039	0.00394	-0.00210
SB	-0.00045	1.14	250.231	-0.00107	-0.00114	0.00086
SE	0.00097	0.28	259.722	-0.00178	0.00312	0.00156
SI	0.03099	7.70	21.831	0.02464	0.03810	0.03023
SN	0.01468	21.85	4.150	0.01487	0.01518	0.01400
SR	0.00037	294.38	3.514	0.00038	0.00036	0.00036
TI	0.00028	36.28	26.636	0.00036	0.00028	0.00021
TL	0.00107	-5.05	133.728	0.00021	0.00028	0.00273
V	-0.00106	-21.02	11.052	-0.00096	-0.00119	-0.00102
Y1	23224.84318	23,224.84	0.088	23201.32596	23238.28490	23234.91868
Y2A	313015.39767	313,015.40	0.294	312942.62159	312133.63787	313969.93355
Y2R	20310.07913	20,310.08	0.731	20303.31470	20165.09293	20461.82978
ZN	0.00172	39.65	4.268	0.00169	0.00180	0.00166
ZR	0.00078	3.53	31.510	0.00103	0.00054	0.00078

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/12/2013 19:34

Sample Number: **LCSW** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05256	785.67	1.070	0.05236	0.05320	0.05213
AL	2.20843	232.25	1.740	2.17996	2.19321	2.25213
AS	0.15805	62.76	0.443	0.15798	0.15739	0.15879
B	1.99321	16,311.59	0.513	2.00150	1.99636	1.98178
BA	2.05077	1,325,932.50	0.857	2.03135	2.06559	2.05536
BE	0.04813	21,163.29	0.138	0.04809	0.04809	0.04820
CA	4.18205	4,072.37	0.701	4.19484	4.14853	4.20278
CD	0.05120	848.70	0.197	0.05131	0.05112	0.05116
CO	0.51742	2,899.87	0.250	0.51802	0.51830	0.51594
CR	0.19911	2,153.45	0.799	0.20094	0.19840	0.19800
CU	0.26134	3,150.82	0.419	0.26224	0.26165	0.26012
FE	1.02368	287.29	1.003	1.02392	1.01330	1.03384
K	10.14154	3,391.94	0.283	10.14612	10.11083	10.16767
LI	1.00026	5,677.10	0.165	0.99843	1.00163	1.00073
MG	2.03150	3,420.20	0.283	2.03298	2.03637	2.02515
MN	0.51233	32,724.45	0.249	0.51371	0.51211	0.51118
MO	2.00868	9,258.94	0.239	2.01062	2.01222	2.00320
NA	10.13440	10,028.95	0.036	10.13684	10.13016	10.13618
NI	0.52797	2,079.38	0.195	0.52903	0.52791	0.52697
P	1.04870	568.58	0.081	1.04900	1.04935	1.04774
PB	0.15963	210.38	0.360	0.16004	0.15897	0.15986
S	1.01242	191.81	0.171	1.01373	1.01045	1.01307
SB	0.49517	376.61	0.529	0.49349	0.49818	0.49384
SE	0.15424	54.06	0.688	0.15545	0.15377	0.15349
SI	0.37209	72.24	2.843	0.37996	0.36006	0.37624
SN	3.99768	4,955.46	0.358	4.00560	4.00629	3.98116
SR	1.01777	765,951.66	0.260	1.01603	1.02081	1.01647
TI	1.00305	61,039.39	0.100	1.00358	1.00368	1.00190
TL	0.16024	94.57	1.033	0.15854	0.16185	0.16034
V	0.48853	6,857.87	0.026	0.48867	0.48842	0.48850
Y1	22825.52757	22,825.53	0.283	22790.19575	22786.33364	22900.05332
Y2A	307313.34962	307,313.35	0.513	308992.21339	307084.07886	305863.75661
Y2R	20363.08922	20,363.09	0.401	20366.70829	20442.79153	20279.76784
ZN	0.51366	6,408.93	0.262	0.51505	0.51355	0.51237
ZR	0.99795	2,284.93	0.417	1.00099	0.99320	0.99966

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/12/2013 19:38

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00343	16.11	10.381	0.00334	0.00312	0.00382
AL	11.64141	1,223.56	0.333	11.63620	11.60549	11.68255
AS	0.02303	1.02	5.149	0.02351	0.02389	0.02167
B	0.04392	920.55	1.212	0.04445	0.04339	0.04393
BA	0.27196	179,019.24	0.126	0.27173	0.27235	0.27179
BE	0.00148	279.37	0.415	0.00147	0.00149	0.00148
CA	30.70490	30,342.42	0.446	30.55001	30.75533	30.80935
CD	0.00342	242.65	3.973	0.00337	0.00331	0.00357
CO	0.02806	171.93	0.786	0.02826	0.02783	0.02809
CR	0.03406	340.50	2.556	0.03309	0.03478	0.03432
CU	0.14161	1,709.30	0.504	0.14177	0.14224	0.14084
FE	97.04324	27,150.87	0.418	96.58552	97.18722	97.35698
K	1.22469	419.71	6.166	1.29616	1.23222	1.14569
LI	0.00849	108.85	22.854	0.01043	0.00655	0.00849
MG	3.82595	6,669.68	0.629	3.80172	3.82630	3.84982
MN	2.89962	188,465.20	0.265	2.89088	2.90530	2.90270
MO	0.00393	18.87	3.134	0.00406	0.00382	0.00389
NA	1.18743	1,202.64	1.164	1.19256	1.19795	1.17178
NI	0.06484	257.29	0.427	0.06513	0.06481	0.06458
P	3.03543	1,662.74	0.341	3.02931	3.02960	3.04738
PB	26.86003	36,220.52	0.255	26.86861	26.78765	26.92383
S	10.51889	2,092.31	0.422	10.50098	10.48628	10.56942
SB	-0.00258	6.51	117.559	-0.00329	-0.00519	0.00074
SE	0.01391	4.82	1.238	0.01371	0.01398	0.01403
SI	3.50583	663.27	0.433	3.52315	3.49958	3.49478
SN	0.03435	46.33	0.933	0.03405	0.03469	0.03431
SR	0.18899	144,788.86	0.150	0.18889	0.18931	0.18878
TI	0.75059	46,494.01	0.505	0.74776	0.74913	0.75490
TL	0.00257	-5.93	10.816	0.00274	0.00273	0.00225
V	0.09994	1,464.28	0.753	0.09921	0.09990	0.10072
Y1	23071.85739	23,071.86	0.172	23086.48270	23102.16971	23026.91974
Y2A	312816.60861	312,816.61	0.531	314640.07328	312417.80480	311391.94775
Y2R	21092.18506	21,092.19	0.285	21152.90535	21090.82985	21032.81998
ZN	0.19105	2,543.80	0.279	0.19104	0.19052	0.19159
ZR	0.01566	38.92	12.859	0.01543	0.01778	0.01377

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/12/2013 19:42

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02206	385.39	6.992	0.02289	0.02300	0.02028
AL	12.28618	1,292.11	1.338	12.21119	12.47475	12.17260
AS	0.31095	171.03	15.014	0.35634	0.31345	0.26306
B	0.23648	2,539.10	7.389	0.24756	0.24554	0.21634
BA	0.29763	198,132.81	6.210	0.31017	0.30630	0.27640
BE	0.02041	9,007.03	5.201	0.02108	0.02096	0.01918
CA	30.87889	30,518.74	1.329	30.68449	31.35028	30.60190
CD	0.02705	905.14	21.951	0.03267	0.02764	0.02084
CO	0.07340	609.68	16.194	0.08464	0.07458	0.06096
CR	0.21958	2,414.31	5.199	0.22724	0.22505	0.20646
CU	0.62510	7,956.69	6.171	0.65056	0.64402	0.58072
FE	94.78502	26,548.55	1.510	93.94791	96.43792	93.96922
K	3.28356	1,134.11	3.098	3.24929	3.39799	3.20341
LI	1.03195	6,083.24	1.354	1.01950	1.04706	1.02929
MG	4.72118	8,229.11	1.649	4.67546	4.81109	4.67700
MN	2.71140	178,237.94	5.183	2.80258	2.78207	2.54955
MO	0.11645	773.82	15.959	0.13390	0.11855	0.09691
NA	3.23347	3,303.79	1.307	3.19668	3.27962	3.22411
NI	0.12689	716.44	15.654	0.14545	0.12928	0.10594
P	2.26243	1,767.47	16.119	2.60746	2.29898	1.88085
PB	15.11760	29,049.42	15.787	17.36030	15.38311	12.60937
S	5.67973	1,605.52	16.022	6.53938	5.77324	4.72658
SB	0.23480	271.88	17.412	0.27345	0.23895	0.19200
SE	0.48765	246.37	15.698	0.56170	0.49242	0.40882
SI	3.27212	619.43	1.945	3.23193	3.34548	3.23895
SN	0.36051	648.02	15.677	0.41291	0.36799	0.30062
SR	0.19116	148,104.55	6.228	0.19915	0.19685	0.17747
TI	0.78405	49,121.39	5.751	0.81538	0.80439	0.73237
TL	0.61804	620.55	15.286	0.70709	0.62809	0.51894
V	0.18752	2,763.15	5.307	0.19411	0.19237	0.17607
Y1	33188.84262	33,188.84	8.997	30496.53416	32669.37042	36400.62329
Y2A	316454.17245	316,454.17	0.954	316815.36545	313272.15190	319275.00000
Y2R	21097.07944	21,097.08	0.658	21156.40603	20938.53564	21196.29667
ZN	0.17176	3,293.05	16.991	0.19948	0.17449	0.14131
ZR	1.00489	2,383.59	1.730	0.99675	1.02485	0.99308

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/12/2013 19:46

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00311	14.28	18.425	0.00245	0.00339	0.00348
AL	11.01781	1,245.48	7.780	10.02815	11.52944	11.49584
AS	0.02156	1.90	4.843	0.02182	0.02041	0.02245
B	0.03087	830.01	33.936	0.04245	0.02811	0.02205
BA	0.20650	160,923.66	8.842	0.22503	0.20594	0.18852
BE	0.00138	274.22	5.473	0.00143	0.00141	0.00129
CA	27.97316	29,752.15	7.428	25.57702	29.27741	29.06505
CD	0.00109	198.57	41.828	0.00087	0.00079	0.00162
CO	0.02045	153.06	12.045	0.01797	0.02048	0.02290
CR	0.02901	344.72	6.816	0.03107	0.02883	0.02712
CU	0.11939	1,700.69	9.525	0.13130	0.11819	0.10866
FE	77.43613	23,490.70	7.704	70.56161	81.24993	80.49685
K	1.06611	391.84	10.552	0.93665	1.14006	1.12162
LI	0.01037	126.73	31.389	0.00727	0.01376	0.01009
MG	3.47370	6,513.83	7.665	3.16725	3.64838	3.60547
MN	1.96764	151,431.00	8.292	2.13488	1.95916	1.80888
MO	0.00302	17.59	11.152	0.00270	0.00300	0.00337
NA	1.07903	1,173.59	8.084	0.97874	1.13723	1.12112
NI	0.05151	248.48	9.812	0.04640	0.05163	0.05651
P	2.33432	1,534.07	10.442	2.09096	2.33357	2.57845
PB	21.35415	34,557.01	10.041	19.20737	21.35945	23.49562
S	8.11300	1,934.76	10.519	7.25136	8.12970	8.95795
SB	-0.00245	6.26	13.263	-0.00259	-0.00268	-0.00208
SE	0.01087	4.46	26.248	0.00806	0.01080	0.01376
SI	3.64453	741.39	8.220	3.30134	3.85378	3.77848
SN	0.02709	44.66	12.237	0.02370	0.02723	0.03033
SR	0.14602	132,438.01	8.828	0.15906	0.14572	0.13329
TI	0.63524	46,589.42	8.491	0.69171	0.62977	0.58425
TL	0.00425	-5.65	11.527	0.00418	0.00380	0.00477
V	0.08195	1,420.57	7.880	0.08876	0.08120	0.07591
Y1	27810.13588	27,810.14	6.638	29655.24336	27811.73942	25963.42488
Y2A	371528.42292	371,528.42	5.775	347315.94227	379091.07498	388178.25149
Y2R	22735.36495	22,735.36	4.291	23855.41567	22071.03975	22279.63943
ZN	0.14623	2,346.84	10.523	0.13085	0.14622	0.16162
ZR	0.01587	42.32	13.450	0.01342	0.01736	0.01681

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/12/2013 19:50

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.04062	697.03	8.309	0.04272	0.04242	0.03673
AL	15.54196	1,839.07	2.676	16.01448	15.23137	15.38005
AS	0.11128	54.04	15.927	0.12809	0.11299	0.09277
B	1.55000	15,618.44	5.971	1.61015	1.59642	1.44342
BA	1.74350	1,340,411.85	6.469	1.78720	1.82789	1.61539
BE	0.03821	19,884.72	6.193	0.03980	0.03933	0.03549
CA	30.63901	34,001.54	2.398	31.48279	30.14165	30.29259
CD	0.02880	881.99	25.203	0.03576	0.02937	0.02127
CO	0.31366	2,477.43	19.745	0.37383	0.31706	0.25010
CR	0.18030	2,288.35	6.265	0.18844	0.18506	0.16741
CU	0.30020	4,293.06	6.394	0.31378	0.30859	0.27824
FE	80.66967	25,518.21	2.487	82.98406	79.42236	79.60258
K	10.19539	3,966.51	2.304	10.46058	10.01322	10.11236
LI	0.81289	5,394.40	2.065	0.83102	0.79789	0.80977
MG	5.17664	10,129.44	2.080	5.29962	5.09916	5.13115
MN	3.14057	238,482.08	6.371	3.27267	3.23867	2.91036
MO	1.16385	7,507.09	19.929	1.38983	1.17534	0.92636
NA	9.51453	10,950.90	2.412	9.77246	9.33280	9.43832
NI	0.34185	1,876.96	19.763	0.40797	0.34466	0.27294
P	2.14790	1,629.11	20.119	2.56960	2.16808	1.70602
PB	15.17490	28,336.26	19.509	18.04931	15.34023	12.13517
S	6.76914	1,858.17	20.266	8.10837	6.83215	5.36691
SB	0.27161	298.41	21.566	0.32915	0.27362	0.21205
SE	0.09980	48.85	19.370	0.11882	0.10041	0.08017
SI	7.28158	1,546.02	2.440	7.48303	7.14721	7.21451
SN	2.30795	4,006.42	19.535	2.74602	2.33253	1.84529
SR	0.90085	805,484.37	8.422	0.92552	0.96131	0.81571
TI	1.41089	102,089.61	6.509	1.47539	1.45153	1.30575
TL	0.09876	73.57	15.828	0.11289	0.10143	0.08197
V	0.44606	7,510.89	6.621	0.46561	0.46048	0.41208
Y1	32434.21480	32,434.21	11.526	28993.71792	31896.61960	36412.30687
Y2A	366383.15638	366,383.16	6.152	358214.58195	349067.93298	391866.95421
Y2R	23690.65752	23,690.66	1.209	23361.66500	23885.58689	23824.72067
ZN	0.40447	7,212.51	20.292	0.48455	0.40832	0.32054
ZR	0.64701	1,723.91	2.256	0.66330	0.63510	0.64264

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/12/2013 19:55

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02578	557.83	13.197	0.02857	0.02678	0.02199
AL	11.76840	1,657.21	2.880	12.12582	11.72771	11.45168
AS	0.08290	46.88	12.404	0.07170	0.09191	0.08510
B	0.95632	12,517.38	13.458	1.06564	0.98883	0.81447
BA	1.05013	1,046,182.96	15.051	1.16597	1.11434	0.87008
BE	0.02415	16,083.08	12.638	0.02674	0.02493	0.02078
CA	20.36793	26,974.41	2.900	20.98627	20.30817	19.80936
CD	0.02196	757.76	19.769	0.01716	0.02562	0.02310
CO	0.23024	2,134.91	15.490	0.19112	0.26095	0.23864
CR	0.11442	1,881.44	12.779	0.12710	0.11774	0.09843
CU	0.18421	3,387.76	13.087	0.20503	0.18979	0.15780
FE	51.88263	19,765.25	2.814	53.41986	51.71321	50.51482
K	7.03883	3,256.91	2.911	7.25019	7.02528	6.84103
LI	0.55313	4,385.05	3.130	0.57216	0.54892	0.53831
MG	3.62649	8,449.86	2.628	3.71930	3.63129	3.52889
MN	1.39375	137,295.84	12.952	1.54675	1.43985	1.19465
MO	0.84782	6,422.43	15.544	0.70342	0.96159	0.87844
NA	6.44899	8,826.75	2.677	6.62450	6.44309	6.27936
NI	0.25382	1,643.46	15.298	0.21101	0.28675	0.26371
P	1.62281	1,445.06	15.822	1.33945	1.84005	1.68893
PB	12.04481	26,410.55	15.258	10.02717	13.62327	12.48400
S	4.91072	1,581.18	15.854	4.05680	5.58116	5.09418
SB	0.19760	254.55	17.218	0.15996	0.22616	0.20668
SE	0.07302	41.93	15.602	0.06113	0.08384	0.07409
SI	3.72740	943.65	3.280	3.82190	3.77099	3.58931
SN	1.71070	3,488.64	15.073	1.42820	1.93342	1.77049
SR	0.57510	667,060.12	14.397	0.60893	0.63563	0.48075
TI	0.93643	87,890.33	13.388	1.04454	0.96575	0.79900
TL	0.07141	61.16	11.191	0.06334	0.07932	0.07157
V	0.27988	6,098.51	12.914	0.31050	0.28912	0.24001
Y1	37809.75053	37,809.75	7.697	41038.80493	35389.06760	37001.37908
Y2A	476862.41868	476,862.42	7.136	457581.61569	456853.43397	516152.20637
Y2R	28192.25013	28,192.25	0.817	28136.00299	27995.15388	28445.59353
ZN	0.30218	6,316.17	15.672	0.25014	0.34276	0.31363
ZR	0.42186	1,338.55	2.830	0.43413	0.42117	0.41028

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/12/2013 19:59

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00197	-8.45	6.456	0.00212	0.00191	0.00188
AL	0.95074	145.80	0.951	0.94152	0.95959	0.95109
AS	0.00526	-1.73	10.918	0.00589	0.00510	0.00478
B	0.00492	141.30	8.967	0.00511	0.00523	0.00441
BA	0.02165	22,100.78	0.407	0.02174	0.02157	0.02164
BE	0.00039	-338.03	1.865	0.00038	0.00039	0.00039
CA	2.60163	3,828.80	0.899	2.58131	2.62721	2.59639
CD	0.00029	26.97	12.666	0.00025	0.00032	0.00031
CO	0.00218	27.92	11.744	0.00236	0.00230	0.00189
CR	0.00301	41.94	10.847	0.00332	0.00267	0.00304
CU	0.01005	139.35	3.868	0.01046	0.01001	0.00968
FE	7.91690	3,311.62	1.112	7.84716	8.01587	7.88766
K	0.01333	-0.93	113.503	0.00156	0.03040	0.00803
LI	-0.00018	58.38	950.488	-0.00164	-0.00057	0.00168
MG	0.31965	799.10	0.730	0.31833	0.32234	0.31827
MN	0.24392	24,545.44	0.367	0.24470	0.24294	0.24412
MO	0.00046	4.48	16.860	0.00045	0.00040	0.00055
NA	0.08695	104.98	1.288	0.08664	0.08603	0.08820
NI	0.00419	46.49	1.490	0.00413	0.00419	0.00425
P	0.23438	208.85	0.653	0.23614	0.23346	0.23353
PB	2.17941	4,803.73	1.058	2.20398	2.15824	2.17602
S	0.78784	248.56	0.518	0.79255	0.78523	0.78576
SB	-0.00049	2.74	179.455	-0.00064	-0.00128	0.00045
SE	0.00102	0.49	173.086	-0.00091	0.00257	0.00142
SI	0.27447	77.74	2.586	0.27703	0.26645	0.27993
SN	0.00215	9.81	12.213	0.00221	0.00186	0.00237
SR	0.01499	17,777.08	0.520	0.01507	0.01491	0.01497
TI	0.06161	5,930.74	0.253	0.06177	0.06158	0.06146
TL	0.00356	-5.57	20.600	0.00276	0.00370	0.00421
V	0.00831	180.37	2.091	0.00851	0.00818	0.00825
Y1	37675.46839	37,675.47	0.526	37462.94580	37855.58443	37707.87493
Y2A	483968.67397	483,968.67	0.661	480966.82150	483607.33245	487331.86795
Y2R	30409.89897	30,409.90	0.657	30626.62273	30233.49810	30369.57608
ZN	0.01403	333.73	1.479	0.01426	0.01390	0.01392
ZR	0.00161	8.09	25.507	0.00137	0.00137	0.00208

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/12/2013 20:03

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00201	-10.70	3.870	0.00208	0.00193	0.00201
AL	3.60560	643.72	27.475	3.99225	4.34461	2.47993
AS	0.00770	0.70	5.711	0.00804	0.00721	0.00787
B	0.00190	78.28	16.188	0.00164	0.00181	0.00224
BA	0.02688	38,175.54	8.756	0.02606	0.02953	0.02505
BE	0.00065	-214.93	6.448	0.00064	0.00069	0.00061
CA	2.05281	3,584.18	27.136	2.27028	2.46832	1.41982
CD	0.00008	6.91	136.862	0.00021	-0.00002	0.00007
CO	0.00009	14.73	248.034	0.00032	0.00011	-0.00015
CR	0.00305	62.89	5.076	0.00288	0.00319	0.00308
CU	0.01914	441.88	13.484	0.01869	0.02191	0.01681
FE	2.64025	1,301.09	27.403	2.93716	3.16806	1.81552
K	0.14595	77.04	24.538	0.16988	0.16318	0.10477
LI	0.00112	81.92	14.234	0.00129	0.00109	0.00098
MG	0.37164	1,093.69	27.270	0.41467	0.44436	0.25588
MN	0.02624	3,698.87	9.861	0.02524	0.02917	0.02429
MO	0.00015	3.29	130.554	0.00038	0.00004	0.00004
NA	0.01648	-0.39	85.898	0.01706	0.03034	0.00205
NI	-0.00057	26.47	194.108	0.00049	-0.00048	-0.00172
P	0.11759	161.98	64.527	0.19746	0.10887	0.04645
PB	0.01633	66.55	65.780	0.02735	0.01576	0.00588
S	0.71216	346.99	64.674	1.19655	0.66015	0.27979
SB	-0.00140	1.64	18.708	-0.00142	-0.00165	-0.00113
SE	0.00032	0.02	433.855	0.00190	-0.00015	-0.00078
SI	0.83634	271.11	27.349	0.93524	0.99896	0.57480
SN	-0.00011	8.17	1024.842	0.00111	-0.00034	-0.00110
SR	0.00954	15,770.16	9.144	0.00923	0.01053	0.00887
TI	0.08657	11,584.90	10.429	0.08286	0.09686	0.07998
TL	0.00695	-2.77	5.562	0.00656	0.00733	0.00696
V	0.00528	154.92	8.089	0.00508	0.00577	0.00498
Y1	60865.90640	60,865.91	9.611	55772.97396	59569.54364	67255.20160
Y2A	673167.17847	673,167.18	4.089	698479.56811	677160.28628	643861.68101
Y2R	36214.71069	36,214.71	7.161	35951.85019	33762.68188	38929.60000
ZN	0.02581	872.80	68.200	0.04421	0.02411	0.00912
ZR	0.00115	7.73	20.099	0.00131	0.00125	0.00088

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/12/2013 20:07

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00208	-4.40	28.070	0.00154	0.00270	0.00200
AL	59.15697	7,175.01	7.678	63.34544	59.79603	54.32943
AS	0.01583	5.07	7.104	0.01699	0.01576	0.01475
B	0.00795	158.50	9.188	0.00846	0.00827	0.00711
BA	0.29582	252,785.52	8.636	0.32005	0.29827	0.26914
BE	0.00246	943.07	5.060	0.00258	0.00247	0.00233
CA	2.67889	3,151.81	7.707	2.87417	2.69965	2.46284
CD	0.00052	34.60	9.512	0.00056	0.00053	0.00047
CO	0.00243	48.95	6.571	0.00259	0.00241	0.00228
CR	0.04133	583.53	7.413	0.04462	0.04082	0.03856
CU	0.08538	1,269.77	8.652	0.09245	0.08598	0.07771
FE	8.87789	2,970.37	7.511	9.50755	8.94680	8.17933
K	1.56154	619.21	5.745	1.64630	1.57073	1.46759
LI	0.01723	164.32	16.355	0.01877	0.01398	0.01893
MG	1.39189	2,799.58	7.249	1.48597	1.40437	1.28534
MN	0.11626	9,826.55	7.895	0.12545	0.11624	0.10709
MO	0.00170	13.21	16.281	0.00195	0.00175	0.00140
NA	0.17562	189.00	7.747	0.19122	0.16945	0.16620
NI	0.01328	100.05	9.672	0.01437	0.01360	0.01187
P	3.74441	3,194.79	7.354	3.98960	3.79711	3.44652
PB	0.07226	182.88	7.837	0.07670	0.07419	0.06588
S	3.31183	1,020.90	7.543	3.53551	3.35772	3.04225
SB	-0.00043	3.54	83.593	-0.00027	-0.00018	-0.00083
SE	0.00384	1.62	65.315	0.00525	0.00094	0.00533
SI	4.80683	1,048.06	7.884	5.17946	4.81924	4.42178
SN	0.01081	26.26	7.124	0.01155	0.01085	0.01002
SR	0.02976	29,613.00	8.184	0.03215	0.02985	0.02728
TI	1.03935	83,580.23	7.983	1.12235	1.03930	0.95641
TL	0.00517	-8.09	8.669	0.00478	0.00507	0.00566
V	0.06042	1,143.00	7.741	0.06521	0.06019	0.05586
Y1	36002.11159	36,002.11	3.598	34933.23000	35630.27333	37442.83145
Y2A	407155.61148	407,155.61	4.820	385310.38487	412860.80677	423295.64281
Y2R	24378.08123	24,378.08	3.787	23470.53696	24347.72410	25315.98262
ZN	0.13612	2,701.08	7.213	0.14471	0.13824	0.12542
ZR	0.00543	17.06	37.685	0.00315	0.00710	0.00605

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/12/2013 20:11

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.53503	6,725.89	0.404	0.53351	0.53751	0.53408
AL	27.35229	2,582.33	1.107	27.66236	27.33706	27.05744
AS	0.52641	196.76	1.317	0.52823	0.53226	0.51875
B	0.51722	4,064.90	0.883	0.51195	0.51967	0.52003
BA	0.53893	323,176.25	0.839	0.53525	0.54397	0.53756
BE	0.51947	215,384.15	0.742	0.51558	0.51955	0.52329
CA	27.20861	24,153.89	1.067	27.44020	27.30266	26.88297
CD	0.52679	8,210.58	1.298	0.53072	0.53075	0.51890
CO	0.52487	2,737.71	1.439	0.52895	0.52950	0.51615
CR	0.51778	5,190.73	0.976	0.51272	0.51779	0.52283
CU	0.53965	6,201.38	0.312	0.53878	0.54159	0.53858
FE	27.05362	6,991.96	1.235	27.32382	27.15685	26.68019
K	26.95314	8,389.09	1.337	27.23078	27.08288	26.54576
LI	0.54018	2,880.84	2.272	0.54807	0.54643	0.52604
MG	26.57592	41,140.49	1.271	26.79258	26.74831	26.18686
MN	0.52626	31,171.01	0.599	0.52341	0.52571	0.52965
MO	0.53085	2,282.84	1.509	0.53536	0.53559	0.52160
NA	26.63992	24,533.97	1.447	26.89521	26.82801	26.19654
NI	0.52951	1,938.24	1.361	0.53279	0.53450	0.52125
P	0.53836	273.10	1.288	0.54016	0.54422	0.53071
PB	0.53278	671.13	1.119	0.53372	0.53822	0.52641
S	26.11003	4,800.41	1.304	26.32257	26.29025	25.71727
SB	0.54977	398.09	1.157	0.55149	0.55509	0.54272
SE	0.52771	172.60	1.318	0.52933	0.53371	0.52008
SI	27.38178	4,637.25	0.996	27.57626	27.49916	27.06992
SN	0.51694	600.39	1.367	0.52166	0.52034	0.50882
SR	0.52140	363,882.07	1.035	0.52124	0.51608	0.52687
TI	0.53048	29,984.16	0.681	0.52638	0.53183	0.53321
TL	0.52735	332.31	1.148	0.53240	0.52900	0.52064
V	0.52449	6,926.54	0.534	0.52330	0.52248	0.52769
Y1	21293.34366	21,293.34	1.079	21174.12529	21147.75438	21558.15131
Y2A	284996.13431	284,996.13	0.913	286624.91716	286366.63353	281996.85222
Y2R	18933.47221	18,933.47	0.888	18782.23474	18903.82124	19114.36064
ZN	0.53383	6,247.52	1.500	0.53825	0.53866	0.52459
ZR	0.53286	1,135.04	1.800	0.53974	0.53694	0.52190

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/12/2013 20:15

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00166	-9.17	24.364	0.00201	0.00176	0.00122
AL	0.01226	2.41	170.989	0.01123	0.03373	-0.00817
AS	-0.00028	-2.75	296.327	0.00012	0.00027	-0.00122
B	0.00082	11.85	85.099	0.00140	0.00004	0.00104
BA	0.00003	54.81	63.942	0.00001	0.00005	0.00003
BE	-0.00027	-492.87	7.690	-0.00028	-0.00029	-0.00025
CA	0.00393	78.57	133.390	0.00569	0.00807	-0.00197
CD	-0.00006	-4.58	48.725	-0.00007	-0.00003	-0.00008
CO	-0.00001	3.78	3775.279	0.00012	0.00019	-0.00033
CR	-0.00003	-3.62	674.465	-0.00015	-0.00009	0.00016
CU	-0.00090	-42.02	55.947	-0.00032	-0.00121	-0.00116
FE	-0.00349	-1.20	203.418	-0.00220	-0.01113	0.00288
K	-0.10916	-39.35	48.216	-0.09687	-0.06377	-0.16686
LI	0.00272	50.89	74.219	0.00467	0.00064	0.00284
MG	0.00240	-0.10	88.644	0.00485	0.00144	0.00093
MN	0.00004	13.97	56.067	0.00003	0.00006	0.00002
MO	0.00018	1.34	51.244	0.00026	0.00008	0.00018
NA	-0.02605	-39.47	12.459	-0.02246	-0.02878	-0.02691
NI	0.00039	13.78	65.222	0.00065	0.00038	0.00014
P	-0.00038	-0.70	217.974	0.00021	-0.00132	-0.00002
PB	0.00192	5.50	94.932	0.00148	0.00391	0.00035
S	0.00091	-4.46	355.272	-0.00156	-0.00027	0.00456
SB	0.00042	1.72	485.996	-0.00181	0.00086	0.00221
SE	0.00191	0.59	114.879	0.00377	0.00248	-0.00051
SI	0.01215	4.07	51.746	0.00800	0.01938	0.00906
SN	-0.00069	2.35	65.855	-0.00108	-0.00079	-0.00019
SR	-0.00022	-145.01	1.393	-0.00022	-0.00021	-0.00021
TI	-0.00003	15.88	145.071	0.00002	-0.00007	-0.00006
TL	-0.00049	-5.89	210.822	-0.00114	-0.00105	0.00071
V	-0.00048	-11.97	107.695	-0.00104	-0.00003	-0.00036
Y1	22062.20793	22,062.21	0.107	22074.10381	22034.99534	22077.52465
Y2A	296938.56307	296,938.56	0.743	297853.46256	294422.46521	298539.76143
Y2R	19262.01258	19,262.01	0.668	19144.90335	19399.70524	19241.42914
ZN	-0.00039	12.48	25.167	-0.00031	-0.00036	-0.00050
ZR	0.00203	6.03	117.408	0.00081	0.00050	0.00477

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/12/2013 20:19

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00171	-10.80	12.056	0.00185	0.00147	0.00180
AL	209.13738	25,590.70	7.219	223.35050	193.28835	210.77327
AS	0.02258	7.16	8.922	0.02364	0.02026	0.02384
B	0.01080	309.25	16.618	0.01178	0.01189	0.00873
BA	0.70342	594,667.84	13.327	0.80373	0.68851	0.61802
BE	0.00814	4,266.63	7.912	0.00883	0.00803	0.00756
CA	2.38758	2,831.49	7.510	2.55883	2.20117	2.40273
CD	-0.00099	41.59	15.403	-0.00115	-0.00085	-0.00097
CO	0.00625	73.37	5.333	0.00633	0.00588	0.00653
CR	0.10009	1,405.85	8.422	0.10897	0.09911	0.09219
CU	0.06378	909.17	8.621	0.06988	0.06229	0.05919
FE	25.53622	8,523.06	7.437	27.35295	23.56415	25.69155
K	3.66167	1,465.54	7.776	3.93280	3.36505	3.68717
LI	0.09352	680.74	5.081	0.09800	0.08853	0.09402
MG	5.81512	11,735.86	7.157	6.21831	5.38705	5.84001
MN	0.09910	8,307.09	8.824	0.10856	0.09741	0.09132
MO	0.00228	15.82	10.753	0.00254	0.00206	0.00223
NA	0.20732	227.48	7.289	0.22195	0.19177	0.20823
NI	0.05863	341.26	5.195	0.06213	0.05655	0.05722
P	4.23308	3,279.30	4.990	4.47413	4.08040	4.14469
PB	0.11880	314.94	4.130	0.12431	0.11718	0.11491
S	3.90277	1,092.75	4.954	4.12273	3.75976	3.82582
SB	-0.00135	4.87	56.500	-0.00153	-0.00051	-0.00201
SE	0.00590	1.52	42.084	0.00637	0.00811	0.00321
SI	7.41696	1,622.81	7.369	7.94361	6.85250	7.45476
SN	0.01700	34.80	6.184	0.01820	0.01653	0.01626
SR	0.04105	40,496.97	8.953	0.04503	0.04034	0.03779
TI	0.94983	75,733.10	8.891	1.04135	0.93321	0.87492
TL	0.00447	-10.06	14.866	0.00383	0.00440	0.00516
V	0.11215	2,104.99	8.670	0.12264	0.11038	0.10344
Y1	32663.03725	32,663.04	2.897	31578.23843	33318.92612	33091.94720
Y2A	404441.03967	404,441.04	7.416	374084.93696	405179.30464	434058.87742
Y2R	24482.27335	24,482.27	3.943	23624.82563	25527.98843	24294.00599
ZN	0.22814	4,114.82	4.987	0.24118	0.22023	0.22301
ZR	0.00825	24.75	11.155	0.00815	0.00738	0.00921

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/12/2013 20:24

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00147	-15.47	20.369	0.00181	0.00130	0.00129
AL	113.31651	15,129.78	3.402	116.21346	114.79519	108.94089
AS	0.01061	-1.35	13.769	0.01021	0.01223	0.00939
B	0.00492	456.28	32.274	0.00632	0.00525	0.00320
BA	0.36391	340,376.14	9.133	0.39612	0.36588	0.32974
BE	0.00161	479.97	4.703	0.00169	0.00160	0.00154
CA	4.77756	6,094.35	3.579	4.91969	4.82520	4.58778
CD	-0.00280	86.67	3.004	-0.00286	-0.00283	-0.00270
CO	0.00674	150.12	2.224	0.00662	0.00670	0.00691
CR	2.87144	44,977.06	8.335	3.07893	2.92578	2.60962
CU	0.03554	337.86	10.437	0.03942	0.03518	0.03203
FE	48.45303	17,535.36	3.425	49.77394	48.99499	46.59015
K	4.28410	1,877.75	3.967	4.41948	4.33942	4.09339
LI	0.07573	614.88	2.800	0.07685	0.07705	0.07328
MG	10.68138	23,538.45	3.417	10.97316	10.79881	10.27217
MN	0.29859	27,598.40	8.385	0.32125	0.30281	0.27171
MO	0.00035	4.30	41.371	0.00034	0.00050	0.00021
NA	0.23449	284.51	1.296	0.23118	0.23715	0.23513
NI	0.02924	239.25	4.095	0.03043	0.02925	0.02803
P	0.71521	764.17	4.002	0.74288	0.71703	0.68572
PB	0.01429	103.50	6.352	0.01533	0.01369	0.01384
S	0.92912	350.67	4.648	0.96942	0.93441	0.88354
SB	-0.04838	5.70	8.912	-0.05236	-0.04898	-0.04380
SE	0.00229	0.46	49.572	0.00123	0.00215	0.00349
SI	10.00631	2,394.93	4.186	10.20278	10.29082	9.52535
SN	0.00716	23.97	8.473	0.00779	0.00710	0.00658
SR	0.04390	47,803.22	8.605	0.04733	0.04451	0.03985
TI	2.37962	209,486.19	8.370	2.55961	2.41361	2.16566
TL	0.00893	-8.99	8.291	0.00975	0.00872	0.00832
V	0.09638	2,011.60	7.870	0.10295	0.09810	0.08808
Y1	45065.44803	45,065.45	1.473	44428.64333	45014.65632	45753.04443
Y2A	446073.21650	446,073.22	6.144	426902.24252	433853.65449	477463.75249
Y2R	26754.04659	26,754.05	1.968	26331.72789	26586.35000	27344.06188
ZN	0.23723	5,958.27	4.020	0.24633	0.23804	0.22731
ZR	0.01631	51.20	16.913	0.01921	0.01598	0.01373

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/12/2013 20:28

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00189	-9.91	1.734	0.00187	0.00187	0.00193
AL	17.77687	2,710.94	3.544	18.42969	17.72837	17.17255
AS	0.01164	-1.76	5.329	0.01233	0.01114	0.01143
B	-0.00513	431.09	9.779	-0.00468	-0.00567	-0.00503
BA	0.08390	96,973.80	5.104	0.08873	0.08239	0.08057
BE	0.00140	427.04	1.805	0.00143	0.00138	0.00139
CA	7.86042	11,397.39	3.894	8.17115	7.85099	7.55912
CD	-0.00140	136.79	9.407	-0.00134	-0.00154	-0.00130
CO	0.00535	96.04	5.480	0.00564	0.00505	0.00537
CR	0.04356	808.45	5.233	0.04618	0.04249	0.04202
CU	0.03006	455.74	7.198	0.03248	0.02939	0.02831
FE	49.93508	20,675.85	3.847	51.88383	49.87868	48.04273
K	2.23240	1,116.60	4.066	2.33116	2.21344	2.15260
LI	0.01446	187.71	9.792	0.01499	0.01285	0.01553
MG	5.40702	13,673.69	3.534	5.60399	5.39472	5.22237
MN	0.29895	34,125.16	4.885	0.31555	0.29319	0.28810
MO	0.00093	9.56	11.382	0.00095	0.00081	0.00101
NA	0.48607	700.55	1.308	0.49221	0.48649	0.47951
NI	0.00880	81.36	6.019	0.00941	0.00851	0.00847
P	0.89531	956.60	5.831	0.95552	0.86276	0.86764
PB	0.08473	234.88	5.233	0.08984	0.08229	0.08205
S	0.92641	350.23	5.254	0.98253	0.89575	0.90094
SB	-0.00523	2.70	13.680	-0.00580	-0.00547	-0.00443
SE	0.00159	0.82	28.450	0.00151	0.00118	0.00208
SI	1.39652	385.38	3.436	1.44278	1.39979	1.34699
SN	0.00610	21.39	10.391	0.00671	0.00544	0.00615
SR	0.02568	34,548.32	5.139	0.02717	0.02520	0.02467
TI	1.13960	123,878.94	5.203	1.20651	1.11873	1.09357
TL	0.00617	-7.54	5.237	0.00597	0.00654	0.00599
V	0.04078	1,052.30	4.524	0.04289	0.03996	0.03948
Y1	45075.73246	45,075.73	2.091	43990.40640	45547.46886	45689.32214
Y2A	549598.45720	549,598.46	3.091	532208.44393	550433.22827	566153.69940
Y2R	30622.78390	30,622.78	1.189	30370.39159	30457.64318	31040.31694
ZN	0.14667	3,748.21	5.853	0.15658	0.14177	0.14165
ZR	0.01002	37.06	9.529	0.01106	0.00978	0.00920

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/12/2013 20:32

Sample Number: **7265236** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00164	-7.98	23.715	0.00119	0.00190	0.00181
AL	46.32086	4,649.63	0.814	46.56416	45.88651	46.51189
AS	0.00992	-9.23	22.972	0.00730	0.01100	0.01145
B	-0.01290	861.57	37.643	-0.00867	-0.01182	-0.01820
BA	0.29341	191,420.36	4.220	0.30484	0.29513	0.28026
BE	0.00209	550.48	2.834	0.00213	0.00212	0.00202
CA	13.25164	12,578.84	0.856	13.31793	13.12064	13.31635
CD	0.00028	352.69	154.442	0.00070	0.00033	-0.00017
CO	0.03030	228.15	1.840	0.03094	0.02991	0.03005
CR	0.09085	934.29	3.539	0.09437	0.09012	0.08807
CU	0.12089	1,233.61	4.108	0.12593	0.12074	0.11600
FE	171.56316	44,414.27	0.743	172.36705	170.09443	172.22799
K	2.68586	884.89	0.289	2.69102	2.67695	2.68962
LI	0.04012	269.66	6.409	0.04302	0.03919	0.03814
MG	11.13433	18,476.87	0.557	11.18935	11.06717	11.14648
MN	2.92705	188,561.50	4.130	3.04197	2.93823	2.80095
MO	0.00328	16.68	3.965	0.00313	0.00336	0.00335
NA	0.99552	960.30	0.699	0.99068	0.99238	1.00350
NI	0.05018	200.48	2.179	0.05135	0.04998	0.04919
P	2.02308	1,165.77	2.309	2.07383	2.01349	1.98191
PB	0.41714	601.12	1.862	0.42502	0.41691	0.40949
S	2.74847	569.68	2.367	2.82057	2.73062	2.69420
SB	-0.01099	6.13	14.948	-0.01266	-0.00938	-0.01093
SE	0.00306	0.85	19.494	0.00259	0.00284	0.00373
SI	4.93524	890.79	0.590	4.96023	4.90327	4.94222
SN	0.04729	65.78	3.207	0.04896	0.04599	0.04693
SR	0.07371	55,975.81	4.365	0.07673	0.07409	0.07032
TI	3.20038	196,425.12	4.092	3.32554	3.21129	3.06432
TL	0.00433	-10.74	39.192	0.00578	0.00475	0.00247
V	0.17807	2,599.26	4.295	0.18504	0.17927	0.16989
Y1	24279.08666	24,279.09	1.718	23818.95828	24385.48119	24632.82051
Y2A	310320.64400	310,320.64	3.271	300947.06759	308912.78108	321102.08333
Y2R	20142.30711	20,142.31	0.511	20070.46544	20260.10277	20096.35313
ZN	0.55096	7,514.67	2.302	0.56507	0.54728	0.54052
ZR	0.01926	45.29	4.570	0.01972	0.01824	0.01980

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/12/2013 20:36

Sample Number: **7265237** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00152	-8.65	20.898	0.00178	0.00162	0.00117
AL	69.67142	7,256.78	1.828	70.42457	68.20091	70.38879
AS	0.01461	-9.75	14.143	0.01249	0.01662	0.01472
B	-0.01018	1,074.65	42.209	-0.01327	-0.00527	-0.01200
BA	0.49028	315,212.86	1.820	0.48006	0.49652	0.49425
BE	0.00279	856.43	1.793	0.00280	0.00274	0.00284
CA	24.83818	24,340.85	1.923	25.18271	24.29285	25.03897
CD	-0.00031	429.80	255.253	0.00022	0.00007	-0.00122
CO	0.03224	267.89	4.479	0.03367	0.03226	0.03078
CR	0.13181	1,350.35	0.594	0.13094	0.13245	0.13205
CU	0.19978	2,088.83	0.902	0.19784	0.20010	0.20140
FE	208.32486	55,039.61	2.239	211.13772	202.93952	210.89735
K	3.18450	1,088.85	2.835	3.24458	3.08067	3.22824
LI	0.05153	353.01	4.760	0.05158	0.05396	0.04905
MG	20.63222	35,341.35	1.715	20.84460	20.22386	20.82819
MN	2.30838	146,570.62	0.942	2.28932	2.30378	2.33205
MO	0.00324	16.95	5.859	0.00343	0.00305	0.00324
NA	1.44802	1,455.86	1.680	1.45060	1.42250	1.47095
NI	0.06045	245.58	2.098	0.06181	0.06024	0.05930
P	3.77026	2,236.74	2.806	3.88677	3.74383	3.68017
PB	0.46933	700.41	2.411	0.48178	0.46653	0.45968
S	1.25130	262.59	3.282	1.29561	1.24378	1.21451
SB	-0.01072	9.77	15.471	-0.01101	-0.00894	-0.01222
SE	0.00460	1.36	89.267	0.00222	0.00934	0.00224
SI	3.70577	694.17	1.593	3.75735	3.64140	3.71856
SN	0.02700	40.21	2.723	0.02726	0.02757	0.02617
SR	0.11320	84,719.07	0.802	0.11238	0.11302	0.11418
TI	4.68572	283,440.02	0.777	4.64394	4.70246	4.71077
TL	0.00845	-11.94	16.143	0.00799	0.00737	0.00998
V	0.22640	3,260.73	1.145	0.22410	0.22588	0.22921
Y1	24994.22064	24,994.22	1.957	24454.97569	25118.48507	25409.20115
Y2A	305597.67871	305,597.68	1.096	309461.44237	303532.63751	303798.95626
Y2R	20890.00708	20,890.01	1.239	20809.13174	21179.54727	20681.34224
ZN	0.65562	9,207.91	3.021	0.67667	0.65285	0.63734
ZR	0.02665	64.32	6.115	0.02560	0.02583	0.02853

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/12/2013 20:40

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00224	-1.56	21.970	0.00264	0.00169	0.00238
AL	18.19075	2,570.84	17.022	21.71653	15.91401	16.94169
AS	0.01052	0.79	12.884	0.01209	0.00971	0.00977
B	0.00751	268.35	34.076	0.00583	0.01046	0.00625
BA	0.06892	68,039.08	9.240	0.07230	0.07288	0.06157
BE	0.00095	55.28	5.803	0.00101	0.00094	0.00090
CA	11.36841	15,223.04	16.792	13.54898	9.99855	10.55769
CD	0.00035	74.36	24.399	0.00026	0.00042	0.00038
CO	0.00555	81.01	16.490	0.00641	0.00459	0.00563
CR	0.06183	1,007.05	9.388	0.06494	0.06542	0.05513
CU	0.05760	979.58	9.962	0.06117	0.06066	0.05098
FE	19.59308	7,611.46	16.927	23.38393	17.22685	18.16845
K	0.91582	420.70	15.213	1.07443	0.81321	0.85982
LI	0.01651	193.57	15.783	0.01951	0.01475	0.01529
MG	3.71640	8,717.32	16.536	4.41736	3.27024	3.46162
MN	0.10799	10,538.37	9.122	0.11337	0.11398	0.09662
MO	0.00063	6.49	25.492	0.00082	0.00057	0.00051
NA	0.83523	1,130.63	17.824	1.00539	0.72901	0.77130
NI	0.01163	104.15	14.709	0.01353	0.01022	0.01113
P	0.56440	570.04	10.889	0.63351	0.51586	0.54384
PB	0.24640	627.36	10.836	0.27637	0.22517	0.23765
S	5.57520	2,043.03	11.112	6.26921	5.07806	5.37833
SB	-0.00335	1.89	24.878	-0.00429	-0.00302	-0.00272
SE	0.00371	2.14	46.956	0.00570	0.00303	0.00242
SI	3.21489	818.78	16.274	3.81528	2.85669	2.97270
SN	0.00919	27.36	12.733	0.01049	0.00823	0.00884
SR	0.02994	34,395.09	9.268	0.03140	0.03168	0.02674
TI	0.65275	60,611.28	9.116	0.68496	0.68922	0.58409
TL	0.00694	-5.74	14.560	0.00578	0.00764	0.00739
V	0.05151	1,123.98	9.183	0.05386	0.05460	0.04606
Y1	42734.79168	42,734.79	4.813	40486.02251	44520.22708	43198.12546
Y2A	470287.79584	470,287.80	5.086	464030.02654	450117.45189	496715.90909
Y2R	28633.54873	28,633.55	8.096	26049.26588	30529.57445	29321.80586
ZN	0.25276	5,918.01	10.778	0.28333	0.23105	0.24389
ZR	0.00736	25.85	22.388	0.00893	0.00564	0.00750

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/12/2013 20:44

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00210	-9.93	6.273	0.00221	0.00195	0.00213
AL	0.24119	60.92	5.465	0.25603	0.23671	0.23083
AS	0.00716	0.47	6.818	0.00747	0.00741	0.00660
B	-0.00009	19.98	251.614	0.00007	-0.00036	0.00001
BA	0.00147	2,591.19	20.359	0.00177	0.00117	0.00147
BE	0.00060	-317.77	1.879	0.00061	0.00059	0.00059
CA	0.41359	1,122.57	2.287	0.42402	0.41117	0.40557
CD	0.00020	1.82	17.304	0.00017	0.00024	0.00021
CO	-0.00009	10.56	155.822	-0.00025	0.00002	-0.00004
CR	0.00173	39.72	14.688	0.00193	0.00144	0.00182
CU	0.00131	-43.63	59.963	0.00207	0.00050	0.00137
FE	0.51189	339.70	3.688	0.53287	0.50654	0.49627
K	-0.03534	-39.98	43.684	-0.01767	-0.04213	-0.04623
LI	-0.00307	50.93	54.578	-0.00198	-0.00499	-0.00223
MG	0.10412	405.87	2.341	0.10691	0.10303	0.10241
MN	0.00258	464.40	21.293	0.00312	0.00202	0.00259
MO	-0.00003	1.21	110.601	-0.00002	-0.00001	-0.00008
NA	0.02617	23.86	56.380	0.03899	0.01004	0.02949
NI	-0.00144	20.81	13.147	-0.00123	-0.00149	-0.00159
P	0.03119	48.28	5.847	0.03316	0.03088	0.02955
PB	0.01888	83.55	3.548	0.01963	0.01864	0.01836
S	0.28196	149.73	5.598	0.29768	0.28207	0.26611
SB	-0.00165	0.76	17.985	-0.00194	-0.00168	-0.00134
SE	0.00005	-0.13	285.145	0.00010	0.00018	-0.00012
SI	0.09568	46.16	17.429	0.11291	0.09450	0.07962
SN	-0.00119	5.33	25.401	-0.00152	-0.00113	-0.00092
SR	0.00060	1,222.11	23.513	0.00075	0.00046	0.00060
TI	0.01039	1,709.15	20.958	0.01255	0.00820	0.01041
TL	0.00643	-3.67	5.516	0.00678	0.00644	0.00607
V	0.00239	75.85	15.344	0.00278	0.00205	0.00235
Y1	67235.44003	67,235.44	0.283	67017.88853	67317.19437	67371.23717
Y2A	808260.90808	808,260.91	1.227	798223.50498	808505.31561	818053.90365
Y2R	48183.00480	48,183.00	0.403	48406.93558	48061.45293	48080.62587
ZN	0.00307	165.86	8.135	0.00333	0.00304	0.00283
ZR	0.00044	6.50	79.168	0.00034	0.00015	0.00082

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/12/2013 20:48

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00224	-3.89	10.969	0.00214	0.00251	0.00205
AL	4.66010	970.02	6.308	4.59280	4.40563	4.98187
AS	0.00916	0.75	9.764	0.00948	0.00815	0.00985
B	0.00179	193.14	47.267	0.00212	0.00241	0.00083
BA	0.03106	44,426.62	4.085	0.03252	0.03034	0.03030
BE	0.00079	-72.92	2.140	0.00081	0.00078	0.00079
CA	1.78533	3,656.68	5.735	1.75892	1.69874	1.89835
CD	0.00018	56.94	108.541	0.00040	0.00016	0.00000
CO	0.00165	42.36	21.828	0.00203	0.00131	0.00162
CR	0.01488	339.72	4.474	0.01557	0.01481	0.01425
CU	0.01081	179.16	6.013	0.01152	0.01065	0.01025
FE	12.10596	6,936.69	5.817	11.92638	11.50898	12.88251
K	0.20216	128.13	16.588	0.18118	0.18447	0.24084
LI	0.00116	94.70	46.801	0.00055	0.00134	0.00160
MG	0.86008	2,963.67	5.830	0.84920	0.81626	0.91476
MN	0.09198	12,998.02	4.090	0.09632	0.08990	0.08972
MO	0.00013	2.89	54.233	0.00019	0.00013	0.00006
NA	0.14586	263.30	11.573	0.14179	0.13139	0.16440
NI	0.00174	45.57	17.104	0.00204	0.00145	0.00173
P	0.29636	402.87	10.908	0.33242	0.26998	0.28668
PB	0.01594	63.42	11.706	0.01807	0.01459	0.01516
S	0.25446	113.91	11.384	0.28609	0.22922	0.24807
SB	-0.00196	2.45	33.170	-0.00270	-0.00164	-0.00153
SE	0.00095	0.62	86.407	0.00145	0.00000	0.00139
SI	0.68080	258.24	6.318	0.65616	0.65577	0.73047
SN	0.00087	10.98	40.767	0.00124	0.00084	0.00053
SR	0.00797	13,275.21	4.104	0.00835	0.00779	0.00778
TI	0.28091	37,781.50	4.295	0.29479	0.27499	0.27295
TL	0.00666	-4.49	4.349	0.00657	0.00699	0.00643
V	0.01644	513.27	3.152	0.01704	0.01611	0.01617
Y1	57511.44689	57,511.45	2.069	56262.82145	58632.32707	57639.19216
Y2A	678848.51534	678,848.52	0.878	675041.33532	675782.70639	685721.50431
Y2R	41769.31534	41,769.32	2.922	41739.52919	43004.54182	40563.87500
ZN	0.05588	1,824.75	11.319	0.06289	0.05060	0.05414
ZR	0.00196	12.87	64.904	0.00103	0.00341	0.00144

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/12/2013 20:52

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00183	-16.01	22.314	0.00151	0.00169	0.00229
AL	0.21984	45.33	8.105	0.23001	0.23024	0.19926
AS	0.00697	-0.14	5.853	0.00737	0.00655	0.00700
B	0.00021	49.92	578.467	0.00139	0.00021	-0.00098
BA	0.00432	6,170.37	62.024	0.00691	0.00447	0.00157
BE	0.00050	-362.52	9.515	0.00045	0.00052	0.00054
CA	2.13844	4,078.36	0.823	2.15363	2.11917	2.14251
CD	-0.00002	3.21	246.462	0.00004	-0.00007	-0.00004
CO	-0.00015	8.65	145.502	0.00003	-0.00038	-0.00009
CR	0.00076	8.59	8.650	0.00083	0.00070	0.00074
CU	0.00176	-26.84	145.060	0.00380	0.00258	-0.00110
FE	2.78021	1,499.70	0.934	2.79735	2.75035	2.79295
K	-0.02356	-24.92	44.146	-0.01223	-0.02578	-0.03266
LI	-0.00193	55.61	61.457	-0.00075	-0.00313	-0.00191
MG	0.26059	837.11	0.731	0.26270	0.25900	0.26007
MN	0.18065	25,218.51	59.756	0.28423	0.18889	0.06881
MO	-0.00003	1.16	90.313	-0.00002	-0.00006	-0.00001
NA	0.22038	389.38	2.600	0.22326	0.22409	0.21378
NI	-0.00164	16.20	15.525	-0.00136	-0.00185	-0.00173
P	0.04700	66.86	44.343	0.06870	0.02715	0.04514
PB	0.00131	12.93	128.804	0.00310	-0.00026	0.00109
S	0.93304	480.01	46.077	1.37484	0.51609	0.90817
SB	-0.00128	1.86	9.493	-0.00135	-0.00136	-0.00114
SE	0.00130	1.06	23.542	0.00138	0.00096	0.00155
SI	0.19204	71.23	4.228	0.18808	0.20138	0.18666
SN	-0.00070	6.52	87.149	-0.00006	-0.00126	-0.00077
SR	0.00508	8,361.88	62.497	0.00815	0.00526	0.00181
TI	0.00550	771.57	61.303	0.00869	0.00583	0.00198
TL	0.00664	-2.58	5.568	0.00703	0.00629	0.00662
V	0.00107	21.86	63.010	0.00171	0.00114	0.00036
Y1	62220.63204	62,220.63	5.866	58101.26274	65052.81775	63507.81562
Y2A	690435.02150	690,435.02	7.375	654490.25116	668113.98277	748700.83056
Y2R	39143.87529	39,143.88	0.787	38991.72318	39498.22606	38941.67664
ZN	0.00563	243.72	58.334	0.00900	0.00245	0.00542
ZR	0.00037	4.99	214.807	-0.00037	0.00027	0.00122

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/12/2013 20:56

Sample Number: **Z265246**

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	k	0.00212	-5.34	2.957	0.00217	0.00213	0.00205
AL		19.14626	2,358.42	45.610	17.59106	28.55208	11.29565
AS	k	0.01094	-2.30	60.078	0.01611	0.00354	0.01316
B	k	0.00232	532.62	1243.261	-0.02323	0.03368	-0.00348
BA		0.08348	99,698.61	4.683	0.08799	0.08142	0.08104
BE	k	0.00124	305.32	1.668	0.00126	0.00122	0.00123
CA		7.18000	8,418.05	46.112	6.57966	10.74996	4.21037
CD	k	-0.00058	174.35	864.498	-0.00470	0.00497	-0.00200
CO	k	0.00716	111.61	20.532	0.00747	0.00844	0.00556
CR	k	0.03128	591.11	7.922	0.03400	0.02916	0.03068
CU	k	0.02691	484.56	14.991	0.03047	0.02253	0.02771
FE		95.70480	31,227.53	47.400	87.31814	144.67653	55.11973
K		1.24323	497.53	46.501	1.12408	1.87164	0.73397
LI		0.02270	203.86	63.490	0.01906	0.03858	0.01045
MG		6.13566	12,528.61	45.566	5.64348	9.14482	3.61867
MN		0.87230	102,829.34	3.989	0.91245	0.85371	0.85074
MO		0.00043	5.74	7.969	0.00045	0.00039	0.00046
NA		0.62546	738.05	42.363	0.59624	0.90382	0.37631
NI	k	0.00581	66.60	30.790	0.00777	0.00426	0.00540
P	k	0.69740	841.98	11.433	0.77432	0.70277	0.61512
PB	k	0.02748	90.20	10.888	0.03015	0.02804	0.02425
S	k	0.33709	136.55	11.234	0.37404	0.33886	0.29837
SB	k	-0.00382	4.43	90.779	-0.00602	0.00018	-0.00562
SE	k	0.00156	0.99	18.576	0.00131	0.00188	0.00148
SI		1.74391	386.09	47.811	1.57570	2.64896	1.00706
SN		0.00286	15.22	14.427	0.00331	0.00274	0.00251
SR		0.01414	19,667.45	4.481	0.01487	0.01381	0.01374
TI	k	0.70434	79,118.97	4.390	0.74002	0.68775	0.68527
TL	k	0.00565	-5.69	32.558	0.00690	0.00354	0.00652
V	k	0.04046	1,072.37	3.961	0.04224	0.04001	0.03914
Y1		51028.44121	51,028.44	3.080	49411.90333	51122.57409	52550.84622
Y2A		567319.18687	567,319.19	1.713	564345.47113	578176.53872	559435.55076
Y2R		0.00000	0.00	0.000	30158.06259	16986.05680	35836.24650
ZN	k	0.13042	3,780.49	11.149	0.14093	0.13651	0.11383
ZR		0.01331	38.32	57.501	0.01327	0.02098	0.00568

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/12/2013 21:00

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.52160	6,675.64	0.697	0.51987	0.51915	0.52577
AL	26.17054	2,551.04	0.133	26.21008	26.15628	26.14524
AS	0.50983	193.94	3.355	0.50364	0.49669	0.52917
B	0.51072	4,083.22	1.164	0.50982	0.50528	0.51707
BA	0.52265	319,112.78	1.667	0.52857	0.51264	0.52673
BE	0.50702	214,054.64	1.138	0.50656	0.50149	0.51300
CA	26.03594	23,870.76	0.337	26.13685	25.99419	25.97679
CD	0.51382	8,153.68	2.304	0.50978	0.50453	0.52715
CO	0.50930	2,705.32	1.946	0.50606	0.50141	0.52043
CR	0.50799	5,185.72	1.552	0.50500	0.50203	0.51693
CU	0.52785	6,175.80	0.745	0.52511	0.52608	0.53235
FE	25.93712	6,924.37	0.427	26.04893	25.82770	25.93473
K	26.11293	8,391.59	0.215	26.16453	26.12115	26.05311
LI	0.52644	2,899.59	0.328	0.52692	0.52452	0.52787
MG	25.66719	41,043.40	0.339	25.73937	25.57069	25.69150
MN	0.51224	30,895.88	1.115	0.51058	0.50755	0.51860
MO	0.51543	2,257.01	2.327	0.51047	0.50671	0.52911
NA	25.88282	24,611.15	0.301	25.96829	25.81578	25.86440
NI	0.51588	1,923.17	2.196	0.51096	0.50783	0.52883
P	0.52096	269.08	2.628	0.51634	0.51017	0.53636
PB	0.51980	666.69	2.126	0.51673	0.51061	0.53207
S	25.35781	4,747.06	2.292	25.15568	24.90476	26.01300
SB	0.53574	395.05	2.494	0.52743	0.52864	0.55115
SE	0.51356	171.04	2.483	0.51282	0.50120	0.52667
SI	26.45451	4,625.80	0.211	26.51570	26.40630	26.44151
SN	0.50377	595.86	2.154	0.49877	0.49631	0.51621
SR	0.51118	363,253.47	1.788	0.51585	0.50064	0.51704
TI	0.51884	29,862.69	1.095	0.51760	0.51389	0.52505
TL	0.51626	331.16	2.152	0.51292	0.50719	0.52865
V	0.51216	6,887.21	1.363	0.50953	0.50687	0.52007
Y1	21685.98504	21,685.99	1.846	21856.47827	21972.93875	21228.53811
Y2A	290215.84383	290,215.84	1.153	288912.27634	294017.97548	287717.27966
Y2R	19547.28436	19,547.28	0.160	19581.20000	19541.16707	19519.48603
ZN	0.52042	6,201.61	2.407	0.51548	0.51112	0.53466
ZR	0.51572	1,134.33	0.866	0.51900	0.51064	0.51753

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 35

Date/Time: 11/12/2013 21:05

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00126	-14.17	50.377	0.00144	0.00056	0.00179
AL	0.02309	3.39	79.789	0.00243	0.03782	0.02900
AS	0.00003	-2.60	3774.663	0.00103	-0.00082	-0.00013
B	0.00104	13.28	43.924	0.00083	0.00156	0.00073
BA	0.00000	30.91	388.236	0.00001	-0.00002	0.00000
BE	-0.00033	-508.02	7.347	-0.00036	-0.00033	-0.00031
CA	0.00698	80.21	81.698	0.01001	0.00040	0.01054
CD	-0.00009	-5.08	91.090	-0.00012	-0.00017	0.00000
CO	-0.00007	3.42	248.196	-0.00027	0.00003	0.00003
CR	0.00027	-0.58	223.857	0.00078	-0.00039	0.00042
CU	-0.00087	-40.85	93.097	-0.00135	-0.00132	0.00006
FE	0.00239	0.36	380.002	-0.00166	0.01279	-0.00396
K	-0.10405	-37.24	14.472	-0.08677	-0.11106	-0.11433
LI	0.00145	43.56	140.603	-0.00039	0.00363	0.00110
MG	0.00107	-2.18	160.290	0.00306	0.00002	0.00014
MN	0.00008	15.95	25.678	0.00006	0.00007	0.00010
MO	0.00031	1.90	63.412	0.00038	0.00009	0.00046
NA	-0.01694	-30.51	48.679	-0.02454	-0.01810	-0.00817
NI	-0.00015	11.62	62.159	-0.00005	-0.00017	-0.00023
P	0.00158	0.32	11.346	0.00144	0.00178	0.00152
PB	-0.00005	2.95	3776.519	-0.00128	-0.00085	0.00199
S	-0.00177	-4.93	122.470	-0.00348	0.00067	-0.00252
SB	0.00200	2.86	59.950	0.00118	0.00338	0.00144
SE	0.00157	0.47	48.942	0.00191	0.00211	0.00069
SI	0.01303	4.16	20.296	0.01562	0.01034	0.01314
SN	-0.00062	2.41	36.053	-0.00038	-0.00064	-0.00082
SR	-0.00024	-160.05	6.396	-0.00024	-0.00025	-0.00022
TI	0.00015	26.22	79.761	0.00028	0.00004	0.00014
TL	-0.00047	-5.80	263.544	0.00034	-0.00189	0.00014
V	-0.00097	-18.28	29.232	-0.00114	-0.00111	-0.00064
Y1	21843.39340	21,843.39	0.348	21758.50313	21905.04263	21866.63445
Y2A	290626.21493	290,626.21	0.928	289208.16766	293737.24321	288933.23393
Y2R	19000.81196	19,000.81	0.305	19059.52975	18999.15237	18943.75374
ZN	-0.00021	14.45	25.743	-0.00015	-0.00025	-0.00024
ZR	0.00156	4.96	94.437	0.00320	0.00036	0.00112

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/12/2013 21:09

Sample Number: **7265885** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00462	37.03	2.230	0.00474	0.00459	0.00454
AL	195.47995	20,061.42	0.524	195.89704	196.22978	194.31303
AS	0.07897	10.11	2.662	0.07927	0.08091	0.07674
B	0.00843	1,878.54	41.006	0.00696	0.00596	0.01238
BA	2.87260	1,803,231.92	0.522	2.86592	2.86209	2.88978
BE	0.00318	1,001.03	0.554	0.00317	0.00320	0.00317
CA	205.10333	191,980.20	0.742	205.94145	206.02091	203.34764
CD	-0.00164	619.19	53.642	-0.00072	-0.00172	-0.00247
CO	0.23687	1,384.08	3.037	0.24388	0.23723	0.22950
CR	0.41819	4,291.38	0.859	0.41965	0.41410	0.42083
CU	0.39618	4,531.31	1.034	0.39545	0.39249	0.40059
FE	334.74699	82,015.35	0.852	336.14597	336.62894	331.46605
K	13.14177	4,426.81	0.774	13.24043	13.14753	13.03733
LI	0.21618	1,390.82	1.106	0.21861	0.21610	0.21383
MG	71.86723	117,757.31	0.531	72.22122	71.91710	71.46338
MN	17.78668	1,102,544.08	1.346	17.91333	17.51063	17.93609
MO	0.00183	9.06	15.961	0.00215	0.00158	0.00176
NA	4.23397	4,209.06	1.015	4.27740	4.23306	4.19144
NI	0.55063	2,140.47	2.783	0.56621	0.55010	0.53558
P	0.86405	472.65	2.820	0.88942	0.86190	0.84082
PB	0.15634	254.44	3.494	0.16067	0.15813	0.15020
S	0.74342	140.02	3.520	0.77310	0.73351	0.72367
SB	-0.01974	14.36	16.311	-0.02250	-0.01621	-0.02052
SE	0.00778	1.79	28.017	0.00890	0.00916	0.00526
SI	8.57711	1,574.21	0.623	8.63313	8.57144	8.52676
SN	0.02055	28.97	6.283	0.02204	0.01977	0.01985
SR	0.77855	568,770.79	2.487	0.78053	0.75828	0.79685
TI	3.76871	222,588.43	0.799	3.77825	3.73500	3.79288
TL	0.00656	-13.60	30.128	0.00517	0.00882	0.00569
V	0.66767	9,322.34	0.635	0.66919	0.66288	0.67093
Y1	23017.33464	23,017.33	1.968	22543.51402	23062.48419	23446.00573
Y2A	298375.96642	298,375.97	1.218	298327.12061	302034.21140	294766.56726
Y2R	20501.71238	20,501.71	0.267	20468.86228	20471.43784	20564.83703
ZN	0.43415	5,921.99	3.034	0.44755	0.43366	0.42122
ZR	0.07262	169.01	4.193	0.07557	0.07279	0.06949

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/12/2013 21:13

Sample Number: **7266809** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00228	-0.90	9.219	0.00230	0.00205	0.00247
AL	3.82652	389.73	1.453	3.88916	3.80736	3.78304
AS	0.00857	0.26	7.933	0.00935	0.00810	0.00825
B	0.04001	375.96	2.567	0.04012	0.04097	0.03893
BA	0.06797	43,195.09	2.028	0.06801	0.06932	0.06657
BE	-0.00015	-445.12	2.064	-0.00014	-0.00015	-0.00014
CA	39.00267	37,212.40	1.742	39.73793	38.87171	38.39836
CD	0.00136	38.87	4.855	0.00144	0.00134	0.00131
CO	0.00215	20.09	11.387	0.00203	0.00200	0.00244
CR	0.01228	124.41	3.685	0.01176	0.01249	0.01258
CU	0.04130	473.51	2.895	0.04128	0.04250	0.04011
FE	9.00121	2,524.67	1.877	9.18504	8.96581	8.85278
K	0.40442	130.62	3.938	0.41996	0.38814	0.40516
LI	0.00314	80.11	50.842	0.00201	0.00244	0.00496
MG	5.17371	8,718.47	1.440	5.25454	5.15871	5.10786
MN	0.57563	36,109.97	2.238	0.57624	0.58820	0.56246
MO	0.00126	6.86	18.949	0.00146	0.00099	0.00133
NA	0.66728	646.67	1.616	0.65953	0.67960	0.66271
NI	0.01425	72.30	4.044	0.01464	0.01453	0.01359
P	1.11741	649.73	3.112	1.15219	1.11739	1.08265
PB	0.18302	266.28	3.907	0.19031	0.18273	0.17602
S	7.87797	1,663.86	3.073	8.11287	7.89175	7.62930
SB	0.00156	3.62	167.292	0.00394	0.00195	-0.00122
SE	0.00324	1.13	59.648	0.00388	0.00478	0.00107
SI	2.22541	407.93	2.125	2.26256	2.24148	2.17218
SN	0.01942	29.35	6.452	0.01973	0.02050	0.01805
SR	0.10739	79,388.41	2.068	0.10739	0.10961	0.10517
TI	0.20843	12,471.05	1.990	0.20816	0.21270	0.20442
TL	0.00270	-4.88	10.175	0.00299	0.00267	0.00244
V	0.02752	383.21	1.954	0.02765	0.02799	0.02693
Y1	24516.04045	24,516.04	2.175	24028.89865	24433.66735	25085.55533
Y2A	301900.75021	301,900.75	1.544	301258.61498	297592.36249	306851.27315
Y2R	20400.04033	20,400.04	0.638	20271.37732	20397.05000	20531.69366
ZN	0.15306	2,066.06	3.086	0.15756	0.15347	0.14814
ZR	0.00423	11.43	27.333	0.00523	0.00450	0.00297

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/12/2013 21:17

Sample Number: **7266812** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00194	-4.63	36.183	0.00113	0.00238	0.00231
AL	40.55876	4,117.50	1.507	41.26190	40.15481	40.25957
AS	0.02675	2.53	10.990	0.02744	0.02353	0.02929
B	0.00183	551.34	86.658	0.00008	0.00317	0.00223
BA	0.38633	245,728.93	0.991	0.38972	0.38710	0.38218
BE	0.00167	350.63	0.321	0.00167	0.00167	0.00166
CA	11.16947	10,740.06	1.326	11.33890	11.06473	11.10478
CD	0.00312	235.31	4.768	0.00296	0.00325	0.00315
CO	0.01410	111.86	3.799	0.01348	0.01443	0.01438
CR	0.06474	655.95	1.841	0.06558	0.06527	0.06338
CU	0.12418	1,323.96	1.098	0.12548	0.12431	0.12276
FE	97.10724	26,242.56	1.613	98.91223	96.10207	96.30743
K	2.30625	767.93	2.006	2.31088	2.35003	2.25785
LI	0.03035	216.54	7.544	0.02946	0.03296	0.02865
MG	5.75546	9,684.67	1.353	5.84539	5.70870	5.71230
MN	0.52874	33,219.49	0.720	0.53216	0.52943	0.52464
MO	0.00211	10.29	3.796	0.00220	0.00207	0.00206
NA	1.28276	1,256.27	0.696	1.29255	1.28069	1.27505
NI	0.04237	166.83	0.350	0.04220	0.04247	0.04244
P	2.76771	1,499.99	0.527	2.75172	2.77114	2.78026
PB	4.25680	5,689.68	0.516	4.23340	4.26002	4.27698
S	3.40605	666.31	0.412	3.39069	3.40923	3.41822
SB	-0.00408	5.69	3.748	-0.00404	-0.00425	-0.00395
SE	0.00561	1.73	28.349	0.00496	0.00742	0.00444
SI	4.64014	847.34	1.333	4.67639	4.67530	4.56873
SN	0.03725	49.43	1.461	0.03664	0.03769	0.03741
SR	0.06251	46,287.35	1.040	0.06301	0.06276	0.06178
TI	2.24839	134,546.53	0.990	2.26911	2.25119	2.22486
TL	0.00261	-10.70	31.681	0.00287	0.00328	0.00169
V	0.14424	2,045.59	1.215	0.14620	0.14371	0.14281
Y1	22827.92993	22,827.93	0.280	22884.18038	22841.14670	22758.46272
Y2A	302299.44243	302,299.44	0.877	299811.54738	301999.17164	305087.60826
Y2R	20375.81901	20,375.82	1.034	20136.27070	20532.65316	20458.53317
ZN	0.65673	8,275.79	0.495	0.65370	0.65632	0.66017
ZR	0.01109	27.15	17.266	0.00944	0.01064	0.01319

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/12/2013 21:21

Sample Number: **7266813** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00266	4.60	13.016	0.00246	0.00247	0.00306
AL	32.26242	3,334.85	1.694	31.74178	32.83182	32.21367
AS	0.29108	119.64	4.427	0.30328	0.29236	0.27760
B	0.05252	609.06	1.398	0.05331	0.05187	0.05237
BA	0.71014	457,310.57	1.131	0.71885	0.70851	0.70304
BE	0.00064	-100.46	8.066	0.00070	0.00062	0.00061
CA	4.73109	4,683.49	1.370	4.66819	4.79766	4.72741
CD	0.00300	112.25	14.442	0.00345	0.00296	0.00258
CO	0.00649	76.65	7.334	0.00699	0.00644	0.00605
CR	0.05004	526.38	0.755	0.05041	0.04966	0.05005
CU	0.21738	2,492.35	0.791	0.21933	0.21610	0.21670
FE	31.73203	8,970.97	1.732	31.20792	32.30421	31.68395
K	2.56742	871.17	1.913	2.51552	2.57355	2.61317
LI	0.02468	183.93	6.815	0.02348	0.02396	0.02660
MG	2.52314	4,328.47	1.174	2.49203	2.55102	2.52637
MN	0.13312	8,477.50	0.524	0.13392	0.13282	0.13263
MO	0.00362	18.06	4.954	0.00378	0.00365	0.00343
NA	0.67609	666.57	2.635	0.65727	0.69270	0.67830
NI	0.02715	120.44	6.003	0.02860	0.02746	0.02539
P	2.08522	1,183.57	4.618	2.17228	2.10159	1.98178
PB	8.15984	11,411.14	4.520	8.50040	8.21109	7.76803
S	10.22893	2,108.25	4.606	10.65476	10.30925	9.72277
SB	0.01872	19.32	7.478	0.02027	0.01833	0.01755
SE	0.00661	2.21	7.122	0.00678	0.00607	0.00696
SI	5.90052	1,096.66	1.941	5.82597	6.03241	5.84318
SN	0.03784	52.50	6.216	0.03997	0.03823	0.03531
SR	0.06272	47,025.21	0.555	0.06313	0.06249	0.06255
TI	2.53163	153,391.96	0.753	2.55364	2.52064	2.52060
TL	0.00509	-8.25	30.707	0.00481	0.00369	0.00678
V	0.08641	1,241.19	1.346	0.08760	0.08634	0.08527
Y1	23928.05965	23,928.06	3.408	23219.17028	23745.93217	24819.07649
Y2A	306082.78109	306,082.78	0.872	303091.61696	308221.58714	306935.13917
Y2R	20751.33465	20,751.33	1.177	20952.86599	20479.72366	20821.41430
ZN	0.38596	5,067.38	4.805	0.40291	0.38881	0.36615
ZR	0.00743	19.08	11.720	0.00738	0.00832	0.00658

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/12/2013 21:25

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00149	-11.68	36.483	0.00210	0.00106	0.00131
AL	66.14611	8,127.21	4.292	66.10703	69.00436	63.32695
AS	0.11272	32.03	4.699	0.11692	0.11448	0.10677
B	-0.05131	1,909.51	9.252	-0.05105	-0.05618	-0.04670
BA	0.68360	558,305.13	3.242	0.65855	0.69164	0.70062
BE	0.00375	1,631.09	3.738	0.00376	0.00389	0.00361
CA	9.89189	11,517.25	4.212	9.89378	10.30761	9.47430
CD	-0.00696	761.99	39.936	-0.00497	-0.01014	-0.00577
CO	0.02323	227.86	6.080	0.02480	0.02207	0.02283
CR	0.07418	870.05	5.186	0.07360	0.07829	0.07066
CU	0.24967	3,611.61	5.288	0.25014	0.26263	0.23623
FE	346.46752	101,451.39	5.090	345.68635	364.47981	329.23640
K	2.57047	1,035.56	6.173	2.55278	2.73726	2.42138
LI	0.05419	423.29	7.561	0.05258	0.05884	0.05113
MG	7.84215	15,944.75	4.800	7.79948	8.23805	7.48891
MN	1.13653	91,591.32	5.210	1.13460	1.19668	1.07830
MO	0.00773	50.29	5.955	0.00825	0.00756	0.00738
NA	0.92120	1,085.54	5.502	0.91048	0.97638	0.87672
NI	0.04887	226.41	4.402	0.05134	0.04738	0.04790
P	4.02545	3,031.65	4.435	4.23103	3.90915	3.93619
PB	0.25526	482.34	4.126	0.26741	0.24872	0.24965
S	3.28743	889.54	4.688	3.46517	3.19129	3.20583
SB	-0.02064	13.77	3.323	-0.02142	-0.02012	-0.02039
SE	0.00592	2.36	67.272	0.01039	0.00458	0.00277
SI	5.29932	1,169.95	4.960	5.25226	5.58252	5.06317
SN	0.02421	46.23	3.850	0.02527	0.02353	0.02383
SR	0.07861	74,669.18	5.480	0.07870	0.08287	0.07426
TI	2.34322	179,906.25	5.044	2.34350	2.46126	2.22489
TL	0.00653	-10.67	5.988	0.00612	0.00659	0.00689
V	0.15122	2,785.90	5.086	0.15117	0.15894	0.14356
Y1	31737.38403	31,737.38	2.327	30894.66831	32270.88220	32046.60159
Y2A	388219.45769	388,219.46	3.234	394167.96358	373797.77704	396692.63245
Y2R	24656.30678	24,656.31	2.041	24565.73705	24204.45253	25198.73076
ZN	1.07520	19,156.19	4.589	1.13165	1.04033	1.05362
ZR	0.02475	70.63	8.658	0.02273	0.02700	0.02451

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/12/2013 21:30

Sample Number: **7265239** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00731	72.27	2.958	0.00722	0.00715	0.00756
AL	47.68354	5,156.98	2.841	46.21619	47.94796	48.88647
AS	0.05872	19.66	8.875	0.06442	0.05420	0.05754
B	0.01910	599.44	18.753	0.02319	0.01762	0.01650
BA	0.18486	125,581.33	3.133	0.19111	0.18378	0.17968
BE	0.00367	1,315.92	2.703	0.00376	0.00367	0.00357
CA	27.64675	28,130.24	2.540	26.86791	27.84080	28.23153
CD	0.00399	235.77	20.376	0.00490	0.00371	0.00334
CO	0.02290	179.33	5.931	0.02435	0.02269	0.02166
CR	0.63951	7,249.62	2.710	0.65766	0.63774	0.62313
CU	0.23811	2,958.63	2.824	0.24555	0.23630	0.23247
FE	73.54327	21,377.69	2.797	71.23783	74.20058	75.19140
K	1.66150	587.77	2.364	1.65431	1.62631	1.70388
LI	0.03894	292.92	7.044	0.04087	0.03580	0.04016
MG	8.29411	14,849.04	2.813	8.03740	8.35158	8.49335
MN	0.17330	11,635.52	2.855	0.17849	0.17276	0.16864
MO	0.00793	42.74	10.604	0.00887	0.00766	0.00725
NA	1.62242	1,696.86	2.999	1.56624	1.65031	1.65072
NI	0.04474	206.24	5.056	0.04726	0.04407	0.04289
P	2.36766	1,479.93	5.784	2.52244	2.31833	2.26220
PB	2.92397	4,513.96	5.613	3.10909	2.86659	2.79623
S	44.32233	10,078.99	5.844	47.25296	43.37471	42.33932
SB	-0.01094	6.80	11.760	-0.01204	-0.00953	-0.01124
SE	0.00348	1.10	32.118	0.00240	0.00340	0.00463
SI	5.45964	1,061.48	3.545	5.23618	5.57146	5.57128
SN	0.04210	63.92	6.601	0.04529	0.04081	0.04021
SR	0.09089	71,856.87	3.064	0.09386	0.09047	0.08833
TI	1.77758	113,606.00	3.034	1.83573	1.76781	1.72919
TL	0.00359	-9.88	37.438	0.00363	0.00492	0.00223
V	0.11307	1,710.39	3.493	0.11732	0.11236	0.10952
Y1	26358.54852	26,358.55	3.614	25280.76846	26706.82500	27088.05210
Y2A	322933.68127	322,933.68	1.992	315935.62625	324272.00000	328593.41755
Y2R	21706.42970	21,706.43	1.266	21979.17499	21710.53418	21429.57992
ZN	1.01379	14,602.11	5.648	1.07872	0.99213	0.97051
ZR	0.01982	50.17	12.586	0.01738	0.02236	0.01971

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/12/2013 21:34

Sample Number: **7265246** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00189	-4.04	10.087	0.00189	0.00169	0.00207
AL	37.96403	3,957.36	1.170	38.13516	37.45978	38.29714
AS	0.02740	-3.21	3.719	0.02823	0.02626	0.02770
B	-0.01855	972.51	15.602	-0.01873	-0.01557	-0.02135
BA	0.31208	207,132.72	2.304	0.31736	0.31498	0.30389
BE	0.00278	876.52	1.605	0.00281	0.00273	0.00279
CA	13.95674	13,755.04	1.003	14.00211	13.79963	14.06849
CD	0.00068	411.65	83.637	0.00105	0.00098	0.00002
CO	0.03306	235.46	2.807	0.03389	0.03323	0.03206
CR	0.10676	1,119.13	1.951	0.10736	0.10848	0.10445
CU	0.11097	1,172.27	2.885	0.11257	0.11306	0.10729
FE	196.66366	52,309.96	1.244	197.70706	193.86798	198.41594
K	2.48949	851.55	0.679	2.50205	2.49617	2.47026
LI	0.04334	299.22	3.909	0.04499	0.04344	0.04160
MG	11.99719	20,670.18	0.985	12.04285	11.86295	12.08578
MN	3.00625	197,028.51	2.047	3.05624	3.02498	2.93754
MO	0.00280	14.38	7.745	0.00283	0.00258	0.00301
NA	1.26024	1,267.06	0.674	1.26377	1.26639	1.25055
NI	0.03413	130.85	2.196	0.03500	0.03374	0.03366
P	3.31835	1,914.10	2.551	3.39694	3.32939	3.22872
PB	0.12789	187.13	3.456	0.13236	0.12779	0.12352
S	1.61792	332.56	2.183	1.65218	1.61997	1.58162
SB	-0.01331	6.22	16.126	-0.01148	-0.01567	-0.01278
SE	0.00288	0.83	52.127	0.00423	0.00126	0.00314
SI	3.54035	664.37	0.254	3.53479	3.55071	3.53555
SN	0.02162	32.00	3.430	0.02225	0.02182	0.02080
SR	0.05252	40,577.96	2.399	0.05349	0.05297	0.05110
TI	2.53184	158,097.22	1.937	2.56698	2.55272	2.47581
TL	0.00436	-8.55	19.966	0.00353	0.00526	0.00429
V	0.14201	2,114.72	1.627	0.14385	0.14277	0.13942
Y1	24302.90312	24,302.90	1.633	23930.42291	24257.75971	24720.52674
Y2A	315483.19758	315,483.20	1.283	312911.55896	313389.86711	320148.16667
Y2R	20921.70840	20,921.71	0.679	20796.89370	21076.33893	20891.89257
ZN	0.61261	8,368.26	2.511	0.62708	0.61430	0.59646
ZR	0.02535	61.37	2.573	0.02548	0.02464	0.02592

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 43

Date/Time: 11/12/2013 21:38

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00689	64.30	5.239	0.00648	0.00716	0.00702
AL	0.23017	23.86	15.728	0.27170	0.20528	0.21354
AS	0.02179	6.04	12.188	0.02279	0.01878	0.02379
B	0.05249	420.73	1.383	0.05269	0.05310	0.05169
BA	0.00575	3,621.68	0.963	0.00573	0.00581	0.00571
BE	0.00475	1,676.20	0.331	0.00476	0.00473	0.00475
CA	0.21737	277.82	2.248	0.22097	0.21933	0.21181
CD	0.00499	78.07	1.658	0.00507	0.00499	0.00491
CO	0.00529	32.95	2.440	0.00541	0.00515	0.00531
CR	0.01570	160.67	1.572	0.01542	0.01578	0.01589
CU	0.00969	85.05	2.611	0.00989	0.00977	0.00941
FE	0.22989	62.25	6.965	0.23940	0.23885	0.21140
K	0.42268	132.07	15.878	0.49978	0.39096	0.37731
LI	0.02247	159.99	6.241	0.02369	0.02278	0.02094
MG	0.10568	168.62	0.383	0.10521	0.10595	0.10587
MN	0.00581	369.73	0.894	0.00586	0.00582	0.00576
MO	0.01055	48.26	2.469	0.01057	0.01080	0.01028
NA	1.00884	952.63	3.180	1.02995	1.02465	0.97192
NI	0.01086	54.06	2.981	0.01123	0.01073	0.01062
P	0.10256	54.04	0.635	0.10303	0.10284	0.10182
PB	0.01743	25.91	6.683	0.01743	0.01626	0.01859
S	0.48974	90.05	1.613	0.49784	0.48932	0.48206
SB	0.02351	19.14	6.056	0.02493	0.02351	0.02208
SE	0.02058	7.02	0.194	0.02061	0.02059	0.02054
SI	0.13395	25.64	4.458	0.13682	0.13795	0.12709
SN	0.01947	26.87	1.963	0.01932	0.01991	0.01919
SR	0.00517	3,767.10	0.763	0.00514	0.00522	0.00516
TI	0.01112	671.12	1.758	0.01127	0.01119	0.01090
TL	0.03384	17.92	4.217	0.03452	0.03220	0.03480
V	0.00450	56.18	8.062	0.00413	0.00485	0.00451
Y1	22387.12947	22,387.13	0.657	22328.23494	22278.61044	22554.54303
Y2A	296488.18202	296,488.18	0.636	295532.05765	295270.95759	298661.53082
Y2R	19717.15835	19,717.16	0.959	19555.11988	19671.37016	19924.98501
ZN	0.02070	269.56	0.469	0.02073	0.02077	0.02059
ZR	0.05311	119.30	5.334	0.05526	0.05417	0.04990

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 44

Date/Time: 11/12/2013 21:42

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00150	-9.35	55.474	0.00077	0.00240	0.00131
AL	532.78783	49,850.47	0.566	530.30242	536.14555	531.91552
AS	-0.00716	-15.54	68.748	-0.00815	-0.00182	-0.01151
B	-0.02680	827.55	6.262	-0.02548	-0.02869	-0.02623
BA	0.00020	137.44	6.416	0.00020	0.00019	0.00022
BE	-0.00053	-517.65	11.566	-0.00060	-0.00047	-0.00052
CA	550.66371	443,031.31	0.161	550.60952	551.57543	549.80618
CD	0.00183	377.68	3.426	0.00190	0.00182	0.00178
CO	-0.00031	1.83	6.827	-0.00031	-0.00033	-0.00029
CR	0.00238	-39.27	32.449	0.00245	0.00311	0.00157
CU	0.00451	151.03	9.944	0.00401	0.00465	0.00487
FE	218.28457	50,857.89	0.864	217.03604	220.45524	217.36243
K	-0.17208	-56.94	34.557	-0.21568	-0.19620	-0.10434
LI	0.00011	339.96	1783.354	0.00053	0.00179	-0.00199
MG	608.39281	652,916.11	0.796	610.28323	612.00838	602.88681
MN	0.00376	208.65	0.583	0.00374	0.00376	0.00379
MO	-0.00129	-4.52	14.022	-0.00129	-0.00147	-0.00111
NA	-0.00435	-18.36	142.699	0.00024	-0.00188	-0.01142
NI	0.00300	-0.95	23.257	0.00222	0.00323	0.00356
P	0.01304	5.54	11.294	0.01344	0.01428	0.01141
PB	0.00268	125.39	24.989	0.00342	0.00213	0.00247
S	-0.14047	-28.42	2.214	-0.14290	-0.13697	-0.14156
SB	-0.00910	7.74	13.268	-0.00781	-0.01021	-0.00929
SE	-0.00076	-2.31	183.757	-0.00232	-0.00029	0.00034
SI	0.04061	8.60	14.351	0.04044	0.04653	0.03487
SN	0.00421	7.18	28.458	0.00470	0.00510	0.00285
SR	0.00195	1,221.30	0.843	0.00195	0.00196	0.00193
TI	-0.00387	-179.20	6.946	-0.00356	-0.00401	-0.00404
TL	-0.00091	-5.17	134.157	-0.00071	-0.00222	0.00020
V	-0.00530	-47.07	1.072	-0.00524	-0.00535	-0.00531
Y1	19265.08128	19,265.08	0.056	19275.06666	19253.63376	19266.54343
Y2A	254216.31978	254,216.32	0.316	254794.69041	254555.75899	253298.50993
Y2R	18499.86870	18,499.87	0.715	18581.28620	18347.21945	18571.10046
ZN	0.00688	333.07	4.437	0.00701	0.00653	0.00709
ZR	0.00579	13.62	15.271	0.00656	0.00482	0.00599

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/12/2013 21:46

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22299	2,542.01	4.000	0.22986	0.21291	0.22619
AL	524.37239	49,914.31	1.058	519.01599	530.08922	524.01196
AS	0.09754	20.89	5.894	0.09586	0.09282	0.10394
B	-0.02781	824.98	27.103	-0.02157	-0.03618	-0.02568
BA	0.51516	284,106.59	3.951	0.53073	0.49213	0.52262
BE	0.51784	197,444.09	4.344	0.53439	0.49223	0.52690
CA	535.06898	439,039.92	0.441	532.87218	537.56354	534.77121
CD	0.96918	13,991.78	0.575	0.97560	0.96559	0.96637
CO	0.47092	2,226.25	0.516	0.47358	0.47038	0.46881
CR	0.49121	4,476.91	4.281	0.50619	0.46717	0.50027
CU	0.54986	5,975.57	4.221	0.56446	0.52309	0.56203
FE	214.37064	50,911.78	1.189	211.86623	216.96088	214.28482
K	-0.09963	-35.58	41.342	-0.10757	-0.05504	-0.13626
LI	-0.00016	335.74	1113.331	-0.00200	0.00165	-0.00014
MG	583.16612	648,169.49	0.810	577.71198	586.05324	585.73315
MN	0.49048	26,714.60	4.606	0.50596	0.46455	0.50092
MO	-0.00129	-4.56	32.110	-0.00162	-0.00142	-0.00083
NA	0.00290	-11.98	427.149	0.01306	-0.01092	0.00657
NI	0.94989	3,131.53	0.584	0.95627	0.94628	0.94711
P	0.01073	5.80	12.080	0.00962	0.01215	0.01041
PB	0.05344	181.02	6.358	0.05692	0.05327	0.05013
S	-0.14325	-29.00	2.909	-0.14508	-0.14618	-0.13848
SB	0.66947	449.97	1.268	0.67919	0.66347	0.66575
SE	0.05550	14.45	8.778	0.05317	0.05223	0.06110
SI	0.05317	10.87	16.624	0.04331	0.06038	0.05582
SN	0.00279	5.70	63.743	0.00473	0.00125	0.00239
SR	0.00190	1,225.40	5.850	0.00197	0.00177	0.00195
TI	-0.00378	-160.96	8.634	-0.00413	-0.00348	-0.00373
TL	0.09135	39.40	1.411	0.09247	0.09164	0.08994
V	0.49678	6,076.53	4.411	0.51228	0.47171	0.50634
Y1	19338.61780	19,338.62	0.431	19243.28826	19397.52017	19375.04497
Y2A	262386.96667	262,386.97	4.146	255062.41722	274886.26574	257212.21704
Y2R	18825.60129	18,825.60	0.715	18958.88977	18689.70500	18828.20909
ZN	1.08340	11,667.48	0.665	1.09165	1.07836	1.08019
ZR	0.00617	14.67	44.710	0.00598	0.00351	0.00901

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/12/2013 21:51

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51878	6,634.89	0.760	0.52176	0.51431	0.52027
AL	25.61680	2,527.45	0.424	25.70084	25.65554	25.49402
AS	0.50891	193.16	0.467	0.51129	0.50888	0.50654
B	0.50649	4,045.24	0.285	0.50791	0.50503	0.50653
BA	0.52285	319,095.53	0.642	0.52589	0.51925	0.52341
BE	0.50767	214,225.76	0.533	0.50957	0.50457	0.50886
CA	25.43543	23,607.16	0.211	25.49135	25.38450	25.43044
CD	0.51450	8,142.47	0.199	0.51563	0.51364	0.51422
CO	0.51209	2,713.06	0.266	0.51352	0.51081	0.51195
CR	0.50618	5,164.94	0.655	0.50900	0.50252	0.50700
CU	0.52173	6,100.23	0.676	0.52382	0.51766	0.52371
FE	25.30164	6,838.53	0.241	25.36996	25.25230	25.28267
K	25.48689	8,289.80	0.288	25.49786	25.55426	25.40854
LI	0.51209	2,855.93	0.753	0.51635	0.51110	0.50883
MG	25.02500	40,515.54	0.449	25.08325	25.09623	24.89551
MN	0.51211	30,872.50	0.501	0.51432	0.50929	0.51270
MO	0.51718	2,258.93	0.194	0.51827	0.51695	0.51631
NA	25.25718	24,307.63	0.454	25.30436	25.34062	25.12657
NI	0.51657	1,920.92	0.112	0.51714	0.51598	0.51660
P	0.52306	269.47	1.037	0.52927	0.51921	0.52071
PB	0.51859	663.30	0.345	0.51711	0.51808	0.52057
S	25.38453	4,740.02	0.383	25.48665	25.29285	25.37410
SB	0.53544	393.77	0.354	0.53763	0.53423	0.53448
SE	0.51347	170.58	0.690	0.51755	0.51115	0.51172
SI	25.88229	4,580.79	0.367	25.97898	25.87861	25.78926
SN	0.50240	592.73	0.097	0.50268	0.50184	0.50267
SR	0.51123	363,134.65	1.274	0.51862	0.50632	0.50876
TI	0.51755	29,773.80	0.430	0.51894	0.51499	0.51873
TL	0.51358	328.58	0.483	0.51444	0.51079	0.51553
V	0.51028	6,858.37	0.474	0.51210	0.50754	0.51120
Y1	21624.99784	21,625.00	0.263	21566.03346	21629.41823	21679.54182
Y2A	290058.56528	290,058.57	0.570	288998.34327	291964.87740	289212.47515
Y2R	19784.85080	19,784.85	0.124	19759.30267	19786.93465	19808.31507
ZN	0.51975	6,177.19	0.220	0.52091	0.51971	0.51862
ZR	0.50342	1,120.76	0.597	0.50607	0.50015	0.50403

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 47 Date/Time: 11/12/2013 21:55

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00106	-17.08	60.629	0.00105	0.00170	0.00042
AL	0.01363	2.53	49.171	0.00973	0.00978	0.02136
AS	0.00134	-2.12	54.552	0.00167	0.00050	0.00185
B	0.00043	8.50	104.480	0.00007	0.00093	0.00028
BA	0.00007	76.37	8.246	0.00007	0.00006	0.00008
BE	-0.00031	-499.82	16.771	-0.00025	-0.00036	-0.00031
CA	0.01589	89.20	25.685	0.01434	0.01281	0.02052
CD	-0.00008	-4.88	83.087	-0.00010	-0.00012	0.00000
CO	0.00002	3.92	1253.510	0.00025	-0.00007	-0.00013
CR	0.00004	-2.90	63.979	0.00002	0.00007	0.00004
CU	-0.00158	-49.40	46.577	-0.00138	-0.00239	-0.00096
FE	-0.00247	-0.92	318.842	0.00422	-0.00048	-0.01114
K	-0.07330	-27.95	15.063	-0.08566	-0.06440	-0.06985
LI	0.00173	45.49	125.781	0.00232	-0.00068	0.00354
MG	0.01025	12.41	7.675	0.01015	0.00952	0.01109
MN	0.00009	17.02	18.032	0.00008	0.00011	0.00009
MO	0.00016	1.26	49.378	0.00022	0.00007	0.00018
NA	-0.01521	-29.24	12.378	-0.01390	-0.01437	-0.01737
NI	0.00041	13.90	20.356	0.00034	0.00038	0.00050
P	0.00074	-0.12	140.536	0.00190	0.00046	-0.00013
PB	0.00132	4.75	163.271	0.00096	-0.00063	0.00363
S	-0.00235	-5.10	190.113	0.00029	-0.00751	0.00017
SB	0.00058	1.85	249.621	-0.00078	0.00211	0.00041
SE	0.00035	0.06	729.725	-0.00128	0.00326	-0.00094
SI	0.01527	4.59	3.140	0.01484	0.01519	0.01579
SN	-0.00068	2.36	56.166	-0.00107	-0.00031	-0.00067
SR	-0.00020	-130.25	9.187	-0.00021	-0.00020	-0.00018
TI	0.00008	22.17	65.290	0.00012	0.00002	0.00009
TL	-0.00003	-5.57	5248.145	-0.00107	0.00189	-0.00091
V	-0.00092	-17.72	38.678	-0.00098	-0.00124	-0.00054
Y1	22138.52035	22,138.52	0.409	22042.99707	22223.06692	22149.49707
Y2A	292468.21847	292,468.22	2.478	296402.00464	284105.94765	296896.70311
Y2R	19230.22145	19,230.22	1.340	19080.31088	19527.69461	19082.65887
ZN	-0.00029	13.75	26.620	-0.00020	-0.00032	-0.00034
ZR	0.00021	2.13	502.765	-0.00013	0.00142	-0.00065

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ICP-AES Run Data Report

1331705T72

Reviewed By
Katlin N Cataldi

Reviewed Date
11/13/2013 7:35PM

Data File Name 1331705T72.TXT
Run Name: 1331705T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:54AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 3282

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/13/2013 15:37

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00154	54.027	-0.00166	-0.00231	-0.00066
AL	0.000	0.01516	32.751	0.01695	0.01898	0.00955
AS	0.000	-0.00918	13.387	-0.00810	-0.00893	-0.01052
B	0.000	0.00002	60.023	0.00002	0.00001	0.00003
BA	0.000	0.00018	34.648	0.00013	0.00015	0.00025
BE	0.000	-0.11021	0.252	-0.11046	-0.10991	-0.11026
CA	0.000	0.00475	0.465	0.00478	0.00475	0.00473
CD	0.000	-0.01372	28.224	-0.01682	-0.00938	-0.01495
CO	0.000	0.00672	44.243	0.00366	0.00692	0.00960
CR	0.000	0.00001	123.630	0.00000	0.00001	0.00002
CU	0.000	-0.00714	3.051	-0.00738	-0.00696	-0.00708
FE	0.000	-0.00007	88.639	-0.00011	-0.00009	0.00000
K	0.000	-0.06997	34.064	-0.04740	-0.09490	-0.06761
LI	0.000	0.00283	35.737	0.00297	0.00176	0.00377
MG	0.000	0.00008	189.438	0.00020	0.00012	-0.00009
MN	0.000	0.00301	30.520	0.00406	0.00263	0.00235
MO	0.000	0.00501	19.753	0.00545	0.00388	0.00571
NA	0.000	-0.00117	48.379	-0.00099	-0.00072	-0.00180
NI	0.000	0.02972	11.465	0.02873	0.02692	0.03351
P	0.000	-0.00003	70.875	-0.00002	-0.00005	-0.00001
PB	0.000	0.00418	86.172	0.00609	0.00641	0.00002
S	0.000	-0.00030	14.231	-0.00029	-0.00026	-0.00035
SB	0.000	0.00010	42.522	0.00007	0.00014	0.00008
SE	0.000	0.00079	169.897	0.00220	-0.00046	0.00063
SI	0.000	0.00018	44.838	0.00014	0.00012	0.00027
SN	0.000	0.00573	18.856	0.00468	0.00567	0.00684
SR	0.000	-0.00053	2.177	-0.00054	-0.00051	-0.00053
TI	0.000	0.00453	24.702	0.00537	0.00326	0.00495
TL	0.000	-0.01594	6.727	-0.01470	-0.01651	-0.01660
V	0.000	-0.00388	3.764	-0.00403	-0.00387	-0.00374
Y1	0.000	22367.92041	0.148	22401.44826	22335.07194	22367.24103
Y2A	0.000	296191.18622	0.636	294048.21074	297586.81246	296938.53545
Y2R	0.000	19027.67279	0.797	18865.63249	19166.20989	19051.17600
ZN	0.000	0.05810	4.447	0.05716	0.06102	0.05612
ZR	0.000	0.00007	98.764	0.00004	0.00002	0.00015

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/13/2013 15:41

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.41757	0.454	13.44774	13.34742	13.45754
CA	50.000	2.55599	0.620	2.56393	2.53775	2.56629
FE	50.000	0.73081	0.840	0.73478	0.72374	0.73391
K	50.000	45.58647	0.546	45.66247	45.30844	45.78850
MG	50.000	4.36533	0.768	4.37134	4.32919	4.39546
NA	50.000	2.68837	0.585	2.68893	2.67238	2.70381
S	50.000	0.46434	0.185	0.46532	0.46395	0.46374
SI	50.000	0.47057	0.610	0.47100	0.46750	0.47319
Y1	50.000	21150.71352	0.139	21169.22129	21166.23260	21116.68666
Y2R	50.000	18794.59796	0.735	18640.84366	18908.14394	18834.80627

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/13/2013 15:45

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.44161	1.024	2.46888	2.43615	2.41979
AS	1.000	0.93675	0.372	0.93807	0.93280	0.93938
B	1.000	0.03029	0.647	0.03052	0.03021	0.03016
BA	1.000	2.34483	0.459	2.35720	2.33755	2.33973
BE	1.000	77.58592	0.734	78.13679	77.62145	76.99951
CD	1.000	38.16305	0.271	38.28195	38.09220	38.11499
CO	1.000	12.77486	0.105	12.79041	12.76702	12.76717
CU	1.000	2.36382	1.105	2.38917	2.36531	2.33699
LI	1.000	0.31234	0.379	0.31318	0.31286	0.31099
MN	1.000	11.13945	0.812	11.22077	11.15562	11.04195
NI	1.000	9.08510	0.224	9.10800	9.07829	9.06902
P	1.000	0.02572	0.267	0.02580	0.02571	0.02566
PB	1.000	3.14440	0.269	3.15211	3.13536	3.14574
SE	1.000	0.82875	0.220	0.82831	0.83075	0.82719
SR	1.000	2.69513	0.659	2.71221	2.69642	2.67676
TL	1.000	1.71211	0.353	1.71565	1.71554	1.70514
Y1	1.000	21494.49471	0.227	21438.50510	21516.51560	21528.46343
Y2A	1.000	282333.49901	0.938	279519.21803	282705.93108	284775.34791
Y2R	1.000	18826.63408	0.517	18734.83410	18816.42886	18928.63927
ZN	1.000	29.29896	0.125	29.31223	29.32706	29.25760

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 4 Date/Time: 11/13/2013 15:50

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03867	0.713	0.03839	0.03894	0.03868
MO	1.000	10.61339	0.127	10.59970	10.61387	10.62661
SB	1.000	0.03821	0.270	0.03830	0.03809	0.03822
SN	1.000	2.88841	0.316	2.89355	2.87788	2.89380
TI	1.000	10.92242	0.730	10.83989	10.92828	10.99907
V	1.000	2.50327	0.672	2.49441	2.49274	2.52266
Y1	1.000	22270.52005	0.147	22285.78232	22292.78769	22232.99014
Y2A	1.000	292843.99161	0.644	295011.43141	291937.54142	291583.00199
Y2R	1.000	19044.36850	0.592	19170.87567	18954.47962	19007.75020
ZR	1.000	0.12061	0.489	0.12009	0.12125	0.12049

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/13/2013 15:54

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60551	8,402.79	0.689	0.60073	0.60839	0.60741
AL	30.18333	3,073.98	0.184	30.16207	30.24647	30.14145
AS	0.59938	237.68	0.360	0.59921	0.59732	0.60162
B	0.58012	5,137.33	0.636	0.57622	0.58057	0.58356
BA	0.60215	398,737.01	1.042	0.59496	0.60651	0.60497
BE	0.58594	256,650.78	0.455	0.58377	0.58515	0.58891
CA	29.74065	28,926.24	0.478	29.62197	29.89809	29.70188
CD	0.59664	9,791.37	0.166	0.59562	0.59671	0.59760
CO	0.59549	3,262.67	0.292	0.59351	0.59624	0.59673
CR	0.57829	6,303.23	0.582	0.57546	0.57740	0.58202
CU	0.60077	7,963.66	0.488	0.59799	0.60048	0.60384
FE	29.66699	8,285.74	0.555	29.56919	29.85692	29.57485
K	29.75165	10,281.35	0.514	29.65010	29.92739	29.67747
LI	0.59656	3,571.72	0.955	0.60260	0.59581	0.59128
MG	29.28315	48,958.05	0.419	29.16713	29.41169	29.27063
MN	0.59354	37,348.57	0.532	0.59001	0.59451	0.59610
MO	0.60643	2,753.06	0.115	0.60566	0.60660	0.60702
NA	29.48466	30,034.24	0.172	29.43265	29.53424	29.48710
NI	0.59726	2,323.77	0.176	0.59848	0.59665	0.59666
P	0.60817	334.19	0.326	0.60875	0.60979	0.60596
PB	0.59927	813.13	0.188	0.60026	0.59952	0.59804
S	29.60809	5,876.05	0.100	29.60203	29.58193	29.64033
SB	0.61571	505.44	0.426	0.61449	0.61392	0.61872
SE	0.60160	213.02	0.246	0.60014	0.60158	0.60310
SI	30.74661	5,485.80	0.233	30.69585	30.82857	30.71542
SN	0.58848	727.85	0.365	0.58926	0.58605	0.59013
SR	0.59272	451,111.90	0.835	0.59334	0.58749	0.59733
TI	0.59558	36,796.24	0.538	0.59297	0.59463	0.59915
TL	0.59038	411.10	0.748	0.59362	0.58535	0.59217
V	0.59386	8,398.20	0.729	0.58896	0.59715	0.59549
Y1	21380.49430	21,380.49	0.208	21429.06923	21341.55896	21370.85471
Y2A	282391.40159	282,391.40	0.341	282519.96355	283284.79125	281369.44997
Y2R	18951.08302	18,951.08	0.261	18997.75225	18899.19194	18956.30487
ZN	0.60319	7,606.32	0.173	0.60263	0.60254	0.60439
ZR	0.60001	1,371.96	0.446	0.59834	0.60309	0.59859

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/13/2013 15:58

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00203	-6.13	12.950	0.00215	0.00221	0.00173
AL	0.00912	6.80	564.065	0.04925	0.02699	-0.04888
AS	-0.00219	-3.78	98.157	-0.00464	-0.00134	-0.00060
B	0.00052	9.98	117.653	0.00123	0.00014	0.00020
BA	0.00008	108.48	9.019	0.00007	0.00008	0.00009
BE	-0.00080	-615.42	4.132	-0.00076	-0.00083	-0.00082
CA	0.00055	92.36	321.296	0.00244	0.00028	-0.00107
CD	-0.00012	-5.90	73.808	-0.00018	-0.00002	-0.00016
CO	0.00022	4.22	132.768	0.00031	0.00045	-0.00011
CR	0.00020	-3.50	103.579	0.00017	0.00041	0.00001
CU	-0.00178	-51.40	12.693	-0.00160	-0.00204	-0.00171
FE	0.00387	1.08	196.563	0.00837	0.00815	-0.00491
K	-0.03381	-11.20	121.319	-0.05868	0.01353	-0.05628
LI	-0.00127	47.09	84.373	-0.00011	-0.00222	-0.00149
MG	0.01345	24.75	2.134	0.01374	0.01343	0.01317
MN	0.00006	21.83	60.136	0.00007	0.00002	0.00010
MO	0.00007	2.56	225.338	0.00019	-0.00011	0.00013
NA	-0.00516	-27.95	164.185	-0.00646	-0.01292	0.00389
NI	0.00007	13.45	356.445	-0.00015	0.00002	0.00034
P	-0.00017	-0.77	423.027	-0.00026	0.00058	-0.00081
PB	0.00129	3.65	59.088	0.00164	0.00180	0.00041
S	-0.00687	-6.08	69.311	-0.00442	-0.00383	-0.01236
SB	0.00141	3.34	88.226	0.00020	0.00268	0.00135
SE	0.00276	0.92	53.393	0.00236	0.00440	0.00153
SI	0.01226	5.68	56.697	0.00600	0.01974	0.01105
SN	0.00013	2.71	502.029	0.00073	-0.00057	0.00023
SR	-0.00015	-93.03	2.898	-0.00015	-0.00014	-0.00015
TI	-0.00005	23.38	114.716	-0.00008	-0.00010	0.00002
TL	-0.00205	-7.24	44.975	-0.00162	-0.00142	-0.00311
V	-0.00125	-19.50	30.265	-0.00146	-0.00148	-0.00081
Y1	22164.82656	22,164.83	0.215	22219.71282	22141.22702	22133.53983
Y2A	294695.35564	294,695.36	1.423	298891.73294	294691.10338	290503.23062
Y2R	19316.18494	19,316.18	0.654	19449.26705	19197.82305	19301.46471
ZN	-0.00063	17.63	14.364	-0.00053	-0.00071	-0.00065
ZR	0.00050	2.48	195.139	0.00024	0.00156	-0.00031

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/13/2013 16:02

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00681	68.82	6.322	0.00659	0.00730	0.00653
AL	0.19003	25.08	25.661	0.13378	0.22036	0.21595
AS	0.01755	4.48	18.935	0.02005	0.01882	0.01378
B	0.04992	453.87	1.380	0.05071	0.04946	0.04958
BA	0.00550	3,864.07	0.887	0.00549	0.00555	0.00545
BE	0.00402	1,596.80	1.026	0.00398	0.00406	0.00403
CA	0.21235	296.80	2.486	0.21279	0.21740	0.20687
CD	0.00501	81.71	2.246	0.00494	0.00514	0.00495
CO	0.00537	33.69	1.318	0.00529	0.00540	0.00542
CR	0.01529	169.12	2.018	0.01555	0.01495	0.01537
CU	0.00991	111.30	3.413	0.01025	0.00991	0.00957
FE	0.21431	60.54	1.995	0.21924	0.21181	0.21186
K	0.46797	162.49	8.653	0.49182	0.42122	0.49087
LI	0.02026	172.72	22.755	0.01604	0.01956	0.02517
MG	0.10860	185.69	1.183	0.10825	0.11002	0.10752
MN	0.00536	370.88	0.683	0.00536	0.00540	0.00533
MO	0.01038	51.23	1.790	0.01019	0.01038	0.01056
NA	0.99821	995.49	0.551	1.00262	0.99997	0.99205
NI	0.01076	56.63	0.489	0.01071	0.01082	0.01076
P	0.10031	56.56	1.427	0.10030	0.09889	0.10175
PB	0.01720	25.94	7.850	0.01571	0.01834	0.01755
S	0.48022	94.60	0.472	0.48282	0.47915	0.47869
SB	0.02177	20.59	7.443	0.02005	0.02326	0.02201
SE	0.02021	7.36	1.349	0.02008	0.02003	0.02053
SI	0.10413	21.97	17.213	0.09280	0.12479	0.09478
SN	0.02079	29.23	2.322	0.02025	0.02095	0.02117
SR	0.00509	4,084.80	1.276	0.00509	0.00516	0.00503
TI	0.00995	670.23	0.829	0.00992	0.01005	0.00989
TL	0.03068	17.58	3.802	0.02952	0.03186	0.03065
V	0.00376	54.28	3.455	0.00362	0.00388	0.00376
Y1	22256.53873	22,256.54	0.089	22245.87553	22279.27991	22244.46074
Y2A	295765.43517	295,765.44	0.565	296062.12724	293964.38038	297269.79788
Y2R	18953.33360	18,953.33	0.641	18854.76951	18916.28417	19088.94711
ZN	0.02050	292.19	0.240	0.02055	0.02049	0.02046
ZR	0.05110	118.05	0.805	0.05128	0.05063	0.05139

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/13/2013 16:06

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00222	-2.27	10.226	0.00224	0.00244	0.00199
AL	506.65630	49,751.62	0.585	507.45508	509.13925	503.37457
AS	-0.00824	-16.04	31.391	-0.00577	-0.00802	-0.01092
B	-0.02724	851.57	5.022	-0.02579	-0.02743	-0.02851
BA	0.00017	142.40	8.378	0.00018	0.00015	0.00018
BE	-0.00111	-639.17	0.990	-0.00110	-0.00112	-0.00111
CA	513.28765	443,674.03	0.416	514.96935	514.01090	510.88271
CD	0.00502	417.60	4.157	0.00509	0.00479	0.00520
CO	-0.00045	0.33	48.781	-0.00068	-0.00024	-0.00043
CR	0.00316	-32.75	9.268	0.00323	0.00341	0.00284
CU	0.00284	149.97	16.614	0.00260	0.00255	0.00339
FE	205.18626	50,716.50	0.617	205.24973	206.41976	203.88930
K	-0.12175	-39.40	36.306	-0.16751	-0.07929	-0.11844
LI	-0.00226	348.26	62.962	-0.00383	-0.00105	-0.00190
MG	551.71377	649,134.48	1.829	552.48171	561.39678	541.26281
MN	0.00357	213.02	1.244	0.00360	0.00352	0.00359
MO	-0.00170	-5.00	37.236	-0.00132	-0.00136	-0.00244
NA	-0.00479	-25.76	71.040	-0.00324	-0.00869	-0.00244
NI	0.00341	1.86	10.293	0.00318	0.00324	0.00382
P	0.00979	4.23	13.589	0.00829	0.01085	0.01021
PB	0.00437	128.50	31.258	0.00376	0.00341	0.00593
S	-0.13422	-28.89	7.301	-0.14341	-0.13534	-0.12390
SB	-0.00843	8.83	6.814	-0.00831	-0.00792	-0.00905
SE	0.00030	-2.05	955.355	-0.00250	0.00314	0.00024
SI	0.03760	9.62	15.108	0.03556	0.03321	0.04401
SN	0.00356	6.12	16.259	0.00302	0.00350	0.00417
SR	0.00186	1,272.87	0.882	0.00188	0.00186	0.00185
TI	-0.00419	-205.00	2.713	-0.00424	-0.00427	-0.00406
TL	-0.00305	-6.68	83.478	-0.00265	-0.00073	-0.00576
V	-0.00559	-50.68	8.179	-0.00524	-0.00611	-0.00543
Y1	19126.32241	19,126.32	0.232	19078.14457	19165.78667	19135.03599
Y2A	249020.54654	249,020.55	0.693	247701.82119	248385.09934	250974.71910
Y2R	18056.72703	18,056.73	0.726	18051.37807	17928.47513	18190.32789
ZN	0.00841	362.28	6.170	0.00879	0.00782	0.00862
ZR	0.00682	16.10	26.405	0.00546	0.00613	0.00886

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/13/2013 16:11

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21830	2,666.12	0.967	0.21607	0.22028	0.21854
AL	496.72339	49,973.69	2.432	505.84289	483.02267	501.30461
AS	0.09290	20.86	7.277	0.08692	0.09155	0.10023
B	-0.02342	862.38	18.433	-0.02744	-0.01886	-0.02395
BA	0.50297	297,577.75	0.322	0.50117	0.50432	0.50341
BE	0.50786	198,714.90	0.746	0.50352	0.50954	0.51051
CA	498.20105	442,261.12	2.688	500.75527	483.71612	510.13175
CD	0.94552	14,179.48	0.101	0.94506	0.94662	0.94489
CO	0.45931	2,252.60	0.123	0.45983	0.45940	0.45870
CR	0.47604	4,584.41	0.576	0.47315	0.47637	0.47861
CU	0.52520	6,389.70	0.636	0.52161	0.52821	0.52577
FE	199.97765	50,771.22	2.378	203.59887	194.59261	201.74146
K	-0.10947	-36.09	40.666	-0.15796	-0.07045	-0.09999
LI	-0.00292	343.84	29.064	-0.00293	-0.00207	-0.00377
MG	530.53236	648,977.99	1.927	536.03323	518.73704	536.82680
MN	0.48291	27,151.23	0.809	0.47840	0.48501	0.48531
MO	-0.00148	-4.10	7.770	-0.00160	-0.00137	-0.00147
NA	0.00555	-16.10	43.293	0.00320	0.00801	0.00545
NI	0.91780	3,179.08	0.163	0.91876	0.91607	0.91856
P	0.00859	4.98	15.034	0.01003	0.00752	0.00824
PB	0.05276	184.45	5.901	0.05107	0.05635	0.05085
S	-0.14434	-30.77	9.021	-0.13306	-0.14135	-0.15859
SB	0.63022	474.61	1.086	0.63803	0.62741	0.62523
SE	0.06266	17.81	3.878	0.06235	0.06040	0.06524
SI	0.05346	12.61	11.036	0.05052	0.04960	0.06025
SN	0.00523	7.97	24.903	0.00592	0.00603	0.00372
SR	0.00182	1,262.49	0.661	0.00182	0.00181	0.00184
TI	-0.00410	-182.97	1.442	-0.00416	-0.00409	-0.00405
TL	0.08774	41.05	0.945	0.08678	0.08825	0.08818
V	0.48874	6,218.95	0.537	0.48579	0.49082	0.48959
Y1	19176.95143	19,176.95	0.285	19136.27673	19155.37964	19239.19792
Y2A	252302.93058	252,302.93	0.674	254251.66445	251119.53642	251537.59088
Y2R	18509.18204	18,509.18	1.572	18330.10265	18844.89215	18352.55133
ZN	1.05071	12,031.79	0.224	1.05153	1.05253	1.04805
ZR	0.00481	11.98	23.481	0.00511	0.00356	0.00576

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/13/2013 16:15

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50689	7,064.54	0.277	0.50543	0.50701	0.50823
AL	25.05410	2,533.34	0.436	25.12593	25.10783	24.92854
AS	0.48874	197.04	0.352	0.48965	0.48982	0.48676
B	0.48935	4,354.49	0.379	0.48943	0.49115	0.48745
BA	0.50718	337,570.78	0.752	0.50404	0.51142	0.50607
BE	0.48960	215,511.02	0.581	0.48956	0.49247	0.48678
CA	24.80337	23,976.96	0.547	24.72606	24.95995	24.72411
CD	0.49426	8,268.78	0.531	0.49659	0.49477	0.49142
CO	0.49212	2,749.47	0.666	0.49464	0.49331	0.48842
CR	0.49018	5,369.53	0.615	0.48823	0.49366	0.48866
CU	0.50609	6,739.48	0.891	0.50321	0.50378	0.51129
FE	24.67344	6,854.19	0.409	24.59481	24.78719	24.63831
K	24.79980	8,507.09	0.545	24.95003	24.76115	24.68821
LI	0.50115	2,986.70	0.788	0.50570	0.49864	0.49911
MG	24.41697	40,620.59	0.190	24.45545	24.42990	24.36556
MN	0.49747	31,466.16	0.512	0.49561	0.50037	0.49642
MO	0.50028	2,315.82	0.500	0.50227	0.50112	0.49747
NA	24.55101	24,820.63	0.423	24.67010	24.50456	24.47838
NI	0.49624	1,970.55	0.519	0.49886	0.49617	0.49371
P	0.50294	281.67	0.340	0.50291	0.50467	0.50125
PB	0.50026	692.29	0.425	0.50223	0.50055	0.49800
S	24.29326	4,914.38	0.575	24.41917	24.31744	24.14317
SB	0.50648	424.47	0.313	0.50624	0.50818	0.50503
SE	0.49681	179.33	0.321	0.49523	0.49678	0.49842
SI	25.59271	4,533.17	0.166	25.57318	25.64137	25.56357
SN	0.48921	617.29	0.159	0.48969	0.48963	0.48832
SR	0.49611	379,522.61	0.592	0.49308	0.49894	0.49630
TI	0.49929	31,009.15	0.451	0.49859	0.50181	0.49746
TL	0.49738	352.29	0.230	0.49867	0.49698	0.49650
V	0.49682	7,062.06	0.432	0.49543	0.49929	0.49574
Y1	21797.47358	21,797.47	0.437	21737.18273	21747.86823	21907.36979
Y2A	283841.17517	283,841.18	0.580	284604.20808	281952.03777	284967.27966
Y2R	18811.50734	18,811.51	0.560	18764.11371	18738.10000	18932.30831
ZN	0.49815	6,409.23	0.413	0.50016	0.49824	0.49605
ZR	0.50050	1,136.21	0.466	0.50140	0.50225	0.49785

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/13/2013 16:19

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00190	-7.98	27.986	0.00183	0.00141	0.00246
AL	-0.01365	4.38	247.162	0.02213	-0.04488	-0.01821
AS	-0.00215	-3.81	10.658	-0.00229	-0.00188	-0.00226
B	0.00026	7.68	298.224	-0.00062	0.00074	0.00065
BA	0.00004	80.15	8.291	0.00004	0.00004	0.00004
BE	-0.00083	-629.40	1.666	-0.00083	-0.00085	-0.00082
CA	0.02901	118.92	11.552	0.03216	0.02938	0.02549
CD	-0.00006	-4.93	79.076	-0.00001	-0.00008	-0.00010
CO	-0.00003	2.85	574.469	0.00015	-0.00008	-0.00016
CR	0.00050	-0.02	45.366	0.00076	0.00041	0.00034
CU	-0.00094	-39.63	44.104	-0.00046	-0.00115	-0.00120
FE	0.01723	4.86	6.516	0.01644	0.01852	0.01673
K	-0.13477	-46.06	9.158	-0.13652	-0.14615	-0.12165
LI	-0.00119	46.89	60.873	-0.00146	-0.00174	-0.00037
MG	0.03397	59.38	3.390	0.03525	0.03302	0.03363
MN	0.00002	19.15	238.394	0.00003	0.00006	-0.00003
MO	-0.00010	1.79	154.058	-0.00013	-0.00022	0.00007
NA	-0.01250	-35.11	72.561	-0.02029	-0.01467	-0.00254
NI	0.00041	14.96	32.453	0.00055	0.00029	0.00037
P	0.00048	-0.40	347.586	0.00201	-0.00129	0.00071
PB	0.00093	3.18	133.886	0.00177	-0.00050	0.00152
S	-0.00437	-5.63	121.884	-0.00250	-0.01038	-0.00023
SB	0.00039	2.52	239.460	-0.00007	-0.00023	0.00148
SE	0.00167	0.52	97.316	0.00057	0.00354	0.00091
SI	0.00421	4.16	270.259	-0.00872	0.01270	0.00865
SN	-0.00036	2.10	51.445	-0.00045	-0.00015	-0.00049
SR	-0.00019	-125.01	1.419	-0.00019	-0.00019	-0.00019
TI	-0.00011	19.93	109.115	-0.00019	0.00003	-0.00015
TL	-0.00225	-7.48	61.713	-0.00071	-0.00264	-0.00341
V	-0.00128	-19.93	2.405	-0.00126	-0.00128	-0.00132
Y1	22411.06108	22,411.06	0.383	22483.43654	22433.64885	22316.09785
Y2A	294844.51624	294,844.52	0.660	293524.76806	293930.83168	297077.94897
Y2R	19046.59262	19,046.59	0.313	19087.35512	19074.19773	18978.22500
ZN	-0.00066	17.45	12.917	-0.00063	-0.00076	-0.00060
ZR	0.00072	2.97	412.020	0.00234	-0.00272	0.00255

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/13/2013 16:24

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00205	-5.88	6.673	0.00221	0.00199	0.00196
AL	0.07525	14.01	16.811	0.06413	0.07262	0.08901
AS	-0.00143	-3.59	232.935	-0.00125	-0.00486	0.00181
B	0.00551	55.95	10.730	0.00619	0.00522	0.00511
BA	0.00018	180.06	5.284	0.00017	0.00017	0.00019
BE	-0.00095	-700.98	4.390	-0.00099	-0.00091	-0.00095
CA	0.10107	197.29	8.143	0.10949	0.09304	0.10069
CD	-0.00003	-4.59	399.245	-0.00018	0.00010	-0.00003
CO	0.00005	3.37	356.914	0.00001	-0.00010	0.00023
CR	0.00026	-2.82	22.204	0.00029	0.00031	0.00020
CU	-0.00073	-37.65	22.876	-0.00082	-0.00054	-0.00083
FE	0.01099	3.21	26.226	0.01258	0.01272	0.00766
K	-0.05959	-20.77	28.622	-0.06159	-0.07555	-0.04161
LI	-0.00069	51.91	382.411	0.00148	-0.00365	0.00009
MG	0.02197	40.55	3.147	0.02196	0.02128	0.02266
MN	0.00017	29.48	28.266	0.00011	0.00020	0.00019
MO	-0.00001	2.25	591.800	0.00003	0.00001	-0.00008
NA	-0.00558	-29.18	278.167	0.00052	-0.02320	0.00596
NI	0.00030	14.88	73.958	0.00040	0.00004	0.00044
P	0.01451	7.84	9.837	0.01332	0.01609	0.01412
PB	0.00186	4.63	48.707	0.00095	0.00188	0.00277
S	-0.00508	-5.92	33.678	-0.00311	-0.00618	-0.00594
SB	-0.00070	1.64	27.061	-0.00087	-0.00049	-0.00074
SE	0.00231	0.78	62.586	0.00172	0.00396	0.00126
SI	0.01586	6.51	19.216	0.01414	0.01407	0.01938
SN	0.01510	22.63	0.639	0.01500	0.01519	0.01511
SR	0.00032	288.62	6.806	0.00034	0.00030	0.00032
TI	0.00025	44.18	50.599	0.00026	0.00012	0.00037
TL	-0.00058	-6.35	64.397	-0.00016	-0.00070	-0.00089
V	-0.00132	-20.97	8.424	-0.00134	-0.00141	-0.00119
Y1	22969.24255	22,969.24	0.172	22951.48488	22941.64111	23014.60165
Y2A	302803.11199	302,803.11	1.617	297723.79299	307492.08861	303193.45436
Y2R	19842.40382	19,842.40	0.905	19638.23941	19913.44810	19975.52395
ZN	0.00134	44.62	6.947	0.00131	0.00127	0.00145
ZR	0.00146	4.86	33.616	0.00164	0.00090	0.00183

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/13/2013 16:28

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00165	-12.08	14.819	0.00181	0.00177	0.00137
AL	0.02197	7.87	27.069	0.02665	0.02397	0.01528
AS	-0.00025	-3.07	499.834	0.00119	-0.00080	-0.00114
B	0.00583	59.37	7.413	0.00534	0.00597	0.00617
BA	0.00021	205.09	12.683	0.00018	0.00022	0.00023
BE	-0.00091	-685.85	3.243	-0.00094	-0.00090	-0.00088
CA	0.10176	183.85	19.064	0.09409	0.08736	0.12382
CD	-0.00007	-5.09	134.175	-0.00009	-0.00014	0.00003
CO	0.00015	3.94	37.934	0.00015	0.00009	0.00020
CR	0.00083	3.83	47.624	0.00119	0.00089	0.00041
CU	-0.00087	-39.93	39.882	-0.00051	-0.00089	-0.00120
FE	0.01235	3.33	29.285	0.00830	0.01350	0.01526
K	-0.08749	-27.77	43.863	-0.05936	-0.07190	-0.13120
LI	-0.00015	50.99	1139.186	-0.00040	-0.00172	0.00167
MG	0.01602	27.45	26.999	0.01357	0.01348	0.02102
MN	0.00013	26.98	56.920	0.00005	0.00013	0.00020
MO	0.00013	2.92	95.867	0.00025	0.00015	0.00000
NA	0.00234	-18.19	580.384	0.01051	0.00989	-0.01336
NI	0.00004	13.75	580.709	0.00022	-0.00023	0.00013
P	0.01361	7.28	3.304	0.01411	0.01345	0.01326
PB	0.00073	2.96	46.566	0.00081	0.00035	0.00101
S	-0.00261	-5.37	79.777	-0.00383	-0.00380	-0.00021
SB	0.00086	2.98	8.588	0.00094	0.00081	0.00082
SE	0.00212	0.70	134.104	0.00537	0.00016	0.00082
SI	0.02358	7.26	52.278	0.02046	0.01311	0.03716
SN	0.01483	22.17	3.203	0.01519	0.01429	0.01501
SR	0.00036	322.21	6.382	0.00033	0.00038	0.00037
TI	0.00026	45.25	42.845	0.00014	0.00030	0.00035
TL	-0.00160	-7.12	68.523	-0.00034	-0.00216	-0.00229
V	-0.00122	-19.72	31.238	-0.00163	-0.00088	-0.00116
Y1	22861.53524	22,861.54	0.387	22787.54162	22837.61165	22959.45244
Y2A	304954.35796	304,954.36	0.375	306262.90806	304143.88668	304456.27915
Y2R	18586.28159	18,586.28	13.434	20030.61428	20025.16477	15703.06571
ZN	0.00143	45.59	8.438	0.00129	0.00150	0.00151
ZR	0.00029	2.06	477.703	-0.00055	0.00189	-0.00047

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/13/2013 16:32

Sample Number: **LCSW** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05457	864.55	1.398	0.05533	0.05381	0.05456
AL	2.12235	236.42	1.562	2.10167	2.16058	2.10479
AS	0.15764	64.78	1.959	0.15779	0.16064	0.15447
B	2.07219	18,441.77	0.476	2.08353	2.06556	2.06749
BA	2.09039	1,439,072.90	0.875	2.10511	2.06990	2.09616
BE	0.04692	21,138.32	0.243	0.04705	0.04682	0.04690
CA	4.11590	4,239.24	0.291	4.10219	4.12429	4.12121
CD	0.05080	867.25	0.269	0.05095	0.05067	0.05078
CO	0.51537	2,968.00	0.324	0.51390	0.51502	0.51719
CR	0.20110	2,278.42	0.541	0.20235	0.20053	0.20041
CU	0.27186	3,653.48	0.662	0.27361	0.27001	0.27196
FE	1.00932	295.21	1.225	1.00293	1.00147	1.02357
K	10.07955	3,606.87	0.451	10.03085	10.08703	10.12078
LI	1.01768	6,238.49	0.556	1.01389	1.01497	1.02418
MG	2.00992	3,528.04	0.502	1.99846	2.01747	2.01383
MN	0.51088	33,426.80	0.571	0.51392	0.50810	0.51063
MO	2.01959	9,607.96	0.213	2.01855	2.01591	2.02432
NA	10.07585	10,611.41	0.279	10.05144	10.06947	10.10664
NI	0.52894	2,167.00	0.319	0.52881	0.52732	0.53069
P	1.05872	608.20	0.220	1.05868	1.06107	1.05642
PB	0.16179	223.73	0.340	0.16135	0.16162	0.16241
S	1.01730	203.81	0.519	1.01736	1.01198	1.02254
SB	0.51065	430.98	0.151	0.51152	0.51004	0.51039
SE	0.15857	58.82	1.834	0.15545	0.16121	0.15903
SI	0.38398	76.86	1.822	0.37796	0.38231	0.39165
SN	4.03013	5,211.29	0.351	4.02592	4.01858	4.04590
SR	1.02464	810,804.16	1.106	1.01997	1.01639	1.03756
TI	1.01788	65,278.18	0.450	1.02262	1.01349	1.01751
TL	0.16416	105.18	0.352	0.16397	0.16370	0.16481
V	0.49482	7,173.53	0.518	0.49763	0.49261	0.49422
Y1	22417.58836	22,417.59	0.372	22438.15833	22488.87372	22325.73304
Y2A	293611.16634	293,611.17	0.425	292735.25514	295039.43009	293058.81378
Y2R	19621.23868	19,621.24	0.596	19718.45654	19653.91717	19491.34232
ZN	0.51654	6,796.05	0.255	0.51607	0.51552	0.51802
ZR	1.00594	2,380.62	0.229	1.00859	1.00483	1.00440

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/13/2013 16:36

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00190	-7.70	31.481	0.00140	0.00173	0.00256
AL	1.14907	123.42	3.290	1.13713	1.19140	1.11868
AS	0.00036	-3.36	477.593	-0.00004	0.00226	-0.00113
B	0.00549	113.92	12.029	0.00604	0.00567	0.00475
BA	0.02801	19,540.63	0.282	0.02804	0.02792	0.02807
BE	-0.00070	-573.68	2.951	-0.00071	-0.00068	-0.00071
CA	3.17674	3,209.78	0.922	3.18651	3.19989	3.14382
CD	0.00055	24.91	12.602	0.00050	0.00051	0.00063
CO	0.00324	22.77	7.264	0.00302	0.00349	0.00321
CR	0.00337	29.61	12.753	0.00293	0.00338	0.00379
CU	0.01341	154.72	6.842	0.01294	0.01447	0.01282
FE	9.70283	2,756.40	1.175	9.74233	9.79187	9.57429
K	0.06959	25.00	35.019	0.09561	0.06584	0.04731
LI	-0.00170	46.05	42.543	-0.00221	-0.00087	-0.00203
MG	0.40161	688.75	0.823	0.40454	0.40227	0.39802
MN	0.29842	19,740.45	0.110	0.29870	0.29849	0.29806
MO	0.00067	5.47	13.455	0.00069	0.00075	0.00057
NA	0.11775	98.86	14.953	0.12567	0.09757	0.13000
NI	0.00708	41.18	5.646	0.00671	0.00703	0.00750
P	0.29041	167.29	0.342	0.29133	0.29055	0.28936
PB	2.74359	3,893.13	0.189	2.74434	2.74835	2.73806
S	0.98150	200.99	0.726	0.97903	0.98953	0.97594
SB	0.00047	3.37	188.642	0.00038	0.00139	-0.00037
SE	0.00242	0.80	232.517	-0.00397	0.00659	0.00464
SI	0.34110	64.79	2.317	0.34851	0.33278	0.34200
SN	0.00396	7.74	3.398	0.00408	0.00382	0.00399
SR	0.01920	15,381.08	0.265	0.01923	0.01914	0.01923
TI	0.07717	5,025.96	0.926	0.07702	0.07653	0.07794
TL	-0.00239	-7.86	72.088	-0.00313	-0.00362	-0.00042
V	0.00925	138.49	4.271	0.00916	0.00890	0.00968
Y1	22570.62478	22,570.62	0.343	22511.53256	22542.12840	22658.21338
Y2A	296730.53347	296,730.53	0.574	294818.17429	298079.35719	297294.06892
Y2R	19122.71009	19,122.71	1.008	19155.25922	18915.84331	19297.02773
ZN	0.01802	277.06	0.428	0.01807	0.01806	0.01793
ZR	0.00366	9.74	48.088	0.00511	0.00418	0.00170

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/13/2013 16:41

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02566	478.25	0.762	0.02545	0.02570	0.02584
AL	2.42128	256.94	0.980	2.42533	2.39577	2.44273
AS	0.60959	255.06	0.393	0.60755	0.61223	0.60900
B	0.24590	2,268.72	0.408	0.24665	0.24630	0.24476
BA	0.09313	64,577.99	0.314	0.09338	0.09281	0.09319
BE	0.02323	10,407.94	0.267	0.02330	0.02318	0.02321
CA	4.40220	4,449.67	0.388	4.41397	4.38260	4.41002
CD	0.06274	1,092.92	0.077	0.06279	0.06274	0.06269
CO	0.12997	751.98	0.415	0.12941	0.13049	0.13002
CR	0.24813	2,827.79	0.365	0.24890	0.24713	0.24836
CU	0.65547	9,126.78	0.519	0.65821	0.65166	0.65654
FE	10.27612	2,943.43	0.222	10.27669	10.25299	10.29867
K	2.53935	893.68	0.611	2.53095	2.55727	2.52984
LI	1.24640	7,496.67	0.622	1.24454	1.23974	1.25491
MG	1.62026	2,796.03	0.486	1.61712	1.61443	1.62922
MN	0.37462	24,675.16	0.494	0.37641	0.37271	0.37475
MO	0.25063	1,197.16	0.223	0.25004	0.25071	0.25114
NA	2.60456	2,679.14	0.670	2.59435	2.59461	2.62471
NI	0.20015	827.58	0.095	0.19994	0.20031	0.20019
P	1.54410	890.22	0.432	1.53723	1.55056	1.54452
PB	3.34608	4,726.35	0.097	3.34434	3.34982	3.34409
S	0.99119	201.70	0.566	0.98510	0.99231	0.99616
SB	0.51666	442.23	0.456	0.51478	0.51590	0.51930
SE	0.98052	365.19	0.672	0.97321	0.98237	0.98598
SI	0.35885	68.86	1.056	0.35606	0.36316	0.35733
SN	0.74241	964.39	0.175	0.74150	0.74183	0.74390
SR	0.04443	35,411.64	0.214	0.04452	0.04433	0.04444
TI	0.20006	12,939.00	0.227	0.20025	0.19954	0.20039
TL	1.32470	1,012.35	0.286	1.32891	1.32363	1.32156
V	0.13281	1,957.72	0.341	0.13323	0.13287	0.13233
Y1	22471.00278	22,471.00	0.095	22493.29959	22450.53996	22469.16878
Y2A	295517.06428	295,517.06	0.458	294635.76872	297077.12061	294838.30351
Y2R	19284.25848	19,284.26	0.623	19226.68433	19422.39573	19203.69539
ZN	0.16523	2,222.38	0.358	0.16461	0.16579	0.16528
ZR	1.23214	2,865.51	0.276	1.23200	1.22881	1.23561

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/13/2013 16:44

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00200	-6.40	18.950	0.00238	0.00162	0.00202
AL	1.18298	128.18	3.289	1.22496	1.17585	1.14812
AS	0.00102	-2.98	116.449	0.00184	0.00156	-0.00034
B	0.00512	102.17	7.054	0.00470	0.00536	0.00529
BA	0.02597	18,125.53	0.517	0.02602	0.02581	0.02606
BE	-0.00078	-610.21	2.628	-0.00080	-0.00077	-0.00077
CA	3.06328	3,129.09	0.795	3.04966	3.04877	3.09139
CD	0.00050	21.28	14.459	0.00058	0.00048	0.00044
CO	0.00276	19.95	4.556	0.00280	0.00285	0.00262
CR	0.00386	35.78	3.104	0.00399	0.00375	0.00384
CU	0.01368	158.67	3.617	0.01324	0.01422	0.01359
FE	8.31040	2,385.57	0.700	8.26979	8.28438	8.37701
K	0.04001	14.83	55.878	0.01420	0.05331	0.05251
LI	0.00128	64.24	121.038	0.00096	-0.00008	0.00296
MG	0.38736	670.93	0.677	0.38562	0.38607	0.39038
MN	0.24608	16,289.36	0.454	0.24666	0.24479	0.24679
MO	0.00041	4.22	22.504	0.00052	0.00037	0.00035
NA	0.11684	98.84	14.028	0.13282	0.11763	0.10007
NI	0.00680	40.08	5.704	0.00653	0.00724	0.00662
P	0.28654	164.53	0.519	0.28482	0.28745	0.28734
PB	2.73578	3,869.95	0.029	2.73580	2.73498	2.73655
S	0.96314	196.53	1.000	0.96426	0.95299	0.97216
SB	0.00108	3.78	118.296	0.00186	-0.00040	0.00179
SE	0.00151	0.46	166.756	0.00433	-0.00051	0.00071
SI	0.36916	70.52	1.307	0.36361	0.37147	0.37239
SN	0.00372	7.41	2.664	0.00378	0.00361	0.00378
SR	0.01815	14,548.84	0.353	0.01817	0.01808	0.01820
TI	0.07956	5,183.46	0.558	0.07995	0.07908	0.07965
TL	-0.00144	-7.14	37.016	-0.00200	-0.00139	-0.00094
V	0.00892	133.63	3.878	0.00853	0.00916	0.00908
Y1	22499.70452	22,499.70	0.116	22512.06116	22517.44023	22469.61216
Y2A	296879.65379	296,879.65	0.561	295519.09722	298737.07753	296382.78661
Y2R	19311.44567	19,311.45	0.555	19390.62812	19354.10440	19189.60450
ZN	0.01782	271.63	0.152	0.01785	0.01780	0.01781
ZR	0.00225	6.56	47.876	0.00199	0.00133	0.00343

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/13/2013 16:49

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00770	85.41	4.717	0.00741	0.00811	0.00759
AL	1.94899	209.07	1.153	1.97227	1.94727	1.92743
AS	0.01460	2.83	14.020	0.01335	0.01696	0.01348
B	0.20492	1,900.84	1.675	0.20120	0.20562	0.20796
BA	0.25072	173,843.16	1.368	0.24711	0.25114	0.25393
BE	0.00404	1,603.30	0.816	0.00402	0.00402	0.00407
CA	3.86006	3,936.87	0.112	3.86483	3.85642	3.85891
CD	0.00554	112.40	1.959	0.00558	0.00542	0.00563
CO	0.05495	325.38	0.446	0.05488	0.05474	0.05522
CR	0.02500	276.91	0.486	0.02513	0.02499	0.02489
CU	0.04112	530.95	0.810	0.04077	0.04143	0.04118
FE	9.92183	2,859.48	0.220	9.94012	9.89764	9.92773
K	1.22966	435.79	3.318	1.19130	1.27252	1.22516
LI	0.10573	692.25	2.076	0.10770	0.10612	0.10336
MG	0.65646	1,141.09	1.022	0.65676	0.64960	0.66302
MN	0.43146	28,427.43	1.436	0.42548	0.43104	0.43785
MO	0.20472	991.53	0.702	0.20616	0.20329	0.20471
NA	1.18529	1,214.21	0.847	1.18552	1.17514	1.19521
NI	0.06001	260.50	0.887	0.05998	0.05950	0.06056
P	0.36093	210.04	0.786	0.36191	0.35773	0.36315
PB	2.66081	3,809.52	0.681	2.67116	2.63988	2.67138
S	1.11637	231.01	0.206	1.11902	1.11480	1.11531
SB	0.04910	44.91	2.565	0.04799	0.04884	0.05047
SE	0.01676	6.22	13.343	0.01577	0.01518	0.01931
SI	0.81705	152.84	1.981	0.80093	0.81691	0.83330
SN	0.40537	534.88	1.094	0.40781	0.40025	0.40804
SR	0.12639	100,725.75	1.480	0.12439	0.12668	0.12810
TI	0.19371	12,530.27	1.260	0.19121	0.19383	0.19609
TL	0.01390	3.23	4.829	0.01341	0.01362	0.01466
V	0.06002	879.41	2.302	0.05870	0.05991	0.06145
Y1	22775.67995	22,775.68	0.528	22721.10349	22913.50153	22692.43485
Y2A	295671.60923	295,671.61	1.472	300446.48774	294639.08217	291929.25779
Y2R	19400.43974	19,400.44	0.427	19317.65117	19483.43825	19400.22982
ZN	0.06836	950.09	0.541	0.06858	0.06793	0.06855
ZR	0.08263	194.57	0.787	0.08245	0.08335	0.08208

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/13/2013 16:53

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00687	74.85	3.100	0.00667	0.00686	0.00709
AL	2.04508	219.46	1.477	2.07743	2.04020	2.01762
AS	0.01655	3.70	3.720	0.01624	0.01725	0.01614
B	0.18924	1,807.56	0.968	0.18932	0.19103	0.18737
BA	0.23501	167,864.96	0.738	0.23511	0.23670	0.23324
BE	0.00392	1,594.43	0.488	0.00393	0.00393	0.00389
CA	3.55154	3,637.05	0.279	3.55389	3.54067	3.56006
CD	0.00541	107.52	2.374	0.00534	0.00556	0.00533
CO	0.05390	317.37	0.895	0.05360	0.05446	0.05365
CR	0.02381	271.49	4.912	0.02262	0.02495	0.02386
CU	0.03915	518.40	0.256	0.03915	0.03926	0.03906
FE	8.97504	2,592.81	0.450	8.99073	8.92911	9.00527
K	1.15057	408.63	2.548	1.11717	1.16252	1.17202
LI	0.09910	653.60	1.103	0.09830	0.09866	0.10035
MG	0.63673	1,109.09	0.506	0.64011	0.63638	0.63369
MN	0.29121	19,771.13	0.660	0.29094	0.29325	0.28943
MO	0.19970	961.34	0.428	0.19898	0.20065	0.19949
NA	1.13817	1,167.40	0.476	1.13918	1.13232	1.14302
NI	0.05886	254.28	1.048	0.05828	0.05951	0.05879
P	0.36103	208.80	0.639	0.35871	0.36332	0.36105
PB	2.79419	3,975.89	0.689	2.77567	2.81412	2.79278
S	1.07986	221.92	0.700	1.07247	1.08758	1.07952
SB	0.04728	43.01	3.915	0.04824	0.04514	0.04845
SE	0.01951	7.22	16.508	0.02245	0.02002	0.01607
SI	0.52825	100.32	3.495	0.54045	0.53729	0.50701
SN	0.39703	520.72	0.484	0.39542	0.39916	0.39651
SR	0.11893	97,641.70	0.733	0.11891	0.11981	0.11807
TI	0.19653	13,095.22	0.578	0.19686	0.19747	0.19527
TL	0.01451	3.65	2.349	0.01487	0.01446	0.01420
V	0.05783	872.69	0.544	0.05819	0.05765	0.05764
Y1	22635.62044	22,635.62	0.517	22755.62217	22521.92100	22629.31815
Y2A	304550.25535	304,550.26	0.397	304414.01590	303414.68254	305822.06759
Y2R	19439.59164	19,439.59	0.531	19327.08790	19530.21374	19461.47329
ZN	0.06679	922.15	0.433	0.06648	0.06706	0.06682
ZR	0.07611	179.68	0.988	0.07555	0.07696	0.07580

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/13/2013 16:57

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 50.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00178	-9.85	5.325	0.00180	0.00168	0.00187
AL	0.19523	25.82	15.016	0.20459	0.16237	0.21872
AS	-0.00160	-3.73	117.384	0.00028	-0.00160	-0.00349
B	0.00086	24.38	89.751	0.00174	0.00051	0.00032
BA	0.00541	3,847.62	0.537	0.00545	0.00541	0.00539
BE	-0.00088	-662.17	1.526	-0.00089	-0.00090	-0.00087
CA	0.60469	685.64	0.894	0.59984	0.61052	0.60369
CD	0.00004	0.50	51.682	0.00003	0.00004	0.00007
CO	0.00073	7.45	47.947	0.00087	0.00098	0.00033
CR	0.00098	4.90	36.777	0.00114	0.00124	0.00057
CU	0.00141	-8.27	37.779	0.00082	0.00185	0.00156
FE	1.83434	523.41	0.416	1.83044	1.84313	1.82946
K	-0.05888	-19.82	52.793	-0.08342	-0.02392	-0.06931
LI	-0.00197	42.86	87.322	-0.00392	-0.00066	-0.00133
MG	0.07487	129.79	0.816	0.07463	0.07556	0.07442
MN	0.05787	3,871.48	0.452	0.05813	0.05788	0.05761
MO	-0.00004	2.08	484.363	0.00016	-0.00022	-0.00006
NA	0.01487	-7.07	103.046	0.01381	0.00010	0.03069
NI	0.00130	18.58	33.011	0.00125	0.00175	0.00089
P	0.05651	32.16	0.750	0.05684	0.05666	0.05603
PB	0.53194	760.03	0.291	0.53111	0.53099	0.53373
S	0.17680	32.47	0.622	0.17801	0.17656	0.17585
SB	0.00003	2.39	2683.326	-0.00031	-0.00066	0.00108
SE	0.00290	0.99	94.257	0.00081	0.00599	0.00189
SI	0.05810	13.89	11.319	0.06568	0.05387	0.05476
SN	0.00040	3.12	140.108	0.00050	-0.00020	0.00089
SR	0.00354	2,880.73	0.426	0.00354	0.00356	0.00353
TI	0.01462	981.12	1.052	0.01479	0.01451	0.01455
TL	-0.00318	-8.32	15.867	-0.00316	-0.00369	-0.00269
V	0.00046	6.25	48.369	0.00021	0.00054	0.00063
Y1	22680.68892	22,680.69	0.170	22700.80242	22636.34396	22704.92038
Y2A	298960.94596	298,960.95	0.882	296830.35123	298140.87302	301911.61365
Y2R	19146.51321	19,146.51	0.283	19186.17606	19084.66215	19168.70142
ZN	0.00291	67.49	1.667	0.00291	0.00296	0.00287
ZR	0.00049	2.46	492.481	-0.00170	0.00008	0.00309

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/13/2013 17:01

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00153	-13.56	16.177	0.00172	0.00125	0.00161
AL	1.23501	133.79	2.716	1.27318	1.22165	1.21020
AS	-0.00072	-3.31	50.315	-0.00053	-0.00049	-0.00114
B	0.00109	20.93	12.945	0.00101	0.00101	0.00126
BA	0.01546	10,873.69	0.063	0.01547	0.01545	0.01547
BE	-0.00089	-662.58	2.725	-0.00091	-0.00088	-0.00087
CA	0.70351	791.08	1.260	0.69357	0.71060	0.70638
CD	0.00006	-1.11	180.072	-0.00001	0.00017	0.00000
CO	0.00050	6.57	26.360	0.00045	0.00040	0.00064
CR	0.00216	18.86	8.556	0.00198	0.00217	0.00235
CU	0.00996	110.15	4.707	0.01033	0.01011	0.00943
FE	0.92866	267.86	1.037	0.92918	0.93803	0.91878
K	-0.03198	-10.47	154.870	0.02447	-0.06816	-0.05226
LI	0.00036	57.33	893.762	-0.00189	0.00409	-0.00111
MG	0.12339	215.19	2.526	0.12554	0.12482	0.11982
MN	0.01364	925.09	0.107	0.01363	0.01366	0.01364
MO	0.00012	2.84	218.096	0.00029	0.00024	-0.00018
NA	-0.00253	-25.30	452.882	-0.01025	0.01061	-0.00794
NI	0.00177	20.68	18.132	0.00156	0.00161	0.00214
P	0.13092	75.61	0.122	0.13093	0.13075	0.13107
PB	0.02161	33.12	2.334	0.02112	0.02213	0.02156
S	0.78364	160.76	0.381	0.78669	0.78352	0.78073
SB	0.00087	3.06	143.305	0.00038	0.00228	-0.00006
SE	0.00220	0.72	49.248	0.00134	0.00185	0.00342
SI	0.27073	52.74	1.189	0.26726	0.27363	0.27129
SN	0.00260	6.01	15.408	0.00214	0.00278	0.00287
SR	0.00526	4,254.26	0.521	0.00529	0.00524	0.00524
TI	0.04676	3,074.67	0.060	0.04678	0.04673	0.04678
TL	-0.00311	-8.39	28.329	-0.00321	-0.00218	-0.00393
V	0.00124	18.05	6.299	0.00128	0.00115	0.00130
Y1	22738.16598	22,738.17	0.319	22737.47335	22810.98674	22666.03786
Y2A	298500.24851	298,500.25	0.047	298404.24122	298661.86216	298434.64215
Y2R	19349.02595	19,349.03	0.513	19447.91667	19249.35091	19349.81027
ZN	0.02816	400.17	0.230	0.02816	0.02810	0.02823
ZR	0.00088	3.40	246.388	0.00337	-0.00023	-0.00051

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/13/2013 17:05

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51235	7,157.37	0.993	0.51598	0.50653	0.51453
AL	25.24350	2,563.20	0.267	25.19357	25.32021	25.21671
AS	0.49705	199.17	0.485	0.49839	0.49427	0.49850
B	0.49262	4,393.52	1.555	0.49562	0.48391	0.49833
BA	0.50801	338,918.94	0.379	0.50775	0.50623	0.51005
BE	0.48863	215,579.83	0.855	0.48801	0.48479	0.49308
CA	24.93456	24,204.18	0.258	24.97281	24.97059	24.86029
CD	0.49782	8,275.22	0.030	0.49786	0.49765	0.49794
CO	0.49690	2,758.41	0.220	0.49726	0.49777	0.49568
CR	0.48753	5,352.66	1.124	0.48794	0.48185	0.49279
CU	0.51349	6,854.46	0.648	0.51498	0.50968	0.51582
FE	24.82270	6,924.18	0.265	24.84643	24.87341	24.74827
K	24.97151	8,601.92	0.457	25.10278	24.89528	24.91647
LI	0.50456	3,019.30	0.771	0.50057	0.50477	0.50834
MG	24.47744	40,890.74	0.207	24.53023	24.47277	24.42932
MN	0.49776	31,558.15	0.614	0.49810	0.49455	0.50064
MO	0.50511	2,323.24	0.190	0.50615	0.50492	0.50426
NA	24.70428	25,080.51	0.166	24.72307	24.65728	24.73250
NI	0.49977	1,971.81	0.114	0.49973	0.50036	0.49922
P	0.50753	282.44	0.091	0.50795	0.50762	0.50703
PB	0.50813	698.63	0.482	0.50663	0.50681	0.51096
S	24.54485	4,933.68	0.174	24.56561	24.57321	24.49574
SB	0.51624	429.67	0.558	0.51951	0.51510	0.51410
SE	0.50295	180.39	0.391	0.50070	0.50379	0.50436
SI	25.66147	4,564.40	0.277	25.73183	25.66265	25.58993
SN	0.49427	619.67	0.206	0.49312	0.49506	0.49464
SR	0.50089	384,066.29	0.943	0.49804	0.49829	0.50634
TI	0.50092	31,182.68	1.094	0.50156	0.49515	0.50606
TL	0.50275	354.02	0.284	0.50378	0.50335	0.50113
V	0.49764	7,089.81	0.806	0.49737	0.49376	0.50177
Y1	21658.23140	21,658.23	0.155	21658.70854	21624.41000	21691.57565
Y2A	284504.19704	284,504.20	0.698	284776.83897	286339.04904	282396.70311
Y2R	18890.33199	18,890.33	0.303	18831.79597	18946.20000	18893.00000
ZN	0.50370	6,438.71	0.181	0.50432	0.50412	0.50265
ZR	0.50543	1,152.23	0.481	0.50343	0.50813	0.50474

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/13/2013 17:09

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00195	-7.20	11.774	0.00169	0.00202	0.00213
AL	-0.01454	4.25	288.613	0.03372	-0.03491	-0.04244
AS	-0.00167	-3.59	154.696	-0.00299	0.00131	-0.00332
B	0.00033	8.12	187.488	0.00105	0.00007	-0.00012
BA	-0.00001	43.23	8.499	-0.00001	-0.00001	-0.00001
BE	-0.00093	-670.28	3.536	-0.00090	-0.00097	-0.00093
CA	-0.00890	81.44	14.937	-0.01026	-0.00882	-0.00761
CD	-0.00012	-5.88	145.936	-0.00027	0.00007	-0.00016
CO	0.00003	3.14	1079.329	0.00017	0.00020	-0.00029
CR	0.00036	-1.57	82.572	0.00010	0.00069	0.00031
CU	-0.00176	-50.57	10.579	-0.00196	-0.00160	-0.00171
FE	-0.00556	-1.60	99.525	-0.00896	-0.00854	0.00082
K	-0.10524	-35.59	18.103	-0.12380	-0.10618	-0.08573
LI	-0.00086	48.60	68.095	-0.00083	-0.00146	-0.00029
MG	-0.00219	-2.27	55.428	-0.00104	-0.00207	-0.00346
MN	-0.00007	13.20	58.102	-0.00004	-0.00011	-0.00005
MO	-0.00007	1.90	78.066	-0.00003	-0.00013	-0.00004
NA	-0.00945	-31.88	133.044	0.00501	-0.01557	-0.01780
NI	0.00026	14.30	79.012	0.00021	0.00008	0.00049
P	-0.00016	-0.77	481.727	-0.00105	0.00017	0.00040
PB	0.00184	4.44	57.413	0.00242	0.00062	0.00248
S	-0.00938	-6.63	31.043	-0.01224	-0.00947	-0.00642
SB	0.00184	3.72	57.036	0.00188	0.00077	0.00287
SE	0.00354	1.21	59.059	0.00573	0.00156	0.00334
SI	0.00391	4.09	219.042	-0.00100	0.01379	-0.00107
SN	0.00002	2.58	2959.937	0.00007	0.00070	-0.00070
SR	-0.00021	-140.47	7.819	-0.00021	-0.00019	-0.00022
TI	-0.00011	19.32	38.570	-0.00010	-0.00016	-0.00008
TL	-0.00286	-7.90	23.946	-0.00312	-0.00208	-0.00338
V	-0.00134	-20.58	3.179	-0.00133	-0.00139	-0.00130
Y1	22293.80754	22,293.81	0.188	22263.96990	22275.69611	22341.75659
Y2A	292213.93859	292,213.94	0.855	289346.58714	293925.86150	293369.36713
Y2R	18955.27650	18,955.28	0.855	18808.82794	18927.45157	19129.55000
ZN	-0.00065	17.50	12.461	-0.00067	-0.00072	-0.00056
ZR	0.00146	4.65	78.944	0.00123	0.00043	0.00270

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/13/2013 17:14

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00192	-7.77	12.032	0.00210	0.00166	0.00200
AL	7.19717	751.84	0.875	7.26824	7.17501	7.14825
AS	0.00100	-2.57	111.447	-0.00028	0.00152	0.00176
B	0.00136	24.19	48.306	0.00198	0.00067	0.00143
BA	0.04534	31,612.94	0.576	0.04560	0.04508	0.04535
BE	-0.00059	-523.88	4.725	-0.00056	-0.00062	-0.00060
CA	0.32218	412.35	2.060	0.32920	0.32130	0.31602
CD	0.00004	-1.01	169.562	-0.00004	0.00009	0.00008
CO	0.00097	10.77	16.053	0.00100	0.00080	0.00111
CR	0.00618	64.87	8.176	0.00643	0.00560	0.00652
CU	0.01175	125.70	2.850	0.01136	0.01190	0.01198
FE	1.08501	313.10	1.424	1.10132	1.08312	1.07059
K	0.08247	29.98	50.922	0.03477	0.09878	0.11386
LI	0.00079	59.74	146.982	0.00015	0.00214	0.00009
MG	0.16819	292.89	2.501	0.17294	0.16671	0.16493
MN	0.01745	1,171.92	1.212	0.01752	0.01722	0.01763
MO	0.00032	3.82	43.957	0.00020	0.00048	0.00030
NA	0.02486	3.33	59.305	0.02156	0.01204	0.04097
NI	0.00283	24.90	8.615	0.00270	0.00310	0.00267
P	0.71593	414.42	0.341	0.71444	0.71461	0.71875
PB	0.01608	26.91	8.905	0.01478	0.01761	0.01585
S	0.62307	126.21	0.545	0.62629	0.61953	0.62339
SB	-0.00010	2.28	1285.716	0.00075	-0.00162	0.00057
SE	0.00228	0.72	89.316	-0.00007	0.00338	0.00352
SI	0.52398	98.86	5.015	0.55124	0.52190	0.49880
SN	0.00259	5.97	12.469	0.00222	0.00284	0.00270
SR	0.00442	3,563.92	0.329	0.00443	0.00443	0.00441
TI	0.15646	10,167.34	0.444	0.15668	0.15568	0.15701
TL	-0.00209	-7.92	5.461	-0.00208	-0.00221	-0.00198
V	0.00764	113.96	1.568	0.00751	0.00766	0.00775
Y1	22629.66948	22,629.67	0.477	22662.21534	22717.65431	22509.13878
Y2A	296876.38061	296,876.38	0.414	296272.20013	298289.76143	296067.18025
Y2R	19360.44357	19,360.44	1.247	19144.73421	19315.45836	19621.13813
ZN	0.02546	363.12	0.874	0.02543	0.02526	0.02570
ZR	0.00105	3.78	57.319	0.00166	0.00046	0.00103

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/13/2013 17:18

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00172	-10.66	30.111	0.00223	0.00171	0.00120
AL	24.93640	2,643.47	0.565	24.78140	25.05682	24.97099
AS	0.00087	-2.74	103.983	0.00184	0.00071	0.00006
B	0.00136	36.61	43.650	0.00100	0.00103	0.00204
BA	0.10503	74,939.20	0.583	0.10445	0.10567	0.10495
BE	0.00018	-171.84	5.881	0.00019	0.00017	0.00018
CA	0.26957	367.23	1.209	0.26581	0.27147	0.27143
CD	-0.00007	0.84	163.645	-0.00019	0.00004	-0.00007
CO	0.00108	11.17	11.830	0.00100	0.00101	0.00123
CR	0.01418	159.93	1.318	0.01397	0.01425	0.01433
CU	0.00826	79.85	5.989	0.00876	0.00825	0.00777
FE	2.98095	876.77	0.385	2.96782	2.98912	2.98592
K	0.33191	120.26	4.551	0.31637	0.34654	0.33280
LI	0.01035	119.28	6.139	0.01058	0.00963	0.01083
MG	0.68363	1,209.33	0.571	0.68221	0.68804	0.68062
MN	0.01410	973.46	0.451	0.01407	0.01417	0.01406
MO	0.00029	3.69	39.463	0.00025	0.00021	0.00043
NA	0.02145	-0.32	18.412	0.02490	0.02232	0.01714
NI	0.00967	52.89	1.934	0.00951	0.00987	0.00962
P	0.64778	376.07	0.329	0.65013	0.64599	0.64721
PB	0.02168	40.31	6.141	0.02308	0.02155	0.02042
S	0.58174	117.80	0.993	0.58448	0.58563	0.57510
SB	0.00049	3.05	345.464	0.00237	-0.00083	-0.00009
SE	0.00229	0.64	44.110	0.00154	0.00344	0.00189
SI	0.88179	167.33	0.323	0.87970	0.88063	0.88504
SN	0.00296	6.47	7.861	0.00315	0.00302	0.00270
SR	0.00589	4,851.56	1.005	0.00586	0.00596	0.00585
TI	0.13570	9,036.97	0.748	0.13454	0.13643	0.13612
TL	-0.00189	-7.98	82.884	-0.00155	-0.00361	-0.00052
V	0.01434	219.27	3.044	0.01383	0.01460	0.01458
Y1	22700.50906	22,700.51	0.015	22703.62473	22701.16984	22696.73261
Y2A	304116.02778	304,116.03	0.825	306860.34310	301941.26905	303546.47117
Y2R	19744.69654	19,744.70	0.268	19796.82191	19691.19114	19746.07657
ZN	0.03478	490.21	0.682	0.03501	0.03454	0.03477
ZR	0.00353	9.77	42.778	0.00468	0.00409	0.00182

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/13/2013 17:22

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00137	-15.61	36.962	0.00099	0.00118	0.00194
AL	17.97268	1,859.82	0.384	17.97976	17.90042	18.03785
AS	0.00112	-2.79	202.645	-0.00133	0.00314	0.00154
B	0.00148	64.94	34.230	0.00141	0.00101	0.00202
BA	0.07361	51,170.25	1.189	0.07276	0.07451	0.07356
BE	-0.00066	-554.36	6.068	-0.00064	-0.00071	-0.00064
CA	0.74830	831.76	1.448	0.75420	0.73579	0.75490
CD	0.00022	15.16	29.314	0.00015	0.00026	0.00025
CO	0.00354	30.55	6.598	0.00349	0.00380	0.00334
CR	0.56641	6,482.29	1.069	0.55975	0.57159	0.56788
CU	0.00622	20.85	3.037	0.00608	0.00643	0.00615
FE	7.59760	2,175.85	0.742	7.64769	7.53655	7.60858
K	0.61013	215.04	4.950	0.63693	0.61605	0.57741
LI	0.01058	118.08	21.052	0.01095	0.01259	0.00819
MG	1.68802	2,909.24	0.661	1.69826	1.67612	1.68969
MN	0.05989	3,968.44	0.848	0.05940	0.06041	0.05984
MO	-0.00009	1.82	22.528	-0.00011	-0.00007	-0.00010
NA	0.02149	-0.29	43.377	0.03204	0.01808	0.01436
NI	0.01054	55.50	1.448	0.01071	0.01044	0.01046
P	0.24173	138.93	0.487	0.24309	0.24104	0.24106
PB	0.01071	22.14	12.397	0.01103	0.00926	0.01186
S	0.30722	59.46	1.373	0.31187	0.30618	0.30362
SB	-0.00753	4.07	41.968	-0.00466	-0.00702	-0.01092
SE	0.00011	-0.14	579.947	-0.00024	0.00087	-0.00029
SI	1.40258	257.59	0.529	1.40933	1.39464	1.40379
SN	0.00293	6.39	7.867	0.00302	0.00267	0.00310
SR	0.00903	7,229.56	1.211	0.00893	0.00914	0.00900
TI	0.47616	30,822.10	1.161	0.47080	0.48184	0.47583
TL	-0.00199	-8.43	15.176	-0.00229	-0.00199	-0.00168
V	0.01775	266.64	3.473	0.01738	0.01846	0.01740
Y1	22541.81598	22,541.82	0.129	22510.76851	22546.44974	22568.22969
Y2A	296205.19755	296,205.20	1.283	299940.14550	292342.03115	296333.41601
Y2R	19260.98528	19,260.99	0.804	19145.59588	19436.90096	19200.45899
ZN	0.07977	1,082.76	0.366	0.08010	0.07955	0.07965
ZR	0.00179	5.49	104.008	0.00021	0.00132	0.00385

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/13/2013 17:26

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00131	-16.44	30.116	0.00175	0.00117	0.00100
AL	3.91195	410.20	1.184	3.90168	3.96255	3.87161
AS	-0.00160	-4.20	35.037	-0.00118	-0.00223	-0.00137
B	0.00002	71.80	3691.338	-0.00060	0.00070	-0.00005
BA	0.02537	17,648.70	1.107	0.02510	0.02566	0.02536
BE	-0.00060	-524.62	4.139	-0.00061	-0.00057	-0.00062
CA	1.71273	1,789.93	0.546	1.71117	1.72275	1.70425
CD	0.00053	26.71	7.742	0.00053	0.00058	0.00049
CO	0.00235	20.75	6.903	0.00249	0.00217	0.00238
CR	0.01236	132.02	3.849	0.01199	0.01290	0.01220
CU	0.00835	62.25	10.584	0.00861	0.00736	0.00907
FE	10.89735	3,124.29	0.106	10.90839	10.89834	10.88531
K	0.43896	155.29	2.078	0.44835	0.43838	0.43013
LI	0.00237	69.93	66.137	0.00085	0.00229	0.00398
MG	1.18038	2,040.22	0.516	1.18727	1.17571	1.17816
MN	0.08666	5,726.99	0.966	0.08599	0.08760	0.08639
MO	0.00011	2.74	95.688	0.00013	-0.00001	0.00020
NA	0.08777	68.56	5.838	0.09318	0.08712	0.08299
NI	0.00377	27.12	2.852	0.00389	0.00372	0.00369
P	0.30536	173.57	0.189	0.30470	0.30556	0.30581
PB	0.03192	47.19	3.879	0.03328	0.03161	0.03086
S	0.30895	59.12	0.376	0.30861	0.31025	0.30800
SB	0.00008	3.21	466.122	-0.00032	0.00041	0.00015
SE	-0.00056	-0.32	297.975	0.00046	-0.00248	0.00035
SI	0.28503	55.22	3.881	0.27303	0.29481	0.28724
SN	0.00312	6.55	18.173	0.00375	0.00293	0.00267
SR	0.00764	6,118.05	1.397	0.00755	0.00776	0.00762
TI	0.32932	21,292.14	1.379	0.32582	0.33445	0.32769
TL	-0.00226	-8.21	23.476	-0.00271	-0.00168	-0.00240
V	0.01084	163.26	2.809	0.01074	0.01060	0.01118
Y1	22269.77145	22,269.77	0.153	22292.45239	22286.19082	22230.67115
Y2A	295812.65187	295,812.65	1.214	299175.44732	292028.99271	296233.51557
Y2R	19306.96350	19,306.96	0.085	19318.55644	19288.28469	19314.04938
ZN	0.05010	689.97	0.259	0.05016	0.05020	0.04995
ZR	0.00216	6.36	16.758	0.00224	0.00248	0.00177

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/13/2013 17:30

Sample Number: **7265236** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00245	1.79	17.593	0.00278	0.00196	0.00260
AL	43.05356	4,616.92	0.605	43.05013	42.79489	43.31565
AS	0.00723	-9.49	7.676	0.00774	0.00732	0.00664
B	-0.00570	923.58	9.906	-0.00549	-0.00526	-0.00633
BA	0.29203	204,173.14	0.567	0.29301	0.29012	0.29296
BE	0.00134	366.22	3.664	0.00130	0.00139	0.00132
CA	12.29520	12,691.94	0.765	12.28558	12.20627	12.39375
CD	0.00695	433.76	6.934	0.00711	0.00733	0.00641
CO	0.03318	238.48	0.635	0.03294	0.03328	0.03333
CR	0.09049	984.30	0.604	0.09085	0.09076	0.08987
CU	0.12005	1,381.50	1.362	0.12194	0.11907	0.11915
FE	157.91286	44,078.42	0.704	157.86039	156.82836	159.04984
K	2.45310	894.39	2.289	2.40202	2.44405	2.51324
LI	0.03288	268.06	4.911	0.03121	0.03301	0.03443
MG	10.31885	18,361.25	0.378	10.34990	10.27510	10.33154
MN	2.90208	192,712.72	0.571	2.91325	2.88303	2.90997
MO	0.00337	18.52	3.985	0.00329	0.00353	0.00331
NA	0.94951	997.02	1.472	0.96188	0.93434	0.95230
NI	0.05318	212.62	0.628	0.05287	0.05353	0.05314
P	2.15703	1,253.71	0.157	2.15946	2.15847	2.15315
PB	0.44654	644.33	0.717	0.44542	0.45016	0.44405
S	2.94029	613.37	0.164	2.94443	2.94145	2.93500
SB	-0.01027	6.61	14.421	-0.01188	-0.00896	-0.00998
SE	0.00439	1.35	40.396	0.00642	0.00310	0.00367
SI	4.43791	837.72	0.101	4.43643	4.44296	4.43434
SN	0.05124	69.63	1.112	0.05153	0.05058	0.05159
SR	0.07337	58,972.49	0.542	0.07366	0.07292	0.07352
TI	3.17241	206,500.00	0.452	3.18579	3.15725	3.17418
TL	0.00208	-12.33	41.375	0.00305	0.00174	0.00144
V	0.17834	2,706.69	0.660	0.17927	0.17702	0.17874
Y1	22692.14207	22,692.14	0.111	22663.83709	22711.87271	22700.71643
Y2A	298118.70213	298,118.70	0.782	299483.46561	299445.61959	295427.02121
Y2R	19979.10807	19,979.11	0.537	19994.29326	20077.90396	19865.12697
ZN	0.59014	8,039.84	0.268	0.59102	0.59108	0.58832
ZR	0.01722	42.85	1.883	0.01688	0.01725	0.01753

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/13/2013 17:34

Sample Number: **7265237** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00230	0.32	14.553	0.00246	0.00192	0.00252
AL	67.17878	7,323.36	0.288	67.09238	67.04373	67.40023
AS	0.01052	-10.60	32.076	0.01142	0.00679	0.01336
B	-0.00809	1,140.41	14.215	-0.00934	-0.00708	-0.00785
BA	0.48660	338,469.76	0.588	0.48407	0.48970	0.48602
BE	0.00197	654.94	2.117	0.00200	0.00199	0.00192
CA	23.69132	24,727.78	0.165	23.69172	23.65205	23.73018
CD	0.00808	537.27	2.299	0.00815	0.00787	0.00822
CO	0.03682	280.47	2.448	0.03749	0.03579	0.03717
CR	0.12802	1,396.47	1.216	0.12635	0.12827	0.12943
CU	0.19584	2,323.05	0.971	0.19365	0.19683	0.19704
FE	197.67894	55,124.61	0.287	197.66898	197.11615	198.25168
K	2.94179	1,089.93	0.598	2.92688	2.93732	2.96118
LI	0.04884	380.50	4.854	0.05144	0.04831	0.04678
MG	19.74423	35,536.78	0.351	19.76650	19.66662	19.79957
MN	2.25646	149,091.39	0.852	2.23436	2.26560	2.26942
MO	0.00310	17.33	2.566	0.00301	0.00314	0.00315
NA	1.40532	1,511.15	1.468	1.41762	1.41684	1.38150
NI	0.06577	261.41	1.093	0.06590	0.06499	0.06641
P	4.11945	2,412.83	0.807	4.12323	4.08448	4.15062
PB	0.51545	753.61	0.762	0.51645	0.51112	0.51878
S	1.37090	284.14	1.097	1.37215	1.35526	1.38527
SB	-0.01183	8.86	13.084	-0.01337	-0.01184	-0.01028
SE	0.00494	1.45	94.398	0.00387	0.01003	0.00090
SI	3.21616	617.98	0.517	3.21817	3.19863	3.23167
SN	0.03181	44.55	0.340	0.03186	0.03169	0.03188
SR	0.11088	88,658.62	0.999	0.10960	0.11144	0.11159
TI	4.55913	295,258.72	0.920	4.51295	4.56955	4.59489
TL	0.00321	-15.35	14.810	0.00272	0.00367	0.00323
V	0.22102	3,341.30	0.738	0.21936	0.22109	0.22262
Y1	22863.42568	22,863.43	0.579	22829.94134	23009.21965	22751.11607
Y2A	296627.99071	296,627.99	0.652	298834.82439	295820.35384	295228.79390
Y2R	20304.46397	20,304.46	0.212	20287.72410	20353.33566	20272.33213
ZN	0.72283	9,922.67	0.667	0.72417	0.71748	0.72684
ZR	0.02266	56.87	7.781	0.02213	0.02463	0.02122

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/13/2013 17:39

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00221	-3.60	3.707	0.00225	0.00226	0.00211
AL	3.23839	340.68	0.679	3.26048	3.23820	3.21650
AS	0.00015	-3.07	543.642	-0.00010	-0.00053	0.00109
B	0.00211	46.05	12.841	0.00241	0.00199	0.00191
BA	0.01556	10,956.89	0.139	0.01555	0.01555	0.01559
BE	-0.00070	-578.70	5.219	-0.00067	-0.00070	-0.00074
CA	2.02468	2,099.77	0.308	2.02162	2.02057	2.03185
CD	0.00043	10.49	26.663	0.00035	0.00037	0.00056
CO	0.00207	16.92	4.845	0.00209	0.00196	0.00216
CR	0.01283	141.37	0.893	0.01281	0.01296	0.01273
CU	0.01155	125.10	0.838	0.01166	0.01149	0.01150
FE	3.51742	1,011.72	0.374	3.53116	3.50494	3.51615
K	0.09575	34.49	29.475	0.12834	0.07961	0.07931
LI	0.00231	69.76	100.217	0.00111	0.00498	0.00085
MG	0.66222	1,145.88	0.722	0.65699	0.66326	0.66639
MN	0.02354	1,584.81	0.378	0.02355	0.02345	0.02362
MO	0.00012	2.81	134.014	0.00009	-0.00002	0.00028
NA	0.14154	124.45	2.539	0.14498	0.13781	0.14184
NI	0.00420	30.16	11.046	0.00469	0.00415	0.00377
P	0.16628	95.52	0.334	0.16678	0.16638	0.16568
PB	0.07680	111.66	2.222	0.07873	0.07550	0.07616
S	1.64423	340.06	0.202	1.64803	1.64188	1.64280
SB	-0.00086	1.91	168.636	-0.00216	0.00070	-0.00112
SE	0.00460	1.61	26.382	0.00423	0.00361	0.00595
SI	0.55058	103.49	1.954	0.56075	0.53932	0.55168
SN	0.00377	7.49	15.617	0.00332	0.00443	0.00354
SR	0.00653	5,287.43	0.306	0.00653	0.00651	0.00655
TI	0.14149	9,258.60	0.196	0.14121	0.14176	0.14151
TL	-0.00154	-7.51	13.459	-0.00168	-0.00130	-0.00163
V	0.00976	146.85	1.662	0.00995	0.00968	0.00966
Y1	22572.80374	22,572.80	0.203	22520.49180	22591.43171	22606.48771
Y2A	298841.32260	298,841.32	0.145	298610.86310	299341.53413	298571.57058
Y2R	19312.67138	19,312.67	0.154	19342.47360	19283.04053	19312.50000
ZN	0.07372	998.85	0.465	0.07370	0.07339	0.07408
ZR	0.00099	3.63	65.230	0.00086	0.00042	0.00168

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/13/2013 17:43

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00177	-9.70	4.140	0.00170	0.00185	0.00177
AL	0.82225	90.08	4.511	0.77963	0.84720	0.83993
AS	0.00018	-2.92	1358.491	0.00292	-0.00117	-0.00123
B	0.00147	28.68	27.776	0.00116	0.00193	0.00131
BA	0.00699	4,911.62	0.639	0.00704	0.00698	0.00695
BE	-0.00088	-653.18	1.739	-0.00089	-0.00086	-0.00087
CA	1.32813	1,396.50	0.364	1.32255	1.33099	1.33085
CD	0.00027	4.07	28.487	0.00020	0.00035	0.00026
CO	0.00094	9.01	32.346	0.00123	0.00098	0.00062
CR	0.00703	74.38	3.938	0.00672	0.00722	0.00716
CU	0.01224	141.75	2.354	0.01206	0.01209	0.01258
FE	1.67061	476.56	0.466	1.67755	1.66220	1.67206
K	-0.01723	-5.27	123.484	-0.00273	-0.00730	-0.04165
LI	-0.00079	50.30	377.141	0.00265	-0.00237	-0.00266
MG	0.32523	558.59	0.842	0.32789	0.32539	0.32242
MN	0.01082	732.62	0.470	0.01080	0.01088	0.01078
MO	0.00032	3.74	60.592	0.00016	0.00053	0.00026
NA	0.10071	81.29	7.363	0.10582	0.09221	0.10411
NI	0.00370	28.06	9.264	0.00372	0.00403	0.00334
P	0.14110	80.16	1.263	0.13916	0.14149	0.14266
PB	0.09522	135.78	1.642	0.09376	0.09502	0.09687
S	1.31610	268.59	0.664	1.31303	1.30931	1.32596
SB	0.00122	3.43	46.466	0.00180	0.00120	0.00067
SE	0.00323	1.10	20.012	0.00255	0.00384	0.00330
SI	0.36709	69.53	2.941	0.35464	0.37391	0.37272
SN	0.00306	6.50	16.799	0.00359	0.00256	0.00303
SR	0.00307	2,479.89	0.592	0.00307	0.00309	0.00305
TI	0.04586	2,996.35	0.421	0.04608	0.04577	0.04573
TL	-0.00216	-7.75	68.022	-0.00101	-0.00382	-0.00166
V	0.00826	122.62	7.269	0.00863	0.00858	0.00757
Y1	22350.36274	22,350.36	0.283	22350.23971	22413.77150	22287.07701
Y2A	296586.39828	296,586.40	0.377	296049.53612	295839.13188	297870.52684
Y2R	19140.11012	19,140.11	0.178	19101.21902	19153.93634	19165.17500
ZN	0.01853	269.41	0.343	0.01855	0.01858	0.01845
ZR	0.00253	7.16	43.797	0.00125	0.00317	0.00317

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/13/2013 17:47

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00173	-10.26	19.214	0.00150	0.00159	0.00211
AL	3.37546	354.57	0.463	3.36399	3.36913	3.39325
AS	-0.00062	-3.68	281.891	0.00055	-0.00263	0.00022
B	0.00026	61.59	114.737	-0.00002	0.00057	0.00022
BA	0.02333	16,144.80	0.702	0.02316	0.02333	0.02348
BE	-0.00067	-554.73	3.018	-0.00069	-0.00066	-0.00066
CA	1.29475	1,374.88	0.691	1.28557	1.29522	1.30346
CD	0.00043	21.02	29.227	0.00029	0.00045	0.00054
CO	0.00211	17.70	5.796	0.00200	0.00208	0.00224
CR	0.01022	107.63	4.424	0.01001	0.00992	0.01074
CU	0.00843	73.70	10.347	0.00941	0.00812	0.00776
FE	8.91728	2,557.34	0.322	8.88521	8.92592	8.94073
K	0.05199	19.04	28.618	0.03605	0.05442	0.06550
LI	0.00404	79.53	37.183	0.00320	0.00577	0.00314
MG	0.63303	1,094.62	0.398	0.63561	0.63293	0.63057
MN	0.06292	4,141.30	0.757	0.06247	0.06287	0.06341
MO	0.00009	2.64	134.251	0.00022	0.00003	0.00001
NA	0.10466	86.05	11.769	0.09758	0.09751	0.11888
NI	0.00347	26.25	2.381	0.00349	0.00355	0.00338
P	0.26032	148.29	1.792	0.25660	0.26556	0.25879
PB	0.01663	25.82	2.923	0.01713	0.01616	0.01661
S	0.21345	39.49	1.202	0.21307	0.21618	0.21109
SB	0.00072	3.58	152.469	0.00143	0.00129	-0.00055
SE	0.00290	0.96	10.092	0.00262	0.00285	0.00320
SI	0.48963	92.34	2.699	0.47599	0.50237	0.49053
SN	0.00244	5.70	19.105	0.00296	0.00229	0.00207
SR	0.00580	4,627.79	0.986	0.00574	0.00581	0.00586
TI	0.19916	12,821.62	0.615	0.19777	0.19965	0.20007
TL	-0.00280	-8.47	30.333	-0.00219	-0.00244	-0.00377
V	0.01012	150.74	3.579	0.00971	0.01023	0.01040
Y1	22334.75066	22,334.75	1.103	22510.47077	22053.26586	22440.51535
Y2A	294273.35984	294,273.36	0.663	296348.07820	293998.01193	292473.98940
Y2R	19297.36959	19,297.37	0.382	19379.95000	19238.08099	19274.07777
ZN	0.04836	666.46	1.828	0.04781	0.04938	0.04788
ZR	0.00220	6.44	76.701	0.00236	0.00379	0.00044

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/13/2013 17:51

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00165	-11.75	24.737	0.00207	0.00125	0.00165
AL	0.11268	17.36	15.466	0.09944	0.13243	0.10618
AS	-0.00137	-3.54	81.931	-0.00250	-0.00135	-0.00026
B	0.00098	23.41	15.901	0.00105	0.00080	0.00109
BA	0.00434	3,091.65	1.286	0.00439	0.00428	0.00435
BE	-0.00085	-644.92	2.561	-0.00085	-0.00082	-0.00087
CA	1.11835	1,190.97	0.845	1.11497	1.11106	1.12903
CD	-0.00003	-1.34	199.038	0.00003	-0.00005	-0.00006
CO	0.00068	6.88	16.247	0.00056	0.00078	0.00069
CR	0.00066	1.38	84.698	0.00010	0.00067	0.00122
CU	0.00238	6.45	16.949	0.00244	0.00274	0.00195
FE	1.50165	428.61	1.773	1.48490	1.48769	1.53236
K	-0.13847	-47.64	25.124	-0.15788	-0.15923	-0.09831
LI	-0.00226	41.57	90.502	-0.00081	-0.00136	-0.00459
MG	0.13924	240.16	1.630	0.13682	0.14132	0.13960
MN	0.16235	10,815.45	1.545	0.16523	0.16114	0.16068
MO	0.00008	2.61	116.766	-0.00001	0.00018	0.00008
NA	0.10687	87.65	9.310	0.10424	0.09850	0.11787
NI	0.00080	16.24	52.349	0.00128	0.00059	0.00053
P	0.07132	39.92	1.095	0.07048	0.07148	0.07201
PB	0.00548	9.47	12.161	0.00624	0.00510	0.00509
S	1.47958	300.66	0.374	1.47796	1.48574	1.47503
SB	0.00057	2.76	169.419	0.00165	0.00024	-0.00018
SE	0.00522	1.82	65.886	0.00268	0.00914	0.00385
SI	0.09884	21.23	8.374	0.09911	0.09043	0.10697
SN	0.00245	5.69	28.663	0.00324	0.00221	0.00190
SR	0.00488	3,949.74	1.835	0.00497	0.00480	0.00485
TI	0.00515	362.58	3.539	0.00529	0.00494	0.00521
TL	-0.00248	-7.50	38.324	-0.00156	-0.00346	-0.00243
V	-0.00050	-8.34	88.514	-0.00003	-0.00056	-0.00092
Y1	22211.24123	22,211.24	0.241	22266.48121	22159.40875	22207.83373
Y2A	298630.98760	298,630.99	0.958	295328.77734	300216.35576	300347.82969
Y2R	19150.89505	19,150.90	0.465	19181.16014	19220.87500	19050.65000
ZN	0.01402	208.91	0.361	0.01396	0.01406	0.01402
ZR	0.00069	2.92	154.770	-0.00031	0.00057	0.00182

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/13/2013 17:55

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51507	7,106.40	0.892	0.51978	0.51059	0.51485
AL	25.32394	2,561.40	0.867	25.09976	25.33328	25.53878
AS	0.49145	196.67	0.863	0.48789	0.49614	0.49033
B	0.49274	4,340.63	0.868	0.49762	0.48964	0.49096
BA	0.51309	338,067.32	0.697	0.51560	0.50899	0.51467
BE	0.49423	215,355.01	0.993	0.49905	0.48924	0.49440
CA	24.96917	24,143.29	1.120	24.73590	24.89228	25.27932
CD	0.49869	8,280.88	0.344	0.49677	0.49921	0.50009
CO	0.49773	2,760.09	0.478	0.49499	0.49901	0.49920
CR	0.49134	5,327.86	1.005	0.49567	0.48596	0.49239
CU	0.51274	6,759.30	0.859	0.51774	0.50943	0.51106
FE	24.88039	6,913.15	1.059	24.64615	24.82940	25.16562
K	24.88295	8,538.60	0.419	24.76512	24.92021	24.96351
LI	0.50040	2,983.34	1.031	0.49472	0.50168	0.50479
MG	24.54857	40,850.04	0.677	24.37411	24.56662	24.70499
MN	0.50235	31,454.57	0.836	0.50611	0.49782	0.50312
MO	0.50508	2,320.62	0.375	0.50299	0.50559	0.50667
NA	24.71210	24,992.10	0.510	24.56918	24.75950	24.80763
NI	0.50197	1,978.30	0.473	0.49936	0.50252	0.50402
P	0.50770	282.23	0.283	0.50612	0.50805	0.50893
PB	0.50628	695.39	0.491	0.50354	0.50692	0.50839
S	24.42490	4,904.30	0.307	24.33957	24.45498	24.48013
SB	0.51332	426.89	0.488	0.51058	0.51387	0.51550
SE	0.49765	178.29	0.535	0.49686	0.49547	0.50062
SI	25.79625	4,570.58	0.926	25.56794	25.77621	26.04462
SN	0.49313	617.57	0.487	0.49038	0.49485	0.49414
SR	0.50580	383,025.59	1.449	0.51427	0.50135	0.50180
TI	0.50481	31,035.54	1.023	0.51048	0.50038	0.50357
TL	0.50066	351.96	0.373	0.49858	0.50218	0.50123
V	0.50191	7,062.48	0.816	0.50663	0.49943	0.49966
Y1	21635.20852	21,635.21	0.295	21708.30947	21606.73333	21590.58275
Y2A	280989.81113	280,989.81	1.036	277996.85222	283808.56528	281164.01590
Y2R	18818.35847	18,818.36	1.071	19009.96703	18836.80000	18608.30838
ZN	0.50279	6,420.63	0.422	0.50039	0.50443	0.50355
ZR	0.50658	1,150.40	0.494	0.50450	0.50589	0.50935

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 35

Date/Time: 11/13/2013 17:59

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00185	-8.60	28.840	0.00230	0.00126	0.00198
AL	-0.03817	1.87	45.411	-0.05710	-0.03433	-0.02308
AS	-0.00294	-4.10	59.304	-0.00123	-0.00287	-0.00472
B	-0.00012	4.17	419.251	0.00046	-0.00053	-0.00030
BA	0.00001	55.57	59.306	0.00000	0.00001	0.00001
BE	-0.00086	-639.37	1.637	-0.00086	-0.00085	-0.00088
CA	-0.00350	86.18	143.872	-0.00485	0.00207	-0.00773
CD	-0.00006	-4.89	69.478	-0.00002	-0.00005	-0.00011
CO	-0.00012	2.31	44.113	-0.00009	-0.00018	-0.00009
CR	0.00032	-2.10	40.965	0.00032	0.00019	0.00045
CU	-0.00143	-46.32	24.330	-0.00149	-0.00174	-0.00106
FE	0.00148	0.38	296.074	-0.00220	0.00635	0.00030
K	-0.11072	-37.29	12.071	-0.11486	-0.12153	-0.09578
LI	-0.00102	47.41	172.846	-0.00305	0.00018	-0.00020
MG	0.00168	4.28	73.107	0.00294	0.00050	0.00158
MN	0.00014	26.57	17.441	0.00011	0.00016	0.00014
MO	0.00013	2.82	205.411	-0.00002	0.00042	-0.00003
NA	-0.00626	-28.47	333.193	0.01482	-0.00674	-0.02686
NI	0.00005	13.42	427.802	0.00002	-0.00016	0.00030
P	0.00069	-0.28	113.080	0.00075	0.00143	-0.00012
PB	0.00053	2.58	64.666	0.00067	0.00077	0.00014
S	-0.00759	-6.24	38.587	-0.01028	-0.00800	-0.00447
SB	0.00214	3.95	9.854	0.00217	0.00233	0.00191
SE	0.00164	0.51	127.177	0.00401	0.00079	0.00012
SI	-0.00071	3.24	1960.341	0.00730	0.00725	-0.01666
SN	-0.00026	2.21	141.297	-0.00042	0.00016	-0.00054
SR	-0.00019	-125.51	2.430	-0.00020	-0.00019	-0.00019
TI	-0.00001	25.98	401.814	0.00003	-0.00006	0.00000
TL	-0.00257	-7.65	1.756	-0.00258	-0.00251	-0.00260
V	-0.00122	-18.98	15.354	-0.00125	-0.00103	-0.00140
Y1	22208.52508	22,208.53	0.289	22260.63391	22228.06292	22136.87842
Y2A	293609.54117	293,609.54	0.786	294297.38237	295494.04762	291037.19351
Y2R	18846.23506	18,846.24	0.584	18731.65138	18855.97880	18951.07500
ZN	-0.00063	17.67	12.834	-0.00065	-0.00054	-0.00070
ZR	0.00197	5.77	80.937	0.00373	0.00062	0.00157

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/13/2013 18:04

Sample Number: **7265246** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00218	-1.08	38.475	0.00182	0.00313	0.00158
AL	36.30023	3,909.18	0.417	36.19683	36.47381	36.23006
AS	0.02323	-4.49	2.733	0.02350	0.02251	0.02369
B	-0.01329	1,043.01	13.820	-0.01260	-0.01537	-0.01189
BA	0.31250	220,303.36	0.323	0.31297	0.31134	0.31319
BE	0.00201	683.50	1.893	0.00201	0.00205	0.00197
CA	13.40848	13,888.42	0.925	13.36038	13.54930	13.31577
CD	0.00803	517.76	4.524	0.00794	0.00771	0.00842
CO	0.03560	246.91	0.438	0.03542	0.03571	0.03567
CR	0.10691	1,173.29	1.076	0.10822	0.10611	0.10638
CU	0.11032	1,301.27	0.677	0.10986	0.10993	0.11119
FE	187.12909	51,797.06	0.818	186.32438	188.89477	186.16811
K	2.30782	845.02	1.214	2.31137	2.33389	2.27819
LI	0.04322	334.17	1.867	0.04306	0.04251	0.04410
MG	11.49620	20,529.52	0.683	11.42134	11.57787	11.48940
MN	3.01956	202,182.22	0.309	3.02696	3.00908	3.02263
MO	0.00273	15.61	4.994	0.00282	0.00279	0.00257
NA	1.21644	1,289.27	0.789	1.21084	1.22753	1.21096
NI	0.03580	139.31	0.021	0.03581	0.03579	0.03580
P	3.51030	2,066.65	0.692	3.48363	3.51613	3.53114
PB	0.13688	201.80	0.180	0.13669	0.13716	0.13679
S	1.70630	357.44	0.927	1.69006	1.70718	1.72166
SB	-0.01132	8.22	5.201	-0.01183	-0.01146	-0.01067
SE	0.00524	1.72	57.889	0.00337	0.00874	0.00361
SI	3.24143	615.39	0.923	3.20794	3.25078	3.26557
SN	0.02446	35.04	2.532	0.02381	0.02453	0.02504
SR	0.05254	42,587.81	0.334	0.05262	0.05234	0.05265
TI	2.52834	165,948.34	0.637	2.52934	2.51177	2.54392
TL	0.00239	-10.02	32.746	0.00238	0.00318	0.00161
V	0.14297	2,194.87	0.294	0.14275	0.14346	0.14271
Y1	22984.16982	22,984.17	0.411	23091.54343	22947.63714	22913.32889
Y2A	300599.29193	300,599.29	0.531	300470.42744	302255.24650	299072.20187
Y2R	20063.02281	20,063.02	0.705	20174.22125	19903.72500	20111.12218
ZN	0.65251	9,017.15	0.696	0.64759	0.65340	0.65655
ZR	0.02614	64.61	3.545	0.02585	0.02539	0.02718

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/13/2013 18:08

Sample Number: **7265885** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00549	50.84	5.628	0.00546	0.00581	0.00520
AL	182.72558	20,111.15	0.046	182.64506	182.71738	182.81432
AS	0.07083	8.48	1.168	0.07069	0.07008	0.07172
B	0.01309	1,947.40	4.835	0.01382	0.01270	0.01274
BA	2.80545	1,911,306.34	0.354	2.81581	2.79600	2.80455
BE	0.00237	819.78	1.979	0.00242	0.00233	0.00236
CA	189.17717	193,691.17	0.168	188.85868	189.17984	189.49298
CD	0.00822	729.24	2.008	0.00806	0.00821	0.00839
CO	0.24417	1,423.10	0.640	0.24304	0.24351	0.24596
CR	0.39820	4,369.56	0.723	0.40149	0.39614	0.39697
CU	0.38216	4,956.19	0.561	0.38293	0.38380	0.37973
FE	305.45159	81,713.18	0.142	304.96332	305.79366	305.59779
K	12.13361	4,522.20	0.722	12.19729	12.03364	12.16990
LI	0.19697	1,432.98	0.754	0.19719	0.19539	0.19834
MG	66.10441	116,985.98	0.014	66.11127	66.09377	66.10819
MN	17.42928	1,127,971.65	0.473	17.49809	17.45179	17.33797
MO	0.00167	9.98	2.174	0.00169	0.00169	0.00162
NA	3.91917	4,284.43	0.309	3.90844	3.93229	3.91677
NI	0.56255	2,218.48	0.219	0.56116	0.56296	0.56353
P	0.88526	499.38	0.373	0.88654	0.88774	0.88151
PB	0.16297	266.90	0.657	0.16224	0.16248	0.16420
S	0.76408	148.73	0.824	0.76319	0.77077	0.75827
SB	-0.02020	13.26	5.606	-0.01904	-0.02130	-0.02026
SE	0.00862	2.19	37.065	0.01228	0.00637	0.00721
SI	8.39678	1,618.04	0.118	8.38784	8.40750	8.39501
SN	0.02104	29.20	3.845	0.02021	0.02110	0.02182
SR	0.76501	599,087.08	0.146	0.76583	0.76374	0.76545
TI	3.63864	230,844.20	0.307	3.65065	3.63675	3.62852
TL	0.00287	-16.28	95.093	0.00429	0.00459	-0.00028
V	0.65420	9,609.21	0.688	0.65902	0.65347	0.65010
Y1	21998.02565	21,998.03	0.444	22076.71639	22028.76991	21888.59065
Y2A	290563.23172	290,563.23	0.400	289278.74420	290866.71637	291544.23459
Y2R	20436.53855	20,436.54	0.160	20446.68825	20462.88242	20400.04499
ZN	0.44977	6,239.52	0.259	0.44842	0.45048	0.45040
ZR	0.06811	169.19	2.138	0.06643	0.06886	0.06903

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/13/2013 18:12

Sample Number: **7266809** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00198	-6.49	27.780	0.00134	0.00232	0.00226
AL	3.63524	390.74	0.394	3.61999	3.63737	3.64838
AS	0.00584	-0.95	18.413	0.00617	0.00464	0.00671
B	0.03785	400.61	1.558	0.03740	0.03763	0.03852
BA	0.06594	46,165.34	0.116	0.06597	0.06585	0.06599
BE	-0.00072	-585.71	1.155	-0.00073	-0.00072	-0.00071
CA	37.50080	37,979.47	0.372	37.37099	37.64818	37.48323
CD	0.00184	44.86	8.005	0.00179	0.00172	0.00201
CO	0.00283	21.84	12.603	0.00251	0.00276	0.00321
CR	0.01156	124.58	2.077	0.01159	0.01177	0.01130
CU	0.03971	531.62	0.745	0.03957	0.04005	0.03951
FE	8.66934	2,546.94	0.214	8.68283	8.64822	8.67696
K	0.33130	120.21	29.657	0.39046	0.21788	0.38555
LI	-0.00043	78.09	717.602	0.00281	-0.00332	-0.00078
MG	4.95397	8,745.19	0.345	4.94205	4.97357	4.94628
MN	0.56171	37,332.75	0.182	0.56077	0.56157	0.56280
MO	0.00113	7.60	28.016	0.00119	0.00141	0.00078
NA	0.65653	674.95	1.575	0.65714	0.64590	0.66656
NI	0.01591	76.97	1.736	0.01619	0.01591	0.01564
P	1.23082	706.85	0.132	1.23130	1.22901	1.23215
PB	0.20304	288.86	0.174	0.20343	0.20293	0.20275
S	8.73722	1,816.54	0.179	8.74340	8.71947	8.74879
SB	0.00099	3.83	133.345	0.00223	0.00113	-0.00039
SE	0.00670	2.38	31.775	0.00497	0.00604	0.00907
SI	1.93259	362.91	0.612	1.92108	1.94472	1.93196
SN	0.02264	31.86	4.266	0.02372	0.02235	0.02186
SR	0.10468	84,166.07	0.263	0.10446	0.10458	0.10499
TI	0.19511	12,732.08	0.174	0.19515	0.19544	0.19476
TL	-0.00085	-7.17	83.979	-0.00074	-0.00162	-0.00020
V	0.02646	397.75	0.461	0.02643	0.02635	0.02659
Y1	22433.43208	22,433.43	0.093	22422.25147	22420.45106	22457.59371
Y2A	298257.96746	298,257.97	0.366	297768.76653	299507.37243	297497.76342
Y2R	19766.35924	19,766.36	0.209	19749.25194	19736.35273	19813.47305
ZN	0.16877	2,240.38	0.076	0.16891	0.16867	0.16872
ZR	0.00486	12.95	9.581	0.00437	0.00491	0.00530

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/13/2013 18:16

Sample Number: **7266812** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00222	-2.63	15.383	0.00228	0.00252	0.00185
AL	38.02482	4,109.50	1.061	37.95260	37.66234	38.45953
AS	0.02593	2.70	12.826	0.02796	0.02209	0.02774
B	-0.00021	571.09	507.265	-0.00061	0.00100	-0.00101
BA	0.35903	257,674.53	1.285	0.36433	0.35590	0.35686
BE	0.00094	186.24	2.192	0.00094	0.00095	0.00091
CA	10.36112	10,796.74	0.958	10.41847	10.24652	10.41837
CD	0.00578	280.94	0.661	0.00581	0.00579	0.00573
CO	0.01402	114.07	1.381	0.01407	0.01381	0.01418
CR	0.05906	661.96	0.547	0.05934	0.05914	0.05871
CU	0.11619	1,467.97	0.803	0.11724	0.11547	0.11586
FE	90.02087	26,058.91	0.955	90.36822	89.04179	90.65259
K	2.11676	777.96	2.017	2.15040	2.13115	2.06874
LI	0.02405	213.79	17.224	0.02813	0.02415	0.01985
MG	5.33763	9,596.35	0.252	5.34537	5.32209	5.34542
MN	0.49864	34,007.68	0.967	0.50412	0.49670	0.49508
MO	0.00155	9.88	5.063	0.00156	0.00162	0.00147
NA	1.22239	1,300.37	0.962	1.22460	1.20969	1.23289
NI	0.04037	170.75	0.983	0.04061	0.04059	0.03992
P	2.66037	1,568.10	0.128	2.66431	2.65848	2.65832
PB	4.15526	6,018.21	0.262	4.14290	4.16342	4.15945
S	3.30598	700.94	0.133	3.30553	3.31057	3.30182
SB	-0.00417	6.36	38.356	-0.00297	-0.00356	-0.00599
SE	0.00488	1.58	47.272	0.00359	0.00351	0.00755
SI	4.20155	799.47	0.975	4.20187	4.16042	4.24235
SN	0.03746	52.34	2.030	0.03738	0.03826	0.03675
SR	0.05871	48,447.80	0.899	0.05928	0.05859	0.05824
TI	2.07259	138,507.12	0.889	2.09322	2.06680	2.05776
TL	0.00084	-12.27	152.391	-0.00013	0.00036	0.00230
V	0.13488	2,096.02	1.172	0.13662	0.13447	0.13354
Y1	23011.70333	23,011.70	0.106	23037.60741	22989.29357	23008.20900
Y2A	306061.42026	306,061.42	0.991	302578.11459	308123.92027	307482.22591
Y2R	20135.39320	20,135.39	0.717	20022.39625	20298.05195	20085.73141
ZN	0.63239	8,619.14	0.176	0.63182	0.63367	0.63168
ZR	0.00875	22.60	31.135	0.00792	0.00653	0.01179

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/13/2013 18:21

Sample Number: **7266813** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00286	6.45	8.406	0.00259	0.00292	0.00305
AL	30.86810	3,336.08	0.261	30.86708	30.94930	30.78792
AS	0.30043	126.12	0.759	0.30156	0.30192	0.29780
B	0.04908	642.15	2.026	0.04901	0.05010	0.04811
BA	0.68110	481,913.68	1.134	0.68444	0.68660	0.67227
BE	0.00004	-234.89	25.960	0.00005	0.00003	0.00004
CA	4.53278	4,780.49	0.216	4.53171	4.54305	4.52359
CD	0.00406	129.54	2.726	0.00414	0.00410	0.00393
CO	0.00761	80.92	3.105	0.00736	0.00783	0.00765
CR	0.04741	537.21	1.500	0.04726	0.04819	0.04679
CU	0.20730	2,734.74	1.255	0.20596	0.21030	0.20564
FE	30.26926	8,979.17	0.157	30.27851	30.21771	30.31156
K	2.32251	853.39	1.026	2.29713	2.34441	2.32599
LI	0.02109	191.45	8.845	0.02323	0.02020	0.01983
MG	2.38583	4,296.10	0.264	2.39269	2.38447	2.38033
MN	0.12944	8,717.49	1.140	0.12898	0.13110	0.12826
MO	0.00353	19.61	4.448	0.00355	0.00367	0.00336
NA	0.65580	686.65	0.824	0.64956	0.65915	0.65867
NI	0.02817	127.90	0.284	0.02817	0.02809	0.02825
P	2.11695	1,253.44	0.297	2.12311	2.11722	2.11053
PB	8.46447	12,303.66	0.367	8.47768	8.48675	8.42897
S	10.57615	2,265.83	0.527	10.61783	10.59784	10.51278
SB	0.01923	21.96	4.709	0.02025	0.01854	0.01890
SE	0.01057	3.80	23.497	0.01275	0.00786	0.01109
SI	5.02973	956.28	0.148	5.03355	5.02113	5.03451
SN	0.04001	55.97	2.837	0.04132	0.03928	0.03944
SR	0.06034	49,095.65	1.227	0.05998	0.06119	0.05985
TI	2.37665	156,586.83	1.091	2.36875	2.40562	2.35559
TL	0.00340	-9.34	15.799	0.00374	0.00278	0.00367
V	0.08258	1,267.41	1.659	0.08174	0.08416	0.08184
Y1	23111.89378	23,111.89	0.292	23128.38828	23037.70656	23169.58650
Y2A	301758.24043	301,758.24	1.006	302150.06662	298547.12302	304577.53165
Y2R	20133.15367	20,133.15	0.200	20138.88057	20090.41383	20170.16660
ZN	0.39319	5,357.66	0.385	0.39400	0.39413	0.39144
ZR	0.00524	14.11	26.564	0.00681	0.00415	0.00476

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/13/2013 18:25

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00201	-3.16	12.784	0.00220	0.00172	0.00211
AL	83.24274	9,225.21	0.446	82.99876	83.05939	83.67008
AS	0.15859	37.96	1.677	0.15716	0.15696	0.16166
B	-0.06424	2,273.28	3.858	-0.06679	-0.06409	-0.06184
BA	0.99567	713,437.61	1.503	0.98186	0.99358	1.01157
BE	0.00420	1,733.46	0.141	0.00419	0.00420	0.00420
CA	12.31370	13,128.46	0.284	12.27699	12.31756	12.34655
CD	0.00962	1,101.13	2.590	0.00954	0.00990	0.00942
CO	0.03689	267.28	0.348	0.03687	0.03678	0.03703
CR	0.10125	1,032.54	0.954	0.10014	0.10191	0.10170
CU	0.35640	4,762.32	0.852	0.35346	0.35622	0.35953
FE	454.71699	114,458.19	0.184	453.78398	454.96137	455.40564
K	3.15766	1,188.91	1.164	3.16878	3.11662	3.18759
LI	0.06776	499.63	3.387	0.06534	0.06804	0.06991
MG	9.77119	17,962.57	0.335	9.73892	9.77028	9.80438
MN	1.59153	108,344.47	0.656	1.58060	1.59256	1.60142
MO	0.01180	60.40	2.015	0.01171	0.01206	0.01161
NA	1.17203	1,276.69	1.960	1.14590	1.18902	1.18116
NI	0.07654	278.27	1.259	0.07577	0.07622	0.07762
P	6.35053	3,776.43	0.177	6.35141	6.36130	6.33890
PB	0.39901	587.69	0.126	0.39946	0.39846	0.39909
S	5.23818	1,119.41	0.305	5.22629	5.25632	5.23192
SB	-0.02511	16.74	2.511	-0.02457	-0.02496	-0.02580
SE	0.01268	4.37	16.852	0.01043	0.01469	0.01293
SI	6.30629	1,227.92	0.526	6.27378	6.30495	6.34014
SN	0.03985	55.98	1.420	0.03928	0.03986	0.04041
SR	0.11235	92,559.63	0.732	0.11156	0.11231	0.11320
TI	3.26993	218,183.71	0.673	3.24830	3.26919	3.29230
TL	0.00464	-12.61	23.531	0.00403	0.00398	0.00589
V	0.21279	3,339.37	0.721	0.21103	0.21382	0.21353
Y1	23208.53932	23,208.54	0.141	23171.47758	23233.55881	23220.58157
Y2A	305600.16100	305,600.16	0.586	307640.87302	304868.22090	304291.38907
Y2R	20635.15361	20,635.15	0.573	20766.58697	20601.14885	20537.72500
ZN	1.70561	23,706.86	0.162	1.70831	1.70573	1.70278
ZR	0.03010	76.30	3.544	0.02931	0.02968	0.03132

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/13/2013 18:29

Sample Number: **7265239** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00776	81.92	3.579	0.00805	0.00749	0.00775
AL	46.73600	5,191.91	0.382	46.58962	46.68358	46.93482
AS	0.06438	20.87	2.300	0.06421	0.06593	0.06298
B	0.01916	637.69	4.229	0.01924	0.01831	0.01992
BA	0.18764	135,274.05	1.667	0.18737	0.18466	0.19089
BE	0.00302	1,179.00	0.970	0.00300	0.00300	0.00305
CA	26.98092	28,680.06	0.343	26.95730	26.90243	27.08303
CD	0.00806	286.95	1.350	0.00813	0.00811	0.00794
CO	0.02791	194.43	0.441	0.02804	0.02787	0.02780
CR	0.63380	7,506.27	1.126	0.63362	0.62676	0.64103
CU	0.24054	3,319.97	1.363	0.23966	0.23779	0.24417
FE	71.69114	21,495.48	0.333	71.56781	71.53898	71.96663
K	1.55079	586.06	0.757	1.54573	1.54242	1.56421
LI	0.03465	299.21	4.042	0.03369	0.03401	0.03626
MG	8.01837	14,798.10	0.344	8.04595	7.99077	8.01840
MN	0.17625	12,084.15	1.572	0.17659	0.17333	0.17884
MO	0.00904	46.95	2.063	0.00883	0.00915	0.00914
NA	1.58330	1,738.52	0.136	1.58337	1.58112	1.58541
NI	0.05187	223.35	0.167	0.05184	0.05179	0.05196
P	2.76243	1,646.34	0.163	2.76625	2.75745	2.76360
PB	3.42956	5,026.38	0.304	3.44146	3.42211	3.42511
S	52.17628	11,271.21	0.266	52.31801	52.04031	52.17050
SB	-0.01119	6.90	5.477	-0.01188	-0.01074	-0.01093
SE	0.00740	2.52	38.052	0.00924	0.00416	0.00881
SI	5.08487	993.82	0.257	5.09563	5.07036	5.08862
SN	0.05131	71.48	1.464	0.05053	0.05203	0.05137
SR	0.09267	76,790.85	1.555	0.09279	0.09118	0.09405
TI	1.77708	119,281.99	1.367	1.77643	1.75312	1.80168
TL	0.00148	-10.86	91.680	0.00232	-0.00009	0.00220
V	0.11475	1,789.85	1.144	0.11490	0.11337	0.11599
Y1	23261.54727	23,261.55	0.036	23256.05717	23257.31740	23271.26724
Y2A	307400.94607	307,400.95	1.361	307490.00666	311540.69767	303172.13386
Y2R	20697.47486	20,697.47	0.295	20700.97112	20756.71158	20634.74188
ZN	1.17815	16,067.22	0.128	1.17962	1.17661	1.17822
ZR	0.01776	45.74	3.802	0.01707	0.01780	0.01842

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 43 Date/Time: 11/13/2013 18:33

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00166	-11.00	3.541	0.00171	0.00166	0.00160
AL	17.15668	1,801.20	0.457	17.24675	17.10438	17.11892
AS	0.02820	4.23	9.768	0.02560	0.02792	0.03108
B	-0.00342	468.27	18.567	-0.00336	-0.00409	-0.00282
BA	0.21029	147,163.20	0.567	0.21072	0.20895	0.21122
BE	0.00018	-166.94	11.859	0.00019	0.00016	0.00020
CA	2.56596	2,667.00	0.457	2.55550	2.56375	2.57862
CD	0.00366	221.63	0.552	0.00365	0.00369	0.00365
CO	0.00788	58.07	2.853	0.00813	0.00768	0.00784
CR	0.02096	208.73	0.262	0.02099	0.02089	0.02099
CU	0.07113	906.99	0.749	0.07171	0.07101	0.07067
FE	80.35803	22,661.97	0.297	80.19709	80.24510	80.63189
K	0.52831	189.02	10.304	0.56875	0.54976	0.46642
LI	0.01190	128.99	18.236	0.01438	0.01103	0.01031
MG	2.01715	3,525.56	0.317	2.01707	2.01079	2.02360
MN	0.33356	22,183.57	0.784	0.33471	0.33056	0.33539
MO	0.00227	13.21	4.183	0.00237	0.00220	0.00222
NA	0.24870	238.52	2.542	0.25085	0.25366	0.24158
NI	0.01631	70.83	3.511	0.01640	0.01683	0.01570
P	1.27667	743.82	0.352	1.27401	1.28186	1.27413
PB	0.08646	126.96	2.547	0.08413	0.08851	0.08675
S	1.03856	213.88	0.420	1.03445	1.03810	1.04313
SB	-0.00419	4.98	58.405	-0.00147	-0.00488	-0.00621
SE	0.00542	1.86	23.788	0.00491	0.00688	0.00446
SI	1.27679	238.18	0.822	1.28724	1.26626	1.27687
SN	0.00930	14.80	7.467	0.00890	0.00889	0.01010
SR	0.02309	18,589.41	0.680	0.02316	0.02291	0.02320
TI	0.67518	44,005.68	0.674	0.67656	0.67009	0.67888
TL	0.00021	-7.78	1022.850	0.00163	-0.00226	0.00125
V	0.04318	659.51	1.304	0.04287	0.04284	0.04383
Y1	22755.66718	22,755.67	0.079	22767.91447	22735.00466	22764.08239
Y2A	298368.78728	298,368.79	0.893	297584.57588	301336.31544	296185.47051
Y2R	19537.07667	19,537.08	0.454	19634.28144	19516.56687	19460.38169
ZN	0.34648	4,725.76	0.201	0.34632	0.34724	0.34587
ZR	0.00647	16.60	41.122	0.00778	0.00823	0.00341

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 44 Date/Time: 11/13/2013 18:37

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00171	-10.47	24.346	0.00123	0.00197	0.00192
AL	8.91532	930.54	0.790	8.93267	8.97545	8.83785
AS	0.01508	0.99	9.084	0.01354	0.01551	0.01618
B	-0.00168	243.02	44.076	-0.00212	-0.00210	-0.00083
BA	0.11046	77,023.27	1.244	0.10891	0.11153	0.11093
BE	-0.00032	-398.92	7.925	-0.00030	-0.00035	-0.00032
CA	1.33557	1,420.68	0.241	1.33415	1.33926	1.33331
CD	0.00246	121.83	2.980	0.00254	0.00240	0.00243
CO	0.00413	31.83	4.141	0.00395	0.00414	0.00429
CR	0.01077	104.03	5.458	0.01009	0.01107	0.01115
CU	0.03788	469.40	2.474	0.03763	0.03892	0.03710
FE	41.29975	11,734.17	0.552	41.34770	41.49981	41.05174
K	0.26599	94.70	15.133	0.21978	0.28477	0.29342
LI	0.00528	87.33	12.266	0.00569	0.00453	0.00560
MG	1.05411	1,828.21	0.412	1.05890	1.05299	1.05044
MN	0.17660	11,707.71	1.478	0.17372	0.17882	0.17724
MO	0.00117	7.94	6.952	0.00126	0.00115	0.00111
NA	0.11265	94.70	3.682	0.11521	0.11488	0.10786
NI	0.00824	42.35	4.216	0.00863	0.00796	0.00813
P	0.65998	383.84	0.453	0.66226	0.66107	0.65660
PB	0.04664	69.29	3.175	0.04715	0.04780	0.04497
S	0.52983	106.66	0.658	0.53243	0.53120	0.52587
SB	-0.00228	3.53	40.137	-0.00157	-0.00195	-0.00331
SE	0.00412	1.41	30.370	0.00426	0.00280	0.00529
SI	0.67978	127.34	1.109	0.68778	0.67874	0.67281
SN	0.00394	7.77	6.265	0.00366	0.00413	0.00403
SR	0.01205	9,680.64	1.413	0.01187	0.01220	0.01209
TI	0.35384	22,986.05	1.266	0.34911	0.35801	0.35440
TL	-0.00183	-8.36	35.287	-0.00115	-0.00190	-0.00244
V	0.02213	336.30	2.054	0.02165	0.02255	0.02219
Y1	22734.70674	22,734.71	0.144	22769.69021	22704.52667	22729.90333
Y2A	297227.33046	297,227.33	0.849	300130.30152	295550.44732	296001.24254
Y2R	19370.20781	19,370.21	0.397	19410.71429	19281.48074	19418.42840
ZN	0.17953	2,458.63	0.317	0.17975	0.17994	0.17888
ZR	0.00486	12.67	53.578	0.00343	0.00786	0.00328

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/13/2013 18:41

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51191	7,013.28	1.018	0.51606	0.51361	0.50607
AL	25.14509	2,521.93	0.481	25.18975	25.00822	25.23729
AS	0.48942	196.48	0.656	0.48919	0.48633	0.49274
B	0.49617	4,339.04	1.241	0.49960	0.49984	0.48906
BA	0.51400	336,300.23	1.690	0.51952	0.51848	0.50398
BE	0.49628	214,749.40	0.958	0.49911	0.49893	0.49079
CA	24.95589	23,927.73	0.603	25.01533	24.78473	25.06762
CD	0.49566	8,257.13	0.197	0.49654	0.49582	0.49461
CO	0.49415	2,749.13	0.238	0.49420	0.49530	0.49295
CR	0.49404	5,320.17	0.836	0.49721	0.49555	0.48937
CU	0.51149	6,695.69	1.335	0.51748	0.51293	0.50406
FE	24.81128	6,836.13	0.807	24.89653	24.58266	24.95465
K	24.71013	8,407.69	0.289	24.77453	24.63343	24.72242
LI	0.49610	2,933.45	0.303	0.49744	0.49637	0.49447
MG	24.33099	40,151.07	0.489	24.43876	24.20323	24.35099
MN	0.50084	31,142.35	0.857	0.50353	0.50310	0.49589
MO	0.50031	2,306.11	0.043	0.50047	0.50039	0.50006
NA	24.44668	24,514.80	0.158	24.45275	24.40548	24.48181
NI	0.49817	1,969.76	0.251	0.49806	0.49947	0.49698
P	0.50142	279.64	0.121	0.50188	0.50165	0.50073
PB	0.50217	691.98	0.623	0.50140	0.50561	0.49950
S	24.18801	4,872.34	0.172	24.14496	24.22810	24.19097
SB	0.50770	423.72	0.322	0.50599	0.50924	0.50786
SE	0.49427	177.65	0.256	0.49483	0.49517	0.49282
SI	25.52953	4,485.29	0.565	25.62330	25.36341	25.60189
SN	0.48878	614.12	0.144	0.48837	0.48959	0.48837
SR	0.50098	376,763.44	1.236	0.50788	0.49590	0.49917
TI	0.50596	30,890.22	1.035	0.50988	0.50798	0.50002
TL	0.49845	351.43	0.221	0.49818	0.49966	0.49751
V	0.50176	7,011.70	0.969	0.50539	0.50365	0.49624
Y1	21704.75522	21,704.76	0.319	21631.28330	21714.27857	21768.70379
Y2A	279035.92335	279,035.92	0.675	277885.60305	278013.83366	281208.33333
Y2R	18659.00815	18,659.01	0.415	18660.57500	18735.55389	18580.89557
ZN	0.49884	6,391.13	0.154	0.49856	0.49971	0.49825
ZR	0.50070	1,127.47	0.892	0.50585	0.49835	0.49789

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/13/2013 18:45

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00124	-17.53	23.908	0.00142	0.00141	0.00090
AL	-0.03485	2.23	111.187	0.00026	-0.07643	-0.02839
AS	-0.00065	-3.18	281.675	-0.00255	-0.00052	0.00111
B	-0.00014	4.03	216.653	-0.00012	-0.00045	0.00015
BA	0.00000	49.68	301.522	-0.00001	-0.00001	0.00001
BE	-0.00085	-639.28	0.475	-0.00085	-0.00085	-0.00085
CA	-0.00660	83.50	43.101	-0.00928	-0.00361	-0.00692
CD	-0.00010	-5.69	26.416	-0.00014	-0.00008	-0.00010
CO	-0.00021	1.82	47.585	-0.00016	-0.00014	-0.00032
CR	0.00024	-3.00	258.724	0.00026	-0.00039	0.00085
CU	-0.00166	-49.80	48.846	-0.00149	-0.00095	-0.00254
FE	-0.00040	-0.17	2090.215	-0.00999	0.00280	0.00598
K	-0.08856	-29.80	41.201	-0.09061	-0.12398	-0.05109
LI	0.00010	54.03	2700.007	-0.00175	0.00312	-0.00108
MG	-0.00224	-2.33	11.695	-0.00197	-0.00226	-0.00249
MN	0.00004	20.72	44.178	0.00005	0.00002	0.00006
MO	-0.00008	1.88	205.112	0.00007	-0.00025	-0.00005
NA	-0.00449	-26.68	148.741	0.00125	-0.00290	-0.01182
NI	0.00016	14.01	115.398	-0.00002	0.00035	0.00015
P	0.00056	-0.36	130.216	0.00106	-0.00028	0.00089
PB	0.00158	4.09	53.476	0.00223	0.00188	0.00062
S	-0.00713	-6.22	12.257	-0.00732	-0.00618	-0.00789
SB	0.00000	2.19	9680.047	-0.00051	-0.00053	0.00103
SE	0.00237	0.78	77.011	0.00448	0.00133	0.00130
SI	-0.00003	3.38	6077.818	0.00089	-0.00229	0.00130
SN	0.00029	2.95	168.175	-0.00021	0.00077	0.00032
SR	-0.00022	-151.56	11.206	-0.00019	-0.00024	-0.00023
TI	-0.00011	19.57	22.211	-0.00009	-0.00012	-0.00014
TL	-0.00312	-8.15	24.181	-0.00312	-0.00236	-0.00387
V	-0.00162	-25.00	14.085	-0.00143	-0.00188	-0.00156
Y1	22464.93326	22,464.93	0.237	22416.21469	22456.64135	22521.94374
Y2A	295459.84181	295,459.84	0.507	297108.34990	294182.04365	295089.13188
Y2R	18923.26500	18,923.27	1.147	19168.15417	18754.21068	18847.43014
ZN	-0.00068	17.22	8.411	-0.00071	-0.00061	-0.00071
ZR	0.00101	3.66	283.107	0.00413	0.00040	-0.00150

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 47

Date/Time: 11/13/2013 18:50

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00653	66.35	3.921	0.00677	0.00657	0.00626
AL	0.19370	25.49	15.507	0.17175	0.18141	0.22793
AS	0.01835	4.87	3.392	0.01880	0.01860	0.01764
B	0.04868	452.43	1.282	0.04923	0.04800	0.04882
BA	0.00530	3,808.04	0.127	0.00530	0.00530	0.00529
BE	0.00391	1,580.35	1.514	0.00385	0.00397	0.00390
CA	0.20253	287.90	0.613	0.20129	0.20377	0.20252
CD	0.00494	81.22	2.144	0.00487	0.00506	0.00489
CO	0.00514	32.64	3.995	0.00526	0.00525	0.00490
CR	0.01520	171.78	3.135	0.01489	0.01495	0.01575
CU	0.00911	102.32	4.590	0.00939	0.00930	0.00863
FE	0.19963	56.52	1.957	0.19531	0.20067	0.20291
K	0.42165	146.79	0.927	0.41781	0.42153	0.42562
LI	0.01948	168.42	10.256	0.02179	0.01829	0.01836
MG	0.09725	166.81	1.158	0.09799	0.09595	0.09780
MN	0.00518	366.73	1.673	0.00509	0.00519	0.00526
MO	0.01022	50.97	2.832	0.01036	0.00989	0.01042
NA	0.99842	997.94	1.301	0.99735	1.01191	0.98600
NI	0.01058	56.40	4.839	0.01062	0.01106	0.01004
P	0.09771	55.58	0.602	0.09725	0.09837	0.09751
PB	0.01825	27.65	1.001	0.01823	0.01808	0.01844
S	0.46827	92.99	0.301	0.46973	0.46692	0.46816
SB	0.02134	20.41	3.393	0.02145	0.02056	0.02200
SE	0.01945	7.15	10.887	0.01858	0.02187	0.01791
SI	0.12168	25.16	6.296	0.12453	0.11300	0.12751
SN	0.02013	28.64	3.908	0.01927	0.02082	0.02029
SR	0.00489	4,008.47	0.183	0.00489	0.00490	0.00488
TI	0.00971	668.85	0.314	0.00974	0.00968	0.00972
TL	0.03053	17.64	3.233	0.02993	0.02999	0.03167
V	0.00350	51.62	7.401	0.00380	0.00335	0.00335
Y1	22463.20495	22,463.20	0.093	22487.03025	22448.70437	22453.88023
Y2A	302248.66755	302,248.67	0.276	301952.94803	301601.34910	303191.70553
Y2R	18995.60452	18,995.60	0.096	18997.68334	18976.40522	19012.72500
ZN	0.02187	312.71	0.255	0.02182	0.02185	0.02193
ZR	0.05184	120.00	2.336	0.05136	0.05321	0.05094

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 48

Date/Time: 11/13/2013 18:54

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00151	-10.90	35.930	0.00134	0.00108	0.00212
AL	507.30567	49,700.08	0.682	509.90140	503.37796	508.63763
AS	-0.00847	-16.17	45.910	-0.01049	-0.01094	-0.00399
B	-0.02765	838.43	7.458	-0.02952	-0.02544	-0.02800
BA	0.00014	123.75	20.997	0.00011	0.00014	0.00017
BE	-0.00112	-638.20	1.691	-0.00114	-0.00110	-0.00113
CA	515.77238	444,611.13	0.826	516.08054	511.36805	519.86855
CD	0.00467	413.25	7.371	0.00447	0.00507	0.00447
CO	-0.00032	0.99	107.155	-0.00048	-0.00054	0.00007
CR	0.00270	-36.70	5.516	0.00280	0.00276	0.00253
CU	0.00314	152.88	4.460	0.00312	0.00329	0.00301
FE	204.78229	50,507.22	0.790	206.02649	202.95298	205.36738
K	-0.17087	-55.46	26.361	-0.21082	-0.17974	-0.12205
LI	-0.00145	353.44	207.316	0.00202	-0.00333	-0.00305
MG	552.56623	648,292.69	1.423	544.58230	552.81465	560.30173
MN	0.00359	212.00	3.347	0.00351	0.00373	0.00353
MO	-0.00118	-2.89	21.193	-0.00101	-0.00106	-0.00147
NA	-0.00059	-21.60	2910.400	0.01439	0.00305	-0.01920
NI	0.00361	2.60	3.523	0.00374	0.00361	0.00348
P	0.01200	5.33	11.086	0.01156	0.01349	0.01094
PB	0.00534	130.33	41.090	0.00285	0.00700	0.00618
S	-0.12922	-28.10	5.553	-0.12287	-0.13700	-0.12779
SB	-0.01189	6.32	47.107	-0.00550	-0.01597	-0.01421
SE	0.00174	-1.61	429.448	-0.00634	0.00837	0.00318
SI	0.02962	8.24	10.621	0.03285	0.02657	0.02943
SN	0.00581	8.63	22.744	0.00429	0.00665	0.00650
SR	0.00187	1,261.25	1.850	0.00183	0.00188	0.00189
TI	-0.00416	-201.40	1.075	-0.00411	-0.00418	-0.00418
TL	-0.00271	-6.47	31.383	-0.00261	-0.00360	-0.00191
V	-0.00602	-55.55	10.658	-0.00674	-0.00578	-0.00553
Y1	19196.90227	19,196.90	0.063	19203.83027	19182.85562	19204.02092
Y2A	246656.34658	246,656.35	0.551	247356.37417	247524.08940	245088.57616
Y2R	18014.60752	18,014.61	0.787	17995.54016	18164.96904	17883.31336
ZN	0.00812	359.92	1.373	0.00800	0.00822	0.00815
ZR	0.00602	14.32	17.216	0.00721	0.00533	0.00552

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 49

Date/Time: 11/13/2013 18:58

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21820	2,682.73	1.155	0.22056	0.21849	0.21555
AL	503.75665	49,870.46	0.215	502.68217	503.73984	504.84794
AS	0.09152	20.21	2.564	0.09130	0.08929	0.09397
B	-0.02871	841.35	3.960	-0.02756	-0.02873	-0.02983
BA	0.50195	298,923.70	1.275	0.50781	0.50291	0.49512
BE	0.50480	198,817.38	1.238	0.50958	0.50709	0.49773
CA	508.54732	443,476.54	0.451	509.63930	505.91356	510.08911
CD	0.94402	14,156.82	0.280	0.94664	0.94136	0.94406
CO	0.46006	2,255.43	0.232	0.46116	0.45903	0.45998
CR	0.46881	4,542.68	1.478	0.47440	0.47098	0.46106
CU	0.52369	6,416.73	1.489	0.53215	0.52213	0.51678
FE	202.64118	50,555.10	0.165	202.32723	202.60238	202.99393
K	-0.12262	-40.01	21.124	-0.11686	-0.15092	-0.10008
LI	-0.00129	353.72	206.584	-0.00338	-0.00221	0.00171
MG	545.21659	649,669.60	0.550	547.89904	545.77540	541.97532
MN	0.48201	27,278.97	1.383	0.48732	0.48417	0.47453
MO	-0.00181	-5.45	21.024	-0.00138	-0.00210	-0.00196
NA	0.00721	-14.23	129.763	0.00738	0.01648	-0.00223
NI	0.91905	3,182.01	0.266	0.92174	0.91698	0.91844
P	0.00893	5.14	23.605	0.01072	0.00947	0.00661
PB	0.05035	183.18	3.045	0.04916	0.05208	0.04982
S	-0.14322	-30.55	2.709	-0.14337	-0.13927	-0.14703
SB	0.62456	470.45	0.574	0.62849	0.62147	0.62373
SE	0.04767	13.01	4.500	0.04736	0.04996	0.04570
SI	0.04707	11.32	29.219	0.03652	0.06262	0.04207
SN	0.00504	7.76	12.398	0.00544	0.00535	0.00432
SR	0.00181	1,260.19	1.448	0.00184	0.00179	0.00180
TI	-0.00390	-173.15	1.211	-0.00393	-0.00392	-0.00385
TL	0.08516	39.37	2.518	0.08552	0.08711	0.08286
V	0.48794	6,249.87	1.572	0.49385	0.49070	0.47927
Y1	19169.99311	19,169.99	0.190	19171.07526	19205.76962	19133.13446
Y2A	253979.86687	253,979.87	1.077	251830.46358	253049.75166	257059.38538
Y2R	18204.54306	18,204.54	0.484	18121.30960	18296.73457	18195.58501
ZN	1.04718	11,991.42	0.274	1.05026	1.04459	1.04669
ZR	0.00666	15.86	18.113	0.00792	0.00552	0.00654

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 50

Date/Time: 11/13/2013 19:03

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50670	7,041.06	0.694	0.50666	0.51025	0.50321
AL	24.99060	2,545.17	1.217	25.19519	25.13540	24.64121
AS	0.49085	196.70	0.134	0.49124	0.49009	0.49121
B	0.48413	4,296.29	0.583	0.48381	0.48710	0.48149
BA	0.50421	334,646.78	1.087	0.50871	0.50582	0.49811
BE	0.49071	215,387.86	0.765	0.49285	0.49291	0.48638
CA	24.56896	23,923.58	0.653	24.65966	24.66363	24.38358
CD	0.49638	8,252.83	0.122	0.49590	0.49617	0.49706
CO	0.49636	2,756.05	0.061	0.49671	0.49622	0.49615
CR	0.48605	5,309.15	0.672	0.48648	0.48908	0.48259
CU	0.50405	6,692.69	0.787	0.50498	0.50747	0.49970
FE	24.48210	6,850.66	0.693	24.60855	24.54861	24.28915
K	24.51017	8,468.51	0.577	24.64868	24.51577	24.36604
LI	0.49345	2,962.95	1.264	0.50056	0.49094	0.48887
MG	24.13226	40,442.75	0.434	24.23697	24.13231	24.02749
MN	0.49822	31,424.14	0.749	0.49974	0.50095	0.49396
MO	0.50226	2,310.71	0.094	0.50280	0.50195	0.50202
NA	24.32621	24,771.05	0.187	24.36269	24.34081	24.27511
NI	0.49812	1,965.85	0.203	0.49919	0.49718	0.49799
P	0.50322	280.09	0.034	0.50314	0.50310	0.50341
PB	0.50138	689.55	0.379	0.50341	0.49965	0.50107
S	24.36937	4,899.59	0.101	24.34269	24.39141	24.37401
SB	0.50748	422.61	0.336	0.50862	0.50552	0.50830
SE	0.49598	177.93	0.959	0.49501	0.50115	0.49178
SI	25.40633	4,532.72	0.510	25.38296	25.54601	25.29003
SN	0.48912	613.39	0.349	0.49094	0.48756	0.48886
SR	0.49729	379,353.45	0.723	0.49556	0.50143	0.49489
TI	0.49880	30,890.71	0.744	0.49939	0.50217	0.49482
TL	0.49647	349.42	0.161	0.49569	0.49729	0.49643
V	0.49796	7,058.14	0.761	0.49969	0.50059	0.49362
Y1	21663.58856	21,663.59	0.019	21668.31178	21661.97615	21660.47775
Y2A	283037.27634	283,037.28	0.481	282395.12922	282116.71637	284599.98343
Y2R	18947.52634	18,947.53	0.424	18871.63308	18939.18447	19031.76148
ZN	0.49940	6,385.48	0.066	0.49931	0.49976	0.49912
ZR	0.49343	1,128.28	0.547	0.49590	0.49385	0.49055

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 51

Date/Time: 11/13/2013 19:07

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00200	-6.70	10.300	0.00176	0.00210	0.00213
AL	0.00350	6.14	466.023	0.01631	0.00903	-0.01485
AS	0.00124	-2.38	73.474	0.00081	0.00230	0.00063
B	-0.00018	3.85	22.483	-0.00022	-0.00014	-0.00018
BA	0.00009	115.36	16.884	0.00007	0.00009	0.00010
BE	-0.00078	-614.08	2.562	-0.00080	-0.00077	-0.00077
CA	0.03369	123.94	5.301	0.03170	0.03422	0.03515
CD	-0.00007	-5.09	87.394	-0.00004	-0.00003	-0.00014
CO	0.00018	4.07	97.053	0.00003	0.00013	0.00038
CR	0.00032	-2.08	129.378	-0.00016	0.00059	0.00054
CU	-0.00109	-42.30	29.275	-0.00081	-0.00144	-0.00102
FE	0.02243	6.36	11.078	0.01962	0.02332	0.02434
K	-0.08258	-28.02	14.565	-0.09597	-0.07906	-0.07270
LI	-0.00155	44.94	70.854	-0.00072	-0.00114	-0.00279
MG	0.03162	55.58	5.658	0.03305	0.03220	0.02962
MN	0.00012	25.95	66.557	0.00020	0.00012	0.00004
MO	-0.00011	1.71	92.840	-0.00002	-0.00010	-0.00023
NA	-0.02531	-48.38	7.694	-0.02665	-0.02620	-0.02308
NI	-0.00004	13.20	315.747	-0.00018	0.00001	0.00005
P	0.00089	-0.17	17.275	0.00102	0.00072	0.00093
PB	0.00189	4.54	59.468	0.00076	0.00301	0.00190
S	-0.00679	-6.15	24.653	-0.00579	-0.00585	-0.00872
SB	0.00069	2.78	199.040	0.00219	-0.00046	0.00033
SE	0.00070	0.16	312.075	-0.00176	0.00245	0.00142
SI	0.00598	4.50	65.870	0.00192	0.00979	0.00623
SN	0.00035	3.03	165.347	0.00090	-0.00024	0.00038
SR	-0.00018	-121.43	7.051	-0.00018	-0.00017	-0.00020
TI	0.00003	29.17	113.264	0.00004	-0.00001	0.00006
TL	-0.00160	-7.00	11.517	-0.00177	-0.00141	-0.00160
V	-0.00123	-19.33	29.158	-0.00101	-0.00164	-0.00102
Y1	22483.75978	22,483.76	0.596	22463.81596	22360.88463	22626.57874
Y2A	299022.80760	299,022.81	0.551	298293.48907	297867.13055	300907.80318
Y2R	19116.39732	19,116.40	0.581	19072.31715	19034.17482	19242.70000
ZN	-0.00067	17.40	20.898	-0.00058	-0.00060	-0.00083
ZR	0.00073	3.03	393.254	-0.00099	-0.00088	0.00406

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ICP-AES Run Data Report

1331707T72

Reviewed By
John W Yanzuk

Reviewed Date
11/14/2013 1:47AM

Data File Name 1331707T72.TXT
Run Name: 1331707T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 11:00AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/13/2013 22:48

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00081	79.284	-0.00028	-0.00062	-0.00152
AL	0.000	0.00979	80.846	0.00065	0.01418	0.01453
AS	0.000	-0.00703	57.496	-0.00386	-0.00565	-0.01158
B	0.000	-0.00001	194.875	0.00001	-0.00003	-0.00001
BA	0.000	0.00025	29.374	0.00020	0.00033	0.00021
BE	0.000	-0.09978	0.872	-0.09882	-0.10052	-0.09998
CA	0.000	0.00501	3.153	0.00491	0.00519	0.00494
CD	0.000	-0.01441	13.177	-0.01629	-0.01445	-0.01249
CO	0.000	0.00872	39.703	0.01234	0.00837	0.00544
CR	0.000	-0.00001	87.411	0.00000	-0.00002	-0.00001
CU	0.000	-0.00643	10.185	-0.00701	-0.00572	-0.00656
FE	0.000	0.00012	14.121	0.00013	0.00012	0.00010
K	0.000	-0.07495	33.624	-0.09779	-0.07914	-0.04791
LI	0.000	0.00240	19.576	0.00232	0.00198	0.00291
MG	0.000	0.00100	12.624	0.00109	0.00106	0.00086
MN	0.000	0.00374	16.625	0.00436	0.00374	0.00311
MO	0.000	0.00525	18.339	0.00557	0.00416	0.00601
NA	0.000	-0.00080	82.851	-0.00156	-0.00052	-0.00032
NI	0.000	0.03247	6.018	0.03241	0.03445	0.03054
P	0.000	-0.00001	330.229	0.00002	-0.00001	-0.00004
PB	0.000	0.00867	6.950	0.00856	0.00813	0.00932
S	0.000	-0.00032	1.063	-0.00033	-0.00032	-0.00032
SB	0.000	0.00015	34.726	0.00009	0.00016	0.00020
SE	0.000	0.00199	5.233	0.00199	0.00189	0.00210
SI	0.000	0.00011	23.847	0.00014	0.00009	0.00009
SN	0.000	0.00604	25.350	0.00428	0.00688	0.00697
SR	0.000	-0.00047	1.396	-0.00046	-0.00047	-0.00046
TI	0.000	0.00668	16.158	0.00793	0.00596	0.00617
TL	0.000	-0.01692	2.975	-0.01641	-0.01693	-0.01741
V	0.000	-0.00367	34.322	-0.00255	-0.00343	-0.00503
Y1	0.000	22424.01707	0.061	22439.66218	22417.61099	22414.77803
Y2A	0.000	301835.34069	1.107	304087.69154	297996.44511	303421.88541
Y2R	0.000	19066.17896	0.088	19080.33579	19047.55000	19070.65109
ZN	0.000	0.06444	1.625	0.06543	0.06454	0.06334
ZR	0.000	0.00002	291.162	0.00007	-0.00001	-0.00002

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/13/2013 22:52

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.26770	0.211	13.25465	13.24862	13.29983
CA	50.000	2.50743	0.286	2.51507	2.50637	2.50084
FE	50.000	0.71532	0.311	0.71746	0.71303	0.71546
K	50.000	45.01444	0.082	45.04446	45.02549	44.97336
MG	50.000	4.27756	0.095	4.28220	4.27481	4.27566
NA	50.000	2.66498	0.066	2.66410	2.66384	2.66701
S	50.000	0.46280	0.057	0.46257	0.46309	0.46275
SI	50.000	0.46353	0.187	0.46412	0.46253	0.46392
Y1	50.000	21228.87305	0.179	21247.00373	21185.28961	21254.32580
Y2R	50.000	18837.02786	0.139	18829.88328	18866.12839	18815.07191

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/13/2013 22:56

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.37181	0.437	2.36238	2.37015	2.38291
AS	1.000	0.92710	0.532	0.92672	0.93221	0.92238
B	1.000	0.02930	0.253	0.02924	0.02927	0.02938
BA	1.000	2.28017	0.730	2.28127	2.26300	2.29624
BE	1.000	75.04687	0.768	74.87260	74.57784	75.69018
CD	1.000	37.62932	0.082	37.60413	37.62029	37.66352
CO	1.000	12.63522	0.197	12.62946	12.66246	12.61374
CU	1.000	2.28309	0.447	2.27246	2.28398	2.29282
LI	1.000	0.30149	0.560	0.30062	0.30042	0.30344
MN	1.000	10.82389	0.525	10.80601	10.77818	10.88746
NI	1.000	8.95587	0.050	8.95596	8.96029	8.95137
P	1.000	0.02530	0.053	0.02531	0.02530	0.02528
PB	1.000	3.11081	0.240	3.11828	3.11077	3.10338
SE	1.000	0.81272	0.130	0.81387	0.81247	0.81180
SR	1.000	2.61663	0.750	2.61176	2.59989	2.63823
TL	1.000	1.69170	0.359	1.69252	1.69732	1.68526
Y1	1.000	21551.90278	0.055	21547.71501	21542.63589	21565.35745
Y2A	1.000	287752.07091	0.489	287728.62823	289171.13983	286356.44467
Y2R	1.000	19002.10577	0.490	18983.52500	19103.16550	18919.62682
ZN	1.000	28.90495	0.041	28.89665	28.89971	28.91850

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 4 Date/Time: 11/13/2013 23:01

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03686	0.288	0.03698	0.03682	0.03678
MO	1.000	10.56738	0.223	10.57497	10.58625	10.54094
SB	1.000	0.03732	0.640	0.03748	0.03743	0.03704
SN	1.000	2.87509	0.266	2.88390	2.87125	2.87012
TI	1.000	10.39838	0.201	10.41945	10.39801	10.37767
V	1.000	2.42556	0.353	2.43545	2.42063	2.42059
Y1	1.000	22523.05200	0.060	22513.50730	22517.09316	22538.55554
Y2A	1.000	304080.72321	0.427	302797.29954	304050.96602	305393.90406
Y2R	1.000	19440.78035	0.684	19531.41831	19288.03372	19502.88902
ZR	1.000	0.11701	0.587	0.11643	0.11776	0.11683

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/13/2013 23:05

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60851	8,427.71	0.976	0.60190	0.61024	0.61339
AL	29.69158	3,055.33	0.501	29.85362	29.56137	29.65975
AS	0.59990	238.73	0.318	0.60096	0.60104	0.59770
B	0.59020	5,177.19	0.996	0.58343	0.59310	0.59406
BA	0.60749	401,434.84	1.194	0.59917	0.61077	0.61251
BE	0.59016	256,539.99	0.876	0.58436	0.59182	0.59429
CA	29.14587	28,427.76	0.582	29.33516	29.09499	29.00747
CD	0.59969	9,834.21	0.149	0.59870	0.59996	0.60042
CO	0.59807	3,285.81	0.290	0.59824	0.59626	0.59972
CR	0.59572	6,354.37	0.689	0.59103	0.59866	0.59747
CU	0.60540	7,949.67	1.380	0.59687	0.60575	0.61357
FE	29.02692	8,112.59	0.576	29.21748	28.95854	28.90475
K	29.41096	10,245.80	0.471	29.56884	29.35476	29.30927
LI	0.60040	3,542.65	1.014	0.60735	0.59786	0.59598
MG	28.92780	48,439.45	0.385	29.05070	28.89905	28.83366
MN	0.59941	37,612.50	0.638	0.59510	0.60075	0.60238
MO	0.60222	2,759.38	0.165	0.60113	0.60247	0.60307
NA	29.20133	30,132.49	0.311	29.29834	29.18734	29.11831
NI	0.59864	2,327.96	0.195	0.59776	0.59819	0.59996
P	0.61337	336.05	0.184	0.61426	0.61210	0.61375
PB	0.60166	819.31	0.570	0.59885	0.60548	0.60065
S	29.43749	5,901.97	0.227	29.40873	29.38974	29.51400
SB	0.61689	502.05	0.281	0.61766	0.61490	0.61811
SE	0.60762	214.25	0.691	0.60280	0.61046	0.60961
SI	30.42462	5,464.29	0.209	30.49159	30.41703	30.36525
SN	0.58674	732.29	0.224	0.58679	0.58539	0.58802
SR	0.59915	454,255.22	1.731	0.59073	0.59598	0.61073
TI	0.60884	36,753.69	0.907	0.60273	0.61032	0.61347
TL	0.59348	413.98	0.296	0.59471	0.59426	0.59147
V	0.59982	8,431.84	1.049	0.59277	0.60181	0.60487
Y1	21672.82777	21,672.83	0.219	21727.20701	21639.74803	21651.52827
Y2A	289809.97349	289,809.97	0.966	292931.82571	288972.16700	287525.92777
Y2R	19368.05046	19,368.05	0.540	19276.29611	19346.06158	19481.79370
ZN	0.60489	7,628.28	0.089	0.60478	0.60547	0.60441
ZR	0.59828	1,355.94	0.668	0.60148	0.59380	0.59956

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/13/2013 23:09

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00007	-9.05	565.419	-0.00012	-0.00043	0.00034
AL	0.00178	3.94	1890.803	0.03488	-0.03255	0.00303
AS	-0.00409	-4.51	27.624	-0.00372	-0.00320	-0.00536
B	0.00188	14.27	16.630	0.00214	0.00153	0.00196
BA	0.00004	100.21	65.313	0.00006	0.00004	0.00001
BE	-0.00046	-603.38	8.040	-0.00043	-0.00050	-0.00045
CA	-0.01152	85.40	23.272	-0.01113	-0.01438	-0.00906
CD	-0.00001	-6.07	81.684	-0.00002	-0.00001	0.00000
CO	0.00007	4.33	339.960	0.00025	0.00016	-0.00020
CR	-0.00004	-0.07	1110.956	-0.00050	0.00035	0.00004
CU	-0.00080	-47.27	59.902	-0.00061	-0.00134	-0.00044
FE	0.00353	3.22	273.148	-0.00004	0.01446	-0.00382
K	0.02072	-18.71	124.489	0.00223	0.05019	0.00975
LI	0.00193	57.39	79.069	0.00269	0.00017	0.00292
MG	0.01246	14.60	6.378	0.01228	0.01333	0.01177
MN	0.00001	23.58	1330.435	0.00013	-0.00016	0.00007
MO	0.00016	3.11	76.218	0.00004	0.00028	0.00015
NA	-0.00537	-34.27	118.826	-0.00343	-0.00018	-0.01249
NI	-0.00002	14.52	2079.421	-0.00043	0.00004	0.00033
P	0.00072	-0.10	88.130	0.00066	0.00139	0.00012
PB	0.00002	3.94	4048.130	-0.00002	-0.00094	0.00104
S	0.00364	-5.22	139.418	0.00443	0.00827	-0.00178
SB	-0.00080	2.76	170.335	-0.00034	0.00027	-0.00232
SE	0.00123	1.34	204.755	-0.00152	0.00341	0.00179
SI	0.01961	5.59	16.282	0.02275	0.01970	0.01637
SN	0.00016	2.92	289.716	0.00066	-0.00022	0.00003
SR	0.00003	-98.67	28.528	0.00004	0.00004	0.00002
TI	-0.00013	32.47	43.322	-0.00007	-0.00018	-0.00014
TL	-0.00294	-7.62	39.827	-0.00247	-0.00207	-0.00427
V	-0.00046	-15.98	22.798	-0.00058	-0.00042	-0.00038
Y1	22496.79230	22,496.79	0.955	22744.74630	22364.60139	22381.02920
Y2A	304036.08418	304,036.08	1.948	310869.51827	300363.73426	300875.00000
Y2R	19265.73559	19,265.74	0.396	19177.80775	19306.55000	19312.84902
ZN	-0.00092	17.13	4.370	-0.00091	-0.00096	-0.00088
ZR	0.00251	5.94	82.776	0.00485	0.00091	0.00176

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/13/2013 23:13

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00504	70.73	7.911	0.00499	0.00467	0.00547
AL	0.18200	22.76	23.587	0.22109	0.18886	0.13606
AS	0.01884	5.07	6.484	0.01785	0.02021	0.01848
B	0.04986	446.00	1.373	0.05065	0.04957	0.04937
BA	0.00534	3,800.44	0.941	0.00540	0.00531	0.00531
BE	0.00428	1,571.77	1.128	0.00433	0.00424	0.00427
CA	0.18412	279.90	1.552	0.18090	0.18635	0.18510
CD	0.00506	79.48	0.540	0.00509	0.00506	0.00503
CO	0.00507	32.62	2.923	0.00509	0.00521	0.00492
CR	0.01456	164.57	1.725	0.01485	0.01441	0.01442
CU	0.00979	99.80	6.587	0.00939	0.00945	0.01053
FE	0.18840	56.12	1.965	0.19146	0.18428	0.18944
K	0.49053	146.92	2.736	0.50089	0.49532	0.47537
LI	0.02167	174.14	3.431	0.02242	0.02094	0.02163
MG	0.10606	175.66	1.963	0.10478	0.10493	0.10846
MN	0.00517	365.45	2.290	0.00531	0.00512	0.00510
MO	0.01006	49.73	2.520	0.00979	0.01028	0.01011
NA	0.98730	1,002.15	1.551	0.97862	0.97830	1.00499
NI	0.01066	56.93	3.994	0.01039	0.01115	0.01045
P	0.09921	55.25	0.848	0.10009	0.09841	0.09914
PB	0.01583	25.79	1.053	0.01571	0.01602	0.01576
S	0.48320	93.85	1.414	0.47579	0.48456	0.48925
SB	0.02008	19.98	0.858	0.02025	0.02008	0.01990
SE	0.02222	8.92	1.702	0.02204	0.02196	0.02265
SI	0.12448	24.74	4.897	0.12074	0.12118	0.13151
SN	0.02067	29.14	1.426	0.02050	0.02101	0.02049
SR	0.00516	4,003.81	1.159	0.00522	0.00515	0.00510
TI	0.00978	663.40	2.031	0.00997	0.00957	0.00981
TL	0.03165	18.46	1.433	0.03213	0.03157	0.03123
V	0.00389	48.27	5.101	0.00387	0.00410	0.00371
Y1	22299.62051	22,299.62	0.191	22348.27540	22280.68878	22269.89735
Y2A	306000.83655	306,000.84	0.877	303081.51093	308364.00733	306556.99139
Y2R	19588.41948	19,588.42	0.386	19657.28378	19507.44967	19600.52500
ZN	0.01996	284.92	0.317	0.01988	0.02001	0.01997
ZR	0.05101	117.20	3.158	0.04919	0.05227	0.05157

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/13/2013 23:17

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-7.83	304.789	-0.00036	0.00025	-0.00020
AL	487.08867	49,319.62	0.642	490.10460	483.86431	487.29710
AS	-0.00587	-14.60	40.003	-0.00558	-0.00835	-0.00368
B	-0.02223	839.78	23.770	-0.02821	-0.01818	-0.02030
BA	0.00013	140.11	7.509	0.00012	0.00013	0.00013
BE	-0.00067	-596.67	7.108	-0.00062	-0.00067	-0.00071
CA	486.48096	432,243.98	0.881	483.45365	484.60417	491.38506
CD	0.00597	411.39	4.136	0.00584	0.00626	0.00582
CO	-0.00057	0.53	59.133	-0.00057	-0.00091	-0.00024
CR	0.00170	-38.48	53.680	0.00268	0.00087	0.00155
CU	0.00432	153.18	28.173	0.00312	0.00555	0.00430
FE	195.03179	49,482.33	0.724	196.53402	193.73076	194.83061
K	-0.01163	-29.34	351.795	0.01132	-0.05889	0.01266
LI	-0.00197	330.45	176.094	-0.00544	-0.00198	0.00150
MG	521.48437	640,674.63	0.455	522.88650	522.82215	518.74446
MN	0.00349	215.82	3.552	0.00340	0.00343	0.00363
MO	-0.00158	-4.42	7.488	-0.00171	-0.00156	-0.00147
NA	0.01059	-17.48	176.066	-0.00939	0.01363	0.02754
NI	0.00250	0.99	31.609	0.00192	0.00217	0.00340
P	0.01075	4.82	4.207	0.01046	0.01052	0.01128
PB	0.00533	126.68	75.353	0.00317	0.00996	0.00285
S	-0.12727	-28.94	0.674	-0.12641	-0.12813	-0.12726
SB	-0.01123	7.16	33.871	-0.00910	-0.01562	-0.00897
SE	0.00093	-0.90	304.407	0.00123	-0.00203	0.00358
SI	0.04296	9.55	6.577	0.04436	0.04480	0.03970
SN	0.00366	6.40	19.206	0.00440	0.00299	0.00360
SR	0.00206	1,297.31	2.138	0.00203	0.00211	0.00205
TI	-0.00415	-189.25	4.875	-0.00398	-0.00409	-0.00437
TL	-0.00311	-6.43	52.276	-0.00436	-0.00369	-0.00127
V	-0.00539	-56.80	4.459	-0.00560	-0.00543	-0.00513
Y1	19343.48587	19,343.49	0.229	19301.11592	19340.00932	19389.33236
Y2A	260112.85915	260,112.86	0.966	261933.93094	261156.97674	257247.66977
Y2R	18852.63868	18,852.64	0.295	18815.05892	18916.41702	18826.44010
ZN	0.00876	355.85	2.376	0.00884	0.00892	0.00853
ZR	0.00597	13.45	15.139	0.00492	0.00643	0.00654

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/13/2013 23:22

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21458	2,691.10	0.652	0.21603	0.21448	0.21324
AL	491.32124	49,615.31	0.379	492.56717	492.21630	489.18024
AS	0.08594	18.60	4.384	0.08988	0.08237	0.08559
B	-0.02667	825.25	2.598	-0.02739	-0.02601	-0.02660
BA	0.48903	295,404.55	0.408	0.48736	0.49124	0.48849
BE	0.49486	196,571.94	0.223	0.49559	0.49359	0.49540
CA	487.88687	432,189.45	0.465	489.11485	485.27027	489.27549
CD	0.94283	14,085.95	0.153	0.94323	0.94122	0.94402
CO	0.46021	2,256.76	0.079	0.46019	0.45986	0.46058
CR	0.46736	4,506.79	0.096	0.46703	0.46787	0.46718
CU	0.51310	6,325.98	0.204	0.51190	0.51359	0.51381
FE	196.36039	49,650.28	0.451	197.07877	196.63038	195.37201
K	-0.02409	-33.46	100.391	0.00162	-0.02750	-0.04639
LI	0.00027	342.98	226.004	0.00003	-0.00018	0.00095
MG	524.72664	641,436.52	0.895	519.36768	528.11141	526.70084
MN	0.47818	27,430.39	0.205	0.47858	0.47890	0.47706
MO	-0.00177	-5.20	1.609	-0.00178	-0.00173	-0.00179
NA	0.01081	-17.23	75.104	0.01661	0.01429	0.00153
NI	0.91313	3,151.86	0.084	0.91231	0.91323	0.91384
P	0.00856	5.04	11.322	0.00768	0.00960	0.00840
PB	0.04863	179.72	4.705	0.04608	0.05050	0.04931
S	-0.13475	-30.36	5.842	-0.14134	-0.13687	-0.12603
SB	0.62490	464.85	0.588	0.62628	0.62074	0.62768
SE	0.05425	15.83	9.400	0.04841	0.05783	0.05651
SI	0.05301	11.28	11.149	0.05676	0.04620	0.05608
SN	0.00507	7.98	28.409	0.00667	0.00467	0.00388
SR	0.00204	1,303.57	0.525	0.00204	0.00203	0.00205
TI	-0.00401	-165.45	1.486	-0.00394	-0.00404	-0.00404
TL	0.08403	39.05	2.006	0.08436	0.08553	0.08221
V	0.48074	6,219.40	0.317	0.48225	0.47920	0.48077
Y1	19383.13202	19,383.13	0.185	19417.36218	19386.08093	19345.95297
Y2A	264889.15125	264,889.15	0.205	265054.65116	265331.42810	264281.37450
Y2R	18799.33738	18,799.34	0.456	18831.71255	18702.11282	18864.18676
ZN	1.04309	11,908.10	0.111	1.04330	1.04185	1.04413
ZR	0.00494	11.16	8.507	0.00448	0.00531	0.00504

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/13/2013 23:26

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49955	7,009.65	1.492	0.49306	0.49790	0.50769
AL	24.43012	2,518.55	1.531	24.69703	24.59059	24.00274
AS	0.49569	197.17	0.551	0.49880	0.49369	0.49457
B	0.48679	4,327.22	1.030	0.48197	0.48641	0.49198
BA	0.49647	332,427.45	2.197	0.48617	0.49536	0.50789
BE	0.48399	213,112.30	1.303	0.47907	0.48178	0.49110
CA	24.15001	23,629.01	1.018	24.25154	24.32884	23.86965
CD	0.49932	8,203.18	0.174	0.49974	0.49990	0.49832
CO	0.49859	2,745.13	0.170	0.49952	0.49837	0.49786
CR	0.49185	5,316.14	1.093	0.48781	0.48979	0.49795
CU	0.49923	6,636.84	1.328	0.49304	0.49843	0.50622
FE	24.06942	6,752.81	1.078	24.11955	24.30018	23.78852
K	24.38299	8,504.98	0.593	24.47882	24.45348	24.21666
LI	0.50315	2,981.69	0.257	0.50235	0.50464	0.50246
MG	23.97036	40,308.12	0.795	24.05525	24.10365	23.75217
MN	0.49304	31,351.61	1.445	0.48769	0.49030	0.50112
MO	0.50089	2,299.96	0.172	0.50183	0.50070	0.50014
NA	24.22676	25,039.15	0.553	24.23252	24.35775	24.09001
NI	0.50023	1,951.47	0.104	0.50084	0.49993	0.49994
P	0.50902	279.34	0.309	0.50959	0.50725	0.51024
PB	0.50522	689.81	0.615	0.50870	0.50271	0.50426
S	24.44430	4,909.55	0.170	24.48728	24.44136	24.40428
SB	0.51247	418.40	0.371	0.51356	0.51027	0.51357
SE	0.50546	178.73	0.417	0.50316	0.50593	0.50730
SI	24.99376	4,497.28	0.630	25.07244	25.09631	24.81251
SN	0.48764	610.25	0.160	0.48741	0.48700	0.48851
SR	0.49304	378,786.47	0.711	0.49084	0.49120	0.49709
TI	0.49958	30,565.17	1.329	0.49392	0.49793	0.50688
TL	0.50038	349.38	0.163	0.50040	0.49955	0.50119
V	0.49021	6,980.35	1.580	0.48332	0.48872	0.49859
Y1	21715.54040	21,715.54	0.233	21665.03063	21715.40000	21766.19057
Y2A	293672.40998	293,672.41	1.234	296749.17164	294588.96620	289679.09211
Y2R	19403.19525	19,403.20	0.969	19322.79588	19268.75374	19618.03614
ZN	0.50344	6,366.00	0.212	0.50455	0.50333	0.50243
ZR	0.49733	1,129.21	0.675	0.49544	0.50121	0.49534

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/13/2013 23:30

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-8.62	470.631	-0.00017	0.00008	0.00001
AL	0.01395	5.22	221.790	0.04961	-0.00220	-0.00557
AS	-0.00267	-3.92	28.007	-0.00225	-0.00222	-0.00353
B	0.00112	7.53	45.354	0.00157	0.00120	0.00057
BA	0.00012	160.36	5.923	0.00013	0.00012	0.00011
BE	-0.00044	-594.33	4.219	-0.00042	-0.00044	-0.00046
CA	0.00802	105.32	40.309	0.00544	0.01164	0.00697
CD	0.00008	-4.57	89.871	0.00000	0.00013	0.00010
CO	0.00007	4.32	456.656	-0.00020	0.00040	0.00000
CR	-0.00013	-1.02	246.210	-0.00048	-0.00004	0.00013
CU	-0.00038	-41.62	70.639	-0.00068	-0.00026	-0.00019
FE	0.01403	6.22	26.274	0.01410	0.01031	0.01768
K	0.01091	-22.30	137.636	-0.00566	0.02361	0.01477
LI	-0.00023	45.46	419.874	-0.00123	0.00064	-0.00008
MG	0.02664	38.92	5.605	0.02587	0.02569	0.02836
MN	0.00039	48.68	5.687	0.00037	0.00042	0.00039
MO	0.00003	2.52	403.969	-0.00010	0.00015	0.00005
NA	-0.00851	-37.85	191.901	-0.00333	0.00461	-0.02682
NI	-0.00004	14.50	359.641	0.00005	0.00003	-0.00019
P	0.00087	-0.01	65.830	0.00022	0.00131	0.00108
PB	0.00009	4.03	1439.966	0.00131	0.00012	-0.00117
S	-0.00172	-6.35	225.615	0.00107	-0.00008	-0.00614
SB	-0.00053	2.98	309.497	0.00101	-0.00224	-0.00036
SE	-0.00170	0.28	50.421	-0.00256	-0.00167	-0.00085
SI	0.00961	3.84	40.403	0.01355	0.00951	0.00578
SN	-0.00015	2.53	179.172	0.00005	-0.00005	-0.00046
SR	0.00004	-94.68	68.674	0.00007	0.00002	0.00003
TI	0.00044	68.67	29.026	0.00058	0.00032	0.00042
TL	-0.00274	-7.49	34.575	-0.00383	-0.00209	-0.00231
V	-0.00065	-18.78	48.965	-0.00067	-0.00095	-0.00032
Y1	22555.55772	22,555.56	0.106	22554.33480	22532.23903	22580.09932
Y2A	304789.10103	304,789.10	0.191	305111.85516	305136.99201	304118.45593
Y2R	19440.03546	19,440.04	0.818	19257.22976	19545.61114	19517.26547
ZN	-0.00083	18.37	4.504	-0.00085	-0.00079	-0.00085
ZR	0.00132	3.28	185.055	0.00345	0.00183	-0.00134

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/13/2013 23:35

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00031	-12.56	32.087	-0.00023	-0.00042	-0.00027
AL	1.15760	126.15	1.801	1.13494	1.17596	1.16190
AS	-0.00069	-3.68	71.798	-0.00075	-0.00017	-0.00115
B	0.00457	95.25	11.904	0.00411	0.00517	0.00442
BA	0.02757	19,360.38	1.320	0.02748	0.02725	0.02797
BE	-0.00026	-515.95	5.860	-0.00025	-0.00025	-0.00028
CA	3.01038	3,122.37	0.795	3.02359	2.98277	3.02477
CD	0.00072	24.75	12.343	0.00064	0.00070	0.00081
CO	0.00308	22.73	5.109	0.00290	0.00317	0.00318
CR	0.00324	34.00	7.390	0.00320	0.00303	0.00350
CU	0.01397	152.74	1.904	0.01374	0.01427	0.01391
FE	9.26570	2,688.41	0.636	9.32611	9.20839	9.26261
K	0.10243	10.03	19.272	0.11358	0.11407	0.07964
LI	0.00184	60.78	102.934	0.00396	0.00034	0.00121
MG	0.40196	696.11	0.215	0.40113	0.40188	0.40286
MN	0.29882	19,864.23	1.439	0.29858	0.29465	0.30324
MO	0.00101	7.30	148.576	0.00273	0.00033	-0.00003
NA	0.12529	103.51	10.176	0.12038	0.13976	0.11572
NI	0.00630	39.25	5.160	0.00593	0.00645	0.00652
P	0.29150	166.69	0.688	0.28920	0.29288	0.29243
PB	2.73368	3,867.29	1.140	2.69769	2.75166	2.75171
S	0.98503	201.56	0.463	0.97982	0.98699	0.98829
SB	-0.00276	1.87	13.661	-0.00313	-0.00279	-0.00237
SE	-0.00041	0.75	374.905	-0.00169	-0.00081	0.00128
SI	0.34045	65.07	1.646	0.33403	0.34439	0.34293
SN	0.00375	7.65	4.295	0.00381	0.00387	0.00356
SR	0.01925	15,326.52	1.243	0.01918	0.01904	0.01951
TI	0.07691	4,944.58	1.012	0.07676	0.07622	0.07775
TL	-0.00285	-7.85	13.525	-0.00328	-0.00269	-0.00256
V	0.00939	132.54	4.449	0.00916	0.00913	0.00987
Y1	22767.52455	22,767.52	0.968	23021.81188	22633.90717	22646.85459
Y2A	306869.36674	306,869.37	1.364	307837.70764	310487.17522	302283.21736
Y2R	19935.78351	19,935.78	0.688	19898.17682	20087.74158	19821.43214
ZN	0.01790	276.59	1.609	0.01758	0.01796	0.01815
ZR	0.00283	6.89	69.146	0.00491	0.00103	0.00254

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/13/2013 23:39

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02467	489.69	2.251	0.02517	0.02407	0.02476
AL	2.46813	261.86	1.578	2.47466	2.42631	2.50341
AS	0.62475	259.51	0.310	0.62253	0.62611	0.62561
B	0.24571	2,246.58	0.994	0.24311	0.24795	0.24607
BA	0.09383	65,045.32	0.493	0.09331	0.09420	0.09398
BE	0.02378	10,455.04	0.372	0.02368	0.02384	0.02381
CA	4.34744	4,399.96	0.912	4.37590	4.30214	4.36427
CD	0.06383	1,096.93	0.185	0.06378	0.06397	0.06375
CO	0.13284	762.93	0.395	0.13294	0.13332	0.13228
CR	0.25004	2,795.94	0.602	0.24879	0.25171	0.24963
CU	0.66053	9,126.07	0.468	0.65761	0.66378	0.66022
FE	10.19206	2,913.41	0.502	10.23812	10.13706	10.20100
K	2.58645	889.99	1.091	2.61861	2.57489	2.56585
LI	1.25259	7,411.27	0.499	1.25879	1.24629	1.25270
MG	1.60869	2,764.03	0.731	1.61246	1.59551	1.61809
MN	0.38152	25,096.59	0.576	0.37914	0.38348	0.38194
MO	0.25245	1,203.90	0.251	0.25285	0.25279	0.25172
NA	2.58750	2,682.09	0.634	2.59349	2.56895	2.60006
NI	0.20171	825.42	0.280	0.20213	0.20193	0.20107
P	1.57148	893.22	0.194	1.57254	1.57386	1.56804
PB	3.39415	4,750.70	0.206	3.40005	3.39600	3.38641
S	1.01270	204.82	0.100	1.01215	1.01209	1.01387
SB	0.51970	436.25	0.390	0.51739	0.52118	0.52053
SE	0.99955	366.05	0.437	0.99664	1.00457	0.99745
SI	0.36983	69.79	2.704	0.37455	0.35835	0.37660
SN	0.74611	967.32	0.207	0.74754	0.74632	0.74448
SR	0.04531	35,885.18	0.474	0.04508	0.04551	0.04533
TI	0.20292	12,851.15	0.631	0.20148	0.20392	0.20336
TL	1.34481	1,018.15	0.432	1.34533	1.35035	1.33876
V	0.13413	1,961.77	1.183	0.13277	0.13587	0.13376
Y1	22530.68074	22,530.68	0.241	22487.14866	22513.47012	22591.42343
Y2A	303701.58250	303,701.58	0.285	304694.74818	303097.99536	303312.00397
Y2R	19649.38714	19,649.39	0.547	19527.84419	19688.13509	19732.18213
ZN	0.16675	2,220.72	0.240	0.16712	0.16681	0.16632
ZR	1.23530	2,840.01	0.631	1.23769	1.22659	1.24161

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/13/2013 23:43

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00043	-1.90	35.802	0.00048	0.00025	0.00054
AL	1.20420	129.97	1.216	1.21980	1.19077	1.20202
AS	0.00069	-3.01	161.267	0.00194	0.00028	-0.00016
B	0.00529	94.19	5.561	0.00511	0.00562	0.00512
BA	0.02584	18,054.78	0.894	0.02610	0.02566	0.02577
BE	-0.00032	-538.40	8.160	-0.00033	-0.00033	-0.00029
CA	2.98147	3,067.69	0.420	2.96776	2.99227	2.98437
CD	0.00058	20.10	10.680	0.00054	0.00056	0.00065
CO	0.00249	19.28	5.052	0.00264	0.00241	0.00242
CR	0.00363	38.60	14.599	0.00325	0.00341	0.00424
CU	0.01484	163.92	4.950	0.01429	0.01454	0.01567
FE	8.12124	2,338.11	0.113	8.11576	8.13185	8.11610
K	0.10410	10.51	32.736	0.14141	0.09629	0.07460
LI	-0.00083	44.51	412.006	-0.00002	0.00212	-0.00459
MG	0.38844	666.88	0.752	0.38996	0.38508	0.39029
MN	0.24890	16,460.05	0.965	0.25139	0.24660	0.24871
MO	0.00022	3.41	15.599	0.00023	0.00024	0.00018
NA	0.12121	98.28	8.957	0.13250	0.11084	0.12029
NI	0.00649	39.98	2.113	0.00665	0.00642	0.00640
P	0.28707	163.39	0.163	0.28726	0.28653	0.28741
PB	2.75350	3,877.42	0.121	2.74995	2.75396	2.75659
S	0.97630	198.81	0.375	0.97207	0.97844	0.97839
SB	-0.00049	3.68	326.566	0.00133	-0.00169	-0.00111
SE	0.00086	1.21	250.884	-0.00153	0.00144	0.00268
SI	0.38069	71.90	0.880	0.38072	0.37732	0.38402
SN	0.00343	7.20	20.299	0.00273	0.00412	0.00345
SR	0.01846	14,618.65	0.685	0.01859	0.01834	0.01845
TI	0.08001	5,114.16	1.357	0.08126	0.07938	0.07938
TL	-0.00168	-6.97	53.895	-0.00127	-0.00105	-0.00272
V	0.00970	136.39	2.011	0.00979	0.00947	0.00982
Y1	22660.95469	22,660.95	0.150	22633.81638	22650.02999	22699.01771
Y2A	305179.93691	305,179.94	0.715	303256.86177	307551.66997	304731.27899
Y2R	19769.67673	19,769.68	0.135	19739.33200	19789.40272	19780.29547
ZN	0.01770	271.20	0.371	0.01773	0.01775	0.01763
ZR	0.00269	6.54	57.080	0.00092	0.00345	0.00371

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/13/2013 23:47

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00549	80.63	2.205	0.00537	0.00548	0.00561
AL	1.98243	209.85	0.691	1.99820	1.97329	1.97582
AS	0.01462	2.87	6.510	0.01572	0.01413	0.01401
B	0.20131	1,850.74	0.789	0.20314	0.20031	0.20047
BA	0.24967	172,981.27	0.691	0.25166	0.24860	0.24874
BE	0.00459	1,700.38	1.232	0.00465	0.00455	0.00456
CA	3.85899	3,896.66	0.845	3.84617	3.83474	3.89607
CD	0.00585	113.23	2.509	0.00592	0.00568	0.00594
CO	0.05702	331.99	0.393	0.05726	0.05699	0.05681
CR	0.02462	272.72	1.657	0.02459	0.02423	0.02504
CU	0.04177	526.18	2.480	0.04270	0.04065	0.04195
FE	9.97511	2,836.93	0.690	9.90468	9.97836	10.04230
K	1.30371	433.26	1.859	1.29393	1.33131	1.28589
LI	0.10578	667.86	2.375	0.10470	0.10399	0.10865
MG	0.67380	1,148.45	0.229	0.67214	0.67519	0.67408
MN	0.43671	28,729.27	0.780	0.44009	0.43328	0.43676
MO	0.20903	1,000.00	0.221	0.20937	0.20850	0.20921
NA	1.20832	1,230.48	1.461	1.22467	1.21068	1.18961
NI	0.06137	261.58	0.130	0.06140	0.06144	0.06128
P	0.36986	210.09	0.272	0.37034	0.37054	0.36870
PB	2.73452	3,838.68	0.135	2.73535	2.73047	2.73772
S	1.15578	235.40	0.525	1.14877	1.15927	1.15929
SB	0.04714	43.10	1.711	0.04621	0.04762	0.04759
SE	0.01565	6.62	3.082	0.01550	0.01525	0.01618
SI	0.85042	156.44	2.422	0.84709	0.83168	0.87247
SN	0.41255	537.57	0.393	0.41342	0.41356	0.41068
SR	0.12743	101,172.67	0.786	0.12855	0.12663	0.12710
TI	0.19583	12,402.14	0.628	0.19723	0.19492	0.19535
TL	0.01561	4.79	7.470	0.01466	0.01691	0.01526
V	0.06119	884.99	0.672	0.06154	0.06074	0.06130
Y1	22593.26067	22,593.26	0.174	22547.82840	22618.07972	22613.87389
Y2A	303760.76415	303,760.76	0.809	303660.14324	306267.27844	301354.87078
Y2R	19547.56022	19,547.56	0.172	19582.05859	19545.91327	19514.70882
ZN	0.06949	947.74	0.177	0.06964	0.06943	0.06942
ZR	0.08548	195.78	2.036	0.08370	0.08555	0.08718

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/13/2013 23:51

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00546	80.57	12.786	0.00503	0.00507	0.00626
AL	2.03477	214.11	0.763	2.01686	2.04457	2.04289
AS	0.01675	3.84	2.579	0.01704	0.01625	0.01696
B	0.19100	1,783.06	0.717	0.19010	0.19257	0.19031
BA	0.23411	165,016.82	0.403	0.23401	0.23510	0.23322
BE	0.00433	1,610.26	0.366	0.00435	0.00432	0.00432
CA	3.52625	3,550.72	0.607	3.50645	3.54896	3.52335
CD	0.00546	105.14	2.795	0.00532	0.00544	0.00563
CO	0.05450	319.15	0.566	0.05447	0.05482	0.05421
CR	0.02341	264.00	0.936	0.02317	0.02360	0.02344
CU	0.04002	510.49	1.118	0.03997	0.04049	0.03960
FE	8.96088	2,536.49	0.655	8.93277	9.02835	8.92153
K	1.22485	403.34	1.868	1.19929	1.24341	1.23185
LI	0.10142	638.82	0.754	0.10174	0.10197	0.10055
MG	0.64930	1,100.72	0.229	0.65102	0.64833	0.64855
MN	0.29394	19,679.37	0.208	0.29362	0.29464	0.29354
MO	0.19881	955.65	0.676	0.19727	0.19938	0.19977
NA	1.11961	1,132.11	1.033	1.12408	1.10648	1.12827
NI	0.05928	254.44	0.770	0.05882	0.05973	0.05930
P	0.36006	205.46	0.931	0.35648	0.36312	0.36059
PB	2.78870	3,933.04	0.769	2.76452	2.79613	2.80544
S	1.07785	220.14	0.889	1.06685	1.08432	1.08238
SB	0.04524	41.64	1.020	0.04519	0.04572	0.04480
SE	0.01438	6.19	6.227	0.01540	0.01405	0.01370
SI	0.53100	98.06	1.746	0.52821	0.52345	0.54135
SN	0.39559	517.99	0.753	0.39215	0.39737	0.39724
SR	0.11966	96,641.24	0.327	0.11967	0.12004	0.11926
TI	0.19994	12,880.61	0.096	0.19985	0.20016	0.19981
TL	0.01402	3.57	5.848	0.01335	0.01377	0.01493
V	0.05823	856.29	0.654	0.05817	0.05864	0.05789
Y1	22699.34579	22,699.35	0.530	22838.00626	22623.68474	22636.34638
Y2A	309020.14095	309,020.14	0.439	310279.14724	307584.57341	309196.70220
Y2R	19446.12918	19,446.13	0.451	19483.97947	19345.81838	19508.58969
ZN	0.06651	911.78	0.575	0.06608	0.06667	0.06679
ZR	0.07712	175.76	0.604	0.07765	0.07696	0.07676

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/13/2013 23:55

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 50.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00025	-11.90	121.201	-0.00015	-0.00059	-0.00001
AL	0.19593	24.44	16.194	0.16526	0.19390	0.22862
AS	-0.00157	-3.58	106.413	-0.00227	-0.00278	0.00034
B	0.00144	21.33	28.908	0.00148	0.00185	0.00101
BA	0.00533	3,810.24	0.591	0.00537	0.00532	0.00531
BE	-0.00036	-561.95	4.726	-0.00034	-0.00037	-0.00037
CA	0.57136	669.42	2.016	0.57814	0.57786	0.55806
CD	0.00004	-1.80	4.726	0.00004	0.00004	0.00004
CO	0.00055	7.29	51.111	0.00023	0.00069	0.00074
CR	0.00046	5.08	37.335	0.00065	0.00031	0.00044
CU	0.00227	-5.98	11.392	0.00226	0.00202	0.00253
FE	1.77576	515.30	0.539	1.77333	1.78632	1.76763
K	0.03147	-15.39	226.996	0.11295	-0.02029	0.00174
LI	0.00093	53.46	124.085	0.00181	0.00135	-0.00037
MG	0.08389	139.12	1.417	0.08449	0.08252	0.08466
MN	0.05816	3,889.25	0.306	0.05830	0.05796	0.05821
MO	-0.00013	1.75	170.449	0.00013	-0.00028	-0.00024
NA	0.02577	-2.33	20.308	0.03157	0.02138	0.02437
NI	0.00125	19.54	15.707	0.00104	0.00129	0.00142
P	0.05574	31.30	3.364	0.05447	0.05790	0.05486
PB	0.53442	755.43	0.320	0.53244	0.53536	0.53545
S	0.18977	33.78	1.925	0.18820	0.18717	0.19395
SB	-0.00208	1.85	86.274	-0.00051	-0.00170	-0.00403
SE	-0.00010	0.86	987.954	0.00005	0.00083	-0.00118
SI	0.06464	14.01	5.378	0.06832	0.06417	0.06142
SN	0.00037	3.21	73.168	0.00015	0.00028	0.00067
SR	0.00373	2,873.46	0.576	0.00375	0.00371	0.00374
TI	0.01446	963.88	0.897	0.01459	0.01444	0.01434
TL	-0.00207	-7.05	21.836	-0.00196	-0.00256	-0.00167
V	0.00150	13.52	20.840	0.00181	0.00118	0.00151
Y1	22652.91211	22,652.91	0.192	22687.11086	22667.75268	22603.87279
Y2A	307217.50510	307,217.51	0.566	305602.30285	306992.83811	309057.37434
Y2R	19807.76280	19,807.76	0.607	19813.02312	19685.02093	19925.24436
ZN	0.00262	65.84	1.245	0.00262	0.00259	0.00266
ZR	0.00152	3.84	189.115	0.00455	-0.00115	0.00115

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/13/2013 23:59

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00028	-12.32	120.808	-0.00024	-0.00063	0.00004
AL	1.19070	130.51	2.469	1.22214	1.18607	1.16388
AS	-0.00063	-3.14	211.973	-0.00200	0.00065	-0.00053
B	0.00190	20.09	18.025	0.00230	0.00174	0.00167
BA	0.01516	10,774.04	0.529	0.01518	0.01508	0.01523
BE	-0.00033	-552.92	8.567	-0.00034	-0.00030	-0.00035
CA	0.66538	773.38	1.075	0.66300	0.65972	0.67342
CD	0.00027	0.37	19.925	0.00025	0.00033	0.00023
CO	0.00035	6.57	126.163	0.00080	0.00031	-0.00007
CR	0.00127	14.66	1.387	0.00126	0.00127	0.00129
CU	0.01113	117.11	6.545	0.01187	0.01042	0.01110
FE	0.87597	258.83	1.390	0.86343	0.88775	0.87672
K	0.05923	-5.52	56.858	0.06487	0.08974	0.02309
LI	-0.00070	44.46	177.693	-0.00170	0.00070	-0.00111
MG	0.13134	224.50	0.813	0.13191	0.13199	0.13010
MN	0.01361	934.89	0.782	0.01373	0.01352	0.01360
MO	-0.00008	1.99	15.693	-0.00007	-0.00008	-0.00010
NA	0.01482	-14.13	97.485	0.01496	0.00030	0.02920
NI	0.00129	19.87	33.530	0.00103	0.00178	0.00104
P	0.13063	74.31	0.381	0.13007	0.13084	0.13099
PB	0.01967	32.03	0.646	0.01981	0.01956	0.01964
S	0.80609	163.64	0.674	0.80700	0.81101	0.80025
SB	-0.00023	3.34	354.733	0.00038	-0.00113	0.00008
SE	-0.00060	0.68	265.344	0.00007	0.00054	-0.00241
SI	0.25877	50.31	3.379	0.25085	0.26815	0.25731
SN	0.00246	5.95	20.973	0.00246	0.00194	0.00297
SR	0.00543	4,272.01	0.917	0.00545	0.00538	0.00547
TI	0.04611	3,006.54	0.718	0.04598	0.04586	0.04649
TL	-0.00201	-7.14	25.987	-0.00162	-0.00261	-0.00181
V	0.00235	26.47	22.490	0.00223	0.00190	0.00293
Y1	22729.75229	22,729.75	0.042	22739.35901	22729.62605	22720.27180
Y2A	309469.09306	309,469.09	0.455	309492.67155	310865.67288	308048.93475
Y2R	20070.49026	20,070.49	0.720	20198.25779	20099.52134	19913.69166
ZN	0.02828	399.29	0.450	0.02824	0.02843	0.02818
ZR	0.00247	6.08	82.595	0.00111	0.00148	0.00481

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/14/2013 00:03

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00015	-10.60	382.140	-0.00057	-0.00036	0.00049
AL	7.05237	751.68	0.644	7.06951	7.00087	7.08673
AS	0.00089	-2.52	25.391	0.00087	0.00068	0.00113
B	0.00145	17.19	6.880	0.00141	0.00156	0.00137
BA	0.04440	31,800.41	0.266	0.04427	0.04444	0.04450
BE	-0.00008	-443.74	3.375	-0.00009	-0.00008	-0.00009
CA	0.29957	402.47	1.356	0.30406	0.29850	0.29615
CD	0.00023	0.07	9.433	0.00022	0.00026	0.00021
CO	0.00062	9.62	35.081	0.00067	0.00038	0.00080
CR	0.00574	66.43	6.020	0.00592	0.00534	0.00596
CU	0.01215	124.32	3.147	0.01186	0.01202	0.01259
FE	1.04278	306.87	0.803	1.03845	1.05243	1.03746
K	0.20139	45.76	8.872	0.19804	0.18543	0.22069
LI	0.00180	59.06	96.842	0.00365	0.00018	0.00158
MG	0.17105	293.64	0.346	0.17038	0.17129	0.17149
MN	0.01740	1,203.16	0.280	0.01737	0.01745	0.01737
MO	0.00026	3.64	52.238	0.00013	0.00040	0.00023
NA	0.02034	-8.20	65.900	0.02756	0.00487	0.02859
NI	0.00262	25.45	4.850	0.00248	0.00272	0.00267
P	0.71977	414.67	0.375	0.71673	0.72187	0.72070
PB	0.01426	26.35	7.566	0.01304	0.01467	0.01508
S	0.62931	127.35	0.448	0.62730	0.63253	0.62810
SB	-0.00041	3.29	176.337	-0.00064	0.00040	-0.00097
SE	-0.00016	0.82	1896.028	-0.00320	0.00279	-0.00006
SI	0.50607	96.06	1.975	0.51569	0.49574	0.50679
SN	0.00267	6.28	17.002	0.00315	0.00262	0.00224
SR	0.00457	3,616.37	0.673	0.00454	0.00456	0.00460
TI	0.15234	9,961.17	0.484	0.15164	0.15311	0.15228
TL	-0.00336	-8.57	14.952	-0.00347	-0.00281	-0.00380
V	0.00820	116.66	4.793	0.00780	0.00822	0.00858
Y1	22900.36479	22,900.36	0.633	23067.64882	22814.69471	22818.75083
Y2A	313354.26262	313,354.26	0.383	314609.88372	312217.68821	313235.21595
Y2R	20018.17325	20,018.17	0.585	19890.58137	20120.65955	20043.27882
ZN	0.02525	362.76	0.867	0.02501	0.02544	0.02529
ZR	0.00163	4.12	91.701	0.00336	0.00082	0.00072

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/14/2013 00:08

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-9.81	347.026	-0.00039	0.00029	-0.00020
AL	24.57106	2,637.19	0.573	24.73148	24.46828	24.51341
AS	0.00177	-2.28	42.124	0.00192	0.00096	0.00242
B	0.00248	38.46	14.024	0.00262	0.00274	0.00208
BA	0.10487	74,899.58	1.301	0.10640	0.10441	0.10379
BE	0.00065	-98.78	4.401	0.00062	0.00066	0.00067
CA	0.25612	362.34	1.686	0.25773	0.25940	0.25123
CD	-0.00001	-0.32	851.459	-0.00007	-0.00007	0.00010
CO	0.00095	11.39	14.266	0.00092	0.00083	0.00110
CR	0.01380	158.68	4.633	0.01419	0.01307	0.01416
CU	0.00851	72.91	3.839	0.00838	0.00826	0.00888
FE	2.93529	867.73	0.707	2.95765	2.93153	2.91669
K	0.45622	139.16	7.635	0.49629	0.43913	0.43323
LI	0.00972	107.58	10.733	0.01033	0.00852	0.01032
MG	0.67750	1,194.69	0.289	0.67634	0.67976	0.67639
MN	0.01420	984.85	0.750	0.01428	0.01423	0.01408
MO	0.00013	3.04	70.922	0.00023	0.00006	0.00010
NA	0.02545	-2.73	5.286	0.02395	0.02586	0.02654
NI	0.00936	53.04	4.140	0.00899	0.00976	0.00934
P	0.65085	376.66	0.899	0.64514	0.65059	0.65684
PB	0.02002	39.97	2.045	0.02044	0.02002	0.01962
S	0.59342	120.21	1.138	0.58585	0.59557	0.59883
SB	0.00058	4.38	322.593	-0.00156	0.00138	0.00191
SE	-0.00091	0.46	235.244	0.00074	-0.00014	-0.00332
SI	0.85903	163.20	0.955	0.85287	0.85587	0.86834
SN	0.00260	6.22	17.333	0.00283	0.00208	0.00290
SR	0.00611	4,870.78	1.183	0.00619	0.00607	0.00606
TI	0.13562	8,860.93	1.373	0.13768	0.13510	0.13406
TL	-0.00198	-7.75	37.582	-0.00208	-0.00120	-0.00268
V	0.01531	225.17	0.534	0.01522	0.01539	0.01531
Y1	23007.10227	23,007.10	0.518	23139.86549	22971.70031	22909.74099
Y2A	312988.71251	312,988.71	1.300	308664.70100	313563.04131	316738.39523
Y2R	20223.00301	20,223.00	0.366	20190.80787	20307.68078	20170.52038
ZN	0.03443	488.70	0.648	0.03418	0.03460	0.03452
ZR	0.00218	5.48	7.381	0.00232	0.00222	0.00200

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/14/2013 00:12

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00056	-16.55	84.972	-0.00109	-0.00017	-0.00042
AL	17.61608	1,876.20	0.605	17.57533	17.73706	17.53584
AS	-0.00052	-3.39	158.228	0.00002	-0.00146	-0.00012
B	0.00267	67.68	12.240	0.00270	0.00297	0.00232
BA	0.07222	51,490.41	0.692	0.07263	0.07166	0.07237
BE	-0.00015	-473.72	21.208	-0.00013	-0.00014	-0.00019
CA	0.70875	816.78	1.353	0.69786	0.71594	0.71246
CD	0.00026	13.29	37.951	0.00017	0.00025	0.00036
CO	0.00340	30.56	4.401	0.00352	0.00345	0.00324
CR	0.55642	6,401.60	0.324	0.55655	0.55455	0.55815
CU	0.00709	24.42	5.812	0.00734	0.00732	0.00661
FE	7.36575	2,152.55	0.447	7.33367	7.39952	7.36406
K	0.64863	207.64	1.652	0.64071	0.64435	0.66082
LI	0.01096	114.42	11.148	0.00972	0.01216	0.01100
MG	1.64285	2,881.73	0.614	1.63797	1.65445	1.63613
MN	0.06005	4,080.66	0.748	0.06049	0.05959	0.06006
MO	-0.00004	2.18	461.372	0.00016	-0.00005	-0.00024
NA	0.03456	7.06	23.863	0.04376	0.03206	0.02784
NI	0.01054	56.76	1.921	0.01076	0.01048	0.01037
P	0.24278	138.84	0.644	0.24457	0.24166	0.24211
PB	0.00920	21.94	24.018	0.00696	0.00927	0.01138
S	0.31247	59.75	1.112	0.31095	0.31645	0.31002
SB	-0.00953	3.48	8.706	-0.01024	-0.00862	-0.00973
SE	0.00109	1.23	219.018	-0.00165	0.00274	0.00219
SI	1.34475	252.19	0.809	1.33575	1.34167	1.35684
SN	0.00245	5.96	22.650	0.00187	0.00298	0.00250
SR	0.00918	7,368.24	0.983	0.00927	0.00909	0.00917
TI	0.46755	30,384.17	0.391	0.46746	0.46576	0.46941
TL	-0.00231	-8.34	51.737	-0.00200	-0.00362	-0.00129
V	0.01860	276.98	1.887	0.01899	0.01850	0.01831
Y1	22785.76161	22,785.76	0.191	22773.91377	22833.88064	22749.49044
Y2A	312247.43827	312,247.44	0.515	310917.05530	314035.14324	311790.11628
Y2R	20059.83930	20,059.84	0.633	20187.74980	19933.67092	20058.09719
ZN	0.07959	1,080.16	0.252	0.07982	0.07951	0.07944
ZR	0.00233	5.77	73.241	0.00118	0.00429	0.00152

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/14/2013 00:16

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50922	7,087.03	1.701	0.50001	0.51719	0.51046
AL	24.64371	2,530.41	0.816	24.42966	24.82874	24.67273
AS	0.49605	197.73	0.548	0.49806	0.49295	0.49713
B	0.48234	4,255.25	1.597	0.47424	0.48957	0.48322
BA	0.50110	332,874.42	1.202	0.49540	0.50049	0.50740
BE	0.48835	213,306.57	1.611	0.47955	0.49469	0.49082
CA	24.26589	23,646.01	0.887	24.02354	24.43480	24.33934
CD	0.49899	8,215.48	0.024	0.49909	0.49902	0.49885
CO	0.50093	2,763.87	0.142	0.50015	0.50154	0.50109
CR	0.48828	5,234.92	1.530	0.47972	0.49344	0.49170
CU	0.50209	6,621.13	1.944	0.49226	0.51178	0.50221
FE	24.23632	6,771.79	1.009	23.98776	24.47674	24.24446
K	24.22201	8,414.56	0.541	24.07082	24.29769	24.29752
LI	0.49560	2,925.98	0.984	0.49412	0.50104	0.49163
MG	23.89077	40,014.36	0.476	23.76766	23.99166	23.91298
MN	0.49978	31,524.50	1.543	0.49132	0.50642	0.50159
MO	0.50044	2,302.80	0.073	0.50082	0.50041	0.50009
NA	24.00705	24,711.63	0.476	23.87521	24.06962	24.07631
NI	0.49880	1,949.99	0.063	0.49843	0.49894	0.49902
P	0.50759	279.16	0.206	0.50849	0.50644	0.50784
PB	0.50438	690.20	0.326	0.50324	0.50627	0.50364
S	24.45103	4,921.34	0.281	24.41243	24.41038	24.53028
SB	0.50842	416.03	0.217	0.50876	0.50719	0.50931
SE	0.50355	178.43	0.782	0.50542	0.49902	0.50620
SI	25.03250	4,486.12	0.401	24.91942	25.06664	25.11144
SN	0.48885	613.06	0.190	0.48835	0.48828	0.48993
SR	0.50123	381,943.04	1.996	0.48975	0.50806	0.50589
TI	0.50166	30,446.11	1.592	0.49278	0.50825	0.50396
TL	0.49975	349.42	0.216	0.49996	0.50071	0.49858
V	0.49810	7,036.15	1.824	0.48802	0.50567	0.50060
Y1	21761.61614	21,761.62	0.058	21757.79688	21751.42505	21775.62650
Y2A	291329.55047	291,329.55	1.724	297013.17097	287489.56262	289485.91783
Y2R	19324.62593	19,324.63	0.689	19476.29396	19226.90000	19270.68381
ZN	0.50054	6,343.53	0.075	0.50063	0.50012	0.50086
ZR	0.49796	1,126.05	0.816	0.49395	0.50207	0.49785

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/14/2013 00:20

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00011	-6.77	191.735	0.00031	0.00015	-0.00012
AL	0.01046	4.91	266.951	0.03032	0.02251	-0.02146
AS	-0.00034	-2.94	382.892	0.00090	-0.00023	-0.00168
B	0.00084	4.95	45.325	0.00042	0.00095	0.00116
BA	-0.00001	66.44	158.808	-0.00004	0.00000	0.00000
BE	-0.00041	-580.90	5.799	-0.00038	-0.00043	-0.00041
CA	-0.01477	83.36	21.996	-0.01508	-0.01137	-0.01784
CD	0.00006	-4.93	191.381	0.00006	-0.00006	0.00017
CO	-0.00019	2.84	202.267	-0.00028	0.00023	-0.00053
CR	-0.00021	-1.90	211.718	-0.00011	-0.00069	0.00018
CU	-0.00073	-46.53	34.530	-0.00060	-0.00057	-0.00102
FE	-0.01425	-1.81	3.706	-0.01364	-0.01455	-0.01456
K	-0.02433	-34.84	43.648	-0.02273	-0.03566	-0.01461
LI	0.00185	57.72	27.525	0.00129	0.00196	0.00229
MG	0.00499	2.01	17.588	0.00565	0.00400	0.00534
MN	-0.00011	15.88	25.572	-0.00008	-0.00013	-0.00010
MO	-0.00020	1.42	37.470	-0.00017	-0.00014	-0.00028
NA	-0.00715	-36.60	72.205	-0.01304	-0.00503	-0.00338
NI	-0.00025	13.65	8.776	-0.00027	-0.00024	-0.00023
P	0.00024	-0.37	236.296	-0.00022	0.00006	0.00088
PB	-0.00051	3.21	88.184	0.00000	-0.00083	-0.00069
S	-0.00159	-6.33	63.833	-0.00230	-0.00205	-0.00043
SB	-0.00028	3.19	553.957	0.00053	0.00069	-0.00205
SE	-0.00176	0.26	51.738	-0.00132	-0.00115	-0.00280
SI	0.00898	3.74	78.945	0.01058	0.01513	0.00123
SN	0.00008	2.83	1129.380	-0.00074	0.00098	-0.00001
SR	0.00000	-124.55	401.154	0.00001	0.00000	0.00000
TI	-0.00027	23.70	25.300	-0.00034	-0.00020	-0.00028
TL	-0.00230	-7.15	33.522	-0.00146	-0.00297	-0.00246
V	-0.00067	-19.10	25.110	-0.00084	-0.00065	-0.00051
Y1	22552.23685	22,552.24	0.379	22463.05304	22633.58885	22560.06866
Y2A	305329.37442	305,329.37	0.479	304802.57937	304202.94897	306982.59494
Y2R	19526.96893	19,526.97	0.335	19601.76506	19499.05190	19480.08982
ZN	-0.00098	16.38	3.489	-0.00098	-0.00101	-0.00094
ZR	-0.00011	0.05	968.767	-0.00087	0.00111	-0.00057

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/14/2013 00:24

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00008	-9.31	162.487	0.00004	-0.00023	-0.00006
AL	3.74418	400.19	0.967	3.71517	3.73262	3.78477
AS	-0.00084	-3.83	200.603	-0.00212	0.00107	-0.00146
B	0.00086	69.86	45.096	0.00126	0.00049	0.00084
BA	0.02470	17,507.79	0.104	0.02469	0.02469	0.02473
BE	-0.00012	-453.74	11.364	-0.00013	-0.00010	-0.00012
CA	1.62254	1,733.14	2.133	1.62509	1.58673	1.65579
CD	0.00061	25.35	18.495	0.00061	0.00072	0.00049
CO	0.00185	19.07	12.879	0.00159	0.00205	0.00192
CR	0.01149	128.03	0.830	0.01140	0.01150	0.01159
CU	0.00880	59.74	5.497	0.00902	0.00825	0.00914
FE	10.46701	3,042.13	1.416	10.51832	10.29995	10.58277
K	0.47110	142.89	7.295	0.51010	0.45793	0.44526
LI	0.00278	65.63	113.273	0.00612	-0.00014	0.00236
MG	1.14566	2,000.20	1.522	1.15506	1.12554	1.15638
MN	0.08574	5,765.55	0.333	0.08585	0.08541	0.08594
MO	0.00016	3.14	66.528	0.00021	0.00021	0.00004
NA	0.11193	89.53	9.370	0.12039	0.11521	0.10020
NI	0.00362	28.30	11.786	0.00368	0.00317	0.00401
P	0.30400	174.34	0.626	0.30417	0.30581	0.30202
PB	0.03050	47.83	2.469	0.03088	0.03098	0.02963
S	0.30872	59.10	0.174	0.30886	0.30813	0.30918
SB	-0.00058	3.91	279.760	0.00119	-0.00094	-0.00199
SE	-0.00065	0.65	318.635	0.00174	-0.00167	-0.00203
SI	0.28932	55.75	1.831	0.29214	0.28321	0.29261
SN	0.00273	6.33	11.186	0.00248	0.00263	0.00307
SR	0.00770	6,110.53	0.228	0.00772	0.00770	0.00769
TI	0.32526	20,960.08	0.276	0.32629	0.32482	0.32467
TL	-0.00192	-7.72	22.811	-0.00182	-0.00239	-0.00153
V	0.01134	164.65	1.100	0.01122	0.01134	0.01147
Y1	22832.10571	22,832.11	0.125	22864.00320	22823.69578	22808.61816
Y2A	309507.89370	309,507.89	0.321	308567.18025	310544.97002	309411.53082
Y2R	19983.44656	19,983.45	1.379	19950.46463	20274.06537	19725.80968
ZN	0.04920	688.52	0.084	0.04924	0.04919	0.04916
ZR	0.00361	8.73	36.285	0.00344	0.00239	0.00500

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/14/2013 00:29

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00005	-9.22	356.974	-0.00021	-0.00005	0.00012
AL	3.17566	335.37	1.107	3.19003	3.20134	3.13560
AS	-0.00062	-3.30	290.415	-0.00236	-0.00077	0.00125
B	0.00204	37.08	15.452	0.00207	0.00171	0.00234
BA	0.01521	10,855.80	1.098	0.01538	0.01505	0.01520
BE	-0.00025	-518.25	8.167	-0.00026	-0.00023	-0.00027
CA	1.95894	2,043.62	0.369	1.96717	1.95600	1.95363
CD	0.00048	9.11	6.919	0.00048	0.00052	0.00045
CO	0.00175	15.92	8.315	0.00179	0.00159	0.00187
CR	0.01261	143.76	3.271	0.01218	0.01265	0.01300
CU	0.01267	131.77	1.838	0.01255	0.01251	0.01293
FE	3.40591	980.75	0.420	3.42237	3.39662	3.39872
K	0.18936	40.81	36.180	0.14112	0.26777	0.15918
LI	0.00113	55.29	114.527	0.00203	0.00173	-0.00036
MG	0.64897	1,115.06	0.600	0.65339	0.64605	0.64746
MN	0.02303	1,572.27	1.002	0.02329	0.02286	0.02293
MO	0.00011	2.92	162.631	0.00017	0.00025	-0.00009
NA	0.14752	125.65	10.814	0.15297	0.12955	0.16003
NI	0.00333	27.92	2.382	0.00331	0.00326	0.00341
P	0.16710	95.45	1.125	0.16550	0.16663	0.16917
PB	0.07581	112.03	0.770	0.07608	0.07514	0.07621
S	1.66296	344.93	0.241	1.66303	1.65893	1.66693
SB	-0.00099	3.06	153.295	-0.00261	-0.00073	0.00038
SE	-0.00140	0.37	285.668	-0.00242	-0.00481	0.00301
SI	0.54212	101.17	1.655	0.54772	0.53177	0.54687
SN	0.00242	5.91	18.052	0.00211	0.00222	0.00291
SR	0.00667	5,295.88	1.059	0.00674	0.00660	0.00666
TI	0.14001	9,084.78	0.982	0.14126	0.13854	0.14024
TL	-0.00275	-8.10	11.946	-0.00273	-0.00243	-0.00309
V	0.01020	146.35	2.501	0.01031	0.00991	0.01039
Y1	22790.72295	22,790.72	0.191	22750.29322	22836.84930	22785.02633
Y2A	310840.67386	310,840.67	0.550	309383.32778	312723.18454	310415.50926
Y2R	19709.95268	19,709.95	0.500	19601.66368	19733.63718	19794.55718
ZN	0.07375	998.09	0.139	0.07375	0.07365	0.07385
ZR	0.00003	0.36	3412.756	0.00056	0.00051	-0.00100

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/14/2013 00:33

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00025	-12.12	238.967	-0.00089	0.00027	-0.00012
AL	0.77584	85.32	2.286	0.78564	0.78652	0.75537
AS	0.00128	-2.39	69.453	0.00035	0.00137	0.00212
B	0.00266	31.82	23.460	0.00233	0.00338	0.00227
BA	0.00673	4,883.83	1.174	0.00677	0.00678	0.00664
BE	-0.00041	-595.93	4.011	-0.00039	-0.00040	-0.00043
CA	1.26138	1,358.51	0.746	1.26103	1.27095	1.25215
CD	0.00037	3.63	7.042	0.00040	0.00035	0.00037
CO	0.00093	9.93	10.210	0.00082	0.00095	0.00101
CR	0.00640	73.82	1.951	0.00630	0.00654	0.00637
CU	0.01292	144.45	4.013	0.01341	0.01297	0.01238
FE	1.59570	463.53	0.537	1.60387	1.59646	1.58678
K	0.08506	3.73	49.336	0.05301	0.13256	0.06962
LI	0.00134	56.41	249.044	0.00216	-0.00233	0.00417
MG	0.31470	540.33	0.381	0.31507	0.31336	0.31567
MN	0.01044	731.08	0.690	0.01050	0.01046	0.01036
MO	0.00019	3.32	54.414	0.00010	0.00017	0.00030
NA	0.10307	79.33	3.932	0.10675	0.10372	0.09873
NI	0.00308	27.20	1.429	0.00313	0.00306	0.00305
P	0.14033	80.25	0.664	0.13961	0.14000	0.14138
PB	0.09274	135.61	1.135	0.09241	0.09391	0.09189
S	1.31634	272.35	0.139	1.31759	1.31719	1.31425
SB	-0.00208	1.93	87.773	-0.00030	-0.00199	-0.00394
SE	0.00245	1.81	38.670	0.00221	0.00164	0.00349
SI	0.36121	68.49	1.363	0.36600	0.35617	0.36146
SN	0.00311	6.84	13.183	0.00346	0.00321	0.00266
SR	0.00319	2,489.24	0.558	0.00320	0.00321	0.00317
TI	0.04438	2,930.90	1.231	0.04487	0.04448	0.04379
TL	-0.00294	-8.08	19.943	-0.00275	-0.00360	-0.00247
V	0.00852	121.08	4.255	0.00845	0.00892	0.00820
Y1	22837.80012	22,837.80	0.077	22847.97576	22817.50767	22847.91694
Y2A	313294.47035	313,294.47	0.644	313636.57562	311126.16589	315120.66955
Y2R	19816.69333	19,816.69	0.634	19714.92321	19778.16058	19956.99621
ZN	0.01816	269.79	0.076	0.01817	0.01816	0.01814
ZR	0.00139	3.53	89.661	0.00240	0.00179	-0.00001

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/14/2013 00:37

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00013	-9.96	513.818	-0.00054	0.00063	-0.00047
AL	3.34028	350.74	0.451	3.32811	3.33559	3.35714
AS	0.00049	-3.14	432.748	0.00111	0.00221	-0.00187
B	0.00086	58.19	89.167	0.00108	0.00001	0.00148
BA	0.02291	15,945.70	0.373	0.02287	0.02301	0.02286
BE	-0.00032	-536.45	2.168	-0.00031	-0.00032	-0.00032
CA	1.25580	1,338.74	0.524	1.25749	1.24854	1.26136
CD	0.00066	22.74	19.955	0.00051	0.00074	0.00074
CO	0.00175	16.69	8.269	0.00182	0.00185	0.00159
CR	0.00967	105.83	0.327	0.00966	0.00971	0.00965
CU	0.00813	59.66	2.567	0.00826	0.00789	0.00825
FE	8.75916	2,500.36	0.343	8.77221	8.72484	8.78044
K	0.15054	26.84	9.732	0.15014	0.13609	0.16539
LI	0.00183	58.68	30.212	0.00167	0.00138	0.00245
MG	0.61557	1,051.91	1.373	0.61993	0.60583	0.62096
MN	0.06233	4,120.11	0.310	0.06252	0.06233	0.06213
MO	0.00009	2.81	135.145	0.00022	-0.00001	0.00006
NA	0.10990	85.65	10.694	0.09875	0.10876	0.12217
NI	0.00313	26.36	12.049	0.00338	0.00270	0.00331
P	0.25864	147.42	0.295	0.25926	0.25887	0.25778
PB	0.01452	25.01	6.186	0.01472	0.01531	0.01354
S	0.21278	38.61	1.467	0.21539	0.20932	0.21363
SB	-0.00169	2.81	73.091	-0.00312	-0.00104	-0.00092
SE	0.00054	1.09	308.744	-0.00050	0.00248	-0.00035
SI	0.49697	92.44	2.556	0.50786	0.48301	0.50004
SN	0.00231	5.75	22.858	0.00288	0.00220	0.00184
SR	0.00592	4,579.19	0.403	0.00590	0.00595	0.00591
TI	0.19916	12,612.97	0.486	0.19849	0.20027	0.19873
TL	-0.00170	-7.33	34.572	-0.00130	-0.00141	-0.00237
V	0.01069	151.07	3.932	0.01033	0.01115	0.01057
Y1	22705.07055	22,705.07	0.151	22720.49574	22665.87656	22728.83936
Y2A	303794.19812	303,794.20	0.585	304335.85943	301810.29314	305236.44180
Y2R	19608.32714	19,608.33	0.176	19611.11942	19641.30869	19572.55332
ZN	0.04748	659.91	0.589	0.04716	0.04760	0.04768
ZR	0.00232	5.63	114.442	0.00538	0.00095	0.00063

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/14/2013 00:41

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00060	-17.18	79.346	-0.00010	-0.00104	-0.00064
AL	0.10345	14.87	32.591	0.10004	0.13874	0.07157
AS	0.00007	-2.88	3495.987	-0.00158	0.00272	-0.00094
B	0.00163	20.98	43.155	0.00195	0.00082	0.00212
BA	0.00417	3,040.11	0.961	0.00418	0.00421	0.00413
BE	-0.00039	-584.43	3.170	-0.00039	-0.00038	-0.00040
CA	1.04278	1,152.38	3.116	1.00693	1.07029	1.05111
CD	0.00016	-0.54	92.077	0.00027	-0.00001	0.00020
CO	0.00038	6.17	128.482	0.00071	-0.00018	0.00059
CR	0.00003	0.36	584.695	0.00020	-0.00019	0.00010
CU	0.00293	4.44	10.294	0.00327	0.00283	0.00269
FE	1.39230	409.02	3.302	1.34043	1.42804	1.40842
K	0.00230	-26.20	801.294	-0.00938	0.02357	-0.00728
LI	0.00000	48.66	4334.835	-0.00135	0.00263	-0.00128
MG	0.13404	228.76	2.064	0.13092	0.13620	0.13500
MN	0.16011	10,813.97	0.592	0.16096	0.16029	0.15908
MO	-0.00009	1.94	338.297	-0.00003	0.00019	-0.00043
NA	0.10474	81.94	6.049	0.09833	0.10488	0.11100
NI	0.00046	16.46	127.237	0.00084	0.00075	-0.00021
P	0.06942	39.25	1.286	0.07021	0.06845	0.06960
PB	0.00442	10.14	28.867	0.00587	0.00349	0.00389
S	1.45451	300.24	0.539	1.46349	1.44899	1.45105
SB	-0.00065	3.01	237.360	-0.00031	0.00069	-0.00232
SE	-0.00092	0.57	135.385	-0.00235	-0.00026	-0.00015
SI	0.09629	20.05	3.617	0.09568	0.10004	0.09316
SN	0.00135	4.51	23.367	0.00103	0.00167	0.00136
SR	0.00497	3,924.47	0.482	0.00497	0.00500	0.00495
TI	0.00472	346.81	0.489	0.00471	0.00474	0.00470
TL	-0.00242	-7.22	34.367	-0.00231	-0.00165	-0.00330
V	0.00025	-5.42	53.492	0.00020	0.00040	0.00015
Y1	22736.96397	22,736.96	0.349	22648.42855	22801.33893	22761.12443
Y2A	311436.54231	311,436.54	0.250	311337.19187	310711.35909	312261.07595
Y2R	20034.21881	20,034.22	2.235	20520.30875	19638.83064	19943.51704
ZN	0.01330	204.68	0.306	0.01327	0.01328	0.01335
ZR	0.00155	3.94	24.728	0.00111	0.00171	0.00183

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/14/2013 00:45

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00060	-16.51	99.532	-0.00121	-0.00001	-0.00059
AL	8.79275	929.49	0.786	8.81411	8.84861	8.71551
AS	0.01375	0.56	24.884	0.01712	0.01028	0.01384
B	0.00008	246.26	440.230	-0.00032	0.00025	0.00030
BA	0.10826	76,185.48	0.509	0.10887	0.10780	0.10809
BE	0.00009	-357.93	15.970	0.00010	0.00008	0.00008
CA	1.28661	1,387.62	0.410	1.29219	1.28171	1.28594
CD	0.00274	121.05	3.423	0.00264	0.00281	0.00278
CO	0.00413	32.45	7.099	0.00417	0.00382	0.00441
CR	0.01082	109.83	0.988	0.01077	0.01074	0.01094
CU	0.03683	446.23	1.631	0.03731	0.03703	0.03616
FE	40.35185	11,517.69	0.330	40.48590	40.35035	40.21931
K	0.36983	105.81	12.398	0.40180	0.31730	0.39039
LI	0.00667	88.24	57.076	0.01000	0.00252	0.00747
MG	1.04862	1,820.35	0.186	1.04876	1.04661	1.05049
MN	0.17432	11,655.85	0.329	0.17484	0.17371	0.17442
MO	0.00113	7.79	10.684	0.00121	0.00118	0.00099
NA	0.12120	98.80	4.446	0.12741	0.11848	0.11772
NI	0.00824	43.27	2.160	0.00805	0.00841	0.00826
P	0.67116	383.76	0.189	0.67025	0.67063	0.67261
PB	0.04495	68.10	0.799	0.04533	0.04488	0.04463
S	0.53723	106.57	0.534	0.53526	0.53591	0.54053
SB	-0.00347	3.66	71.508	-0.00623	-0.00275	-0.00143
SE	-0.00263	-0.11	54.789	-0.00211	-0.00153	-0.00427
SI	0.66321	124.31	0.083	0.66369	0.66334	0.66261
SN	0.00479	8.99	4.950	0.00474	0.00458	0.00505
SR	0.01211	9,642.02	0.451	0.01215	0.01205	0.01212
TI	0.35348	22,690.75	0.454	0.35495	0.35177	0.35371
TL	-0.00046	-6.87	130.614	-0.00003	-0.00116	-0.00021
V	0.02219	330.79	0.958	0.02199	0.02219	0.02241
Y1	22724.99044	22,724.99	0.373	22818.46333	22703.47000	22653.03797
Y2A	308369.31543	308,369.32	0.517	307099.51699	310158.64424	307849.78505
Y2R	19872.29832	19,872.30	0.188	19915.14744	19847.21114	19854.53639
ZN	0.18122	2,447.95	0.368	0.18047	0.18174	0.18147
ZR	0.00629	14.94	19.639	0.00487	0.00694	0.00708

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 30

Date/Time: 11/14/2013 00:49

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00505	70.72	1.640	0.00510	0.00510	0.00496
AL	0.18107	22.78	18.505	0.19051	0.20885	0.14386
AS	0.01786	4.71	3.546	0.01851	0.01725	0.01781
B	0.04888	436.95	1.073	0.04852	0.04863	0.04948
BA	0.00530	3,774.03	1.382	0.00527	0.00525	0.00539
BE	0.00431	1,583.37	1.382	0.00431	0.00424	0.00436
CA	0.17484	272.25	1.387	0.17742	0.17449	0.17260
CD	0.00502	79.63	1.961	0.00507	0.00508	0.00490
CO	0.00513	33.28	2.092	0.00501	0.00521	0.00517
CR	0.01445	163.18	3.267	0.01443	0.01398	0.01493
CU	0.00973	98.98	5.949	0.00948	0.01039	0.00932
FE	0.18396	55.15	5.317	0.19413	0.18312	0.17463
K	0.47422	141.94	1.849	0.46517	0.48268	0.47481
LI	0.02149	174.06	13.529	0.02154	0.01855	0.02436
MG	0.10068	167.36	1.358	0.10198	0.09925	0.10082
MN	0.00512	362.00	1.948	0.00511	0.00503	0.00523
MO	0.01014	50.64	0.440	0.01013	0.01018	0.01010
NA	0.98732	1,007.74	0.468	0.98259	0.98756	0.99182
NI	0.01011	55.34	0.609	0.01005	0.01010	0.01017
P	0.09850	55.47	0.933	0.09766	0.09836	0.09948
PB	0.01510	25.06	5.612	0.01565	0.01553	0.01413
S	0.47529	93.25	0.375	0.47373	0.47490	0.47723
SB	0.02086	20.85	6.774	0.01982	0.02029	0.02247
SE	0.02068	8.46	1.265	0.02097	0.02063	0.02045
SI	0.11422	23.00	6.961	0.12040	0.10525	0.11701
SN	0.02015	28.79	2.645	0.02075	0.01973	0.01996
SR	0.00515	3,996.97	1.125	0.00514	0.00510	0.00522
TI	0.00957	649.73	2.843	0.00939	0.00944	0.00989
TL	0.03119	18.31	5.280	0.03141	0.02944	0.03271
V	0.00403	50.20	6.068	0.00426	0.00377	0.00405
Y1	22548.54919	22,548.55	0.265	22514.81223	22513.37597	22617.45937
Y2A	305884.96360	305,884.96	1.467	308391.90540	308557.62825	300705.35714
Y2R	19697.37100	19,697.37	0.214	19678.35761	19668.00539	19745.75000
ZN	0.01985	286.75	0.220	0.01989	0.01980	0.01987
ZR	0.04966	114.73	1.414	0.04999	0.05013	0.04885

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 31

Date/Time: 11/14/2013 00:54

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00013	-8.58	418.839	-0.00002	0.00036	-0.00074
AL	480.30806	48,966.80	1.754	483.09255	470.84515	486.98648
AS	-0.01260	-16.91	39.199	-0.01830	-0.00967	-0.00982
B	-0.02356	823.57	16.104	-0.02618	-0.01921	-0.02529
BA	0.00011	128.69	13.516	0.00010	0.00012	0.00009
BE	-0.00065	-595.58	2.941	-0.00065	-0.00066	-0.00063
CA	483.54787	432,849.28	1.681	488.86183	474.19048	487.59129
CD	0.00611	408.89	2.464	0.00609	0.00626	0.00596
CO	-0.00083	-0.72	0.999	-0.00082	-0.00083	-0.00084
CR	0.00140	-41.03	19.072	0.00166	0.00113	0.00139
CU	0.00440	155.85	12.065	0.00379	0.00472	0.00470
FE	191.74933	49,062.53	1.709	193.37497	187.97767	193.89534
K	-0.02281	-33.21	279.210	-0.08769	0.03961	-0.02035
LI	-0.00405	319.29	51.024	-0.00597	-0.00186	-0.00431
MG	514.32122	639,343.14	1.677	520.43581	504.45293	518.07493
MN	0.00333	209.48	4.110	0.00323	0.00348	0.00327
MO	-0.00186	-5.59	8.834	-0.00204	-0.00171	-0.00183
NA	0.01557	-12.64	59.616	0.02079	0.00485	0.02107
NI	0.00257	1.56	19.277	0.00229	0.00228	0.00314
P	0.01113	5.01	18.102	0.01222	0.01235	0.00880
PB	0.00645	126.76	63.042	0.00329	0.01104	0.00502
S	-0.12630	-28.81	1.553	-0.12428	-0.12820	-0.12643
SB	-0.01165	6.68	31.394	-0.00825	-0.01118	-0.01552
SE	0.00303	-0.22	151.711	-0.00012	0.00830	0.00090
SI	0.02508	6.47	15.957	0.02966	0.02231	0.02325
SN	0.00454	7.40	31.543	0.00620	0.00374	0.00369
SR	0.00201	1,275.32	0.161	0.00200	0.00201	0.00201
TI	-0.00444	-207.83	0.346	-0.00443	-0.00445	-0.00443
TL	-0.00318	-6.51	44.949	-0.00154	-0.00386	-0.00415
V	-0.00478	-49.98	5.553	-0.00449	-0.00482	-0.00502
Y1	19395.14824	19,395.15	0.078	19403.05463	19377.76372	19404.62636
Y2A	263606.17387	263,606.17	0.644	265147.67442	261786.37874	263884.46844
Y2R	18988.06683	18,988.07	1.205	18863.55476	19252.07459	18848.57114
ZN	0.00881	353.43	4.389	0.00866	0.00925	0.00853
ZR	0.00335	7.74	43.090	0.00197	0.00324	0.00485

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 32

Date/Time: 11/14/2013 00:58

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21295	2,661.52	1.160	0.21184	0.21123	0.21578
AL	486.44263	49,434.78	0.492	484.58649	489.14259	485.59879
AS	0.09177	20.81	1.299	0.09064	0.09166	0.09302
B	-0.02423	830.16	5.911	-0.02455	-0.02547	-0.02266
BA	0.48810	293,869.23	0.711	0.48527	0.48707	0.49197
BE	0.49669	196,648.39	0.770	0.49430	0.49467	0.50110
CA	484.29034	432,006.47	0.506	481.46521	485.57950	485.82631
CD	0.94454	14,100.18	0.034	0.94488	0.94424	0.94449
CO	0.46118	2,260.34	0.114	0.46074	0.46176	0.46103
CR	0.47331	4,550.32	0.911	0.46991	0.47185	0.47816
CU	0.51426	6,318.02	1.480	0.50874	0.51110	0.52294
FE	194.23067	49,475.94	0.709	193.36606	195.81981	193.50614
K	-0.07078	-49.57	32.930	-0.05670	-0.09769	-0.05797
LI	0.00017	342.40	1114.257	-0.00125	0.00234	-0.00058
MG	518.15878	640,306.48	0.863	516.16930	523.28221	515.02485
MN	0.47746	27,298.35	0.862	0.47482	0.47536	0.48220
MO	-0.00176	-5.16	18.448	-0.00139	-0.00187	-0.00201
NA	0.01341	-14.69	43.062	0.02002	0.00936	0.01084
NI	0.91521	3,157.70	0.156	0.91374	0.91659	0.91531
P	0.00849	5.01	16.147	0.00741	0.01003	0.00801
PB	0.04895	178.84	3.666	0.04763	0.05099	0.04822
S	-0.12949	-29.38	5.752	-0.13530	-0.13207	-0.12109
SB	0.62718	466.17	0.214	0.62627	0.62872	0.62655
SE	0.05354	15.62	7.969	0.04861	0.05595	0.05606
SI	0.05162	11.11	22.280	0.06485	0.04598	0.04403
SN	0.00451	7.35	12.098	0.00431	0.00409	0.00512
SR	0.00200	1,269.98	0.643	0.00198	0.00200	0.00201
TI	-0.00429	-180.60	6.847	-0.00400	-0.00429	-0.00459
TL	0.08645	40.61	2.259	0.08589	0.08484	0.08862
V	0.48129	6,205.60	1.054	0.47762	0.47916	0.48708
Y1	19373.32400	19,373.32	0.218	19414.15239	19329.88467	19375.93494
Y2A	264022.74450	264,022.74	0.719	265179.40199	265056.57720	261832.25432
Y2R	18921.70847	18,921.71	0.676	19019.52424	18776.94461	18968.65657
ZN	1.04535	11,924.77	0.095	1.04650	1.04472	1.04484
ZR	0.00342	7.88	62.105	0.00285	0.00164	0.00577

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 33

Date/Time: 11/14/2013 01:03

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50207	7,107.98	1.015	0.50549	0.50451	0.49621
AL	24.20554	2,543.53	1.907	23.67344	24.49650	24.44668
AS	0.49865	199.40	0.655	0.49591	0.49777	0.50227
B	0.47808	4,287.91	0.413	0.48034	0.47714	0.47674
BA	0.49757	336,232.24	0.250	0.49763	0.49629	0.49878
BE	0.48035	213,439.02	0.366	0.48167	0.48102	0.47836
CA	23.63242	23,571.61	1.693	23.17239	23.82479	23.90007
CD	0.49970	8,250.02	0.087	0.49923	0.49979	0.50009
CO	0.50170	2,776.08	0.074	0.50159	0.50211	0.50139
CR	0.48275	5,265.39	0.233	0.48405	0.48212	0.48208
CU	0.49544	6,646.36	0.681	0.49594	0.49854	0.49185
FE	23.56607	6,740.29	1.790	23.07899	23.80452	23.81468
K	23.87873	8,488.85	1.485	23.47702	24.01084	24.14831
LI	0.48641	2,939.61	1.508	0.47794	0.49087	0.49041
MG	23.50378	40,293.49	1.631	23.06180	23.70338	23.74617
MN	0.49283	31,624.46	0.569	0.49565	0.49278	0.49004
MO	0.50047	2,309.69	0.132	0.50096	0.49972	0.50074
NA	23.83783	25,110.89	1.425	23.44629	24.01428	24.05292
NI	0.49910	1,956.94	0.144	0.49831	0.49972	0.49925
P	0.50710	279.69	0.218	0.50656	0.50838	0.50637
PB	0.50461	692.41	0.151	0.50546	0.50438	0.50399
S	24.56680	4,959.15	0.067	24.58326	24.56666	24.55048
SB	0.50859	417.26	0.464	0.50619	0.51090	0.50868
SE	0.50289	178.72	0.433	0.50537	0.50203	0.50128
SI	24.59162	4,510.08	1.668	24.12448	24.75701	24.89336
SN	0.49012	616.44	0.380	0.48989	0.49208	0.48837
SR	0.49615	384,636.19	0.680	0.49640	0.49939	0.49266
TI	0.49439	30,525.07	0.285	0.49466	0.49564	0.49286
TL	0.49980	350.72	0.280	0.49819	0.50062	0.50060
V	0.49047	7,047.91	0.402	0.49170	0.49151	0.48819
Y1	21825.30295	21,825.30	0.023	21831.01046	21822.69579	21822.20260
Y2A	296325.85045	296,325.85	0.416	295345.84162	295922.13386	297709.57588
Y2R	19778.34003	19,778.34	1.254	20064.47342	19644.62500	19625.92168
ZN	0.50175	6,376.30	0.139	0.50213	0.50218	0.50095
ZR	0.48689	1,126.82	1.111	0.48183	0.48624	0.49259

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 34 Date/Time: 11/14/2013 01:07

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-9.00	1146.269	-0.00030	0.00042	-0.00022
AL	-0.00169	3.71	1120.129	-0.02132	0.01653	-0.00030
AS	-0.00257	-3.87	132.559	-0.00363	-0.00531	0.00124
B	0.00089	5.43	43.230	0.00045	0.00114	0.00108
BA	-0.00001	68.00	136.827	0.00000	-0.00003	-0.00001
BE	-0.00041	-592.47	11.847	-0.00039	-0.00038	-0.00047
CA	-0.00743	92.21	74.917	-0.00129	-0.00885	-0.01216
CD	0.00000	-5.99	1710.403	0.00007	-0.00001	-0.00007
CO	-0.00038	1.76	64.794	-0.00025	-0.00023	-0.00066
CR	-0.00033	-3.33	71.842	-0.00016	-0.00060	-0.00023
CU	-0.00028	-40.87	275.078	0.00040	-0.00012	-0.00113
FE	-0.01375	-1.70	37.669	-0.00858	-0.01373	-0.01894
K	0.00270	-25.81	1850.033	0.02245	-0.05405	0.03968
LI	-0.00109	41.28	284.708	-0.00468	0.00062	0.00078
MG	0.02305	33.54	7.943	0.02503	0.02270	0.02142
MN	-0.00006	19.23	116.575	-0.00005	0.00000	-0.00013
MO	-0.00008	2.00	125.131	-0.00017	0.00002	-0.00007
NA	0.00483	-24.57	296.301	-0.00155	-0.00518	0.02123
NI	-0.00025	13.64	54.417	-0.00019	-0.00040	-0.00015
P	-0.00003	-0.52	4530.084	-0.00167	0.00014	0.00143
PB	0.00004	3.96	2934.768	0.00056	0.00076	-0.00120
S	-0.00252	-6.51	209.499	-0.00098	-0.00838	0.00182
SB	0.00021	3.58	44.297	0.00028	0.00011	0.00023
SE	0.00145	1.43	185.971	0.00279	0.00320	-0.00165
SI	0.01595	5.10	20.123	0.01573	0.01927	0.01286
SN	-0.00064	1.89	19.686	-0.00053	-0.00062	-0.00078
SR	0.00001	-120.20	141.857	-0.00001	0.00002	0.00001
TI	-0.00035	18.88	19.402	-0.00041	-0.00028	-0.00036
TL	-0.00256	-7.33	13.032	-0.00285	-0.00263	-0.00220
V	-0.00086	-22.28	57.757	-0.00029	-0.00112	-0.00116
Y1	22518.25636	22,518.26	0.096	22542.04757	22512.53500	22500.18652
Y2A	310068.41225	310,068.41	0.912	311078.65449	312251.58228	306875.00000
Y2R	19878.25870	19,878.26	0.271	19882.30455	19929.97304	19822.49850
ZN	-0.00086	17.95	2.951	-0.00083	-0.00088	-0.00085
ZR	0.00003	0.38	1407.521	0.00105	0.00042	-0.00138

Mercury Data

Metals in Solid

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1331501M07

Mercury Run Data Report

Data File Name: 1331511.M07

Run Name: 1331501M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By
Damary Valentin

Reviewed Date
11/11/2013 12:26PM

Method Reference Name(s):
SW-846 7471A
SW-846 7471A modified

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 7:52AM

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/11/2013 06:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	144.0

2 Burn Date/Time: 11/11/2013 06:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1401.0

3 Burn Date/Time: 11/11/2013 06:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3301.0

4 Burn Date/Time: 11/11/2013 06:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6865.0

5 Burn Date/Time: 11/11/2013 06:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	16871.0

6 Burn Date/Time: 11/11/2013 06:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33032.0

CorrelationCoefficient = 1.00000
Slope = 6599.9132000000
Y-Intercept = 149.1330900000

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/11/2013 06:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4413	16262.0

8 Burn Date/Time: 11/11/2013 07:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0439	-142.0

9 Burn Date/Time: 11/11/2013 07:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1873	1384.0

10 Burn Date/Time: 11/11/2013 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
1.0295	6943.0

11 Burn Date/Time: 11/11/2013 07:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0224	0.0

12 Burn Date/Time: 11/11/2013 07:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/11/2013 07:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0335	6970.0		

14 Burn Date/Time: 11/11/2013 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266171	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6086	4165.0		

15 Burn Date/Time: 11/11/2013 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266172	**********	0.6024	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6730	4590.0		

16 Burn Date/Time: 11/11/2013 07:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266173	**********	0.6028	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2470	1778.0		

17 Burn Date/Time: 11/11/2013 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	U*********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0245	-14.0		

18 Burn Date/Time: 11/11/2013 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	UP********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0661	7185.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/11/2013 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	D*********	0.6404	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0294	-46.0		

20 Burn Date/Time: 11/11/2013 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	R*********	0.6043	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1229	7560.0		

21 Burn Date/Time: 11/11/2013 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	M*********	0.6247	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0966	7386.0		

22 Burn Date/Time: 11/11/2013 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
1.0441	7040.0

23 Burn Date/Time: 11/11/2013 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0332	-71.0

24 Burn Date/Time: 11/11/2013 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266175	**********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0085	6805.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/11/2013 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266176	**********	0.6136	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5898	4041.0		

26 Burn Date/Time: 11/11/2013 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266177	**********	0.6209	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1388	1064.0		

27 Burn Date/Time: 11/11/2013 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266178	**********	0.6185	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	39.0		

28 Burn Date/Time: 11/11/2013 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266179	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3620	2537.0		

29 Burn Date/Time: 11/11/2013 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266180	**********	0.6097	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6459	4411.0		

30 Burn Date/Time: 11/11/2013 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266181	**********	0.6011	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2909	2068.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/11/2013 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266182	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0157	44.0		

32 Burn Date/Time: 11/11/2013 07:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266183	**********	0.6198	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.7596	5162.0		

33 Burn Date/Time: 11/11/2013 07:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266184	**********	0.6173	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6104	4177.0		

34 Burn Date/Time: 11/11/2013 07:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
1.0446	7043.0

35 Burn Date/Time: 11/11/2013 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0294	-46.0

36 Burn Date/Time: 11/11/2013 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266185	**********	0.6194	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0980	795.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/11/2013 08:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266186	**********	0.6336	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0046	178.0		

38 Burn Date/Time: 11/11/2013 08:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268096	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6093	4170.0		

39 Burn Date/Time: 11/11/2013 08:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268097	**********	0.6074	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5807	3981.0		

40 Burn Date/Time: 11/11/2013 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268098	**********	0.6122	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3866	2700.0		

41 Burn Date/Time: 11/11/2013 08:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268099	**********	0.6321	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	46.0		

42 Burn Date/Time: 11/11/2013 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0166	38.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/11/2013 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0184	6870.0		

44 Burn Date/Time: 11/11/2013 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.9185	45815.0		

45 Burn Date/Time: 11/11/2013 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.9253	52461.0		

46 Burn Date/Time: 11/11/2013 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9543	6447.0

47 Burn Date/Time: 11/11/2013 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0415	-126.0

48 Burn Date/Time: 11/11/2013 08:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5052	10083.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/11/2013 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.5806	17182.0		

50 Burn Date/Time: 11/11/2013 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
Z266803		0.6348	100	1.00

AVG (ppb)	Intensity
0.8542	5786.0

51 Burn Date/Time: 11/11/2013 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4183	9510.0		

52 Burn Date/Time: 11/11/2013 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4196	9518.0		

53 Burn Date/Time: 11/11/2013 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266803	D*********	0.6348	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.1285	27399.0		

54 Burn Date/Time: 11/11/2013 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6820	44254.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/11/2013 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6391	43971.0		

56 Burn Date/Time: 11/11/2013 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.7650	51403.0		

57 Burn Date/Time: 11/11/2013 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266806	**********	0.6431	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0814	685.0		

58 Burn Date/Time: 11/11/2013 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
1.0140	6841.0

59 Burn Date/Time: 11/11/2013 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0303	-52.0

60 Burn Date/Time: 11/11/2013 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266808	**********	0.6283	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2758	1968.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/11/2013 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266676	**********	0.6067	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0461	452.0		

62 Burn Date/Time: 11/11/2013 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266677	**********	0.6417	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2409	1738.0		

63 Burn Date/Time: 11/11/2013 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266678	**********	0.6128	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2186	1591.0		

64 Burn Date/Time: 11/11/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266679	**********	0.6117	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1499	1137.0		

65 Burn Date/Time: 11/11/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266681	**********	0.6147	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0030	128.0		

66 Burn Date/Time: 11/11/2013 09:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266682	**********	0.6378	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0584	533.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/11/2013 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265116	**********	0.6392	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1647	1235.0		

68 Burn Date/Time: 11/11/2013 09:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265117	**********	0.6185	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1152	908.0		

69 Burn Date/Time: 11/11/2013 09:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265118	**********	0.6161	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0405	415.0		

70 Burn Date/Time: 11/11/2013 09:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
1.0443	7041.0

71 Burn Date/Time: 11/11/2013 09:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0307	-55.0

72 Burn Date/Time: 11/11/2013 09:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265119	**********	0.6194	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0085	92.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/11/2013 09:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265120	**********	0.6218	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0650	577.0		

74 Burn Date/Time: 11/11/2013 09:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265121	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0243	308.0		

75 Burn Date/Time: 11/11/2013 09:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265123	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0052	182.0		

76 Burn Date/Time: 11/11/2013 09:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265124	**********	0.6249	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0658	582.0		

77 Burn Date/Time: 11/11/2013 09:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265125	**********	0.6086	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1750	1303.0		

78 Burn Date/Time: 11/11/2013 09:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265126	**********	0.6024	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0924	758.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/11/2013 09:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6992	11364.0		

80 Burn Date/Time: 11/11/2013 09:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0341	-77.0		

81 Burn Date/Time: 11/11/2013 09:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9896	6680.0		

82 Burn Date/Time: 11/11/2013 09:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
1.0341	6974.0

83 Burn Date/Time: 11/11/2013 09:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0330	-70.0

84 Burn Date/Time: 11/11/2013 09:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265885	**********	0.6064	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1635	1227.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/11/2013 09:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266477	**********	0.6144	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2506	8403.0		

86 Burn Date/Time: 11/11/2013 09:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266809	**********	0.6123	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2406	1736.0		

87 Burn Date/Time: 11/11/2013 09:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266812	**********	0.6018	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9514	6428.0		

88 Burn Date/Time: 11/11/2013 09:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266813	**********	0.6373	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5417	10324.0		

89 Burn Date/Time: 11/11/2013 09:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	U*********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9064	6131.0		

90 Burn Date/Time: 11/11/2013 09:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	UP********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9687	13143.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/11/2013 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266817	D*********	0.6053	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8608	5830.0		

92 Burn Date/Time: 11/11/2013 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266815	R*********	0.6279	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9369	12933.0		

93 Burn Date/Time: 11/11/2013 10:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266816	M*********	0.6233	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8742	12519.0		

94 Burn Date/Time: 11/11/2013 10:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
1.0205	6884.0

95 Burn Date/Time: 11/11/2013 10:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0351	-84.0

96 Burn Date/Time: 11/11/2013 10:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266818	**********	0.6071	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8607	5829.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/11/2013 10:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	16.1754	106918.0		

98 Burn Date/Time: 11/11/2013 10:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265225	**********	0.6077	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0040	174.0		

99 Burn Date/Time: 11/11/2013 10:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265226	**********	0.6122	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1529	1157.0		

100 Burn Date/Time: 11/11/2013 10:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265227	**********	0.6141	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5547	3809.0		

101 Burn Date/Time: 11/11/2013 10:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265229	**********	0.6104	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3357	2364.0		

102 Burn Date/Time: 11/11/2013 10:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265234	**********	0.6308	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1747	1301.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/11/2013 10:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265236	**********	0.6315	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5463	3754.0		

104 Burn Date/Time: 11/11/2013 10:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265237	**********	0.6385	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5597	3842.0		

105 Burn Date/Time: 11/11/2013 10:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.9888	33078.0		

106 Burn Date/Time: 11/11/2013 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9748	6582.0

107 Burn Date/Time: 11/11/2013 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0354	-86.0

108 Burn Date/Time: 11/11/2013 10:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265242	**********	0.6258	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.4372	16235.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/11/2013 10:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265244	**********	0.6282	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9552	6453.0		

110 Burn Date/Time: 11/11/2013 10:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265245	**********	0.6209	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0909	748.0		

111 Burn Date/Time: 11/11/2013 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265246	**********	0.6355	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6472	4420.0		

112 Burn Date/Time: 11/11/2013 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	10.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.7097	11433.0		

113 Burn Date/Time: 11/11/2013 11:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	2.50	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1061	14050.0		

114 Burn Date/Time: 11/11/2013 11:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0407	-121.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/11/2013 11:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9607	6489.0		

116 Burn Date/Time: 11/11/2013 11:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267423	**********	0.6102	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.2265	21445.0		

117 Burn Date/Time: 11/11/2013 11:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268100	**********	0.6075	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8508	5764.0		

118 Burn Date/Time: 11/11/2013 11:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
1.0148	6846.0

119 Burn Date/Time: 11/11/2013 11:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0341	-77.0

120 Burn Date/Time: 11/11/2013 11:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268101	**********	0.6144	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9540	6445.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

121 Burn Date/Time: 11/11/2013 11:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268102	**********	0.6421	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4875	3366.0		

122 Burn Date/Time: 11/11/2013 11:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268103	**********	0.6026	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0203	14.0		

123 Burn Date/Time: 11/11/2013 11:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268104	**********	0.6366	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8505	5762.0		

124 Burn Date/Time: 11/11/2013 11:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268105	**********	0.6027	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6109	4180.0		

125 Burn Date/Time: 11/11/2013 11:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268106	**********	0.6215	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4995	3445.0		

126 Burn Date/Time: 11/11/2013 11:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268107	**********	0.6384	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0253	-19.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

127 Burn Date/Time: 11/11/2013 11:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268108	**********	0.6193	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4712	3258.0		

128 Burn Date/Time: 11/11/2013 11:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268109	**********	0.6300	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3292	2321.0		

129 Burn Date/Time: 11/11/2013 11:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268110	**********	0.6271	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4945	3412.0		

130 Burn Date/Time: 11/11/2013 11:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 11		1	1	1.00

AVG (ppb)	Intensity
1.0257	6918.0

131 Burn Date/Time: 11/11/2013 11:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 11		1	1	1.00

AVG (ppb)	Intensity
-0.0301	-51.0

132 Burn Date/Time: 11/11/2013 11:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268111	**********	0.6242	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

133 Burn Date/Time: 11/11/2013 11:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263643	**********	0.6209	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9998	6747.0		

134 Burn Date/Time: 11/11/2013 11:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263647	**********	0.6138	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4030	2808.0		

135 Burn Date/Time: 11/11/2013 11:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266523	**********	0.6099	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0273	328.0		

136 Burn Date/Time: 11/11/2013 11:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	U*********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1197	7539.0		

137 Burn Date/Time: 11/11/2013 11:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	UP********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1377	14258.0		

138 Burn Date/Time: 11/11/2013 11:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	D*********	0.6250	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8264	5603.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

139 Burn Date/Time: 11/11/2013 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	R*********	0.6169	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9907	13288.0		

140 Burn Date/Time: 11/11/2013 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	M*********	0.6306	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8897	12621.0		

141 Burn Date/Time: 11/11/2013 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	8.8181	58354.0		

142 Burn Date/Time: 11/11/2013 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 12		1	1	1.00

AVG (ppb)	Intensity
1.0264	6923.0

143 Burn Date/Time: 11/11/2013 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 12		1	1	1.00

AVG (ppb)	Intensity
-0.0306	-54.0

144 Burn Date/Time: 11/11/2013 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	5.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9260	12861.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

145 Burn Date/Time: 11/11/2013 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1682	1258.0

146 Burn Date/Time: 11/11/2013 12:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 13		1	1	1.00

AVG (ppb)	Intensity
1.0243	6909.0

147 Burn Date/Time: 11/11/2013 12:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 13		1	1	1.00

AVG (ppb)	Intensity
-0.0310	-57.0

Extraction/Distillation/Digestion Logs

Metals in Solid

LLENS Worksheet for 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 003

Balance ID#: 10685 **Start Time:** 11/11/13 22:27 **End Time:** 11/12/13 3:30 **Hot Block:** 8

Pipette ID: S/2000

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HNO3	P13-305B	10.00
30% H2O2	333502	4.00
HCL	40272	10.00
HNO3	1113030	5.00
ICP Spike 1A	1317716#31	2.00
ICP Spike 1B	1317717#31	2.00
LCS A1	1317716#31	2.00
LCS B1	1317717#31	2.00

Method Ref: SW-846 3050B

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
3)	7265225	11/15/13 20:32		SW	N8			020a	1306159	
4)	7265226	11/15/13 20:32		SW	N8			020a	1306159	
5)	7265227	11/15/13 20:32		SW	N8			020a	1306159	
6)	7265229	11/15/13 20:32		SW	N8			020a	1306159	
7)	7265234	11/15/13 20:32		SW	N8			020a	1306159	
8)	7265236	11/15/13 20:32		SW	N8			020a	1306159	
9)	7265237	11/15/13 20:32		SW	N8			020a	1306159	
10)	7265241	11/15/13 20:32		SW	N8			020a	1306159	
11)	7265242	11/15/13 20:32		SW	N8			020a	1306159	
12)	7265244	11/15/13 20:32		SW	N8			020a	1306159	
13)	7265245	11/15/13 20:32		SW	N8			020a	1306159	
14)	7265246FD	11/15/13 20:32		SW	N8			020a	1306159	
15)	7265885	11/18/13 09:05		SW	P8			099a	1306159	
16)	7266809	11/18/13 18:58		SW	N8			020a	1306159	
17)	7266812	11/18/13 18:58		SW	N8			020a	1306159	
18)	7266813	11/18/13 18:58		SW	N8			020a	1306159	
19)	**7266814U**	11/18/13 18:58		SW	N8			020a	1306159	
20)	**7266815R**	11/18/13 18:58		SW	N8			020a	1306159	
21)	**7266816M**	11/18/13 18:58		SW	N8			020a	1306159	
22)	**7266817D**	11/18/13 18:58		SW	N8			020a	1306159	
23)	7266818	11/18/13 18:58		SW	N8			020a	1306159	

Prep Employee: AMS00862

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	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
24)	7265239	11/19/13 00:00		SW	N8			020a	1306159	

Batch# 13 312 5708 003

LLENS Batch Chronology and Change Log - SW846 ICP/ICP MS Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:54	00862
2)	Sample Wt		11/11/13 22:27	00862
3)	Final Vol	10685	11/11/13 22:27	00862
4)	Trial		11/11/13 22:27	00862
5)	Upload Prep	US19VDIELA04	11/12/13 3:31	00862

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 003

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					1.0000	100.0000	1
LCSW					1.0000	100.0000	1
7265225	11/15/13	N8	R2041	KVM04-03	1.0300	100.0000	1
7265226	11/15/13	N8	R2042	KVM04-04	1.0200	100.0000	1
7265227	11/15/13	N8	R2043	KVM04-05	1.0100	100.0000	1
7265229	11/15/13	N8	R2M71	KVM04-07	1.0100	100.0000	1
7265234	11/15/13	N8	R2E16	KVM04-09	1.0000	100.0000	1
7265236	11/15/13	N8	2E161	KVM04-11	1.0200	100.0000	1
7265237	11/15/13	N8	2E16D	KVM04-12	1.0400	100.0000	1
7265241	11/15/13	N8	2F142	KVM04-16	1.0100	100.0000	1
7265242	11/15/13	N8	R2121	KVM04-17	1.0100	100.0000	1
7265244	11/15/13	N8	R2123	KVM04-19	1.0100	100.0000	1
7265245	11/15/13	N8	2D141	KVM04-20	1.0100	100.0000	1
7265246FD	11/15/13	N8	DUPX1	KVM04-21FD	1.0000	100.0000	1
7265885	11/18/13	P8	ARTSV		1.0300	100.0000	1
7266809	11/18/13	N8	2E131	KVM06-01	1.0200	100.0000	1
7266812	11/18/13	N8	2C126	KVM06-04	1.0100	100.0000	1
7266813	11/18/13	N8	2C111	KVM06-05	1.0100	100.0000	1
7266814U	11/18/13	N8	2E101	KVM06-06BKG	1.0000	100.0000	1
7266815R	11/18/13	N8	2E101	KVM06-06MS	1.0000	100.0000	1
7266816M	11/18/13	N8	2E101	KVM06-06MSD	1.0000	100.0000	1
7266817D	11/18/13	N8	2E101	KVM06-06DUP	1.0000	100.0000	1
7266818	11/18/13	N8	2E102	KVM06-07	1.0300	100.0000	1
7265239	11/19/13	N8	R2F14	KVM04-14	1.0400	100.0000	1

LLENS Worksheet for 5711 SW SW846 Hg Digest

Batch# 13 312 5711 003

Balance ID#: 19119 **Start Time:** 11/11/13 2:00 **End Time:** 11/11/13 2:30 **Hot Block:** 7

Pipette ID: S/100

Spike/Reagent	Lot#	Volume Added(mL)
5%KMnO4	H13-310P	15.00
Aqua Regia	P13-315A	5.00
LCS 1ppm Hg	P13-312A	0.10
Spike 1ppm Hg	P13-312A	0.10

Method Ref: SW-846 7471A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	0.6252g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	0.6261g Teflon chips used, Lot: J114-3H037
3)	7265885	11/18/13 09:05		SW	P8			099a	1306159	
4)	7266477	11/18/13 15:34		SW	N8			034a	1306159	
5)	7266809	11/18/13 18:58		SW	N8			020a	1306159	
6)	7266812	11/18/13 18:58		SW	N8			020a	1306159	
7)	7266813	11/18/13 18:58		SW	N8			020a	1306159	
8)	**7266814U**	11/18/13 18:58		SW	N8			020a	1306159	
9)	**7266815R**	11/18/13 18:58		SW	N8			020a	1306159	
10)	**7266816M**	11/18/13 18:58		SW	N8			020a	1306159	
11)	**7266817D**	11/18/13 18:58		SW	N8			020a	1306159	
12)	7266818	11/18/13 18:58		SW	N8			020a	1306159	
13)	7265239	11/19/13 00:00		SW	N8			020a	1306159	
14)	7265225	11/15/13 20:32		SW	N8			020a	1306159	
15)	7265226	11/15/13 20:32		SW	N8			020a	1306159	
16)	7265227	11/15/13 20:32		SW	N8			020a	1306159	
17)	7265229	11/15/13 20:32		SW	N8			020a	1306159	
18)	7265234	11/15/13 20:32		SW	N8			020a	1306159	
19)	7265236	11/15/13 20:32		SW	N8			020a	1306159	
20)	7265237	11/15/13 20:32		SW	N8			020a	1306159	
21)	7265241	11/15/13 20:32		SW	N8			020a	1306159	
22)	7265242	11/15/13 20:32		SW	N8			020a	1306159	
23)	7265244	11/15/13 20:32		SW	N8			020a	1306159	
24)	7265245	11/15/13 20:32		SW	N8			020a	1306159	
25)	7265246FD	11/15/13 20:32		SW	N8			020a	1306159	

Prep Employee: AMS00862

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v 1.0.1

Batch# 13 312 5711 003

LLENS Batch Chronology and Change Log - SW SW846 Hg Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:17	00862
2)	Sample Wt	19119	11/11/13 0:41	00862
3)	Final Vol	19119	11/11/13 0:41	00862
4)	Trial		11/11/13 0:41	00862
5)	Upload Prep	US19VDIELA03	11/11/13 3:32	00862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5711 SW SW846 Hg Digest

Batch# 13 312 5711 003

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					.6000	100.0000	1
LCSW					1.0000	100.0000	1
7265885	11/18/13	P8	ARTSV		.6064	100.0000	1
7266477	11/18/13	N8			.6144	100.0000	1
7266809	11/18/13	N8	2E131	KVM06-01	.6123	100.0000	1
7266812	11/18/13	N8	2C126	KVM06-04	.6018	100.0000	1
7266813	11/18/13	N8	2C111	KVM06-05	.6373	100.0000	1
7266814U	11/18/13	N8	2E101	KVM06-06BKG	.6083	100.0000	1
7266815R	11/18/13	N8	2E101	KVM06-06MS	.6279	100.0000	1
7266816M	11/18/13	N8	2E101	KVM06-06MSD	.6233	100.0000	1
7266817D	11/18/13	N8	2E101	KVM06-06DUP	.6053	100.0000	1
7266818	11/18/13	N8	2E102	KVM06-07	.6071	100.0000	1
7265239	11/19/13	N8	R2F14	KVM04-14	.6229	100.0000	1
7265225	11/15/13	N8	R2041	KVM04-03	.6077	100.0000	1
7265226	11/15/13	N8	R2042	KVM04-04	.6122	100.0000	1
7265227	11/15/13	N8	R2043	KVM04-05	.6141	100.0000	1
7265229	11/15/13	N8	R2M71	KVM04-07	.6104	100.0000	1
7265234	11/15/13	N8	R2E16	KVM04-09	.6308	100.0000	1
7265236	11/15/13	N8	2E161	KVM04-11	.6315	100.0000	1
7265237	11/15/13	N8	2E16D	KVM04-12	.6385	100.0000	1
7265241	11/15/13	N8	2F142	KVM04-16	.6270	100.0000	1
7265242	11/15/13	N8	R2121	KVM04-17	.6258	100.0000	1
7265244	11/15/13	N8	R2123	KVM04-19	.6282	100.0000	1
7265245	11/15/13	N8	2D141	KVM04-20	.6209	100.0000	1
7265246FD	11/15/13	N8	DUPX1	KVM04-21FD	.6355	100.0000	1

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓	C	↓	↓	↓	↓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C				
9	Hg 5700 ICV	E					.25ml	1	4	111330
10	CCV	F					.20			
11	CRA	G	Hg-0.1mg/L Cont			H13③288308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13		I					.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K					.25			
16		L					.50			
17		M								
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM823	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-04-13	11-11-13	RT
6				↓	↓	↓	↓	0.1	↓	↓	↓	↓
7				↓	↓	↓	↓	1.0	↓	↓	↓	↓
8				↓	↓	↓	↓	0.1	↓	↓	↓	↓
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1.6ml KMnO4		H13-297A H13-302C	100	2.5ug/L	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	↓	0.01	↓	↓	↓	↓
18				to volume w/ DI H_2O			2000	5%	NSM823	11-04-13	5-04-14	RT
19				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L Inter Cont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-238D	1.0ml			
2	Hg-0.1mg/L Inter Cont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		M	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	SI	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				Top vol w/0.	15%	HNO3 H13-16KC	10	1.0	DJ354	11-05-13	11-12-13	RT
2				↓	↓	↓	10	0.1				
3				5ml Aqua Regia 15ml Rm NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16				↓	↓	↓		0.4				
17				③ ~~Rm~~ 5ml Aqua-Regia 25ml Rm NO4		H13-309 H13-302D		2.5				
18								1.0				
19								0.2				
20				↓	↓	↓	↓	0.2	↓	↓	↓	↓

11-5-13 DV 354

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 StdCal	HG-309W	Hg-0.1mg/L Cal		11-12-13	HI3-309B	.50ml			
2		X	Hg-1.0mg/L Cal			HI3-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-10mg/L Inter Cal	HI3-310A	Hg-10mg/L Cal		4-15-14	HI3-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	HI3-310M				
9	1.0mg/L Inter Conc	C	10mg/L Cont		4-15-14	HI3-288D				
10	0.1mg/L Inter Cont	D	1.0mg/L Cont		11-13-13	HI3-310C				
11	Hg-5700 ICV	E					.25ml	1	H	1113030
12	CCV	F	11-6-130V354 (3)				.20			
13	CRA	G	Hg-0.1mg/L ~~Pal Cont~~			HI3-310D	.20			
14	StdCal	H	Hg-0.1mg/L Cal			HI3-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			HI3-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	HI3-310N	$KMnO_4$ #1	6	4-10-18	46760	100.04g			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua 25ml Km	Aqua NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O8 6ml KmNO4		H13-297K H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

Key (••) – Other Used

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	HB-310 P	$KMnO_4$ #1	6	4-10-18	46760	100.03 g			
2	↓ ↓	↓ R	↓ ↓	↓	↓	↓	100.07 g			
3	Hg-1.0mg/L InterCont	HB-311A	Hg-10mg/L Cont	–	4-15-14	HB-288D	1.0ml			
4	Hg-0.1mg/L InterCont	311B	Hg-1.0mg/L Cont	–	11-14-13	HB-311A	1.0ml			
5	Stannous Chloride	311C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #2-3	200.03g			
6	Stannous Chloride	↓ 311D	↓	6	↓	↓ #5	200.03g			
7	Hydroxylamine	HG-311E	$NH_2OH \cdot HCl$	6	10-26-19	54809 #2-3	240.01g			
8	↓	↓	NaCl	6	3-17-18	48151 #1	240.01g			
9	Hg-1.0mg/L InterCal	HB-312A	Hg-10mg/L Cal	–	4-15-14	HB-288C	1.0ml			
10	Hg-1.0mg/L InterCal	HB-313A	Hg-10mg/L Cal		4-15-14	HB-288C	1.0ml			
11	Hg-0.1mg/L InterCal	B	Hg-1.0mg/L Cal		11-16-13	HB-313A				
12	Hg-1.0mg/L InterCont	C	Hg-10mg/L Cont		4-15-14	HB-288D				
13	Hg-0.1mg/L InterCont	D	Hg-1.0mg/L Cont		11-16-13	HB-313C	↓			
14	Hg-5700 ICV	E	↓		↓	↓	.25ml	1	4	111363D
15	CCV	F	↓			↓	.20			
16	CRA	G	Hg-0.1mg/L Cont			HB-313D	.20			
17	Std. Cal	H	Hg-0.1mg/L Cal			HB-313B	.20			
18	↓	I	↓			↓	.50			
19	↓	J	Hg-1.0mg/L Cal			HB-313A	.20			
20	↓ ↓	↓ K	↓		↓	↓	.25 ↓	↓	↓	↓

Key – Manufacturer (M•)

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7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12.– SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM213	11-06-13	5-06-14	RT
2	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-07-13	11-14-13	RT
4				↓	↓	↓	10	0.1			↓	
5	200	6	40272				2000	10%			5-07-14	
6	↓	↓	↓				↓	10%			↓	
7								12%				
8							↓	↓	↓	↓	↓	↓
9				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-08-13	11-15-13	RT
10				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-09-13	11-16-13	RT
11								0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H13-2975 H13-3056	100	2.5				
15	↓	↓	↓	↓	↓	↓	200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓

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Footnotes

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H13-313L	Hg 1.0 mg/L Cal	—	11-16-13	H13-313A	.50ml	1	4	1113030
2	↓	M						↓	↓	↓
3	Hg 5701 ICV	N	Hg 1.0 mg/L Cont		11-16-13	H13-313C	.25ml			
4	CCV	O					.10			
5	CCV	P					.10			
6	CCV	Q					.10			
7	CCV	R	↓			↓	.10			
8	CRA	S	Hg 0.1 mg/L Cont			H13-313D	.20			
9	Std Cal	T	Hg 0.1 mg/L Cal			H13-313B	.20			
10		U	↓			↓	.50			
11		V	Hg 1.0 mg/L Cal			H13-313A	.10			
12		W					.25			
13		X	↓		↓	↓	.50Y			
14	↓	Y								
15	SI	Z	Hg 0.1 mg/L Cal		11-16-13	H13-313B	.10ml			
16	CRA	AA	Hg 0.1 mg/L Cont			H13-313D	.10ml			
17	CRA	BB	↓		↓	↓	.40ml			
18	Aqua Regia	CC						20	4	1113030
19	Hg 1.0 mg/L InterCal	H13-315A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0ml			
20	Hg 0.1 mg/L InterCal	315B	Hg 1.0 mg/L Cal		11-18-13	H13-315A	1.0mL			

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10 – Plasma Pure
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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	135111	3.2ml $H_2S_2O_8$ 1ml $KMnO_4$		H13-2973 H13-305C	100	5.0ug/L	DL354	11-09-13	11-16-13	RT
2	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
3	—			5ml Aqua Regia 15ml $KMnO_4$		H13-313CC H13-305C		2.5				
4				↓	↓	↓	↓	1.0	↓	↓	↓	↓
5								1.0				
6								1.0				
7								1.0				
8								0.2				
9								0.2				
10								0.5				
11								1.0				
12								2.5				
13								5.0				
14								0.0				
15								0.1				
16								0.1				
17	—			↓	↓	↓	↓	0.4			↓	
18	60	6	40272	—		—	80	1:3	↓	↓	11-09-13	↓
19	—			To Vol w/ 0.15% HNO_3		H13-116CC	10	1.0	DL354	11-11-13	11-18-13	RT
20	—			↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

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D = La_2O_3 (10%)
E = $Al(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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** units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Stannous Chloride	H13-315C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #3	200.06g	—		
2	Hydroxylamine	H13-315D	$NH_2OH \cdot HCl$	6	10-26-19	54869 #3	240.04g			
3	↓	↓	NaCl	6	3-17-18	48151 #1	240.08g			
4	Potassium Permanganate	H13-315E	$KMnO_4$ #1	6	4-10-18	46760	100.03g			
5	↓	↓ F	↓	↓		46760	100.04g			
6	↓	↓ G	↓	↓	↓	46760	100.07g			
7	Hg 1.0 mg/L Inter Cont	H13-316A	Hg 10 mg/L Cont	—	4-15-14	H13-288D	1.0 ml			
8	Hg 0.1 mg/L Inter Cont	316B	Hg 1.0 mg/L Cont	—	11-19-13	H13-316A	1.0 ml			
9	Potassium Persulfate	H13-316C	$K_2S_2O_8$ # 3	6	9-29-15	42220	100.04g			
10	Hg 1.0 mg/L Inter Cal	H13-317A	Hg 10 mg/L Cal	7	4-15-14	H13-288C	1.0 ml			
11	0.1 mg/L Inter Cal	B	1.0 mg/L Cal		11-20-13	H13-317A	↓			
12	1.0 mg/L Inter Cont	C	10 mg/L Cont		4-15-14	H13-288D				
13	↓ 0.1 mg/L Inter Cont	D	↓ 1.0 mg/L Cont	↓	11-20-13	H13-317C	↓			
14	Hg 5700 ICV	E	↓	7	↓	↓	.25 ml	1	4	1113030
15	CCV	F	↓			↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1 mg/L Cont			H13-317D	.20			
17	Std Cal	H	Hg 0.1 mg/L Cal			H13-317B	.20			
18	↓	I	↓			↓	.50			
19		J	Hg 1.0 mg/L Cal			H13-317A	.20			
20	↓	↓ K	↓	↓	↓	↓	.25 ↓	↓	↓	↓

Key – Manufacturer (M•)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	200	13 ③11-11-13	52250 20Y35Y				2000	10%	DU354	11-11-13	5-11-14	RT
2								12%				
3												
4				to volume w/ DI H_2O			2000	5%	NSM823	11-11-13	5-11-14	RT
5												
6												
7				To vol w/ 0.15% HNO3		H13-161CC	10	1.0	DU354	11-12-13	11-19-13	RT
8							10	0.1				
9				to volume w/ DI H_2O			2000	5%	NSM823	11-12-13	5-12-14	RT
10				To vol w/ 0.15% HNO3		H13-161CC	10	1.0	DU354	11-13-13	11-20-13	RT
11								0.1				
12								1.0				
13								0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 6ml KMNO4		H13-308N H13-310B	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7265225	SD-R2-0-4-1		X	1	
7265226	SD-R2-0-4-2		X	1	
7265227	SD-R2-0-4-3		X	1	
7265229	SD-R2-M-7-01D		X	1	
7265234	SD-R2-E16-3		X	1; 1; 1	
7265236	SD-R2-E-16-1		X	1	
7265237	SD-R2-E-16-1D		X	1	
7265239	SD-R2-F-14-1		X	1	
7265241	SD-R2-F-14-2		X	1	
7265242	SD-R2-G-12-1		X	1	
7265244	SD-R2-G-12-3		X	1	
7265245	SD-R2-D-14-1		X	1	
7265246	DUP-02		X	1	Field Duplicate Sample
7265247	FB-01_11052013	X		1	Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Sample Duplicate

Method defined actions are taken for any failed matrix QC.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Ashland, Inc.
SDG: KVM04

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
TOC by Lloyd Kahn	13311049532A	B262379B	11/07/2013 21:35:00
		262379Q	11/07/2013 21:26:00
		7265225	11/08/2013 02:46:00
		7265226	11/08/2013 03:00:00
		7265227	11/08/2013 03:12:00
TOC by Lloyd Kahn	13312049531A	7265234B	11/08/2013 22:41:00
		7265234Q	11/08/2013 22:51:00
		7265229	11/08/2013 22:59:00
		7265234 UNSPK/BKG	11/08/2013 23:10:00
		7265234 DUP	11/08/2013 23:19:00
		7265234 MS	11/08/2013 23:28:00
		7265236	11/08/2013 23:44:00
		7265237	11/09/2013 01:20:00
		7265239	11/09/2013 00:05:00
		7265241	11/09/2013 00:17:00
		7265242	11/09/2013 00:46:00
		7265244	11/09/2013 00:56:00
		7265245	11/09/2013 01:33:00
		7265246	11/09/2013 01:12:00
Total Organic Carbon	13312049501A	P31249AB	11/08/2013 03:21:00
		P31249AQ	11/08/2013 03:07:00
Total Organic Carbon	13312049501B	7265247	11/08/2013 09:42:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM04
Matrix: LIQUID

Fraction: Instrumental Wet Chemistry

13312049501A / P31249AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Organic Carbon	TOC	11/08/13	N.D.	mg/l	0.50	1.0

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM04
Matrix: SOLID

Fraction: Instrumental Wet Chemistry

13311049532A / B262379B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
TOC by Lloyd Kahn	TOC	11/07/13	N.D.	mg/kg	100	300

13312049531A / 7265234B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
TOC by Lloyd Kahn	TOC	11/08/13	N.D.	mg/kg	100	300

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

UNSPK: 7265234 MS: 7265234 **Parameter**	Batch: **13312049531A** (Sample number(s): 7265229, 7265234, 7265236-7265237, 7265239, 7265241-7265242, 7265244-7265246) **ME**	**Spike Added mg/kg**	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	50251	3313.07	55460.64	NA	104	NA	59-125	NA	NA

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: LIQUID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: P31249AQ	Batch: **13312049501B** (Sample number(s): 7265247)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Organic Carbon	TOC	25	25.23	NA	101	NA	91-113	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM04
Matrix: SOLID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: Q262379	Batch: **13311049532A** (Sample number(s): 7265225-7265227)								
Parameter	**ME**	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	5880	4879.58	NA	83	NA	47-143	NA	NA

LCS: 7265234	Batch: **13312049531A** (Sample number(s): 7265229, 7265234, 7265236-7265237, 7265239, 7265241-7265242, 7265244-7265246)								
Parameter	**ME**	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	5880	4203.49	NA	71	NA	47-143	NA	NA

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM04

Instrument ID: 15610
Calibration Date: 11/01/2013

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	CC
TOC	12300	72009	98977	229220	458881	888166	0.9999

Acceptance Range:
ICV/CCV: 90%-110%
ICB/CCB: < LOQ

Concentration units: mg/L

Batch Numbers: 13312049501A, 13312049501B
Run Start Dates: 11/08/2013
Run Names: 1331201G03

	TOC		
Sample	True	Result	%Rec
ICV	25	25.443	102
ICB	0	ND	NA
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.084	100
CCB	0	ND	NA
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.059	100
CCB	0	ND	NA

* = Out of Specification are immediately followed by two acceptable CCVs

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM04

Instrument ID: 08610
Calibration Date: 11/04/2013

Analysis	0.3 mg C	0.9 mg C	3.0 mg C	6.0 mg C	CC
TOC	509	1275	3416	6312	.9985

Acceptance Range:
ICV/CCV: 90%-110%
ICB/CCB: < LOQ

Units: CTS

Batch Numbers: 1331104532A, 13312049531A
Run Start Date: 11/07/2013-11/09/2013

	TOC		
Sample	True	Result	%Rec
ICV	3	2.547	85*
ICV	3	2.692	90
ICV	3	2.811	94
CCB	0	ND	NA
CCV	3	2.888	96
CCB	0	ND	NA
CCV	3	2.597	87
CCB	0	ND	NA
CCV	3	2.845	95
CCB	0	ND	NA
CCV	3	2.780	93
CCB	0	ND	NA
CCV	3	2.836	95
CCB	0	ND	NA
CCV	3	2.851	95
CCB	0	ND	NA
CCV	3	2.789	93
CCB	0	ND	NA

* = Out of Specification are immediately followed by two acceptable CCV's

Raw Data

Instrumental Wet Chemistry

Fraction: Instrumental Wet Chemistry

00383: TOC by Lloyd Kahn Analyte Name	Default MDL	Default LOQ	Units
TOC by Lloyd Kahn	100	300	mg/kg

00273: Total Organic Carbon Analyte Name	Default MDL	Default LOQ	Units
Total Organic Carbon	0.50	1.0	mg/l

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03

Data File Name: 13306CAL.G03

Run Start Date/Time: Friday, November 01, 2013 23:54:51

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

CALIB.

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS			
PB	0.0	-1.00	1.00

Analyst: JSMathur 11/3 Date: 11.3.13

Verified By: 11/4/13 Date: 11/4/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
0 CLEANUP	11/1/2013 11:54:51PM	1.0	0.00000		2982
Comments:					
1 RINSE	11/2/2013 12:11:00AM	1.0	0.16100		2467
Comments:					
2 MBLANK	11/2/2013 12:17:28AM	1.0	0.00000		1340
Comments:					
3 S0	11/2/2013 1:13:12AM	1.0	0.00000		2573
Comments:					
4 S1.0	11/2/2013 1:27:23AM	1.0	1.00000		12300
Comments:					
5 S7.5	11/2/2013 1:34:03AM	1.0	7.50000		72009
Comments:					
6 S10.0	11/2/2013 1:43:13AM	1.0	10.00000		98977
Comments:					
7 S25.0	11/2/2013 1:51:32AM	1.0	25.00000		229220
Comments:					

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time: 11/2/2013 1:59:55AM			
8				
S50.0	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
	1.0	50.00000		458881

Comments:

Injection #	Date/Time: 11/2/2013 2:08:09AM			
9				
S100.0	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
	1.0	100.00000		888166

Comments:

Injection #	Date/Time: 11/2/2013 2:21:54AM			
10				
RINSE	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
	1.0	0.25300		3214

Comments:

Injection #	Date/Time: 11/2/2013 2:29:11AM			
11				
ICV	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
	1.0	25.44300		225534

Comments: 1029. IS

Injection #	Date/Time: 11/2/2013 2:36:55AM			
12				
ICB	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
	1.0	0.09000		1766

Comments:

Analyst: [signature] 495 Date: 11.3.13

Verified By: BB/LP Date: 11/4/13

User ID:jsm00495 Name:James S. Mathiot
Title:Chemist Dept:4027

Calibration - Quick View -TOC

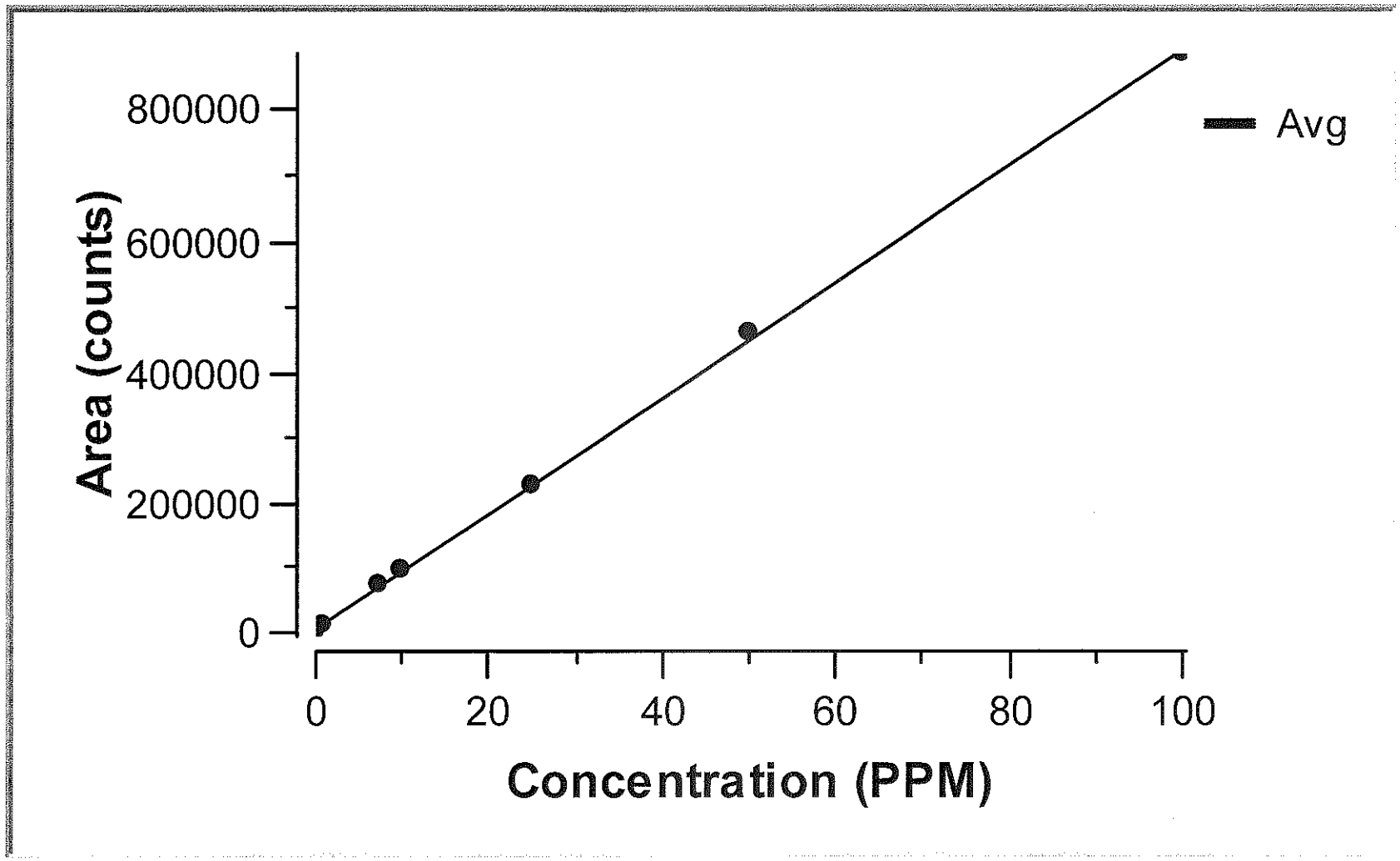
Revision: 19-lli-new - Jun 14, 2012; 03-47-17 PM
Modified By: toc
Date Created: 2012/06/14; 03:47 PM
Last Modified: 2013/11/02; 12:17 AM
Last Calibrated: 2013/11/02; 02:08 AM

RF(ugC/k-cnt): 0.2256
R2: 0.9998
Reagent Blank(cts): 970
Offset Area(cts): 6,700
Offset Mass(ugC): -1.51

Std #	Conc (PPM)	Volume (mL)	# Reps	Area	Std. Dev	%RSD	Date Analysed
RW	0.000	2.000	1	2,573	0	0.00	2013-11-02; 01:13AM
1	1.000	2.000	1	12,300	0	0.00	2013-11-02; 01:27AM
2	7.500	2.000	1	72,009	0	0.00	2013-11-02; 01:34AM
3	10.000	2.000	1	98,977	0	0.00	2013-11-02; 01:43AM
4	25.000	2.000	1	229,220	0	0.00	2013-11-02; 01:51AM
5	50.000	2.000	1	458,881	0	0.00	2013-11-02; 01:59AM
6	100.000	2.000	1	888,166	0	0.00	2013-11-02; 02:08AM

Erik J. Frederikson
Manager

NOV 0 4 2013



Frederiksen

NOV 04 2013

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03

Data File Name: 13312.G03

Run Start Date/Time: Friday, November 08, 2013 01:54:08

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS	25.0	22.63	28.35
PB	0.0	-1.00	1.00

Analyst: J S Matthew 495 Date: 11.8.13

Verified By: BJG Date: 11/11/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 0 — CLEANUP
Date/Time: 11/8/2013 1:54:08AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		3925

Comments:

Injection # 1 — RINSE
Date/Time: 11/8/2013 2:06:29AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		2360

Comments:

Injection # 2 — 25 TIC
Date/Time: 11/8/2013 2:26:24AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.23700		224675

IS

Comments:

Injection # 3 — HIGH CH
Date/Time: 11/8/2013 2:32:59AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	41.21200	103%	366281

Comments: TV=40

Injection # 4 — LOW CHE
Date/Time: 11/8/2013 2:42:16AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	13.15700	105%	117599

Comments: TV=12.5

Injection # 5 — CCV2
Date/Time: 11/8/2013 2:50:29AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.07200		223211

% Recovery = 100

Comments:

Injection # 6 — CCB
Date/Time: 11/8/2013 2:58:16AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.14800		2280

Comments:

Injection # 7 — LCS
Date/Time: 11/8/2013 3:07:08AM Batch Number: 13312049501A Element: TOC

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.05800	25.23200	25.23200	223858

Comments: TV=25 101% (IS)

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	
8	11/8/2013 3:21:54AM	13312049501A	TOC	V
PB	Dil Factor: 1.0	Raw Result 1 (mg/L): 0.23300	Raw Result 2 (mg/L): 0.13500	Class: ********** Calculated Result (mg/L): 0.23300 (TJ) Area Counts: 2601
	Comments:			

Injection #	Date/Time	Batch Number	Element	
9	11/8/2013 3:37:18AM	13311049502A	TOC	V
7261389	Dil Factor: 25.0	Raw Result 1 (mg/L): 43.07200	Raw Result 2 (mg/L): 44.64600	Class: ********** SDG: CLB88 Calculated Result (mg/L): 1116.15000 Area Counts: 389748
	Comments:			

Injection #	Date/Time	Batch Number	Element	
10	11/8/2013 3:52:12AM	13312049501A	TOC	V
7261416	Dil Factor: 1.0	Raw Result 1 (mg/L): 2.16400	Raw Result 2 (mg/L): 2.46600	Class: ********** SDG: CLB89 Calculated Result (mg/L): 2.46600 Area Counts: 21489
	Comments:			

Injection #	Date/Time	Batch Number	Element	
11	11/8/2013 4:07:03AM	13312049501A	TOC	V
7261417	Dil Factor: 1.0	Raw Result 1 (mg/L): 1.37500	Raw Result 2 (mg/L): 1.59900	Class: ********** SDG: CLB89 Calculated Result (mg/L): 1.59900 Area Counts: 14149
	Comments:			

Injection #	Date/Time	Batch Number	Element	
12	11/8/2013 4:22:13AM	13312049501A	TOC	V
7261418	Dil Factor: 1.0	Raw Result 1 (mg/L): 1.30200	Raw Result 2 (mg/L): 1.60400	Class: ********** SDG: CLB89 Calculated Result (mg/L): 1.60400 Area Counts: 13852
	Comments:			

Injection #	Date/Time	Batch Number	Element	
13	11/8/2013 4:37:36AM	13312049501A	TOC	V
7261420	Dil Factor: 1.0	Raw Result 1 (mg/L): 14.23400	Raw Result 2 (mg/L): 16.98500	Class: ********** SDG: CLB89 Calculated Result (mg/L): 16.98500 Area Counts: 139334
	Comments: RLT- Rpd			

Injection #	Date/Time	Batch Number	Element	
14	11/8/2013 4:52:22AM	13312049501A	TOC	V
7261435	Dil Factor: 1.0	Raw Result 1 (mg/L): 1.07800	Raw Result 2 (mg/L): 1.29700	Class: ********** SDG: CLB89 Calculated Result (mg/L): 1.29700 Area Counts: 11497
	Comments:			

Injection #	Date/Time	Batch Number	Element	
15	11/8/2013 5:07:43AM	13312049501A	TOC	V
7261436	Dil Factor: 1.0	Raw Result 1 (mg/L): 1.76400	Raw Result 2 (mg/L): 2.28200	Class: ********** SDG: CLB90 Calculated Result (mg/L): 2.28200 Area Counts: 18899
	Comments:			

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 16 — Date/Time: 11/8/2013 5:22:50AM — Batch Number: 13312049501A — Element: TOC — V

7261437 — Class: ********** — SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.52800	4.15800	4.15800	35033

Comments:

Injection # 17 — Date/Time: 11/8/2013 5:38:08AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.08400		223318

% Recovery = 100

Comments: IS

Injection # 18 — Date/Time: 11/8/2013 5:45:55AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.26400		3308

Comments:

Injection # 19 — Date/Time: 11/8/2013 5:54:18AM — Batch Number: 13312049501A — Element: TOC — V

7261438 — Class: ********** — SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	2.13000	2.50400	2.50400	21509

Comments:

Injection # 20 — Date/Time: 11/8/2013 6:09:42AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: U********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.57400	3.89300	3.89300	34067

Comments:

Injection # 21 — Date/Time: 11/8/2013 6:24:59AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: D********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.65000	4.09400	4.09400	35298

Comments:

Injection # 22 — Date/Time: 11/8/2013 6:40:09AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: R********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	14.20100	14.82900	14.82900	129630

Comments: SA=10 1099 (+S)

Injection # 23 — Date/Time: 11/8/2013 6:54:42AM — Batch Number: 13312049501A — Element: TOC — V

~~7251564~~ 7261564 — Class: ********** — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.32200	0.30600	0.32200	3753

Comments:

(3) asm 495 11.8.13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	
24	11/8/2013 7:10:03AM	13312049501B	TOC	V
7261566	Class: **********	SDG: CS037		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.50700	4.27900	4.27900	35481

Comments:

Injection #	Date/Time	Batch Number	Element	
25	11/8/2013 7:25:22AM	13312049501B	TOC	V
7261929	Class: **********	SDG: CP177		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	19.61200	22.51700	22.51700	187690

Comments: Re-Rpd

Injection #	Date/Time	Batch Number	Element	
26	11/8/2013 7:40:10AM	13312049501B	TOC	V
7261930	Class: **********	SDG: CP177		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.55100	0.44300	0.55100	5378

Comments:

Injection #	Date/Time	Batch Number	Element	
27	11/8/2013 7:55:12AM	13312049501B	TOC	V
7262380	Class: **********	SDG: POM89		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.57500	0.47400	0.57500	5619

Comments:

Injection #	Date/Time	Batch Number	Element	
28	11/8/2013 8:10:24AM	13312049501B	TOC	V
7263060	Class: **********	SDG: KVM03		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.32600	0.27800	0.32600	3647

Comments:

Injection #	Date/Time
29	11/8/2013 8:25:53AM
CCV2	

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.07200		223214

% Recovery = 100

Comments:

Injection #	Date/Time
30	11/8/2013 8:33:33AM
CCB	

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.17400		2515

Comments:

Injection #	Date/Time	Batch Number	Element	
31	11/8/2013 8:42:38AM	13312049501B	TOC	V
7265107	Class: U**********	SDG: SOF26		

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.87700	1.84800	1.87700	17483

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	
32	11/8/2013 8:57:52AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	SDG	Calculated Result (mg/L)	Area Counts
7265107	1.0	1.84400	1.87900	D*********	SOF26	1.87900	17472

Comments:

Injection #	Date/Time	Batch Number	Element	
33	11/8/2013 9:13:07AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	SDG	Calculated Result (mg/L)	Area Counts
7265107	1.0	12.26700	12.63600	R*********	SOF26	12.63600	111343

Comments: SA=10 1089. (IS)

Injection #	Date/Time	Batch Number	Element	
34	11/8/2013 9:27:39AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	SDG	Calculated Result (mg/L)	Area Counts
7265111	1.0	1.79300	1.89000	**********	SOF27	1.89000	17293

Comments:

Injection #	Date/Time	Batch Number	Element	
35	11/8/2013 9:42:58AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	SDG	Calculated Result (mg/L)	Area Counts
7265247	1.0	0.25200	0.17500	**********	KVM04	0.25200	2863

Comments:

Injection #	Date/Time	Batch Number	Element	
36	11/8/2013 9:58:18AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	Calculated Result (mg/L)	Area Counts
7266311	1.0	1.74500	2.49200	**********	2.49200	19749

Comments:

Injection #	Date/Time	Batch Number	Element	
37	11/8/2013 10:13:12AM	13312049501B	TOC	V

Sample	Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Class	SDG	Calculated Result (mg/L)	Area Counts
7266798	1.0	0.31100	0.20000	**********	KVM05	0.31100	3236

Comments:

Injection #	Date/Time
38	11/8/2013 10:28:48AM

Sample	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
CCV2	1.0	25.05900		223096

% Recovery = 100

Comments: (IS)

Injection #	Date/Time
39	11/8/2013 10:36:42AM

Sample	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
CCB	1.0	0.17700		2541

Comments:

SOLIDS: EXTERNALLY ABORTED

Bk. 177658
p. 16

13308-CAL

Q Smear
Inst. 8610
11/4/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:21:08 2013

(1)

#0001 00:27:56 TC SPL#01 0.000 mg 0000000 cts 000.000 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:28:23 2013

#0001 00:36:47 TC STD#01 000.300 mgC 0000509 cts

(2)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
RF = 589.391 ugC/k-cts
R2 = 0.0000
OFFSET = 0 cts (0.00000 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:37:13 2013

#0001 00:48:14 TC STD#02 000.900 mgC 0001275 cts

(3)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
RF = 783.290 ugC/k-cts
R2 = 1.0000
OFFSET = 126 cts (-0.099 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:48:40 2013

#0001 00:59:46 TC STD#03 003.000 mgC 0003416 cts

(4)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
RF = 915.475 ugC/k-cts
R2 = 0.9958
OFFSET = 204 cts (-0.187 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:00:12 2013

#0001 01:11:50 TC STD#04 006.000 mgC 0006312 cts

(5)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
STD#4 = 06.000 mgC 1 reps Avg Area = 6312.0 cts %rsd = 0.00
RF = 964.399 ugC/k-cts
R2 = 0.9970
OFFSET = 233 cts (-0.226 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:12:16 2013

(6)

#0001 01:24:48 TC SPL#01 3.000 mg 0002875 cts 002.547 mgC 84.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:25:15 2013

SOLIDS: EXTERNALLY ABORTED

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:27:10 2013

(7)

#0001 01:33:56 TC SPL#01 3.000 mg 0003025 cts 002.692 mgC 89.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:35:44 2013

(8)

#0001 01:42:36 TC SPL#01 3.000 mg 0003149 cts 002.811 mgC 93.71 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:43:04 2013

(9)

#0001 01:49:49 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.4.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [illegible]

Sucrose Soln Lot #: 042012 exp 4.20.15

15000mg/L KHP p. 10.20.13 e. 11.19.13

BK-146420 p.21

Run #: 1 3 3 0 8 C AL

— CALIB. —

Inj #	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	BLANK	0.000	0.0				0027				
2	0.3 STD	509 cts.	1.0 µl				0036				
3	0.9 STD	1275 cts.	3.0 µl				0048				
4	3.0 STD	3416 cts.	10.0 µl				0059				
5	6.0 STD	6312 cts.	20.0 µl				0111				
6	ICV 3.0	2.547	0.2 mL	OS			0124		85%		
7	ICV 3.0	2.692	0.2 mL	IS			0133		90%		
8	ICV 3.0	2.811	0.2 mL	↓			0142		94%		
9	ICB	-.226	0.0	↓			0149				

N/A

Verified by: EF/LD Date: 11/4/13

1941.03

177658 16

Bk. 177658
p. 24-25

13311-1

Inst. 8610
11/8/13

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 20:30:50 2013 (1)

#0001 20:38:17 TC SPL#01 3.000 mg 0003228 cts 002.888 mgC 96.25 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 20:38:44 2013 (2)

#0001 20:49:23 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:02:36 2013 (3)

#0001 21:26:25 TC SPL#01 95.500 mg 0000717 cts 000.466 mgC 0.49 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:28:47 2013 (4)

#0001 21:35:41 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 21:50:03 2013 (5)

#0001 21:57:01 TC SPL#01 999.300 mg 0000309 cts 000.072 mgC 0.01 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:03:42 2013 (6)

#0001 22:10:32 TC SPL#01 998.700 mg 0000525 cts 000.281 mgC 0.03 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:16:33 2013 (7)

#0001 22:24:09 TC SPL#01 340.300 mg 0000522 cts 000.278 mgC 0.08 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 22:45:36 2013 (8)

#0001 23:08:58 TC SPL#01 545.500 mg 0000819 cts 000.564 mgC 0.10 %C

OI Analytical
TOC Solids V3.0 (9)

Analysis Date: Thu Nov 07 23:10:56 2013

#0001 23:18:21 TC SPL#01 157.900 mg 0003014 cts 002.681 mgC 1.70 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 23:33:15 2013 (10)

#0001 23:40:05 TC SPL#01 601.300 mg 0001214 cts 000.945 mgC 0.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Thu Nov 07 23:44:47 2013 (11)

#0001 23:51:52 TC SPL#01 999.100 mg 0001137 cts 000.871 mgC 0.09 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 00:28:15 2013 (12)

#0001 00:35:32 TC SPL#01 81.800 mg 0002070 cts 001.771 mgC 2.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 00:55:08 2013

SOLIDS: EXTERNALLY ABORTED

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:06:52 2013 (13)

#0001 01:16:17 TC SPL#01 3.000 mg 0002927 cts 002.597 mgC 86.58 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:21:15 2013 (14)

#0001 01:28:02 TC SPL#01 3.000 mg 0003106 cts 002.770 mgC 92.33 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:31:11 2013 (15)

#0001 01:38:00 TC SPL#01 3.000 mg 0003181 cts 002.842 mgC 94.74 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:40:03 2013 (16)

#0001 01:46:54 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 01:55:06 2013 (17)

#0001 02:08:52 TC SPL#01 [illegible] mg [illegible] cts 001.430 mgC 2.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:15:35 2013

18

#0001 02:22:19 TC SPL#01 79.500 mg 0003864 cts 003.501 mgC 4.40 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:25:59 2013

19

#0001 02:32:52 TC SPL#01 56.200 mg 0002967 cts 002.636 mgC 4.69 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:39:38 2013

20

#0001 02:46:23 TC SPL#01 62.800 mg 0001679 cts 001.394 mgC 2.22 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 02:53:46 2013

21

#0001 03:00:32 TC SPL#01 81.600 mg 0003537 cts 003.186 mgC 3.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:05:25 2013

22

#0001 03:12:11 TC SPL#01 91.400 mg 0002274 cts 001.968 mgC 2.15 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:13:55 2013

23

#0001 03:21:14 TC SPL#01 3.000 mg 0003116 cts 002.780 mgC 92.65 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 03:22:55 2013

24

#0001 03:29:41 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.7.13 - 11.8.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature]

Sucrose Soln Lot #: 042012 exp. 4.20.15
15000mg/L KHP p. 10.20.13 e. 11.19.13
BK.146420 p.21

Run #: 1 3 3 1 1 1

Inj #	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	CCV 3.0	2.888	0.2 mL	IS			2038		96%		
2	CCB	-.226	0.0	↓			2049				
3	~~PBS~~ LCSS	.466	④ ~~0.0~~ 95.5	4879.58	10.47	3141	2126	13311049532A	TV=5880 83% IS		
4	~~LCSS~~ PBS	-.226	④ ~~95.5~~ 0.0	0	1	300	2135		IS		
5	7262377	.072	999.3	72.05	1.00	300	2157				POM89
6	7262378	.281	998.7	RPT			2210		irreg. peak		
7	7262379-U	.278	340.3	RPT			2224				
8	-D	.564	545.5	1033.91	1.83	549	2308				
9	-R	2.681	157.9	16979.1	6.33	1899	2318		SA=18999 81% IS		
10	7262379-U	.945	601.3	1571.59	1.66	498	2340				
11	7262378	.871	999.1	871.78	1.00	300	2351				
12	7263052	1.771	81.8	21650.37	12.22	3666	0035				KVM03
13	CCV 3.0	2.597	0.2 mL	OS			0116		87%		
14	CCV 3.0	2.770	0.2 mL	IS			0128		92%		

Verified by: [signature] Date: 11/8/13

1941.03

177658 24

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.8.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [illegible]

Sucrose Soln Lot #: 042012 exp. 4.20.15

Run #: 1 3 3 1 1 1

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
15	CCV 3.0	2.542	0.2mL	IS			0138		95%		
16	CCB	-.226	0.0	↓			0146				
17	7263053	1.430	66.3	21568.63	15.08	4524	0208	135110495324			KVM03
18	7263054	3.501	79.5	44037.74	12.58	3774	0222				↓
19	7263055	2.636	56.2	46903.91	17.79	5337	0232				
20	7265225	1.394	62.8	22197.45	15.92	4776	0246				KVM04
21	7265226	3.186	81.6	39044.12	12.25	3675	0300				
22	7265227	1.968	91.4	21531.73	10.94	3282	0312				↓
23	CCV 3.0	2.780	0.2mL	IS			0321		93%		
24	CCB	-.226	0.0	↓			0329				
											N/A

Verified by: EF/LLS Date: 11/8/13

BK-177658
p. 26-27

13312-1

Inst. 8610

11/11/13

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 22:20:13 2013

(1)

#0001 22:26:57 TC SPL#01 3.000 mg 0003175 cts 002.836 mgC 94.55 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 22:27:21 2013

(2)

#0001 22:34:13 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 22:34:37 2013

(3)

#0001 22:41:26 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 22:44:00 2013

(4)

#0001 22:51:07 TC SPL#01 97.300 mg 0000658 cts 000.409 mgC 0.42 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 22:52:26 2013

(5)

#0001 22:59:47 TC SPL#01 163.500 mg 0001770 cts 001.481 mgC 0.91 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:04:08 2013

(6)

#0001 23:10:54 TC SPL#01 131.600 mg 0000686 cts 000.436 mgC 0.33 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:12:34 2013

(7)

#0001 23:19:27 TC SPL#01 144.700 mg 0000972 cts 000.712 mgC 0.49 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:20:46 2013

(8)

#0001 23:28:23 TC SPL#01 59.700 mg 0003667 cts 003.311 mgC 5.55 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:37:32 2013

(9)

#0001 23:44:17 TC SPL#01 327.500 mg 0002707 cts 002.385 mgC 0.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:50:06 2013

(10)

#0001 23:56:53 TC SPL#01 196.100 mg 0000279 cts 000.044 mgC 0.02 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Fri Nov 08 23:58:21 2013

(11)

#0001 00:05:07 TC SPL#01 62.200 mg 0001503 cts 001.224 mgC 1.97 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:10:37 2013

(12)

#0001 00:17:21 TC SPL#01 65.800 mg 0000951 cts 000.692 mgC 1.05 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:23:22 2013

(13)

#0001 00:30:12 TC SPL#01 3.000 mg 0003190 cts 002.851 mgC 95.03 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:32:09 2013

(14)

#0001 00:38:55 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:39:22 2013

(15)

#0001 00:46:07 TC SPL#01 115.100 mg 0003772 cts 003.412 mgC 2.96 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:50:02 2013

(16)

#0001 00:56:47 TC SPL#01 113.000 mg 0002048 cts 001.750 mgC 1.55 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 00:57:58 2013

(17)

#0001 01:04:44 TC SPL#01 57.900 mg 0000330 cts 000.093 mgC 0.16 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 01:05:58 2013

(18)

#0001 01:12:45 TC SPL#01 103.000 mg 0000863 cts 000.607 mgC 0.59 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 01:13:56 2013

19

#0001 01:20:42 TC SPL#01 411.500 mg 0001839 cts 001.548 mgC 0.38 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 01:26:44 2013

20

#0001 01:33:40 TC SPL#01 83.900 mg 0001740 cts 001.453 mgC 1.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 01:35:01 2013

21

#0001 01:41:46 TC SPL#01 3.000 mg 0003126 cts 002.789 mgC 92.97 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Sat Nov 09 01:42:12 2013

22

#0001 01:48:58 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.8.13 – 11.9.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature]

Sucrose Soln Lot #: 042012 exp: 4.20.15

15000mg/L KHP p. 10.20.13 e. 11.19.13

BK. 146420 p. 21

Run #: 1 3 3 1 2 1

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	CCV 3.0	2.836	0.2 mL	(IS)			2226		95%		
2	CCB	-.226	0.0	↓			2234				
3	PBS	-.226	0.0	0	1	300	2241	133120495314	(IS)		
4	LCSS	.409	97.3	4203.49	10.28	3084	2251		TV=5880 71% (IS)		
5	7265229	1.481	163.5	9058.1	6.12	1836	2259				KVM04
6	7265234	.436	131.6	3313.07	7.60	2280	2310				
7	1 -D	.712	144.7	4920.53	6.91	2073	2319				
8	↓ -R	3.311	59.7	55460.64	16.75	5025	2328		SA=50251 104% (IS)		
9	7265236	2.385	327.5	7282.44	3.05	915	2344				
10	7265237	.044	196.1	RPT			2356				
11	7265239	1.224	62.2	19678.46	16.08	4824	0005				
12	7265241	.692	65.8	10516.72	15.20	4560	0017				
13	CCV3.0	2.851	0.2 mL	(IS)			0030		95%		
14	CCB	-.226	0.0	↓			0038				

Verified by: KF/LLB Date: 11/11/13

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.9.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: Sm49r

Sucrose Soln Lot #: 042012 exp. 4.12.2015

Run #: 1 3 3 1 2 1

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
15	7265242	3.412	115.1	29643.79	8.69	2607	0046	133120495 31A			KVM04
16	7265244	1.750	113.0	15486.73	8.85	2655	0056				
17	7265245	.093	57.9	RPS			0104		split peak		
18	7265246	.607	103.0	5893.2	9.71	2913	0112				
19	7265237	1.548	411.5	3761.85	2.43	729	0120				
20	7265245	1.453	83.9	17318.24	11.92	3576	0133				
21	CCV 3.0	2.789	0.2mL	15			0141		93%		
22	CCB	-.226	0.0	↓			0148				
											N/A

Verified by: BF/LS Date: 11/11/13

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

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Combustion TOC Prep Log
Analysis #2079, #0383

Phosphoric Lot #053113 exp. 11.30.13

Oven ID# 1887

Oven Temperature (°C) 75°

Tray #: 30 Balance ID: B35614 Time In: 2015 Time Out: 2030

Position	Date	Analyst	Sample #	Weight (mg)	Batch Number	Comments
A1	11.7.13	JM495	PBS	0.0	133110495 32A	
A2			LCSS	95.5		
A3			7262377	999.3		
A4			7262378	998.7		
A5			7262379-4	340.3		
A6			-D	545.5		
A7			-L	157.9		
A8			7262378	999.1		
B1			7262379-4	601.3		
B2			7263052	81.8		
B3			7263053	66.3		
B4			7263054	79.5		
B5			7263055	56.2		
B6			7265225	62.8		
B7			7265226	81.6		
B8			7265227	91.4		
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						N/A

Verified by: [illegible] Date: 11/8/13

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Combustion TOC Prep Log
Analysis #2079, #0383

Phosphoric Lot #053113 exp. 11.30.13

Oven ID# 1887

Oven Temperature (°C) 75°

Tray #: 30 Balance ID: B355614 Time In: 2220 Time Out: 2235

Position	Date	Analyst	Sample #	Weight (mg)	Batch Number	Comments
A1	11.8.13	[illegible]	PBS	0.0	133120495314	
A2			LCSS	97.3		
A3			7265229	163.5		
A4			7265234-4	131.6		
A5			-D	144.7		
A6			-R	59.7		
A7			7265236	327.5		
A8			7265237	196.1		rpt
B1			7265239	62.2		
B2			7265241	65.8		
B3			7265242	115.1		
B4			7265244	113.0		
B5			7265245	57.9		
B6			7265246	103.0		
B7			7265237	411.5		
B8			7265245	83.9		
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						N/A

Verified by: BF/LLS Date: 11/11/13

Wet Chemistry Data

Case Narrative/Conformance Summary

Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Water Quality

Fraction: Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7265223	SW-R2-N-5-1	X		
7265224	SW-R2-N-5-2	X		
7265228	SW-R2-M-6-1	X		
7265230	SW-R2-E-16-3	X		Background/Unspiked
7265231	SW-R2-E-16-3_MS	X		Matrix Spike
7265232	SW-R2-E-16-3_MSD	X		Matrix Spike Duplicate
7265233	SW-R2-E-16-3_DUP	X		Duplicate
7265235	SW-R2-E-16-1	X		
7265238	SW-R2-F-14-1	X		
7265240	SW-R2-F-14-2	X		
7265243	SW-R2-G-12-2	X		
7265248	FB-02_11052013	X		Field Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

Samples	pH	Total Hardness
7265223	DF1	DF5

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM04

Water Quality

Fraction: Wet Chemistry

Samples	pH	Total Hardness
7265224	DF1	DF5
7265228	DF1	DF1
7265230	UNSPK/ DF1	UNSPK/ DF1
7265231		MS/ DF1
7265232		MSD/ DF1
7265233	D/ DF1	D/ DF1
7265235	DF1	DF1
7265238	DF1	DF1
7265240	DF1	DF1
7265243	DF1	DF1
7265248	DF1	DF1

(Sample number(s): 7265223-7265224: Analysis: 12147)
Reporting limits were raised due to interference from the sample matrix.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

QC Summary

Wet Chemistry

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Quality Control Reference List
Water Quality

CLIENT: Ashland, Inc.
SDG: KVM04

Fraction: Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
pH	13312002202A	P002202Q	11/08/2013 12:03:00
		7265223	11/08/2013 12:23:00
		7265224	11/08/2013 12:27:00
		7265228	11/08/2013 12:20:00
		7265230 BKG	11/08/2013 12:08:00
		7265233 DUP	11/08/2013 12:12:00
		7265235	11/08/2013 13:11:00
		7265238	11/08/2013 12:15:00
		7265240	11/08/2013 12:39:00
		7265243	11/08/2013 12:31:00
		7265248	11/08/2013 12:35:00
Total Hardness	13311001104A	P001104B	11/08/2013 00:36:00
		P001104Q	11/08/2013 00:44:00
		7265228	11/08/2013 02:03:00
		7265230 UNSPK,BKG	11/08/2013 02:27:00
		7265231 MS	11/08/2013 02:37:00
		7265232 MSD	11/08/2013 02:47:00
		7265233 DUP	11/08/2013 02:57:00
		7265235	11/08/2013 03:07:00
		7265238	11/08/2013 03:19:00
		7265240	11/08/2013 03:31:00
		7265243	11/08/2013 03:42:00
		7265248	11/08/2013 03:47:00
Total Hardness	13326002101A	P002101B	11/22/2013 13:01:00
		P002101Q	11/22/2013 13:09:00
		7265223	11/22/2013 11:54:00
		7265224	11/22/2013 11:59:00

Quality Control Summary
Method Blank
Water Quality
SDG: KVM04
Matrix: LIQUID

Fraction: Wet Chemistry

13311001104A / P001104B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/08/13	N.D.	mg/l as CaCO3	3.0	5.0

13326002101A / P002101B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/22/13	N.D.	mg/l as CaCO3	3.0	5.0

Water Quality
Fraction: Wet Chemistry

UNSPK: 7265230 MS: 7265231 MSD: 7265232 **Parameter**	Batch: **13311001104A** (Sample number(s): 7265228, 7265230-7265233, 7265235, 7265238, 7265240, 7265243, 7265248)									
	ME	**Spike Added mg/l as CaCO3**	**Unspiked Conc mg/l as CaCO3**	**MS Conc mg/l as CaCO3**	**MSD Conc mg/l as CaCO3**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	154.54	190.84	189.25	91	87	67-120	1	5

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Water Quality
Fraction: Wet Chemistry

BKG: 7265230 DUP: 7265233	Batch: **13311001104A** (Sample number(s): 7265228, 7265230-7265233, 7265235, 7265238, 7265240, 7265243, 7265248)				
Parameter	**ME**	**Unspiked Conc mg/l as CaCO3**	**DUP Conc mg/l as CaCO3**	**%RPD**	**%RPD Limits**
Total Hardness	TI	154.54	155.14	0	5

BKG: 7265230 DUP: 7265233	Batch: **13312002202A** (Sample number(s): 7265223-7265224, 7265228, 7265230, 7265233, 7265235, 7265238, 7265240, 7265243, 7265248)				
Parameter	**ME**	**Unspiked Conc Std. Units**	**DUP Conc Std. Units**	**%RPD**	**%RPD Limits**
pH	MTR	7.43	7.46	0	3

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

Water Quality
Fraction: Wet Chemistry

LCS: P001104	Batch: **13311001104A** (Sample number(s): 7265228, 7265230-7265233, 7265235, 7265238, 7265240, 7265243, 7265248)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	41.15	NA	103	NA	96-110	NA	NA

LCS: P002202	Batch: **13312002202A** (Sample number(s): 7265223-7265224, 7265228, 7265230, 7265233, 7265235, 7265238, 7265240, 7265243, 7265248)								
Parameter	**ME**	**Spike Added Std. Units**	**LCS Conc Std. Units**	**LCSD Conc Std. Units**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
pH	MTR	6.86	6.79	NA	99	NA	92-106	NA	NA

LCS: P002101	Batch: **13326002101A** (Sample number(s): 7265223-7265224)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	39.86	NA	100	NA	96-110	NA	NA

Raw Data

Wet Chemistry

Fraction: Wet Chemistry

12152: pH Analyte Name	Default MDL	Default LOQ	Units
pH	0.010	0.010	Std. Units

12147: Total Hardness Analyte Name	Default MDL	Default LOQ	Units
Total Hardness	3.0	5.0	mg/l as CaCO3

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Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Bicarbonate	mg/l as CaCO3
Carbonate	mg/l as CaCO3
Phenolphthalein Alkalinity	mg/l as CaCO3
Specific Conductance	umhos/cm
Temperature of pH	Degrees C
Total Alkalinity	mg/l as CaCO3
pH	Std. Units

Analysis Name	QC Check	True Value	Acceptance Range
Specific Conductance	CCVSC1	147.00	132.30 - 161.70
Specific Conductance	CCVSC2	1413.00	1271.70 - 1554.30
Specific Conductance	CCVSC3	12900.00	11610.00 - 14190.00
pH	CCVPH2	7.00	6.27 - 7.73

Analysis Name	QC Check	Acceptance Range
Specific Conductance	CCB	< 5.00
Specific Conductance	PBW	< 5.00
Total Alkalinity	CCB	< 2.00
Total Alkalinity	PBW	< 2.00

Analysis Name	Reagent Name	Lot Info

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Specific Conductance	LCSSC	147.00	140.39 - 153.47	174884p68
Total Alkalinity	LCSAK	188.00	168.26 - 207.55	174884p56
pH	LCSPH	7.00	6.27 - 7.73	C129-02
pH	LCSSSFL	7.00	6.62 - 7.38	

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267643	26099		13312002201A	1	070A	11/08/2013 11:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.64	7.64	Y	Y		
Temperature of pH	20.87	20.87				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267651	26100		13312002201A	1	070A	11/08/2013 11:25

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.73	7.73	Y	Y		
Temperature of pH	21.09	21.09				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267642	26101		13312002201A	1	070A	11/08/2013 11:29

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.29	6.29	Y	Y		
Temperature of pH	20.99	20.99				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVSC3	26102	CCV		1	11/08/2013 11:30

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Specific Conductance	12510.00	12510.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26103	CCV		1	11/08/2013 11:35

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.80	6.80		
Temperature of pH	20.77	20.77		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	26104	CCB		1	11/08/2013 11:42

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	0.47	0.47		
Carbonate	0.00	0.00		
Specific Conductance	0.94	0.94		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	5.90	5.90		
Total Alkalinity	0.47	0.47		
Temperature of pH	20.54	20.54		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268203	26105		13312002201A	1	070A	11/08/2013 11:46

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.94	7.94	Y	Y		
Temperature of pH	20.38	20.38	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267644	26106	U	13312002201B	1	070A	11/08/2013 11:50

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.77	6.77	Y	Y		
Temperature of pH	20.23	20.23				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267647	26107	D	13312002201B	1	070A	11/08/2013 11:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26108	CCV		1	11/08/2013 11:58

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.41	20.41		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSPH	26109	Q	13312002202A	1	11/08/2013 12:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.79	6.79	Y			
Temperature of pH	20.65	20.65				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	26110	U	13312002202A	1	004A	11/08/2013 12:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	21.05	21.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	26111	D	13312002202A	1	004A	11/08/2013 12:12

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.46	7.46	Y	Y		
Temperature of pH	20.89	20.89				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	26112		13312002202A	1	004A	11/08/2013 12:15

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.96	7.96	Y	Y		
Temperature of pH	20.49	20.49				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	26113		13312002202A	1	004A	11/08/2013 12:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.20	7.20	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	26114		13312002202A	1	004A	11/08/2013 12:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.60	4.60	Y	Y		
Temperature of pH	20.12	20.12				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	26115		13312002202A	1	004A	11/08/2013 12:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.63	4.63	Y	Y		
Temperature of pH	20.04	20.04				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	26116		13312002202A	1	004A	11/08/2013 12:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.70	7.70	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	26117		13312002202A	1	004A	11/08/2013 12:35

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.03	6.03	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	26118		13312002202A	1	004A	11/08/2013 12:39

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.98	7.98	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26119	CCV		1	11/08/2013 12:43

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.29	20.29		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	26120		13312002202A	1	004A	11/08/2013 12:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.72	7.72	Y	Y		
Temperature of pH	20.67	20.67				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	26121		13312002202A	1	004A	11/08/2013 12:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.02	7.02	Y	Y		
Temperature of pH	20.59	20.59				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	26122		13312002202A	1	004A	11/08/2013 12:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.85	6.85	Y	Y		
Temperature of pH	20.40	20.40				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	26123		13312002202A	1	004A	11/08/2013 13:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.87	6.87	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	26124		13312002202A	1	004A	11/08/2013 13:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.90	6.90	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	26125		13312002202A	1	004A	11/08/2013 13:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.94	5.94	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	26126		13312002202A	1	004A	11/08/2013 13:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	20.02	20.02				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26127	U	13312002202B	1	070A	11/08/2013 13:16

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26128	D	13312002202B	1	070A	11/08/2013 13:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y			
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267842	26129		13312002202A	1	070A	11/08/2013 13:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.01	6.01	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26130	CCV		1	11/08/2013 13:28

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.62	20.62		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267839	26131		13312002202A	1	070A	11/08/2013 13:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.81	5.81	Y	Y		
Temperature of pH	20.73	20.73				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267841	26132		13312002202A	1	070A	11/08/2013 13:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.61	6.61	Y	Y		
Temperature of pH	20.47	20.47				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267843	26133		13312002202A	1	070A	11/08/2013 13:41

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.36	5.36	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26134	CCV		1	11/08/2013 13:44

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.83	6.83		
Temperature of pH	20.20	20.20		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26135	Q	13312002203A	1	11/08/2013 13:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.81	6.81	Y			
Temperature of pH	20.09	20.09				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26136	Y	13312002203A	1	11/08/2013 13:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y			
Temperature of pH	20.15	20.15				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265638	26137		13312002203A	1	004A	11/08/2013 13:58

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.79	5.79	Y	Y		
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265640	26138		13312002203A	1	004A	11/08/2013 14:02

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.52	5.52	Y	Y		
Temperature of pH	20.20	20.20				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263617	26139		13312002203A	1	004A	11/08/2013 14:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263615	26140		13312002203A	1	004A	11/08/2013 14:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.60	20.60				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26141	CCV		1	11/08/2013 14:13

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.82	6.82		
Temperature of pH	20.58	20.58		

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Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	174884/73

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261491	35488		13311001103A	1	007A	11/07/2013 23:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	23.70	23.70	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261492	35489		13311001103A	1	007A	11/07/2013 23:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	53.48	53.48	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261493	35490		13311001103A	1	007A	11/07/2013 23:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	103.03	103.03	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263051	35491		13311001104A	1	007A	11/08/2013 00:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.71	38.71	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263056	35492		13311001104A	1	007A	11/08/2013 00:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	36.91	36.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35493	CCV		1	11/08/2013 00:15

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	21.28	21.28		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35494	CCB		1	11/08/2013 00:20

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.15	1.15		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35495	B	13311001104A	1	11/08/2013 00:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35496	Q	13311001104A	1	11/08/2013 00:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.15	41.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35497	U	13311001104B	1	007A	11/08/2013 00:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.93	38.93	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35498	D	13311001104B	1	007A	11/08/2013 01:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.77	38.77	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263058	35499		13311001104A	1	007A	11/08/2013 01:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.78	38.78	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263059	35500		13311001104A	1	007A	11/08/2013 01:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	35501		13311001104A	1	007A	11/08/2013 01:40

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	35502		13311001104A	1	007A	11/08/2013 01:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	35503		13311001104A	1	007A	11/08/2013 02:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.58	38.58	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35504	CCV		1	11/08/2013 02:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	41.49	41.49		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35505	CCB		1	11/08/2013 02:17

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.18	1.18		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	35506	U	13311001104A	1	007A	11/08/2013 02:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.54	154.54	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265231	35507	R	13311001104A	1	007A	11/08/2013 02:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	190.84	190.84	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265232	35508	M	13311001104A	1	007A	11/08/2013 02:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	189.25	189.25	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	35509	D	13311001104A	1	007A	11/08/2013 02:57

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	155.14	155.14	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	35510		13311001104A	1	007A	11/08/2013 03:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.17	154.17	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	35511		13311001104A	1	007A	11/08/2013 03:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	237.40	237.40	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	35512		13311001104A	1	007A	11/08/2013 03:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	235.62	235.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	35513		13311001104A	1	007A	11/08/2013 03:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	221.52	221.52	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	35514		13311001104A	1	007A	11/08/2013 03:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.04	2.04	Y	Y		

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	35515		13311001104A	1	007A	11/08/2013 04:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH3	35516	CCV		1	11/08/2013 04:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	62.80	62.80		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35517	CCB		1	11/08/2013 04:16

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.26	1.26		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	35518		13311001104A	1	007A	11/08/2013 04:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	35519		13311001104A	1	007A	11/08/2013 04:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	264.91	264.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	35520		13311001104A	1	007A	11/08/2013 04:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	88.39	88.39	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	35521		13311001104A	1	007A	11/08/2013 05:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.97	86.97	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	35522		13311001104A	1	007A	11/08/2013 05:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	108.41	108.41	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260374	35523		13311001105A	10	007A	11/08/2013 05:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260375	35524		13311001105A	10	007A	11/08/2013 05:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	122.53	1225.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260376	35525		13311001105A	10	007A	11/08/2013 05:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	172.03	1720.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260377	35526		13311001105A	10	007A	11/08/2013 05:55

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	52.15	521.50	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260378	35527		13311001105A	10	007A	11/08/2013 06:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	232.14	2321.40	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35528	CCV		1	11/08/2013 06:13

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Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	178368/11

Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
tap1	36068			1		11/22/2013 10:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	19.99	19.99				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	36069	CCV		1	11/22/2013 10:32

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	20.02	20.02		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36070	CCB		1	11/22/2013 10:47

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259632	36071		13326002101A	1	007A	11/22/2013 11:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259632	36072		13326002101A	2	007A	11/22/2013 11:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	12.61	25.22	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260379	36073		133260021010	1	007A	11/22/2013 11:28

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261490	36074		13326002101A	1	007A	11/22/2013 11:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261490	36075		13326002101A	2	007A	11/22/2013 11:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.81	5.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	36076		13326002101A	5	007A	11/22/2013 11:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.01	10.05	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	36077		13326002101A	5	007A	11/22/2013 11:59

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.71	8.55	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	36078		13326002101A	5	007A	11/22/2013 12:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	22.19	110.95	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267643	36079		13326002101A	5	007A	11/22/2013 12:14

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.10	205.50	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267648	36080		13326002101A	5	007A	11/22/2013 12:22

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	45.70	228.50	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	36081	CCV		1	11/22/2013 12:30

Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	40.34	40.34		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36082	CCB		1	11/22/2013 12:46

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	36083	B	13326002101A	1	11/22/2013 13:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	36084	Q	13326002101A	1	11/22/2013 13:09

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	39.86	39.86	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7270083	36085	U	13326002101B	1	007A	11/22/2013 13:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.12	86.12	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7270083	36086	D	13326002101B	1	007A	11/22/2013 13:28

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.15	86.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7276747	36087		13326002101A	1	007A	11/22/2013 13:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36088	U	13326002101A	1	007A	11/22/2013 13:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	47.95	47.95	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36089	D	13326002101A	1	007A	11/22/2013 14:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	48.30	48.30	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36090	R	13326002101A	1	007A	11/22/2013 14:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	87.13	87.13	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285564	36091		13326002101A	1	007A	11/22/2013 14:18

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	20.43	20.43	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285565	36092		13326002101A	1	007A	11/22/2013 14:26

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	42.48	42.48	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH3	36093	CCV		1	11/22/2013 14:35

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	63.76	63.76		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36094	CCB		1	11/22/2013 14:50

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
7265225	R2041
7265226	R2042
7265227	R2043
7265229	R2M71
7265234	R2E16
7265236	2E161
7265237	2E16D
7265239	R2F14
7265241	2F142
7265242	R2121
7265244	R2123
7265245	2D141
7265246	DUPX1FD

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name		LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number:	13316820005A	Sample number(s):		7265225-7265227, 7265229, 7265234, 7265236-7265237, 7265239, 7265241-7265242, 7265244-7265246		
Moisture		100		99-101		

Sample Matrix Quality Control

Analysis Name		BKG Conc	DUP Conc	RPD	RPD Max
Batch number:	13316820005A	Sample number(s):		7265225-7265227, 7265229, 7265234, 7265236-7265237, 7265239, 7265241-7265242, 7265244-7265246	
Moisture		45.5	44.9	1	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 13316820005

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0881	5.0293	1.6328	89.17	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265225	A	00111	1.1155	9.2921	2.0257	90.20	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265226	A	00111	1.0924	8.5583	4.2747	62.82	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265227BKG	A	00111	1.0566	7.8204	5.3199	45.48	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265227DUP	A	00111	1.1091	7.5520	5.2684	44.92	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265229	A	00111	1.0795	7.2806	5.8389	34.63	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265234	A	00111	1.1249	8.0396	7.5280	20.36	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265236	A	00111	1.0971	7.6449	6.6660	27.16	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265237	A	00111	1.0816	8.8601	8.0745	21.07	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265239	A	00111	1.0790	8.6784	3.2513	74.97	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265241	A	00111	1.0459	8.0851	2.6381	80.31	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265242	A	00111	1.0962	8.6846	2.2308	86.94	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265244	A	00111	1.0991	8.4875	4.9632	54.47	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265245	A	00111	1.0888	8.0927	1.6339	93.26	11/12/13 (1201/SWF)	11/13/13 (0236/CW)
7265246FD	A	00111	1.1092	8.4279	6.1663	40.00	11/12/13 (1201/SWF)	11/13/13 (0236/CW)

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Type I Data Package

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

Project: Hercules Phase II R.I.
Sediment, Surface Water and Water Samples
Collected on 11/06/13

SDG# KVM05

GROUP	SAMPLE NUMBERS
1431971	7266798-7266808

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/23/2013**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Wendy Kozma at (717) 556-7257.

2425 New Holland Pike, Lancaster, PA 17601 · 717-656-2300 · Fax: 717-656-2681 · www.LancasterLabs.com

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Sample Reference List for SDG Number KVM05
with a Data Package Type of I

06716 - Ashland, Inc.

Project: Hercules Phase II R.I.

Lab Sample Number	Lab Sample Code	Client Sample Description
7266798	FB106	FB-01_11062013 Grab Water Sample
7266799	FB206	FB-02_11062013 Grab Water Sample
7266800	2G124	SD-R2-G-12-4 Grab Sediment Sample
7266801	2G124	SD-R2-G-12-4_MS Grab Sediment Sample
7266802	2G124	SD-R2-G-12-4_MSD Grab Sediment Sample
7266803	2G124	SD-R2-G-12-4_DUP Grab Sediment Sample
7266804	2G125	SD-R2-G-12-5 Grab Sediment Sample
7266805	2B152	SW-R2-B-15-2 Grab Surface Water Sample
7266806	2C152	SD-R2-C-15-2 Grab Sediment Sample
7266807	2B151	SW-R2-B-15-1 Grab Surface Water Sample
7266808	2C151	SD-R2-C-15-1 Grab Sediment Sample

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Sample pH Log

SDG: KVM05

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7266798	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266798	091A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266798	091B	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266799	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266799	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266805	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266805	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266807	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266807	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

00159 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A, September 1994

05705 WW/TL SW 846 ICP Digest (tot)

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

05711 SW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A Modified, September 1994.

01643 Aluminum
01743 Aluminum
06944 Antimony
06935 Arsenic
07046 Barium
06946 Barium
07047 Beryllium
06947 Beryllium
07049 Cadmium
06949 Cadmium
01750 Calcium
01650 Calcium
07051 Chromium
06951 Chromium
06952 Cobalt
07052 Cobalt
07053 Copper
06953 Copper
01654 Iron
01754 Iron
06955 Lead

01657 Magnesium
01757 Magnesium
07058 Manganese
06958 Manganese
07061 Nickel
06961 Nickel
01662 Potassium
01762 Potassium
07036 Selenium
06936 Selenium
07066 Silver
06966 Silver
01667 Sodium
01767 Sodium
06925 Thallium
06971 Vanadium
07071 Vanadium
07072 Zinc
06972 Zinc

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010B, December 1996.

06024 Antimony
06025 Arsenic
06035 Lead
06045 Thallium

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020, September 1994.

06050 ICP/MS SW-846 Water Digest

The sample is digested with nitric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A Modified, July 1992

05708 SW SW846 ICP/ICP MS Digest

The sample is digested with nitric acid, hydrochloric acid and hydrogen peroxide.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3050B, December 1996

06915 Nitroaromatics/Amines Wat Ext

The sample is passed through a Porapak RDX cartridge. The cartridge is then eluted with acetonitrile and the extract is brought to 5 mL. The extract is diluted to 10 mL using a calcium chloride solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06916 Nitroaromatics/Amines in Water

The sample is extracted into acetonitrile using SPE on a Porapak RDX cartridge. The extract is analyzed using High Performance Liquid Chromatography with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06917 Nitroaromatics/Amines Sol Ext

The sample is extracted with acetonitrile in a vial using a chilled ultrasonic bath. The vial is centrifuged and the acetonitrile removed. The extract is brought to volume with calcium chloride solution and filtered prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06918 Nitroaromatics/Amines in Solid

The sample is extracted into acetonitrile using an ultrasonic bath. The extract is analyzed using High Performance Liquid Chromatography (HPLC) with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

00813 BNA Water Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, December 1996

10724 PAH 8270 (microwave)
04678 TCL SW846 Semivolatiles/Waters

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270C, December 1996

10814 BNA Soil Microwave PAH

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546, Revision 0, February 2007.

00383 TOC by Lloyd Kahn

Total organic carbon is determined by acidifying a sample aliquot and heating it to remove any inorganic carbon. The sample is then heated to 900oC for combustion of the remaining organic carbon. The resulting carbon dioxide from the organic carbon is detected by a nondispersive infrared detector that has been calibrated to directly display the mass of carbon dioxide detected. The mass is proportional to the mass of total organic carbon in the sample.

Reference: Lloyd Kahn (modified)

00273 Total Organic Carbon

TOC is determined by first removing the inorganic carbon from a sample. The remaining carbon is then oxidized to carbon dioxide, which is measured by a nondispersive infrared detector. The mass of carbon dioxide detected is proportional to the mass of TOC in the sample.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 5310 C-2000

12152 pH

The activity of hydrogen ions in the sample is measured using a glass electrode and a reference electrode.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 4500 H/B-2000

12147 Total Hardness

The concentration of calcium and magnesium ions is determined by titration with EDTA to a blue endpoint, in the presence of Eriochrome Black T indicator. The result is expressed in mg/L calcium carbonate.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2340 C-1997

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G-1997

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

November 22, 2013

Project: Hercules Phase II R.I.

Submittal Date: 11/06/2013
Group Number: 1431971
SDG: KVM05
PO Number: 4501686843
Release Number: KENVIL
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
FB-01_11062013 Grab Water Sample	7266798
FB-02_11062013 Grab Water Sample	7266799
SD-R2-G-12-4 Grab Sediment Sample	7266800
SD-R2-G-12-4_MS Grab Sediment Sample	7266801
SD-R2-G-12-4_MSD Grab Sediment Sample	7266802
SD-R2-G-12-4_DUP Grab Sediment Sample	7266803
SD-R2-G-12-5 Grab Sediment Sample	7266804
SW-R2-B-15-2 Grab Surface Water Sample	7266805
SD-R2-C-15-2 Grab Sediment Sample	7266806
SW-R2-B-15-1 Grab Surface Water Sample	7266807
SD-R2-C-15-1 Grab Sediment Sample	7266808

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Ashland	Attn: Ed Meeks
ELECTRONIC COPY TO	OBG	Attn: John Lucey

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: FB-01_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266798
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 07:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB106 SDG#: KVM05-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266798
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 07:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB106 SDG#: KVM05-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		**ug/l**	**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-01_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266798
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 07:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB106 SDG#: KVM05-01FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.	82.8	200	1
07046	Barium	7440-39-3	N.D.	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	N.D.	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	N.D.	43.0	200	1
01757	Magnesium	7439-95-4	N.D.	16.7	100	1
07058	Manganese	7439-96-5	N.D.	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	N.D.	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	N.D.	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	N.D.	2.0	20.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.	0.42	2.0	1
06035	Lead	7439-92-1	N.D.	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry		**SM 5310 C-2000**	**mg/l**	**mg/l**	**mg/l**	
00273	Total Organic Carbon	n.a.	N.D.	0.50	1.0	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: FB-01_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266798
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 07:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB106 SDG#: KVM05-01FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 08:58	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/17/2013 23:11	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:36	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:49	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:49	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:49	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:49	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:45	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
00273	Total Organic Carbon	SM 5310 C-2000	1	13312049501B	11/08/2013 10:13	James S Mathiot	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FB106

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266798
Sample wt/vol: 233 (g/mL) mL Lab File ID: dk0389.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
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page 1 of 1

FORM I SV-1

Sample Description: FB-02_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266799
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 08:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB206 SDG#: KVM05-02FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	30	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266799
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 08:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB206 SDG#: KVM05-02FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	30	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266799
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 08:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB206 SDG#: KVM05-02FB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene					
Metals		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	N.D.	82.8	200	1
07046	Barium	7440-39-3	N.D.	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	N.D.	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	N.D.	43.0	200	1
01757	Magnesium	7439-95-4	N.D.	16.7	100	1
07058	Manganese	7439-96-5	N.D.	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	N.D.	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	N.D.	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	N.D.	2.0	20.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	N.D.	0.42	2.0	1
06035	Lead	7439-92-1	N.D.	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	N.D.	3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	5.9	0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.					

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: FB-02_11062013 Grab Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266799
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 08:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

FB206 SDG#: KVM05-02FB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 09:25	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/17/2013 23:53	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:40	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 02:51	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 02:51	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 02:51	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 02:51	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:47	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 04:03	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 13:07	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
FB206

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266799
Sample wt/vol: 247 (g/mL) mL Lab File ID: dk0390.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-G-12-4 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266800
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	N.D.		92	470	5
10724	Acenaphthylene	208-96-8	190	J	92	470	5
10724	Anthracene	120-12-7	220	J	92	470	5
10724	Benzo(a)anthracene	56-55-3	400	J	92	470	5
10724	Benzo(a)pyrene	50-32-8	540		92	470	5
10724	Benzo(b)fluoranthene	205-99-2	890		92	470	5
10724	Benzo(g,h,i)perylene	191-24-2	500		92	470	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.		92	470	5
10724	Chrysene	218-01-9	710		92	470	5
10724	Dibenz(a,h)anthracene	53-70-3	160	J	92	470	5
10724	Fluoranthene	206-44-0	1,000		92	470	5
10724	Fluorene	86-73-7	N.D.		92	470	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	420	J	92	470	5
10724	1-Methylnaphthalene	90-12-0	N.D.		92	470	5
10724	2-Methylnaphthalene	91-57-6	N.D.		92	470	5
10724	Naphthalene	91-20-3	N.D.		92	470	5
10724	Phenanthrene	85-01-8	550		92	470	5
10724	Pyrene	129-00-0	990		92	470	5

Reporting limits were raised due to interference from the sample matrix.

Explosives	**SW-846 8330**		ug/kg		ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		420	830	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		280	830	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		280	830	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		280	830	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		280	830	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		280	830	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		280	830	1
06918	HMX	2691-41-0	N.D.		690	2,100	1
06918	Nitrobenzene	98-95-3	N.D.		280	830	1
06918	Nitroglycerin	55-63-0	N.D.		5,500	17,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		280	830	1
06918	2-Nitrotoluene	88-72-2	N.D.		550	830	1
06918	3-Nitrotoluene	99-08-1	N.D.		690	830	1
06918	4-Nitrotoluene	99-99-0	N.D.		550	830	1
06918	PETN	78-11-5	N.D.		5,500	17,000	1
06918	RDX	121-82-4	N.D.		350	830	1
06918	Tetryl	479-45-8	N.D.		420	830	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		280	830	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		280	830	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene

Metals	**SW-846 6010B**		mg/kg		mg/kg	mg/kg	
01643	Aluminum	7429-90-5	15,900		19.8	54.9	1
06944	Antimony	7440-36-0	N.D.		2.03	5.49	1
06935	Arsenic	7440-38-2	22.6		1.92	5.49	1
06946	Barium	7440-39-3	380		0.0905	1.37	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266800
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06947	Beryllium	7440-41-7	0.483	J	0.184	1.37	1
06949	Cadmium	7440-43-9	3.30		0.208	1.37	1
01650	Calcium	7440-70-2	6,340		9.16	54.9	1
06951	Chromium	7440-47-3	73.3		0.439	4.11	1
06952	Cobalt	7440-48-4	40.6		0.272	1.37	1
06953	Copper	7440-50-8	44.1		0.795	2.74	1
01654	Iron	7439-89-6	72,400		9.93	54.9	1
06955	Lead	7439-92-1	92.6		1.37	4.11	1
01657	Magnesium	7439-95-4	2,540		4.58	27.4	1
06958	Manganese	7439-96-5	7,280		1.14	6.86	5
06961	Nickel	7440-02-0	18.3		0.357	2.74	1
01662	Potassium	7440-09-7	766		22.9	137	1
06936	Selenium	7782-49-2	4.17	J	2.19	5.49	1
06966	Silver	7440-22-4	2.46		0.466	1.37	1
01667	Sodium	7440-23-5	474		45.8	274	1
06925	Thallium	7440-28-0	N.D.		1.43	8.23	1
06971	Vanadium	7440-62-2	41.3		0.357	1.37	1
06972	Zinc	7440-66-6	438		0.549	5.49	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	3.33		0.133	1.33	5
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	60,800		3,120	9,370	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	63.9		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 21:05	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 06:15	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266800
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/13/2013 11:03	Eric L Eby	5
06961	Nickel	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/13/2013 10:38	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:30	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 21:40	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266801
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg	ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	8,000	92	470	5
10724	Acenaphthylene	208-96-8	9,600	92	470	5
10724	Anthracene	120-12-7	8,900	92	470	5
10724	Benzo(a)anthracene	56-55-3	8,100	92	470	5
10724	Benzo(a)pyrene	50-32-8	8,700	92	470	5
10724	Benzo(b)fluoranthene	205-99-2	8,700	92	470	5
10724	Benzo(g,h,i)perylene	191-24-2	8,900	92	470	5
10724	Benzo(k)fluoranthene	207-08-9	9,300	92	470	5
10724	Chrysene	218-01-9	8,400	92	470	5
10724	Dibenz(a,h)anthracene	53-70-3	8,900	92	470	5
10724	Fluoranthene	206-44-0	9,500	92	470	5
10724	Fluorene	86-73-7	8,200	92	470	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	8,300	92	470	5
10724	1-Methylnaphthalene	90-12-0	8,600	92	470	5
10724	2-Methylnaphthalene	91-57-6	8,100	92	470	5
10724	Naphthalene	91-20-3	8,600	92	470	5
10724	Phenanthrene	85-01-8	9,500	92	470	5
10724	Pyrene	129-00-0	9,700	92	470	5
	Reporting limits were raised due to interference from the sample matrix.					
Explosives	**SW-846 8330**		ug/kg	ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	8,400	360	720	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	8,600	240	720	1
06918	1,2-Dinitrobenzene	528-29-0	22,000	240	720	1
06918	1,3-Dinitrobenzene	99-65-0	11,000	240	720	1
06918	1,4-Dinitrobenzene	100-25-4	19,000	240	720	1
06918	2,4-Dinitrotoluene	121-14-2	11,000	240	720	1
06918	2,6-Dinitrotoluene	606-20-2	11,000	240	720	1
06918	HMX	2691-41-0	6,700	600	1,800	1
06918	Nitrobenzene	98-95-3	10,000	240	720	1
06918	Nitroglycerin	55-63-0	39,000	4,800	14,000	1
06918	1-Nitronaphthalene	86-57-7	24,000	240	720	1
06918	2-Nitrotoluene	88-72-2	11,000	480	720	1
06918	3-Nitrotoluene	99-08-1	13,000	600	720	1
06918	4-Nitrotoluene	99-99-0	9,100	480	720	1
06918	PETN	78-11-5	33,000	4,800	14,000	1
06918	RDX	121-82-4	9,500	300	720	1
06918	Tetryl	479-45-8	7,700	370	720	1
06918	1,3,5-Trinitrobenzene	99-35-4	9,800	240	720	1
06918	2,4,6-Trinitrotoluene	118-96-7	11,000	240	720	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene					
Metals	**SW-846 6010B**		mg/kg	mg/kg	mg/kg	
01643	Aluminum	7429-90-5	21,300	19.8	54.9	1
06944	Antimony	7440-36-0	98.5	2.03	5.49	1
06935	Arsenic	7440-38-2	59.0	1.92	5.49	1
06946	Barium	7440-39-3	834	0.0905	1.37	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266801
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MS

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		mg/kg	mg/kg	mg/kg	
06947	Beryllium	7440-41-7	13.1	0.184	1.37	1
06949	Cadmium	7440-43-9	16.0	0.208	1.37	1
01650	Calcium	7440-70-2	7,800	9.16	54.9	1
06951	Chromium	7440-47-3	134	0.439	4.11	1
06952	Cobalt	7440-48-4	166	0.272	1.37	1
06953	Copper	7440-50-8	123	0.795	2.74	1
01654	Iron	7439-89-6	66,600	9.93	54.9	1
06955	Lead	7439-92-1	136	1.37	4.11	1
01657	Magnesium	7439-95-4	3,550	4.58	27.4	1
06958	Manganese	7439-96-5	7,070	1.14	6.86	5
06961	Nickel	7440-02-0	153	0.357	2.74	1
01662	Potassium	7440-09-7	4,120	22.9	137	1
06936	Selenium	7782-49-2	45.1	2.19	5.49	1
06966	Silver	7440-22-4	15.6	0.466	1.37	1
01667	Sodium	7440-23-5	3,220	45.8	274	1
06925	Thallium	7440-28-0	39.8	1.43	8.23	1
06971	Vanadium	7440-62-2	180	0.357	1.37	1
06972	Zinc	7440-66-6	502	0.549	5.49	1
	SW-846 7471A		mg/kg	mg/kg	mg/kg	
00159	Mercury	7439-97-6	3.24	0.137	1.37	5
Wet Chemistry	**Lloyd Kahn modified**		mg/kg	mg/kg	mg/kg	
00383	TOC by Lloyd Kahn	n.a.	297,000	7,740	23,200	1
Wet Chemistry	**SM 2540 G-1997**		%	%	%	
00118	Moisture	n.a.	63.9	0.50	0.50	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 21:30	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 06:58	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266801
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
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Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/13/2013 11:25	Eric L Eby	5
06961	Nickel	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/13/2013 10:51	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:36	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 21:55	James S Mathiot	1
00118	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266802
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg	ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	8,200	92	470	5
10724	Acenaphthylene	208-96-8	9,500	92	470	5
10724	Anthracene	120-12-7	8,600	92	470	5
10724	Benzo(a)anthracene	56-55-3	8,500	92	470	5
10724	Benzo(a)pyrene	50-32-8	8,700	92	470	5
10724	Benzo(b)fluoranthene	205-99-2	9,900	92	470	5
10724	Benzo(g,h,i)perylene	191-24-2	8,400	92	470	5
10724	Benzo(k)fluoranthene	207-08-9	8,800	92	470	5
10724	Chrysene	218-01-9	9,000	92	470	5
10724	Dibenz(a,h)anthracene	53-70-3	8,100	92	470	5
10724	Fluoranthene	206-44-0	10,000	92	470	5
10724	Fluorene	86-73-7	8,600	92	470	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	8,300	92	470	5
10724	1-Methylnaphthalene	90-12-0	8,600	92	470	5
10724	2-Methylnaphthalene	91-57-6	7,700	92	470	5
10724	Naphthalene	91-20-3	8,400	92	470	5
10724	Phenanthrene	85-01-8	9,900	92	470	5
10724	Pyrene	129-00-0	11,000	92	470	5

Reporting limits were raised due to interference from the sample matrix.

Explosives	**SW-846 8330**		ug/kg	ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	9,500	360	720	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	9,400	240	720	1
06918	1,2-Dinitrobenzene	528-29-0	27,000	240	720	1
06918	1,3-Dinitrobenzene	99-65-0	12,000	240	720	1
06918	1,4-Dinitrobenzene	100-25-4	21,000	240	720	1
06918	2,4-Dinitrotoluene	121-14-2	12,000	240	720	1
06918	2,6-Dinitrotoluene	606-20-2	13,000	240	720	1
06918	HMX	2691-41-0	7,600	600	1,800	1
06918	Nitrobenzene	98-95-3	11,000	240	720	1
06918	Nitroglycerin	55-63-0	47,000	4,800	14,000	1
06918	1-Nitronaphthalene	86-57-7	25,000	240	720	1
06918	2-Nitrotoluene	88-72-2	11,000	480	720	1
06918	3-Nitrotoluene	99-08-1	14,000	600	720	1
06918	4-Nitrotoluene	99-99-0	9,400	480	720	1
06918	PETN	78-11-5	43,000	4,800	14,000	1
06918	RDX	121-82-4	11,000	300	720	1
06918	Tetryl	479-45-8	9,000	370	720	1
06918	1,3,5-Trinitrobenzene	99-35-4	11,000	240	720	1
06918	2,4,6-Trinitrotoluene	118-96-7	12,000	240	720	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene

Metals	**SW-846 6010B**		mg/kg	mg/kg	mg/kg	
01643	Aluminum	7429-90-5	23,000	19.8	54.9	1
06944	Antimony	7440-36-0	95.7	2.03	5.49	1
06935	Arsenic	7440-38-2	58.9	1.92	5.49	1
06946	Barium	7440-39-3	835	0.0905	1.37	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266802
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MSD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06947	Beryllium	7440-41-7	13.1	0.184	1.37	1
06949	Cadmium	7440-43-9	15.8	0.208	1.37	1
01650	Calcium	7440-70-2	8,160	9.16	54.9	1
06951	Chromium	7440-47-3	142	0.439	4.11	1
06952	Cobalt	7440-48-4	162	0.272	1.37	1
06953	Copper	7440-50-8	118	0.795	2.74	1
01654	Iron	7439-89-6	62,800	9.93	54.9	1
06955	Lead	7439-92-1	143	1.37	4.11	1
01657	Magnesium	7439-95-4	3,700	4.58	27.4	1
06958	Manganese	7439-96-5	6,760	1.14	6.86	5
06961	Nickel	7440-02-0	150	0.357	2.74	1
01662	Potassium	7440-09-7	4,220	22.9	137	1
06936	Selenium	7782-49-2	44.6	2.19	5.49	1
06966	Silver	7440-22-4	15.4	0.466	1.37	1
01667	Sodium	7440-23-5	3,190	45.8	274	1
06925	Thallium	7440-28-0	38.8	1.43	8.23	1
06971	Vanadium	7440-62-2	182	0.357	1.37	1
06972	Zinc	7440-66-6	495	0.549	5.49	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	3.17	0.134	1.34	5
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00118	Moisture	n.a.	63.9	0.50	0.50	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 21:54	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 07:40	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266802
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01650	Calcium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/13/2013 11:29	Eric L Eby	5
06961	Nickel	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/13/2013 10:55	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:38	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00118	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_DUP Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266803
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03DUP

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	16,600		19.8	54.9	1
06944	Antimony	7440-36-0	N.D.		2.03	5.49	1
06935	Arsenic	7440-38-2	18.6		1.92	5.49	1
06946	Barium	7440-39-3	370		0.0905	1.37	1
06947	Beryllium	7440-41-7	0.464	J	0.184	1.37	1
06949	Cadmium	7440-43-9	3.45		0.208	1.37	1
01650	Calcium	7440-70-2	6,160		9.16	54.9	1
06951	Chromium	7440-47-3	75.2		0.439	4.11	1
06952	Cobalt	7440-48-4	41.0		0.272	1.37	1
06953	Copper	7440-50-8	44.8		0.795	2.74	1
01654	Iron	7439-89-6	67,300		9.93	54.9	1
06955	Lead	7439-92-1	95.6		1.37	4.11	1
01657	Magnesium	7439-95-4	2,550		4.58	27.4	1
06958	Manganese	7439-96-5	7,140		1.14	6.86	5
06961	Nickel	7440-02-0	19.2		0.357	2.74	1
01662	Potassium	7440-09-7	792		22.9	137	1
06936	Selenium	7782-49-2	5.25	J	2.19	5.49	1
06966	Silver	7440-22-4	2.25		0.466	1.37	1
01667	Sodium	7440-23-5	485		45.8	274	1
06925	Thallium	7440-28-0	N.D.		1.43	8.23	1
06971	Vanadium	7440-62-2	41.6		0.357	1.37	1
06972	Zinc	7440-66-6	408		0.549	5.49	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	1.80		0.0262	0.262	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	58,500		3,360	10,100	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00118	Moisture	n.a.	63.9		0.50	0.50	1
00121	Moisture Duplicate	n.a.	56.9		0.50	0.50	1

The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01643	Aluminum	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-4_DUP Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266803
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G124 SDG#: KVM05-03DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06944	Antimony	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/13/2013 11:12	Eric L Eby	5
06961	Nickel	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/13/2013 10:46	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:42	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 22:09	James S Mathiot	1
00118	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1
00121	Moisture Duplicate	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-5 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266804
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G125 SDG#: KVM05-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	N.D.		99	500	5
10724	Acenaphthylene	208-96-8	260	J	99	500	5
10724	Anthracene	120-12-7	280	J	99	500	5
10724	Benzo(a)anthracene	56-55-3	670		99	500	5
10724	Benzo(a)pyrene	50-32-8	960		99	500	5
10724	Benzo(b)fluoranthene	205-99-2	1,300		99	500	5
10724	Benzo(g,h,i)perylene	191-24-2	850		99	500	5
10724	Benzo(k)fluoranthene	207-08-9	590		99	500	5
10724	Chrysene	218-01-9	1,200		99	500	5
10724	Dibenz(a,h)anthracene	53-70-3	260	J	99	500	5
10724	Fluoranthene	206-44-0	1,600		99	500	5
10724	Fluorene	86-73-7	110	J	99	500	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	640		99	500	5
10724	1-Methylnaphthalene	90-12-0	N.D.		99	500	5
10724	2-Methylnaphthalene	91-57-6	N.D.		99	500	5
10724	Naphthalene	91-20-3	190	J	99	500	5
10724	Phenanthrene	85-01-8	900		99	500	5
10724	Pyrene	129-00-0	1,900		99	500	5

Reporting limits were raised due to interference from the sample matrix.

Explosives	**SW-846 8330**		ug/kg		ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		370	740	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		250	740	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		250	740	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		250	740	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		250	740	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		250	740	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		250	740	1
06918	HMX	2691-41-0	N.D.		620	1,900	1
06918	Nitrobenzene	98-95-3	N.D.		250	740	1
06918	Nitroglycerin	55-63-0	N.D.		5,300	15,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		250	740	1
06918	2-Nitrotoluene	88-72-2	N.D.		490	740	1
06918	3-Nitrotoluene	99-08-1	N.D.		620	740	1
06918	4-Nitrotoluene	99-99-0	N.D.		490	740	1
06918	PETN	78-11-5	N.D.		4,900	15,000	1
06918	RDX	121-82-4	N.D.		310	740	1
06918	Tetryl	479-45-8	N.D.		380	740	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		250	740	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		250	740	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene
Reporting limits were raised due to interference from the sample matrix.

Metals	**SW-846 6010B**		mg/kg		mg/kg	mg/kg	
01643	Aluminum	7429-90-5	21,700		21.0	58.2	1
06944	Antimony	7440-36-0	N.D.		2.15	5.82	1
06935	Arsenic	7440-38-2	11.3		2.04	5.82	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-5 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266804
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G125 SDG#: KVM05-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06946	Barium	7440-39-3	144	0.0960	1.45	1
06947	Beryllium	7440-41-7	1.02 J	0.195	1.45	1
06949	Cadmium	7440-43-9	1.12 J	0.221	1.45	1
01650	Calcium	7440-70-2	5,100	9.72	58.2	1
06951	Chromium	7440-47-3	74.5	0.465	4.36	1
06952	Cobalt	7440-48-4	10.3	0.288	1.45	1
06953	Copper	7440-50-8	56.8	0.844	2.91	1
01654	Iron	7439-89-6	24,300	10.5	58.2	1
06955	Lead	7439-92-1	123	1.45	4.36	1
01657	Magnesium	7439-95-4	3,090	4.86	29.1	1
06958	Manganese	7439-96-5	371	0.241	1.45	1
06961	Nickel	7440-02-0	20.2	0.378	2.91	1
01662	Potassium	7440-09-7	891	24.3	145	1
06936	Selenium	7782-49-2	N.D.	2.33	5.82	1
06966	Silver	7440-22-4	0.864 J	0.495	1.45	1
01667	Sodium	7440-23-5	498	48.6	291	1
06925	Thallium	7440-28-0	N.D.	1.51	8.73	1
06971	Vanadium	7440-62-2	50.7	0.378	1.45	1
06972	Zinc	7440-66-6	350	0.582	5.82	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	3.94	0.139	1.39	5
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	32,400	4,730	14,200	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	66.3	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 22:19	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 08:23	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-G-12-5 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266804
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 09:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2G125 SDG#: KVM05-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 11:50	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/11/2013 14:46	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 09:36	Damary Valentin	5
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 22:17	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266805
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:20 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B152 SDG#: KVM05-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l		ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.		0.5	1	1
04678	Anthracene	120-12-7	N.D.		0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.		2	5	1
04678	Benzaldehyde	100-52-7	N.D.		1	5	1
04678	Benzo(a)anthracene	56-55-3	0.1	J	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	0.2	J	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	0.2	J	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	0.1	J	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	0.1	J	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.		0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
04678	Caprolactam	105-60-2	N.D.		5	15	1
04678	Carbazole	86-74-8	N.D.		0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.		0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.		0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.		0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	Chrysene	218-01-9	0.2	J	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.		0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.		0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.		2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.		2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		10	30	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		2	5	1
04678	Fluoranthene	206-44-0	0.4	J	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.		0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.		0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		5	15	1
04678	Hexachloroethane	67-72-1	N.D.		1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		0.1	0.5	1
04678	Isophorone	78-59-1	N.D.		0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.		0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266805
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:20 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B152 SDG#: KVM05-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.		0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	N.D.		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.		0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.		0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.		0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.		0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.		0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.		10	30	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		2	5	1
04678	Pentachlorophenol	87-86-5	N.D.		1	5	1
04678	Phenanthrene	85-01-8	0.2	J	0.1	0.5	1
04678	Phenol	108-95-2	N.D.		0.5	1	1
04678	Pyrene	129-00-0	0.3	J	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		0.5	1	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(g,h,i)perylene						
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		0.70	0.70	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		0.70	0.70	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.		0.45	1.3	1
06916	HMX	2691-41-0	N.D.		0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.		0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1
06916	PETN	78-11-5	N.D.		6.0	18	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266805
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:20 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B152 SDG#: KVM05-05

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	RDX	121-82-4	N.D.		0.20	0.50	1
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene Reporting limits were raised due to interference from the sample matrix.						
Metals	**SW-846 6010B**		**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	1,430		82.8	200	1
07046	Barium	7440-39-3	70.6		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	1.0	J	0.76	5.0	1
01750	Calcium	7440-70-2	25,000		33.4	200	1
07051	Chromium	7440-47-3	6.5	J	1.6	15.0	1
07052	Cobalt	7440-48-4	12.4		1.3	5.0	1
07053	Copper	7440-50-8	10.5		2.7	10.0	1
01754	Iron	7439-89-6	21,000		43.0	200	1
01757	Magnesium	7439-95-4	9,730		16.7	100	1
07058	Manganese	7439-96-5	1,620		0.83	5.0	1
07061	Nickel	7440-02-0	7.4	J	1.5	10.0	1
01762	Potassium	7440-09-7	3,180		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	53,100		167	1,000	1
07071	Vanadium	7440-62-2	5.6		2.0	5.0	1
07072	Zinc	7440-66-6	61.7		2.0	20.0	1
	SW-846 6020		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	0.46	J	0.34	1.0	1
06025	Arsenic	7440-38-2	3.8		0.42	2.0	1
06035	Lead	7439-92-1	22.5		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.080	J	0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	111,000		15,000	25,000	5
	SM 4500-H+ B-2000		**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.9		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-2 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266805
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:20 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B152 SDG#: KVM05-05

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 09:51	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/18/2013 00:36	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:44	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 22:54	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:09	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:09	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:09	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:49	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	2	13326002101A	11/22/2013 12:06	Susan A Engle	5
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:56	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2B152

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266805
Sample wt/vol: 246 (g/mL) mL Lab File ID: dk0391.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.147	5	J
2.		Unknown	2.730	12	J
3.		Unknown	3.225	9	J
4.		Unknown	11.036	8	J
5.		Unknown	11.147	6	J
6.		Unknown	14.137	170	J
7.		Unknown	14.207	27	J
8.		Unknown	20.187	5	J
9.		Unknown	20.286	5	J
10.		Unknown	20.974	5	J
11.		Unknown	21.218	13	J
12.		Unknown	21.318	7	J
13.		Unknown	21.498	6	J
14.		Unknown	21.591	6	J
15.		Unknown	21.819	5	J
16.					
17.	SVOCTIC	Total SVOC TICs		290	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-C-15-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266806
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C152 SDG#: KVM05-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**	**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.	790	4,000	5
10724	Acenaphthylene	208-96-8	N.D.	790	4,000	5
10724	Anthracene	120-12-7	N.D.	790	4,000	5
10724	Benzo(a)anthracene	56-55-3	N.D.	790	4,000	5
10724	Benzo(a)pyrene	50-32-8	N.D.	790	4,000	5
10724	Benzo(b)fluoranthene	205-99-2	N.D.	790	4,000	5
10724	Benzo(g,h,i)perylene	191-24-2	N.D.	790	4,000	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.	790	4,000	5
10724	Chrysene	218-01-9	N.D.	790	4,000	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.	790	4,000	5
10724	Fluoranthene	206-44-0	N.D.	790	4,000	5
10724	Fluorene	86-73-7	N.D.	790	4,000	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	790	4,000	5
10724	1-Methylnaphthalene	90-12-0	N.D.	790	4,000	5
10724	2-Methylnaphthalene	91-57-6	N.D.	790	4,000	5
10724	Naphthalene	91-20-3	N.D.	790	4,000	5
10724	Phenanthrene	85-01-8	N.D.	790	4,000	5
10724	Pyrene	129-00-0	N.D.	790	4,000	5

Reporting limits were raised due to interference from the sample matrix.

Explosives	**SW-846 8330**		**ug/kg**	**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	1,100	2,200	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	720	2,200	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.	720	2,200	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.	720	2,200	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.	720	2,200	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.	720	2,200	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.	720	2,200	1
06918	HMX	2691-41-0	N.D.	1,800	5,400	1
06918	Nitrobenzene	98-95-3	N.D.	720	2,200	1
06918	Nitroglycerin	55-63-0	N.D.	14,000	43,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.	720	2,200	1
06918	2-Nitrotoluene	88-72-2	N.D.	1,400	2,200	1
06918	3-Nitrotoluene	99-08-1	N.D.	1,800	2,200	1
06918	4-Nitrotoluene	99-99-0	N.D.	1,400	2,200	1
06918	PETN	78-11-5	N.D.	14,000	43,000	1
06918	RDX	121-82-4	N.D.	900	2,200	1
06918	Tetryl	479-45-8	N.D.	1,100	2,200	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.	720	2,200	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.	720	2,200	1

The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene

Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	8,460	57.2	159	1
06944	Antimony	7440-36-0	N.D.	5.87	15.9	1
06935	Arsenic	7440-38-2	N.D.	5.56	15.9	1
06946	Barium	7440-39-3	82.4	0.262	3.97	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-15-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266806
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C152 SDG#: KVM05-06

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06947	Beryllium	7440-41-7	0.913	J	0.532	3.97	1
06949	Cadmium	7440-43-9	1.04	J	0.603	3.97	1
01650	Calcium	7440-70-2	6,580		26.5	159	1
06951	Chromium	7440-47-3	14.4		1.27	11.9	1
06952	Cobalt	7440-48-4	5.85		0.786	3.97	1
06953	Copper	7440-50-8	23.6		2.30	7.94	1
01654	Iron	7439-89-6	12,400		28.7	159	1
06955	Lead	7439-92-1	105		3.97	11.9	1
01657	Magnesium	7439-95-4	1,370		13.3	79.4	1
06958	Manganese	7439-96-5	384		0.659	3.97	1
06961	Nickel	7440-02-0	10.6		1.03	7.94	1
01662	Potassium	7440-09-7	324	J	66.2	397	1
06936	Selenium	7782-49-2	N.D.		6.35	15.9	1
06966	Silver	7440-22-4	1.58	J	1.35	3.97	1
01667	Sodium	7440-23-5	304	J	133	794	1
06925	Thallium	7440-28-0	N.D.		4.13	23.8	1
06971	Vanadium	7440-62-2	25.7		1.03	3.97	1
06972	Zinc	7440-66-6	117		1.59	15.9	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.100	J	0.0740	0.740	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	213,000		8,580	25,700	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	87.4		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 22:43	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 09:48	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-15-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266806
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 10:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C152 SDG#: KVM05-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 11:54	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/11/2013 14:50	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:51	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 22:33	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266807
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B151 SDG#: KVM05-07

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l		ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.		0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.		0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.		0.5	1	1
04678	Anthracene	120-12-7	N.D.		0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.		2	5	1
04678	Benzaldehyde	100-52-7	N.D.		1	5	1
04678	Benzo(a)anthracene	56-55-3	0.1	J	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	0.2	J	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	0.2	J	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	0.2	J	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	0.1	J	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.		0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.		0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.		2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.		2	5	1
04678	Caprolactam	105-60-2	N.D.		5	16	1
04678	Carbazole	86-74-8	N.D.		0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.		0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.		0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.		0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.		0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.		0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.		0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.		0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.		0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.						
04678	Chrysene	218-01-9	0.2	J	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.		0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.		0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.		2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.		0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.		2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.		0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.		2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.		5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.		11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.		1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.		0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.		2	5	1
04678	Fluoranthene	206-44-0	0.3	J	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.		0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.		0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.		0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.		5	16	1
04678	Hexachloroethane	67-72-1	N.D.		1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	0.1	J	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.		0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.		0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266807
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B151 SDG#: KVM05-07

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.		0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	N.D.		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.		0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.		0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.		0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.		0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.		0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.		11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		2	5	1
04678	Pentachlorophenol	87-86-5	N.D.		1	5	1
04678	Phenanthrene	85-01-8	0.1	J	0.1	0.5	1
04678	Phenol	108-95-2	N.D.		0.5	1	1
04678	Pyrene	129-00-0	0.4	J	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		0.5	1	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: benzo(g,h,i)perylene indeno(1,2,3-cd)pyrene						
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.		0.45	1.3	1
06916	HMX	2691-41-0	N.D.		0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.		0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266807
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B151 SDG#: KVM05-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
Explosives	**SW-846 8330**		**ug/l**	**ug/l**	**ug/l**	
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene					
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	646	82.8	200	1
07046	Barium	7440-39-3	63.7	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	61,700	33.4	200	1
07051	Chromium	7440-47-3	2.5 J	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	2,290	43.0	200	1
01757	Magnesium	7439-95-4	26,300	16.7	100	1
07058	Manganese	7439-96-5	416	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	3,860	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	82,000	334	2,000	2
07071	Vanadium	7440-62-2	2.0 J	2.0	5.0	1
07072	Zinc	7440-66-6	15.0 J	2.0	20.0	1
	SW-846 6020		**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	0.55 J	0.42	2.0	1
06035	Lead	7439-92-1	5.0	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
	SW-846 7470A		**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry	**SM 2340 C-1997**		**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	265,000	3,000	5,000	1
	SM 4500-H+ B-2000		**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.7	0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.					

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-B-15-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266807
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2B151 SDG#: KVM05-07

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 10:18	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/18/2013 02:01	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/13/2013 01:10	John W Yanzuk II	2
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:55	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:11	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:11	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:11	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:11	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:51	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 04:44	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:48	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2B151

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266807
Sample wt/vol: 231 (g/mL) mL Lab File ID: dk0392.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.730	26	J
2.		Unknown	3.225	19	J
3.		Unknown	21.224	9	J
4.					
5.	SVOCTIC	Total SVOC TICs		54	J
6.					
7.					
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9.					
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27.					
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29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-C-15-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266808
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C151 SDG#: KVM05-08*

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		470	2,400	5
10724	Acenaphthylene	208-96-8	N.D.		470	2,400	5
10724	Anthracene	120-12-7	N.D.		470	2,400	5
10724	Benzo(a)anthracene	56-55-3	N.D.		470	2,400	5
10724	Benzo(a)pyrene	50-32-8	N.D.		470	2,400	5
10724	Benzo(b)fluoranthene	205-99-2	570	J	470	2,400	5
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		470	2,400	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.		470	2,400	5
10724	Chrysene	218-01-9	520	J	470	2,400	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		470	2,400	5
10724	Fluoranthene	206-44-0	850	J	470	2,400	5
10724	Fluorene	86-73-7	N.D.		470	2,400	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		470	2,400	5
10724	1-Methylnaphthalene	90-12-0	N.D.		470	2,400	5
10724	2-Methylnaphthalene	91-57-6	N.D.		470	2,400	5
10724	Naphthalene	91-20-3	N.D.		470	2,400	5
10724	Phenanthrene	85-01-8	500	J	470	2,400	5
10724	Pyrene	129-00-0	990	J	470	2,400	5
	Reporting limits were raised due to interference from the sample matrix.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		620	1,200	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		410	1,200	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		410	1,200	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		410	1,200	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		410	1,200	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		410	1,200	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		410	1,200	1
06918	HMX	2691-41-0	N.D.		1,000	3,100	1
06918	Nitrobenzene	98-95-3	N.D.		410	1,200	1
06918	Nitroglycerin	55-63-0	N.D.		8,200	25,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		410	1,200	1
06918	2-Nitrotoluene	88-72-2	N.D.		820	1,200	1
06918	3-Nitrotoluene	99-08-1	N.D.		1,000	1,200	1
06918	4-Nitrotoluene	99-99-0	N.D.		820	1,200	1
06918	PETN	78-11-5	N.D.		8,200	25,000	1
06918	RDX	121-82-4	N.D.		510	1,200	1
06918	Tetryl	479-45-8	N.D.		630	1,200	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		410	1,200	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		410	1,200	1
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-dinitrotoluene						
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	9,620		33.3	92.5	1
06944	Antimony	7440-36-0	N.D.		3.42	9.25	1
06935	Arsenic	7440-38-2	5.07	J	3.24	9.25	1
06946	Barium	7440-39-3	117		0.153	2.31	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-15-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266808
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C151 SDG#: KVM05-08*

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06947	Beryllium	7440-41-7	0.745 J	0.310	2.31	1
06949	Cadmium	7440-43-9	1.03 J	0.351	2.31	1
01650	Calcium	7440-70-2	16,200	15.4	92.5	1
06951	Chromium	7440-47-3	20.6	0.740	6.94	1
06952	Cobalt	7440-48-4	3.60	0.458	2.31	1
06953	Copper	7440-50-8	31.6	1.34	4.62	1
01654	Iron	7439-89-6	13,400	16.7	92.5	1
06955	Lead	7439-92-1	84.4	2.31	6.94	1
01657	Magnesium	7439-95-4	2,320	7.72	46.2	1
06958	Manganese	7439-96-5	331	0.384	2.31	1
06961	Nickel	7440-02-0	8.53	0.601	4.62	1
01662	Potassium	7440-09-7	416	38.6	231	1
06936	Selenium	7782-49-2	5.58 J	3.70	9.25	1
06966	Silver	7440-22-4	0.943 J	0.786	2.31	1
01667	Sodium	7440-23-5	692	77.2	462	1
06925	Thallium	7440-28-0	N.D.	2.40	13.9	1
06971	Vanadium	7440-62-2	33.8	0.601	2.31	1
06972	Zinc	7440-66-6	132	0.925	9.25	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.207 J	0.0450	0.450	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	91,100	7,590	22,800	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	78.8	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLB026	11/15/2013 23:08	Holly Berry	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLB026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140019A	11/18/2013 10:30	James H Place	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-15-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266808
LL Group # 1431971
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 11:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/22/2013 16:37

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C151 SDG#: KVM05-08*

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140019A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06944	Antimony	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06935	Arsenic	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06946	Barium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06947	Beryllium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06949	Cadmium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
01650	Calcium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06951	Chromium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06952	Cobalt	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06953	Copper	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
01654	Iron	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06955	Lead	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
01657	Magnesium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06958	Manganese	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06961	Nickel	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
01662	Potassium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06936	Selenium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06966	Silver	SW-846 6010B	1	133125708002	11/13/2013 11:58	Eric L Eby	1
01667	Sodium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06925	Thallium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06971	Vanadium	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
06972	Zinc	SW-846 6010B	1	133125708002	11/11/2013 15:02	Eric L Eby	1
00159	Mercury	SW-846 7471A	1	133125711002	11/11/2013 08:57	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708002	11/10/2013 22:15	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711002	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531A	11/11/2013 22:45	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005A	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13314WAD026	Sample number(s): 7266798-7266799,7266805,7266807								
Acenaphthene	N.D.	0.03	0.1	ug/l	94	91	69-122	2	30
Acenaphthylene	N.D.	0.03	0.1	ug/l	103	101	84-125	2	30
Acetophenone	N.D.	0.1	0.3	ug/l	88	87	71-110	2	30
Anthracene	N.D.	0.03	0.1	ug/l	98	99	82-116	1	30
Atrazine	N.D.	0.5	1	ug/l	107	109	67-127	1	30
Benzaldehyde	N.D.	0.3	1	ug/l	68	66	19-100	4	30
Benzo(a)anthracene	N.D.	0.03	0.1	ug/l	103	104	84-121	1	30
Benzo(a)pyrene	N.D.	0.03	0.1	ug/l	100	99	82-116	1	30
Benzo(b)fluoranthene	N.D.	0.03	0.1	ug/l	96	96	82-121	1	30
Benzo(g,h,i)perylene	N.D.	0.03	0.1	ug/l	125*	124*	81-121	1	30
Benzo(k)fluoranthene	N.D.	0.03	0.1	ug/l	100	100	81-122	1	30
1,1'-Biphenyl	N.D.	0.1	0.3	ug/l	93	91	60-120	2	30
4-Bromophenyl-phenylether	N.D.	0.1	0.3	ug/l	105	104	75-115	1	30
Butylbenzylphthalate	N.D.	0.5	1	ug/l	95	95	70-122	0	30
Di-n-butylphthalate	N.D.	0.5	1	ug/l	97	97	72-120	0	30
Caprolactam	N.D.	1.	4	ug/l	33	32	14-46	3	30
Carbazole	N.D.	0.1	0.3	ug/l	99	99	70-128	0	30
4-Chloro-3-methylphenol	N.D.	0.1	0.3	ug/l	98	98	67-131	0	30
4-Chloroaniline	N.D.	0.1	0.3	ug/l	84	87	46-112	4	30
bis(2-Chloroethoxy)methane	N.D.	0.1	0.3	ug/l	85	84	65-125	0	30
bis(2-Chloroethyl)ether	N.D.	0.1	0.3	ug/l	85	83	73-112	2	30
2-Chloronaphthalene	N.D.	0.1	0.3	ug/l	98	95	60-138	3	30
2-Chlorophenol	N.D.	0.1	0.3	ug/l	94	92	76-111	3	30
4-Chlorophenyl-phenylether	N.D.	0.1	0.3	ug/l	100	99	77-114	1	30
2,2'-oxybis(1-Chloropropane)	N.D.	0.1	0.3	ug/l	71	68	55-123	5	30
Chrysene	N.D.	0.03	0.1	ug/l	101	102	81-120	0	30
Dibenz(a,h)anthracene	N.D.	0.03	0.1	ug/l	127*	124	83-124	2	30
Dibenzofuran	N.D.	0.1	0.3	ug/l	97	95	81-110	2	30
3,3'-Dichlorobenzidine	N.D.	0.5	1	ug/l	71	73	47-108	3	30
2,4-Dichlorophenol	N.D.	0.1	0.3	ug/l	104	104	84-114	0	30
Diethylphthalate	N.D.	0.5	1	ug/l	95	92	60-121	3	30
2,4-Dimethylphenol	N.D.	0.1	0.3	ug/l	92	92	66-125	0	30
Dimethylphthalate	N.D.	0.5	1	ug/l	94	90	50-127	4	30
4,6-Dinitro-2-methylphenol	N.D.	1.	4	ug/l	103	102	68-131	1	30
2,4-Dinitrophenol	N.D.	3.	8	ug/l	99	100	43-137	1	30
2,4-Dinitrotoluene	N.D.	0.3	1	ug/l	106	107	81-120	1	30
2,6-Dinitrotoluene	N.D.	0.1	0.3	ug/l	106	107	81-124	0	30
bis(2-Ethylhexyl)phthalate	N.D.	0.5	1	ug/l	96	97	78-117	1	30
Fluoranthene	N.D.	0.03	0.1	ug/l	105	105	71-129	0	30
Fluorene	N.D.	0.03	0.1	ug/l	97	95	71-126	2	30
Hexachlorobenzene	N.D.	0.03	0.1	ug/l	109	109	74-126	0	30
Hexachlorobutadiene	N.D.	0.1	0.3	ug/l	100	102	56-119	1	30
Hexachlorocyclopentadiene	N.D.	1.	4	ug/l	102	97	21-126	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	N.D.	0.3	1	ug/l	77	77	55-109	0	30
Indeno(1,2,3-cd)pyrene	N.D.	0.03	0.1	ug/l	122*	120	83-121	2	30
Isophorone	N.D.	0.1	0.3	ug/l	90	91	68-124	1	30
2-Methylnaphthalene	N.D.	0.03	0.1	ug/l	91	91	63-120	0	30
2-Methylphenol	N.D.	0.1	0.3	ug/l	89	86	61-118	3	30
4-Methylphenol	N.D.	0.1	0.3	ug/l	84	81	54-112	3	30
Naphthalene	N.D.	0.03	0.1	ug/l	93	93	75-108	0	30
2-Nitroaniline	N.D.	0.1	0.3	ug/l	105	104	84-122	1	30
3-Nitroaniline	N.D.	0.1	0.3	ug/l	92	93	70-118	0	30
4-Nitroaniline	N.D.	0.1	0.3	ug/l	87	87	61-110	0	30
Nitrobenzene	N.D.	0.1	0.3	ug/l	89	88	67-123	1	30
2-Nitrophenol	N.D.	0.1	0.3	ug/l	109	108	84-118	1	30
4-Nitrophenol	N.D.	3.	8	ug/l	59	57	16-91	4	30
N-Nitroso-di-n-propylamine	N.D.	0.1	0.3	ug/l	82	81	71-117	1	30
N-Nitrosodiphenylamine	N.D.	0.1	0.3	ug/l	96	94	80-115	2	30
Di-n-octylphthalate	N.D.	0.5	1	ug/l	88	86	72-129	1	30
Pentachlorophenol	N.D.	0.3	1	ug/l	85	86	50-129	2	30
Phenanthrene	N.D.	0.03	0.1	ug/l	96	96	68-127	0	30
Phenol	N.D.	0.1	0.3	ug/l	53	51	23-82	4	30
Pyrene	N.D.	0.03	0.1	ug/l	97	97	81-112	0	30
2,4,5-Trichlorophenol	N.D.	0.1	0.3	ug/l	109	106	81-121	3	30
2,4,6-Trichlorophenol	N.D.	0.1	0.3	ug/l	105	103	84-119	2	30
Batch number: 13316SLB026	Sample number(s): 7266800-7266802,7266804,7266806,7266808								
Acenaphthene	N.D.	3.	17	ug/kg	102		83-111		
Acenaphthylene	N.D.	3.	17	ug/kg	114		83-127		
Anthracene	N.D.	3.	17	ug/kg	106		82-118		
Benzo(a)anthracene	N.D.	3.	17	ug/kg	92		81-117		
Benzo(a)pyrene	N.D.	3.	17	ug/kg	103		84-122		
Benzo(b)fluoranthene	N.D.	3.	17	ug/kg	96		76-124		
Benzo(g,h,i)perylene	N.D.	3.	17	ug/kg	102		77-122		
Benzo(k)fluoranthene	N.D.	3.	17	ug/kg	101		80-125		
Chrysene	N.D.	3.	17	ug/kg	93		77-116		
Dibenz(a,h)anthracene	N.D.	3.	17	ug/kg	104		81-123		
Fluoranthene	N.D.	3.	17	ug/kg	102		79-123		
Fluorene	N.D.	3.	17	ug/kg	104		86-118		
Indeno(1,2,3-cd)pyrene	N.D.	3.	17	ug/kg	100		77-122		
1-Methylnaphthalene	N.D.	3.	17	ug/kg	109		77-115		
2-Methylnaphthalene	N.D.	3.	17	ug/kg	99		80-114		
Naphthalene	N.D.	3.	17	ug/kg	99		77-115		
Phenanthrene	N.D.	3.	17	ug/kg	104		85-116		
Pyrene	N.D.	3.	17	ug/kg	99		81-114		
Batch number: 133140016A	Sample number(s): 7266798-7266799,7266805,7266807								
4-Amino-2,6-Dinitrotoluene	N.D.	0.30	0.60	ug/l	92*	91*	97-156	1	30
2-Amino-4,6-Dinitrotoluene	N.D.	0.20	0.60	ug/l	88	87	65-107	1	30
1,2-Dinitrobenzene	N.D.	0.20	0.60	ug/l	105	109	90-118	4	30
1,3-Dinitrobenzene	N.D.	0.20	0.60	ug/l	107	104	78-121	3	30
1,4-Dinitrobenzene	N.D.	0.30	0.60	ug/l	92	95	81-108	2	30
2,4-Dinitrotoluene	N.D.	0.72	2.0	ug/l	102	103	71-111	2	30
2,6-Dinitrotoluene	N.D.	0.45	1.3	ug/l	105	109	84-157	4	30
HMX	N.D.	0.65	2.0	ug/l	79	81	73-112	3	30
Nitrobenzene	N.D.	0.20	0.60	ug/l	97	96	71-111	1	30
Nitroglycerin	N.D.	5.2	15	ug/l	88	87	73-116	1	30
1-Nitronaphthalene	N.D.	0.20	0.60	ug/l	106	106	69-125	0	30
2-Nitrotoluene	N.D.	0.25	0.75	ug/l	86	87	74-115	0	30

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
3-Nitrotoluene	N.D.	0.40	1.2	ug/l	99	102	76-115	3	30
4-Nitrotoluene	N.D.	0.60	1.2	ug/l	90	88	76-120	2	30
PETN	N.D.	6.0	18	ug/l	98	99	73-126	1	30
RDX	N.D.	0.20	0.50	ug/l	92	92	70-117	0	30
Tetryl	N.D.	0.40	0.60	ug/l	99	100	43-133	1	30
1,3,5-Trinitrobenzene	N.D.	0.20	0.60	ug/l	93	94	72-119	1	30
2,4,6-Trinitrotoluene	N.D.	0.20	0.60	ug/l	108	110	75-119	2	30
Batch number: 133140019A	Sample number(s): 7266800-7266802,7266804,7266806,7266808								
4-Amino-2,6-Dinitrotoluene	N.D.	150.	300	ug/kg	94*		98-143		
2-Amino-4,6-Dinitrotoluene	N.D.	100.	300	ug/kg	91		84-115		
1,2-Dinitrobenzene	N.D.	100.	300	ug/kg	107		94-129		
1,3-Dinitrobenzene	N.D.	100.	300	ug/kg	112		97-119		
1,4-Dinitrobenzene	N.D.	100.	300	ug/kg	94		83-122		
2,4-Dinitrotoluene	N.D.	100.	300	ug/kg	107		91-112		
2,6-Dinitrotoluene	N.D.	100.	300	ug/kg	102		86-137		
HMX	N.D.	250.	750	ug/kg	87		79-104		
Nitrobenzene	N.D.	100.	300	ug/kg	100		89-107		
Nitroglycerin	N.D.	2,000.	6,000	ug/kg	95		70-118		
1-Nitronaphthalene	N.D.	100.	300	ug/kg	116		83-122		
2-Nitrotoluene	N.D.	200.	300	ug/kg	102		91-113		
3-Nitrotoluene	N.D.	250.	300	ug/kg	118		88-121		
4-Nitrotoluene	N.D.	200.	300	ug/kg	90		89-119		
PETN	N.D.	2,000.	6,000	ug/kg	79		67-136		
RDX	N.D.	130.	300	ug/kg	94		87-111		
Tetryl	N.D.	150.	300	ug/kg	107		80-112		
1,3,5-Trinitrobenzene	N.D.	100.	300	ug/kg	92		83-119		
2,4,6-Trinitrotoluene	N.D.	100.	300	ug/kg	113		85-122		
Batch number: 133115705006	Sample number(s): 7266798-7266799,7266805,7266807								
Aluminum	N.D.	82.8	200	ug/l	104		90-112		
Barium	N.D.	0.33	5.0	ug/l	103		90-110		
Beryllium	N.D.	0.67	5.0	ug/l	103		90-111		
Cadmium	N.D.	0.76	5.0	ug/l	102		90-112		
Calcium	N.D.	33.4	200	ug/l	102		90-112		
Chromium	N.D.	1.6	15.0	ug/l	103		90-110		
Cobalt	N.D.	1.3	5.0	ug/l	103		90-110		
Copper	N.D.	2.7	10.0	ug/l	104		90-112		
Iron	N.D.	43.0	200	ug/l	101		90-112		
Magnesium	N.D.	16.7	100	ug/l	101		89-110		
Manganese	N.D.	0.83	5.0	ug/l	102		90-110		
Nickel	N.D.	1.5	10.0	ug/l	104		90-111		
Potassium	N.D.	98.0	500	ug/l	102		90-110		
Selenium	N.D.	8.4	20.0	ug/l	104		80-120		
Silver	N.D.	2.1	5.0	ug/l	112		80-120		
Sodium	N.D.	167.	1,000	ug/l	102		87-114		
Vanadium	N.D.	2.0	5.0	ug/l	105		90-110		
Zinc	N.D.	2.0	20.0	ug/l	102		90-110		
Batch number: 133115713006	Sample number(s): 7266798-7266799,7266805,7266807								
Mercury	N.D.	0.060	0.20	ug/l	97		80-120		
Batch number: 133116050004A	Sample number(s): 7266798-7266799,7266805,7266807								
Antimony	N.D.	0.34	1.0	ug/l	94		80-120		
Arsenic	N.D.	0.42	2.0	ug/l	100		86-120		
Lead	N.D.	0.085	1.0	ug/l	99		90-110		

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Thallium	N.D.		0.15	0.50	ug/l	93		90-115		
Batch number: 133125708002	Sample number(s): 7266800-7266804,7266806,7266808									
Aluminum	N.D.		7.21	20.0	mg/kg	103		80-120		
Antimony	N.D.		0.740	2.00	mg/kg	101		80-120		
Arsenic	N.D.		0.700	2.00	mg/kg	105		80-120		
Barium	N.D.		0.0330	0.500	mg/kg	103		80-120		
Beryllium	N.D.		0.0670	0.500	mg/kg	97		80-120		
Cadmium	N.D.		0.0760	0.500	mg/kg	103		80-120		
Calcium	N.D.		3.34	20.0	mg/kg	99		80-120		
Chromium	N.D.		0.160	1.50	mg/kg	100		80-120		
Cobalt	N.D.		0.0990	0.500	mg/kg	105		80-120		
Copper	N.D.		0.290	1.00	mg/kg	106		80-120		
Iron	N.D.		3.62	20.0	mg/kg	100		80-120		
Lead	N.D.		0.500	1.50	mg/kg	107		80-120		
Magnesium	1.67	J	1.67	10.0	mg/kg	99		80-120		
Manganese	N.D.		0.0830	0.500	mg/kg	103		80-120		
Nickel	N.D.		0.130	1.00	mg/kg	107		80-120		
Potassium	N.D.		8.34	50.0	mg/kg	99		80-120		
Selenium	N.D.		0.800	2.00	mg/kg	106		80-120		
Silver	N.D.		0.170	0.500	mg/kg	105		80-120		
Sodium	N.D.		16.7	100	mg/kg	99		80-120		
Thallium	N.D.		0.520	3.00	mg/kg	108		80-120		
Vanadium	N.D.		0.130	0.500	mg/kg	98		80-120		
Zinc	N.D.		0.200	2.00	mg/kg	104		80-120		
Batch number: 133125711002	Sample number(s): 7266800-7266804,7266806,7266808									
Mercury	N.D.		0.0100	0.100	mg/kg	102		80-120		
Batch number: 13312049501B	Sample number(s): 7266798									
Total Organic Carbon	N.D.		0.50	1.0	mg/l	101		91-113		
Batch number: 13315049531A	Sample number(s): 7266800-7266801,7266803-7266804,7266806,7266808									
TOC by Lloyd Kahn	N.D.		100.	300	mg/kg	74		47-143		
Batch number: 13311001104A	Sample number(s): 7266799,7266807									
Total Hardness	N.D.		3,000.	5,000	ug/l	103		96-110		
Batch number: 13312002202A	Sample number(s): 7266799,7266805,7266807									
pH						99		93-106		
Batch number: 13326002101A	Sample number(s): 7266805									
Total Hardness	N.D.		3,000.	5,000	ug/l	100		96-110		
Batch number: 13317820005A	Sample number(s): 7266800-7266804,7266806,7266808									
Moisture						100		99-101		
Moisture						100		99-101		
Moisture Duplicate						100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

*- Outside of specification
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(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13316SLB026	Sample number(s): 7266800-7266802,7266804,7266806,7266808 UNSPK: 7266800								
Acenaphthene	87	89	61-128	2	30				
Acenaphthylene	102	100	67-130	1	30				
Anthracene	94	91	41-142	3	30				
Benzo(a)anthracene	84	88	32-150	5	30				
Benzo(a)pyrene	89	88	36-151	0	30				
Benzo(b)fluoranthene	85	98	29-150	13	30				
Benzo(g,h,i)perylene	91	85	41-147	7	30				
Benzo(k)fluoranthene	101	95	44-145	6	30				
Chrysene	83	90	28-146	8	30				
Dibenz(a,h)anthracene	95	86	54-142	9	30				
Fluoranthene	92	98	30-151	6	30				
Fluorene	89	93	55-128	4	30				
Indeno(1,2,3-cd)pyrene	85	85	44-147	0	30				
1-Methylnaphthalene	94	93	82-115	0	30				
2-Methylnaphthalene	87	84	39-140	4	30				
Naphthalene	93	91	44-142	3	30				
Phenanthrene	97	102	34-147	4	30				
Pyrene	94	111	29-148	15	30				
Batch number: 133140019A	Sample number(s): 7266800-7266802,7266804,7266806,7266808 UNSPK: 7266800								
4-Amino-2,6-Dinitrotoluene	70*	79*	85-118	12	50				
2-Amino-4,6-Dinitrotoluene	72	78	69-113	9	50				
1,2-Dinitrobenzene	93	111	80-120	18	50				
1,3-Dinitrobenzene	95	98	89-119	3	50				
1,4-Dinitrobenzene	80*	86	82-117	8	50				
2,4-Dinitrotoluene	92	98	81-111	7	50				
2,6-Dinitrotoluene	91	106	86-114	15	50				
HMX	71*	63*	72-107	11	50				
Nitrobenzene	85*	93	86-108	9	50				
Nitroglycerin	81	98	73-116	18	50				
1-Nitronaphthalene	99	105	89-131	6	50				
2-Nitrotoluene	89	94	79-112	6	50				
3-Nitrotoluene	104	113	72-119	8	50				
4-Nitrotoluene	75*	78*	90-118	4	50				
PETN	68*	88	71-133	26	50				
RDX	79	87	75-108	10	50				
Tetryl	64	75	58-125	15	50				
1,3,5-Trinitrobenzene	81	88	58-135	8	50				
2,4,6-Trinitrotoluene	94	102	92-114	9	50				
Batch number: 133115705006	Sample number(s): 7266798-7266799,7266805,7266807 UNSPK: P265230 BKG: P265230								
Aluminum	98	96	75-125	2	20	148 J	137 J	8 (1)	20
Barium	100	100	78-118	0	20	39.4	40.4	3	20
Beryllium	105	106	87-114	0	20	N.D.	N.D.	0 (1)	20
Cadmium	101	102	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	108 (2)	120 (2)	75-125	1	20	36,100	36,300	1	20
Chromium	104	104	76-120	0	20	N.D.	N.D.	0 (1)	20
Cobalt	101	102	82-112	0	20	N.D.	N.D.	0 (1)	20
Copper	103	104	86-122	1	20	N.D.	N.D.	0 (1)	20
Iron	52*	50*	75-125	1	20	1,450	1,430	1	20
Magnesium	101 (2)	111 (2)	75-125	1	20	14,400	14,600	2	20
Manganese	81	80	75-125	0	20	739	750	1	20
Nickel	102	103	86-115	1	20	N.D.	N.D.	0 (1)	20
Potassium	102	103	77-128	1	20	1,960	1,920	2 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Selenium	102	106	75-125	4	20	N.D.	N.D.	0 (1)	20
Silver	113	113	75-125	0	20	N.D.	N.D.	0 (1)	20
Sodium	103 (2)	112 (2)	75-125	1	20	71,600	72,100	1	20
Vanadium	107	107	90-117	0	20	N.D.	N.D.	0 (1)	20
Zinc	101	102	85-117	1	20	2.1 J	N.D.	200* (1)	20
Batch number: 133115713006	Sample number(s): 7266798-7266799,7266805,7266807 UNSPK: P267633 BKG: P267633								
Mercury	107	102	80-120	4	20	N.D.	N.D.	0 (1)	20
Batch number: 133116050004A	Sample number(s): 7266798-7266799,7266805,7266807 UNSPK: P265230 BKG: P265230								
Antimony	103	110	75-125	7	20	N.D.	N.D.	0 (1)	20
Arsenic	109	99	75-125	10	20	N.D.	N.D.	0 (1)	20
Lead	98	94	89-120	4	20	0.73 J	0.70 J	3 (1)	20
Thallium	98	99	85-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 133125708002	Sample number(s): 7266800-7266804,7266806,7266808 UNSPK: 7266800 BKG: 7266800								
Aluminum	986 (2)	1282 (2)	75-125	7	20	5,750	5,980	4	20
Antimony	72*	70*	75-125	3	20	N.D.	N.D.	0 (1)	20
Arsenic	89	88	75-125	0	20	8.16	6.71	19 (1)	20
Barium	83	83	75-125	0	20	137	134	3	20
Beryllium	92	92	83-119	0	20	0.174 J	0.167 J	4 (1)	20
Cadmium	93	91	75-125	2	20	1.19	1.24	4 (1)	20
Calcium	133 (2)	166 (2)	75-125	4	20	2,290	2,220	3	20
Chromium	111	126*	75-125	6	20	26.4	27.1	3	20
Cobalt	91	89	78-113	2	20	14.7	14.8	1	20
Copper	115	107	75-125	4	20	15.9	16.2	2	20
Iron	-2134 (2)	-3526 (2)	75-125	6	20	26,100	24,300	7	20
Lead	104	122	75-125	5	20	33.4	34.5	3	20
Magnesium	184 (2)	210 (2)	75-125	4	20	918	920	0	20
Manganese	-150 (2)	-381 (2)	75-125	5	20	2,630	2,580	2	20
Nickel	98	96	75-125	2	20	6.60	6.93	5	20
Potassium	122	126*	75-125	2	20	276	286	3	20
Selenium	99	98	75-125	1	20	1.51 J	1.90 J	23* (1)	20
Silver	96	94	75-125	1	20	0.889	0.812	9 (1)	20
Sodium	100	99	75-125	1	20	171	175	2 (1)	20
Thallium	97	94	78-119	2	20	N.D.	N.D.	0 (1)	20
Vanadium	101	102	75-125	1	20	14.9	15.0	1	20
Zinc	47*	42*	75-125	1	20	158	147	7	20
Batch number: 133125711002	Sample number(s): 7266800-7266804,7266806,7266808 UNSPK: 7266800 BKG: 7266800								
Mercury	-20 (2)	-35 (2)	80-120	2	20	1.20	0.650	60* (1)	20
Batch number: 13312049501B	Sample number(s): 7266798 UNSPK: P265107 BKG: P265107								
Total Organic Carbon	108		63-142			1.9	1.9	0 (1)	4
Batch number: 13315049531A	Sample number(s): 7266800-7266801,7266803-7266804,7266806,7266808 UNSPK: 7266800 BKG: 7266800								
TOC by Lloyd Kahn	102		59-125			22,000	21,100	4	15

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13311001104A	Sample number(s): 7266799,7266807 UNSPK: P265230 BKG: P265230								
Total Hardness	91	87	67-120	1	5	155,000	155,000	0	5
Batch number: 13312002202A	Sample number(s): 7266799,7266805,7266807 BKG: P265230								
pH						7.4	7.5	0	3
Batch number: 13326002101A	Sample number(s): 7266805 UNSPK: P285563 BKG: P285563								
Total Hardness	98		67-120			48,000	48,300	1	5
Batch number: 13317820005A	Sample number(s): 7266800-7266804,7266806,7266808 BKG: 7266800								
Moisture						63.9	56.9	12*	5
Moisture						63.9	56.9	12*	5
Moisture Duplicate						63.9	56.9	12*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed
unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 Semivolatiles/Waters
Batch number: 13314WAD026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7266798	66	47	129	91	100	118
7266799	64	44	123	84	93	116
7266805	62	42	122	87	93	82
7266807	65	46	116	88	93	85
Blank	62	45	126	89	97	114
LCS	71	51	129	89	99	112
LCSD	67	48	125	87	96	112
Limits:	10-107	10-83	22-150	60-123	63-121	47-146

Analysis Name: PAH 8270 (microwave)
Batch number: 13316SLB026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7266800	86	89	95
7266801	83	91	93
7266802	78	92	90
7266804	84	87	92
7266806	86	95	93
7266808	80	97	92
Blank	94	103	103
LCS	99	106	100
MS	83	91	93
MSD	78	92	90
Limits:	60-120	69-120	66-137

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431971
Reported: 11/22/13 at 04:37 PM

Surrogate Quality Control

Analysis Name: Nitroaromatics/Amines in Water
Batch number: 133140016A

	2-Nitro-m-xylene
7266798	95
7266799	85
7266805	78
7266807	85
Blank	95
LCS	87
LCSD	93
Limits:	73-122

Analysis Name: Nitroaromatics/Amines in Solid
Batch number: 133140019A

	2-Nitro-m-xylene
7266800	97
7266801	86
7266802	81
7266804	93
7266806	82
7266808	97
Blank	93
LCS	91
MS	86
MSD	81
Limits:	63-150

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmental Analysis Request/Chain of Custody

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Acct. # 6716 For Eurofins Lancaster Laboratories Environmental use only Group # 431971 Sample # 726798-808
Instructions on reverse side correspond with circled numbers.

COC # 344662

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucey	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:

Name of state where samples were collected: New Jersey

2 Sample Identification | **Collected** Date | Time | **3** Grab | Composite | **4 Matrix** Soil | Sediment | Potable Water | Ground | NPDES | Surface | Other: | Total # of Containers | **5 Analysis Requested** (Preservation Codes: N, N, O) SVOCs | Nitroaromatics | TAL Metals | Hardness | pH | PAHs, Nitroaromatics, metals, moisture, solids | TDC | TOC | | | **6 Remarks**

Sample Identification	Date	Time	Grab	Composite	Soil	Sediment	Potable Water	Ground	NPDES	Surface	Other:	Total # of Containers	SVOCs	Nitroaromatics	TAL Metals	Hardness	pH	PAHs, Nitroaromatics, metals, moisture, solids	TDC	TOC			Remarks
FB-01_11062013	11/6/13	0745	X		X						→	1	X	X	X					X			QC (in H_2O)
FB-02_11062013	11/6/13	0800	X				X					7	X	X	X	X	X						QC
SD-R2-G-12-4	11/6/13	0910	X		X							2						X	X				
SD-R2-G-12-4_MS	11/6/13	0910	X		X							2						X	X				QC
SD-R2-G-12-4_MSD	11/6/13	0910	X		X							2						X	X				QC
SD-R2-G-12-5	11/6/13	0930	X		X							2						X	X				
SW-R2-B-15-2	11/6/13	1020	X				X					7	X	X	X	X	X						
SD-R2-C-15-2	11/6/13	1030	X		X		RBB					2						X	X				
SW-R2-B-15-1	11/6/13	1100	X				X					7	X	X	X	X	X						
SD-R2-C-15-1	11/6/13	1110	X		X							2						X	X				

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

7 Turnaround Time (TAT) Requested (please circle)
(Standard) Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed:

E-mail address: John.Lucey@obg.com

8 Data Package Options (circle if required)
(Type I (Validation/non-CLP)) Type VI (Raw Data Only)
Type III (Reduced non-CLP) TX TRRP-13
Type IV (CLP SOW) MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/6/13	1600	A Whaughty	11/6/13	1600
A Whaughty	11/6/13	1858			

9

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other
Temperature upon receipt 0.9-4.5 °C

A# 6716, Gr. # 1431971, Samples 7266798-808

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:33 AM
To: Wendy Kozma
Subject: RE: Ashland

yes and yes

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]
Sent: Friday, November 08, 2013 8:29 AM
To: John Lucey
Subject: RE: Ashland

OK--thanks for letting me know.

Does this include the Surfacewater/Sediment received this week?
And I'm confirming non-interpretive TICs? 10 VOC and 20 SVOC?

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:10 AM
To: Wendy Kozma
Subject: Ashland

Wendy,

For all VOC and SVOC analyses we need to run TICs

John

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Environmental Sample Administration Receipt Documentation Log

1431971

Client/Project: Ashland

Date of Receipt: 11/6/13

Time of Receipt: 1858

Source Code: 01

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	DT121	4.5°	TB	WI	Y	B	
2	↓	2.9°	↓	↓	↓	↓	
3	↓	0.9°	↓	↓	↓	↓	
4	↓	1.5°	↓	↓	↓	↓	
5			\				
6							

Number of Trip Blanks received NOT listed on chain of custody: 2 (HCl)

Paperwork Discrepancy/Unpacking Problems:

1 jar of SD-R2-C-15-2 time= 1020 - Gr. 1431971

1 amber of SW-R2-D-12-3 labeled SD-R2-D-12-3 - Gr. 1431972

Unpacker Signature/Emp#: [signature] 2308 **Date/Time:** 11/6/13 1959

Issued by Dept. 6042 Management

2174.06

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266798	FB-01_11062013	X		1	Field Blank
7266799	FB-02_11062013	X		1	Field Blank
7266800	SD-R2-G-12-4		X	5	Unspiked
7266801	SD-R2-G-12-4_MS		X	5	Matrix Spike
7266802	SD-R2-G-12-4_MSD		X	5	Matrix Spike Duplicate
7266804	SD-R2-G-12-5		X	5	
7266805	SW-R2-B-15-2	X		1	
7266806	SD-R2-C-15-2		X	5	
7266807	SW-R2-B-15-1	X		1	
7266808	SD-R2-C-15-1		X	5	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 7266798-7266799, 7266805, 7266807: Analysis: 04678)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

(Sample number(s): 7266805: Analysis: 04678)
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(g,h,i)perylene

(Sample number(s): 7266807: Analysis: 04678)
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
benzo(g,h,i)perylene
indeno(1,2,3-cd)pyrene

SAMPLE ANALYSIS:

(Sample number(s): 7266800-7266802, 7266804, 7266806, 7266808: Analysis: 10724)
Reporting limits were raised due to interference from the sample matrix.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Ashland, Inc.
SDG: KVM05

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
PAH 8270 (microwave)	13316SLB026	SBLKLB316	11/15/2013 13:20:00
		316LBLCS	11/15/2013 13:44:00
		7266800 UNSPK	11/15/2013 21:05:00
		7266801 MS	11/15/2013 21:30:00
		7266802 MSD	11/15/2013 21:54:00
		7266804	11/15/2013 22:19:00
		7266806	11/15/2013 22:43:00
		7266808	11/15/2013 23:08:00
TCL SW846 Semivolatiles/Waters	13314WAD026	SBLKWD314	11/13/2013 05:51:00
		314WDLCS	11/13/2013 06:18:00
		314WDLCSD	11/13/2013 06:45:00
		7266798	11/13/2013 08:58:00
		7266799	11/13/2013 09:25:00
		7266805	11/13/2013 09:51:00
		7266807	11/13/2013 10:18:00

Fraction: Semivolatiles by GC/MS

13314WAD026 / SBLKWD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/13/13	N.D.	ug/l	0.3	1
Phenol	11/13/13	N.D.	ug/l	0.1	0.3
bis(2-Chloroethyl)ether	11/13/13	N.D.	ug/l	0.1	0.3
2-Chlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
2-Methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
2,2'-oxybis(1-Chloropropane)	11/13/13	N.D.	ug/l	0.1	0.3
4-Methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
N-Nitroso-di-n-propylamine	11/13/13	N.D.	ug/l	0.1	0.3
Acetophenone	11/13/13	N.D.	ug/l	0.1	0.3
Hexachloroethane	11/13/13	N.D.	ug/l	0.3	1
Nitrobenzene	11/13/13	N.D.	ug/l	0.1	0.3
Isophorone	11/13/13	N.D.	ug/l	0.1	0.3
2-Nitrophenol	11/13/13	N.D.	ug/l	0.1	0.3
2,4-Dimethylphenol	11/13/13	N.D.	ug/l	0.1	0.3
bis(2-Chloroethoxy)methane	11/13/13	N.D.	ug/l	0.1	0.3
2,4-Dichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
Naphthalene	11/13/13	N.D.	ug/l	0.03	0.1
4-Chloroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Hexachlorobutadiene	11/13/13	N.D.	ug/l	0.1	0.3
Caprolactam	11/13/13	N.D.	ug/l	1	4
4-Chloro-3-methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
2-Methylnaphthalene	11/13/13	N.D.	ug/l	0.03	0.1
Hexachlorocyclopentadiene	11/13/13	N.D.	ug/l	1	4
2,4,6-Trichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
2,4,5-Trichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
1,1'-Biphenyl	11/13/13	N.D.	ug/l	0.1	0.3
2-Chloronaphthalene	11/13/13	N.D.	ug/l	0.1	0.3
2-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Dimethylphthalate	11/13/13	N.D.	ug/l	0.5	1
2,6-Dinitrotoluene	11/13/13	N.D.	ug/l	0.1	0.3
Acenaphthylene	11/13/13	N.D.	ug/l	0.03	0.1
3-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Acenaphthene	11/13/13	N.D.	ug/l	0.03	0.1
2,4-Dinitrophenol	11/13/13	N.D.	ug/l	3	8
4-Nitrophenol	11/13/13	N.D.	ug/l	3	8
2,4-Dinitrotoluene	11/13/13	N.D.	ug/l	0.3	1
Dibenzofuran	11/13/13	N.D.	ug/l	0.1	0.3
Diethylphthalate	11/13/13	N.D.	ug/l	0.5	1
Fluorene	11/13/13	N.D.	ug/l	0.03	0.1
4-Chlorophenyl-phenylether	11/13/13	N.D.	ug/l	0.1	0.3
4-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
4,6-Dinitro-2-methylphenol	11/13/13	N.D.	ug/l	1	4
N-Nitrosodiphenylamine	11/13/13	N.D.	ug/l	0.1	0.3
4-Bromophenyl-phenylether	11/13/13	N.D.	ug/l	0.1	0.3
Hexachlorobenzene	11/13/13	N.D.	ug/l	0.03	0.1

Fraction: Semivolatiles by GC/MS

13314WAD026 / SBLKWD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Atrazine	11/13/13	N.D.	ug/l	0.5	1
Pentachlorophenol	11/13/13	N.D.	ug/l	0.3	1
Phenanthrene	11/13/13	N.D.	ug/l	0.03	0.1
Anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Carbazole	11/13/13	N.D.	ug/l	0.1	0.3
Di-n-butylphthalate	11/13/13	N.D.	ug/l	0.5	1
Fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Butylbenzylphthalate	11/13/13	N.D.	ug/l	0.5	1
bis(2-Ethylhexyl)phthalate	11/13/13	N.D.	ug/l	0.5	1
3,3'-Dichlorobenzidine	11/13/13	N.D.	ug/l	0.5	1
Benzo(a)anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Chrysene	11/13/13	N.D.	ug/l	0.03	0.1
Di-n-octylphthalate	11/13/13	N.D.	ug/l	0.5	1
Benzo(b)fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(k)fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(a)pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Indeno(1,2,3-cd)pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Dibenz(a,h)anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(g,h,i)perylene	11/13/13	N.D.	ug/l	0.03	0.1

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKWD3144

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: SBLKWD314

Sample wt/vol: 1000 (g/mL) mL Lab File ID: dk0382.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 5 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	19.417	2	J
2.		Unknown	19.948	2	J
3.		Unknown	20.466	3	J
4.		Unknown	20.979	2	J
5.		Unknown	21.533	2	J
6.					
7.	SVOCTIC	Total SVOC TICs		11	J
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1

Fraction: Semivolatiles by GC/MS

13316SLB026 / SBLKLB316 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Naphthalene	11/15/13	N.D.	ug/kg	3	17
2-Methylnaphthalene	11/15/13	N.D.	ug/kg	3	17
1-Methylnaphthalene	11/15/13	N.D.	ug/kg	3	17
Acenaphthylene	11/15/13	N.D.	ug/kg	3	17
Acenaphthene	11/15/13	N.D.	ug/kg	3	17
Fluorene	11/15/13	N.D.	ug/kg	3	17
Phenanthrene	11/15/13	N.D.	ug/kg	3	17
Anthracene	11/15/13	N.D.	ug/kg	3	17
Fluoranthene	11/15/13	N.D.	ug/kg	3	17
Pyrene	11/15/13	N.D.	ug/kg	3	17
Benzo(a)anthracene	11/15/13	N.D.	ug/kg	3	17
Chrysene	11/15/13	N.D.	ug/kg	3	17
Benzo(b)fluoranthene	11/15/13	N.D.	ug/kg	3	17
Benzo(k)fluoranthene	11/15/13	N.D.	ug/kg	3	17
Benzo(a)pyrene	11/15/13	N.D.	ug/kg	3	17
Indeno(1,2,3-cd)pyrene	11/15/13	N.D.	ug/kg	3	17
Dibenz(a,h)anthracene	11/15/13	N.D.	ug/kg	3	17
Benzo(g,h,i)perylene	11/15/13	N.D.	ug/kg	3	17

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM05
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

13314WAD026	2-Fluorophenol		Phenol-d6		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	25 ug/l	Spike Added	25 ug/l	Spike Added	25 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWD314	62	10 - 107	45	10 - 83	126	22 - 150	89	60 - 123	97	63 - 121	114	47 - 146
314WDLCS	71	10 - 107	51	10 - 83	129	22 - 150	89	60 - 123	99	63 - 121	112	47 - 146
314WDLCSD	67	10 - 107	48	10 - 83	125	22 - 150	87	60 - 123	96	63 - 121	112	47 - 146
7266798	66	10 - 107	47	10 - 83	129	22 - 150	91	60 - 123	100	63 - 121	118	47 - 146
7266799	64	10 - 107	44	10 - 83	123	22 - 150	84	60 - 123	93	63 - 121	116	47 - 146
7266805	62	10 - 107	42	10 - 83	122	22 - 150	87	60 - 123	93	63 - 121	82	47 - 146
7266807	65	10 - 107	46	10 - 83	116	22 - 150	88	60 - 123	93	63 - 121	85	47 - 146

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM05
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13316SLB026	Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLB316	94	60 - 120	103	69 - 120	103	66 - 137
316LBLCS	99	60 - 120	106	69 - 120	100	66 - 137
7266800	86	60 - 120	89	69 - 120	95	66 - 137
7266801 MS	83	60 - 120	91	69 - 120	93	66 - 137
7266802 MSD	78	60 - 120	92	69 - 120	90	66 - 137
7266804	84	60 - 120	87	69 - 120	92	66 - 137
7266806	86	60 - 120	95	69 - 120	93	66 - 137
7266808	80	60 - 120	97	69 - 120	92	66 - 137

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 7266800 MS: 7266801 MSD: 7266802 **Analyte**	Batch: **13316SLB026** (Sample number(s): 7266800-7266802, 7266804, 7266806, 7266808)								
	Spike Added ug/kg	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	3333.33	N.D.	3103.6	3026.47	93	91	44-142	3	30
2-Methylnaphthalene	3333.33	N.D.	2911.55	2795.25	87	84	39-140	4	30
1-Methylnaphthalene	3333.33	N.D.	3117.1	3102.68	94	93	82-115	0	30
Acenaphthylene	3333.33	68.12	3465.65	3417.68	102	100	67-130	1	30
Acenaphthene	3333.33	N.D.	2895.07	2955.95	87	89	61-128	2	30
Fluorene	3333.33	N.D.	2970.53	3095.84	89	93	55-128	4	30
Phenanthrene	3333.33	200.28	3434.84	3587.77	97	102	34-147	4	30
Anthracene	3333.33	78.46	3214.57	3117.15	94	91	41-142	3	30
Fluoranthene	3333.33	375.83	3436.32	3641.27	92	98	30-151	6	30
Pyrene	3333.33	359.16	3493.2	4048.76	94	111	29-148	15	30
Benzo(a)anthracene	3333.33	143.47	2938.05	3074.69	84	88	32-150	5	30
Chrysene	3333.33	255.65	3019.87	3266.18	83	90	28-146	8	30
Benzo(b)fluoranthene	3333.33	320.78	3146.53	3581.51	85	98	29-150	13	30
Benzo(k)fluoranthene	3333.33	N.D.	3365.46	3165.49	101	95	44-145	6	30
Benzo(a)pyrene	3333.33	194.79	3145.99	3143.43	89	88	36-151	0	30
Indeno(1,2,3-cd)pyrene	3333.33	151.18	2985.73	2980.99	85	85	44-147	0	30
Dibenz(a,h)anthracene	3333.33	57.52	3217.79	2939.37	95	86	54-142	9	30
Benzo(g,h,i)perylene	3333.33	179.76	3228.66	3024.32	91	85	41-147	7	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314WDLCS LCSD: 314WDLCSD	Batch: **13314WAD026** (Sample number(s): 7266798-7266799, 7266805, 7266807)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	12.5	8.52	8.21	68	66	19-100	4	30
Phenol	12.5	6.65	6.37	53	51	23-82	4	30
bis(2-Chloroethyl)ether	12.5	10.6	10.35	85	83	73-112	2	30
2-Chlorophenol	12.5	11.78	11.44	94	92	76-111	3	30
2-Methylphenol	12.5	11.09	10.79	89	86	61-118	3	30
2,2'-oxybis(1-Chloropropane)	12.5	8.87	8.48	71	68	55-123	5	30
4-Methylphenol	12.5	10.48	10.17	84	81	54-112	3	30
N-Nitroso-di-n-propylamine	12.5	10.29	10.15	82	81	71-117	1	30
Acetophenone	12.5	11.04	10.82	88	87	71-110	2	30
Hexachloroethane	12.5	9.57	9.62	77	77	55-109	0	30
Nitrobenzene	12.5	11.12	10.96	89	88	67-123	1	30
Isophorone	12.5	11.29	11.36	90	91	68-124	1	30
2-Nitrophenol	12.5	13.59	13.44	109	108	84-118	1	30
2,4-Dimethylphenol	12.5	11.55	11.54	92	92	66-125	0	30
bis(2-Chloroethoxy)methane	12.5	10.6	10.56	85	84	65-125	0	30
2,4-Dichlorophenol	12.5	13	12.96	104	104	84-114	0	30
Naphthalene	12.5	11.64	11.67	93	93	75-108	0	30
4-Chloroaniline	12.5	10.49	10.9	84	87	46-112	4	30
Hexachlorobutadiene	12.5	12.52	12.7	100	102	56-119	1	30
Caprolactam	12.5	4.17	4.04	33	32	14-46	3	30
4-Chloro-3-methylphenol	12.5	12.29	12.28	98	98	67-131	0	30
2-Methylnaphthalene	12.5	11.39	11.38	91	91	63-120	0	30
Hexachlorocyclopentadiene	25	25.39	24.26	102	97	21-126	5	30
2,4,6-Trichlorophenol	12.5	13.11	12.84	105	103	84-119	2	30
2,4,5-Trichlorophenol	12.5	13.57	13.21	109	106	81-121	3	30
1,1'-Biphenyl	12.5	11.61	11.33	93	91	60-120	2	30
2-Chloronaphthalene	12.5	12.19	11.89	98	95	60-138	3	30
2-Nitroaniline	12.5	13.13	12.96	105	104	84-122	1	30
Dimethylphthalate	12.5	11.78	11.3	94	90	50-127	4	30
2,6-Dinitrotoluene	12.5	13.31	13.31	106	107	81-124	0	30
Acenaphthylene	12.5	12.82	12.57	103	101	84-125	2	30
3-Nitroaniline	12.5	11.52	11.57	92	93	70-118	0	30
Acenaphthene	12.5	11.72	11.44	94	91	69-122	2	30
2,4-Dinitrophenol	25	24.68	24.99	99	100	43-137	1	30
4-Nitrophenol	12.5	7.4	7.12	59	57	16-91	4	30
2,4-Dinitrotoluene	12.5	13.3	13.42	106	107	81-120	1	30
Dibenzofuran	12.5	12.13	11.89	97	95	81-110	2	30
Diethylphthalate	12.5	11.9	11.51	95	92	60-121	3	30
Fluorene	12.5	12.16	11.9	97	95	71-126	2	30
4-Chlorophenyl-phenylether	12.5	12.55	12.39	100	99	77-114	1	30
4-Nitroaniline	12.5	10.84	10.83	87	87	61-110	0	30
4,6-Dinitro-2-methylphenol	12.5	12.92	12.81	103	102	68-131	1	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314WDLCS LCSD: 314WDLCSD	Batch: **13314WAD026** (Sample number(s): 7266798-7266799, 7266805, 7266807)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodiphenylamine	12.5	12.04	11.8	96	94	80-115	2	30
4-Bromophenyl-phenylether	12.5	13.09	12.98	105	104	75-115	1	30
Hexachlorobenzene	12.5	13.58	13.64	109	109	74-126	0	30
Atrazine	12.5	13.37	13.57	107	109	67-127	1	30
Pentachlorophenol	12.5	10.58	10.77	85	86	50-129	2	30
Phenanthrene	12.5	11.95	11.96	96	96	68-127	0	30
Anthracene	12.5	12.23	12.31	98	99	82-116	1	30
Carbazole	12.5	12.37	12.41	99	99	70-128	0	30
Di-n-butylphthalate	12.5	12.15	12.11	97	97	72-120	0	30
Fluoranthene	12.5	13.12	13.16	105	105	71-129	0	30
Pyrene	12.5	12.15	12.09	97	97	81-112	0	30
Butylbenzylphthalate	12.5	11.88	11.91	95	95	70-122	0	30
bis(2-Ethylhexyl)phthalate	12.5	12	12.09	96	97	78-117	1	30
3,3'-Dichlorobenzidine	12.5	8.9	9.17	71	73	47-108	3	30
Benzo(a)anthracene	12.5	12.9	12.97	103	104	84-121	1	30
Chrysene	12.5	12.66	12.71	101	102	81-120	0	30
Di-n-octylphthalate	12.5	10.94	10.78	88	86	72-129	1	30
Benzo(b)fluoranthene	12.5	12.02	11.95	96	96	82-121	1	30
Benzo(k)fluoranthene	12.5	12.55	12.46	100	100	81-122	1	30
Benzo(a)pyrene	12.5	12.47	12.38	100	99	82-116	1	30
Indeno(1,2,3-cd)pyrene	12.5	15.27	15.01	122 *	120	83-121	2	30
Dibenz(a,h)anthracene	12.5	15.86	15.54	127 *	124	83-124	2	30
Benzo(g,h,i)perylene	12.5	15.61	15.46	125 *	124 *	81-121	1	30

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 316LBLCS	Batch: **13316SLB026** (Sample number(s): 7266800-7266802, 7266804, 7266806, 7266808)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	1666.67	1657.54	NA	99	NA	77-115	NA	NA
2-Methylnaphthalene	1666.67	1648.09	NA	99	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1808.55	NA	109	NA	77-115	NA	NA
Acenaphthylene	1666.67	1900.76	NA	114	NA	83-127	NA	NA
Acenaphthene	1666.67	1706.55	NA	102	NA	83-111	NA	NA
Fluorene	1666.67	1736.23	NA	104	NA	86-118	NA	NA
Phenanthrene	1666.67	1729.63	NA	104	NA	85-116	NA	NA
Anthracene	1666.67	1770.11	NA	106	NA	82-118	NA	NA
Fluoranthene	1666.67	1692.07	NA	102	NA	79-123	NA	NA
Pyrene	1666.67	1646	NA	99	NA	81-114	NA	NA
Benzo(a)anthracene	1666.67	1530.27	NA	92	NA	81-117	NA	NA
Chrysene	1666.67	1552.86	NA	93	NA	77-116	NA	NA
Benzo(b)fluoranthene	1666.67	1607.39	NA	96	NA	76-124	NA	NA
Benzo(k)fluoranthene	1666.67	1675.3	NA	101	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1718.82	NA	103	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1670.23	NA	100	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1736.02	NA	104	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1691.82	NA	102	NA	77-122	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dj1150.d DFTPP Injection Date: 10/29/13

Instrument ID: HP19760 DFTPP Injection Time: 07:25

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.0
68	Less than 2.0% of mass 69	0.85 (1.72)1
69	Mass 69 relative abundance	49.5
70	Less than 2.0% of mass 69	0.24 (0.48)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.75
275	10.0 - 30.0% of mass 198	19.9
365	Greater than 1.00% of mass 198	2.21
441	Present, and less than mass 443	7.23
442	Greater than 40.0 % of mass 198	47.3
443	17.0 - 23.0% of mass 442	9.02 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	dj1181.d	10/29/13	11:28
02	STD2813 - SSTD.125	dj1182.d	10/29/13	11:55
03	STD2813 - SSTD30	dj1183.d	10/29/13	12:21
04	STD2813 - SSTD.25	dj1184.d	10/29/13	12:48
05	STD2813 - SSTD1.25	dj1185.d	10/29/13	13:15
06	STD2813 - SSTD3.75	dj1186.d	10/29/13	13:42
07	STD2813 - SSTD12.5	dj1187.d	10/29/13	14:08
08	STD2813 - SSTD20	dj1188.d	10/29/13	14:35
09	MDL2813 - SSTD0.125	dj1189.d	10/29/13	15:02
10	PAH2813 - SSTD0.025	dj1190.d	10/29/13	15:28
11	ICV2463 - SSTD12.5	dj1191.d	10/29/13	15:55
12	BASICV2463 - SSTD12.5	dj1192.d	10/29/13	16:22

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0380.d DFTPP Injection Date: 11/13/13

Instrument ID: HP19760 DFTPP Injection Time: 05:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.4
68	Less than 2.0% of mass 69	0.76 (1.69)1
69	Mass 69 relative abundance	44.6
70	Less than 2.0% of mass 69	0.47 (1.05)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.68
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.72
441	Present, and less than mass 443	9.95
442	Greater than 40.0 % of mass 198	66.7
443	17.0 - 23.0% of mass 442	12.8 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD12	dk0381.d	11/13/13	05:19
02	SBLKWD314	dk0382.d	11/13/13	05:51
03	314WDLCS	dk0383.d	11/13/13	06:18
04	314WDLCSD	dk0384.d	11/13/13	06:45
05	7266449DL	dk0385.d	11/13/13	07:11
06	7266450DL	dk0386.d	11/13/13	07:38
07	7266451DL	dk0387.d	11/13/13	08:05
08	7266590	dk0388.d	11/13/13	08:31
09	7266798	dk0389.d	11/13/13	08:58
10	7266799	dk0390.d	11/13/13	09:25
11	7266805	dk0391.d	11/13/13	09:51
12	7266807	dk0392.d	11/13/13	10:18
13	7266810	dk0393.d	11/13/13	10:45
14	7266811	dk0394.d	11/13/13	11:12
15	7266819	dk0395.d	11/13/13	11:39
16	7266823	dk0396.d	11/13/13	12:05
17	7266824	dk0397.d	11/13/13	12:32
18	7267172	dk0398.d	11/13/13	12:59

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0380.d DFTPP Injection Date: 11/13/13

Instrument ID: HP19760 DFTPP Injection Time: 05:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.4
68	Less than 2.0% of mass 69	0.76 (1.69)1
69	Mass 69 relative abundance	44.6
70	Less than 2.0% of mass 69	0.47 (1.05)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.68
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.72
441	Present, and less than mass 443	9.95
442	Greater than 40.0 % of mass 198	66.7
443	17.0 - 23.0% of mass 442	12.8 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7267633	dk0399.d	11/13/13	13:25
20	7267634	dk0400.d	11/13/13	13:52
21	7270635	dk0401.d	11/13/13	14:19
22	7270637	dk0402.d	11/13/13	14:46
23	7270638	dk0403.d	11/13/13	15:13
24	7270641	dk0404.d	11/13/13	15:39
25	7270643	dk0405.d	11/13/13	16:06
26	7270644	dk0406.d	11/13/13	16:33
27	7270742	dk0407.d	11/13/13	17:00

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ek0500.d DFTPP Injection Date: 11/12/13

Instrument ID: HP09572 DFTPP Injection Time: 12:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.5
68	Less than 2.0% of mass 69	0.65 (1.17)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	0.33 (0.59)1
127	40.0 - 60.0% of mass 198	56.9
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.74
275	10.0 - 30.0% of mass 198	21.6
365	Greater than 1.00% of mass 198	2.61
441	Present, and less than mass 443	9.7
442	Greater than 40.0 % of mass 198	67.7
443	17.0 - 23.0% of mass 442	13.1 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ek0501.d	11/12/13	12:21
02	STD3083 - SSTD.5	ek0502.d	11/12/13	13:11
03	STD3083 - SSTD120	ek0503.d	11/12/13	13:35
04	STD3083 - SSTD80	ek0504.d	11/12/13	14:00
05	STD3083 - SSTD15	ek0506.d	11/12/13	14:49
06	STD3083 - SSTD5	ek0507.d	11/12/13	15:13
07	STD3083 - SSTD1	ek0508.d	11/12/13	15:38
08	PAHMDL3083 - SSTD0.10	ek0510.d	11/12/13	16:27
09	8270ICV2463 - SSTD050	ek0511.d	11/12/13	16:51
10	BAS3153 - SSTD50	ek0513a.d	11/12/13	17:16
11	BAS3153 - SSTD120	ek0514.d	11/12/13	17:40
12	BAS3153 - SSTD80	ek0515.d	11/12/13	18:05
13	BAS3153 - SSTD30	ek0516.d	11/12/13	18:29
14	BAS3153 - SSTD15	ek0517.d	11/12/13	18:53
15	BAS3153 - SSTD5	ek0518.d	11/12/13	19:18
16	STD3083 - SSTD50	ek0505a.d	11/12/13	19:42
17	BASMDL3153 - SSTD001	ek0519.d	11/12/13	20:07
18	BASICV2463 - SSTD050	ek0512.d	11/12/13	20:31

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ek0500.d DFTPP Injection Date: 11/12/13

Instrument ID: HP09572 DFTPP Injection Time: 12:06

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.5
68	Less than 2.0% of mass 69	0.65 (1.17)1
69	Mass 69 relative abundance	55.6
70	Less than 2.0% of mass 69	0.33 (0.59)1
127	40.0 - 60.0% of mass 198	56.9
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.74
275	10.0 - 30.0% of mass 198	21.6
365	Greater than 1.00% of mass 198	2.61
441	Present, and less than mass 443	9.7
442	Greater than 40.0 % of mass 198	67.7
443	17.0 - 23.0% of mass 442	13.1 (19.3)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	8270MDL3083 - SSTD0.50	ek0509a.d	11/12/13	20:55

FORM V SV

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ek0660z.d DFTPP Injection Date: 11/15/13

Instrument ID: HP09572 DFTPP Injection Time: 11:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.8
68	Less than 2.0% of mass 69	0.78 (1.35)1
69	Mass 69 relative abundance	58.1
70	Less than 2.0% of mass 69	0.43 (0.74)1
127	40.0 - 60.0% of mass 198	55.4
197	Less than 1.0% of mass 198	0.75
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.53
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.06
441	Present, and less than mass 443	9.54
442	Greater than 40.0 % of mass 198	67.4
443	17.0 - 23.0% of mass 442	13.3 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ek0661.d	11/15/13	11:51
02	BENZ2853 - SSTD50	ek0662.d	11/15/13	12:16
03	BAS3153 - SSTD50	ek0663.d	11/15/13	12:48
04	SBLKLB316	ek0664.d	11/15/13	13:20
05	316LBLCS	ek0665.d	11/15/13	13:44
06	SBLKLE314	ek0666.d	11/15/13	14:09
07	314LELCS	ek0667.d	11/15/13	14:33
08	7263650	ek0668.d	11/15/13	14:58
09	7263650MS	ek0669.d	11/15/13	15:22
10	7263650MSD	ek0670.d	11/15/13	15:47
11	7265116	ek0671.d	11/15/13	16:12
12	7265116MS	ek0672.d	11/15/13	16:36
13	7265116MSD	ek0673.d	11/15/13	17:01
14	7265117	ek0674.d	11/15/13	17:25
15	7265118	ek0675.d	11/15/13	17:50
16	7265119	ek0676.d	11/15/13	18:14
17	7265120	ek0677.d	11/15/13	18:39
18	7265121	ek0678.d	11/15/13	19:03

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ek0660z.d DFTPP Injection Date: 11/15/13

Instrument ID: HP09572 DFTPP Injection Time: 11:36

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.8
68	Less than 2.0% of mass 69	0.78 (1.35)1
69	Mass 69 relative abundance	58.1
70	Less than 2.0% of mass 69	0.43 (0.74)1
127	40.0 - 60.0% of mass 198	55.4
197	Less than 1.0% of mass 198	0.75
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.53
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.06
441	Present, and less than mass 443	9.54
442	Greater than 40.0 % of mass 198	67.4
443	17.0 - 23.0% of mass 442	13.3 (19.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7265123	ek0679.d	11/15/13	19:28
20	7265124	ek0680.d	11/15/13	19:52
21	7265125	ek0681.d	11/15/13	20:16
22	7265126	ek0682.d	11/15/13	20:41
23	7266800	ek0683.d	11/15/13	21:05
24	7266801MS	ek0684.d	11/15/13	21:30
25	7266802MSD	ek0685.d	11/15/13	21:54
26	7266804	ek0686.d	11/15/13	22:19
27	7266806	ek0687.d	11/15/13	22:43
28	7266808	ek0688.d	11/15/13	23:08

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.644	0.649	0.605	0.626	0.603	0.650	0.629	3	AVG
N-Nitrosodimethylamine		0.980	1.115	1.001	1.178	1.168	1.164	1.172	1.111	8	AVG
Pyridine			1.951	1.687	1.897	1.953	1.913	1.970	1.895	6	AVG
2-Picoline		2.157	1.905	1.890	2.018	2.008	1.988	2.008	1.996	4	AVG
N-Nitrosomethylethylamine		0.801	0.829	0.828	0.913	0.870	0.874	0.891	0.858	5	AVG
Methyl methanesulfonate		1.005	0.942	0.944	1.027	0.976	0.980	0.991	0.981	3	AVG
N-Nitrosodiethylamine		0.833	0.774	0.791	0.866	0.829	0.833	0.841	0.824	4	AVG
Ethyl methanesulfonate		0.845	0.764	0.765	0.817	0.787	0.795	0.790	0.795	4	AVG
Benzaldehyde			1.591	1.577	1.533	1.435	1.282	1.140	1.426	13	AVG
Aniline		3.071	2.865	2.832	3.030	2.871	2.852	2.825	2.907	3	AVG
Phenol		2.550	2.375	2.318	2.444	2.314	2.282	2.240	2.360	5	AVG
bis(2-Chloroethyl)ether		2.016	1.840	1.825	1.915	1.837	1.807	1.796	1.862	4	AVG
2-Chlorophenol		1.504	1.404	1.405	1.541	1.455	1.464	1.447	1.460	3	AVG
1,3-Dichlorobenzene		1.672	1.589	1.550	1.593	1.543	1.534	1.512	1.570	3	AVG
1,4-Dichlorobenzene		1.739	1.598	1.562	1.600	1.559	1.551	1.511	1.588	5	AVG
Benzyl alcohol			1.015	1.013	1.052	1.035	1.033	1.047	1.033	2	AVG
1,2-Dichlorobenzene		1.581	1.532	1.470	1.503	1.469	1.453	1.393	1.486	4	AVG
Indene		2.774	2.562	2.417	2.569	2.474	2.458	2.319	2.510	6	AVG
2-Methylphenol		1.536	1.430	1.441	1.531	1.447	1.446	1.424	1.465	3	AVG
2,2'-oxybis(1-Chloropropane)		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
bis(2-Chloroisopropyl)ether		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
N-Nitrosopyrrolidine		0.815	0.766	0.817	0.905	0.848	0.857	0.858	0.838	5	AVG
Acetophenone		2.429	2.337	2.282	2.249	2.241	2.257	2.241	2.291	3	AVG
N-Nitroso-di-n-propylamine		1.433	1.348	1.319	1.401	1.290	1.243	1.197	1.319	6	AVG
N-Nitrosomorpholine		1.186	1.089	1.039	1.078	0.994	0.961	0.931	1.040	8	AVG
4-Methylphenol		1.739	1.655	1.630	1.732	1.618	1.576	1.507	1.637	5	AVG
o-Toluidine		2.746	2.533	2.502	2.629	2.490	2.433	2.351	2.526	5	AVG
Hexachloroethane		0.722	0.667	0.657	0.690	0.659	0.660	0.646	0.671	4	AVG
Nitrobenzene		0.513	0.494	0.479	0.504	0.487	0.474	0.467	0.488	3	AVG
N-Nitrosopiperidine		0.202	0.194	0.197	0.209	0.203	0.199	0.197	0.200	3	AVG
Isophorone		0.853	0.815	0.807	0.874	0.843	0.821	0.815	0.832	3	AVG
2-Nitrophenol		0.143	0.146	0.155	0.192	0.178	0.180	0.180	0.168	12	AVG
2,4-Dimethylphenol		0.418	0.396	0.400	0.424	0.414	0.404	0.395	0.407	3	AVG
O,O,O-triethylphosphorothioate		0.188	0.177	0.179	0.181	0.184	0.180	0.175	0.181	3	AVG
bis(2-Chloroethoxy)methane		0.581	0.558	0.537	0.550	0.524	0.534	0.518	0.543	4	AVG
Benzoic acid				0.183	0.294	0.257	0.287	0.330	0.270	20	1STDEG
2,4-Dichlorophenol		0.287	0.271	0.283	0.299	0.297	0.291	0.283	0.287	3	AVG
1,2,4-Trichlorobenzene		0.355	0.328	0.312	0.317	0.320	0.314	0.300	0.321	5	AVG
Naphthalene	1.011	1.213	1.102	1.061	1.069	1.065	1.024	0.984	1.066	7	AVG
4-Chloroaniline		0.483	0.439	0.432	0.459	0.441	0.425	0.413	0.442	5	AVG
2,6-Dichlorophenol		0.274	0.274	0.277	0.286	0.282	0.275	0.264	0.276	3	AVG
Hexachloropropene		0.194	0.178	0.194	0.211	0.211	0.216	0.213	0.203	7	AVG
Hexachlorobutadiene		0.201	0.190	0.183	0.183	0.188	0.186	0.179	0.187	4	AVG
Quinoline		0.771	0.704	0.685	0.721	0.697	0.691	0.674	0.706	5	AVG
Caprolactam			0.118	0.127	0.134	0.131	0.130	0.129	0.128	5	AVG
N-Nitrosodi-n-butylamine			0.297	0.300	0.320	0.305	0.382	0.377	0.330	12	AVG
4-Chloro-3-methylphenol		0.339	0.321	0.335	0.371	0.353	0.350	0.346	0.345	5	AVG
Safrole		0.267	0.271	0.266	0.280	0.278	0.274	0.264	0.271	2	AVG
2-Methylnaphthalene	0.703	0.762	0.734	0.709	0.725	0.712	0.684	0.654	0.710	5	AVG
1-Methylnaphthalene	0.644	0.686	0.654	0.644	0.660	0.645	0.627	0.598	0.645	4	AVG
Hexachlorocyclopentadiene			0.229	0.245	0.293	0.281	0.297	0.297	0.273	11	AVG
1,2,4,5-Tetrachlorobenzene		0.626	0.594	0.571	0.579	0.568	0.566	0.552	0.580	4	AVG

BCM 10-29-13

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
cis-Isosafrole		0.081	0.079	0.081	0.091	0.087	0.087	0.089	0.085	6	AVG
2,4,6-Trichlorophenol		0.332	0.337	0.354	0.399	0.378	0.381	0.378	0.366	7	AVG
2,4,5-Trichlorophenol		0.361	0.336	0.361	0.415	0.390	0.397	0.384	0.378	7	AVG
trans-Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
1,1'-Biphenyl		1.619	1.541	1.485	1.433	1.403	1.369	1.314	1.452	7	AVG
2-Chloronaphthalene		1.255	1.171	1.079	1.151	1.074	1.101	0.966	1.114	8	AVG
1-Chloronaphthalene		1.202	1.152	1.116	1.110	1.071	0.994	1.043	1.098	6	AVG
Diphenyl ether		0.844	0.835	0.802	0.829	0.786	0.782	0.747	0.803	4	AVG
2-Nitroaniline		0.286	0.305	0.340	0.405	0.367	0.369	0.358	0.347	12	AVG
1,4-Naphthoquinone			0.407	0.460	0.526	0.501	0.500	0.482	0.479	9	AVG
1,4-Dinitrobenzene			0.122	0.151	0.211	0.184	0.192	0.198	0.176	19	1STDEG
Dimethylphthalate			1.320	1.297	1.315	1.247	1.216	1.162	1.260	5	AVG
1,3-Dinitrobenzene			0.182	0.200	0.246	0.222	0.224	0.224	0.216	10	AVG
2,6-Dinitrotoluene		0.229	0.260	0.281	0.317	0.291	0.293	0.283	0.279	10	AVG
Acenaphthylene	1.693	1.708	1.693	1.689	1.783	1.684	1.675	1.601	1.691	3	AVG
3-Nitroaniline		0.252	0.294	0.321	0.365	0.335	0.337	0.339	0.320	12	AVG
Acenaphthene	1.224	1.268	1.181	1.154	1.194	1.121	1.110	1.053	1.163	6	AVG
2,4-Dinitrophenol				0.095	0.147	0.121	0.154	0.172	0.138	22	1STDEG
Pentachlorobenzene		0.525	0.460	0.452	0.466	0.452	0.456	0.439	0.464	6	AVG
4-Nitrophenol			0.158	0.192	0.231	0.212	0.215	0.217	0.204	13	AVG
Dibenzofuran		1.817	1.713	1.662	1.696	1.611	1.583	1.497	1.654	6	AVG
2,4-Dinitrotoluene		0.297	0.323	0.359	0.393	0.373	0.381	0.378	0.358	10	AVG
2,4_2,6-Dinitrotoluenes		0.527	0.583	0.640	0.710	0.664	0.674		0.633	11	AVG
1-Naphthylamine		1.203	1.209	1.214	1.240	1.193	1.197	1.160	1.202	2	AVG
2,3,4,6-Tetrachlorophenol		0.273	0.260	0.298	0.327	0.302	0.315	0.313	0.298	8	AVG
2-Naphthylamine		1.246	1.260	1.259	1.281	1.206	1.215	1.168	1.234	3	AVG
Diethylphthalate			1.251	1.221	1.296	1.222	1.239	1.217	1.241	2	AVG
Thionazin		0.281	0.274	0.274	0.284	0.265	0.257	0.242	0.268	6	AVG
Fluorene	1.345	1.412	1.371	1.346	1.392	1.318	1.268	1.199	1.331	5	AVG
4-Chlorophenyl-phenylether		0.724	0.695	0.663	0.663	0.636	0.631	0.610	0.660	6	AVG
5-Nitro-o-toluidine		0.322	0.361	0.369	0.384	0.355	0.359	0.355	0.358	5	AVG
4-Nitroaniline		0.293	0.324	0.337	0.349	0.338	0.333	0.333	0.330	5	AVG
4,6-Dinitro-2-methylphenol				0.086	0.126	0.119	0.133	0.139	0.121	17	1STDEG
N-Nitrosodiphenylamine (1)		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
1,2-Diphenylhydrazine		1.031	1.032	1.003	1.050	0.978	0.916	0.888	0.985	6	AVG
Tetraethyldithiopyrophosphate		0.142	0.134	0.142	0.154	0.144	0.141	0.139	0.142	4	AVG
1,3,5-Trinitrobenzene			0.043	0.062	0.094	0.088	0.099	0.103	0.081	29	1STDEG
Diallate (peak 1)		0.497	0.508	0.502	0.530	0.489	0.461	0.450	0.491	6	AVG
Phorate		0.549	0.588	0.593	0.635	0.582	0.546		0.582	6	AVG
Phenacetin		0.330	0.373	0.405	0.474	0.442	0.439	0.438	0.414	12	AVG
4-Bromophenyl-phenylether		0.202	0.202	0.195	0.203	0.197	0.192	0.191	0.197	3	AVG
Diallate (peak 2)		0.196	0.199	0.206	0.227	0.212	0.211	0.215	0.209	5	AVG
Hexachlorobenzene	0.200	0.211	0.198	0.190	0.197	0.190	0.188	0.187	0.195	4	AVG
Dimethoate			0.322	0.367	0.433	0.393	0.383	0.382	0.380	10	AVG
Atrazine		0.196	0.210	0.216	0.209	0.204	0.198	0.185	0.203	5	AVG
Pentachlorophenol			0.097	0.119	0.149	0.144	0.150	0.153	0.135	17	1STDEG
Pentachloronitrobenzene		0.071	0.085	0.093	0.098	0.097	0.096	0.093	0.091	10	AVG
4-Aminobiphenyl		0.743	0.765	0.784	0.837	0.804	0.776	0.742	0.779	4	AVG
Pronamide		0.263	0.300	0.331	0.369	0.354	0.348	0.341	0.329	11	AVG
Phenanthrene	1.182	1.238	1.172	1.109	1.117	1.074	1.033	0.997	1.115	7	AVG
Dinoseb			0.078	0.123	0.184	0.178	0.197	0.205	0.161	31	1STDEG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

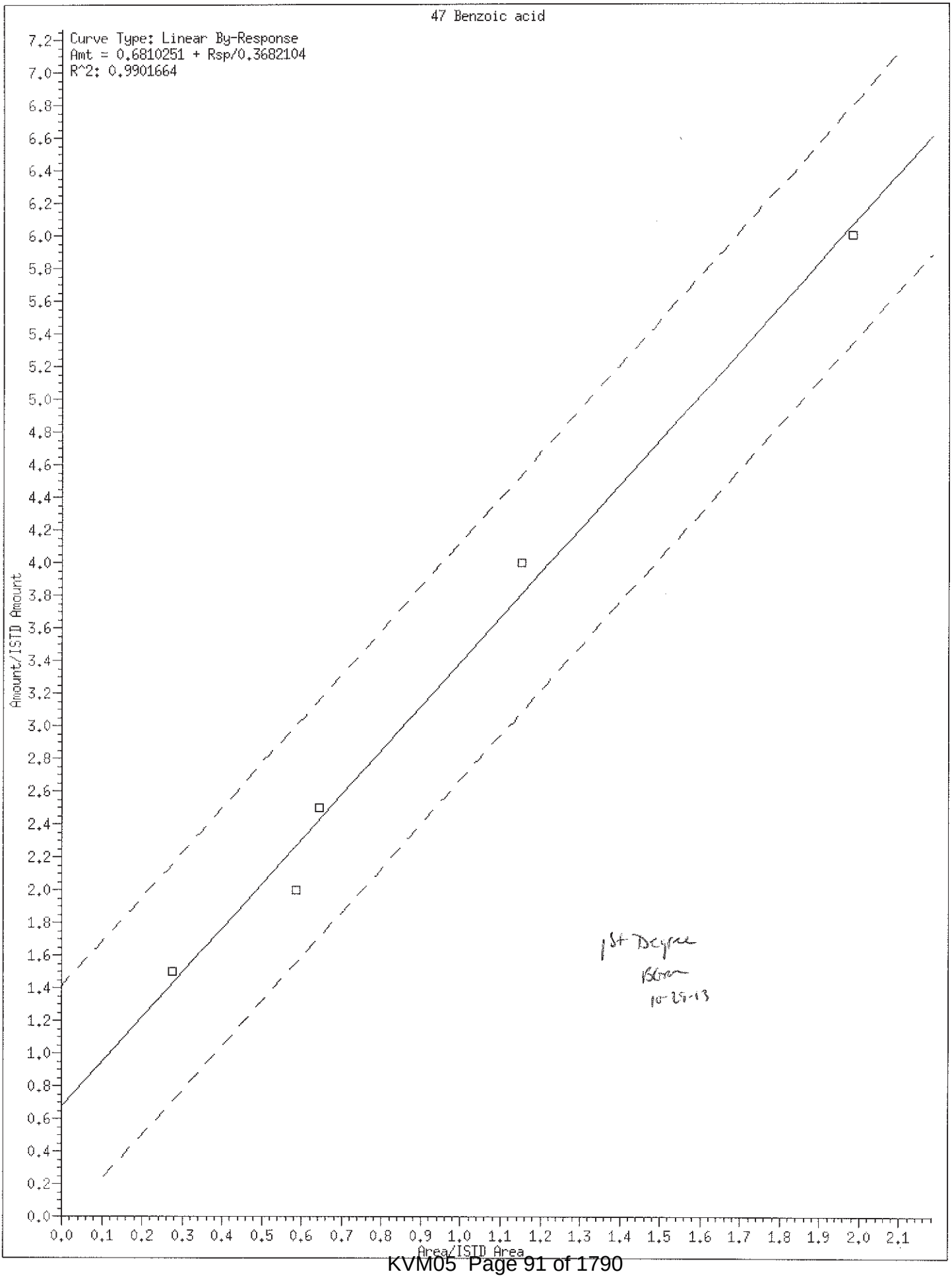
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

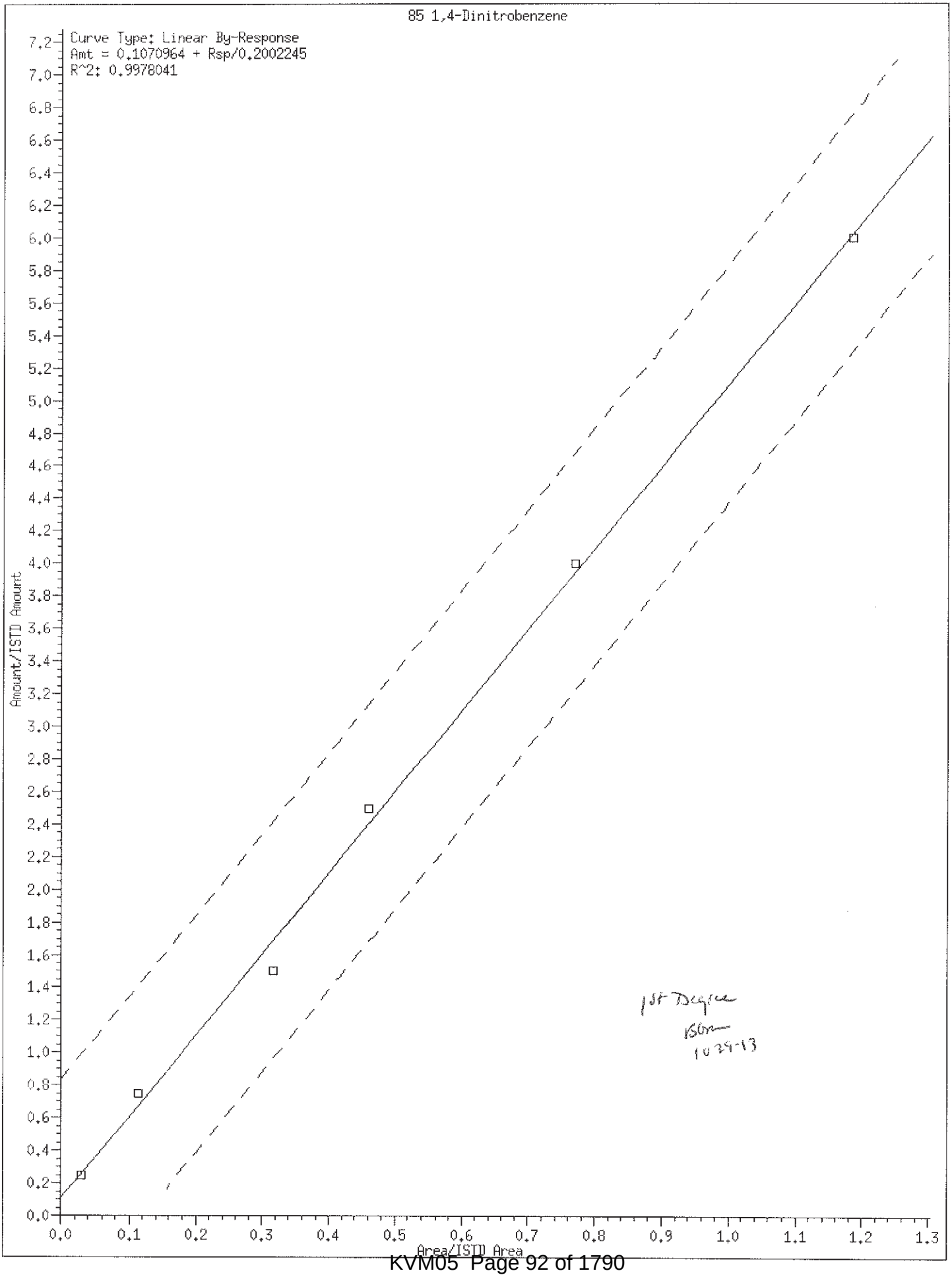
LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

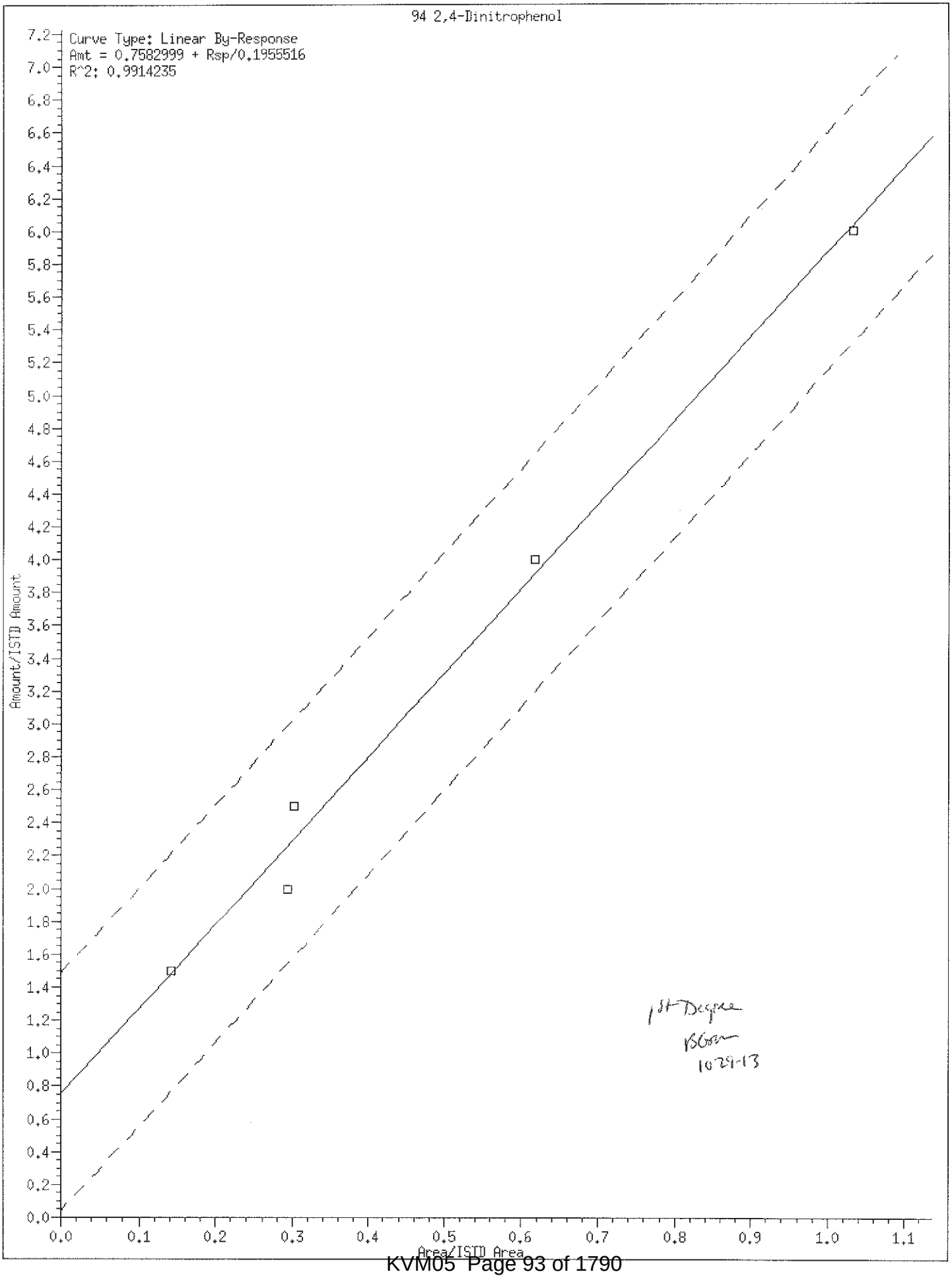
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Anthracene	1.117	1.108	1.139	1.122	1.170	1.118	1.072	1.049	1.112	3	AVG
Carbazole		1.086	1.072	1.083	1.145	1.085	1.046	1.015	1.076	4	AVG
Methyl parathion			0.186	0.238	0.313	0.282	0.286	0.285	0.265	17	1STDEG
Di-n-butylphthalate			1.169	1.259	1.410	1.310	1.270	1.227	1.274	6	AVG
Parathion			0.124	0.162	0.200	0.183	0.182	0.181	0.172	15	1STDEG
4-Nitroquinoline-1-oxide			0.031	0.053	0.101	0.095	0.118	0.130	0.088	43	1STDEG
Isodrin		0.125	0.127	0.133	0.142	0.138	0.136	0.134	0.134	4	AVG
Fluoranthene	1.229	1.221	1.220	1.264	1.329	1.285	1.257	1.228	1.254	3	AVG
Benzidine			0.559	0.651	0.702	0.675	0.646	0.617	0.642	8	AVG
Pyrene	1.163	1.156	1.080	1.034	1.057	1.037	0.996	0.969	1.062	7	AVG
p-Dimethylaminoazobenzene		0.126	0.155	0.184	0.220	0.213	0.214	0.216	0.190	19	1STDEG
Chlorobenzilate			0.264	0.285	0.330	0.308	0.304	0.302	0.299	8	AVG
3,3'-Dimethylbenzidine			0.461	0.592	0.722	0.695	0.667	0.644	0.630	15	AVG
Butylbenzylphthalate			0.403	0.443	0.498	0.470	0.454	0.443	0.452	7	AVG
2-Acetylaminofluorene			0.209	0.291	0.434	0.385	0.397	0.421	0.356	25	1STDEG
Benzo(a)anthracene	0.865	0.782	0.857	0.904	0.975	0.954	0.933	0.936	0.901	7	AVG
3,3'-Dichlorobenzidine			0.272	0.308	0.348	0.345	0.337	0.343	0.325	9	AVG
4,4'-Methylenebis(2-Chloroanil			0.138	0.163	0.188	0.184	0.178	0.180	0.172	11	AVG
Chrysene	0.884	0.883	0.909	0.896	0.914	0.895	0.858	0.847	0.886	3	AVG
bis(2-Ethylhexyl)phthalate			0.492	0.563	0.682	0.624	0.601	0.604	0.594	11	AVG
6-Methylchrysene		0.554	0.580	0.612	0.668	0.657	0.641	0.646	0.623	7	AVG
Dibenz(a,h)acridine			0.535	0.637	0.767	0.762	0.791	0.798	0.715	15	AVG
Di-n-octylphthalate			0.965	1.220	1.588	1.494	1.476	1.477	1.370	17	1STDEG
Dibenz(a,j)acridine			0.621	0.736	0.790	0.823	0.829	0.803	0.767	10	AVG
7,12-Dimethylbenz[a]anthracene		0.431	0.484	0.527	0.494	0.570	0.575	0.578	0.523	11	AVG
Benzo(b)fluoranthene	1.110	1.157	1.127	1.166	1.208	1.215	1.237	1.202	1.178	4	AVG
Benzo(k)fluoranthene	1.192	1.174	1.167	1.199	1.202	1.233	1.168	1.168	1.188	2	AVG
Benzo(a)pyrene	1.047	1.096	1.029	1.032	1.124	1.128	1.102	1.090	1.081	4	AVG
3-Methylcholanthrene		0.432	0.456	0.496	0.548	0.552	0.556	0.559	0.515	10	AVG
NDPA as diphenylamine		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
Indeno(1,2,3-cd)pyrene	0.806	0.767	0.875	0.959	1.037	1.052	1.061	1.030	0.948	12	AVG
Dibenz(a,h)anthracene	0.686	0.626	0.738	0.803	0.873	0.909	0.906	0.883	0.803	14	AVG
Benzo(g,h,i)perylene	0.723	0.759	0.749	0.785	0.841	0.859	0.857	0.821	0.799	7	AVG
Diallate TRANS/CIS		0.422	0.431	0.428	0.454	0.420	0.399	0.391	0.421	5	AVG
2-Fluorophenol		1.513	1.464	1.431	1.556	1.478	1.481	1.469	1.485	3	AVG
Phenol-d5		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Phenol-d6		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Nitrobenzene-d5		0.483	0.457	0.451	0.479	0.461	0.449	0.441	0.460	3	AVG
2-Fluorobiphenyl		1.405	1.305	1.252	1.266	1.212	1.179	1.122	1.249	7	AVG
2,4,6-Tribromophenol		0.111	0.120	0.128	0.141	0.132	0.141	0.147	0.131	10	AVG
Terphenyl-d14		0.646	0.625	0.614	0.642	0.618	0.610	0.609	0.623	2	AVG

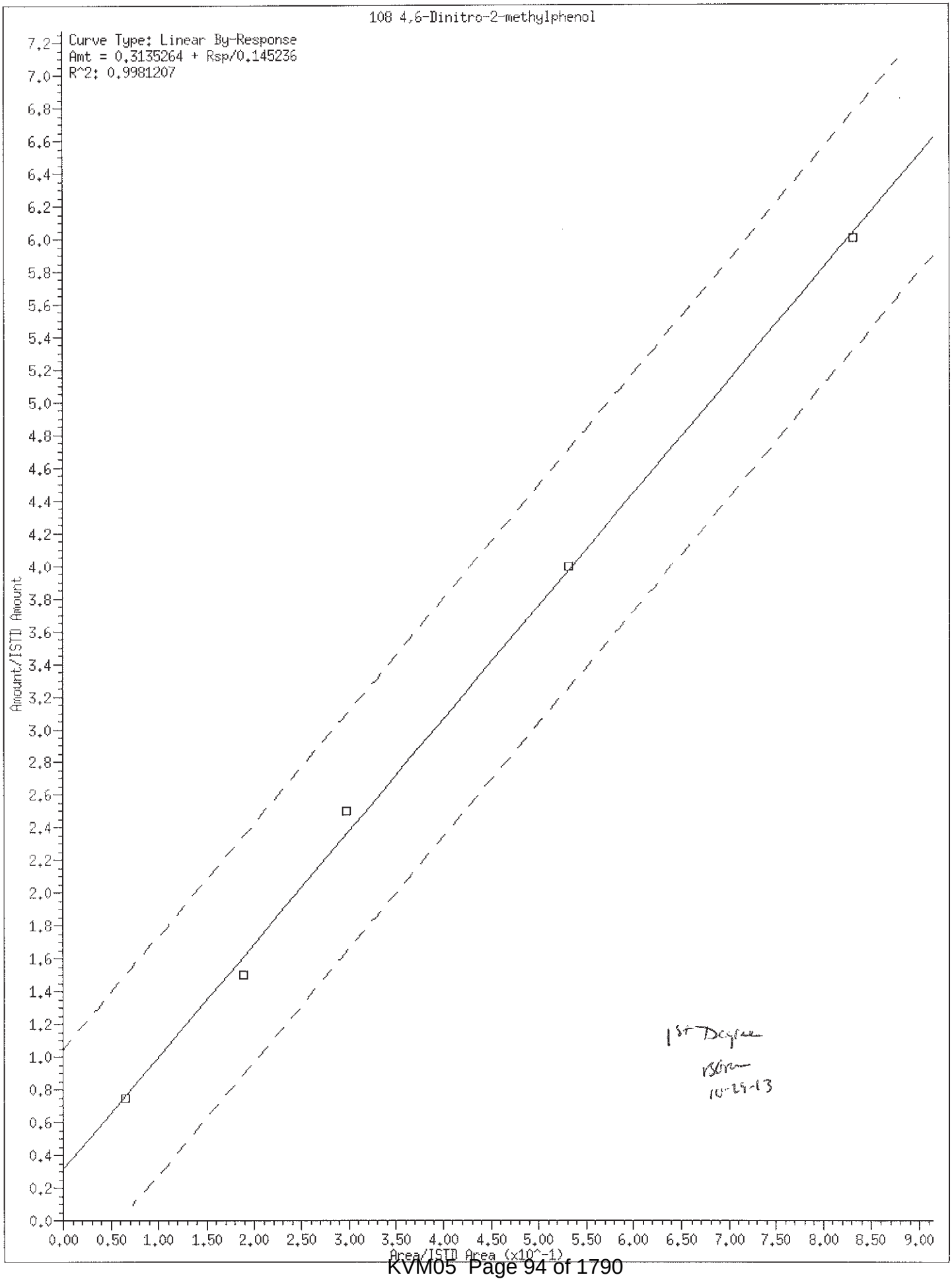
Average %RSD 7

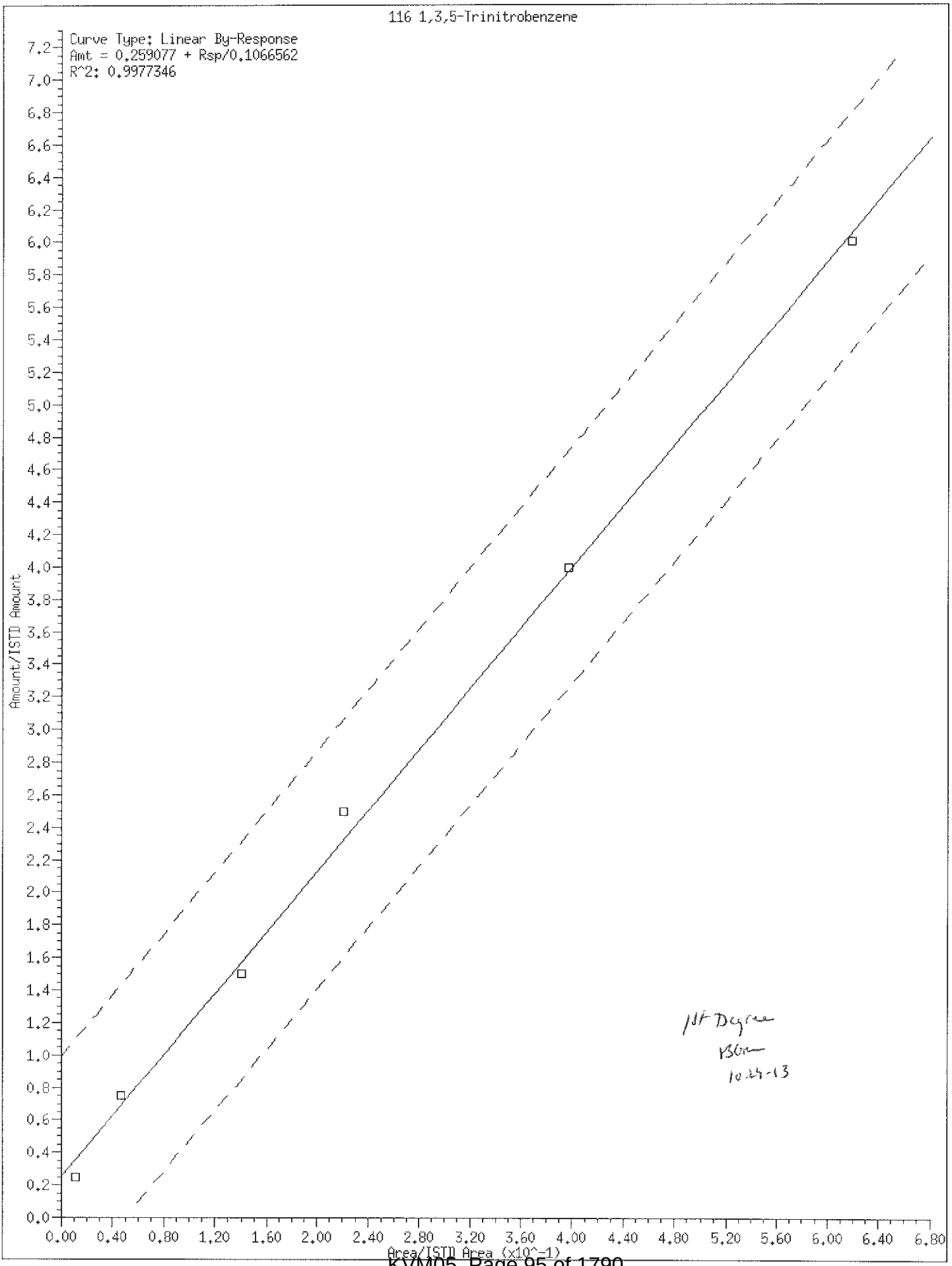
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

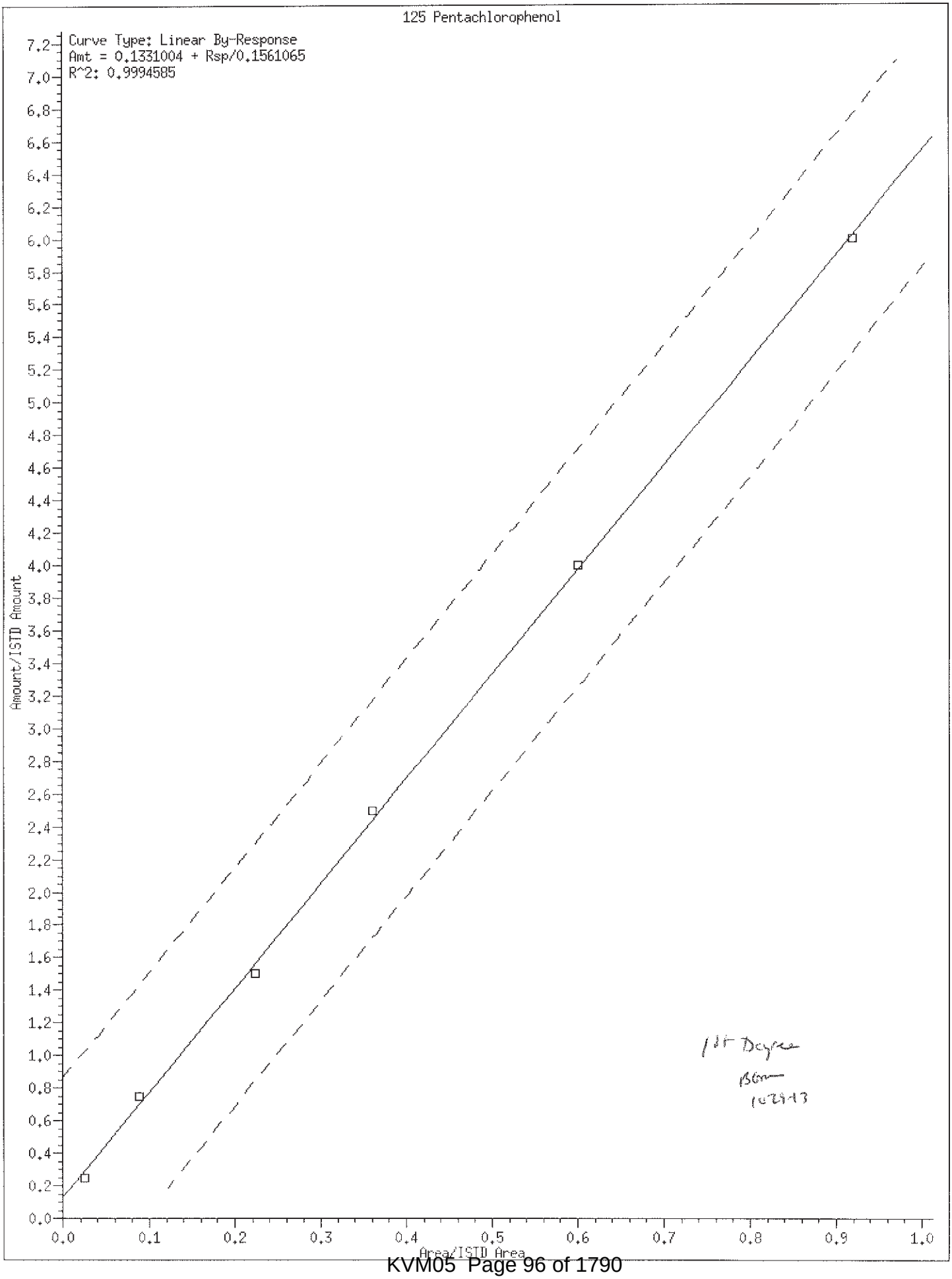

47 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.6810251 + Rsp/0.3682104
R^2: 0.9901664
Amount/ISTD Amount
Area/ISTD Area
1st Degree
10-25-13

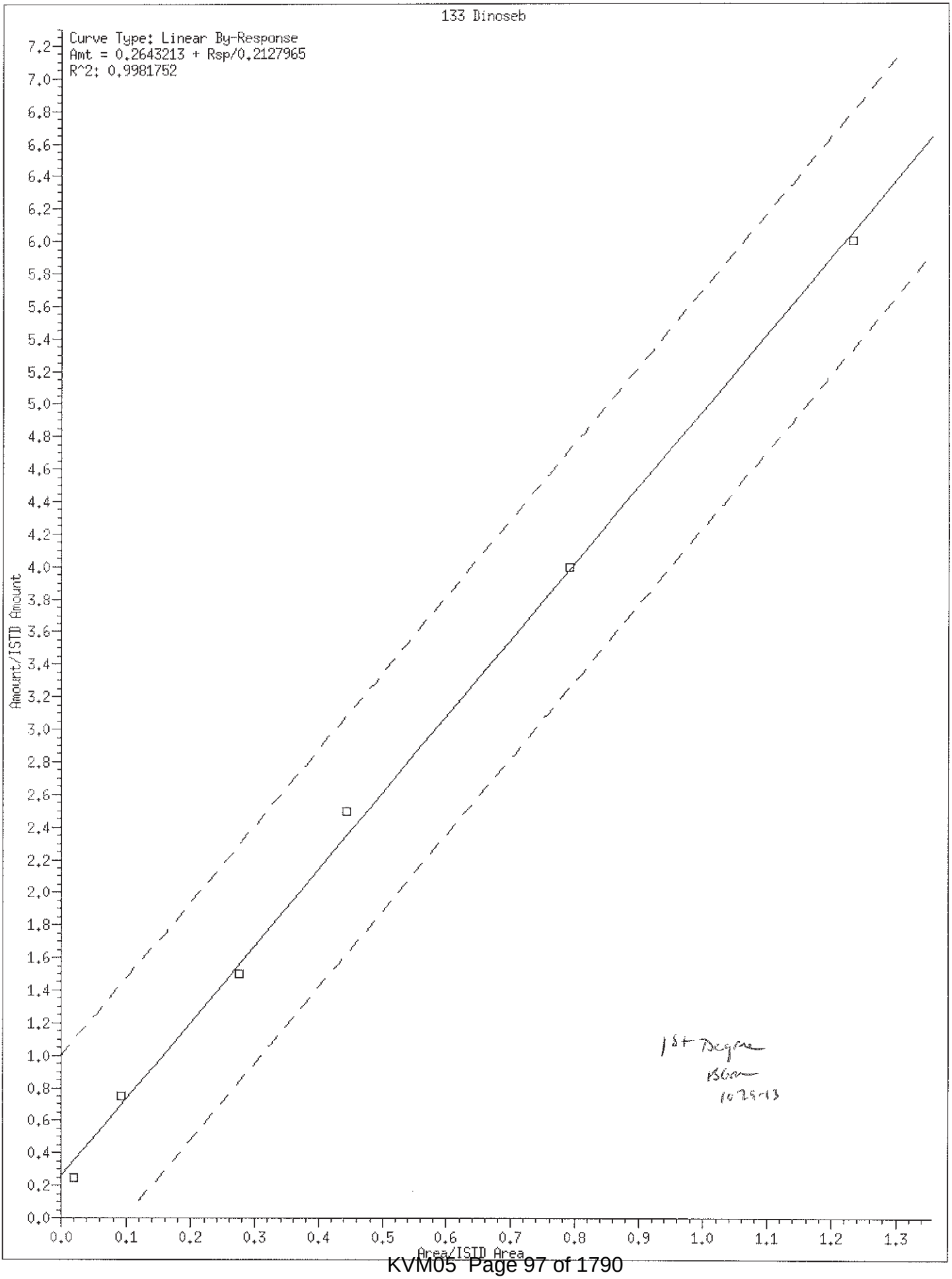

85 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1070964 + Rsp/0.2002245
R^2: 0.9978041
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BSM
10-29-13

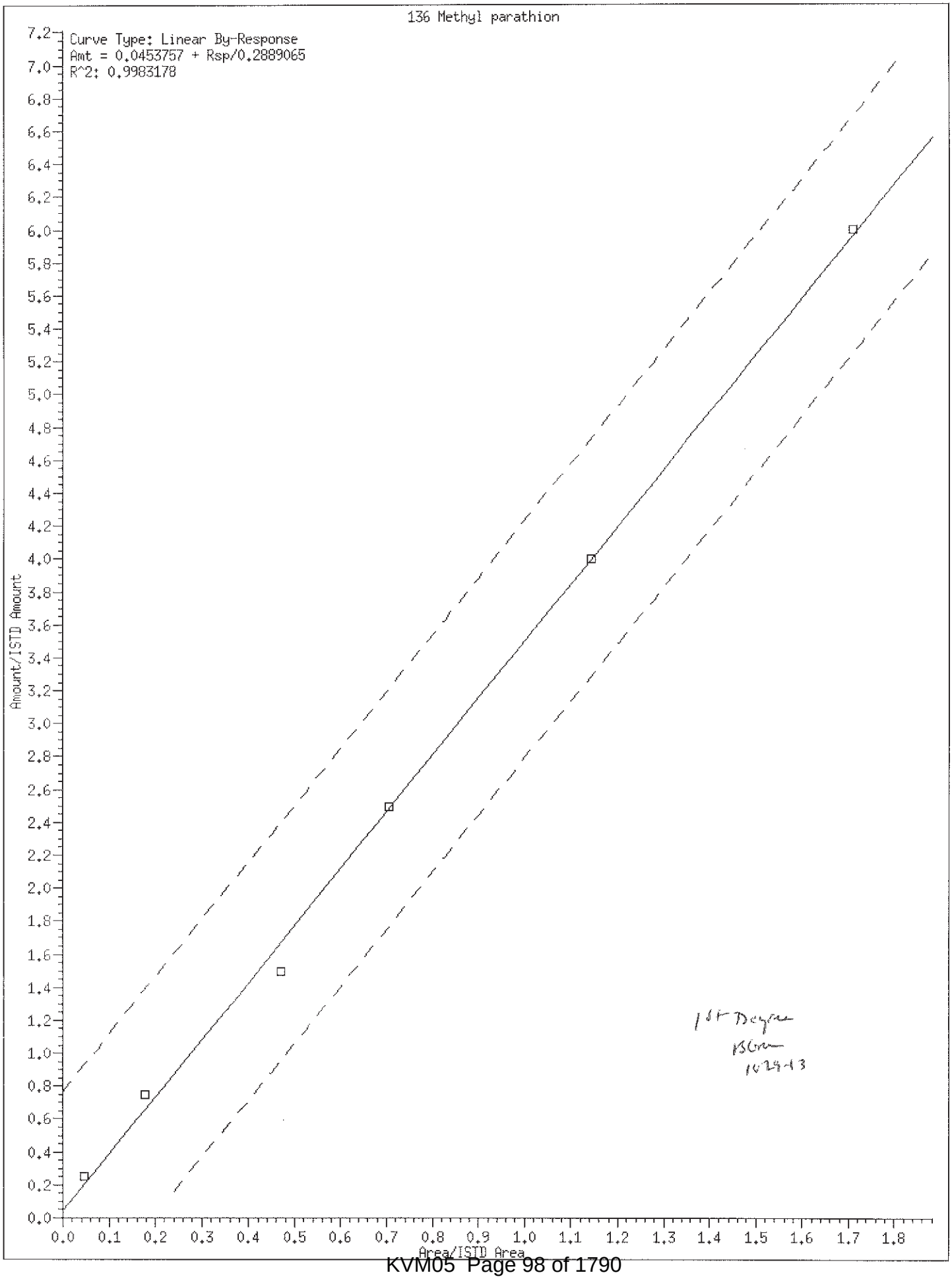

94 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0.7582999 + Rsp/0.1955516
R^2: 0.9914235
Amount/ISTD Amount
Area/ISTD Area
1st Degree
RSam
10-29-13

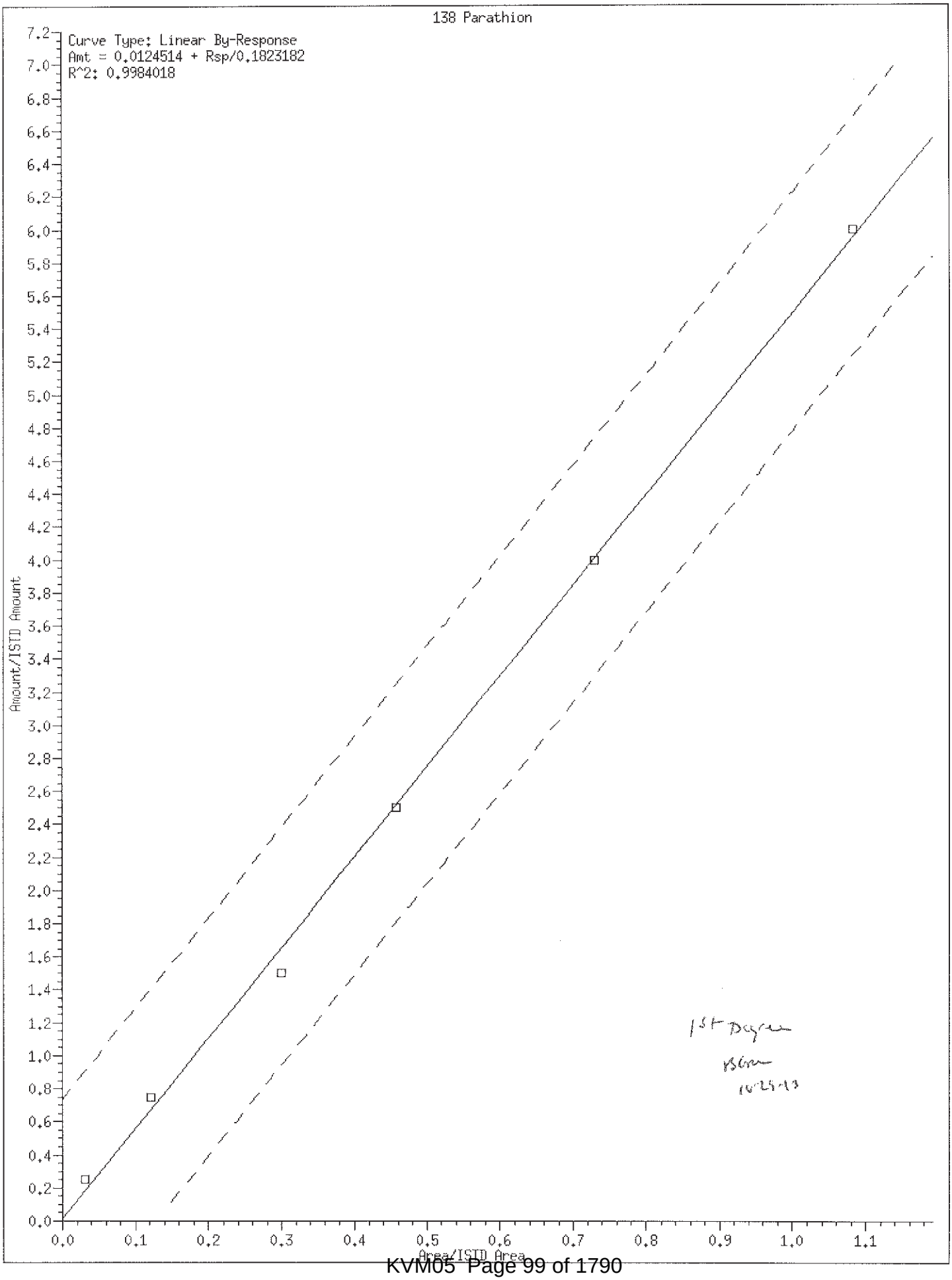

108 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3135264 + Rsp/0.145236
R^2: 0.9981207
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
RSO
10-29-13

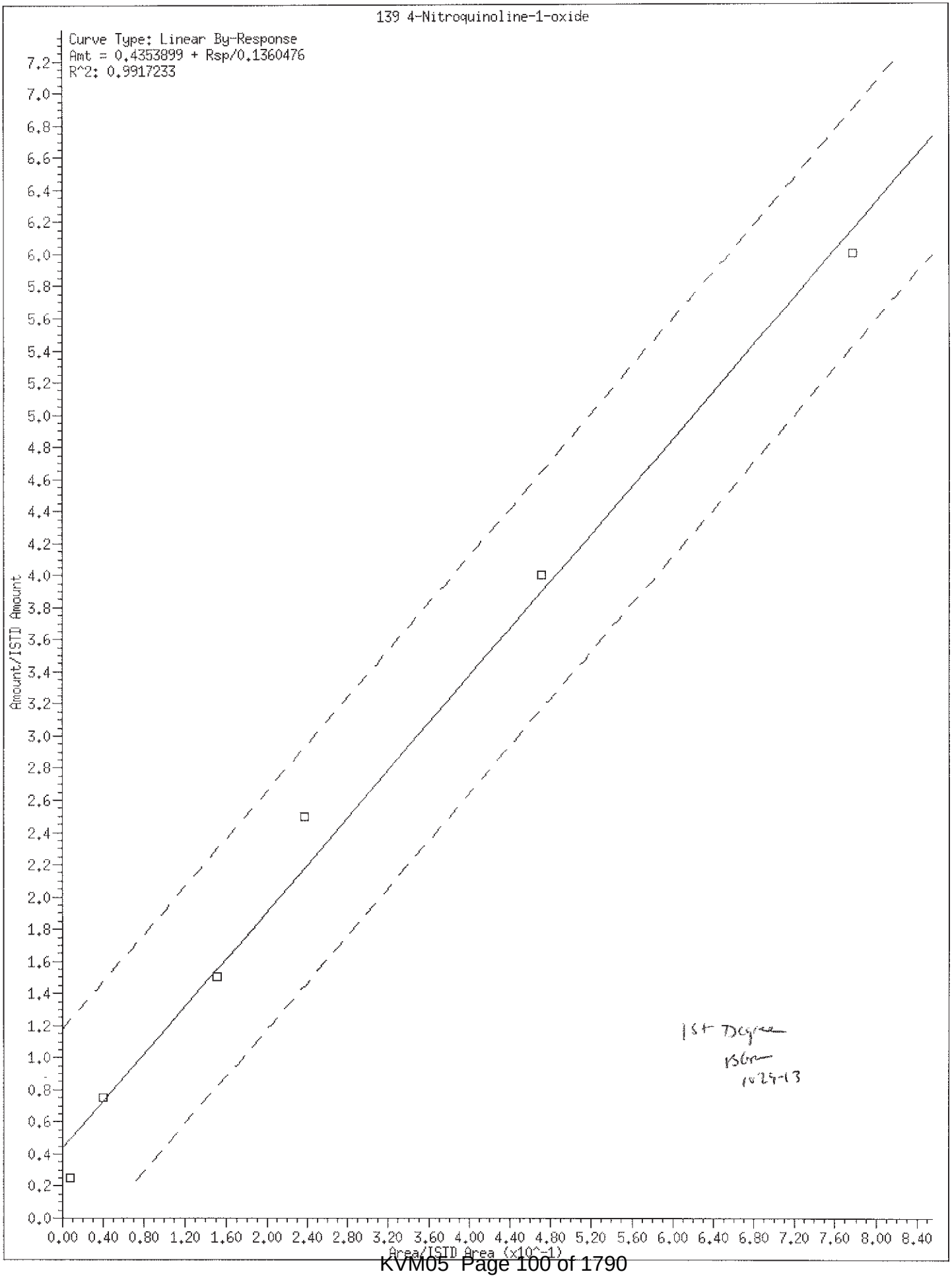

116 1,3,5-Trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.259077 + Rsp/0.1066562
R^2: 0.9977346
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
1st Degree
RSC
10-24-13

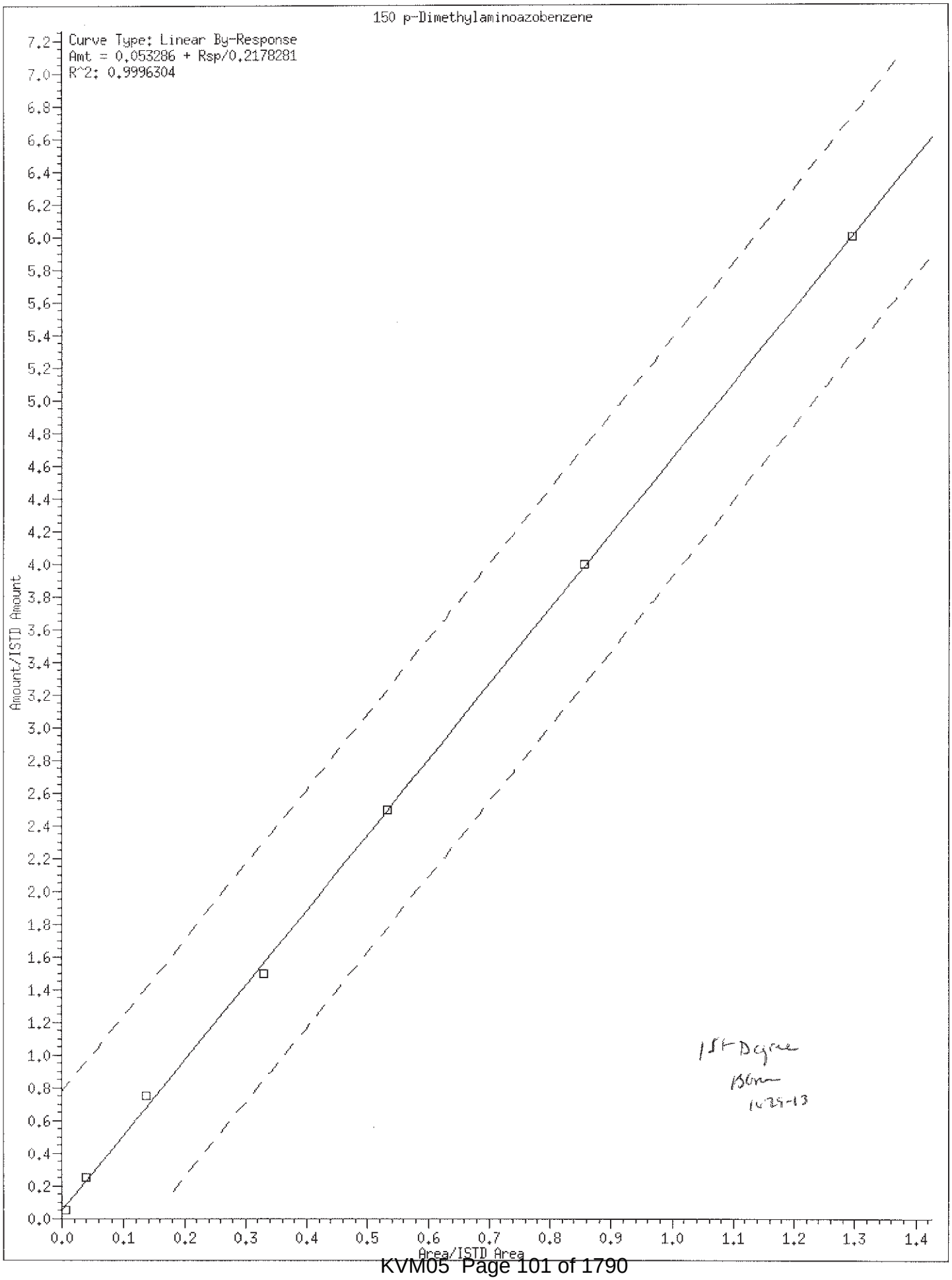

125 Pentachlorophenol
Curve Type: Linear By-Response
Amt = 0.1331004 + Rsp/0.1561065
R^2: 0.9994585
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
1st Degree
BGM
10/29/13

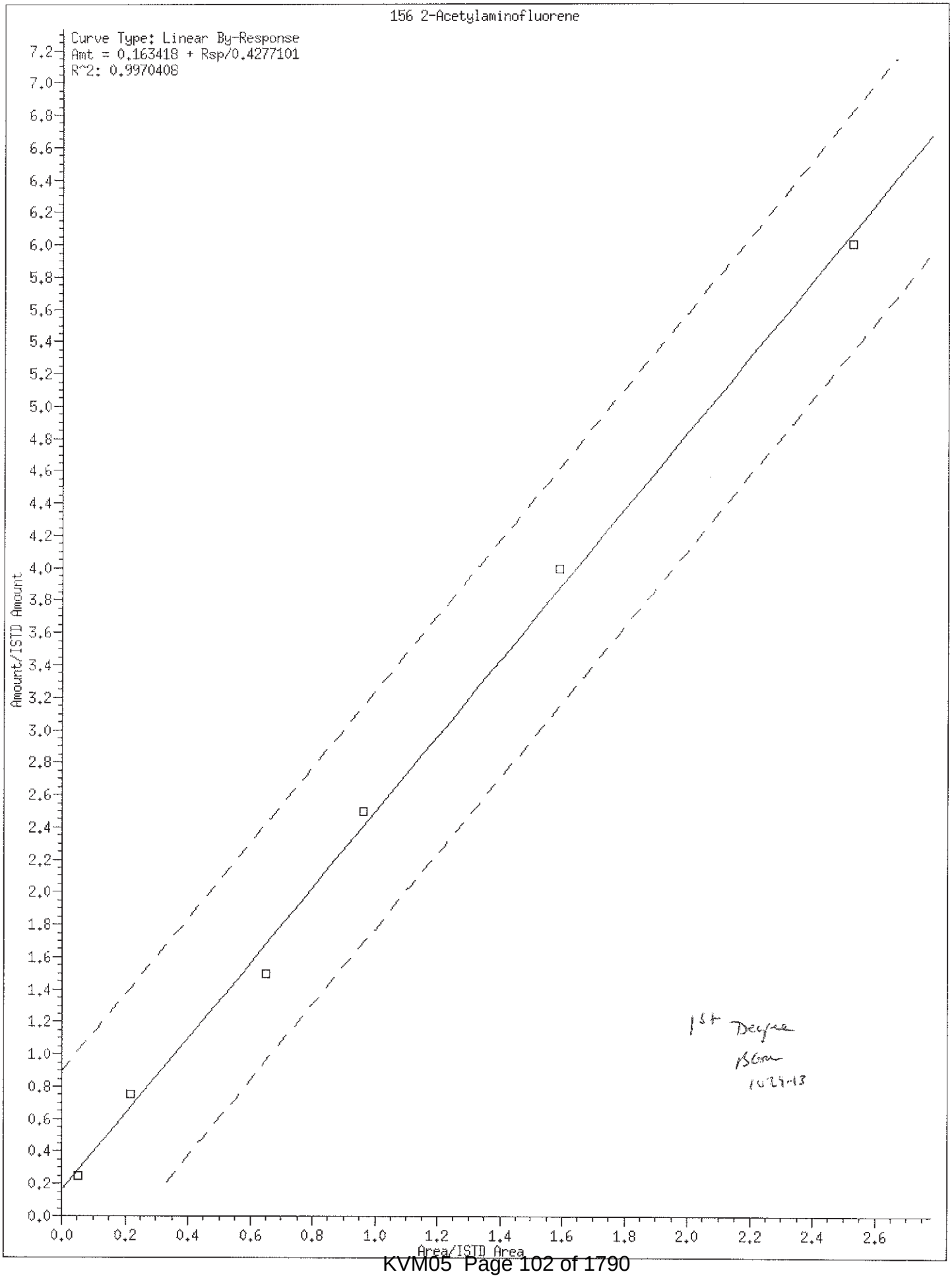

133 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2643213 + Rsp/0.2127965
R^2: 0.9981752
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-29-13

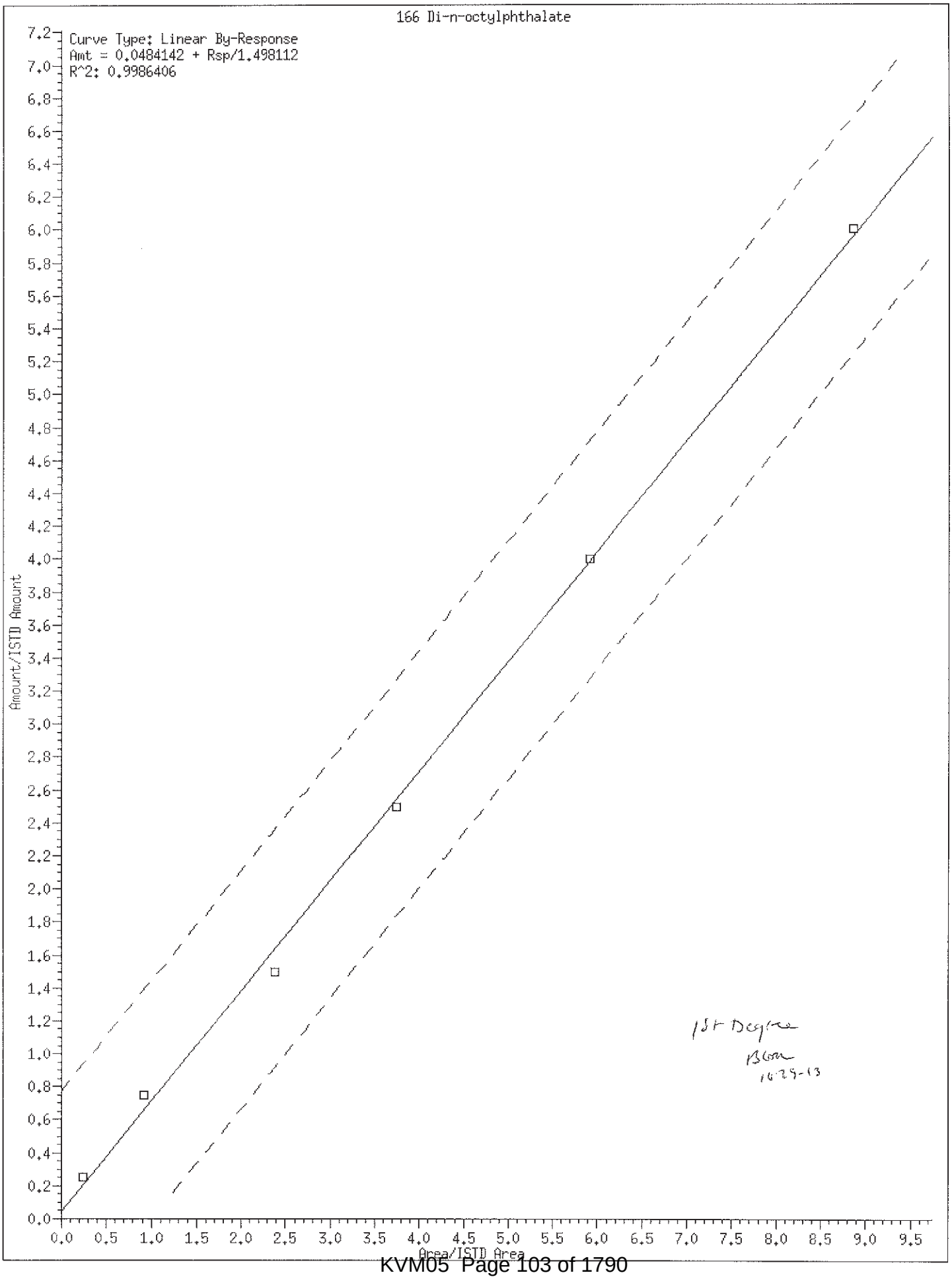

136 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.0453757 + Rsp/0.2889065
R^2: 0.9983178
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BCm
10-29-13


138 Parathion
Curve Type: Linear By-Response
Amt = 0.0124514 + Rsp/0.1823182
R^2: 0.9984018
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-25-13


139 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.4353899 + Rsp/0.1360476
R^2: 0.9917233
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
BGM
10-29-13


150 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.053286 + Rsp/0.2178281
R^2: 0.9996304
Amount/ISTD Amount
Area/ISTD Area
1st Degree
150
11-29-13


156 2-Acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.163418 + Rsp/0.4277101
R^2: 0.9970408
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1st Degree
BCom
10-23-13


166 Di-n-octylphthalate
Curve Type: Linear By-Response
Amt = 0.0484142 + Rsp/1.498112
R^2: 0.9986406
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
1629-13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d SSTD7.5
/chem/HP19760.i/13oct29.b/dj1182.d SSTD0.125
/chem/HP19760.i/13oct29.b/dj1183.d SSTD30
/chem/HP19760.i/13oct29.b/dj1184.d SSTD0.25
/chem/HP19760.i/13oct29.b/dj1185.d SSTD1.25
/chem/HP19760.i/13oct29.b/dj1186.d SSTD3.75
/chem/HP19760.i/13oct29.b/dj1187.d SSTD12.5
/chem/HP19760.i/13oct29.b/dj1188.d SSTD20

Area Summary

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d	Avg. Area	%RSD
	File ID:									
1,4-Dichlorobenzene-d4	151909	172486	136880	126889	138331	140563	139035	134726	142602	10
Naphthalene-d8	608104	675195	543087	495519	535285	552831	538194	531119	559917	10
Acenaphthene-d10	340173	386904	309287	282862	303956	315878	311099	302476	319079	10
Phenanthrene-d10	574655	662675	533001	486096	512509	538913	522070	525961	544485	10
Pyrene-d10	743541	830589	680467	607939	649692	695223	668822	677846	694265	10
Perylene-d12	528760	590527	487829	409698	447306	486848	459604	467732	484788	11

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

BSG 10-29-13

Internal Standard Name	dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d
	File ID:							
1,4-Dichlorobenzene-d4	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029
Naphthalene-d8	7.987	7.987	7.993	7.987	7.987	7.987	7.993	7.993
Acenaphthene-d10	10.797	10.791	10.797	10.791	10.791	10.791	10.797	10.797
Phenanthrene-d10	12.691	12.685	12.697	12.685	12.685	12.685	12.691	12.691
Pyrene-d10	14.649	14.644	14.649	14.644	14.644	14.644	14.644	14.650
Perylene-d12	19.120	19.114	19.126	19.114	19.114	19.114	19.114	19.120

Comments: _____

Report generated on 10/29/2013 at 21:53

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.81	3	30	YES
N-Nitrosodimethylamine	12.50	13.15	5	30	YES
Pyridine	12.50	11.90	-5	30	YES
2-Picoline	12.50	12.58	1	30	YES
N-Nitrosomethylethylamine	12.50	12.97	4	30	YES
Methyl methanesulfonate	12.50	13.65	9	30	YES
N-Nitrosodiethylamine	12.50	12.86	3	30	YES
Ethyl methanesulfonate	12.50	13.05	4	30	YES
Phenol	12.50	12.63	1	30	YES
Aniline	12.50	12.94	4	30	YES
bis(2-Chloroethyl)ether	12.50	12.52	0	30	YES
2-Chlorophenol	12.50	12.95	4	30	YES
1,3-Dichlorobenzene	12.50	12.74	2	30	YES
1,4-Dichlorobenzene	12.50	12.73	2	30	YES
Benzyl alcohol	12.50	13.05	4	30	YES
1,2-Dichlorobenzene	12.50	12.66	1	30	YES
Indene	12.50	11.89	-5	30	YES
2-Methylphenol	12.50	12.66	1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	11.85	-5	30	YES
bis(2-Chloroisopropyl)ether	12.50	11.85	-5	30	YES
N-Nitrosopyrrolidine	12.50	13.14	5	30	YES
Acetophenone	12.50	12.38	-1	30	YES
N-Nitroso-di-n-propylamine	12.50	12.45	0	30	YES
N-Nitrosomorpholine	12.50	12.33	-1	30	YES
4-Methylphenol	12.50	12.58	1	30	YES
o-Toluidine	12.50	12.43	-1	30	YES
Hexachloroethane	12.50	12.67	1	30	YES
Nitrobenzene	12.50	12.46	0	30	YES
N-Nitrosopiperidine	12.50	13.34	7	30	YES
Isophorone	12.50	13.18	5	30	YES
2-Nitrophenol	12.50	13.55	8	30	YES
2,4-Dimethylphenol	12.50	12.95	4	30	YES
O,O,O-triethylphosphorothio	12.50	12.83	3	30	YES
Benzoic acid	25.00	22.14	-11	30	YES
bis(2-Chloroethoxy)methane	12.50	12.79	2	30	YES
2,4-Dichlorophenol	12.50	13.47	8	30	YES
1,2,4-Trichlorobenzene	12.50	13.27	6	30	YES

NC = Could not calculate

BSon 10-29-13

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	12.50	12.69	2	30	YES
4-Chloroaniline	12.50	13.20	6	30	YES
2,6-Dichlorophenol	12.50	13.42	7	30	YES
Hexachloropropene	12.50	14.21	14	30	YES
Hexachlorobutadiene	12.50	13.04	4	30	YES
Quinoline	12.50	12.68	1	30	YES
N-Nitrosodi-n-butylamine	12.50	12.00	-4	30	YES
4-Chloro-3-methylphenol	12.50	13.26	6	30	YES
Safrole	12.50	13.42	7	30	YES
2-Methylnaphthalene	12.50	12.56	0	30	YES
1-Methylnaphthalene	12.50	13.06	5	30	YES
Hexachlorocyclopentadiene	25.00	32.20	29	30	NO
1,2,4,5-Tetrachlorobenzene	12.50	12.53	0	30	YES
2,4,6-Trichlorophenol	12.50	13.16	5	30	YES
2,4,5-Trichlorophenol	12.50	13.20	6	30	YES
Isosafrole	12.50	13.37	7	30	YES
1,1'-Biphenyl	12.50	12.23	-2	30	YES
2-Chloronaphthalene	12.50	12.29	-2	30	YES
Diphenyl ether	12.50	12.54	0	30	YES
2-Nitroaniline	12.50	13.42	7	30	YES
1,4-Naphthoquinone	15.63	15.93	2	30	YES
1,4-Dinitrobenzene	12.50	12.46	0	30	YES
Dimethylphthalate	12.50	12.57	1	30	YES
1,3-Dinitrobenzene	12.50	13.22	6	30	YES
2,6-Dinitrotoluene	12.50	13.50	8	30	YES
Acenaphthylene	12.50	13.55	8	30	YES
3-Nitroaniline	12.50	13.57	9	30	YES
Acenaphthene	12.50	12.33	-1	30	YES
2,4-Dinitrophenol	25.00	24.19	-3	30	YES
Pentachlorobenzene	12.50	12.67	1	30	YES
4-Nitrophenol	12.50	13.36	7	30	YES
Dibenzofuran	12.50	12.48	0	30	YES
2,4-Dinitrotoluene	12.50	13.66	9	30	YES
1-Naphthylamine	25.00	24.62	-2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.94	12	30	YES
2-Naphthylamine	25.00	24.01	-4	30	YES
Diethylphthalate	12.50	12.76	2	30	YES

→ OK TO USE, NOT A CC
< 50%
[illegible]
10-29-13

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluorene	12.50	12.62	1	30	YES
Thionazin	12.50	11.96	-4	30	YES
4-Chlorophenyl-phenylether	12.50	12.40	-1	30	YES
5-Nitro-o-toluidine	12.50	13.20	6	30	YES
4-Nitroaniline	12.50	12.89	3	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.86	3	30	YES
N-Nitrosodiphenylamine	12.50	13.29	6	30	YES
1,2-Diphenylhydrazine	12.50	12.44	0	30	YES
Tetraethyldithiopyrophospha	12.50	12.48	0	30	YES
1,3,5-Trinitrobenzene	12.50	12.77	2	30	YES
Diallate (peak 1)	9.38	9.16	-2	30	YES
Phorate	12.50	12.15	-3	30	YES
Phenacetin	12.50	13.76	10	30	YES
4-Bromophenyl-phenylether	12.50	12.70	2	30	YES
Diallate (peak 2)	3.13	3.10	-1	30	YES
Hexachlorobenzene	12.50	12.53	0	30	YES
Dimethoate	12.50	13.02	4	30	YES
Pentachlorophenol	12.50	12.57	1	30	YES
Pentachloronitrobenzene	12.50	13.79	10	30	YES
4-Aminobiphenyl	12.50	14.36	15	30	YES
Pronamide	12.50	12.93	3	30	YES
Phenanthrene	12.50	12.27	-2	30	YES
Dinoseb	12.50	13.11	5	30	YES
Anthracene	12.50	12.90	3	30	YES
Carbazole	12.50	13.08	5	30	YES
Methyl parathion	12.50	13.14	5	30	YES
Di-n-butylphthalate	12.50	13.10	5	30	YES
Parathion	12.50	12.45	0	30	YES
4-Nitroquinoline-1-oxide	150.00	168.75	13	30	YES
Isodrin	12.50	12.54	0	30	YES
Fluoranthene	12.50	13.25	6	30	YES
Benzidine	62.50	60.48	-3	30	YES
Pyrene	12.50	12.38	-1	30	YES
p-Dimethylaminoazobenzene	12.50	13.36	7	30	YES
Chlorobenzilate	12.50	12.37	-1	30	YES
3,3'-Dimethylbenzidine	25.00	25.93	4	30	YES
Butylbenzylphthalate	12.50	13.20	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Acetylaminofluorene	12.50	12.60	1	30	YES
Benzo(a)anthracene	12.50	13.47	8	30	YES
3,3'-Dichlorobenzidine	12.50	12.82	3	30	YES
4,4'-Methylenebis(2-Chloroa	12.50	12.73	2	30	YES
Chrysene	12.50	12.86	3	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.24	6	30	YES
6-Methylchrysene	12.50	12.50	0	30	YES
Di-n-octylphthalate	12.50	13.15	5	30	YES
Benzo(b)fluoranthene	12.50	13.52	8	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.66	9	30	YES
Benzo(k)fluoranthene	12.50	13.14	5	30	YES
Benzo(a)pyrene	12.50	13.57	9	30	YES
3-Methylcholanthrene	12.50	13.83	11	30	YES
Dibenz(a,h)acridine	12.50	13.41	7	30	YES
Dibenz(a,j)acridine	12.50	13.26	6	30	YES
Indeno(1,2,3-cd)pyrene	12.50	14.40	15	30	YES
Dibenz(a,h)anthracene	12.50	14.44	16	30	YES
Benzo(g,h,i)perylene	12.50	13.92	11	30	YES
Diallate TRANS/CIS	12.50	12.24	-2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1192.d

ICV SAMPLE ID: BASICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.17	5	30	YES
Caprolactam	12.50	13.12	5	30	YES
Atrazine	12.50	13.46	8	30	YES

BGM 10-29-13

NC = Could not calculate

Comments:

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 12:21 19:42

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ek0502.d RRF1 = ek0508.d RRF5 = ek0507.d RRF15 = ek0506.d
RRF30 = ek0501.d RRF50 = ek0505a.d RRF80 = ek0504.d RRF120 = ek0503.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane				0.569	0.570	0.607	0.630	0.545	0.563	0.581	5	AVG	
N-Nitrosodimethylamine				0.824	0.880	1.035	1.050	0.983	1.029	0.967	10	AVG	
Pyridine				1.565	1.600	1.387	1.679	1.621	1.693	1.591	7	AVG	
2-Picoline				1.920	1.922	1.998	2.012	1.858	1.991	1.950	3	AVG	
N-Nitrosomethylethylamine				0.865	0.879	0.918	0.892	0.861	0.879	0.882	2	AVG	
Methyl methanesulfonate				1.016	1.032	1.098	1.097	1.042	1.077	1.060	3	AVG	
N-Nitrosodiethylamine			0.895	0.862	0.876	0.925	0.936	0.896	0.932	0.903	3	AVG	
Ethyl methanesulfonate			1.184	0.860	0.896	0.929	0.916	0.893	0.899	0.940	12	AVG	
Aniline			3.390	2.795	2.994	3.123	3.136	2.949	3.065	3.065	6	AVG	
Phenol	*		2.160	2.317	2.410	2.536	2.541	2.340	2.382	2.384	6	AVG	*
bis(2-Chloroethyl)ether			2.115	1.885	1.894	2.007	2.000	1.850	1.917	1.953	5	AVG	
2-Chlorophenol			1.527	1.447	1.516	1.625	1.643	1.492	1.591	1.549	5	AVG	
1,3-Dichlorobenzene			1.802	1.481	1.617	1.543	1.591	1.488	1.541	1.580	7	AVG	
1,4-Dichlorobenzene	*		1.814	1.444	1.595	1.615	1.627	1.533	1.587	1.602	7	AVG	*
Benzyl alcohol				1.044	1.174	1.319	1.220	1.215	1.207	1.196	7	AVG	
1,2-Dichlorobenzene			1.429	1.382	1.498	1.543	1.617	1.473	1.530	1.496	5	AVG	
2-Methylphenol			1.752	1.548	1.726	1.757	1.808	1.663	1.755	1.715	5	AVG	
2,2'-oxybis(1-Chloropropane)			2.313	2.005	2.073	2.127	2.113	1.971	2.028	2.090	5	AVG	
bis(2-Chloroisopropyl)ether			2.313	2.005	2.073	2.127	2.113	1.971	2.028	2.090	5	AVG	
N-Nitrosopyrrolidine			1.152	0.976	1.076	1.150	1.109	1.049	1.054	1.081	6	AVG	
Acetophenone			3.536	2.908	2.708	2.873	2.785	2.673	2.595	2.868	11	AVG	
N-Nitroso-di-n-propylamine	#		2.121	1.587	1.535	1.661	1.632	1.542	1.532	1.658	13	AVG	#
N-Nitrosomorpholine				1.287	1.358	1.434	1.407	1.323	1.307	1.353	4	AVG	
4-Methylphenol			2.100	1.944	1.918	2.148	2.137	2.005	2.046	2.042	4	AVG	
o-Toluidine			3.091	2.613	2.952	3.063	3.084	2.803	2.881	2.927	6	AVG	
Hexachloroethane				0.642	0.648	0.692	0.699	0.653	0.680	0.669	4	AVG	
Nitrobenzene			0.563	0.451	0.473	0.470	0.496	0.468	0.469	0.484	8	AVG	
N-Nitrosopiperidine			0.226	0.230	0.214	0.211	0.224	0.208	0.208	0.217	4	AVG	
Isophorone			0.914	0.851	0.855	0.849	0.891	0.831	0.833	0.861	4	AVG	
2-Nitrophenol	*		0.184	0.178	0.198	0.198	0.214	0.199	0.205	0.197	6	AVG	*
2,4-Dimethylphenol			0.454	0.460	0.437	0.464	0.482	0.452	0.445	0.456	3	AVG	
O,O,O-triethylphosphorothioate				0.169	0.170	0.169	0.182	0.172	0.169	0.172	3	AVG	
bis(2-Chloroethoxy)methane			0.623	0.520	0.537	0.545	0.596	0.533	0.660	0.573	9	AVG	
Benzoic acid				0.361	0.374	0.348	0.352	0.384	0.392	0.368	5	AVG	
2,4-Dichlorophenol	*		0.280	0.276	0.299	0.292	0.314	0.298	0.297	0.294	4	AVG	*
1,2,4-Trichlorobenzene				0.284	0.267	0.297	0.313	0.285	0.291	0.289	5	AVG	
Naphthalene		1.183	1.196	1.047	0.993	1.013	1.076	0.981	0.948	1.055	9	AVG	
4-Chloroaniline			0.473	0.446	0.446	0.465	0.492	0.451	0.455	0.461	4	AVG	
2,6-Dichlorophenol			0.281	0.294	0.276	0.291	0.306	0.290	0.285	0.289	3	AVG	
Hexachloropropene				0.159	0.161	0.174	0.190	0.189	0.185	0.176	8	AVG	
Hexachlorobutadiene	*		0.172	0.148	0.149	0.141	0.157	0.152	0.150	0.153	6	AVG	*
Caprolactam				0.199	0.173	0.161	0.181	0.161	0.151	0.171	10	AVG	
N-Nitrosodi-n-butylamine			0.531	0.412	0.477	0.452	0.477	0.347		0.449	14	AVG	
4-Chloro-3-methylphenol	*		0.463	0.434	0.441	0.431	0.459	0.430	0.419	0.439	4	AVG	*
Safrole				0.292	0.288	0.290	0.316	0.292	0.286	0.294	4	AVG	
2-Methylnaphthalene		0.739	0.839	0.744	0.749	0.742	0.801	0.733	0.714	0.757	5	AVG	
1-Methylnaphthalene		0.697	0.740	0.710	0.665	0.677	0.737	0.670	0.658	0.694	5	AVG	
Hexachlorocyclopentadiene	#			0.175	0.184	0.205	0.223	0.224	0.233	0.207	11	AVG	#
1,2,4,5-Tetrachlorobenzene			0.451	0.434	0.410	0.430	0.445	0.429	0.442	0.435	3	AVG	
cis-Isosafrole				0.677	0.708	0.732	0.799	0.740	0.739	0.733	6	AVG	
2,4,6-Trichlorophenol	*		0.258	0.352	0.341	0.329	0.337	0.341	0.338	0.328	10	AVG	*
2,4,5-Trichlorophenol			0.264	0.355	0.348	0.356	0.375	0.350	0.363	0.345	11	AVG	

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 12:21 19:42

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ek0502.d RRF1 = ek0508.d RRF5 = ek0507.d RRF15 = ek0506.d
RRF30 = ek0501.d RRF50 = ek0505a.d RRF80 = ek0504.d RRF120 = ek0503.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
trans-Isosafrole				0.481	0.531	0.530	0.550	0.512	0.519	0.521	4	AVG	
Isosafrole				0.428	0.472	0.472	0.489	0.456	0.462	0.463	4	AVG	
1,1'-Biphenyl			1.625	1.641	1.428	1.411	1.450	1.386	1.272	1.459	9	AVG	
2-Chloronaphthalene			1.028	1.401	1.245	0.997	1.231	1.279		1.197	13	AVG	
1-Chloronaphthalene			1.349	1.020	1.059	1.067	1.212	1.063	0.980	1.107	12	AVG	
Diphenyl ether			0.892	0.777	0.752	0.742	0.789	0.730	0.744	0.775	7	AVG	
2-Nitroaniline			0.292	0.455	0.402	0.417	0.436	0.421	0.417	0.406	13	AVG	
1,4-Naphthoquinone				0.452	0.473	0.490	0.518	0.493	0.475	0.484	5	AVG	
1,4-Dinitrobenzene				0.199	0.213	0.216	0.222	0.219	0.224	0.215	4	AVG	
Dimethylphthalate				1.408	1.382	1.340	1.401	1.295	1.260	1.348	4	AVG	
1,3-Dinitrobenzene				0.238	0.250	0.242	0.272	0.255	0.252	0.251	5	AVG	
2,6-Dinitrotoluene			0.377	0.322	0.312	0.311	0.343	0.319	0.322	0.329	7	AVG	
Acenaphthylene		1.688	1.570	1.644	1.647	1.631	1.702	1.585	1.555	1.628	3	AVG	
3-Nitroaniline			0.373	0.369	0.372	0.365	0.396	0.367	0.377	0.374	3	AVG	
Acenaphthene	*	1.327	1.301	1.118	1.122	1.103	1.167	1.101	1.091	1.166	8	AVG	*
2,4-Dinitrophenol	#			0.160	0.154	0.165	0.177	0.187	0.195	0.173	9	AVG	#
Pentachlorobenzene			0.464	0.370	0.395	0.377	0.400	0.378	0.379	0.394	8	AVG	
4-Nitrophenol	#			0.299	0.298	0.303	0.312	0.303	0.313	0.305	2	AVG	#
Dibenzofuran			1.946	1.641	1.559	1.548	1.631	1.514	1.478	1.617	10	AVG	
2,4-Dinitrotoluene				0.414	0.461	0.439	0.477	0.442	0.436	0.445	5	AVG	
1-Naphthylamine				1.348	1.273	1.279	1.375	1.259	1.255	1.298	4	AVG	
2,3,4,6-Tetrachlorophenol			0.266	0.262	0.256	0.278	0.286	0.283	0.279	0.273	4	AVG	
2-Naphthylamine				1.331	1.341	1.327	1.407	1.274	1.214	1.316	5	AVG	
Diethylphthalate				1.484	1.437	1.391	1.460	1.359	1.348	1.413	4	AVG	
Thionazin				0.349	0.313	0.317	0.317	0.307	0.302	0.317	5	AVG	
Fluorene		1.522	1.401	1.370	1.354	1.349	1.388	1.317	1.282	1.373	5	AVG	
4-Chlorophenyl-phenylether			0.642	0.689	0.627	0.584	0.632	0.579	0.588	0.620	6	AVG	
5-Nitro-o-toluidine			0.538	0.422	0.419	0.417	0.439	0.411	0.410	0.436	11	AVG	
4-Nitroaniline			0.377	0.429	0.394	0.380	0.398	0.371	0.361	0.387	6	AVG	
4,6-Dinitro-2-methylphenol				0.121	0.121	0.131	0.148	0.152	0.152	0.137	11	AVG	
N-Nitrosodiphenylamine (1)	*		0.712	0.678	0.674	0.685	0.741	0.683	0.678	0.693	4	AVG	*
1,2-Diphenylhydrazine			0.947	0.938	0.988	0.983	1.017	0.980	0.927	0.969	3	AVG	
Tetraethyldithiopyrophosphate				0.157	0.169	0.165	0.172	0.172	0.167	0.167	3	AVG	
1,3,5-Trinitrobenzene				0.072	0.084	0.085	0.098	0.100	0.099	0.090	12	AVG	
Diallate (peak 1)				0.564	0.566	0.555	0.591	0.536	0.540	0.559	4	AVG	
Phorate			0.615	0.581	0.653	0.905	0.944	0.894	0.854	0.778	20	1STDEG	
Phenacetin			0.563	0.517	0.520	0.517	0.539	0.513	0.516	0.526	3	AVG	
4-Bromophenyl-phenylether				0.183	0.183	0.183	0.198	0.179	0.183	0.185	4	AVG	
Diallate (peak 2)				0.298	0.265	0.248	0.252	0.242	0.253	0.259	8	AVG	
Hexachlorobenzene		0.182	0.180	0.176	0.176	0.182	0.195	0.181	0.176	0.181	3	AVG	
Dimethoate				0.436	0.443	0.415	0.424	0.396	0.365	0.413	7	AVG	
Diallate TRANS/CIS				0.497	0.491	0.478	0.506	0.463	0.468	0.484	4	AVG	
Atrazine			0.232	0.263	0.231	0.221	0.214			0.232	8	AVG	
Pentachlorophenol	*			0.076	0.114	0.117	0.126	0.130	0.131	0.116	18	1STDEG	*
Pentachloronitrobenzene				0.093	0.095	0.094	0.100	0.100	0.102	0.097	4	AVG	
4-Aminobiphenyl			0.737	0.766	0.865	0.775	0.784	0.669	0.639	0.748	10	AVG	
Pronamide			0.339	0.370	0.363	0.366	0.392	0.367	0.373	0.367	4	AVG	
Dinoseb				0.139	0.168	0.183	0.207	0.207	0.208	0.185	15	1STDEG	
Phenanthrene		1.225	1.173	1.115	1.132	1.110	1.180	1.077	1.032	1.131	5	AVG	
Anthracene		1.067	1.209	1.149	1.175	1.105	1.214	1.139	1.072	1.141	5	AVG	
Carbazole			1.153	1.111	1.127	1.112	1.153	1.065	1.015	1.105	5	AVG	
Methyl parathion				0.320	0.320	0.318	0.335	0.313	0.289	0.316	5	AVG	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date(s): 11/12/13 11/12/13

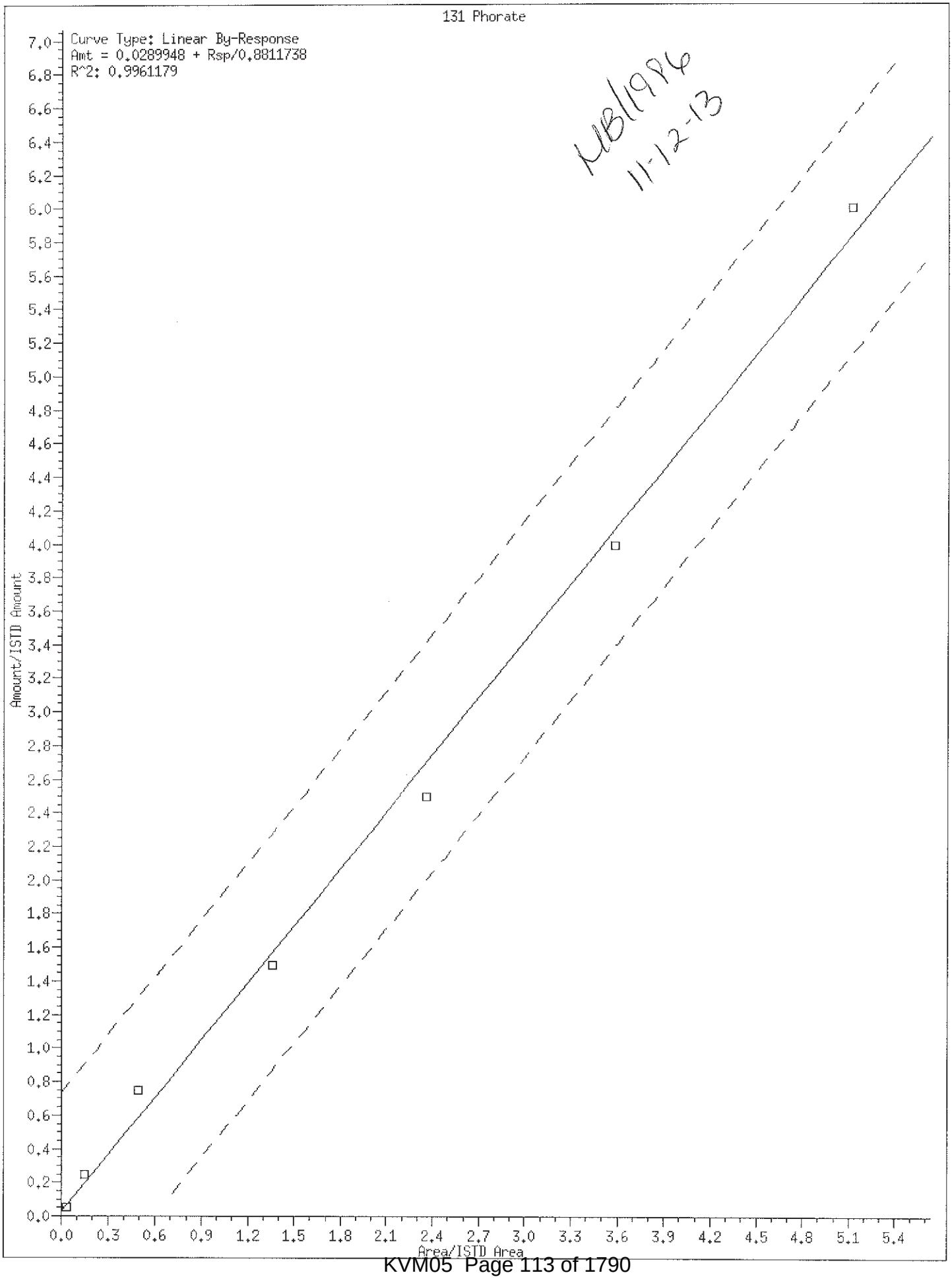
Calibration Times: 12:21 19:42

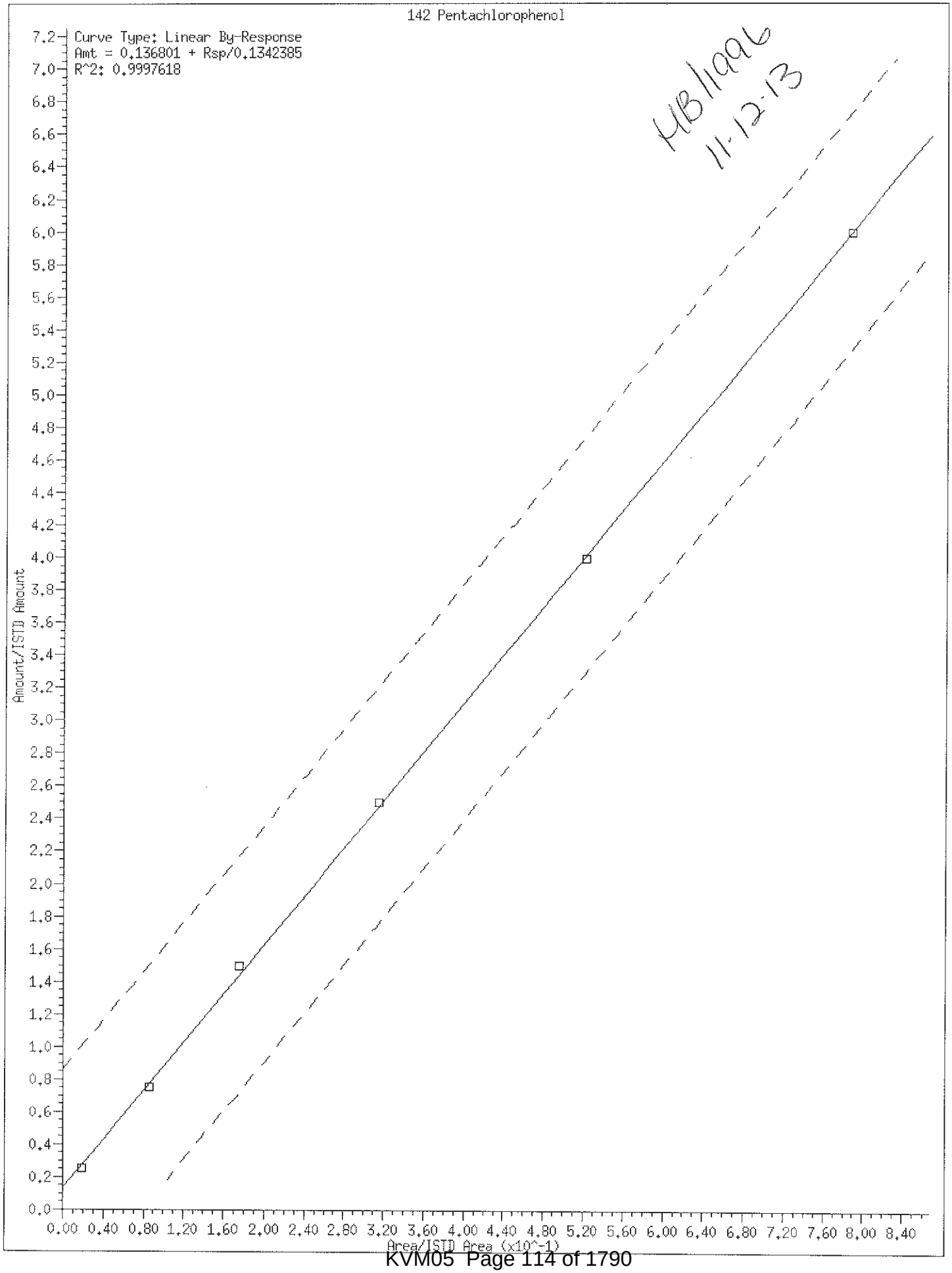
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

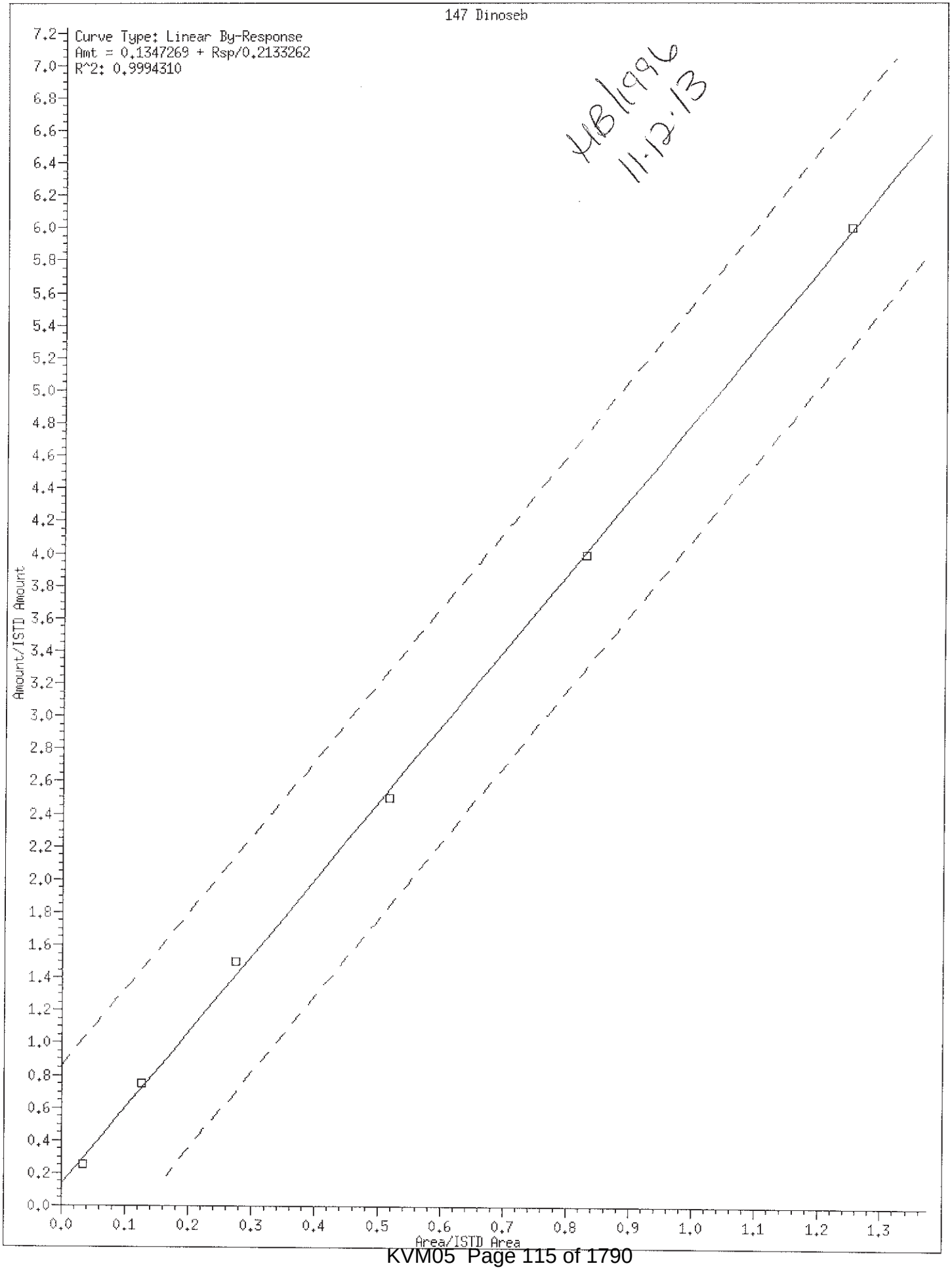
LAB FILE ID:RRF0.5 = ek0502.d RRF1 = ek0508.d RRF5 = ek0507.d RRF15 = ek0506.d
RRF30 = ek0501.d RRF50 = ek0505a.d RRF80 = ek0504.d RRF120 = ek0503.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
Di-n-butylphthalate				1.394	1.413	1.417	1.455	1.350	1.246	1.379	5	AVG	
Parathion				0.198	0.223	0.213	0.230	0.222	0.217	0.217	5	AVG	
4-Nitroquinoline-1-oxide				0.071	0.089	0.110	0.118	0.119	0.114	0.103	19	1STDEG	
Isodrin			0.191	0.133	0.133	0.126	0.139	0.129	0.129	0.140	16	2NDDEG	
Fluoranthene	*	1.057	1.390	1.167	1.205	1.159	1.235	1.154	1.084	1.181	9	AVG	*
Benzidine				0.752	0.721	0.774	0.803	0.665	0.592	0.718	11	AVG	
Pyrene		1.232	1.134	1.121	1.062	1.060	1.117	1.019	0.992	1.092	7	AVG	
p-Dimethylaminoazobenzene			0.200	0.200	0.213	0.231	0.244	0.230	0.230	0.221	8	AVG	
Chlorobenzilate			0.426	0.405	0.425	0.432	0.457	0.419	0.415	0.426	4	AVG	
3,3'-Dimethylbenzidine				0.525	0.578	0.618	0.674	0.569	0.565	0.588	9	AVG	
Butylbenzylphthalate				0.607	0.575	0.581	0.602	0.564	0.548	0.580	4	AVG	
2-Acetylaminofluorene				0.464	0.494	0.488	0.524	0.495	0.485	0.492	4	AVG	
3,3'-Dichlorobenzidine				0.320	0.323	0.340	0.359	0.337	0.327	0.335	4	AVG	
4,4'-Methylenebis(2-Chloroanil				0.184	0.183	0.184	0.193	0.178	0.175	0.183	3	AVG	
Benzo(a)anthracene		0.978	1.116	0.986	0.991	0.941	0.974	0.912	0.888	0.973	7	AVG	
Chrysene		0.998	1.005	0.924	0.899	0.885	0.944	0.849	0.810	0.914	7	AVG	
bis(2-Ethylhexyl)phthalate				0.749	0.771	0.775	0.816	0.750	0.730	0.765	4	AVG	
6-Methylchrysene				0.666	0.668	0.670	0.688	0.641	0.632	0.661	3	AVG	
Di-n-octylphthalate	*			1.748	1.743	1.813	1.965	1.886	1.830	1.831	5	AVG	*
Dibenz(a,h)acridine				0.742	0.796	0.805	0.834	0.821	0.839	0.806	4	AVG	
Dibenz(a,j)acridine				0.832	0.851	0.858	0.915	0.858	0.862	0.863	3	AVG	
7,12-Dimethylbenz[a]anthracene			0.563	0.595	0.585	0.611	0.671	0.621	0.628	0.610	6	AVG	
Benzo(b)fluoranthene		1.226	1.184	1.190	1.235	1.179	1.299	1.318	1.402	1.254	6	AVG	
Quinoline				0.786	0.734	0.733	0.788	0.729	0.706	0.746	4	AVG	
Benzo(k)fluoranthene		1.177	1.382	1.306	1.225	1.180	1.392	1.212	1.140	1.252	8	AVG	
Benzo(a)pyrene	*	1.111	1.185	1.079	1.072	1.066	1.164	1.116	1.092	1.111	4	AVG	*
3-Methylcholanthrene			0.585	0.530	0.577	0.585	0.621	0.605	0.613	0.588	5	AVG	
NDPA as diphenylamine				0.678	0.674	0.685	0.741	0.683	0.678	0.690	4	AVG	
Indeno(1,2,3-cd)pyrene		1.136	1.202	1.079	1.111	1.080	1.154	1.078	1.115	1.120	4	AVG	
Dibenz(a,h)anthracene		1.030	0.868	0.922	0.930	0.939	0.994	0.939	0.963	0.948	5	AVG	
Benzo(g,h,i)perylene		1.006	1.021	0.903	0.913	0.883	0.949	0.899	0.918	0.936	5	AVG	
Indene				2.784	2.797	2.882	2.809	2.635	2.649	2.759	4	AVG	
2-Fluorophenol				1.373	1.518	1.560	1.583	1.479	1.522	1.506	5	AVG	
Phenol-d5				2.118	2.303	2.373	2.418	2.251	2.298	2.293	5	AVG	
Phenol-d6				2.118	2.303	2.373	2.418	2.251	2.298	2.293	5	AVG	
Nitrobenzene-d5				0.481	0.456	0.452	0.492	0.458	0.457	0.466	4	AVG	
2-Fluorobiphenyl				1.159	1.169	1.150	1.213	1.112	1.055	1.143	5	AVG	
2,4,6-Tribromophenol				0.144	0.143	0.147	0.153	0.146	0.146	0.147	2	AVG	
Terphenyl-d14				0.746	0.748	0.721	0.752	0.673	0.637	0.713	7	AVG	
									Average %RSD		6		

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


131 Phorate
Curve Type: Linear By-Response
Amt = 0.0289948 + Rsp/0.8811738
R^2: 0.9961179
MB 1986
11-12-13
Amount/ISTD Amount
Area/ISTD Area
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1 5.4


142 Pentachlorophenol
Curve Type: Linear By-Response
Amt = 0.136801 + Rsp/0.1342385
R^2: 0.9997618
MB1196
11-12-13
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0 7.2
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80 7.20 7.60 8.00 8.40


147 Dinoseb
Curve Type: Linear By-Response
Amt = 0.1347269 + Rsp/0.2133262
R^2: 0.9994310
MB 1996
11.12.13
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.0
0.1
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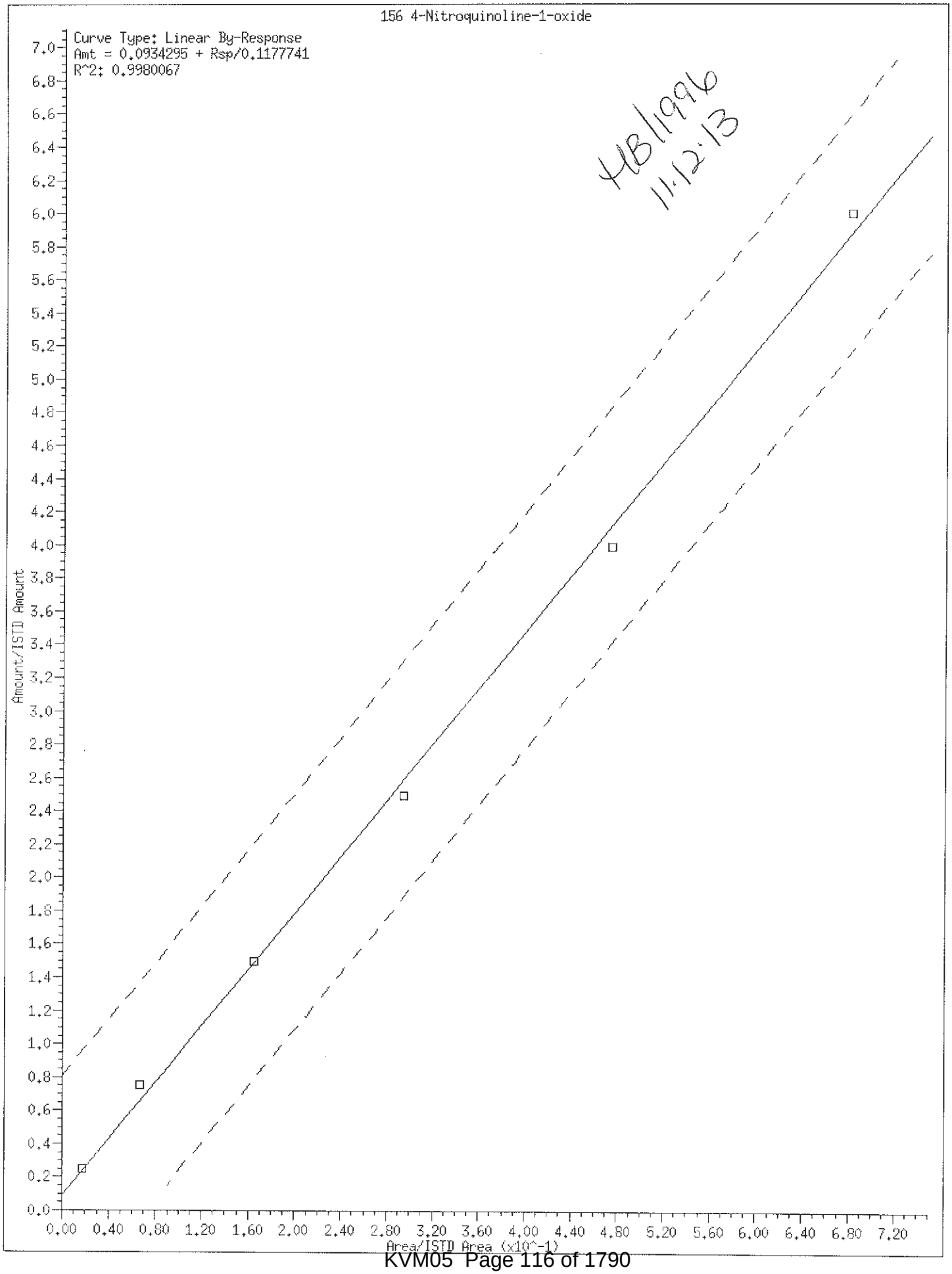
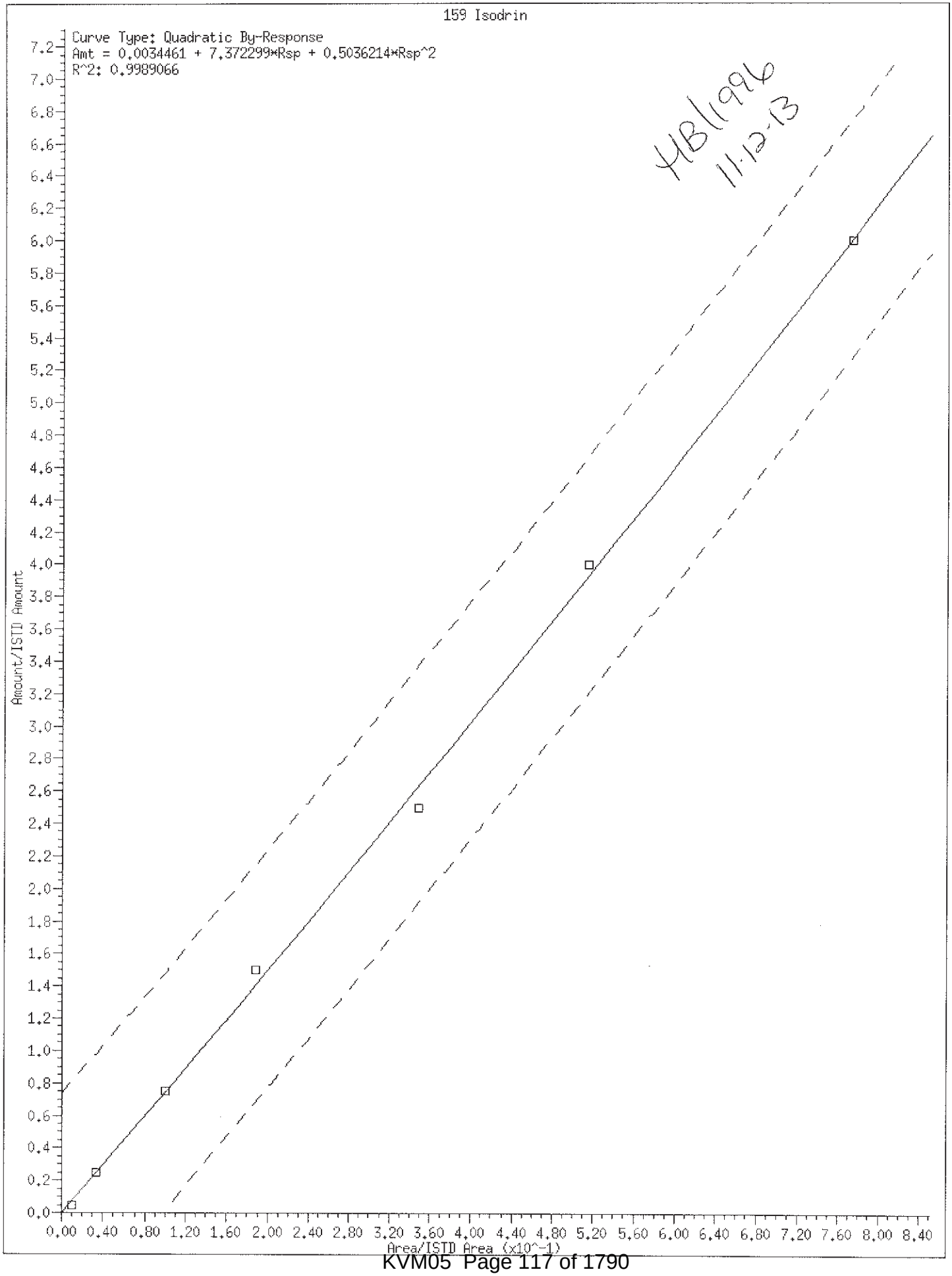
1.2
1.3


156 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.0934295 + Rsp/0.1177741
R^2: 0.9980067
4B11996
11.12.13
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
7.20


159 Isodrin
Curve Type: Quadratic By-Response
Amt = 0.0034461 + 7.372299*Rsp + 0.5036214*Rsp^2
R^2: 0.9989066
HB 1996
11-12-13
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0 7.2
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80 7.20 7.60 8.00 8.40

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09572.i/13nov12.b/ek0501.d SSTD030
/chem/HP09572.i/13nov12.b/ek0502.d SSTD0.50
/chem/HP09572.i/13nov12.b/ek0503.d SSTD120
/chem/HP09572.i/13nov12.b/ek0504.d SSTD080
/chem/HP09572.i/13nov12.b/ek0505a.d SSTD050
/chem/HP09572.i/13nov12.b/ek0506.d SSTD015
/chem/HP09572.i/13nov12.b/ek0507.d SSTD005
/chem/HP09572.i/13nov12.b/ek0508.d SSTD001

Area Summary

	File ID:									
Internal Standard Name	ek0501.d	ek0502.d	ek0503.d	ek0504.d	ek0505a.d	ek0506.d	ek0507.d	ek0508.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	165180	151978	190881	170810	162187	152615	157606	116773	158504	13
Naphthalene-d8	813832	652255	900389	788070	740222	724705	692629	553162	733158	14
Acenaphthene-d10	534667	446132	566480	510366	495466	478675	465599	374201	483948	12
Phenanthrene-d10	900731	796583	942213	847868	830107	828953	840928	687104	834311	9
Pyrene-d10	991279	942277	1022824	941860	914067	931303	949761	805741	937389	7
Perylene-d12	698268	722489	664709	626318	620664	682209	686298	579064	660002	7

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

	File ID:							
Internal Standard Name	ek0501.d	ek0502.d	ek0503.d	ek0504.d	ek0505a.d	ek0506.d	ek0507.d	ek0508.d
1,4-Dichlorobenzene-d4	5.002	5.002	5.002	5.002	5.002	5.002	5.002	5.002
Naphthalene-d8	6.145	6.145	6.151	6.151	6.145	6.145	6.145	6.145
Acenaphthene-d10	7.623	7.622	7.628	7.623	7.622	7.622	7.622	7.623
Phenanthrene-d10	8.837	8.837	8.843	8.843	8.837	8.837	8.837	8.831
Pyrene-d10	9.991	9.991	9.997	9.992	9.991	9.991	9.991	9.986
Perylene-d12	12.480	12.474	12.486	12.480	12.480	12.480	12.474	12.474

Comments: _____

_____

Report generated on 11/12/2013 at 20:30

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP09572

Method: SW-846 8270C (LL) File ID: ek0511.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	51.77	4	20	YES
N-Nitrosodimethylamine	50.00	54.04	8	20	YES
Pyridine	50.00	45.73	-9	20	YES
2-Picoline	50.00	47.91	-4	20	YES
N-Nitrosomethylethylamine	50.00	51.65	3	20	YES
Methyl methanesulfonate	50.00	58.23	16	20	YES
N-Nitrosodiethylamine	50.00	51.90	4	20	YES
Ethyl methanesulfonate	50.00	50.91	2	20	YES
Phenol	50.00	54.45	9	20	YES
Aniline	50.00	52.28	5	20	YES
bis(2-Chloroethyl)ether	50.00	50.10	0	20	YES
2-Chlorophenol	50.00	53.20	6	20	YES
1,3-Dichlorobenzene	50.00	52.05	4	20	YES
1,4-Dichlorobenzene	50.00	52.11	4	20	YES
Benzyl alcohol	50.00	55.47	11	20	YES
1,2-Dichlorobenzene	50.00	54.20	8	20	YES
2-Methylphenol	50.00	52.71	5	20	YES
Indene	50.00	47.13	-6	20	YES
2,2'-oxybis(1-Chloropropane	50.00	49.03	-2	20	YES
bis(2-Chloroisopropyl)ether	50.00	49.03	-2	20	YES
N-Nitrosopyrrolidine	50.00	54.68	9	20	YES
Acetophenone	50.00	50.05	0	20	YES
4-Methylphenol	50.00	52.80	6	20	YES
N-Nitroso-di-n-propylamine	50.00	50.75	1	20	YES
N-Nitrosomorpholine	50.00	53.17	6	20	YES
o-Toluidine	50.00	52.82	6	20	YES
Hexachloroethane	50.00	50.96	2	20	YES
Nitrobenzene	50.00	49.57	-1	20	YES
N-Nitrosopiperidine	50.00	49.47	-1	20	YES
Isophorone	50.00	51.23	2	20	YES
2-Nitrophenol	50.00	50.23	0	20	YES
2,4-Dimethylphenol	50.00	49.65	-1	20	YES
O,O,O-triethylphosphorothio	50.00	49.26	-1	20	YES
Benzoic acid	100.00	97.50	-3	20	YES
bis(2-Chloroethoxy)methane	50.00	44.83	-10	20	YES
2,4-Dichlorophenol	50.00	51.55	3	20	YES
1,2,4-Trichlorobenzene	50.00	52.36	5	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP09572

Method: SW-846 8270C (LL) File ID: ek0511.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	50.00	48.03	-4	20	YES
4-Chloroaniline	50.00	52.45	5	20	YES
2,6-Dichlorophenol	50.00	51.80	4	20	YES
Hexachloropropene	50.00	49.98	0	20	YES
Hexachlorobutadiene	50.00	50.21	0	20	YES
Quinoline	50.00	49.65	-1	20	YES
N-Nitrosodi-n-butylamine	50.00	39.93	-20	20	YES
4-Chloro-3-methylphenol	50.00	49.88	0	20	YES
Safrole	50.00	52.04	4	20	YES
2-Methylnaphthalene	50.00	49.96	0	20	YES
1-Methylnaphthalene	50.00	50.78	2	20	YES
Hexachlorocyclopentadiene	100.00	116.18	16	20	YES
1,2,4,5-Tetrachlorobenzene	50.00	51.50	3	20	YES
cis-Isosafrole	5.50	5.69	3	20	YES
2,4,6-Trichlorophenol	50.00	53.15	6	20	YES
2,4,5-Trichlorophenol	50.00	52.21	4	20	YES
trans-Isosafrole	44.50	47.48	7	20	YES
Isosafrole	50.00	53.35	7	20	YES
1,1'-Biphenyl	50.00	49.49	-1	20	YES
2-Chloronaphthalene	50.00	51.21	2	20	YES
Diphenyl ether	50.00	50.45	1	20	YES
2-Nitroaniline	50.00	53.06	6	20	YES
1,4-Naphthoquinone	62.50	61.80	-1	20	YES
1,4-Dinitrobenzene	50.00	50.08	0	20	YES
Dimethylphthalate	50.00	51.69	3	20	YES
1,3-Dinitrobenzene	50.00	54.52	9	20	YES
2,6-Dinitrotoluene	50.00	51.25	3	20	YES
Acenaphthylene	50.00	56.06	12	20	YES
3-Nitroaniline	50.00	54.16	8	20	YES
Acenaphthene	50.00	50.01	0	20	YES
2,4-Dinitrophenol	100.00	112.55	13	20	YES
4-Nitrophenol	50.00	52.82	6	20	YES
Pentachlorobenzene	50.00	49.97	0	20	YES
2,4-Dinitrotoluene	50.00	51.68	3	20	YES
Dibenzofuran	50.00	49.33	-1	20	YES
1-Naphthylamine	100.00	102.54	3	20	YES
2,3,4,6-Tetrachlorophenol	50.00	55.13	10	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP09572

Method: SW-846 8270C (LL) File ID: ek0511.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Naphthylamine	100.00	100.74	1	20	YES
Diethylphthalate	50.00	51.62	3	20	YES
Thionazin	50.00	47.89	-4	20	YES
Fluorene	50.00	51.06	2	20	YES
4-Chlorophenyl-phenylether	50.00	49.88	0	20	YES
5-Nitro-o-toluidine	50.00	49.41	-1	20	YES
4-Nitroaniline	50.00	52.47	5	20	YES
4,6-Dinitro-2-methylphenol	50.00	49.80	0	20	YES
N-Nitrosodiphenylamine	50.00	50.18	0	20	YES
1,2-Diphenylhydrazine	50.00	51.01	2	20	YES
Tetraethyldithiopyrophospha	50.00	48.60	-3	20	YES
1,3,5-Trinitrobenzene	50.00	52.54	5	20	YES
Diallate (peak 1)	37.50	35.63	-5	20	YES
Phorate	50.00	50.29	1	20	YES
Phenacetin	50.00	48.85	-2	20	YES
4-Bromophenyl-phenylether	50.00	49.38	-1	20	YES
Diallate (peak 2)	12.50	11.79	-6	20	YES
Hexachlorobenzene	50.00	49.60	-1	20	YES
Dimethoate	50.00	47.70	-5	20	YES
Pentachlorophenol	50.00	46.76	-6	20	YES
4-Aminobiphenyl	50.00	61.94	24	20	NO ☆
Pentachloronitrobenzene	50.00	49.11	-2	20	YES
Pronamide	50.00	47.97	-4	20	YES
Dinoseb	50.00	49.31	-1	20	YES
Phenanthrene	50.00	49.12	-2	20	YES
Anthracene	50.00	50.63	1	20	YES
Carbazole	50.00	51.00	2	20	YES
Methyl parathion	50.00	50.11	0	20	YES
Di-n-butylphthalate	50.00	51.45	3	20	YES
Parathion	50.00	50.16	0	20	YES
4-Nitroquinoline-1-oxide	600.00	702.47	17	20	YES
Isodrin	50.00	47.55	-5	20	YES
Fluoranthene	50.00	48.85	-2	20	YES
Benzidine	250.00	236.70	-5	20	YES
Pyrene	50.00	49.11	-2	20	YES
p-Dimethylaminoazobenzene	50.00	54.35	9	20	YES
Chlorobenzilate	50.00	49.40	-1	20	YES

NC = Could not calculate

Comments: ☆ non-CCC, <50% drift, okay HB 11-12-13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP09572

Method: SW-846 8270C (LL) File ID: ek0511.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
3,3'-Dimethylbenzidine	100.00	104.51	5	20	YES
Butylbenzylphthalate	50.00	50.43	1	20	YES
2-Acetylaminofluorene	50.00	51.14	2	20	YES
3,3'-Dichlorobenzidine	50.00	50.71	1	20	YES
4,4'-Methylenebis(2-Chloroa	50.00	47.78	-4	20	YES
Benzo(a)anthracene	50.00	49.41	-1	20	YES
Chrysene	50.00	47.59	-5	20	YES
bis(2-Ethylhexyl)phthalate	50.00	52.69	5	20	YES
6-Methylchrysene	50.00	49.77	0	20	YES
Di-n-octylphthalate	50.00	54.20	8	20	YES
7,12-Dimethylbenz[a]anthrac	50.00	52.78	6	20	YES
Benzo(b)fluoranthene	50.00	47.34	-5	20	YES
Benzo(k)fluoranthene	50.00	51.95	4	20	YES
Benzo(a)pyrene	50.00	52.67	5	20	YES
3-Methylcholanthrene	50.00	52.02	4	20	YES
Dibenz(a,h)acridine	50.00	51.03	2	20	YES
Dibenz(a,j)acridine	50.00	49.10	-2	20	YES
Indeno(1,2,3-cd)pyrene	50.00	50.62	1	20	YES
Dibenz(a,h)anthracene	50.00	52.13	4	20	YES
Benzo(g,h,i)perylene	50.00	49.73	-1	20	YES
2,4_2,6-Dinitrotoluenes	50.00	.00	0	20	YES
Diallate TRANS/CIS	50.00	47.46	-5	20	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP09572

Method: SW-846 8270C File ID: ek0512.d

ICV SAMPLE ID: BASICV2463 BATCH: 13NOV12026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	48.14	-4	20	YES
Caprolactam	50.00	53.09	6	20	YES
Atrazine	50.00	49.95	0	20	YES

NC = Could not calculate

Comments: _____

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.629	0.625	12.410	12.5	-1
N-Nitrosodimethylamine	1.111	0.990	11.140	12.5	-11
Pyridine	1.895	1.668	11.000	12.5	-12
2-Picoline	1.996	1.793	11.230	12.5	-10
N-Nitrosomethylethylamine	0.858	0.774	11.280	12.5	-10
Methyl methanesulfonate	0.981	0.904	11.520	12.5	-8
N-Nitrosodiethylamine	0.824	0.765	11.610	12.5	-7
Ethyl methanesulfonate	0.795	0.747	11.750	12.5	-6
Benzaldehyde	1.426	1.246	10.920	12.5	-13
Aniline	2.907	2.598	11.170	12.5	-11
Phenol	2.360	2.106	11.160	12.5	-11
bis(2-Chloroethyl)ether	1.862	1.655	11.110	12.5	-11
2-Chlorophenol	1.460	1.425	12.200	12.5	-2
1,3-Dichlorobenzene	1.570	1.540	12.260	12.5	-2
1,4-Dichlorobenzene	1.589	1.559	12.270	12.5	-2
Benzyl alcohol	1.033	0.967	11.700	12.5	-6
1,2-Dichlorobenzene	1.486	1.458	12.260	12.5	-2
Indene	2.510	2.406	14.380	15.0	-4
2-Methylphenol	1.465	1.396	11.910	12.5	-5
2,2'-oxybis(1-Chloropropane)	2.312	1.756	9.500	12.5	-24
bis(2-Chloroisopropyl)ether	2.312	1.756	9.500	12.5	-24
N-Nitrosopyrrolidine	0.838	0.768	11.460	12.5	-8
Acetophenone	2.291	2.134	11.650	12.5	-7
N-Nitroso-di-n-propylamine	1.319	1.130	10.720	12.5	-14
N-Nitrosomorpholine	1.040	0.854	10.260	12.5	-18
4-Methylphenol	1.637	1.515	11.570	12.5	-7
o-Toluidine	2.526	2.323	11.490	12.5	-8
Hexachloroethane	0.671	0.636	11.830	12.5	-5
Nitrobenzene	0.488	0.450	11.510	12.5	-8
N-Nitrosopiperidine	0.200	0.194	12.100	12.5	-3
Isophorone	0.832	0.769	11.550	12.5	-8
2-Nitrophenol	0.168	0.189	14.080	12.5	13
2,4-Dimethylphenol	0.407	0.404	12.420	12.5	-1
O,O,O-triethylphosphorothioate	0.181	0.199	13.780	12.5	10
bis(2-Chloroethoxy)methane	0.543	0.492	11.310	12.5	-10
Benzoic acid	0.270	0.178	9.460	12.5	-24

FORM VII SV-1

11-15-15

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dichlorophenol	0.287	0.310	13.470	12.5	8
1,2,4-Trichlorobenzene	0.321	0.342	13.330	12.5	7
Naphthalene	1.066	1.054	12.360	12.5	-1
4-Chloroaniline	0.442	0.439	12.430	12.5	-1
2,6-Dichlorophenol	0.276	0.296	13.430	12.5	7
Hexachloropropene	0.203	0.242	14.920	12.5	19
Hexachlorobutadiene	0.187	0.215	14.350	12.5	15
Quinoline	0.706	0.701	12.410	12.5	-1
Caprolactam	0.128	0.128	12.520	12.5	0
N-Nitrosodi-n-butylamine	0.330	0.362	13.700	12.5	10
4-Chloro-3-methylphenol	0.345	0.353	12.780	12.5	2
Safrole	0.271	0.288	13.260	12.5	6
2-Methylnaphthalene	0.710	0.717	12.620	12.5	1
1-Methylnaphthalene	0.645	0.650	12.600	12.5	1
Hexachlorocyclopentadiene	0.273	0.299	13.680	12.5	9
1,2,4,5-Tetrachlorobenzene	0.580	0.599	12.920	12.5	3
cis-Isosafrole	0.085	0.084	12.330	12.5	-1
2,4,6-Trichlorophenol	0.366	0.402	13.760	12.5	10
2,4,5-Trichlorophenol	0.378	0.412	13.650	12.5	9
trans-Isosafrole	0.478	0.481	12.580	12.5	1
Isosafrole	0.478	0.481	12.580	12.5	1
1,1'-Biphenyl	1.452	1.387	11.940	12.5	-4
2-Chloronaphthalene	1.114	1.104	12.390	12.5	-1
1-Chloronaphthalene	1.098	1.063	12.100	12.5	-3
Diphenyl ether	0.803	0.803	12.490	12.5	0
2-Nitroaniline	0.347	0.379	13.650	12.5	9
1,4-Naphthoquinone	0.479	0.486	12.670	12.5	1
1,4-Dinitrobenzene	0.176	0.210	13.660	12.5	9
Dimethylphthalate	1.260	1.273	12.640	12.5	1
1,3-Dinitrobenzene	0.216	0.237	13.700	12.5	10
2,6-Dinitrotoluene	0.279	0.302	13.520	12.5	8
Acenaphthylene	1.691	1.667	12.330	12.5	-1
3-Nitroaniline	0.320	0.333	12.990	12.5	4
Acenaphthene	1.163	1.124	12.080	12.5	-3
2,4-Dinitrophenol	0.138	0.172	14.810	12.5	18
Pentachlorobenzene	0.464	0.511	13.750	12.5	10

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.204	0.221	13.530	12.5	8
Dibenzofuran	1.654	1.662	12.560	12.5	0
2,4-Dinitrotoluene	0.358	0.401	14.020	12.5	12
2,4_2,6-Dinitrotoluenes	0.633	0.703	27.530	12.5	120
1-Naphthylamine	1.202	1.144	11.890	12.5	-5
2,3,4,6-Tetrachlorophenol	0.298	0.332	13.910	12.5	11
2-Naphthylamine	1.234	1.170	11.850	12.5	-5
Diethylphthalate	1.241	1.242	12.510	12.5	0
Thionazin	0.268	0.246	11.480	12.5	-8
Fluorene	1.331	1.317	12.360	12.5	-1
4-Chlorophenyl-phenylether	0.660	0.686	13.000	12.5	4
5-Nitro-o-toluidine	0.358	0.369	12.890	12.5	3
4-Nitroaniline	0.330	0.336	12.730	12.5	2
4,6-Dinitro-2-methylphenol	0.120	0.135	13.140	12.5	5
N-Nitrosodiphenylamine (1)	0.622	0.596	11.970	12.5	-4
1,2-Diphenylhydrazine	0.985	0.808	10.250	12.5	-18
Tetraethyldithiopyrophosphate	0.142	0.131	11.500	12.5	-8
1,3,5-Trinitrobenzene	0.082	0.103	13.360	12.5	7
Diallate (peak 1)	0.491	0.420	8.030	9.4	-14
Phorate	0.582	0.483	10.370	12.5	-17
Phenacetin	0.414	0.406	12.250	12.5	-2
4-Bromophenyl-phenylether	0.197	0.208	13.190	12.5	5
Diallate (peak 2)	0.209	0.182	2.720	3.1	-13
Hexachlorobenzene	0.195	0.214	13.690	12.5	10
Dimethoate	0.380	0.337	11.060	12.5	-11
Atrazine	0.203	0.202	12.440	12.5	0
Pentachlorophenol	0.135	0.135	11.460	12.5	-8
Pentachloronitrobenzene	0.091	0.102	14.000	12.5	12
4-Aminobiphenyl	0.779	0.761	12.220	12.5	-2
Pronamide	0.329	0.345	13.100	12.5	5
Phenanthrene	1.115	1.059	11.870	12.5	-5
Dinoseb	0.161	0.187	12.290	12.5	-2
Anthracene	1.112	1.095	12.310	12.5	-2
Carbazole	1.076	1.049	12.180	12.5	-3
Methyl parathion	0.265	0.268	11.830	12.5	-5
Di-n-butylphthalate	1.275	1.255	12.310	12.5	-1

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Parathion	0.172	0.171	11.810	12.5	-5
4-Nitroquinoline-1-oxide	0.088	0.094	10.830	12.5	-13
Isodrin	0.134	0.137	12.760	12.5	2
Fluoranthene	1.254	1.303	12.990	12.5	4
Benzidine	0.642	0.630	36.800	37.5	-2
Pyrene	1.061	1.015	11.950	12.5	-4
p-Dimethylaminoazobenzene	0.190	0.212	12.460	12.5	0
Chlorobenzilate	0.299	0.293	12.260	12.5	-2
3,3'-Dimethylbenzidine	0.630	0.684	13.560	12.5	9
Butylbenzylphthalate	0.452	0.439	12.150	12.5	-3
2-Acetylaminofluorene	0.356	0.401	12.550	12.5	0
Benzo(a)anthracene	0.901	0.958	13.290	12.5	6
3,3'-Dichlorobenzidine	0.325	0.369	14.180	12.5	13
4,4'-Methylenebis(2-Chloroanil	0.172	0.188	13.710	12.5	10
Chrysene	0.886	0.907	12.800	12.5	2
bis(2-Ethylhexyl)phthalate	0.594	0.585	12.310	12.5	-2
6-Methylchrysene	0.623	0.706	14.170	12.5	13
Dibenz(a,h)acridine	0.715	0.821	14.350	12.5	15
Di-n-octylphthalate	1.370	1.283	10.950	12.5	-12
Dibenz(a,j)acridine	0.767	0.954	15.560	12.5	24
7,12-Dimethylbenz[a]anthracene	0.523	0.538	12.870	12.5	3
Benzo(b)fluoranthene	1.178	1.193	12.660	12.5	1
Benzo(k)fluoranthene	1.188	1.164	12.250	12.5	-2
Benzo(a)pyrene	1.081	1.114	12.880	12.5	3
3-Methylcholanthrene	0.515	0.564	13.710	12.5	10
NDPA as diphenylamine	0.622	0.596	11.970	12.5	-4
Indeno(1,2,3-cd)pyrene	0.948	1.184	15.600	12.5	25
Dibenz(a,h)anthracene	0.803	1.005	15.640	12.5	25
Benzo(g,h,i)perylene	0.799	1.007	15.740	12.5	26
Diallate TRANS/CIS	0.421	0.361	10.720	12.5	-14
2-Fluorophenol	1.485	1.412	23.780	25.0	-5
Phenol-d5	2.039	1.875	22.990	25.0	-8
Phenol-d6	2.039	1.875	22.990	25.0	-8
Nitrobenzene-d5	0.460	0.433	23.530	25.0	-6
2-Fluorobiphenyl	1.249	1.235	24.730	25.0	-1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4,6-Tribromophenol	0.131	0.166	31.580	25.0	26
Terphenyl-d14	0.623	0.651	26.120	25.0	4
				Average %Drift:	8

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d **
/chem/HP19760.i/13oct29.b/dj1182.d
/chem/HP19760.i/13oct29.b/dj1183.d
/chem/HP19760.i/13oct29.b/dj1184.d
/chem/HP19760.i/13oct29.b/dj1185.d
/chem/HP19760.i/13oct29.b/dj1186.d
/chem/HP19760.i/13oct29.b/dj1187.d
/chem/HP19760.i/13oct29.b/dj1188.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/13nov13.b/dk0381.d

Area Summary

File ID:

Internal Standard Name	dk0381.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	137427	151909	75954	303818	Yes
Naphthalene-d8	522469	608104	304052	1216208	Yes
Acenaphthene-d10	315923	340173	170086	680346	Yes
Phenanthrene-d10	559806	574655	287328	1149310	Yes
Pyrene-d10	730002	743541	371770	1487082	Yes
Perylene-d12	576555	528760	264380	1057520	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dk0381.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.924	6.029	Yes
Naphthalene-d8	7.888	7.987	Yes
Acenaphthene-d10	10.692	10.797	Yes
Phenanthrene-d10	12.592	12.691	Yes
Pyrene-d10	14.533	14.649	Yes
Perylene-d12	18.980	19.120	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-15-13

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date: 11/15/13 Time: 11:51

Lab File ID: ek0661.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 12:21 19:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1,4-Dioxane	0.581	0.593	30.610	30.0	2
	N-Nitrosodimethylamine	0.967	0.988	30.650	30.0	2
	Pyridine	1.591	1.396	26.320	30.0	-12
	2-Picoline	1.950	1.855	28.540	30.0	-5
	N-Nitrosomethylethylamine	0.882	0.917	31.160	30.0	4
	Methyl methanesulfonate	1.060	0.997	28.210	30.0	-6
	N-Nitrosodiethylamine	0.903	0.875	29.050	30.0	-3
	Ethyl methanesulfonate	0.940	0.879	28.060	30.0	-6
	Aniline	3.065	2.914	28.530	30.0	-5
*	Phenol	2.384	2.371	29.840	30.0	-1*
	bis(2-Chloroethyl)ether	1.952	1.910	29.340	30.0	-2
	2-Chlorophenol	1.549	1.495	28.960	30.0	-3
	1,3-Dichlorobenzene	1.580	1.528	29.000	30.0	-3
*	1,4-Dichlorobenzene	1.602	1.549	29.010	30.0	-3*
	Benzyl alcohol	1.196	1.170	29.340	30.0	-2
	1,2-Dichlorobenzene	1.496	1.477	29.610	30.0	-1
	2-Methylphenol	1.715	1.637	28.640	30.0	-5
	2,2'-oxybis(1-Chloropropane)	2.090	1.924	27.610	30.0	-8
	bis(2-Chloroisopropyl)ether	2.090	1.924	27.610	30.0	-8
	N-Nitrosopyrrolidine	1.081	1.043	28.940	30.0	-4
	Acetophenone	2.868	2.602	27.210	30.0	-9
#	N-Nitroso-di-n-propylamine	1.658	1.498	27.090	30.0	-10#
	N-Nitrosomorpholine	1.353	1.261	27.980	30.0	-7
	4-Methylphenol	2.042	1.900	27.910	30.0	-7
	o-Toluidine	2.927	2.771	28.410	30.0	-5
	Hexachloroethane	0.669	0.663	29.730	30.0	-1
	Nitrobenzene	0.484	0.473	29.280	30.0	-2
	N-Nitrosopiperidine	0.217	0.206	28.480	30.0	-5
	Isophorone	0.861	0.834	29.070	30.0	-3
*	2-Nitrophenol	0.197	0.199	30.390	30.0	1*
	2,4-Dimethylphenol	0.456	0.445	29.270	30.0	-2
	O,O,O-triethylphosphorothioate	0.172	0.170	29.630	30.0	-1
	bis(2-Chloroethoxy)methane	0.573	0.673	35.220	30.0	17
	Benzoic acid	0.368	0.360	39.040	40.0	-2
*	2,4-Dichlorophenol	0.294	0.296	30.250	30.0	1*
	1,2,4-Trichlorobenzene	0.289	0.287	29.720	30.0	-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date: 11/15/13 Time: 11:51

Lab File ID: ek0661.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 12:21 19:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Naphthalene	1.055	1.004	28.560	30.0	-5
	4-Chloroaniline	0.461	0.457	29.700	30.0	-1
	2,6-Dichlorophenol	0.289	0.276	28.630	30.0	-5
	Hexachloropropene	0.176	0.175	29.700	30.0	-1
*	Hexachlorobutadiene	0.153	0.153	30.010	30.0	0*
	Caprolactam	0.171	0.160	28.010	30.0	-7
	N-Nitrosodi-n-butylamine	0.449	0.430	28.690	30.0	-4
*	4-Chloro-3-methylphenol	0.439	0.418	28.530	30.0	-5*
	Safrole	0.294	0.278	28.340	30.0	-6
	2-Methylnaphthalene	0.757	0.734	29.060	30.0	-3
	1-Methylnaphthalene	0.694	0.686	29.650	30.0	-1
#	Hexachlorocyclopentadiene	0.207	0.204	29.550	30.0	-2#
	1,2,4,5-Tetrachlorobenzene	0.435	0.433	29.910	30.0	0
	cis-Isosafrole	0.733	0.688	3.100	3.3	-6
*	2,4,6-Trichlorophenol	0.328	0.325	29.760	30.0	-1*
	2,4,5-Trichlorophenol	0.345	0.358	31.190	30.0	4
	trans-Isosafrole	0.521	0.507	26.000	26.7	-3
	Isosafrole	0.463	0.451	29.220	30.0	-3
	1,1'-Biphenyl	1.459	1.415	29.090	30.0	-3
	2-Chloronaphthalene	1.197	1.285	32.210	30.0	7
	1-Chloronaphthalene	1.107	1.060	28.720	30.0	-4
	Diphenyl ether	0.775	0.753	29.150	30.0	-3
	2-Nitroaniline	0.406	0.402	29.700	30.0	-1
	1,4-Naphthoquinone	0.484	0.482	29.880	30.0	0
	1,4-Dinitrobenzene	0.215	0.213	29.380	30.0	-2
	Dimethylphthalate	1.348	1.287	28.660	30.0	-4
	1,3-Dinitrobenzene	0.251	0.244	29.170	30.0	-3
	2,6-Dinitrotoluene	0.329	0.323	29.420	30.0	-2
	Acenaphthylene	1.628	1.610	29.680	30.0	-1
	3-Nitroaniline	0.374	0.360	28.870	30.0	-4
*	Acenaphthene	1.166	1.112	28.610	30.0	-5*
#	2,4-Dinitrophenol	0.173	0.171	39.680	40.0	-1#
	Pentachlorobenzene	0.394	0.376	28.570	30.0	-5
#	4-Nitrophenol	0.305	0.290	28.550	30.0	-5#
	Dibenzofuran	1.617	1.547	28.710	30.0	-4
	2,4-Dinitrotoluene	0.445	0.424	28.630	30.0	-5

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date: 11/15/13 Time: 11:51

Lab File ID: ek0661.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 12:21 19:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
	1-Naphthylamine	1.298	1.274	29.430	30.0	-2
	2,3,4,6-Tetrachlorophenol	0.273	0.272	29.890	30.0	0
	2-Naphthylamine	1.316	1.305	29.760	30.0	-1
	Diethylphthalate	1.413	1.373	29.140	30.0	-3
	Thionazin	0.317	0.297	28.080	30.0	-6
	Fluorene	1.373	1.312	28.680	30.0	-4
	4-Chlorophenyl-phenylether	0.620	0.573	27.710	30.0	-8
	5-Nitro-o-toluidine	0.436	0.412	28.310	30.0	-6
	4-Nitroaniline	0.387	0.371	28.730	30.0	-4
	4,6-Dinitro-2-methylphenol	0.137	0.132	28.580	30.0	-5
*	N-Nitrosodiphenylamine (1)	0.693	0.692	29.940	30.0	0*
	1,2-Diphenylhydrazine	0.969	0.961	29.770	30.0	-1
	Tetraethyldithiopyrophosphate	0.167	0.163	29.230	30.0	-3
	1,3,5-Trinitrobenzene	0.090	0.089	28.880	30.0	-4
	Diallate (peak 1)	0.559	0.527	21.230	22.5	-6
	Phorate	0.778	0.868	33.470	30.0	12
	Phenacetin	0.526	0.499	28.420	30.0	-5
	4-Bromophenyl-phenylether	0.185	0.188	30.460	30.0	2
	Diallate (peak 2)	0.259	0.233	6.720	7.5	-10
	Hexachlorobenzene	0.181	0.179	29.680	30.0	-1
	Dimethoate	0.413	0.415	30.150	30.0	1
	Diallate TRANS/CIS	0.484	0.453	28.110	30.0	-6
	Atrazine	0.232	0.212	27.430	30.0	-9
*	Pentachlorophenol	0.116	0.120	29.600	30.0	-1*
	Pentachloronitrobenzene	0.097	0.091	28.060	30.0	-6
	4-Aminobiphenyl	0.748	0.742	29.790	30.0	-1
	Pronamide	0.367	0.359	29.340	30.0	-2
	Dinoseb	0.185	0.187	28.940	30.0	-4
	Phenanthrene	1.131	1.127	29.900	30.0	0
	Anthracene	1.141	1.141	29.980	30.0	0
	Carbazole	1.105	1.098	29.810	30.0	-1
	Methyl parathion	0.316	0.318	30.180	30.0	1
	Di-n-butylphthalate	1.379	1.361	29.610	30.0	-1
	Parathion	0.217	0.213	29.440	30.0	-2
	4-Nitroquinoline-1-oxide	0.103	0.112	30.320	30.0	1
	Isodrin	0.140	0.129	27.690	30.0	-8

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP09572 Calibration Date: 11/15/13 Time: 11:51

Lab File ID: ek0661.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 12:21 19:42

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF30	ACTUAL CONC.	TRUE CONC.	% DRIFT
* Fluoranthene	1.181	1.164	29.560	30.0	-1*
Benzidine	0.718	0.775	97.140	90.0	8
Pyrene	1.092	1.083	29.740	30.0	-1
p-Dimethylaminoazobenzene	0.221	0.236	32.020	30.0	7
Chlorobenzilate	0.426	0.431	30.370	30.0	1
3,3'-Dimethylbenzidine	0.588	0.611	31.160	30.0	4
Butylbenzylphthalate	0.580	0.583	30.180	30.0	1
2-Acetylaminofluorene	0.492	0.487	29.290	30.0	-2
3,3'-Dichlorobenzidine	0.335	0.338	30.330	30.0	1
4,4'-Methylenebis(2-Chloroanil	0.183	0.182	29.930	30.0	0
Benzo(a)anthracene	0.973	0.955	29.450	30.0	-2
Chrysene	0.914	0.913	29.960	30.0	0
bis(2-Ethylhexyl)phthalate	0.765	0.789	30.930	30.0	3
6-Methylchrysene	0.661	0.659	29.920	30.0	0
Dibenz(a,h)acridine	0.806	0.808	30.060	30.0	0
* Di-n-octylphthalate	1.831	1.955	32.040	30.0	7*
Dibenz(a,j)acridine	0.863	0.857	29.790	30.0	-1
7,12-Dimethylbenz[a]anthracene	0.610	0.620	30.450	30.0	1
Quinoline	0.746	0.704	28.310	30.0	-6
Benzo(b)fluoranthene	1.254	1.282	30.670	30.0	2
Benzo(k)fluoranthene	1.252	1.263	30.270	30.0	1
* Benzo(a)pyrene	1.111	1.091	29.480	30.0	-2*
3-Methylcholanthrene	0.588	0.606	30.900	30.0	3
NDPA as diphenylamine	0.690	0.692	30.080	30.0	0
Indeno(1,2,3-cd)pyrene	1.120	1.079	28.920	30.0	-4
Dibenz(a,h)anthracene	0.948	0.956	30.250	30.0	1
Benzo(g,h,i)perylene	0.936	0.901	28.860	30.0	-4
Indene	2.759	2.681	34.980	36.0	-3
2-Fluorophenol	1.506	1.511	60.220	60.0	0
Phenol-d5	2.293	2.219	58.060	60.0	-3
Phenol-d6	2.293	2.219	58.060	60.0	-3
Nitrobenzene-d5	0.466	0.460	59.280	60.0	-1
2-Fluorobiphenyl	1.143	1.154	60.580	60.0	1
2,4,6-Tribromophenol	0.147	0.146	59.640	60.0	-1
Terphenyl-d14	0.713	0.717	60.360	60.0	1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP09572.i/13nov12.b/ek0501.d
/chem/HP09572.i/13nov12.b/ek0502.d
/chem/HP09572.i/13nov12.b/ek0503.d
/chem/HP09572.i/13nov12.b/ek0504.d
/chem/HP09572.i/13nov12.b/ek0505a.d
/chem/HP09572.i/13nov12.b/ek0506.d **
/chem/HP09572.i/13nov12.b/ek0507.d
/chem/HP09572.i/13nov12.b/ek0508.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP09572.i/13nov15.b/ek0661.d

Area Summary

File ID:

Internal Standard Name	ek0661.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	230937	152615	76308	305230	Yes
Naphthalene-d8	1032734	724705	362352	1449410	Yes
Acenaphthene-d10	658026	478675	239338	957350	Yes
Phenanthrene-d10	1097331	828953	414476	1657906	Yes
Pyrene-d10	1190463	931303	465652	1862606	Yes
Perylene-d12	804712	682209	341104	1364418	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ek0661.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	4.829	5.002	Yes
Naphthalene-d8	5.983	6.145	Yes
Acenaphthene-d10	7.461	7.622	Yes
Phenanthrene-d10	8.669	8.837	Yes
Pyrene-d10	9.818	9.991	Yes
Perylene-d12	12.217	12.480	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	137427		5.924		522469		7.888		315923		10.692	
	UPPER LIMIT	274854		6.424		1044938		8.388		631846		11.192	
	LOWER LIMIT	68714		5.424		261235		7.388		157962		10.192	
	LLI SAMPLE NO.												
01	SBLKWD314	116893		5.924		441917		7.882		263542		10.686	
02	314WDLCS	120892		5.924		460968		7.888		275060		10.692	
03	314WDLCSD	121592		5.924		454668		7.888		277321		10.692	
04	7266449DL	113310		5.924		415560		7.888		259635		10.686	
05	7266450DL	120492		5.924		456215		7.882		278765		10.686	
06	7266451DL	119692		5.924		439331		7.882		267896		10.686	
07	7266590	124259		5.924		466177		7.882		272381		10.686	
08	7266798	121116		5.924		461933		7.882		276636		10.686	
09	7266799	123039		5.924		477986		7.883		282053		10.686	
10	7266805	128584		5.924		489788		7.883		291304		10.686	
11	7266807	125087		5.924		478541		7.882		283192		10.686	
12	7266810	128316		5.924		495759		7.882		288695		10.686	
13	7266811	130476		5.924		500764		7.882		290626		10.686	
14	7266819	128426		5.924		489529		7.882		290260		10.686	
15	7266823	132279		5.924		507246		7.883		294869		10.686	
16	7266824	128022		5.924		487001		7.882		280600		10.686	
17	7267172	127993		5.924		486134		7.883		281274		10.686	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	559806	12.592	730002	14.533	576555	18.980
	UPPER LIMIT	1119612	13.092	1460004	15.033	1153110	19.480
	LOWER LIMIT	279903	12.092	365001	14.033	288278	18.480
	LLI SAMPLE NO.						
01	SBLKWD314	462153	12.592	586235	14.527	470041	18.980
02	314WDLCS	468730	12.592	624100	14.527	486341	18.980
03	314WDLCSD	468707	12.592	624748	14.527	494320	18.980
04	7266449DL	468381	12.592	609342	14.527	465755	18.980
05	7266450DL	494379	12.592	639804	14.527	474488	18.980
06	7266451DL	475290	12.592	606093	14.527	447630	18.980
07	7266590	472498	12.592	625502	14.533	473283	18.980
08	7266798	489596	12.592	618104	14.527	472021	18.980
09	7266799	493530	12.592	609839	14.527	451379	18.980
10	7266805	528872	12.592	689351	14.527	495828	18.980
11	7266807	499367	12.592	638825	14.527	481341	18.980
12	7266810	506394	12.592	642017	14.527	476708	18.980
13	7266811	512701	12.592	629913	14.527	464719	18.980
14	7266819	514451	12.592	656174	14.527	465134	18.980
15	7266823	517078	12.592	633558	14.527	442752	18.980
16	7266824	494776	12.592	612628	14.527	416744	18.980
17	7267172	499119	12.592	611356	14.527	401539	18.980

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	137427		5.924		522469		7.888		315923		10.692	
	UPPER LIMIT	274854		6.424		1044938		8.388		631846		11.192	
	LOWER LIMIT	68714		5.424		261235		7.388		157962		10.192	
	LLI SAMPLE NO.												
18	7267633	124825		5.924		479125		7.883		277945		10.686	
19	7267634	126397		5.924		480613		7.882		281340		10.686	
20	7270635	124754		5.924		466964		7.882		281089		10.686	
21	7270637	124627		5.924		475509		7.882		278731		10.686	
22	7270638	126096		5.924		474534		7.882		280026		10.686	
23	7270641	122956		5.924		462289		7.882		267972		10.686	
24	7270643	119954		5.924		453415		7.882		260283		10.686	
25	7270644	120882		5.924		454531		7.882		270609		10.686	
26	7270742	114673		5.924		411085		7.888		251971		10.686	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	559806	12.592	730002	14.533	576555	18.980
UPPER LIMIT	1119612	13.092	1460004	15.033	1153110	19.480
LOWER LIMIT	279903	12.092	365001	14.033	288278	18.480
LLI SAMPLE NO.						
18 7267633	491773	12.592	629206	14.527	442225	18.980
19 7267634	496258	12.592	637016	14.527	439913	18.980
20 7270635	498067	12.592	639066	14.527	429217	18.980
21 7270637	492411	12.592	622714	14.527	415522	18.980
22 7270638	492103	12.592	616340	14.527	408572	18.980
23 7270641	477159	12.592	590375	14.527	392741	18.980
24 7270643	462173	12.592	573728	14.527	366243	18.980
25 7270644	471949	12.592	587422	14.527	383743	18.980
26 7270742	438197	12.592	591514	14.533	431295	18.980

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ek0661.d Date Analyzed: 11/15/13

Instrument ID: HP09572 Time Analyzed: 11:51

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	230937		4.829		1032734		5.983		658026		7.461	
	UPPER LIMIT	461874		5.329		2065468		6.483		1316052		7.961	
	LOWER LIMIT	115469		4.329		516367		5.483		329013		6.961	
	LLI SAMPLE NO.												
01	SBLKLB316	163694		4.829		657806		5.977		408449		7.455	
02	316LBLCS	145247		4.829		627811		5.983		412776		7.455	
03	SBLKLE314	144243		4.829		640522		5.977		400301		7.455	
04	314LELCS	130819		4.829		620531		5.983		419235		7.455	
05	7263650	141347		4.829		677427		5.977		438541		7.455	
06	7263650MS	139388		4.829		651764		5.977		426866		7.455	
07	7263650MSD	59578*		4.823		270290*		5.977		170020*		7.455	
08	7265116	133960		4.829		630058		5.977		411206		7.455	
09	7265116MS	144119		4.829		688885		5.983		458065		7.461	
10	7265116MSD	152087		4.829		712192		5.983		438532		7.461	
11	7265117	149297		4.829		706776		5.983		451974		7.455	
12	7265118	152029		4.829		718857		5.977		440457		7.455	
13	7265119	136044		4.829		655195		5.977		404808		7.455	
14	7265120	172214		4.829		811756		5.983		501254		7.455	
15	7265121	131416		4.829		629219		5.983		422523		7.455	
16	7265123	153748		4.829		684044		5.983		442891		7.455	
17	7265124	151079		4.829		691026		5.983		442046		7.455	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ek0661.d Date Analyzed: 11/15/13

Instrument ID: HP09572 Time Analyzed: 11:51

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1097331	8.669	1190463	9.818	804712	12.217
	UPPER LIMIT	2194662	9.169	2380926	10.318	1609424	12.717
	LOWER LIMIT	548666	8.169	595232	9.318	402356	11.717
	LLI SAMPLE NO.						
01	SBLKLB316	713271	8.663	814178	9.812	569994	12.211
02	316LBLCS	698211	8.663	789518	9.818	503121	12.217
03	SBLKLE314	721126	8.663	832912	9.812	617242	12.211
04	314LELCS	739187	8.663	817916	9.818	518344	12.217
05	7263650	784114	8.663	896345	9.812	620264	12.217
06	7263650MS	715185	8.663	824199	9.812	548589	12.217
07	7263650MSD	288894*	8.663	323880*	9.812	230735*	12.211
08	7265116	697863	8.663	789365	9.812	535094	12.217
09	7265116MS	762841	8.663	773183	9.818	510656	12.217
10	7265116MSD	716020	8.669	739826	9.818	480093	12.217
11	7265117	746589	8.663	804891	9.812	517412	12.211
12	7265118	690034	8.663	716786	9.812	479030	12.217
13	7265119	704219	8.663	744343	9.818	498826	12.217
14	7265120	820326	8.663	874865	9.818	584706	12.217
15	7265121	696732	8.663	737998	9.818	476066	12.217
16	7265123	727607	8.663	744969	9.818	494649	12.217
17	7265124	724421	8.663	746640	9.818	484064	12.217

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ek0661.d Date Analyzed: 11/15/13

Instrument ID: HP09572 Time Analyzed: 11:51

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	230937		4.829		1032734		5.983		658026		7.461	
	UPPER LIMIT	461874		5.329		2065468		6.483		1316052		7.961	
	LOWER LIMIT	115469		4.329		516367		5.483		329013		6.961	
	LLI SAMPLE NO.												
18	7265125	148286		4.829		720872		5.983		480535		7.455	
19	7265126	142179		4.829		666808		5.983		417534		7.455	
20	7266800	140743		4.829		685235		5.983		444131		7.461	
21	7266801MS	138138		4.829		652817		5.983		428260		7.461	
22	7266802MSD	148115		4.829		737291		5.983		475147		7.461	
23	7266804	147224		4.829		693916		5.983		452859		7.461	
24	7266806	140271		4.829		641081		5.983		423256		7.455	
25	7266808	140914		4.829		668852		5.983		427010		7.461	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ek0661.d Date Analyzed: 11/15/13

Instrument ID: HP09572 Time Analyzed: 11:51

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	1097331	8.669	1190463	9.818	804712	12.217
UPPER LIMIT	2194662	9.169	2380926	10.318	1609424	12.717
LOWER LIMIT	548666	8.169	595232	9.318	402356	11.717
LLI SAMPLE NO.						
18 7265125	790986	8.663	840184	9.818	554171	12.217
19 7265126	715703	8.669	729410	9.818	465393	12.217
20 7266800	740230	8.669	803216	9.818	560210	12.217
21 7266801MS	708762	8.669	762845	9.818	494183	12.217
22 7266802MSD	815433	8.669	858583	9.818	556169	12.217
23 7266804	753807	8.669	764677	9.818	502240	12.217
24 7266806	749655	8.663	791575	9.818	501213	12.217
25 7266808	728622	8.669	784704	9.818	522073	12.217

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10724: PAH 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Naphthalene	3	17	ug/kg
2-Methylnaphthalene	3	17	ug/kg
1-Methylnaphthalene	3	17	ug/kg
Acenaphthylene	3	17	ug/kg
Acenaphthene	3	17	ug/kg
Fluorene	3	17	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
1,4-Dioxane	1	5	ug/l
N-Nitrosodimethylamine	2	5	ug/l
Pyridine	2	5	ug/l
Benzaldehyde	0.3	1	ug/l
Phenol	0.1	0.3	ug/l
Phenol	0.1	0.3	ug/l
Aniline	1	5	ug/l
a-methylstyrene	1	5	ug/l
bis(2-Chloroethyl)ether	0.1	0.3	ug/l
bis(2-Chloroethyl)ether	0.1	0.3	ug/l
2-Chlorophenol	0.1	0.3	ug/l
2-Chlorophenol	0.1	0.3	ug/l
1,3-Dichlorobenzene	1	5	ug/l
1,4-Dichlorobenzene	1	5	ug/l
Benzyl alcohol	5	15	ug/l
1,2-Dichlorobenzene	1	5	ug/l
2-Methylphenol	0.1	0.3	ug/l
2-Methylphenol	0.1	0.3	ug/l
2,2'-oxybis(1-Chloropropane)	0.1	0.3	ug/l
2,2'-oxybis(1-Chloropropane)	0.1	0.3	ug/l
bis(2-Chloroisopropyl)ether	1	5	ug/l
4-Methylphenol	0.1	0.3	ug/l
4-Methylphenol	0.1	0.3	ug/l
N-Nitroso-di-n-propylamine	0.1	0.3	ug/l
N-Nitroso-di-n-propylamine	0.1	0.3	ug/l
Acetophenone	0.1	0.3	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Acetophenone	0.1	0.3	ug/l
o-Toluidine	1	5	ug/l
Hexachloroethane	0.3	1	ug/l
Nitrobenzene	0.1	0.3	ug/l
Nitrobenzene	0.1	0.3	ug/l
Isophorone	0.1	0.3	ug/l
Isophorone	0.1	0.3	ug/l
2-Nitrophenol	0.1	0.3	ug/l
2-Nitrophenol	0.1	0.3	ug/l
2,4-Dimethylphenol	0.1	0.3	ug/l
2,4-Dimethylphenol	0.1	0.3	ug/l
Benzoic acid	6	15	ug/l
bis(2-Chloroethoxy)methane	0.1	0.3	ug/l
bis(2-Chloroethoxy)methane	0.1	0.3	ug/l
1,2,3,4-Tetrahydronaphthalene	1	5	ug/l
2,4-Dichlorophenol	0.1	0.3	ug/l
2,4-Dichlorophenol	0.1	0.3	ug/l
1,2,4-Trichlorobenzene	1	5	ug/l
Naphthalene	0.03	0.1	ug/l
Naphthalene	0.03	0.1	ug/l
4-Chloroaniline	0.1	0.3	ug/l
4-Chloroaniline	0.1	0.3	ug/l
Hexachlorobutadiene	0.1	0.3	ug/l
Hexachlorobutadiene	0.1	0.3	ug/l
Caprolactam	1	4	ug/l
4-Chloro-3-methylphenol	0.1	0.3	ug/l
4-Chloro-3-methylphenol	0.1	0.3	ug/l
2-Methylnaphthalene	0.03	0.1	ug/l
2-Methylnaphthalene	0.03	0.1	ug/l
1-Methylnaphthalene	1	5	ug/l
Hexachlorocyclopentadiene	1	4	ug/l
2,4,6-Trichlorophenol	0.1	0.3	ug/l
2,4,6-Trichlorophenol	0.1	0.3	ug/l
2,4,5-Trichlorophenol	0.1	0.3	ug/l
2,4,5-Trichlorophenol	0.1	0.3	ug/l
1,1'-Biphenyl	0.1	0.3	ug/l
1,1'-Biphenyl	0.1	0.3	ug/l
2-Chloronaphthalene	0.1	0.3	ug/l
2-Chloronaphthalene	0.1	0.3	ug/l
1-Chloronaphthalene	1	5	ug/l
Diphenyl ether	1	5	ug/l
2-Nitroaniline	0.1	0.3	ug/l
2-Nitroaniline	0.1	0.3	ug/l
Dimethylphthalate	0.5	1	ug/l
2,6-Dinitrotoluene	0.1	0.3	ug/l
2,6-Dinitrotoluene	0.1	0.3	ug/l
Acenaphthylene	0.03	0.1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Acenaphthylene	0.03	0.1	ug/l
3-Nitroaniline	0.1	0.3	ug/l
3-Nitroaniline	0.1	0.3	ug/l
Acenaphthene	0.03	0.1	ug/l
Acenaphthene	0.03	0.1	ug/l
2,4-Dinitrophenol	3	8	ug/l
2,4-Dinitrophenol	3	8	ug/l
4-Nitrophenol	3	8	ug/l
2,4-Dinitrotoluene	0.3	1	ug/l
Dibenzofuran	0.1	0.3	ug/l
Dibenzofuran	0.1	0.3	ug/l
1-Naphthylamine	5	15	ug/l
2,3,4,6-Tetrachlorophenol	2	5	ug/l
2-Naphthylamine	5	15	ug/l
Diethylphthalate	0.5	1	ug/l
Fluorene	0.03	0.1	ug/l
Fluorene	0.03	0.1	ug/l
4-Chlorophenyl-phenylether	0.1	0.3	ug/l
4-Chlorophenyl-phenylether	0.1	0.3	ug/l
4-Nitroaniline	0.1	0.3	ug/l
4-Nitroaniline	0.1	0.3	ug/l
4,6-Dinitro-2-methylphenol	1	4	ug/l
N-Nitrosodiphenylamine	0.1	0.3	ug/l
N-Nitrosodiphenylamine	0.1	0.3	ug/l
1,2-Diphenylhydrazine	1	5	ug/l
4-Bromophenyl-phenylether	0.1	0.3	ug/l
4-Bromophenyl-phenylether	0.1	0.3	ug/l
Hexachlorobenzene	0.03	0.1	ug/l
Hexachlorobenzene	0.03	0.1	ug/l
Atrazine	0.5	1	ug/l
Pentachlorophenol	0.3	1	ug/l
Pentachlorophenol	0.3	1	ug/l
Phenanthrene	0.03	0.1	ug/l
Phenanthrene	0.03	0.1	ug/l
Anthracene	0.03	0.1	ug/l
Anthracene	0.03	0.1	ug/l
Carbazole	0.1	0.3	ug/l
Carbazole	0.1	0.3	ug/l
Di-n-butylphthalate	0.5	1	ug/l
Fluoranthene	0.03	0.1	ug/l
Fluoranthene	0.03	0.1	ug/l
Benzidine	20	60	ug/l
Pyrene	0.03	0.1	ug/l
Pyrene	0.03	0.1	ug/l
4,4'-Methylenedianiline	1	5	ug/l
Butylbenzylphthalate	0.5	1	ug/l
bis(2-Ethylhexyl)phthalate	0.5	1	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
3,3'-Dichlorobenzidine	0.5	1	ug/l
Benzo(a)anthracene	0.03	0.1	ug/l
Benzo(a)anthracene	0.03	0.1	ug/l
Chrysene	0.03	0.1	ug/l
Chrysene	0.03	0.1	ug/l
Di-n-octylphthalate	0.5	1	ug/l
Benzo(b)fluoranthene	0.03	0.1	ug/l
Benzo(b)fluoranthene	0.03	0.1	ug/l
Benzo(k)fluoranthene	0.03	0.1	ug/l
Benzo(k)fluoranthene	0.03	0.1	ug/l
Benzo(a)pyrene	0.03	0.1	ug/l
Benzo(a)pyrene	0.03	0.1	ug/l
Indeno(1,2,3-cd)pyrene	0.03	0.1	ug/l
Indeno(1,2,3-cd)pyrene	0.03	0.1	ug/l
Dibenz(a,h)anthracene	0.03	0.1	ug/l
Dibenz(a,h)anthracene	0.03	0.1	ug/l
Benzo(g,h,i)perylene	0.03	0.1	ug/l
Benzo(g,h,i)perylene	0.03	0.1	ug/l
Octachlorostyrene	2	10	ug/l
2,4_2,6-Dinitrotoluenes	1	5	ug/l
Total PAHs	1	5	ug/l
1,2,4,5-Tetrachlorobenzene	2	5	ug/l

FB106 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7266798

Data file: /chem/HP19760.i/13nov13.b/dk0389.d Injection date and time: **13-NOV-2013 08:58**
Data file Sample Info. Line: FB106;7266798;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 233 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	121116 (-12)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	461933 (-12)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	276636 (-12)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	489596 (-13)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	618104 (-15)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	472021 (-18)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.966(0.001)	112	1183402	32.907	66%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1165220	23.593	47%		10 - 83
36) Nitrobenzene-d5	(2)	6.769(0.001)	82	969534	22.806	91%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1724608	24.965	100%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	468120	64.429	129%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2270092	29.450	118%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0389.d Injection date and time: **13-NOV-2013 08:58**
Data file Sample Info. Line: FB106;7266798;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 233 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

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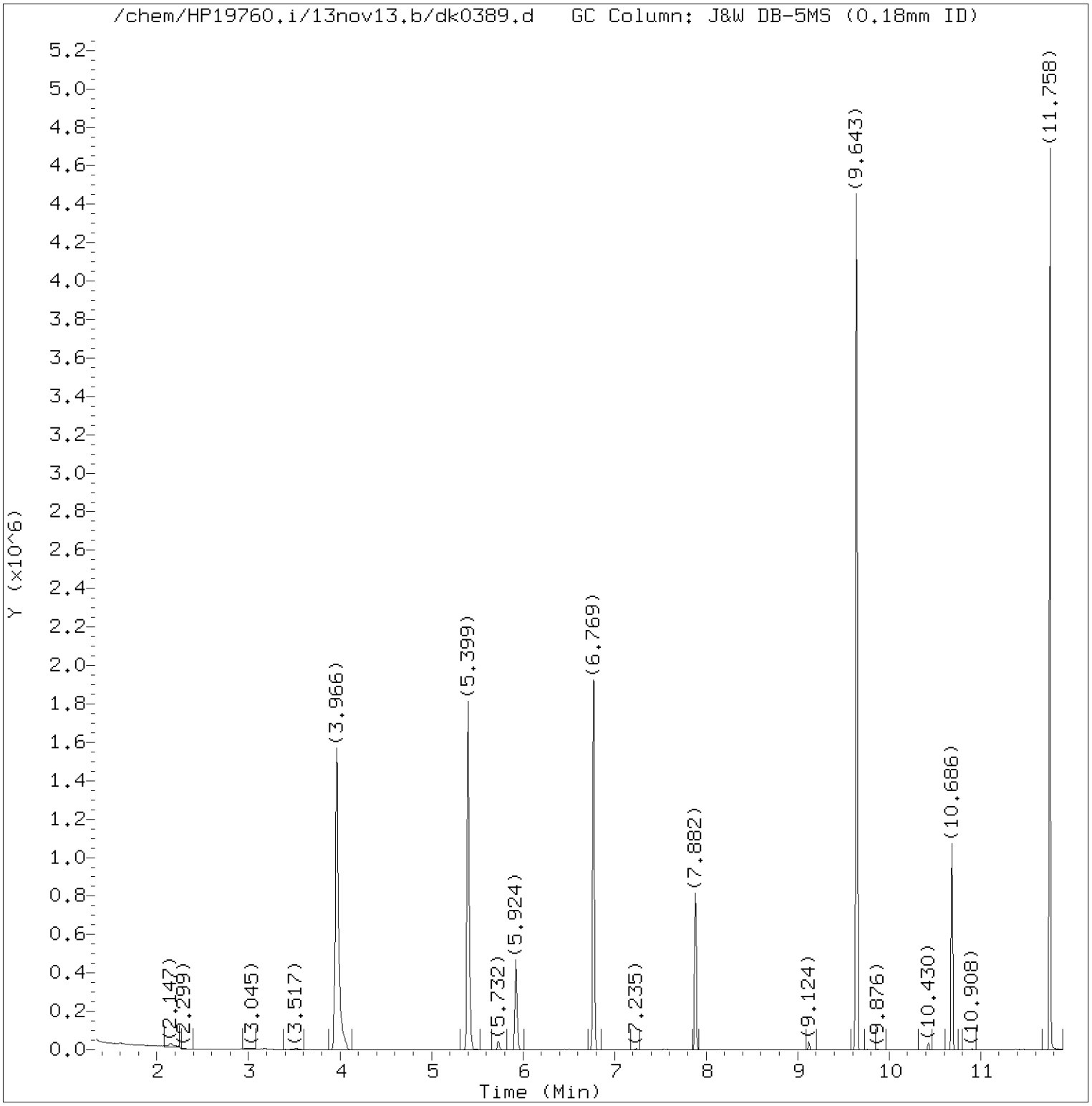
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:11. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

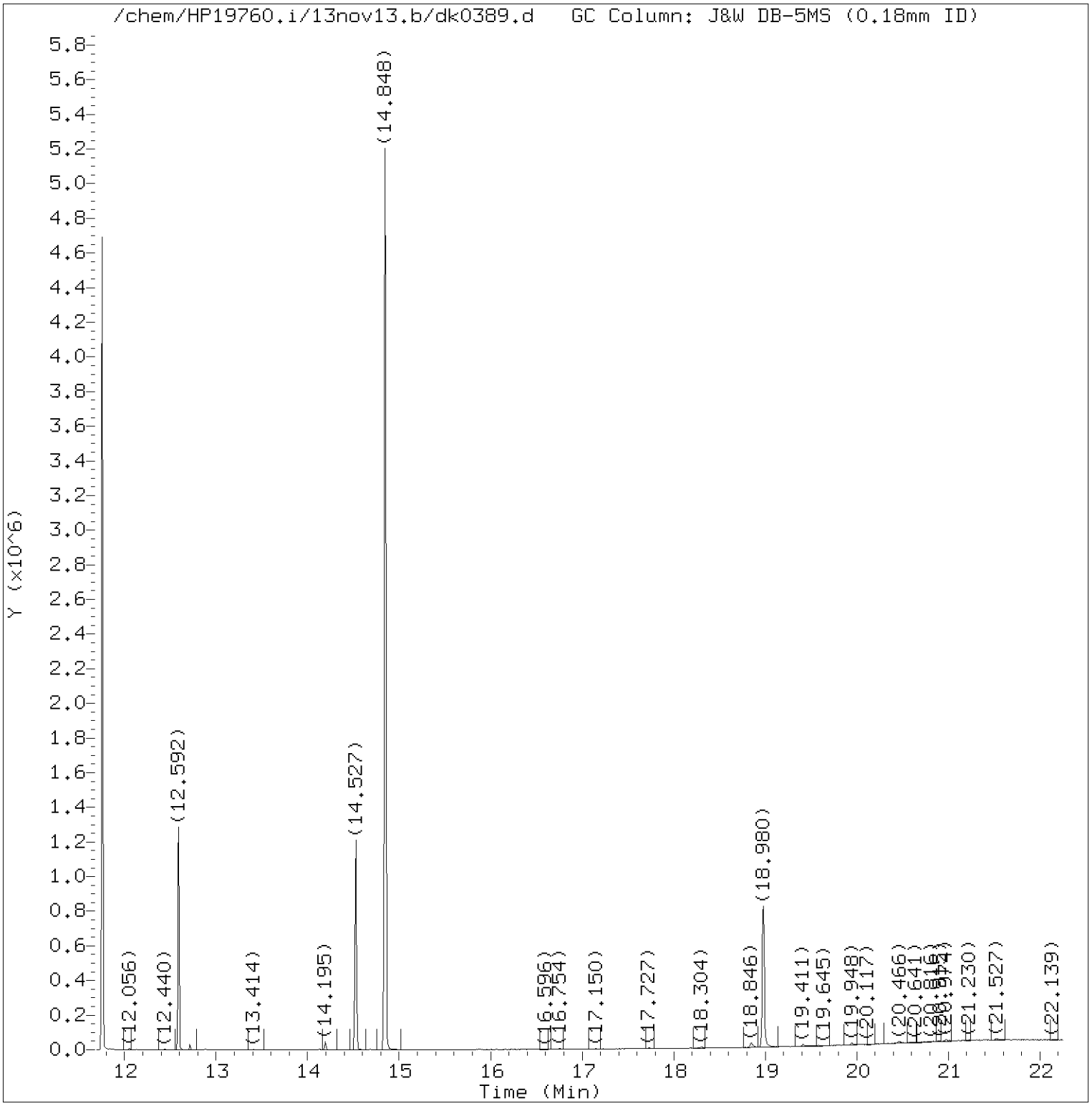
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:26.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:26.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.966	112	1183402	32.907
13)$Phenol-d6	(1)	5.399	99	1165220	23.593
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	121116	5.000
36)$Nitrobenzene-d5	(2)	6.769	82	969534	22.806
52)*Naphthalene-d8	(2)	7.882	136	461933	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1724608	24.965
92)*Acenaphthene-d10	(3)	10.686	164	276636	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	468120	64.429
130)*Phenanthrene-d10	(4)	12.592	188	489596	5.000
145)*Pyrene-d10	(5)	14.527	212	618104	5.000
149)$Terphenyl-d14	(5)	14.848	244	2270092	29.450
172)*Perylene-d12	(6)	18.980	264	472021	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 21:26.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

FB106

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7266798

Sample wt/vol: 233 (g/mL) mL Lab File ID: dk0389.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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10.					
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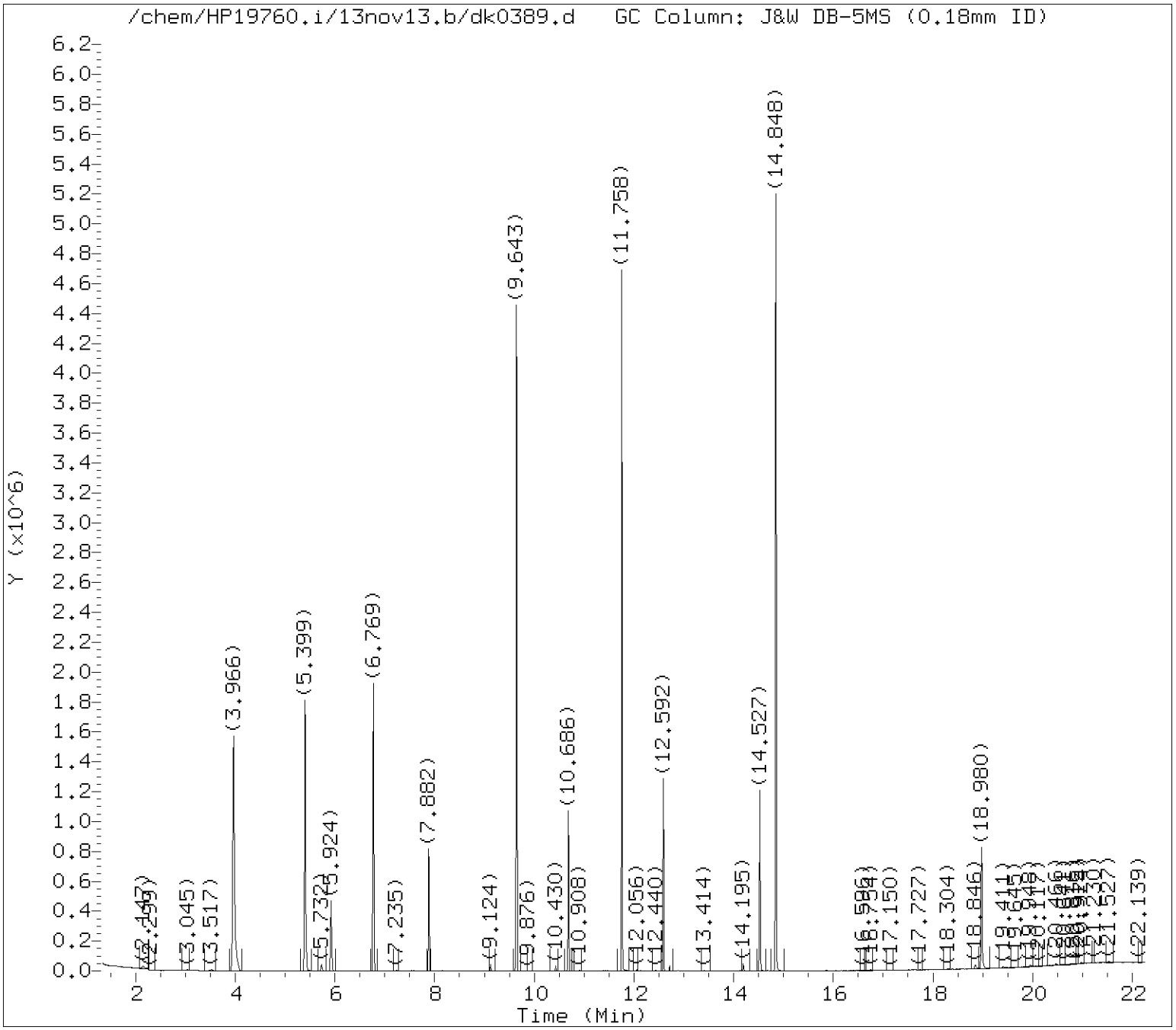
30.					



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

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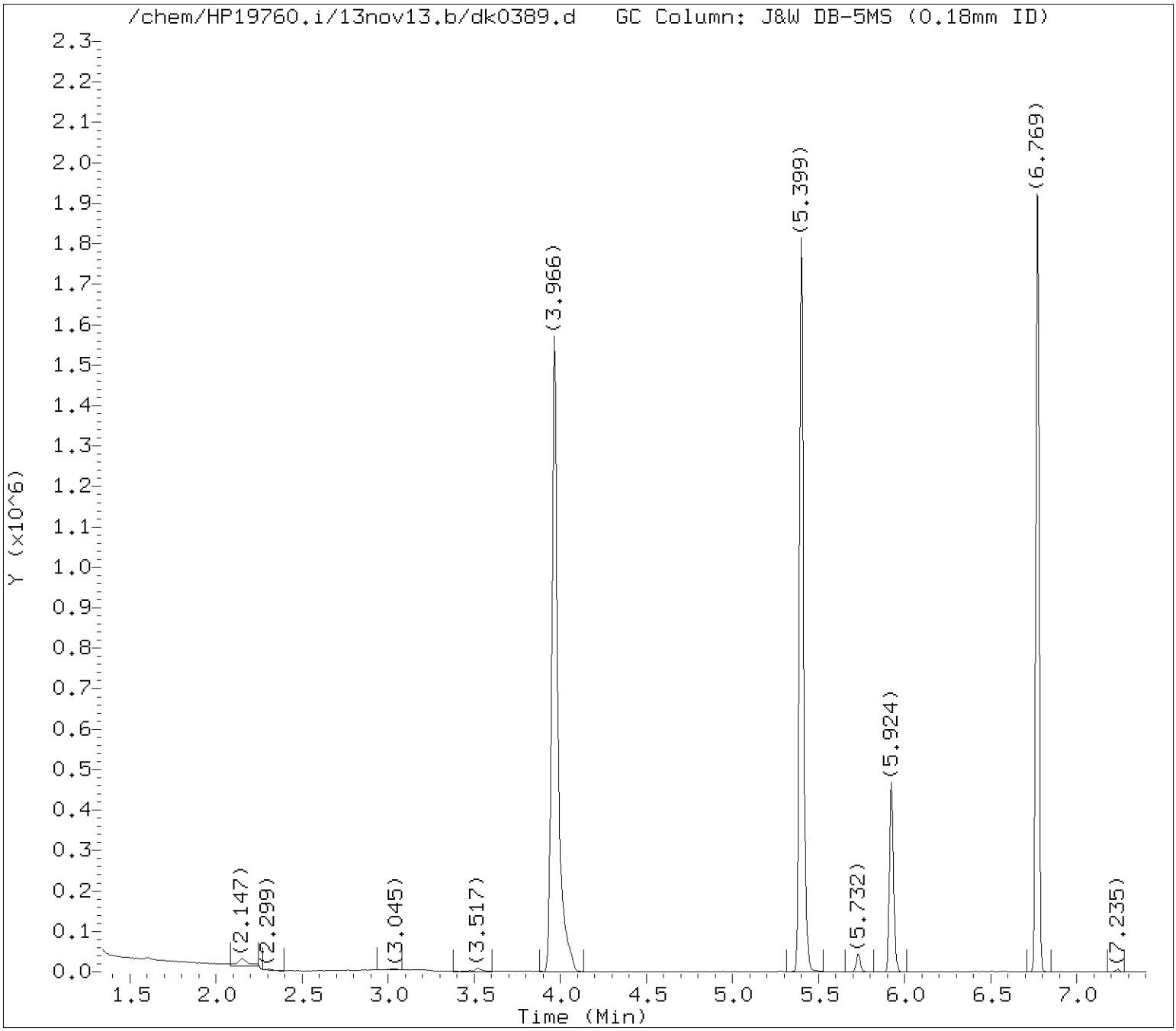
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

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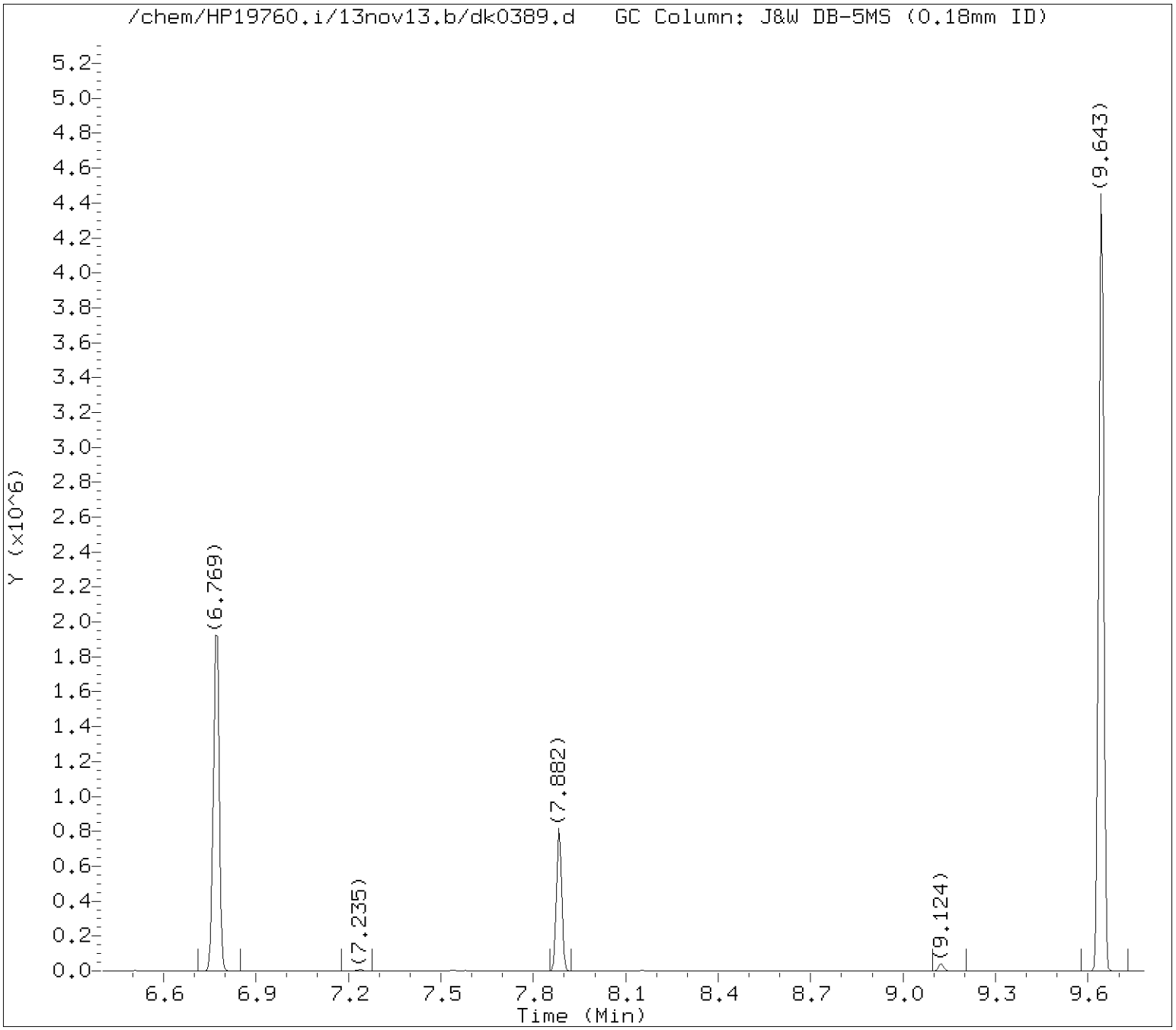
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

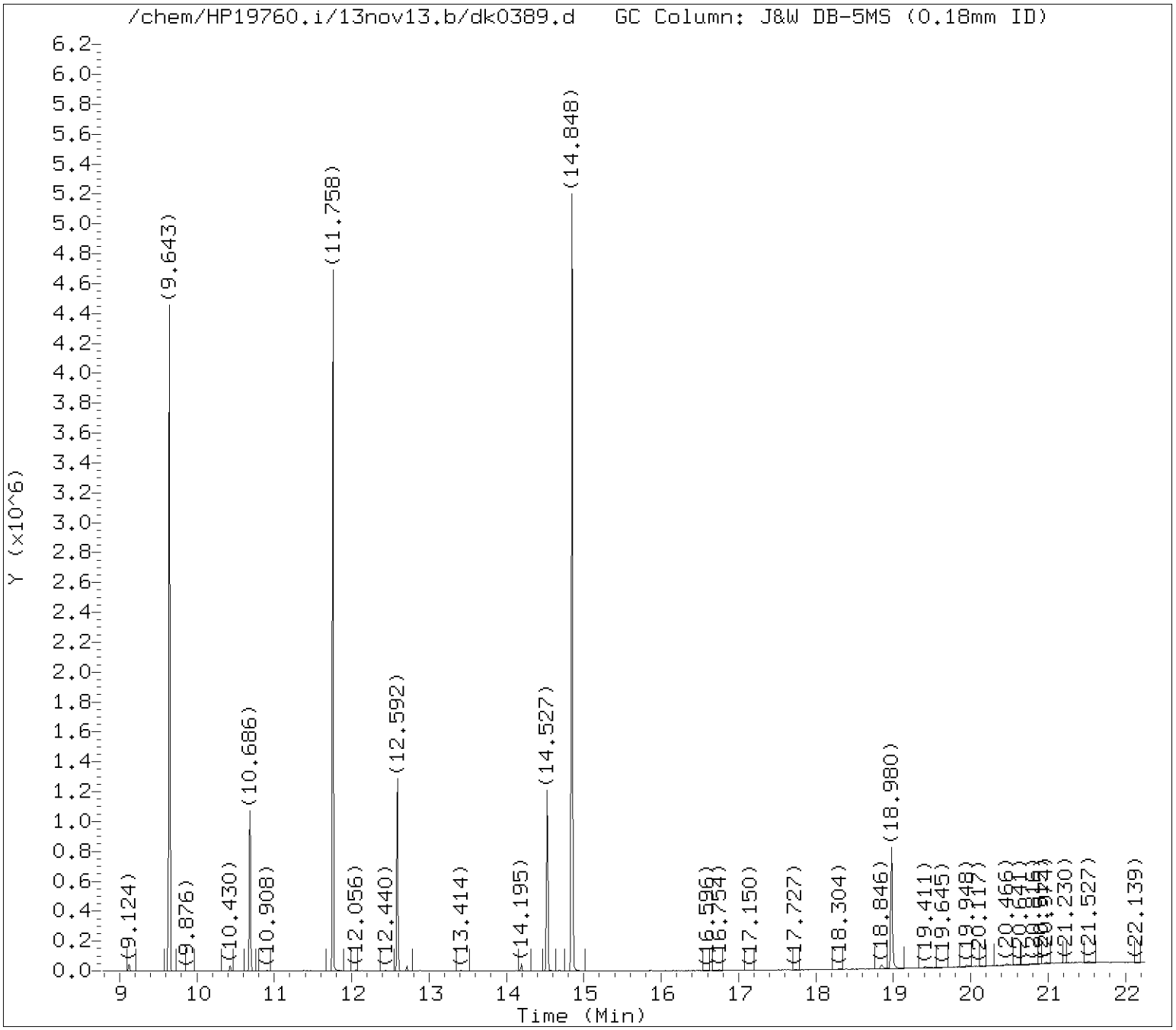
Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

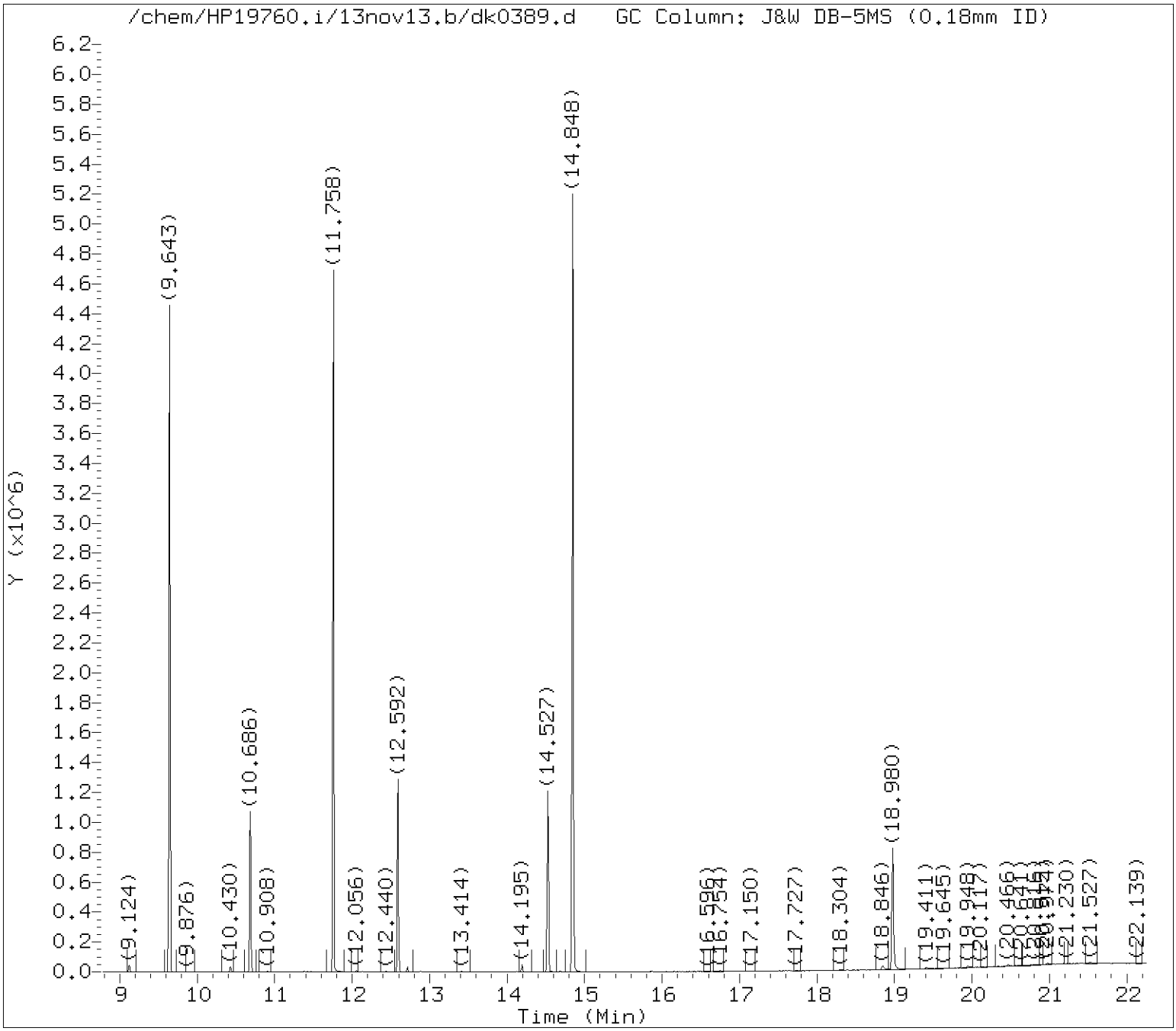
Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

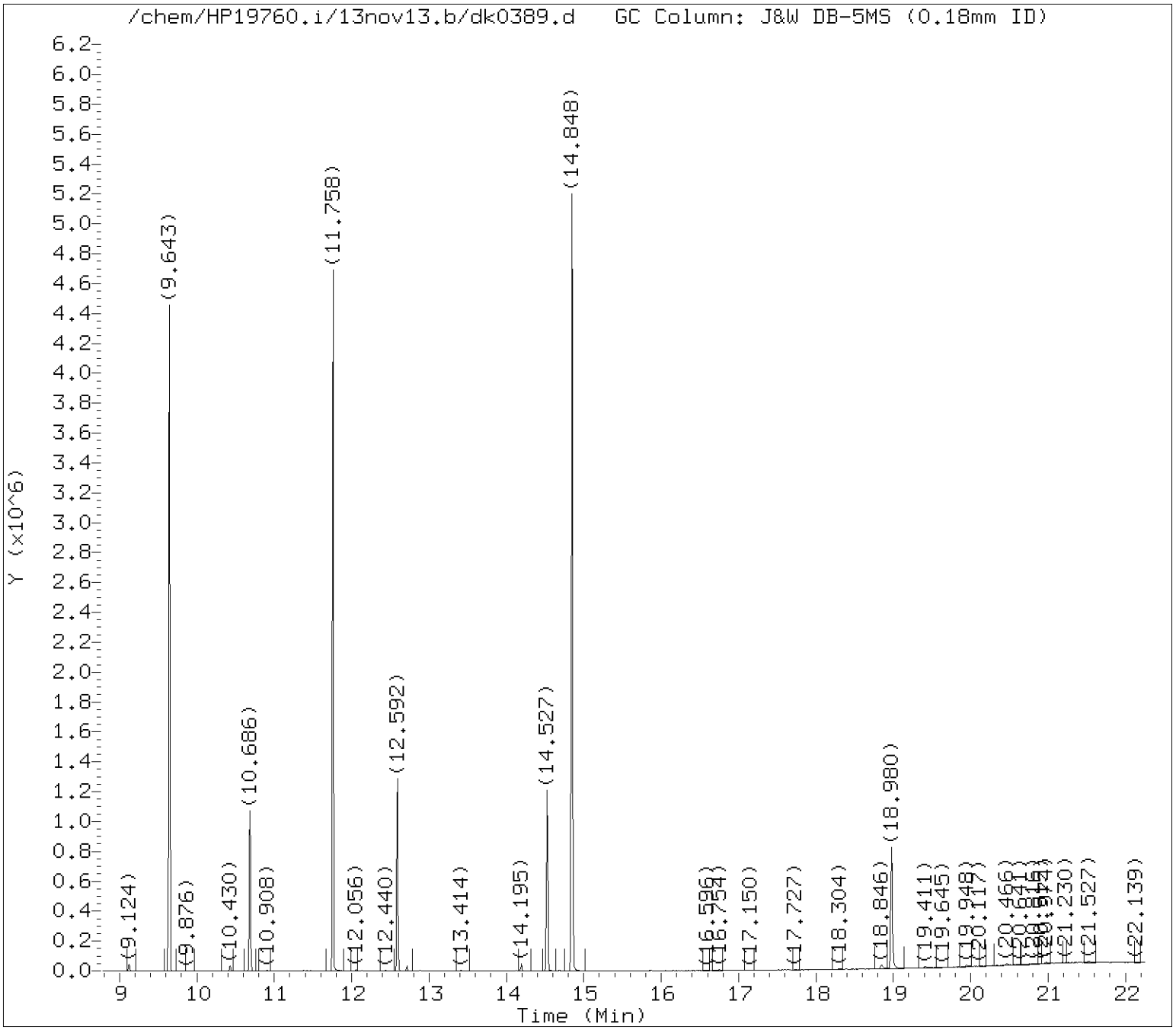
Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.560

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

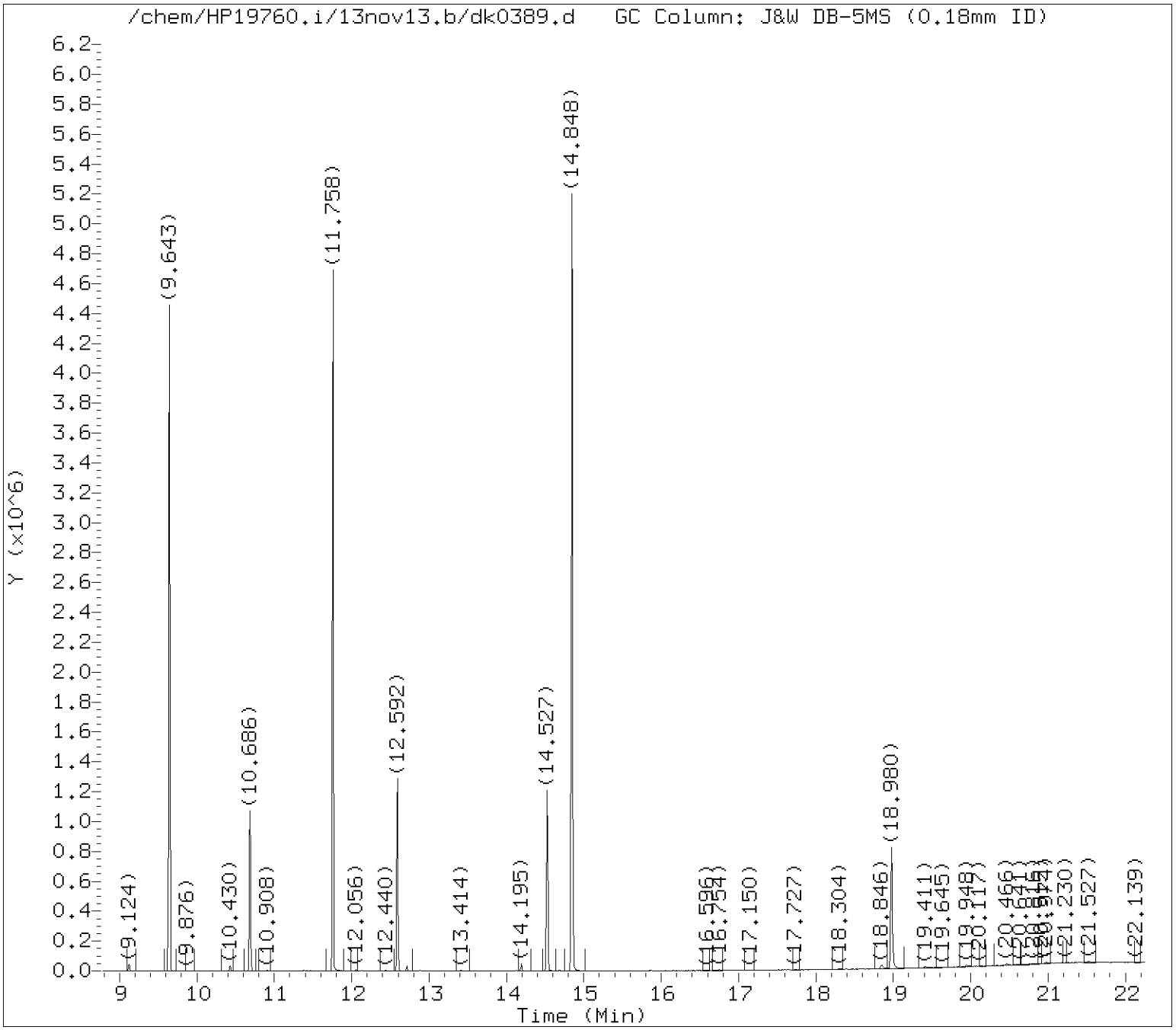
Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.560
Chromatogram End Time (min.): 16.754

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0389.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 08:58 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:41 ceb05247

Sample Name: FB106 Lab Sample ID: 7266798

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0389.d
Lab Smp Id: 7266798 Client Smp ID: FB106
Inj Date : 13-NOV-2013 08:58
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : FB106;7266798;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;233;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

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Target 3.5 esignature user ID: ceb05247

FB206 Lancaster Labs
Analysis Summary for GC/MS Semivolatiles 7266799

Data file: /chem/HP19760.i/13nov13.b/dk0390.d Injection date and time: **13-NOV-2013 09:25**
Data file Sample Info. Line: FB206;7266799;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	123039 (-10)	5.00	
52) Naphthalene-d8	7.883(0.005)	1123	136	477986 (-9)	5.00	
92) Acenaphthene-d10	10.686(0.005)	1604	164	282053 (-11)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	493530 (-12)	5.00	
145) Pyrene-d10	14.527(0.005)	2263	212	609839 (-16)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	451379 (-22)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.966(0.001)	112	1169603	32.015	64%		10 - 107
13) Phenol-d6	(1)	5.400(0.001)	99	1101918	21.963	44%		10 - 83
36) Nitrobenzene-d5	(2)	6.769(0.001)	82	921526	20.949	84%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1637284	23.245	93%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.759(-0.001)	330	457016	61.693	123%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2205003	28.994	116%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0390.d Injection date and time: **13-NOV-2013 09:25**
Data file Sample Info. Line: FB206;7266799;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 247 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

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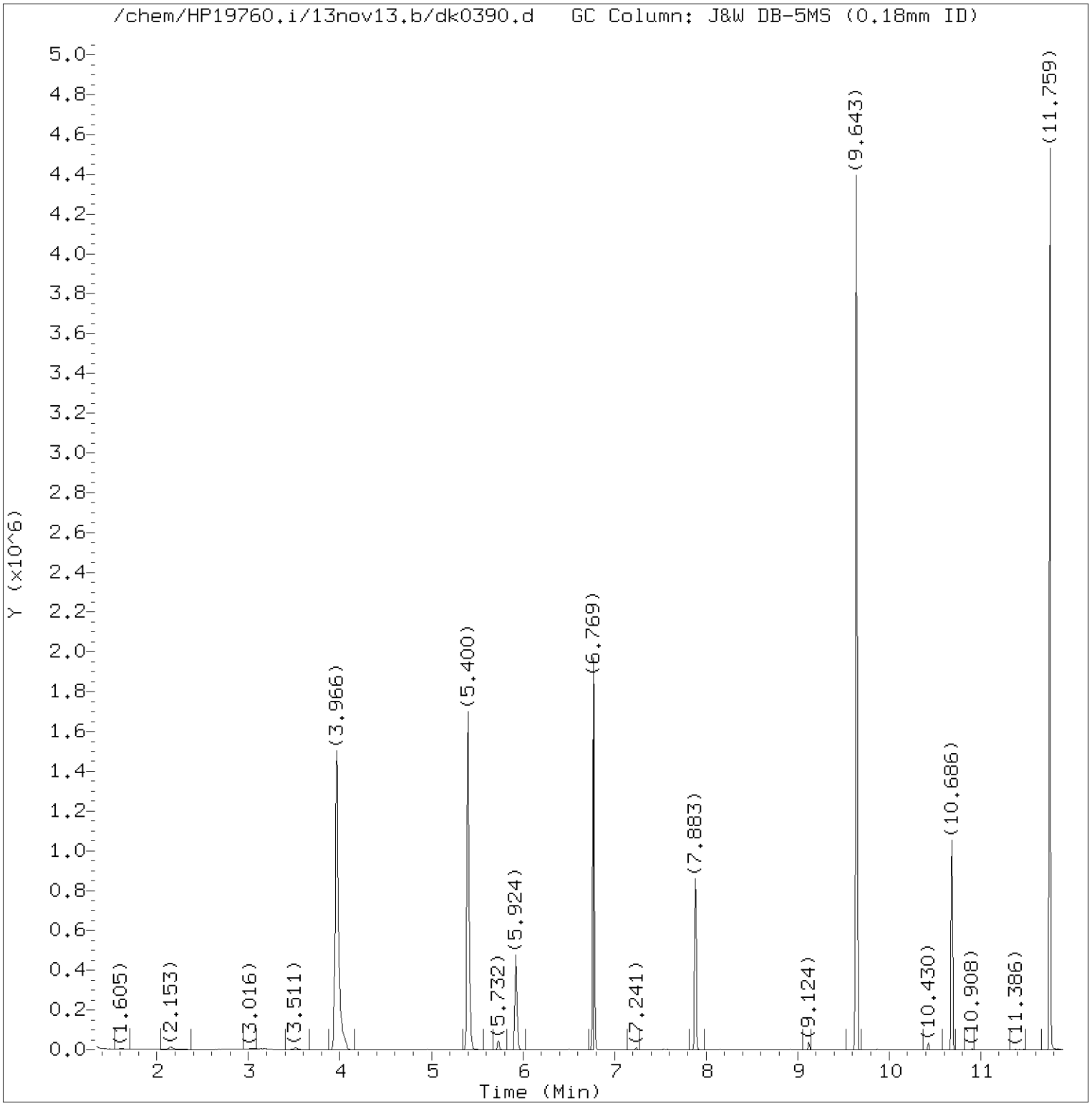
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:12. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

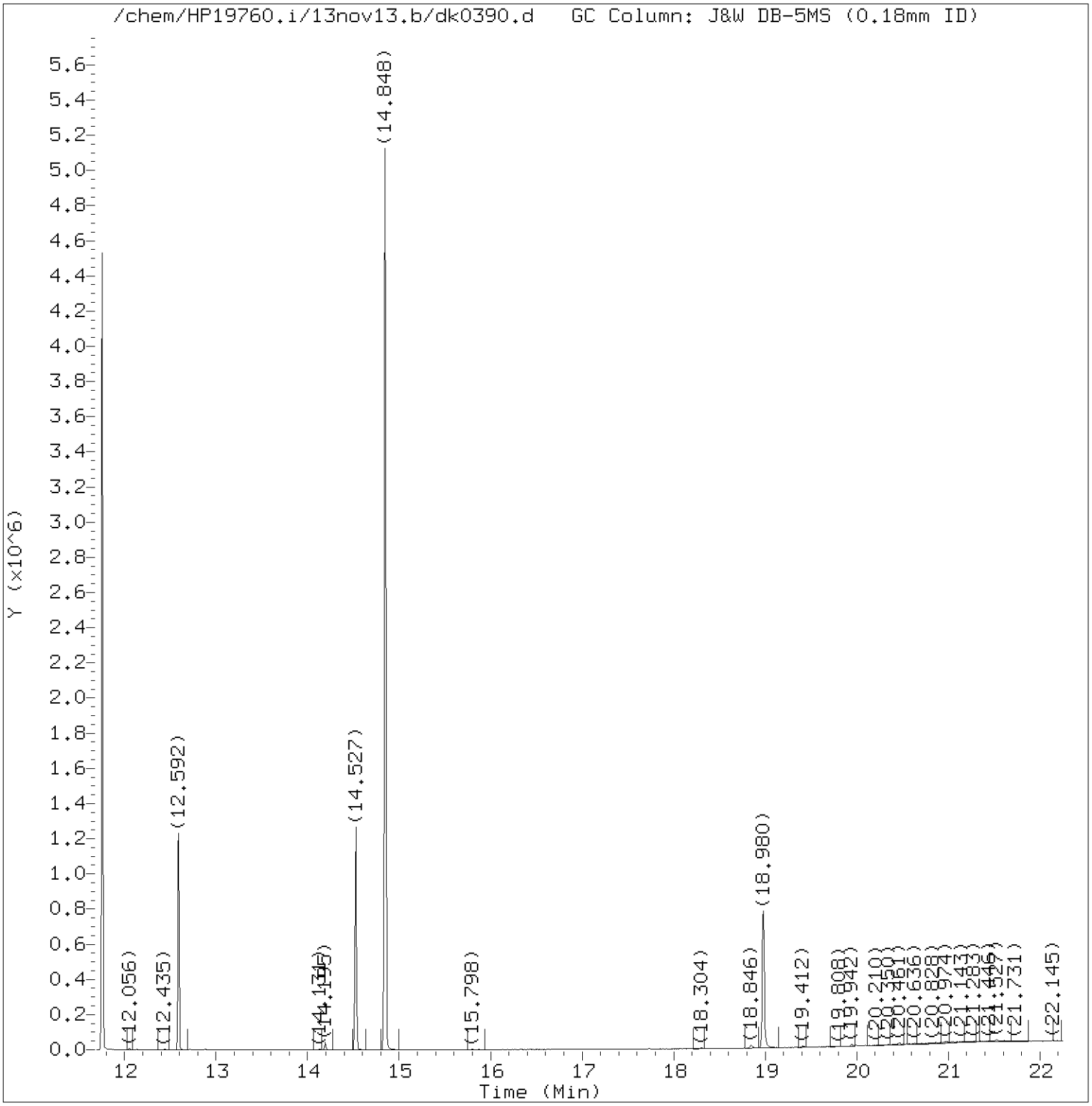
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:28.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:28.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.966	112	1169603	32.015
13)$Phenol-d6	(1)	5.400	99	1101918	21.963
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	123039	5.000
36)$Nitrobenzene-d5	(2)	6.769	82	921526	20.949
52)*Naphthalene-d8	(2)	7.883	136	477986	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1637284	23.245
92)*Acenaphthene-d10	(3)	10.686	164	282053	5.000
112)$2,4,6-Tribromophenol	(3)	11.759	330	457016	61.693
130)*Phenanthrene-d10	(4)	12.592	188	493530	5.000
145)*Pyrene-d10	(5)	14.527	212	609839	5.000
149)$Terphenyl-d14	(5)	14.848	244	2205003	28.994
172)*Perylene-d12	(6)	18.980	264	451379	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:28.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

FB206

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7266799

Sample wt/vol: 247 (g/mL) mL Lab File ID: dk0390.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
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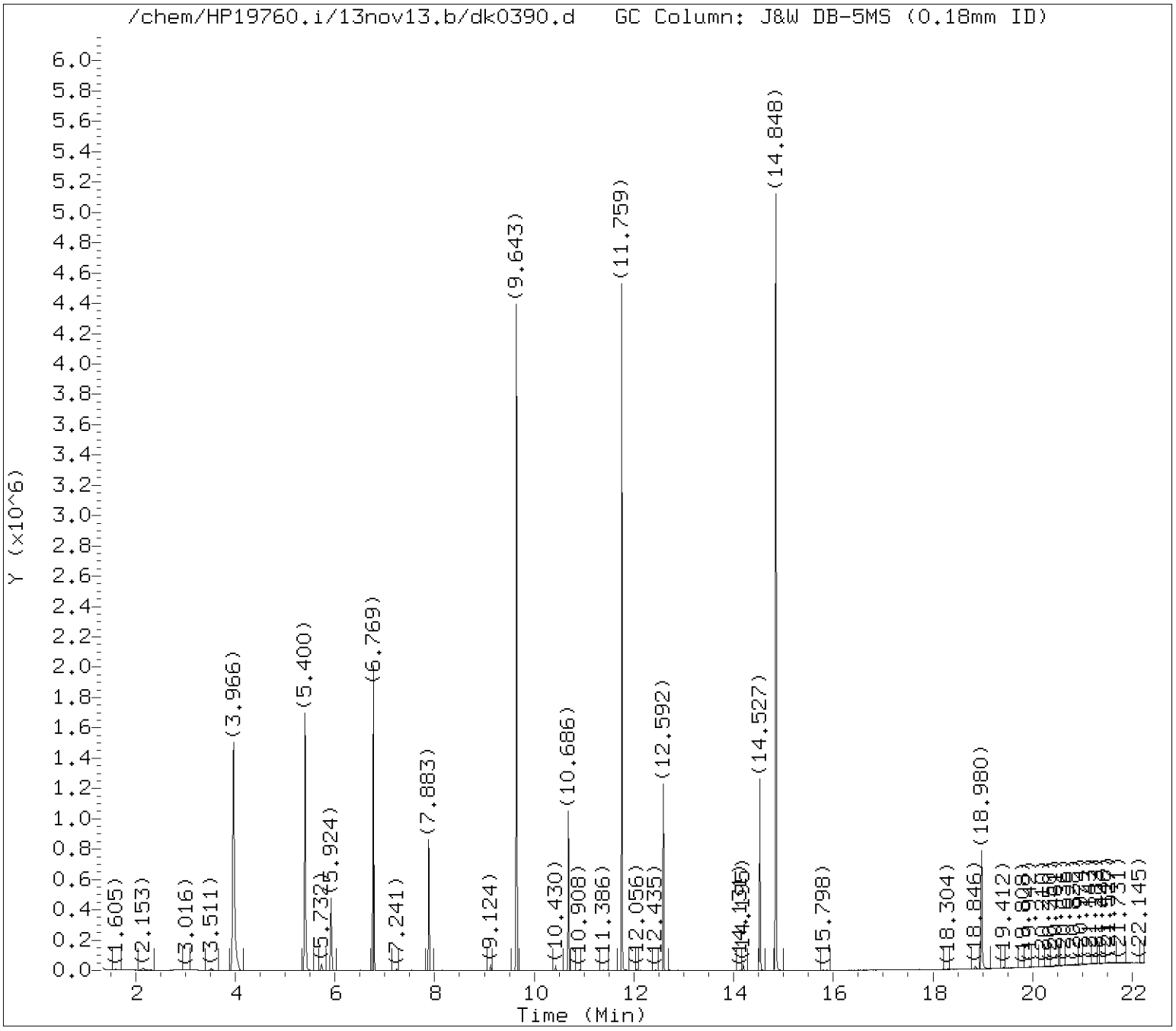
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

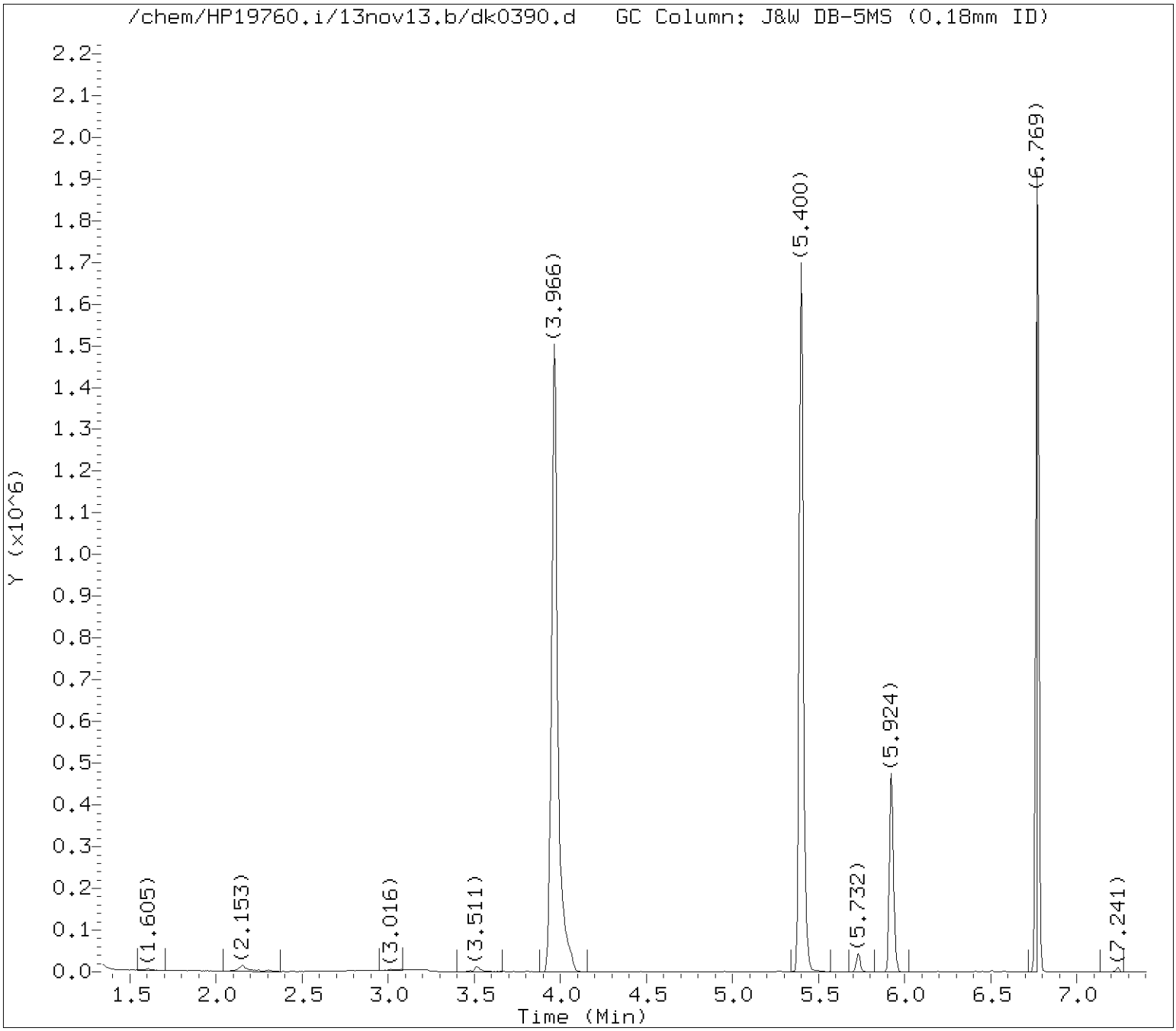
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

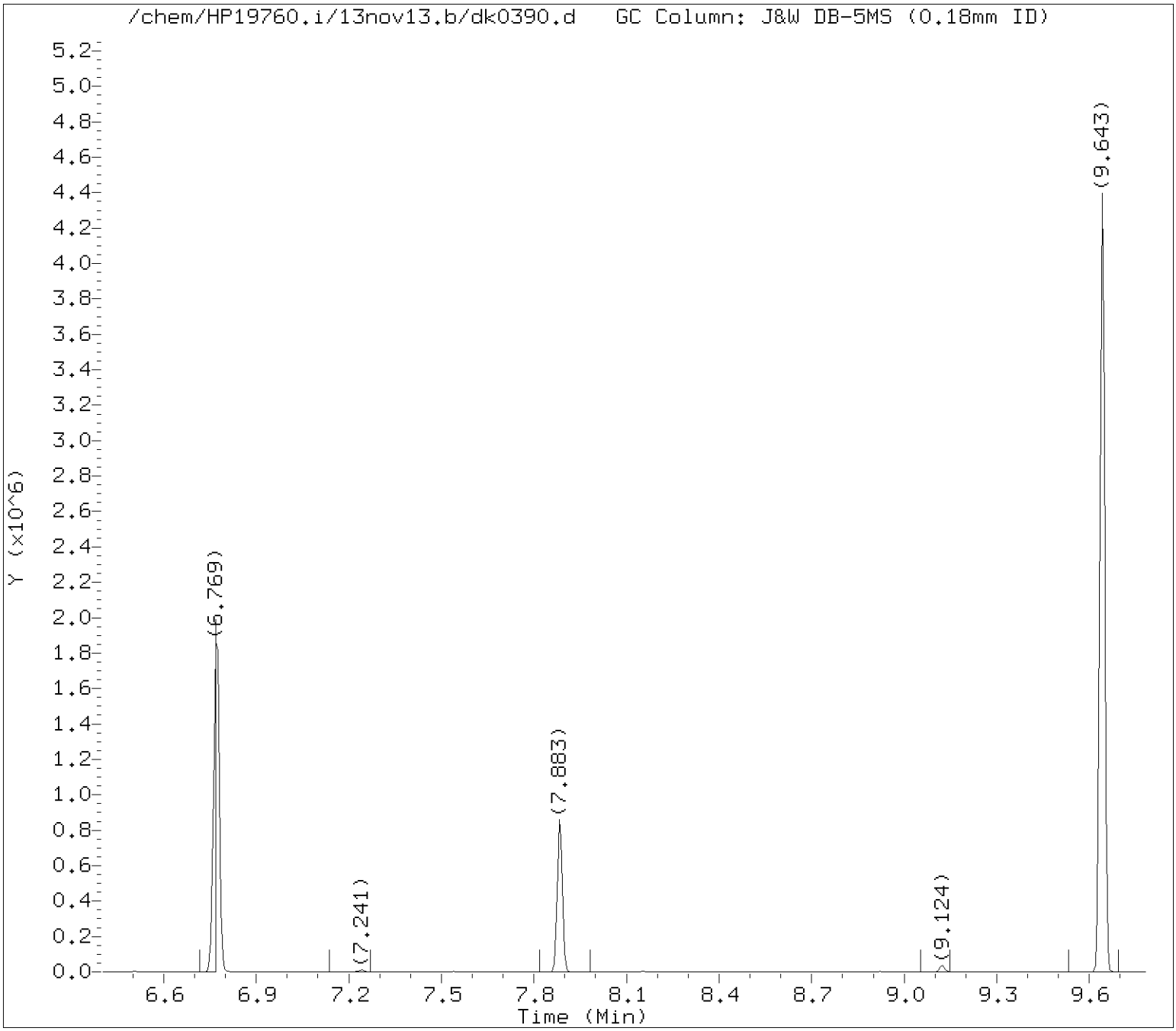
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

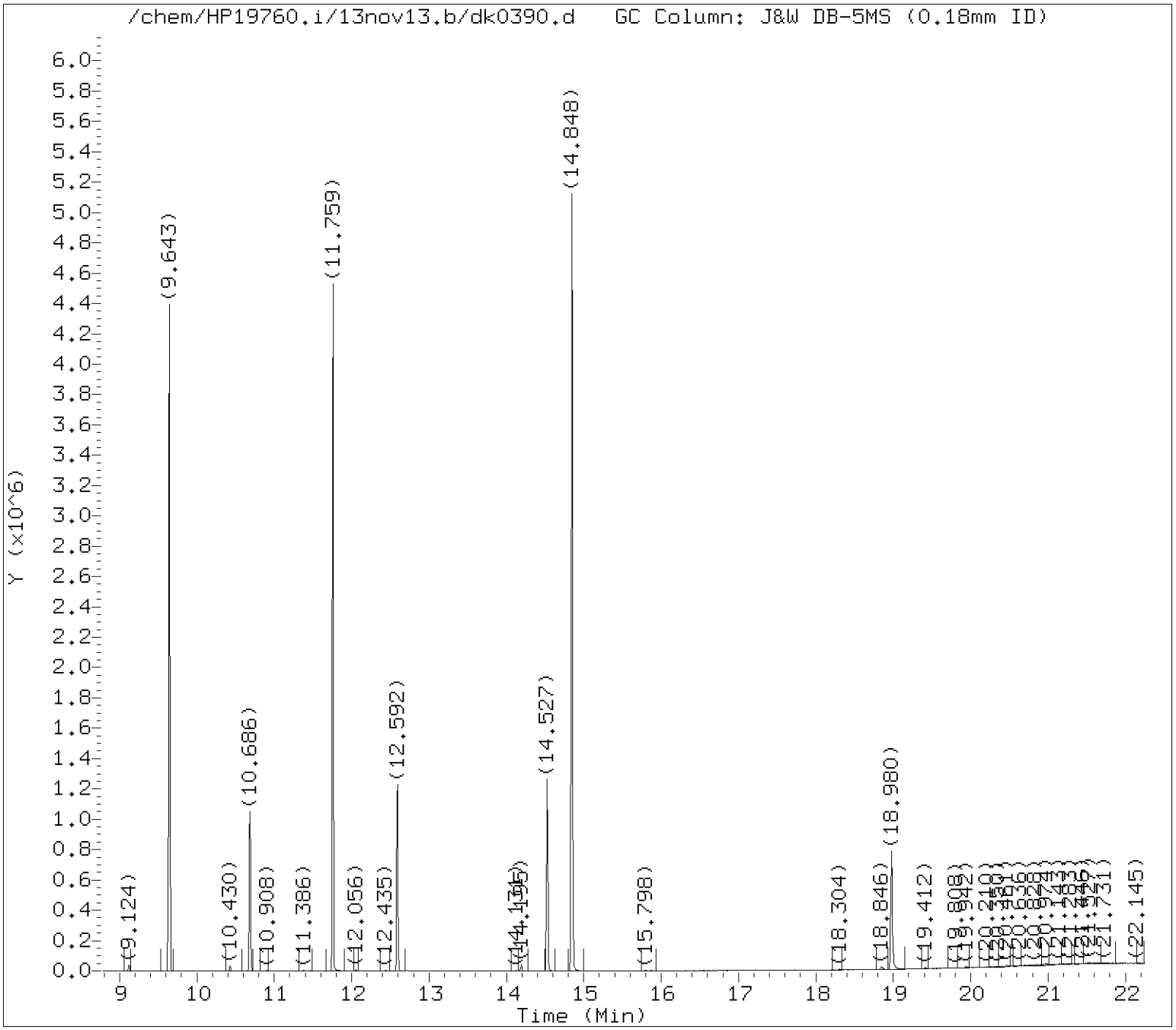
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: Naphthalene-d8 at 7.883 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

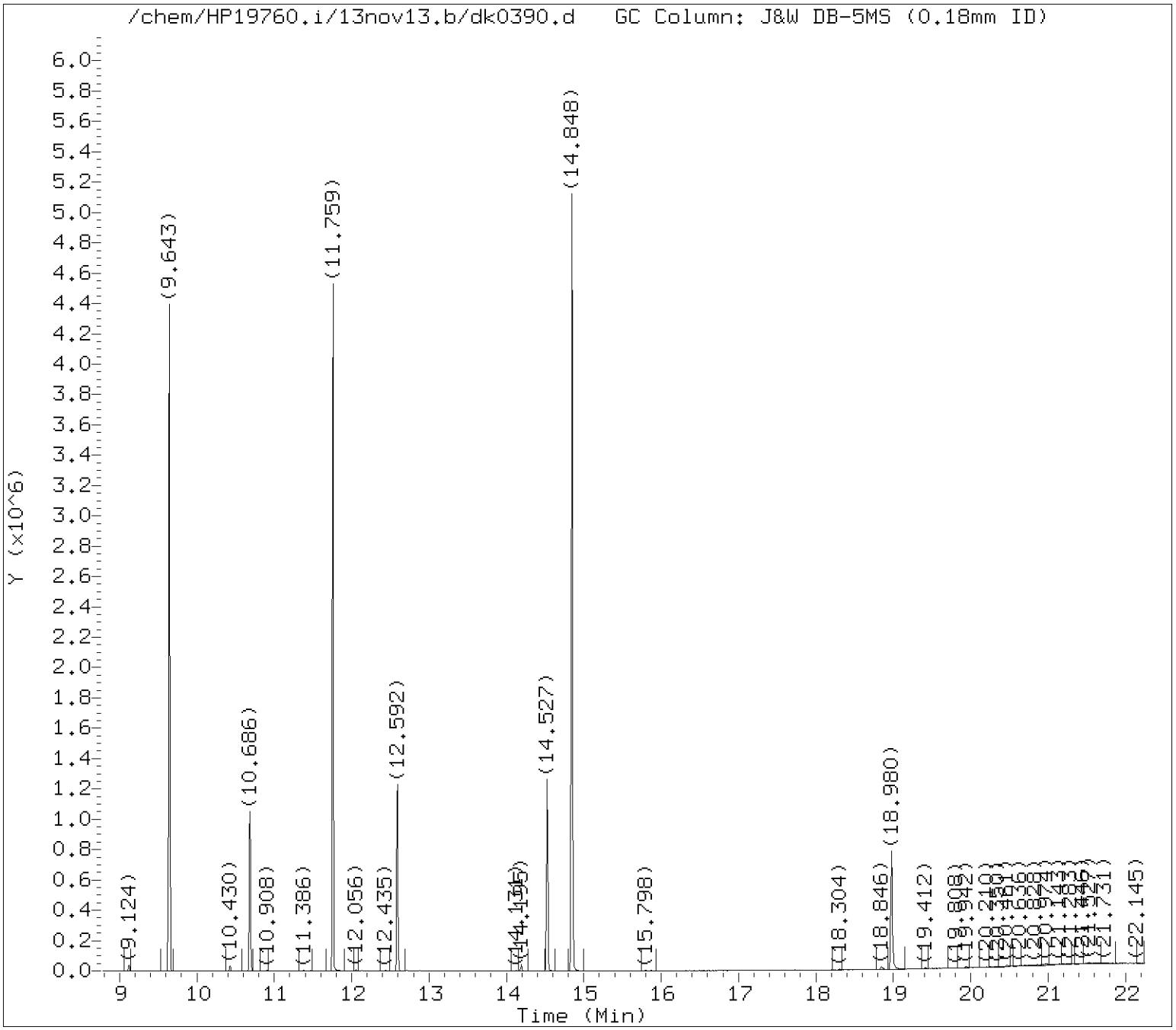
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

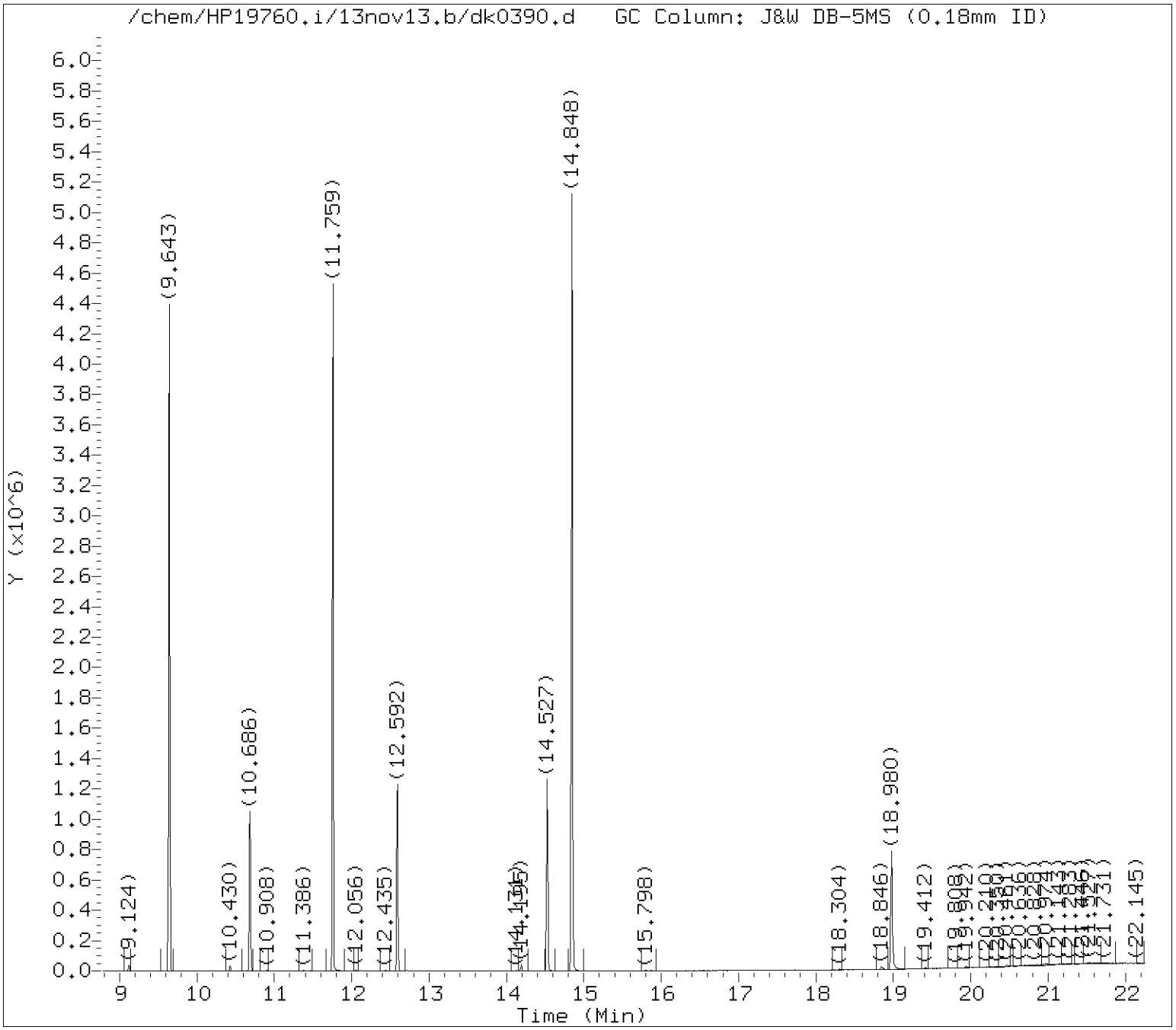
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.560

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

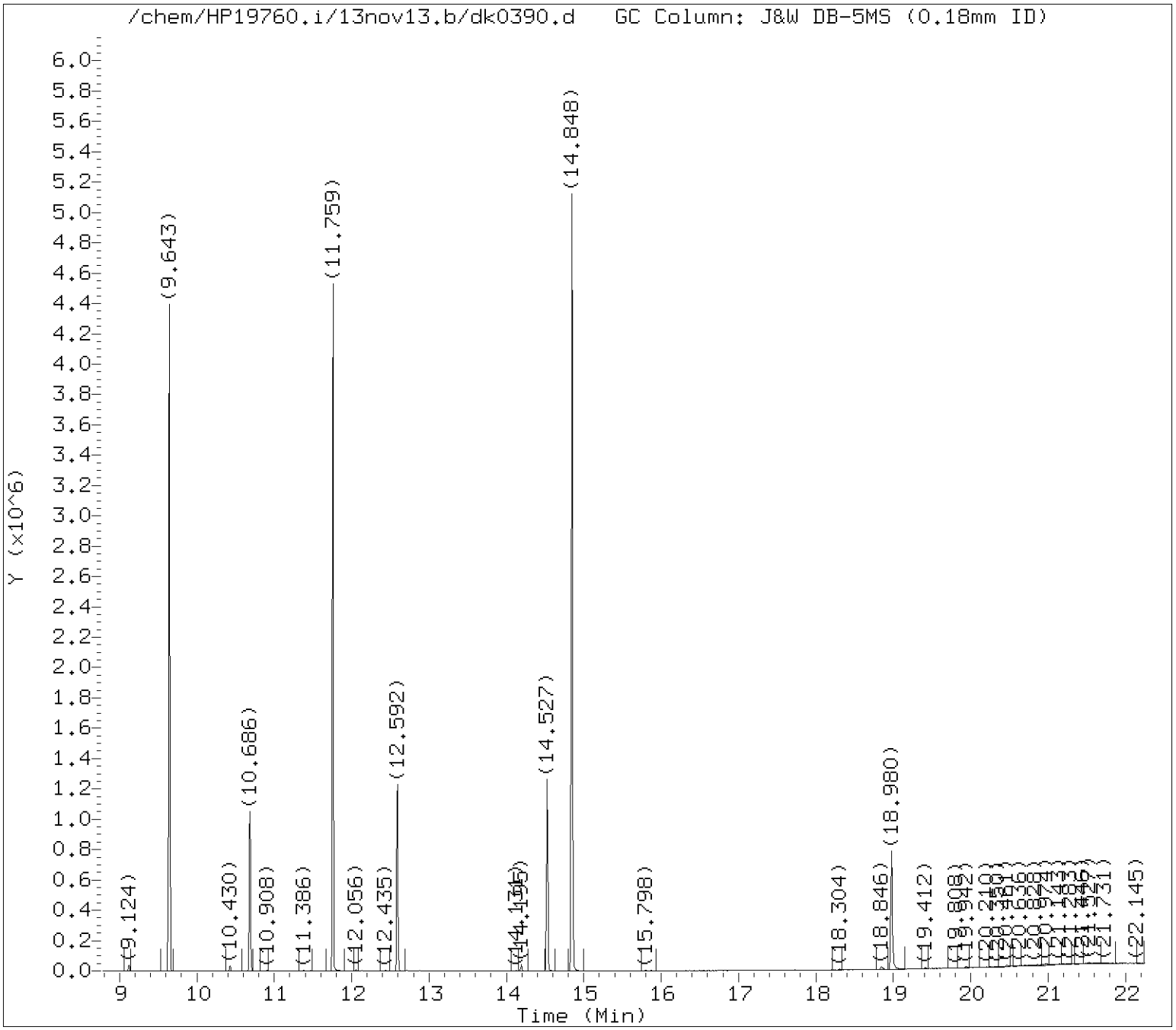
Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.560
Chromatogram End Time (min.): 16.754

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0390.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:25 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:45 ceb05247

Sample Name: FB206 Lab Sample ID: 7266799

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0390.d
Lab Smp Id: 7266799 Client Smp ID: FB206
Inj Date : 13-NOV-2013 09:25
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : FB206;7266799;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;247;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0683.d
Injection date and time: **15-NOV-2013 21:05**
Data file Sample Info. Line: 2G124;7266800;2;0;SAMPLE;;;
Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	140743 (-39)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	685235 (-34)	20.00	
99) Acenaphthene-d10	7.461(0.000)	1033	164	444131 (-33)	20.00	
148) Phenanthrene-d10	8.669(0.000)	1235	188	740230 (-33)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	803216 (-33)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	560210 (-30)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	273080	17.105	86%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.917(0.001)	172	452803	17.838	89%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	544962	19.037	95%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)			Not Detected					0.1
72) 2-Methylnaphthalene	(2)			Not Detected					0.1
75) 1-Methylnaphthalene	(2)			Not Detected					0.1
96) Acenaphthylene	(3)	7.341(0.000)	152	7386	0.204	68.12			0.1
100) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
149) Phenanthrene	(4)	8.687(-0.000)	178	25144	0.601	200.29			0.1
150) Anthracene	(4)	8.729(0.000)	178	9943	0.235	78.46			0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	49302	1.127	375.83			0.1
166) Pyrene	(5)	9.830(0.000)	202	47257	1.077	359.16			0.1
178) Benzo(a)anthracene	(5)	10.817(-0.000)	228	16823	0.430	143.47			0.1
180) Chrysene	(5)	10.841(0.000)	228	28161	0.767	255.65			0.1
186) Benzo(b)fluoranthene	(6)	11.822(0.000)	252	33802M	0.962	320.79			0.1
187) Benzo(k)fluoranthene	(6)			Not Detected					0.1
189) Benzo(a)pyrene	(6)	12.157(0.000)	252	18181	0.584	194.80			0.1
194) Indeno(1,2,3-cd)pyrene	(6)	13.395(0.000)	276	14222	0.454	151.18			0.1
195) Dibenz(a,h)anthracene	(6)	13.431(0.000)	278	4583	0.173	57.53			0.1
196) Benzo(g,h,i)perylene	(6)	13.688(0.000)	276	14145	0.539	179.76			0.1

M = Compound was manually integrated.

Digitally signed by Holly Berry on 11/17/2013 at 14:47. Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0683.d Injection date and time: **15-NOV-2013 21:05**
Data file Sample Info. Line: 2G124;7266800;2;0;SAMPLE;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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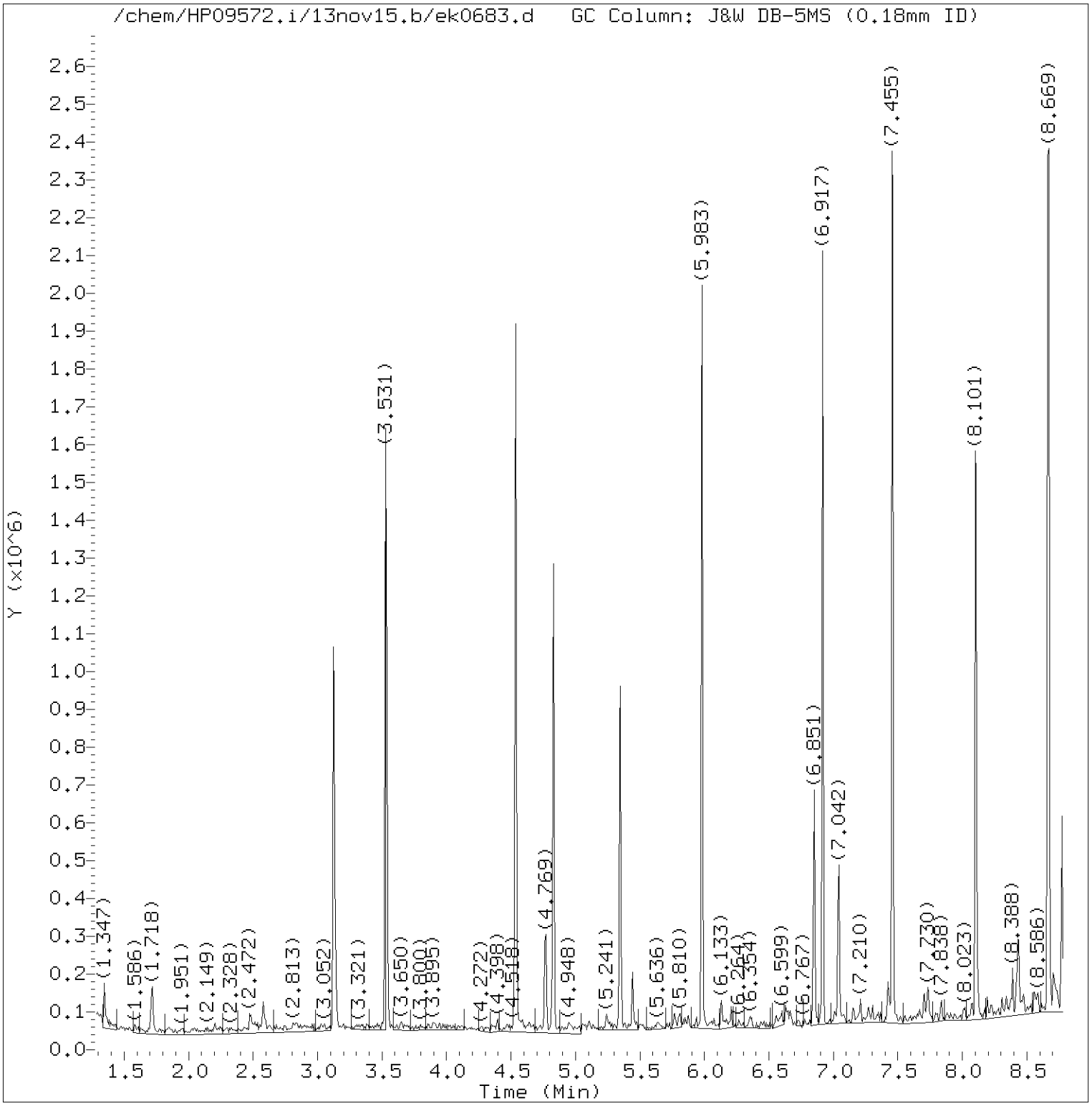
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:47. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

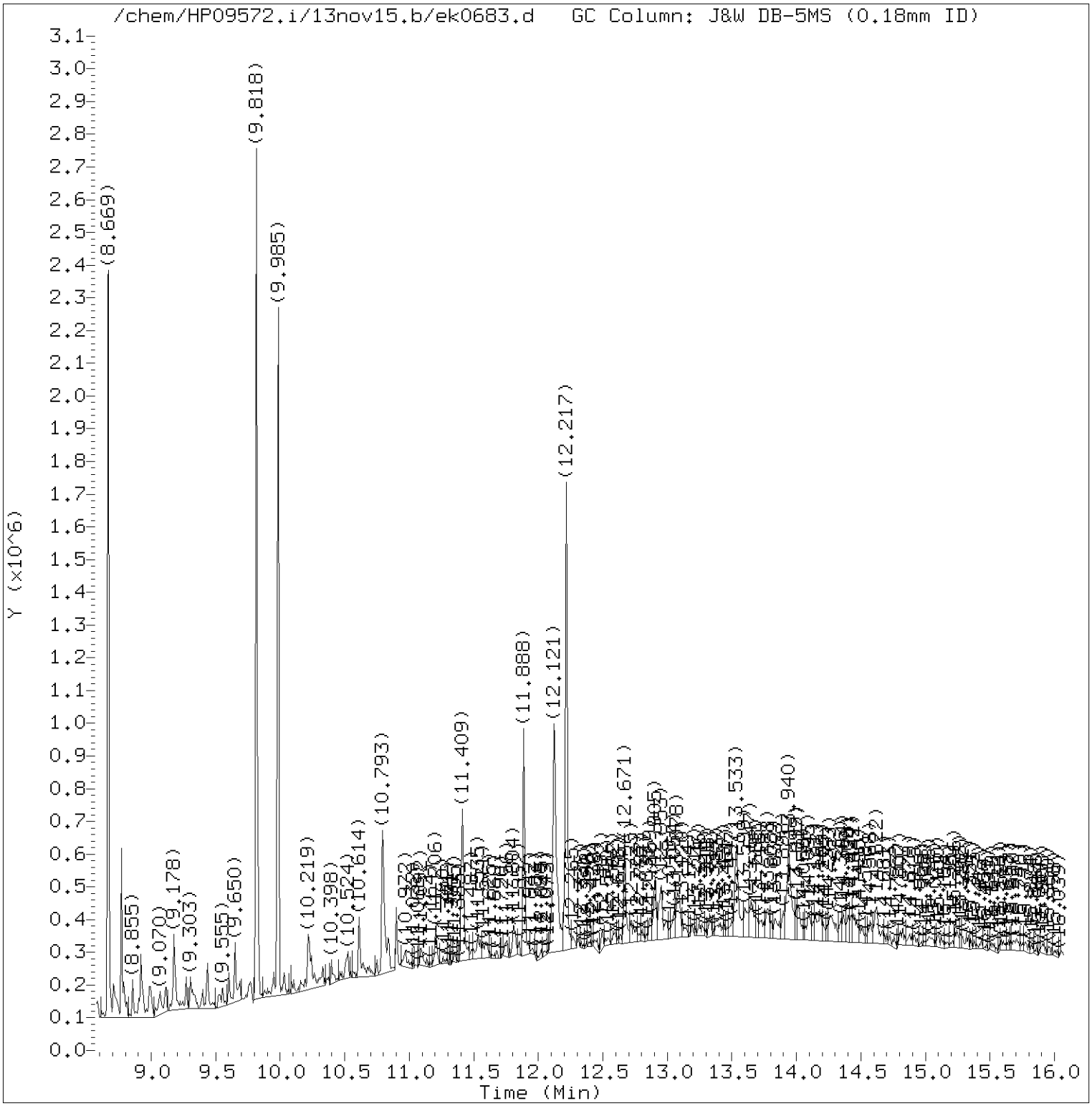
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

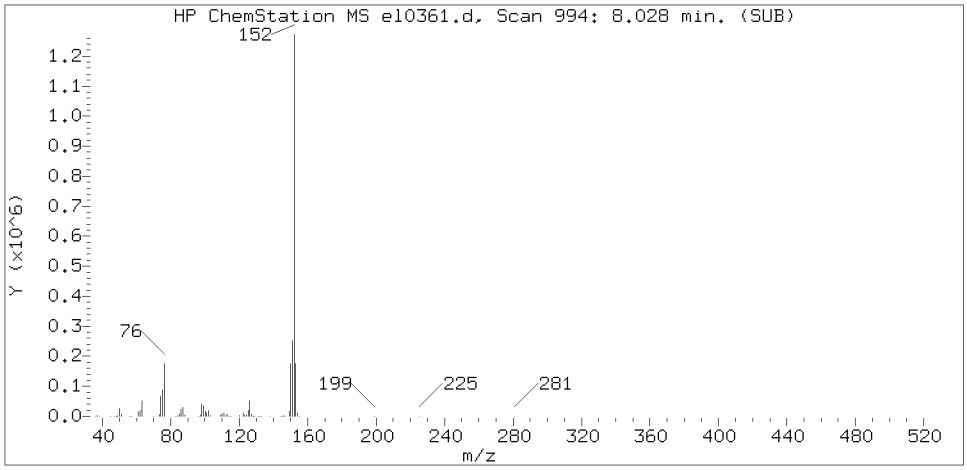
Sample Name: 2G124 Lab Sample ID: 7266800

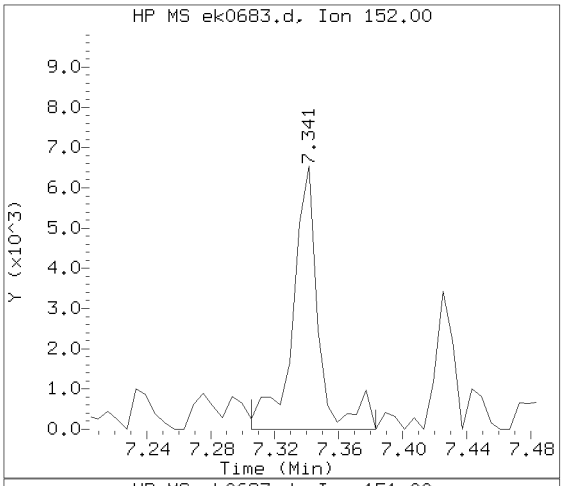
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	140743	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	273080	17.105
60)*Naphthalene-d8	(2)	5.983	136	685235	20.000
81)$2-Fluorobiphenyl	(3)	6.917	172	452803	17.838
96) Acenaphthylene	(3)	7.341	152	7386	0.204
99)*Acenaphthene-d10	(3)	7.461	164	444131	20.000
148)*Phenanthrene-d10	(4)	8.669	188	740230	20.000
149) Phenanthrene	(4)	8.687	178	25144	0.601
150) Anthracene	(4)	8.729	178	9943	0.235
163) Fluoranthene	(4)	9.650	202	49302	1.127
165)*Pyrene-d10	(5)	9.818	212	803216	20.000
166) Pyrene	(5)	9.830	202	47257	1.077
169)$Terphenyl-d14	(5)	9.985	244	544962	19.037
178) Benzo(a)anthracene	(5)	10.817	228	16823	0.430
180) Chrysene	(5)	10.841	228	28161	0.767
186) Benzo(b)fluoranthene	(6)	11.822	252	33802M	0.962
189) Benzo(a)pyrene	(6)	12.157	252	18181	0.584
190)*Perylene-d12	(6)	12.217	264	560210	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.395	276	14222	0.454
195) Dibenz(a,h)anthracene	(6)	13.431	278	4583	0.173
196) Benzo(g,h,i)perylene	(6)	13.688	276	14145	0.539

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

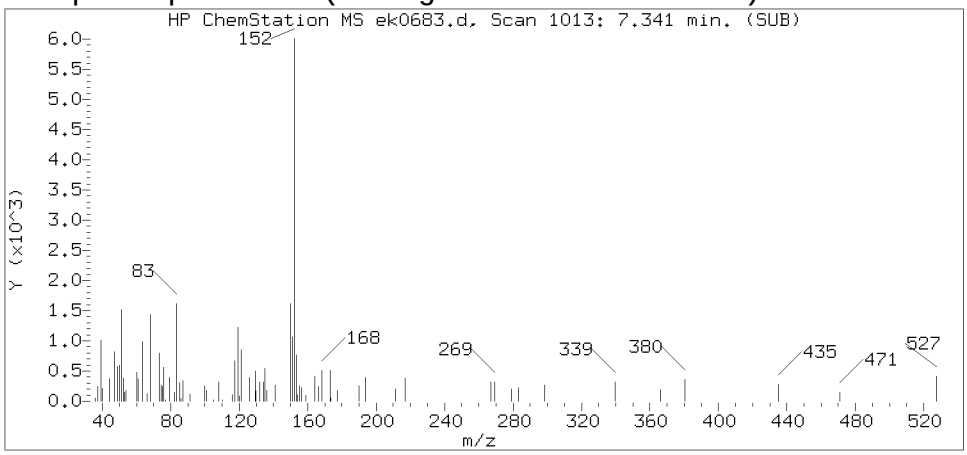
Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

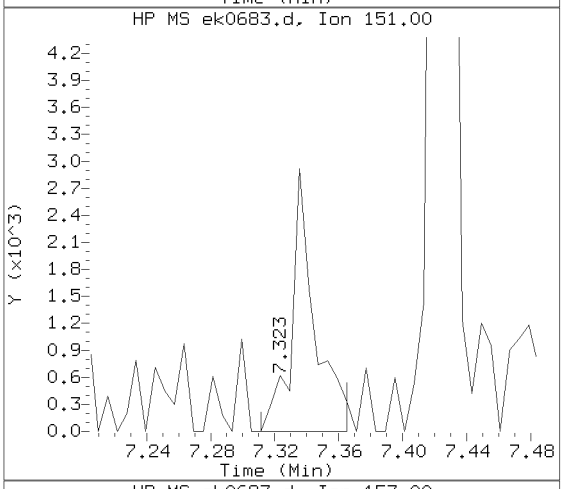
Reference Standard Spectrum for Acenaphthylene



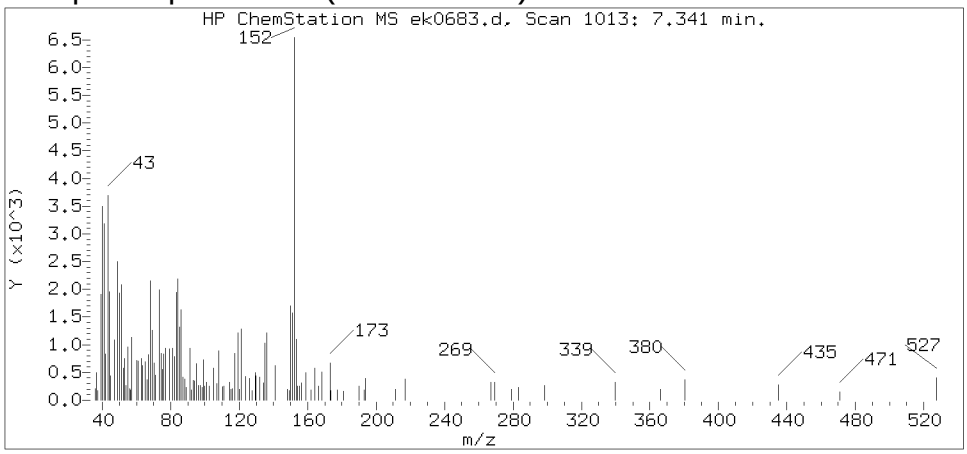


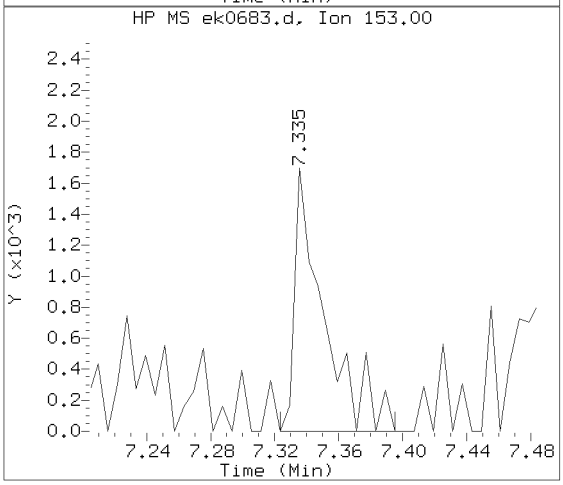
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

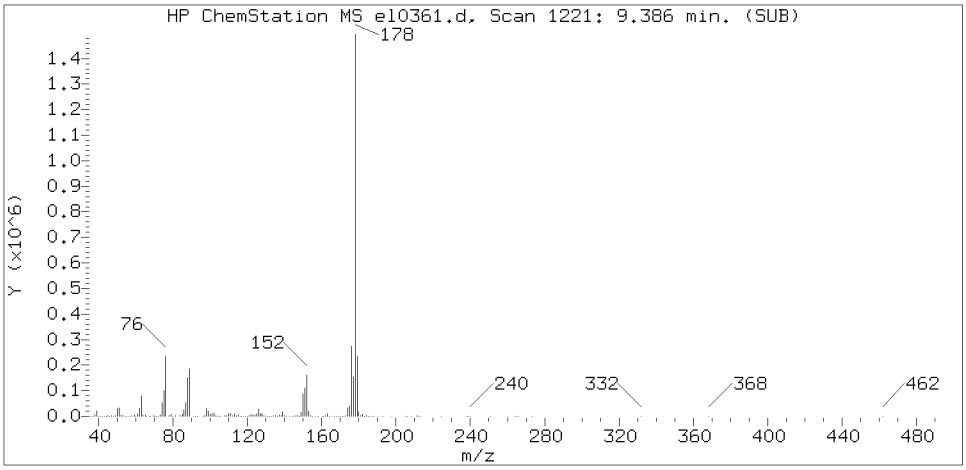
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

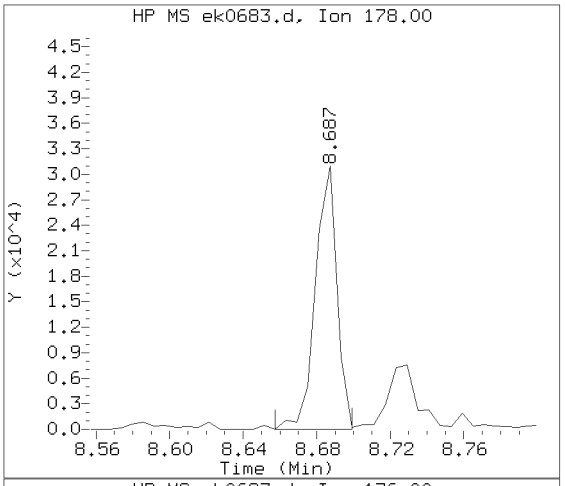
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 96
Compound Name	: Acenaphthylene
Scan Number	: 1013
Retention Time (minutes)	: 7.341
Relative Retention Time	: 0.00000
Quant Ion	: 152.00
Area (flag)	: 7386
On-column Amount (ng/ul)	: 0.2044

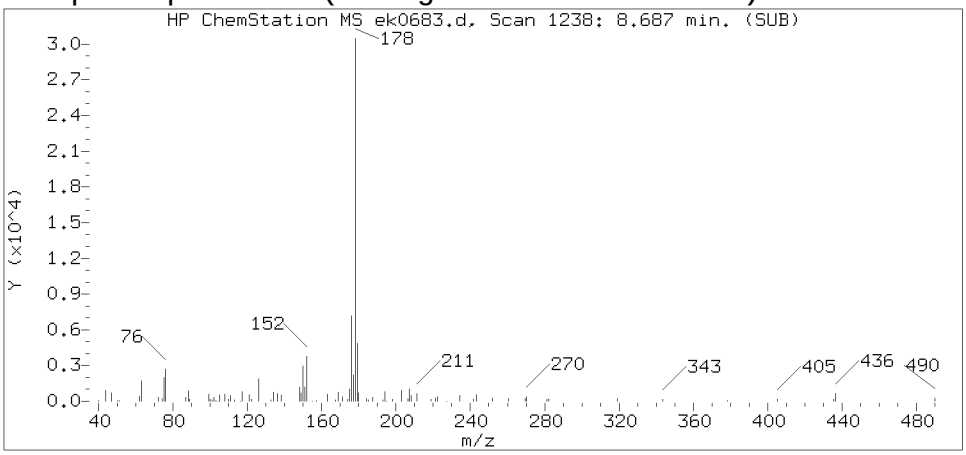
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

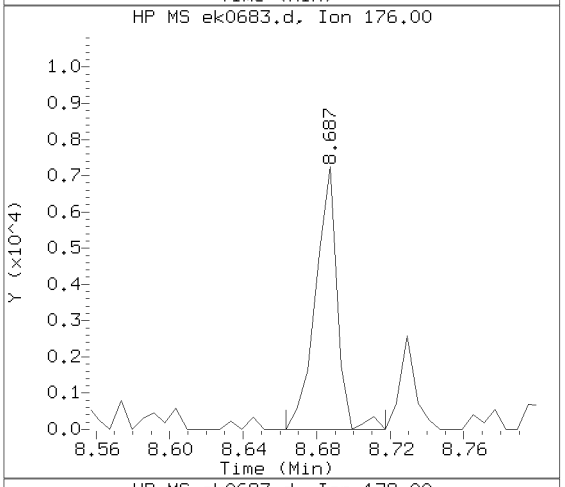
Reference Standard Spectrum for Phenanthrene



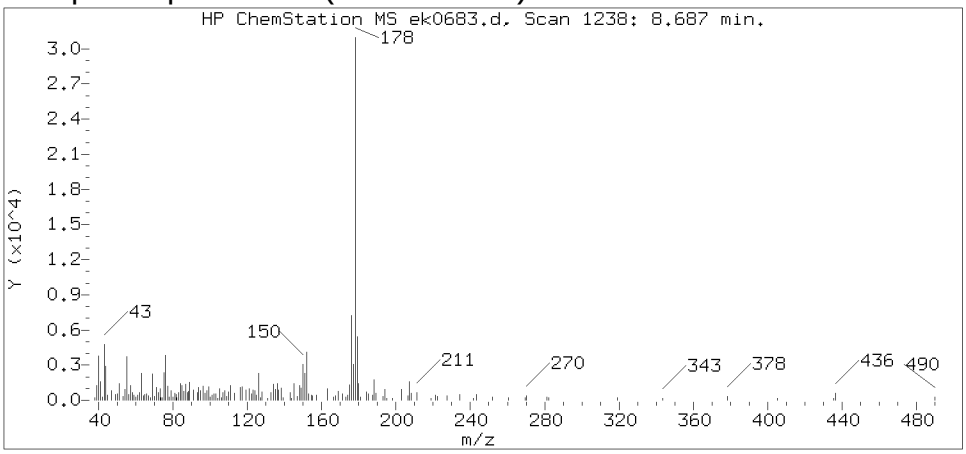


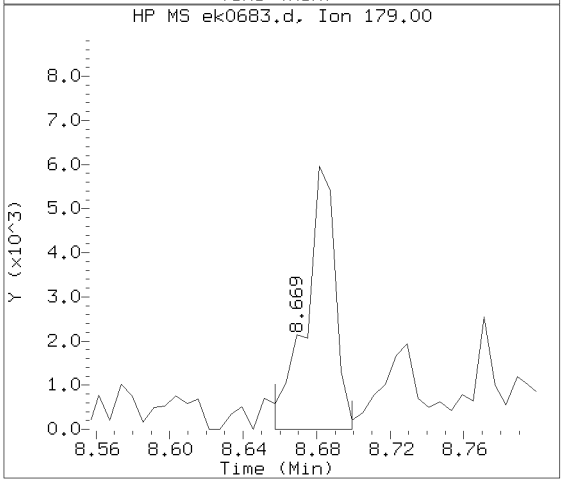
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

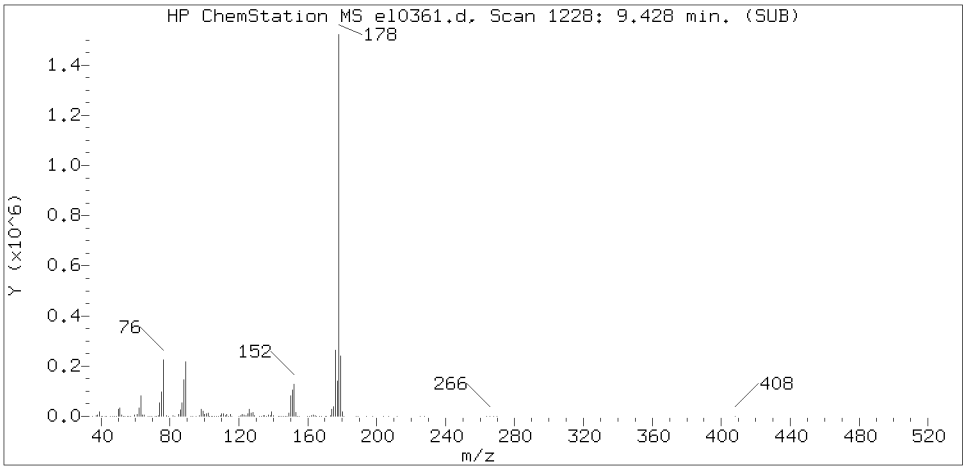
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

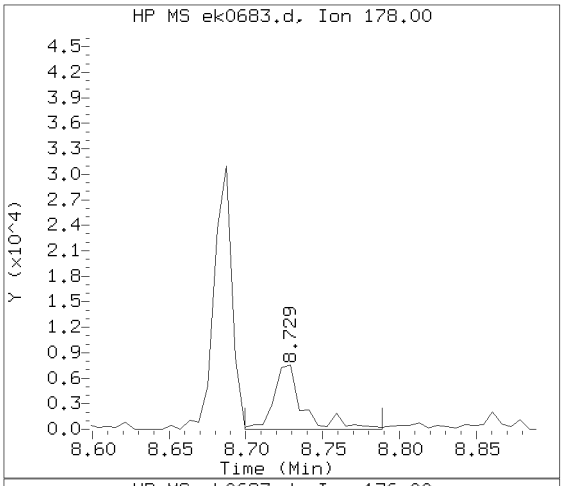
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number : 149
Compound Name : Phenanthrene
Scan Number : 1238
Retention Time (minutes) : 8.687
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 25144
On-column Amount (ng/ul) : 0.6009

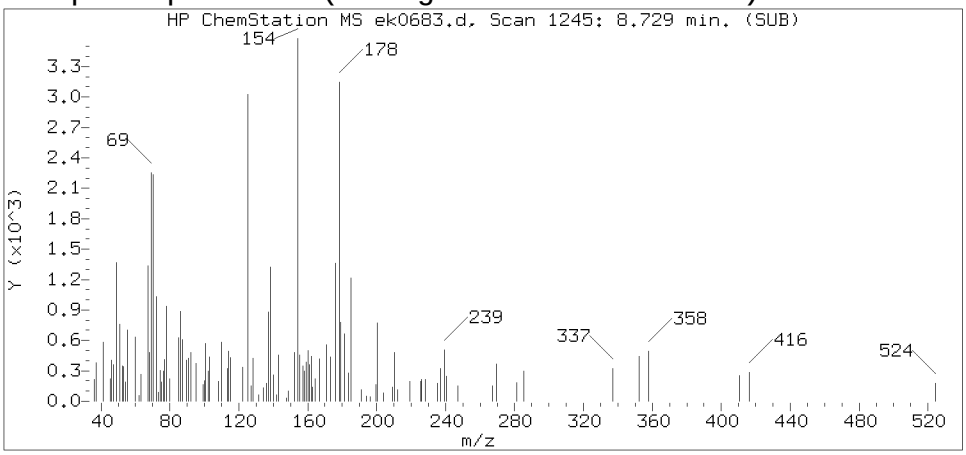
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

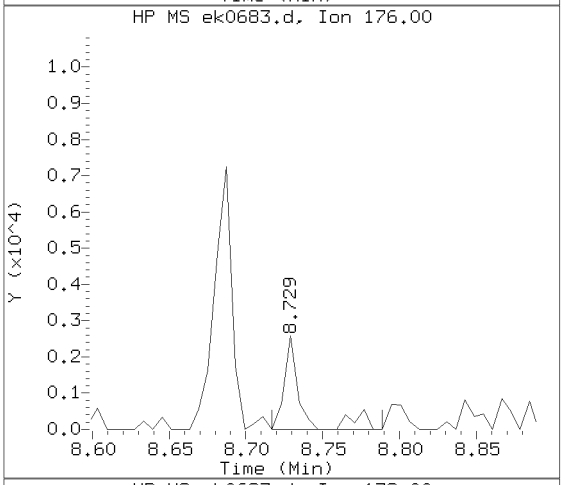
Reference Standard Spectrum for Anthracene



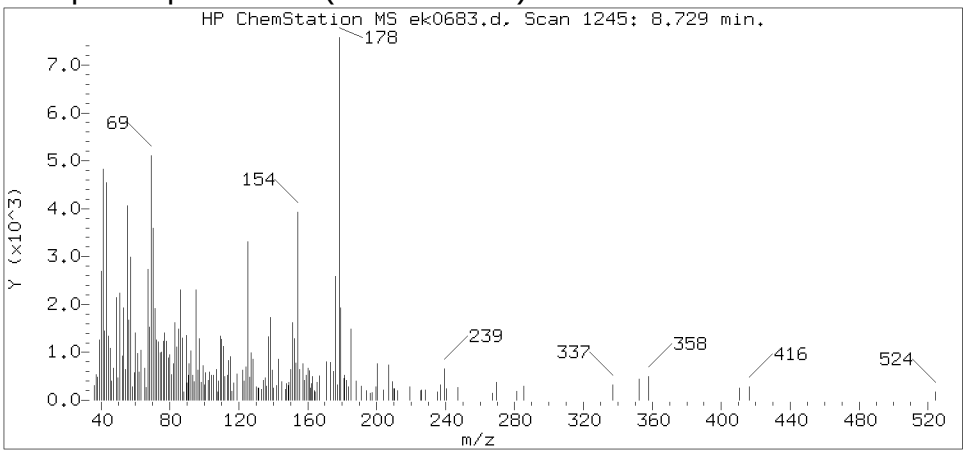


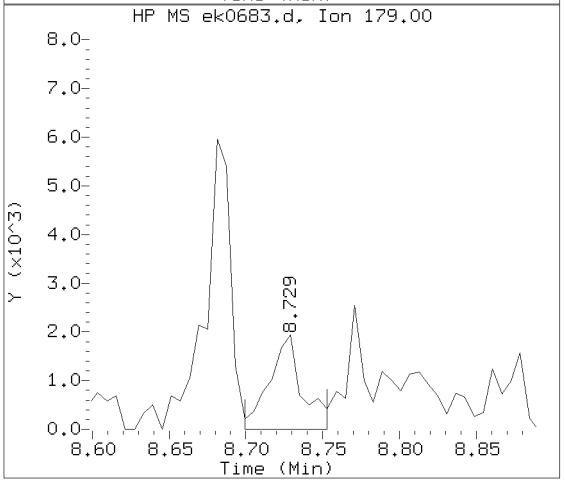
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

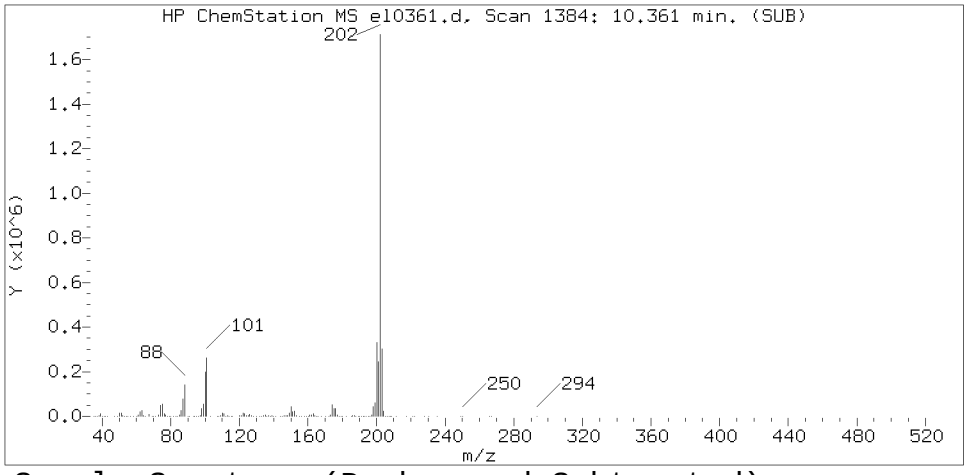
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

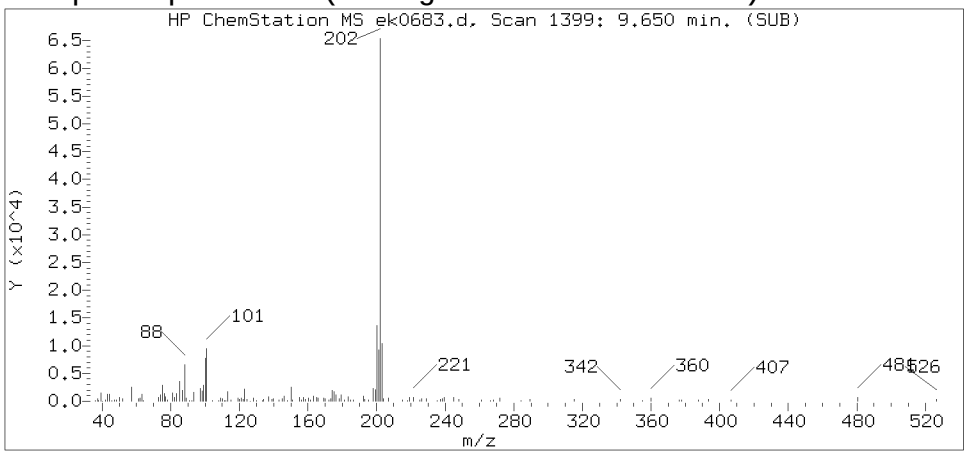
Compound Number	: 150
Compound Name	: Anthracene
Scan Number	: 1245
Retention Time (minutes)	: 8.729
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 9943
On-column Amount (ng/ul)	: 0.2354

Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

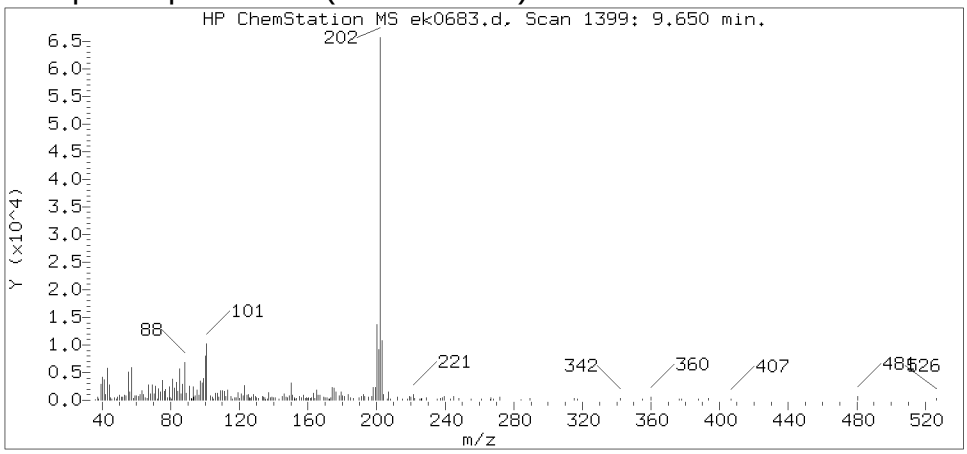
Reference Standard Spectrum for Fluoranthene

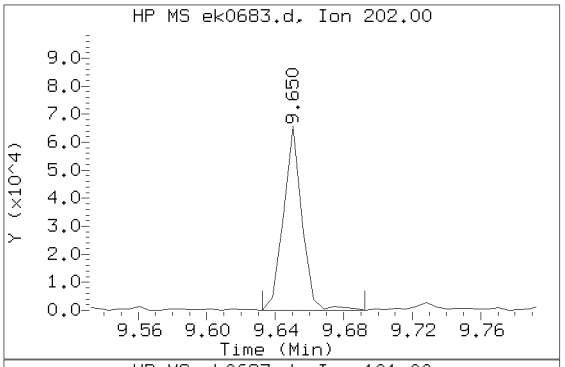


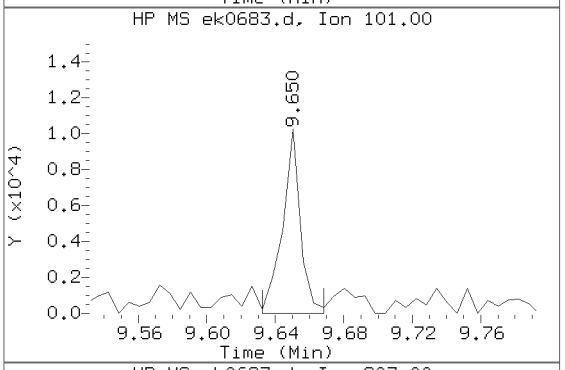
Sample Spectrum (Background Subtracted)

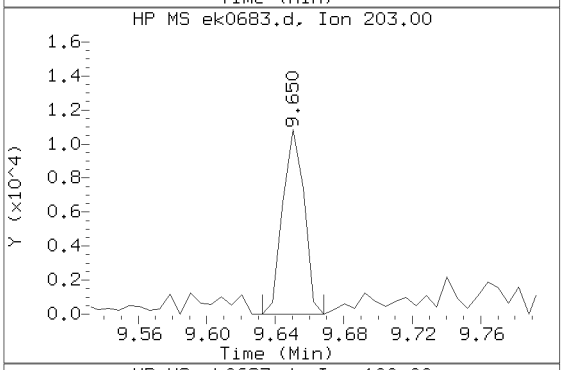


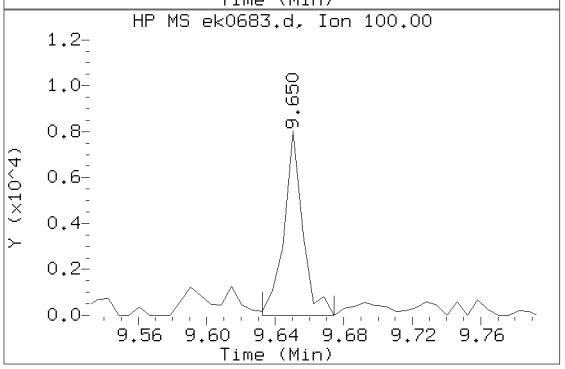
Sample Spectrum (Unaltered)











Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

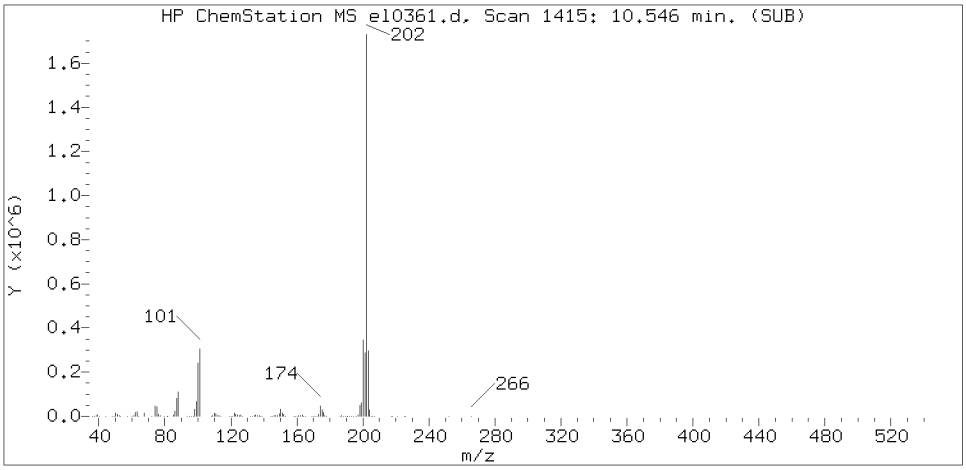
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

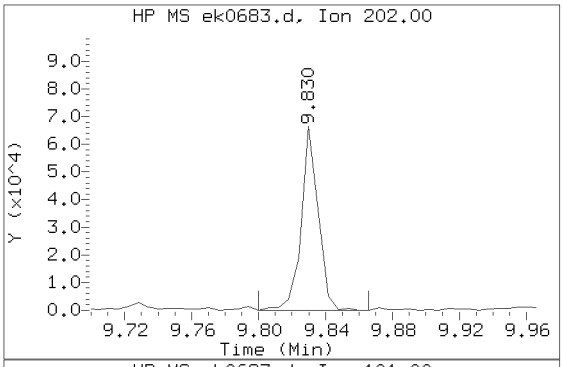
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number : 163
Compound Name : Fluoranthene
Scan Number : 1399
Retention Time (minutes) : 9.650
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 49302
On-column Amount (ng/ul) : 1.1275

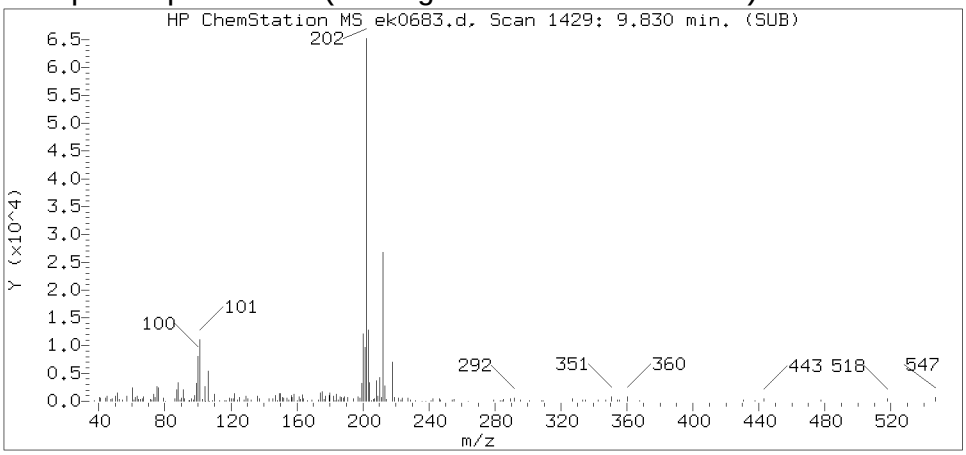
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

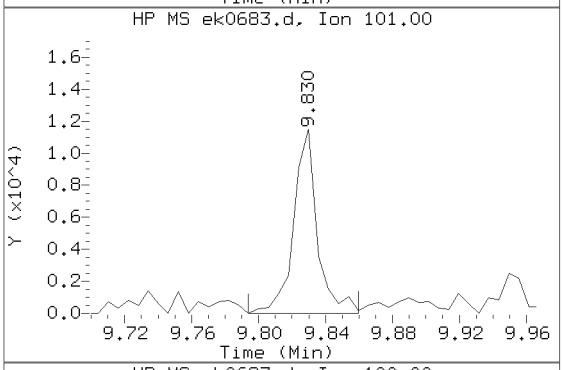
Reference Standard Spectrum for Pyrene

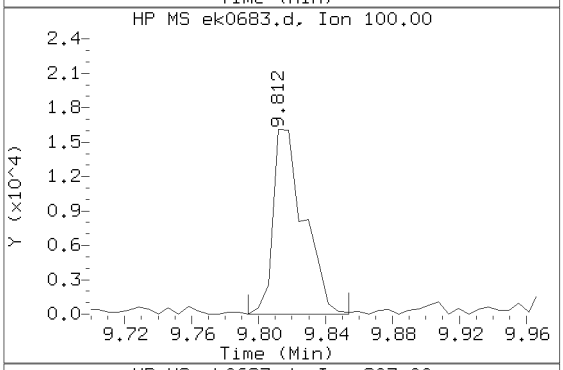




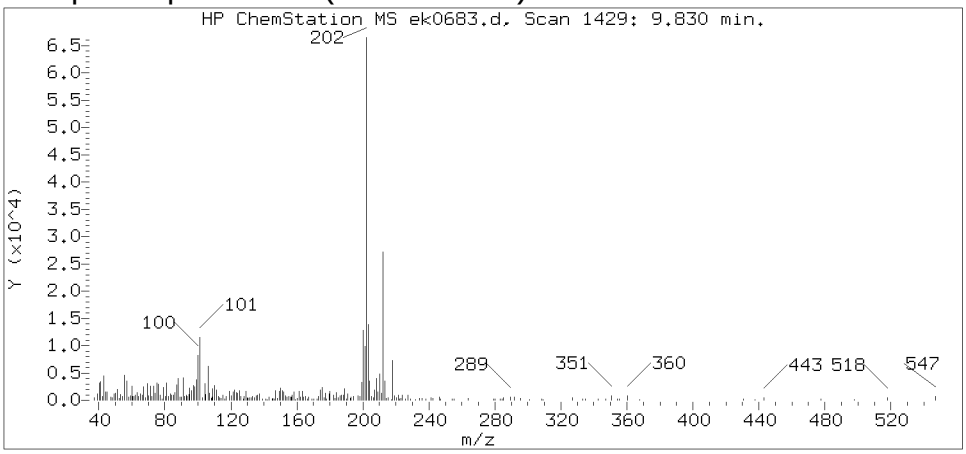
Sample Spectrum (Background Subtracted)

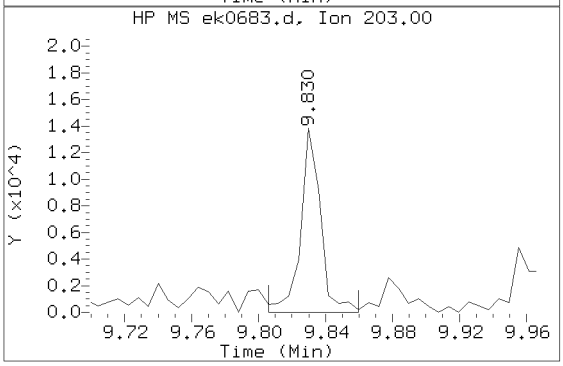






Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

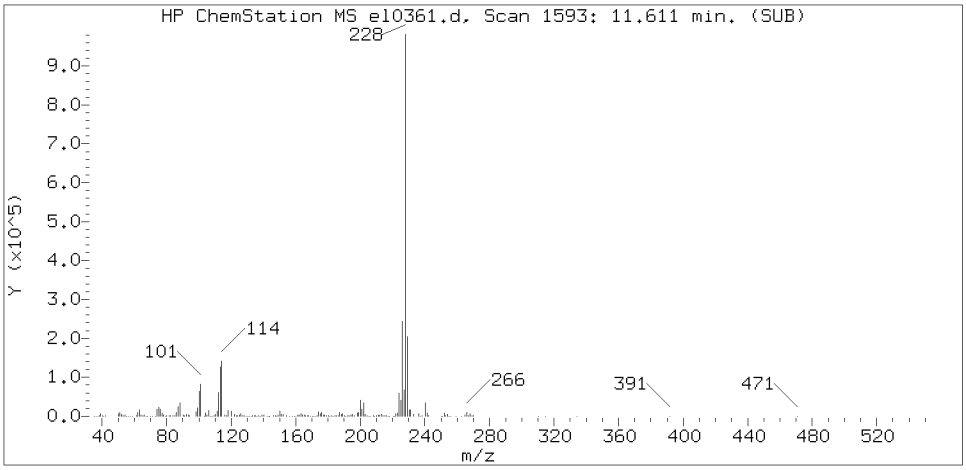
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

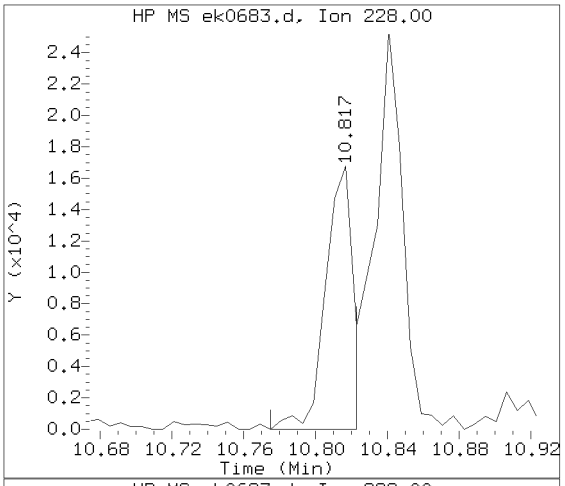
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 166
Compound Name	: Pyrene
Scan Number	: 1429
Retention Time (minutes)	: 9.830
Relative Retention Time	: 0.00061
Quant Ion	: 202.00
Area (flag)	: 47257
On-column Amount (ng/ul)	: 1.0775

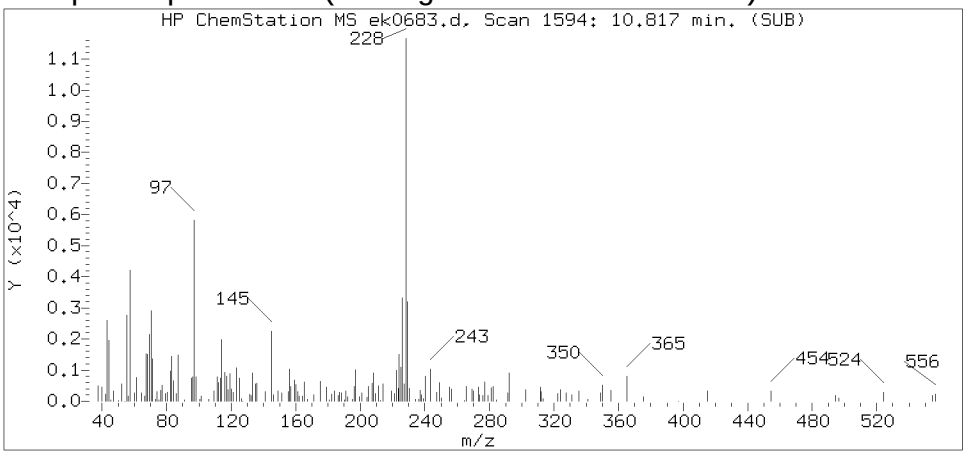
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

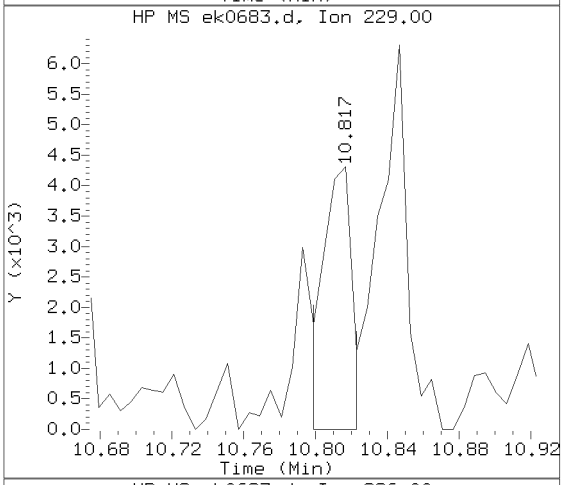
Reference Standard Spectrum for Benzo(a)anthracene



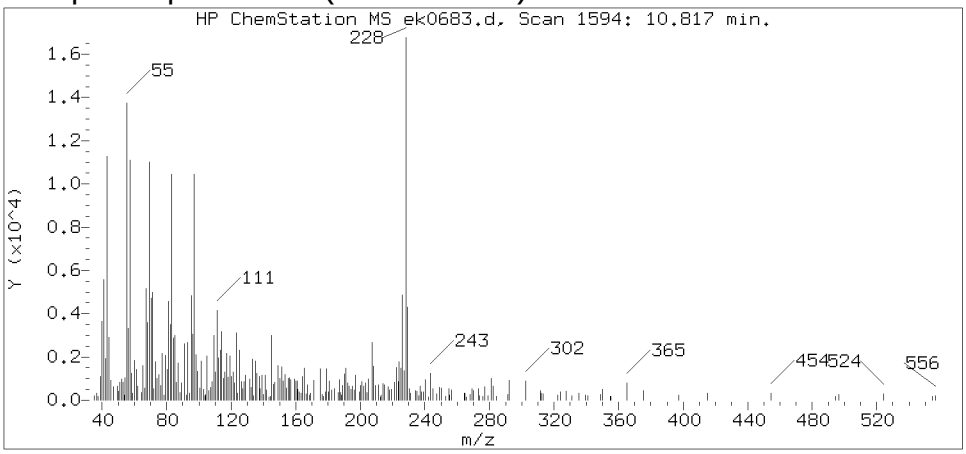


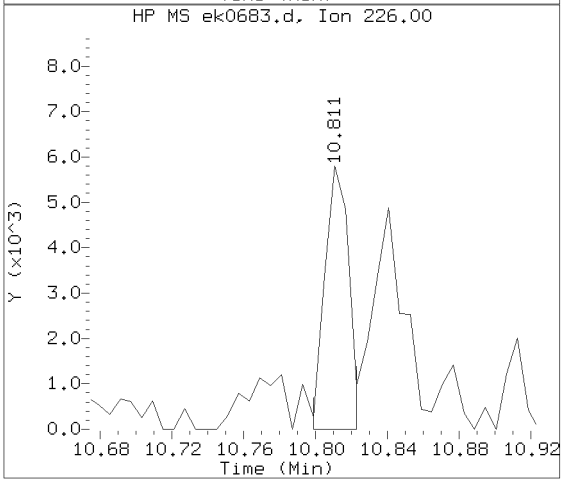
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number : 178
Compound Name : Benzo(a)anthracene
Scan Number : 1594
Retention Time (minutes) : 10.817
Relative Retention Time :-0.00000
Quant Ion : 228.00
Area (flag) : 16823
On-column Amount (ng/ul) : 0.4304

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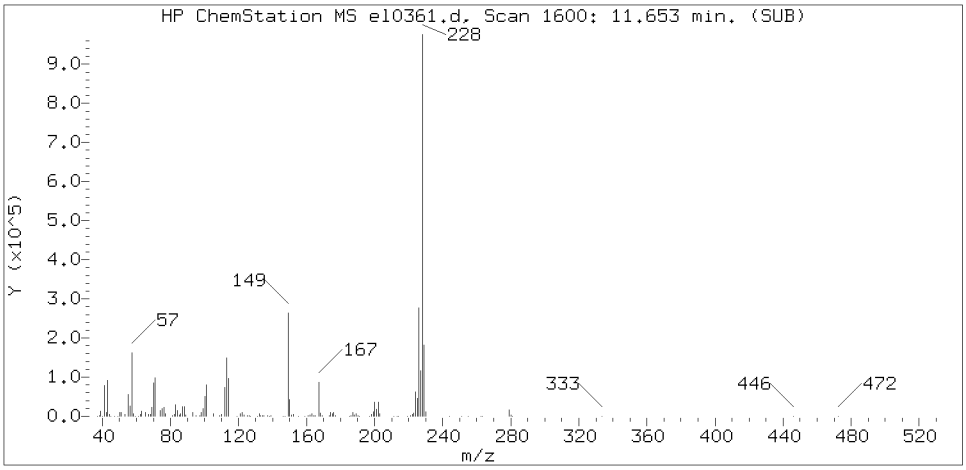
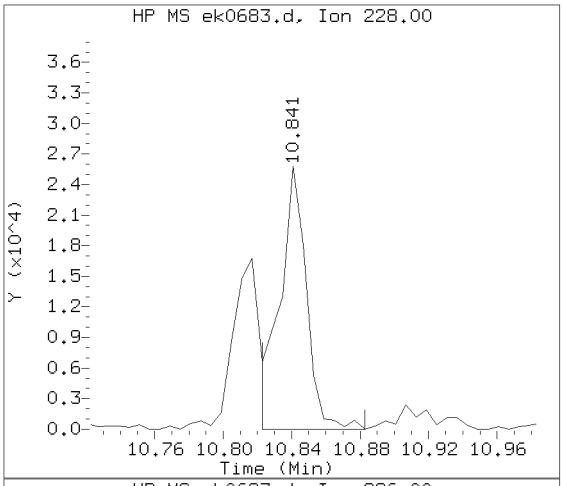
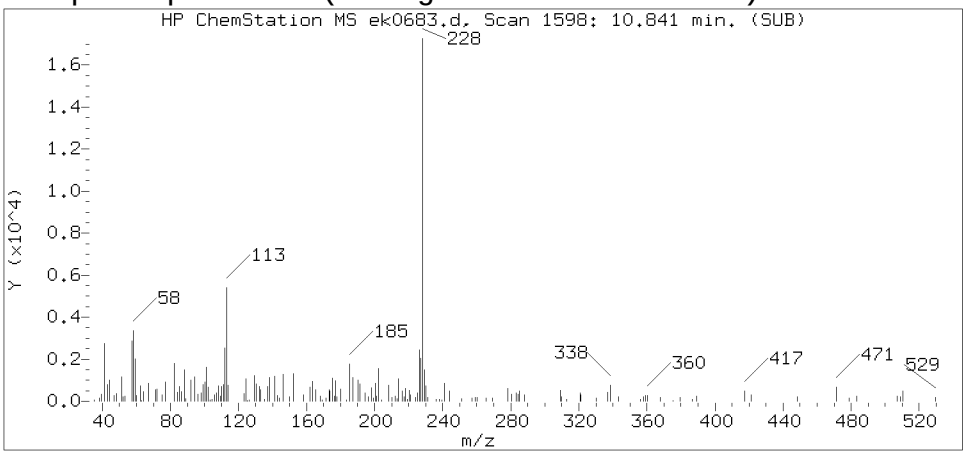
Target 3.5 esignature user ID: hb01996

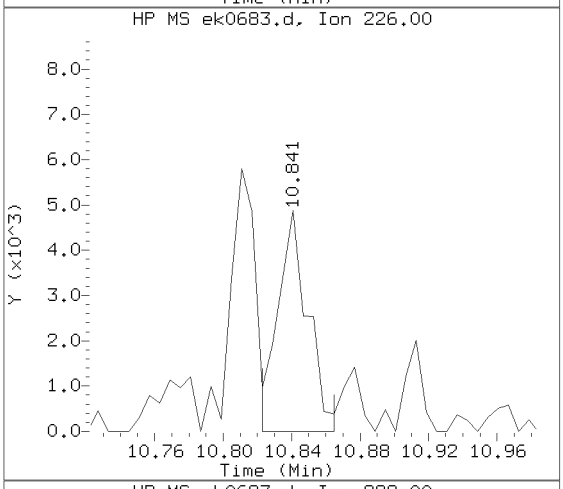
Reference Standard Spectrum for Chrysene



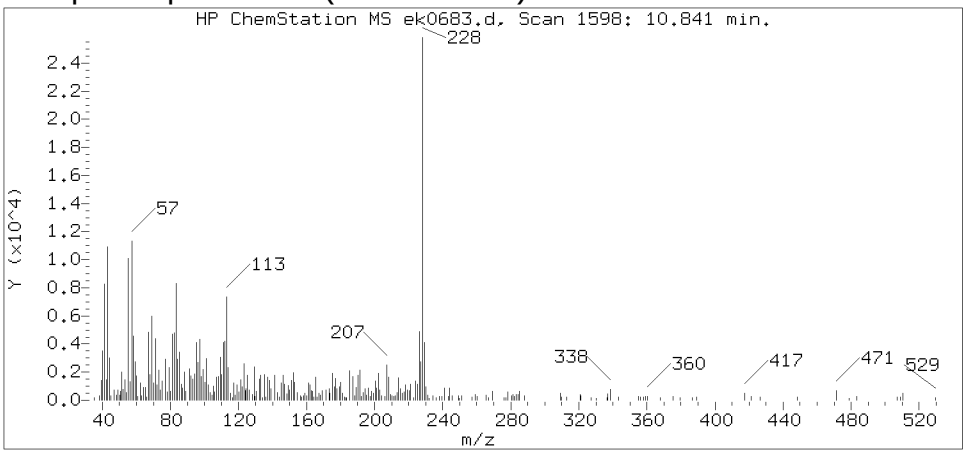


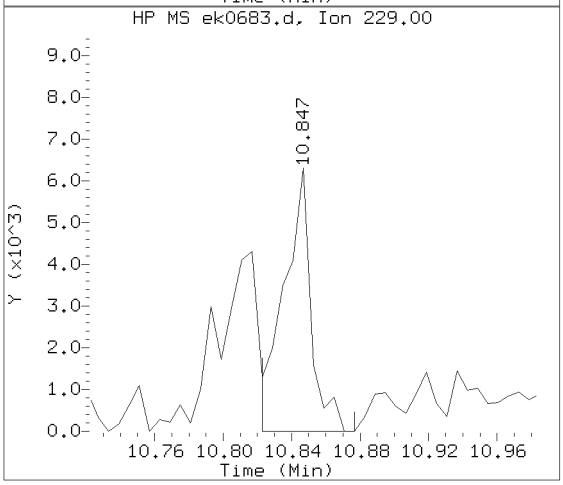
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 180
Compound Name	: Chrysene
Scan Number	: 1598
Retention Time (minutes)	: 10.841
Relative Retention Time	: 0.00061
Quant Ion	: 228.00
Area (flag)	: 28161
On-column Amount (ng/ul)	: 0.7670

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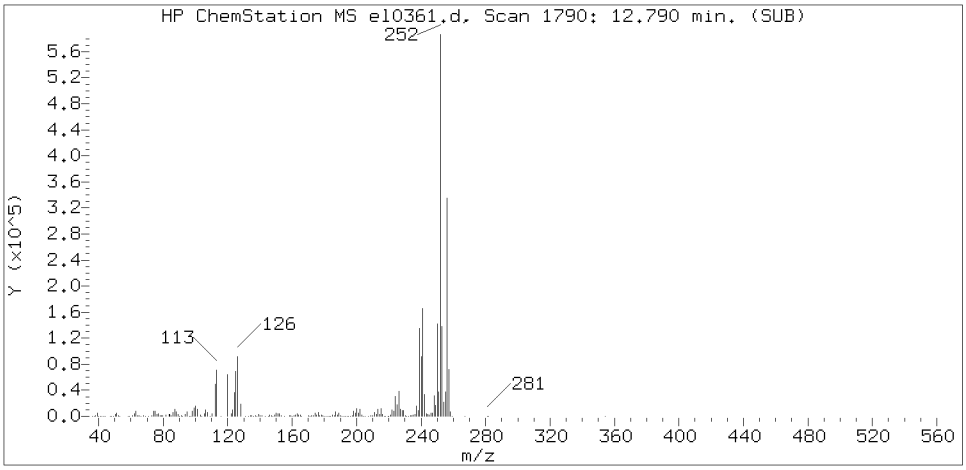
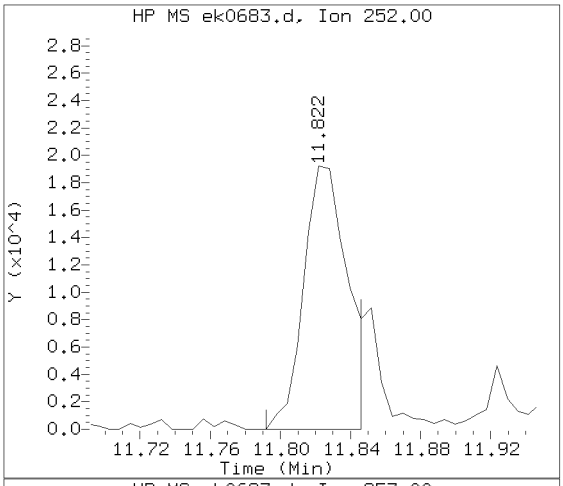
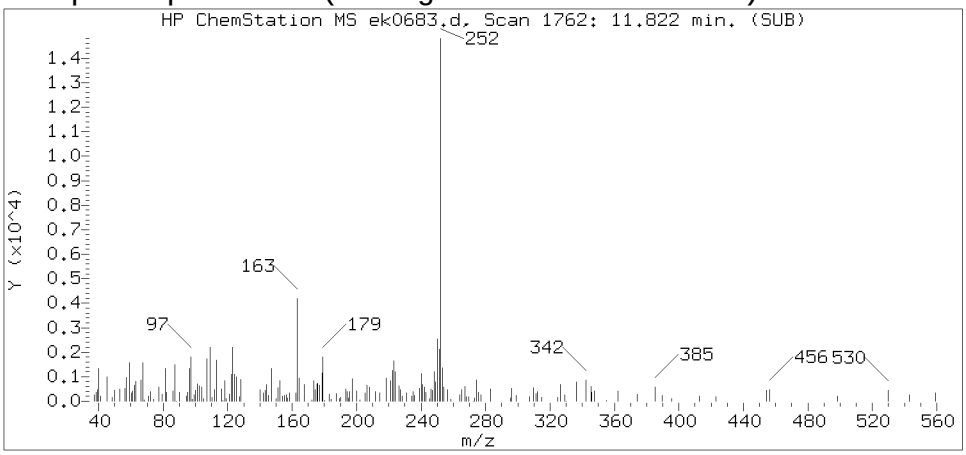
Target 3.5 esignature user ID: hb01996

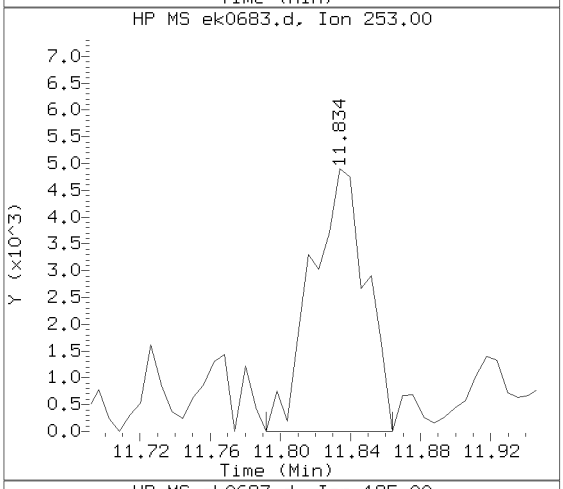
Reference Standard Spectrum for Benzo(b)fluoranthene



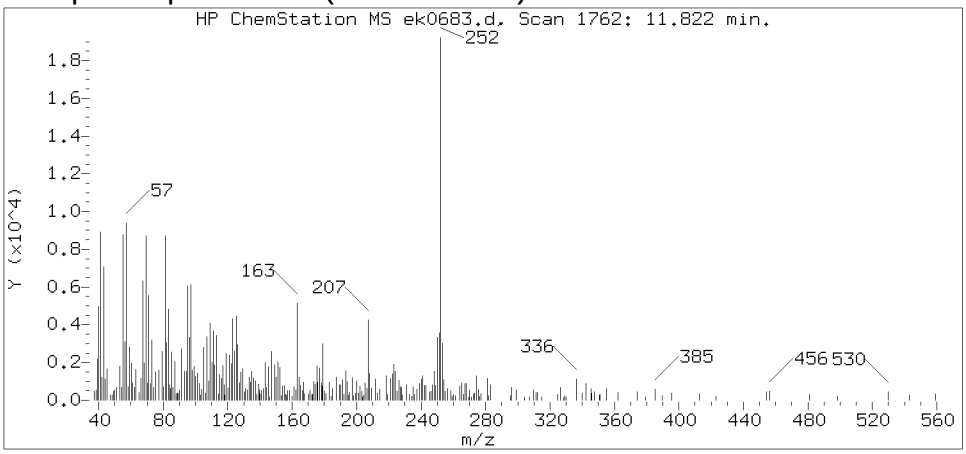


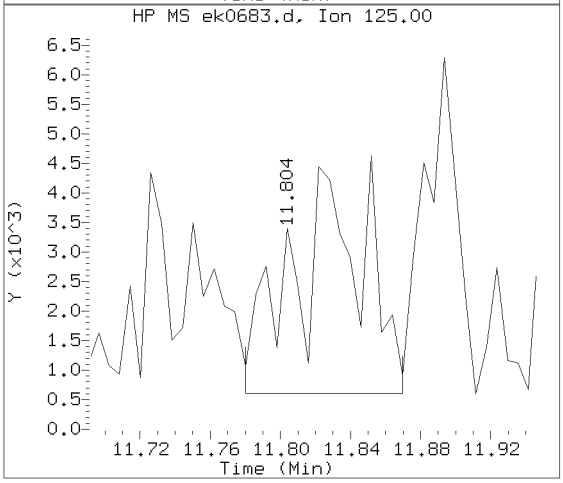
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

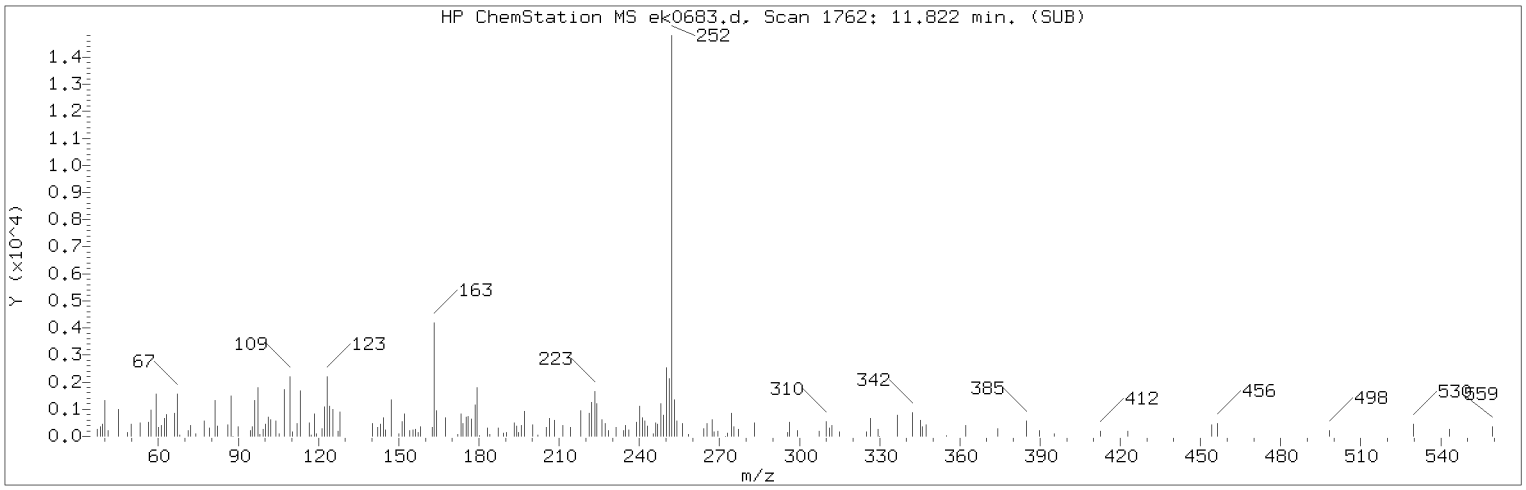
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

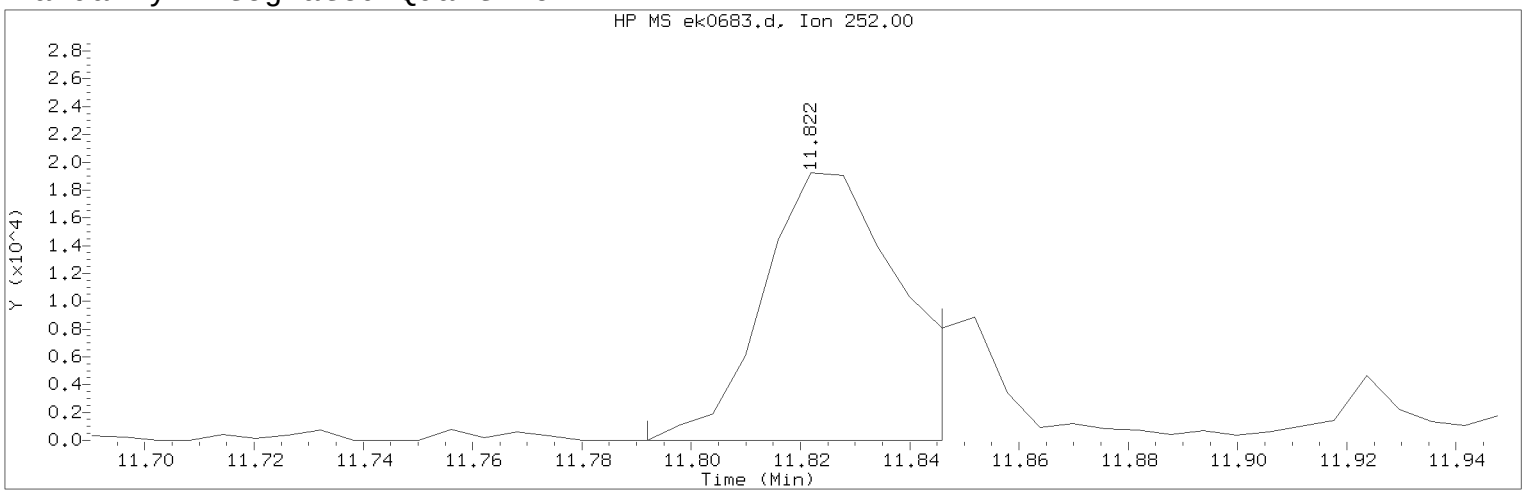
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Relative Retention Time : 0.00049
Quant Ion : 252.00
Area (flag) : 33802M
On-column Amount (ng/ul) : 0.9624

Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

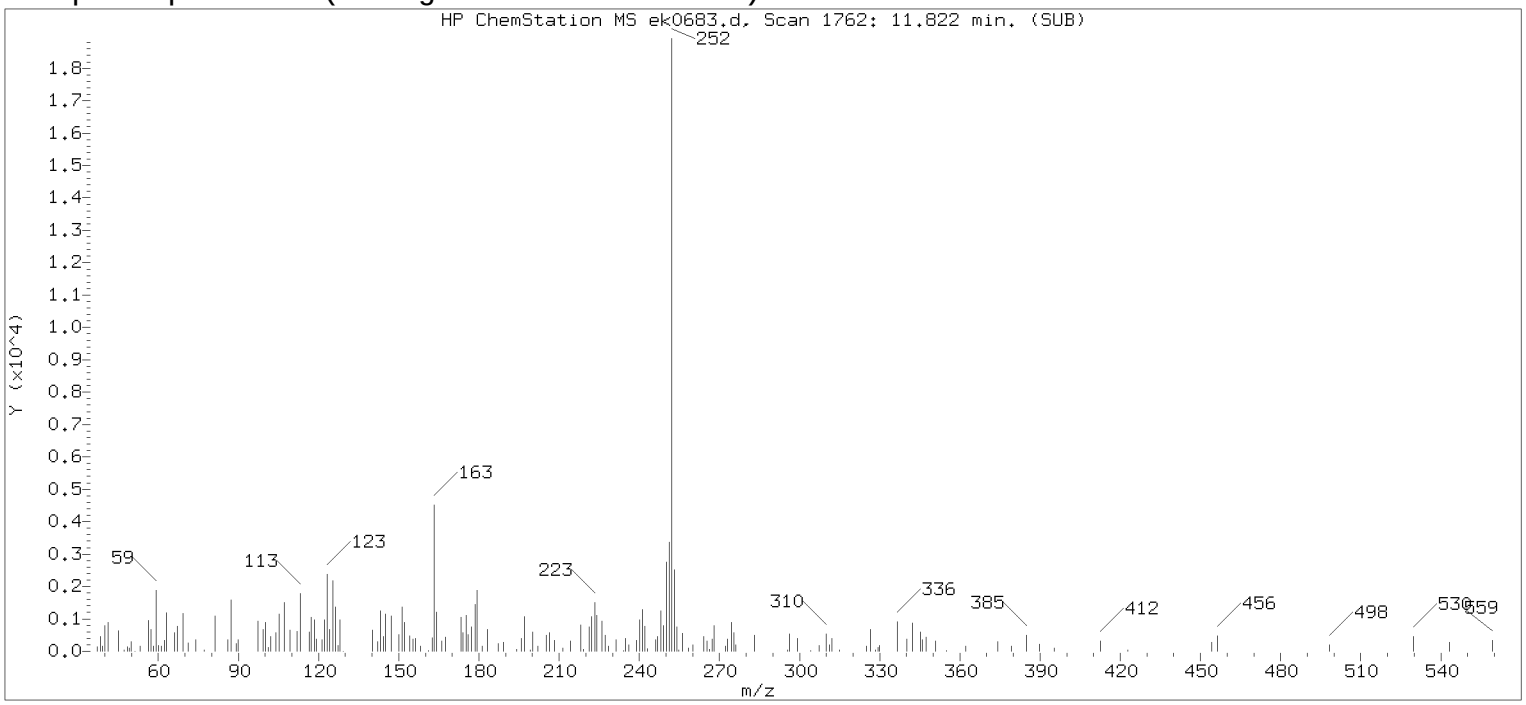
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area (flag) : 33802M
On-column Amount (ng/ul) : 0.9624
Integration start scan : 1756 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

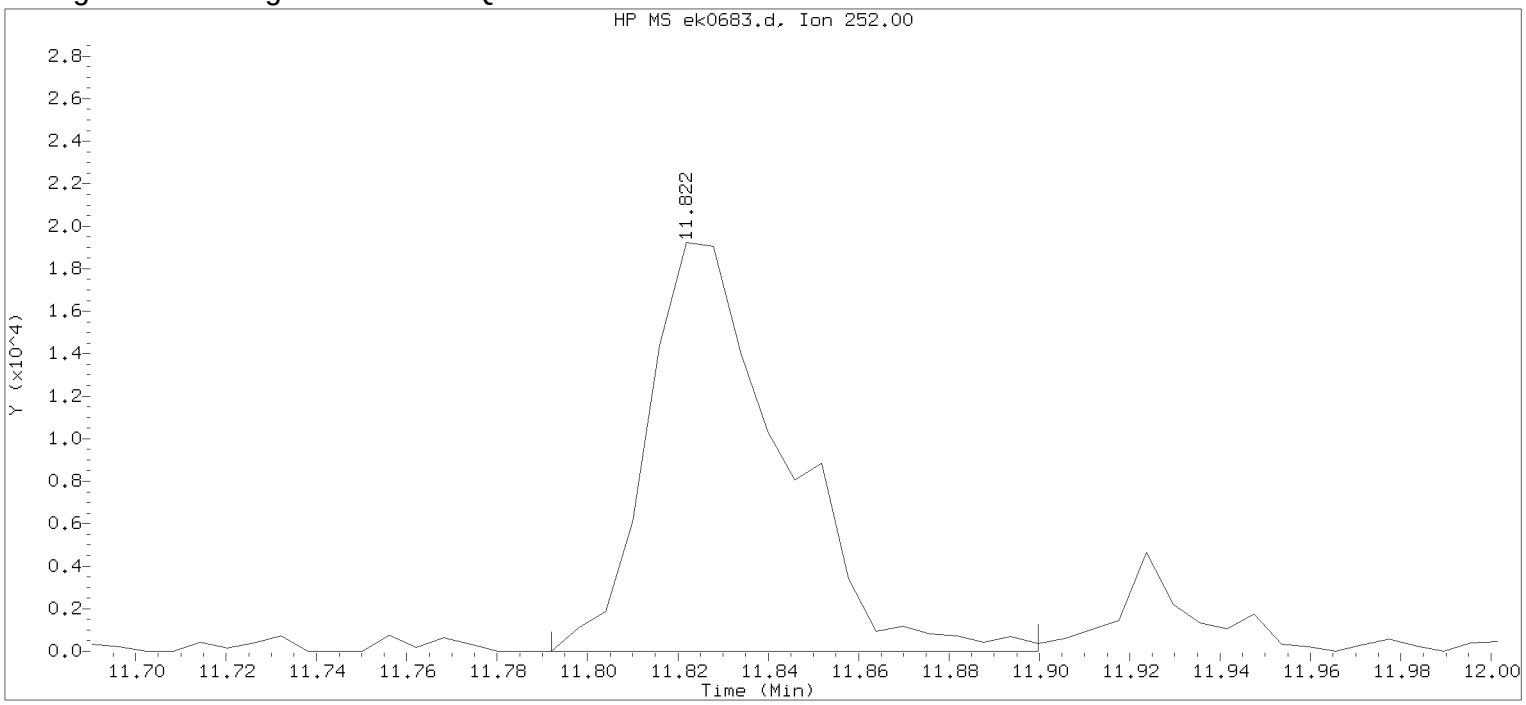
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

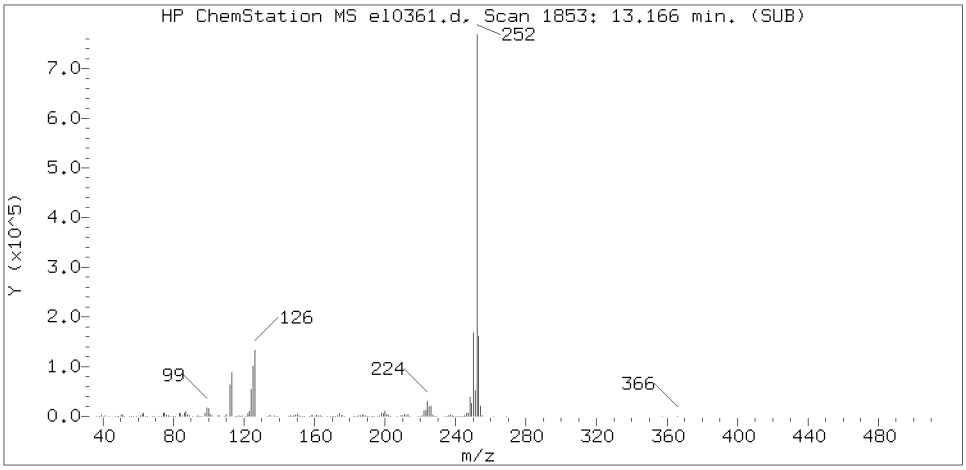
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:52 hb01996

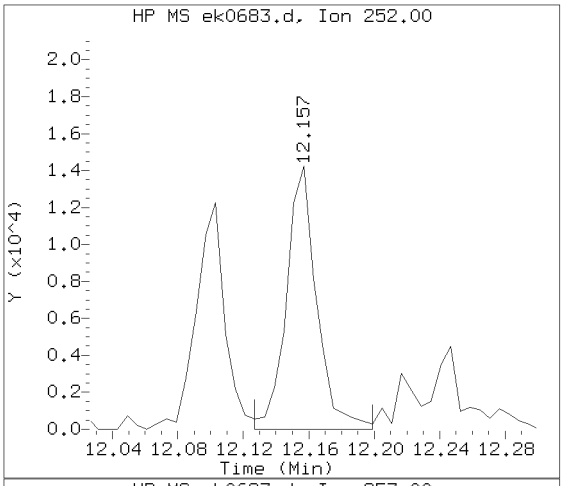
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area : 39982
On-column Amount (ng/ul) : 1.1383
Integration start scan : 1756 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

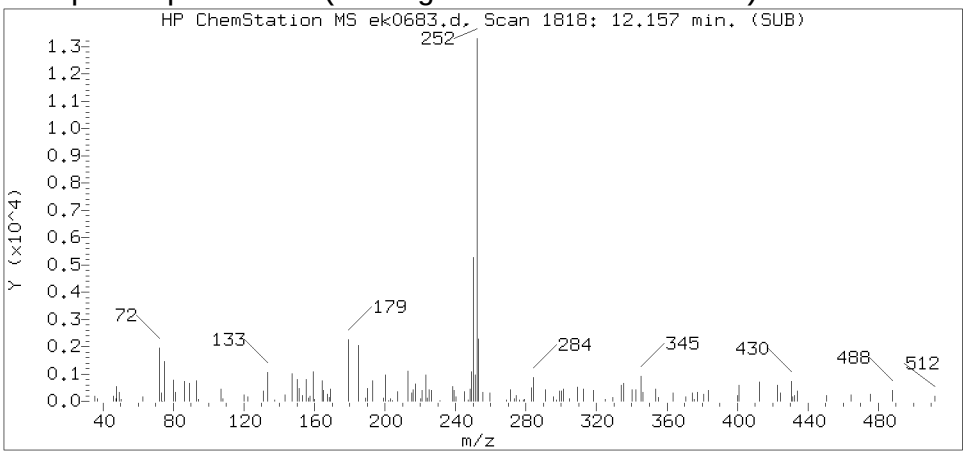
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

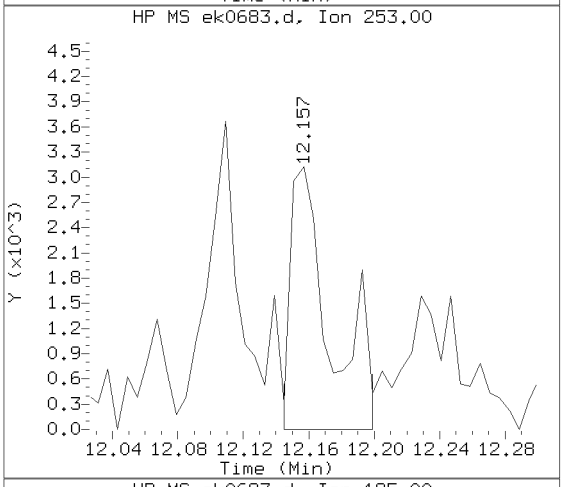
Reference Standard Spectrum for Benzo(a)pyrene



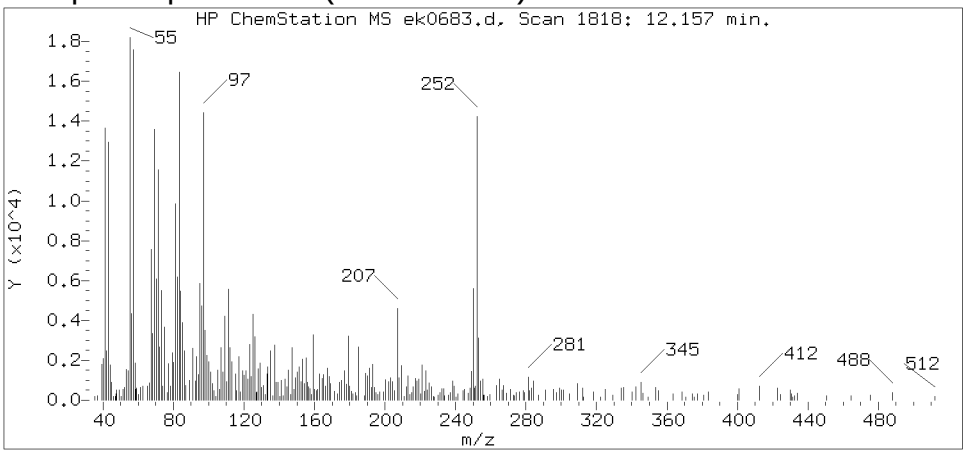


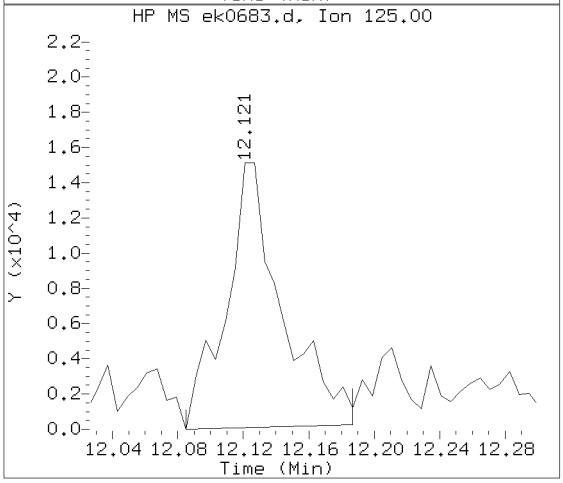
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

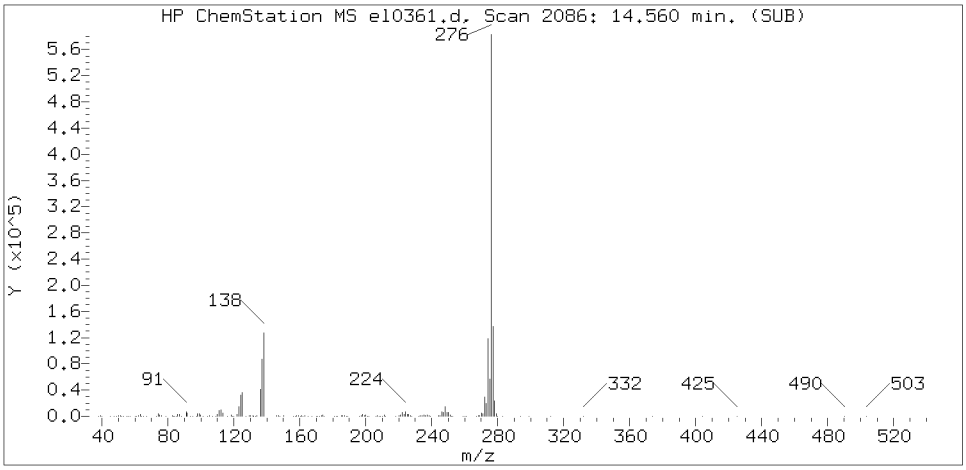
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

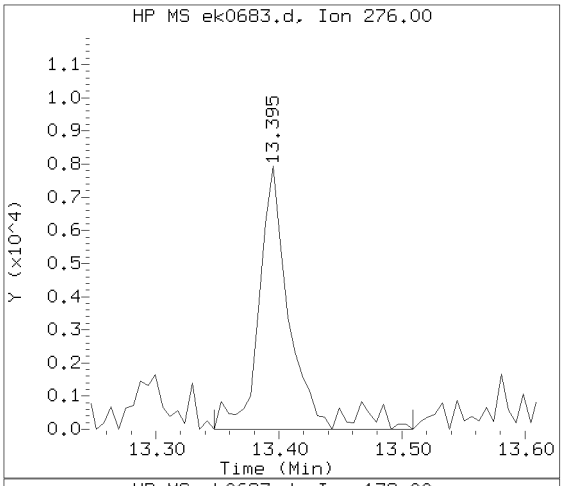
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 189
Compound Name	: Benzo(a)pyrene
Scan Number	: 1818
Retention Time (minutes)	: 12.157
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 18181
On-column Amount (ng/ul)	: 0.5844

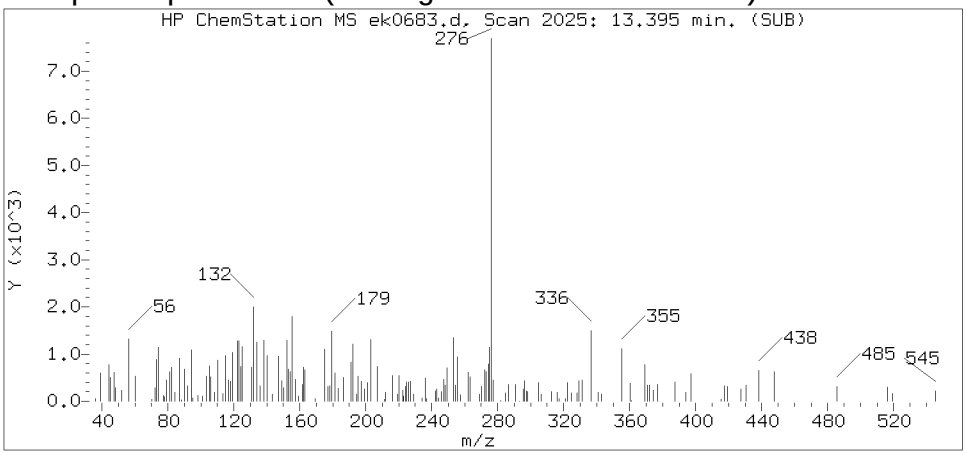
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

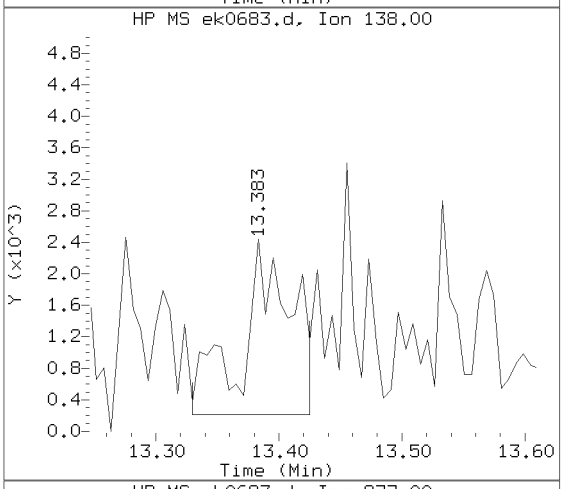
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



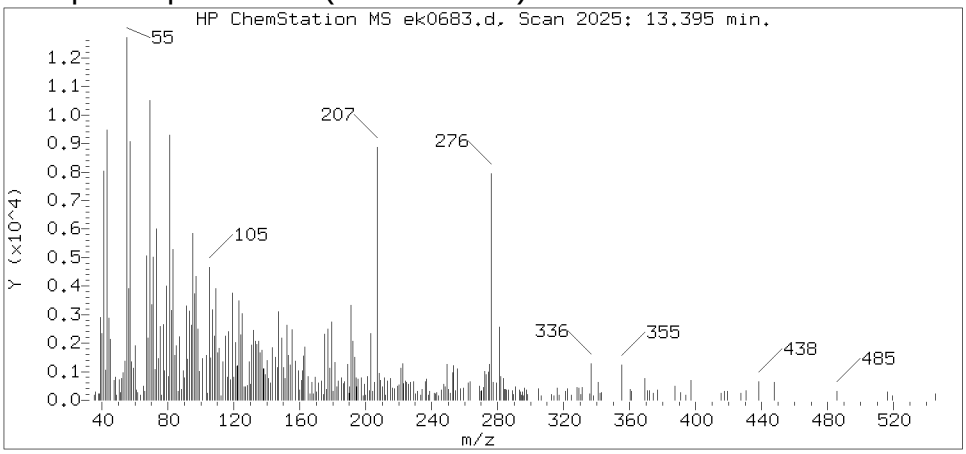


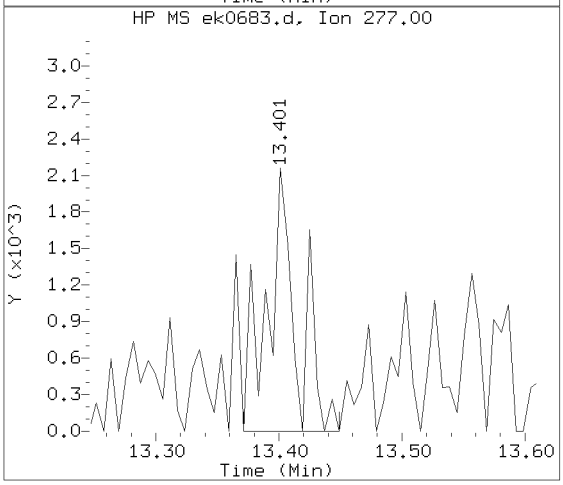
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

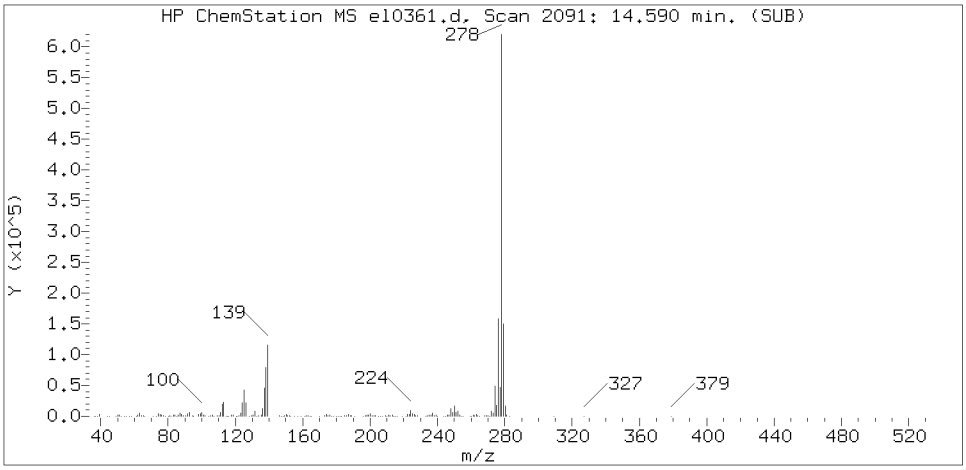
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

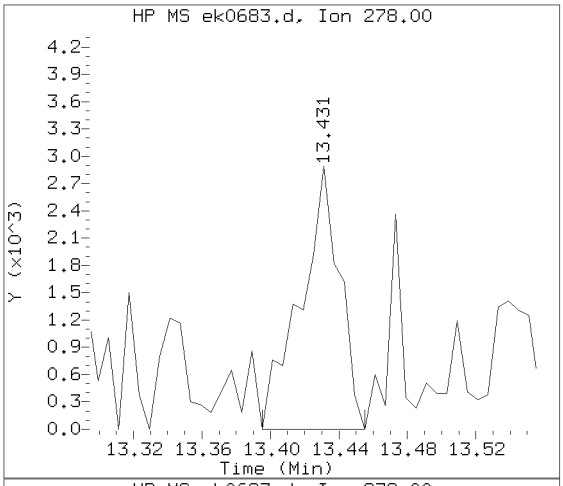
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number : 194
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2025
Retention Time (minutes) : 13.395
Relative Retention Time : 0.00049
Quant Ion : 276.00
Area (flag) : 14222
On-column Amount (ng/ul) : 0.4535

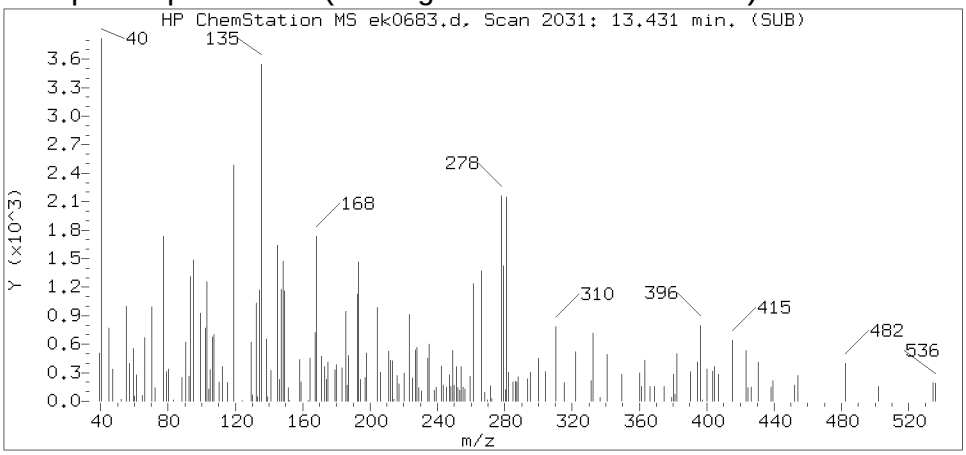
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

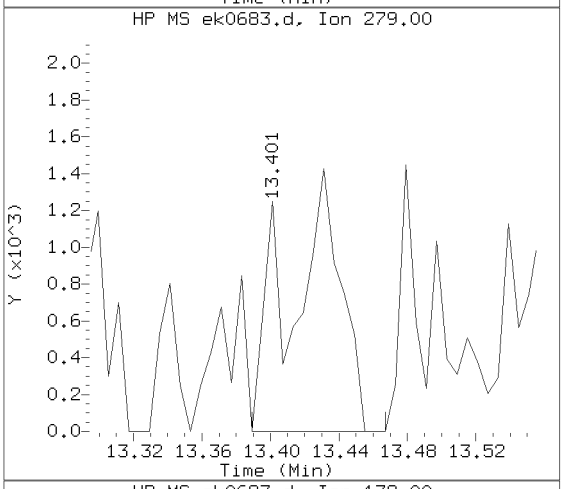
Reference Standard Spectrum for Dibenz(a,h)anthracene



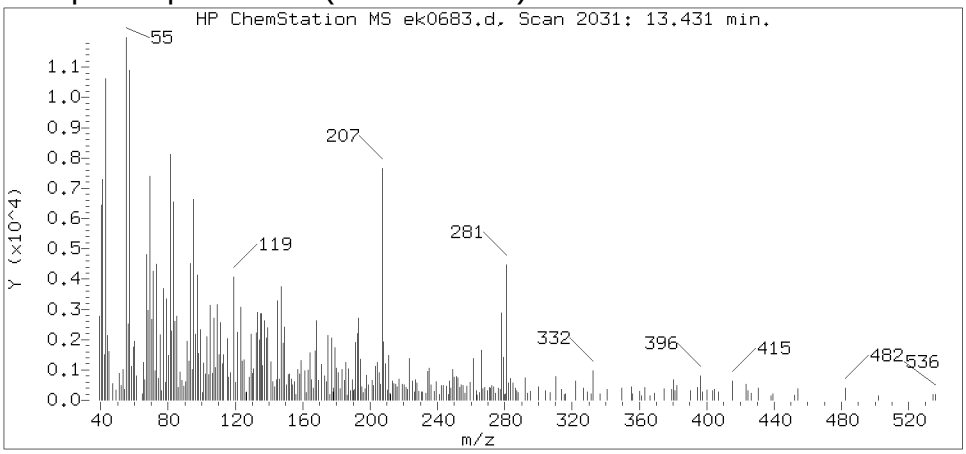


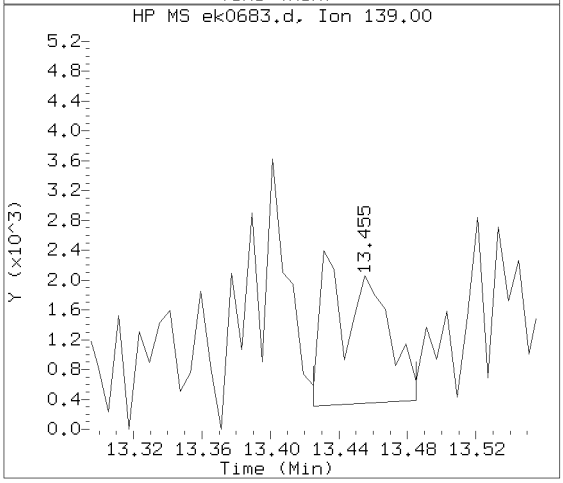
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

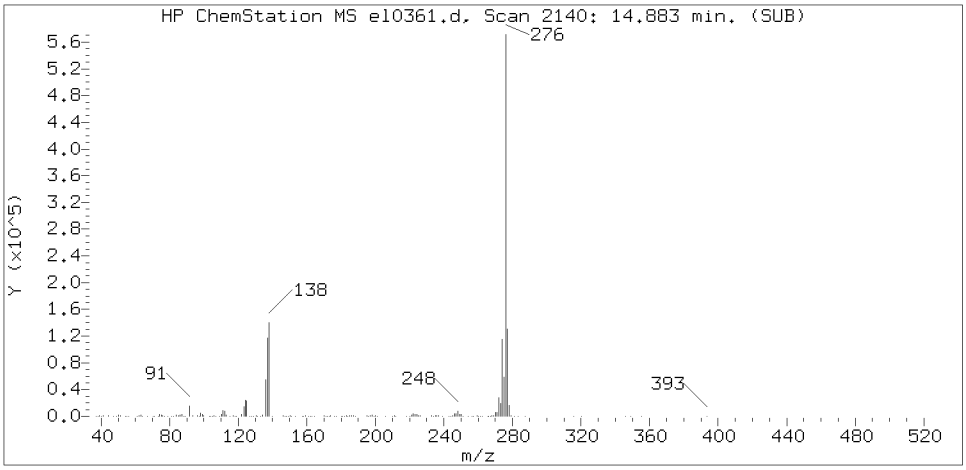
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

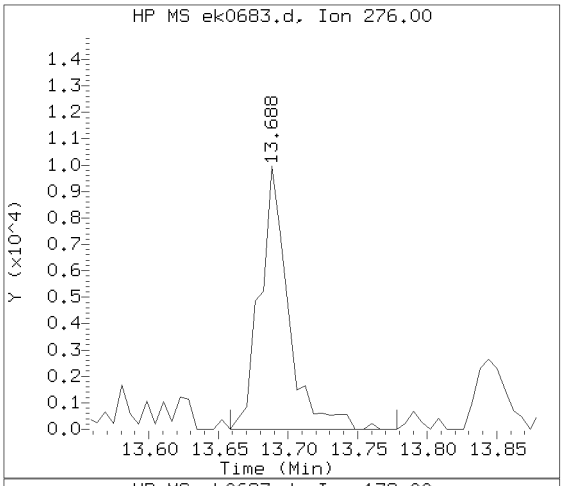
Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 195
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2031
Retention Time (minutes)	: 13.431
Relative Retention Time	: 0.00049
Quant Ion	: 278.00
Area (flag)	: 4583
On-column Amount (ng/ul)	: 0.1726

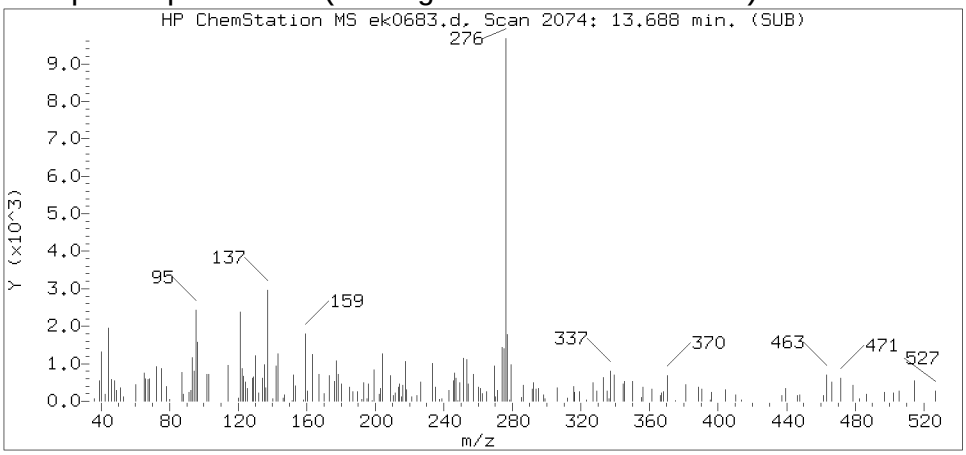
Digitally signed by Holly Berry on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

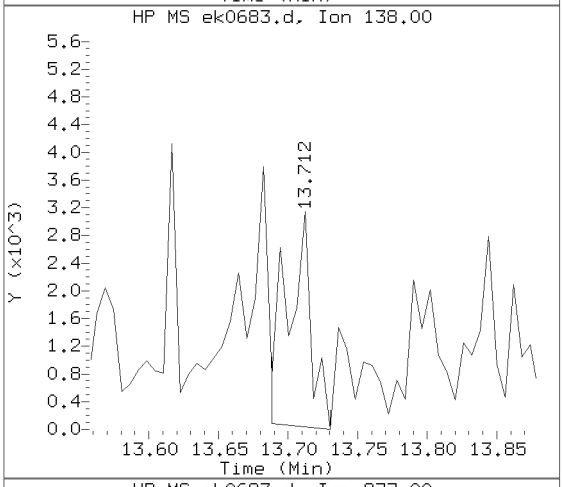
Reference Standard Spectrum for Benzo(g,h,i)perylene



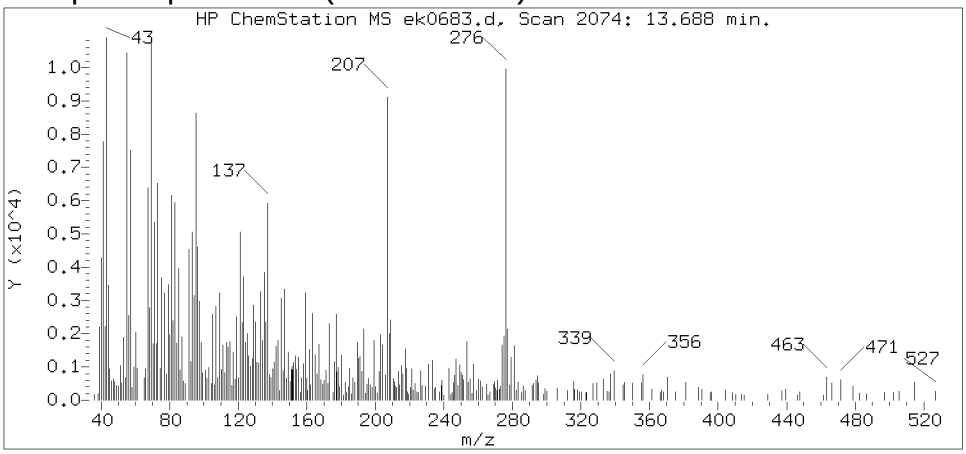


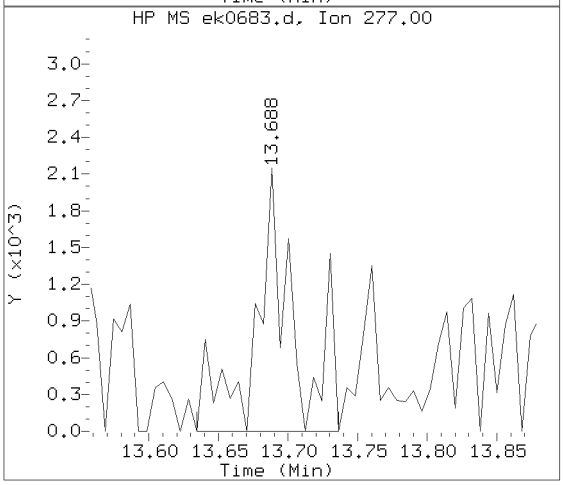
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0683.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:05 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:41 hb01996

Sample Name: 2G124 Lab Sample ID: 7266800

Compound Number	: 196
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2074
Retention Time (minutes)	: 13.688
Relative Retention Time	: 0.00049
Quant Ion	: 276.00
Area (flag)	: 14145
On-column Amount (ng/ul)	: 0.5393

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Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0686.d
Injection date and time: **15-NOV-2013 22:19**
Data file Sample Info. Line: 2G125;7266804;2;0;SAMPLE;;;
Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	147224 (-36)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	693916 (-33)	20.00	
99) Acenaphthene-d10	7.461(0.000)	1033	164	452859 (-31)	20.00	
148) Phenanthrene-d10	8.669(0.000)	1235	188	753807 (-31)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	764677 (-36)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	502240 (-38)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	270742	16.746	84%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.917(0.001)	172	449129	17.352	87%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	504004	18.493	92%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)	6.001(-0.000)	128	7214	0.197	65.72			0.1
72) 2-Methylnaphthalene	(2)			Not Detected					0.1
75) 1-Methylnaphthalene	(2)			Not Detected					0.1
96) Acenaphthylene	(3)	7.341(0.000)	152	9593	0.260	86.77			0.1
100) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)	7.910(0.000)	166	3449	0.111	36.98			0.1
149) Phenanthrene	(4)	8.687(-0.000)	178	38706	0.908	302.76			0.1
150) Anthracene	(4)	8.729(-0.000)	178	12006	0.279	93.04			0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	73586	1.653	550.84			0.1
166) Pyrene	(5)	9.830(0.000)	202	81009	1.940	646.71			0.1
178) Benzo(a)anthracene	(5)	10.811(0.000)	228	25256	0.679	226.25			0.1
180) Chrysene	(5)	10.841(0.000)	228	42580	1.218	406.04			0.1
186) Benzo(b)fluoranthene	(6)	11.828(-0.000)	252	40377M	1.282	427.41			0.1
187) Benzo(k)fluoranthene	(6)	11.852(0.000)	252	18681M	0.594	198.12			0.1
189) Benzo(a)pyrene	(6)	12.157(0.000)	252	26975	0.967	322.38			0.1
194) Indeno(1,2,3-cd)pyrene	(6)	13.389(0.000)	276	18304	0.651	217.03			0.1
195) Dibenz(a,h)anthracene	(6)	13.431(0.000)	278	6366	0.267	89.13			0.1
196) Benzo(g,h,i)perylene	(6)	13.688(0.000)	276	20119	0.856	285.19			0.1

M = Compound was manually integrated.

Digitally signed by Holly Berry on 11/17/2013 at 14:50. Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0686.d Injection date and time: **15-NOV-2013 22:19**
Data file Sample Info. Line: 2G125;7266804;2;0;SAMPLE;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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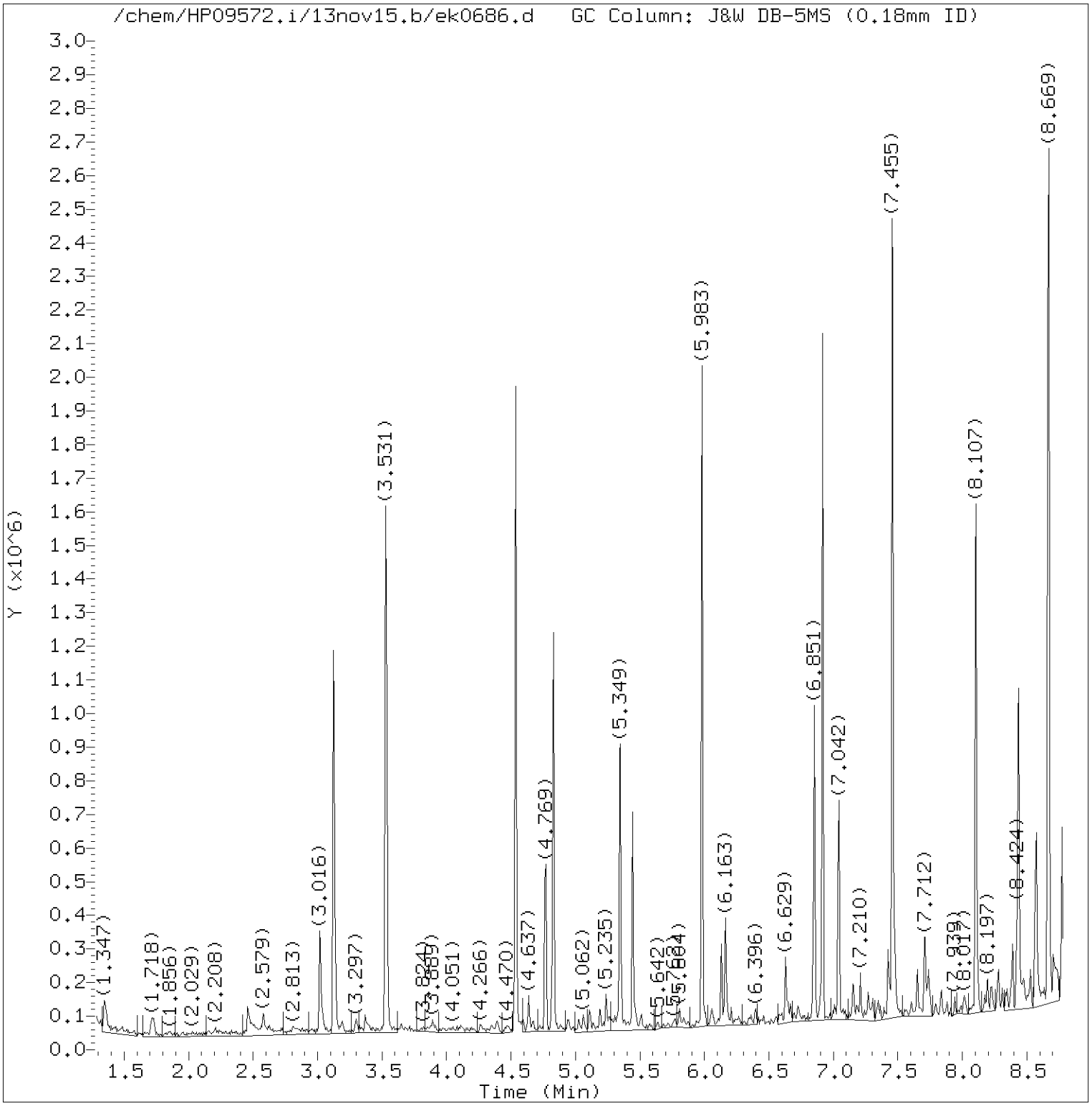
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:50. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

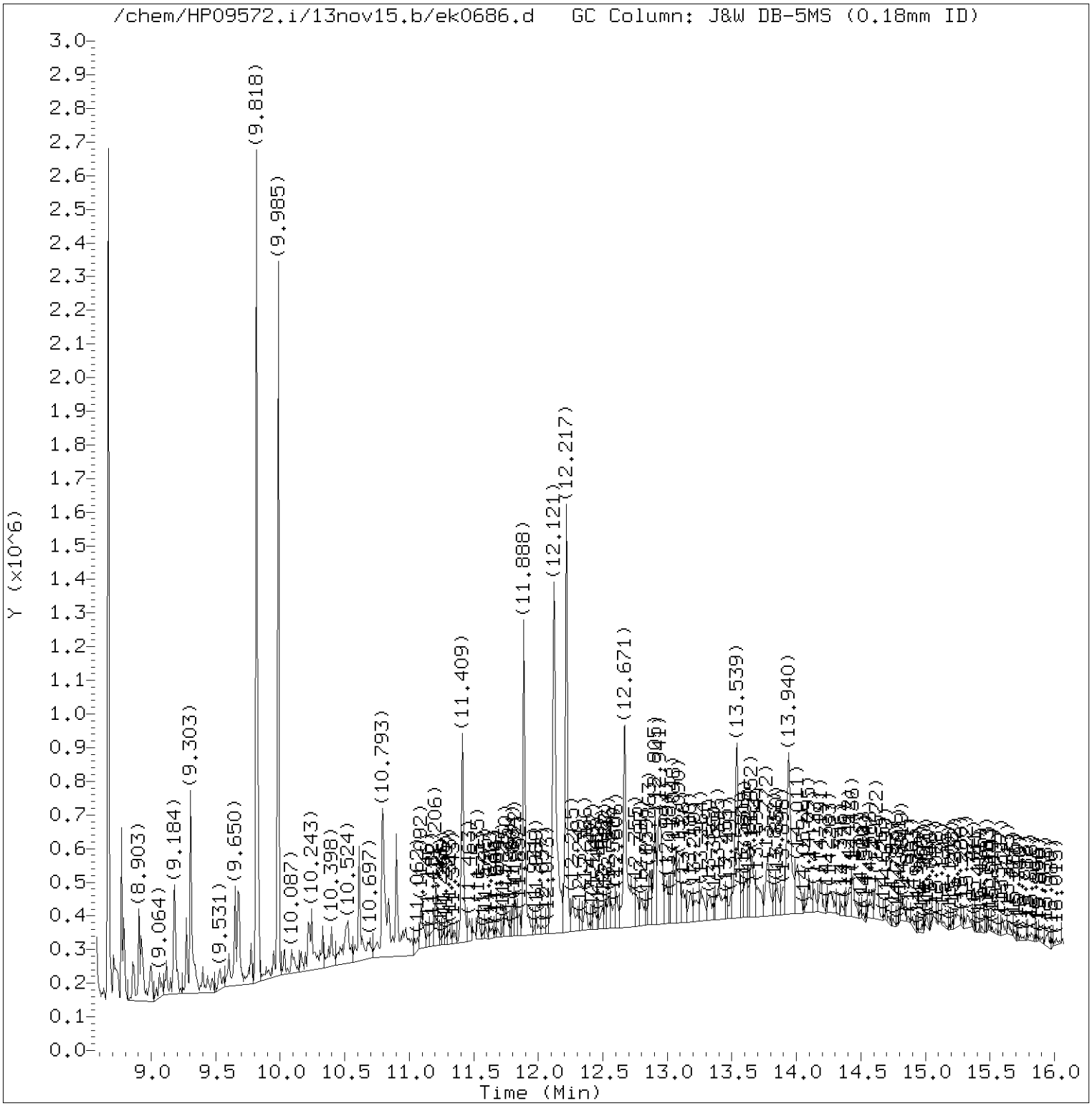
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

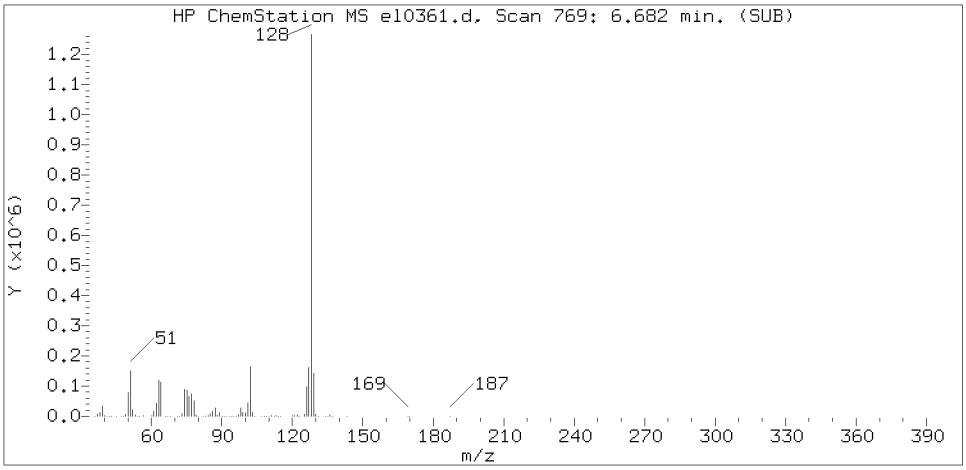
Sample Name: 2G125 Lab Sample ID: 7266804

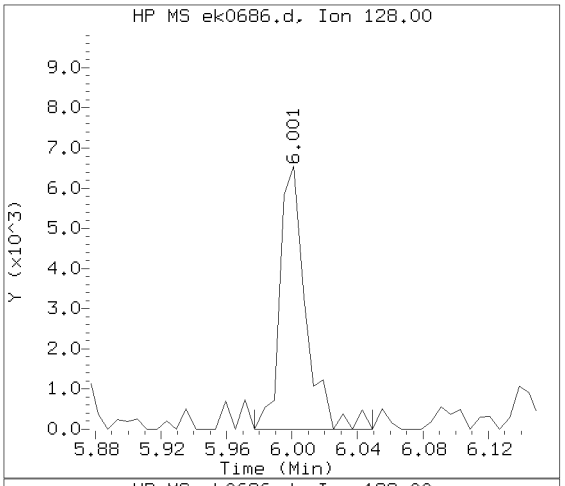
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	147224	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	270742	16.746
60)*Naphthalene-d8	(2)	5.983	136	693916	20.000
61) Naphthalene	(2)	6.001	128	7214	0.197
81)$2-Fluorobiphenyl	(3)	6.917	172	449129	17.352
96) Acenaphthylene	(3)	7.341	152	9593	0.260
99)*Acenaphthene-d10	(3)	7.461	164	452859	20.000
111) Fluorene	(3)	7.910	166	3449	0.111
148)*Phenanthrene-d10	(4)	8.669	188	753807	20.000
149) Phenanthrene	(4)	8.687	178	38706	0.908
150) Anthracene	(4)	8.729	178	12006	0.279
163) Fluoranthene	(4)	9.650	202	73586	1.653
165)*Pyrene-d10	(5)	9.818	212	764677	20.000
166) Pyrene	(5)	9.830	202	81009	1.940
169)$Terphenyl-d14	(5)	9.985	244	504004	18.493
178) Benzo(a)anthracene	(5)	10.811	228	25256	0.679
180) Chrysene	(5)	10.841	228	42580	1.218
186) Benzo(b)fluoranthene	(6)	11.828	252	40377M	1.282
187) Benzo(k)fluoranthene	(6)	11.852	252	18681M	0.594
189) Benzo(a)pyrene	(6)	12.157	252	26975	0.967
190)*Perylene-d12	(6)	12.217	264	502240	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.389	276	18304	0.651
195) Dibenz(a,h)anthracene	(6)	13.431	278	6366	0.267
196) Benzo(g,h,i)perylene	(6)	13.688	276	20119	0.856

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

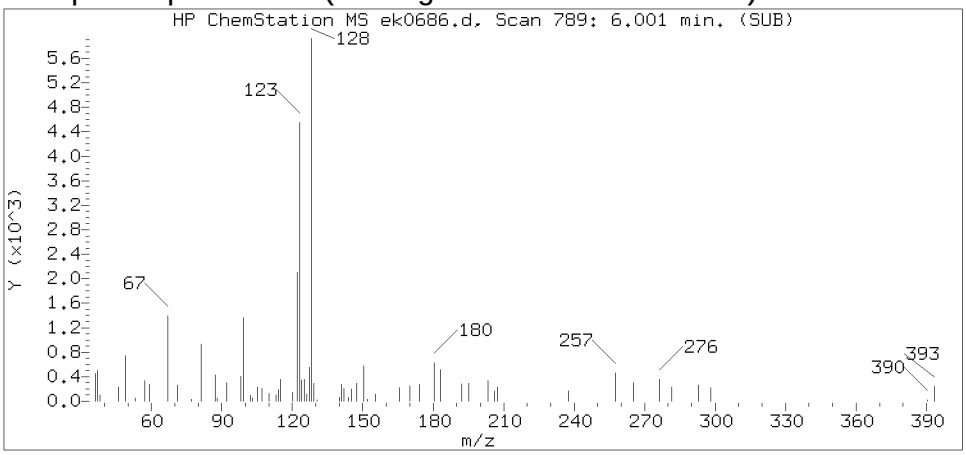
Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

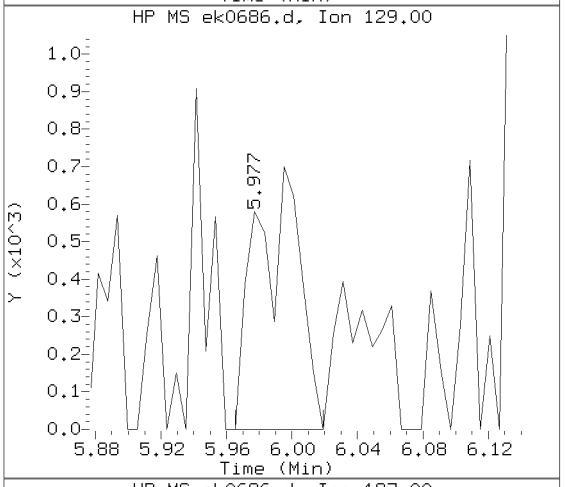
Reference Standard Spectrum for Naphthalene



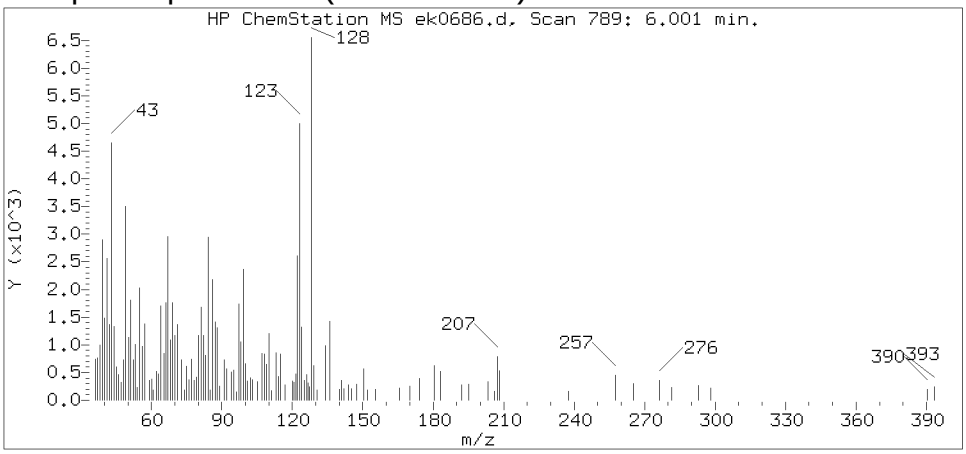


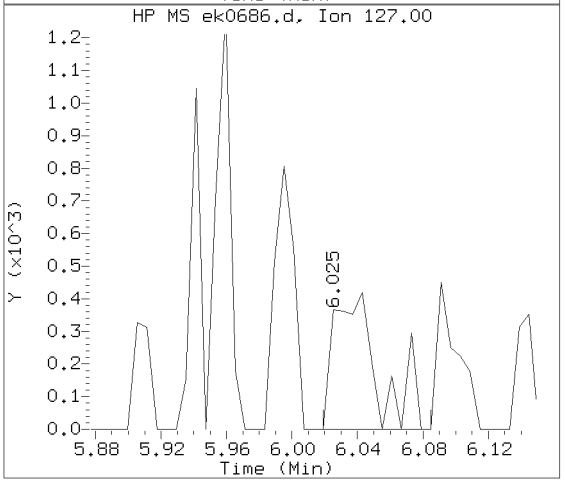
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 61
Compound Name : Naphthalene
Scan Number : 789
Retention Time (minutes) : 6.001
Relative Retention Time :-0.00000
Quant Ion : 128.00
Area (flag) : 7214
On-column Amount (ng/ul) : 0.1971

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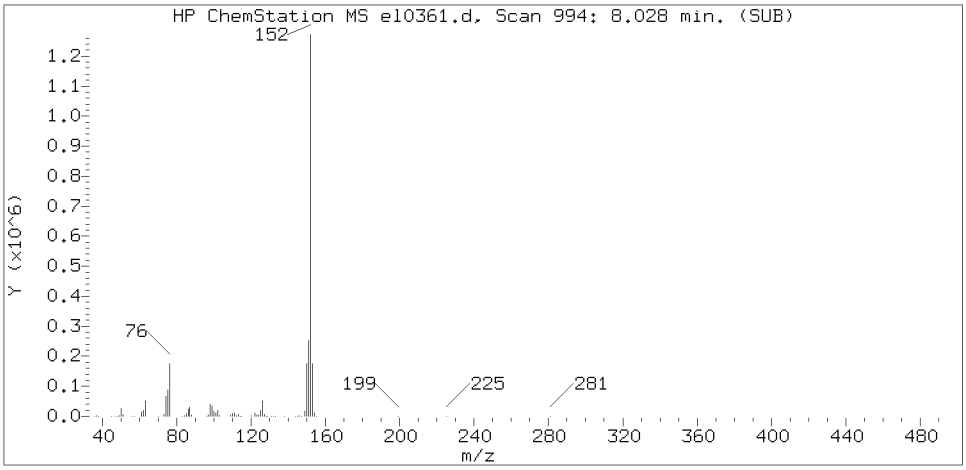
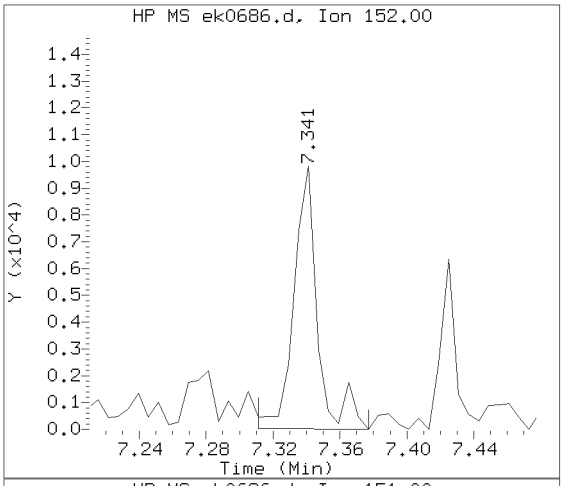
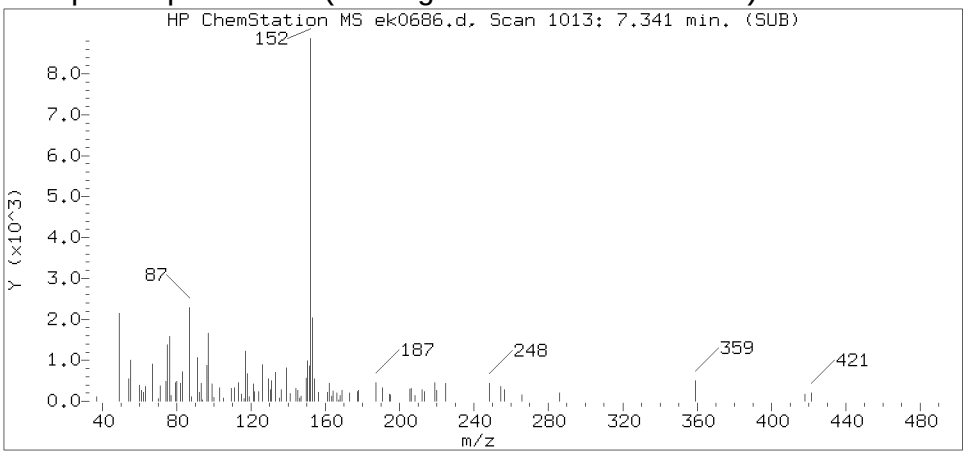
Target 3.5 esignature user ID: hb01996

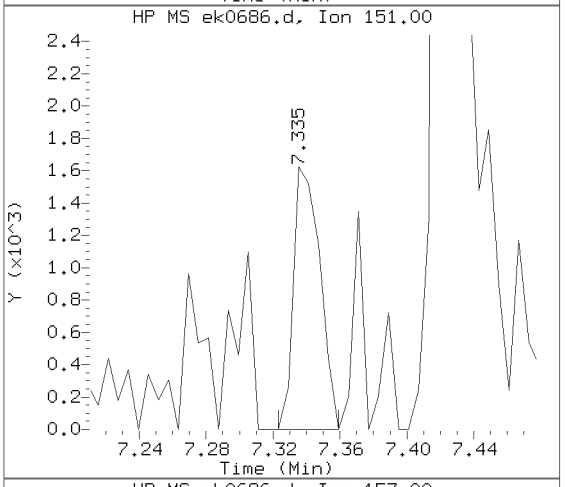
Reference Standard Spectrum for Acenaphthylene



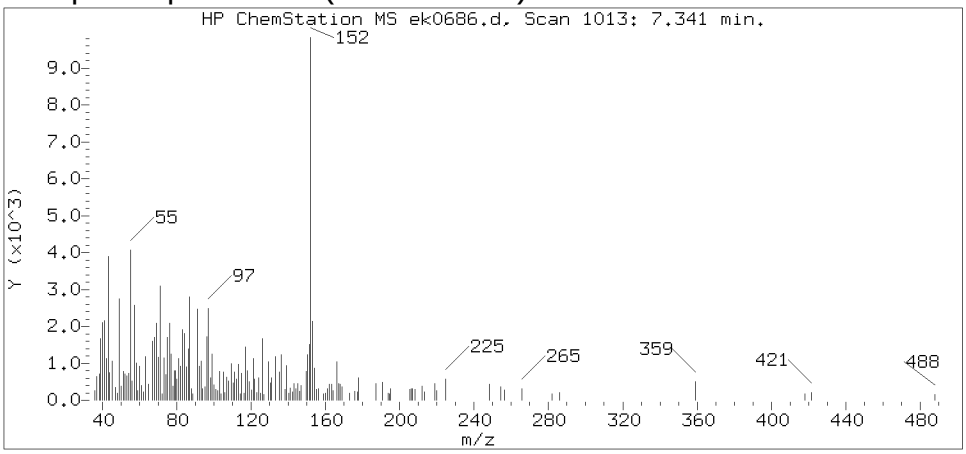


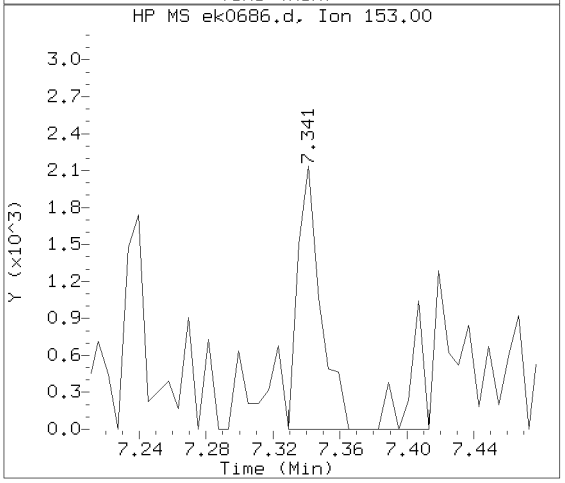
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 96
Compound Name	: Acenaphthylene
Scan Number	: 1013
Retention Time (minutes)	: 7.341
Relative Retention Time	: 0.00000
Quant Ion	: 152.00
Area (flag)	: 9593
On-column Amount (ng/ul)	: 0.2603

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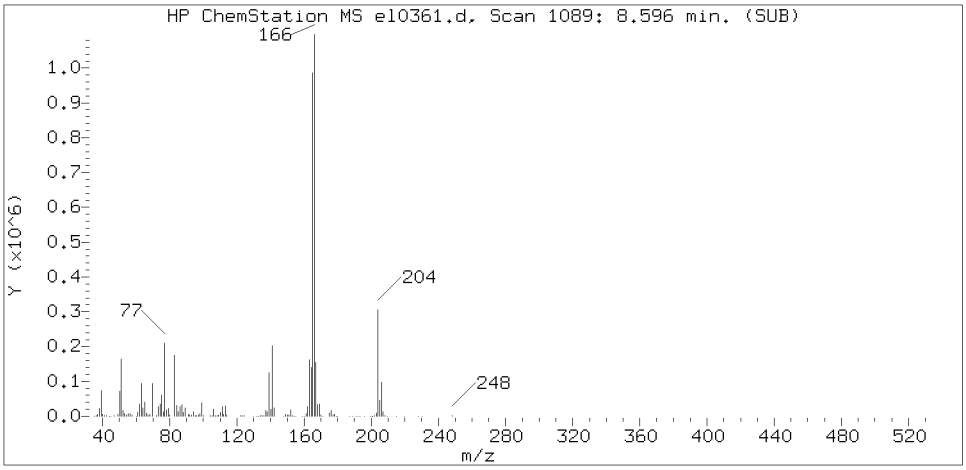
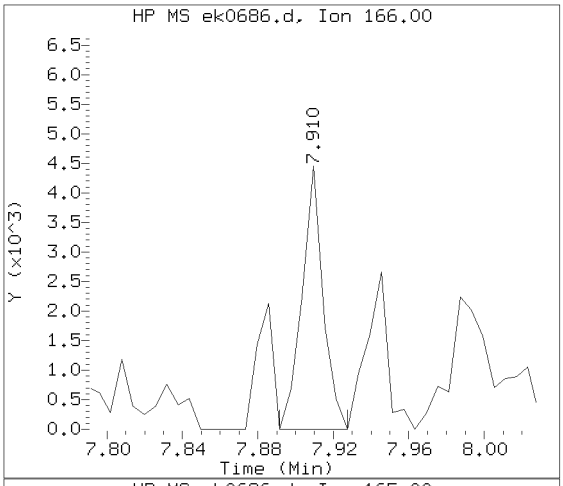
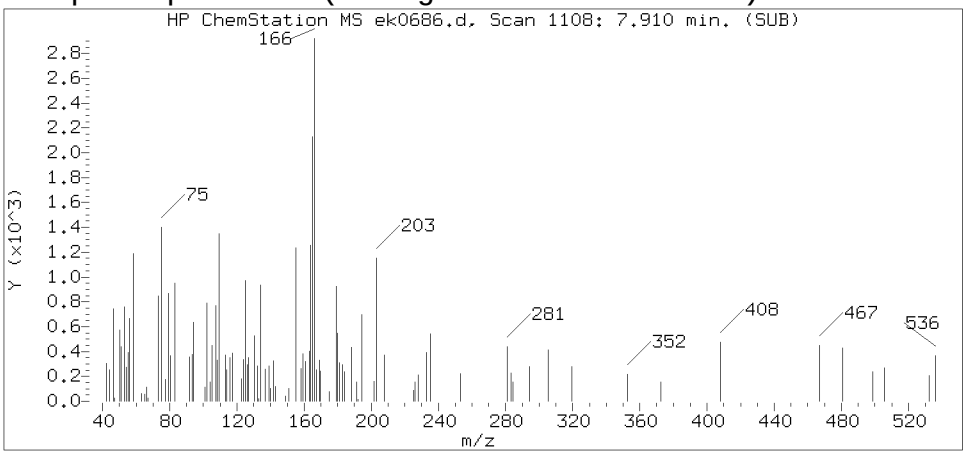
Target 3.5 esignature user ID: hb01996

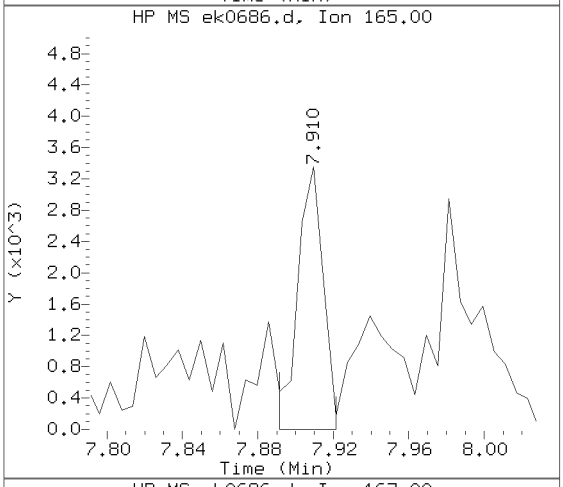
Reference Standard Spectrum for Fluorene



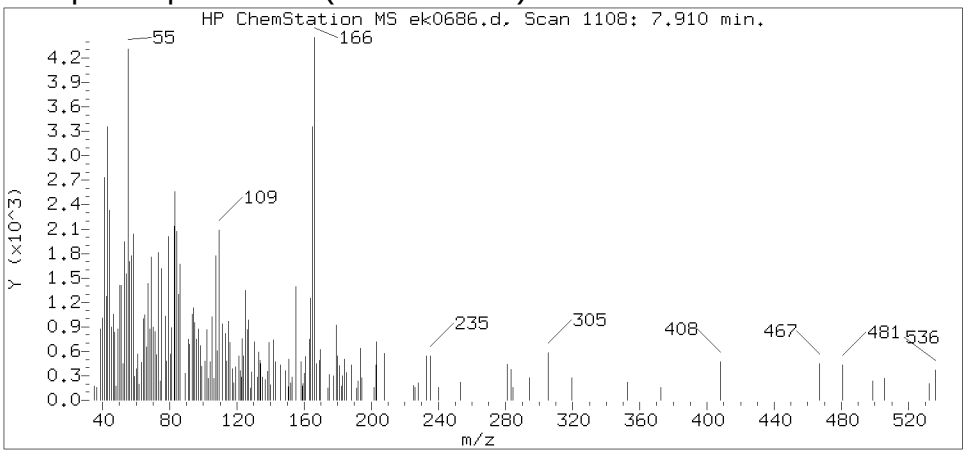


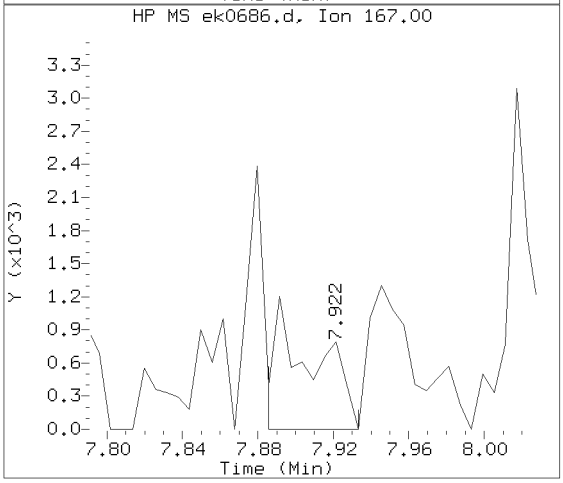
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 111
Compound Name	: Fluorene
Scan Number	: 1108
Retention Time (minutes)	: 7.910
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 3449
On-column Amount (ng/ul)	: 0.1109

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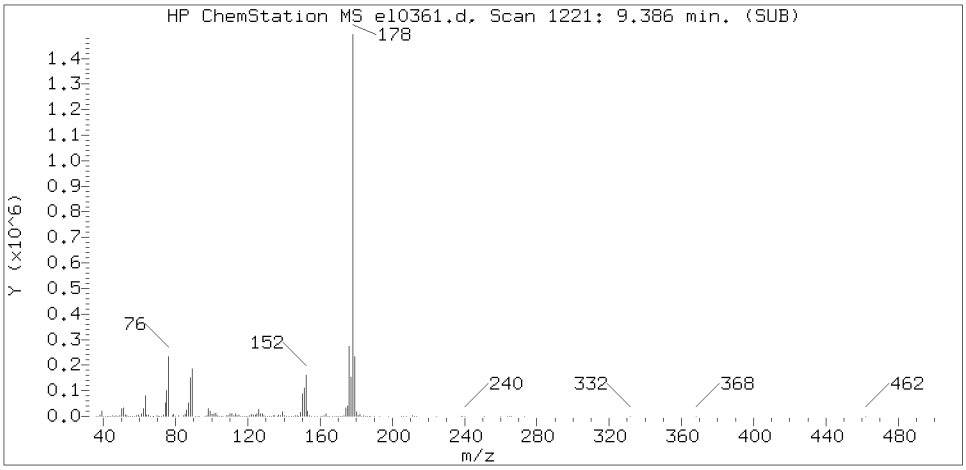
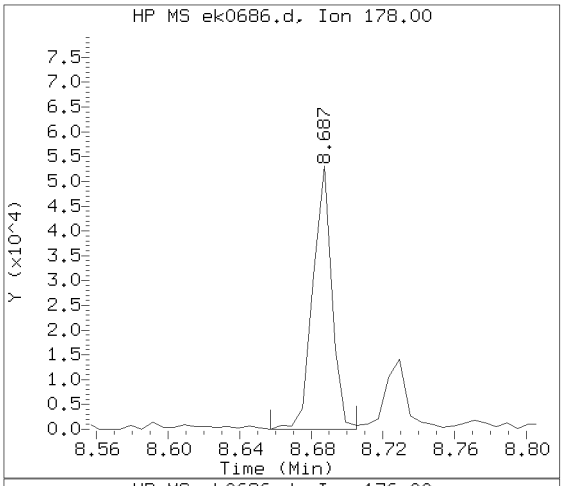
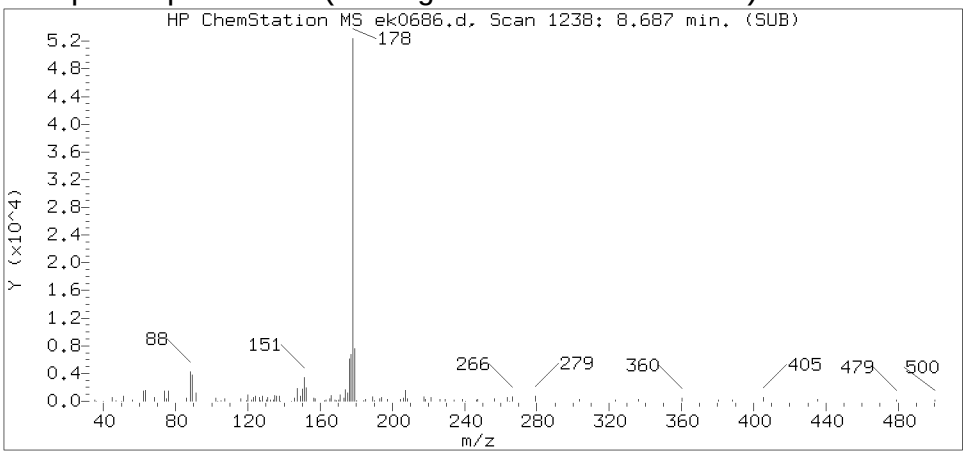
Target 3.5 esignature user ID: hb01996

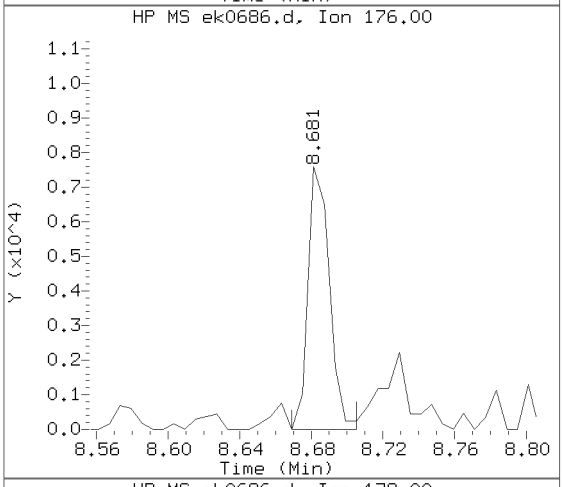
Reference Standard Spectrum for Phenanthrene



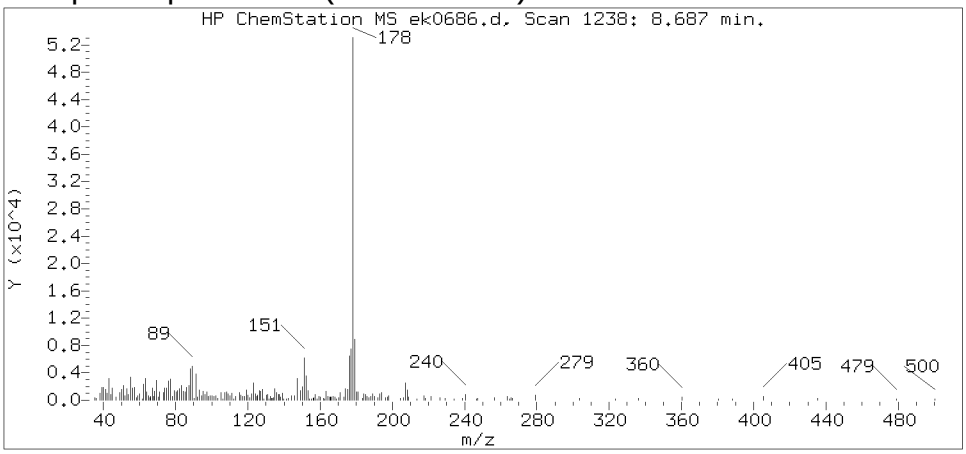


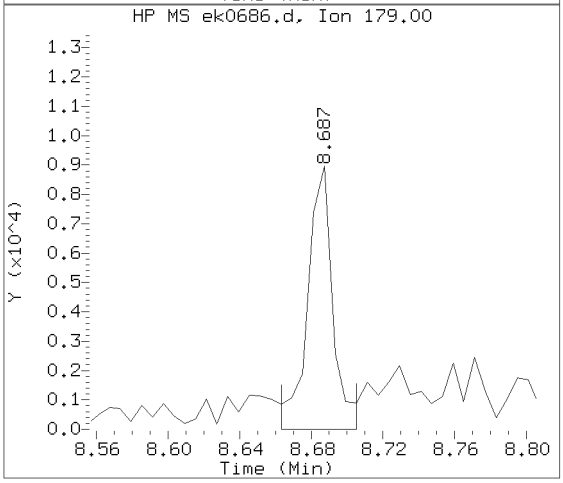
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 149
Compound Name : Phenanthrene
Scan Number : 1238
Retention Time (minutes) : 8.687
Relative Retention Time :-0.00000
Quant Ion : 178.00
Area (flag) : 38706
On-column Amount (ng/ul) : 0.9083

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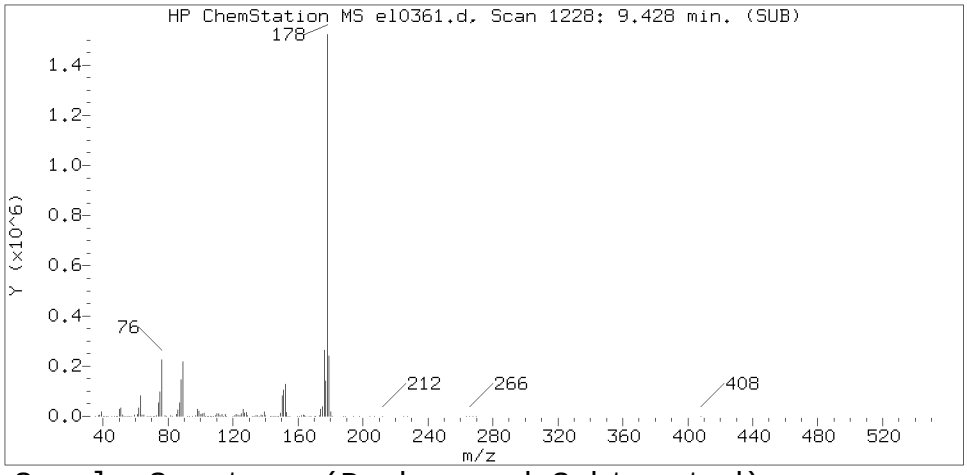
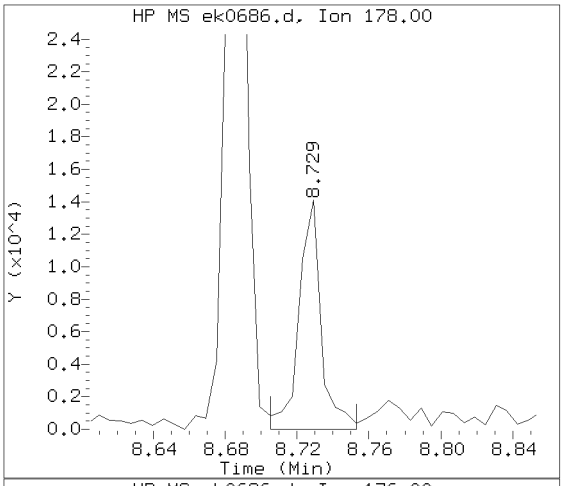
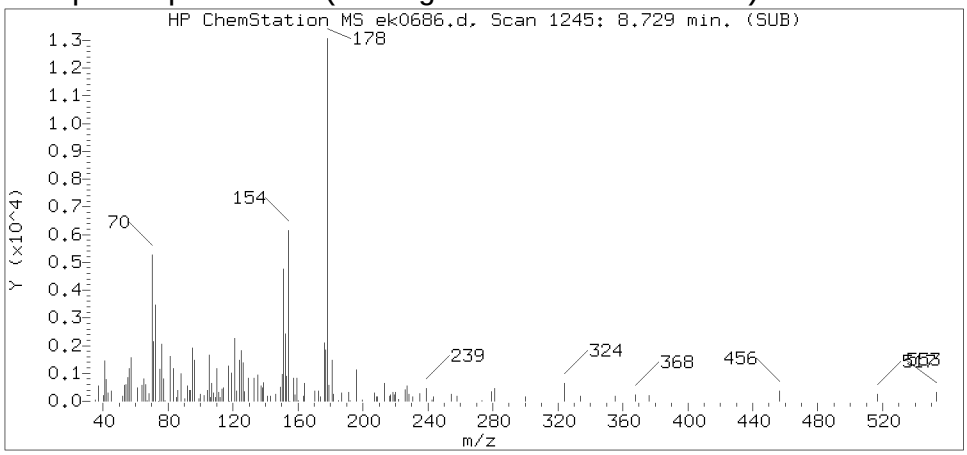
Target 3.5 esignature user ID: hb01996

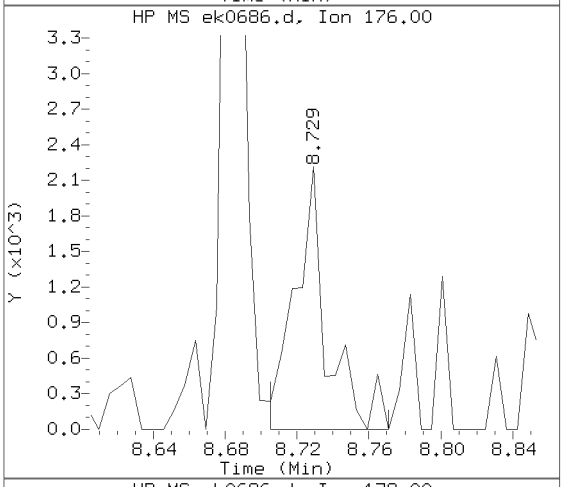
Reference Standard Spectrum for Anthracene



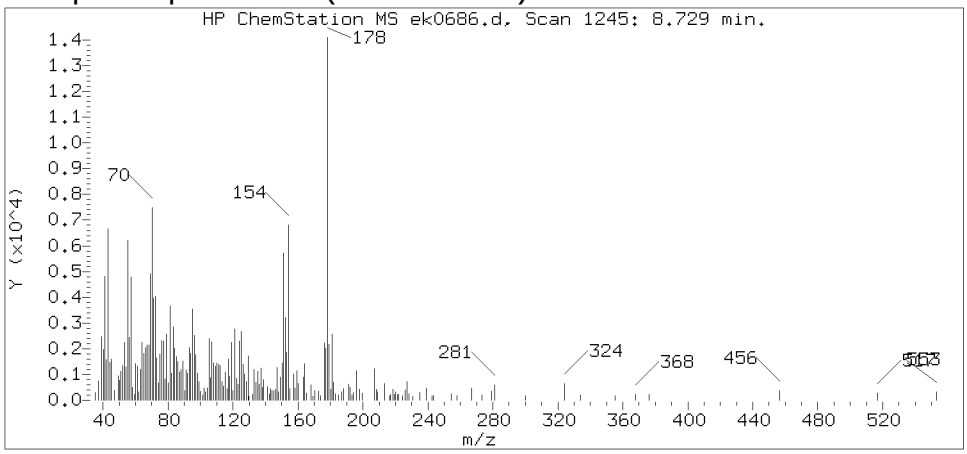


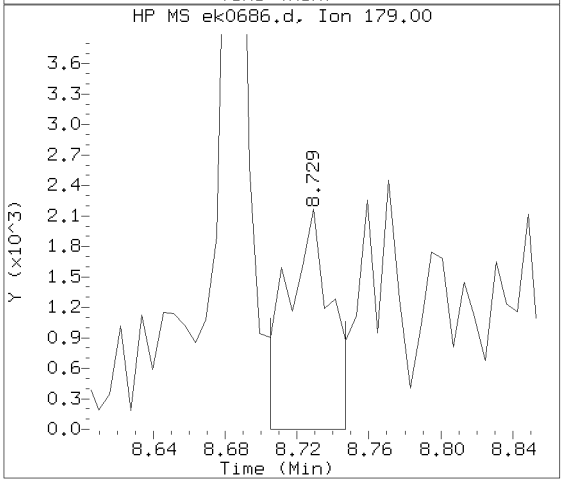
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 150
Compound Name	: Anthracene
Scan Number	: 1245
Retention Time (minutes)	: 8.729
Relative Retention Time	:-0.00000
Quant Ion	: 178.00
Area (flag)	: 12006
On-column Amount (ng/ul)	: 0.2791

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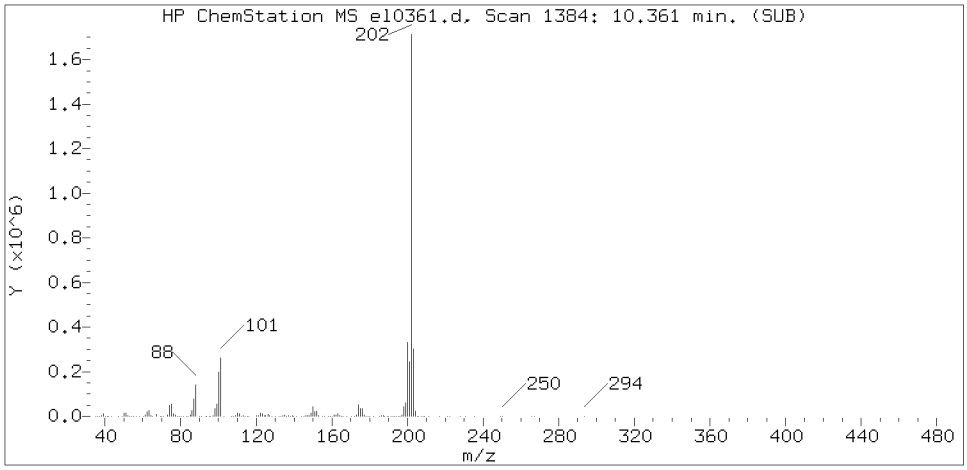
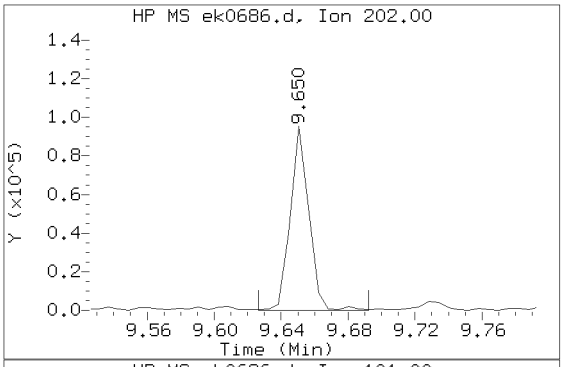
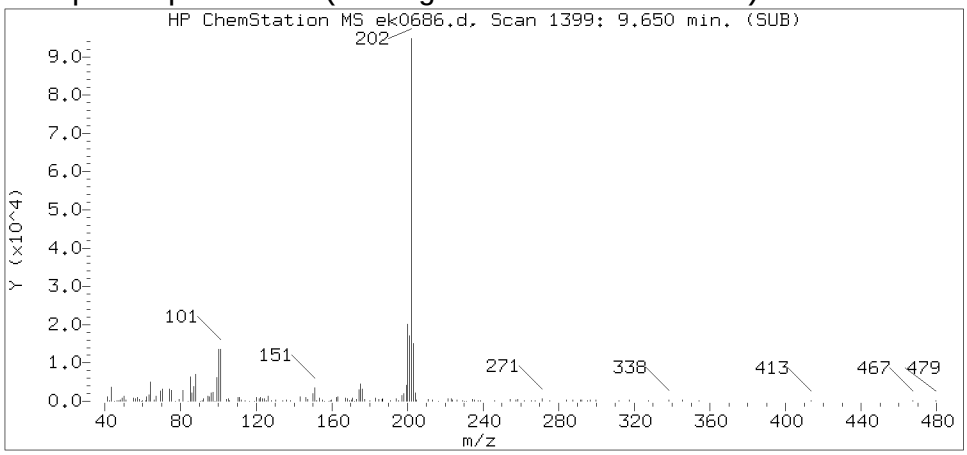
Target 3.5 esignature user ID: hb01996

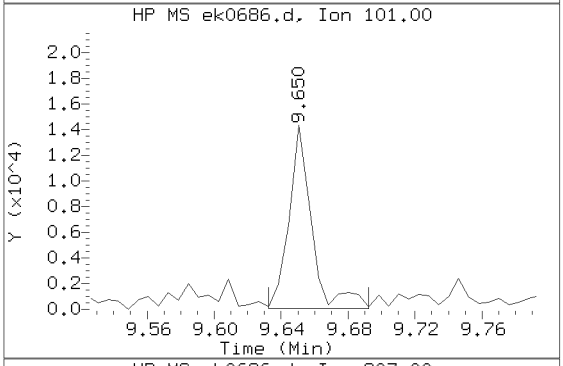
Reference Standard Spectrum for Fluoranthene

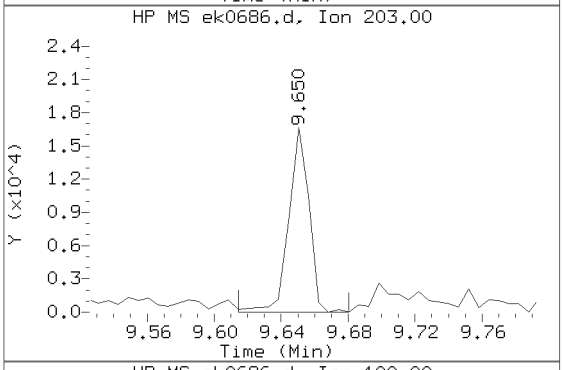




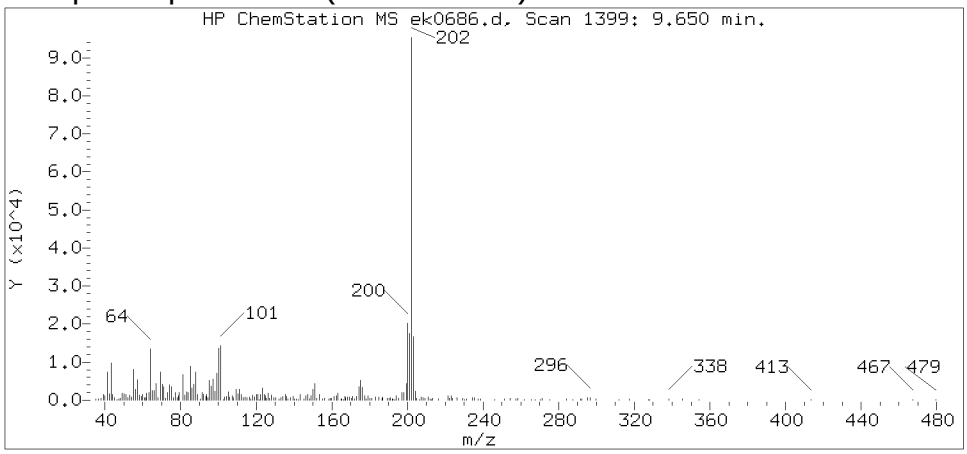
Sample Spectrum (Background Subtracted)

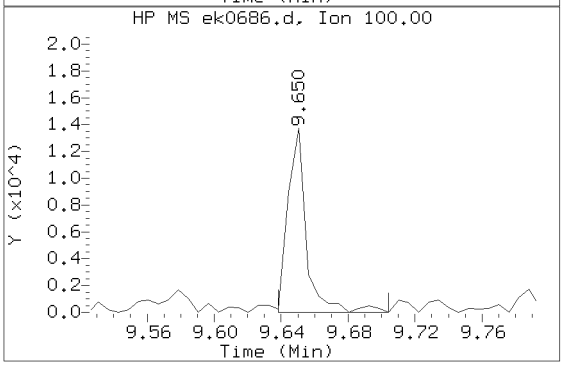






Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 163
Compound Name : Fluoranthene
Scan Number : 1399
Retention Time (minutes) : 9.650
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 73586
On-column Amount (ng/ul) : 1.6525

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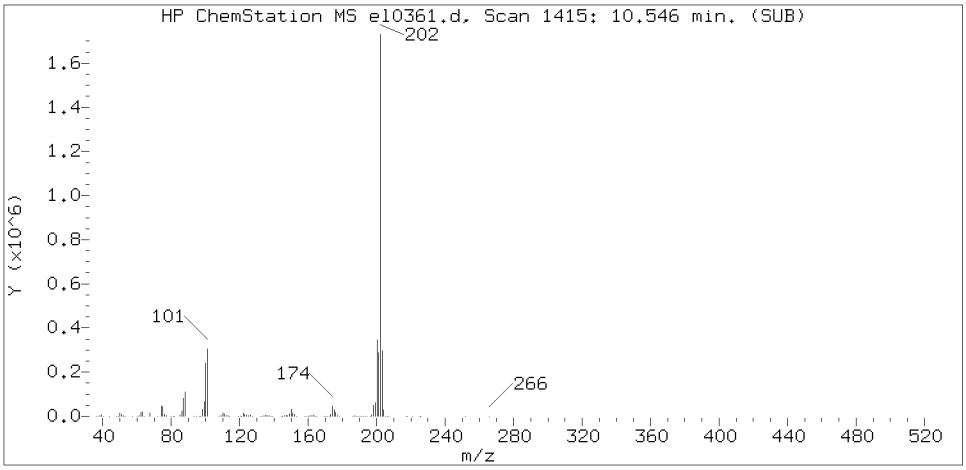
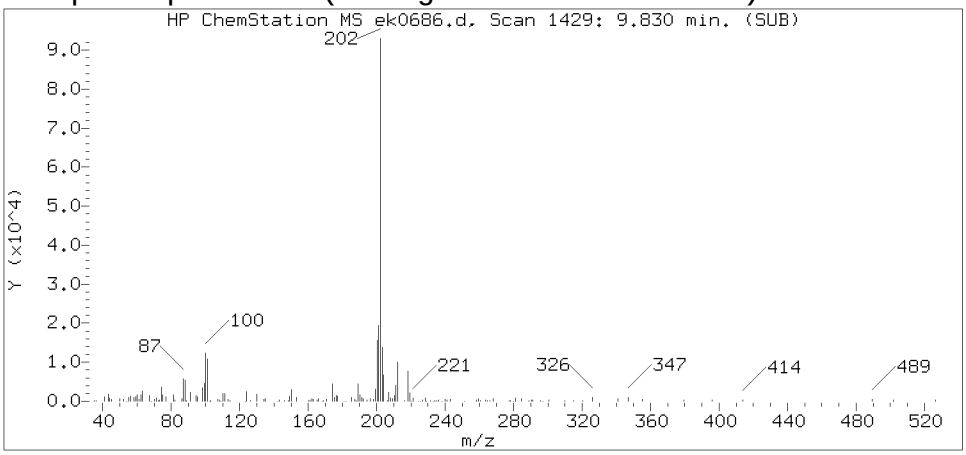
Target 3.5 esignature user ID: hb01996

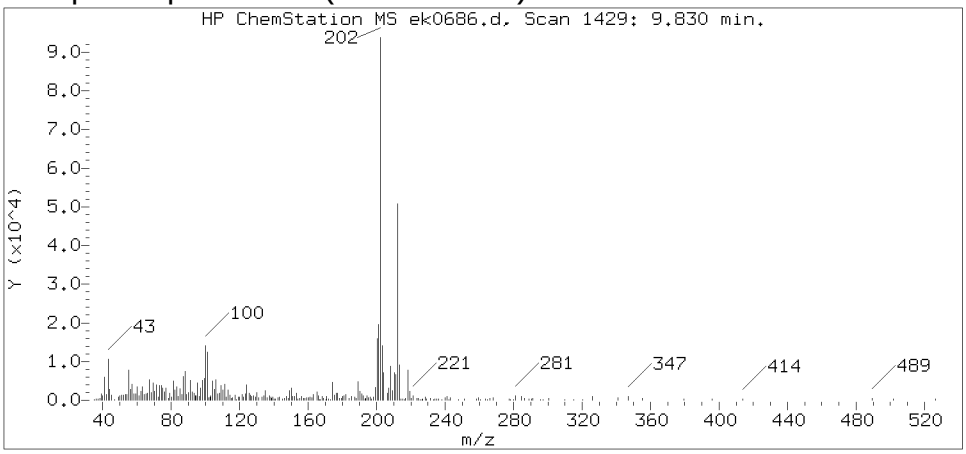
Reference Standard Spectrum for Pyrene

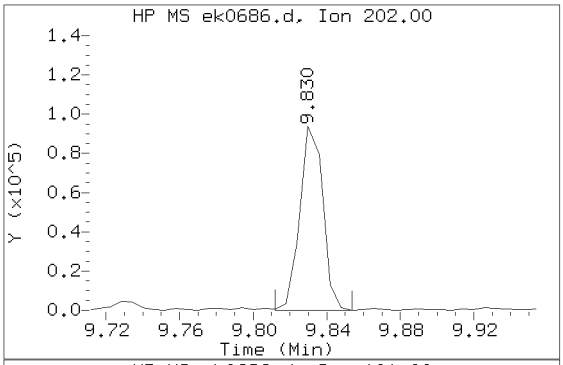


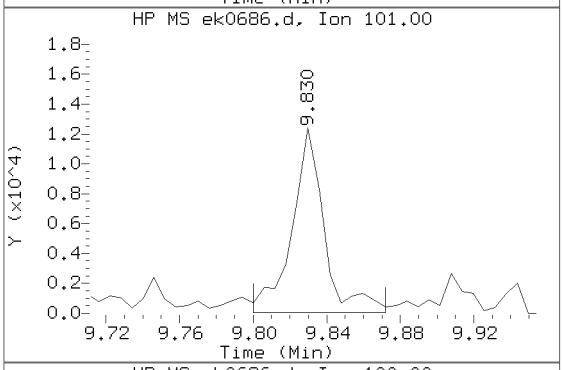
Sample Spectrum (Background Subtracted)

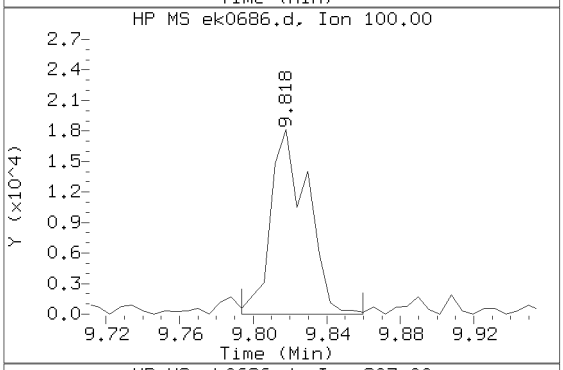


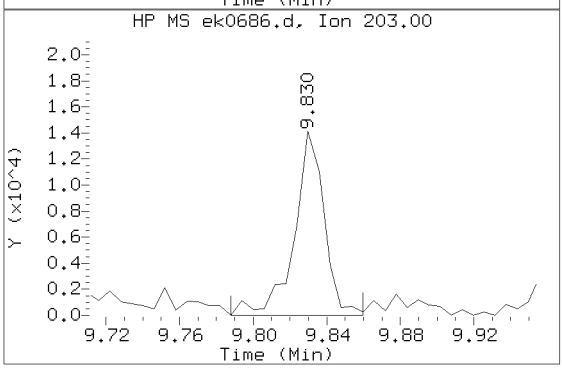
Sample Spectrum (Unaltered)











Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 166
Compound Name	: Pyrene
Scan Number	: 1429
Retention Time (minutes)	: 9.830
Relative Retention Time	: 0.00061
Quant Ion	: 202.00
Area (flag)	: 81009
On-column Amount (ng/ul)	: 1.9401

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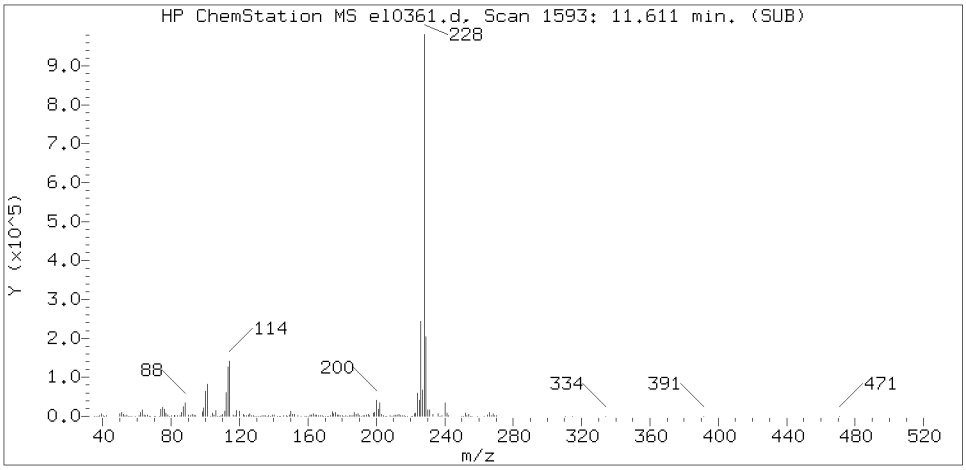
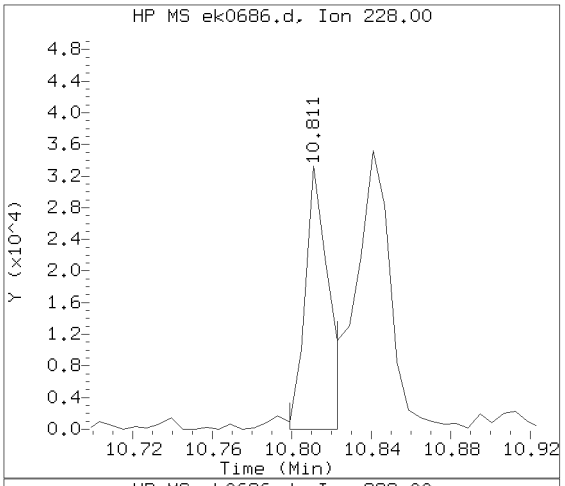
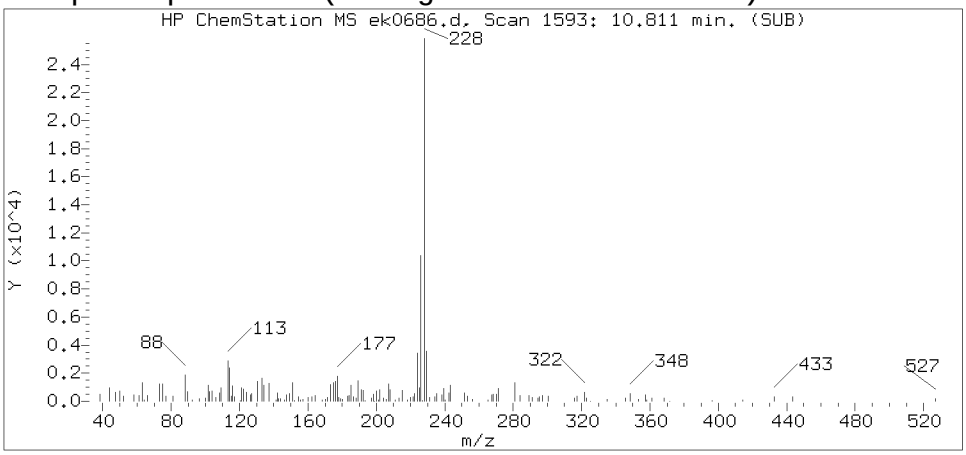
Target 3.5 esignature user ID: hb01996

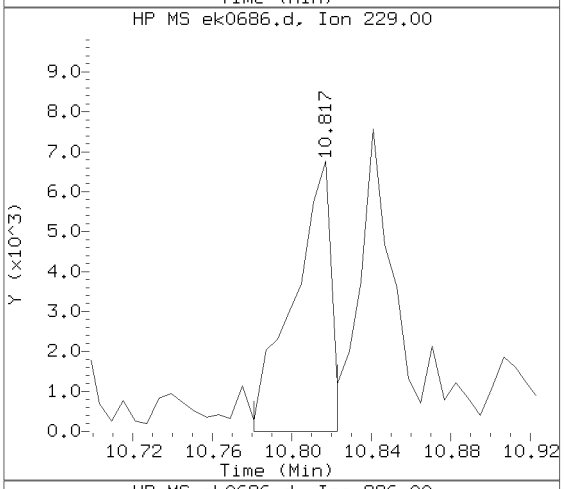
Reference Standard Spectrum for Benzo(a)anthracene



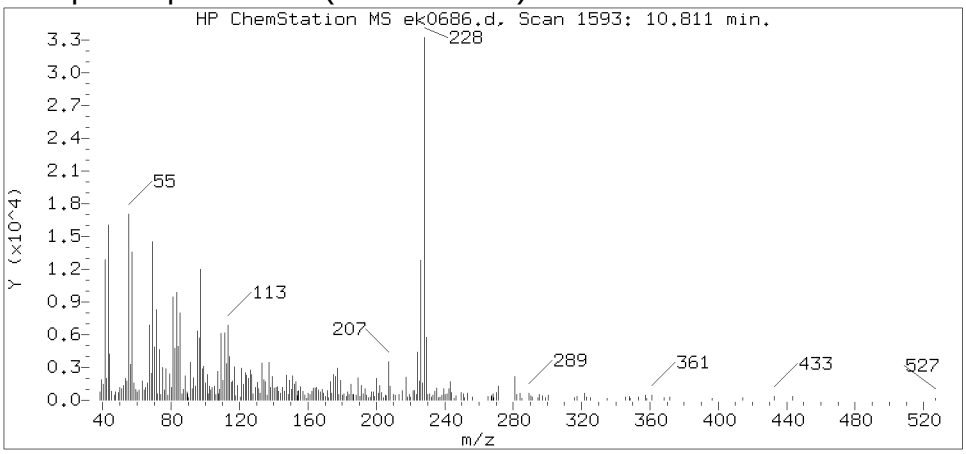


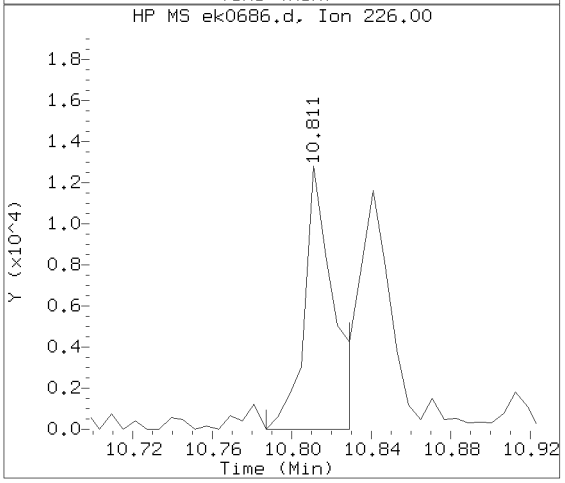
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

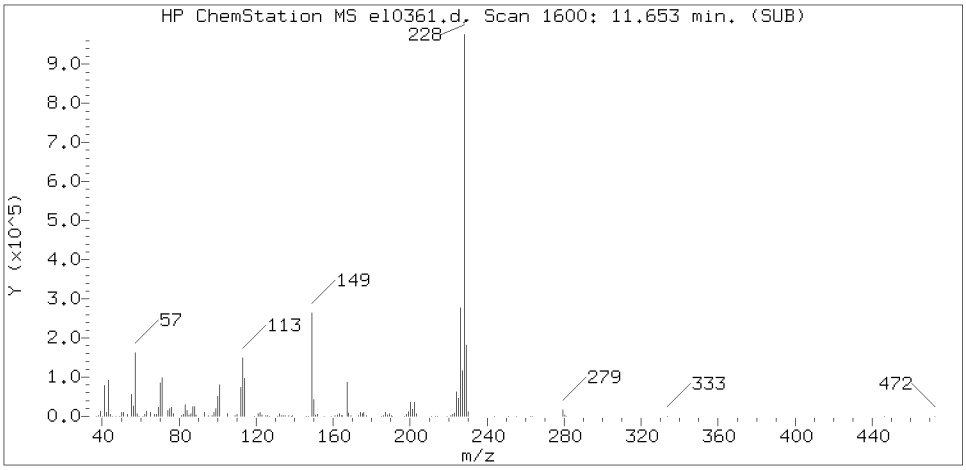
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

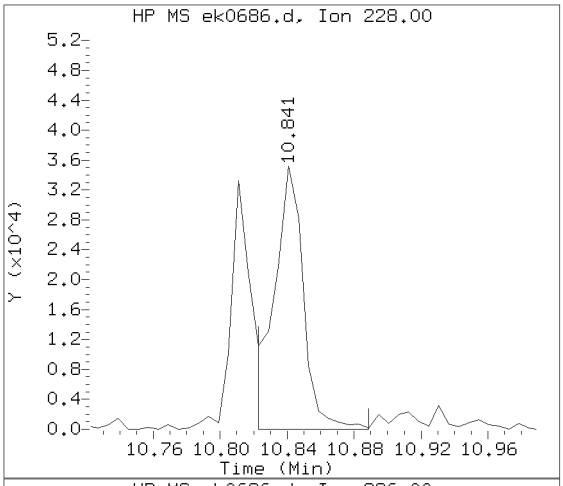
Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 178
Compound Name : Benzo(a)anthracene
Scan Number : 1593
Retention Time (minutes) : 10.811
Relative Retention Time : 0.00061
Quant Ion : 228.00
Area (flag) : 25256
On-column Amount (ng/ul) : 0.6787

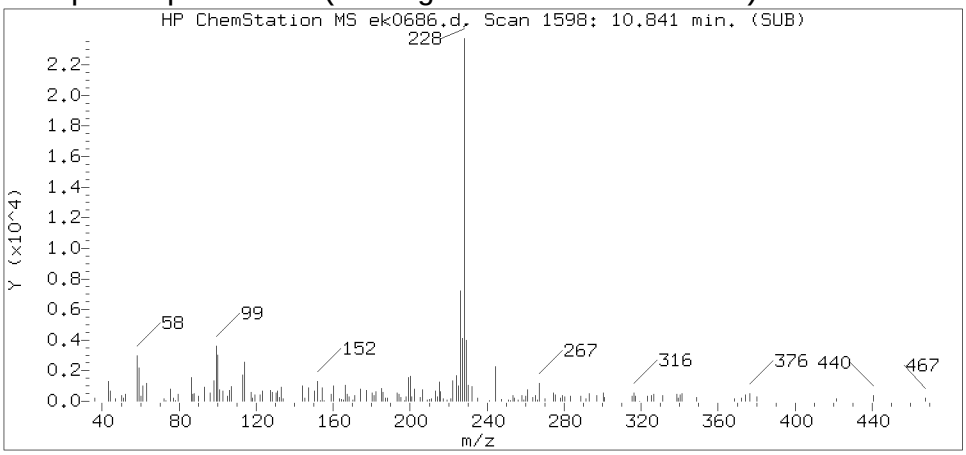
Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

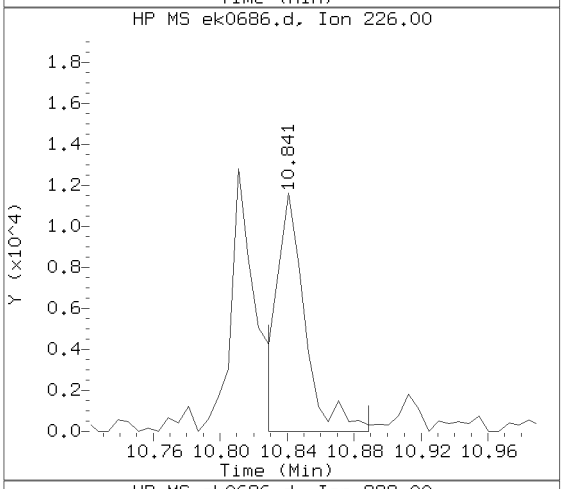
Reference Standard Spectrum for Chrysene



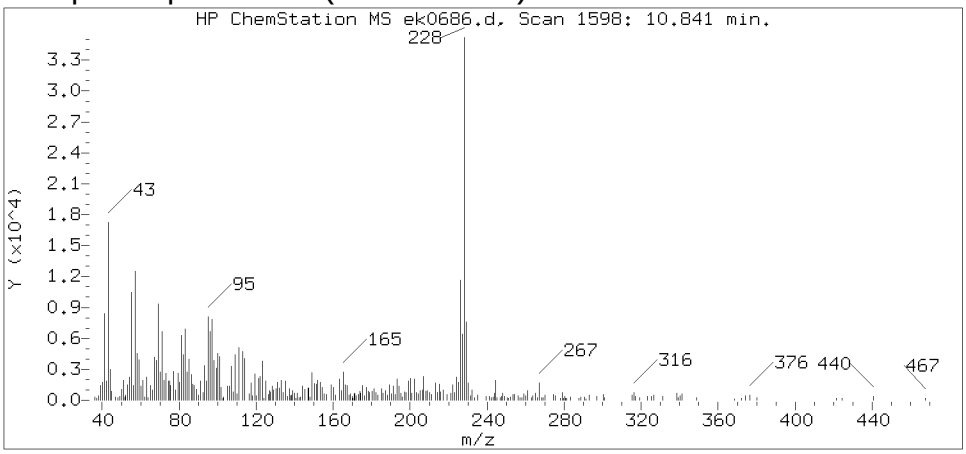


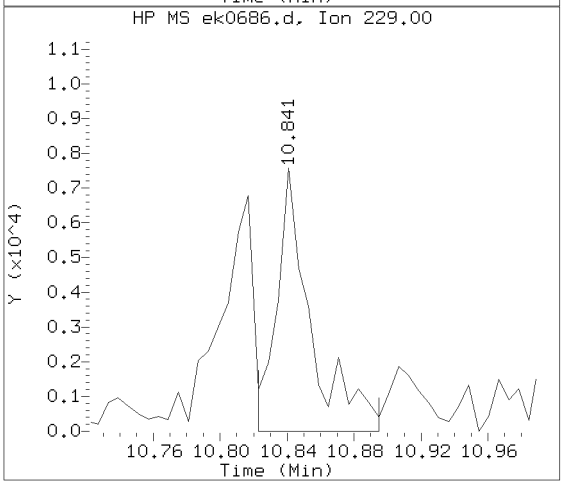
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

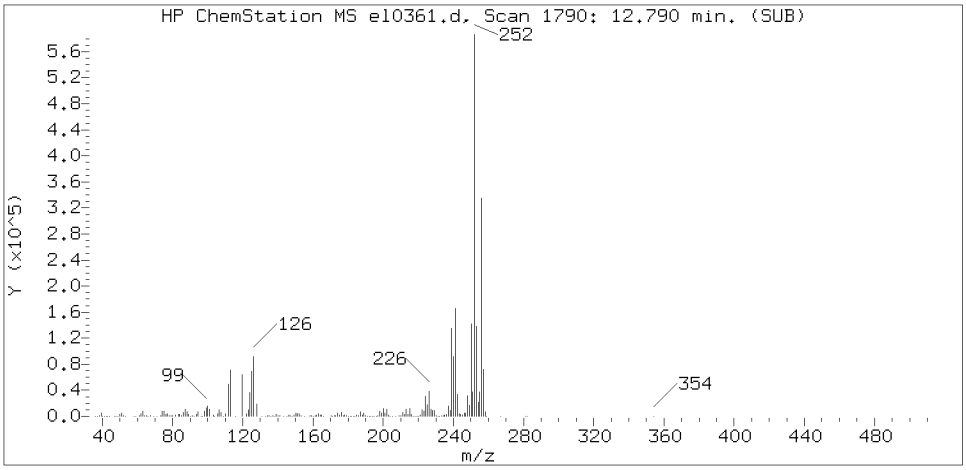
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

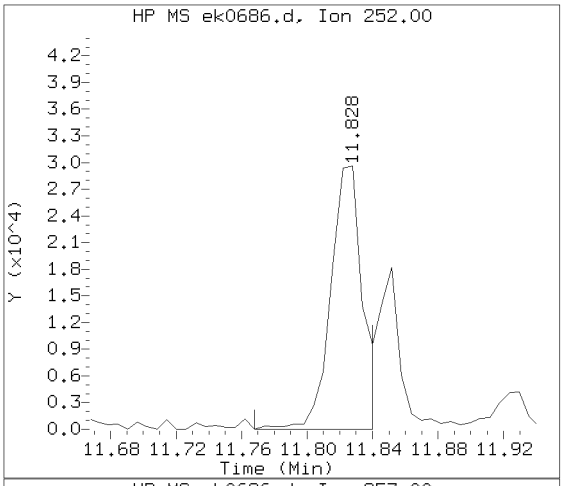
Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 180
Compound Name	: Chrysene
Scan Number	: 1598
Retention Time (minutes)	: 10.841
Relative Retention Time	: 0.00061
Quant Ion	: 228.00
Area (flag)	: 42580
On-column Amount (ng/ul)	: 1.2181

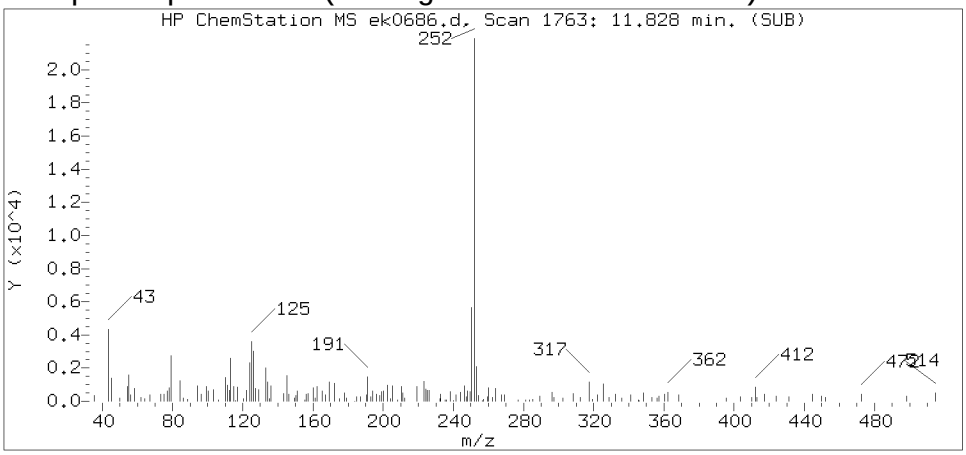
Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

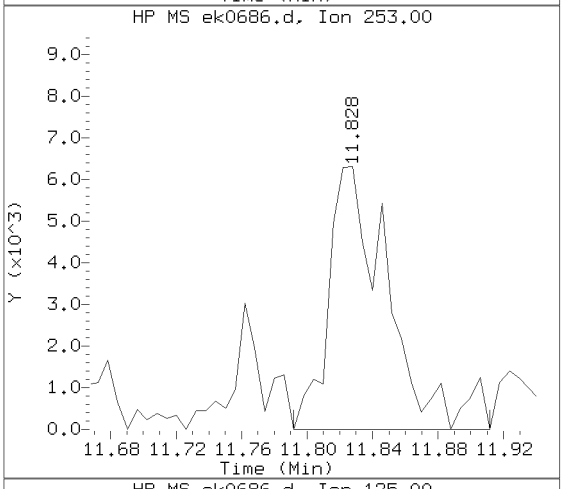
Reference Standard Spectrum for Benzo(b)fluoranthene



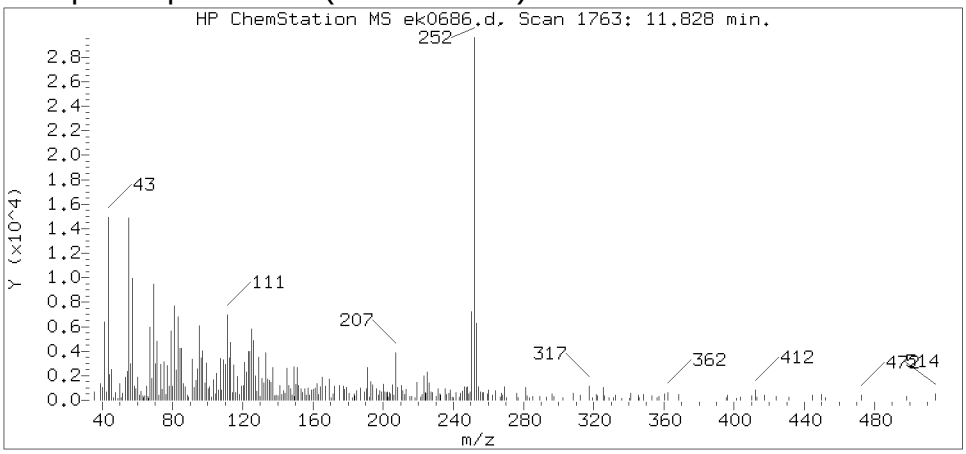


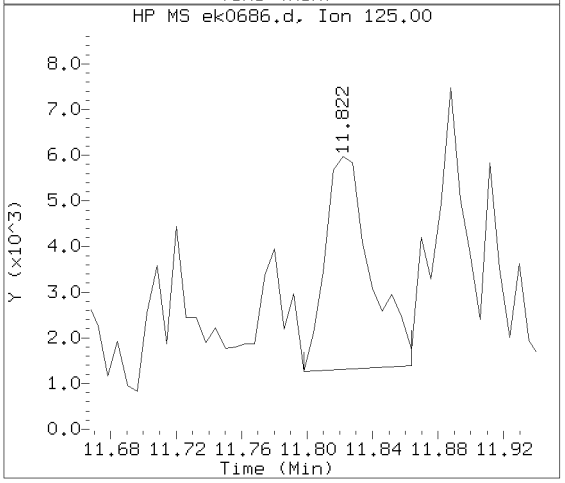
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

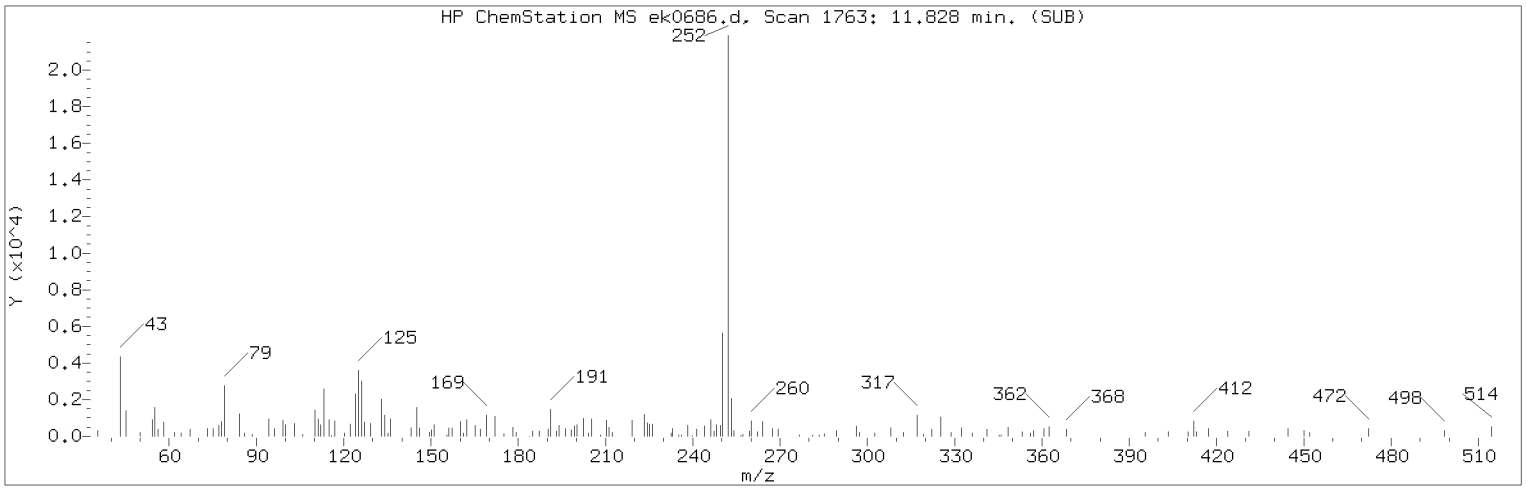
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

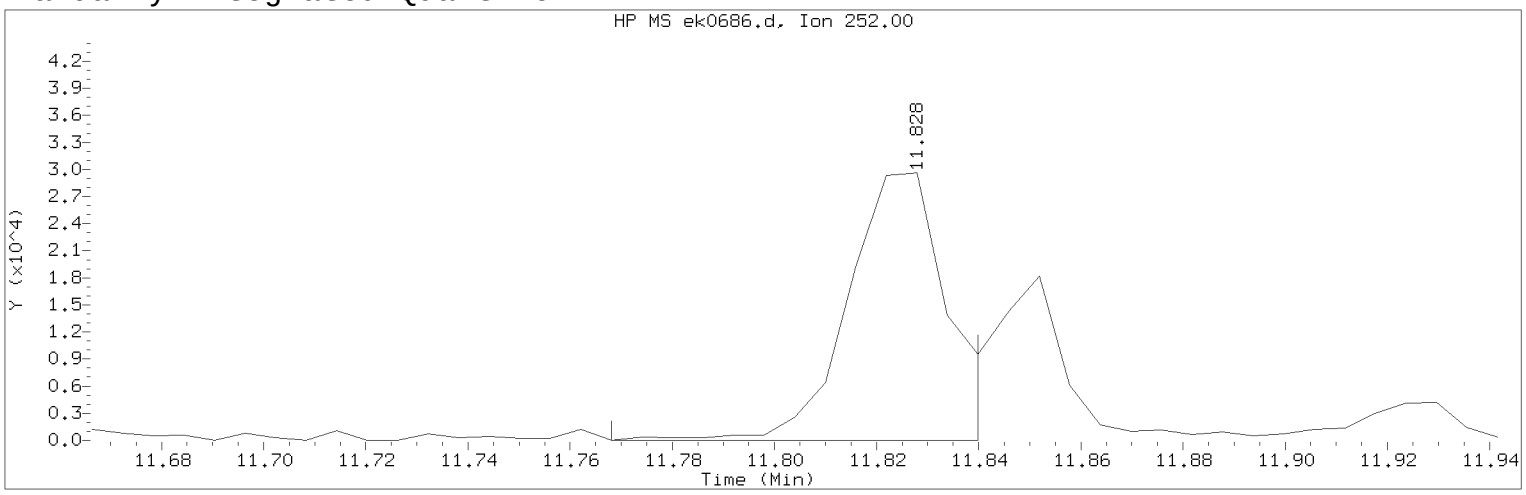
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 40377M
On-column Amount (ng/ul) : 1.2822

Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

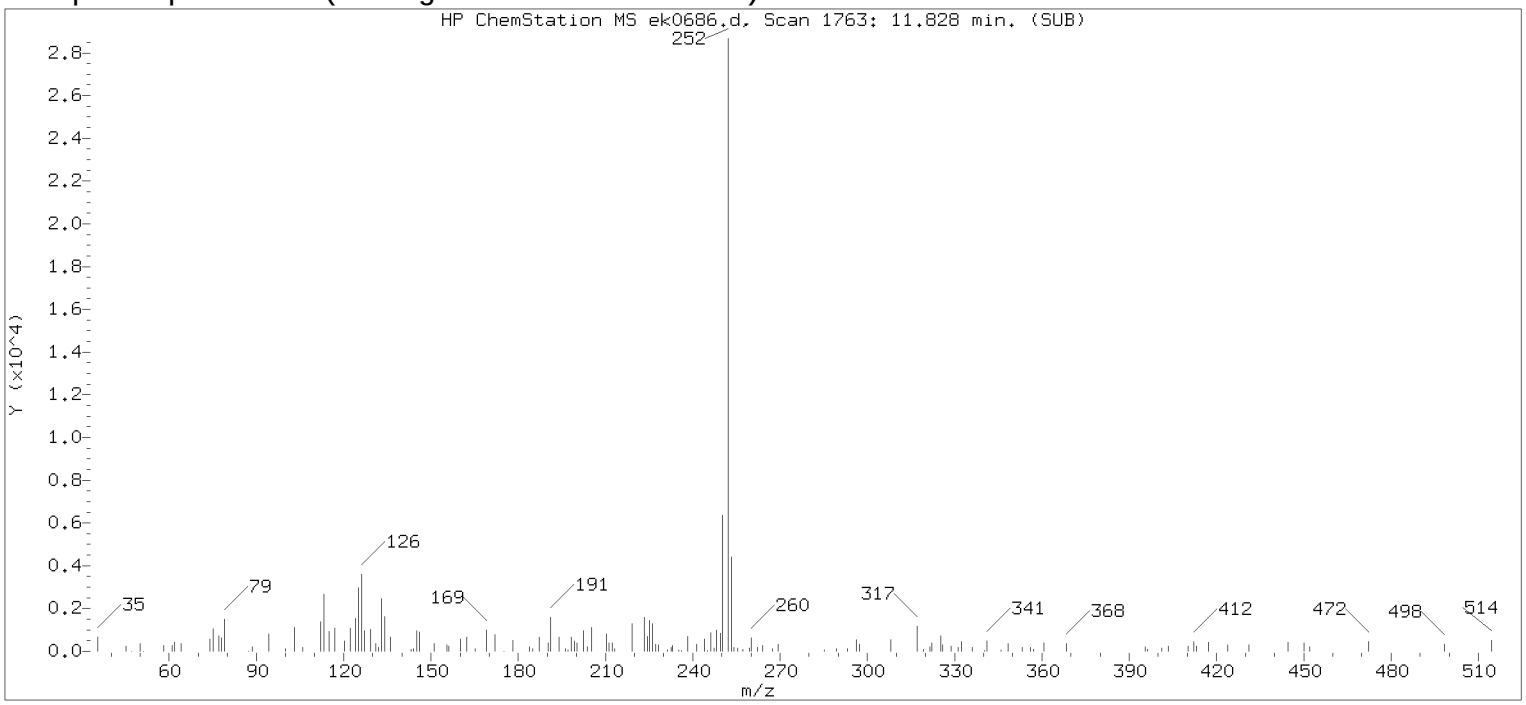
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area (flag) : 40377M
On-column Amount (ng/ul) : 1.2822
Integration start scan : 1752 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

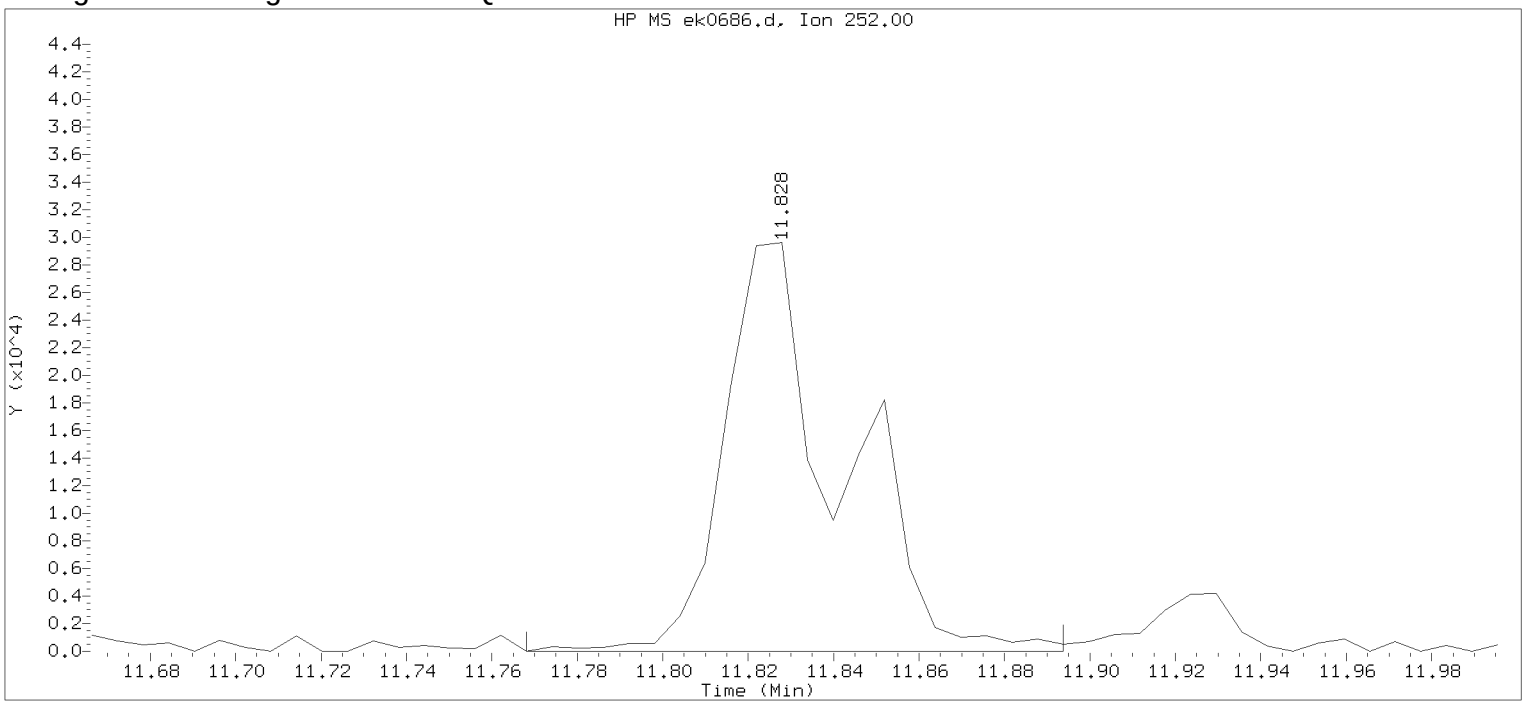
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

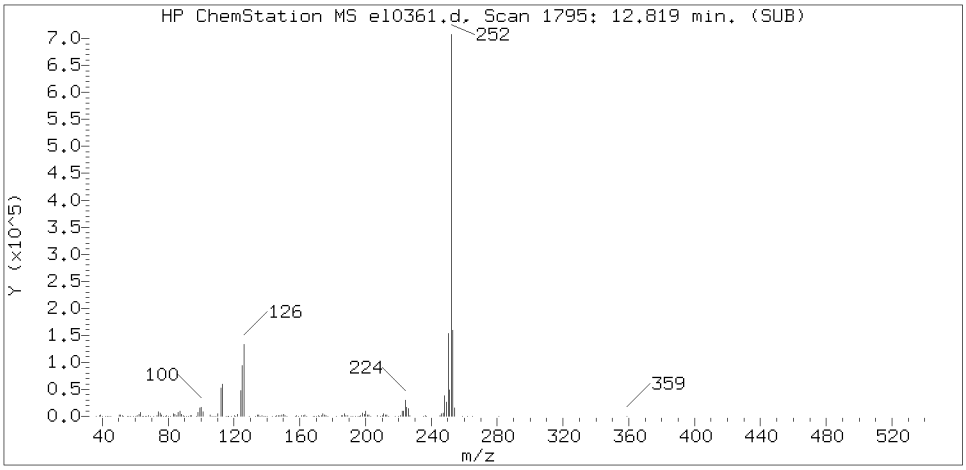
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:54 hb01996

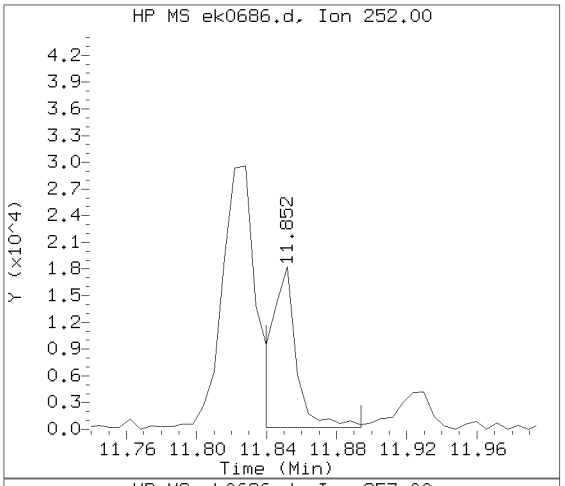
Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area : 56244
On-column Amount (ng/ul) : 1.7861
Integration start scan : 1752 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

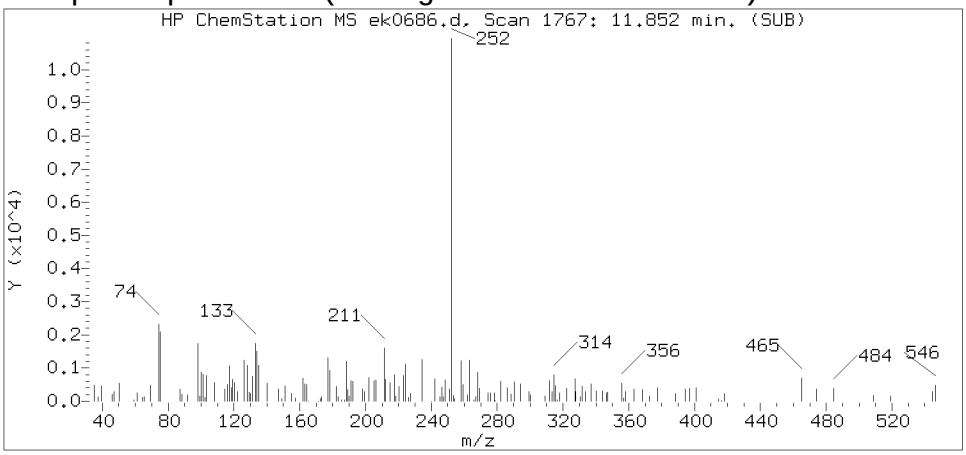
Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

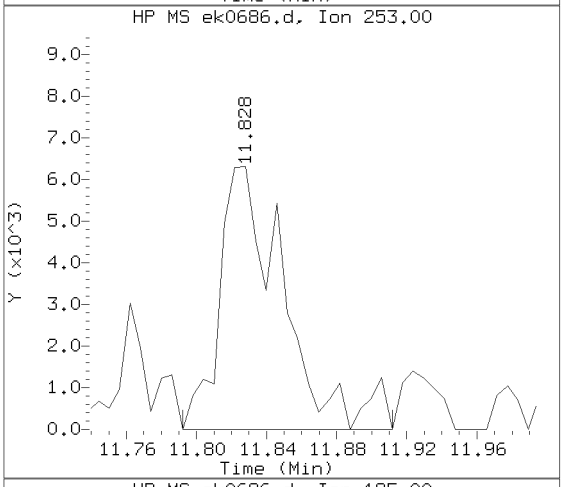
Reference Standard Spectrum for Benzo(k)fluoranthene



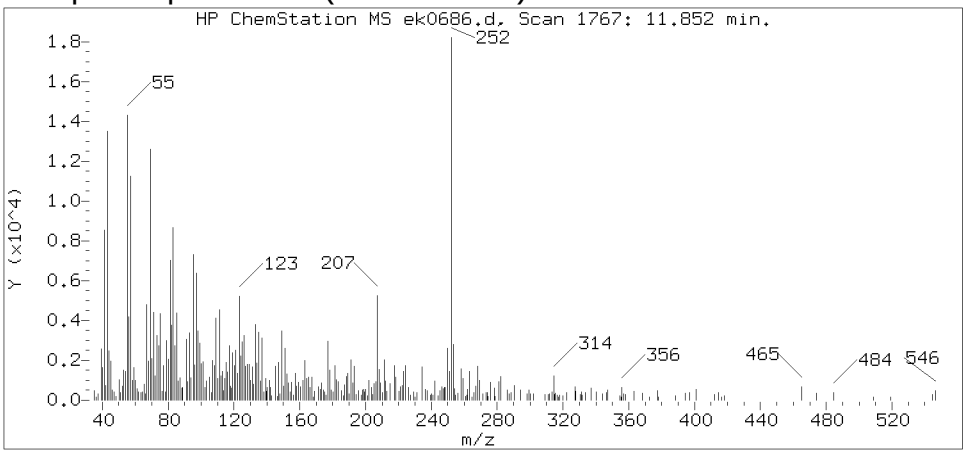


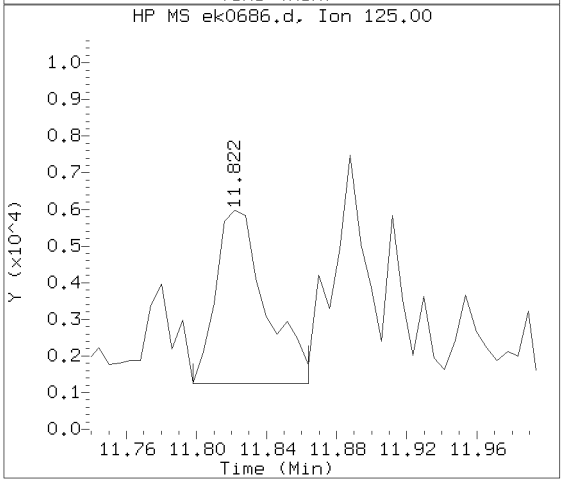
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

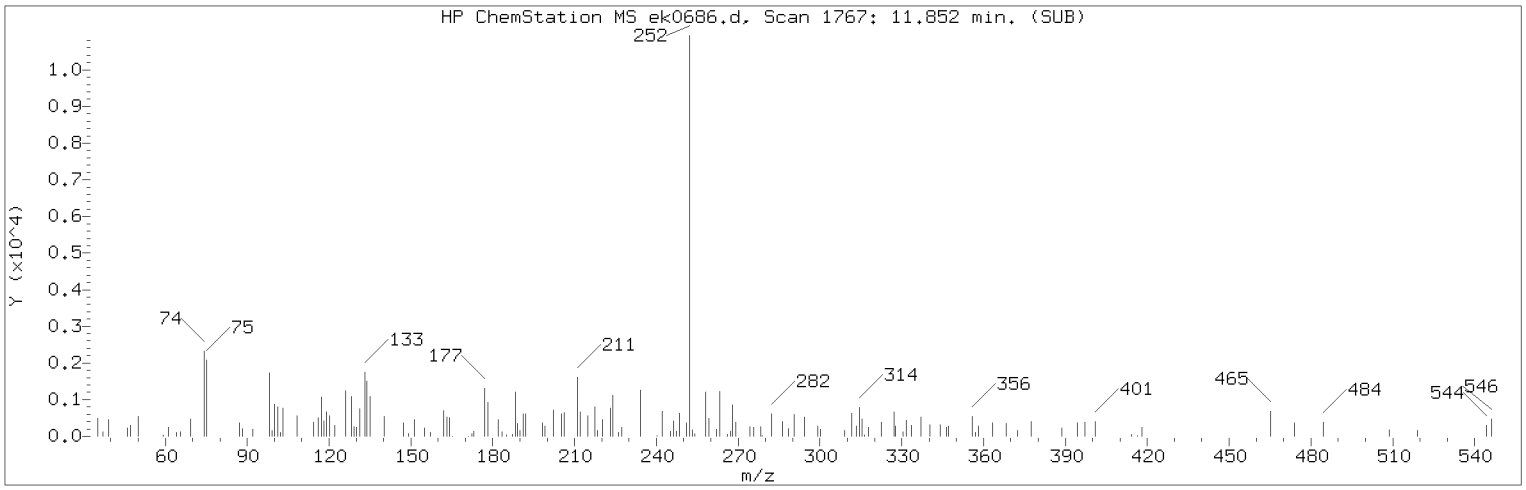
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

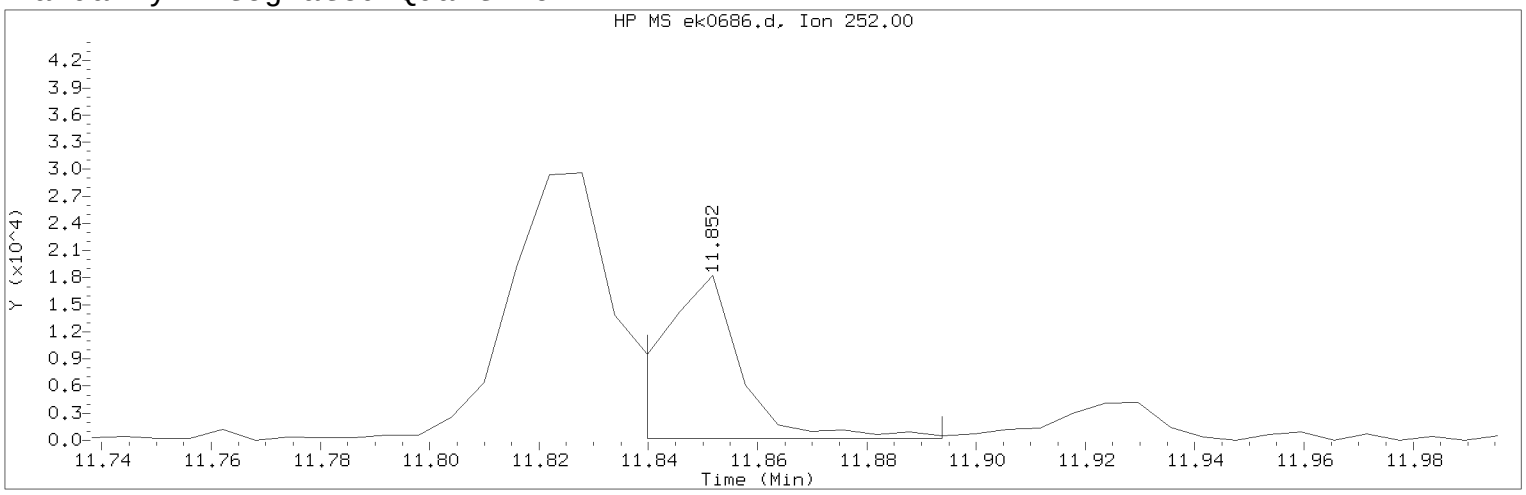
Compound Number	: 187
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 1767
Retention Time (minutes)	: 11.852
Relative Retention Time	: 0.00049
Quant Ion	: 252.00
Area (flag)	: 18681M
On-column Amount (ng/ul)	: 0.5944

Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

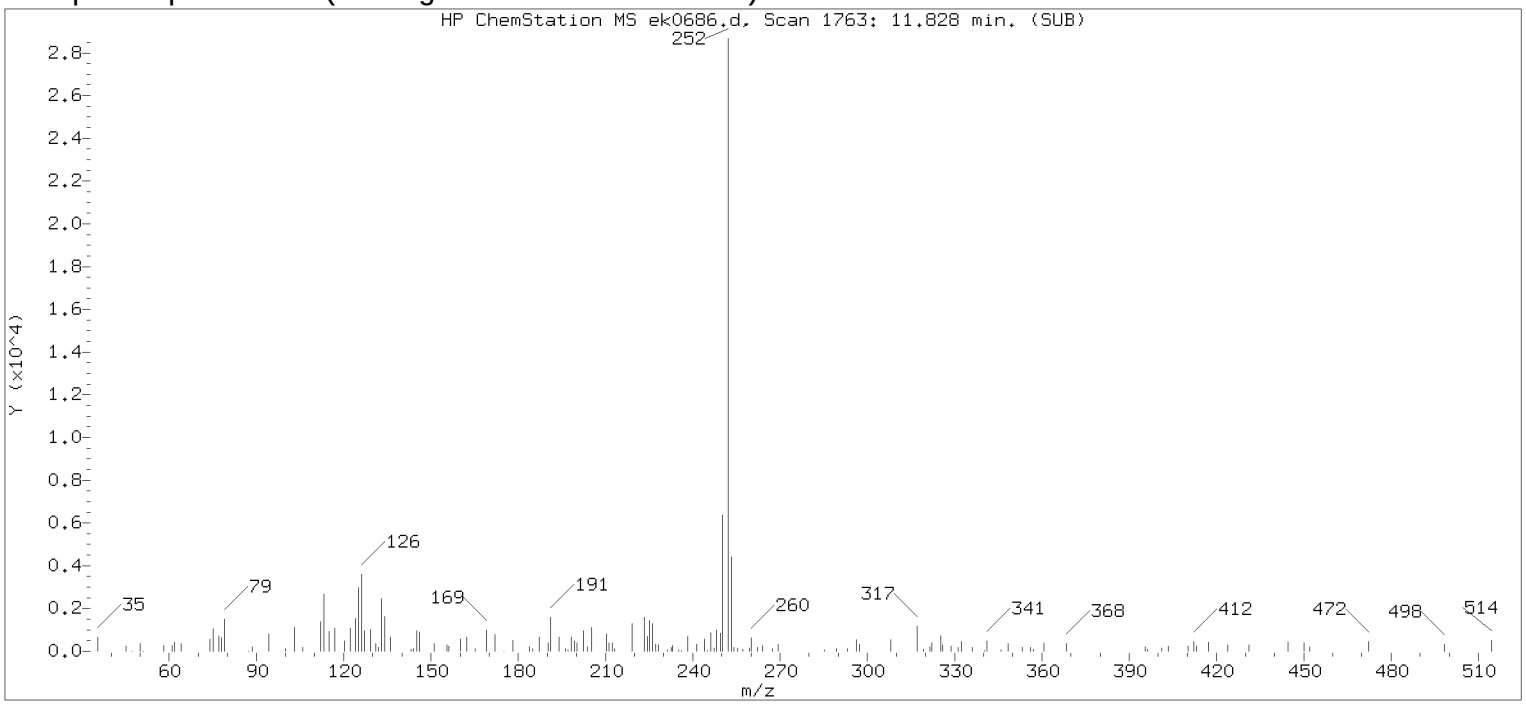
Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1767
Retention Time (minutes) : 11.852
Quant Ion : 252.00
Area (flag) : 18681M
On-column Amount (ng/ul) : 0.5944
Integration start scan : 1764 Integration stop scan: 1773
Y at integration start : 191 Y at integration end: 191

Reason for manual integration: improper integration

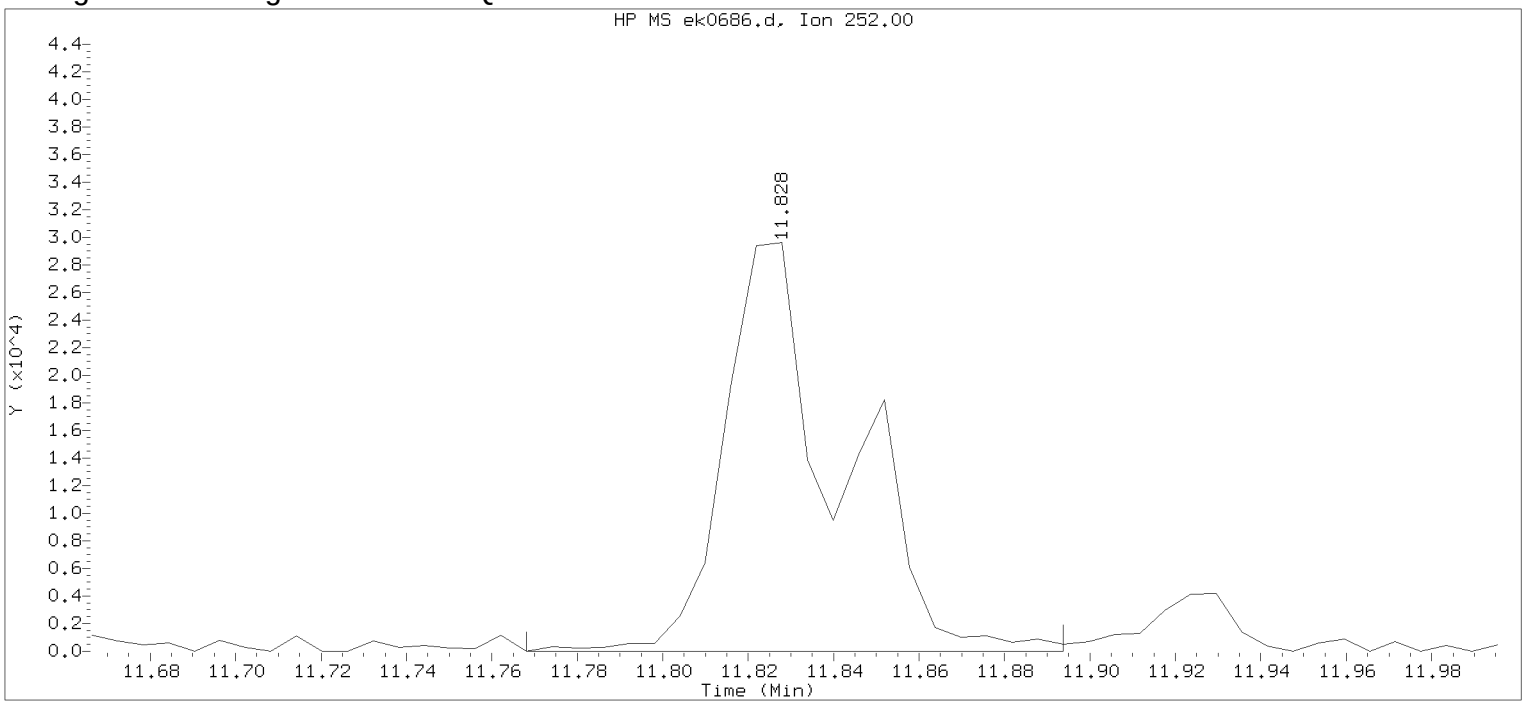
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

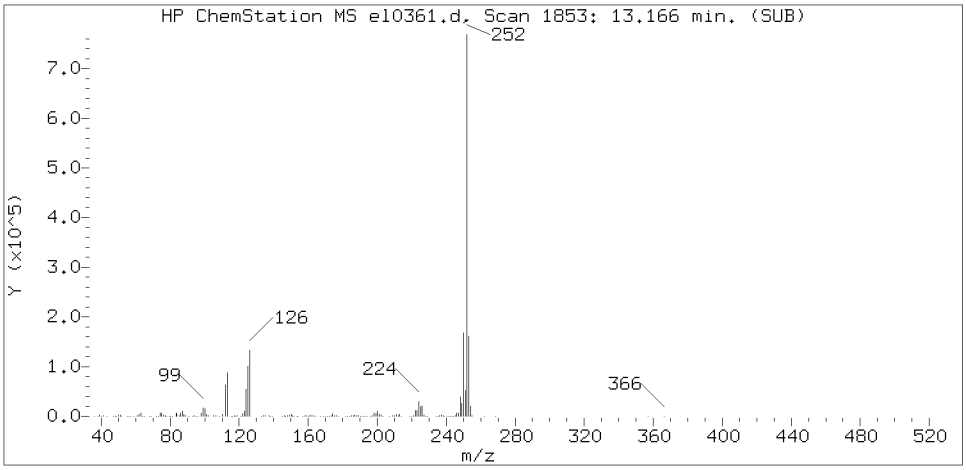
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:54 hb01996

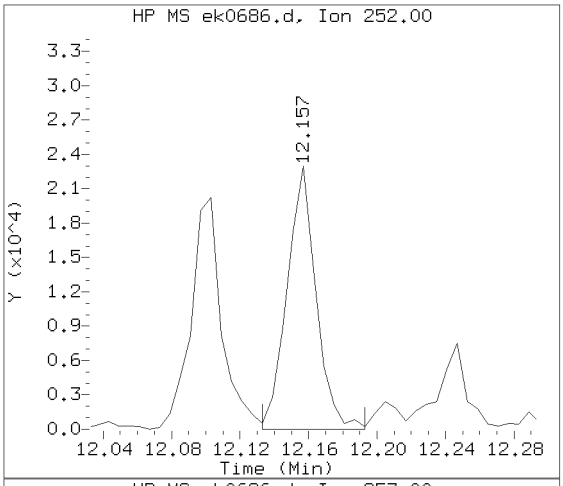
Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area : 56244
On-column Amount (ng/ul) : 1.7895
Integration start scan : 1752 Integration stop scan: 1773
Y at integration start : 0 Y at integration end: 0

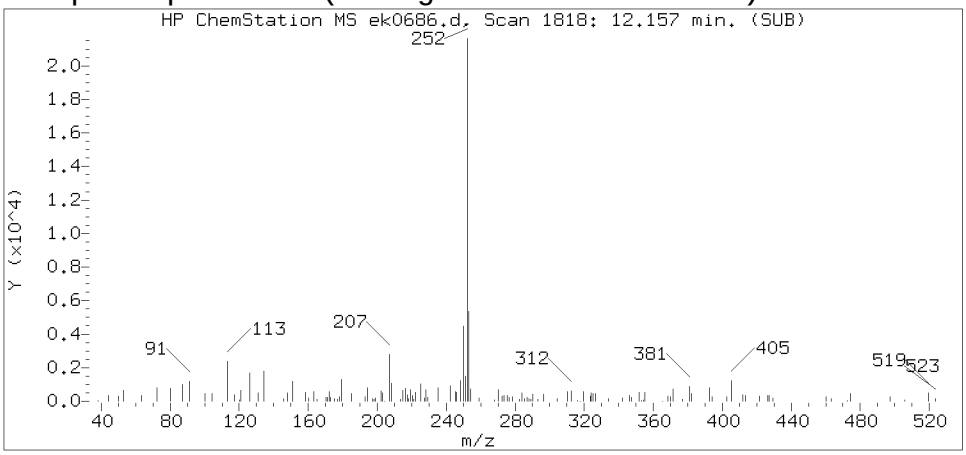
Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

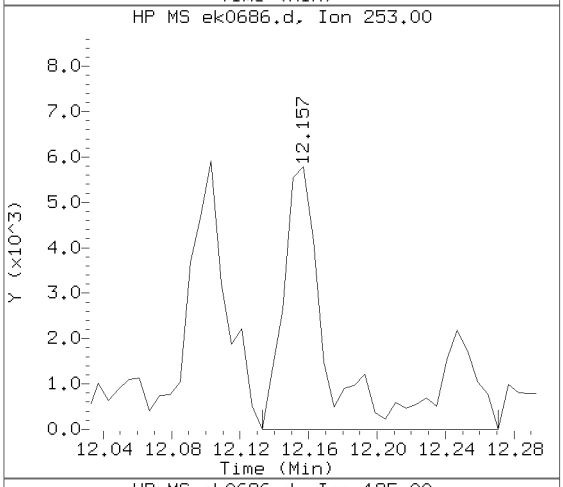
Reference Standard Spectrum for Benzo(a)pyrene



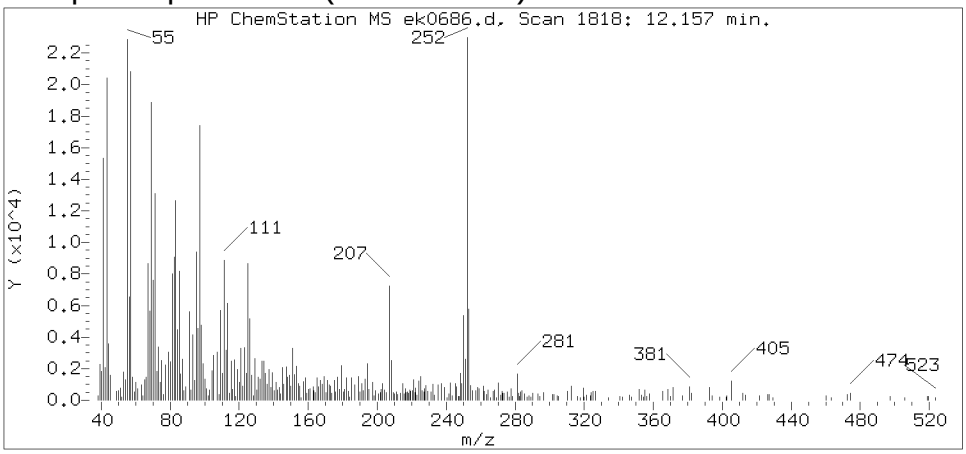


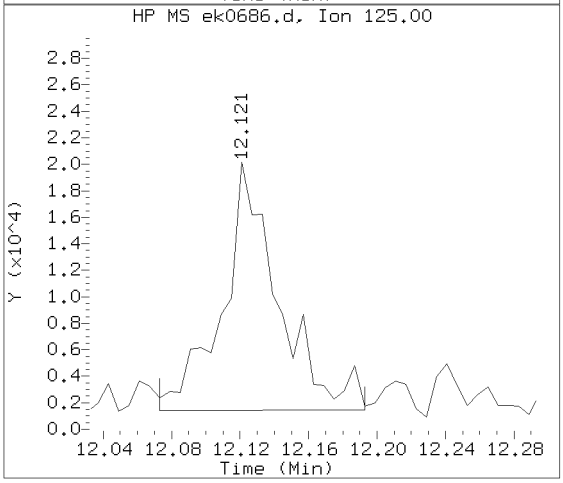
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 189
Compound Name	: Benzo(a)pyrene
Scan Number	: 1818
Retention Time (minutes)	: 12.157
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 26975
On-column Amount (ng/ul)	: 0.9671

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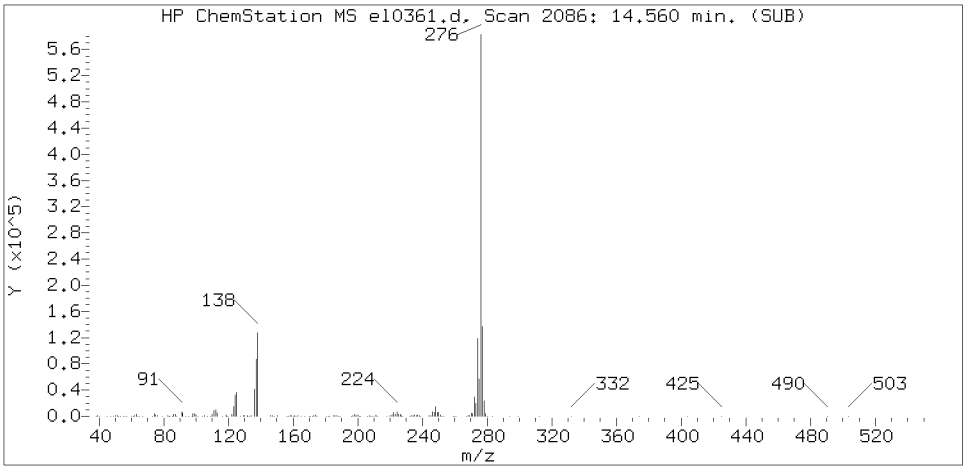
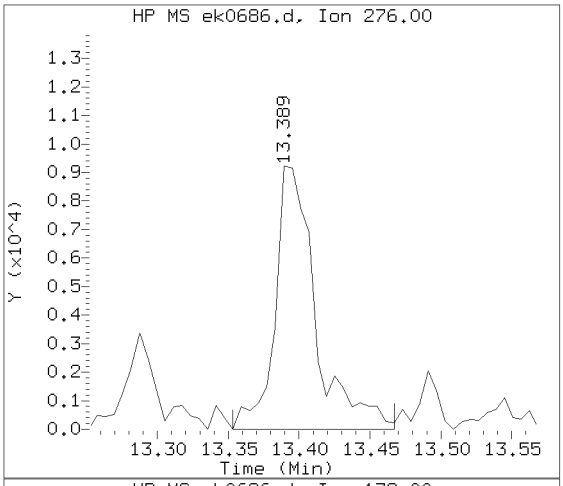
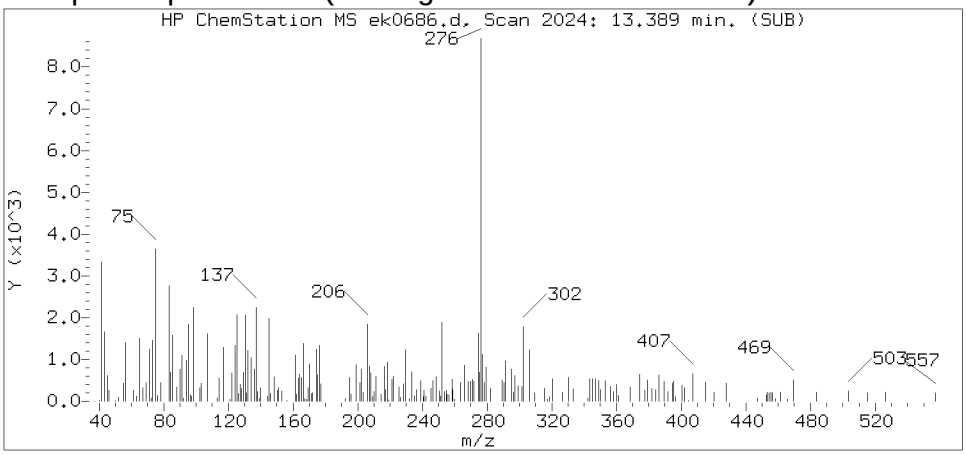
Target 3.5 esignature user ID: hb01996

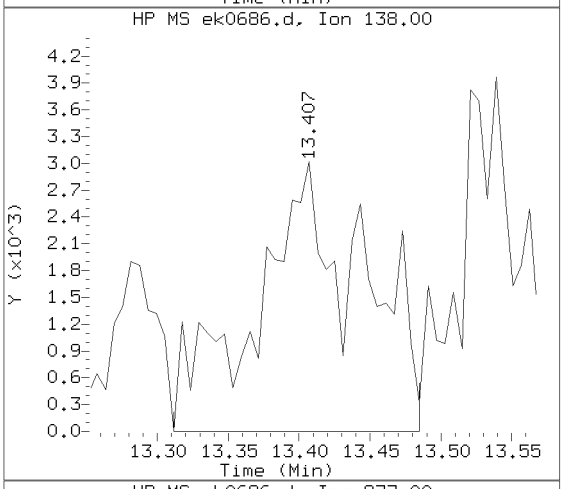
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



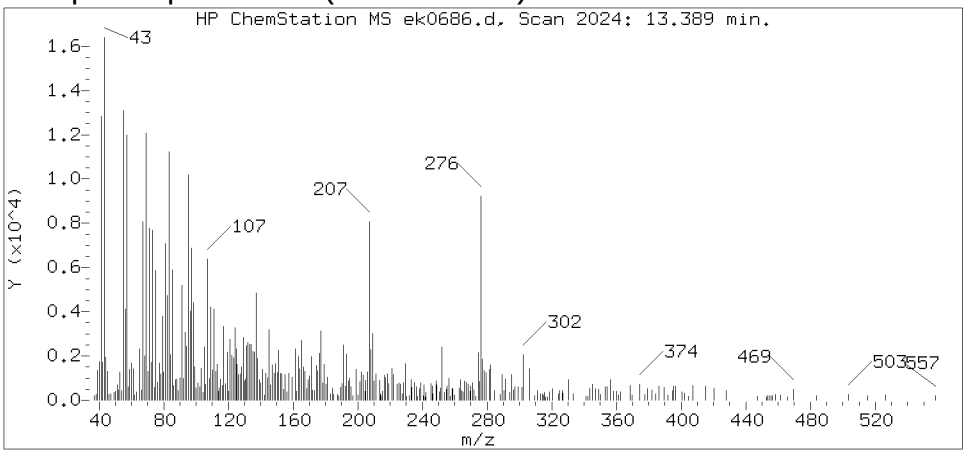


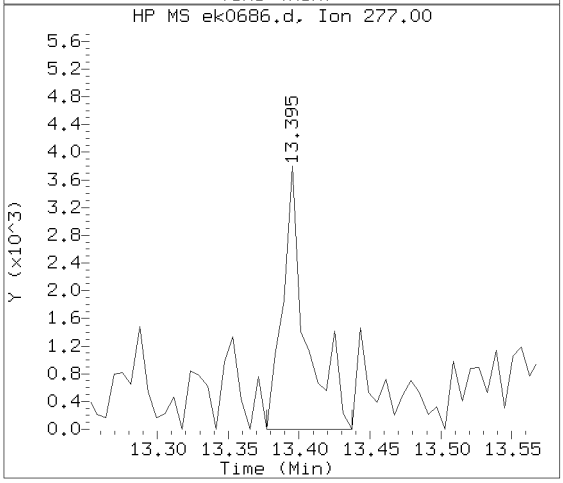
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

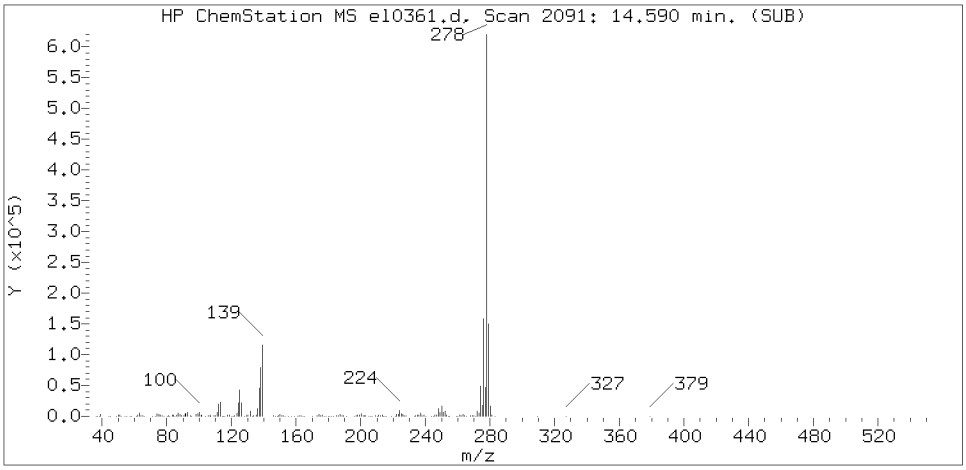
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

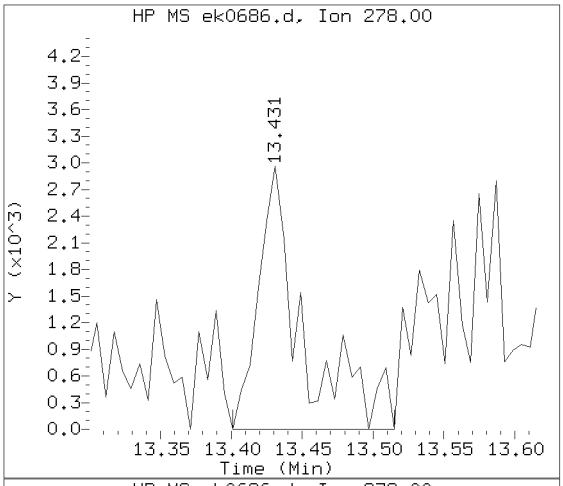
Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 194
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2024
Retention Time (minutes)	: 13.389
Relative Retention Time	: 0.00098
Quant Ion	: 276.00
Area (flag)	: 18304
On-column Amount (ng/ul)	: 0.6511

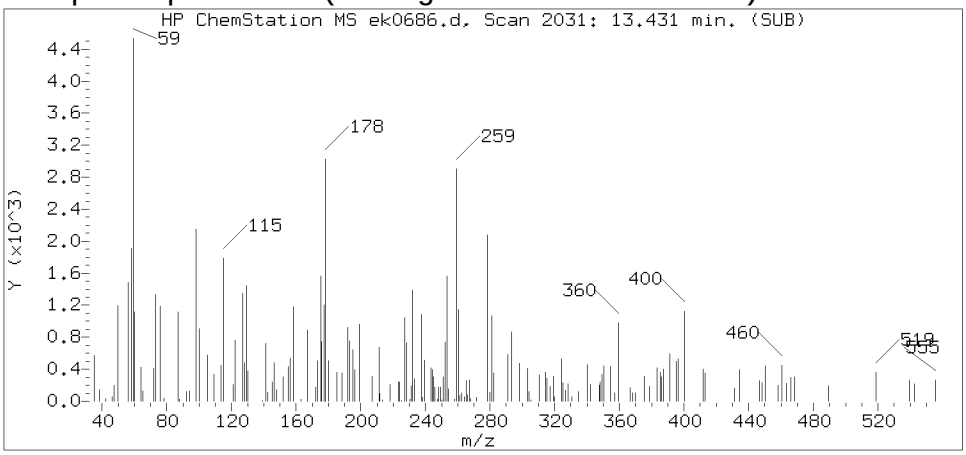
Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

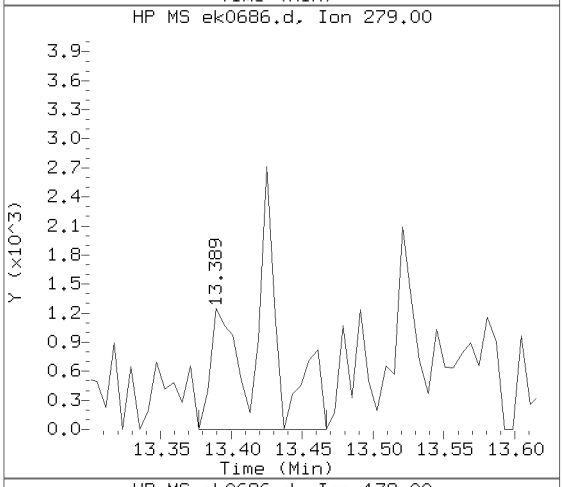
Reference Standard Spectrum for Dibenz(a,h)anthracene



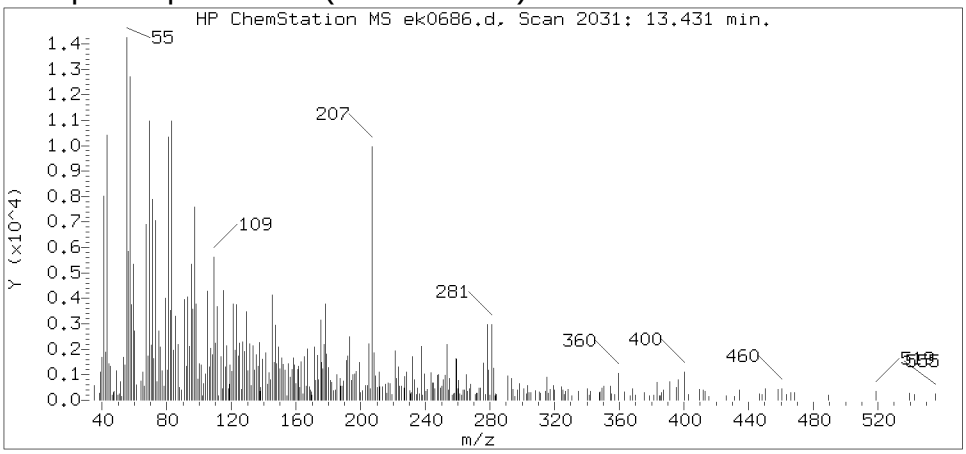


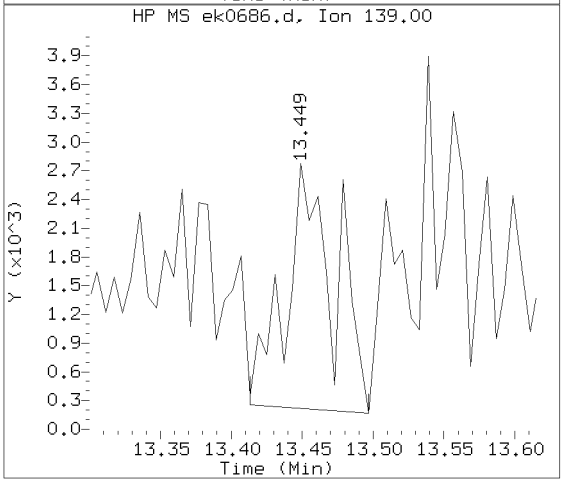
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 195
Compound Name	: Dibenz(a,h)anthracene
Scan Number	: 2031
Retention Time (minutes)	: 13.431
Relative Retention Time	: 0.00049
Quant Ion	: 278.00
Area (flag)	: 6366
On-column Amount (ng/ul)	: 0.2674

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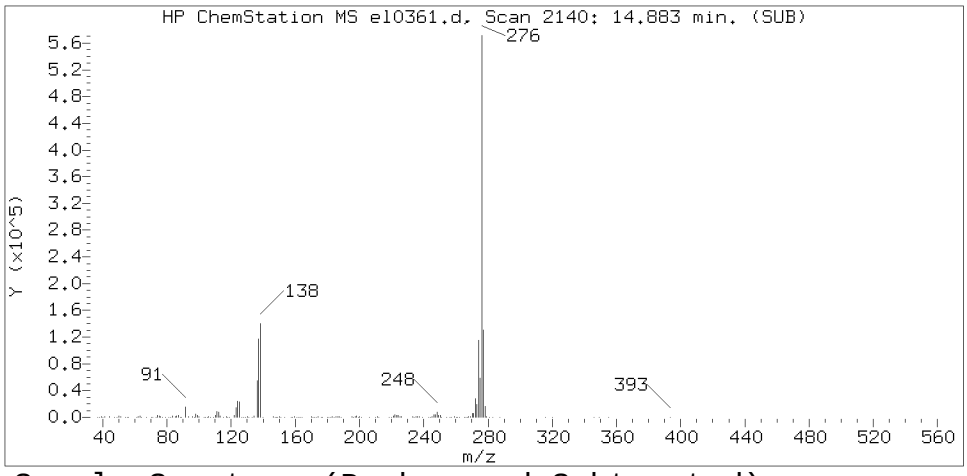
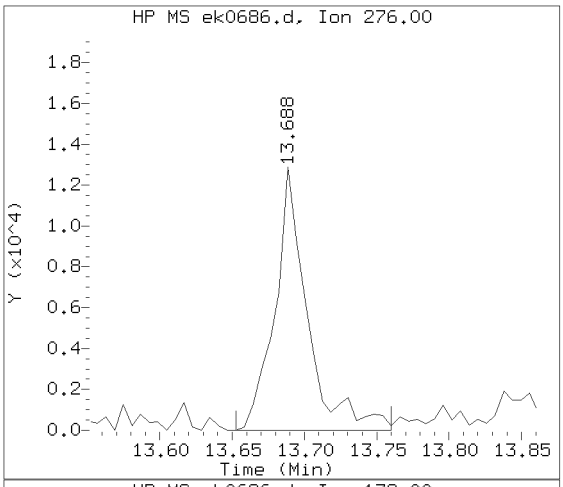
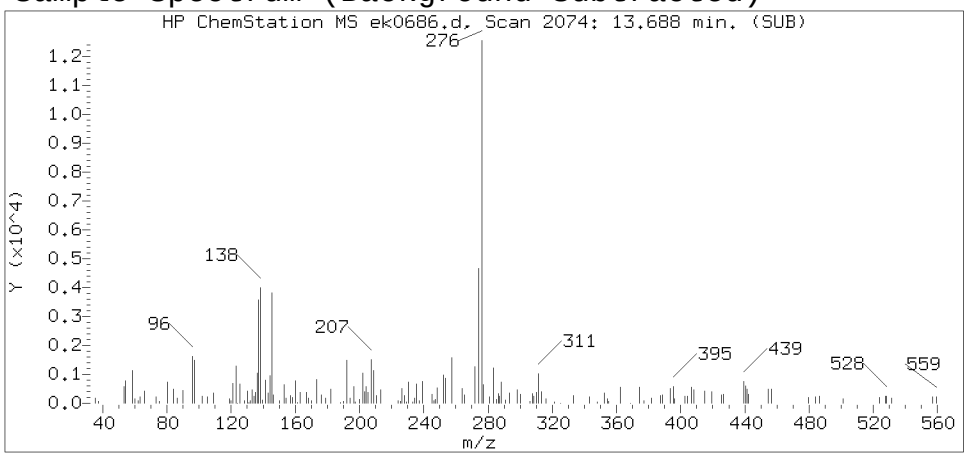
Target 3.5 esignature user ID: hb01996

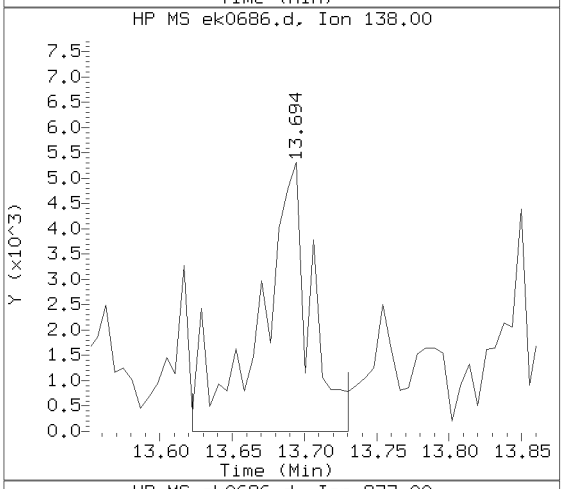
Reference Standard Spectrum for Benzo(g,h,i)perylene



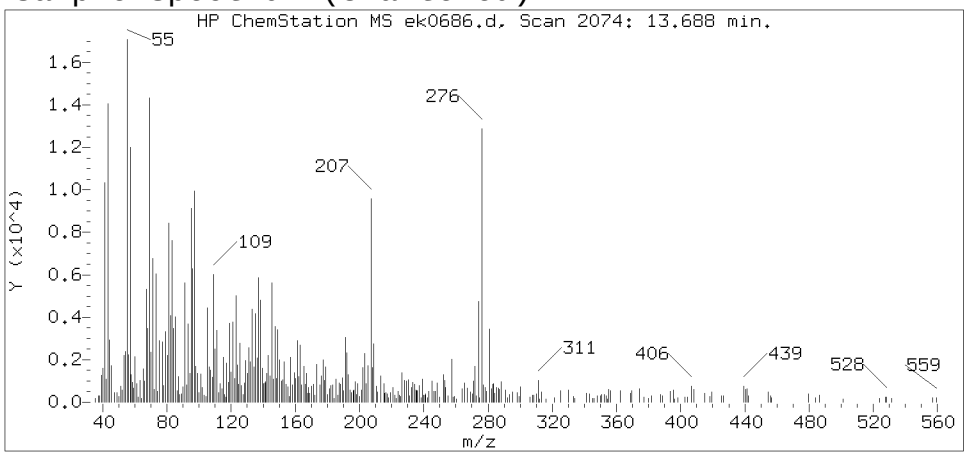


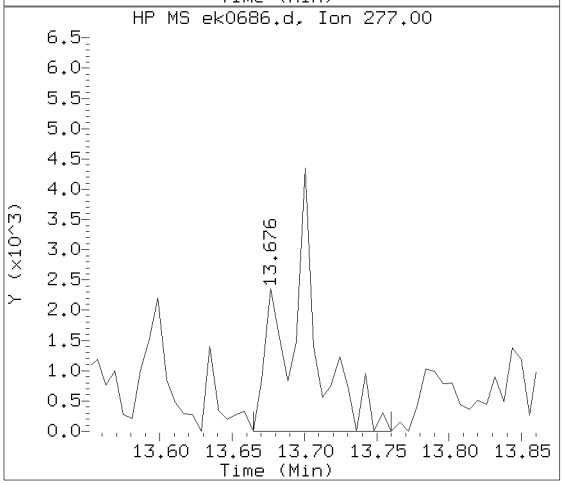
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0686.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:19 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:43 hb01996

Sample Name: 2G125 Lab Sample ID: 7266804

Compound Number	: 196
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2074
Retention Time (minutes)	: 13.688
Relative Retention Time	: 0.00049
Quant Ion	: 276.00
Area (flag)	: 20119
On-column Amount (ng/ul)	: 0.8556

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Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0391.d
Injection date and time: **13-NOV-2013 09:51**
Data file Sample Info. Line: 2B152;7266805;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	128584 (-6)	5.00	
52) Naphthalene-d8	7.883(0.006)	1123	136	489788 (-6)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	291304 (-8)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	528872 (-6)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	689351 (-6)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	495828 (-14)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.966(0.001)	112	1183395	30.996	62%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1113485	21.236	42%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.000)	82	979913	21.740	87%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1699585	23.364	93%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.759(-0.001)	330	467983	61.167	122%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	1771095	20.602	82%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

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Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0391.d Injection date and time: **13-NOV-2013 09:51**
Data file Sample Info. Line: 2B152;7266805;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 246 ml Volume Injected (Vi): 0.5 ul

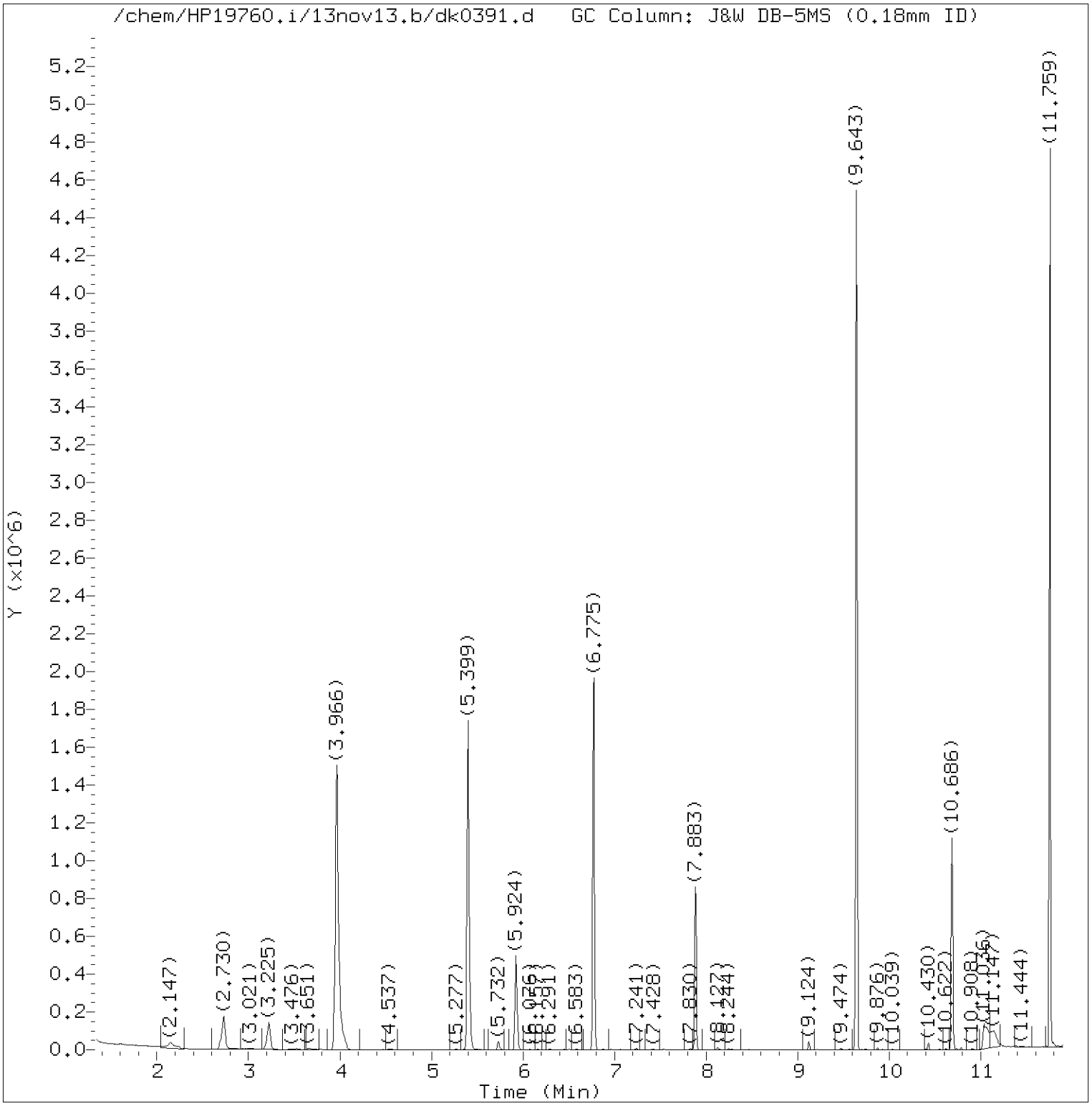
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)	12.615(0.000)	178	4815	0.041	0.17			0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)	14.236(-0.000)	202	11765	0.089	0.36			0.03
146) Pyrene	(5)	14.556(-0.000)	202	12327	0.084	0.34			0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)	16.532(-0.000)	228	3461	0.028	0.11			0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)	16.590(0.000)	228	6518	0.053	0.22			0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)	18.362(0.000)	252	6295M	0.054	0.22			0.03
170) Benzo(k)fluoranthene	(6)	18.409(0.000)	252	3376M	0.029	0.12			0.03
171) Benzo(a)pyrene	(6)	18.887(0.000)	252	4826	0.045	0.18			0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)	20.927(0.000)	276	2706M	0.034	0.14			0.03

M = Compound was manually integrated.

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:12. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

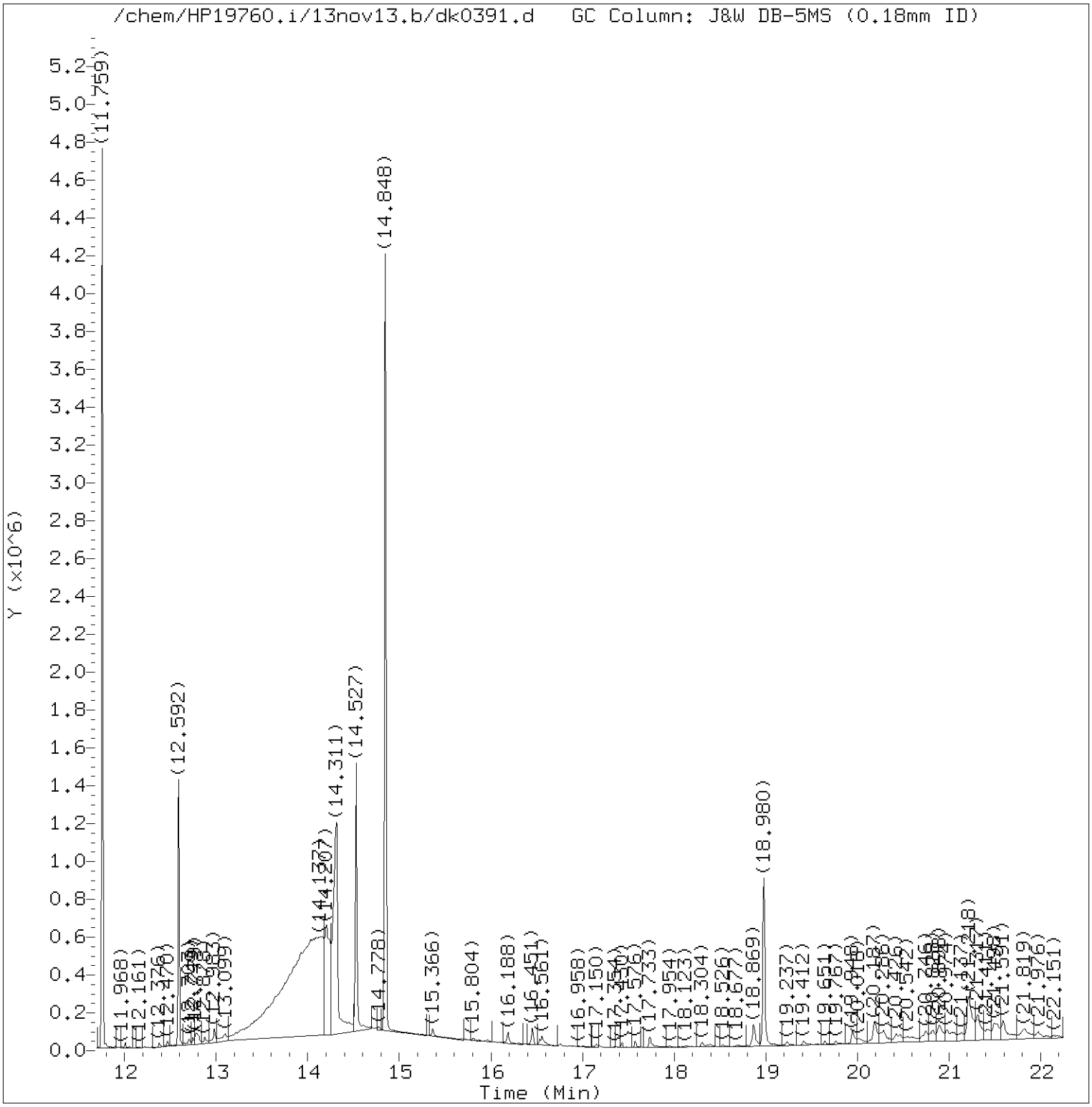
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

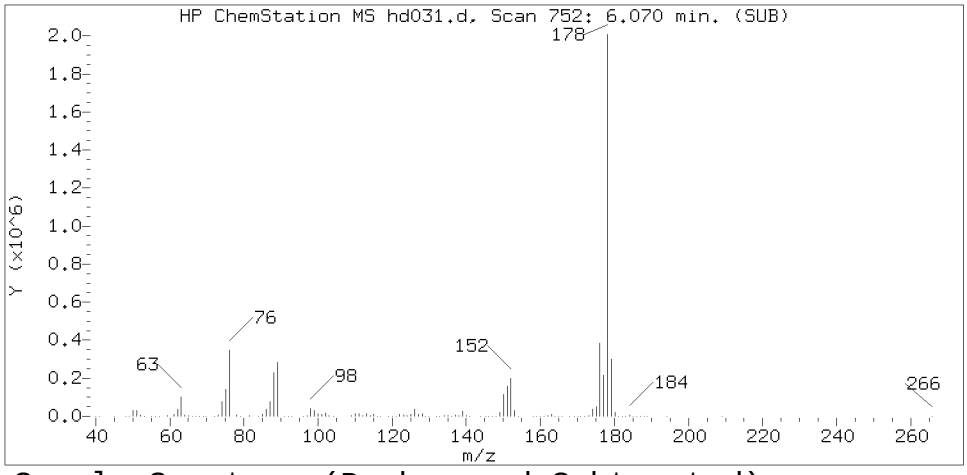
Sample Name: 2B152 Lab Sample ID: 7266805

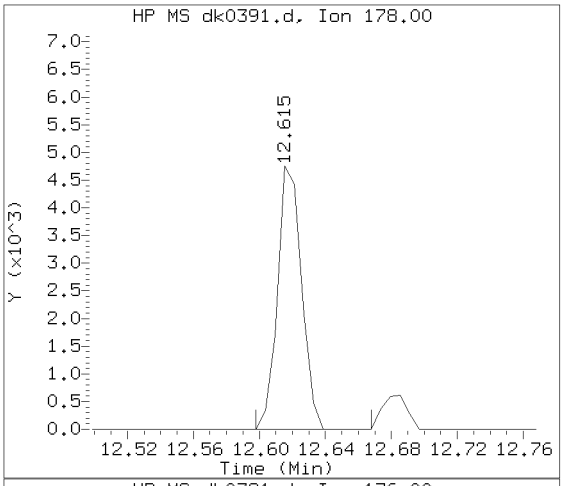
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.966	112	1183395	30.996
13)$Phenol-d6	(1)	5.399	99	1113485	21.236
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	128584	5.000
36)$Nitrobenzene-d5	(2)	6.775	82	979913	21.740
52)*Naphthalene-d8	(2)	7.883	136	489788	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1699585	23.364
92)*Acenaphthene-d10	(3)	10.686	164	291304	5.000
112)$2,4,6-Tribromophenol	(3)	11.759	330	467983	61.167
130)*Phenanthrene-d10	(4)	12.592	188	528872	5.000
131) Phenanthrene	(4)	12.615	178	4815	0.041
142) Fluoranthene	(4)	14.236	202	11765	0.089
145)*Pyrene-d10	(5)	14.527	212	689351	5.000
146) Pyrene	(5)	14.556	202	12327	0.084
149)$Terphenyl-d14	(5)	14.848	244	1771095	20.602
158) Benzo(a)anthracene	(5)	16.532	228	3461	0.028
161) Chrysene	(5)	16.590	228	6518	0.053
168) Benzo(b)fluoranthene	(6)	18.362	252	6295M	0.054
170) Benzo(k)fluoranthene	(6)	18.409	252	3376M	0.029
171) Benzo(a)pyrene	(6)	18.887	252	4826	0.045
172)*Perylene-d12	(6)	18.980	264	495828	5.000
178) Benzo(g,h,i)perylene	(6)	20.927	276	2706M	0.034

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

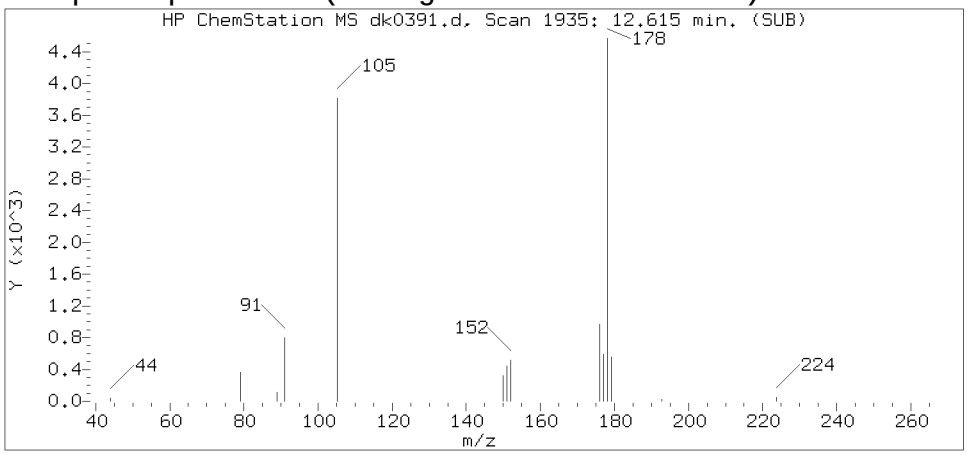
Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

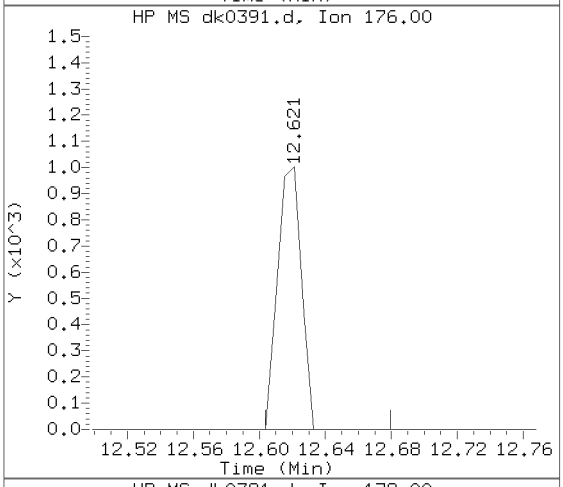
Reference Standard Spectrum for Phenanthrene



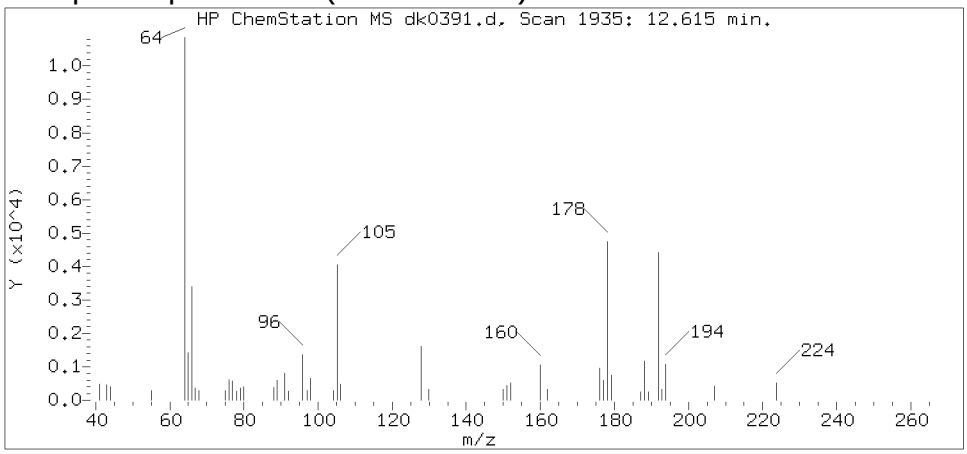


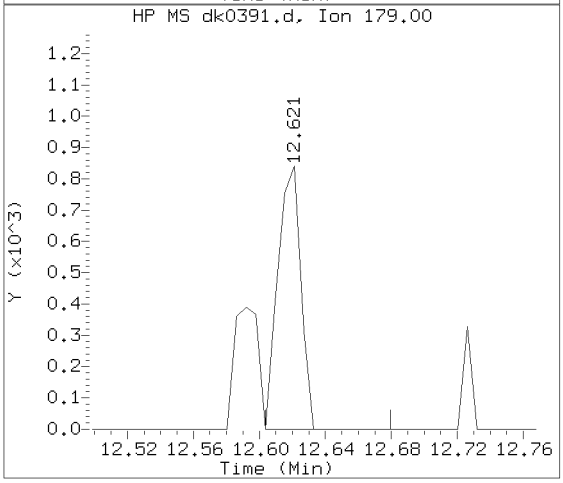
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number : 131
Compound Name : Phenanthrene
Scan Number : 1935
Retention Time (minutes) : 12.615
Relative Retention Time : 0.00093
Quant Ion : 178.00
Area (flag) : 4815
On-column Amount (ng/ul) : 0.0408

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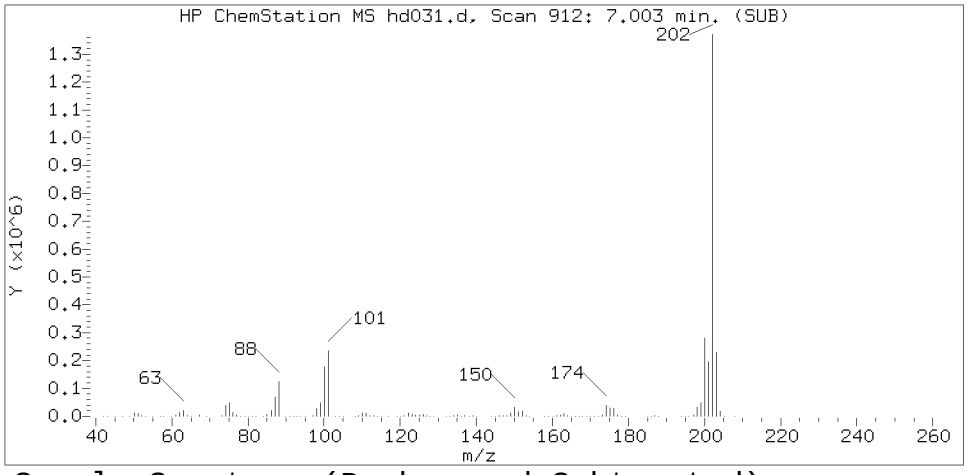
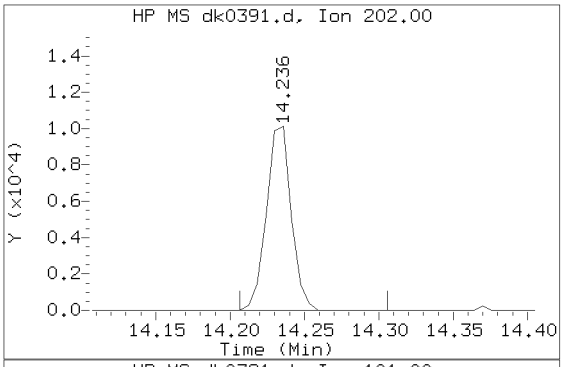
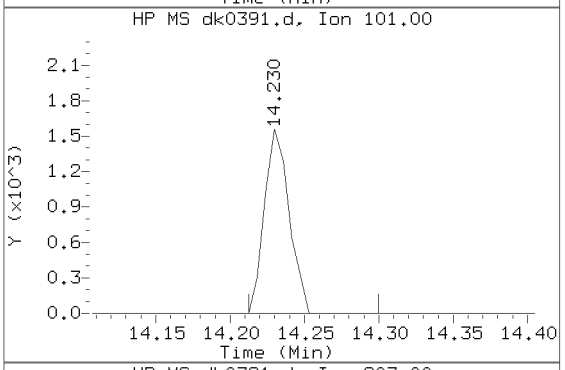
Target 3.5 esignature user ID: ceb05247

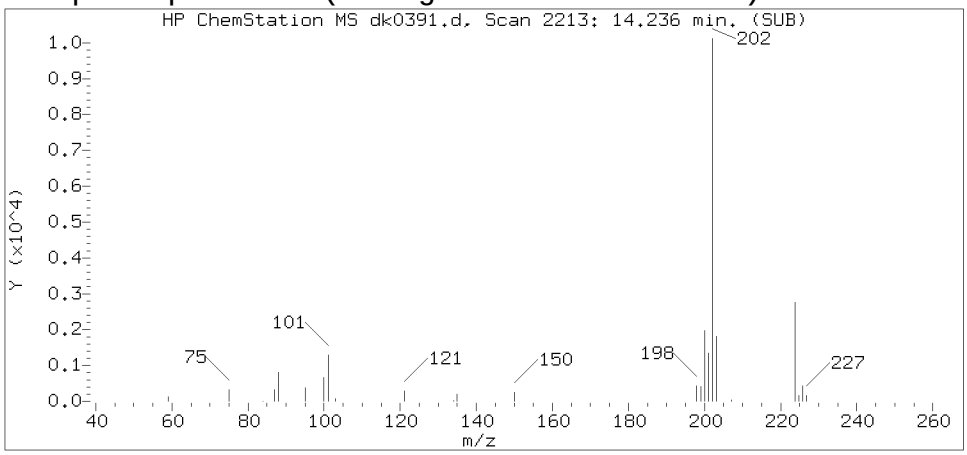
Reference Standard Spectrum for Fluoranthene

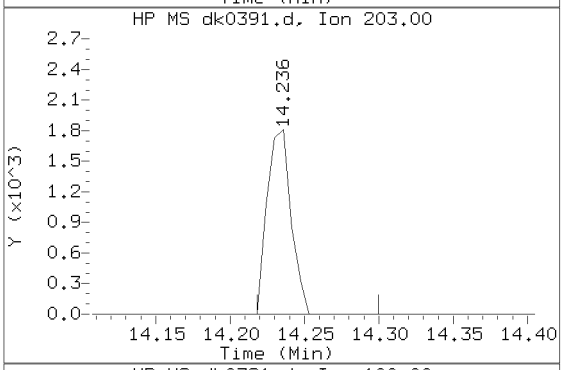




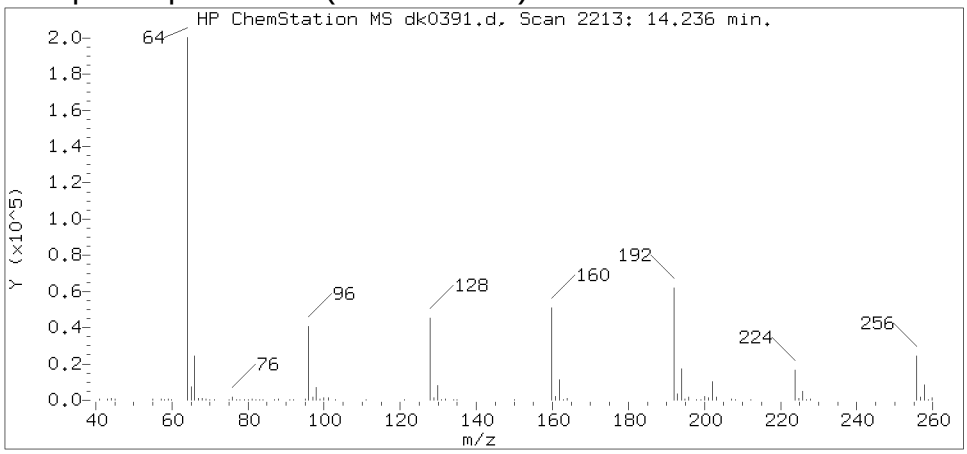


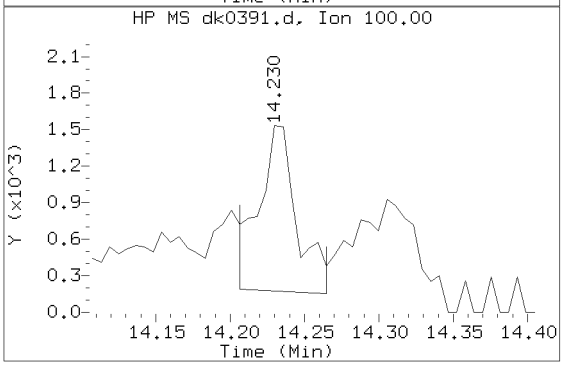
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number : 142
Compound Name : Fluoranthene
Scan Number : 2213
Retention Time (minutes) : 14.236
Relative Retention Time :-0.00092
Quant Ion : 202.00
Area (flag) : 11765
On-column Amount (ng/ul) : 0.0887

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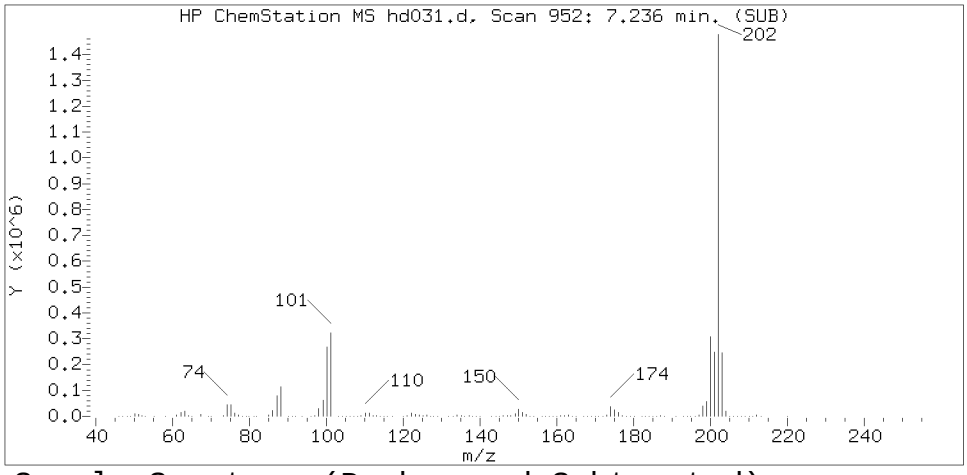
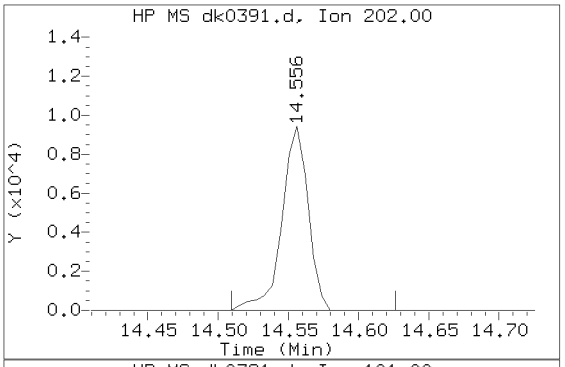
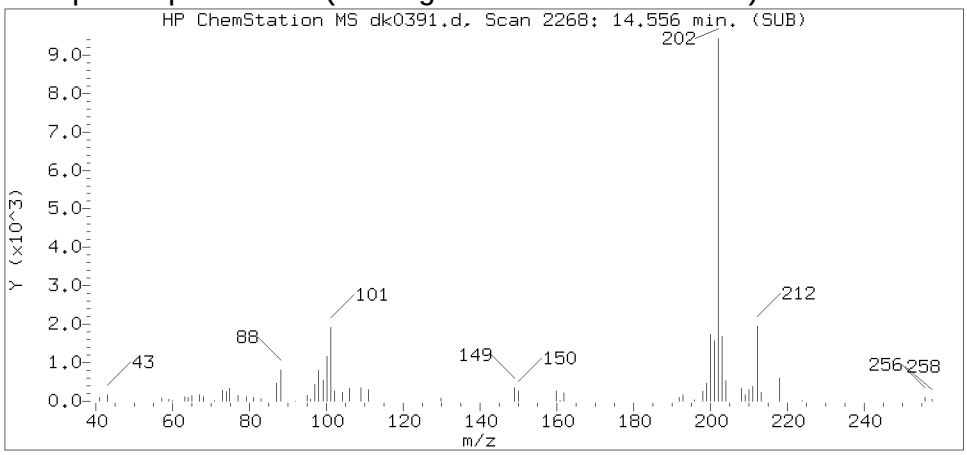
Target 3.5 esignature user ID: ceb05247

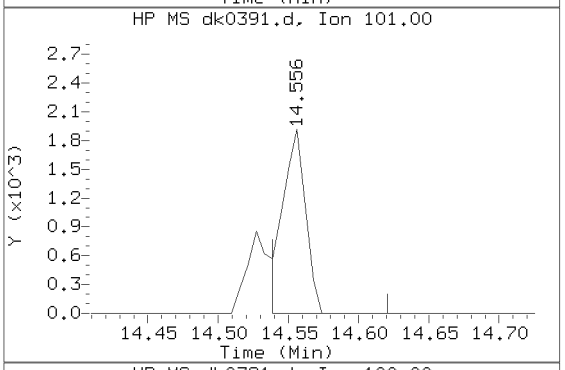
Reference Standard Spectrum for Pyrene

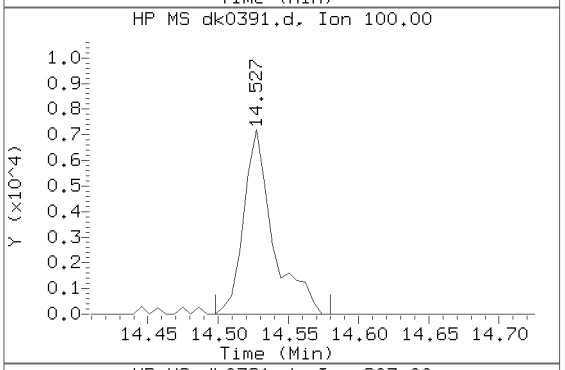




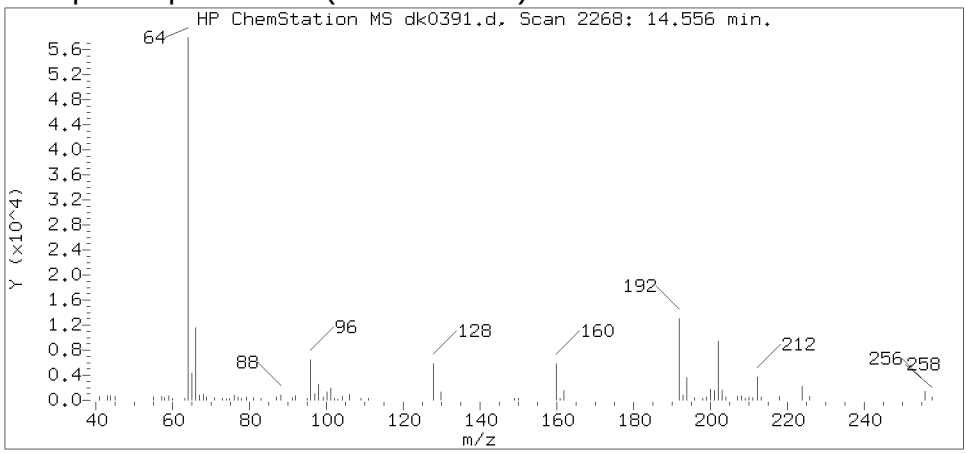
Sample Spectrum (Background Subtracted)

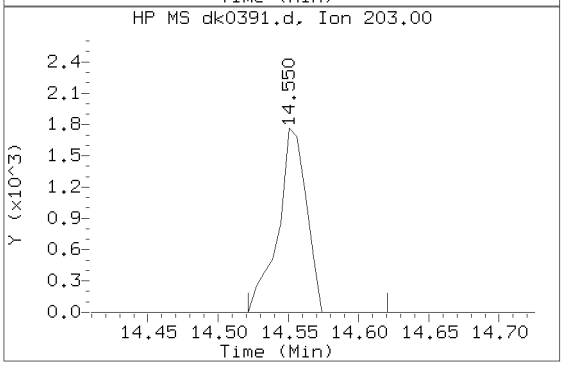






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number	: 146
Compound Name	: Pyrene
Scan Number	: 2268
Retention Time (minutes)	: 14.556
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 12327
On-column Amount (ng/ul)	: 0.0842

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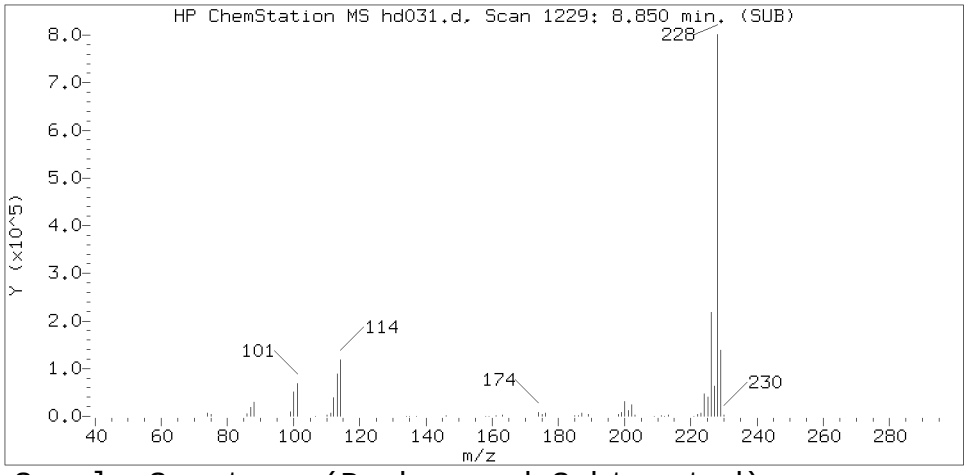
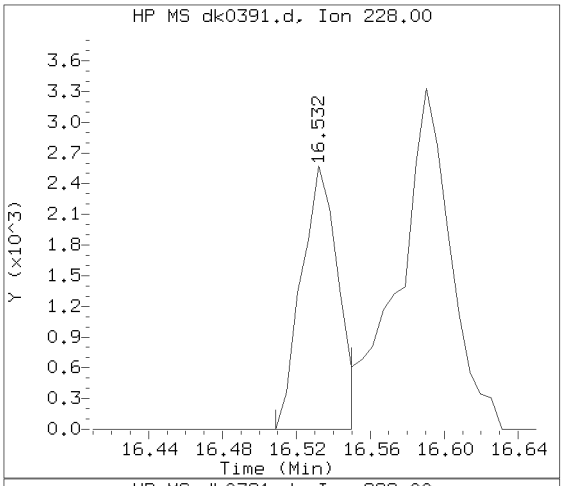
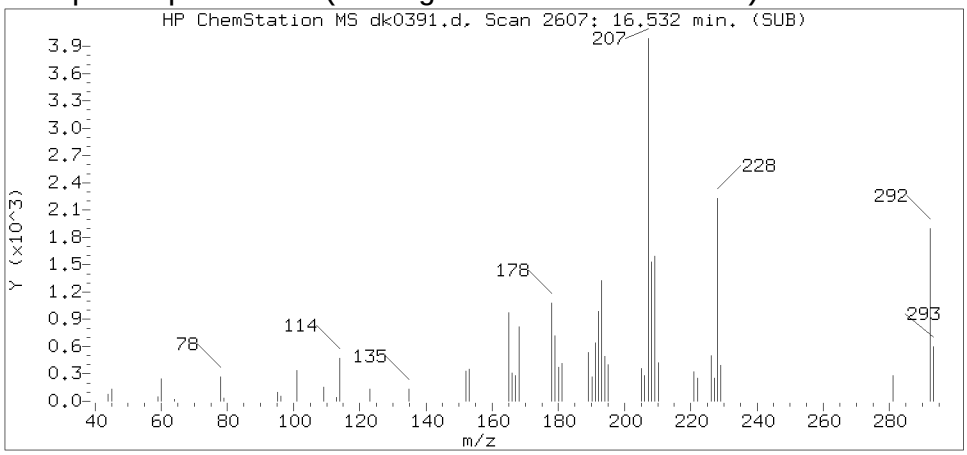
Target 3.5 esignature user ID: ceb05247

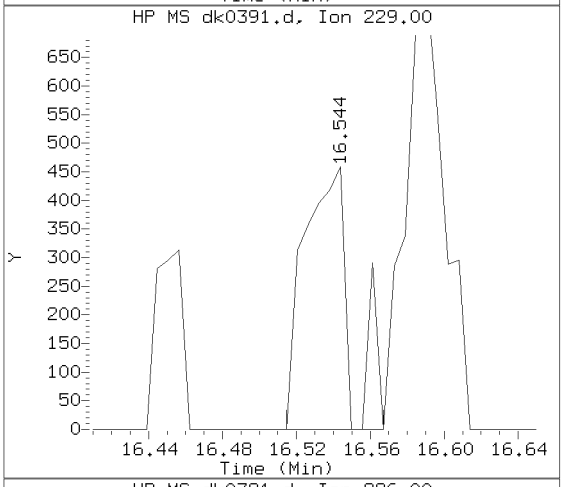
Reference Standard Spectrum for Benzo(a)anthracene



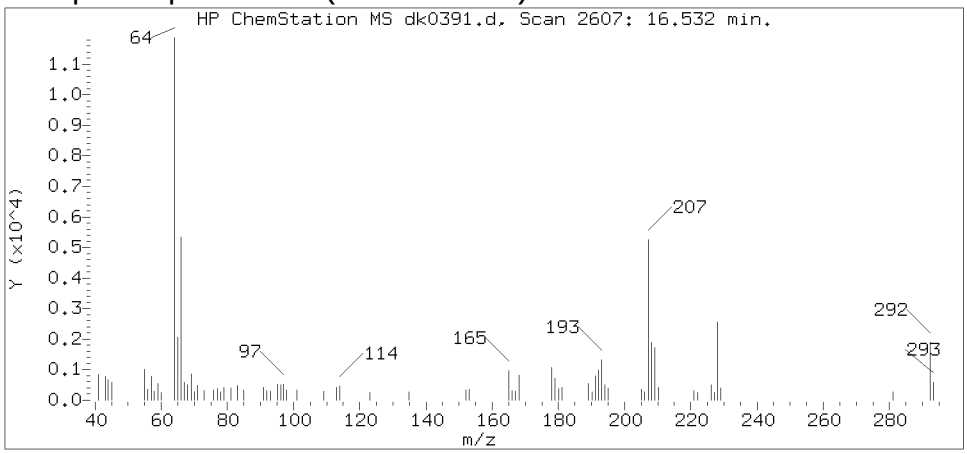


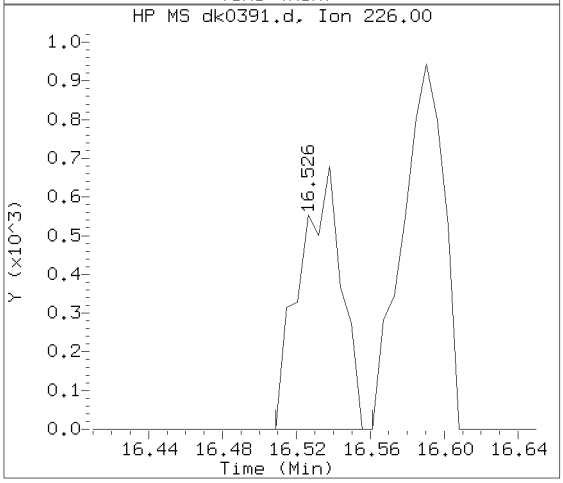
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number : 158
Compound Name : Benzo(a)anthracene
Scan Number : 2607
Retention Time (minutes) : 16.532
Relative Retention Time :-0.00005
Quant Ion : 228.00
Area (flag) : 3461
On-column Amount (ng/ul) : 0.0279

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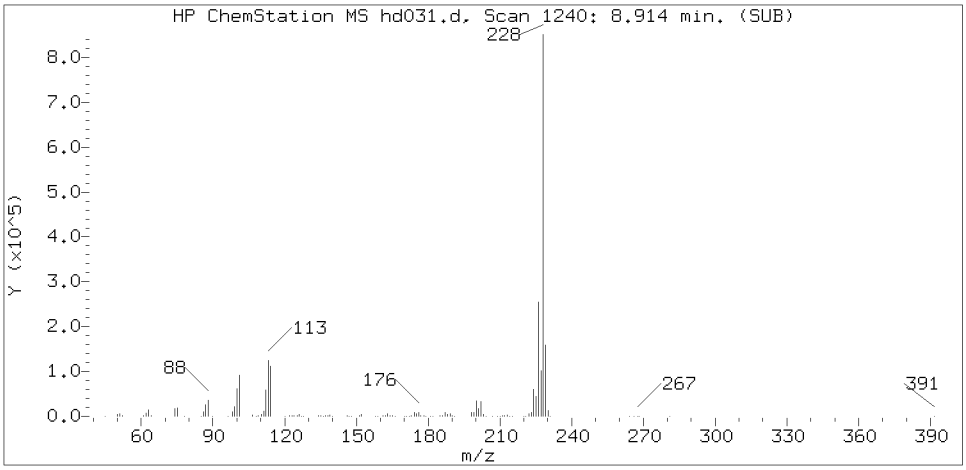
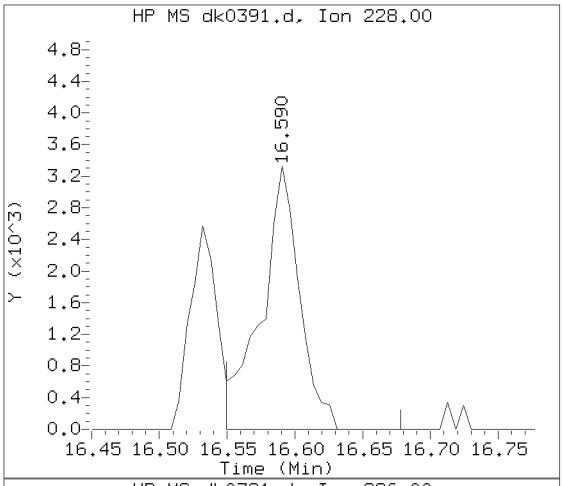
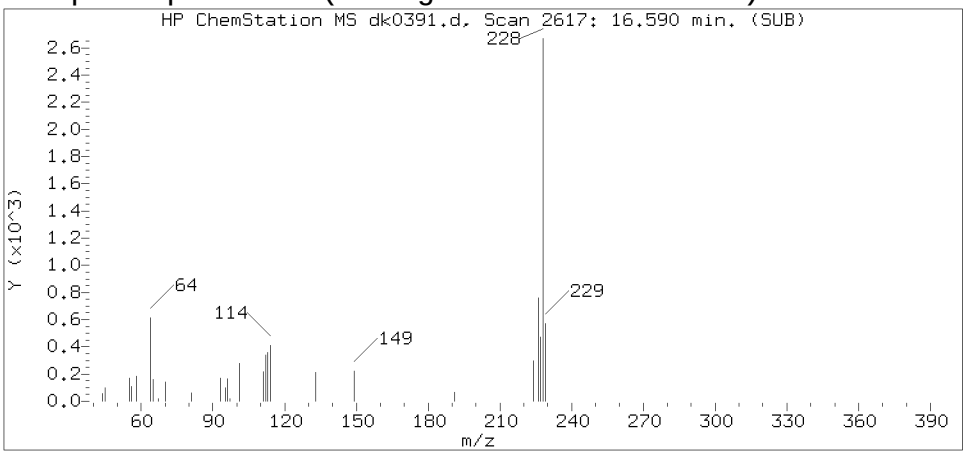
Target 3.5 esignature user ID: ceb05247

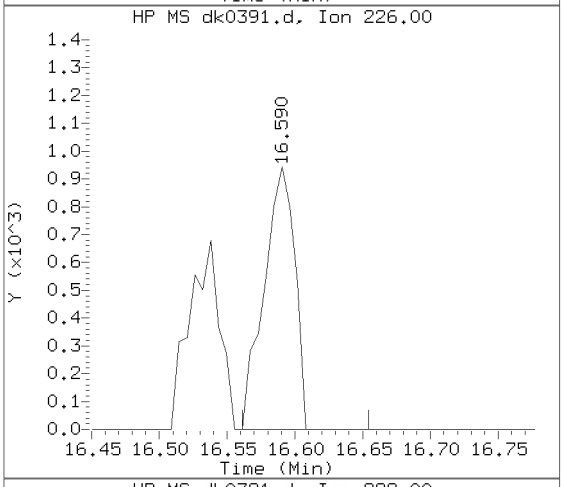
Reference Standard Spectrum for Chrysene



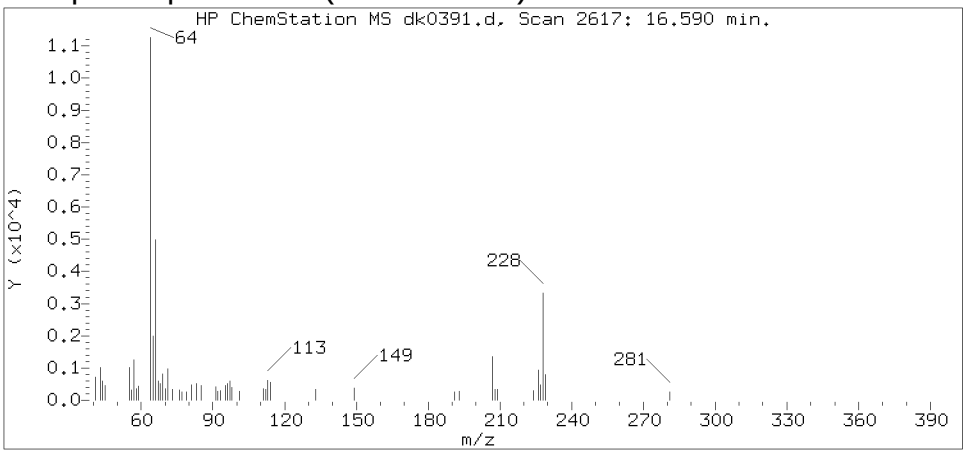


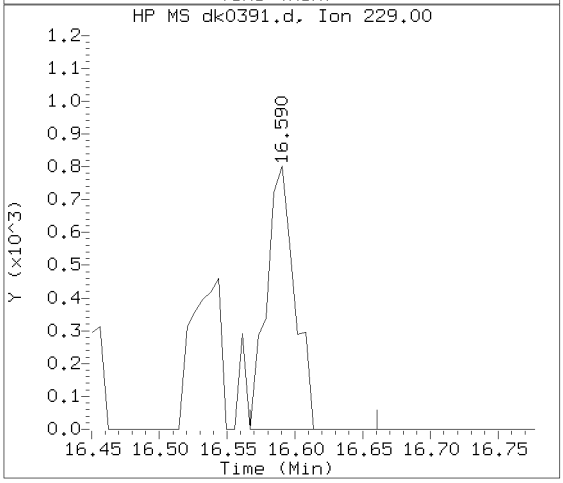
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number	: 161
Compound Name	: Chrysene
Scan Number	: 2617
Retention Time (minutes)	: 16.590
Relative Retention Time	: 0.00035
Quant Ion	: 228.00
Area (flag)	: 6518
On-column Amount (ng/ul)	: 0.0534

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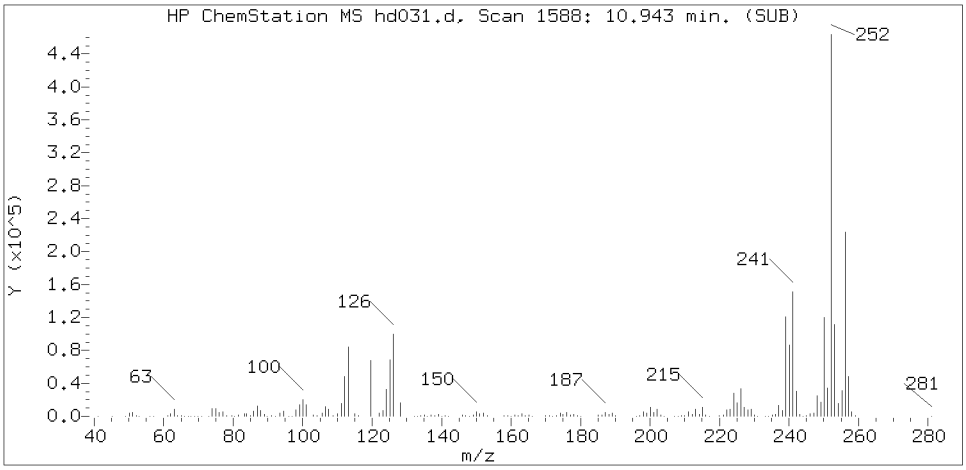
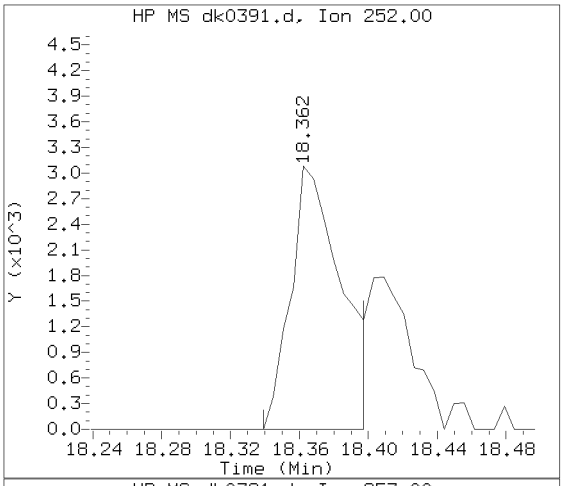
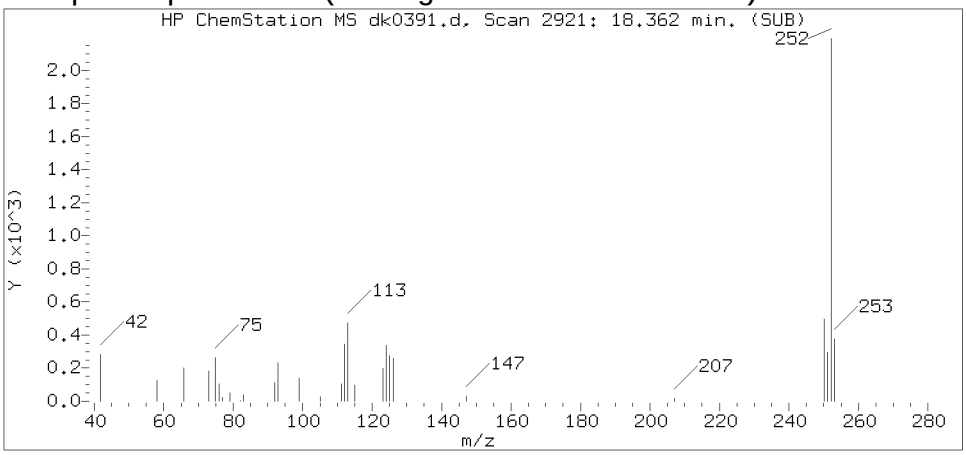
Target 3.5 esignature user ID: ceb05247

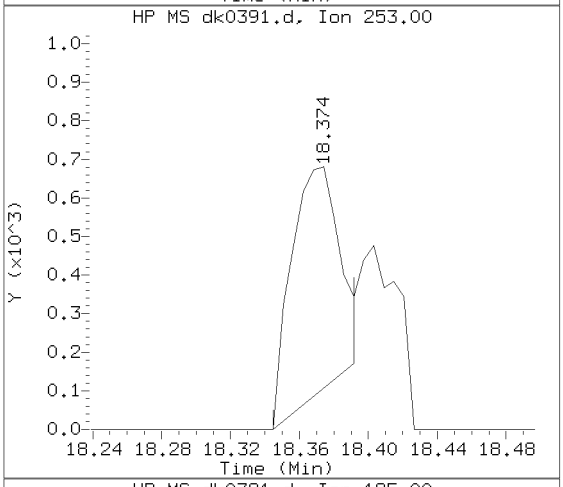
Reference Standard Spectrum for Benzo(b)fluoranthene



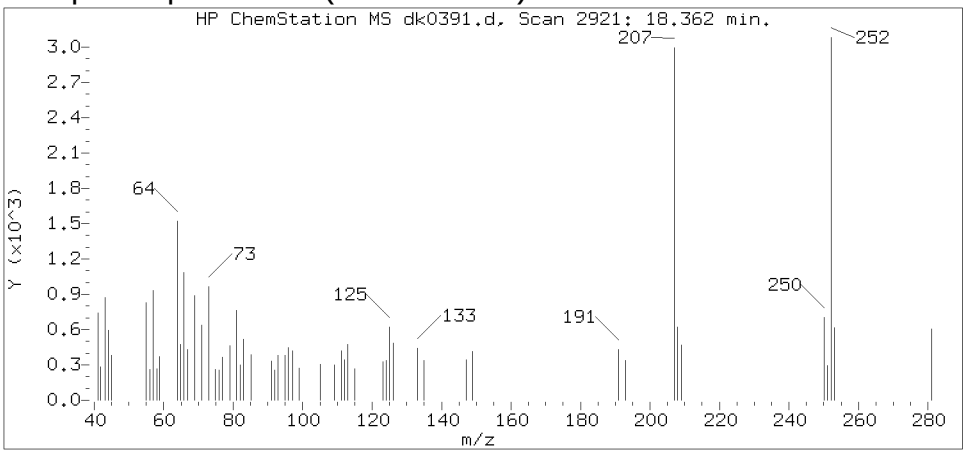


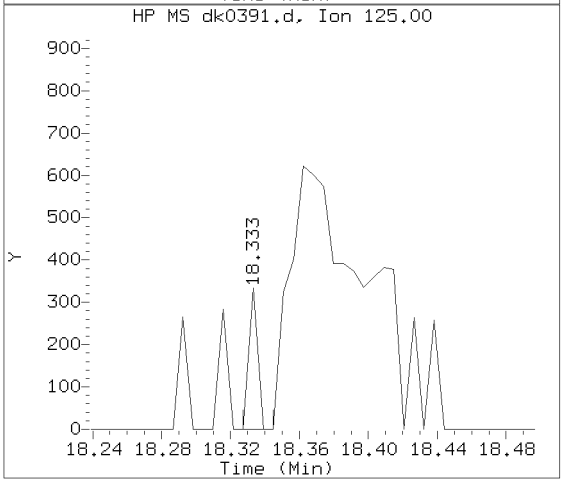
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

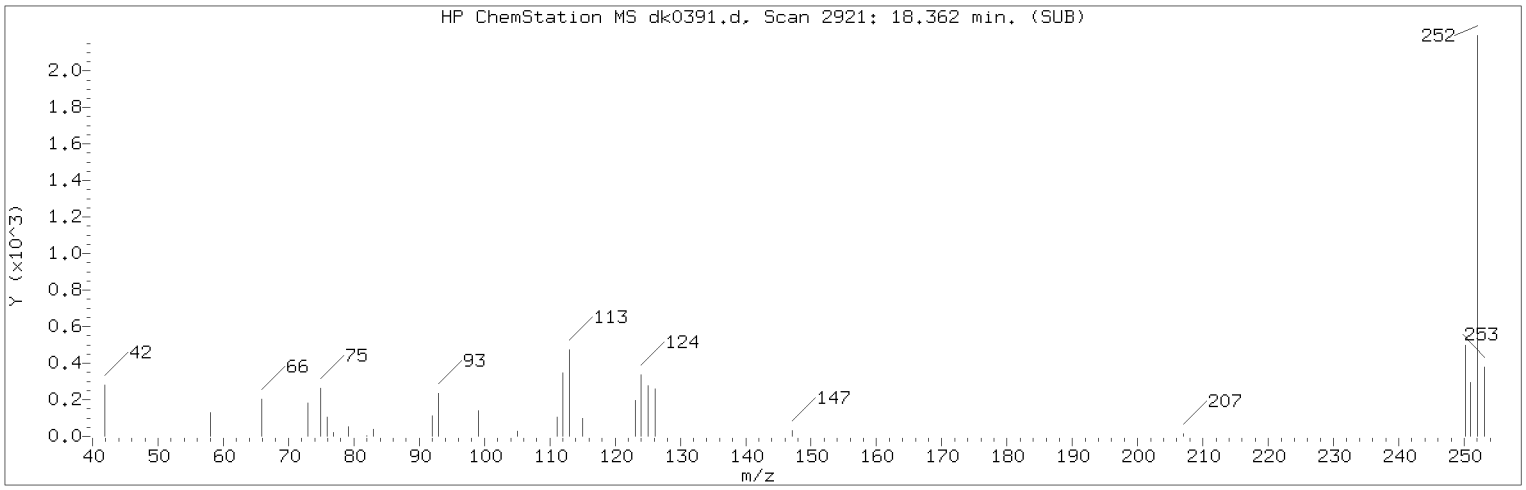
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

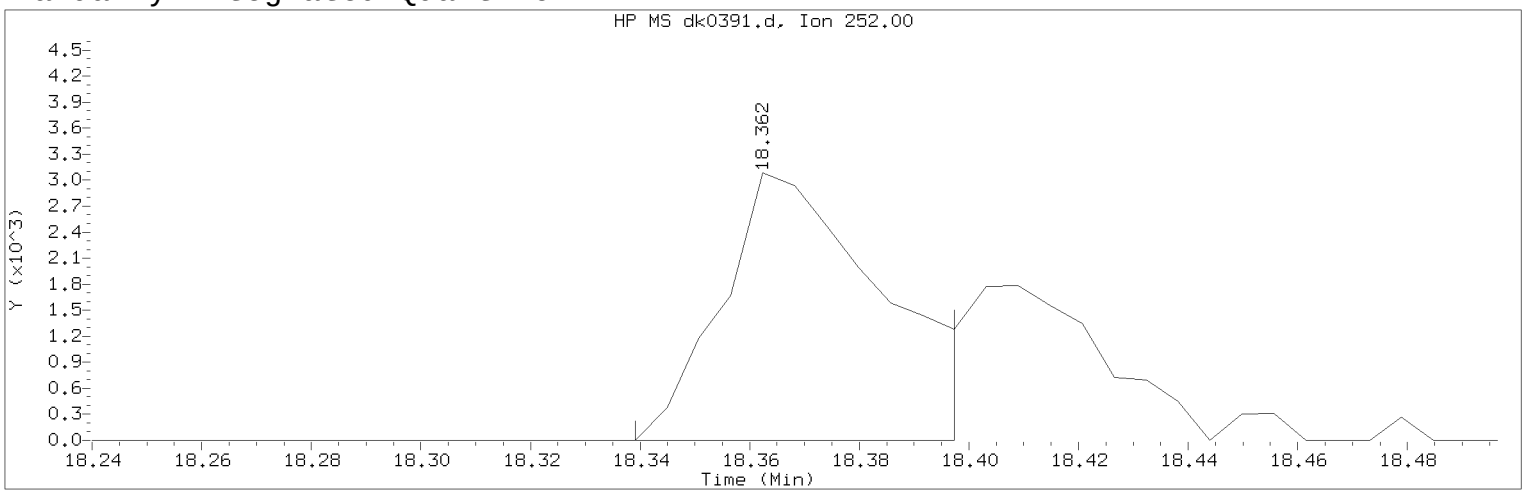
Compound Number : 168
Compound Name : Benzo(b)fluoranthene
Scan Number : 2921
Retention Time (minutes) : 18.362
Relative Retention Time : 0.00061
Quant Ion : 252.00
Area (flag) : 6295M
On-column Amount (ng/ul) : 0.0539

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

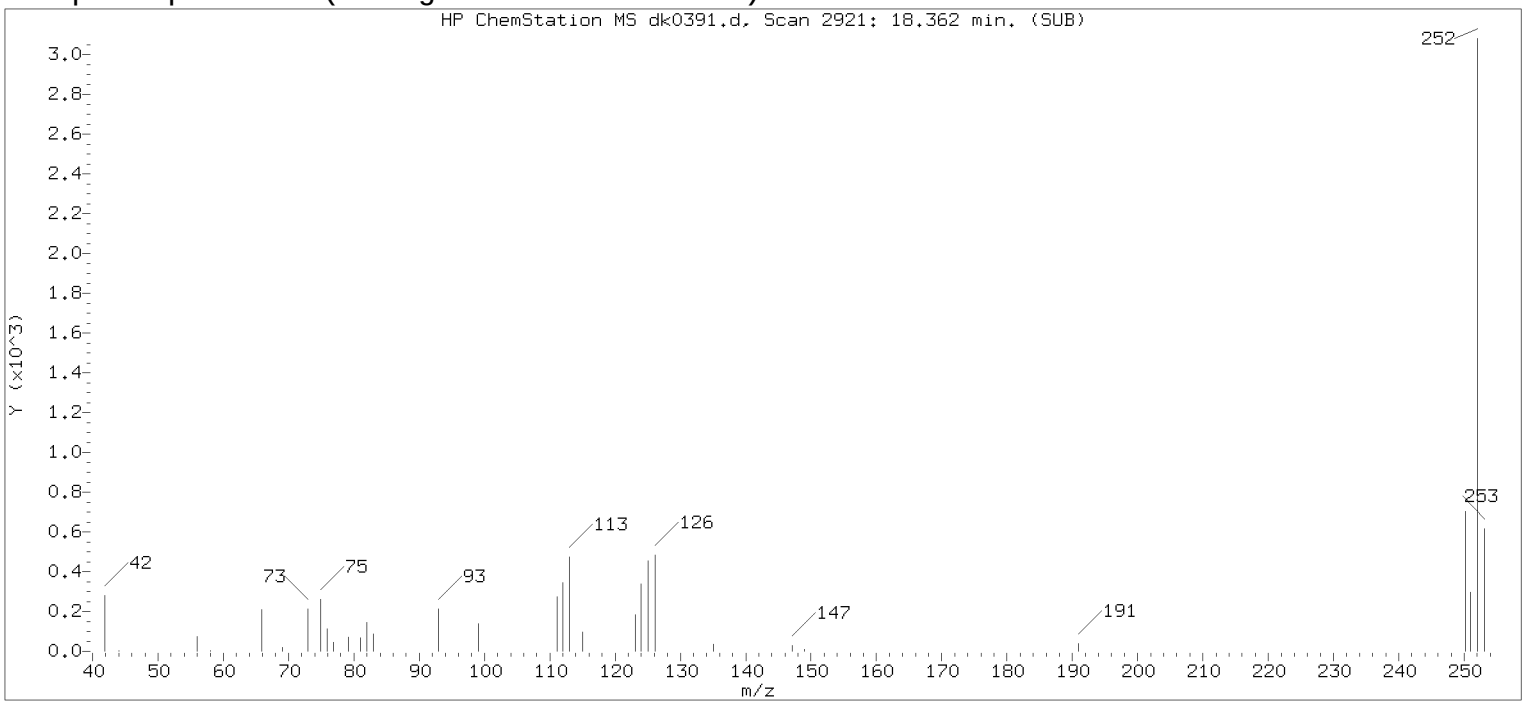
Compound Number : 168
Compound Name : Benzo(b)fluoranthene
Scan Number : 2921
Retention Time (minutes) : 18.362
Quant Ion : 252.00
Area (flag) : 6295M
On-column Amount (ng/ul) : 0.0539
Integration start scan : 2916 Integration stop scan: 2926
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

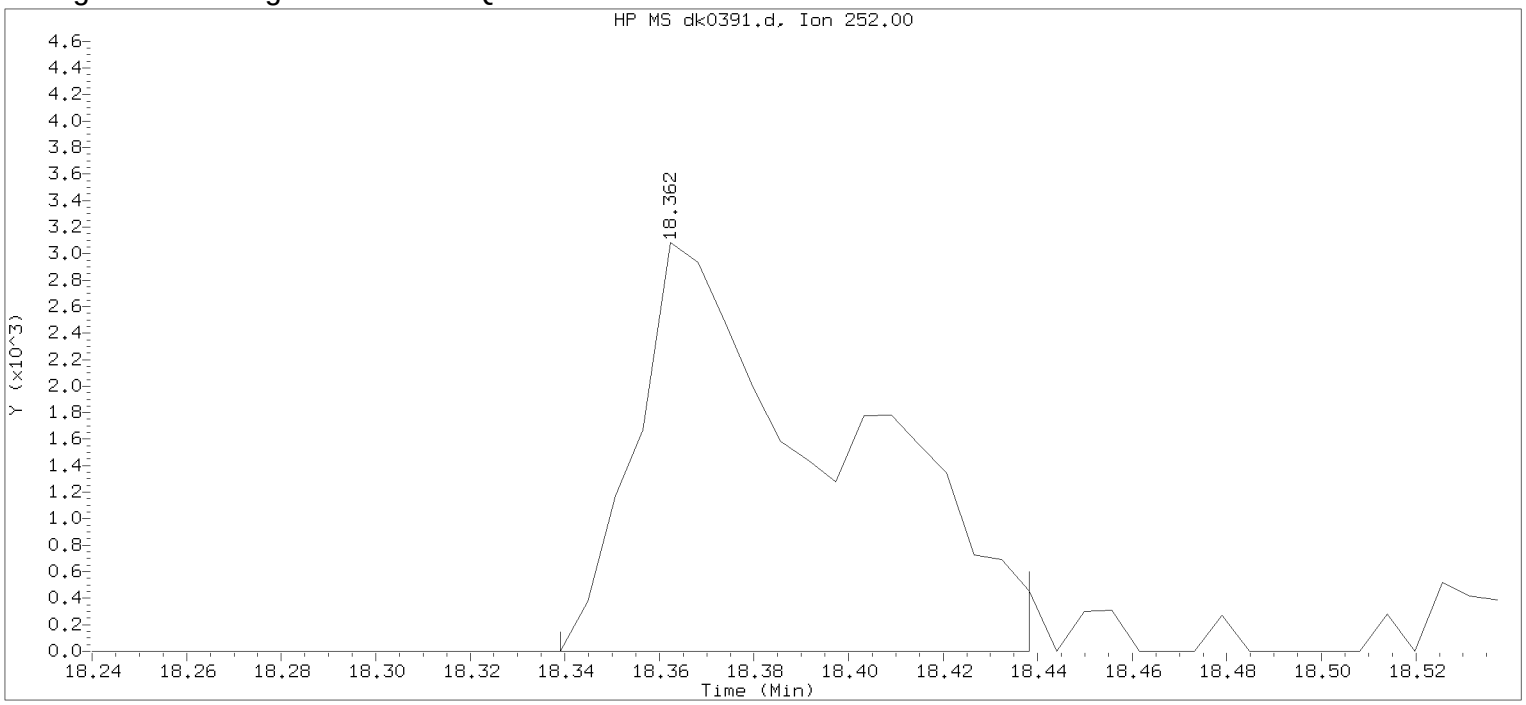
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:12.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

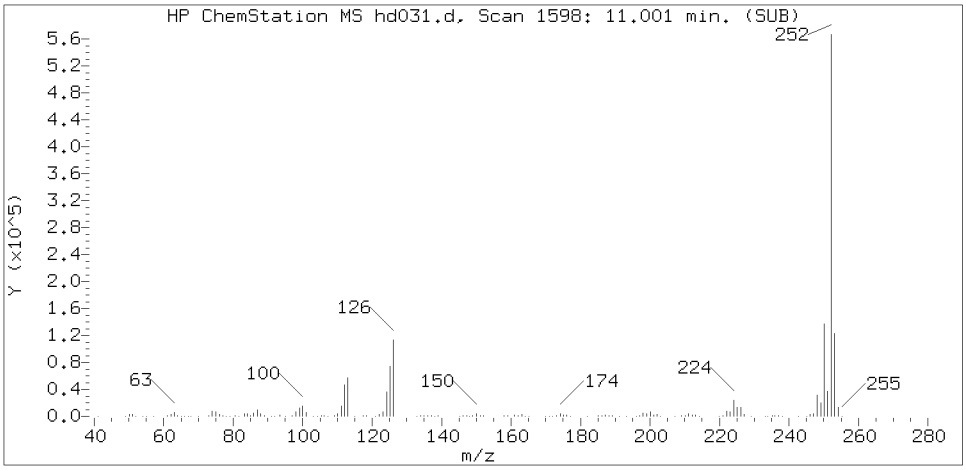
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 10:23 Automation

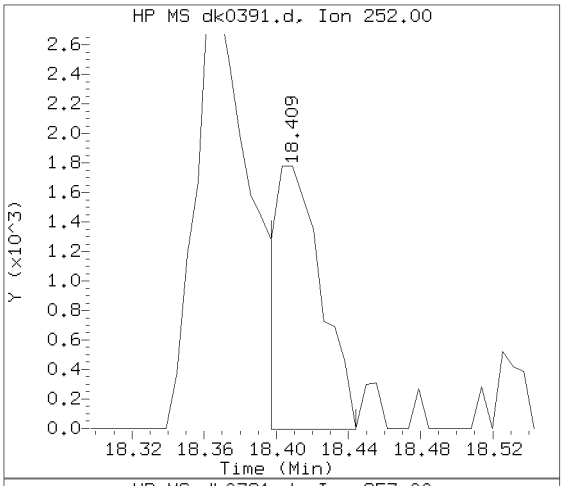
Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number	:	168
Compound Name	:	Benzo(b)fluoranthene
Scan Number	:	2921
Retention Time (minutes)	:	18.362
Quant Ion	:	252.00
Area	:	9129
On-column Amount (ng/ul)	:	0.0782
Integration start scan	:	2916 Integration stop scan: 2933
Y at integration start	:	0 Y at integration end: 0

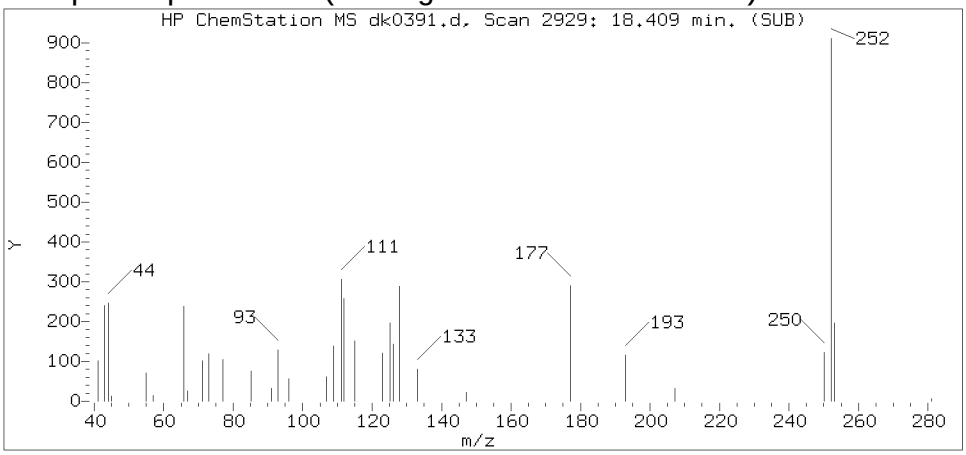
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: cebo5241

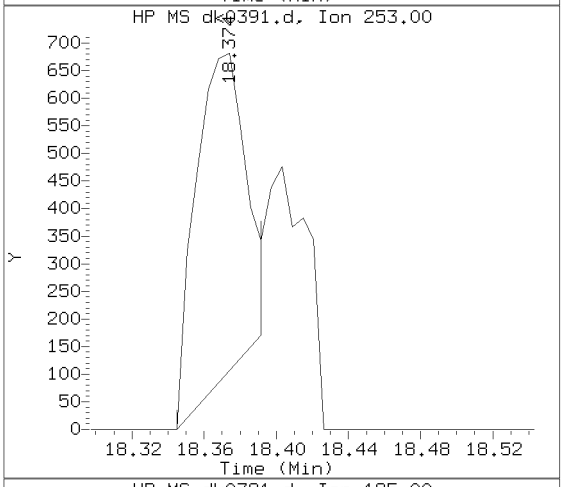
Reference Standard Spectrum for Benzo(k)fluoranthene



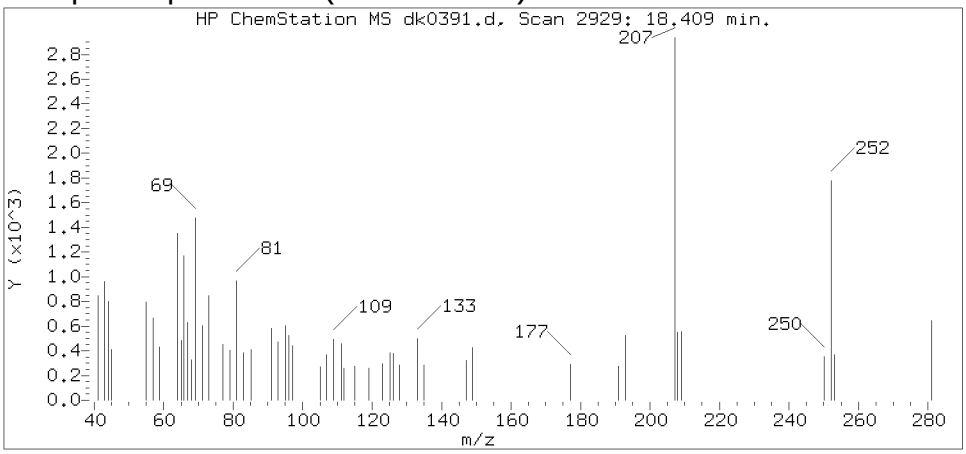


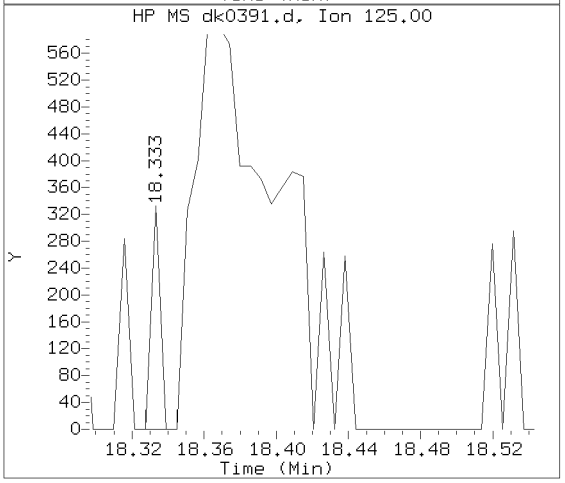
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

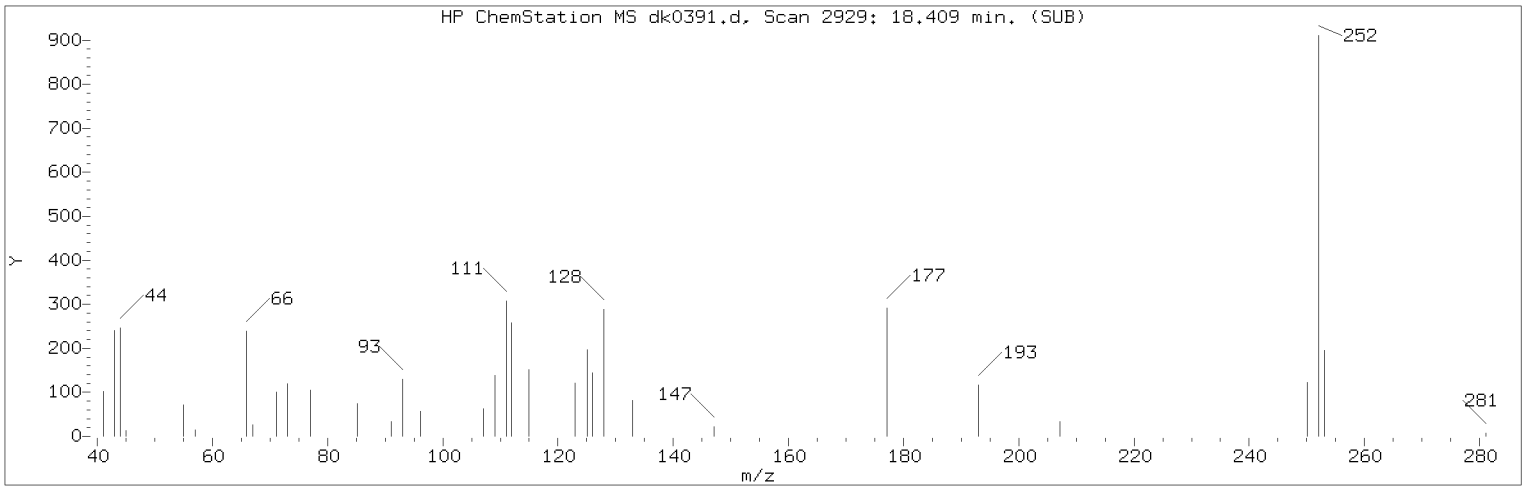
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

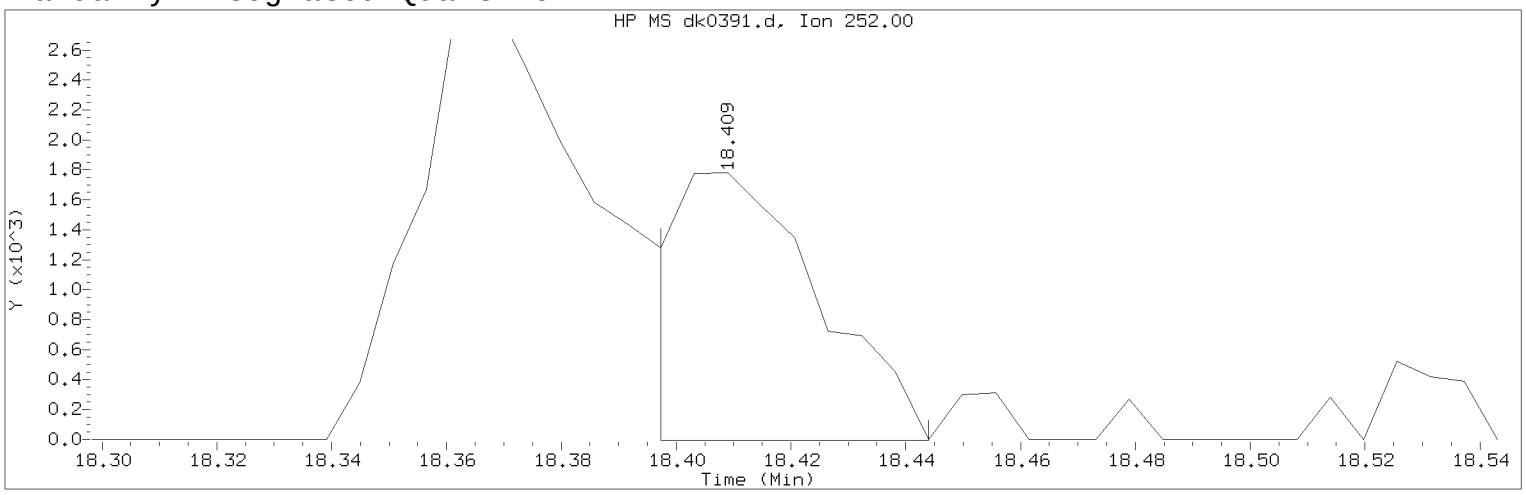
Compound Number : 170
Compound Name : Benzo(k)fluoranthene
Scan Number : 2929
Retention Time (minutes) : 18.409
Relative Retention Time : 0.00092
Quant Ion : 252.00
Area (flag) : 3376M
On-column Amount (ng/ul) : 0.0287

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

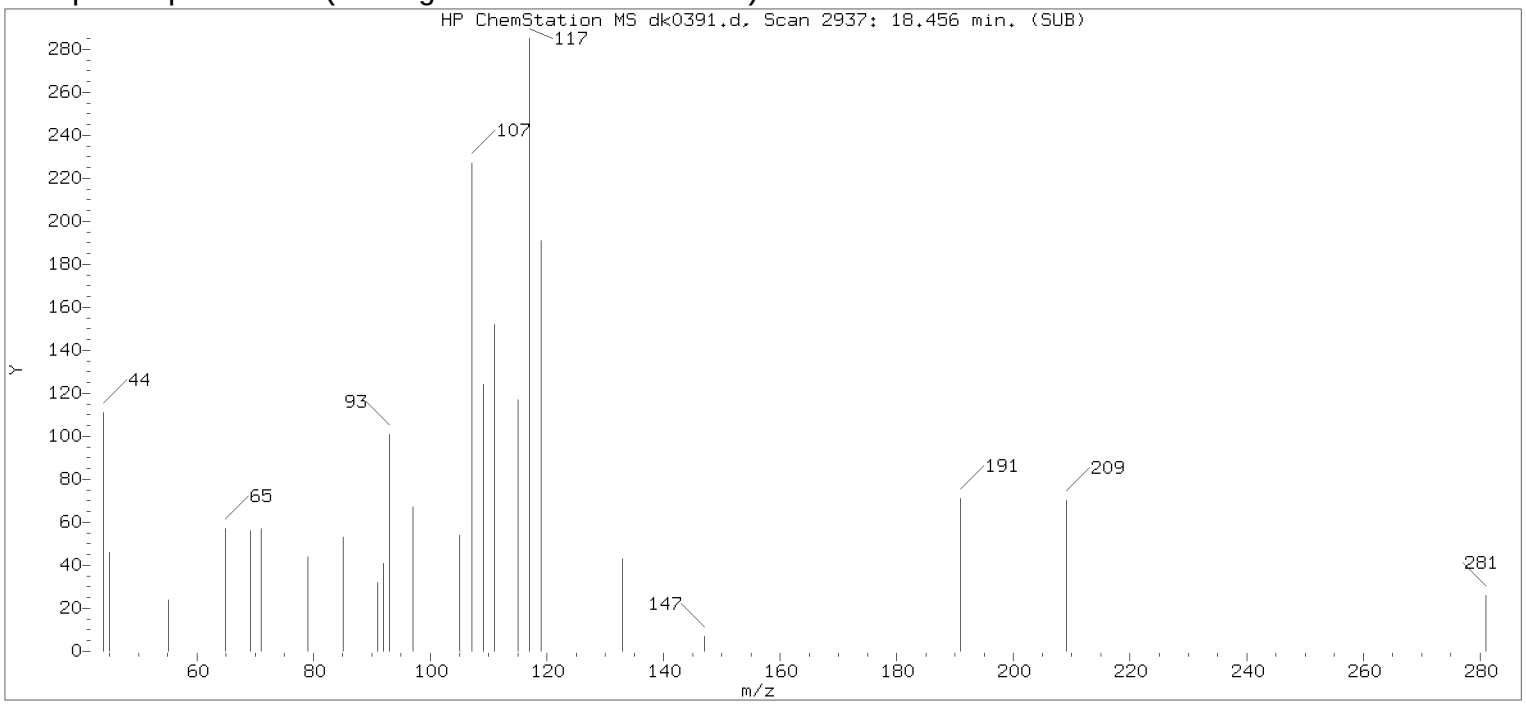
Compound Number : 170
Compound Name : Benzo(k)fluoranthene
Scan Number : 2929
Retention Time (minutes) : 18.409
Quant Ion : 252.00
Area (flag) : 3376M
On-column Amount (ng/ul) : 0.0287
Integration start scan : 2926 Integration stop scan: 2934
Y at integration start : -5 Y at integration end: -5

Reason for manual integration: improper integration

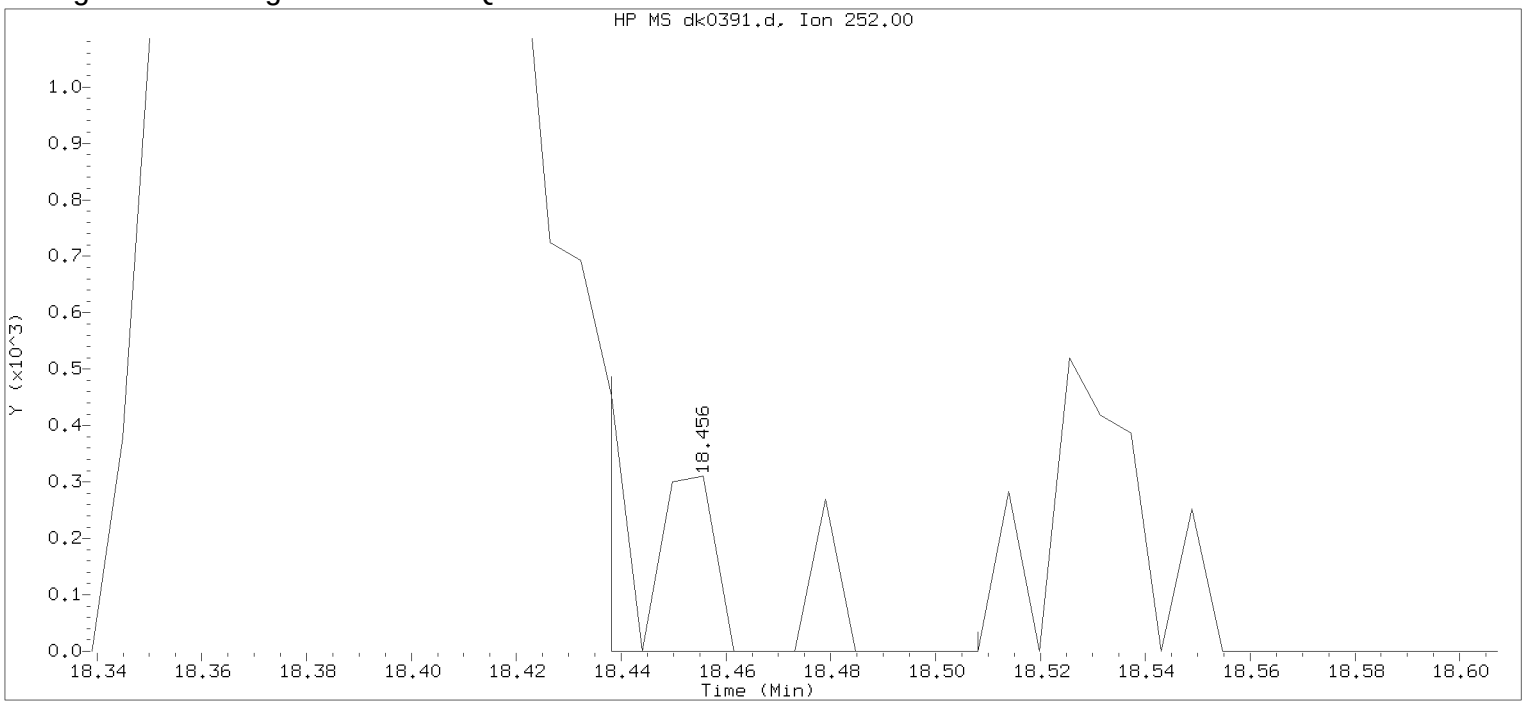
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:12.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

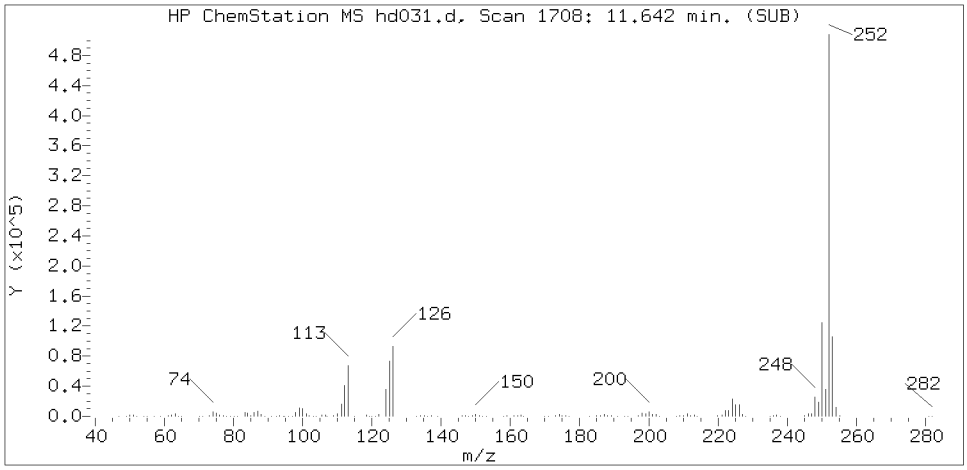
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 10:23 Automation

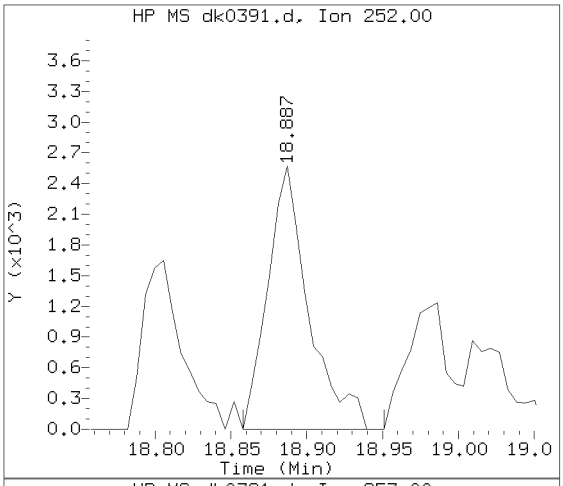
Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number : 170
Compound Name : Benzo(k)fluoranthene
Scan Number : 2937
Retention Time (minutes) : 18.456
Quant Ion : 252.00
Area : 386
On-column Amount (ng/ul) : 0.0033
Integration start scan : 2933 Integration stop scan: 2945
Y at integration start : 0 Y at integration end: 0

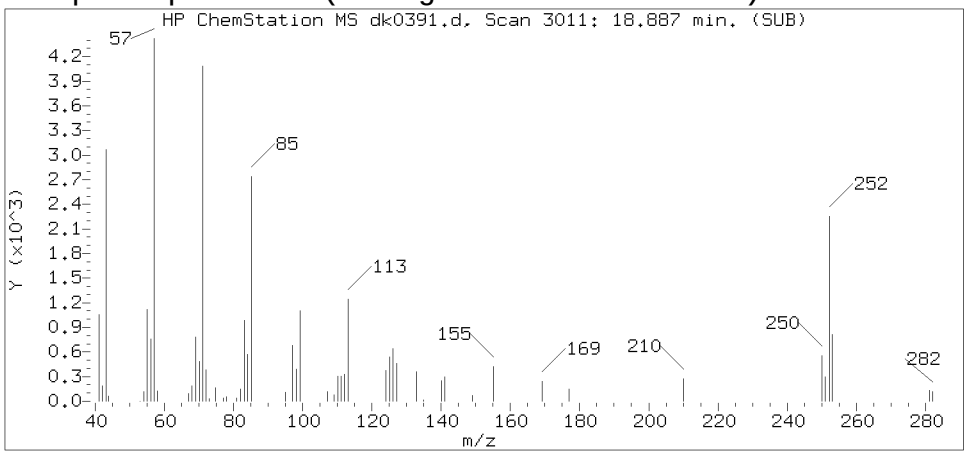
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: cebo234

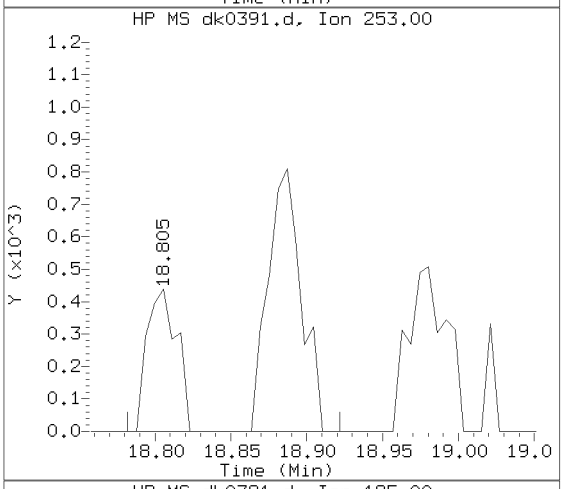
Reference Standard Spectrum for Benzo(a)pyrene



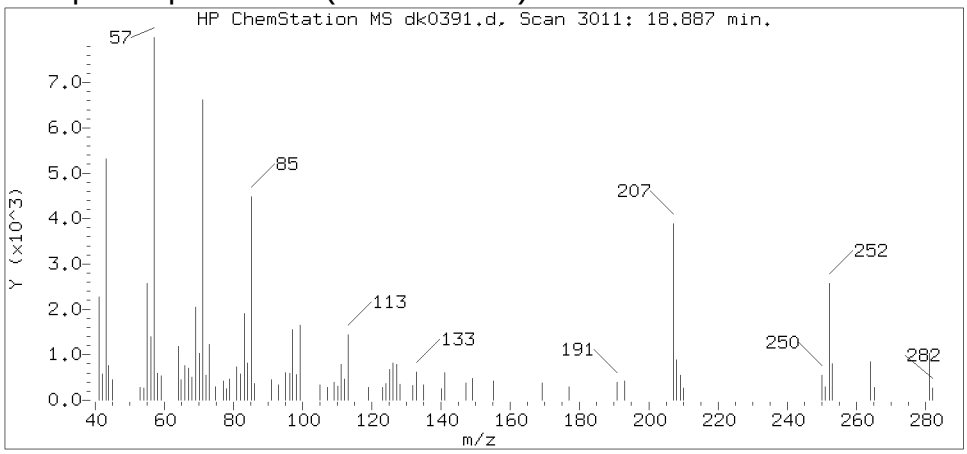


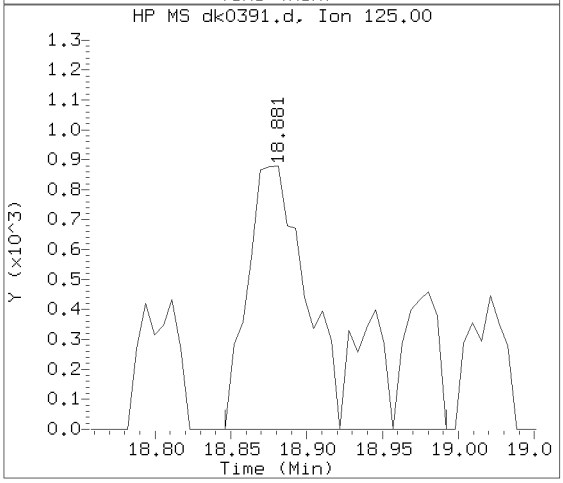
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

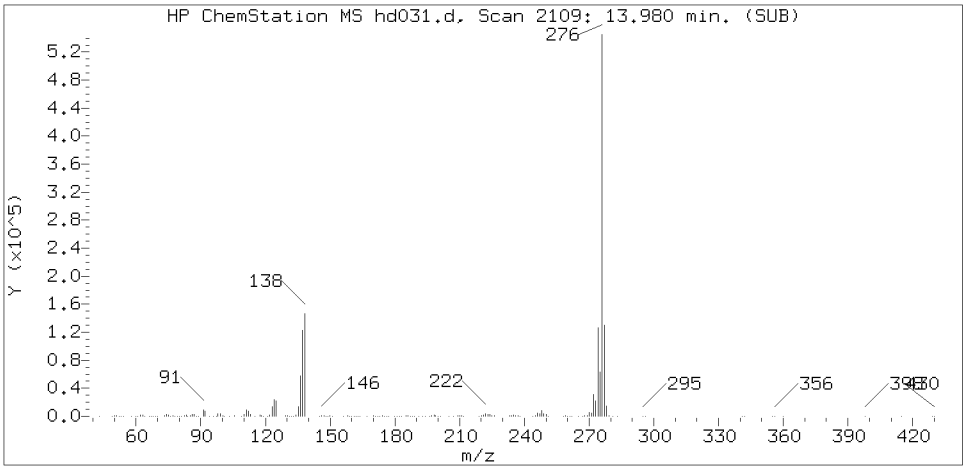
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

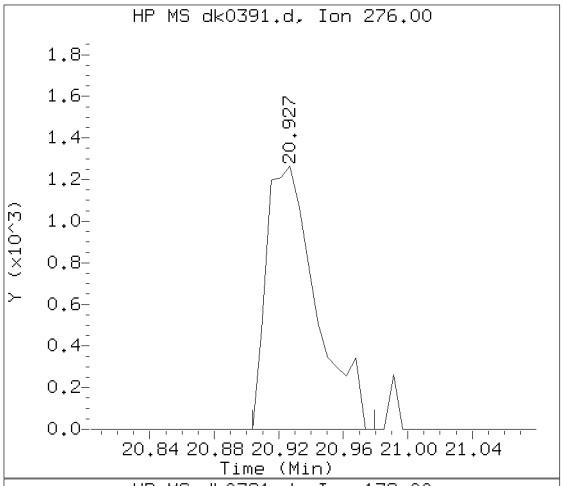
Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number	: 171
Compound Name	: Benzo(a)pyrene
Scan Number	: 3011
Retention Time (minutes)	: 18.887
Relative Retention Time	: 0.00031
Quant Ion	: 252.00
Area (flag)	: 4826
On-column Amount (ng/ul)	: 0.0450

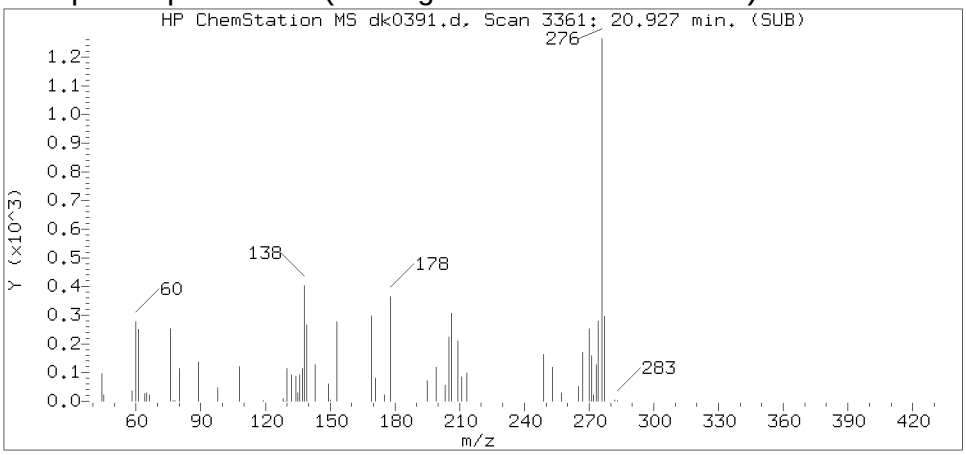
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

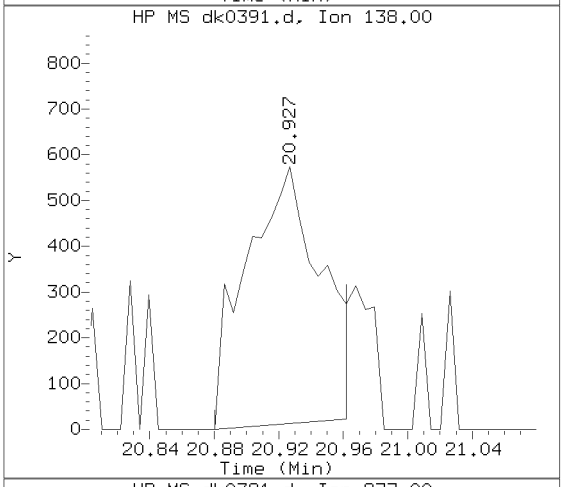
Reference Standard Spectrum for Benzo(g,h,i)perylene



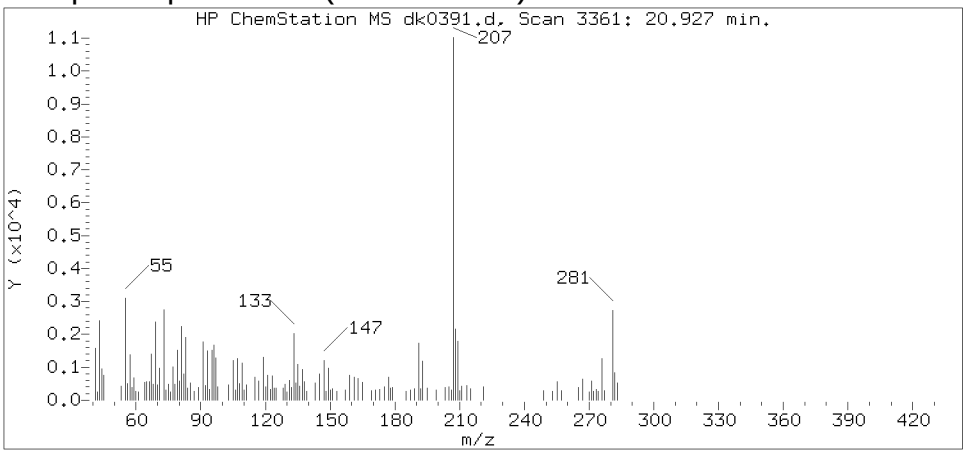


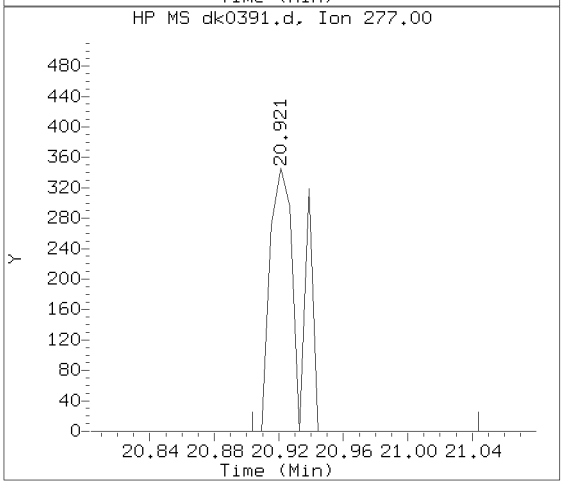
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

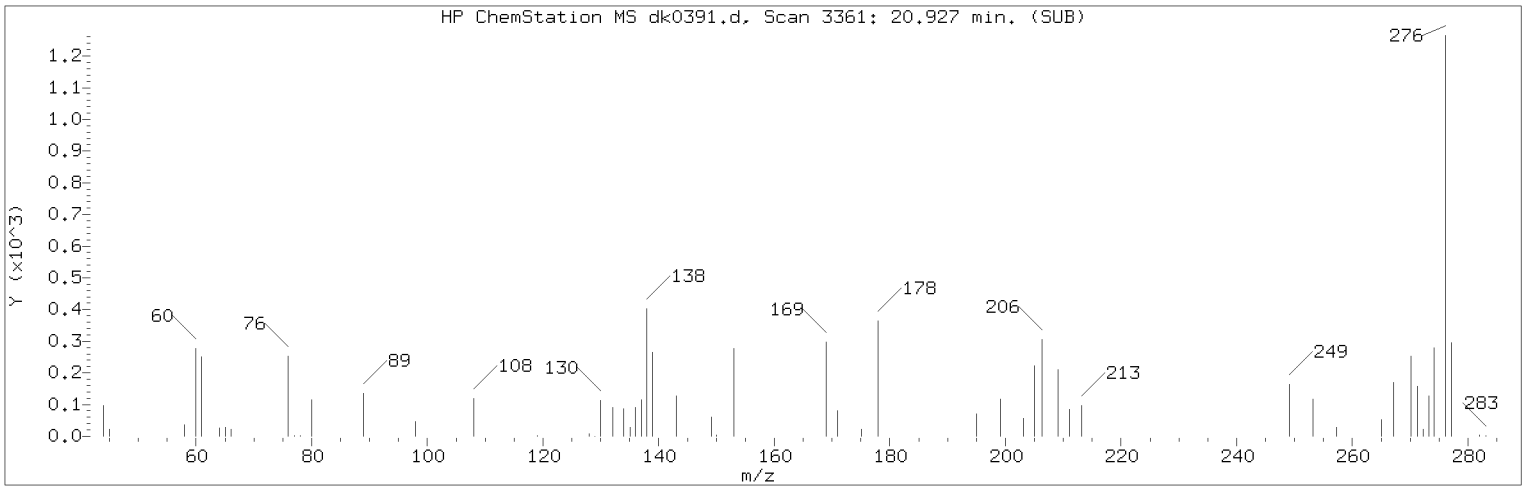
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

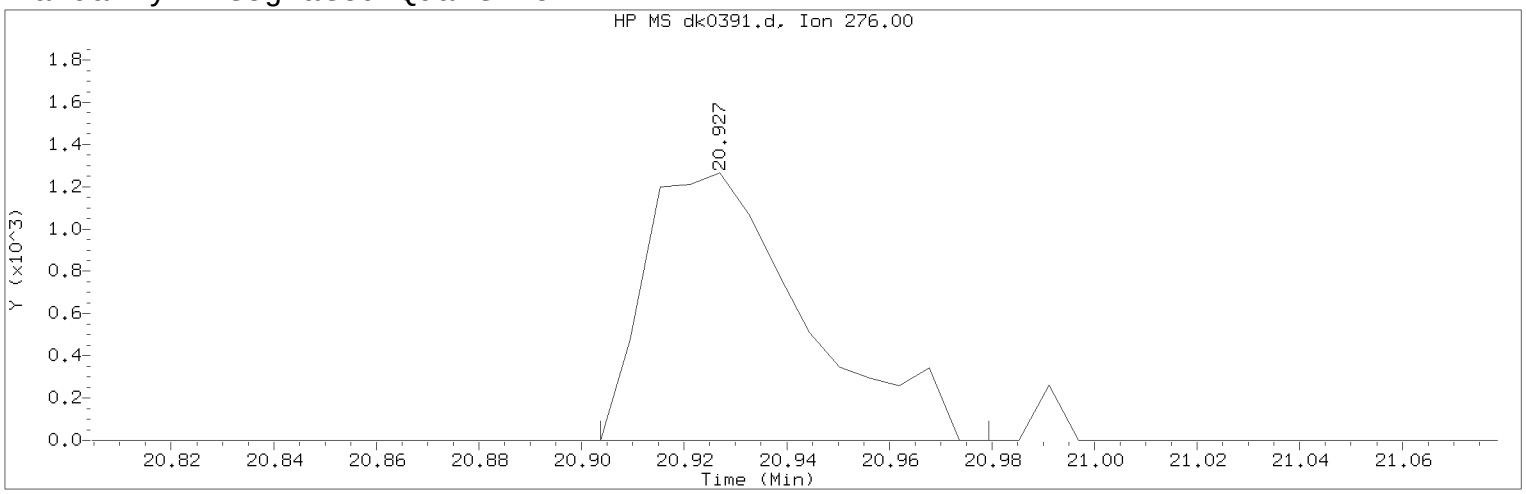
Compound Number	: 178
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 3361
Retention Time (minutes)	: 20.927
Relative Retention Time	: 0.00092
Quant Ion	: 276.00
Area (flag)	: 2706M
On-column Amount (ng/ul)	: 0.0341

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

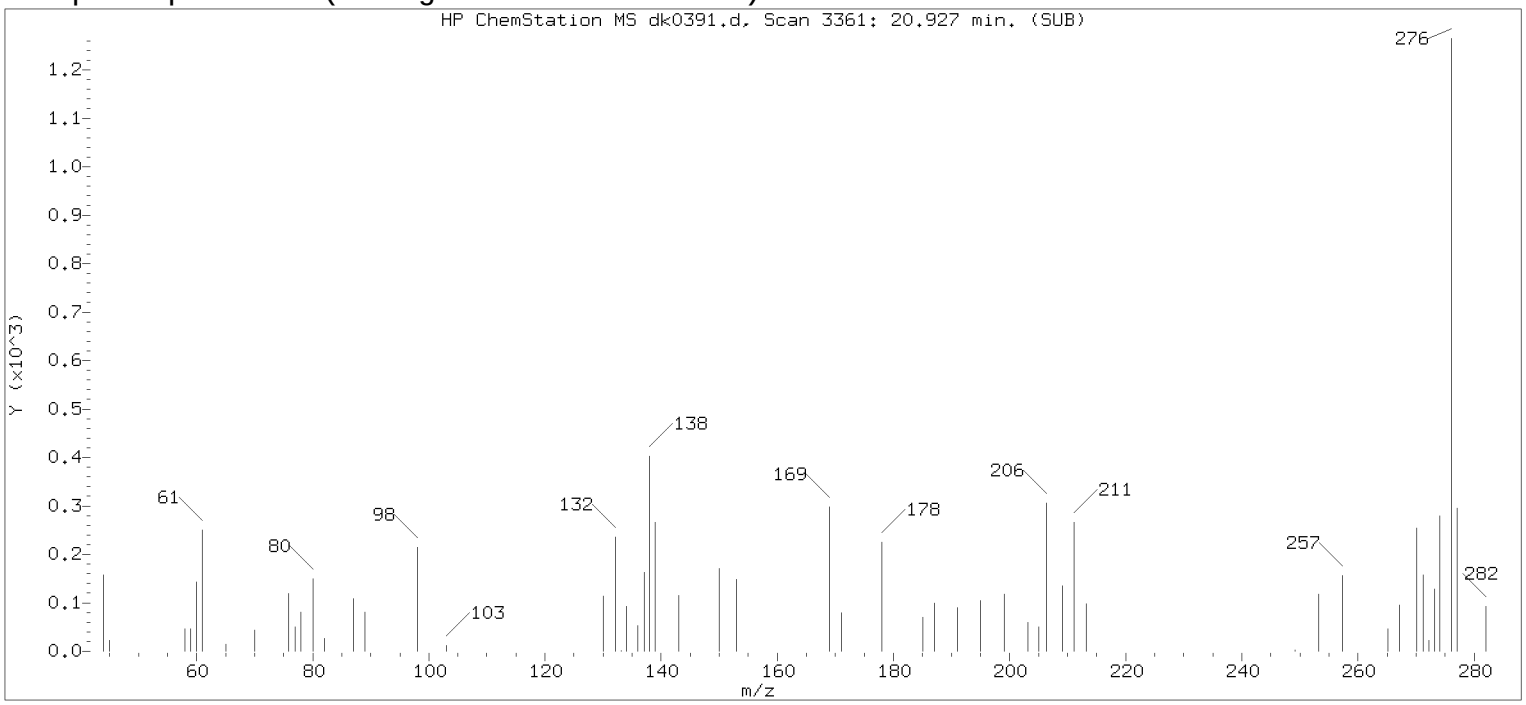
Compound Number : 178
Compound Name : Benzo(g,h,i)perylene
Scan Number : 3361
Retention Time (minutes) : 20.927
Quant Ion : 276.00
Area (flag) : 2706M
On-column Amount (ng/ul) : 0.0341
Integration start scan : 3356 Integration stop scan: 3369
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

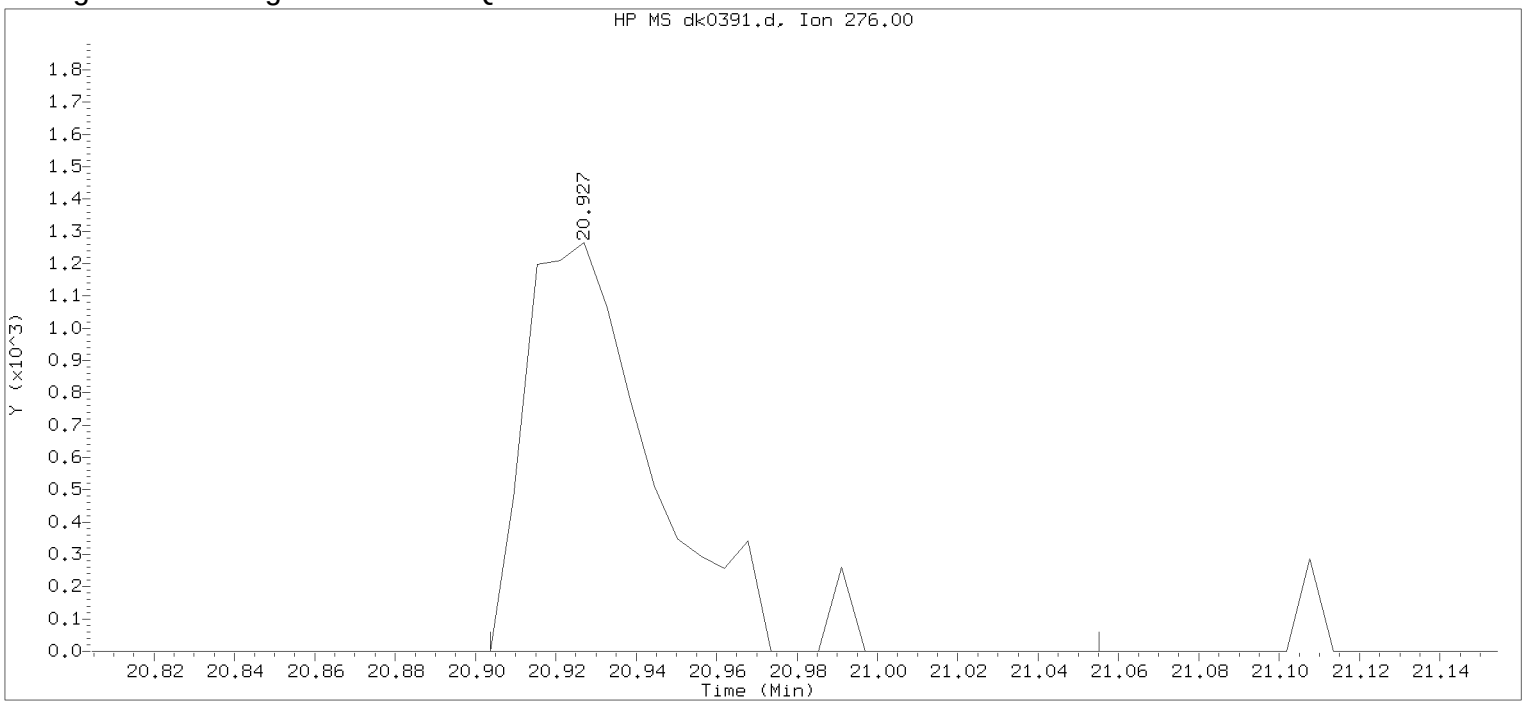
Analyst responsible for change: Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:12.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 10:23 Automation

Sample Name: 2B152 Lab Sample ID: 7266805

Compound Number : 178
Compound Name : Benzo(g,h,i)perylene
Scan Number : 3361
Retention Time (minutes) : 20.927
Quant Ion : 276.00
Area : 2797
On-column Amount (ng/ul) : 0.0353
Integration start scan : 3356 Integration stop scan: 3382
Y at integration start : 0 Y at integration end: 0

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:37.
Target 3.5 esignature user ID: cebe248

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2B152

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7266805

Sample wt/vol: 246 (g/mL) mL Lab File ID: dk0391.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

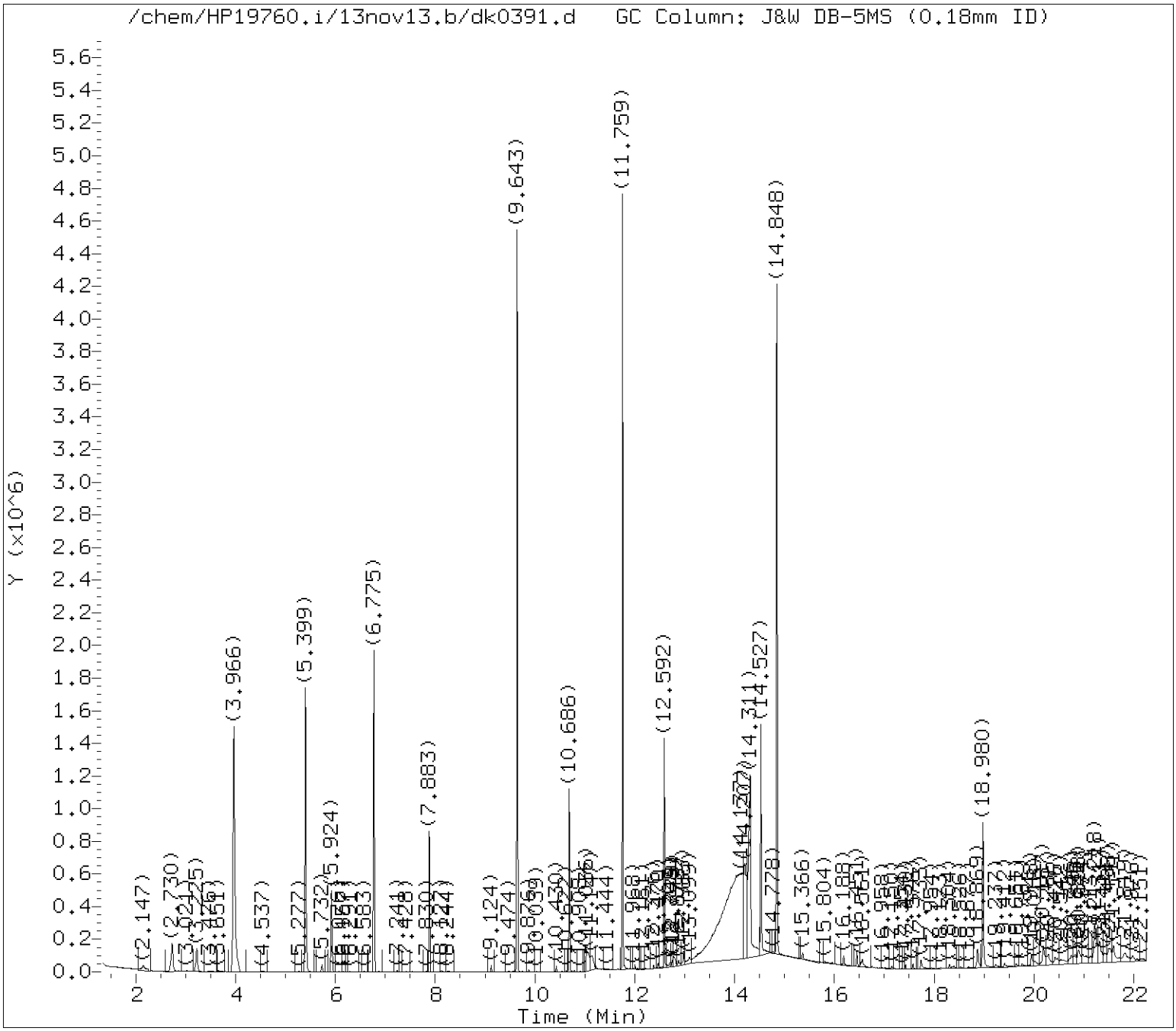
Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 15 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.147	5	J
2.		Unknown	2.730	12	J
3.		Unknown	3.225	9	J
4.		Unknown	11.036	8	J
5.		Unknown	11.147	6	J
6.		Unknown	14.137	170	J
7.		Unknown	14.207	27	J
8.		Unknown	20.187	5	J
9.		Unknown	20.286	5	J
10.		Unknown	20.974	5	J
11.		Unknown	21.218	13	J
12.		Unknown	21.318	7	J
13.		Unknown	21.498	6	J
14.		Unknown	21.591	6	J
15.		Unknown	21.819	5	J
16.					
17.	SVOCTIC	Total SVOC TICs		290	J
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

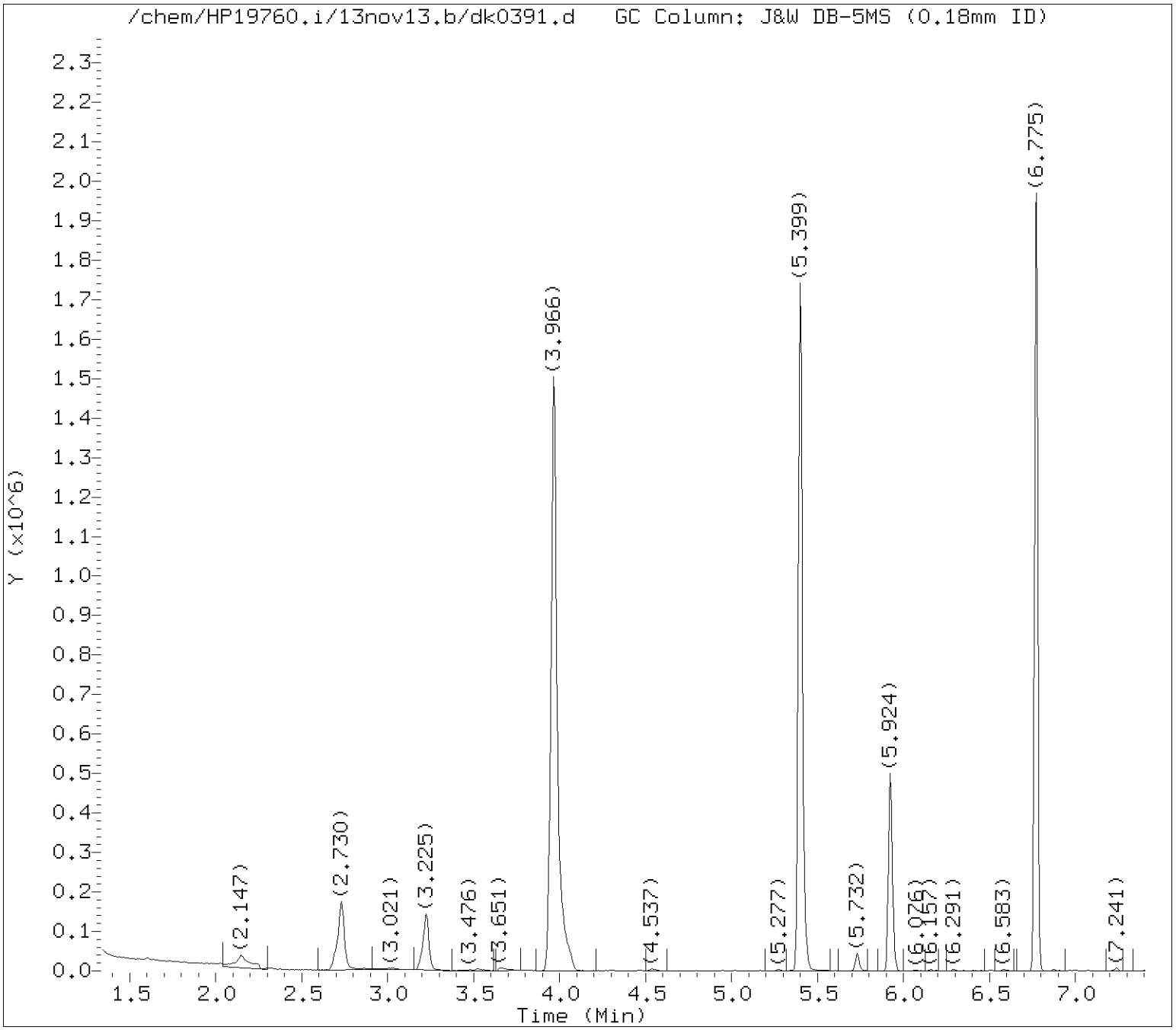
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

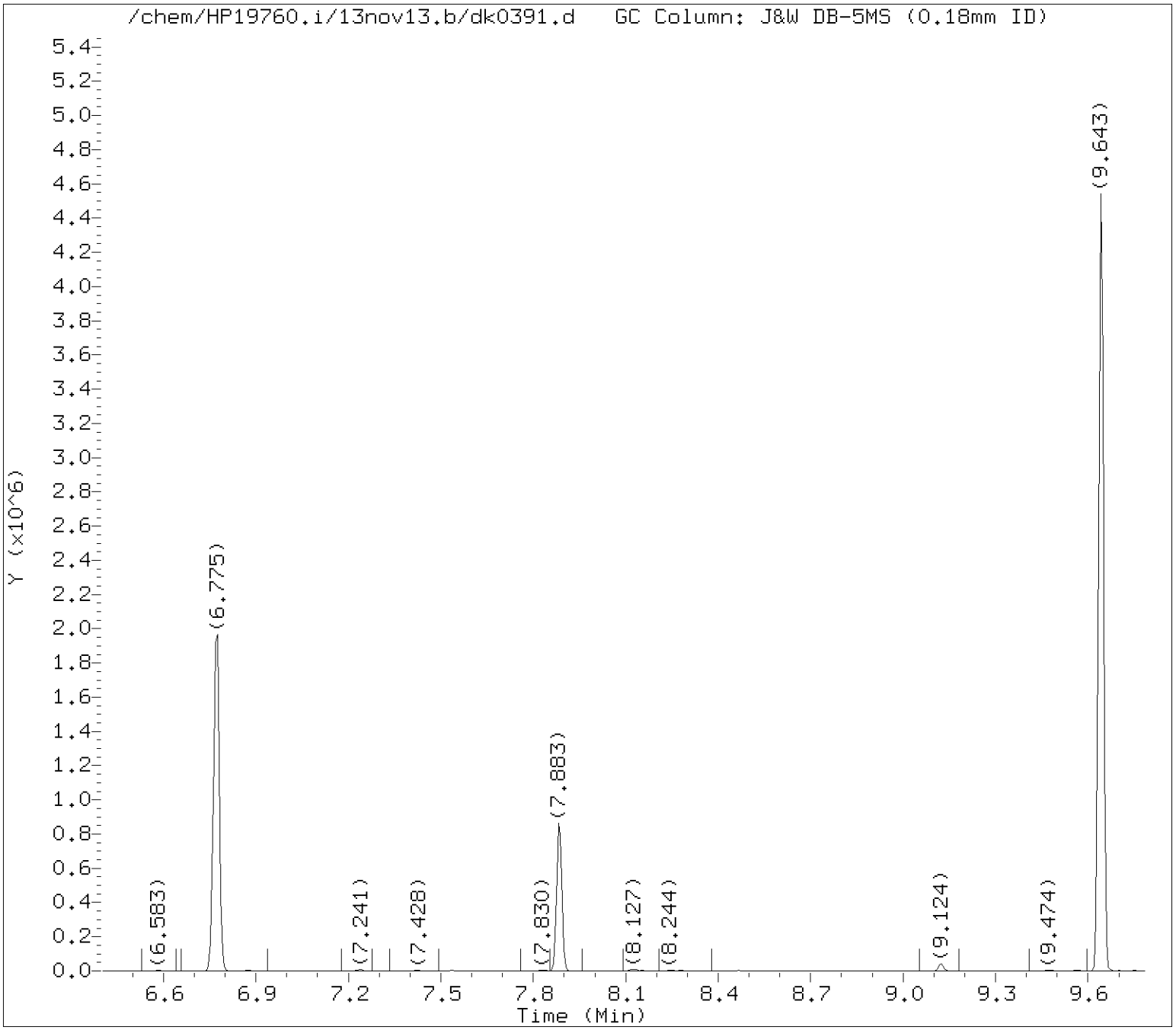
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

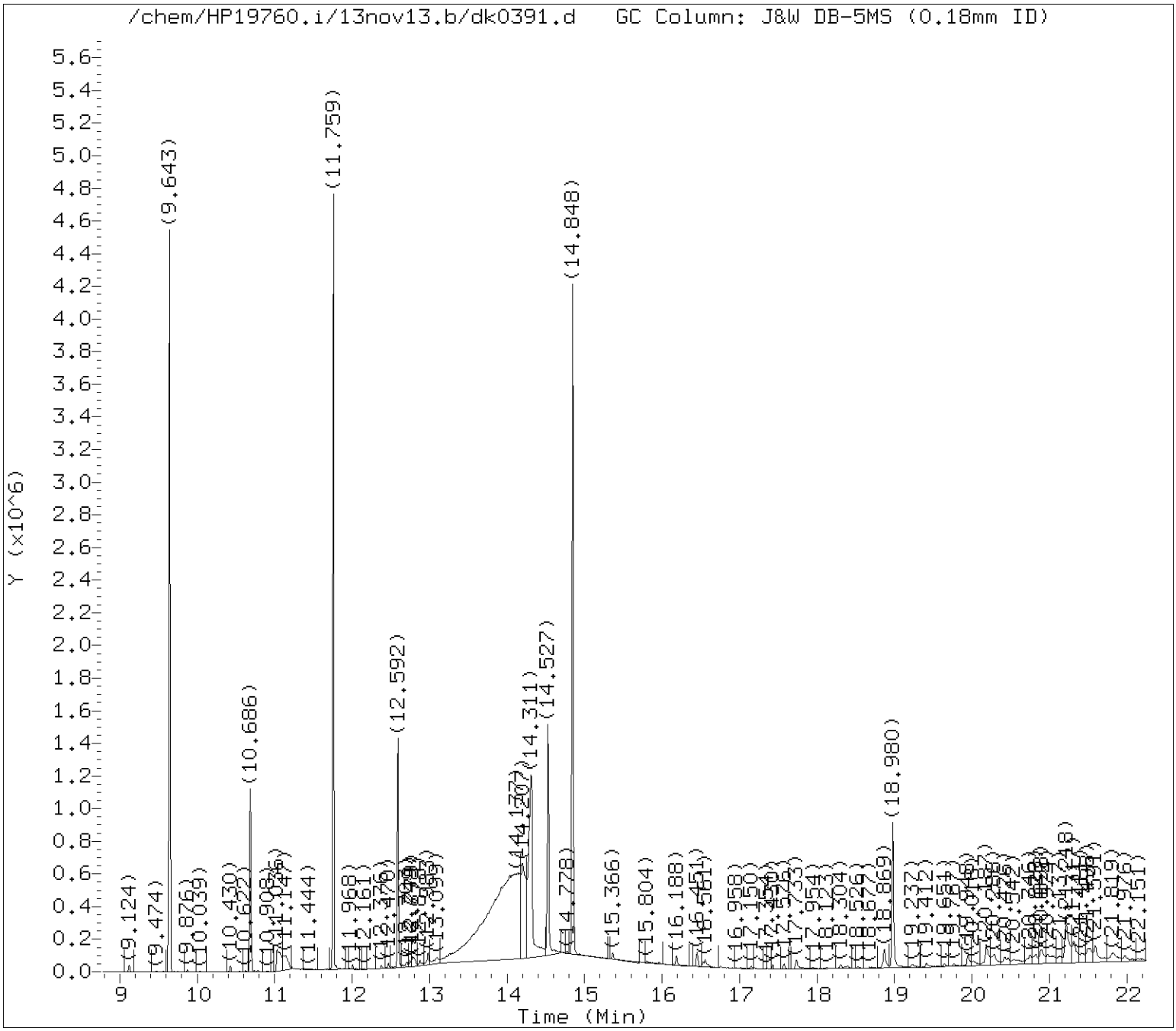
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: Naphthalene-d8 at 7.883 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

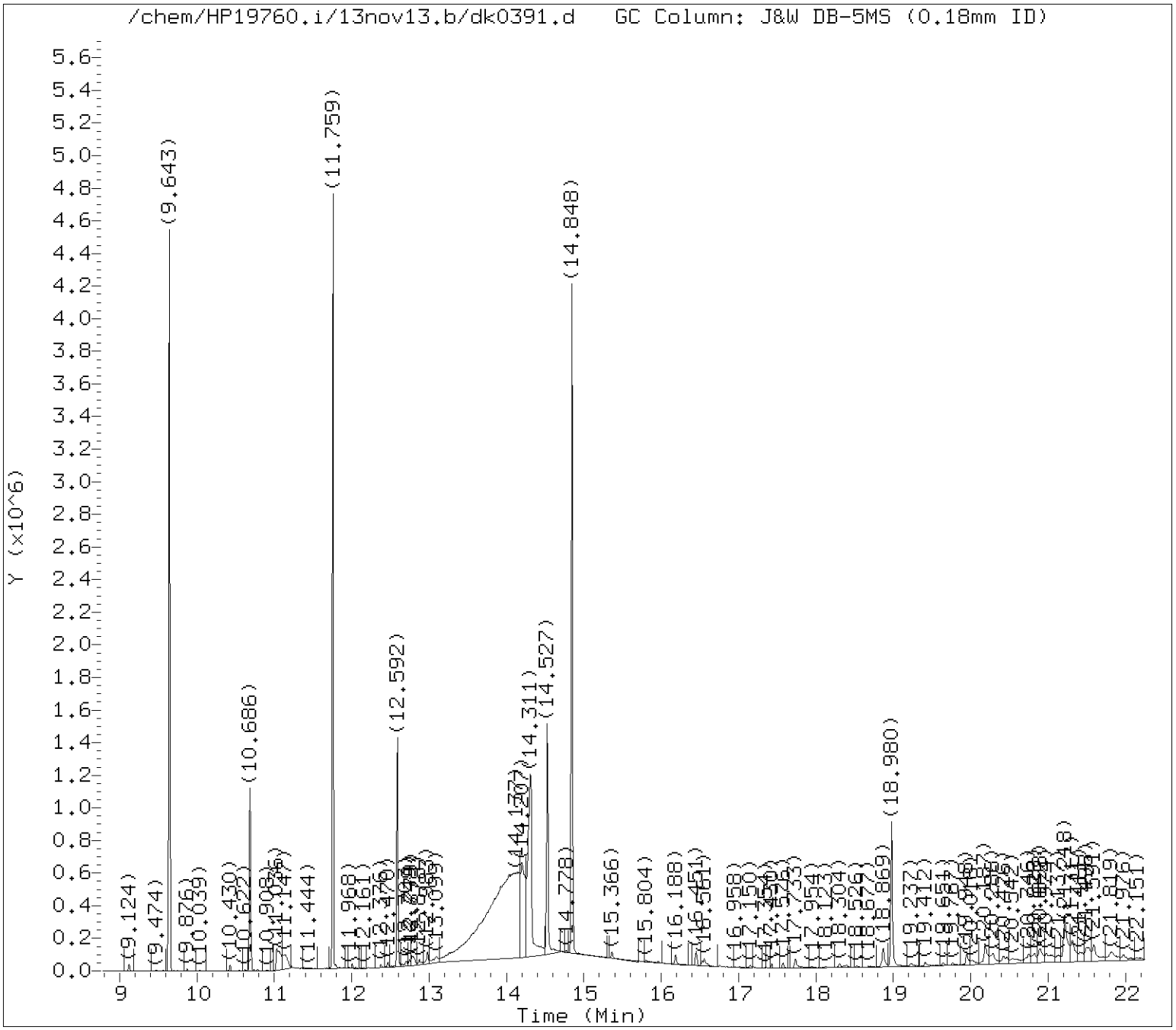
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

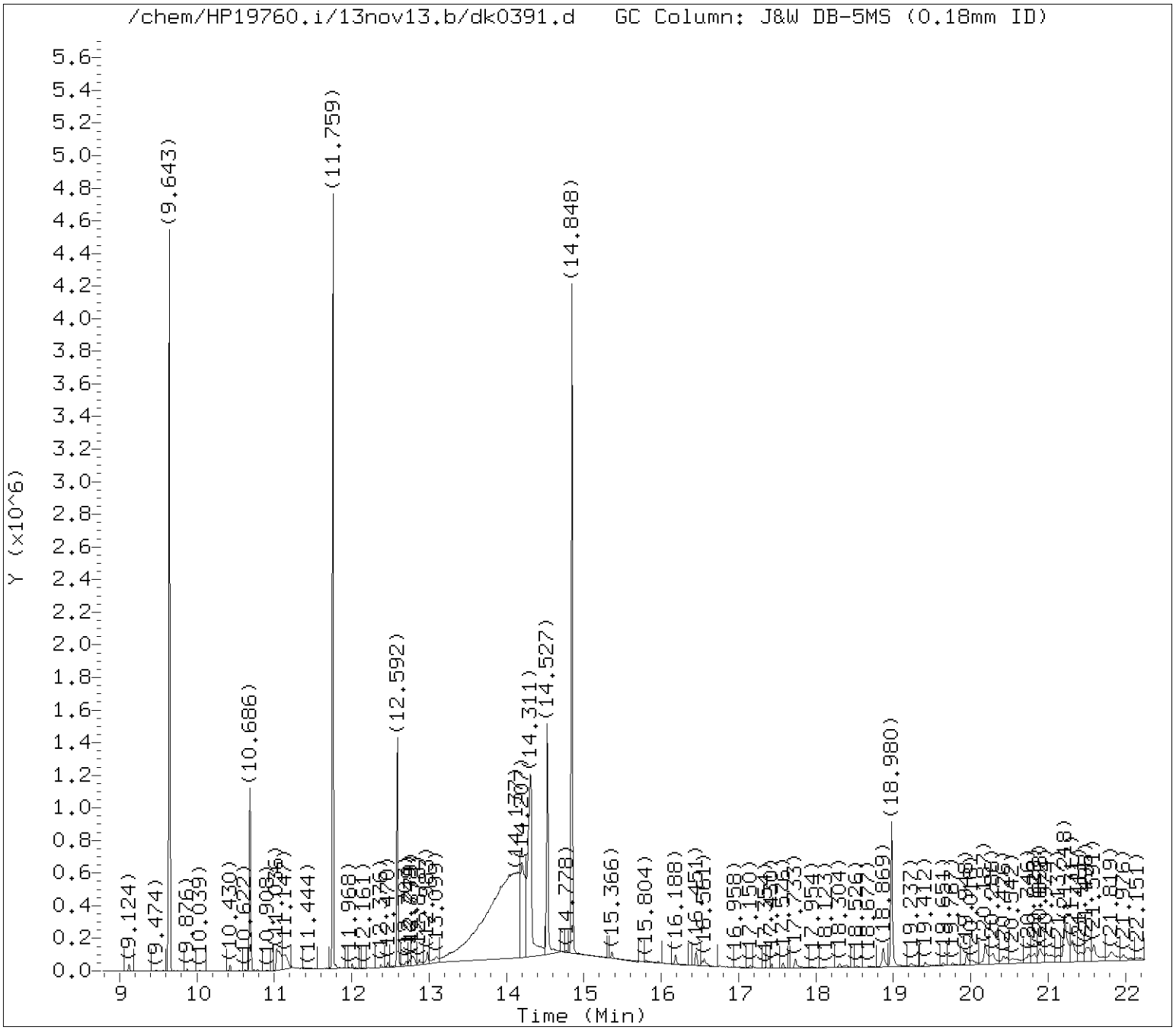
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.560

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

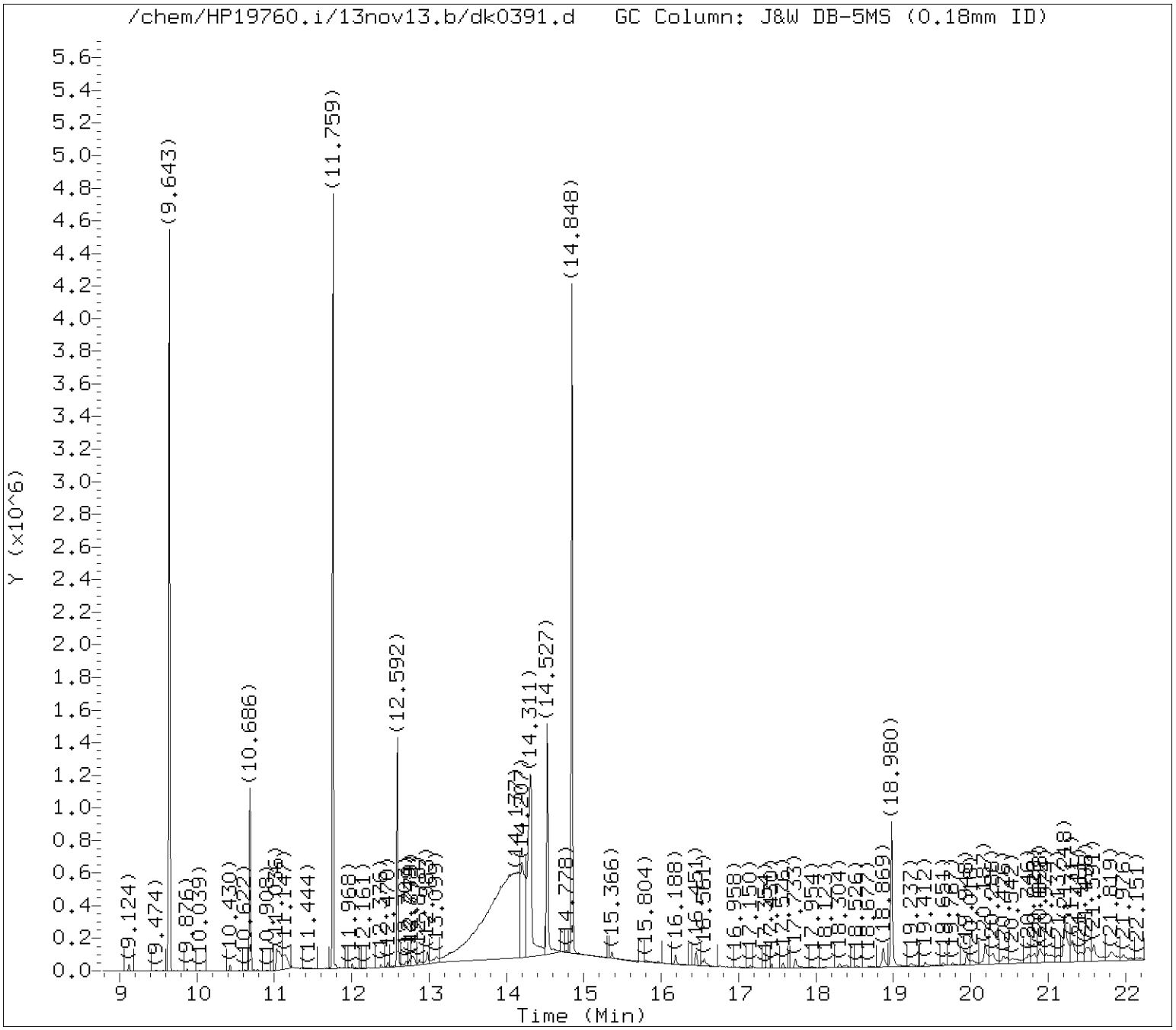
Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.560
Chromatogram End Time (min.): 16.754

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0391.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 09:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:35 ceb05247

Sample Name: 2B152 Lab Sample ID: 7266805

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

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Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0391.d
Lab Smp Id: 7266805 Client Smp ID: 2B152
Inj Date : 13-NOV-2013 09:51
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : 2B152;7266805;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;246;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 25, 15 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 21:24 ceb05247 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	246.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.924	805897	5.000
* 92 Acenaphthene-d10	10.686	1339243	5.000
* 145 Pyrene-d10	14.527	1916621	5.000
* 172 Perylene-d12	18.980	1479893	5.000

CONCENTRATIONS					QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #

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Target 3.5 esignature user ID: ceb05247

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
2,2-Dimethoxybutane					CAS #: 3453-99-4		
2.147	198237	1.22991426	4.99965	59	NIST98.l	35304	19
3-Butyn-2-ol, 2-methyl-					CAS #: 115-19-5		
2.730	497628	3.08741476	12.55046	38	NIST98.l	114184	19
1-Butene, 3,3-dimethyl-					CAS #: 558-37-2		
3.225	358374	2.22344604	9.03839	72	NIST98.l	114146	19
Benzene, 1-bromo-4-chloro-					CAS #: 106-39-8		
11.036	515063	1.92296360	7.81692	9	NIST98.l	81016	92
Benzene, 1-bromo-4-chloro-					CAS #: 106-39-8		
11.147	430529	1.60735804	6.53397	9	NIST98.l	125839	92
Cyclic octaatomic sulfur					CAS #: 10544-50-0		
14.137	15728652	41.0322338	166.79769	90	NIST98.l	113565	145
Naphtho[2,3-b]thiophene, 4,9-dimethyl-					CAS #: 16587-34-1		
14.207	2556712	6.66984058	27.11317	72	NIST98.l	86019	145
Cholesterol					CAS #: 57-88-5		
20.187	381130	1.28769585	5.23453	58	NIST98.l	110020	172
3-Hexadecene, (Z)-					CAS #: 34303-81-6		
20.286	343852	1.16174453	4.72253	51	NIST98.l	13212	172
Hexadecane, 2,6,10,14-tetramethyl-					CAS #: 638-36-8		
20.974	337773	1.14120741	4.63905	60	NIST98.l	112575	172
.gamma.-Sitosterol					CAS #: 83-47-6		
21.218	952311	3.21749976	13.07926	95	NIST98.l	5248	172
6,7,8,9-Tetrahydrodibenzo[b,d]furan, 2-a					CAS #: 1000196-34-3		
21.317	536107	1.81130414	7.36302	53	NIST98.l	87291	172
Benzene, 1,3,5-tri-tert-butyl-					CAS #: 1460-02-2		
21.498	430787	1.45546733	5.91653	27	NIST98.l	127166	172
6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8					CAS #: 86917-79-5		
21.591	456586	1.54263028	6.27085	45	NIST98.l	41513	172
1-Hydroxypyrene					CAS #: 5315-79-7		
21.819	373548	1.26207739	5.13039	53	NIST98.l	87249	172

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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

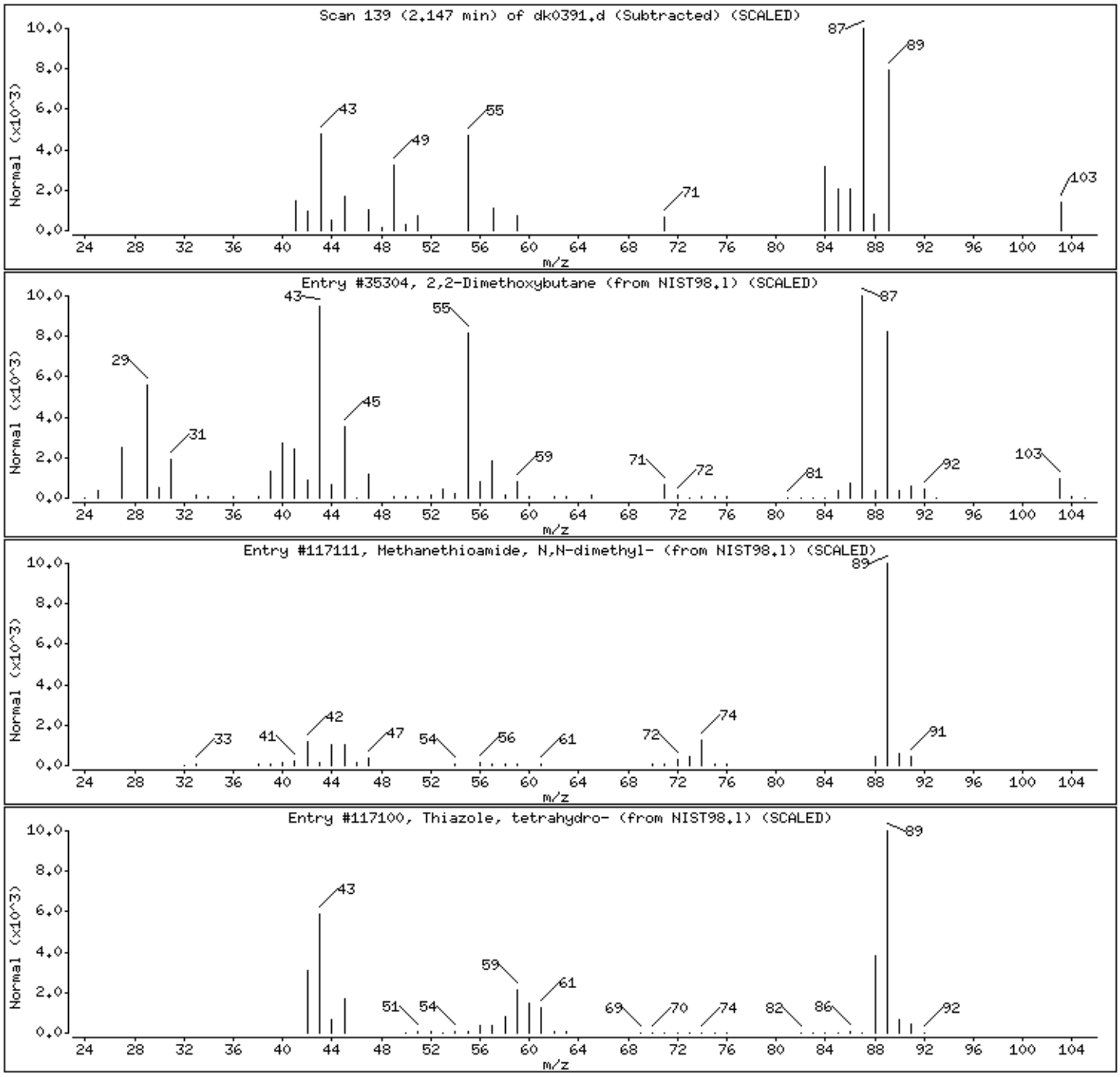
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2,2-Dimethoxybutane	3453-99-4	NIST98.1	35304	59	C6H14O2	118
Methanethioamide, N,N-dimethyl-	758-16-7	NIST98.1	117111	25	C3H7NS	89
Thiazole, tetrahydro-	504-78-9	NIST98.1	117100	25	C3H7NS	89



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

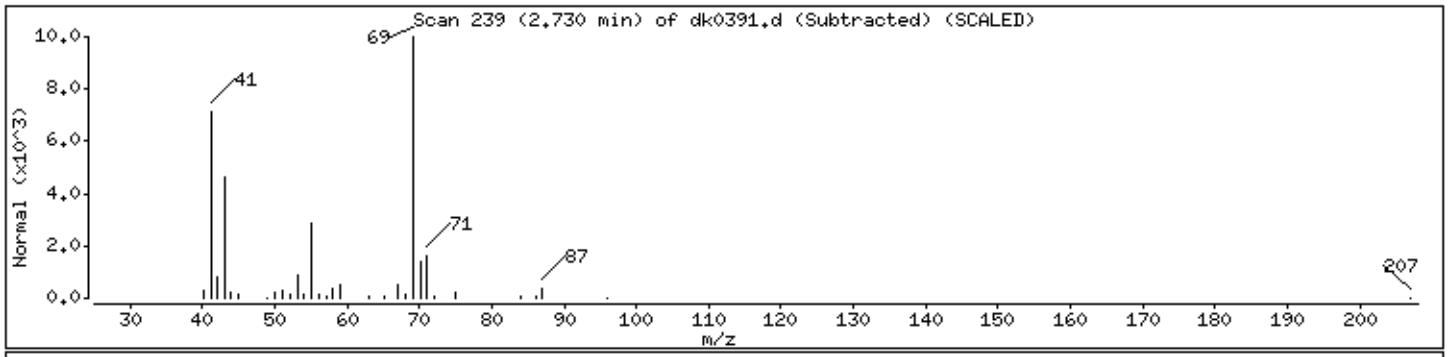
Client ID: 2B152 Instrument: HP19760.i

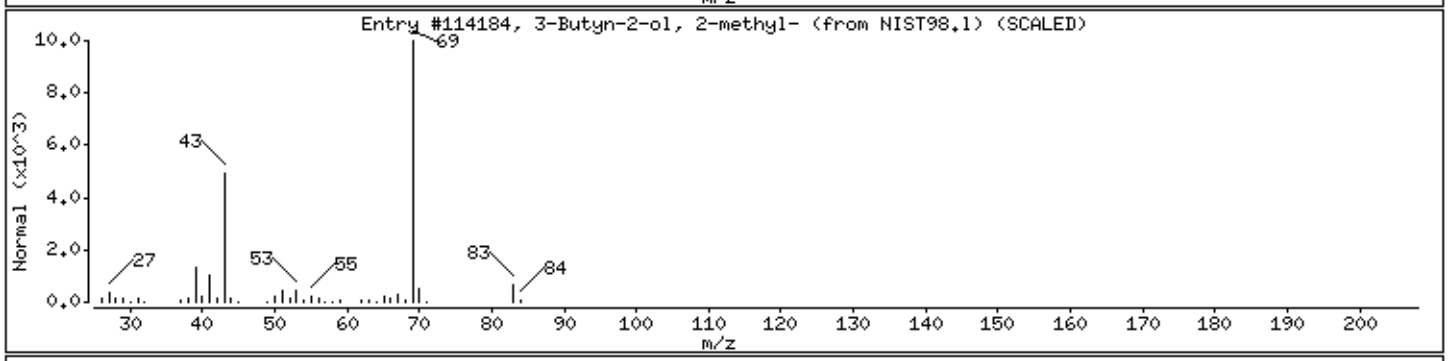
Sample Info: 2B152;7266805;1;0;SAMPLE;;;

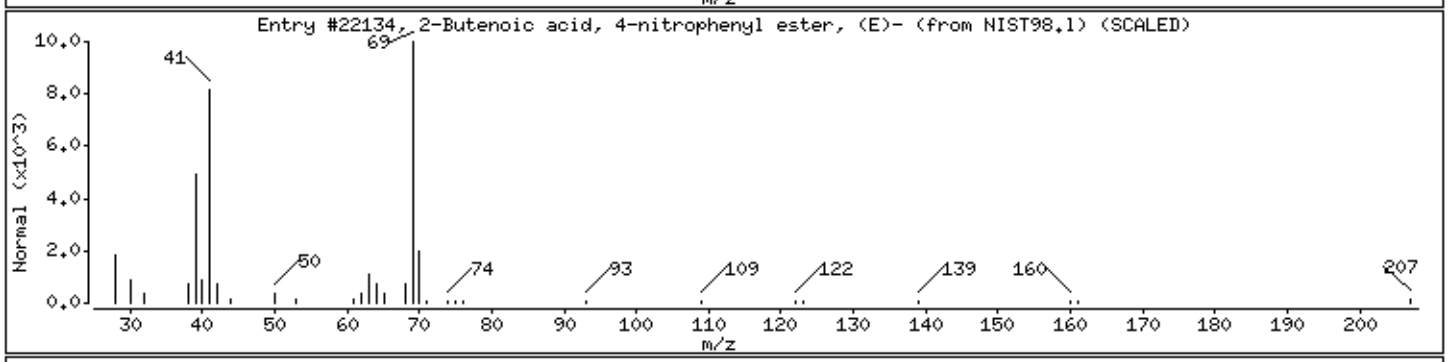
Volume Injected (uL): 0.5 Operator: jmg00346

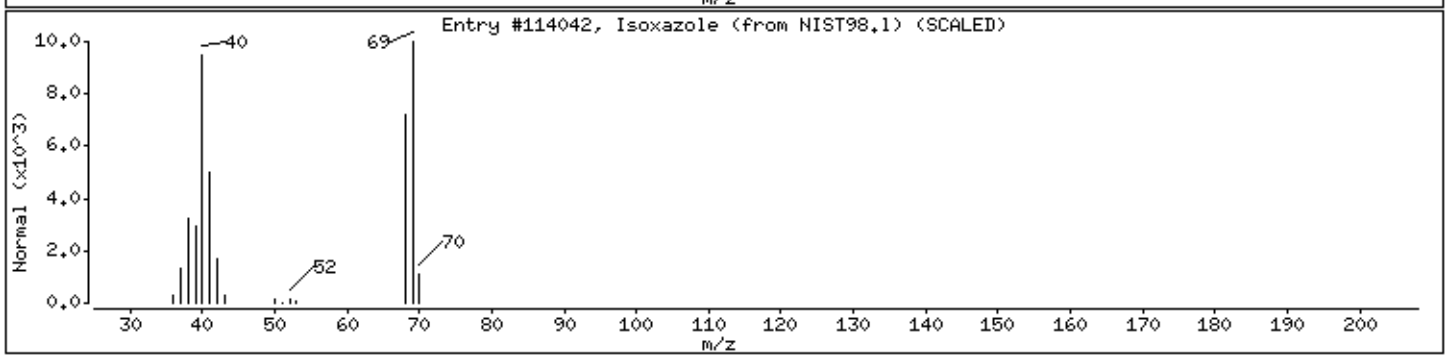
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Butyn-2-ol, 2-methyl-	115-19-5	NIST98.1	114184	38	C5H8O	84
2-Butenoic acid, 4-nitrophenyl ester, (E	14617-88-0	NIST98.1	22134	33	C10H9NO4	207
Isoxazole	288-14-2	NIST98.1	114042	9	C3H3NO	69









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

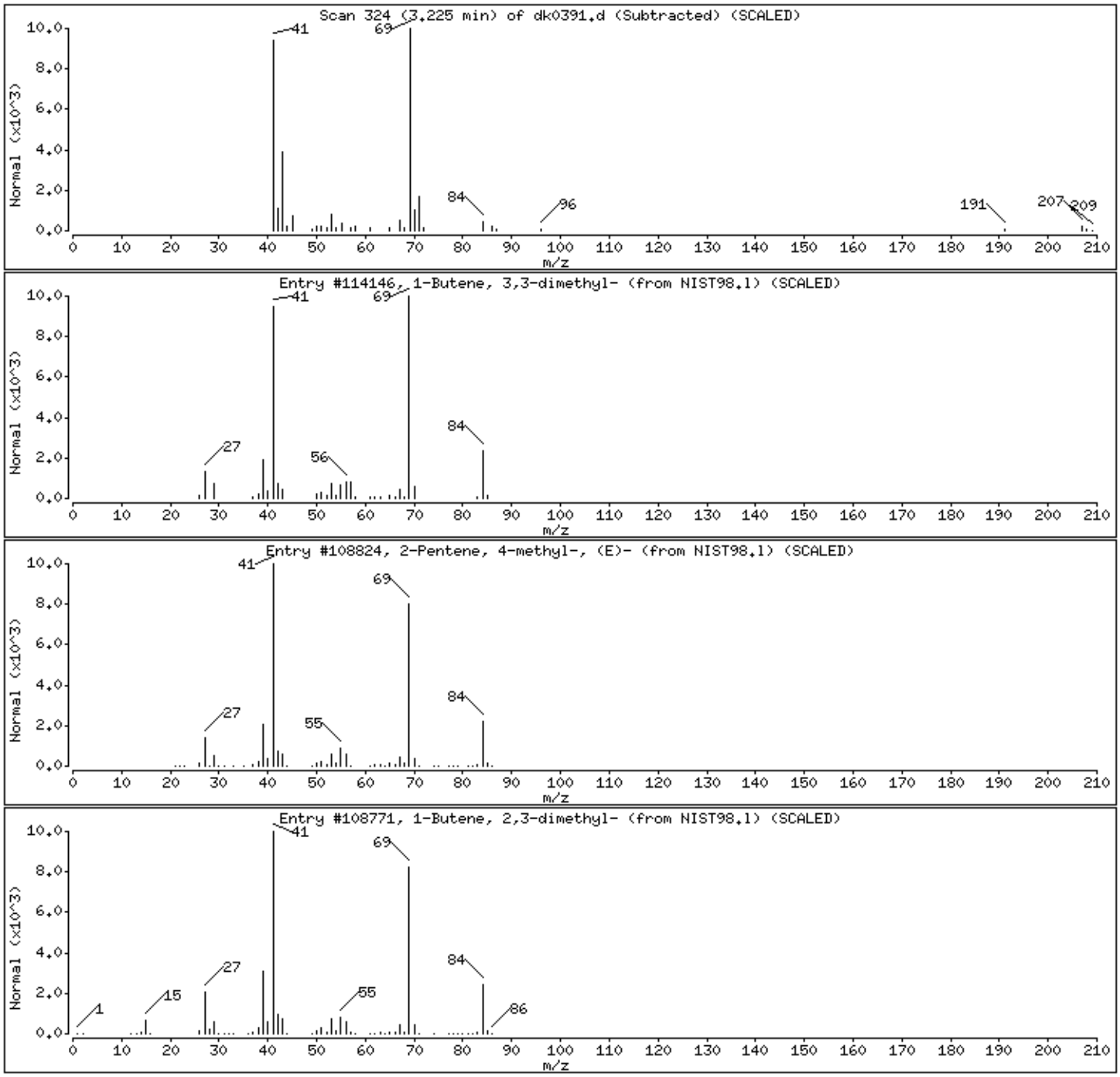
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Butene, 3,3-dimethyl-	558-37-2	NIST98.l	114146	72	C6H12	84
2-Pentene, 4-methyl-, (E)-	674-76-0	NIST98.l	108824	59	C6H12	84
1-Butene, 2,3-dimethyl-	563-78-0	NIST98.l	108771	50	C6H12	84



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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

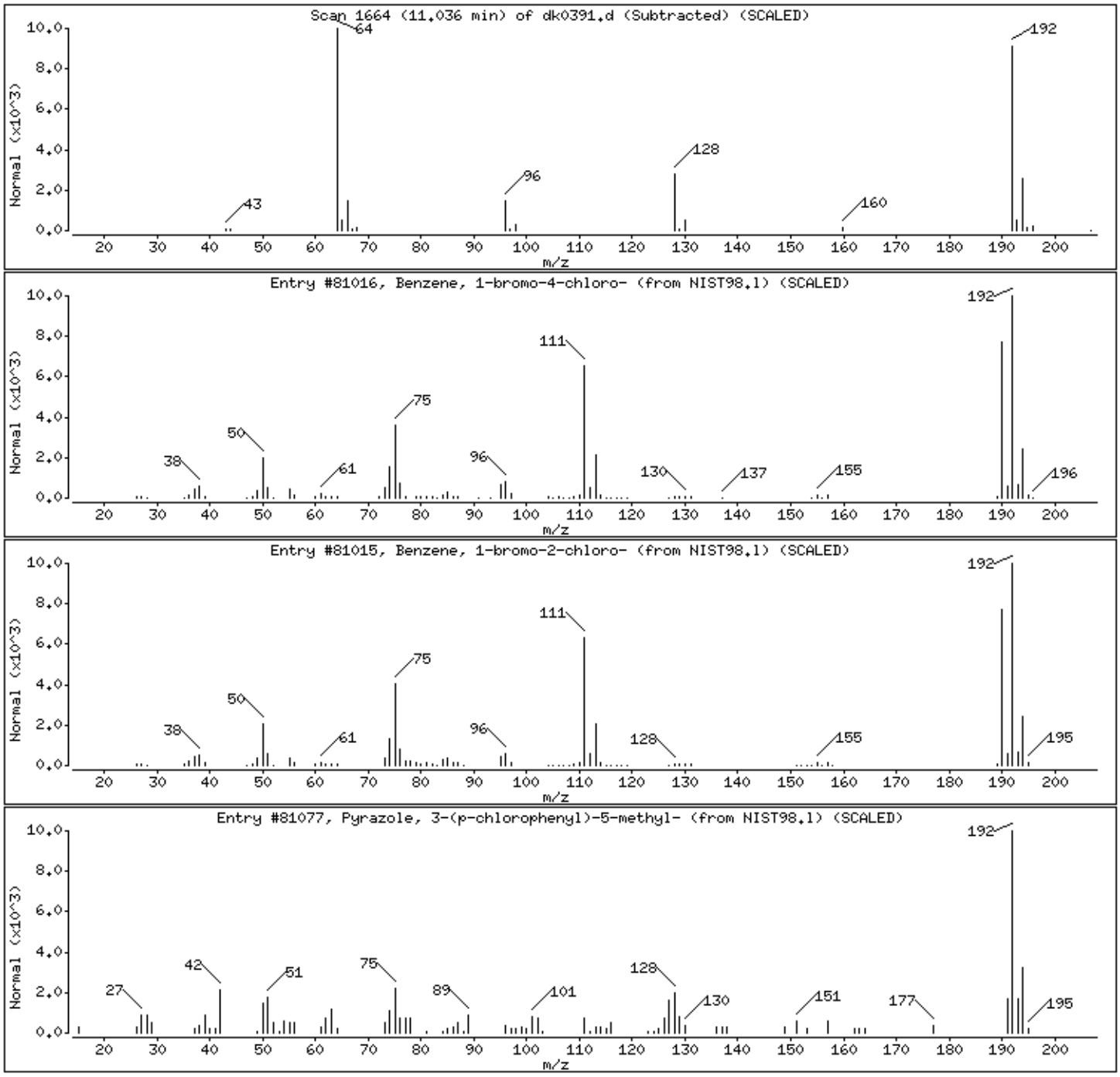
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-bromo-4-chloro-	106-39-8	NIST98.1	81016	9	C6H4BrCl	190
Benzene, 1-bromo-2-chloro-	694-80-4	NIST98.1	81015	9	C6H4BrCl	190
Pyrazole, 3-(p-chlorophenyl)-5-methyl-	17629-27-5	NIST98.1	81077	9	C10H9ClN2	192



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

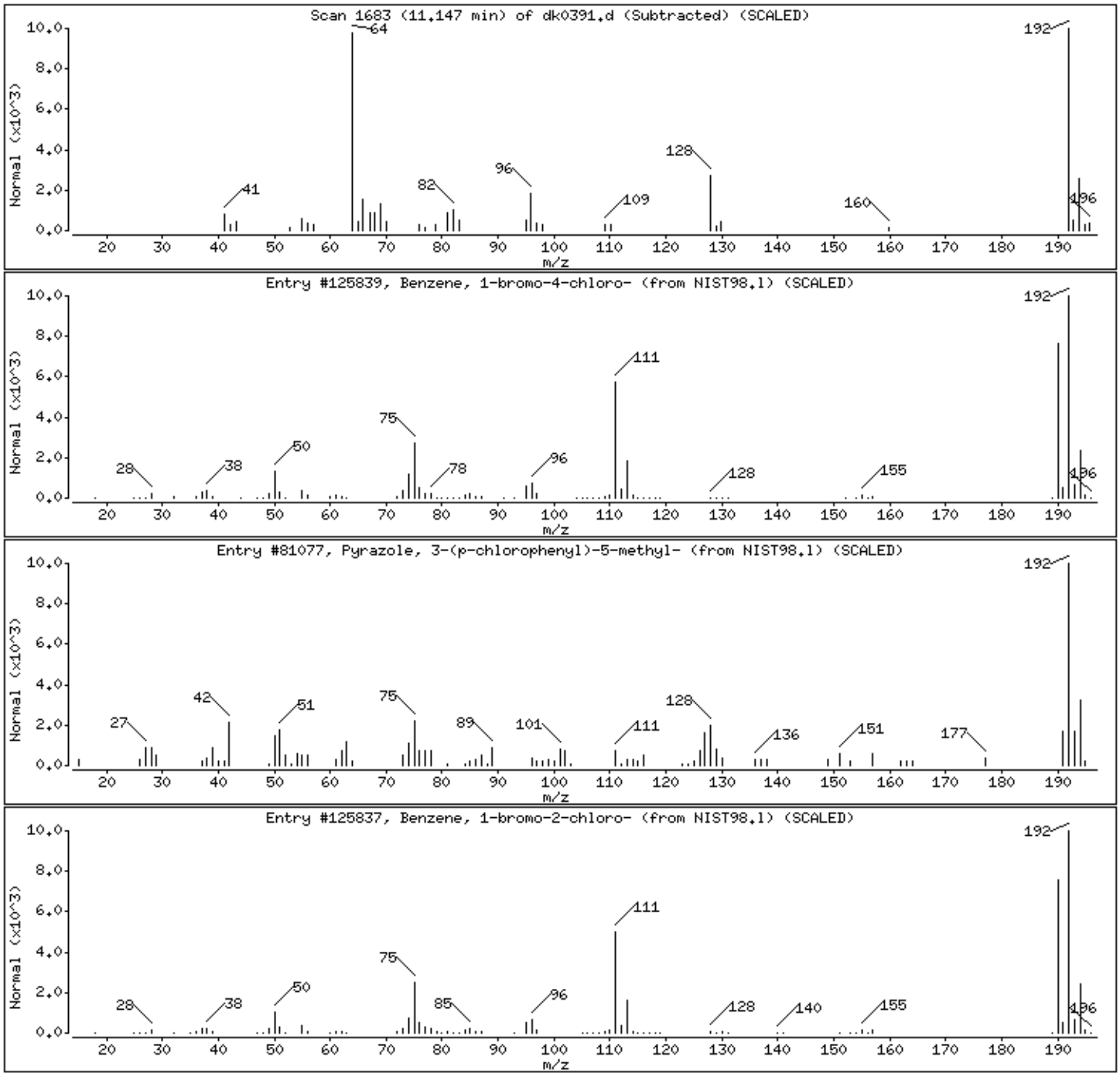
Client ID: 2B152 Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1-bromo-4-chloro-	106-39-8	NIST98.l	125839	9	C6H4BrCl	190
Pyrazole, 3-(p-chlorophenyl)-5-methyl-	17629-27-5	NIST98.l	81077	9	C10H9ClN2	192
Benzene, 1-bromo-2-chloro-	694-80-4	NIST98.l	125837	9	C6H4BrCl	190



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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

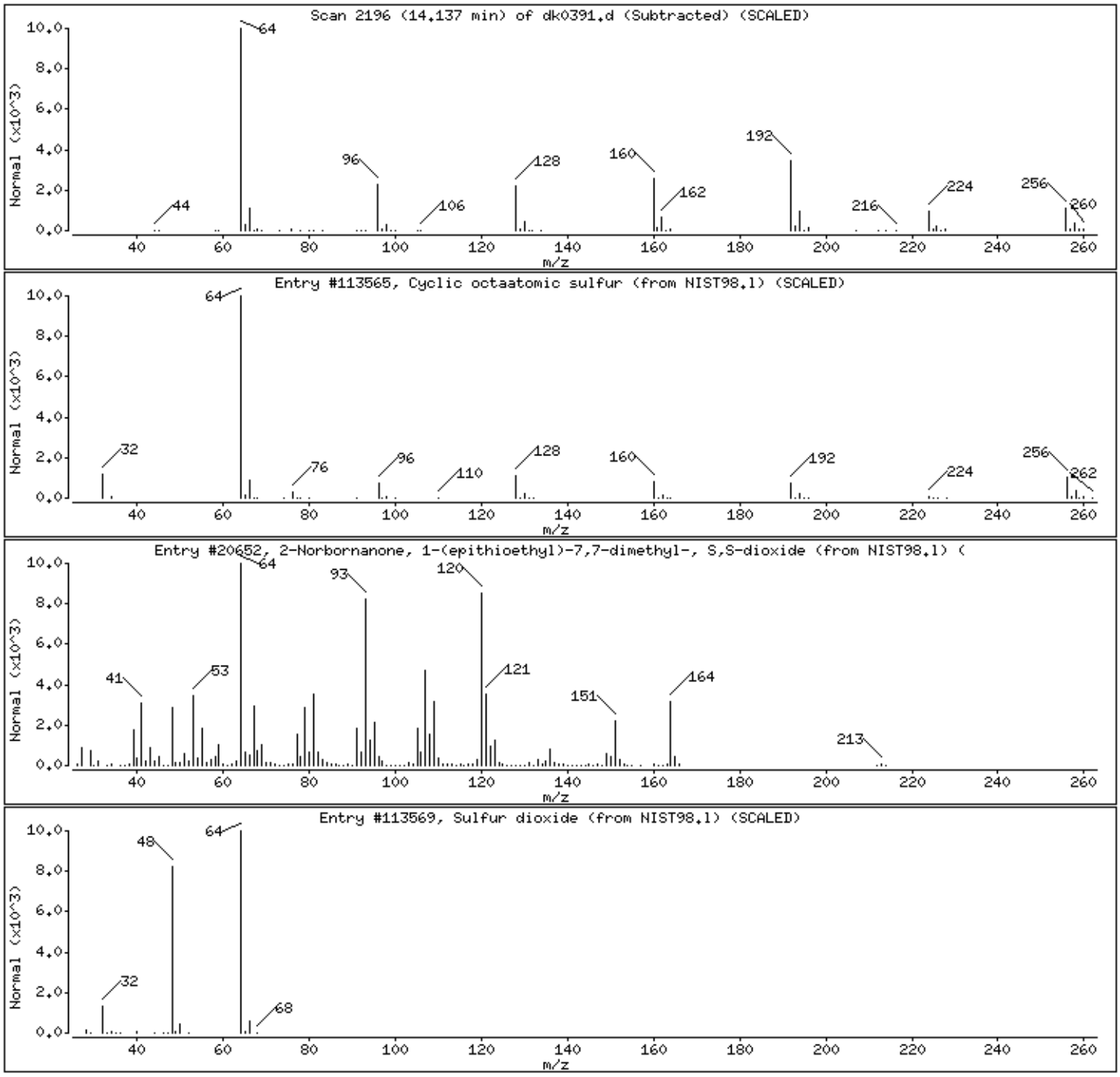
Client ID: 2B152 Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclic octaatomic sulfur	10544-50-0	NIST98.1	113565	90	S8	256
2-Norbornanone, 1-(epithioethyl)-7,7-dim	1782-93-0	NIST98.1	20652	36	C11H16O3S	228
Sulfur dioxide	7446-09-5	NIST98.1	113569	5	O2S	64



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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

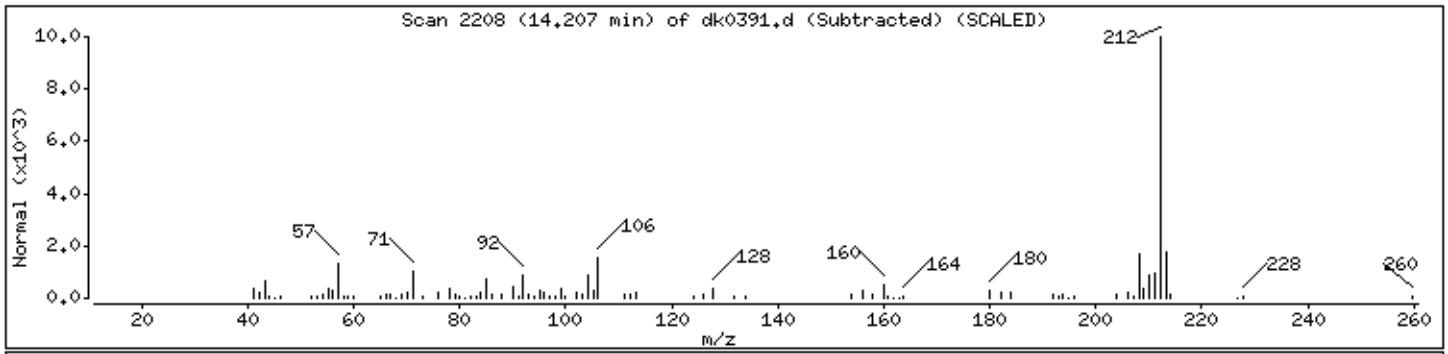
Client ID: 2B152 Instrument: HP19760.i

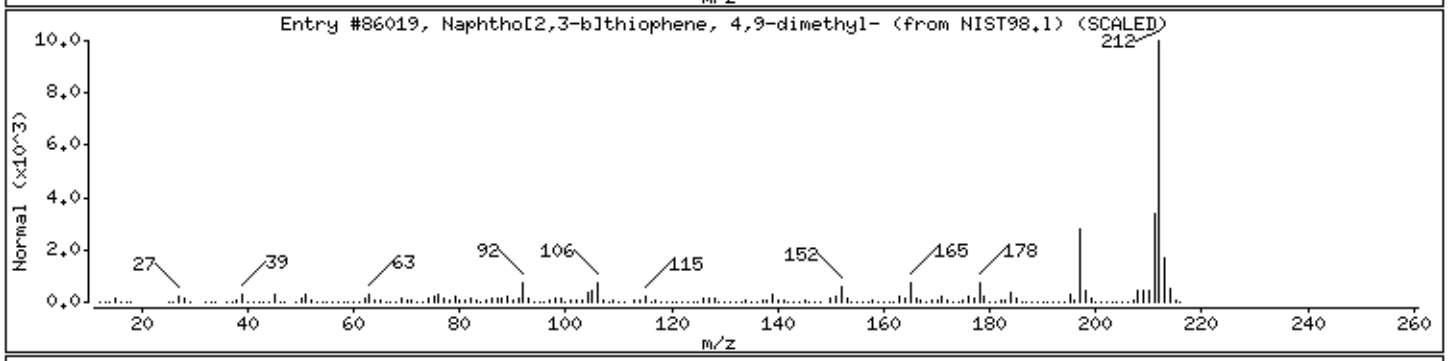
Sample Info: 2B152;7266805;1;0;SAMPLE;;;

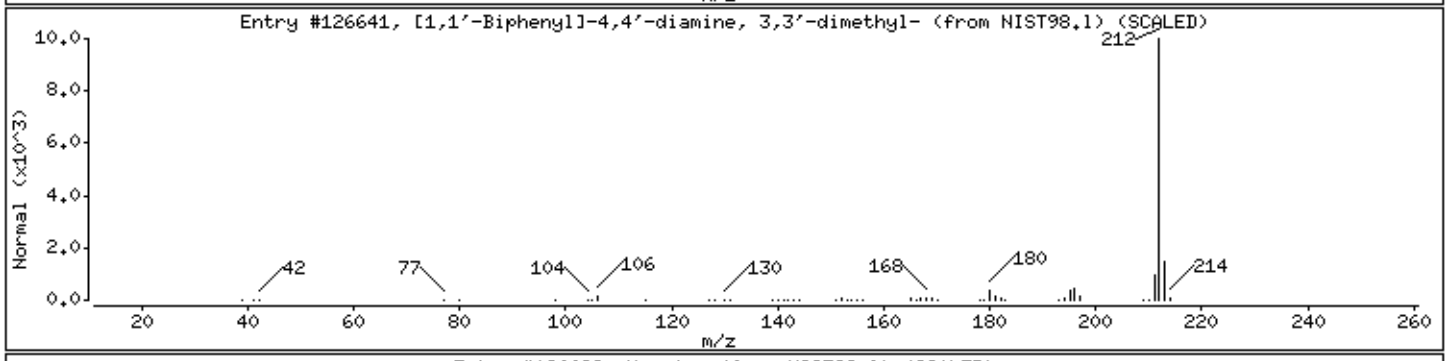
Volume Injected (uL): 0.5 Operator: jmg00346

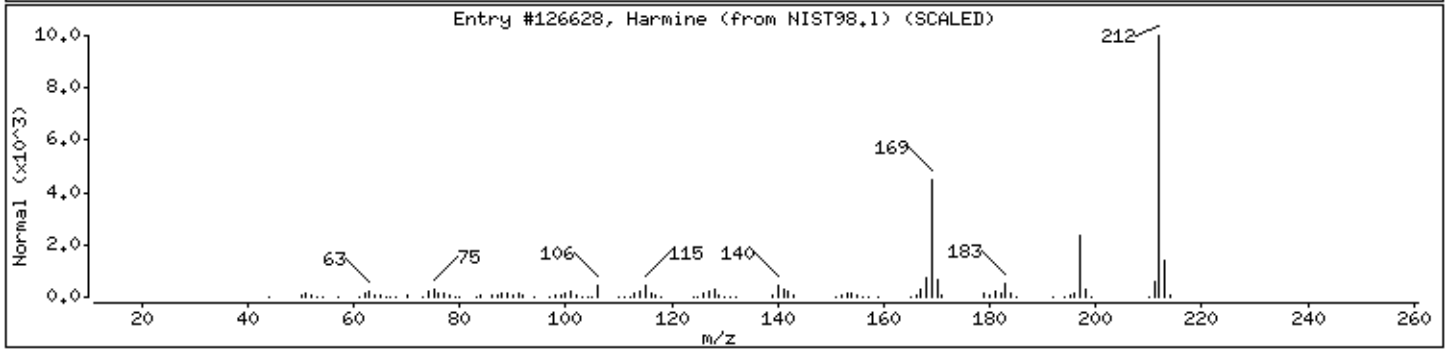
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Naphtho[2,3-b]thiophene, 4,9-dimethyl-	16587-34-1	NIST98.1	86019	72	C14H12S	212
[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimet	119-93-7	NIST98.1	126641	64	C14H16N2	212
Harmine	442-51-3	NIST98.1	126628	64	C13H12N2O	212









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

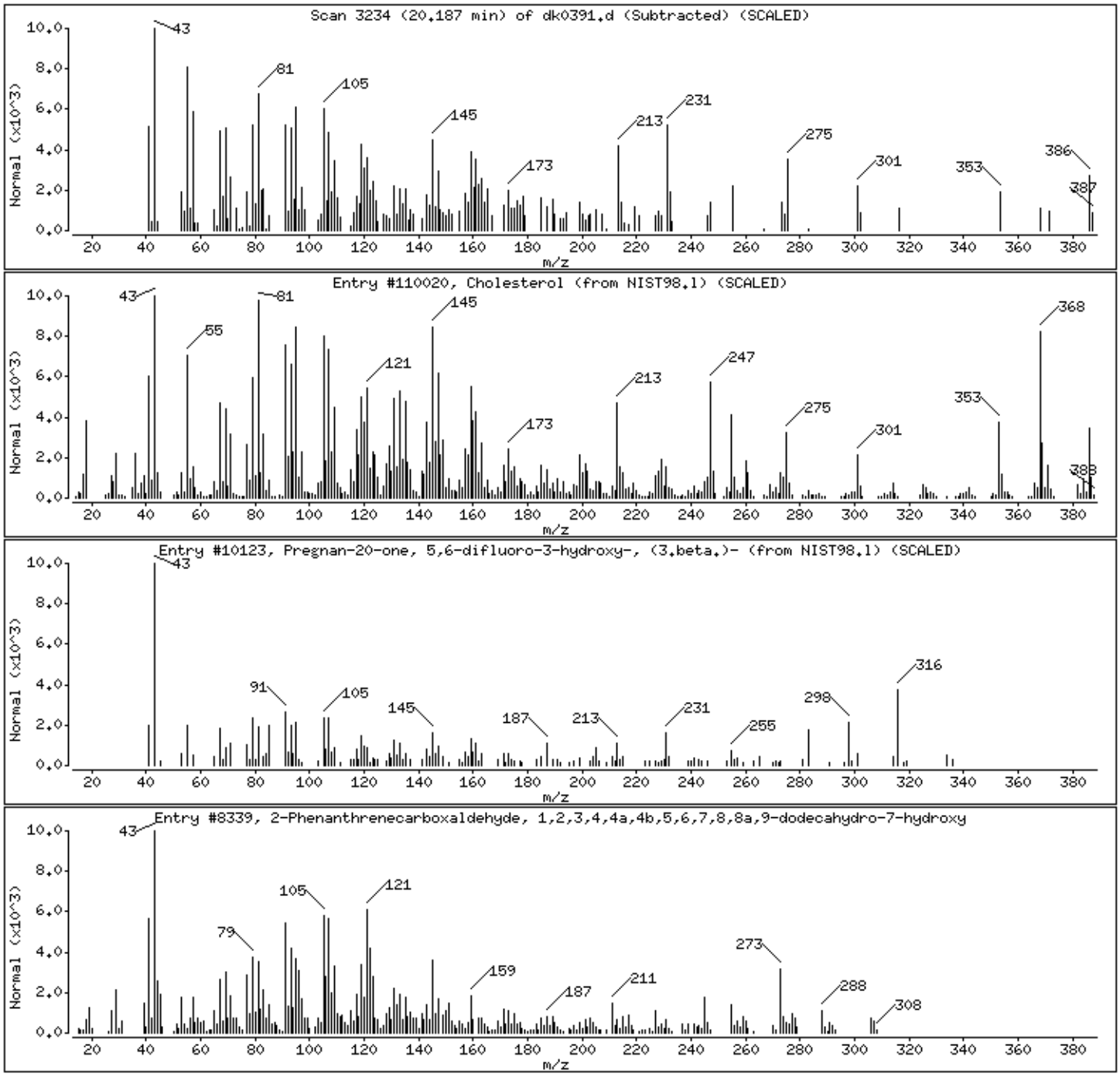
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cholesterol	57-88-5	NIST98.1	110020	58	C27H46O	386
Pregnan-20-one, 5,6-difluoro-3-hydroxy-,	56193-66-9	NIST98.1	10123	42	C21H32F2O2	354
2-Phenanthrenecarboxaldehyde, 1,2,3,4,4a	72088-19-8	NIST98.1	8339	30	C19H30O3	306



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

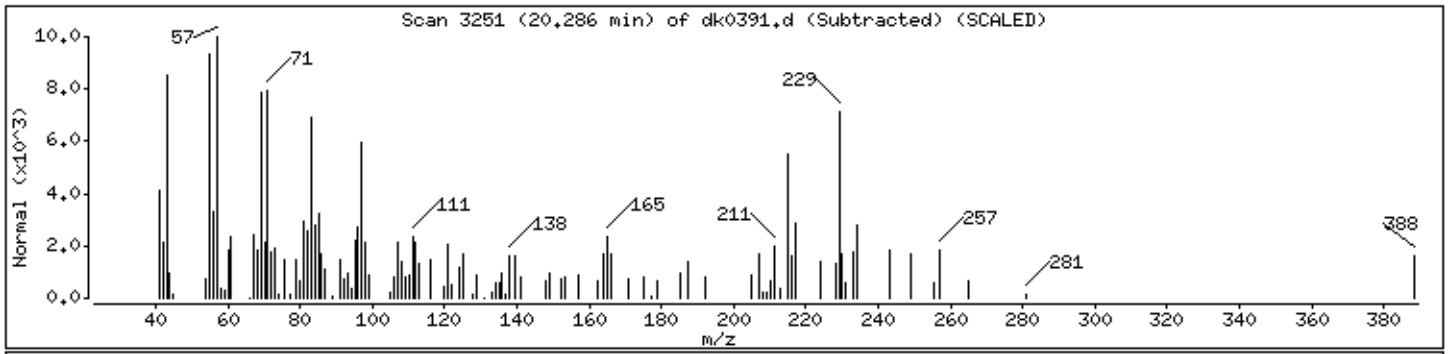
Volume Injected (uL): 0.5

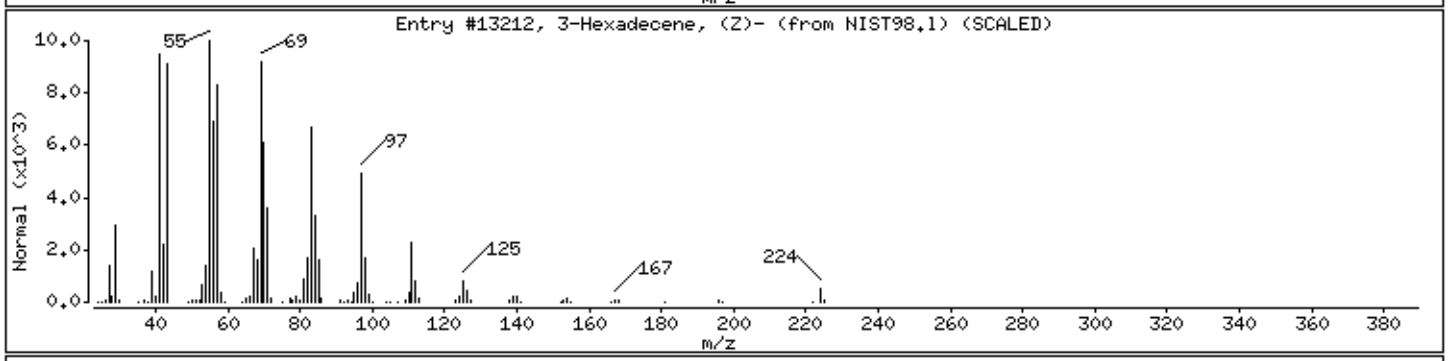
Operator: jmg00346

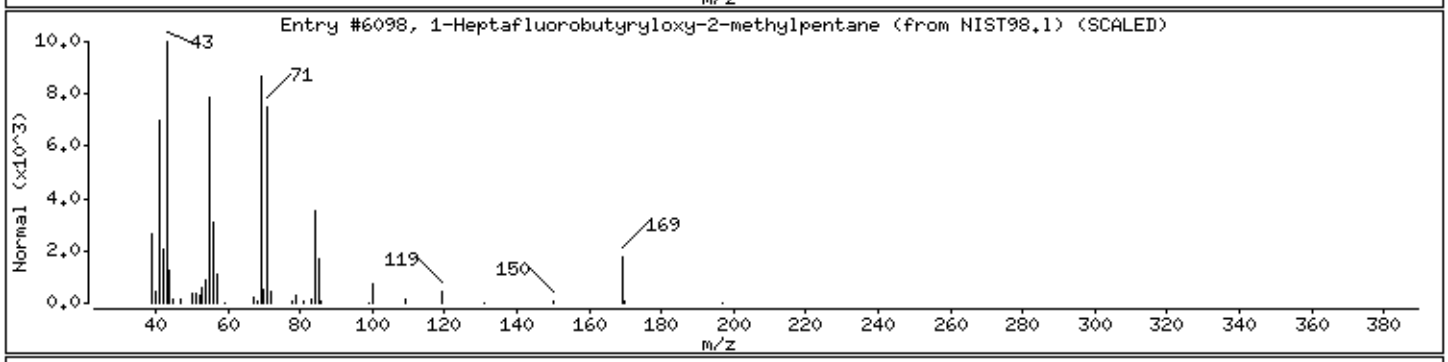
Column phase: J&W DB-5MS

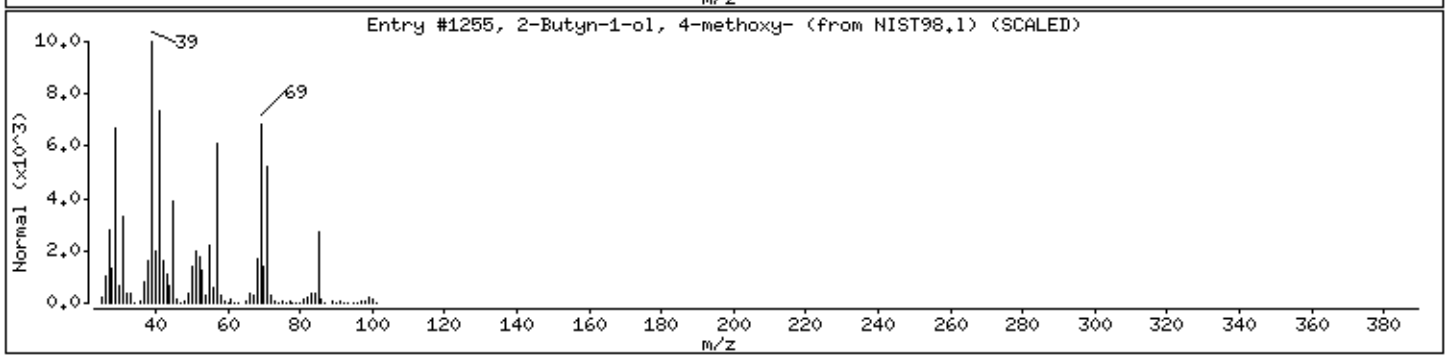
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
3-Hexadecene, (Z)-	34303-81-6	NIST98.1	13212	51	C16H32	224
1-Heptafluorobutyryloxy-2-methylpentane	1000215-95-7	NIST98.1	6098	35	C10H13F7O2	298
2-Butyn-1-ol, 4-methoxy-	18857-03-9	NIST98.1	1255	35	C5H8O2	100









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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

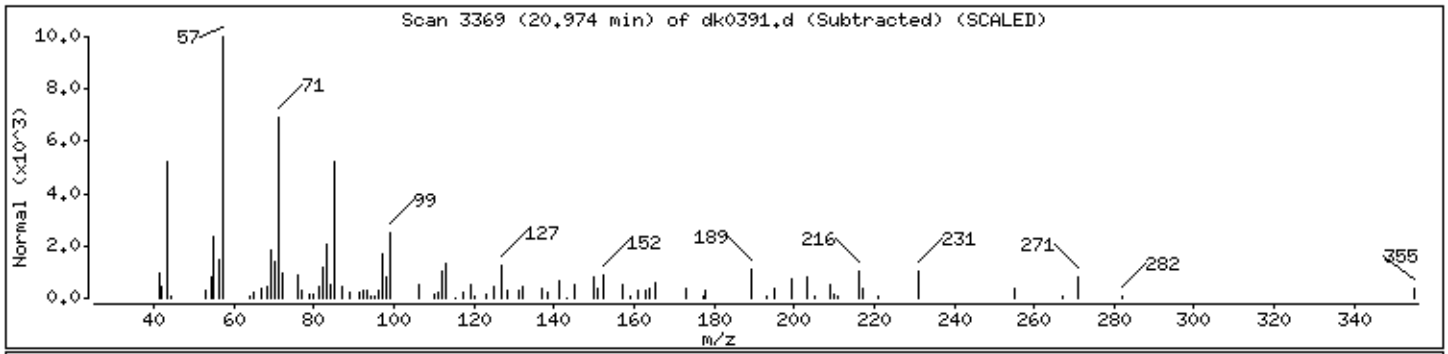
Volume Injected (uL): 0.5

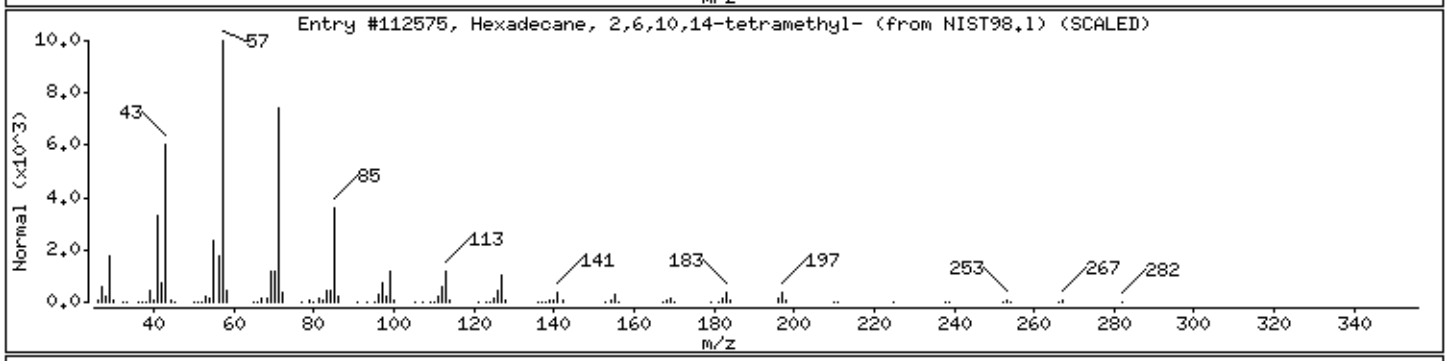
Operator: jmg00346

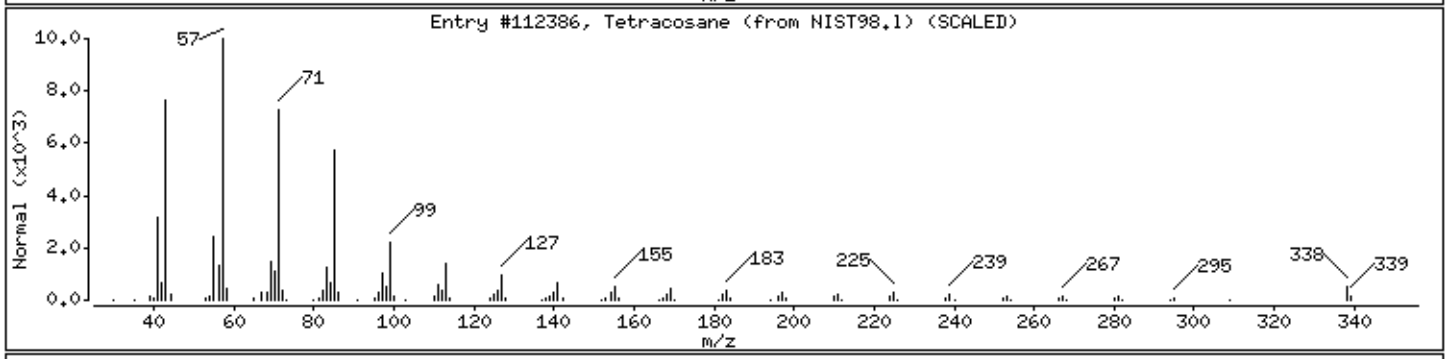
Column phase: J&W DB-5MS

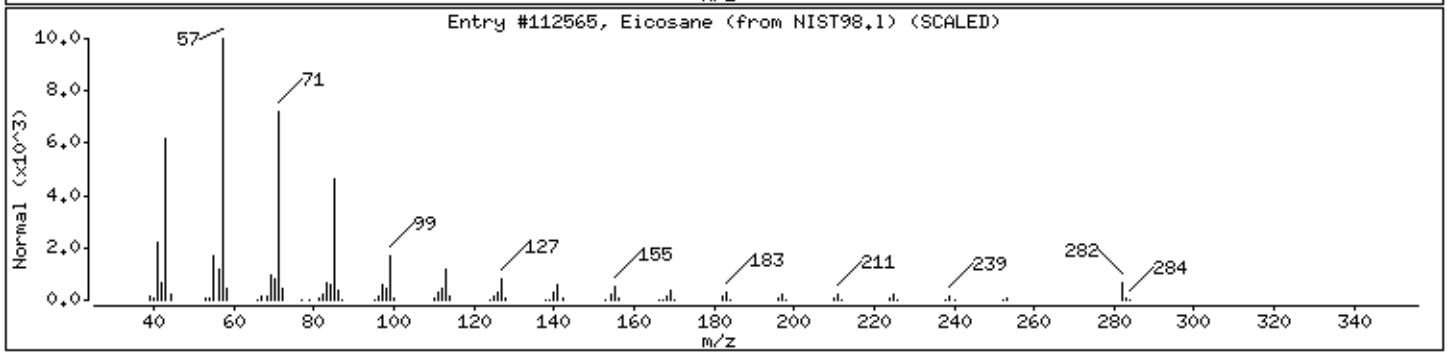
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Hexadecane, 2,6,10,14-tetramethyl-	638-36-8	NIST98.1	112575	60	C20H42	282
Tetracosane	646-31-1	NIST98.1	112386	59	C24H50	338
Eicosane	112-95-8	NIST98.1	112565	53	C20H42	282









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

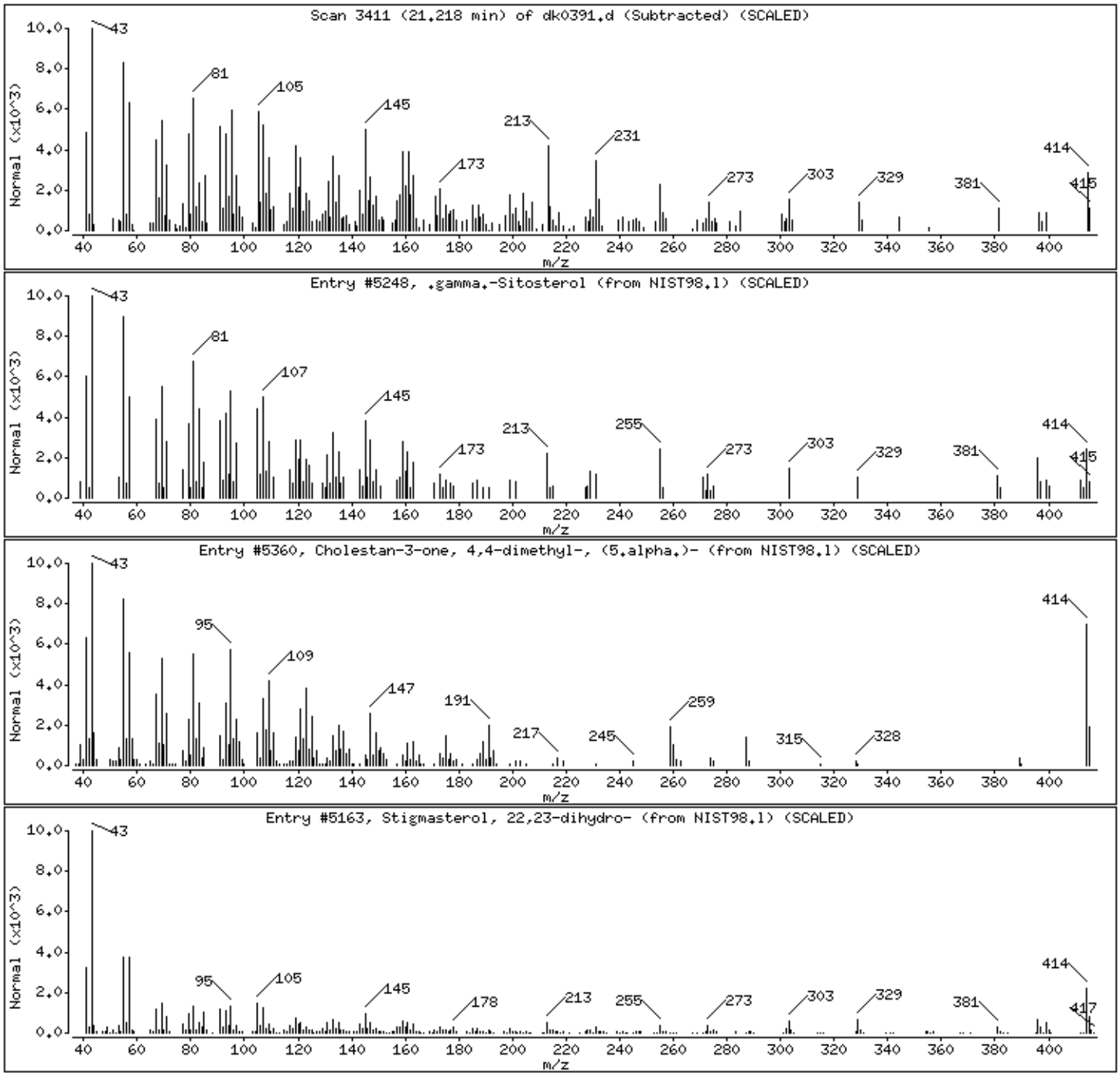
Client ID: 2B152 Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
.gamma.-Sitosterol	83-47-6	NIST98.1	5248	95	C29H50O	414
Cholestan-3-one, 4,4-dimethyl-, (5.alpha	2097-85-0	NIST98.1	5360	49	C29H50O	414
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST98.1	5163	47	C29H50O	414



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

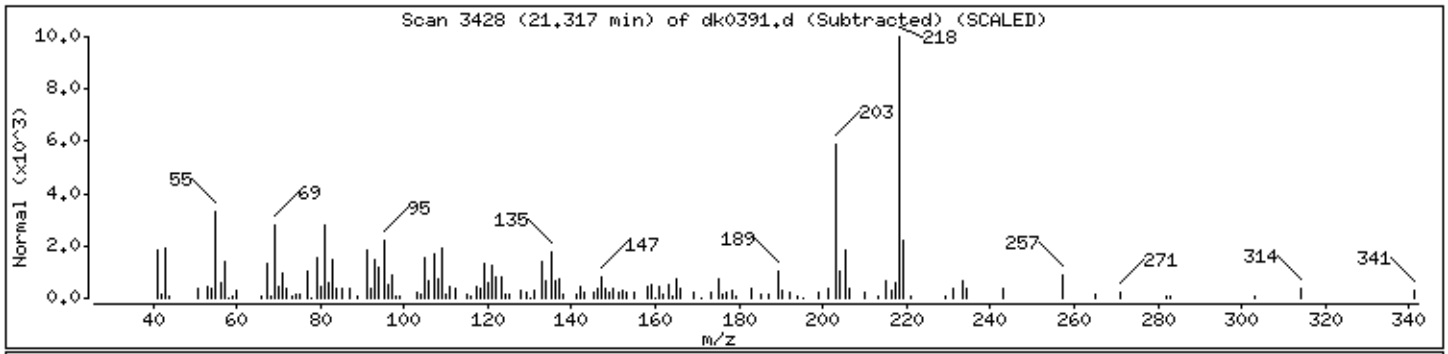
Client ID: 2B152 Instrument: HP19760.i

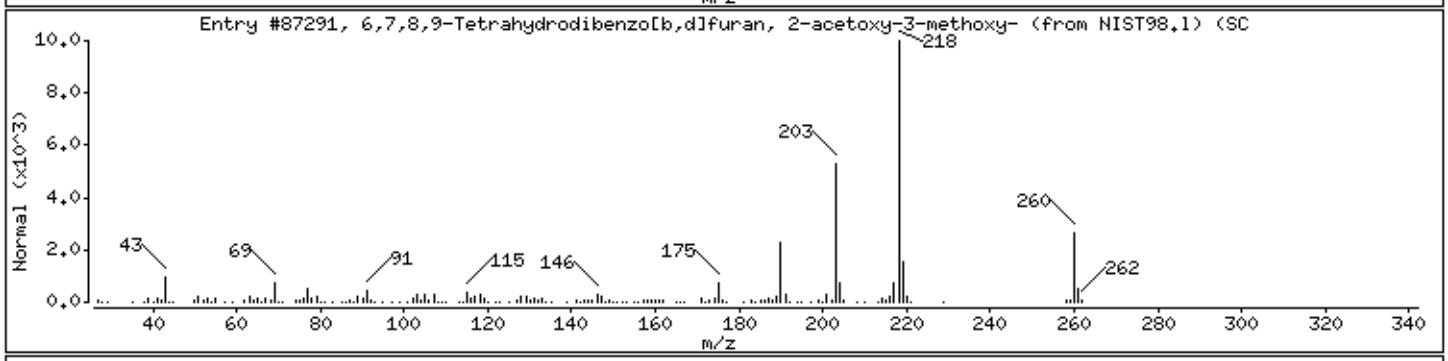
Sample Info: 2B152;7266805;1;0;SAMPLE;;;

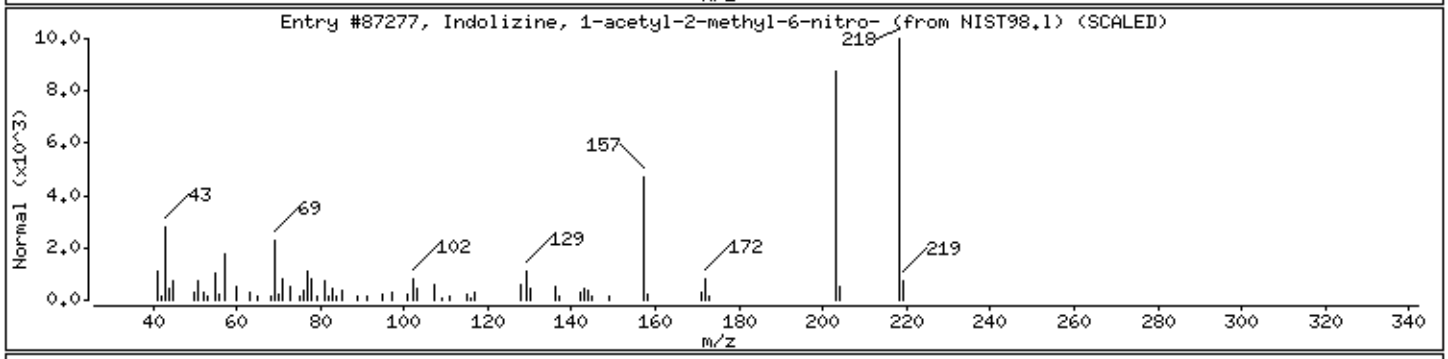
Volume Injected (uL): 0.5 Operator: jmg00346

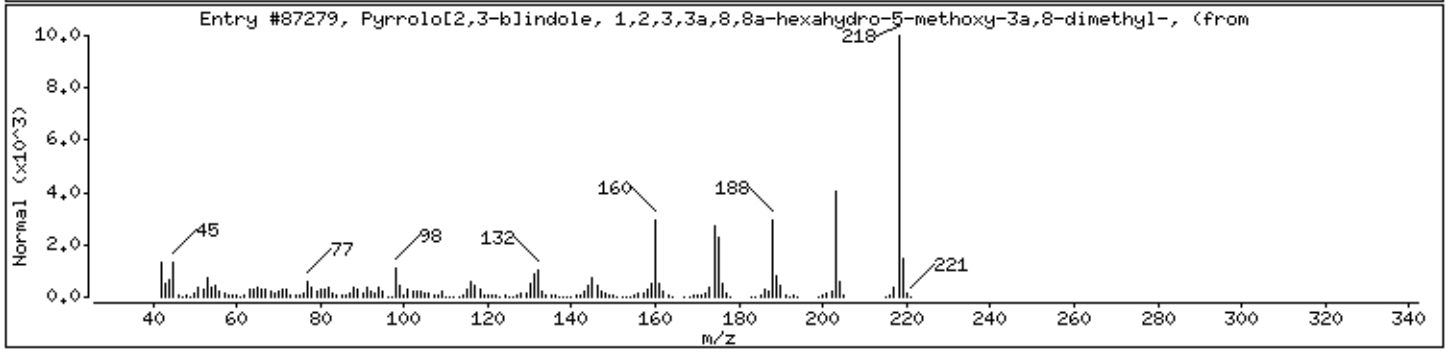
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
6,7,8,9-Tetrahydrodibenzo[b,d]furan, 2-a	1000196-34-3	NIST98.1	87291	53	C15H16O4	260
Indolizine, 1-acetyl-2-methyl-6-nitro-	1000071-33-1	NIST98.1	87277	47	C11H10N2O3	218
Pyrrolo[2,3-b]indole, 1,2,3,3a,8,8a-hexa	46479-70-3	NIST98.1	87279	46	C13H18N2O	218









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

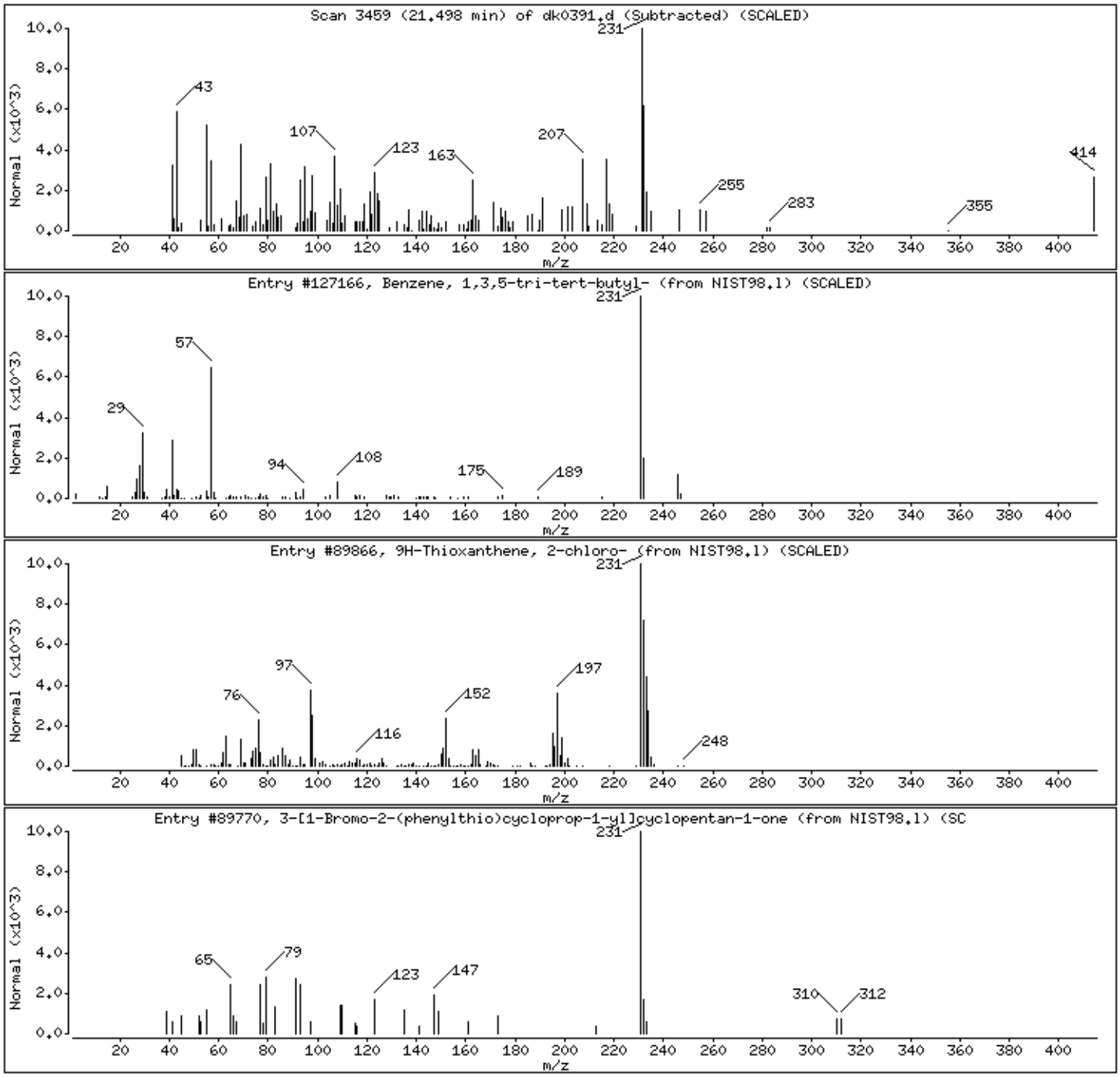
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Benzene, 1,3,5-tri-tert-butyl-	1460-02-2	NIST98.1	127166	27	C18H30	246
9H-Thioxanthene, 2-chloro-	92-38-6	NIST98.1	89866	17	C13H9ClS	232
3-[1-Bromo-2-(phenylthio)cycloprop-1-yl]	1000139-16-9	NIST98.1	89770	16	C14H15BrOS	310



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

Client ID: 2B152

Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

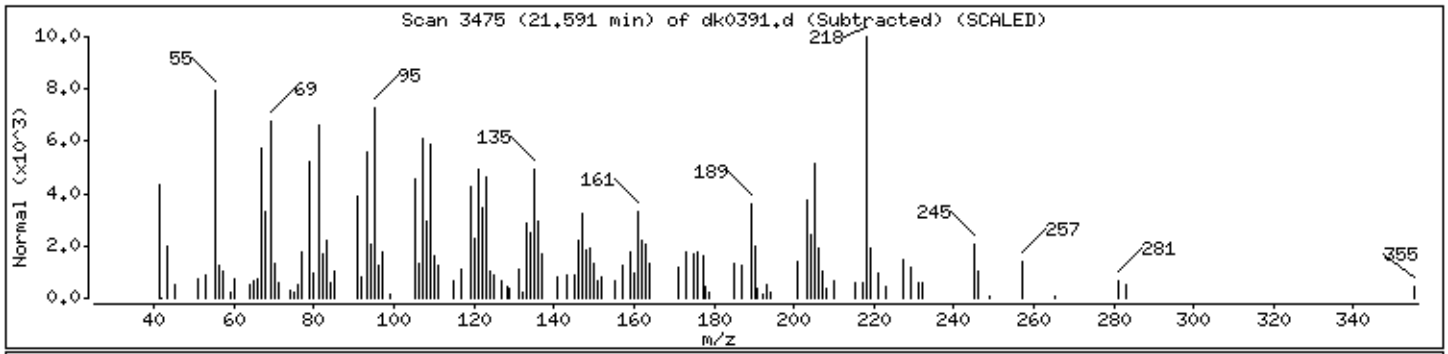
Volume Injected (uL): 0.5

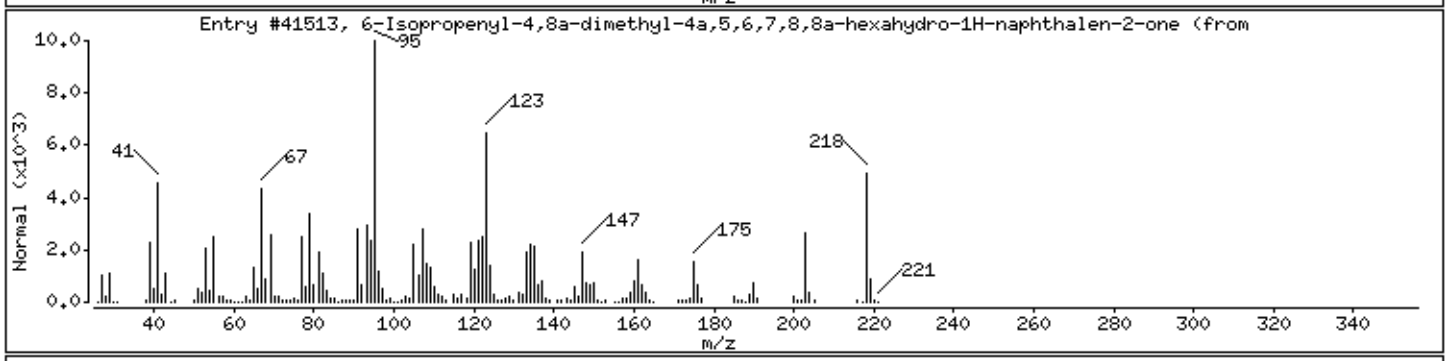
Operator: jmg00346

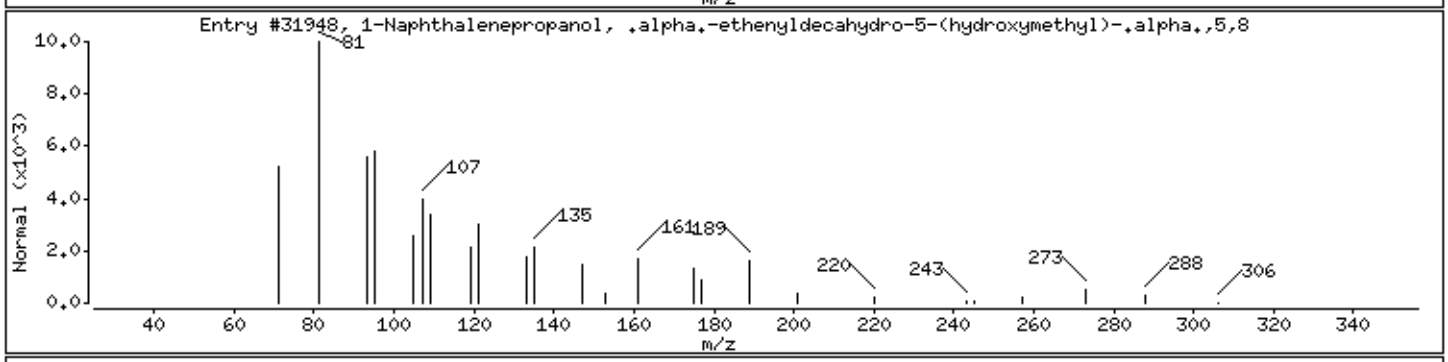
Column phase: J&W DB-5MS

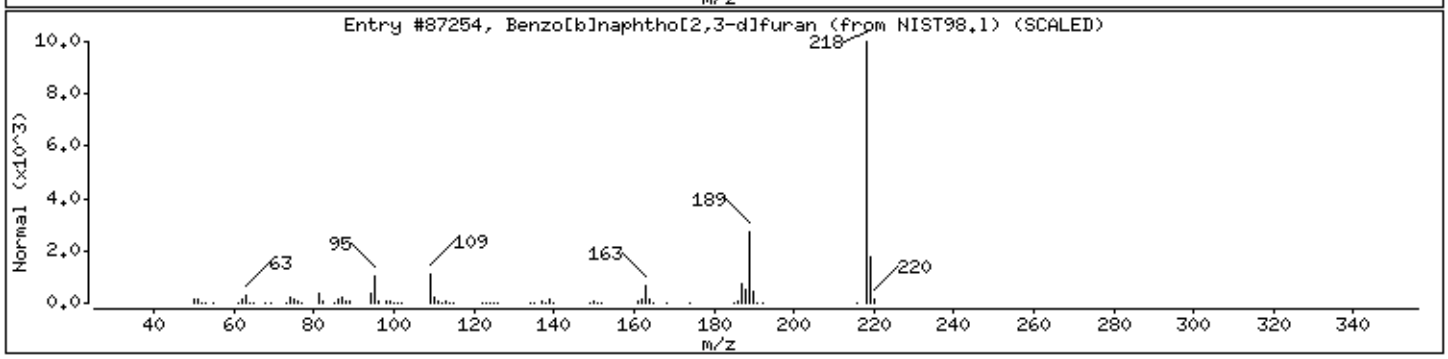
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
6-Isopropenyl-4,8a-dimethyl-4a,5,6,7,8,8	86917-79-5	NIST98.1	41513	45	C15H220	218
1-Naphthalenepropanol, .alpha.-ethenylde	4549-12-6	NIST98.1	31948	43	C20H3402	306
Benzo[b]naphtho[2,3-d]furan	243-42-5	NIST98.1	87254	42	C16H100	218









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0391.d

Date : 13-NOV-2013 09:51

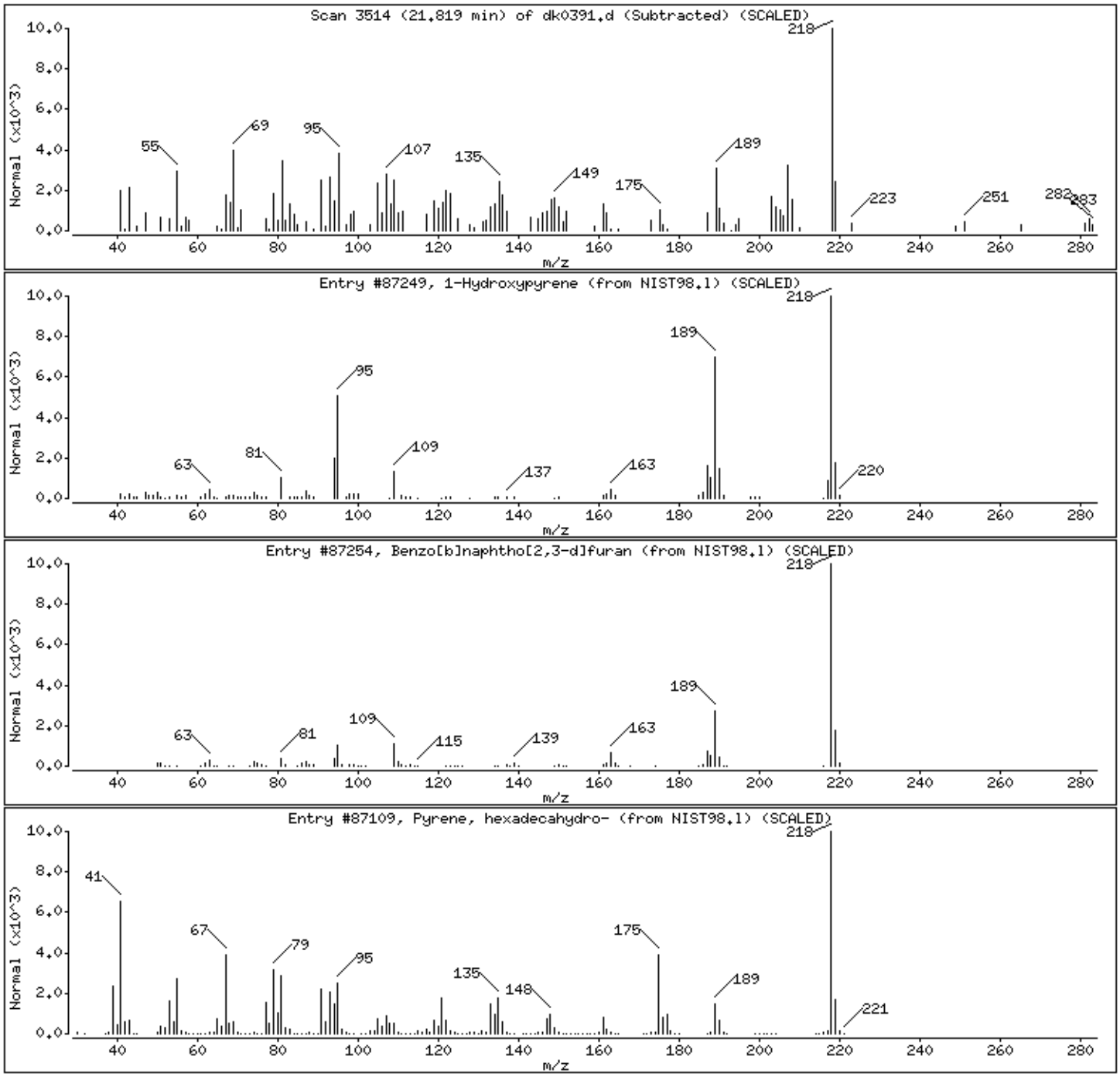
Client ID: 2B152 Instrument: HP19760.i

Sample Info: 2B152;7266805;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Hydroxypyrene	5315-79-7	NIST98.1	87249	53	C16H10O	218
Benzo[b]naphtho[2,3-d]furan	243-42-5	NIST98.1	87254	50	C16H10O	218
Pyrene, hexadecahydro-	2435-85-0	NIST98.1	87109	46	C16H26	218



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:38.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0687.d
Injection date and time: **15-NOV-2013 22:43**
Data file Sample Info. Line: 2C152;7266806;2;0;SAMPLE;;;
Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:45 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	140271 (-39)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	641081 (-38)	20.00	
99) Acenaphthene-d10	7.455(0.006)	1032	164	423256 (-36)	20.00	
148) Phenanthrene-d10	8.663(0.006)	1234	188	749655 (-32)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	791575 (-34)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	501213 (-38)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	255661	17.117	86%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.917(0.000)	172	459681	19.002	95%		69 - 120
169) Terphenyl-d14	(5)	9.986(0.000)	244	524172	18.580	93%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)			Not Detected					0.1
72) 2-Methylnaphthalene	(2)			Not Detected					0.1
75) 1-Methylnaphthalene	(2)			Not Detected					0.1
96) Acenaphthylene	(3)			Not Detected					0.1
100) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
149) Phenanthrene	(4)			Not Detected					0.1
150) Anthracene	(4)			Not Detected					0.1
163) Fluoranthene	(4)			Not Detected					0.1
166) Pyrene	(5)			Not Detected					0.1
178) Benzo(a)anthracene	(5)			Not Detected					0.1
180) Chrysene	(5)			Not Detected					0.1
186) Benzo(b)fluoranthene	(6)			Not Detected					0.1
187) Benzo(k)fluoranthene	(6)			Not Detected					0.1
189) Benzo(a)pyrene	(6)			Not Detected					0.1
194) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
195) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
196) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Digitally signed by Holly Berry on 11/17/2013 at 14:52. Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0687.d Injection date and time: **15-NOV-2013 22:43**
Data file Sample Info. Line: 2C152;7266806;2;0;SAMPLE;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:45 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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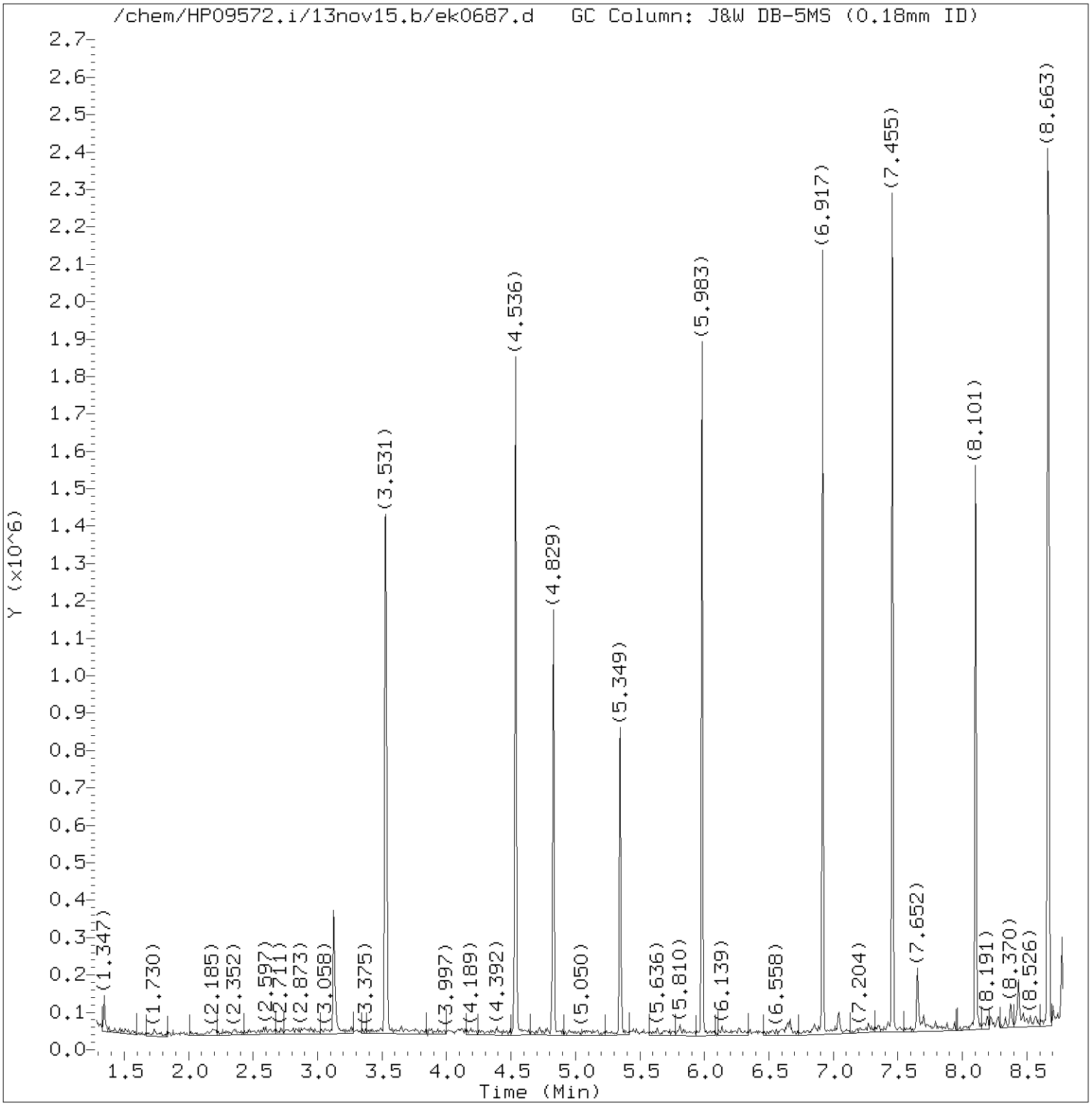
Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:52. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

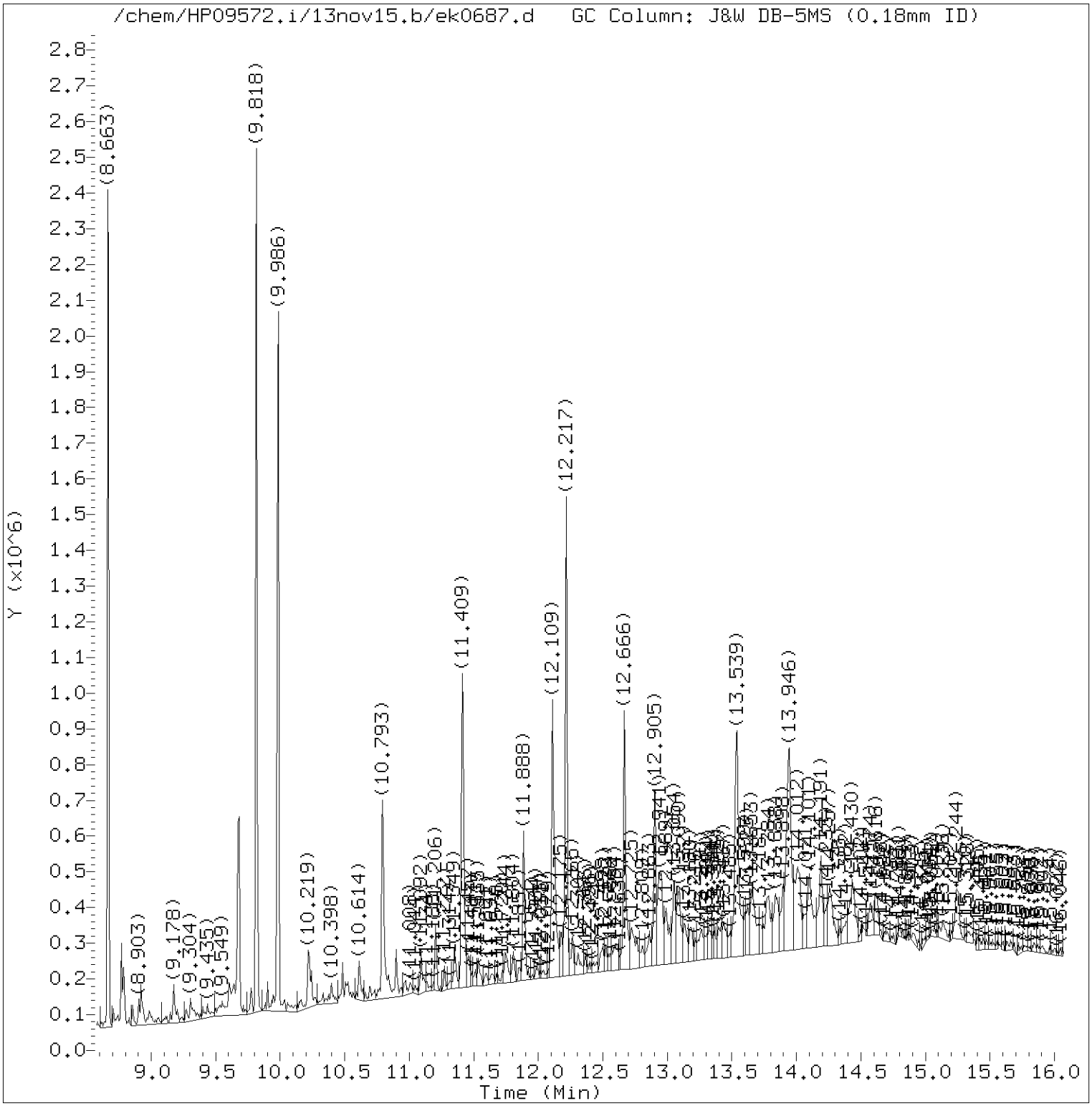
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0687.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:43 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:45 hb01996

Sample Name: 2C152 Lab Sample ID: 7266806

Digitally signed by Holly Berry
on 11/17/2013 at 14:52.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0687.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:43 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:45 hb01996

Sample Name: 2C152 Lab Sample ID: 7266806

Digitally signed by Holly Berry
on 11/17/2013 at 14:52.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0687.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 22:43 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:45 hb01996

Sample Name: 2C152 Lab Sample ID: 7266806

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	140271	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	255661	17.117
60)*Naphthalene-d8	(2)	5.983	136	641081	20.000
81)$2-Fluorobiphenyl	(3)	6.917	172	459681	19.002
99)*Acenaphthene-d10	(3)	7.455	164	423256	20.000
148)*Phenanthrene-d10	(4)	8.663	188	749655	20.000
165)*Pyrene-d10	(5)	9.818	212	791575	20.000
169)$Terphenyl-d14	(5)	9.986	244	524172	18.580
190)*Perylene-d12	(6)	12.217	264	501213	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/17/2013 at 14:52.
Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0392.d
Injection date and time: **13-NOV-2013 10:18**
Data file Sample Info. Line: 2B151;7266807;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	125087 (-9)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	478541 (-8)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	283192 (-10)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	499367 (-11)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	638825 (-12)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	481341 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.965(0.001)	112	1201023	32.337	65%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1165387	22.847	46%		10 - 83
36) Nitrobenzene-d5	(2)	6.769(0.001)	82	966354	21.943	88%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1645050	23.262	93%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	431892	58.067	116%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	1693400	21.256	85%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31. Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0392.d Injection date and time: **13-NOV-2013 10:18**
Data file Sample Info. Line: 2B151;7266807;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

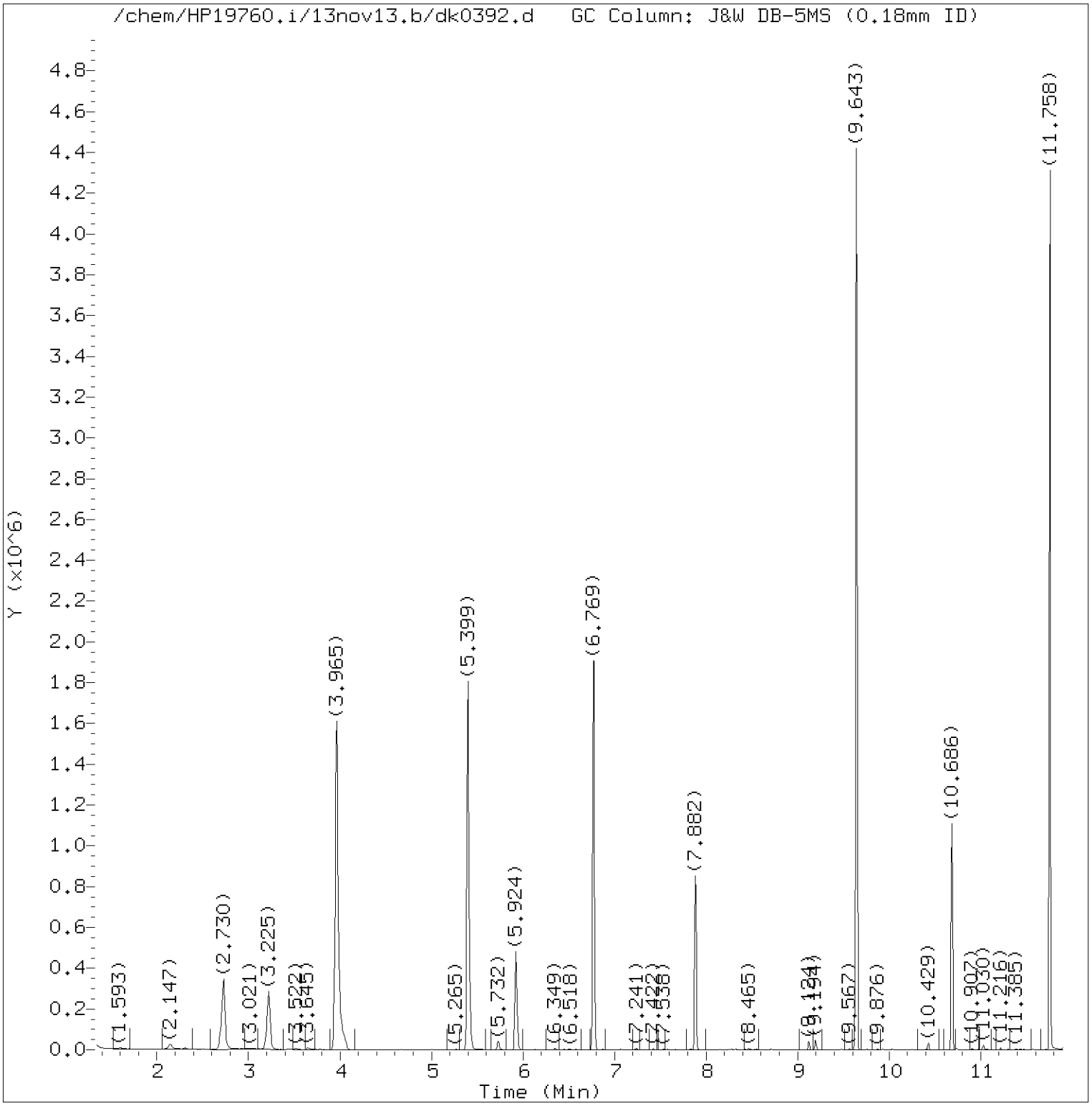
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 231 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)	12.615(0.000)	178	3780	0.034	0.15			0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)	14.224(0.000)	202	9478	0.076	0.33			0.03
146) Pyrene	(5)	14.556(-0.000)	202	11144	0.082	0.36			0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)	16.532(-0.000)	228	3770	0.033	0.14			0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)	16.590(0.000)	228	5845	0.052	0.22			0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)	18.368(0.000)	252	5241	0.046	0.20			0.03
170) Benzo(k)fluoranthene	(6)	18.403(0.001)	252	3814	0.033	0.14			0.03
171) Benzo(a)pyrene	(6)	18.887(0.000)	252	4849	0.047	0.20			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.571(0.000)	276	2365	0.026	0.11			0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)	20.927(0.000)	276	3167	0.041	0.18			0.03

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:13. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

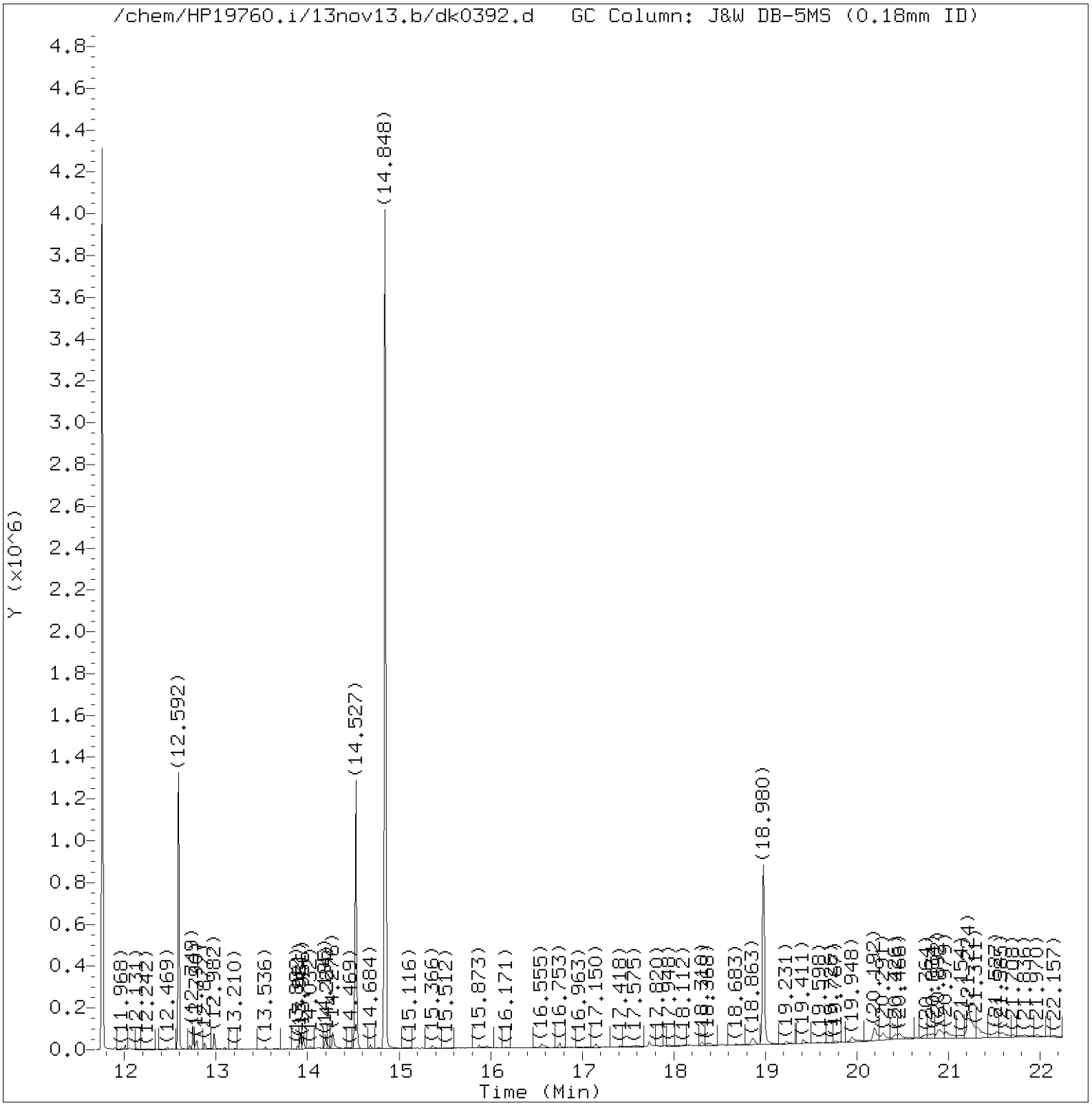
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.965	112	1201023	32.337
13)$Phenol-d6	(1)	5.399	99	1165387	22.847
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	125087	5.000
36)$Nitrobenzene-d5	(2)	6.769	82	966354	21.943
52)*Naphthalene-d8	(2)	7.882	136	478541	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1645050	23.262
92)*Acenaphthene-d10	(3)	10.686	164	283192	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	431892	58.067
130)*Phenanthrene-d10	(4)	12.592	188	499367	5.000
131) Phenanthrene	(4)	12.615	178	3780	0.034
142) Fluoranthene	(4)	14.224	202	9478	0.076
145)*Pyrene-d10	(5)	14.527	212	638825	5.000
146) Pyrene	(5)	14.556	202	11144	0.082
149)$Terphenyl-d14	(5)	14.848	244	1693400	21.256
158) Benzo(a)anthracene	(5)	16.532	228	3770	0.033
161) Chrysene	(5)	16.590	228	5845	0.052
168) Benzo(b)fluoranthene	(6)	18.368	252	5241	0.046
170) Benzo(k)fluoranthene	(6)	18.403	252	3814	0.033
171) Benzo(a)pyrene	(6)	18.887	252	4849	0.047
172)*Perylene-d12	(6)	18.980	264	481341	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.571	276	2365	0.026
178) Benzo(g,h,i)perylene	(6)	20.927	276	3167	0.041

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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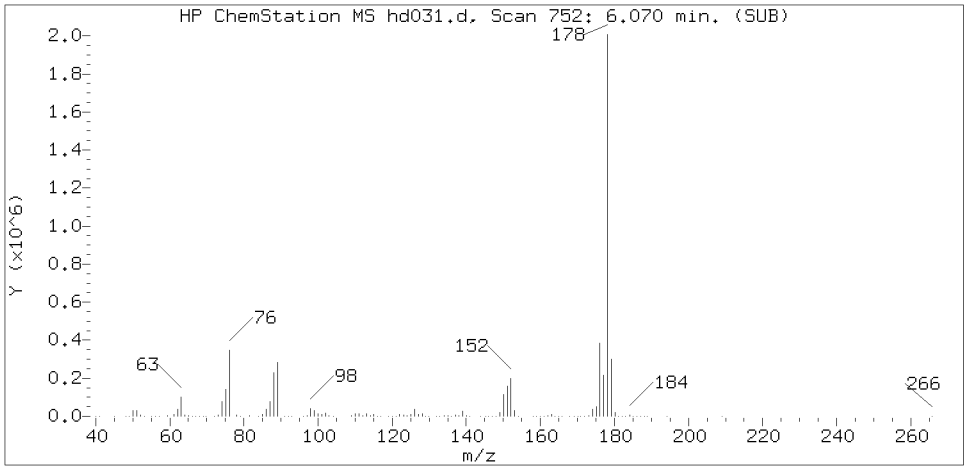
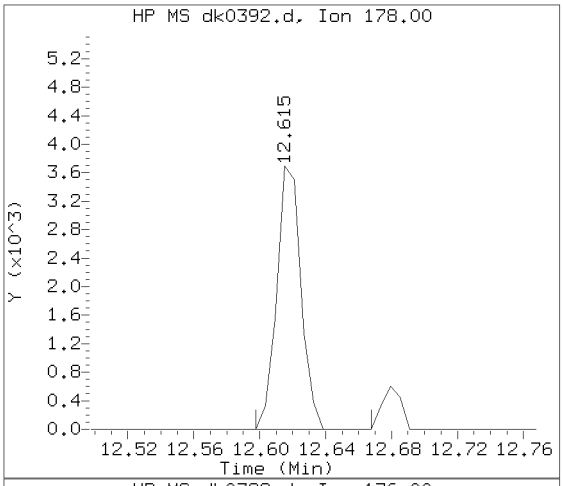
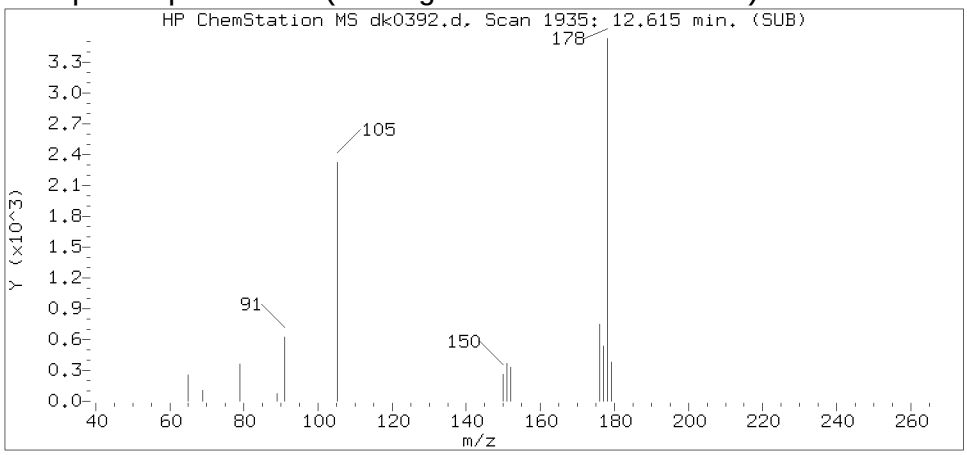
on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

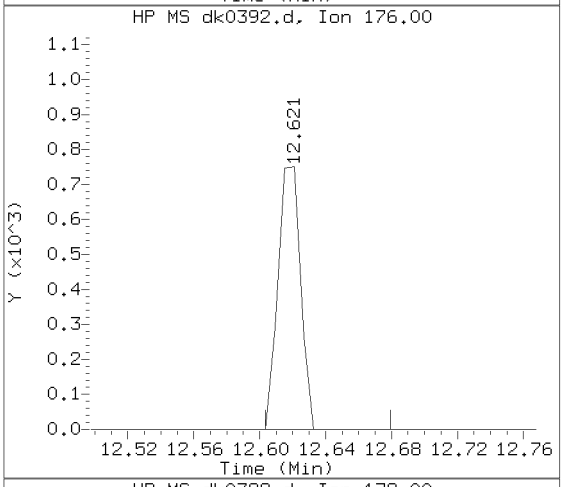
Reference Standard Spectrum for Phenanthrene



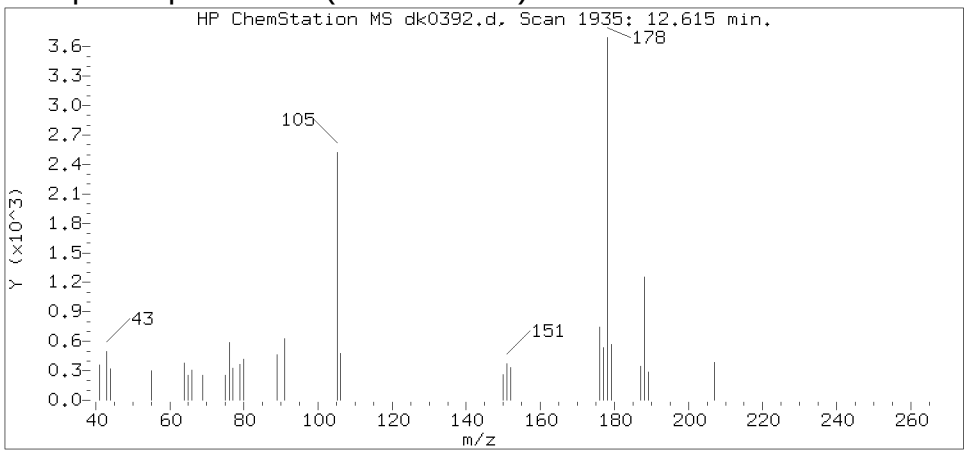


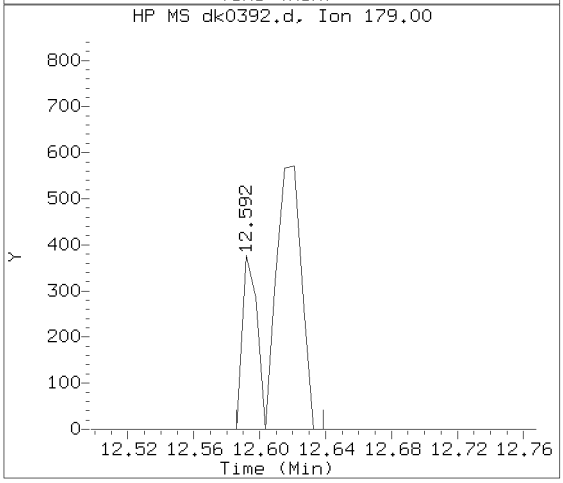
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number : 131
Compound Name : Phenanthrene
Scan Number : 1935
Retention Time (minutes) : 12.615
Relative Retention Time : 0.00093
Quant Ion : 178.00
Area (flag) : 3780
On-column Amount (ng/ul) : 0.0339

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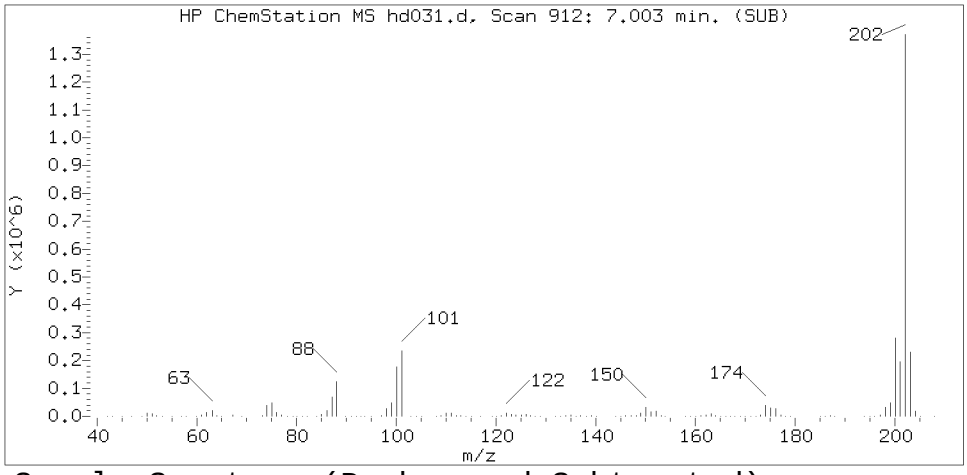
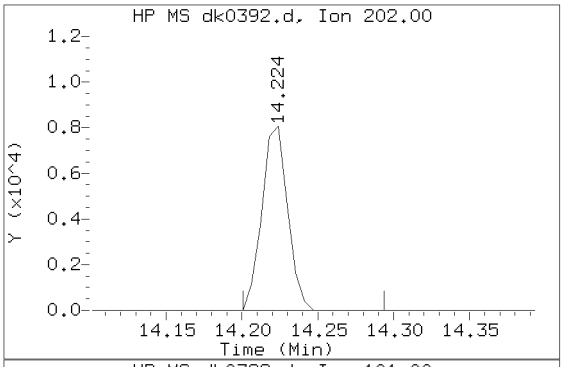
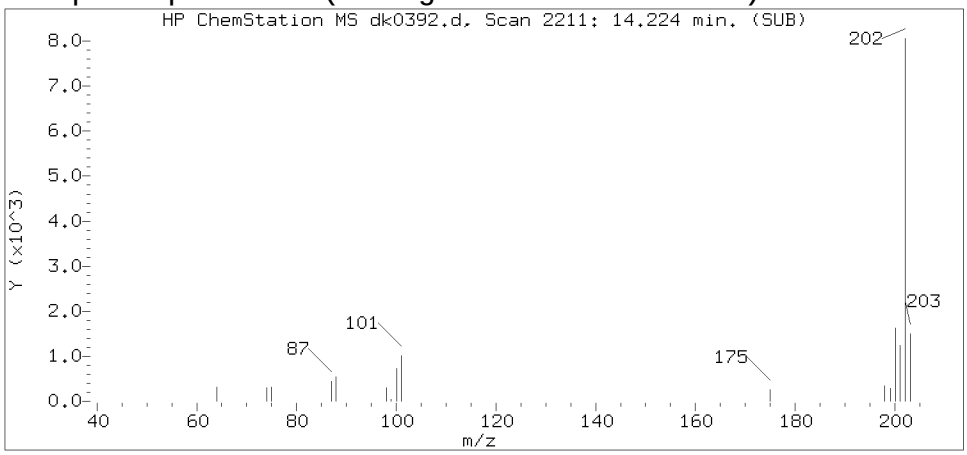
Target 3.5 esignature user ID: ceb05247

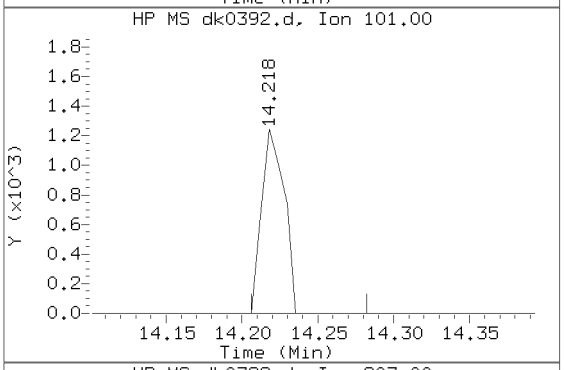
Reference Standard Spectrum for Fluoranthene

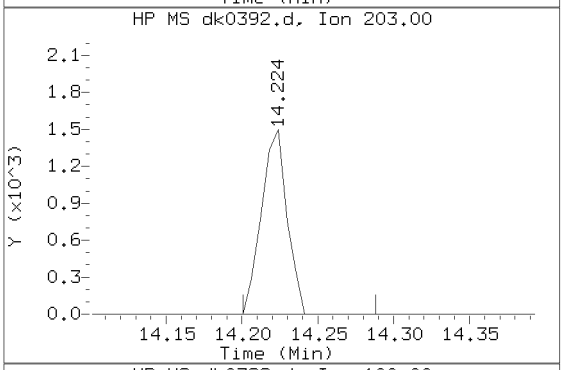




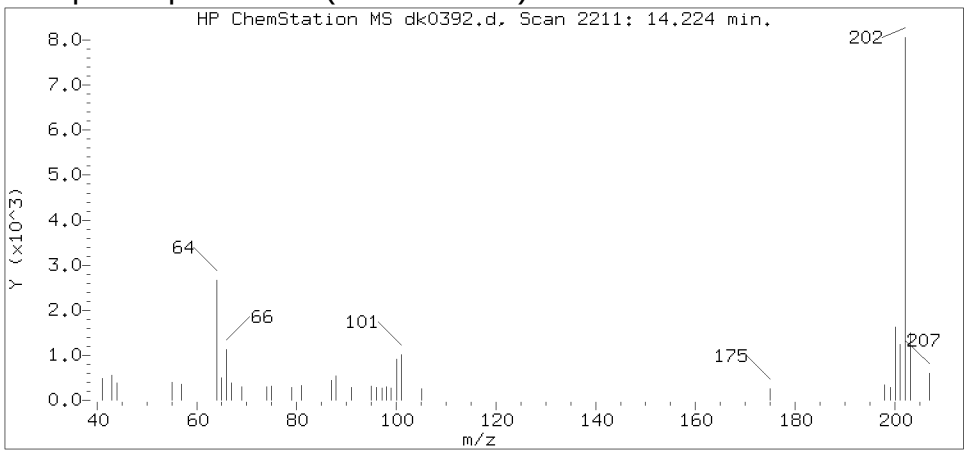
Sample Spectrum (Background Subtracted)

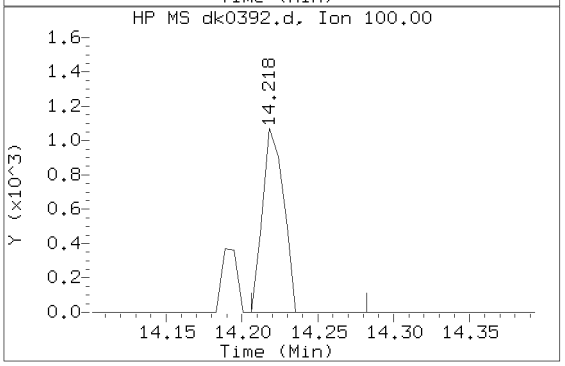






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 142
Compound Name	: Fluoranthene
Scan Number	: 2211
Retention Time (minutes)	: 14.224
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 9478
On-column Amount (ng/ul)	: 0.0757

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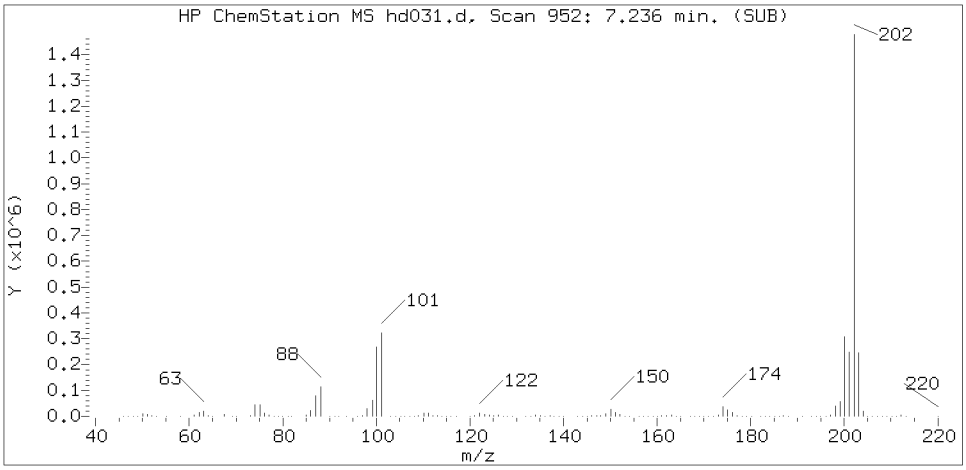
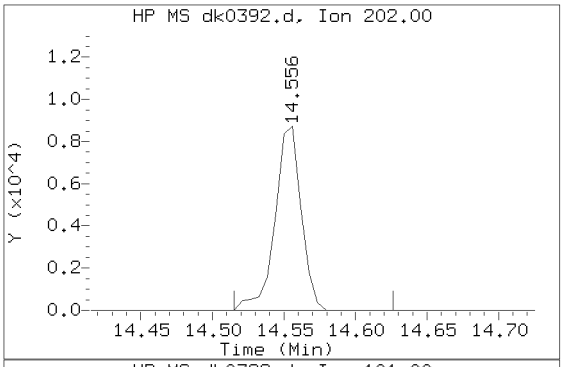
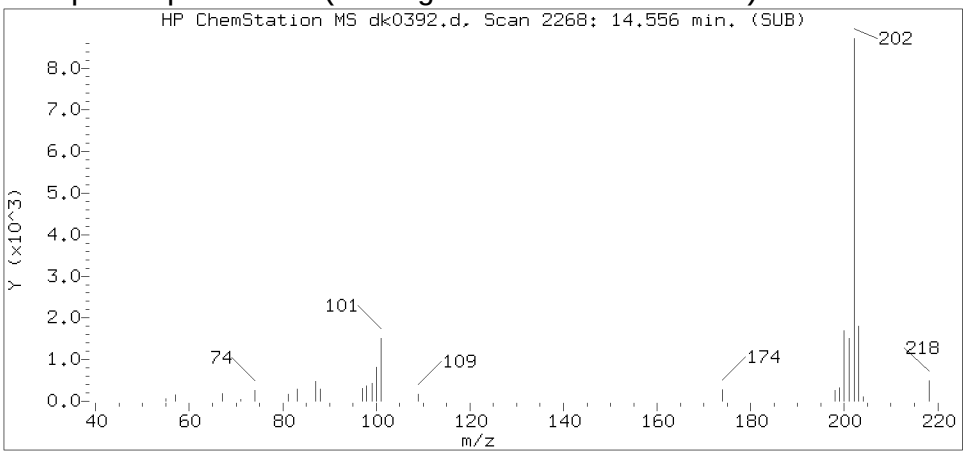
Target 3.5 esignature user ID: ceb05247

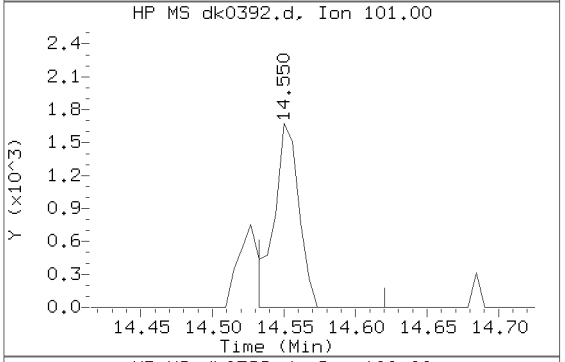
Reference Standard Spectrum for Pyrene

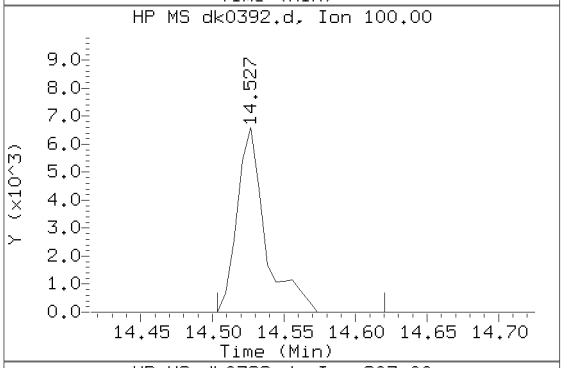




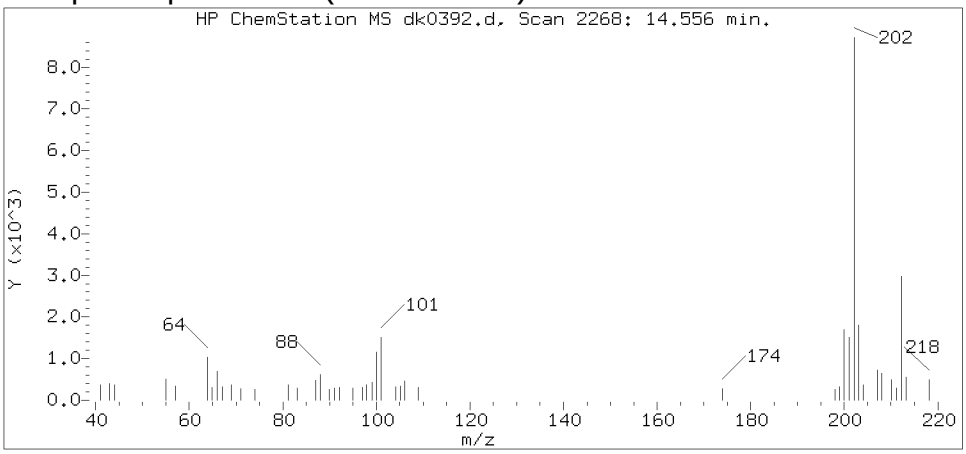
Sample Spectrum (Background Subtracted)

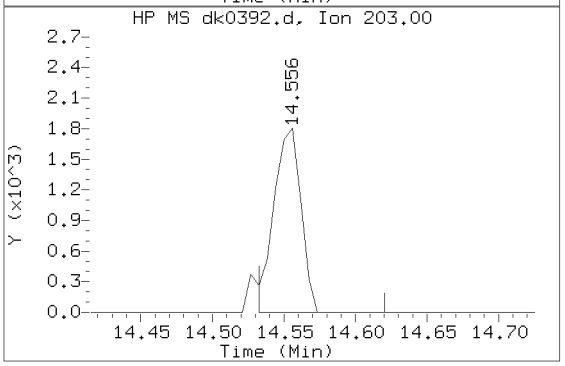






Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 146
Compound Name	: Pyrene
Scan Number	: 2268
Retention Time (minutes)	: 14.556
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 11144
On-column Amount (ng/ul)	: 0.0822

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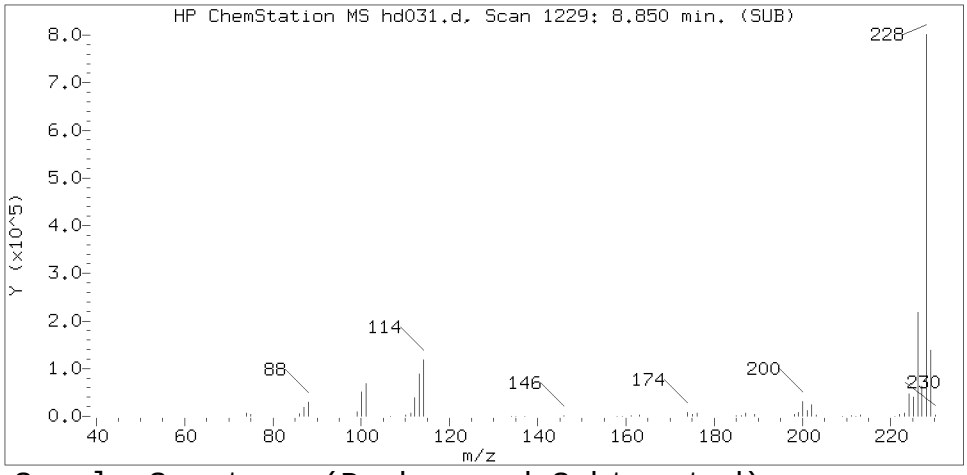
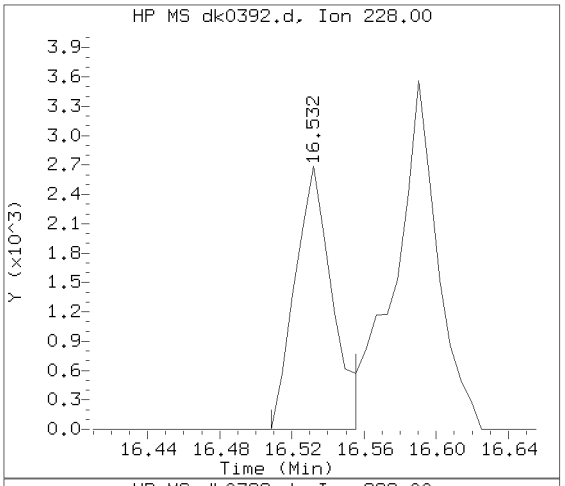
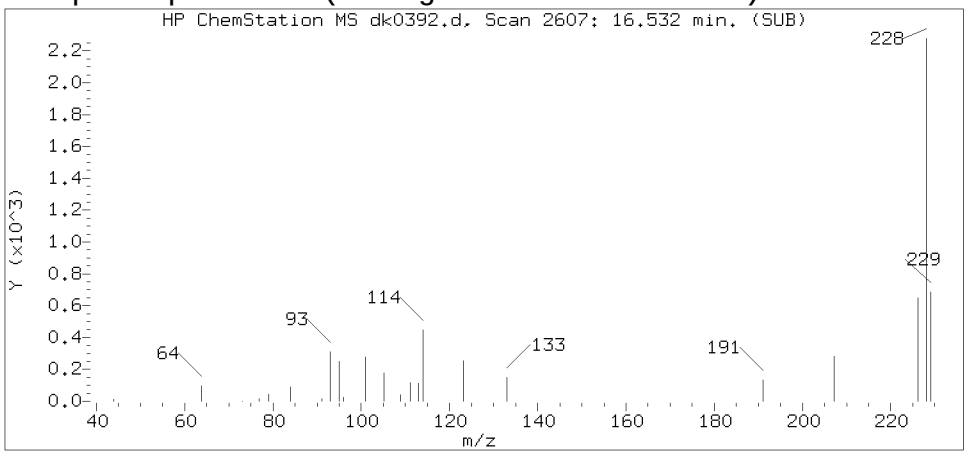
Target 3.5 esignature user ID: ceb05247

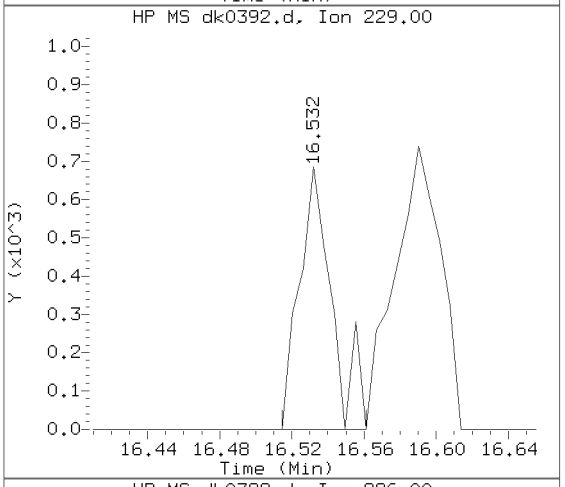
Reference Standard Spectrum for Benzo(a)anthracene



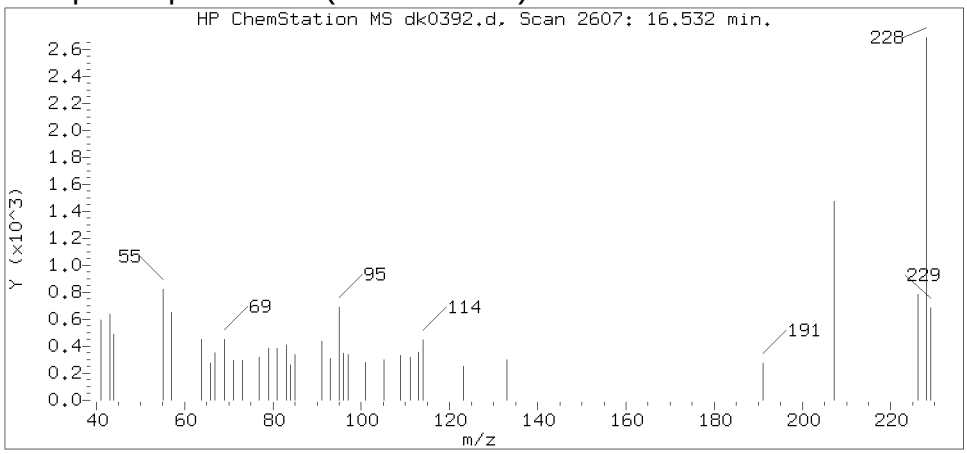


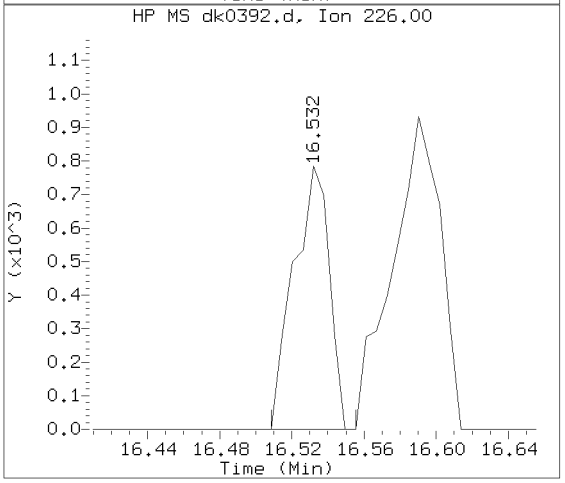
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

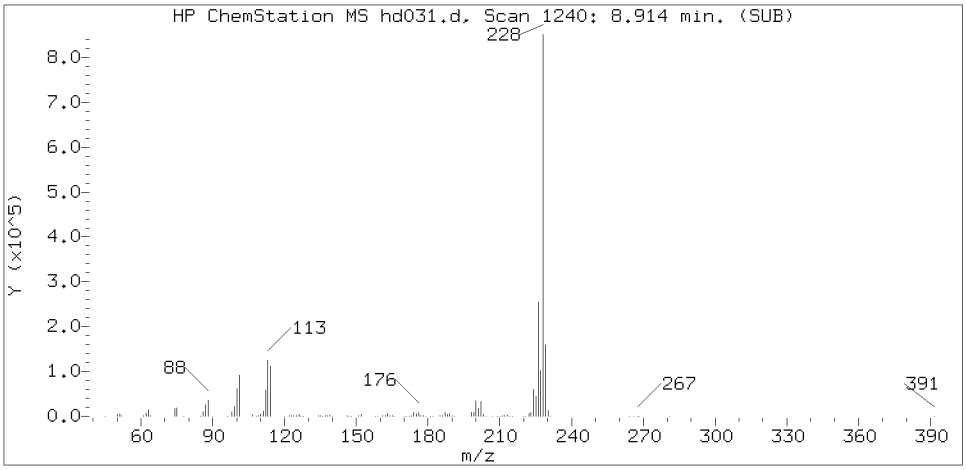
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

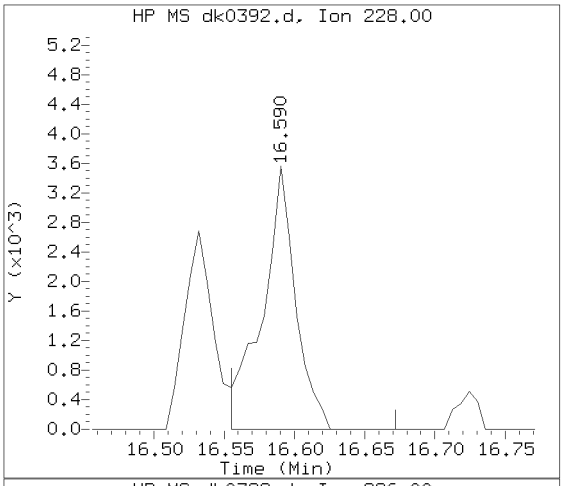
Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number : 158
Compound Name : Benzo(a)anthracene
Scan Number : 2607
Retention Time (minutes) : 16.532
Relative Retention Time :-0.00006
Quant Ion : 228.00
Area (flag) : 3770
On-column Amount (ng/ul) : 0.0328

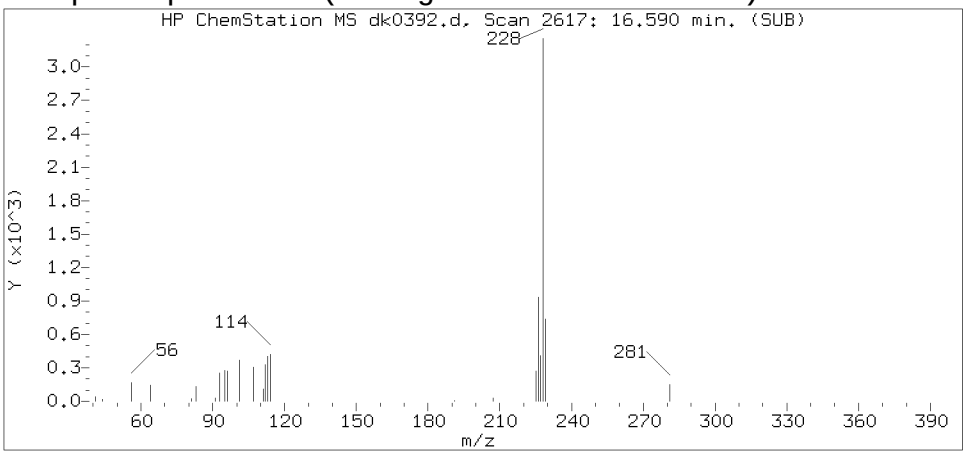
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

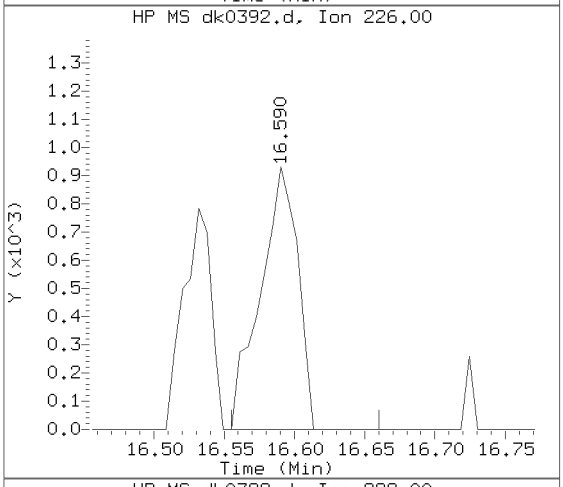
Reference Standard Spectrum for Chrysene



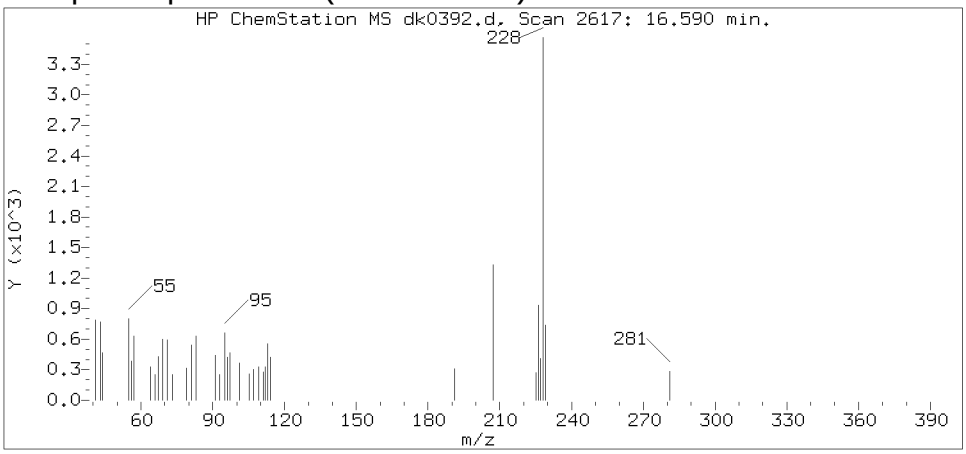


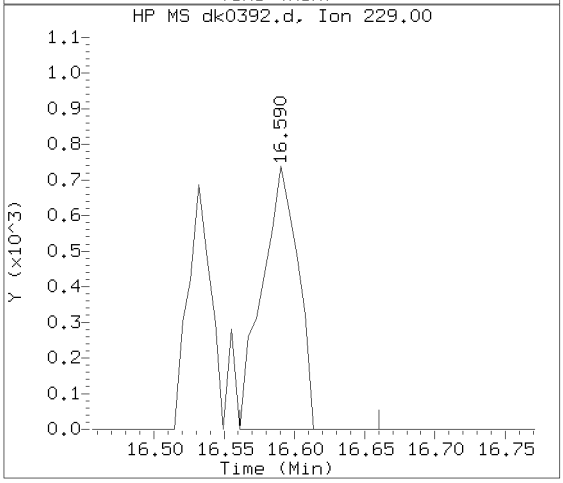
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

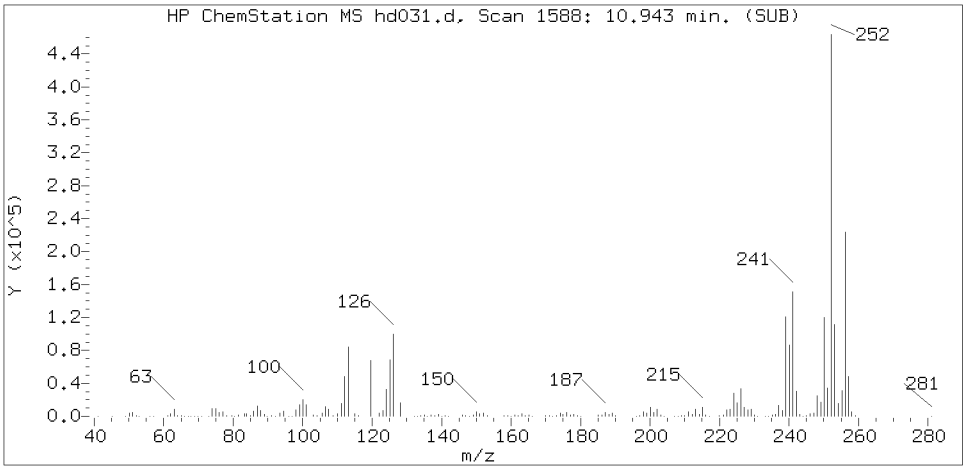
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

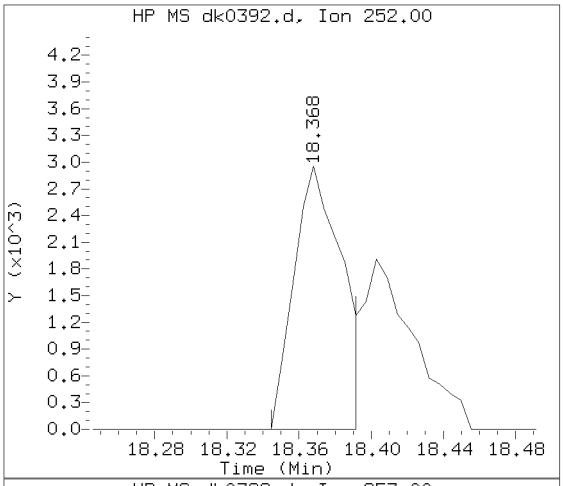
Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 161
Compound Name	: Chrysene
Scan Number	: 2617
Retention Time (minutes)	: 16.590
Relative Retention Time	: 0.00034
Quant Ion	: 228.00
Area (flag)	: 5845
On-column Amount (ng/ul)	: 0.0516

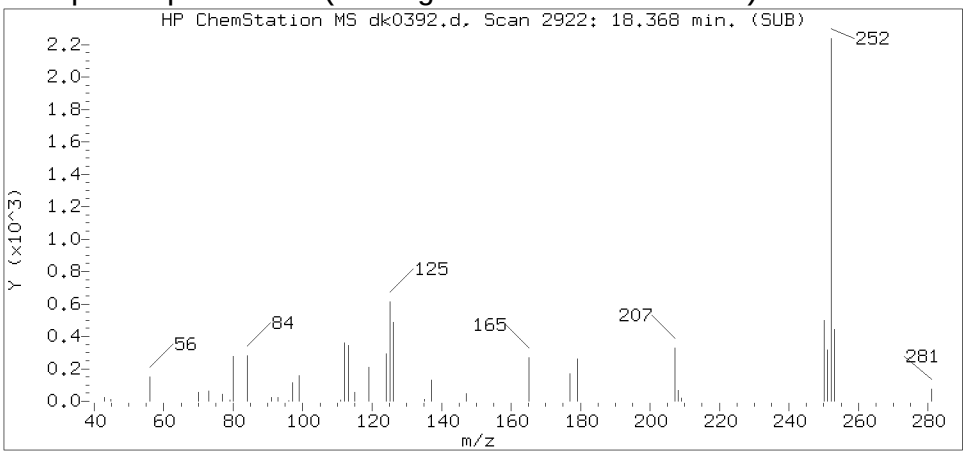
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

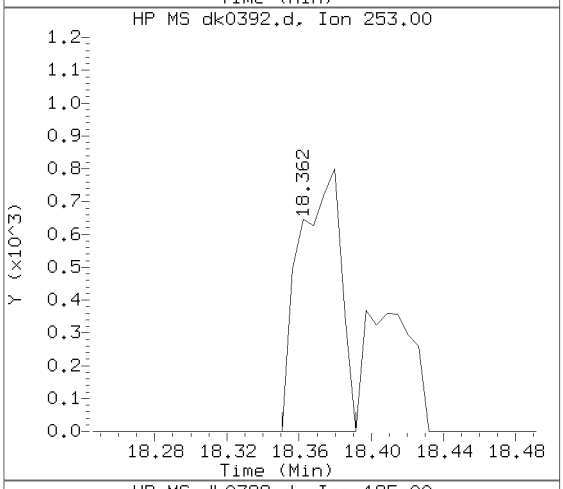
Reference Standard Spectrum for Benzo(b)fluoranthene



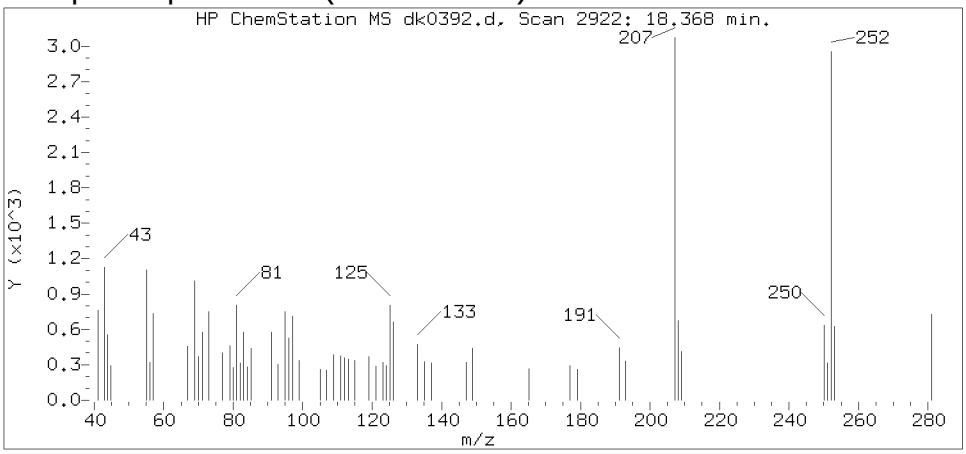


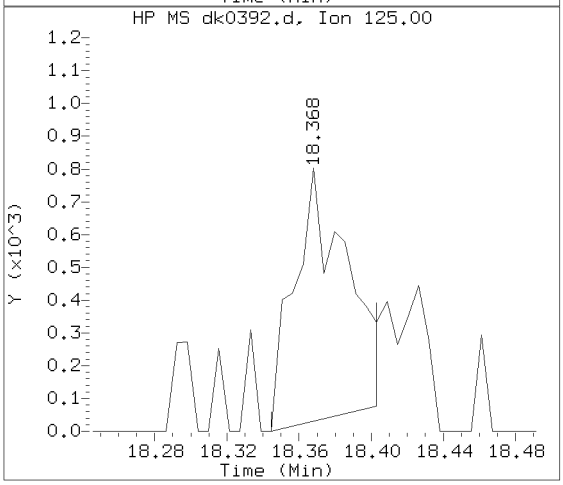
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 168
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 2922
Retention Time (minutes)	: 18.368
Relative Retention Time	: 0.00031
Quant Ion	: 252.00
Area (flag)	: 5241
On-column Amount (ng/ul)	: 0.0462

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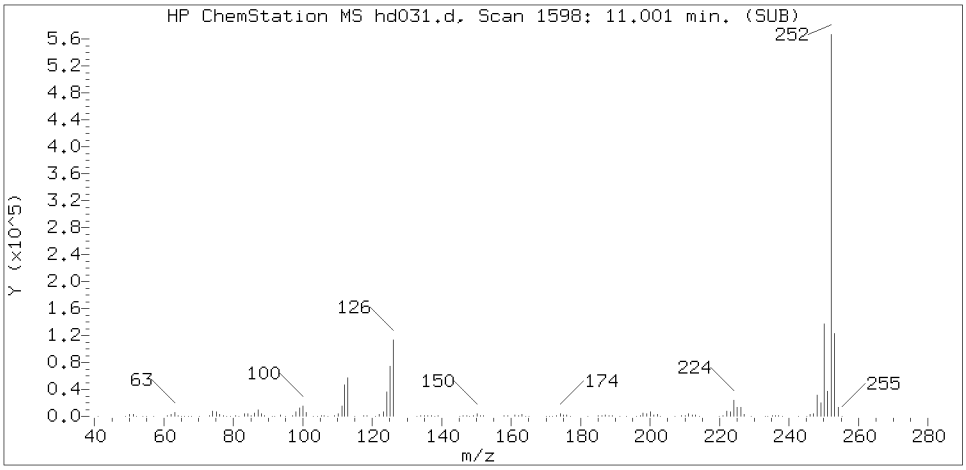
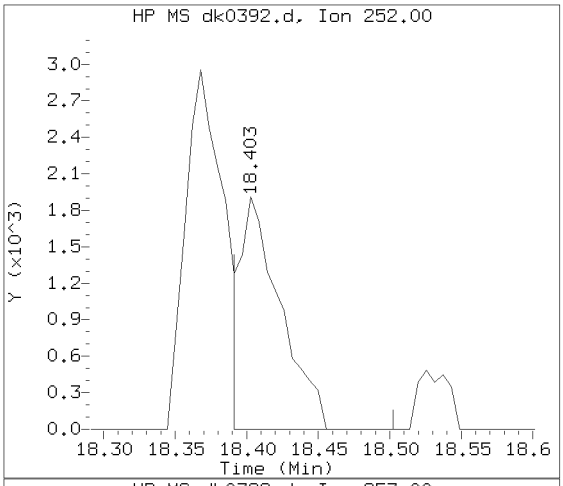
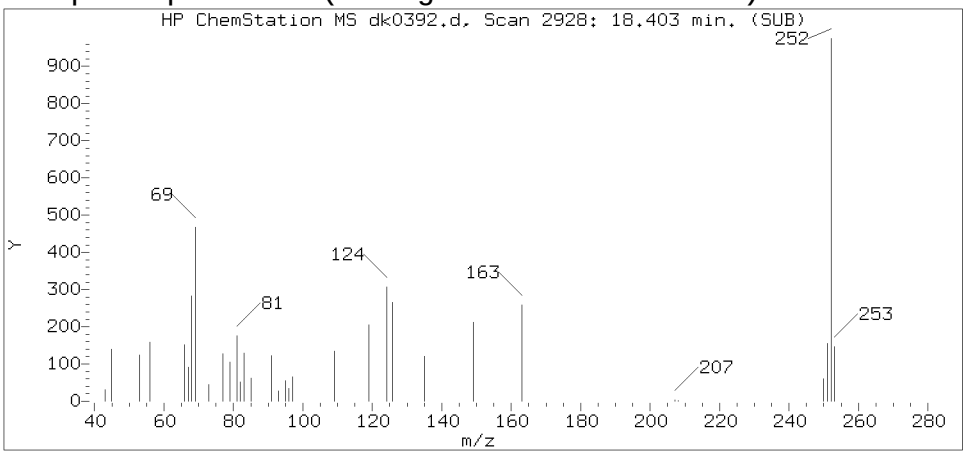
Target 3.5 esignature user ID: ceb05247

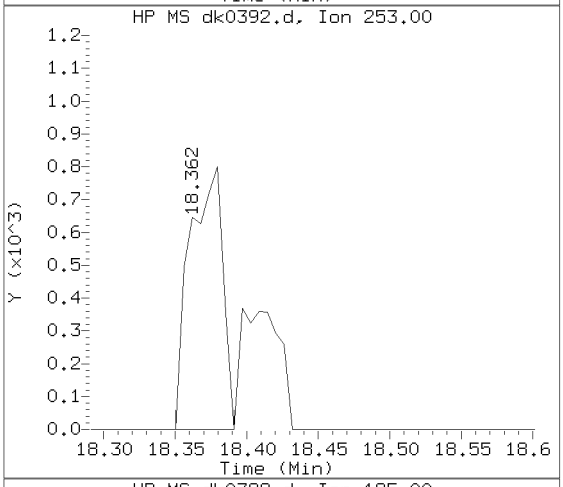
Reference Standard Spectrum for Benzo(k)fluoranthene



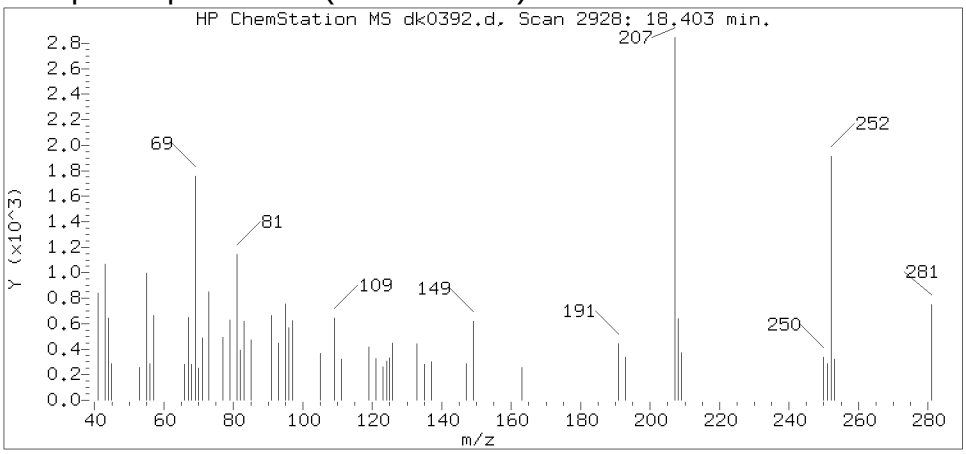


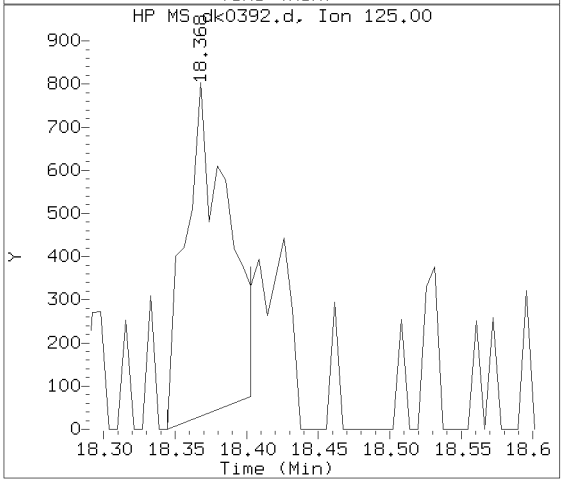
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

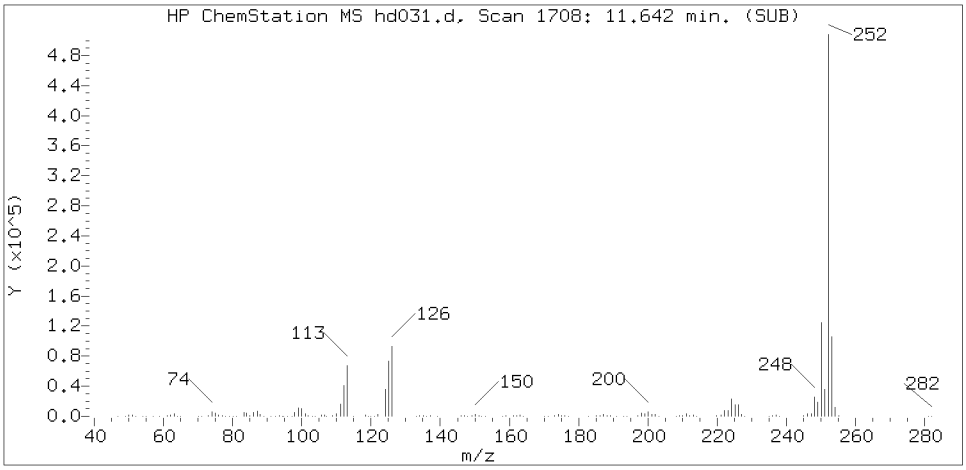
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

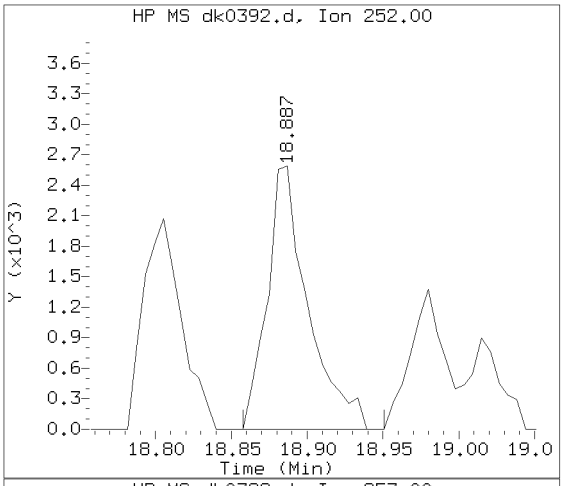
Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 170
Compound Name	: Benzo(k)fluoranthene
Scan Number	: 2928
Retention Time (minutes)	: 18.403
Relative Retention Time	: 0.00123
Quant Ion	: 252.00
Area (flag)	: 3814
On-column Amount (ng/ul)	: 0.0334

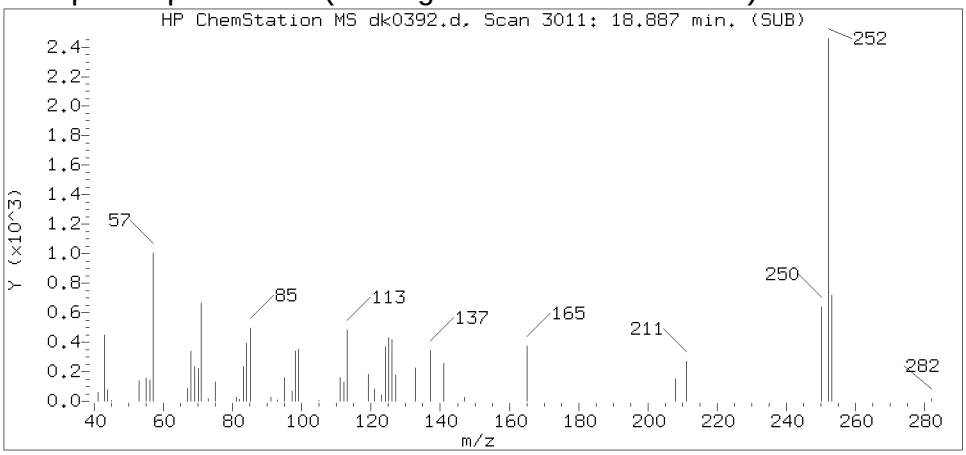
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

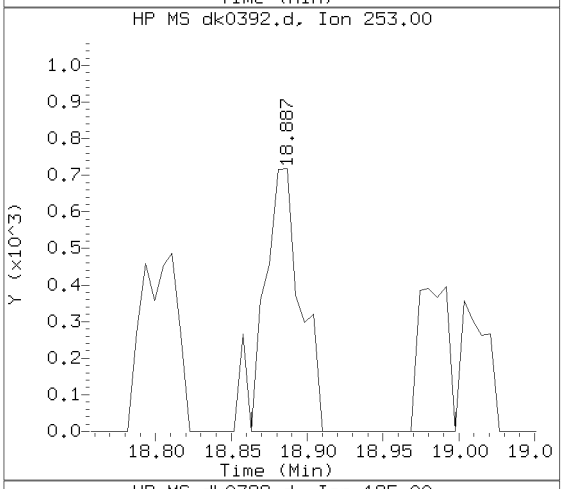
Reference Standard Spectrum for Benzo(a)pyrene



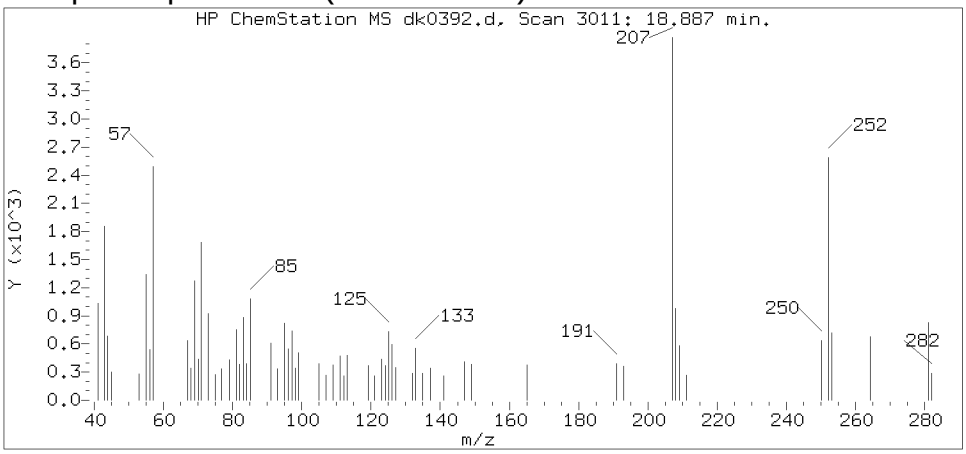


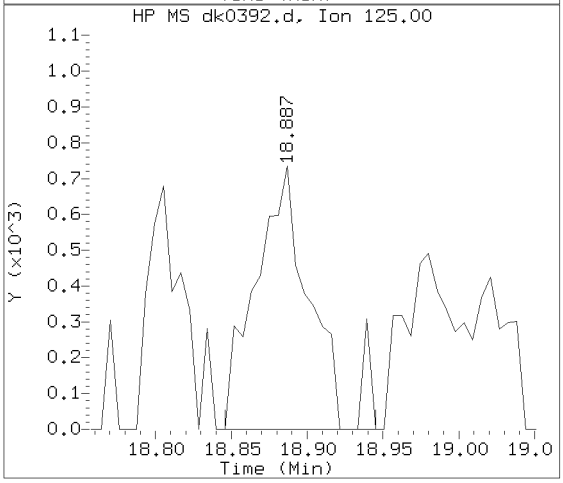
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

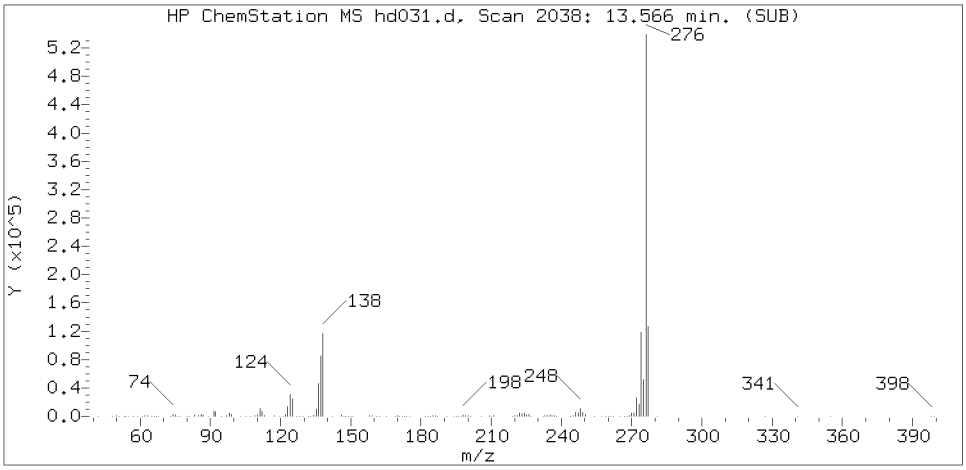
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

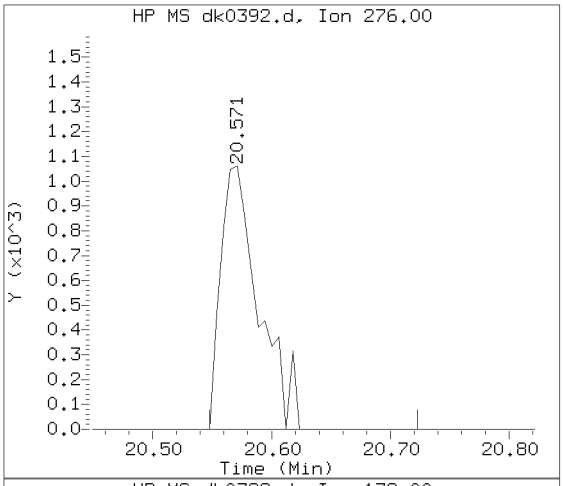
Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number	: 171
Compound Name	: Benzo(a)pyrene
Scan Number	: 3011
Retention Time (minutes)	: 18.887
Relative Retention Time	: 0.00031
Quant Ion	: 252.00
Area (flag)	: 4849
On-column Amount (ng/ul)	: 0.0466

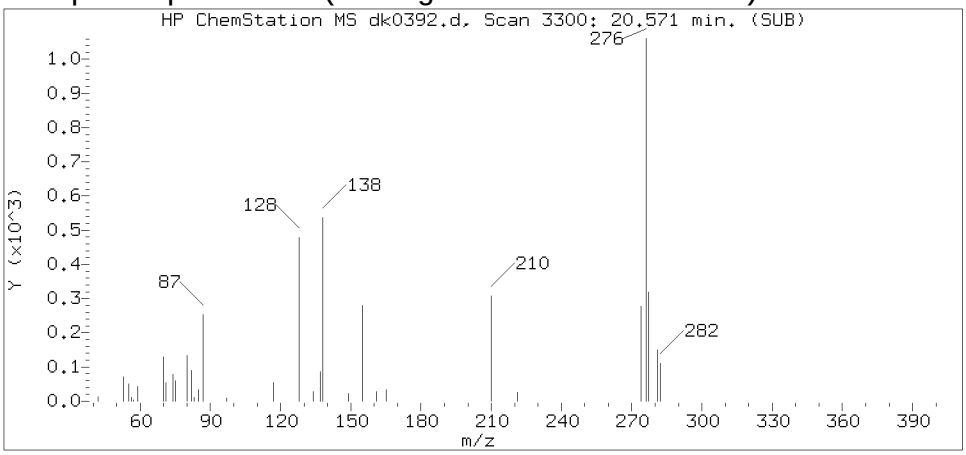
Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

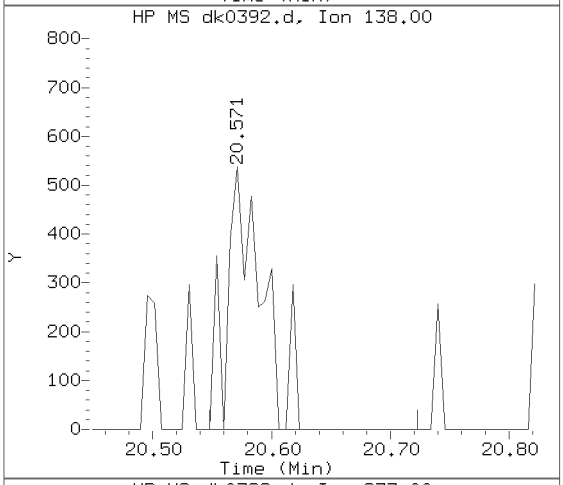
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



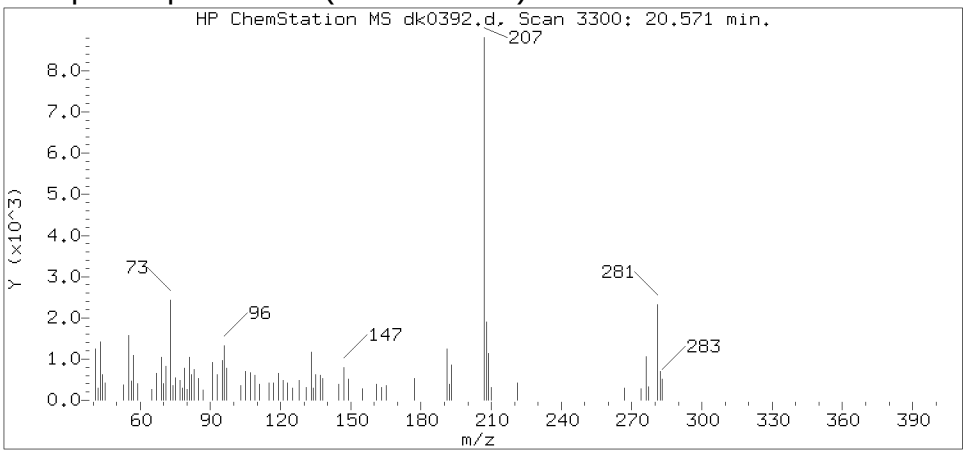


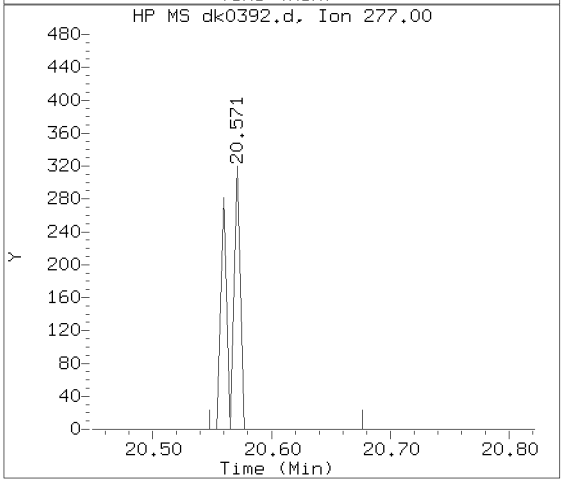
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3300
Retention Time (minutes) : 20.571
Relative Retention Time : 0.00061
Quant Ion : 276.00
Area (flag) : 2365
On-column Amount (ng/ul) : 0.0259

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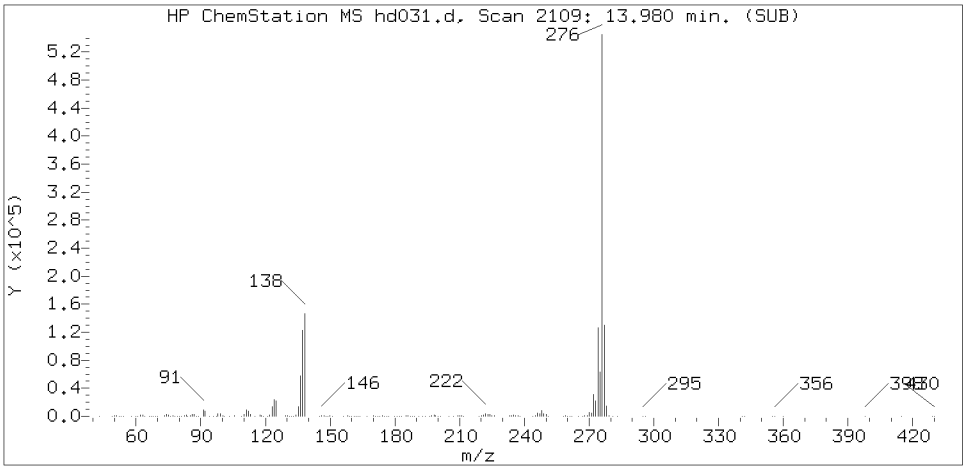
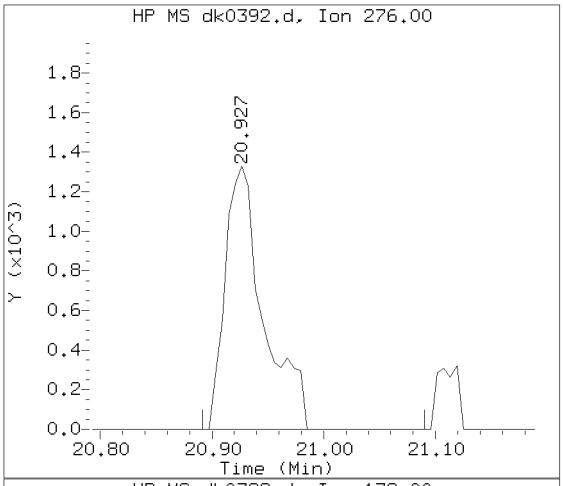
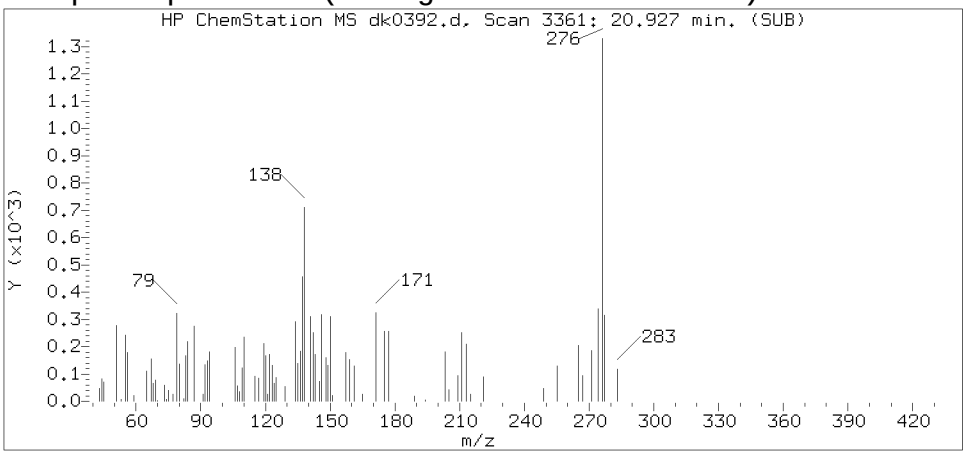
Target 3.5 esignature user ID: ceb05247

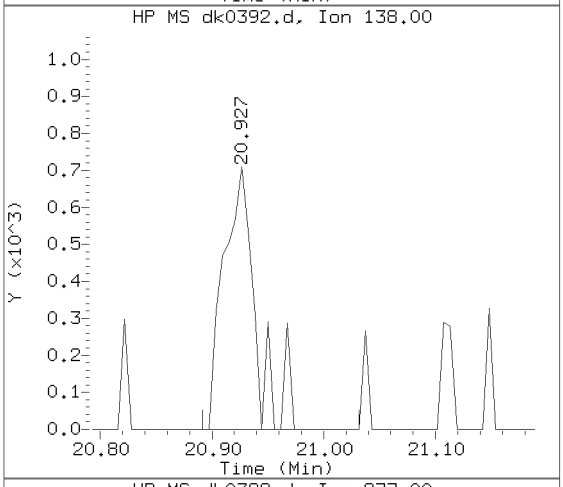
Reference Standard Spectrum for Benzo(g,h,i)perylene



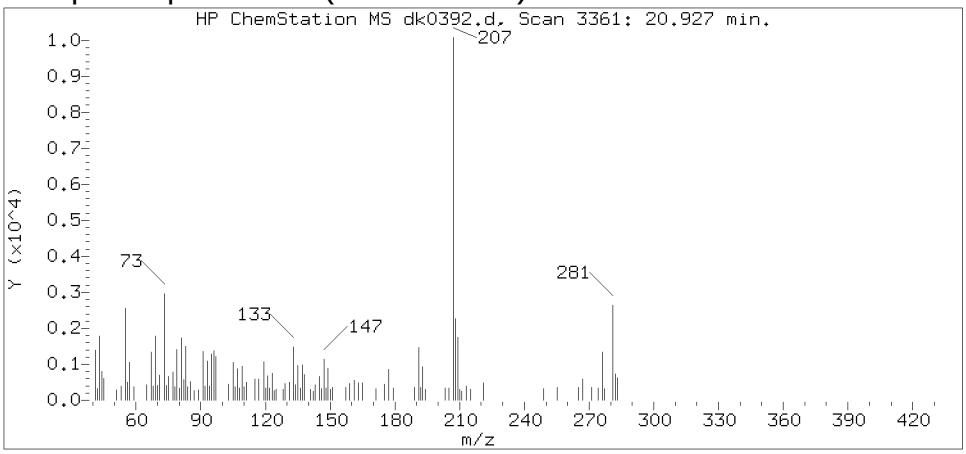


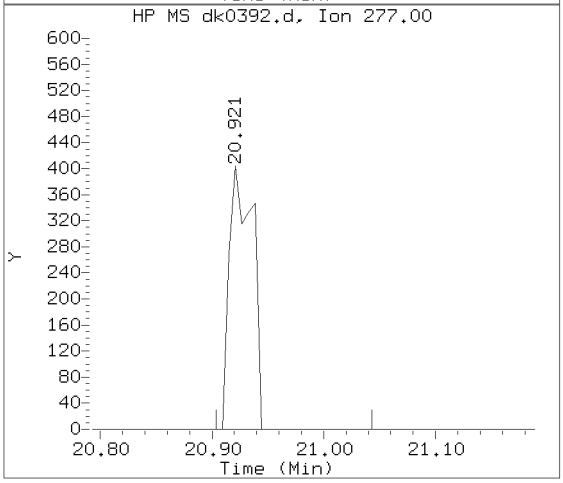
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Compound Number : 178
Compound Name : Benzo(g,h,i)perylene
Scan Number : 3361
Retention Time (minutes) : 20.927
Relative Retention Time : 0.00092
Quant Ion : 276.00
Area (flag) : 3167
On-column Amount (ng/ul) : 0.0412

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:31.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2B151

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7266807

Sample wt/vol: 231 (g/mL) mL Lab File ID: dk0392.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.730	26	J
2.		Unknown	3.225	19	J
3.		Unknown	21.224	9	J
4.					
5.	SVOCTIC	Total SVOC TICs		54	J
6.					
7.					
8.					
9.					
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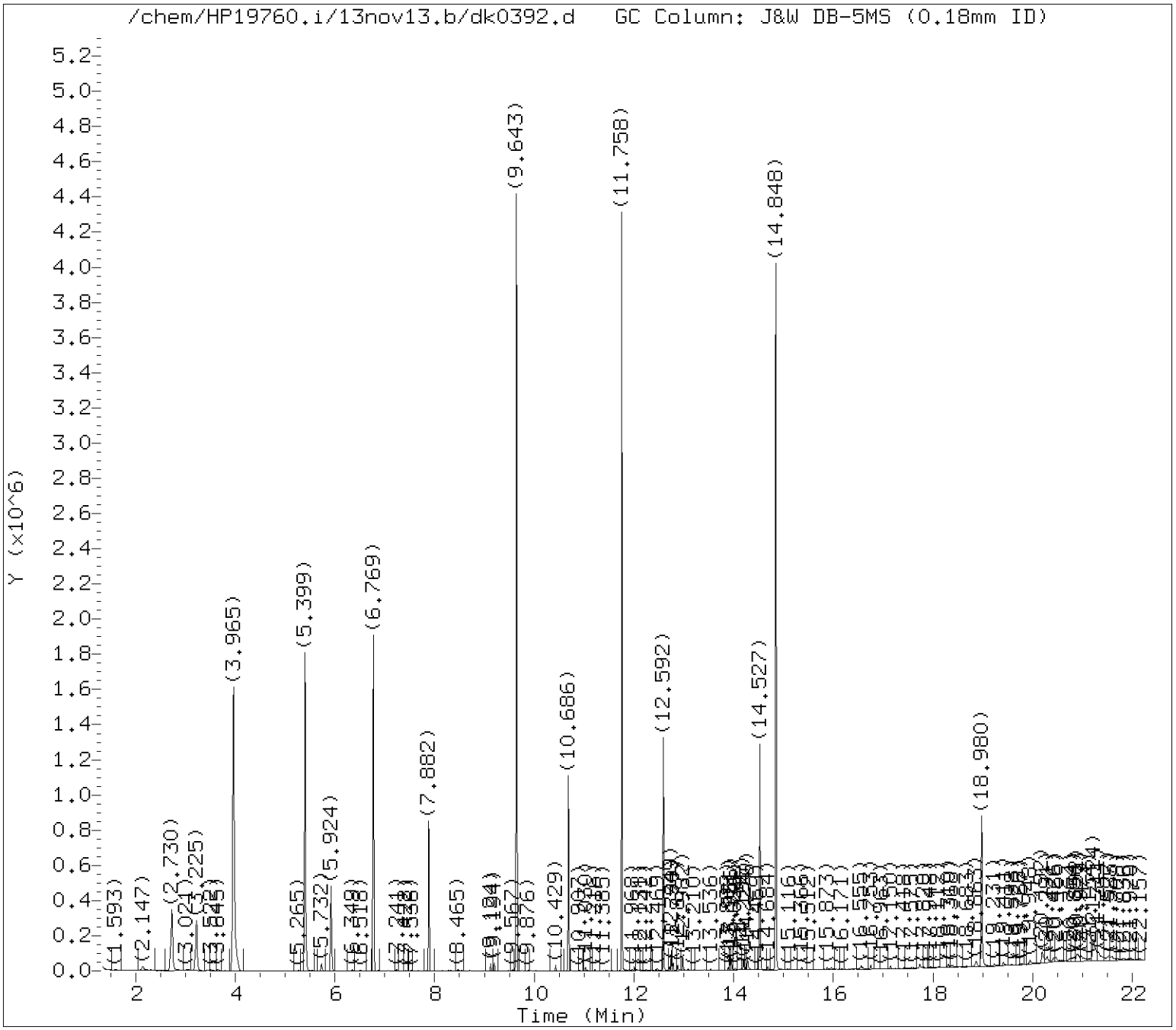
FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

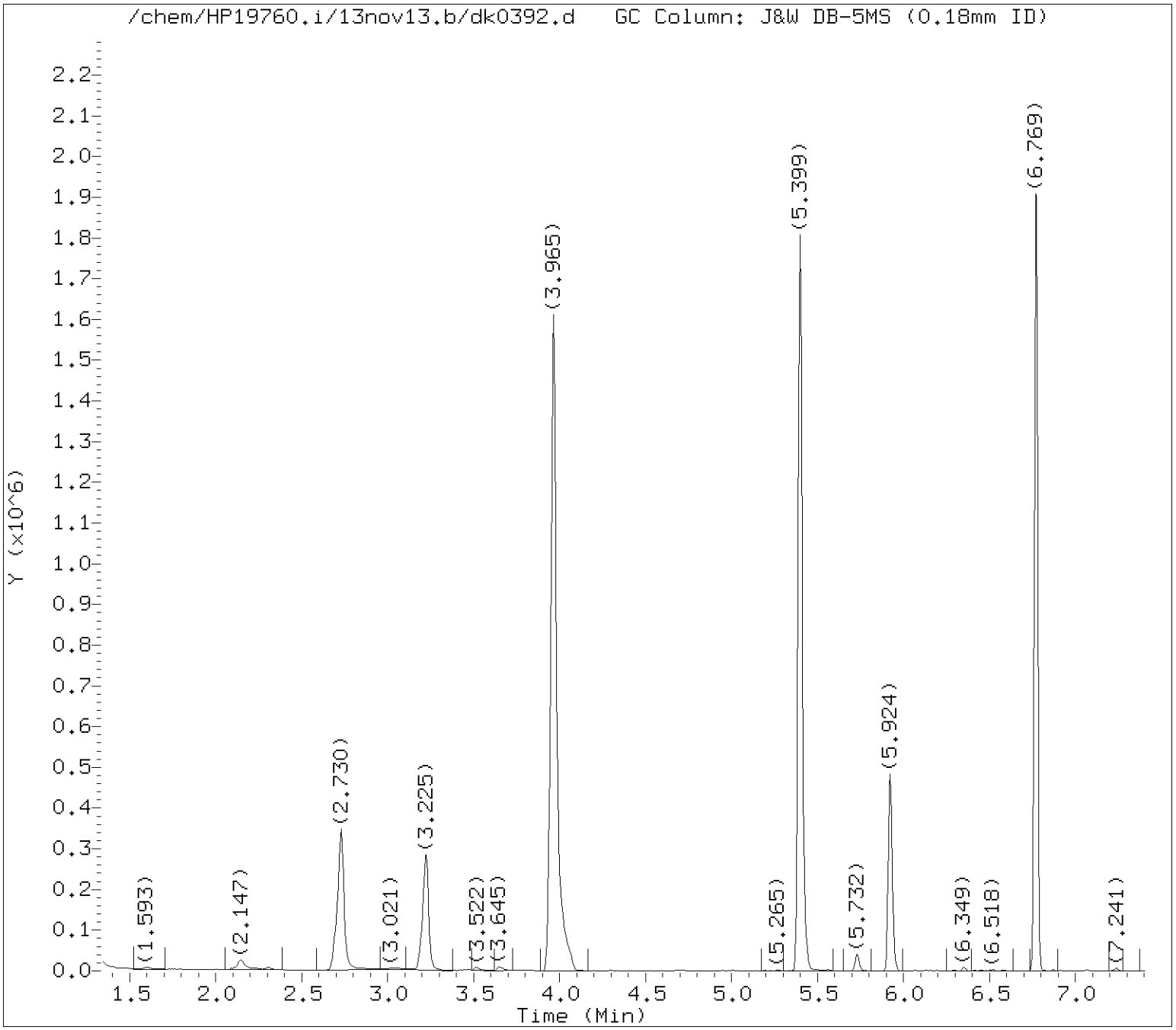
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

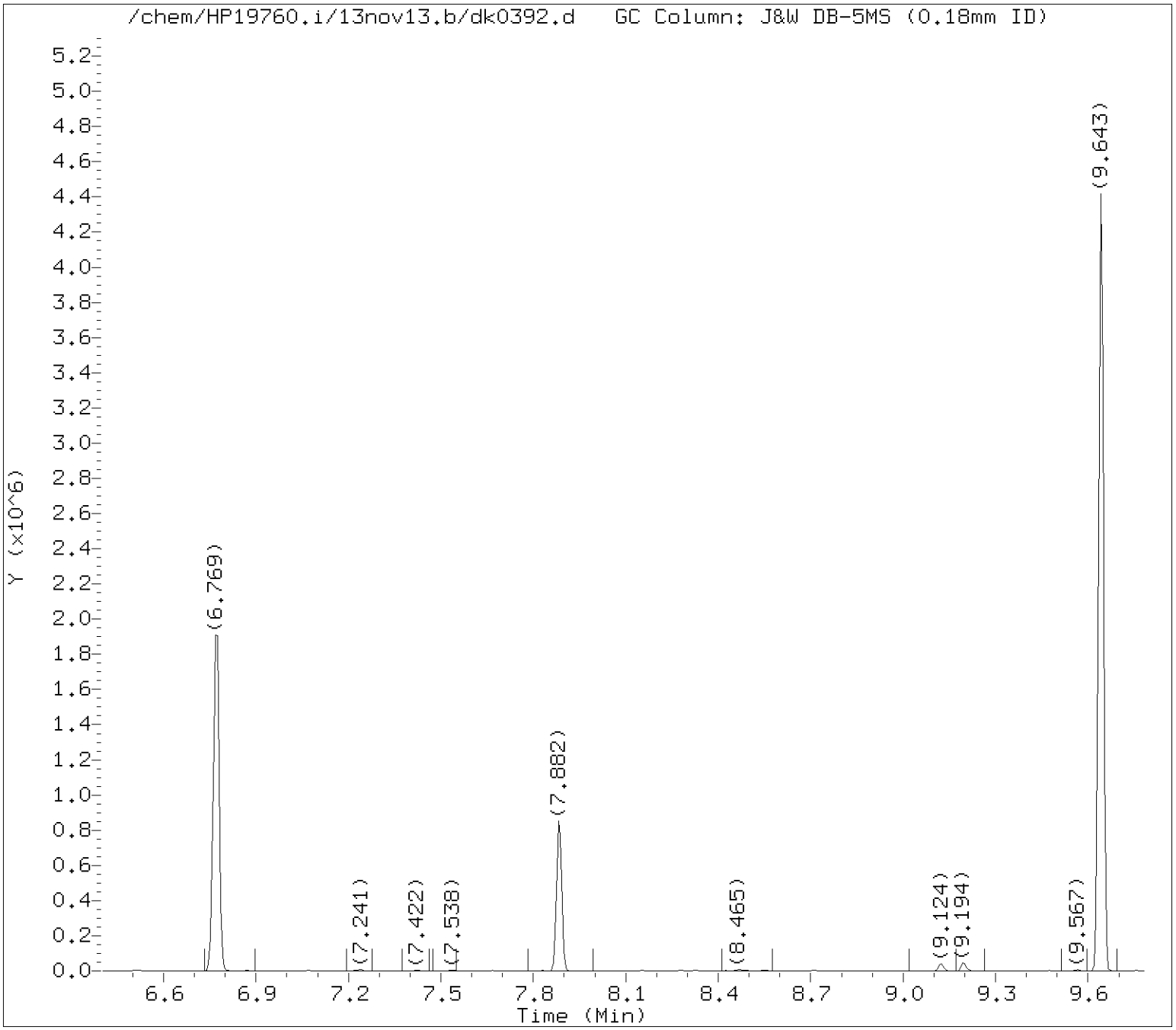
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

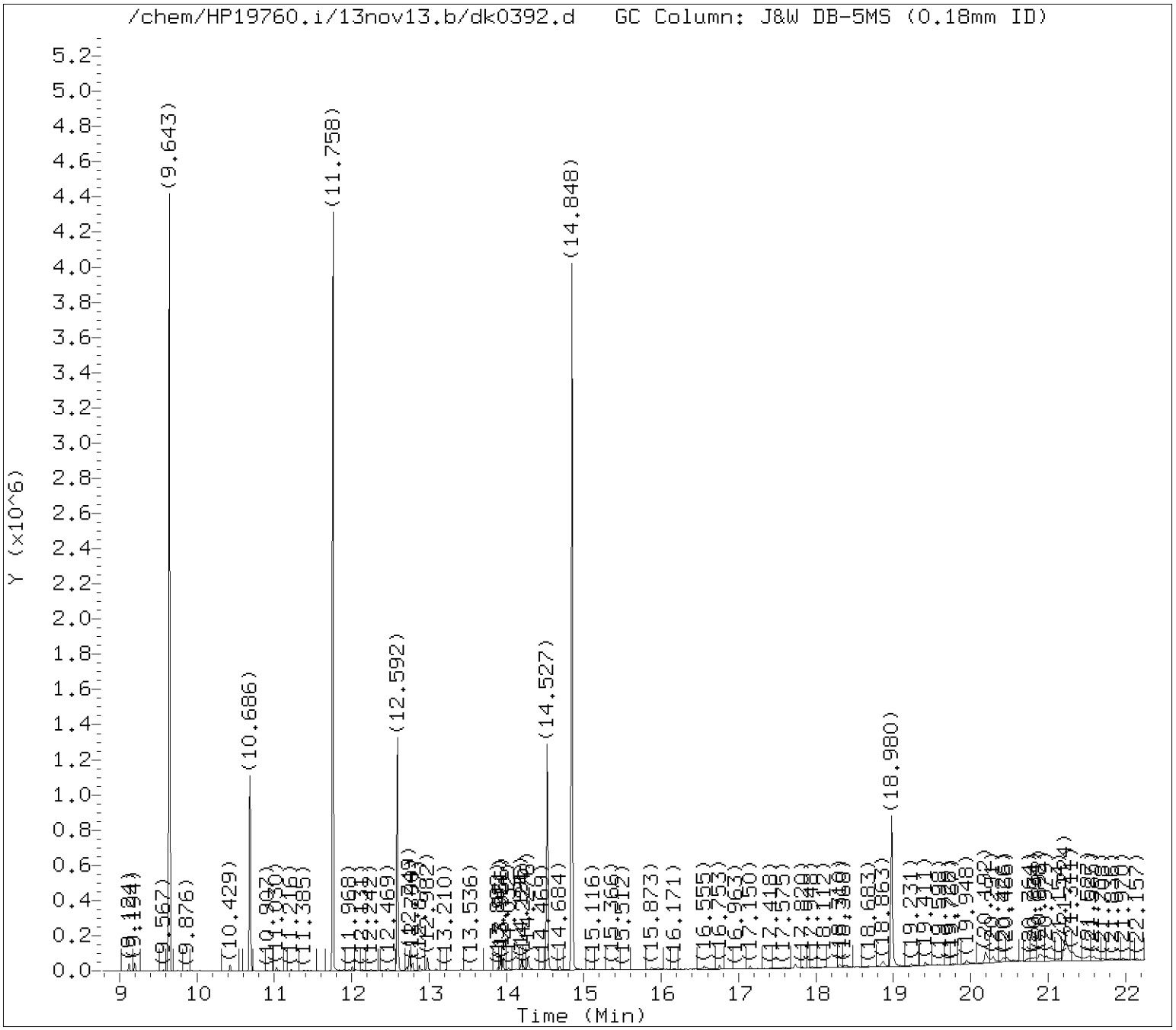
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

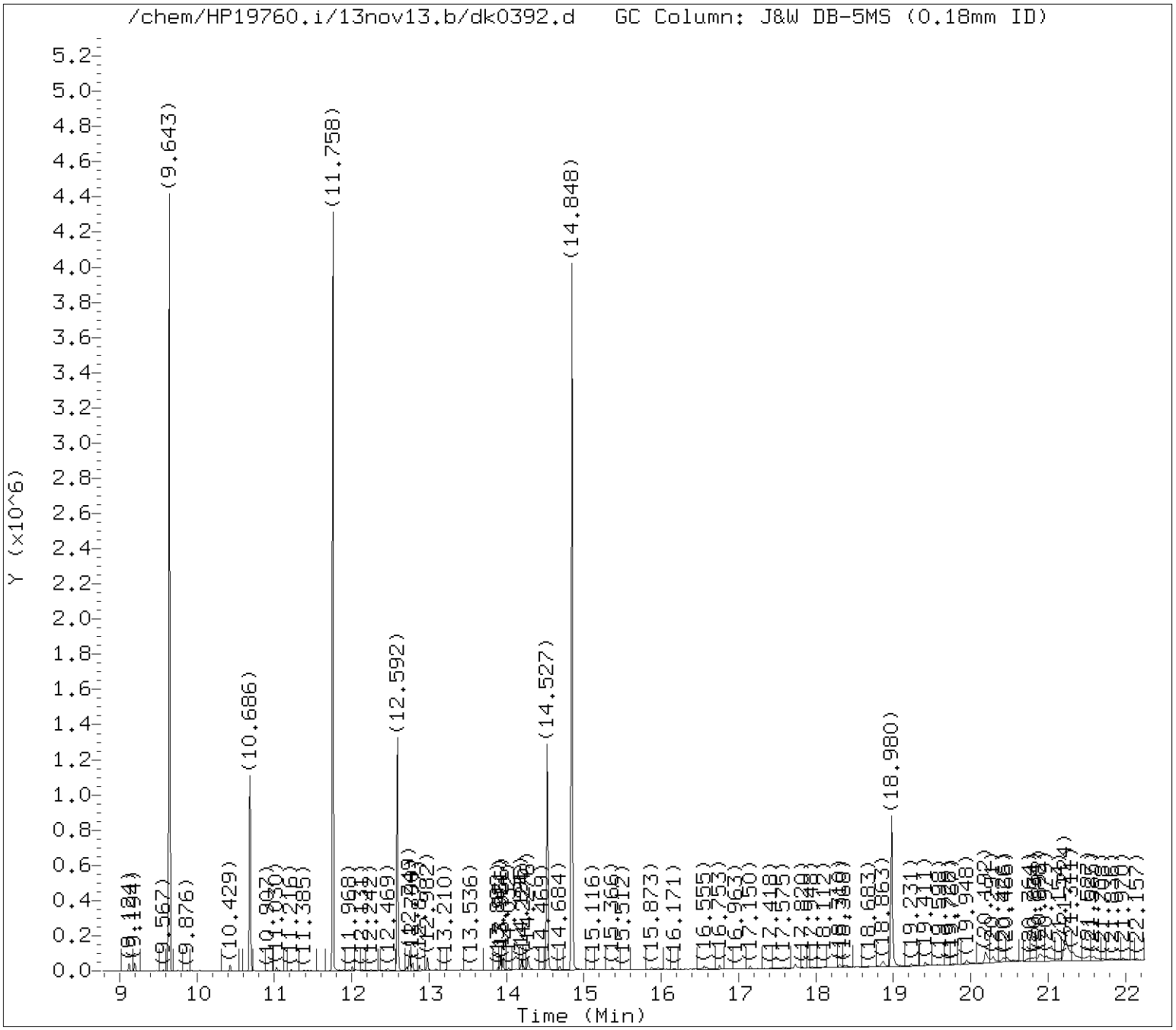
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

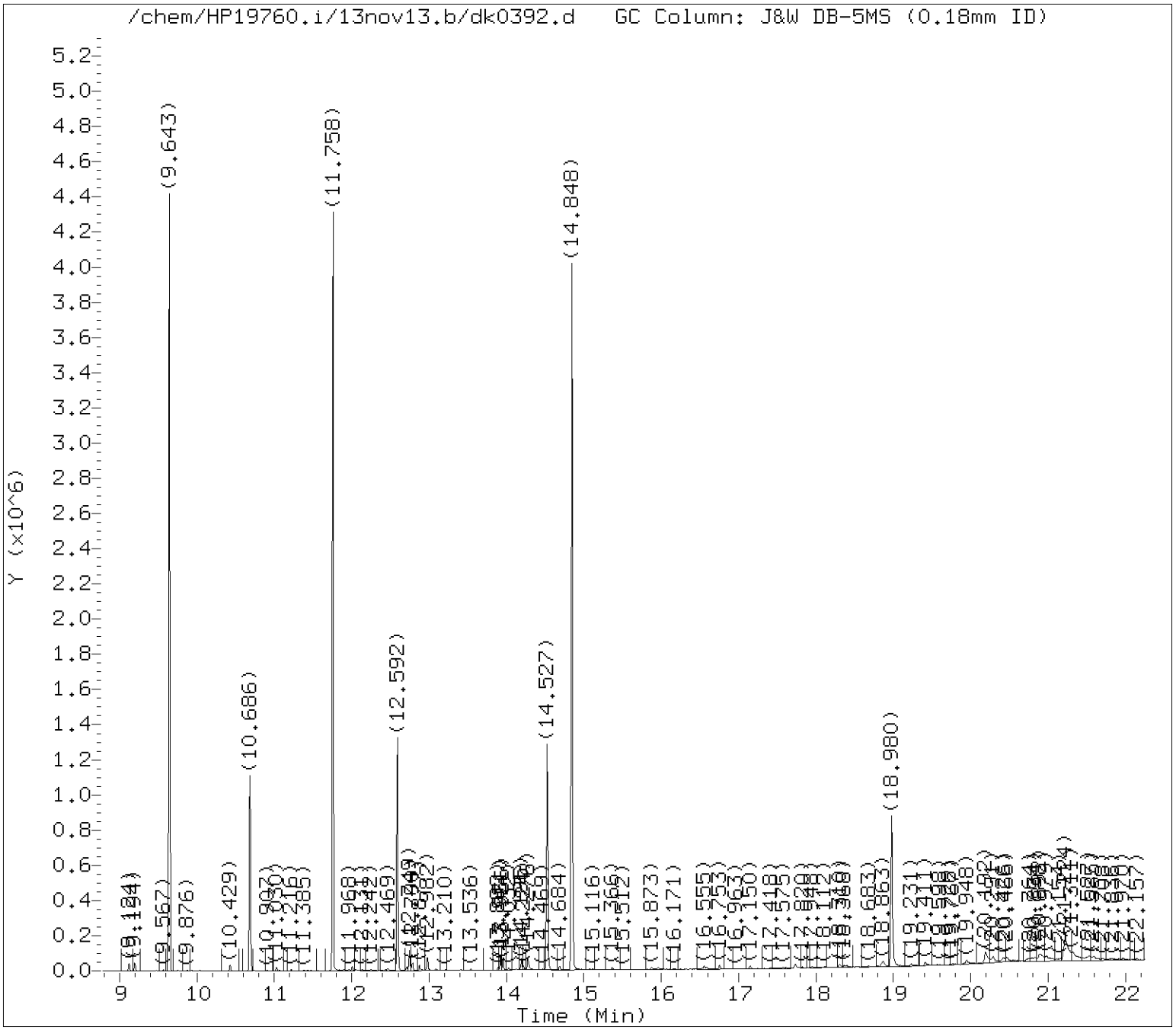
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.559

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

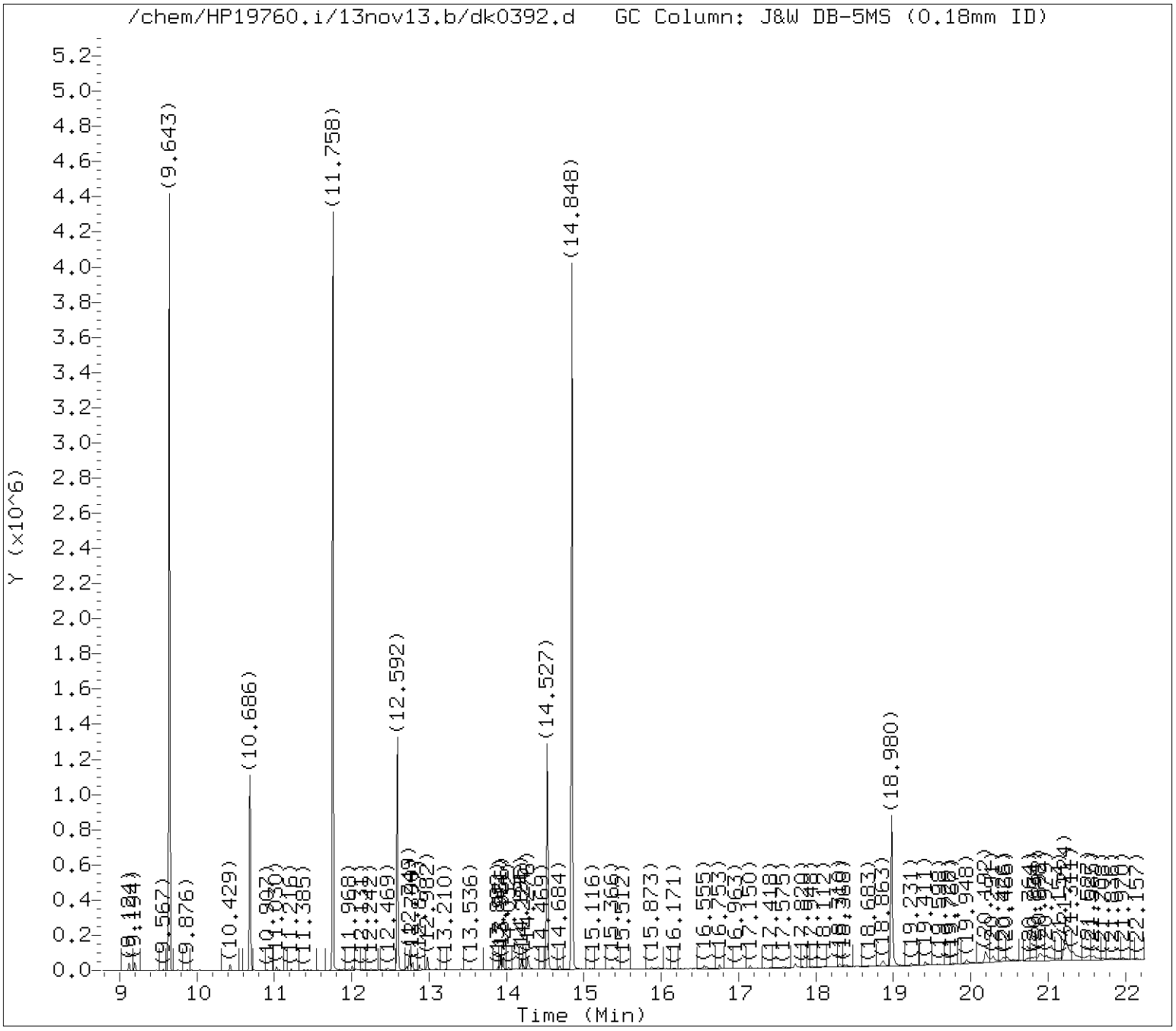
Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.559
Chromatogram End Time (min.): 16.753

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0392.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:57 ceb05247

Sample Name: 2B151 Lab Sample ID: 7266807

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.753
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0392.d
Lab Smp Id: 7266807 Client Smp ID: 2B151
Inj Date : 13-NOV-2013 10:18
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : 2B151;7266807;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;231;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 3 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	231.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.924	798372	5.000
* 172 Perylene-d12	18.980	1370501	5.000

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
1-Octen-4-ol					CAS #: 40575-42-6		
2.730	972332	6.08946774	26.36133	40	NIST98.l	22444	19
1-Butene, 3,3-dimethyl-					CAS #: 558-37-2		
3.225	715114	4.47857653	19.38777	40	NIST98.l	2451	19

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Stigmasterol, 22,23-dihydro-					CAS #: 1000214-20-7		
21.224	555796	2.02771003	8.77796	86	NIST98.l	5163	172

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0392.d

Date : 13-NOV-2013 10:18

Client ID: 2B151

Instrument: HP19760.i

Sample Info: 2B151;7266807;1;0;SAMPLE;;;

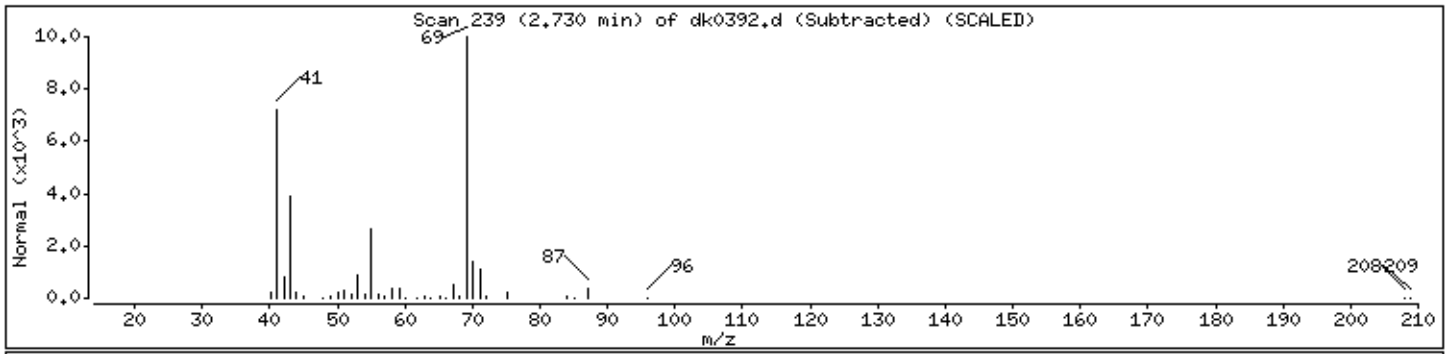
Volume Injected (uL): 0.5

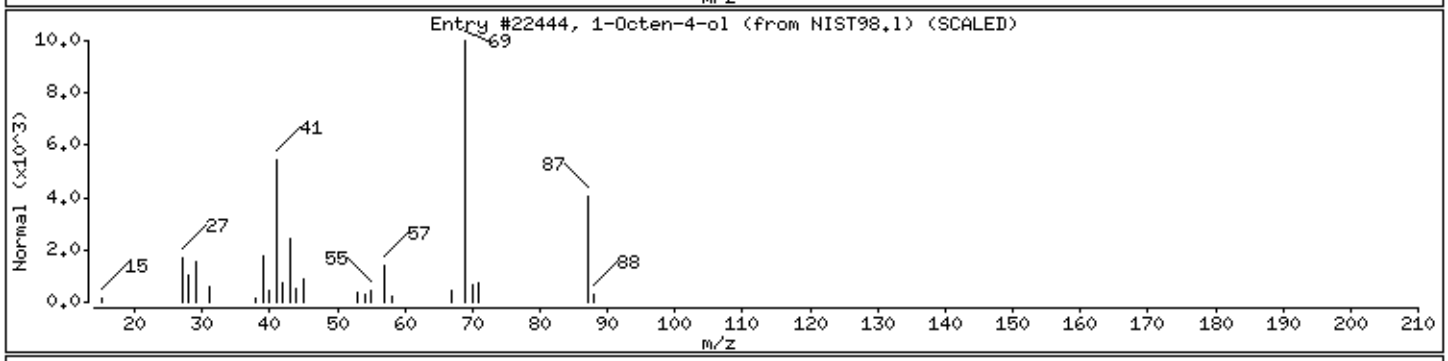
Operator: jmg00346

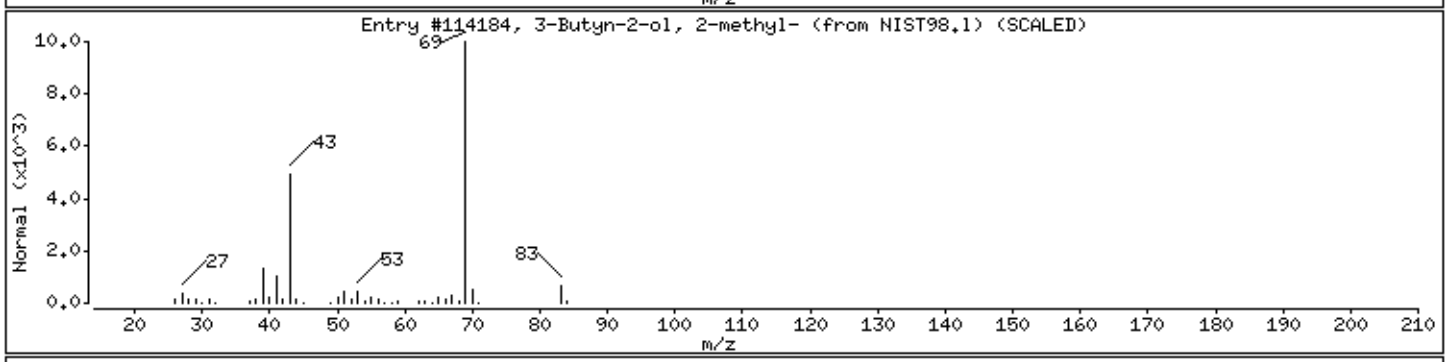
Column phase: J&W DB-5MS

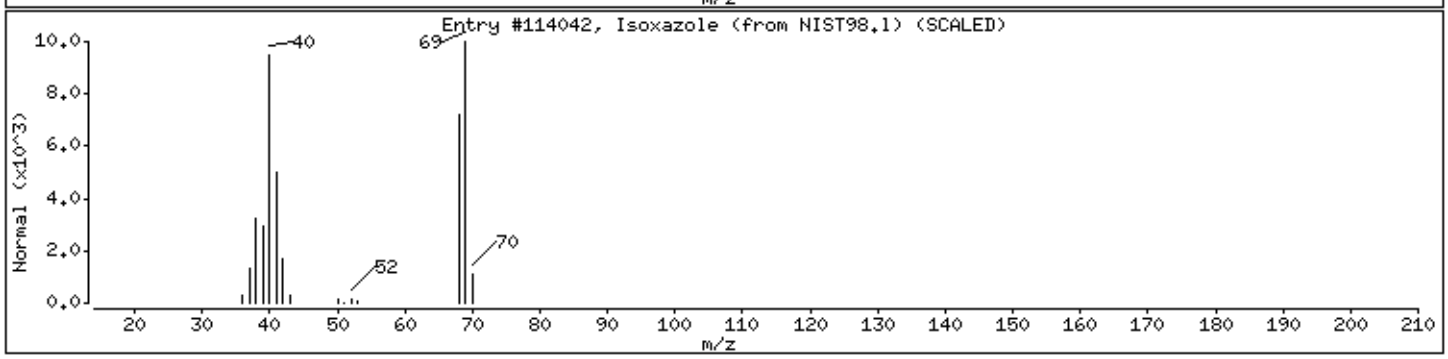
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Octen-4-ol	40575-42-6	NIST98.1	22444	40	C8H16O	128
3-Butyn-2-ol, 2-methyl-	115-19-5	NIST98.1	114184	36	C5H8O	84
Isoxazole	288-14-2	NIST98.1	114042	9	C3H3NO	69









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0392.d

Date : 13-NOV-2013 10:18

Client ID: 2B151

Instrument: HP19760.i

Sample Info: 2B151;7266807;1;0;SAMPLE;;;

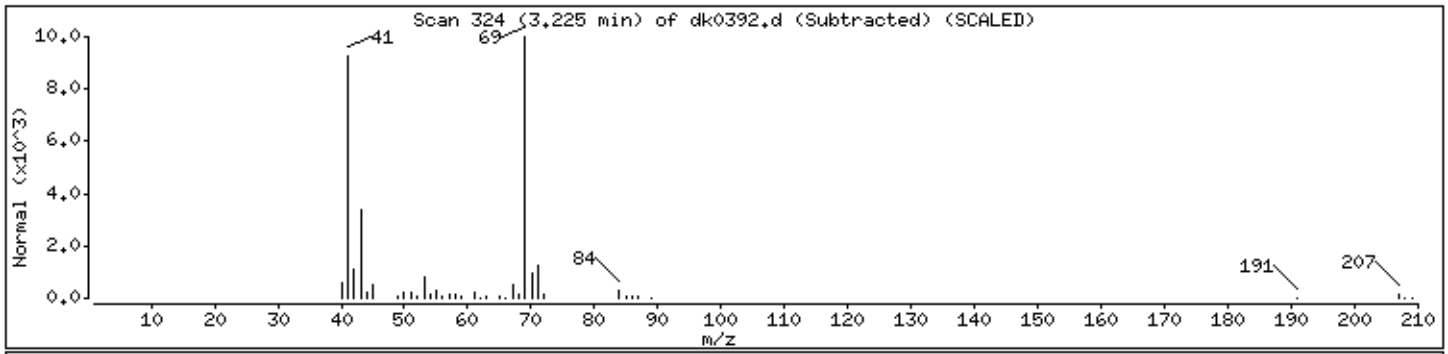
Volume Injected (uL): 0.5

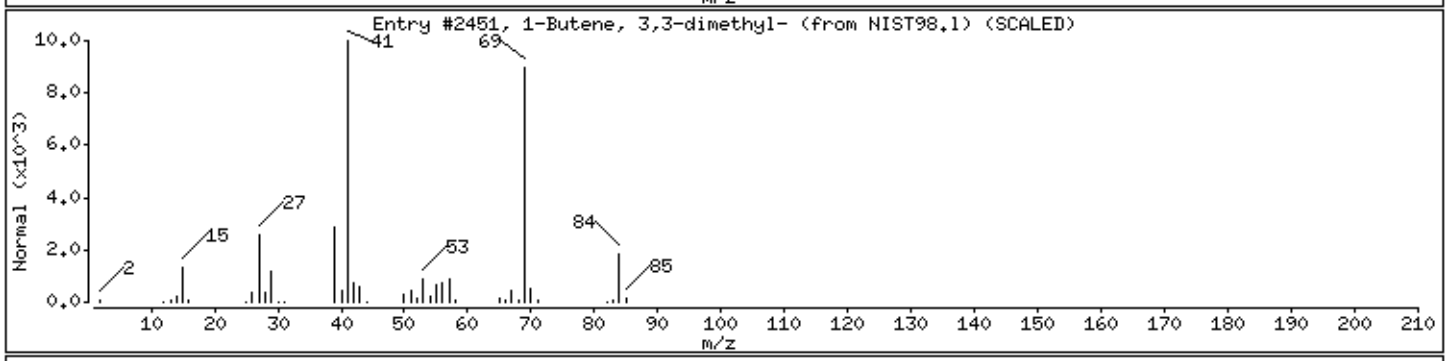
Operator: jmg00346

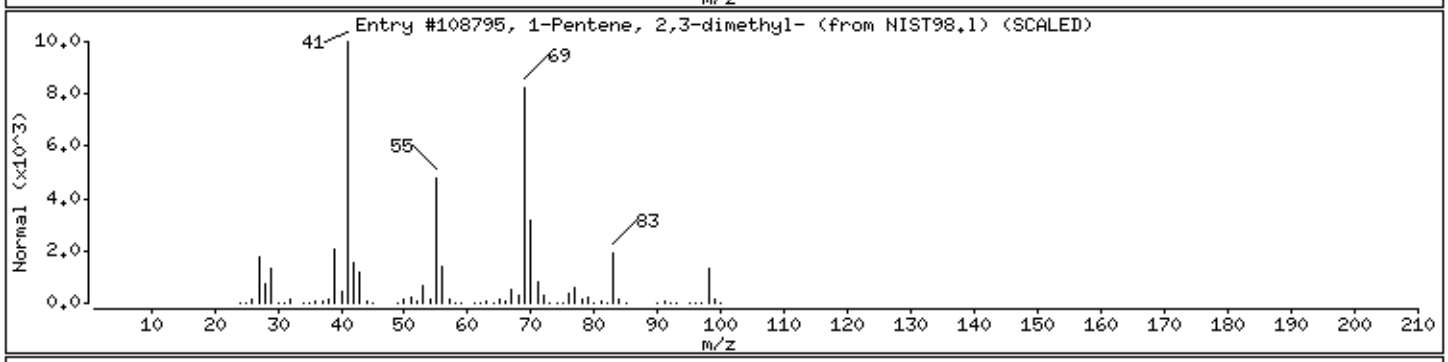
Column phase: J&W DB-5MS

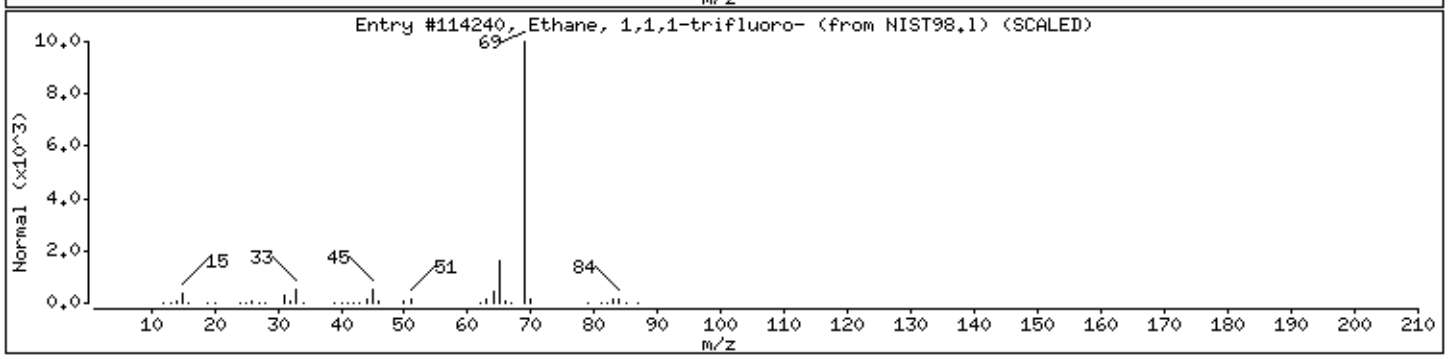
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
1-Butene, 3,3-dimethyl-	558-37-2	NIST98.l	2451	40	C6H12	84
1-Pentene, 2,3-dimethyl-	3404-72-6	NIST98.l	108795	39	C7H14	98
Ethane, 1,1,1-trifluoro-	420-46-2	NIST98.l	114240	37	C2H3F3	84









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0392.d

Date : 13-NOV-2013 10:18

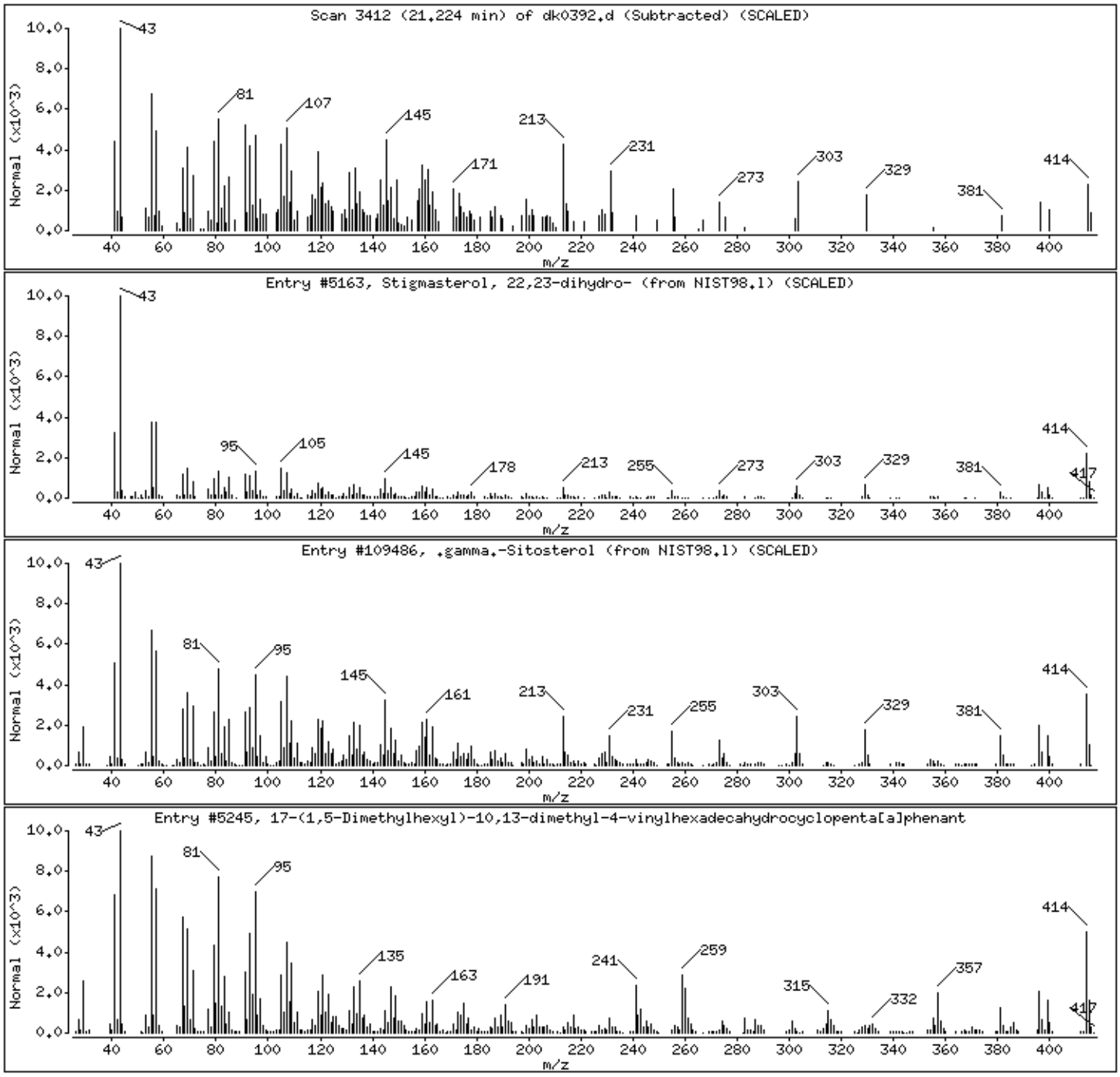
Client ID: 2B151 Instrument: HP19760.i

Sample Info: 2B151;7266807;1;0;SAMPLE;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Stigmasterol, 22,23-dihydro-	1000214-20-7	NIST98.1	5163	86	C29H50O	414
.gamma.-Sitosterol	83-47-6	NIST98.1	109486	68	C29H50O	414
17-(1,5-Dimethylhexyl)-10,13-dimethyl-4-	1000210-86-9	NIST98.1	5245	46	C29H50O	414



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0688.d
Injection date and time: **15-NOV-2013 23:08**
Data file Sample Info. Line: 2C151;7266808;2;0;SAMPLE;;;
Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	140914 (-39)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	668852 (-35)	20.00	
99) Acenaphthene-d10	7.461(0.000)	1033	164	427010 (-35)	20.00	
148) Phenanthrene-d10	8.669(0.000)	1235	188	728622 (-34)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	784704 (-34)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	522073 (-35)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	249724	16.025	80%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.916(0.001)	172	475618	19.488	97%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	514179	18.385	92%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)			Not Detected					0.1
72) 2-Methylnaphthalene	(2)			Not Detected					0.1
75) 1-Methylnaphthalene	(2)			Not Detected					0.1
96) Acenaphthylene	(3)			Not Detected					0.1
100) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
149) Phenanthrene	(4)	8.687(-0.000)	178	4372	0.106	106.14			0.1
150) Anthracene	(4)			Not Detected					0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	7769	0.180	180.50			0.1
166) Pyrene	(5)	9.830(0.000)	202	9016	0.210	210.42			0.1
178) Benzo(a)anthracene	(5)			Not Detected					0.1
180) Chrysene	(5)	10.841(0.000)	228	3964	0.111	110.51			0.1
186) Benzo(b)fluoranthene	(6)	11.828(0.000)	252	3963M	0.121	121.09			0.1
187) Benzo(k)fluoranthene	(6)			Not Detected					0.1
189) Benzo(a)pyrene	(6)			Not Detected					0.1
194) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
195) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
196) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Holly Berry on 11/17/2013 at 14:53. Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0688.d Injection date and time: **15-NOV-2013 23:08**
Data file Sample Info. Line: 2C151;7266808;2;0;SAMPLE;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 5 g

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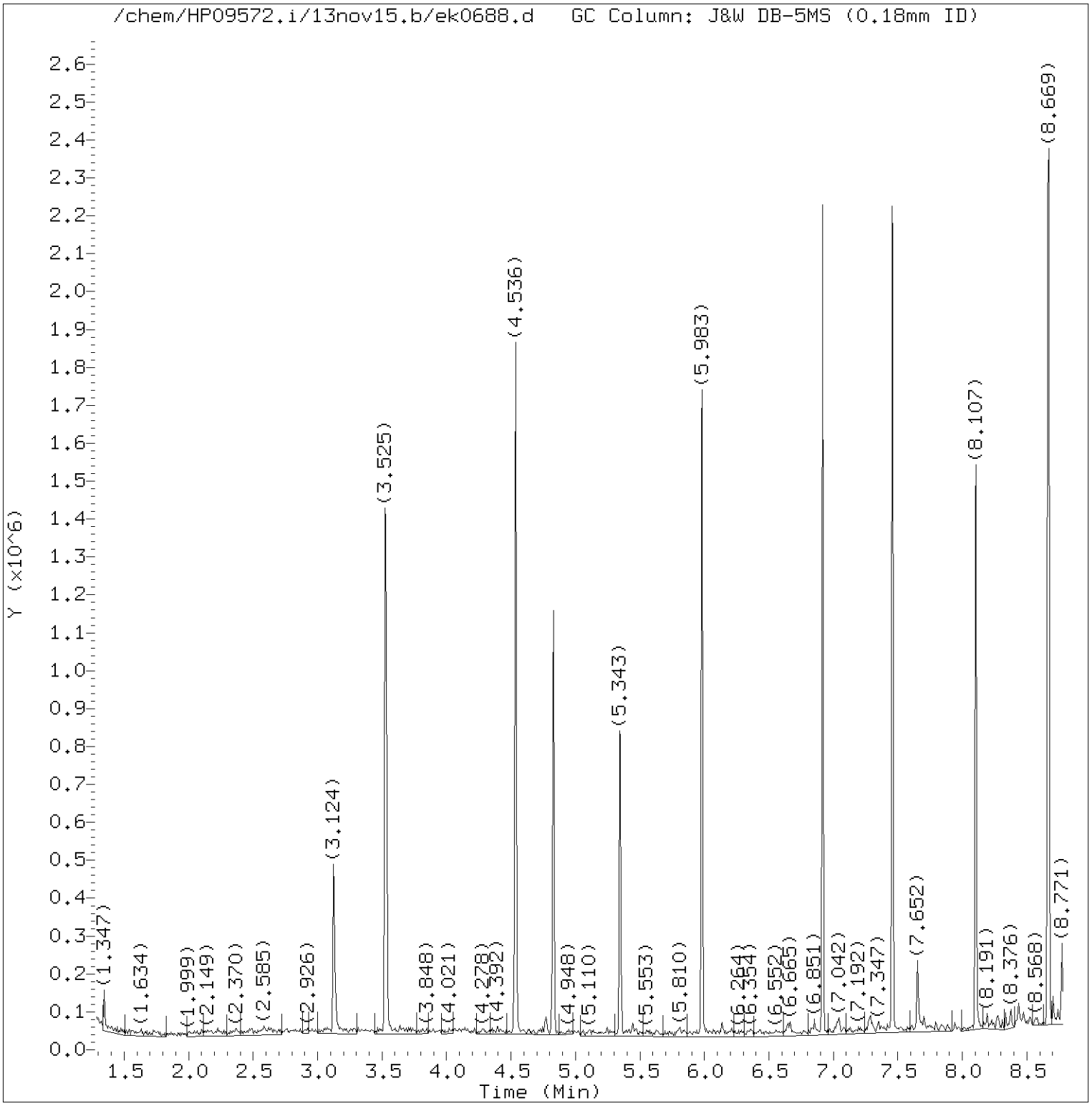
Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:53. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

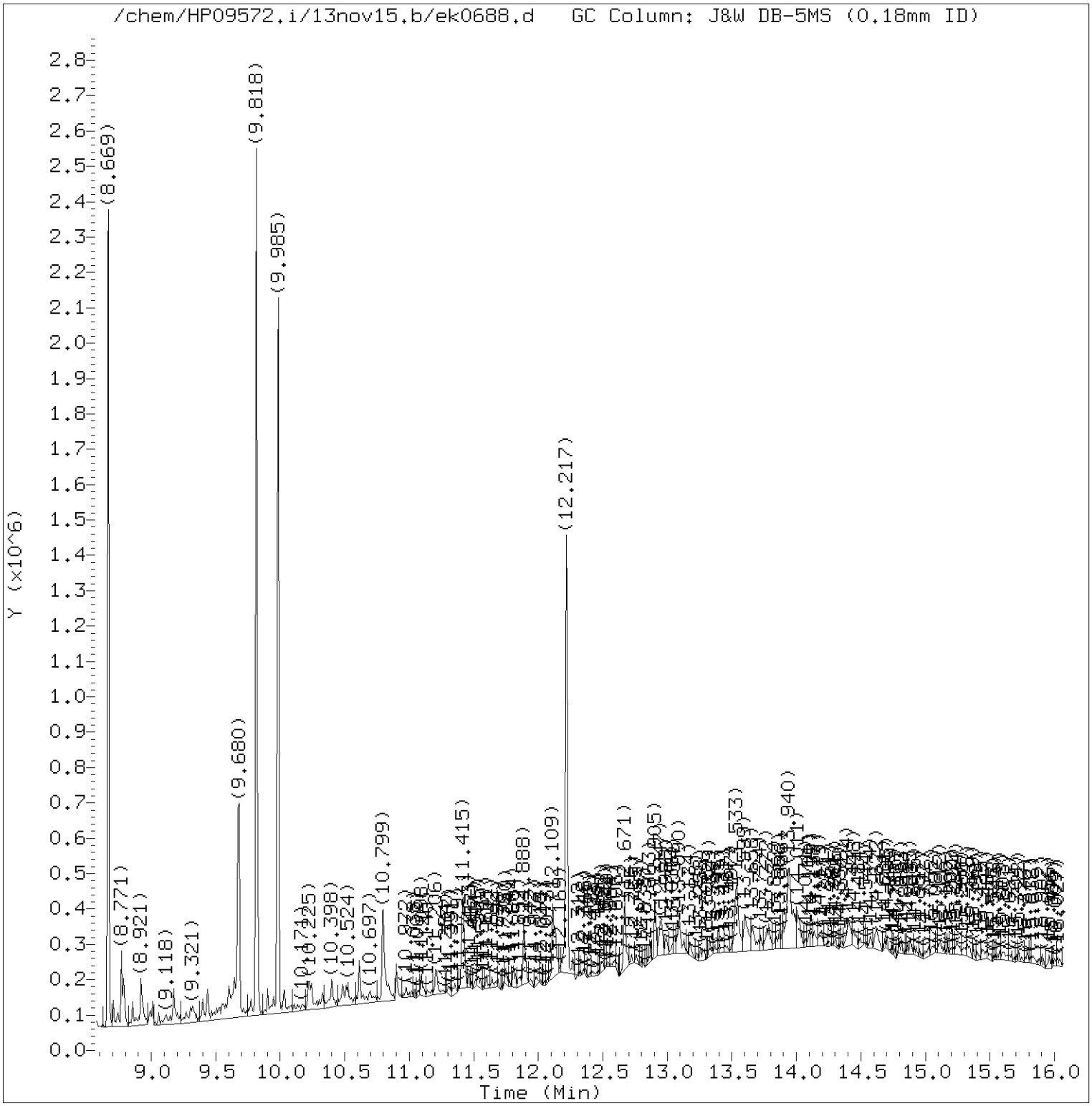
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Sample Name: 2C151 Lab Sample ID: 7266808

Digitally signed by Holly Berry
on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Sample Name: 2C151 Lab Sample ID: 7266808

Digitally signed by Holly Berry
on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

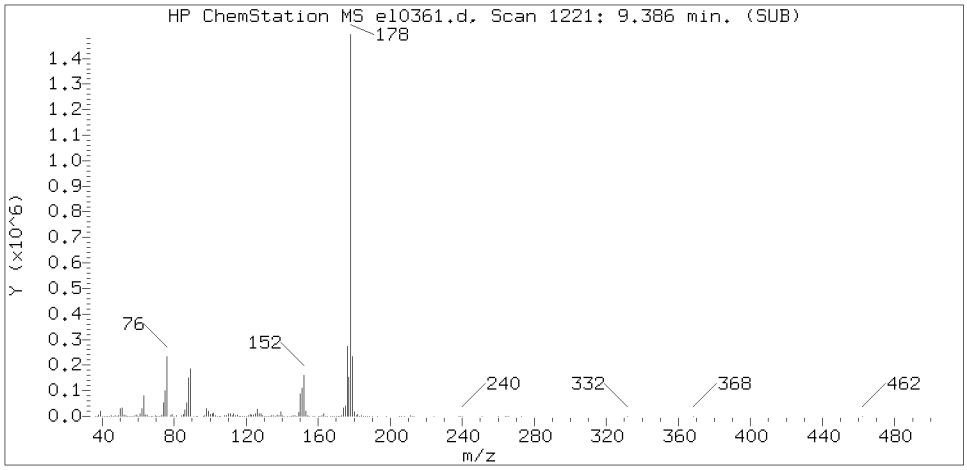
Sample Name: 2C151 Lab Sample ID: 7266808

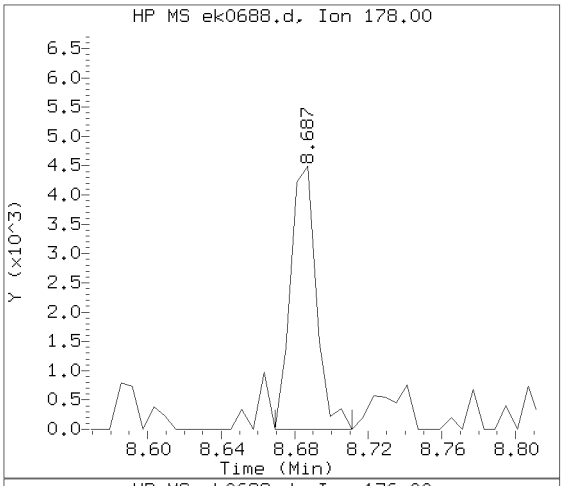
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	140914	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	249724	16.025
60)*Naphthalene-d8	(2)	5.983	136	668852	20.000
81)$2-Fluorobiphenyl	(3)	6.916	172	475618	19.488
99)*Acenaphthene-d10	(3)	7.461	164	427010	20.000
148)*Phenanthrene-d10	(4)	8.669	188	728622	20.000
149) Phenanthrene	(4)	8.687	178	4372	0.106
163) Fluoranthene	(4)	9.650	202	7769	0.180
165)*Pyrene-d10	(5)	9.818	212	784704	20.000
166) Pyrene	(5)	9.830	202	9016	0.210
169)$Terphenyl-d14	(5)	9.985	244	514179	18.385
180) Chrysene	(5)	10.841	228	3964	0.111
186) Benzo(b)fluoranthene	(6)	11.828	252	3963M	0.121
190)*Perylene-d12	(6)	12.217	264	522073	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

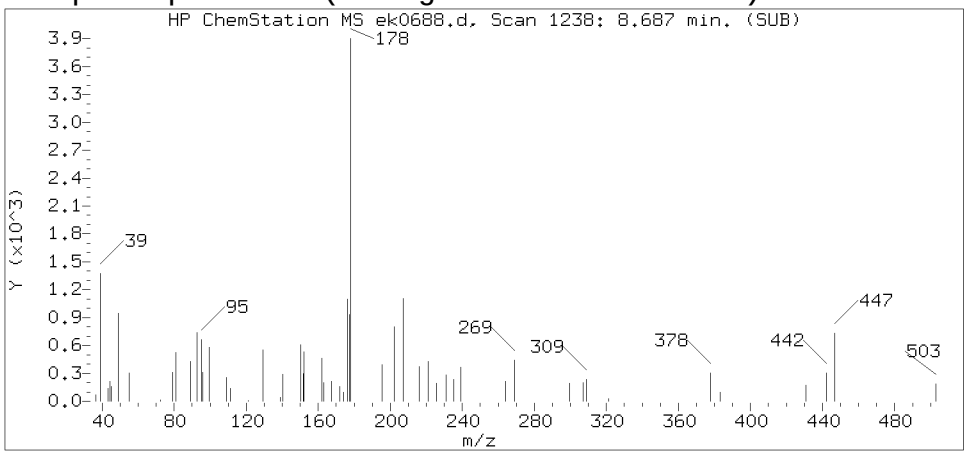
Digitally signed by Holly Berry
on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

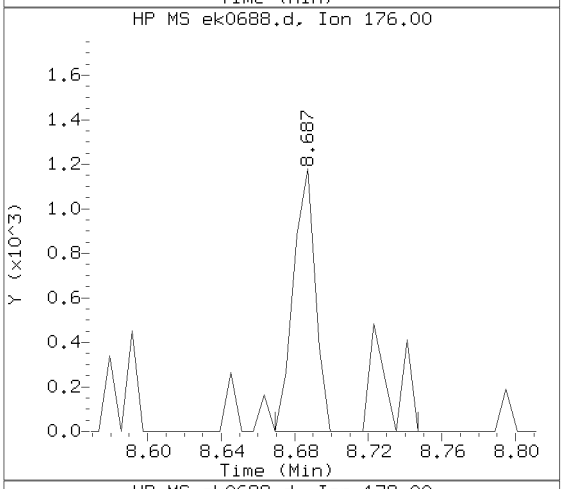
Reference Standard Spectrum for Phenanthrene



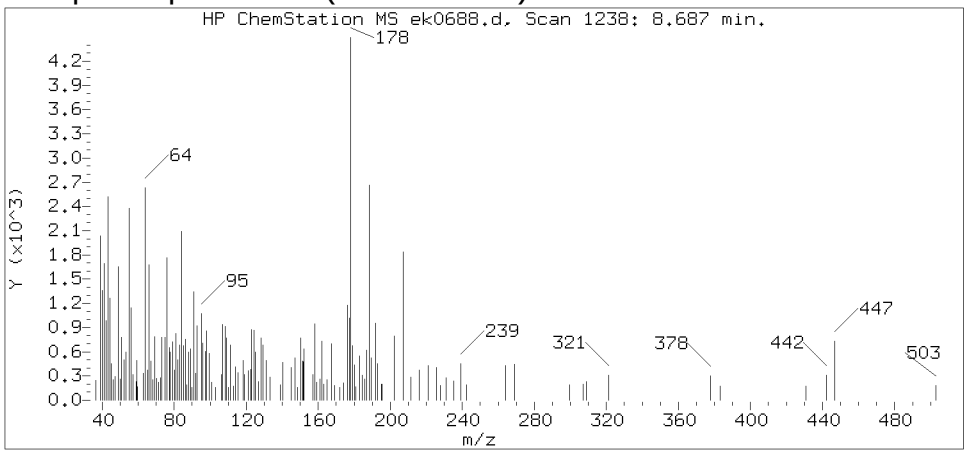


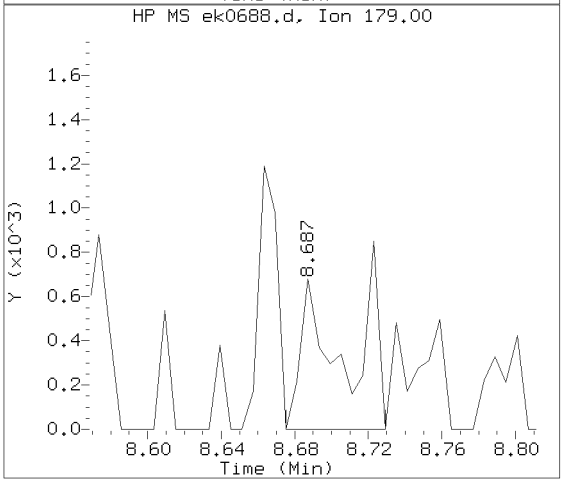
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

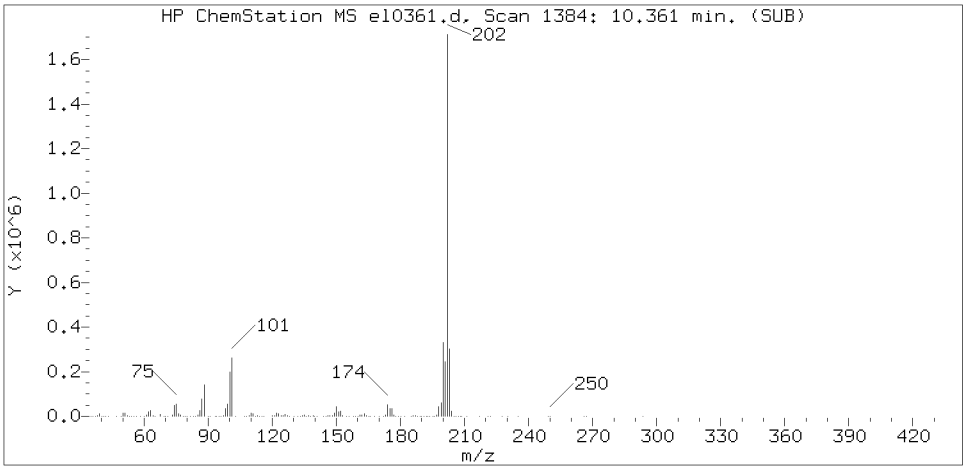
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

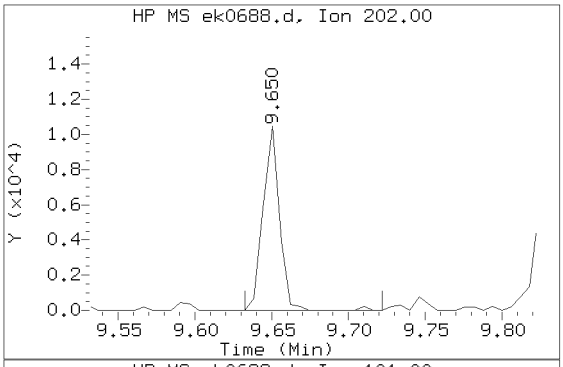
Sample Name: 2C151 Lab Sample ID: 7266808

Compound Number	: 149
Compound Name	: Phenanthrene
Scan Number	: 1238
Retention Time (minutes)	: 8.687
Relative Retention Time	:-0.00000
Quant Ion	: 178.00
Area (flag)	: 4372
On-column Amount (ng/ul)	: 0.1061

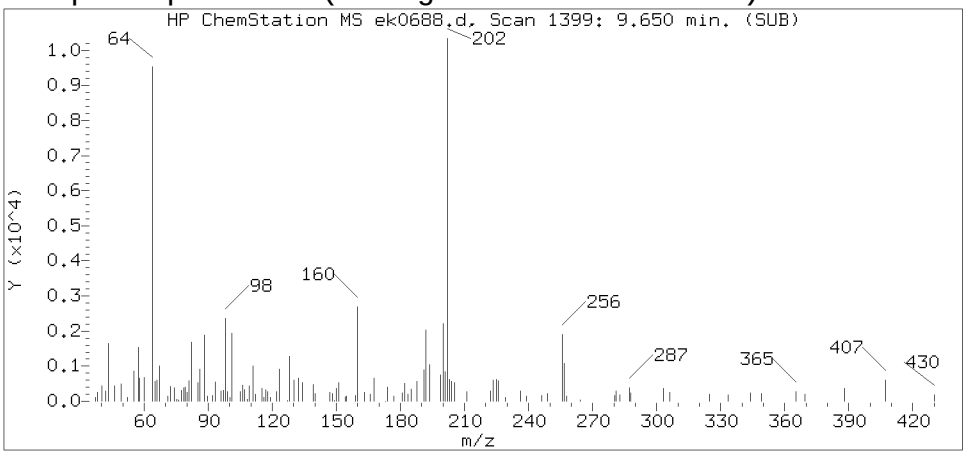
Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

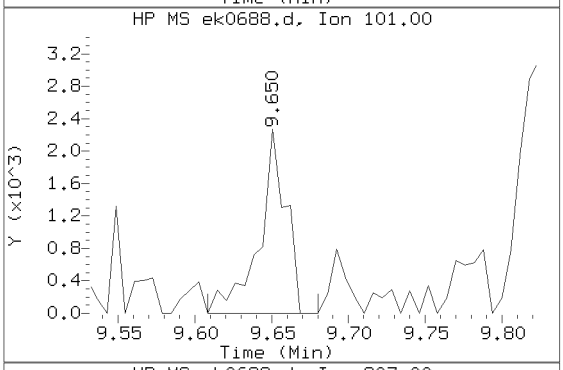
Reference Standard Spectrum for Fluoranthene

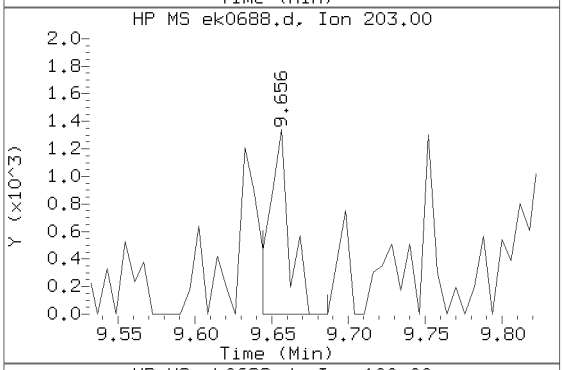




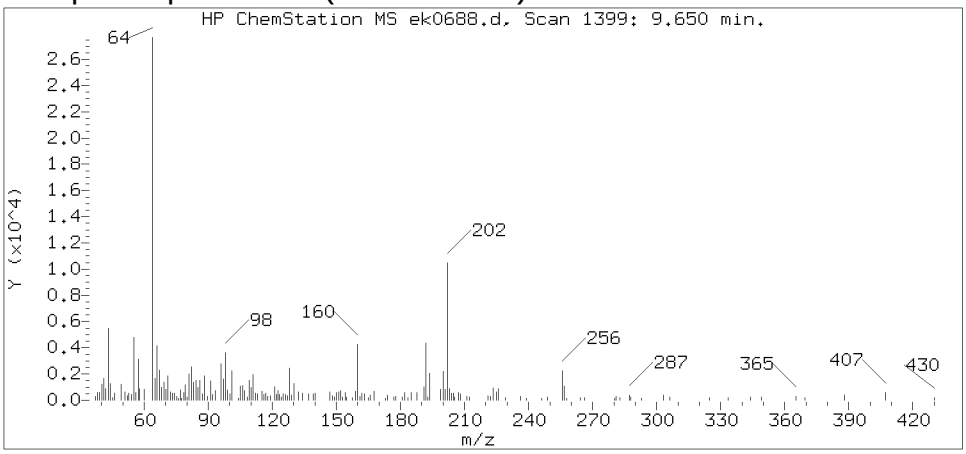
Sample Spectrum (Background Subtracted)

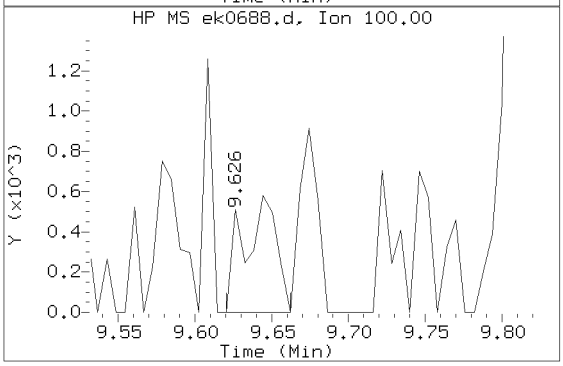






Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

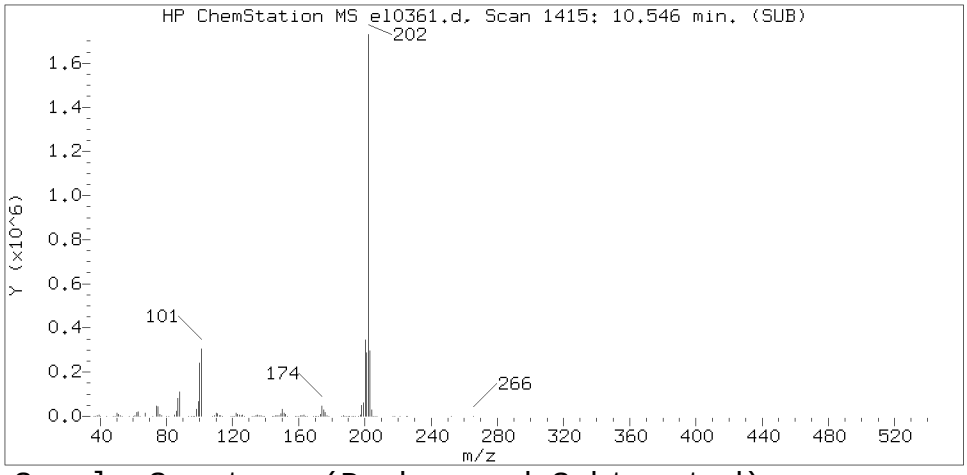
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

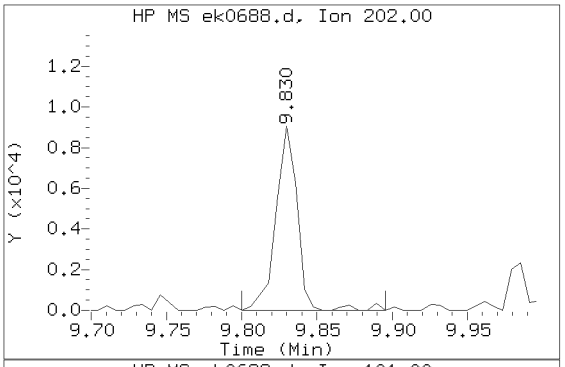
Sample Name: 2C151 Lab Sample ID: 7266808

Compound Number : 163
Compound Name : Fluoranthene
Scan Number : 1399
Retention Time (minutes) : 9.650
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 7769
On-column Amount (ng/ul) : 0.1805

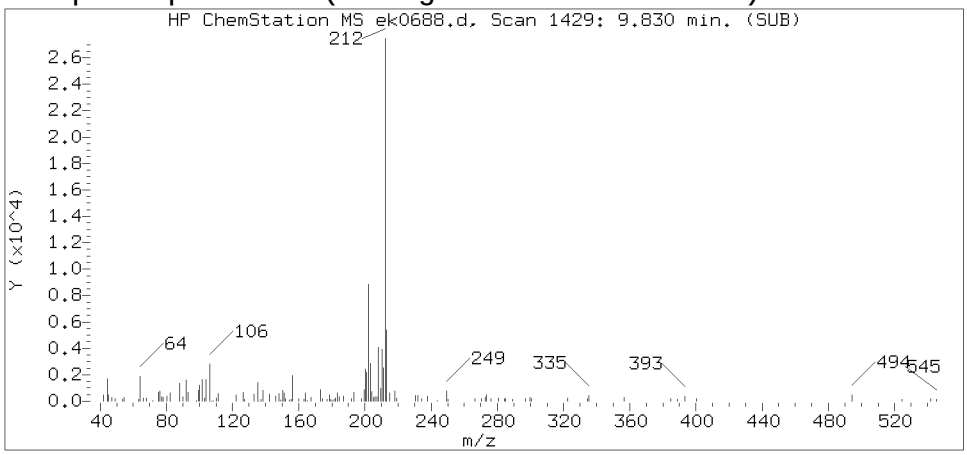
Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

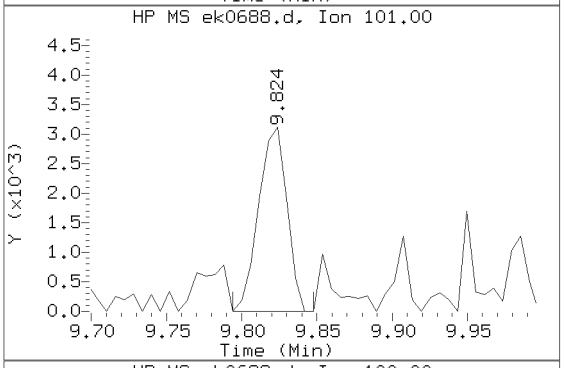
Reference Standard Spectrum for Pyrene

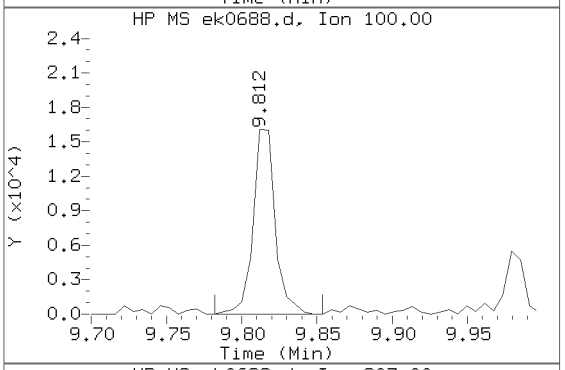




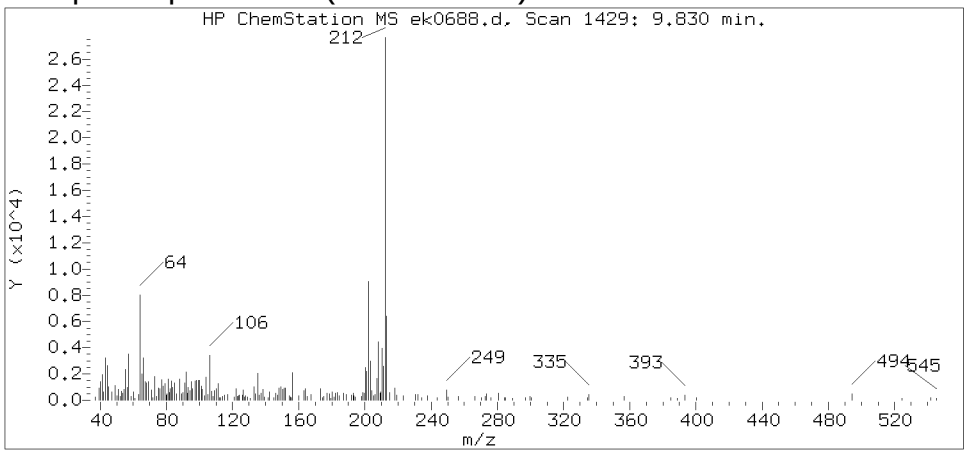
Sample Spectrum (Background Subtracted)

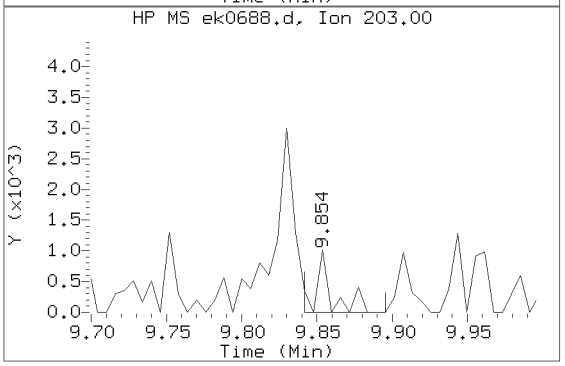






Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

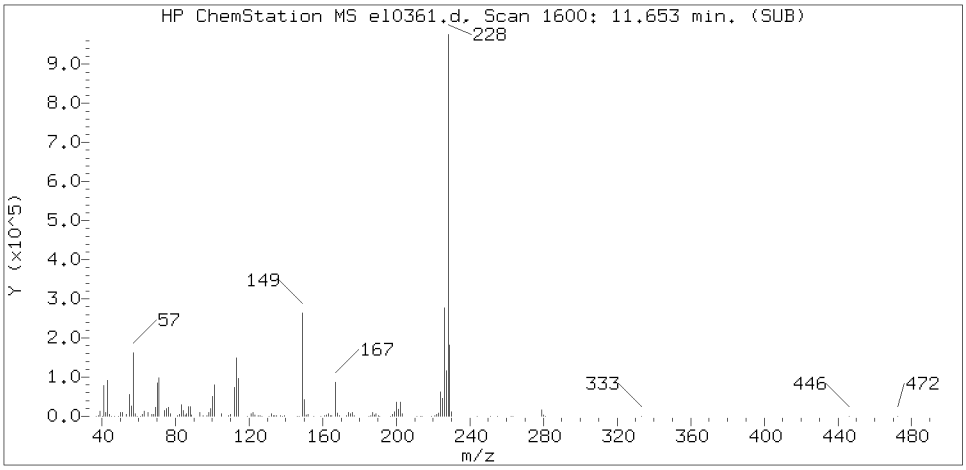
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

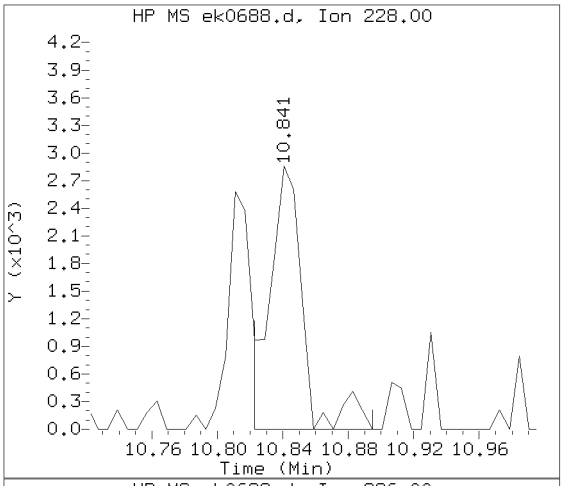
Sample Name: 2C151 Lab Sample ID: 7266808

Compound Number	: 166
Compound Name	: Pyrene
Scan Number	: 1429
Retention Time (minutes)	: 9.830
Relative Retention Time	: 0.00061
Quant Ion	: 202.00
Area (flag)	: 9016
On-column Amount (ng/ul)	: 0.2104

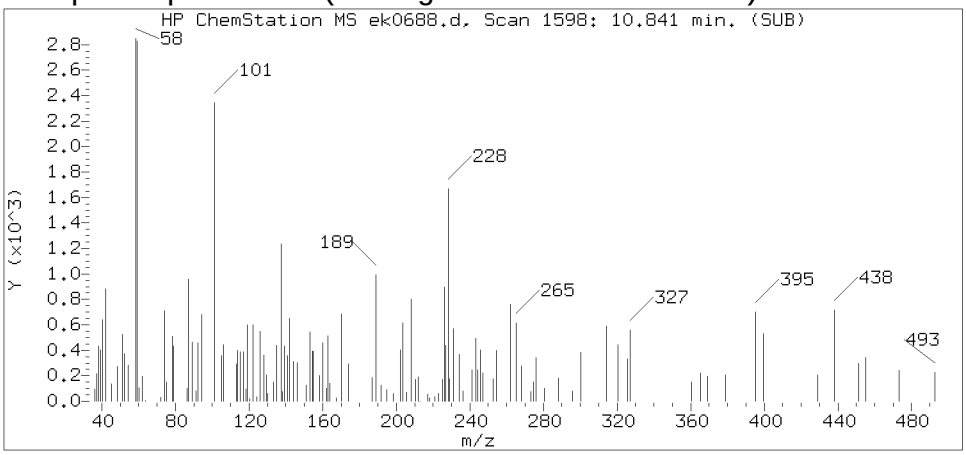
Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

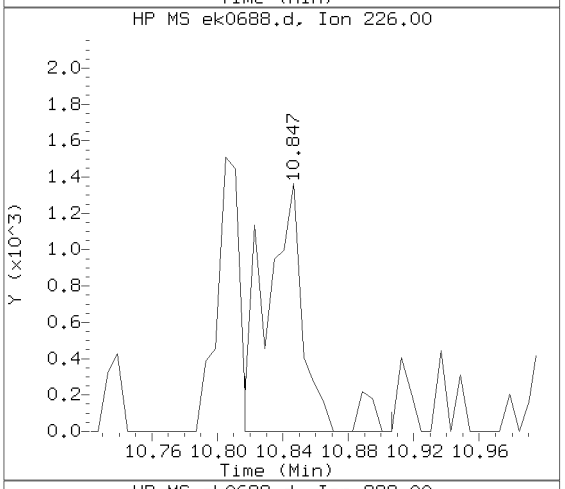
Reference Standard Spectrum for Chrysene



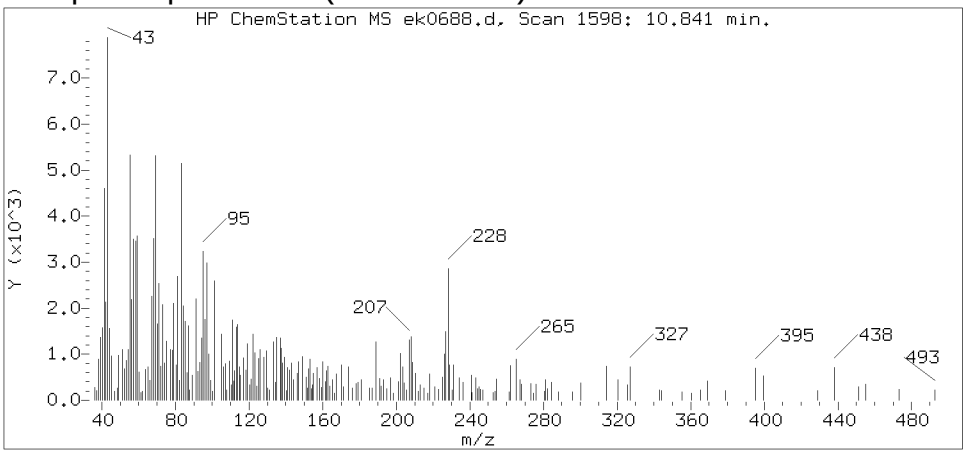


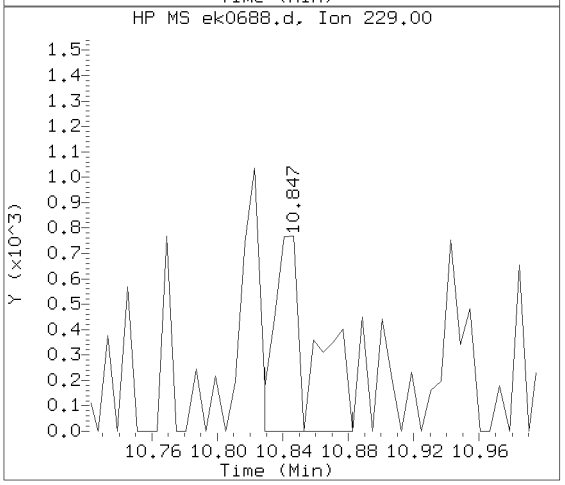
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

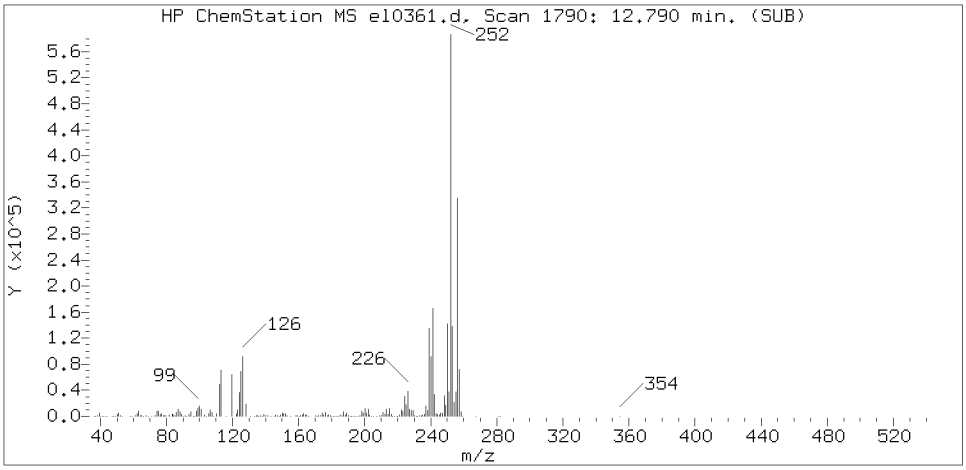
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

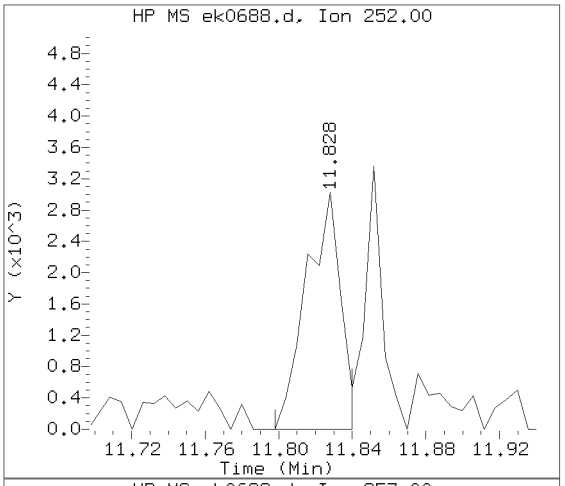
Sample Name: 2C151 Lab Sample ID: 7266808

Compound Number	: 180
Compound Name	: Chrysene
Scan Number	: 1598
Retention Time (minutes)	: 10.841
Relative Retention Time	: 0.00061
Quant Ion	: 228.00
Area (flag)	: 3964
On-column Amount (ng/ul)	: 0.1105

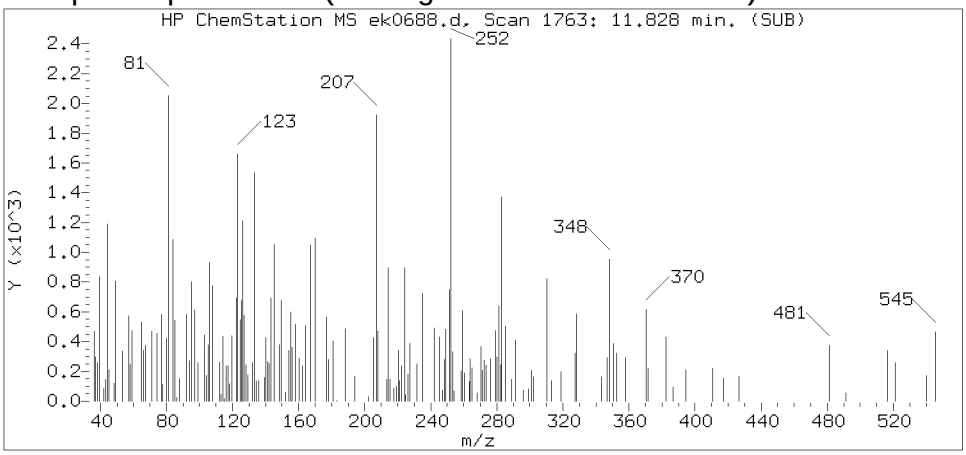
Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

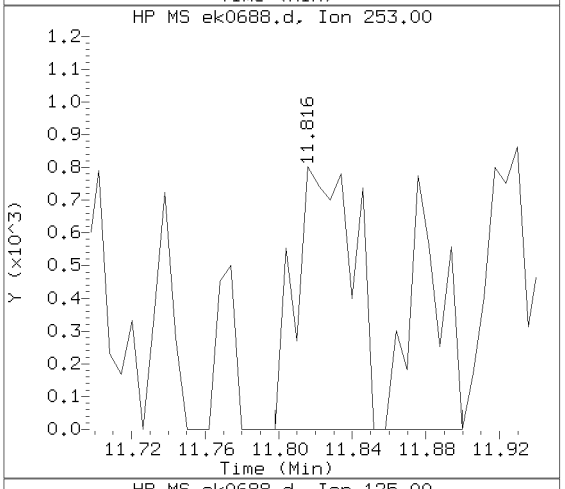
Reference Standard Spectrum for Benzo(b)fluoranthene



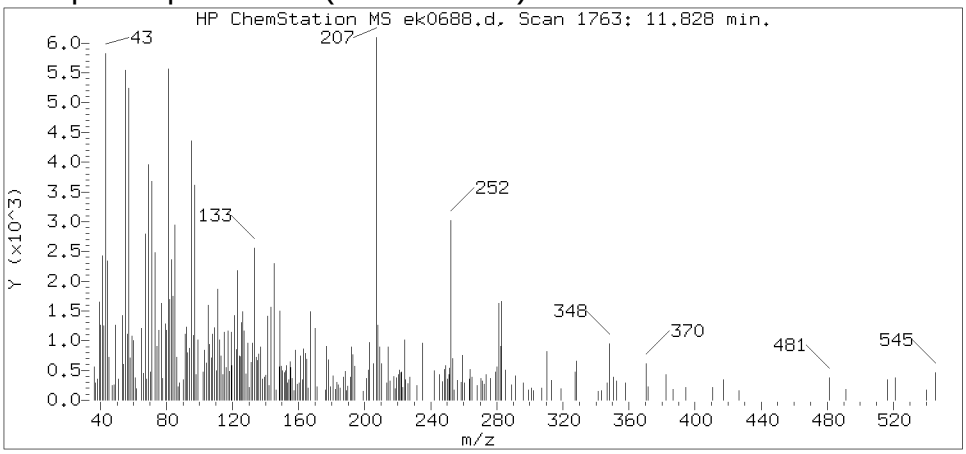


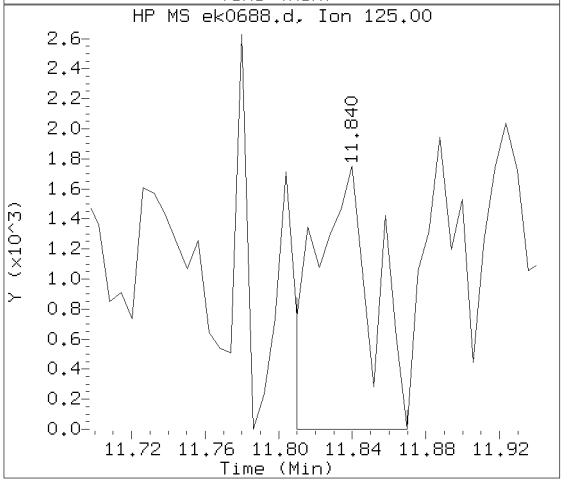
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

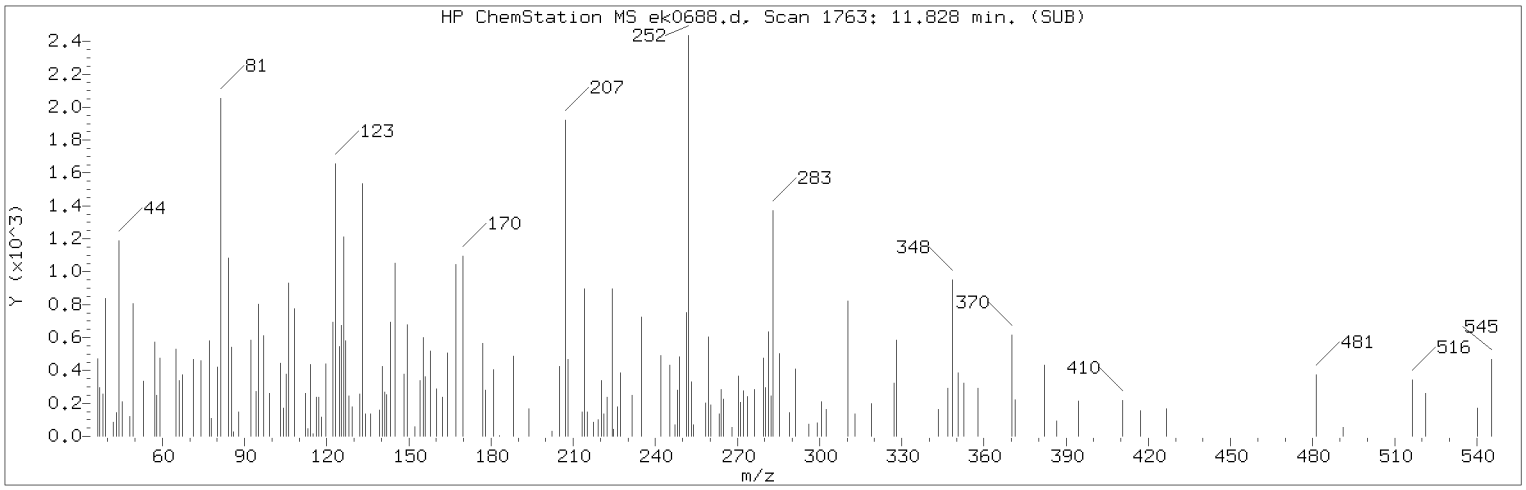
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Sample Name: 2C151 Lab Sample ID: 7266808

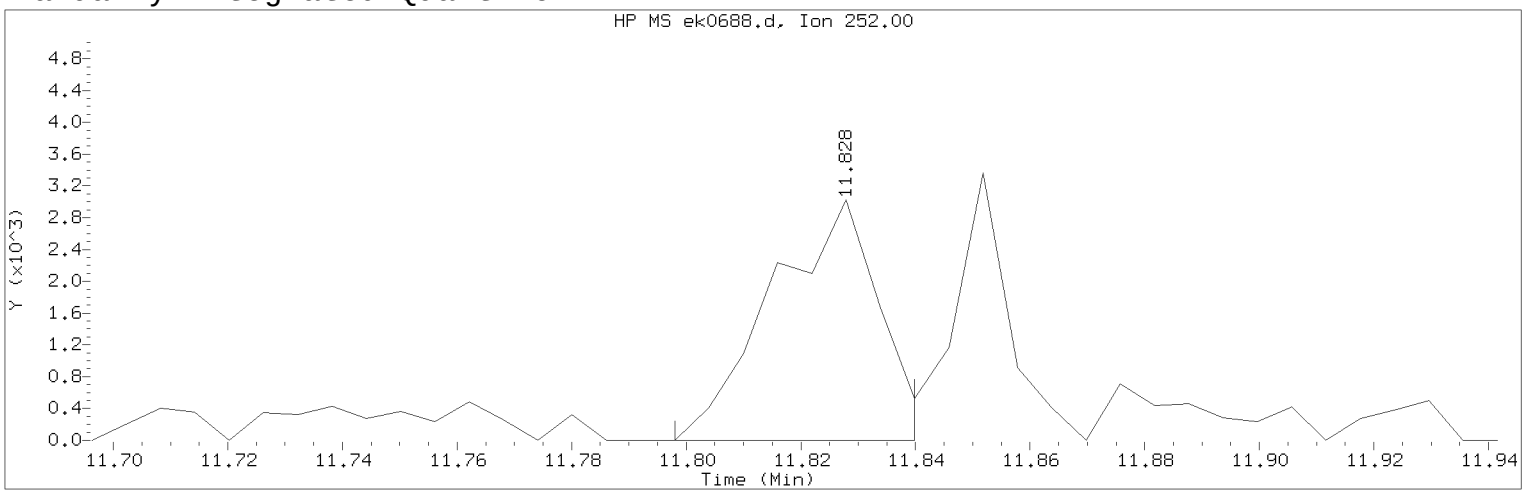
Compound Number	: 186
Compound Name	: Benzo(b)fluoranthene
Scan Number	: 1763
Retention Time (minutes)	: 11.828
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 3963M
On-column Amount (ng/ul)	: 0.1211

Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:46 hb01996

Sample Name: 2C151 Lab Sample ID: 7266808

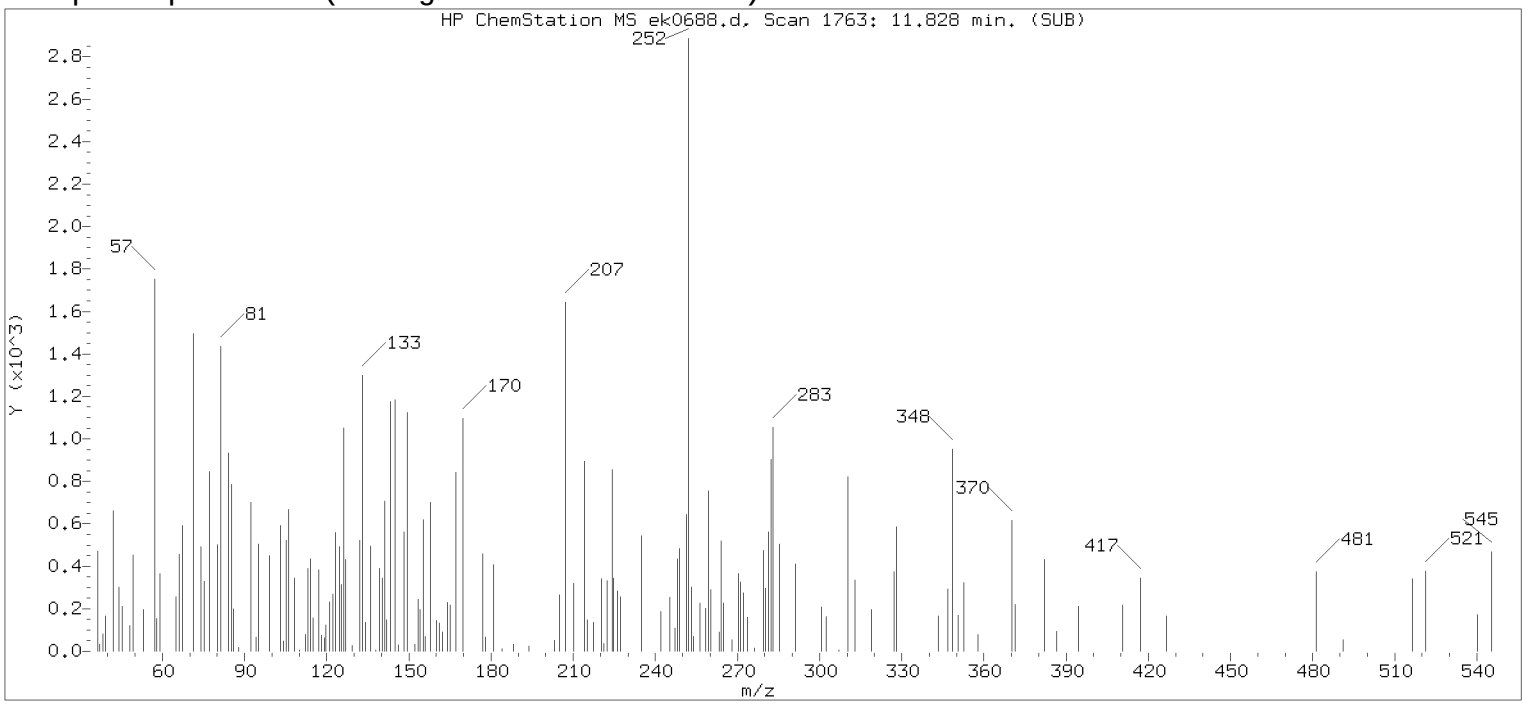
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area (flag) : 3963M
On-column Amount (ng/ul) : 0.1211
Integration start scan : 1757 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

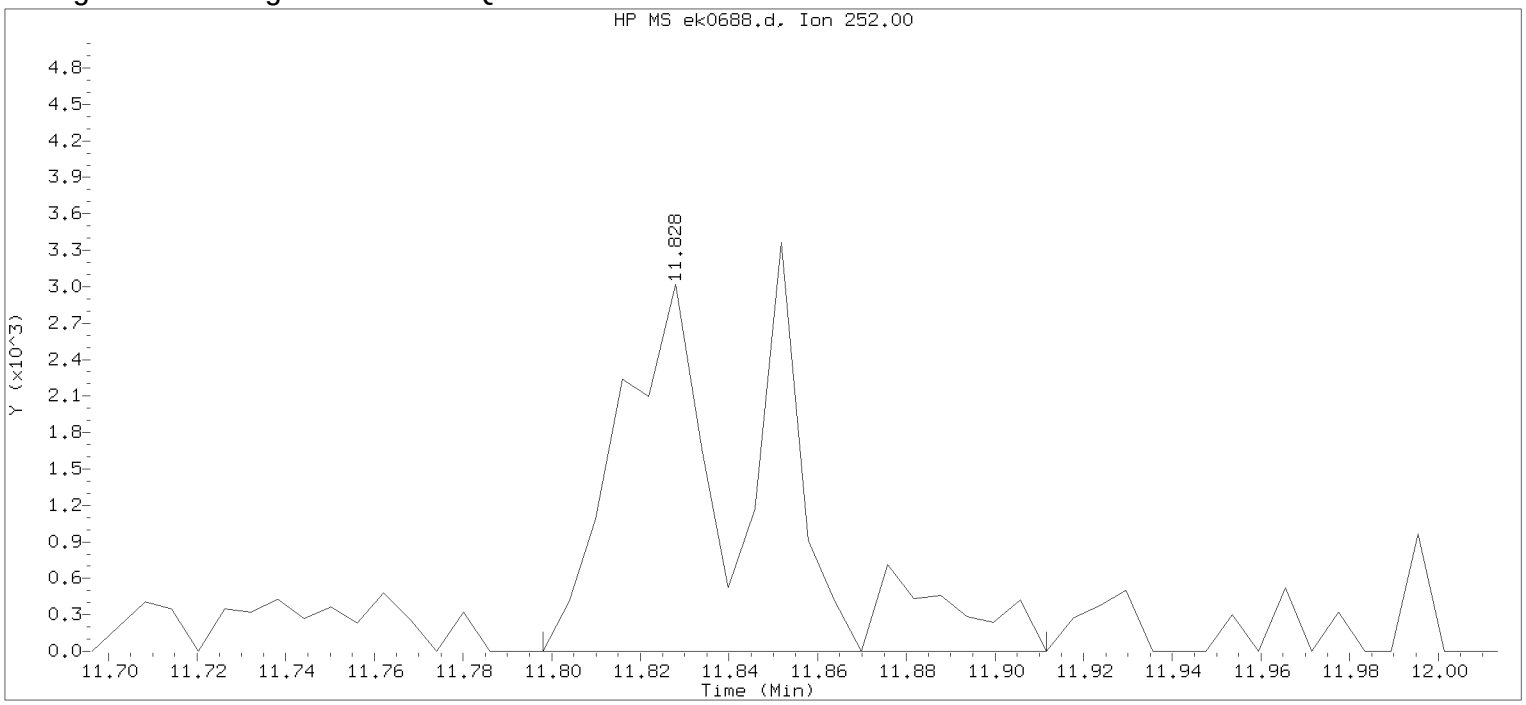
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0688.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 23:08 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:55 hb01996

Sample Name: 2C151 Lab Sample ID: 7266808

Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area : 6984
On-column Amount (ng/ul) : 0.2134
Integration start scan : 1757 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Holly Berry on 11/17/2013 at 14:53.
Target 3.5 esignature user ID: hb01996

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: BC *** Shift #2 Analyst: _____

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = 1 or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

Data Directory Path is - C:\msdchem\1\data\13oct29\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DJ1150.D	DFTPP12.5	DFTPP1863	29 Oct 2013	07:25			nu
2	DJ1151.D	SSTD7.5	STD2813	29 Oct 2013	07:41			nu
3	DJ1152.D	SSTD0.125	STD2813	29 Oct 2013	08:13			nu
4	DJ1153.D	SSTD30	STD2813	29 Oct 2013	08:40			nu
5	DJ1154.D	SSTD0.25	STD2813	29 Oct 2013	09:06			nu
1	DJ1180.D	DFTPP12.5	DFTPP1863	29 Oct 2013	11:14			mr
2	DJ1181.D	SSTD7.5	STD2813	29 Oct 2013	11:28			mr
3	DJ1182.D	SSTD0.125	STD2813	29 Oct 2013	11:55			mr
4	DJ1183.D	SSTD30	STD2813	29 Oct 2013	12:21			mr
5	DJ1184.D	SSTD0.25	STD2813	29 Oct 2013	12:48			mr
6	DJ1185.D	SSTD1.25	STD2813	29 Oct 2013	13:15			mr
7	DJ1186.D	SSTD3.75	STD2813	29 Oct 2013	13:42			mr
8	DJ1187.D	SSTD12.5	STD2813	29 Oct 2013	14:08			mr
9	DJ1188.D	SSTD20	STD2813	29 Oct 2013	14:35			mr
3	DJ1189.D	SSTD0.125	MDL2813	29 Oct 2013	15:02			mr
10	DJ1190.D	SSTD0.025	PAH2813	29 Oct 2013	15:28			mr
11	DJ1191.D	SSTD12.5	ICV2463	29 Oct 2013	15:55			mr
12	DJ1192.D	SSTD12.5	BASICV2463	29 Oct 2013	16:22			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: JMG *** Shift #2 Analyst: CEB *

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

*
*
*
*

Data Directory Path is - C:\msdchem\1\data\13nov13\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DK0380.D	DFTPP	DFTPP1863	13 Nov 2013	05:05			mr
2	DK0381.D	SSTD12.	STD2813	13 Nov 2013	05:19			mr
3	DK0382.D	SBLKWD3144	SBLKWD314	13 Nov 2013	05:51	13314WAD		mr
4	DK0383.D	314WDLCS4	314WDLCS	13 Nov 2013	06:18	13314WAD		mr
5	DK0384.D	314WDLCSD4	314WDLCSD	13 Nov 2013	06:45	13314WAD		mr
6	DK0385.D	CDC6PDL	7266449DL	13 Nov 2013	07:11	13312WAI	10	mr
7	DK0386.D	CDC06DL	7266450DL	13 Nov 2013	07:38	13312WAI	10	mr
8	DK0387.D	CDC07DL	7266451DL	13 Nov 2013	08:05	13312WAI	10	mr
9	DK0388.D	49CBT	7266590	13 Nov 2013	08:31	13314WAD		mr
10	DK0389.D	FB106	7266798	13 Nov 2013	08:58	13314WAD		mr
11	DK0390.D	FB206	7266799	13 Nov 2013	09:25	13314WAD		mr
12	DK0391.D	2B152	7266805	13 Nov 2013	09:51	13314WAD		mr
13	DK0392.D	2B151	7266807	13 Nov 2013	10:18	13314WAD		mr
14	DK0393.D	2D123	7266810	13 Nov 2013	10:45	13314WAD		mr
15	DK0394.D	2D121	7266811	13 Nov 2013	11:12	13314WAD		mr
16	DK0395.D	3--FD	7266819	13 Nov 2013	11:39	13314WAD		mr
17	DK0396.D	FF---	7266823	13 Nov 2013	12:05	13314WAD		mr
18	DK0397.D	PF-D-	7266824	13 Nov 2013	12:32	13314WAD		mr
19	DK0398.D	OM-EF	7267172	13 Nov 2013	12:59	13314WAD		mr
20	DK0399.D	NS40D	7267633	13 Nov 2013	13:25	13314WAD		mr
21	DK0400.D	NS28D	7267634	13 Nov 2013	13:52	13314WAD		mr
22	DK0401.D	TSINF	7270635	13 Nov 2013	14:19	13314WAD	10	mr
23	DK0402.D	401AP	7270637	13 Nov 2013	14:46	13314WAD	10	mr
24	DK0403.D	T501P	7270638	13 Nov 2013	15:13	13314WAD	10	mr
25	DK0404.D	TSEFF	7270641	13 Nov 2013	15:39	13314WAD	10	mr
26	DK0405.D	ELGAC	7270643	13 Nov 2013	16:06	13314WAD	10	mr
27	DK0406.D	SP901	7270644	13 Nov 2013	16:33	13314WAD	10	mr
28	DK0407.D	3521X	7270742	13 Nov 2013	17:00	13314WAD	5	mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP09572 **HP #05**

*** Shift #1 Analyst: lmh *** Shift #2 Analyst: hb

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

Data Directory Path is - C:\msdchem\1\data\13nov12\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	EK0460.D	DFTPP	DFTPP2843	12 Nov 2013	08:52			nu
2	EK0461.D	SSTD030	STD3083	12 Nov 2013	09:09			nu
3	EK0462.D	SSTD050	BENZ2853	12 Nov 2013	09:39			nu
1	EK0470.D	DFTPP	DFTPP2843	12 Nov 2013	10:30			nu
2	EK0471.D	SSTD030	STD3083	12 Nov 2013	10:45			nu
2	EK0471a.D	SSTD030	STD3083	12 Nov 2013	11:26			nu
1	EK0500.D	DFTPP	DFTPP2843	12 Nov 2013	12:06			mr
2	EK0501.D	SSTD030	STD3083	12 Nov 2013	12:21			mr
13	EK0513.D	SSTD050	BAS2813	12 Nov 2013	12:46			nu
3	EK0502.D	SSTD0.50	STD3083	12 Nov 2013	13:11			mr
4	EK0503.D	SSTD120	STD3083	12 Nov 2013	13:35			mr
5	EK0504.D	SSTD080	STD3083	12 Nov 2013	14:00			mr
6	EK0505.D	SSTD050	STD3083	12 Nov 2013	14:24			nu
7	EK0506.D	SSTD015	STD3083	12 Nov 2013	14:49			mr
8	EK0507.D	SSTD005	STD3083	12 Nov 2013	15:13			mr
9	EK0508.D	SSTD001	STD3083	12 Nov 2013	15:38			mr
3	EK0509.D	SSTD0.50	8270MDL3083	12 Nov 2013	16:02			nu
10	EK0510.D	SSTD0.10	PAHMDL3083	12 Nov 2013	16:27			mr
11	EK0511.D	SSTD050	8270ICV2463	12 Nov 2013	16:51			mr
13	EK0513a.D	SSTD050	BAS3153	12 Nov 2013	17:16			mr
14	EK0514.D	SSTD120	BAS3153	12 Nov 2013	17:40			mr
15	EK0515.D	SSTD080	BAS3153	12 Nov 2013	18:05			mr
16	EK0516.D	SSTD030	BAS3153	12 Nov 2013	18:29			mr
17	EK0517.D	SSTD015	BAS3153	12 Nov 2013	18:53			mr
18	EK0518.D	SSTD005	BAS3153	12 Nov 2013	19:18			mr
6	EK0505a.D	SSTD050	STD3083	12 Nov 2013	19:42			mr
19	EK0519.D	SSTD001	BASMDL3153	12 Nov 2013	20:07			mr
12	EK0512.D	SSTD050	BASICV2463	12 Nov 2013	20:31			mr
3	EK0509a.D	SSTD0.50	8270MDL3083	12 Nov 2013	20:55			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Newlett Packard GC/MS System HP09572 **HP #05**

*** Shift #1 Analyst:_____*** Shift #2 Analyst:_____hb_____

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

Data Directory Path is - C:\msdchem\1\data\13nov15\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	EK0660.D	DFTPP	DFTPP2843	15 Nov 2013	11:24			nu
1	EK0660Z.D	DFTPP	DFTPP2843	15 Nov 2013	11:36			mr
2	EK0661.D	SSTD030	STD3083	15 Nov 2013	11:51			mr
3	EK0662.D	SSTD050	BENZ2853	15 Nov 2013	12:16			mr
4	EK0663.D	SSTD050	BAS3153	15 Nov 2013	12:48			mr
5	EK0664.D	SBLKLB3165	SBLKLB316	15 Nov 2013	13:20	13316SLB		mr
6	EK0665.D	316LBLCS5	316LBLCS	15 Nov 2013	13:44	13316SLB		mr
7	EK0666.D	SBLKLE3145	SBLKLE314	15 Nov 2013	14:09	13314SLE		mr
8	EK0667.D	314LELCS5	314LELCS	15 Nov 2013	14:33	13314SLE		mr
9	EK0668.D	24057	7263650	15 Nov 2013	14:58	13313SLG	10	mr
10	EK0669.D	24057MS	7263650	15 Nov 2013	15:22	13313SLG	10	mr
11	EK0670.D	24057MSD	7263650	15 Nov 2013	15:47	13313SLG	10	nu
12	EK0671.D	015D1	7265116	15 Nov 2013	16:12	13314SLE		mr
13	EK0672.D	015D1MS	7265116	15 Nov 2013	16:36	13314SLE		mr
14	EK0673.D	015D1MSD	7265116	15 Nov 2013	17:01	13314SLE		mr
15	EK0674.D	015G4	7265117	15 Nov 2013	17:25	13314SLE		mr
16	EK0675.D	016F4	7265118	15 Nov 2013	17:50	13314SLE		mr
17	EK0676.D	016G4	7265119	15 Nov 2013	18:14	13314SLE		mr
18	EK0677.D	017F3	7265120	15 Nov 2013	18:39	13314SLE	5	mr
19	EK0678.D	017G2	7265121	15 Nov 2013	19:03	13314SLE		mr
20	EK0679.D	020D4	7265123	15 Nov 2013	19:28	13314SLE		mr
21	EK0680.D	020G3	7265124	15 Nov 2013	19:52	13314SLE		mr
22	EK0681.D	018G1	7265125	15 Nov 2013	20:16	13314SLE	5	s
23	EK0682.D	018H1	7265126	15 Nov 2013	20:41	13314SLE		mr
24	EK0683.D	2G124	7266800	15 Nov 2013	21:05	13316SLB	5	mr
25	EK0684.D	2G124MS	7266801	15 Nov 2013	21:30	13316SLB	5	mr
26	EK0685.D	2G124MSD	7266802	15 Nov 2013	21:54	13316SLB	5	mr
27	EK0686.D	2G125	7266804	15 Nov 2013	22:19	13316SLB	5	mr
28	EK0687.D	2C152	7266806	15 Nov 2013	22:43	13316SLB	5	mr
29	EK0688.D	2C151	7266808	15 Nov 2013	23:08	13316SLB	5	mr
30	EK0689.D	SURRSPK	1331826A	15 Nov 2013	23:32			iuo

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

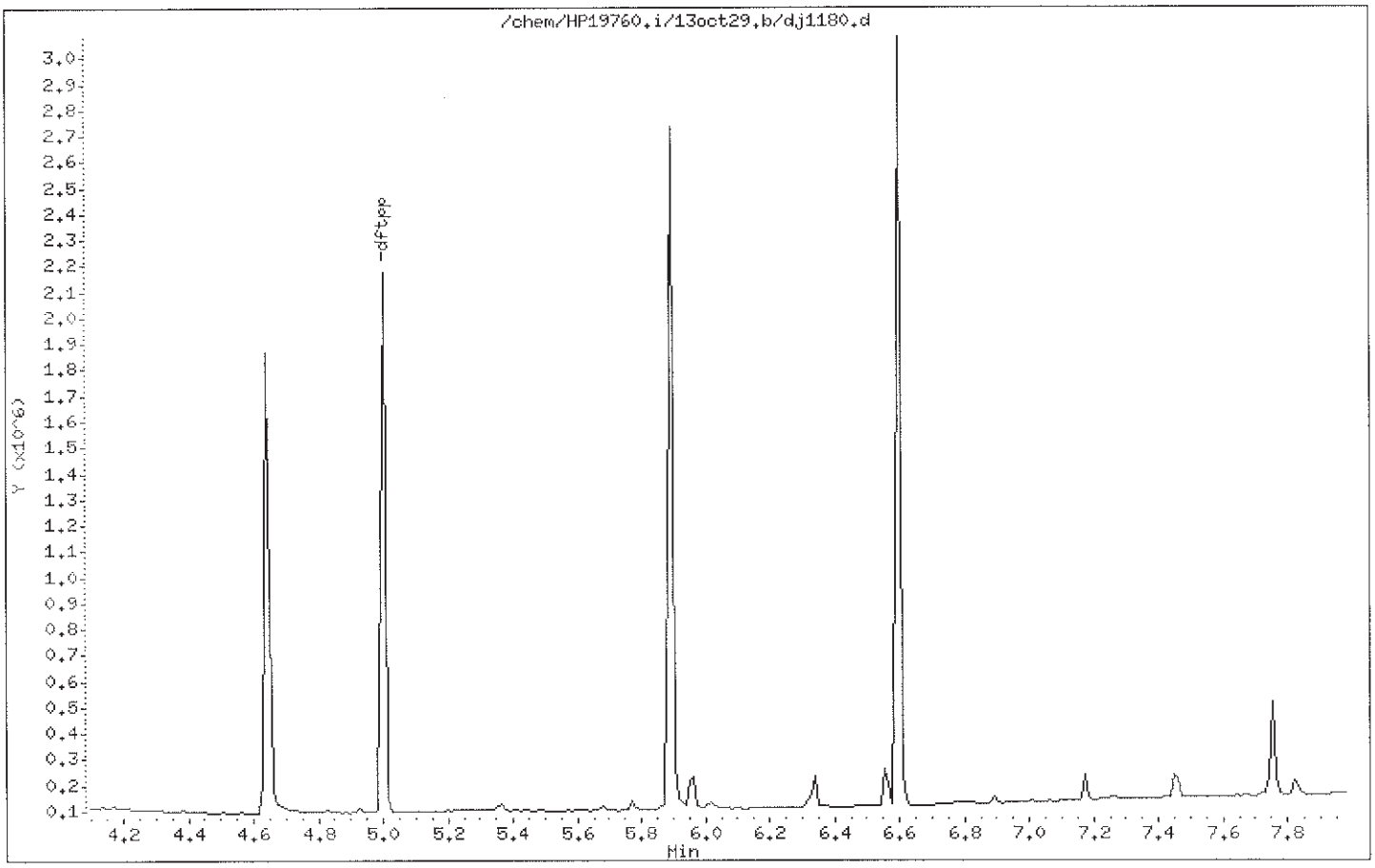
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

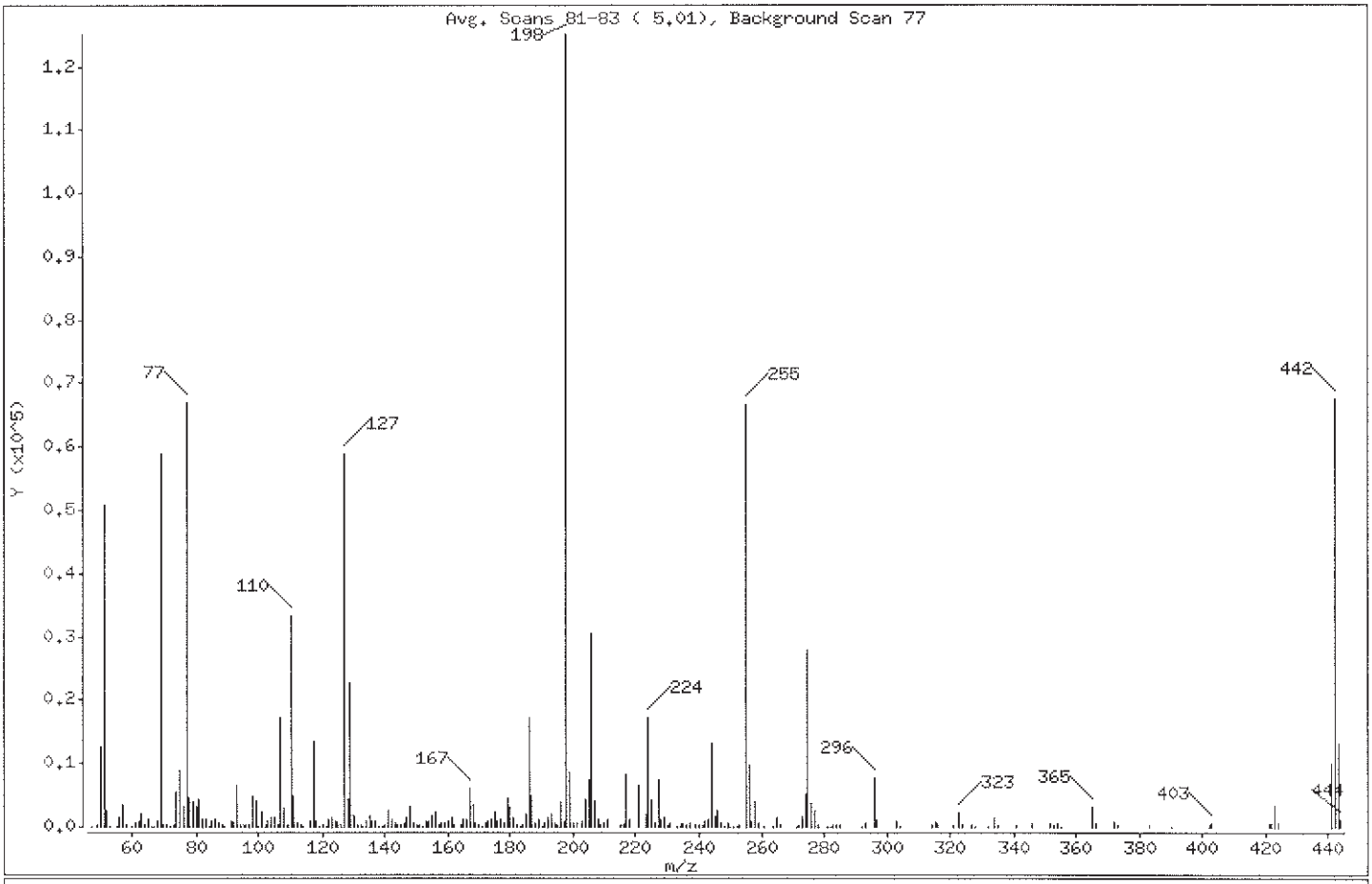
Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.63
68	Less than 2.00% of mass 69	0.61 (1.30)
69	Mass 69 relative abundance	47.07
70	Less than 2.00% of mass 69	0.22 (0.47)
127	40.00 - 60.00% of mass 198	47.20
197	Less than 1.00% of mass 198	0.62
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	7.96
442	40.00 - 99.99% of mass 198	53.99
443	17.00 - 23.00% of mass 442	10.46 (19.38)

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d
Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	13	116.00	929	181.00	1462	255.00	66776
49.00	261	117.00	13587	182.00	291	256.00	9856
50.00	12707	118.00	891	183.00	143	257.00	787
51.00	50792	119.00	70	184.00	364	258.00	3960
52.00	2525	120.00	147	185.00	2083	259.00	515
53.00	20	121.00	36	186.00	17232	261.00	89
55.00	76	122.00	1155	187.00	4804	264.00	110
56.00	1295	123.00	1560	188.00	488	265.00	1556
57.00	3551	124.00	721	189.00	1028	266.00	224
58.00	186	125.00	778	190.00	135	271.00	107
60.00	129	126.00	172	191.00	434	272.00	152
61.00	662	127.00	59016	192.00	1400	273.00	1837
62.00	792	128.00	4334	193.00	1907	274.00	5128
63.00	2094	129.00	22576	194.00	447	275.00	27968
64.00	251	130.00	1821	195.00	243	276.00	3801
65.00	1088	131.00	408	196.00	3990	277.00	2556
66.00	43	132.00	329	197.00	771	278.00	336
67.00	9	133.00	2	198.00	125032	281.00	79
68.00	765	134.00	785	199.00	8488	282.00	108
69.00	58856	135.00	1720	200.00	703	283.00	234
70.00	276	136.00	896	201.00	580	284.00	166
71.00	205	137.00	852	203.00	834	285.00	364
72.00	37	138.00	108	204.00	4361	292.00	83
73.00	162	139.00	59	205.00	7410	293.00	500
74.00	5521	140.00	378	206.00	30336	296.00	7902
75.00	8878	141.00	2631	207.00	3917	297.00	1170
76.00	3208	142.00	1009	208.00	1033	303.00	767
77.00	66928	143.00	510	209.00	258	304.00	143
78.00	4517	144.00	245	210.00	495	314.00	331
79.00	3900	145.00	408	211.00	1226	315.00	774
80.00	3044	146.00	599	215.00	391	316.00	434
81.00	4425	147.00	1398	216.00	685	321.00	177
82.00	1038	148.00	3200	217.00	8299	323.00	2340
83.00	1074	149.00	650	218.00	1128	324.00	382
84.00	117	150.00	311	221.00	6661	327.00	385

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d

Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77

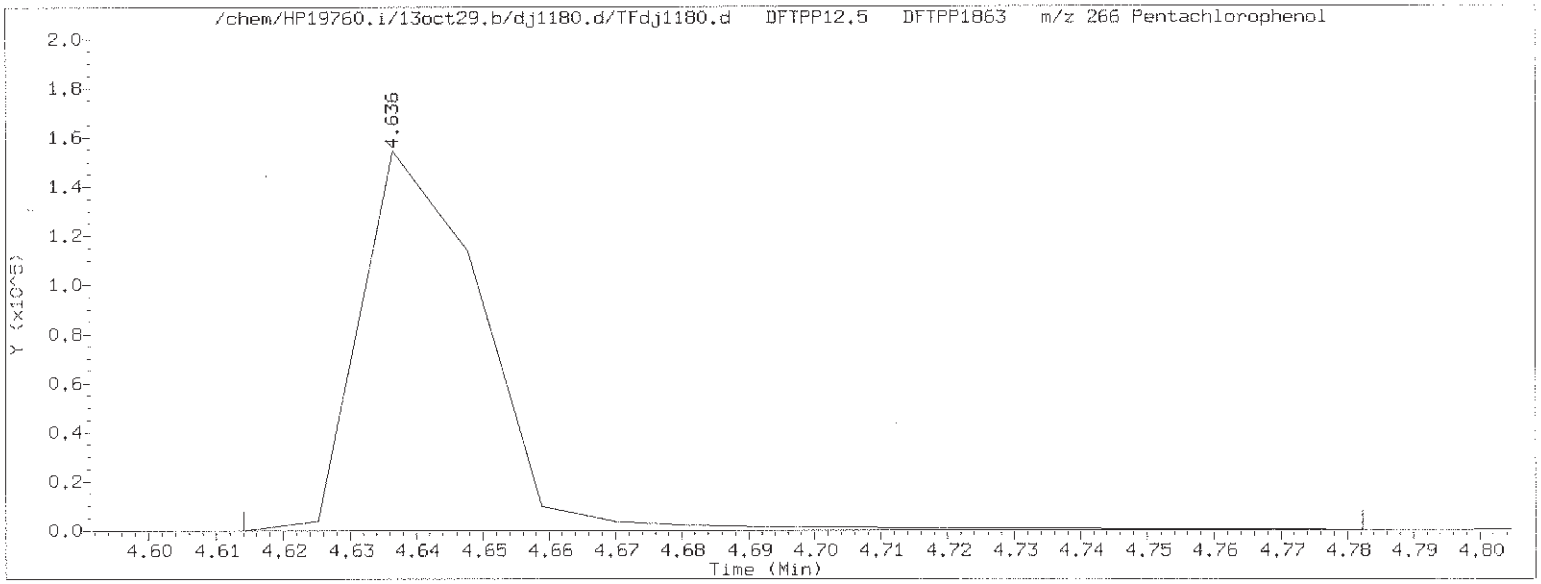
Location of Maximum: 198.00

Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	730	151.00	347	223.00	1931	328.00	105
86.00	1136	152.00	115	224.00	17384	332.00	94
87.00	504	153.00	923	225.00	4444	334.00	1395
88.00	348	154.00	792	226.00	485	335.00	344
89.00	140	155.00	1648	227.00	7391	341.00	240
91.00	953	156.00	2400	228.00	1081	346.00	451
92.00	900	157.00	250	229.00	1546	352.00	610
93.00	6479	158.00	576	230.00	169	353.00	425
94.00	405	159.00	492	231.00	629	354.00	617
95.00	146	160.00	1004	233.00	116	355.00	124
96.00	229	161.00	1421	234.00	480	365.00	3246
97.00	183	162.00	391	235.00	560	366.00	459
98.00	4747	164.00	233	236.00	276	372.00	946
99.00	3999	165.00	1040	237.00	642	373.00	170
100.00	126	166.00	1180	239.00	257	383.00	169
101.00	2341	167.00	5965	240.00	184	390.00	105
102.00	187	168.00	3512	241.00	370	402.00	369
103.00	775	169.00	567	242.00	924	403.00	500
104.00	1455	170.00	169	243.00	1252	421.00	444
105.00	1370	171.00	41	244.00	13079	422.00	479
106.00	380	172.00	563	245.00	1740	423.00	3350
107.00	17112	173.00	735	246.00	2568	424.00	517
108.00	2756	174.00	1279	247.00	557	441.00	9954
109.00	396	175.00	2300	248.00	115	442.00	67496
110.00	33216	176.00	754	249.00	484	443.00	13079
111.00	4816	177.00	1124	250.00	91	444.00	1189
112.00	615	178.00	434	251.00	86		
113.00	205	179.00	4545	252.00	112		
114.00	16	180.00	3086	253.00	238		

Assessment of GC Column Performance and Injection Port Inertness for

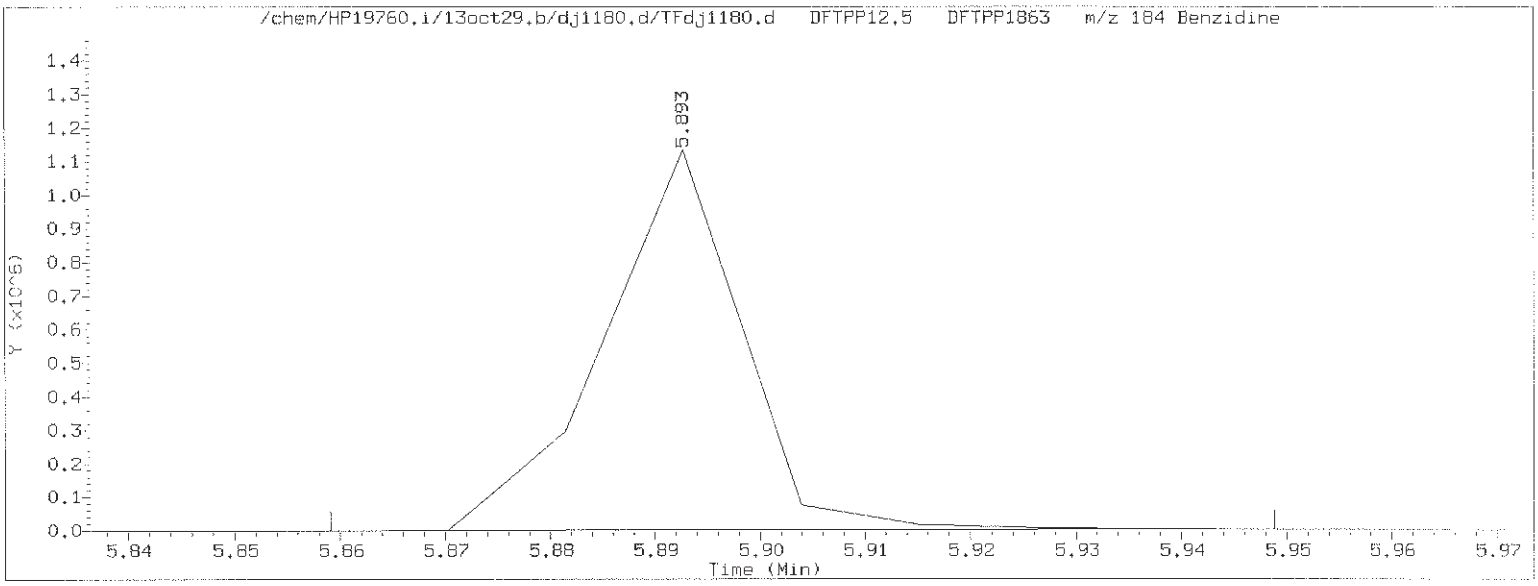
Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 154624 EICP peak height at 10% = 15462 Pentachlorophenol EICP area = 198857

Pentachlorophenol EICP peak apex (min.) = 4.636
RT at 10% of front half of EICP (min.) = 4.626 'Front' peak width (min.) = 0.0103333333
RT at 10% of back half of EICP (min.) = 4.658 'Tailing' peak width (min.) = 0.0218166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0218166667}{0.0103333333} = 2.111$$



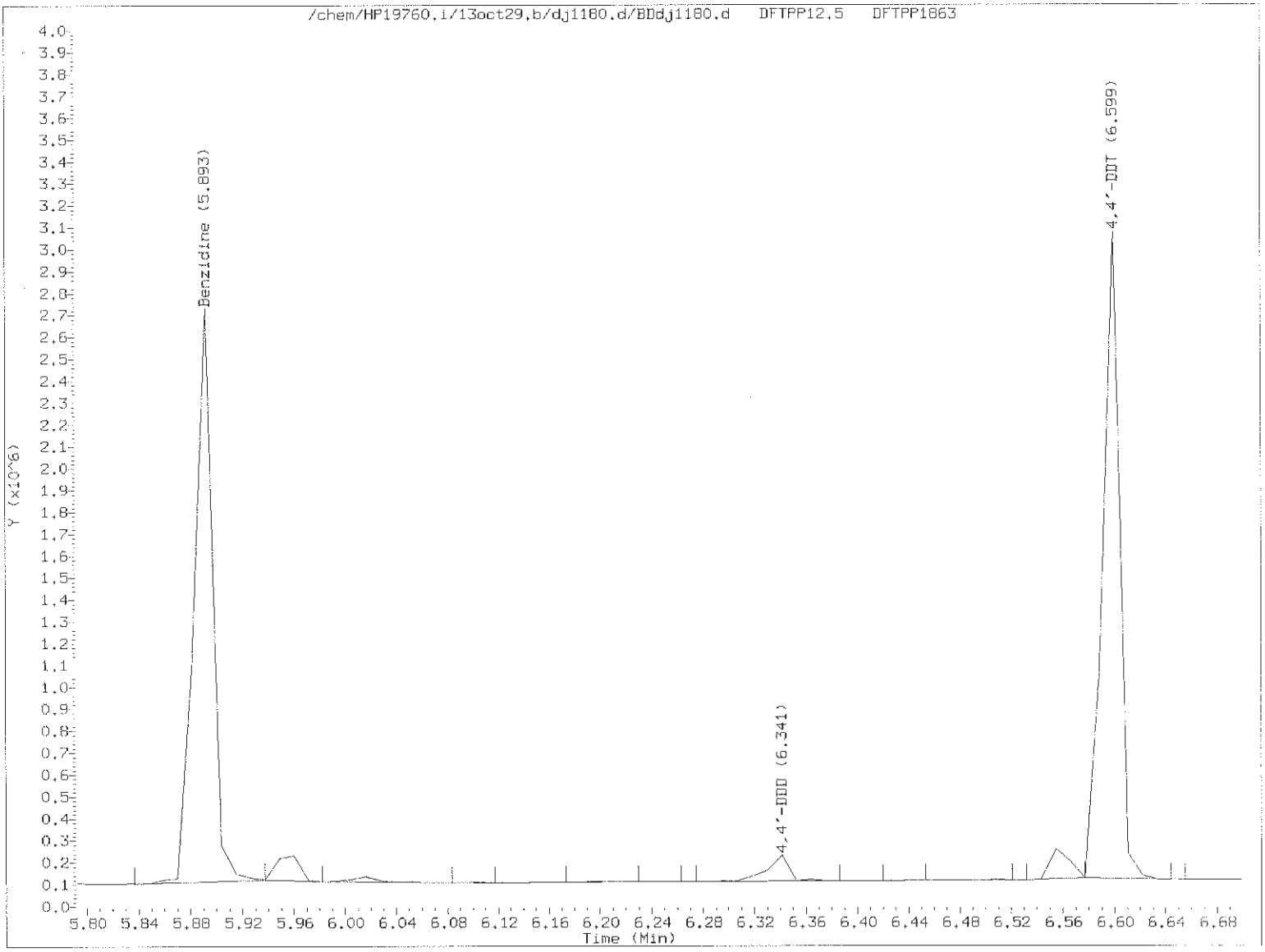
Benzidine EICP peak height = 1133040 EICP peak height at 10% = 113304 Benzidine EICP area = 1026461

Benzidine EICP peak apex (min.) = 5.893
RT at 5% of front half of EICP (min.) = 5.872 'Front' peak width (min.) = 0.0202666667
RT at 5% of back half of EICP (min.) = 5.907 'Tailing' peak width (min.) = 0.0146166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0146166667}{0.0202666667} = 0.721$$

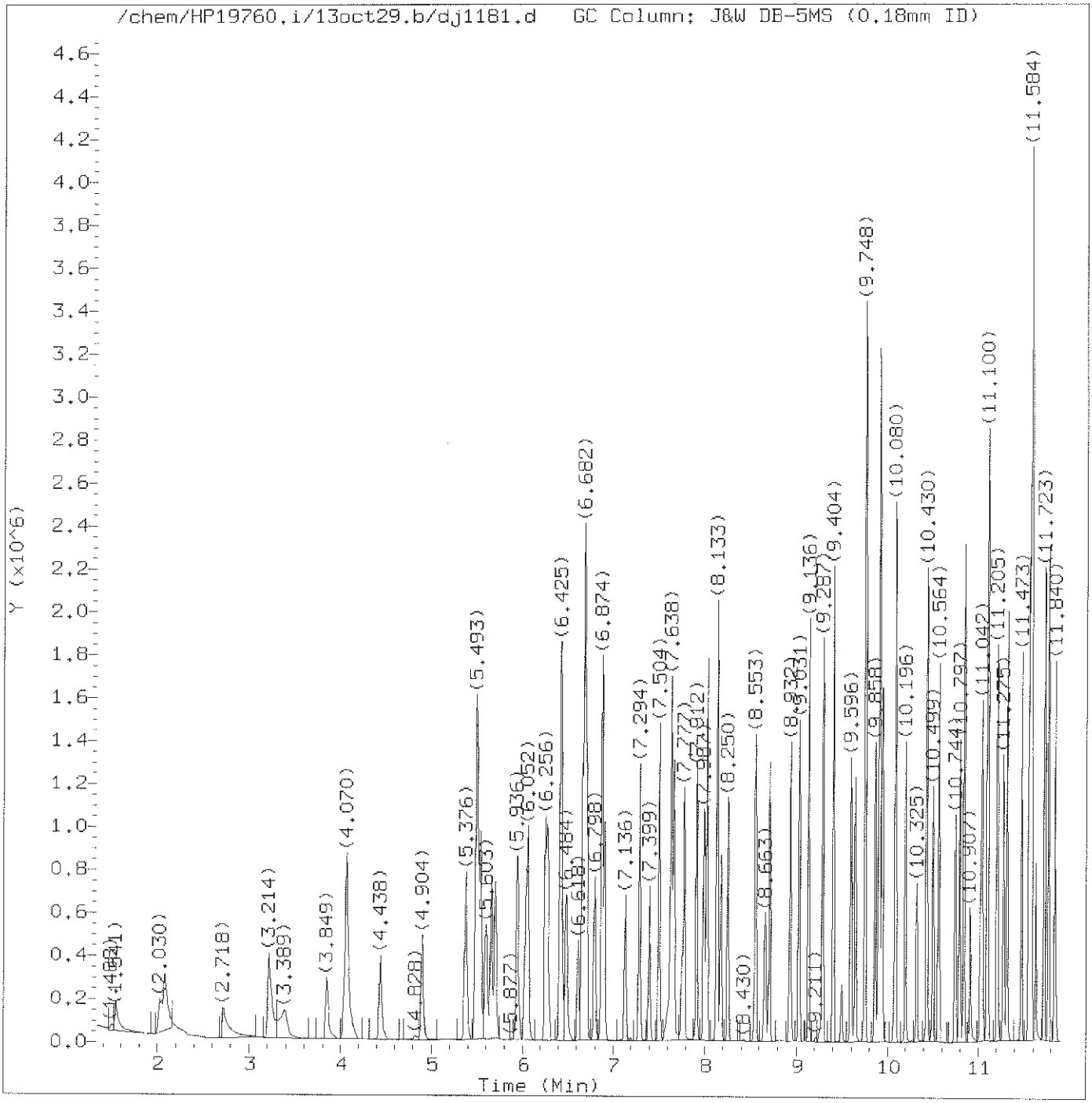
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 147644}{0 + 147644 + 2694927} \times 100 = 5.2$$



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d
Injection date and time: 29-OCT-2013 11:28

Instrument ID: HP19760.i
Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m
Calibration date and time: 29-OCT-2013 21:49

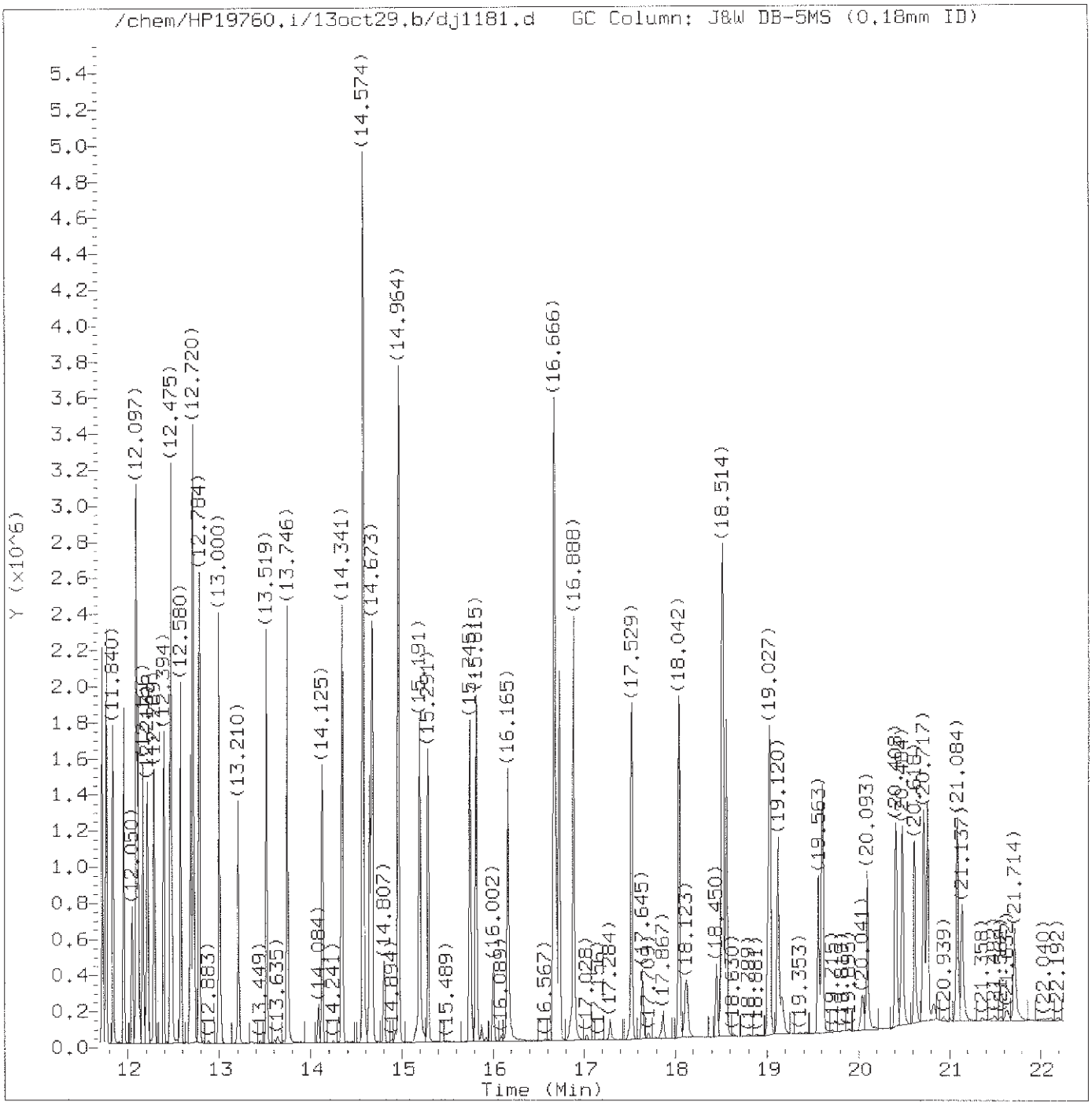
Sublist used: newall1

Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5

Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	137767	7.500
2) N-Nitrosodimethylamine	(1)	2.030	74	268516	7.500
3) Pyridine	(1)	2.083	79	432268	7.500
4) 2-Picoline	(1)	3.214	93	459785	7.500
5) N-Nitrosomethylethylamine	(1)	3.389	88	208027	7.500
6) Methyl methanesulfonate	(1)	3.849	80	233954	7.500
7)$2-Fluorophenol	(1)	4.070	112	709277	15.000
8) N-Nitrosodiethylamine	(1)	4.444	102	197319	7.500
10) Ethyl methanesulfonate	(1)	4.904	109	186082	7.500
11) Benzaldehyde	(1)	5.376	77	349278	7.500
12)$Phenol-d5	(1)	5.487	99	975454	15.000
13)$Phenol-d6	(1)	5.487	99	975454	15.000
14) Phenol	(1)	5.510	94	556847	7.500
15) Aniline	(1)	5.539	93	690455	7.500
16) bis(2-Chloroethyl)ether	(1)	5.656	93	436390	7.500
17) 2-Chlorophenol	(1)	5.702	128	351189	7.500
18) 1,3-Dichlorobenzene	(1)	5.941	146	363080	7.500
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	151909	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	364571	7.500
23) Benzyl alcohol	(1)	6.250	108	239760	7.500
24) 1,2-Dichlorobenzene	(1)	6.280	146	342428	7.500
25) Indene	(1)	6.419	115	702500	9.000
26) 2-Methylphenol	(1)	6.431	108	348956	7.500
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	541494	7.500
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	541494	7.500
29) N-Nitrosopyrrolidine	(1)	6.618	100	206158	7.500
30) Acetophenone	(1)	6.658	105	512562	7.500
33) 4-Methylphenol	(1)	6.682	108	394695	7.500
31) N-Nitroso-di-n-propylamine	(1)	6.682	70	319187	7.500
32) N-Nitrosomorpholine	(1)	6.688	56	245653	7.500
34) o-Toluidine	(1)	6.705	106	598993	7.500
35) Hexachloroethane	(1)	6.798	117	157145	7.500
36)$Nitrobenzene-d5	(2)	6.874	82	873687	15.000
37) Nitrobenzene	(2)	6.903	77	459440	7.500
39) N-Nitrosopiperidine	(2)	7.136	114	190894	7.500
40) Isophorone	(2)	7.294	82	797440	7.500
42) 2-Nitrophenol	(2)	7.399	139	175236	7.500
45) 2,4-Dimethylphenol	(2)	7.504	107	386388	7.500
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	164859	7.500
47) Benzoic acid	(2)	7.655	105	357390	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	501971M	7.500
49) 2,4-Dichlorophenol	(2)	7.777	162	272381	7.500
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	288881	7.500
52)*Naphthalene-d8	(2)	7.987	136	608104	5.000
53) Naphthalene	(2)	8.022	128	975519	7.500
55) 4-Chloroaniline	(2)	8.127	127	418617	7.500
56) 2,6-Dichlorophenol	(2)	8.139	162	261060	7.500
57) Hexachloropropene	(2)	8.174	213	192094	7.500
58) Hexachlorobutadiene	(2)	8.255	225	166743	7.500
60) Quinoline	(2)	8.553	129	657223	7.500
61) Caprolactam	(2)	8.663	113	122649	7.500
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	291446	7.500
63) 4-Chloro-3-methylphenol	(2)	8.932	107	337960	7.500
64) Safrole	(2)	9.031	162	255020	7.500
65) 2-Methylnaphthalene	(2)	9.136	142	661678	7.500
66) 1-Methylnaphthalene	(2)	9.287	142	601705	7.500
67) Hexachlorocyclopentadiene	(3)	9.404	237	149375	7.500
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	295528	7.500
69) cis-Isosafrole	(3)	9.497	162	46662	7.500
70) 2,4,6-Trichlorophenol	(3)	9.596	196	203516	7.500
71) 2,4,5-Trichlorophenol	(3)	9.643	196	211849	7.500
72)$2-Fluorobiphenyl	(3)	9.748	172	1291899	15.000
74) Isosafrole	(3)	9.858	162	260550	7.500
73) trans-Isosafrole	(3)	9.858	162	260550	7.500
75) 1,1'-Biphenyl	(3)	9.899	154	731309	7.500
76) 2-Chloronaphthalene	(3)	9.905	162	587363	7.500
77) 1-Chloronaphthalene	(3)	9.940	162	566223	7.500
82) Diphenyl ether	(3)	10.080	170	422807	7.500
83) 2-Nitroaniline	(3)	10.086	138	206464	7.500
84) 1,4-Naphthoquinone	(3)	10.196	158	268566	7.500
85) 1,4-Dinitrobenzene	(3)	10.325	168	107464	7.500
86) Dimethylphthalate	(3)	10.430	163	671240	7.500
87) 1,3-Dinitrobenzene	(3)	10.435	168	125634	7.500
88) 2,6-Dinitrotoluene	(3)	10.499	165	161578	7.500
90) Acenaphthylene	(3)	10.564	152	909644	7.500
91) 3-Nitroaniline	(3)	10.744	138	186158	7.500
92)*Acenaphthene-d10	(3)	10.797	164	340173	5.000
93) Acenaphthene	(3)	10.843	153	609286	7.500
94) 2,4-Dinitrophenol	(3)	10.913	184	99795	10.000
96) 4-Nitrophenol	(3)	11.030	109	118092	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	237796	7.500
97) Dibenzofuran	(3)	11.100	168	865450	7.500
98) 2,4-Dinitrotoluene	(3)	11.106	165	200480	7.500
99) 1-Naphthylamine	(3)	11.205	143	632752	7.500
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	166684	7.500
101) 2-Naphthylamine	(3)	11.315	143	653595	7.500
102) Diethylphthalate	(3)	11.473	149	661064	7.500
103) Fluorene	(3)	11.554	166	710098	7.500
104) Thionazin	(3)	11.566	107	145158	7.500
106) 5-Nitro-o-toluidine	(3)	11.578	152	196066	7.500
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	338065	7.500
107) 4-Nitroaniline	(3)	11.584	138	177952	7.500
108) 4,6-Dinitro-2-methylphenol	(4)	11.630	198	108493	7.500
109) N-Nitrosodiphenylamine	(4)	11.729	169	561532	7.500
110) NDPA as diphenylamine	(4)	11.729	169	561532	7.500
111) 1,2-Diphenylhydrazine	(4)	11.770	77	905405	7.500
112)$2,4,6-Tribromophenol	(3)	11.840	330	143815	15.000
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	132618	7.500
116) 1,3,5-Trinitrobenzene	(4)	12.050	213	80876	7.500
117) Diallate (peak 1)	(4)	12.091	86	342542	5.625
118) Phorate	(4)	12.097	75	547268	7.500
119) Phenacetin	(4)	12.114	108	408525	7.500
120) 4-Bromophenyl-phenylether	(4)	12.166	248	174573	7.500
121) Diallate (peak 2)	(4)	12.196	86	49019	1.875
122) Hexachlorobenzene	(4)	12.213	284	169395	7.500
123) Dimethoate	(4)	12.289	87	373493	7.500
124) Atrazine	(4)	12.394	200	180156	7.500
125) Pentachlorophenol	(4)	12.464	266	128448	7.500
126) Pentachloronitrobenzene	(4)	12.475	237	84108	7.500
127) 4-Aminobiphenyl	(4)	12.475	169	721220	7.500
129) Pronamide	(4)	12.580	173	318096	7.500
130)*Phenanthrene-d10	(4)	12.691	188	574655	5.000
131) Phenanthrene	(4)	12.720	178	962778	7.500
133) Dinoseb	(4)	12.720	211	158315	7.500
134) Anthracene	(4)	12.784	178	1008447	7.500
135) Carbazole	(4)	13.000	167	986634	7.500
136) Methyl parathion	(4)	13.204	109	269786	7.500
137) Di-n-butylphthalate	(4)	13.519	149	1215775	7.500
138) Parathion	(4)	13.746	109	172642	7.500
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	87192	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	122402	7.500
142) Fluoranthene	(4)	14.341	202	1145853	7.500
144) Benzidine	(5)	14.574	184	2350030	22.500
145)*Pyrene-d10	(5)	14.649	212	743541	5.000
146) Pyrene	(5)	14.679	202	1179015	7.500
149)$Terphenyl-d14	(5)	14.964	244	1432906	15.000
150) p-Dimethylaminoazobenzene	(5)	15.197	225	245246	7.500
151) Chlorobenzilate	(5)	15.291	139	368575	7.500
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	805018	7.500
153) Butylbenzylphthalate	(5)	15.815	149	555530	7.500
156) 2-Acetylaminofluorene	(5)	16.165	181	483665	7.500
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	388403	7.500
158) Benzo(a)anthracene	(5)	16.666	228	1087387	7.500
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	209240	7.500
161) Chrysene	(5)	16.730	228	1019141	7.500
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	760232	7.500
165) 6-Methylchrysene	(5)	17.529	242	745309	7.500
166) Di-n-octylphthalate	(6)	18.042	149	1259155	7.500
168) Benzo(b)fluoranthene	(6)	18.508	252	957737	7.500
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.514	256	391427	7.500
170) Benzo(k)fluoranthene	(6)	18.555	252	953456	7.500
171) Benzo(a)pyrene	(6)	19.027	252	891430	7.500
172)*Perylene-d12	(6)	19.120	264	528760	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	434800	7.500
174) Dibenz(a,h)acridine	(6)	20.408	279	608478	7.500
175) Dibenz(a,j)acridine	(6)	20.484	279	626394	7.500
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	822323	7.500
177) Dibenz(a,h)anthracene	(6)	20.764	278	692510	7.500
178) Benzo(g,h,i)perylene	(6)	21.084	276	667334	7.500
179) Diallate TRANS/CIS	(4)			391561	7.500
182) 2,4_2,6-Dinitrotoluenes	(3)			362058	15.000

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$ = Compound is a surrogate standard.

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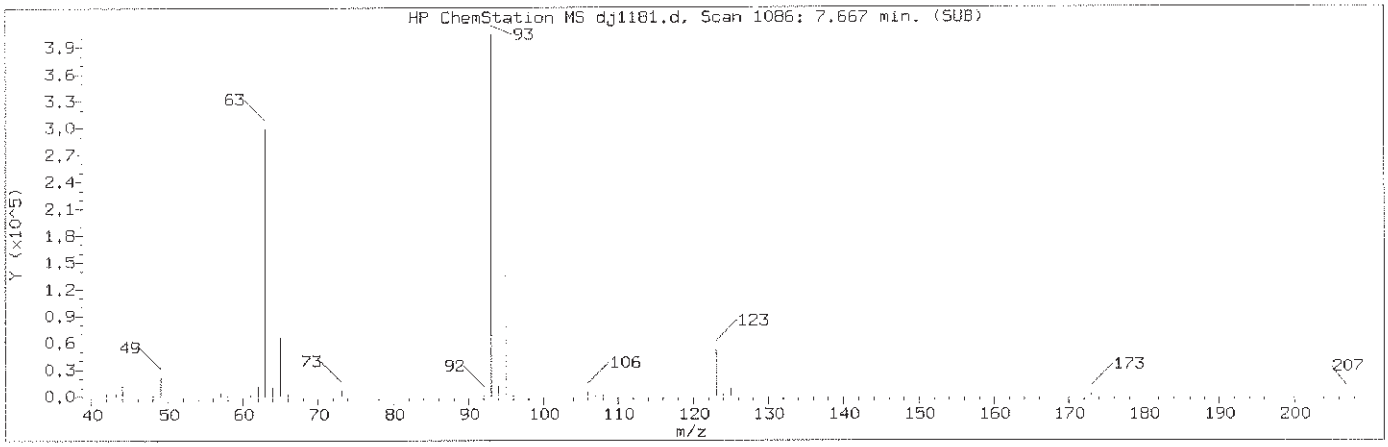
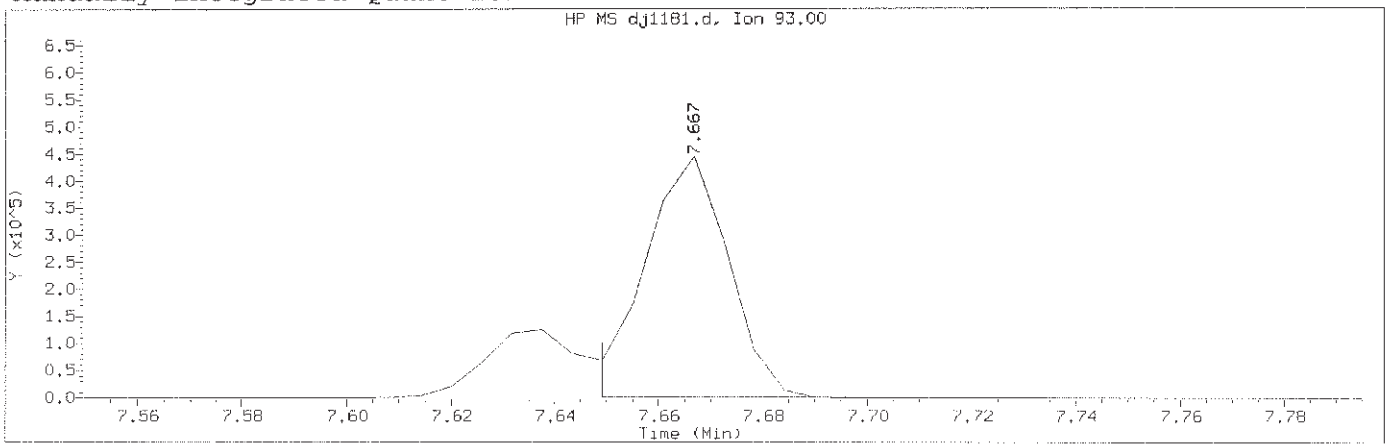
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 501971M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 584	Y at integration end:	584

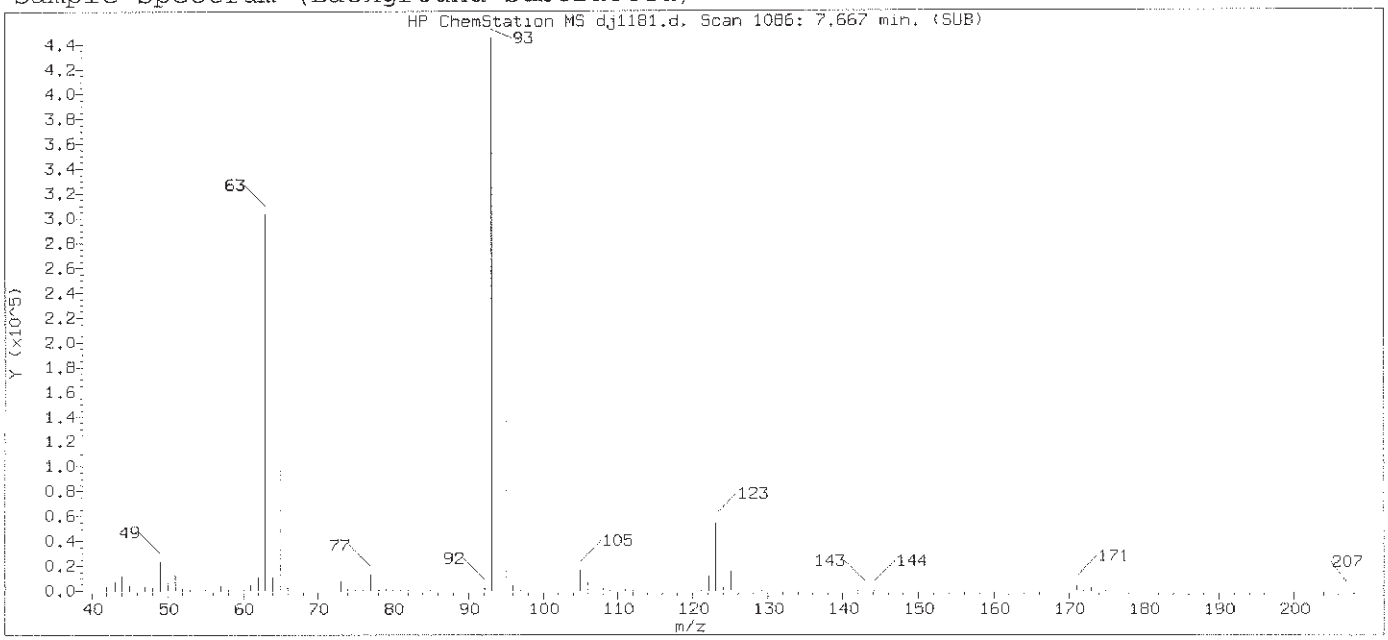
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

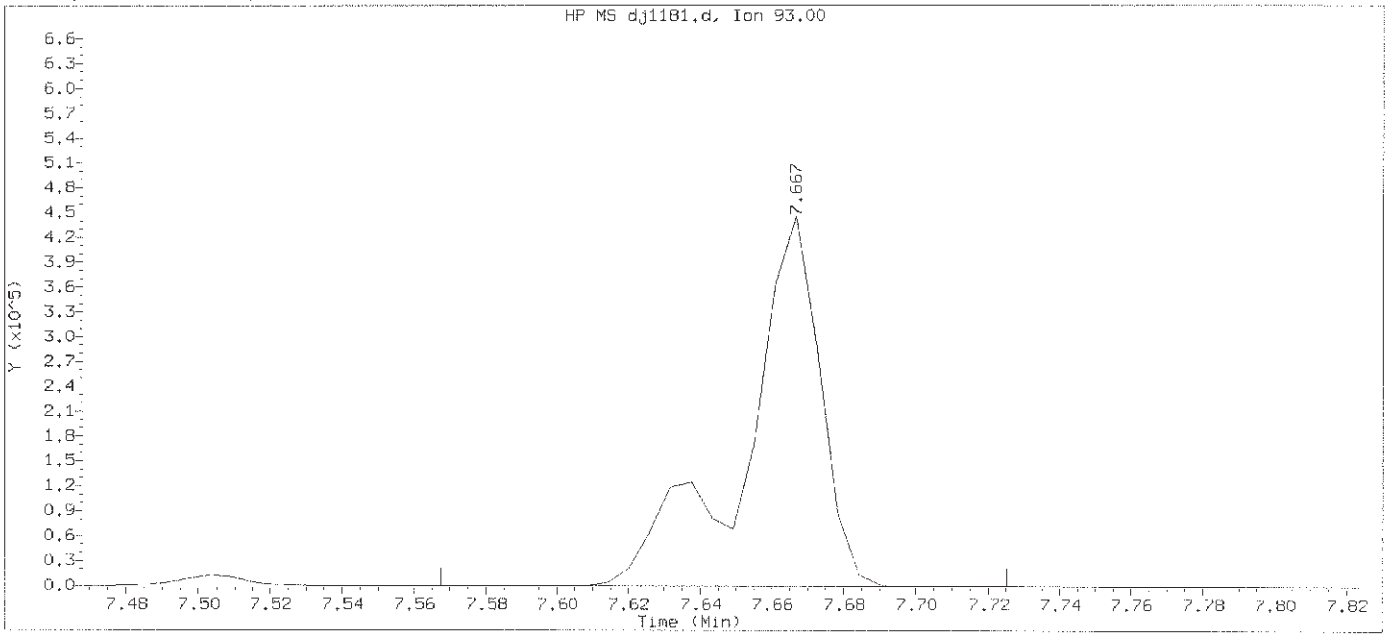
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:37
Date, time and analyst ID of latest file update: 29-Oct-2013 21:37 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area	: 649915		
On-column Amount (ng/ul)	: 8.8624		
Integration start scan	: 1068	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	0

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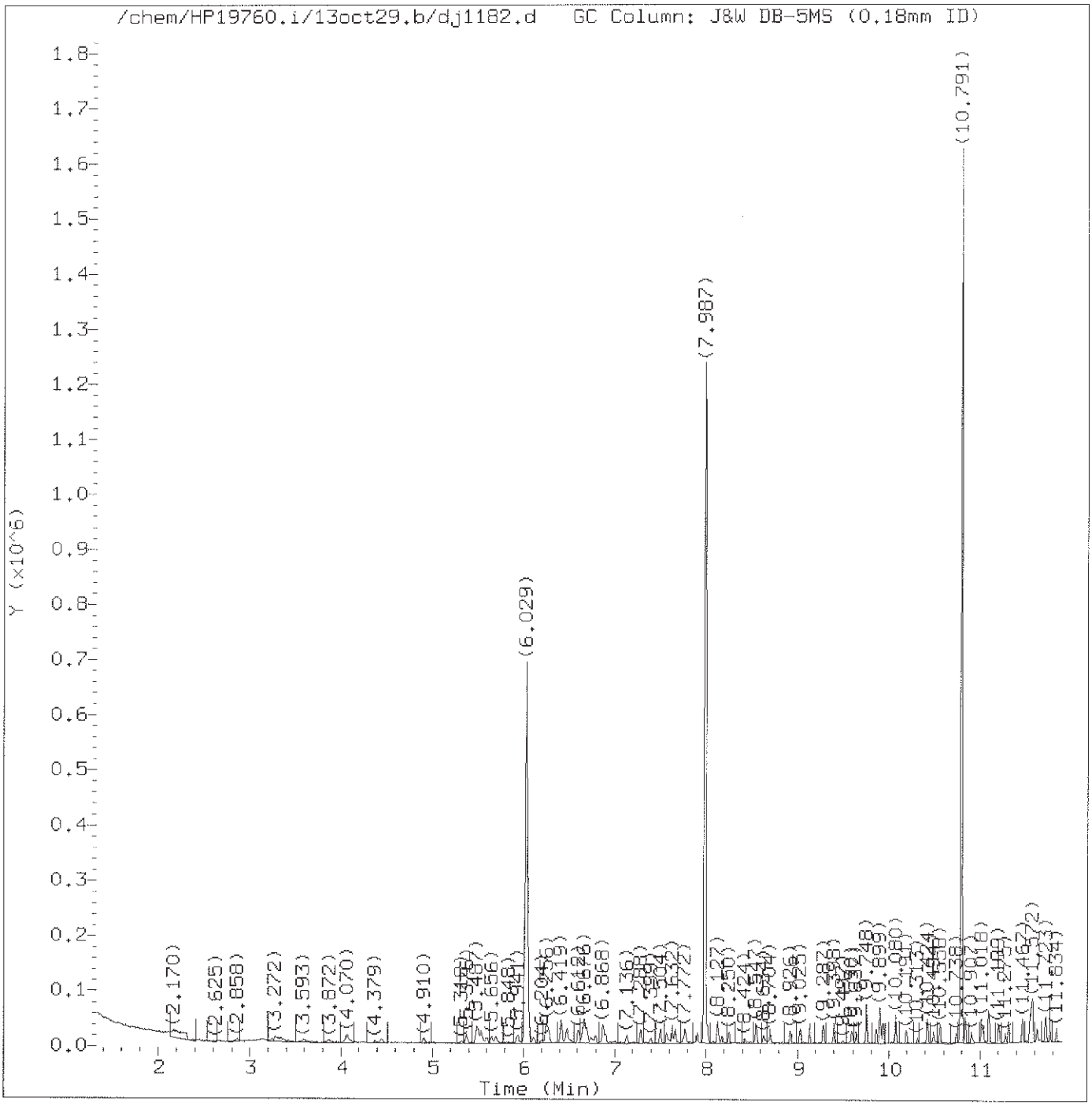
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

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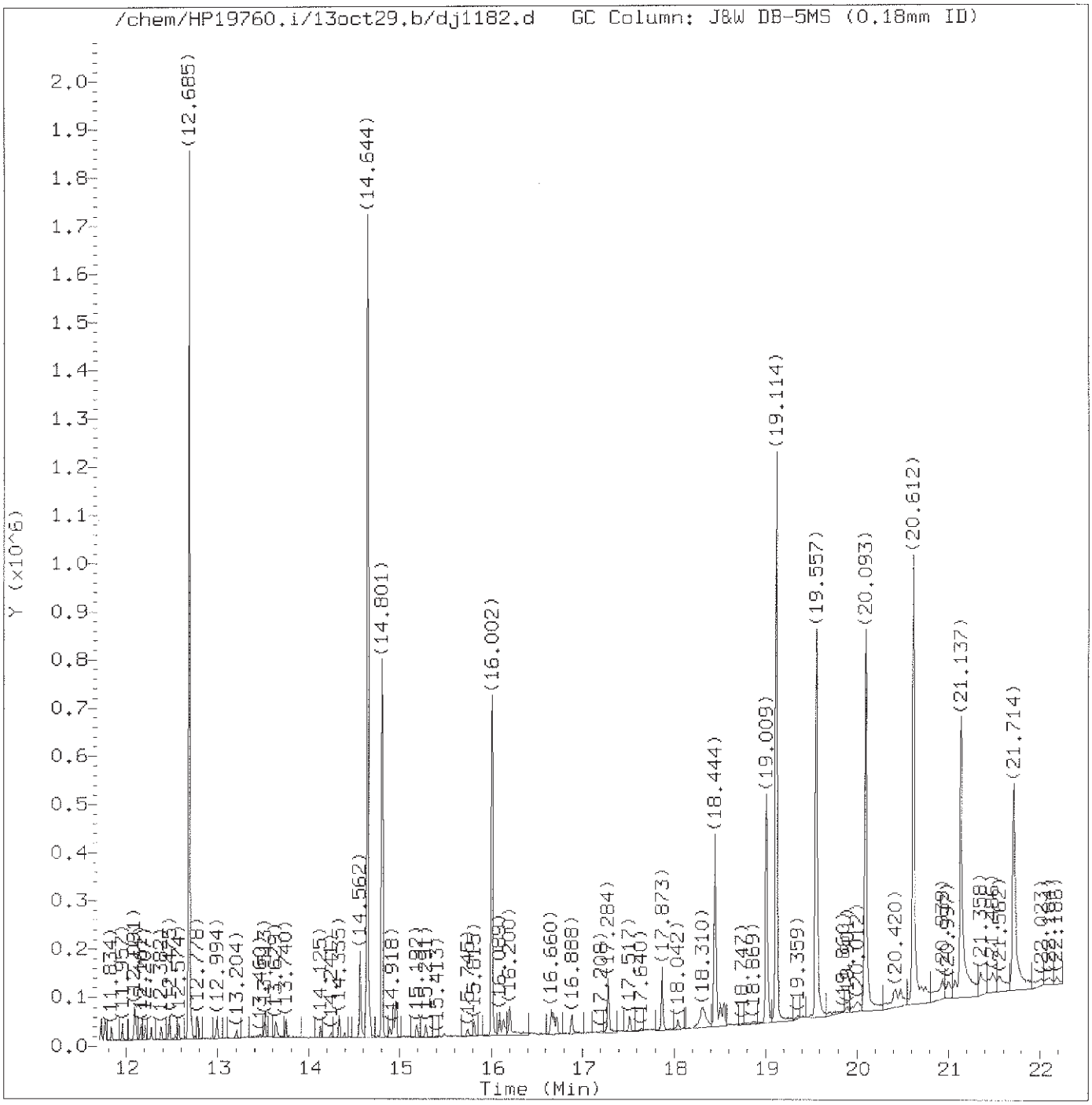
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.089	74	1978	0.049
3) Pyridine	(1)	2.159	79	4040	0.062
4) 2-Picoline	(1)	3.278	93	5887	0.085
5) N-Nitrosomethylethylamine	(1)	3.412	88	2434	0.077
6) Methyl methanesulfonate	(1)	3.866	80	3178	0.090
7)$2-Fluorophenol	(1)	4.065	112	11592	0.216
8) N-Nitrosodiethylamine	(1)	4.449	102	2906	0.097
10) Ethyl methanesulfonate	(1)	4.910	109	2854	0.101
11) Benzaldehyde	(1)	5.376	77	6602	0.125
12)$Phenol-d5	(1)	5.487	99	16847	0.228
13)$Phenol-d6	(1)	5.487	99	16847	0.228
14) Phenol	(1)	5.504	94	10250	0.122
15) Aniline	(1)	5.539	93	13009	0.124
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6855	0.104
17) 2-Chlorophenol	(1)	5.697	128	5496	0.103
18) 1,3-Dichlorobenzene	(1)	5.941	146	5342	0.097
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	172486	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5727	0.104
23) Benzyl alcohol	(1)	6.250	108	5087	0.140
24) 1,2-Dichlorobenzene	(1)	6.280	146	5122	0.099
25) Indene	(1)	6.414	115	13592	0.153
26) 2-Methylphenol	(1)	6.431	108	6249	0.118
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	11271	0.137
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	11271	0.137
29) N-Nitrosopyrrolidine	(1)	6.612	100	3637	0.117
30) Acetophenone	(1)	6.653	105	9151	0.118
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	6438	0.133
33) 4-Methylphenol	(1)	6.676	108	7465	0.125
32) N-Nitrosomorpholine	(1)	6.682	56	5072	0.136
34) o-Toluidine	(1)	6.699	106	10505	0.116
35) Hexachloroethane	(1)	6.792	117	2399	0.101
36)$Nitrobenzene-d5	(2)	6.868	82	14956	0.231
37) Nitrobenzene	(2)	6.897	77	8544	0.126
39) N-Nitrosopiperidine	(2)	7.136	114	3210	0.114
40) Isophorone	(2)	7.288	82	14776	0.125
42) 2-Nitrophenol	(2)	7.399	139	2257	0.087
45) 2,4-Dimethylphenol	(2)	7.504	107	6641	0.116
47) Benzoic acid	(2)	7.568	105	9965	0.251
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3021	0.124
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	9510	0.128

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	7.772	162	4415	0.109
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4887	0.114
52)*Naphthalene-d8	(2)	7.987	136	675195	5.000
53) Naphthalene	(2)	8.022	128	17062	0.121
55) 4-Chloroaniline	(2)	8.127	127	8283	0.134
56) 2,6-Dichlorophenol	(2)	8.133	162	4277	0.111
57) Hexachloropropene	(2)	8.174	213	2448	0.086
58) Hexachlorobutadiene	(2)	8.250	225	2766	0.112
60) Quinoline	(2)	8.547	129	14809	0.152
61) Caprolactam	(2)	8.634	113	2282	0.126
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	5553	0.129
63) 4-Chloro-3-methylphenol	(2)	8.926	107	5929	0.119
64) Safrole	(2)	9.025	162	4340	0.115
65) 2-Methylnaphthalene	(2)	9.130	142	11868	0.123
66) 1-Methylnaphthalene	(2)	9.287	142	10863	0.123
67) Hexachlorocyclopentadiene	(3)	9.398	237	1612	0.071
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.398	216	5395	0.120
69) cis-Isosafrole	(3)	9.497	162	787	0.111
70) 2,4,6-Trichlorophenol	(3)	9.590	196	3352	0.109
71) 2,4,5-Trichlorophenol	(3)	9.637	196	3643	0.113
72)$2-Fluorobiphenyl	(3)	9.748	172	26357	0.269
74) Isosafrole	(3)	9.858	162	4585	0.116
73) trans-Isosafrole	(3)	9.858	162	4585	0.116
75) 1,1'-Biphenyl	(3)	9.893	154	13490	0.122
76) 2-Chloronaphthalene	(3)	9.899	162	11235	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12712	0.148
82) Diphenyl ether	(3)	10.080	170	8236	0.128
83) 2-Nitroaniline	(3)	10.080	138	3138	0.100
84) 1,4-Naphthoquinone	(3)	10.191	158	3989	0.098
85) 1,4-Dinitrobenzene	(3)	10.319	168	1125	0.069
86) Dimethylphthalate	(3)	10.424	163	13121	0.129
87) 1,3-Dinitrobenzene	(3)	10.430	168	1495	0.078
88) 2,6-Dinitrotoluene	(3)	10.494	165	2253	0.092
90) Acenaphthylene	(3)	10.558	152	16378	0.122
91) 3-Nitroaniline	(3)	10.738	138	2678	0.095
92)*Acenaphthene-d10	(3)	10.791	164	386904	5.000
93) Acenaphthene	(3)	10.838	153	11840	0.127
94) 2,4-Dinitrophenol	(3)	10.907	184	2929	0.258
96) 4-Nitrophenol	(3)	11.018	109	6470	0.361
95) Pentachlorobenzene	(3)	11.036	250	4685	0.130

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
97) Dibenzofuran	(3)	11.094	168	16311	0.124
98) 2,4-Dinitrotoluene	(3)	11.100	165	2709	0.089
99) 1-Naphthylamine	(3)	11.199	143	11145	0.116
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2308	0.091
101) 2-Naphthylamine	(3)	11.310	143	12227	0.123
102) Diethylphthalate	(3)	11.467	149	12664	0.126
103) Fluorene	(3)	11.549	166	13013	0.123
104) Thionazin	(3)	11.560	107	3060	0.139
106) 5-Nitro-o-toluidine	(3)	11.572	152	3031	0.102
107) 4-Nitroaniline	(3)	11.572	138	2893	0.107
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6859	0.134
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	3453	0.207
109) N-Nitrosodiphenylamine	(4)	11.723	169	11124	0.129
110) NDPA as diphenylamine	(4)	11.723	169	11124	0.129
111) 1,2-Diphenylhydrazine	(4)	11.764	77	16987	0.122
112)$2,4,6-Tribromophenol	(3)	11.840	330	2419	0.222
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	2806	0.138
117) Diallate (peak 1)	(4)	12.085	86	6127	0.087
118) Phorate	(4)	12.091	75	10537	0.125
119) Phenacetin	(4)	12.102	108	6376	0.102
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3210	0.120
121) Diallate (peak 2)	(4)	12.190	86	769	0.026
122) Hexachlorobenzene	(4)	12.207	284	3315	0.126
123) Dimethoate	(4)	12.277	87	6002	0.105
124) Atrazine	(4)	12.388	200	2898	0.105
125) Pentachlorophenol	(4)	12.458	266	1375	0.070
126) Pentachloronitrobenzene	(4)	12.470	237	1266	0.098
127) 4-Aminobiphenyl	(4)	12.475	169	12135	0.109
129) Pronamide	(4)	12.574	173	5209	0.107
130)*Phenanthrene-d10	(4)	12.685	188	662675	5.000
131) Phenanthrene	(4)	12.714	178	19587	0.129
134) Anthracene	(4)	12.778	178	18511	0.122
135) Carbazole	(4)	12.994	167	18175	0.120
136) Methyl parathion	(4)	13.204	109	3103	0.075
137) Di-n-butylphthalate	(4)	13.513	149	21722	0.116
138) Parathion	(4)	13.740	109	2270	0.086
140) Isodrin	(4)	14.125	193	2777	0.148
142) Fluoranthene	(4)	14.335	202	20363	0.120
144) Benzidine	(5)	14.562	184	88772	0.761
145)*Pyrene-d10	(5)	14.644	212	830589	5.000

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Pyrene	(5)	14.673	202	24159	0.131
149)$Terphenyl-d14	(5)	14.958	244	28150	0.264
150) p-Dimethylaminoazobenzene	(5)	15.192	225	2695	0.074
151) Chlorobenzilate	(5)	15.291	139	6067	0.111
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	8981	0.075
153) Butylbenzylphthalate	(5)	15.815	149	7839	0.095
156) 2-Acetylaminofluorene	(5)	16.153	181	3961	0.055
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	5296	0.092
158) Benzo(a)anthracene	(5)	16.660	228	17959	0.118
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	2581	0.083
161) Chrysene	(5)	16.719	228	18348	0.123
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	13020	0.115
165) 6-Methylchrysene	(5)	17.517	242	14196	0.128
166) Di-n-octylphthalate	(6)	18.042	149	13839	0.074
168) Benzo(b)fluoranthene	(6)	18.502	252	16394	0.120
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	5521	0.095
170) Benzo(k)fluoranthene	(6)	18.543	252	17604	0.124
171) Benzo(a)pyrene	(6)	19.021	252	15464	0.121
172)*Perylene-d12	(6)	19.114	264	590527	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	7441	0.115
174) Dibenz(a,h)acridine	(6)	20.402	279	8282	0.091
175) Dibenz(a,j)acridine	(6)	20.472	279	9481	0.102
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	11904	0.109
177) Dibenz(a,h)anthracene	(6)	20.752	278	10127	0.110
178) Benzo(g,h,i)perylene	(6)	21.073	276	10674	0.116
179) Diallate TRANS/CIS	(4)			6896	0.115
182) 2,4_2,6-Dinitrotoluenes	(3)			4962	0.181

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$ = Compound is a surrogate standard.

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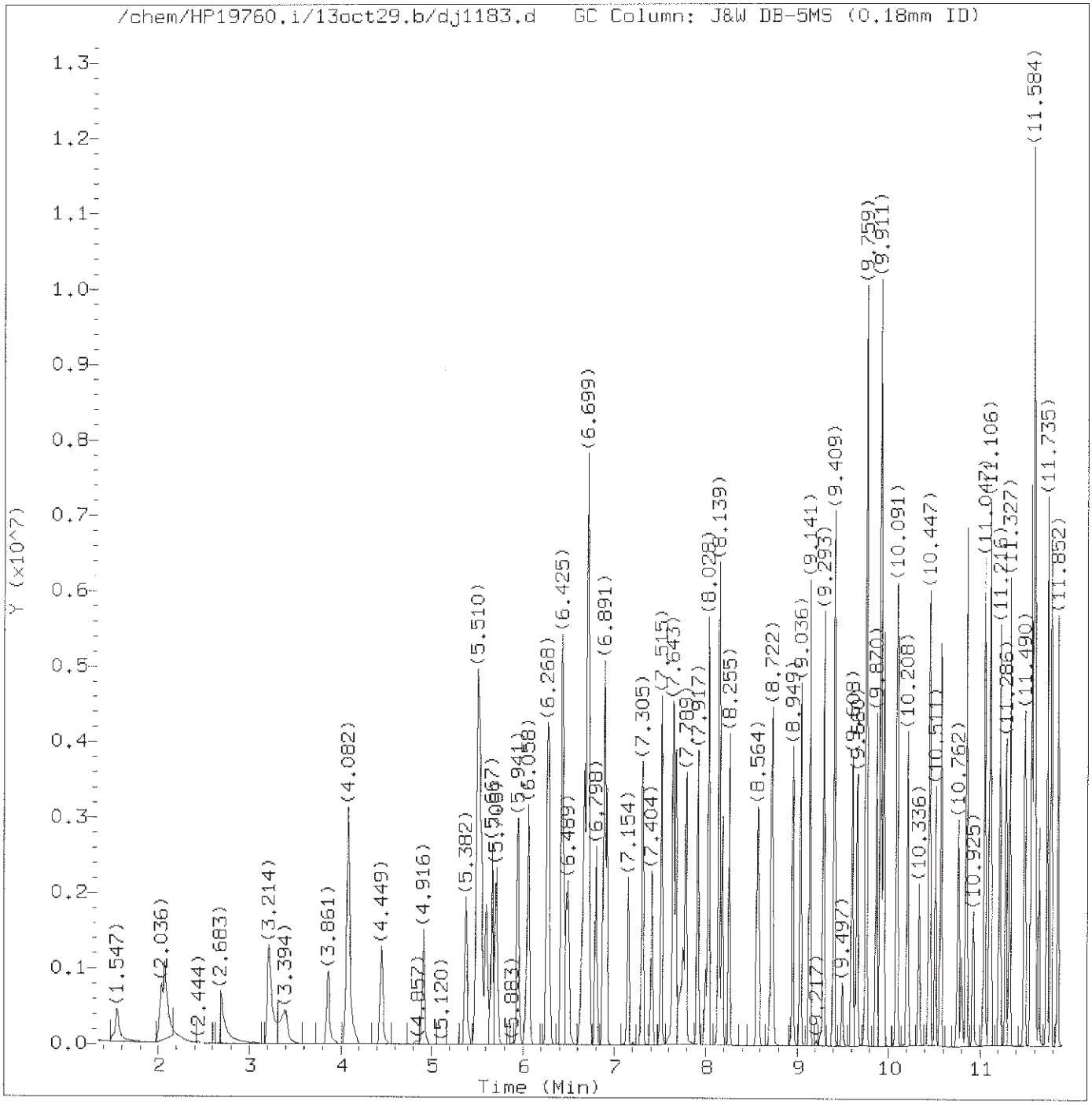
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

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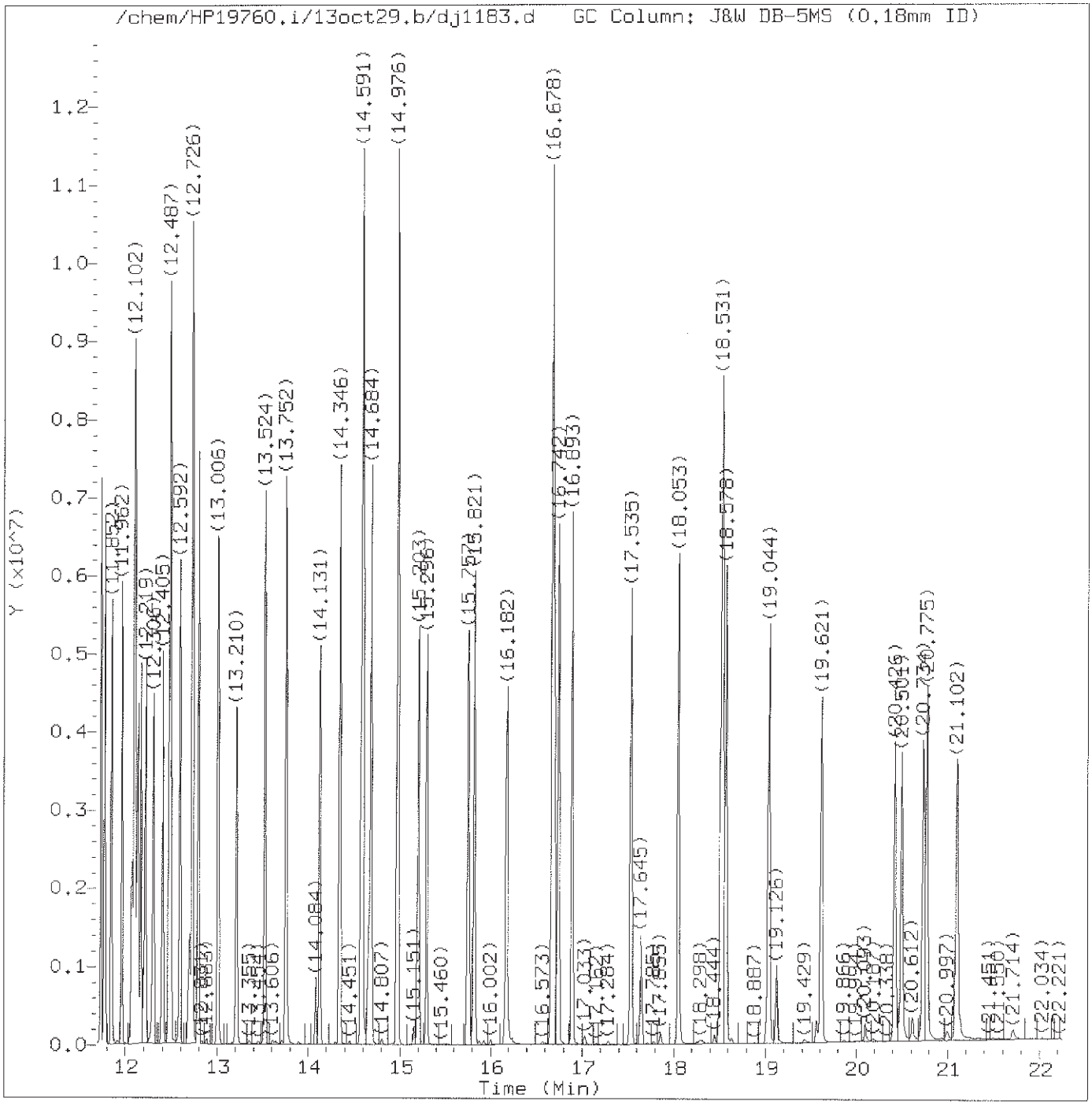
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	533811M	31.085
2) N-Nitrosodimethylamine	(1)	2.030	74	962330	29.915
3) Pyridine	(1)	2.071	79	1618210	30.569
4) 2-Picoline	(1)	3.214	93	1649187	29.927
5) N-Nitrosomethylethylamine	(1)	3.394	88	732071	29.641
6) Methyl methanesulfonate	(1)	3.861	80	814086	29.472
7)$2-Fluorophenol	(1)	4.082	112	2413564	58.275
8) N-Nitrosodiethylamine	(1)	4.449	102	690447	29.556
10) Ethyl methanesulfonate	(1)	4.916	109	648760	29.501
11) Benzaldehyde	(1)	5.382	77	936320	25.592
12)$Phenol-d5	(1)	5.510	99	3225817	57.419
13)$Phenol-d6	(1)	5.510	99	3225817	57.419
14) Phenol	(1)	5.528	94	1839299	28.692
15) Aniline	(1)	5.545	93	2320471	28.951
16) bis(2-Chloroethyl)ether	(1)	5.667	93	1475312	29.040
17) 2-Chlorophenol	(1)	5.714	128	1188155	29.051
18) 1,3-Dichlorobenzene	(1)	5.941	146	1241476	29.210
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	136880	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	1240683	29.139
23) Benzyl alcohol	(1)	6.262	108	859919	29.926
24) 1,2-Dichlorobenzene	(1)	6.279	146	1143792	28.859
25) Indene	(1)	6.419	115	2285068	34.155
26) 2-Methylphenol	(1)	6.437	108	1169803	28.913
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1784369	28.656
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1784369	28.656
29) N-Nitrosopyrrolidine	(1)	6.641	100	704808	29.208
30) Acetophenone	(1)	6.670	105	1840492	29.944
33) 4-Methylphenol	(1)	6.699	108	1237807	27.916
31) N-Nitroso-di-n-propylamine	(1)	6.705	70	983097	27.647
32) N-Nitrosomorpholine	(1)	6.711	56	764484	27.801
34) o-Toluidine	(1)	6.722	106	1930813	28.327
35) Hexachloroethane	(1)	6.798	117	530896	29.030
36)$Nitrobenzene-d5	(2)	6.891	82	2871559	57.502
37) Nitrobenzene	(2)	6.921	77	1522252	28.871
39) N-Nitrosopiperidine	(2)	7.154	114	641771	29.090
40) Isophorone	(2)	7.305	82	2655803	28.949
42) 2-Nitrophenol	(2)	7.410	139	586205	29.015
45) 2,4-Dimethylphenol	(2)	7.515	107	1286581	28.946
46) O,O,O-triethylphosphorothioate	(2)	7.649	198	568840	29.479
48) bis(2-Chloroethoxy)methane	(2)	7.678	93	1689288M	29.105

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.737	105	1076787	31.759
49) 2,4-Dichlorophenol	(2)	7.789	162	921015	29.176
51) 1,2,4-Trichlorobenzene	(2)	7.917	180	976302	29.168
52)*Naphthalene-d8	(2)	7.993	136	543087	5.000
53) Naphthalene	(2)	8.028	128	3205184	28.894
55) 4-Chloroaniline	(2)	8.139	127	1344813	28.409
56) 2,6-Dichlorophenol	(2)	8.145	162	860749	28.798
57) Hexachloropropene	(2)	8.180	213	695357	30.198
58) Hexachlorobutadiene	(2)	8.255	225	583889	29.701
60) Quinoline	(2)	8.564	129	2197862	29.010
62) N-Nitrosodi-n-butylamine	(2)	8.722	84	1227168	32.460
61) Caprolactam	(2)	8.733	113	420909	29.398
63) 4-Chloro-3-methylphenol	(2)	8.949	107	1126249	28.958
64) Safrole	(2)	9.036	162	859283	29.123
65) 2-Methylnaphthalene	(2)	9.141	142	2132185	28.274
66) 1-Methylnaphthalene	(2)	9.293	142	1948789	28.310
67) Hexachlorocyclopentadiene	(3)	9.404	237	551060	30.214
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.409	216	1025079	29.290
69) cis-Isosafrole	(3)	9.497	162	164912	29.571
70) 2,4,6-Trichlorophenol	(3)	9.608	196	701260	29.191
71) 2,4,5-Trichlorophenol	(3)	9.660	196	712383	28.825
72)$2-Fluorobiphenyl	(3)	9.759	172	4163177	56.376
74) Isosafrole	(3)	9.870	162	872242	28.758
73) trans-Isosafrole	(3)	9.870	162	872242	28.758
75) 1,1'-Biphenyl	(3)	9.911	154	2438245	28.697
76) 2-Chloronaphthalene	(3)	9.917	162	1792144	27.373
77) 1-Chloronaphthalene	(3)	9.946	162	1935636	29.072
82) Diphenyl ether	(3)	10.086	170	1385610	28.439
83) 2-Nitroaniline	(3)	10.097	138	664121	28.161
84) 1,4-Naphthoquinone	(3)	10.208	158	893735	28.669
85) 1,4-Dinitrobenzene	(3)	10.336	168	366530	29.038
86) Dimethylphthalate	(3)	10.447	163	2156829	28.145
87) 1,3-Dinitrobenzene	(3)	10.453	168	415458	28.575
88) 2,6-Dinitrotoluene	(3)	10.511	165	526071	28.342
90) Acenaphthylene	(3)	10.569	152	2971115	28.382
91) 3-Nitroaniline	(3)	10.762	138	629662	28.913
92)*Acenaphthene-d10	(3)	10.797	164	309287	5.000
93) Acenaphthene	(3)	10.849	153	1954037	27.302
94) 2,4-Dinitrophenol	(3)	10.925	184	319330	32.390
96) 4-Nitrophenol	(3)	11.047	109	403476	29.063

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.047	250	814606	29.103
97) Dibenzofuran	(3)	11.106	168	2777166	28.125
98) 2,4-Dinitrotoluene	(3)	11.123	165	702019	29.432
99) 1-Naphthylamine	(3)	11.216	143	2152834	29.001
100) 2,3,4,6-Tetrachlorophenol	(3)	11.286	232	580597	29.353
101) 2-Naphthylamine	(3)	11.327	143	2168398	28.623
102) Diethylphthalate	(3)	11.490	149	2257543	29.056
103) Fluorene	(3)	11.560	166	2225368	27.419
104) Thionazin	(3)	11.584	107	448938	27.575
105) 4-Chlorophenyl-phenylether	(3)	11.589	204	1132180	28.764
106) 5-Nitro-o-toluidine	(3)	11.595	152	657947	28.794
107) 4-Nitroaniline	(3)	11.607	138	618137A	29.311
108) 4,6-Dinitro-2-methylphenol	(4)	11.648	198	443113	31.440
110) NDPA as diphenylamine	(4)	11.735	169	1837235	28.117
109) N-Nitrosodiphenylamine	(4)	11.735	169	1837235	28.117
111) 1,2-Diphenylhydrazine	(4)	11.776	77	2839842	27.487
112)$2,4,6-Tribromophenol	(3)	11.852	330	545042	61.237
115) Tetraethyldithiopyrophosphate	(4)	11.962	97	443512	28.444
116) 1,3,5-Trinitrobenzene	(4)	12.073	213	329707	31.413
117) Diallate (peak 1)	(4)	12.096	86	1078550	20.658
118) Phorate	(4)	12.102	75	1716065	25.356
119) Phenacetin	(4)	12.137	108	1401644	28.828
120) 4-Bromophenyl-phenylether	(4)	12.172	248	609610	29.092
121) Diallate (peak 2)	(4)	12.196	86	171573	7.282
122) Hexachlorobenzene	(4)	12.219	284	597745	28.828
123) Dimethoate	(4)	12.306	87	1223135	28.131
124) Atrazine	(4)	12.405	200	591090	28.159
125) Pentachlorophenol	(4)	12.469	266	490292	30.426
127) 4-Aminobiphenyl	(4)	12.487	169	2373398	28.203
126) Pentachloronitrobenzene	(4)	12.487	237	298768	29.348
129) Pronamide	(4)	12.592	173	1088998	28.795
130)*Phenanthrene-d10	(4)	12.697	188	533001	5.000
131) Phenanthrene	(4)	12.726	178	3186893	27.213
133) Dinoseb	(4)	12.726	211	657031	31.680
134) Anthracene	(4)	12.796	178	3353888	28.293
135) Carbazole	(4)	13.012	167	3247508	28.207
136) Methyl parathion	(4)	13.210	109	911392	28.595
137) Di-n-butylphthalate	(4)	13.524	149	3923710	27.913
138) Parathion	(4)	13.752	109	577302	28.443
139) 4-Nitroquinoline-1-oxide	(4)	13.758	190	414372	33.695

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.131	193	429506	29.164
142) Fluoranthene	(4)	14.346	202	3926948	29.187
144) Benzidine	(5)	14.591	184	7555861	84.169
145)*Pyrene-d10	(5)	14.649	212	680467	5.000
146) Pyrene	(5)	14.684	202	3955299	27.338
149)$Terphenyl-d14	(5)	14.976	244	4971452	58.391
150) p-Dimethylaminoazobenzene	(5)	15.203	225	881982	29.734
151) Chlorobenzilate	(5)	15.296	139	1231178	28.627
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2630050	28.295
153) Butylbenzylphthalate	(5)	15.821	149	1808532	28.242
156) 2-Acetylaminofluorene	(5)	16.182	181	1719429	29.561
159) 3,3'-Dichlorobenzidine	(5)	16.678	252	1398429	29.751
158) Benzo(a)anthracene	(5)	16.678	228	3820231	30.341
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.695	231	736186	29.405
161) Chrysene	(5)	16.742	228	3459397	28.834
162) bis(2-Ethylhexyl)phthalate	(5)	16.893	149	2465418	28.185
165) 6-Methylchrysene	(5)	17.540	242	2639356	29.503
166) Di-n-octylphthalate	(6)	18.053	149	4322950	28.917
168) Benzo(b)fluoranthene	(6)	18.525	252	3518347	30.734
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.537	256	1691748	32.365
170) Benzo(k)fluoranthene	(6)	18.578	252	3417738	29.501
171) Benzo(a)pyrene	(6)	19.044	252	3191333	30.085
172)*Perylene-d12	(6)	19.126	264	487829	5.000
173) 3-Methylcholanthrene	(6)	19.621	268	1637077	30.301
174) Dibenz(a,h)acridine	(6)	20.426	279	2334375	30.582
175) Dibenz(a,j)acridine	(6)	20.501	279	2348896	30.240
176) Indeno(1,2,3-cd)pyrene	(6)	20.734	276	3014289	32.261
177) Dibenz(a,h)anthracene	(6)	20.775	278	2583344	32.532
178) Benzo(g,h,i)perylene	(6)	21.108	276	2403123	30.977
179) Diallate TRANS/CIS	(4)			1250123	27.751
182) 2,4_2,6-Dinitrotoluenes	(3)			1228090	57.774

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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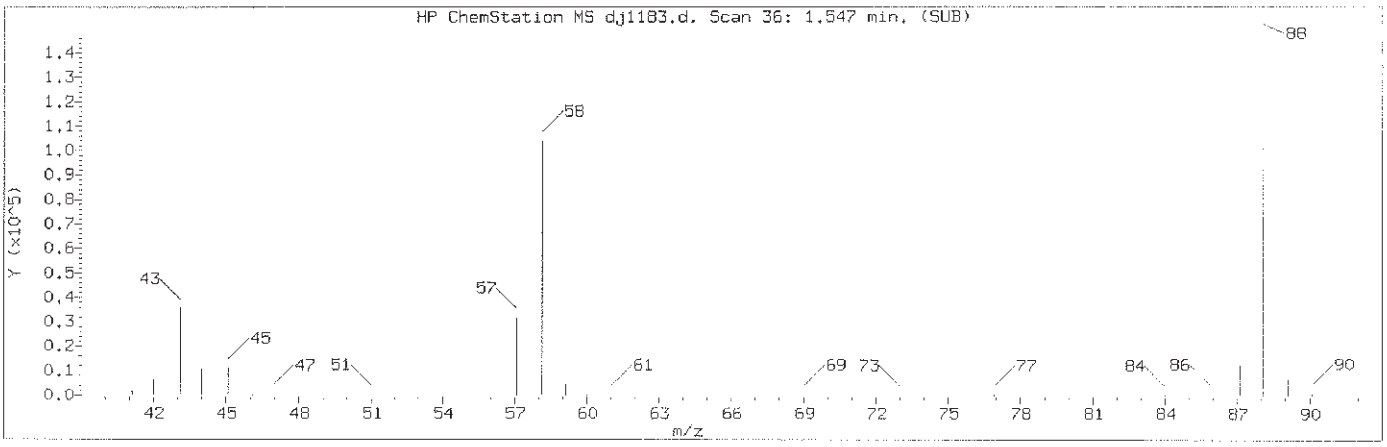
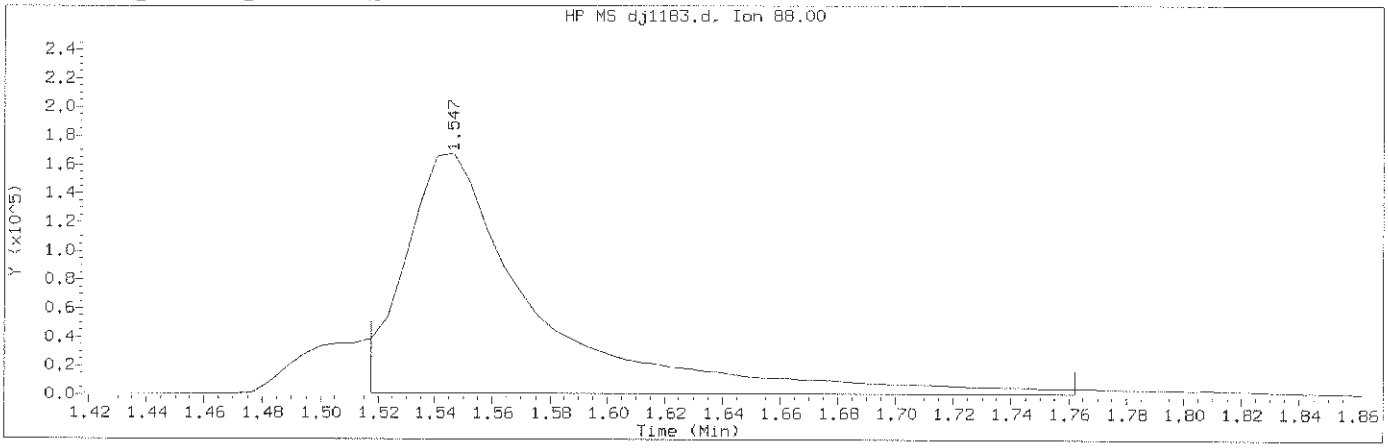
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area (flag)	: 533811M		
On-Column Amount (ng/ul)	: 31.0849		
Integration start scan	: 30	Integration stop scan:	72
Y at integration start	: 1385	Y at integration end:	1385

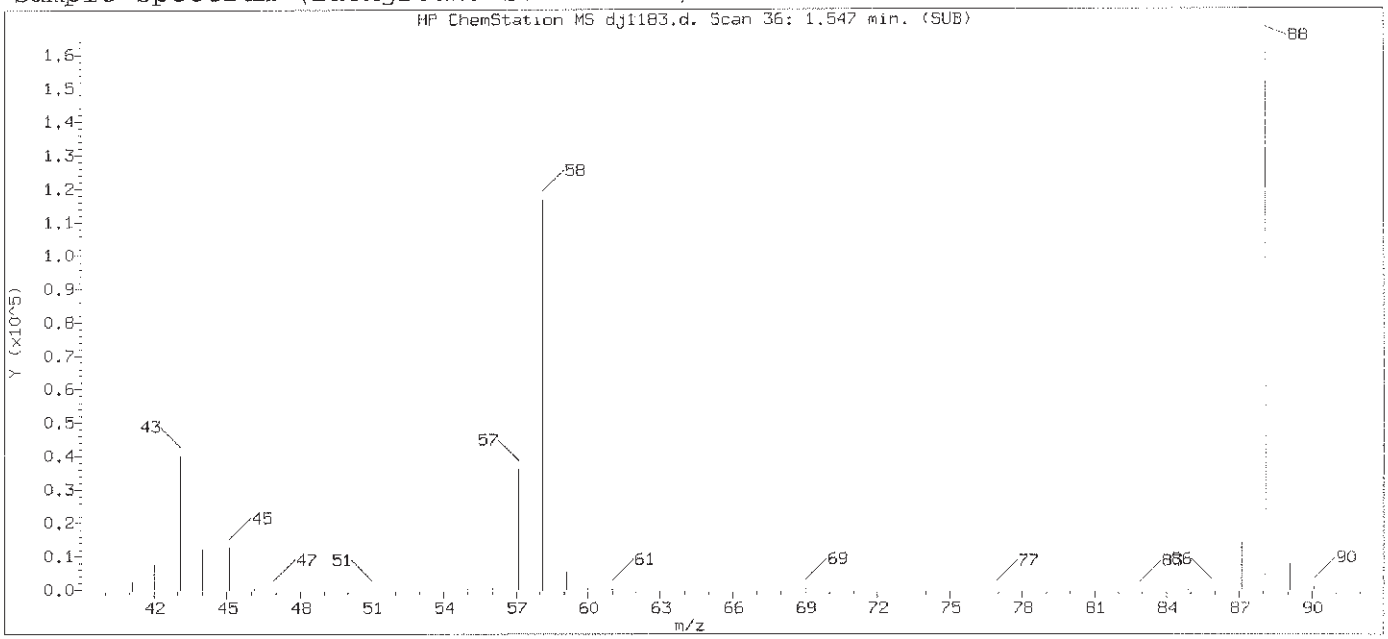
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

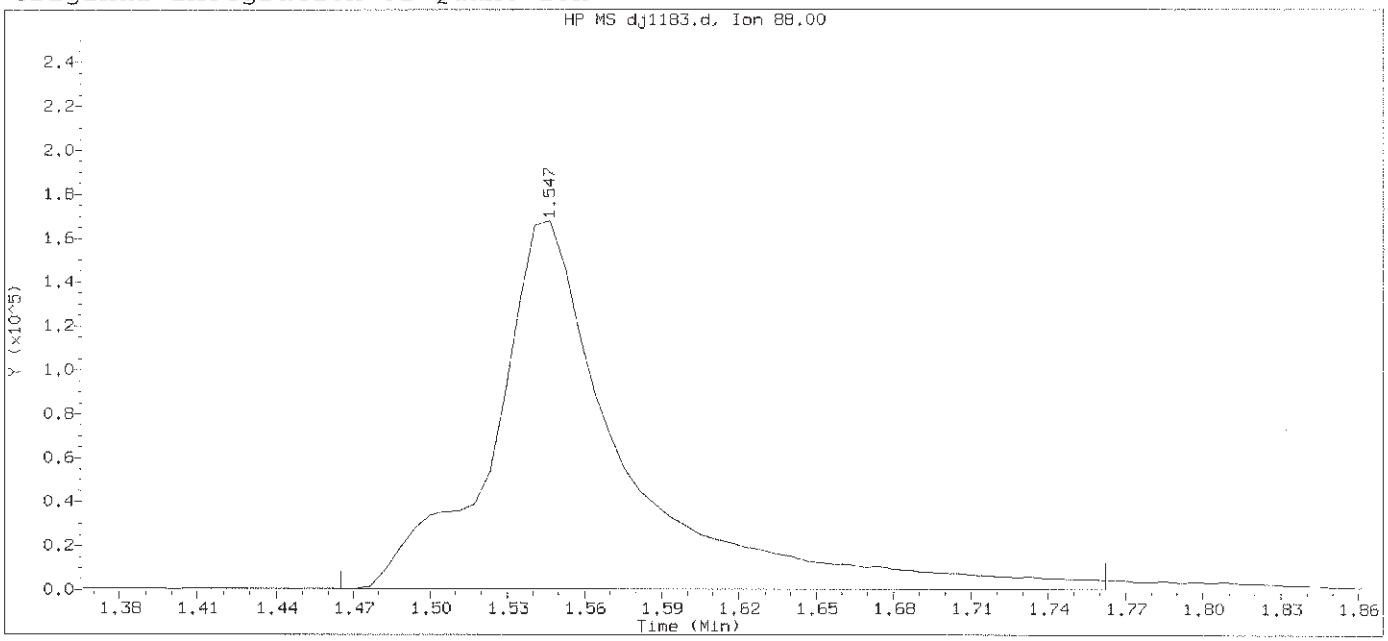
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area	: 600995		
On-column Amount (ng/ul)	: 35.2969		
Integration start scan	: 21	Integration stop scan:	72
Y at integration start	: 576	Y at integration end:	576

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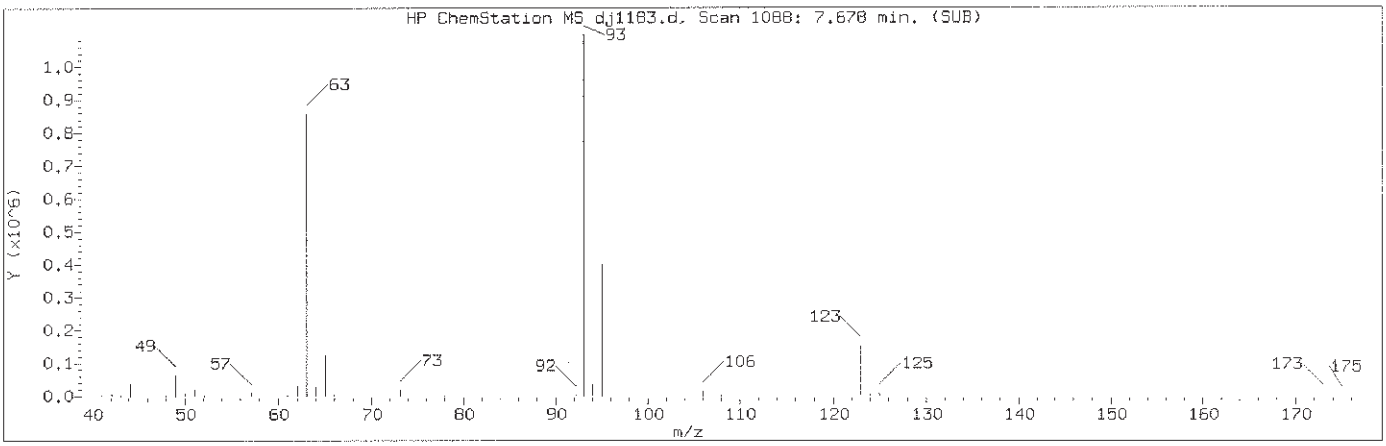
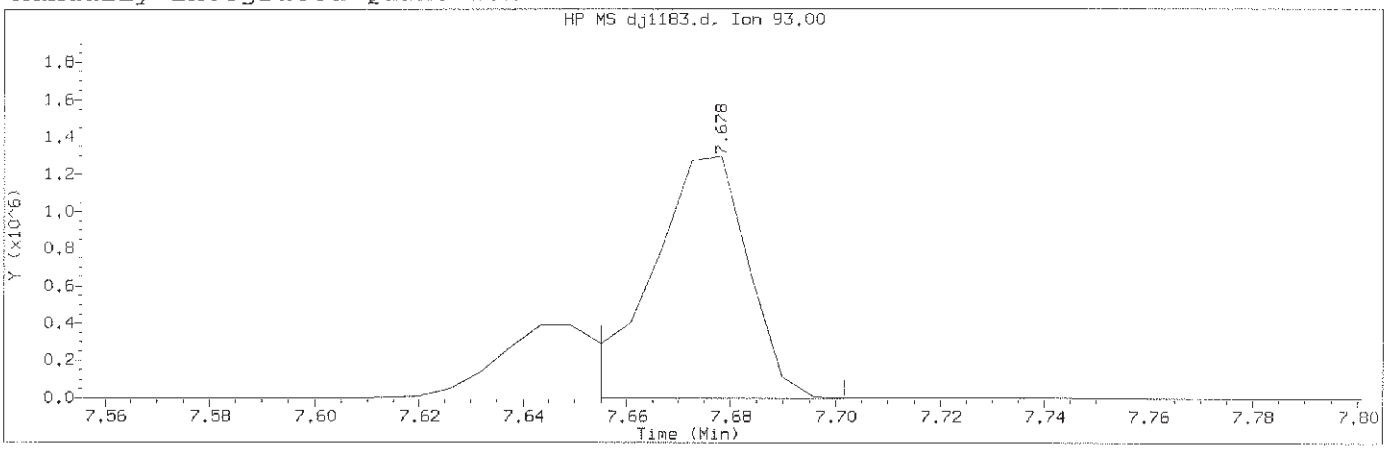
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area (flag)	: 1689288M		
On-Column Amount (ng/ul)	: 29.1048		
Integration start scan	: 1083	Integration stop scan:	1091
Y at integration start	: -679	Y at integration end:	-679

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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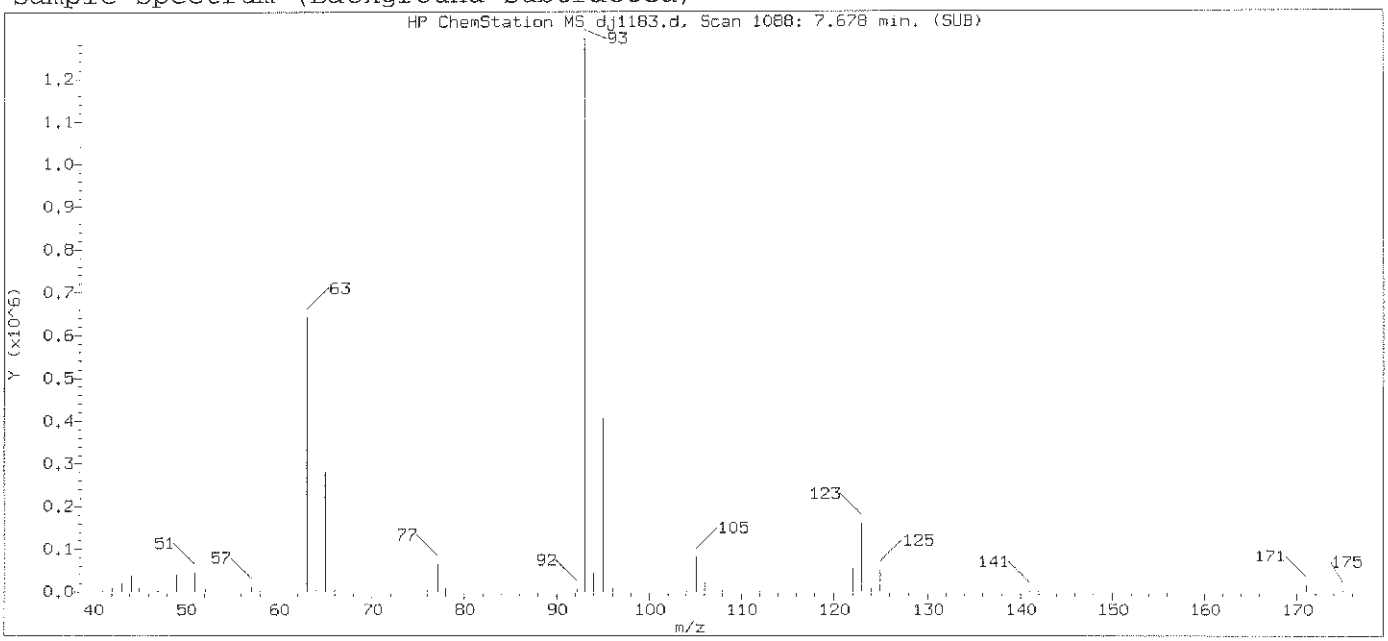
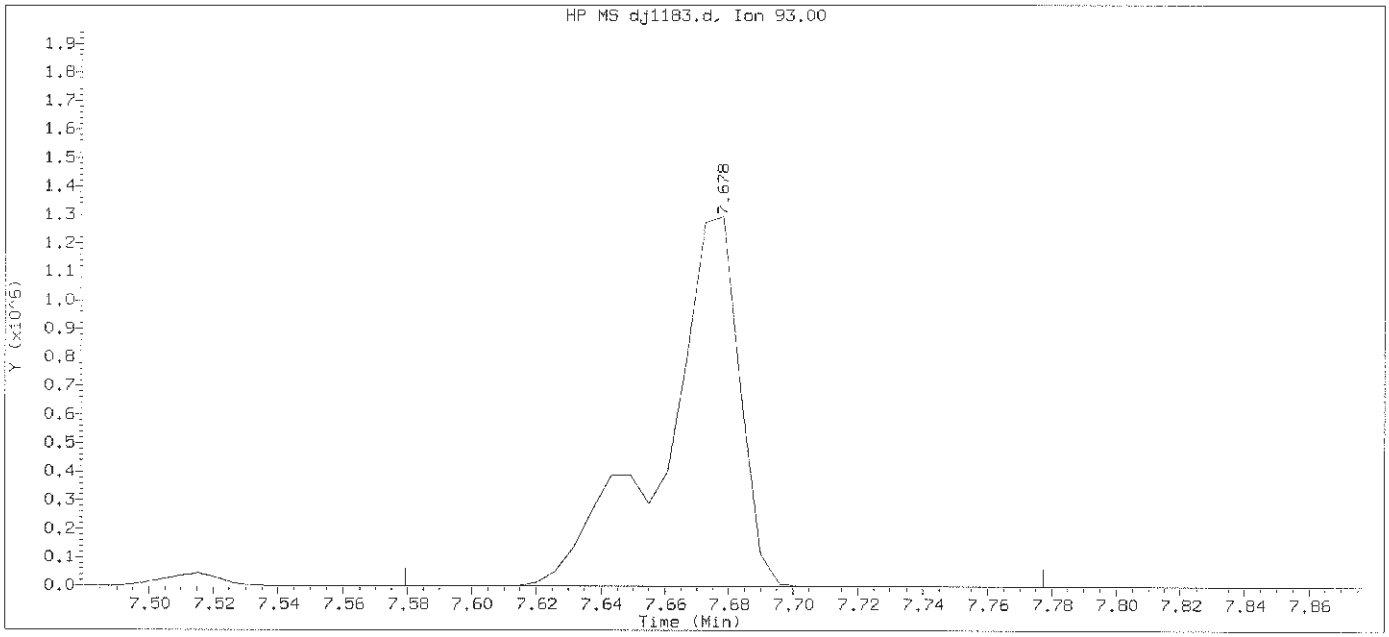
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

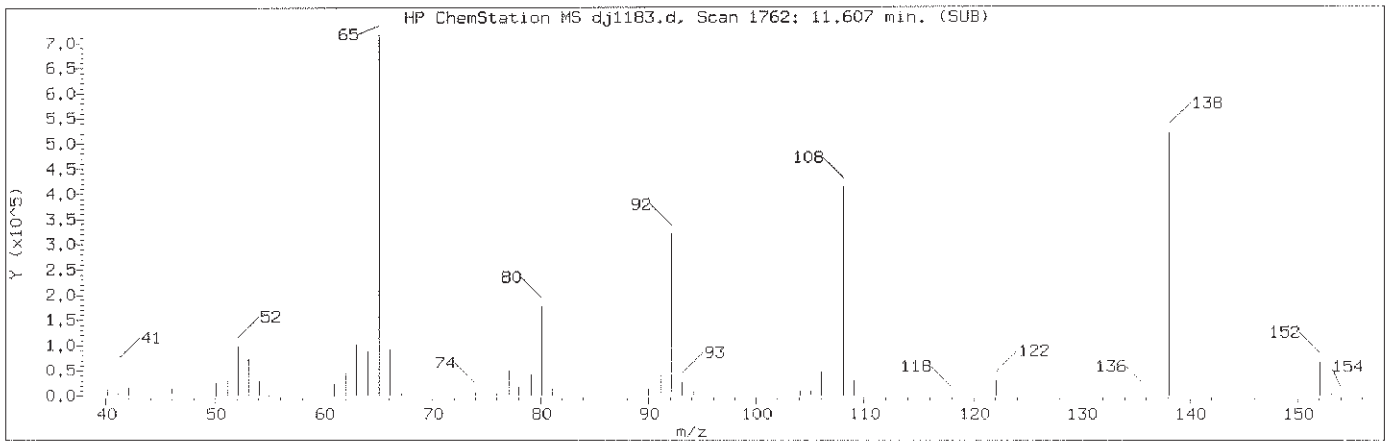
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

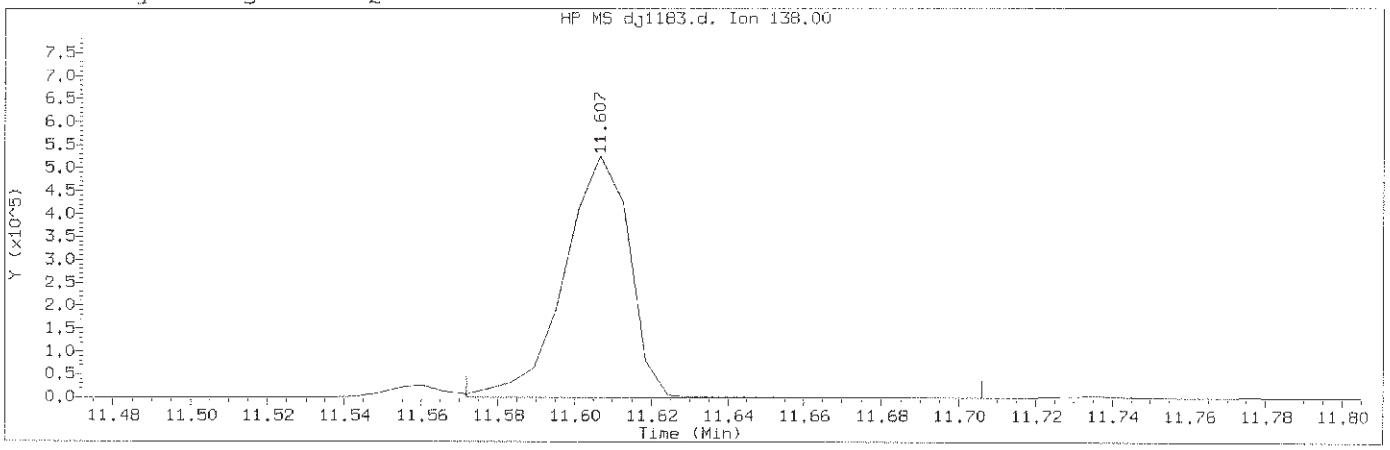
Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area	: 2128683		
On-column Amount (ng/ul)	: 32.5033		
Integration start scan	: 1070	Integration stop scan:	1104
Y at integration start	: 0	Y at integration end:	63

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1762		
Retention Time (minutes)	: 11.607		
Quant Ion	: 138.00		
Area (flag)	: 618137A		
On-Column Amount (ng/ul)	: 29.3114		
Integration start scan	: 1755	Integration stop scan:	1778
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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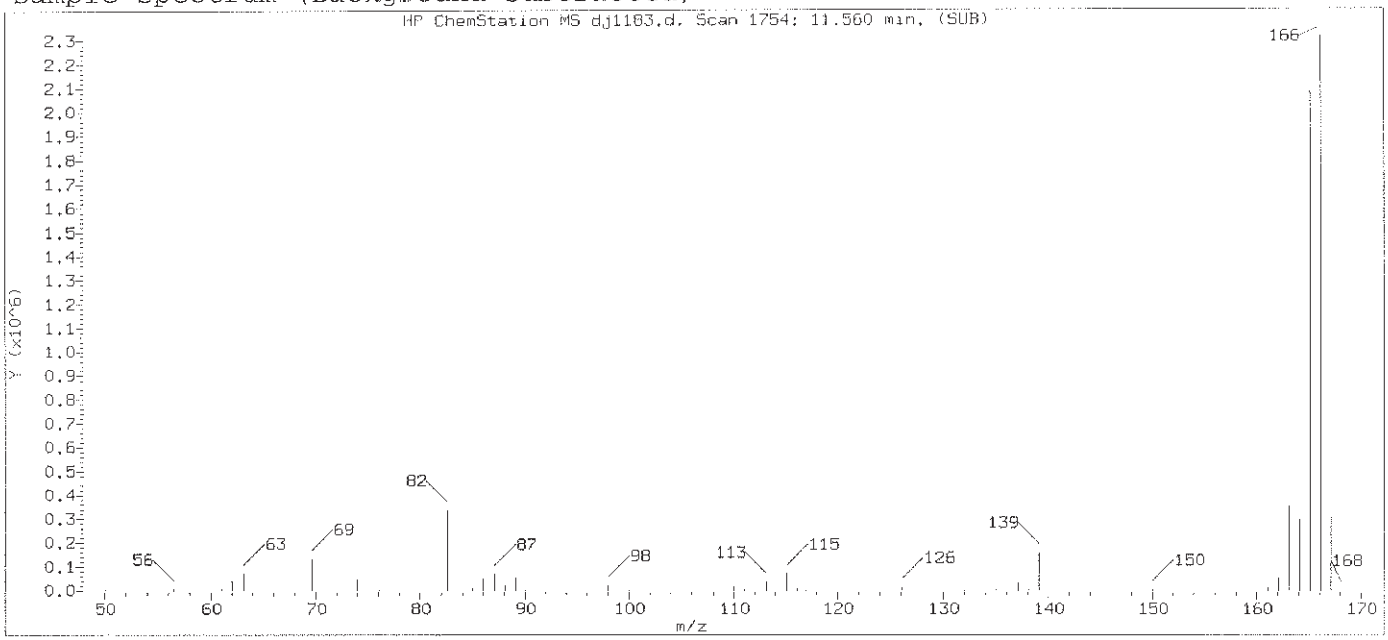
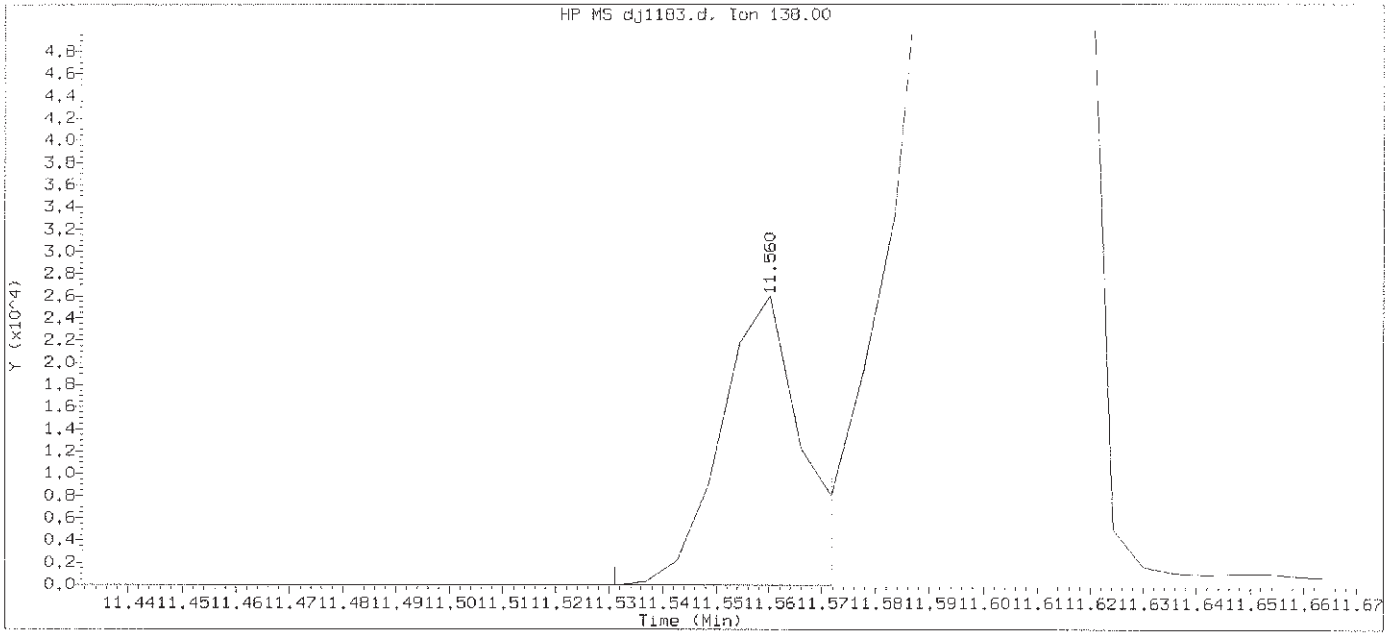
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



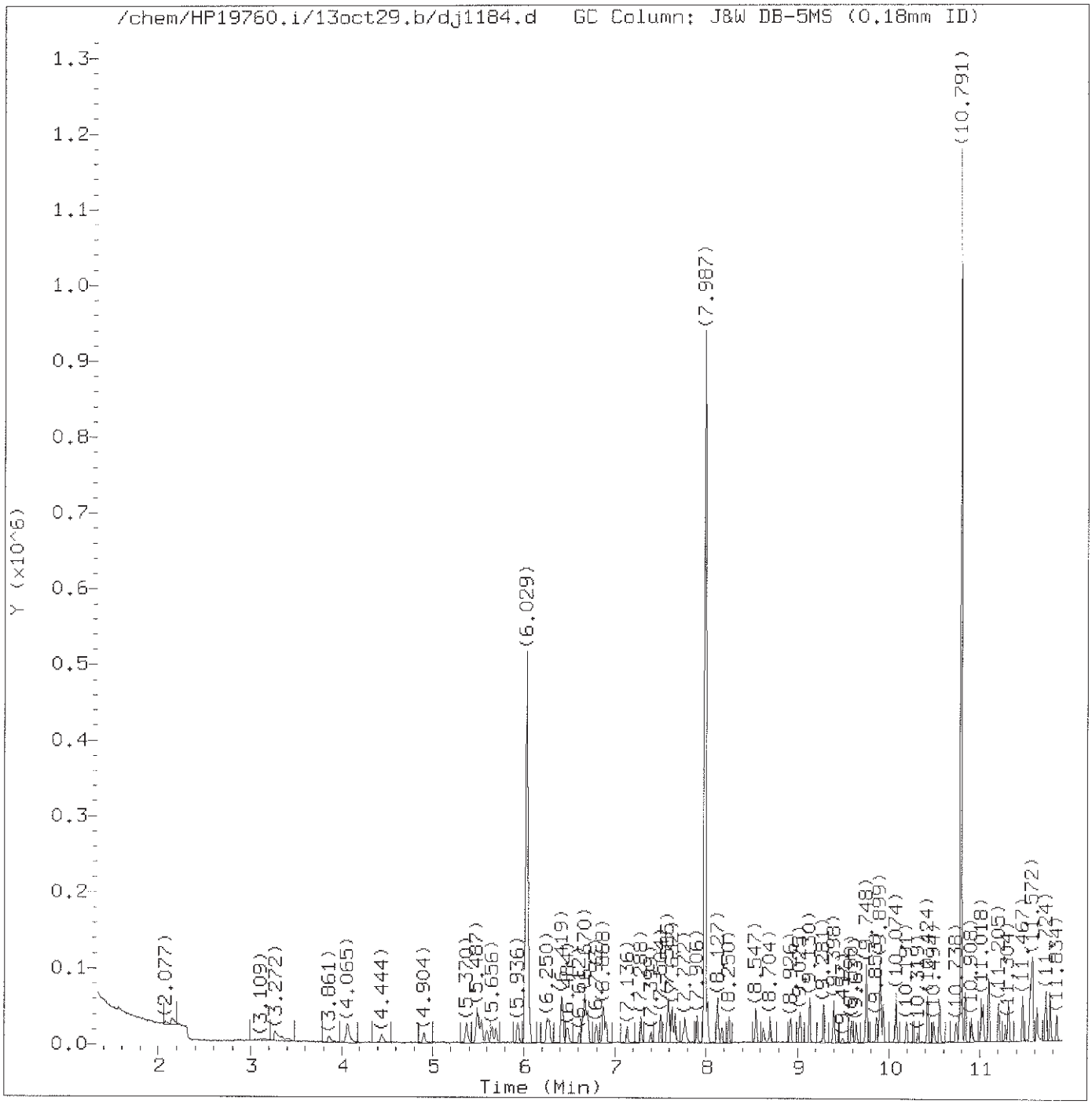
Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1754		
Retention Time (minutes)	: 11.560		
Quant Ion	: 138.00		
Area	: 26465		
On-column Amount (ng/ul)	: 1.5063		
Integration start scan	: 1748	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

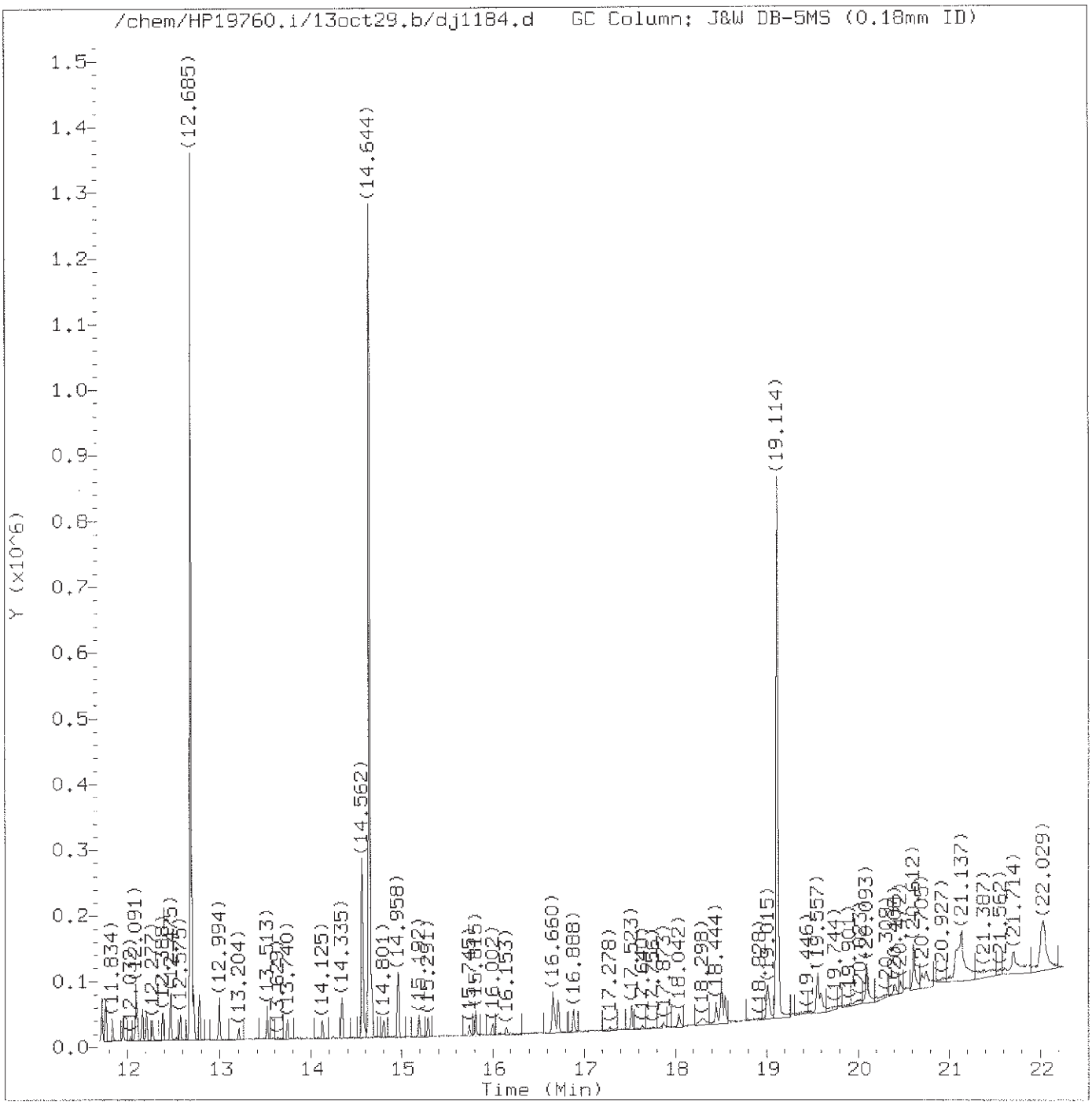
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.564	88	3696M	0.232
2) N-Nitrosodimethylamine	(1)	2.077	74	6220M	0.221
3) Pyridine	(1)	2.147	79	17293M	0.352
4) 2-Picoline	(1)	3.266	93	13682M	0.262
5) N-Nitrosomethylethylamine	(1)	3.418	88	5080	0.231
6) Methyl methanesulfonate	(1)	3.861	80	6376M	0.249
7)$2-Fluorophenol	(1)	4.065	112	19200	0.500
8) N-Nitrosodiethylamine	(1)	4.444	102	5285M	0.246
10) Ethyl methanesulfonate	(1)	4.904	109	5358M	0.258
11) Benzaldehyde	(1)	5.376	77	11103	0.327
12)$Phenol-d5	(1)	5.487	99	26913	0.511
13)$Phenol-d6	(1)	5.487	99	26913	0.511
14) Phenol	(1)	5.504	94	16178	0.264
15) Aniline	(1)	5.539	93	19481	0.258
16) bis(2-Chloroethyl)ether	(1)	5.656	93	12791	0.264
17) 2-Chlorophenol	(1)	5.703	128	9542	0.251
18) 1,3-Dichlorobenzene	(1)	5.936	146	10610	0.263
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	126889	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	11036	0.269
23) Benzyl alcohol	(1)	6.250	108	6796	0.255
24) 1,2-Dichlorobenzene	(1)	6.280	146	10030	0.265
25) Indene	(1)	6.414	115	21122	0.326
26) 2-Methylphenol	(1)	6.425	108	9745	0.256
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	16394	0.272
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	16394	0.272
29) N-Nitrosopyrrolidine	(1)	6.612	100	5168	0.237
30) Acetophenone	(1)	6.653	105	15413	0.263
33) 4-Methylphenol	(1)	6.670	108	11034	0.262
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	9090	0.267
32) N-Nitrosomorpholine	(1)	6.682	56	7524	0.278
34) o-Toluidine	(1)	6.699	106	17422	0.267
35) Hexachloroethane	(1)	6.793	117	4580	0.263
36)$Nitrobenzene-d5	(2)	6.868	82	23926	0.516
37) Nitrobenzene	(2)	6.897	77	12719	0.259
39) N-Nitrosopiperidine	(2)	7.136	114	5015	0.249
40) Isophorone	(2)	7.288	82	21125	0.252
42) 2-Nitrophenol	(2)	7.399	139	3541	0.208
45) 2,4-Dimethylphenol	(2)	7.504	107	10359	0.254
47) Benzoic acid	(2)	7.585	105	30416	0.983
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	4669	0.260

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	14395	0.264
49) 2,4-Dichlorophenol	(2)	7.772	162	7102	0.248
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	8785	0.274
52)*Naphthalene-d8	(2)	7.987	136	495519	5.000
53) Naphthalene	(2)	8.022	128	30041	0.284
55) 4-Chloroaniline	(2)	8.127	127	11979	0.268
56) 2,6-Dichlorophenol	(2)	8.133	162	6778	0.249
57) Hexachloropropene	(2)	8.174	213	4815	0.236
58) Hexachlorobutadiene	(2)	8.250	225	4973	0.268
60) Quinoline	(2)	8.547	129	19114	0.267
61) Caprolactam	(2)	8.629	113	3083	0.236
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	7870	0.228
63) 4-Chloro-3-methylphenol	(2)	8.926	107	8404	0.241
64) Safrole	(2)	9.025	162	6608	0.247
65) 2-Methylnaphthalene	(2)	9.130	142	18878	0.268
66) 1-Methylnaphthalene	(2)	9.281	142	16987	0.265
67) Hexachlorocyclopentadiene	(3)	9.398	237	2826	0.169
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	8849	0.267
69) cis-Isosafrole	(3)	9.497	162	1141	0.232
70) 2,4,6-Trichlorophenol	(3)	9.590	196	4697	0.225
71) 2,4,5-Trichlorophenol	(3)	9.637	196	5103	0.233
72)$2-Fluorobiphenyl	(3)	9.748	172	39741	0.556
74) Isosafrole	(3)	9.853	162	6499	0.239
73) trans-Isosafrole	(3)	9.853	162	6499	0.239
75) 1,1'-Biphenyl	(3)	9.893	154	22904	0.278
76) 2-Chloronaphthalene	(3)	9.899	162	17748	0.279
77) 1-Chloronaphthalene	(3)	9.934	162	16994	0.269
82) Diphenyl ether	(3)	10.080	170	11939	0.262
83) 2-Nitroaniline	(3)	10.080	138	4042	0.204
84) 1,4-Naphthoquinone	(3)	10.191	158	4974	0.174
85) 1,4-Dinitrobenzene	(3)	10.319	168	1574	0.136
86) Dimethylphthalate	(3)	10.424	163	19473	0.278
87) 1,3-Dinitrobenzene	(3)	10.430	168	1962	0.148
88) 2,6-Dinitrotoluene	(3)	10.494	165	3241	0.207
90) Acenaphthylene	(3)	10.558	152	24150	0.252
91) 3-Nitroaniline	(3)	10.738	138	3561	0.198
92)*Acenaphthene-d10	(3)	10.791	164	282862	5.000
93) Acenaphthene	(3)	10.838	153	17930	0.268
94) 2,4-Dinitrophenol	(3)	10.908	184	5476	0.607
96) 4-Nitrophenol	(3)	11.018	109	9085	0.716

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	7421	0.275
97) Dibenzofuran	(3)	11.094	168	25697	0.272
98) 2,4-Dinitrotoluene	(3)	11.100	165	4206	0.209
99) 1-Naphthylamine	(3)	11.205	143	17020	0.250
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	3868	0.225
101) 2-Naphthylamine	(3)	11.310	143	17627	0.253
102) Diethylphthalate	(3)	11.467	149	18398	0.259
103) Fluorene	(3)	11.549	166	19968	0.264
104) Thionazin	(3)	11.566	107	3976	0.261
106) 5-Nitro-o-toluidine	(3)	11.572	152	4559	0.228
107) 4-Nitroaniline	(3)	11.572	138	4144	0.225
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	10239	0.272
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	6064	0.472
109) N-Nitrosodiphenylamine	(4)	11.724	169	15725	0.259
110) NDPA as diphenylamine	(4)	11.724	169	15725	0.259
111) 1,2-Diphenylhydrazine	(4)	11.764	77	25065	0.260
112)$2,4,6-Tribromophenol	(3)	11.840	330	3128	0.416
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	3448	0.245
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	656	0.069
117) Diallate (peak 1)	(4)	12.085	86	9067	0.189
118) Phorate	(4)	12.091	75	13349	0.232
119) Phenacetin	(4)	12.102	108	8021	0.199
120) 4-Bromophenyl-phenylether	(4)	12.161	248	4904	0.254
121) Diallate (peak 2)	(4)	12.190	86	1191	0.058
122) Hexachlorobenzene	(4)	12.207	284	5132	0.266
123) Dimethoate	(4)	12.277	87	7175	0.181
124) Atrazine	(4)	12.388	200	4752	0.249
125) Pentachlorophenol	(4)	12.458	266	1535	0.104
126) Pentachloronitrobenzene	(4)	12.470	237	1737	0.204
127) 4-Aminobiphenyl	(4)	12.475	169	18057	0.240
129) Pronamide	(4)	12.575	173	6404	0.203
130)*Phenanthrene-d10	(4)	12.685	188	486096	5.000
131) Phenanthrene	(4)	12.714	178	30082	0.273
133) Dinoseb	(4)	12.720	211	1071	0.057
134) Anthracene	(4)	12.778	178	26925	0.249
135) Carbazole	(4)	12.994	167	26389	0.251
136) Methyl parathion	(4)	13.204	109	3458	0.119
137) Di-n-butylphthalate	(4)	13.513	149	27530	0.215
138) Parathion	(4)	13.740	109	2408	0.130
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	417	0.037

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	3050	0.234
142) Fluoranthene	(4)	14.335	202	29686	0.244
144) Benzidine	(5)	14.562	184	137965	1.720
145)*Pyrene-d10	(5)	14.644	212	607939	5.000
146) Pyrene	(5)	14.673	202	35149	0.266
149)$Terphenyl-d14	(5)	14.958	244	39291	0.511
150) p-Dimethylaminoazobenzene	(5)	15.192	225	3822	0.168
151) Chlorobenzilate	(5)	15.291	139	7130	0.186
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	10857	0.131
153) Butylbenzylphthalate	(5)	15.815	149	10632	0.186
156) 2-Acetylaminofluorene	(5)	16.153	181	4634	0.089
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	7120M	0.170
158) Benzo(a)anthracene	(5)	16.660	228	23780	0.220
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	3484	0.156
161) Chrysene	(5)	16.719	228	26853	0.250
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	12026	0.154
165) 6-Methylchrysene	(5)	17.517	242	16847	0.222
166) Di-n-octylphthalate	(6)	18.042	149	14018	0.112
168) Benzo(b)fluoranthene	(6)	18.496	252	23703	0.247
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	8832	0.215
170) Benzo(k)fluoranthene	(6)	18.543	252	24057	0.248
171) Benzo(a)pyrene	(6)	19.021	252	22451	0.252
172)*Perylene-d12	(6)	19.114	264	409698	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	8857	0.211
174) Dibenz(a,h)acridine	(6)	20.402	279	9846M	0.154
175) Dibenz(a,j)acridine	(6)	20.472	279	11208M	0.172
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	15702	0.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	12821	0.204
178) Benzo(g,h,i)perylene	(6)	21.073	276	15545	0.241
179) Diallate TRANS/CIS	(4)			10258	0.250
182) 2,4_2,6-Dinitrotoluenes	(3)			7447	0.416

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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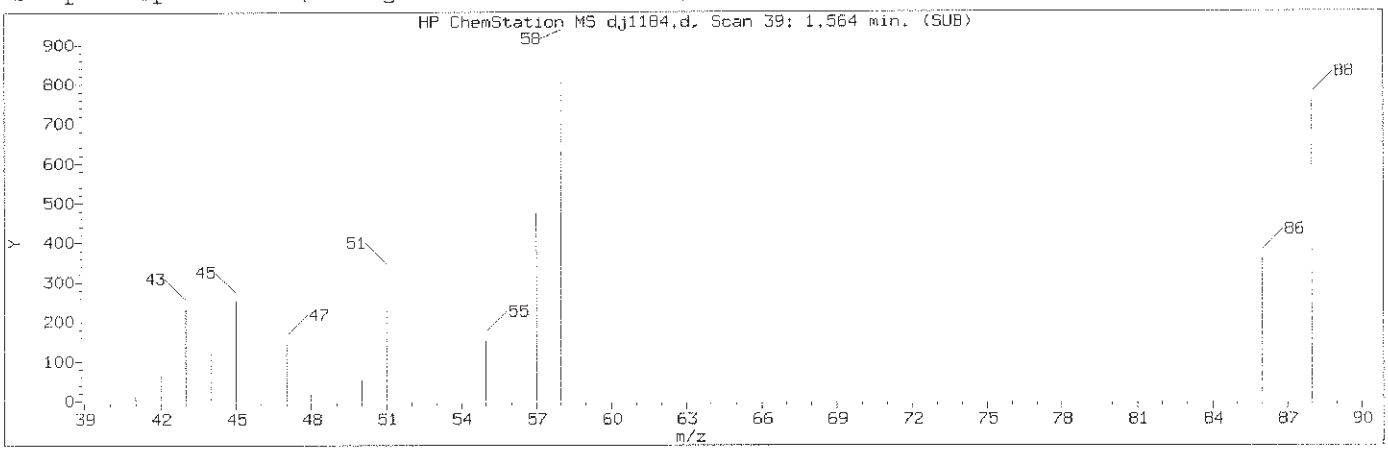
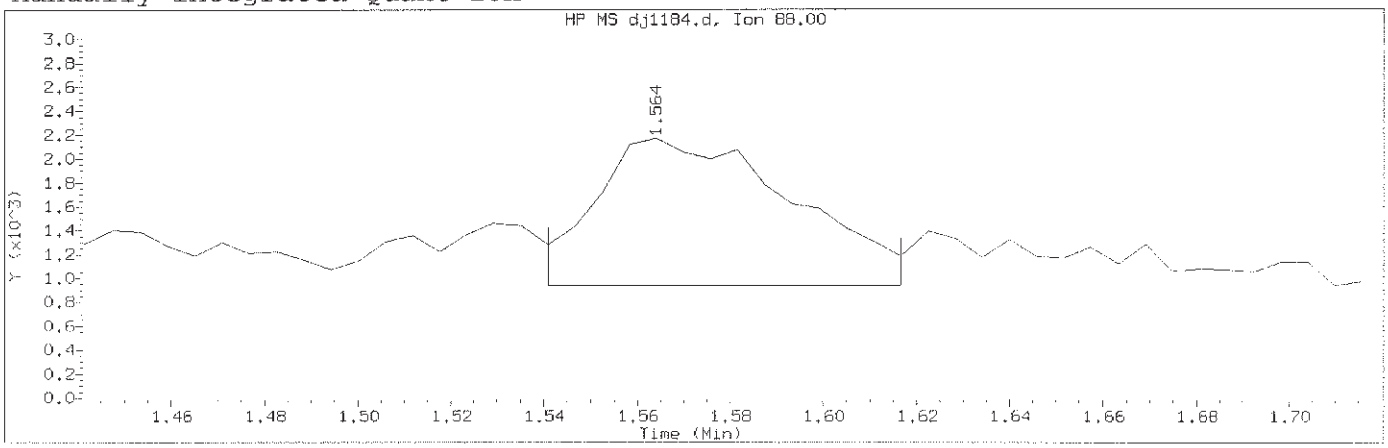
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 39		
Retention Time (minutes)	: 1.564		
Quant Ion	: 88.00		
Area (flag)	: 3696M		
On-Column Amount (ng/ul)	: 0.2322		
Integration start scan	: 34	Integration stop scan:	47
Y at integration start	: 939	Y at integration end:	939

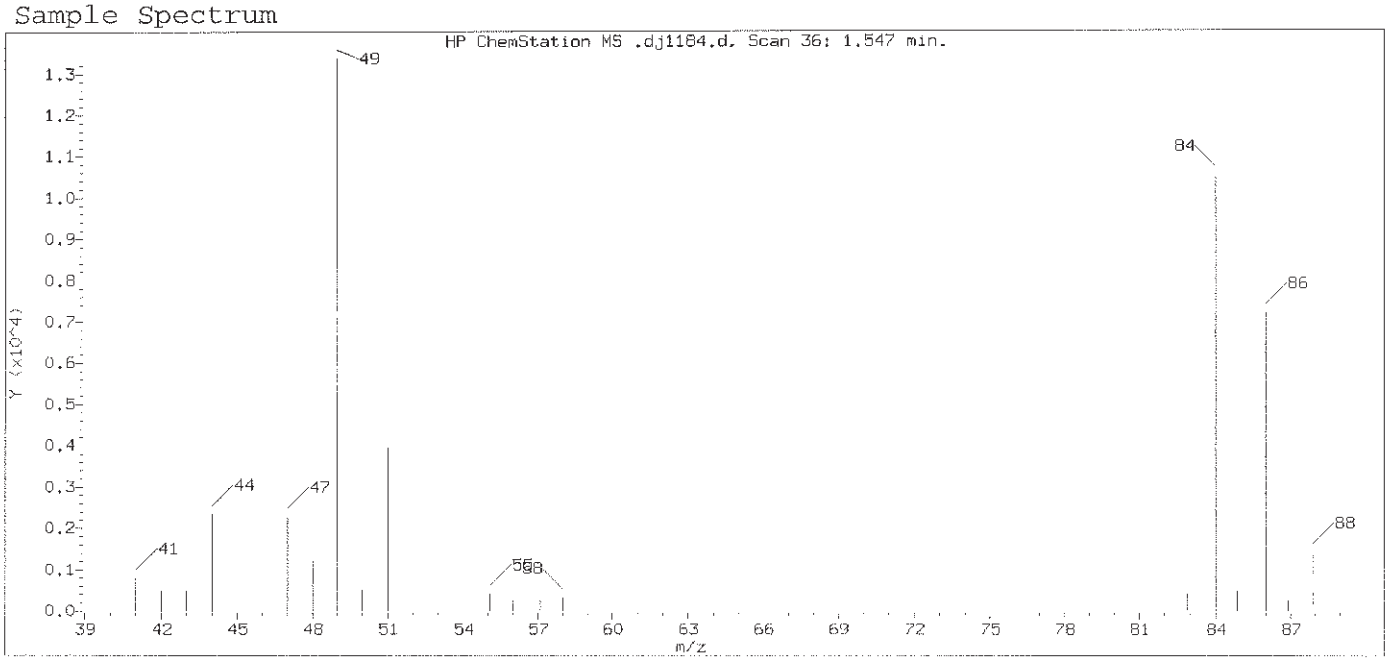
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

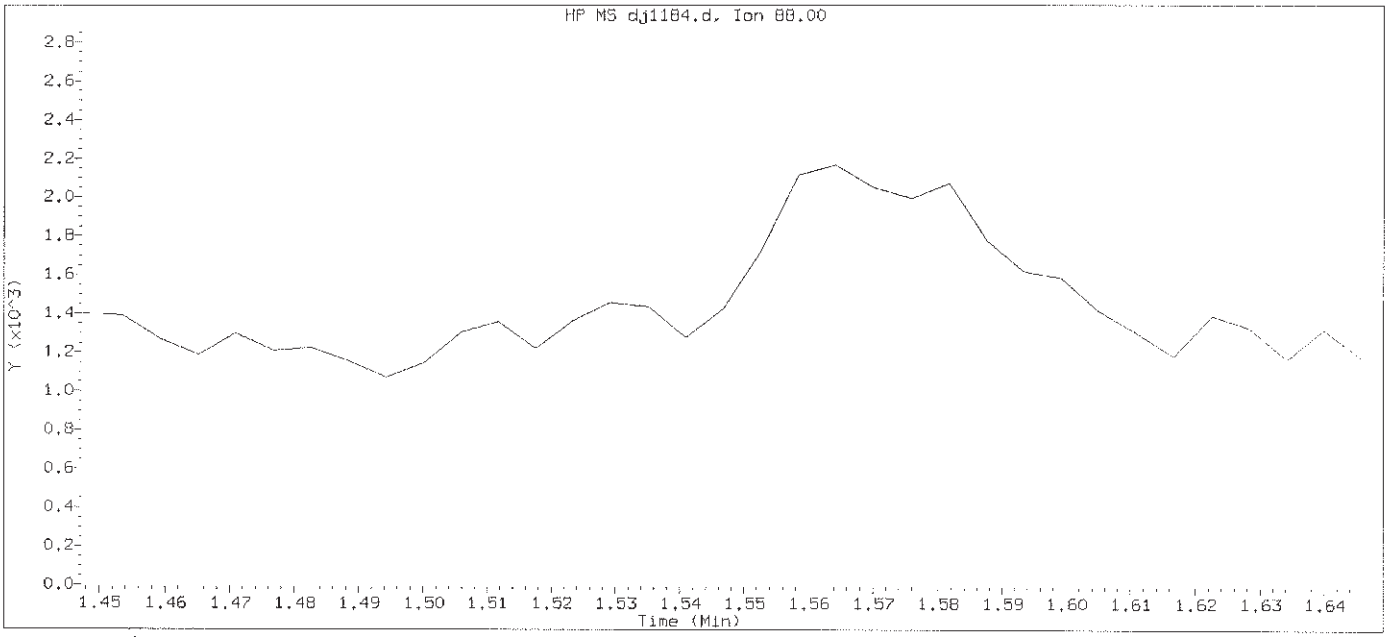
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

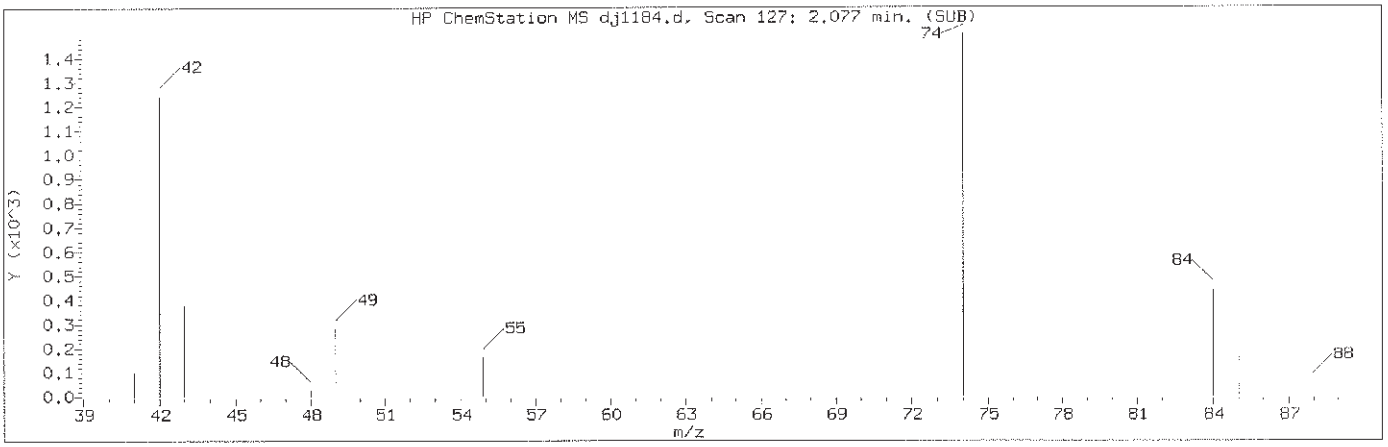
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

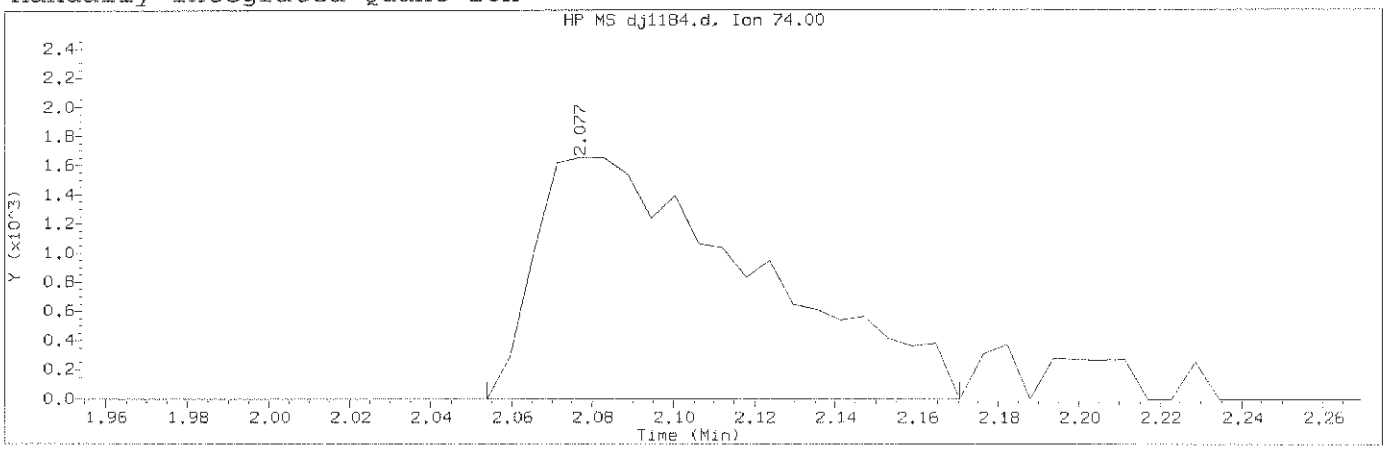
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area (flag)	: 6220M		
On-Column Amount (ng/ul)	: 0.2208		
Integration start scan	: 122	Integration stop scan:	142
Y at integration start	: -1	Y at integration end:	-1

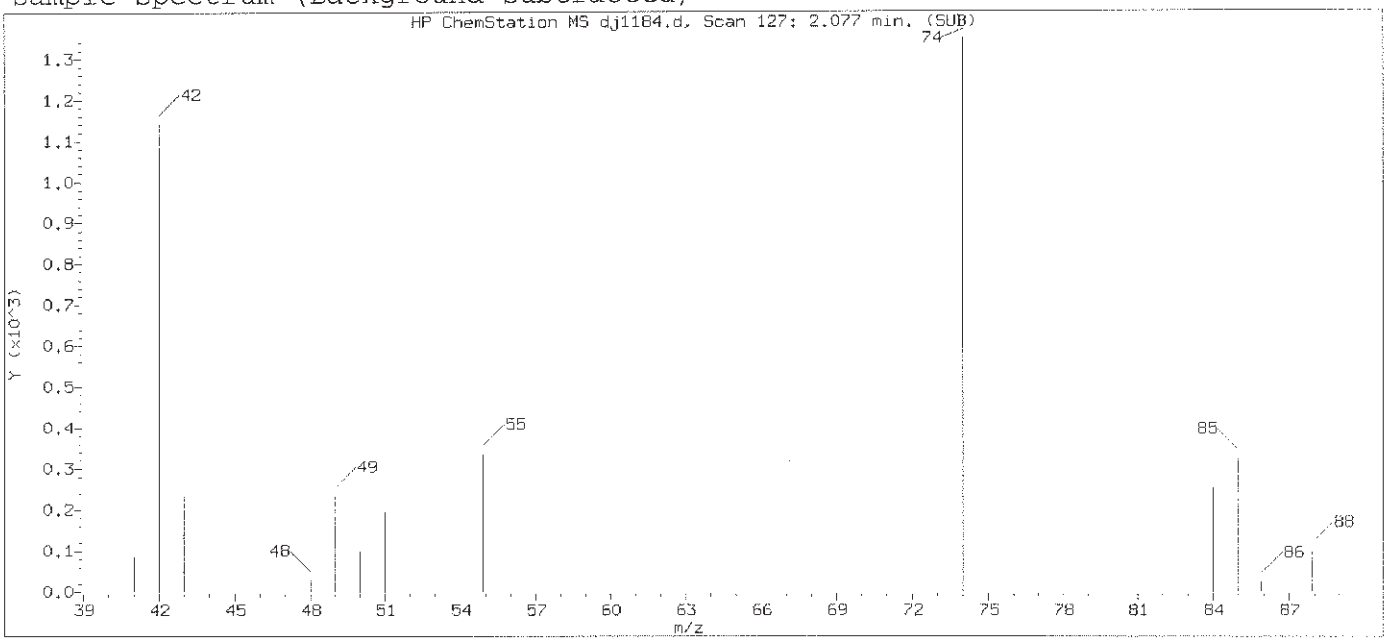
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

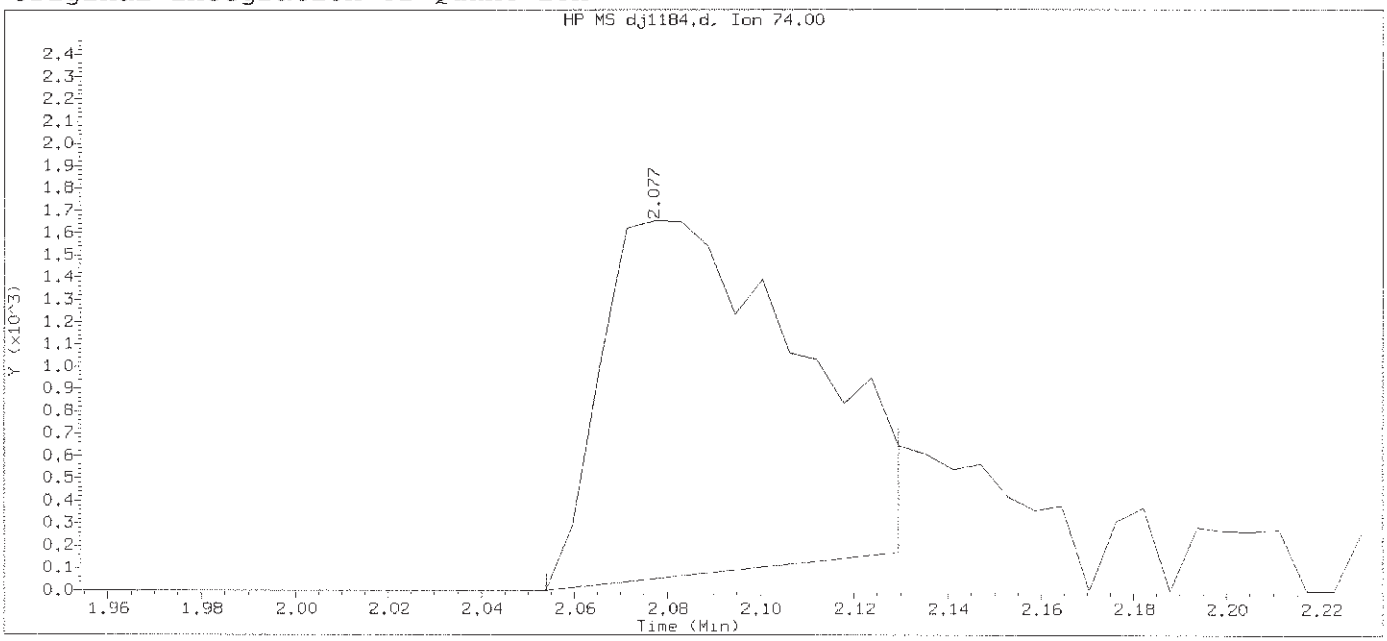
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

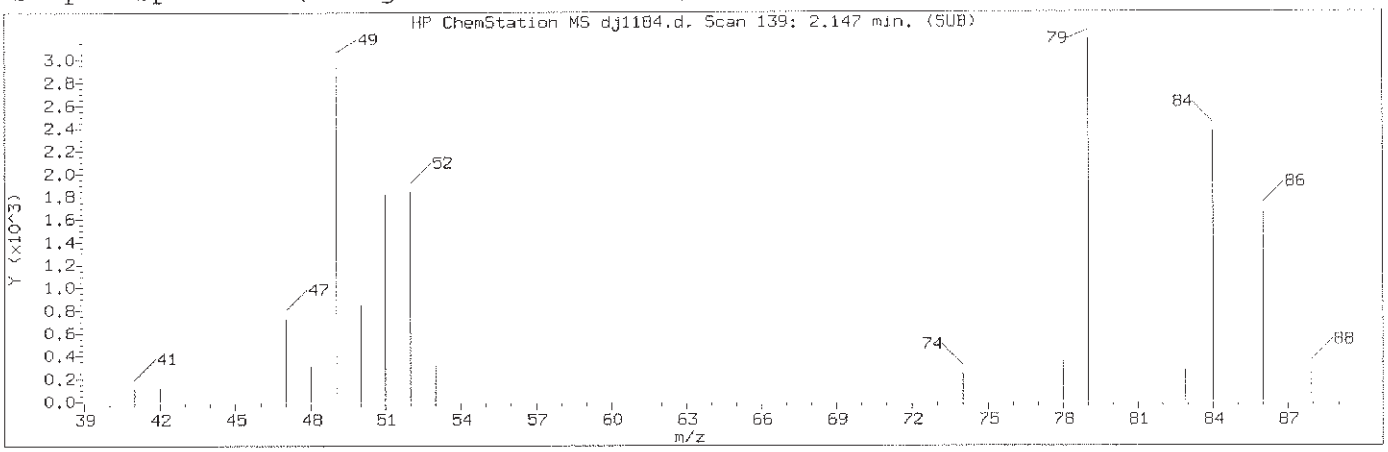
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

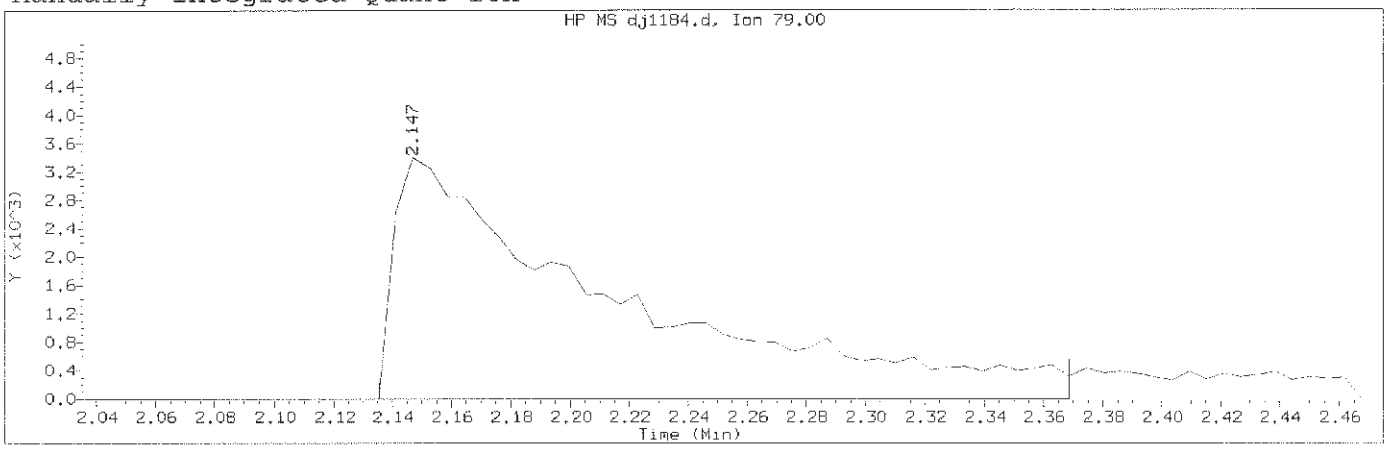
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area	: 4711		
On-column Amount (ng/ul)	: 0.1787		
Integration start scan	: 122	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	170

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area (flag)	: 17293M		
On-Column Amount (ng/ul)	: 0.3524		
Integration start scan	: 136	Integration stop scan:	176
Y at integration start	: -3	Y at integration end:	-3

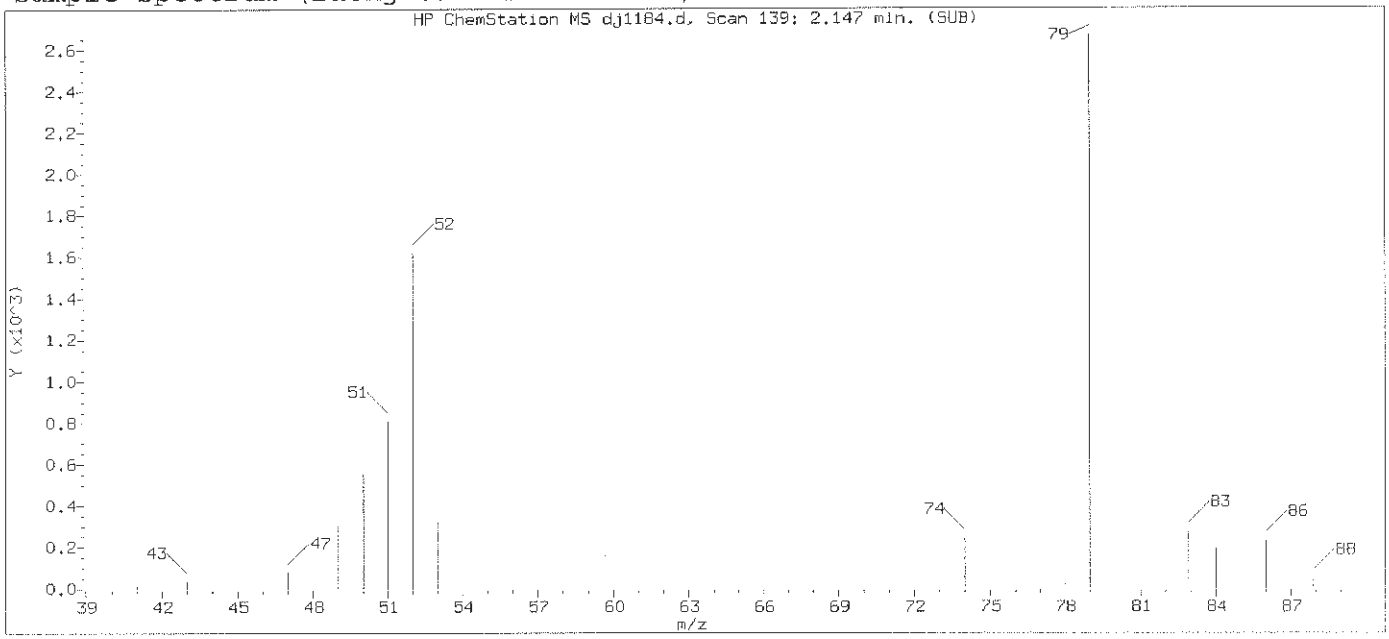
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

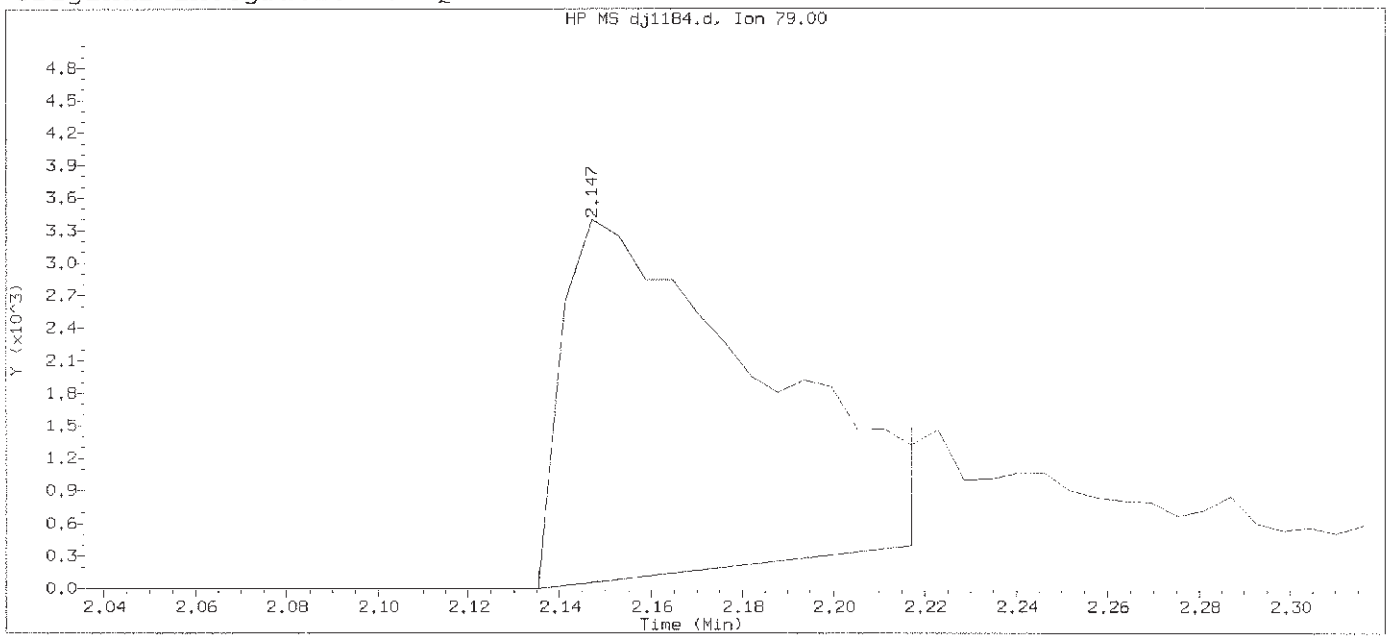
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

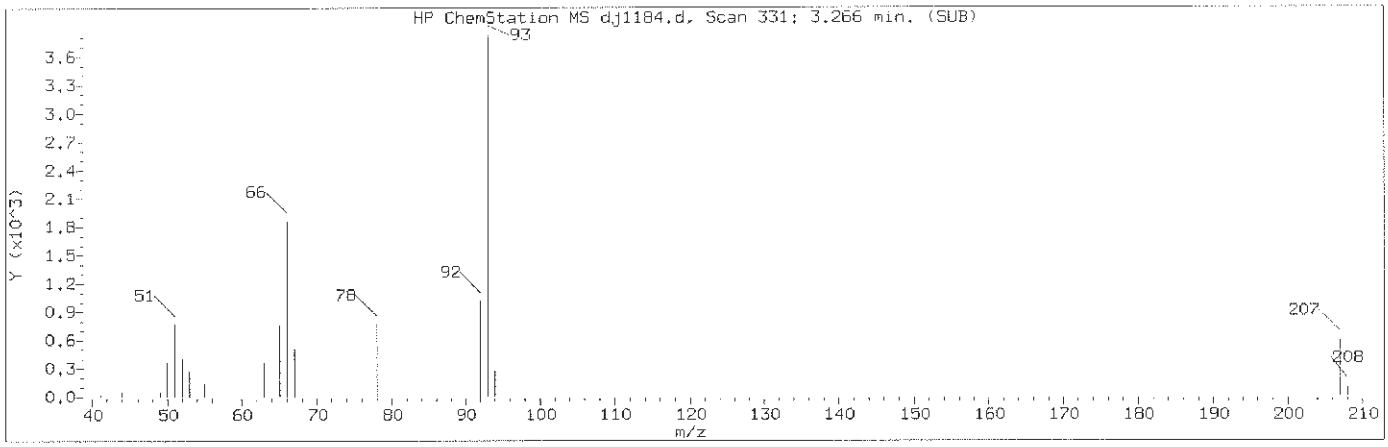
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

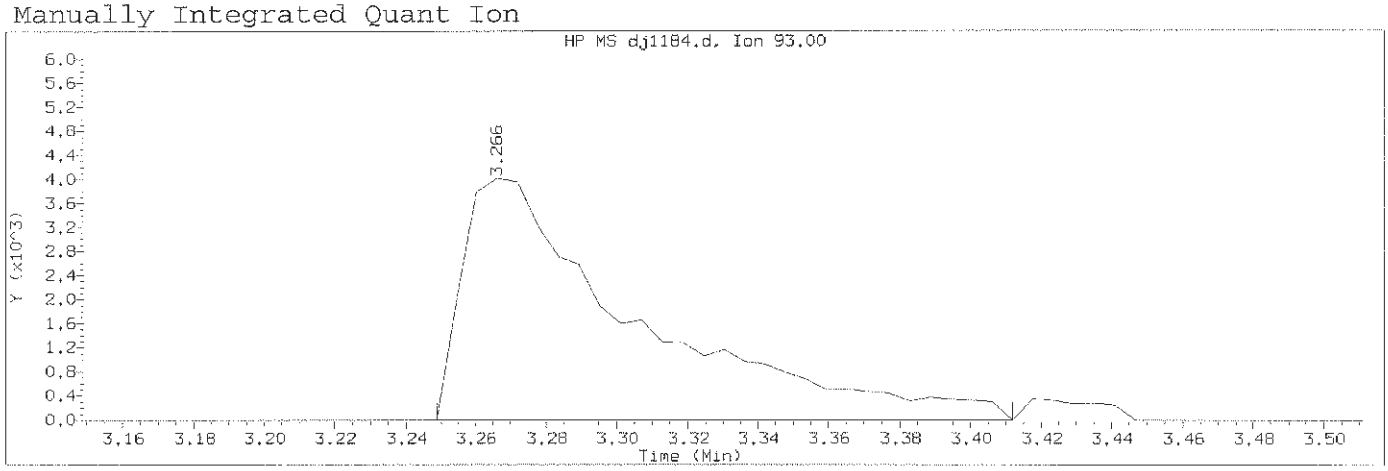
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area	: 9841		
On-column Amount (ng/ul)	: 0.2168		
Integration start scan	: 136	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	397

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area (flag)	: 13682M		
On-Column Amount (ng/ul)	: 0.2616		
Integration start scan	: 327	Integration stop scan:	355
Y at integration start	: 2	Y at integration end:	2

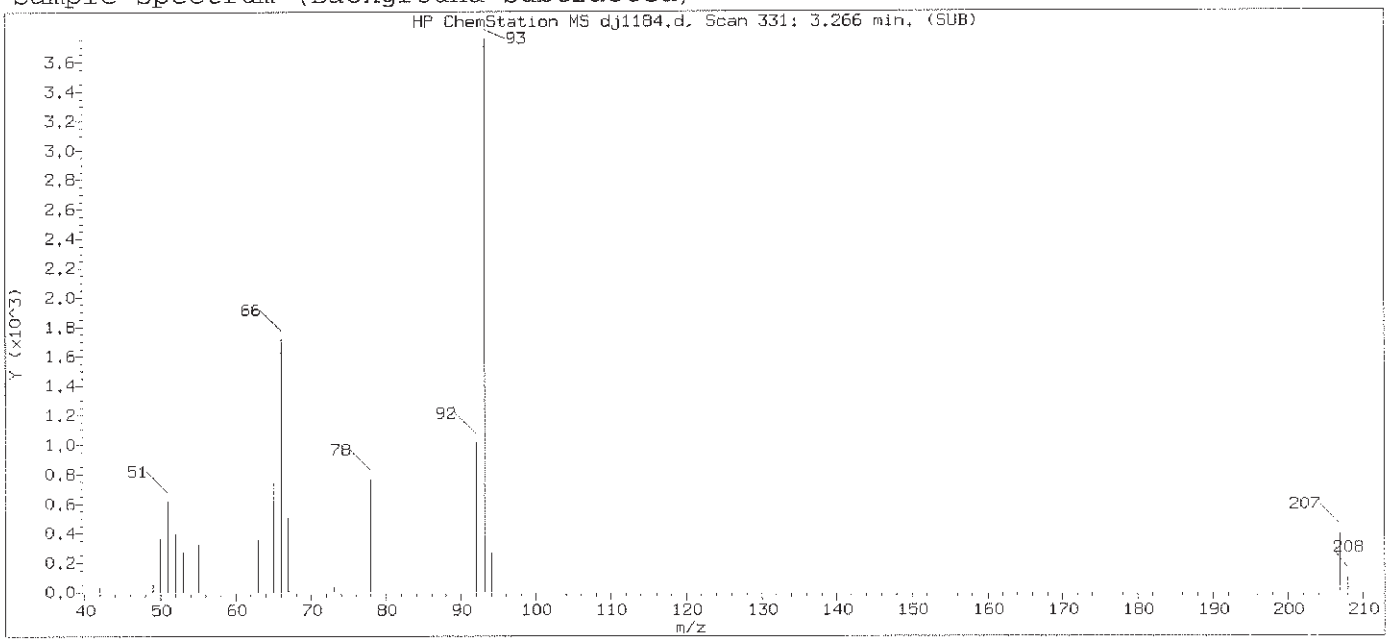
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

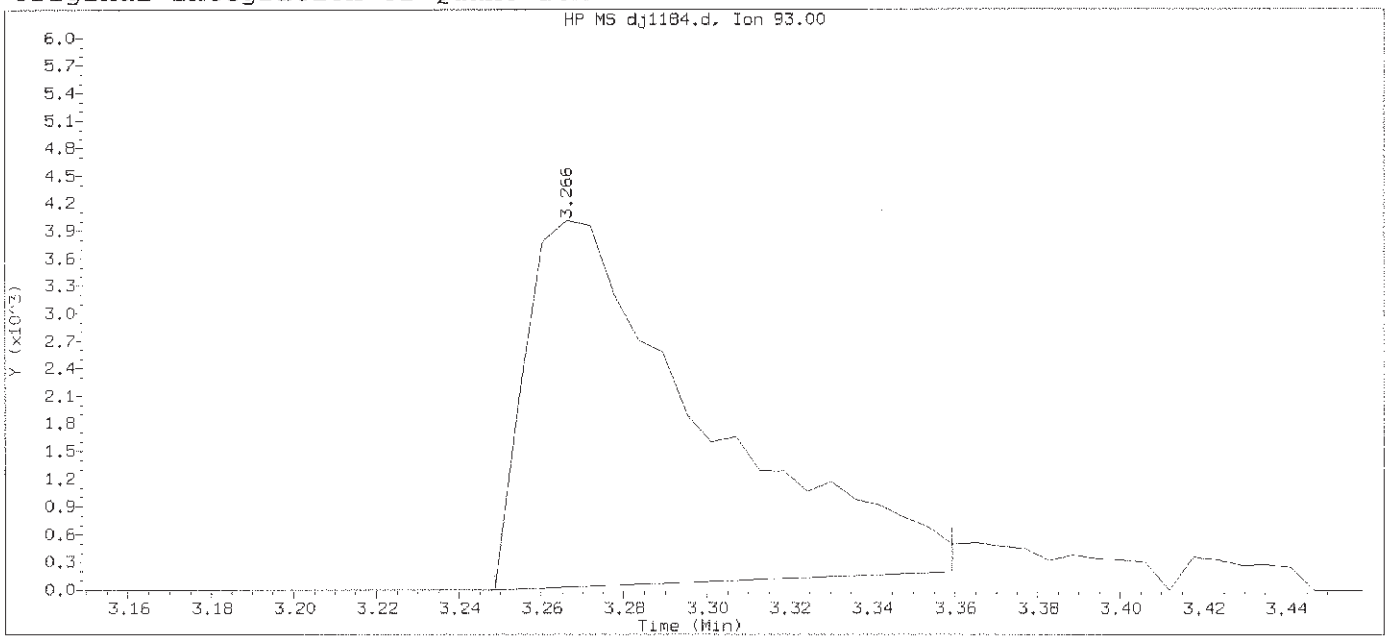
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

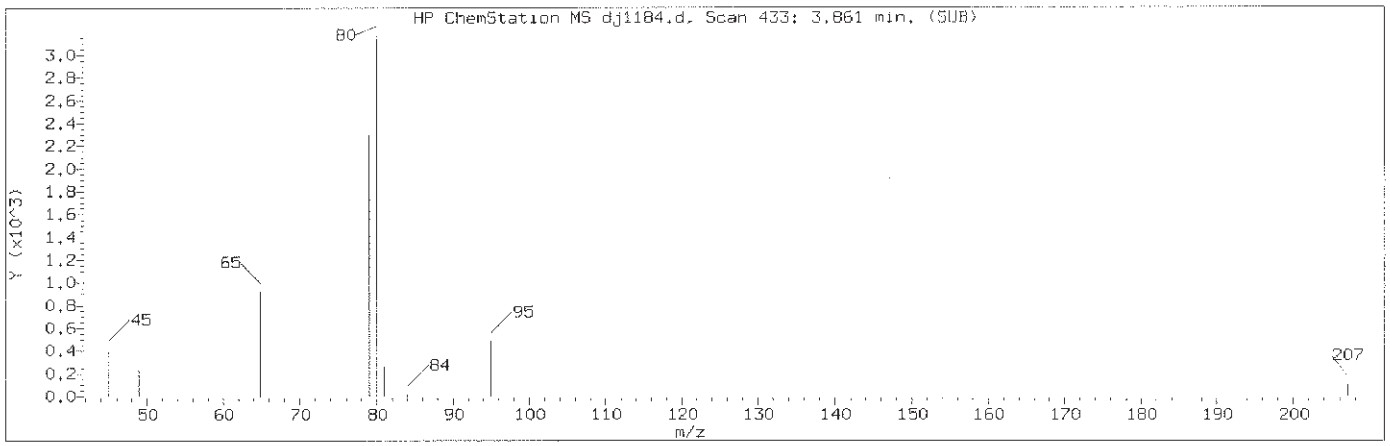
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

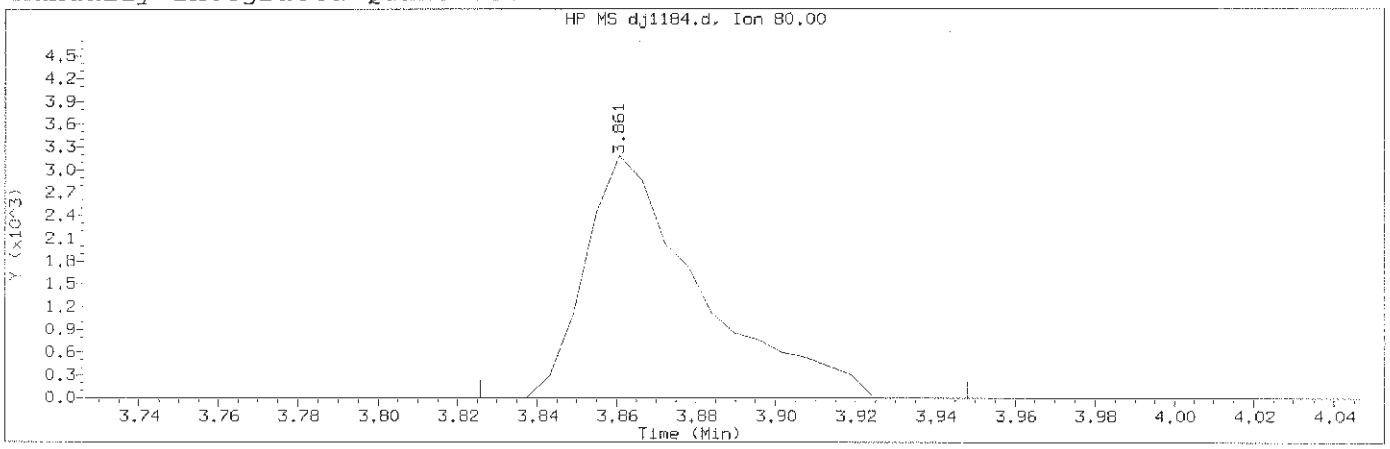
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area	: 11889		
On-column Amount (ng/ul)	: 0.2395		
Integration start scan	: 327	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	193

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area (flag)	: 6376M		
On-Column Amount (ng/ul)	: 0.2493		
Integration start scan	: 426	Integration stop scan:	447
Y at integration start	: 0	Y at integration end:	0

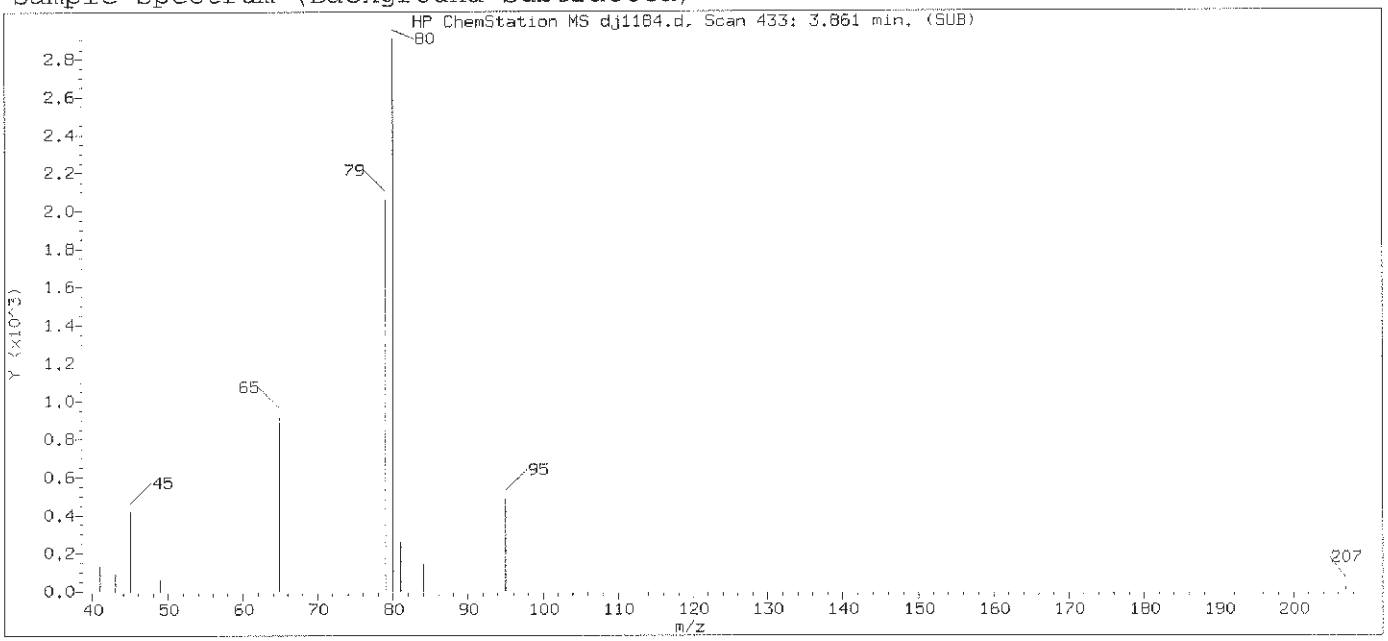
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

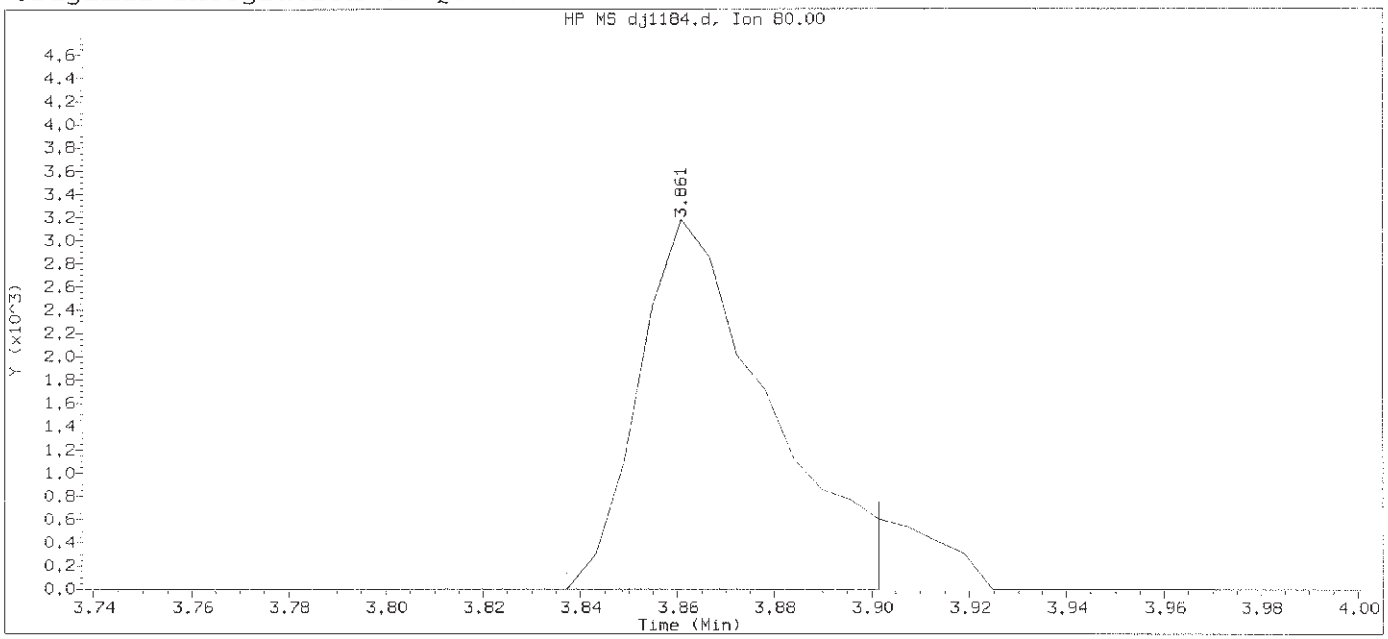
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area	: 5828		
On-column Amount (ng/ul)	: 0.2371		
Integration start scan	: 428	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

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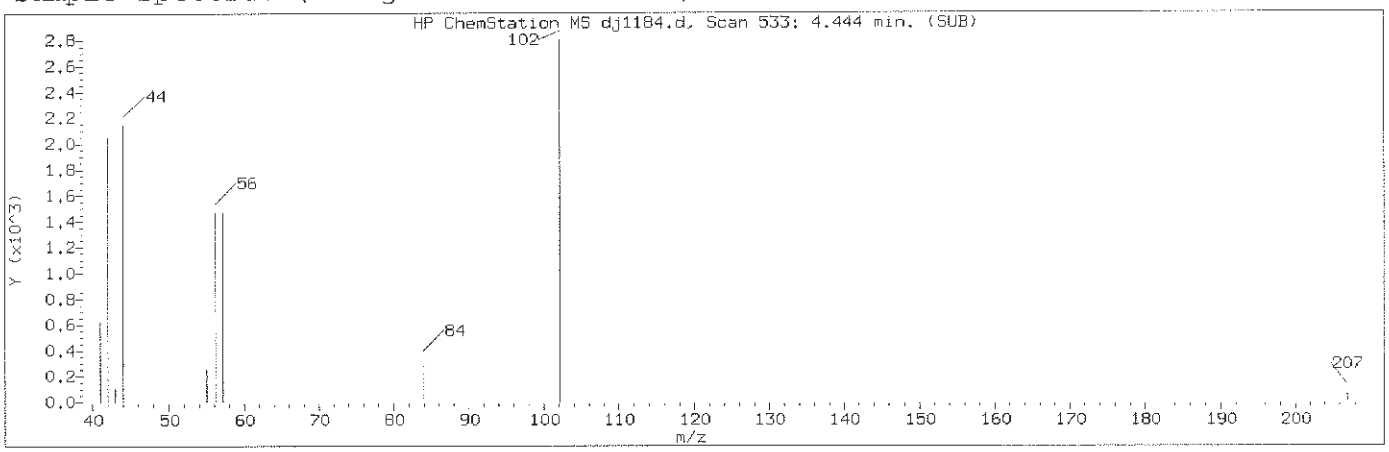
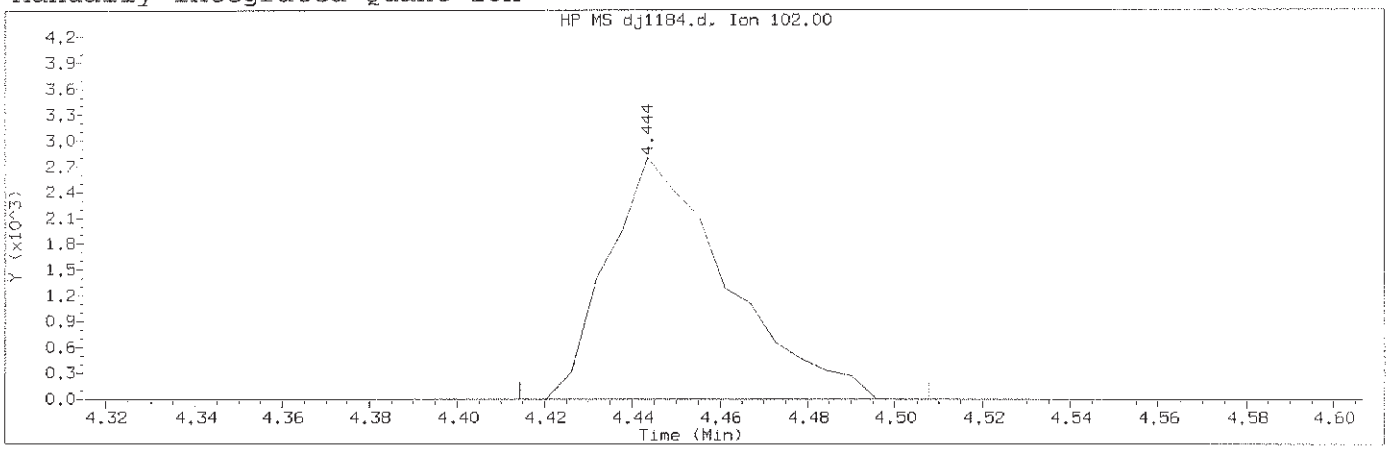
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area (flag)	: 5285M		
On-Column Amount (ng/ul)	: 0.2460		
Integration start scan	: 527	Integration stop scan:	543
Y at integration start	: 0	Y at integration end:	0

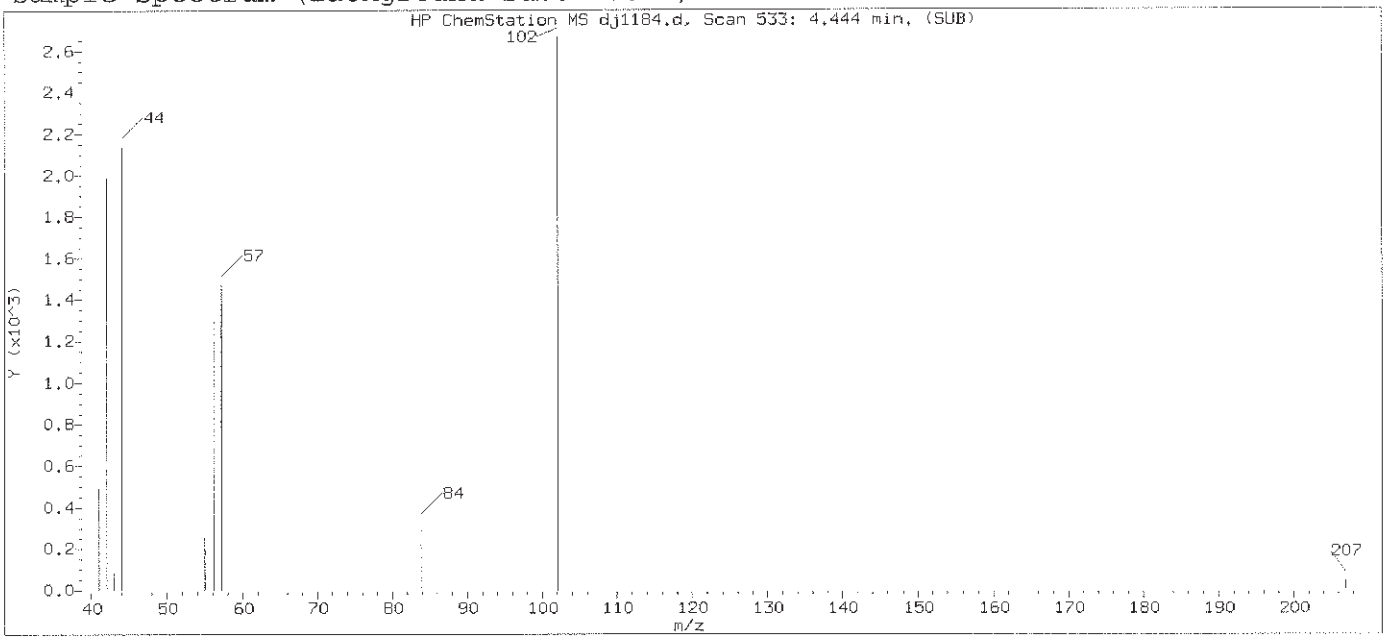
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

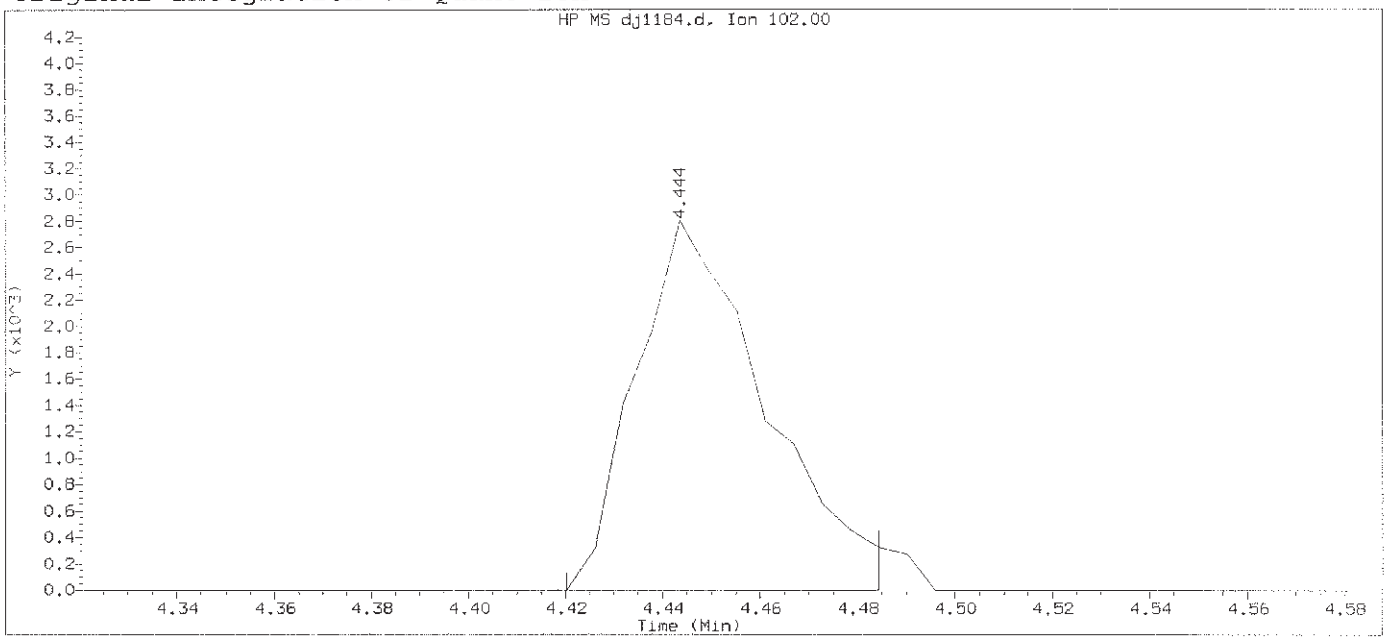
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

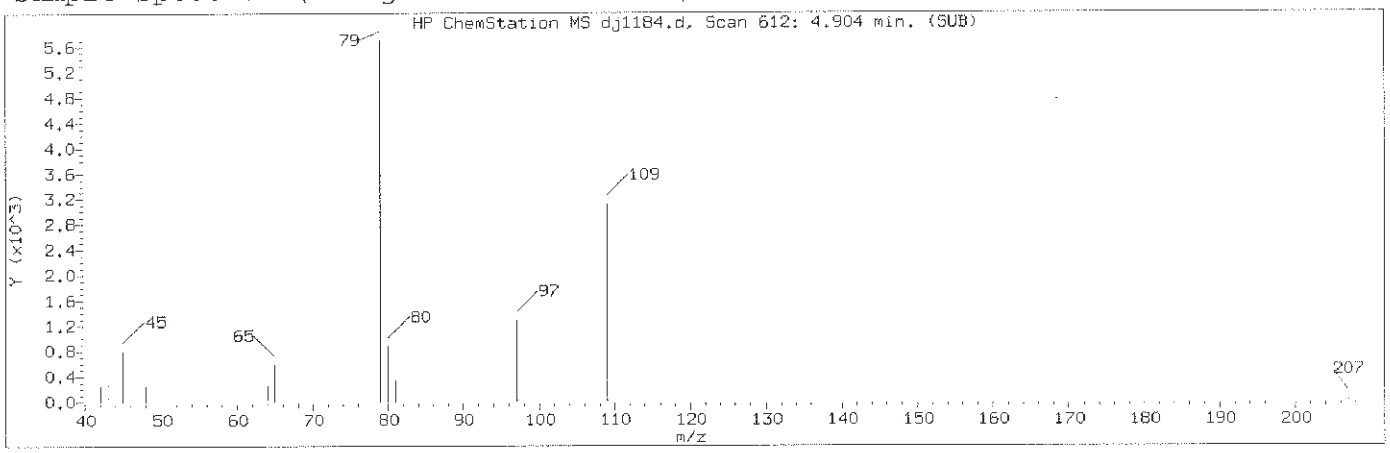
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

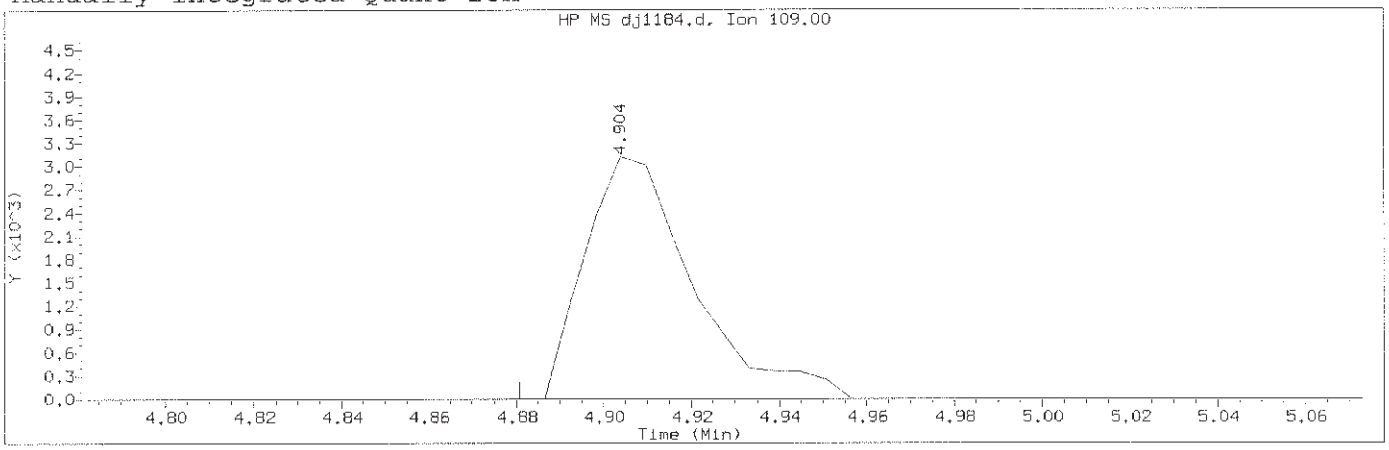
Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area	: 5133		
On-column Amount (ng/ul)	: 0.2465		
Integration start scan	: 528	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area (flag)	: 5358M		
On-Column Amount (ng/ul)	: 0.2584		
Integration start scan	: 607	Integration stop scan:	623
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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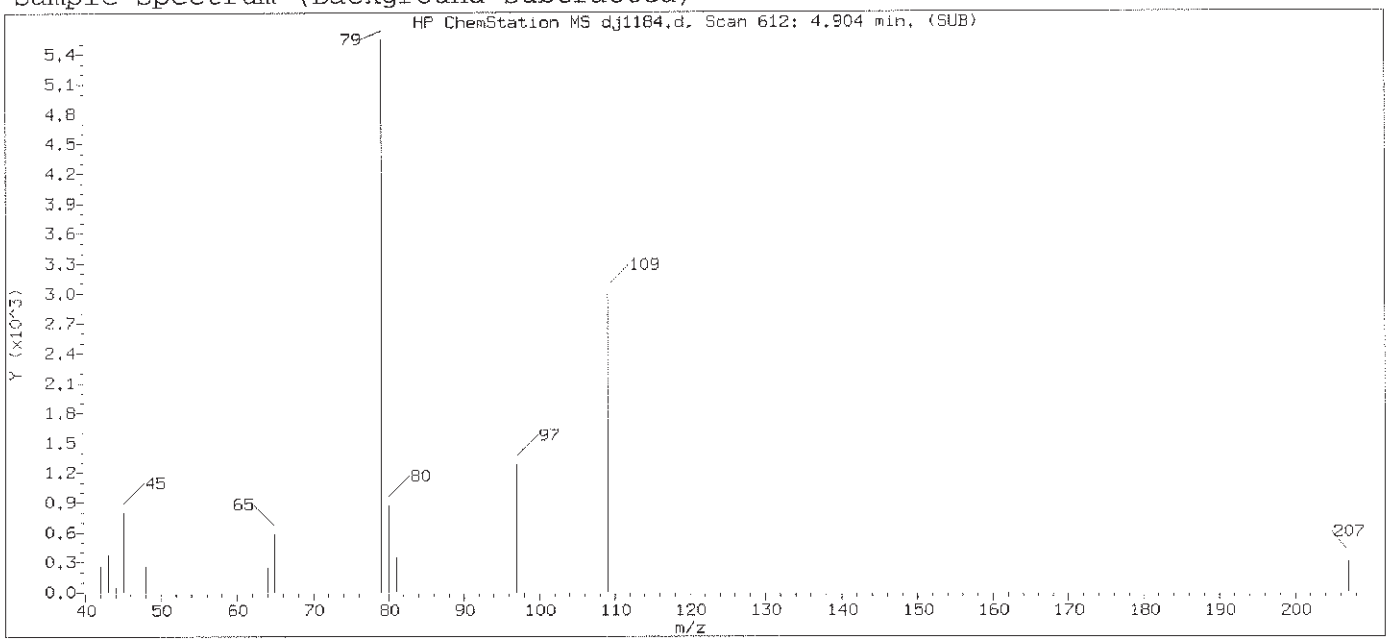
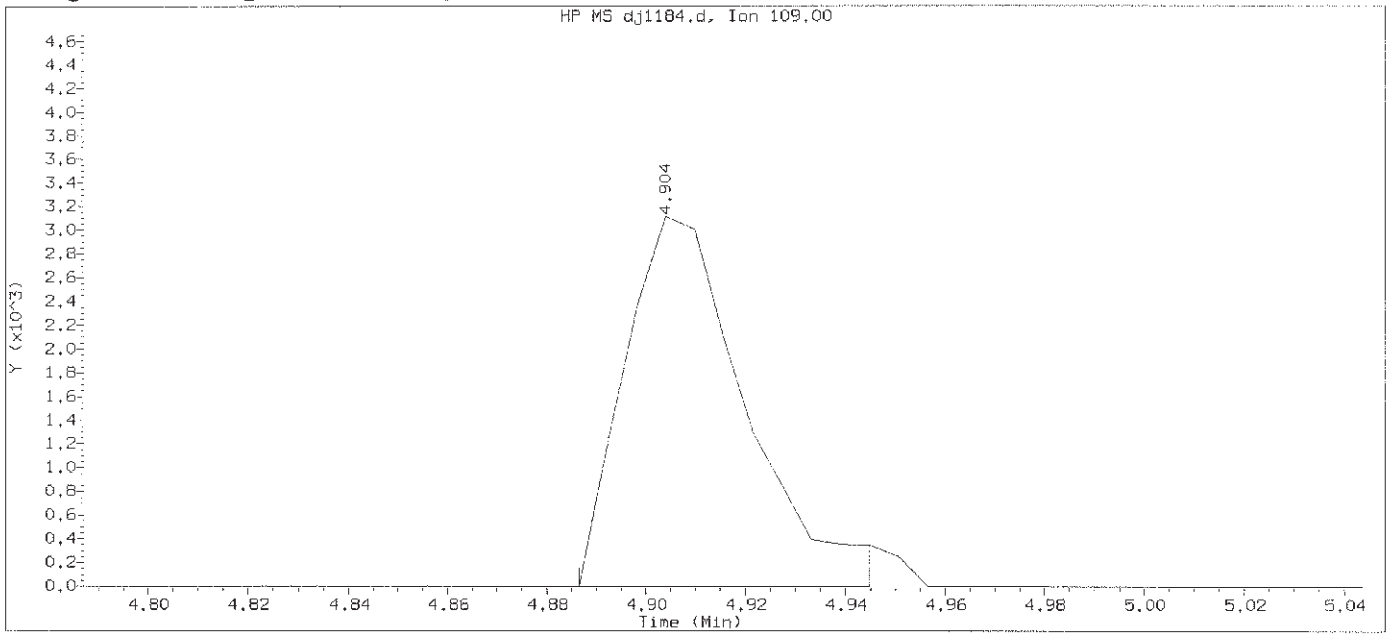
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

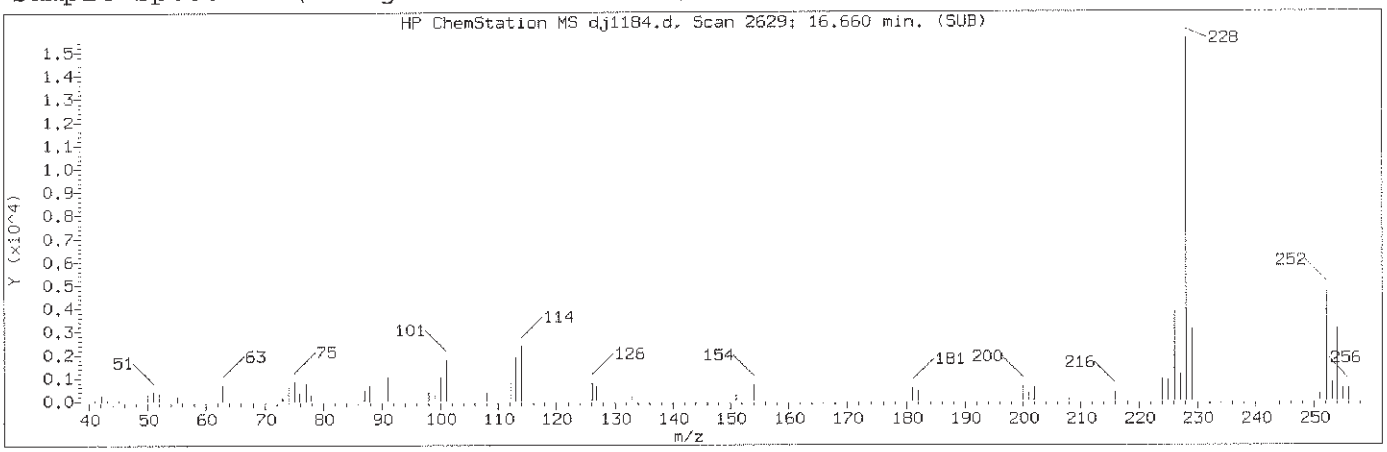
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

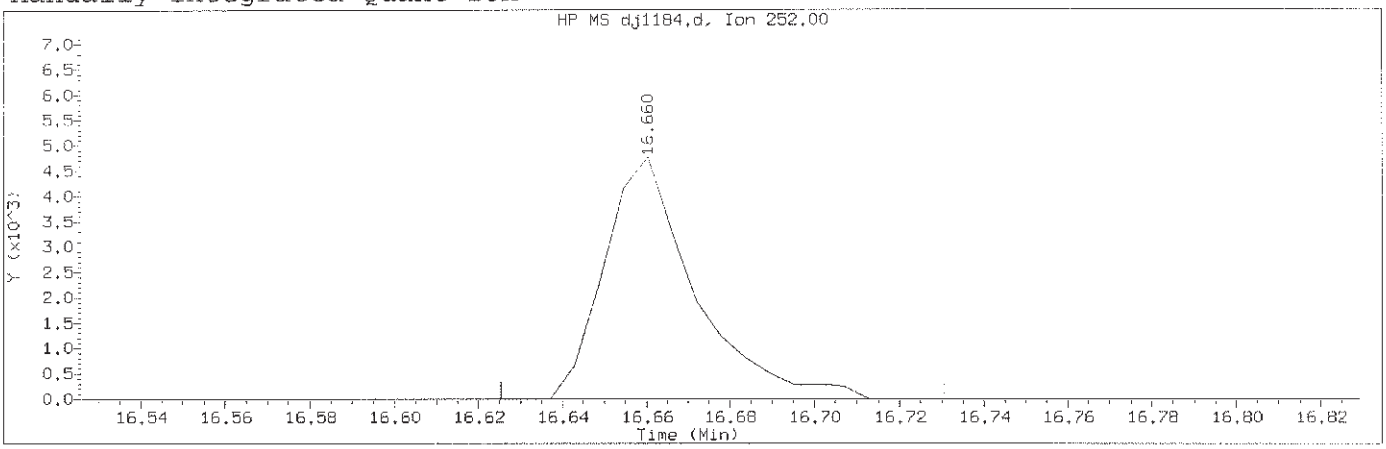
Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area	: 5209		
On-column Amount (ng/ul)	: 0.2594		
Integration start scan	: 608	Integration stop scan:	618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 159		
Compound Name	: 3,3'-Dichlorobenzidine		
Scan Number	: 2629		
Retention Time (minutes)	: 16.660		
Quant Ion	: 252.00		
Area (flag)	: 7120M		
On-Column Amount (ng/ul)	: 0.1695		
Integration start scan	: 2622	Integration stop scan:	2640
Y at integration start	: 0	Y at integration end:	0

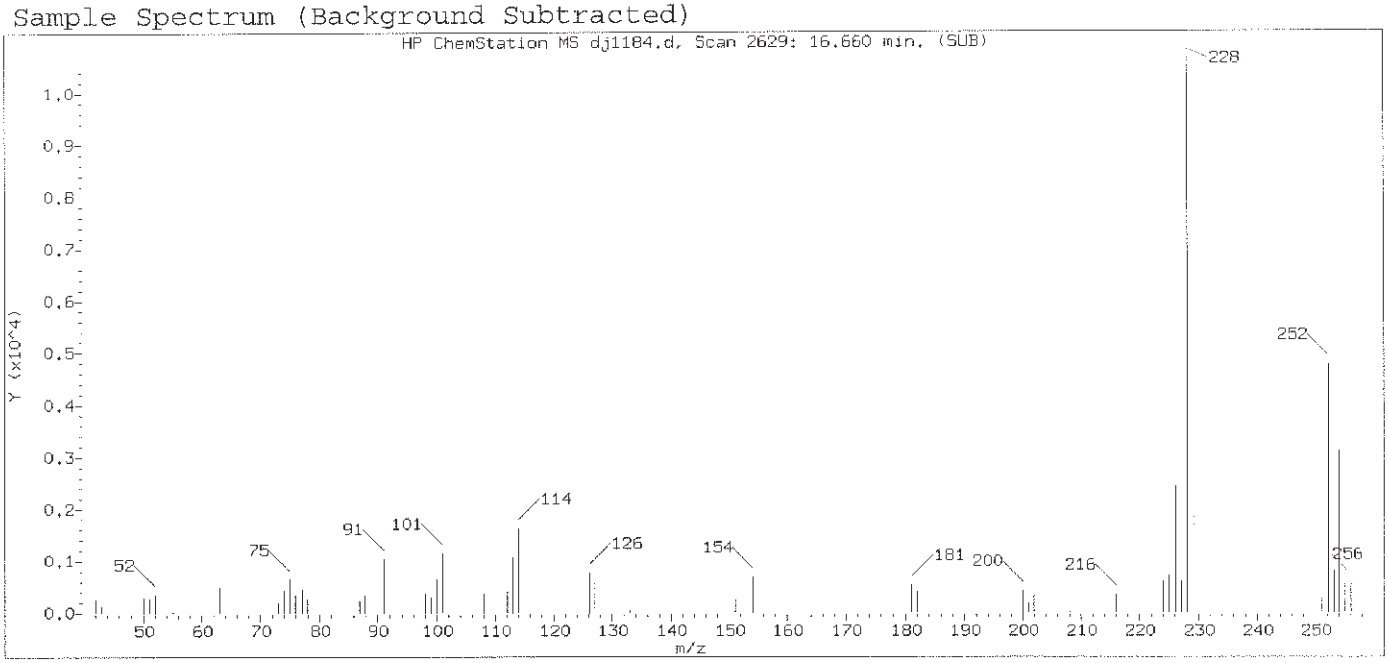
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

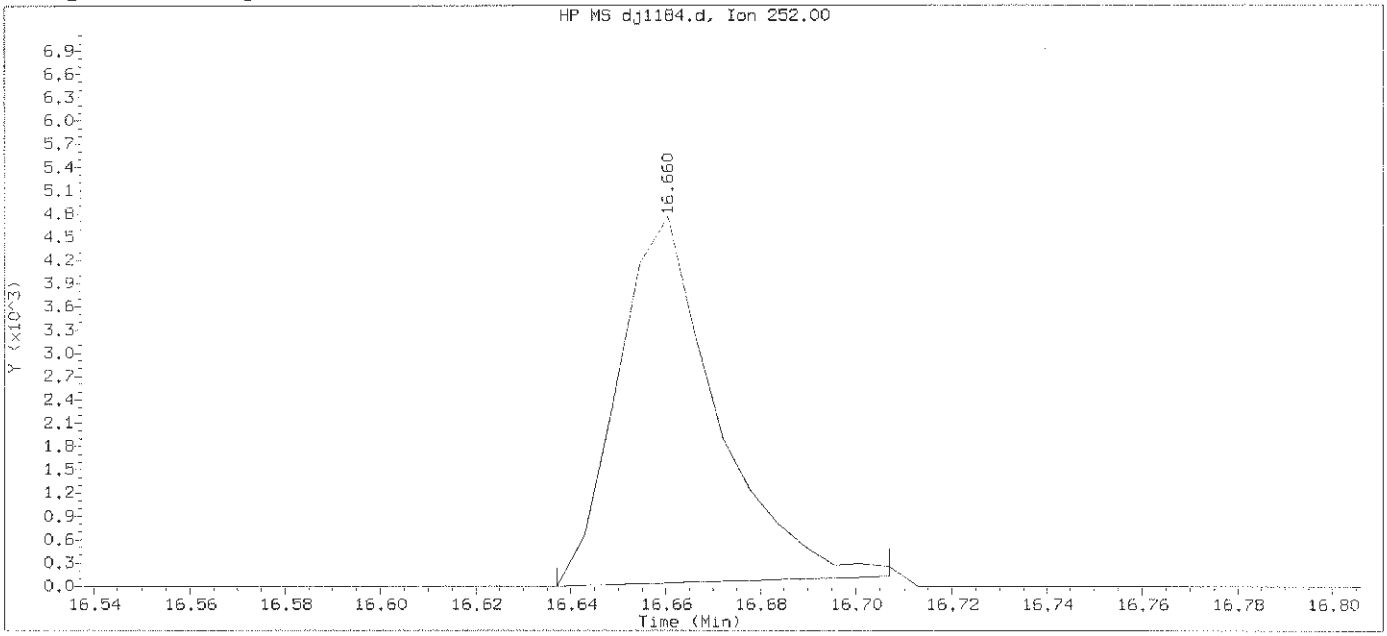
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

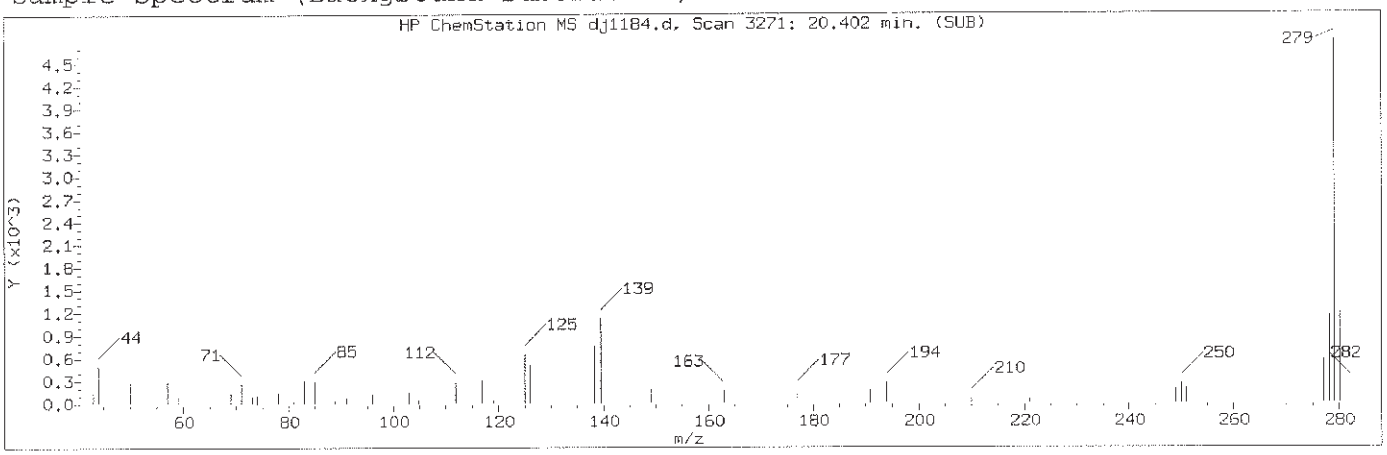
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

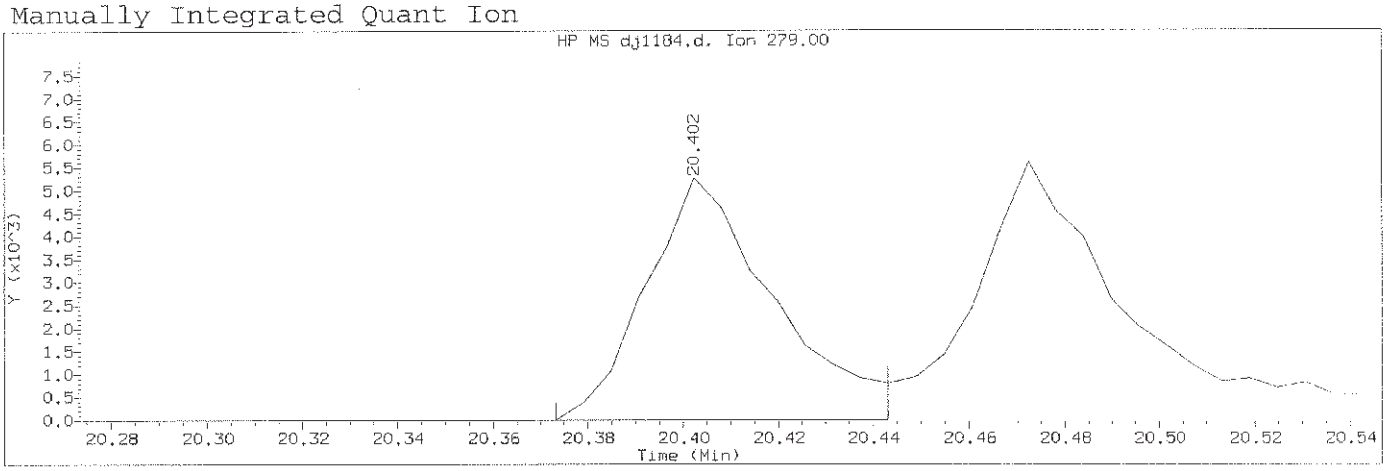
Compound Number	: 159
Compound Name	: 3,3'-Dichlorobenzidine
Scan Number	: 2629
Retention Time (minutes)	: 16.660
Quant Ion	: 252.00
Area	: 6810
On-column Amount (ng/ul)	: 0.1722
Integration start scan	: 2624 Integration stop scan: 2636
Y at integration start	: 0 Y at integration end: 127

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area (flag)	: 9846M		
On-Column Amount (ng/ul)	: 0.1536		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 1	Y at integration end:	1

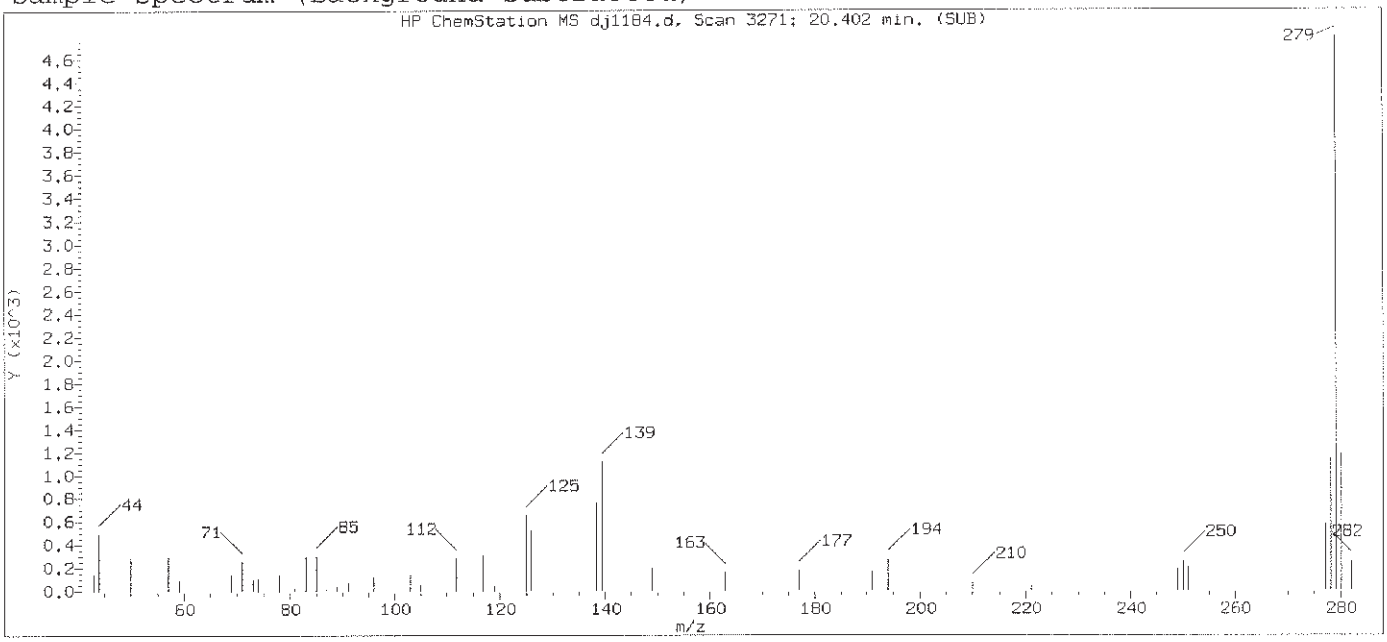
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

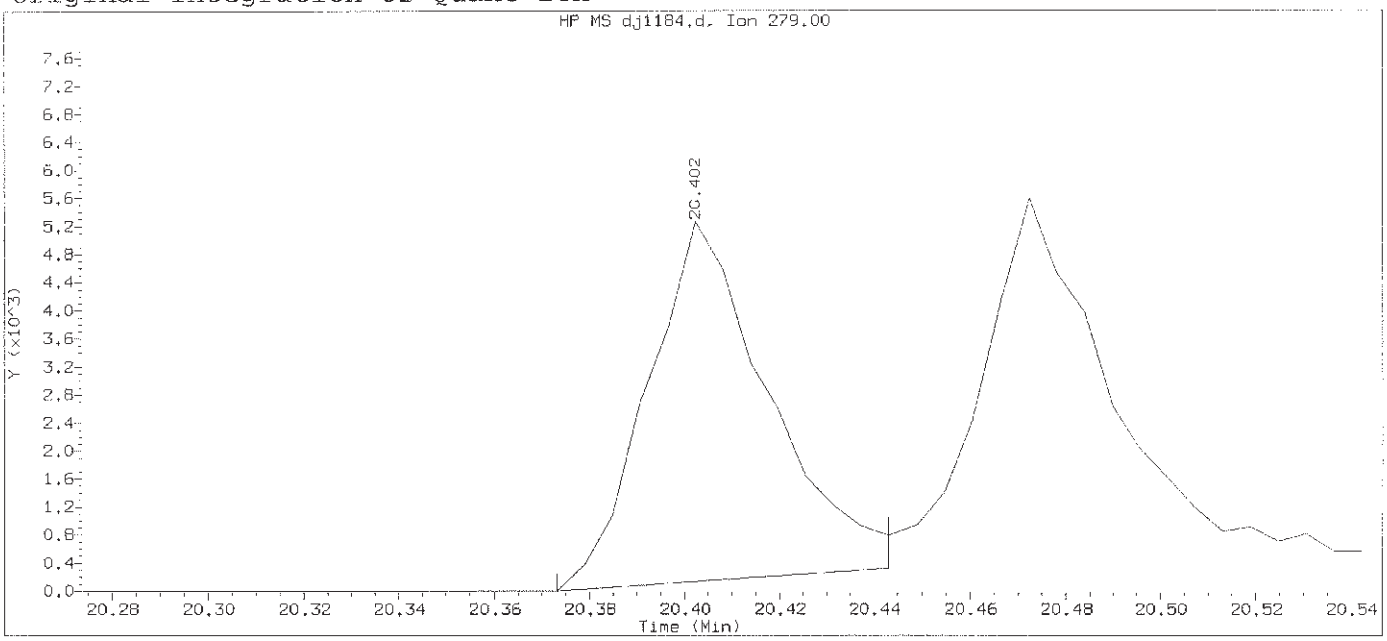
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

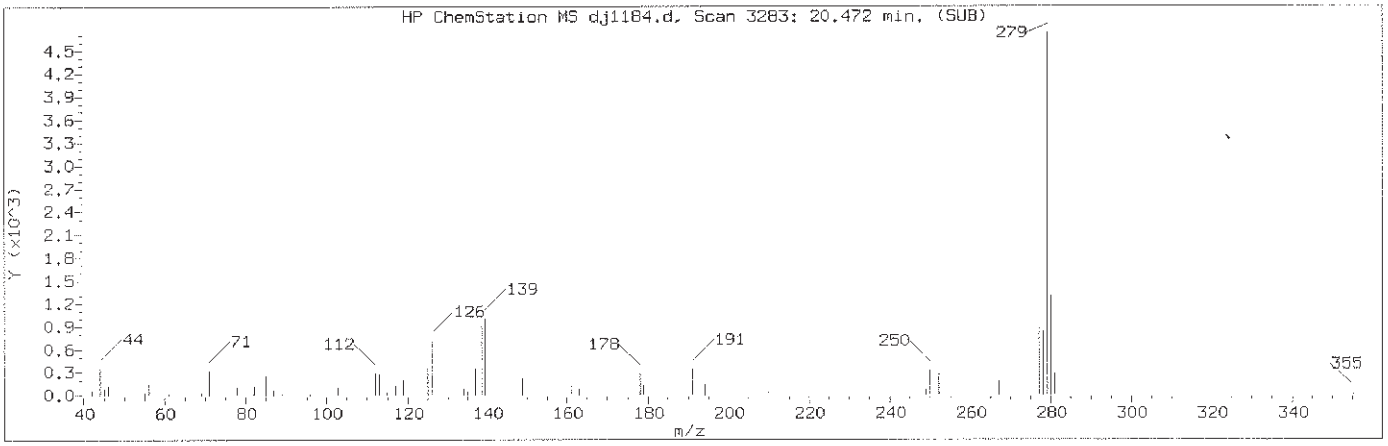
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

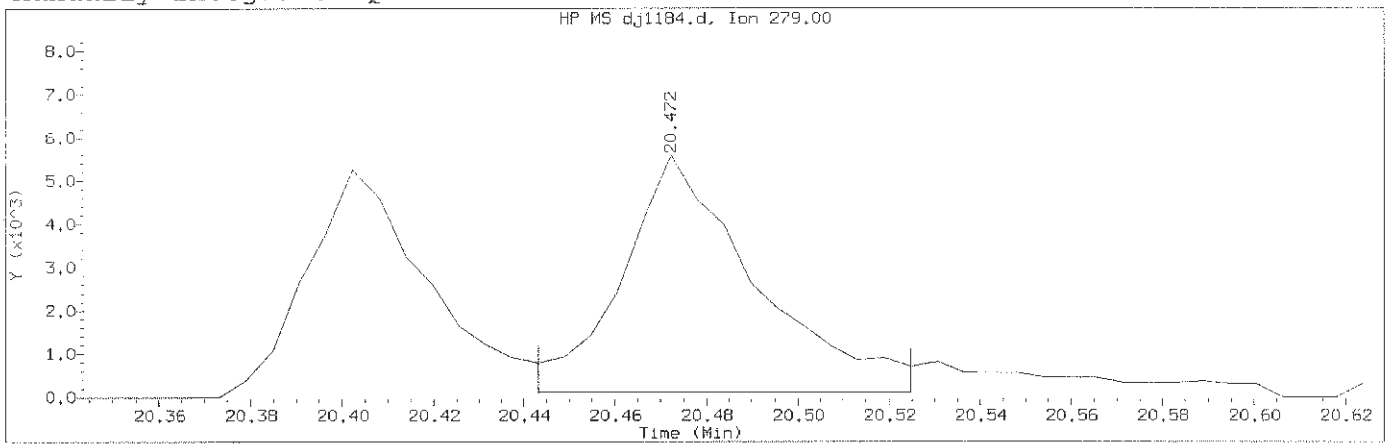
Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area	: 9028		
On-column Amount (ng/ul)	: 0.1541		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 0	Y at integration end:	326

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area (flag)	: 11208M		
On-Column Amount (ng/ul)	: 0.1718		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 119	Y at integration end:	119

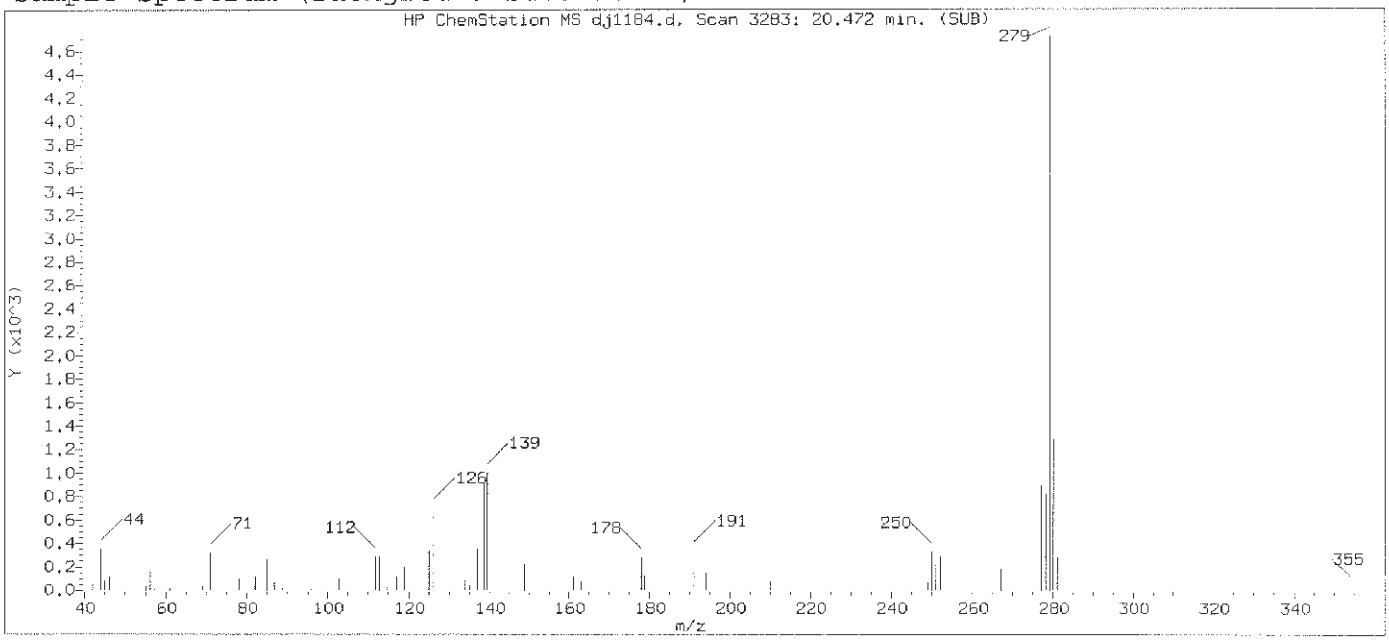
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

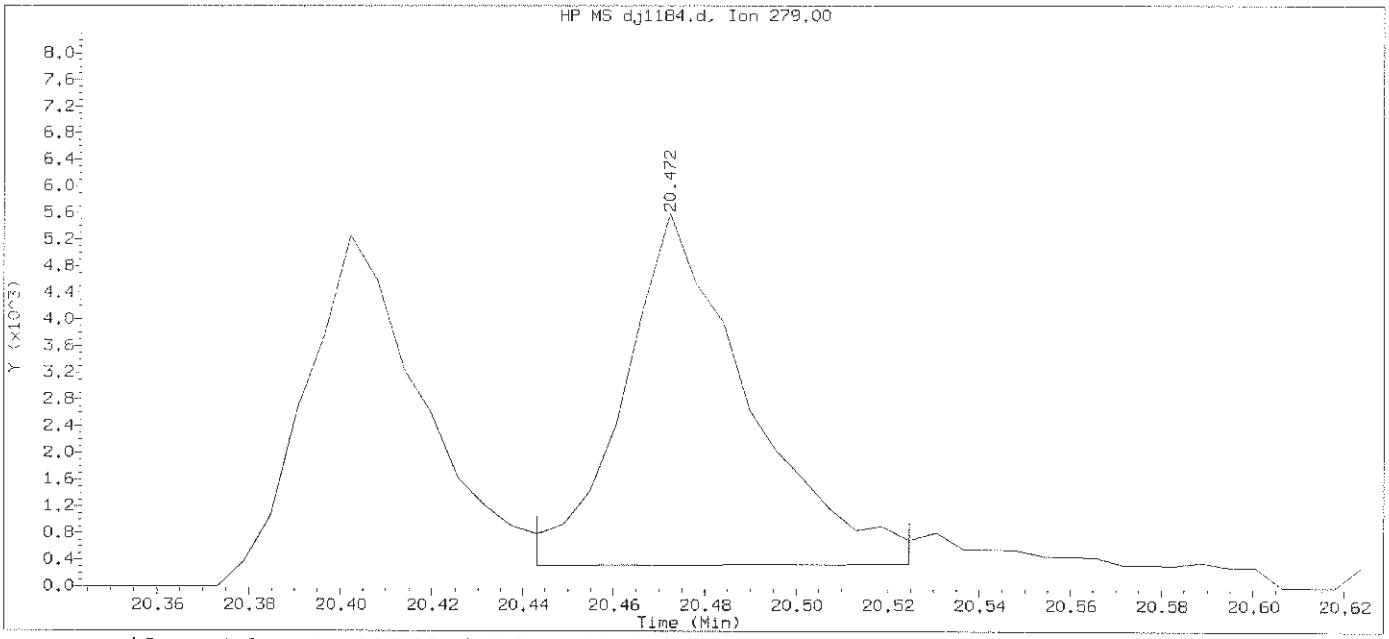
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Technical Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



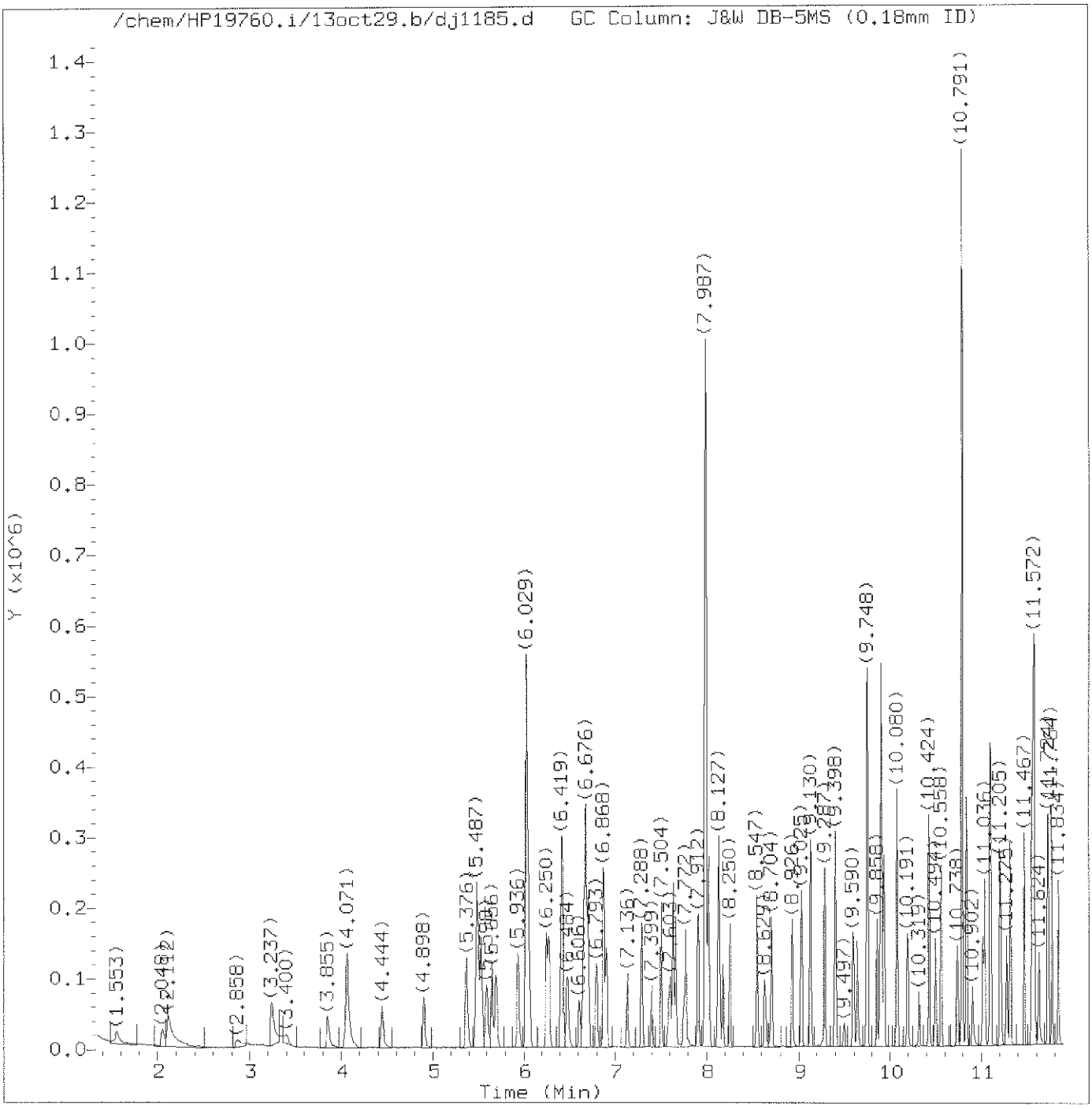
Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area	: 9925		
On-column Amount (ng/ul)	: 0.1579		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 326	Y at integration end:	346

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

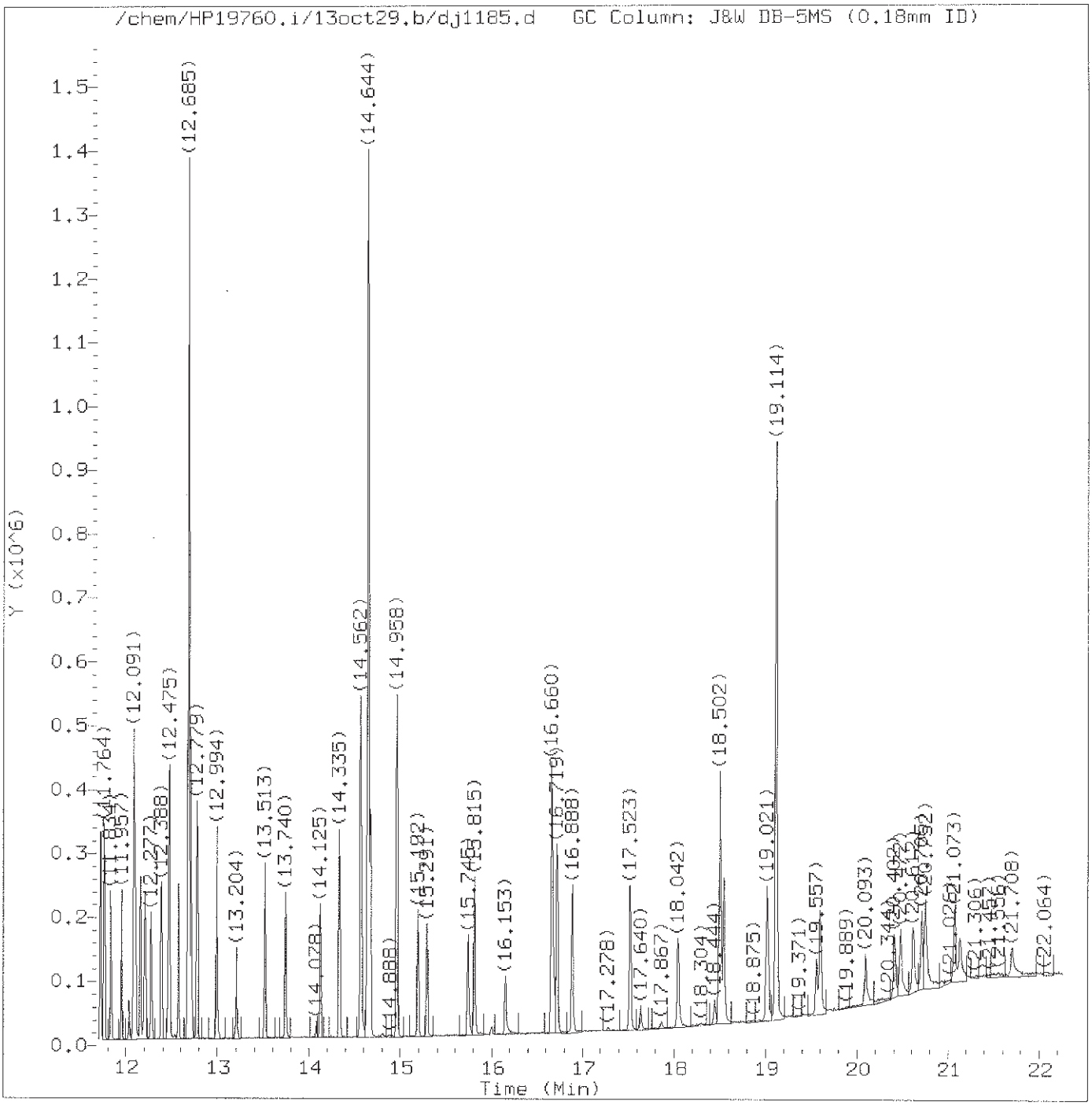
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	22269M	1.272
2) N-Nitrosodimethylamine	(1)	2.048	74	38547M	1.254
3) Pyridine	(1)	2.112	79	67472M	1.257
4) 2-Picoline	(1)	3.237	93	65872	1.178
5) N-Nitrosomethylethylamine	(1)	3.400	88	28658	1.207
6) Methyl methanesulfonate	(1)	3.855	80	32575	1.188
7)$2-Fluorophenol	(1)	4.071	112	101248	2.439
8) N-Nitrosodiethylamine	(1)	4.444	102	26770	1.168
10) Ethyl methanesulfonate	(1)	4.904	109	26410	1.188
11) Benzaldehyde	(1)	5.376	77	55036	1.399
12)$Phenol-d5	(1)	5.487	99	141190	2.469
13)$Phenol-d6	(1)	5.487	99	141190	2.469
14) Phenol	(1)	5.504	94	82122	1.236
15) Aniline	(1)	5.534	93	99089	1.215
16) bis(2-Chloroethyl)ether	(1)	5.656	93	63620	1.216
17) 2-Chlorophenol	(1)	5.697	128	48543	1.190
18) 1,3-Dichlorobenzene	(1)	5.936	146	54943	1.248
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	138331	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	55272	1.239
23) Benzyl alcohol	(1)	6.250	108	35118	1.223
24) 1,2-Dichlorobenzene	(1)	6.280	146	52982	1.275
25) Indene	(1)	6.414	115	106311	1.503
26) 2-Methylphenol	(1)	6.431	108	49448	1.207
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	81508	1.242
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	81508	1.242
29) N-Nitrosopyrrolidine	(1)	6.612	100	26480	1.145
30) Acetophenone	(1)	6.653	105	80822	1.262
33) 4-Methylphenol	(1)	6.670	108	57251	1.248
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	46619	1.253
32) N-Nitrosomorpholine	(1)	6.682	56	37671	1.271
34) o-Toluidine	(1)	6.705	106	87593	1.235
35) Hexachloroethane	(1)	6.793	117	23051	1.223
36)$Nitrobenzene-d5	(2)	6.868	82	122397	2.459
37) Nitrobenzene	(2)	6.897	77	66124	1.249
39) N-Nitrosopiperidine	(2)	7.136	114	25981	1.209
40) Isophorone	(2)	7.288	82	109011	1.213
42) 2-Nitrophenol	(2)	7.399	139	19527	1.104
45) 2,4-Dimethylphenol	(2)	7.504	107	53050	1.214
47) Benzoic acid	(2)	7.603	105	64759	1.938
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	23748	1.230

M = Compound was manually integrated.
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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	74668M	1.264
49) 2,4-Dichlorophenol	(2)	7.772	162	36329	1.191
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	43959	1.264
52)*Naphthalene-d8	(2)	7.987	136	535285	5.000
53) Naphthalene	(2)	8.022	128	147464	1.281
55) 4-Chloroaniline	(2)	8.127	127	58769	1.224
56) 2,6-Dichlorophenol	(2)	8.133	162	36624	1.247
57) Hexachloropropene	(2)	8.174	213	23865	1.119
58) Hexachlorobutadiene	(2)	8.250	225	25385	1.261
60) Quinoline	(2)	8.553	129	94155	1.226
61) Caprolactam	(2)	8.634	113	15728	1.156
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	39725	1.121
63) 4-Chloro-3-methylphenol	(2)	8.926	107	42929	1.166
64) Safrole	(2)	9.025	162	36262	1.253
65) 2-Methylnaphthalene	(2)	9.130	142	98282	1.282
66) 1-Methylnaphthalene	(2)	9.287	142	87553	1.262
67) Hexachlorocyclopentadiene	(3)	9.398	237	17375	1.048
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	45128	1.263
69) cis-Isosafrole	(3)	9.497	162	6014	1.163
70) 2,4,6-Trichlorophenol	(3)	9.596	196	25634	1.166
71) 2,4,5-Trichlorophenol	(3)	9.637	196	25547	1.124
72)$2-Fluorobiphenyl	(3)	9.748	172	198287	2.560
74) Isosafrole	(3)	9.858	162	34926	1.210
73) trans-Isosafrole	(3)	9.858	162	34926	1.210
75) 1,1'-Biphenyl	(3)	9.893	154	117078	1.304
76) 2-Chloronaphthalene	(3)	9.899	162	88989	1.289
77) 1-Chloronaphthalene	(3)	9.934	162	87532	1.278
82) Diphenyl ether	(3)	10.080	170	63424	1.282
83) 2-Nitroaniline	(3)	10.080	138	23140	1.125
84) 1,4-Naphthoquinone	(3)	10.196	158	30951	1.079
85) 1,4-Dinitrobenzene	(3)	10.319	168	9236	0.861
86) Dimethylphthalate	(3)	10.424	163	100272	1.303
87) 1,3-Dinitrobenzene	(3)	10.430	168	13847	1.048
88) 2,6-Dinitrotoluene	(3)	10.494	165	19733	1.192
90) Acenaphthylene	(3)	10.558	152	128664	1.248
91) 3-Nitroaniline	(3)	10.738	138	22330	1.176
92)*Acenaphthene-d10	(3)	10.791	164	303956	5.000
93) Acenaphthene	(3)	10.838	153	89771	1.247
94) 2,4-Dinitrophenol	(3)	10.908	184	13659	1.410
96) 4-Nitrophenol	(3)	11.018	109	24040	1.954

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	34962	1.217
97) Dibenzofuran	(3)	11.094	168	130135	1.274
98) 2,4-Dinitrotoluene	(3)	11.100	165	24532	1.160
99) 1-Naphthylamine	(3)	11.205	143	91867	1.256
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	19751	1.108
101) 2-Naphthylamine	(3)	11.310	143	95744	1.271
102) Diethylphthalate	(3)	11.467	149	95093	1.247
103) Fluorene	(3)	11.549	166	104201	1.275
104) Thionazin	(3)	11.566	107	20809	1.266
106) 5-Nitro-o-toluidine	(3)	11.572	152	27432	1.269
107) 4-Nitroaniline	(3)	11.572	138	24616	1.247
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	52803	1.291
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	17872	1.319
109) N-Nitrosodiphenylamine	(4)	11.724	169	82130	1.275
110) NDPA as diphenylamine	(4)	11.724	169	82130	1.275
111) 1,2-Diphenylhydrazine	(4)	11.764	77	132180	1.289
112)$2,4,6-Tribromophenol	(3)	11.840	330	18163	2.308
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	17130	1.177
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	5451	0.666
117) Diallate (peak 1)	(4)	12.085	86	48822	0.960
118) Phorate	(4)	12.091	75	75299	1.244
119) Phenacetin	(4)	12.102	108	47845	1.156
120) 4-Bromophenyl-phenylether	(4)	12.161	248	25926	1.269
121) Diallate (peak 2)	(4)	12.190	86	6365	0.297
122) Hexachlorobenzene	(4)	12.207	284	25349	1.246
123) Dimethoate	(4)	12.277	87	41240	1.061
124) Atrazine	(4)	12.388	200	26935	1.315
125) Pentachlorophenol	(4)	12.458	266	12480	0.914
126) Pentachloronitrobenzene	(4)	12.475	237	10941	1.227
127) 4-Aminobiphenyl	(4)	12.475	169	98012	1.239
129) Pronamide	(4)	12.575	173	38417	1.178
130)*Phenanthrene-d10	(4)	12.685	188	512509	5.000
131) Phenanthrene	(4)	12.714	178	150220	1.284
133) Dinoseb	(4)	12.714	211	10055	0.629
134) Anthracene	(4)	12.779	178	145940	1.275
135) Carbazole	(4)	12.994	167	137397	1.242
136) Methyl parathion	(4)	13.204	109	23830	0.890
137) Di-n-butylphthalate	(4)	13.513	149	149836	1.152
138) Parathion	(4)	13.740	109	15893	0.921
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	3967	0.444

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$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	16317	1.203
142) Fluoranthene	(4)	14.335	202	156364	1.225
144) Benzidine	(5)	14.562	184	272209	3.347
145)*Pyrene-d10	(5)	14.644	212	649692	5.000
146) Pyrene	(5)	14.673	202	175362	1.244
149)$Terphenyl-d14	(5)	14.958	244	203163	2.479
150) p-Dimethylaminoazobenzene	(5)	15.192	225	25171	1.081
151) Chlorobenzilate	(5)	15.291	139	42880	1.105
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	74815	0.946
153) Butylbenzylphthalate	(5)	15.815	149	65483	1.125
156) 2-Acetylaminofluorene	(5)	16.153	181	33973	0.737
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	44223	1.060
158) Benzo(a)anthracene	(5)	16.660	228	139152	1.213
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	22477	1.025
161) Chrysene	(5)	16.719	228	147664	1.281
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	79864	1.038
165) 6-Methylchrysene	(5)	17.523	242	94127	1.183
166) Di-n-octylphthalate	(6)	18.042	149	107935	0.898
168) Benzo(b)fluoranthene	(6)	18.502	252	126011	1.213
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	54160	1.219
170) Benzo(k)fluoranthene	(6)	18.543	252	130476	1.235
171) Benzo(a)pyrene	(6)	19.021	252	115098	1.194
172)*Perylene-d12	(6)	19.114	264	447306	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	51034	1.143
174) Dibenz(a,h)acridine	(6)	20.402	279	59881	0.956
175) Dibenz(a,j)acridine	(6)	20.472	279	69441	1.052
176) Indeno(1,2,3-cd)pyrene	(6)	20.705	276	97855	1.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	82575	1.213
178) Benzo(g,h,i)perylene	(6)	21.073	276	83734	1.202
179) Diallate TRANS/CIS	(4)			55187	1.268
182) 2,4_2,6-Dinitrotoluenes	(3)			44265	2.352

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$ = Compound is a surrogate standard.

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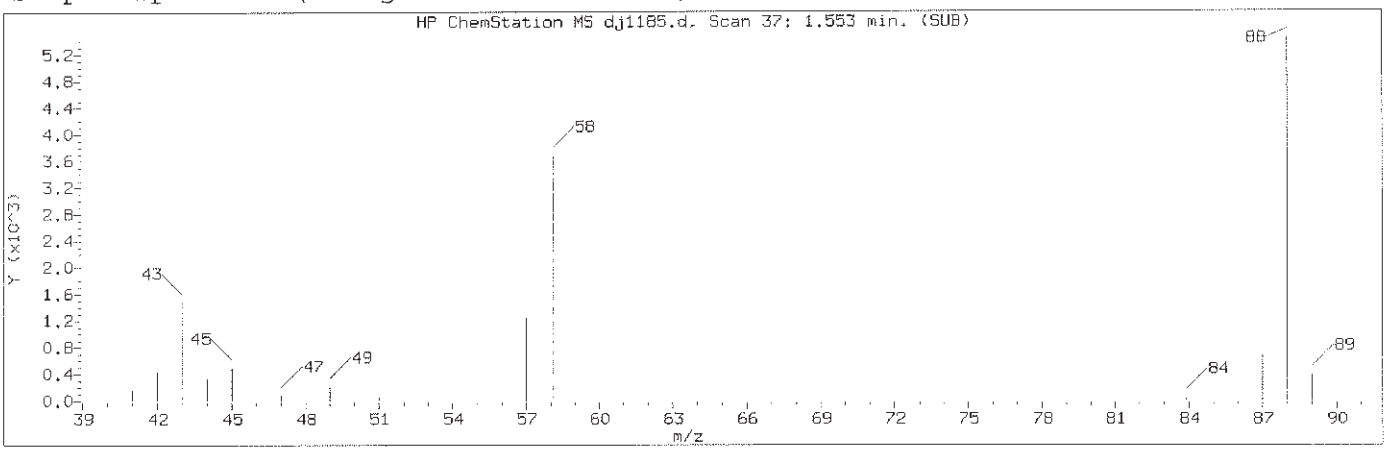
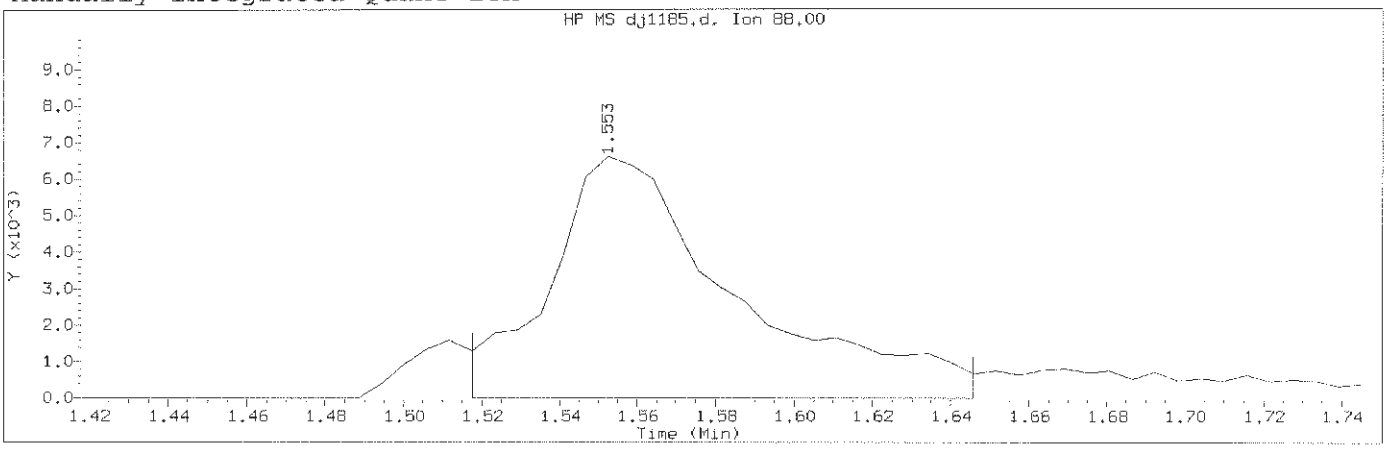
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 22269M		
On-Column Amount (ng/ul)	: 1.2719		
Integration start scan	: 30	Integration stop scan:	52
Y at integration start	: -1	Y at integration end:	-1

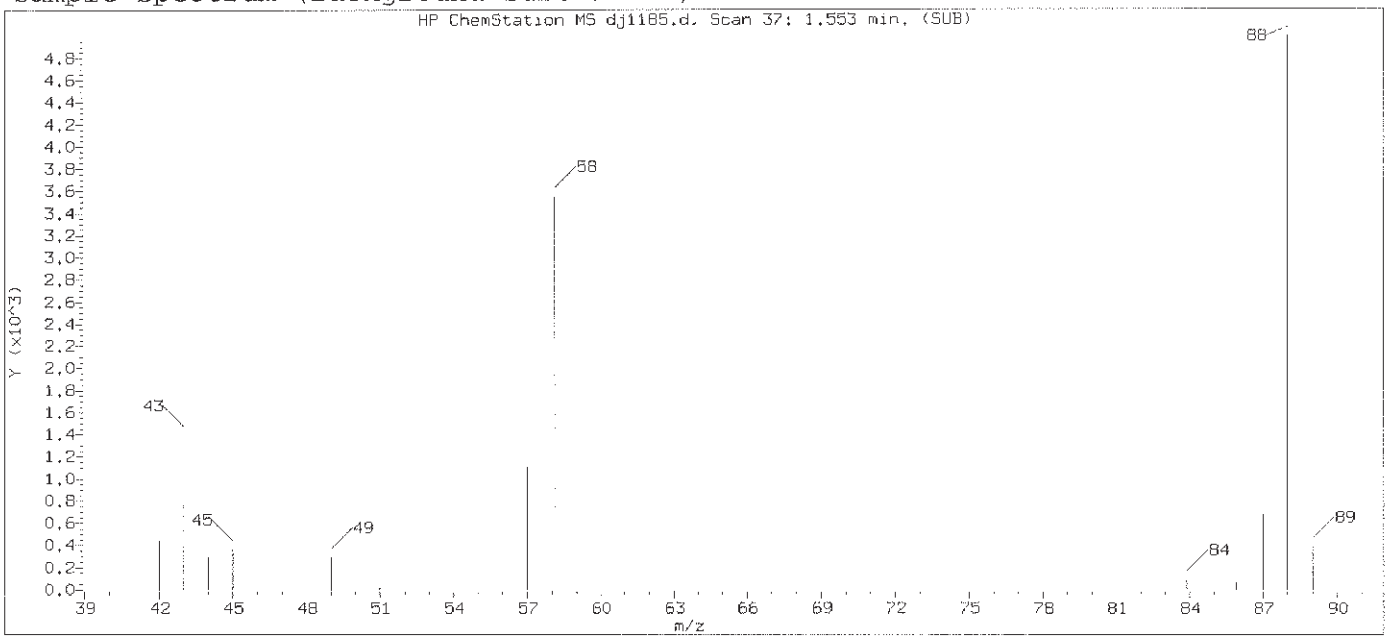
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

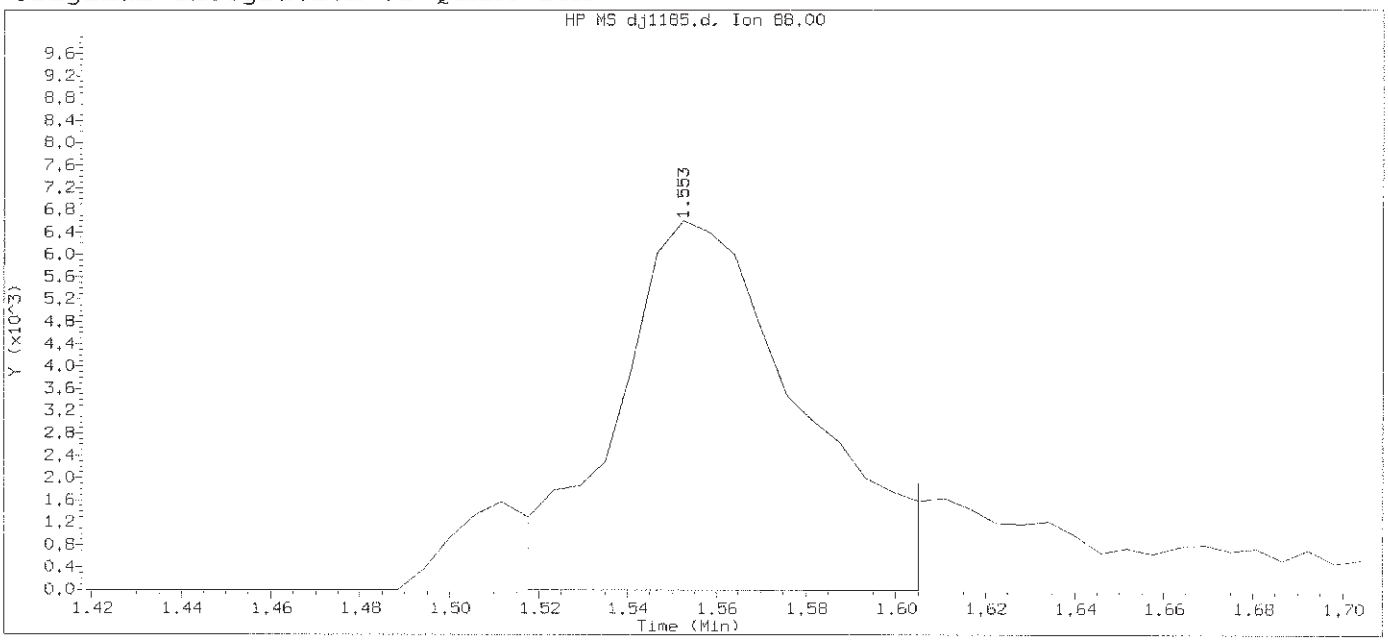
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

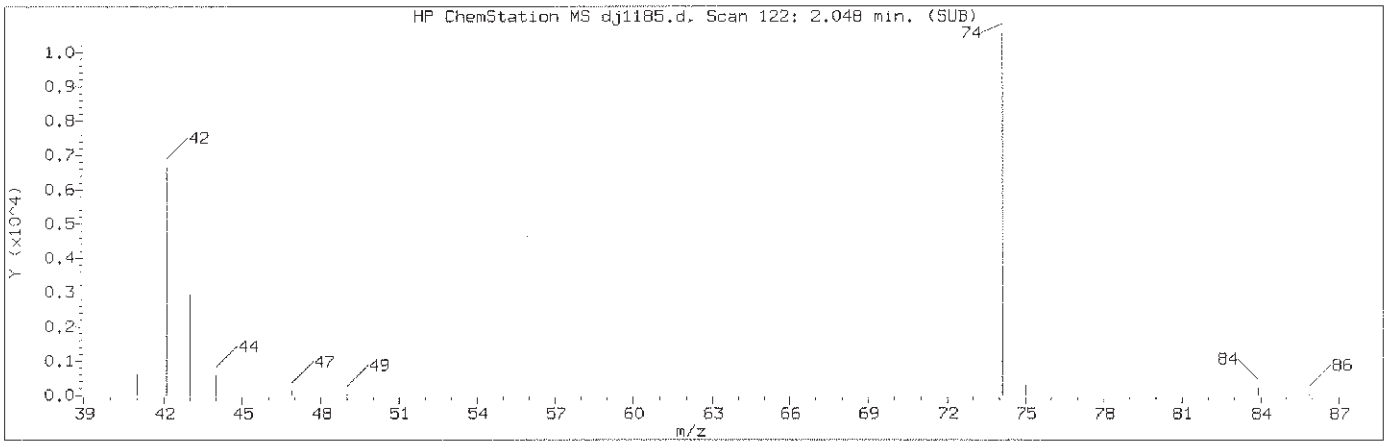
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

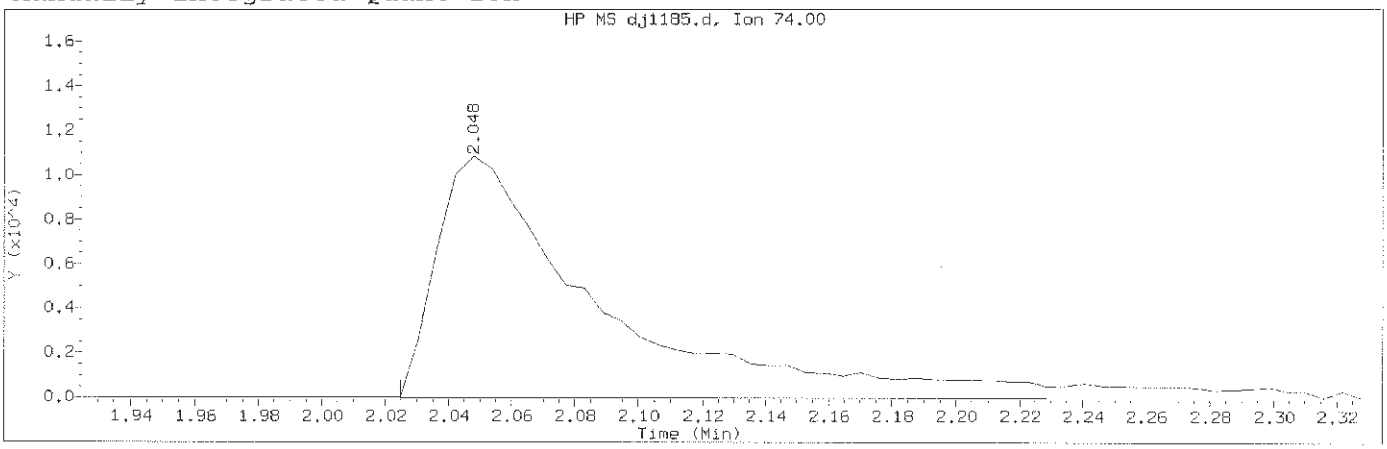
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 18846		
On-column Amount (ng/ul)	: 1.0953		
Integration start scan	: 30	Integration stop scan:	45
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area (flag)	: 38547M		
On-Column Amount (ng/ul)	: 1.2538		
Integration start scan	: 117	Integration stop scan:	152
Y at integration start	: -17	Y at integration end:	-17

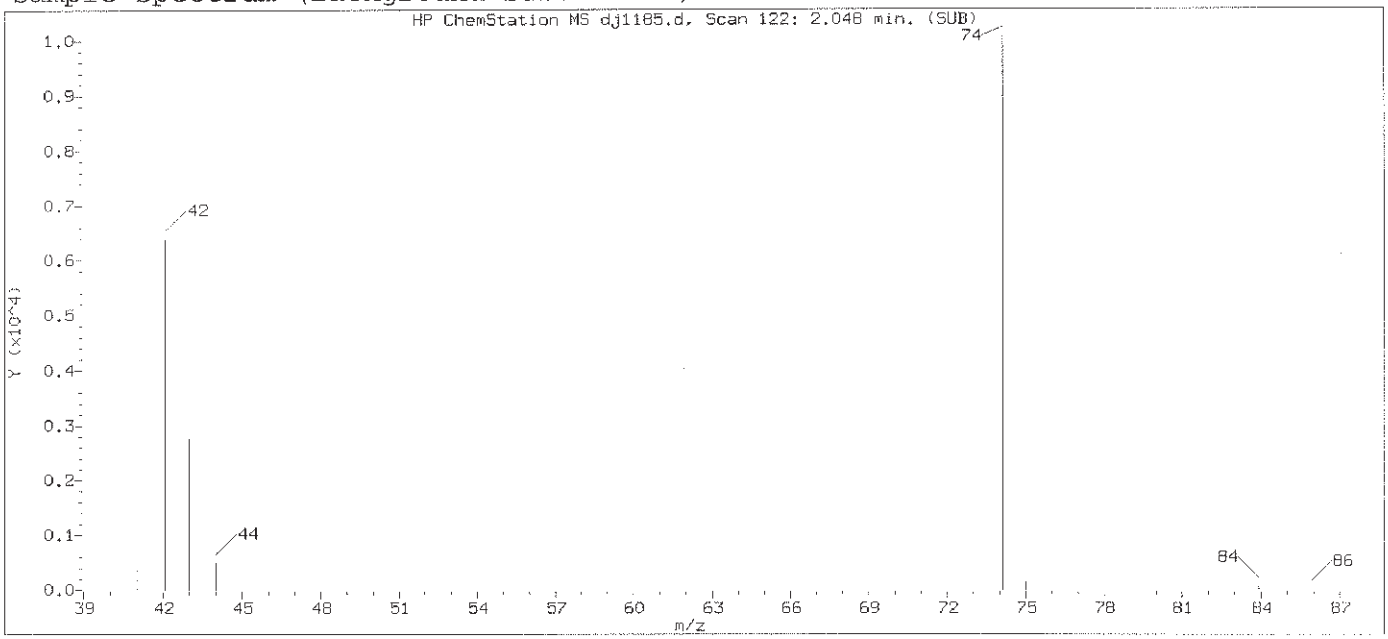
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

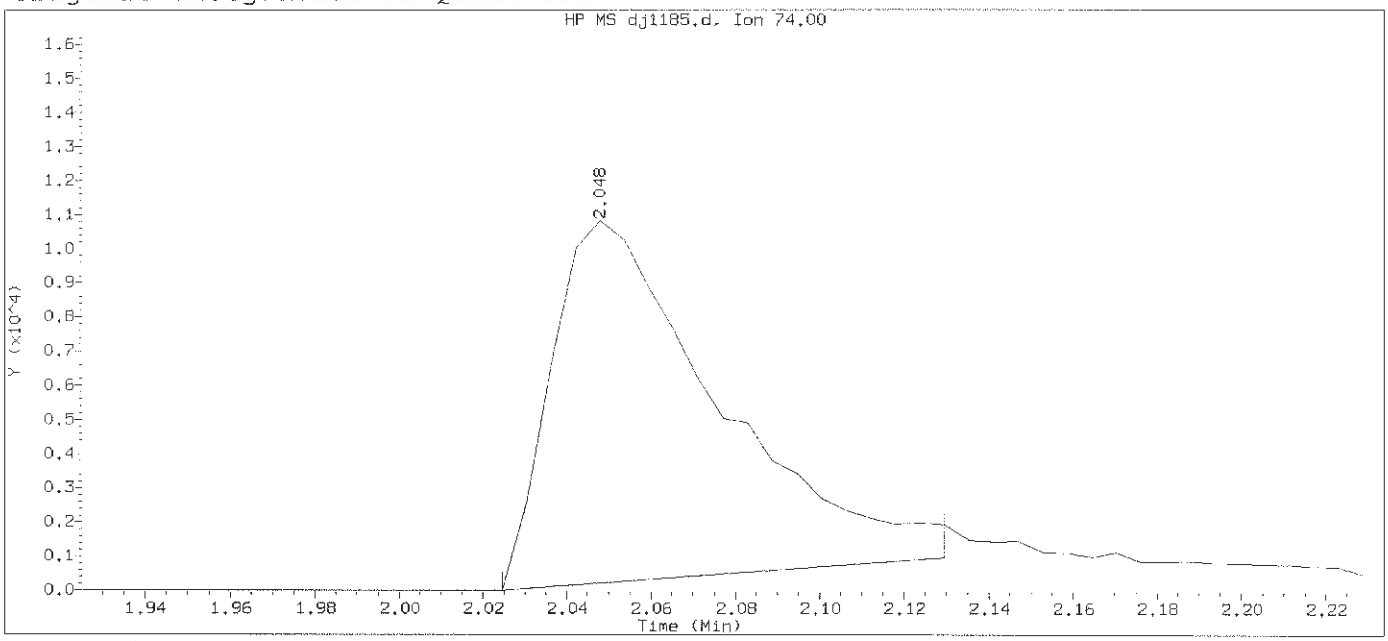
GC/MS audit/management approval: OCT. 3 0 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

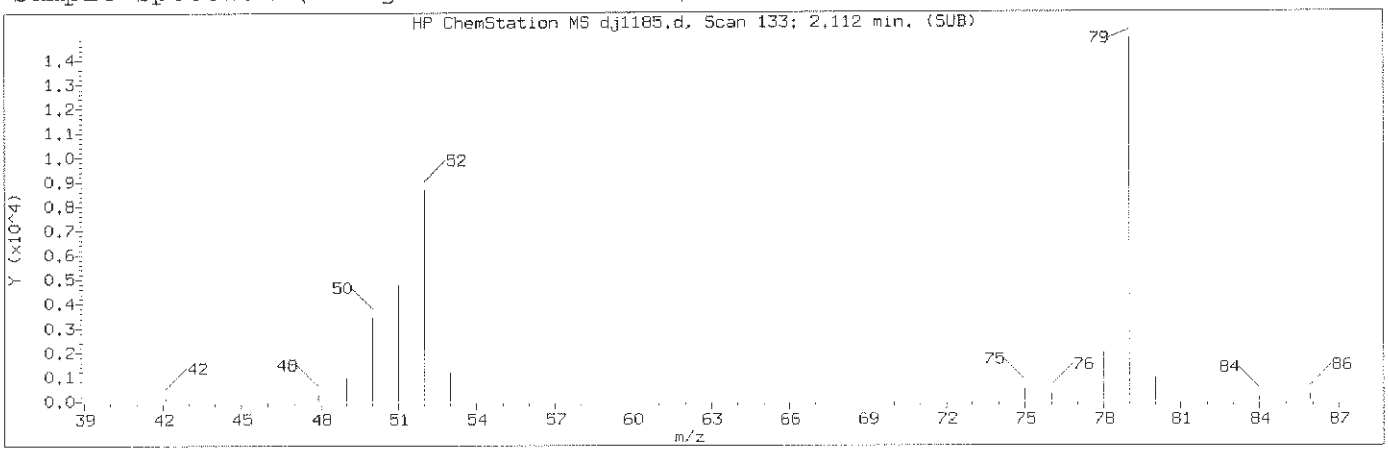
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

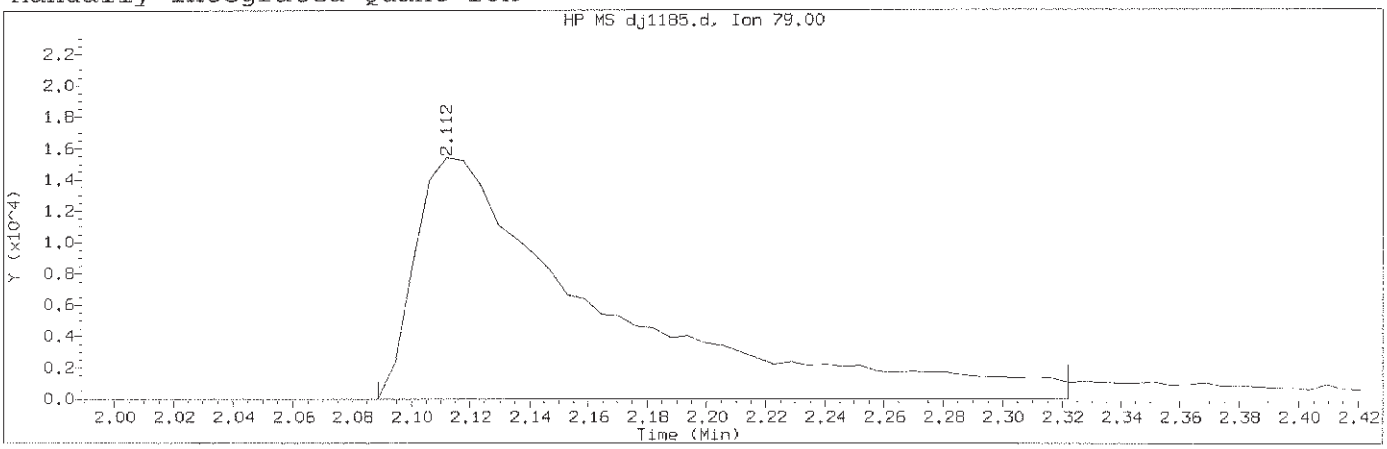
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area	: 29253		
On-column Amount (ng/ul)	: 1.0178		
Integration start scan	: 117	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	965

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area (flag)	: 67472M		
On-Column Amount (ng/ul)	: 1.2574		
Integration start scan	: 128	Integration stop scan:	168
Y at integration start	: -8	Y at integration end:	-8

Reason for manual integration: improper integration

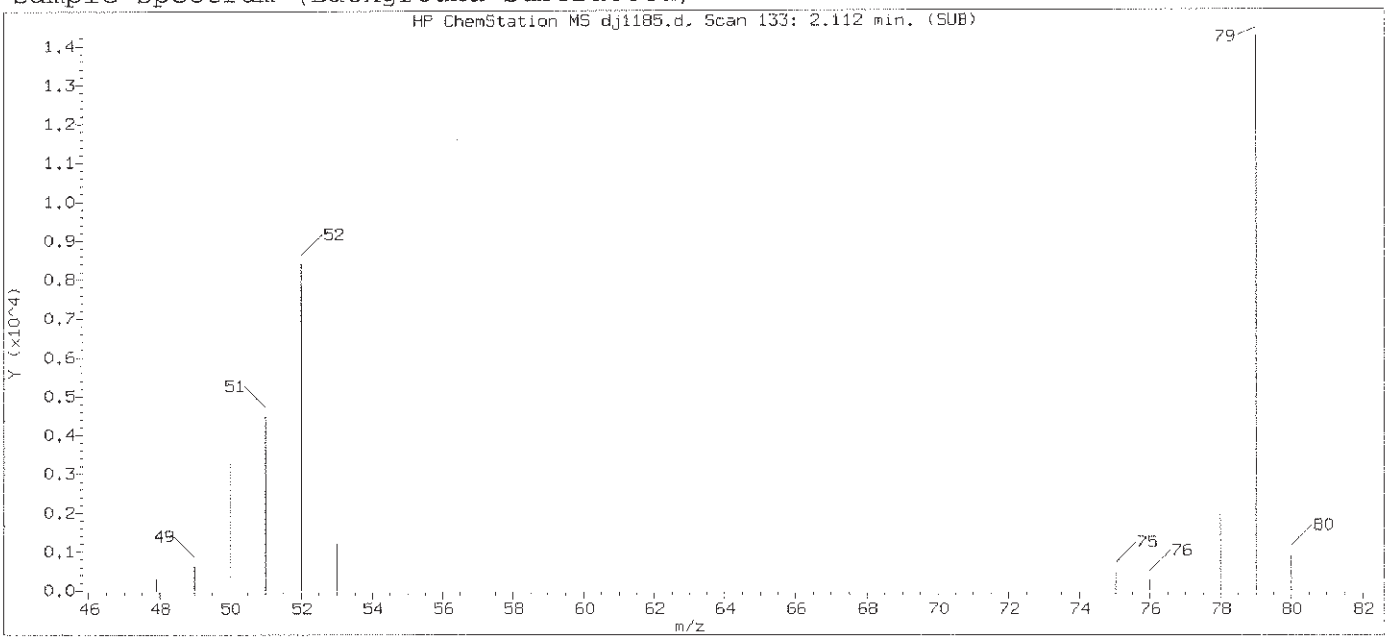
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

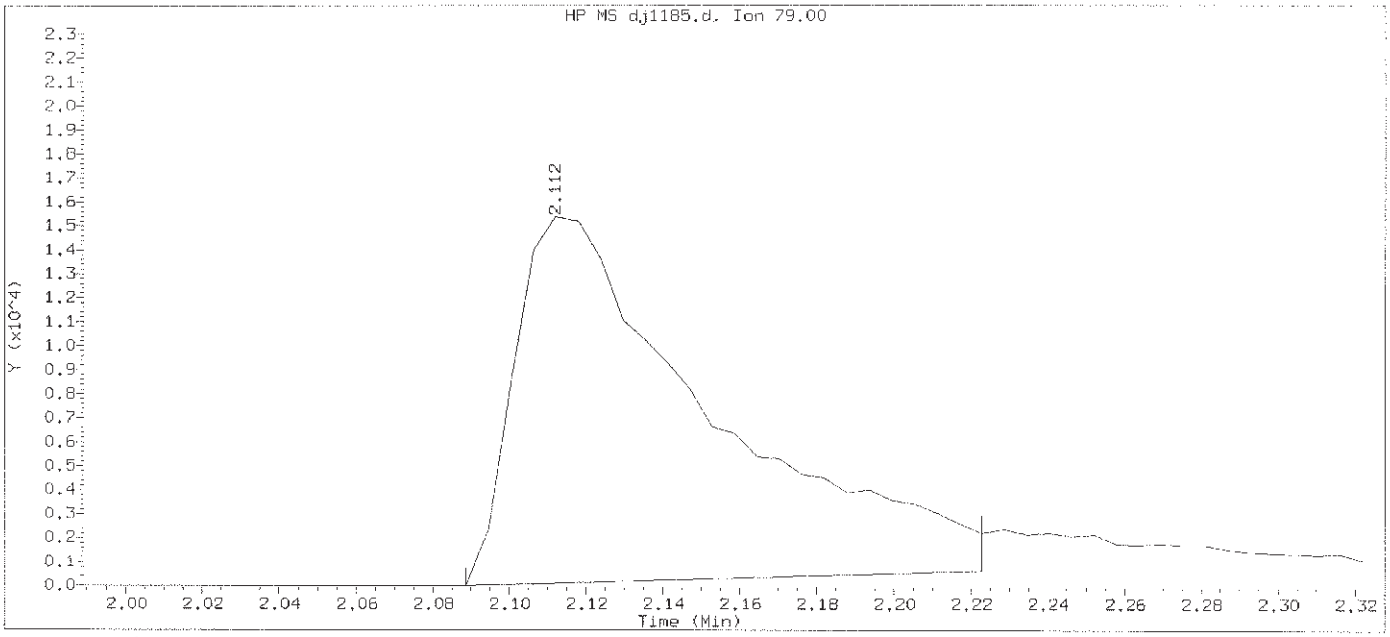
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

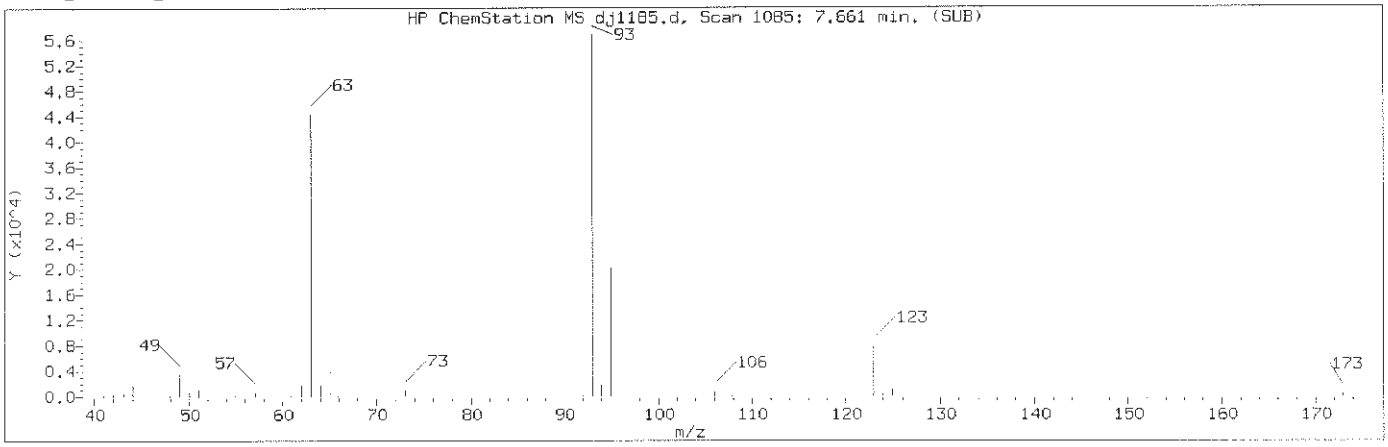
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

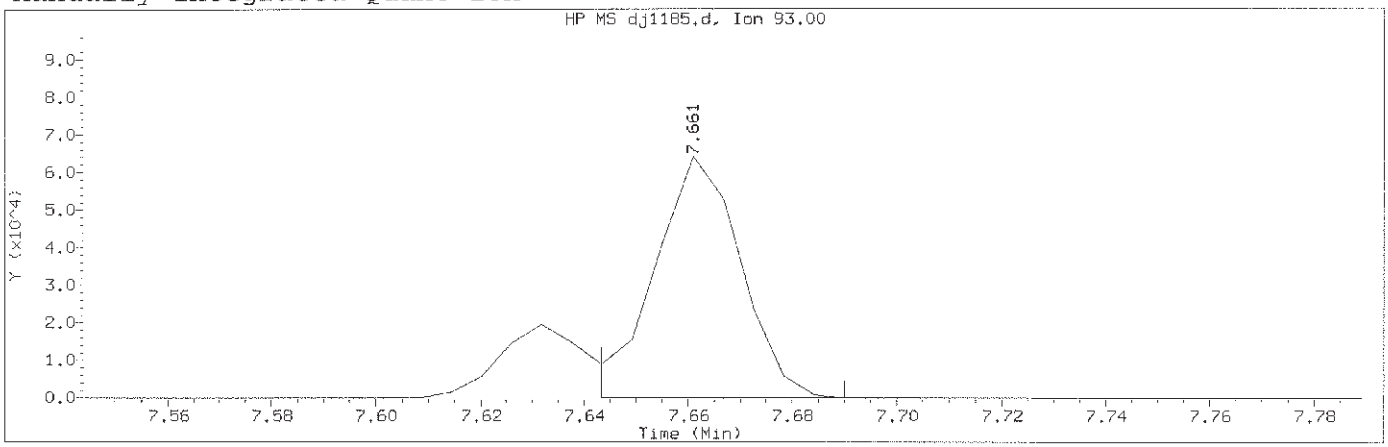
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area	: 54361		
On-column Amount (ng/ul)	: 1.0984		
Integration start scan	: 128	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	617

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1085		
Retention Time (minutes)	: 7.661		
Quant Ion	: 93.00		
Area (flag)	: 74668M		
On-Column Amount (ng/ul)	: 1.2637		
Integration start scan	: 1081	Integration stop scan:	1089
Y at integration start	: -3	Y at integration end:	-3

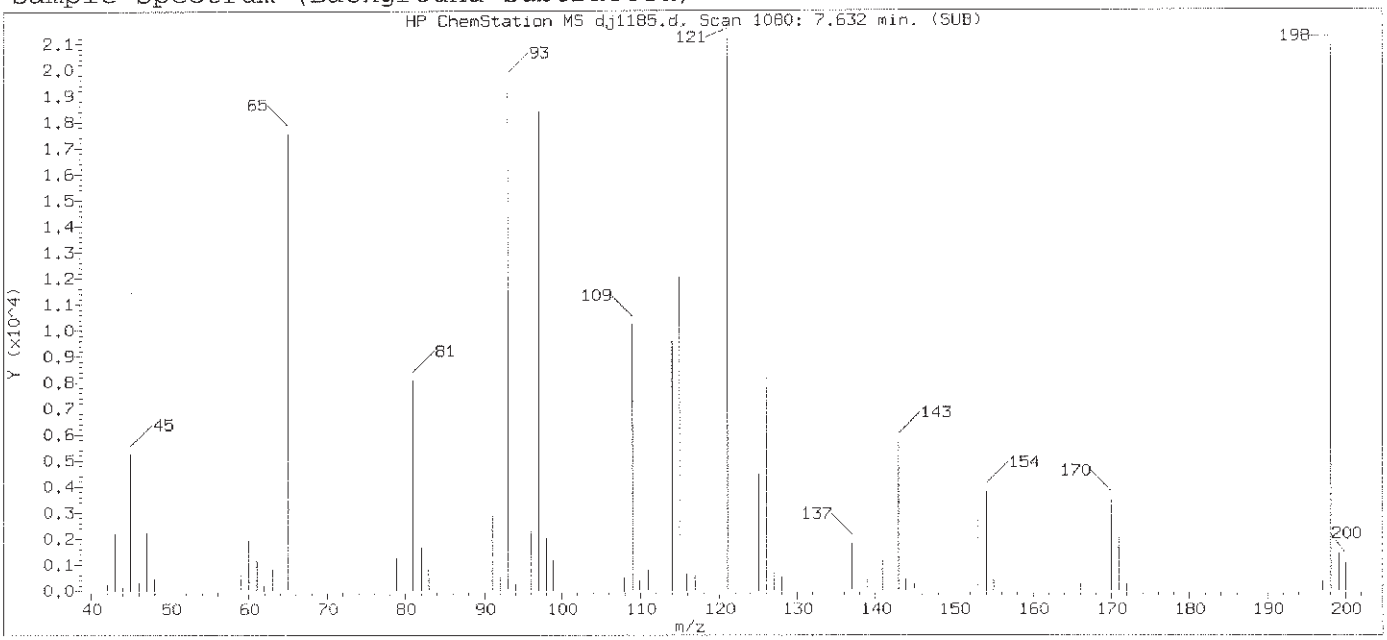
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

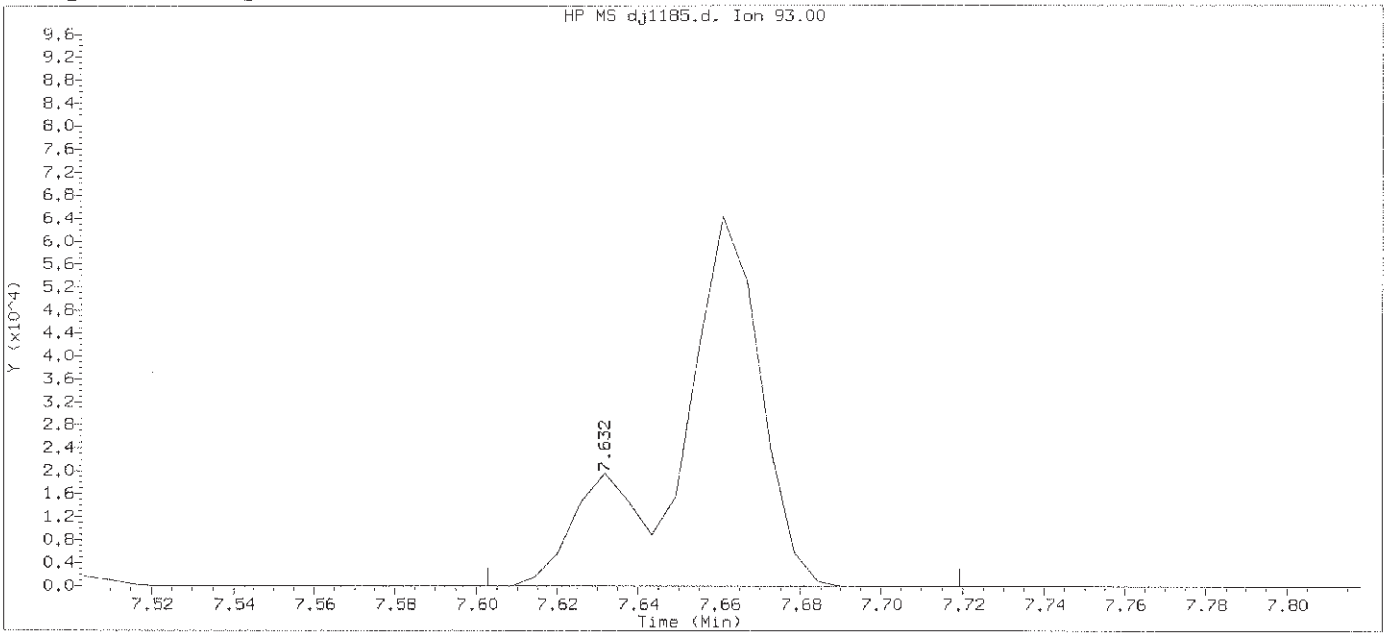
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



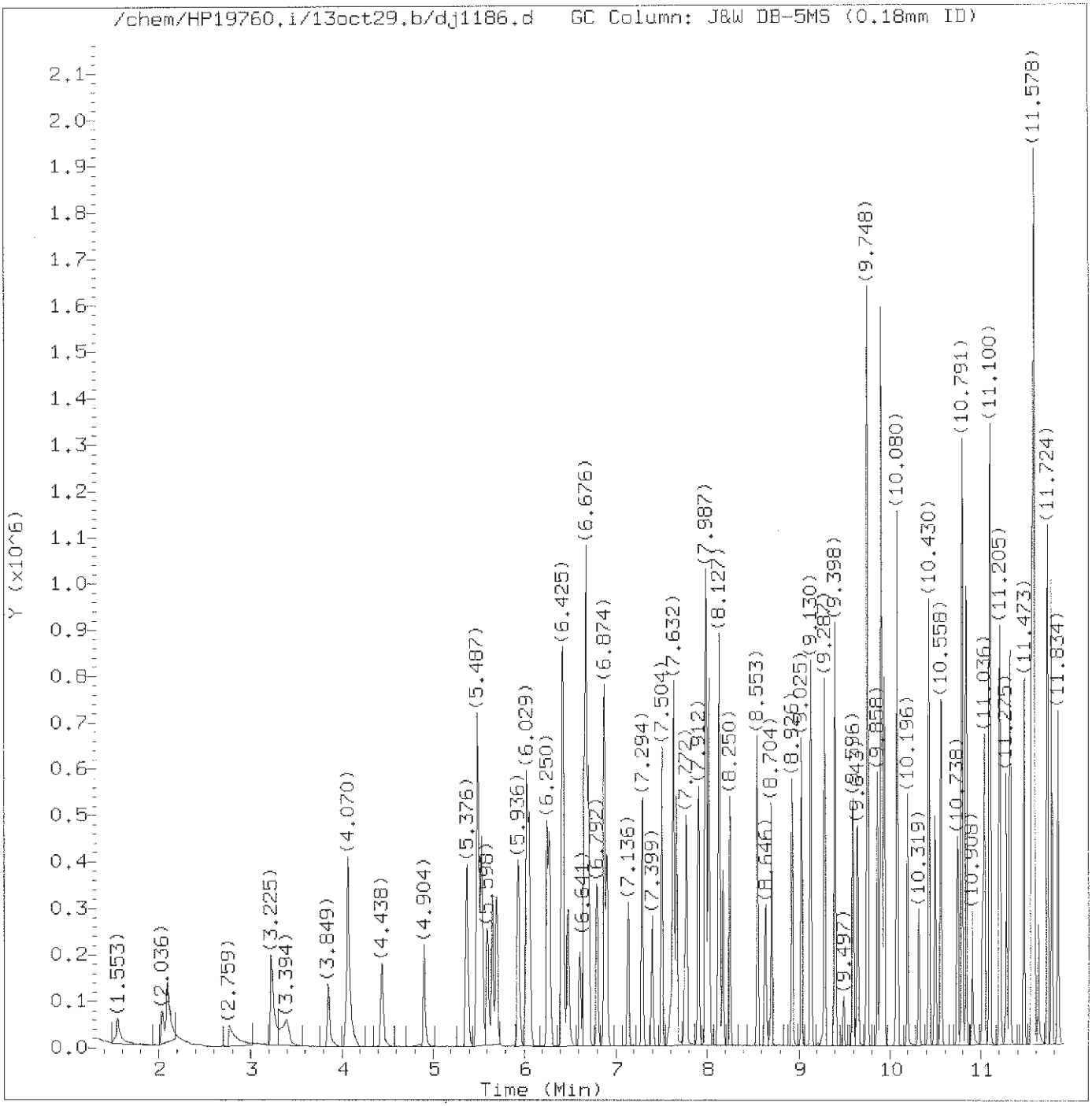
Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1080		
Retention Time (minutes)	: 7.632		
Quant Ion	: 93.00		
Area	: 94211		
On-column Amount (ng/ul)	: 1.4595		
Integration start scan	: 1074	Integration stop scan:	1094
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

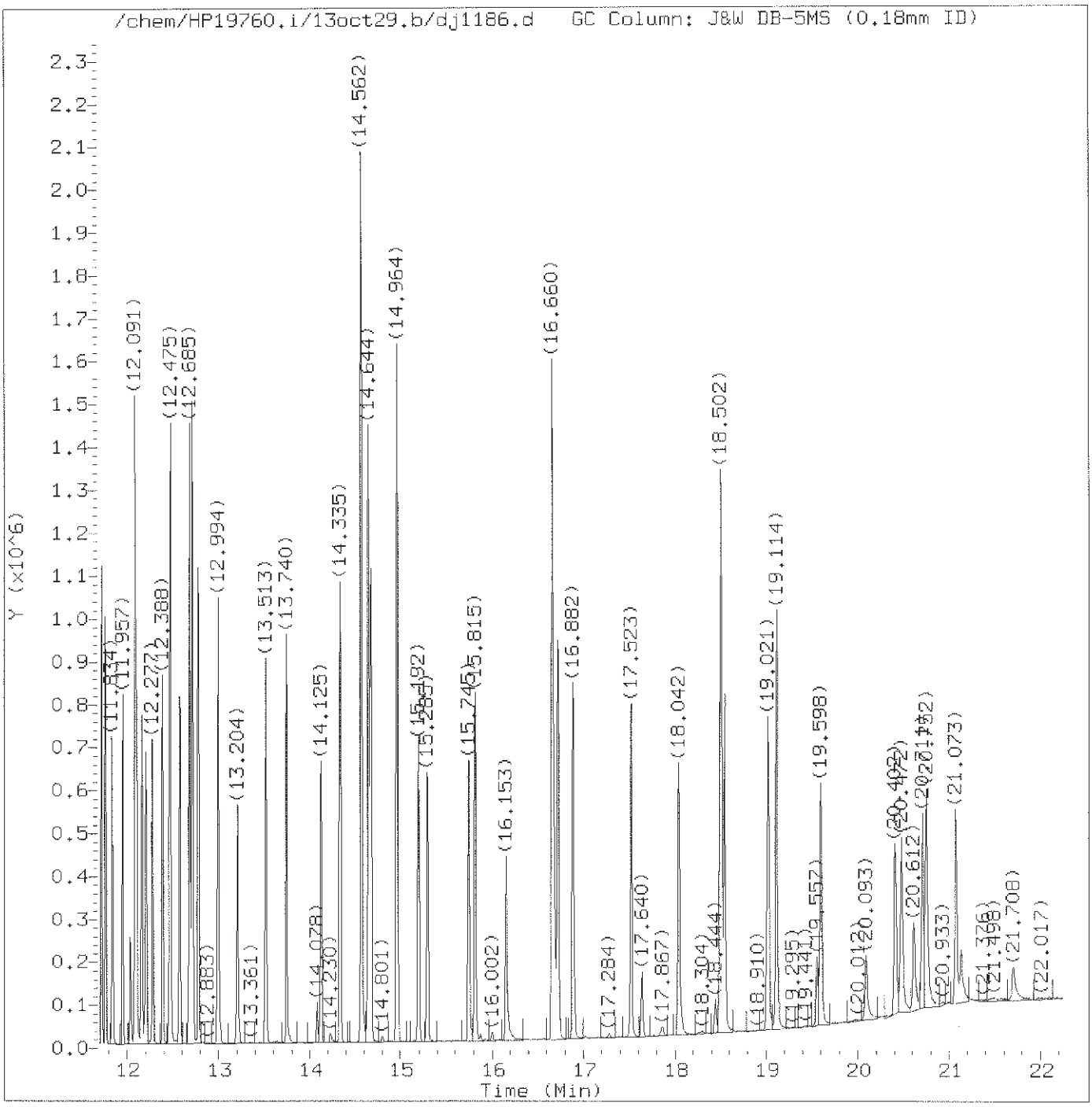
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	68392M	3.820
2) N-Nitrosodimethylamine	(1)	2.036	74	105553	3.447
3) Pyridine	(1)	2.095	79	177830	3.371
4) 2-Picoline	(1)	3.225	93	199277	3.552
5) N-Nitrosomethylethylamine	(1)	3.394	88	87323	3.644
6) Methyl methanesulfonate	(1)	3.849	80	99499	3.605
7)$2-Fluorophenol	(1)	4.070	112	301694	7.218
8) N-Nitrosodiethylamine	(1)	4.444	102	83412	3.614
10) Ethyl methanesulfonate	(1)	4.904	109	80657	3.604
11) Benzaldehyde	(1)	5.376	77	166226	4.049
12)$Phenol-d5	(1)	5.487	99	419689	7.277
13)$Phenol-d6	(1)	5.487	99	419689	7.277
14) Phenol	(1)	5.504	94	244417	3.645
15) Aniline	(1)	5.539	93	298601	3.632
16) bis(2-Chloroethyl)ether	(1)	5.656	93	192402	3.643
17) 2-Chlorophenol	(1)	5.703	128	148109	3.608
18) 1,3-Dichlorobenzene	(1)	5.936	146	163356	3.670
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	140563	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	164644	3.656
23) Benzyl alcohol	(1)	6.250	108	106806	3.682
24) 1,2-Dichlorobenzene	(1)	6.280	146	154923	3.685
25) Indene	(1)	6.414	115	305774	4.302
26) 2-Methylphenol	(1)	6.431	108	151928	3.670
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	241778	3.649
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	241778	3.649
29) N-Nitrosopyrrolidine	(1)	6.612	100	86112	3.682
30) Acetophenone	(1)	6.653	105	240525	3.708
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	139013	3.692
33) 4-Methylphenol	(1)	6.676	108	171824	3.698
32) N-Nitrosomorpholine	(1)	6.682	56	109527	3.660
34) o-Toluidine	(1)	6.705	106	263721	3.676
35) Hexachloroethane	(1)	6.792	117	69243	3.642
36)$Nitrobenzene-d5	(2)	6.874	82	374112	7.321
37) Nitrobenzene	(2)	6.903	77	198687	3.656
39) N-Nitrosopiperidine	(2)	7.136	114	81540	3.689
40) Isophorone	(2)	7.294	82	334673	3.635
42) 2-Nitrophenol	(2)	7.399	139	64142	3.557
45) 2,4-Dimethylphenol	(2)	7.504	107	165705	3.687
47) Benzoic acid	(2)	7.626	105	151594M	5.096
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	74096	3.723

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	222735	3.670
49) 2,4-Dichlorophenol	(2)	7.772	162	117512	3.735
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	129391	3.631
52)*Naphthalene-d8	(2)	7.987	136	552831	5.000
53) Naphthalene	(2)	8.022	128	439891	3.707
55) 4-Chloroaniline	(2)	8.127	127	178930	3.635
56) 2,6-Dichlorophenol	(2)	8.133	162	114671	3.774
57) Hexachloropropene	(2)	8.174	213	80240	3.665
58) Hexachlorobutadiene	(2)	8.250	225	75787	3.665
60) Quinoline	(2)	8.553	129	284083	3.613
61) Caprolactam	(2)	8.646	113	52556	3.743
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	124480	3.482
63) 4-Chloro-3-methylphenol	(2)	8.926	107	138946	3.672
64) Safrole	(2)	9.025	162	110360	3.705
65) 2-Methylnaphthalene	(2)	9.130	142	293792	3.718
66) 1-Methylnaphthalene	(2)	9.287	142	266959	3.729
67) Hexachlorocyclopentadiene	(3)	9.404	237	58106	3.459
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	135309	3.665
69) cis-Isosafrole	(3)	9.497	162	19222	3.611
70) 2,4,6-Trichlorophenol	(3)	9.596	196	83953	3.690
71) 2,4,5-Trichlorophenol	(3)	9.643	196	85454	3.642
72)$2-Fluorobiphenyl	(3)	9.748	172	593259	7.395
74) Isosafrole	(3)	9.858	162	112492	3.749
73) trans-Isosafrole	(3)	9.858	162	112492	3.749
75) 1,1'-Biphenyl	(3)	9.899	154	351719	3.766
76) 2-Chloronaphthalene	(3)	9.905	162	255632	3.599
77) 1-Chloronaphthalene	(3)	9.934	162	264305	3.721
82) Diphenyl ether	(3)	10.080	170	189965	3.707
83) 2-Nitroaniline	(3)	10.080	138	80534	3.765
84) 1,4-Naphthoquinone	(3)	10.196	158	108951	3.679
85) 1,4-Dinitrobenzene	(3)	10.319	168	35691	3.322
86) Dimethylphthalate	(3)	10.424	163	307320	3.819
87) 1,3-Dinitrobenzene	(3)	10.430	168	47338	3.517
88) 2,6-Dinitrotoluene	(3)	10.494	165	66555	3.845
90) Acenaphthylene	(3)	10.564	152	400060	3.737
91) 3-Nitroaniline	(3)	10.738	138	76037	3.831
92)*Acenaphthene-d10	(3)	10.791	164	315878	5.000
93) Acenaphthene	(3)	10.838	153	273437	3.671
94) 2,4-Dinitrophenol	(3)	10.908	184	44952	5.161
96) 4-Nitrophenol	(3)	11.018	109	45497	3.605

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	107060	3.618
97) Dibenzofuran	(3)	11.100	168	393706	3.717
98) 2,4-Dinitrotoluene	(3)	11.100	165	85005	3.844
99) 1-Naphthylamine	(3)	11.205	143	287654	3.778
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	70651	3.801
101) 2-Naphthylamine	(3)	11.316	143	298380	3.800
102) Diethylphthalate	(3)	11.473	149	289267	3.674
103) Fluorene	(3)	11.549	166	318814	3.754
104) Thionazin	(3)	11.566	107	64912	3.790
106) 5-Nitro-o-toluidine	(3)	11.572	152	87345	3.860
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	157117	3.707
107) 4-Nitroaniline	(3)	11.578	138	79776	3.860
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	34788	2.763
109) N-Nitrosodiphenylamine	(4)	11.724	169	255381	3.766
110) NDPA as diphenylamine	(4)	11.724	169	255381	3.766
111) 1,2-Diphenylhydrazine	(4)	11.764	77	405355	3.758
112)$2,4,6-Tribromophenol	(3)	11.840	330	60726	7.439
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	57370	3.748
116) 1,3,5-Trinitrobenzene	(4)	12.044	213	25031	3.082
117) Diallate (peak 1)	(4)	12.085	86	152285	2.840
118) Phorate	(4)	12.091	75	239579	3.760
119) Phenacetin	(4)	12.108	108	163548	3.755
120) 4-Bromophenyl-phenylether	(4)	12.161	248	78686	3.680
121) Diallate (peak 2)	(4)	12.190	86	20804	0.926
122) Hexachlorobenzene	(4)	12.207	284	76769	3.614
123) Dimethoate	(4)	12.277	87	148445	3.661
124) Atrazine	(4)	12.388	200	87367	3.990
125) Pentachlorophenol	(4)	12.458	266	47912	3.431
126) Pentachloronitrobenzene	(4)	12.475	237	37712	3.966
127) 4-Aminobiphenyl	(4)	12.475	169	316816	3.797
129) Pronamide	(4)	12.574	173	133638	3.866
130)*Phenanthrene-d10	(4)	12.685	188	538913	5.000
131) Phenanthrene	(4)	12.714	178	448337	3.662
133) Dinoseb	(4)	12.714	211	49773	3.127
134) Anthracene	(4)	12.778	178	453512	3.765
135) Carbazole	(4)	12.994	167	437915	3.761
136) Methyl parathion	(4)	13.204	109	96338	3.497
137) Di-n-butylphthalate	(4)	13.513	149	508920	3.728
138) Parathion	(4)	13.740	109	65531	3.646
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	21592	2.543

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	53847	3.771
142) Fluoranthene	(4)	14.335	202	510943	3.796
144) Benzidine	(5)	14.568	184	1018403	11.585
145)*Pyrene-d10	(5)	14.644	212	695223	5.000
146) Pyrene	(5)	14.673	202	539258	3.602
149)$Terphenyl-d14	(5)	14.964	244	640393	7.341
150) p-Dimethylaminoazobenzene	(5)	15.192	225	95700	3.823
151) Chlorobenzilate	(5)	15.285	139	148617	3.620
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	308612	3.671
153) Butylbenzylphthalate	(5)	15.815	149	230740	3.715
156) 2-Acetylaminofluorene	(5)	16.153	181	151546	3.218
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	160393	3.631
158) Benzo(a)anthracene	(5)	16.660	228	471516	3.825
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	84756	3.645
161) Chrysene	(5)	16.719	228	466993	3.779
162) bis(2-Ethylhexyl)phthalate	(5)	16.882	149	293533	3.608
165) 6-Methylchrysene	(5)	17.523	242	319217	3.750
166) Di-n-octylphthalate	(6)	18.042	149	445353	3.485
168) Benzo(b)fluoranthene	(6)	18.502	252	425715	3.764
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	192572	3.933
170) Benzo(k)fluoranthene	(6)	18.549	252	437867	3.799
171) Benzo(a)pyrene	(6)	19.021	252	376795	3.617
172)*Perylene-d12	(6)	19.114	264	486848	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	181235	3.734
174) Dibenz(a,h)acridine	(6)	20.402	279	232723	3.492
175) Dibenz(a,j)acridine	(6)	20.472	279	268607	3.742
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	350010	3.941
177) Dibenz(a,h)anthracene	(6)	20.752	278	293379	3.922
178) Benzo(g,h,i)perylene	(6)	21.073	276	286798	3.777
179) Diallate TRANS/CIS	(4)			173089	3.777
182) 2,4_2,6-Dinitrotoluenes	(3)			151560	7.689

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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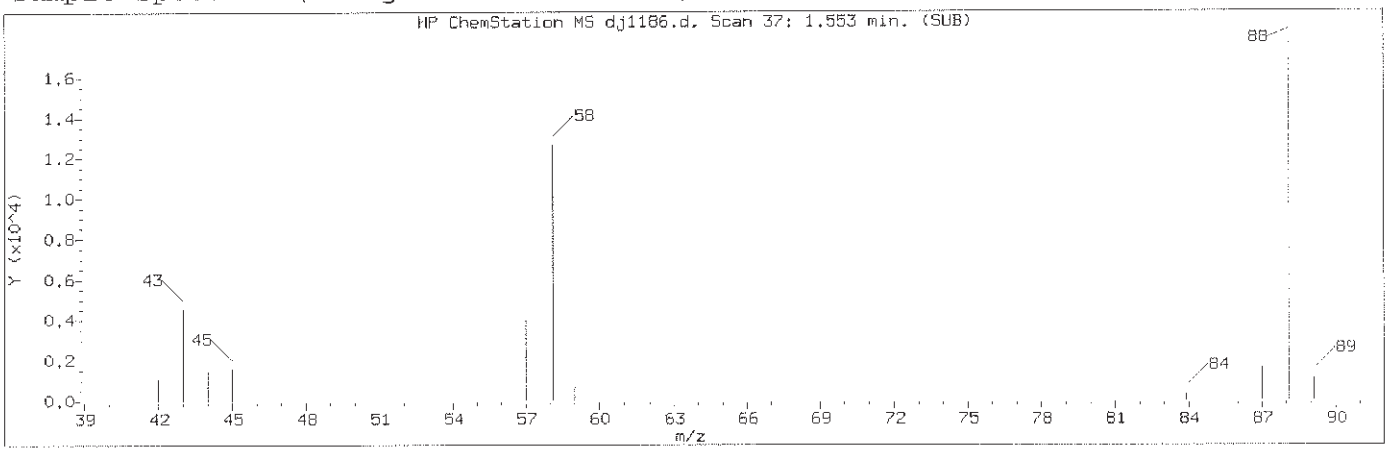
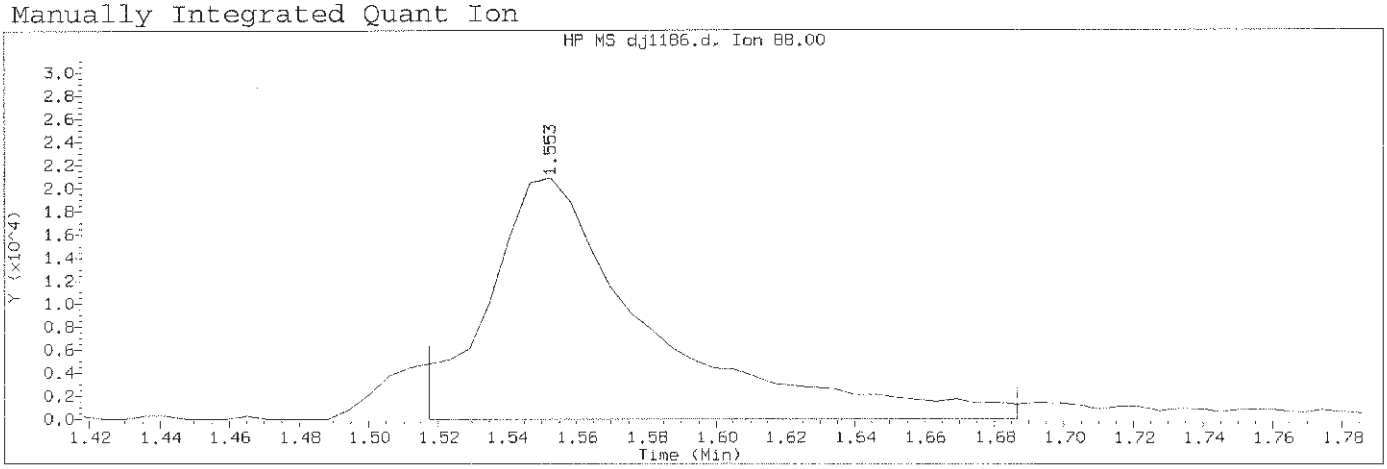
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 68392M		
On-Column Amount (ng/ul)	: 3.8203		
Integration start scan	: 30	Integration stop scan:	59
Y at integration start	: 3	Y at integration end:	3

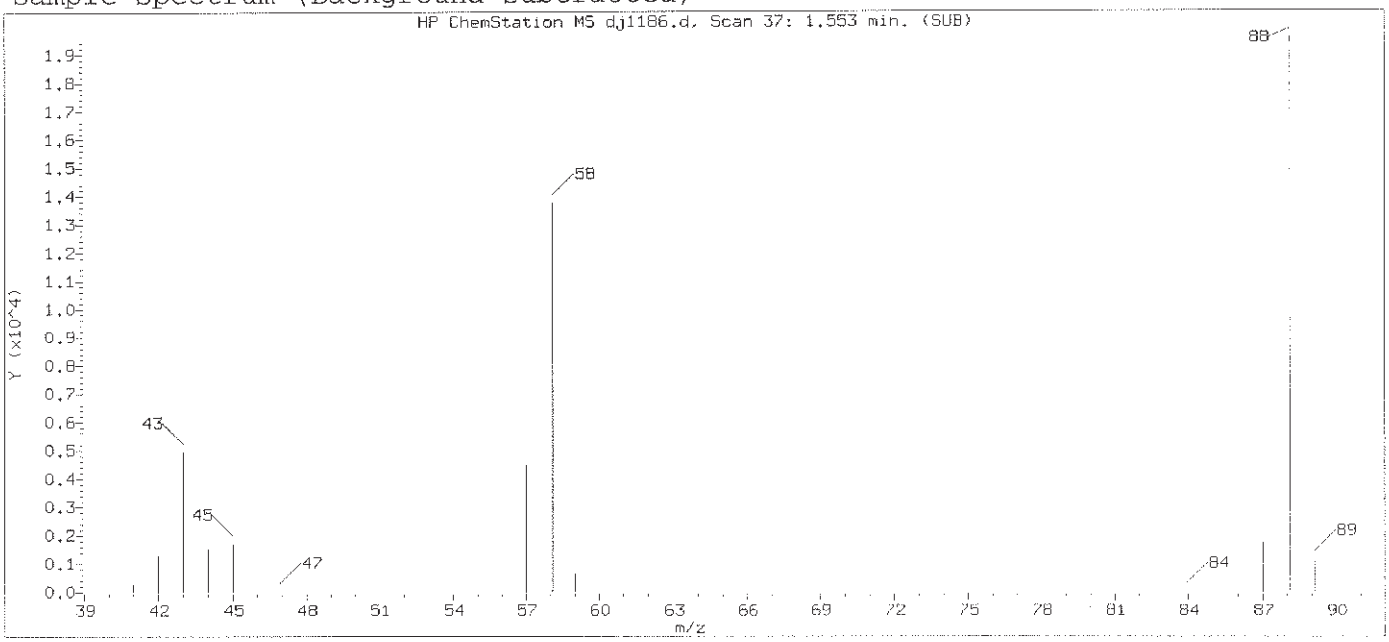
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

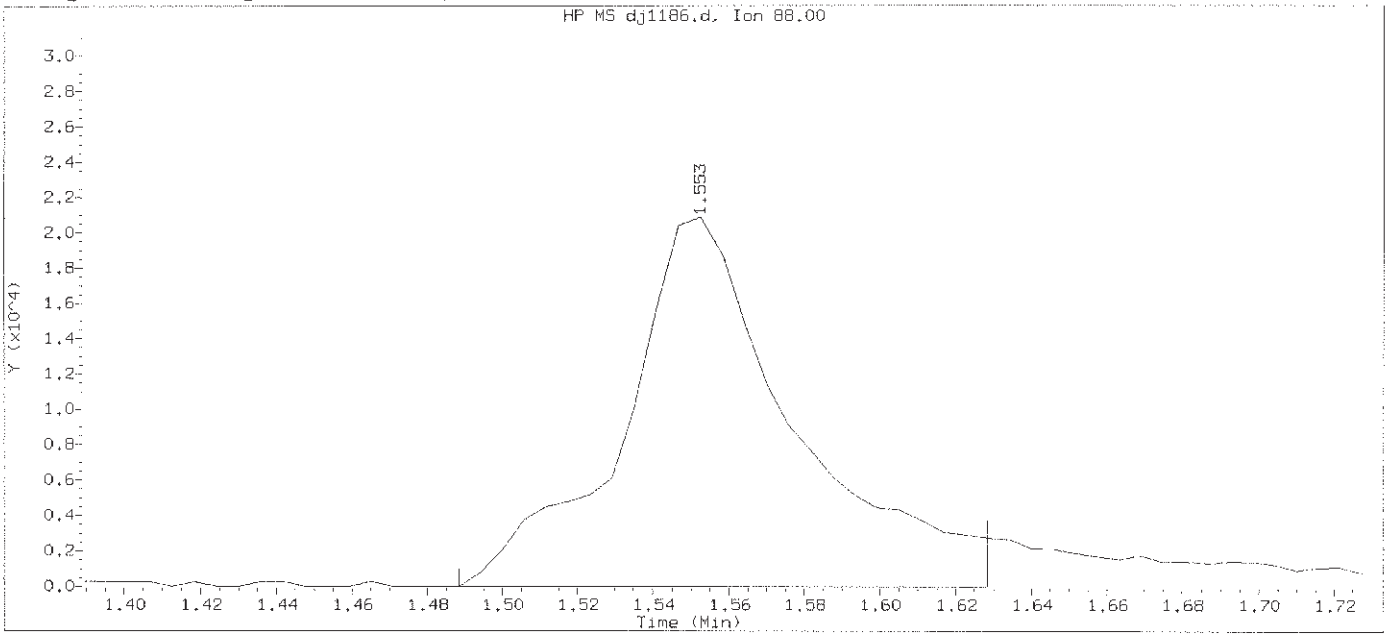
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 65518		
On-column Amount (ng/ul)	: 3.7471		
Integration start scan	: 25	Integration stop scan:	49
Y at integration start	: 0	Y at integration end:	0

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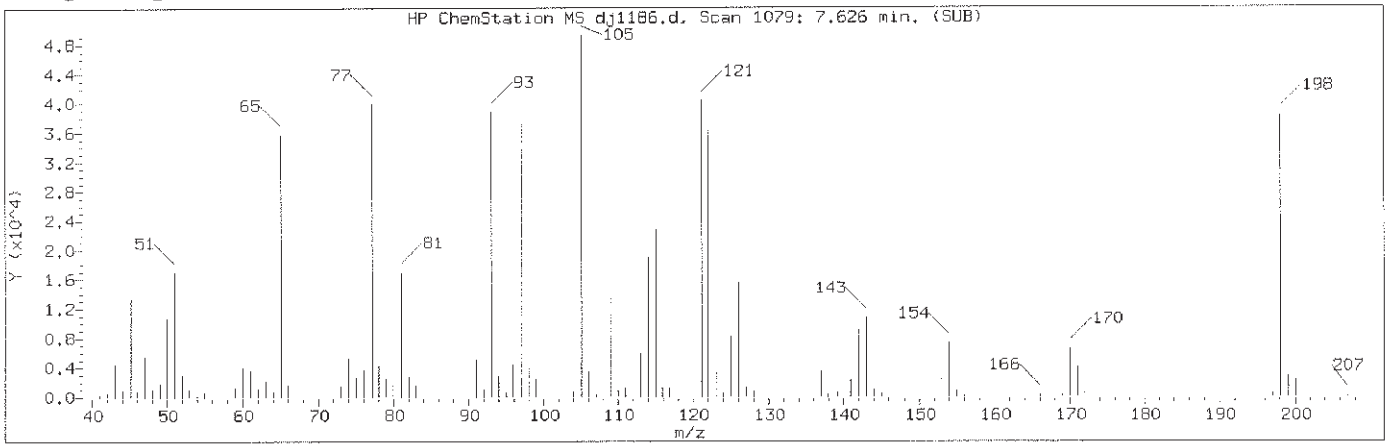
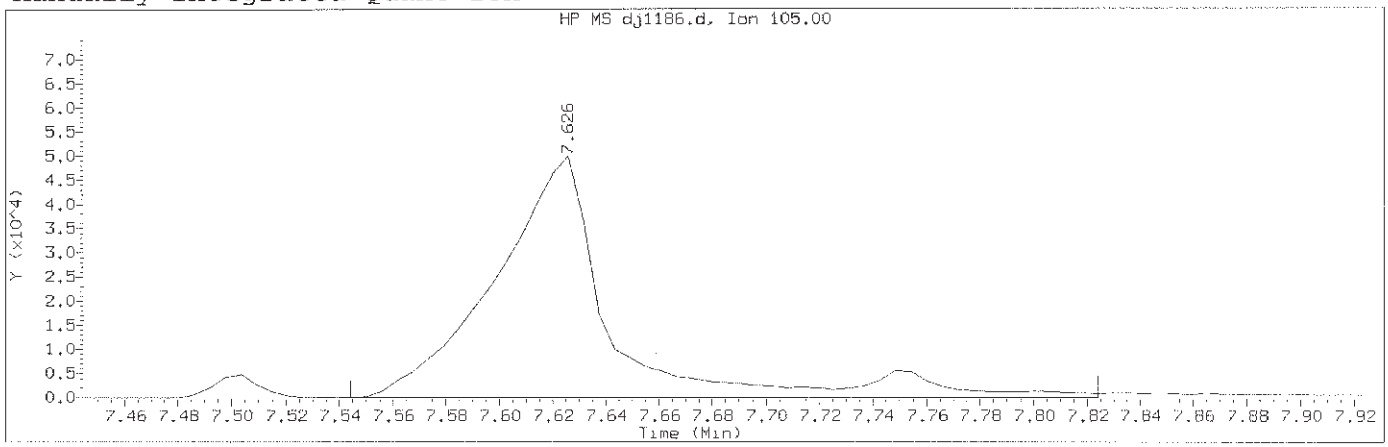
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area (flag)	: 151594M		
On-Column Amount (ng/ul)	: 5.0962		
Integration start scan	: 1064	Integration stop scan:	1112
Y at integration start	: 26	Y at integration end:	26

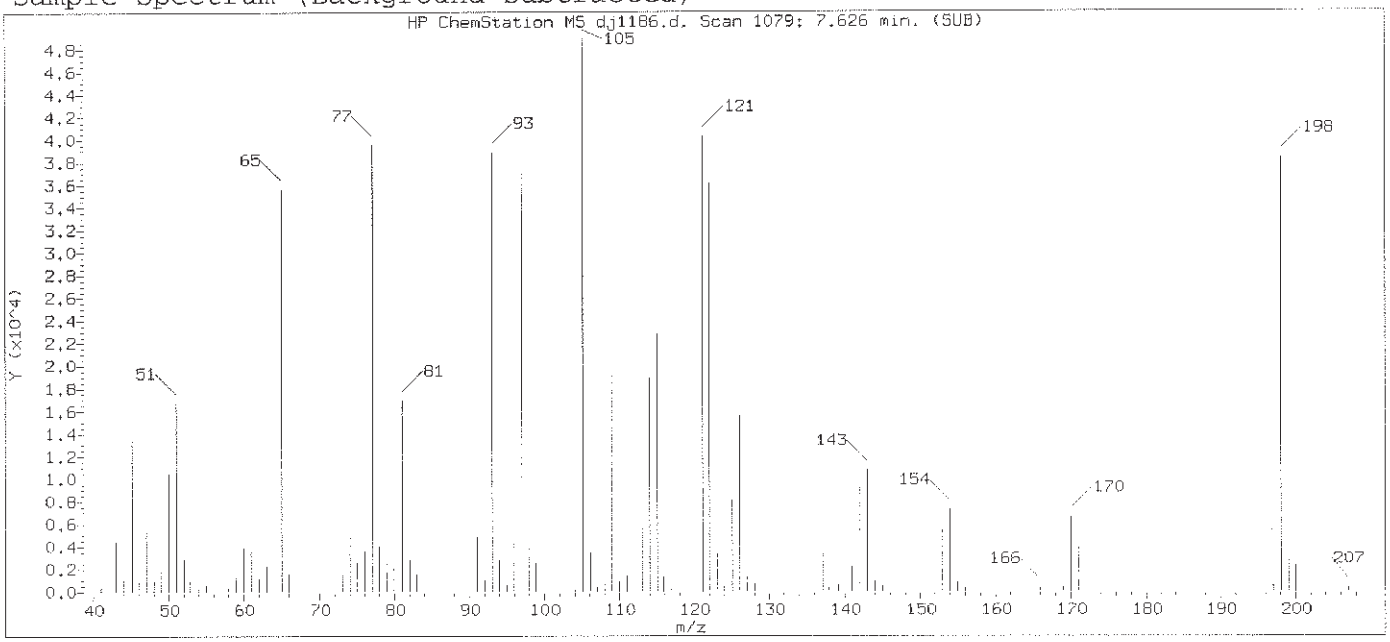
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

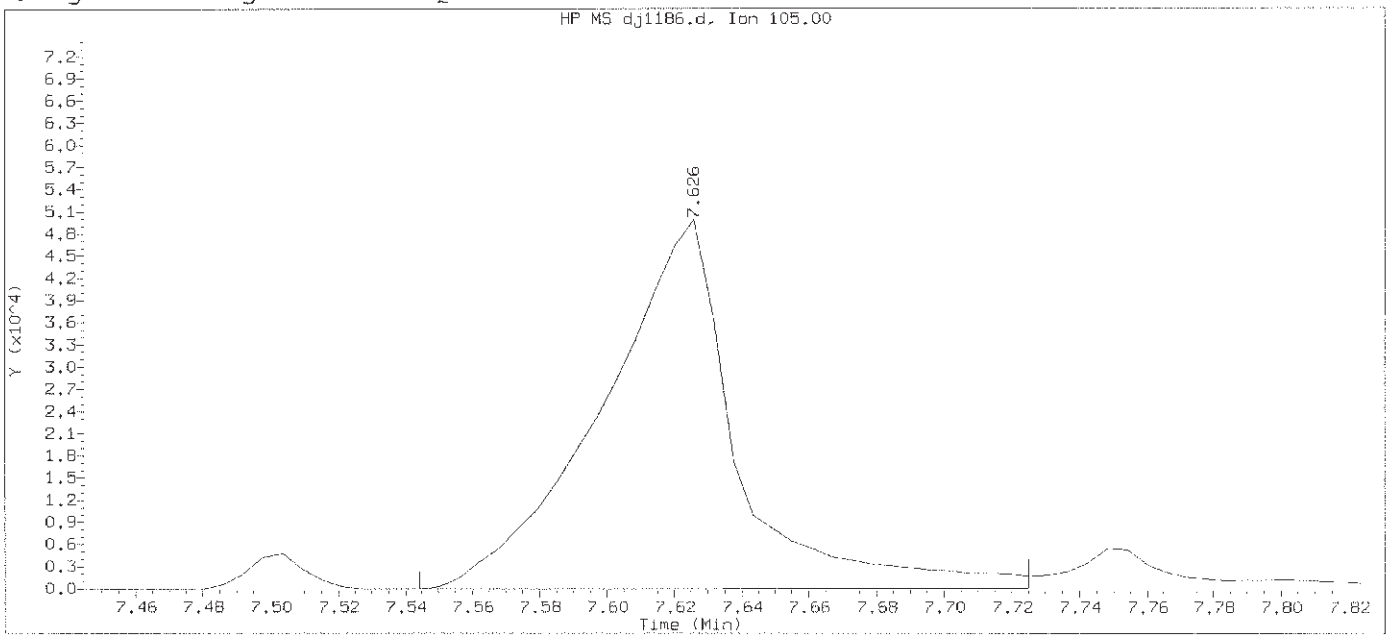
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area	: 138684		
On-column Amount (ng/ul)	: 4.6933		
Integration start scan	: 1064	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	64

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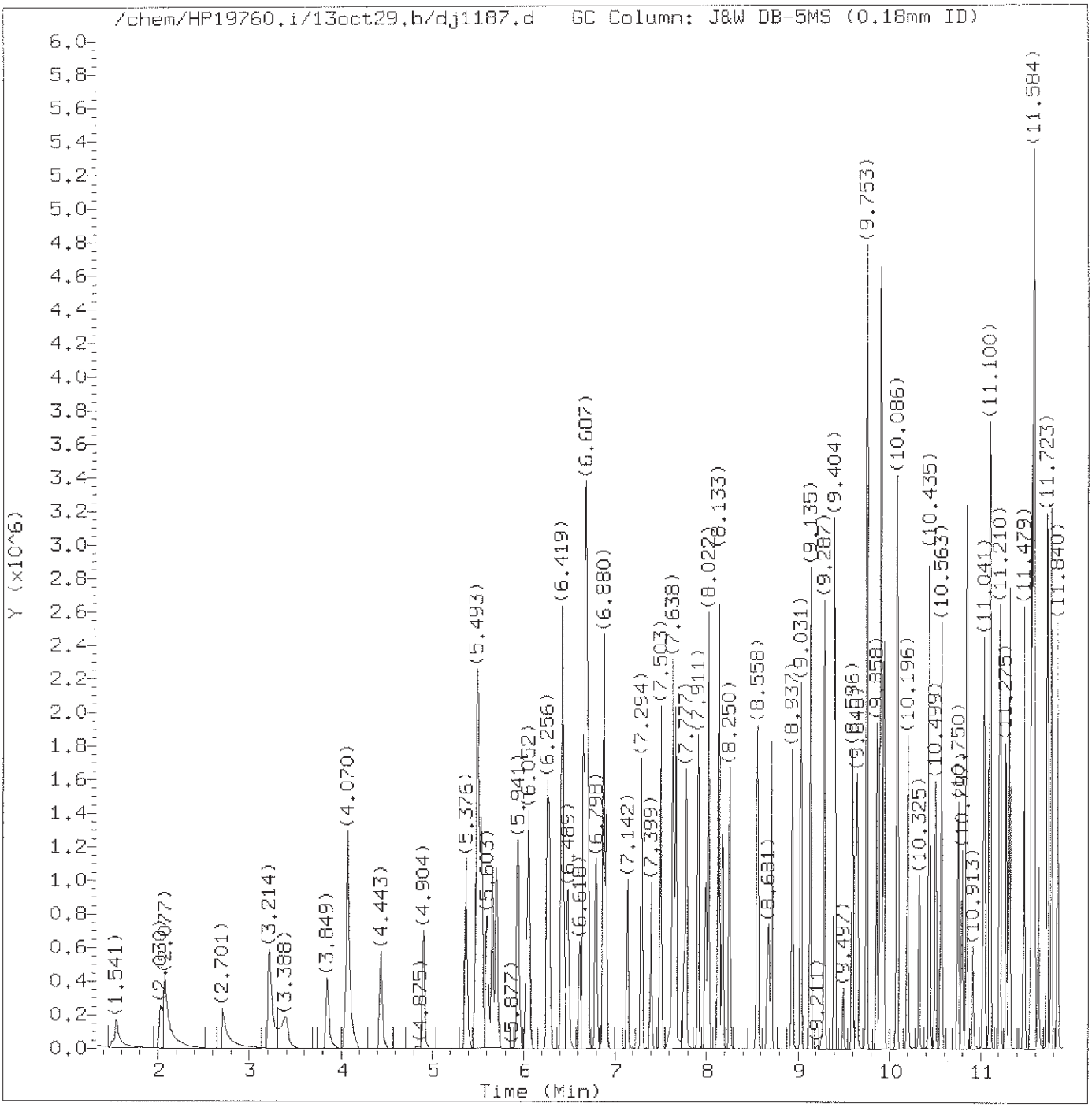
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

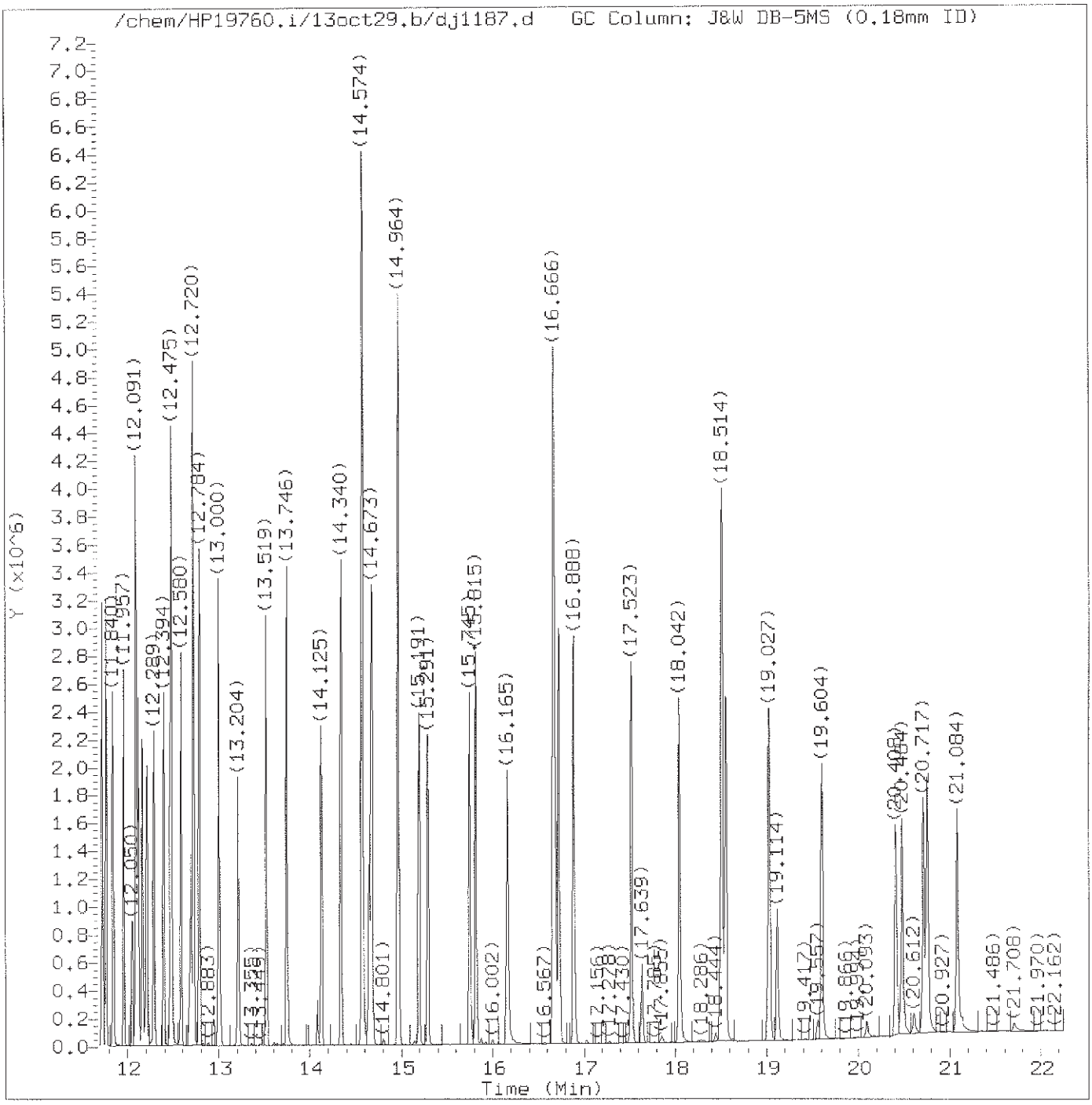
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.541	88	217441	12.323
2) N-Nitrosodimethylamine	(1)	2.030	74	406062	13.246
3) Pyridine	(1)	2.077	79	678751M	12.904
4) 2-Picoline	(1)	3.214	93	698067	12.567
5) N-Nitrosomethylethylamine	(1)	3.388	88	302408	12.715
6) Methyl methanesulfonate	(1)	3.849	80	339392	12.444
7)$2-Fluorophenol	(1)	4.070	112	1027222	24.873
8) N-Nitrosodiethylamine	(1)	4.443	102	288293	12.607
10) Ethyl methanesulfonate	(1)	4.904	109	273542	12.382
11) Benzaldehyde	(1)	5.376	77	498842	12.327
12)$Phenol-d5	(1)	5.493	99	1402775	24.658
13)$Phenol-d6	(1)	5.493	99	1402775	24.658
14) Phenol	(1)	5.510	94	804262	12.186
15) Aniline	(1)	5.539	93	997877	12.307
16) bis(2-Chloroethyl)ether	(1)	5.656	93	638471	12.268
17) 2-Chlorophenol	(1)	5.702	128	505845	12.466
18) 1,3-Dichlorobenzene	(1)	5.941	146	536362	12.235
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	139035	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	541731	12.216
23) Benzyl alcohol	(1)	6.256	108	359714	12.528
24) 1,2-Dichlorobenzene	(1)	6.279	146	510656	12.315
25) Indene	(1)	6.419	115	1031733	14.729
26) 2-Methylphenol	(1)	6.431	108	503066	12.321
28) bis(2-Chloroisopropyl)ether	(1)	6.483	45	774924	11.932
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.483	45	774924	11.932
29) N-Nitrosopyrrolidine	(1)	6.618	100	294760	12.700
30) Acetophenone	(1)	6.658	105	778913	12.197
33) 4-Methylphenol	(1)	6.682	108	562542	12.283
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	448321	12.112
32) N-Nitrosomorpholine	(1)	6.693	56	345597	11.804
34) o-Toluidine	(1)	6.711	106	865552	12.246
35) Hexachloroethane	(1)	6.798	117	228903	12.226
36)$Nitrobenzene-d5	(2)	6.880	82	1240362	24.944
37) Nitrobenzene	(2)	6.909	77	655195	12.403
39) N-Nitrosopiperidine	(2)	7.142	114	272572	12.640
40) Isophorone	(2)	7.294	82	1133725	12.623
42) 2-Nitrophenol	(2)	7.399	139	239011	13.414
45) 2,4-Dimethylphenol	(2)	7.503	107	557475	12.699
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	247315	12.721
47) Benzoic acid	(2)	7.667	105	346411	12.092

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	704841	12.020
49) 2,4-Dichlorophenol	(2)	7.777	162	399960	12.961
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	431091	12.439
52)*Naphthalene-d8	(2)	7.993	136	538194	5.000
53) Naphthalene	(2)	8.022	128	1432666	12.416
55) 4-Chloroaniline	(2)	8.133	127	593011	12.396
56) 2,6-Dichlorophenol	(2)	8.139	162	379233	12.765
57) Hexachloropropene	(2)	8.174	213	284301	13.190
58) Hexachlorobutadiene	(2)	8.255	225	253018	12.556
60) Quinoline	(2)	8.558	129	937990	12.296
61) Caprolactam	(2)	8.681	113	176749	12.843
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	409804	11.914
63) 4-Chloro-3-methylphenol	(2)	8.937	107	474792	12.822
64) Safrole	(2)	9.031	162	374498	12.843
65) 2-Methylnaphthalene	(2)	9.135	142	957535	12.456
66) 1-Methylnaphthalene	(2)	9.287	142	868136	12.462
67) Hexachlorocyclopentadiene	(3)	9.404	237	218343	13.052
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	441807	12.206
69) cis-Isosafrole	(3)	9.497	162	67577	12.824
70) 2,4,6-Trichlorophenol	(3)	9.596	196	294243	13.023
71) 2,4,5-Trichlorophenol	(3)	9.648	196	303624	13.029
72)$2-Fluorobiphenyl	(3)	9.753	172	1884573	24.036
74) Isosafrole	(3)	9.858	162	376749	12.707
73) trans-Isosafrole	(3)	9.858	162	376749	12.707
75) 1,1'-Biphenyl	(3)	9.899	154	1091015	11.963
76) 2-Chloronaphthalene	(3)	9.905	162	835373	12.031
77) 1-Chloronaphthalene	(3)	9.940	162	833324	12.006
82) Diphenyl ether	(3)	10.080	170	611099	12.171
83) 2-Nitroaniline	(3)	10.086	138	285422	13.363
84) 1,4-Naphthoquinone	(3)	10.196	158	389887	13.184
85) 1,4-Dinitrobenzene	(3)	10.325	168	143389	13.326
86) Dimethylphthalate	(3)	10.429	163	969956	12.291
87) 1,3-Dinitrobenzene	(3)	10.435	168	172282	12.895
88) 2,6-Dinitrotoluene	(3)	10.499	165	226524	13.150
90) Acenaphthylene	(3)	10.563	152	1309652	12.434
91) 3-Nitroaniline	(3)	10.750	138	260480	13.181
92)*Acenaphthene-d10	(3)	10.797	164	311099	5.000
93) Acenaphthene	(3)	10.843	153	871740	11.967
94) 2,4-Dinitrophenol	(3)	10.913	184	94123	11.318
96) 4-Nitrophenol	(3)	11.030	109	164665	13.091

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$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.041	250	351717	12.139
97) Dibenzofuran	(3)	11.100	168	1252587	12.086
98) 2,4-Dinitrotoluene	(3)	11.111	165	289819	13.165
99) 1-Naphthylamine	(3)	11.210	143	927610	12.390
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	235067	12.782
101) 2-Naphthylamine	(3)	11.315	143	938106	12.190
102) Diethylphthalate	(3)	11.479	149	950623	12.308
103) Fluorene	(3)	11.554	166	1025190	12.292
104) Thionazin	(3)	11.572	107	206142	12.268
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	494846	11.957
106) 5-Nitro-o-toluidine	(3)	11.584	152	275986	12.403
107) 4-Nitroaniline	(3)	11.589	138	262921	12.847
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	155613	12.691
109) N-Nitrosodiphenylamine	(4)	11.729	169	806574	12.314
110) NDPA as diphenylamine	(4)	11.729	169	806574	12.314
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1276195	12.259
112)$2,4,6-Tribromophenol	(3)	11.840	330	205883	25.506
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	188239	12.662
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	115384	14.175
117) Diallate (peak 1)	(4)	12.091	86	478759	9.243
118) Phorate	(4)	12.096	75	760126	12.352
119) Phenacetin	(4)	12.120	108	577166	13.468
120) 4-Bromophenyl-phenylether	(4)	12.166	248	256706	12.410
121) Diallate (peak 2)	(4)	12.190	86	69285	3.172
122) Hexachlorobenzene	(4)	12.213	284	247689	12.101
123) Dimethoate	(4)	12.289	87	513340	12.950
124) Atrazine	(4)	12.394	200	266901	12.569
125) Pentachlorophenol	(4)	12.464	266	187965	13.591
126) Pentachloronitrobenzene	(4)	12.475	237	127220	13.572
127) 4-Aminobiphenyl	(4)	12.481	169	1049406	12.900
129) Pronamide	(4)	12.580	173	462653	13.578
130)*Phenanthrene-d10	(4)	12.691	188	522070	5.000
131) Phenanthrene	(4)	12.720	178	1401469	11.910
133) Dinoseb	(4)	12.720	211	231968	14.455
134) Anthracene	(4)	12.784	178	1458971	12.503
135) Carbazole	(4)	13.000	167	1415513	12.541
136) Methyl parathion	(4)	13.204	109	368685	13.531
137) Di-n-butylphthalate	(4)	13.519	149	1710230	12.844
138) Parathion	(4)	13.746	109	238421	13.437
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	124164	14.493

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$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

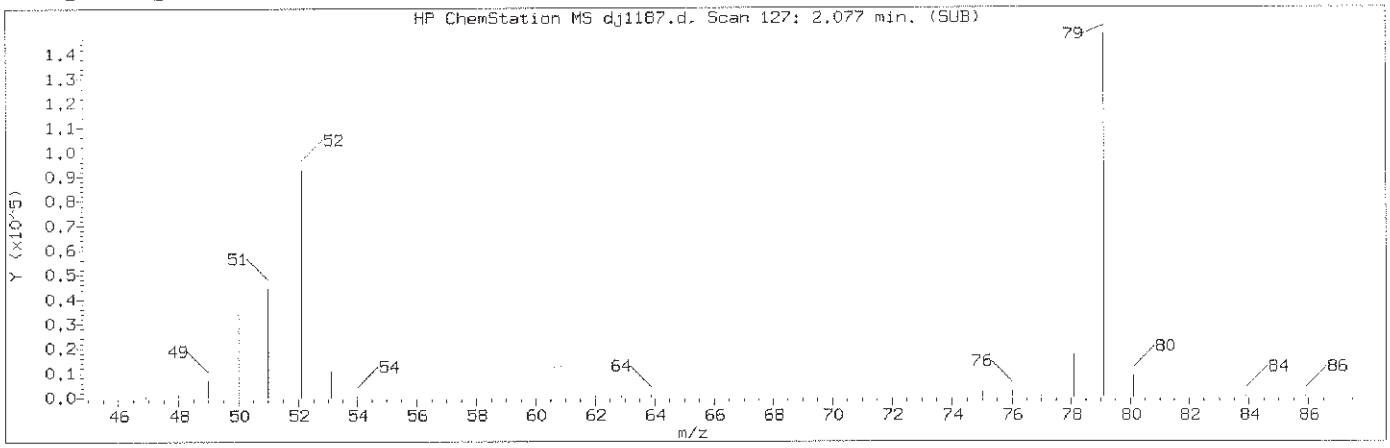
Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	179675	12.905
142) Fluoranthene	(4)	14.340	202	1677613	12.813
144) Benzidine	(5)	14.574	184	3386718	39.510
145)*Pyrene-d10	(5)	14.644	212	668822	5.000
146) Pyrene	(5)	14.679	202	1733287	12.100
149)$Terphenyl-d14	(5)	14.964	244	2065792	24.678
150) p-Dimethylaminoazobenzene	(5)	15.197	225	356781	14.372
151) Chlorobenzilate	(5)	15.291	139	514982	12.928
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	1162212	13.953
153) Butylbenzylphthalate	(5)	15.815	149	786237	13.021
156) 2-Acetylaminofluorene	(5)	16.165	181	643223	13.823
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	576125	13.333
158) Benzo(a)anthracene	(5)	16.666	228	1595523	13.310
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	307206	13.469
161) Chrysene	(5)	16.730	228	1497033	12.578
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1043912	13.163
165) 6-Methylchrysene	(5)	17.523	242	1098857	13.257
166) Di-n-octylphthalate	(6)	18.042	149	1716460	13.846
168) Benzo(b)fluoranthene	(6)	18.508	252	1396180	12.990
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	654651	13.855
170) Benzo(k)fluoranthene	(6)	18.560	252	1416406	12.941
171) Benzo(a)pyrene	(6)	19.027	252	1296417	13.081
172)*Perylene-d12	(6)	19.114	264	459604	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	634593	13.604
174) Dibenz(a,h)acridine	(6)	20.408	279	876116	13.616
175) Dibenz(a,j)acridine	(6)	20.484	279	946076	13.642
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1208834	14.108
177) Dibenz(a,h)anthracene	(6)	20.758	278	1044758	14.417
178) Benzo(g,h,i)perylene	(6)	21.084	276	987567	13.580
179) Diallate TRANS/CIS	(4)			548044	12.369
182) 2,4_2,6-Dinitrotoluenes	(3)			516343	26.315

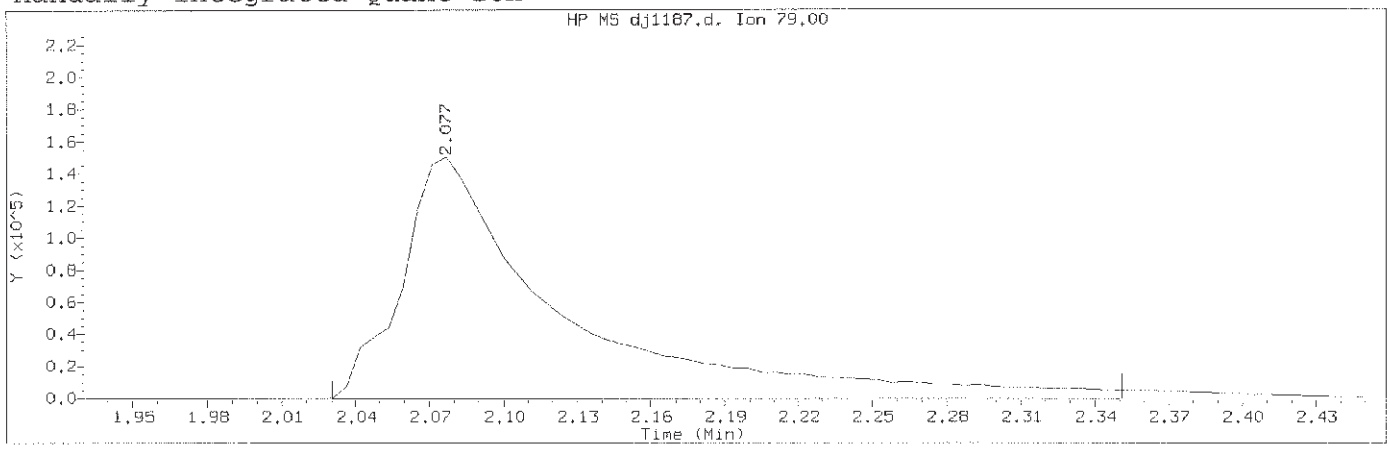
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area (flag)	: 678751M		
On-Column Amount (ng/ul)	: 12.9041		
Integration start scan	: 118	Integration stop scan:	173
Y at integration start	: -236	Y at integration end:	-236

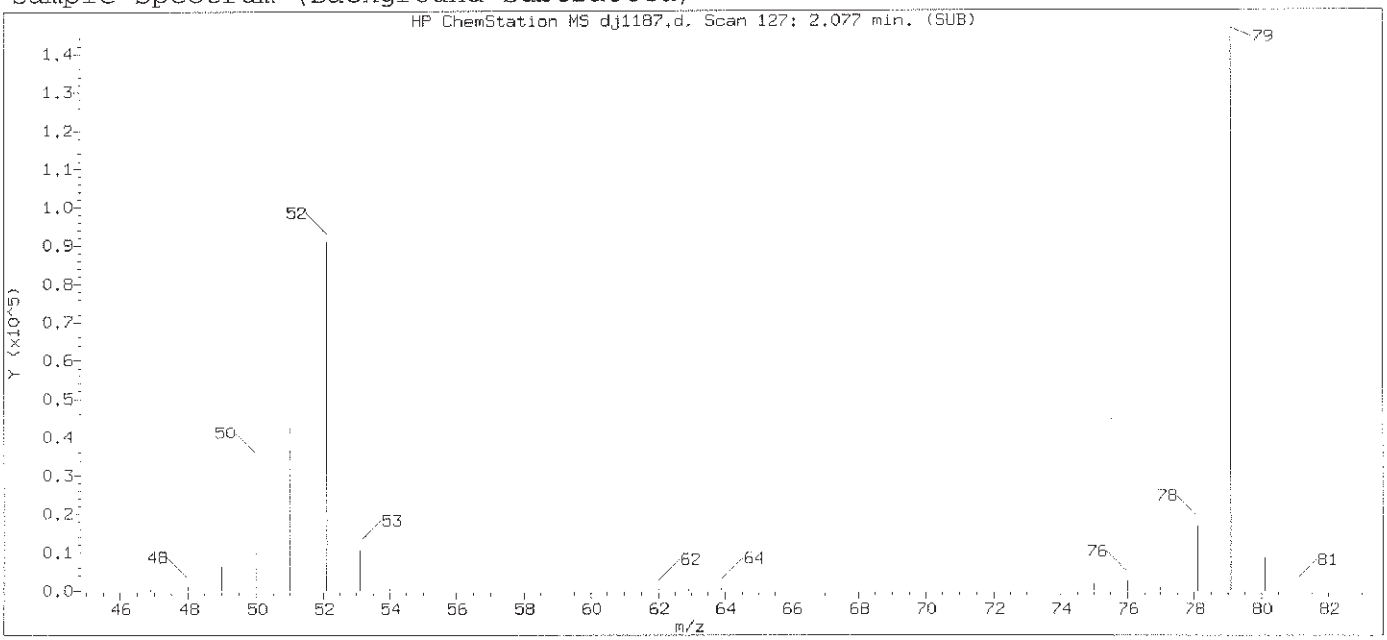
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

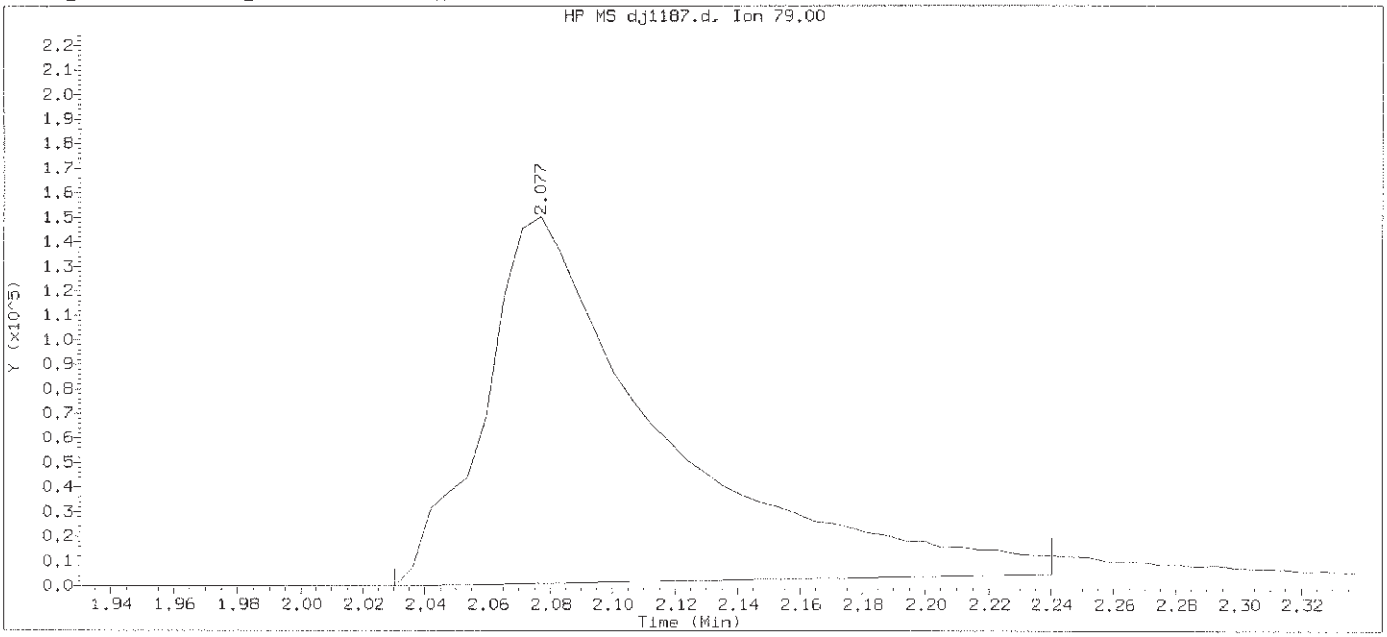
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



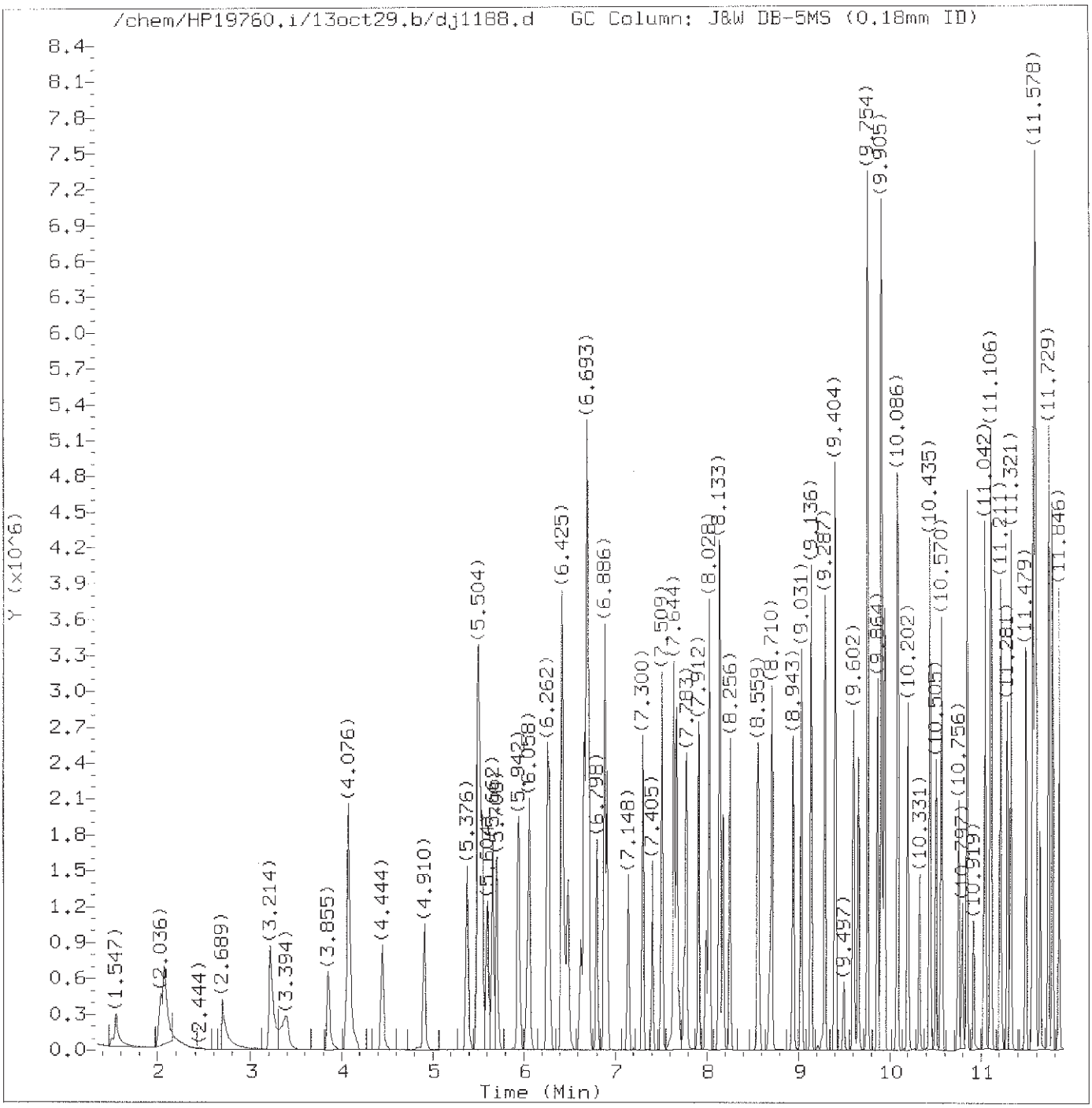
Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area	: 588658		
On-column Amount (ng/ul)	: 11.8341		
Integration start scan	: 118	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	4950

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

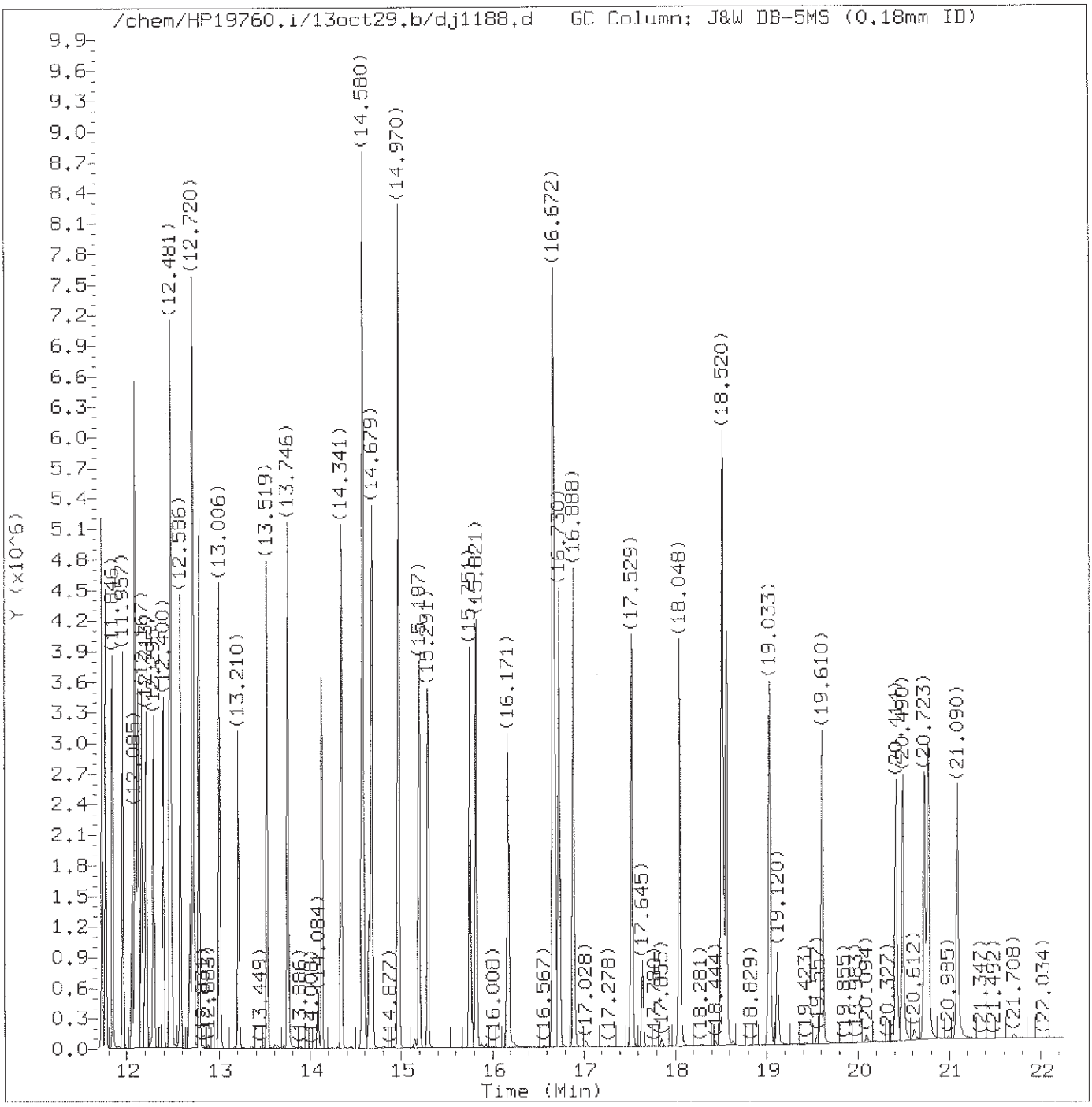
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	325165	19.174
2) N-Nitrosodimethylamine	(1)	2.031	74	627522	20.956
3) Pyridine	(1)	2.077	79	1031077	20.191
4) 2-Picoline	(1)	3.214	93	1071191	19.915
5) N-Nitrosomethylethylamine	(1)	3.394	88	470743	20.363
6) Methyl methanesulfonate	(1)	3.855	80	528331	19.992
7)$2-Fluorophenol	(1)	4.076	112	1596153	39.901
8) N-Nitrosodiethylamine	(1)	4.444	102	449166	20.231
10) Ethyl methanesulfonate	(1)	4.910	109	428518	20.015
11) Benzaldehyde	(1)	5.376	77	690695	17.972
12)$Phenol-d5	(1)	5.499	99	2152609	39.182
13)$Phenol-d6	(1)	5.499	99	2152609	39.182
14) Phenol	(1)	5.516	94	1229979	19.339
15) Aniline	(1)	5.545	93	1536784	19.622
16) bis(2-Chloroethyl)ether	(1)	5.662	93	973912	19.408
17) 2-Chlorophenol	(1)	5.708	128	789062	20.057
18) 1,3-Dichlorobenzene	(1)	5.942	146	826580	19.535
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	134726	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	835743	19.526
23) Benzyl alcohol	(1)	6.256	108	556643	20.006
24) 1,2-Dichlorobenzene	(1)	6.280	146	782771	19.554
25) Indene	(1)	6.420	115	1589371	23.497
26) 2-Methylphenol	(1)	6.437	108	779210	19.738
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1168228	18.756
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1168228	18.756
29) N-Nitrosopyrrolidine	(1)	6.629	100	461572	20.447
30) Acetophenone	(1)	6.664	105	1216572	19.708
33) 4-Methylphenol	(1)	6.688	108	849471	19.259
31) N-Nitroso-di-n-propylamine	(1)	6.693	70	670115	18.860
32) N-Nitrosomorpholine	(1)	6.699	56	518122	18.492
34) o-Toluidine	(1)	6.711	106	1311142	19.262
35) Hexachloroethane	(1)	6.798	117	355620	19.657
36)$Nitrobenzene-d5	(2)	6.886	82	1908801	39.052
37) Nitrobenzene	(2)	6.909	77	1007734	19.424
39) N-Nitrosopiperidine	(2)	7.148	114	423710	19.923
40) Isophorone	(2)	7.300	82	1743328	19.716
42) 2-Nitrophenol	(2)	7.405	139	382136	21.467
45) 2,4-Dimethylphenol	(2)	7.509	107	857500	19.823
46) O,O,O-triethylphosphorothioate	(2)	7.644	198	382048	19.925
48) bis(2-Chloroethoxy)methane	(2)	7.673	93	1134237M	19.656

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.702	105	610398	21.253
49) 2,4-Dichlorophenol	(2)	7.783	162	617339	20.233
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	667875	19.594
52)*Naphthalene-d8	(2)	7.993	136	531119	5.000
53) Naphthalene	(2)	8.028	128	2175665	19.213
55) 4-Chloroaniline	(2)	8.133	127	903717	19.261
56) 2,6-Dichlorophenol	(2)	8.139	162	583652	19.921
57) Hexachloropropene	(2)	8.180	213	459184	21.345
58) Hexachlorobutadiene	(2)	8.256	225	395446	19.902
60) Quinoline	(2)	8.564	129	1468344	19.573
61) Caprolactam	(2)	8.704	113	275391	20.230
62) N-Nitrosodi-n-butylamine	(2)	8.716	84	811695	23.158
63) 4-Chloro-3-methylphenol	(2)	8.943	107	744211	20.312
64) Safrole	(2)	9.031	162	581470	20.176
65) 2-Methylnaphthalene	(2)	9.136	142	1452939	19.254
66) 1-Methylnaphthalene	(2)	9.287	142	1332939	19.464
67) Hexachlorocyclopentadiene	(3)	9.404	237	358846	21.689
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	684824	19.535
69) cis-Isosafrole	(3)	9.497	162	105700	20.538
70) 2,4,6-Trichlorophenol	(3)	9.602	196	460428	20.816
71) 2,4,5-Trichlorophenol	(3)	9.654	196	480784	21.037
72)$2-Fluorobiphenyl	(3)	9.754	172	2853736	37.780
74) Isosafrole	(3)	9.864	162	585504	20.266
73) trans-Isosafrole	(3)	9.864	162	585504	20.266
75) 1,1'-Biphenyl	(3)	9.905	154	1656069	18.854
76) 2-Chloronaphthalene	(3)	9.911	162	1331601	19.763
77) 1-Chloronaphthalene	(3)	9.940	162	1202300	18.098
82) Diphenyl ether	(3)	10.086	170	945913	19.464
83) 2-Nitroaniline	(3)	10.092	138	446033	21.253
84) 1,4-Naphthoquinone	(3)	10.202	158	604466	20.845
85) 1,4-Dinitrobenzene	(3)	10.331	168	232734	21.837
86) Dimethylphthalate	(3)	10.435	163	1471328	19.309
87) 1,3-Dinitrobenzene	(3)	10.441	168	270524	20.683
88) 2,6-Dinitrotoluene	(3)	10.505	165	354207	20.976
90) Acenaphthylene	(3)	10.570	152	2027003	19.818
91) 3-Nitroaniline	(3)	10.756	138	407986	21.048
92)*Acenaphthene-d10	(3)	10.797	164	302476	5.000
93) Acenaphthene	(3)	10.849	153	1342436	19.079
94) 2,4-Dinitrophenol	(3)	10.919	184	186536	22.382
96) 4-Nitrophenol	(3)	11.036	109	260505	21.072

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	551450	19.635
97) Dibenzofuran	(3)	11.100	168	1915807	19.147
98) 2,4-Dinitrotoluene	(3)	11.112	165	461073	21.307
99) 1-Naphthylamine	(3)	11.211	143	1447962	19.908
100) 2,3,4,6-Tetrachlorophenol	(3)	11.281	232	380803	21.102
101) 2-Naphthylamine	(3)	11.321	143	1470056	19.696
102) Diethylphthalate	(3)	11.485	149	1499545	19.974
103) Fluorene	(3)	11.555	166	1534105	19.047
104) Thionazin	(3)	11.572	107	311254	19.181
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	763380	19.112
106) 5-Nitro-o-toluidine	(3)	11.590	152	434452	20.070
107) 4-Nitroaniline	(3)	11.595	138	403432	20.235
108) 4,6-Dinitro-2-methylphenol	(4)	11.642	198	279696	22.060
109) N-Nitrosodiphenylamine	(4)	11.729	169	1247929	19.060
110) NDPA as diphenylamine	(4)	11.729	169	1247929	19.060
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1926138	18.583
112)$2,4,6-Tribromophenol	(3)	11.846	330	340856	42.905
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	295865	19.789
116) 1,3,5-Trinitrobenzene	(4)	12.062	213	208612	24.335
117) Diallate (peak 1)	(4)	12.091	86	727862	14.089
118) Phorate	(4)	12.097	75	1149741	18.772
119) Phenacetin	(4)	12.126	108	922599	21.163
120) 4-Bromophenyl-phenylether	(4)	12.167	248	404863	19.508
121) Diallate (peak 2)	(4)	12.190	86	111193	5.046
122) Hexachlorobenzene	(4)	12.213	284	396121	19.305
123) Dimethoate	(4)	12.295	87	805609	20.144
124) Atrazine	(4)	12.400	200	417230	19.573
125) Pentachlorophenol	(4)	12.464	266	315705	22.167
127) 4-Aminobiphenyl	(4)	12.481	169	1632793	19.934
126) Pentachloronitrobenzene	(4)	12.481	237	201829	21.165
129) Pronamide	(4)	12.586	173	732209	21.129
130)*Phenanthrene-d10	(4)	12.691	188	525961	5.000
133) Dinoseb	(4)	12.720	211	415493	24.534
131) Phenanthrene	(4)	12.726	178	2172274	18.518
134) Anthracene	(4)	12.790	178	2256094	19.289
135) Carbazole	(4)	13.006	167	2201249	19.447
136) Methyl parathion	(4)	13.210	109	601743	21.575
137) Di-n-butylphthalate	(4)	13.519	149	2672851	19.937
138) Parathion	(4)	13.746	109	383066	21.178
139) 4-Nitroquinoline-1-oxide	(4)	13.752	190	247472	26.740

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

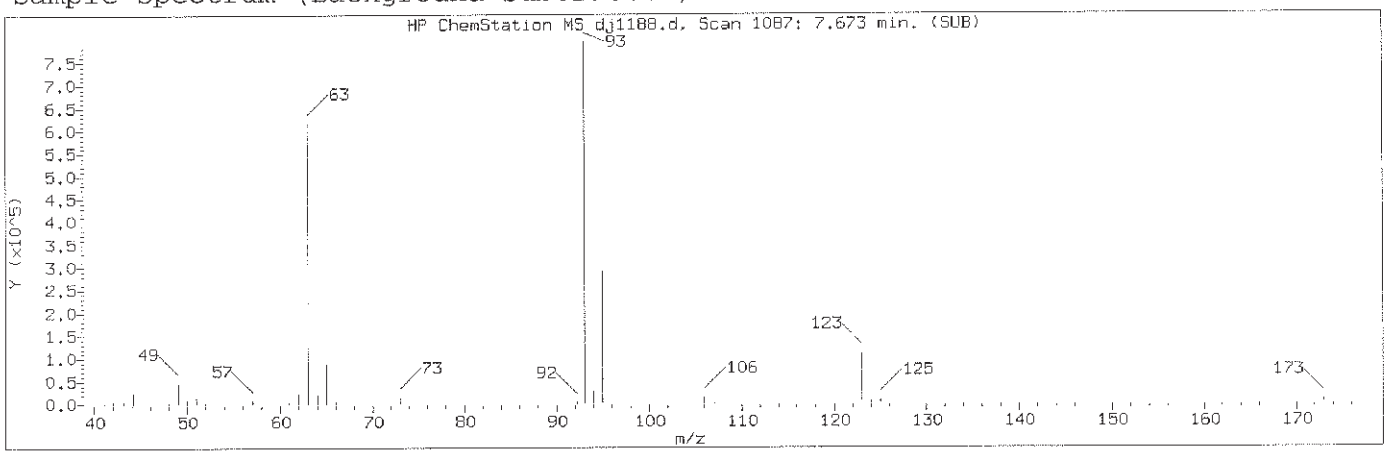
Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	286795	20.382
142) Fluoranthene	(4)	14.341	202	2645406	20.048
144) Benzidine	(5)	14.585	184	5251006	60.369
145)*Pyrene-d10	(5)	14.650	212	677846	5.000
146) Pyrene	(5)	14.679	202	2701111	18.769
149)$Terphenyl-d14	(5)	14.970	244	3307867	39.131
150) p-Dimethylaminoazobenzene	(5)	15.197	225	579528	22.545
151) Chlorobenzilate	(5)	15.291	139	823625	20.332
152) 3,3'-Dimethylbenzidine	(5)	15.751	212	1809397	21.180
153) Butylbenzylphthalate	(5)	15.821	149	1230558	20.091
156) 2-Acetylaminofluorene	(5)	16.171	181	1075711	22.288
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	913090	20.703
158) Benzo(a)anthracene	(5)	16.672	228	2529133	20.712
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.690	231	483244	20.748
161) Chrysene	(5)	16.736	228	2326892	19.377
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1630232	20.234
165) 6-Methylchrysene	(5)	17.529	242	1737541	20.583
166) Di-n-octylphthalate	(6)	18.048	149	2760949	21.546
168) Benzo(b)fluoranthene	(6)	18.514	252	2314973	21.011
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.526	256	1076337	22.009
170) Benzo(k)fluoranthene	(6)	18.566	252	2184746	19.661
171) Benzo(a)pyrene	(6)	19.033	252	2061113	20.380
172)*Perylene-d12	(6)	19.120	264	467732	5.000
173) 3-Methylcholanthrene	(6)	19.610	268	1040881	21.628
174) Dibenz(a,h)acridine	(6)	20.414	279	1479580	22.116
175) Dibenz(a,j)acridine	(6)	20.490	279	1551213	21.623
176) Indeno(1,2,3-cd)pyrene	(6)	20.729	276	1985177	22.379
177) Dibenz(a,h)anthracene	(6)	20.770	278	1694542	22.557
178) Benzo(g,h,i)perylene	(6)	21.090	276	1602998	21.437
179) Diallate TRANS/CIS	(4)			839055	18.960
182) 2,4_2,6-Dinitrotoluenes	(3)			815280	42.283

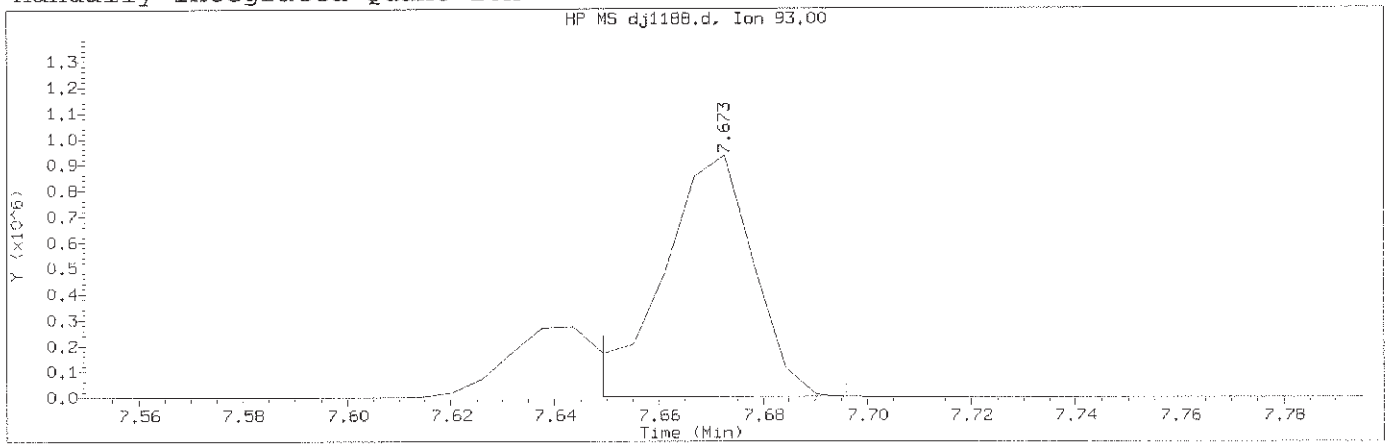
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area (flag)	: 1134237M		
On-Column Amount (ng/ul)	: 19.6559		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 1173	Y at integration end:	1173

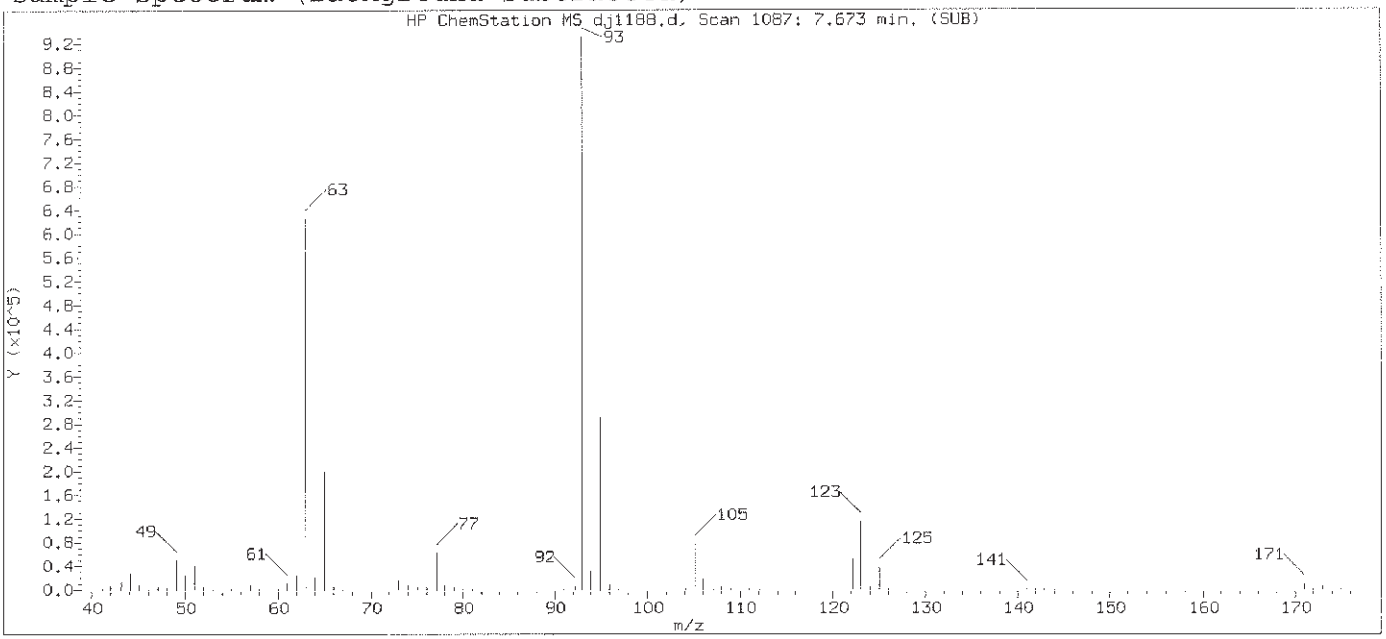
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

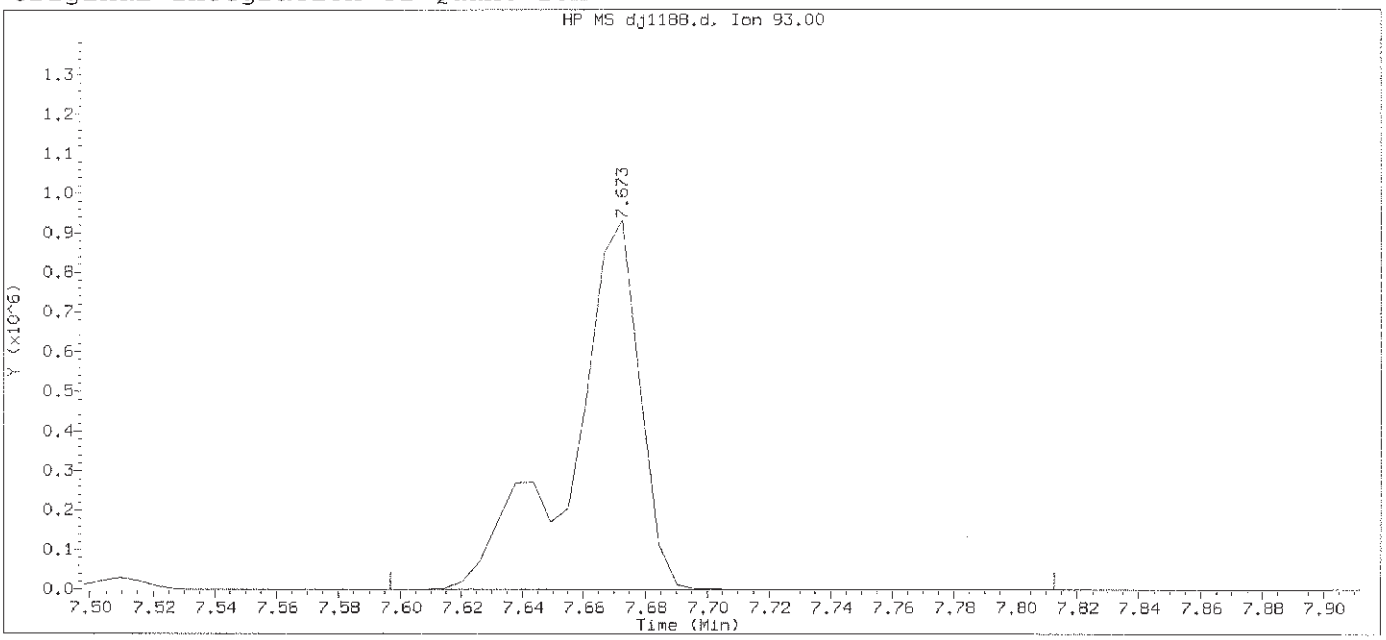
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area	: 1421968		
On-column Amount (ng/ul)	: 22.2016		
Integration start scan	: 1073	Integration stop scan:	1110
Y at integration start	: 0	Y at integration end:	0

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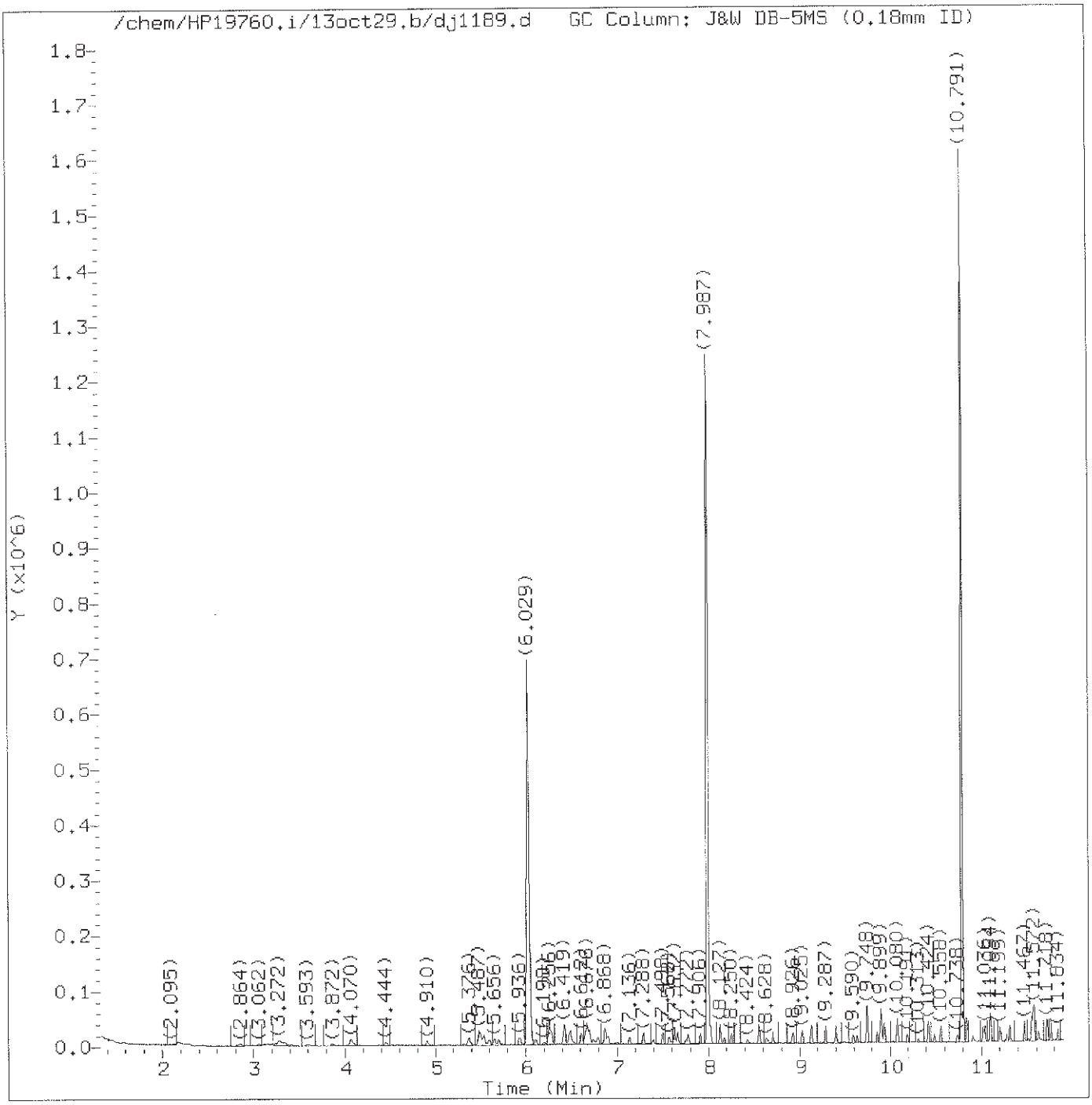
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

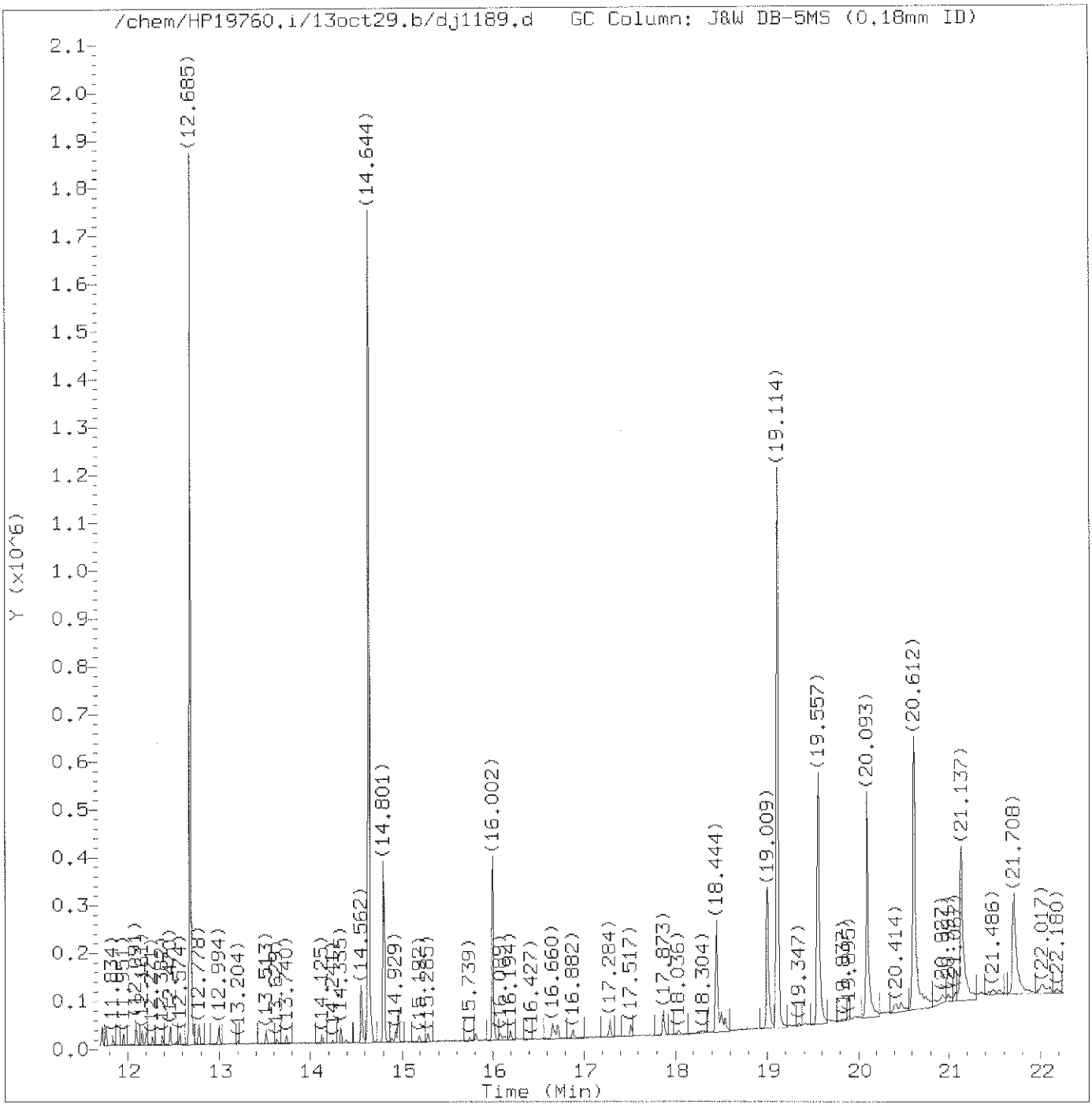
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.570	88	3666M	0.167
2) N-Nitrosodimethylamine	(1)	2.089	74	2809	0.072
3) Pyridine	(1)	2.165	79	10875M	0.164
5) N-Nitrosomethylethylamine	(1)	3.249	88	2617	0.087
4) 2-Picoline	(1)	3.278	93	6815	0.098
6) Methyl methanesulfonate	(1)	3.866	80	2981	0.087
7)$2-Fluorophenol	(1)	4.070	112	9940	0.192
8) N-Nitrosodiethylamine	(1)	4.444	102	1982	0.069
10) Ethyl methanesulfonate	(1)	4.910	109	2866	0.103
11) Benzaldehyde	(1)	5.370	77	5773	0.116
12)$Phenol-d5	(1)	5.487	99	15683	0.220
13)$Phenol-d6	(1)	5.487	99	15683	0.220
14) Phenol	(1)	5.504	94	8874	0.108
15) Aniline	(1)	5.539	93	12406	0.122
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6585	0.101
17) 2-Chlorophenol	(1)	5.702	128	4849	0.095
18) 1,3-Dichlorobenzene	(1)	5.936	146	5661	0.103
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	174606	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5964	0.108
23) Benzyl alcohol	(1)	6.250	108	4655	0.129
24) 1,2-Dichlorobenzene	(1)	6.280	146	5468	0.105
25) Indene	(1)	6.414	115	12134	0.138
26) 2-Methylphenol	(1)	6.431	108	5252	0.103
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	8860	0.110
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	8860	0.110
29) N-Nitrosopyrrolidine	(1)	6.612	100	2905	0.099
30) Acetophenone	(1)	6.653	105	8474	0.106
33) 4-Methylphenol	(1)	6.670	108	6702	0.117
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	5592	0.121
32) N-Nitrosomorpholine	(1)	6.682	56	4914	0.135
34) o-Toluidine	(1)	6.705	106	10085	0.114
35) Hexachloroethane	(1)	6.792	117	2232	0.095
36)$Nitrobenzene-d5	(2)	6.868	82	12836	0.206
37) Nitrobenzene	(2)	6.897	77	6906	0.105
39) N-Nitrosopiperidine	(2)	7.136	114	2867	0.106
40) Isophorone	(2)	7.294	82	12860	0.114
42) 2-Nitrophenol	(2)	7.399	139	1731	0.076
45) 2,4-Dimethylphenol	(2)	7.504	107	5945	0.108
47) Benzoic acid	(2)	7.574	105	6762	3.541
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3063	0.125

M = Compound was manually integrated.
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Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	8784	0.120
49) 2,4-Dichlorophenol	(2)	7.772	162	3993	0.103
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4610	0.106
52)*Naphthalene-d8	(2)	7.987	136	676323	5.000
55) 4-Chloroaniline	(2)	8.127	127	7548	0.126
56) 2,6-Dichlorophenol	(2)	8.133	162	4009	0.107
57) Hexachloropropene	(2)	8.174	213	2326	0.085
58) Hexachlorobutadiene	(2)	8.250	225	2637	0.104
60) Quinoline	(2)	8.547	129	14427	0.151
61) Caprolactam	(2)	8.634	113	1802	0.104
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	4368	0.098
63) 4-Chloro-3-methylphenol	(2)	8.926	107	4803	0.103
64) Safrole	(2)	9.025	162	3942	0.107
67) Hexachlorocyclopentadiene	(3)	9.398	237	1492	0.070
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	5668	0.125
69) cis-Isosafrole	(3)	9.491	162	530M	0.080
70) 2,4,6-Trichlorophenol	(3)	9.590	196	2714	0.095
71) 2,4,5-Trichlorophenol	(3)	9.643	196	3036	0.103
72)$2-Fluorobiphenyl	(3)	9.748	172	26016	0.267
74) Isosafrole	(3)	9.858	162	3898	0.105
73) trans-Isosafrole	(3)	9.858	162	3898	0.105
75) 1,1'-Biphenyl	(3)	9.893	154	13250	0.117
76) 2-Chloronaphthalene	(3)	9.899	162	10941	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12390	0.145
83) 2-Nitroaniline	(3)	10.074	138	2125	0.079
82) Diphenyl ether	(3)	10.080	170	8115	0.130
84) 1,4-Naphthoquinone	(3)	10.196	158	2996	0.080
85) 1,4-Dinitrobenzene	(3)	10.319	168	740M	0.583
86) Dimethylphthalate	(3)	10.424	163	12446	0.127
87) 1,3-Dinitrobenzene	(3)	10.430	168	1007M	0.060
88) 2,6-Dinitrotoluene	(3)	10.494	165	1765	0.081
91) 3-Nitroaniline	(3)	10.738	138	1951	0.078
92)*Acenaphthene-d10	(3)	10.791	164	389992	5.000
94) 2,4-Dinitrophenol	(3)	10.907	184	2068	3.927
96) 4-Nitrophenol	(3)	11.018	109	4568	0.287
95) Pentachlorobenzene	(3)	11.036	250	4705	0.130
97) Dibenzofuran	(3)	11.094	168	16519	0.128
98) 2,4-Dinitrotoluene	(3)	11.100	165	2005	0.072
99) 1-Naphthylamine	(3)	11.199	143	9497	0.101
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2016	0.087

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Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) 2-Naphthylamine	(3)	11.310	143	10595	0.110
102) Diethylphthalate	(3)	11.467	149	11373	0.117
104) Thionazin	(3)	11.560	107	2606	0.125
106) 5-Nitro-o-toluidine	(3)	11.572	152	2160	0.077
107) 4-Nitroaniline	(3)	11.572	138	2057	0.080
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6692	0.130
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	2423	1.691
109) N-Nitrosodiphenylamine	(4)	11.723	169	10283	0.122
110) NDPA as diphenylamine	(4)	11.723	169	10283	0.122
111) 1,2-Diphenylhydrazine	(4)	11.764	77	14760	0.111
112)$2,4,6-Tribromophenol	(3)	11.840	330	1914	0.187
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	2108	0.110
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	316M	1.317
117) Diallate (peak 1)	(4)	12.085	86	5354	0.081
118) Phorate	(4)	12.091	75	8810	0.112
119) Phenacetin	(4)	12.102	108	4220	0.075
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3113	0.117
121) Diallate (peak 2)	(4)	12.190	86	674M	0.024
123) Dimethoate	(4)	12.271	87	4204	0.082
124) Atrazine	(4)	12.382	200	2307	0.084
125) Pentachlorophenol	(4)	12.458	266	986	0.712
126) Pentachloronitrobenzene	(4)	12.470	237	1094M	0.089
127) 4-Aminobiphenyl	(4)	12.475	169	10255	0.097
129) Pronamide	(4)	12.574	173	3949	0.089
130)*Phenanthrene-d10	(4)	12.685	188	676898	5.000
133) Dinoseb	(4)	12.720	211	414M	1.336
135) Carbazole	(4)	12.994	167	15785	0.108
136) Methyl parathion	(4)	13.204	109	1786	0.273
137) Di-n-butylphthalate	(4)	13.513	149	14623	0.085
138) Parathion	(4)	13.740	109	1235M	0.112
140) Isodrin	(4)	14.125	193	2512	0.139
144) Benzidine	(5)	14.562	184	64682	0.595
145)*Pyrene-d10	(5)	14.644	212	846618	5.000
149)$Terphenyl-d14	(5)	14.958	244	27173	0.257
150) p-Dimethylaminoazobenzene	(5)	15.192	225	1978	0.320
151) Chlorobenzilate	(5)	15.291	139	4391	0.087
152) 3,3'-Dimethylbenzidine	(5)	15.739	212	4629	0.043
153) Butylbenzylphthalate	(5)	15.815	149	5061	0.066
156) 2-Acetylaminofluorene	(5)	16.147	181	2175	0.847
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	3586	0.065

M = Compound was manually integrated.
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Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

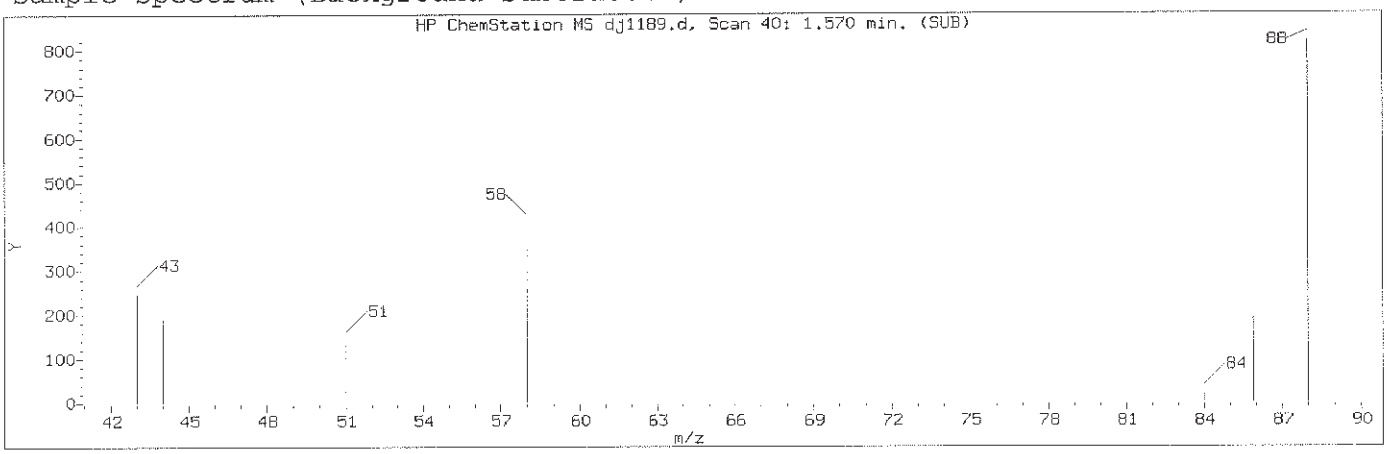
Sample Name: SSTD0.125 Lab Sample ID: MDL2813

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160)	4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	1582M	0.054
162)	bis(2-Ethylhexyl)phthalate	(5)	16.888	149	6775	0.067
165)	6-Methylchrysene	(5)	17.517	242	11409	0.108
166)	Di-n-octylphthalate	(6)	18.042	149	6684	0.280
169)	7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	4971	0.081
172)	*Perylene-d12	(6)	19.114	264	585884	5.000
173)	3-Methylcholanthrene	(6)	19.598	268	6441	0.107
174)	Dibenz(a,h)acridine	(6)	20.402	279	5356	0.064
175)	Dibenz(a,j)acridine	(6)	20.472	279	5840	0.065
179)	Diallate TRANS/CIS	(4)			6028	0.104

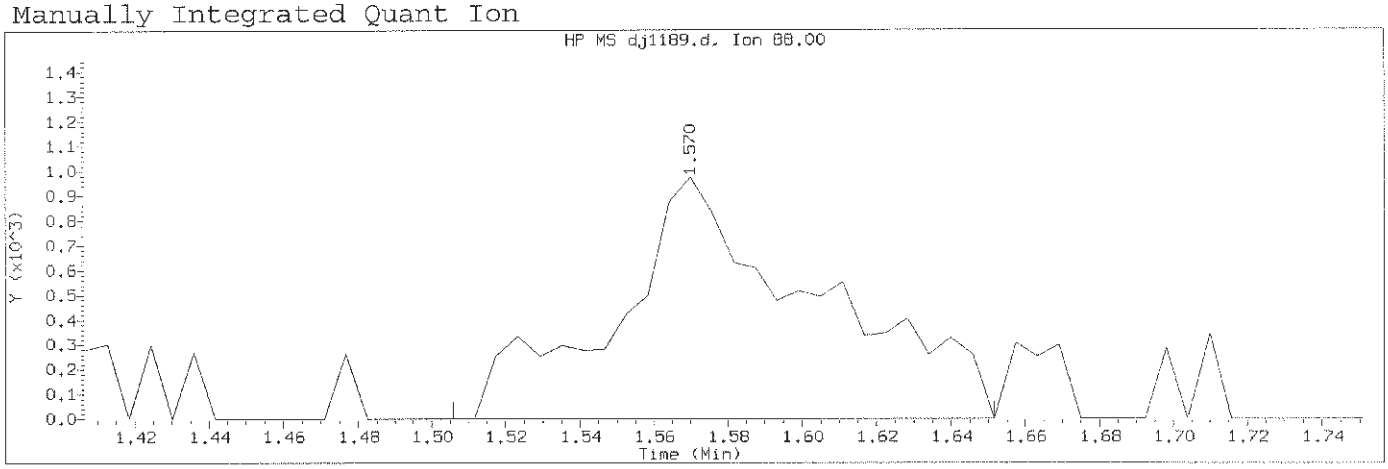
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 40		
Retention Time (minutes)	: 1.570		
Quant Ion	: 88.00		
Area (flag)	: 3666M		
On-Column Amount (ng/ul)	: 0.1668		
Integration start scan	: 28	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

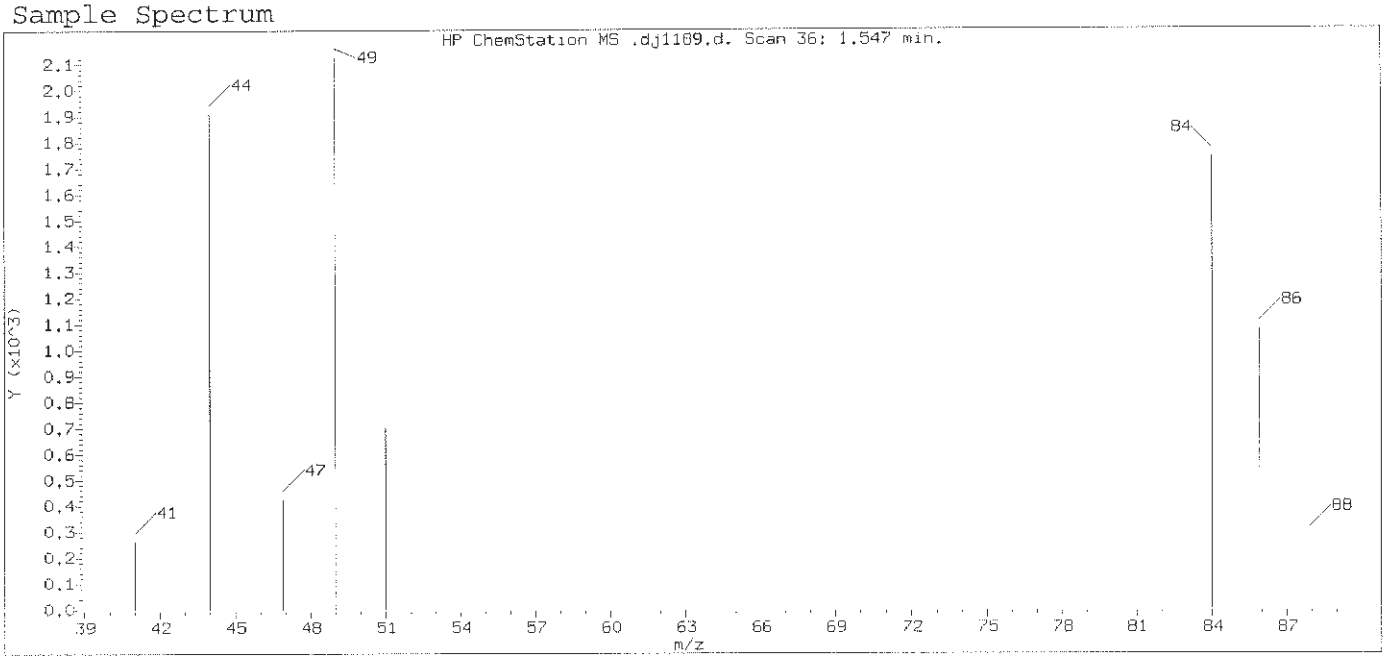
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: _____

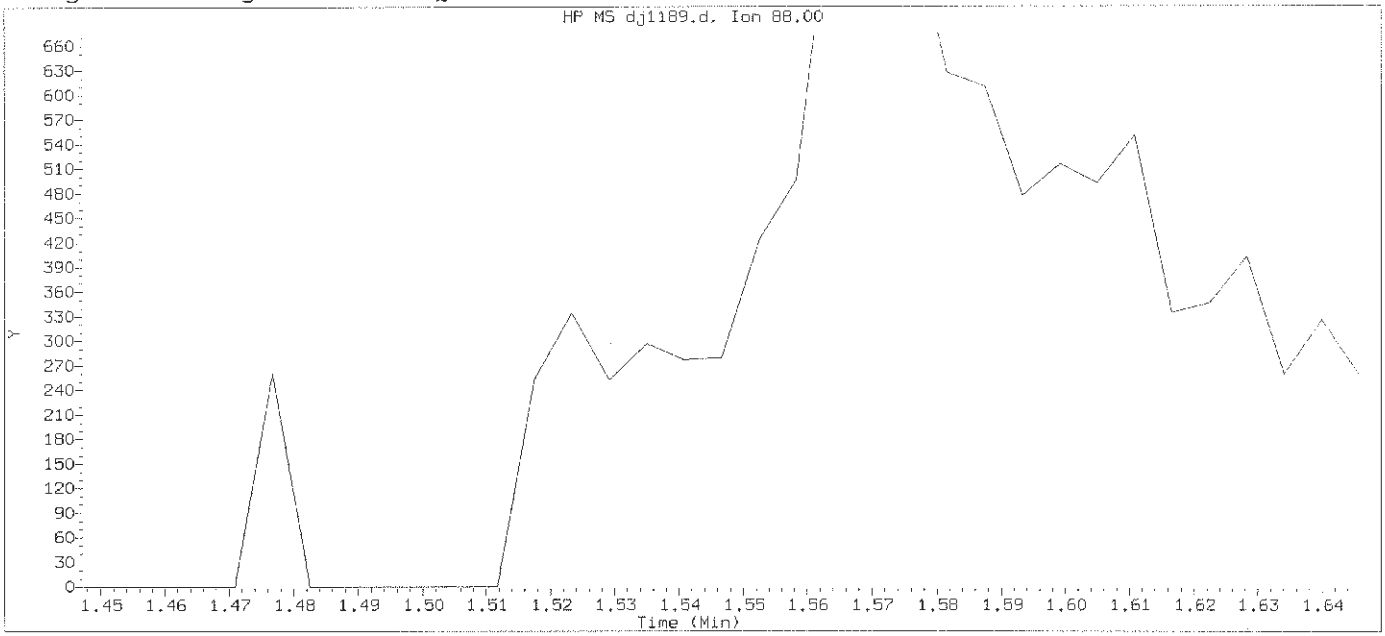
OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

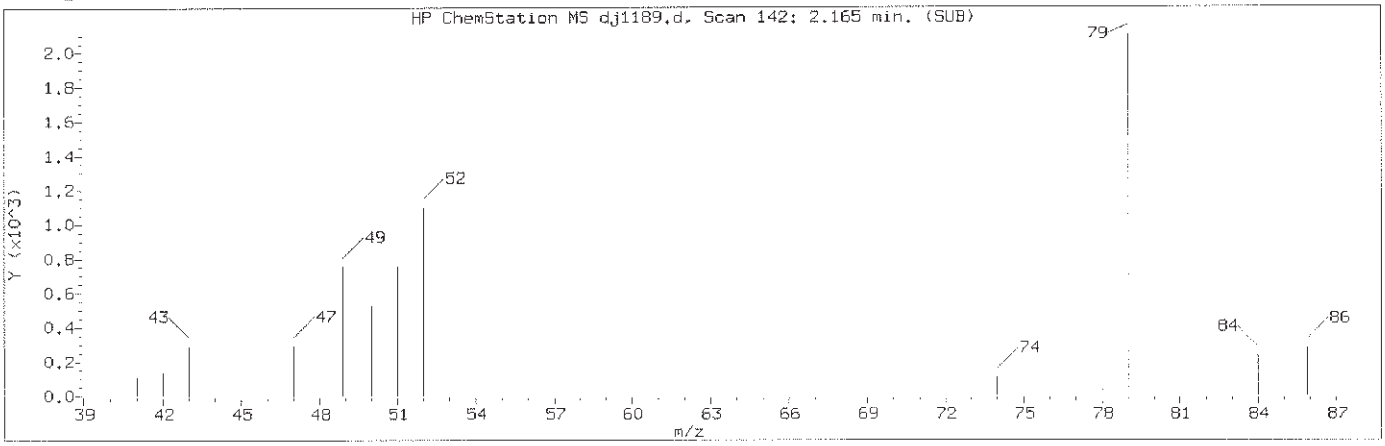
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

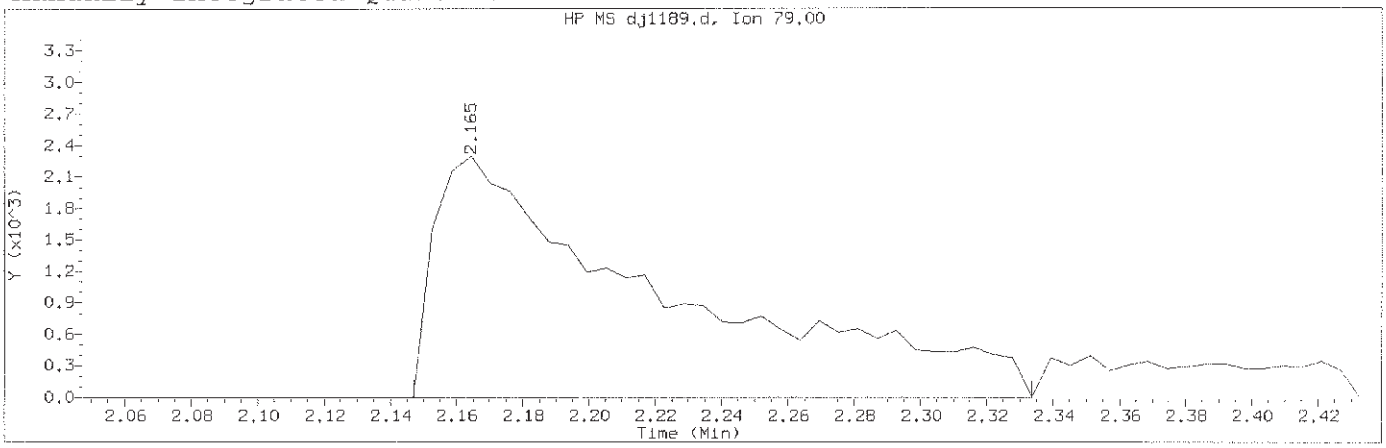
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area (flag)	: 10875M		
On-Column Amount (ng/ul)	: 0.1643		
Integration start scan	: 138	Integration stop scan:	170
Y at integration start	: 0	Y at integration end:	0

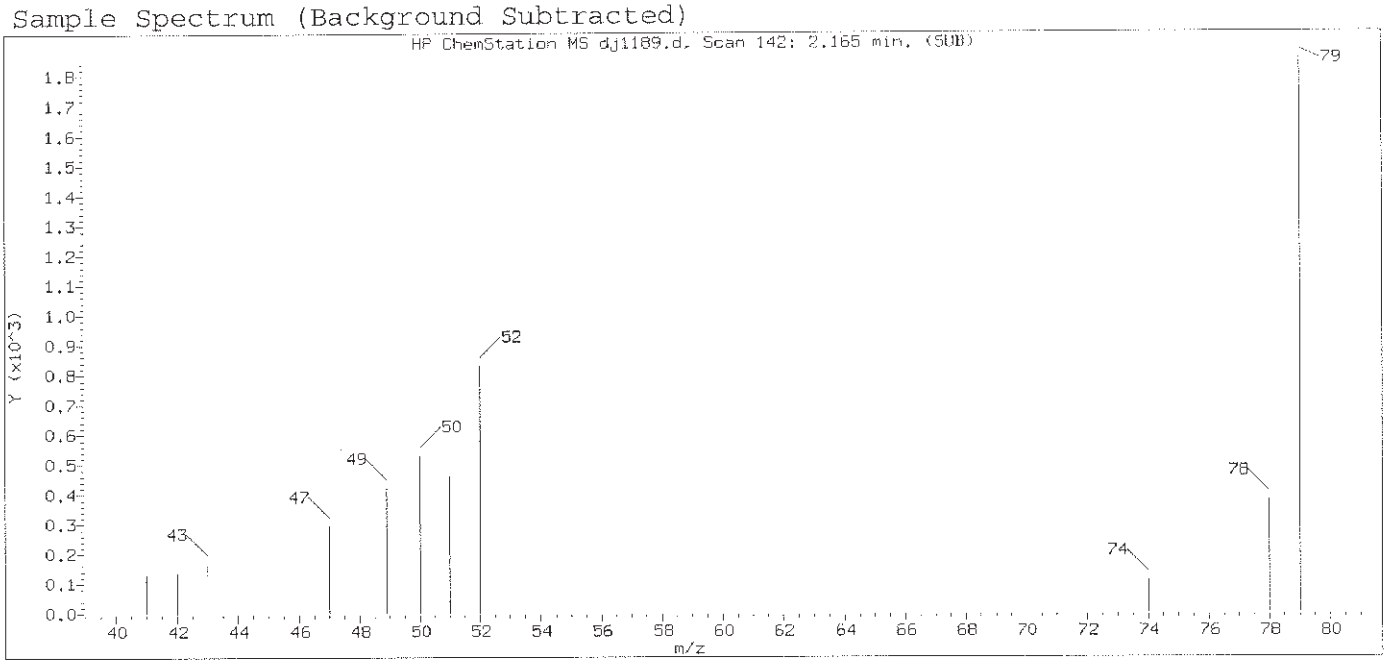
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

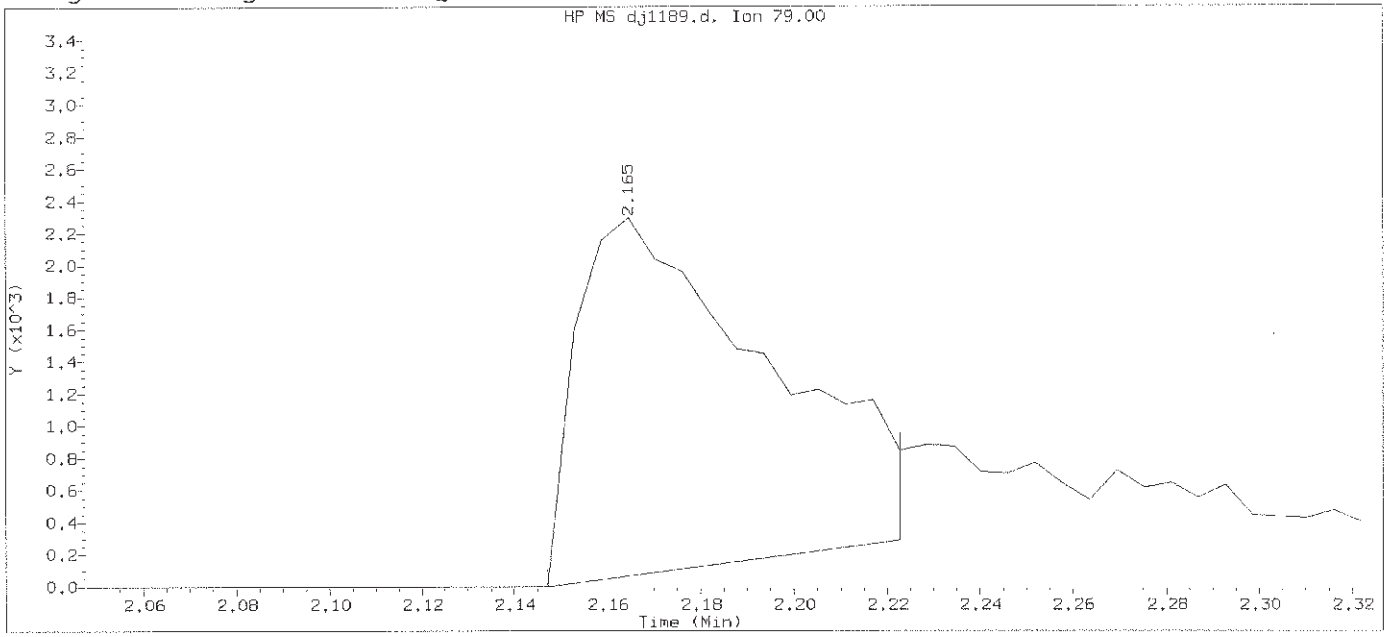
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

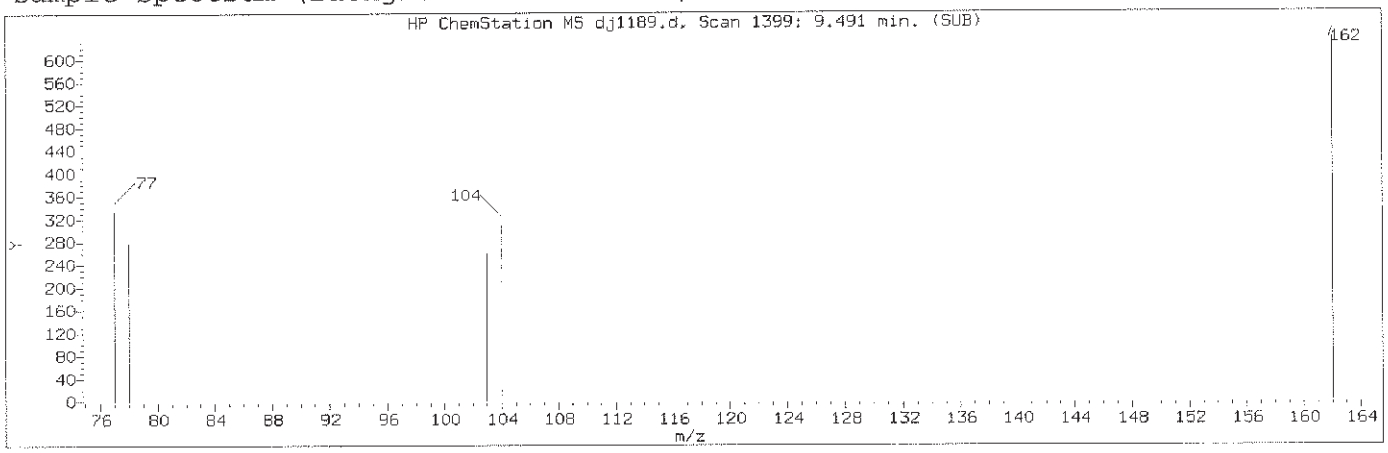
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

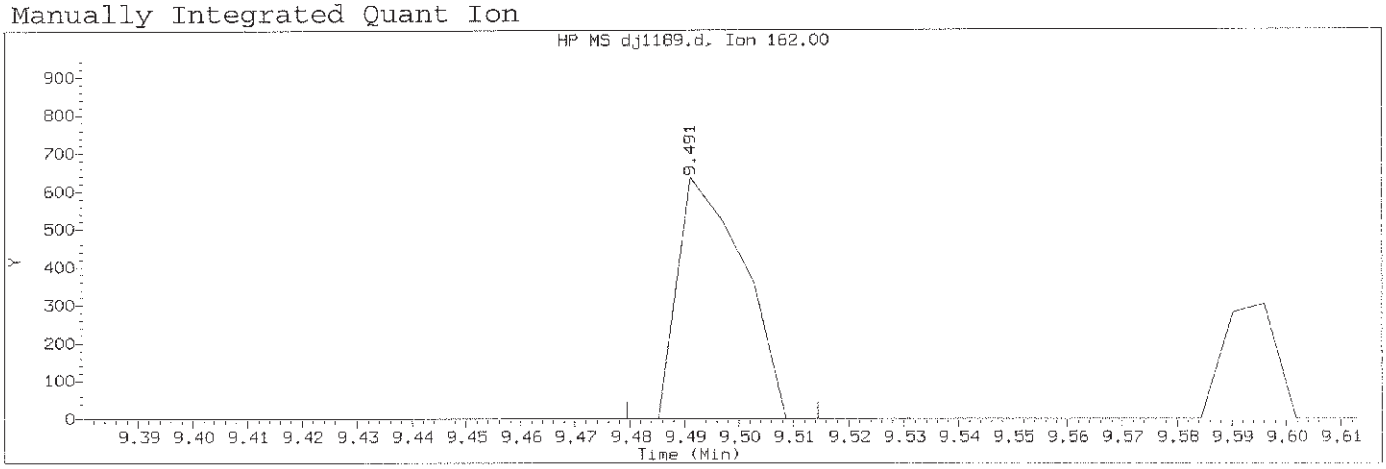
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area	: 6269		
On-column Amount (ng/ul)	: 0.0947		
Integration start scan	: 138	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	288

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1399		
Retention Time (minutes)	: 9.491		
Quant Ion	: 162.00		
Area (flag)	: 530M		
On-Column Amount (ng/ul)	: 0.0799		
Integration start scan	: 1396	Integration stop scan:	1402
Y at integration start	: 0	Y at integration end:	0

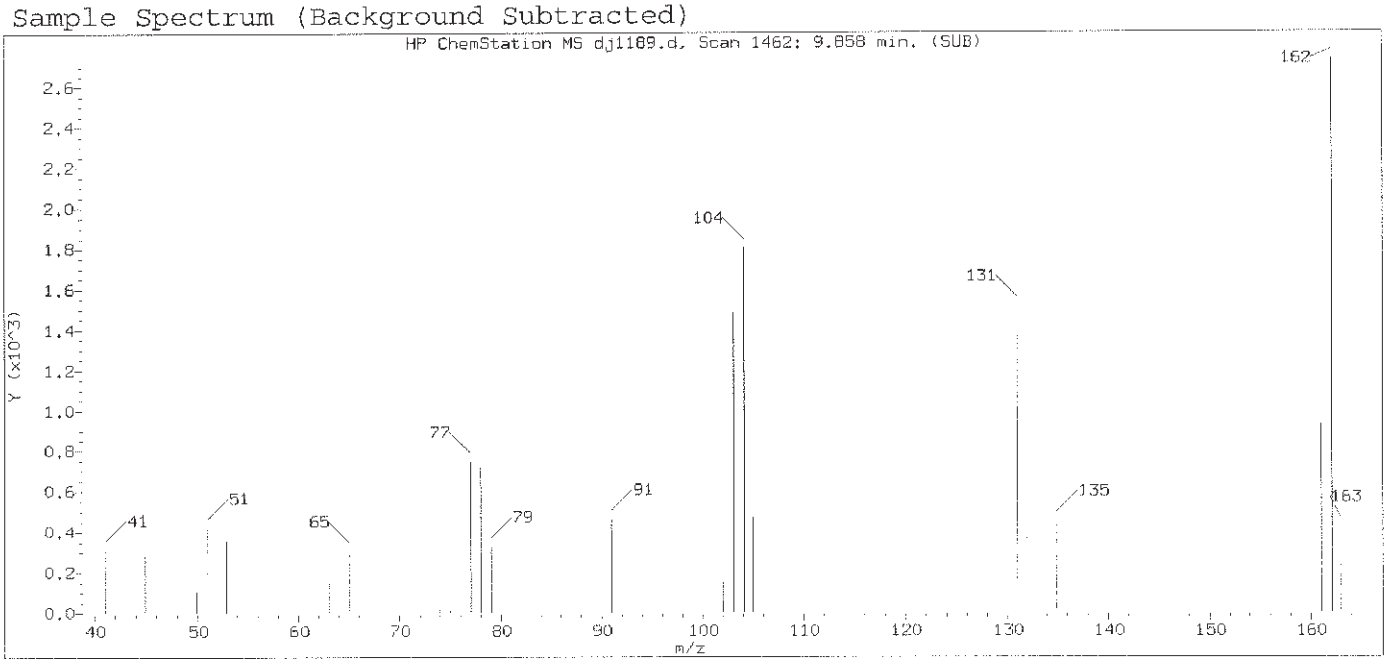
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

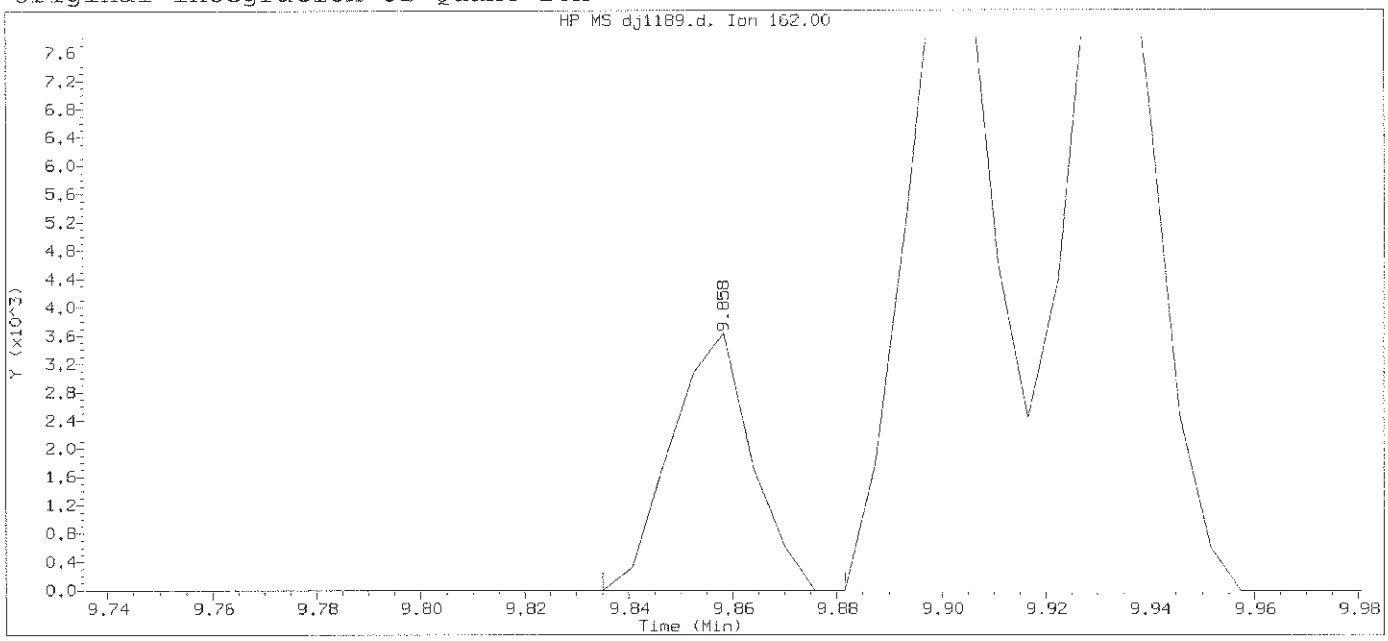
GC/MS audit/management approval: OCT 3 0 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

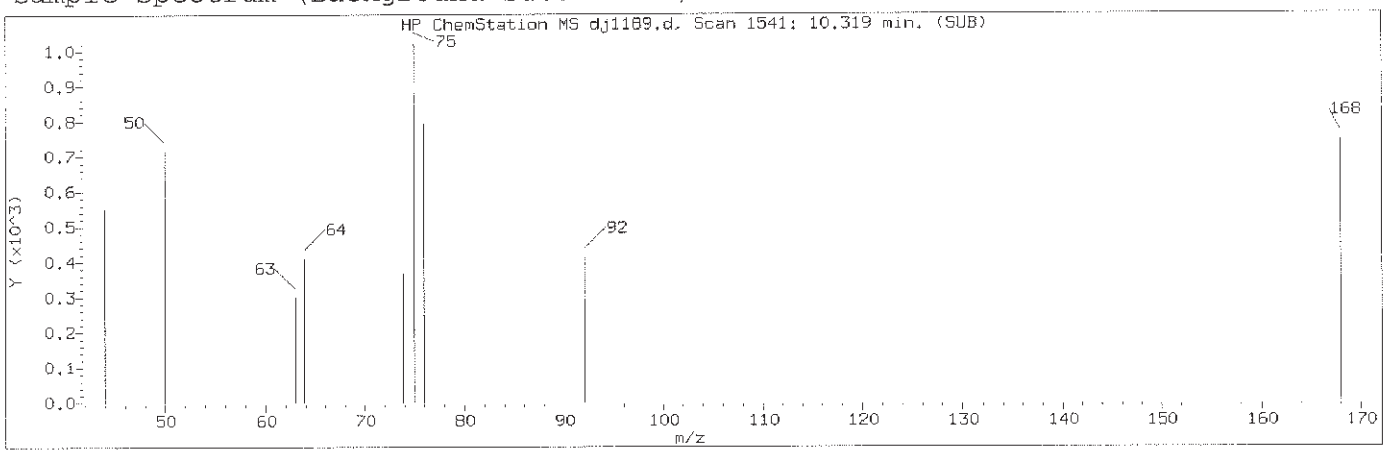
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

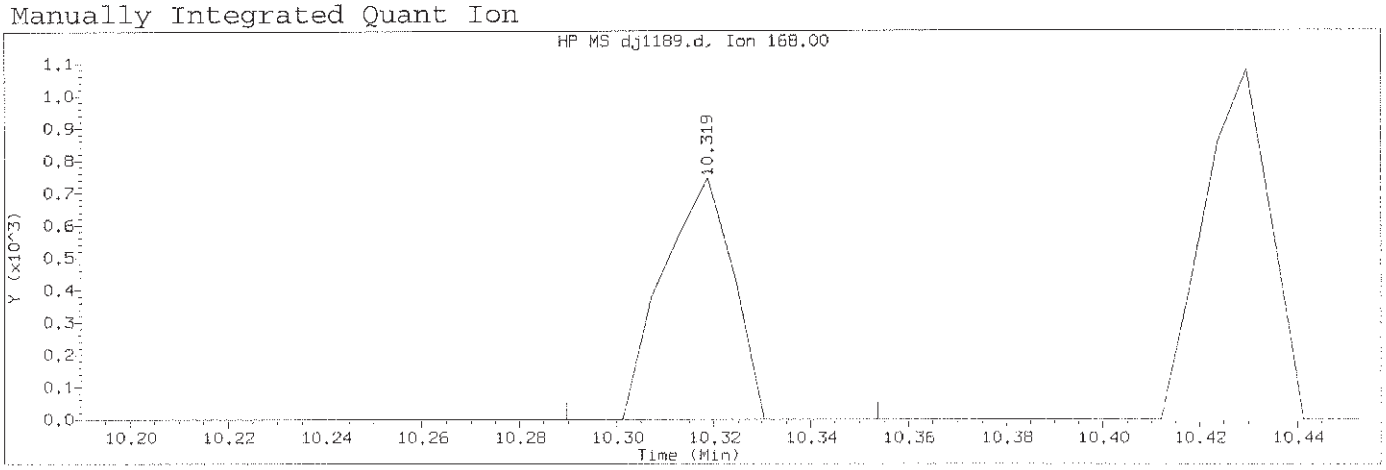
Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1462		
Retention Time (minutes)	: 9.858		
Quant Ion	: 162.00		
Area	: 3898		
On-column Amount (ng/ul)	: 0.5875		
Integration start scan	: 1457	Integration stop scan:	1465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 85		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1541		
Retention Time (minutes)	: 10.319		
Quant Ion	: 168.00		
Area (flag)	: 740M		
On-Column Amount (ng/ul)	: 0.5829		
Integration start scan	: 1535	Integration stop scan:	1546
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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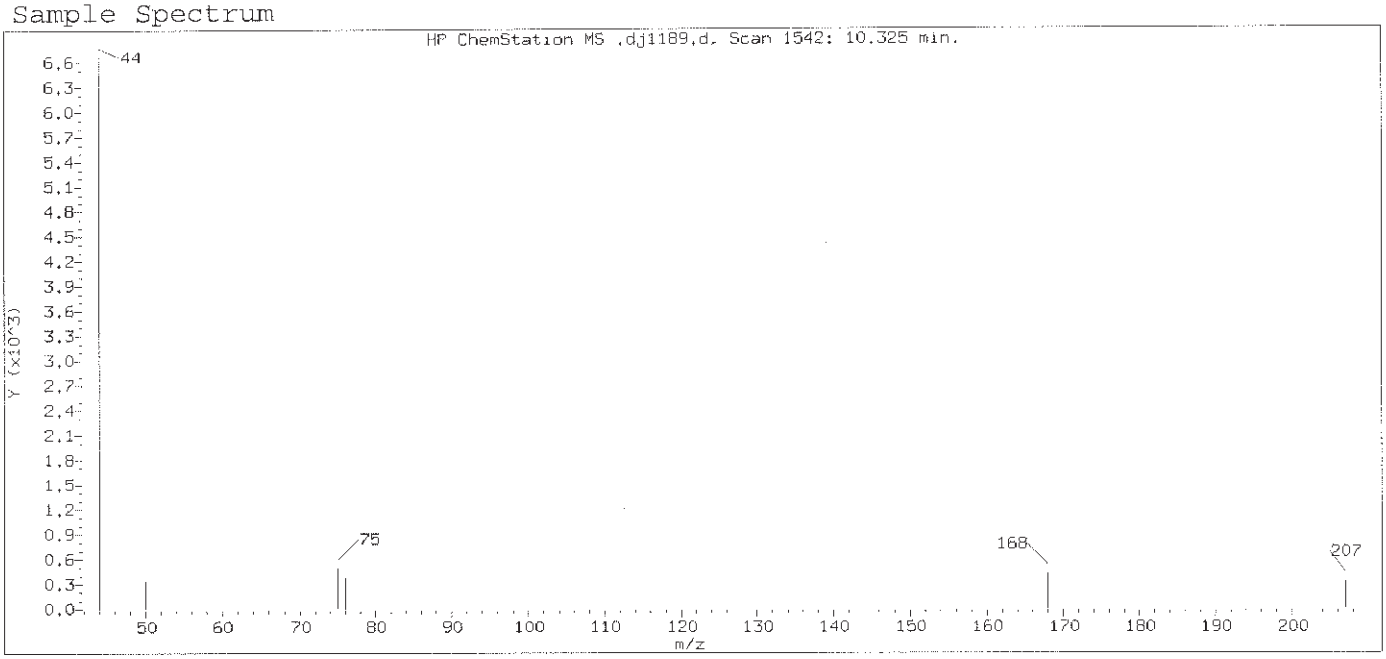
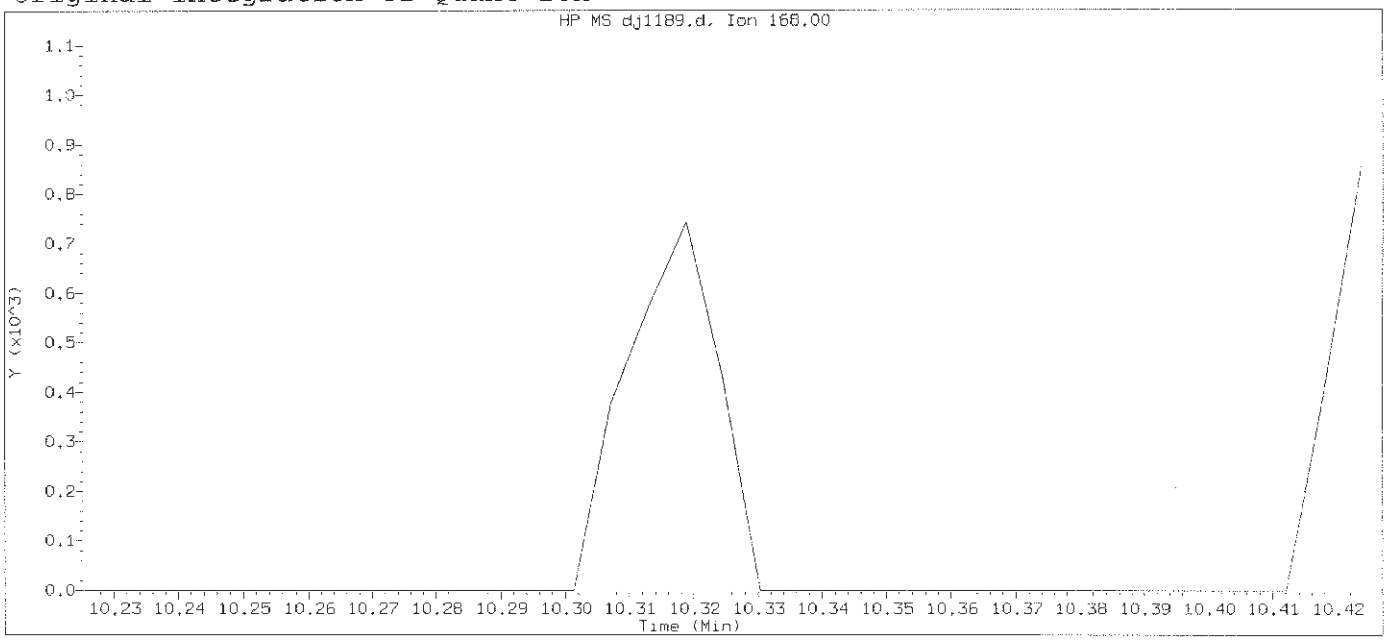
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

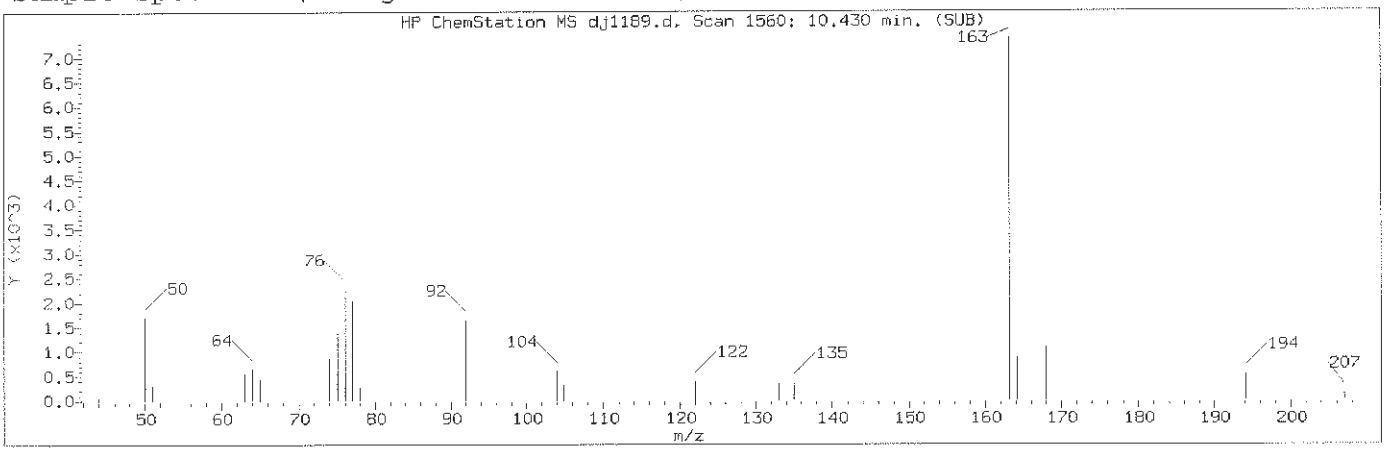
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

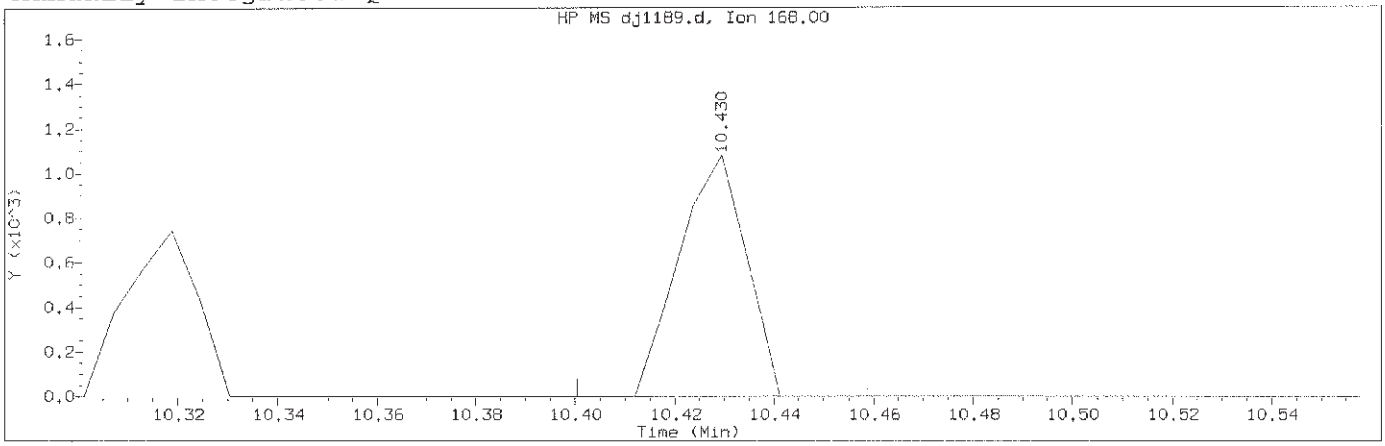
Compound Number : 85
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 10.325
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 87		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1560		
Retention Time (minutes)	: 10.430		
Quant Ion	: 168.00		
Area (flag)	: 1007M		
On-Column Amount (ng/ul)	: 0.0598		
Integration start scan	: 1554	Integration stop scan:	1564
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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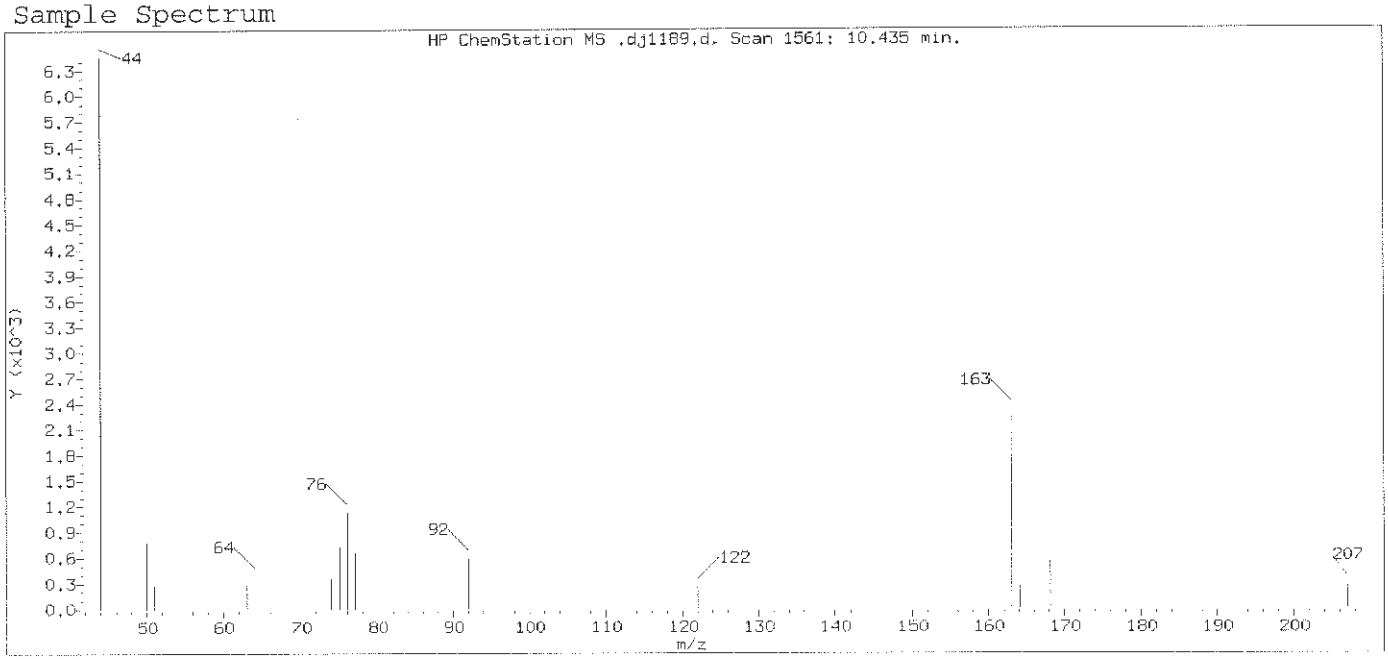
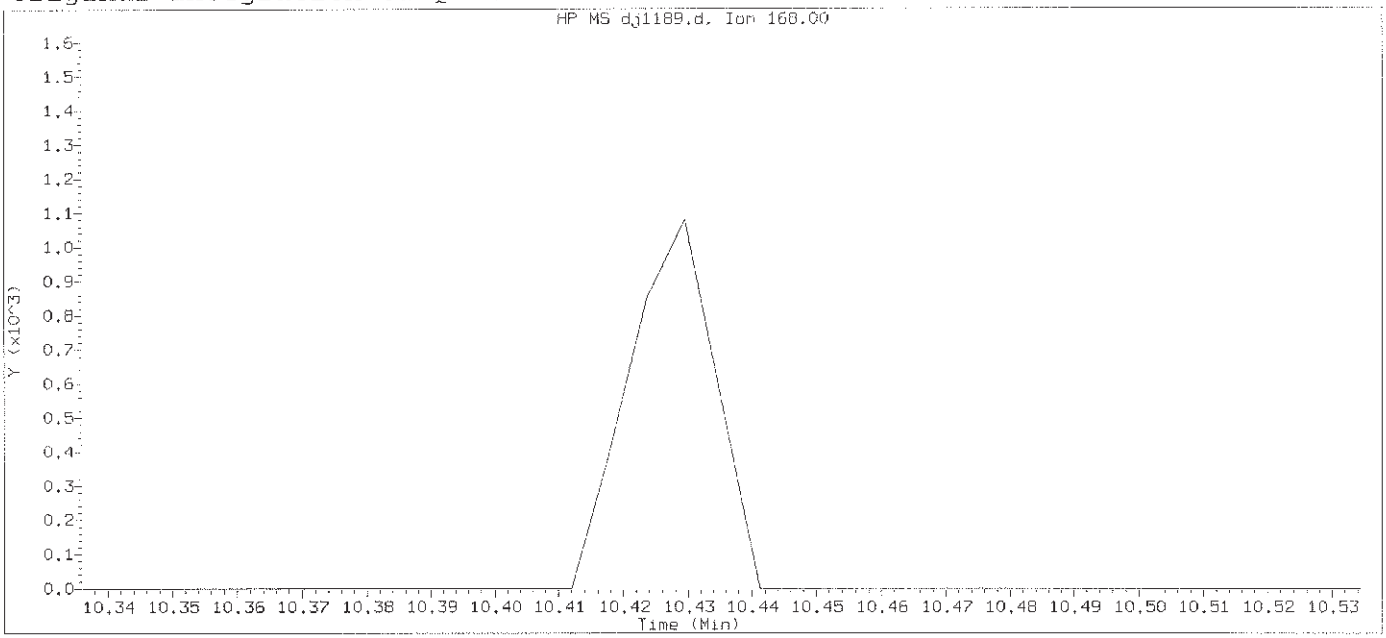
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

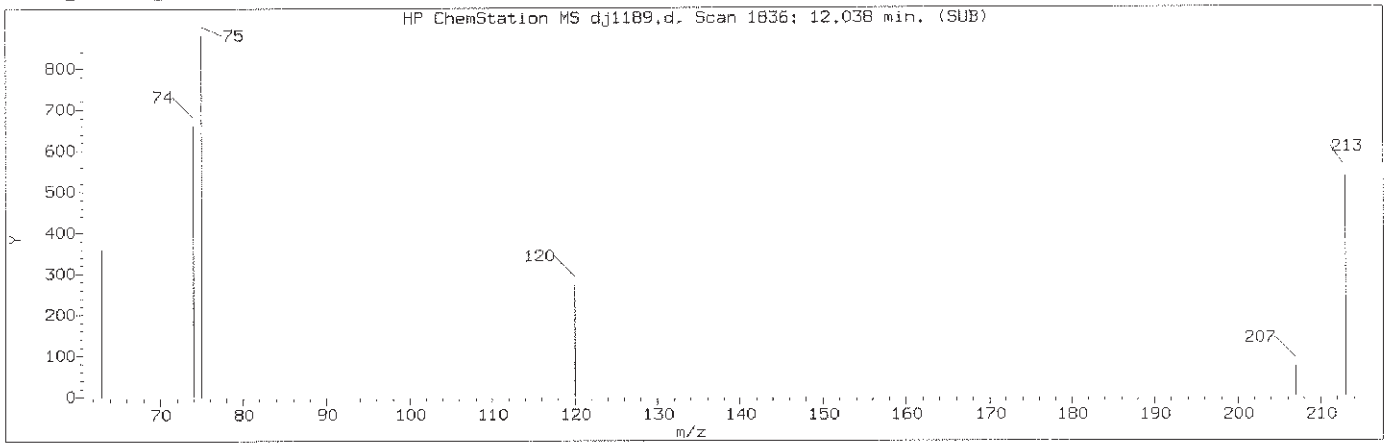
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

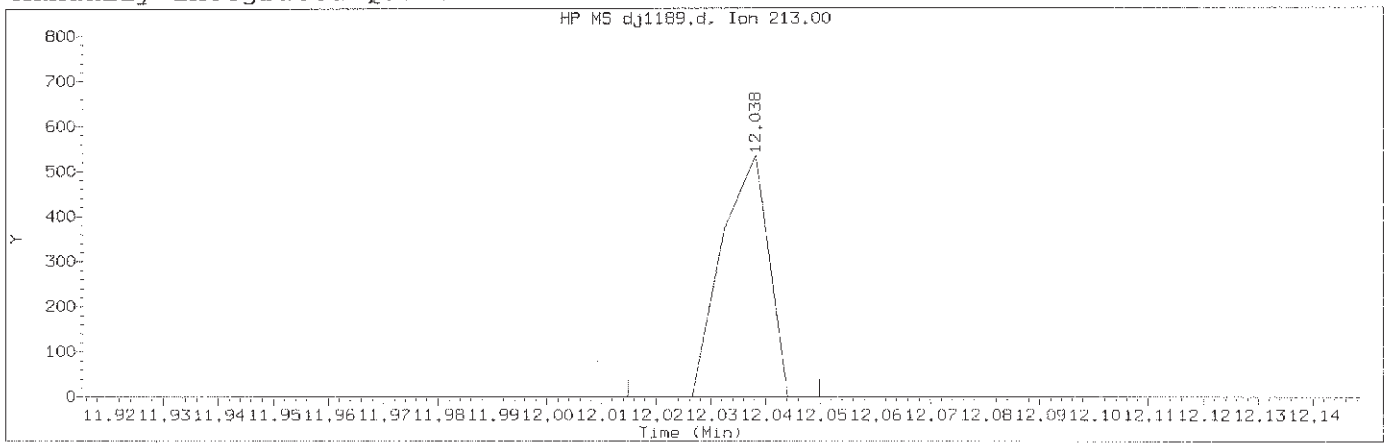
Compound Number : 87
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 10.435
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 116		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1836		
Retention Time (minutes)	: 12.038		
Quant Ion	: 213.00		
Area (flag)	: 316M		
On-Column Amount (ng/ul)	: 1.3173		
Integration start scan	: 1831	Integration stop scan:	1837
Y at integration start	: 0	Y at integration end:	0

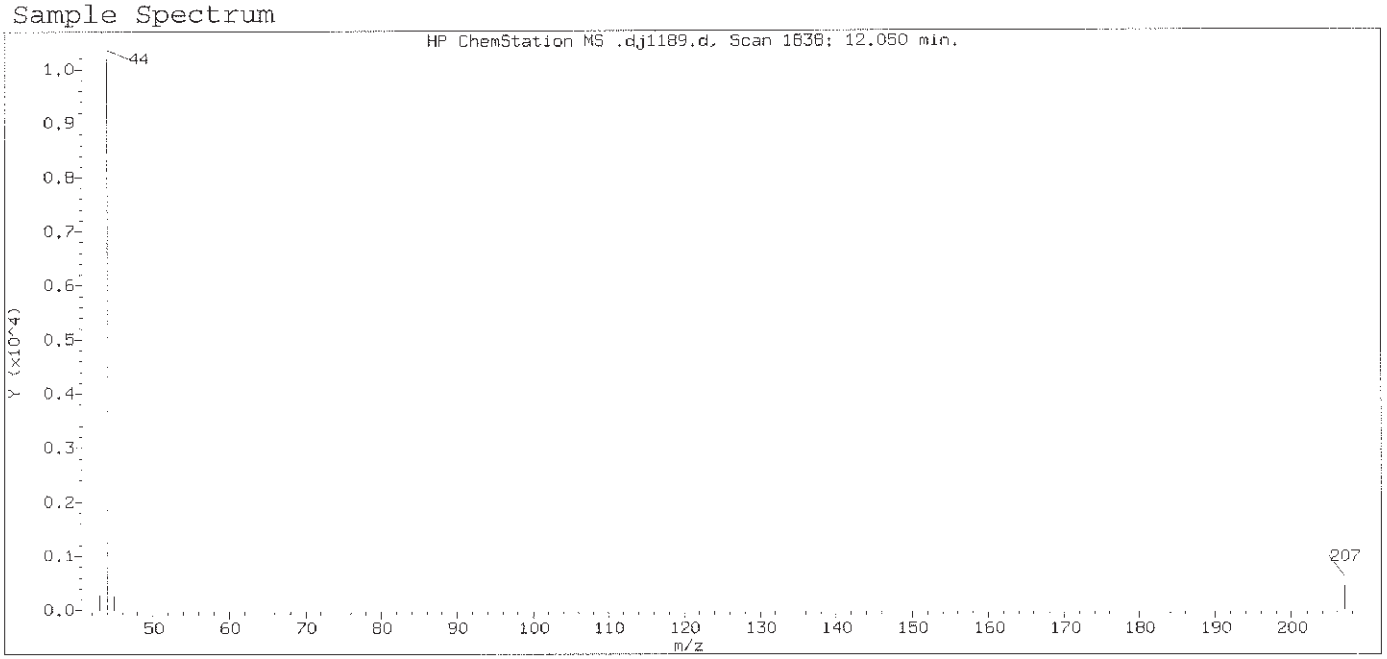
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

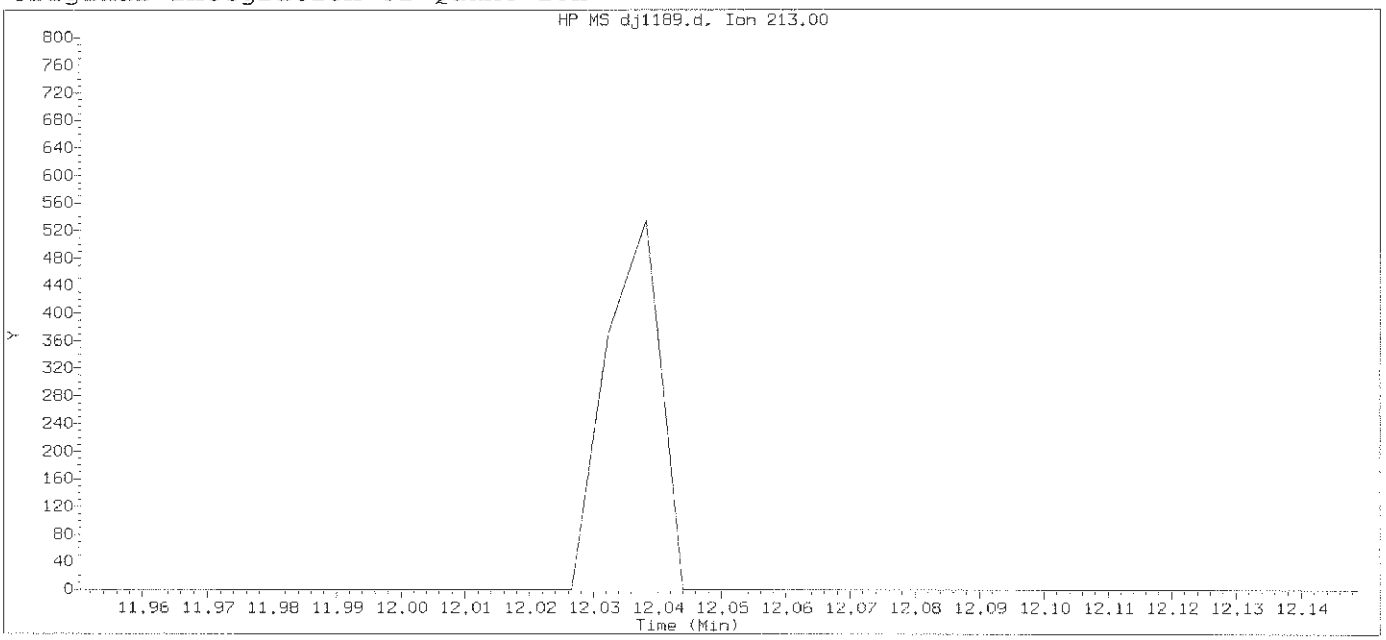
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

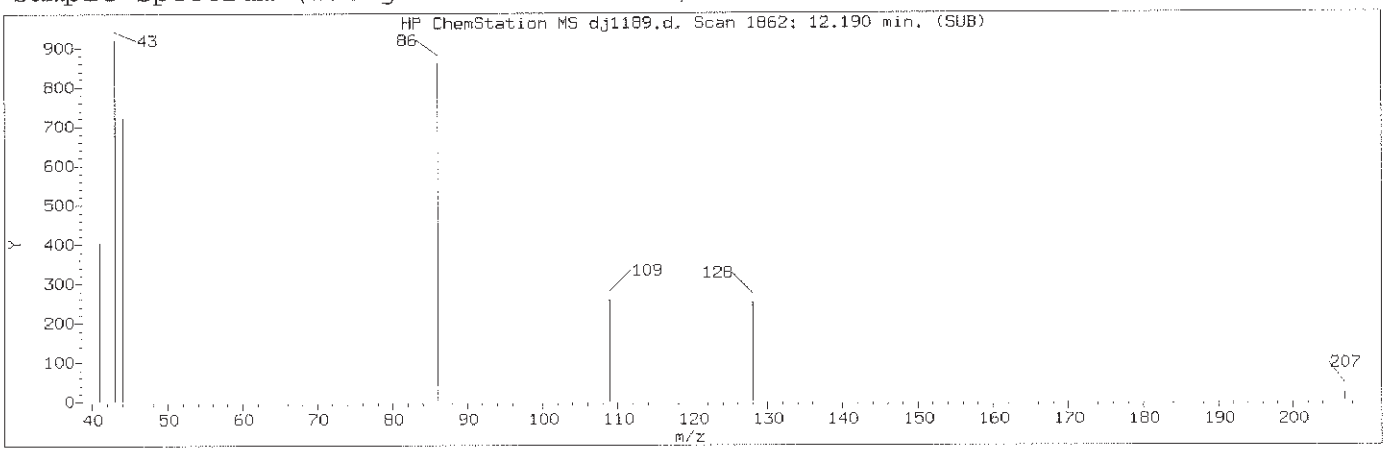
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

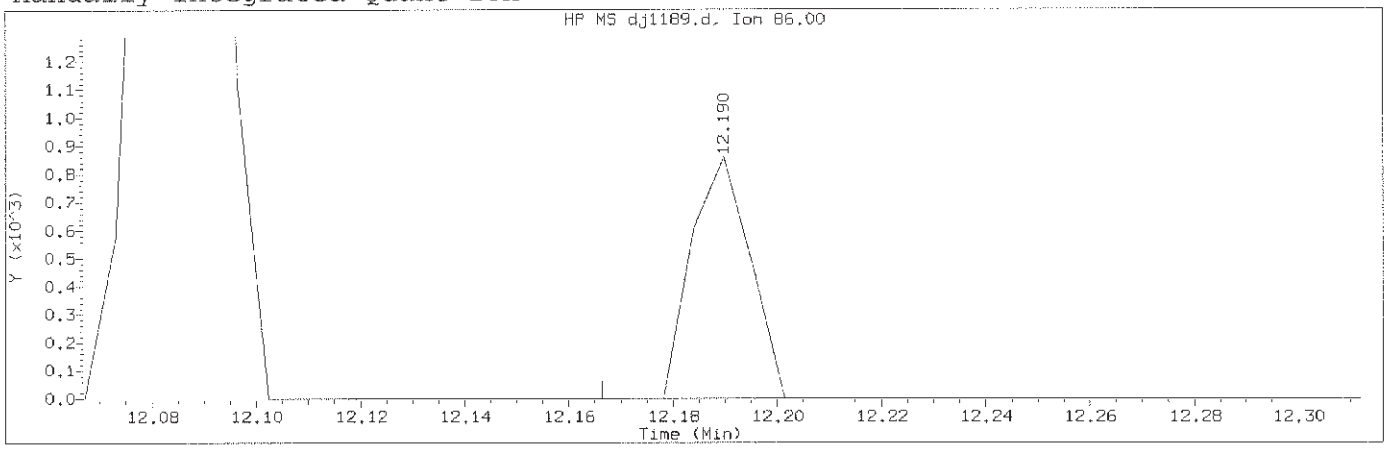
Compound Number : 116
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.050
Quant Ion : 213.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5md1a111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1862		
Retention Time (minutes)	: 12.190		
Quant Ion	: 86.00		
Area (flag)	: 674M		
On-Column Amount (ng/ul)	: 0.0238		
Integration start scan	: 1857	Integration stop scan:	1865
Y at integration start	: 0	Y at integration end:	0

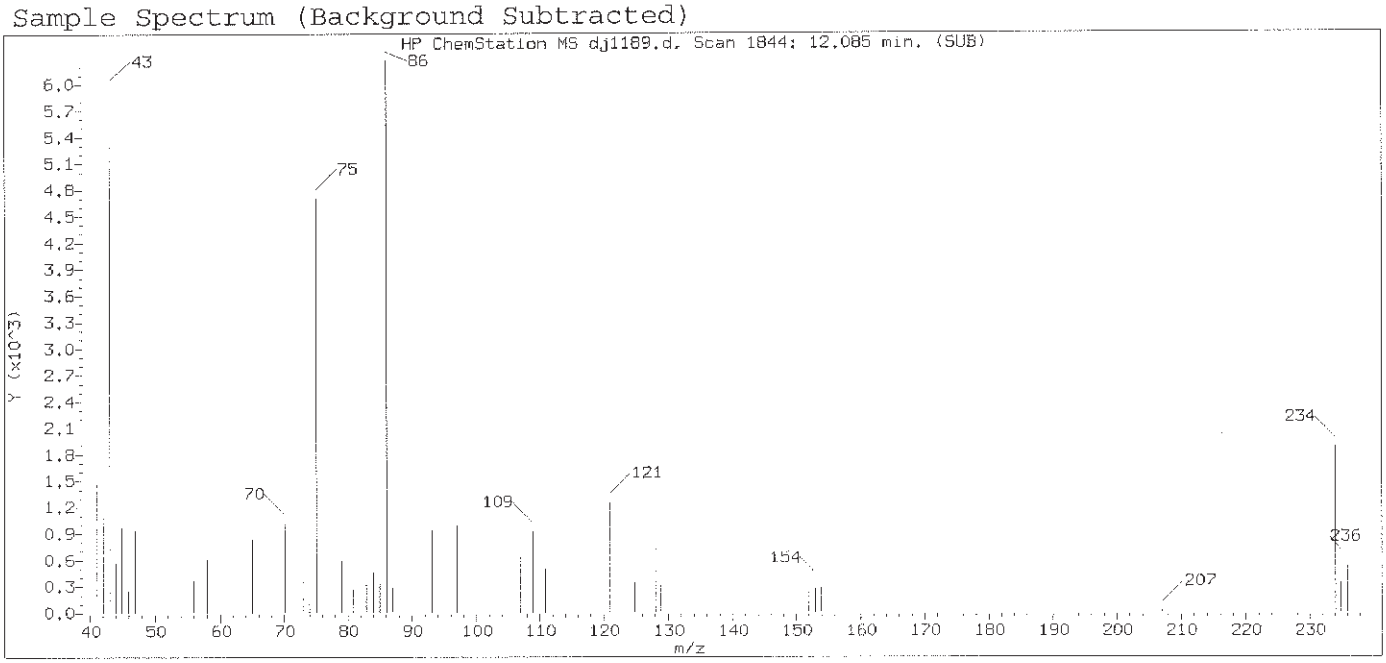
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

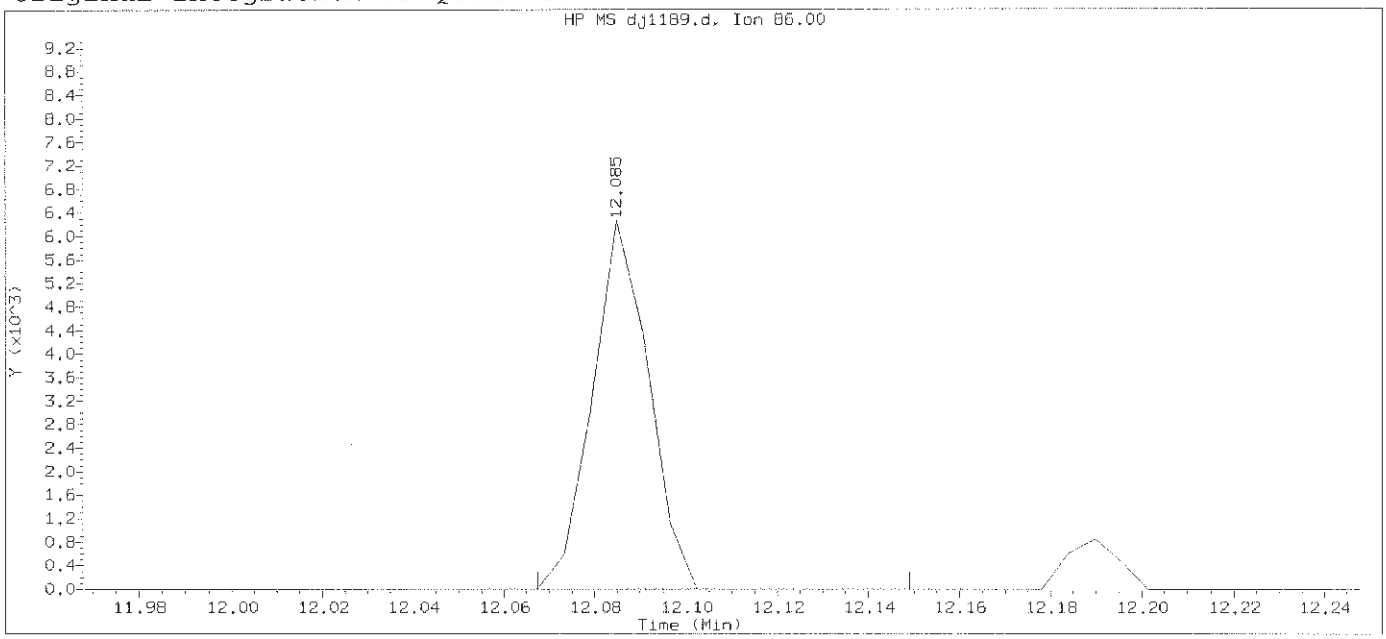
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

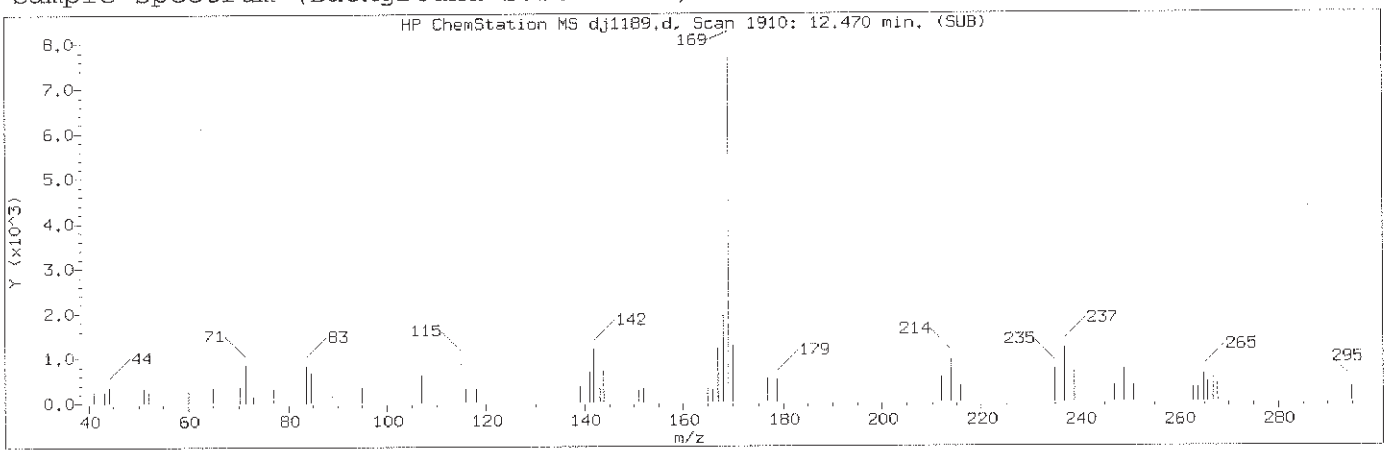
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

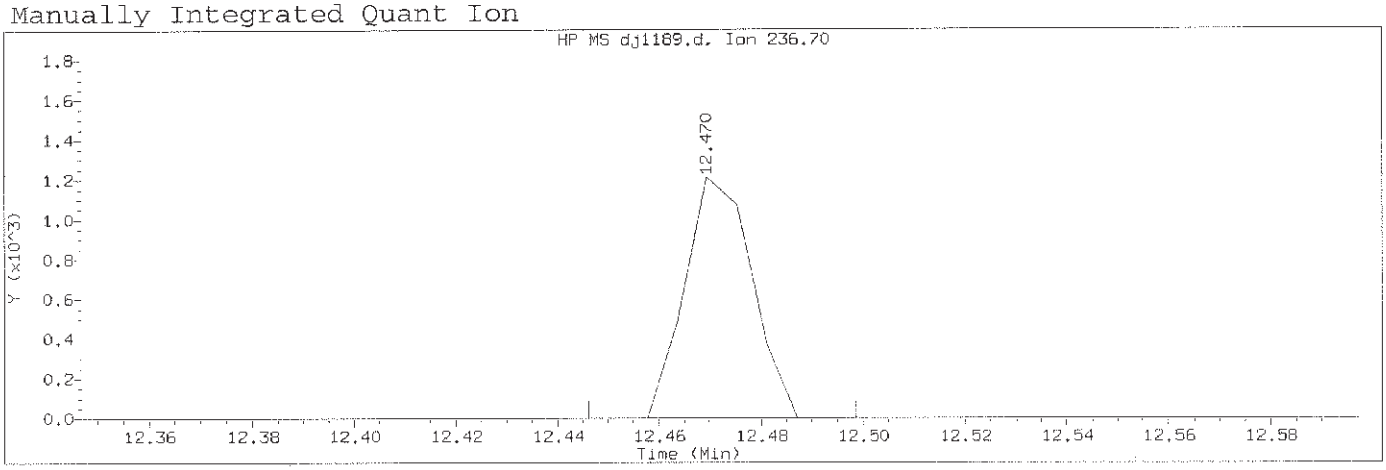
Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1844		
Retention Time (minutes)	: 12.085		
Quant Ion	: 86.00		
Area	: 5354		
On-column Amount (ng/ul)	: 0.1888		
Integration start scan	: 1840	Integration stop scan:	1854
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 126		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1910		
Retention Time (minutes)	: 12.470		
Quant Ion	: 237.00		
Area (flag)	: 1094M		
On-Column Amount (ng/ul)	: 0.0892		
Integration start scan	: 1905	Integration stop scan:	1914
Y at integration start	: 0	Y at integration end:	0

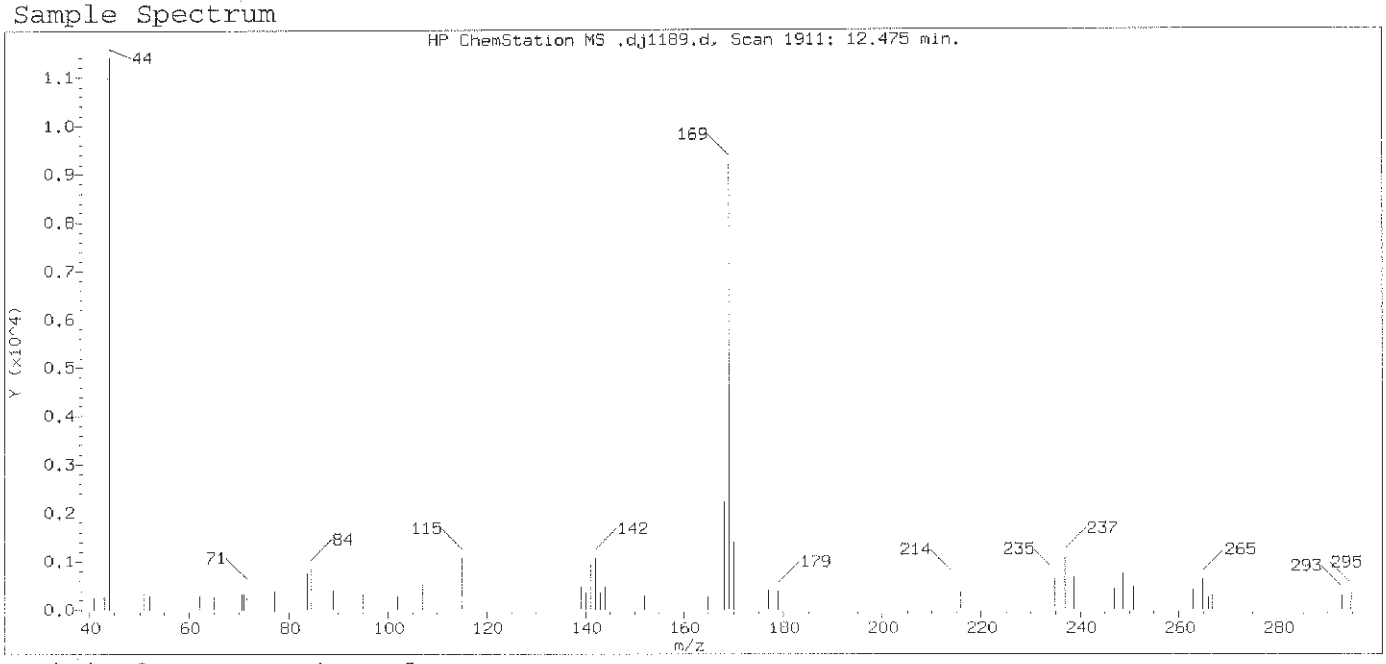
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

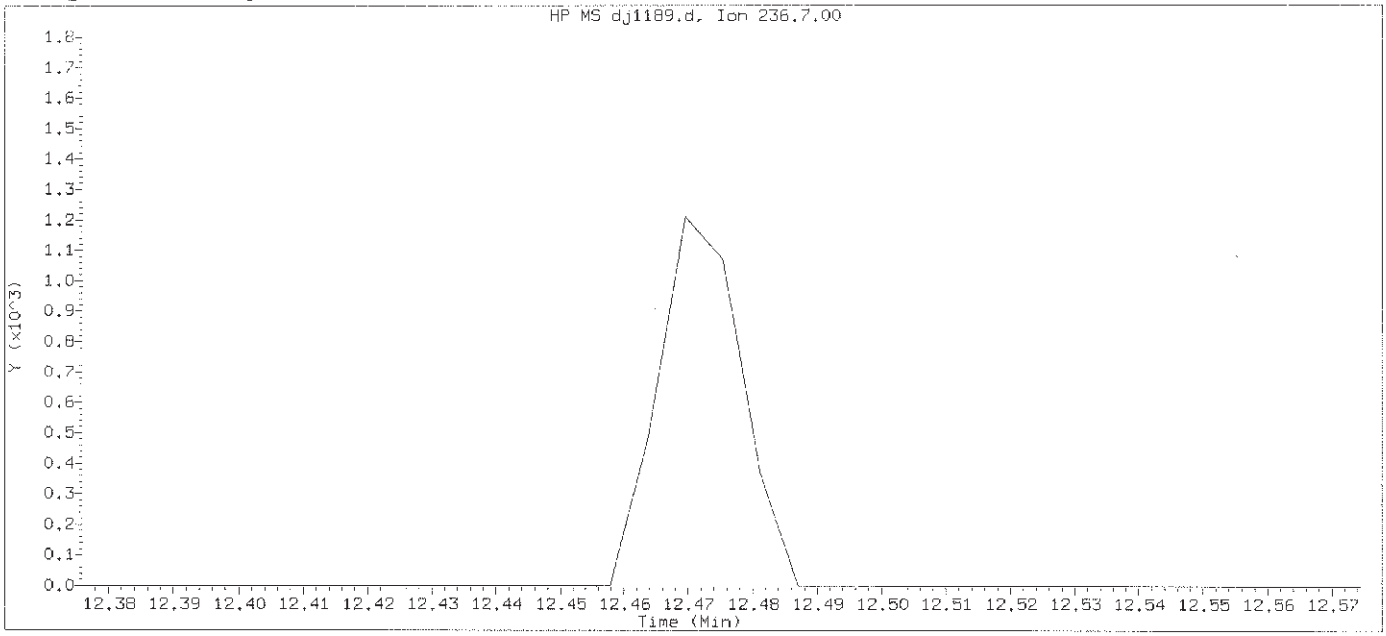
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

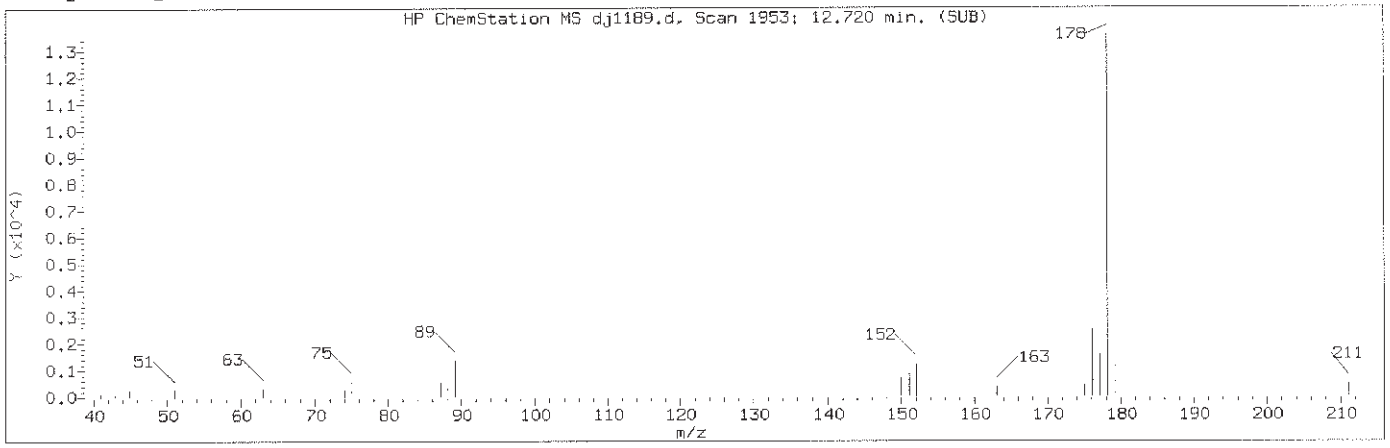
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

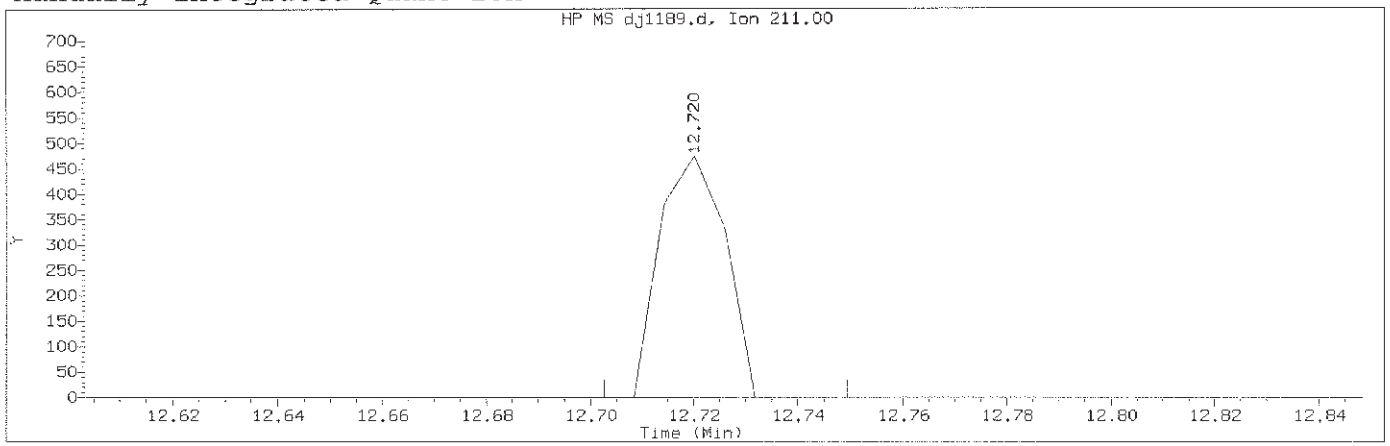
Compound Number : 126
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 12.475
Quant Ion : 237.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 133		
Compound Name	: Dinoseb		
Scan Number	: 1953		
Retention Time (minutes)	: 12.720		
Quant Ion	: 211.00		
Area (flag)	: 414M		
On-Column Amount (ng/ul)	: 1.3360		
Integration start scan	: 1949	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

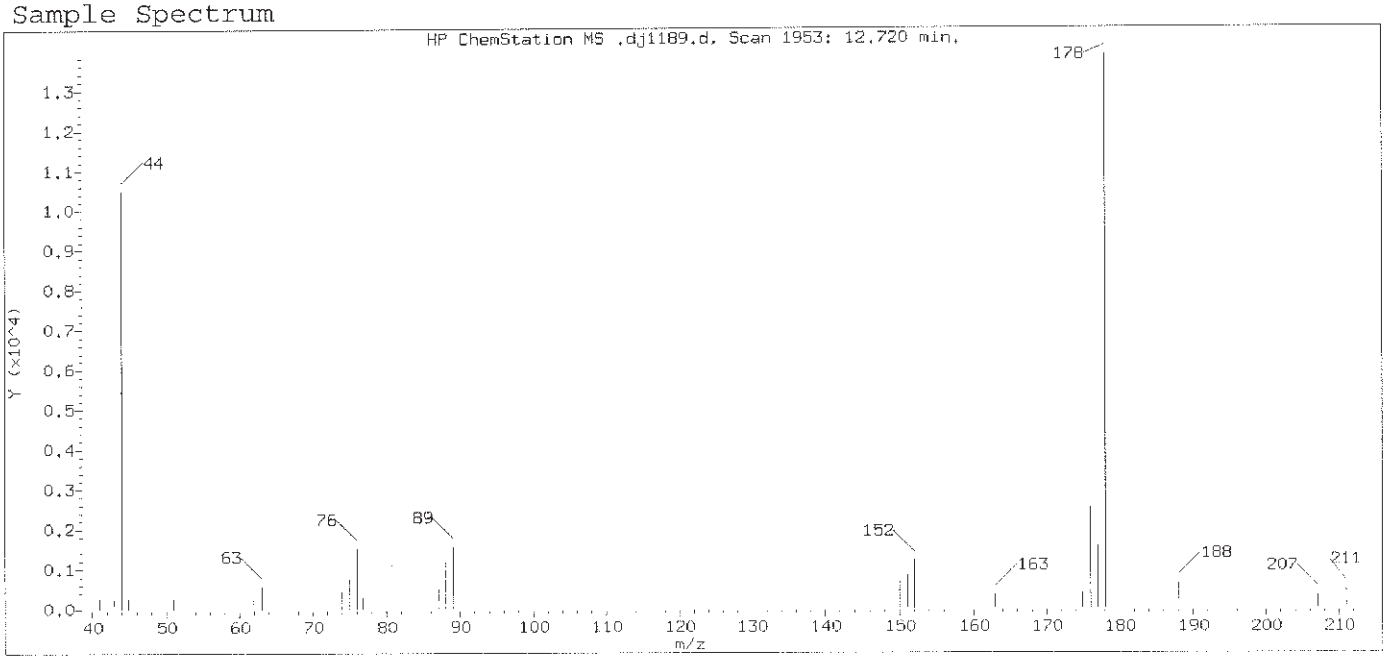
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

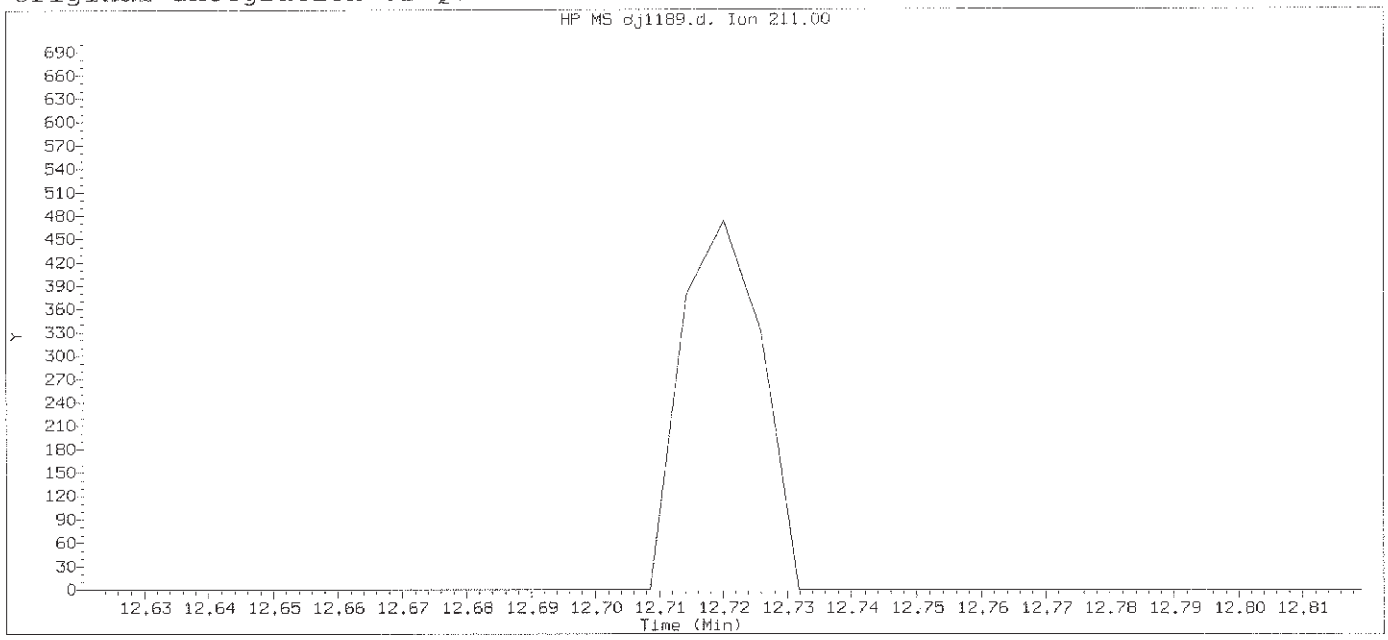
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

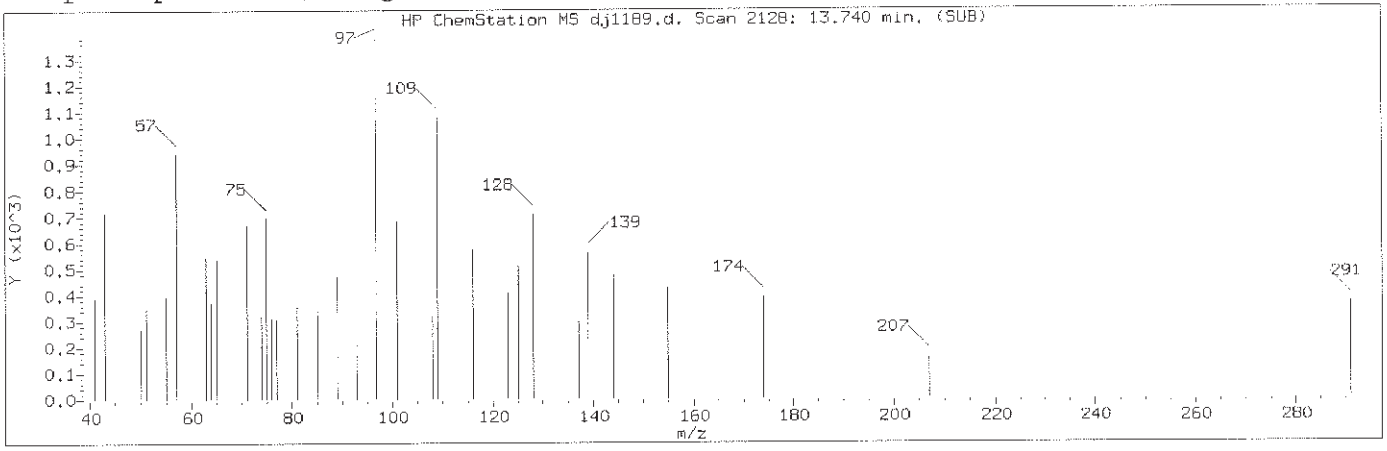
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

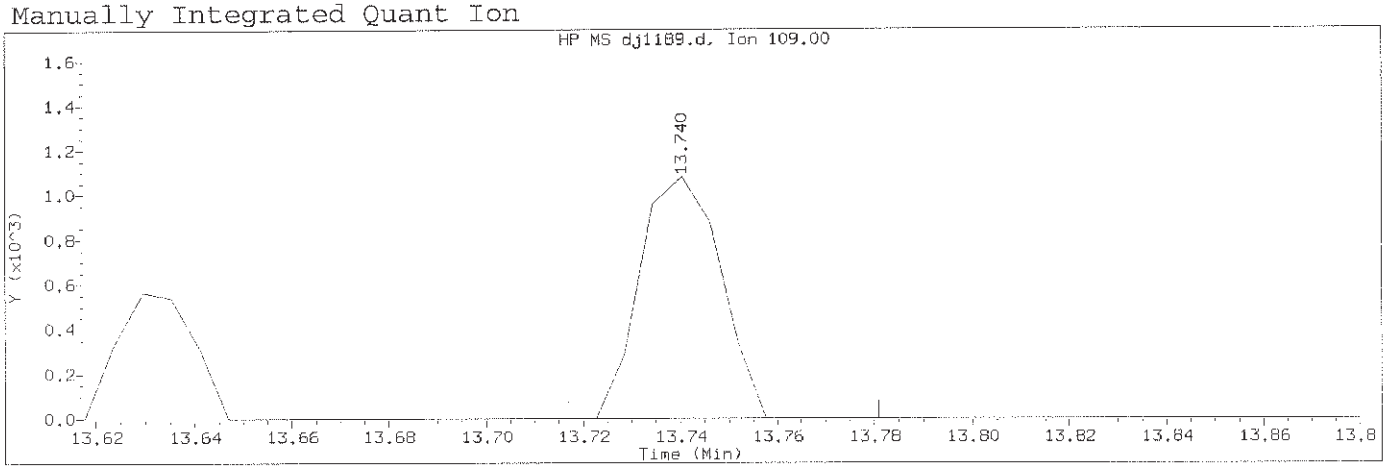
Compound Number : 133
Compound Name : Dinoseb
Expected RT (minutes) : 12.720
Quant Ion : 211.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2128		
Retention Time (minutes)	: 13.740		
Quant Ion	: 109.00		
Area (flag)	: 1235M		
On-Column Amount (ng/ul)	: 0.1123		
Integration start scan	: 2123	Integration stop scan:	2134
Y at integration start	: 0	Y at integration end:	0

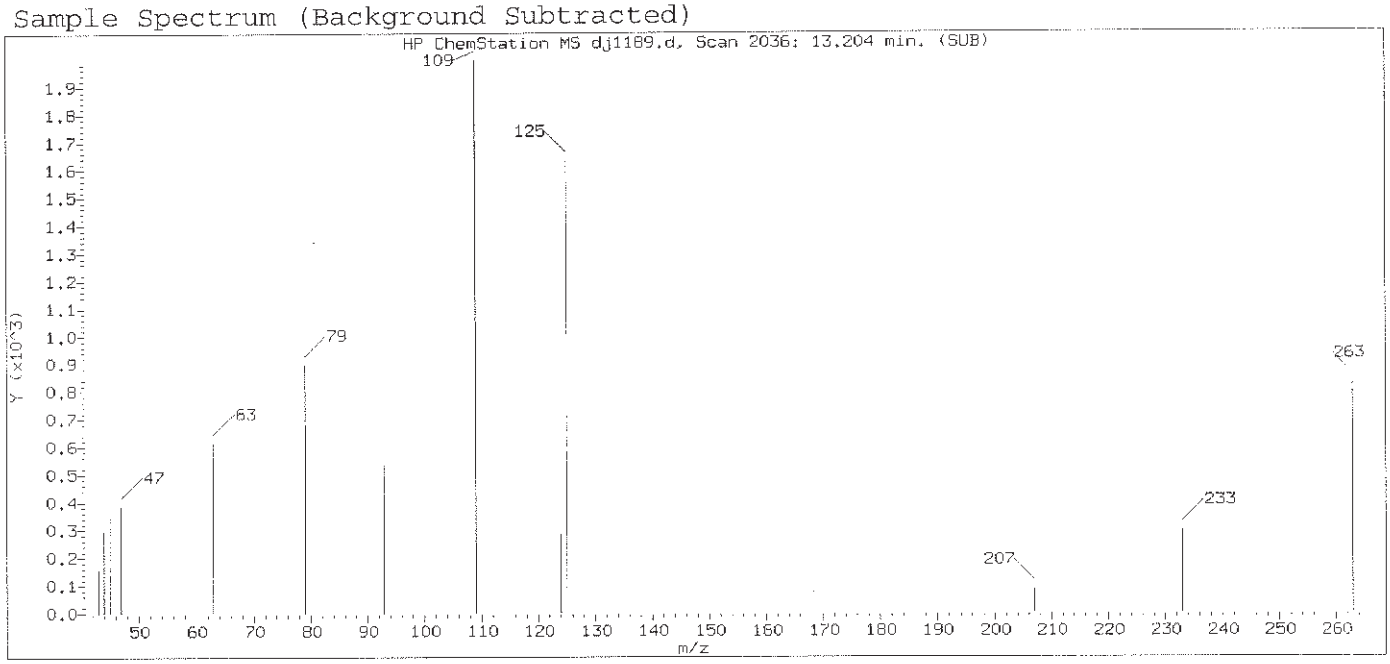
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

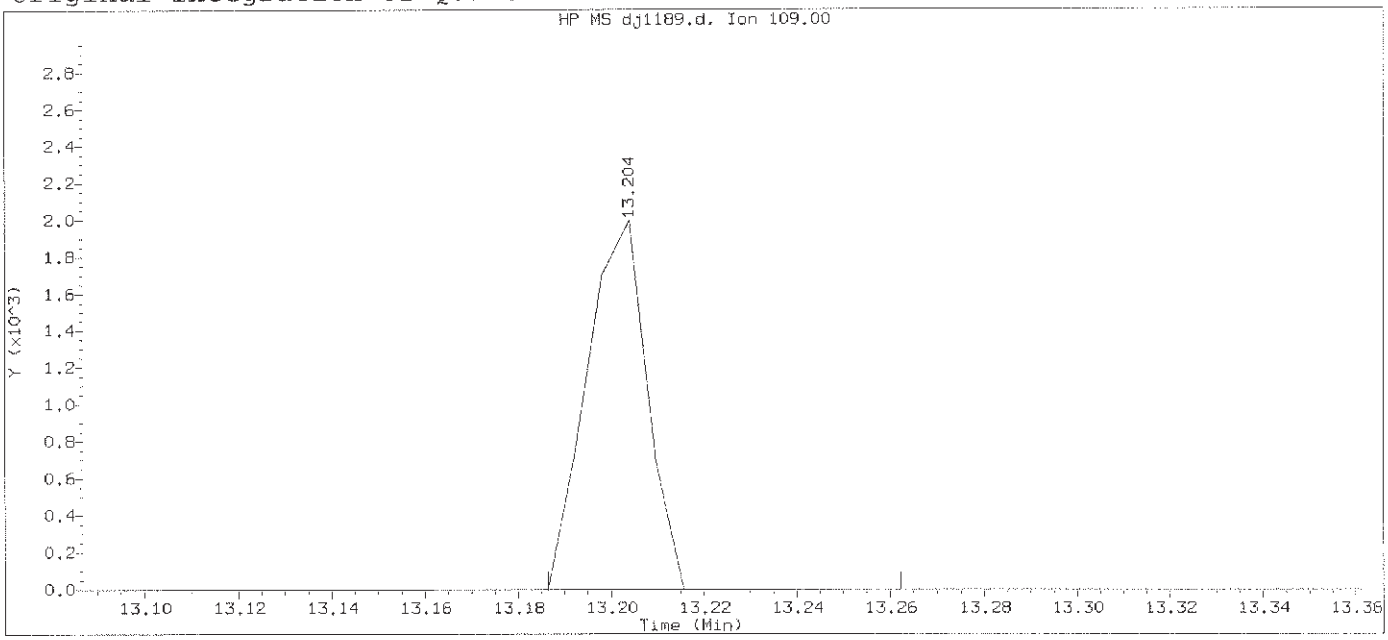
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2036		
Retention Time (minutes)	: 13.204		
Quant Ion	: 109.00		
Area	: 1786		
On-column Amount (ng/ul)	: 0.1346		
Integration start scan	: 2032	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

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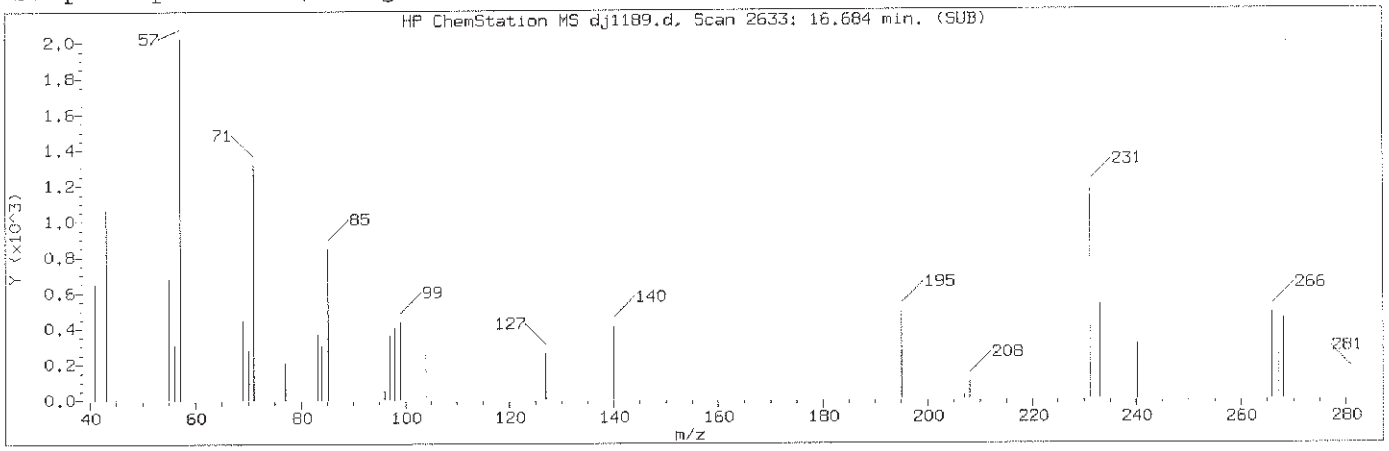
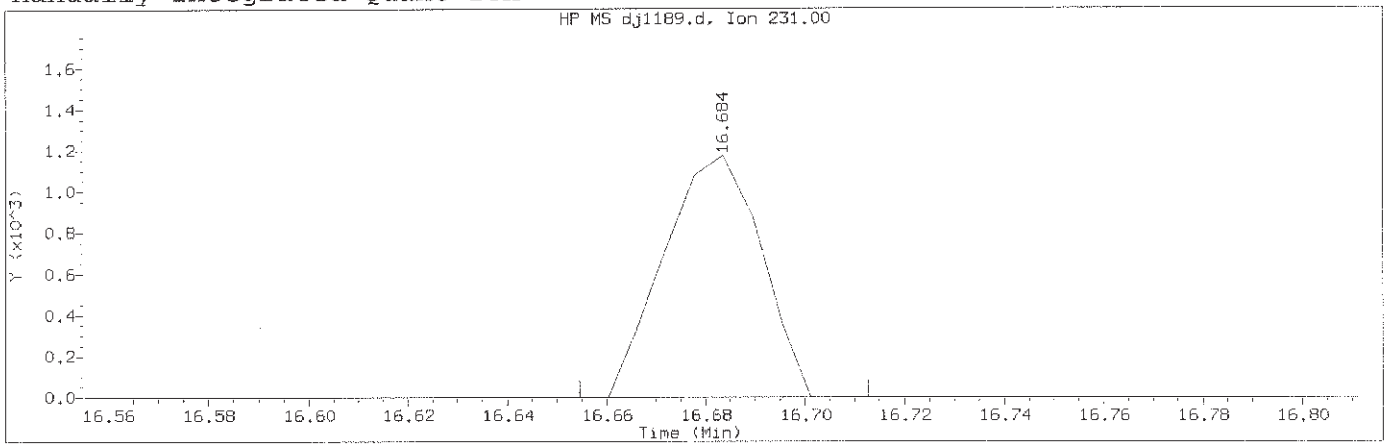
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 160		
Compound Name	: 4,4'-Methylenebis(2-Chloroanil		
Scan Number	: 2633		
Retention Time (minutes)	: 16.684		
Quant Ion	: 231.00		
Area (flag)	: 1582M		
On-Column Amount (ng/ul)	: 0.0544		
Integration start scan	: 2627	Integration stop scan:	2637
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

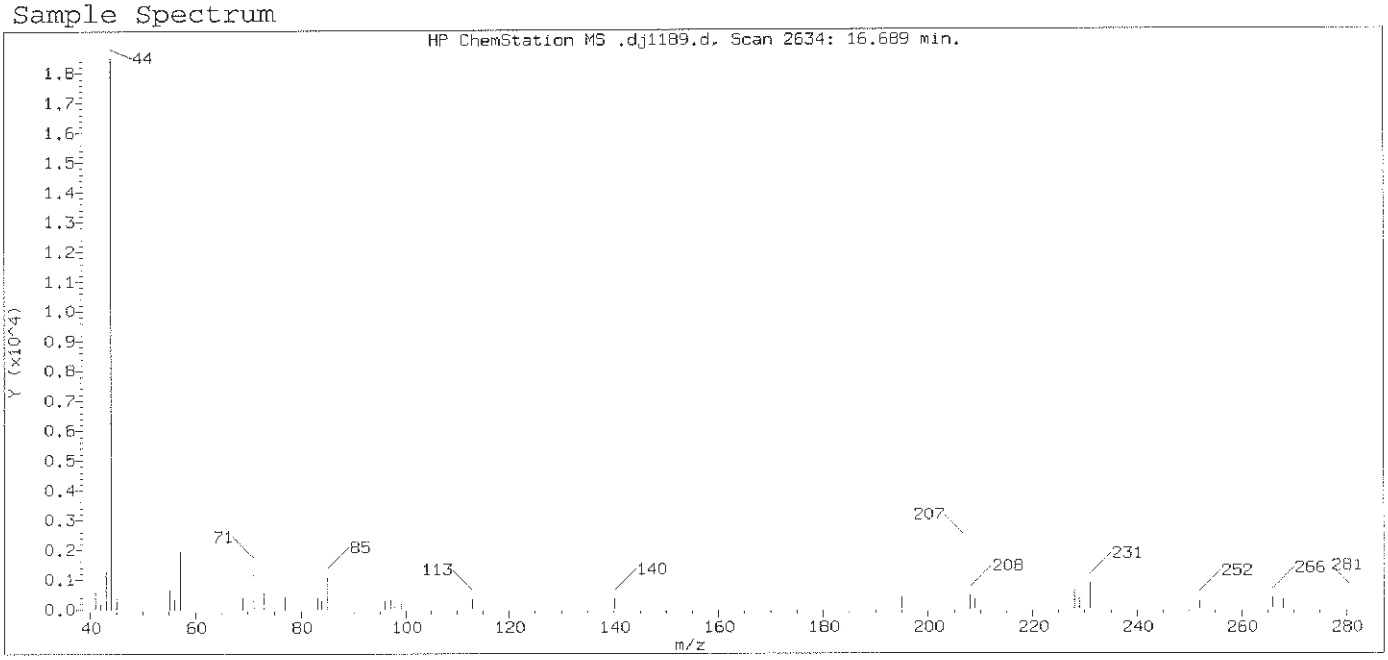
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

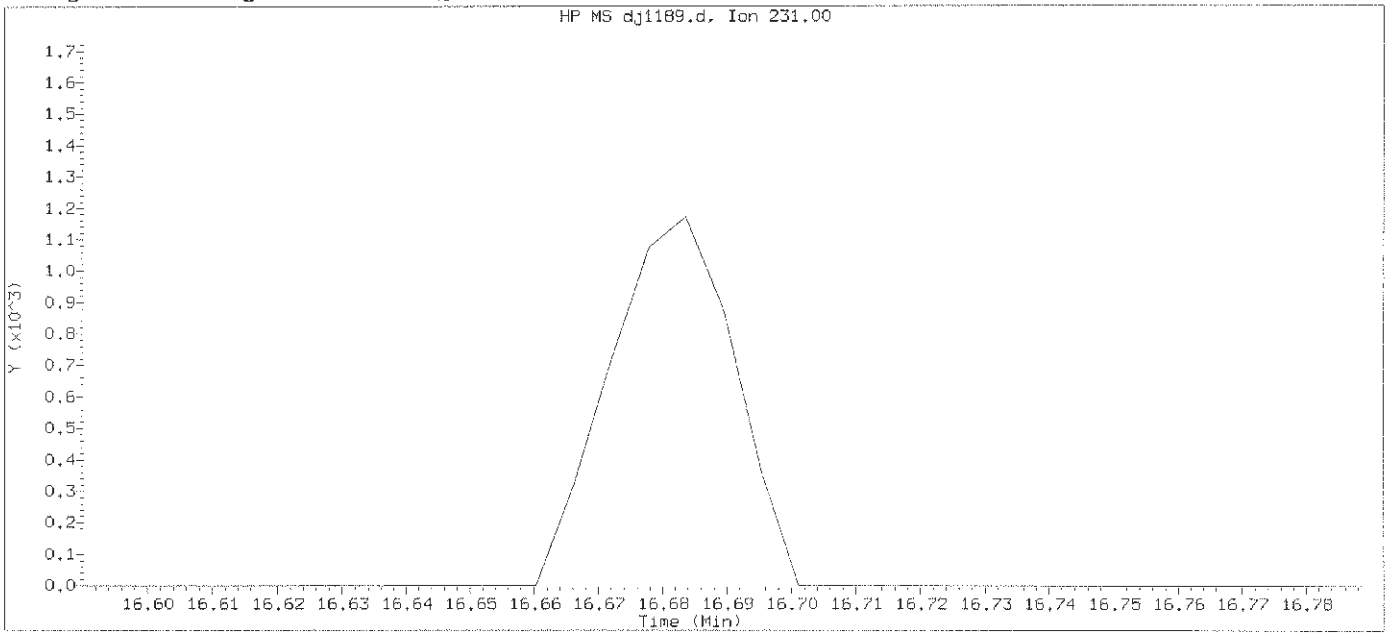
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



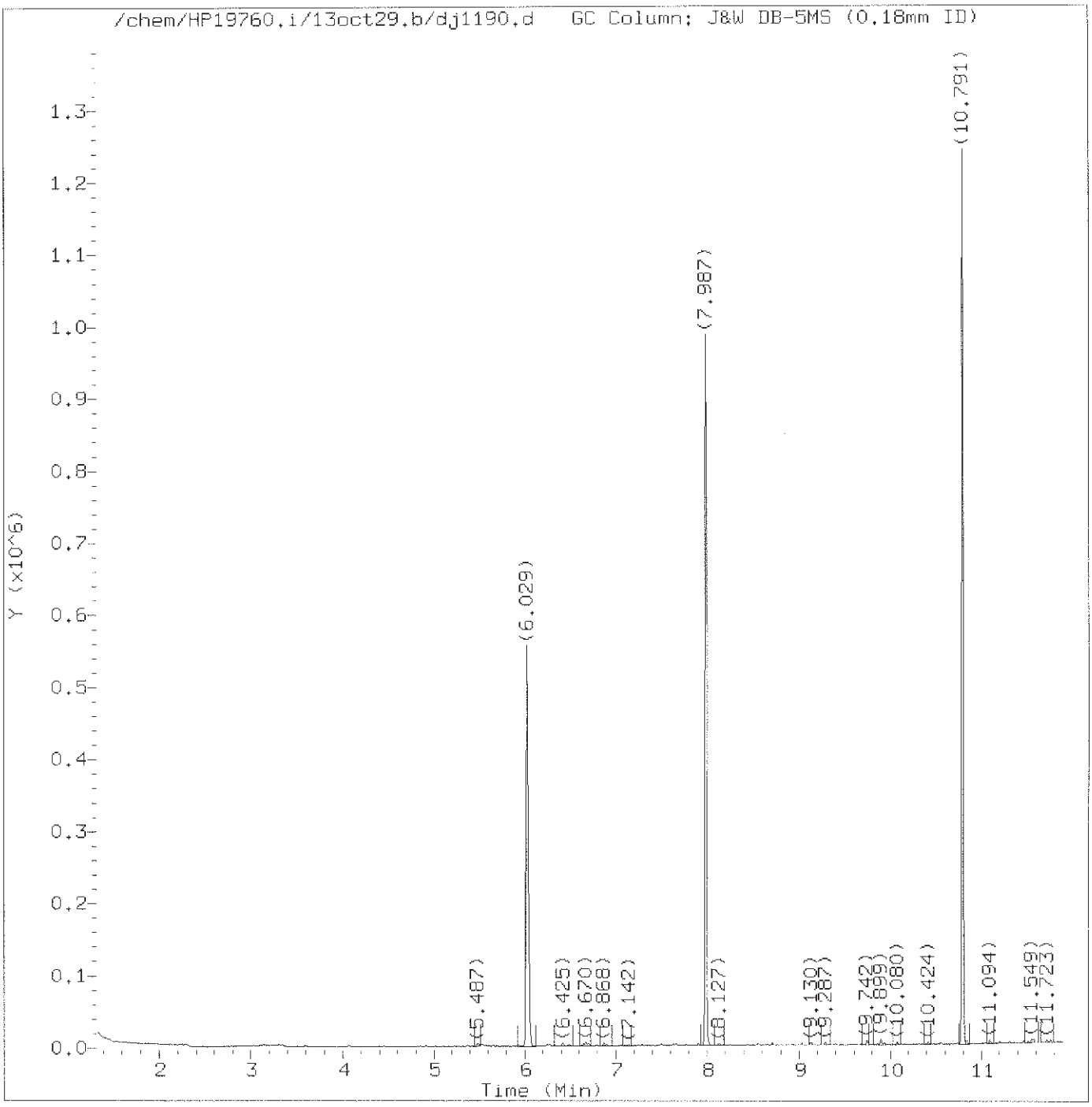
Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number : 160
Compound Name : 4,4'-Methylenebis(2-Chloroanil
Expected RT (minutes) : 16.689
Quant Ion : 231.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

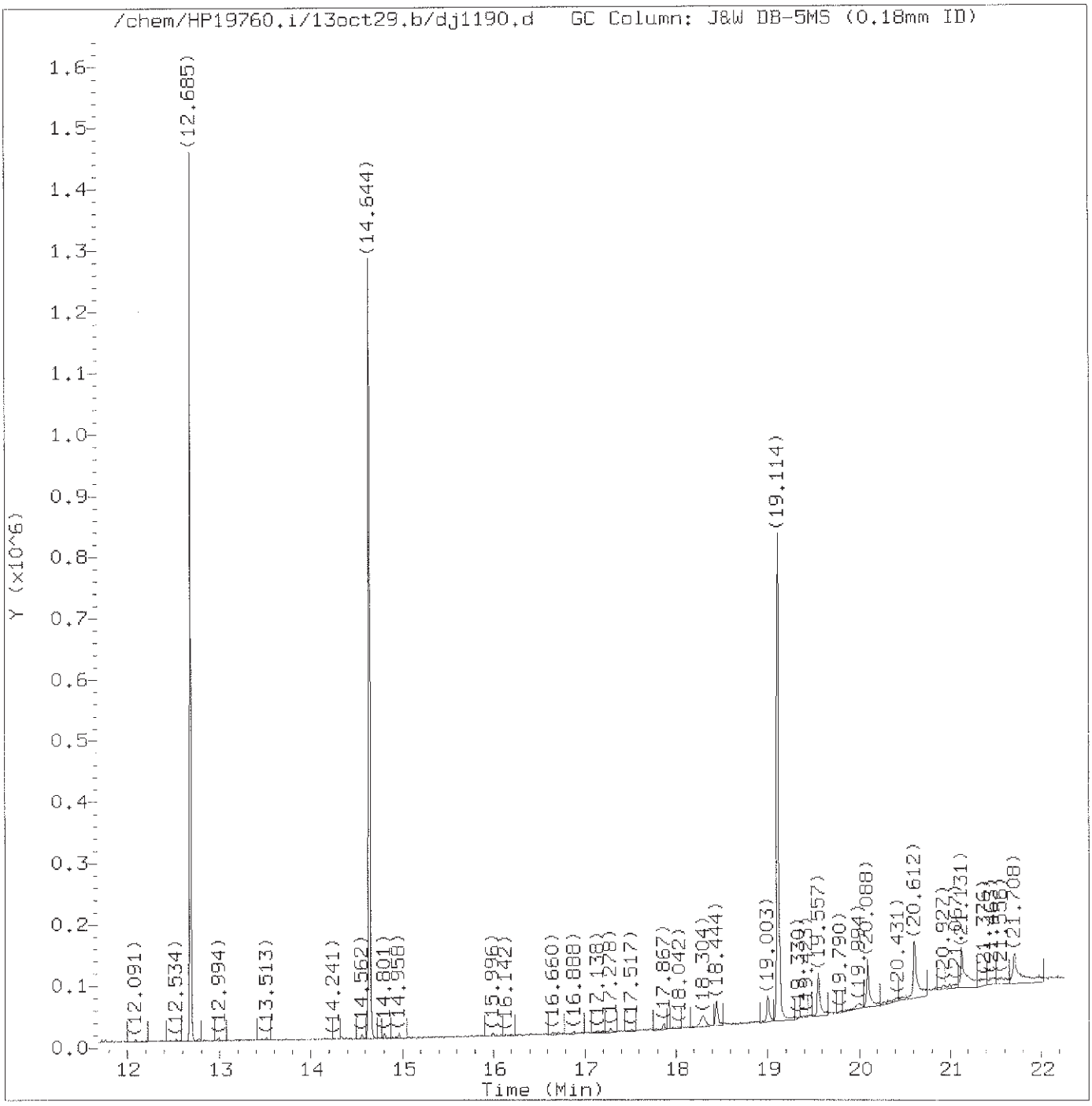
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

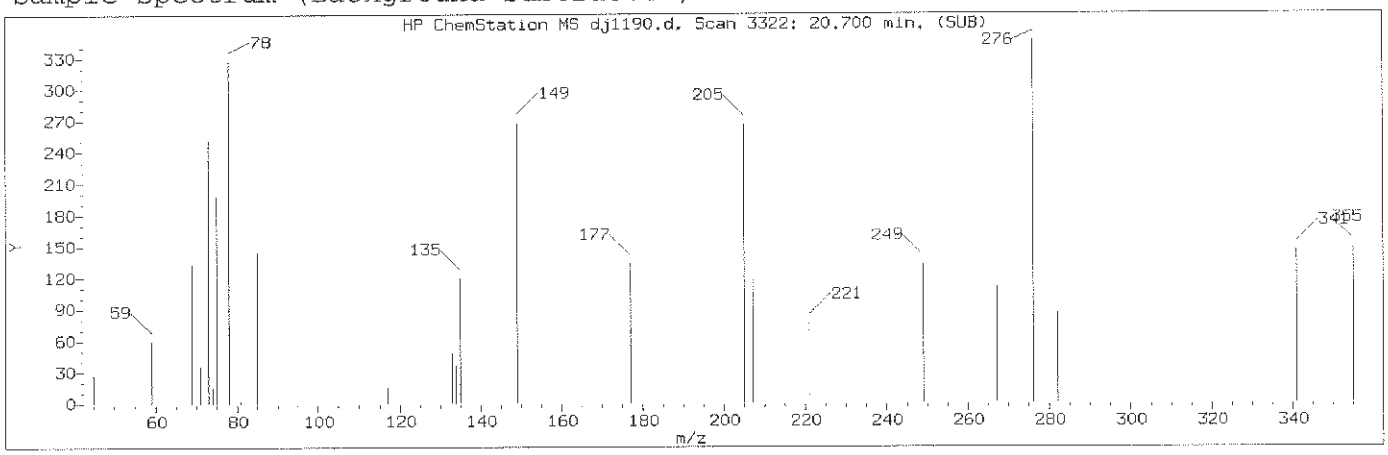
Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.065	112	1215	0.030
12)$Phenol-d5	(1)	5.487	99	2471	0.044
13)$Phenol-d6	(1)	5.487	99	2471	0.044
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	137980	5.000
36)$Nitrobenzene-d5	(2)	6.868	82	1959	0.040
52)*Naphthalene-d8	(2)	7.987	136	529711	5.000
53) Naphthalene	(2)	8.022	128	3010	0.027
65) 2-Methylnaphthalene	(2)	9.130	142	1743	0.023
66) 1-Methylnaphthalene	(2)	9.287	142	1683	0.025
72)$2-Fluorobiphenyl	(3)	9.742	172	3786	0.051
90) Acenaphthylene	(3)	10.558	152	1902	0.019
92)*Acenaphthene-d10	(3)	10.791	164	297690	5.000
93) Acenaphthene	(3)	10.838	153	1795	0.026
103) Fluorene	(3)	11.549	166	1636	0.021
112)$2,4,6-Tribromophenol	(3)	11.840	330	122	0.016
122) Hexachlorobenzene	(4)	12.207	284	556	0.028
130)*Phenanthrene-d10	(4)	12.685	188	507726	5.000
131) Phenanthrene	(4)	12.714	178	3004	0.027
134) Anthracene	(4)	12.778	178	2321	0.021
142) Fluoranthene	(4)	14.335	202	2459	0.019
145)*Pyrene-d10	(5)	14.644	212	618065	5.000
146) Pyrene	(5)	14.667	202	4157	0.032
149)$Terphenyl-d14	(5)	14.958	244	4822	0.063
158) Benzo(a)anthracene	(5)	16.660	228	1516	0.014
161) Chrysene	(5)	16.719	228	2198	0.020
168) Benzo(b)fluoranthene	(6)	18.502	252	1711	0.018
170) Benzo(k)fluoranthene	(6)	18.549	252	2204	0.023
171) Benzo(a)pyrene	(6)	19.021	252	2994	0.034
172)*Perylene-d12	(6)	19.114	264	408848	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.700	276	333M	0.004
177) Dibenz(a,h)anthracene	(6)	20.746	278	250M	0.004
178) Benzo(g,h,i)perylene	(6)	21.073	276	449	0.007

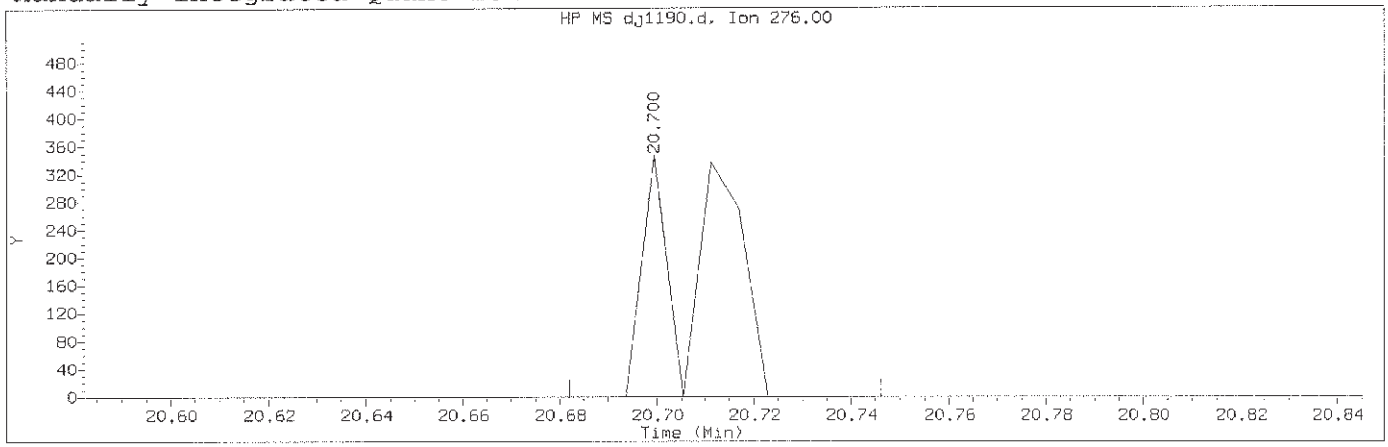
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3322		
Retention Time (minutes)	: 20.700		
Quant Ion	: 276.00		
Area (flag)	: 333M		
On-Column Amount (ng/ul)	: 0.0043		
Integration start scan	: 3318	Integration stop scan:	3329
Y at integration start	: 0	Y at integration end:	0

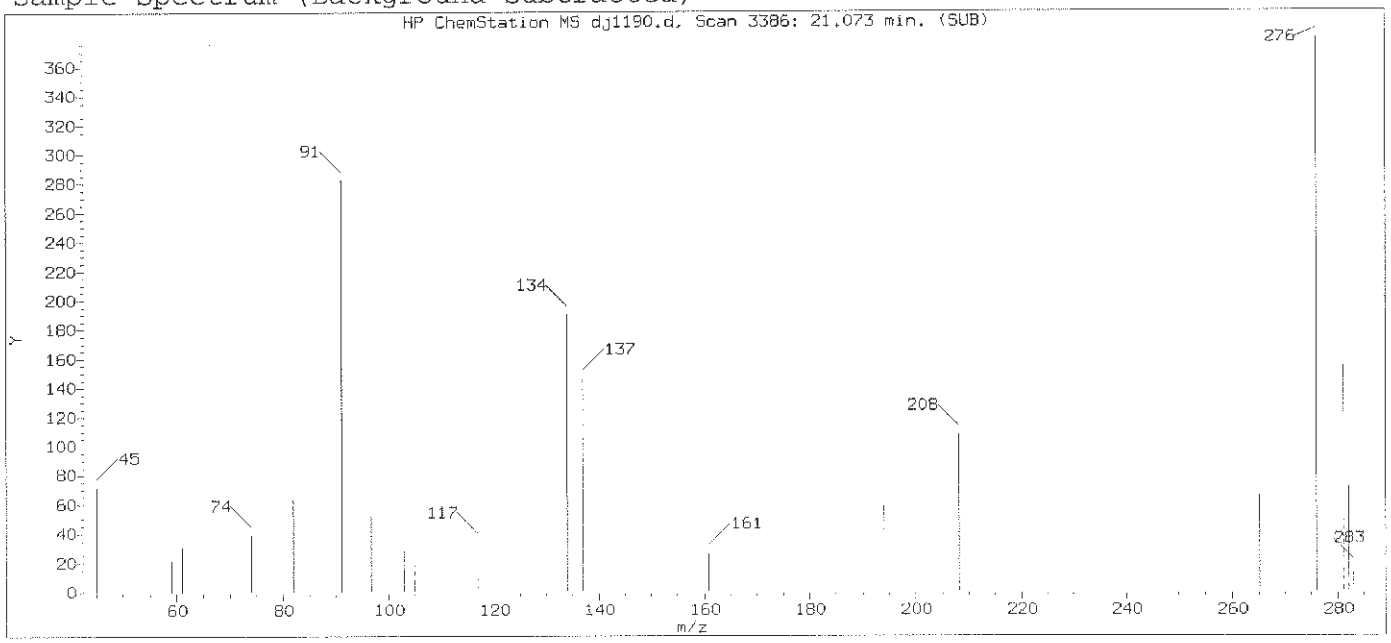
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

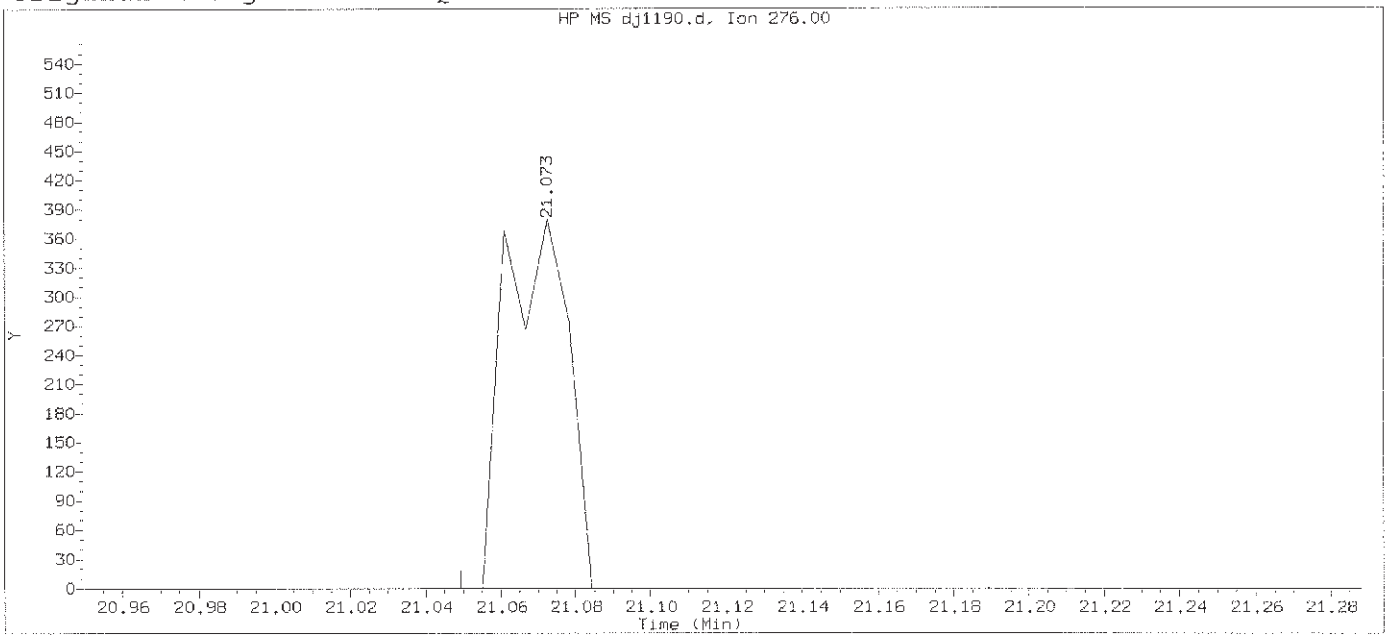
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

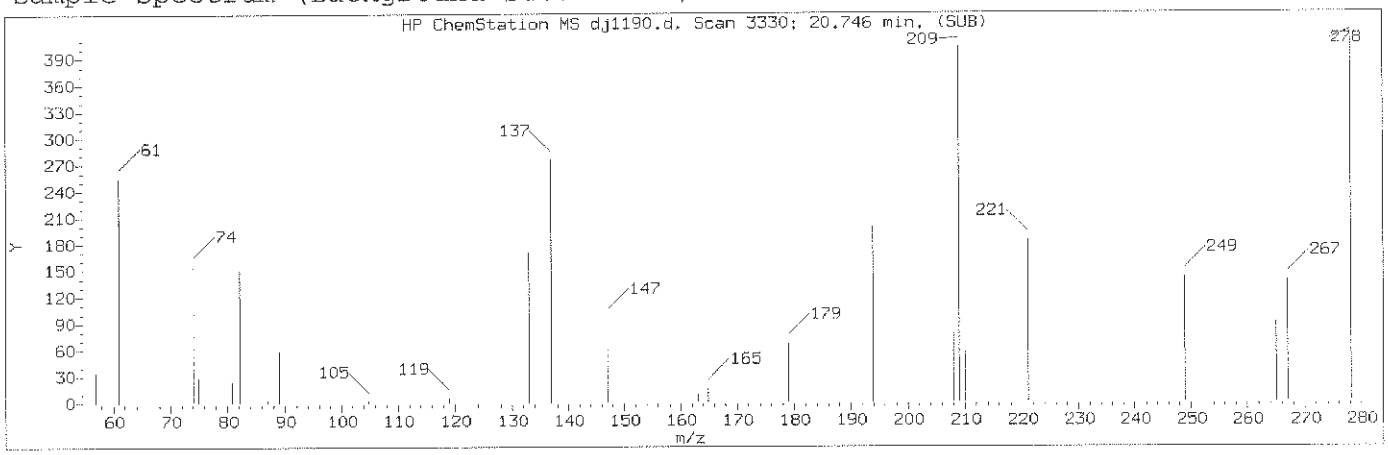
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

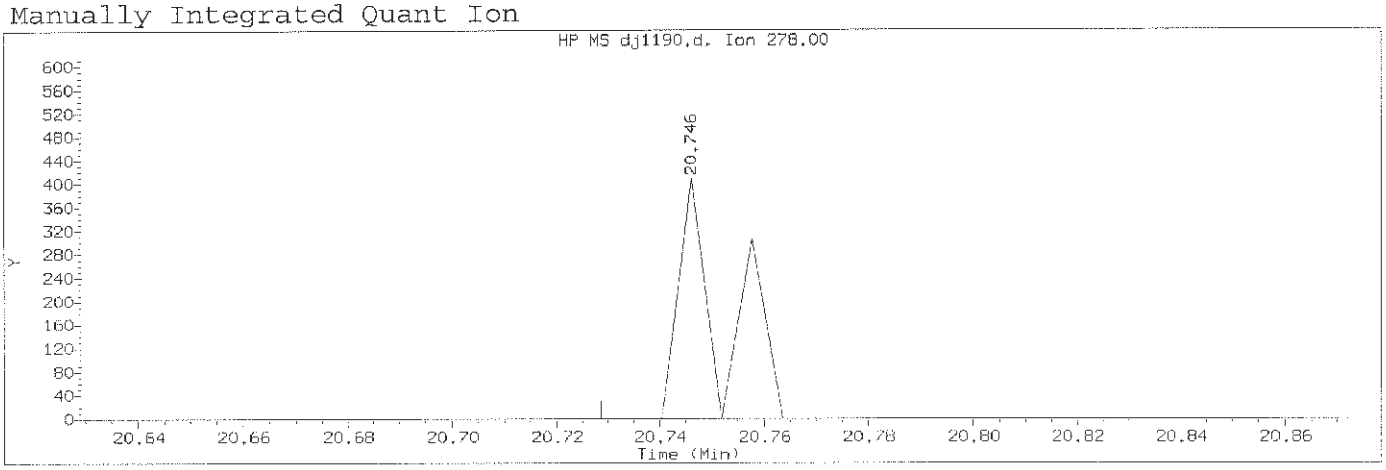
Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3386		
Retention Time (minutes)	: 21.073		
Quant Ion	: 276.00		
Area	: 449		
On-column Amount (ng/ul)	: 0.0058		
Integration start scan	: 3381	Integration stop scan:	3405
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 177		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3330		
Retention Time (minutes)	: 20.746		
Quant Ion	: 278.00		
Area (flag)	: 250M		
On-Column Amount (ng/ul)	: 0.0038		
Integration start scan	: 3326	Integration stop scan:	3334
Y at integration start	: 0	Y at integration end:	0

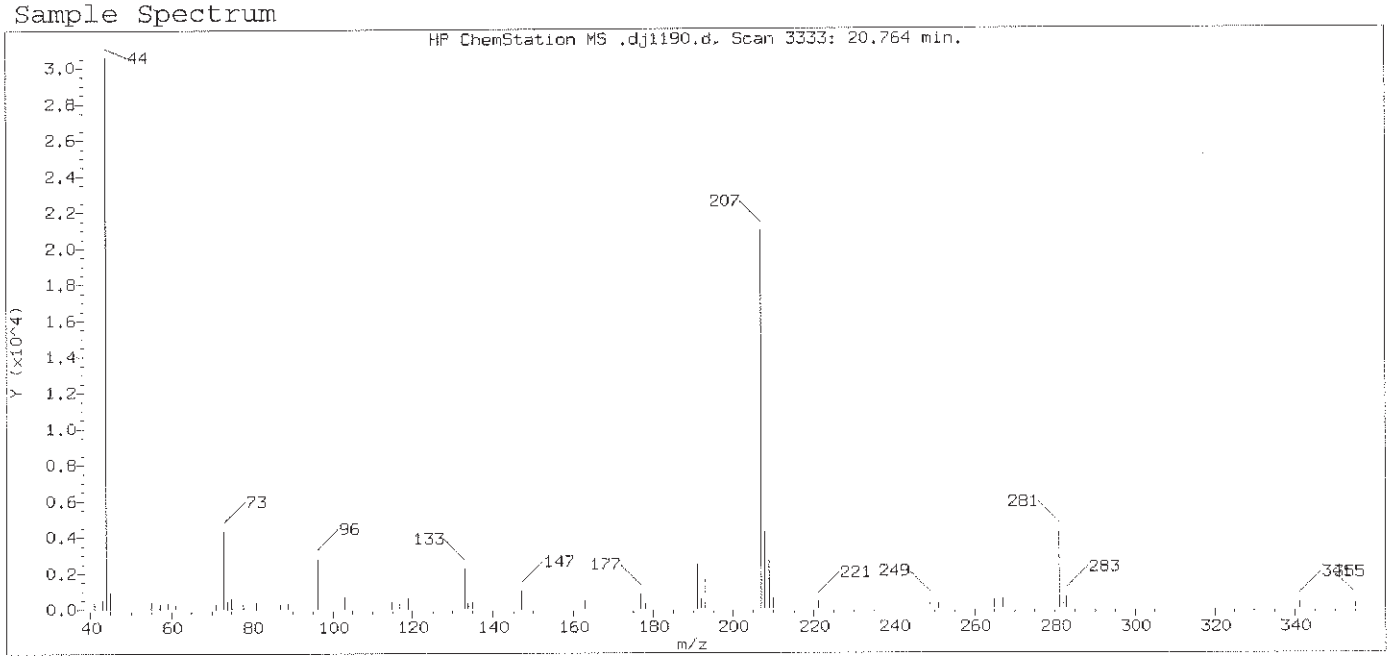
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

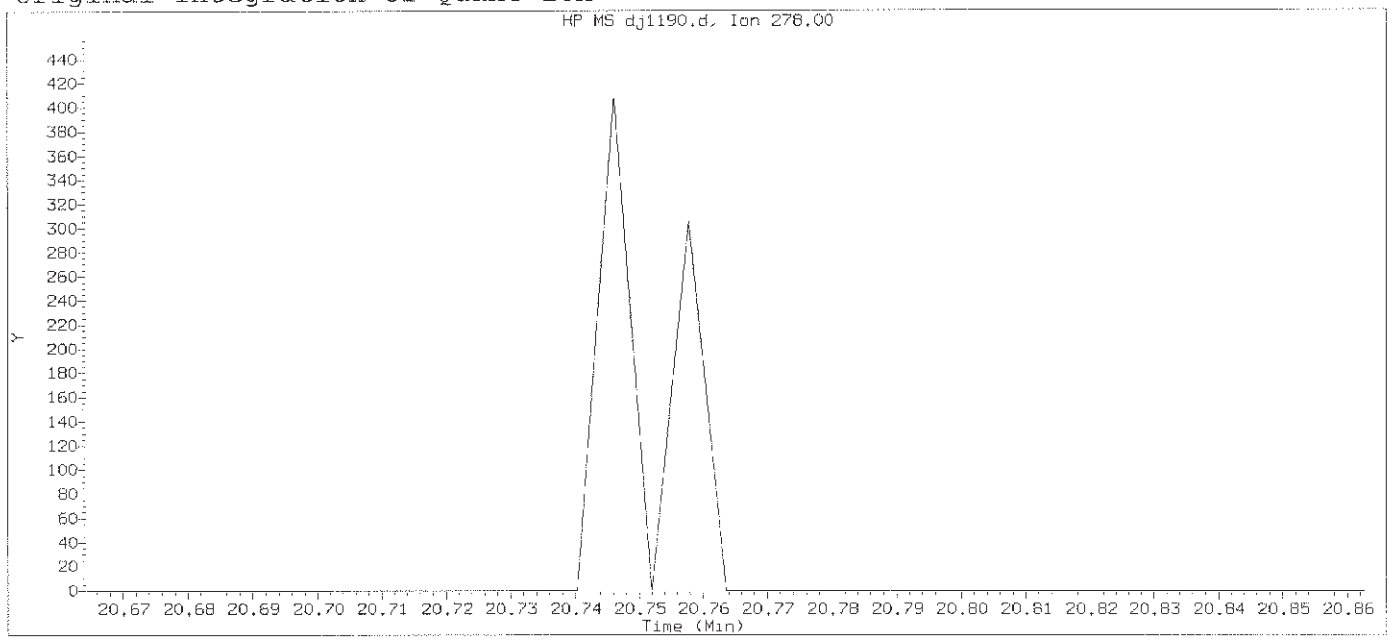
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



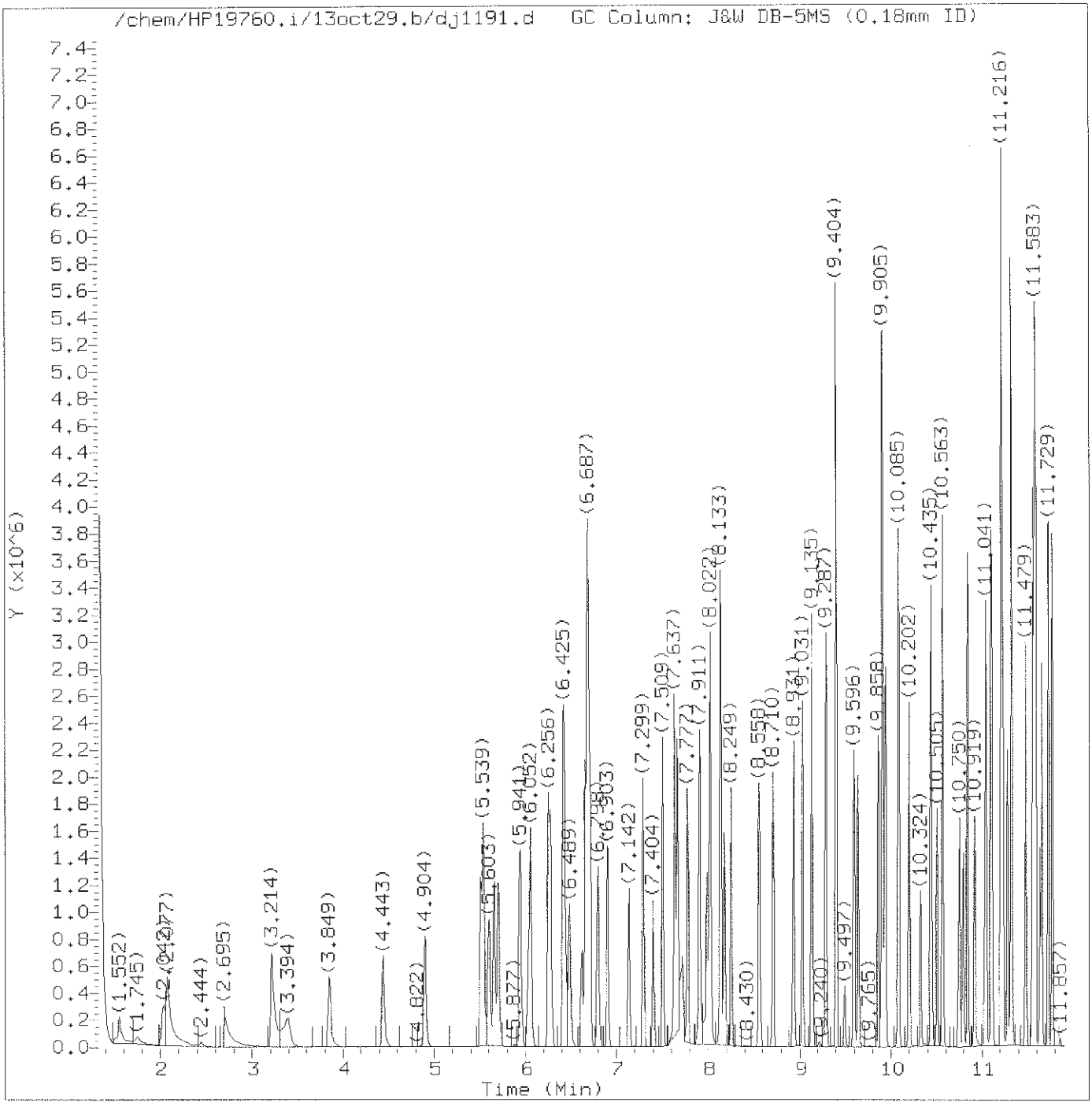
Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number : 177
Compound Name : Dibenz(a,h)anthracene
Expected RT (minutes) : 20.764
Quant Ion : 278.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

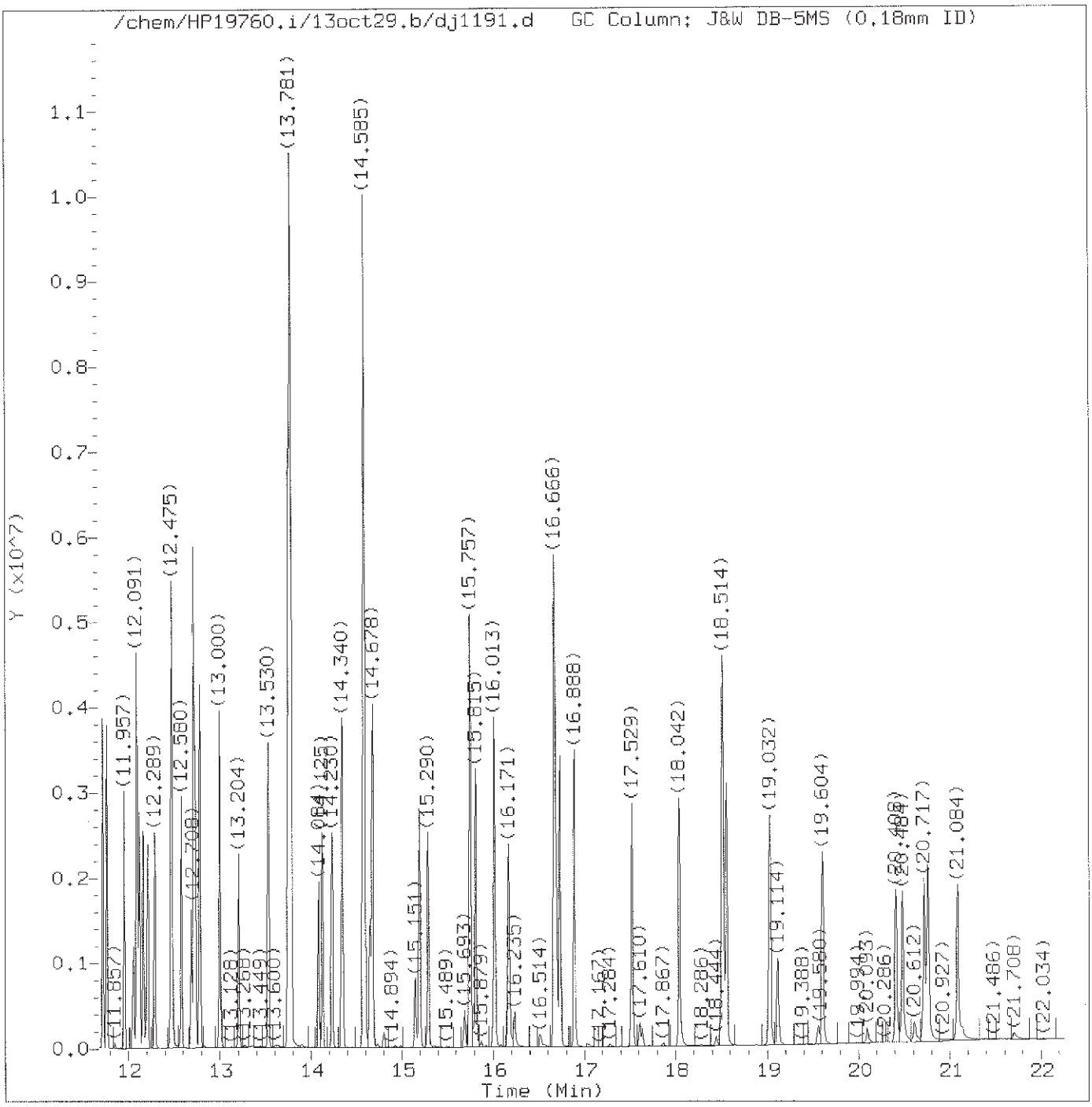
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.552	88	252866	12.813
2) N-Nitrosodimethylamine	(1)	2.030	74	458178	13.148
3) Pyridine	(1)	2.077	79	706933	11.895
4) 2-Picoline	(1)	3.214	93	787682	12.583
5) N-Nitrosomethylethylamine	(1)	3.394	88	348814	12.966
6) Methyl methanesulfonate	(1)	3.849	80	419860	13.652
8) N-Nitrosodiethylamine	(1)	4.443	102	332186	12.856
10) Ethyl methanesulfonate	(1)	4.904	109	325219	13.053
14) Phenol	(1)	5.510	94	934654	12.628
15) Aniline	(1)	5.539	93	1179304	12.939
16) bis(2-Chloroethyl)ether	(1)	5.662	93	731156	12.520
17) 2-Chlorophenol	(1)	5.702	128	593017	12.953
18) 1,3-Dichlorobenzene	(1)	5.941	146	627361	12.740
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	156790	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	633986	12.728
23) Benzyl alcohol	(1)	6.256	108	422533	13.049
24) 1,2-Dichlorobenzene	(1)	6.279	146	590009	12.665
25) Indene	(1)	6.419	115	936311	11.894
26) 2-Methylphenol	(1)	6.431	108	581856	12.664
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	859230	11.854
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	859230	11.854
29) N-Nitrosopyrrolidine	(1)	6.623	100	345261	13.142
30) Acetophenone	(1)	6.658	105	889098	12.376
33) 4-Methylphenol	(1)	6.682	108	645718	12.580
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	514957	12.454
32) N-Nitrosomorpholine	(1)	6.693	56	402202	12.335
34) o-Toluidine	(1)	6.711	106	984993	12.434
35) Hexachloroethane	(1)	6.798	117	266754	12.670
37) Nitrobenzene	(2)	6.903	77	736958	12.456
39) N-Nitrosopiperidine	(2)	7.142	114	323608	13.343
40) Isophorone	(2)	7.299	82	1329192	13.182
42) 2-Nitrophenol	(2)	7.404	139	274990	13.546
45) 2,4-Dimethylphenol	(2)	7.509	107	638586	12.945
46) O,O,O-triethylphosphorothioate	(2)	7.637	198	280555	12.830
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	841486M	12.787
47) Benzoic acid	(2)	7.725	105	835582	22.138
49) 2,4-Dichlorophenol	(2)	7.777	162	468581	13.467
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	515870	13.271
52)*Naphthalene-d8	(2)	7.993	136	605686	5.000
53) Naphthalene	(2)	8.022	128	1638400	12.688

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 4-Chloroaniline	(2)	8.133	127	706302	13.200
56) 2,6-Dichlorophenol	(2)	8.139	162	448488	13.423
57) Hexachloropropene	(2)	8.174	213	348607	14.210
58) Hexachlorobutadiene	(2)	8.255	225	295415	13.037
60) Quinoline	(2)	8.558	129	1084667	12.679
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	479758	12.002
63) 4-Chloro-3-methylphenol	(2)	8.931	107	554160	13.263
64) Safrole	(2)	9.031	162	441137	13.422
65) 2-Methylnaphthalene	(2)	9.135	142	1080755	12.558
66) 1-Methylnaphthalene	(2)	9.287	142	1020104	13.062
67) Hexachlorocyclopentadiene	(3)	9.404	237	624773	32.204
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	514999	12.529
70) 2,4,6-Trichlorophenol	(3)	9.596	196	341304	13.159
71) 2,4,5-Trichlorophenol	(3)	9.643	196	353683	13.198
74) Isosafrole	(3)	9.858	162	452952	13.371
75) 1,1'-Biphenyl	(3)	9.899	154	1259926	12.233
76) 2-Chloronaphthalene	(3)	9.911	162	970718	12.286
77) 1-Chloronaphthalene	(3)	9.940	162	947406	12.162
82) Diphenyl ether	(3)	10.080	170	714778	12.543
83) 2-Nitroaniline	(3)	10.091	138	330184	13.417
84) 1,4-Naphthoquinone	(3)	10.202	158	541572	15.927
85) 1,4-Dinitrobenzene	(3)	10.324	168	169392	12.462
86) Dimethylphthalate	(3)	10.435	163	1123197	12.570
87) 1,3-Dinitrobenzene	(3)	10.441	168	202814	13.224
88) 2,6-Dinitrotoluene	(3)	10.505	165	267388	13.504
90) Acenaphthylene	(3)	10.563	152	1624852	13.548
91) 3-Nitroaniline	(3)	10.750	138	308367	13.567
92)*Acenaphthene-d10	(3)	10.797	164	354681	5.000
93) Acenaphthene	(3)	10.843	153	1017034	12.327
94) 2,4-Dinitrophenol	(3)	10.919	184	282939	24.188
96) 4-Nitrophenol	(3)	11.036	109	193631	13.358
95) Pentachlorobenzene	(3)	11.041	250	417252	12.670
97) Dibenzofuran	(3)	11.100	168	1464807	12.485
98) 2,4-Dinitrotoluene	(3)	11.117	165	346555	13.658
99) 1-Naphthylamine	(3)	11.216	143	2099655	24.619
100) 2,3,4,6-Tetrachlorophenol	(3)	11.280	232	295053	13.943
101) 2-Naphthylamine	(3)	11.321	143	2101605	24.013
102) Diethylphthalate	(3)	11.479	149	1123150	12.758
103) Fluorene	(3)	11.554	166	1192153	12.623
104) Thionazin	(3)	11.572	107	227564	11.960

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 4-Chlorophenyl-phenylether	(3)	11.583	204	580969	12.404
106) 5-Nitro-o-toluidine	(3)	11.583	152	335108	13.202
107) 4-Nitroaniline	(3)	11.595	138	301384	12.891
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	198072	12.864
109) N-Nitrosodiphenylamine	(4)	11.729	169	998356	13.286
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1479946	12.441
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	214106	12.478
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	147739	12.769
117) Diallate (peak 1)	(4)	12.091	86	543072	9.160
118) Phorate	(4)	12.096	75	853757	12.146
119) Phenacetin	(4)	12.120	108	688586	13.762
120) 4-Bromophenyl-phenylether	(4)	12.166	248	302404	12.696
121) Diallate (peak 2)	(4)	12.190	86	78461	3.102
122) Hexachlorobenzene	(4)	12.213	284	294976	12.526
123) Dimethoate	(4)	12.289	87	597488	13.017
125) Pentachlorophenol	(4)	12.464	266	224311	12.568
126) Pentachloronitrobenzene	(4)	12.475	237	150953	13.793
127) 4-Aminobiphenyl	(4)	12.481	169	1350394	14.365
129) Pronamide	(4)	12.580	173	514382	12.933
130) *Phenanthrene-d10	(4)	12.691	188	603640	5.000
131) Phenanthrene	(4)	12.720	178	1652485	12.274
133) Dinoseb	(4)	12.720	211	302962	13.114
134) Anthracene	(4)	12.784	178	1731054	12.896
135) Carbazole	(4)	13.000	167	1699126	13.079
136) Methyl parathion	(4)	13.204	109	450225	13.135
137) Di-n-butylphthalate	(4)	13.530	149	2016342	13.105
138) Parathion	(4)	13.752	109	272718	12.452
139) 4-Nitroquinoline-1-oxide	(4)	13.781	190	2735978	168.753
140) Isodrin	(4)	14.125	193	202515	12.540
142) Fluoranthene	(4)	14.340	202	2006181	13.247
144) Benzidine	(5)	14.585	184	6002081	60.477
145) *Pyrene-d10	(5)	14.649	212	773413	5.000
146) Pyrene	(5)	14.678	202	2032565	12.378
150) p-Dimethylaminoazobenzene	(5)	15.197	225	441084	13.357
151) Chlorobenzilate	(5)	15.290	139	571680	12.369
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2527546	25.931
153) Butylbenzylphthalate	(5)	15.815	149	922592	13.201
156) 2-Acetylaminofluorene	(5)	16.171	181	779791	12.604
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	645378	12.825
158) Benzo(a)anthracene	(5)	16.666	228	1876414	13.468

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

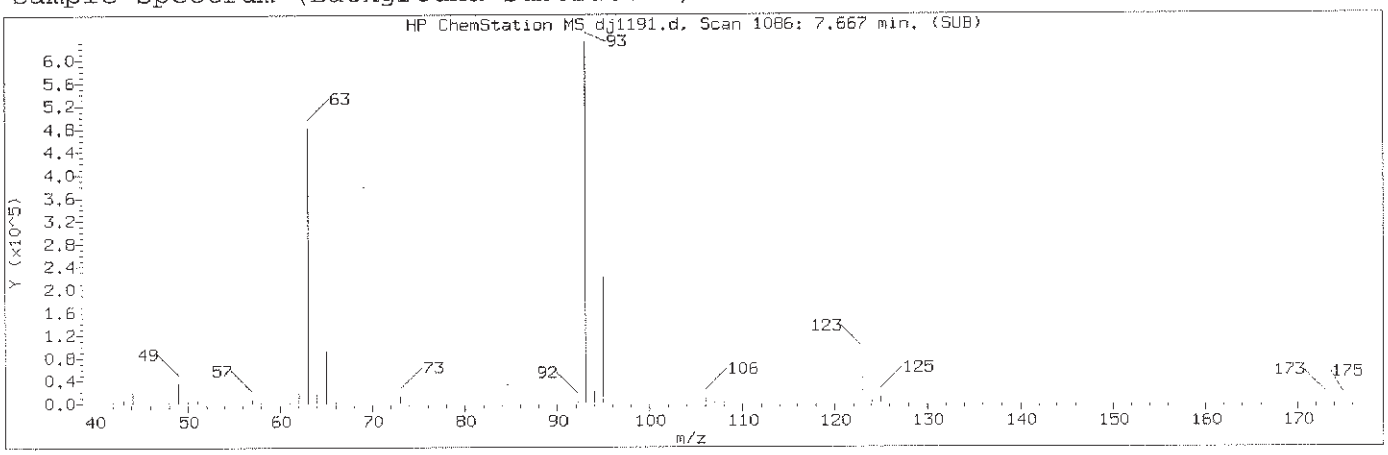
Sample Name: SSTD12.5 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160)	4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	338249	12.728
161)	Chrysene	(5)	16.730	228	1762571	12.864
162)	bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1217515	13.245
165)	6-Methylchrysene	(5)	17.529	242	1204416	12.505
166)	Di-n-octylphthalate	(6)	18.042	149	2020727	13.147
168)	Benzo(b)fluoranthene	(6)	18.508	252	1664477	13.521
169)	7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	746135	13.655
170)	Benzo(k)fluoranthene	(6)	18.560	252	1630979	13.136
171)	Benzo(a)pyrene	(6)	19.032	252	1533395	13.570
172)	*Perylene-d12	(6)	19.114	264	522609	5.000
173)	3-Methylcholanthrene	(6)	19.604	268	743613	13.829
174)	Dibenz(a,h)acridine	(6)	20.408	279	1002205	13.408
175)	Dibenz(a,j)acridine	(6)	20.484	279	1062543	13.256
176)	Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1427155	14.399
177)	Dibenz(a,h)anthracene	(6)	20.764	278	1212103	14.441
178)	Benzo(g,h,i)perylene	(6)	21.084	276	1163357	13.924
179)	Diallate TRANS/CIS	(4)	23.156	86	621533	12.237

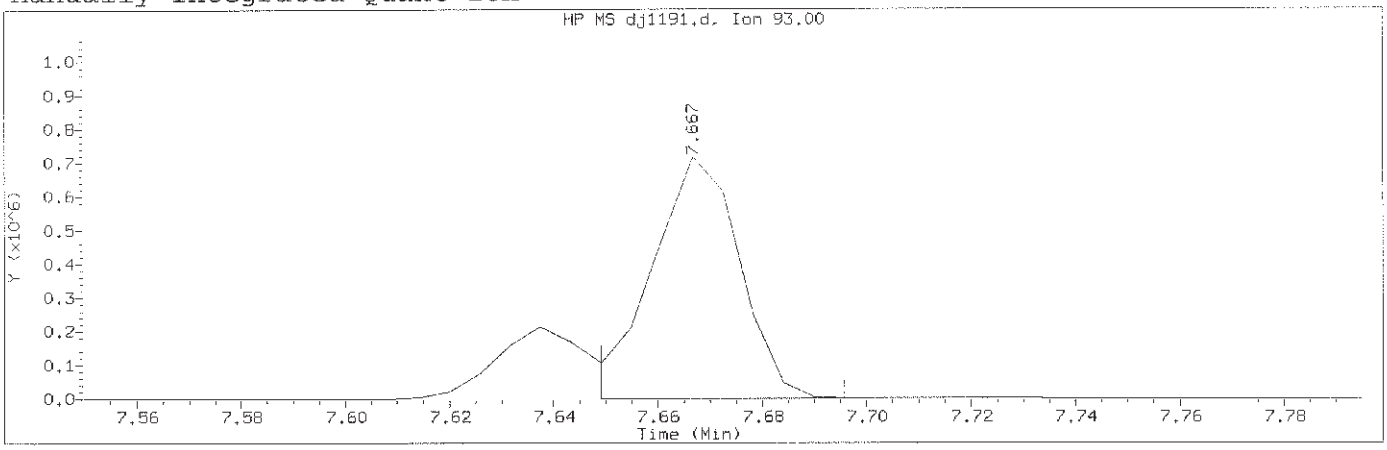
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 841486M		
On-Column Amount (ng/ul)	: 12.7873		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 675	Y at integration end:	675

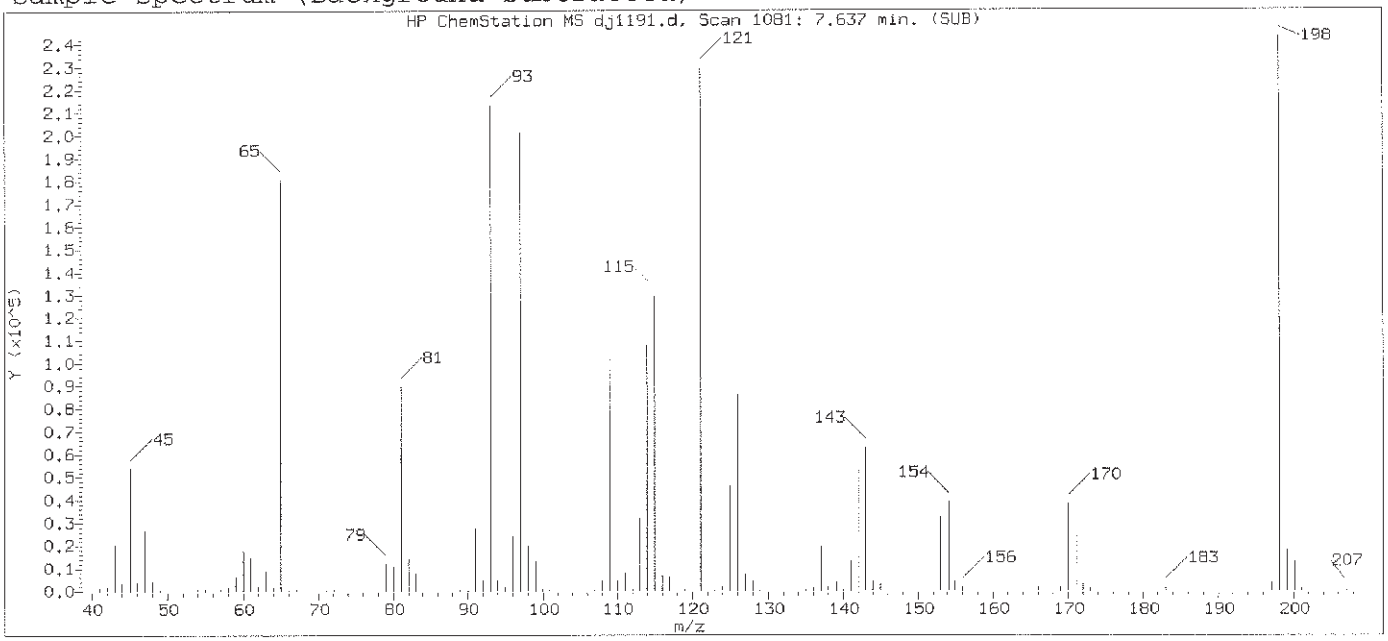
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

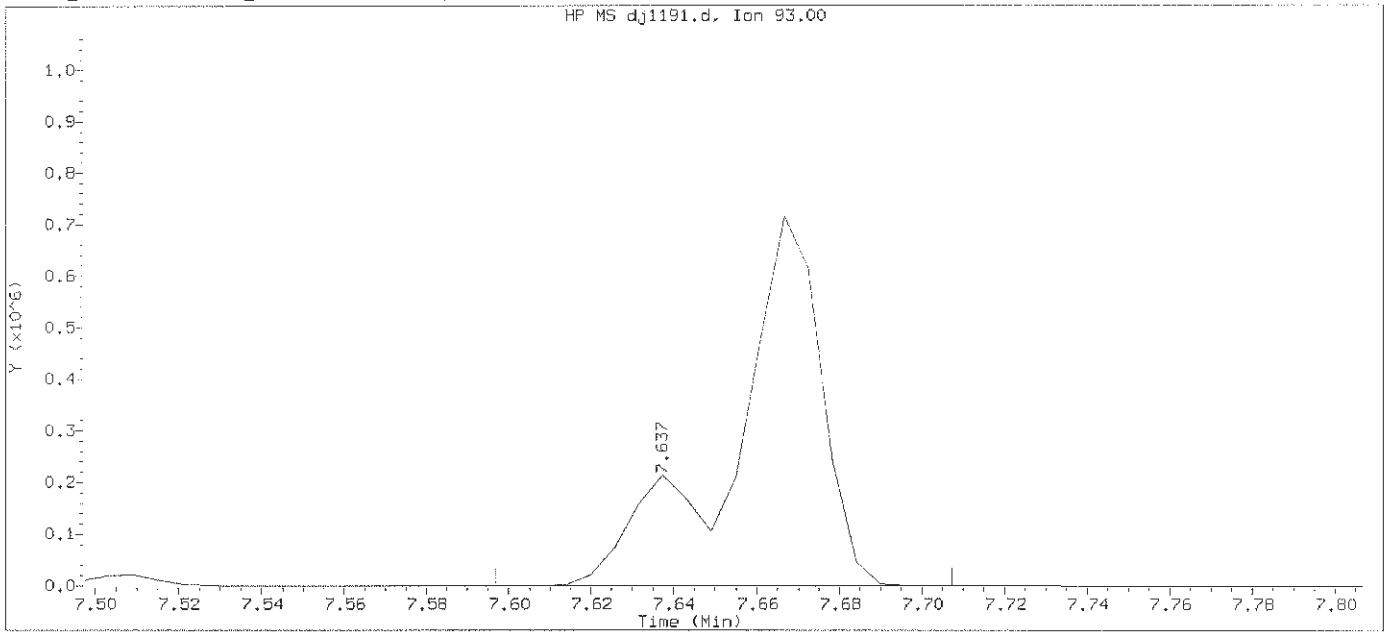
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



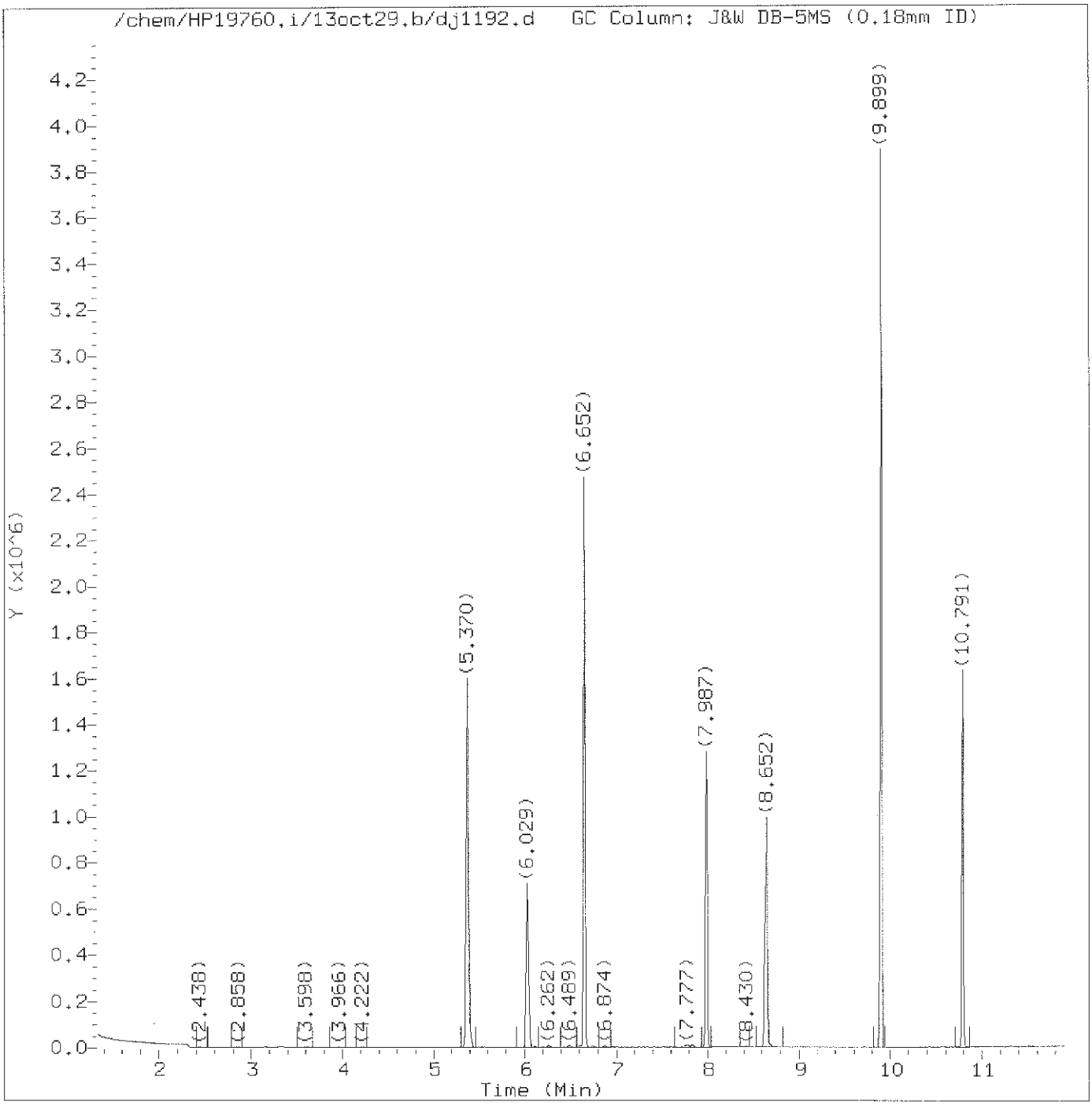
Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1081		
Retention Time (minutes)	: 7.637		
Quant Ion	: 93.00		
Area	: 1066922		
On-column Amount (ng/ul)	: 16.2131		
Integration start scan	: 1073	Integration stop scan:	1092
Y at integration start	: 0	Y at integration end:	133

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

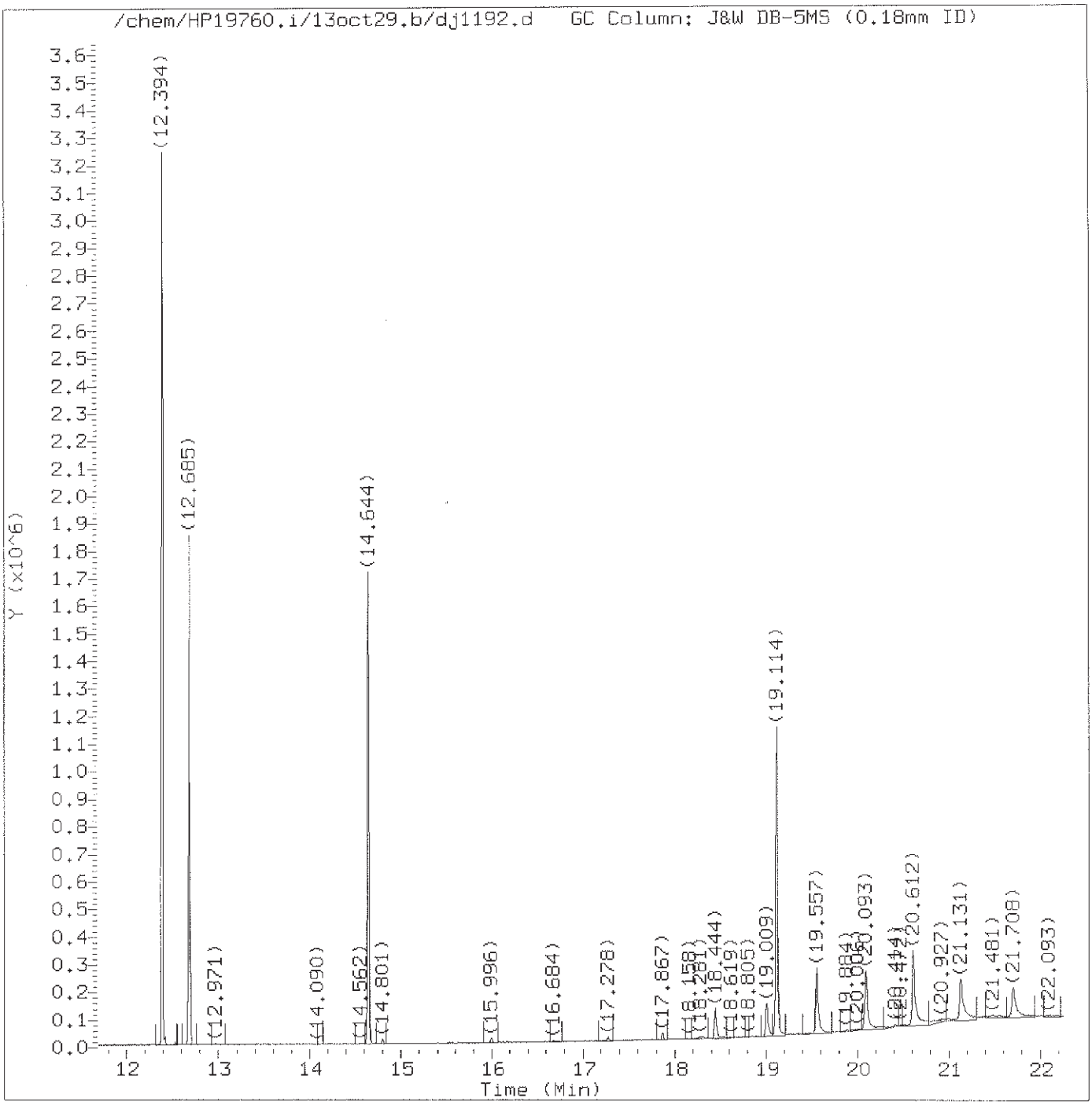
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11) Benzaldehyde	(1)	5.370	77	673572	13.169
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	179297	5.000
52)*Naphthalene-d8	(2)	7.987	136	685192	5.000
61) Caprolactam	(2)	8.652	113	230343	13.116
92)*Acenaphthene-d10	(3)	10.791	164	386805	5.000
124) Atrazine	(4)	12.394	200	366396	13.461
130)*Phenanthrene-d10	(4)	12.685	188	671597	5.000
145)*Pyrene-d10	(5)	14.644	212	826855	5.000
172)*Perylene-d12	(6)	19.114	264	563593	5.000

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP19760.i/13nov13.b/dk0380.d

Date : 13-NOV-2013 05:05

Client ID: DFTPP

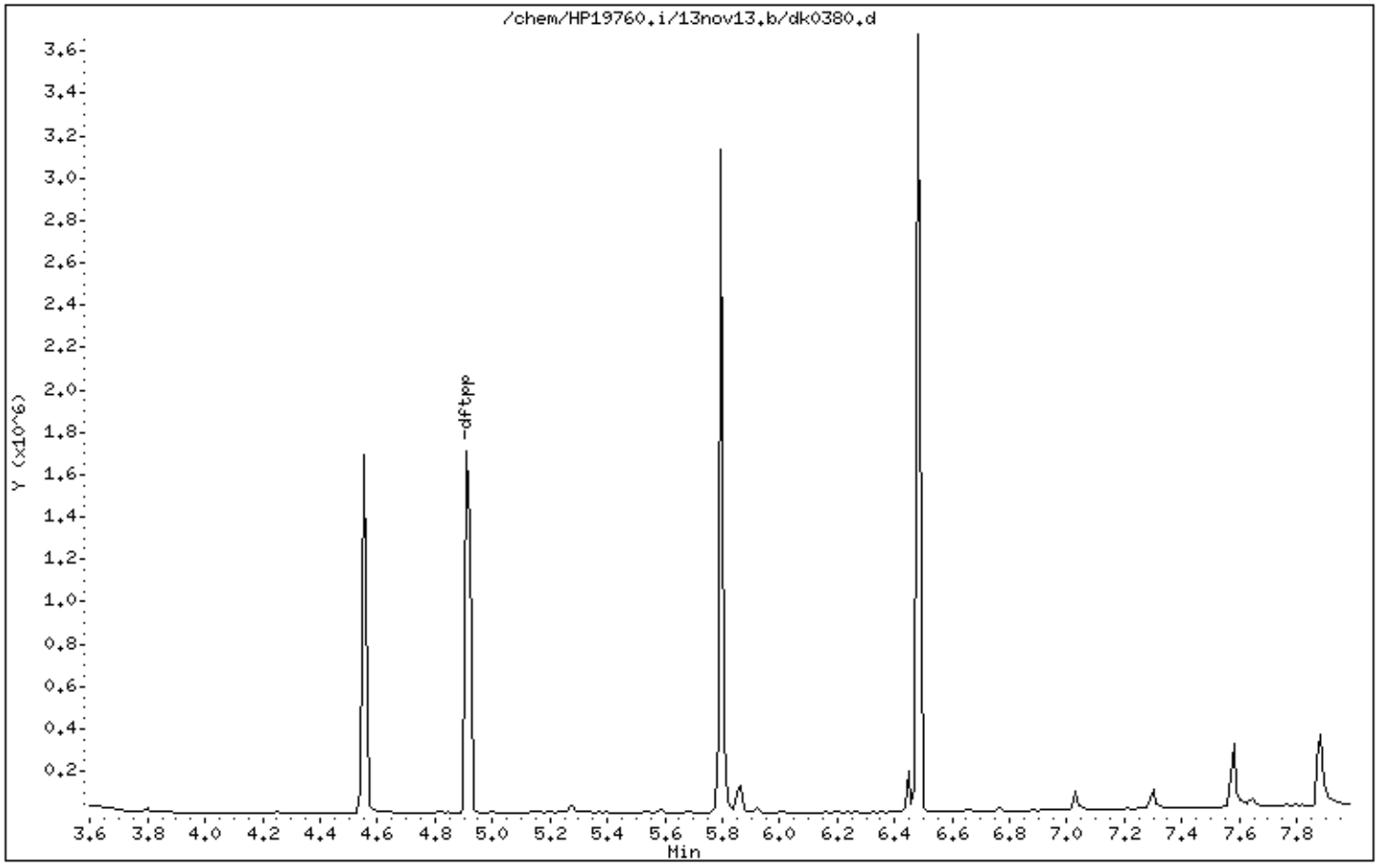
Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0380.d

Date : 13-NOV-2013 05:05

Client ID: DFTPP

Instrument: HP19760.i

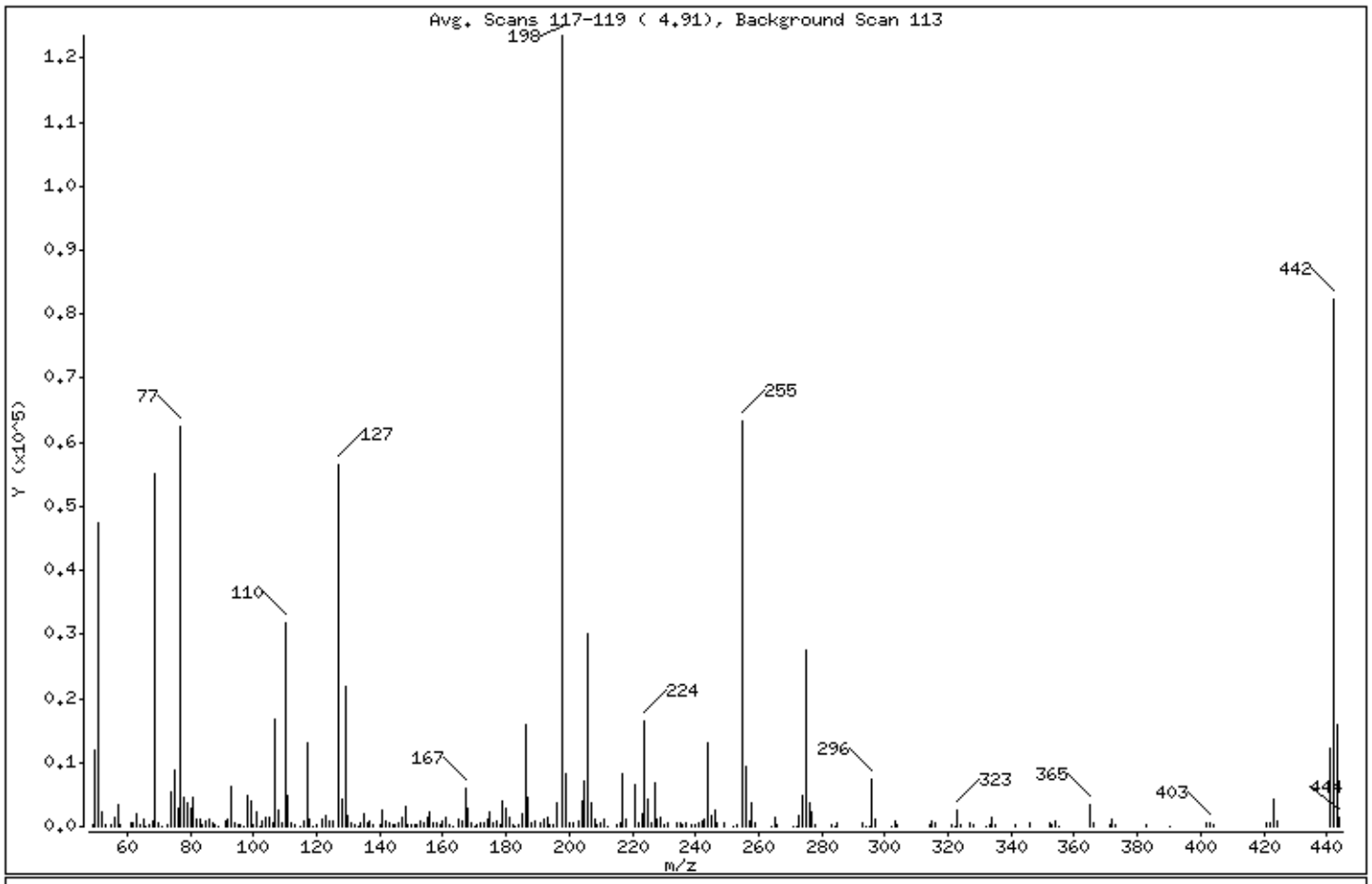
Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	38.41
68	Less than 2.00% of mass 69	0.76 (1.69)
69	Mass 69 relative abundance	44.63
70	Less than 2.00% of mass 69	0.47 (1.05)
127	40.00 - 60.00% of mass 198	45.66
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.72
441	Present, but less than mass 443	9.95
442	40.00 - 99.99% of mass 198	66.68
443	17.00 - 23.00% of mass 442	12.82 (19.22)

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 05:05

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0380.d
Spectrum: Avg. Scans 117-119 (4.91), Background Scan 113
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	289	117.00	13052	183.00	95	259.00	532
50.00	11827	118.00	1023	184.00	340	264.00	100
51.00	47448	119.00	134	185.00	1974	265.00	1420
52.00	2394	120.00	164	186.00	15896	266.00	325
53.00	205	122.00	1022	187.00	4457	271.00	84
55.00	353	123.00	1599	188.00	449	272.00	92
56.00	1341	124.00	742	189.00	983	273.00	1840
57.00	3383	125.00	782	191.00	517	274.00	4899
58.00	147	127.00	56400	192.00	1246	275.00	27632
61.00	639	128.00	4214	193.00	1422	276.00	3693
62.00	705	129.00	21744	194.00	354	277.00	2326
63.00	1966	130.00	1845	195.00	208	278.00	407
64.00	272	131.00	434	196.00	3608	283.00	286
65.00	1144	132.00	179	198.00	123528	284.00	118
66.00	120	133.00	104	199.00	8249	285.00	440
67.00	382	134.00	694	200.00	613	293.00	483
68.00	934	135.00	1920	201.00	616	294.00	90
69.00	55128	136.00	705	203.00	860	295.00	137
70.00	578	137.00	831	204.00	4034	296.00	7482
71.00	130	138.00	238	205.00	7115	297.00	1059
73.00	414	140.00	193	206.00	30240	302.00	106
74.00	5368	141.00	2626	207.00	3790	303.00	856
75.00	8788	142.00	969	208.00	1023	304.00	225
76.00	2962	143.00	634	209.00	351	314.00	379
77.00	62360	144.00	150	210.00	478	315.00	896
78.00	4408	145.00	142	211.00	1184	316.00	474
79.00	3743	146.00	491	212.00	129	321.00	199
80.00	2874	147.00	1415	215.00	360	322.00	108
81.00	4419	148.00	3127	216.00	612	323.00	2455
82.00	1065	149.00	349	217.00	8200	324.00	370
83.00	1046	150.00	208	218.00	1017	327.00	460
84.00	234	151.00	394	221.00	6454	328.00	173
85.00	726	152.00	241	222.00	521	332.00	110
86.00	1129	153.00	922	223.00	1893	333.00	159
87.00	593	154.00	619	224.00	16568	334.00	1477

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 05:05

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

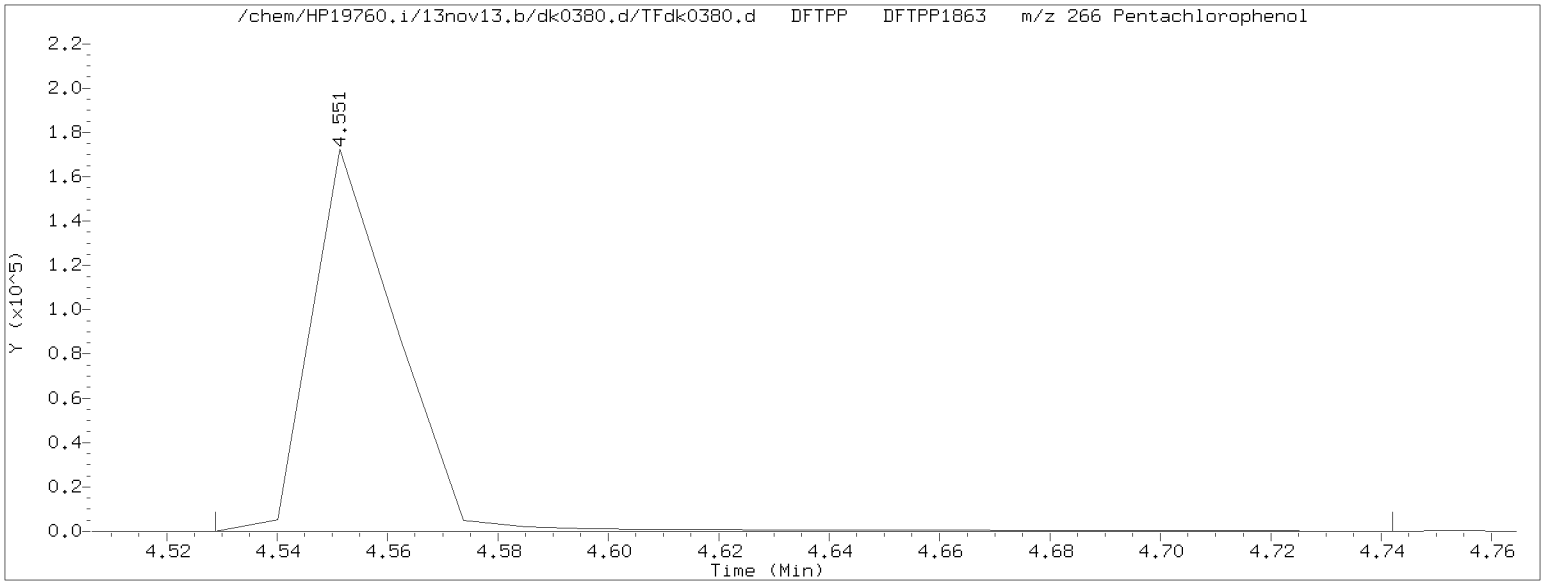
Data File: dk0380.d
Spectrum: Avg. Scans 117-119 (4.91), Background Scan 113
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	163	155.00	1514	225.00	4284	335.00	410
89.00	100	156.00	2199	226.00	441	341.00	204
91.00	894	157.00	434	227.00	6897	346.00	484
92.00	1099	158.00	541	228.00	1049	352.00	700
93.00	6375	159.00	425	229.00	1429	353.00	412
94.00	504	160.00	883	230.00	249	354.00	724
95.00	330	161.00	1331	231.00	578	355.00	109
96.00	396	162.00	363	234.00	435	365.00	3360
97.00	134	163.00	88	235.00	500	366.00	430
98.00	4688	165.00	1048	236.00	371	371.00	176
99.00	4030	166.00	825	237.00	615	372.00	1230
100.00	262	167.00	5967	239.00	280	373.00	245
101.00	2222	168.00	2884	240.00	233	383.00	238
102.00	87	169.00	526	241.00	426	390.00	102
103.00	743	170.00	127	242.00	894	402.00	429
104.00	1422	171.00	166	243.00	1023	403.00	536
105.00	1451	172.00	468	244.00	12968	404.00	175
106.00	482	173.00	609	245.00	1627	421.00	517
107.00	16880	174.00	1115	246.00	2435	422.00	534
108.00	2697	175.00	2261	247.00	480	423.00	4119
109.00	603	176.00	644	249.00	456	424.00	880
110.00	31792	177.00	937	252.00	91	441.00	12292
111.00	4861	178.00	420	253.00	279	442.00	82368
112.00	639	179.00	4033	255.00	63312	443.00	15835
113.00	153	180.00	2825	256.00	9364	444.00	1420
115.00	87	181.00	1363	257.00	716		
116.00	952	182.00	246	258.00	3788		

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

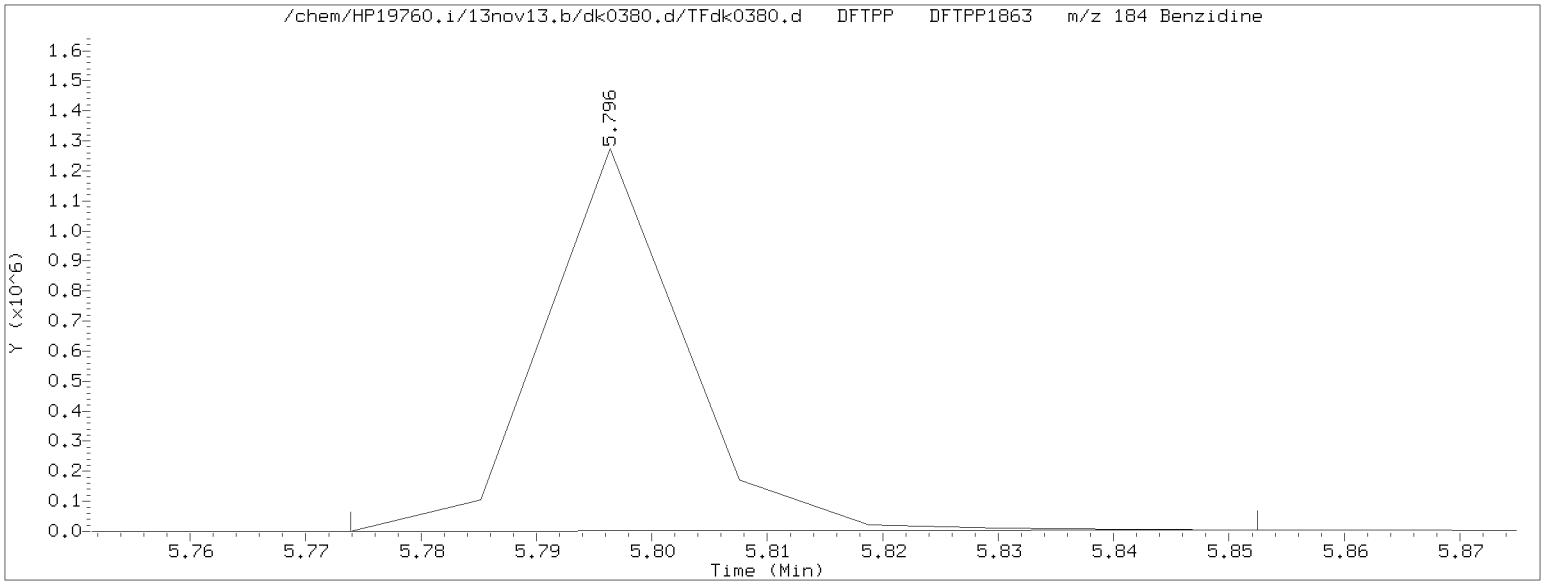
Instrument ID: HP19760.i Injection Date: 13-NOV-2013 05:05 Operator: jmg00346



Pentachlorophenol EICP peak height = 172480 EICP peak height at 10% = 17248 Pentachlorophenol EICP area = 186381

Pentachlorophenol EICP peak apex (min.) = 4.551
RT at 10% of front half of EICP (min.) = 4.541 'Front' peak width (min.) = 0.0104000000
RT at 10% of back half of EICP (min.) = 4.572 'Tailing' peak width (min.) = 0.0207000000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0207000000}{0.0104000000} = 1.990$



Benzidine EICP peak height = 1272674 EICP peak height at 10% = 127267 Benzidine EICP area = 1058287

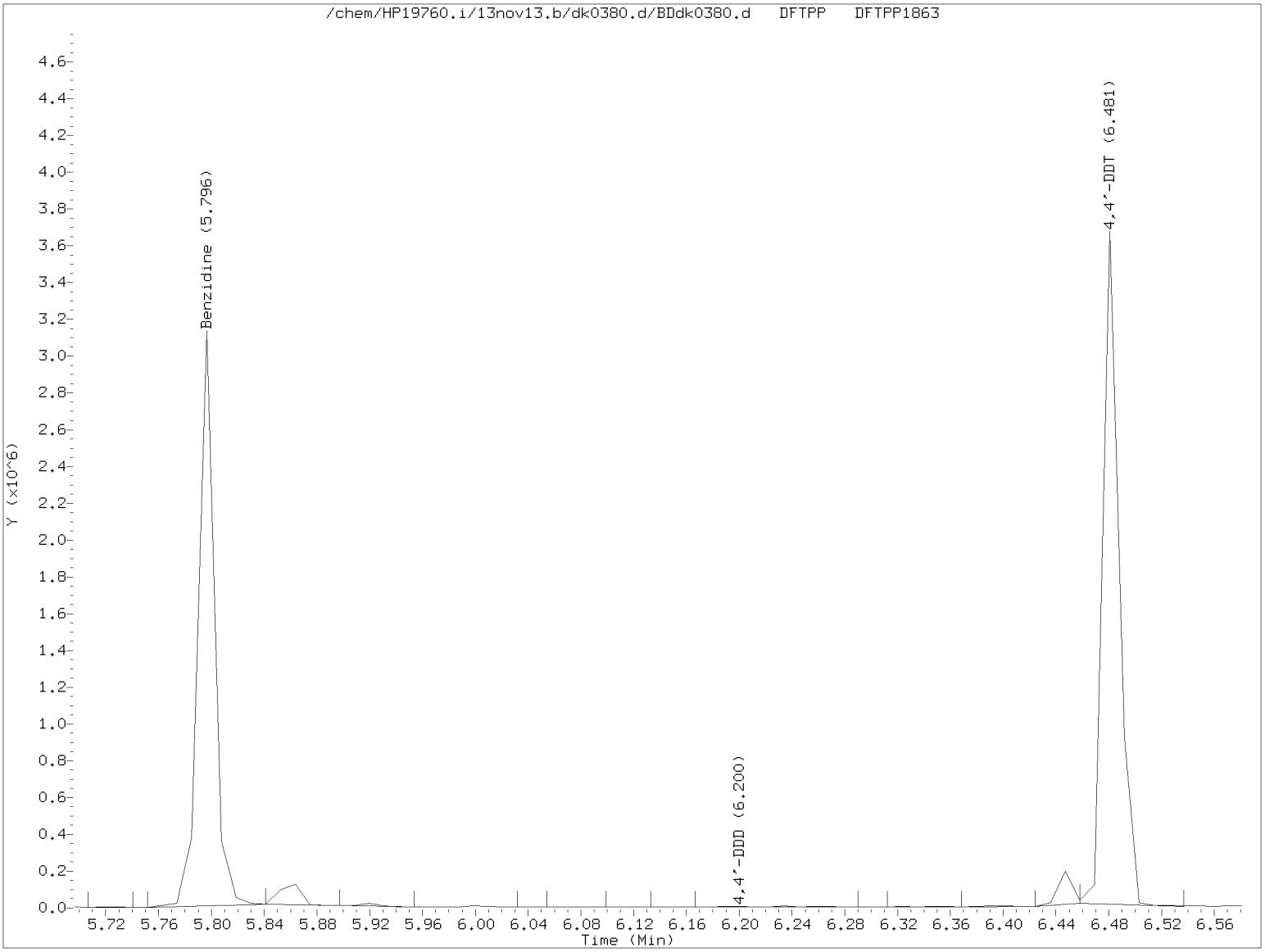
Benzidine EICP peak apex (min.) = 5.796
RT at 10% of front half of EICP (min.) = 5.785 'Front' peak width (min.) = 0.0109666667
RT at 10% of back half of EICP (min.) = 5.811 'Tailing' peak width (min.) = 0.0143666667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0143666667}{0.0109666667} = 1.310$

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

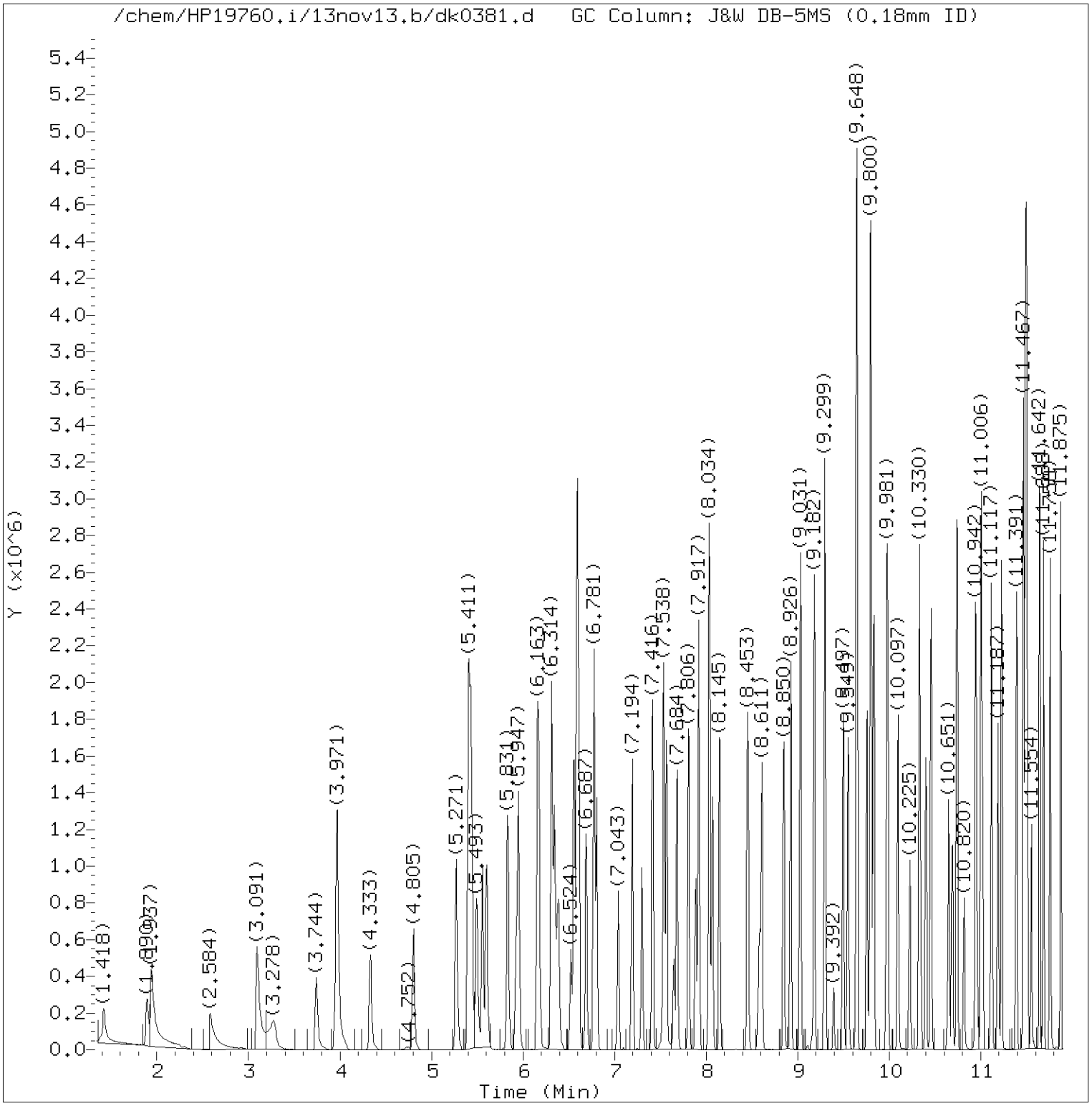
Instrument ID: HP19760.i Injection Date: 13-NOV-2013 05:05 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 10741}{0 + 10741 + 3154150} \times 100 = 0.3$$

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

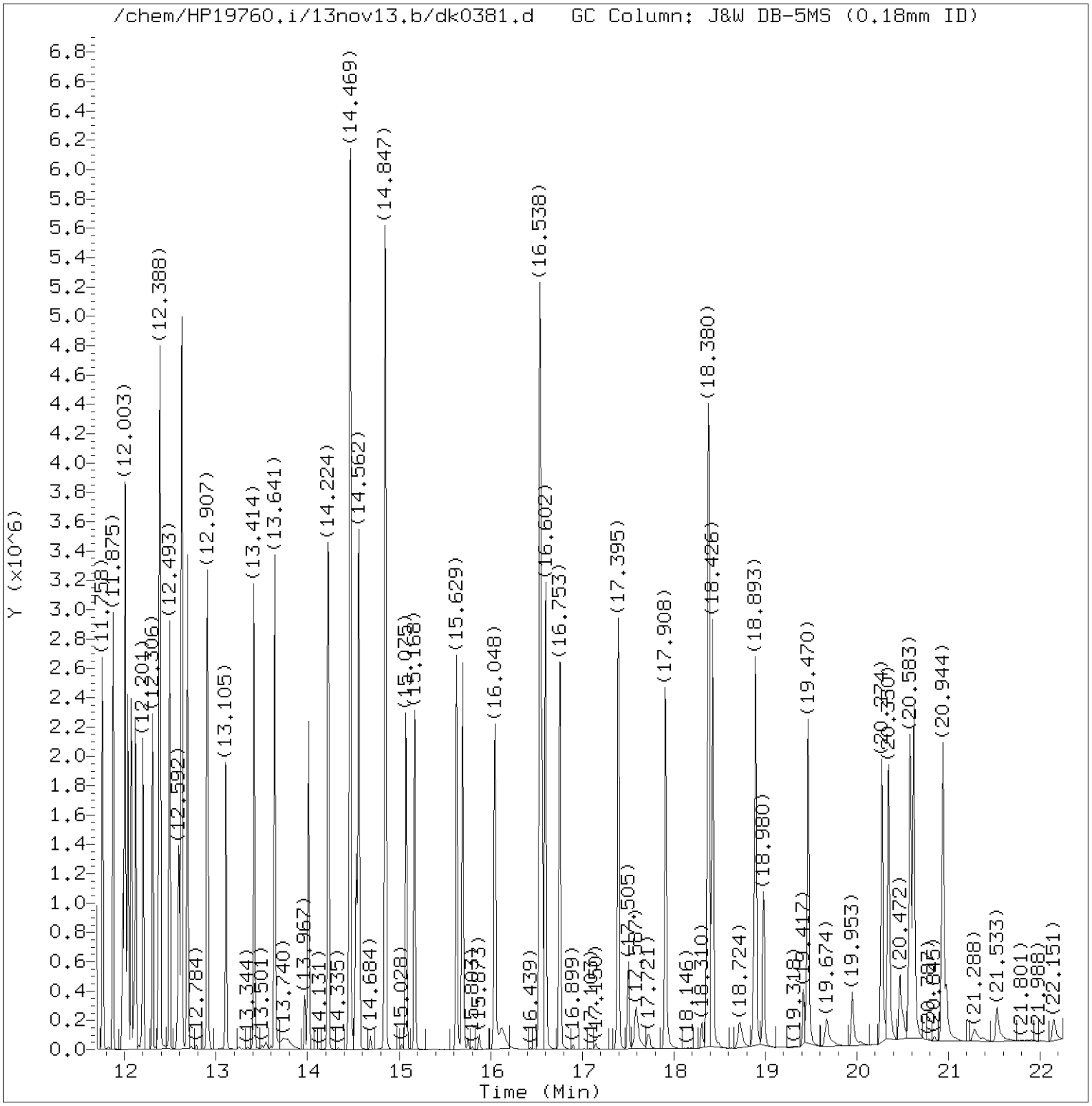
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.418	88	214725	12.413
2) N-Nitrosodimethylamine	(1)	1.890	74	340230	11.139
3) Pyridine	(1)	1.937	79	573143	11.003
4) 2-Picoline	(1)	3.091	93	616139	11.230
5) N-Nitrosomethylethylamine	(1)	3.272	88	265884	11.275
6) Methyl methanesulfonate	(1)	3.744	80	310647	11.524
7)$2-Fluorophenol	(1)	3.971	112	970150	23.775
8) N-Nitrosodiethylamine	(1)	4.333	102	262840	11.606
10) Ethyl methanesulfonate	(1)	4.805	109	256620	11.750
11) Benzaldehyde	(1)	5.271	77	427967	10.917
12)$Phenol-d5	(1)	5.405	99	1288258	22.988
13)$Phenol-d6	(1)	5.405	99	1288258	22.988
14) Phenol	(1)	5.423	94	723722	11.156
15) Aniline	(1)	5.440	93	892545	11.172
16) bis(2-Chloroethyl)ether	(1)	5.557	93	568748	11.111
17) 2-Chlorophenol	(1)	5.603	128	489524	12.199
18) 1,3-Dichlorobenzene	(1)	5.831	146	529190	12.261
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	137427	5.000
20) 1,4-Dichlorobenzene	(1)	5.947	146	535762	12.271
23) Benzyl alcohol	(1)	6.157	108	332176	11.704
24) 1,2-Dichlorobenzene	(1)	6.174	146	500772	12.264
25) Indene	(1)	6.314	115	991875	14.376
26) 2-Methylphenol	(1)	6.344	108	479502	11.907
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	603329	9.496
28) bis(2-Chloroisopropyl)ether	(1)	6.384	45	603329	9.496
29) N-Nitrosopyrrolidine	(1)	6.524	100	263955	11.463
30) Acetophenone	(1)	6.559	105	733303	11.646
31) N-Nitroso-di-n-propylamine	(1)	6.582	70	388385	10.716
33) 4-Methylphenol	(1)	6.594	108	520458	11.568
32) N-Nitrosomorpholine	(1)	6.594	56	293340	10.264
34) o-Toluidine	(1)	6.612	106	798073	11.494
35) Hexachloroethane	(1)	6.687	117	218382	11.834
36)$Nitrobenzene-d5	(2)	6.781	82	1131597	23.535
37) Nitrobenzene	(2)	6.804	77	587162	11.505
39) N-Nitrosopiperidine	(2)	7.043	114	253141	12.100
40) Isophorone	(2)	7.194	82	1004672	11.550
42) 2-Nitrophenol	(2)	7.299	139	246573	14.081
45) 2,4-Dimethylphenol	(2)	7.416	107	528320	12.416
46) O,O,O-triethylphosphorothioate	(2)	7.538	198	259943	13.781
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	642111M	11.312

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.579	105	232819	9.456
49) 2,4-Dichlorophenol	(2)	7.684	162	404286	13.470
51) 1,2,4-Trichlorobenzene	(2)	7.806	180	446821	13.326
52)*Naphthalene-d8	(2)	7.888	136	522469	5.000
53) Naphthalene	(2)	7.917	128	1376375	12.356
55) 4-Chloroaniline	(2)	8.034	127	573494	12.425
56) 2,6-Dichlorophenol	(2)	8.040	162	387198	13.434
57) Hexachloropropene	(2)	8.069	213	315667	14.917
58) Hexachlorobutadiene	(2)	8.150	225	280545	14.353
60) Quinoline	(2)	8.453	129	915783	12.410
61) Caprolactam	(2)	8.588	113	167655	12.520
62) N-Nitrosodi-n-butylamine	(2)	8.611	84	472216	13.695
63) 4-Chloro-3-methylphenol	(2)	8.850	107	460764	12.784
64) Safrole	(2)	8.926	162	376053	13.265
65) 2-Methylnaphthalene	(2)	9.031	142	936898	12.621
66) 1-Methylnaphthalene	(2)	9.182	142	848685	12.598
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.299	216	472906	12.916
67) Hexachlorocyclopentadiene	(3)	9.299	237	236402	13.680
69) cis-Isosafrole	(3)	9.392	162	66288	12.332
70) 2,4,6-Trichlorophenol	(3)	9.497	196	317816	13.757
71) 2,4,5-Trichlorophenol	(3)	9.549	196	325744	13.646
72)$2-Fluorobiphenyl	(3)	9.648	172	1951352	24.734
74) Isosafrole	(3)	9.759	162	379689	12.583
73) trans-Isosafrole	(3)	9.759	162	379689	12.583
75) 1,1'-Biphenyl	(3)	9.794	154	1095253	11.939
76) 2-Chloronaphthalene	(3)	9.800	162	871972	12.390
77) 1-Chloronaphthalene	(3)	9.835	162	839776	12.103
82) Diphenyl ether	(3)	9.975	170	633920	12.489
83) 2-Nitroaniline	(3)	9.986	138	299094	13.645
84) 1,4-Naphthoquinone	(3)	10.097	158	383787	12.672
85) 1,4-Dinitrobenzene	(3)	10.225	168	166076	13.663
86) Dimethylphthalate	(3)	10.330	163	1005642	12.636
87) 1,3-Dinitrobenzene	(3)	10.342	168	187180	13.702
88) 2,6-Dinitrotoluene	(3)	10.400	165	238369	13.515
90) Acenaphthylene	(3)	10.459	152	1316917	12.328
91) 3-Nitroaniline	(3)	10.651	138	262989	12.990
92)*Acenaphthene-d10	(3)	10.692	164	315923	5.000
93) Acenaphthene	(3)	10.744	153	887603	12.078
94) 2,4-Dinitrophenol	(3)	10.820	184	136173	14.812
95) Pentachlorobenzene	(3)	10.942	250	403439	13.754

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
96) 4-Nitrophenol	(3)	10.960	109	174651	13.526
97) Dibenzofuran	(3)	11.006	168	1312467	12.559
98) 2,4-Dinitrotoluene	(3)	11.018	165	316778	14.016
99) 1-Naphthylamine	(3)	11.117	143	903624	11.895
100) 2,3,4,6-Tetrachlorophenol	(3)	11.193	232	262091	13.905
101) 2-Naphthylamine	(3)	11.228	143	923898	11.852
102) Diethylphthalate	(3)	11.391	149	981218	12.513
103) Fluorene	(3)	11.467	166	1040042	12.363
104) Thionazin	(3)	11.484	107	194620	11.483
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	542187	12.996
106) 5-Nitro-o-toluidine	(3)	11.502	152	291440	12.890
107) 4-Nitroaniline	(3)	11.508	138	265148	12.733
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	188253	13.145
110) NDPA as diphenylamine	(4)	11.648	169	834023	11.968
109) N-Nitrosodiphenylamine	(4)	11.648	169	834023	11.968
111) 1,2-Diphenylhydrazine	(4)	11.688	77	1130469	10.247
112)$2,4,6-Tribromophenol	(3)	11.758	330	261996	31.575
115) Tetraethyldithiopyrophosphate	(4)	11.875	97	182933	11.496
116) 1,3,5-Trinitrobenzene	(4)	11.980	213	144117	13.364
117) Diallate (peak 1)	(4)	12.003	86	441321	8.026
118) Phorate	(4)	12.009	75	675832	10.367
119) Phenacetin	(4)	12.038	108	568490	12.252
120) 4-Bromophenyl-phenylether	(4)	12.073	248	291249	13.185
121) Diallate (peak 2)	(4)	12.102	86	63831	2.721
122) Hexachlorobenzene	(4)	12.120	284	299016	13.691
123) Dimethoate	(4)	12.201	87	470946	11.064
124) Atrazine	(4)	12.306	200	282306	12.443
125) Pentachlorophenol	(4)	12.376	266	188750	11.465
127) 4-Aminobiphenyl	(4)	12.388	169	1065089	12.217
126) Pentachloronitrobenzene	(4)	12.388	237	142132	14.004
129) Pronamide	(4)	12.493	173	483259	13.102
130)*Phenanthrene-d10	(4)	12.592	188	559806	5.000
131) Phenanthrene	(4)	12.627	178	1481763	11.868
133) Dinoseb	(4)	12.627	211	261426	12.294
134) Anthracene	(4)	12.691	178	1531903	12.306
135) Carbazole	(4)	12.907	167	1467810	12.183
136) Methyl parathion	(4)	13.105	109	375194	11.826
137) Di-n-butylphthalate	(4)	13.414	149	1757063	12.314
138) Parathion	(4)	13.641	109	239858	11.813
139) 4-Nitroquinoline-1-oxide	(4)	13.647	190	131775	10.828

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

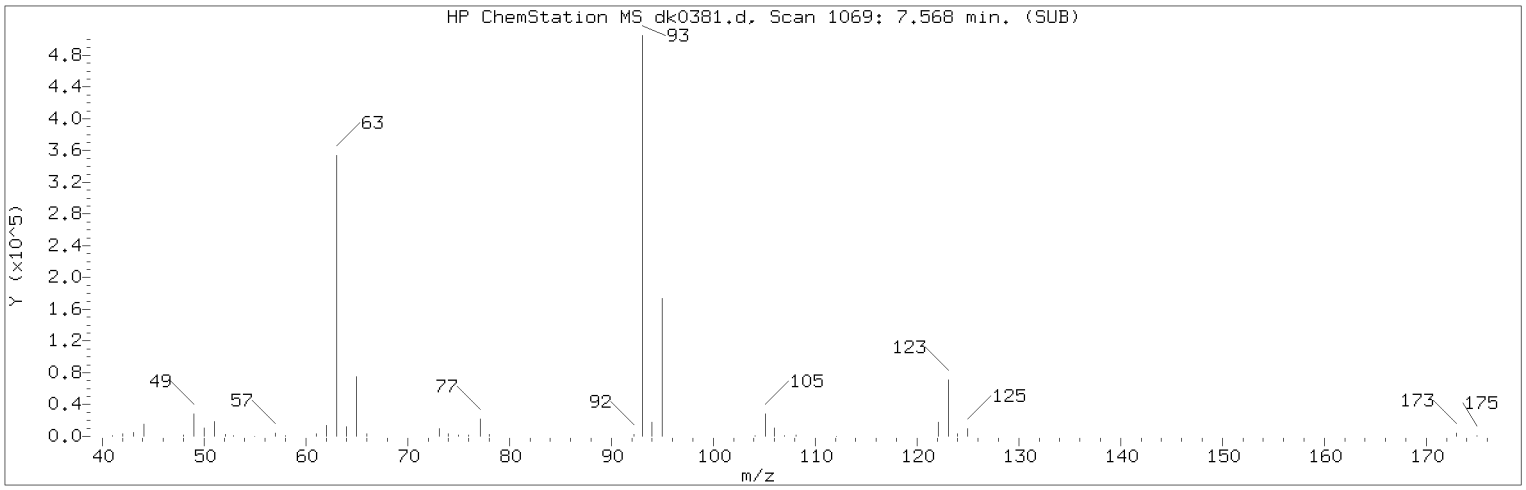
Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.008	193	191103	12.760
142) Fluoranthene	(4)	14.224	202	1824202	12.989
144) Benzidine	(5)	14.469	184	3447473	36.803
145)*Pyrene-d10	(5)	14.533	212	730002	5.000
146) Pyrene	(5)	14.562	202	1851973	11.949
149)$Terphenyl-d14	(5)	14.847	244	2377957	26.121
150) p-Dimethylaminoazobenzene	(5)	15.075	225	387673	12.456
151) Chlorobenzilate	(5)	15.168	139	535044	12.265
152) 3,3'-Dimethylbenzidine	(5)	15.629	212	1247916	13.564
153) Butylbenzylphthalate	(5)	15.693	149	801271	12.147
156) 2-Acetylaminofluorene	(5)	16.048	181	732622	12.549
158) Benzo(a)anthracene	(5)	16.538	228	1747833	13.291
159) 3,3'-Dichlorobenzidine	(5)	16.544	252	673564	14.181
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.561	231	343943	13.712
161) Chrysene	(5)	16.602	228	1655465	12.801
162) bis(2-Ethylhexyl)phthalate	(5)	16.759	149	1068254	12.312
165) 6-Methylchrysene	(5)	17.395	242	1287961	14.167
166) Di-n-octylphthalate	(6)	17.908	149	1849372	10.948
168) Benzo(b)fluoranthene	(6)	18.374	252	1719821	12.663
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.385	256	775903	12.871
170) Benzo(k)fluoranthene	(6)	18.426	252	1677910	12.250
171) Benzo(a)pyrene	(6)	18.893	252	1605491	12.879
172)*Perylene-d12	(6)	18.980	264	576555	5.000
173) 3-Methylcholanthrene	(6)	19.470	268	813452	13.712
174) Dibenz(a,h)acridine	(6)	20.274	279	1183004	14.346
175) Dibenz(a,j)acridine	(6)	20.350	279	1375695	15.557
176) Indeno(1,2,3-cd)pyrene	(6)	20.583	276	1706090M	15.603
177) Dibenz(a,h)anthracene	(6)	20.624	278	1447935	15.636
178) Benzo(g,h,i)perylene	(6)	20.944	276	1451127	15.743
179) Diallate TRANS/CIS	(4)			505152	10.725
182) 2,4_2,6-Dinitrotoluenes	(3)			555147	27.531

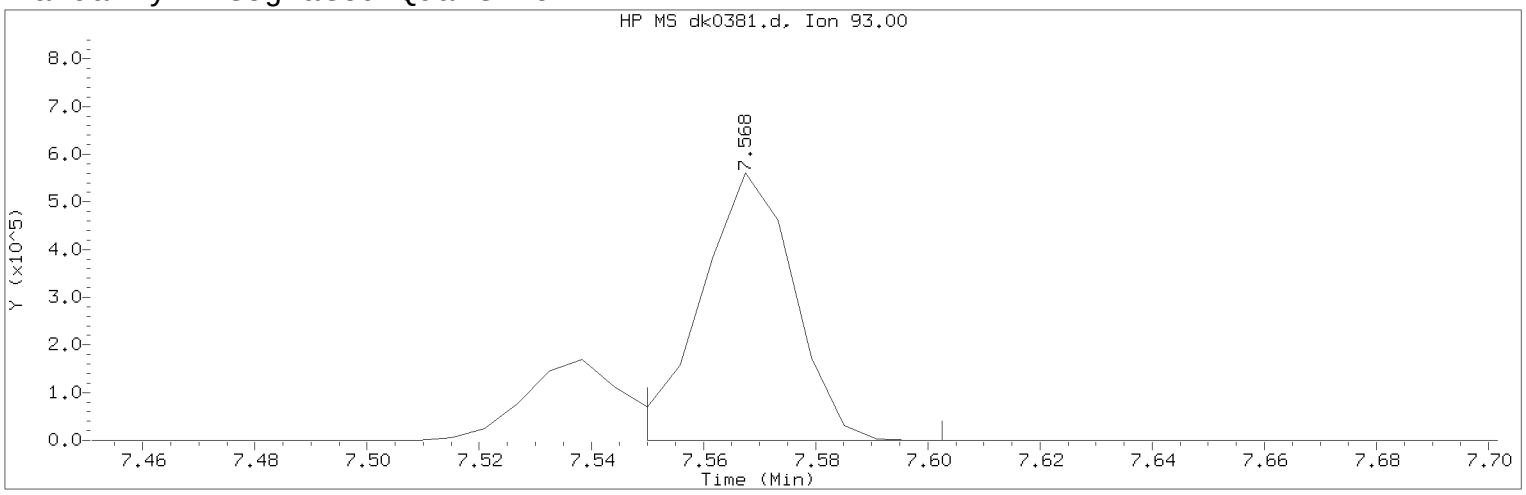
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

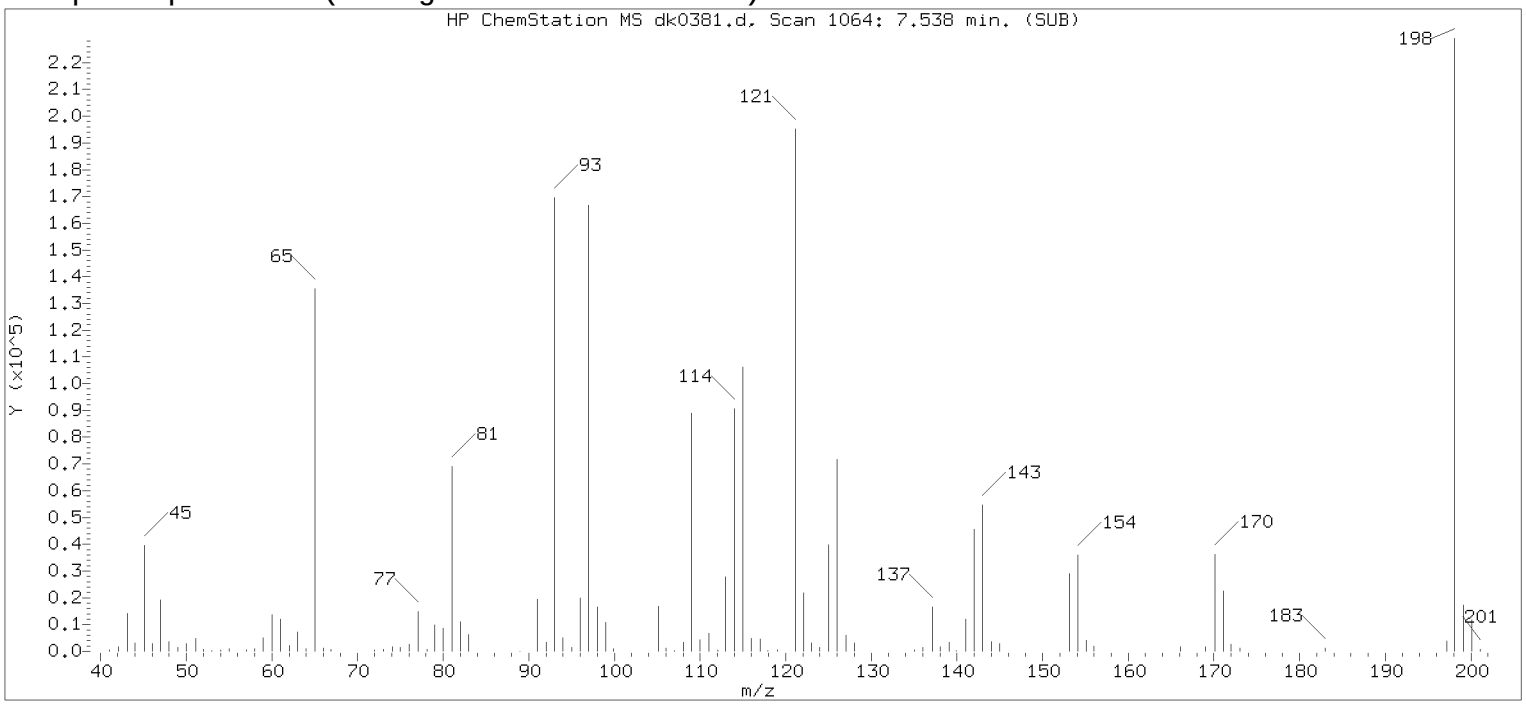
Compound Number : 48
Compound Name : bis(2-Chloroethoxy)methane
Scan Number : 1069
Retention Time (minutes) : 7.568
Quant Ion : 93.00
Area (flag) : 642111M
On-Column Amount (ng/ul) : 11.3118
Integration start scan : 1065 Integration stop scan: 1074
Y at integration start : 422 Y at integration end: 422

Reason for manual integration: improper integration

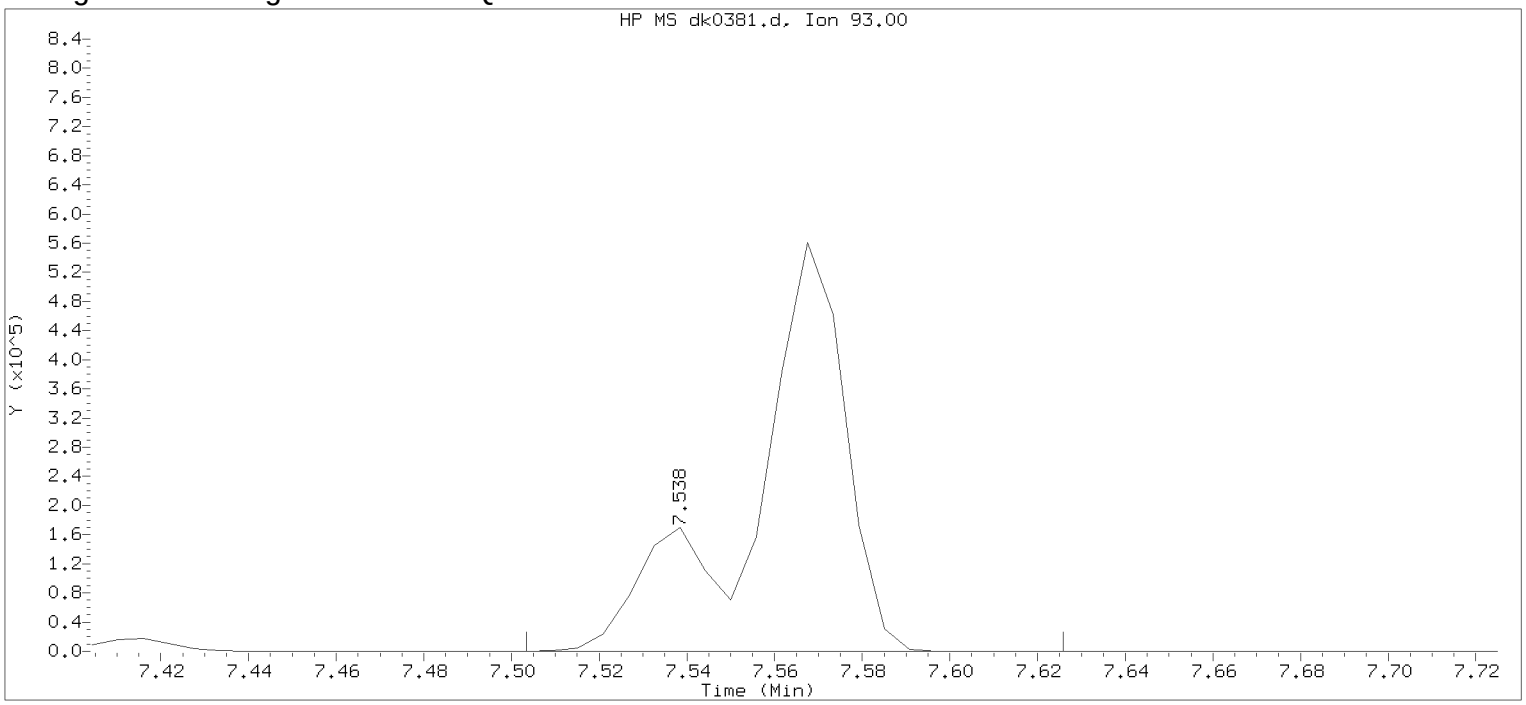
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:39.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

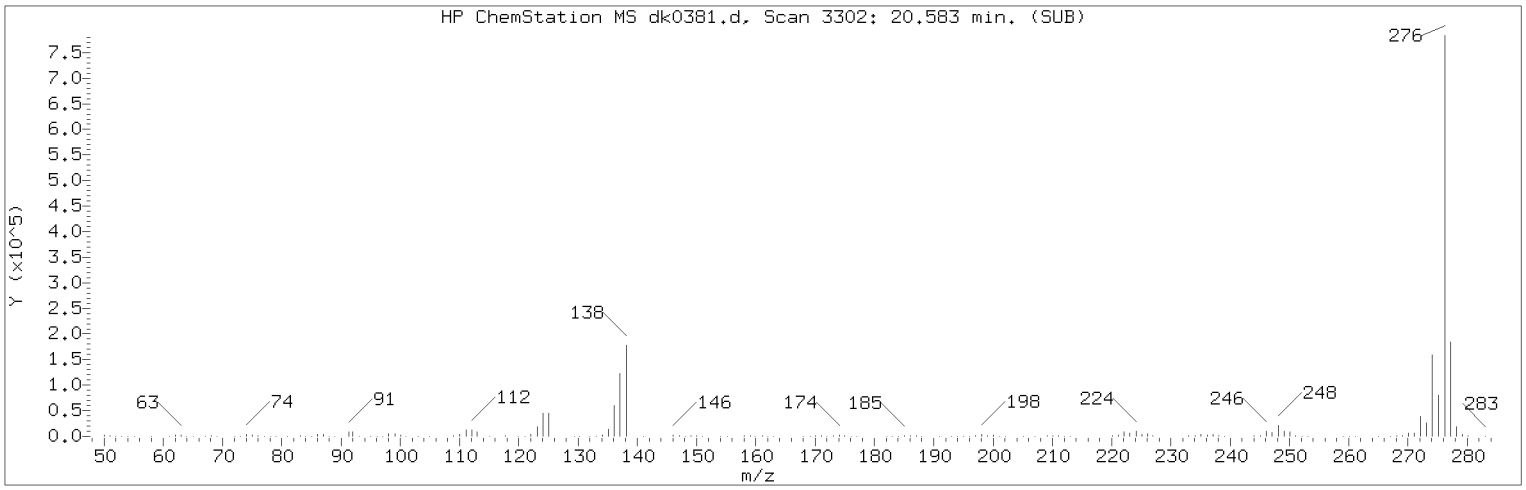
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 05:50
Date, time and analyst ID of latest file update: 13-Nov-2013 05:50 Automation

Sample Name: SSTD12. Lab Sample ID: STD2813

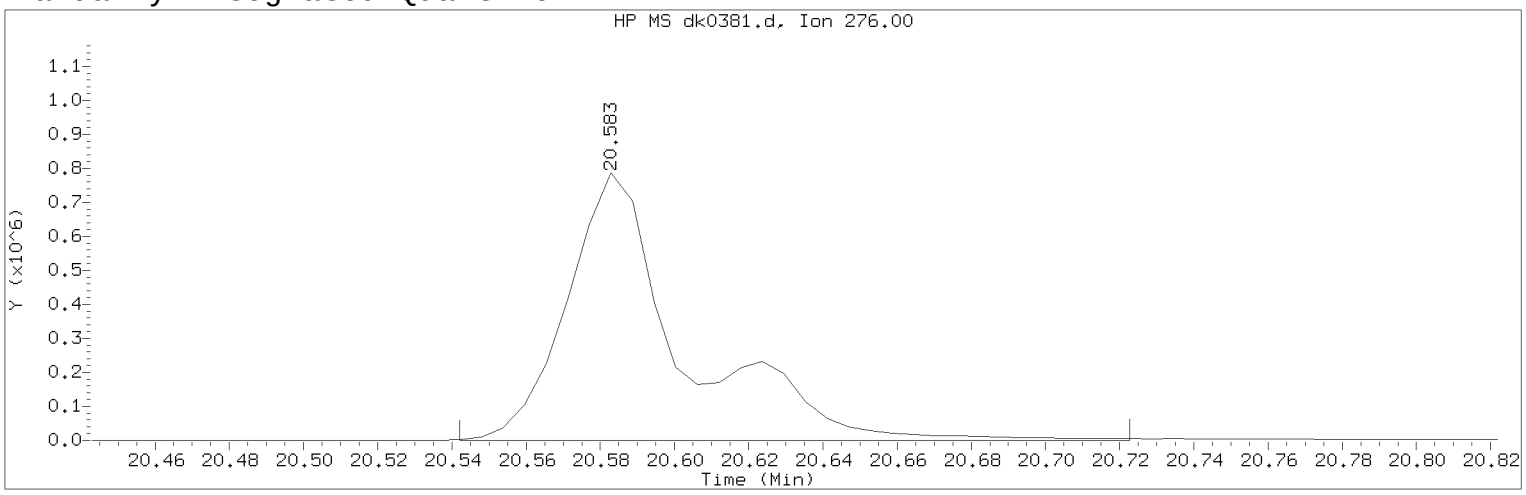
Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1064		
Retention Time (minutes)	: 7.538		
Quant Ion	: 93.00		
Area	: 829310		
On-column Amount (ng/ul)	: 14.6096		
Integration start scan	: 1057	Integration stop scan:	1078
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:04.
Target 3.5 esignature user KVM05 jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

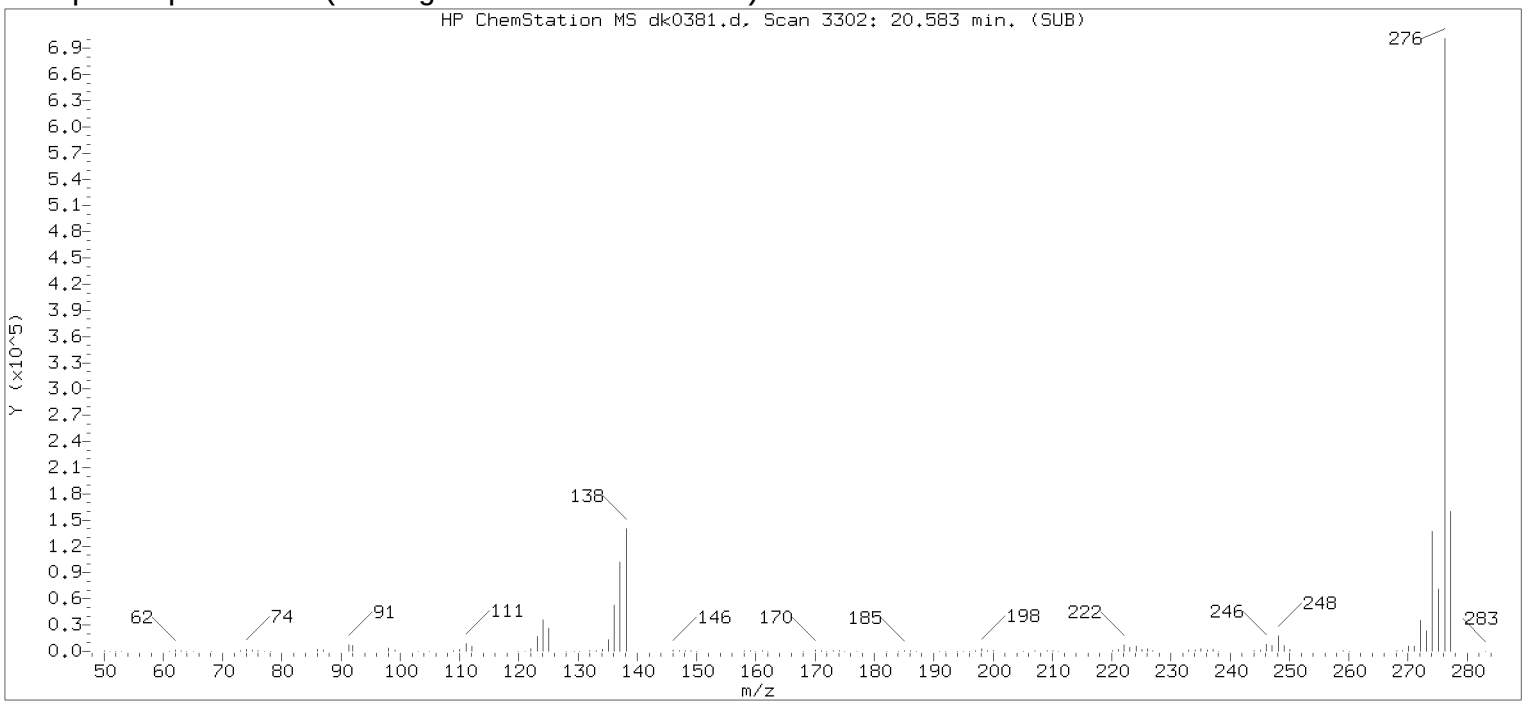
Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3302
Retention Time (minutes) : 20.583
Quant Ion : 276.00
Area (flag) : 1706090M
On-Column Amount (ng/ul) : 15.6025
Integration start scan : 3294 Integration stop scan: 3325
Y at integration start : 222 Y at integration end: 222

Reason for manual integration: improper integration

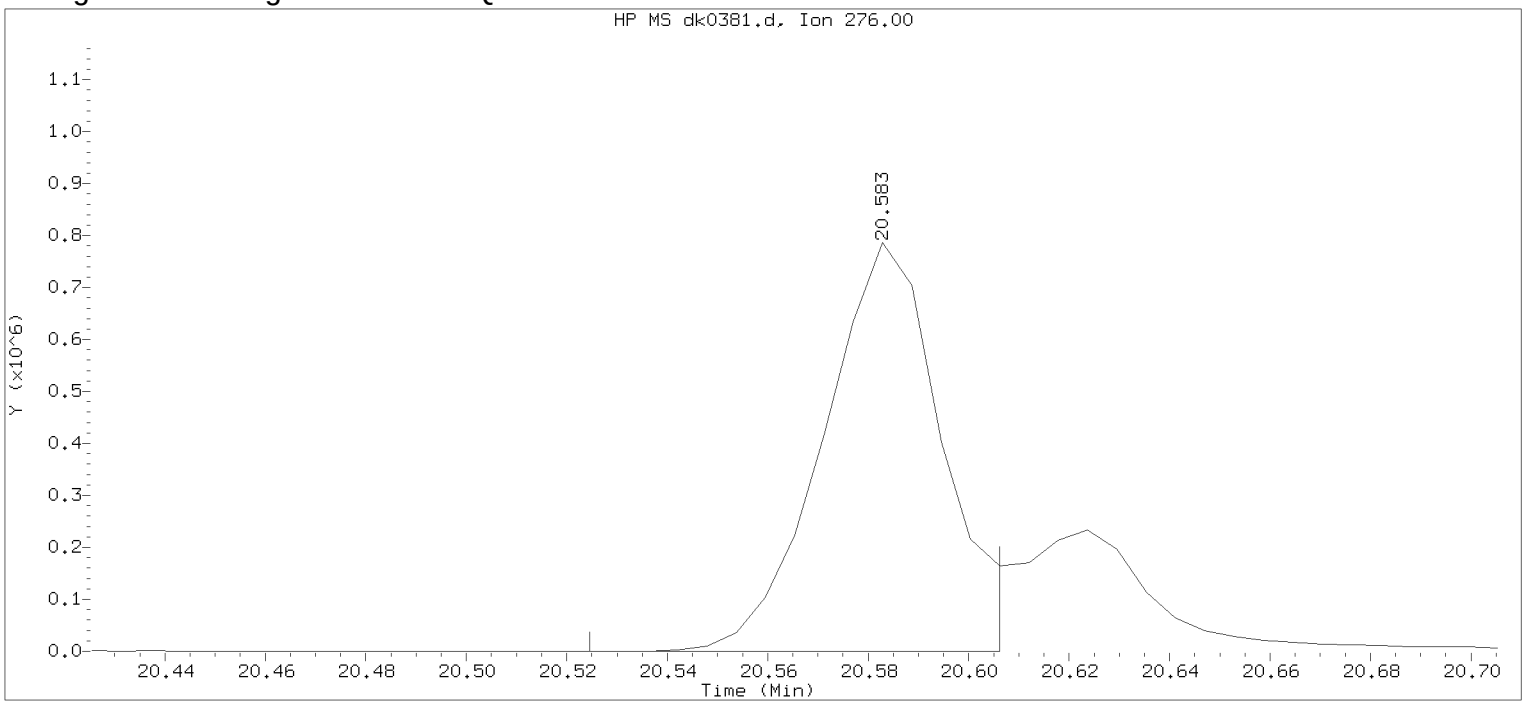
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:39.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 05:50
Date, time and analyst ID of latest file update: 13-Nov-2013 05:50 Automation

Sample Name: SSTD12. Lab Sample ID: STD2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3302		
Retention Time (minutes)	: 20.583		
Quant Ion	: 276.00		
Area	: 1265419		
On-column Amount (ng/ul)	: 11.5725		
Integration start scan	: 3291	Integration stop scan:	3305
Y at integration start	: 0	Y at integration end:	280

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP09572.i/13nov12.b/ek0500.d

Date : 12-NOV-2013 12:06

Client ID: DFTPP

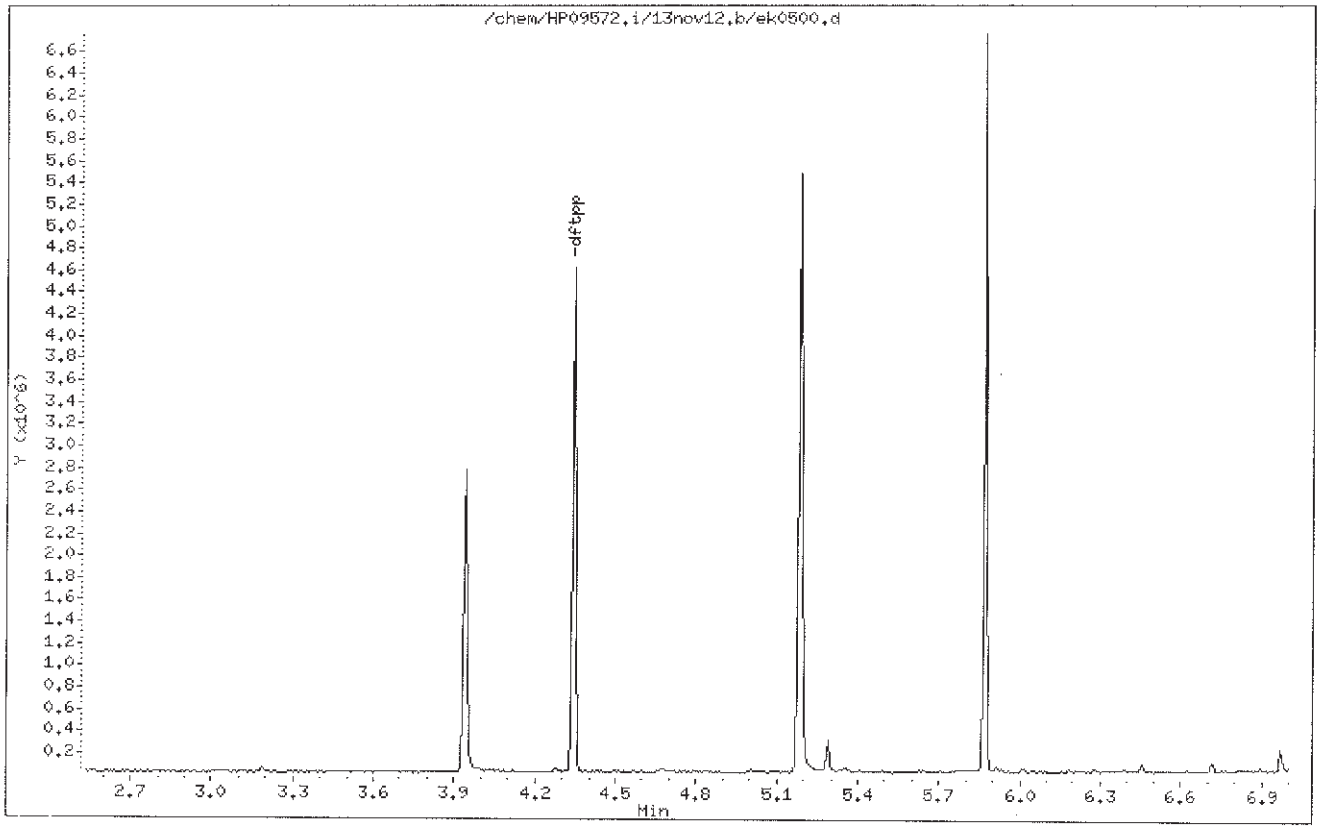
Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Data File: /chem/HP09572.i/13nov12.b/ek0500.d

Date : 12-NOV-2013 12:06

Client ID: DFTPP

Instrument: HP09572.i

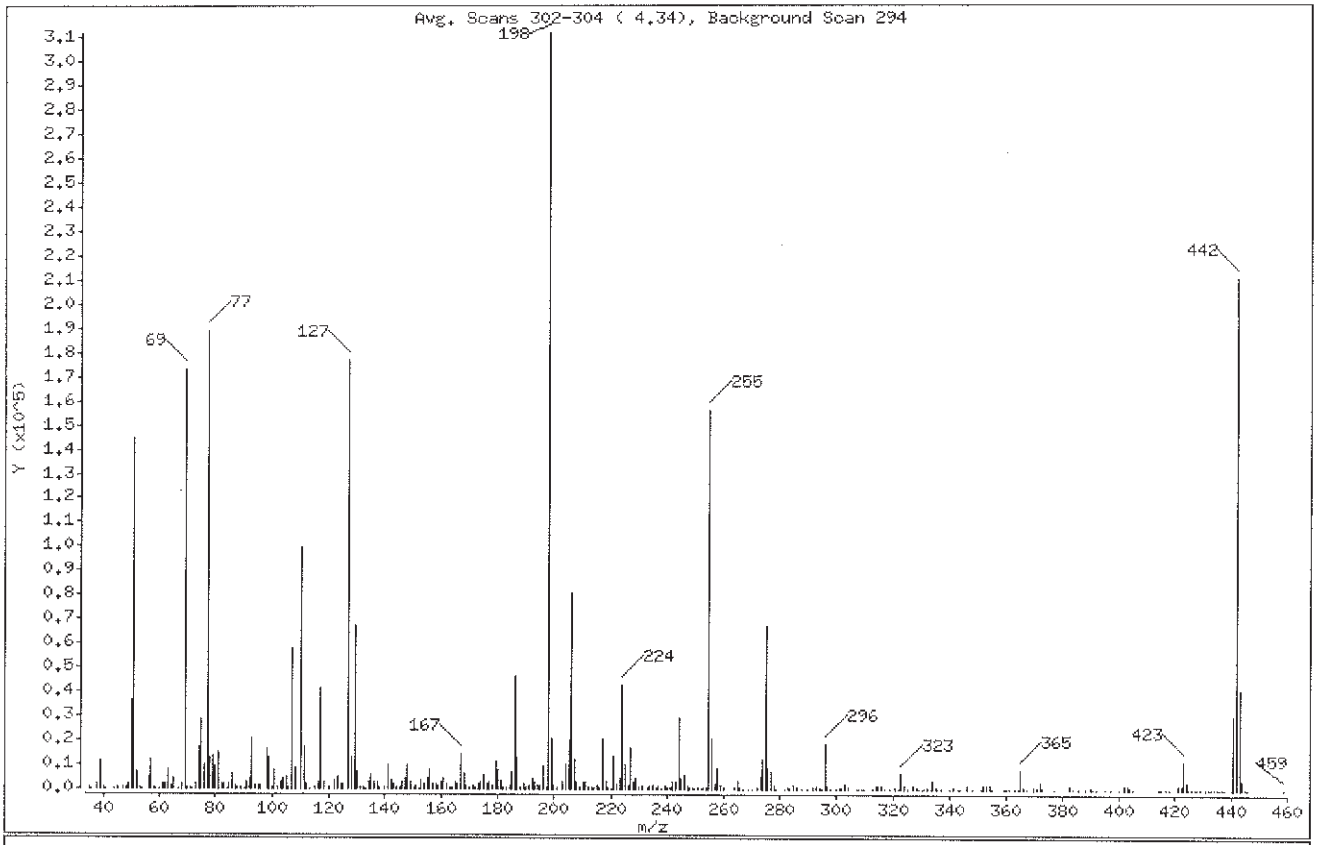
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.46
68	Less than 2.00% of mass 69	0.65 (1.17)
69	Mass 69 relative abundance	55.64
70	Less than 2.00% of mass 69	0.33 (0.59)
127	40.00 - 60.00% of mass 198	56.86
197	Less than 1.00% of mass 198	0.15
199	5.00 - 9.00% of mass 198	6.74
275	10.00 - 30.00% of mass 198	21.57
365	Greater than 1.00% of mass 198	2.61
441	Present, but less than mass 443	9.70
442	40.00 - 99.99% of mass 198	67.68
443	17.00 - 23.00% of mass 442	13.06 (19.30)

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Data File: /chem/HP09572.i/13nov12.b/ek0500.d

Date : 12-NOV-2013 12:06

Client ID: DFTPP

Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5

Column diameter: 0.25

Data File: ek0500.d
Spectrum: Avg. Scans 302-304 (4.34), Background Scan 294
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	360	132.00	676	219.00	533	322.00	332
36.00	195	133.00	104	220.00	335	323.00	6146
38.00	1793	134.00	2576	221.00	13568	324.00	1759
39.00	11129	135.00	5933	222.00	1840	325.00	113
40.00	785	136.00	2548	223.00	4024	327.00	1453
41.00	197	137.00	2766	224.00	43120	328.00	515
44.00	277	138.00	958	225.00	9834	329.00	178
45.00	540	140.00	939	226.00	1545	330.00	78
47.00	446	141.00	9832	227.00	17160	331.00	88
48.00	558	142.00	3338	228.00	2778	332.00	399
49.00	2028	143.00	2463	229.00	3996	333.00	313
50.00	36368	144.00	694	230.00	436	334.00	3869
51.00	144768	145.00	816	231.00	1646	335.00	658
52.00	7155	146.00	2622	233.00	430	336.00	146
53.00	686	147.00	4552	234.00	1236	337.00	189
54.00	305	148.00	10051	235.00	1149	340.00	303
56.00	4942	149.00	2889	236.00	906	341.00	600
57.00	12029	150.00	650	237.00	1314	343.00	82
58.00	663	151.00	1497	238.00	219	344.00	299
59.00	169	152.00	325	239.00	1274	346.00	1240
60.00	87	153.00	3245	240.00	689	348.00	87
61.00	2079	154.00	2204	241.00	953	351.00	293
62.00	1846	155.00	4446	242.00	2709	352.00	1156
63.00	7912	156.00	7747	243.00	2875	353.00	1339
64.00	1340	157.00	1905	244.00	29648	354.00	1408
65.00	4178	158.00	1897	245.00	4134	355.00	267
67.00	88	159.00	1511	246.00	5843	359.00	68
68.00	2030	160.00	2866	247.00	1233	360.00	150
69.00	173376	161.00	4519	248.00	590	361.00	61
70.00	1026	162.00	2044	249.00	632	363.00	142
71.00	652	163.00	436	250.00	48	364.00	87
72.00	259	164.00	499	251.00	508	365.00	8126
73.00	1796	165.00	2541	252.00	230	366.00	1039
74.00	17080	166.00	2330	253.00	958	367.00	72
75.00	28720	167.00	14535	254.00	660	370.00	410

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Data File: /chem/HP09572.i/13nov12.b/ek0500.d

Date : 12-NOV-2013 12:06

Client ID: DFTPP

Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5

Column diameter: 0.25

Data File: ek0500.d
Spectrum: Avg. Scans 302-304 (4.34), Background Scan 294
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	9901	168.00	6621	255.00	156288	371.00	660
77.00	189376	169.00	1420	256.00	20672	372.00	2749
78.00	13008	170.00	692	257.00	2036	373.00	642
79.00	13905	171.00	1209	258.00	8486	377.00	68
80.00	9655	172.00	967	259.00	1178	383.00	1080
81.00	14924	173.00	2360	260.00	496	384.00	203
82.00	2465	174.00	3126	264.00	432	386.00	132
83.00	2353	175.00	5796	265.00	3351	388.00	96
84.00	130	176.00	2363	266.00	405	390.00	956
85.00	1820	177.00	2739	267.00	248	391.00	216
86.00	6318	178.00	1395	269.00	55	392.00	238
87.00	1320	179.00	11538	270.00	309	395.00	89
88.00	422	180.00	7568	272.00	972	397.00	137
89.00	510	181.00	3502	273.00	4779	400.00	97
90.00	183	182.00	608	274.00	12528	402.00	1638
91.00	2772	183.00	504	275.00	67232	403.00	1654
92.00	4522	184.00	1220	276.00	8873	404.00	828
93.00	20472	185.00	6806	277.00	7196	405.00	276
94.00	1584	186.00	46888	278.00	1601	414.00	267
95.00	1076	187.00	13198	279.00	126	415.00	246
96.00	1084	188.00	1000	282.00	51	417.00	73
98.00	16792	189.00	2393	283.00	508	418.00	95
99.00	12841	190.00	576	284.00	971	421.00	1550
100.00	1035	191.00	1251	285.00	1300	422.00	1466
101.00	7544	192.00	3987	286.00	527	423.00	11280
102.00	495	193.00	3065	288.00	61	424.00	2521
103.00	2970	194.00	1115	290.00	199	425.00	290
104.00	4484	195.00	1129	292.00	453	426.00	180
105.00	4996	196.00	9325	293.00	1503	427.00	309
106.00	944	197.00	476	294.00	695	428.00	116
107.00	57960	198.00	311616	295.00	213	429.00	153
108.00	8789	199.00	21000	296.00	18312	431.00	266
110.00	99288	200.00	1275	297.00	1713	432.00	205
111.00	16872	201.00	587	298.00	217	433.00	130
112.00	2051	203.00	2931	300.00	58	434.00	323

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Date : 12-NOV-2013 12:06

Client ID: DFTPP Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: lmh00956

Column phase: DB-5 Column diameter: 0.25

Data File: ek0500.d
Spectrum: Avg. Scans 302-304 (4.34), Background Scan 294
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	279	204.00	9678	301.00	535	435.00	104
115.00	468	205.00	19832	302.00	392	436.00	262
116.00	2519	206.00	81152	303.00	2178	437.00	61
117.00	41224	207.00	12082	304.00	431	438.00	275
118.00	2631	208.00	3010	307.00	187	440.00	223
120.00	577	209.00	815	308.00	222	441.00	30216
122.00	3441	210.00	2693	309.00	298	442.00	210880
123.00	5290	211.00	2908	310.00	161	443.00	40696
124.00	2163	212.00	998	313.00	350	444.00	3659
125.00	2292	213.00	361	314.00	1200	445.00	107
127.00	177216	214.00	408	315.00	1738	446.00	82
128.00	12669	215.00	1407	316.00	1234	459.00	95
129.00	67656	216.00	502	317.00	264		
130.00	7447	217.00	20752	319.00	51		
131.00	922	218.00	2974	321.00	577		

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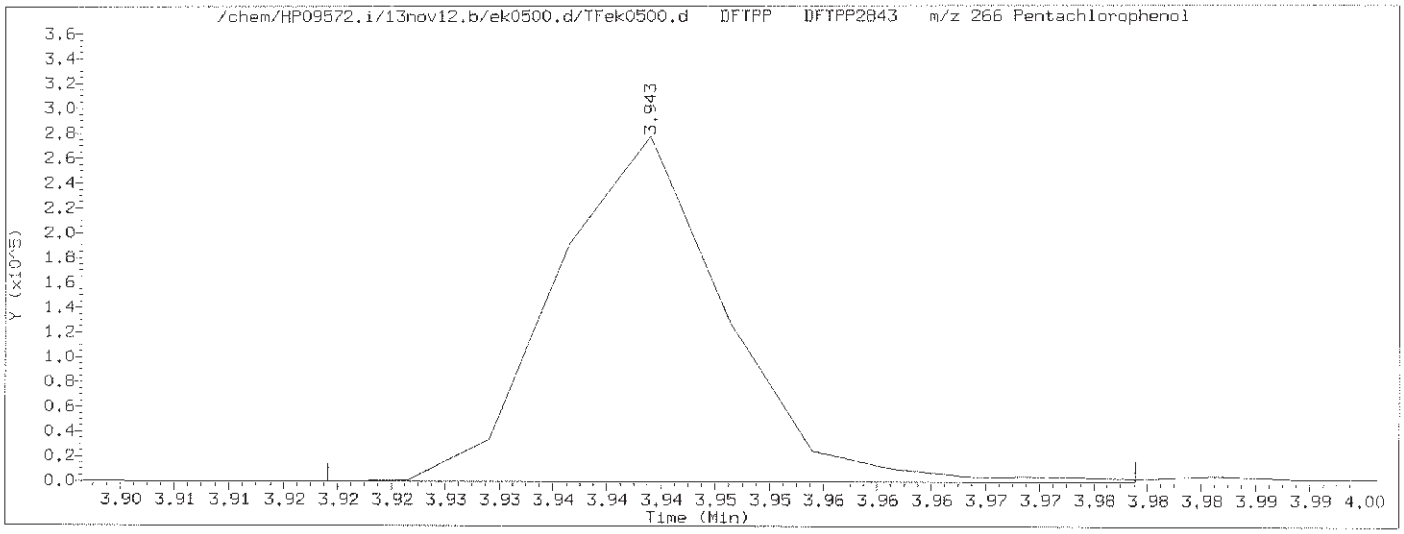
Target 3.5 esignature user ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

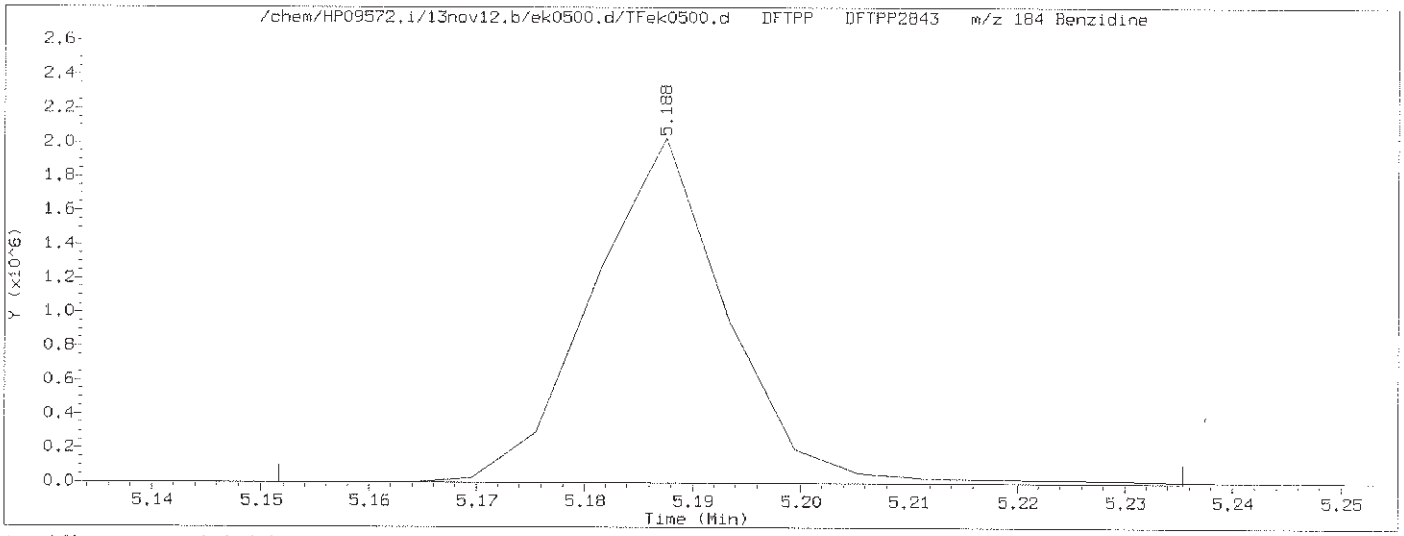
Instrument ID: HP09572.i Injection Date: 12-NOV-2013 12:06 Operator: lmh00956



Pentachlorophenol EICP peak height = 277248 EICP peak height at 10% = 27725 Pentachlorophenol EICP area = 241980

Pentachlorophenol EICP peak apex (min.) = 3.943
RT at 10% of front half of EICP (min.) = 3.930 'Front' peak width (min.) = 0.0128333333
RT at 10% of back half of EICP (min.) = 3.955 'Tailing' peak width (min.) = 0.0117333333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0117333333}{0.0128333333} = 0.914$



Benzidine EICP peak height = 2030080 EICP peak height at 10% = 203008 Benzidine EICP area = 1763998

Benzidine EICP peak apex (min.) = 5.188
RT at 10% of front half of EICP (min.) = 5.174 'Front' peak width (min.) = 0.0139166667
RT at 10% of back half of EICP (min.) = 5.199 'Tailing' peak width (min.) = 0.0118833333

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0118833333}{0.0139166667} = 0.854$

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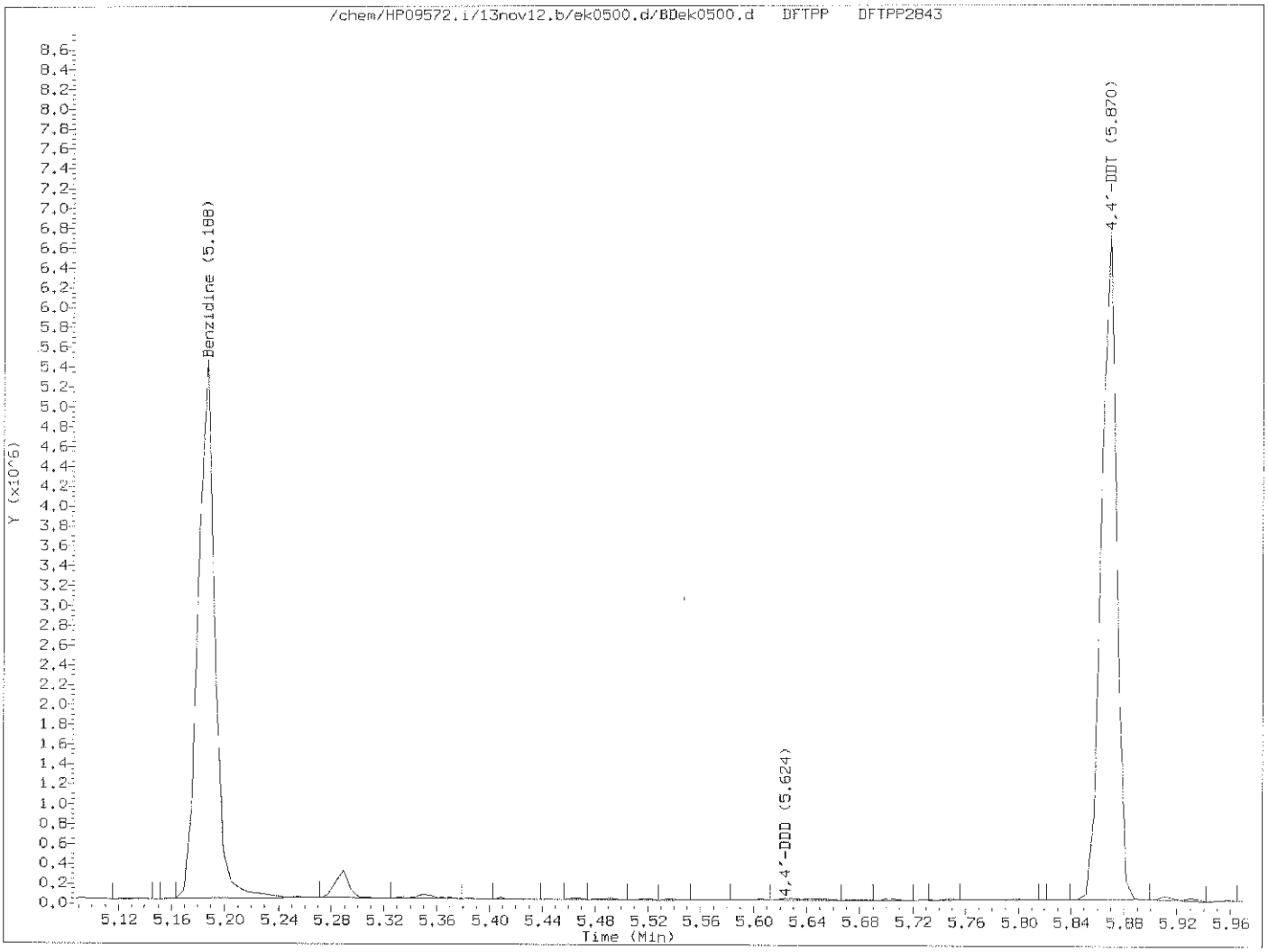
Target 3.5 esignature user ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP09572.i Injection Date: 12-NOV-2013 12:06 Operator: lmh00956



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{0 + 25851}{0 + 25851 + 5305397} \times 100 = 0.5$$

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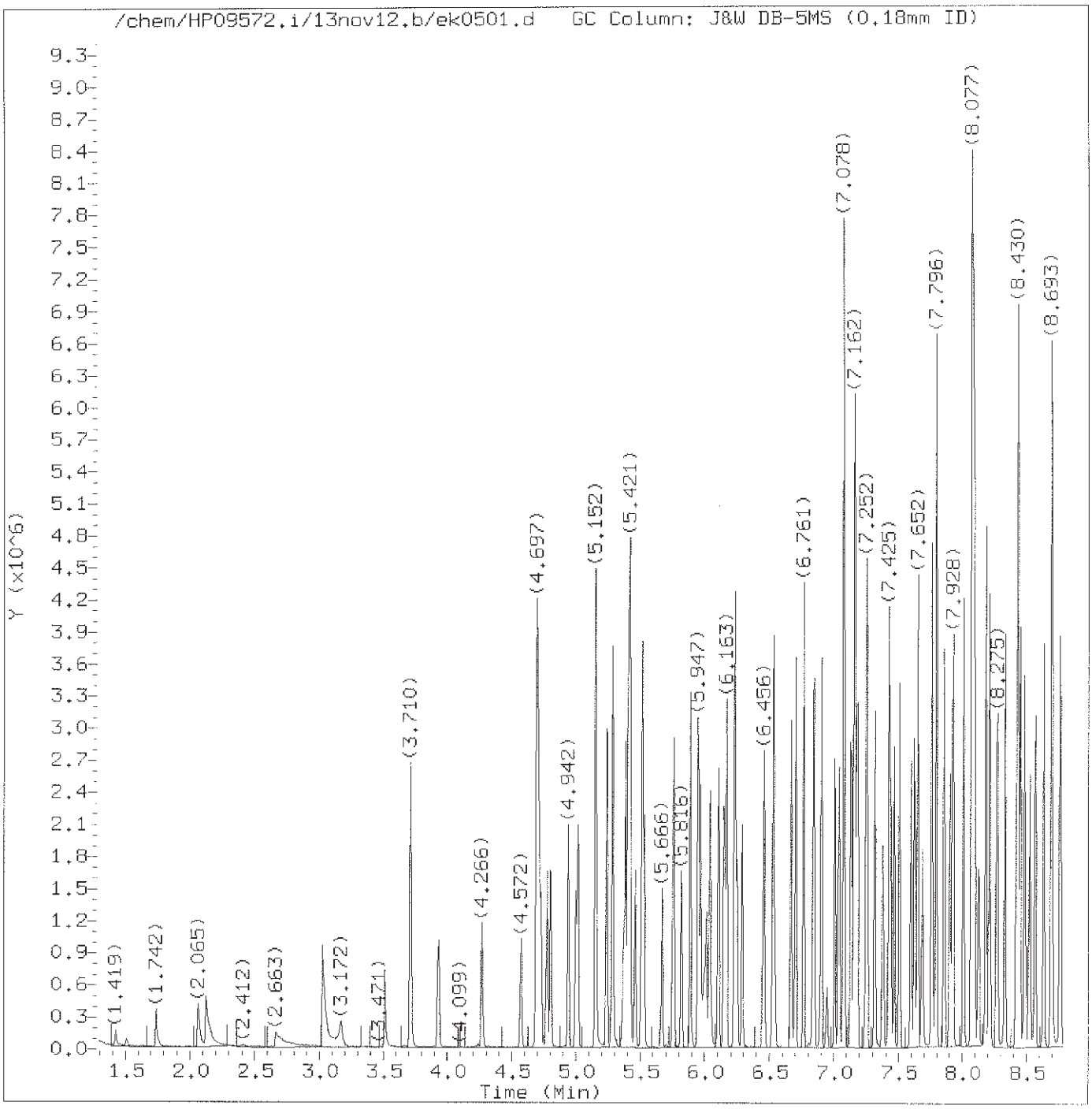
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

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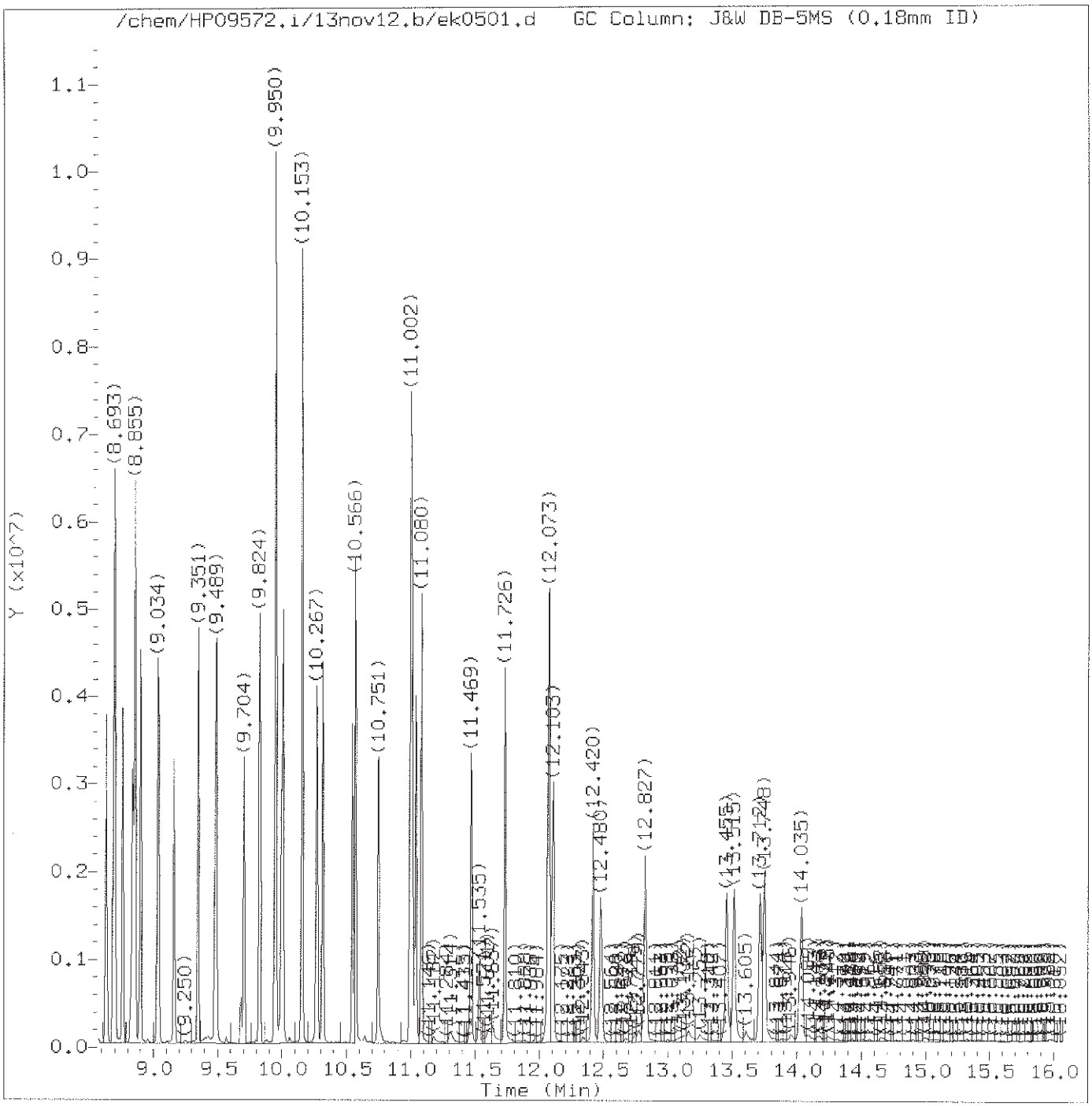
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.742	88	150493	29.457
2) N-Nitrosodimethylamine	(1)	2.065	74	256423	29.782
3) Pyridine	(1)	2.125	79	343622	27.139
4) 2-Picoline	(1)	3.028	93	494971	29.894
5) N-Nitrosomethylethylamine	(1)	3.166	88	227354	30.418
6) Methyl methanesulfonate	(1)	3.513	80	272163	30.017
7)$2-Fluorophenol	(1)	3.716	112	773132	59.563
8) N-Nitrosodiethylamine	(1)	3.931	102	229161	29.824
10) Ethyl methanesulfonate	(1)	4.266	109	230098	30.202
20) Aniline	(1)	4.691	93	773843	29.940
18)$Phenol-d6	(1)	4.697	99	1176066	59.440
17)$Phenol-d5	(1)	4.697	99	1176066	59.440
19) Phenol	(1)	4.709	94	628366	29.972
21) bis(2-Chloroethyl)ether	(1)	4.775	93	497253	30.054
22) 2-Chlorophenol	(1)	4.805	128	402576	29.833
24) 1,3-Dichlorobenzene	(1)	4.942	146	382229	29.537
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	165180	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	400044	29.888
27) Benzyl alcohol	(1)	5.152	108	326742	31.165
28) 1,2-Dichlorobenzene	(1)	5.152	146	382201	29.290
30) Indene	(1)	5.242	115	856791	36.458
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	527075	30.098
29) 2-Methylphenol	(1)	5.283	108	435304	29.572
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	527075	30.098
33) N-Nitrosopyrrolidine	(1)	5.367	100	284983	30.546
34) Acetophenone	(1)	5.385	105	711817	30.464
36) N-Nitroso-di-n-propylamine	(1)	5.403	70	411525	30.260
37) N-Nitrosomorpholine	(1)	5.409	56	355300	30.282
38) o-Toluidine	(1)	5.415	106	759039	29.899
35) 4-Methylphenol	(1)	5.421	108	532173	30.079
39) Hexachloroethane	(1)	5.463	117	171513	29.845
40)$Nitrobenzene-d5	(2)	5.517	82	1103430	57.438
41) Nitrobenzene	(2)	5.535	77	573318	29.174
42) N-Nitrosopiperidine	(2)	5.672	114	258086	29.134
52) Isophorone	(2)	5.756	82	1035949	29.263
53) 2-Nitrophenol	(2)	5.822	139	241802	28.822
54) 2,4-Dimethylphenol	(2)	5.888	107	566371	29.442
55) O,O,O-triethylphosphorothioate	(2)	5.953	198	206152	28.849
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	664911	28.652
56) Benzoic acid	(2)	6.007	105	566944	39.813

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.043	162	356345	28.889
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	362044	29.212
60)*Naphthalene-d8	(2)	6.145	136	813832	20.000
61) Naphthalene	(2)	6.163	128	1237065	29.096
62) 4-Chloroaniline	(2)	6.223	127	567131	29.141
63) 2,6-Dichlorophenol	(2)	6.235	162	354927	29.235
64) Hexachloropropene	(2)	6.247	213	212290	28.686
65) Hexachlorobutadiene	(2)	6.288	225	172359	28.411
67) Quinoline	(2)	6.456	129	894209	28.899
68) N-Nitrosodi-n-butylamine	(2)	6.534	84	551808	29.182
69) Caprolactam	(2)	6.534	113	196251	28.213
70) 4-Chloro-3-methylphenol	(2)	6.665	107	525965	29.050
71) Safrole	(2)	6.701	162	353426	28.674
72) 2-Methylnaphthalene	(2)	6.761	142	906038	28.860
75) 1-Methylnaphthalene	(2)	6.845	142	826175	28.728
76) Hexachlorocyclopentadiene	(3)	6.899	237	164135	28.711
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.905	216	344548	29.456
78) cis-Isosafrole	(3)	6.947	162	64605	3.156
79) 2,4,6-Trichlorophenol	(3)	7.006	196	264155	29.645
80) 2,4,5-Trichlorophenol	(3)	7.042	196	285730	29.224
81)$2-Fluorobiphenyl	(3)	7.078	172	1844018	58.383
83) Isosafrole	(3)	7.138	162	378631	29.461
82) trans-Isosafrole	(3)	7.138	162	378631	26.220
86) 1,1'-Biphenyl	(3)	7.156	154	1131556	29.587
87) 2-Chloronaphthalene	(3)	7.168	162	799368	26.840
88) 1-Chloronaphthalene	(3)	7.186	162	855741	28.085
89) Diphenyl ether	(3)	7.252	170	594723	29.062
90) 2-Nitroaniline	(3)	7.258	138	334269	29.321
91) 1,4-Naphthoquinone	(3)	7.317	158	393331	29.194
92) 1,4-Dinitrobenzene	(3)	7.377	168	173220	29.574
93) Dimethylphthalate	(3)	7.425	163	1074470	29.329
94) 1,3-Dinitrobenzene	(3)	7.437	168	194164	28.274
95) 2,6-Dinitrotoluene	(3)	7.467	165	249198	28.512
96) Acenaphthylene	(3)	7.503	152	1307863	29.363
97) 3-Nitroaniline	(3)	7.599	138	292594	28.766
99)*Acenaphthene-d10	(3)	7.623	164	534667	20.000
100) Acenaphthene	(3)	7.652	153	884459	29.149
101) 2,4-Dinitrophenol	(3)	7.688	184	176348	38.632
102) 4-Nitrophenol	(3)	7.760	109	243305	29.567
103) Pentachlorobenzene	(3)	7.760	250	302129	29.119

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.796	165	351757	28.751
105) Dibenzofuran	(3)	7.796	168	1241532	29.213
106) 1-Naphthylamine	(3)	7.856	143	1025992	28.918
107) 2,3,4,6-Tetrachlorophenol	(3)	7.904	232	223304	29.573
108) 2-Naphthylamine	(3)	7.928	143	1064580	29.129
109) Diethylphthalate	(3)	8.011	149	1115838	29.279
110) Thionazin	(3)	8.071	107	254027	29.987
111) Fluorene	(3)	8.077	166	1082266	29.575
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	468604	28.818
113) 5-Nitro-o-toluidine	(3)	8.089	152	334208	29.209
114) 4-Nitroaniline	(3)	8.101	138	304533	29.310
115) 4,6-Dinitro-2-methylphenol	(4)	8.131	198	176996	28.160
118) NDPA as diphenylamine	(4)	8.185	169	925888	28.830
117) N-Nitrosodiphenylamine	(4)	8.185	169	925888	28.830
119) 1,2-Diphenylhydrazine	(4)	8.215	77	1327846	29.487
120)$2,4,6-Tribromophenol	(3)	8.275	330	235160	58.799
122) Tetraethyldithiopyrophosphate	(4)	8.334	97	223605	29.387
129) 1,3,5-Trinitrobenzene	(4)	8.424	213	115193	27.948
130) Diallate (peak 1)	(4)	8.430	86	562620	21.803
131) Phorate	(4)	8.430	75	1223097	29.368
132) Phenacetin	(4)	8.454	108	698593	29.381
133) 4-Bromophenyl-phenylether	(4)	8.484	248	247089	28.774
134) Diallate (peak 2)	(4)	8.496	86	83602	7.437
137) Hexachlorobenzene	(4)	8.526	284	245743	28.973
139) Dimethoate	(4)	8.568	87	560085	29.657
141) Atrazine	(4)	8.634	200	298529	30.480
143) 4-Aminobiphenyl	(4)	8.693	169	1047619	29.831
142) Pentachlorophenol	(4)	8.693	266	158058	28.928
144) Pentachloronitrobenzene	(4)	8.699	237	126472	29.024
146) Pronamide	(4)	8.759	173	494112	28.970
148)*Phenanthrene-d10	(4)	8.837	188	900731	20.000
147) Dinoseb	(4)	8.855	211	246813	28.128
149) Phenanthrene	(4)	8.861	178	1500030	29.080
150) Anthracene	(4)	8.897	178	1493446	28.600
151) Carbazole	(4)	9.034	167	1502081	29.454
152) Methyl parathion	(4)	9.160	109	429891	29.245
154) Di-n-butylphthalate	(4)	9.351	149	1915030	29.605
155) Parathion	(4)	9.483	109	287468	28.832
156) 4-Nitroquinoline-1-oxide	(4)	9.489	190	148617	28.958
159) Isodrin	(4)	9.704	193	169913	28.462

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$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0501.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 12:21 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.824	202	1565472	29.043
164) Benzidine	(5)	9.950	184	3451533	88.316
165)*Pyrene-d10	(5)	9.991	212	991279	20.000
166) Pyrene	(5)	10.009	202	1575763	29.215
169)$Terphenyl-d14	(5)	10.153	244	2143066	58.727
170) p-Dimethylaminoazobenzene	(5)	10.273	225	342758	29.153
171) Chlorobenzilate	(5)	10.315	139	643063	29.182
173) 3,3'-Dimethylbenzidine	(5)	10.542	212	919133	28.698
174) Butylbenzylphthalate	(5)	10.566	149	864639	29.476
175) 2-Acetylaminofluorene	(5)	10.751	181	725370	28.941
176) 3,3'-Dichlorobenzidine	(5)	10.996	252	506181	29.210
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.002	231	273692	29.295
178) Benzo(a)anthracene	(5)	11.008	228	1399842	29.496
180) Chrysene	(5)	11.038	228	1315917	29.040
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	1152971	29.242
183) 6-Methylchrysene	(5)	11.469	242	995693	29.587
184) Di-n-octylphthalate	(6)	11.726	149	1898746	28.791
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.073	256	639768	28.598
186) Benzo(b)fluoranthene	(6)	12.073	252	1234420	28.540
187) Benzo(k)fluoranthene	(6)	12.103	252	1236024	27.532
189) Benzo(a)pyrene	(6)	12.420	252	1116421	28.675
190)*Perylene-d12	(6)	12.480	264	698268	20.000
191) 3-Methylcholanthrene	(6)	12.827	268	612677	29.098
192) Dibenz(a,h)acridine	(6)	13.455	279	843171	29.469
193) Dibenz(a,j)acridine	(6)	13.515	279	898334	29.027
194) Indeno(1,2,3-cd)pyrene	(6)	13.712	276	1131594	29.013
195) Dibenz(a,h)anthracene	(6)	13.748	278	983270	29.146
196) Benzo(g,h,i)perylene	(6)	14.035	276	924450	28.908
204) Diallate TRANS/CIS	(4)			646222	29.156

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$ = Compound is a surrogate standard.

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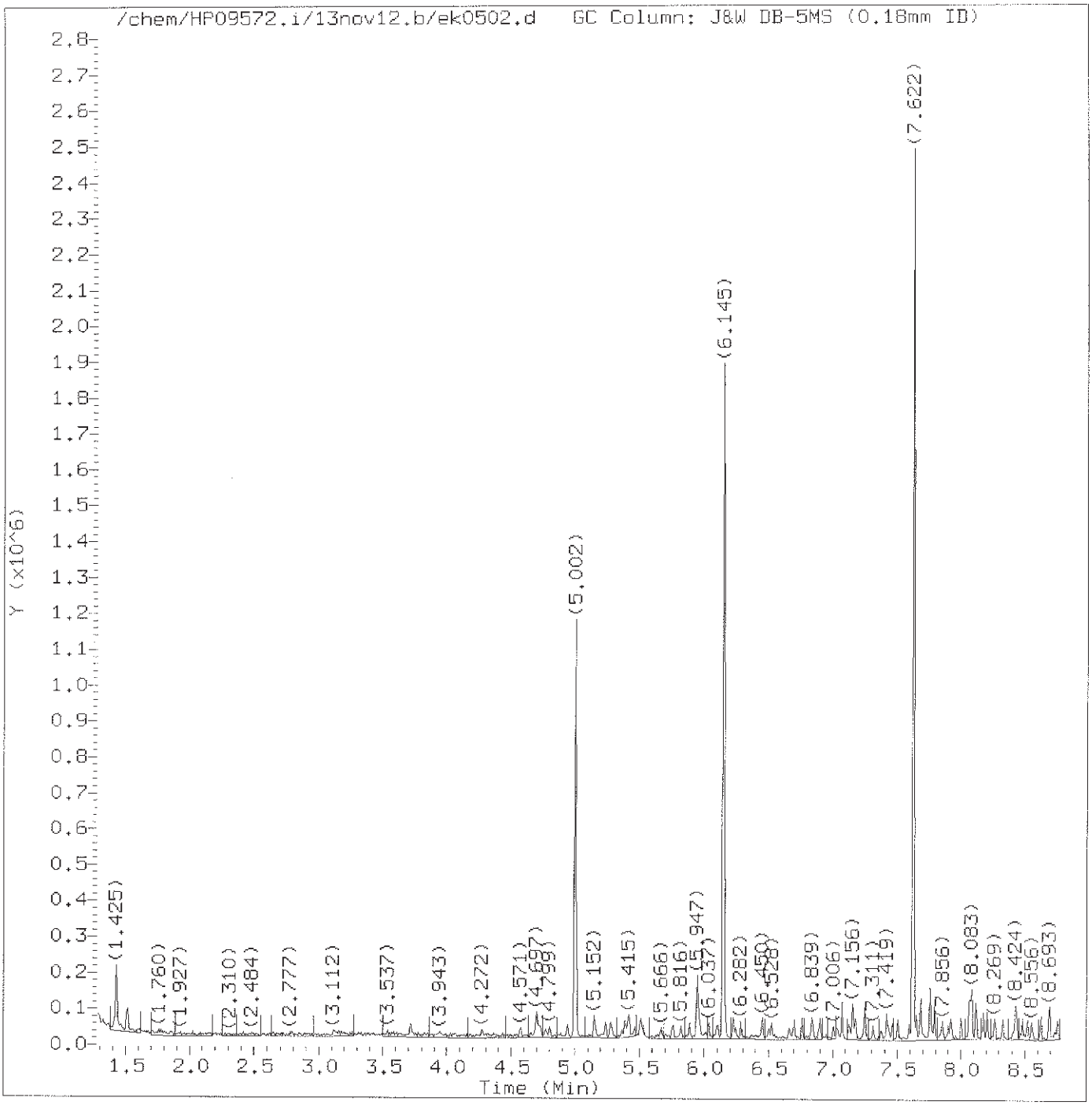
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

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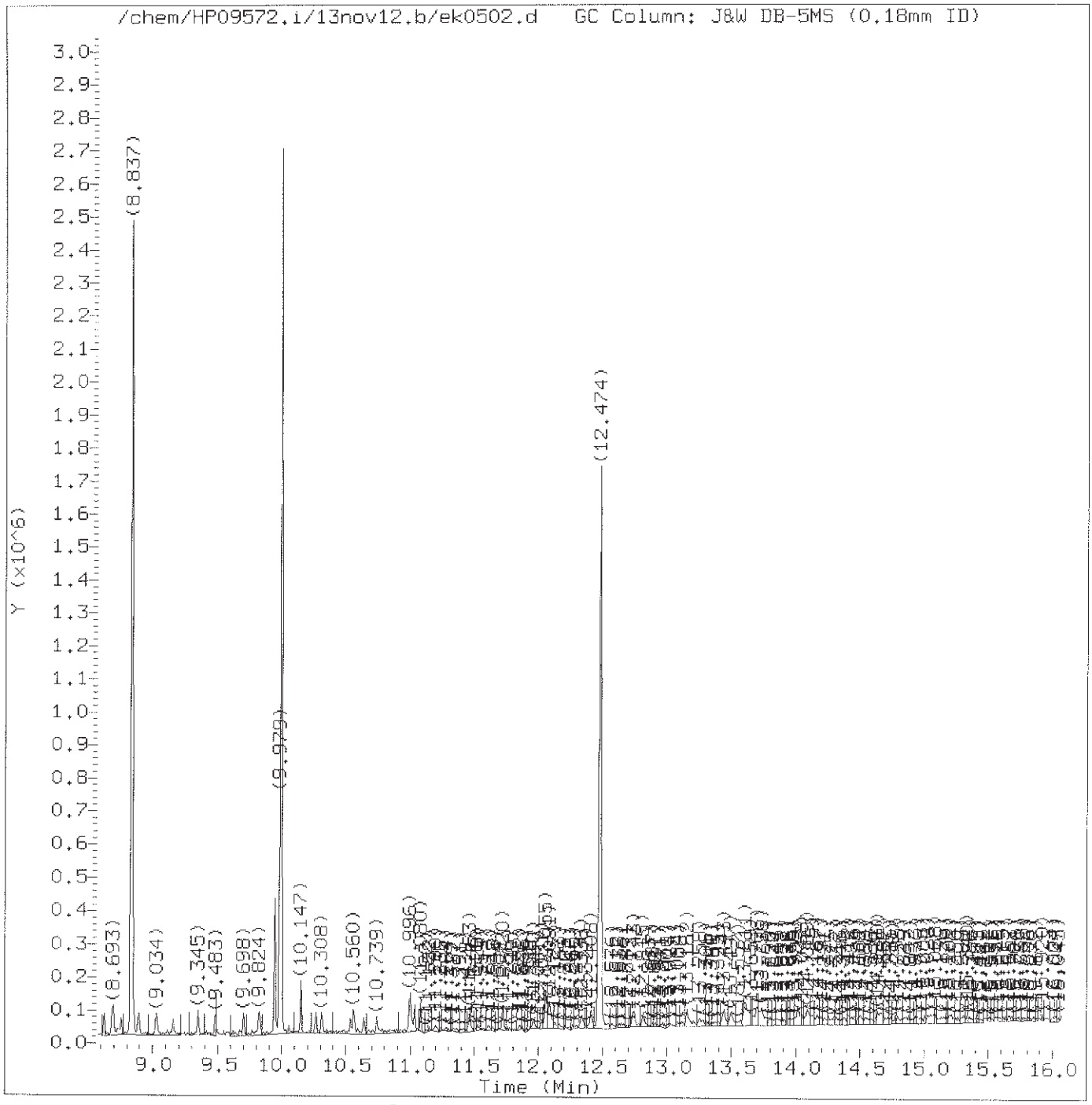
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

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on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.760	88	2569	0.547
2) N-Nitrosodimethylamine	(1)	2.017	74	152	0.019
3) Pyridine	(1)	2.119	79	1405	0.121
4) 2-Picoline	(1)	3.046	93	603	0.040
5) N-Nitrosomethylethylamine	(1)	3.112	88	7437	1.081
6) Methyl methanesulfonate	(1)	3.537	80	3319	0.398
7)$2-Fluorophenol	(1)	3.716	112	10661	0.893
8) N-Nitrosodiethylamine	(1)	3.937	102	2951	0.417
10) Ethyl methanesulfonate	(1)	4.272	109	4471	0.638
20) Aniline	(1)	4.691	93	13477	0.567
18)$Phenol-d6	(1)	4.697	99	17068	0.938
17)$Phenol-d5	(1)	4.697	99	17068	0.938
19) Phenol	(1)	4.709	94	8907	0.462
21) bis(2-Chloroethyl)ether	(1)	4.769	93	6857	0.450
22) 2-Chlorophenol	(1)	4.799	128	4959	0.399
24) 1,3-Dichlorobenzene	(1)	4.942	146	5186	0.436
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	151978	20.000
26) 1,4-Dichlorobenzene	(1)	5.020	146	5661	0.460
27) Benzyl alcohol	(1)	5.152	108	4800	0.498
28) 1,2-Dichlorobenzene	(1)	5.152	146	6866	0.572
30) Indene	(1)	5.236	115	10662	0.493
29) 2-Methylphenol	(1)	5.277	108	5626	0.415
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	8561	0.531
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	8561	0.531
33) N-Nitrosopyrrolidine	(1)	5.367	100	3533	0.412
34) Acetophenone	(1)	5.379	105	9679	0.450
36) N-Nitroso-di-n-propylamine	(1)	5.397	70	7205	0.576
37) N-Nitrosomorpholine	(1)	5.403	56	7169	0.664
38) o-Toluidine	(1)	5.415	106	10835	0.464
35) 4-Methylphenol	(1)	5.421	108	8121	0.499
39) Hexachloroethane	(1)	5.463	117	2821	0.534
40)$Nitrobenzene-d5	(2)	5.511	82	14984	0.973
41) Nitrobenzene	(2)	5.523	77	9561	0.607
42) N-Nitrosopiperidine	(2)	5.660	114	3697	0.521
52) Isophorone	(2)	5.750	82	12741	0.449
53) 2-Nitrophenol	(2)	5.792	139	2736	0.407
54) 2,4-Dimethylphenol	(2)	5.882	107	7147	0.464
55) O,O,O-triethylphosphorothioate	(2)	5.947	198	3387	0.591
56) Benzoic acid	(2)	5.947	105	40584	3.556
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	7205	0.387

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.037	162	4126	0.417
59) 1,2,4-Trichlorobenzene	(2)	6.097	180	5078	0.511
60)*Naphthalene-d8	(2)	6.145	136	652255	20.000
61) Naphthalene	(2)	6.163	128	19283	0.542
62) 4-Chloroaniline	(2)	6.223	127	7027	0.451
63) 2,6-Dichlorophenol	(2)	6.229	162	4209	0.433
64) Hexachloropropene	(2)	6.241	213	2940	0.496
65) Hexachlorobutadiene	(2)	6.288	225	3495	0.719
67) Quinoline	(2)	6.450	129	13174	0.531
69) Caprolactam	(2)	6.504	113	3265	0.586
68) N-Nitrosodi-n-butylamine	(2)	6.528	84	9020	0.595
70) 4-Chloro-3-methylphenol	(2)	6.659	107	7221	0.498
71) Safrole	(2)	6.701	162	4089	0.414
72) 2-Methylnaphthalene	(2)	6.761	142	12050	0.486
75) 1-Methylnaphthalene	(2)	6.839	142	11365	0.495
76) Hexachlorocyclopentadiene	(3)	6.899	237	1676	0.351
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.899	216	5093	0.522
78) cis-Isosafrole	(3)	6.946	162	597	0.035
79) 2,4,6-Trichlorophenol	(3)	7.006	196	3599	0.484
80) 2,4,5-Trichlorophenol	(3)	7.036	196	4492	0.551
81)$2-Fluorobiphenyl	(3)	7.078	172	27822	1.056
83) Isosafrole	(3)	7.132	162	4938	0.460
82) trans-Isosafrole	(3)	7.132	162	4938	0.410
86) 1,1'-Biphenyl	(3)	7.156	154	16946	0.531
87) 2-Chloronaphthalene	(3)	7.162	162	9038	0.364
88) 1-Chloronaphthalene	(3)	7.180	162	13025	0.512
89) Diphenyl ether	(3)	7.246	170	9237	0.541
90) 2-Nitroaniline	(3)	7.252	138	4786	0.503
91) 1,4-Naphthoquinone	(3)	7.311	158	4264	0.379
92) 1,4-Dinitrobenzene	(3)	7.371	168	1830	0.374
93) Dimethylphthalate	(3)	7.419	163	16656	0.545
94) 1,3-Dinitrobenzene	(3)	7.431	168	2732	0.477
95) 2,6-Dinitrotoluene	(3)	7.461	165	2615	0.359
96) Acenaphthylene	(3)	7.503	152	18822	0.504
97) 3-Nitroaniline	(3)	7.593	138	4559	0.537
99)*Acenaphthene-d10	(3)	7.622	164	446132	20.000
100) Acenaphthene	(3)	7.646	153	14806	0.554
101) 2,4-Dinitrophenol	(3)	7.682	184	12016	3.155
102) 4-Nitrophenol	(3)	7.760	109	13760	2.004
103) Pentachlorobenzene	(3)	7.760	250	4877	0.563

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Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.790	165	5276	0.517
105) Dibenzofuran	(3)	7.790	168	18745	0.529
106) 1-Naphthylamine	(3)	7.856	143	15127	0.511
107) 2,3,4,6-Tetrachlorophenol	(3)	7.904	232	2438	0.387
108) 2-Naphthylamine	(3)	7.922	143	16189	0.531
109) Diethylphthalate	(3)	8.005	149	15661	0.492
110) Thionazin	(3)	8.065	107	5019	0.710
111) Fluorene	(3)	8.071	166	16972	0.536
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	7228	0.533
113) 5-Nitro-o-toluidine	(3)	8.083	152	5074	0.531
114) 4-Nitroaniline	(3)	8.089	138	4159	0.480
115) 4,6-Dinitro-2-methylphenol	(4)	8.119	198	10232	1.841
117) N-Nitrosodiphenylamine	(4)	8.179	169	14298	0.503
118) NDPA as diphenylamine	(4)	8.179	169	14298	0.503
119) 1,2-Diphenylhydrazine	(4)	8.209	77	21137	0.531
120)$2,4,6-Tribromophenol	(3)	8.269	330	2821	0.845
122) Tetraethyldithiopyrophosphate	(4)	8.328	97	4634	0.689
131) Phorate	(4)	8.406	75	13362	0.363
130) Diallate (peak 1)	(4)	8.424	86	11702	0.513
132) Phenacetin	(4)	8.436	108	8802	0.419
133) 4-Bromophenyl-phenylether	(4)	8.478	248	3473	0.457
134) Diallate (peak 2)	(4)	8.490	86	3132	0.315
137) Hexachlorobenzene	(4)	8.520	284	3634	0.490
139) Dimethoate	(4)	8.556	87	8793	0.526
141) Atrazine	(4)	8.627	200	6296	0.727
143) 4-Aminobiphenyl	(4)	8.687	169	16192	0.521
144) Pentachloronitrobenzene	(4)	8.693	237	2186	0.567
142) Pentachlorophenol	(4)	8.693	266	2058	0.426
146) Pronamide	(4)	8.753	173	6726	0.446
148)*Phenanthrene-d10	(4)	8.837	188	796583	20.000
147) Dinoseb	(4)	8.849	211	2118	0.273
149) Phenanthrene	(4)	8.855	178	24396	0.523
150) Anthracene	(4)	8.897	178	21250	0.473
151) Carbazole	(4)	9.028	167	20277	0.450
152) Methyl parathion	(4)	9.154	109	5099	0.392
154) Di-n-butylphthalate	(4)	9.345	149	27075	0.473
155) Parathion	(4)	9.477	109	4135	0.469
156) 4-Nitroquinoline-1-oxide	(4)	9.483	190	1133	0.250
159) Isodrin	(4)	9.704	193	3706	0.702
163) Fluoranthene	(4)	9.818	202	21057	0.460

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$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

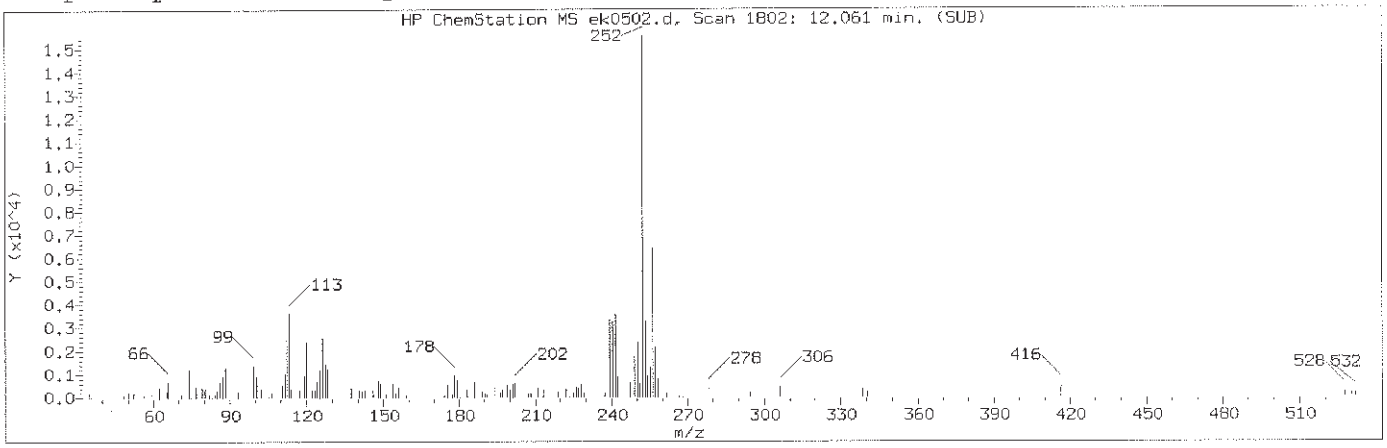
Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) Benzidine	(5)	9.944	184	131778	3.547
165)*Pyrene-d10	(5)	9.991	212	942277	20.000
166) Pyrene	(5)	10.003	202	29022	0.542
169)$Terphenyl-d14	(5)	10.147	244	34459	0.993
170) p-Dimethylaminoazobenzene	(5)	10.267	225	4086	0.366
171) Chlorobenzilate	(5)	10.308	139	8758	0.418
173) 3,3'-Dimethylbenzidine	(5)	10.542	212	14310	0.470
174) Butylbenzylphthalate	(5)	10.560	149	12583	0.451
175) 2-Acetylaminofluorene	(5)	10.739	181	11340	0.476
176) 3,3'-Dichlorobenzidine	(5)	10.996	252	7504	0.456
177) 4,4'-Methylenebis(2-Chloroanil	(5)	10.996	231	3813	0.429
178) Benzo(a)anthracene	(5)	11.002	228	23041	0.507
180) Chrysene	(5)	11.032	228	23513	0.530
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	19932	0.532
183) 6-Methylchrysene	(5)	11.463	242	14300	0.447
184) Di-n-octylphthalate	(6)	11.720	149	28118	0.412
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.055	256	10243	0.443
186) Benzo(b)fluoranthene	(6)	12.061	252	22137M	0.496
187) Benzo(k)fluoranthene	(6)	12.085	252	21251M	0.471
189) Benzo(a)pyrene	(6)	12.408	252	20065M	0.499
190)*Perylene-d12	(6)	12.474	264	722489	20.000
191) 3-Methylcholanthrene	(6)	12.815	268	9611	0.441
192) Dibenz(a,h)acridine	(6)	13.443	279	14007	0.473
193) Dibenz(a,j)acridine	(6)	13.503	279	14593	0.456
194) Indeno(1,2,3-cd)pyrene	(6)	13.700	276	20524	0.506
195) Dibenz(a,h)anthracene	(6)	13.736	278	18604	0.522
196) Benzo(g,h,i)perylene	(6)	14.017	276	18162	0.532
204) Diallate TRANS/CIS	(4)			14834	0.757

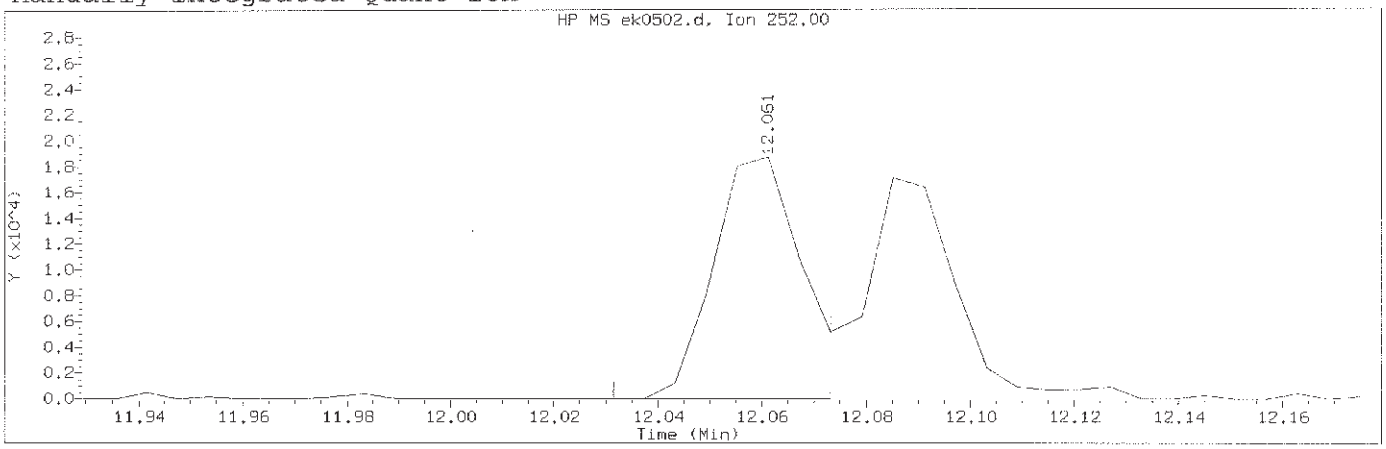
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area (flag)	: 22137M		
On-Column Amount (ng/ul)	: 0.4964		
Integration start scan	: 1796	Integration stop scan:	1803
Y at integration start	: 0	Y at integration end:	0

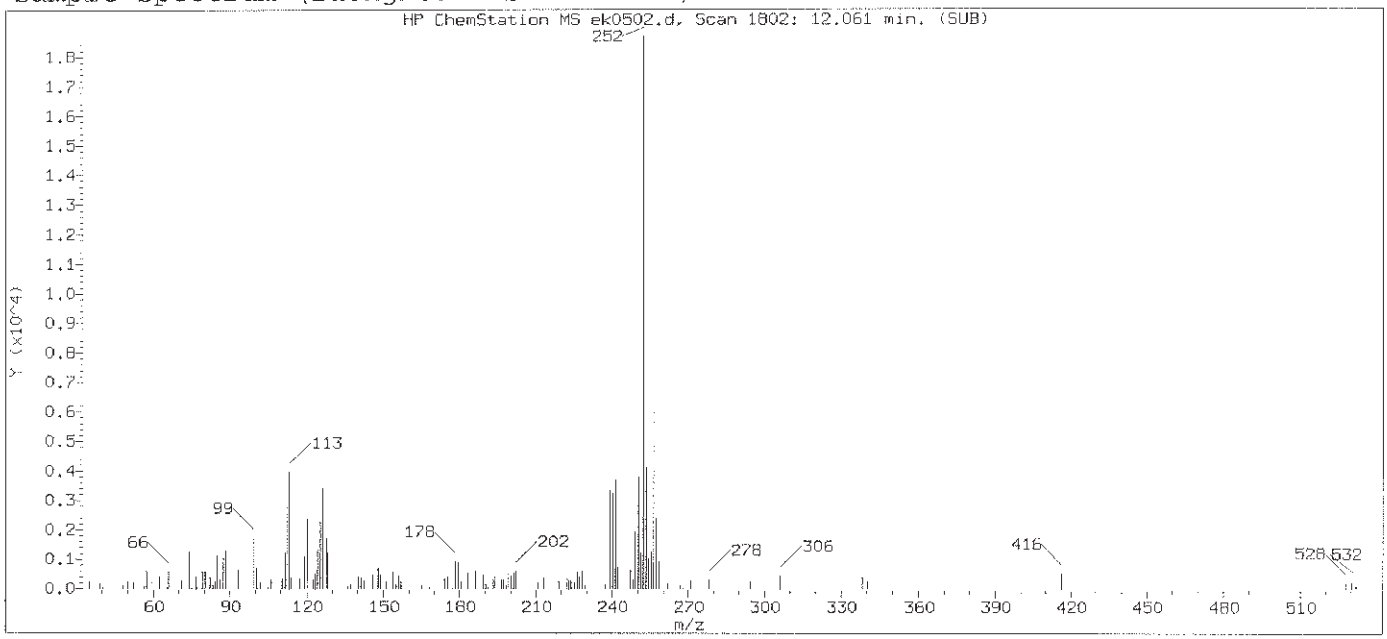
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:24
Target 3.5 esignature user ID: hb01996

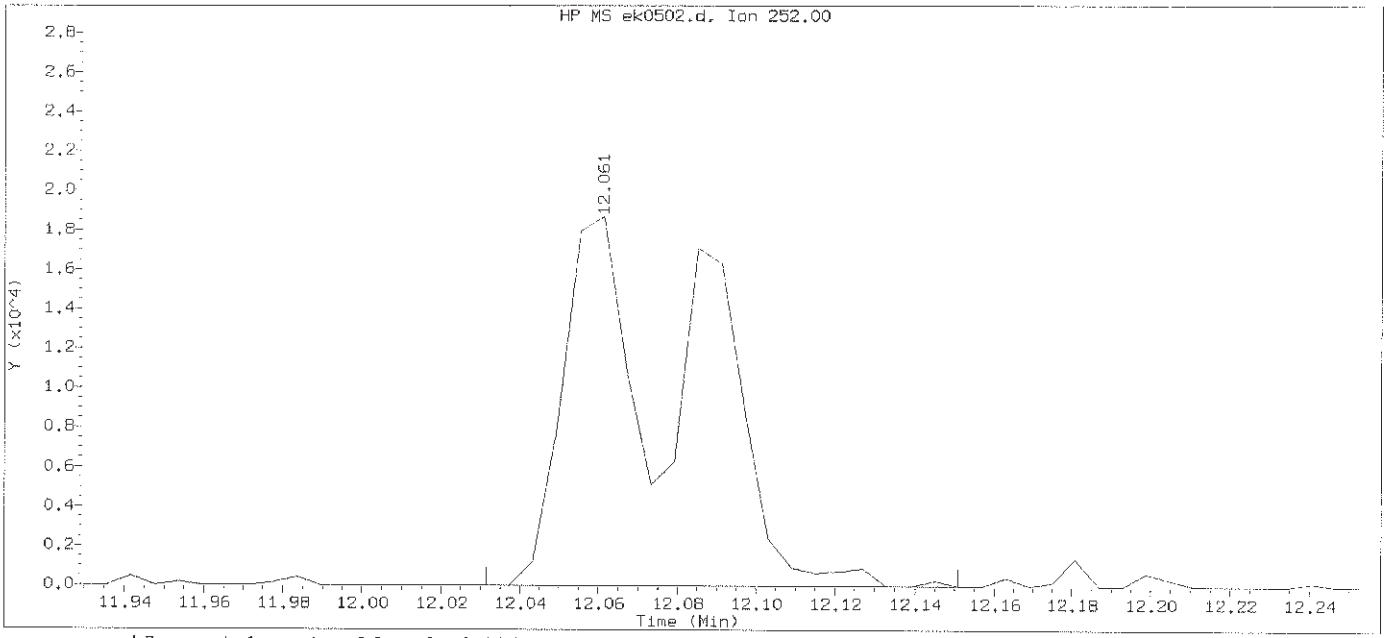
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

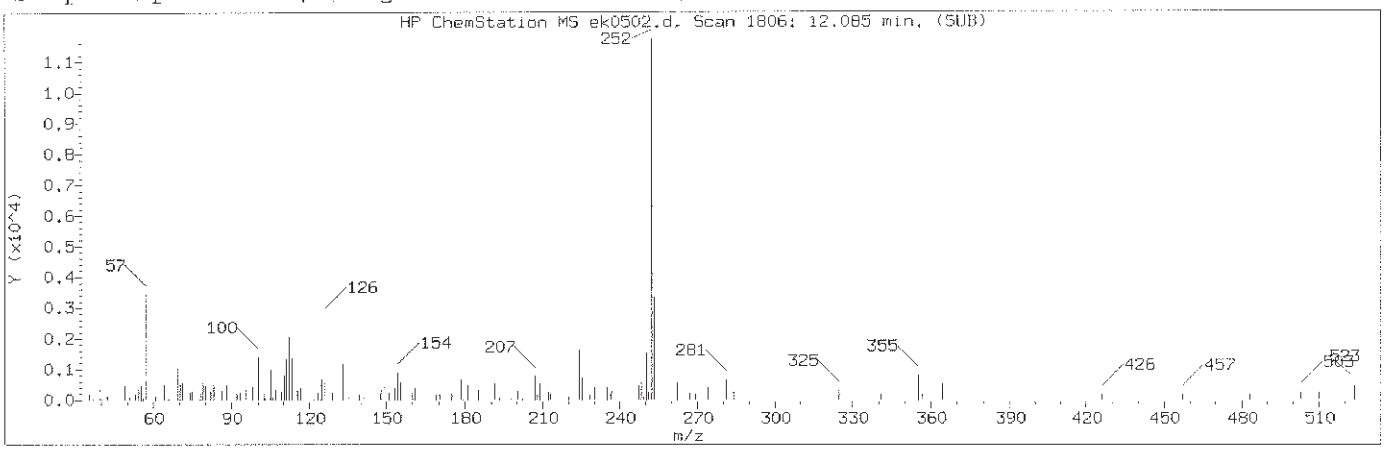
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 13:36
Date, time and analyst ID of latest file update: 12-Nov-2013 13:36 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD3083

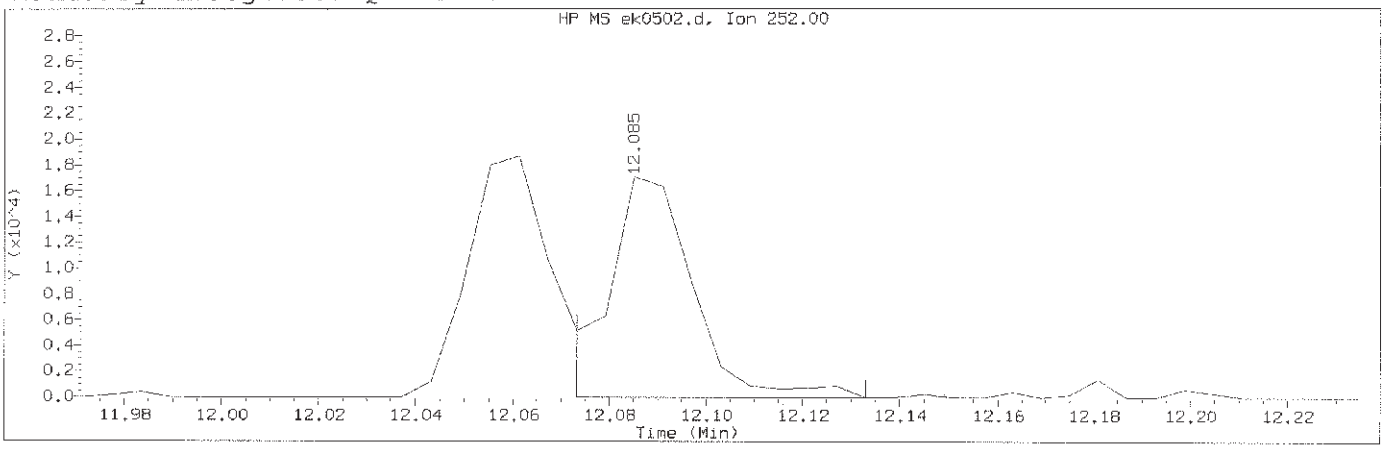
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 41637		
On-column Amount (ng/ul)	: 0.8634		
Integration start scan	: 1796	Integration stop scan:	1816
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

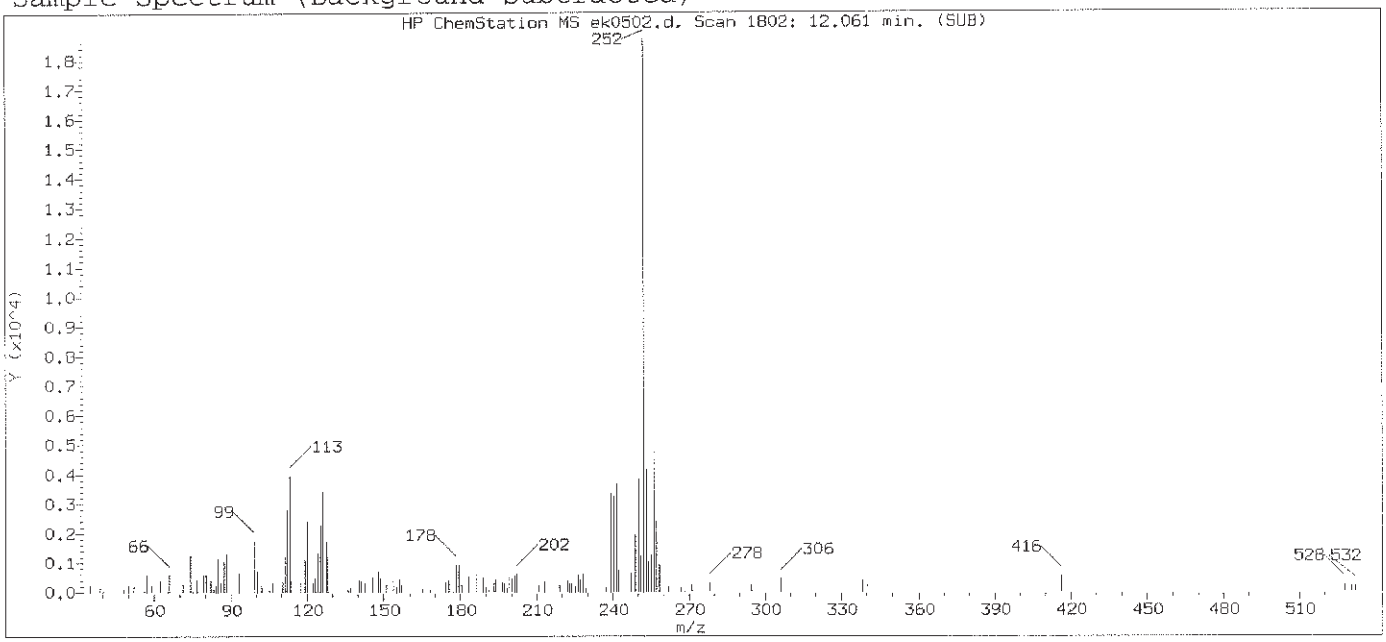
Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area (flag)	: 21251M		
On-Column Amount (ng/ul)	: 0.4708		
Integration start scan	: 1803	Integration stop scan:	1813
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

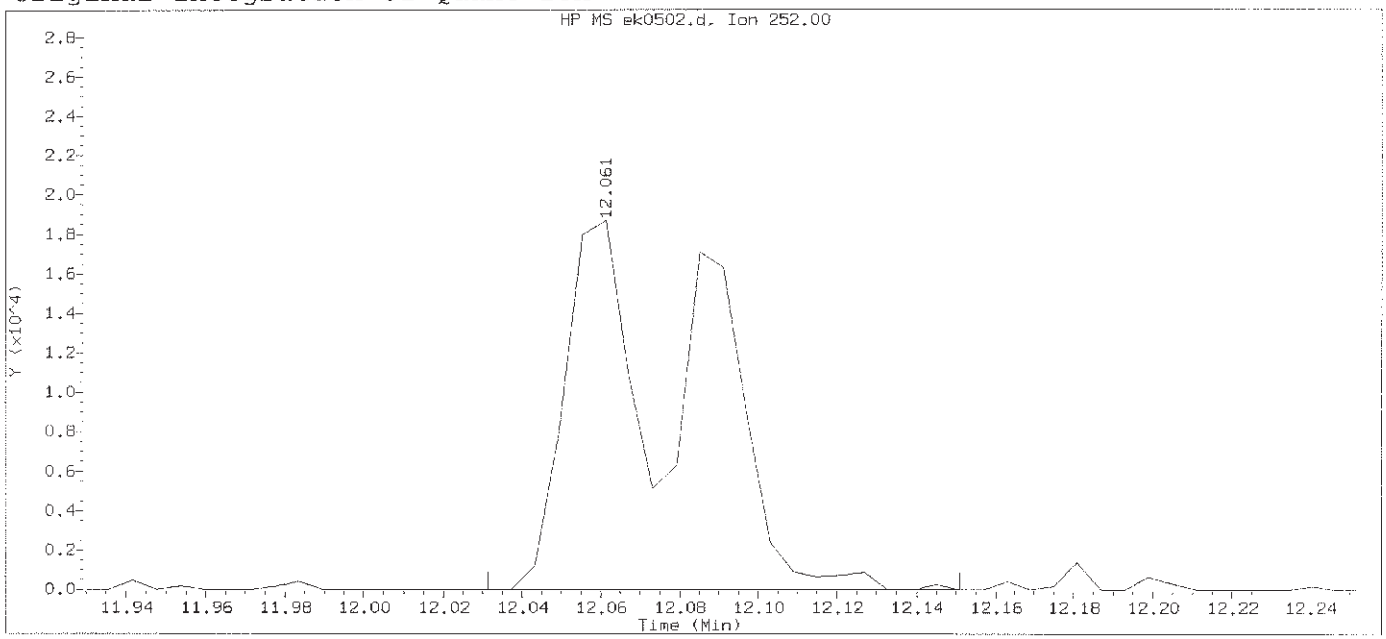
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff Senior Specialist NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

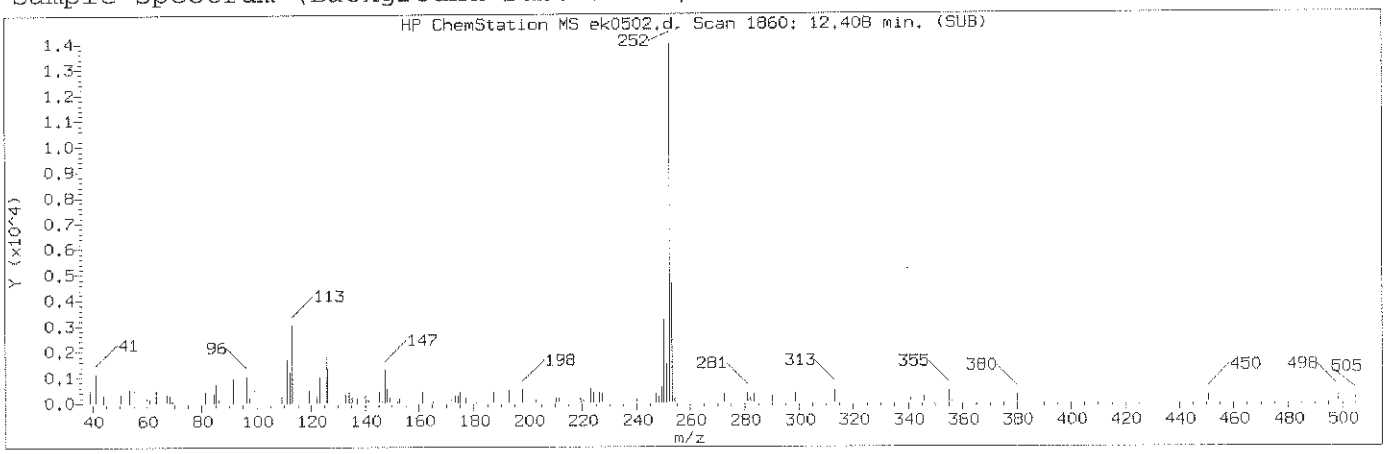
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 13:36
Date, time and analyst ID of latest file update: 12-Nov-2013 13:36 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD3083

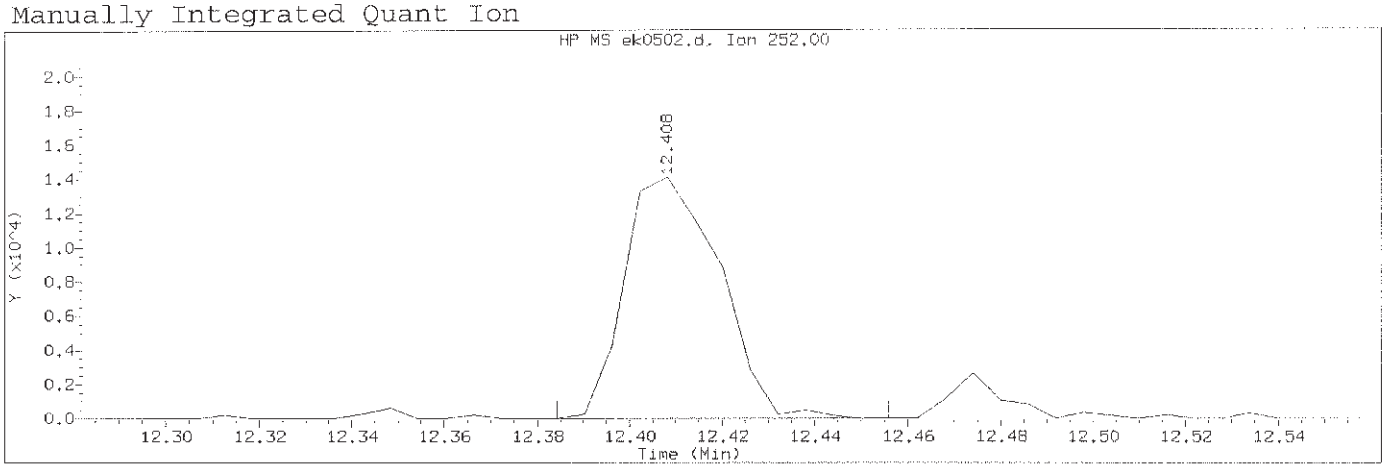
Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 41637		
On-column Amount (ng/ul)	: 0.8309		
Integration start scan	: 1796	Integration stop scan:	1816
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD0.50 Lab Sample ID: STD3083

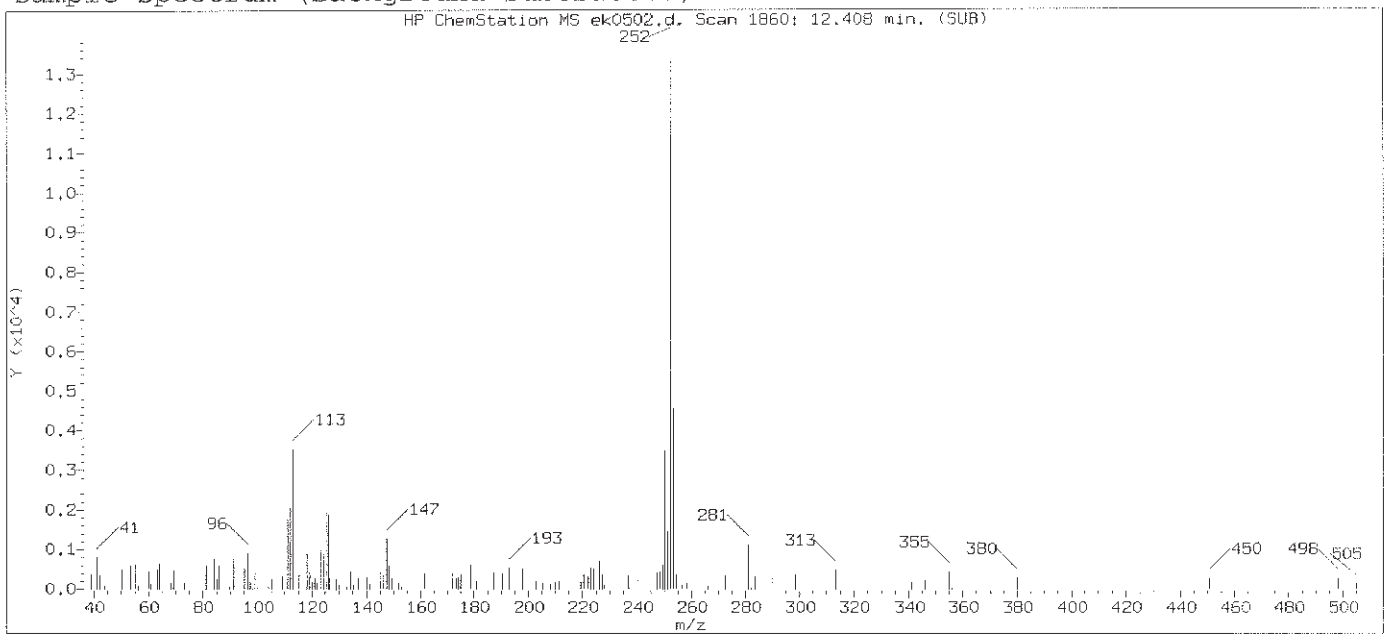
Compound Number	: 189		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1860		
Retention Time (minutes)	: 12.408		
Quant Ion	: 252.00		
Area (flag)	: 20065M		
On-Column Amount (ng/ul)	: 0.4987		
Integration start scan	: 1855	Integration stop scan:	1867
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

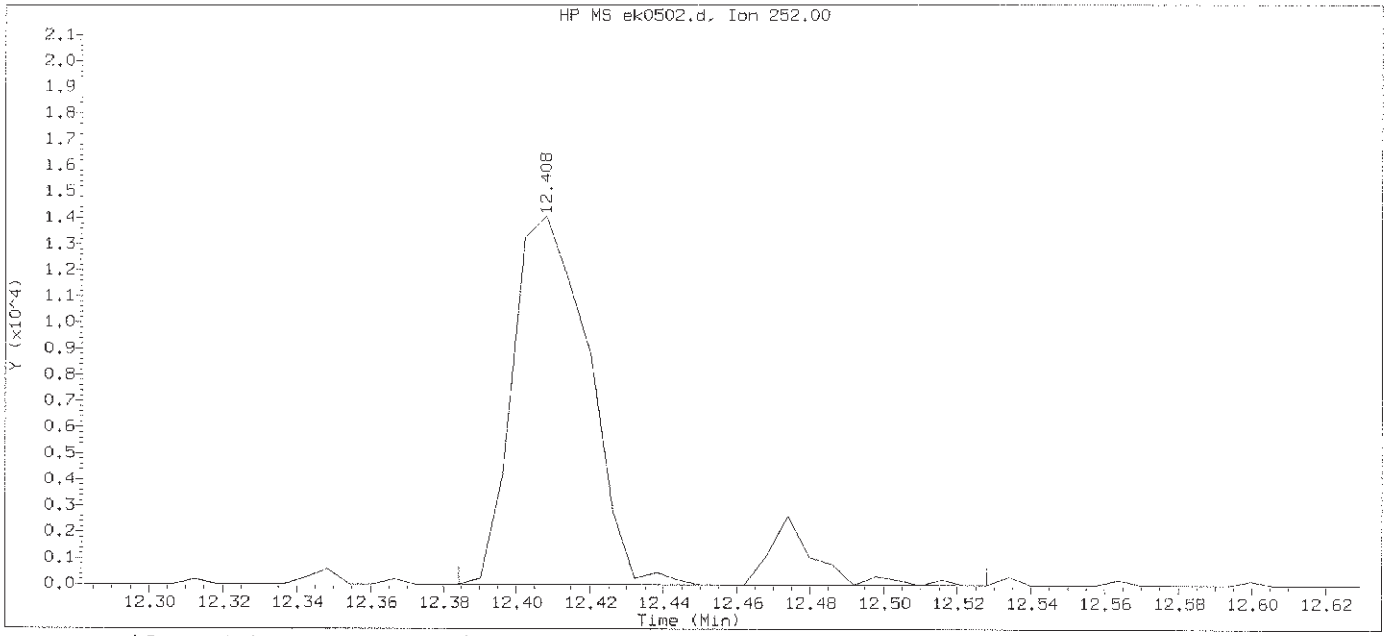
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



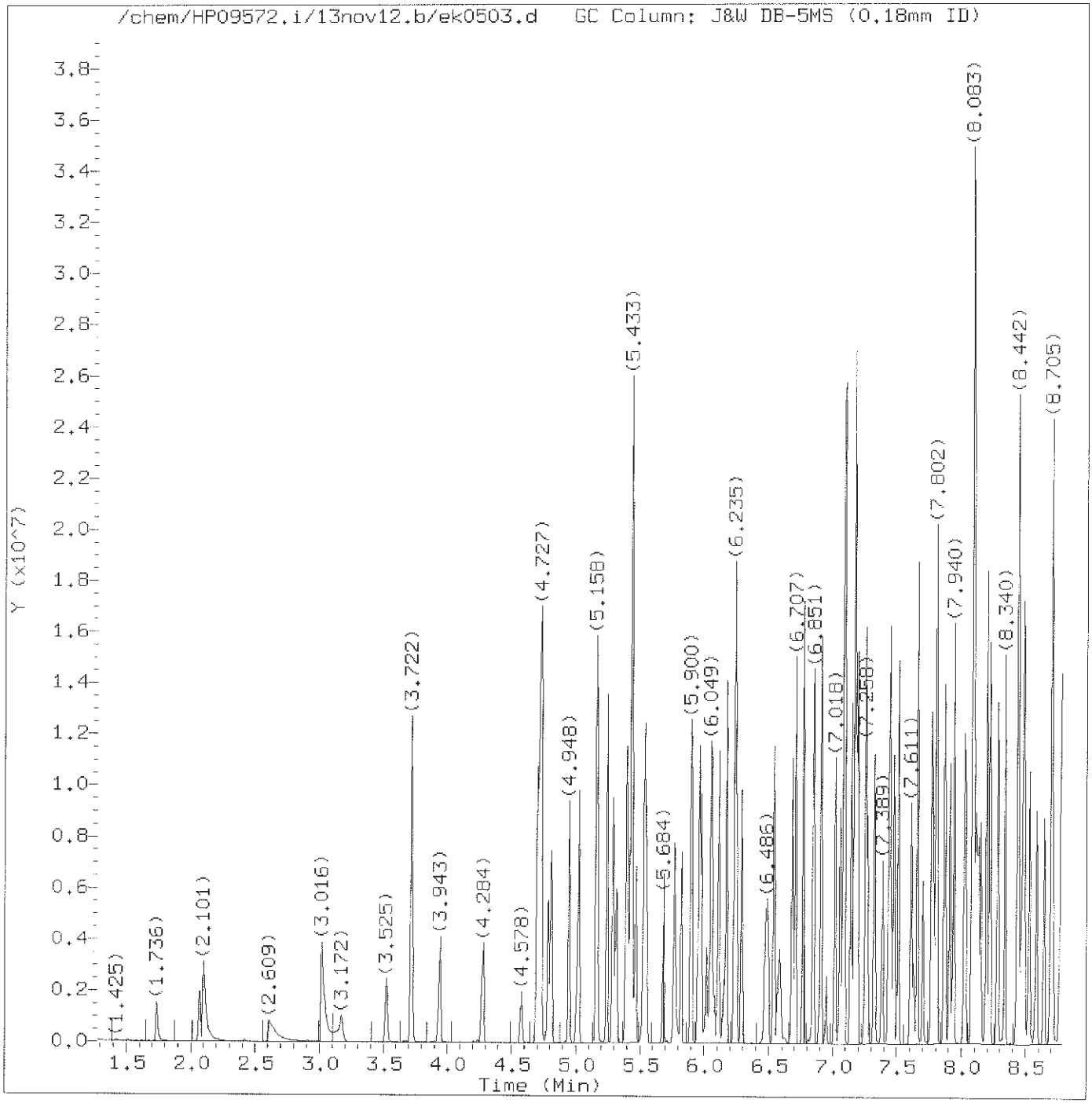
Data File: /chem/HP09572.i/13nov12.b/ek0502.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:11 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 13:36
Date, time and analyst ID of latest file update: 12-Nov-2013 13:36 Automation

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 189		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1860		
Retention Time (minutes)	: 12.408		
Quant Ion	: 252.00		
Area	: 22325		
On-column Amount (ng/ul)	: 0.5700		
Integration start scan	: 1855	Integration stop scan:	1879
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:24.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

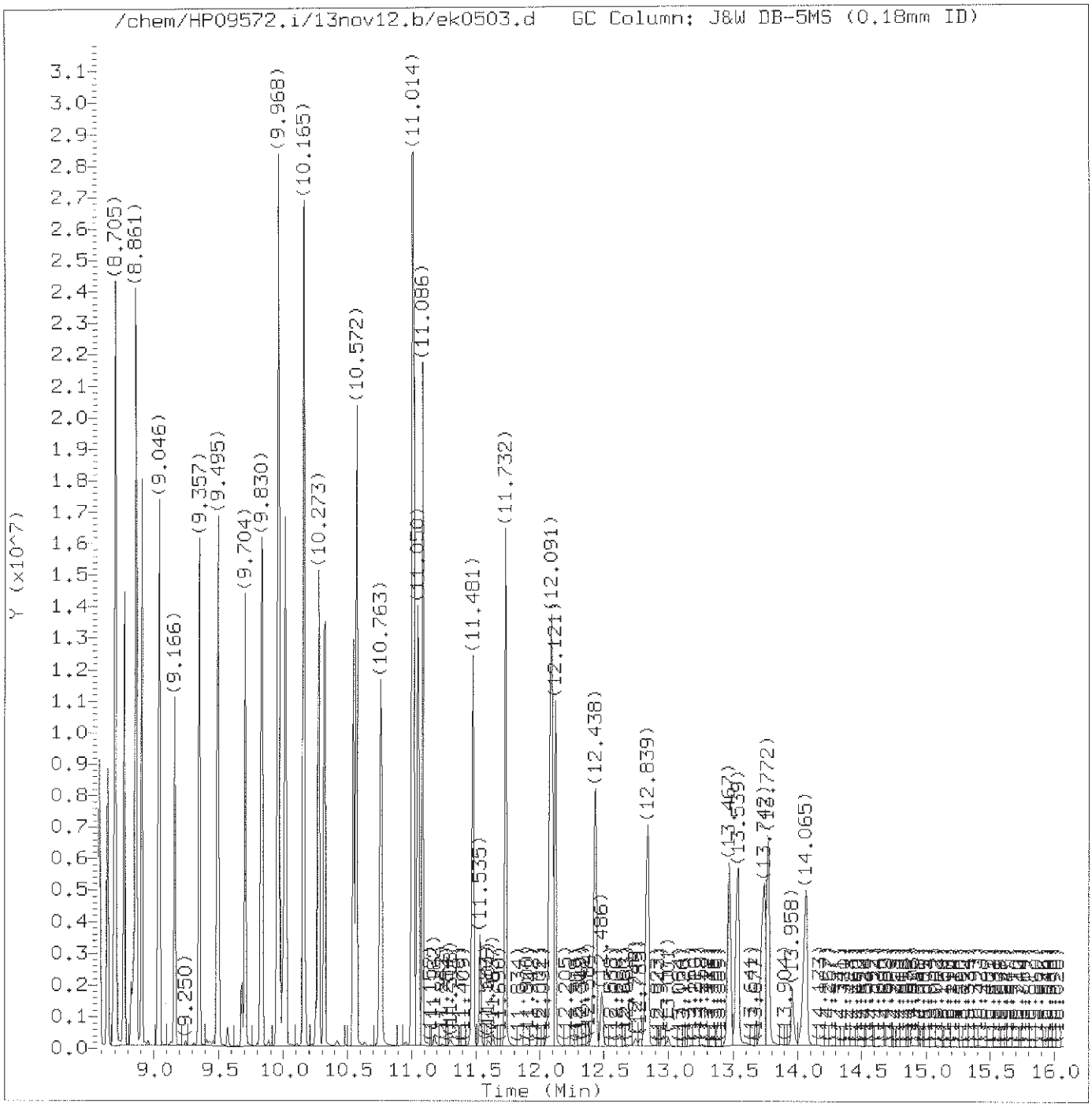
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.736	88	644365	112.537
2) N-Nitrosodimethylamine	(1)	2.065	74	1178523	118.960
3) Pyridine	(1)	2.101	79	1938643	128.053
4) 2-Picoline	(1)	3.016	93	2280607	119.462
5) N-Nitrosomethylethylamine	(1)	3.172	88	1007106	117.711
6) Methyl methanesulfonate	(1)	3.525	80	1233622	118.483
7)$2-Fluorophenol	(1)	3.722	112	3485315	234.850
8) N-Nitrosodiethylamine	(1)	3.943	102	1067780	120.169
10) Ethyl methanesulfonate	(1)	4.284	109	1029275	117.922
20) Aniline	(1)	4.697	93	3509735	118.327
18)$Phenol-d6	(1)	4.715	99	5262638	233.354
17)$Phenol-d5	(1)	4.715	99	5262638	233.354
19) Phenol	(1)	4.727	94	2728258A	114.970
21) bis(2-Chloroethyl)ether	(1)	4.787	93	2195094	116.488
22) 2-Chlorophenol	(1)	4.811	128	1821681	117.861
24) 1,3-Dichlorobenzene	(1)	4.948	146	1764744	118.666
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	190881	20.000
26) 1,4-Dichlorobenzene	(1)	5.020	146	1817111	118.310
28) 1,2-Dichlorobenzene	(1)	5.158	146	1752034	117.431
27) Benzyl alcohol	(1)	5.164	108	1382097	115.986
32) bis(2-Chloroisopropyl)ether	(1)	5.170	45	2323039	116.478
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.170	45	2323039	116.478
30) Indene	(1)	5.242	115	3640264	137.205
29) 2-Methylphenol	(1)	5.313	108	2009477M	118.748
34) Acetophenone	(1)	5.397	105	2972495	113.204
33) N-Nitrosopyrrolidine	(1)	5.397	100	1207479	114.544
38) o-Toluidine	(1)	5.427	106	3299341	114.869
36) N-Nitroso-di-n-propylamine	(1)	5.433	70	1754541	114.297
37) N-Nitrosomorpholine	(1)	5.433	56	1497031A	113.433
35) 4-Methylphenol	(1)	5.439	108	2343160	116.348
39) Hexachloroethane	(1)	5.469	117	778989	118.187
40)$Nitrobenzene-d5	(2)	5.535	82	4937620	234.821
41) Nitrobenzene	(2)	5.547	77	2534140	117.682
42) N-Nitrosopiperidine	(2)	5.684	114	1124859	116.464
52) Isophorone	(2)	5.768	82	4501647	116.575
53) 2-Nitrophenol	(2)	5.828	139	1105651	119.412
54) 2,4-Dimethylphenol	(2)	5.900	107	2402306	115.155
55) O,O,O-triethylphosphorothioate	(2)	5.959	198	910998	116.776
57) bis(2-Chloroethoxy)methane	(2)	5.977	93	3567714	132.007
58) 2,4-Dichlorophenol	(2)	6.055	162	1606077	118.450

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.079	105	2118687M	129.279
59) 1,2,4-Trichlorobenzene	(2)	6.109	180	1573489	116.452
60)*Naphthalene-d8	(2)	6.151	136	900389	20.000
61) Naphthalene	(2)	6.169	128	5121088	107.817
62) 4-Chloroaniline	(2)	6.235	127	2456370	115.990
63) 2,6-Dichlorophenol	(2)	6.241	162	1537636	116.262
64) Hexachloropropene	(2)	6.253	213	997187	121.189
65) Hexachlorobutadiene	(2)	6.288	225	808705	120.324
67) Quinoline	(2)	6.492	129	3815410M	114.163
68) N-Nitrosodi-n-butylamine	(2)	6.540	84	1789548	85.542
69) Caprolactam	(2)	6.588	113	814592A	110.178
70) 4-Chloro-3-methylphenol	(2)	6.683	107	2262277	115.197
71) Safrole	(2)	6.707	162	1545482	115.471
72) 2-Methylnaphthalene	(2)	6.767	142	3855273	114.347
75) 1-Methylnaphthalene	(2)	6.851	142	3553269	114.049
76) Hexachlorocyclopentadiene	(3)	6.905	237	793026	127.071
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.911	216	1500644	120.722
78) cis-Isosafrole	(3)	6.947	162	276319	12.889
79) 2,4,6-Trichlorophenol	(3)	7.018	196	1150459	121.235
80) 2,4,5-Trichlorophenol	(3)	7.054	196	1232428	119.314
81)$2-Fluorobiphenyl	(3)	7.090	172	7172965	222.266
83) Isosafrole	(3)	7.144	162	1570209	116.836
82) trans-Isosafrole	(3)	7.144	162	1570209	103.984
86) 1,1'-Biphenyl	(3)	7.168	154	4324033	110.801
87) 2-Chloronaphthalene	(3)	7.174	162	4680868M	148.340
88) 1-Chloronaphthalene	(3)	7.192	162	3332445M	108.273
89) Diphenyl ether	(3)	7.252	170	2529178	117.747
90) 2-Nitroaniline	(3)	7.270	138	1417624	118.232
91) 1,4-Naphthoquinone	(3)	7.323	158	1614342	115.304
92) 1,4-Dinitrobenzene	(3)	7.389	168	760304	121.667
93) Dimethylphthalate	(3)	7.443	163	4281762	113.363
94) 1,3-Dinitrobenzene	(3)	7.455	168	855842	118.408
95) 2,6-Dinitrotoluene	(3)	7.479	165	1093331	118.706
96) Acenaphthylene	(3)	7.515	152	5283922	113.502
97) 3-Nitroaniline	(3)	7.611	138	1282945	119.363
99)*Acenaphthene-d10	(3)	7.628	164	566480	20.000
100) Acenaphthene	(3)	7.658	153	3708317	111.697
101) 2,4-Dinitrophenol	(3)	7.700	184	664280	131.035
103) Pentachlorobenzene	(3)	7.766	250	1286718	118.017
102) 4-Nitrophenol	(3)	7.778	109	1065274	121.448

M = Compound was manually integrated.
A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) Dibenzofuran	(3)	7.802	168	5023176	114.237
104) 2,4-Dinitrotoluene	(3)	7.814	165	1481763	116.147
106) 1-Naphthylamine	(3)	7.868	143	4264769	115.554
107) 2,3,4,6-Tetrachlorophenol	(3)	7.910	232	949222	119.095
108) 2-Naphthylamine	(3)	7.940	143	4127481	110.718
109) Diethylphthalate	(3)	8.023	149	4582423	115.578
111) Fluorene	(3)	8.083	166	4356782	111.037
110) Thionazin	(3)	8.089	107	1025306	116.094
112) 4-Chlorophenyl-phenylether	(3)	8.089	204	1997306	117.257
113) 5-Nitro-o-toluidine	(3)	8.113	152	1392197	116.512
114) 4-Nitroaniline	(3)	8.131	138	1227343	114.191
115) 4,6-Dinitro-2-methylphenol	(4)	8.149	198	858735	126.872
118) NDPA as diphenylamine	(4)	8.197	169	3832094	115.979
117) N-Nitrosodiphenylamine	(4)	8.197	169	3832094	115.979
119) 1,2-Diphenylhydrazine	(4)	8.221	77	5241232	114.033
120)$2,4,6-Tribromophenol	(3)	8.287	330	994201	236.391
122) Tetraethyldithiopyrophosphate	(4)	8.340	97	944852	119.136
130) Diallate (peak 1)	(4)	8.436	86	2287893	86.436
131) Phorate	(4)	8.442	75	4825722	113.685
129) 1,3,5-Trinitrobenzene	(4)	8.448	213	560289	126.457
132) Phenacetin	(4)	8.484	108	2918555	118.217
133) 4-Bromophenyl-phenylether	(4)	8.490	248	1034109	116.705
134) Diallate (peak 2)	(4)	8.502	86	357709	30.277
137) Hexachlorobenzene	(4)	8.532	284	997660	115.152
139) Dimethoate	(4)	8.586	87	2061757	109.103
141) Atrazine	(4)	8.651	200	830997	81.111
142) Pentachlorophenol	(4)	8.699	266	741942	126.369
143) 4-Aminobiphenyl	(4)	8.705	169	3611261	104.607
144) Pentachloronitrobenzene	(4)	8.711	237	575475	124.097
146) Pronamide	(4)	8.777	173	2111134	118.879
148)*Phenanthrene-d10	(4)	8.843	188	942213	20.000
147) Dinoseb	(4)	8.861	211	1175960	125.292
149) Phenanthrene	(4)	8.867	178	5836790	108.962
150) Anthracene	(4)	8.909	178	6062636	115.457
151) Carbazole	(4)	9.046	167	5736976	111.397
152) Methyl parathion	(4)	9.166	109	1631232	110.351
154) Di-n-butylphthalate	(4)	9.357	149	7044482	108.915
155) Parathion	(4)	9.489	109	1228823	118.538
156) 4-Nitroquinoline-1-oxide	(4)	9.501	190	642397	119.772
159) Isodrin	(4)	9.704	193	729188	117.825

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.836	202	6129894	114.759
164) Benzidine	(5)	9.968	184	10899660	294.778
165)*Pyrene-d10	(5)	9.997	212	1022824	20.000
166) Pyrene	(5)	10.015	202	6089927	108.236
169)$Terphenyl-d14	(5)	10.165	244	7820637	217.456
170) p-Dimethylaminoazobenzene	(5)	10.279	225	1410021	117.460
171) Chlorobenzilate	(5)	10.315	139	2546885	114.554
173) 3,3'-Dimethylbenzidine	(5)	10.548	212	3469198	109.549
174) Butylbenzylphthalate	(5)	10.572	149	3362966	113.923
175) 2-Acetylaminofluorene	(5)	10.763	181	2973381	116.601
176) 3,3'-Dichlorobenzidine	(5)	11.008	252	2006622	114.701
178) Benzo(a)anthracene	(5)	11.014	228	5450177	112.737
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.014	231	1072691	114.039
180) Chrysene	(5)	11.050	228	4971192	106.916
181) bis(2-Ethylhexyl)phthalate	(5)	11.086	149	4480668	113.239
183) 6-Methylchrysene	(5)	11.481	242	3878259	114.328
184) Di-n-octylphthalate	(6)	11.732	149	7299631	117.490
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.085	256	2503070	118.346
186) Benzo(b)fluoranthene	(6)	12.097	252	5591534M	131.815
187) Benzo(k)fluoranthene	(6)	12.121	252	4548483M	111.977
189) Benzo(a)pyrene	(6)	12.438	252	4355228	118.238
190)*Perylene-d12	(6)	12.486	264	664709	20.000
191) 3-Methylcholanthrene	(6)	12.839	268	2444421	121.297
192) Dibenz(a,h)acridine	(6)	13.473	279	3344924	121.858
193) Dibenz(a,j)acridine	(6)	13.539	279	3436886	117.751
194) Indeno(1,2,3-cd)pyrene	(6)	13.742	276	4448610	119.350
195) Dibenz(a,h)anthracene	(6)	13.772	278	3842237	117.787
196) Benzo(g,h,i)perylene	(6)	14.065	276	3662637	117.369
204) Diallate TRANS/CIS	(4)			2645602	116.007

M = Compound was manually integrated.
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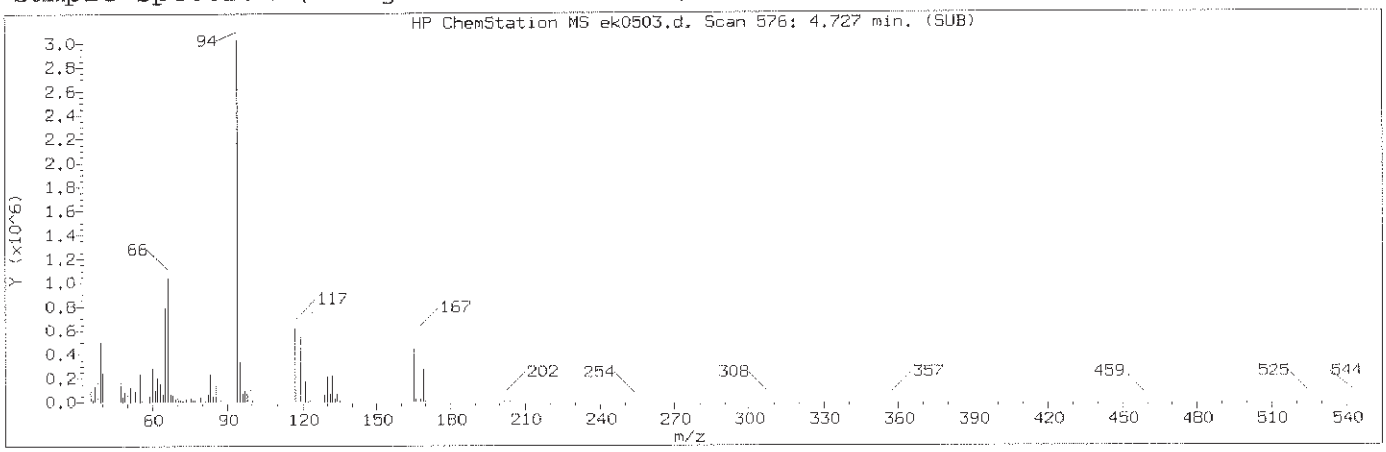
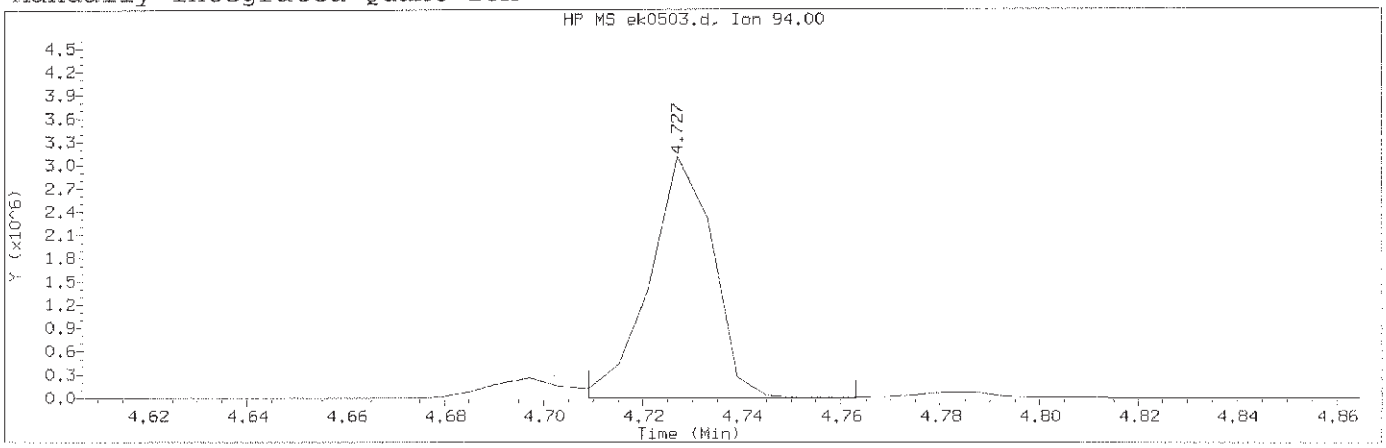
Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 19		
Compound Name	: Phenol		
Scan Number	: 576		
Retention Time (minutes)	: 4.727		
Quant Ion	: 94.00		
Area (flag)	: 2728258A		
On-Column Amount (ng/ul)	: 114.9699		
Integration start scan	: 572	Integration stop scan:	581
Y at integration start	: 0	Y at integration end:	0

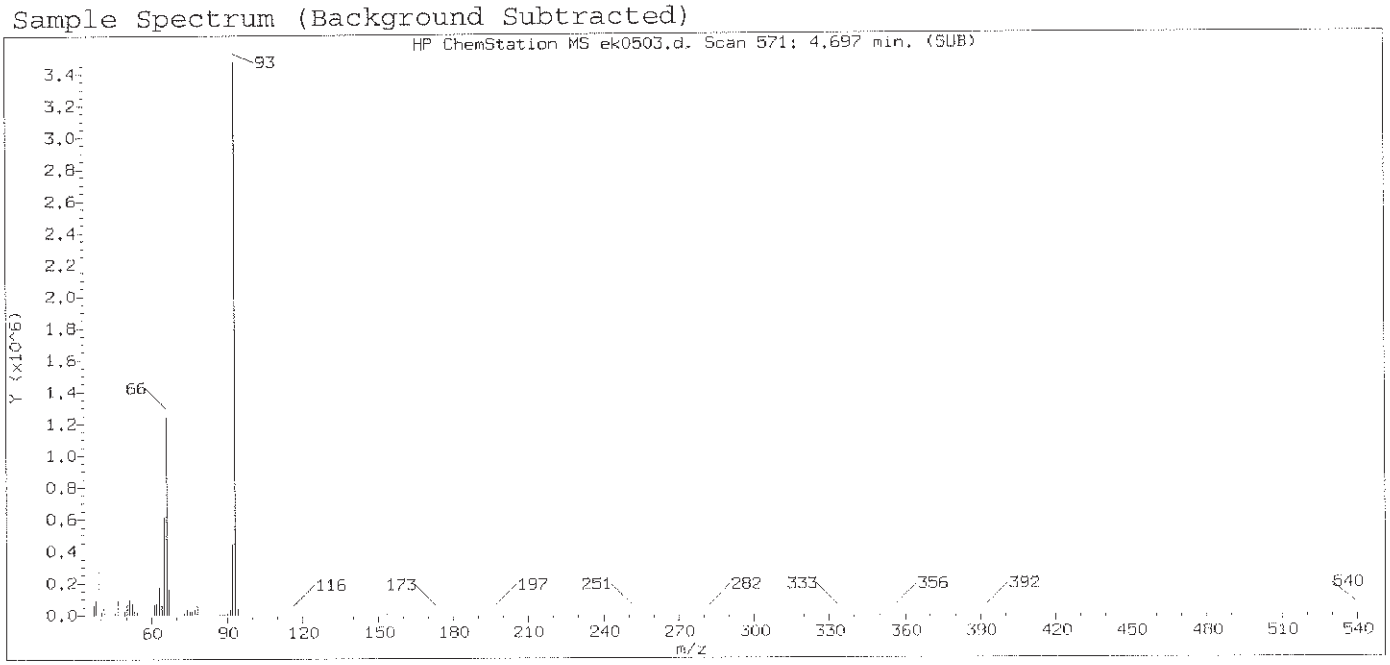
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

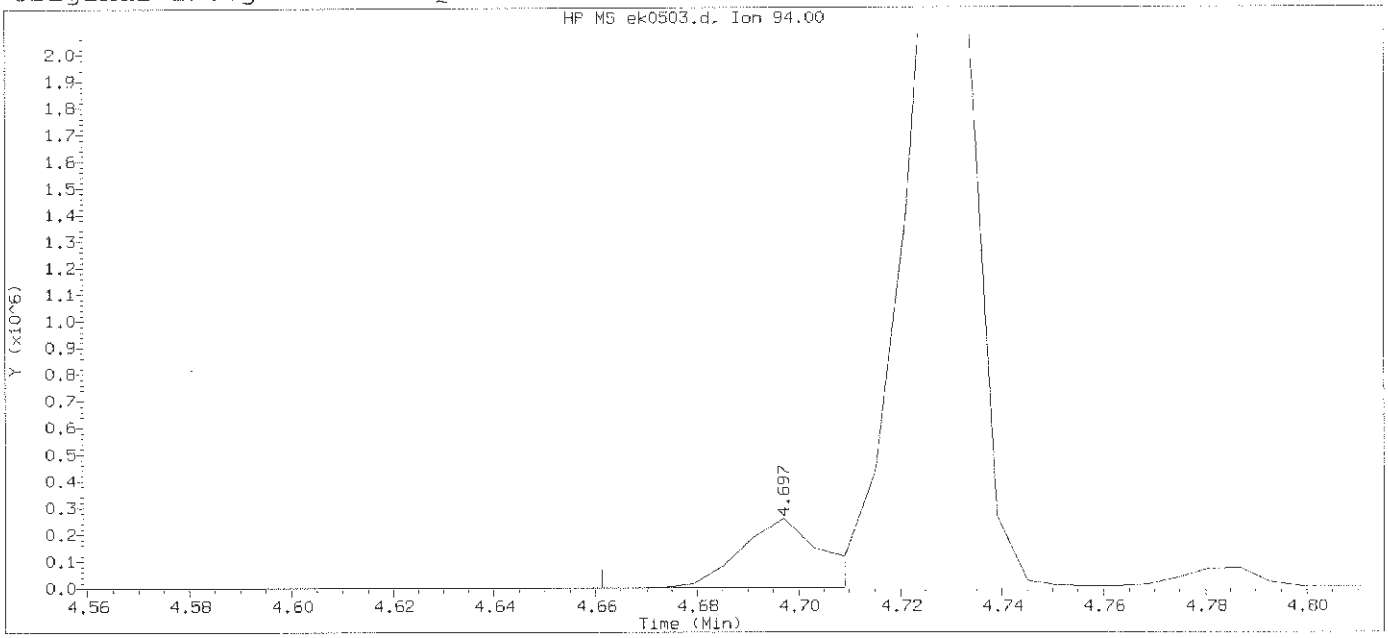
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

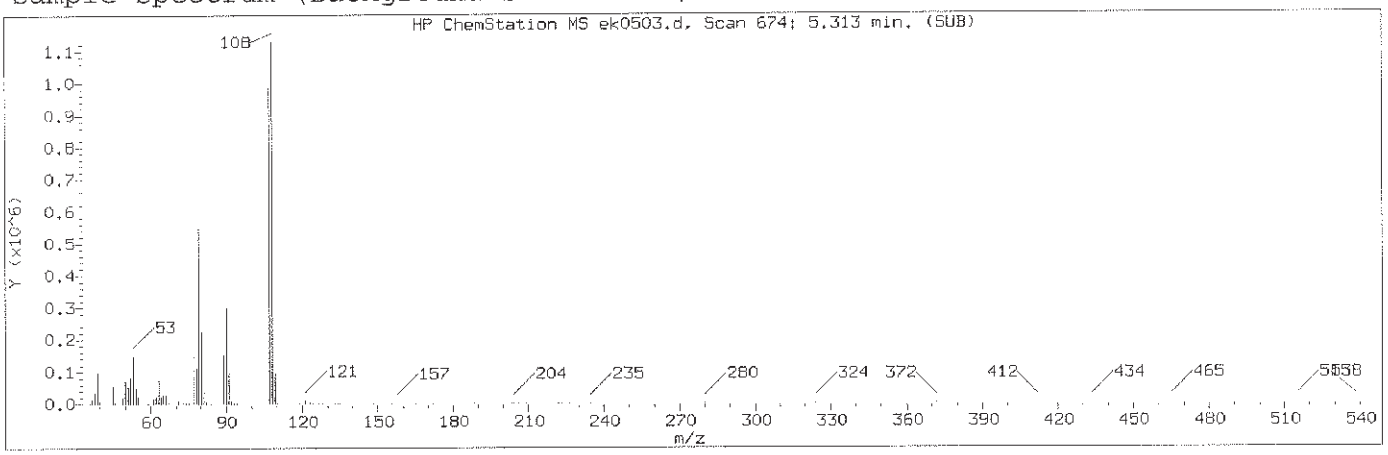
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

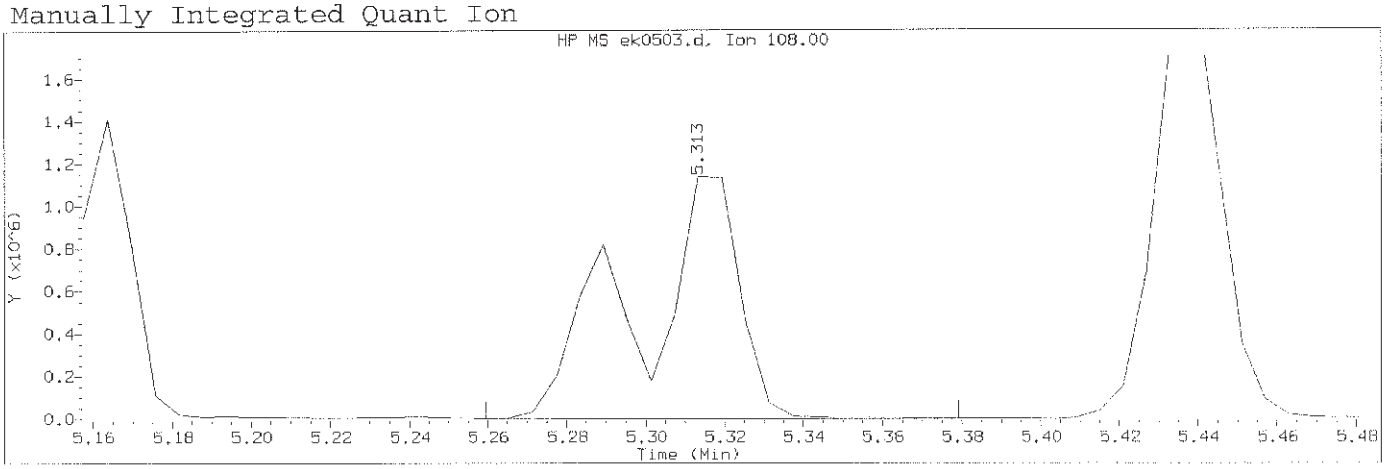
Compound Number	: 19		
Compound Name	: Phenol		
Scan Number	: 571		
Retention Time (minutes)	: 4.697		
Quant Ion	: 94.00		
Area	: 268897		
On-column Amount (ng/ul)	: 11.7586		
Integration start scan	: 564	Integration stop scan:	572
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 29		
Compound Name	: 2-Methylphenol		
Scan Number	: 674		
Retention Time (minutes)	: 5.313		
Quant Ion	: 108.00		
Area (flag)	: 2009477M		
On-Column Amount (ng/ul)	: 118.7481		
Integration start scan	: 664	Integration stop scan:	684
Y at integration start	: 1	Y at integration end:	1

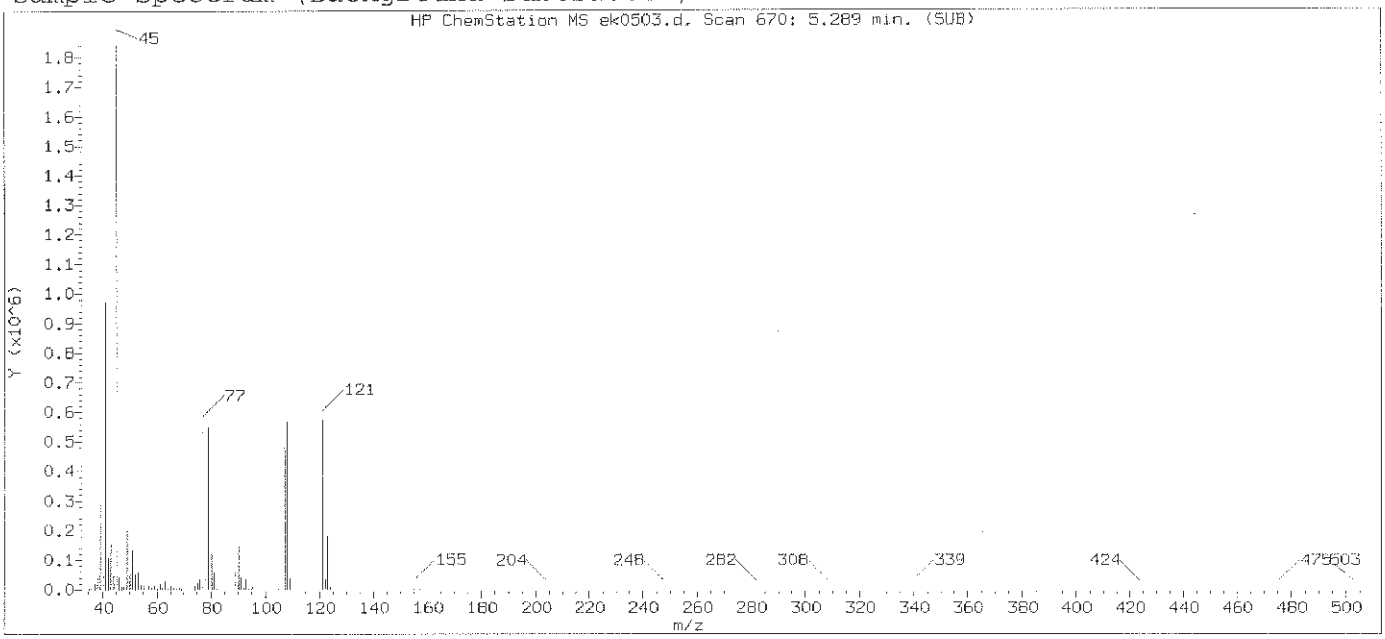
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

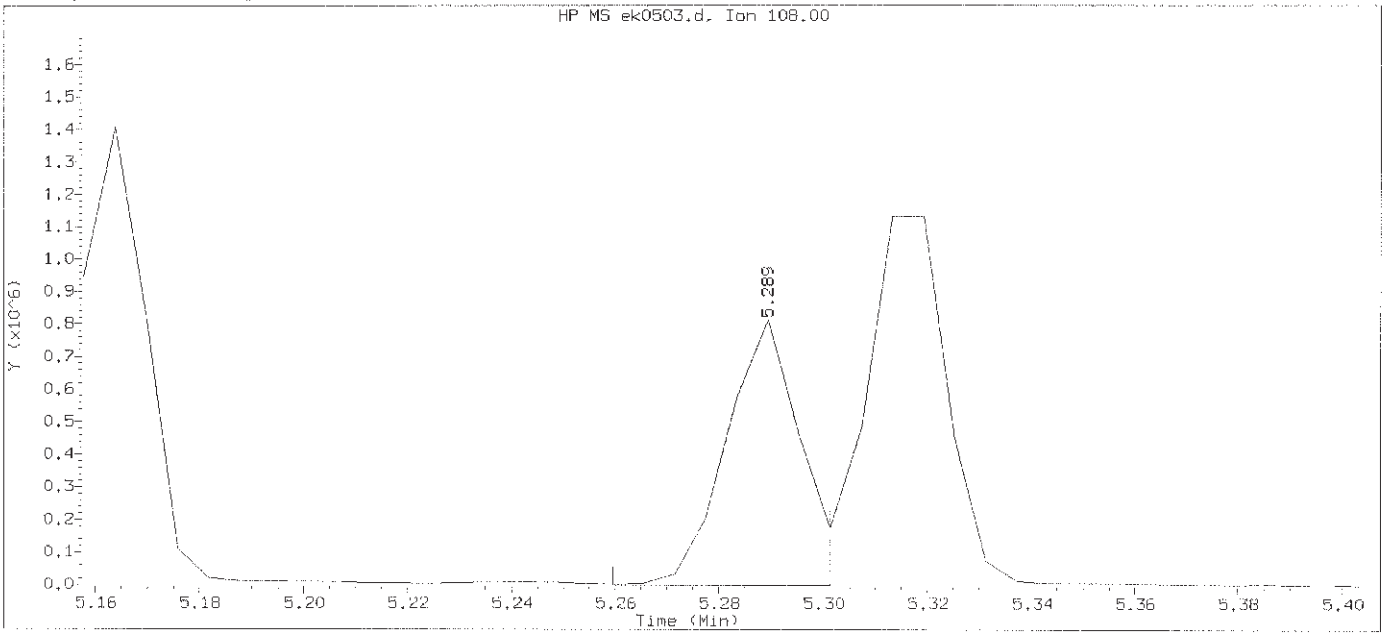
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

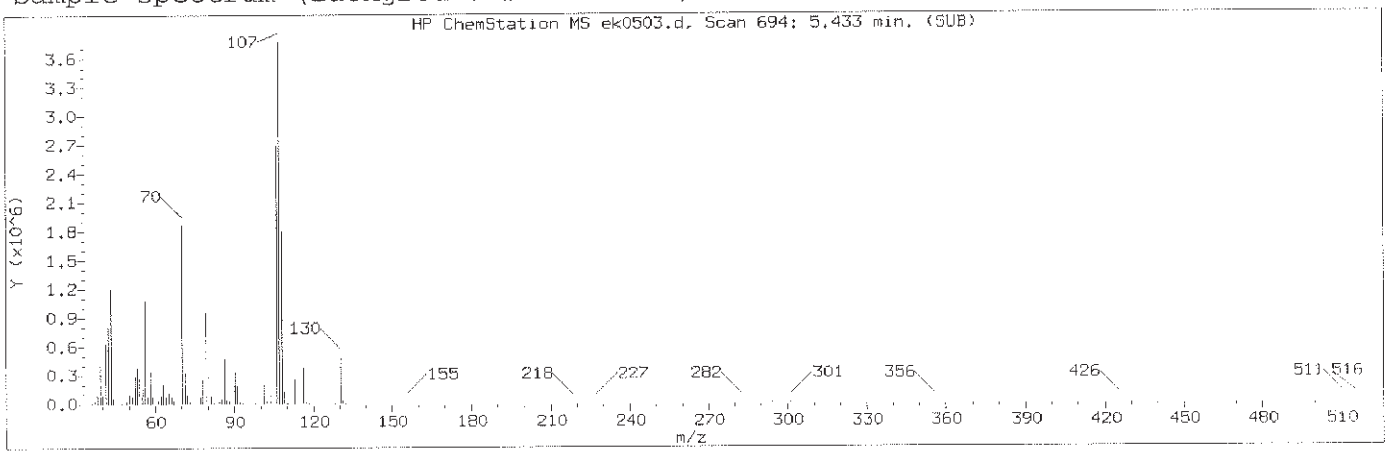
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

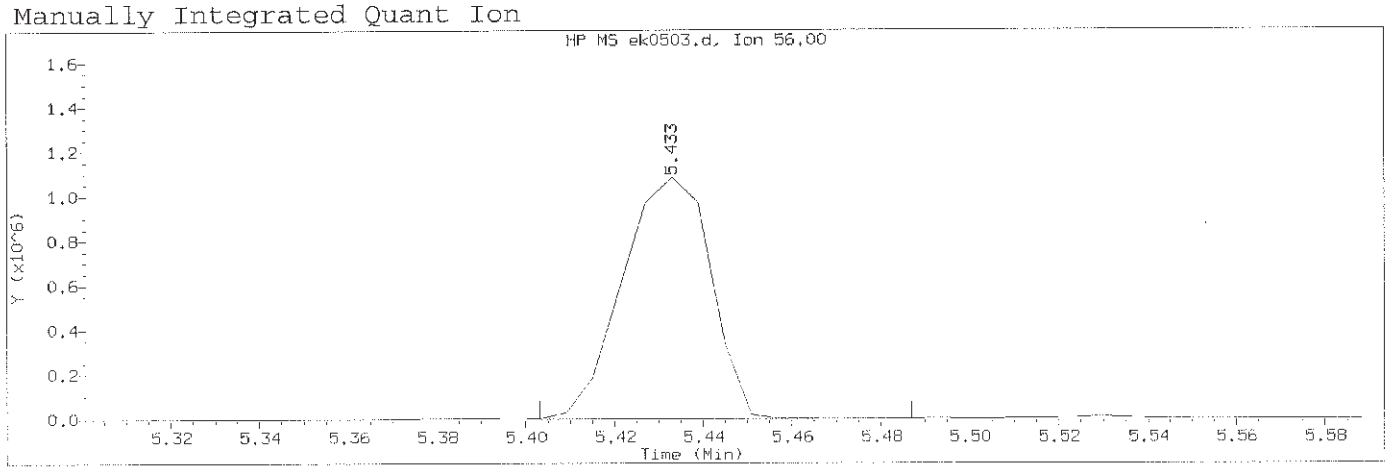
Compound Number	: 29		
Compound Name	: 2-Methylphenol		
Scan Number	: 670		
Retention Time (minutes)	: 5.289		
Quant Ion	: 108.00		
Area	: 783937		
On-column Amount (ng/ul)	: 50.6311		
Integration start scan	: 664	Integration stop scan:	671
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

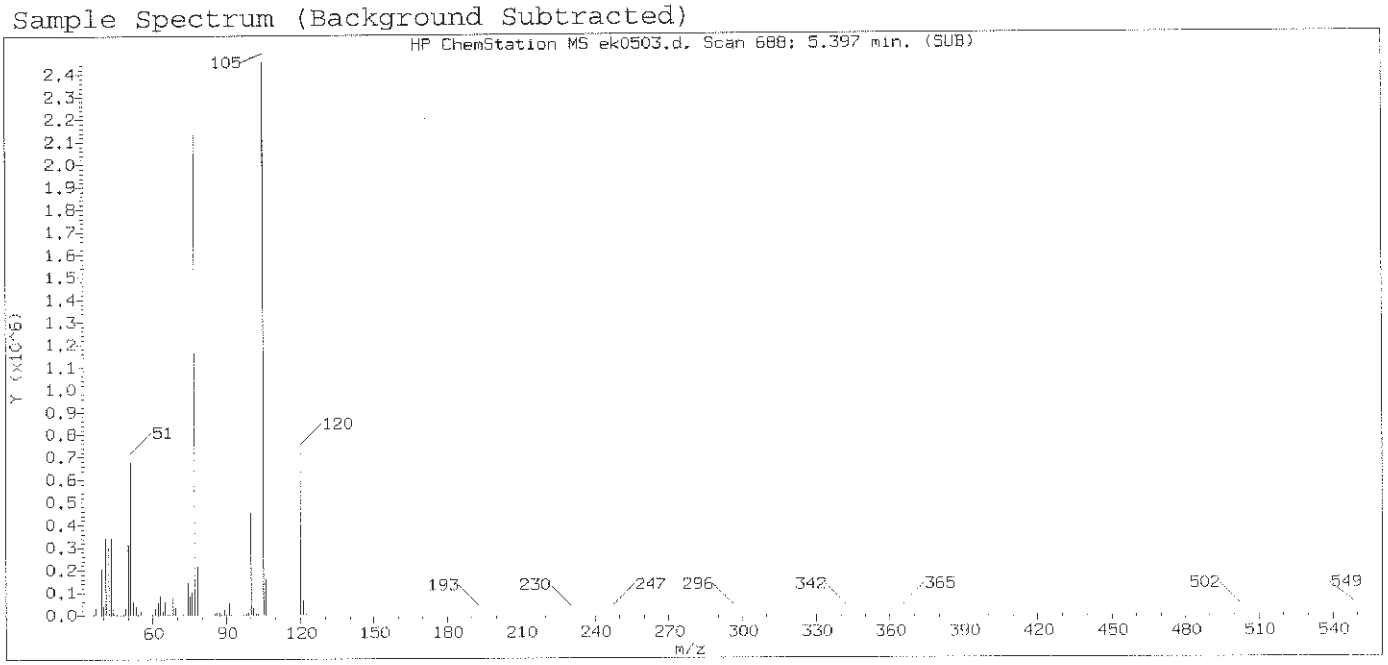
Compound Number	: 37		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 694		
Retention Time (minutes)	: 5.433		
Quant Ion	: 56.00		
Area (flag)	: 1497031A		
On-Column Amount (ng/ul)	: 113.4334		
Integration start scan	: 688	Integration stop scan:	702
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

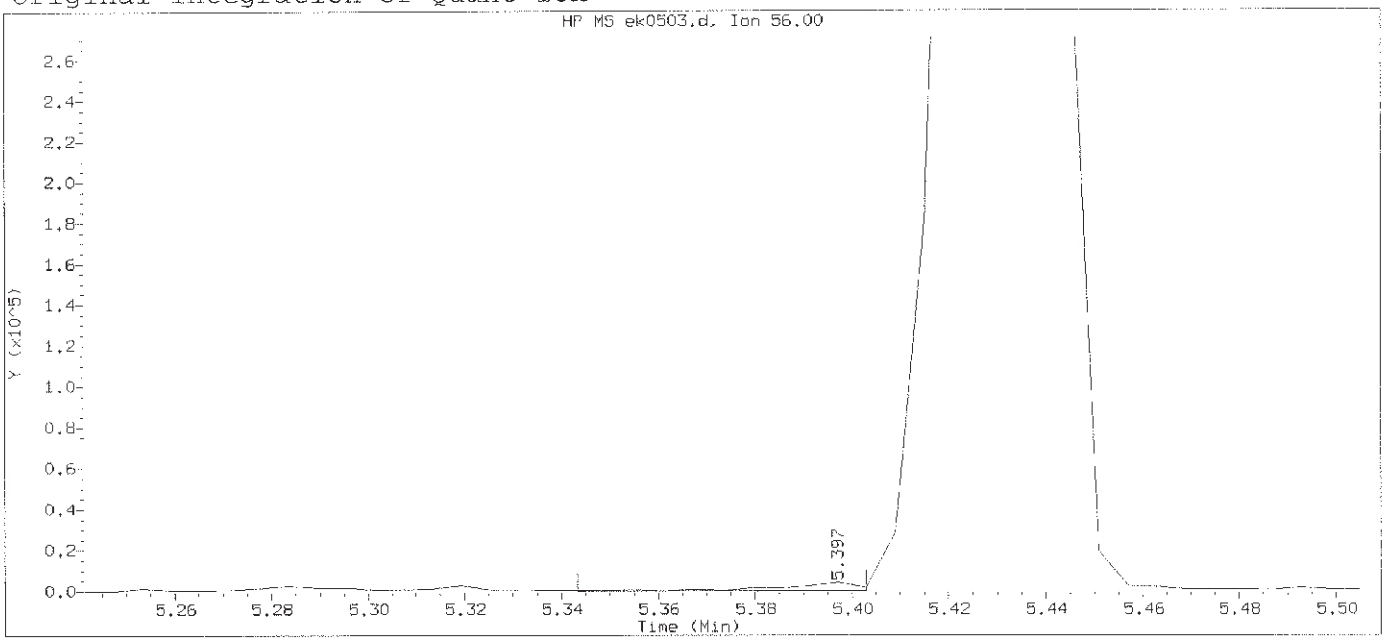
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A Ratcliff Senior Specialist NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

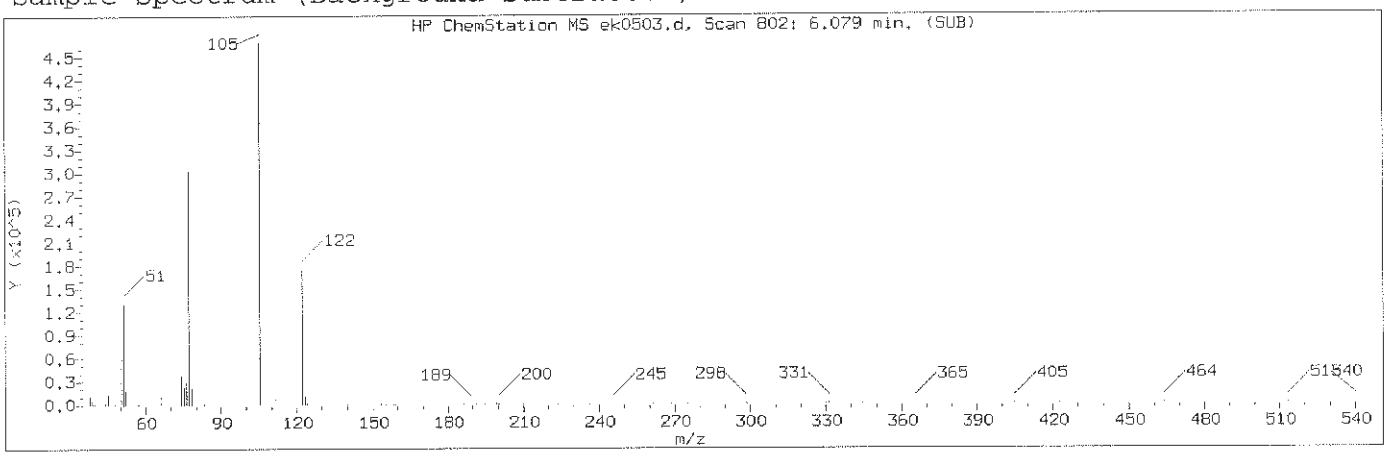
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newa11-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

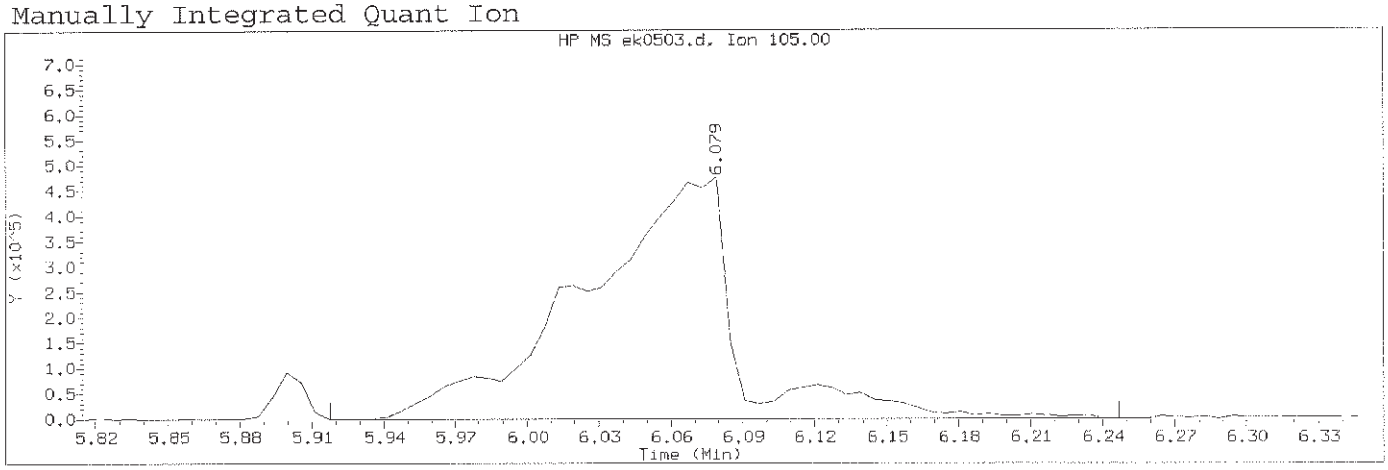
Compound Number	: 37		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 688		
Retention Time (minutes)	: 5.397		
Quant Ion	: 56.00		
Area	: 4689		
On-column Amount (ng/ul)	: 0.4122		
Integration start scan	: 678	Integration stop scan:	688
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 802		
Retention Time (minutes)	: 6.079		
Quant Ion	: 105.00		
Area (flag)	: 2118687M		
On-Column Amount (ng/ul)	: 129.2791		
Integration start scan	: 774	Integration stop scan:	829
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

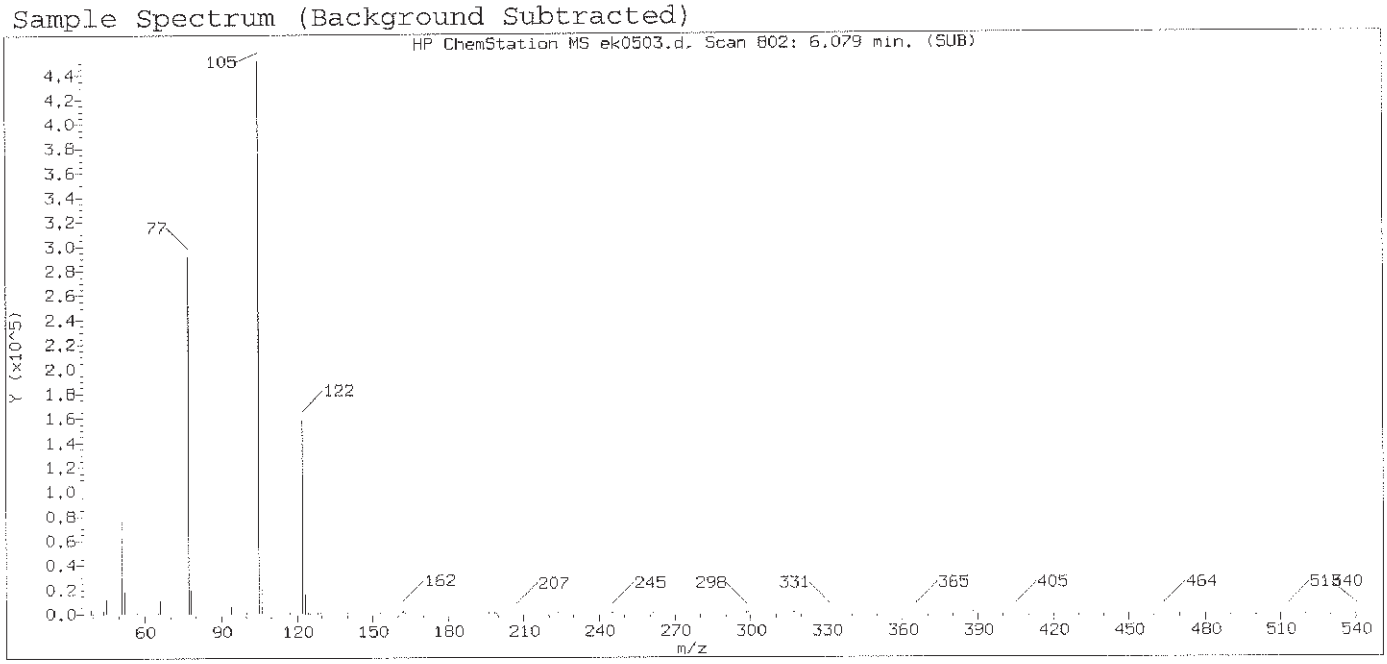
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

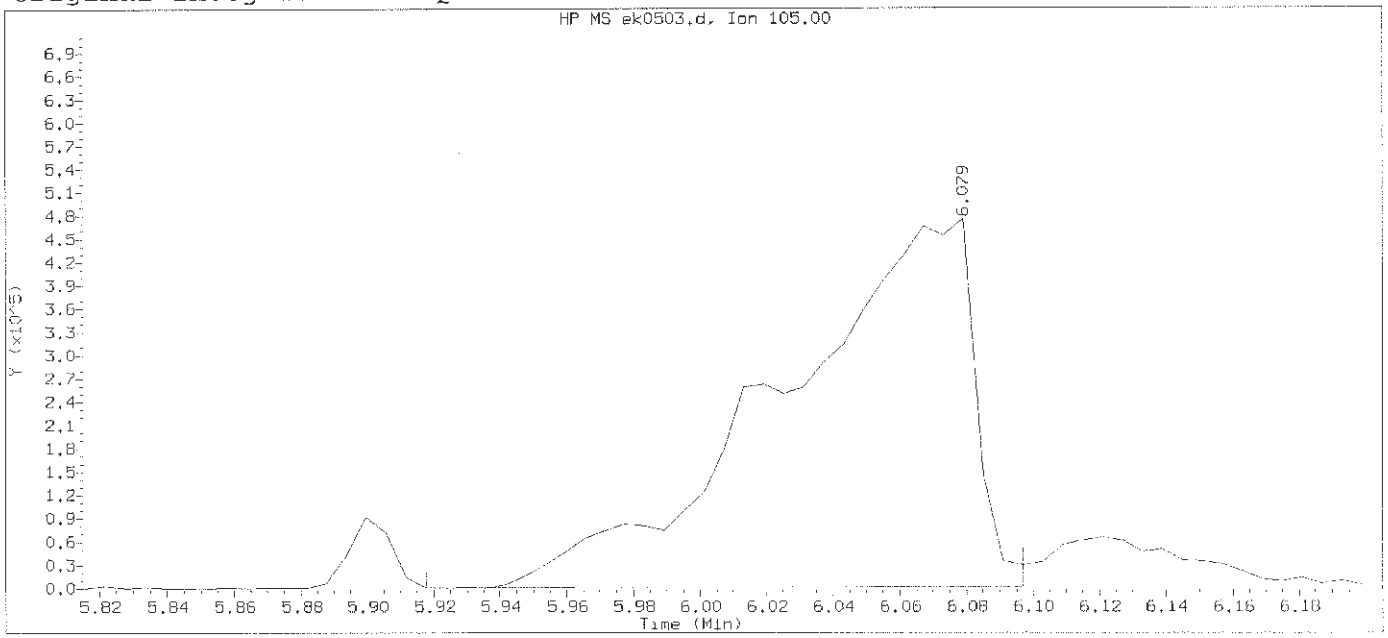
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

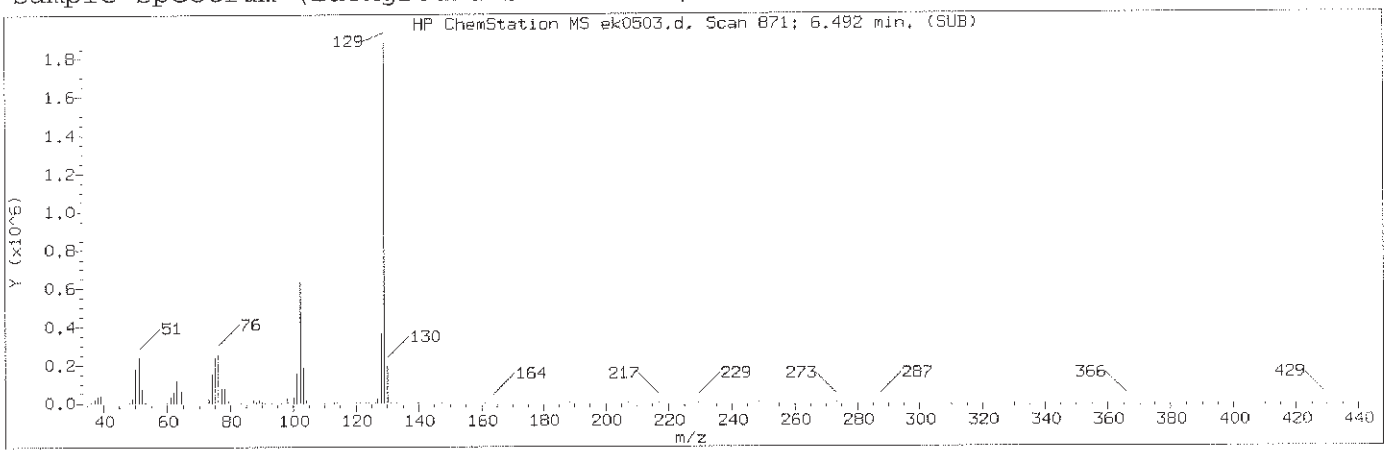
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

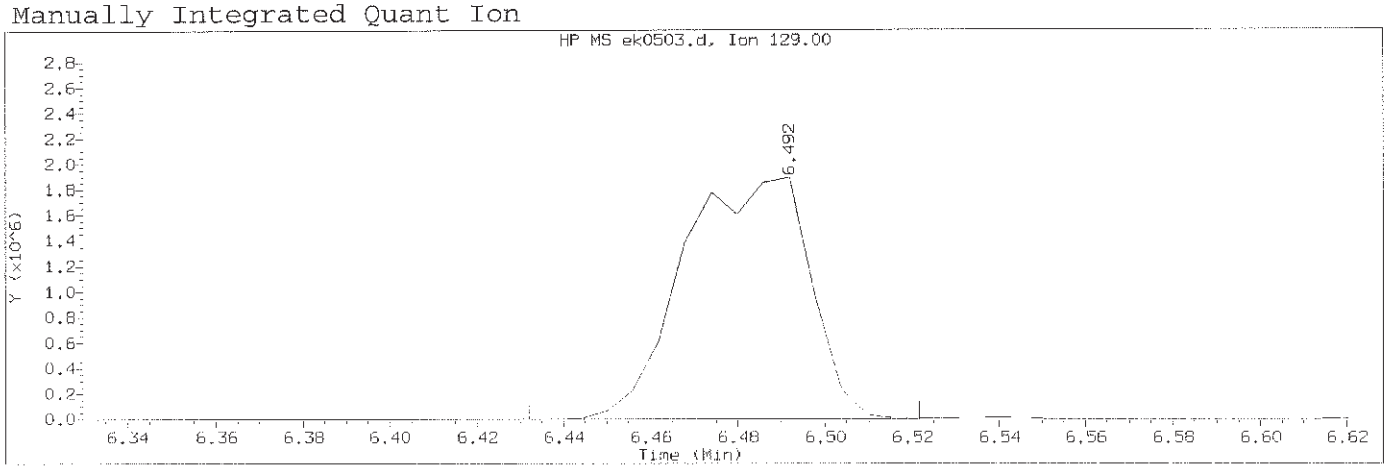
Compound Number	: 56
Compound Name	: Benzoic acid
Scan Number	: 802
Retention Time (minutes)	: 6.079
Quant Ion	: 105.00
Area	: 1882222
On-column Amount (ng/ul)	: 140.7793
Integration start scan	: 774 Integration stop scan: 804
Y at integration start	: 499 Y at integration end: 2473

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 67		
Compound Name	: Quinoline		
Scan Number	: 871		
Retention Time (minutes)	: 6.492		
Quant Ion	: 129.00		
Area (flag)	: 3815410M		
On-Column Amount (ng/ul)	: 114.1635		
Integration start scan	: 860	Integration stop scan:	875
Y at integration start	: 0	Y at integration end:	0

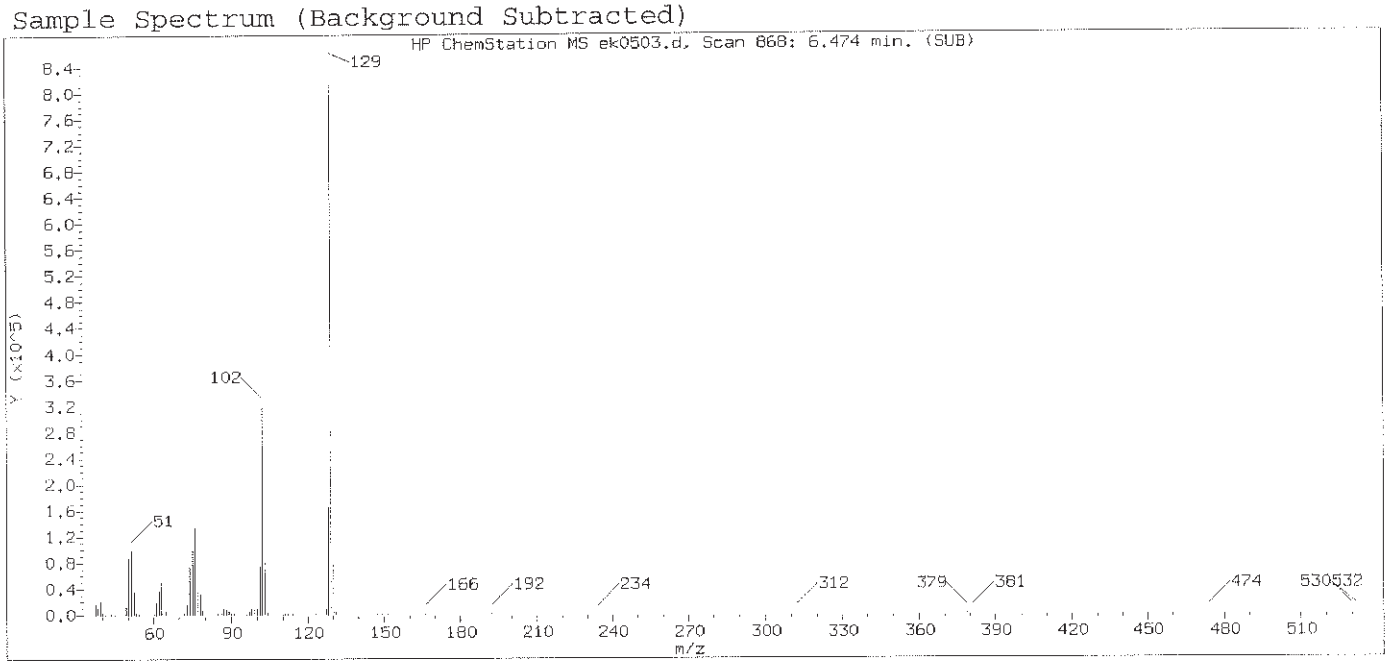
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

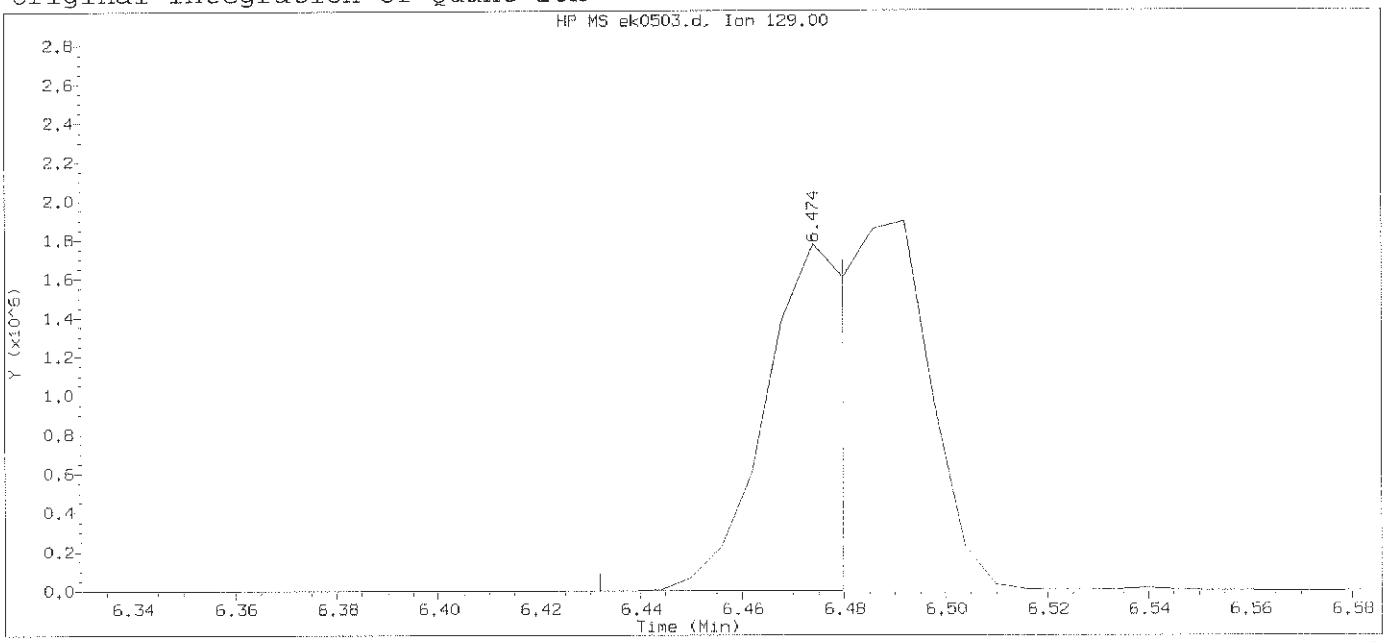
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

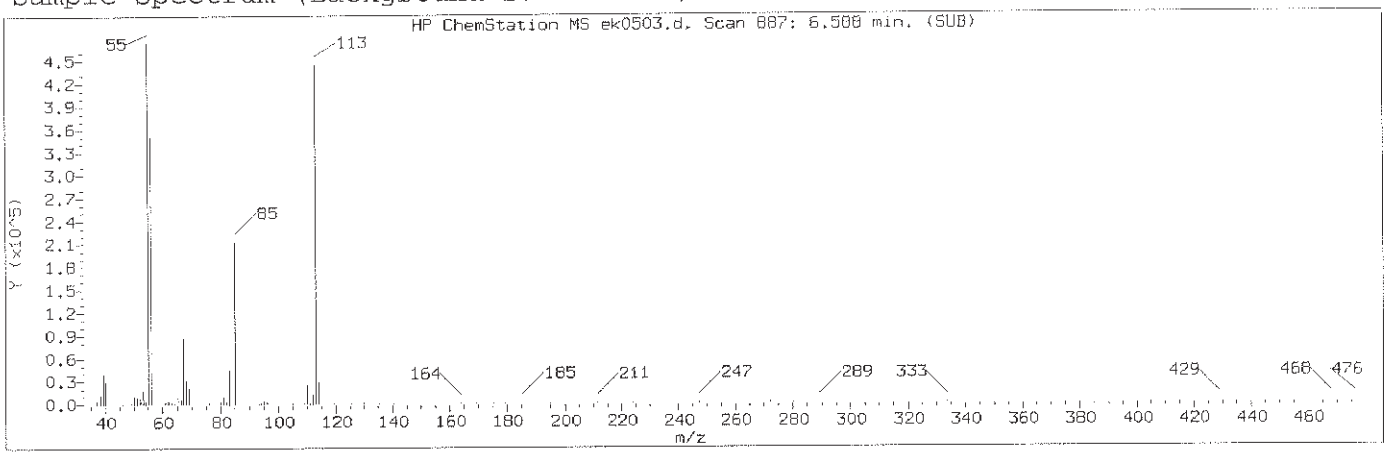
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

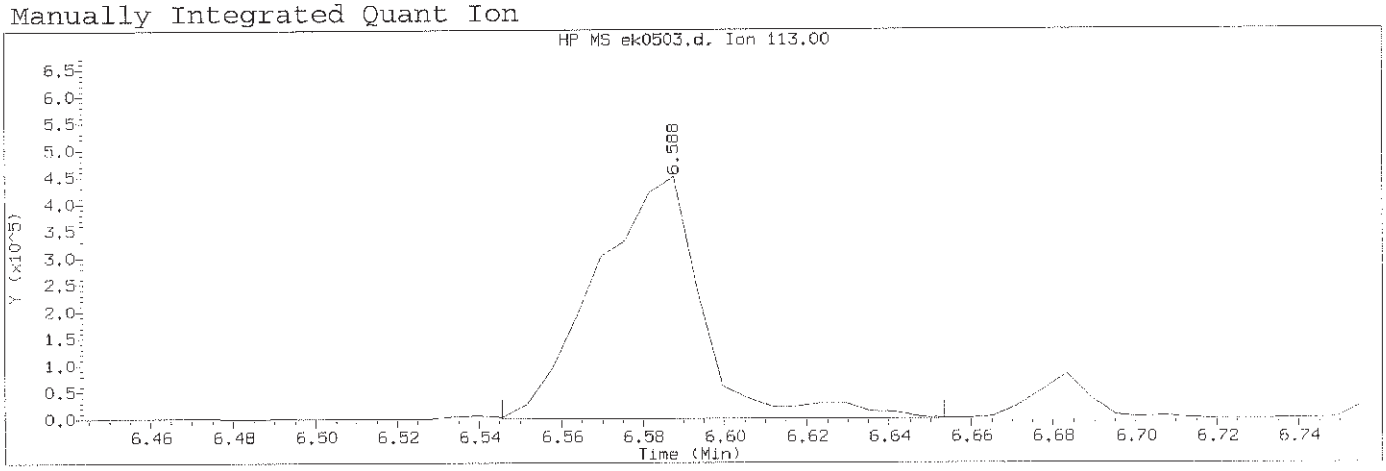
Compound Number	: 67		
Compound Name	: Quinoline		
Scan Number	: 868		
Retention Time (minutes)	: 6.474		
Quant Ion	: 129.00		
Area	: 1743150		
On-column Amount (ng/ul)	: 58.4603		
Integration start scan	: 860	Integration stop scan:	868
Y at integration start	: 0	Y at integration end:	211

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

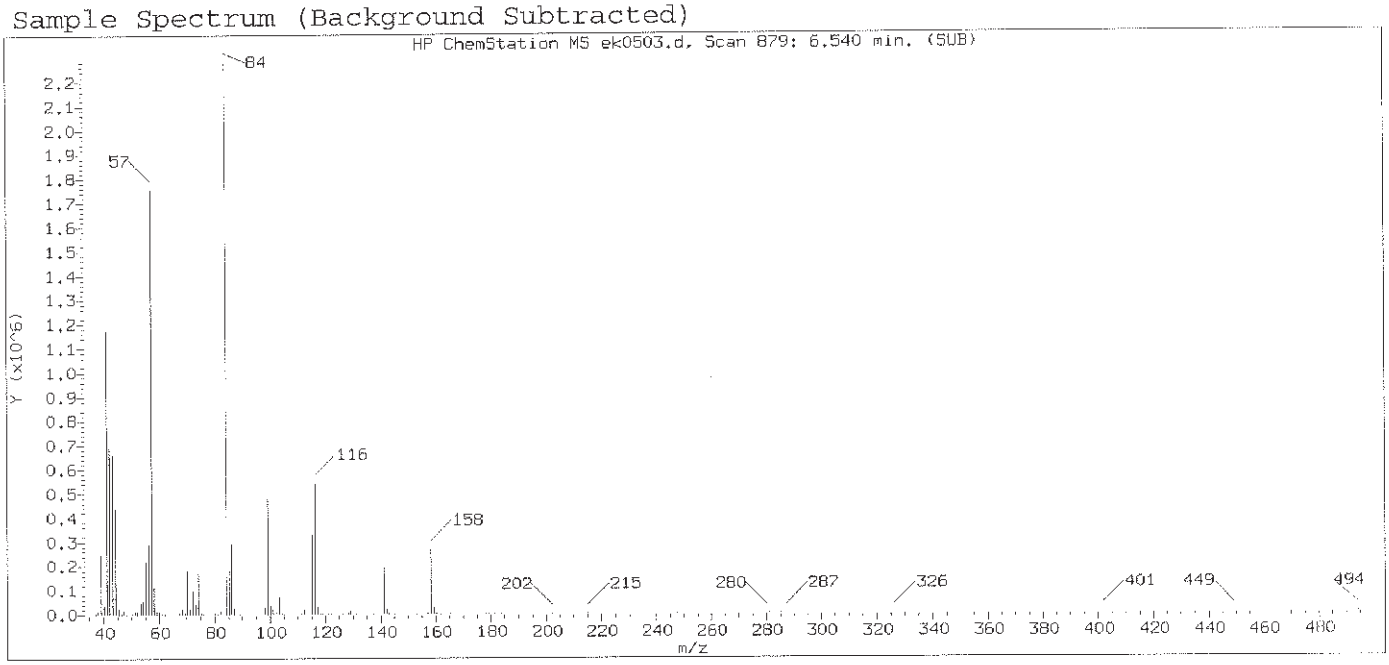
Compound Number	: 69		
Compound Name	: Caprolactam		
Scan Number	: 887		
Retention Time (minutes)	: 6.588		
Quant Ion	: 113.00		
Area (flag)	: 814592A		
On-Column Amount (ng/ul)	: 110.1781		
Integration start scan	: 879	Integration stop scan:	897
Y at integration start	: 24	Y at integration end:	55

Reason for manual integration: improper integration

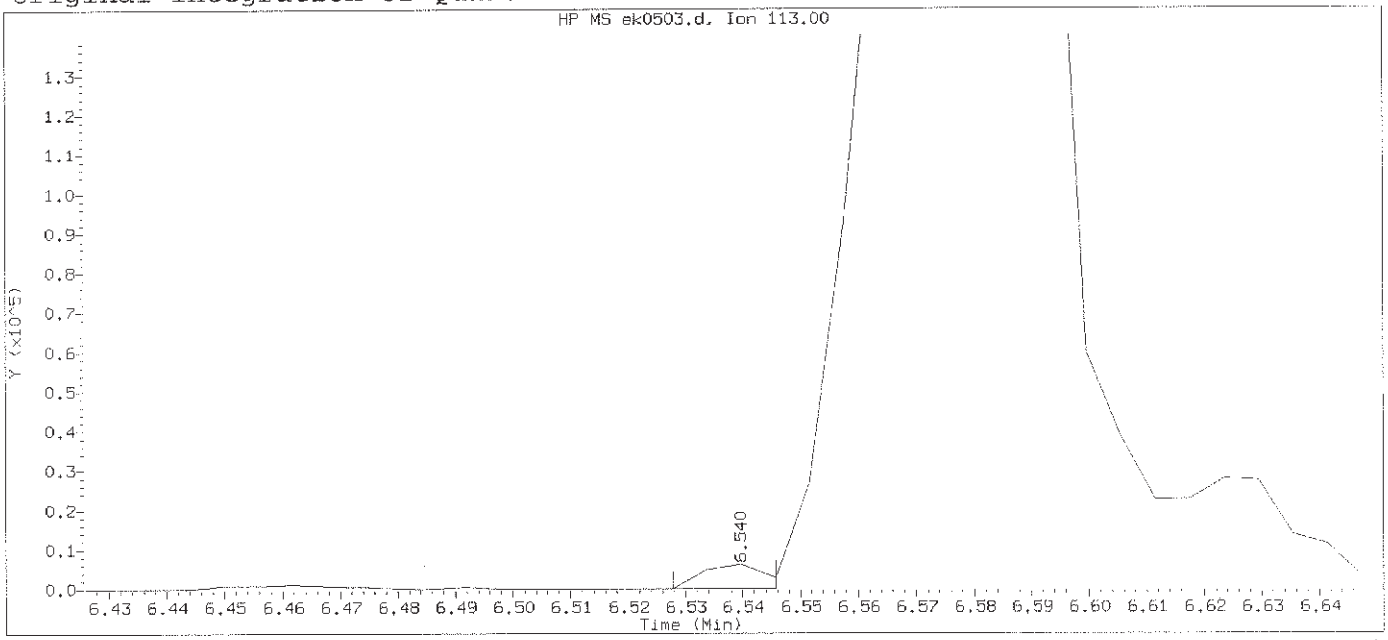
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

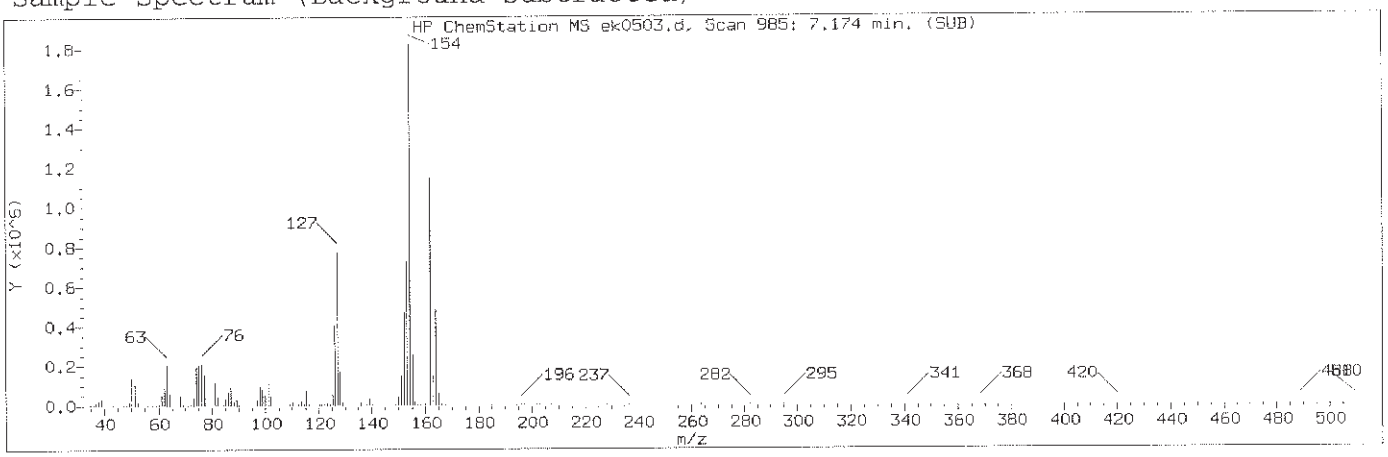
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

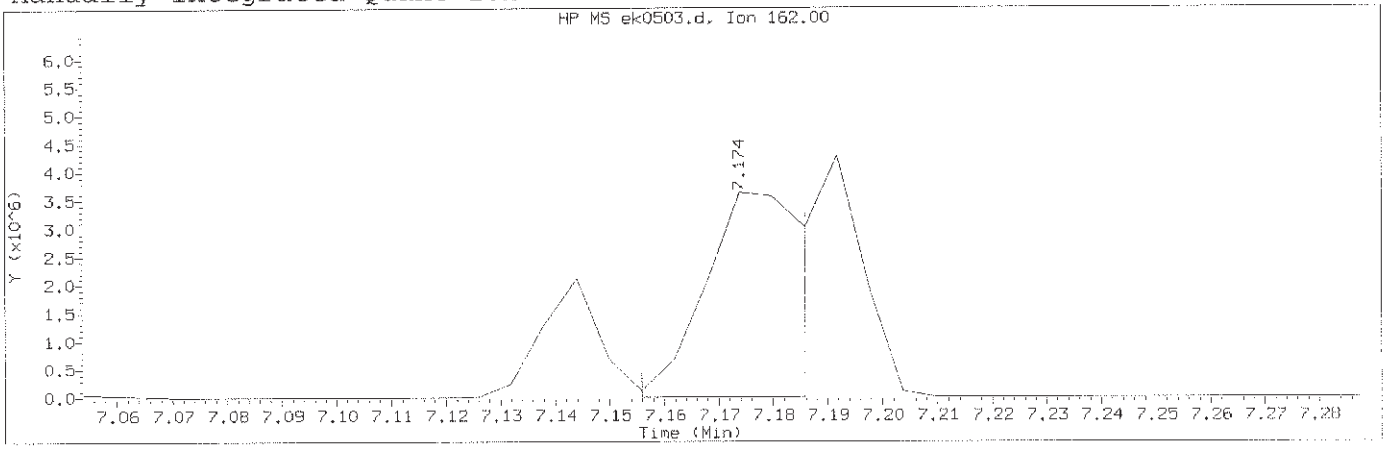
Compound Number	: 69		
Compound Name	: Caprolactam		
Scan Number	: 879		
Retention Time (minutes)	: 6.540		
Quant Ion	: 113.00		
Area	: 4406		
On-column Amount (ng/ul)	: 0.7073		
Integration start scan	: 876	Integration stop scan:	879
Y at integration start	: 0	Y at integration end:	24

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number : 87
Compound Name : 2-Chloronaphthalene
Scan Number : 985
Retention Time (minutes) : 7.174
Quant Ion : 162.00
Area (flag) : 4680868M
On-Column Amount (ng/ul) : 148.3403
Integration start scan : 981 Integration stop scan: 986
Y at integration start : 39 Y at integration end: 35

Reason for manual integration: improper integration

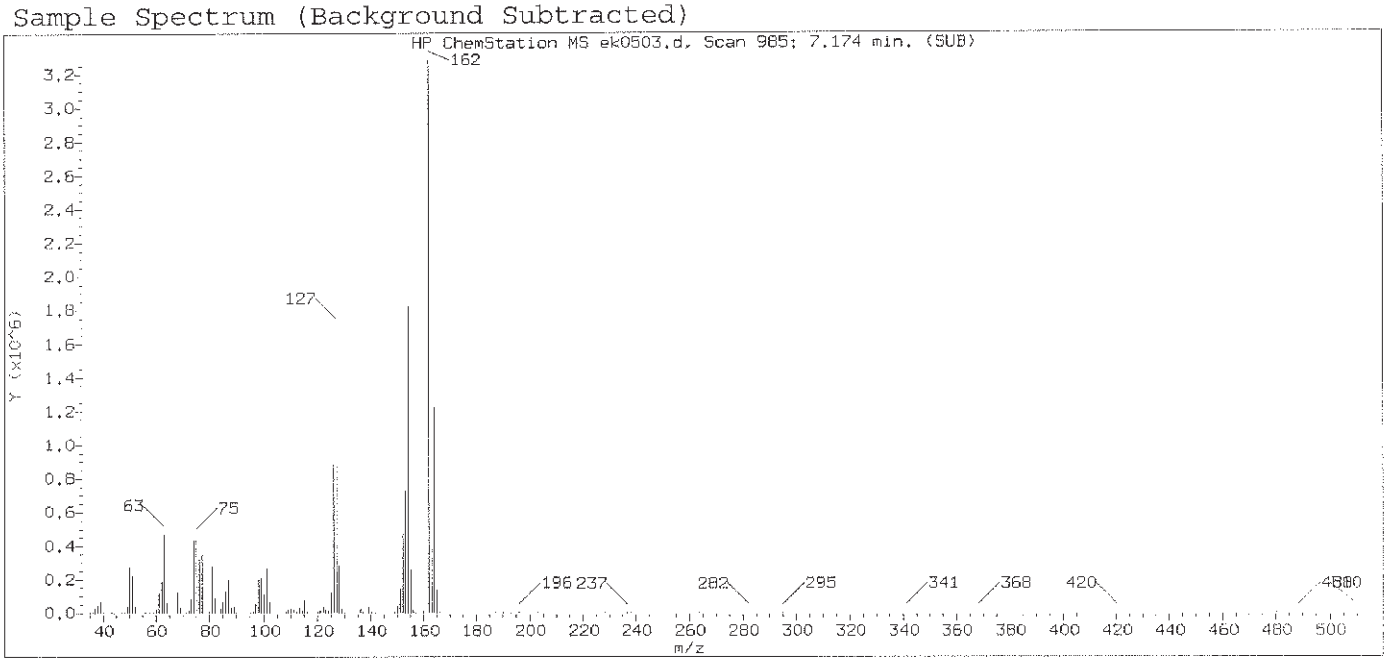
Analyst responsible for change: Digitally signed by Holly Berry on 11/12/2013 at 20:25. Target 3.5 esignature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

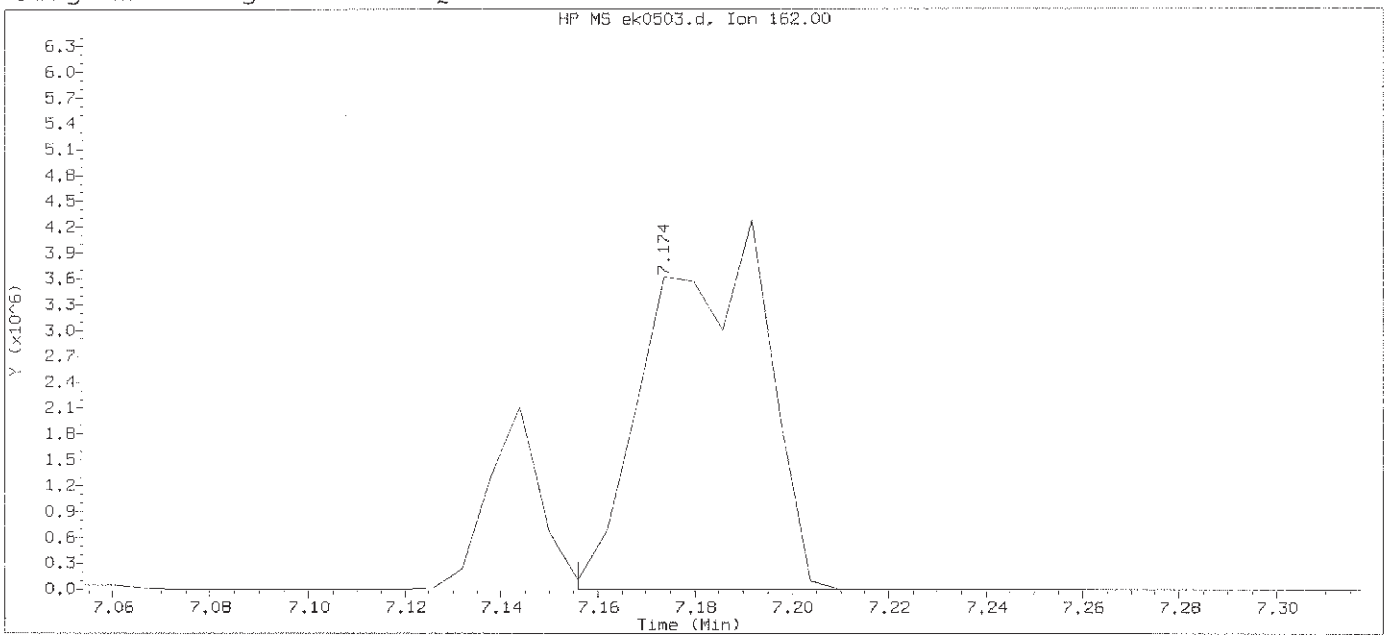
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

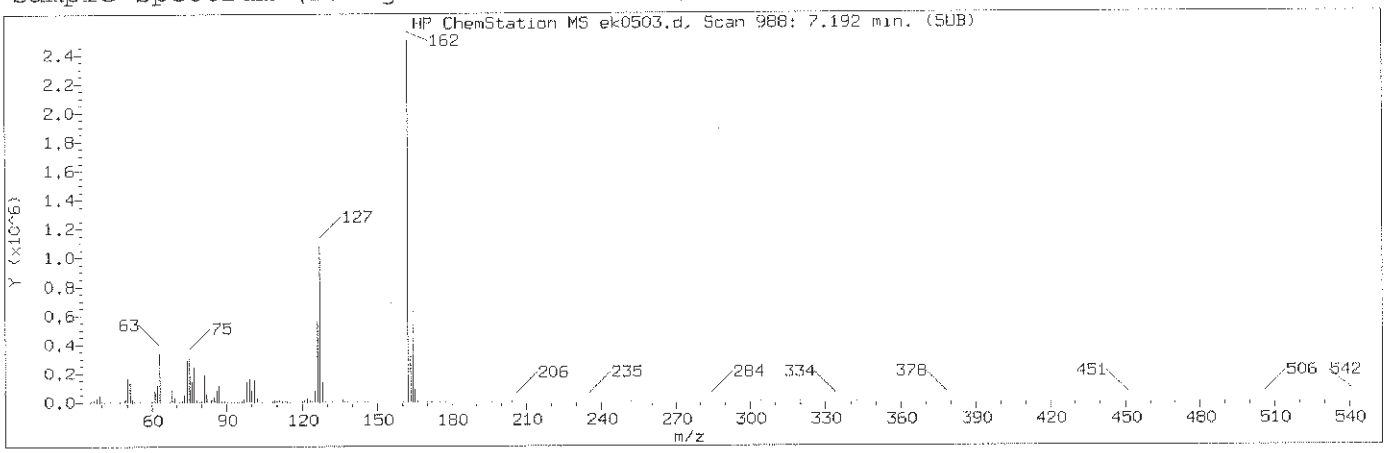
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

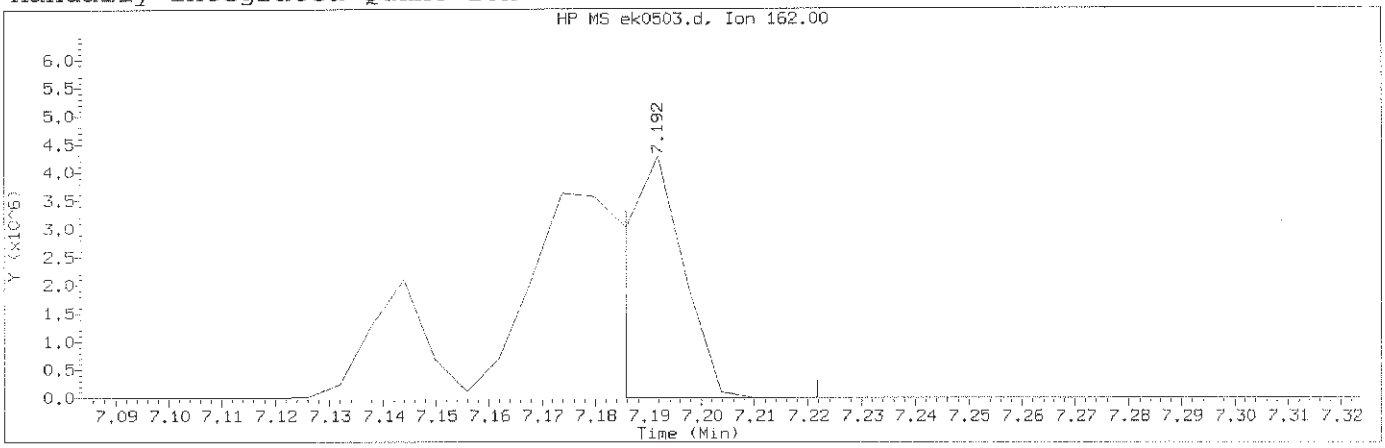
Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 985		
Retention Time (minutes)	: 7.174		
Quant Ion	: 162.00		
Area	: 6914950		
On-column Amount (ng/ul)	: 207.2376		
Integration start scan	: 981	Integration stop scan:	991
Y at integration start	: 39	Y at integration end:	31

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 988		
Retention Time (minutes)	: 7.192		
Quant Ion	: 162.00		
Area (flag)	: 3332445M		
On-Column Amount (ng/ul)	: 108.2729		
Integration start scan	: 986	Integration stop scan:	992
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

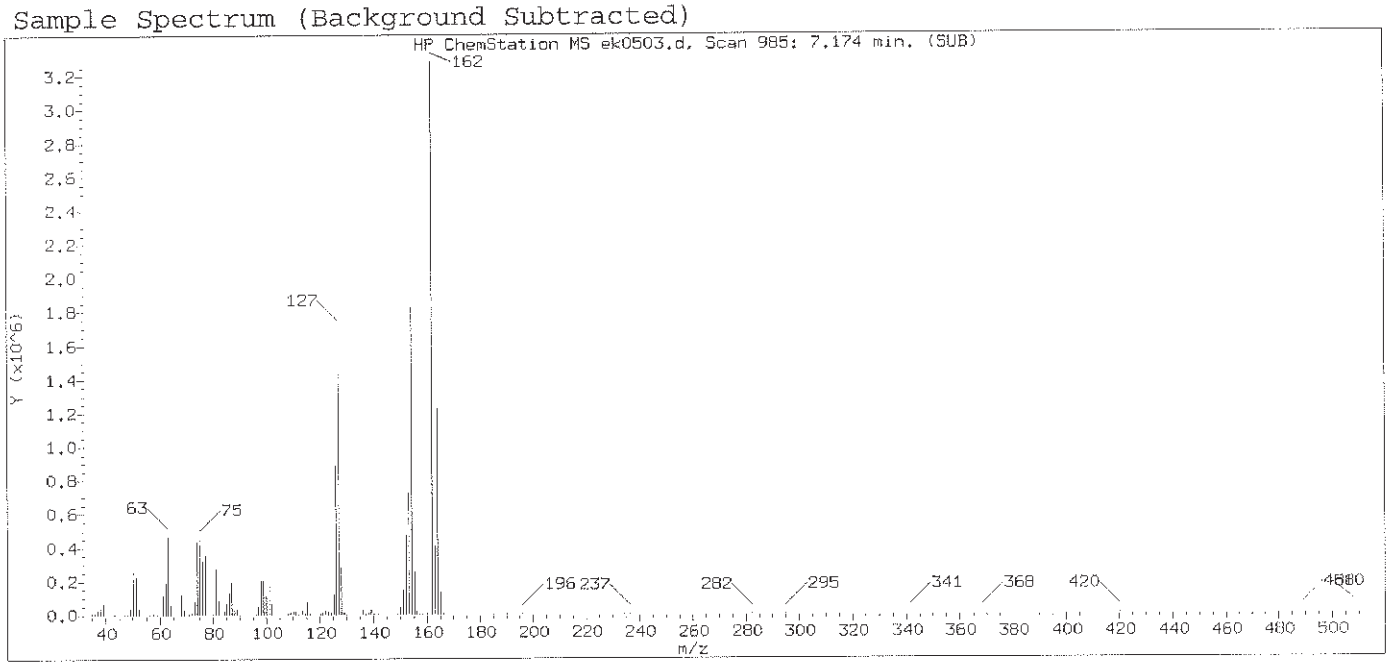
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

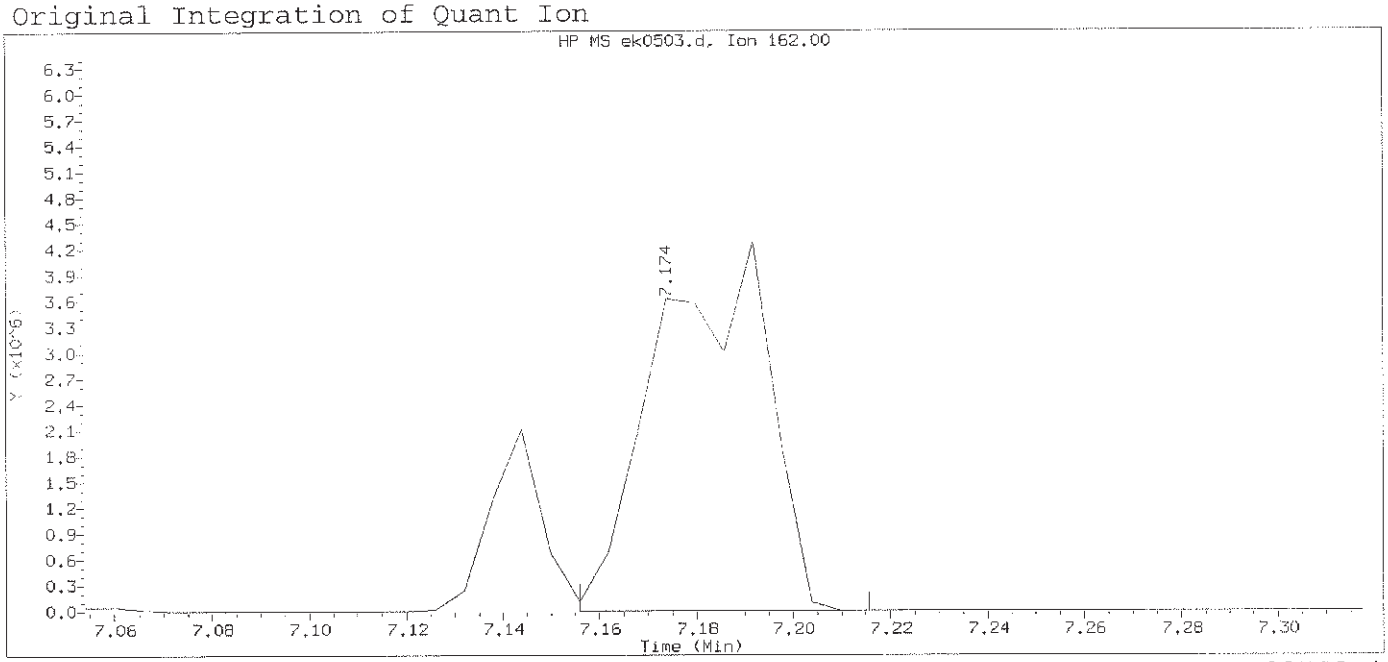
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 985		
Retention Time (minutes)	: 7.174		
Quant Ion	: 162.00		
Area	: 6914175		
On-column Amount (ng/ul)	: 195.9442		
Integration start scan	: 981	Integration stop scan:	991
Y at integration start	: 281	Y at integration end:	220

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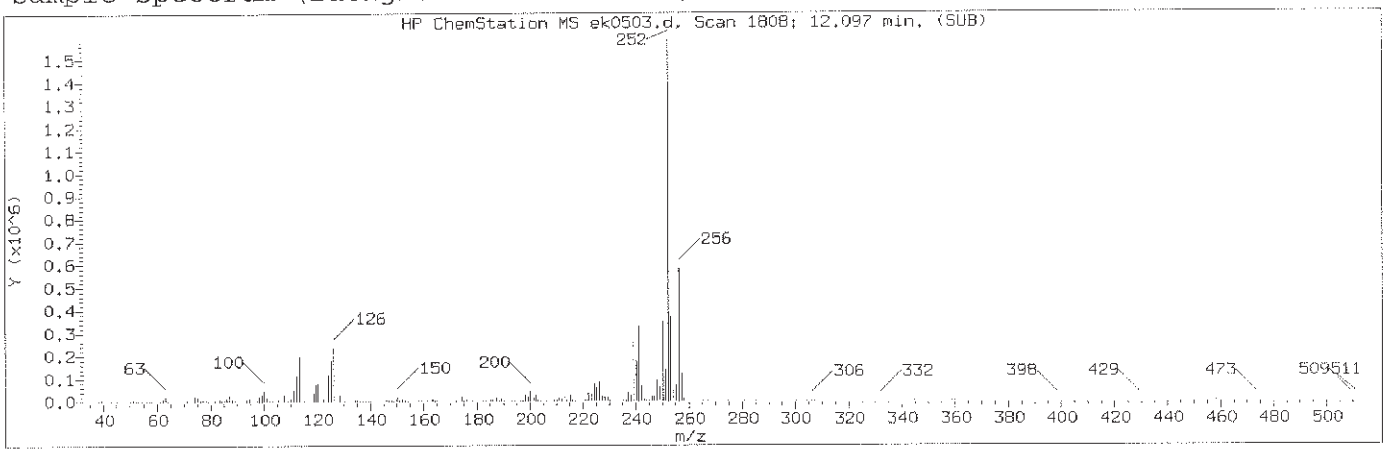
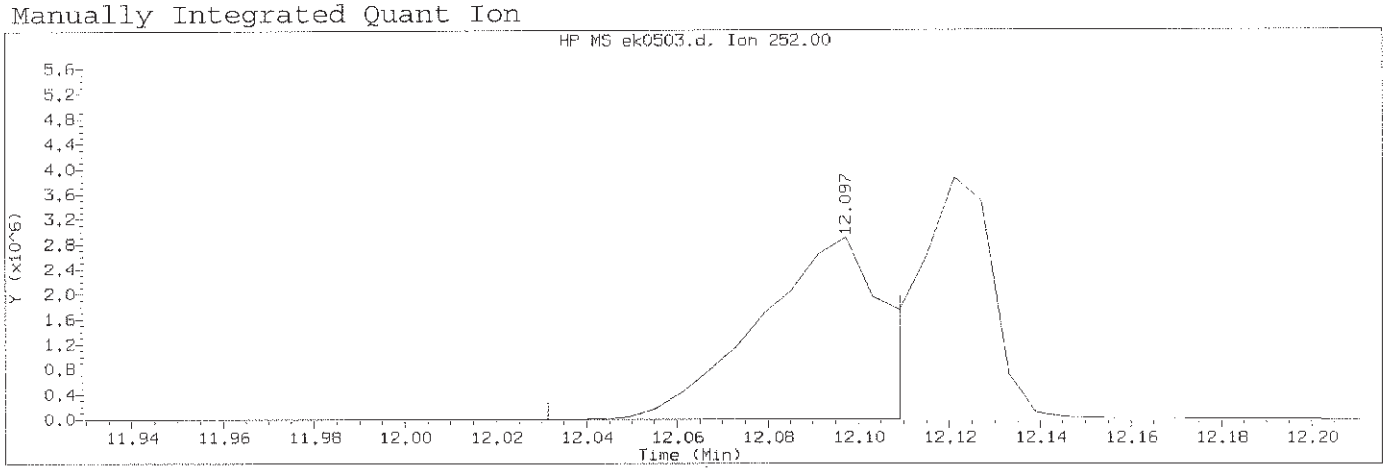
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1808		
Retention Time (minutes)	: 12.097		
Quant Ion	: 252.00		
Area (flag)	: 5591534M		
On-Column Amount (ng/ul)	: 131.8153		
Integration start scan	: 1796	Integration stop scan:	1809
Y at integration start	: 0	Y at integration end:	149

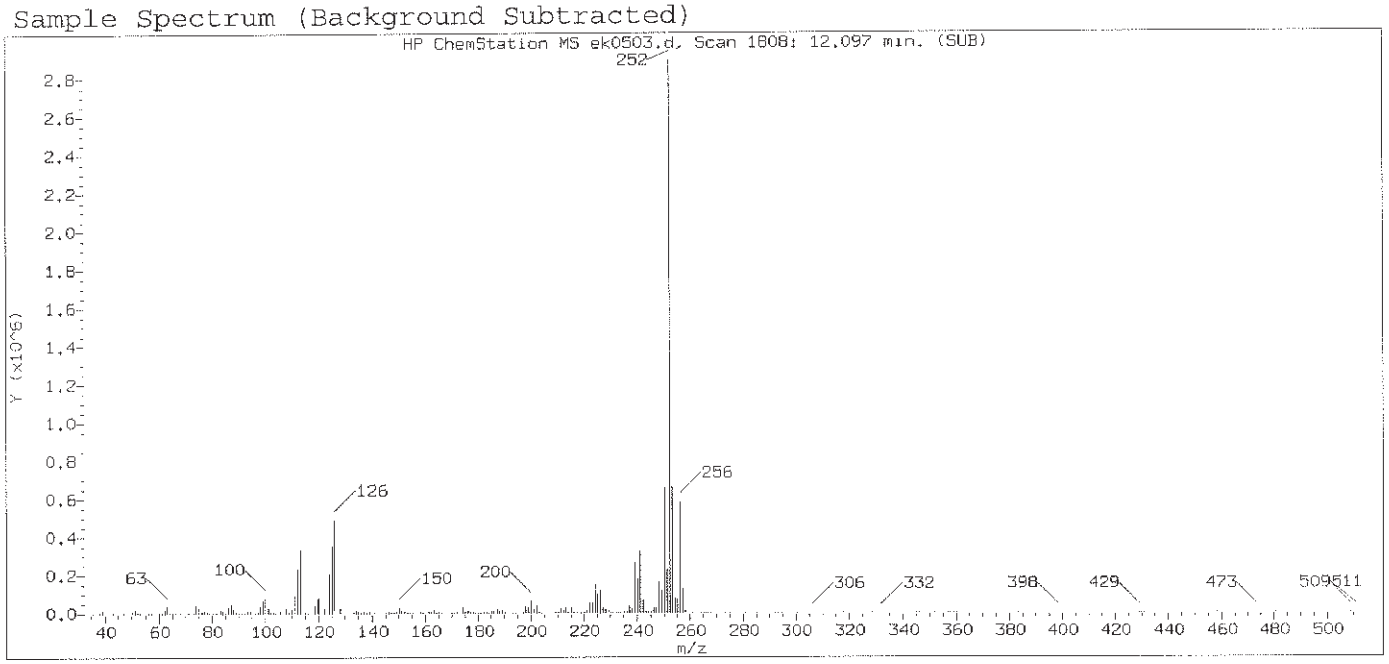
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

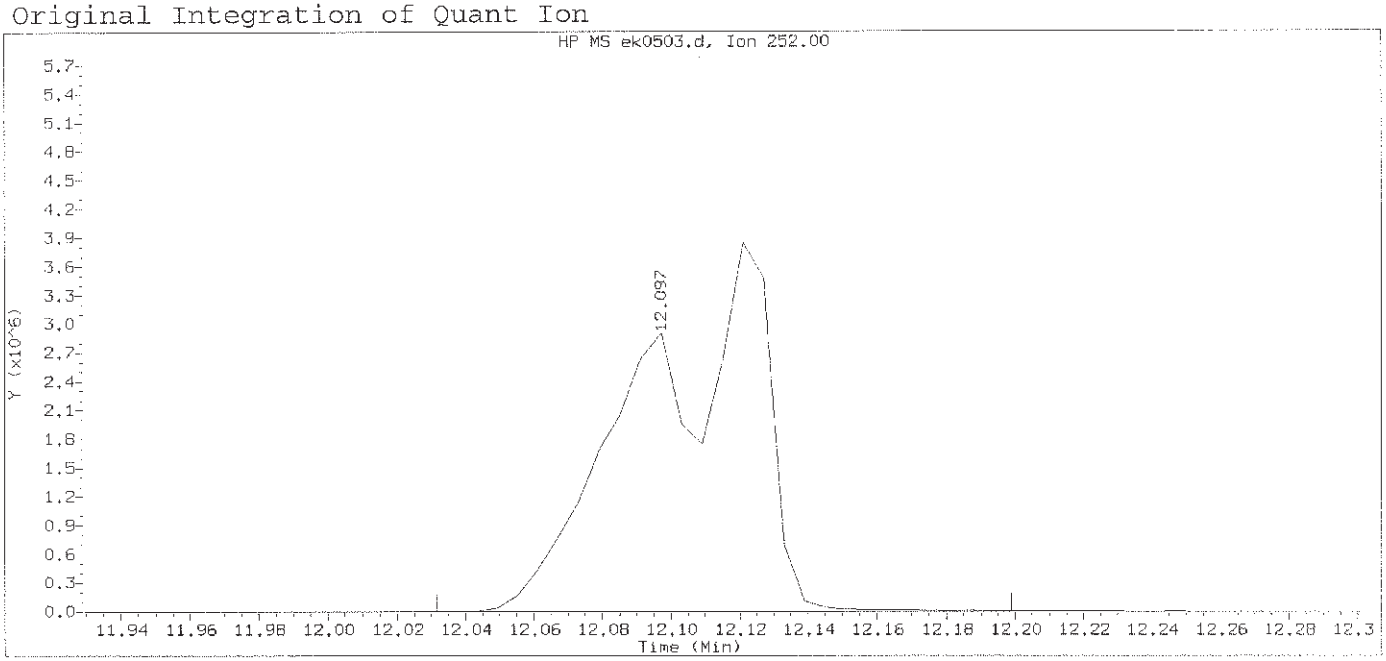
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1808		
Retention Time (minutes)	: 12.097		
Quant Ion	: 252.00		
Area	: 9512169		
On-column Amount (ng/ul)	: 193.4429		
Integration start scan	: 1796	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	323

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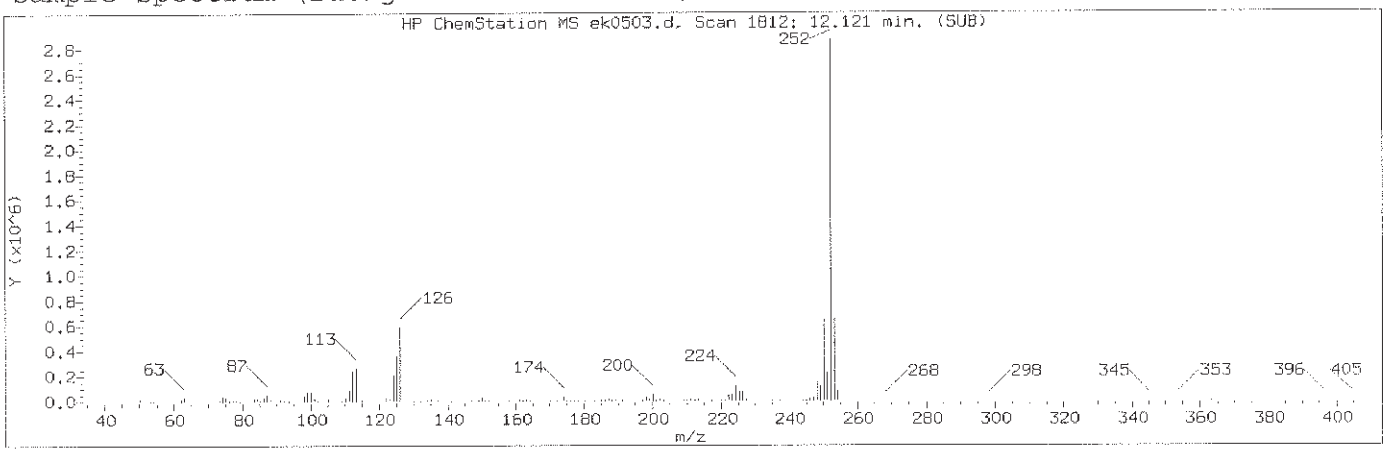
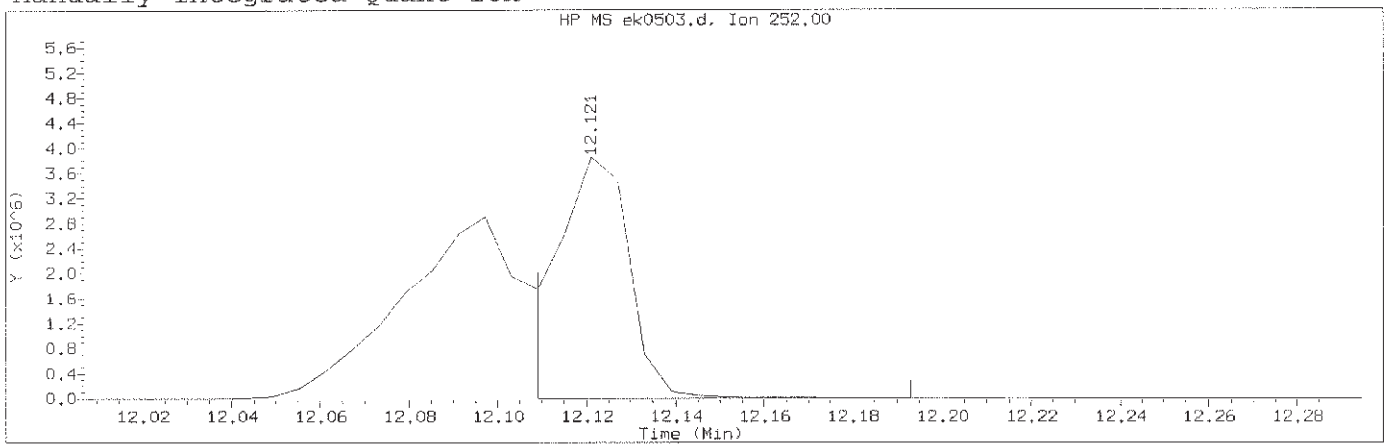
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1812		
Retention Time (minutes)	: 12.121		
Quant Ion	: 252.00		
Area (flag)	: 4548483M		
On-Column Amount (ng/ul)	: 111.9775		
Integration start scan	: 1809	Integration stop scan:	1823
Y at integration start	: 0	Y at integration end:	0

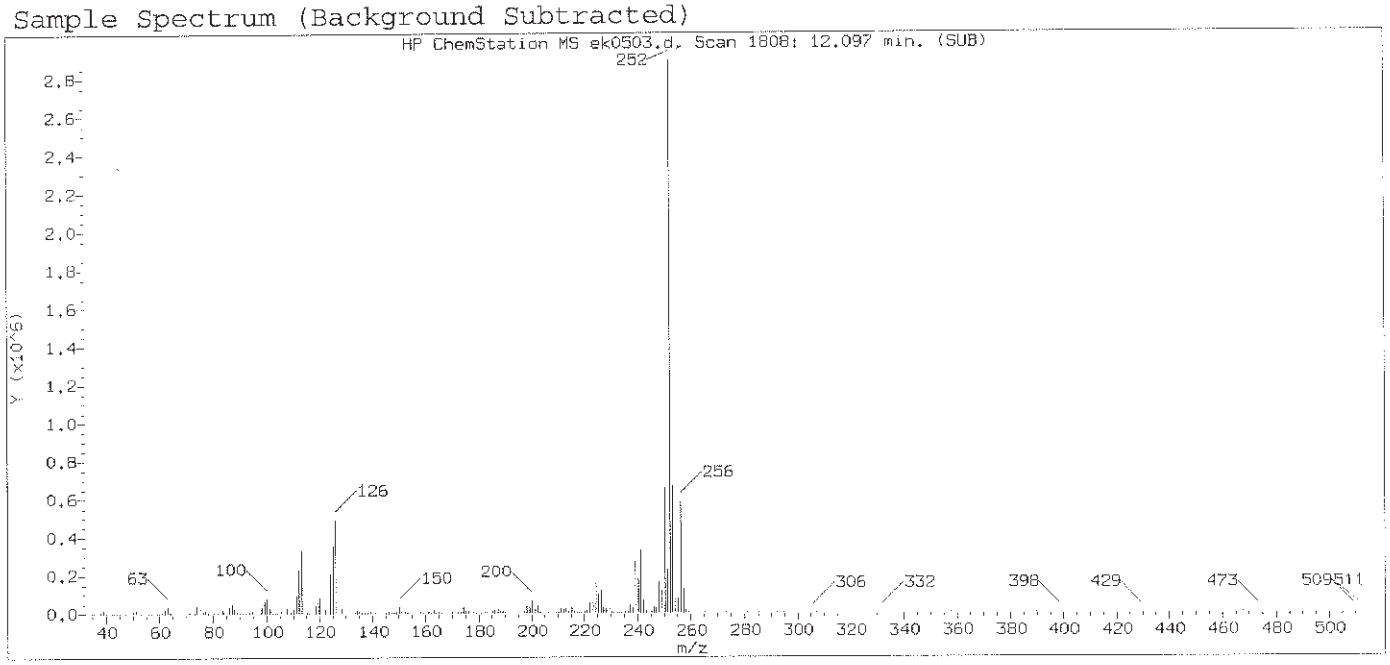
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

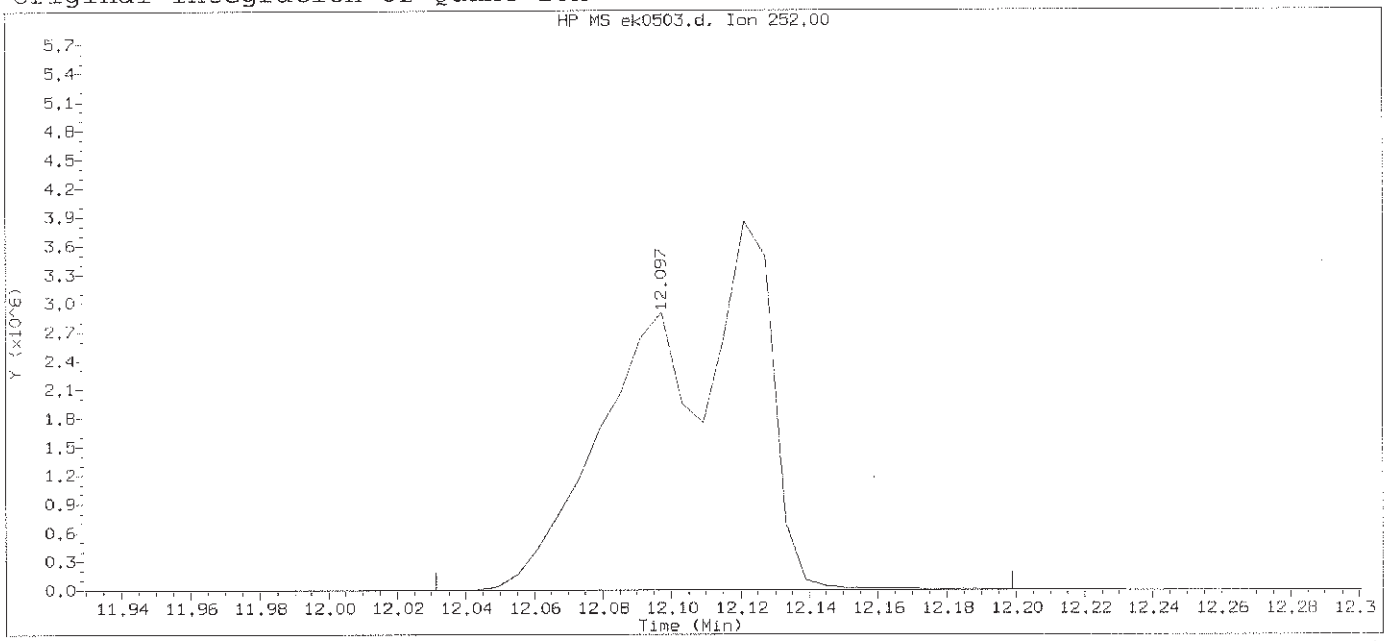
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



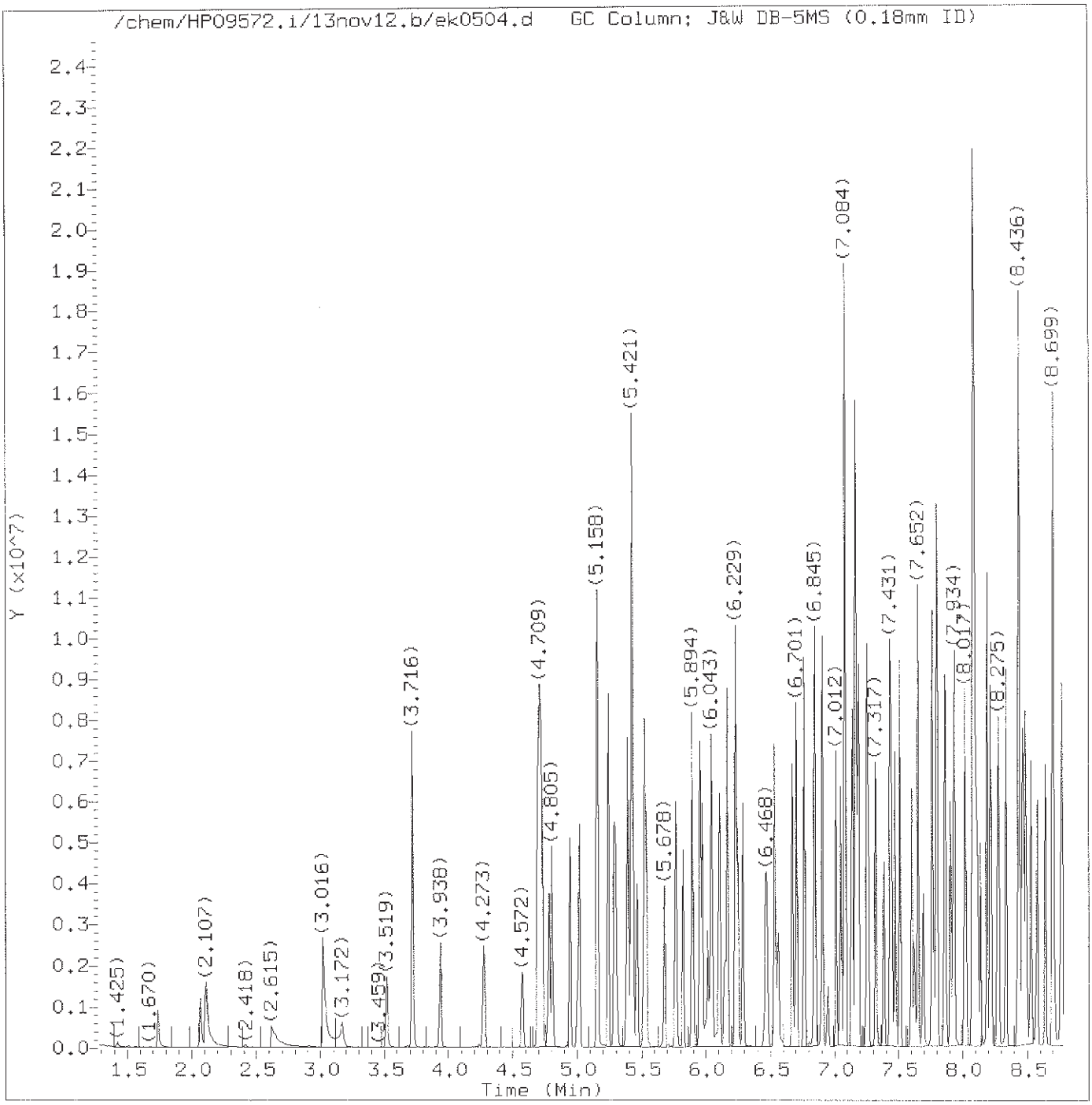
Data File: /chem/HP09572.i/13nov12.b/ek0503.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 13:35 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:00
Date, time and analyst ID of latest file update: 12-Nov-2013 14:00 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1808		
Retention Time (minutes)	: 12.097		
Quant Ion	: 252.00		
Area	: 9512169		
On-column Amount (ng/ul)	: 187.7654		
Integration start scan	: 1796	Integration stop scan:	1824
Y at integration start	: 0	Y at integration end:	323

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

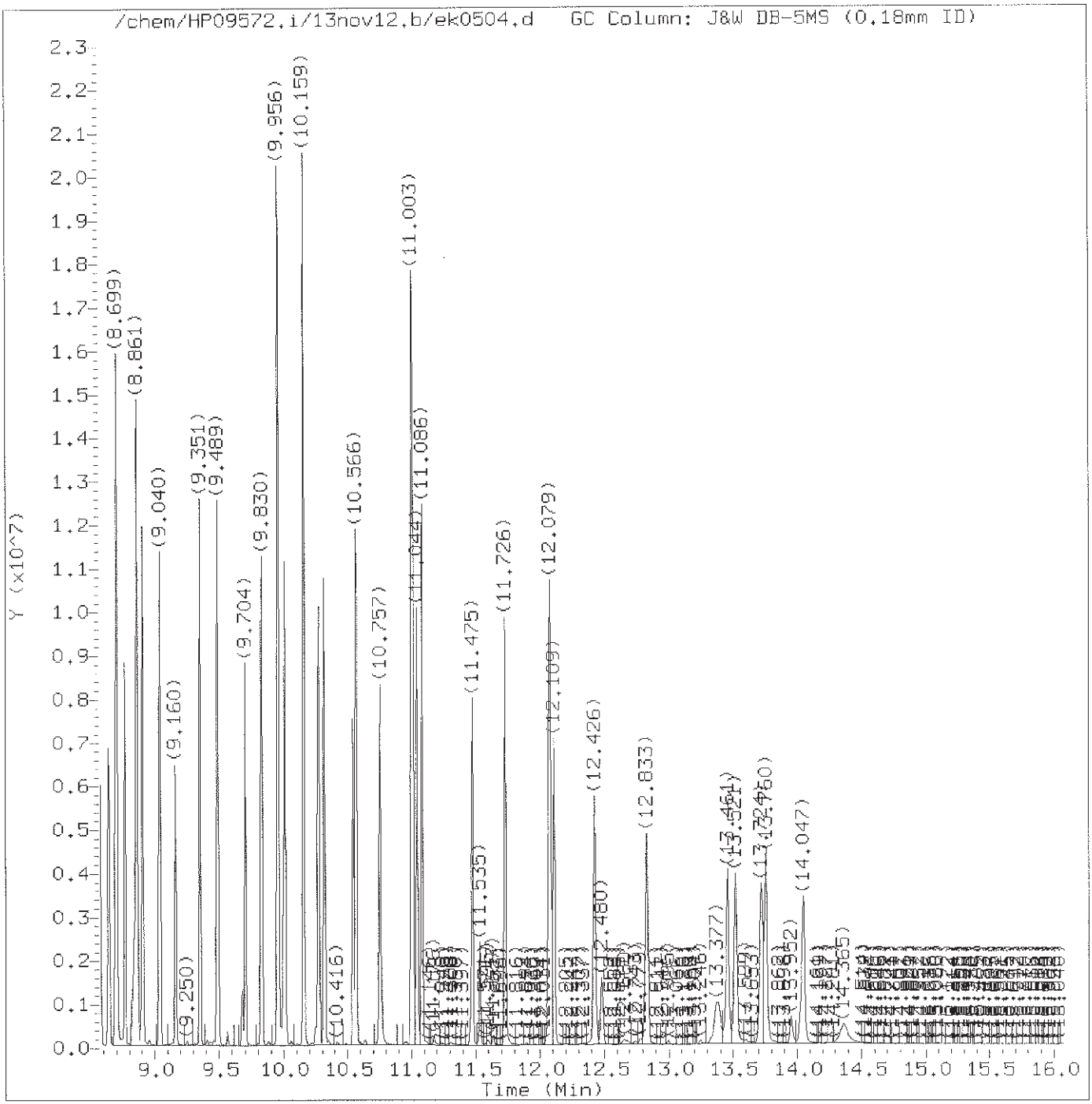
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.736	88	372521	74.401
2) N-Nitrosodimethylamine	(1)	2.065	74	671497	76.766
3) Pyridine	(1)	2.107	79	1107769	81.320
4) 2-Picoline	(1)	3.016	93	1269483	75.656
5) N-Nitrosomethylethylamine	(1)	3.172	88	588609	77.638
6) Methyl methanesulfonate	(1)	3.519	80	711898	77.276
7)$2-Fluorophenol	(1)	3.716	112	2020396	154.030
8) N-Nitrosodiethylamine	(1)	3.938	102	612391	77.742
10) Ethyl methanesulfonate	(1)	4.273	109	609983	78.564
20) Aniline	(1)	4.691	93	2014848	76.893
18)$Phenol-d6	(1)	4.709	99	3076319	154.261
17)$Phenol-d5	(1)	4.709	99	3076319	154.261
19) Phenol	(1)	4.721	94	1598631	76.409
21) bis(2-Chloroethyl)ether	(1)	4.781	93	1264086	76.163
22) 2-Chlorophenol	(1)	4.805	128	1019442	75.185
24) 1,3-Dichlorobenzene	(1)	4.943	146	1016563	77.261
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	170810	20.000
26) 1,4-Dichlorobenzene	(1)	5.020	146	1047117	77.106
27) Benzyl alcohol	(1)	5.158	108	829961	78.365
28) 1,2-Dichlorobenzene	(1)	5.158	146	1006288	76.478
30) Indene	(1)	5.242	115	2160432	92.198
32) bis(2-Chloroisopropyl)ether	(1)	5.290	45	1346889	76.553
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.290	45	1346889	76.553
29) 2-Methylphenol	(1)	5.301	108	1136207M	76.216
33) N-Nitrosopyrrolidine	(1)	5.385	100	716992	76.968
34) Acetophenone	(1)	5.391	105	1825984	78.271
38) o-Toluidine	(1)	5.421	106	1915060	75.810
37) N-Nitrosomorpholine	(1)	5.421	56	903817	77.370
36) N-Nitroso-di-n-propylamine	(1)	5.421	70	1053519	77.495
35) 4-Methylphenol	(1)	5.427	108	1369583	76.960
39) Hexachloroethane	(1)	5.463	117	446355	76.714
40)$Nitrobenzene-d5	(2)	5.523	82	2886105	157.602
41) Nitrobenzene	(2)	5.541	77	1474956	78.686
42) N-Nitrosopiperidine	(2)	5.678	114	655728	78.162
52) Isophorone	(2)	5.762	82	2619832	78.120
53) 2-Nitrophenol	(2)	5.822	139	628492	78.150
54) 2,4-Dimethylphenol	(2)	5.894	107	1423388	78.456
55) O,O,O-triethylphosphorothioate	(2)	5.954	198	542003	79.533
57) bis(2-Chloroethoxy)methane	(2)	5.971	93	1681440	73.119
58) 2,4-Dichlorophenol	(2)	6.043	162	940374	79.427

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
56) Benzoic acid	(2)	6.043	105	1210567	83.251
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	899596	77.013
60)*Naphthalene-d8	(2)	6.151	136	788070	20.000
61) Naphthalene	(2)	6.169	128	3092215	75.440
62) 4-Chloroaniline	(2)	6.229	127	1423075	77.557
63) 2,6-Dichlorophenol	(2)	6.235	162	914847	79.271
64) Hexachloropropene	(2)	6.247	213	596597	82.110
65) Hexachlorobutadiene	(2)	6.289	225	478882	81.050
67) Quinoline	(2)	6.468	129	2298854	78.937
68) N-Nitrosodi-n-butylamine	(2)	6.534	84	1092298	65.180
69) Caprolactam	(2)	6.564	113	506969	78.751
70) 4-Chloro-3-methylphenol	(2)	6.671	107	1355333	79.135
71) Safrole	(2)	6.701	162	921170	78.972
72) 2-Methylnaphthalene	(2)	6.761	142	2309772	78.611
75) 1-Methylnaphthalene	(2)	6.845	142	2112034	77.948
76) Hexachlorocyclopentadiene	(3)	6.899	237	456960	80.950
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.905	216	876156	78.668
78) cis-Isosafrole	(3)	6.947	162	166181	8.652
79) 2,4,6-Trichlorophenol	(3)	7.012	196	695533	81.011
80) 2,4,5-Trichlorophenol	(3)	7.048	196	715429	77.635
81)$2-Fluorobiphenyl	(3)	7.084	172	4540601	157.108
83) Isosafrole	(3)	7.138	162	931064	77.649
82) trans-Isosafrole	(3)	7.138	162	931064	69.107
86) 1,1'-Biphenyl	(3)	7.162	154	2828784	80.341
87) 2-Chloronaphthalene	(3)	7.174	162	2611831M	87.541
88) 1-Chloronaphthalene	(3)	7.186	162	2170022M	78.686
89) Diphenyl ether	(3)	7.252	170	1489713	77.713
90) 2-Nitroaniline	(3)	7.264	138	859007	79.639
91) 1,4-Naphthoquinone	(3)	7.323	158	1005780	79.802
92) 1,4-Dinitrobenzene	(3)	7.383	168	446350	79.459
93) Dimethylphthalate	(3)	7.431	163	2643927	78.260
94) 1,3-Dinitrobenzene	(3)	7.443	168	520200	79.913
95) 2,6-Dinitrotoluene	(3)	7.473	165	651109	78.843
96) Acenaphthylene	(3)	7.509	152	3235827	77.703
97) 3-Nitroaniline	(3)	7.605	138	748422	77.949
99)*Acenaphthene-d10	(3)	7.623	164	510366	20.000
100) Acenaphthene	(3)	7.652	153	2248180	76.082
101) 2,4-Dinitrophenol	(3)	7.694	184	380875	82.517
103) Pentachlorobenzene	(3)	7.766	250	771242	78.882
102) 4-Nitrophenol	(3)	7.766	109	617878	78.633

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) Dibenzofuran	(3)	7.796	168	3090436	78.498
104) 2,4-Dinitrotoluene	(3)	7.802	165	901467	78.817
106) 1-Naphthylamine	(3)	7.862	143	2570563	77.964
107) 2,3,4,6-Tetrachlorophenol	(3)	7.904	232	577908	80.360
108) 2-Naphthylamine	(3)	7.934	143	2601556	78.078
109) Diethylphthalate	(3)	8.017	149	2775169	78.256
111) Fluorene	(3)	8.077	166	2688551	76.812
110) Thionazin	(3)	8.083	107	626736	79.072
112) 4-Chlorophenyl-phenylether	(3)	8.089	204	1181512	77.721
113) 5-Nitro-o-toluidine	(3)	8.101	152	838378	78.398
114) 4-Nitroaniline	(3)	8.113	138	757745	78.682
115) 4,6-Dinitro-2-methylphenol	(4)	8.137	198	514120	83.262
118) NDPA as diphenylamine	(4)	8.191	169	2316805	78.430
117) N-Nitrosodiphenylamine	(4)	8.191	169	2316805	78.430
119) 1,2-Diphenylhydrazine	(4)	8.215	77	3322881	80.255
120)$2,4,6-Tribromophenol	(3)	8.281	330	597296	158.219
122) Tetraethyldithiopyrophosphate	(4)	8.334	97	584392	81.405
130) Diallate (peak 1)	(4)	8.430	86	1364216	57.932
131) Phorate	(4)	8.436	75	3032726	79.546
129) 1,3,5-Trinitrobenzene	(4)	8.436	213	338604	83.639
132) Phenacetin	(4)	8.466	108	1738447	78.681
133) 4-Bromophenyl-phenylether	(4)	8.484	248	606881	77.047
134) Diallate (peak 2)	(4)	8.496	86	205061	19.461
137) Hexachlorobenzene	(4)	8.526	284	613811	78.981
139) Dimethoate	(4)	8.580	87	1344306	79.288
141) Atrazine	(4)	8.646	200	626363	67.940
142) Pentachlorophenol	(4)	8.693	266	442359	82.763
143) 4-Aminobiphenyl	(4)	8.699	169	2267316	74.621
144) Pentachloronitrobenzene	(4)	8.705	237	339558	81.024
146) Pronamide	(4)	8.771	173	1245819	78.459
148)*Phenanthrene-d10	(4)	8.843	188	847868	20.000
147) Dinoseb	(4)	8.855	211	701457	82.268
149) Phenanthrene	(4)	8.861	178	3654203	76.611
150) Anthracene	(4)	8.903	178	3863821	81.410
151) Carbazole	(4)	9.040	167	3611216	78.432
152) Methyl parathion	(4)	9.160	109	1061816	79.868
154) Di-n-butylphthalate	(4)	9.351	149	4578800	78.999
155) Parathion	(4)	9.489	109	751933	80.454
156) 4-Nitroquinoline-1-oxide	(4)	9.495	190	402481	82.516
159) Isodrin	(4)	9.704	193	435933	78.702

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$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.830	202	3913701	81.133
164) Benzidine	(5)	9.956	184	7516771	225.278
165)*Pyrene-d10	(5)	9.992	212	941860	20.000
166) Pyrene	(5)	10.009	202	3839548	75.214
169)$Terphenyl-d14	(5)	10.159	244	5069303	154.746
170) p-Dimethylaminoazobenzene	(5)	10.273	225	868110	78.895
171) Chlorobenzilate	(5)	10.315	139	1578741	77.815
173) 3,3'-Dimethylbenzidine	(5)	10.542	212	2143314	75.023
174) Butylbenzylphthalate	(5)	10.566	149	2126669	78.669
175) 2-Acetylaminofluorene	(5)	10.757	181	1866538	79.615
176) 3,3'-Dichlorobenzidine	(5)	11.003	252	1270615	79.152
178) Benzo(a)anthracene	(5)	11.009	228	3435219	77.717
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.009	231	669745	77.974
180) Chrysene	(5)	11.044	228	3200289	75.741
181) bis(2-Ethylhexyl)phthalate	(5)	11.086	149	2825872	78.153
183) 6-Methylchrysene	(5)	11.475	242	2414338	77.951
184) Di-n-octylphthalate	(6)	11.726	149	4724065	80.521
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.079	256	1556734	78.578
186) Benzo(b)fluoranthene	(6)	12.085	252	3301557M	82.068
187) Benzo(k)fluoranthene	(6)	12.115	252	3035779M	79.453
189) Benzo(a)pyrene	(6)	12.426	252	2796958	80.469
190)*Perylene-d12	(6)	12.480	264	626318	20.000
191) 3-Methylcholanthrene	(6)	12.833	268	1515853	79.873
192) Dibenz(a,h)acridine	(6)	13.461	279	2055616	79.608
193) Dibenz(a,j)acridine	(6)	13.521	279	2149069	78.599
194) Indeno(1,2,3-cd)pyrene	(6)	13.724	276	2700460	77.493
195) Dibenz(a,h)anthracene	(6)	13.760	278	2351308	77.175
196) Benzo(g,h,i)perylene	(6)	14.047	276	2252892	77.272
204) Diallate TRANS/CIS	(4)			1569277	77.321

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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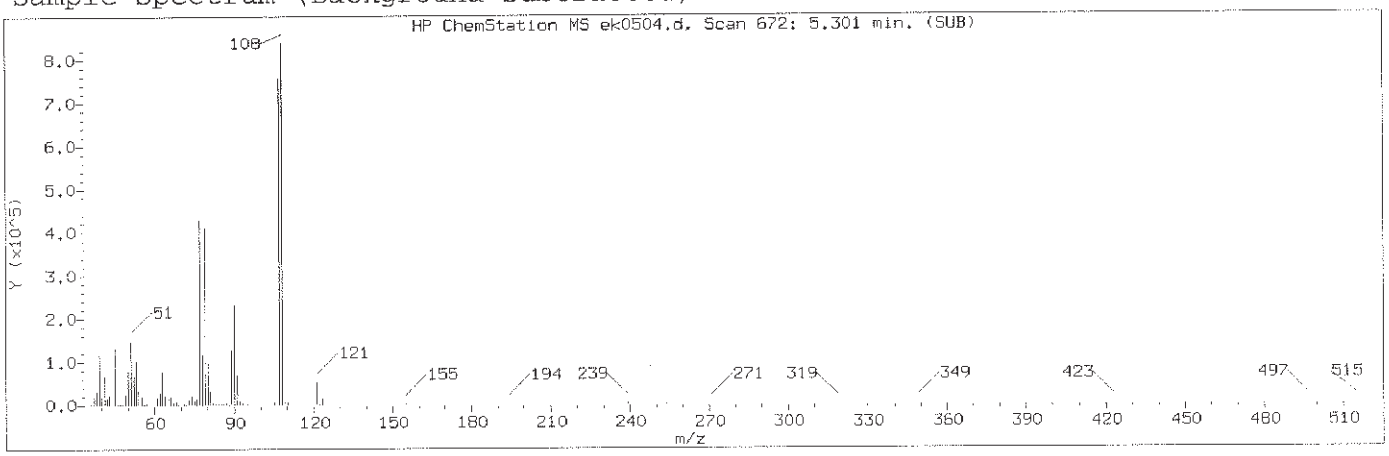
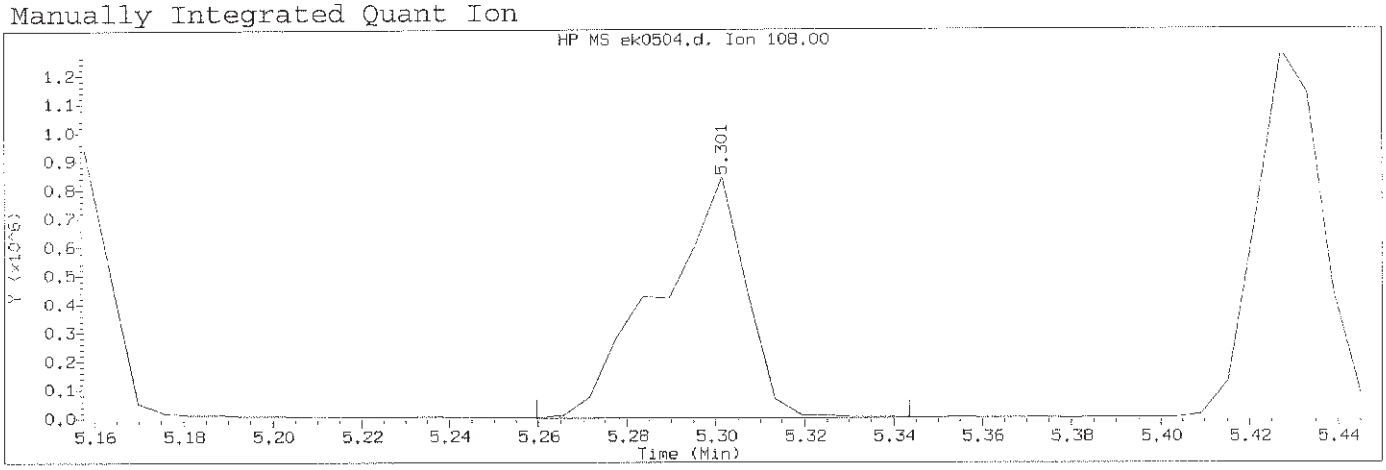
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 29		
Compound Name	: 2-Methylphenol		
Scan Number	: 672		
Retention Time (minutes)	: 5.301		
Quant Ion	: 108.00		
Area (flag)	: 1136207M		
On-Column Amount (ng/ul)	: 76.2158		
Integration start scan	: 664	Integration stop scan:	678
Y at integration start	: 131	Y at integration end:	131

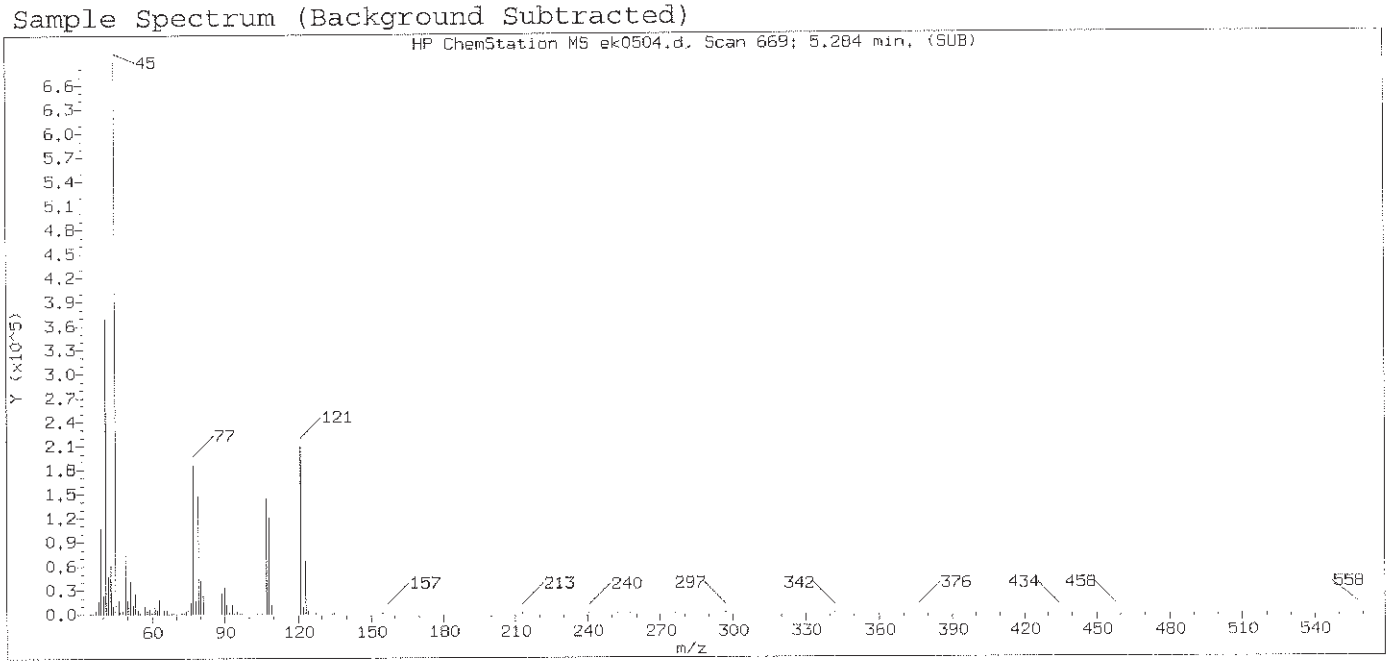
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

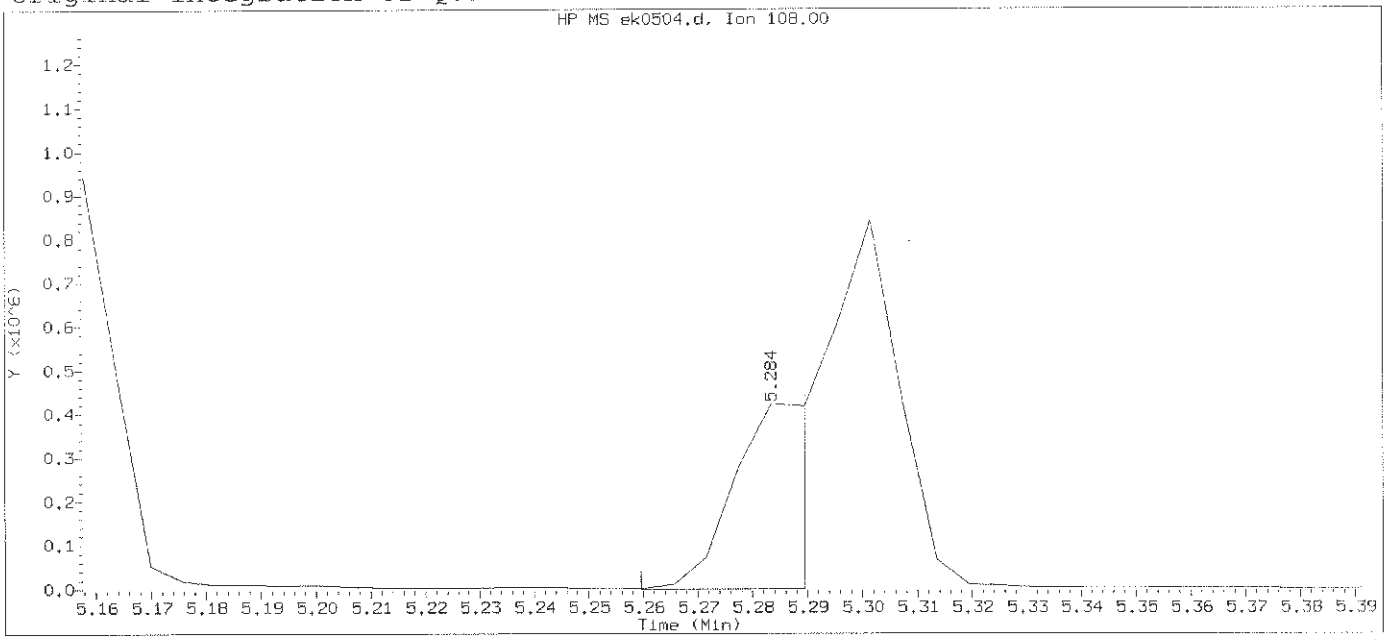
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

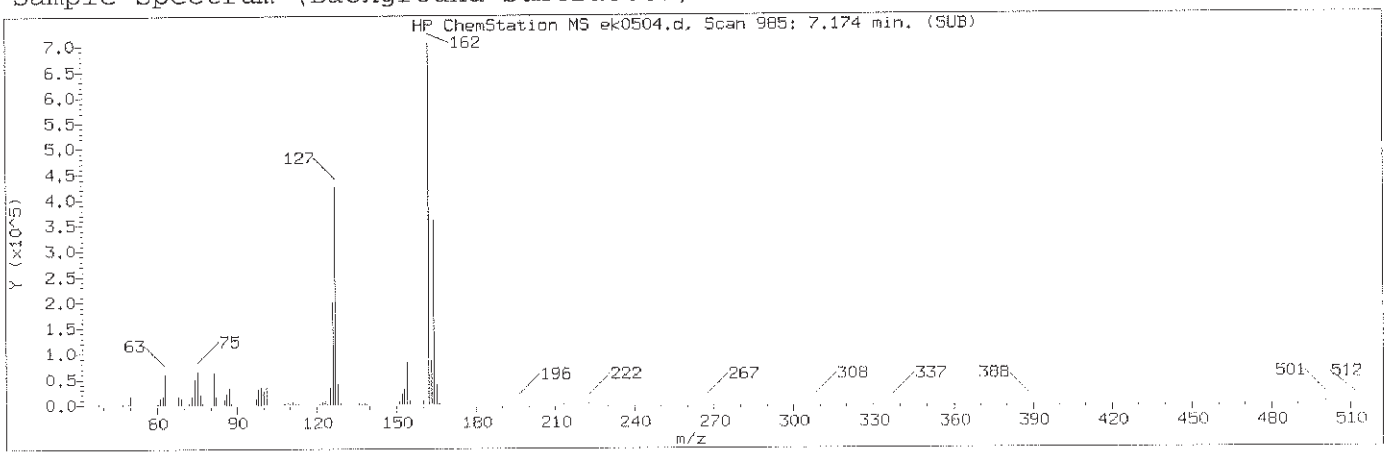
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:25
Date, time and analyst ID of latest file update: 12-Nov-2013 14:25 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

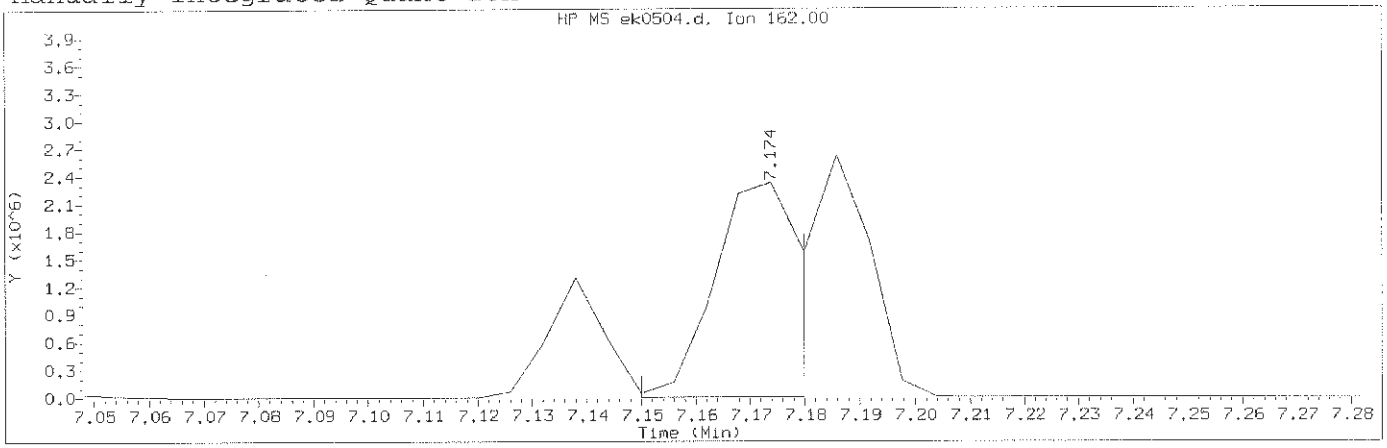
Compound Number	: 29		
Compound Name	: 2-Methylphenol		
Scan Number	: 669		
Retention Time (minutes)	: 5.284		
Quant Ion	: 108.00		
Area	: 357173		
On-column Amount (ng/ul)	: 28.9139		
Integration start scan	: 664	Integration stop scan:	669
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 985		
Retention Time (minutes)	: 7.174		
Quant Ion	: 162.00		
Area (flag)	: 2611831M		
On-Column Amount (ng/ul)	: 87.5413		
Integration start scan	: 980	Integration stop scan:	985
Y at integration start	: 14	Y at integration end:	8

Reason for manual integration: improper integration

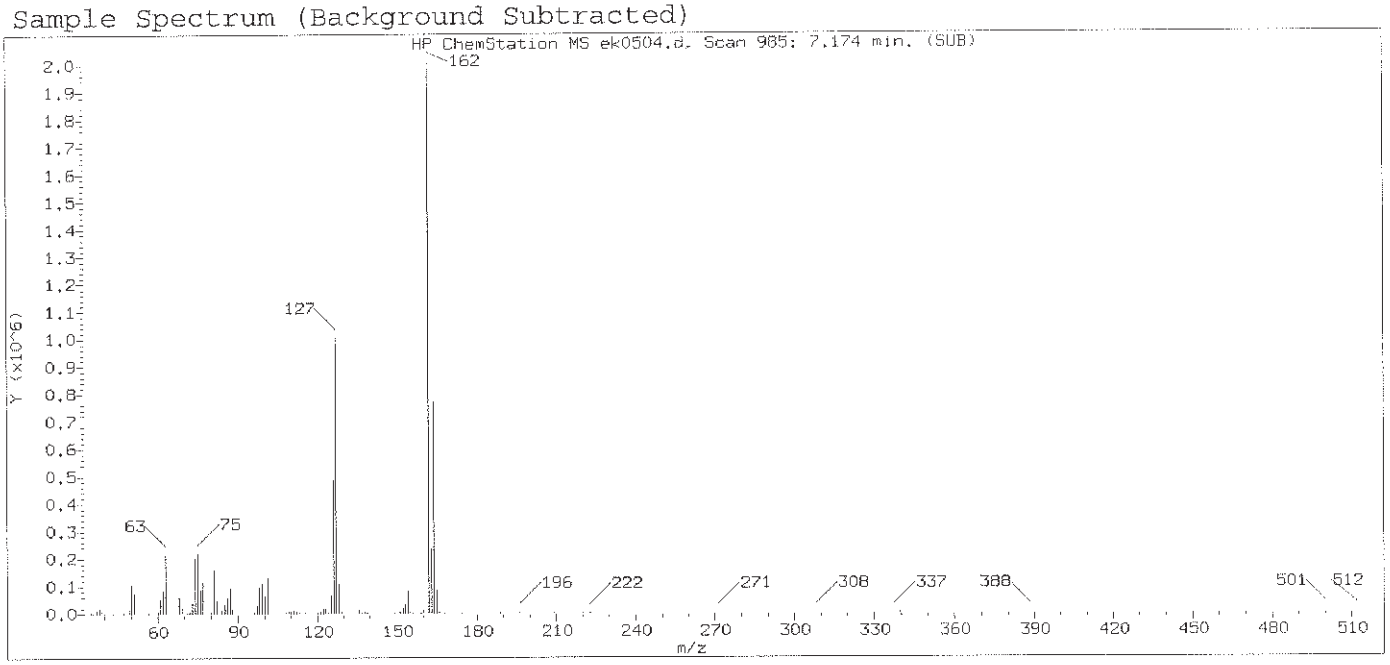
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5, signature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

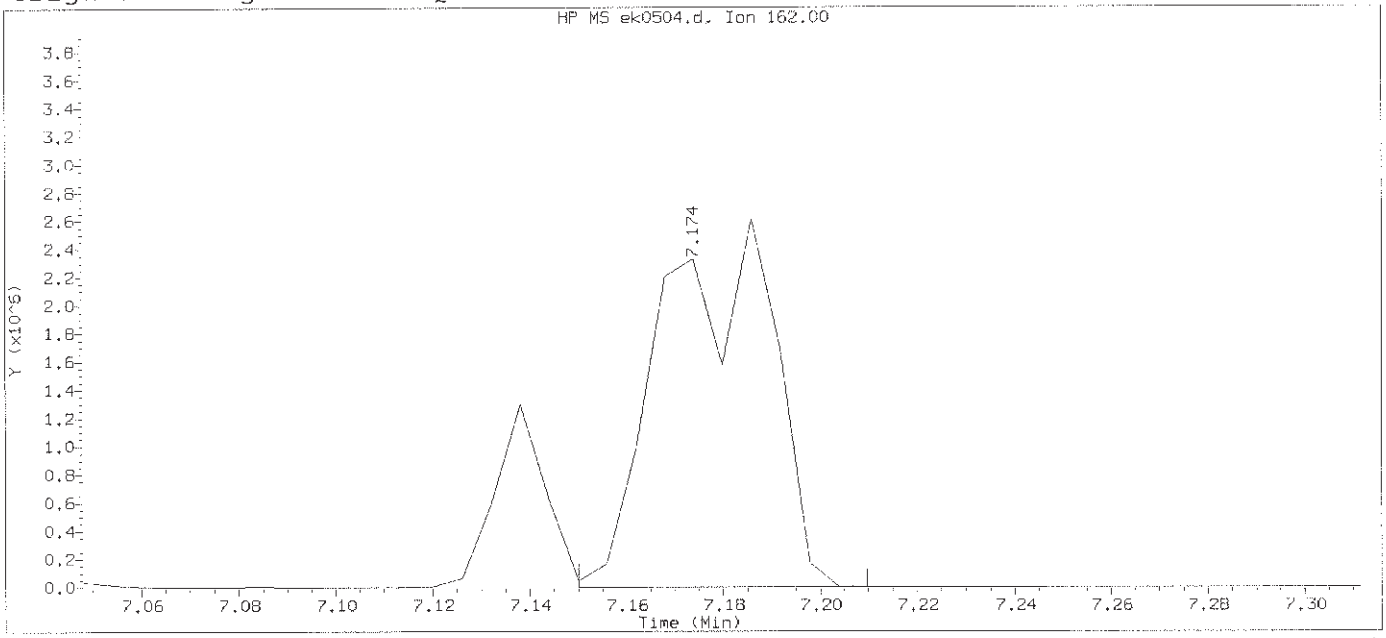
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:25
Date, time and analyst ID of latest file update: 12-Nov-2013 14:25 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 985		
Retention Time (minutes)	: 7.174		
Quant Ion	: 162.00		
Area	: 4209586		
On-column Amount (ng/ul)	: 127.6768		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 14	Y at integration end:	0

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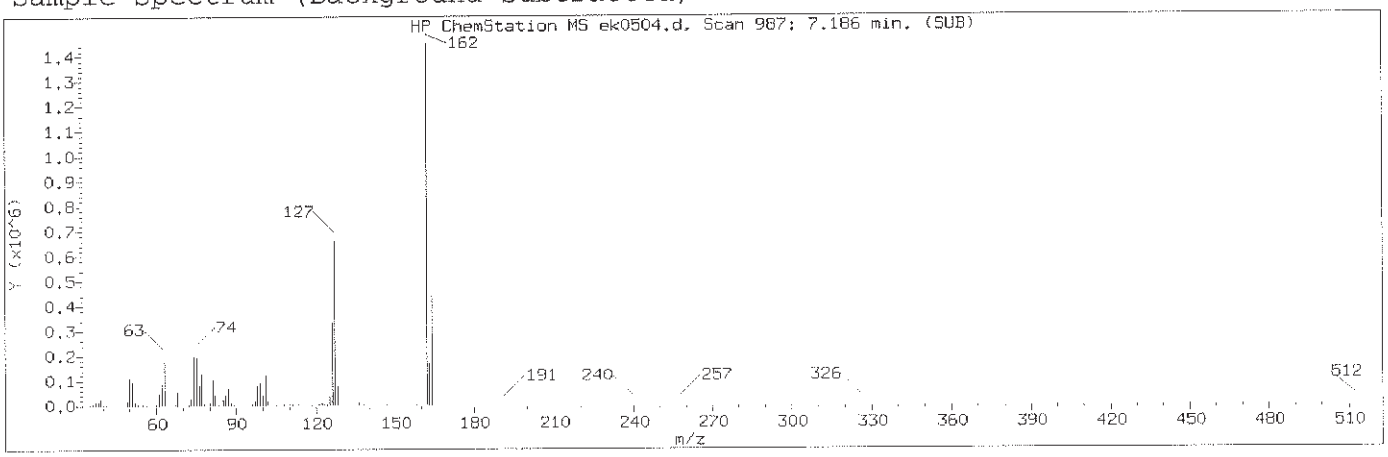
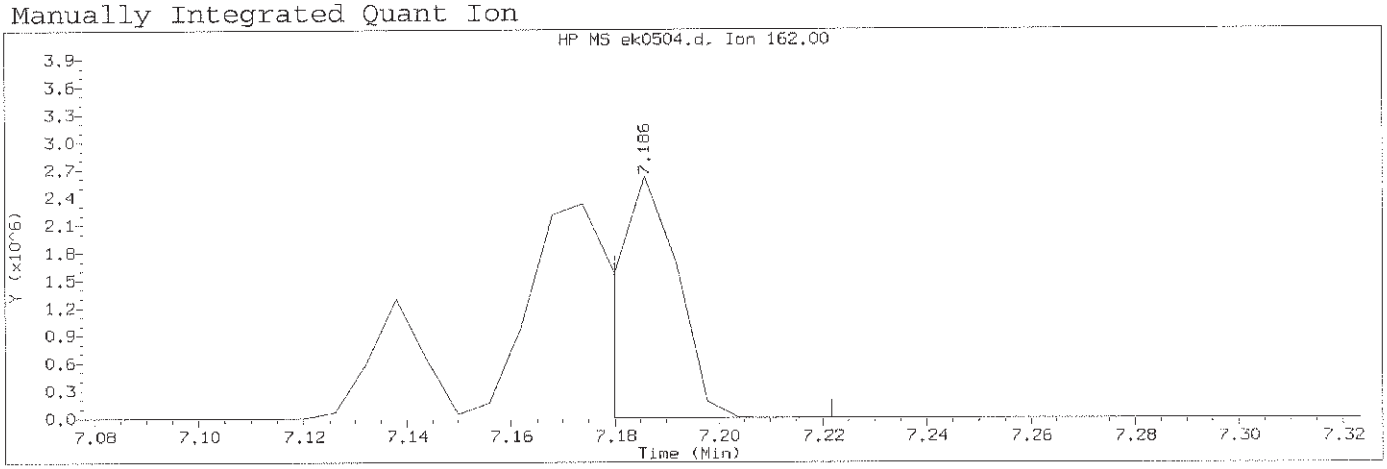
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number : 88
Compound Name : 1-Chloronaphthalene
Scan Number : 987
Retention Time (minutes) : 7.186
Quant Ion : 162.00
Area (flag) : 2170022M
On-Column Amount (ng/ul) : 78.6857
Integration start scan : 985 Integration stop scan: 992
Y at integration start : 0 Y at integration end: 0

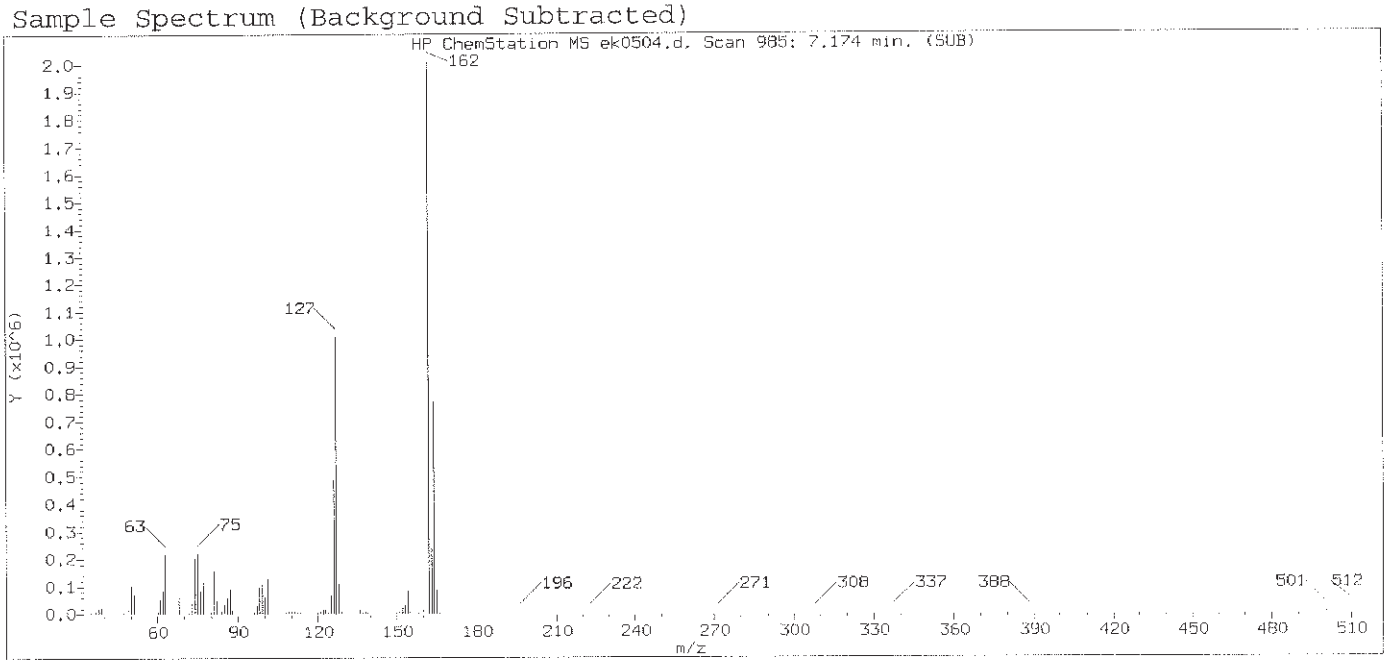
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

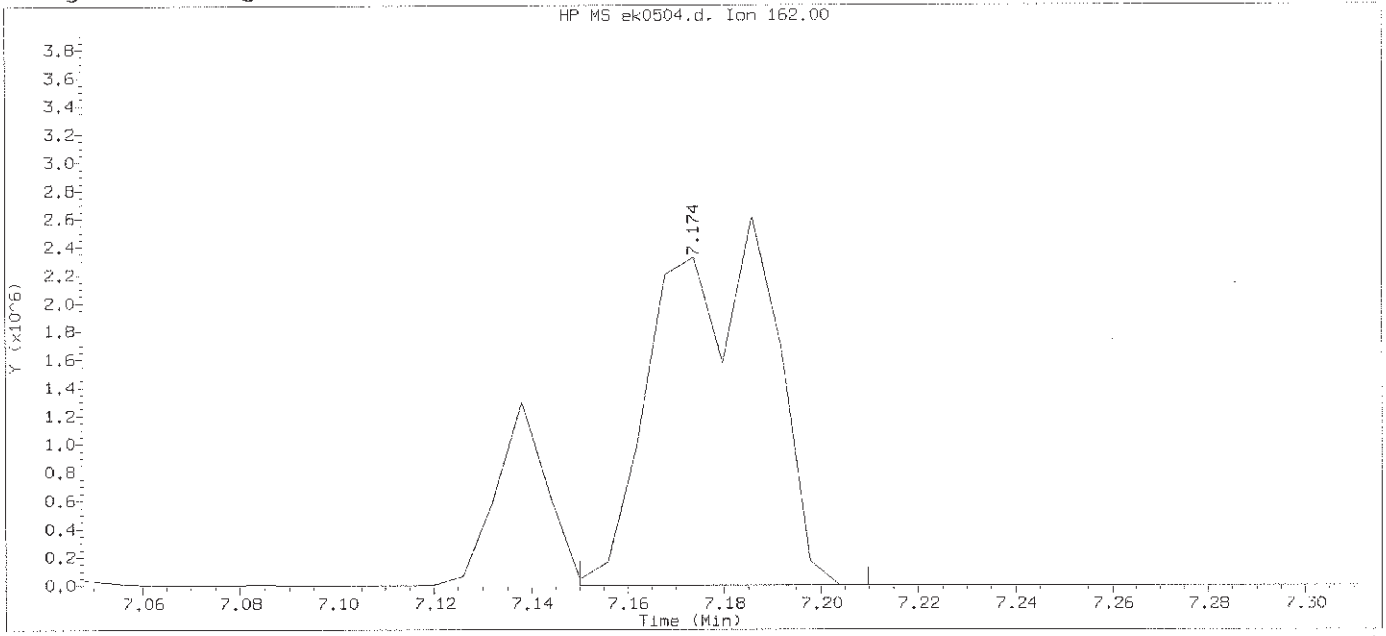
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

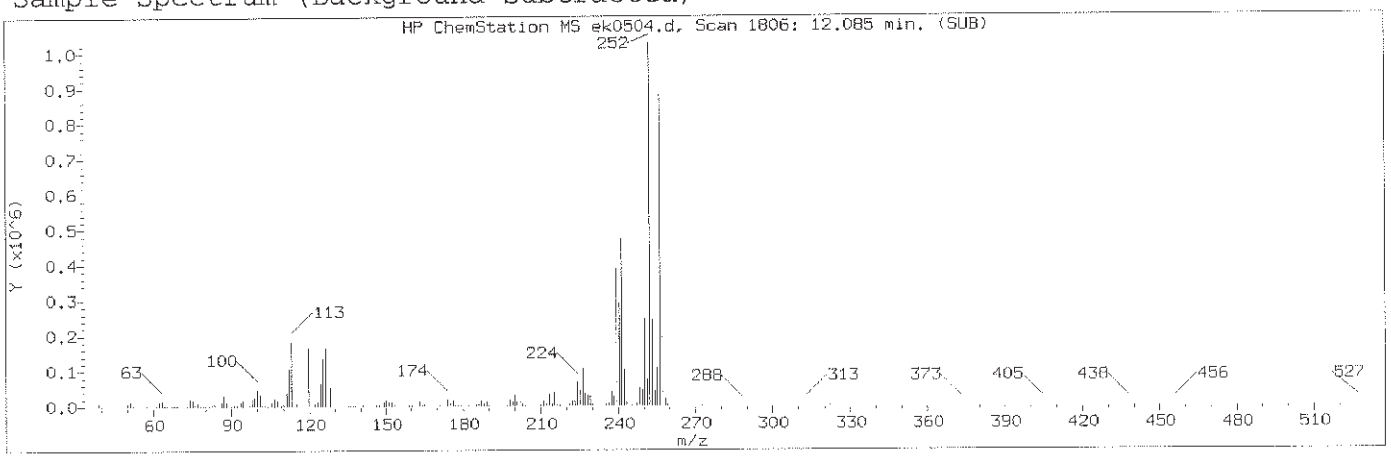
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:25
Date, time and analyst ID of latest file update: 12-Nov-2013 14:25 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

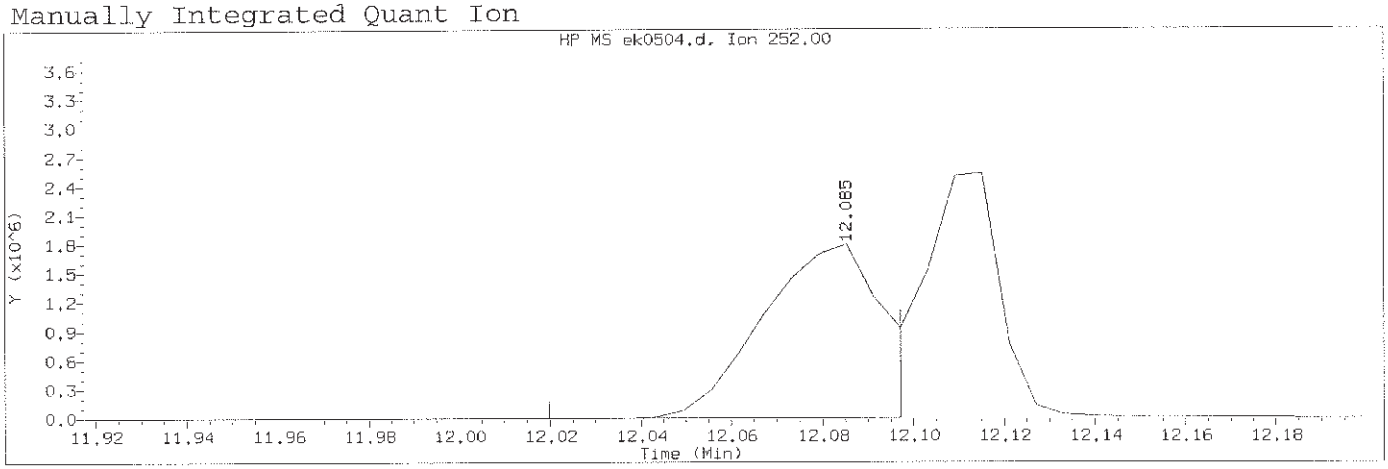
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 985		
Retention Time (minutes)	: 7.174		
Quant Ion	: 162.00		
Area	: 4209610		
On-column Amount (ng/ul)	: 118.0875		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

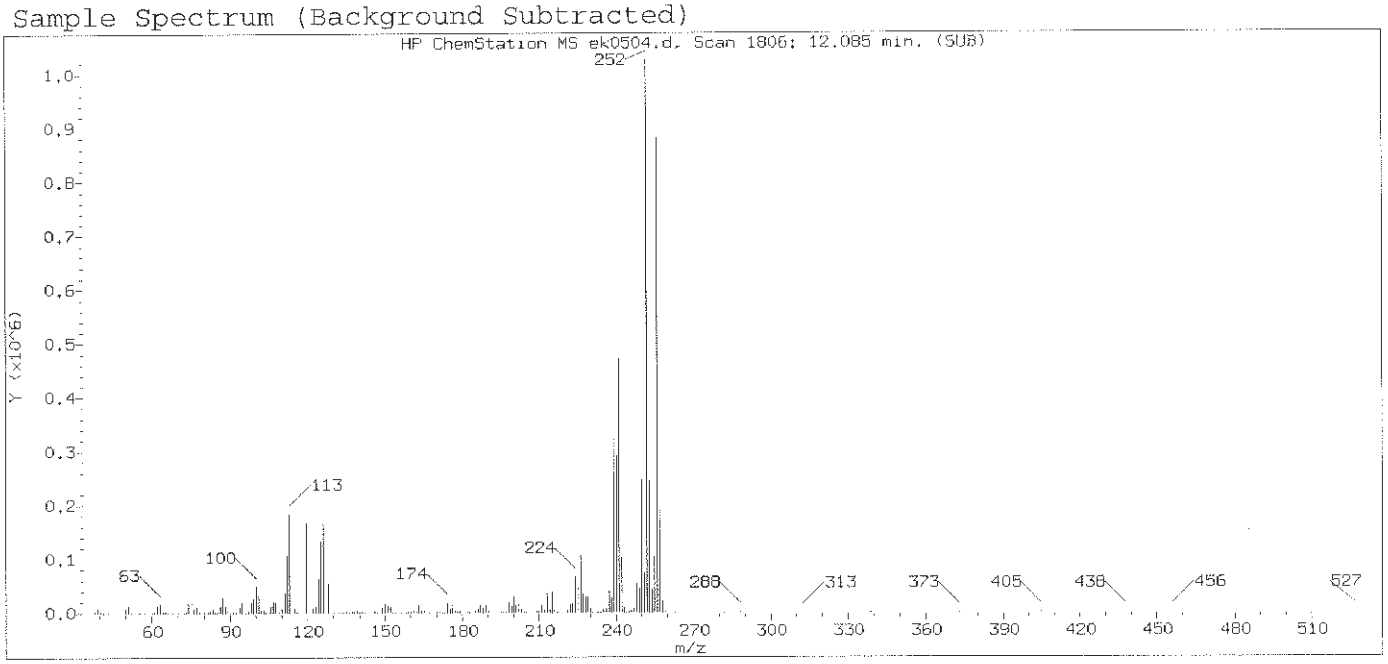
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area (flag)	: 3301557M		
On-Column Amount (ng/ul)	: 82.0681		
Integration start scan	: 1794	Integration stop scan:	1807
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

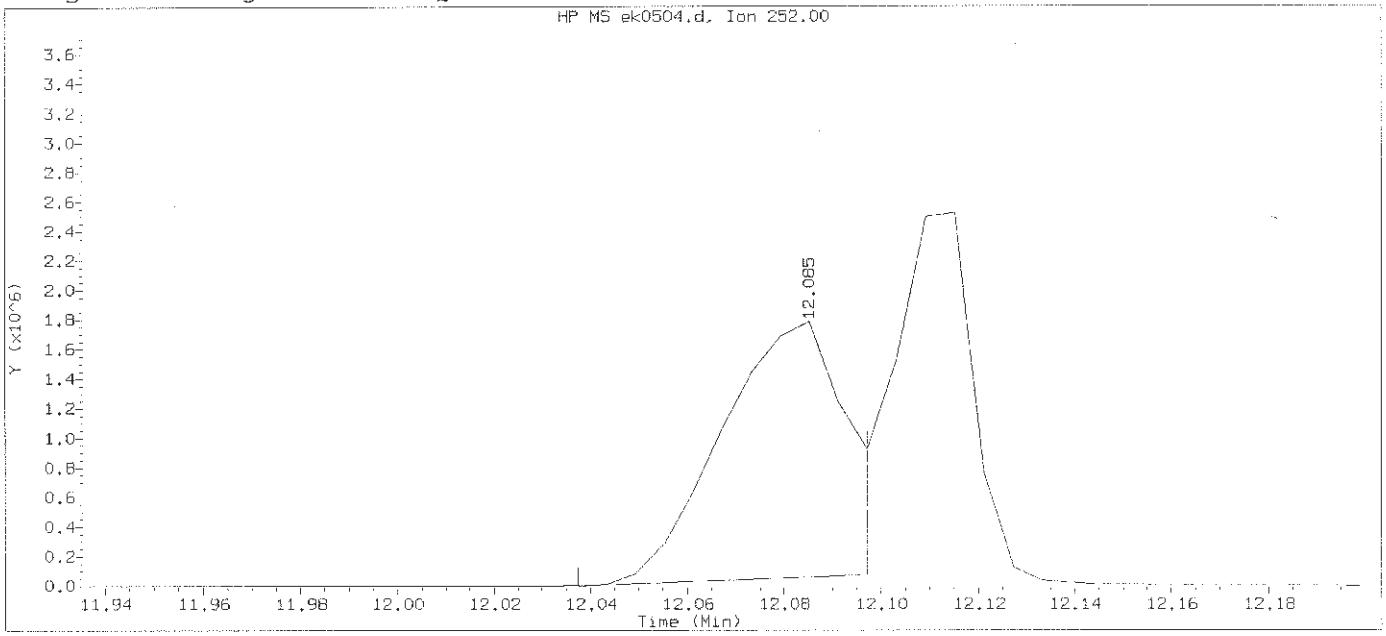
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: _____
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

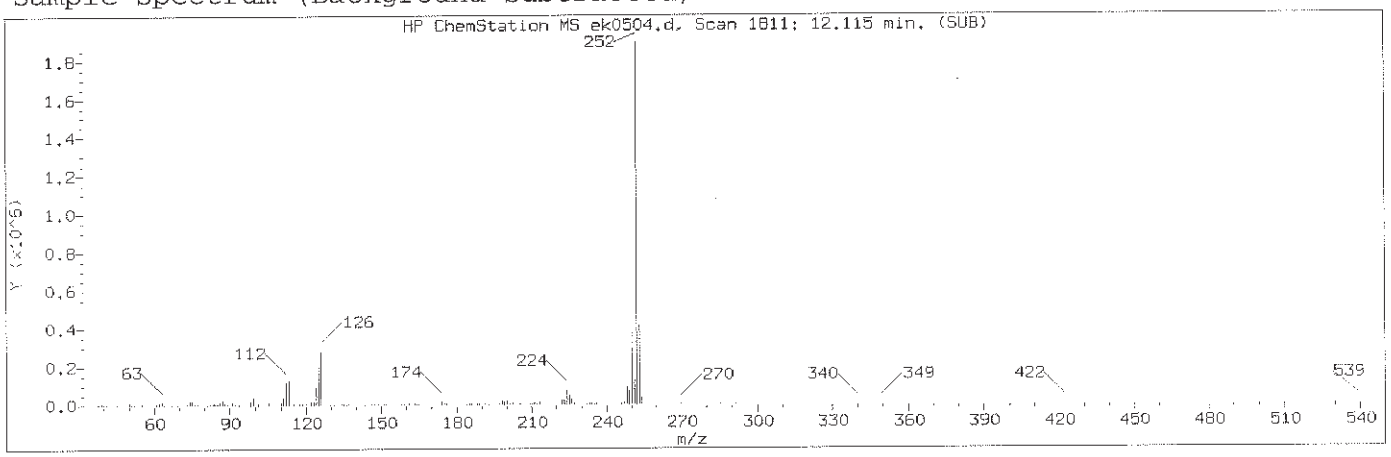
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:25
Date, time and analyst ID of latest file update: 12-Nov-2013 14:25 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

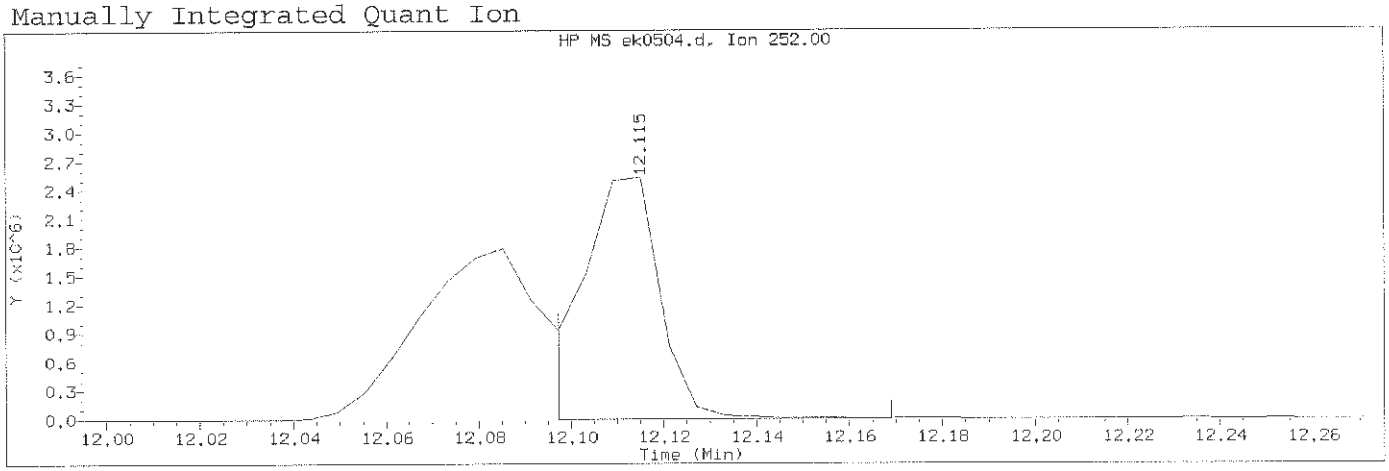
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area	: 3002445		
On-column Amount (ng/ul)	: 64.4549		
Integration start scan	: 1797	Integration stop scan:	1807
Y at integration start	: 0	Y at integration end:	73754

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD080 Lab Sample ID: STD3083

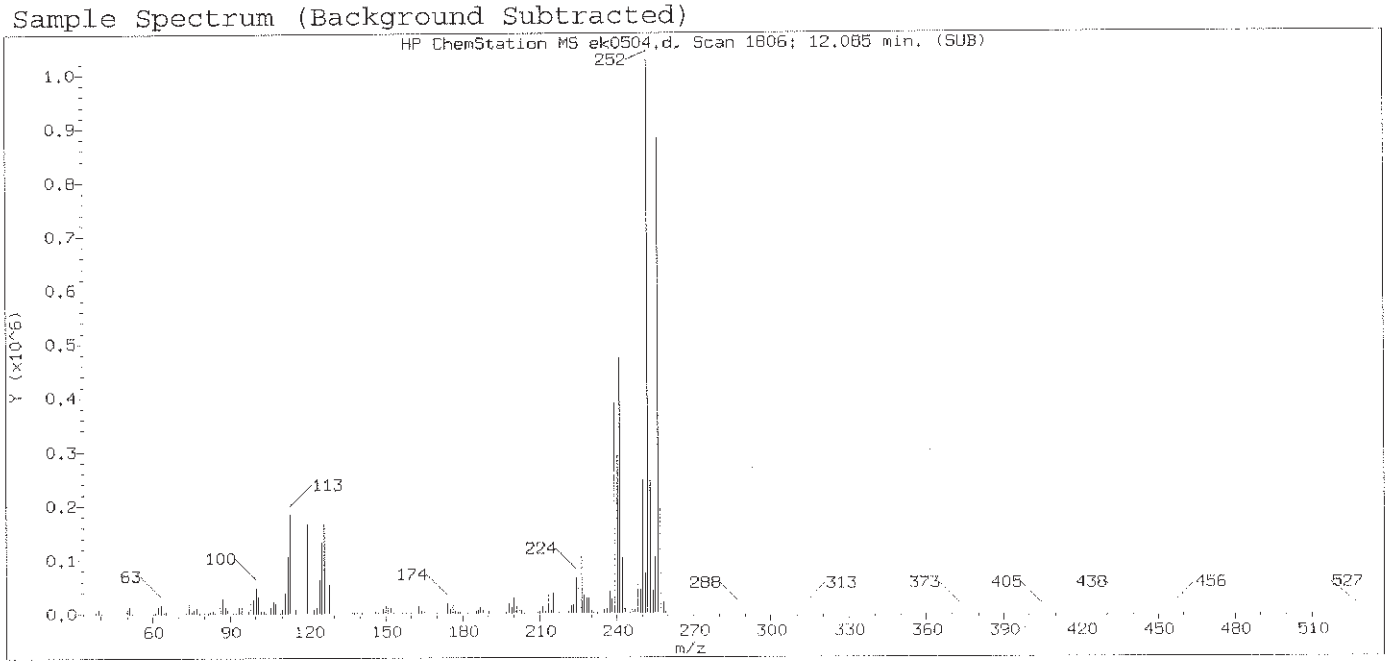
Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1811
Retention Time (minutes) : 12.115
Quant Ion : 252.00
Area (flag) : 3035779M
On-Column Amount (ng/ul) : 79.4534
Integration start scan : 1807 Integration stop scan: 1819
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

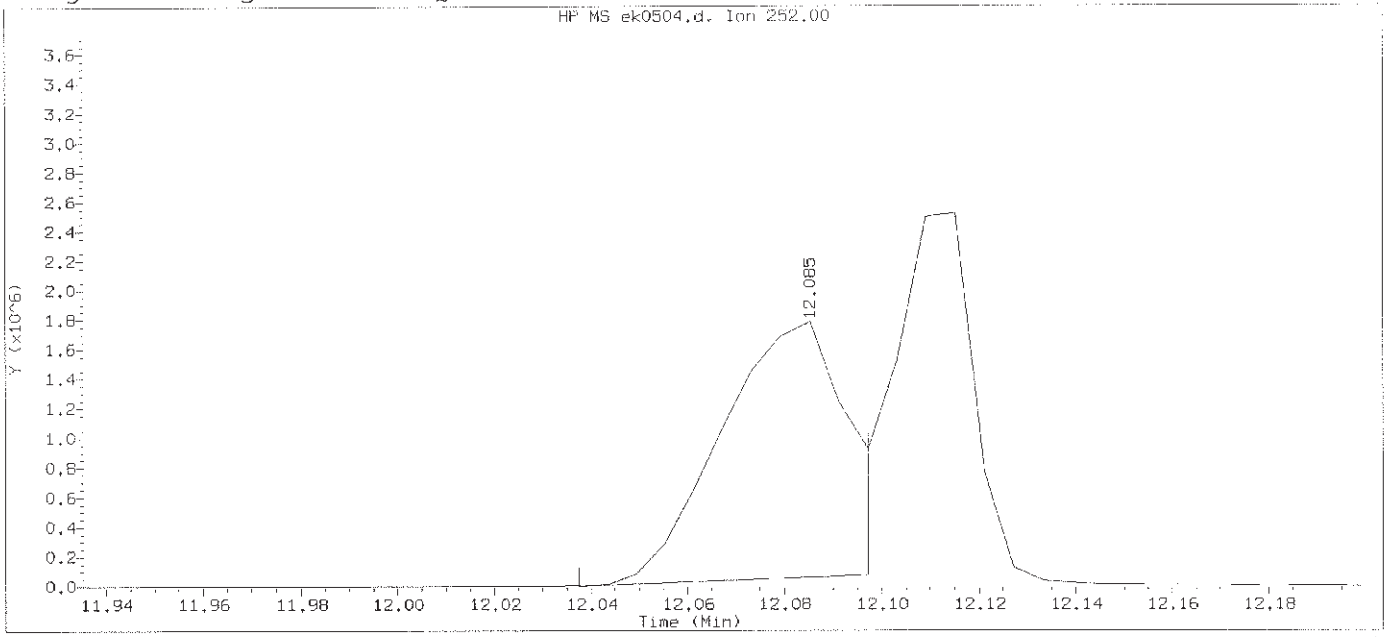
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



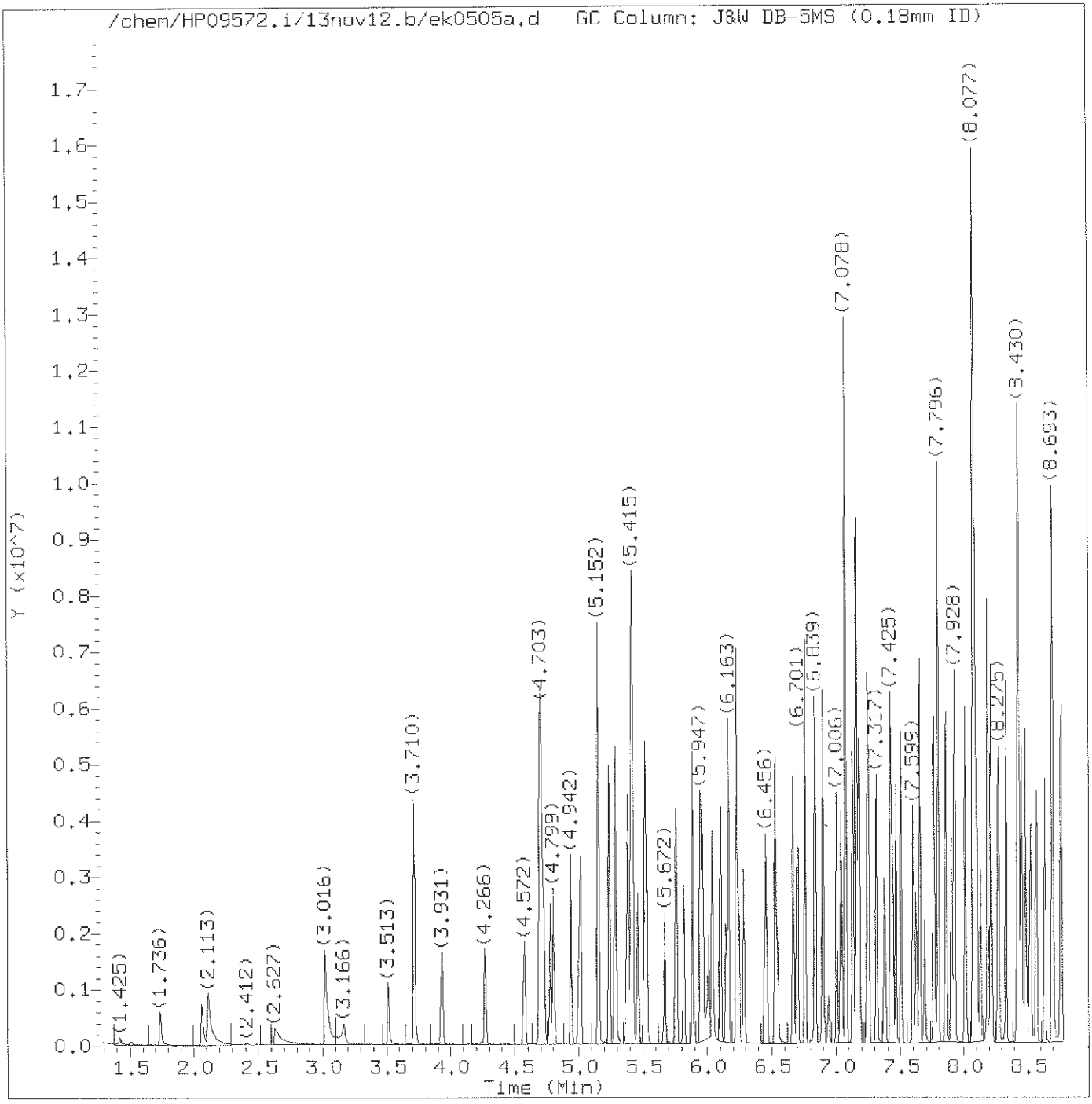
Data File: /chem/HP09572.i/13nov12.b/ek0504.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:00 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 14:25
Date, time and analyst ID of latest file update: 12-Nov-2013 14:25 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area	: 3002445		
On-column Amount (ng/ul)	: 62.9302		
Integration start scan	: 1797	Integration stop scan:	1807
Y at integration start	: 0	Y at integration end:	73754

Digitally signed by Holly Berry on 11/12/2013 at 20:25.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

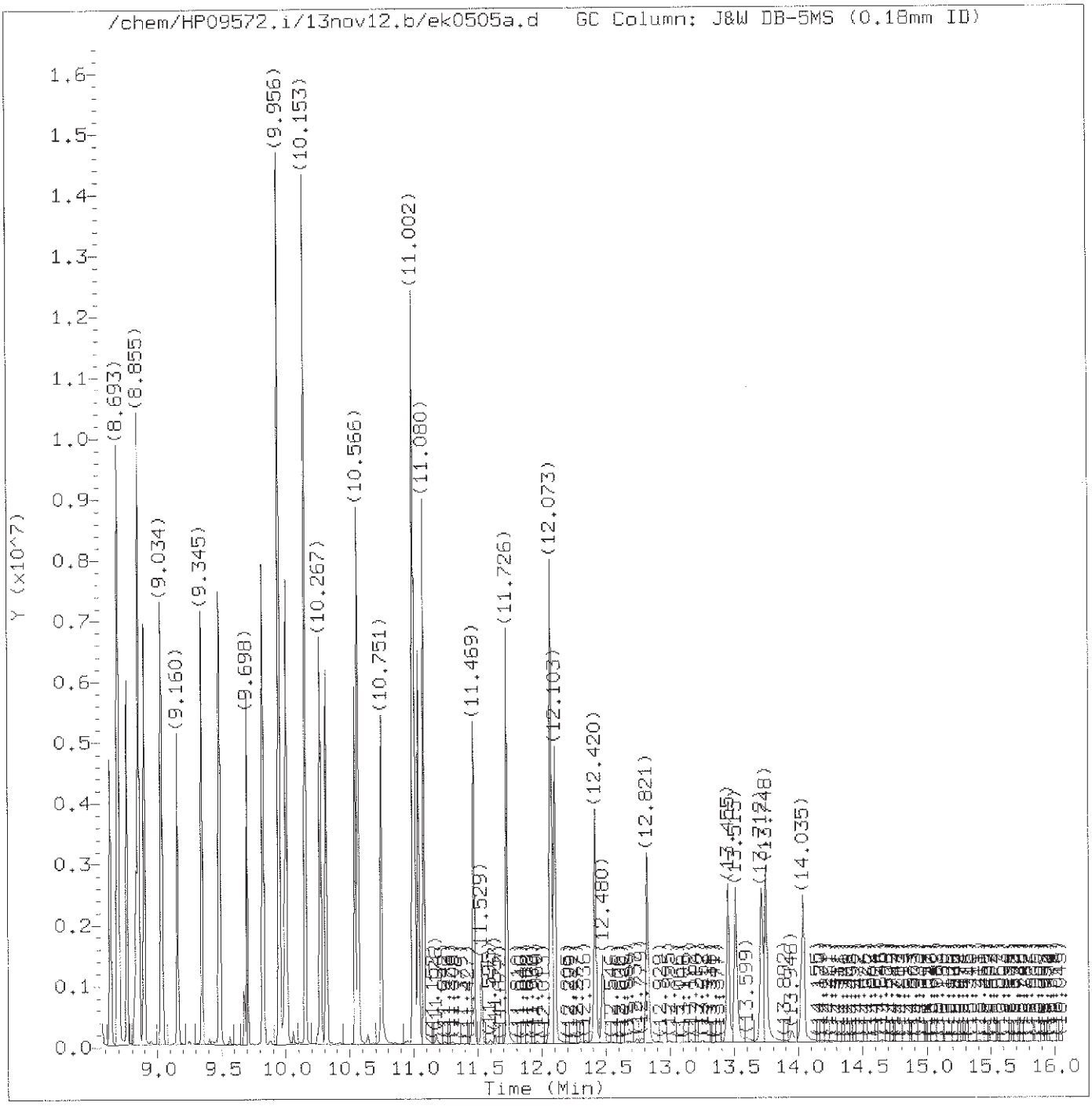
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.736	88	255362	53.713
2) N-Nitrosodimethylamine	(1)	2.059	74	425780	51.264
3) Pyridine	(1)	2.113	79	680865	52.639
4) 2-Picoline	(1)	3.016	93	815729	51.199
5) N-Nitrosomethylethylamine	(1)	3.166	88	361836	50.264
6) Methyl methanesulfonate	(1)	3.513	80	444867	50.857
7)$2-Fluorophenol	(1)	3.716	112	1283786	103.076
8) N-Nitrosodiethylamine	(1)	3.931	102	379445	50.731
10) Ethyl methanesulfonate	(1)	4.266	109	371507	50.393
20) Aniline	(1)	4.691	93	1271454	51.103
18)$Phenol-d6	(1)	4.697	99	1960868	103.555
17)$Phenol-d5	(1)	4.697	99	1960868	103.555
19) Phenol	(1)	4.715	94	1030255	51.861
21) bis(2-Chloroethyl)ether	(1)	4.775	93	810812	51.450
22) 2-Chlorophenol	(1)	4.799	128	666185	51.744
24) 1,3-Dichlorobenzene	(1)	4.942	146	645110	51.636
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	162187	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	659547	51.149
27) Benzyl alcohol	(1)	5.152	108	494711	49.194
28) 1,2-Dichlorobenzene	(1)	5.152	146	655802	52.491
30) Indene	(1)	5.236	115	1366890	61.435
32) bis(2-Chloroisopropyl)ether	(1)	5.289	45	856924	51.294
29) 2-Methylphenol	(1)	5.289	108	732977	51.782
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.289	45	856924	51.294
33) N-Nitrosopyrrolidine	(1)	5.373	100	449687	50.840
34) Acetophenone	(1)	5.385	105	1129383	50.985
37) N-Nitrosomorpholine	(1)	5.409	56	570600	51.442
36) N-Nitroso-di-n-propylamine	(1)	5.409	70	661856	51.273
35) 4-Methylphenol	(1)	5.421	108	866330	51.269
38) o-Toluidine	(1)	5.421	106	1250530	52.135
39) Hexachloroethane	(1)	5.463	117	283591	51.331
40)$Nitrobenzene-d5	(2)	5.517	82	1821942	105.922
41) Nitrobenzene	(2)	5.535	77	918324	52.157
42) N-Nitrosopiperidine	(2)	5.672	114	414496	52.601
52) Isophorone	(2)	5.756	82	1649563	52.367
53) 2-Nitrophenol	(2)	5.816	139	396521	52.493
54) 2,4-Dimethylphenol	(2)	5.888	107	891096	52.292
55) O,O,O-triethylphosphorothioate	(2)	5.953	198	337455	52.719
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	1102797	51.056
56) Benzoic acid	(2)	6.013	105	650646	47.638

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.043	162	581723	52.310
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	578426	52.719
60)*Naphthalene-d8	(2)	6.145	136	740222	20.000
61) Naphthalene	(2)	6.163	128	1991876	51.737
62) 4-Chloroaniline	(2)	6.223	127	910385	52.823
63) 2,6-Dichlorophenol	(2)	6.229	162	566196	52.232
64) Hexachloropropene	(2)	6.247	213	351301	51.475
65) Hexachlorobutadiene	(2)	6.288	225	290518	52.348
67) Quinoline	(2)	6.456	129	1458820	53.330
68) N-Nitrosodi-n-butylamine	(2)	6.534	84	883372	56.120
69) Caprolactam	(2)	6.546	113	335197	55.434
70) 4-Chloro-3-methylphenol	(2)	6.665	107	849489	52.806
71) Safrole	(2)	6.701	162	585323	53.423
72) 2-Methylnaphthalene	(2)	6.761	142	1482015	53.699
75) 1-Methylnaphthalene	(2)	6.839	142	1363364	53.570
76) Hexachlorocyclopentadiene	(3)	6.899	237	276261	50.411
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.905	216	551808	51.036
78) cis-Isosafrole	(3)	6.941	162	108909	5.841
79) 2,4,6-Trichlorophenol	(3)	7.006	196	417742	50.119
80) 2,4,5-Trichlorophenol	(3)	7.042	196	464726	51.946
81)$2-Fluorobiphenyl	(3)	7.078	172	3005799	107.131
83) Isosafrole	(3)	7.132	162	606180	52.074
82) trans-Isosafrole	(3)	7.132	162	606180	46.346
86) 1,1'-Biphenyl	(3)	7.156	154	1796492	52.557
87) 2-Chloronaphthalene	(3)	7.168	162	1525321M	52.662
88) 1-Chloronaphthalene	(3)	7.180	162	1501857M	56.095
89) Diphenyl ether	(3)	7.246	170	977805	52.543
90) 2-Nitroaniline	(3)	7.258	138	540173	51.586
91) 1,4-Naphthoquinone	(3)	7.317	158	641029	52.391
92) 1,4-Dinitrobenzene	(3)	7.377	168	275237	50.471
93) Dimethylphthalate	(3)	7.425	163	1735438	52.913
94) 1,3-Dinitrobenzene	(3)	7.437	168	336498	53.247
95) 2,6-Dinitrotoluene	(3)	7.467	165	425044	53.017
96) Acenaphthylene	(3)	7.503	152	2107616	52.133
97) 3-Nitroaniline	(3)	7.599	138	490677	52.641
99)*Acenaphthene-d10	(3)	7.622	164	495466	20.000
100) Acenaphthene	(3)	7.652	153	1445775	50.399
101) 2,4-Dinitrophenol	(3)	7.688	184	218737	48.815
102) 4-Nitrophenol	(3)	7.760	109	386777	50.702
103) Pentachlorobenzene	(3)	7.760	250	494849	52.135

M = Compound was manually integrated.
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on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	Qlon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.796	165	590465	53.178
105) Dibenzofuran	(3)	7.796	168	2020790	52.872
106) 1-Naphthylamine	(3)	7.862	143	1703216	53.211
107) 2,3,4,6-Tetrachlorophenol	(3)	7.904	232	354852	50.827
108) 2-Naphthylamine	(3)	7.928	143	1742501	53.869
109) Diethylphthalate	(3)	8.011	149	1808272	52.524
110) Thionazin	(3)	8.077	107	392687	51.033
111) Fluorene	(3)	8.077	166	1719542	50.605
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	783115	53.063
113) 5-Nitro-o-toluidine	(3)	8.095	152	544117	52.411
114) 4-Nitroaniline	(3)	8.107	138	492484A	52.676
115) 4,6-Dinitro-2-methylphenol	(4)	8.131	198	307382	50.846
118) NDPA as diphenylamine	(4)	8.185	169	1537615	53.166
117) N-Nitrosodiphenylamine	(4)	8.185	169	1537615	53.166
119) 1,2-Diphenylhydrazine	(4)	8.215	77	2110503	52.064
120)$2,4,6-Tribromophenol	(3)	8.275	330	378036	103.150
122) Tetraethyldithiopyrophosphate	(4)	8.334	97	357789	50.906
129) 1,3,5-Trinitrobenzene	(4)	8.424	213	202911	51.194
130) Diallate (peak 1)	(4)	8.430	86	919457	39.881
131) Phorate	(4)	8.430	75	1959491	52.495
132) Phenacetin	(4)	8.460	108	1118208	51.693
133) 4-Bromophenyl-phenylether	(4)	8.484	248	411854	53.406
134) Diallate (peak 2)	(4)	8.496	86	130604	12.660
137) Hexachlorobenzene	(4)	8.526	284	404225	53.126
139) Dimethoate	(4)	8.568	87	880202	53.025
141) Atrazine	(4)	8.639	200	444082	49.199
143) 4-Aminobiphenyl	(4)	8.693	169	1627403	54.706
142) Pentachlorophenol	(4)	8.693	266	260763	49.831
144) Pentachloronitrobenzene	(4)	8.699	237	207321	50.528
146) Pronamide	(4)	8.765	173	812924	52.292
148)*Phenanthrene-d10	(4)	8.837	188	830107	20.000
147) Dinoseb	(4)	8.855	211	429569	51.458
149) Phenanthrene	(4)	8.861	178	2449845	52.460
150) Anthracene	(4)	8.903	178	2518529	54.201
151) Carbazole	(4)	9.034	167	2392718	53.079
152) Methyl parathion	(4)	9.160	109	694391	53.348
154) Di-n-butylphthalate	(4)	9.345	149	3020050	53.220
155) Parathion	(4)	9.483	109	477319	52.164
156) 4-Nitroquinoline-1-oxide	(4)	9.489	190	244710	51.244
159) Isodrin	(4)	9.698	193	289194	53.327

A = User selected an alternate hit.
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$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.824	202	2562927	54.268
164) Benzidine	(5)	9.956	184	5506796	170.057
165)*Pyrene-d10	(5)	9.991	212	914067	20.000
166) Pyrene	(5)	10.009	202	2551833	51.509
169)$Terphenyl-d14	(5)	10.153	244	3436388	108.089
170) p-Dimethylaminoazobenzene	(5)	10.267	225	557375	52.195
171) Chlorobenzilate	(5)	10.315	139	1043686	53.007
173) 3,3'-Dimethylbenzidine	(5)	10.542	212	1540761	55.571
174) Butylbenzylphthalate	(5)	10.566	149	1376045	52.450
175) 2-Acetylaminofluorene	(5)	10.751	181	1196401	52.583
176) 3,3'-Dichlorobenzidine	(5)	10.996	252	820016	52.635
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.002	231	440874	52.889
178) Benzo(a)anthracene	(5)	11.008	228	2224822	51.864
180) Chrysene	(5)	11.038	228	2156087	52.579
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	1863791	53.113
183) 6-Methylchrysene	(5)	11.469	242	1572937	52.329
184) Di-n-octylphthalate	(6)	11.726	149	3049090	52.445
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.073	256	1040722	53.010
186) Benzo(b)fluoranthene	(6)	12.073	252	2015877M	50.566
187) Benzo(k)fluoranthene	(6)	12.103	252	2159307M	57.029
189) Benzo(a)pyrene	(6)	12.420	252	1806695	52.453
190)*Perylene-d12	(6)	12.480	264	620664	20.000
191) 3-Methylcholanthrene	(6)	12.827	268	963886	51.251
192) Dibenz(a,h)acridine	(6)	13.455	279	1294101	50.573
193) Dibenz(a,j)acridine	(6)	13.515	279	1420085	52.410
194) Indeno(1,2,3-cd)pyrene	(6)	13.712	276	1790480	51.848
195) Dibenz(a,h)anthracene	(6)	13.748	278	1542016	51.074
196) Benzo(g,h,i)perylene	(6)	14.035	276	1472938	50.981
204) Diallate TRANS/CIS	(4)			1050061	52.845

M = Compound was manually integrated.
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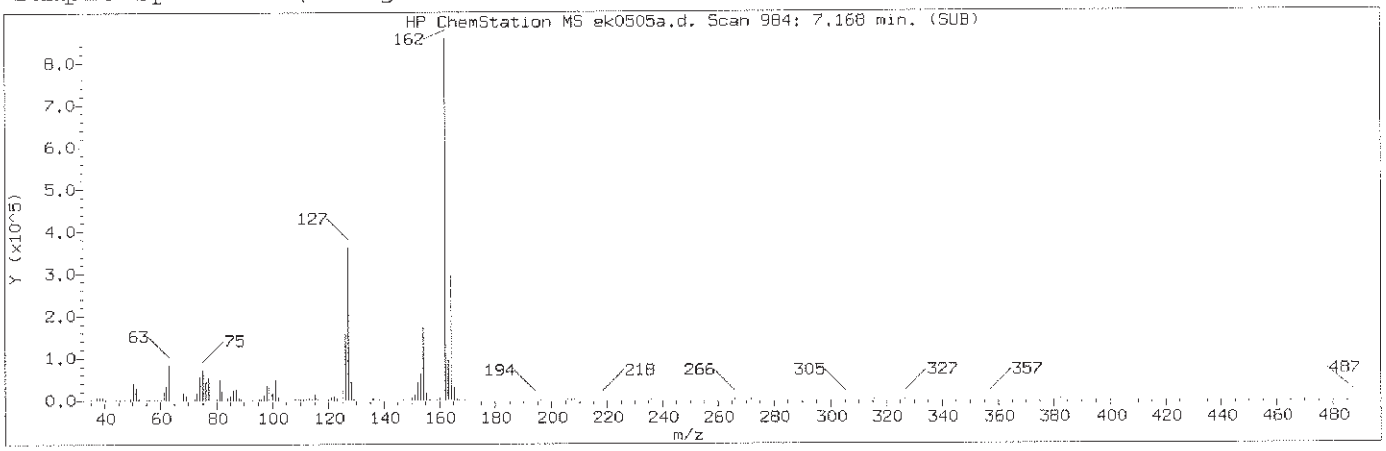
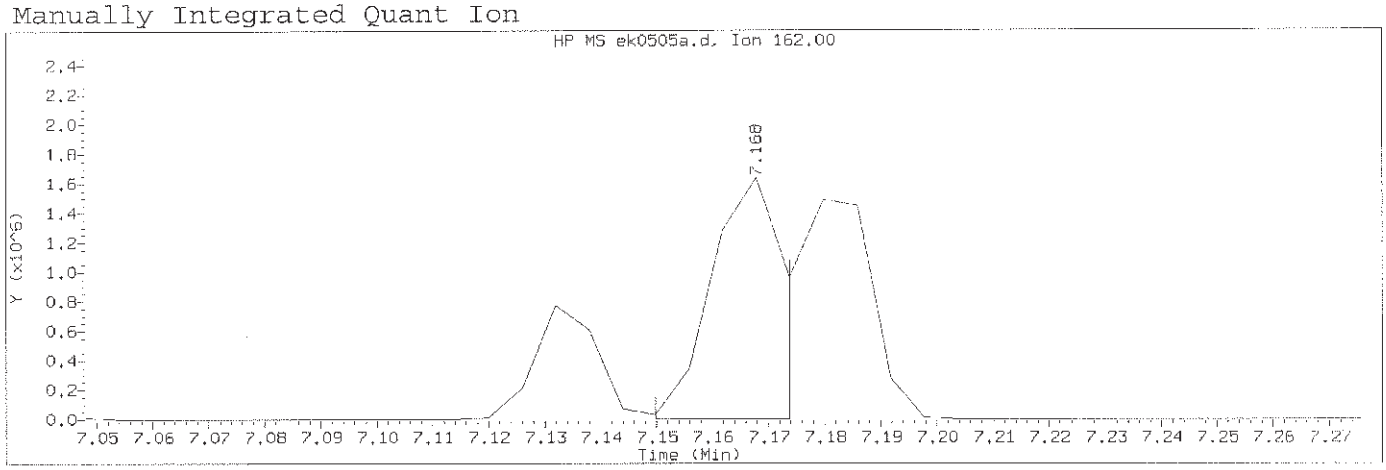
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area (flag)	: 1525321M		
On-Column Amount (ng/ul)	: 52.6620		
Integration start scan	: 980	Integration stop scan:	984
Y at integration start	: 0	Y at integration end:	0

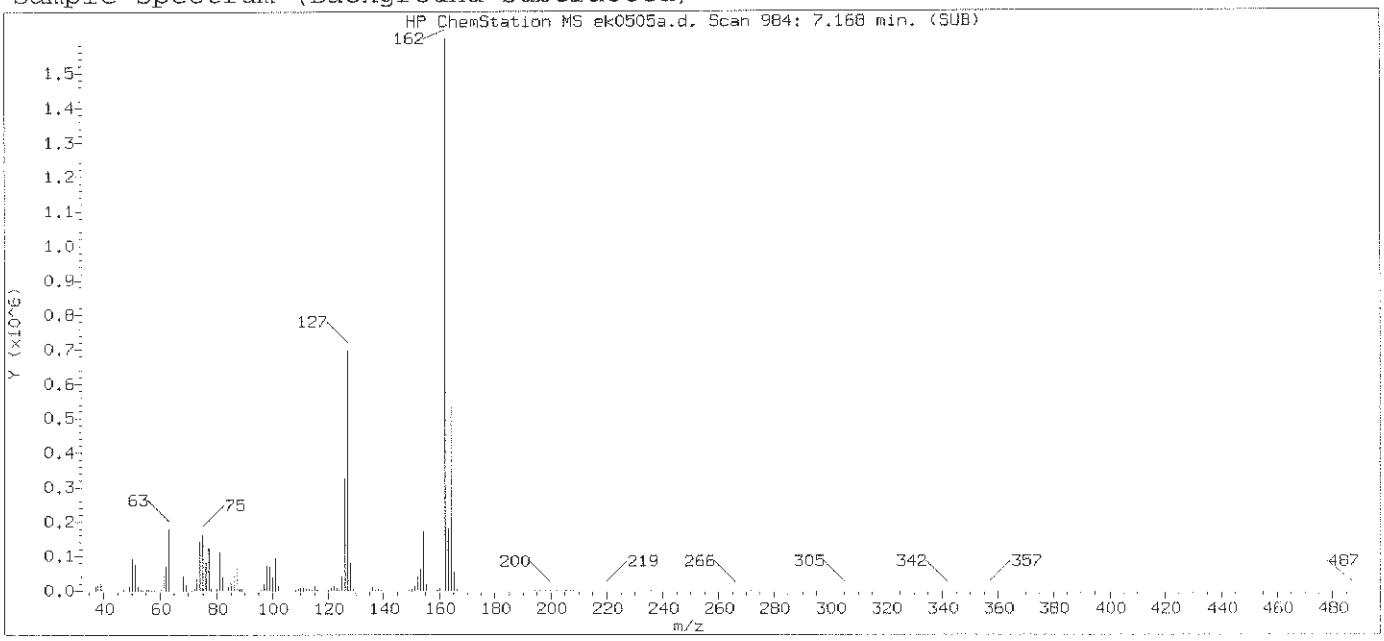
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

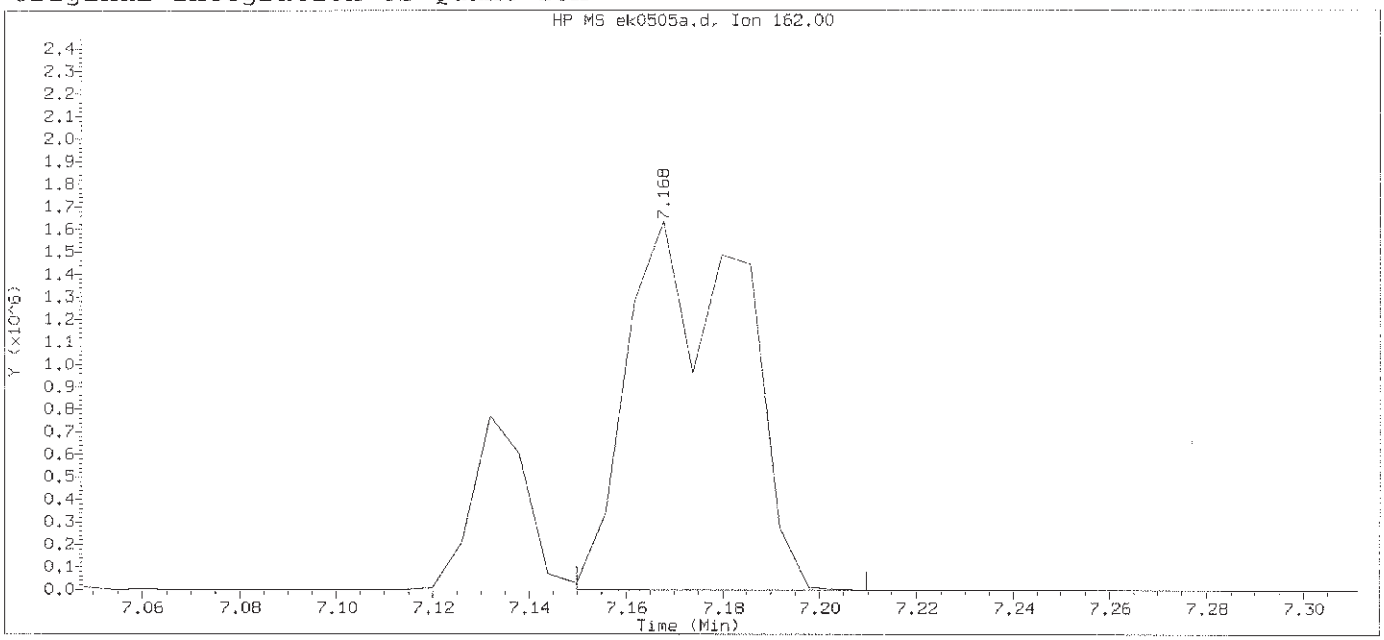
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

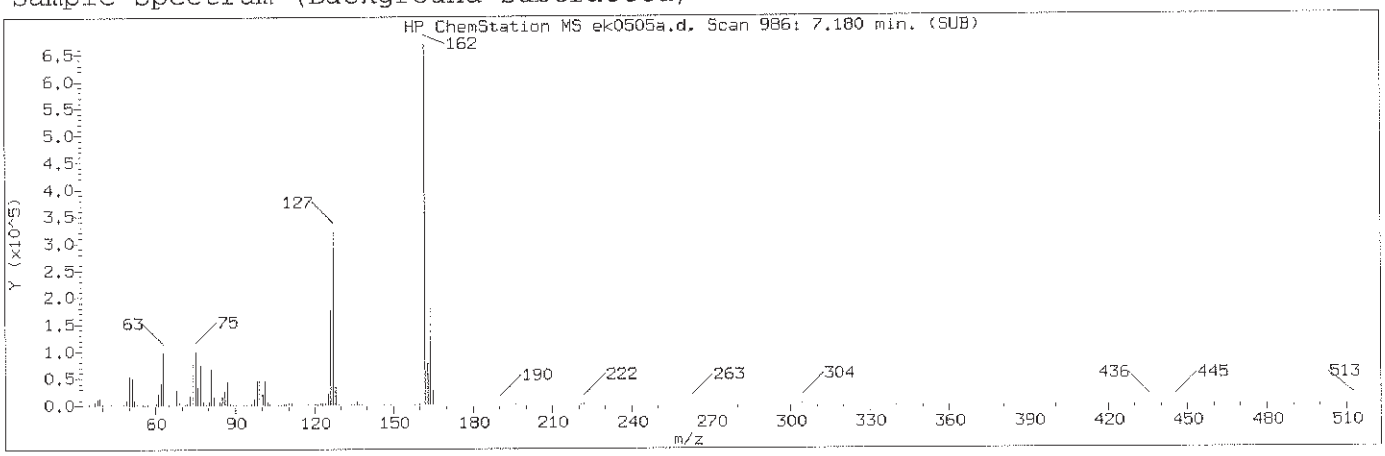
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:07
Date, time and analyst ID of latest file update: 12-Nov-2013 20:07 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

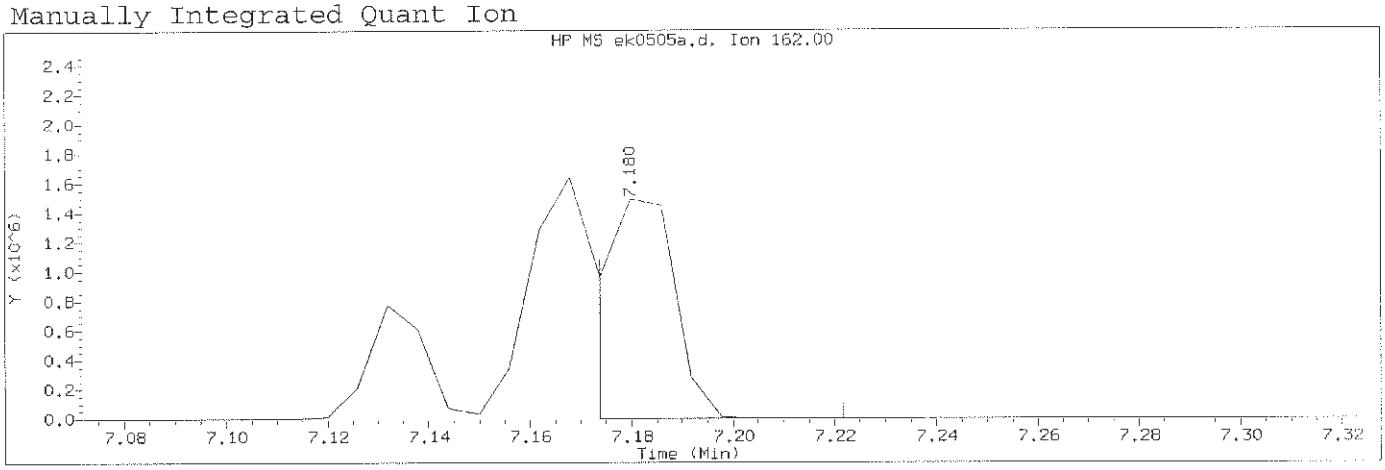
Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area	: 2676870		
On-column Amount (ng/ul)	: 50.0000		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 986		
Retention Time (minutes)	: 7.180		
Quant Ion	: 162.00		
Area (flag)	: 1501857M		
On-Column Amount (ng/ul)	: 56.0955		
Integration start scan	: 984	Integration stop scan:	992
Y at integration start	: 0	Y at integration end:	0

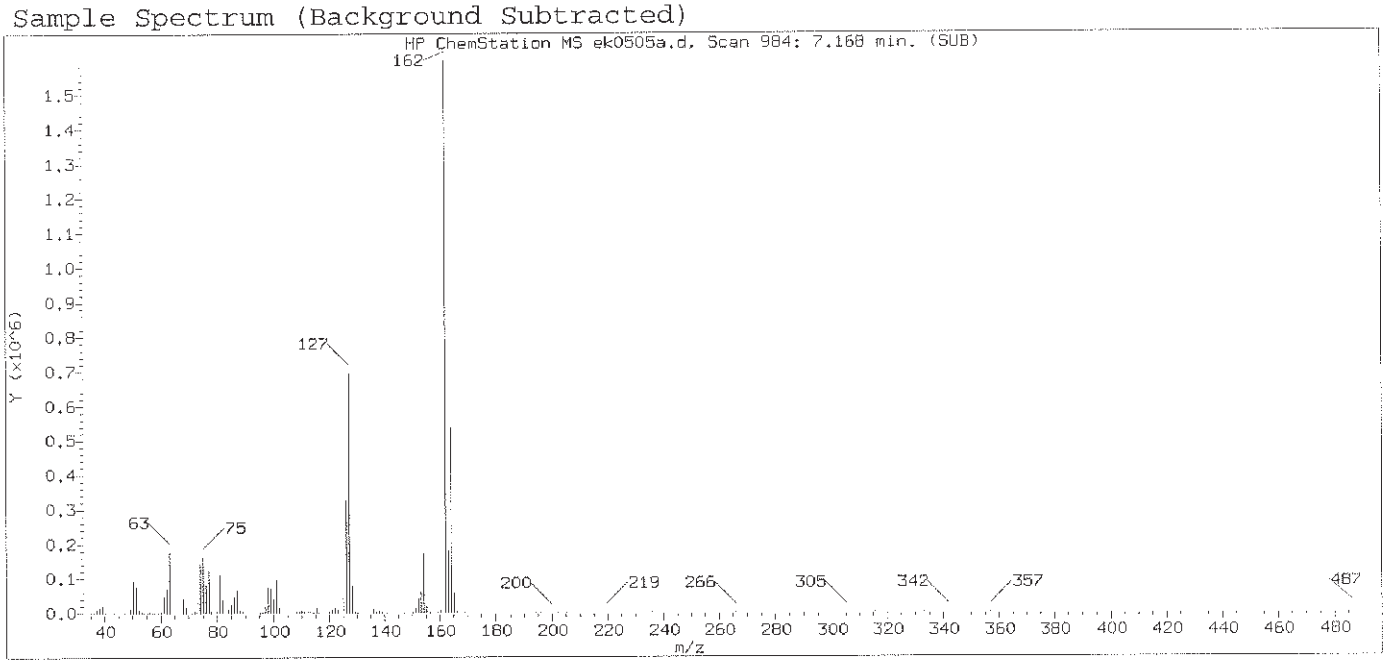
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

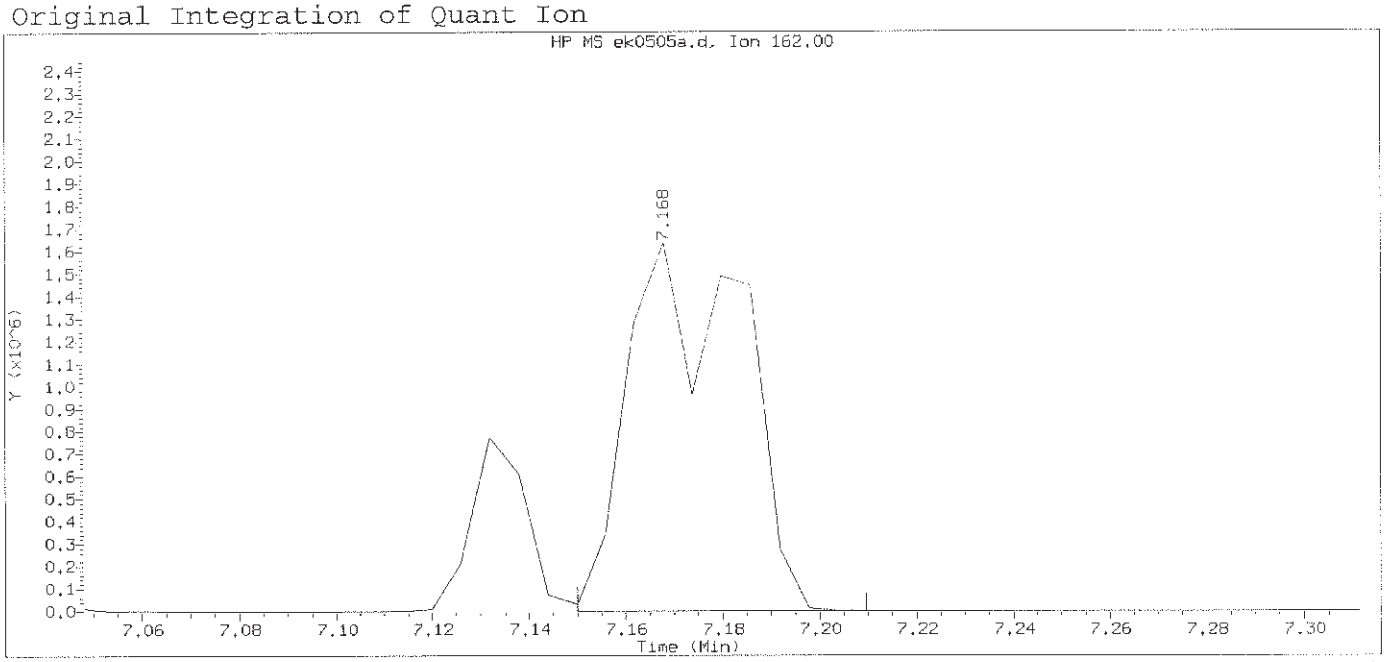
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

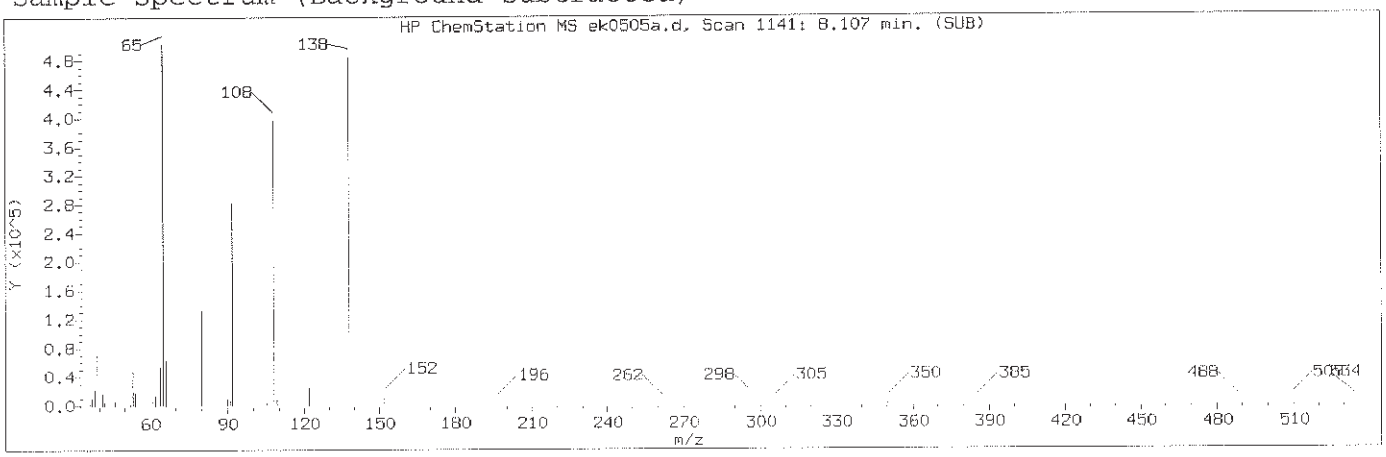
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:07
Date, time and analyst ID of latest file update: 12-Nov-2013 20:07 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

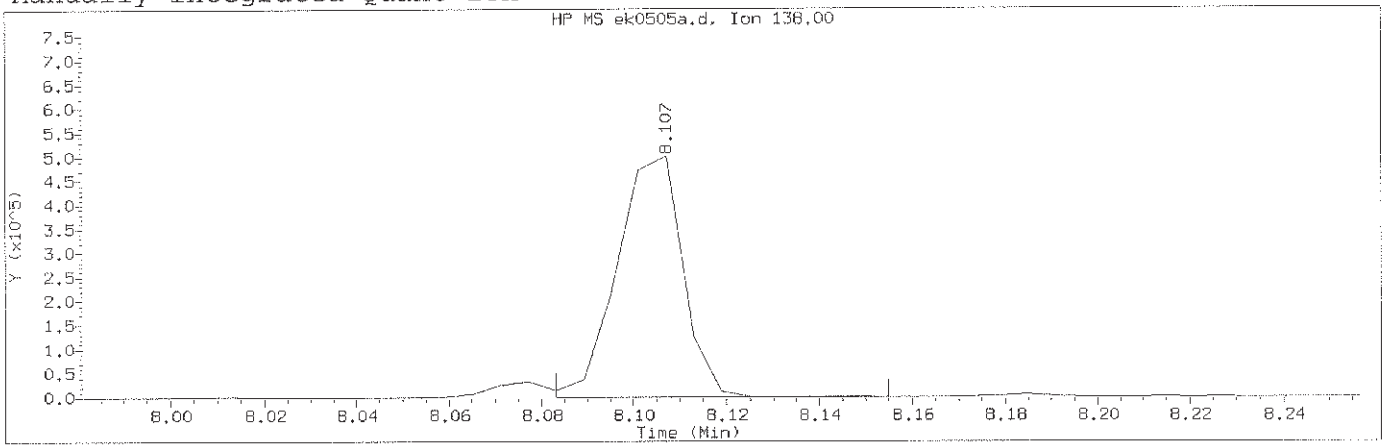
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area	: 2676742		
On-column Amount (ng/ul)	: 50.0000		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 37	Y at integration end:	34

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number : 114
Compound Name : 4-Nitroaniline
Scan Number : 1141
Retention Time (minutes) : 8.107
Quant Ion : 138.00
Area (flag) : 492484A
On-Column Amount (ng/ul) : 52.6756
Integration start scan : 1136 Integration stop scan: 1148
Y at integration start : 0 Y at integration end: 0

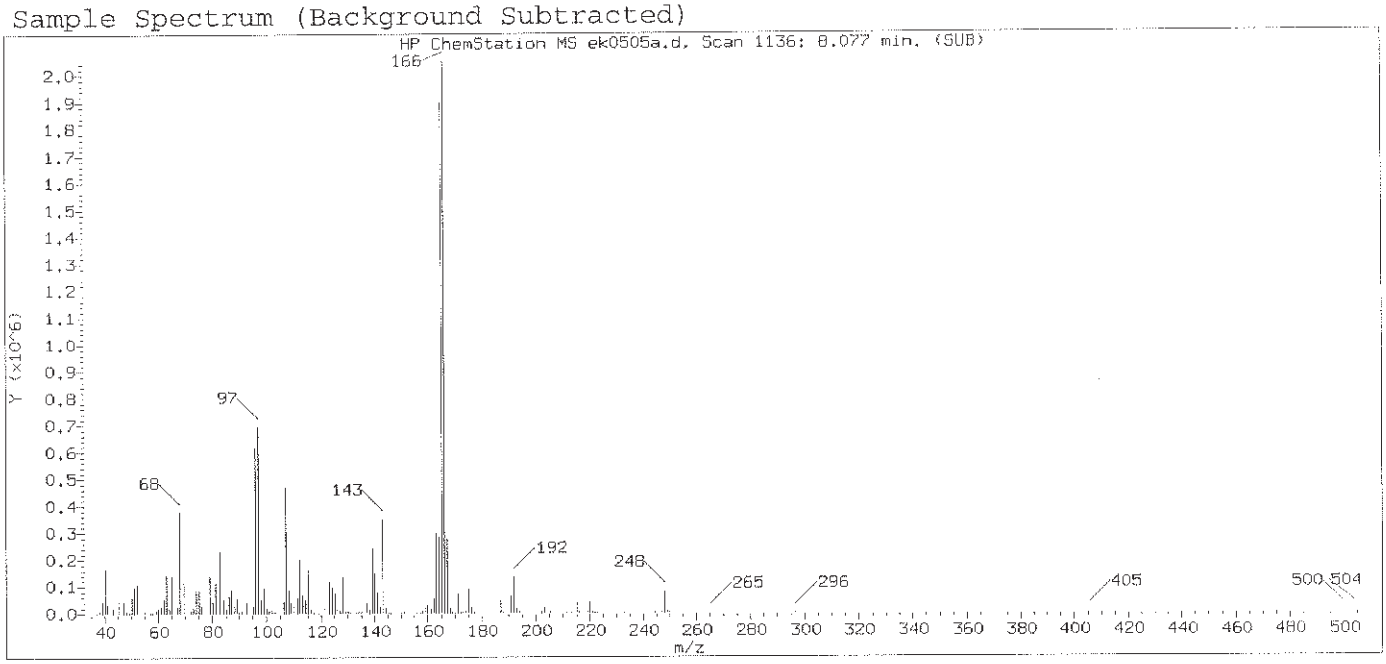
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

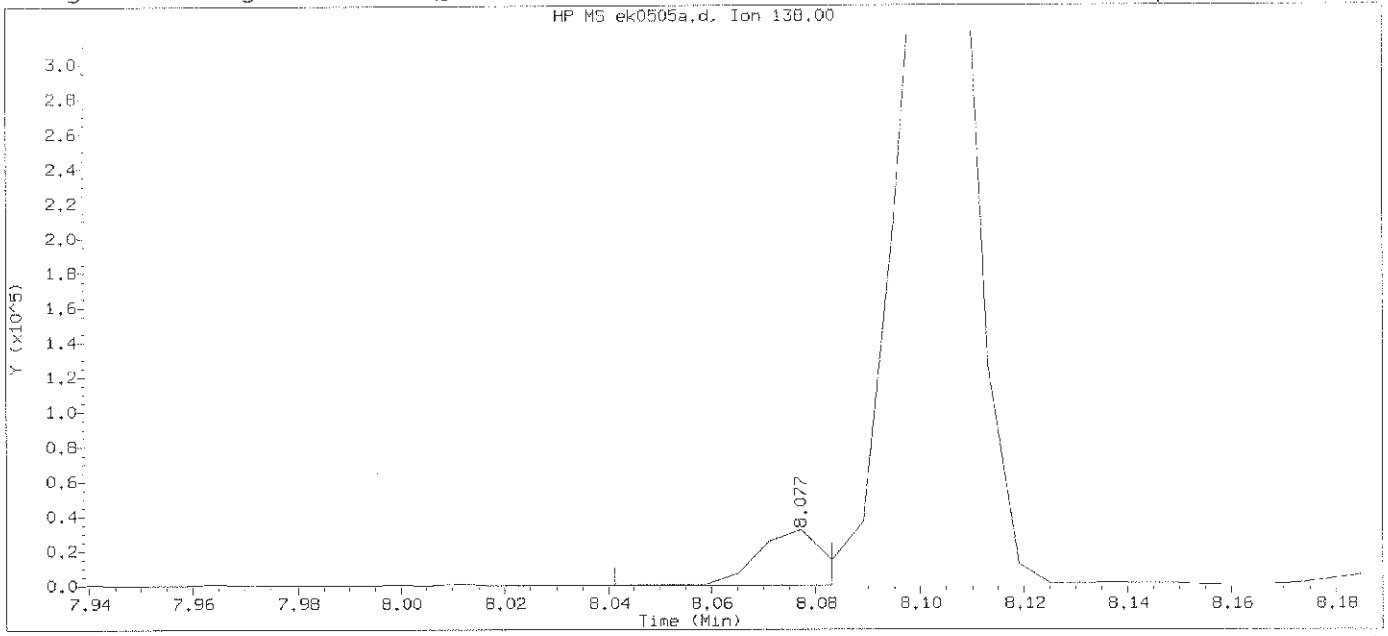
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

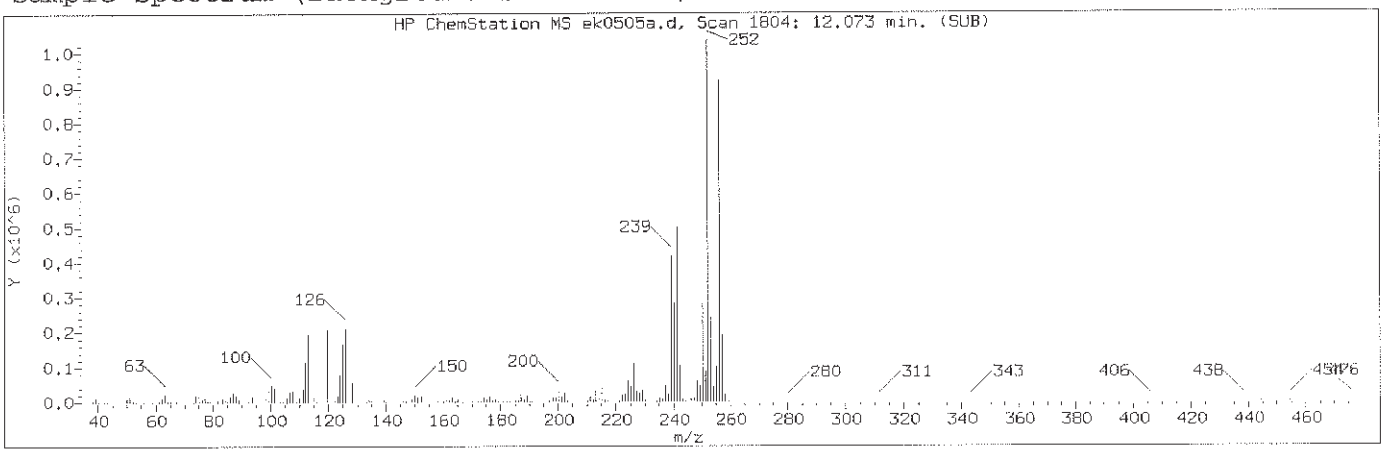
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:07
Date, time and analyst ID of latest file update: 12-Nov-2013 20:07 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

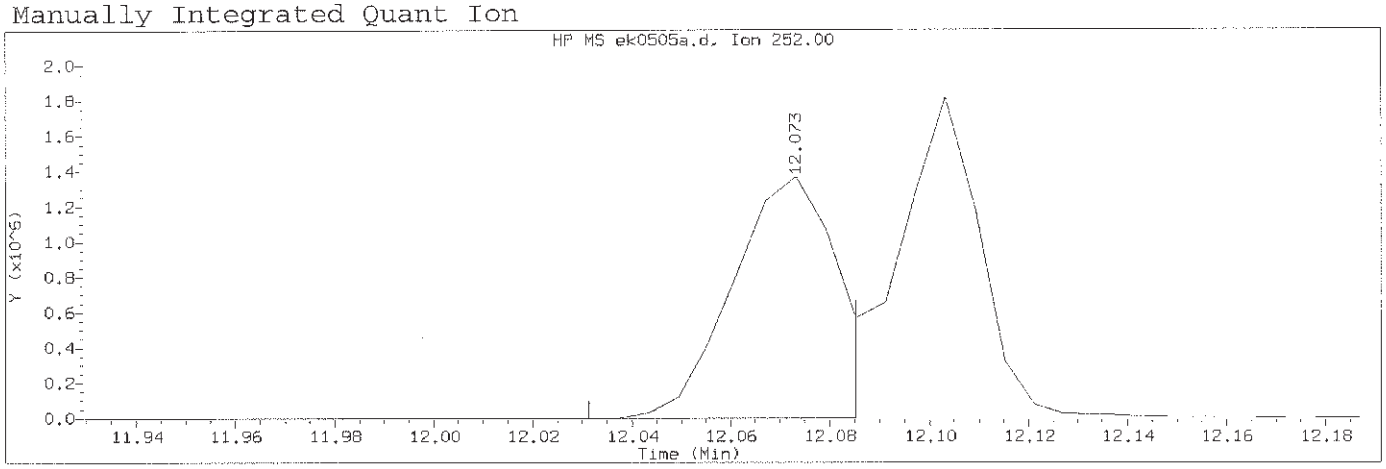
Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1136		
Retention Time (minutes)	: 8.077		
Quant Ion	: 138.00		
Area	: 26089		
On-column Amount (ng/ul)	: 50.0000		
Integration start scan	: 1129	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1804		
Retention Time (minutes)	: 12.073		
Quant Ion	: 252.00		
Area (flag)	: 2015877M		
On-Column Amount (ng/ul)	: 50.5659		
Integration start scan	: 1796	Integration stop scan:	1805
Y at integration start	: 0	Y at integration end:	184

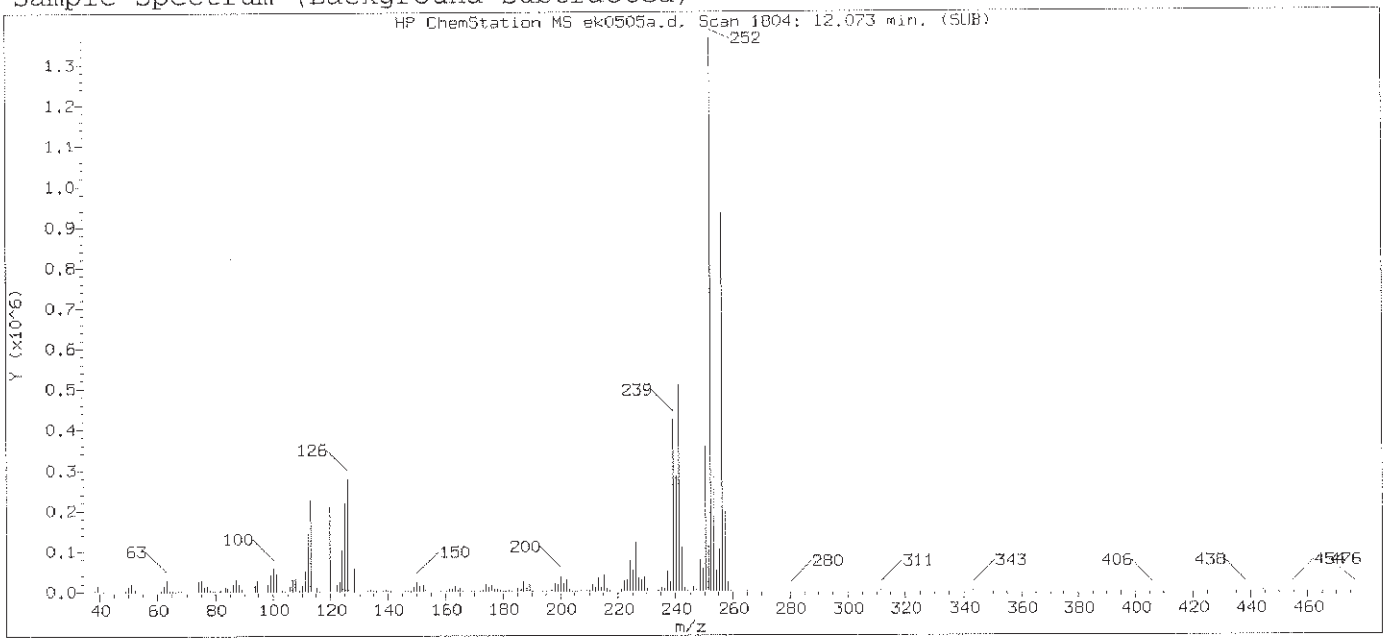
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

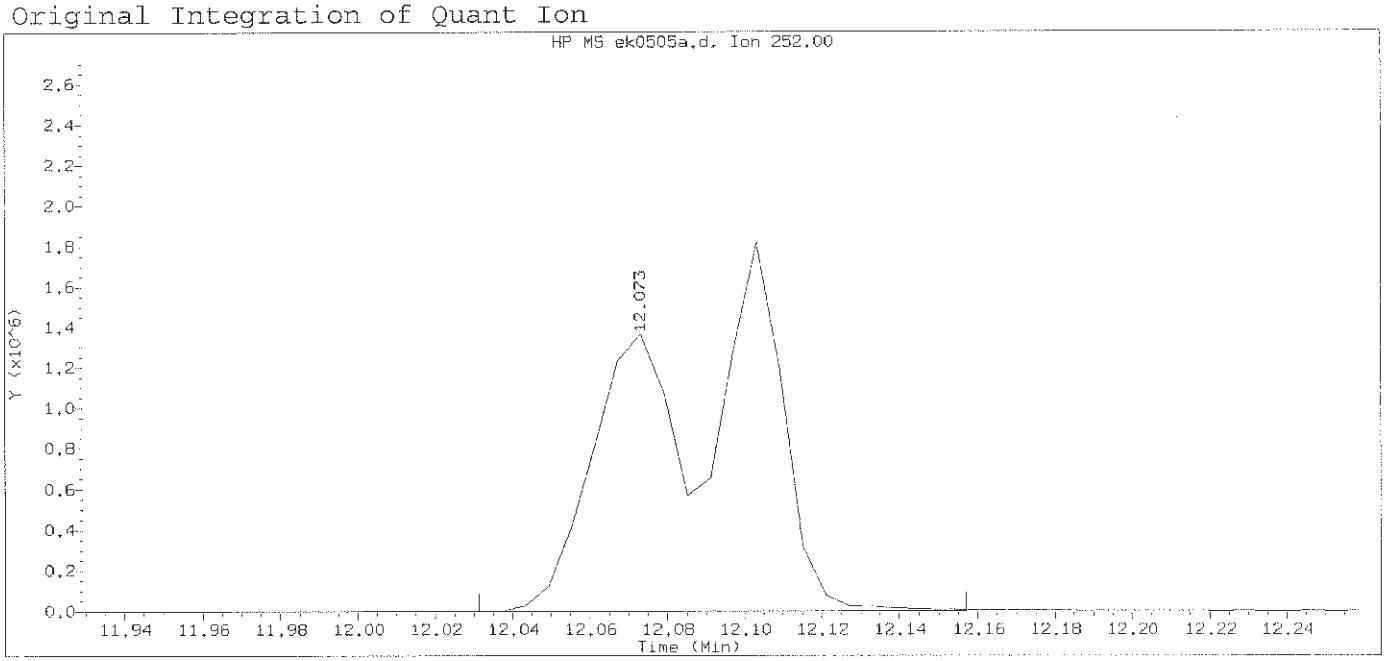
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

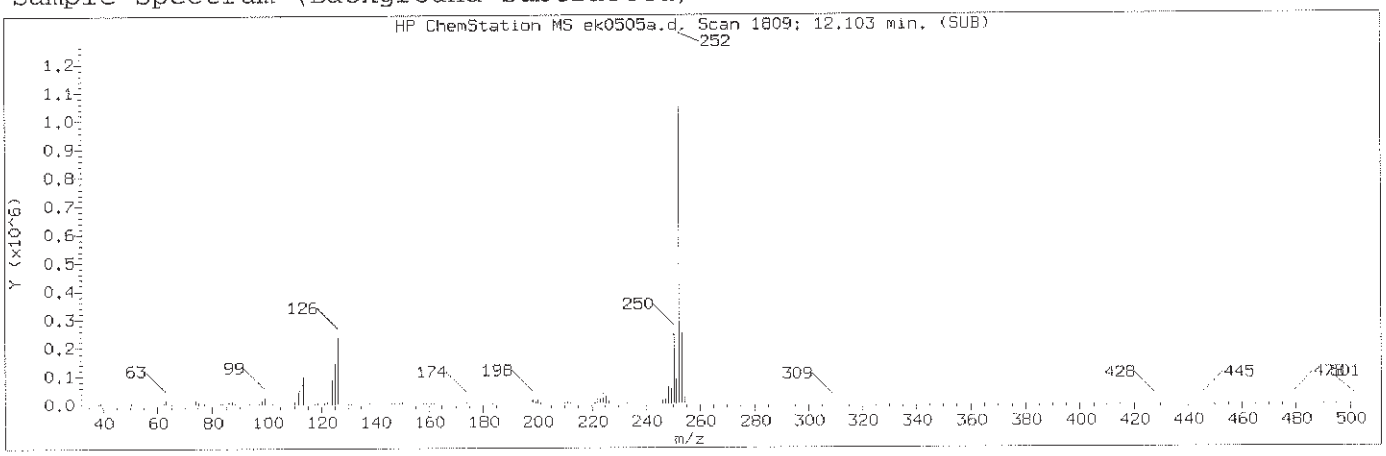
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:07
Date, time and analyst ID of latest file update: 12-Nov-2013 20:07 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

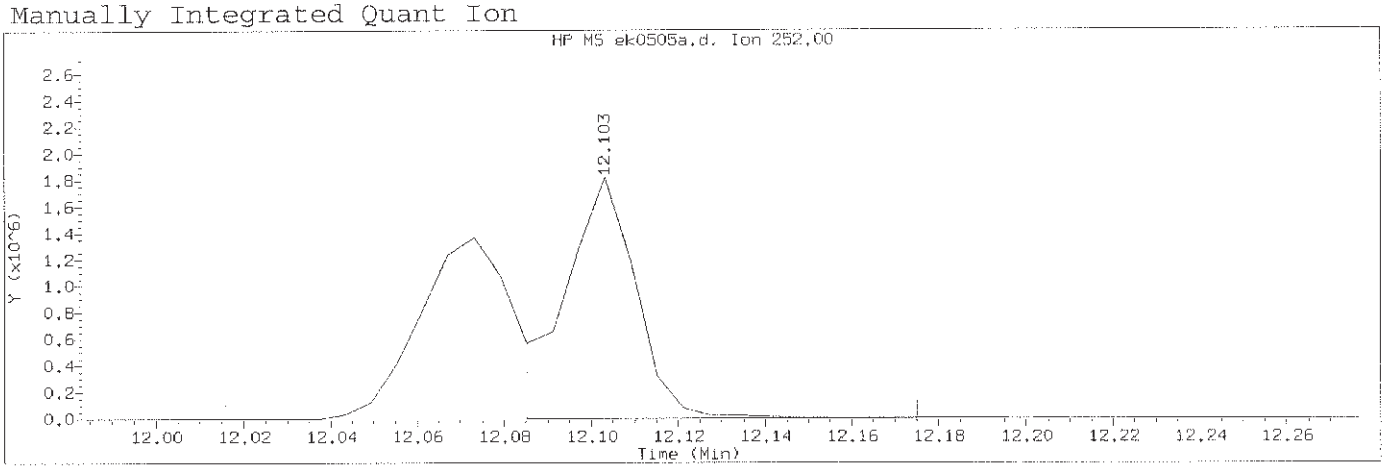
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1804		
Retention Time (minutes)	: 12.073		
Quant Ion	: 252.00		
Area	: 3963612		
On-column Amount (ng/ul)	: 50.0000		
Integration start scan	: 1796	Integration stop scan:	1817
Y at integration start	: 0	Y at integration end:	431

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:14
Date, time and analyst ID of latest file update: 12-Nov-2013 20:14 hb01996

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1809		
Retention Time (minutes)	: 12.103		
Quant Ion	: 252.00		
Area (flag)	: 2159307M		
On-Column Amount (ng/ul)	: 57.0289		
Integration start scan	: 1805	Integration stop scan:	1820
Y at integration start	: 0	Y at integration end:	0

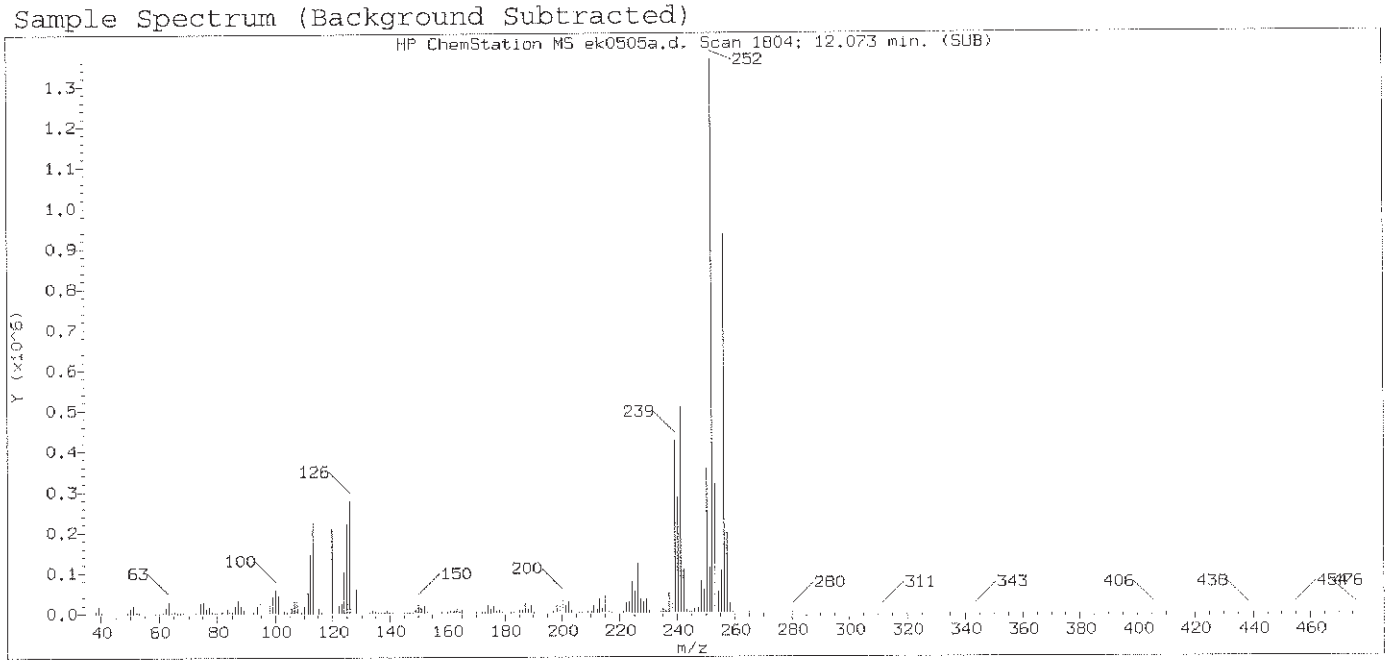
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

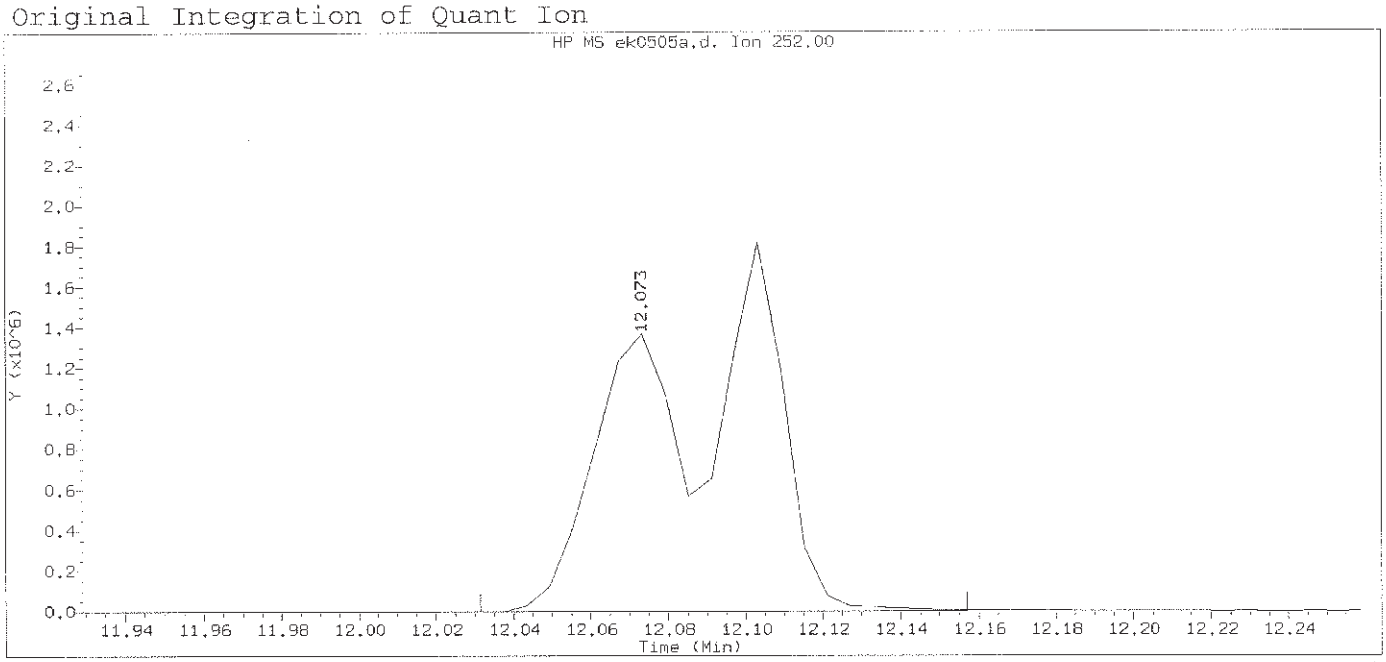
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



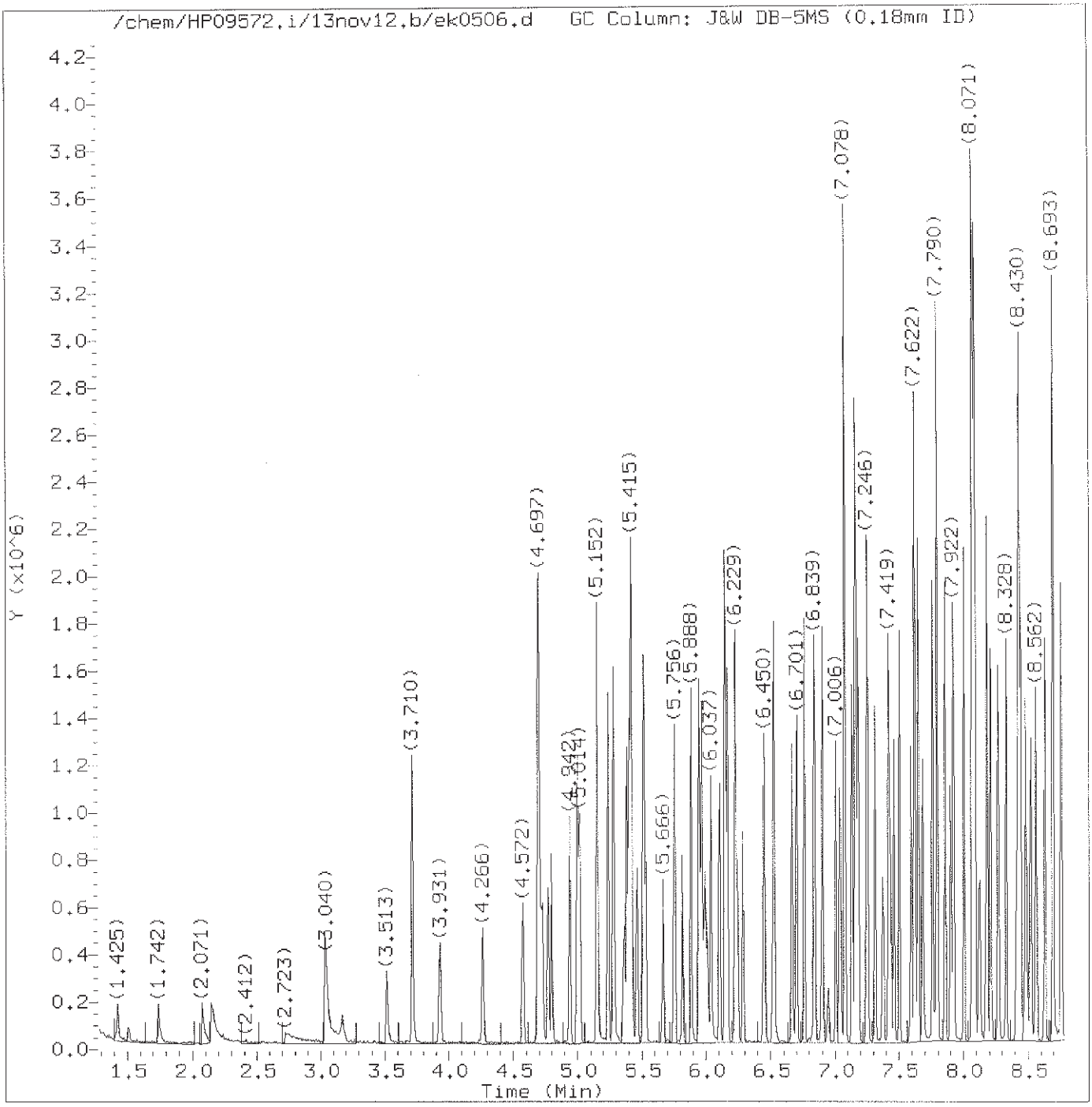
Data File: /chem/HP09572.i/13nov12.b/ek0505a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 19:42 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:07
Date, time and analyst ID of latest file update: 12-Nov-2013 20:07 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1804		
Retention Time (minutes)	: 12.073		
Quant Ion	: 252.00		
Area	: 3963612		
On-column Amount (ng/ul)	: 50.0000		
Integration start scan	: 1796	Integration stop scan:	1817
Y at integration start	: 0	Y at integration end:	431

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

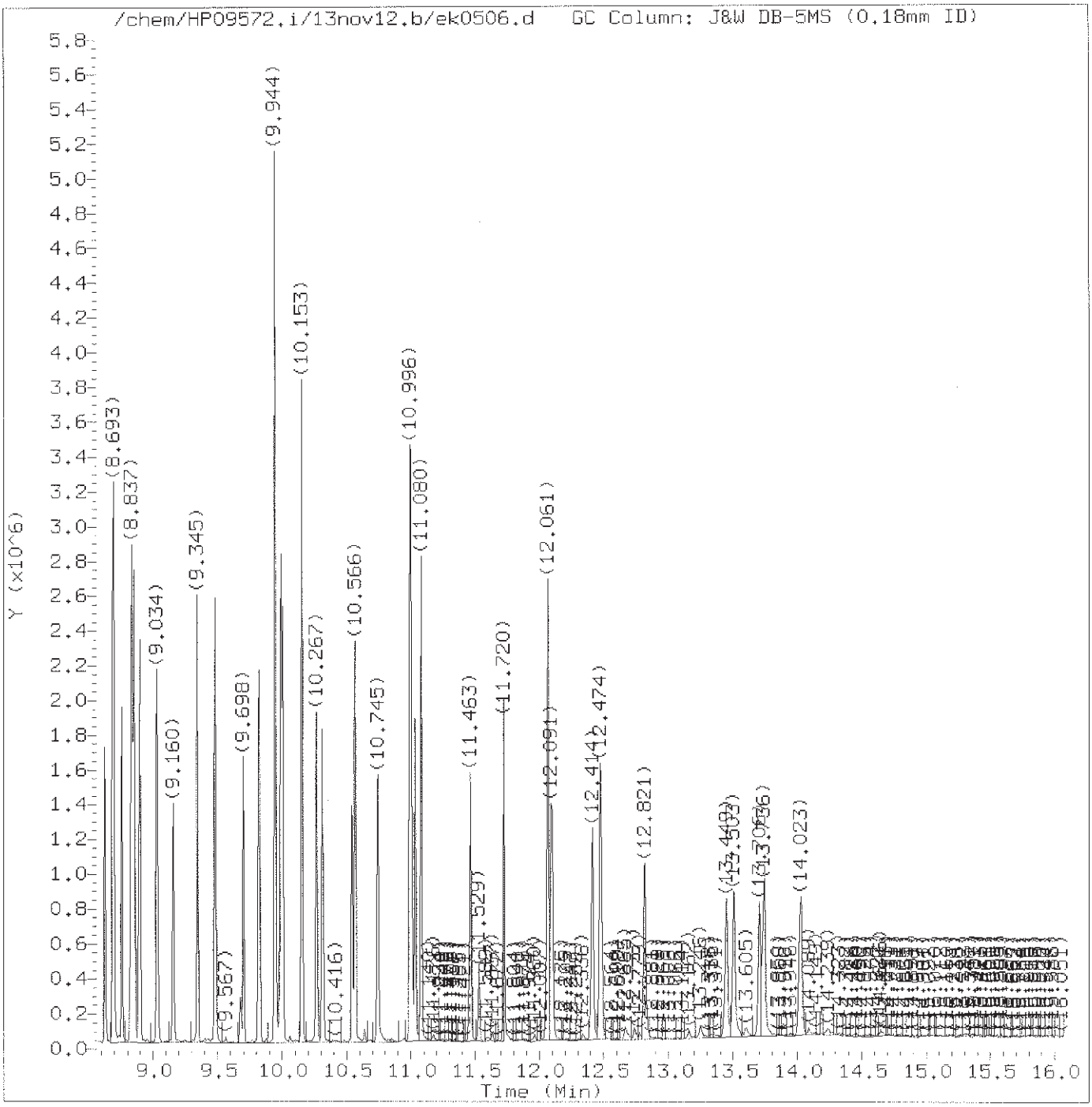
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.742	88	65235	14.664
2) N-Nitrosodimethylamine	(1)	2.071	74	100682	13.257
3) Pyridine	(1)	2.143	79	183109M	15.035
4) 2-Picoline	(1)	3.034	93	219959M	14.736
5) N-Nitrosomethylethylamine	(1)	3.172	88	100647	14.886
6) Methyl methanesulfonate	(1)	3.513	80	118119	14.476
7)$2-Fluorophenol	(1)	3.710	112	347554	29.724
8) N-Nitrosodiethylamine	(1)	3.931	102	100214	14.385
10) Ethyl methanesulfonate	(1)	4.266	109	102561	14.827
20) Aniline	(1)	4.685	93	342700	14.709
18)$Phenol-d6	(1)	4.697	99	527223	29.671
17)$Phenol-d5	(1)	4.697	99	527223	29.671
19) Phenol	(1)	4.709	94	275815	14.803
21) bis(2-Chloroethyl)ether	(1)	4.769	93	216822	14.696
22) 2-Chlorophenol	(1)	4.799	128	173557	14.456
24) 1,3-Dichlorobenzene	(1)	4.942	146	185100	15.590
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	152615	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	182528	15.034
27) Benzyl alcohol	(1)	5.152	108	134337	14.350
28) 1,2-Dichlorobenzene	(1)	5.152	146	171440	14.664
30) Indene	(1)	5.236	115	384133	18.277
29) 2-Methylphenol	(1)	5.277	108	197506	14.862
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	237260	15.074
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	237260	15.074
33) N-Nitrosopyrrolidine	(1)	5.361	100	123192	14.840
34) Acetophenone	(1)	5.385	105	309981	14.897
37) N-Nitrosomorpholine	(1)	5.403	56	155485	14.917
36) N-Nitroso-di-n-propylamine	(1)	5.403	70	175714	14.570
38) o-Toluidine	(1)	5.415	106	337851	14.975
35) 4-Methylphenol	(1)	5.421	108	219481	14.027
39) Hexachloroethane	(1)	5.463	117	74184	14.410
40)$Nitrobenzene-d5	(2)	5.511	82	495218	29.524
41) Nitrobenzene	(2)	5.529	77	256932	14.924
42) N-Nitrosopiperidine	(2)	5.666	114	116560	15.087
52) Isophorone	(2)	5.756	82	464811	15.057
53) 2-Nitrophenol	(2)	5.816	139	107622	14.640
54) 2,4-Dimethylphenol	(2)	5.888	107	237256	14.370
55) O,O,O-triethylphosphorothioate	(2)	5.947	198	92588	14.819
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	291731	14.021
56) Benzoic acid	(2)	5.995	105	406727	30.332

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.037	162	162608	14.948
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	145240	13.793
60)*Naphthalene-d8	(2)	6.145	136	724705	20.000
61) Naphthalene	(2)	6.163	128	539782	14.429
62) 4-Chloroaniline	(2)	6.223	127	242445	14.490
63) 2,6-Dichlorophenol	(2)	6.229	162	149938	14.294
64) Hexachloropropene	(2)	6.247	213	87665	13.458
65) Hexachlorobutadiene	(2)	6.288	225	80854	14.905
67) Quinoline	(2)	6.450	129	398715	14.910
69) Caprolactam	(2)	6.522	113	94063	15.703
68) N-Nitrosodi-n-butylamine	(2)	6.528	84	259441	16.335
70) 4-Chloro-3-methylphenol	(2)	6.659	107	239750	15.177
71) Safrole	(2)	6.701	162	156708	14.686
72) 2-Methylnaphthalene	(2)	6.761	142	407091	15.055
75) 1-Methylnaphthalene	(2)	6.839	142	361307	14.581
76) Hexachlorocyclopentadiene	(3)	6.899	237	66199	12.934
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.899	216	147367	14.278
78) cis-Isosafrole	(3)	6.946	162	27976	1.571
79) 2,4,6-Trichlorophenol	(3)	7.006	196	122495	15.169
80) 2,4,5-Trichlorophenol	(3)	7.036	196	124806	14.549
81)$2-Fluorobiphenyl	(3)	7.078	172	839340	30.767
83) Isosafrole	(3)	7.132	162	169597	15.064
82) trans-Isosafrole	(3)	7.132	162	169597	13.407
86) 1,1'-Biphenyl	(3)	7.156	154	512525	15.413
87) 2-Chloronaphthalene	(3)	7.162	162	447070M	15.721
88) 1-Chloronaphthalene	(3)	7.180	162	380213M	14.759
89) Diphenyl ether	(3)	7.246	170	269970	15.013
90) 2-Nitroaniline	(3)	7.258	138	144219	14.399
91) 1,4-Naphthoquinone	(3)	7.311	158	169875	14.492
92) 1,4-Dinitrobenzene	(3)	7.377	168	76532	14.619
93) Dimethylphthalate	(3)	7.419	163	496032	15.519
94) 1,3-Dinitrobenzene	(3)	7.431	168	89802	14.766
95) 2,6-Dinitrotoluene	(3)	7.461	165	111852	14.549
96) Acenaphthylene	(3)	7.503	152	591452	15.119
97) 3-Nitroaniline	(3)	7.593	138	133722	14.879
99)*Acenaphthene-d10	(3)	7.622	164	478675	20.000
100) Acenaphthene	(3)	7.646	153	402736	14.608
101) 2,4-Dinitrophenol	(3)	7.682	184	110240	26.259
102) 4-Nitrophenol	(3)	7.760	109	106996	14.612
103) Pentachlorobenzene	(3)	7.760	250	141774	15.366

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on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.790	165	165479	15.339
105) Dibenzofuran	(3)	7.790	168	559692	15.126
106) 1-Naphthylamine	(3)	7.856	143	457059	14.824
107) 2,3,4,6-Tetrachlorophenol	(3)	7.898	232	92070	13.900
108) 2-Naphthylamine	(3)	7.922	143	481313	15.320
109) Diethylphthalate	(3)	8.005	149	515860	15.405
110) Thionazin	(3)	8.065	107	112318	15.087
111) Fluorene	(3)	8.071	166	485978	14.836
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	225257	15.632
114) 4-Nitroaniline	(3)	8.089	138	141557	15.533
113) 5-Nitro-o-toluidine	(3)	8.089	152	150253	14.984
115) 4,6-Dinitro-2-methylphenol	(4)	8.125	198	75351	12.915
118) NDPA as diphenylamine	(4)	8.179	169	419055	14.605
117) N-Nitrosodiphenylamine	(4)	8.179	169	419055	14.605
119) 1,2-Diphenylhydrazine	(4)	8.209	77	614156	15.137
120)$2,4,6-Tribromophenol	(3)	8.269	330	102920	29.249
122) Tetraethyldithiopyrophosphate	(4)	8.328	97	104976	14.965
129) 1,3,5-Trinitrobenzene	(4)	8.412	213	52324	13.541
130) Diallate (peak 1)	(4)	8.424	86	264097	11.426
131) Phorate	(4)	8.430	75	405980	11.523
132) Phenacetin	(4)	8.442	108	323136	14.967
133) 4-Bromophenyl-phenylether	(4)	8.484	248	113656	14.806
134) Diallate (peak 2)	(4)	8.496	86	41168	3.944
137) Hexachlorobenzene	(4)	8.520	284	109228	14.476
139) Dimethoate	(4)	8.562	87	275177	16.254
141) Atrazine	(4)	8.627	200	143324	15.589
142) Pentachlorophenol	(4)	8.687	266	70985	13.845
143) 4-Aminobiphenyl	(4)	8.693	169	537520	17.377
144) Pentachloronitrobenzene	(4)	8.699	237	58860	14.488
146) Pronamide	(4)	8.759	173	225755	14.631
148)*Phenanthrene-d10	(4)	8.837	188	828953	20.000
147) Dinoseb	(4)	8.849	211	104342	12.945
149) Phenanthrene	(4)	8.855	178	703714	15.075
150) Anthracene	(4)	8.897	178	730291	15.610
151) Carbazole	(4)	9.034	167	700472	15.445
152) Methyl parathion	(4)	9.160	109	198753	15.232
154) Di-n-butylphthalate	(4)	9.345	149	878395	15.398
155) Parathion	(4)	9.483	109	138515	15.127
156) 4-Nitroquinoline-1-oxide	(4)	9.489	190	55082	12.107
159) Isodrin	(4)	9.698	193	82669	15.211

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Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.824	202	749275	15.732
164) Benzidine	(5)	9.944	184	1511720	45.653
165)*Pyrene-d10	(5)	9.991	212	931303	20.000
166) Pyrene	(5)	10.003	202	741860	14.747
169)$Terphenyl-d14	(5)	10.153	244	1045385	31.791
170) p-Dimethylaminoazobenzene	(5)	10.267	225	149051	13.941
171) Chlorobenzilate	(5)	10.308	139	296781	14.835
173) 3,3'-Dimethylbenzidine	(5)	10.542	212	404007	14.436
174) Butylbenzylphthalate	(5)	10.566	149	401788	15.025
175) 2-Acetylaminofluorene	(5)	10.745	181	345230	14.914
176) 3,3'-Dichlorobenzidine	(5)	10.990	252	225908	14.379
178) Benzo(a)anthracene	(5)	11.002	228	692216	15.692
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.002	231	127620	15.021
180) Chrysene	(5)	11.032	228	627953	15.025
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	538304	15.045
183) 6-Methylchrysene	(5)	11.463	242	466684	15.190
184) Di-n-octylphthalate	(6)	11.720	149	891617	14.150
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.061	256	299311	14.082
186) Benzo(b)fluoranthene	(6)	12.067	252	632081M	14.517
187) Benzo(k)fluoranthene	(6)	12.097	252	626537M	15.045
189) Benzo(a)pyrene	(6)	12.414	252	548455	14.570
190)*Perylene-d12	(6)	12.480	264	682209	20.000
191) 3-Methylcholanthrene	(6)	12.821	268	295280	14.422
192) Dibenz(a,h)acridine	(6)	13.449	279	407029	14.574
193) Dibenz(a,j)acridine	(6)	13.509	279	435565	14.698
194) Indeno(1,2,3-cd)pyrene	(6)	13.706	276	568452	14.980
195) Dibenz(a,h)anthracene	(6)	13.742	278	475757	14.443
196) Benzo(g,h,i)perylene	(6)	14.023	276	467059	14.755
204) Diallate TRANS/CIS	(4)			305265	15.306

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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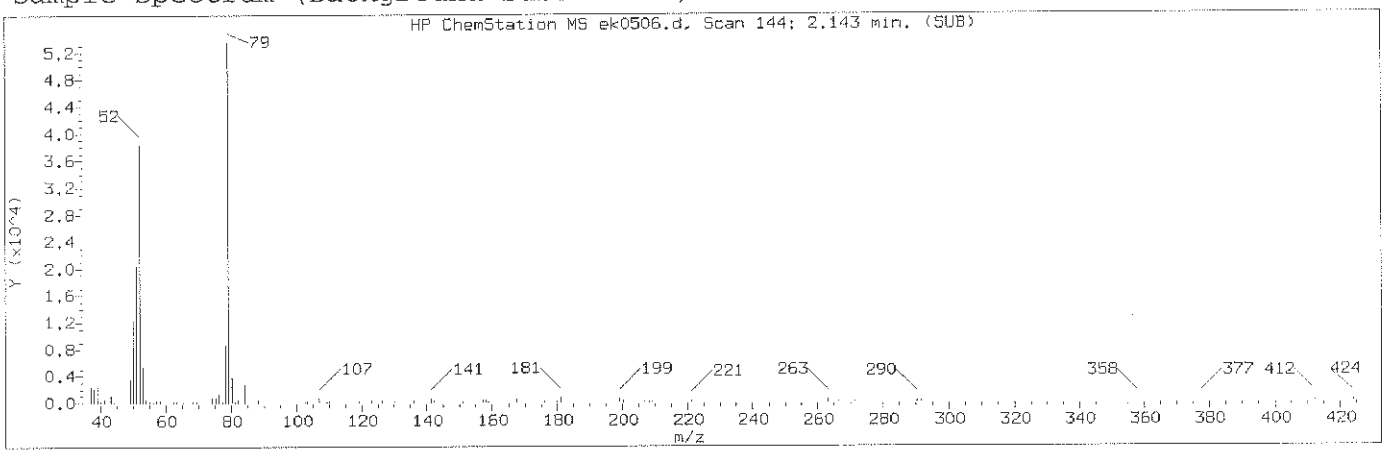
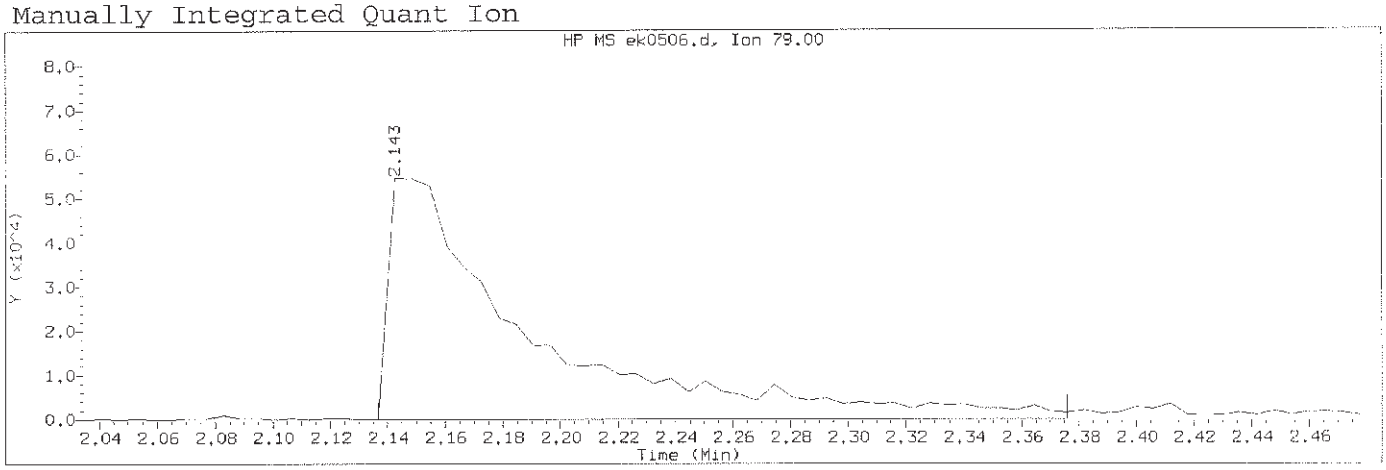
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 144		
Retention Time (minutes)	: 2.143		
Quant Ion	: 79.00		
Area (flag)	: 183109M		
On-Column Amount (ng/ul)	: 15.0354		
Integration start scan	: 142	Integration stop scan:	182
Y at integration start	: 0	Y at integration end:	0

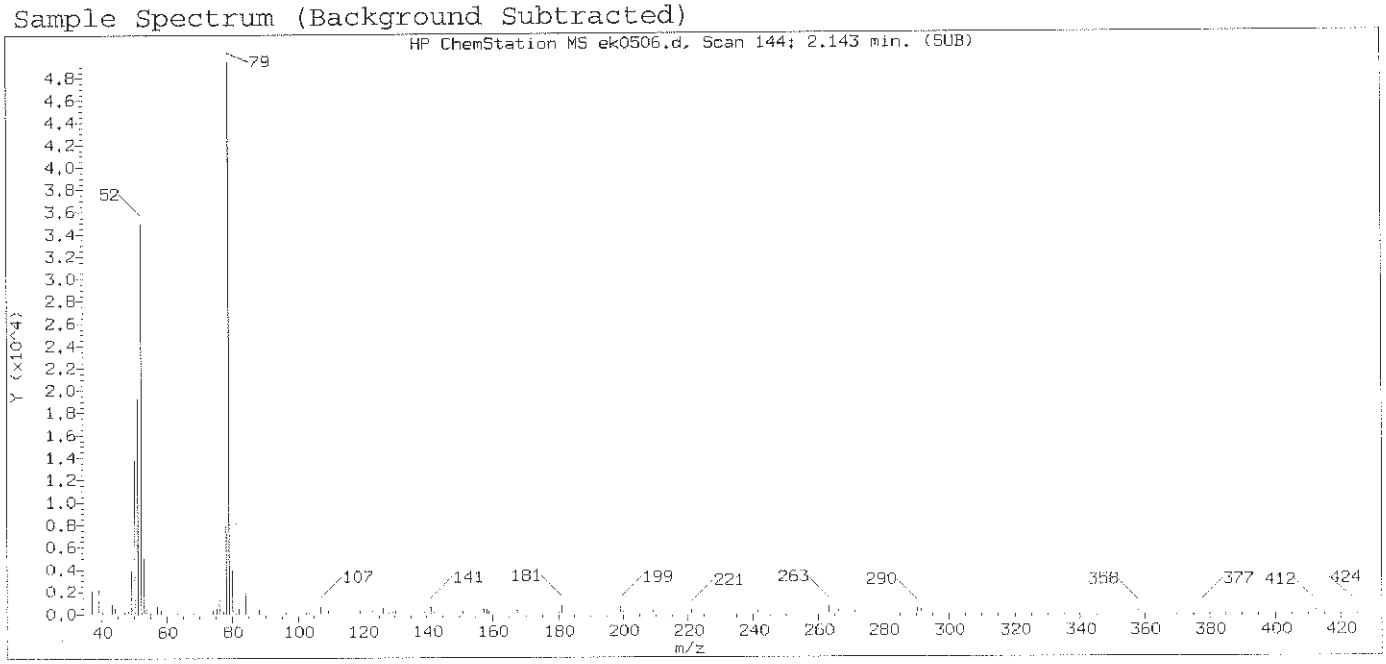
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

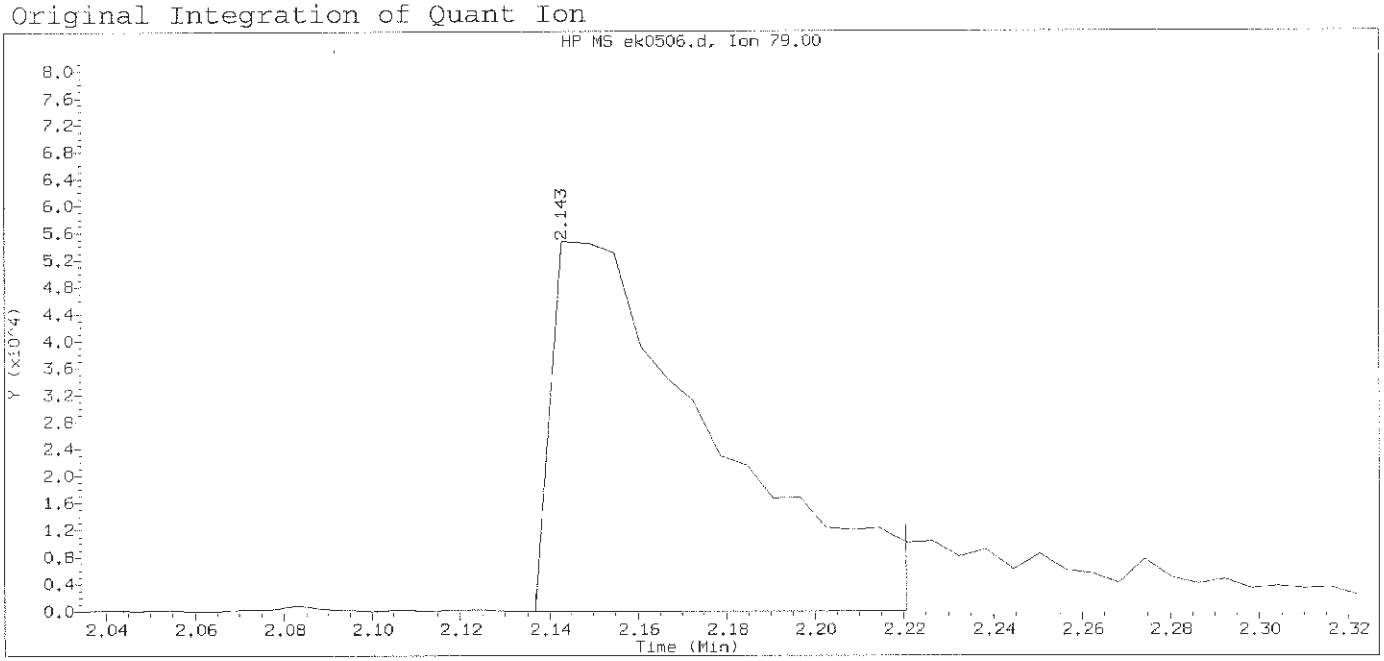
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

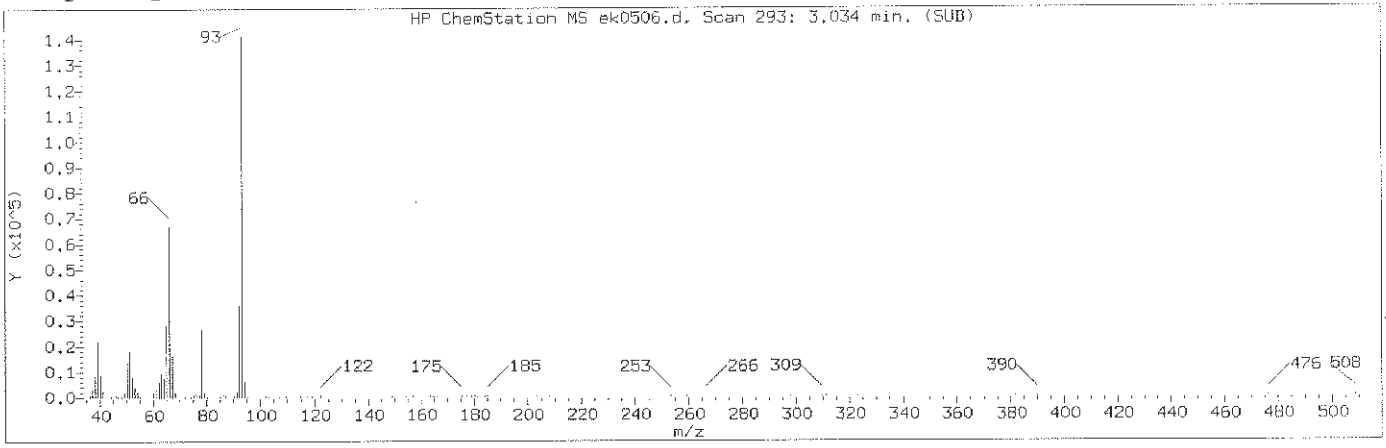
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

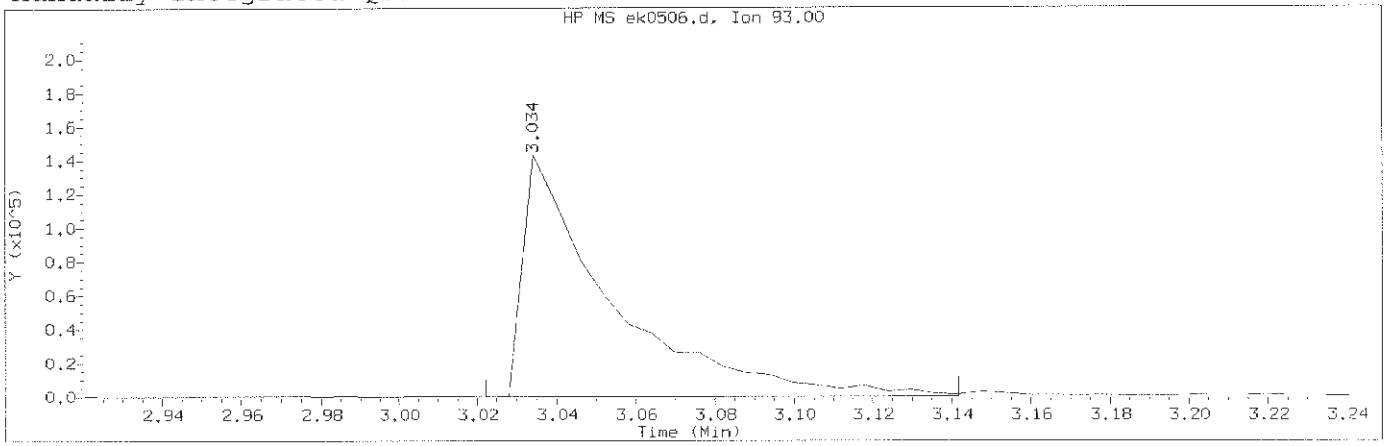
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 144		
Retention Time (minutes)	: 2.143		
Quant Ion	: 79.00		
Area	: 138574		
On-column Amount (ng/ul)	: 12.3429		
Integration start scan	: 142	Integration stop scan:	156
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

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Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 293		
Retention Time (minutes)	: 3.034		
Quant Ion	: 93.00		
Area (flag)	: 219959M		
On-Column Amount (ng/ul)	: 14.7361		
Integration start scan	: 290	Integration stop scan:	310
Y at integration start	: 0	Y at integration end:	0

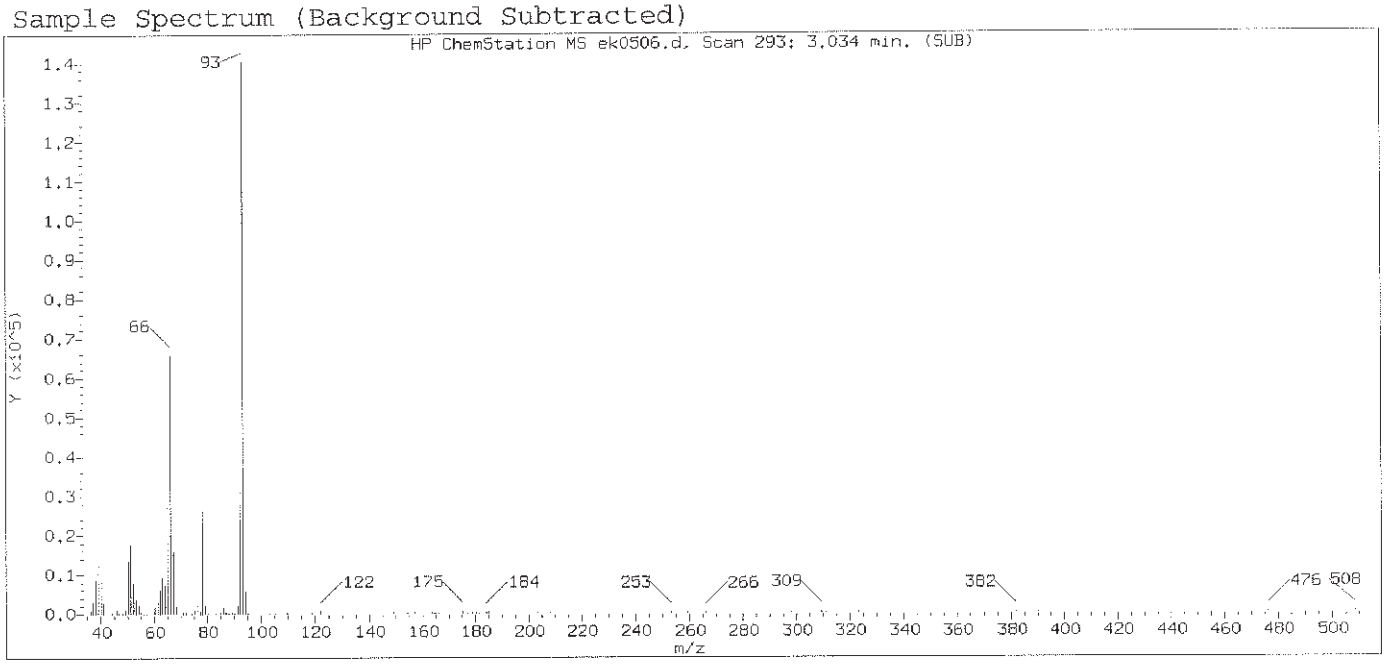
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

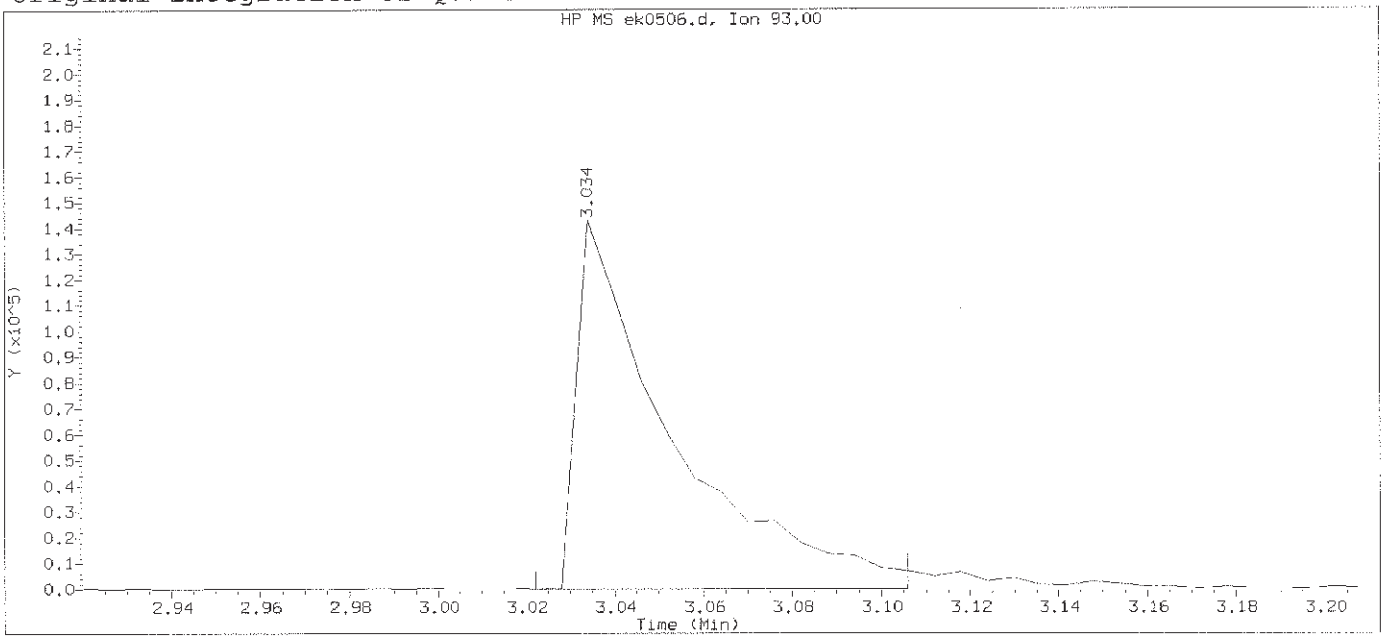
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 293		
Retention Time (minutes)	: 3.034		
Quant Ion	: 93.00		
Area	: 210664		
On-column Amount (ng/ul)	: 16.5016		
Integration start scan	: 290	Integration stop scan:	304
Y at integration start	: 0	Y at integration end:	77

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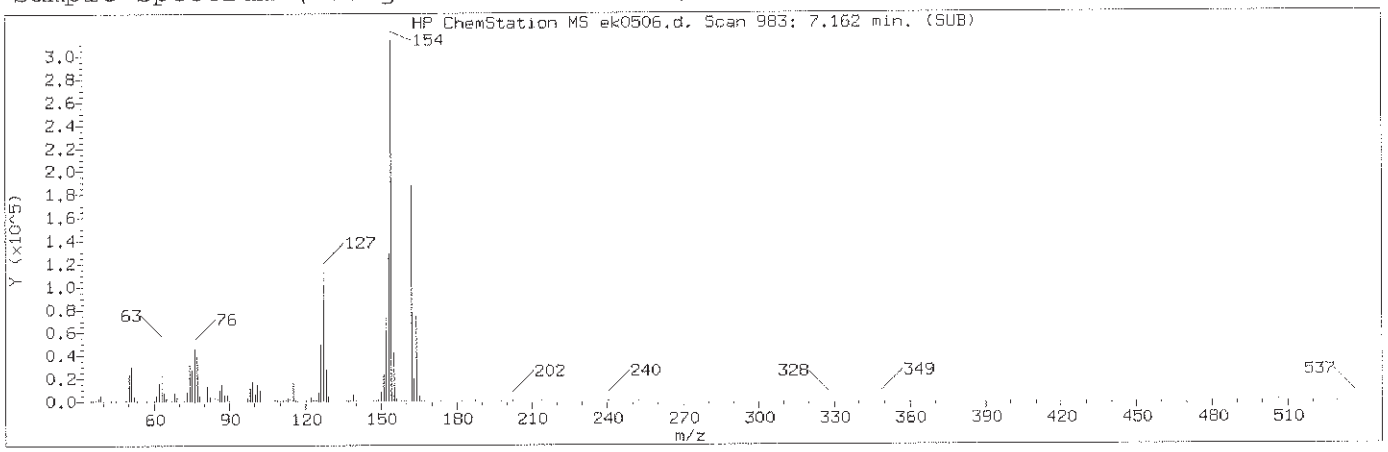
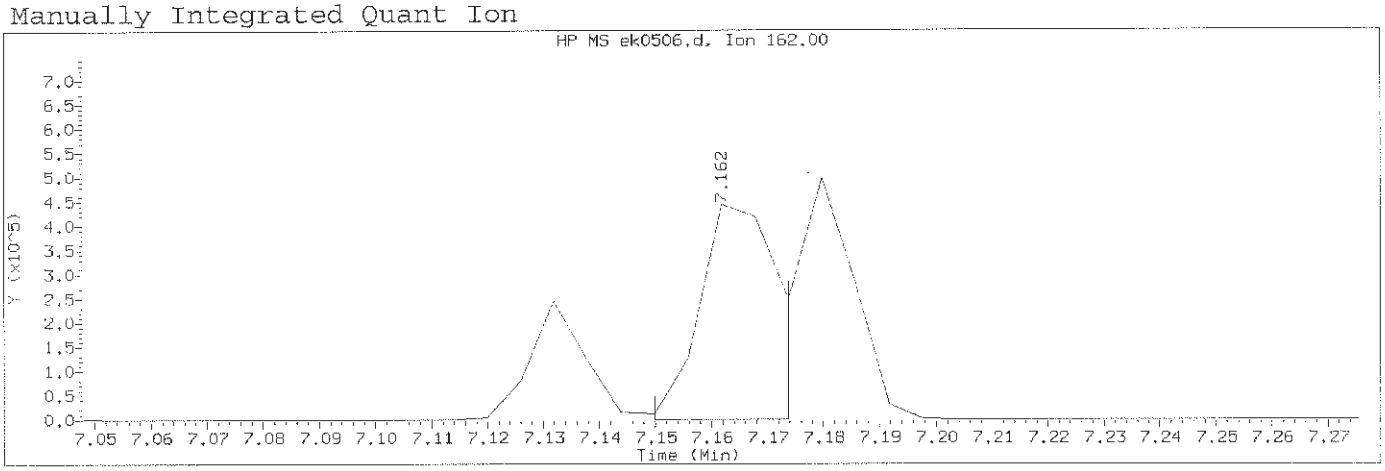
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area (flag)	: 447070M		
On-Column Amount (ng/ul)	: 15.7207		
Integration start scan	: 980	Integration stop scan:	984
Y at integration start	: 0	Y at integration end:	0

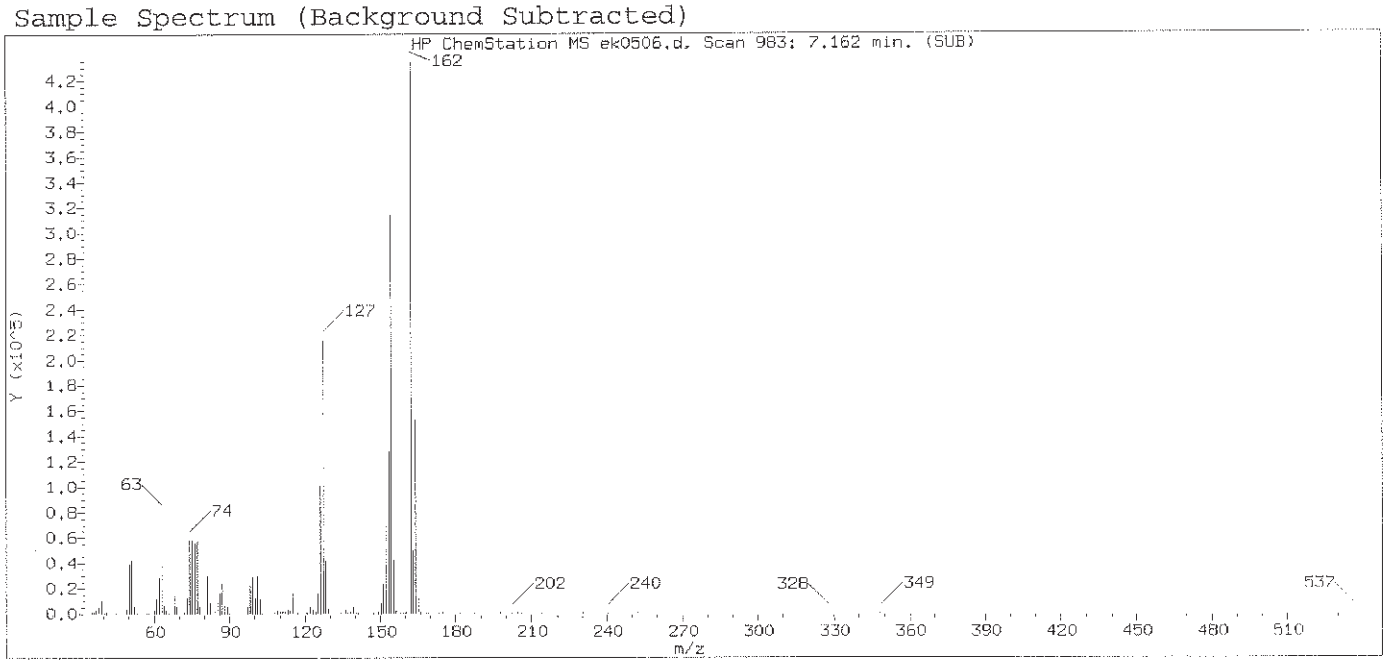
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

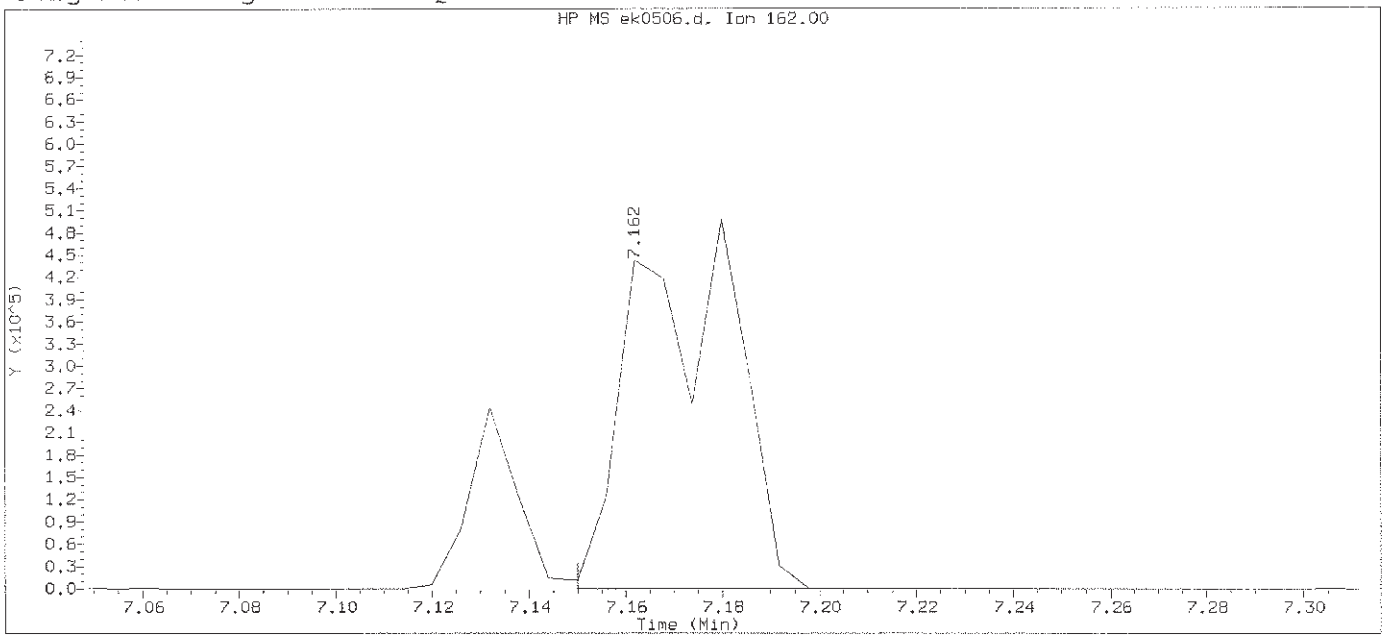
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
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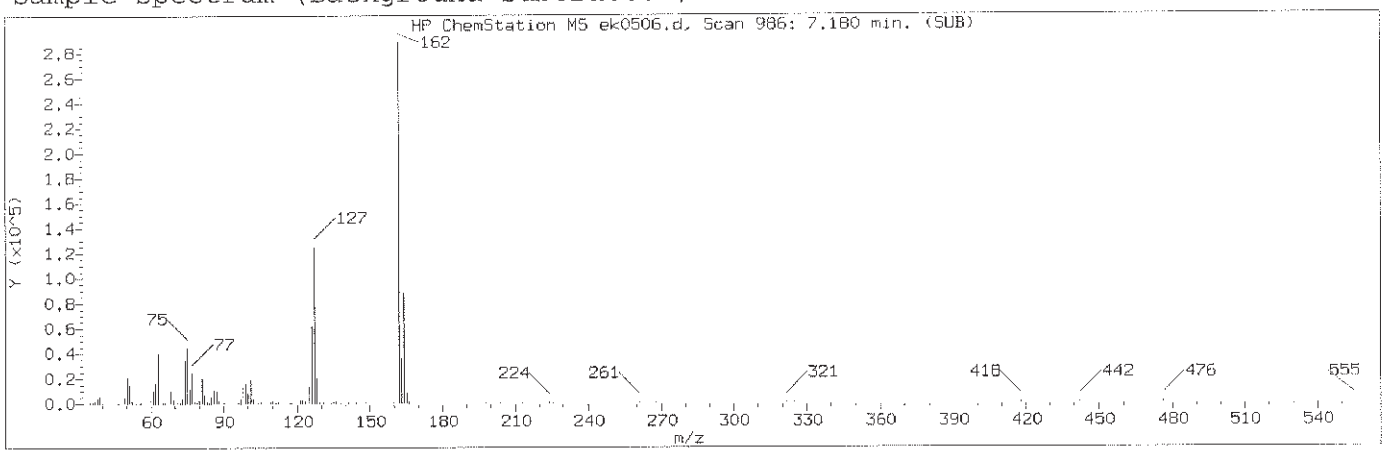
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

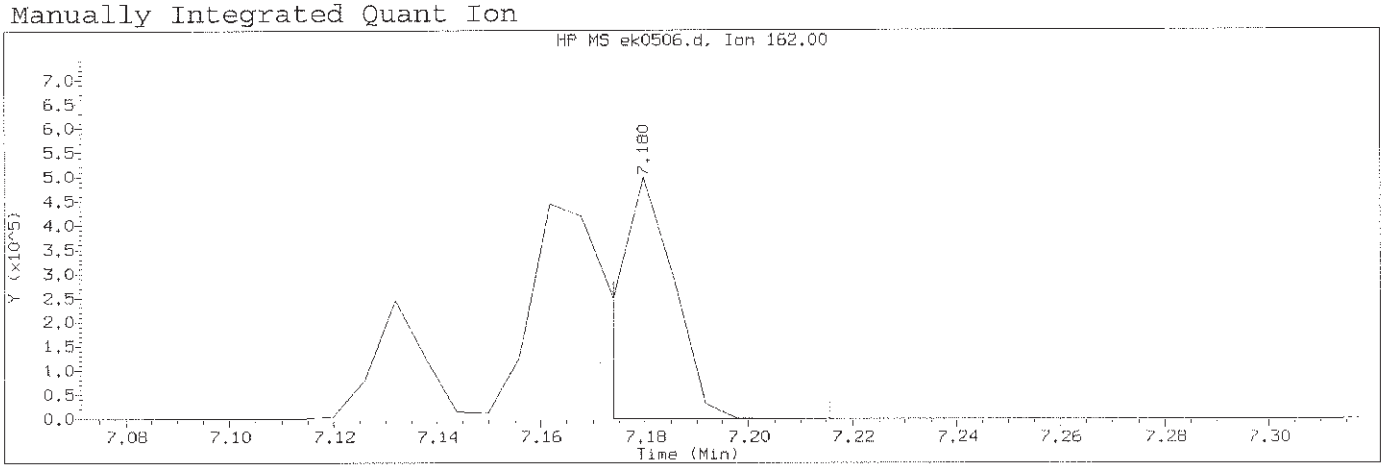
Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area	: 735988		
On-column Amount (ng/ul)	: 18.8790		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 986		
Retention Time (minutes)	: 7.180		
Quant Ion	: 162.00		
Area (flag)	: 380213M		
On-Column Amount (ng/ul)	: 14.7585		
Integration start scan	: 984	Integration stop scan:	991
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

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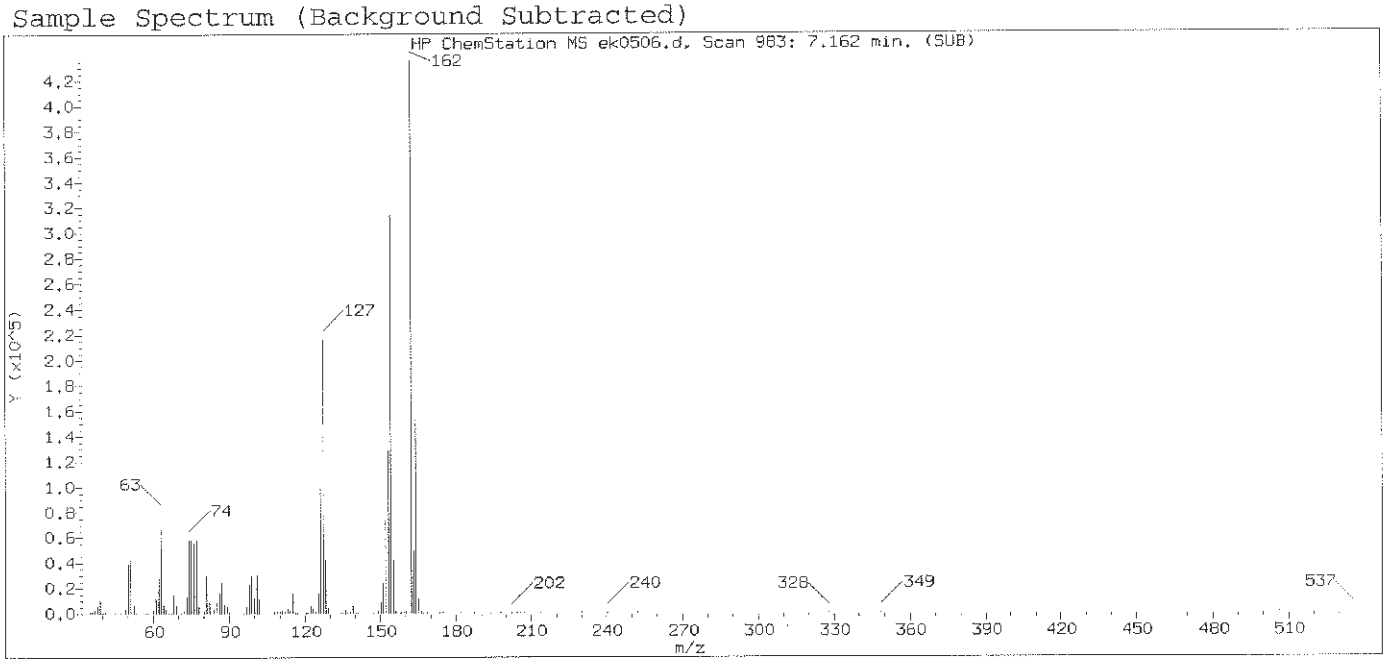
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

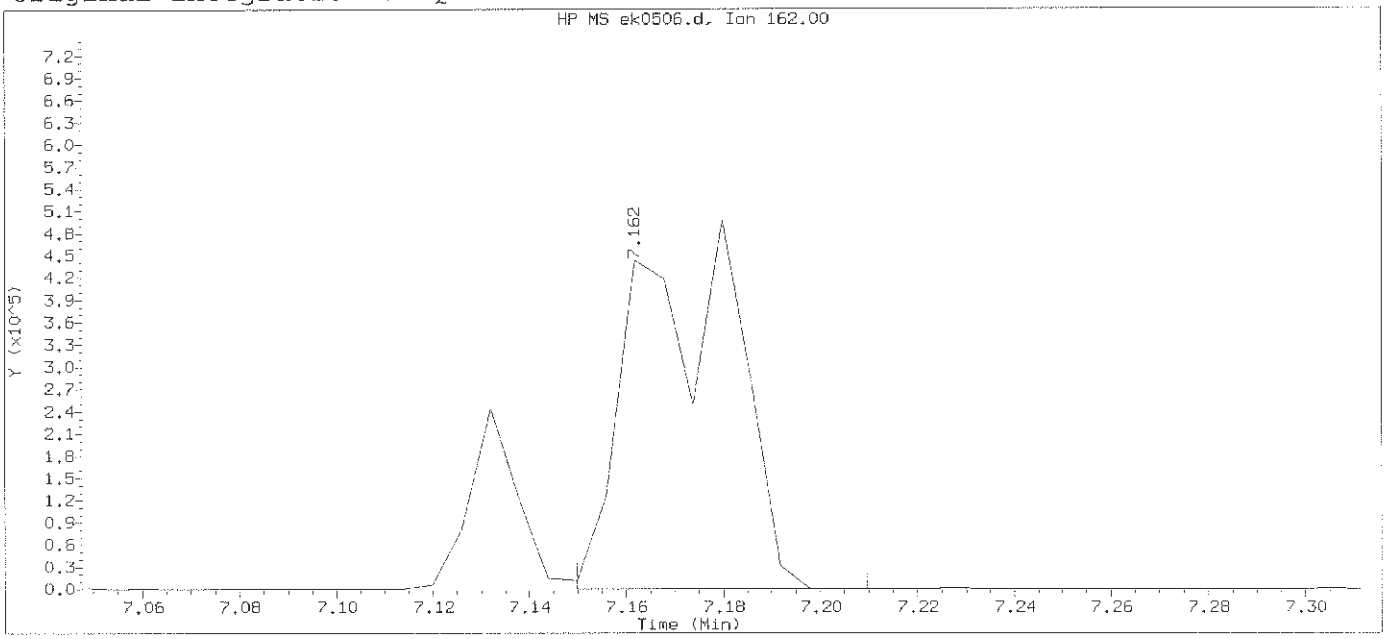
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

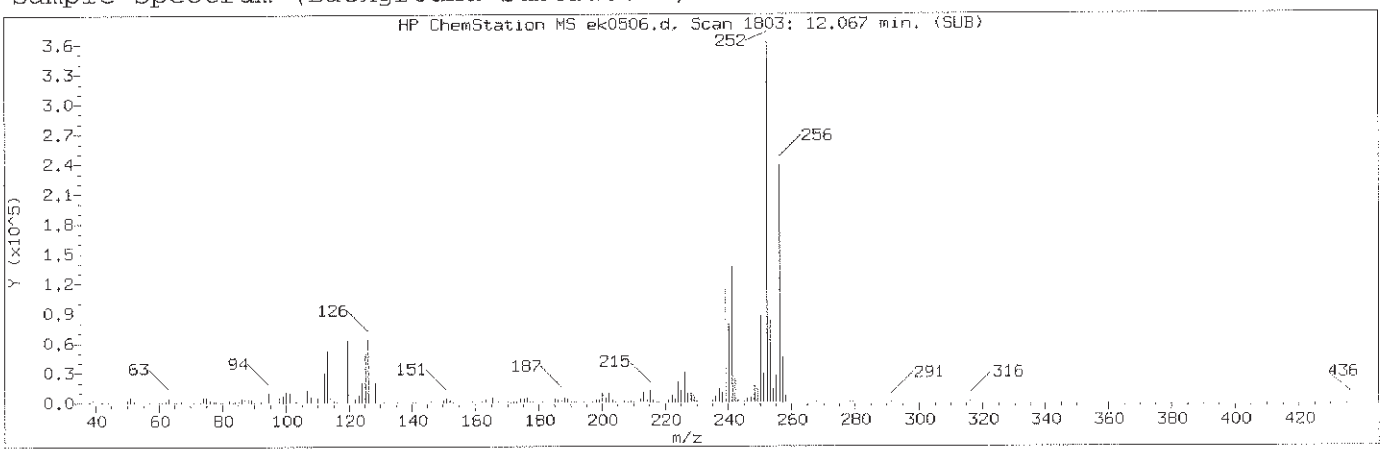
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

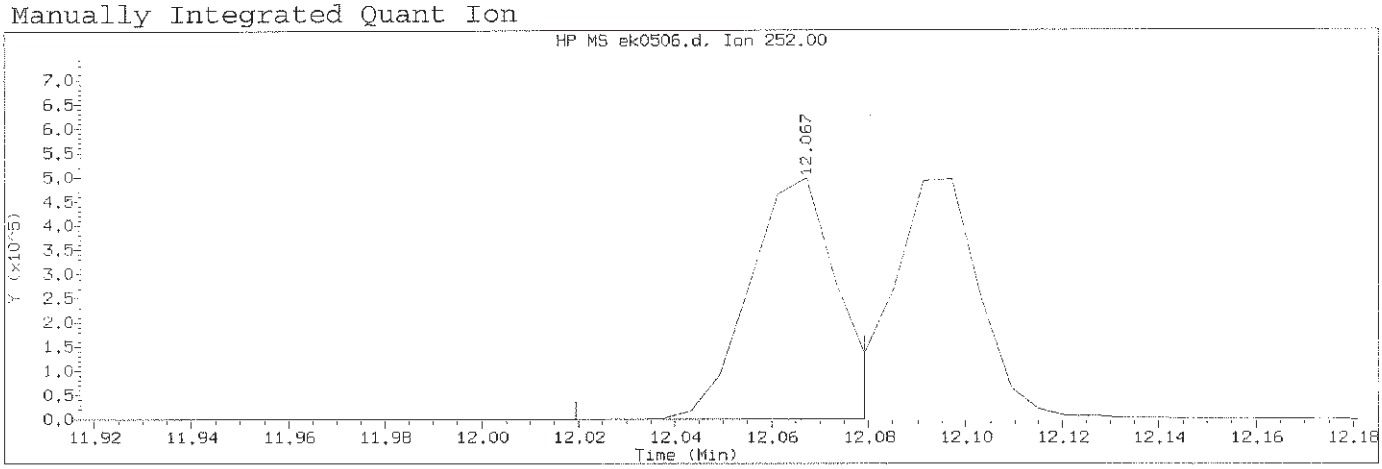
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area	: 735988		
On-column Amount (ng/ul)	: 17.8060		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1803		
Retention Time (minutes)	: 12.067		
Quant Ion	: 252.00		
Area (flag)	: 632081M		
On-Column Amount (ng/ul)	: 14.5175		
Integration start scan	: 1794	Integration stop scan:	1804
Y at integration start	: 0	Y at integration end:	0

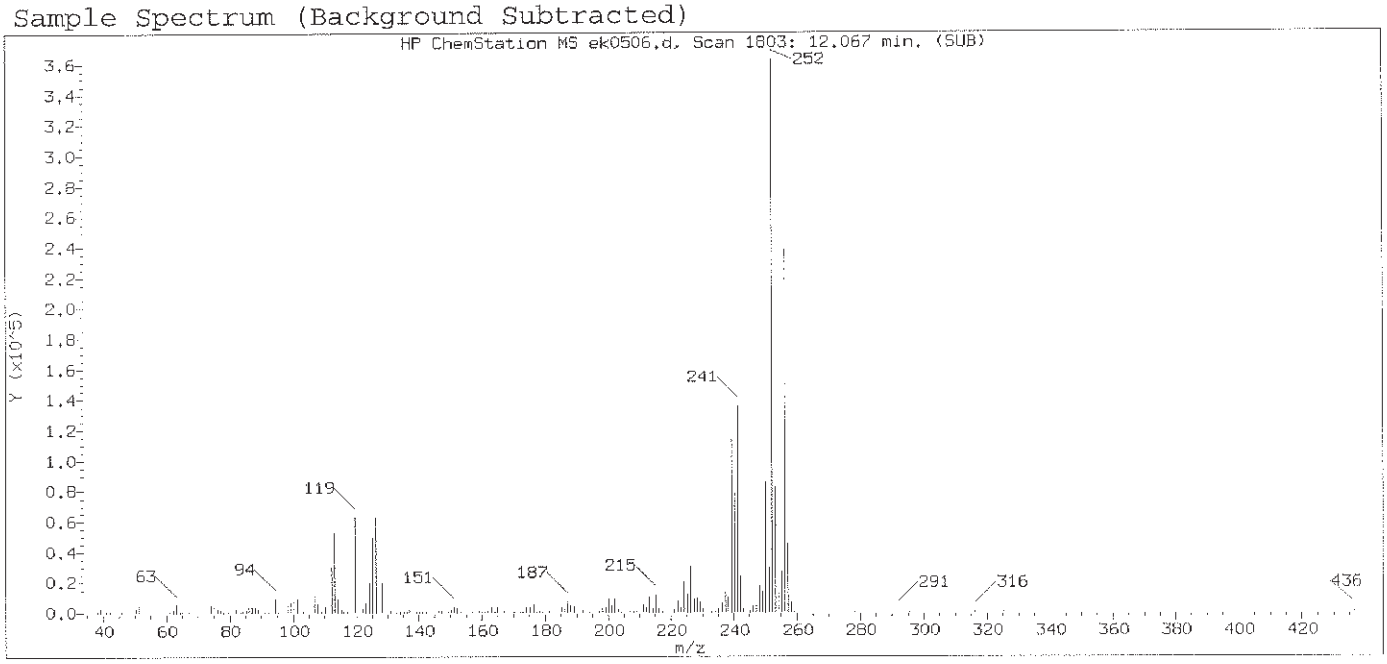
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

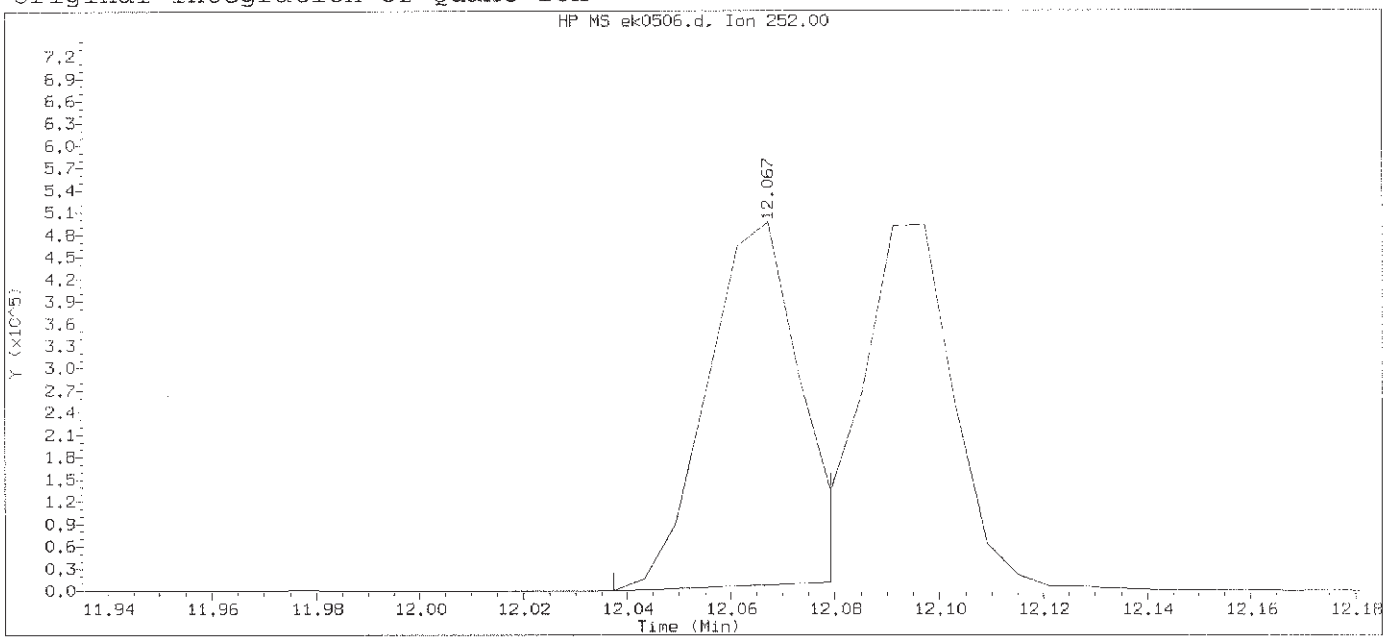
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

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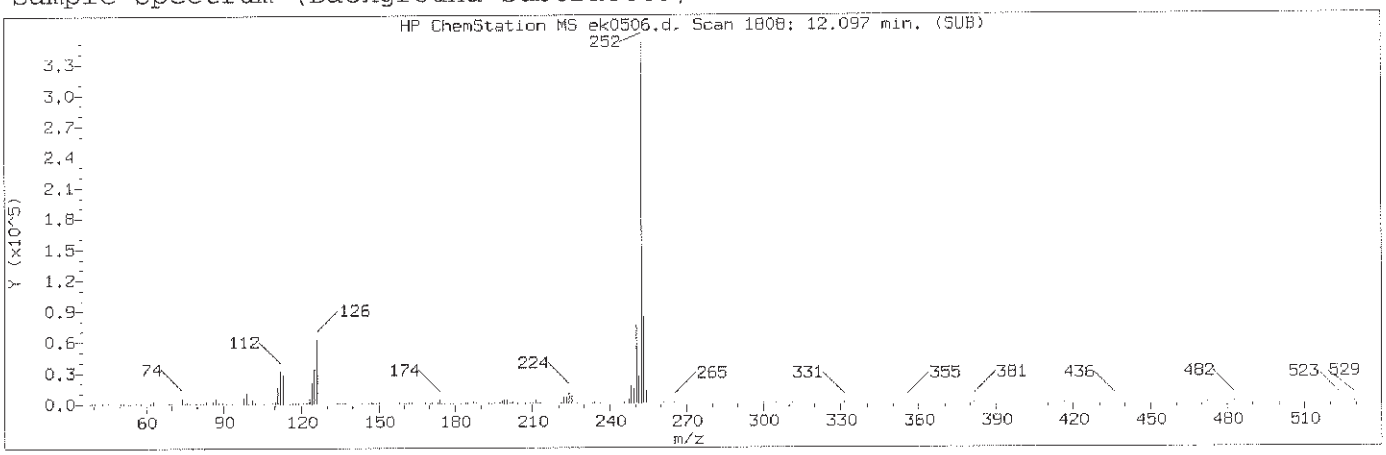
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

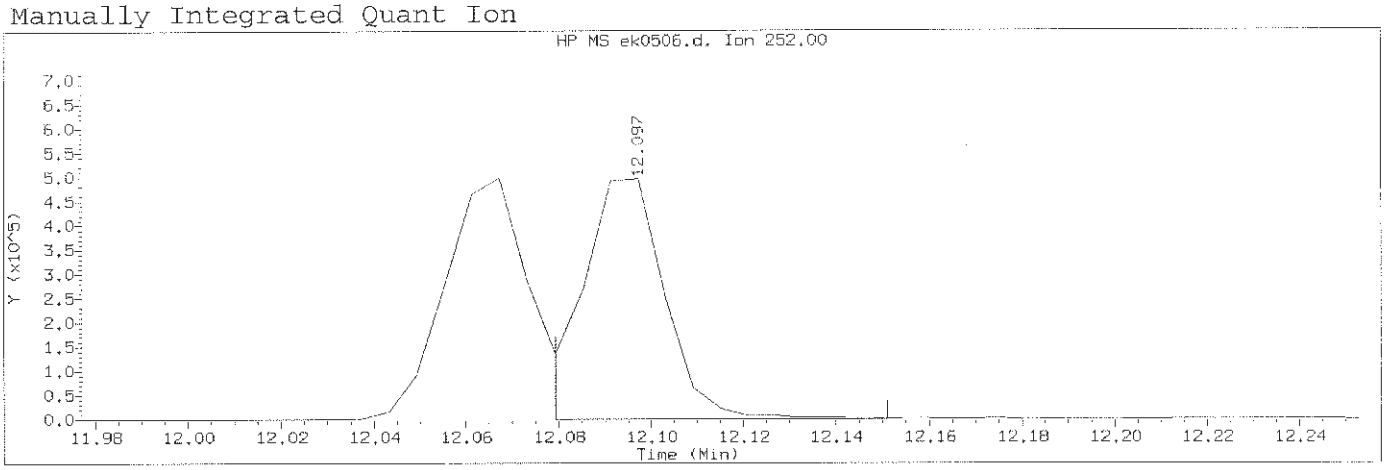
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1803		
Retention Time (minutes)	: 12.067		
Quant Ion	: 252.00		
Area	: 593152		
On-column Amount (ng/ul)	: 11.7328		
Integration start scan	: 1797	Integration stop scan:	1804
Y at integration start	: 0	Y at integration end:	11478

Digitally signed by Holly Berry on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1808		
Retention Time (minutes)	: 12.097		
Quant Ion	: 252.00		
Area (flag)	: 626537M		
On-Column Amount (ng/ul)	: 15.0454		
Integration start scan	: 1804	Integration stop scan:	1816
Y at integration start	: 0	Y at integration end:	0

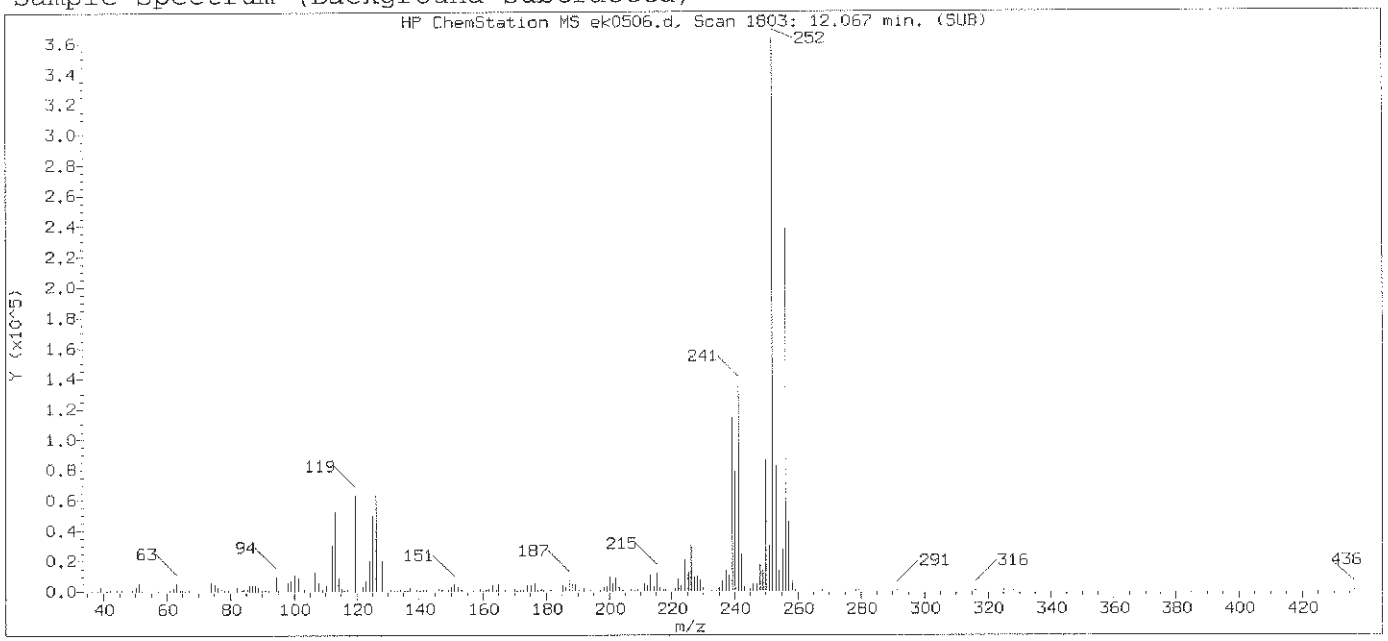
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:26.
Target 3.5 esignature user ID: hb01996

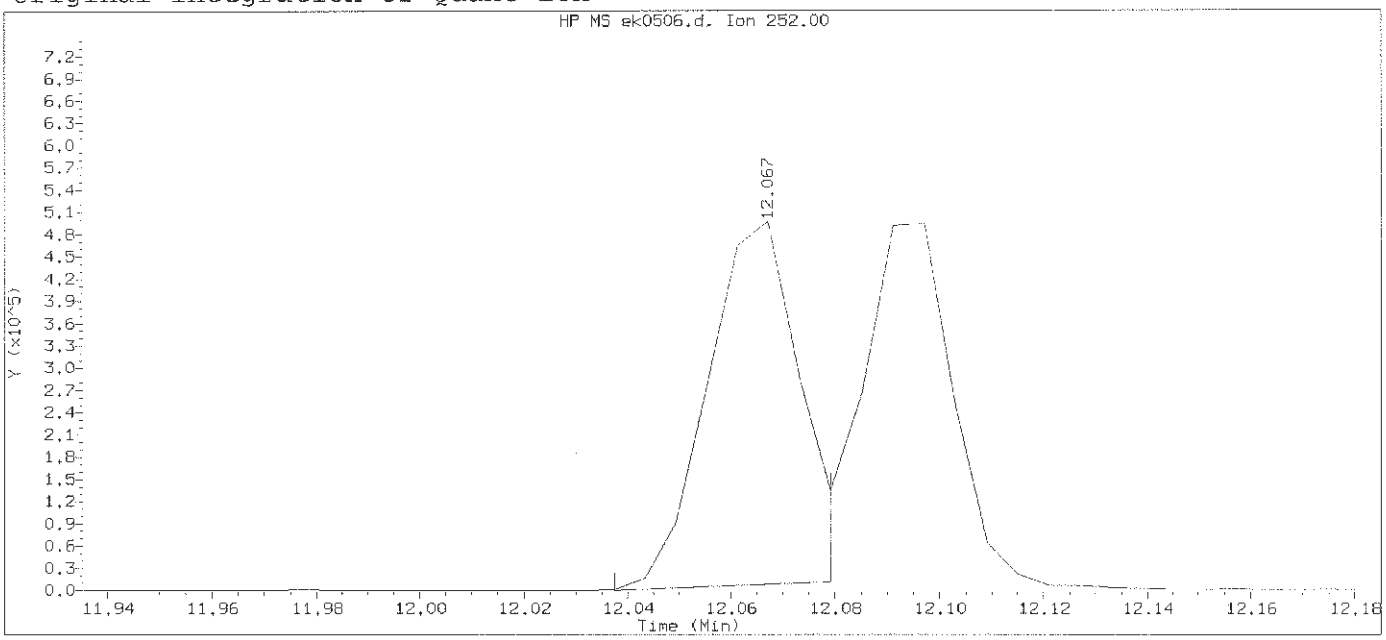
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0506.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 14:49 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:14
Date, time and analyst ID of latest file update: 12-Nov-2013 15:14 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1803		
Retention Time (minutes)	: 12.067		
Quant Ion	: 252.00		
Area	: 593152		
On-column Amount (ng/ul)	: 11.4577		
Integration start scan	: 1797	Integration stop scan:	1804
Y at integration start	: 0	Y at integration end:	11478

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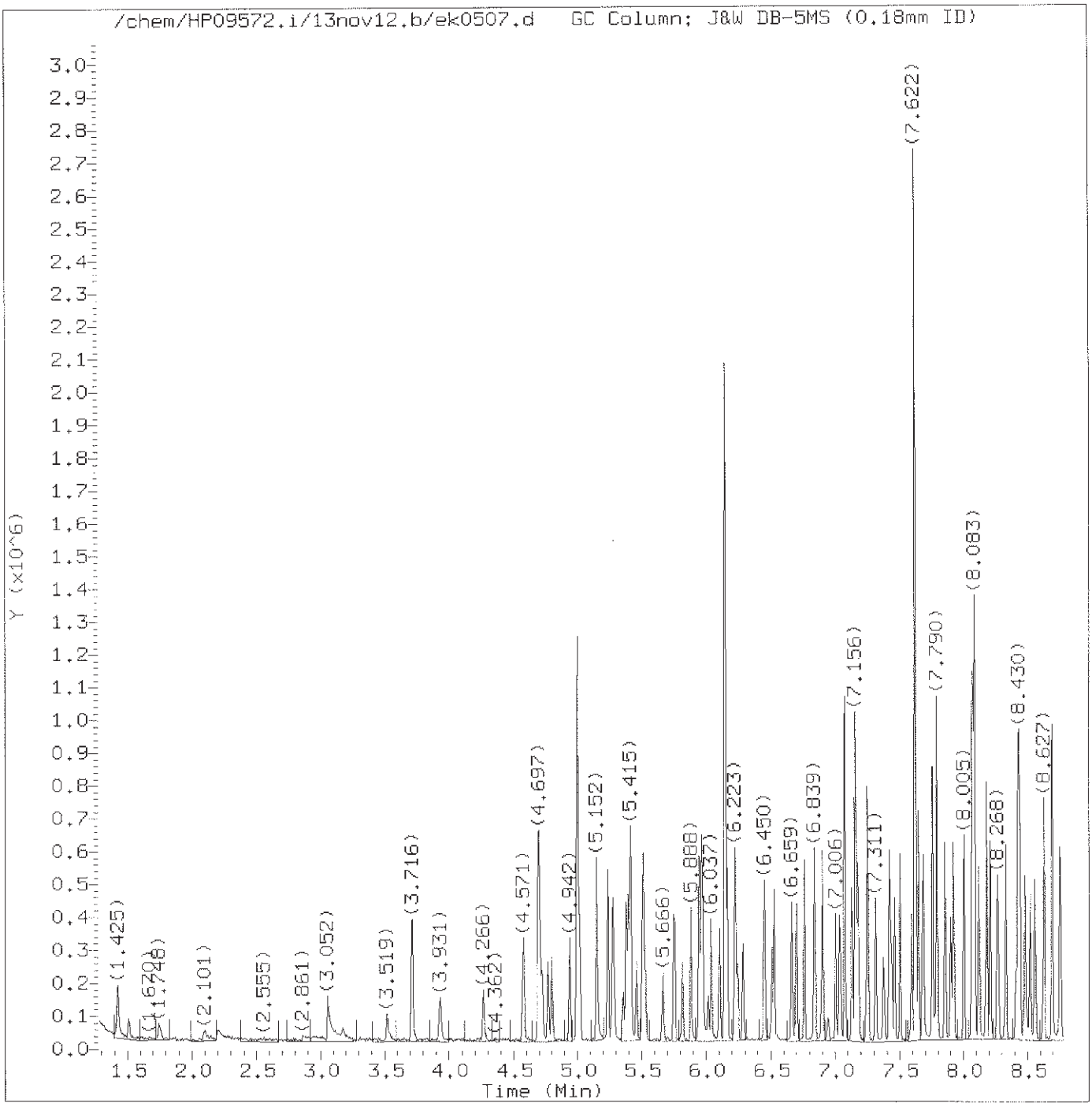
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

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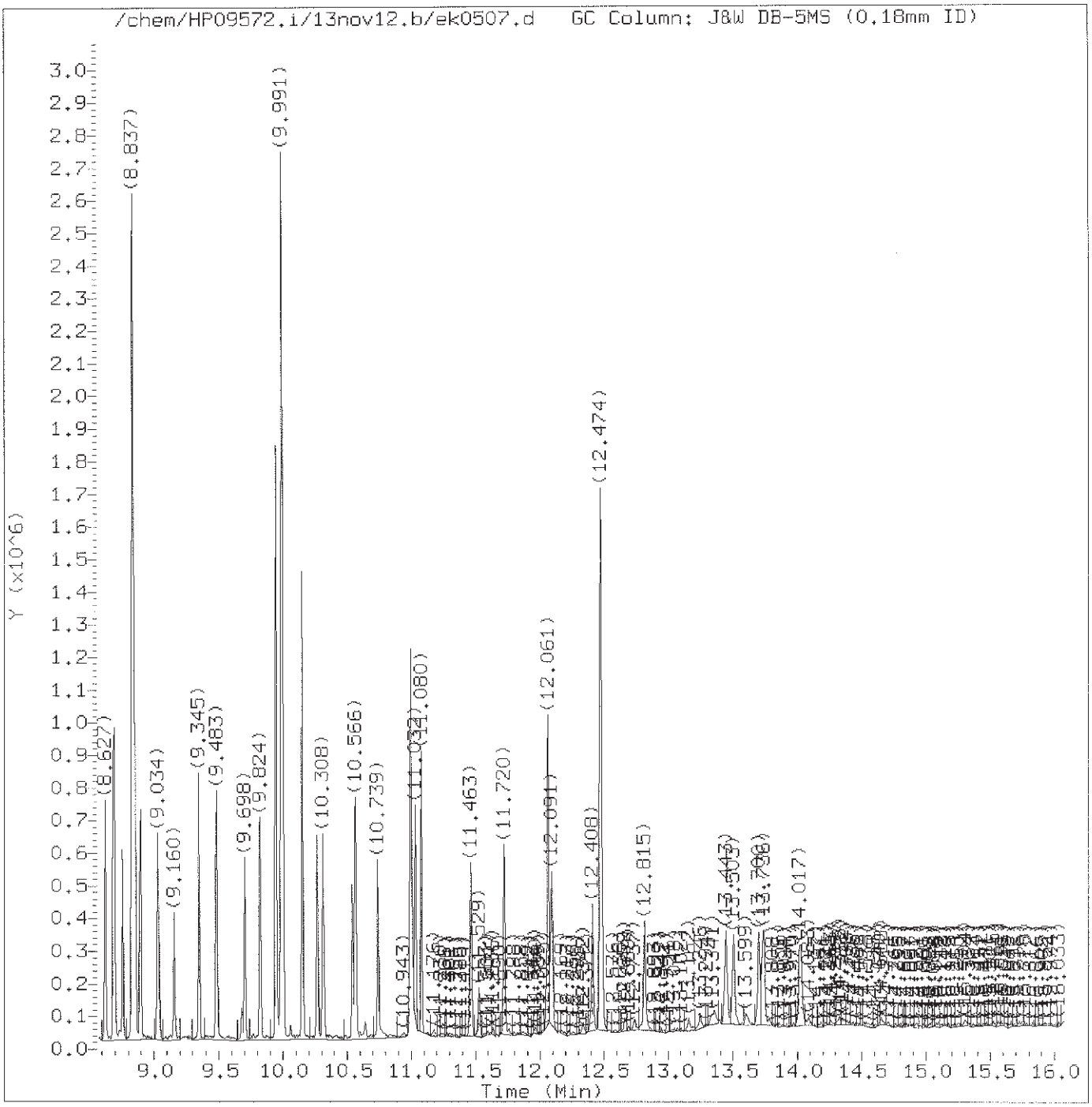
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.748	88	22438	4.903
2) N-Nitrosodimethylamine	(1)	2.101	74	32462M	4.261
3) Pyridine	(1)	2.208	79	61646M	4.918
4) 2-Picoline	(1)	3.052	93	75636M	4.922
5) N-Nitrosomethylethylamine	(1)	3.178	88	34073M	4.900
6) Methyl methanesulfonate	(1)	3.519	80	40014	4.789
7)$2-Fluorophenol	(1)	3.710	112	108205	9.119
8) N-Nitrosodiethylamine	(1)	3.931	102	33975	4.766
10) Ethyl methanesulfonate	(1)	4.266	109	33892	4.785
20) Aniline	(1)	4.685	93	110136	4.643
18)$Phenol-d6	(1)	4.697	99	166873	9.233
17)$Phenol-d5	(1)	4.697	99	166873	9.233
19) Phenol	(1)	4.709	94	91296	4.785
21) bis(2-Chloroethyl)ether	(1)	4.769	93	74275	4.895
22) 2-Chlorophenol	(1)	4.799	128	57004	4.660
24) 1,3-Dichlorobenzene	(1)	4.942	146	58368	4.799
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	157606	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	56897	4.609
27) Benzyl alcohol	(1)	5.152	108	41147	4.364
28) 1,2-Dichlorobenzene	(1)	5.152	146	54442	4.584
30) Indene	(1)	5.236	115	131652	6.055
29) 2-Methylphenol	(1)	5.271	108	61005	4.529
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	79007	4.883
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	79007	4.883
33) N-Nitrosopyrrolidine	(1)	5.361	100	38473	4.566
34) Acetophenone	(1)	5.385	105	114563	5.273
36) N-Nitroso-di-n-propylamine	(1)	5.397	70	62511	5.016
37) N-Nitrosomorpholine	(1)	5.403	56	50705	4.757
38) o-Toluidine	(1)	5.415	106	102962	4.506
35) 4-Methylphenol	(1)	5.421	108	76592	4.781
39) Hexachloroethane	(1)	5.463	117	25308	4.799
40)$Nitrobenzene-d5	(2)	5.511	82	166678	10.329
41) Nitrobenzene	(2)	5.529	77	78018	4.783
42) N-Nitrosopiperidine	(2)	5.666	114	39867	5.328
52) Isophorone	(2)	5.750	82	147381	4.996
53) 2-Nitrophenol	(2)	5.816	139	30881	4.486
54) 2,4-Dimethylphenol	(2)	5.888	107	79686	5.042
55) O,O,O-triethylphosphorothioate	(2)	5.947	198	29187	4.906
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	89993	4.598
56) Benzoic acid	(2)	5.977	105	187395	14.684

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.037	162	47771	4.658
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	49194	4.906
60)*Naphthalene-d8	(2)	6.145	136	692629	20.000
61) Naphthalene	(2)	6.163	128	181351	5.062
62) 4-Chloroaniline	(2)	6.223	127	77282	4.860
63) 2,6-Dichlorophenol	(2)	6.229	162	50825	5.058
64) Hexachloropropene	(2)	6.247	213	27589	4.517
65) Hexachlorobutadiene	(2)	6.288	225	25673	4.960
67) Quinoline	(2)	6.450	129	136139	5.269
69) Caprolactam	(2)	6.510	113	34442	5.819
68) N-Nitrosodi-n-butylamine	(2)	6.528	84	71289	4.754
70) 4-Chloro-3-methylphenol	(2)	6.659	107	75078	4.977
71) Safrole	(2)	6.701	162	50492	4.959
72) 2-Methylnaphthalene	(2)	6.761	142	128810	4.987
75) 1-Methylnaphthalene	(2)	6.839	142	122999	5.165
76) Hexachlorocyclopentadiene	(3)	6.899	237	20318	4.210
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.899	216	50488	5.024
78) cis-Isosafrole	(3)	6.946	162	8667	0.508
79) 2,4,6-Trichlorophenol	(3)	7.006	196	40999	5.182
80) 2,4,5-Trichlorophenol	(3)	7.036	196	41315	4.959
81)$2-Fluorobiphenyl	(3)	7.078	172	269886	10.142
83) Isosafrole	(3)	7.132	162	49858	4.622
82) trans-Isosafrole	(3)	7.132	162	49858	4.113
86) 1,1'-Biphenyl	(3)	7.156	154	190968	5.732
87) 2-Chloronaphthalene	(3)	7.162	162	163114M	5.693
88) 1-Chloronaphthalene	(3)	7.180	162	118778M	4.781
89) Diphenyl ether	(3)	7.246	170	90395	5.139
90) 2-Nitroaniline	(3)	7.252	138	52978	5.360
91) 1,4-Naphthoquinone	(3)	7.311	158	52638	4.677
92) 1,4-Dinitrobenzene	(3)	7.371	168	23216	4.627
93) Dimethylphthalate	(3)	7.419	163	163937	5.225
94) 1,3-Dinitrobenzene	(3)	7.431	168	27671	4.728
95) 2,6-Dinitrotoluene	(3)	7.461	165	37443	5.006
96) Acenaphthylene	(3)	7.503	152	191312	5.024
97) 3-Nitroaniline	(3)	7.593	138	42905	4.923
99)*Acenaphthene-d10	(3)	7.622	164	465599	20.000
100) Acenaphthene	(3)	7.646	153	130133	4.873
101) 2,4-Dinitrophenol	(3)	7.682	184	55821	13.875
102) 4-Nitrophenol	(3)	7.754	109	69639	9.814
103) Pentachlorobenzene	(3)	7.760	250	43040	4.829

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.790	165	48155	4.653
105) Dibenzofuran	(3)	7.790	168	191004	5.253
106) 1-Naphthylamine	(3)	7.856	143	156850	5.190
107) 2,3,4,6-Tetrachlorophenol	(3)	7.898	232	30455	4.770
108) 2-Naphthylamine	(3)	7.922	143	154872	5.056
109) Diethylphthalate	(3)	8.005	149	172698	5.249
110) Thionazin	(3)	8.065	107	40626	5.498
111) Fluorene	(3)	8.071	166	159454	5.004
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	80151	5.585
113) 5-Nitro-o-toluidine	(3)	8.083	152	49088	5.027
114) 4-Nitroaniline	(3)	8.089	138	49954	5.518
115) 4,6-Dinitro-2-methylphenol	(4)	8.119	198	50672	8.772
117) N-Nitrosodiphenylamine	(4)	8.179	169	142589	4.915
118) NDPA as diphenylamine	(4)	8.179	169	142589	4.915
119) 1,2-Diphenylhydrazine	(4)	8.209	77	197129	4.823
120)$2,4,6-Tribromophenol	(3)	8.268	330	33482	9.818
122) Tetraethyldithiopyrophosphate	(4)	8.328	97	33044	4.699
129) 1,3,5-Trinitrobenzene	(4)	8.412	213	15194	4.027
130) Diallate (peak 1)	(4)	8.424	86	88884	3.784
131) Phorate	(4)	8.430	75	122193	3.609
132) Phenacetin	(4)	8.442	108	108642	4.967
133) 4-Bromophenyl-phenylether	(4)	8.484	248	38374	4.940
134) Diallate (peak 2)	(4)	8.496	86	15658	1.435
137) Hexachlorobenzene	(4)	8.520	284	37084	4.866
139) Dimethoate	(4)	8.556	87	91668	5.278
141) Atrazine	(4)	8.627	200	55382	5.672
142) Pentachlorophenol	(4)	8.687	266	15957	3.279
144) Pentachloronitrobenzene	(4)	8.693	237	19619	4.799
143) 4-Aminobiphenyl	(4)	8.693	169	161024	5.109
146) Pronamide	(4)	8.759	173	77846	4.978
148)*Phenanthrene-d10	(4)	8.837	188	840928	20.000
147) Dinoseb	(4)	8.849	211	29158	3.745
149) Phenanthrene	(4)	8.855	178	234425	4.957
150) Anthracene	(4)	8.897	178	241500	5.076
151) Carbazole	(4)	9.034	167	233493	5.062
152) Methyl parathion	(4)	9.160	109	67292	5.069
154) Di-n-butylphthalate	(4)	9.345	149	293091	5.054
155) Parathion	(4)	9.483	109	41571	4.555
156) 4-Nitroquinoline-1-oxide	(4)	9.483	190	15019	3.455
159) Isodrin	(4)	9.698	193	28013	5.067

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

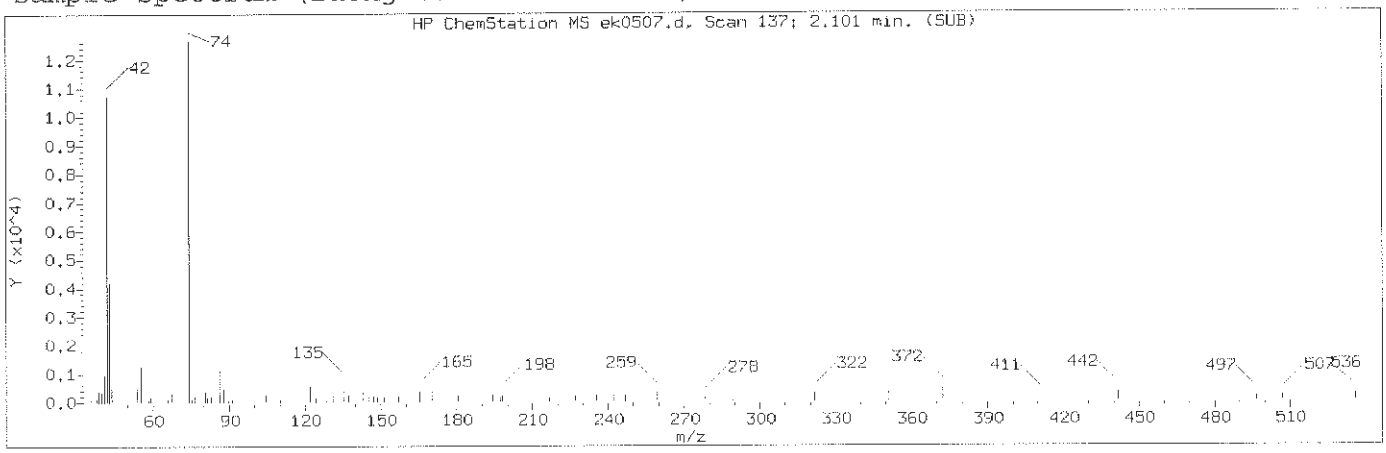
Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.824	202	245387	5.068
164) Benzidine	(5)	9.944	184	535579	15.710
165)*Pyrene-d10	(5)	9.991	212	949761	20.000
166) Pyrene	(5)	10.003	202	266086	5.159
169)$Terphenyl-d14	(5)	10.147	244	354286	10.466
170) p-Dimethylaminoazobenzene	(5)	10.267	225	47506	4.452
171) Chlorobenzilate	(5)	10.308	139	96112	4.757
173) 3,3'-Dimethylbenzidine	(5)	10.536	212	124570	4.459
174) Butylbenzylphthalate	(5)	10.566	149	144021	5.232
175) 2-Acetylaminofluorene	(5)	10.739	181	110222	4.721
176) 3,3'-Dichlorobenzidine	(5)	10.990	252	76018	4.785
178) Benzo(a)anthracene	(5)	11.002	228	234137	5.174
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.002	231	43771	5.043
180) Chrysene	(5)	11.032	228	219388	5.126
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	177878	4.895
183) 6-Methylchrysene	(5)	11.463	242	158196	5.041
184) Di-n-octylphthalate	(6)	11.720	149	299940	4.774
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.061	256	102168	4.814
186) Benzo(b)fluoranthene	(6)	12.061	252	204127	4.706
187) Benzo(k)fluoranthene	(6)	12.091	252	224139A	5.297
189) Benzo(a)pyrene	(6)	12.414	252	185137	4.904
190)*Perylene-d12	(6)	12.474	264	686298	20.000
191) 3-Methylcholanthrene	(6)	12.815	268	90951	4.503
192) Dibenz(a,h)acridine	(6)	13.443	279	127276	4.602
193) Dibenz(a,j)acridine	(6)	13.503	279	142683	4.821
194) Indeno(1,2,3-cd)pyrene	(6)	13.700	276	185099	4.870
195) Dibenz(a,h)anthracene	(6)	13.736	278	158222	4.806
196) Benzo(g,h,i)perylene	(6)	14.023	276	154856	4.882
204) Diallate TRANS/CIS	(4)			104542	5.138

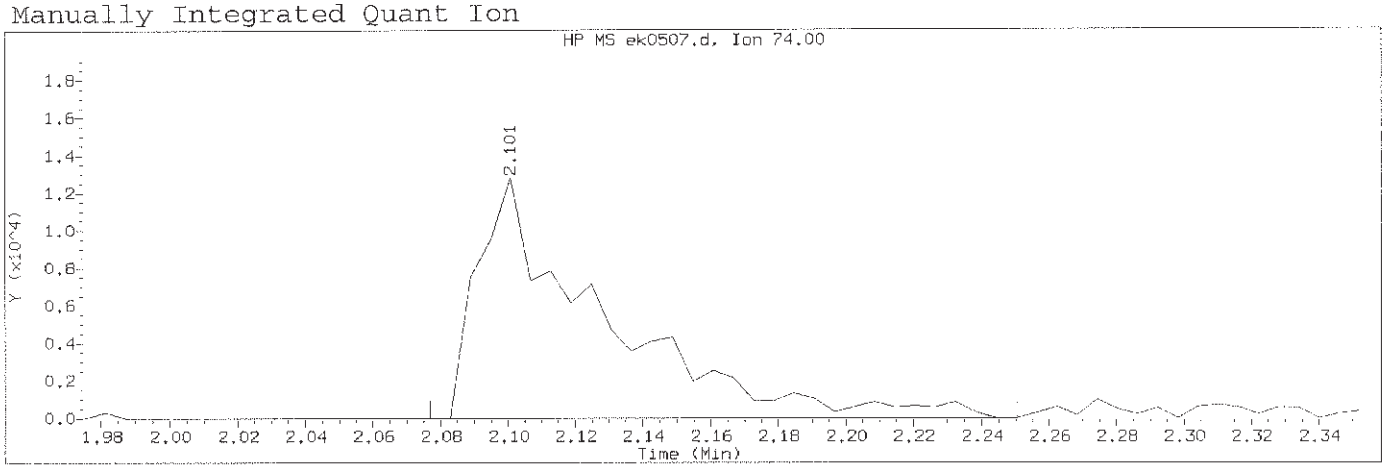
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 137		
Retention Time (minutes)	: 2.101		
Quant Ion	: 74.00		
Area (flag)	: 32462M		
On-Column Amount (ng/ul)	: 4.2612		
Integration start scan	: 132	Integration stop scan:	161
Y at integration start	: 0	Y at integration end:	0

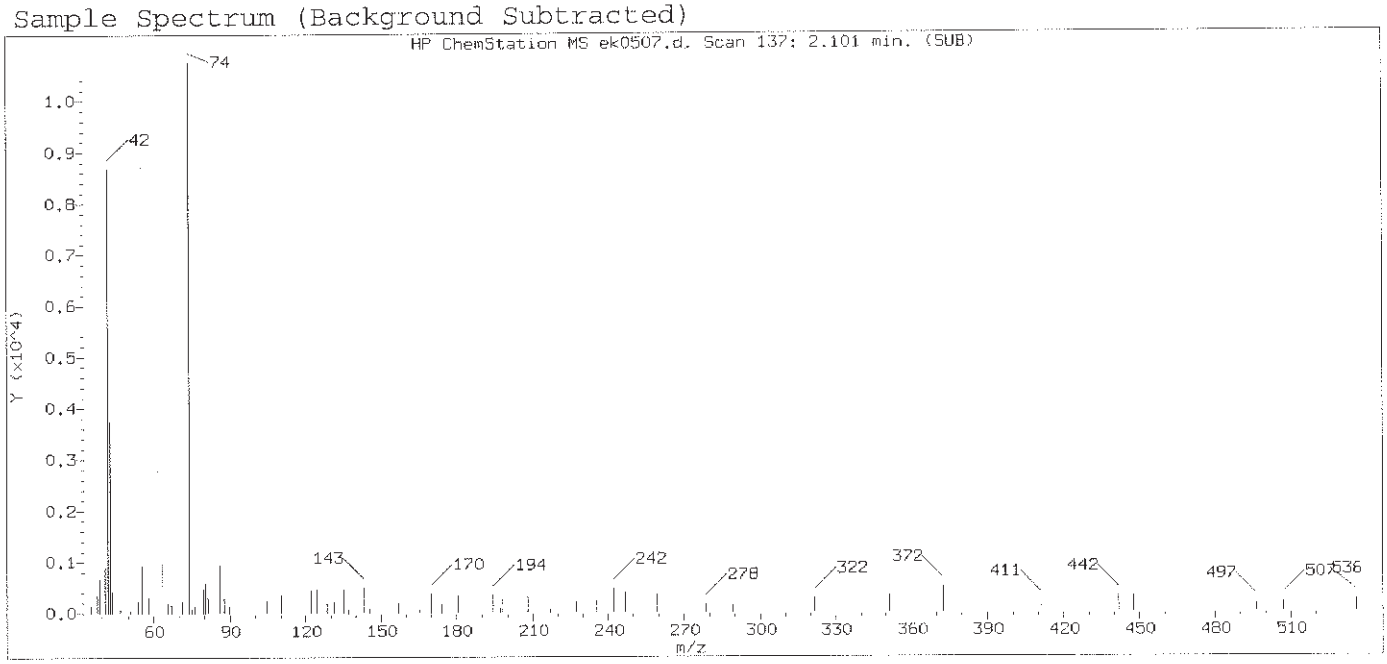
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

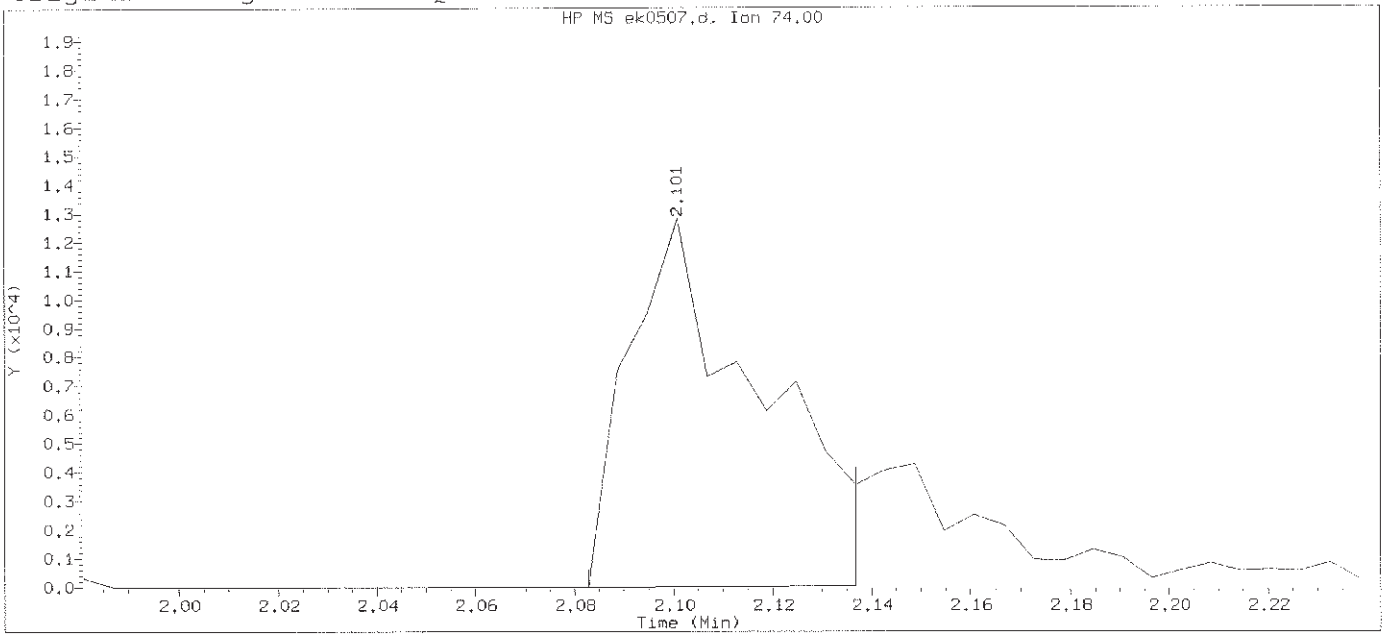
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

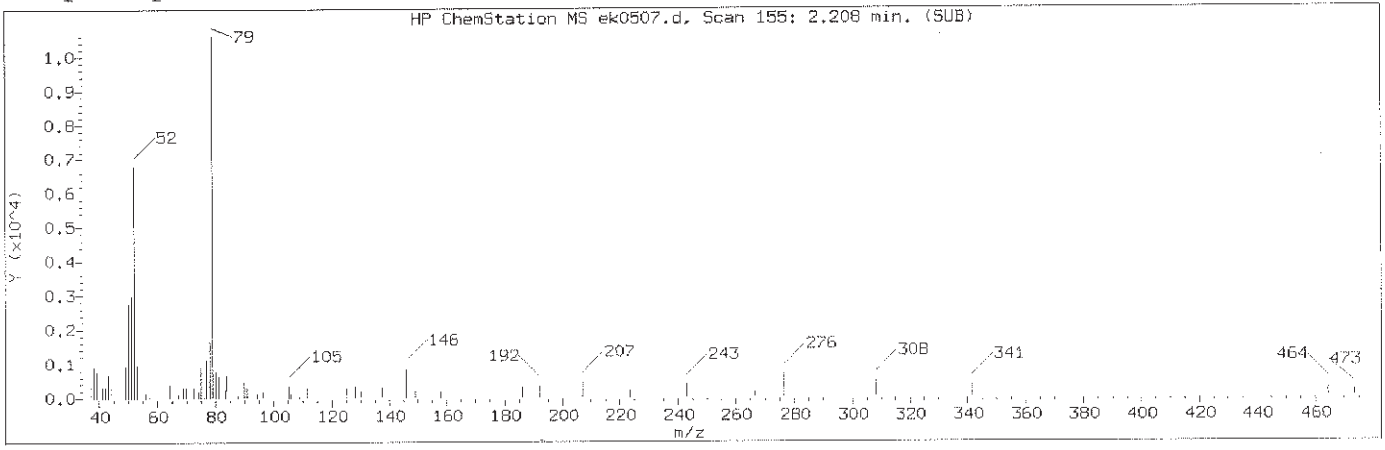
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

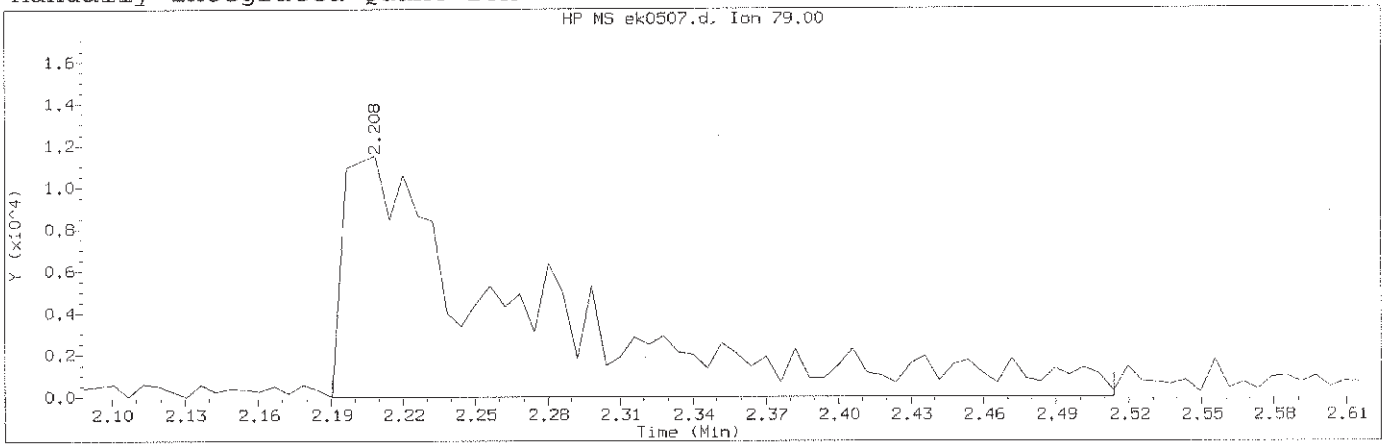
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 137		
Retention Time (minutes)	: 2.101		
Quant Ion	: 74.00		
Area	: 23150		
On-column Amount (ng/ul)	: 3.1728		
Integration start scan	: 133	Integration stop scan:	142
Y at integration start	: 0	Y at integration end:	44

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

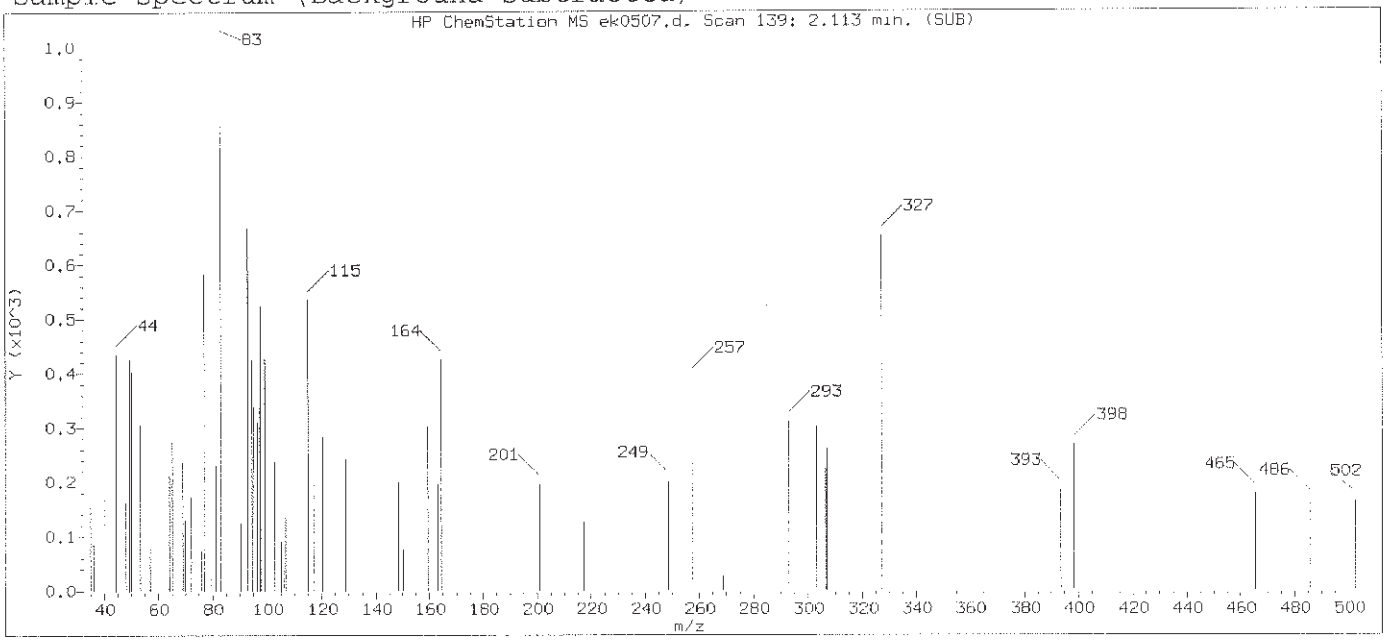
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 155		
Retention Time (minutes)	: 2.208		
Quant Ion	: 79.00		
Area (flag)	: 61646M		
On-Column Amount (ng/ul)	: 4.9177		
Integration start scan	: 151	Integration stop scan:	205
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

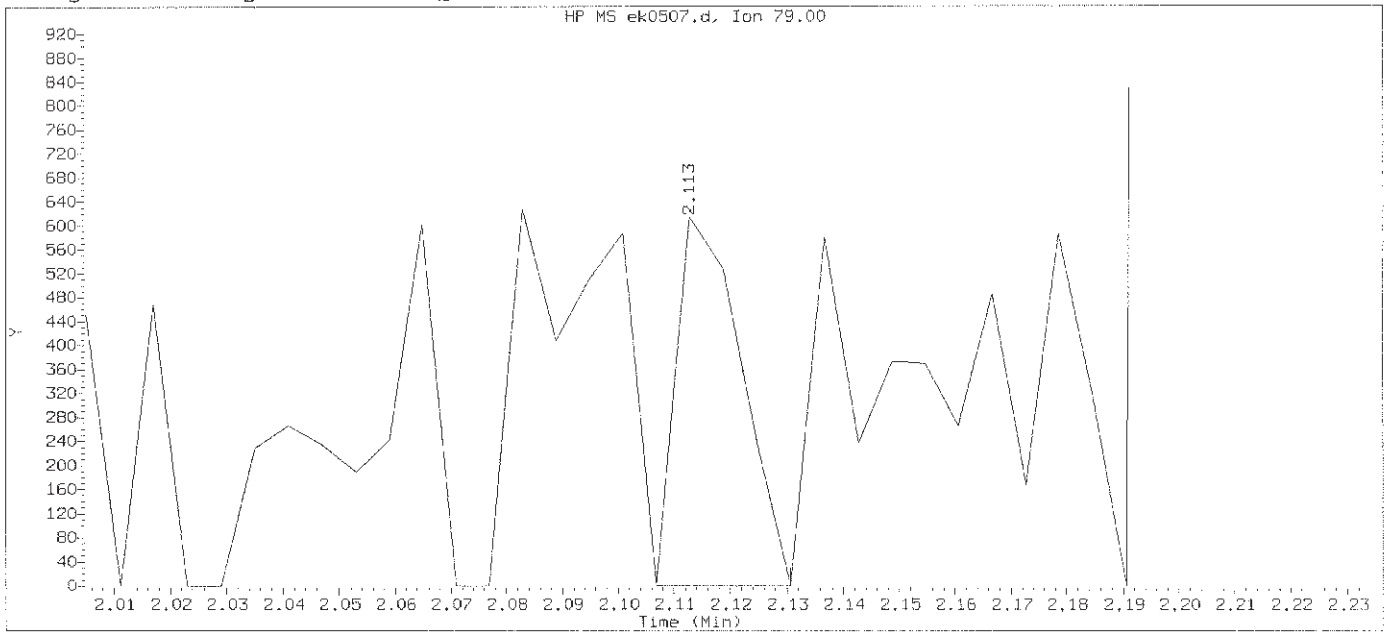
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

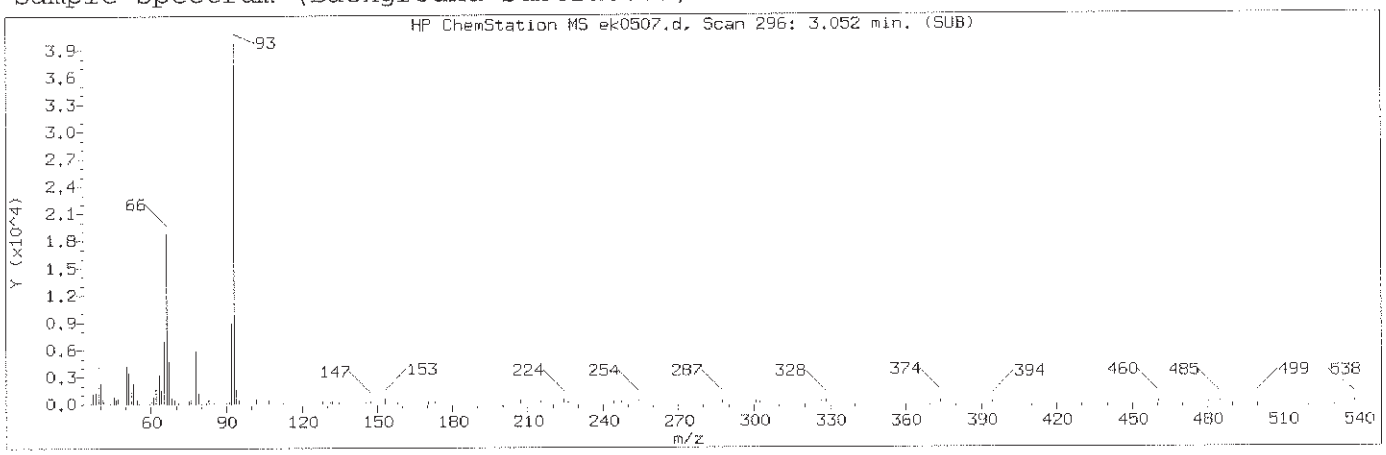
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

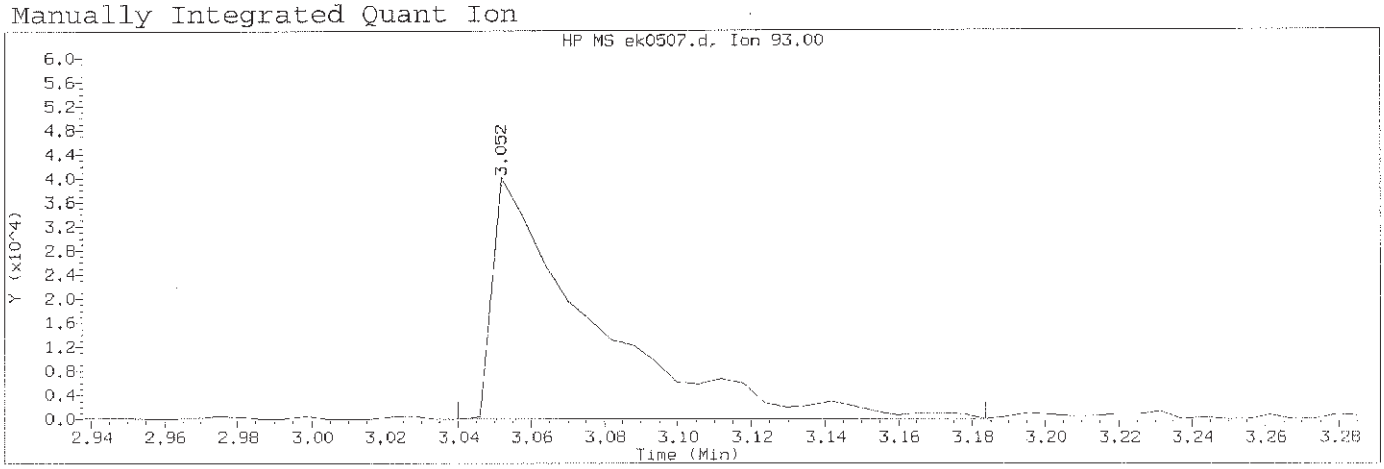
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.113		
Quant Ion	: 79.00		
Area	: 494		
On-column Amount (ng/ul)	: 0.0556		
Integration start scan	: 137	Integration stop scan:	141
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 296		
Retention Time (minutes)	: 3.052		
Quant Ion	: 93.00		
Area (flag)	: 75636M		
On-Column Amount (ng/ul)	: 4.9220		
Integration start scan	: 293	Integration stop scan:	317
Y at integration start	: 0	Y at integration end:	0

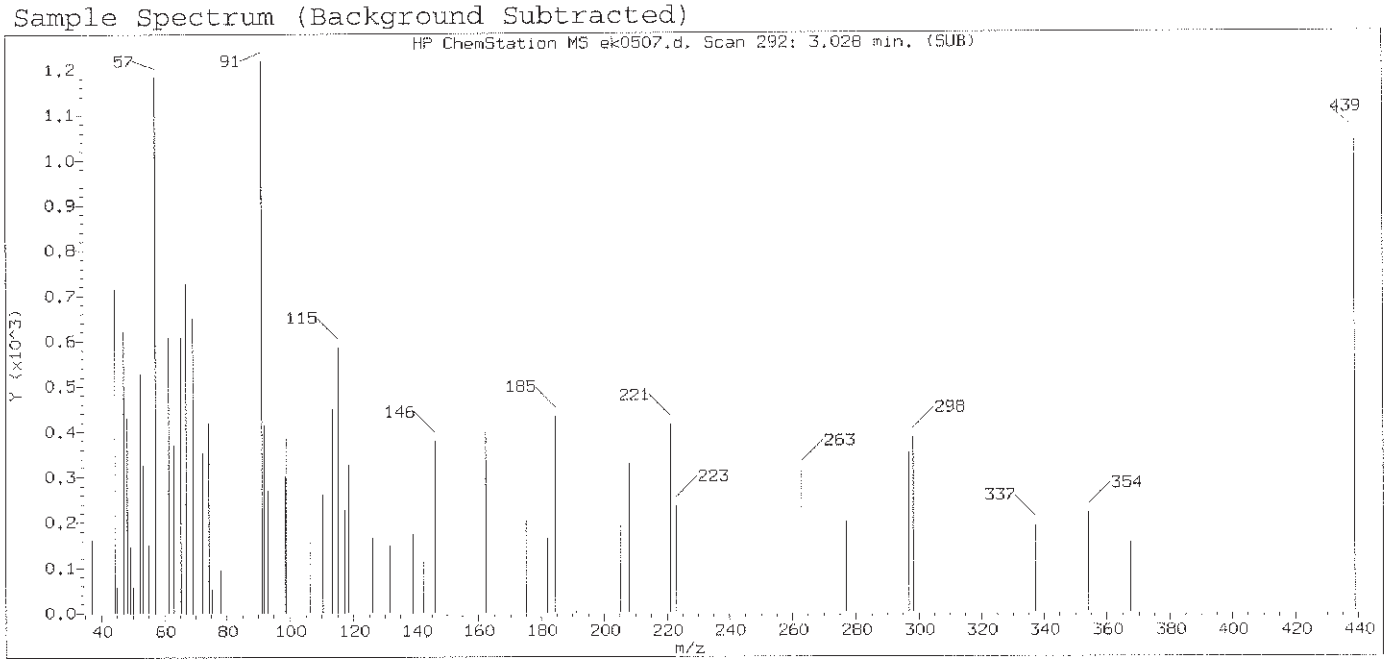
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

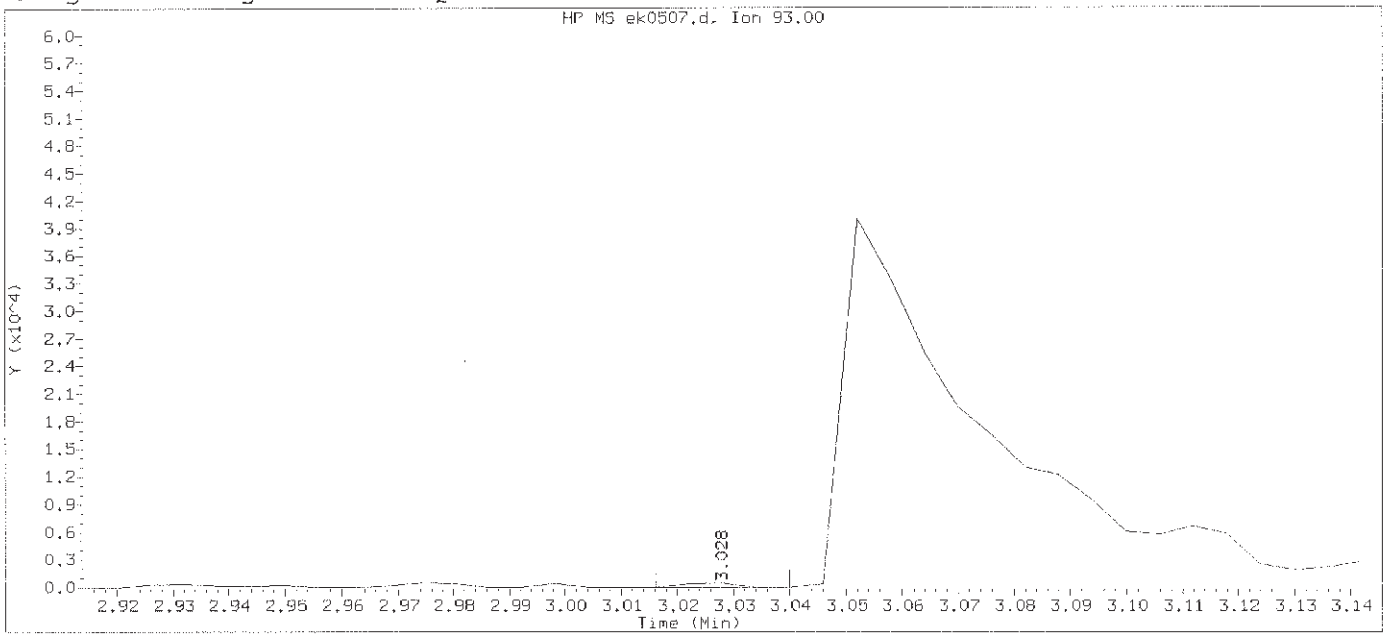
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

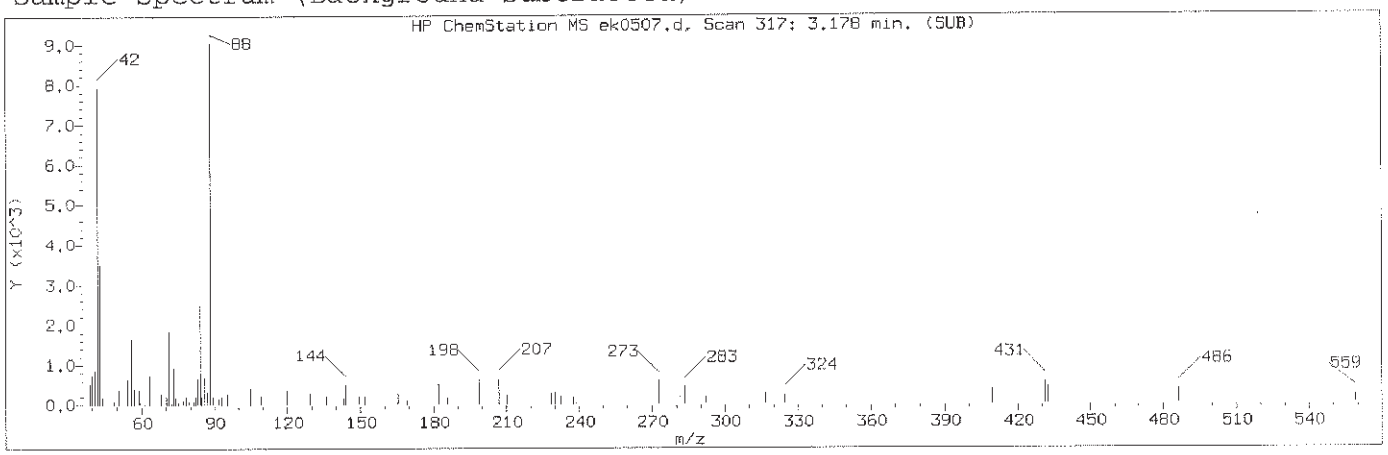
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

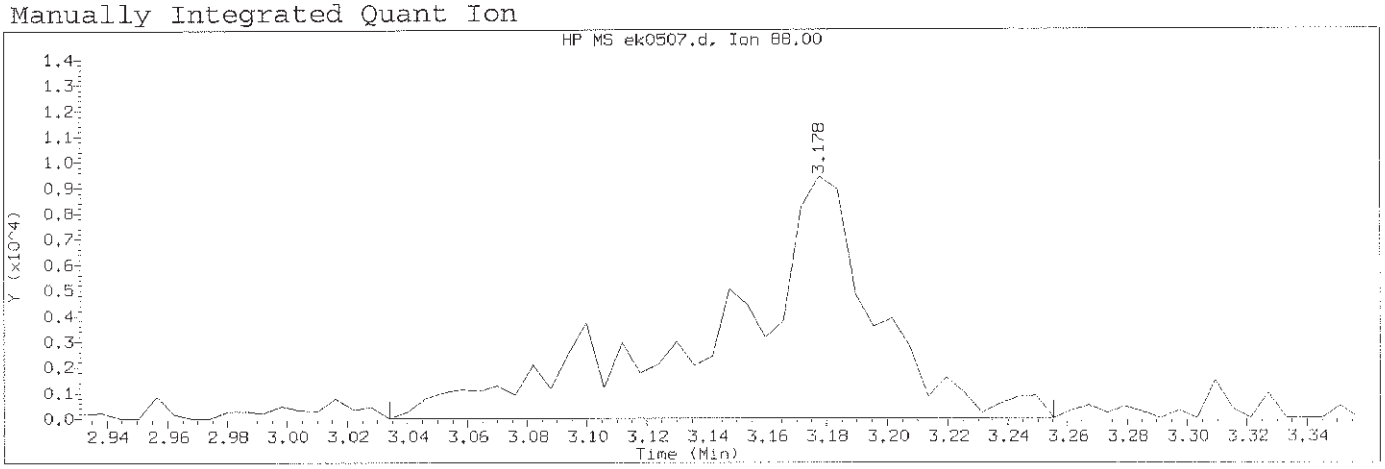
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 292		
Retention Time (minutes)	: 3.028		
Quant Ion	: 93.00		
Area	: 297		
On-column Amount (ng/ul)	: 0.0286		
Integration start scan	: 289	Integration stop scan:	293
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 317		
Retention Time (minutes)	: 3.178		
Quant Ion	: 88.00		
Area (flag)	: 34073M		
On-Column Amount (ng/ul)	: 4.8996		
Integration start scan	: 292	Integration stop scan:	329
Y at integration start	: 0	Y at integration end:	0

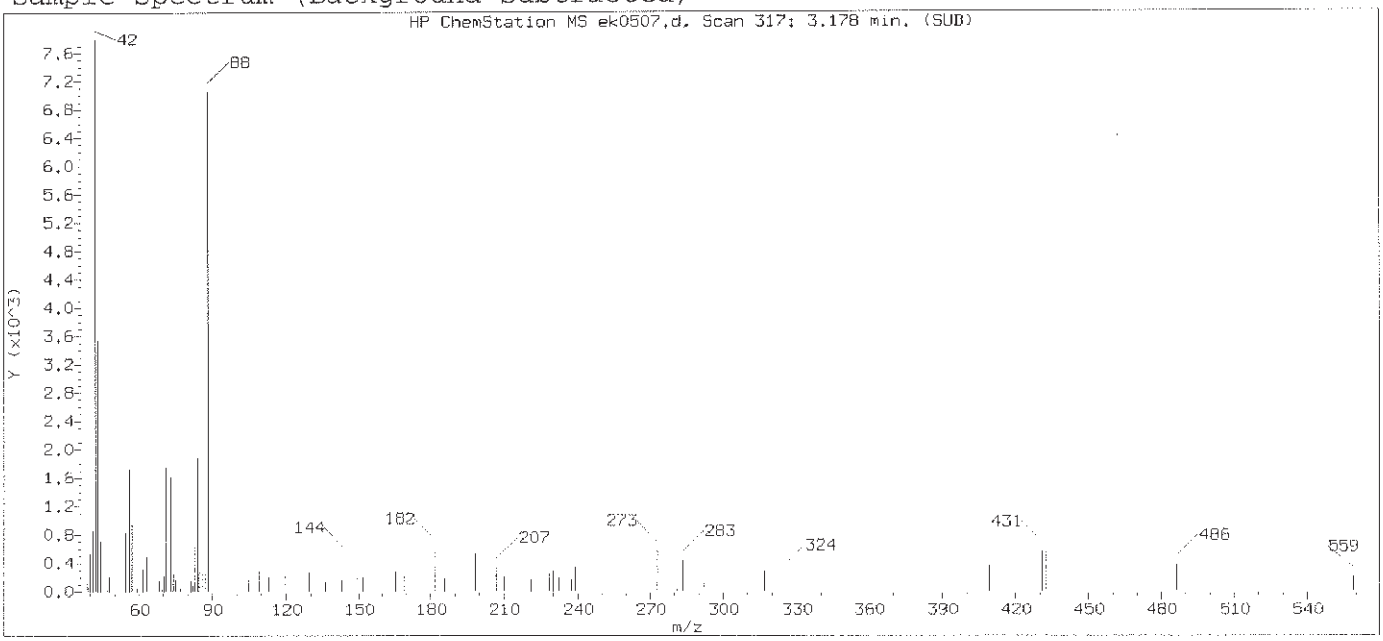
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

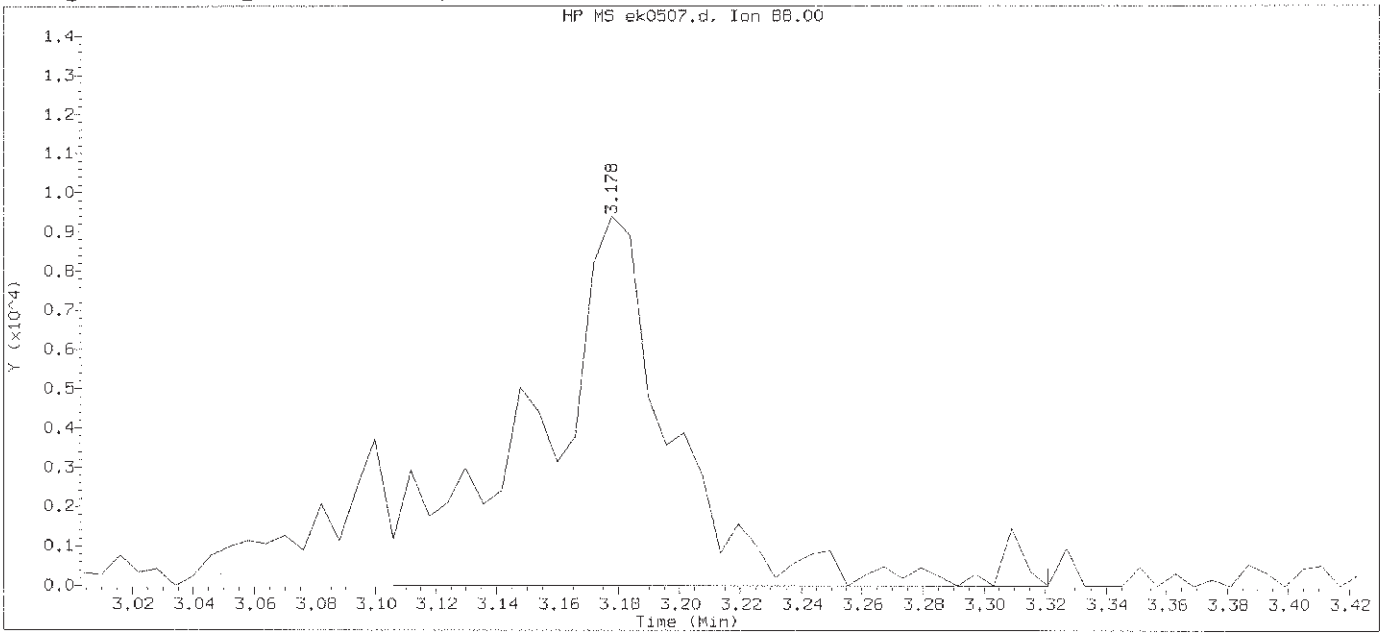
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

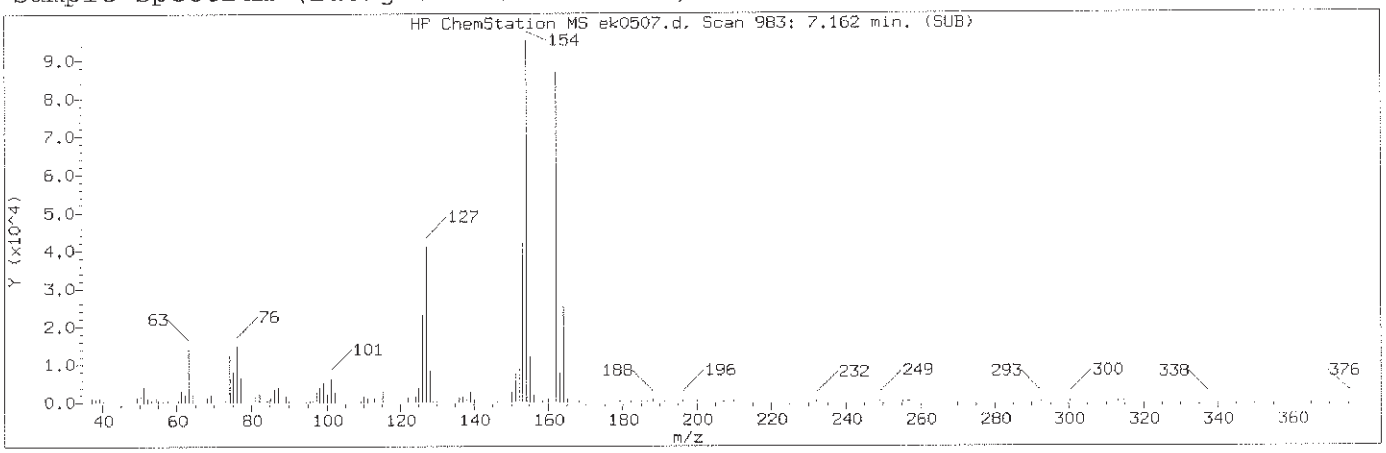
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

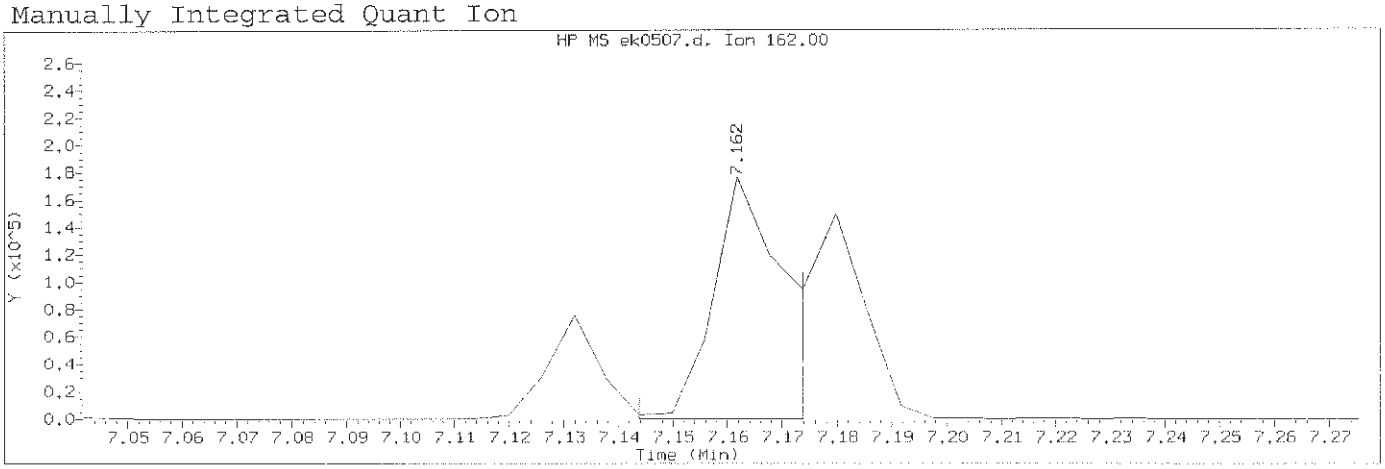
Compound Number	: 5		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 317		
Retention Time (minutes)	: 3.178		
Quant Ion	: 88.00		
Area	: 29565		
On-column Amount (ng/ul)	: 4.1392		
Integration start scan	: 304	Integration stop scan:	340
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area (flag)	: 163114M		
On-Column Amount (ng/ul)	: 5.6926		
Integration start scan	: 979	Integration stop scan:	984
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

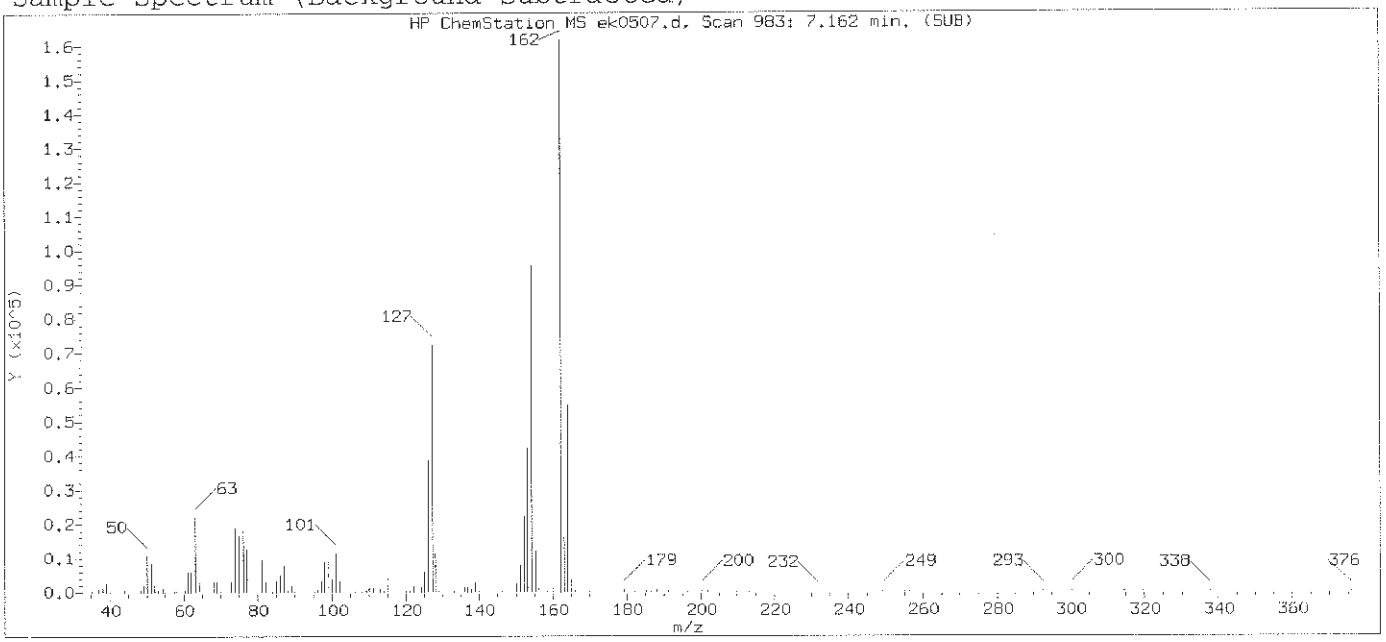
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

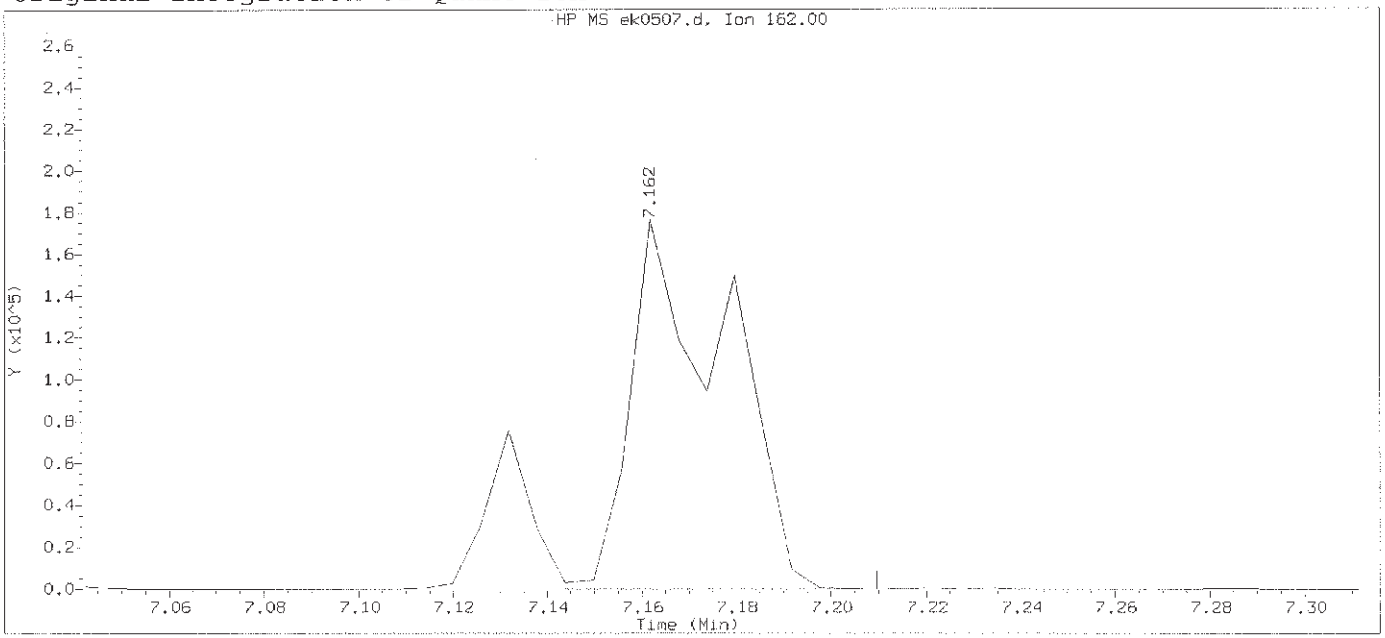
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

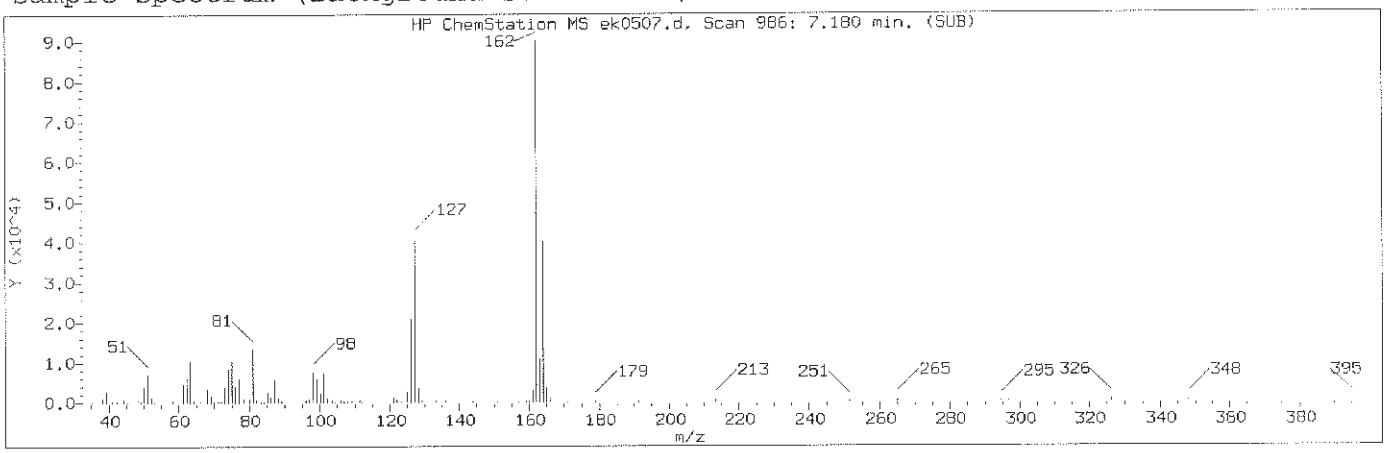
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

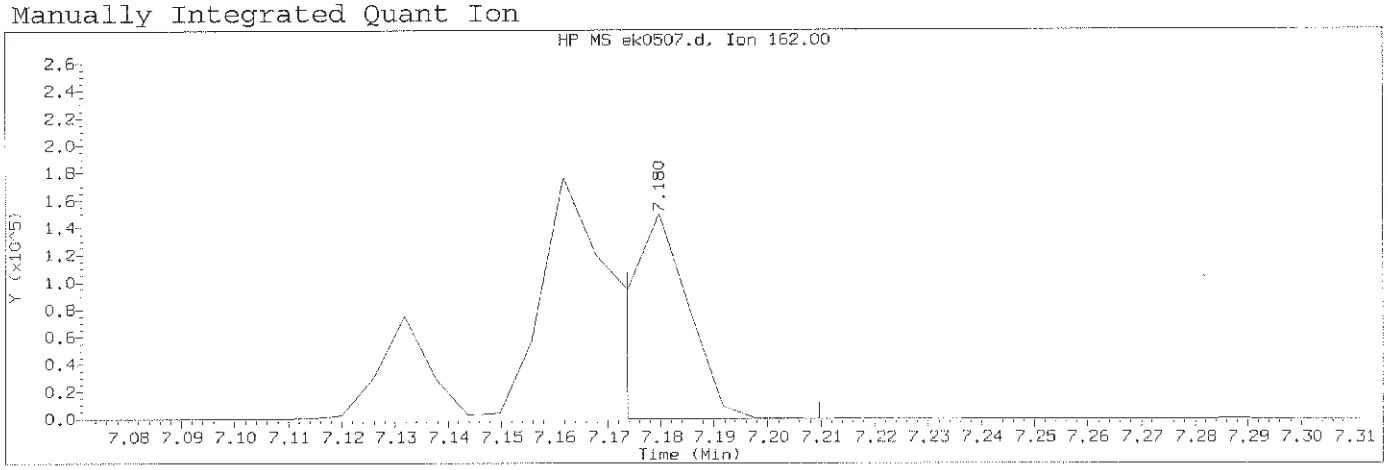
Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area	: 247451		
On-column Amount (ng/ul)	: 5.8451		
Integration start scan	: 979	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 986		
Retention Time (minutes)	: 7.180		
Quant Ion	: 162.00		
Area (flag)	: 118778M		
On-Column Amount (ng/ul)	: 4.7815		
Integration start scan	: 984	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

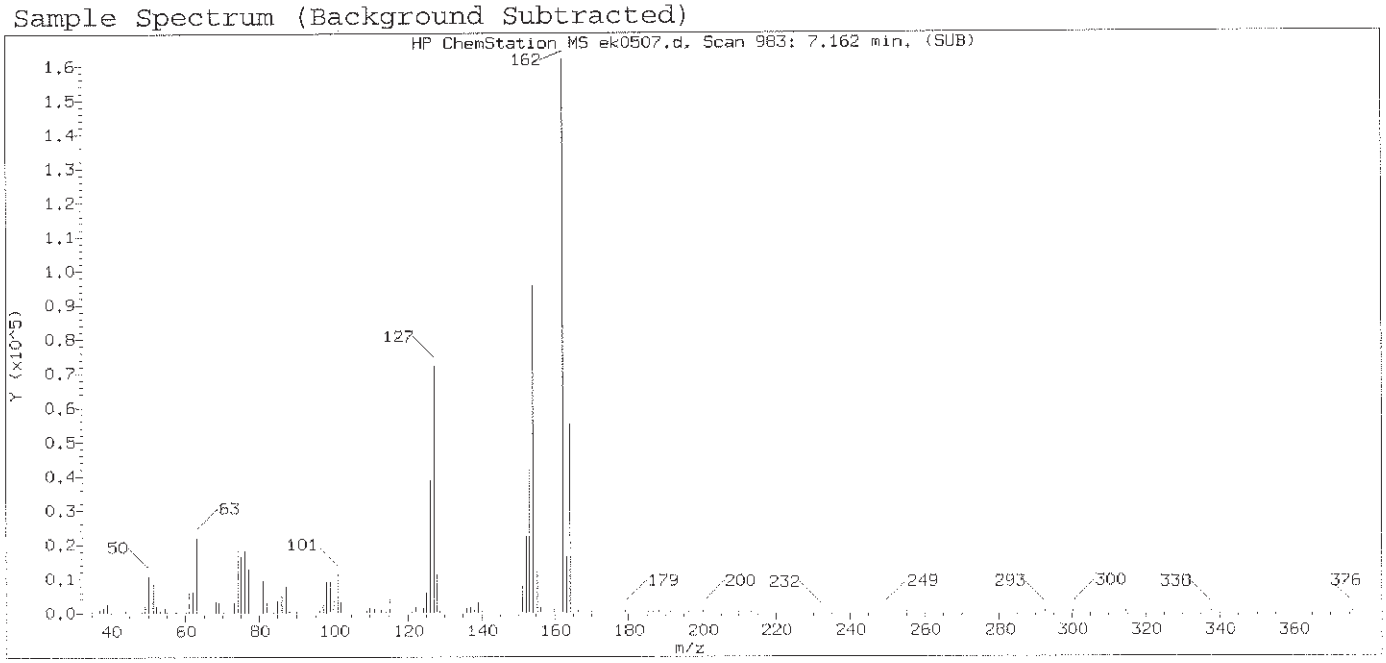
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

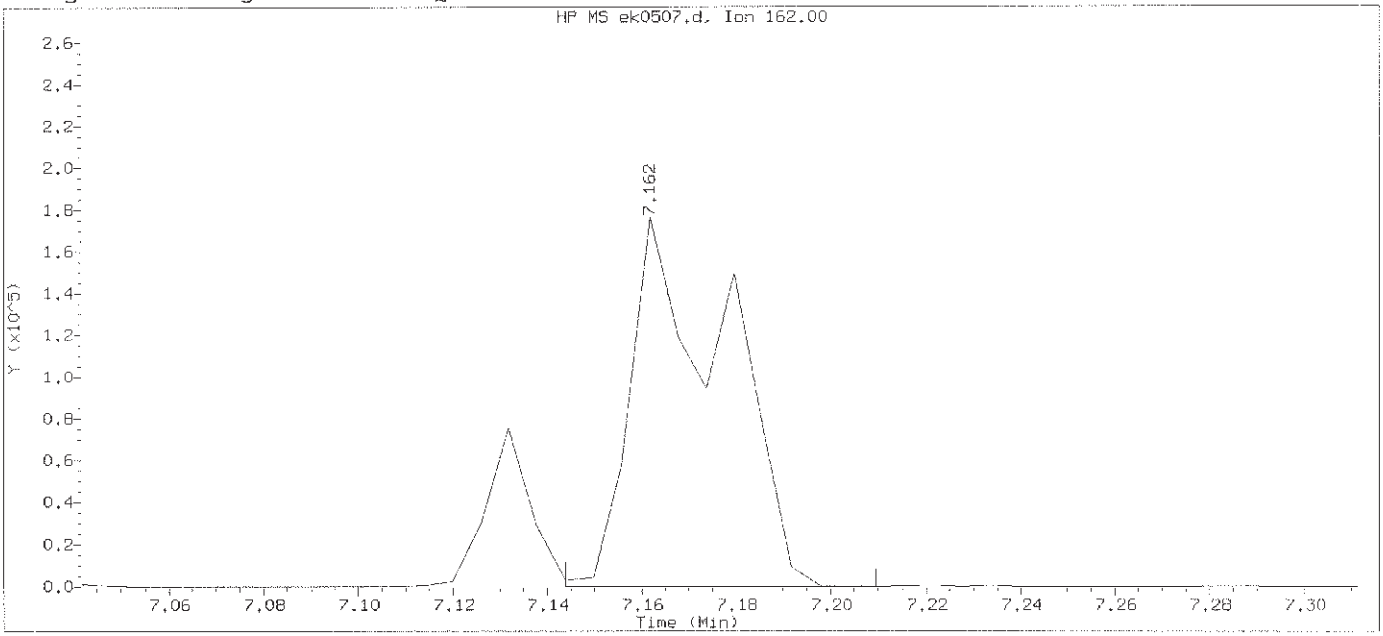
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

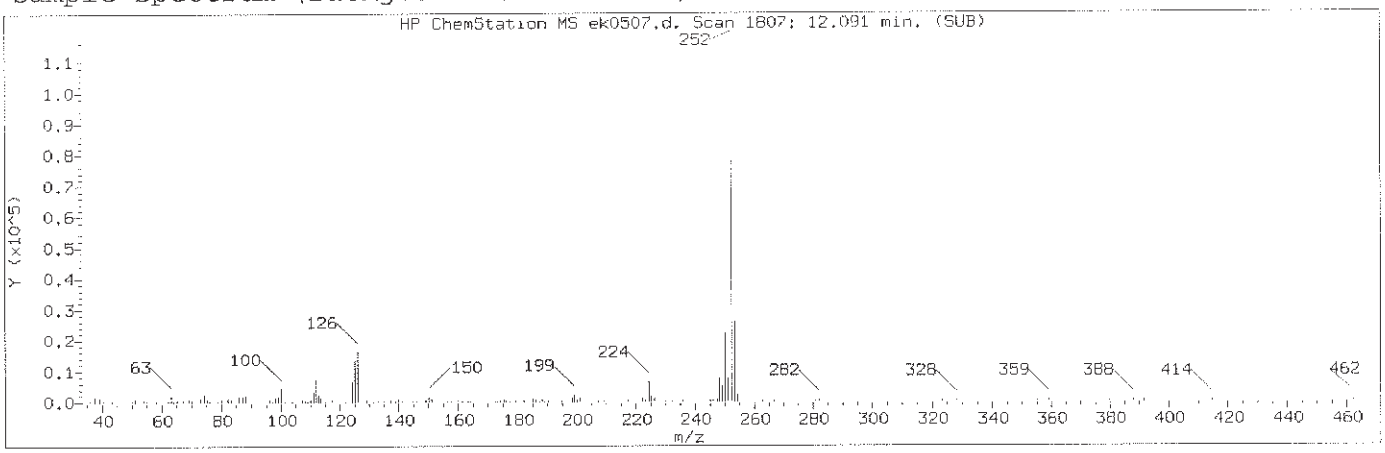
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

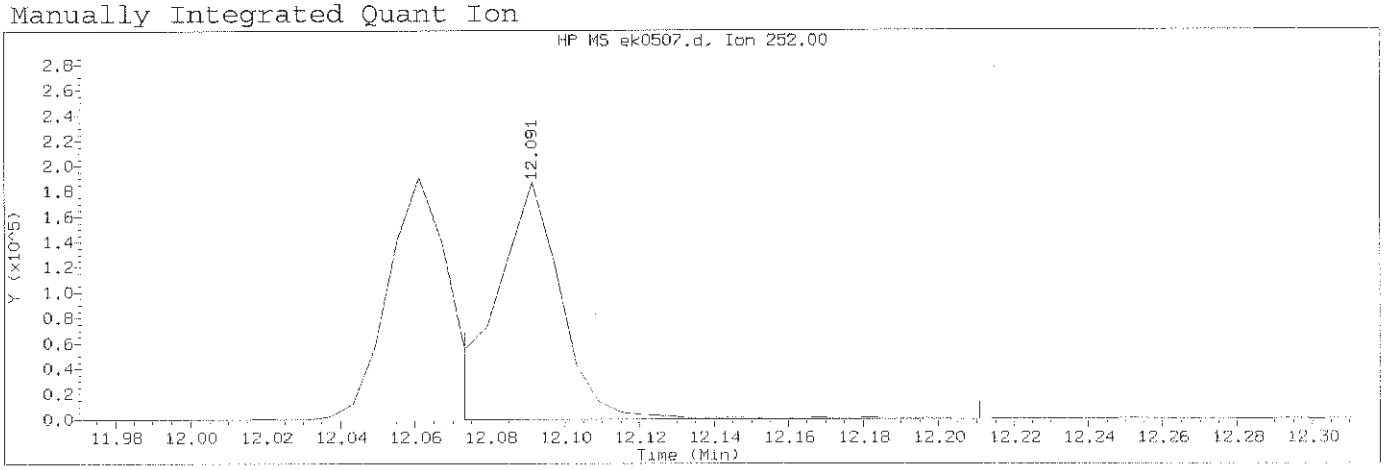
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area	: 247451		
On-column Amount (ng/ul)	: 5.6954		
Integration start scan	: 979	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:15
Date, time and analyst ID of latest file update: 12-Nov-2013 20:15 hb01996

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1807		
Retention Time (minutes)	: 12.091		
Quant Ion	: 252.00		
Area (flag)	: 224139A		
On-Column Amount (ng/ul)	: 5.2973		
Integration start scan	: 1803	Integration stop scan:	1826
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

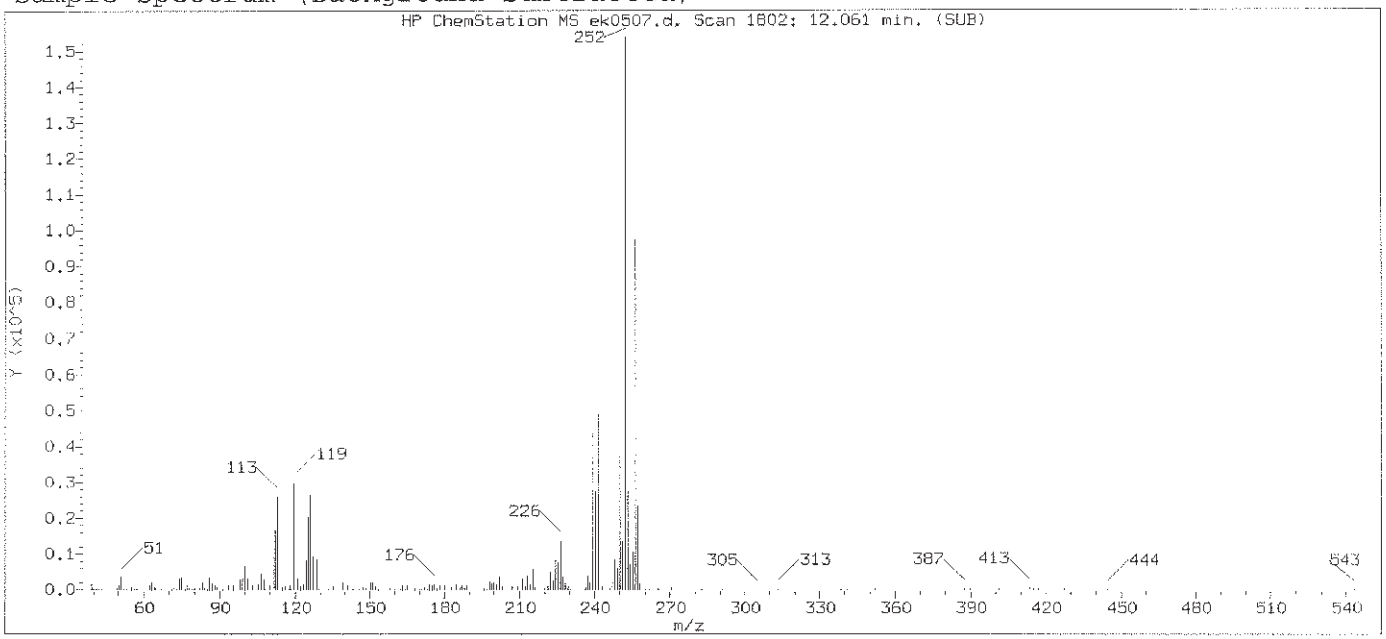
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature User ID: hb01996

Mark A. Ratcliff
Senior Specialist

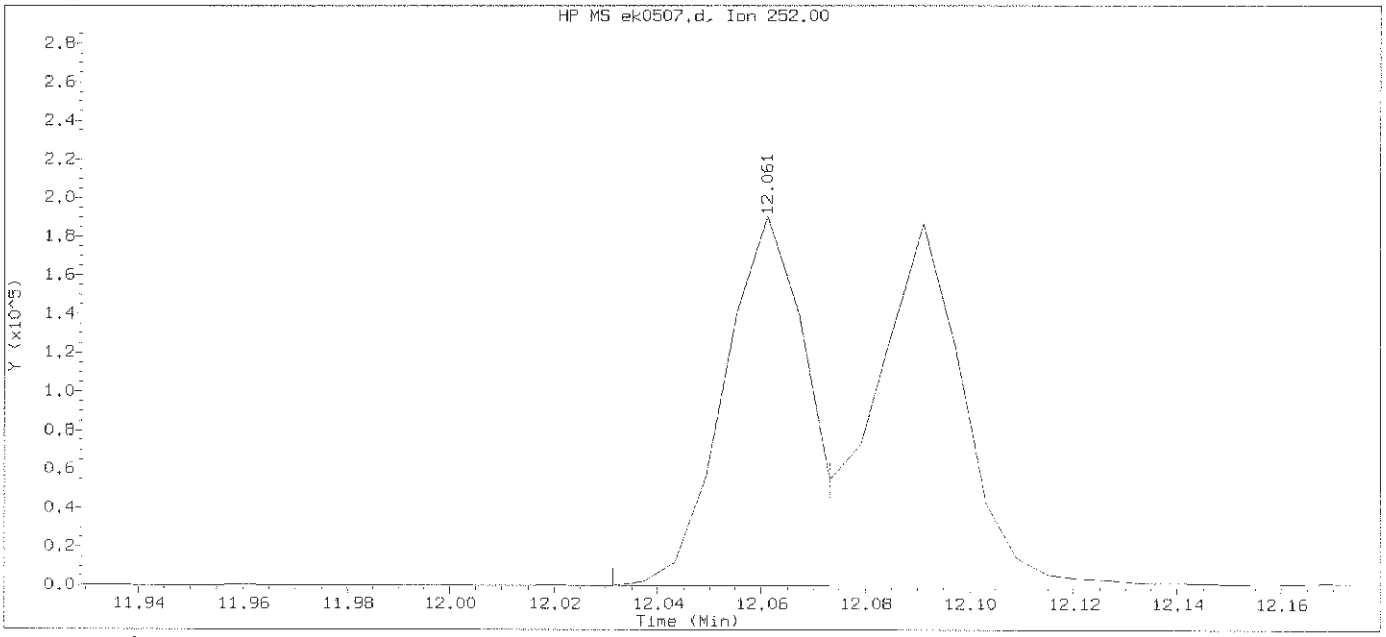
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



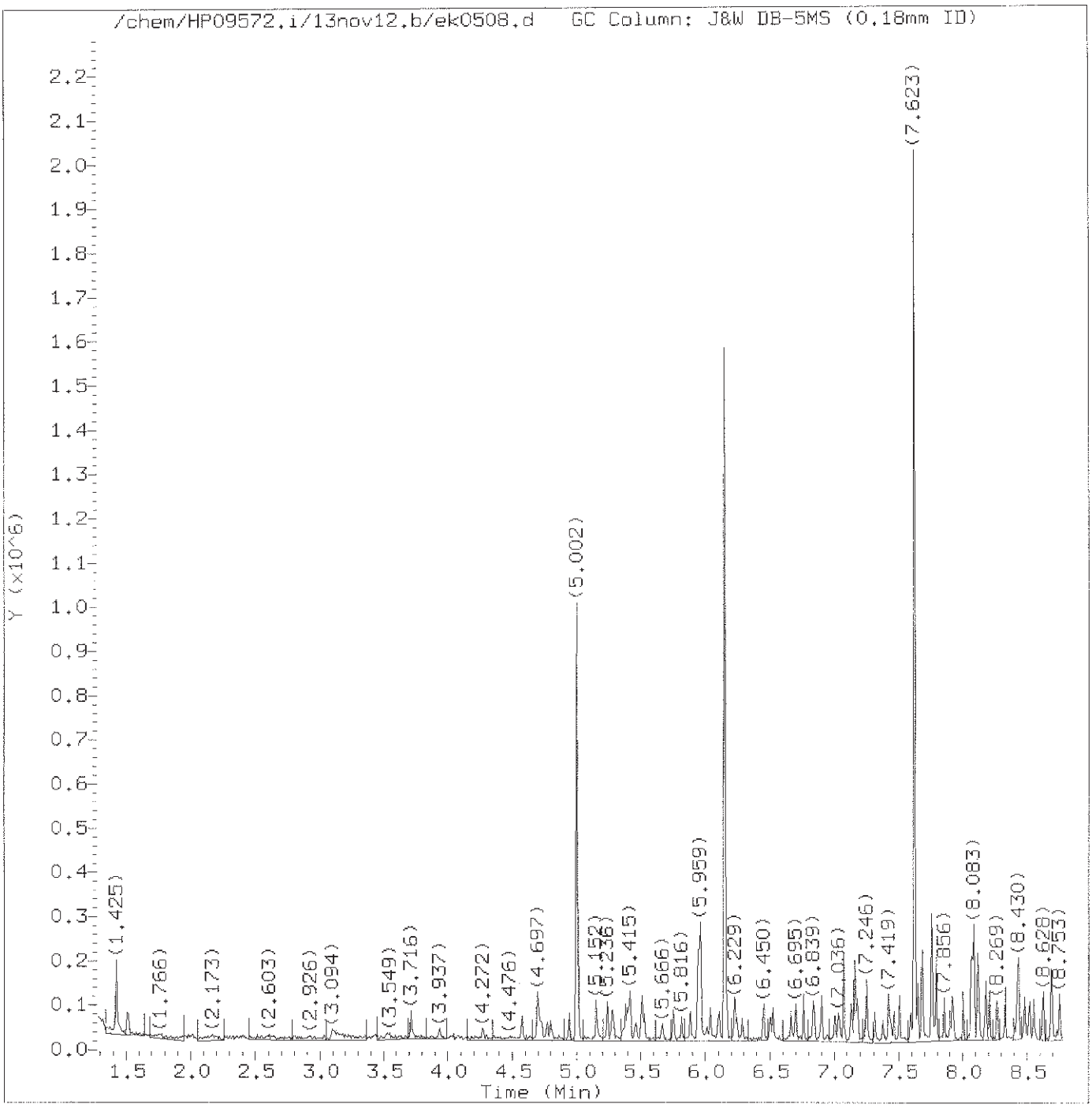
Data File: /chem/HP09572.i/13nov12.b/ek0507.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:13 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 15:39
Date, time and analyst ID of latest file update: 12-Nov-2013 15:39 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 204127		
On-column Amount (ng/ul)	: 3.9284		
Integration start scan	: 1796	Integration stop scan:	1803
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

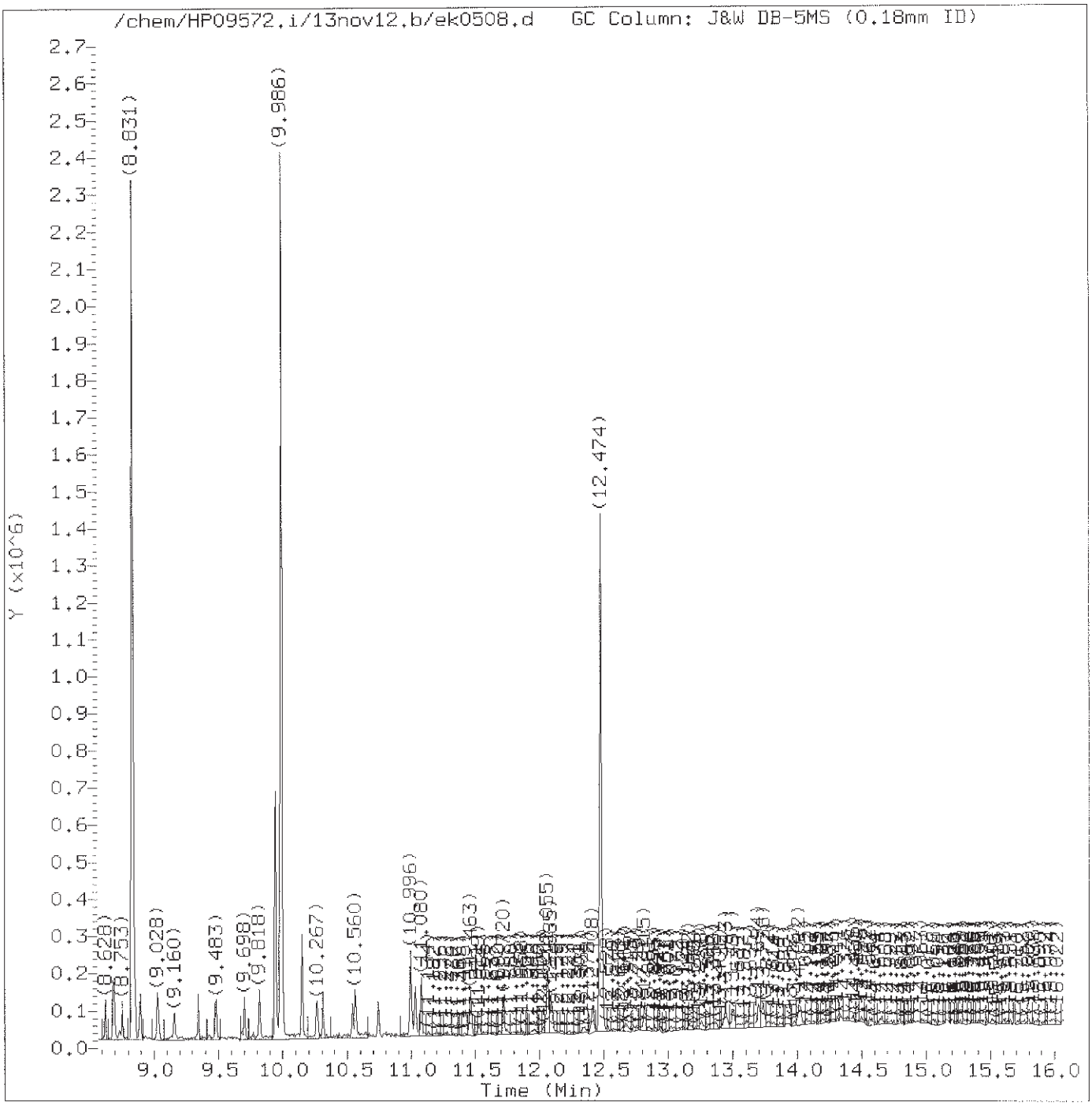
Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.760	88	4277	1.261
2) N-Nitrosodimethylamine	(1)	2.137	74	5589M	0.990
3) Pyridine	(1)	2.502	79	11412M	1.229
5) N-Nitrosomethylethylamine	(1)	3.094	88	7918M	1.537
4) 2-Picoline	(1)	3.100	93	12509M	1.099
6) Methyl methanesulfonate	(1)	3.531	80	6750	1.090
7)$2-Fluorophenol	(1)	3.716	112	18918	2.152
8) N-Nitrosodiethylamine	(1)	3.937	102	5223	0.991
10) Ethyl methanesulfonate	(1)	4.272	109	6915	1.261
20) Aniline	(1)	4.691	93	19794	1.106
18)$Phenol-d6	(1)	4.697	99	27760	2.073
17)$Phenol-d5	(1)	4.697	99	27760	2.073
19) Phenol	(1)	4.709	94	12614	0.906
21) bis(2-Chloroethyl)ether	(1)	4.769	93	12349	1.083
22) 2-Chlorophenol	(1)	4.799	128	8913	0.986
24) 1,3-Dichlorobenzene	(1)	4.942	146	10521	1.140
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	116773	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	10589	1.132
27) Benzyl alcohol	(1)	5.152	108	6384	0.914
28) 1,2-Dichlorobenzene	(1)	5.152	146	8344	0.955
30) Indene	(1)	5.236	115	20181	1.253
29) 2-Methylphenol	(1)	5.271	108	10227	1.021
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	13507	1.107
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	13507	1.107
33) N-Nitrosopyrrolidine	(1)	5.361	100	6724	1.065
34) Acetophenone	(1)	5.379	105	20646	1.233
36) N-Nitroso-di-n-propylamine	(1)	5.397	70	12381	1.279
37) N-Nitrosomorpholine	(1)	5.403	56	9115	1.154
38) o-Toluidine	(1)	5.415	106	18049	1.056
35) 4-Methylphenol	(1)	5.421	108	12261	1.028
39) Hexachloroethane	(1)	5.463	117	4943	1.265
40)$Nitrobenzene-d5	(2)	5.511	82	28778	2.233
41) Nitrobenzene	(2)	5.529	77	15576	1.163
42) N-Nitrosopiperidine	(2)	5.666	114	6241	1.038
52) Isophorone	(2)	5.750	82	25272	1.062
53) 2-Nitrophenol	(2)	5.816	139	5101	0.937
54) 2,4-Dimethylphenol	(2)	5.888	107	12569	0.996
55) O,O,O-triethylphosphorothioate	(2)	5.947	198	6651	1.400
56) Benzoic acid	(2)	5.959	105	78617	7.714
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	17225	1.086

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.037	162	7744	0.953
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	7638	0.954
60)*Naphthalene-d8	(2)	6.145	136	553162	20.000
61) Naphthalene	(2)	6.163	128	33066	1.134
62) 4-Chloroaniline	(2)	6.223	127	13075	1.025
63) 2,6-Dichlorophenol	(2)	6.229	162	7771	0.973
64) Hexachloropropene	(2)	6.247	213	6305	1.293
65) Hexachlorobutadiene	(2)	6.282	225	4751	1.125
67) Quinoline	(2)	6.450	129	23212	1.125
69) Caprolactam	(2)	6.504	113	7478	1.582
68) N-Nitrosodi-n-butylamine	(2)	6.528	84	14682	1.181
70) 4-Chloro-3-methylphenol	(2)	6.659	107	12798	1.053
71) Safrole	(2)	6.695	162	7319	0.900
72) 2-Methylnaphthalene	(2)	6.761	142	23206	1.108
75) 1-Methylnaphthalene	(2)	6.839	142	20478	1.067
76) Hexachlorocyclopentadiene	(3)	6.899	237	2724	0.702
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.905	216	8441	1.038
78) cis-Isosafrole	(3)	6.941	162	1367	0.100
79) 2,4,6-Trichlorophenol	(3)	7.006	196	4818	0.785
80) 2,4,5-Trichlorophenol	(3)	7.036	196	4946	0.767
81)$2-Fluorobiphenyl	(3)	7.072	172	44687	2.089
83) Isosafrole	(3)	7.132	162	8242	0.951
82) trans-Isosafrole	(3)	7.132	162	8242	0.846
86) 1,1'-Biphenyl	(3)	7.156	154	30413	1.114
87) 2-Chloronaphthalene	(3)	7.162	162	19242	0.859
88) 1-Chloronaphthalene	(3)	7.180	162	25241A	1.218
89) Diphenyl ether	(3)	7.246	170	16684	1.151
90) 2-Nitroaniline	(3)	7.252	138	5462	0.720
91) 1,4-Naphthoquinone	(3)	7.311	158	9081	1.004
92) 1,4-Dinitrobenzene	(3)	7.371	168	4131	1.024
93) Dimethylphthalate	(3)	7.419	163	27316	1.083
94) 1,3-Dinitrobenzene	(3)	7.431	168	4012	0.853
95) 2,6-Dinitrotoluene	(3)	7.461	165	7059	1.146
96) Acenaphthylene	(3)	7.503	152	29376	0.965
97) 3-Nitroaniline	(3)	7.593	138	6973	0.996
99)*Acenaphthene-d10	(3)	7.623	164	374201	20.000
100) Acenaphthene	(3)	7.646	153	24339	1.115
101) 2,4-Dinitrophenol	(3)	7.682	184	20713	6.406
102) 4-Nitrophenol	(3)	7.754	109	27049	4.743
103) Pentachlorobenzene	(3)	7.760	250	8677	1.176

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) 2,4-Dinitrotoluene	(3)	7.790	165	8421	1.012
105) Dibenzofuran	(3)	7.790	168	36402	1.203
106) 1-Naphthylamine	(3)	7.856	143	26033	1.072
107) 2,3,4,6-Tetrachlorophenol	(3)	7.898	232	4971	0.973
108) 2-Naphthylamine	(3)	7.922	143	27711	1.126
109) Diethylphthalate	(3)	7.999	149	29314	1.109
110) Thionazin	(3)	8.065	107	7322	1.233
111) Fluorene	(3)	8.071	166	26221	1.021
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	12003	1.035
113) 5-Nitro-o-toluidine	(3)	8.083	152	10070M	1.233
114) 4-Nitroaniline	(3)	8.089	138	7059	0.974
115) 4,6-Dinitro-2-methylphenol	(4)	8.119	198	17440	3.695
118) NDPA as diphenylamine	(4)	8.179	169	24475	1.033
117) N-Nitrosodiphenylamine	(4)	8.179	169	24475	1.028
119) 1,2-Diphenylhydrazine	(4)	8.209	77	32534	0.978
120)$2,4,6-Tribromophenol	(3)	8.269	330	6252	2.281
122) Tetraethyldithiopyrophosphate	(4)	8.328	97	6794	1.183
129) 1,3,5-Trinitrobenzene	(4)	8.406	213	2616	0.849
130) Diallate (peak 1)	(4)	8.424	86	16702	0.870
131) Phorate	(4)	8.430	75	21139	0.791
132) Phenacetin	(4)	8.436	108	19327	1.069
133) 4-Bromophenyl-phenylether	(4)	8.484	248	7092	1.117
134) Diallate (peak 2)	(4)	8.496	86	3366	0.378
137) Hexachlorobenzene	(4)	8.514	284	6171	0.992
139) Dimethoate	(4)	8.556	87	14221	1.002
141) Atrazine	(4)	8.628	200	7966	0.999
143) 4-Aminobiphenyl	(4)	8.687	169	25322	0.986
142) Pentachlorophenol	(4)	8.687	266	3037	0.764
144) Pentachloronitrobenzene	(4)	8.693	237	3660	1.096
146) Pronamide	(4)	8.753	173	11633	0.922
148)*Phenanthrene-d10	(4)	8.831	188	687104	20.000
149) Phenanthrene	(4)	8.849	178	40282	1.037
147) Dinoseb	(4)	8.849	211	4795	0.754
150) Anthracene	(4)	8.891	178	41545	1.060
151) Carbazole	(4)	9.028	167	39624	1.044
152) Methyl parathion	(4)	9.154	109	7815	0.721
154) Di-n-butylphthalate	(4)	9.345	149	46502	0.981
155) Parathion	(4)	9.477	109	5757	0.772
156) 4-Nitroquinoline-1-oxide	(4)	9.483	190	1684	0.474
159) Isodrin	(4)	9.698	193	6579	1.367

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Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.818	202	47751	1.176
164) Benzidine	(5)	9.944	184	242306	8.378
165)*Pyrene-d10	(5)	9.986	212	805741	20.000
166) Pyrene	(5)	10.003	202	45682	1.038
169)$Terphenyl-d14	(5)	10.147	244	61106	2.128
170) p-Dimethylaminoazobenzene	(5)	10.267	225	8057	0.904
171) Chlorobenzilate	(5)	10.309	139	17143	1.000
173) 3,3'-Dimethylbenzidine	(5)	10.536	212	23961	1.011
174) Butylbenzylphthalate	(5)	10.560	149	21960	0.940
175) 2-Acetylaminofluorene	(5)	10.739	181	20013	1.010
176) 3,3'-Dichlorobenzidine	(5)	10.991	252	14094	1.046
177) 4,4'-Methylenebis(2-Chloroanil	(5)	10.996	231	6417	0.871
178) Benzo(a)anthracene	(5)	11.002	228	44945	1.146
180) Chrysene	(5)	11.032	228	40487	1.099
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	34528	1.120
183) 6-Methylchrysene	(5)	11.463	242	28487	1.070
184) Di-n-octylphthalate	(6)	11.720	149	45884	0.866
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.055	256	16292	0.922
186) Benzo(b)fluoranthene	(6)	12.061	252	34268M	0.944
187) Benzo(k)fluoranthene	(6)	12.085	252	40005M	1.104
189) Benzo(a)pyrene	(6)	12.408	252	34310	1.067
190)*Perylene-d12	(6)	12.474	264	579064	20.000
191) 3-Methylcholanthrene	(6)	12.743	268	16924	0.994
192) Dibenz(a,h)acridine	(6)	13.443	279	20850	0.894
193) Dibenz(a,j)acridine	(6)	13.503	279	22681	0.908
194) Indeno(1,2,3-cd)pyrene	(6)	13.694	276	34814	1.074
195) Dibenz(a,h)anthracene	(6)	13.736	278	25135	0.916
196) Benzo(g,h,i)perylene	(6)	14.018	276	29558	1.090
204) Diallate TRANS/CIS	(4)			20068	1.207

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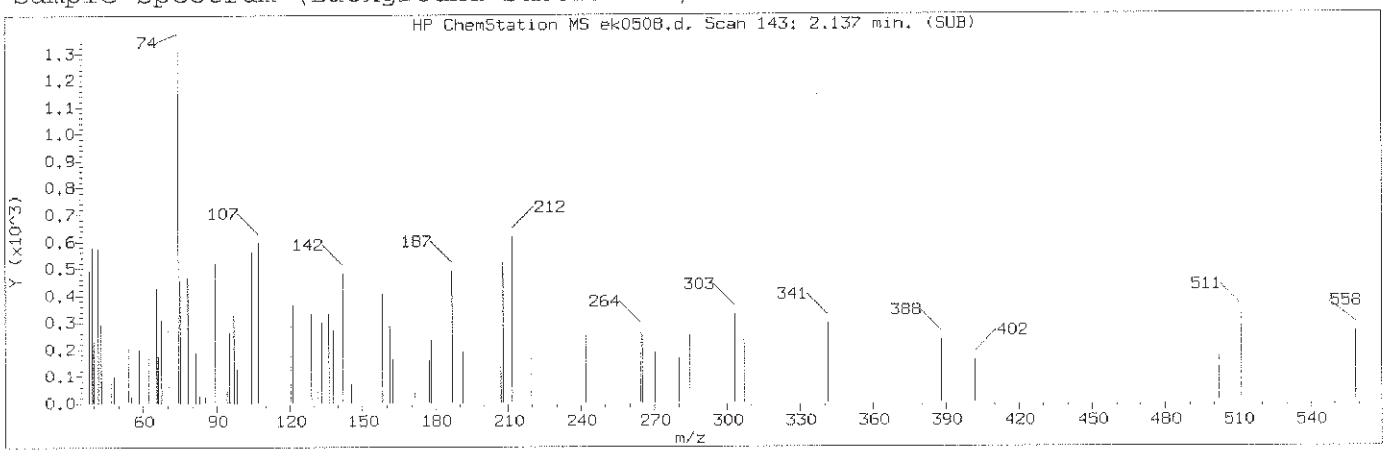
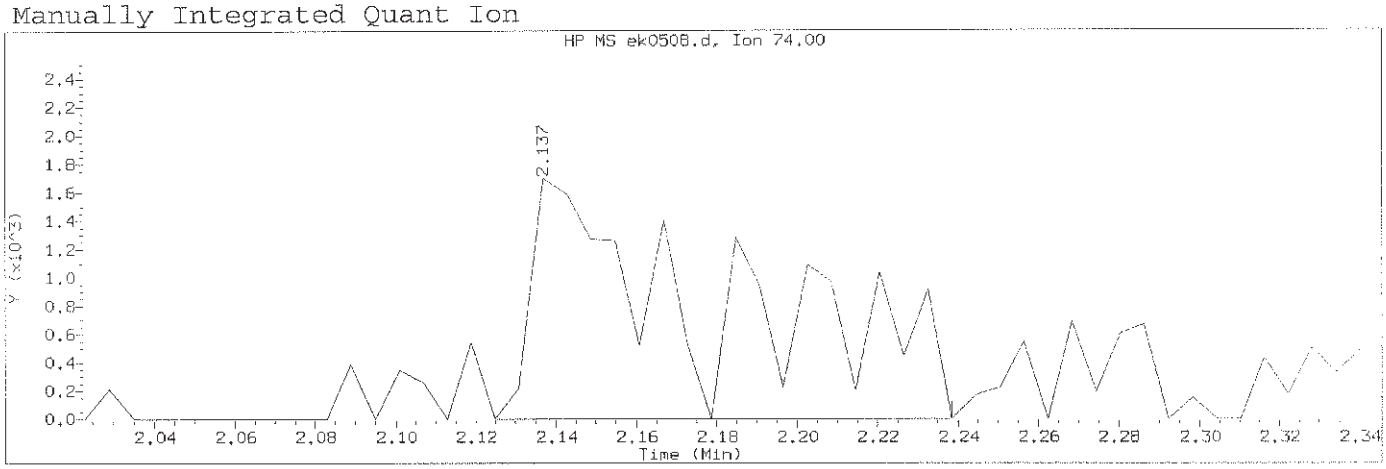
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

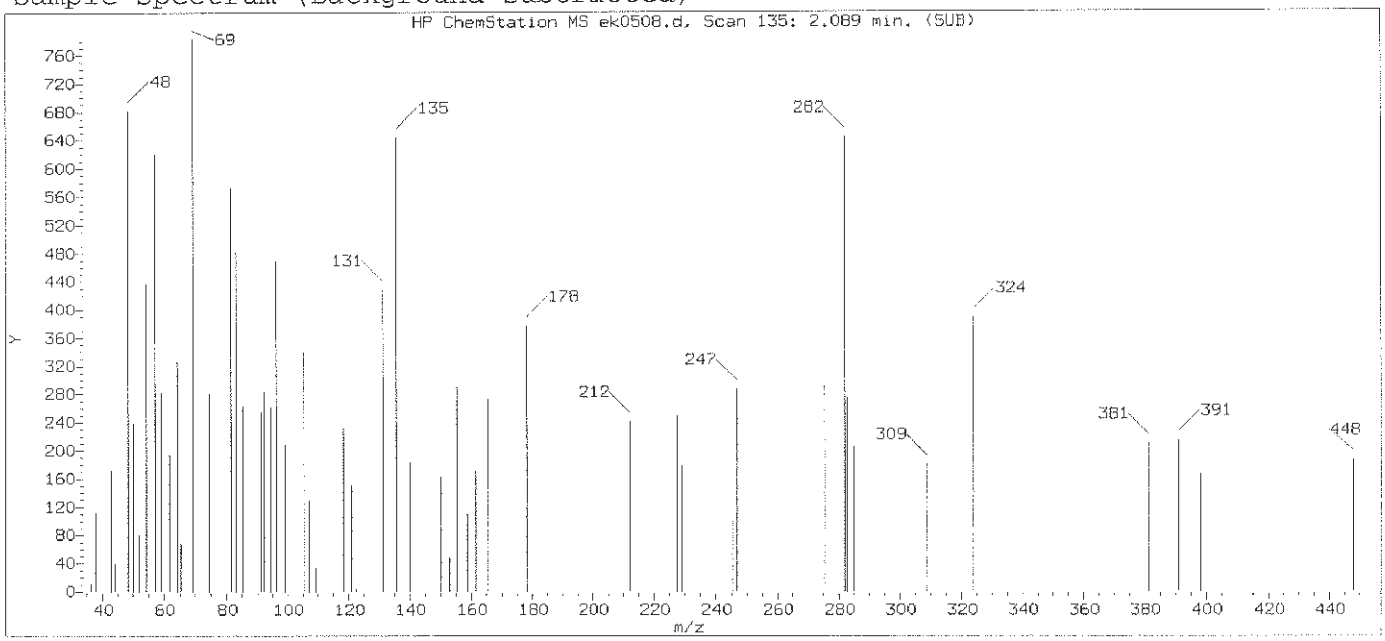
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 143		
Retention Time (minutes)	: 2.137		
Quant Ion	: 74.00		
Area (flag)	: 5589M		
On-Column Amount (ng/ul)	: 0.9902		
Integration start scan	: 140	Integration stop scan:	159
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

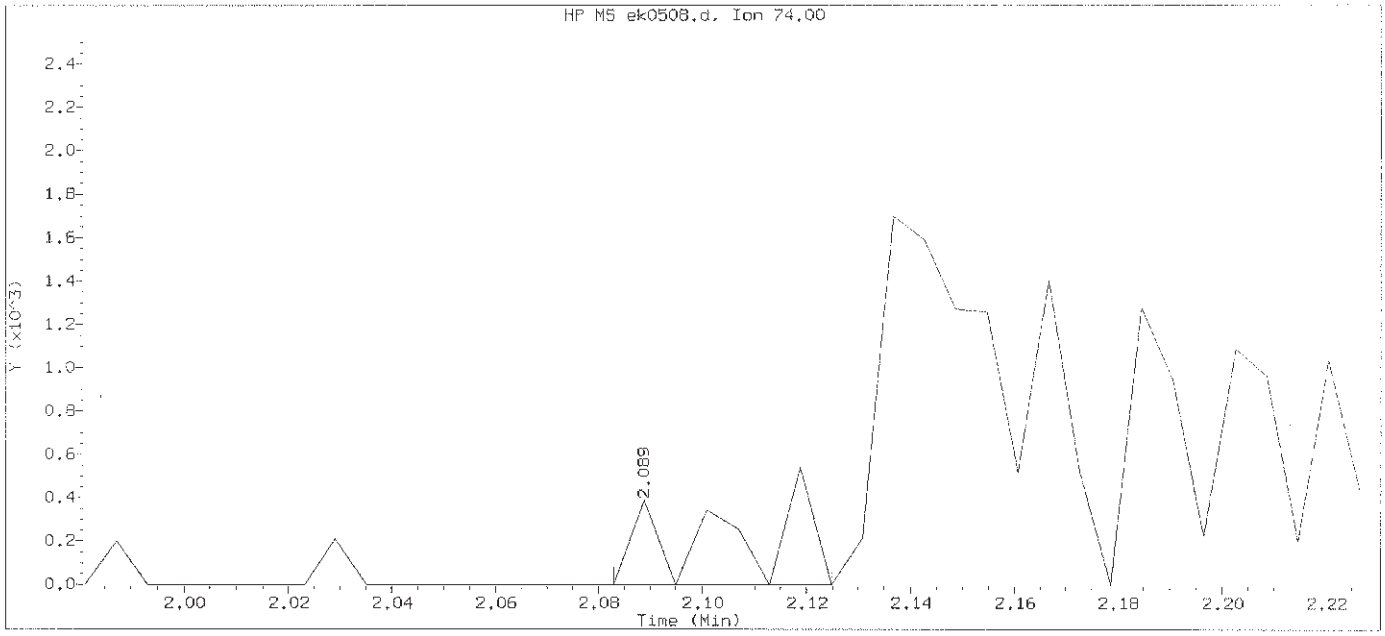
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

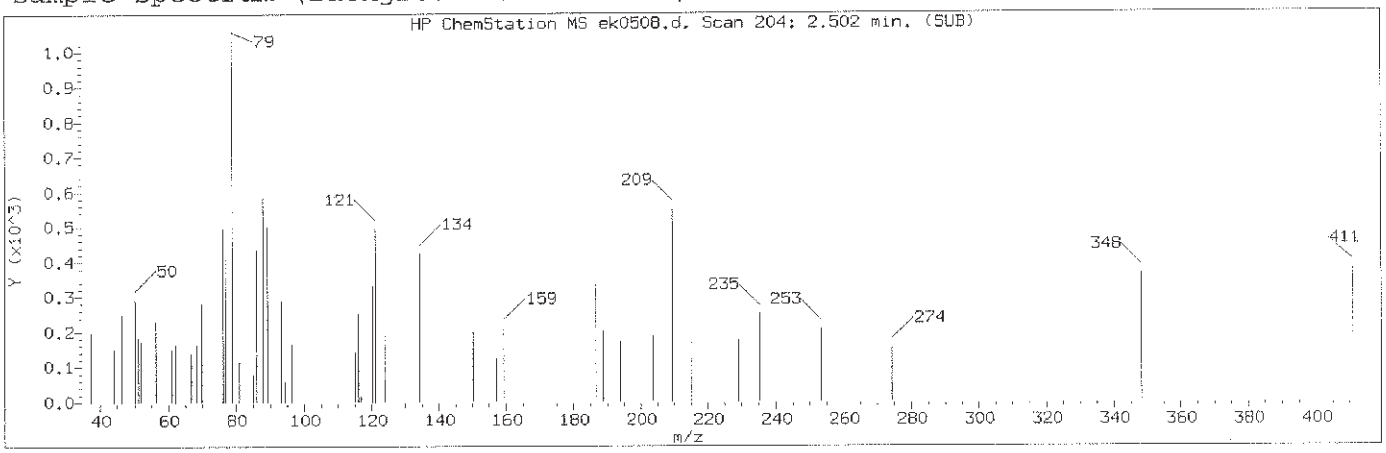
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

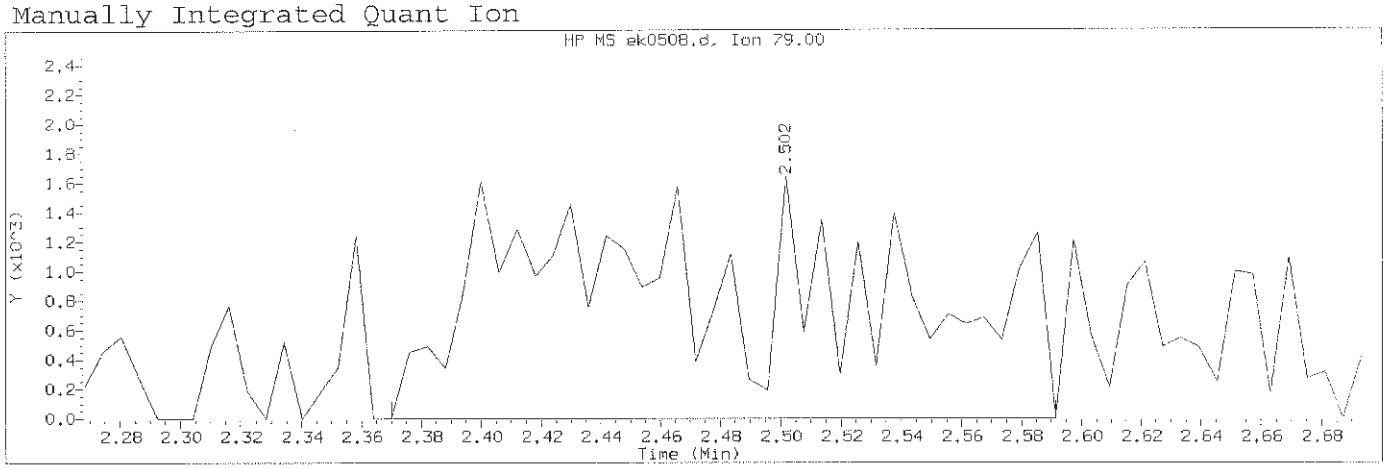
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 135		
Retention Time (minutes)	: 2.089		
Quant Ion	: 74.00		
Area	: 550		
On-column Amount (ng/ul)	: 0.1018		
Integration start scan	: 133	Integration stop scan:	140
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 204		
Retention Time (minutes)	: 2.502		
Quant Ion	: 79.00		
Area (flag)	: 11412M		
On-Column Amount (ng/ul)	: 1.2287		
Integration start scan	: 181	Integration stop scan:	218
Y at integration start	: 0	Y at integration end:	0

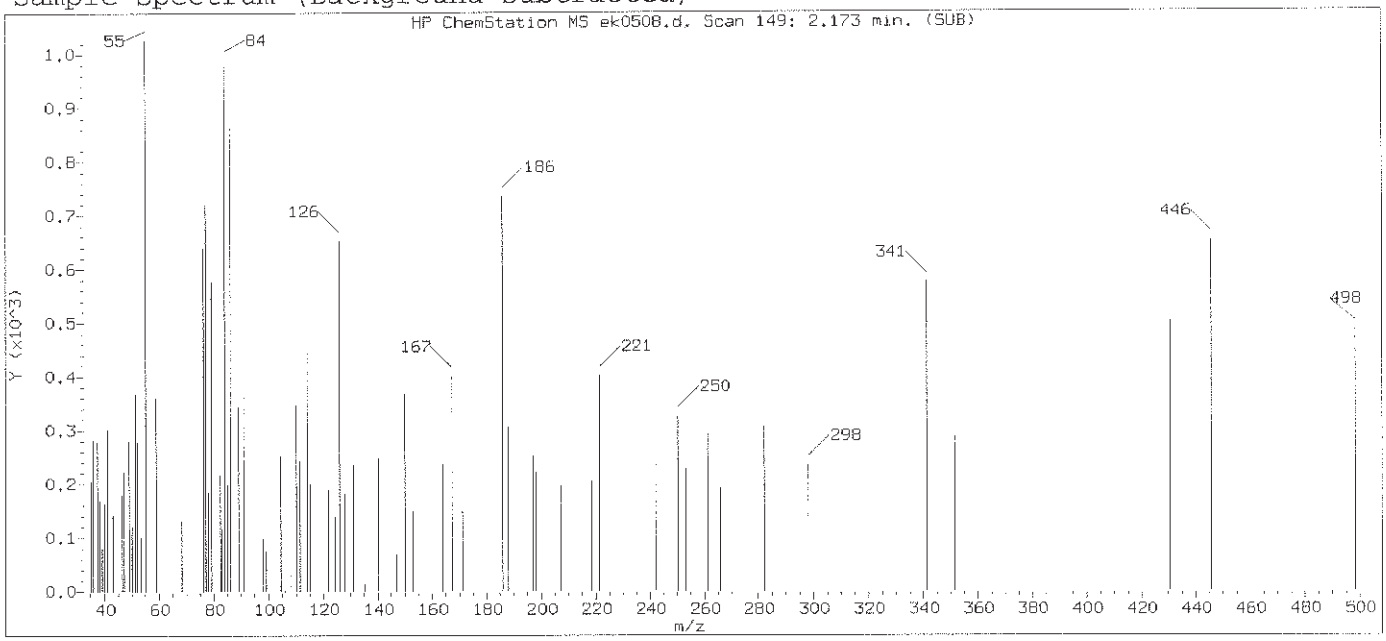
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

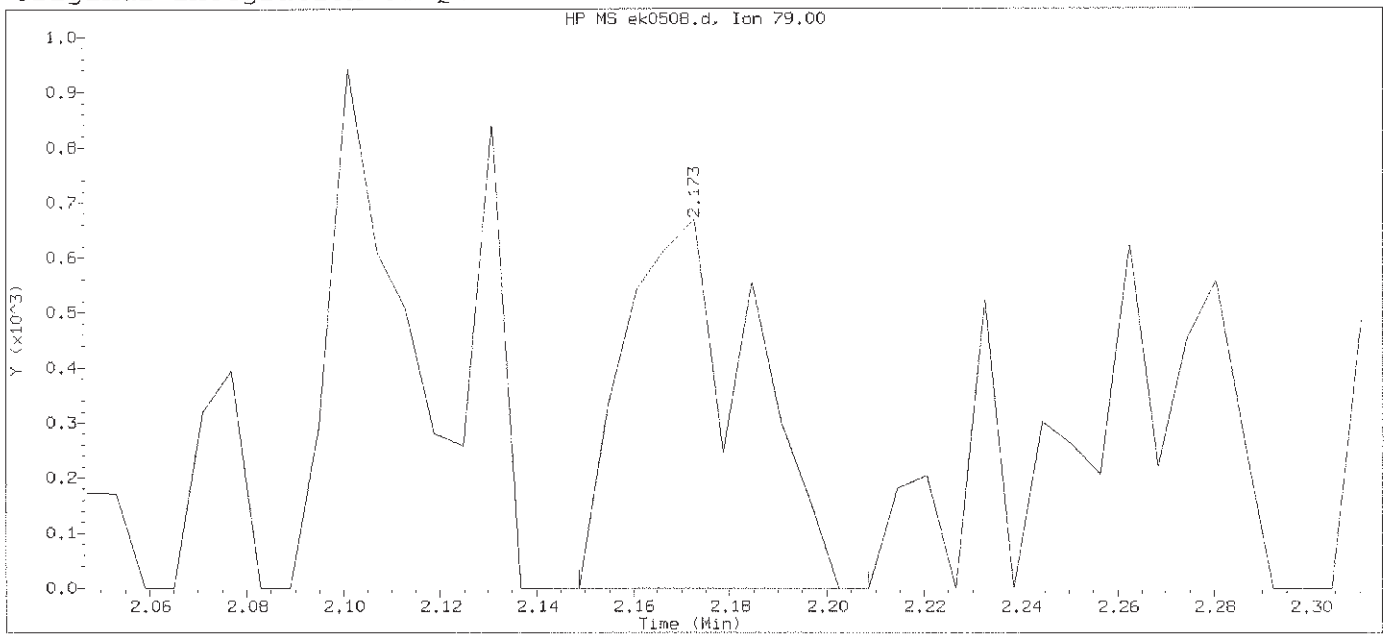
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

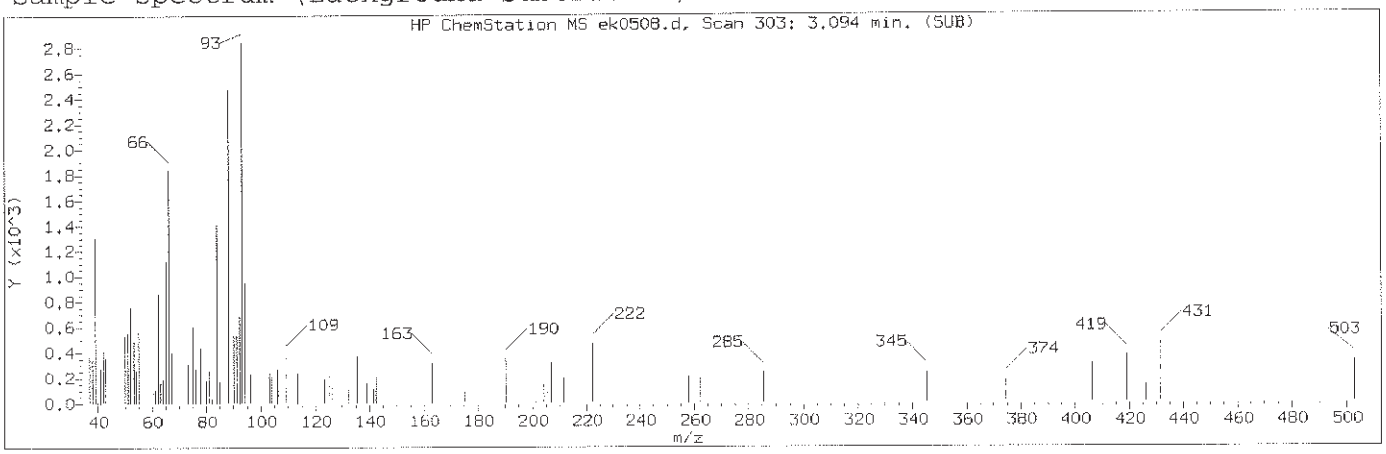
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

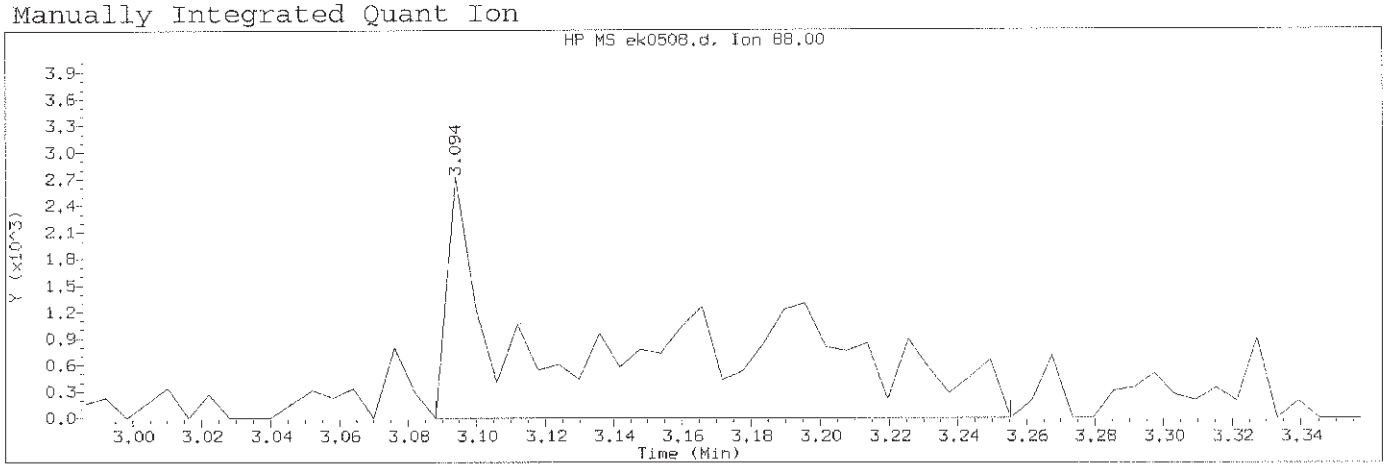
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 149		
Retention Time (minutes)	: 2.173		
Quant Ion	: 79.00		
Area	: 1227		
On-column Amount (ng/ul)	: 0.1862		
Integration start scan	: 144	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

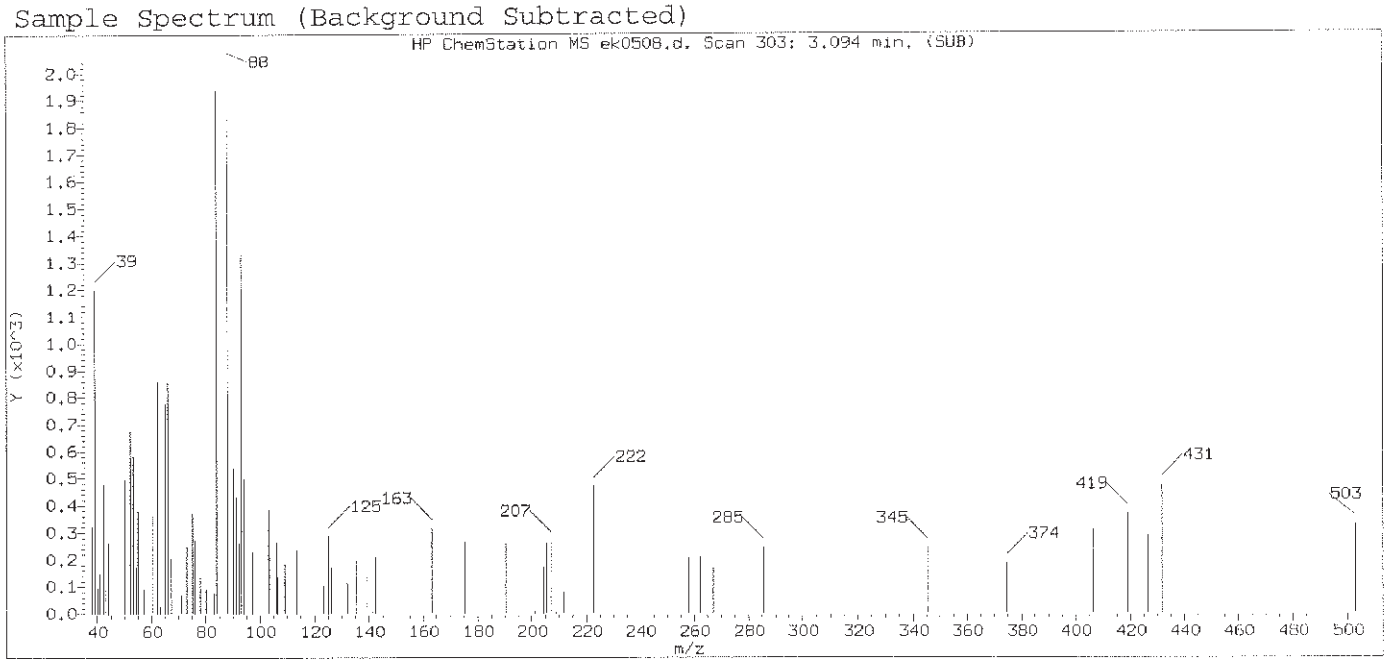
Compound Number	: 5		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 303		
Retention Time (minutes)	: 3.094		
Quant Ion	: 88.00		
Area (flag)	: 7918M		
On-Column Amount (ng/ul)	: 1.5367		
Integration start scan	: 301	Integration stop scan:	329
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

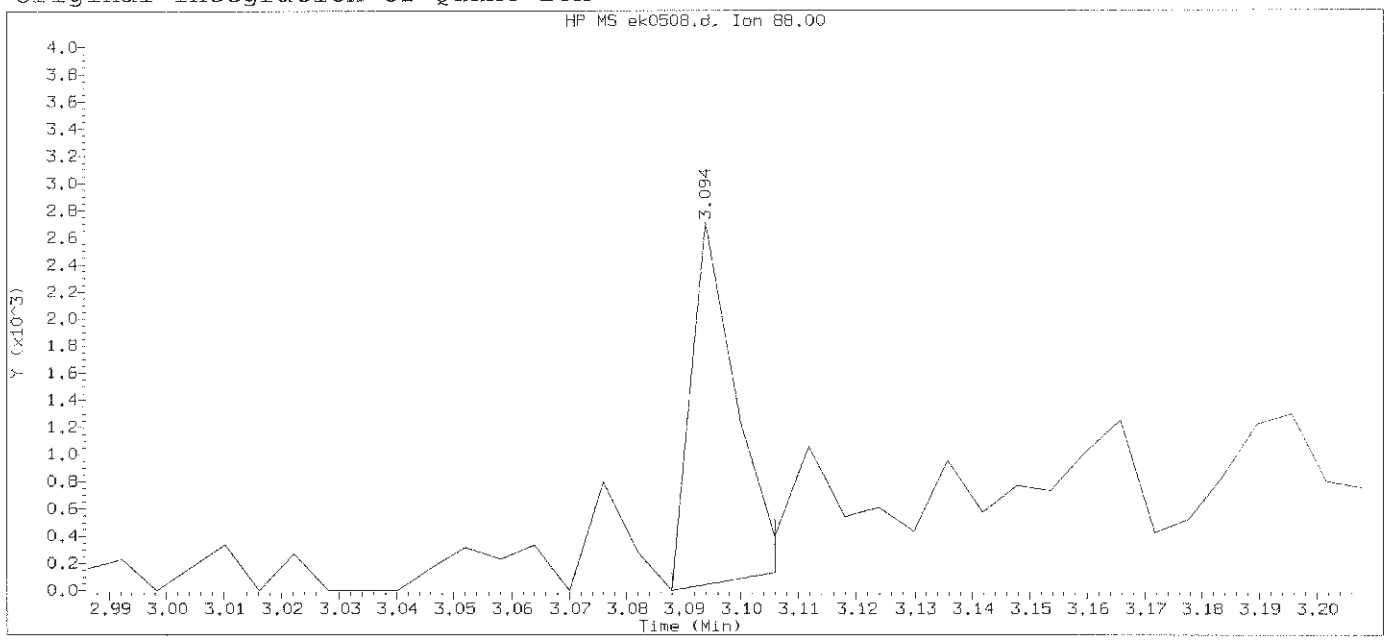
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

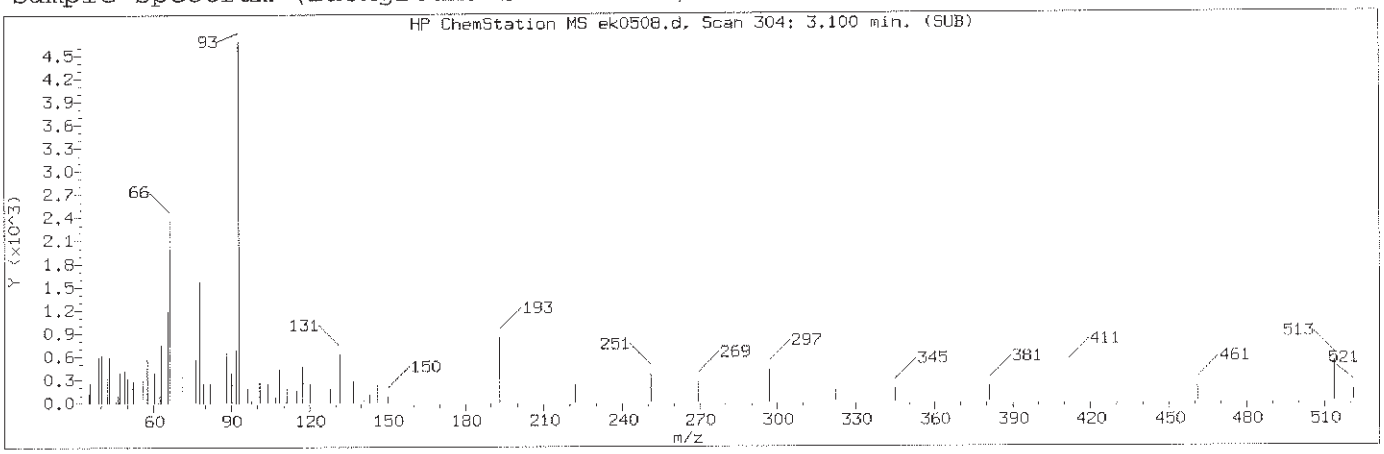
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

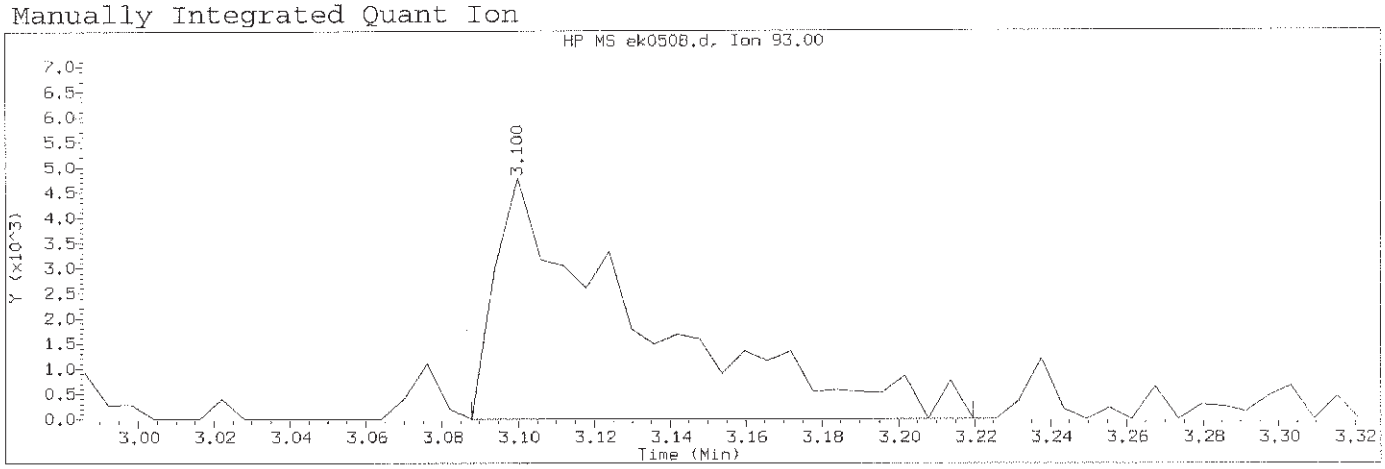
Compound Number	: 5		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 303		
Retention Time (minutes)	: 3.094		
Quant Ion	: 88.00		
Area	: 1415		
On-column Amount (ng/ul)	: 0.2674		
Integration start scan	: 301	Integration stop scan:	304
Y at integration start	: 0	Y at integration end:	132

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newal11-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

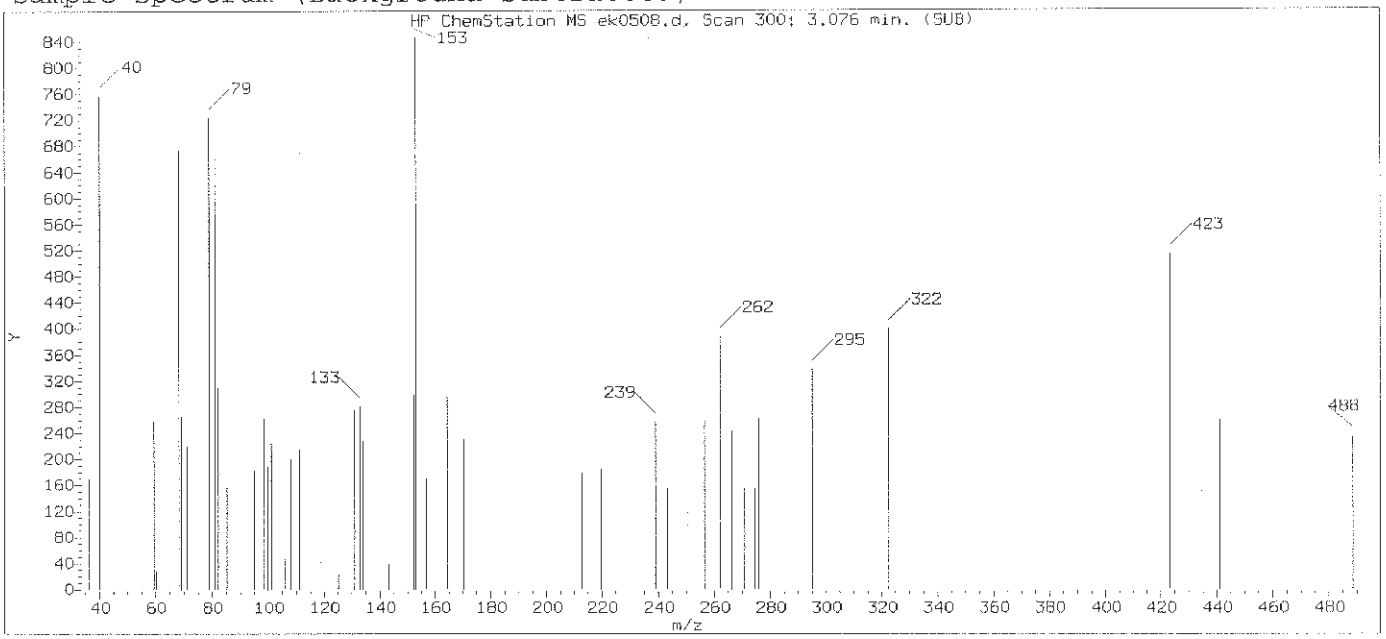
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 304		
Retention Time (minutes)	: 3.100		
Quant Ion	: 93.00		
Area (flag)	: 12509M		
On-Column Amount (ng/ul)	: 1.0987		
Integration start scan	: 301	Integration stop scan:	323
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

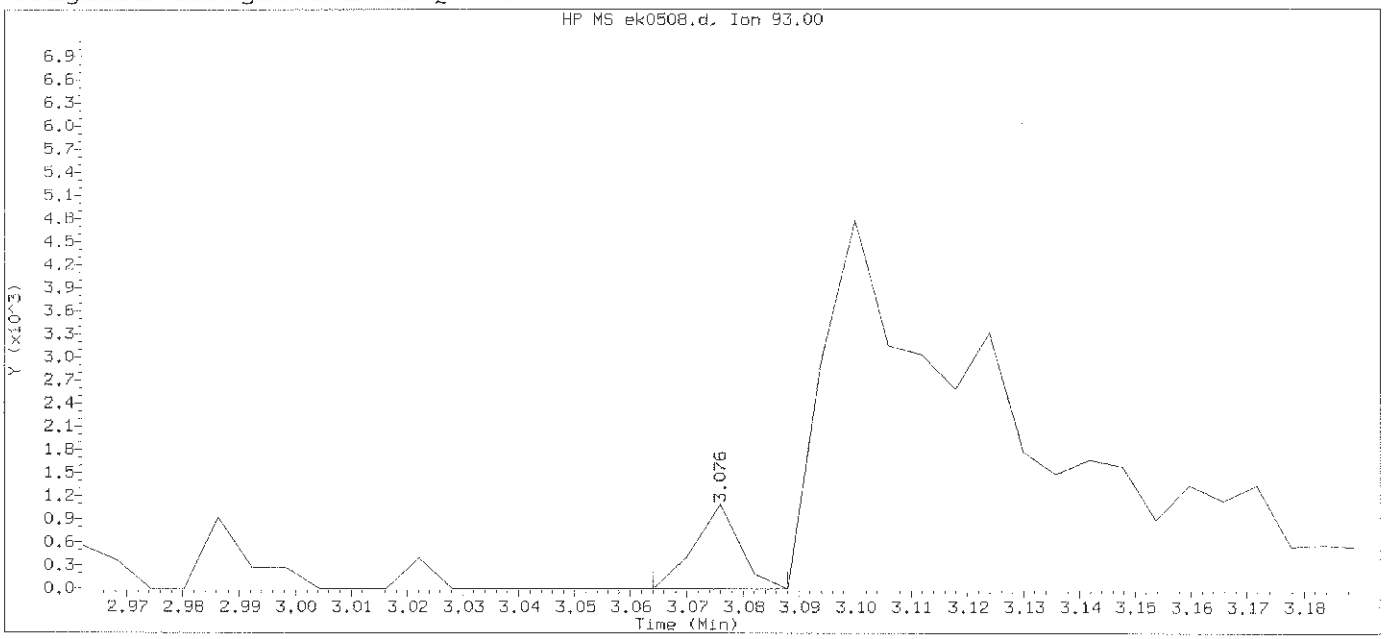
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: _____
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

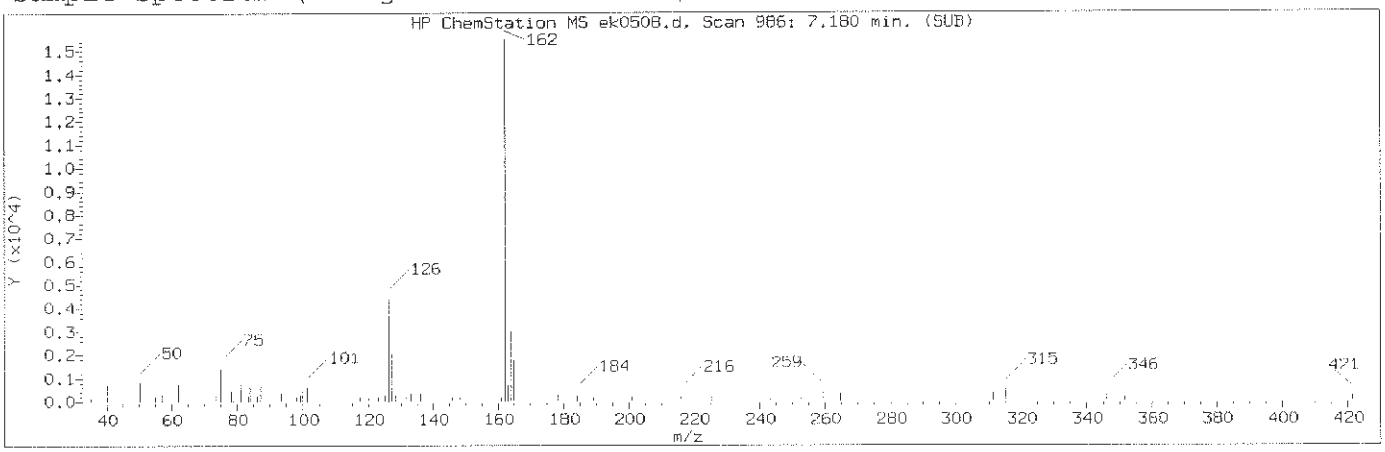
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

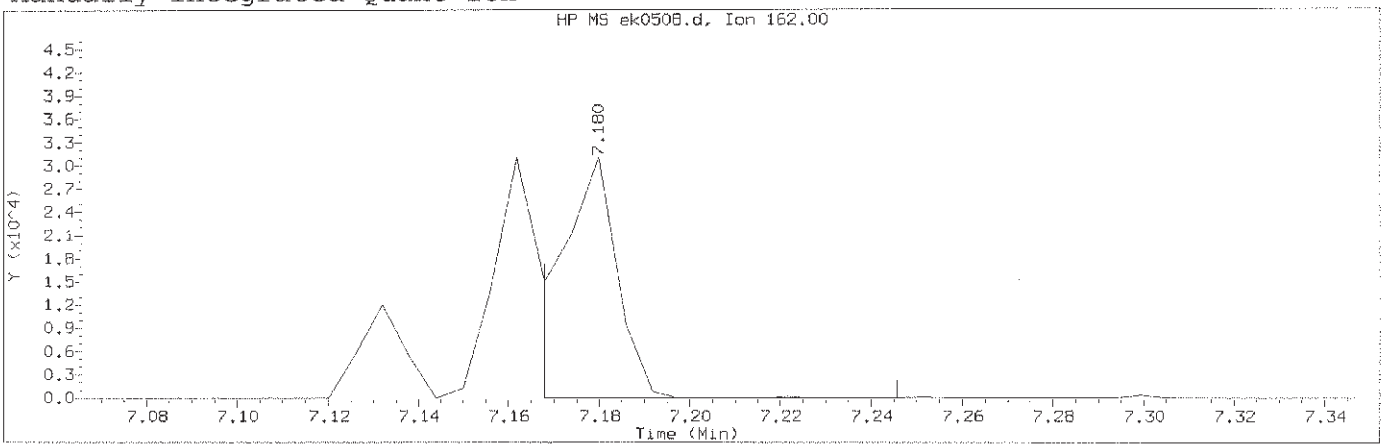
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 300		
Retention Time (minutes)	: 3.076		
Quant Ion	: 93.00		
Area	: 611		
On-column Amount (ng/ul)	: 0.0794		
Integration start scan	: 297	Integration stop scan:	301
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

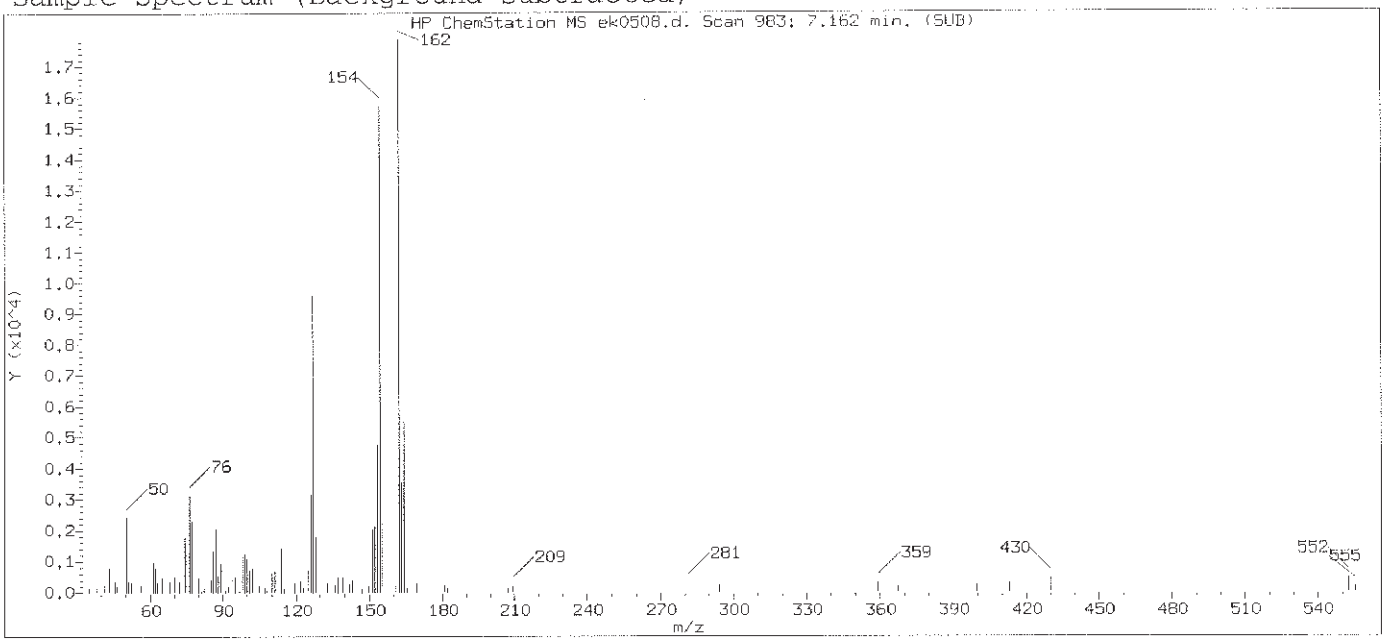
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 986		
Retention Time (minutes)	: 7.180		
Quant Ion	: 162.00		
Area (flag)	: 25241A		
On-Column Amount (ng/ul)	: 1.2183		
Integration start scan	: 983	Integration stop scan:	996
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

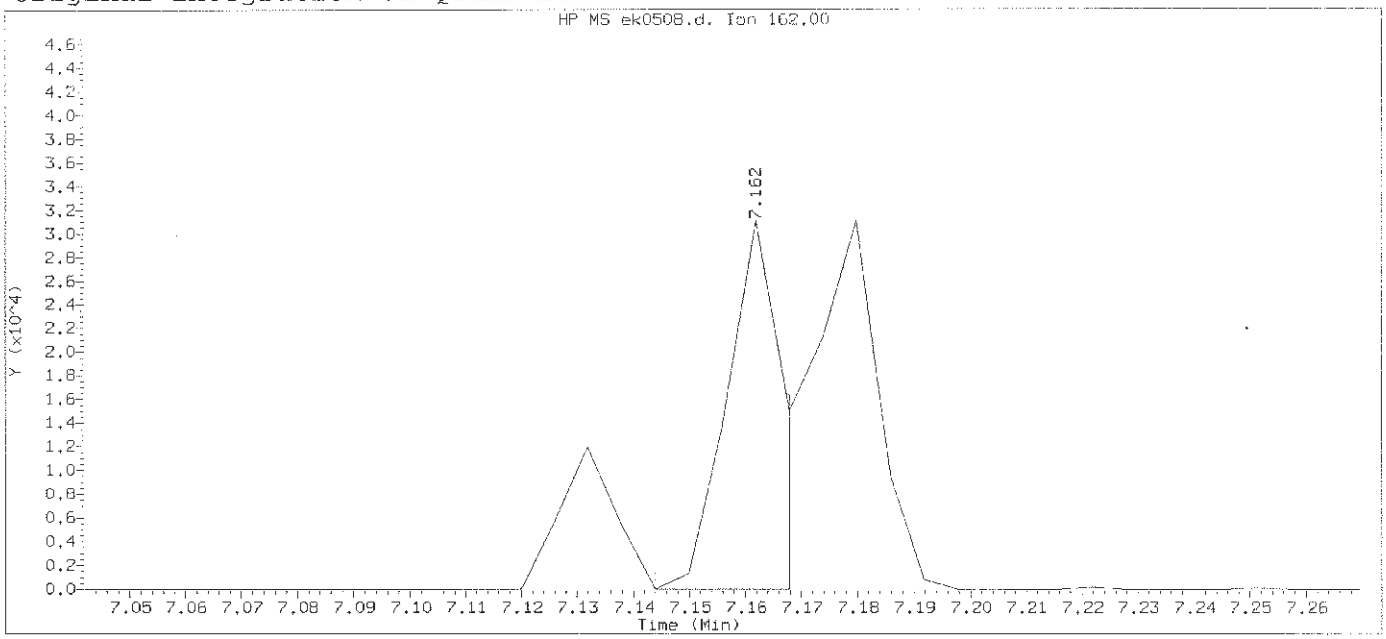
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: _____
Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

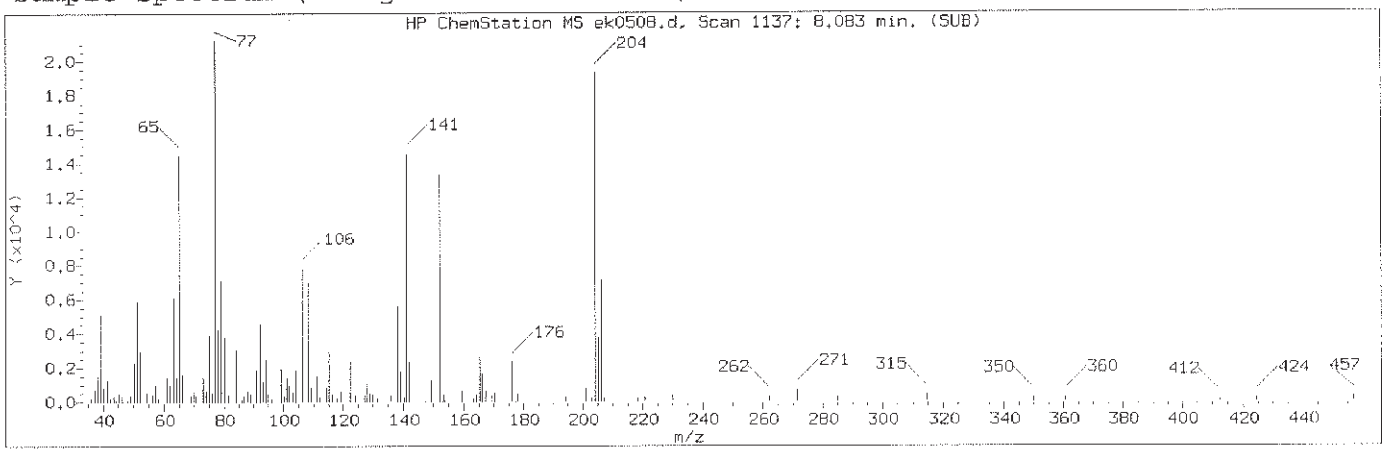
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

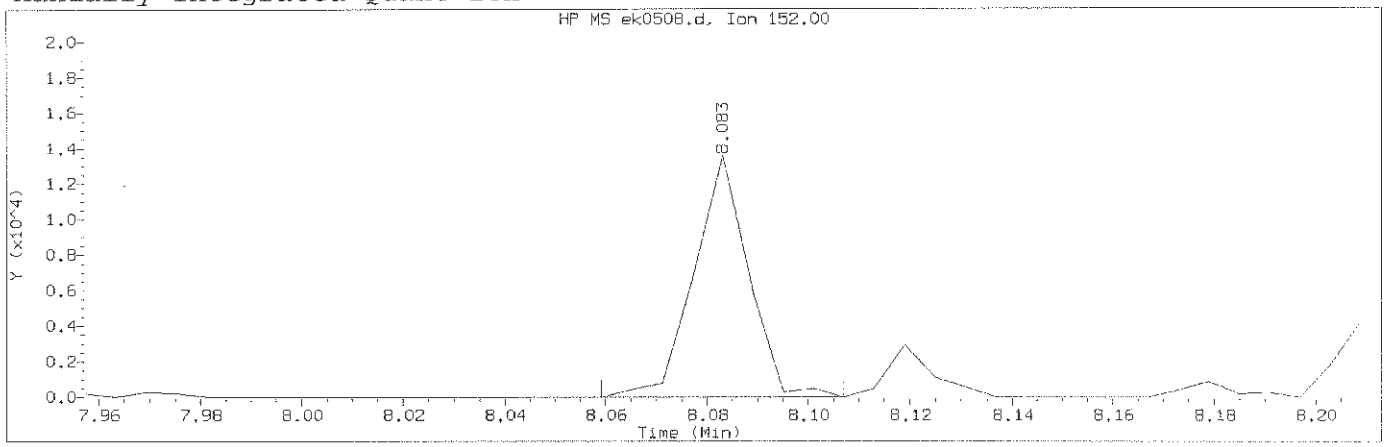
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 983		
Retention Time (minutes)	: 7.162		
Quant Ion	: 162.00		
Area	: 19242		
On-column Amount (ng/ul)	: 0.5587		
Integration start scan	: 979	Integration stop scan:	983
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

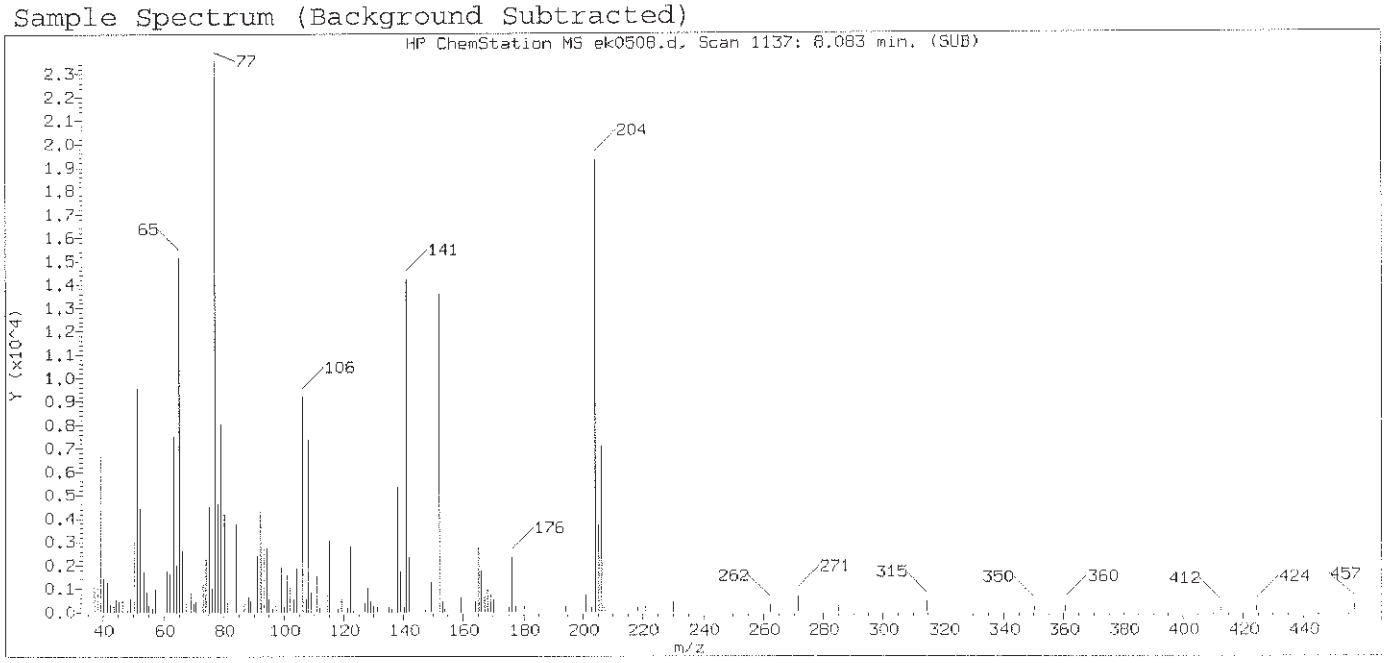
Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1137		
Retention Time (minutes)	: 8.083		
Quant Ion	: 152.00		
Area (flag)	: 10070M		
On-Column Amount (ng/ul)	: 1.2333		
Integration start scan	: 1132	Integration stop scan:	1140
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

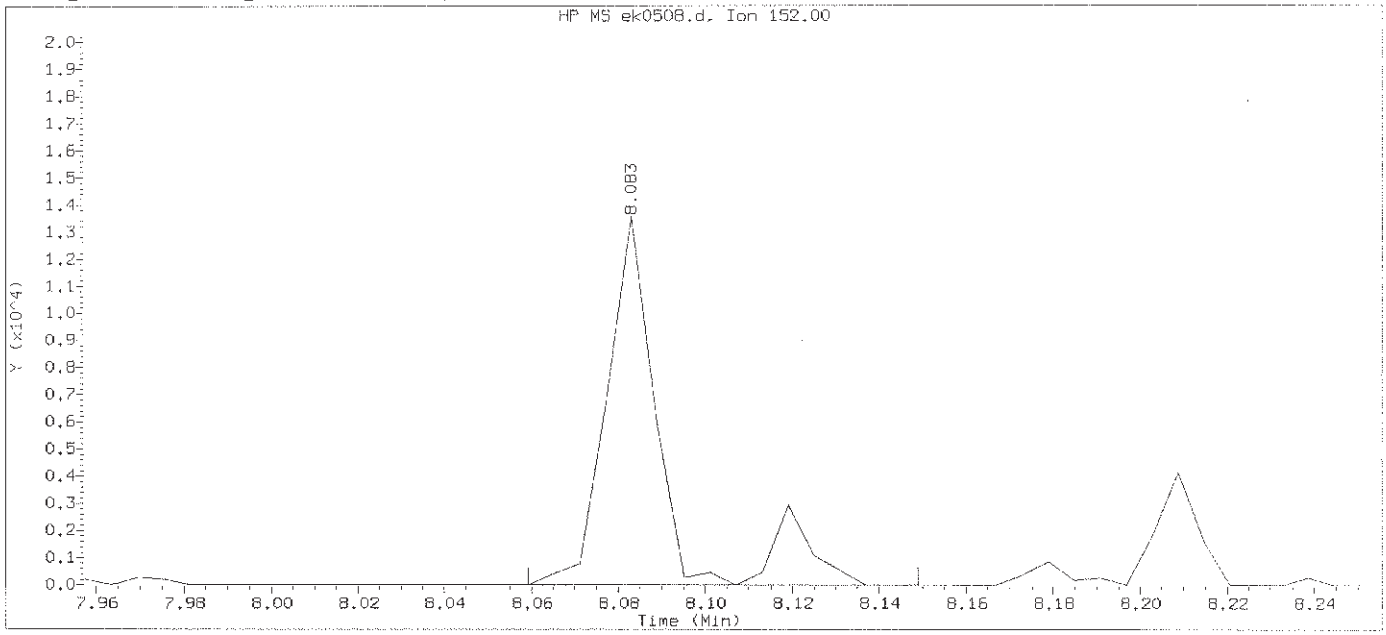
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

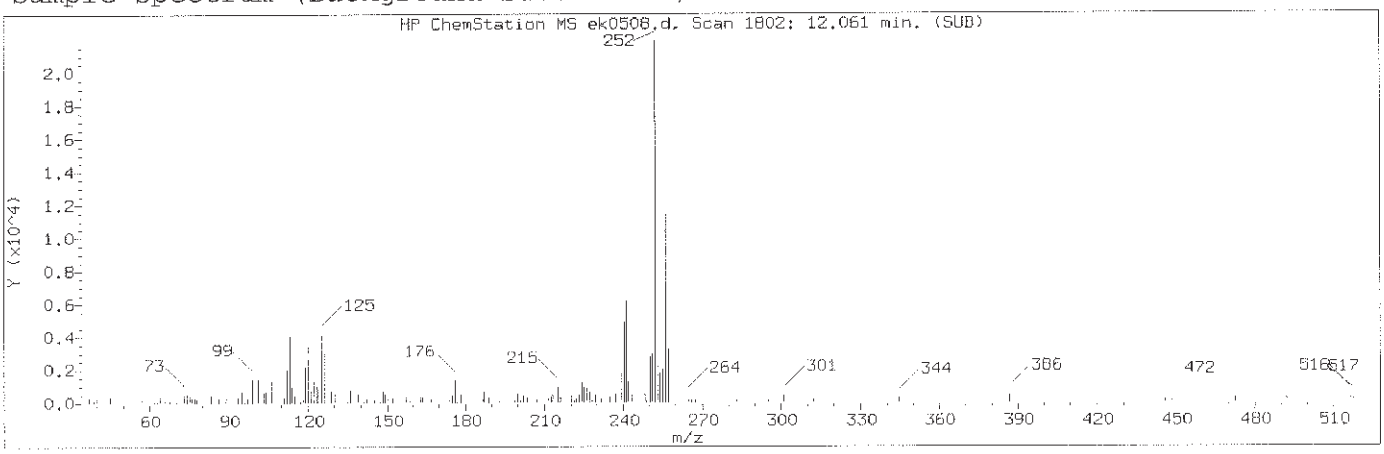
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

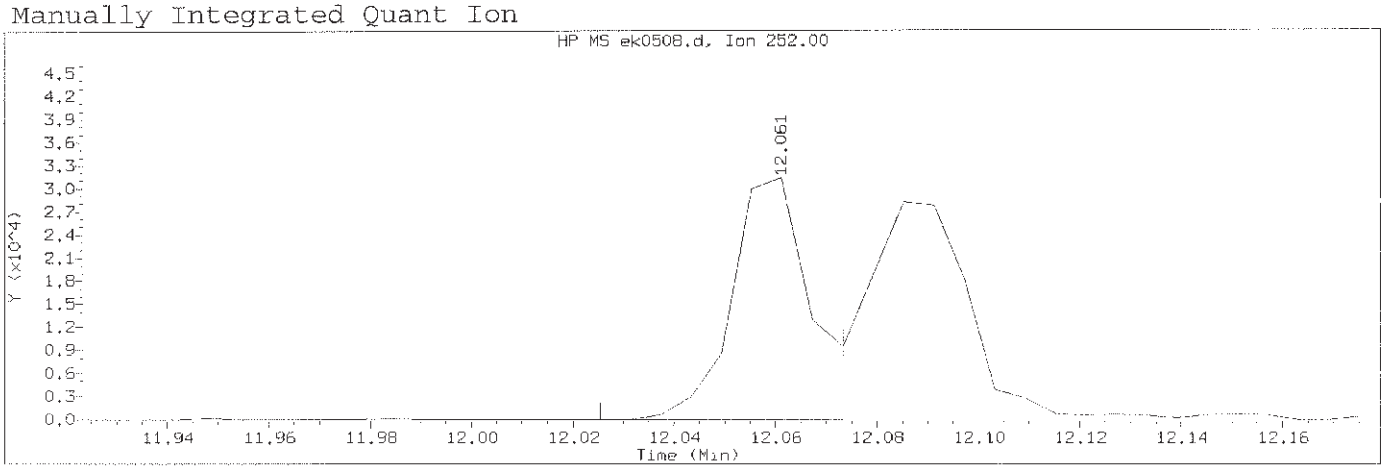
Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1137		
Retention Time (minutes)	: 8.083		
Quant Ion	: 152.00		
Area	: 11883		
On-column Amount (ng/ul)	: 1.4247		
Integration start scan	: 1132	Integration stop scan:	1147
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

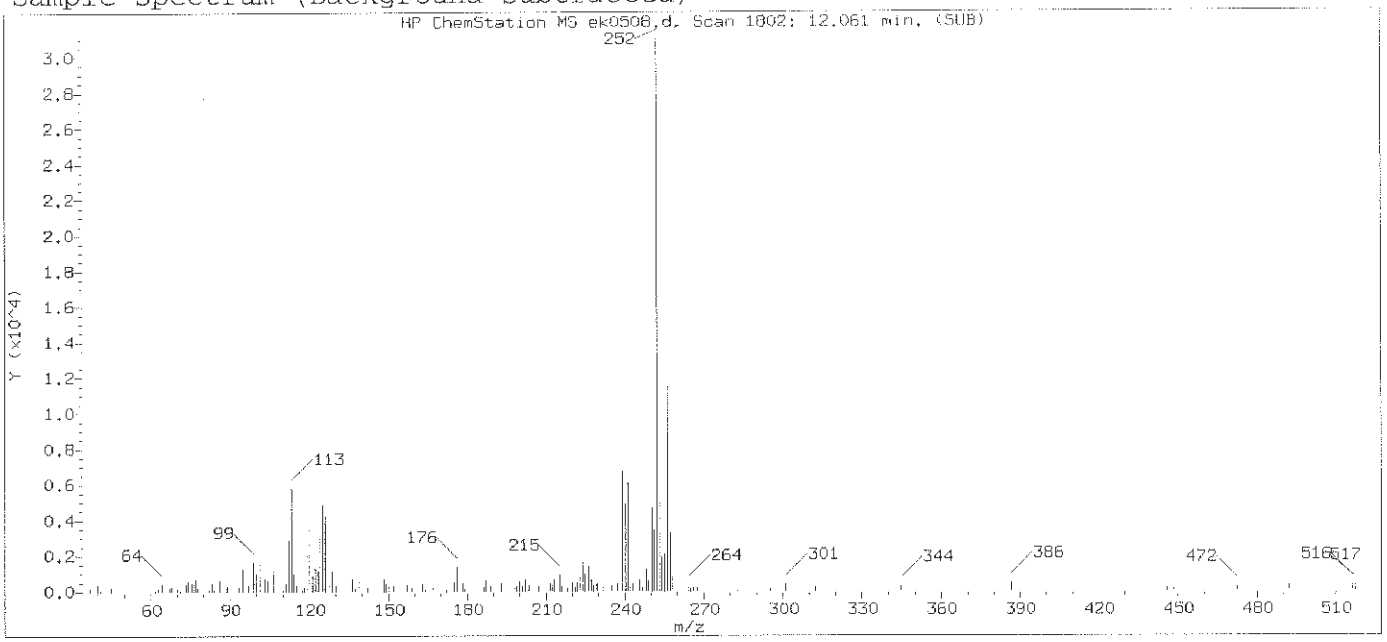
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area (flag)	: 34268M		
On-Column Amount (ng/ul)	: 0.9438		
Integration start scan	: 1795	Integration stop scan:	1803
Y at integration start	: 0	Y at integration end:	7

Reason for manual integration: improper integration

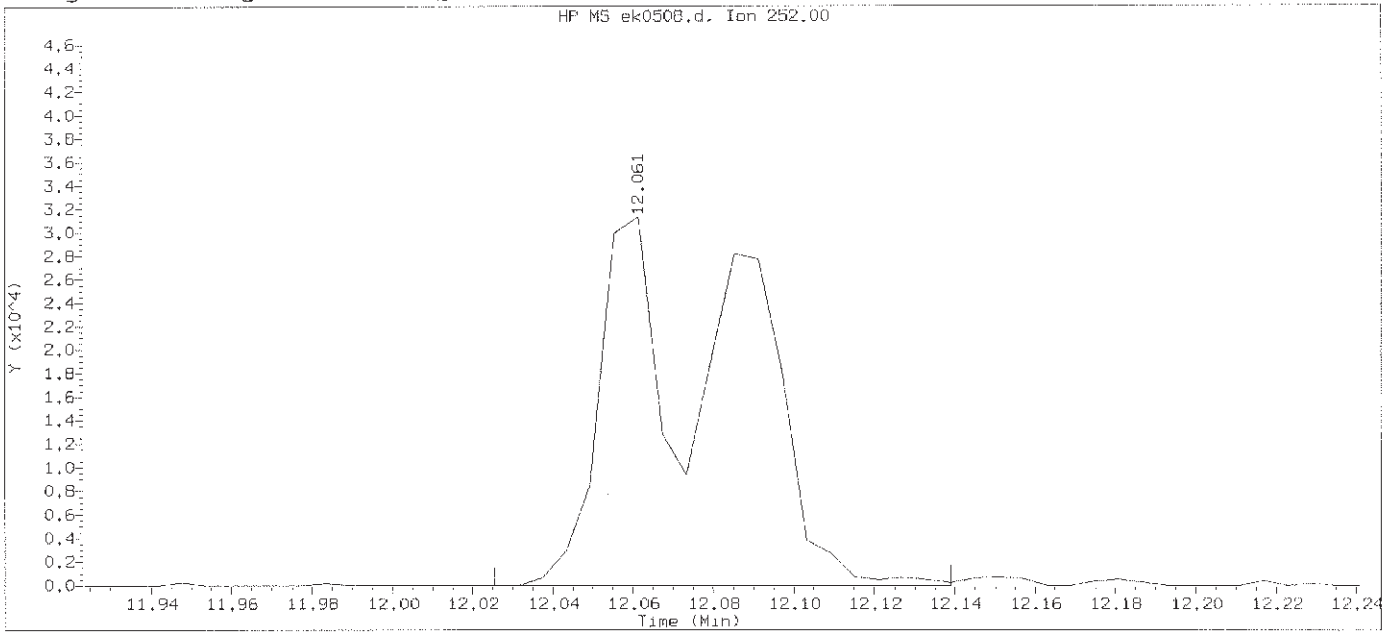
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

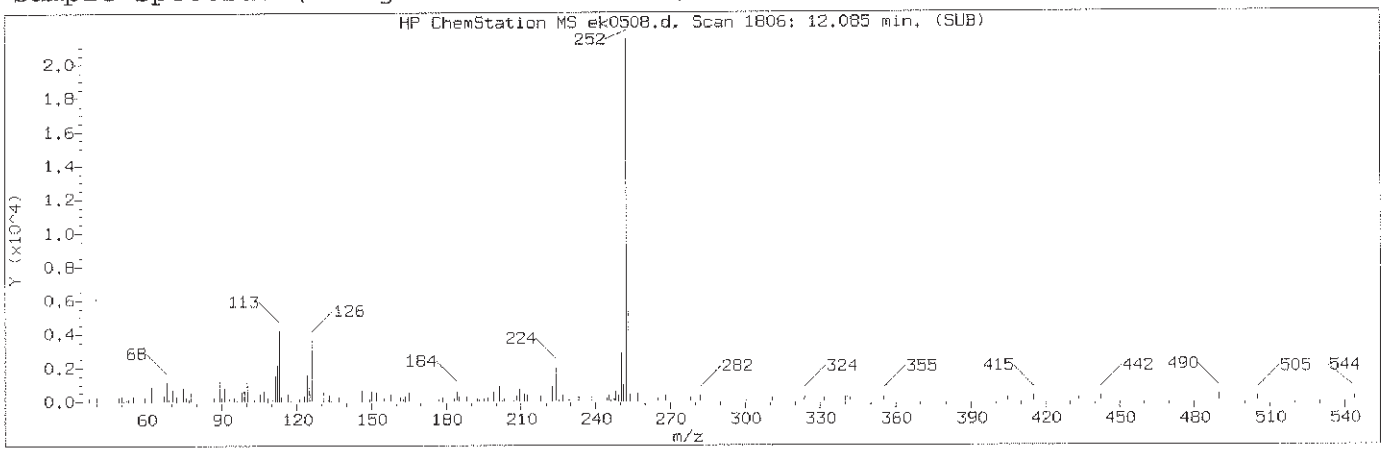
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

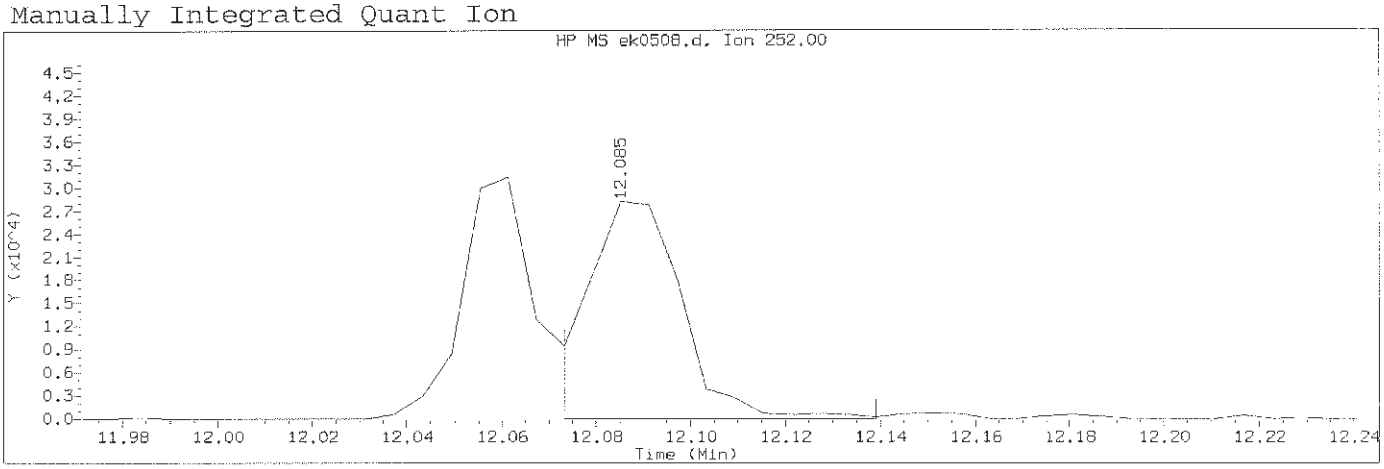
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 70807		
On-column Amount (ng/ul)	: 1.4947		
Integration start scan	: 1795	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	18

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 20:22
Date, time and analyst ID of latest file update: 12-Nov-2013 20:22 hb01996

Sample Name: SSTD001 Lab Sample ID: STD3083

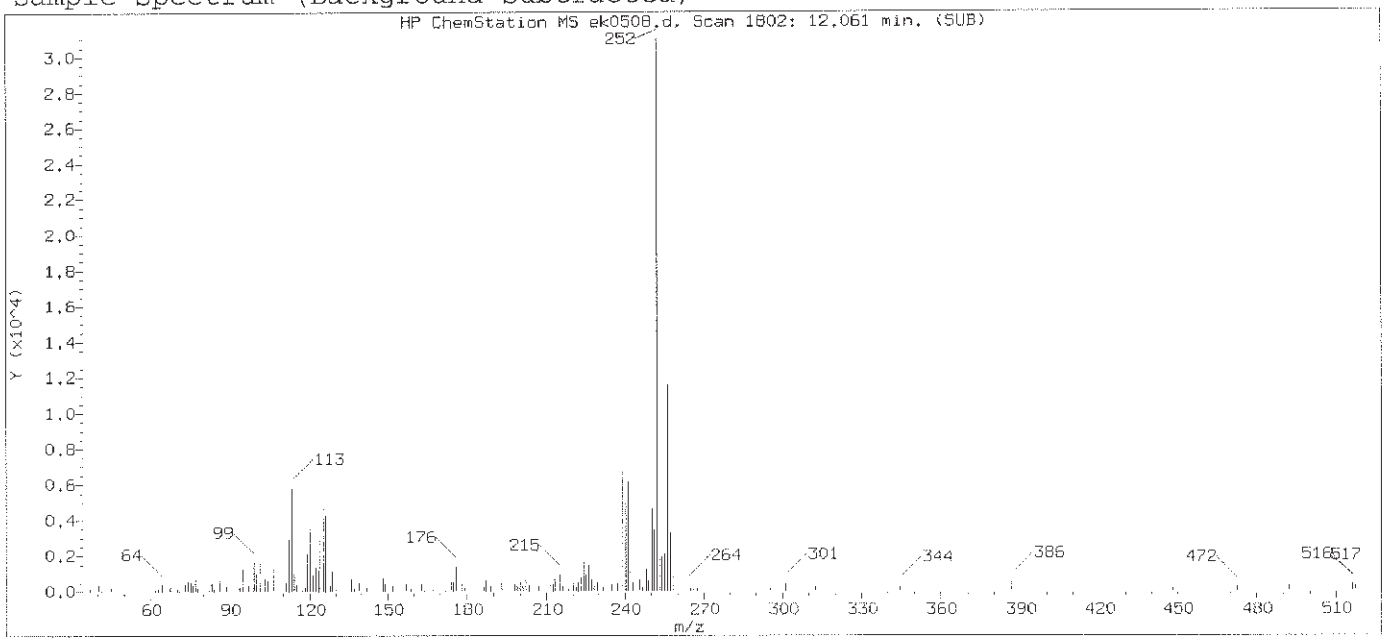
Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area (flag)	: 40005M		
On-Column Amount (ng/ul)	: 1.1039		
Integration start scan	: 1803	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

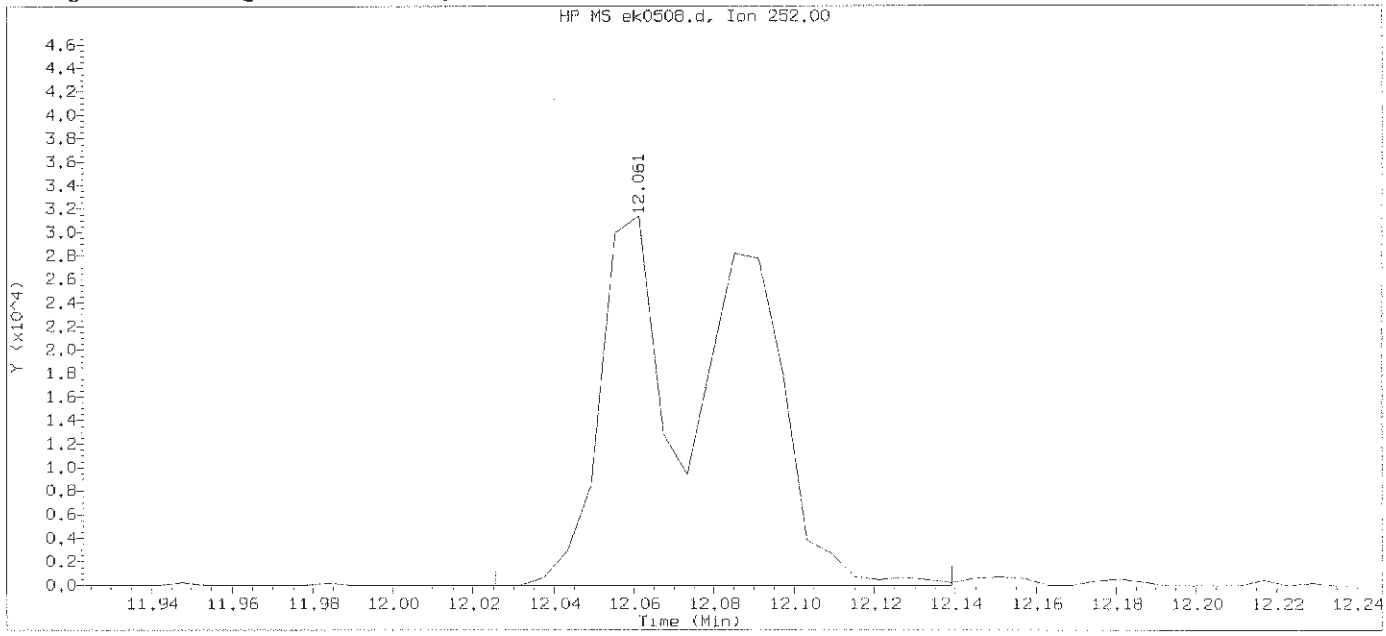
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



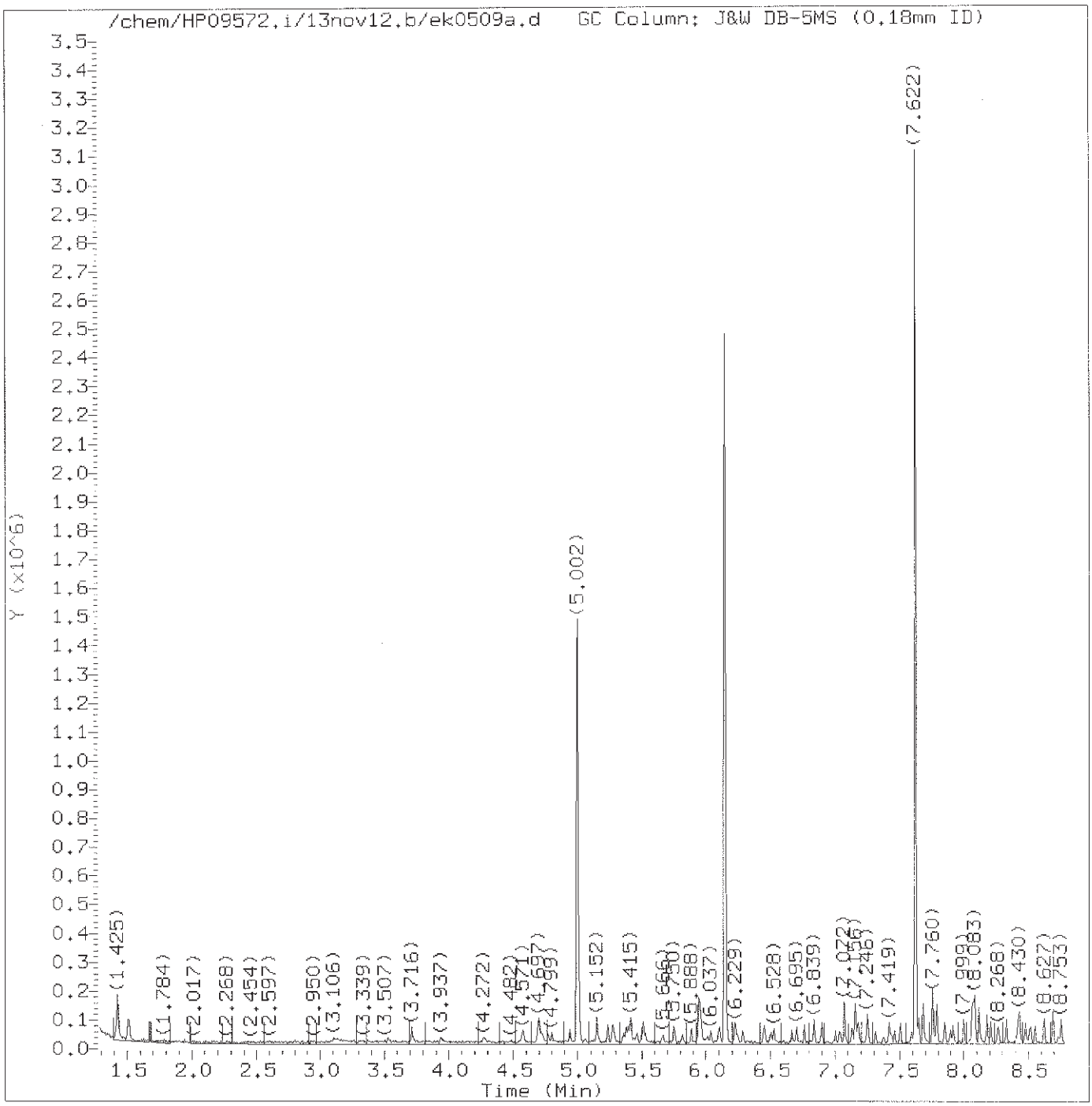
Data File: /chem/HP09572.i/13nov12.b/ek0508.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 15:38 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:03 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 70807		
On-column Amount (ng/ul)	: 1.4730		
Integration start scan	: 1795	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	18

Digitally signed by Holly Berry on 11/12/2013 at 20:27.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

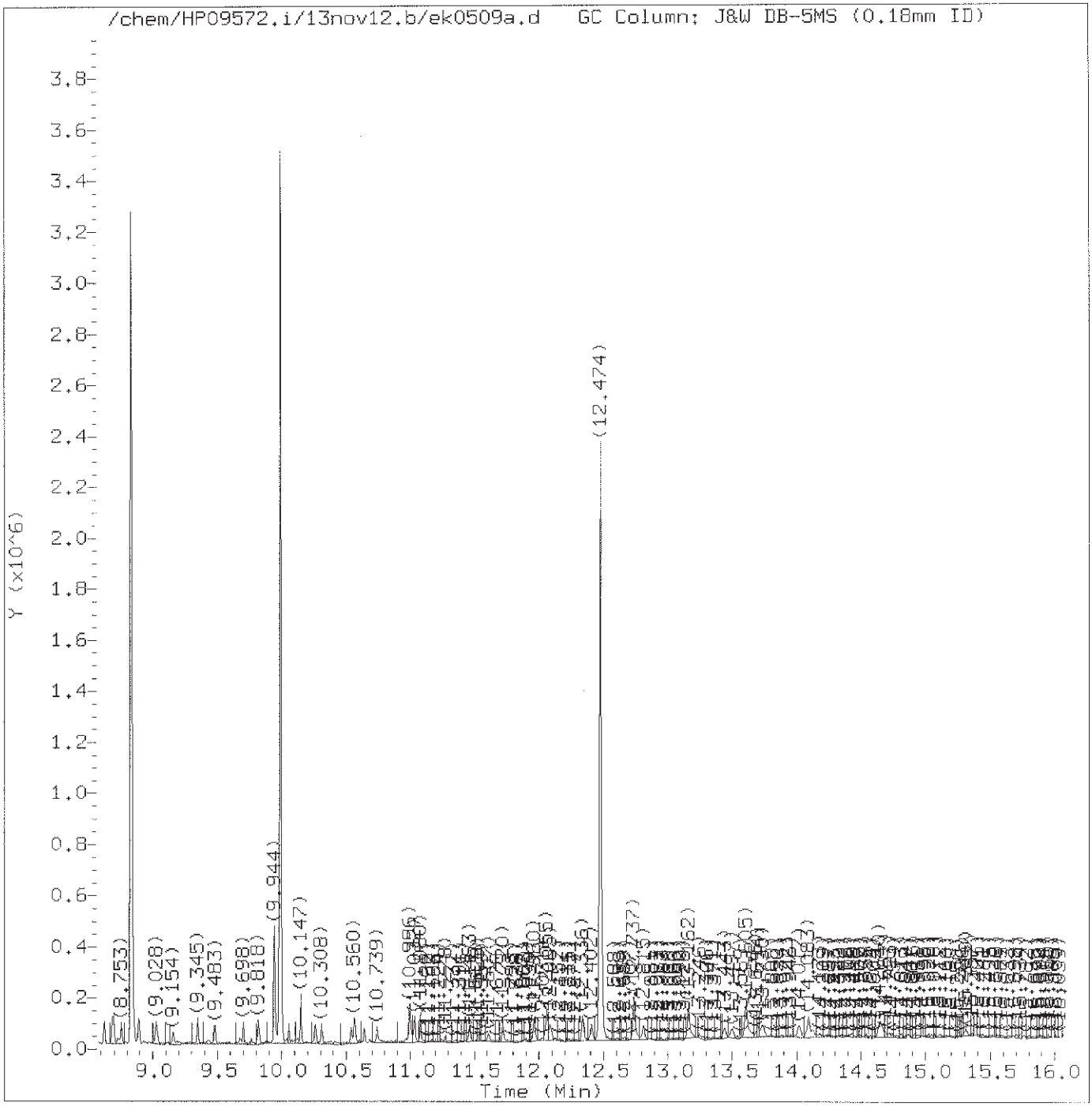
Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.766	88	4014	0.682
2) N-Nitrosodimethylamine	(1)	2.203	74	5155M	0.526
3) Pyridine	(1)	2.597	79	10534M	0.654
4) 2-Picoline	(1)	3.106	93	11839M	0.599
5) N-Nitrosomethylethylamine	(1)	3.178	88	8643	0.967
6) Methyl methanesulfonate	(1)	3.531	80	5818	0.542
7)$2-Fluorophenol	(1)	3.716	112	12008	0.787
8) N-Nitrosodiethylamine	(1)	3.937	102	3406	0.372
10) Ethyl methanesulfonate	(1)	4.272	109	4952	0.520
20) Aniline	(1)	4.691	93	15561	0.501
18)$Phenol-d6	(1)	4.697	99	23011	0.990
17)$Phenol-d5	(1)	4.697	99	23011	0.990
19) Phenol	(1)	4.709	94	11577	0.479
21) bis(2-Chloroethyl)ether	(1)	4.769	93	8475	0.428
22) 2-Chlorophenol	(1)	4.805	128	7595	0.484
24) 1,3-Dichlorobenzene	(1)	4.942	146	8440	0.527
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	202627	20.000
26) 1,4-Dichlorobenzene	(1)	5.014	146	7877	0.485
27) Benzyl alcohol	(1)	5.152	108	3379	0.279
28) 1,2-Dichlorobenzene	(1)	5.152	146	8489	0.560
30) Indene	(1)	5.235	115	16650	0.596
29) 2-Methylphenol	(1)	5.271	108	10039	0.578
32) bis(2-Chloroisopropyl)ether	(1)	5.283	45	9945	0.470
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.283	45	9945	0.470
33) N-Nitrosopyrrolidine	(1)	5.367	100	5113	0.467
34) Acetophenone	(1)	5.385	105	14167	0.488
36) N-Nitroso-di-n-propylamine	(1)	5.397	70	6505	0.387
37) N-Nitrosomorpholine	(1)	5.403	56	8051	0.587
38) o-Toluidine	(1)	5.415	106	14252	0.481
35) 4-Methylphenol	(1)	5.421	108	8080	0.390
39) Hexachloroethane	(1)	5.463	117	3118	0.460
40)$Nitrobenzene-d5	(2)	5.511	82	21425	1.021
41) Nitrobenzene	(2)	5.529	77	10410	0.477
42) N-Nitrosopiperidine	(2)	5.666	114	4897	0.500
52) Isophorone	(2)	5.750	82	18697	0.482
53) 2-Nitrophenol	(2)	5.816	139	3503	0.395
54) 2,4-Dimethylphenol	(2)	5.888	107	10868	0.529
55) O,O,O-triethylphosphorothioate	(2)	5.947	198	3826	0.495
56) Benzoic acid	(2)	5.953	105	46490	2.802
57) bis(2-Chloroethoxy)methane	(2)	5.965	93	11838	0.459

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	6.037	162	5965	0.451
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	5443	0.418
60)*Naphthalene-d8	(2)	6.145	136	900535	20.000
62) 4-Chloroaniline	(2)	6.223	127	10277	0.495
63) 2,6-Dichlorophenol	(2)	6.229	162	5131	0.395
64) Hexachloropropene	(2)	6.240	213	4173	0.525
65) Hexachlorobutadiene	(2)	6.288	225	3253	0.473
67) Quinoline	(2)	6.450	129	15268	0.455
69) Caprolactam	(2)	6.504	113	4178	0.543
68) N-Nitrosodi-n-butylamine	(2)	6.528	84	9469	0.468
70) 4-Chloro-3-methylphenol	(2)	6.659	107	7583	0.383
71) Safrole	(2)	6.701	162	6198	0.468
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.899	216	5329	0.426
76) Hexachlorocyclopentadiene	(3)	6.899	237	1748	0.293
78) cis-Isosafrole	(3)	6.940	162	1126	0.053
79) 2,4,6-Trichlorophenol	(3)	7.006	196	3824	0.405
80) 2,4,5-Trichlorophenol	(3)	7.036	196	4328	0.436
81)$2-Fluorobiphenyl	(3)	7.072	172	36921	1.121
82) trans-Isosafrole	(3)	7.132	162	6053	0.404
83) Isosafrole	(3)	7.132	162	6053	0.453
86) 1,1'-Biphenyl	(3)	7.156	154	25882	0.616
87) 2-Chloronaphthalene	(3)	7.162	162	12590	0.365
88) 1-Chloronaphthalene	(3)	7.180	162	16615	0.521
89) Diphenyl ether	(3)	7.246	170	11819	0.529
90) 2-Nitroaniline	(3)	7.252	138	5594	0.479
91) 1,4-Naphthoquinone	(3)	7.311	158	4724	0.339
92) 1,4-Dinitrobenzene	(3)	7.371	168	2280	0.367
93) Dimethylphthalate	(3)	7.419	163	20246	0.522
94) 1,3-Dinitrobenzene	(3)	7.431	168	2544	0.351
95) 2,6-Dinitrotoluene	(3)	7.461	165	4072	0.429
97) 3-Nitroaniline	(3)	7.592	138	4755	0.441
99)*Acenaphthene-d10	(3)	7.622	164	576134	20.000
101) 2,4-Dinitrophenol	(3)	7.682	184	13634	2.739
103) Pentachlorobenzene	(3)	7.754	250	5500	0.484
102) 4-Nitrophenol	(3)	7.760	109	17743	2.021
105) Dibenzofuran	(3)	7.790	168	26858	0.577
104) 2,4-Dinitrotoluene	(3)	7.790	165	6053	0.473
106) 1-Naphthylamine	(3)	7.856	143	17221	0.461
107) 2,3,4,6-Tetrachlorophenol	(3)	7.898	232	3319	0.422
108) 2-Naphthylamine	(3)	7.916	143	20644	0.545

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on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
109) Diethylphthalate	(3)	7.999	149	18411	0.452
110) Thionazin	(3)	8.065	107	4600	0.503
114) 4-Nitroaniline	(3)	8.083	138	6183	0.554
112) 4-Chlorophenyl-phenylether	(3)	8.083	204	9389	0.526
113) 5-Nitro-o-toluidine	(3)	8.083	152	5643	0.449
115) 4,6-Dinitro-2-methylphenol	(4)	8.119	198	12505	1.753
118) NDPA as diphenylamine	(4)	8.179	169	17038	0.476
117) N-Nitrosodiphenylamine	(4)	8.179	169	17038	0.473
119) 1,2-Diphenylhydrazine	(4)	8.209	77	22498	0.447
120)$2,4,6-Tribromophenol	(3)	8.268	330	4265	1.011
122) Tetraethyldithiopyrophosphate	(4)	8.328	97	4827	0.556
129) 1,3,5-Trinitrobenzene	(4)	8.406	213	746M	0.160
130) Diallate (peak 1)	(4)	8.424	86	12112	0.418
131) Phorate	(4)	8.430	75	13714	0.880
132) Phenacetin	(4)	8.436	108	13402	0.490
133) 4-Bromophenyl-phenylether	(4)	8.478	248	4421	0.461
134) Diallate (peak 2)	(4)	8.496	86	3892	0.289
139) Dimethoate	(4)	8.556	87	8125	0.379
141) Atrazine	(4)	8.627	200	6657	0.552
142) Pentachlorophenol	(4)	8.687	266	1863	3.003
144) Pentachloronitrobenzene	(4)	8.693	237	2184	0.433
143) 4-Aminobiphenyl	(4)	8.693	169	18790	0.484
146) Pronamide	(4)	8.753	173	9512	0.499
148)*Phenanthrene-d10	(4)	8.831	188	1038552	20.000
147) Dinoseb	(4)	8.843	211	2581	2.928
151) Carbazole	(4)	9.028	167	27416	0.478
152) Methyl parathion	(4)	9.154	109	7711	0.470
154) Di-n-butylphthalate	(4)	9.345	149	33724	0.471
155) Parathion	(4)	9.477	109	5418	0.481
156) 4-Nitroquinoline-1-oxide	(4)	9.483	190	1071	2.044
159) Isodrin	(4)	9.698	193	3361	0.546
164) Benzidine	(5)	9.944	184	159655	3.636
165)*Pyrene-d10	(5)	9.985	212	1223159	20.000
169)$Terphenyl-d14	(5)	10.147	244	46541	1.068
170) p-Dimethylaminoazobenzene	(5)	10.267	225	4761	0.352
171) Chlorobenzilate	(5)	10.308	139	10948	0.421
173) 3,3'-Dimethylbenzidine	(5)	10.536	212	17089	0.475
174) Butylbenzylphthalate	(5)	10.566	149	15346	0.433
175) 2-Acetylaminofluorene	(5)	10.739	181	12639	0.420
177) 4,4'-Methylenebis(2-Chloroanil	(5)	10.990	231	4918	0.440

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on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176) 3,3'-Dichlorobenzidine	(5)	10.990	252	9743	0.476
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	25032	0.535
183) 6-Methylchrysene	(5)	11.463	242	20210	0.500
184) Di-n-octylphthalate	(6)	11.720	149	38647	0.430
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.055	256	10310	0.344
190)*Perylene-d12	(6)	12.474	264	980830	20.000
191) 3-Methylcholanthrene	(6)	12.815	268	14321	0.497
192) Dibenz(a,h)acridine	(6)	13.443	279	16310	0.413
193) Dibenz(a,j)acridine	(6)	13.497	279	19398	0.459
204) Diallate TRANS/CIS	(4)			16004	0.706

* = Compound is an internal standard.

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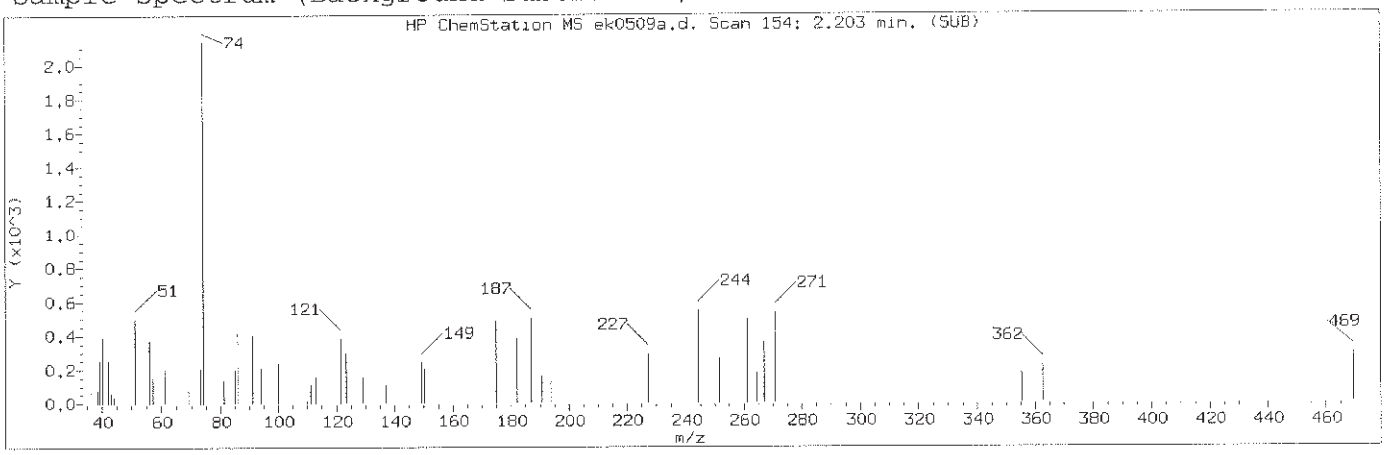
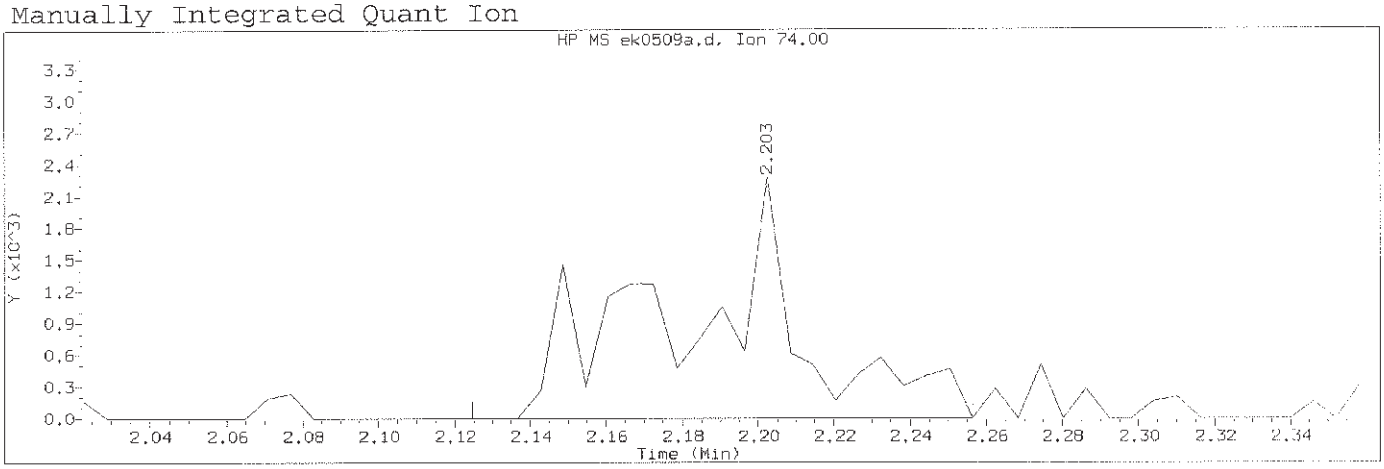
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 154		
Retention Time (minutes)	: 2.203		
Quant Ion	: 74.00		
Area (flag)	: 5155M		
On-Column Amount (ng/ul)	: 0.5264		
Integration start scan	: 140	Integration stop scan:	162
Y at integration start	: 0	Y at integration end:	0

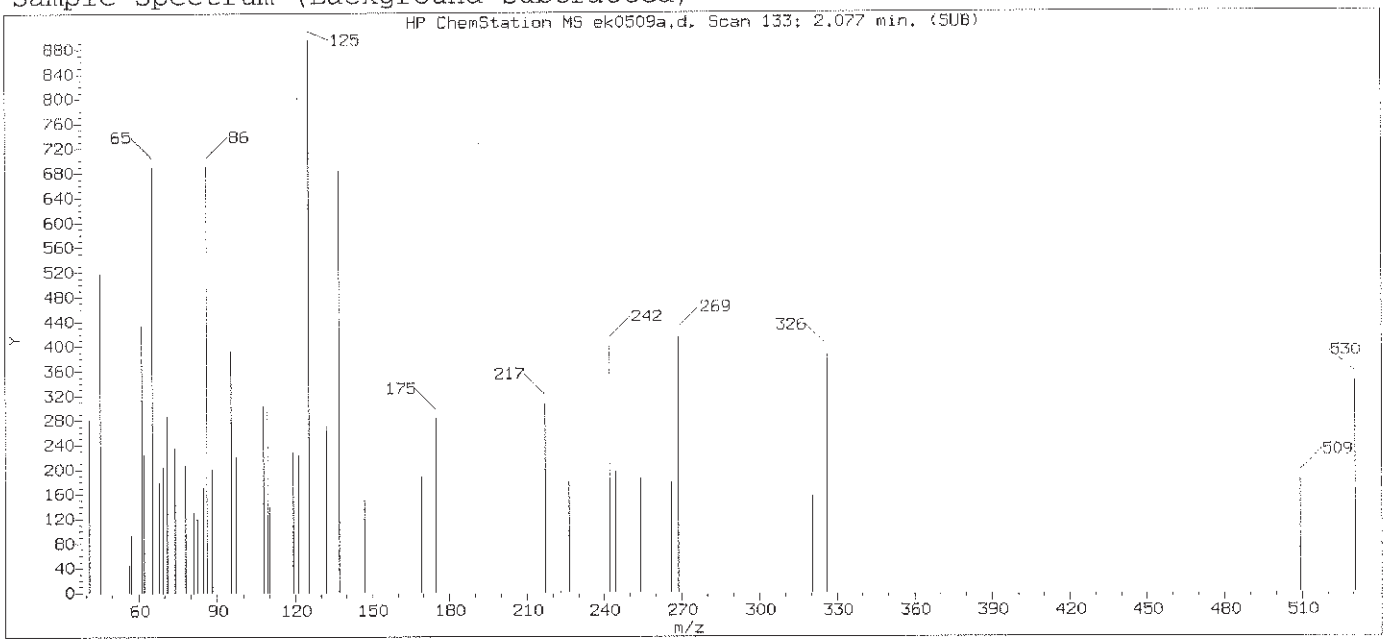
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

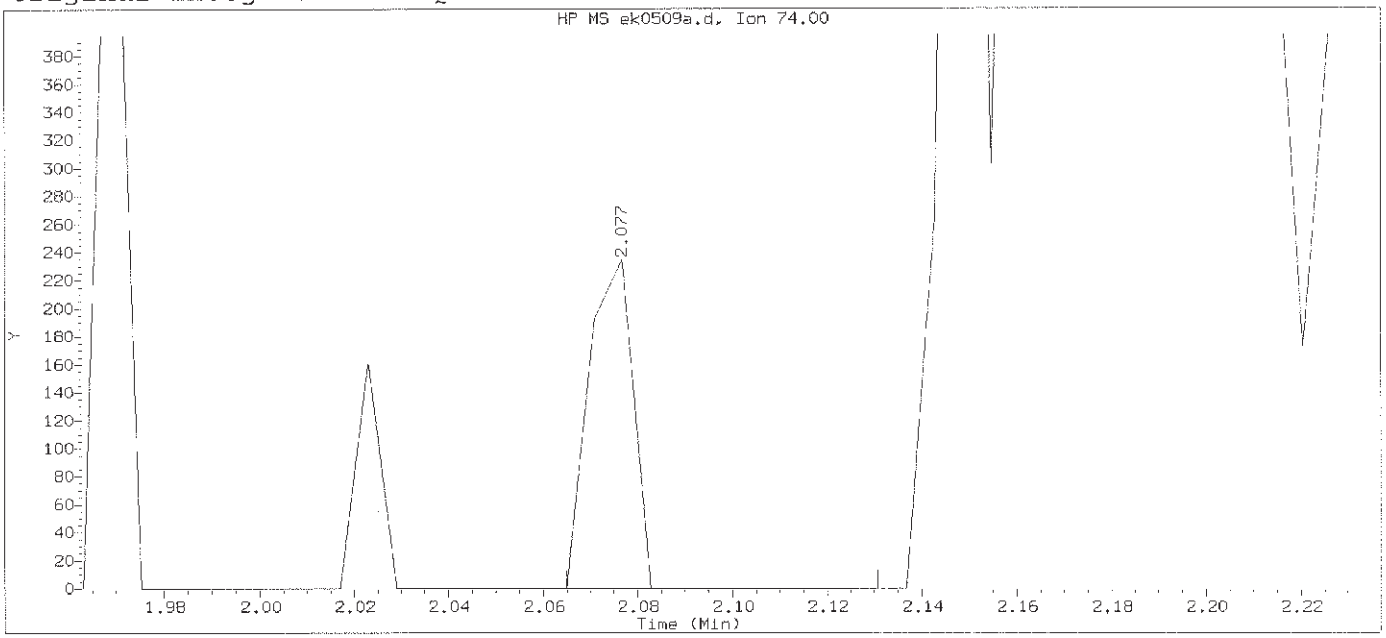
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:20 Automation

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 133		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area	: 153		
On-column Amount (ng/ul)	: 0.0156		
Integration start scan	: 130	Integration stop scan:	141
Y at integration start	: 0	Y at integration end:	0

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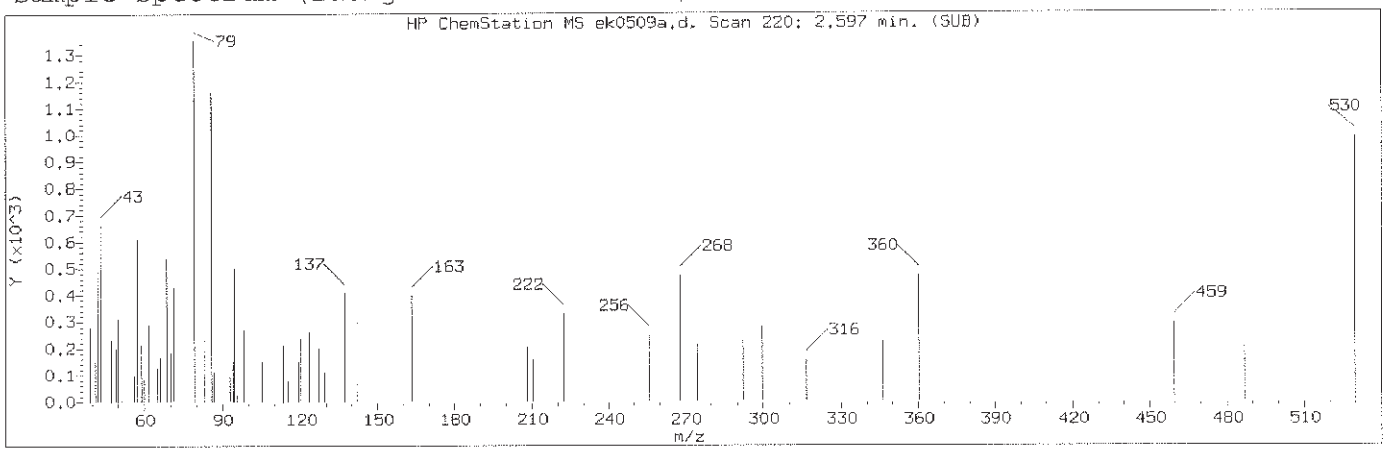
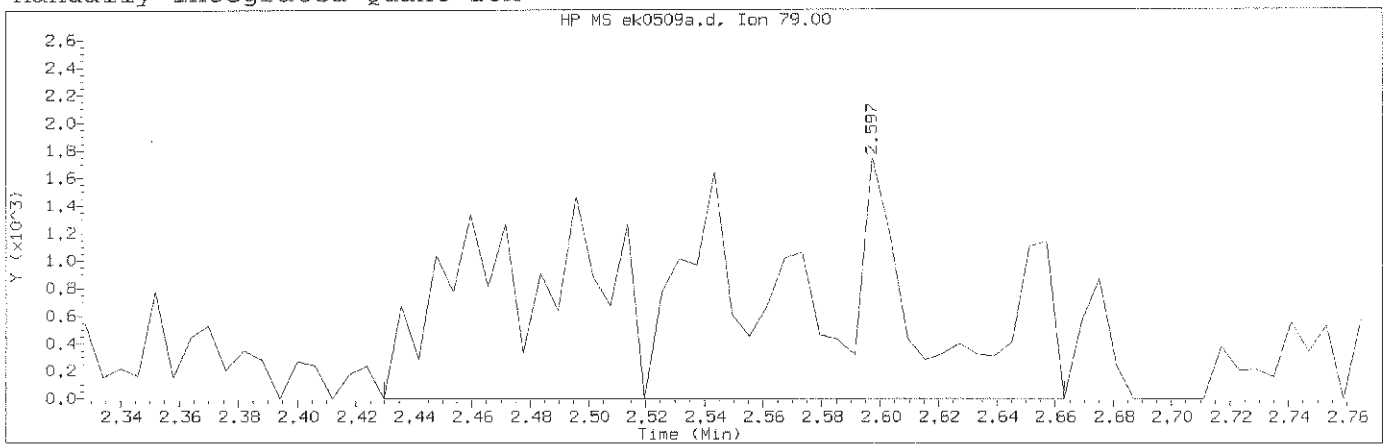
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 220		
Retention Time (minutes)	: 2.597		
Quant Ion	: 79.00		
Area (flag)	: 10534M		
On-Column Amount (ng/ul)	: 0.6536		
Integration start scan	: 191	Integration stop scan:	230
Y at integration start	: 0	Y at integration end:	0

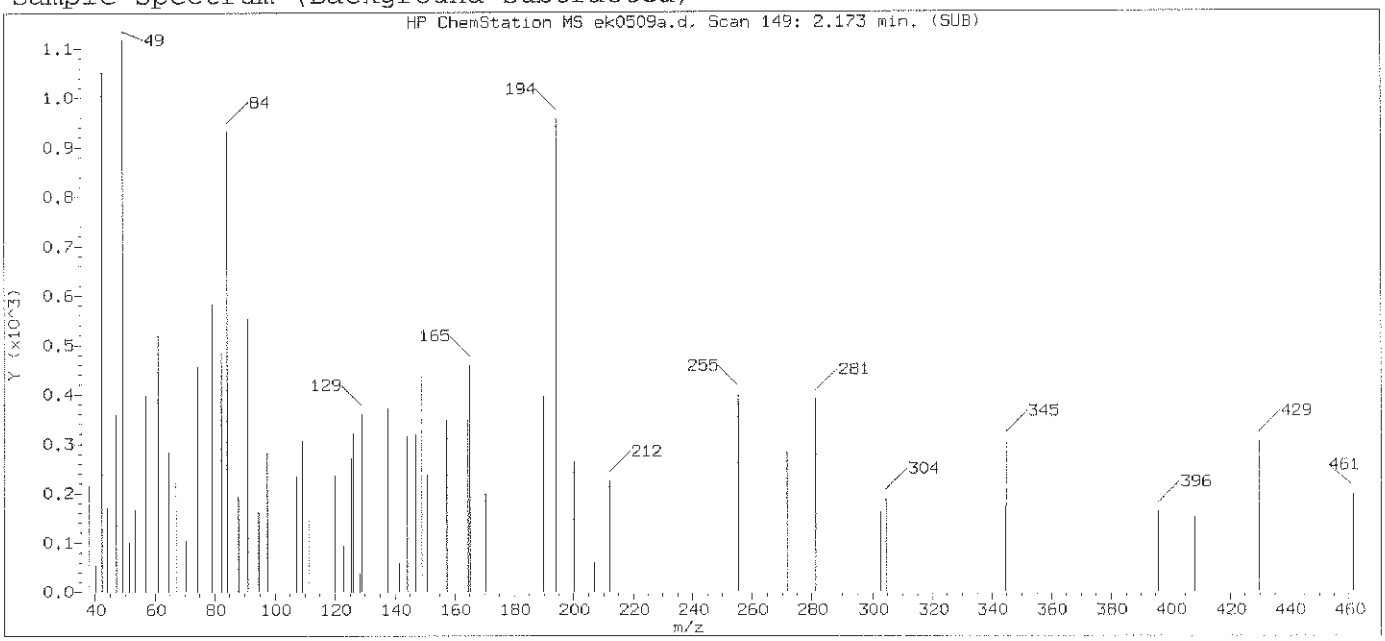
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

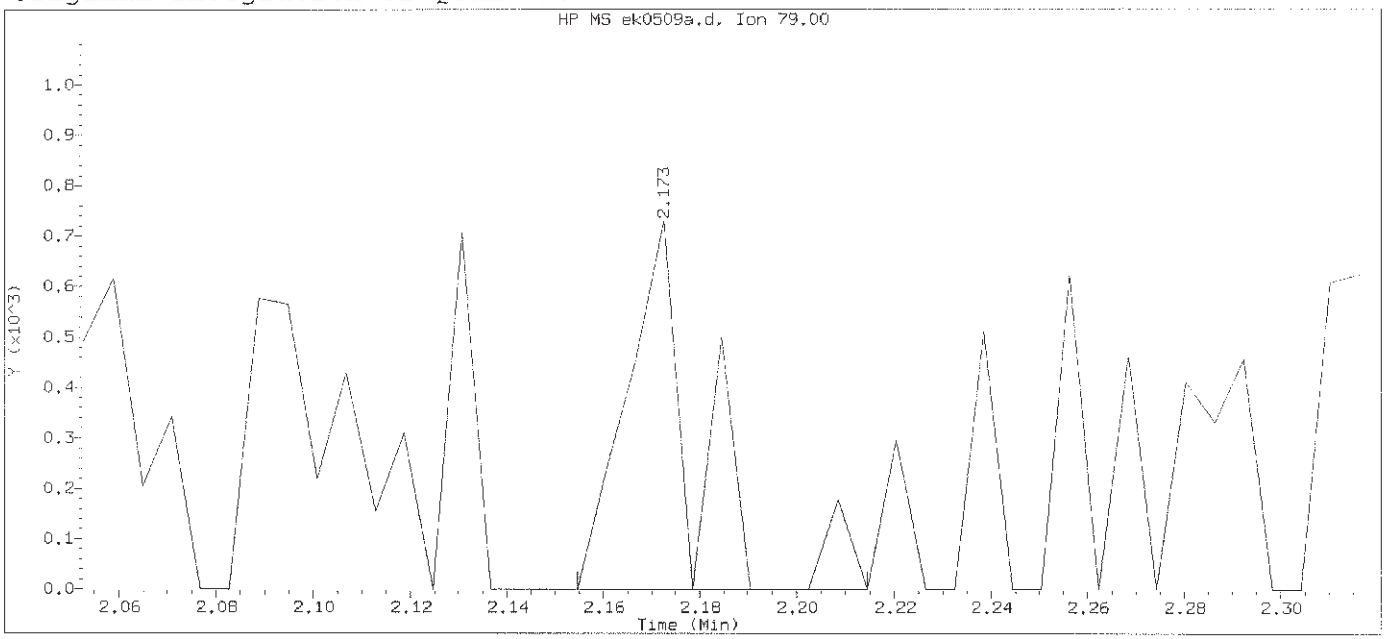
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

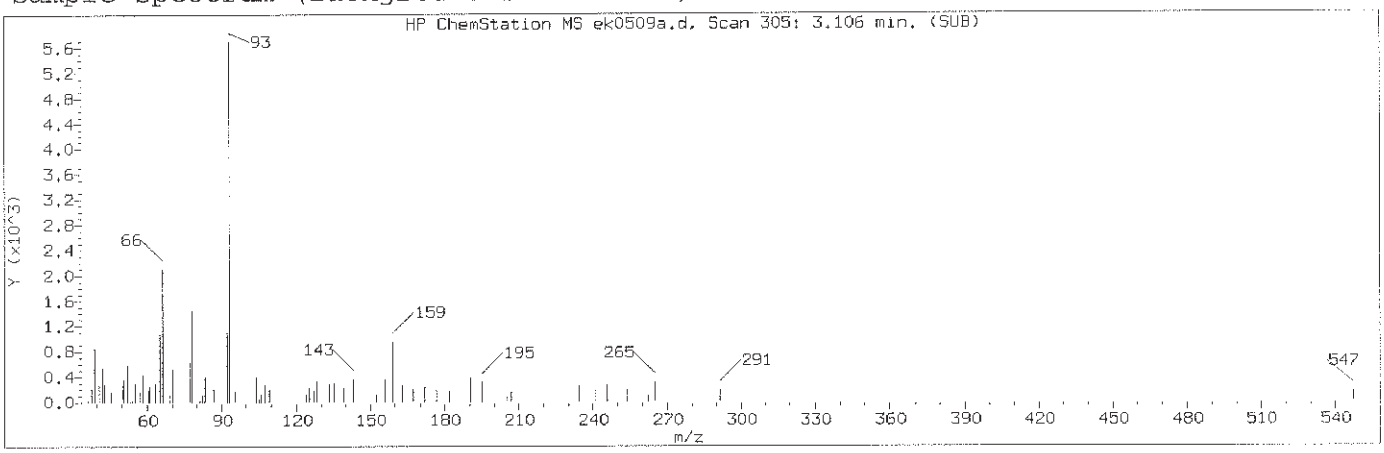
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:20 Automation

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

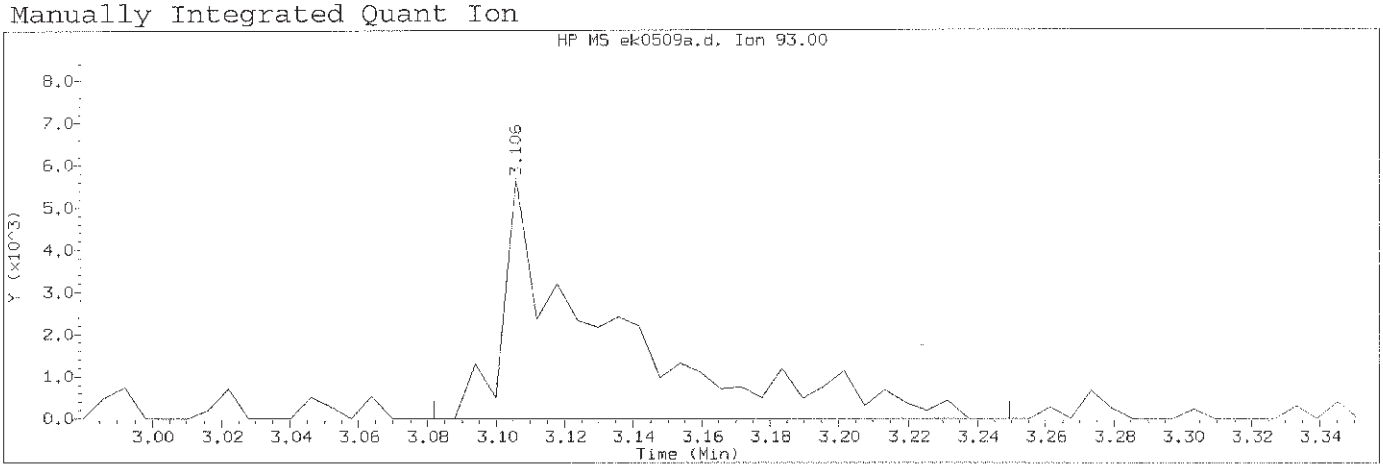
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 149		
Retention Time (minutes)	: 2.173		
Quant Ion	: 79.00		
Area	: 754		
On-column Amount (ng/ul)	: 0.0468		
Integration start scan	: 145	Integration stop scan:	155
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

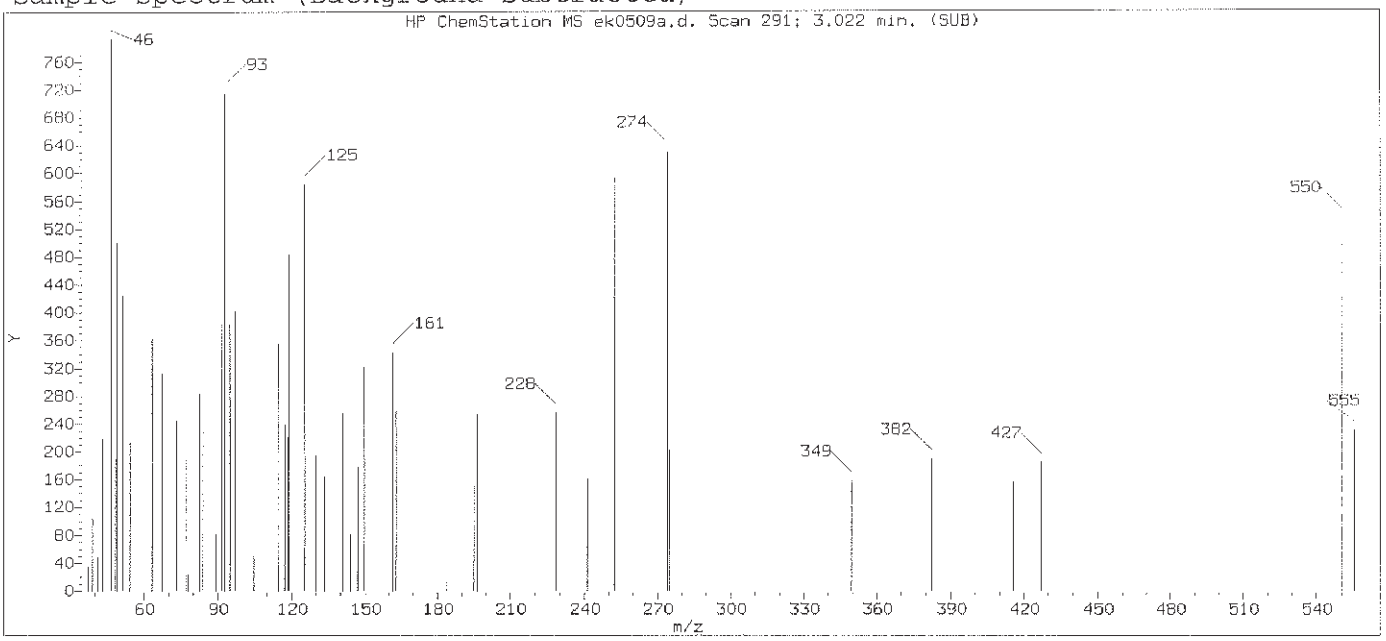
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 305		
Retention Time (minutes)	: 3.106		
Quant Ion	: 93.00		
Area (flag)	: 11839M		
On-Column Amount (ng/ul)	: 0.5993		
Integration start scan	: 300	Integration stop scan:	328
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

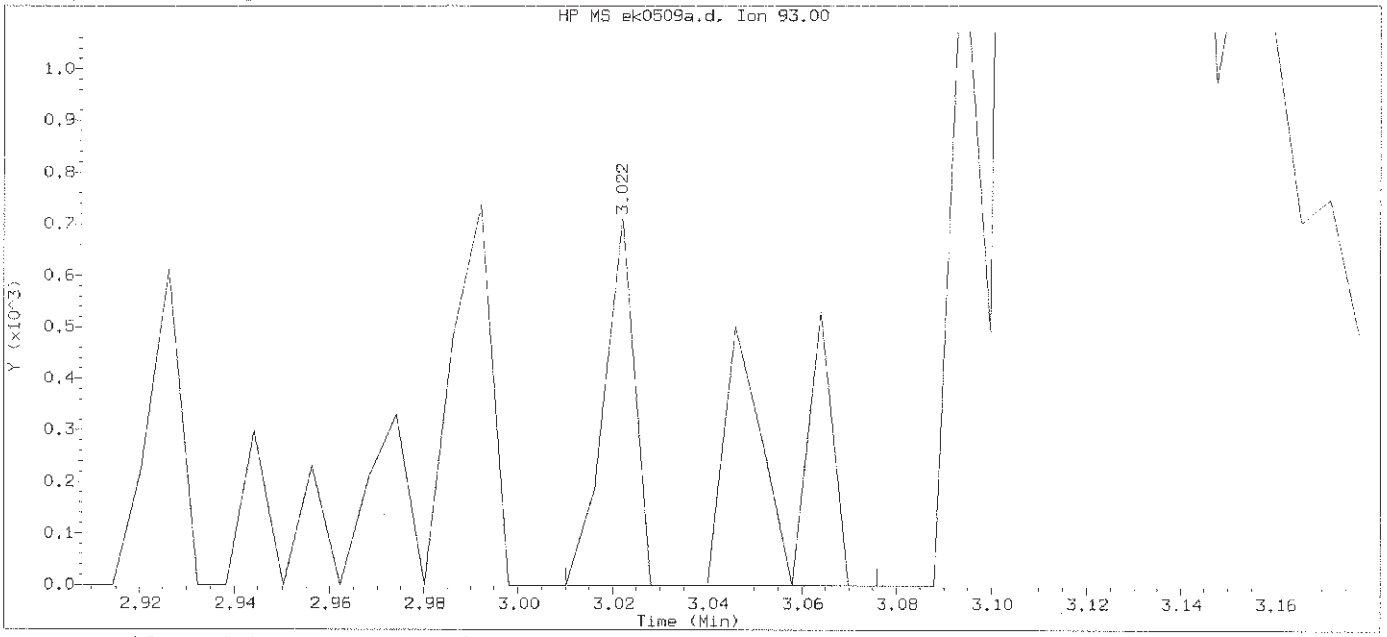
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

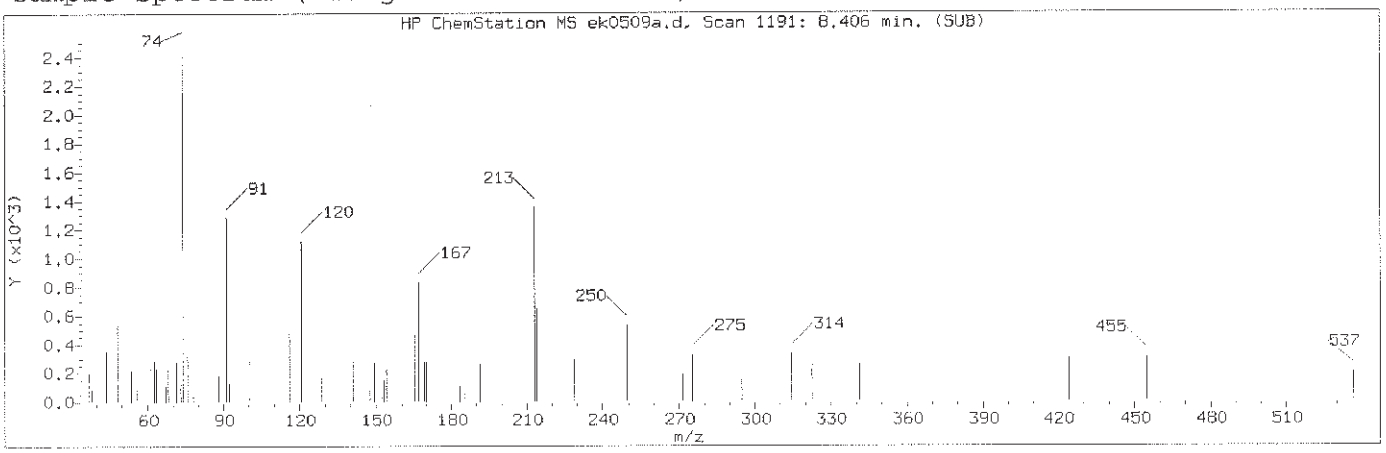
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5md1a111-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:20 Automation

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

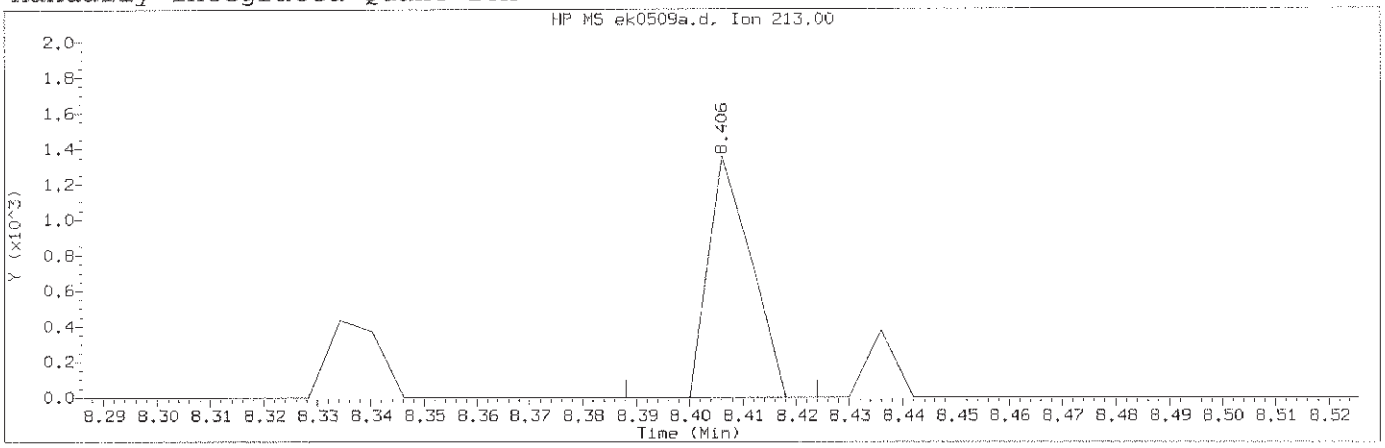
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 291		
Retention Time (minutes)	: 3.022		
Quant Ion	: 93.00		
Area	: 788		
On-column Amount (ng/ul)	: 0.0399		
Integration start scan	: 288	Integration stop scan:	299
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdlall1-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:47 hb01996

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number : 129
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1191
Retention Time (minutes) : 8.406
Quant Ion : 213.00
Area (flag) : 746M
On-Column Amount (ng/ul) : 0.1603
Integration start scan : 1187 Integration stop scan: 1193
Y at integration start : 0 Y at integration end: 0

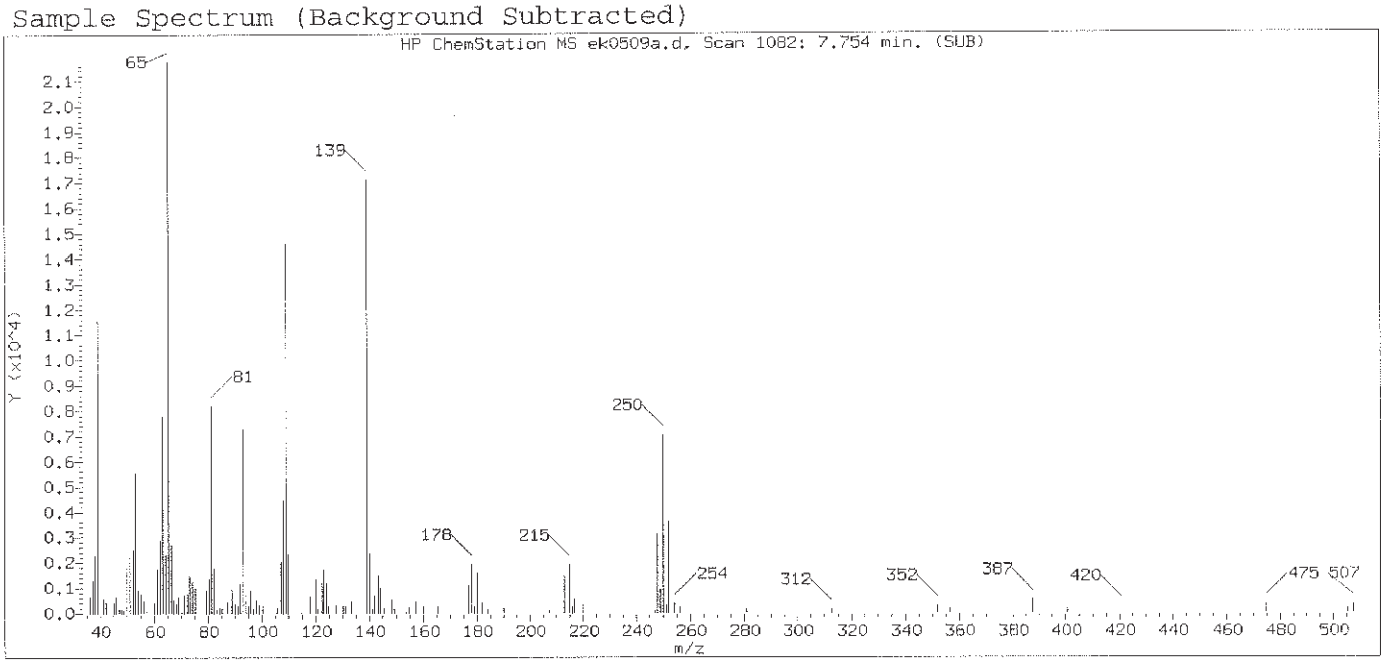
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996

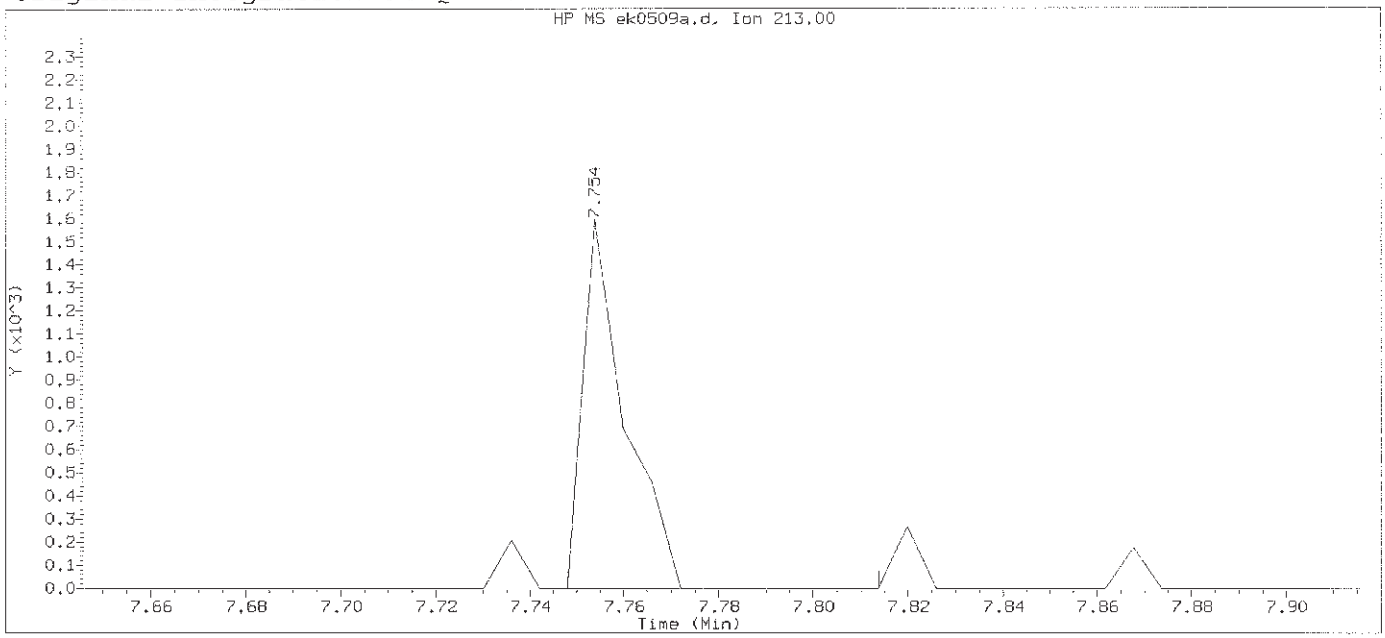
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



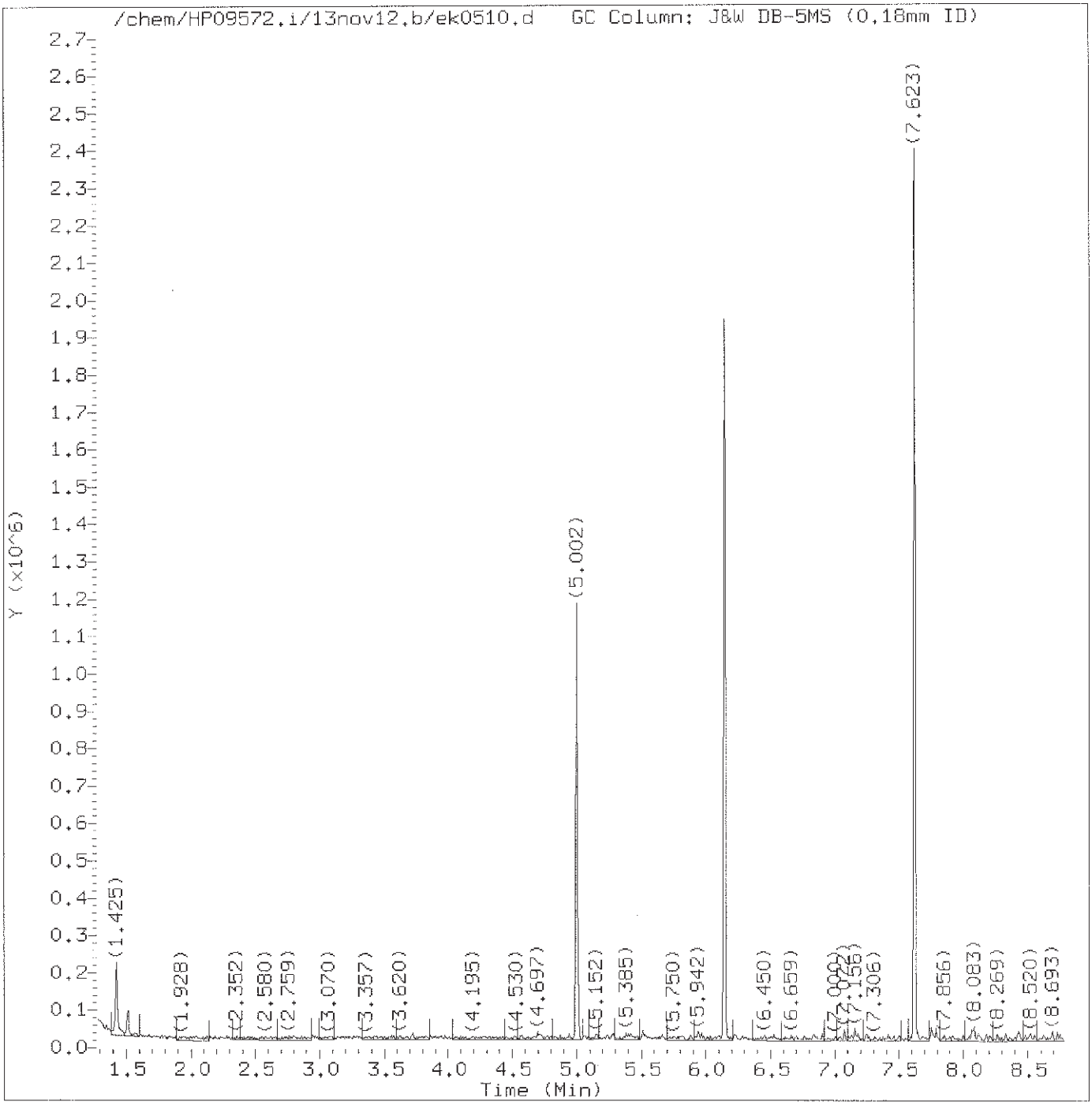
Data File: /chem/HP09572.i/13nov12.b/ek0509a.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:55 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used:0.5mdla111-b
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 21:20 Automation

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 129		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1082		
Retention Time (minutes)	: 7.754		
Quant Ion	: 213.00		
Area	: 987		
On-column Amount (ng/ul)	: 0.2118		
Integration start scan	: 1080	Integration stop scan:	1091
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 21:48.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

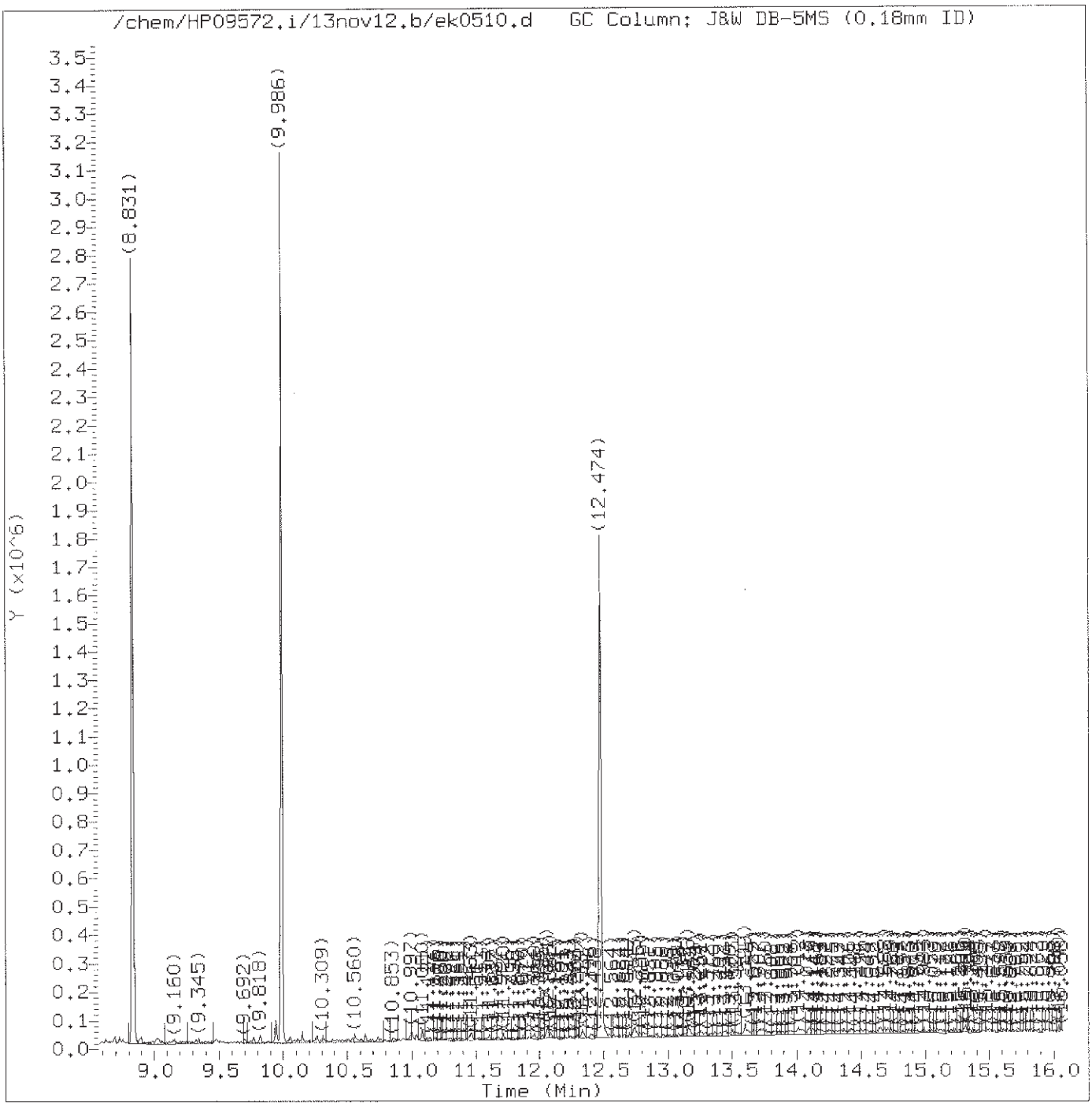
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdla111
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

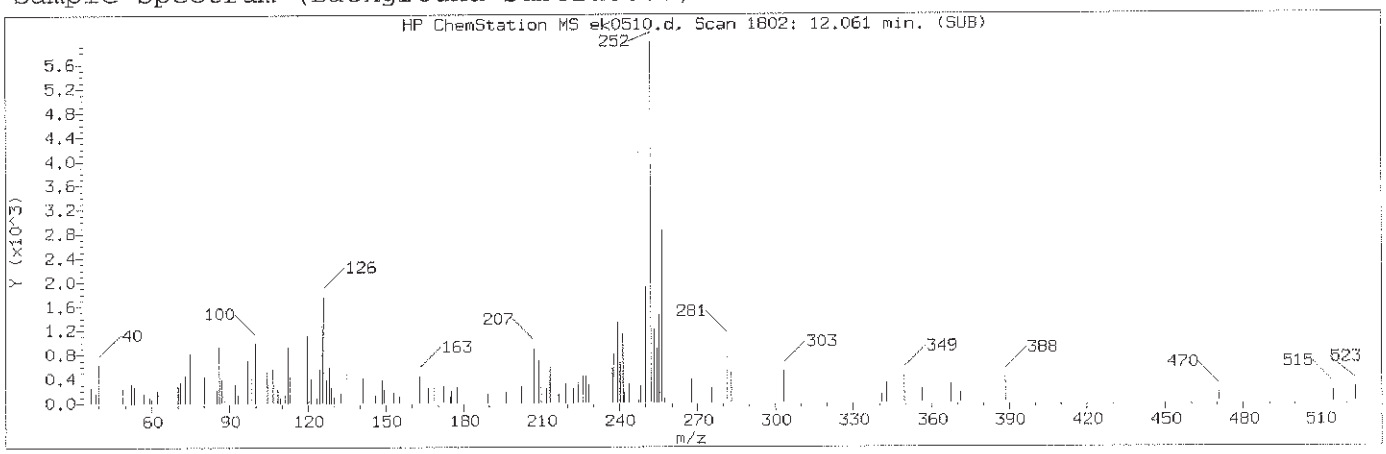
Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.716	112	2986	0.261
17)$Phenol-d5	(1)	4.697	99	3113	0.179
18)$Phenol-d6	(1)	4.697	99	3113	0.179
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	152035	20.000
40)$Nitrobenzene-d5	(2)	5.511	82	3985	0.250
60)*Naphthalene-d8	(2)	6.145	136	685234	20.000
61) Naphthalene	(2)	6.163	128	3887	0.108
72) 2-Methylnaphthalene	(2)	6.755	142	2502	0.096
75) 1-Methylnaphthalene	(2)	6.839	142	3052	0.128
81)$2-Fluorobiphenyl	(3)	7.072	172	5313	0.197
96) Acenaphthylene	(3)	7.503	152	4015	0.105
99)*Acenaphthene-d10	(3)	7.623	164	471035	20.000
100) Acenaphthene	(3)	7.647	153	2856	0.104
111) Fluorene	(3)	8.071	166	3015	0.093
120)$2,4,6-Tribromophenol	(3)	8.263	330	1082	0.314
137) Hexachlorobenzene	(4)	8.514	284	838	0.107
148)*Phenanthrene-d10	(4)	8.831	188	861929	20.000
149) Phenanthrene	(4)	8.855	178	5051	0.104
150) Anthracene	(4)	8.897	178	6158	0.125
163) Fluoranthene	(4)	9.818	202	6443	0.127
165)*Pyrene-d10	(5)	9.986	212	974450	20.000
166) Pyrene	(5)	10.004	202	8235	0.155
169)$Terphenyl-d14	(5)	10.147	244	9299	0.268
178) Benzo(a)anthracene	(5)	11.003	228	6514	0.137
180) Chrysene	(5)	11.032	228	6552	0.147
186) Benzo(b)fluoranthene	(6)	12.061	252	7516M	0.163
187) Benzo(k)fluoranthene	(6)	12.085	252	9284M	0.202
189) Benzo(a)pyrene	(6)	12.408	252	6492	0.159
190)*Perylene-d12	(6)	12.474	264	735533	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.701	276	6691	0.163
195) Dibenz(a,h)anthracene	(6)	13.736	278	5884	0.169
196) Benzo(g,h,i)perylene	(6)	14.012	276	5785M	0.168

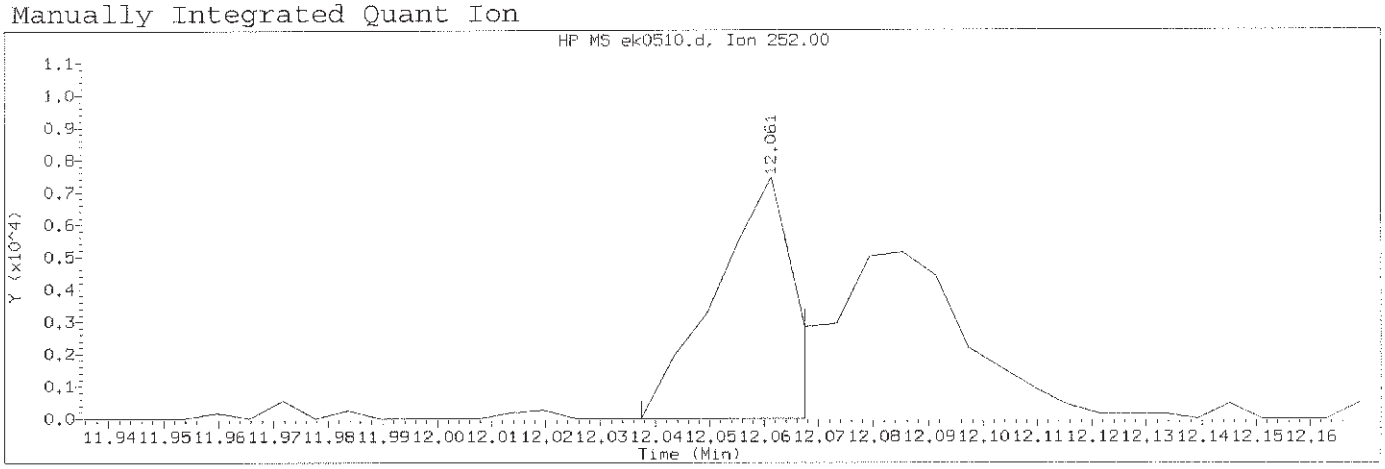
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area (flag)	: 7516M		
On-Column Amount (ng/ul)	: 0.1630		
Integration start scan	: 1797	Integration stop scan:	1802
Y at integration start	: 0	Y at integration end:	0

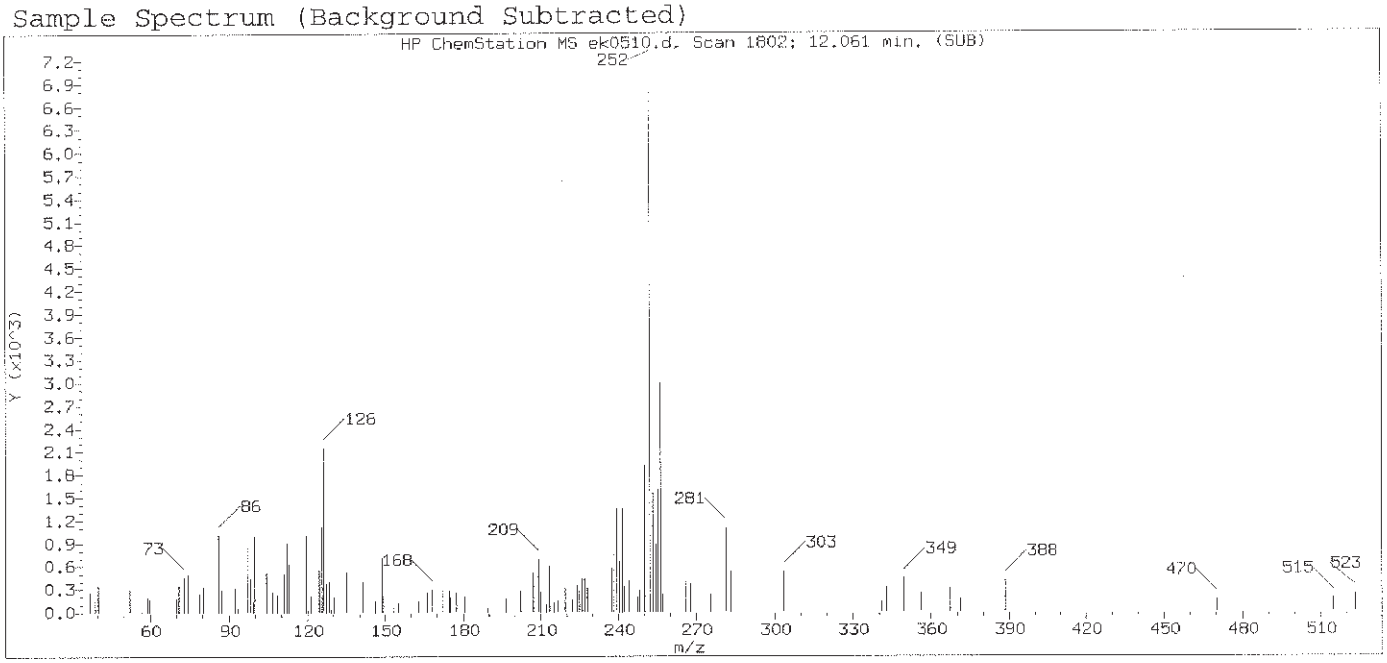
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

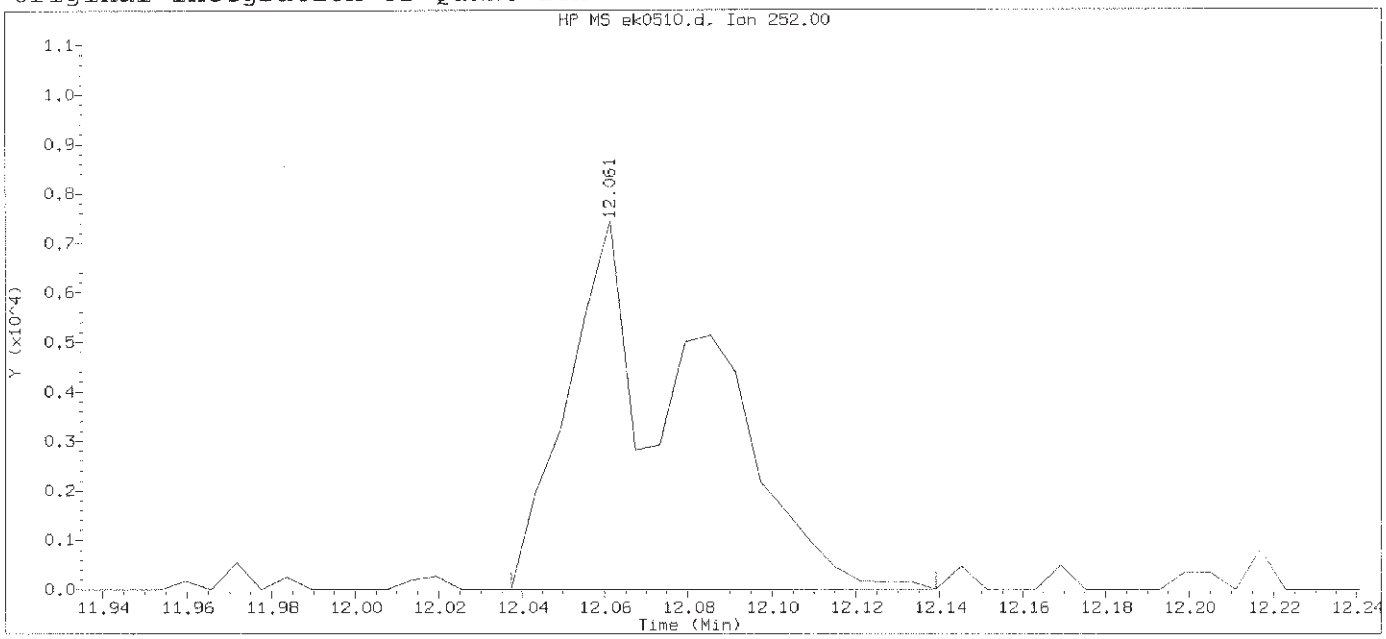
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

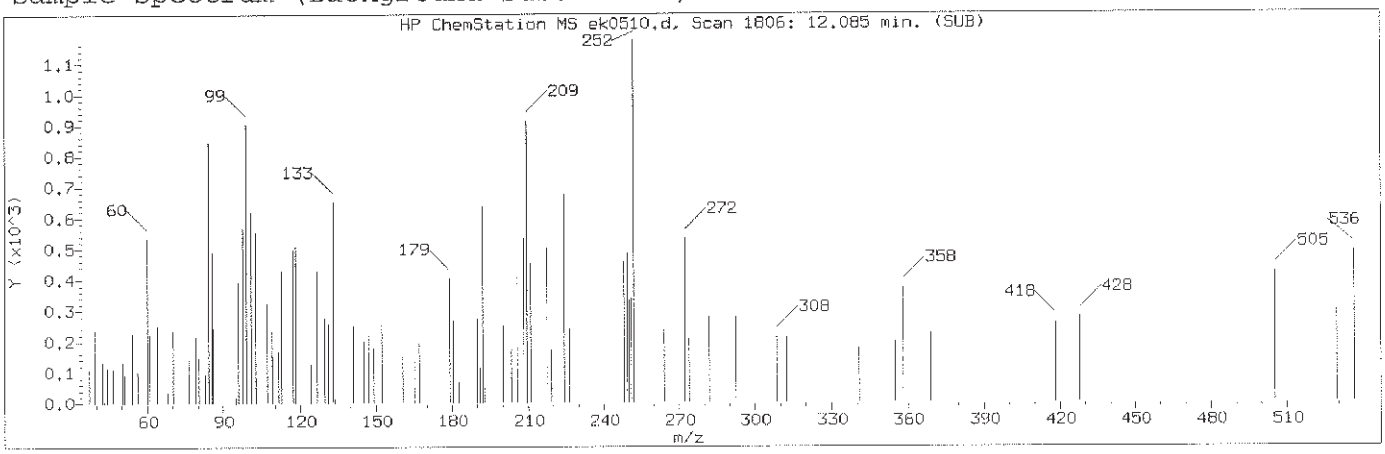
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:52 Automation

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

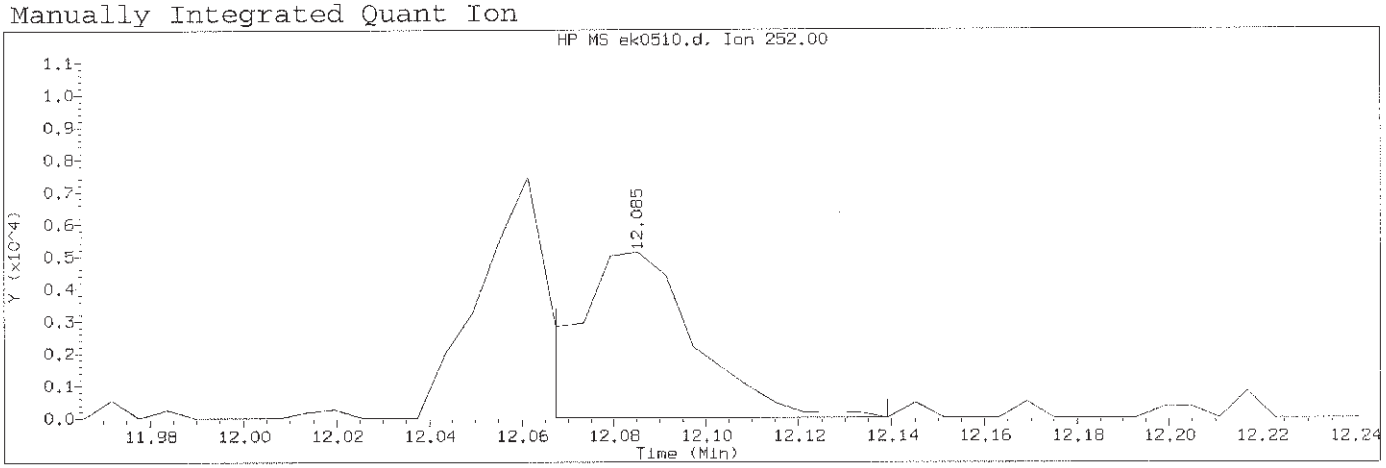
Compound Number	: 186		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 15790		
On-column Amount (ng/ul)	: 0.2624		
Integration start scan	: 1797	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1806		
Retention Time (minutes)	: 12.085		
Quant Ion	: 252.00		
Area (flag)	: 9284M		
On-Column Amount (ng/ul)	: 0.2017		
Integration start scan	: 1802	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	0

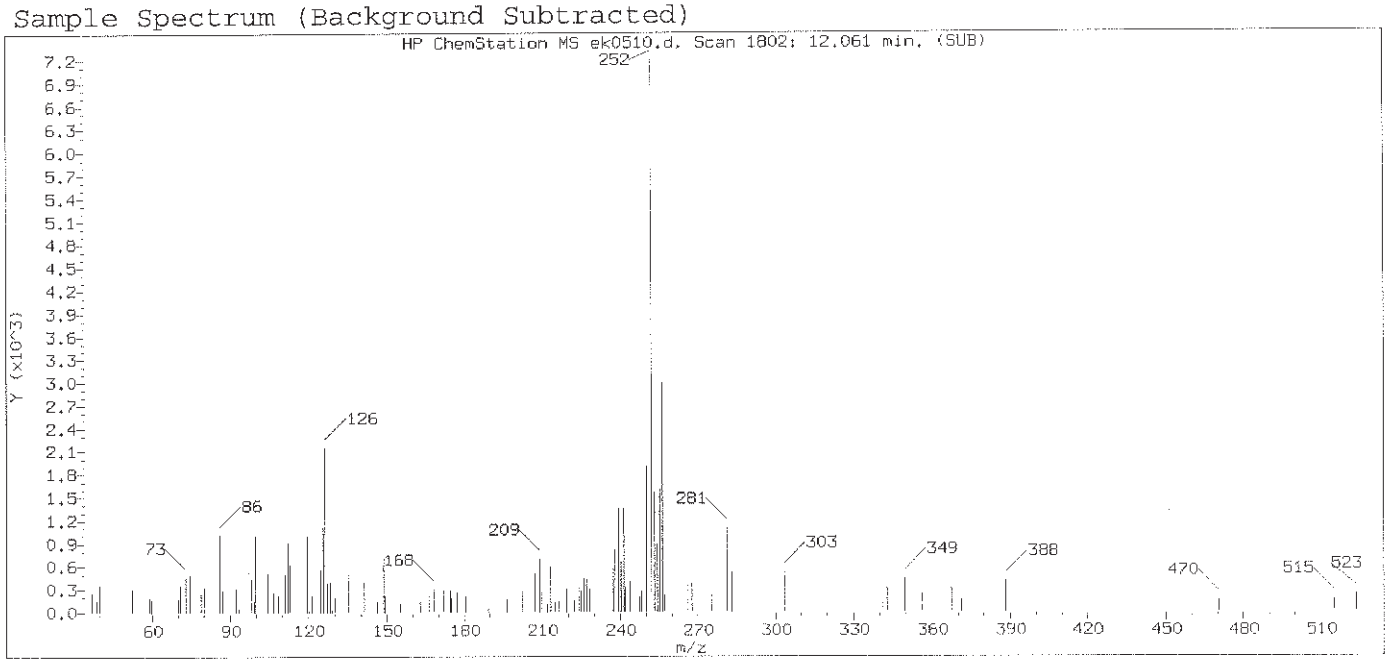
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

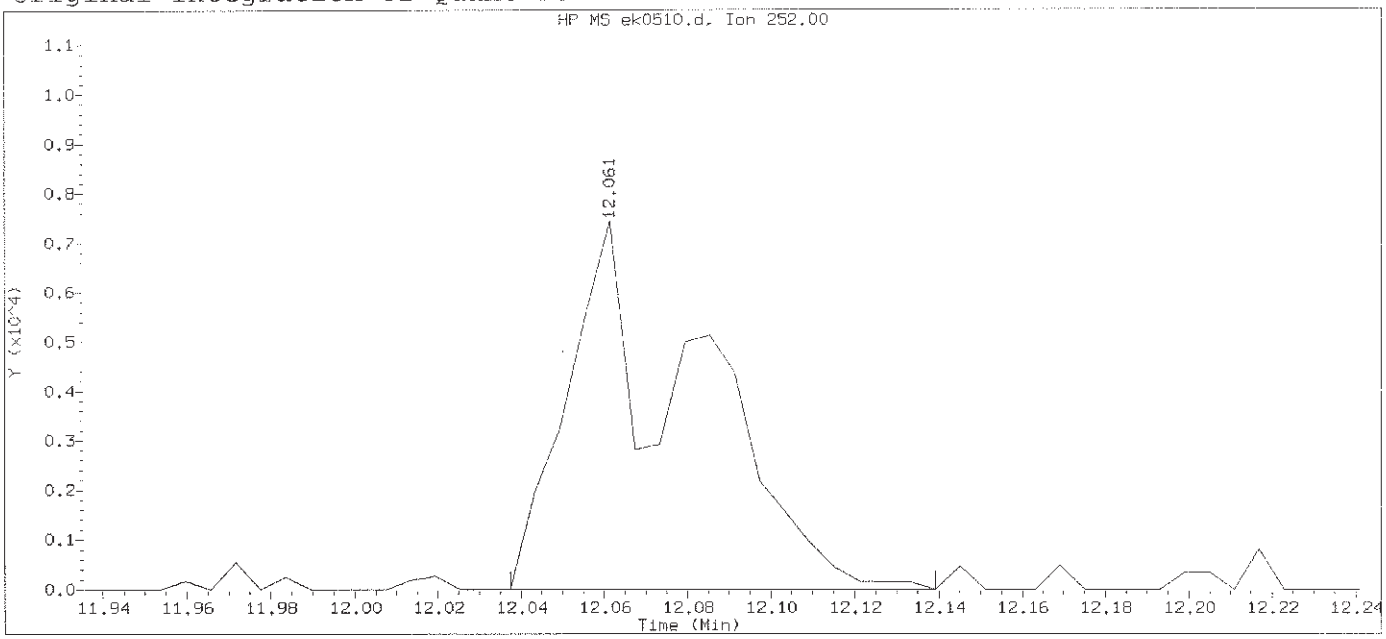
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

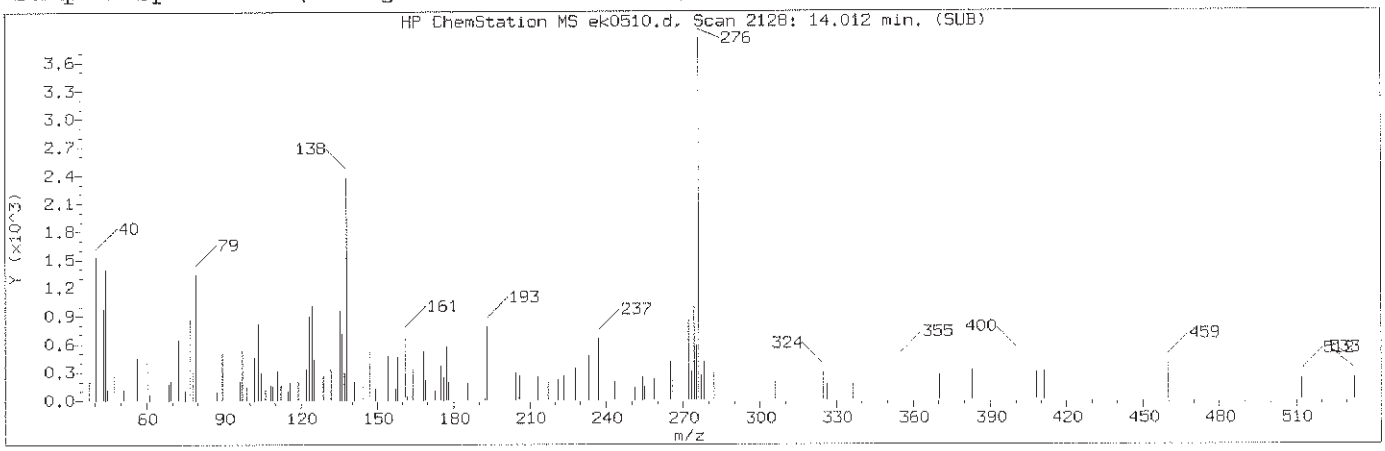
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:52 Automation

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

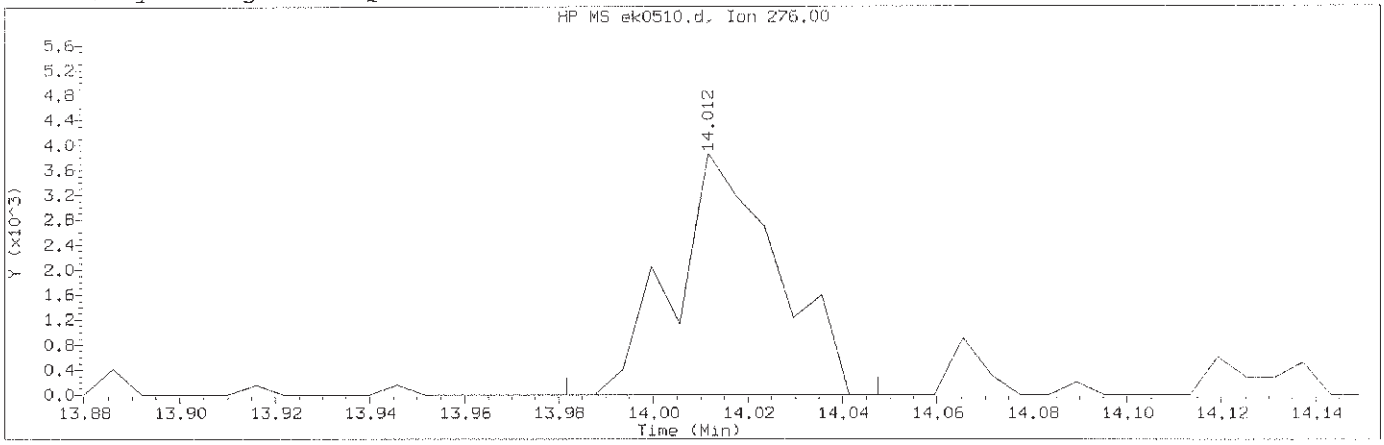
Compound Number	: 187		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1802		
Retention Time (minutes)	: 12.061		
Quant Ion	: 252.00		
Area	: 15790		
On-column Amount (ng/ul)	: 0.2586		
Integration start scan	: 1797	Integration stop scan:	1814
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1mdlall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:48 hb01996

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

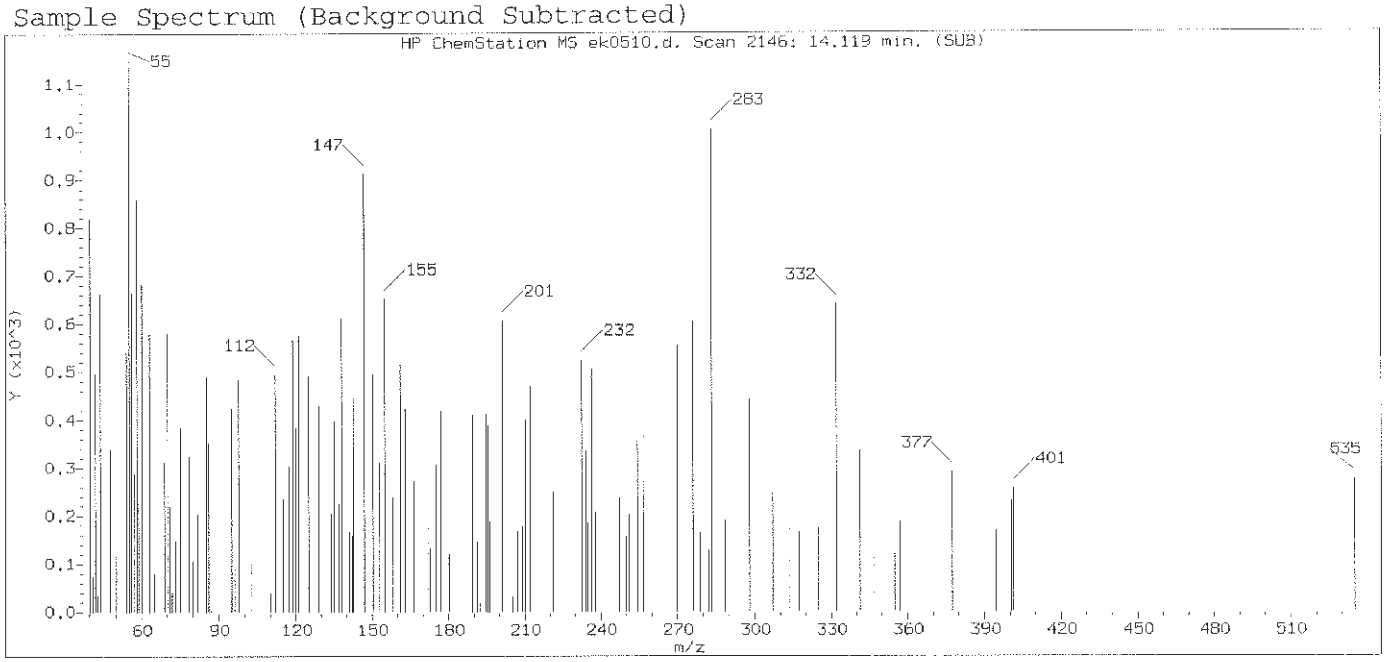
Compound Number	: 196		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2128		
Retention Time (minutes)	: 14.012		
Quant Ion	: 276.00		
Area (flag)	: 5785M		
On-Column Amount (ng/ul)	: 0.1680		
Integration start scan	: 2122	Integration stop scan:	2133
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

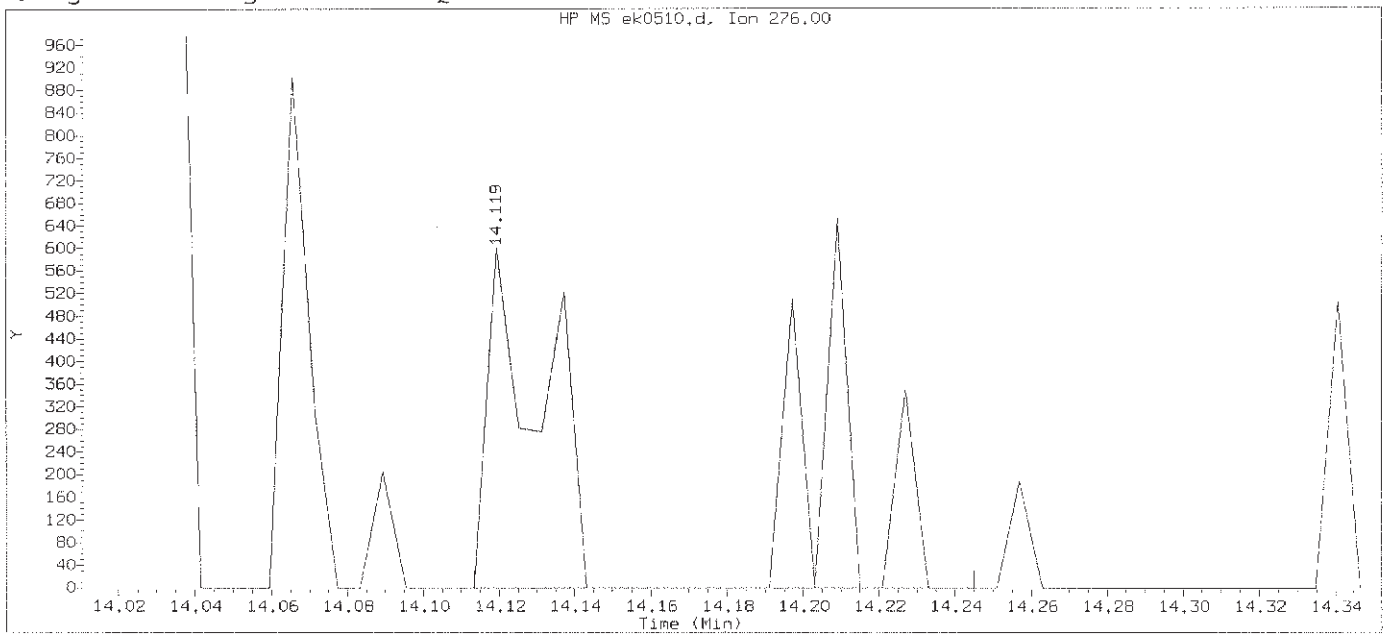
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



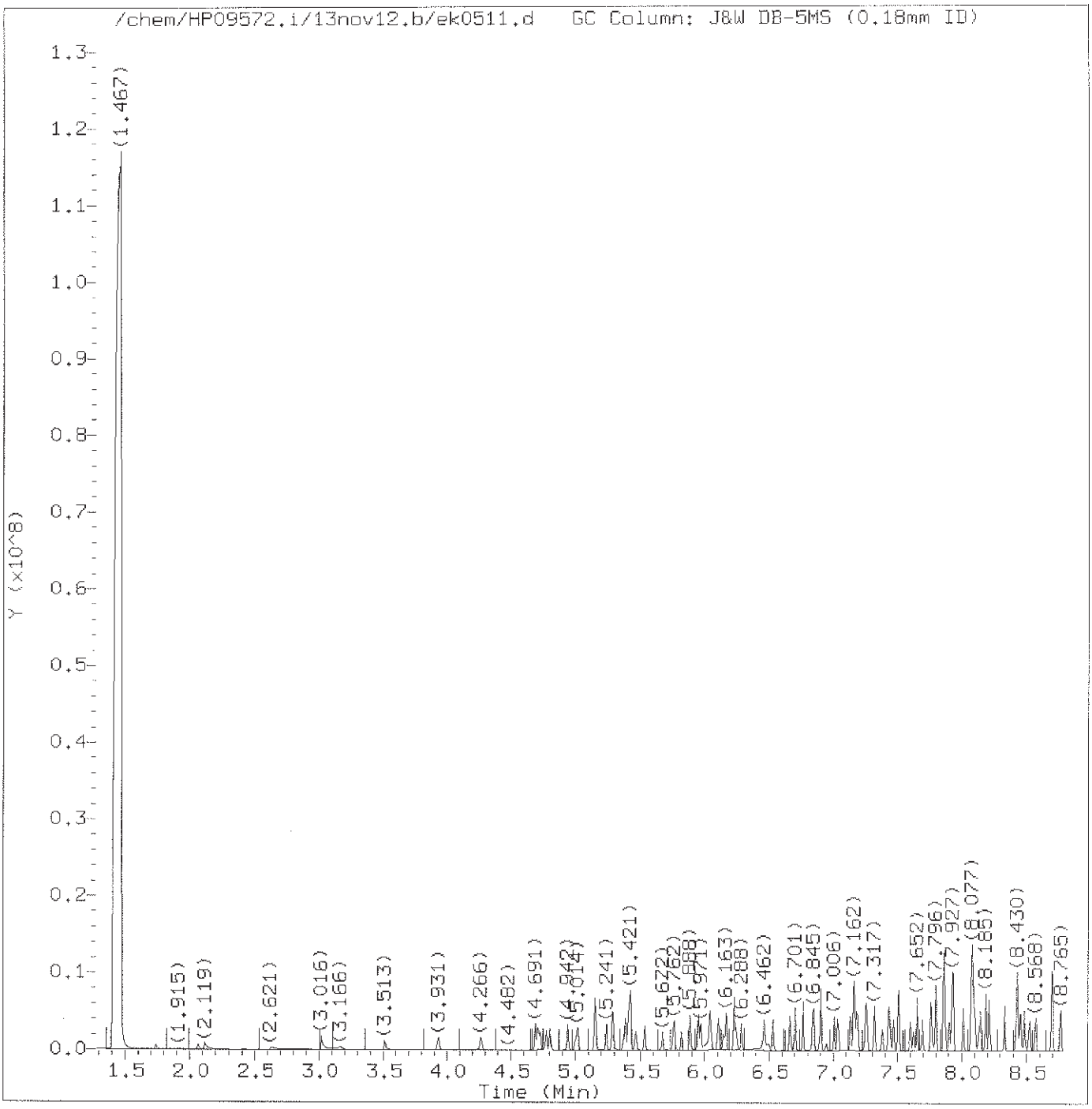
Data File: /chem/HP09572.i/13nov12.b/ek0510.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:27 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: 0.1md1a111
Calibration date and time: 12-NOV-2013 16:03
Date, time and analyst ID of latest file update: 12-Nov-2013 16:52 Automation

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Compound Number	: 196		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2146		
Retention Time (minutes)	: 14.119		
Quant Ion	: 276.00		
Area	: 1145		
On-column Amount (ng/ul)	: 0.0324		
Integration start scan	: 2144	Integration stop scan:	2166
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

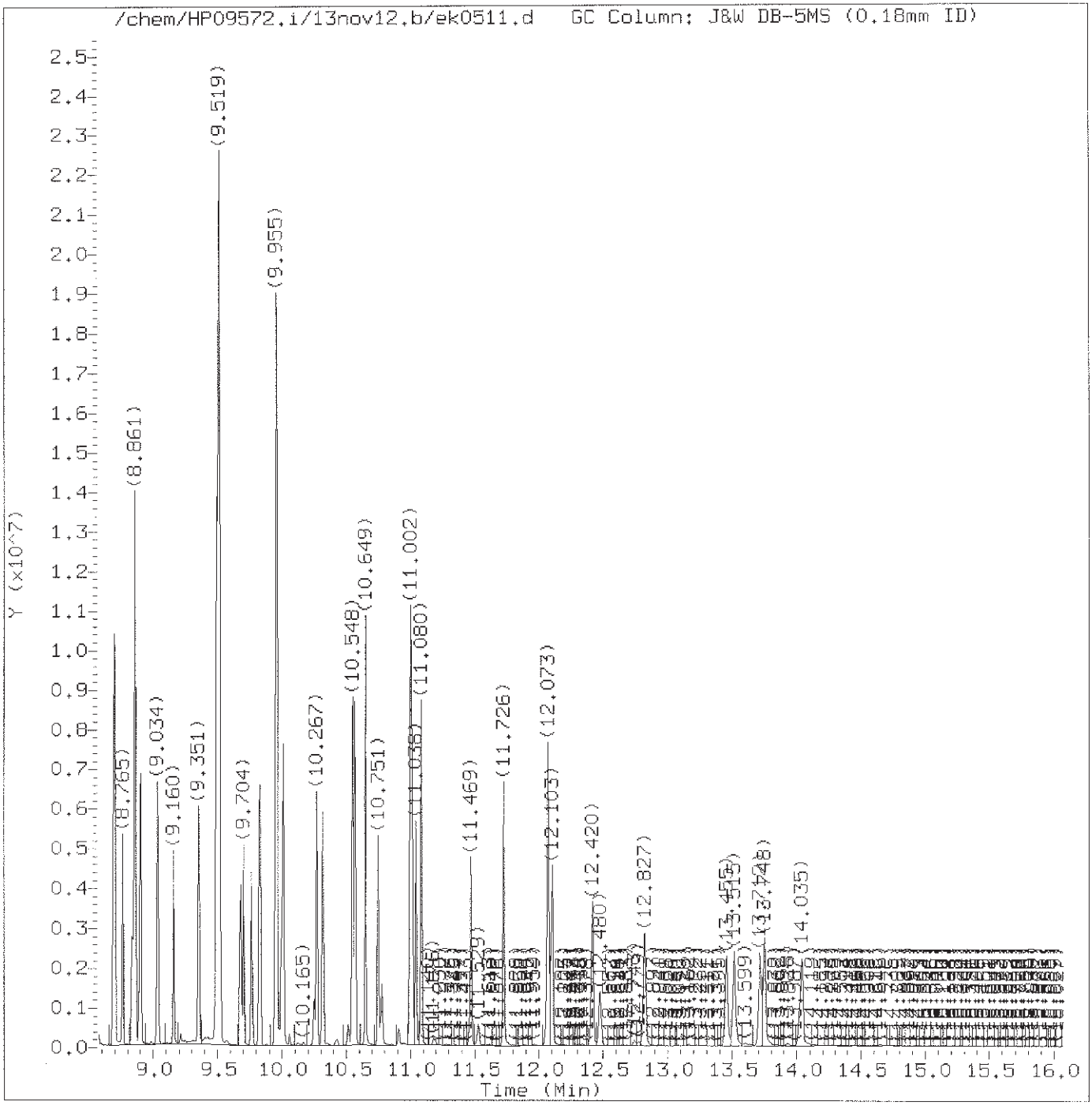
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicvall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.742	88	222402	51.774
2) N-Nitrosodimethylamine	(1)	2.065	74	386400	54.037
3) Pyridine	(1)	2.113	79	538063	45.729
4) 2-Picoline	(1)	3.016	93	691070	47.911
5) N-Nitrosomethylethylamine	(1)	3.166	88	337175	51.654
6) Methyl methanesulfonate	(1)	3.513	80	456757	58.235
8) N-Nitrosodiethylamine	(1)	3.931	102	346722	51.904
10) Ethyl methanesulfonate	(1)	4.266	109	353812	50.909
20) Aniline	(1)	4.691	93	1185157	52.283
19) Phenol	(1)	4.709	94	960043	54.449
21) bis(2-Chloroethyl)ether	(1)	4.775	93	723580	50.100
22) 2-Chlorophenol	(1)	4.805	128	609357	53.198
24) 1,3-Dichlorobenzene	(1)	4.942	146	608517	52.054
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	147937	20.000
26) 1,4-Dichlorobenzene	(1)	5.020	146	617468	52.114
27) Benzyl alcohol	(1)	5.152	108	490861	55.468
28) 1,2-Dichlorobenzene	(1)	5.152	146	599718	54.200
30) Indene	(1)	5.241	115	961858	47.126
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.289	45	758055	49.029
29) 2-Methylphenol	(1)	5.289	108	668744	52.705
32) bis(2-Chloroisopropyl)ether	(1)	5.289	45	758055	49.029
33) N-Nitrosopyrrolidine	(1)	5.373	100	437221	54.678
34) Acetophenone	(1)	5.385	105	1061935	50.053
37) N-Nitrosomorpholine	(1)	5.409	56	532048	53.172
36) N-Nitroso-di-n-propylamine	(1)	5.409	70	622523	50.746
38) o-Toluidine	(1)	5.421	106	1143520	52.821
35) 4-Methylphenol	(1)	5.421	108	797659	52.801
39) Hexachloroethane	(1)	5.463	117	252248	50.955
41) Nitrobenzene	(2)	5.535	77	867393	49.566
42) N-Nitrosopiperidine	(2)	5.672	114	388759	49.471
52) Isophorone	(2)	5.762	82	1593583	51.231
53) 2-Nitrophenol	(2)	5.822	139	357168	50.230
54) 2,4-Dimethylphenol	(2)	5.888	107	818493	49.649
55) O,O,O-triethylphosphorothioate	(2)	5.953	198	305863	49.263
57) bis(2-Chloroethoxy)methane	(2)	5.971	93	928980	44.827
58) 2,4-Dichlorophenol	(2)	6.043	162	547529	51.554
56) Benzoic acid	(2)	6.049	105	1298552	97.498
59) 1,2,4-Trichlorobenzene	(2)	6.103	180	547940	52.364
60)*Naphthalene-d8	(2)	6.145	136	722859	20.000
61) Naphthalene	(2)	6.163	128	1830786	48.030

* = Compound is an internal standard.

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on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 4-Chloroaniline	(2)	6.228	127	874041	52.445
63) 2,6-Dichlorophenol	(2)	6.234	162	540742	51.797
64) Hexachloropropene	(2)	6.246	213	318615	49.984
65) Hexachlorobutadiene	(2)	6.288	225	277027	50.209
67) Quinoline	(2)	6.462	129	1338795	49.652
68) N-Nitrosodi-n-butylamine	(2)	6.534	84	648416	39.930
70) 4-Chloro-3-methylphenol	(2)	6.659	107	792242	49.882
71) Safrole	(2)	6.701	162	552945	52.036
72) 2-Methylnaphthalene	(2)	6.761	142	1367854	49.959
75) 1-Methylnaphthalene	(2)	6.845	142	1274060	50.778
76) Hexachlorocyclopentadiene	(3)	6.899	237	558676	116.182
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.904	216	519027	51.502
78) cis-Isosafrole	(3)	6.946	162	96712	5.690
79) 2,4,6-Trichlorophenol	(3)	7.006	196	404514	53.149
80) 2,4,5-Trichlorophenol	(3)	7.036	196	417243	52.214
83) Isosafrole	(3)	7.132	162	573448	53.350
82) trans-Isosafrole	(3)	7.132	162	573448	47.481
86) 1,1'-Biphenyl	(3)	7.156	154	1675056	49.494
87) 2-Chloronaphthalene	(3)	7.168	162	1421979M	51.208
88) 1-Chloronaphthalene	(3)	7.180	162	1398226M	54.434
89) Diphenyl ether	(3)	7.245	170	907032	50.453
90) 2-Nitroaniline	(3)	7.257	138	499256	53.058
91) 1,4-Naphthoquinone	(3)	7.317	158	693123	61.800
92) 1,4-Dinitrobenzene	(3)	7.377	168	250351	50.076
93) Dimethylphthalate	(3)	7.431	163	1615696	51.685
94) 1,3-Dinitrobenzene	(3)	7.443	168	317885	54.516
95) 2,6-Dinitrotoluene	(3)	7.467	165	391474	51.251
96) Acenaphthylene	(3)	7.509	152	2116355	56.056
97) 3-Nitroaniline	(3)	7.598	138	469976	54.156
99) *Acenaphthene-d10	(3)	7.622	164	463931	20.000
100) Acenaphthene	(3)	7.652	153	1352891	50.006
101) 2,4-Dinitrophenol	(3)	7.694	184	451181	112.549
103) Pentachlorobenzene	(3)	7.760	250	457165	49.967
102) 4-Nitrophenol	(3)	7.766	109	373483	52.822
105) Dibenzofuran	(3)	7.796	168	1849858	49.328
104) 2,4-Dinitrotoluene	(3)	7.802	165	532994	51.683
106) 1-Naphthylamine	(3)	7.862	143	3087673	102.538
107) 2,3,4,6-Tetrachlorophenol	(3)	7.904	232	349141	55.132
108) 2-Naphthylamine	(3)	7.933	143	3074536	100.741
109) Diethylphthalate	(3)	8.011	149	1692322	51.624

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
111) Fluorene	(3)	8.077	166	1626014	51.058
110) Thionazin	(3)	8.077	107	352614	47.895
112) 4-Chlorophenyl-phenylether	(3)	8.089	204	717388	49.876
113) 5-Nitro-o-toluidine	(3)	8.095	152	500207	49.414
114) 4-Nitroaniline	(3)	8.107	138	471265A	52.471
115) 4,6-Dinitro-2-methylphenol	(4)	8.131	198	279907	49.796
118) NDPA as diphenylamine	(4)	8.185	169	1423082	50.415
117) N-Nitrosodiphenylamine	(4)	8.185	169	1423082	50.181
119) 1,2-Diphenylhydrazine	(4)	8.215	77	2021205	51.010
122) Tetraethyldithiopyrophosphate	(4)	8.334	97	332509	48.597
129) 1,3,5-Trinitrobenzene	(4)	8.424	213	192900	52.540
130) Diallate (peak 1)	(4)	8.430	86	814423	35.630
131) Phorate	(4)	8.436	75	1792357	50.295
132) Phenacetin	(4)	8.460	108	1051733	48.846
133) 4-Bromophenyl-phenylether	(4)	8.484	248	373240	49.375
134) Diallate (peak 2)	(4)	8.496	86	125209	11.793
137) Hexachlorobenzene	(4)	8.526	284	367380	49.598
139) Dimethoate	(4)	8.568	87	806143	47.700
142) Pentachlorophenol	(4)	8.693	266	241806	46.762
143) 4-Aminobiphenyl	(4)	8.699	169	1895056	61.940
144) Pentachloronitrobenzene	(4)	8.699	237	195372	49.109
146) Pronamide	(4)	8.765	173	720682	47.973
148)*Phenanthrene-d10	(4)	8.837	188	818289	20.000
147) Dinoseb	(4)	8.855	211	406848	49.308
149) Phenanthrene	(4)	8.861	178	2272253	49.119
150) Anthracene	(4)	8.903	178	2364253	50.631
151) Carbazole	(4)	9.034	167	2305748	51.000
152) Methyl parathion	(4)	9.160	109	647272	50.112
154) Di-n-butylphthalate	(4)	9.357	149	2903352	51.447
155) Parathion	(4)	9.495	109	445511	50.164
156) 4-Nitroquinoline-1-oxide	(4)	9.519	190	3375956	702.469
159) Isodrin	(4)	9.704	193	257932	47.546
163) Fluoranthene	(4)	9.830	202	2361317	48.850
164) Benzidine	(5)	9.961	184	7506179	236.704
165)*Pyrene-d10	(5)	9.991	212	883441	20.000
166) Pyrene	(5)	10.009	202	2368896	49.107
170) p-Dimethylaminoazobenzene	(5)	10.267	225	530884	54.345
171) Chlorobenzilate	(5)	10.314	139	928382	49.395
173) 3,3'-Dimethylbenzidine	(5)	10.548	212	2715604	104.506
174) Butylbenzylphthalate	(5)	10.566	149	1291328	50.434

A = User selected an alternate hit.
* = Compound is an internal standard.

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on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicvall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
175) 2-Acetylaminofluorene	(5)	10.751	181	1110625	51.142
176) 3,3'-Dichlorobenzidine	(5)	10.996	252	749242	50.706
177) 4,4'-Methylenebis(2-Chloroanil	(5)	11.002	231	385715	47.777
178) Benzo(a)anthracene	(5)	11.008	228	2124201	49.412
180) Chrysene	(5)	11.038	228	1921774	47.586
181) bis(2-Ethylhexyl)phthalate	(5)	11.080	149	1780878	52.690
183) 6-Methylchrysene	(5)	11.469	242	1452790	49.768
184) Di-n-octylphthalate	(6)	11.726	149	2891846	54.196
186) Benzo(b)fluoranthene	(6)	12.073	252	1730278	47.342
185) 7,12-Dimethylbenz[a]anthracene	(6)	12.073	256	939202	52.781
187) Benzo(k)fluoranthene	(6)	12.103	252	1895117	51.949
189) Benzo(a)pyrene	(6)	12.420	252	1704993	52.668
190)*Perylene-d12	(6)	12.480	264	582921	20.000
191) 3-Methylcholanthrene	(6)	12.827	268	891451	52.018
192) Dibenz(a,h)acridine	(6)	13.455	279	1198642	51.029
193) Dibenz(a,j)acridine	(6)	13.515	279	1234361	49.099
194) Indeno(1,2,3-cd)pyrene	(6)	13.712	276	1651718	50.620
195) Dibenz(a,h)anthracene	(6)	13.748	278	1440628	52.135
196) Benzo(g,h,i)perylene	(6)	14.041	276	1357362	49.733
203) 2,4_2,6-Dinitrotoluenes	(3)	22.321	100	924468	0.000
204) Diallate TRANS/CIS	(4)	23.156	86	939632	47.462

* = Compound is an internal standard.

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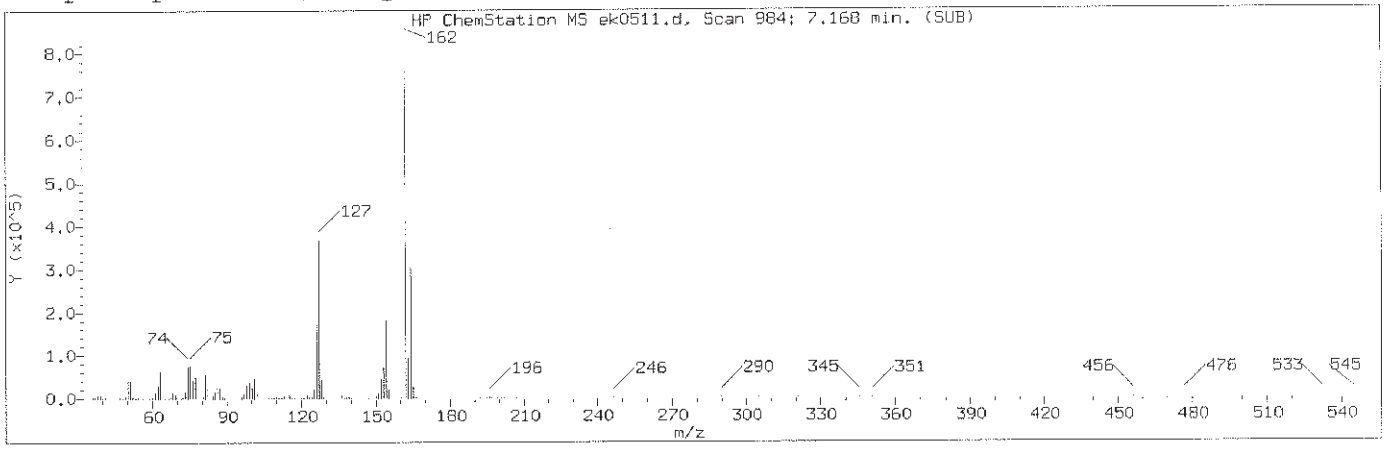
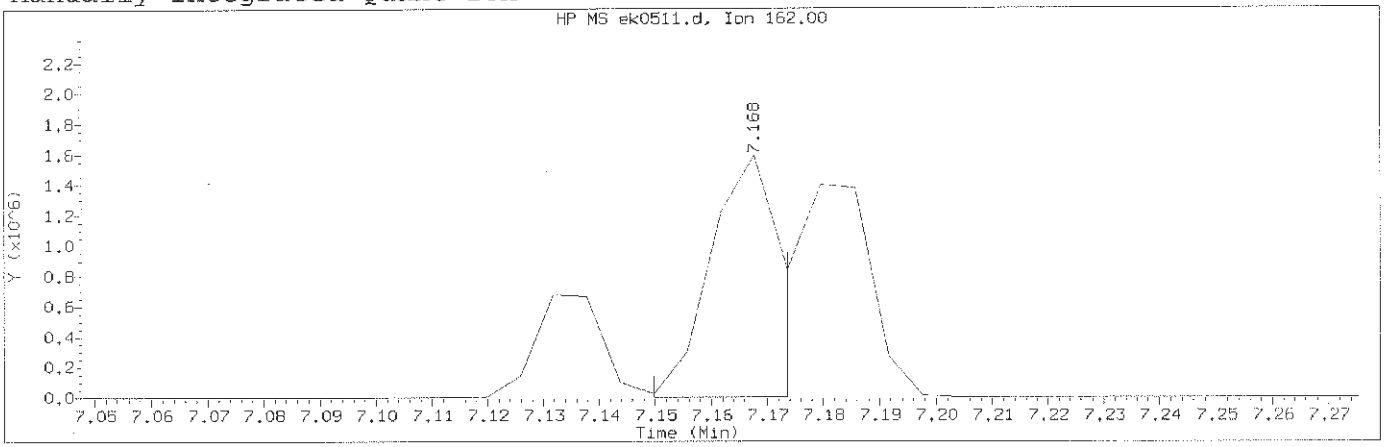
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area (flag)	: 1421979M		
On-Column Amount (ng/ul)	: 51.2083		
Integration start scan	: 980	Integration stop scan:	984
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

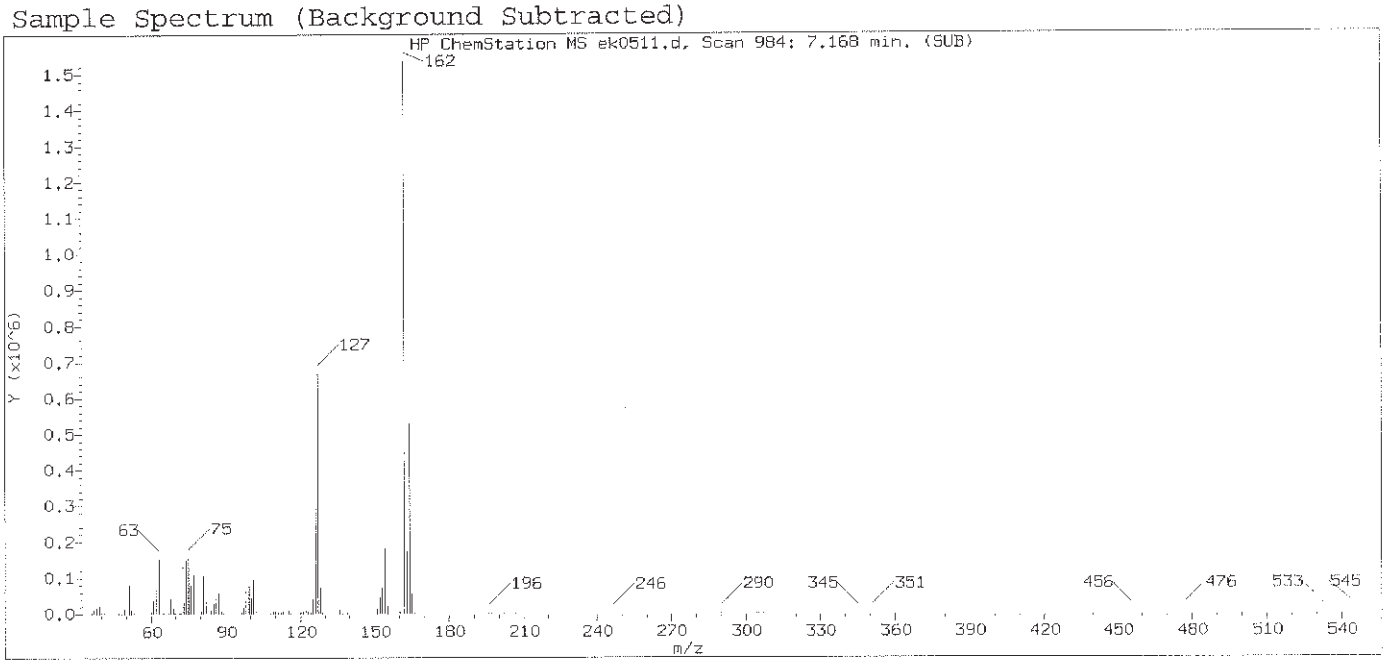
Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Mark A. Ratcliff
Senior Specialist

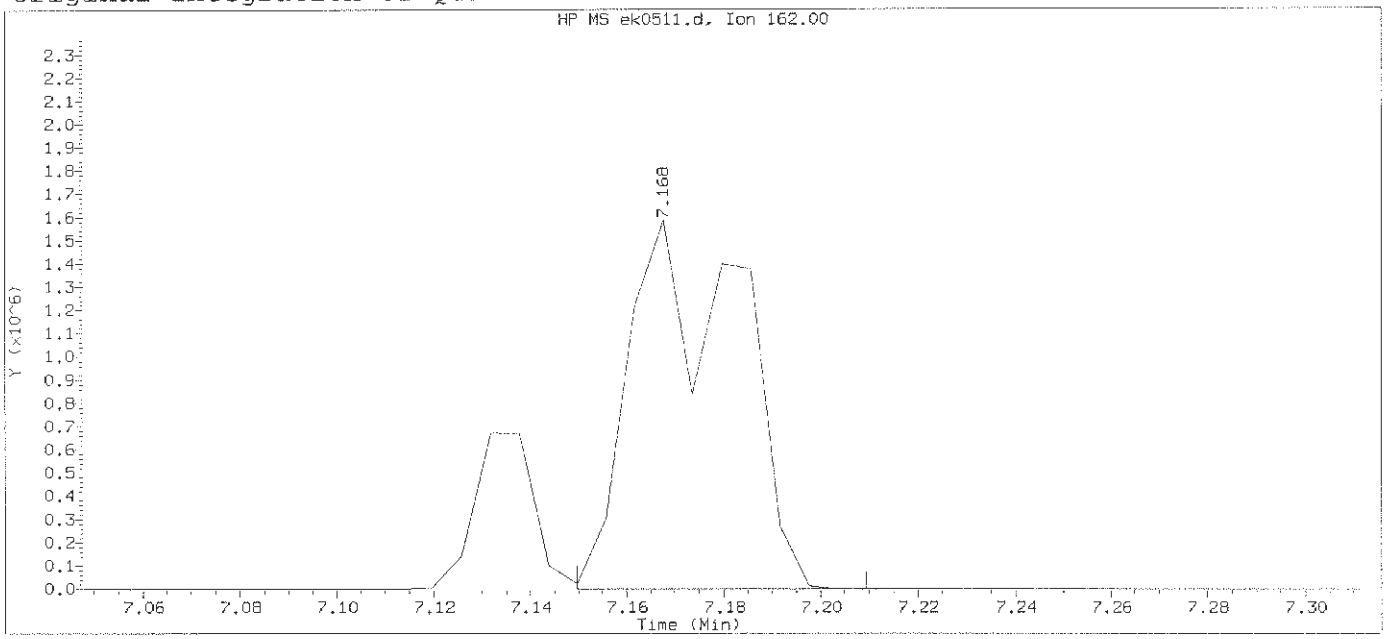
NOV 14 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:42 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 87		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area	: 2515579		
On-column Amount (ng/ul)	: 90.5910		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

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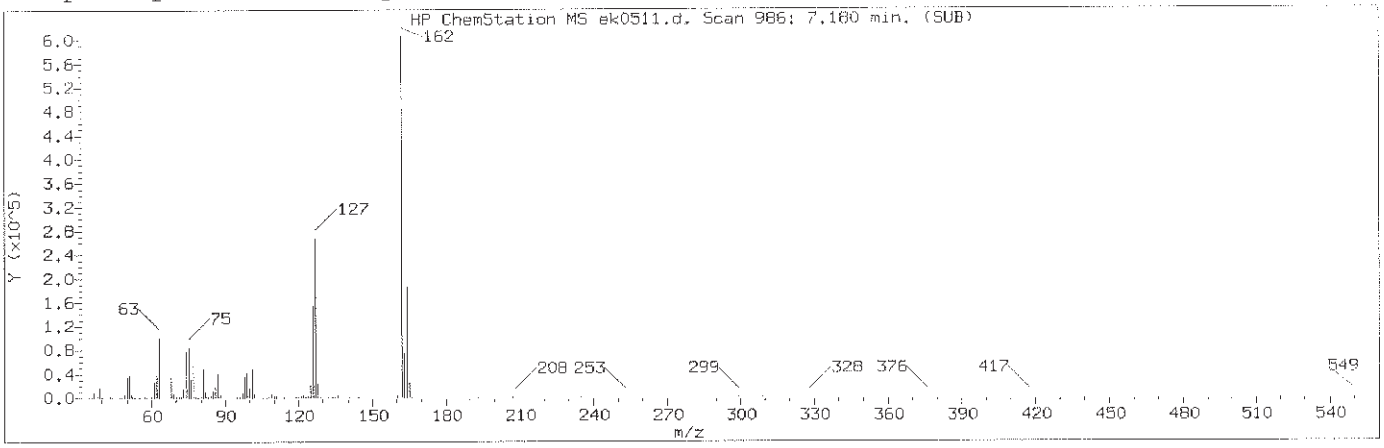
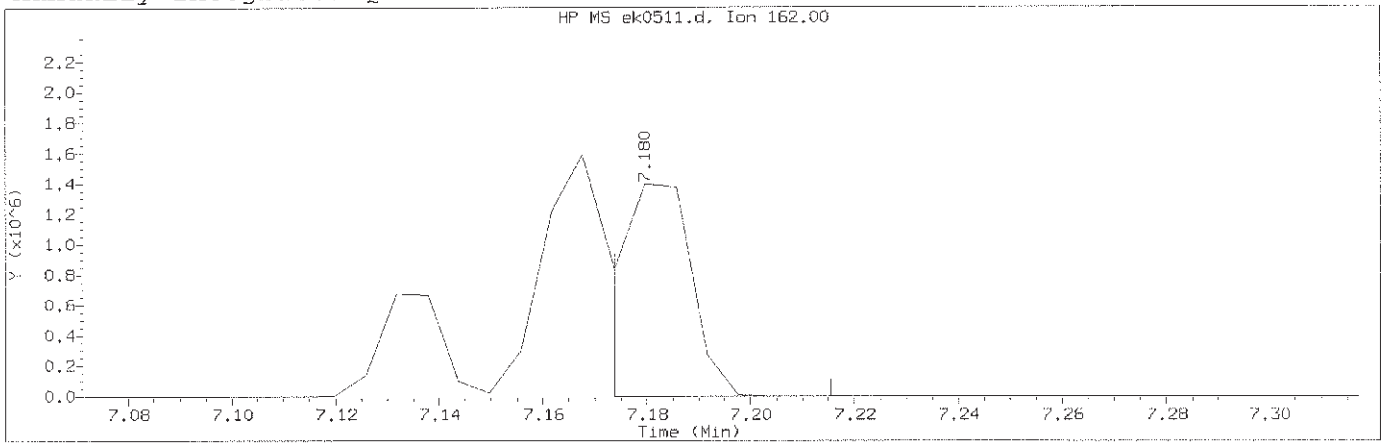
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 986		
Retention Time (minutes)	: 7.180		
Quant Ion	: 162.00		
Area (flag)	: 1398226M		
On-Column Amount (ng/ul)	: 54.4337		
Integration start scan	: 984	Integration stop scan:	991
Y at integration start	: 0	Y at integration end:	0

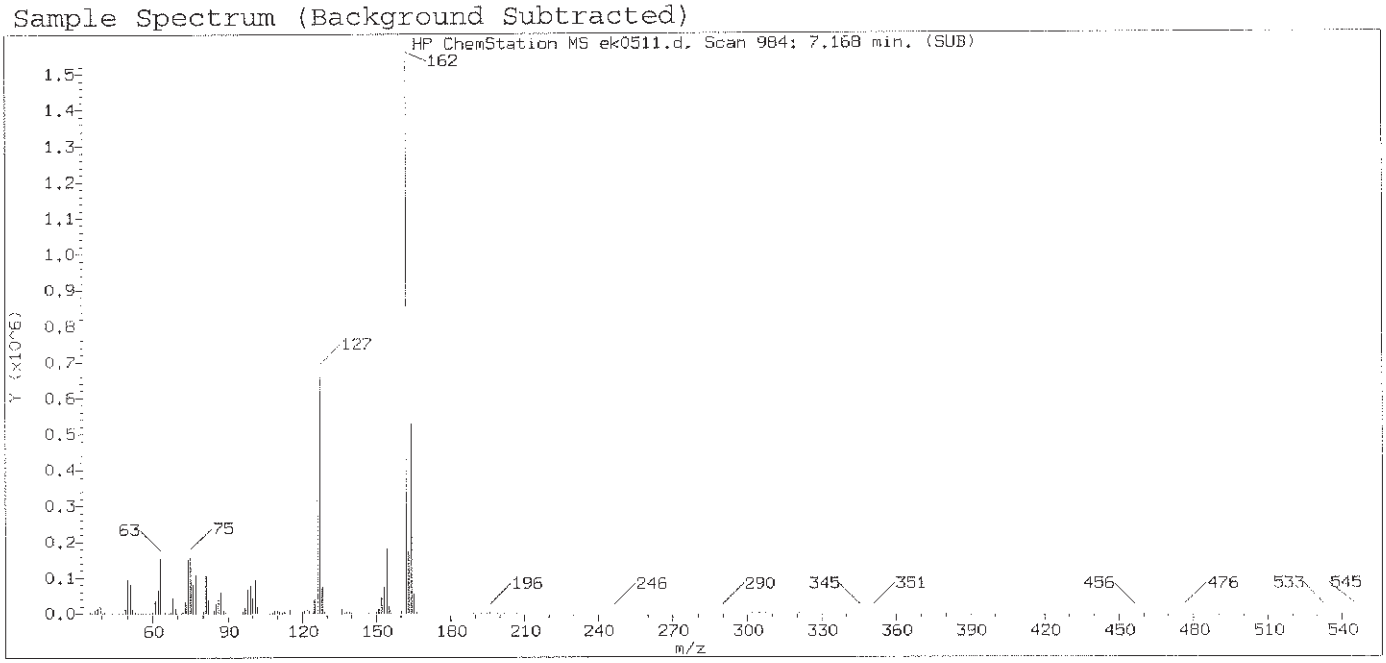
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

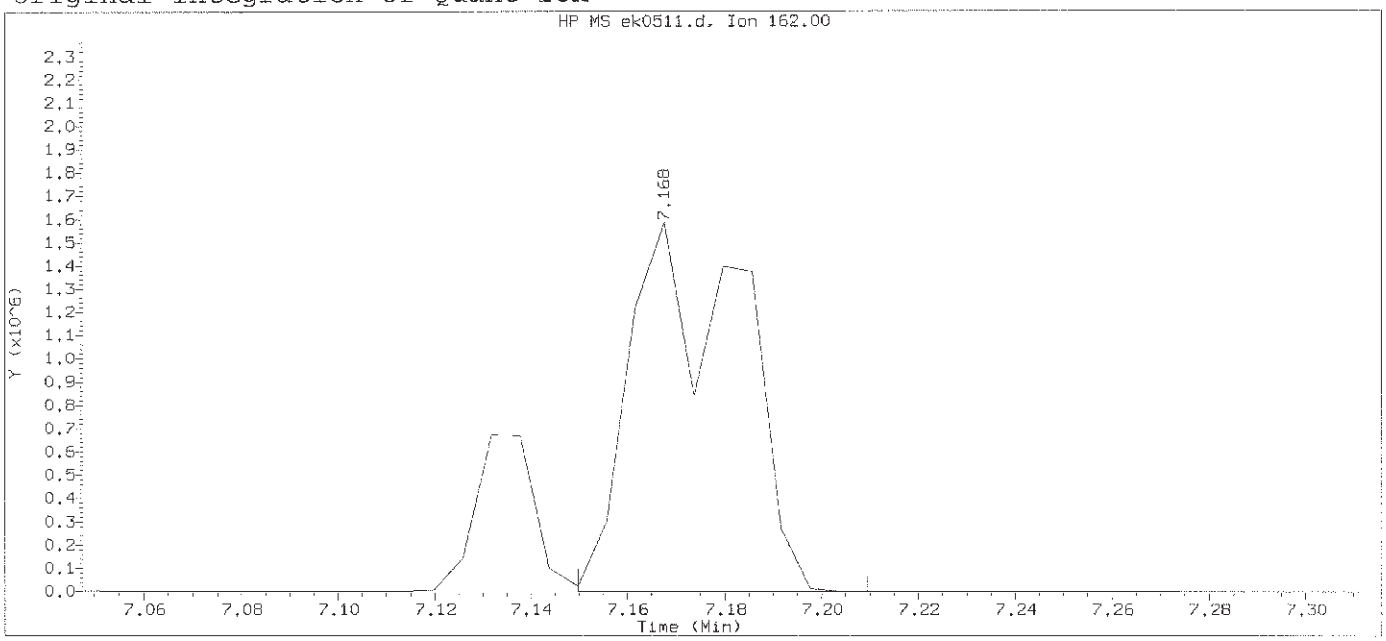
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

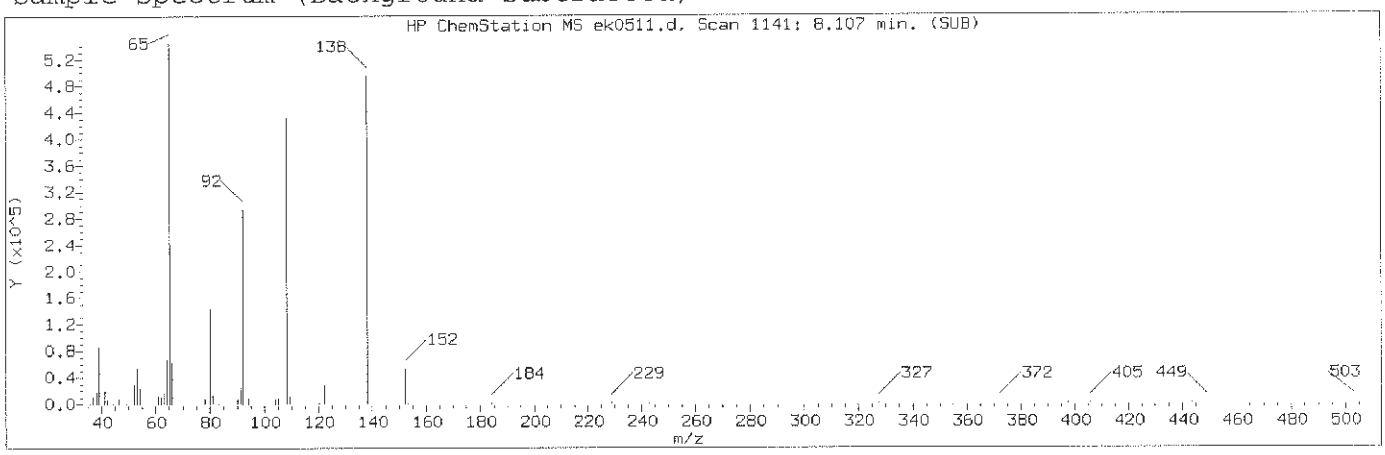
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:42 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

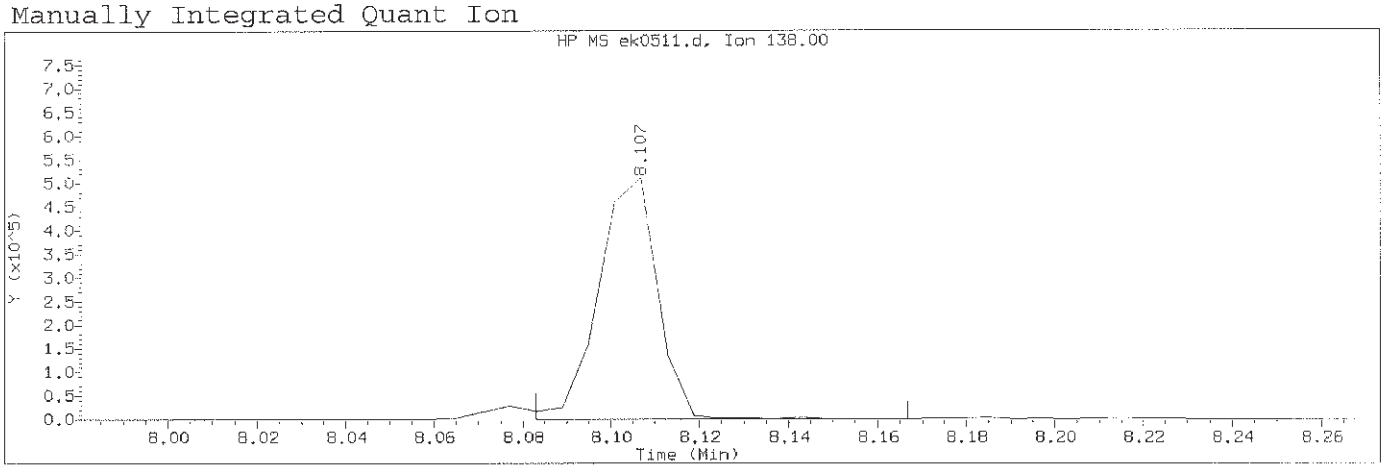
Compound Number	: 88		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 984		
Retention Time (minutes)	: 7.168		
Quant Ion	: 162.00		
Area	: 2515579		
On-column Amount (ng/ul)	: 97.9328		
Integration start scan	: 980	Integration stop scan:	990
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:49 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1141		
Retention Time (minutes)	: 8.107		
Quant Ion	: 138.00		
Area (flag)	: 471265A		
On-Column Amount (ng/ul)	: 52.4707		
Integration start scan	: 1136	Integration stop scan:	1150
Y at integration start	: 0	Y at integration end:	0

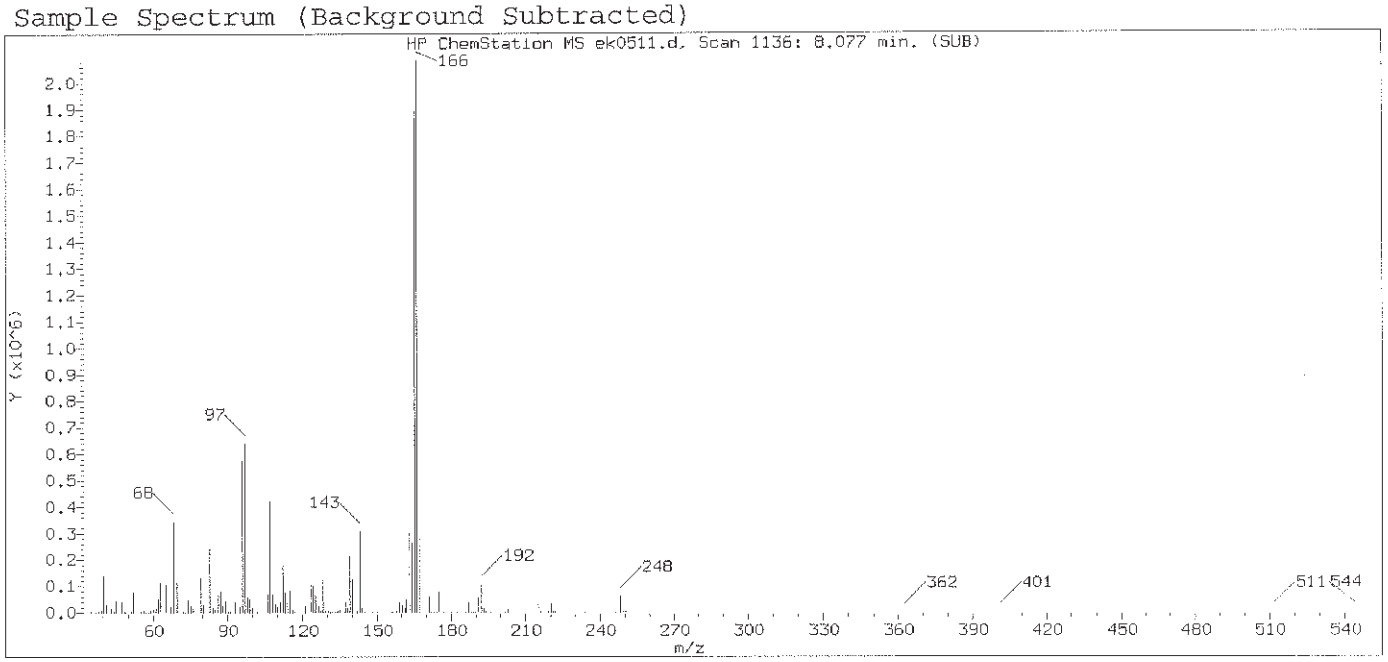
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Holly Berry
on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996

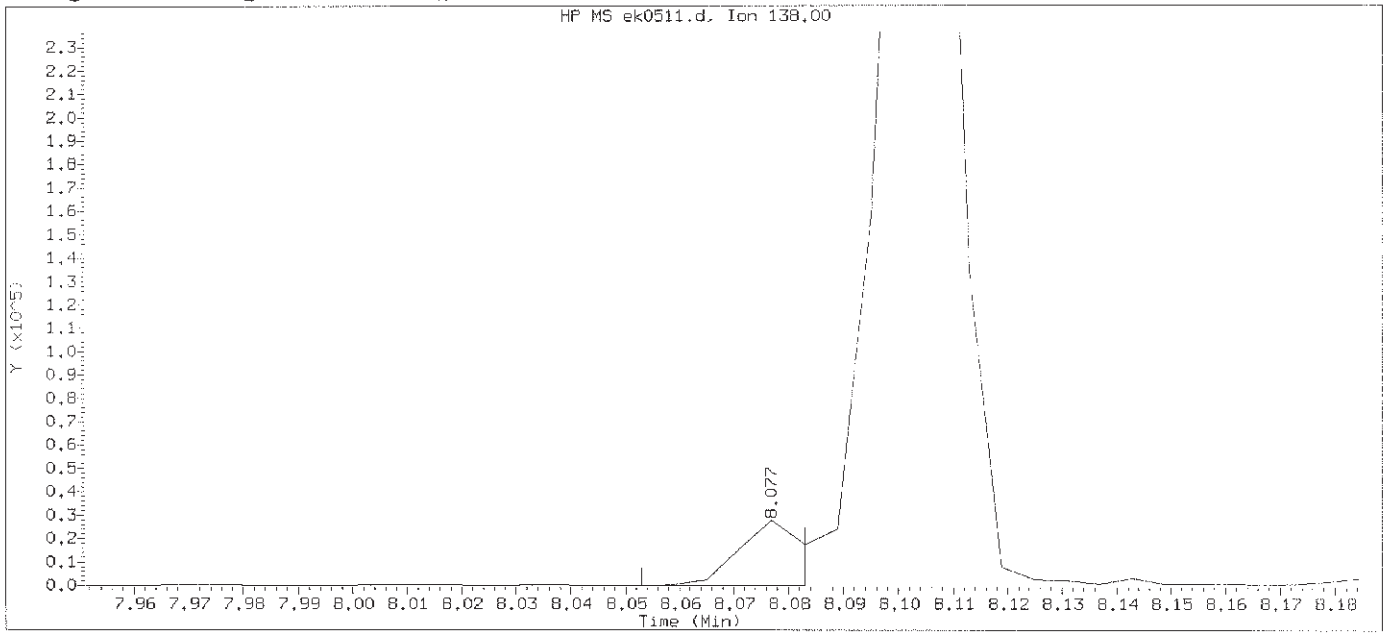
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 14 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



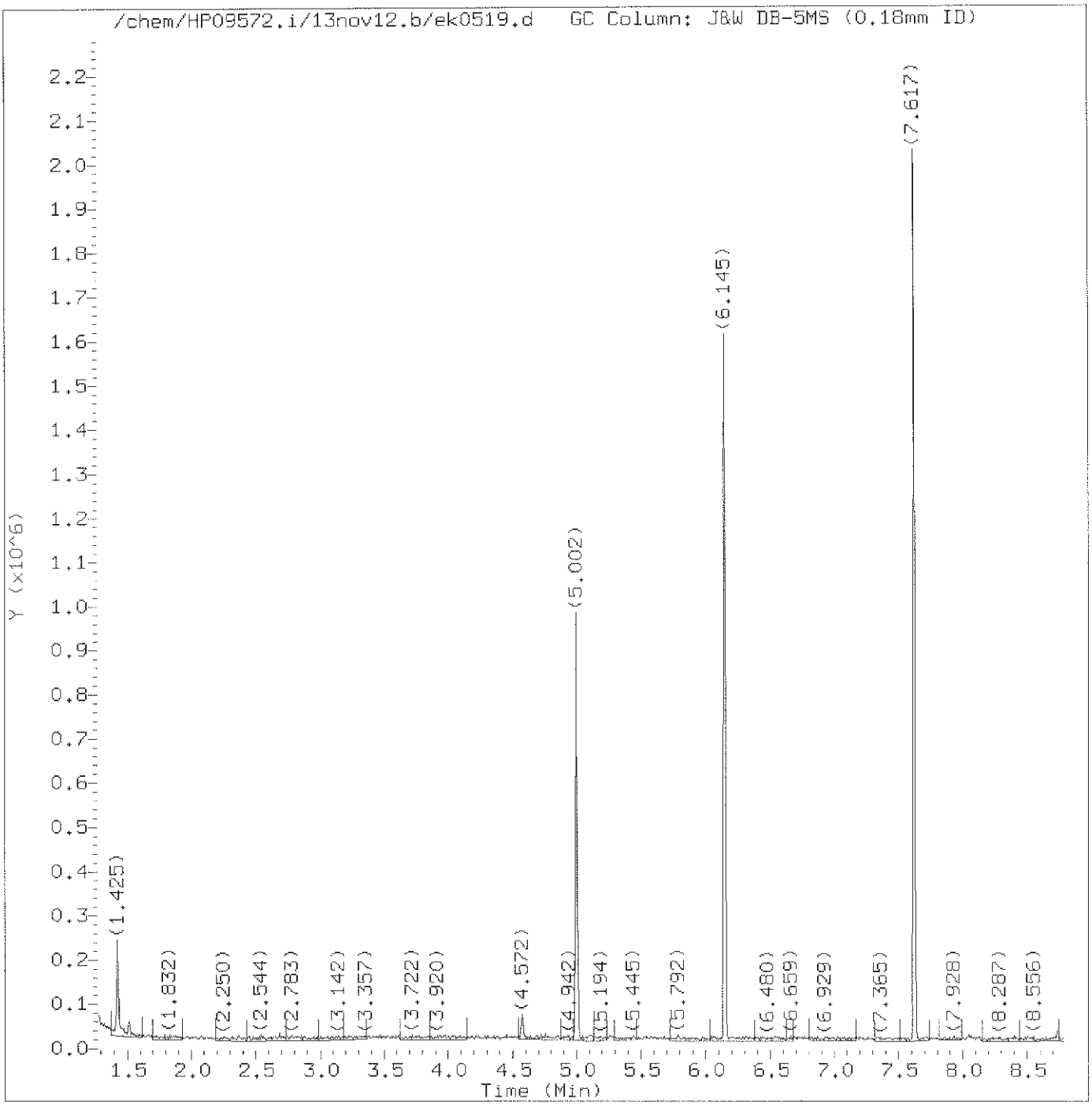
Data File: /chem/HP09572.i/13nov12.b/ek0511.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 16:51 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: newicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:42 hb01996

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1136		
Retention Time (minutes)	: 8.077		
Quant Ion	: 138.00		
Area	: 19821		
On-column Amount (ng/ul)	: 2.2069		
Integration start scan	: 1131	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Holly Berry on 11/12/2013 at 20:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

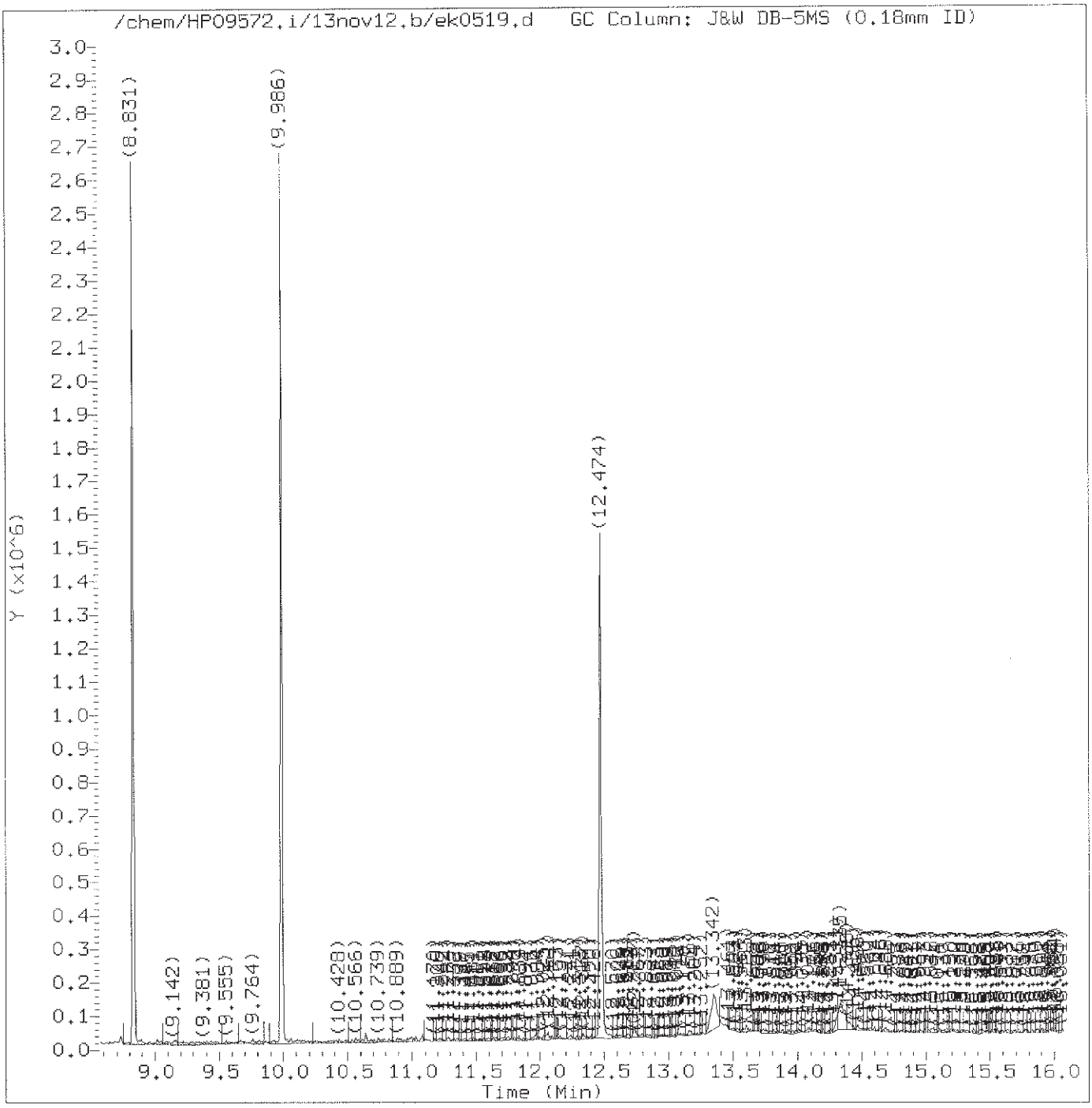
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0519.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:07 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: bas
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:35 hb01996

Sample Name: SSTD001 Lab Sample ID: BASMDL3153

Digitally signed by Holly Berry
on 11/12/2013 at 20:51.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0519.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:07 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: bas
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:35 hb01996

Sample Name: SSTD001 Lab Sample ID: BASMDL3153

Digitally signed by Holly Berry
on 11/12/2013 at 20:51.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0519.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:07 Analyst ID: lmh00956

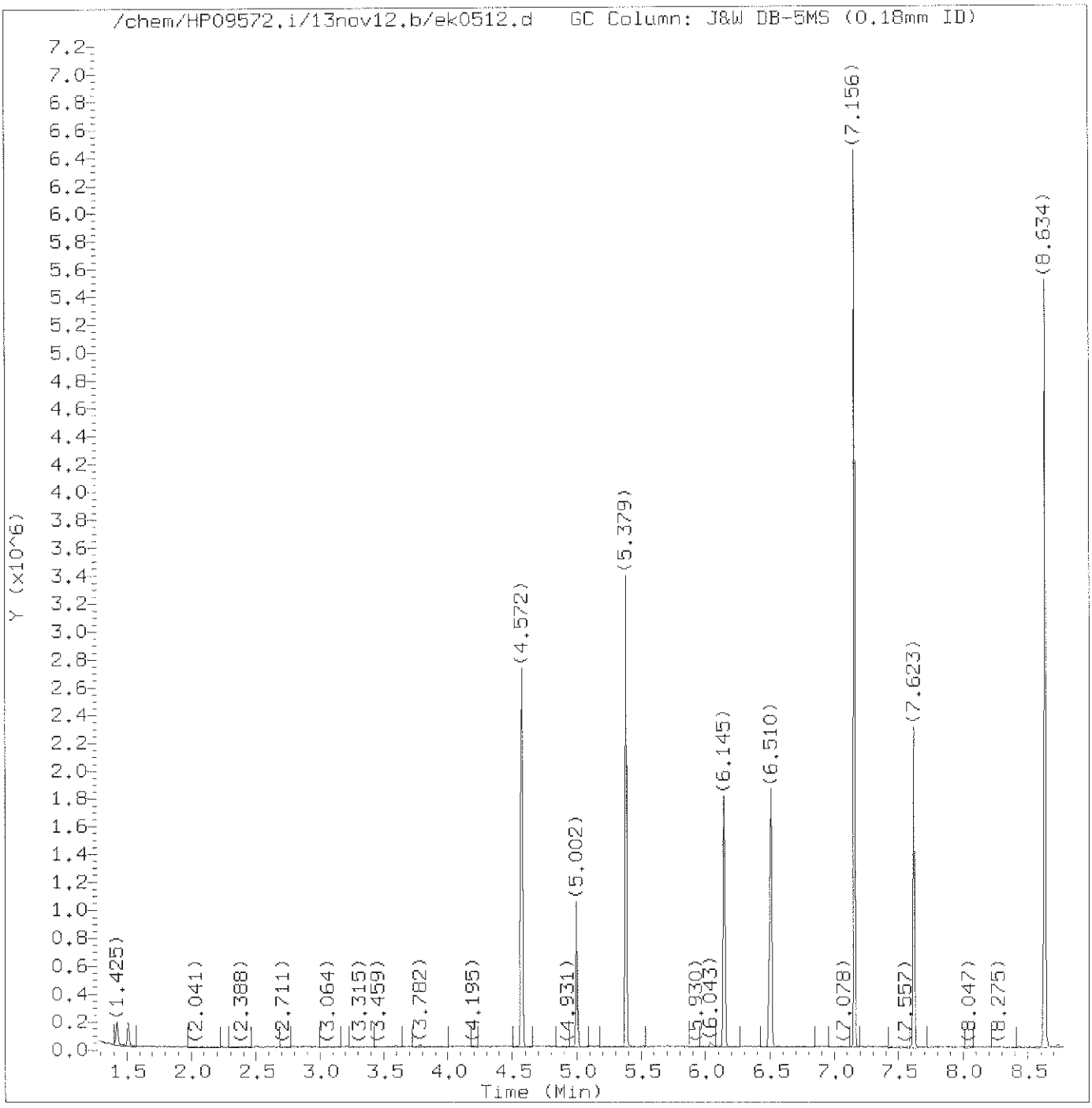
Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: bas
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:35 hb01996

Sample Name: SSTD001 Lab Sample ID: BASMDL3153

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	4.572	77	11630	1.128
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	130274	20.000
60)*Naphthalene-d8	(2)	6.145	136	606657	20.000
99)*Acenaphthene-d10	(3)	7.623	164	410947	20.000
148)*Phenanthrene-d10	(4)	8.831	188	738349	20.000
165)*Pyrene-d10	(5)	9.986	212	856169	20.000
190)*Perylene-d12	(6)	12.474	264	632247	20.000

* = Compound is an internal standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:51.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

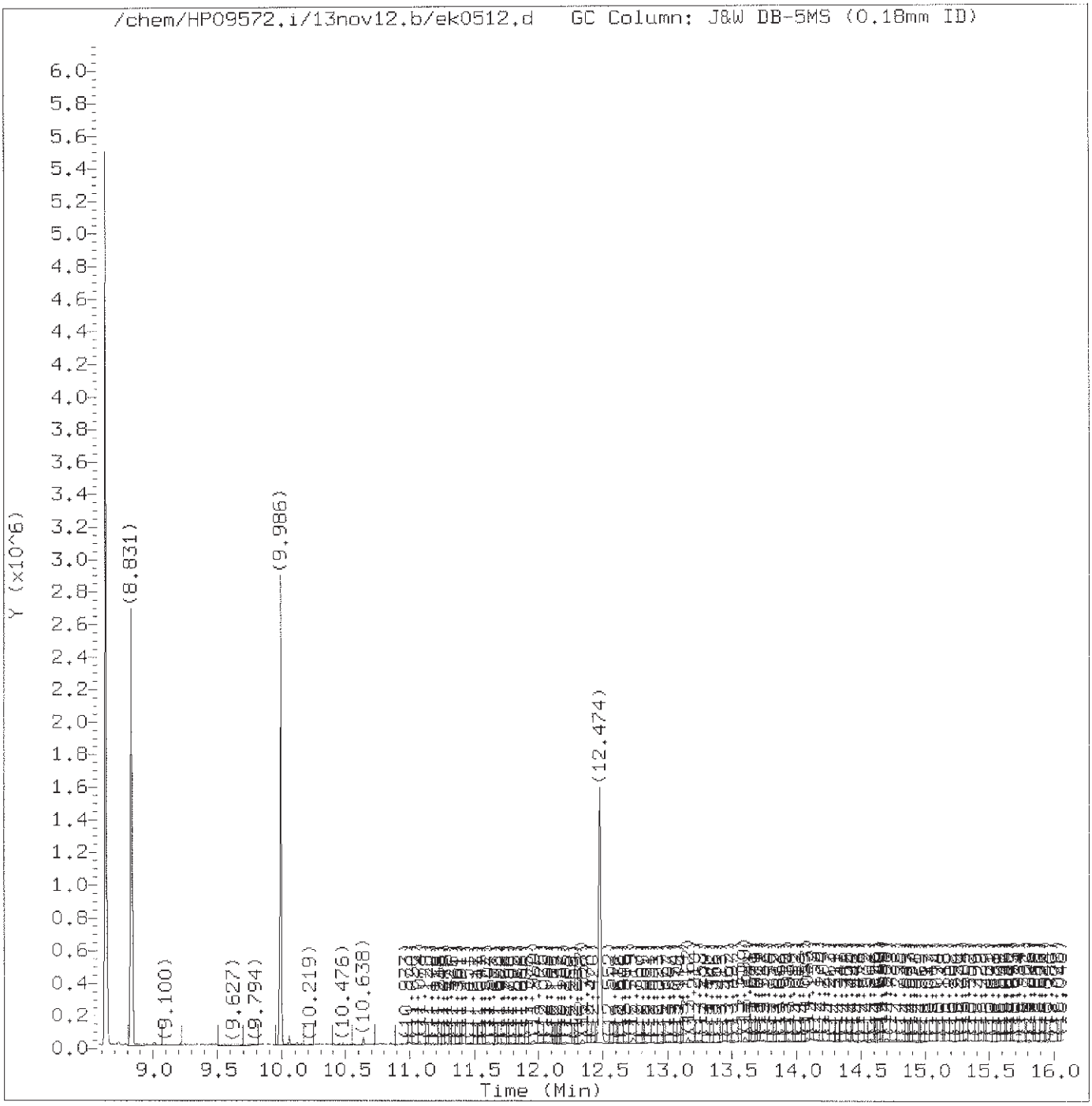
Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0512.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:31 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: basicvall1
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:56 hb01996

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Holly Berry
on 11/12/2013 at 20:57.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0512.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:31 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: basicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:56 hb01996

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Digitally signed by Holly Berry
on 11/12/2013 at 20:57.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov12.b/ek0512.d Instrument ID: HP09572.i
Injection date and time: 12-NOV-2013 20:31 Analyst ID: lmh00956

Method used: /chem/HP09572.i/13nov12.b/mnew8270.m Sublist used: basicval11
Calibration date and time: 12-NOV-2013 20:34
Date, time and analyst ID of latest file update: 12-Nov-2013 20:56 hb01996

Sample Name: SSTD050 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	4.572	77	558798	48.135
25)*1,4-Dichlorobenzene-d4	(1)	5.002	152	146642	20.000
60)*Naphthalene-d8	(2)	6.145	136	645177	20.000
69) Caprolactam	(2)	6.510	113	292703	53.089
99)*Acenaphthene-d10	(3)	7.623	164	434131	20.000
141) Atrazine	(4)	8.634	200	462510	49.953
148)*Phenanthrene-d10	(4)	8.831	188	797640	20.000
165)*Pyrene-d10	(5)	9.986	212	918497	20.000
190)*Perylene-d12	(6)	12.474	264	660846	20.000

* = Compound is an internal standard.

Digitally signed by Holly Berry
on 11/12/2013 at 20:57.
Target 3.5 esignature user ID: hb01996

Data File: /chem/HP09572.i/13nov15.b/ek0660z.d

Date : 15-NOV-2013 11:36

Client ID: DFTPP

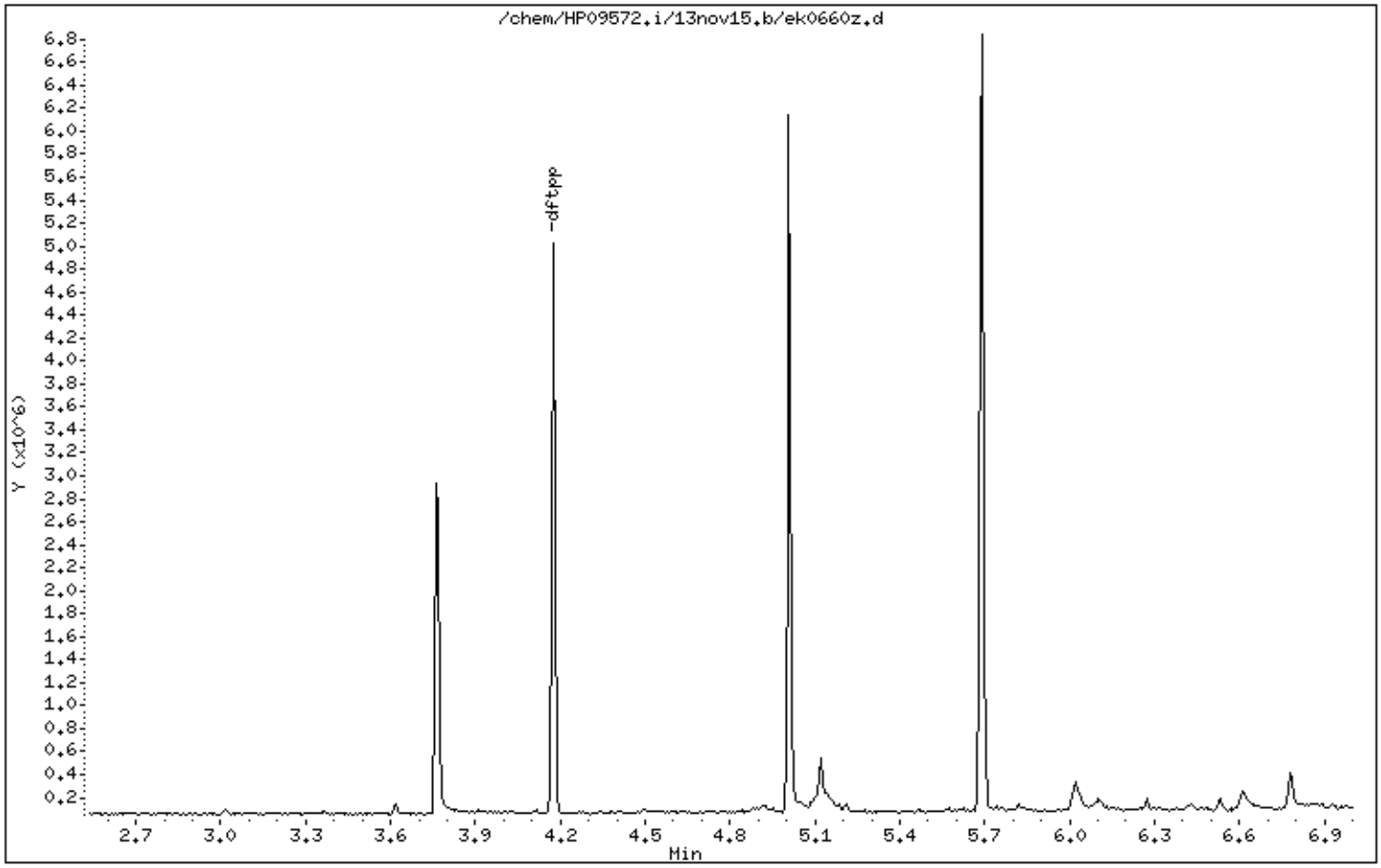
Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Data File: /chem/HP09572.i/13nov15.b/ek0660z.d

Date : 15-NOV-2013 11:36

Client ID: DFTPP

Instrument: HP09572.i

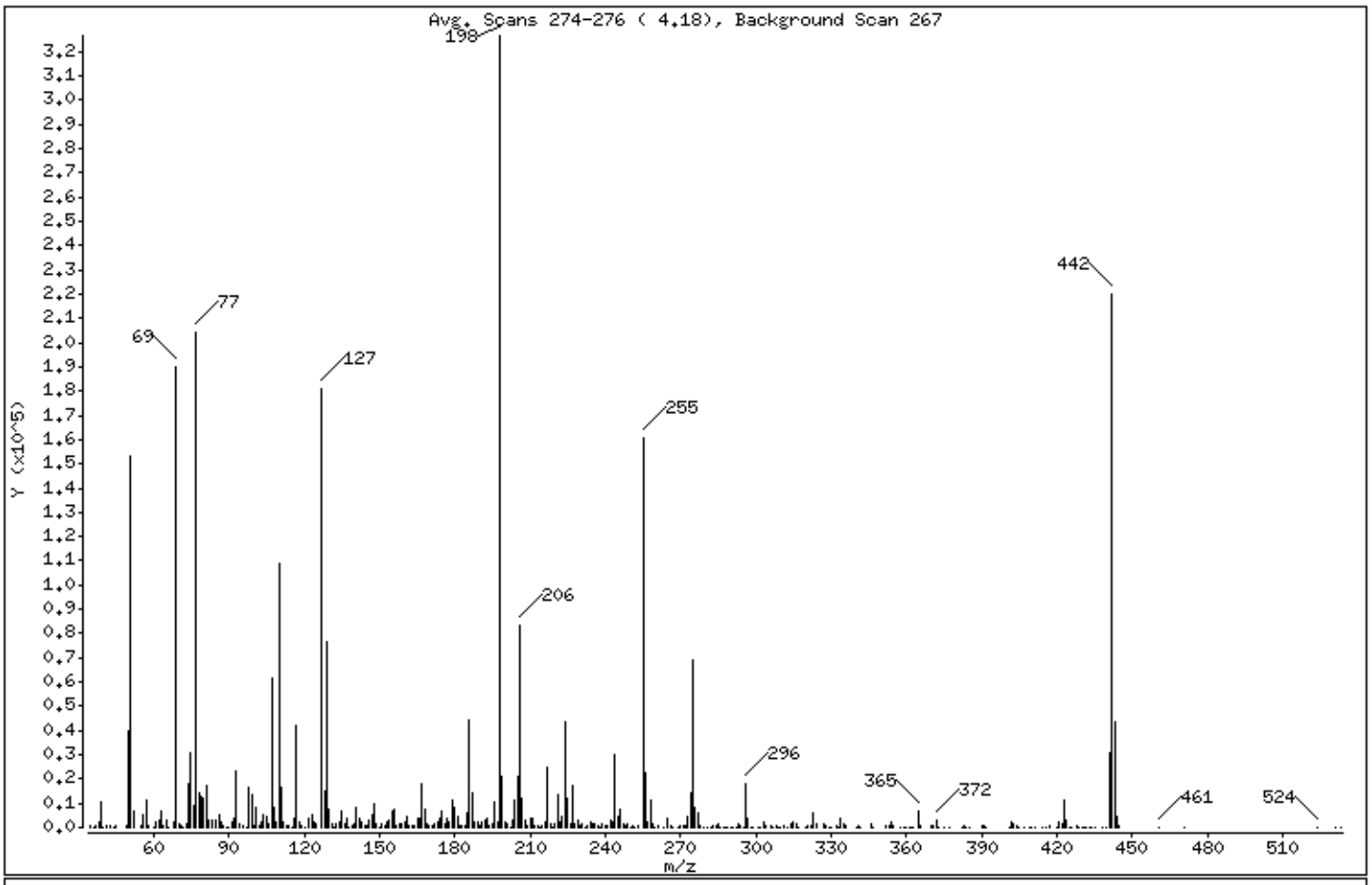
Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.84
68	Less than 2.00% of mass 69	0.78 (1.35)
69	Mass 69 relative abundance	58.08
70	Less than 2.00% of mass 69	0.43 (0.74)
127	40.00 - 60.00% of mass 198	55.41
197	Less than 1.00% of mass 198	0.75
199	5.00 - 9.00% of mass 198	6.53
275	10.00 - 30.00% of mass 198	21.07
365	Greater than 1.00% of mass 198	2.06
441	Present, but less than mass 443	9.54
442	40.00 - 99.99% of mass 198	67.41
443	17.00 - 23.00% of mass 442	13.32 (19.77)

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Date : 15-NOV-2013 11:36

Client ID: DFTPP Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5 Column diameter: 0.25

Data File: ek0660z.d
Spectrum: Avg. Scans 274-276 (4.18), Background Scan 267
Location of Maximum: 198.00
Number of points: 346

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	1079	134.00	2328	221.00	13355	316.00	1235
36.00	351	135.00	6907	222.00	2481	317.00	228
37.00	642	136.00	1804	223.00	4502	320.00	283
38.00	2030	137.00	3785	224.00	43368	321.00	554
39.00	10855	138.00	322	225.00	11806	322.00	624
40.00	21	139.00	449	226.00	1625	323.00	6004
41.00	437	140.00	1214	227.00	17440	324.00	1391
43.00	521	141.00	8353	228.00	1495	327.00	1402
44.00	298	142.00	3535	229.00	3275	328.00	786
45.00	542	143.00	2013	230.00	547	329.00	63
49.00	985	144.00	659	231.00	1599	330.00	75
50.00	39496	145.00	788	232.00	279	332.00	761
51.00	152960	146.00	2712	233.00	385	333.00	303
52.00	6685	147.00	5590	234.00	2170	334.00	3699
55.00	454	148.00	10125	235.00	1815	335.00	1463
56.00	4932	149.00	1658	236.00	1546	336.00	530
57.00	10988	150.00	287	237.00	1050	340.00	120
58.00	708	151.00	1382	238.00	223	341.00	550
60.00	224	152.00	474	239.00	1353	342.00	195
61.00	2502	153.00	1888	240.00	740	346.00	1760
62.00	2737	154.00	2728	241.00	533	347.00	246
63.00	7045	155.00	6656	242.00	2868	352.00	1083
64.00	1055	156.00	7310	243.00	2292	353.00	1100
65.00	3095	157.00	871	244.00	30072	354.00	2048
66.00	246	158.00	1724	245.00	4785	355.00	613
68.00	2562	159.00	1775	246.00	7797	358.00	206
69.00	189696	160.00	2292	247.00	1142	359.00	127
70.00	1398	161.00	4467	248.00	717	360.00	223
71.00	382	162.00	680	249.00	1289	361.00	116
72.00	254	163.00	401	250.00	224	362.00	51
73.00	1173	164.00	759	251.00	924	363.00	134
74.00	18040	165.00	3495	252.00	325	365.00	6739
75.00	31000	166.00	3536	253.00	809	366.00	945
76.00	9301	167.00	18224	255.00	160896	370.00	528
77.00	204416	168.00	7694	256.00	22472	371.00	395

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Date : 15-NOV-2013 11:36

Client ID: DFTPP Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5 Column diameter: 0.25

Data File: ek0660z.d
Spectrum: Avg. Scans 274-276 (4.18), Background Scan 267
Location of Maximum: 198.00
Number of points: 346

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	14374	169.00	1480	257.00	1907	372.00	3135
79.00	12922	170.00	582	258.00	10937	373.00	236
80.00	11707	171.00	942	259.00	1827	375.00	107
81.00	17088	172.00	1625	260.00	85	377.00	170
82.00	3153	173.00	2528	261.00	733	382.00	66
83.00	3143	174.00	3473	263.00	135	383.00	948
85.00	2978	175.00	7020	265.00	3989	384.00	216
86.00	5143	176.00	1858	266.00	390	385.00	54
87.00	2244	177.00	3575	267.00	341	390.00	482
88.00	1062	178.00	2198	269.00	83	391.00	435
89.00	94	179.00	11414	270.00	654	392.00	207
90.00	149	180.00	8398	271.00	416	401.00	346
91.00	2264	181.00	4431	272.00	511	402.00	2168
92.00	3446	182.00	555	273.00	4519	403.00	1876
93.00	23640	183.00	1105	274.00	14185	404.00	616
94.00	1653	184.00	850	275.00	68832	405.00	252
96.00	763	185.00	6009	276.00	8532	407.00	107
97.00	14	186.00	44336	277.00	6062	409.00	209
98.00	16424	187.00	14301	278.00	908	410.00	253
99.00	13793	188.00	2070	279.00	375	411.00	112
100.00	741	189.00	2611	281.00	204	414.00	205
101.00	8270	190.00	631	282.00	199	416.00	63
102.00	510	191.00	2010	283.00	922	417.00	413
103.00	2326	192.00	3308	284.00	377	420.00	110
104.00	5307	193.00	3960	285.00	1450	421.00	2159
105.00	4144	194.00	565	286.00	308	422.00	1518
106.00	1251	195.00	1654	287.00	56	423.00	11308
107.00	61440	196.00	10152	288.00	81	424.00	2853
108.00	8187	197.00	2441	289.00	72	425.00	78
109.00	2525	198.00	326592	290.00	154	426.00	59
110.00	108728	199.00	21320	291.00	69	428.00	421
111.00	16832	200.00	1925	292.00	86	429.00	109
112.00	2052	201.00	1530	293.00	1332	430.00	264
113.00	928	202.00	330	294.00	793	431.00	106
114.00	378	203.00	3125	295.00	224	432.00	166

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Date : 15-NOV-2013 11:36

Client ID: DFTPP Instrument: HP09572.i

Sample Info: DFTPP;DFTPP2843;1;3;DFTPP;

Operator: hb01996

Column phase: DB-5 Column diameter: 0.25

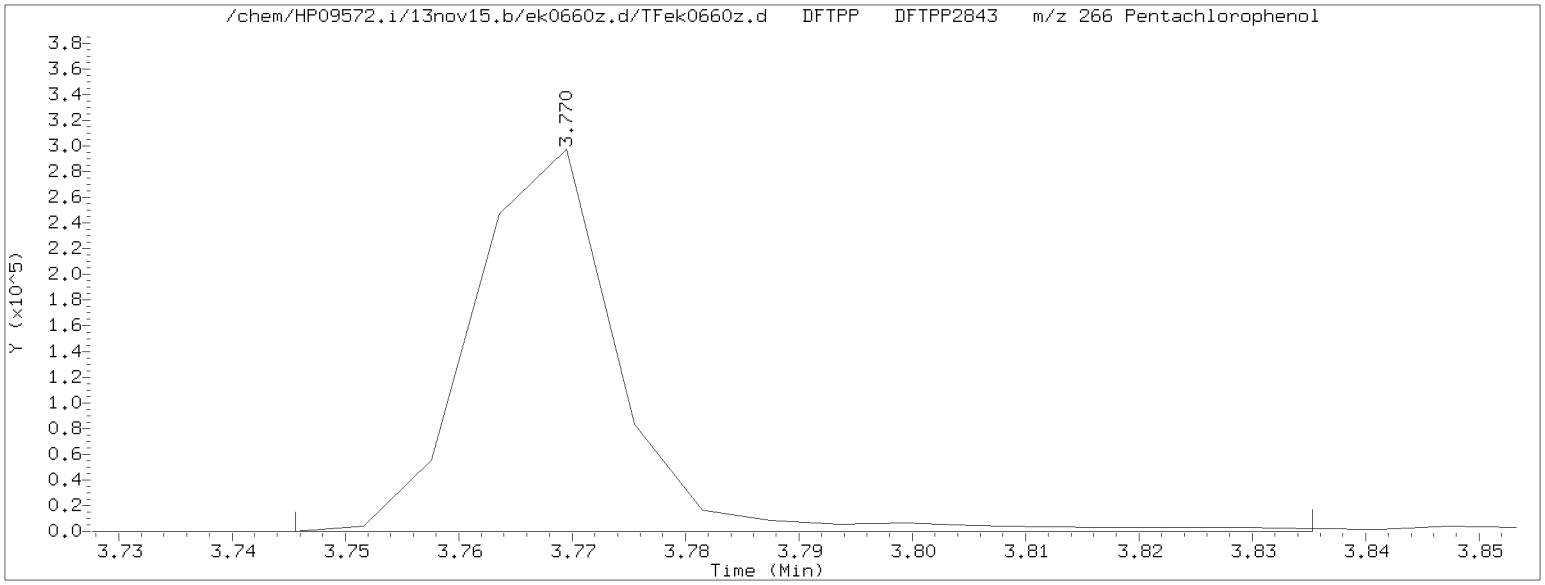
Data File: ek0660z.d
Spectrum: Avg. Scans 274-276 (4.18), Background Scan 267
Location of Maximum: 198.00
Number of points: 346

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	88	204.00	10946	296.00	17984	433.00	254
116.00	4006	205.00	20824	297.00	3474	434.00	157
117.00	42280	206.00	82984	298.00	54	435.00	53
118.00	2382	207.00	11713	299.00	113	438.00	97
119.00	621	208.00	3370	301.00	261	440.00	96
120.00	203	209.00	680	302.00	167	441.00	31152
122.00	4115	210.00	3385	303.00	2444	442.00	220160
123.00	5546	211.00	3747	304.00	705	443.00	43520
124.00	2294	212.00	974	306.00	427	444.00	4761
125.00	1842	213.00	492	307.00	134	445.00	444
127.00	180928	214.00	54	308.00	416	461.00	92
128.00	15385	215.00	1042	309.00	197	471.00	53
129.00	76672	216.00	2182	310.00	85	524.00	141
130.00	7290	217.00	24504	311.00	382	531.00	57
131.00	1143	218.00	1848	313.00	128	533.00	74
132.00	344	219.00	213	314.00	1368		
133.00	1336	220.00	1401	315.00	2345		

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

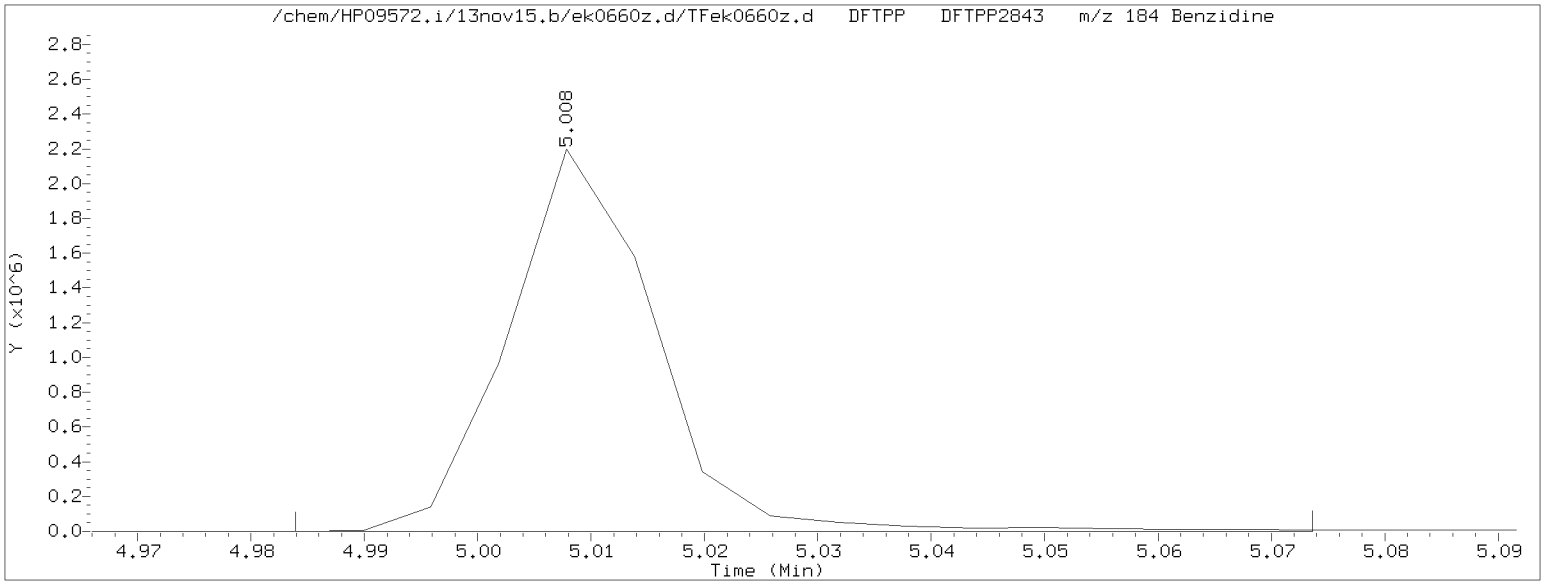
Instrument ID: HP09572.i Injection Date: 15-NOV-2013 11:36 Operator: hb01996



Pentachlorophenol EICP peak height = 297600 EICP peak height at 10% = 29760 Pentachlorophenol EICP area = 266323

Pentachlorophenol EICP peak apex (min.) = 3.770
RT at 10% of front half of EICP (min.) = 3.755 'Front' peak width (min.) = 0.0148666667
RT at 10% of back half of EICP (min.) = 3.780 'Tailing' peak width (min.) = 0.0107166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0107166667}{0.0148666667} = 0.721$



Benzidine EICP peak height = 2199040 EICP peak height at 10% = 219904 Benzidine EICP area = 1968064

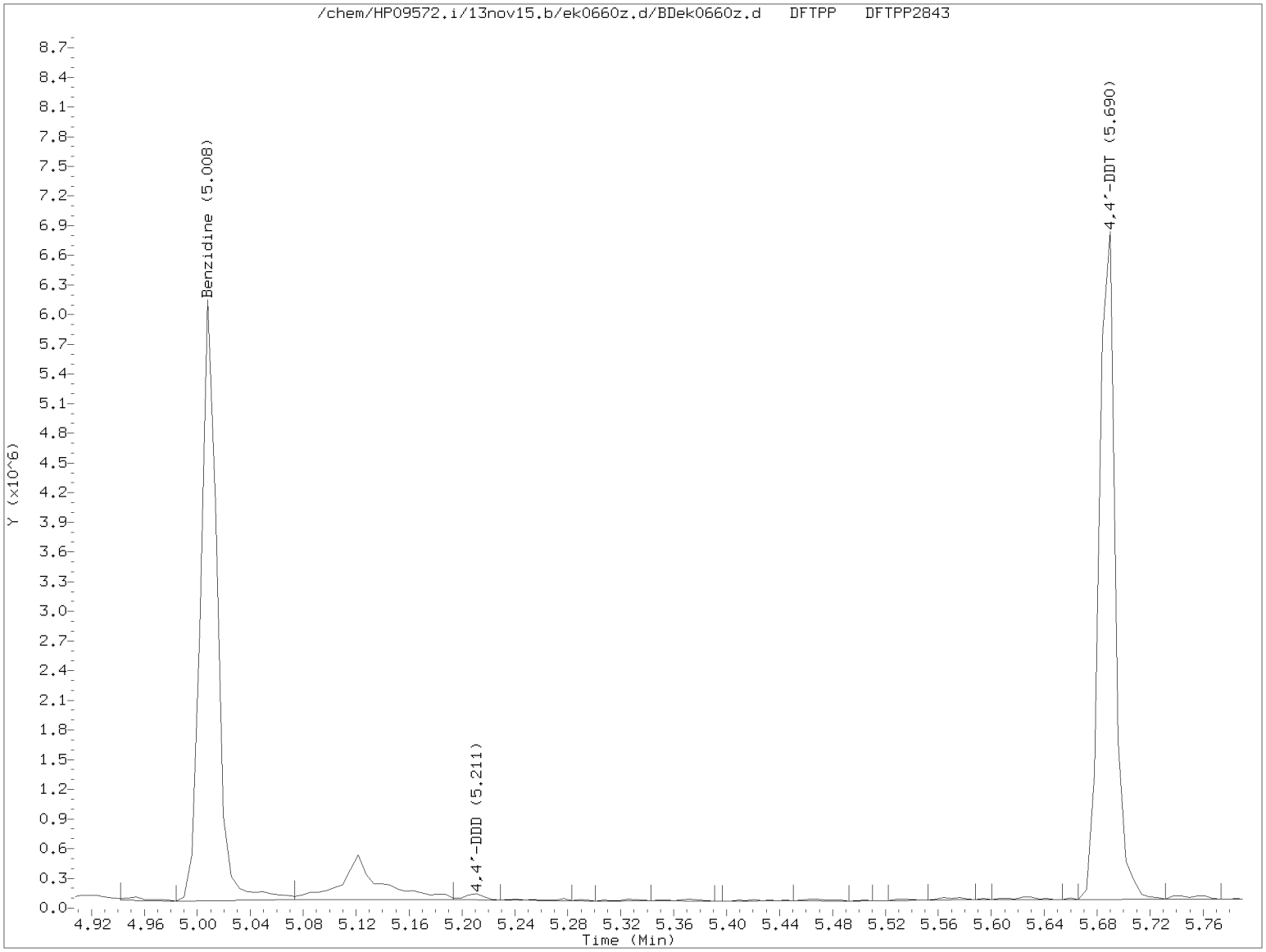
Benzidine EICP peak apex (min.) = 5.008
RT at 10% of front half of EICP (min.) = 4.996 'Front' peak width (min.) = 0.0113666667
RT at 10% of back half of EICP (min.) = 5.023 'Tailing' peak width (min.) = 0.0148166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0148166667}{0.0113666667} = 1.304$

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Assessment of GC Column Performance and Injection Port Inertness for

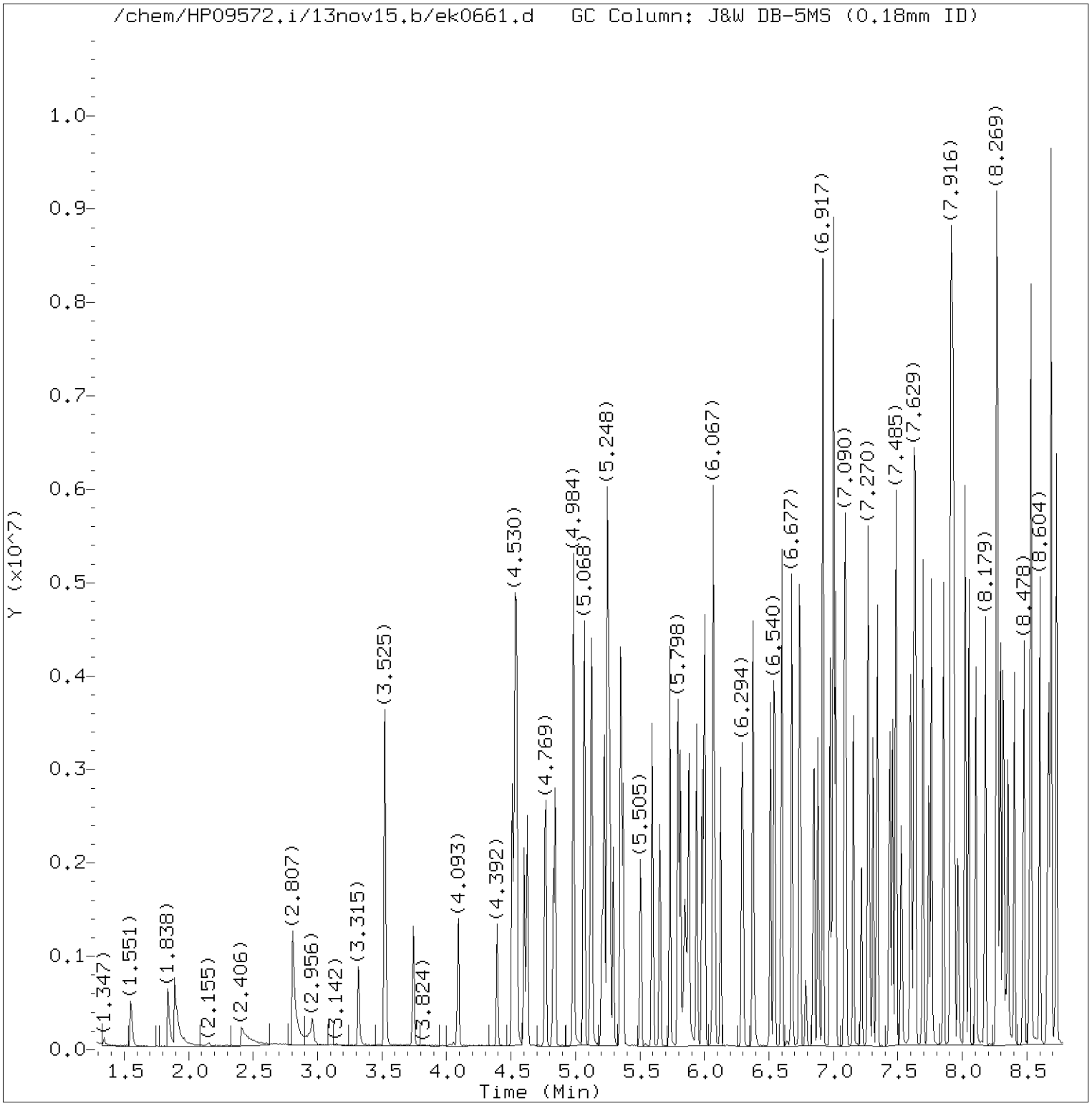
Instrument ID: HP09572.i Injection Date: 15-NOV-2013 11:36 Operator: hb01996



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 58740}{0 + 58740 + 5764057} \times 100 = 1.0$$

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

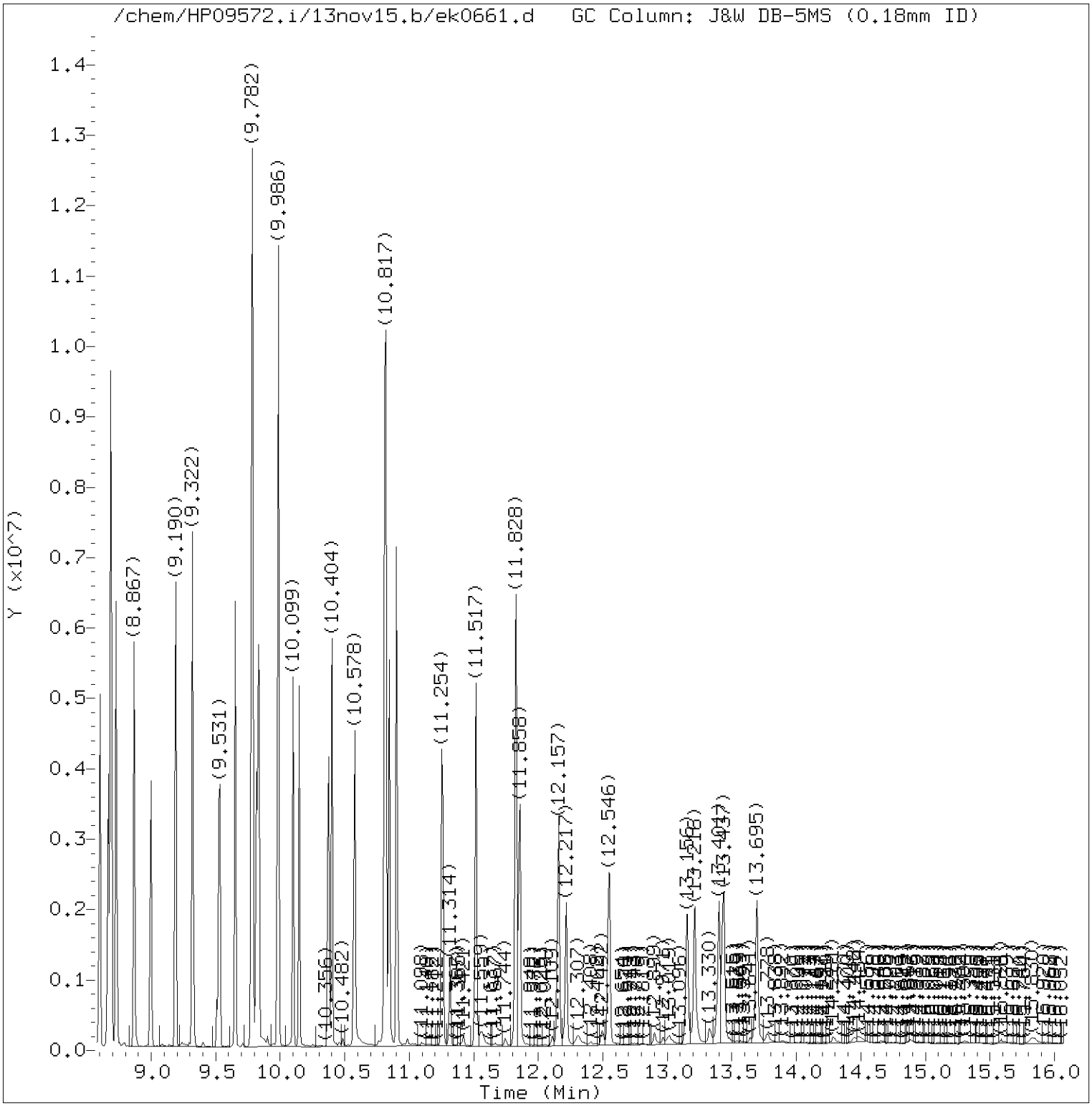
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.551	88	205253	30.609
2) N-Nitrosodimethylamine	(1)	1.838	74	342152	30.652
3) Pyridine	(1)	1.892	79	483452	26.320
4) 2-Picoline	(1)	2.807	93	642598	28.539
5) N-Nitrosomethylethylamine	(1)	2.956	88	317555	31.164
6) Methyl methanesulfonate	(1)	3.315	80	345411	28.211
7)$2-Fluorophenol	(1)	3.525	112	1047075	60.221
8) N-Nitrosodiethylamine	(1)	3.740	102	302951	29.052
10) Ethyl methanesulfonate	(1)	4.093	109	304465	28.064
20) Aniline	(1)	4.512	93	1009517	28.529
18)$Phenol-d6	(1)	4.530	99	1537431	58.055
17)$Phenol-d5	(1)	4.530	99	1537431	58.055
19) Phenol	(1)	4.542	94	821342	29.840
21) bis(2-Chloroethyl)ether	(1)	4.602	93	661496	29.340
22) 2-Chlorophenol	(1)	4.625	128	517824	28.959
24) 1,3-Dichlorobenzene	(1)	4.769	146	529140	28.996
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	230937	20.000
26) 1,4-Dichlorobenzene	(1)	4.841	146	536550	29.009
27) Benzyl alcohol	(1)	4.984	108	405375	29.344
28) 1,2-Dichlorobenzene	(1)	4.984	146	511483	29.612
30) Indene	(1)	5.068	115	1114646	34.984
32) bis(2-Chloroisopropyl)ether	(1)	5.122	45	666440	27.612
29) 2-Methylphenol	(1)	5.122	108	567232	28.638
31) 2,2'-oxybis(1-Chloropropane)	(1)	5.122	45	666440	27.612
33) N-Nitrosopyrrolidine	(1)	5.206	100	361218	28.938
34) Acetophenone	(1)	5.224	105	901215	27.211
37) N-Nitrosomorpholine	(1)	5.248	56	436971	27.975
36) N-Nitroso-di-n-propylamine	(1)	5.248	70	518793	27.091
38) o-Toluidine	(1)	5.254	106	959960	28.405
35) 4-Methylphenol	(1)	5.266	108	658158	27.909
39) Hexachloroethane	(1)	5.295	117	229719	29.726
40)$Nitrobenzene-d5	(2)	5.349	82	1426353	59.280
41) Nitrobenzene	(2)	5.367	77	732025	29.279
42) N-Nitrosopiperidine	(2)	5.505	114	319716	28.477
52) Isophorone	(2)	5.595	82	1291838	29.069
53) 2-Nitrophenol	(2)	5.654	139	308687	30.386
54) 2,4-Dimethylphenol	(2)	5.732	107	689464	29.273
57) bis(2-Chloroethoxy)methane	(2)	5.798	93	1042882	35.224
55) O,O,O-triethylphosphorothioate	(2)	5.798	198	262824	29.630
56) Benzoic acid	(2)	5.864	105	742849	39.039

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$ = Compound is a surrogate standard.

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on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
58) 2,4-Dichlorophenol	(2)	5.882	162	458913	30.245
59) 1,2,4-Trichlorobenzene	(2)	5.942	180	444327	29.721
60)*Naphthalene-d8	(2)	5.983	136	1032734	20.000
61) Naphthalene	(2)	6.001	128	1555268	28.559
62) 4-Chloroaniline	(2)	6.067	127	707187	29.701
63) 2,6-Dichlorophenol	(2)	6.073	162	427080	28.635
64) Hexachloropropene	(2)	6.085	213	270461	29.698
65) Hexachlorobutadiene	(2)	6.127	225	236534	30.007
67) Quinoline	(2)	6.294	129	1090370	28.305
68) N-Nitrosodi-n-butylamine	(2)	6.378	84	665614	28.690
69) Caprolactam	(2)	6.384	113	247236	28.014
70) 4-Chloro-3-methylphenol	(2)	6.510	107	647424	28.532
71) Safrole	(2)	6.546	162	430242	28.340
72) 2-Methylnaphthalene	(2)	6.600	142	1136747	29.060
75) 1-Methylnaphthalene	(2)	6.677	142	1062968	29.653
76) Hexachlorocyclopentadiene	(3)	6.737	237	201533	29.548
77) 1,2,4,5-Tetrachlorobenzene	(3)	6.743	216	427476	29.906
78) cis-Isosafrole	(3)	6.785	162	74683	3.098
79) 2,4,6-Trichlorophenol	(3)	6.851	196	321235	29.757
80) 2,4,5-Trichlorophenol	(3)	6.881	196	353565	31.195
81)$2-Fluorobiphenyl	(3)	6.923	172	2278377	60.580
83) Isosafrole	(3)	6.976	162	445425	29.216
82) trans-Isosafrole	(3)	6.976	162	445425	26.002
86) 1,1'-Biphenyl	(3)	6.994	154	1396306	29.088
87) 2-Chloronaphthalene	(3)	7.000	162	1268581M	32.209
88) 1-Chloronaphthalene	(3)	7.018	162	1046419M	28.721
89) Diphenyl ether	(3)	7.090	170	743244	29.148
90) 2-Nitroaniline	(3)	7.096	138	396346	29.697
91) 1,4-Naphthoquinone	(3)	7.156	158	475387	29.884
92) 1,4-Dinitrobenzene	(3)	7.222	168	210536	29.381
93) Dimethylphthalate	(3)	7.270	163	1270572	28.656
94) 1,3-Dinitrobenzene	(3)	7.282	168	241243	29.169
95) 2,6-Dinitrotoluene	(3)	7.305	165	318697	29.417
96) Acenaphthylene	(3)	7.341	152	1589576	29.684
97) 3-Nitroaniline	(3)	7.437	138	355338	28.868
99)*Acenaphthene-d10	(3)	7.461	164	658026	20.000
100) Acenaphthene	(3)	7.485	153	1098025	28.614
101) 2,4-Dinitrophenol	(3)	7.527	184	224862	39.680
103) Pentachlorobenzene	(3)	7.599	250	370701	28.565
102) 4-Nitrophenol	(3)	7.605	109	286316	28.550

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on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) Dibenzofuran	(3)	7.629	168	1527018	28.708
104) 2,4-Dinitrotoluene	(3)	7.635	165	418823	28.633
106) 1-Naphthylamine	(3)	7.694	143	1257121	29.433
107) 2,3,4,6-Tetrachlorophenol	(3)	7.742	232	268461	29.888
108) 2-Naphthylamine	(3)	7.760	143	1288245	29.760
109) Diethylphthalate	(3)	7.856	149	1354997	29.142
111) Fluorene	(3)	7.910	166	1295487	28.680
110) Thionazin	(3)	7.916	107	293231	28.081
112) 4-Chlorophenyl-phenylether	(3)	7.922	204	565320	27.710
113) 5-Nitro-o-toluidine	(3)	7.928	152	406433	28.307
114) 4-Nitroaniline	(3)	7.940	138	365984	28.729
115) 4,6-Dinitro-2-methylphenol	(4)	7.970	198	217703	28.584
118) NDPA as diphenylamine	(4)	8.023	169	1138527	30.078
117) N-Nitrosodiphenylamine	(4)	8.023	169	1138527	29.938
119) 1,2-Diphenylhydrazine	(4)	8.053	77	1581584	29.765
120)$2,4,6-Tribromophenol	(3)	8.107	330	287449	59.642
122) Tetraethyldithiopyrophosphate	(4)	8.179	97	268175	29.228
129) 1,3,5-Trinitrobenzene	(4)	8.269	213	146876	28.885
130) Diallate (peak 1)	(4)	8.269	86	650645	21.227
131) Phorate	(4)	8.275	75	1428756	33.466
132) Phenacetin	(4)	8.299	108	820612	28.420
133) 4-Bromophenyl-phenylether	(4)	8.316	248	308791	30.462
134) Diallate (peak 2)	(4)	8.334	86	95735	6.724
137) Hexachlorobenzene	(4)	8.358	284	294827	29.682
139) Dimethoate	(4)	8.406	87	683339	30.151
141) Atrazine	(4)	8.478	200	349360	27.428
142) Pentachlorophenol	(4)	8.526	266	197889	29.604
144) Pentachloronitrobenzene	(4)	8.532	237	149710	28.062
143) 4-Aminobiphenyl	(4)	8.532	169	1222136	29.788
146) Pronamide	(4)	8.604	173	591032	29.338
148)*Phenanthrene-d10	(4)	8.669	188	1097331	20.000
149) Phenanthrene	(4)	8.687	178	1854672	29.897
147) Dinoseb	(4)	8.687	211	307131	28.935
150) Anthracene	(4)	8.729	178	1877527	29.983
151) Carbazole	(4)	8.867	167	1807160	29.808
152) Methyl parathion	(4)	8.998	109	522777	30.181
154) Di-n-butylphthalate	(4)	9.190	149	2240746	29.609
156) 4-Nitroquinoline-1-oxide	(4)	9.322	190	183867	30.323
155) Parathion	(4)	9.322	109	350646	29.442
159) Isodrin	(4)	9.531	193	212775	27.690

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on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
163) Fluoranthene	(4)	9.651	202	1916195	29.561
164) Benzidine	(5)	9.782	184	4151005	97.141
165)*Pyrene-d10	(5)	9.818	212	1190463	20.000
166) Pyrene	(5)	9.836	202	1933446	29.744
169)$Terphenyl-d14	(5)	9.986	244	2560948	60.359
170) p-Dimethylaminoazobenzene	(5)	10.099	225	421461	32.017
171) Chlorobenzilate	(5)	10.147	139	769173	30.370
173) 3,3'-Dimethylbenzidine	(5)	10.374	212	1091223	31.164
174) Butylbenzylphthalate	(5)	10.404	149	1041422	30.184
175) 2-Acetylaminofluorene	(5)	10.578	181	870239	29.289
176) 3,3'-Dichlorobenzidine	(5)	10.811	252	603875	30.328
178) Benzo(a)anthracene	(5)	10.817	228	1706116	29.452
177) 4,4'-Methylenebis(2-Chloroanil	(5)	10.817	231	325602	29.929
180) Chrysene	(5)	10.847	228	1630628	29.964
181) bis(2-Ethylhexyl)phthalate	(5)	10.901	149	1408804	30.932
183) 6-Methylchrysene	(5)	11.254	242	1177118	29.924
184) Di-n-octylphthalate	(6)	11.517	149	2359849	32.036
185) 7,12-Dimethylbenz[a]anthracene	(6)	11.828	256	747973	30.449
186) Benzo(b)fluoranthene	(6)	11.828	252	1547428M	30.670
187) Benzo(k)fluoranthene	(6)	11.858	252	1524641M	30.275
189) Benzo(a)pyrene	(6)	12.157	252	1317341	29.478
190)*Perylene-d12	(6)	12.217	264	804712	20.000
191) 3-Methylcholanthrene	(6)	12.552	268	731014	30.900
192) Dibenz(a,h)acridine	(6)	13.156	279	974753	30.060
193) Dibenz(a,j)acridine	(6)	13.216	279	1033942	29.792
194) Indeno(1,2,3-cd)pyrene	(6)	13.401	276	1302691	28.920
195) Dibenz(a,h)anthracene	(6)	13.437	278	1153829	30.247
196) Benzo(g,h,i)perylene	(6)	13.695	276	1087302	28.858
204) Diallate TRANS/CIS	(4)			746380	28.114

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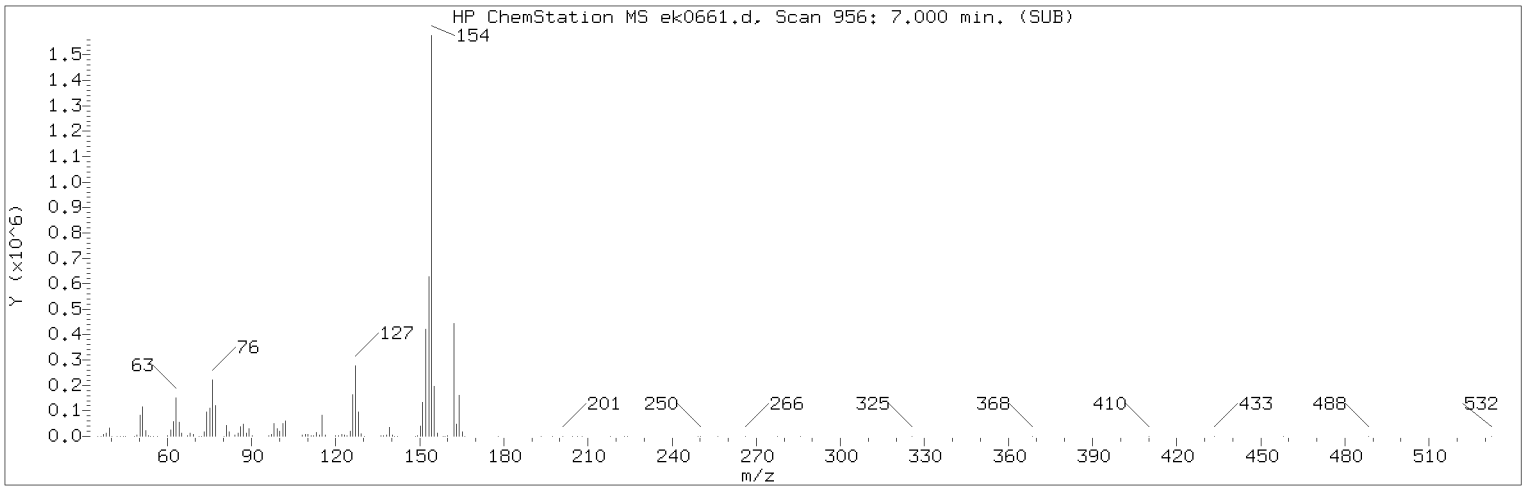
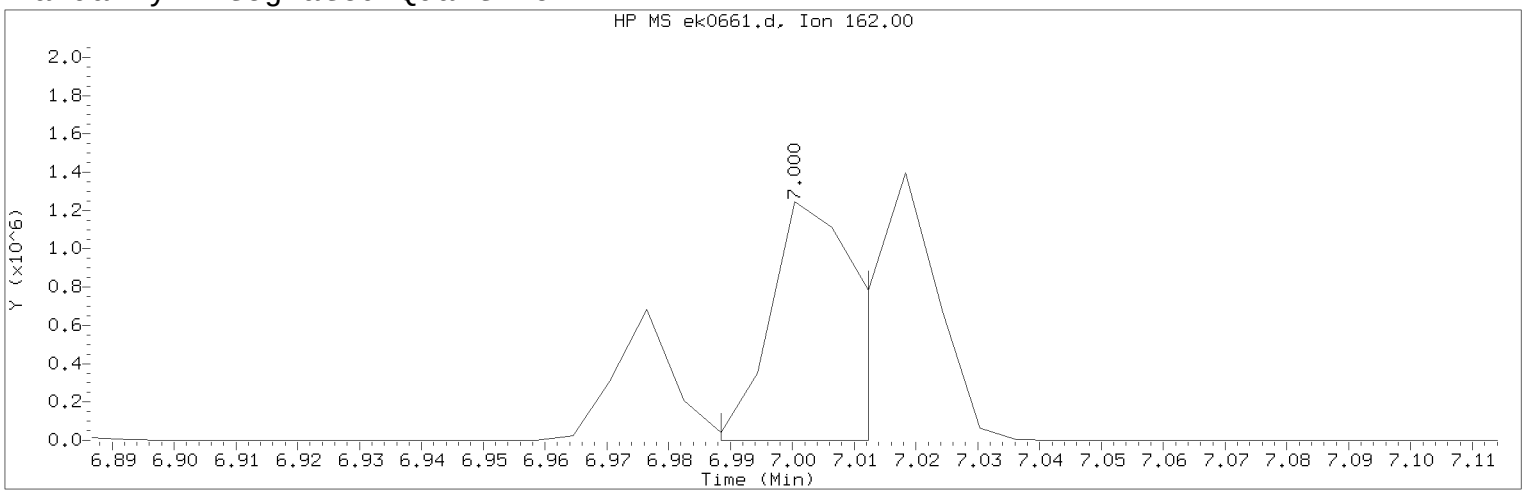
Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

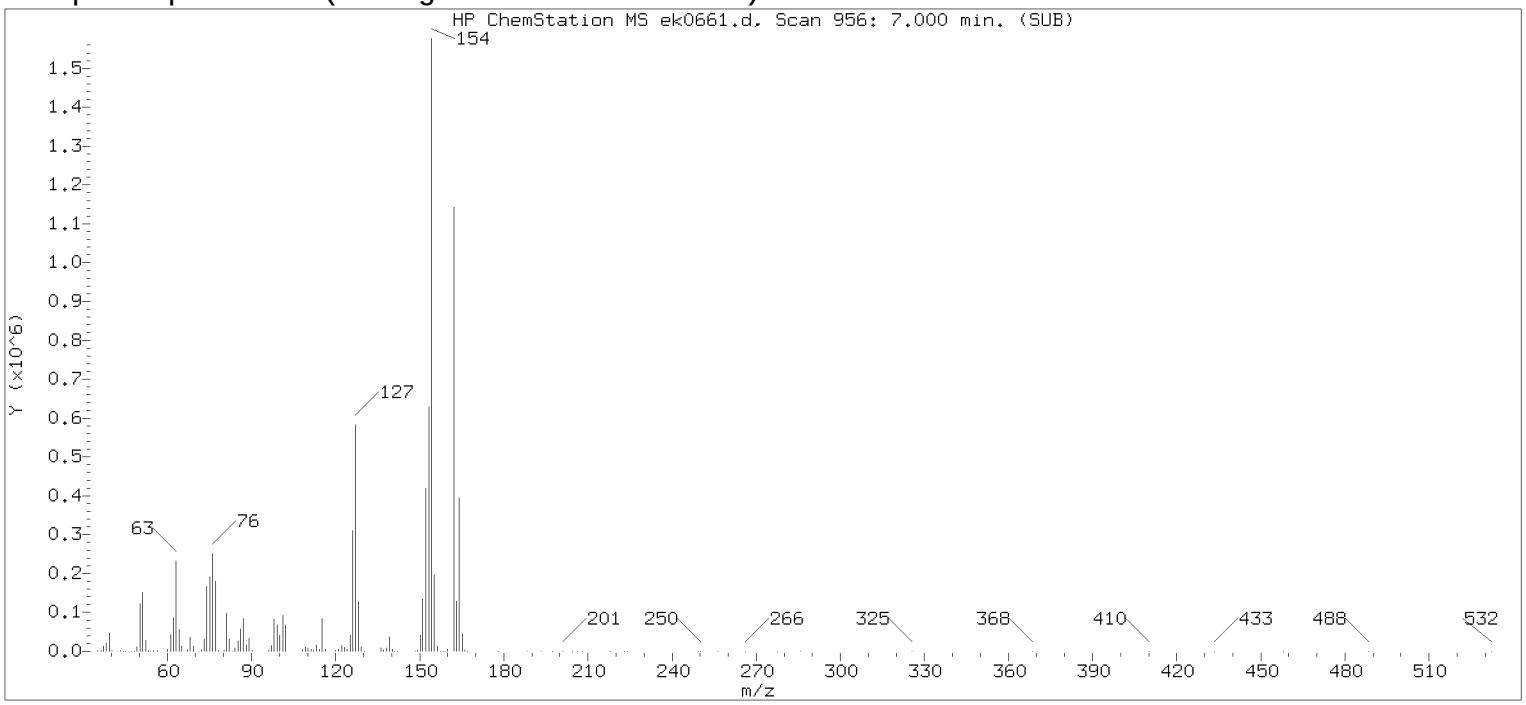
Compound Number : 87
Compound Name : 2-Chloronaphthalene
Scan Number : 956
Retention Time (minutes) : 7.000
Quant Ion : 162.00
Area (flag) : 1268581M
On-Column Amount (ng/ul) : 32.2089
Integration start scan : 953 Integration stop scan: 957
Y at integration start : 20 Y at integration end: 19

Reason for manual integration: improper integration

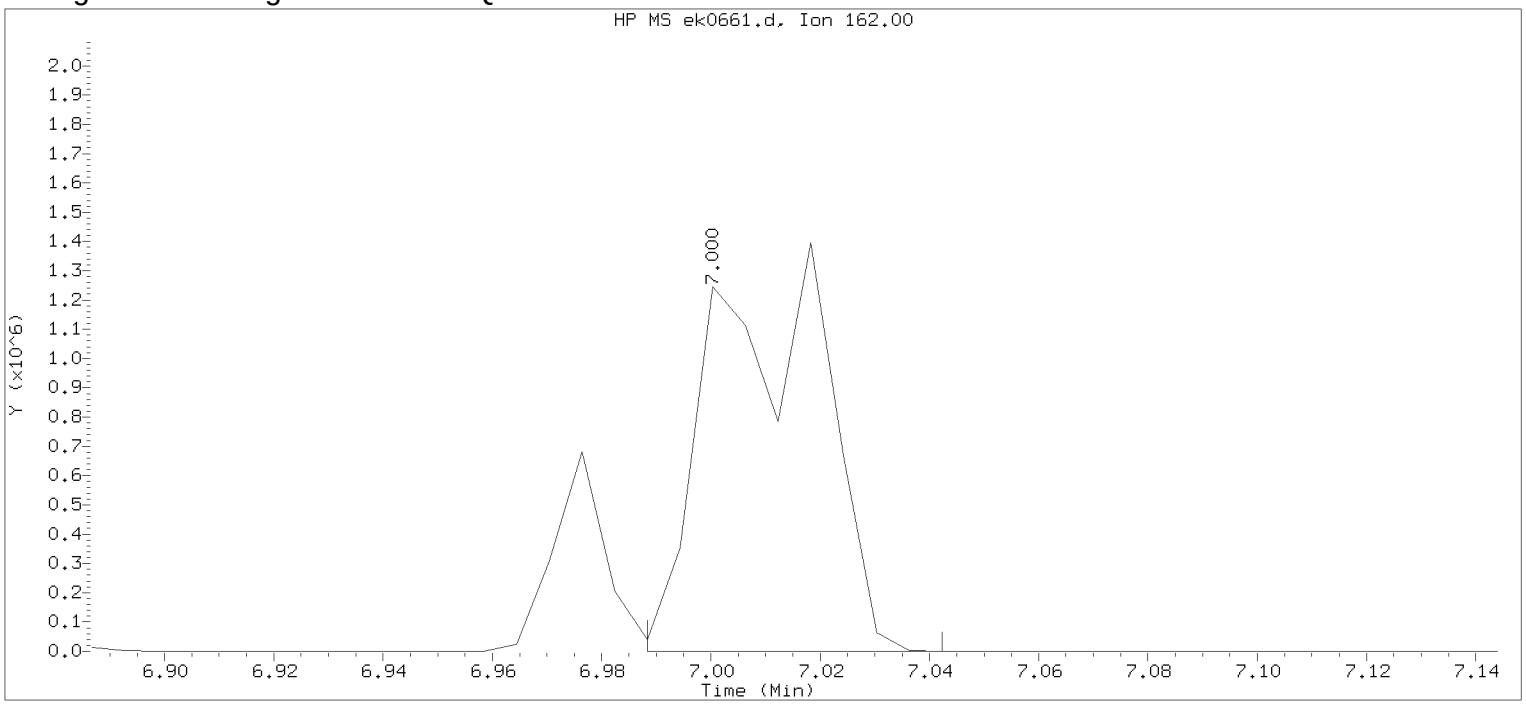
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

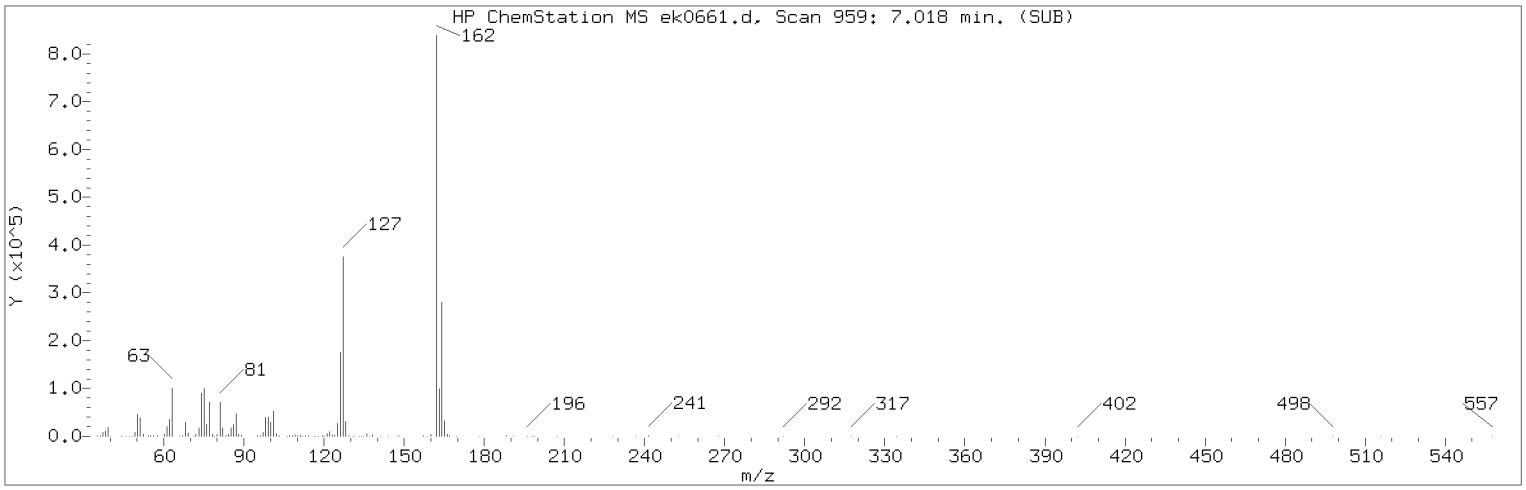
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 12:45
Date, time and analyst ID of latest file update: 15-Nov-2013 12:45 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

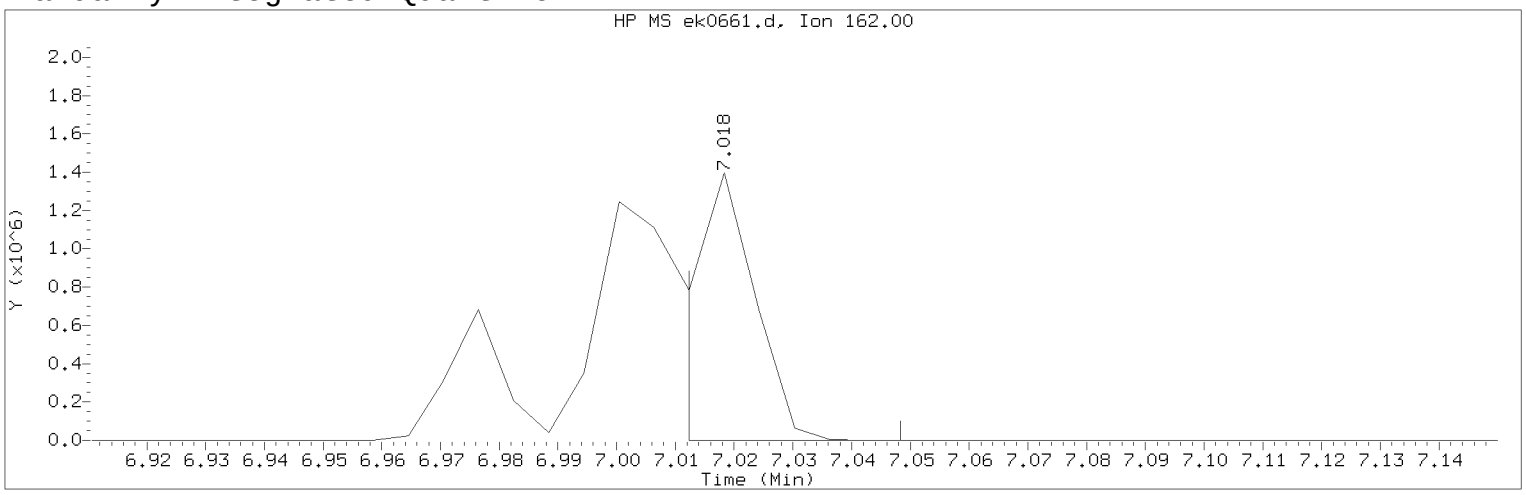
Compound Number : 87
Compound Name : 2-Chloronaphthalene
Scan Number : 956
Retention Time (minutes) : 7.000
Quant Ion : 162.00
Area : 2026409
On-column Amount (ng/ul) : 51.4498
Integration start scan : 953 Integration stop scan: 962
Y at integration start : 20 Y at integration end: 16

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

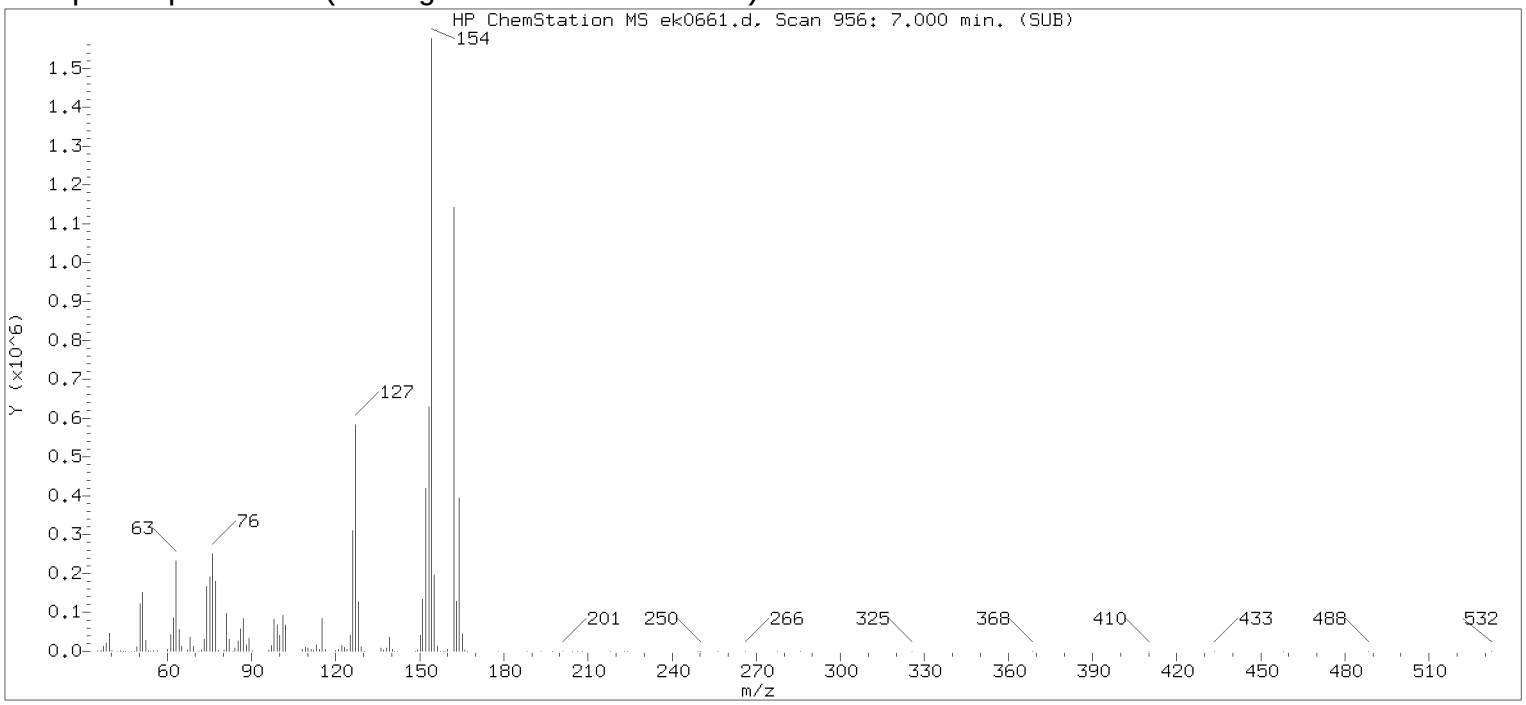
Compound Number : 88
Compound Name : 1-Chloronaphthalene
Scan Number : 959
Retention Time (minutes) : 7.018
Quant Ion : 162.00
Area (flag) : 1046419M
On-Column Amount (ng/ul) : 28.7214
Integration start scan : 957 Integration stop scan: 963
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

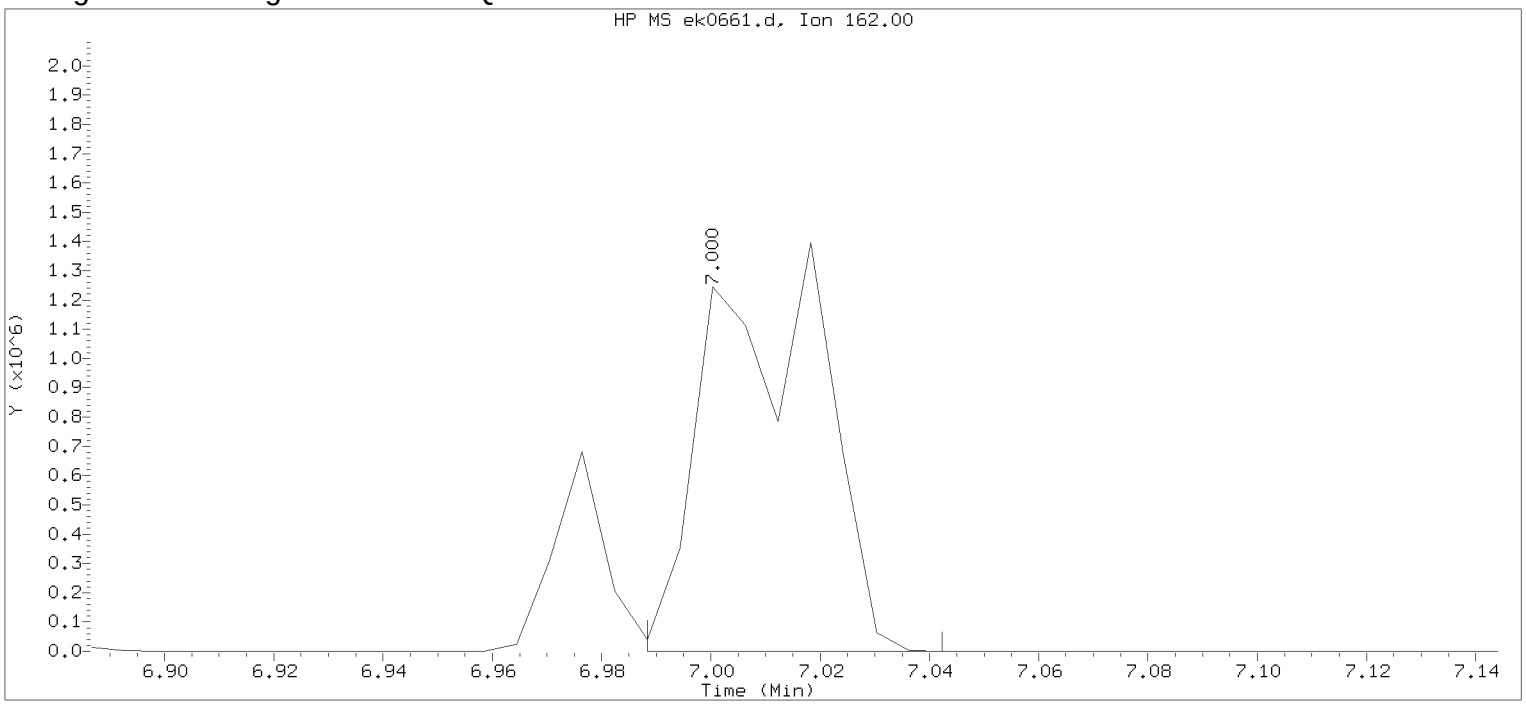
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

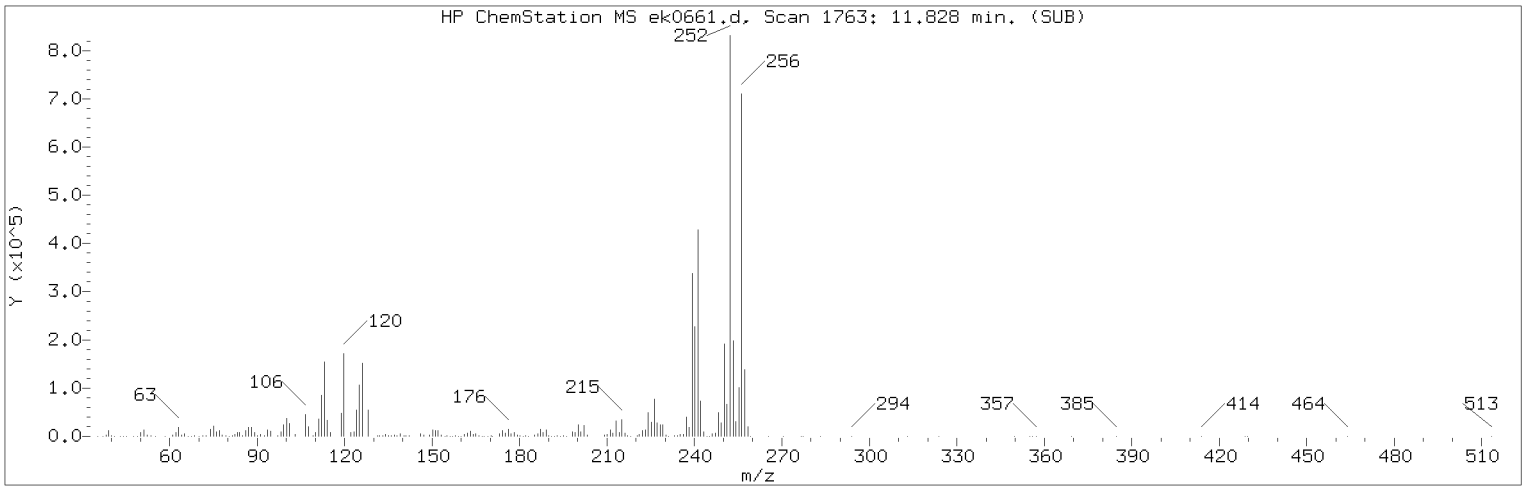
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 12:45
Date, time and analyst ID of latest file update: 15-Nov-2013 12:45 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

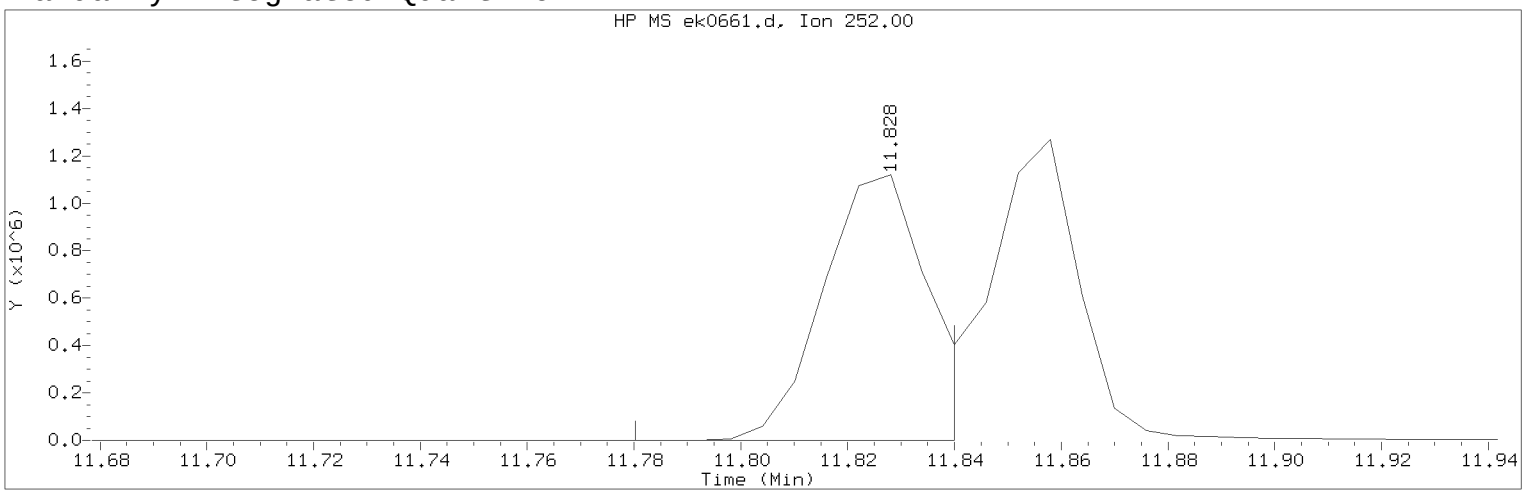
Compound Number : 88
Compound Name : 1-Chloronaphthalene
Scan Number : 956
Retention Time (minutes) : 7.000
Quant Ion : 162.00
Area : 2026239
On-column Amount (ng/ul) : 55.6149
Integration start scan : 953 Integration stop scan: 962
Y at integration start : 73 Y at integration end: 68

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

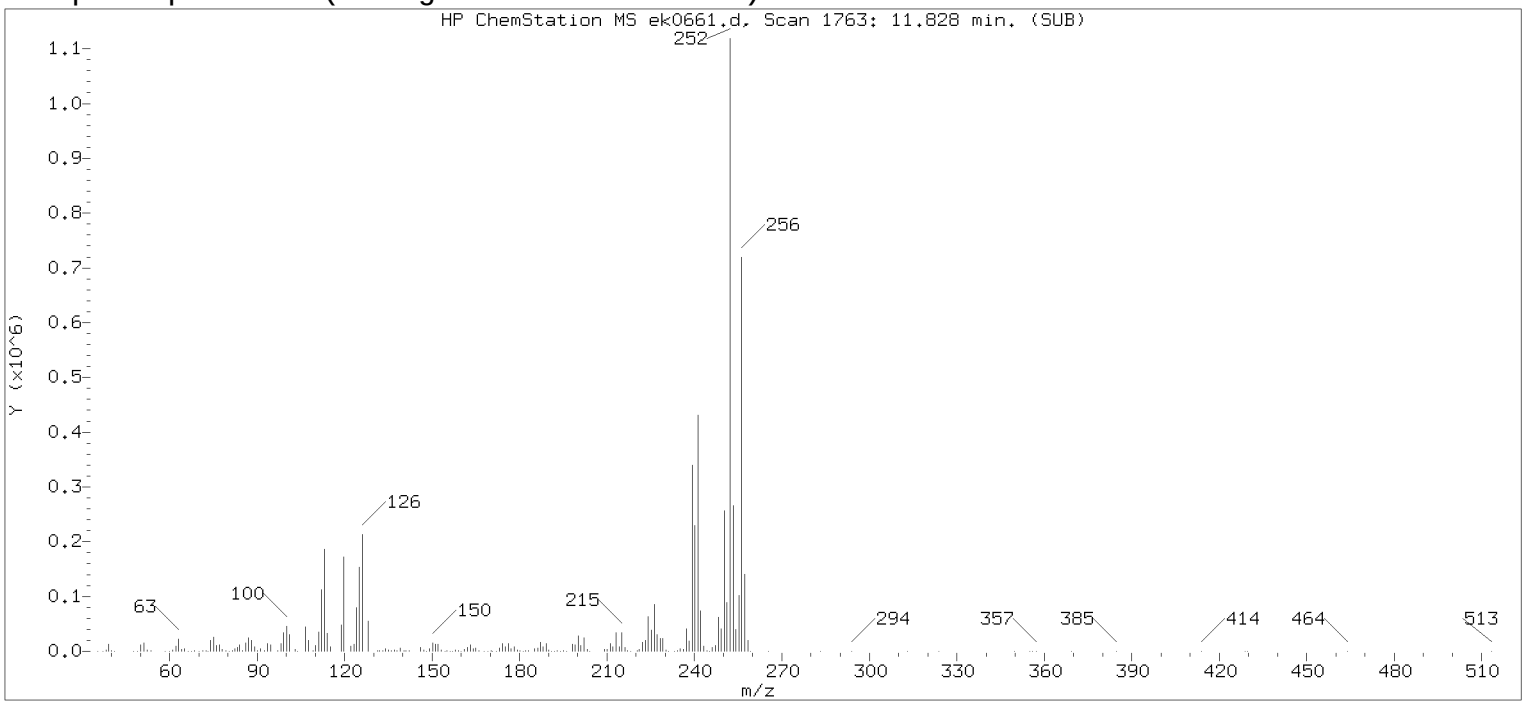
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area (flag) : 1547428M
On-Column Amount (ng/ul) : 30.6697
Integration start scan : 1754 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 373

Reason for manual integration: improper integration

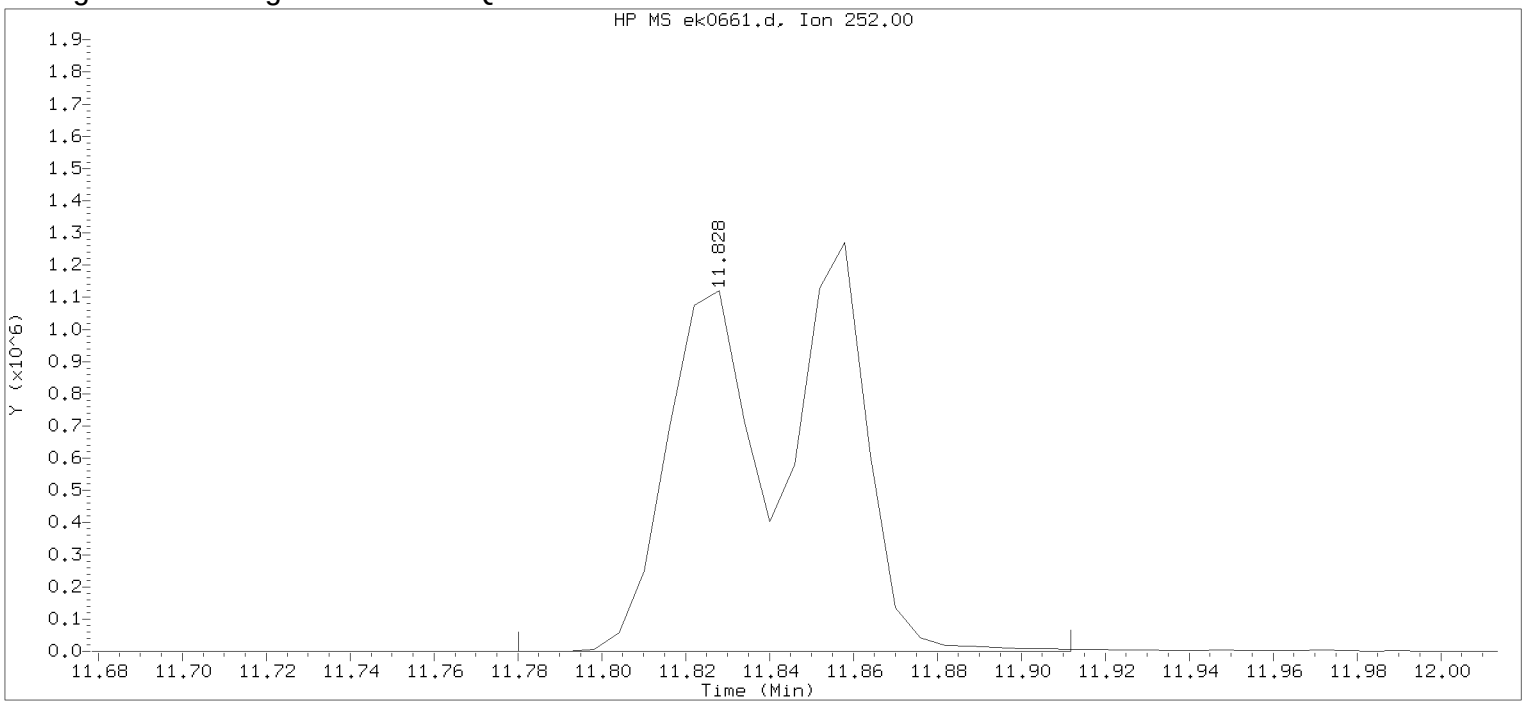
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

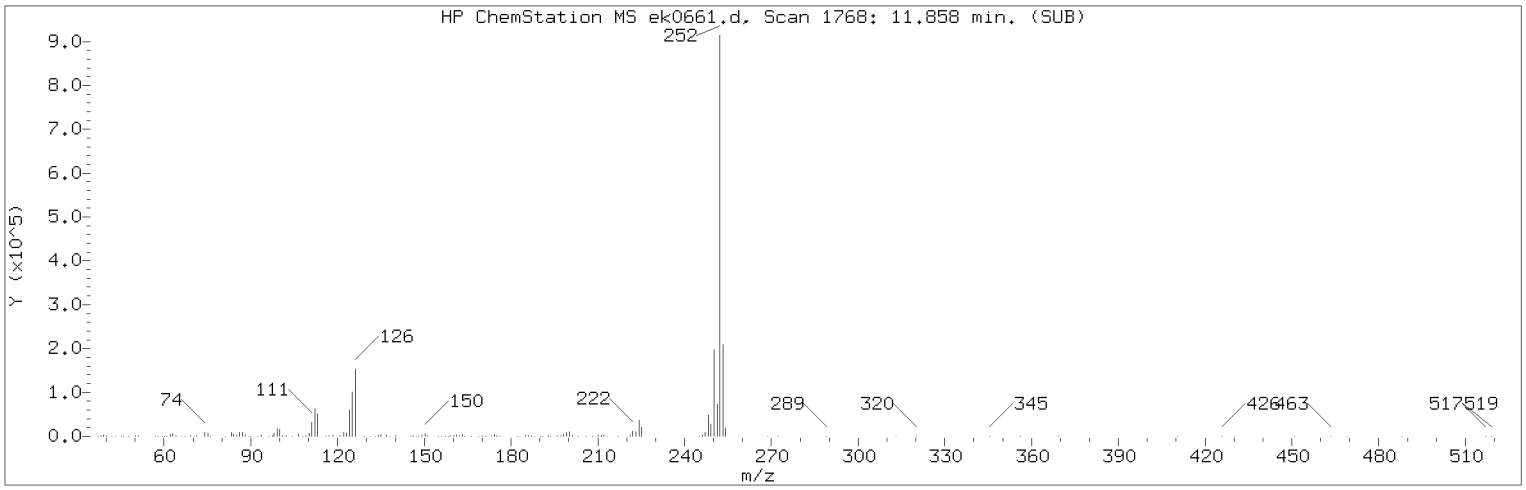
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 12:45
Date, time and analyst ID of latest file update: 15-Nov-2013 12:45 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

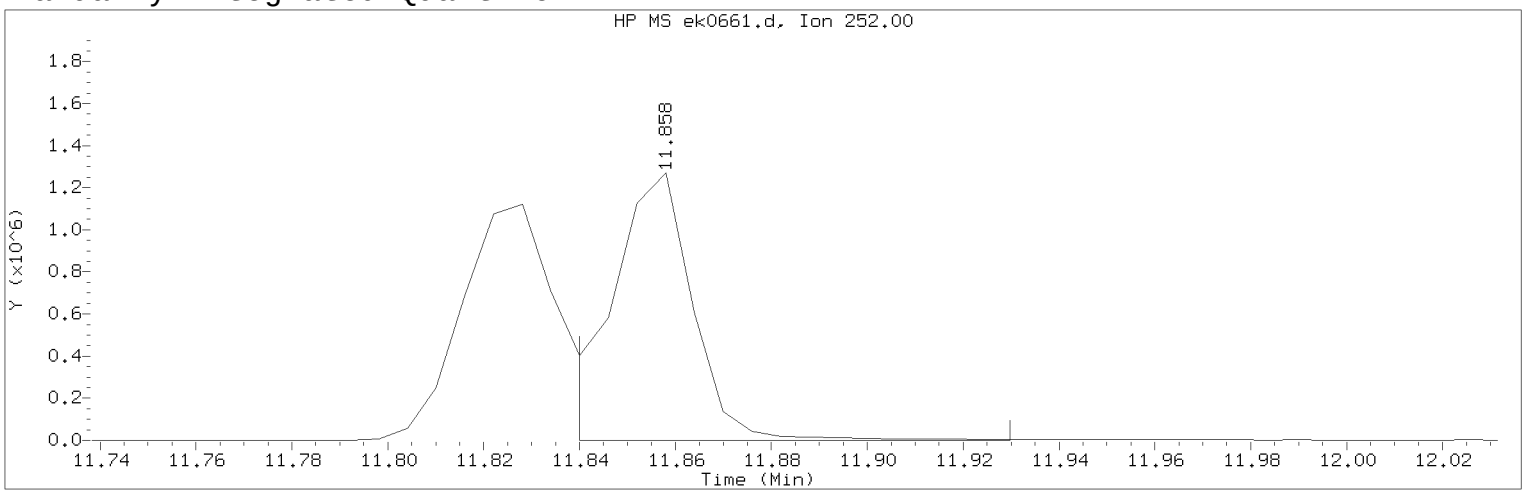
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area : 2919739
On-column Amount (ng/ul) : 57.8687
Integration start scan : 1754 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 822

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 15-Nov-2013 15:28 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

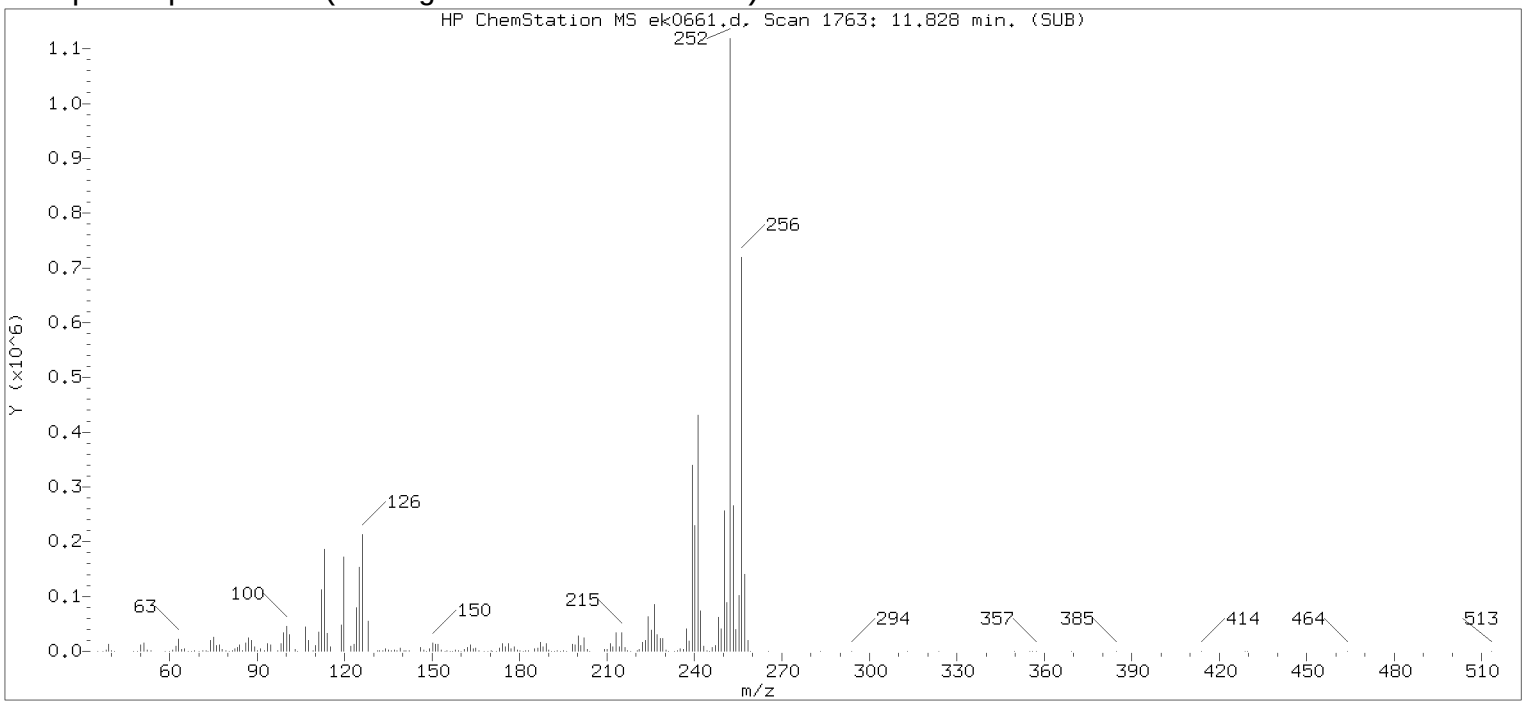
Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1768
Retention Time (minutes) : 11.858
Quant Ion : 252.00
Area (flag) : 1524641M
On-Column Amount (ng/ul) : 30.2747
Integration start scan : 1764 Integration stop scan: 1779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

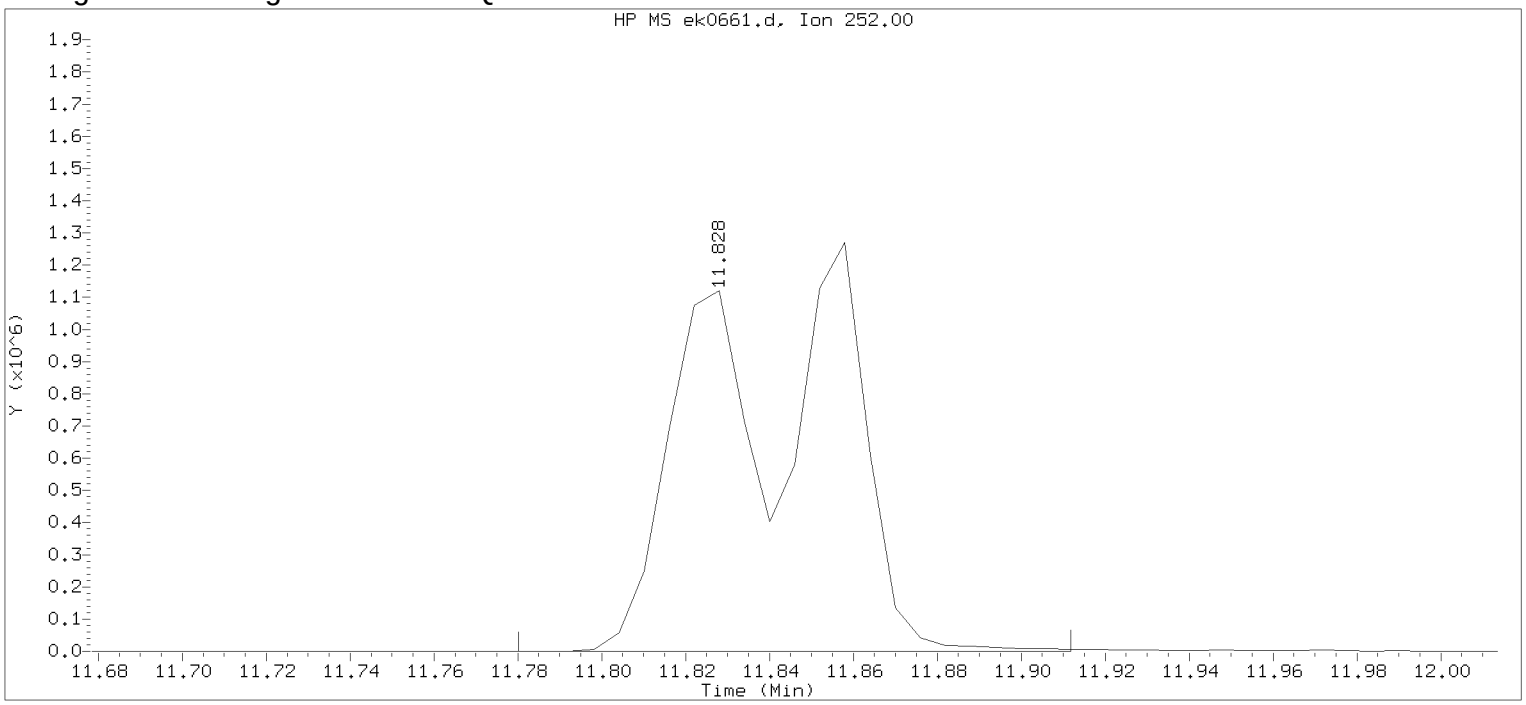
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0661.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 11:51 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: newall1-b
Calibration date and time: 15-NOV-2013 12:45
Date, time and analyst ID of latest file update: 15-Nov-2013 12:45 hb01996

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1763
Retention Time (minutes) : 11.828
Quant Ion : 252.00
Area : 2919739
On-column Amount (ng/ul) : 57.9770
Integration start scan : 1754 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 822

Digitally signed by Holly Berry on 11/17/2013 at 13:23.
Target 3.5 esignature user ID: hb01996

Raw QC Data

Semivolatiles by GC/MS

SBLKLB3165 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLB316

Data file: /chem/HP09572.i/13nov15.b/ek0664.d Injection date and time: **15-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLB3165;SBLKLB316;2;3;BLANK;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 13:35 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	163694 (-29)	20.00	
60) Naphthalene-d8	5.977(0.006)	785	136	657806 (-36)	20.00	
99) Acenaphthene-d10	7.455(0.006)	1032	164	408449 (-38)	20.00	
148) Phenanthrene-d10	8.663(0.006)	1234	188	713271 (-35)	20.00	
165) Pyrene-d10	9.812(0.006)	1426	212	814178 (-32)	20.00	
190) Perylene-d12	12.211(0.006)	1827	264	569994 (-29)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(-0.001)	82	1433446	93.530	94%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.917(0.000)	172	2395727	102.624	103%		69 - 120
169) Terphenyl-d14	(5)	9.985(-0.001)	244	2978804	102.654	103%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)			Not Detected					0.1
72) 2-Methylnaphthalene	(2)			Not Detected					0.1
75) 1-Methylnaphthalene	(2)			Not Detected					0.1
96) Acenaphthylene	(3)			Not Detected					0.1
100) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
149) Phenanthrene	(4)			Not Detected					0.1
150) Anthracene	(4)			Not Detected					0.1
163) Fluoranthene	(4)			Not Detected					0.1
166) Pyrene	(5)			Not Detected					0.1
178) Benzo(a)anthracene	(5)			Not Detected					0.1
180) Chrysene	(5)			Not Detected					0.1
186) Benzo(b)fluoranthene	(6)			Not Detected					0.1
187) Benzo(k)fluoranthene	(6)			Not Detected					0.1
189) Benzo(a)pyrene	(6)			Not Detected					0.1
194) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
195) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
196) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

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Data file: /chem/HP09572.i/13nov15.b/ek0664.d Injection date and time: **15-NOV-2013 13:20**
Data file Sample Info. Line: SBLKLB3165;SBLKLB316;2;3;BLANK;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 13:35 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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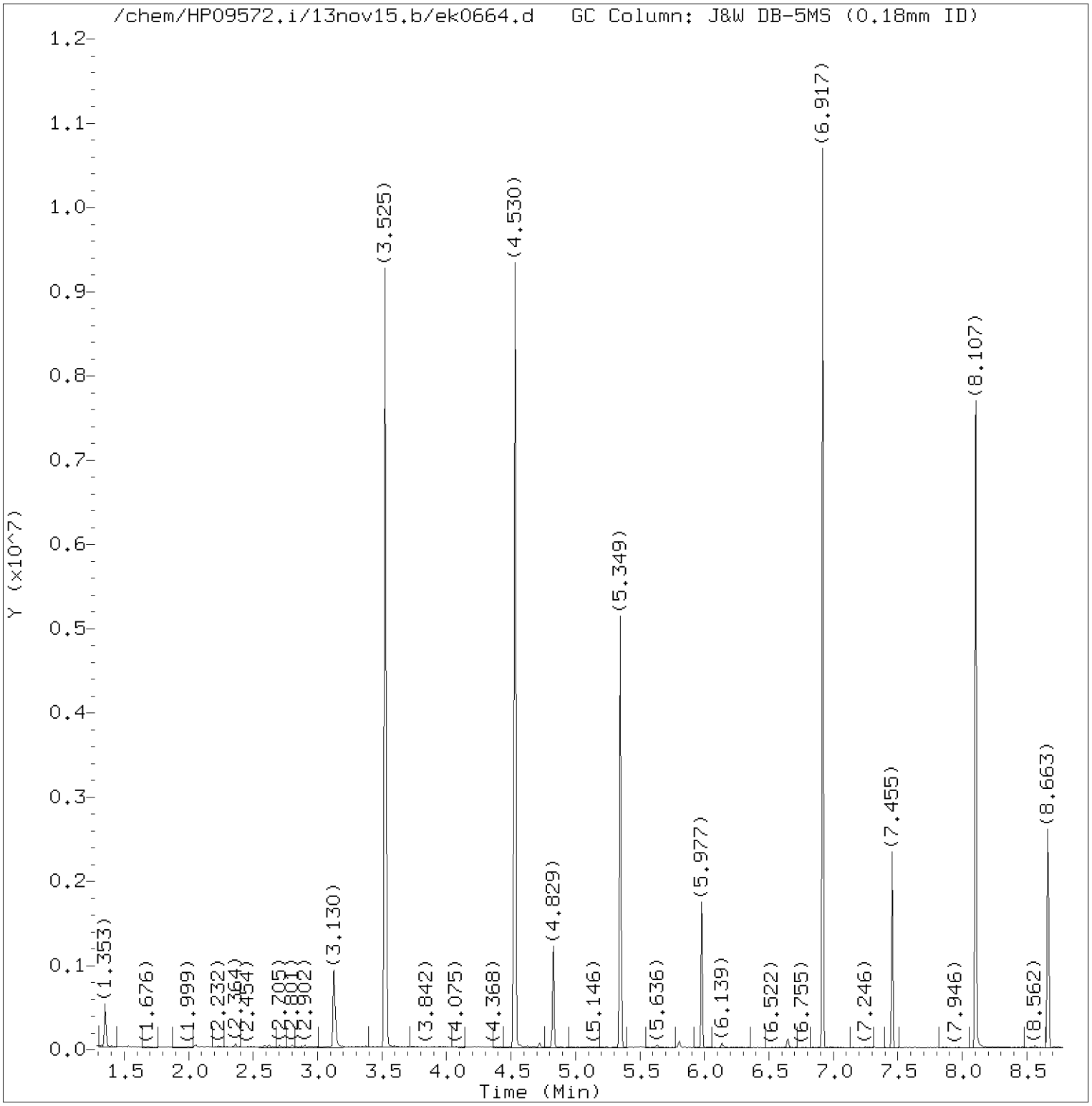
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:47. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

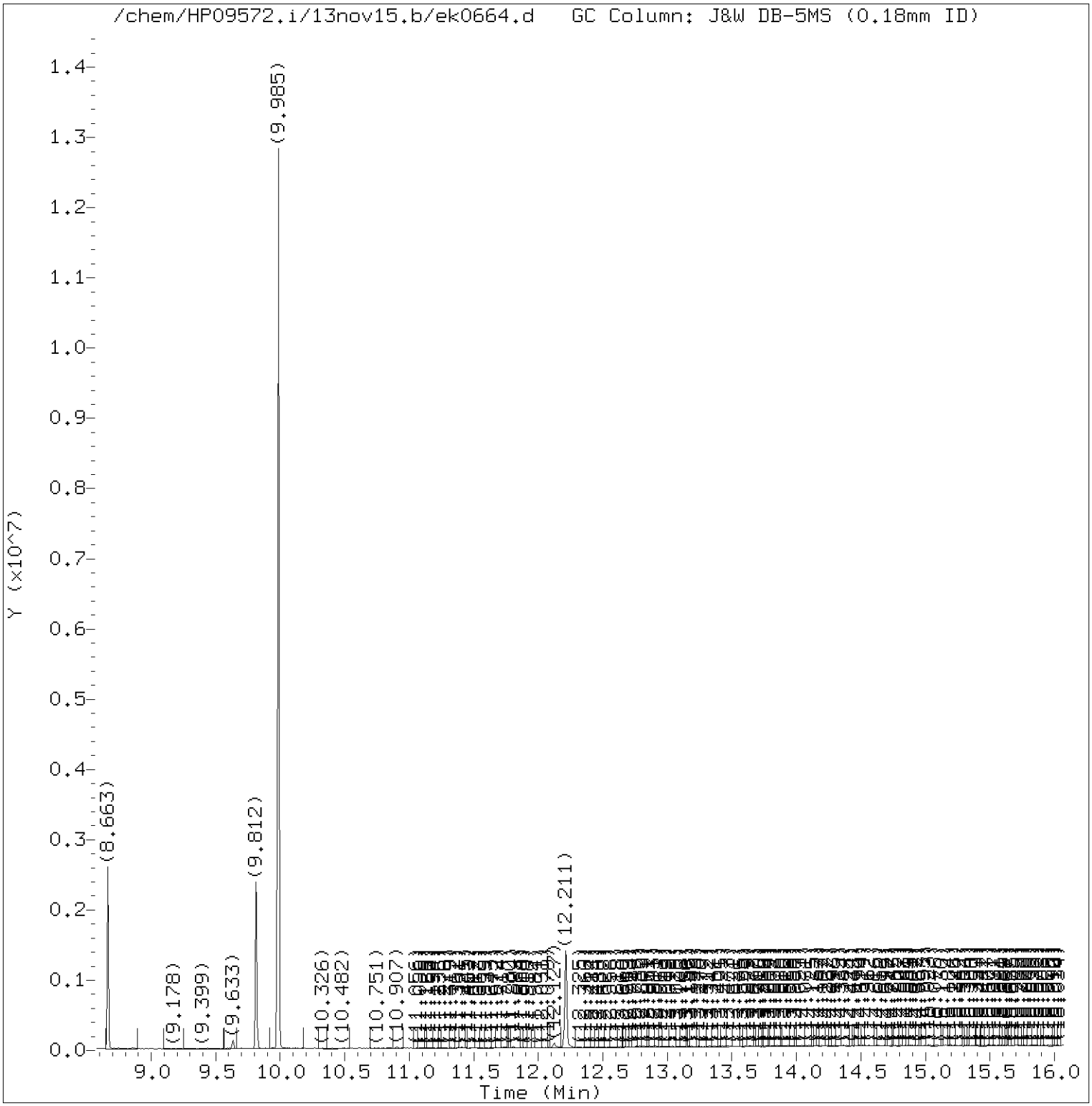
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0664.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:20 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:35 hb01996

Sample Name: SBLKLB3165 Lab Sample ID: SBLKLB316

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0664.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:20 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:35 hb01996

Sample Name: SBLKLB3165 Lab Sample ID: SBLKLB316

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0664.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:20 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:35 hb01996

Sample Name: SBLKLB3165 Lab Sample ID: SBLKLB316

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	163694	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	1433446	93.530
60)*Naphthalene-d8	(2)	5.977	136	657806	20.000
81)$2-Fluorobiphenyl	(3)	6.917	172	2395727	102.624
99)*Acenaphthene-d10	(3)	7.455	164	408449	20.000
148)*Phenanthrene-d10	(4)	8.663	188	713271	20.000
165)*Pyrene-d10	(5)	9.812	212	814178	20.000
169)$Terphenyl-d14	(5)	9.985	244	2978804	102.654
190)*Perylene-d12	(6)	12.211	264	569994	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

SBLKWD3144 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKWD314

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	116893 (-15)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	441917 (-15)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	263542 (-17)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	462153 (-17)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	586235 (-20)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	470041 (-18)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.965(0.001)	112	1079792	31.111	62%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1074140	22.535	45%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.000)	82	903258	22.210	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1602184	24.345	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	434425	62.762	126%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2078944	28.437	114%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
18) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
20) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
23) Benzyl alcohol	(1)			Not Detected					1
24) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
51) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1
82) Diphenyl ether	(3)			Not Detected					0.1
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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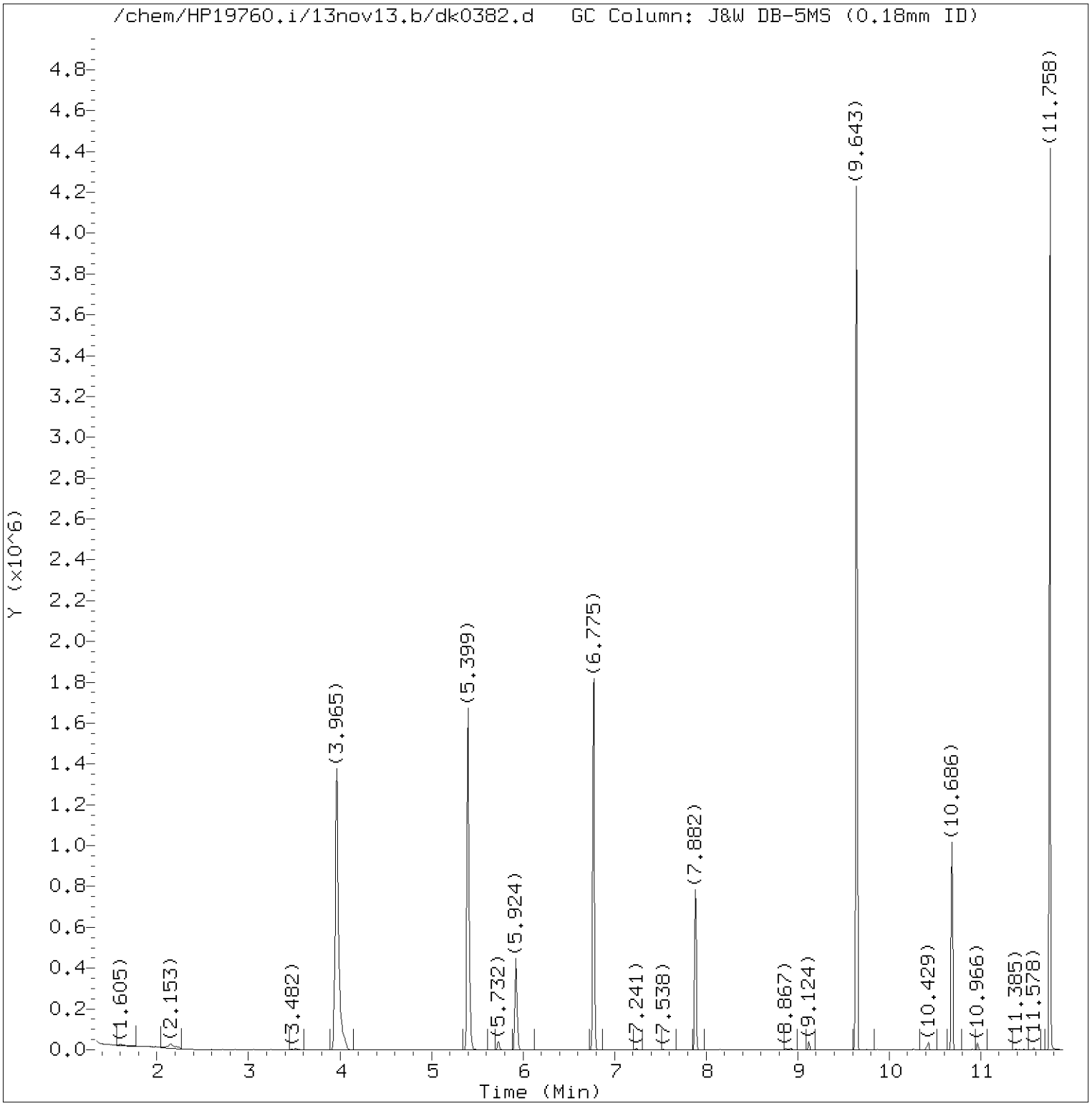
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 71

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:41. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

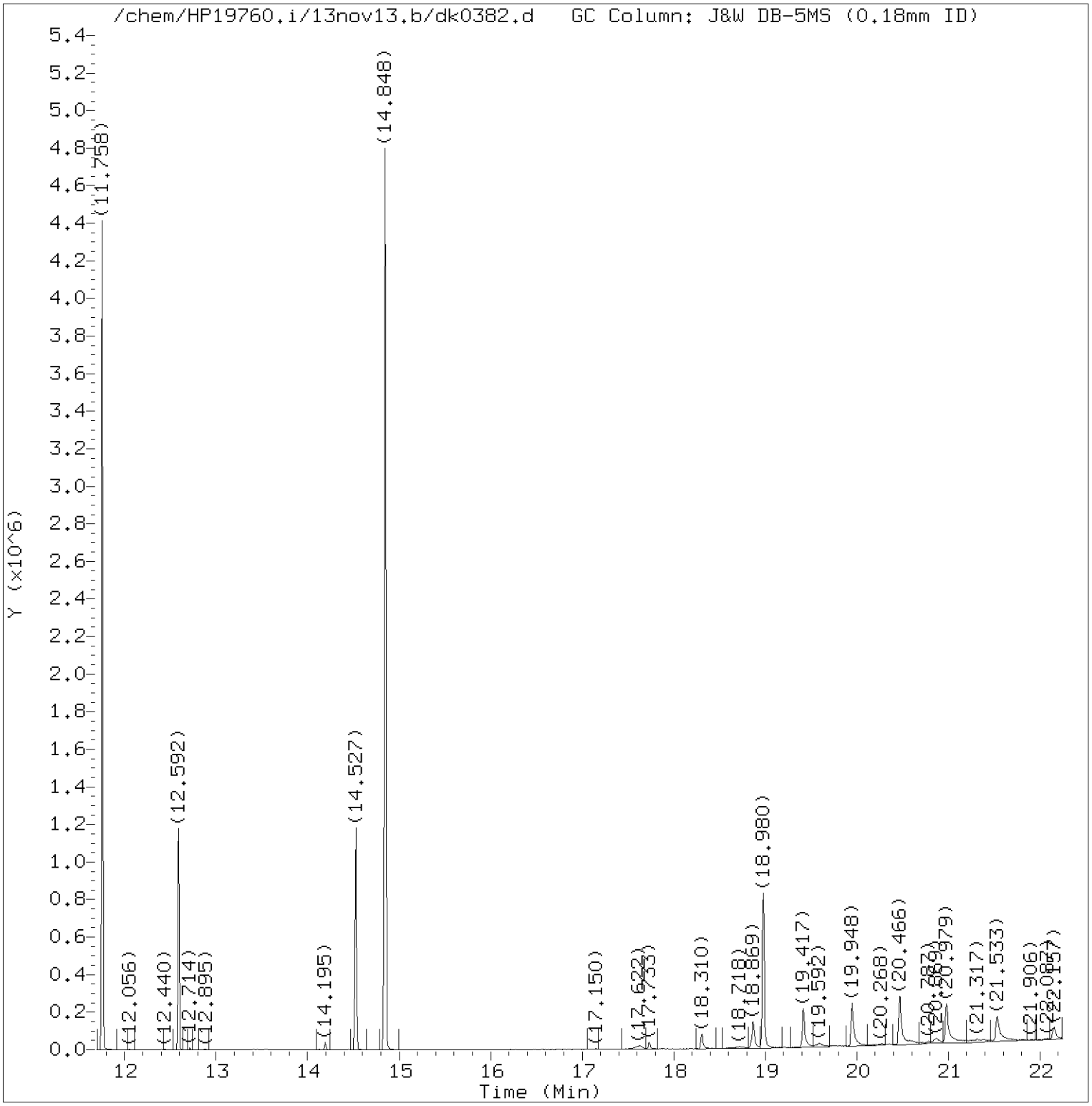
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

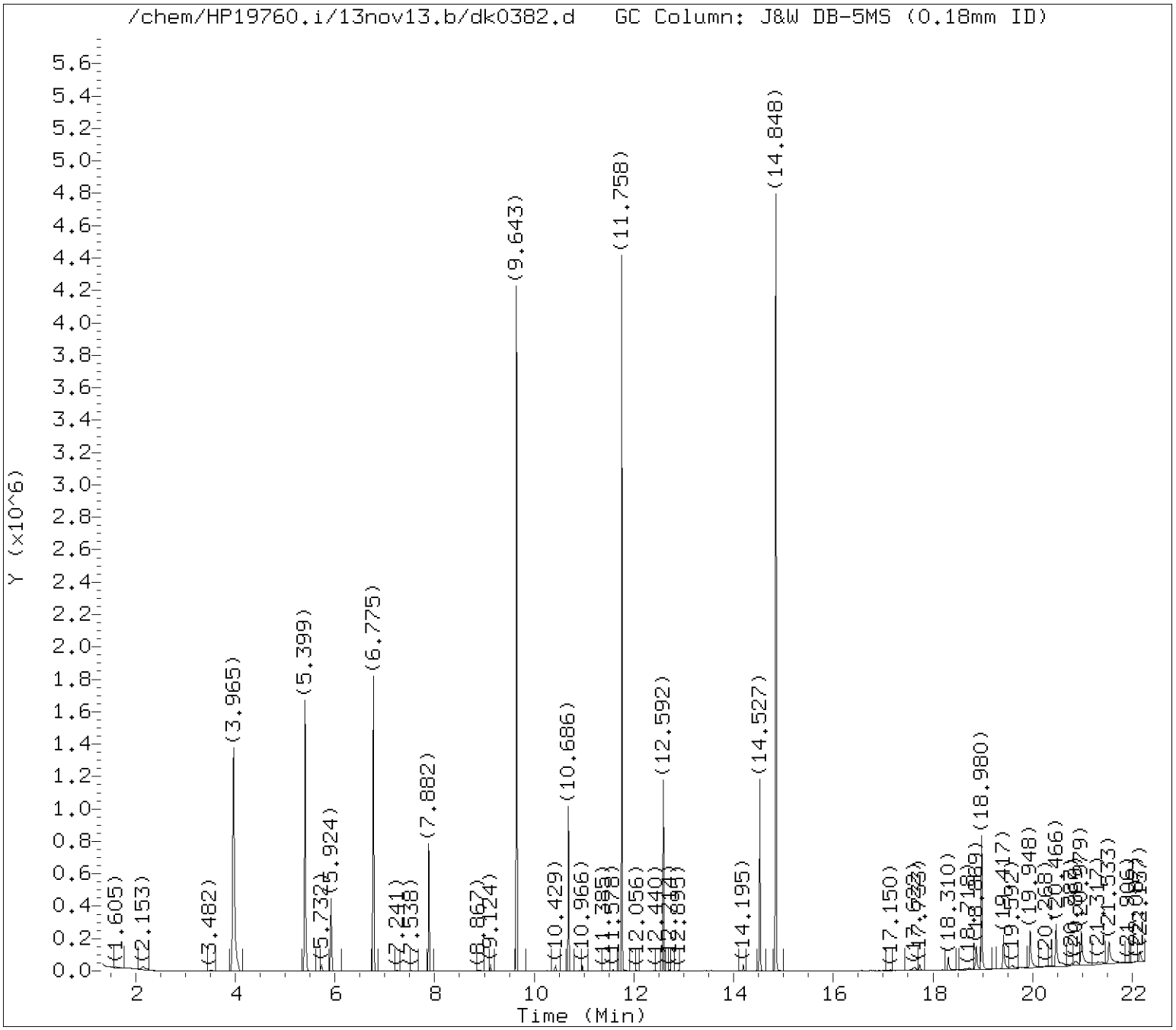
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.965	112	1079792	31.111
13)$Phenol-d6	(1)	5.399	99	1074140	22.535
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	116893	5.000
36)$Nitrobenzene-d5	(2)	6.775	82	903258	22.210
52)*Naphthalene-d8	(2)	7.882	136	441917	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1602184	24.345
92)*Acenaphthene-d10	(3)	10.686	164	263542	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	434425	62.762
130)*Phenanthrene-d10	(4)	12.592	188	462153	5.000
145)*Pyrene-d10	(5)	14.527	212	586235	5.000
149)$Terphenyl-d14	(5)	14.848	244	2078944	28.437
172)*Perylene-d12	(6)	18.980	264	470041	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

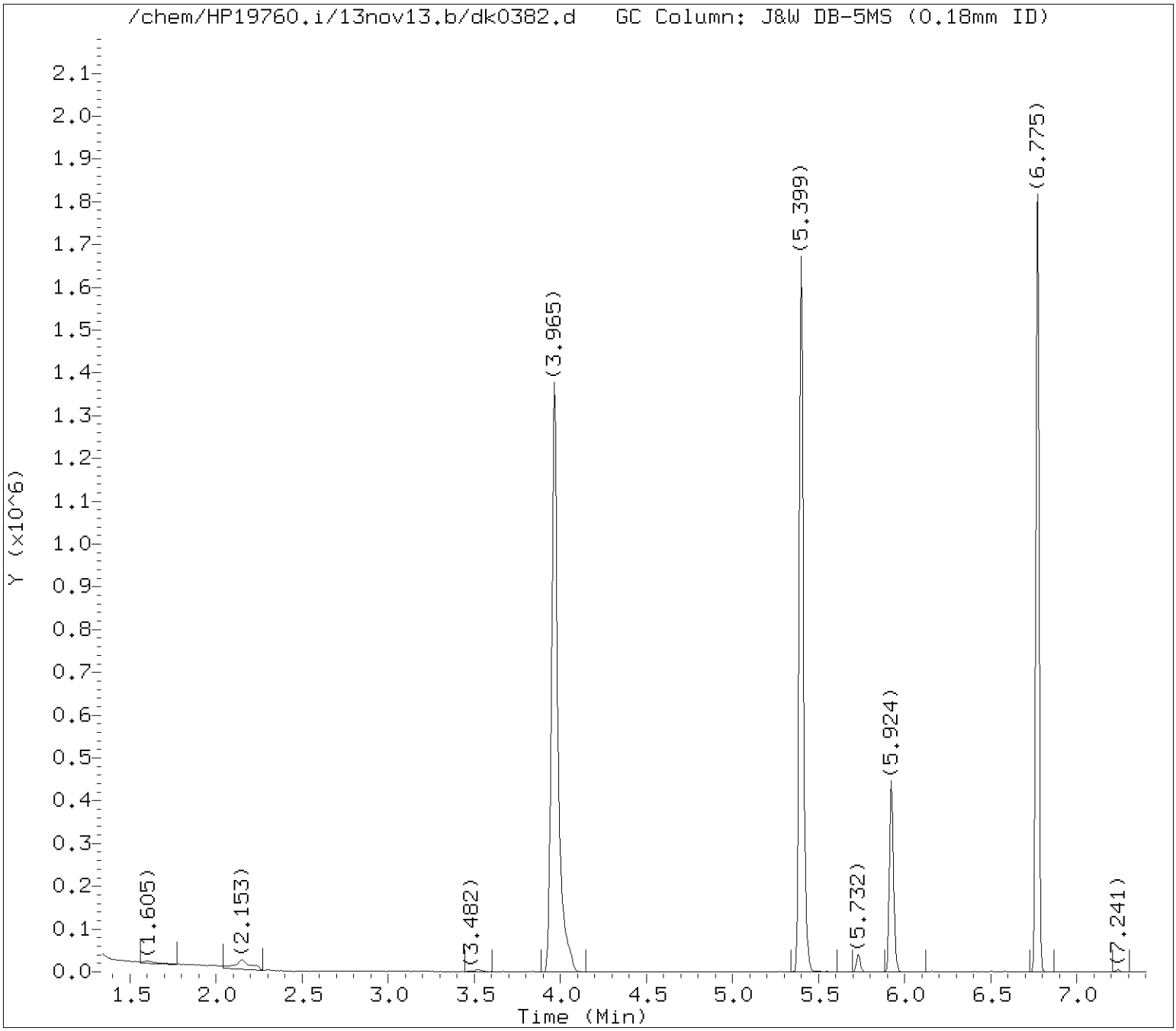
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

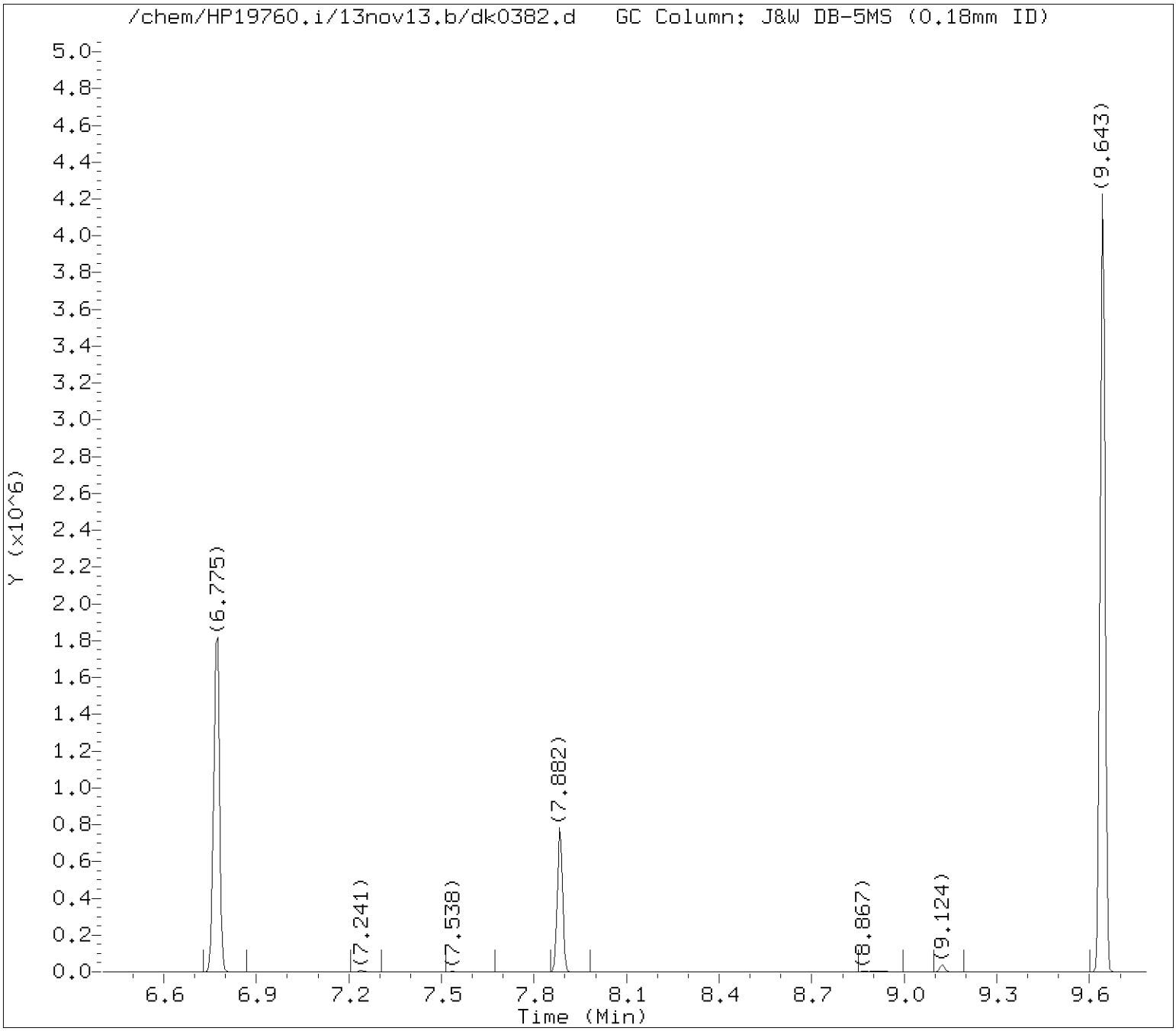
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

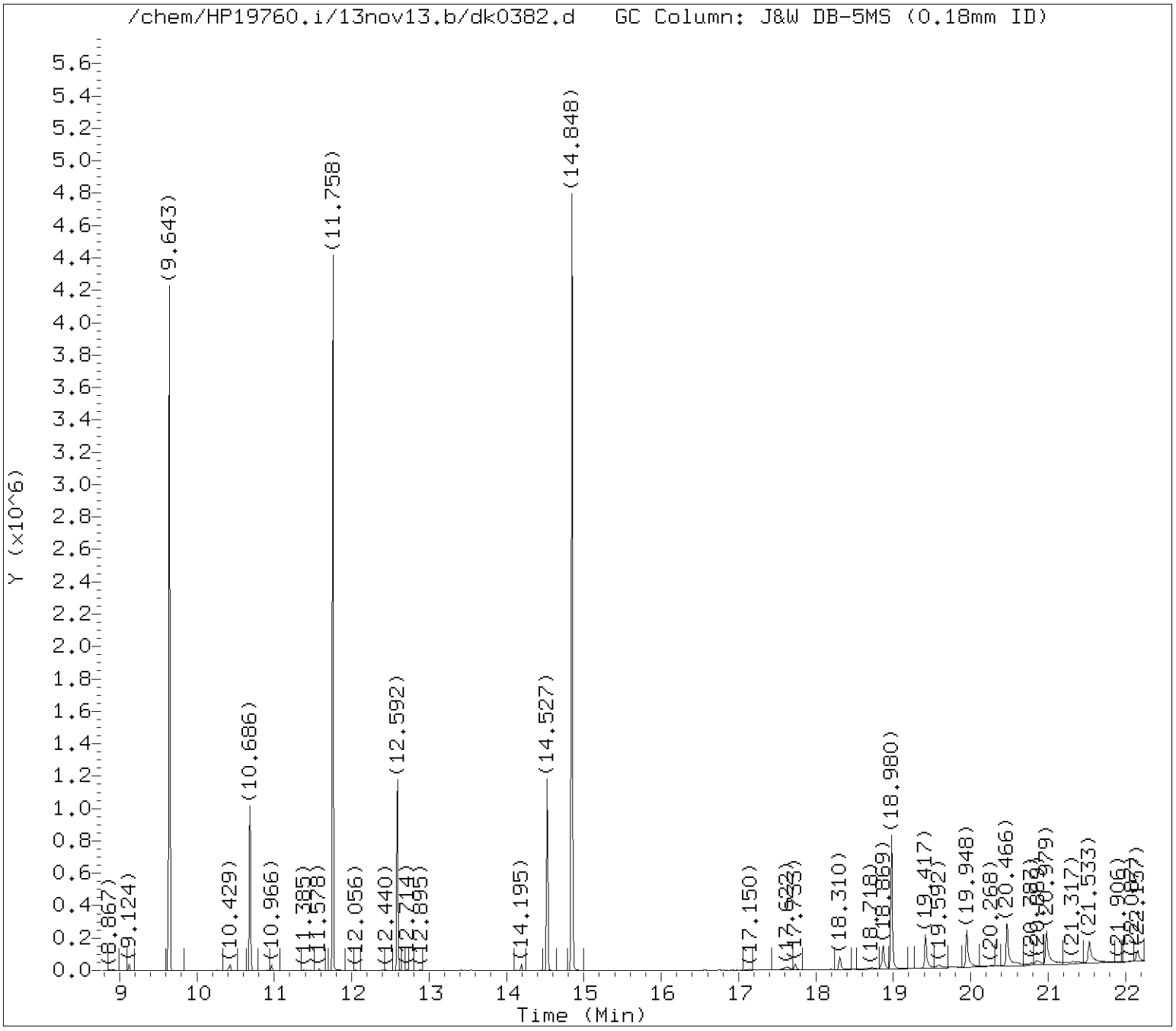
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

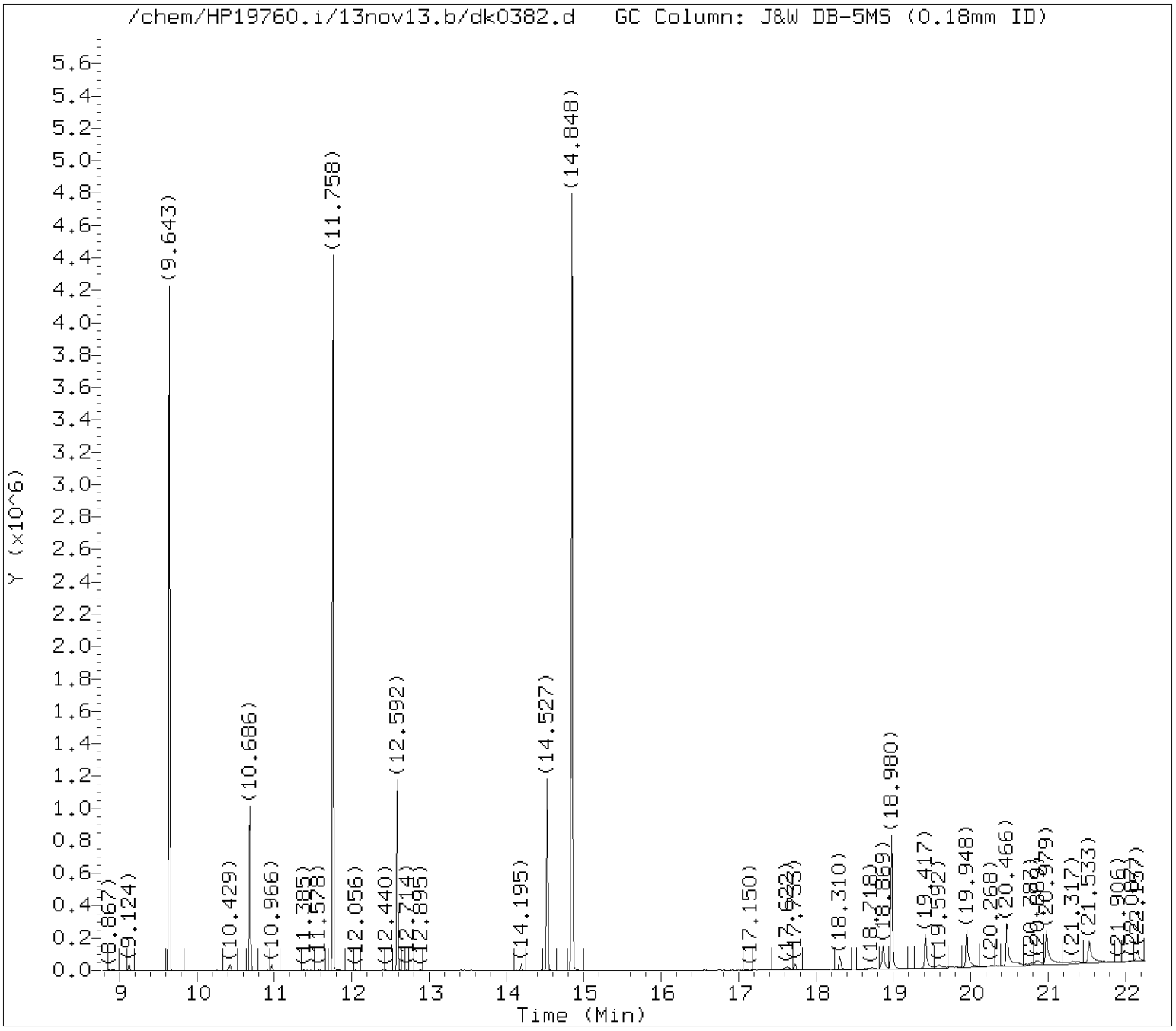
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

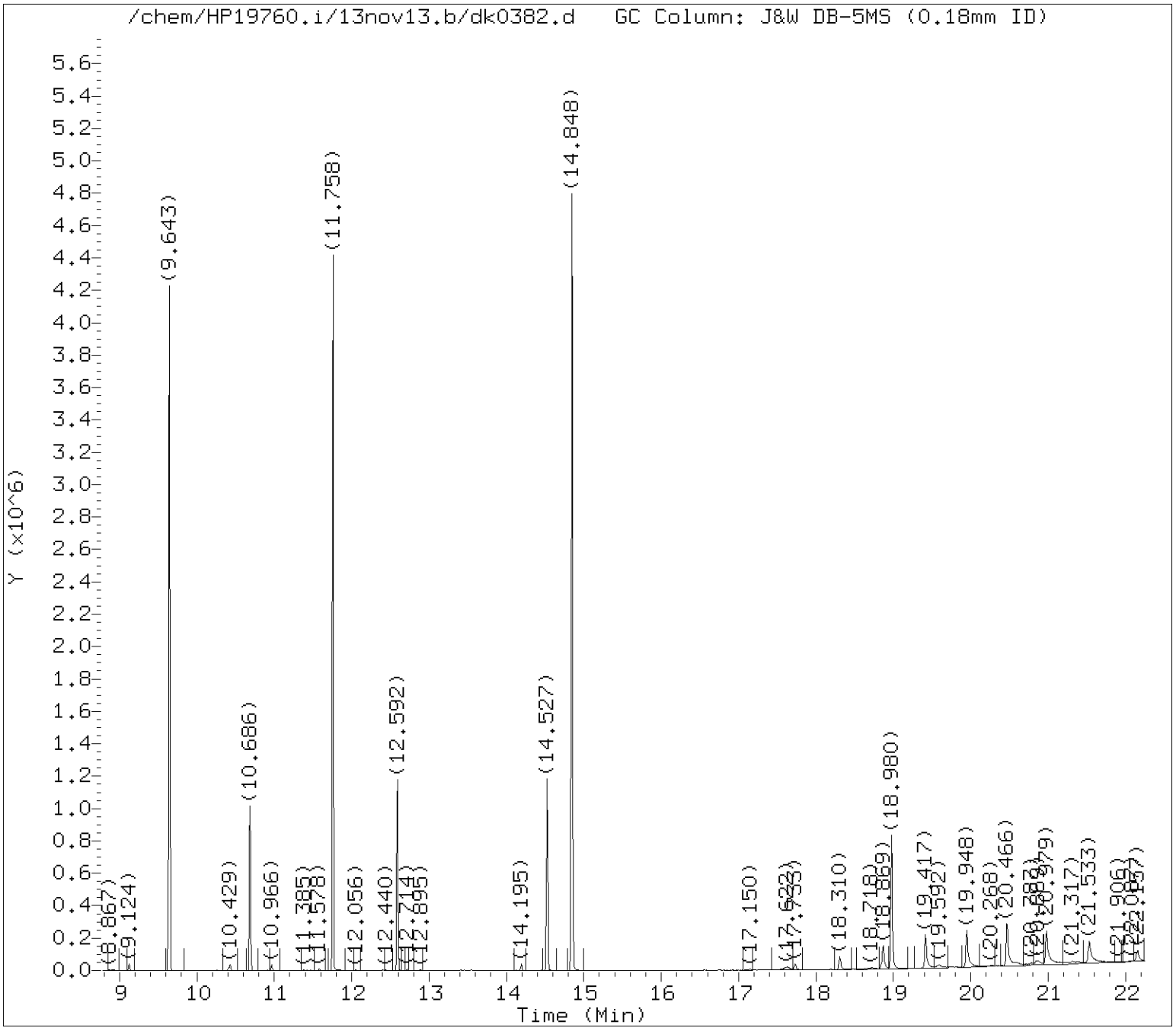
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.559

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

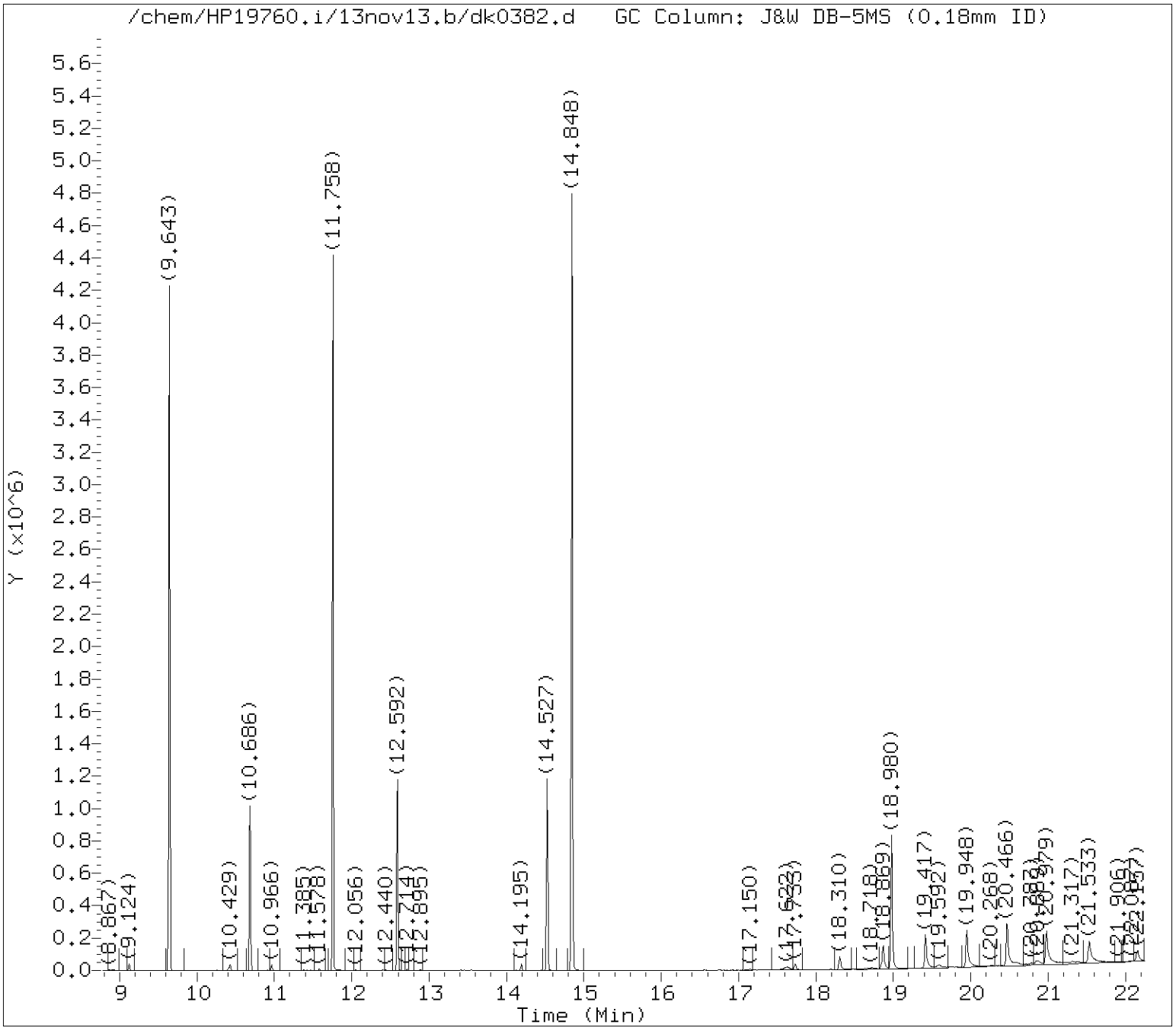
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.559
Chromatogram End Time (min.): 16.754

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0382.d
Lab Smp Id: SBLKWD314 Client Smp ID: SBLKWD3144
Inj Date : 13-NOV-2013 05:51
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : SBLKWD3144;SBLKWD314;1;3;BLANK;;;
Misc Info : 13314WAD;newall1;;1000;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 5 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 314WAD.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 172 Perylene-d12	18.980	1333238	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
19.417	443371	1.66275892	1.66275	0		0	172
Unknown				CAS #:			
19.948	534492	2.00448601	2.00448	0		0	172

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
20.466	720083	2.70050443	2.70050	0		0	172
Unknown				CAS #:			
20.979	646403	2.42418292	2.42418	0		0	172
Unknown				CAS #:			
21.533	517002	1.93889617	1.93889	0		0	172

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

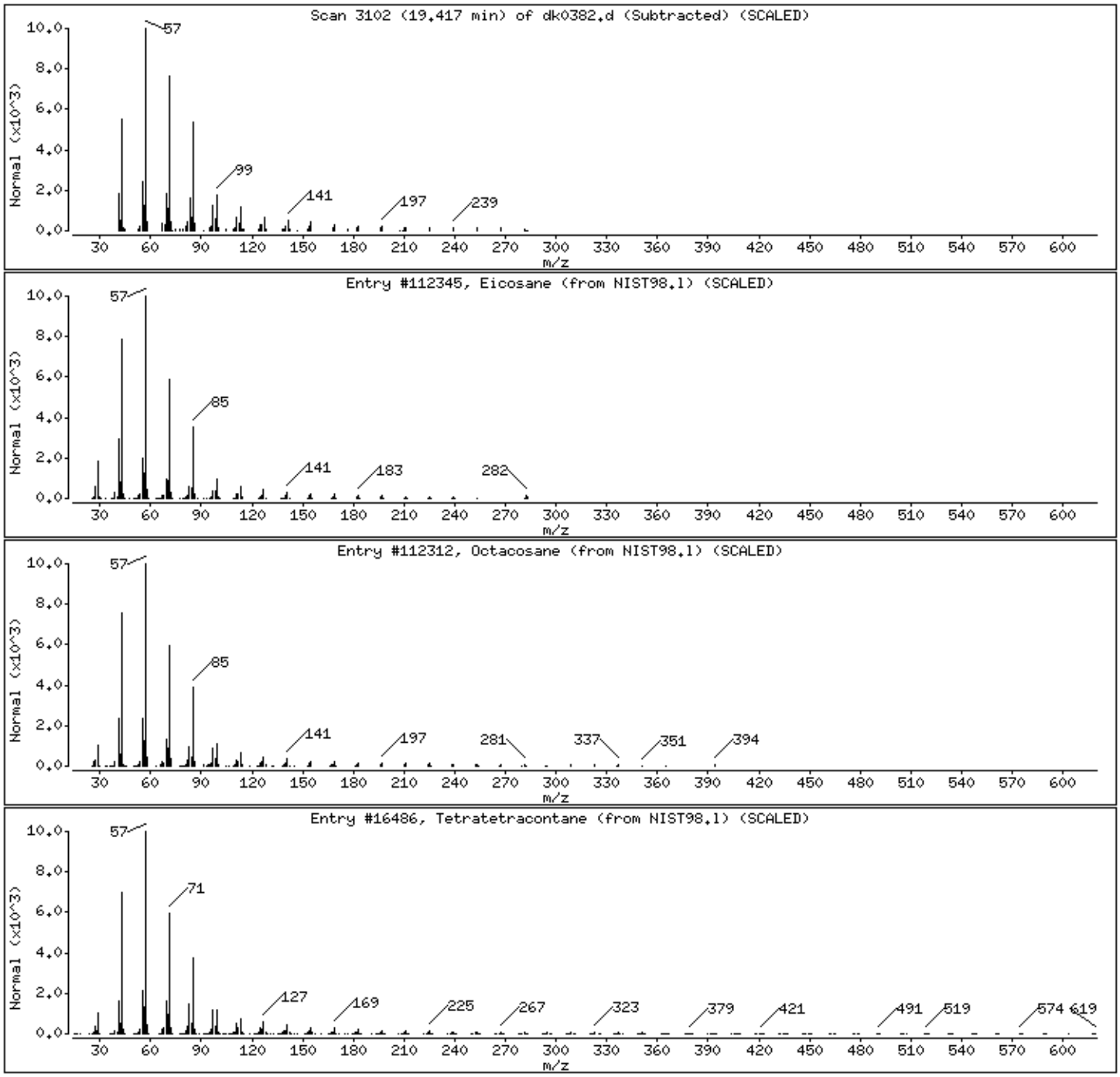
Client ID: SBLKWD3144 Instrument: HP19760.i

Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST98.1	112345	96	C20H42	282
Octacosane	630-02-4	NIST98.1	112312	91	C28H58	394
Tetratetracontane	7098-22-8	NIST98.1	16486	91	C44H90	619



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

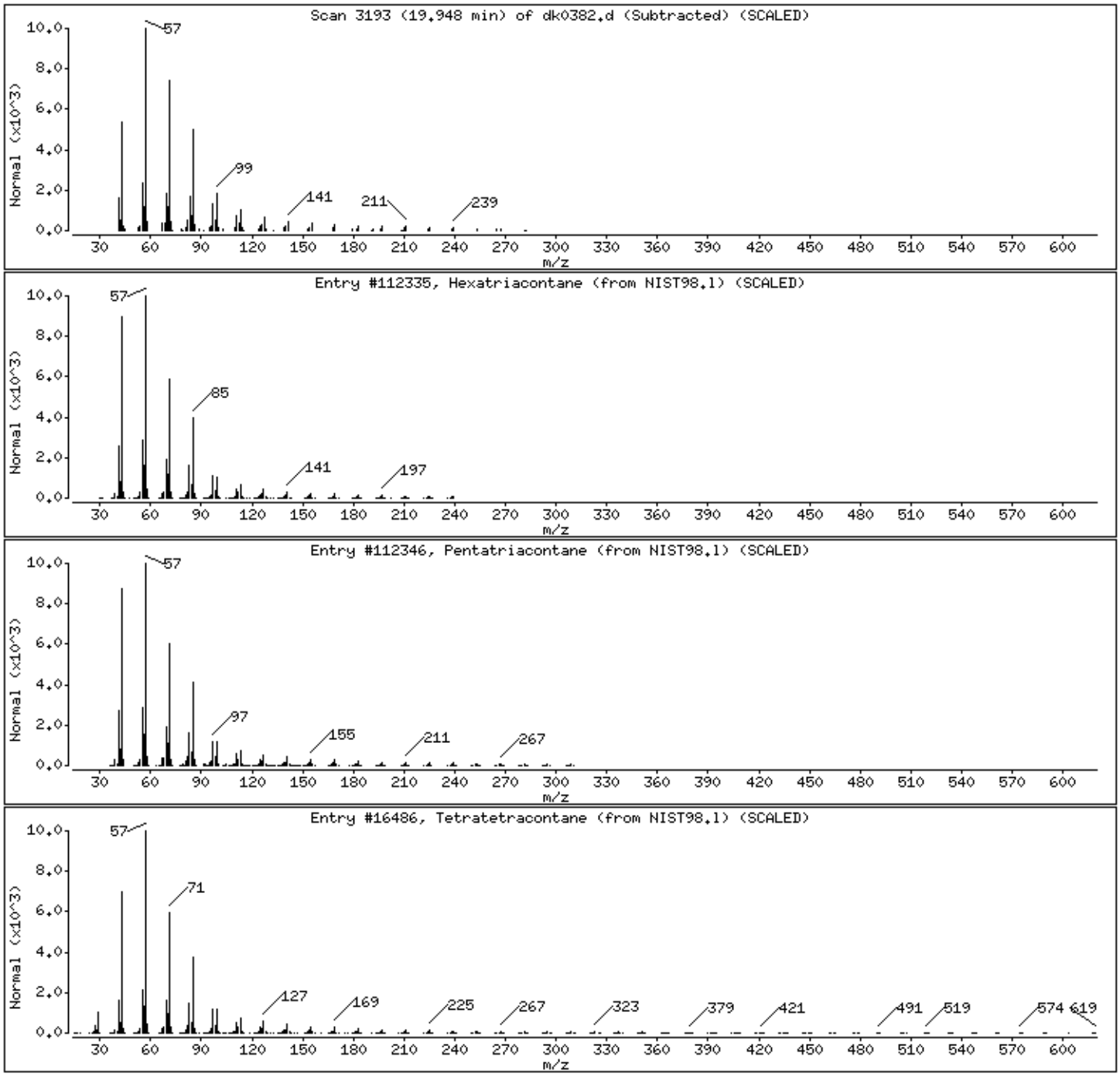
Client ID: SBLKWD3144 Instrument: HP19760.i

Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507
Pentatriacontane	630-07-9	NIST98.1	112346	91	C35H72	493
Tetratetracontane	7098-22-8	NIST98.1	16486	91	C44H90	619



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

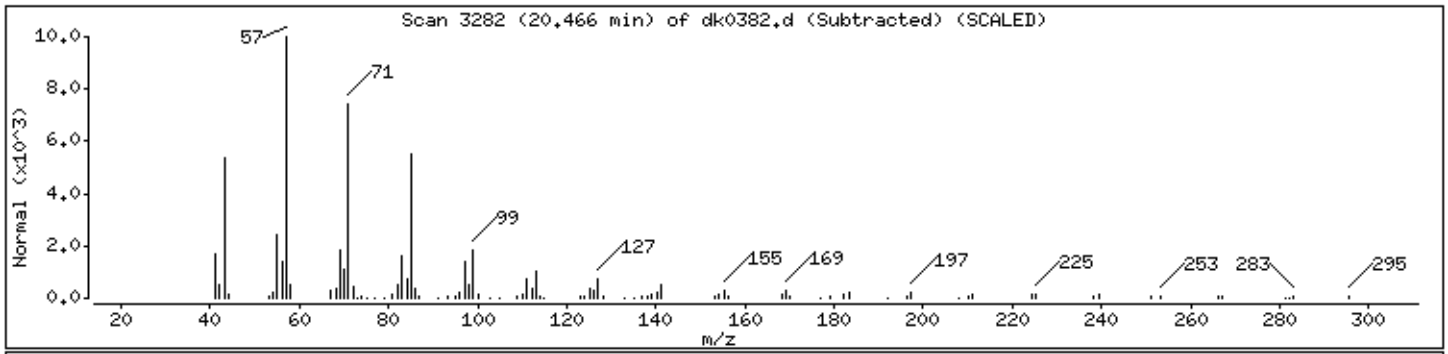
Client ID: SBLKWD3144 Instrument: HP19760.i

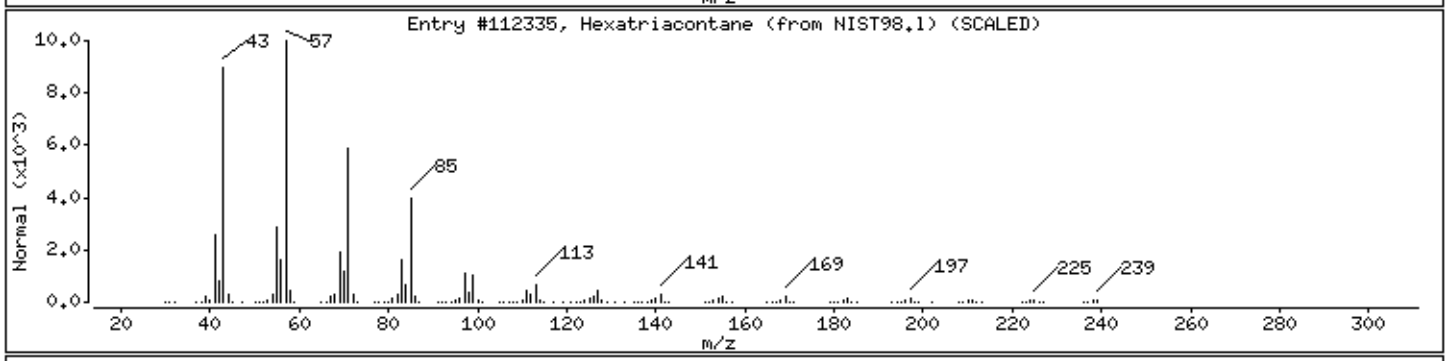
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

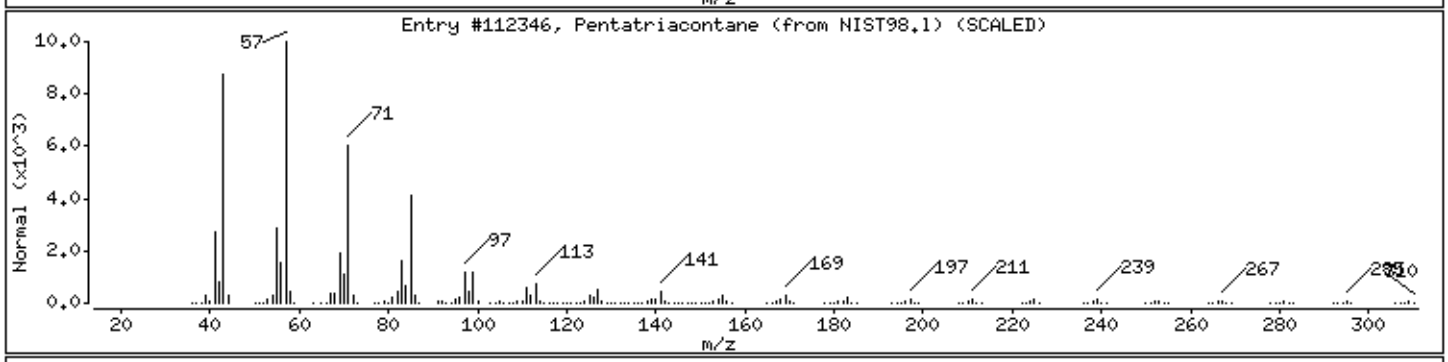
Volume Injected (uL): 0.5 Operator: jmg00346

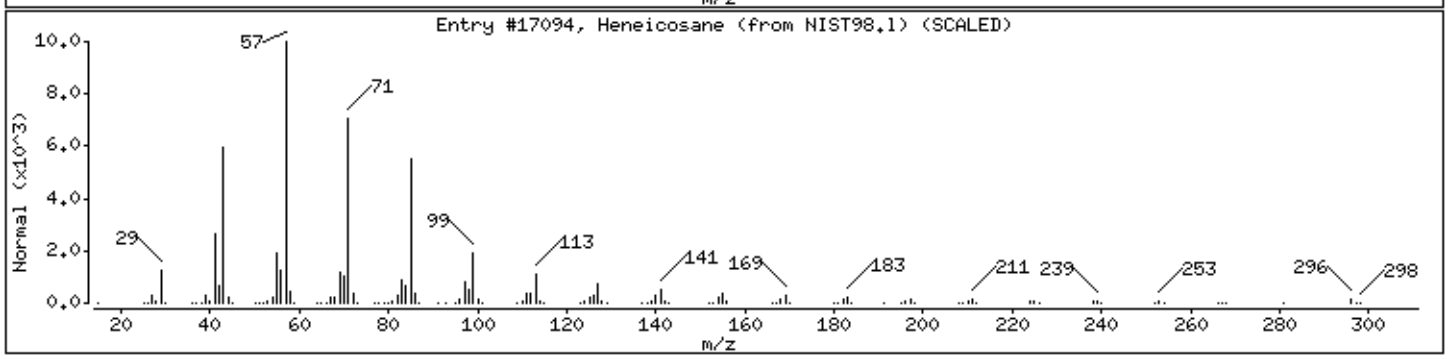
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507
Pentatriacontane	630-07-9	NIST98.1	112346	91	C35H72	493
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

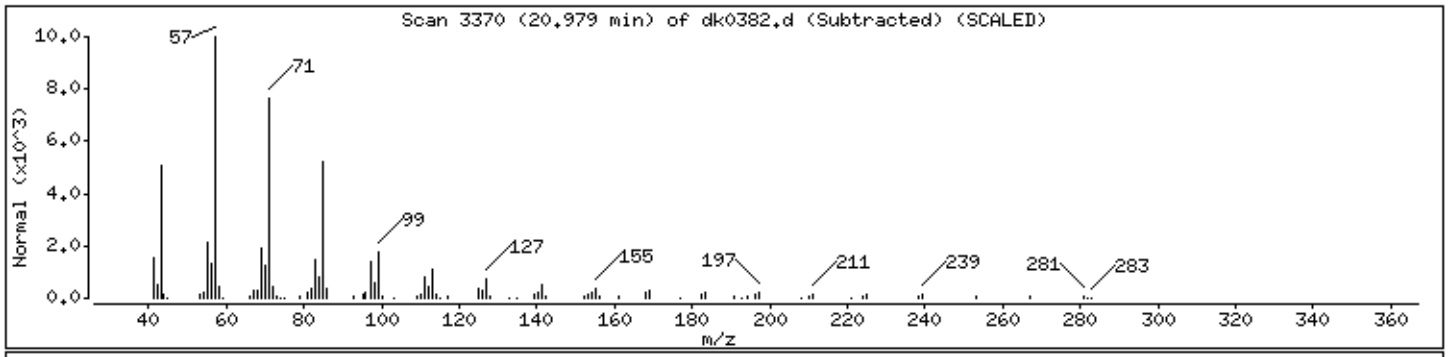
Client ID: SBLKWD3144 Instrument: HP19760.i

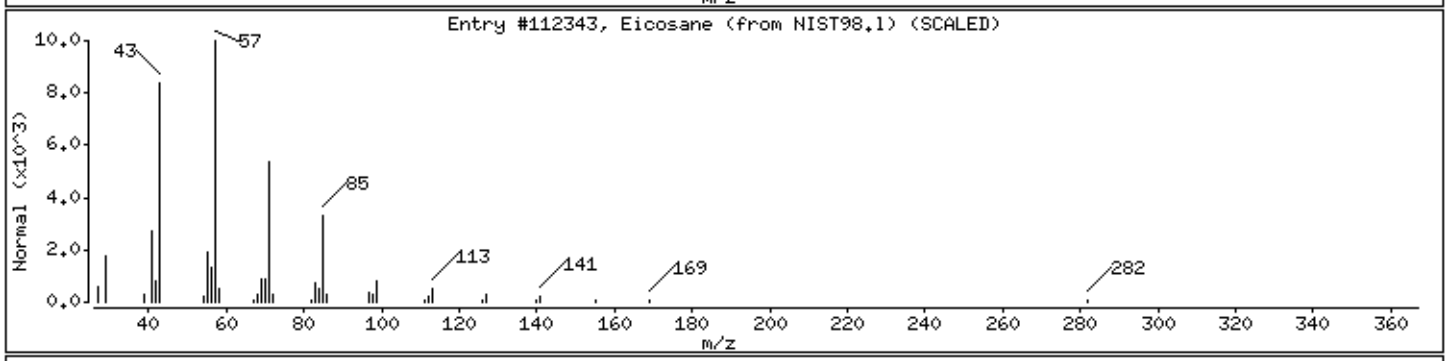
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

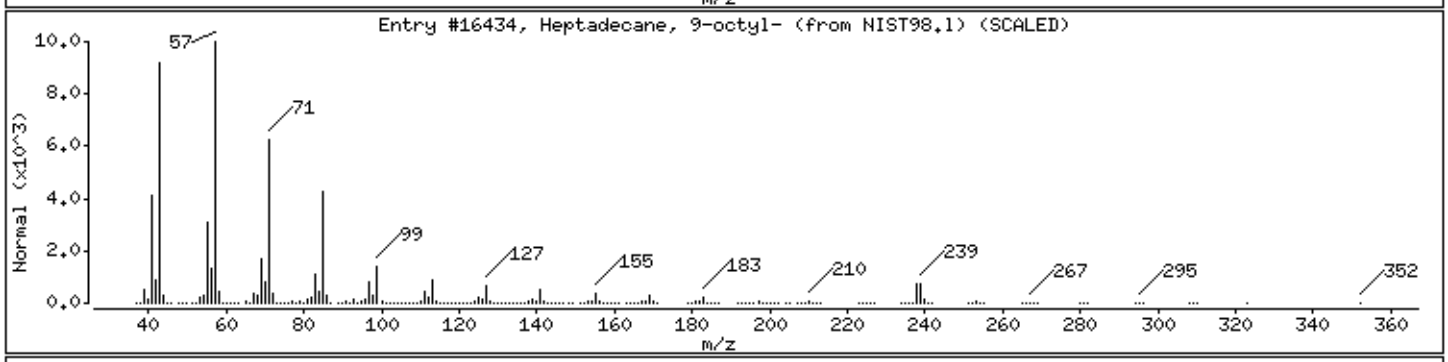
Volume Injected (uL): 0.5 Operator: jmg00346

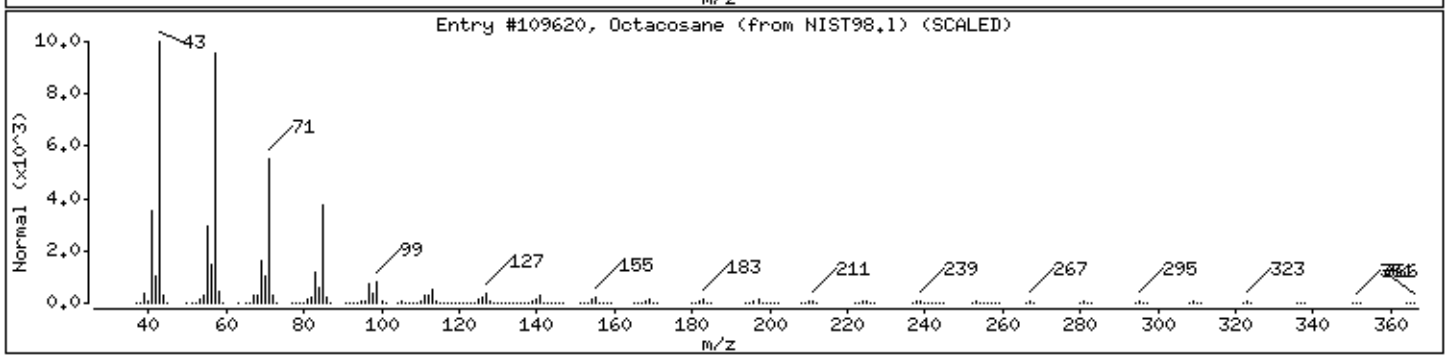
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST98.l	112343	96	C20H42	282
Heptadecane, 9-octyl-	7225-64-1	NIST98.l	16434	91	C25H52	352
Octacosane	630-02-4	NIST98.l	109620	91	C28H58	394









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

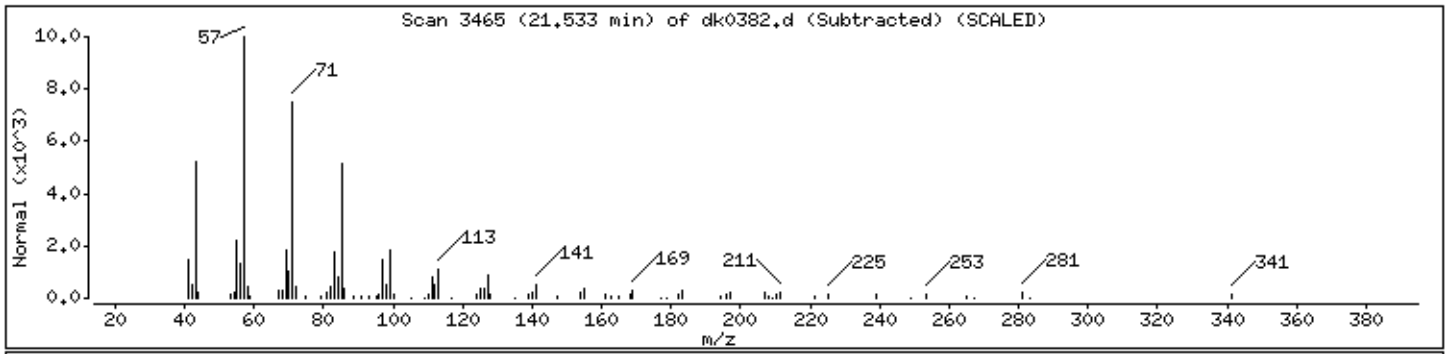
Client ID: SBLKWD3144 Instrument: HP19760.i

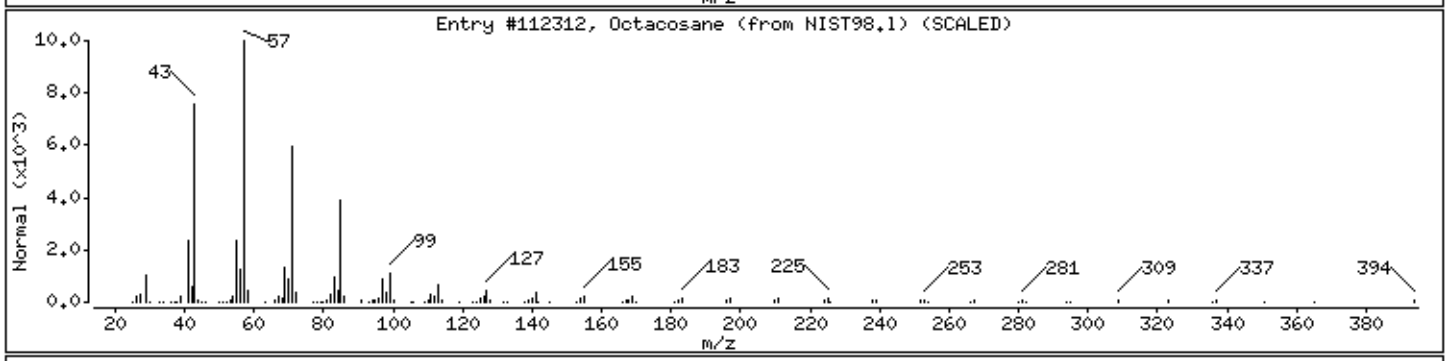
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

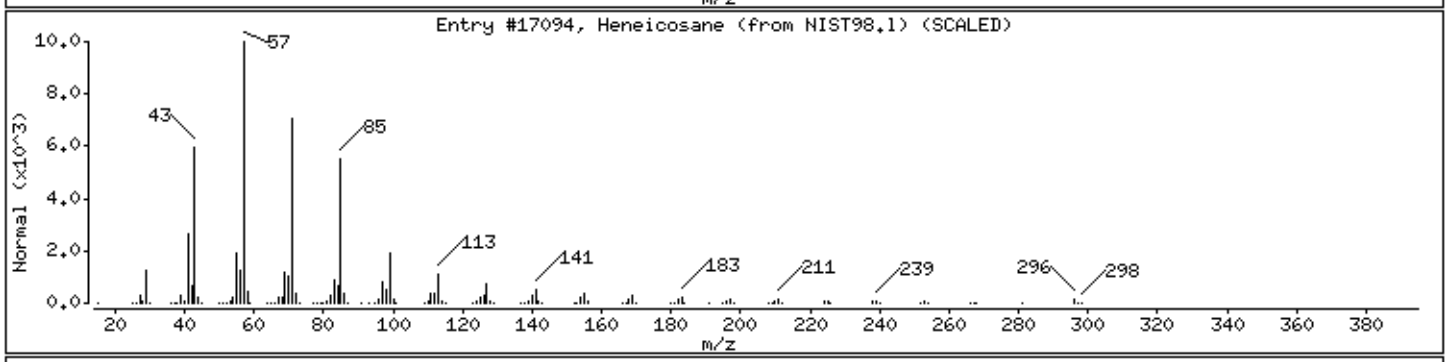
Volume Injected (uL): 0.5 Operator: jmg00346

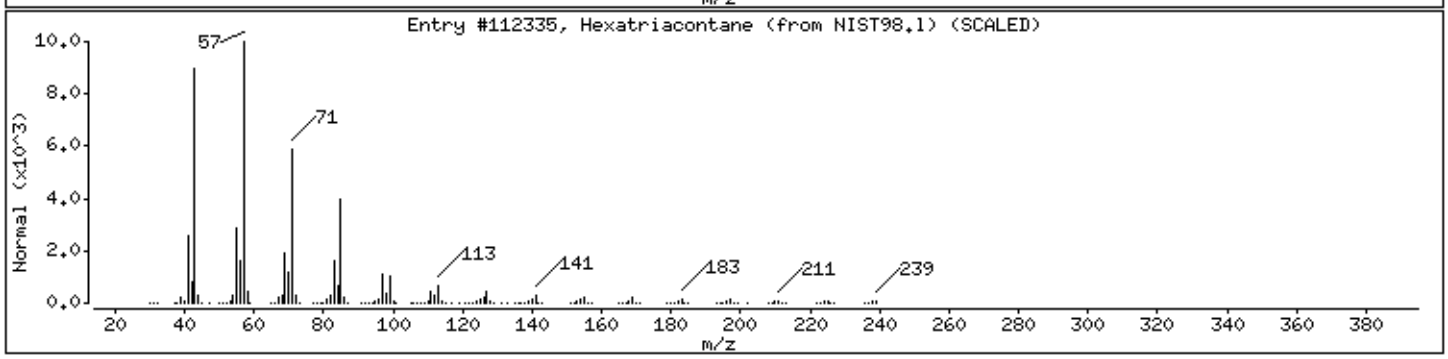
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Octacosane	630-02-4	NIST98.1	112312	91	C28H58	394
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

2G124MS Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7266801

Data file: /chem/HP09572.i/13nov15.b/ek0684.d
Injection date and time: **15-NOV-2013 21:30**
Data file Sample Info. Line: 2G124MS;7266801;2;3;MS;;;
Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	138138 (-40)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	652817 (-37)	20.00	
99) Acenaphthene-d10	7.461(0.000)	1033	164	428260 (-35)	20.00	
148) Phenanthrene-d10	8.669(0.000)	1235	188	708762 (-35)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	762845 (-36)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	494183 (-39)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	252791	16.620	83%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.916(0.001)	172	446832	18.255	91%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	506551	18.631	93%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)	6.001(-0.000)	128	320518	9.311	3103.60			0.1
72) 2-Methylnaphthalene	(2)	6.599(-0.000)	142	215978	8.735	2911.55			0.1
75) 1-Methylnaphthalene	(2)	6.677(-0.000)	142	211897	9.351	3117.10			0.1
96) Acenaphthylene	(3)	7.341(0.000)	152	362347	10.397	3465.65			0.1
100) Acenaphthene	(3)	7.485(-0.000)	153	216906	8.685	2895.07			0.1
111) Fluorene	(3)	7.910(0.000)	166	261982	8.912	2970.53			0.1
149) Phenanthrene	(4)	8.687(0.000)	178	412881	10.305	3434.84			0.1
150) Anthracene	(4)	8.729(0.000)	178	390043	9.644	3214.58			0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	431620	10.309	3436.32			0.1
166) Pyrene	(5)	9.830(0.000)	202	436519	10.480	3493.20			0.1
178) Benzo(a)anthracene	(5)	10.817(-0.000)	228	327189	8.814	2938.05			0.1
180) Chrysene	(5)	10.847(-0.000)	228	315928	9.060	3019.87			0.1
186) Benzo(b)fluoranthene	(6)	11.822(0.000)	252	292483M	9.440	3146.53			0.1
187) Benzo(k)fluoranthene	(6)	11.852(0.000)	252	312248M	10.096	3365.46			0.1
189) Benzo(a)pyrene	(6)	12.157(0.000)	252	259019	9.438	3145.99			0.1
194) Indeno(1,2,3-cd)pyrene	(6)	13.401(-0.000)	276	247778	8.957	2985.73			0.1
195) Dibenz(a,h)anthracene	(6)	13.431(0.000)	278	226142	9.653	3217.79			0.1
196) Benzo(g,h,i)perylene	(6)	13.694(-0.000)	276	224114	9.686	3228.66			0.1

M = Compound was manually integrated.

Digitally signed by Holly Berry on 11/17/2013 at 14:49. Target 3.5 esignature user ID: hb01996

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP09572.i/13nov15.b/ek0684.d Injection date and time: **15-NOV-2013 21:30**
Data file Sample Info. Line: 2G124MS;7266801;2;3;MS;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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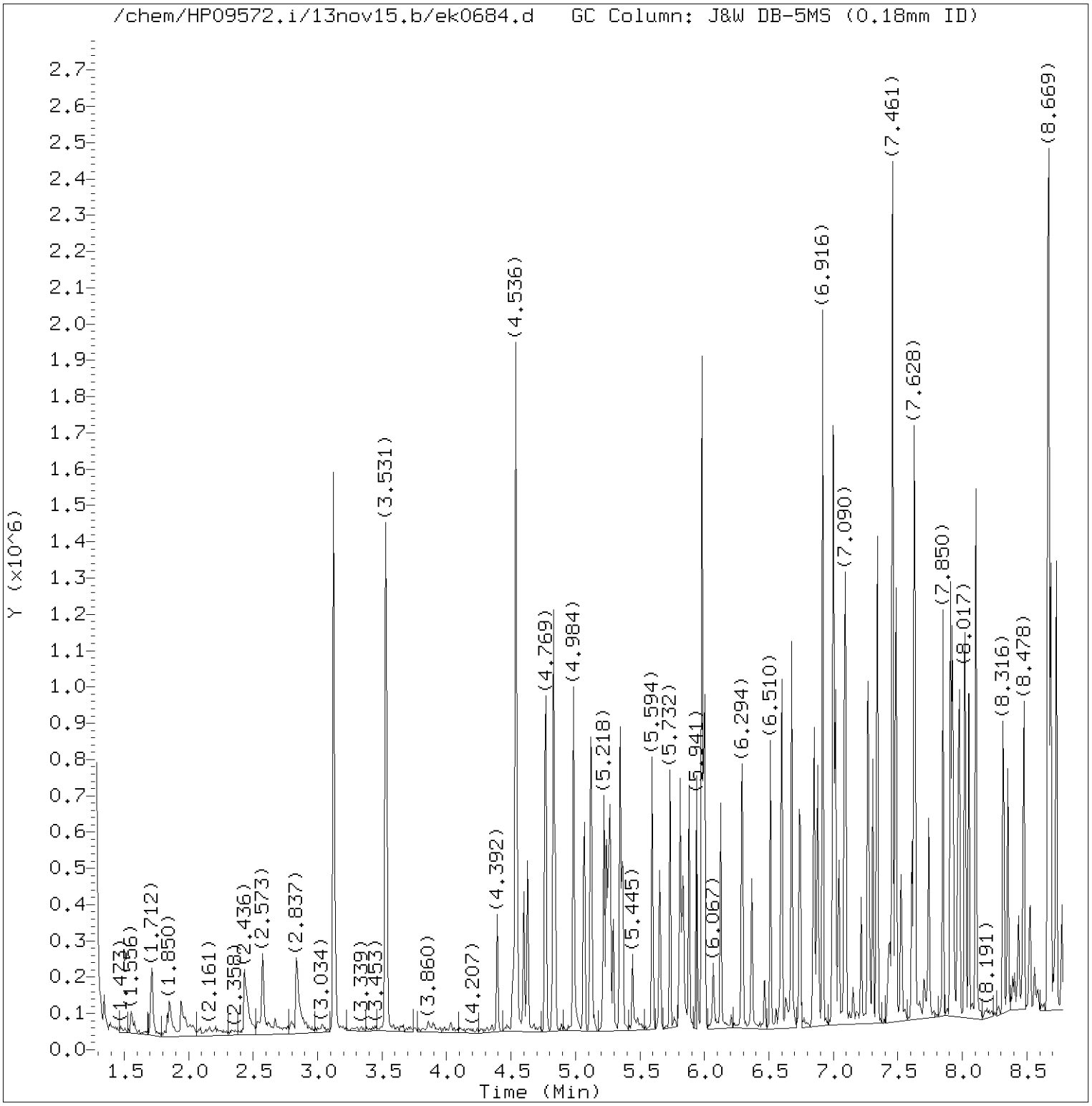
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:49. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

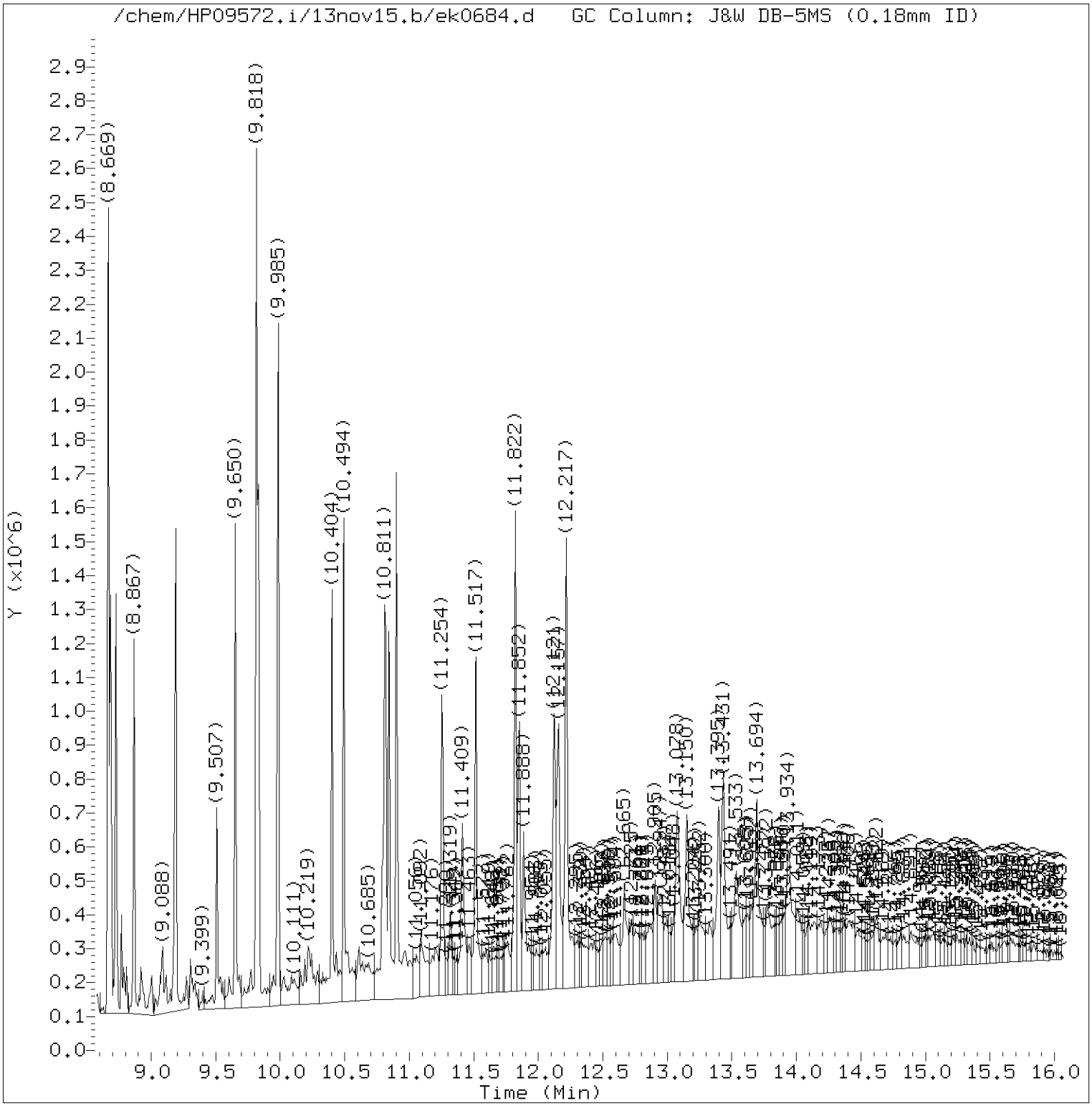
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

Digitally signed by Holly Berry
on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

Digitally signed by Holly Berry
on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

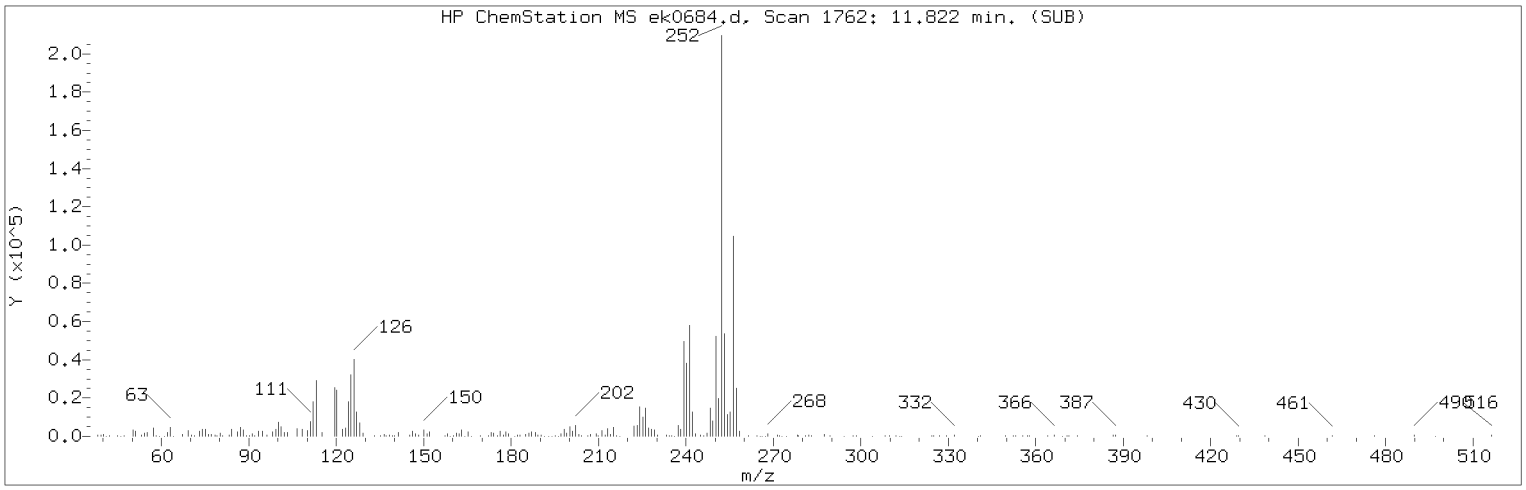
Sample Name: 2G124MS Lab Sample ID: 7266801

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	138138	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	252791	16.620
60)*Naphthalene-d8	(2)	5.983	136	652817	20.000
61) Naphthalene	(2)	6.001	128	320518	9.311
72) 2-Methylnaphthalene	(2)	6.599	142	215978	8.735
75) 1-Methylnaphthalene	(2)	6.677	142	211897	9.351
81)$2-Fluorobiphenyl	(3)	6.916	172	446832	18.255
96) Acenaphthylene	(3)	7.341	152	362347	10.397
99)*Acenaphthene-d10	(3)	7.461	164	428260	20.000
100) Acenaphthene	(3)	7.485	153	216906	8.685
111) Fluorene	(3)	7.910	166	261982	8.912
148)*Phenanthrene-d10	(4)	8.669	188	708762	20.000
149) Phenanthrene	(4)	8.687	178	412881	10.305
150) Anthracene	(4)	8.729	178	390043	9.644
163) Fluoranthene	(4)	9.650	202	431620	10.309
165)*Pyrene-d10	(5)	9.818	212	762845	20.000
166) Pyrene	(5)	9.830	202	436519	10.480
169)$Terphenyl-d14	(5)	9.985	244	506551	18.631
178) Benzo(a)anthracene	(5)	10.817	228	327189	8.814
180) Chrysene	(5)	10.847	228	315928	9.060
186) Benzo(b)fluoranthene	(6)	11.822	252	292483M	9.440
187) Benzo(k)fluoranthene	(6)	11.852	252	312248M	10.096
189) Benzo(a)pyrene	(6)	12.157	252	259019	9.438
190)*Perylene-d12	(6)	12.217	264	494183	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.401	276	247778	8.957
195) Dibenz(a,h)anthracene	(6)	13.431	278	226142	9.653
196) Benzo(g,h,i)perylene	(6)	13.694	276	224114	9.686

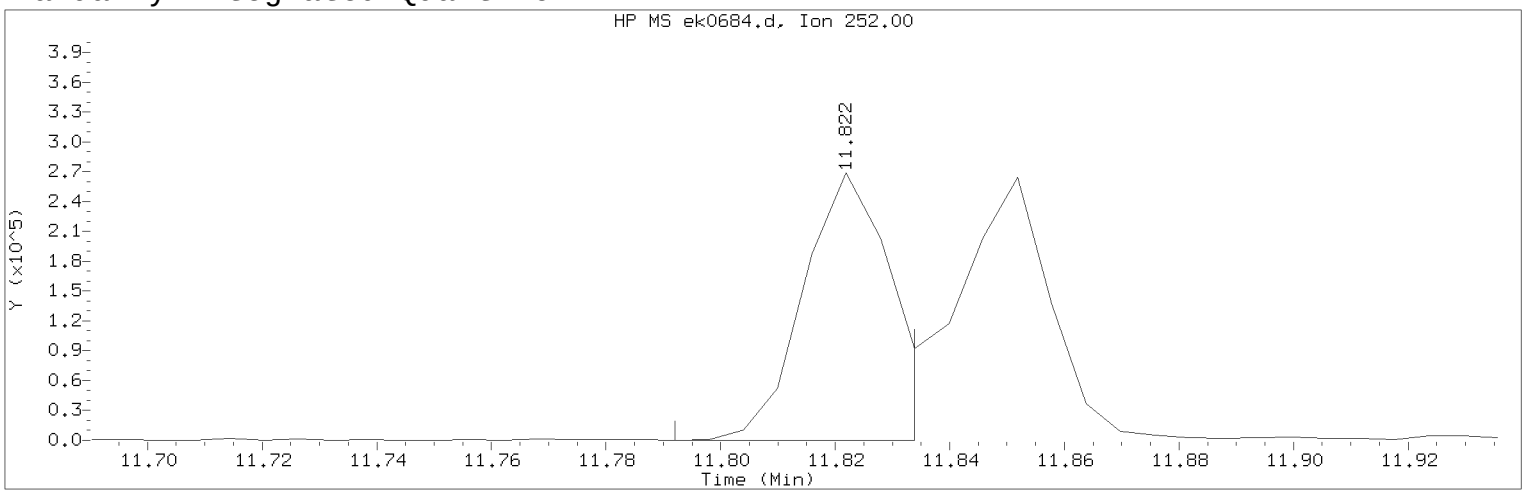
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Holly Berry
on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

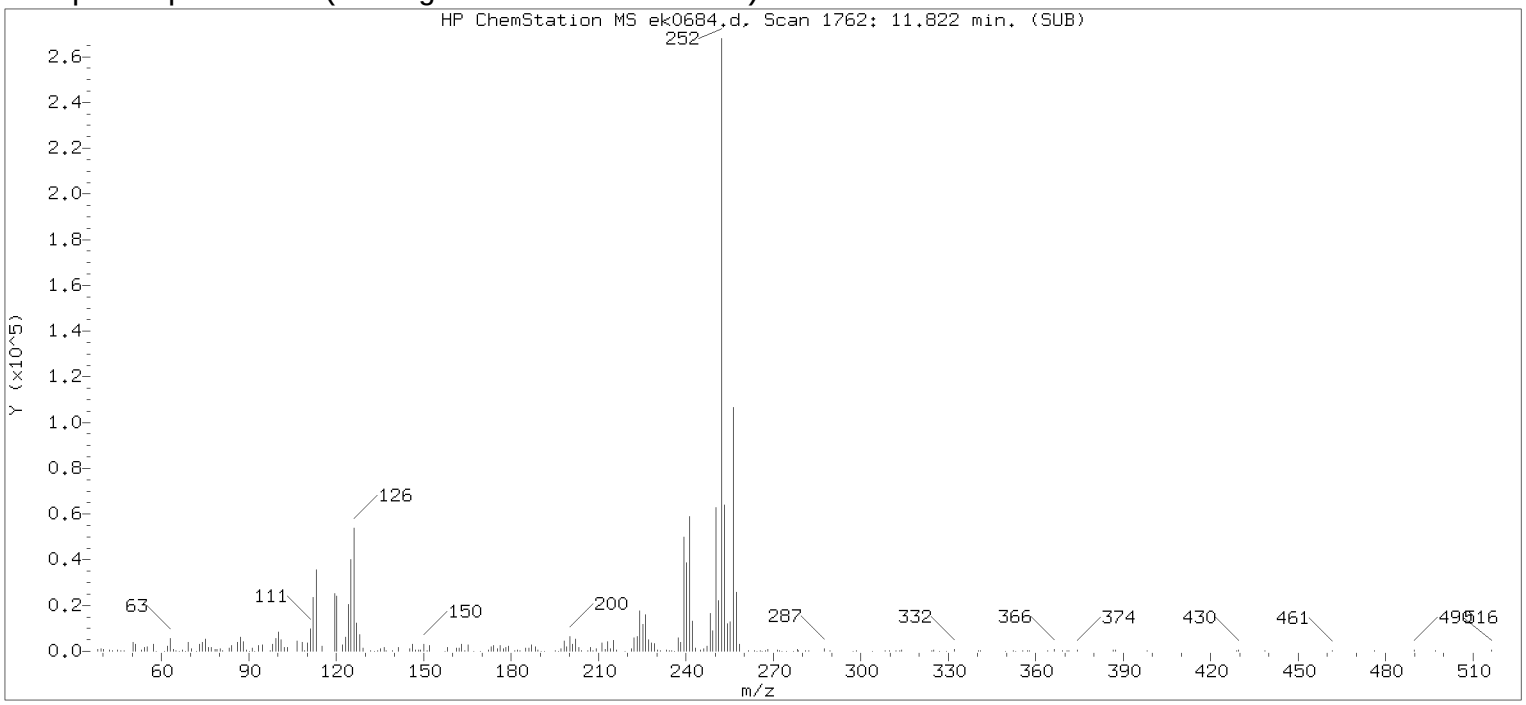
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area (flag) : 292483M
On-Column Amount (ng/ul) : 9.4396
Integration start scan : 1756 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 16

Reason for manual integration: improper integration

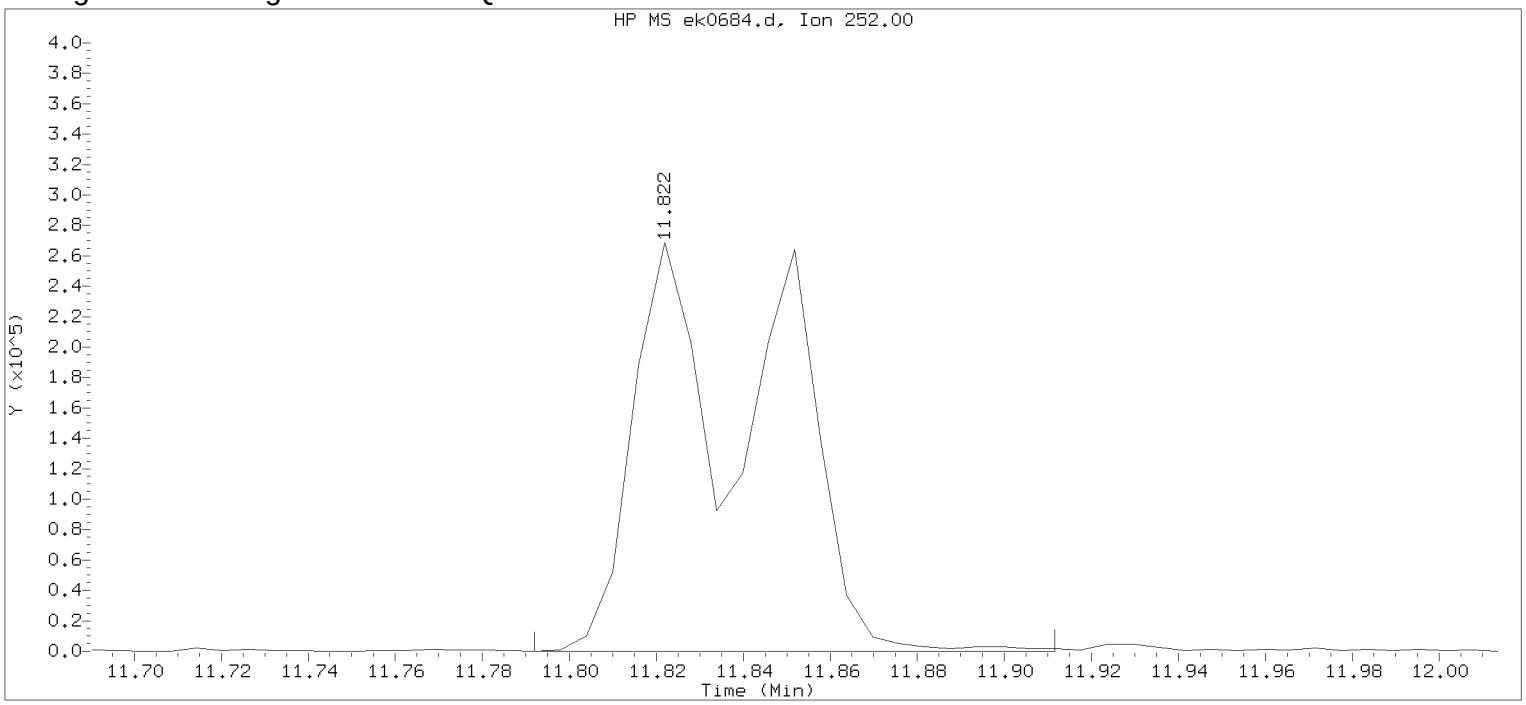
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

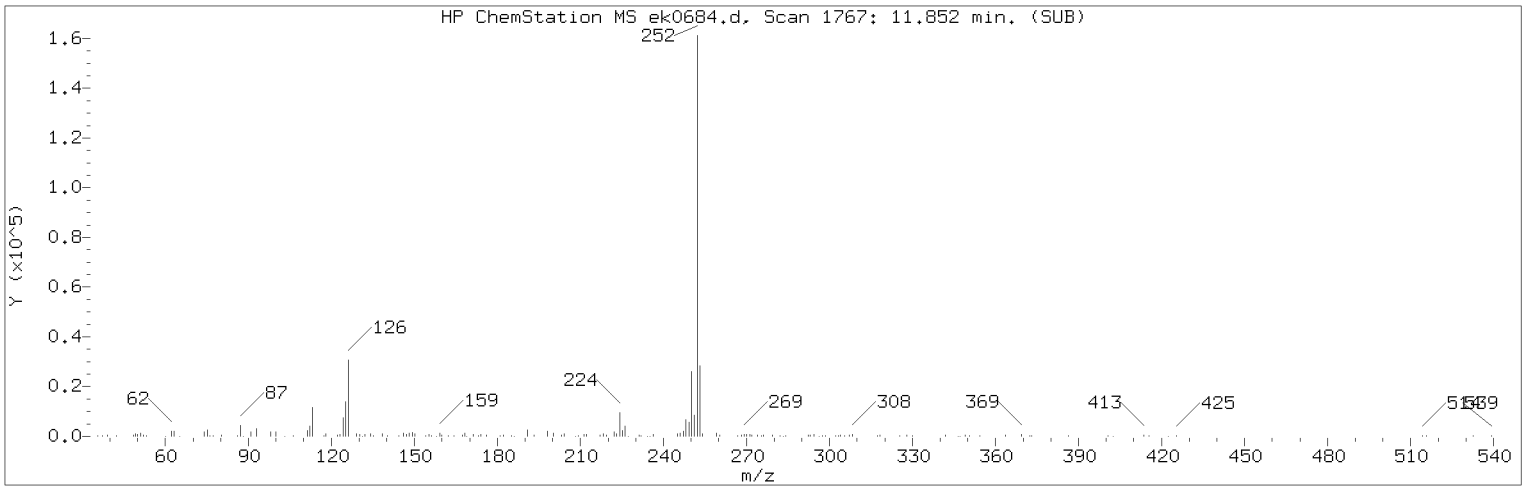
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:53 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

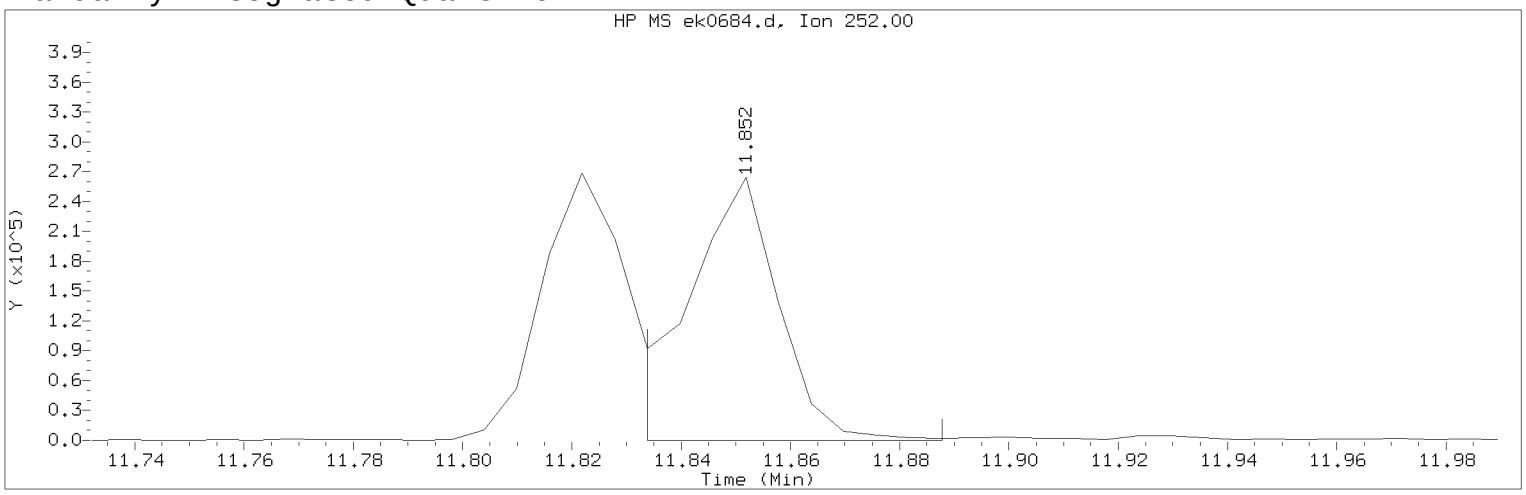
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area : 574477
On-column Amount (ng/ul) : 18.5406
Integration start scan : 1756 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 46

Digitally signed by Holly Berry on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

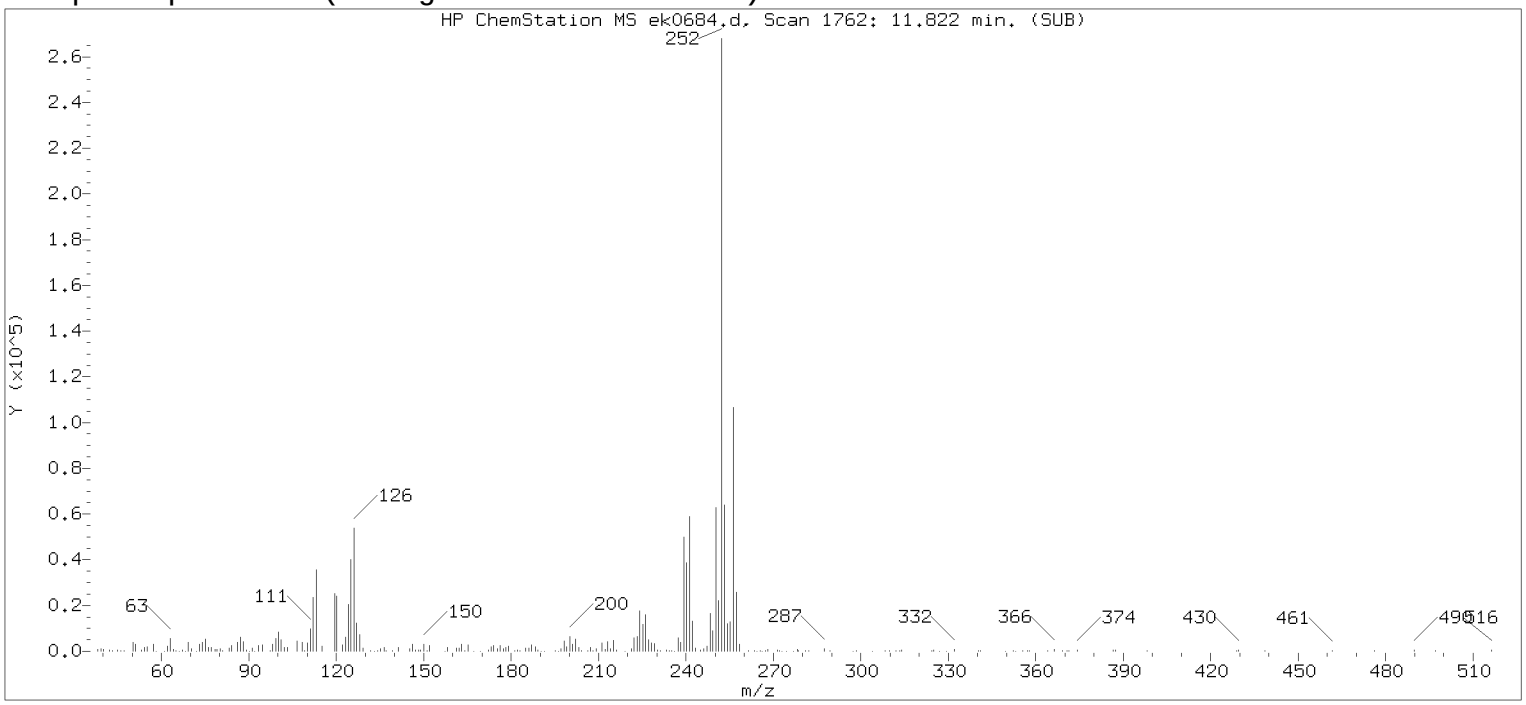
Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1767
Retention Time (minutes) : 11.852
Quant Ion : 252.00
Area (flag) : 312248M
On-Column Amount (ng/ul) : 10.0964
Integration start scan : 1763 Integration stop scan: 1772
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

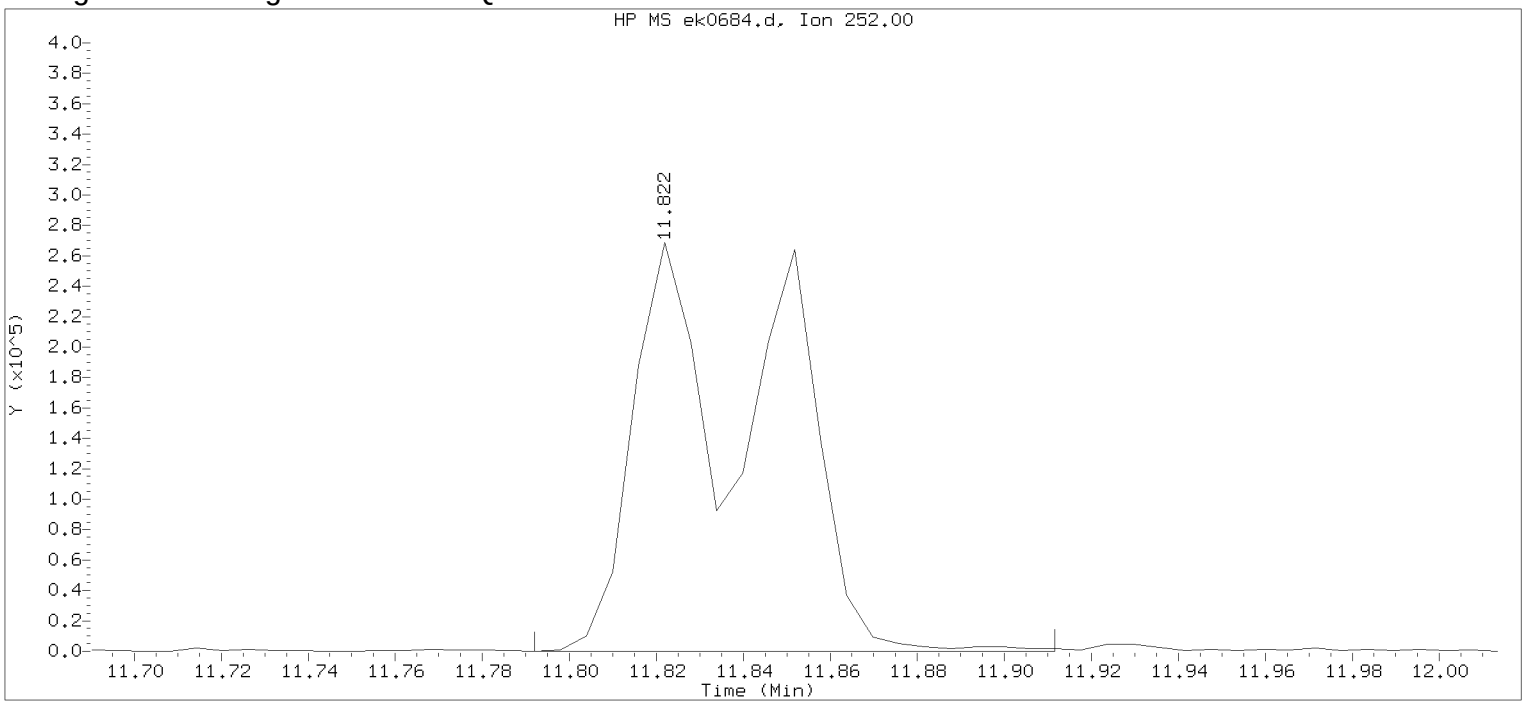
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0684.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:30 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:53 hb01996

Sample Name: 2G124MS Lab Sample ID: 7266801

Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area : 574477
On-column Amount (ng/ul) : 18.5754
Integration start scan : 1756 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 46

Digitally signed by Holly Berry on 11/17/2013 at 14:49.
Target 3.5 esignature user ID: hb01996

2G124MSD Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7266802

Data file: /chem/HP09572.i/13nov15.b/ek0685.d Injection date and time: **15-NOV-2013 21:54**
Data file Sample Info. Line: 2G124MSD;7266802;2;3;MSD;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	148115 (-36)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	737291 (-29)	20.00	
99) Acenaphthene-d10	7.461(0.000)	1033	164	475147 (-28)	20.00	
148) Phenanthrene-d10	8.669(0.000)	1235	188	815433 (-26)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	858583 (-28)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	556169 (-31)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	268827	15.650	78%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.916(0.001)	172	499146	18.380	92%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	552590	18.058	90%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)	6.001(0.000)	128	352997	9.079	3026.47			0.1
72) 2-Methylnaphthalene	(2)	6.599(-0.000)	142	234182	8.386	2795.25			0.1
75) 1-Methylnaphthalene	(2)	6.677(-0.000)	142	238209	9.308	3102.68			0.1
96) Acenaphthylene	(3)	7.341(0.000)	152	396454	10.253	3417.68			0.1
100) Acenaphthene	(3)	7.485(-0.000)	153	245714	8.868	2955.95			0.1
111) Fluorene	(3)	7.910(0.000)	166	302926	9.288	3095.84			0.1
149) Phenanthrene	(4)	8.687(-0.000)	178	496171	10.763	3587.77			0.1
150) Anthracene	(4)	8.729(0.000)	178	435145	9.351	3117.15			0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	526198	10.924	3641.27			0.1
166) Pyrene	(5)	9.830(0.000)	202	569440	12.146	4048.77			0.1
178) Benzo(a)anthracene	(5)	10.817(-0.000)	228	385378	9.224	3074.69			0.1
180) Chrysene	(5)	10.847(-0.000)	228	384579	9.799	3266.18			0.1
186) Benzo(b)fluoranthene	(6)	11.822(0.000)	252	374674M	10.745	3581.51			0.1
187) Benzo(k)fluoranthene	(6)	11.852(0.000)	252	330534M	9.496	3165.49			0.1
189) Benzo(a)pyrene	(6)	12.157(0.000)	252	291271	9.430	3143.43			0.1
194) Indeno(1,2,3-cd)pyrene	(6)	13.401(-0.000)	276	278414	8.943	2980.99			0.1
195) Dibenz(a,h)anthracene	(6)	13.431(0.000)	278	232486	8.818	2939.37			0.1
196) Benzo(g,h,i)perylene	(6)	13.688(0.000)	276	236262	9.073	3024.33			0.1

M = Compound was manually integrated.

Digitally signed by Holly Berry on 11/17/2013 at 14:50. Target 3.5 esignature user ID: hb01996

Data file: /chem/HP09572.i/13nov15.b/ek0685.d Injection date and time: **15-NOV-2013 21:54**
Data file Sample Info. Line: 2G124MSD;7266802;2;3;MSD;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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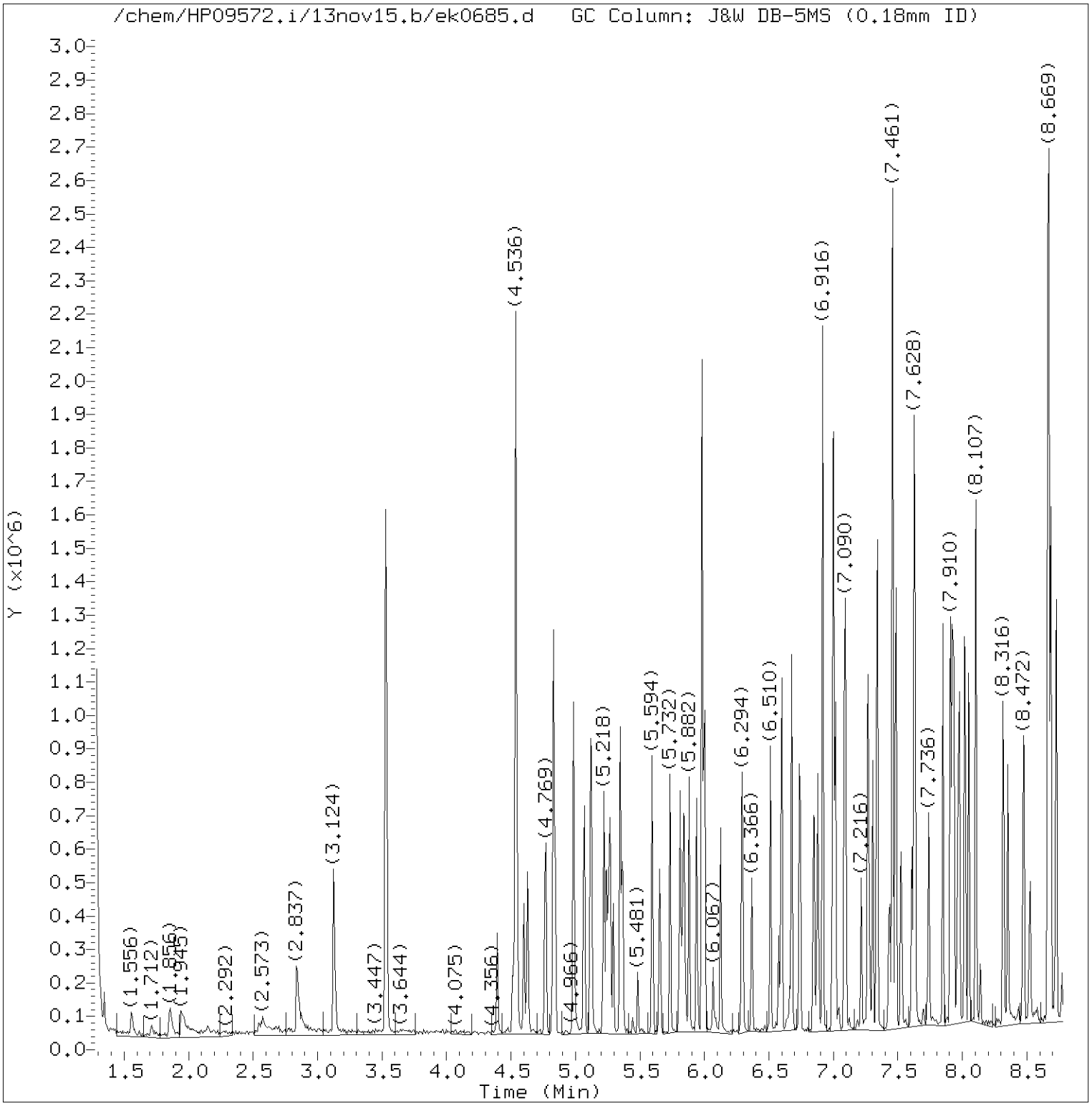
Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:50. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

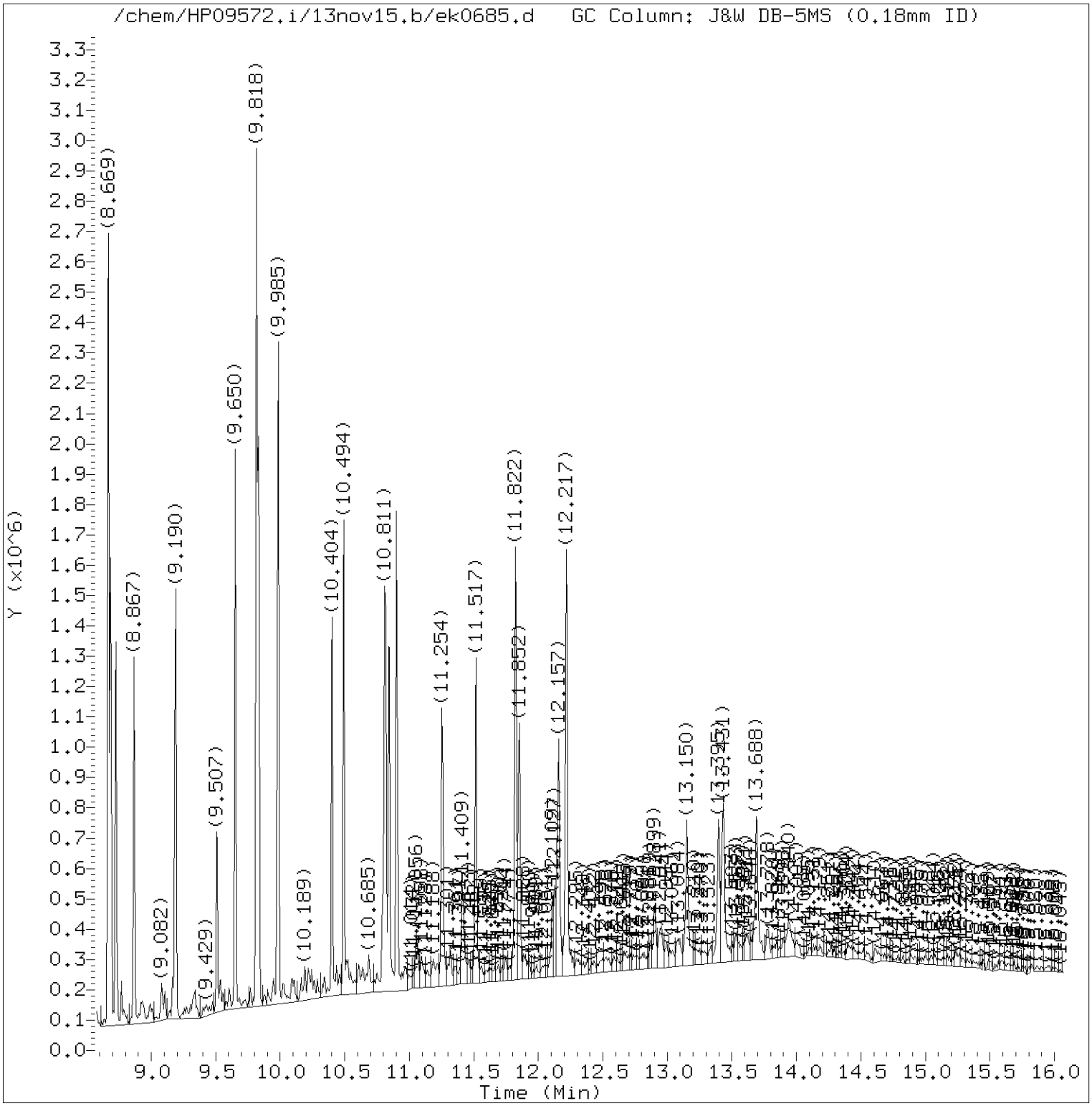
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	148115	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	268827	15.650
60)*Naphthalene-d8	(2)	5.983	136	737291	20.000
61) Naphthalene	(2)	6.001	128	352997	9.079
72) 2-Methylnaphthalene	(2)	6.599	142	234182	8.386
75) 1-Methylnaphthalene	(2)	6.677	142	238209	9.308
81)$2-Fluorobiphenyl	(3)	6.916	172	499146	18.380
96) Acenaphthylene	(3)	7.341	152	396454	10.253
99)*Acenaphthene-d10	(3)	7.461	164	475147	20.000
100) Acenaphthene	(3)	7.485	153	245714	8.868
111) Fluorene	(3)	7.910	166	302926	9.288
148)*Phenanthrene-d10	(4)	8.669	188	815433	20.000
149) Phenanthrene	(4)	8.687	178	496171	10.763
150) Anthracene	(4)	8.729	178	435145	9.351
163) Fluoranthene	(4)	9.650	202	526198	10.924
165)*Pyrene-d10	(5)	9.818	212	858583	20.000
166) Pyrene	(5)	9.830	202	569440	12.146
169)$Terphenyl-d14	(5)	9.985	244	552590	18.058
178) Benzo(a)anthracene	(5)	10.817	228	385378	9.224
180) Chrysene	(5)	10.847	228	384579	9.799
186) Benzo(b)fluoranthene	(6)	11.822	252	374674M	10.745
187) Benzo(k)fluoranthene	(6)	11.852	252	330534M	9.496
189) Benzo(a)pyrene	(6)	12.157	252	291271	9.430
190)*Perylene-d12	(6)	12.217	264	556169	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.401	276	278414	8.943
195) Dibenz(a,h)anthracene	(6)	13.431	278	232486	8.818
196) Benzo(g,h,i)perylene	(6)	13.688	276	236262	9.073

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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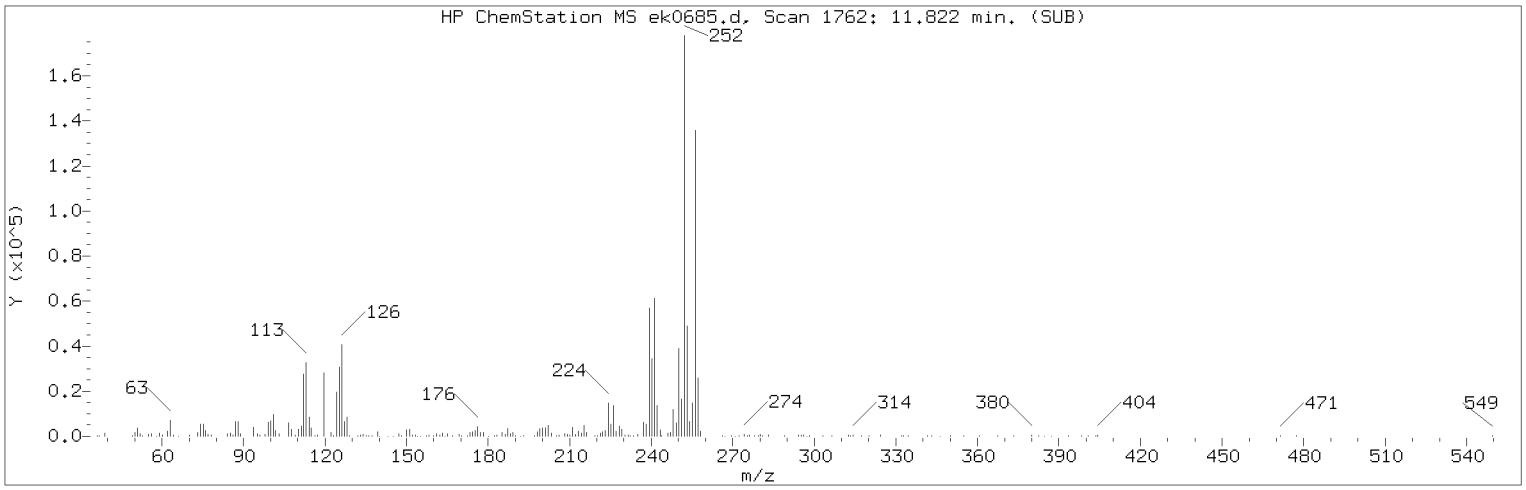
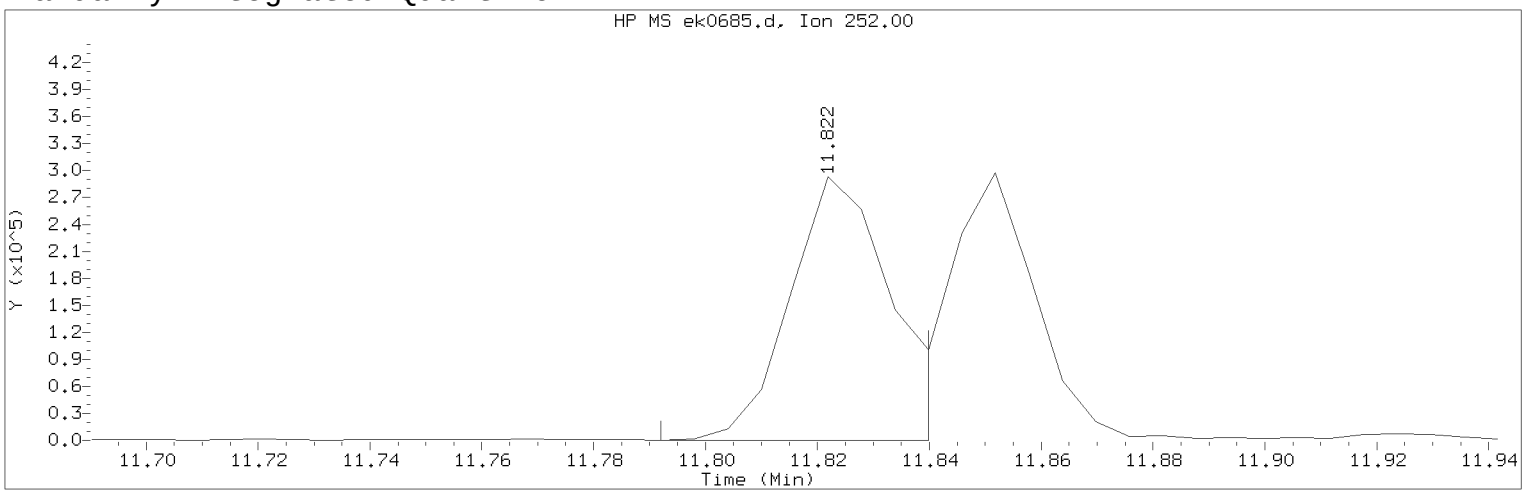
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

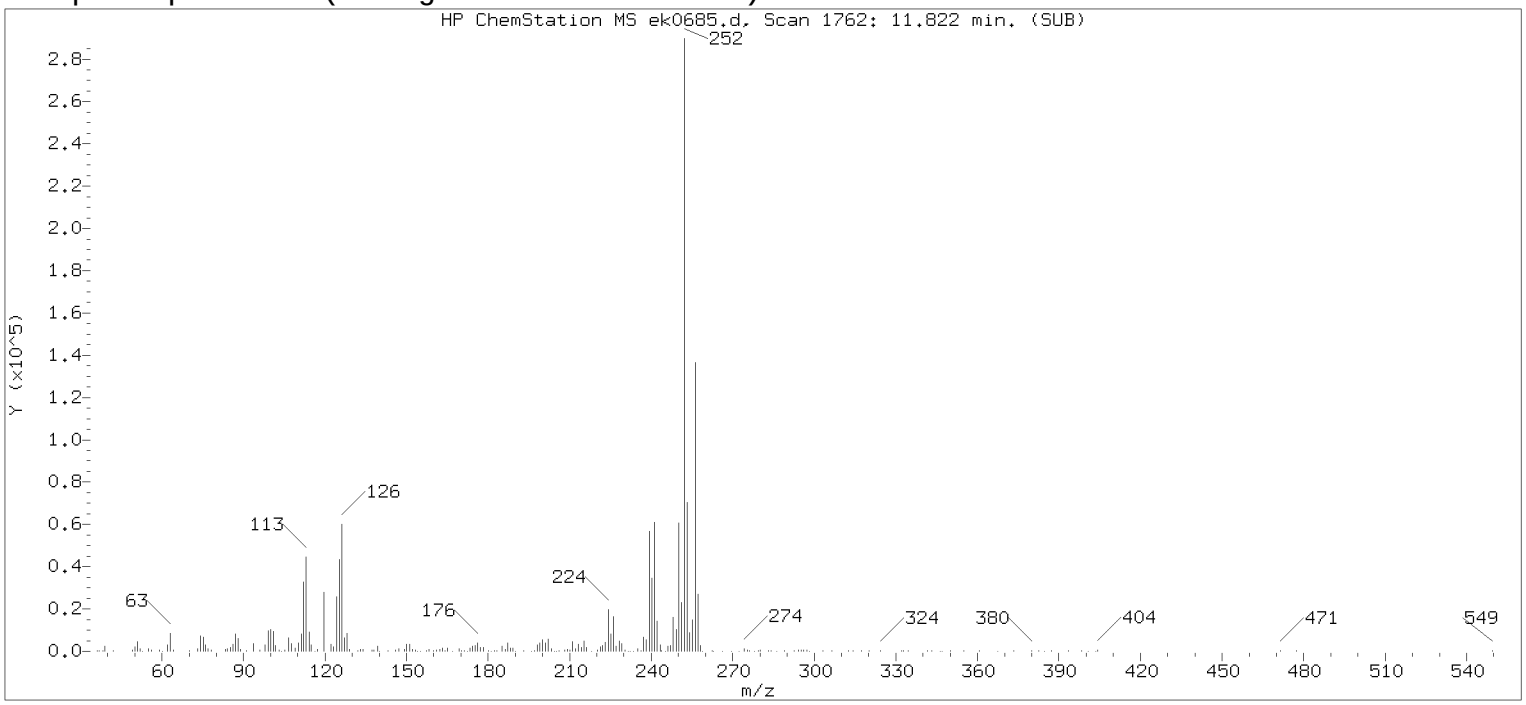
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area (flag) : 374674M
On-Column Amount (ng/ul) : 10.7445
Integration start scan : 1756 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

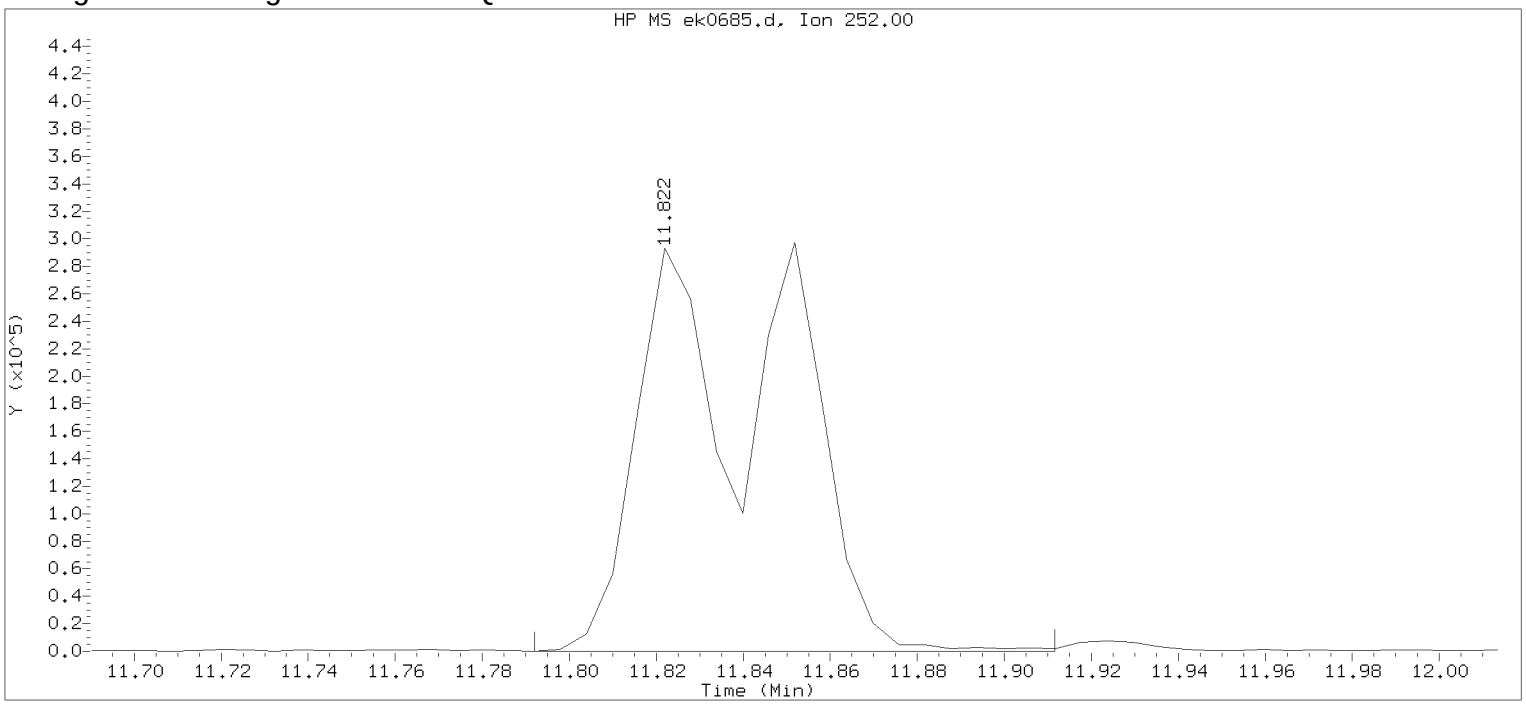
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

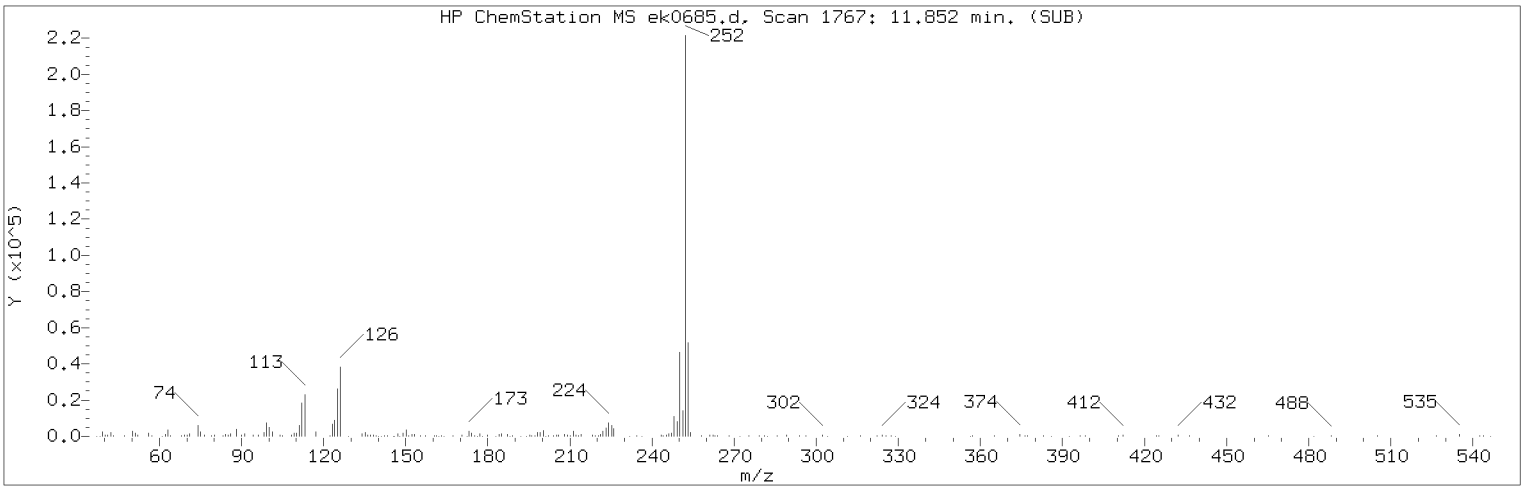
Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:53 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

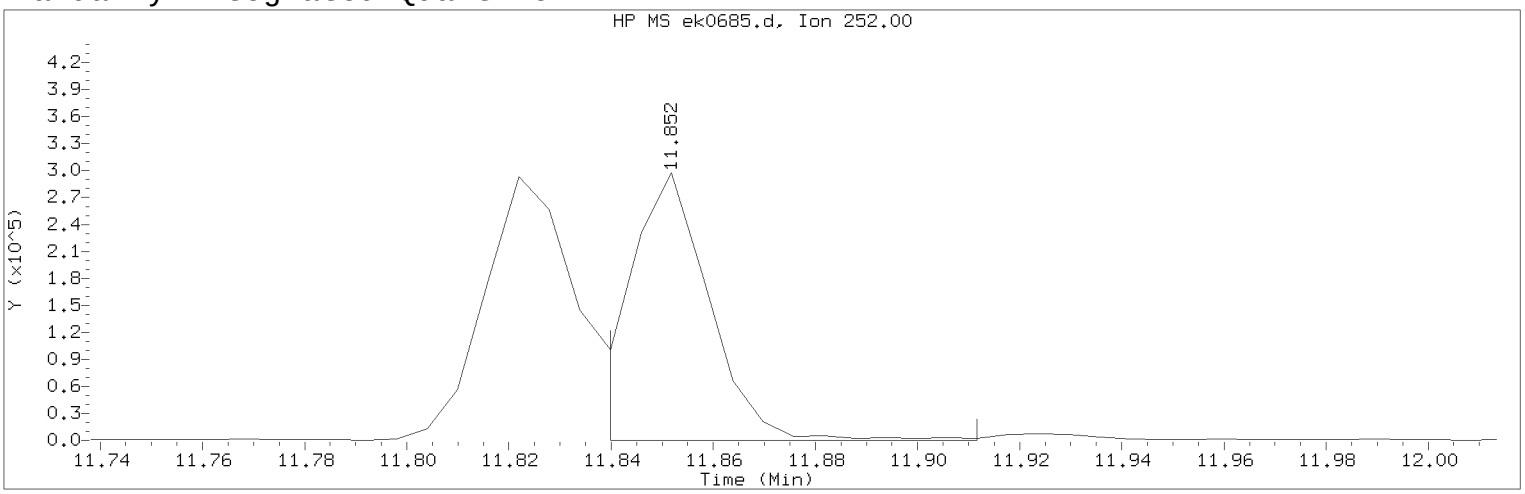
Compound Number : 186
Compound Name : Benzo(b)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area : 668775
On-column Amount (ng/ul) : 19.1784
Integration start scan : 1756 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 14:42 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

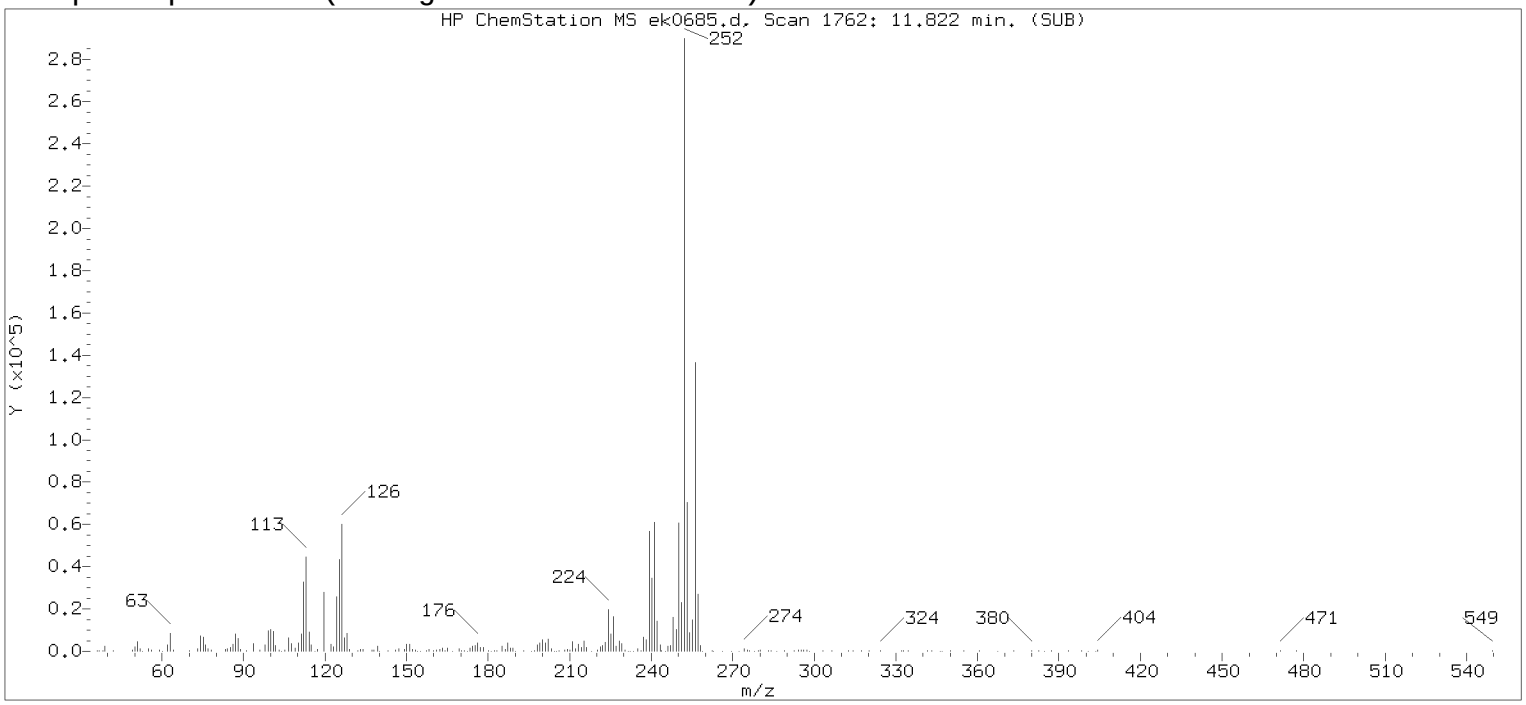
Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1767
Retention Time (minutes) : 11.852
Quant Ion : 252.00
Area (flag) : 330534M
On-Column Amount (ng/ul) : 9.4965
Integration start scan : 1764 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

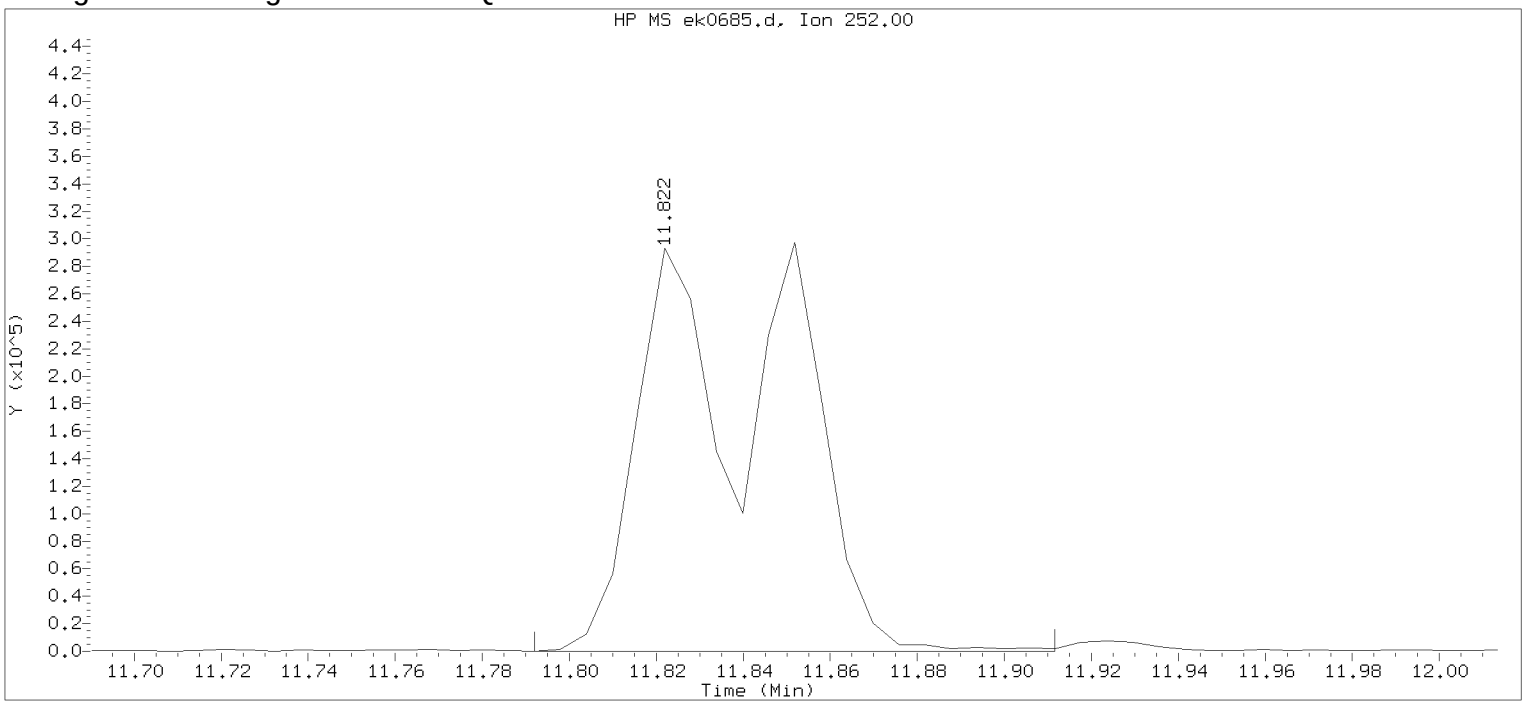
Analyst responsible for change: Digitally signed by Holly Berry
on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42.
Parallax ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP09572.i/13nov15.b/ek0685.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 21:54 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:53 hb01996

Sample Name: 2G124MSD Lab Sample ID: 7266802

Compound Number : 187
Compound Name : Benzo(k)fluoranthene
Scan Number : 1762
Retention Time (minutes) : 11.822
Quant Ion : 252.00
Area : 668775
On-column Amount (ng/ul) : 19.2143
Integration start scan : 1756 Integration stop scan: 1776
Y at integration start : 0 Y at integration end: 0

Digitally signed by Holly Berry on 11/17/2013 at 14:50.
Target 3.5 esignature user ID: hb01996

Data file: /chem/HP09572.i/13nov15.b/ek0665.d Injection date and time: **15-NOV-2013 13:44**
Data file Sample Info. Line: 316LBLCS5;316LBLCS;2;3;LCS;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 13:43 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	4.829(0.000)	593	152	145247 (-37)	20.00	
60) Naphthalene-d8	5.983(0.000)	786	136	627811 (-39)	20.00	
99) Acenaphthene-d10	7.455(0.006)	1032	164	412776 (-37)	20.00	
148) Phenanthrene-d10	8.663(0.006)	1234	188	698211 (-36)	20.00	
165) Pyrene-d10	9.818(0.000)	1427	212	789518 (-34)	20.00	
190) Perylene-d12	12.217(0.000)	1828	264	503121 (-37)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
40) Nitrobenzene-d5	(2)	5.349(0.000)	82	1450011	99.131	99%		60 - 120
81) 2-Fluorobiphenyl	(3)	6.923(-0.001)	172	2489748	105.534	106%		69 - 120
169) Terphenyl-d14	(5)	9.985(0.000)	244	2805771	99.712	100%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
61) Naphthalene	(2)	6.001(-0.000)	128	1646218	49.726	1657.54			0.1
72) 2-Methylnaphthalene	(2)	6.599(-0.000)	142	1175725	49.443	1648.09			0.1
75) 1-Methylnaphthalene	(2)	6.677(-0.000)	142	1182339	54.257	1808.55			0.1
96) Acenaphthylene	(3)	7.341(-0.000)	152	1915463	57.023	1900.76			0.1
100) Acenaphthene	(3)	7.485(-0.000)	153	1232362	51.197	1706.55			0.1
111) Fluorene	(3)	7.910(-0.000)	166	1475876	52.087	1736.23			0.1
149) Phenanthrene	(4)	8.687(-0.000)	178	2048133	51.889	1729.63			0.1
150) Anthracene	(4)	8.729(-0.000)	178	2115798	53.103	1770.11			0.1
163) Fluoranthene	(4)	9.650(-0.000)	202	2093693	50.762	1692.07			0.1
166) Pyrene	(5)	9.830(0.000)	202	2128798	49.380	1646.00			0.1
178) Benzo(a)anthracene	(5)	10.817(-0.000)	228	1763731	45.908	1530.27			0.1
180) Chrysene	(5)	10.847(-0.000)	228	1681352	46.586	1552.86			0.1
186) Benzo(b)fluoranthene	(6)	11.828(0.000)	252	1521163	48.222	1607.39			0.1
187) Benzo(k)fluoranthene	(6)	11.858(0.000)	252	1582467	50.259	1675.30			0.1
189) Benzo(a)pyrene	(6)	12.157(0.000)	252	1440756	51.565	1718.82			0.1
194) Indeno(1,2,3-cd)pyrene	(6)	13.401(-0.000)	276	1411151	50.107	1670.23			0.1
195) Dibenz(a,h)anthracene	(6)	13.431(0.000)	278	1242120	52.081	1736.02			0.1
196) Benzo(g,h,i)perylene	(6)	13.694(-0.000)	276	1195600	50.755	1691.82			0.1

Digitally signed by Holly Berry on 11/17/2013 at 14:47. Target 3.5 esignature user ID: hb01996

Data file: /chem/HP09572.i/13nov15.b/ek0665.d Injection date and time: **15-NOV-2013 13:44**
Data file Sample Info. Line: 316LBLCS5;316LBLCS;2;3;LCS;;; Instrument ID: **HP09572.i** Batch: **13316SLB**
Date, time and analyst ID of latest file update: 17-Nov-2013 13:43 hb01996

Blank Data file reference: **/chem/HP09572.i/13nov15.b/ek0664.d**

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 15-NOV-2013 15:28
Mid Level Daily Calibration Standard Reference: **/chem/HP09572.i/13nov15.b/ek0661.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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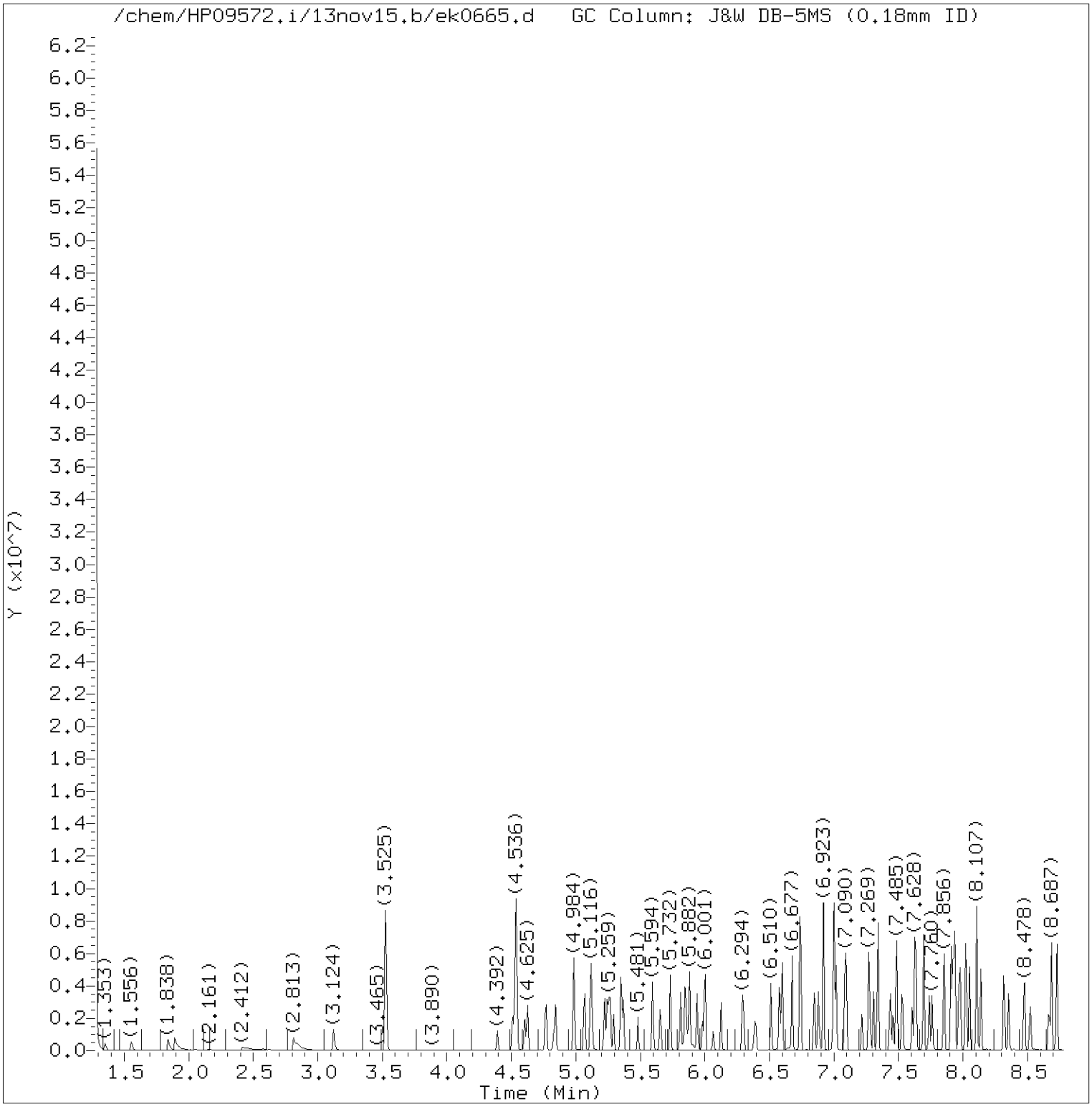
Total number of targets = 18

Digitally signed by Holly Berry on 11/17/2013 at 14:47. Target 3.5 esignature user ID: hb01996

Secondary review performed and digitally signed by Matthew E. Barton on 11/18/2013 at 12:42. Parallax ID: reb00745



Total Ion Chromatogram (TIC)

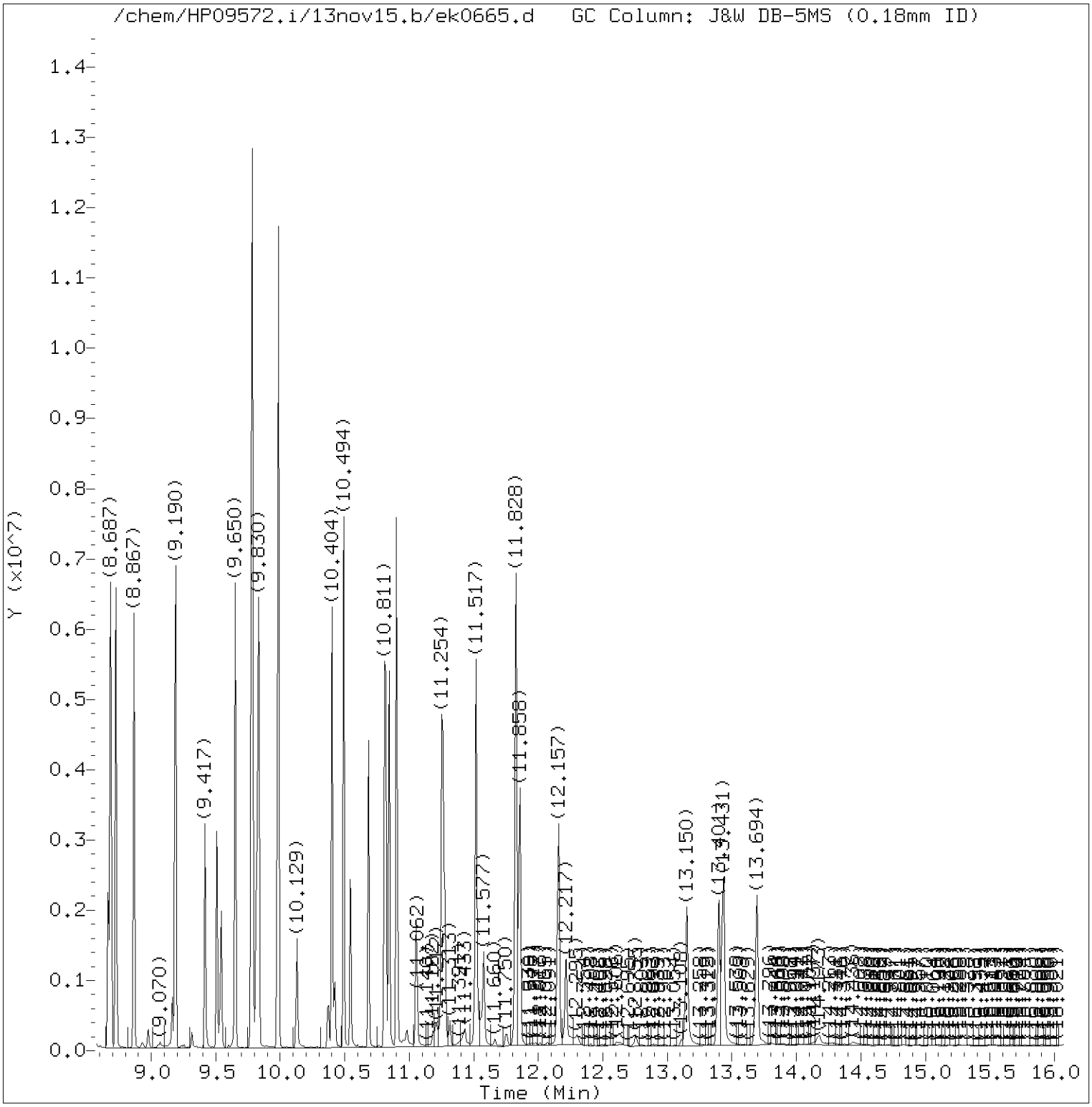
Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0665.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:44 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:43 hb01996

Sample Name: 316LBLCS5 Lab Sample ID: 316LBLCS

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0665.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:44 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:43 hb01996

Sample Name: 316LBLCS5 Lab Sample ID: 316LBLCS

Digitally signed by Holly Berry
on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem/HP09572.i/13nov15.b/ek0665.d Instrument ID: HP09572.i
Injection date and time: 15-NOV-2013 13:44 Analyst ID: hb01996

Method used: /chem/HP09572.i/13nov15.b/mnew8270.m Sublist used: SL4677mic
Calibration date and time: 15-NOV-2013 15:28
Date, time and analyst ID of latest file update: 17-Nov-2013 13:43 hb01996

Sample Name: 316LBLCS5 Lab Sample ID: 316LBLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	4.829	152	145247	20.000
40)$Nitrobenzene-d5	(2)	5.349	82	1450011	99.131
60)*Naphthalene-d8	(2)	5.983	136	627811	20.000
61) Naphthalene	(2)	6.001	128	1646218	49.726
72) 2-Methylnaphthalene	(2)	6.599	142	1175725	49.443
75) 1-Methylnaphthalene	(2)	6.677	142	1182339	54.257
81)$2-Fluorobiphenyl	(3)	6.923	172	2489748	105.534
96) Acenaphthylene	(3)	7.341	152	1915463	57.023
99)*Acenaphthene-d10	(3)	7.455	164	412776	20.000
100) Acenaphthene	(3)	7.485	153	1232362	51.197
111) Fluorene	(3)	7.910	166	1475876	52.087
148)*Phenanthrene-d10	(4)	8.663	188	698211	20.000
149) Phenanthrene	(4)	8.687	178	2048133	51.889
150) Anthracene	(4)	8.729	178	2115798	53.103
163) Fluoranthene	(4)	9.650	202	2093693	50.762
165)*Pyrene-d10	(5)	9.818	212	789518	20.000
166) Pyrene	(5)	9.830	202	2128798	49.380
169)$Terphenyl-d14	(5)	9.985	244	2805771	99.712
178) Benzo(a)anthracene	(5)	10.817	228	1763731	45.908
180) Chrysene	(5)	10.847	228	1681352	46.586
186) Benzo(b)fluoranthene	(6)	11.828	252	1521163	48.222
187) Benzo(k)fluoranthene	(6)	11.858	252	1582467	50.259
189) Benzo(a)pyrene	(6)	12.157	252	1440756	51.565
190)*Perylene-d12	(6)	12.217	264	503121	20.000
194) Indeno(1,2,3-cd)pyrene	(6)	13.401	276	1411151	50.107
195) Dibenz(a,h)anthracene	(6)	13.431	278	1242120	52.081
196) Benzo(g,h,i)perylene	(6)	13.694	276	1195600	50.755

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/17/2013 at 14:47.
Target 3.5 esignature user ID: hb01996

Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	120892 (-12)	5.00	
52) Naphthalene-d8	7.888(0.000)	1124	136	460968 (-12)	5.00	
92) Acenaphthene-d10	10.692(0.000)	1605	164	275060 (-13)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	468730 (-16)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	624100 (-15)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	486341 (-16)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.995(-0.004)	112	1267629	35.315	71%		10 - 107
13) Phenol-d6	(1)	5.417(-0.002)	99	1261161	25.583	51%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.001)	82	942807	22.224	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.648(0.000)	172	1699505	24.742	99%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.764(-0.001)	330	467611	64.728	129%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2185522	28.081	112%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.271(-0.000)	77	293811	8.520	8.52			0.3
14) Phenol	(1)	5.434(-0.001)	94	379428	6.648	6.65			0.1
16) bis(2-Chloroethyl)ether	(1)	5.557(-0.000)	93	477438	10.603	10.60			0.1
17) 2-Chlorophenol	(1)	5.609(-0.000)	128	415804	11.779	11.78			0.1
18) 1,3-Dichlorobenzene	(1)	5.836(-0.000)	146	398778	10.503	10.50			0.1
20) 1,4-Dichlorobenzene	(1)	5.953(-0.000)	146	406917	10.595	10.59			0.1
23) Benzyl alcohol	(1)	6.157(0.000)	108	265599	10.638	10.64			1
24) 1,2-Dichlorobenzene	(1)	6.174(0.000)	146	389648	10.847	10.85			0.1
26) 2-Methylphenol	(1)	6.349(-0.000)	108	392693	11.085	11.09			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384(0.000)	45	495936	8.874	8.87			0.1
30) Acetophenone	(1)	6.553(0.000)	105	611688	11.043	11.04			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.582(0.000)	70	327969	10.287	10.29			0.1
33) 4-Methylphenol	(1)	6.594(-0.000)	108	414899	10.483	10.48			0.1
35) Hexachloroethane	(1)	6.687(0.000)	117	155409	9.573	9.57			0.3
37) Nitrobenzene	(2)	6.804(-0.000)	77	500542	11.116	11.12			0.1
40) Isophorone	(2)	7.194(-0.000)	82	866777	11.295	11.29			0.1
42) 2-Nitrophenol	(2)	7.299(-0.000)	139	209911	13.587	13.59			0.1
45) 2,4-Dimethylphenol	(2)	7.416(-0.000)	107	433732	11.553	11.55			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.568(-0.000)	93	530880	10.600	10.60			0.1
49) 2,4-Dichlorophenol	(2)	7.684(-0.000)	162	344323	13.003	13.00			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.806(-0.000)	180	358390	12.114	12.11			0.1
53) Naphthalene	(2)	7.917(-0.000)	128	1143893	11.639	11.64			0.03
55) 4-Chloroaniline	(2)	8.028(0.000)	127	426994	10.485	10.49			0.1
58) Hexachlorobutadiene	(2)	8.145(0.000)	225	215991	12.525	12.52			0.1
61) Caprolactam	(2)	8.564(0.002)	113	49308	4.173	4.17			1
63) 4-Chloro-3-methylphenol	(2)	8.844(0.000)	107	390680	12.286	12.29			0.1
65) 2-Methylnaphthalene	(2)	9.030(0.000)	142	746175	11.393	11.39			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.299(-0.000)	237	382072	25.395	25.39			1
70) 2,4,6-Trichlorophenol	(3)	9.497(-0.000)	196	263728	13.112	13.11			0.1
71) 2,4,5-Trichlorophenol	(3)	9.549(-0.000)	196	281999	13.569	13.57			0.1
75) 1,1'-Biphenyl	(3)	9.794(-0.000)	154	927411	11.611	11.61			0.1
76) 2-Chloronaphthalene	(3)	9.800(-0.000)	162	746895	12.190	12.19			0.1
82) Diphenyl ether	(3)	9.975(-0.000)	170	520226	11.771	11.77			0.1
83) 2-Nitroaniline	(3)	9.986(-0.000)	138	250512	13.127	13.13			0.1
86) Dimethylphthalate	(3)	10.330(-0.000)	163	816134	11.778	11.78			0.5
88) 2,6-Dinitrotoluene	(3)	10.400(-0.000)	165	204316	13.306	13.31			0.1
90) Acenaphthylene	(3)	10.458(-0.000)	152	1192493	12.821	12.82			0.03
91) 3-Nitroaniline	(3)	10.651(-0.000)	138	203052	11.520	11.52			0.1
93) Acenaphthene	(3)	10.738(0.000)	153	750190	11.725	11.72			0.03
94) 2,4-Dinitrophenol	(3)	10.820(0.000)	184	224664	24.676	24.68			3
96) 4-Nitrophenol	(3)	10.954(0.000)	109	83144	7.396	7.40			3
97) Dibenzofuran	(3)	11.001(0.000)	168	1103482	12.128	12.13			0.1
98) 2,4-Dinitrotoluene	(3)	11.018(0.000)	165	261806	13.304	13.30			0.3
102) Diethylphthalate	(3)	11.391(0.000)	149	812290	11.898	11.90			0.5
103) Fluorene	(3)	11.467(0.000)	166	890456	12.158	12.16			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.496(0.000)	204	455908	12.552	12.55			0.1
107) 4-Nitroaniline	(3)	11.508(0.000)	138	196483	10.837	10.84			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.554(-0.000)	198	154619	12.924	12.92			1
109) N-Nitrosodiphenylamine	(4)	11.642(0.000)	169	702790	12.045	12.04			0.1
120) 4-Bromophenyl-phenylether	(4)	12.073(-0.000)	248	242060	13.087	13.09			0.1
122) Hexachlorobenzene	(4)	12.120(-0.000)	284	248308	13.579	13.58			0.03
124) Atrazine	(4)	12.306(-0.000)	200	253957	13.368	13.37			0.5
125) Pentachlorophenol	(4)	12.370(0.000)	266	145104	10.581	10.58			0.3
131) Phenanthrene	(4)	12.621(0.000)	178	1249049	11.948	11.95			0.03
134) Anthracene	(4)	12.685(0.000)	178	1274591	12.228	12.23			0.03
135) Carbazole	(4)	12.901(0.000)	167	1248150	12.373	12.37			0.1
137) Di-n-butylphthalate	(4)	13.414(0.000)	149	1451444	12.149	12.15			0.5
142) Fluoranthene	(4)	14.224(0.000)	202	1543294	13.124	13.12			0.03
146) Pyrene	(5)	14.562(-0.000)	202	1609250	12.145	12.15			0.03
153) Butylbenzylphthalate	(5)	15.693(-0.000)	149	670169	11.884	11.88			0.5
158) Benzo(a)anthracene	(5)	16.538(-0.000)	228	1450367	12.900	12.90			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.538(-0.000)	252	361561	8.904	8.90			0.5
161) Chrysene	(5)	16.602(-0.000)	228	1399242	12.655	12.66			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.754(-0.000)	149	889986	11.998	12.00			0.5
166) Di-n-octylphthalate	(6)	17.908(-0.000)	149	1558933	10.940	10.94			0.5
168) Benzo(b)fluoranthene	(6)	18.374(-0.000)	252	1377314	12.022	12.02			0.03
170) Benzo(k)fluoranthene	(6)	18.420(0.000)	252	1450296	12.552	12.55			0.03
171) Benzo(a)pyrene	(6)	18.893(-0.000)	252	1311554	12.472	12.47			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.577(0.000)	276	1408418	15.269	15.27			0.03
177) Dibenz(a,h)anthracene	(6)	20.624(0.000)	278	1238469	15.855	15.86			0.03
178) Benzo(g,h,i)perylene	(6)	20.938(0.000)	276	1213531	15.608	15.61			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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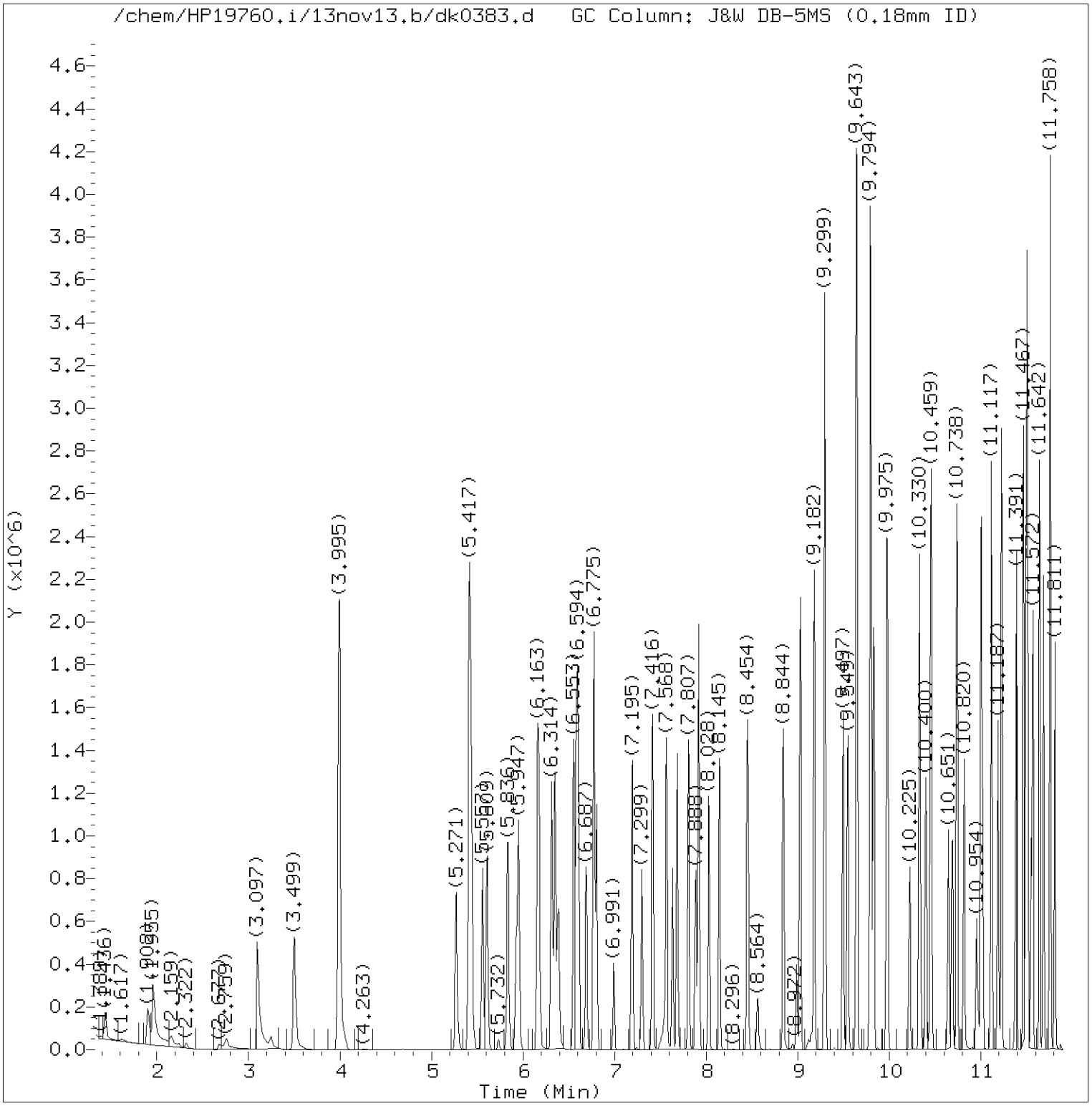
Total number of targets = 71

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:49. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:42. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

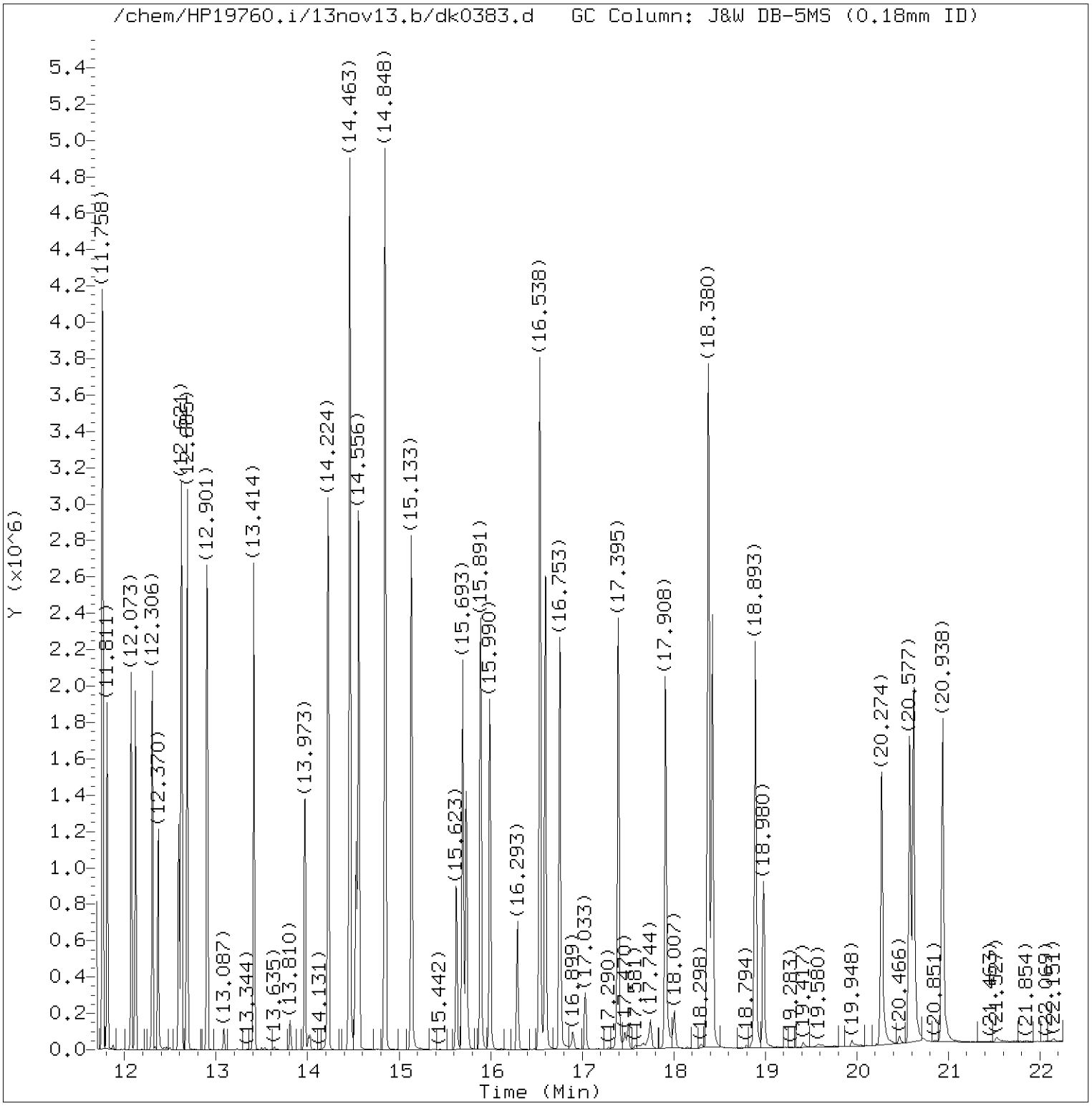
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.995	112	1267629	35.315
11) Benzaldehyde	(1)	5.271	77	293811	8.520
13)$Phenol-d6	(1)	5.417	99	1261161	25.583
14) Phenol	(1)	5.434	94	379428	6.648
16) bis(2-Chloroethyl)ether	(1)	5.557	93	477438	10.603
17) 2-Chlorophenol	(1)	5.609	128	415804	11.779
18) 1,3-Dichlorobenzene	(1)	5.836	146	398778	10.503
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	120892	5.000
20) 1,4-Dichlorobenzene	(1)	5.953	146	406917	10.595
23) Benzyl alcohol	(1)	6.157	108	265599	10.638
24) 1,2-Dichlorobenzene	(1)	6.175	146	389648	10.847
26) 2-Methylphenol	(1)	6.349	108	392693	11.085
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	495936	8.874
30) Acetophenone	(1)	6.553	105	611688	11.043
31) N-Nitroso-di-n-propylamine	(1)	6.583	70	327969	10.287
33) 4-Methylphenol	(1)	6.594	108	414899	10.483
35) Hexachloroethane	(1)	6.687	117	155409	9.573
36)$Nitrobenzene-d5	(2)	6.775	82	942807	22.224
37) Nitrobenzene	(2)	6.804	77	500542	11.116
40) Isophorone	(2)	7.195	82	866777	11.295
42) 2-Nitrophenol	(2)	7.299	139	209911	13.587
45) 2,4-Dimethylphenol	(2)	7.416	107	433732	11.553
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	530880	10.600
49) 2,4-Dichlorophenol	(2)	7.684	162	344323	13.003
51) 1,2,4-Trichlorobenzene	(2)	7.807	180	358390	12.114
52)*Naphthalene-d8	(2)	7.888	136	460968	5.000
53) Naphthalene	(2)	7.917	128	1143893	11.639
55) 4-Chloroaniline	(2)	8.028	127	426994	10.485
58) Hexachlorobutadiene	(2)	8.145	225	215991	12.525
61) Caprolactam	(2)	8.564	113	49308	4.173
63) 4-Chloro-3-methylphenol	(2)	8.844	107	390680	12.286
65) 2-Methylnaphthalene	(2)	9.031	142	746175	11.393
67) Hexachlorocyclopentadiene	(3)	9.299	237	382072	25.395
70) 2,4,6-Trichlorophenol	(3)	9.497	196	263728	13.112
71) 2,4,5-Trichlorophenol	(3)	9.549	196	281999	13.569
72)$2-Fluorobiphenyl	(3)	9.648	172	1699505	24.742
75) 1,1'-Biphenyl	(3)	9.794	154	927411	11.611
76) 2-Chloronaphthalene	(3)	9.800	162	746895	12.190
82) Diphenyl ether	(3)	9.975	170	520226	11.771
83) 2-Nitroaniline	(3)	9.986	138	250512	13.127

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) Dimethylphthalate	(3)	10.330	163	816134	11.778
88) 2,6-Dinitrotoluene	(3)	10.400	165	204316	13.306
90) Acenaphthylene	(3)	10.459	152	1192493	12.821
91) 3-Nitroaniline	(3)	10.651	138	203052	11.520
92)*Acenaphthene-d10	(3)	10.692	164	275060	5.000
93) Acenaphthene	(3)	10.738	153	750190	11.725
94) 2,4-Dinitrophenol	(3)	10.820	184	224664	24.676
96) 4-Nitrophenol	(3)	10.954	109	83144	7.396
97) Dibenzofuran	(3)	11.001	168	1103482	12.128
98) 2,4-Dinitrotoluene	(3)	11.018	165	261806	13.304
102) Diethylphthalate	(3)	11.391	149	812290	11.898
103) Fluorene	(3)	11.467	166	890456	12.158
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	455908	12.552
107) 4-Nitroaniline	(3)	11.508	138	196483	10.837
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	154619	12.924
109) N-Nitrosodiphenylamine	(4)	11.642	169	702790	12.045
112)$2,4,6-Tribromophenol	(3)	11.764	330	467611	64.728
120) 4-Bromophenyl-phenylether	(4)	12.073	248	242060	13.087
122) Hexachlorobenzene	(4)	12.120	284	248308	13.579
124) Atrazine	(4)	12.306	200	253957	13.368
125) Pentachlorophenol	(4)	12.370	266	145104	10.581
130)*Phenanthrene-d10	(4)	12.592	188	468730	5.000
131) Phenanthrene	(4)	12.621	178	1249049	11.948
134) Anthracene	(4)	12.685	178	1274591	12.228
135) Carbazole	(4)	12.901	167	1248150	12.373
137) Di-n-butylphthalate	(4)	13.414	149	1451444	12.149
142) Fluoranthene	(4)	14.224	202	1543294	13.124
145)*Pyrene-d10	(5)	14.527	212	624100	5.000
146) Pyrene	(5)	14.562	202	1609250	12.145
149)$Terphenyl-d14	(5)	14.848	244	2185522	28.081
153) Butylbenzylphthalate	(5)	15.693	149	670169	11.884
158) Benzo(a)anthracene	(5)	16.538	228	1450367	12.900
159) 3,3'-Dichlorobenzidine	(5)	16.538	252	361561	8.904
161) Chrysene	(5)	16.602	228	1399242	12.655
162) bis(2-Ethylhexyl)phthalate	(5)	16.753	149	889986	11.998
166) Di-n-octylphthalate	(6)	17.908	149	1558933	10.940
168) Benzo(b)fluoranthene	(6)	18.374	252	1377314	12.022
170) Benzo(k)fluoranthene	(6)	18.421	252	1450296	12.552
171) Benzo(a)pyrene	(6)	18.893	252	1311554	12.472
172)*Perylene-d12	(6)	18.980	264	486341	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176) Indeno(1,2,3-cd)pyrene	(6)	20.577	276	1408418	15.269
177) Dibenz(a,h)anthracene	(6)	20.624	278	1238469	15.855
178) Benzo(g,h,i)perylene	(6)	20.938	276	1213531	15.608

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	121592 (-12)	5.00	
52) Naphthalene-d8	7.888(0.000)	1124	136	454668 (-13)	5.00	
92) Acenaphthene-d10	10.692(0.000)	1605	164	277321 (-12)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	468707 (-16)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	624748 (-14)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	494320 (-14)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.995(-0.004)	112	1205794	33.399	67%		10 - 107
13) Phenol-d6	(1)	5.411(-0.001)	99	1196984	24.141	48%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.001)	82	912749	21.814	87%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.648(0.000)	172	1660932	23.983	96%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.764(-0.001)	330	455257	62.504	125%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2184410	28.037	112%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.271(-0.000)	77	284887	8.213	8.21			0.3
14) Phenol	(1)	5.434(-0.001)	94	365818	6.373	6.37			0.1
16) bis(2-Chloroethyl)ether	(1)	5.557(-0.000)	93	468942	10.354	10.35			0.1
17) 2-Chlorophenol	(1)	5.609(-0.000)	128	406212	11.441	11.44			0.1
18) 1,3-Dichlorobenzene	(1)	5.836(-0.000)	146	396322	10.378	10.38			0.1
20) 1,4-Dichlorobenzene	(1)	5.953(-0.000)	146	407435	10.547	10.55			0.1
23) Benzyl alcohol	(1)	6.157(0.000)	108	261982	10.433	10.43			1
24) 1,2-Dichlorobenzene	(1)	6.174(0.000)	146	387606	10.728	10.73			0.1
26) 2-Methylphenol	(1)	6.349(-0.000)	108	384457	10.790	10.79			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384(0.000)	45	476577	8.478	8.48			0.1
30) Acetophenone	(1)	6.553(0.000)	105	602744	10.819	10.82			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.577(0.000)	70	325486	10.150	10.15			0.1
33) 4-Methylphenol	(1)	6.594(-0.000)	108	404874	10.171	10.17			0.1
35) Hexachloroethane	(1)	6.688(-0.000)	117	156993	9.615	9.62			0.3
37) Nitrobenzene	(2)	6.804(-0.000)	77	486919	10.964	10.96			0.1
40) Isophorone	(2)	7.194(-0.000)	82	860087	11.363	11.36			0.1
42) 2-Nitrophenol	(2)	7.300(-0.000)	139	204778	13.438	13.44			0.1
45) 2,4-Dimethylphenol	(2)	7.416(-0.000)	107	427415	11.542	11.54			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.568(-0.000)	93	521770	10.562	10.56			0.1
49) 2,4-Dichlorophenol	(2)	7.684(-0.000)	162	338390	12.956	12.96			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.806(-0.000)	180	355164	12.172	12.17			0.1
53) Naphthalene	(2)	7.917(-0.000)	128	1131228	11.670	11.67			0.03
55) 4-Chloroaniline	(2)	8.028(0.000)	127	437758	10.899	10.90			0.1
58) Hexachlorobutadiene	(2)	8.150(-0.000)	225	215993	12.698	12.70			0.1
61) Caprolactam	(2)	8.564(0.002)	113	47125	4.044	4.04			1
63) 4-Chloro-3-methylphenol	(2)	8.844(0.000)	107	385107	12.278	12.28			0.1
65) 2-Methylnaphthalene	(2)	9.031(0.000)	142	735127	11.380	11.38			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.299(0.000)	237	367945	24.256	24.26			1
70) 2,4,6-Trichlorophenol	(3)	9.497(-0.000)	196	260371	12.839	12.84			0.1
71) 2,4,5-Trichlorophenol	(3)	9.549(0.000)	196	276885	13.214	13.21			0.1
75) 1,1'-Biphenyl	(3)	9.794(0.000)	154	912748	11.334	11.33			0.1
76) 2-Chloronaphthalene	(3)	9.800(-0.000)	162	734437	11.889	11.89			0.1
82) Diphenyl ether	(3)	9.975(-0.000)	170	515637	11.572	11.57			0.1
83) 2-Nitroaniline	(3)	9.986(-0.000)	138	249459	12.965	12.96			0.1
86) Dimethylphthalate	(3)	10.330(0.000)	163	789567	11.302	11.30			0.5
88) 2,6-Dinitrotoluene	(3)	10.400(-0.000)	165	206121	13.314	13.31			0.1
90) Acenaphthylene	(3)	10.459(0.000)	152	1178821	12.571	12.57			0.03
91) 3-Nitroaniline	(3)	10.651(-0.000)	138	205676	11.574	11.57			0.1
93) Acenaphthene	(3)	10.738(0.000)	153	737775	11.436	11.44			0.03
94) 2,4-Dinitrophenol	(3)	10.820(0.000)	184	229958	24.993	24.99			3
96) 4-Nitrophenol	(3)	10.954(0.000)	109	80722	7.122	7.12			3
97) Dibenzofuran	(3)	11.006(0.000)	168	1090569	11.888	11.89			0.1
98) 2,4-Dinitrotoluene	(3)	11.018(0.000)	165	266338	13.424	13.42			0.3
102) Diethylphthalate	(3)	11.391(0.000)	149	792007	11.506	11.51			0.5
103) Fluorene	(3)	11.467(0.000)	166	878855	11.901	11.90			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.496(0.000)	204	453754	12.390	12.39			0.1
107) 4-Nitroaniline	(3)	11.508(0.000)	138	197879	10.825	10.83			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.554(-0.000)	198	153069	12.811	12.81			1
109) N-Nitrosodiphenylamine	(4)	11.642(0.000)	169	688664	11.803	11.80			0.1
120) 4-Bromophenyl-phenylether	(4)	12.073(-0.000)	248	240057	12.980	12.98			0.1
122) Hexachlorobenzene	(4)	12.120(-0.000)	284	249448	13.642	13.64			0.03
124) Atrazine	(4)	12.306(-0.000)	200	257706	13.566	13.57			0.5
125) Pentachlorophenol	(4)	12.370(0.000)	266	147821	10.767	10.77			0.3
131) Phenanthrene	(4)	12.621(0.000)	178	1250326	11.960	11.96			0.03
134) Anthracene	(4)	12.685(0.000)	178	1283368	12.313	12.31			0.03
135) Carbazole	(4)	12.901(0.000)	167	1251635	12.408	12.41			0.1
137) Di-n-butylphthalate	(4)	13.414(0.000)	149	1446489	12.108	12.11			0.5
142) Fluoranthene	(4)	14.224(0.000)	202	1547505	13.160	13.16			0.03
146) Pyrene	(5)	14.562(-0.000)	202	1604263	12.095	12.09			0.03
153) Butylbenzylphthalate	(5)	15.693(-0.000)	149	672612	11.915	11.91			0.5
158) Benzo(a)anthracene	(5)	16.538(-0.000)	228	1459223	12.966	12.97			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.538(-0.000)	252	372902	9.174	9.17			0.5
161) Chrysene	(5)	16.602(-0.000)	228	1407159	12.714	12.71			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.759(-0.000)	149	897562	12.087	12.09			0.5
166) Di-n-octylphthalate	(6)	17.913(-0.000)	149	1560391	10.777	10.78			0.5
168) Benzo(b)fluoranthene	(6)	18.374(-0.000)	252	1391259	11.948	11.95			0.03
170) Benzo(k)fluoranthene	(6)	18.426(-0.000)	252	1462756	12.456	12.46			0.03
171) Benzo(a)pyrene	(6)	18.893(-0.000)	252	1323728	12.385	12.38			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.583(-0.000)	276	1407644	15.015	15.01			0.03
177) Dibenz(a,h)anthracene	(6)	20.624(-0.000)	278	1233852	15.541	15.54			0.03
178) Benzo(g,h,i)perylene	(6)	20.938(0.000)	276	1221399	15.455	15.46			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 71

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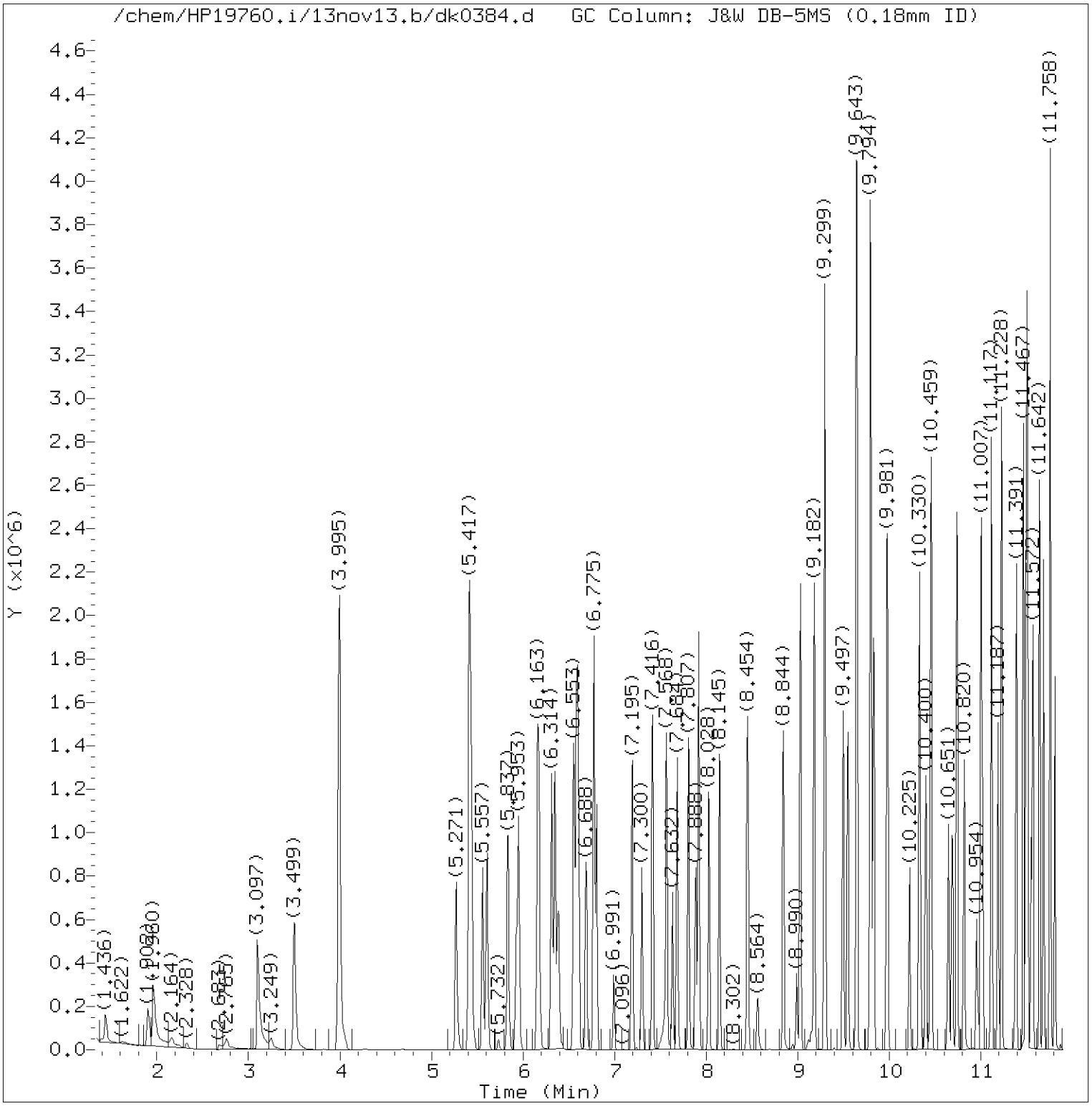
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:43. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

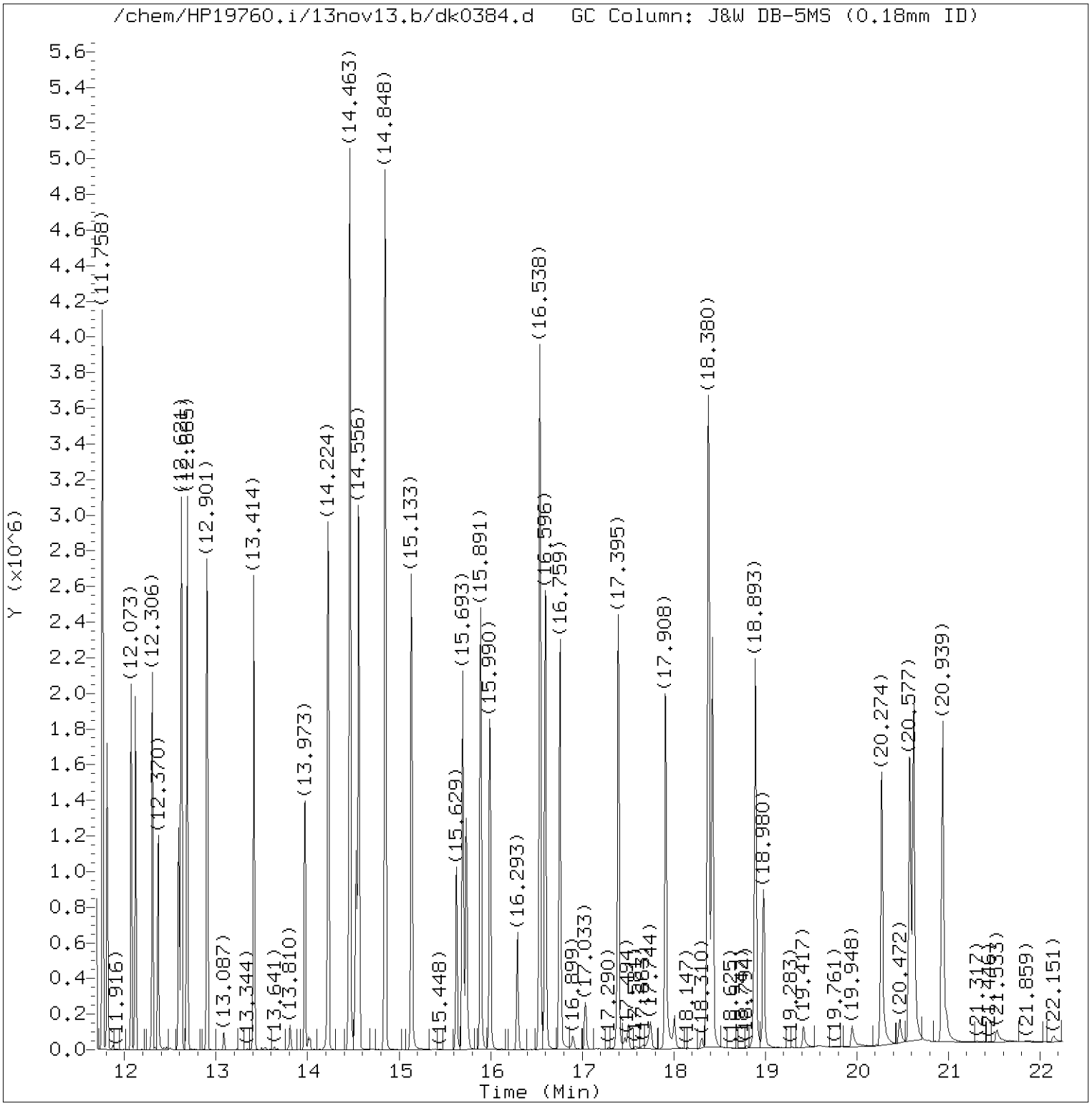
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.995	112	1205794	33.399
11) Benzaldehyde	(1)	5.271	77	284887	8.213
13)$Phenol-d6	(1)	5.411	99	1196984	24.141
14) Phenol	(1)	5.434	94	365818	6.373
16) bis(2-Chloroethyl)ether	(1)	5.557	93	468942	10.354
17) 2-Chlorophenol	(1)	5.609	128	406212	11.441
18) 1,3-Dichlorobenzene	(1)	5.837	146	396322	10.378
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	121592	5.000
20) 1,4-Dichlorobenzene	(1)	5.953	146	407435	10.547
23) Benzyl alcohol	(1)	6.157	108	261982	10.433
24) 1,2-Dichlorobenzene	(1)	6.175	146	387606	10.728
26) 2-Methylphenol	(1)	6.349	108	384457	10.790
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	476577	8.478
30) Acetophenone	(1)	6.553	105	602744	10.819
31) N-Nitroso-di-n-propylamine	(1)	6.577	70	325486	10.150
33) 4-Methylphenol	(1)	6.594	108	404874	10.171
35) Hexachloroethane	(1)	6.688	117	156993	9.615
36)$Nitrobenzene-d5	(2)	6.775	82	912749	21.814
37) Nitrobenzene	(2)	6.804	77	486919	10.964
40) Isophorone	(2)	7.195	82	860087	11.363
42) 2-Nitrophenol	(2)	7.300	139	204778	13.438
45) 2,4-Dimethylphenol	(2)	7.416	107	427415	11.542
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	521770	10.562
49) 2,4-Dichlorophenol	(2)	7.684	162	338390	12.956
51) 1,2,4-Trichlorobenzene	(2)	7.807	180	355164	12.172
52)*Naphthalene-d8	(2)	7.888	136	454668	5.000
53) Naphthalene	(2)	7.917	128	1131228	11.670
55) 4-Chloroaniline	(2)	8.028	127	437758	10.899
58) Hexachlorobutadiene	(2)	8.150	225	215993	12.698
61) Caprolactam	(2)	8.564	113	47125	4.044
63) 4-Chloro-3-methylphenol	(2)	8.844	107	385107	12.278
65) 2-Methylnaphthalene	(2)	9.031	142	735127	11.380
67) Hexachlorocyclopentadiene	(3)	9.299	237	367945	24.256
70) 2,4,6-Trichlorophenol	(3)	9.497	196	260371	12.839
71) 2,4,5-Trichlorophenol	(3)	9.549	196	276885	13.214
72)$2-Fluorobiphenyl	(3)	9.648	172	1660932	23.983
75) 1,1'-Biphenyl	(3)	9.794	154	912748	11.334
76) 2-Chloronaphthalene	(3)	9.800	162	734437	11.889
82) Diphenyl ether	(3)	9.975	170	515637	11.572
83) 2-Nitroaniline	(3)	9.986	138	249459	12.965

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) Dimethylphthalate	(3)	10.330	163	789567	11.302
88) 2,6-Dinitrotoluene	(3)	10.400	165	206121	13.314
90) Acenaphthylene	(3)	10.459	152	1178821	12.571
91) 3-Nitroaniline	(3)	10.651	138	205676	11.574
92)*Acenaphthene-d10	(3)	10.692	164	277321	5.000
93) Acenaphthene	(3)	10.738	153	737775	11.436
94) 2,4-Dinitrophenol	(3)	10.820	184	229958	24.993
96) 4-Nitrophenol	(3)	10.954	109	80722	7.122
97) Dibenzofuran	(3)	11.007	168	1090569	11.888
98) 2,4-Dinitrotoluene	(3)	11.018	165	266338	13.424
102) Diethylphthalate	(3)	11.391	149	792007	11.506
103) Fluorene	(3)	11.467	166	878855	11.901
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	453754	12.390
107) 4-Nitroaniline	(3)	11.508	138	197879	10.825
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	153069	12.811
109) N-Nitrosodiphenylamine	(4)	11.642	169	688664	11.803
112)$2,4,6-Tribromophenol	(3)	11.764	330	455257	62.504
120) 4-Bromophenyl-phenylether	(4)	12.073	248	240057	12.980
122) Hexachlorobenzene	(4)	12.120	284	249448	13.642
124) Atrazine	(4)	12.306	200	257706	13.566
125) Pentachlorophenol	(4)	12.370	266	147821	10.767
130)*Phenanthrene-d10	(4)	12.592	188	468707	5.000
131) Phenanthrene	(4)	12.621	178	1250326	11.960
134) Anthracene	(4)	12.685	178	1283368	12.313
135) Carbazole	(4)	12.901	167	1251635	12.408
137) Di-n-butylphthalate	(4)	13.414	149	1446489	12.108
142) Fluoranthene	(4)	14.224	202	1547505	13.160
145)*Pyrene-d10	(5)	14.527	212	624748	5.000
146) Pyrene	(5)	14.562	202	1604263	12.095
149)$Terphenyl-d14	(5)	14.848	244	2184410	28.037
153) Butylbenzylphthalate	(5)	15.693	149	672612	11.915
158) Benzo(a)anthracene	(5)	16.538	228	1459223	12.966
159) 3,3'-Dichlorobenzidine	(5)	16.538	252	372902	9.174
161) Chrysene	(5)	16.602	228	1407159	12.714
162) bis(2-Ethylhexyl)phthalate	(5)	16.759	149	897562	12.087
166) Di-n-octylphthalate	(6)	17.913	149	1560391	10.777
168) Benzo(b)fluoranthene	(6)	18.374	252	1391259	11.948
170) Benzo(k)fluoranthene	(6)	18.426	252	1462756	12.456
171) Benzo(a)pyrene	(6)	18.893	252	1323728	12.385
172)*Perylene-d12	(6)	18.980	264	494320	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176) Indeno(1,2,3-cd)pyrene	(6)	20.583	276	1407644	15.015
177) Dibenz(a,h)anthracene	(6)	20.624	278	1233852	15.541
178) Benzo(g,h,i)perylene	(6)	20.939	276	1221399	15.455

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 5079 Anna Stager Reviewed by: SMG 11-15-13 Start Date: 11/12/13 Start time: 9:35

13314WAD026

Tech 1: AES 5079 Tech 2:

Dept: 26	Prep Analysis: 00813 BNA Water Extraction										TCL SW846 Semivolatiles/Waters
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWD314	250	SS1330426A	1	~~MS1329726A~~		1	✓	✓	—	top H2O
LCSA	314WDLCS	250	SS1330426A	1	~~MS1329726A~~ (8)	1	1	✓	✓	—	↓
LCSDA	314WDLCSD	250	SS1330426A	1	~~MS1329726A~~ (8)	1	1	✓	✓	—	↓

(8) Mini Sep. LCS spike code changed to MS1330826A. AES 5079 11/12/13

Solvent Used	Lot No.
10N NaOH	1211122
Methylene Chloride	60310
Sodium Sulfate	13312A
Sulfuric Acid	132553

Spike Solutions: Witness: N/A

~~MS1329726A~~ (8) MINI SEP. LCS SPIKE

SS1330426A MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 7266590 R	49CBT	242	SS1330426A	1	1	✓	✓	153B	cloudy brown color	04678	155	11/11/2013	S
2 7266798	FB106	233	SS1330426A	1	1	✓	✓	153A	clear	04678	2272	11/18/2013	N
3 7266799	FB206	247	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
4 7266805	2B152	246	SS1330426A	1	1	✓	✓	153A	brown tint w/ sediment	04678	2272	11/18/2013	N
5 7266807	2B151	231	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
6 7266810	2D123	245	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
7 7266811	2D121	232	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
8 7266819	3--FD	237	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
9 7266823	PF---	240	SS1330426A	1	1	✓	✓	153A	clear	04678	9642	11/18/2013	N
10 7266824	PF-D-	241	SS1330426A	1	1	✓	✓	153A	↓	04678	9642	11/18/2013	N
11 7267172	OM-EF	234	SS1330426A	1	1	✓	✓	153A	↓	04678	2308	11/19/2013	N
12 7267633	NS40D	246	SS1330426A	1	1	✓	✓	153A	↓	04678	1013	11/18/2013	P
13 7267634	NS28D	247	SS1330426A	1	1	✓	✓	153A	↓	04678	1013	11/18/2013	P
14 7270635	TSINF	249	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
15 7270637	401AP	236	SS1330426A	1	1	✓	✓	153A	yellow tint	04678	12825	11/15/2013	S
16 7270638	T501P	246	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
17 7270641	TSEFF	247	SS1330426A	1	1	✓	✓	153A	clear	04678	12825	11/15/2013	S
18 7270643	ELGAC	244	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
19 7270644	SP901	224	SS1330426A	1	1	✓	✓	153A	yellow tint	04678	12825	11/15/2013	S
20 7270742	3521X	220	SS1330426A	1	1	✓	✓	153A	cloudy brown color	04678	2272	11/15/2013	S

KVM05 Page 745 of 1790

Rack ID:		Work Station	H2O 5
Internal Standard	ISTD5103	Balance #	7

S-bath ID 11	88° C	S-bath ID	C	N-Evap	C	M-vap	C	13314WAD026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2807 Nicholas Shroyer Reviewed by: HB 11-15-13 Start Date: 11-12-13 Start time: 18:45

13316SLB026

Tech 1: NS2807 Tech 2:

Dept: 26 Prep Analysis: 10814 BNA Soil Microwave PAH PAH 8270 (microwave)

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266801MS *	2G124	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	brown mud
7266802MSD *	2G124	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	↓ ↓
BLANKA	SBLKLB316	30.0	SS1331226A	1.0	—	—	1.0	Z	Z	—	Na_2SO_4
LCSA	316LBLCS	30.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	—	↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185110713A
Methylene Chloride	60310
Sodium Sulfate	13316A

Spike Solutions: Witness:
MS1330526A LCS SPIKE MIX
SS1331226A BNA SURROGATE STANDARD

	Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7266800BKG *	2G124	15.0	SS1331226A	1.0	1.0	Z	Z	20A	brown mud	10724	4677	11/18/2013	N
2	7266804 *	2G125	15.0	SS1331226A	↓	1.0	Z	Z	20A	↓ ↓	10724	4677	11/18/2013	N
3	7266806 *	2C152	5.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
4	7266808 *	2C151	5.0	SS1331226A	↓	1.0	Z	Z	20A		10724	4677	11/18/2013	N

* Reduced due to poor sample matrix. NS2807 11-12-13

N/A NS2807 11-12-13

KVM05 Page 746 of 1790

Rack ID:	—	Work Station	Micro
Internal Standard	LB99318	Balance #	17609

S-bath ID/3	89° C	S-bath ID	C	N-Evap	C	M-vap	C	13316SLB026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

CH_2Cl_2 lot # 000060310 used for dilutions HB 11-15-13

Explosives Data

Case Narrative/Conformance Summary

Explosives

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Pesticide Residue Analysis

Fraction: Explosives

Nitroaromatics/Amines in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266798	FB-01_11062013	X		1	Field Blank
7266799	FB-02_11062013	X		1	Field Blank
7266800	SD-R2-G-12-4		X	1	Unspiked
7266801	SD-R2-G-12-4_MS		X	1	Matrix Spike
7266802	SD-R2-G-12-4_MSD		X	1	Matrix Spike Duplicate
7266804	SD-R2-G-12-5		X	1	
7266805	SW-R2-B-15-2	X		1	
7266806	SD-R2-C-15-2		X	1	
7266807	SW-R2-B-15-1	X		1	
7266808	SD-R2-C-15-1		X	1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

Method Blank

LCS/LCSD

MS/MSD

eurofins | Lancaster Laboratories Environmental

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Pesticide Residue Analysis

Fraction: Explosives

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Surrogate

Sample Duplicate

Serial Dilution

Post Digestion Spike

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Additional Comments

(Sample number(s): 7266804: Analysis: 06918)
The LCS and/or LCSD recoveries are outside the stated QC window
but within the marginal exceedance allowance of +/- 4 standard
deviations as defined in the NELAC Standards. The following
analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene
Reporting limits were raised due to interference from the sample matrix.

(Sample number(s): 7266805: Analysis: 06916)
The LCS and/or LCSD recoveries are outside the stated QC window
but within the marginal exceedance allowance of +/- 4 standard
deviations as defined in the NELAC Standards. The following
analytes are accepted based on this allowance:
4-Amino-2,6-Dinitrotoluene
Reporting limits were raised due to interference from the sample matrix.

(Sample number(s): 7266800-7266802, 7266806, 7266808: Analysis: 06918)
The LCS and/or LCSD recoveries are outside the stated QC window
but within the marginal exceedance allowance of +/- 4 standard

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Pesticide Residue Analysis

Fraction: Explosives

deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-dinitrotoluene

(Sample number(s): 7266798-7266799, 7266807: Analysis: 06916)
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-Dinitrotoluene

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Explosives

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Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Ashland, Inc.
SDG: KVM05

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
Nitroaromatics/Amines in Solid	133140019A	PBLK19314	11/18/2013 04:50:00
		LCS19314	11/18/2013 05:33:00
		7266800 UNSPK	11/18/2013 06:15:00
		7266801 MS	11/18/2013 06:58:00
		7266802 MSD	11/18/2013 07:40:00
		7266804	11/18/2013 08:23:00
		7266806	11/18/2013 09:48:00
		7266808	11/18/2013 10:30:00
Nitroaromatics/Amines in Water	133140016A	PBLK16314	11/17/2013 21:03:00
		LCS16314	11/17/2013 21:46:00
		LCSD16314	11/17/2013 22:28:00
		7266798	11/17/2013 23:11:00
		7266799	11/17/2013 23:53:00
		7266805	11/18/2013 00:36:00
		7266807	11/18/2013 02:01:00

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM05
Matrix: LIQUID

Fraction: Explosives

133140016A / PBLK16314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/17/13	N.D.	ug/l	5.2	15
PETN	11/17/13	N.D.	ug/l	6.0	18
HMX	11/17/13	N.D.	ug/l	0.65	2.0
RDX	11/17/13	N.D.	ug/l	0.20	0.50
1,3,5-Trinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,2-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,3-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
Tetryl	11/17/13	N.D.	ug/l	0.40	0.60
Nitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
2,4,6-Trinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
4-Amino-2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.30	0.60
1,4-Dinitrobenzene	11/17/13	N.D.	ug/l	0.30	0.60
2-Amino-4,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
2,4-Dinitrotoluene	11/17/13	N.D.	ug/l	0.72	2.0
2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.45	1.3
2-Nitrotoluene	11/17/13	N.D.	ug/l	0.25	0.75
3-Nitrotoluene	11/17/13	N.D.	ug/l	0.40	1.2
4-Nitrotoluene	11/17/13	N.D.	ug/l	0.60	1.2
1-Nitronaphthalene	11/17/13	N.D.	ug/l	0.20	0.60

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM05
Matrix: SOLID

Fraction: Explosives

133140019A / PBLK19314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/18/13	N.D.	ug/kg	2000	6000
PETN	11/18/13	N.D.	ug/kg	2000	6000
HMX	11/18/13	N.D.	ug/kg	250	750
RDX	11/18/13	N.D.	ug/kg	130	300
1,3,5-Trinitrobenzene	11/18/13	N.D.	ug/kg	100	300
1,4-Dinitrobenzene	11/18/13	N.D.	ug/kg	100	300
1,2-Dinitrobenzene	11/18/13	N.D.	ug/kg	100	300
1,3-Dinitrobenzene	11/18/13	N.D.	ug/kg	100	300
Tetryl	11/18/13	N.D.	ug/kg	150	300
Nitrobenzene	11/18/13	N.D.	ug/kg	100	300
2,4,6-Trinitrotoluene	11/18/13	N.D.	ug/kg	100	300
4-Amino-2,6-Dinitrotoluene	11/18/13	N.D.	ug/kg	150	300
2-Amino-4,6-Dinitrotoluene	11/18/13	N.D.	ug/kg	100	300
2,4-Dinitrotoluene	11/18/13	N.D.	ug/kg	100	300
2,6-Dinitrotoluene	11/18/13	N.D.	ug/kg	100	300
2-Nitrotoluene	11/18/13	N.D.	ug/kg	200	300
3-Nitrotoluene	11/18/13	N.D.	ug/kg	250	300
4-Nitrotoluene	11/18/13	N.D.	ug/kg	200	300
1-Nitronaphthalene	11/18/13	N.D.	ug/kg	100	300

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM05
Matrix: LIQUID

Fraction: Explosives

133140016A	2-Nitro-m-xylene	
	Spike Added	10 ug/l
Sample	**% Recovery**	**Limits**
PBLK16314	95	73 - 122
LCS16314	87	73 - 122
LCSD16314	93	73 - 122
7266798	95	73 - 122
7266799	85	73 - 122
7266805	78	73 - 122
7266807	85	73 - 122

Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM05
Matrix: SOLID

Fraction: Explosives

133140019A	2-Nitro-m-xylene	
	Spike Added	5000 ug/kg
Sample	**% Recovery**	**Limits**
PBLK19314	93	63 - 150
LCS19314	91	63 - 150
7266800	97	63 - 150
7266801 MS	86	63 - 150
7266802 MSD	81	63 - 150
7266804	93	63 - 150
7266806	82	63 - 150
7266808	97	63 - 150

Pesticide Residue Analysis

Fraction: Explosives

UNSPK: 7266800 MS: 7266801 MSD: 7266802 **Analyte**	Batch: **133140019A** (Sample number(s): 7266800-7266802, 7266804, 7266806, 7266808)								
	Spike Added ug/kg	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	17400	N.D.	14128.	16975.75	81	98	73-116	18	50
PETN	17400	N.D.	11860.63	15382.14	68 *	88	71-133	26	50
HMX	3422.82	N.D.	2436.74	2728.76	71 *	63 *	72-107	11	50
RDX	4350	N.D.	3438.01	3795.77	79	87	75-108	10	50
1,3,5-Trinitrobenzene	4360	N.D.	3534.42	3833.95	81	88	58-135	8	50
1,4-Dinitrobenzene	8700	N.D.	6976.29	7524.76	80 *	86	82-117	8	50
1,2-Dinitrobenzene	8700	N.D.	8053.43	9681.75	93	111	80-120	18	50
1,3-Dinitrobenzene	4350	N.D.	4125.79	4247.75	95	98	89-119	3	50
Tetryl	4350	N.D.	2792.82	3245.39	64	75	58-125	15	50
Nitrobenzene	4350	N.D.	3710.87	4055.94	85 *	93	86-108	9	50
2,4,6-Trinitrotoluene	4350	N.D.	4081.79	4447.75	94	102	92-114	9	50
4-Amino-2,6-Dinitrotoluene	4350	N.D.	3035.99	3432.74	70 *	79 *	85-118	12	50
2-Amino-4,6-Dinitrotoluene	4350	N.D.	3111.09	3392.53	72	78	69-113	9	50
2,4-Dinitrotoluene	4350	N.D.	3985.5	4256.74	92	98	81-111	7	50
2,6-Dinitrotoluene	4350	N.D.	3979.62	4626.5	91	106	86-114	15	50
2-Nitrotoluene	4350	N.D.	3862.	4080.84	89	94	79-112	6	50
3-Nitrotoluene	4350	N.D.	4528.89	4917.3	104	113	72-119	8	50
4-Nitrotoluene	4350	N.D.	3274.94	3408.11	75 *	78 *	90-118	4	50
1-Nitronaphthalene	8700	N.D.	8633.31	9172.89	99	105	89-131	6	50

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: LIQUID

Pesticide Residue Analysis
Fraction: Explosives

LCS: LCS16314 LCSD: LCSD16314 **Analyte**	Batch: **133140016A** (Sample number(s): 7266798-7266799, 7266805, 7266807)							
	Spike Added ug/l	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	240	210.27	209.1	88	87	73-116	1	30
PETN	240	234.03	236.45	98	99	73-126	1	30
HMX	10	7.86	8.12	79	81	73-112	3	30
RDX	10	9.15	9.17	92	92	70-117	0	30
1,3,5-Trinitrobenzene	10	9.32	9.41	93	94	72-119	1	30
1,2-Dinitrobenzene	20	21.04	21.87	105	109	90-118	4	30
1,3-Dinitrobenzene	10	10.69	10.38	107	104	78-121	3	30
Tetryl	10	9.9	9.96	99	100	43-133	1	30
Nitrobenzene	10	9.73	9.63	97	96	71-111	1	30
2,4,6-Trinitrotoluene	10	10.8	10.96	108	110	75-119	2	30
1,4-Dinitrobenzene	20	18.49	18.91	92	95	81-108	2	30
4-Amino-2,6-Dinitrotoluene	10	9.18	9.09	92 *	91 *	97-156	1	30
2-Amino-4,6-Dinitrotoluene	10	8.83	8.7	88	87	65-107	1	30
2,4-Dinitrotoluene	10	10.15	10.33	102	103	71-111	2	30
2,6-Dinitrotoluene	10	10.47	10.87	105	109	84-157	4	30
2-Nitrotoluene	10	8.64	8.67	86	87	74-115	0	30
3-Nitrotoluene	10	9.86	10.16	99	102	76-115	3	30
4-Nitrotoluene	10	9	8.84	90	88	76-120	2	30
1-Nitronaphthalene	20	21.14	21.11	106	106	69-125	0	30

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS19314	Batch: **133140019A** (Sample number(s): 7266800-7266802, 7266804, 7266806, 7266808)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	18910.89	NA	95	NA	70-118	NA	NA
PETN	20000	15837.4	NA	79	NA	67-136	NA	NA
HMX	3936.25	3417.39	NA	87	NA	79-104	NA	NA
RDX	5000	4697.33	NA	94	NA	87-111	NA	NA
1,3,5-Trinitrobenzene	5020	4632.73	NA	92	NA	83-119	NA	NA
1,4-Dinitrobenzene	10000	9438.83	NA	94	NA	83-122	NA	NA
1,2-Dinitrobenzene	10000	10713.07	NA	107	NA	94-129	NA	NA
1,3-Dinitrobenzene	5000	5589.52	NA	112	NA	97-119	NA	NA
Tetryl	5000	5350.73	NA	107	NA	80-112	NA	NA
Nitrobenzene	5000	4976.25	NA	100	NA	89-107	NA	NA
2,4,6-Trinitrotoluene	5000	5645.84	NA	113	NA	85-122	NA	NA
4-Amino-2,6-Dinitrotoluene	5000	4676.25	NA	94 *	NA	98-143	NA	NA
2-Amino-4,6-Dinitrotoluene	5000	4543.28	NA	91	NA	84-115	NA	NA
2,4-Dinitrotoluene	5000	5339.15	NA	107	NA	91-112	NA	NA
2,6-Dinitrotoluene	5000	5120.26	NA	102	NA	86-137	NA	NA
2-Nitrotoluene	5000	5107.67	NA	102	NA	91-113	NA	NA
3-Nitrotoluene	5000	5918.6	NA	118	NA	88-121	NA	NA
4-Nitrotoluene	5000	4492.52	NA	90	NA	89-119	NA	NA
1-Nitronaphthalene	10000	11568.9	NA	116	NA	83-122	NA	NA

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	~~MIDPOINT~~ Level 4 RT	RT WINDOW FROM	TO
RDX	4.22	4.21	4.23	4.22	4.20	4.24	4.22	4.12	4.32
1,3,5-Trinitrobenzene	4.89	4.91	4.91	4.90	4.86	4.92	4.90	4.80	5.00
1,4-Dinitrobenzene	5.78	5.80	5.83	5.79	5.68	5.78	5.79	5.69	5.89
o-Dinitrobenzene	6.38	6.41	6.44	6.41	6.23	6.51	6.41	6.31	6.51
1,3-DNB	6.78	6.79	6.82	6.80	6.65	6.82	6.80	6.70	6.90
Nitrobenzene	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
Tetryl	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
2,4,6-Trinitrotoluene	8.12	8.17	8.20	8.16	7.89	8.18	8.16	8.06	8.26
Tetryl breakdown	8.78	8.74	8.88	8.90	8.55	8.89	8.90	8.77	9.02
4-Amino-2,6-dinitrotoluene	9.98	10.00	10.07	10.02	9.59	10.19	10.02	9.88	10.16
2-Amino-4,6-dinitrotoluene	10.41	10.48	10.52	10.47	10.05	10.51	10.47	10.33	10.61
2,6-Dinitrotoluene	10.88	10.91	10.98	10.93	10.46	10.91	10.93	10.79	11.07
2,4-Dinitrotoluene	11.33	11.40	11.43	11.40	10.96	11.43	11.40	11.26	11.54
2-Nitrotoluene	13.38	13.43	13.44	13.39	12.87	13.44	13.39	13.25	13.54
4-Nitrotoluene	14.71	14.73	14.84	14.77	14.25	14.84	14.77	14.61	14.94
3-Nitrotoluene	15.43	15.45	15.57	15.50	14.97	15.56	15.50	15.33	15.66
2-NMX	26.57	26.83	26.85	26.77	25.96	26.86	26.77	26.43	27.11
1-Nitronaphthalene	33.40	33.27	33.29	33.24	33.01	33.29	33.24	32.99	33.48

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+02	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310.CAL** Version = 9
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.216 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.899 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.789 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.412 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.800 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.159 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.895 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.022 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.468 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.932 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.398 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.393 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.774 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.496 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.768 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.236 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
HMX	2.79	2.81	2.82	2.81	2.84	2.82	2.81	2.71	2.91
2,4-Diamino-6-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
2,6-Diamino-4-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
Nitroglycerin	8.95	8.99	9.03	8.99	8.69	9.03	8.99	8.80	9.18
PETN	16.67	16.68	16.74	16.67	16.11	16.73	16.67	16.38	16.96
2-NMX	26.75	26.93	27.01	26.91	26.11	27.02	26.91	26.58	27.24

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	
							Average % RSD:	18	

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310B.CAL** Version = 10
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.809 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.969 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.969 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin

Retention time = 8.992 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN

Retention time = 16.669 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.910 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/10/13

11/8/2013

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 4E12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.10			4.10	4.00	4.20
1,3,5-Trinitrobenzene				4.76			4.76	4.66	4.86
1,4-Dinitrobenzene				5.62			5.62	5.52	5.72
o-Dinitrobenzene				6.23			6.23	6.13	6.33
1,3-DNB				6.59			6.59	6.49	6.69
Nitrobenzene				7.47			7.47	7.33	7.61
Tetryl				7.47			7.47	7.33	7.61
2,4,6-Trinitrotoluene				7.88			7.88	7.78	7.98
Tetryl breakdown				8.39			8.39	8.27	8.52
4-Amino-2,6-dinitrotoluene				9.83			9.83	9.69	9.97
2-Amino-4,6-dinitrotoluene				10.11			10.11	9.97	10.25
2,6-Dinitrotoluene				10.52			10.52	10.38	10.66
2,4-Dinitrotoluene				11.00			11.00	10.86	11.14
2-Nitrotoluene				12.94			12.94	12.80	13.08
4-Nitrotoluene				14.27			14.27	14.11	14.43
3-Nitrotoluene				14.95			14.95	14.79	15.12
2-NMX				25.75			25.75	25.41	26.09
1-Nitronaphthalene				32.87			32.87	32.62	33.11

RT Update

Files used 4E12310.58 +.59

Applies to 4E12310.58 →

1566 11/20/13

Audited By:

Lisa A. Reinert
Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Average % RSD: 8

— Linear

James H. Place
Senior Chemist

NOV 2 0 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310.CAL** Version = 6
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.102 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.764 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.623 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.233 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.594 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 7.876 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.394 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 9.828 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.111 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.518 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 10.997 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 12.941 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.267 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 14.953 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 25.749 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 32.866 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 4E12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.75			2.75	2.65	2.85
2,4-Diamino-6-nitrotoluene				2.87			2.87	2.77	2.97
2,6-Diamino-4-nitrotoluene				2.87			2.87	2.77	2.97
Nitroglycerin				8.70			8.70	8.51	8.89
PETN				16.04			16.04	15.75	16.33
2-NMX				25.91			25.91	25.57	26.24

James H. Place
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NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	– Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	– Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	
							Average % RSD:	18	

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NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.747 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.698 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.039 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 25.906 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	~~MIDPOINT~~ Level 4 RT	RT WINDOW FROM	TO
HMX	4.25	4.29	4.29	4.28	4.25	4.25	4.28	4.18	4.38
RDX	5.25	5.24	5.25	5.26	5.17	5.20	5.26	5.16	5.36
Nitrobenzene	12.90	12.88	12.92	12.88	12.46	12.78	12.88	12.72	13.04
o-Dinitrobenzene	14.97	14.97	14.95	14.92	14.40	14.78	14.92	14.74	15.10
2-Amino-4,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
4-Amino-2,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
1,3-DNB	19.07	19.15	19.06	19.04	18.63	18.91	19.04	18.89	19.19
1,4-Dinitrobenzene	19.76	19.90	19.86	19.85	19.40	19.67	19.85	19.70	20.00
2-Nitrotoluene	24.39	24.41	24.38	24.33	23.71	24.14	24.33	24.07	24.59
3-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
4-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
1,3,5-Trinitrobenzene	30.07	30.04	30.02	39.94	29.52	29.67	29.94	29.74	30.14
2,6-Dinitrotoluene	31.07	31.33	30.97	30.89	29.91	30.62	30.89	30.69	31.09
2,4-Dinitrotoluene	33.86	33.85	33.80	33.79	33.62	33.71	33.79	33.68	33.90
2-NMX	34.37	34.28	34.22	34.23	34.10	34.17	34.23	34.13	34.33
Tetryl	34.63	34.59	34.54	34.53	34.42	34.47	34.53	34.43	34.63
2,4,6-Trinitrotoluene	35.58	35.53	35.47	35.46	35.38	35.41	35.46	35.36	35.56
1-Nitronaphthalene	36.54	36.48	36.47	36.46	36.42	36.43	36.46	36.36	36.56

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NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.00E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	Linear
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310.CAL** Version = 21
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.260 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.877 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.924 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.035 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.850 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.334 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.943 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.885 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.788 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.226 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.529 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.463 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
2,4-Diamino-6-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
2,6-Diamino-4-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
Nitroglycerin	9.77	9.71	9.70	9.70	9.37	9.63	9.70	9.60	9.80
PETN	26.50	26.32	26.34	26.28	25.64	26.08	26.28	26.07	26.49

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310B.CAL** Version = 20
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.695 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.283 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 1C12310.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.31			4.31	4.21	4.41
RDX				5.28			5.28	5.18	5.38
Nitrobenzene				12.98			12.98	12.82	13.14
o-Dinitrobenzene				15.03			15.03	14.85	15.21
2-Amino-4,6-dinitrotoluene				16.97			16.97	16.81	17.13
4-Amino-2,6-dinitrotoluene				16.97			16.97	16.81	17.13
1,3-DNB				19.19			19.19	19.04	19.34
1,4-Dinitrobenzene				19.98			19.98	19.83	20.13
2-Nitrotoluene				24.47			24.47	24.21	24.73
3-Nitrotoluene				28.03			28.03	27.77	28.29
4-Nitrotoluene				28.03			28.03	27.77	28.29
1,3,5-Trinitrobenzene				30.21			30.21	30.01	30.41
2,6-Dinitrotoluene				30.96			30.96	30.76	31.16
2,4-Dinitrotoluene				33.84			33.84	33.73	33.95
2-NMX				34.25			34.25	34.15	34.35
Tetryl				34.57			34.56	34.46	34.66
2,4,6-Trinitrotoluene				35.50			35.50	35.40	35.60
1-Nitronaphthalene				36.48			36.48	36.38	36.58

Coelute

RT Update

Files used 1C12310.39+.40

Applies to 1C12310.20 →

James H. Place
Senior Chemist

NOV 08 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 2C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	Linear
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Coelute

Average % RSD: 25

James H. Place
Senior Chemist

NOV 08 2013

Calibration File Name: **C:\CPWIN\DATA1\2C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.311 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.977 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 15.029 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.965 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.194 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.984 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.467 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 28.029 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.212 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.964 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.841 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.248 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.565 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.500 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.478 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

CONFIDENTIAL

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 1C12310B.39R

Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.83			3.83	3.65	4.01
2,6-Diamino-4-nitrotoluene				3.83			3.83	3.65	4.01
Nitroglycerin				9.76			9.76	9.66	9.86
PETN				26.38			26.38	26.17	26.59

James H. Place
Senior Chemist

NOV 08 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 2C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/7/2013 11/7/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
							Average % RSD:	12

Calibration File Name: **C:\CPWIN\DATA1\2C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.834 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.760 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

S2 PETN
Retention time = 26.381 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 4C12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.30			4.30	4.20	4.40
RDX				5.26			5.26	5.16	5.36
Nitrobenzene				12.91			12.91	12.75	13.07
o-Dinitrobenzene				14.90			14.90	14.72	15.08
2-Amino-4,6-dinitrotoluene				16.82			16.82	16.66	16.98
4-Amino-2,6-dinitrotoluene				16.82			16.82	16.66	16.98
1,3-DNB				19.08			19.08	18.93	19.23
1,4-Dinitrobenzene				19.77			19.77	19.62	19.92
2-Nitrotoluene				24.31			24.31	24.05	24.57
3-Nitrotoluene				27.86			27.86	27.60	28.12
4-Nitrotoluene				27.86			27.86	27.60	28.12
1,3,5-Trinitrobenzene				30.01			30.01	29.81	30.21
2,6-Dinitrotoluene				30.82			30.82	30.62	31.02
2,4-Dinitrotoluene				33.78			33.78	33.67	33.89
2-NMX				34.22			34.22	34.12	34.32
Tetryl				34.51			34.51	34.41	34.61
2,4,6-Trinitrotoluene				35.46			35.46	35.36	35.56
1-Nitronaphthalene				36.46			36.46	36.36	36.56

RT Update

Files used 4C12310.58+.59

Applies to 4C12310.58 →

RT update applies to files 58→ old cal. 2C12310

James H. Place
Senior Chemist

NOV 2 0 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 2 0 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23

Linear

Linear

Linear

Linear

Average % RSD: 25

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.297 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.262 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.911 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.900 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.078 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB
Retention time = 19.773 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.306 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.009 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.816 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.782 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.215 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.513 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.458 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 4C12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.82			3.82	3.64	4.00
2,6-Diamino-4-nitrotoluene				3.82			3.82	3.64	4.00
Nitroglycerin				9.72			9.72	9.62	9.82
PETN				26.23			26.23	26.02	26.44

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6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

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Calibration File Name: **C:\CPWIN\DATA1\3C12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.719 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.233 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
RDX	4.20	4.12	4.32	496.07	500.00	-1
1,3,5-Trinitrobenzene	4.88	4.80	5.00	492.04	499.80	-2
1,4-Dinitrobenzene	5.77	5.69	5.89	466.40	500.00	-7
o-Dinitrobenzene	6.38	6.31	6.51	485.01	500.00	-3
1,3-DNB	6.77	6.70	6.90	501.80	499.55	0
Tetryl + Breakdown	7.67	7.57	7.85	25.32 + 437.75 = 463.07	500.00	-12 / -7
2,4,6-Trinitrotoluene	8.12	8.06	8.26	492.63	499.80	-1
4-Amino-2,6-dinitrotoluene	9.96	9.88	10.16	553.23	499.80	11
2-Amino-4,6-dinitrotoluene	10.42	10.33	10.61	465.31	500.00	-7
2,6-Dinitrotoluene	10.87	10.79	11.07	488.15	500.00	-2
2,4-Dinitrotoluene	11.34	11.26	11.54	480.84	500.00	-4
2-Nitrotoluene	13.33	13.25	13.54	460.36	500.00	-8
4-Nitrotoluene	14.70	14.61	14.94	496.26	499.55	-1
3-Nitrotoluene	15.43	15.33	15.66	498.88	500.00	0
2-NMX	26.63	26.43	27.11	986.47	1000.45	-1
1-Nitronaphthalene	33.18	32.99	33.48	544.17	500.00	9

Compounds 16 Average of %D: 4

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Senior Chemist

NOV 07 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	2.80	2.71	2.91	485.07	500.00	-3
Nitroglycerin	8.95	8.80	9.18	5425.07	6000.00	-10
PETN	16.59	16.38	16.96	5923.12	6000.00	-1
2-NMX	26.76	26.58	27.24	1113.34	1000.45	11

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.08	4.00	4.20	465.76	494.00	-6
1,3,5-Trinitrobenzene	4.74	4.66	4.86	466.27	500.50	-7
1,4-Dinitrobenzene	5.59	5.52	5.72	451.96	497.00	-9
o-Dinitrobenzene	6.19	6.13	6.33	426.52	502.00	-15
1,3-DNB	6.56	6.49	6.69	496.47	500.50	-1
Tetryl + Breakdown	7.43	7.33	7.61	44.68 + 422.23 = 466.91	499.50	-15 -7
2,4,6-Trinitrotoluene	7.83	7.78	7.98	530.22	501.50	6
4-Amino-2,6-dinitrotoluene	9.78	9.69	9.97	453.91	500.50	-9
2-Amino-4,6-dinitrotoluene	10.07	9.97	10.25	437.29	500.00	-13
2,6-Dinitrotoluene	10.46	10.38	10.66	471.03	500.50	-6
2,4-Dinitrotoluene	10.95	10.86	11.14	522.40	500.50	4
2-Nitrotoluene	12.88	12.80	13.08	438.01	496.00	-12
4-Nitrotoluene	14.20	14.11	14.43	435.43	497.50	-12
3-Nitrotoluene	14.89	14.79	15.12	515.06	495.00	4
2-NMX	25.68	25.41	26.09	1454.63	1500.68	-3
1-Nitronaphthalene	32.82	32.62	33.11	520.34	501.00	4

Compounds 16 Average of %D: 8

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7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310B.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.74	2.65	2.85	490.98	498.50	-2
Nitroglycerin	8.65	8.51	8.89	8773.75	10030.00	-13
PETN	15.96	15.75	16.33	9460.47	9980.00	-5
2-NMX	25.81	25.57	26.24	1451.79	1500.68	-3

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.04	4.00	4.20	462.72	494.00	-6
1,3,5-Trinitrobenzene	4.69	4.66	4.86	463.63	500.50	-7
1,4-Dinitrobenzene	5.52	5.52	5.72	451.59	497.00	-9
o-Dinitrobenzene	6.08	6.13	6.33	464.06	502.00	-8
1,3-DNB	6.46	6.49	6.69	477.62	500.50	-5
Tetryl + Breakdown	7.31	7.33	7.61	45.61 + 414.48 = 460.09	499.50	~~-7~~ -8
2,4,6-Trinitrotoluene	7.69	7.78	7.98	526.99	501.50	5
4-Amino-2,6-dinitrotoluene	9.56	9.69	9.97	426.79	500.50	-15
2-Amino-4,6-dinitrotoluene	9.85	9.97	10.25	441.64	500.00	-12
2,6-Dinitrotoluene	10.25	10.38	10.66	480.78	500.50	-4
2,4-Dinitrotoluene	10.72	10.86	11.14	514.47	500.50	3
2-Nitrotoluene	12.61	12.80	13.08	434.87	496.00	-12
4-Nitrotoluene	13.91	14.11	14.43	445.43	497.50	-10
3-Nitrotoluene	14.57	14.79	15.12	501.57	495.00	1
2-NMX	25.10	25.41	26.09	1490.67	1500.68	-1
1-Nitronaphthalene	32.59	32.62	33.11	508.57	501.00	2

Compounds 16 Average of %D: 7

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NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.71	2.65	2.85	493.56	498.50	-1
Nitroglycerin	8.49	8.51	8.89	8724.02	10030.00	-13
PETN	15.62	15.75	16.33	9454.38	9980.00	-5
2-NMX	25.23	25.57	26.24	1451.73	1500.68	-3

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.03	4.00	4.20	465.11	494.00	-6
1,3,5-Trinitrobenzene	4.67	4.66	4.86	466.86	500.50	-7
1,4-Dinitrobenzene	5.48	5.52	5.72	446.36	497.00	-10
o-Dinitrobenzene	6.01	6.13	6.33	469.90	502.00	-6
1,3-DNB	6.41	6.49	6.69	478.10	500.50	-4
Tetryl + Breakdown	7.24	7.33	7.61	48.68 + 426.34 = 475.02	499.50	~~-15~~ -5
2,4,6-Trinitrotoluene	7.61	7.78	7.98	535.38	501.50	7
4-Amino-2,6-dinitrotoluene	9.42	9.69	9.97	433.87	500.50	-13
2-Amino-4,6-dinitrotoluene	9.72	9.97	10.25	445.94	500.00	-11
2,6-Dinitrotoluene	10.09	10.38	10.66	505.51	500.50	1
2,4-Dinitrotoluene	10.57	10.86	11.14	510.70	500.50	2
2-Nitrotoluene	12.39	12.80	13.08	430.43	496.00	-13
4-Nitrotoluene	13.66	14.11	14.43	441.18	497.50	-11
3-Nitrotoluene	14.32	14.79	15.12	491.25	495.00	-1
2-NMX	24.77	25.41	26.09	1471.64	1500.68	-2
1-Nitronaphthalene	32.49	32.62	33.11	497.13	501.00	-1

Compounds 16 Average of %D: 7

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NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.73	2.65	2.85	496.15	498.50	0
Nitroglycerin	8.39	8.51	8.89	8676.23	10030.00	-13
PETN	15.34	15.75	16.33	10819.72	9980.00	8
2-NMX	24.92	25.57	26.24	1447.83	1500.68	-4

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.95R Time Analyzed: 11:13

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.02	4.00	4.20	461.67	494.00	-7
1,3,5-Trinitrobenzene	4.67	4.66	4.86	465.46	500.50	-7
1,4-Dinitrobenzene	5.51	5.52	5.72	449.17	497.00	-10
o-Dinitrobenzene	6.08	6.13	6.33	449.99	502.00	-10
1,3-DNB	6.46	6.49	6.69	484.28	500.50	-3
Tetryl + Breakdown	7.31	7.33	7.61	62.58 + 419.98 = 482.56	499.50	-16
2,4,6-Trinitrotoluene	7.71	7.78	7.98	525.92	501.50	5
4-Amino-2,6-dinitrotoluene	9.61	9.69	9.97	428.59	500.50	-14
2-Amino-4,6-dinitrotoluene	9.89	9.97	10.25	438.90	500.00	-12
2,6-Dinitrotoluene	10.30	10.38	10.66	510.59	500.50	2
2,4-Dinitrotoluene	10.77	10.86	11.14	512.62	500.50	2
2-Nitrotoluene	12.66	12.80	13.08	427.69	496.00	-14
4-Nitrotoluene	13.96	14.11	14.43	436.03	497.50	-12
3-Nitrotoluene	14.63	14.79	15.12	497.22	495.00	0
2-NMX	25.20	25.41	26.09	1456.01	1500.68	-3
1-Nitronaphthalene	32.62	32.62	33.11	509.77	501.00	2

Compounds 16 Average of %D: 7

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NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.95R Time Analyzed: 11:13

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.70	2.65	2.85	492.86	498.50	-1
Nitroglycerin	8.51	8.51	8.89	8772.23	10030.00	-13
PETN	15.69	15.75	16.33	9547.91	9980.00	-4
2-NMX	25.35	25.57	26.24	1483.16	1500.68	-1

Compounds 4 Average of %D: 5

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	4.29	4.18	4.38	443.58	500.00	-11
RDX	5.26	5.16	5.36	502.76	500.00	1
Nitrobenzene	12.89	12.72	13.04	496.28	500.00	-1
o-Dinitrobenzene	14.91	14.74	15.10	502.21	500.00	0
4-Amino-2,6-dinitrotoluene	16.83	16.70	17.02	499.96	499.80	0
1,3-DNB	19.05	18.89	19.19	499.49	499.55	0
1,4-Dinitrobenzene	19.84	19.70	20.00	500.62	500.00	0
2-Nitrotoluene	24.33	24.07	24.59	501.96	500.00	0
4-Nitrotoluene	27.90	27.68	28.20	466.62	499.55	-7
1,3,5-Trinitrobenzene	29.94	29.74	30.14	443.53	499.80	-11
2,6-Dinitrotoluene	30.88	30.69	31.09	498.30	500.00	0
2,4-Dinitrotoluene	33.78	33.68	33.90	528.91	500.00	6
2-NMX	34.22	34.13	34.33	990.46	1000.45	-1
Tetryl	34.52	34.43	34.63	475.03	500.00	-5
2,4,6-Trinitrotoluene	35.46	35.36	35.56	503.01	499.80	1
1-Nitronaphthalene	36.46	36.36	36.56	517.66	500.00	4

Compounds 16 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Nitroglycerin	9.70	9.60	9.80	5470.55	6000.00	-9
PETN	26.30	26.07	26.49	5363.19	6000.00	-11

Compounds 2 Average of %D: 10

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.08	4.00	4.20	465.76	494.00	-6
1,3,5-Trinitrobenzene	4.74	4.66	4.86	466.27	500.50	-7
1,4-Dinitrobenzene	5.59	5.52	5.72	451.96	497.00	-9
o-Dinitrobenzene	6.19	6.13	6.33	426.52	502.00	-15
1,3-DNB	6.56	6.49	6.69	496.47	500.50	-1
Tetryl + Breakdown	7.43	7.33	7.61	44.68 + 422.23 = 466.91	499.50	-15 -7
2,4,6-Trinitrotoluene	7.83	7.78	7.98	530.22	501.50	6
4-Amino-2,6-dinitrotoluene	9.78	9.69	9.97	453.91	500.50	-9
2-Amino-4,6-dinitrotoluene	10.07	9.97	10.25	437.29	500.00	-13
2,6-Dinitrotoluene	10.46	10.38	10.66	471.03	500.50	-6
2,4-Dinitrotoluene	10.95	10.86	11.14	522.40	500.50	4
2-Nitrotoluene	12.88	12.80	13.08	438.01	496.00	-12
4-Nitrotoluene	14.20	14.11	14.43	435.43	497.50	-12
3-Nitrotoluene	14.89	14.79	15.12	515.06	495.00	4
2-NMX	25.68	25.41	26.09	1454.63	1500.68	-3
1-Nitronaphthalene	32.82	32.62	33.11	520.34	501.00	4

Compounds 16 Average of %D: 8

James H. Place
Senior Chemist

NOV 20 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310B.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.74	2.65	2.85	490.98	498.50	-2
Nitroglycerin	8.65	8.51	8.89	8773.75	10030.00	-13
PETN	15.96	15.75	16.33	9460.47	9980.00	-5
2-NMX	25.81	25.57	26.24	1451.79	1500.68	-3

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.04	4.00	4.20	462.72	494.00	-6
1,3,5-Trinitrobenzene	4.69	4.66	4.86	463.63	500.50	-7
1,4-Dinitrobenzene	5.52	5.52	5.72	451.59	497.00	-9
o-Dinitrobenzene	6.08	6.13	6.33	464.06	502.00	-8
1,3-DNB	6.46	6.49	6.69	477.62	500.50	-5
Tetryl + Breakdown	7.31	7.33	7.61	45.61 + 414.48 = 460.09	499.50	-17 -8
2,4,6-Trinitrotoluene	7.69	7.78	7.98	526.99	501.50	5
4-Amino-2,6-dinitrotoluene	9.56	9.69	9.97	426.79	500.50	-15
2-Amino-4,6-dinitrotoluene	9.85	9.97	10.25	441.64	500.00	-12
2,6-Dinitrotoluene	10.25	10.38	10.66	480.78	500.50	-4
2,4-Dinitrotoluene	10.72	10.86	11.14	514.47	500.50	3
2-Nitrotoluene	12.61	12.80	13.08	434.87	496.00	-12
4-Nitrotoluene	13.91	14.11	14.43	445.43	497.50	-10
3-Nitrotoluene	14.57	14.79	15.12	501.57	495.00	1
2-NMX	25.10	25.41	26.09	1490.67	1500.68	-1
1-Nitronaphthalene	32.59	32.62	33.11	508.57	501.00	2

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.71	2.65	2.85	493.56	498.50	-1
Nitroglycerin	8.49	8.51	8.89	8724.02	10030.00	-13
PETN	15.62	15.75	16.33	9454.38	9980.00	-5
2-NMX	25.23	25.57	26.24	1451.73	1500.68	-3

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.03	4.00	4.20	465.11	494.00	-6
1,3,5-Trinitrobenzene	4.67	4.66	4.86	466.86	500.50	-7
1,4-Dinitrobenzene	5.48	5.52	5.72	446.36	497.00	-10
o-Dinitrobenzene	6.01	6.13	6.33	469.90	502.00	-6
1,3-DNB	6.41	6.49	6.69	478.10	500.50	-4
Tetryl + Breakdown	7.24	7.33	7.61	48.68 + 426.34 = 47502	499.50	~~-15~~ -5
2,4,6-Trinitrotoluene	7.61	7.78	7.98	535.38	501.50	7
4-Amino-2,6-dinitrotoluene	9.42	9.69	9.97	433.87	500.50	-13
2-Amino-4,6-dinitrotoluene	9.72	9.97	10.25	445.94	500.00	-11
2,6-Dinitrotoluene	10.09	10.38	10.66	505.51	500.50	1
2,4-Dinitrotoluene	10.57	10.86	11.14	510.70	500.50	2
2-Nitrotoluene	12.39	12.80	13.08	430.43	496.00	-13
4-Nitrotoluene	13.66	14.11	14.43	441.18	497.50	-11
3-Nitrotoluene	14.32	14.79	15.12	491.25	495.00	-1
2-NMX	24.77	25.41	26.09	1471.64	1500.68	-2
1-Nitronaphthalene	32.49	32.62	33.11	497.13	501.00	-1

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.73	2.65	2.85	496.15	498.50	0
Nitroglycerin	8.39	8.51	8.89	8676.23	10030.00	-13
PETN	15.34	15.75	16.33	10819.72	9980.00	8
2-NMX	24.92	25.57	26.24	1447.83	1500.68	-4

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.95R Time Analyzed: 11:13

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.02	4.00	4.20	461.67	494.00	-7
1,3,5-Trinitrobenzene	4.67	4.66	4.86	465.46	500.50	-7
1,4-Dinitrobenzene	5.51	5.52	5.72	449.17	497.00	-10
o-Dinitrobenzene	6.08	6.13	6.33	449.99	502.00	-10
1,3-DNB	6.46	6.49	6.69	484.28	500.50	-3
Tetryl + Breakdown	7.31	7.33	7.61	62.58 + 419.98 = 482.56	499.50	-16
2,4,6-Trinitrotoluene	7.71	7.78	7.98	525.92	501.50	5
4-Amino-2,6-dinitrotoluene	9.61	9.69	9.97	428.59	500.50	-14
2-Amino-4,6-dinitrotoluene	9.89	9.97	10.25	438.90	500.00	-12
2,6-Dinitrotoluene	10.30	10.38	10.66	510.59	500.50	2
2,4-Dinitrotoluene	10.77	10.86	11.14	512.62	500.50	2
2-Nitrotoluene	12.66	12.80	13.08	427.69	496.00	-14
4-Nitrotoluene	13.96	14.11	14.43	436.03	497.50	-12
3-Nitrotoluene	14.63	14.79	15.12	497.22	495.00	0
2-NMX	25.20	25.41	26.09	1456.01	1500.68	-3
1-Nitronaphthalene	32.62	32.62	33.11	509.77	501.00	2

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.95R Time Analyzed: 11:13

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.70	2.65	2.85	492.86	498.50	-1
Nitroglycerin	8.51	8.51	8.89	8772.23	10030.00	-13
PETN	15.69	15.75	16.33	9547.91	9980.00	-4
2-NMX	25.35	25.57	26.24	1483.16	1500.68	-1

Compounds 4 Average of %D: 5

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310	26.08
002		CONDITIONER	11/15/2013	17:25:53	2E12310	25.96
003		CONDITIONER	11/15/2013	18:08:16	2E12310	25.89
004		CONDITIONER	11/15/2013	18:50:40	2E12310	25.82
005		CONDITIONER	11/15/2013	19:33:09	2E12310	25.86
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310	25.75
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310	
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310	25.87
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310	25.99
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310	25.93
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310	
016	C5605	7269438	11/16/2013	03:19:46	2E12310	26.08
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310	26.15
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310	26.20
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310	26.01
021	C5611	7269454	11/16/2013	06:51:59	2E12310	25.86
022	C5621	7269467	11/16/2013	07:34:27	2E12310	25.83
023	C5626	7269472	11/16/2013	08:16:55	2E12310	26.09
024	C5629	7269475	11/16/2013	08:59:20	2E12310	26.01
025	C5632	7269478	11/16/2013	09:41:45	2E12310	25.85
026	C5638	7269484	11/16/2013	10:24:11	2E12310	26.06
027	C5641	7269487	11/16/2013	11:06:32	2E12310	25.99
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310	25.95
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310	25.82
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310	26.00
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310	25.60
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310	25.77

	ICAL Dates		ICAL RT	QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310	25.96
035	C5905	7269504	11/16/2013	16:46:09	2E12310	25.97
036	C5915	7269514	11/16/2013	17:28:35	2E12310	26.07
037	C5921	7269520	11/16/2013	18:11:00	2E12310	25.86
038	C5927	7269526	11/16/2013	18:53:29	2E12310	26.00
039	C5930	7269529	11/16/2013	19:35:53	2E12310	26.01
040	C5933	7269532	11/16/2013	20:18:18	2E12310	26.10
041	C5939	7269538	11/16/2013	21:00:45	2E12310	25.96
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310	25.97
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310	
044	C5942	7269541	11/16/2013	23:07:56	2E12310	26.07
045	C5945	7269544	11/16/2013	23:50:21	2E12310	25.96
046	C5951	7269550	11/17/2013	00:32:48	2E12310	26.22
047	C5954	7269553	11/17/2013	01:15:16	2E12310	26.27
048	C5960	7269559	11/17/2013	01:57:42	2E12310	25.93
049	C6109	7270974	11/17/2013	02:40:06	2E12310	25.87
050	C6109	7270975	11/17/2013	03:22:32	2E12310	26.10
051	C6109	7270976	11/17/2013	04:05:01	2E12310	26.10
052	C6115	7270986	11/17/2013	04:47:25	2E12310	26.08
053	C6118	7270989	11/17/2013	05:29:51	2E12310	26.13
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310	26.04
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310	
056	C6124	7270995	11/17/2013	07:37:16	2E12310	25.86
057	C6130	7271001	11/17/2013	08:19:42	2E12310	25.71
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310	25.67
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310	25.60
062	R2N51	7265223	11/17/2013	11:51:56	3E12310	25.43
063	R2N52	7265224	11/17/2013	12:34:25	3E12310	25.78
064	R2M61	7265228	11/17/2013	13:16:50	3E12310	25.73
065	R2163	7265230	11/17/2013	13:59:19	3E12310	25.57
066	R2163	7265231	11/17/2013	14:41:48	3E12310	25.59

	ICAL Dates		ICAL RT	QC Limits
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310	25.63
068	E2161	7265235	11/17/2013	16:06:43	3E12310	25.69
069	R2141	7265238	11/17/2013	16:49:08	3E12310	25.66
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310	25.68
071	R2142	7265240	11/17/2013	18:14:03	3E12310	25.78
072	R2122	7265243	11/17/2013	18:56:31	3E12310	25.22 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310	25.62
074	FBX02	7265248	11/17/2013	20:21:28	3E12310	25.50
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310	25.37 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310	25.41
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310	23.69 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310	25.50
079	FB206	7266799	11/17/2013	23:53:49	3E12310	24.89 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310	25.51
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310	25.10 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310	25.47
083	2D123	7266810	11/18/2013	02:43:40	3E12310	25.33 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310	25.34 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310	25.38 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310	24.56 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310	25.29 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310	25.30 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310	25.30 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310	24.73 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310	25.28 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310	24.77 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310	25.27 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310	25.22 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310	25.20 *

	ICAL Dates		ICAL RT QC Limits	
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310B	26.22
002		CONDITIONER	11/15/2013	17:25:53	2E12310B	26.12
003		CONDITIONER	11/15/2013	18:08:16	2E12310B	26.04
004		CONDITIONER	11/15/2013	18:50:40	2E12310B	25.96
005		CONDITIONER	11/15/2013	19:33:09	2E12310B	26.02
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310B	25.89
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310B	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310B	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310B	26.39
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310B	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310B	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310B	26.02
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310B	26.16
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310B	26.03
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310B	
016	C5605	7269438	11/16/2013	03:19:46	2E12310B	26.24
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310B	26.27
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310B	26.33
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310B	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310B	26.10
021	C5611	7269454	11/16/2013	06:51:59	2E12310B	26.02
022	C5621	7269467	11/16/2013	07:34:27	2E12310B	26.02
023	C5626	7269472	11/16/2013	08:16:55	2E12310B	26.25
024	C5629	7269475	11/16/2013	08:59:20	2E12310B	26.17
025	C5632	7269478	11/16/2013	09:41:45	2E12310B	26.00
026	C5638	7269484	11/16/2013	10:24:11	2E12310B	26.21
027	C5641	7269487	11/16/2013	11:06:32	2E12310B	26.17
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310B	26.09
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310B	26.00
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310B	26.14
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310B	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310B	25.72
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310B	25.92

	ICAL Dates		ICAL RT	QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91	(25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310B	26.16
035	C5905	7269504	11/16/2013	16:46:09	2E12310B	26.09
036	C5915	7269514	11/16/2013	17:28:35	2E12310B	26.26
037	C5921	7269520	11/16/2013	18:11:00	2E12310B	26.03
038	C5927	7269526	11/16/2013	18:53:29	2E12310B	26.18
039	C5930	7269529	11/16/2013	19:35:53	2E12310B	26.18
040	C5933	7269532	11/16/2013	20:18:18	2E12310B	26.19
041	C5939	7269538	11/16/2013	21:00:45	2E12310B	26.09
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310B	26.11
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310B	
044	C5942	7269541	11/16/2013	23:07:56	2E12310B	26.25
045	C5945	7269544	11/16/2013	23:50:21	2E12310B	26.15
046	C5951	7269550	11/17/2013	00:32:48	2E12310B	26.36
047	C5954	7269553	11/17/2013	01:15:16	2E12310B	26.41
048	C5960	7269559	11/17/2013	01:57:42	2E12310B	26.10
049	C6109	7270974	11/17/2013	02:40:06	2E12310B	26.06
050	C6109	7270975	11/17/2013	03:22:32	2E12310B	26.23
051	C6109	7270976	11/17/2013	04:05:01	2E12310B	26.23
052	C6115	7270986	11/17/2013	04:47:25	2E12310B	26.18
053	C6118	7270989	11/17/2013	05:29:51	2E12310B	26.26
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310B	26.22
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310B	
056	C6124	7270995	11/17/2013	07:37:16	2E12310B	26.00
057	C6130	7271001	11/17/2013	08:19:42	2E12310B	25.85
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310B	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310B	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310B	25.85
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310B	25.81
062	R2N51	7265223	11/17/2013	11:51:56	3E12310B	
063	R2N52	7265224	11/17/2013	12:34:25	3E12310B	25.92
064	R2M61	7265228	11/17/2013	13:16:50	3E12310B	25.94
065	R2163	7265230	11/17/2013	13:59:19	3E12310B	25.71
066	R2163	7265231	11/17/2013	14:41:48	3E12310B	25.70

	ICAL Dates		ICAL RT QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310B	25.79
068	E2161	7265235	11/17/2013	16:06:43	3E12310B	25.82
069	R2141	7265238	11/17/2013	16:49:08	3E12310B	25.80
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310B	25.81
071	R2142	7265240	11/17/2013	18:14:03	3E12310B	25.87
072	R2122	7265243	11/17/2013	18:56:31	3E12310B	25.36 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310B	25.77
074	FBX02	7265248	11/17/2013	20:21:28	3E12310B	25.62
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310B	25.50 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310B	25.58
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310B	23.84 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310B	25.63
079	FB206	7266799	11/17/2013	23:53:49	3E12310B	25.07 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310B	25.65
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310B	25.23 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310B	25.61
083	2D123	7266810	11/18/2013	02:43:40	3E12310B	25.49 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310B	25.49 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310B	25.52 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310B	24.67 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310B	25.45 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310B	25.45 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310B	25.44 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310B	24.89 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310B	25.47 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310B	24.92 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310B	25.42 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310B	25.32 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310B	25.35 *

	ICAL Dates		ICAL RT QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D

ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D

ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT QC Limits	
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310	34.29
002		CONDITIONER	11/15/2013	17:25:53	2C12310	34.29
003		CONDITIONER	11/15/2013	18:08:16	2C12310	34.29
004		CONDITIONER	11/15/2013	18:50:40	2C12310	34.29
005		CONDITIONER	11/15/2013	19:33:09	2C12310	34.27
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310	34.29
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310	34.25
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310	34.24
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310	34.25
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310	34.24
015	C5605	7269438	11/16/2013	03:19:46	2C12310	34.22
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310	34.18
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310	34.17
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310	34.27
020	C5611	7269454	11/16/2013	06:51:59	2C12310	34.21
021	C5621	7269467	11/16/2013	07:34:27	2C12310	34.22
022	C5626	7269472	11/16/2013	08:16:55	2C12310	34.19
023	C5629	7269475	11/16/2013	08:59:19	2C12310	34.22
024	C5632	7269478	11/16/2013	09:41:45	2C12310	34.24
025	C5638	7269484	11/16/2013	10:24:11	2C12310	34.19
026	C5641	7269487	11/16/2013	11:06:32	2C12310	34.19
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310	34.20
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310	34.28
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310	34.20
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310	34.17
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310	34.24
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310	34.22
033	C5902	7269501	11/16/2013	16:03:43	2C12310	34.20

	ICAL Dates		ICAL RT	QC Limits
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310	34.19
035	C5915	7269514	11/16/2013	17:28:35	2C12310	34.15
036	C5921	7269520	11/16/2013	18:11:00	2C12310	34.23
037	C5927	7269526	11/16/2013	18:53:29	2C12310	34.19
038	C5930	7269529	11/16/2013	19:35:53	2C12310	34.17
039	C5933	7269532	11/16/2013	20:18:19	2C12310	34.21
040	C5939	7269538	11/16/2013	21:00:44	2C12310	34.23
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310	34.20
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310	
043	C5942	7269541	11/16/2013	23:07:56	2C12310	34.17
044	C5945	7269544	11/16/2013	23:50:21	2C12310	34.18
045	C5951	7269550	11/17/2013	00:32:48	2C12310	34.16
046	C5954	7269553	11/17/2013	01:15:16	2C12310	34.16
047	C5960	7269559	11/17/2013	01:57:42	2C12310	34.21
048	C6109	7270974	11/17/2013	02:40:06	2C12310	34.22
049	C6109	7270975	11/17/2013	03:22:31	2C12310	34.23
050	C6109	7270976	11/17/2013	04:05:00	2C12310	34.25
051	C6115	7270986	11/17/2013	04:47:25	2C12310	34.19
052	C6118	7270989	11/17/2013	05:29:51	2C12310	34.18
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310	34.20
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310	
055	C6124	7270995	11/17/2013	07:37:16	2C12310	34.21
056	C6130	7271001	11/17/2013	08:19:42	2C12310	34.23
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310	34.21
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310	34.26
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310	34.29
061	R2N51	7265223	11/17/2013	11:51:56	3C12310	34.30
062	R2N52	7265224	11/17/2013	12:34:25	3C12310	34.26
063	R2M61	7265228	11/17/2013	13:16:50	3C12310	34.23
064	R2163	7265230	11/17/2013	13:59:19	3C12310	34.29
065	R2163	7265231	11/17/2013	14:41:48	3C12310	34.34 *
066	R2163	7265232	11/17/2013	15:24:17	3C12310	34.32 *

	ICAL Dates		ICAL RT	QC Limits
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310	34.26
068	R2141	7265238	11/17/2013	16:49:08	3C12310	34.27
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310	34.24
070	R2142	7265240	11/17/2013	18:14:03	3C12310	34.26
071	R2122	7265243	11/17/2013	18:56:30	3C12310	34.20
072	FBX01	7265247	11/17/2013	19:38:55	3C12310	34.28
073	FBX02	7265248	11/17/2013	20:21:28	3C12310	34.29
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310	34.30
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310	34.35 *
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310	34.29
077	FB106	7266798	11/17/2013	23:11:20	3C12310	34.30
078	FB206	7266799	11/17/2013	23:53:48	3C12310	34.18
079	2B152	7266805	11/18/2013	00:36:17	3C12310	34.29
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310	34.26
081	2B151	7266807	11/18/2013	02:01:14	3C12310	34.30
082	2D123	7266810	11/18/2013	02:43:40	3C12310	34.31
083	2D121	7266811	11/18/2013	03:25:57	3C12310	34.32 *
084	3--FD	7266819	11/18/2013	04:08:25	3C12310	34.32 *
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310	34.23
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310	34.21
087	2G124	7266800	11/18/2013	06:15:48	3C12310	34.30
088	2G124	7266801	11/18/2013	06:58:17	3C12310	34.30
089	2G124	7266802	11/18/2013	07:40:42	3C12310	34.23
090	2G125	7266804	11/18/2013	08:23:14	3C12310	34.31
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310	34.21
092	2C152	7266806	11/18/2013	09:48:09	3C12310	34.30
093	2C151	7266808	11/18/2013	10:30:40	3C12310	34.32 *
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310B	
002		CONDITIONER	11/15/2013	17:25:53	2C12310B	
003		CONDITIONER	11/15/2013	18:08:16	2C12310B	
004		CONDITIONER	11/15/2013	18:50:40	2C12310B	
005		CONDITIONER	11/15/2013	19:33:09	2C12310B	
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310B	
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310B	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310B	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310B	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310B	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310B	
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310B	
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310B	
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310B	
015	C5605	7269438	11/16/2013	03:19:46	2C12310B	
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310B	
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310B	
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310B	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310B	
020	C5611	7269454	11/16/2013	06:51:59	2C12310B	
021	C5621	7269467	11/16/2013	07:34:27	2C12310B	
022	C5626	7269472	11/16/2013	08:16:55	2C12310B	
023	C5629	7269475	11/16/2013	08:59:19	2C12310B	
024	C5632	7269478	11/16/2013	09:41:45	2C12310B	
025	C5638	7269484	11/16/2013	10:24:11	2C12310B	
026	C5641	7269487	11/16/2013	11:06:32	2C12310B	
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310B	
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310B	
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310B	
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310B	
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310B	
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310B	
033	C5902	7269501	11/16/2013	16:03:43	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310B	
035	C5915	7269514	11/16/2013	17:28:35	2C12310B	
036	C5921	7269520	11/16/2013	18:11:00	2C12310B	
037	C5927	7269526	11/16/2013	18:53:29	2C12310B	
038	C5930	7269529	11/16/2013	19:35:53	2C12310B	
039	C5933	7269532	11/16/2013	20:18:19	2C12310B	
040	C5939	7269538	11/16/2013	21:00:44	2C12310B	
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310B	
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310B	
043	C5942	7269541	11/16/2013	23:07:56	2C12310B	
044	C5945	7269544	11/16/2013	23:50:21	2C12310B	
045	C5951	7269550	11/17/2013	00:32:48	2C12310B	
046	C5954	7269553	11/17/2013	01:15:16	2C12310B	
047	C5960	7269559	11/17/2013	01:57:42	2C12310B	
048	C6109	7270974	11/17/2013	02:40:06	2C12310B	
049	C6109	7270975	11/17/2013	03:22:31	2C12310B	
050	C6109	7270976	11/17/2013	04:05:00	2C12310B	
051	C6115	7270986	11/17/2013	04:47:25	2C12310B	
052	C6118	7270989	11/17/2013	05:29:51	2C12310B	
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310B	
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310B	
055	C6124	7270995	11/17/2013	07:37:16	2C12310B	
056	C6130	7271001	11/17/2013	08:19:42	2C12310B	
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310B	
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310B	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310B	
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310B	
061	R2N51	7265223	11/17/2013	11:51:56	3C12310B	
062	R2N52	7265224	11/17/2013	12:34:25	3C12310B	
063	R2M61	7265228	11/17/2013	13:16:50	3C12310B	
064	R2163	7265230	11/17/2013	13:59:19	3C12310B	
065	R2163	7265231	11/17/2013	14:41:48	3C12310B	
066	R2163	7265232	11/17/2013	15:24:17	3C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310B	
068	R2141	7265238	11/17/2013	16:49:08	3C12310B	
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310B	
070	R2142	7265240	11/17/2013	18:14:03	3C12310B	
071	R2122	7265243	11/17/2013	18:56:30	3C12310B	
072	FBX01	7265247	11/17/2013	19:38:55	3C12310B	
073	FBX02	7265248	11/17/2013	20:21:28	3C12310B	
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310B	
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310B	
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310B	
077	FB106	7266798	11/17/2013	23:11:20	3C12310B	
078	FB206	7266799	11/17/2013	23:53:48	3C12310B	
079	2B152	7266805	11/18/2013	00:36:17	3C12310B	
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310B	
081	2B151	7266807	11/18/2013	02:01:14	3C12310B	
082	2D123	7266810	11/18/2013	02:43:40	3C12310B	
083	2D121	7266811	11/18/2013	03:25:57	3C12310B	
084	3--FD	7266819	11/18/2013	04:08:25	3C12310B	
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310B	
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310B	
087	2G124	7266800	11/18/2013	06:15:48	3C12310B	
088	2G124	7266801	11/18/2013	06:58:17	3C12310B	
089	2G124	7266802	11/18/2013	07:40:42	3C12310B	
090	2G125	7266804	11/18/2013	08:23:14	3C12310B	
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310B	
092	2C152	7266806	11/18/2013	09:48:09	3C12310B	
093	2C151	7266808	11/18/2013	10:30:40	3C12310B	
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310B	

	ICAL Dates		ICAL RT QC Limits	
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

Sample Data

Explosives

Fraction: Explosives

06918: Nitroaromatics/Amines in Solid Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	2,000	6,000	ug/kg
PETN	2,000	6,000	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
HMX	250	750	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
RDX	130	300	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
Nitrobenzene	100	300	ug/kg
PETN	2,000	6,000	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
HMX	250	750	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
RDX	130	300	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
Tetryl	150	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
Nitrobenzene	100	300	ug/kg
2,4,6-Trinitrotoluene	100	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
Tetryl	150	300	ug/kg
1-Nitronaphthalene	100	300	ug/kg

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	5.2	15	ug/l
PETN	6.0	18	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
HMX	0.65	2.0	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
RDX	0.20	0.50	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
Nitrobenzene	0.20	0.60	ug/l

Fraction: Explosives

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
1,2-Dinitrobenzene	0.20	0.60	ug/l
HMX	0.65	2.0	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
RDX	0.20	0.50	ug/l
1,2-Dinitrobenzene	0.20	0.60	ug/l
Tetryl	0.40	0.60	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
Nitrobenzene	0.20	0.60	ug/l
2,4,6-Trinitrotoluene	0.20	0.60	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
Tetryl	0.40	0.60	ug/l
1-Nitronaphthalene	0.20	0.60	ug/l

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Data Summary

Sample Name: 7266798 FB106 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 23:11:20
Instrument X6329A
Result file 4E12310.78R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 95% (73 - 122) Conc: 9.487699

Analysis Report (B)

Injected on Nov 17, 2013 23:11:20
Instrument Y6329A
Result file 4C12310.78R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 103% (73 - 122) Conc: 10.305732

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.66	4.72	4.86	43	0.004115
Tetryl	7.33	7.57	7.61	48	0.004435
2,4-Dinitrotoluene	10.86	11.11	11.14	65	0.003916
2-NMX	25.41	25.50	26.09	16171	9.487699

Compound	Min	RT	Max	Area	Amount
1,3-DNB	18.93	19.13	19.23	2041	0.120545
2-NMX	34.12	34.30	34.32	16132	10.305732

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.487699				8.27	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266798 FB106 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 23:11:20
Instrument : CP12--X6329A
Result file : 4E12310.78R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 95% (73-122) Conc.: 9.487699

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.04	4.20	155	-0.214752
1,3,5-TNB	4.66	4.72	4.86	43	0.004115
Tetryl	7.33	7.57	7.61	48	0.002760
Tetryl breakdown	8.27	8.38	8.52	29	0.001675
2,4-DNT	10.86	11.11	11.14	65	0.003916
2-NMX	25.41	25.50	26.09	16171	9.487699

Analysis Report (B)

Injected on : NOV 17, 2013 23:11:20
Instrument : CP12--X6329B
Result file : 4E12310B.78R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 95% (73-122) Conc.: 9.503469

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.63	26.24	232107	9.503469

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			+Breakdown = 0.004435
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.487699				0.17	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

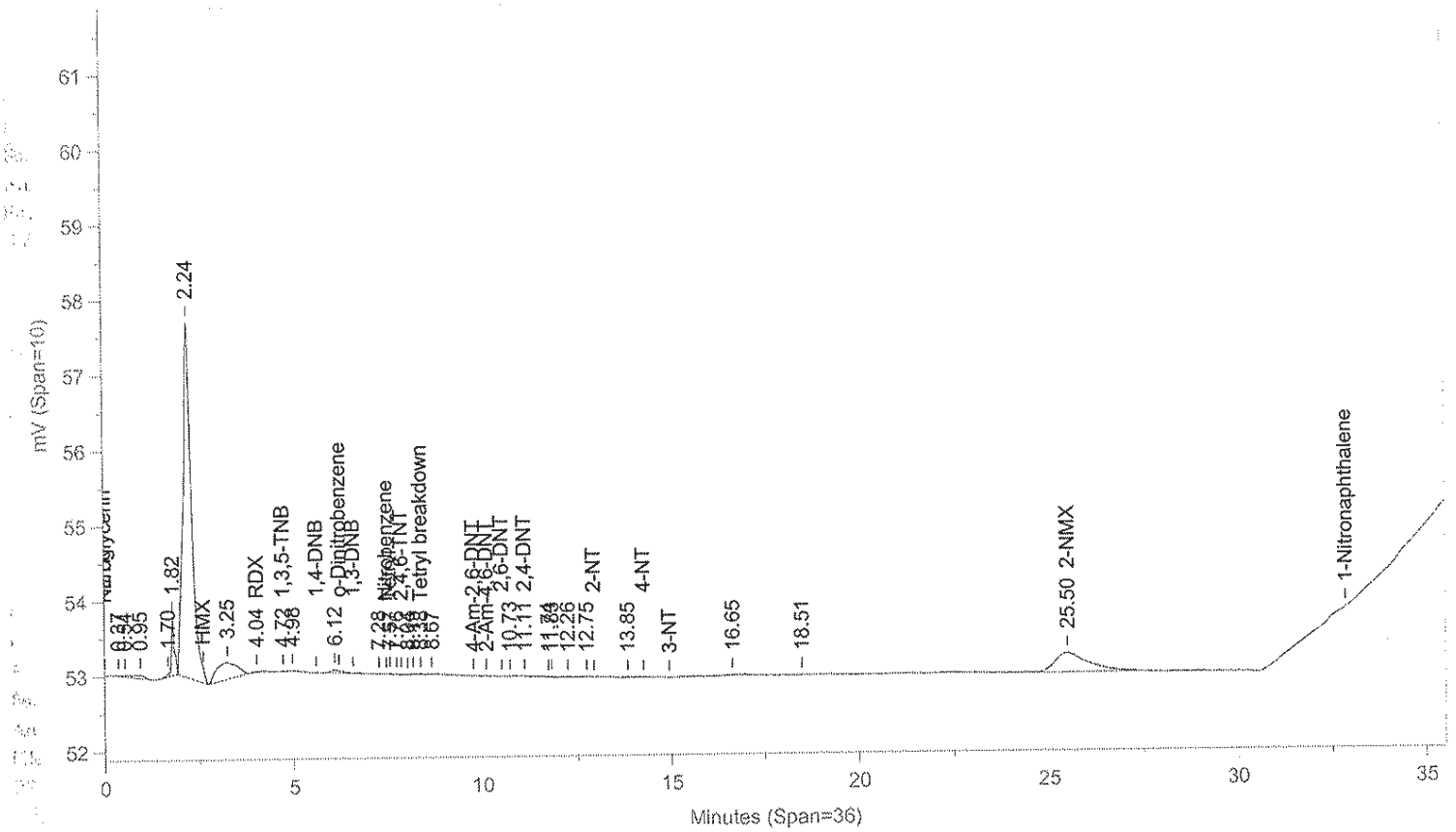
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

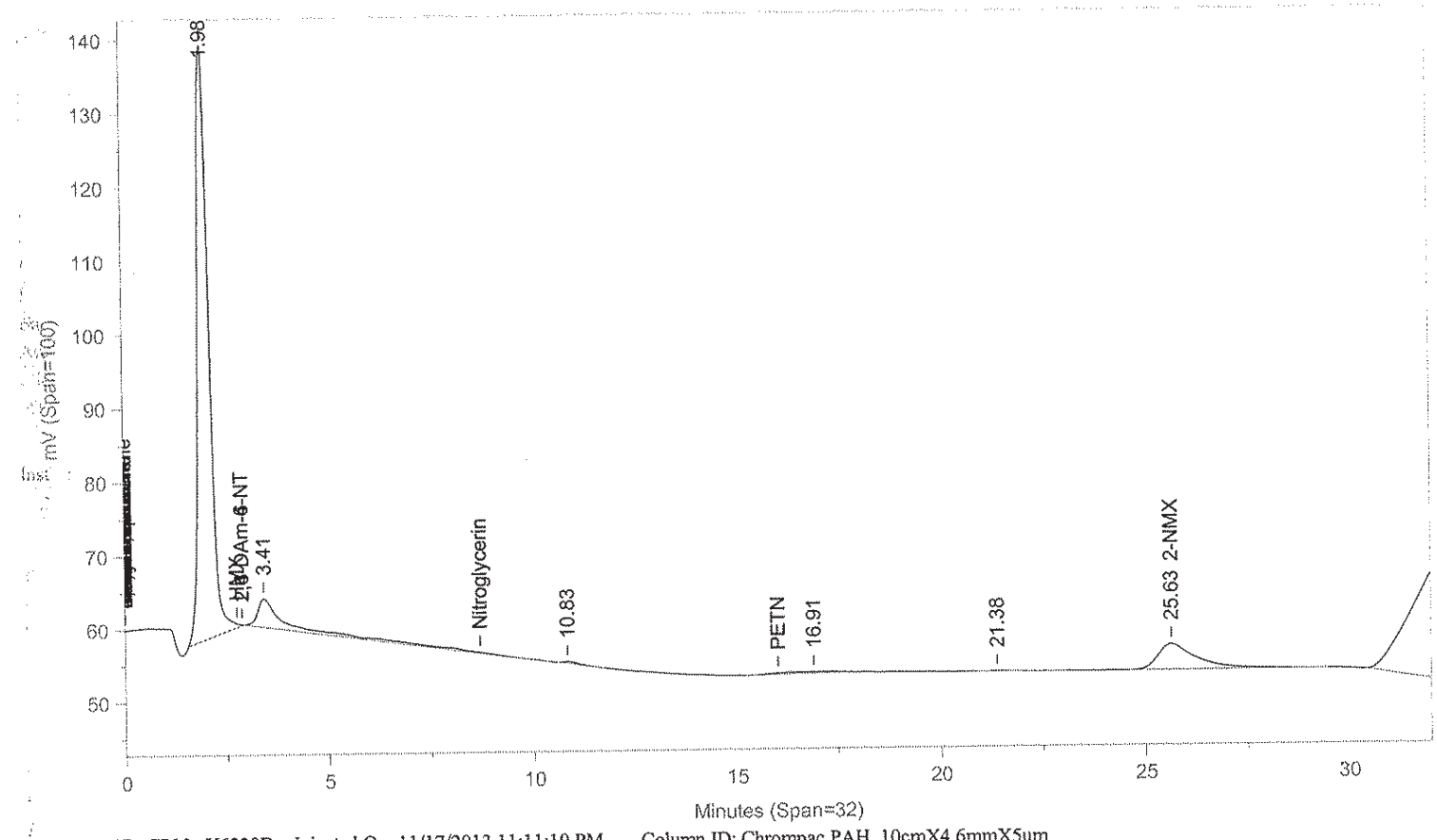
Printed on: 11/20/2013 13:24:01

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.78R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:11:19 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.78R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:11:19 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.038	155	-.215	RDX	.	0	.	RDX
4.723	43	.004	1,3,5-TNB	.	0	.	1,3,5-TNB
7.569	48	.003	Tetryl	.	0	.	Tetryl
8.384	29	.002	Tetryl breakdown	.	0	.	Tetryl breakdown
11.112	65	.004	2,4-DNT	.	0	.	2,4-DNT
25.501	16171	9.488	2-NMX	25.634	232107	9.503	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.78A
Area File: C:\CPWIN\DATA1\4E12310B.78A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:53:24 PM
File Reported On: 11/18/2013 at 2:53:34 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266798 FB106 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 23:11:20
Instrument : CP12--Y6329A
Result file : 4C12310.78R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.305732

Analysis Report (B)

Injected on : NOV 17, 2013 23:11:20
Instrument : CP12--Y6329B
Result file : 4C12310B.78R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.26	5.36	2015	-0.112058
1,3-DNB	18.93	19.13	19.23	2041	0.120545
2-NMX	34.12	34.30	34.32	16132	10.305732

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.305732					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

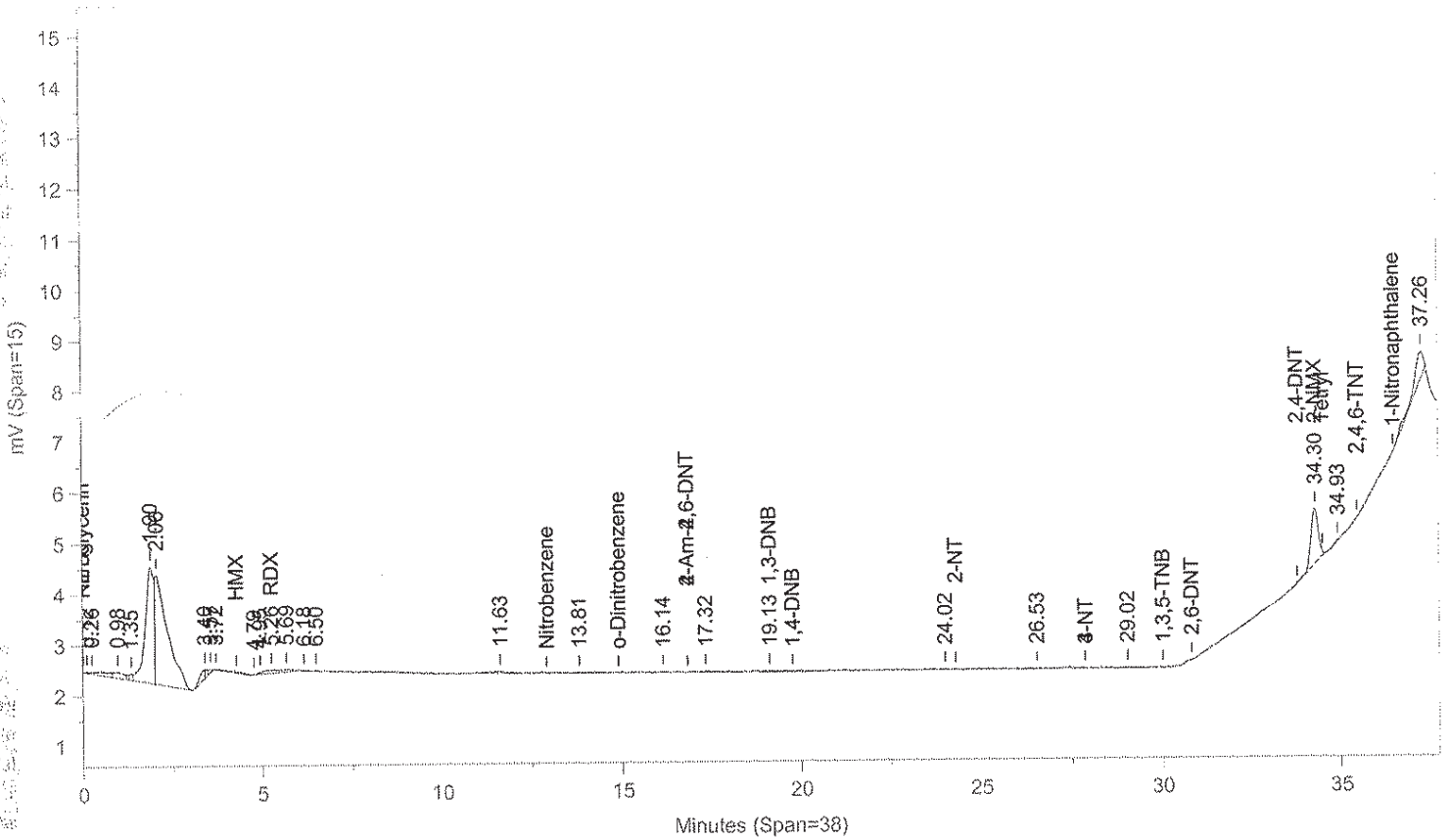
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:23

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.78R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 11:11:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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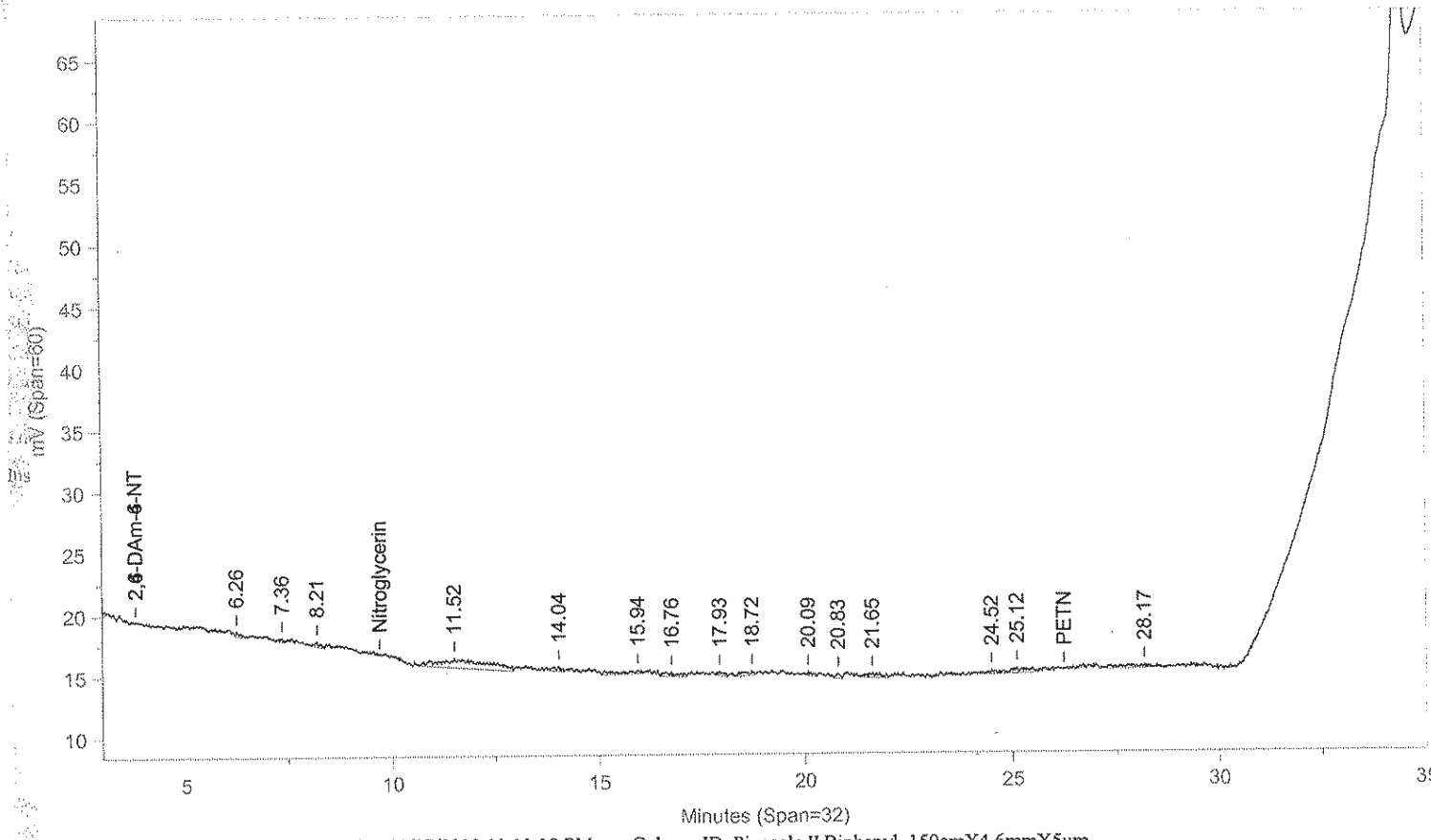

Instrument ID: CP12--Y6329B Injected On: 11/17/2013 11:11:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.263	2015	-.112	RDX	.	0	.	RDX
19.127	2041	.121	1,3-DNB	.	0	.	1,3-DNB
34.304	16132	10.306	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.78A
Area File: C:\CPWIN\DATA1\4C12310B.78A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:20:00 PM
File Reported On: 11/18/2013 at 3:20:10 PM

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Data Summary

Sample Name: 7266799 FB206 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 23:53:49
Instrument X6329A
Result file 4E12310.79R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 85% (73 - 122) Conc: 8.514865

Analysis Report (B)

Injected on Nov 17, 2013 23:53:48
Instrument Y6329A
Result file 4C12310.79R
Calibration file 3C12310
Method file 8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3-DNB	6.49	6.56	6.69	38	0.002318
Tetryl	7.33	7.43	7.61	46	0.00664
2,6-Dinitrotoluene	10.38	10.41	10.66	144	0.023631
2-NMX	25.41	24.89	26.09	14512	8.514865

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.66	16.66	16.98	770	0.039881
2-NMX	34.12	34.18	34.32	17501	11.089927

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.514865				26.27	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Operations
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266799 FB206 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 23:53:49
Instrument : CP12--X6329A
Result file : 4E12310.79R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 85% (73-122) Conc.: 8.514865

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.08	4.20	222	-0.199433
1,3-DNB	6.49	6.56	6.69	38	0.002318
Tetryl	7.33	7.43	7.61	46	0.002689
Tetryl breakdown	8.27	8.41	8.52	68	0.003951
2,6-DNT	10.38	10.41	10.66	144	0.023631
2-NMX	25.41	24.89	26.09	14512	8.514865

Analysis Report (B)

Injected on : NOV 17, 2013 23:53:49
Instrument : CP12--X6329B
Result file : 4E12310B.79R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 108% (73-122) Conc.: 10.831719

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.07	26.24	264548	10.831719

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			*Breakdown = 0.00644
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.514865				23.95	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____ NOV 21 2013
Date: _____

Valerie L. Tomayko
Principal Specialist

Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:24:14

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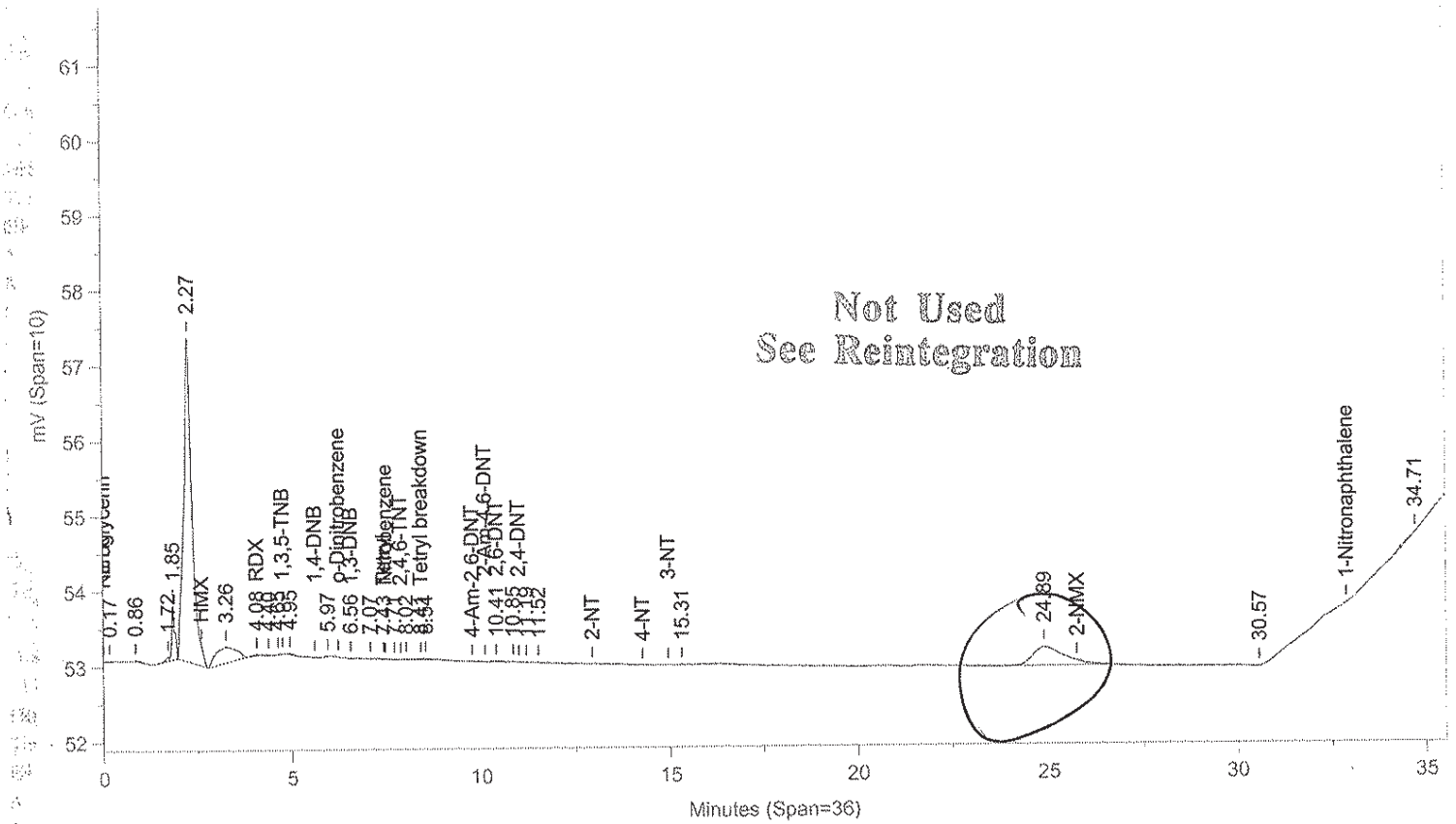
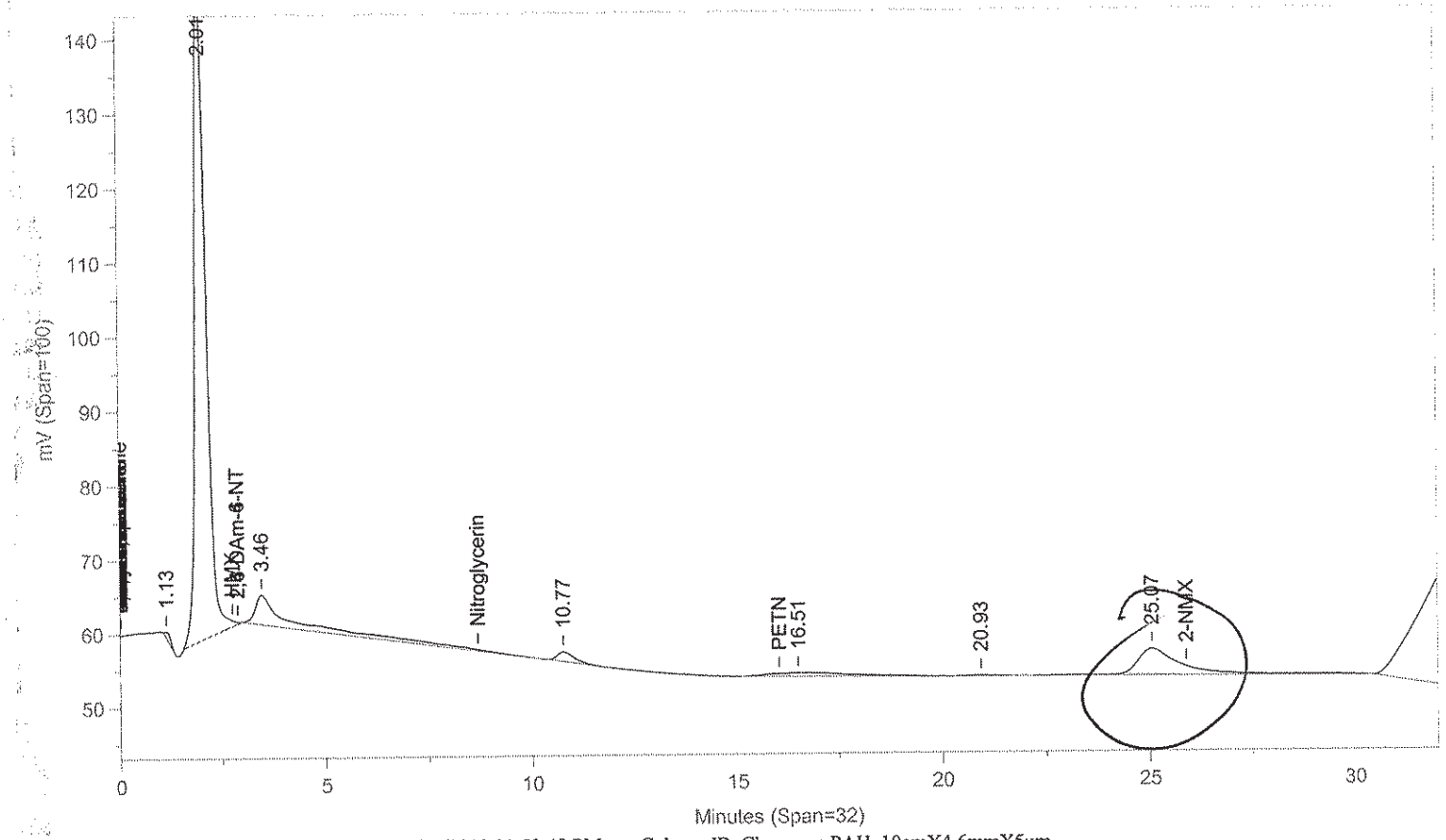


Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:53:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.79R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:53:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

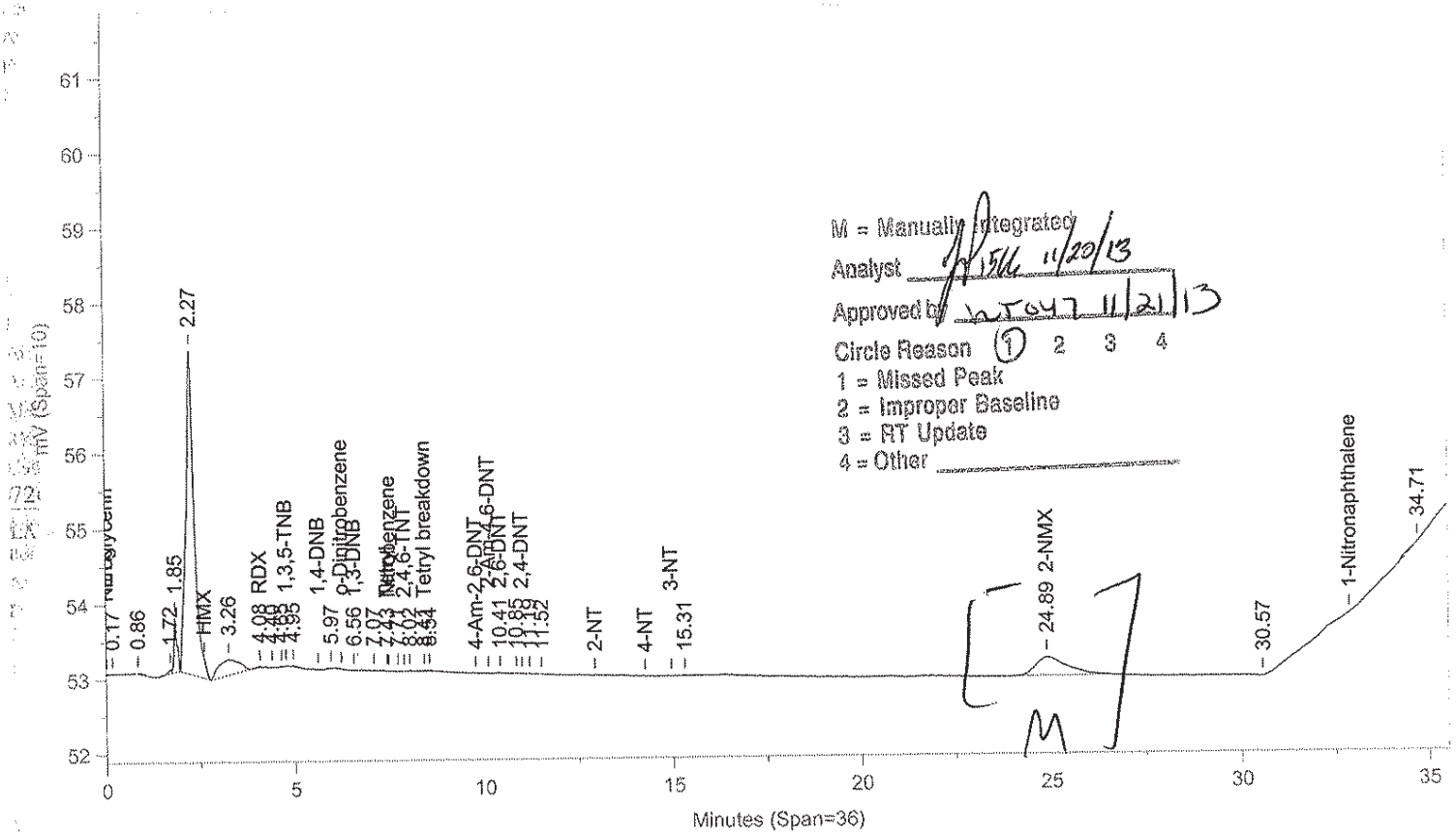
Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.08	222	-.199	RDX	.	0	.	RDX
6.561	38	.002	1,3-DNB	.	0	.	1,3-DNB
7.429	46	.003	Tetryl	.	0	.	Tetryl
8.412	68	.004	Tetryl breakdown	.	0	.	Tetryl breakdown
10.412	144	.024	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.79A
Area File: C:\CPWIN\DATA1\4E12310B.79A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:53:54 PM
File Reported On: 11/18/2013 at 2:54:04 PM

Not Used
See Reintegration

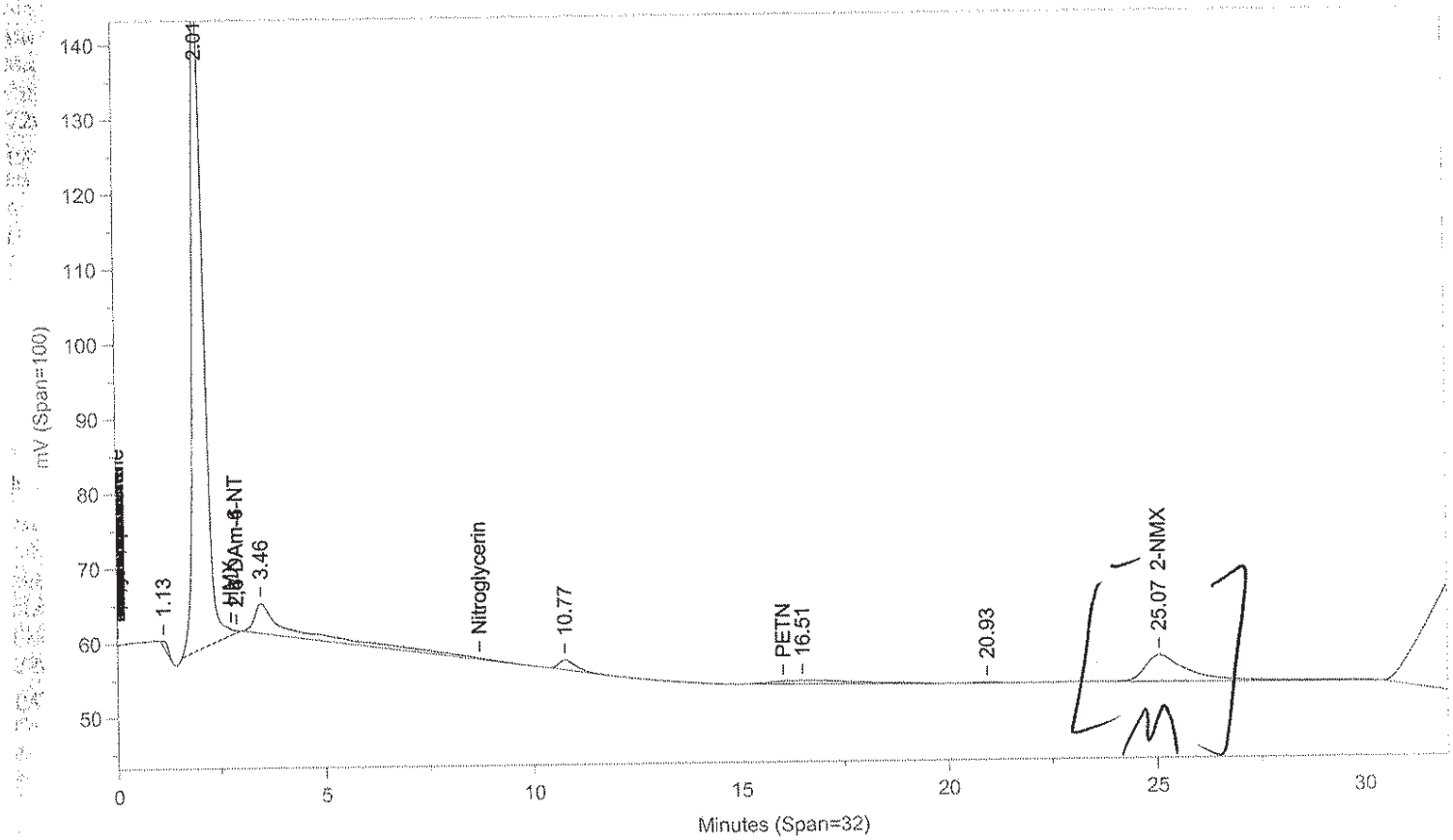
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.79R



M = Manually Integrated
Analyst _____ 11/20/13
Approved by _____ 11/21/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other _____

Instrument ID: CP12--X6329A Injected On: 11/17/2013 11:53:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.79R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 11:53:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.08	222	-.199	RDX	.	0	.	RDX
6.561	38	.002	1,3-DNB	.	0	.	1,3-DNB
7.429	46	.003	Tetryl	.	0	.	Tetryl
8.412	68	.004	Tetryl breakdown	.	0	.	Tetryl breakdown
10.412	144	.024	2,6-DNT	.	0	.	2,6-DNT
24.89	14512	8.515	2-NMX	25.066	264548	10.832	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:05:58 PM
File Reported On: 11/20/2013 at 12:05:58 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266799 FB206 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 23:53:48
Instrument : CP12--Y6329A
Result file : 4C12310.79R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 111% (73-122) Conc.: 11.089927

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.24	5.36	553	-0.372945
4-Am-2,6-DNT	16.66	16.66	16.98	770	0.039881
2-NMX	34.12	34.18	34.32	17501	11.089927

Analysis Report (B)

Injected on : NOV 17, 2013 23:53:48
Instrument : CP12--Y6329B
Result file : 4C12310B.79R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.79	9.82	7319	1.440122

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.089927					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie J. Tomayko, Principal Specialist
Date: NOV 21 2013

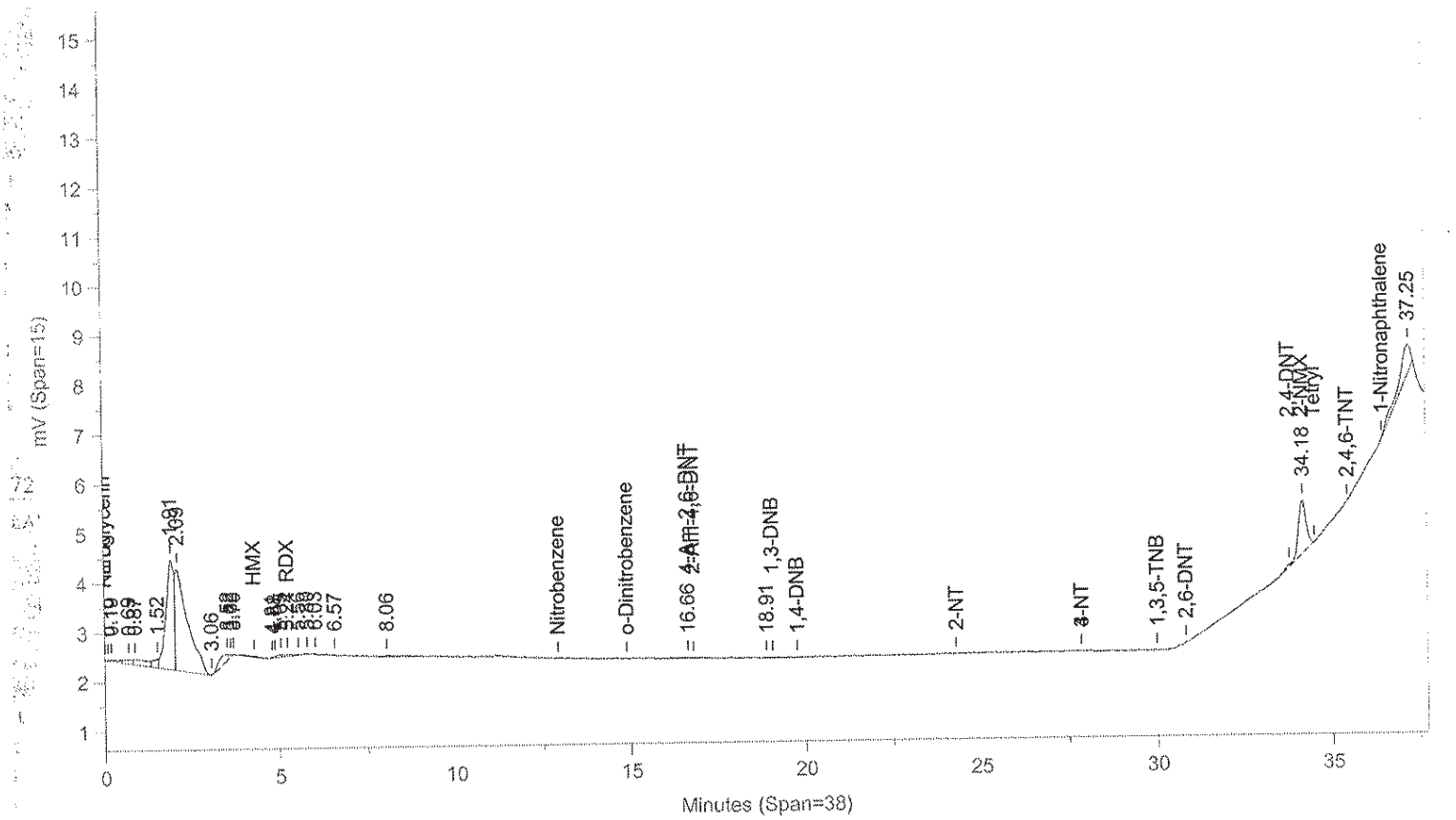
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:35

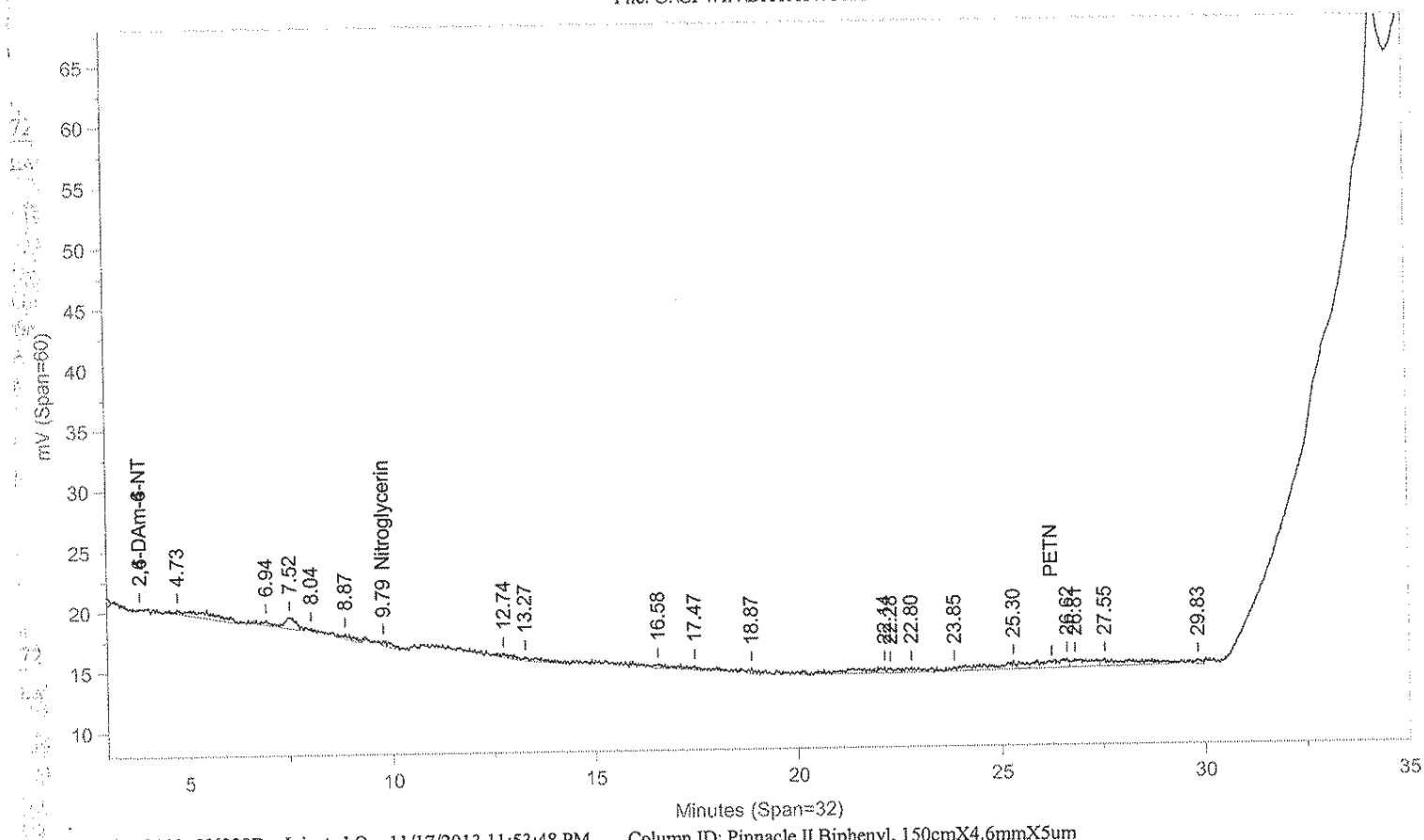
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.79R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 11:53:47 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.79R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 11:53:48 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.239	553	-.373	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.793	7319	1.44	Nitroglycerin
16.661	770	.04	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
34.178	17501	11.09	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.79A
Area File: C:\CPWIN\DATA1\4C12310B.79A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:20:30 PM
File Reported On: 11/18/2013 at 3:20:40 PM

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Data Summary

Sample Name: 7266805 2B152 Sample ID:AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 18, 2013 00:36:17
Instrument X6329A
Result file 4E12310.80R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 78% (73 - 122) Conc: 7.77383

Analysis Report (B)

Injected on Nov 18, 2013 00:36:17
Instrument Y6329A
Result file 4C12310.80R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 105% (73 - 122) Conc: 10.52107

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.94	7.98	9	0.000776
2,4-Dinitrotoluene	10.86	11.04	11.14	135	0.008137
2-NMX	25.41	25.51	26.09	13249	7.77383

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.66	16.91	16.98	13198	0.683826
2-NMX	34.12	34.29	34.32	16508	10.52107

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.7	<0.7			
☑ 2-Amino-4,6-dinitrotoluene			<0.7	<0.7			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	7.77383				30.03	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266805 2B152 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 00:36:17
Instrument : CP12--X6329A
Result file : 4E12310.80R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 78% (73-122) Conc.: 7.77383

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.94	7.98	9	0.000776
2,4-DNT	10.86	11.04	11.14	135	0.008137
2-NMX	25.41	25.51	26.09	13249	7.773830

Analysis Report (B)

Injected on : NOV 18, 2013 00:36:17
Instrument : CP12--X6329B
Result file : 4E12310B.80R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 85% (73-122) Conc.: 8.459313

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.65	26.24	206606	8.459313

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			~~<0.7~~ ~~<0.6~~	~~<0.7~~ ~~<0.3~~			w/c off Confirmation
☑ 2-Am-4,6-DNT			~~<0.7~~ ~~<0.6~~	~~<0.7~~ ~~<0.2~~			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	7.773830				8.45	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tompkins, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:24:27

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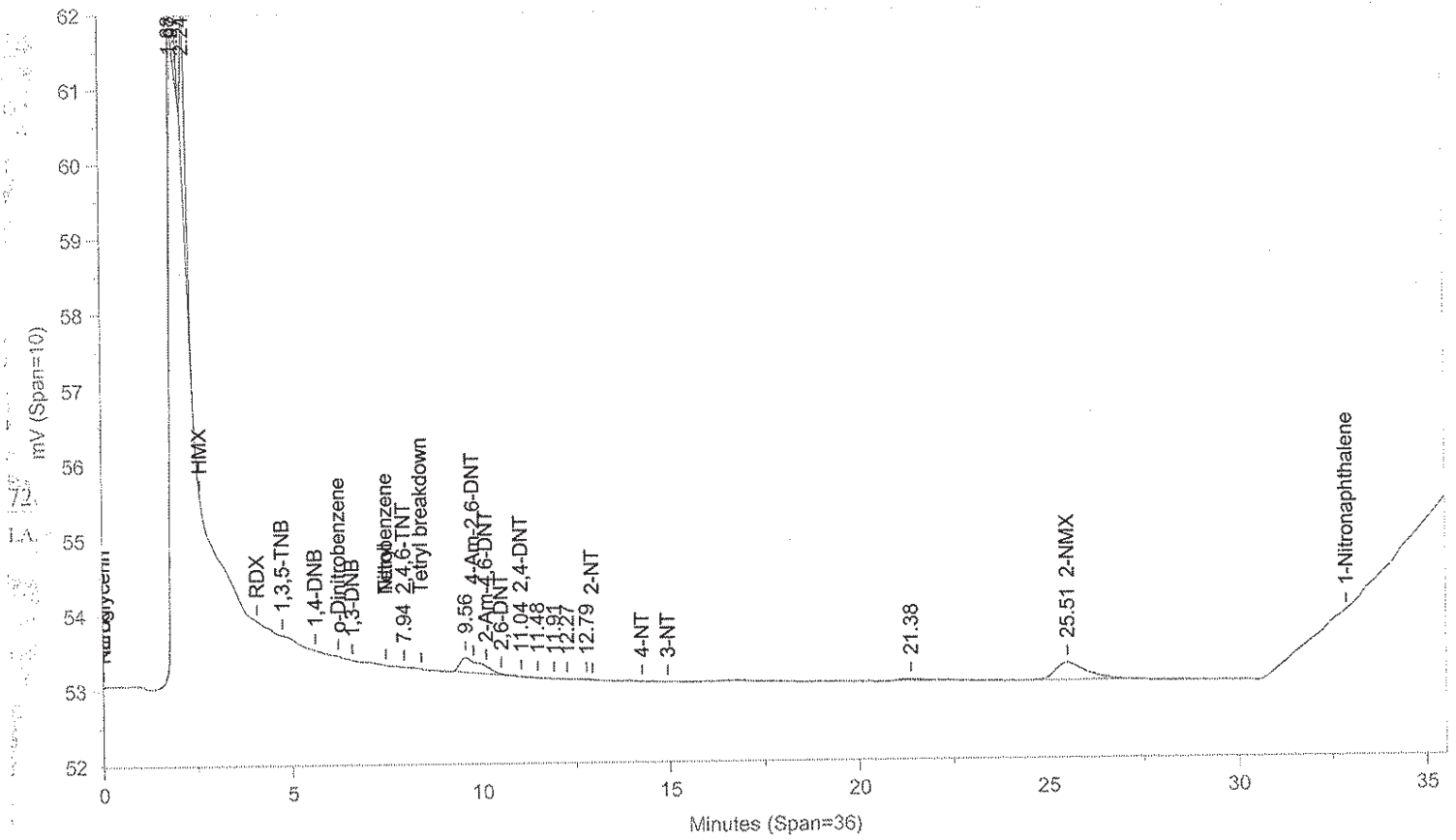
File: C:\CPWIN\DATA1\4E12310.80R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 12:36:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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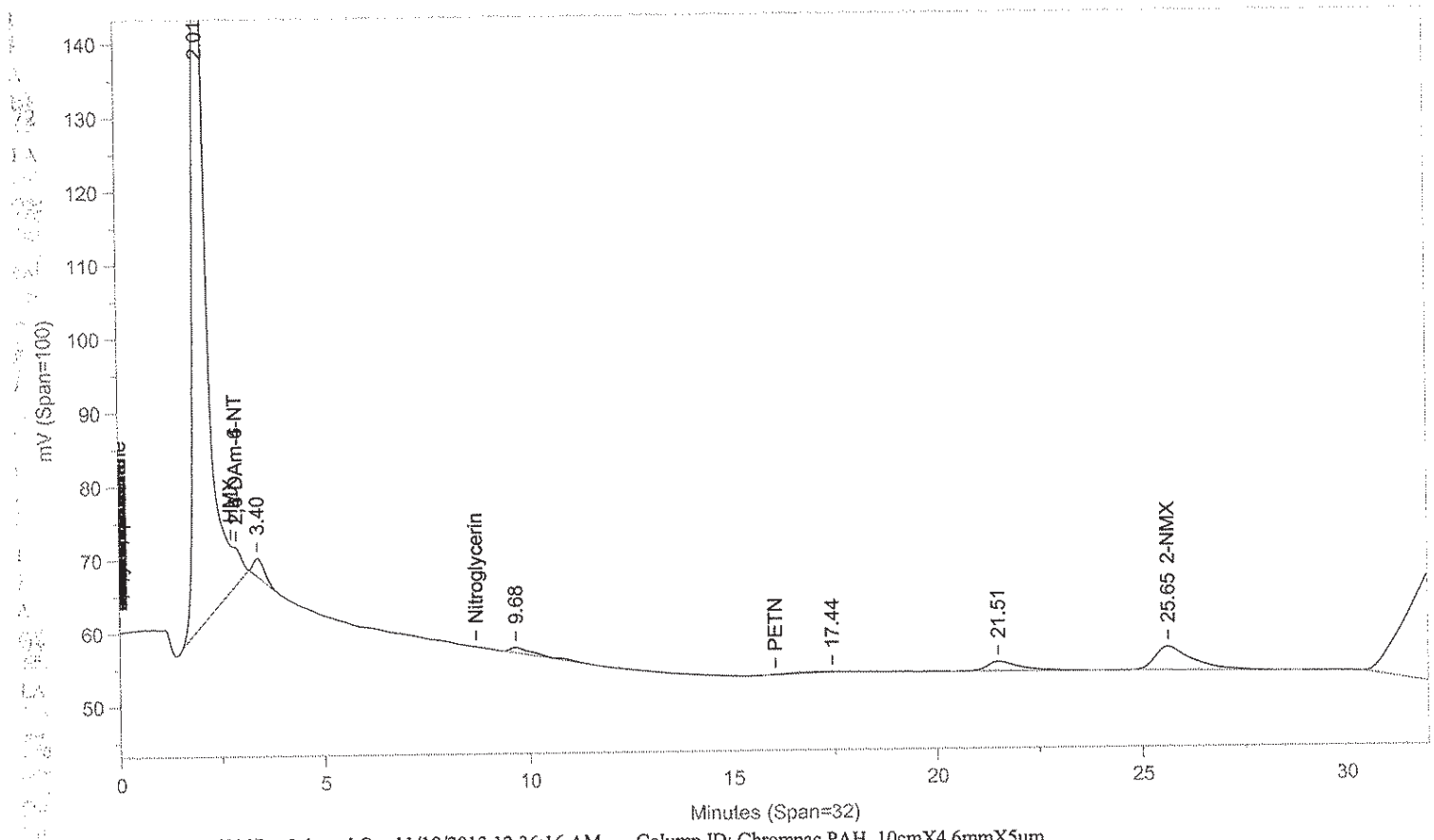

Instrument ID: CP12--X6329B Injected On: 11/18/2013 12:36:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.944	9	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
11.044	135	.008	2,4-DNT	.	0	.	2,4-DNT
25.514	13249	7.774	2-NMX	25.645	206606	8.459	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.80A
Area File: C:\CPWIN\DATA1\4E12310B.80A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:54:24 PM
File Reported On: 11/18/2013 at 2:54:35 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266805 2B152 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 00:36:17
Instrument : CP12--Y6329A
Result file : 4C12310.80R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 105% (73-122) Conc.: 10.52107

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.66	16.91	16.98	13198	0.683826
2-NMX	34.12	34.29	34.32	16508	10.521070

Analysis Report (B)

Injected on : NOV 18, 2013 00:36:17
Instrument : CP12--Y6329B
Result file : 4C12310B.80R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.64	3.91	4.00	33393	0.302976

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT	A	0.683826	~~<0.7 0.6~~ <0.7	~~<0.7 0.3~~ <0.7			
☑ 2-Am-4,6-DNT			~~<0.7 0.6~~ <0.7	~~<0.7 0.2~~ <0.7			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.521070					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 2 1 2013

Verified by: Valerie L. Tomaylla, Principal Specialist
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:48

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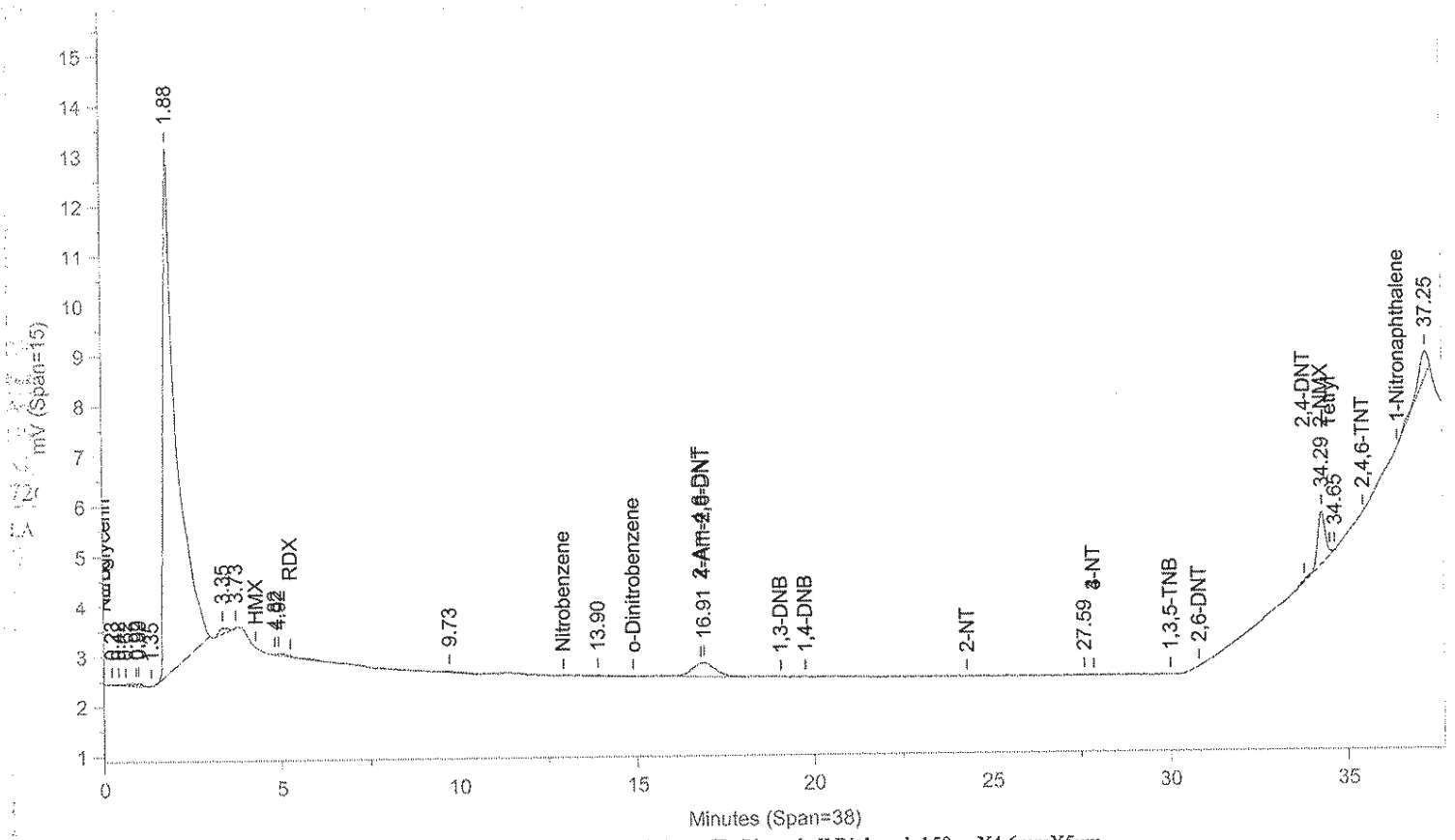
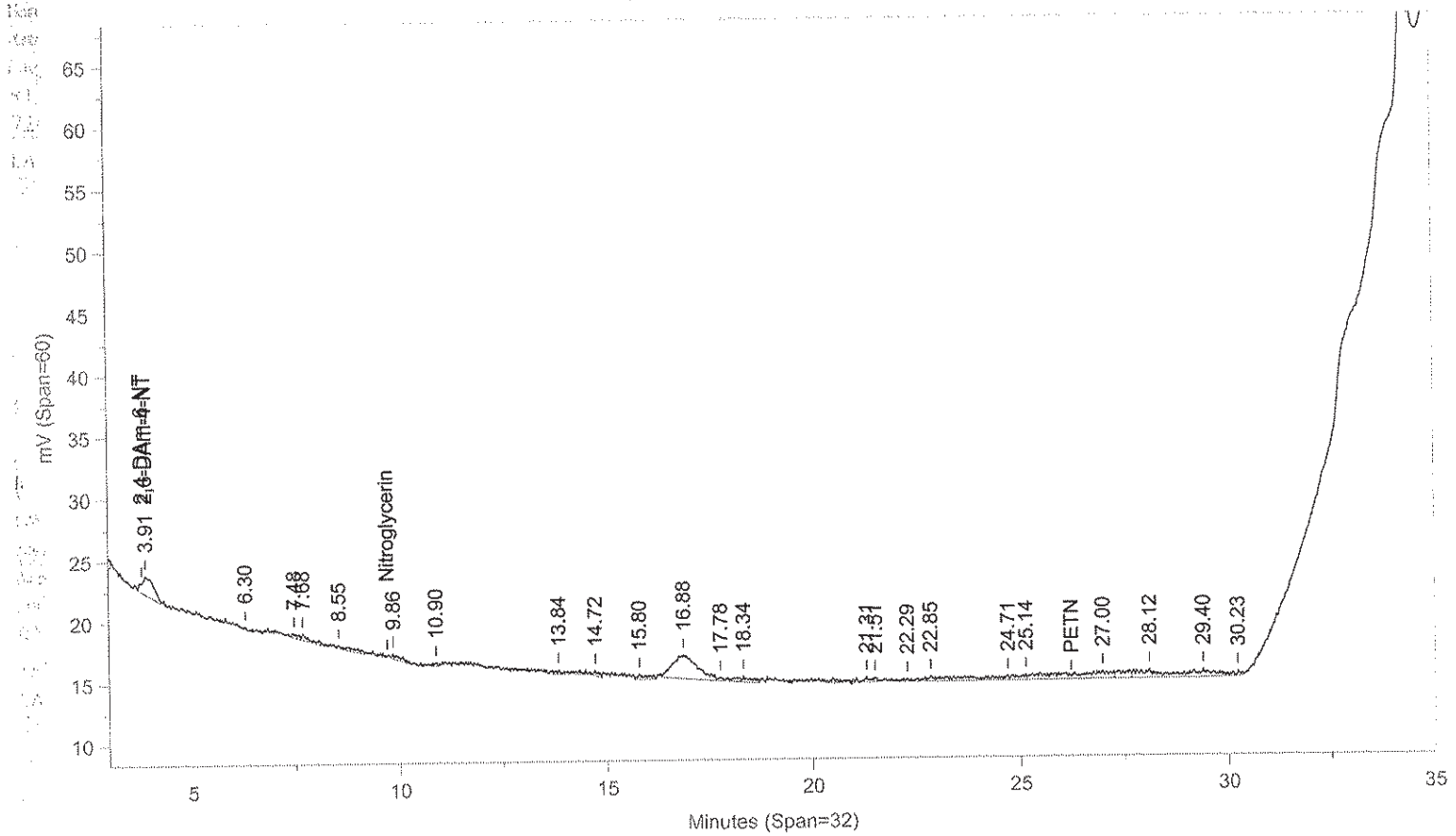


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 12:36:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.80R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 12:36:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.907	33393	.303	2,6-DAm-4-NT
16.906	13198	.684	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
34.288	16508	10.521	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.80A
Area File: C:\CPWIN\DATA1\4C12310B.80A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:21:00 PM
File Reported On: 11/18/2013 at 3:21:10 PM

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Data Summary

Sample Name: 7266807 2B151 Sample ID: AA **Batchnumber: 133140016A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on Nov 18, 2013 02:01:14
Instrument X6329A
Result file 4E12310.82R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 85% (73 - 122) Conc: 8.539182

Analysis Report (B)

Injected on Nov 18, 2013 02:01:14
Instrument Y6329A
Result file 4C12310.82R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 105% (73 - 122) Conc: 10.459169

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.35	7.61	9	0.000545	2-NMX	34.12	34.30	34.32	16400	10.459169
2,4-Dinitrotoluene	10.86	10.97	11.14	95	0.005769						
2-NMX	25.41	25.47	26.09	14554	8.539182						

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	8.539182				20.21	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266807 2B151 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 02:01:14
Instrument : CP12--X6329A
Result file : 4E12310.82R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 85% (73-122) Conc.: 8.539182

Peak name	Min	R.T.	Max	Area	Amount
Tetryl	7.33	7.35	7.61	9	0.000545
2,4-DNT	10.86	10.97	11.14	95	0.005769
2-NMX	25.41	25.47	26.09	14554	8.539182

Analysis Report (B)

Injected on : NOV 18, 2013 02:01:14
Instrument : CP12--X6329B
Result file : 4E12310B.82R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 80% (73-122) Conc.: 7.95928

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.61	26.24	194393	7.959280

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	8.539182				7.03	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaylla, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:24:40

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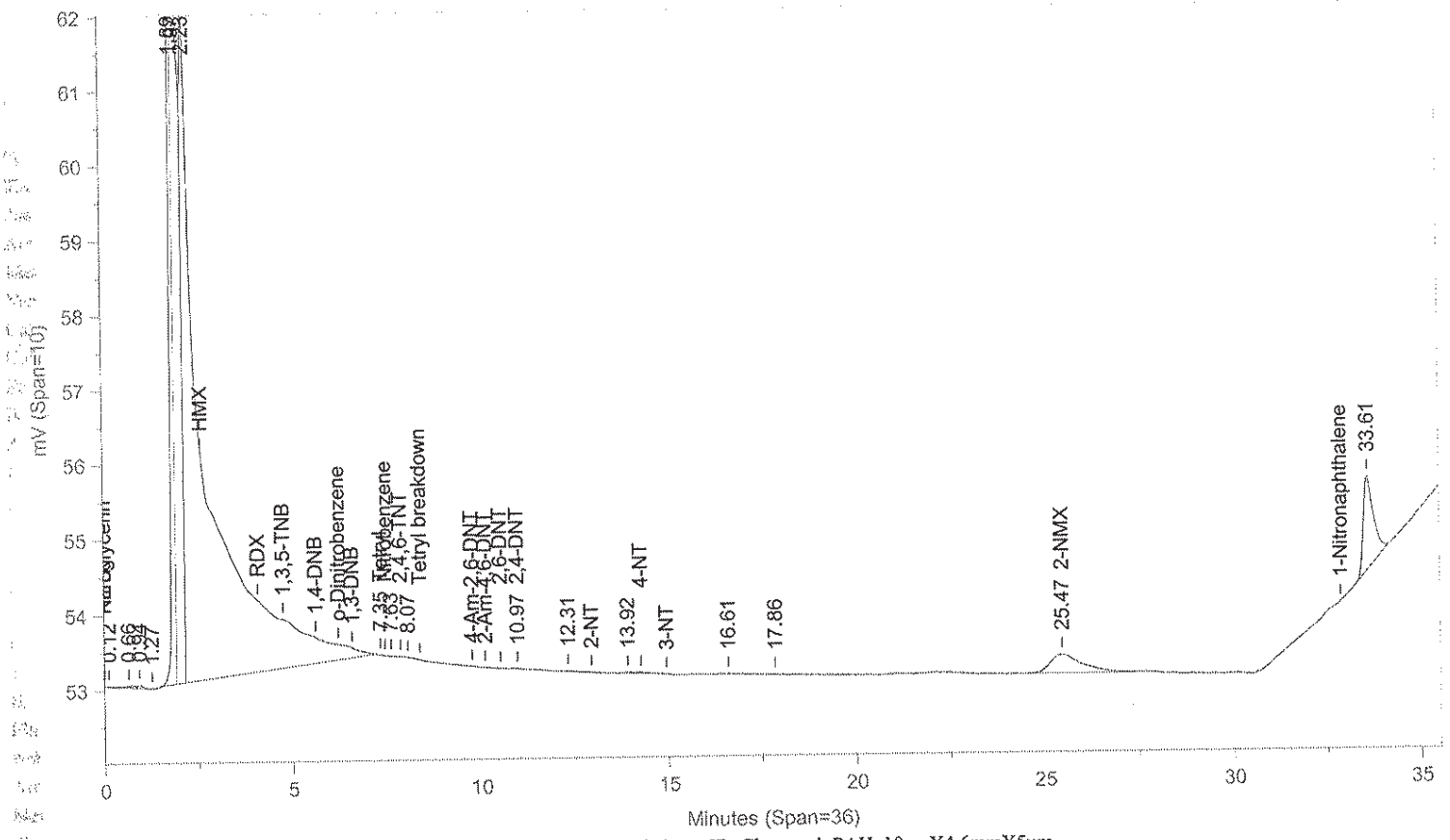
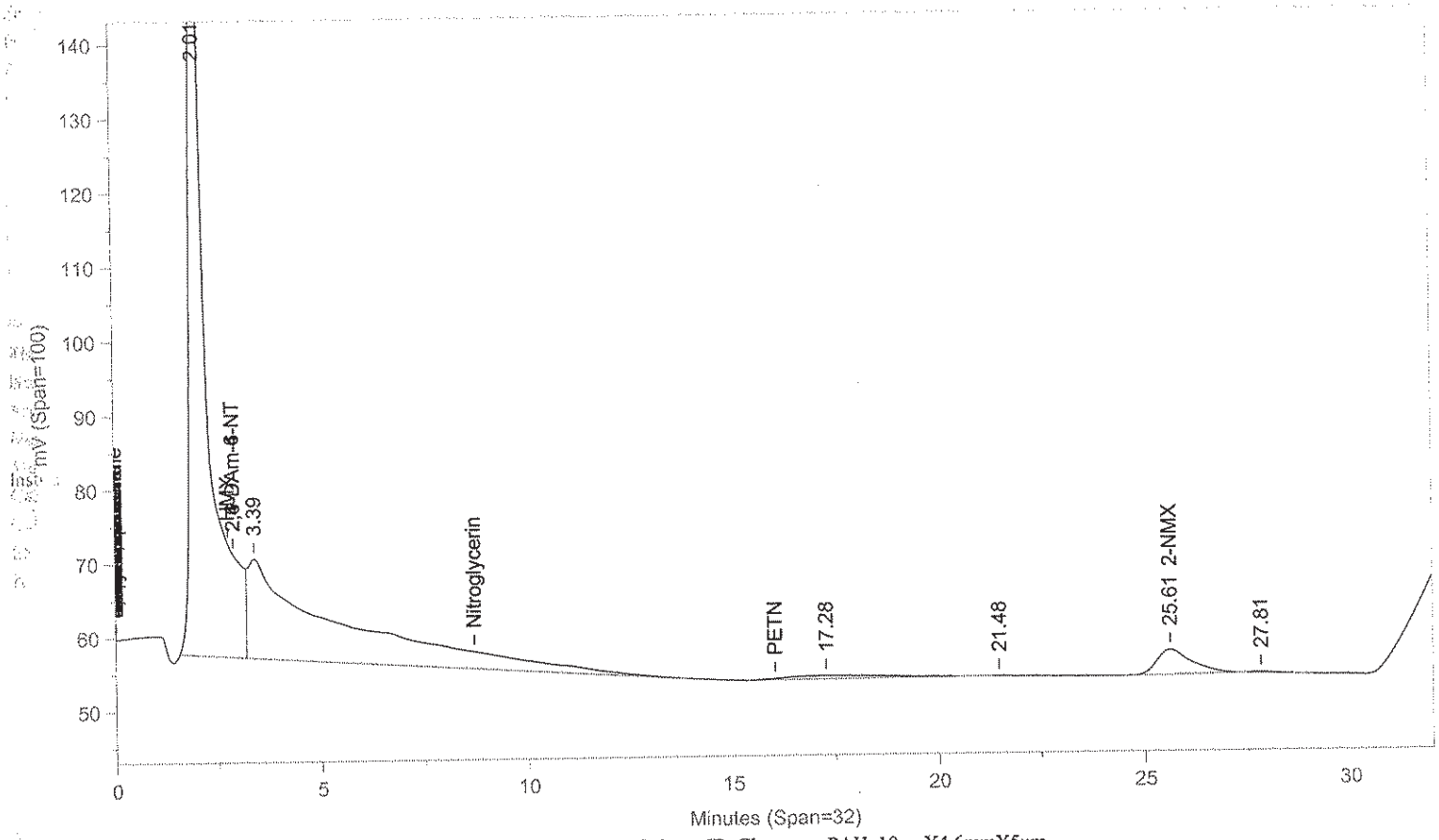


Instrument ID: CP12--X6329A Injected On: 11/18/2013 2:01:13 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.82R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 2:01:13 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.345	9	.001	Tetryl	.	0	.	Tetryl
20.967	95	.006	2,4-DNT	.	0	.	2,4-DNT
25.467	14554	8.539	2-NMX	25.608	194393	7.959	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4E12310.82A
Area File: C:\CPWIN\DATA1\4E12310B.82A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:55:24 PM
File Reported On: 11/18/2013 at 2:55:35 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266807 2B151 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 02:01:14
Instrument : CP12--Y6329A
Result file : 4C12310.82R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 105% (73-122) Conc.: 10.459169

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.12	34.30	34.32	16400	10.459169

Analysis Report (B)

Injected on : NOV 18, 2013 02:01:14
Instrument : CP12--Y6329B
Result file : 4C12310B.82R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.15	26.44	23531	3.962781

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.459169					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:36:03

LANCASTER LABORATORIES

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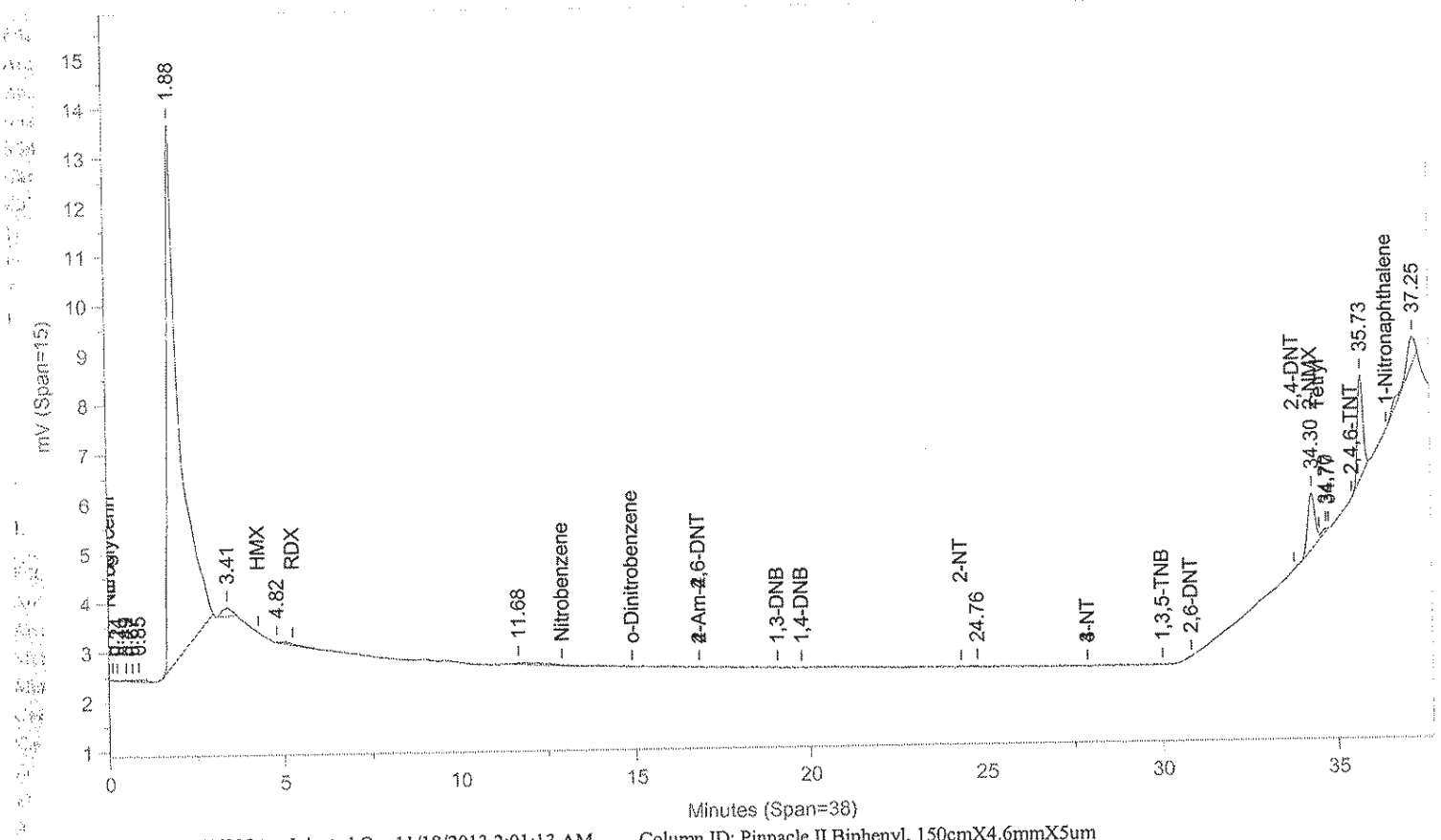
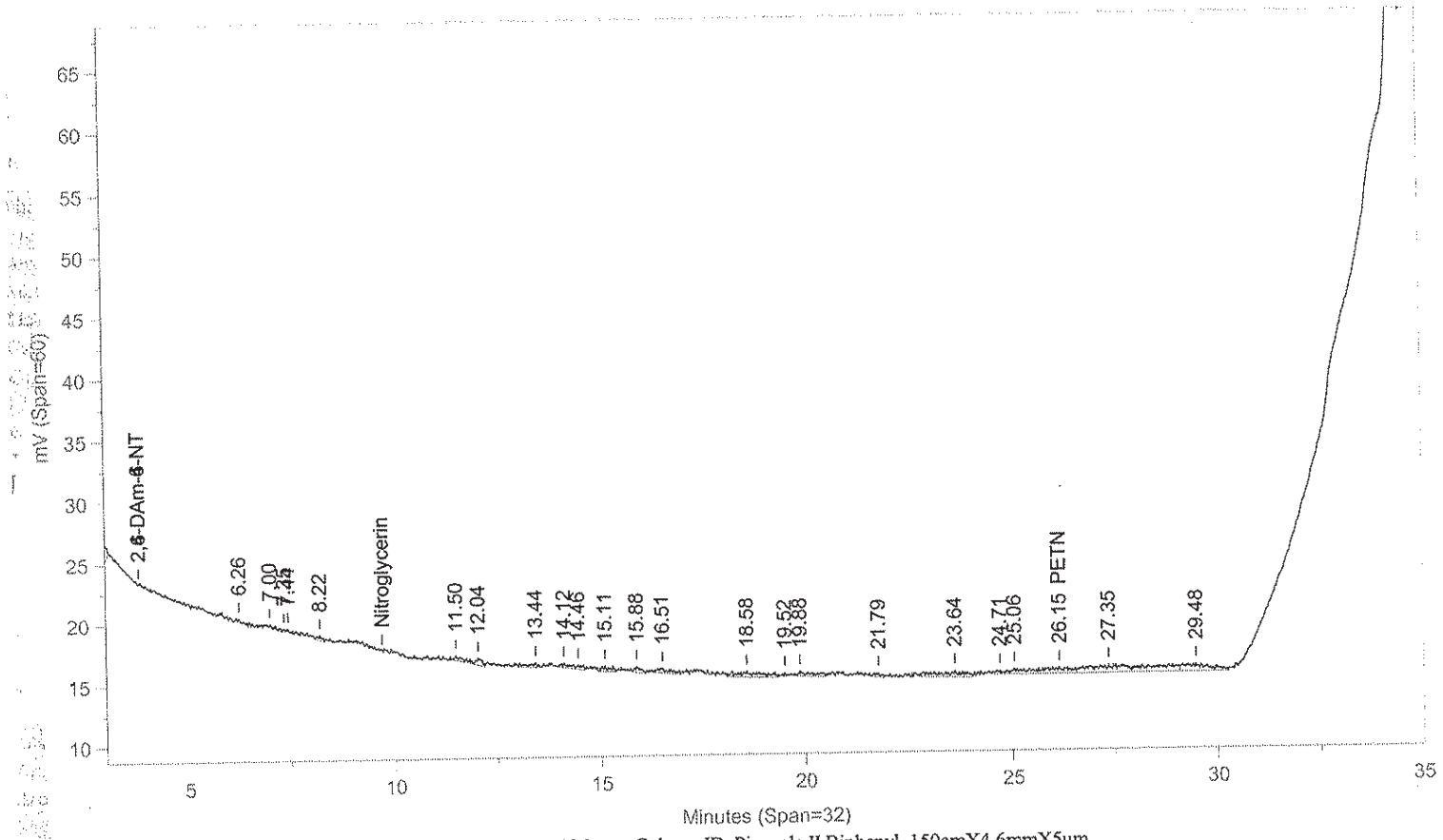


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 2:01:13 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.82R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 2:01:13 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	PETN	26.153	23531	3.963	PETN
34.298	16400	10.459	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.82A
Area File: C:\CPWIN\DATA1\4C12310B.82A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:22:02 PM
File Reported On: 11/18/2013 at 3:22:11 PM

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Data Summary

Sample Name: 7266800 2G124 Sample ID: AA **Batchnumber: 133140019A**

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 06:15:48
Instrument X6329A
Result file 4E12310.88R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 97% (63 - 150) Conc: 4842.450684

Analysis Report (B)

Injected on Nov 18, 2013 06:15:48
Instrument Y6329A
Result file 4C12310.88R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 104% (63 - 150) Conc: 5204.626953

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.61	7.61	24	0.693862
2-Nitrotoluene	12.80	12.84	13.08	314	23.710287
2-NMX	25.41	25.30	26.09	16507	4842.450684

Compound	Min	RT	Max	Area	Amount
4-Nitrotoluene	27.60	27.84	28.12	1588	203.094406
2-NMX	34.12	34.30	34.32	16313	5204.626953

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<6000	<2000			
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-Trinitrobenzene			<300	<100			
☑ 1,4-Dinitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-Trinitrotoluene			<300	<100			
☑ 4-Amino-2,6-dinitrotoluene			<300	<150			
☑ 2-Amino-4,6-dinitrotoluene			<300	<100			
☑ 2,6-Dinitrotoluene			<300	<100			
☑ 2,4-Dinitrotoluene			<300	<100			
☑ 2-Nitrotoluene			<300	<200			
☑ 4-Nitrotoluene			<300	<200			
☑ 3-Nitrotoluene			<300	<250			
☑ 2-NMX	A	4842.450684				7.21	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylla, Analytical Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266800 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 06:15:48
Instrument : CP12--X6329A
Result file : 4E12310.88R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 97% (63-150) Conc.: 4842.45068

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.05	4.20	348	-85.278854
Tetryl	7.33	7.61	7.61	24	0.693862
2-NT	12.80	12.84	13.08	314	23.710287
2-NMX	25.41	25.30	26.09	16507	4842.450684

Analysis Report (B)

Injected on : NOV 18, 2013 06:15:48
Instrument : CP12--X6329B
Result file : 4E12310B.88R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 92% (63-150) Conc.: 4605.21044

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.45	26.24	224950	4605.210449

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			Report Confirmation
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4842.450684				5.02	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

Valerie L. Tomayko
Analytical Specialist

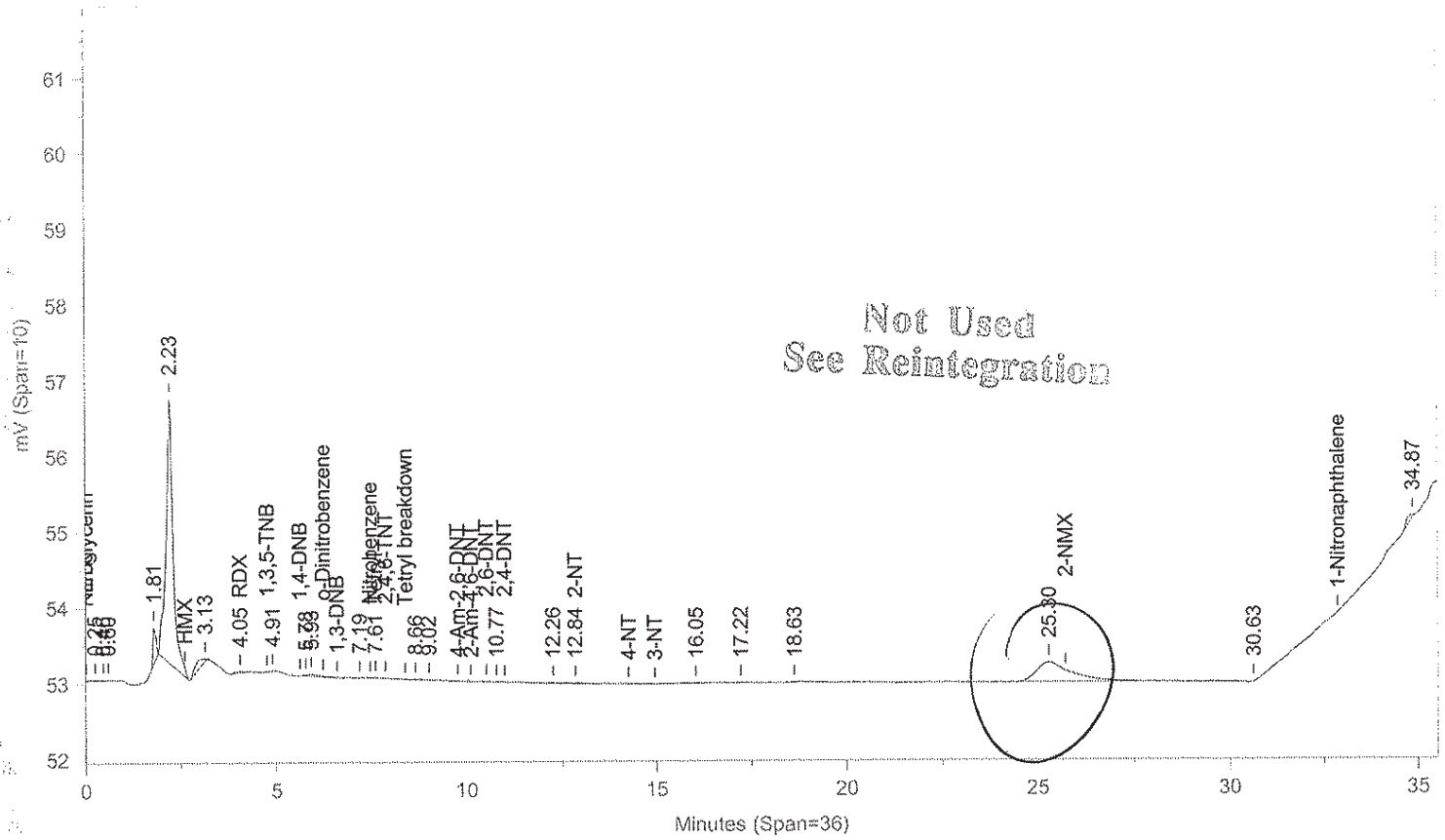
Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

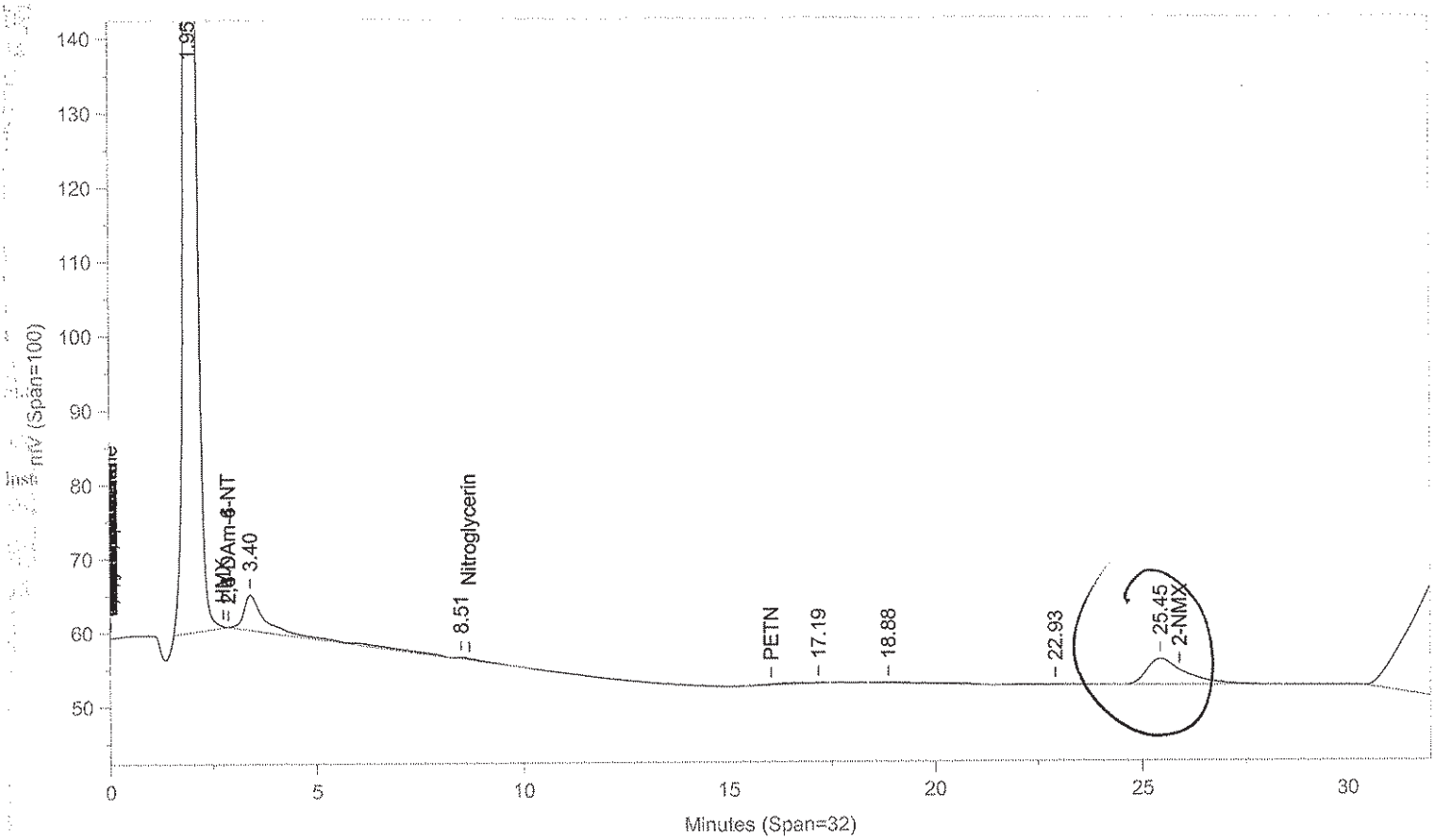
Printed on: 11/20/2013 13:25:58

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.88R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 6:15:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.88R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 6:15:48 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

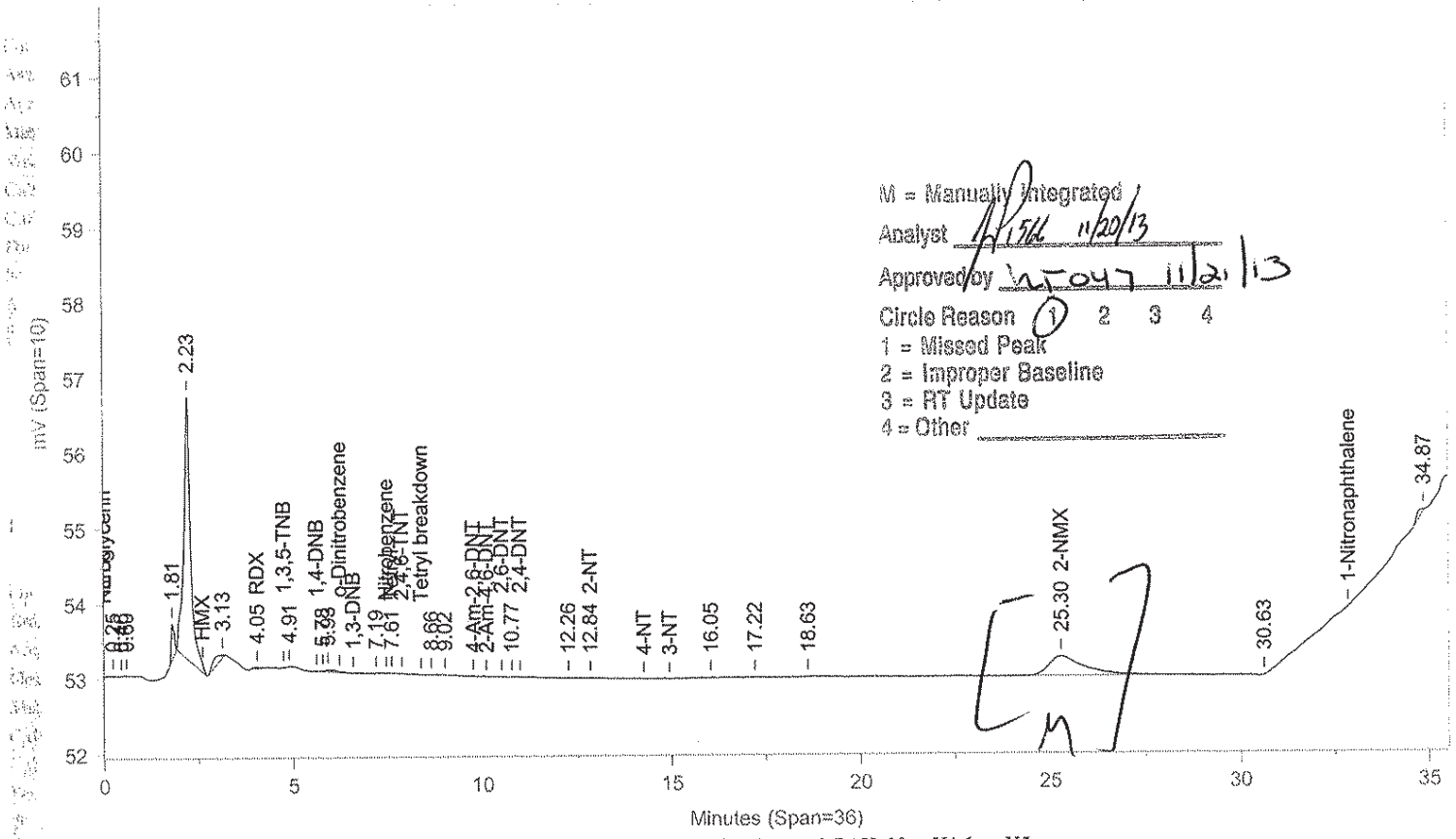
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.054	348	-85.279	RDX	.	0	.	RDX
7.606	24	.694	Tetryl	.	0	.	Tetryl
12.839	314	23.71	2-NT	.	0	.	2-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.88A
Area File: C:\CPWIN\DATA1\4E12310B.88A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:58:26 PM
File Reported On: 11/18/2013 at 2:58:36 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

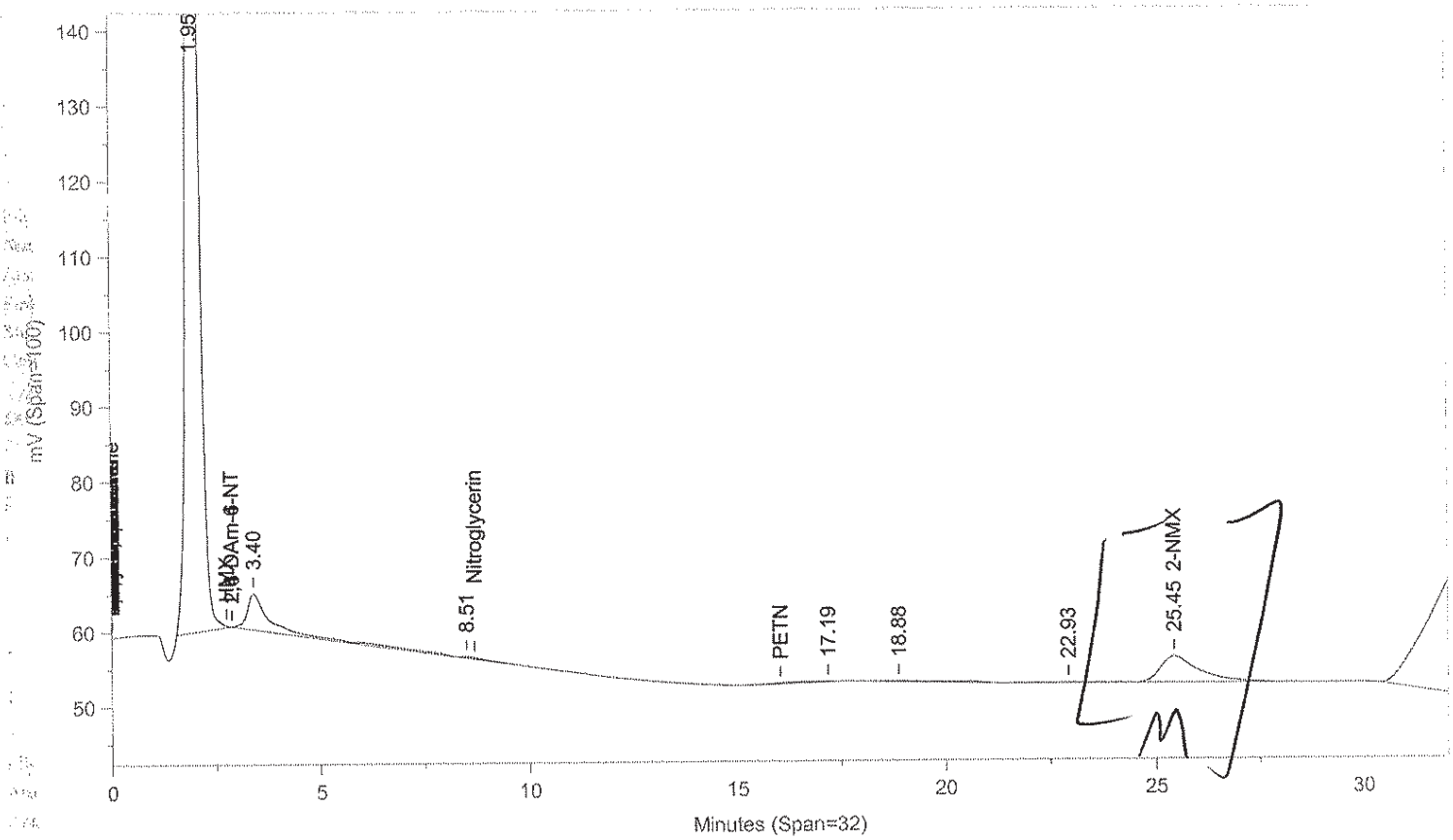
File: C:\CPWIN\DATA1\4E12310.88R



M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 6:15:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.88R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 6:15:48 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.054	348	-85.279	RDX	.	0	.	RDX
7.606	24	.694	Tetryl	.	0	.	Tetryl
12.839	314	23.71	2-NT	.	0	.	2-NT
25.304	16507	4842.451	2-NMX	25.448	224950	4605.21	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:43:34 PM
File Reported On: 11/20/2013 at 12:43:33 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266800 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 06:15:48
Instrument : CP12--Y6329A
Result file : 4C12310.88R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 104% (63-150) Conc.: 5204.62695

Analysis Report (B)

Injected on : NOV 18, 2013 06:15:48
Instrument : CP12--Y6329B
Result file : 4C12310B.88R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.20	5.36	840	-160.823746
4-NT	27.60	27.84	28.12	1588	203.094406
2-NMX	34.12	34.30	34.32	16313	5204.626953

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			Report
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			Report
☑ 4-NT	A	203.094406	<300	200	J		
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5204.626953					
☑ Tetryl			<300	<153			
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

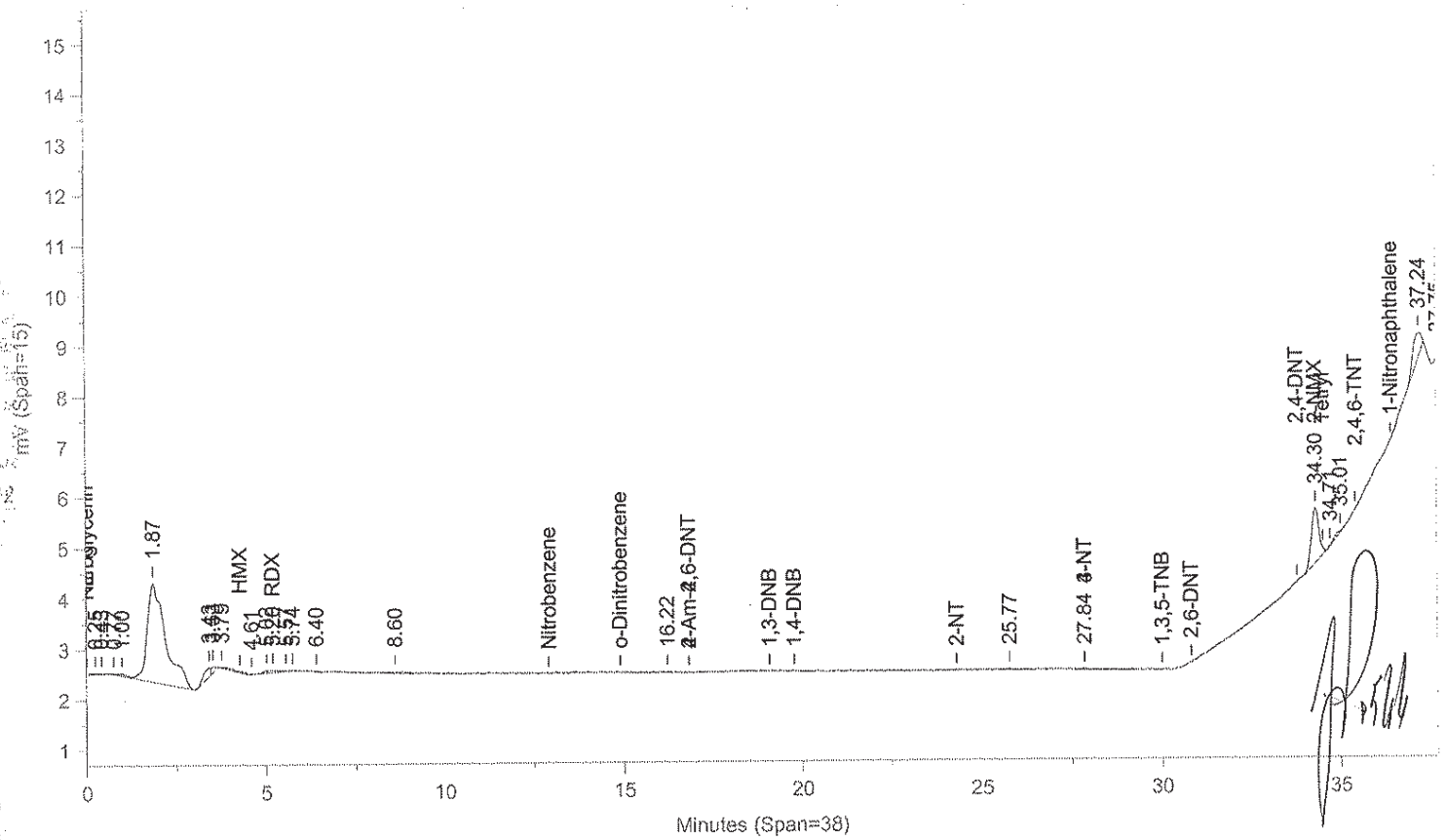
Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Scientist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

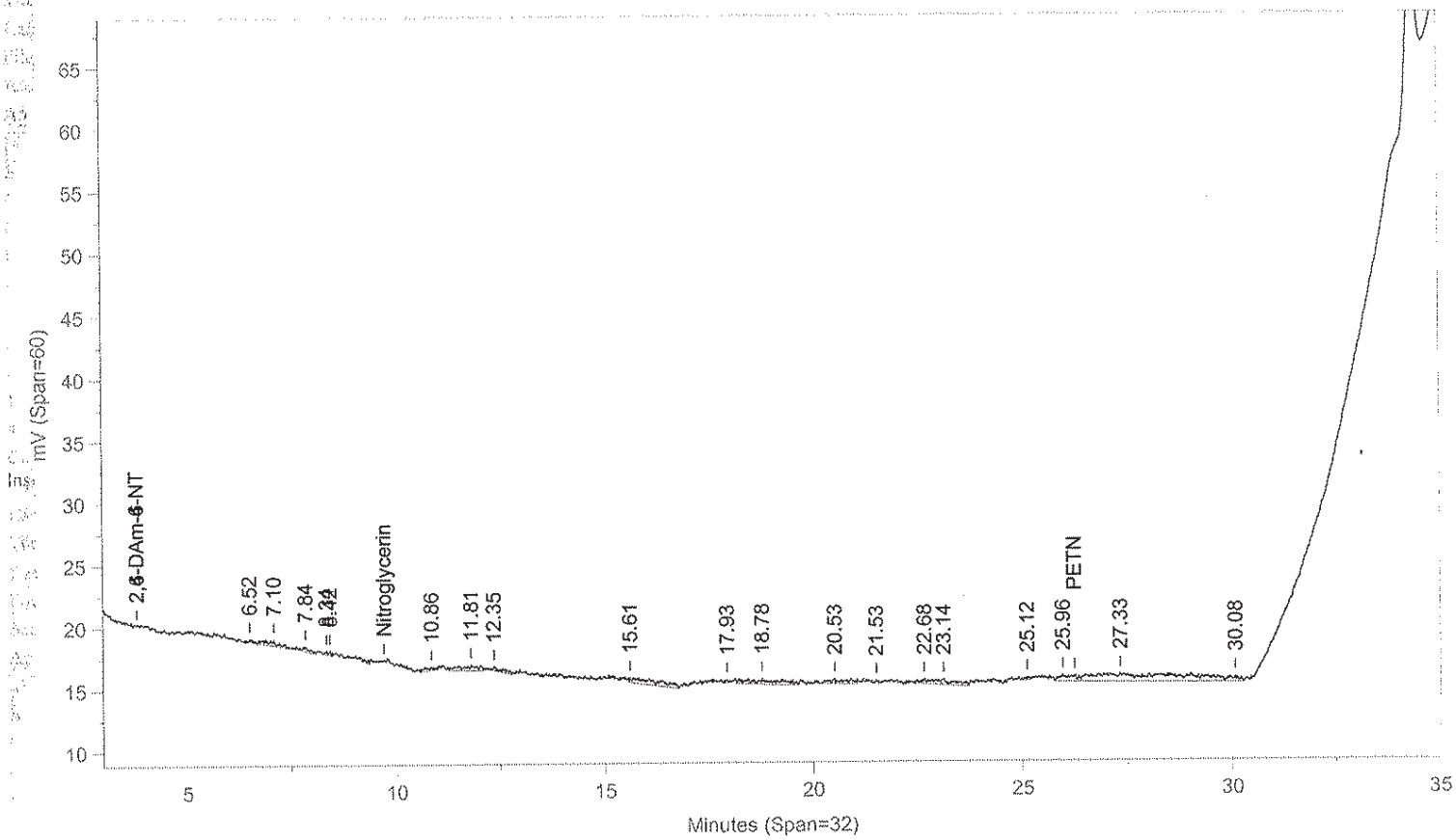
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.88R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 6:15:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.88R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 6:15:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.2	840	-160.824	RDX	.	0	.	RDX
27.837	1588	203.094	4-NT	.	0	.	4-NT
34.301	16313	5204.627	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.88A
Area File: C:\CPWIN\DATA1\4C12310B.88A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:25:02 PM
File Reported On: 11/18/2013 at 3:25:12 PM

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Data Summary

Sample Name: 7266804 2G125 Sample ID: AA **Batchnumber: 133140019A**

Sample Amount: 2.4 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 08:23:14
Instrument X6329A
Result file 4E12310.91R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 93% (63 - 150) Conc: 3869.570068

Analysis Report (B)

Injected on Nov 18, 2013 08:23:14
Instrument Y6329A
Result file 4C12310.91R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 87% (63 - 150) Conc: 3629.177979

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3-DNB	6.49	6.54	6.69	142	3.651855
Tetryl	7.33	7.50	7.61	15	0.357817
2,4-Dinitrotoluene	10.86	10.95	11.14	38	0.965762
2-NMX	25.41	25.28	26.09	15828	3869.570068

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.31	34.32	13347	3629.177979
1-Nitronaphthalene	36.36	36.39	36.56	3670	421.336365

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<4999.9999	<1800			
☑ PETN			<4999.9999	<1666.6666			
☑ HMX			<625	<208.3333			
☑ RDX			<250	<104.1667			
☑ 1,3,5-Trinitrobenzene			<250	<83.3333			
☑ 1,4-Dinitrobenzene			<250	<83.3333			
☑ o-Dinitrobenzene			<250	<83.3333			
☑ 1,3-DNB			<250	<83.3333			
☑ Tetryl			<250	<127.5			
☑ Nitrobenzene			<250	<83.3333			
☑ 2,4,6-Trinitrotoluene			<250	<83.3333			
☑ 4-Amino-2,6-dinitrotoluene			<250	<125			
☑ 2-Amino-4,6-dinitrotoluene			<250	<83.3333			
☑ 2,6-Dinitrotoluene			<250	<83.3333			
☑ 2,4-Dinitrotoluene			<250	<83.3333			
☑ 2-Nitrotoluene			<250	<166.6667			
☑ 4-Nitrotoluene			<250	<166.6667			
☑ 3-Nitrotoluene			<250	<208.3333			
☑ 2-NMX	A	3869.570068				6.41	
☑ 1-Nitronaphthalene			<250	<83.3333			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266804 2G125 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.4 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 08:23:14
Instrument : CP12--X6329A
Result file : 4E12310.91R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 93% (63-150) Conc.: 3869.57006

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.03	4.20	116	-93.181099
1,3-DNB	6.49	6.54	6.69	142	3.651855
Tetryl	7.33	7.50	7.61	15	0.357817
2,4-DNT	10.86	10.95	11.14	38	0.965762
2-NMX	25.41	25.28	26.09	15828	3869.570068

Analysis Report (B)

Injected on : NOV 18, 2013 08:23:14
Instrument : CP12--X6329B
Result file : 4E12310B.91R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 102% (63-150) Conc.: 4233.83691

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.51	8.51	8.89	15223	992.563416
2-NMX	25.57	25.47	26.24	248172	4233.836914

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<4999.998	<1666.666			Report Confirmation
☑ PETN			<4999.998	<1666.666			
☑ HMX			<624.9998	<208.3333			
☑ RDX			<249.9999	<104.1666			
☑ 1,3,5-TNB			<249.9999	<83.3333			
☑ 1,4-DNB			<249.9999	<83.3333			
☑ o-Dinitrobenzene			<249.9999	<83.3333			
☑ 1,3-DNB			<249.9999	<83.3333			
☑ Tetryl			<249.9999	<127.4999			
☑ Nitrobenzene			<249.9999	<83.3333			
☑ 2,4,6-TNT			<249.9999	<83.3333			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<249.9999	<125			
☑ 2-Am-4,6-DNT			<249.9999	<83.3333			
☑ 2,6-DNT			<249.9999	<83.3333			
☑ 2,4-DNT			<249.9999	<83.3333			
☑ 2-NT			<249.9999	<166.6666			Report Confirmation
☑ 4-NT			<249.9999	<166.6666			
☑ 3-NT			<249.9999	<208.3333			
☐ 2-NMX	A	3869.570068				8.99	
☑ 1-Nitronaphthalene			<249.9999	<83.3333			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaylo
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:26:37

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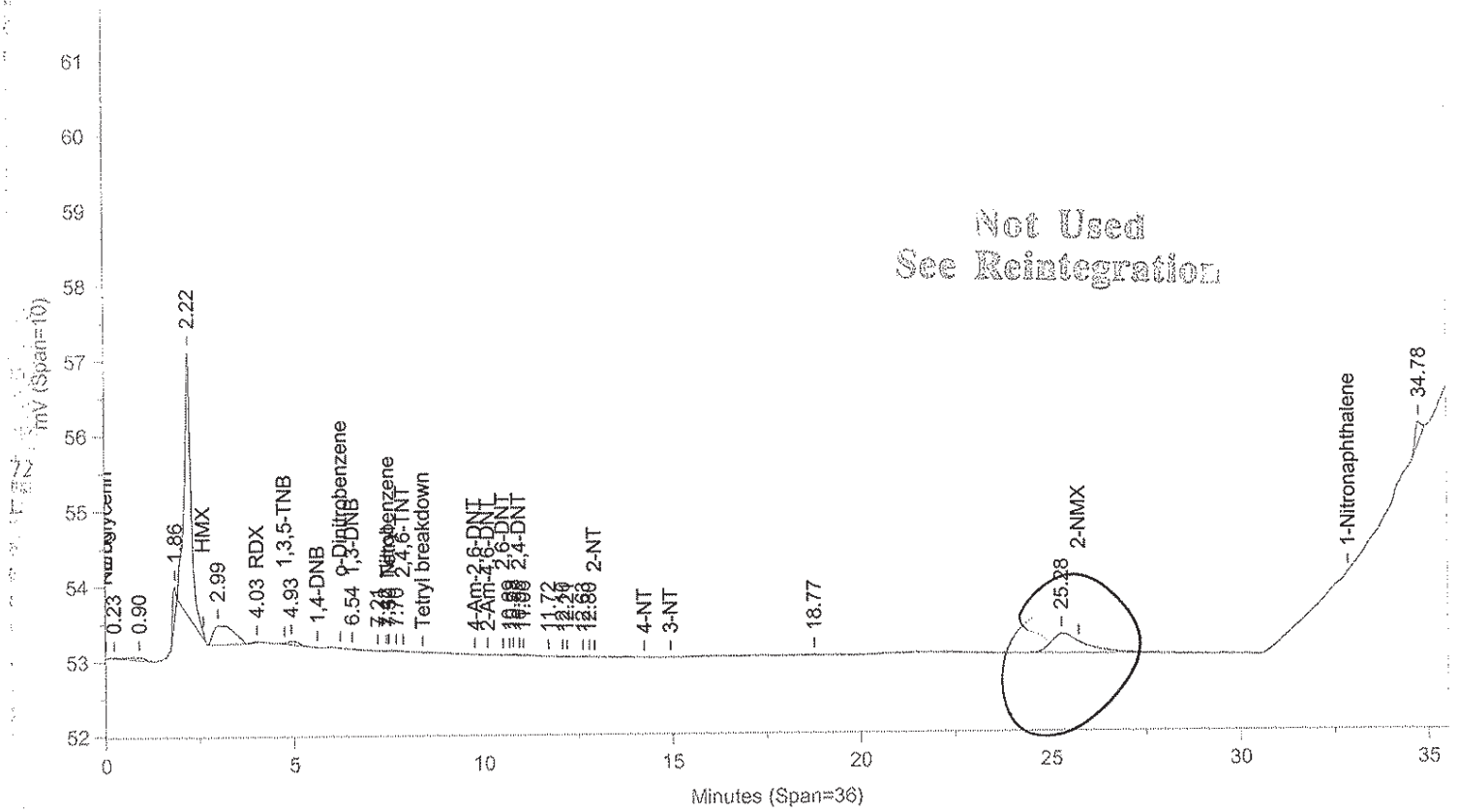

Instrument ID: CP12--X6329A Injected On: 11/18/2013 8:23:13 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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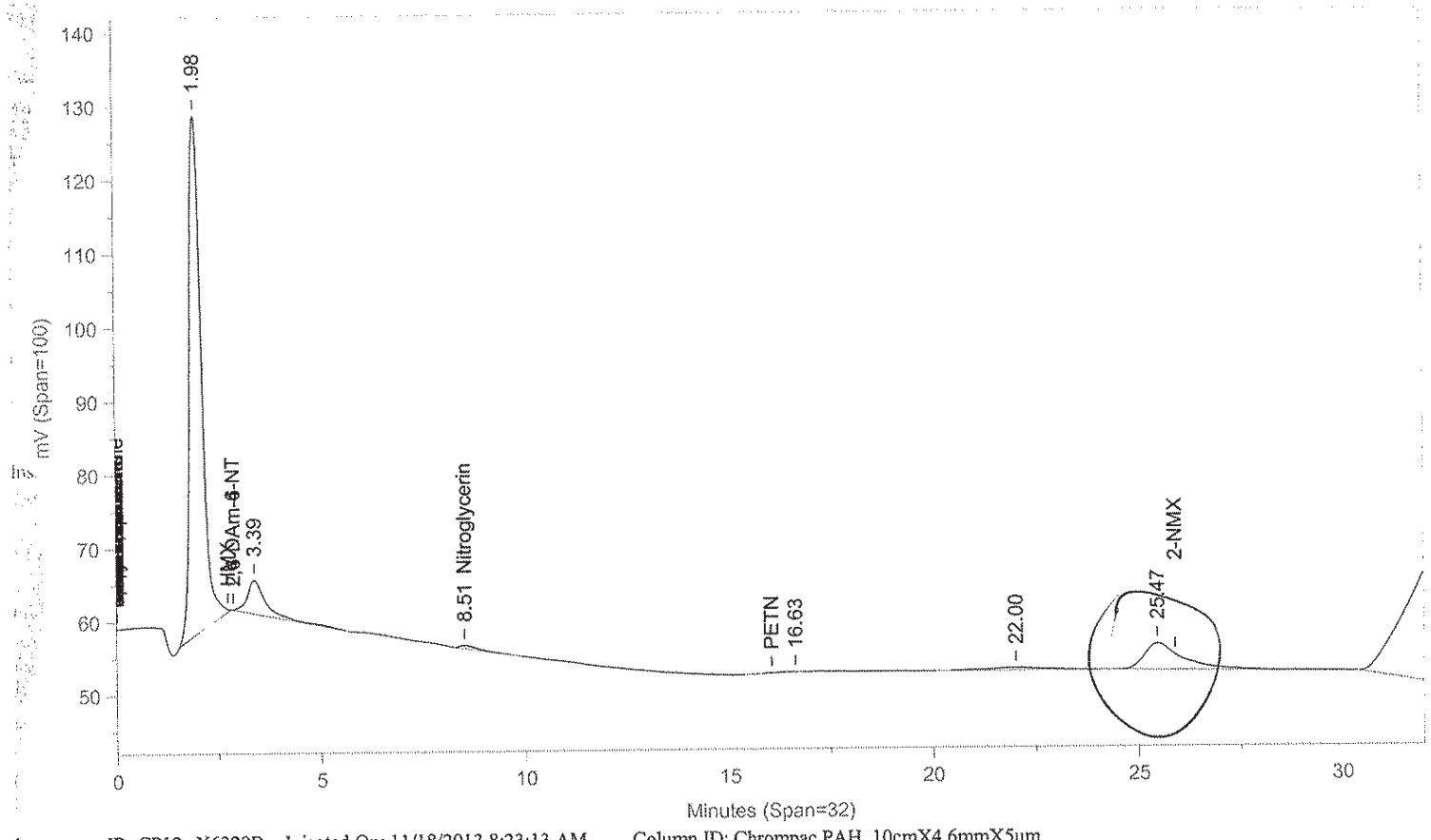


Instrument ID: CP12--X6329B Injected On: 11/18/2013 8:23:13 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.4
Analyst: 1566

Dilution Factor: 20

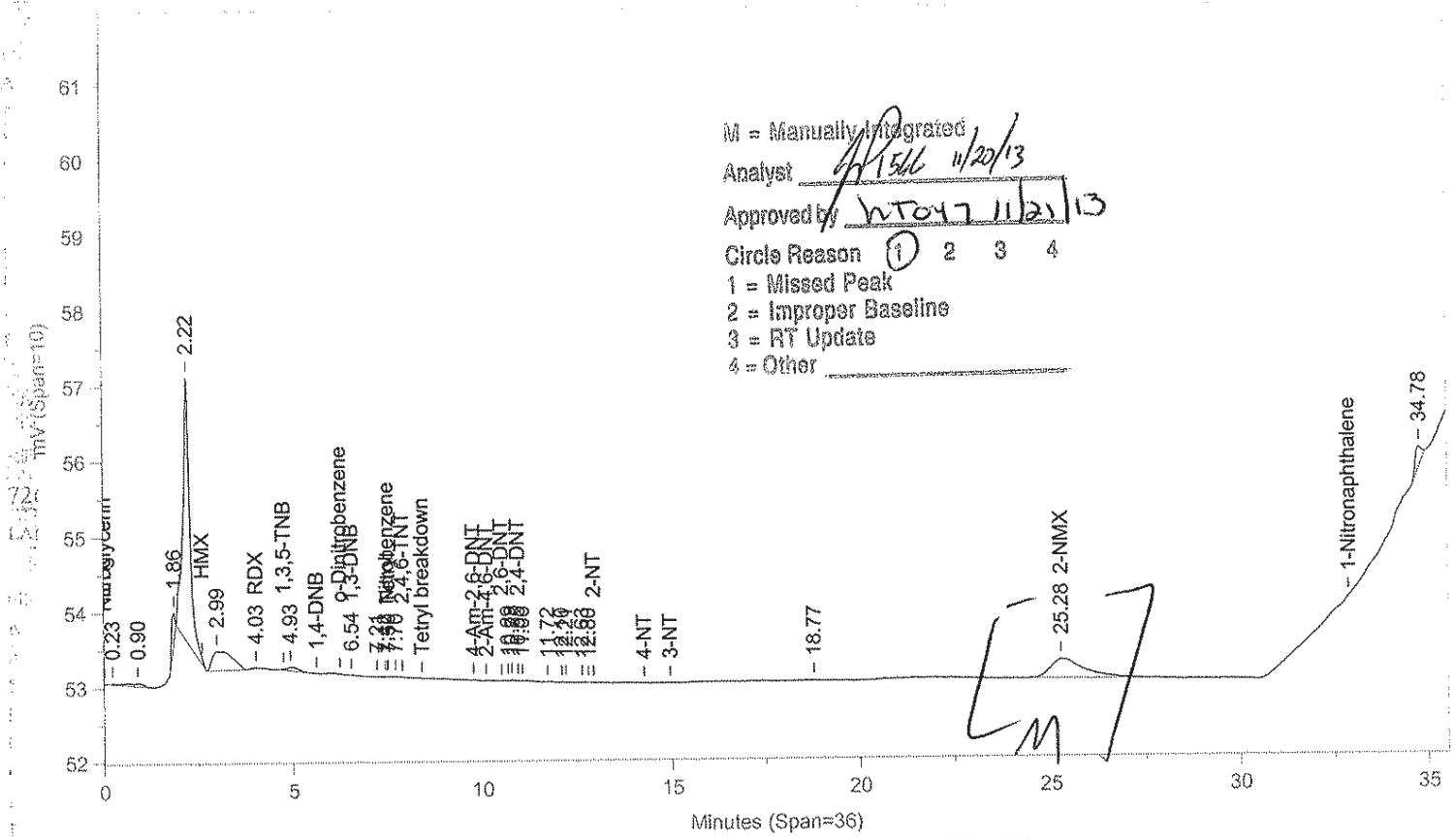
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.026	116	-93.181	RDX	.	0	.	RDX
6.537	142	3.652	1,3-DNB	.	0	.	1,3-DNB
7.503	15	.358	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.513	15223	992.563	Nitroglycerin
10.945	38	.966	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.91A
Area File: C:\CPWIN\DATA1\4E12310B.91A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:59:58 PM
File Reported On: 11/18/2013 at 3:00:08 PM

Not Used
See Reintegration

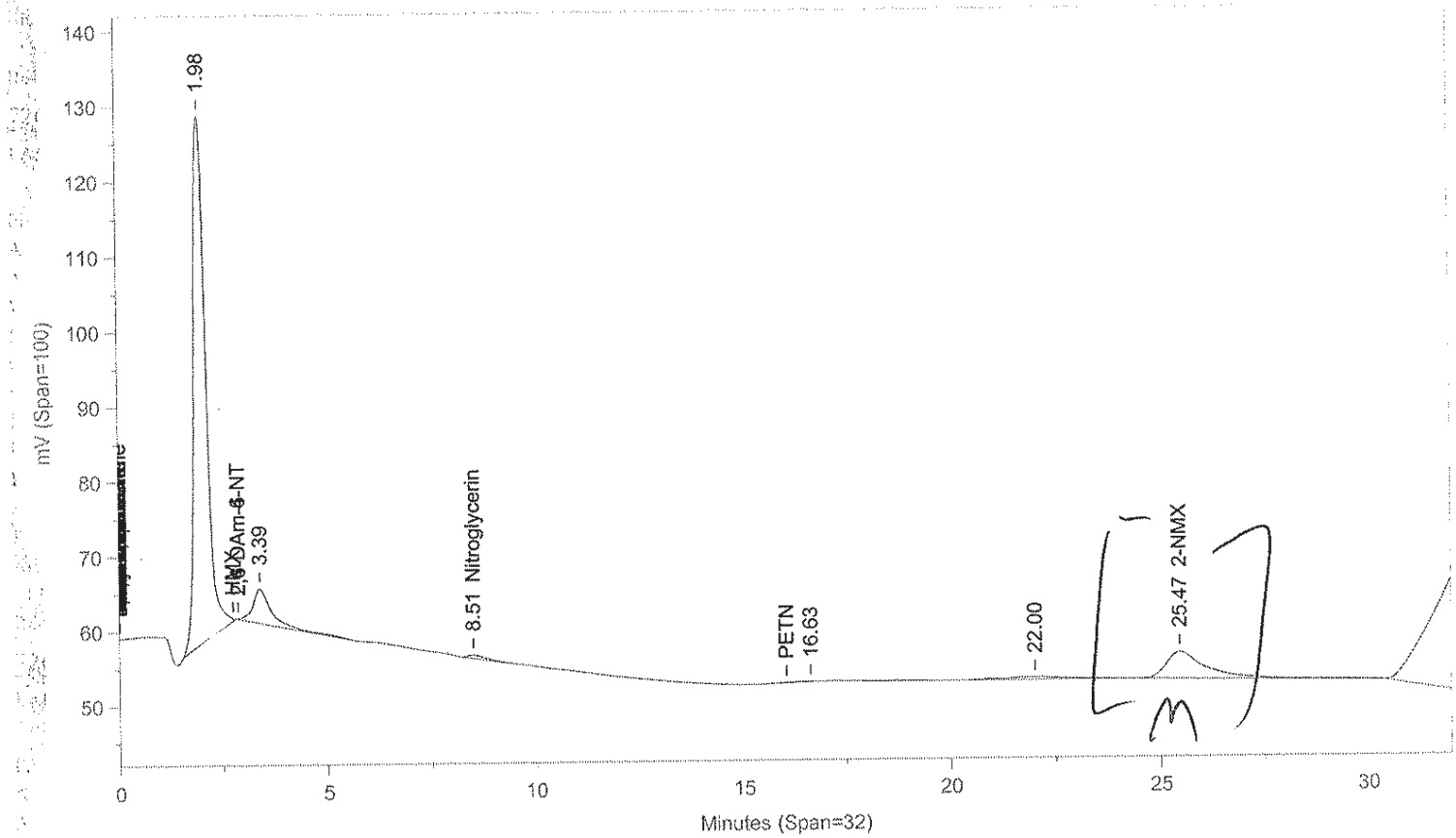
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.91R

M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--X6329A Injected On: 11/18/2013 8:23:13 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.91R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 8:23:13 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.4
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.026	116	-93.181	RDX	.	0	.	RDX
6.537	142	3.652	1,3-DNB	.	0	.	1,3-DNB
7.503	15	.358	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.513	15223	992.563	Nitroglycerin
10.945	38	.966	2,4-DNT	.	0	.	2,4-DNT
25.282	15828	3869.57	2-NMX	25.471	248172	4233.837	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:50:22 PM
File Reported On: 11/20/2013 at 12:50:22 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266804 2G125 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.4 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 08:23:14
Instrument : CP12--Y6329A
Result file : 4C12310.91R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 87% (63-150) Conc.: 3629.17797

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.33	5.36	2261	-28.374035
2-NMX	34.12	34.31	34.32	13347	3629.177979
1-Nitronaphthalene	36.36	36.39	36.56	3670	421.336365

Analysis Report (B)

Injected on : NOV 18, 2013 08:23:14
Instrument : CP12--Y6329B
Result file : 4C12310B.91R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.71	9.82	21744	1782.801636

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<4999.998	<1666.666			Report
☑ Nitroglycerin	B	1782.801636	<4999.998	1666.666	~~X~~ <1800		W/C
☑ HMX			<624.9998	<208.3333			
☑ RDX			<249.9999	<104.1666			
☑ Nitrobenzene			<249.9999	<83.3333			Report
☑ o-Dinitrobenzene			<249.9999	<83.3333			
☑ 4-Am-2,6-DNT			<249.9999	<125			
☑ 2-Am-4,6-DNT			<249.9999	<83.3333			
☑ 1,3-DNB			<249.9999	<83.3333			
☑ 1,4-DNB			<249.9999	<83.3333			
☑ 2-NT			<249.9999	<166.6666			Report
☑ 4-NT			<249.9999	<166.6666			
☑ 3-NT			<249.9999	<208.3333			
☑ 1,3,5-TNB			<249.9999	<83.3333			
☑ 2,6-DNT			<249.9999	<83.3333			
☑ 2,4-DNT			<249.9999	<83.3333			
☐ 2-NMX	A	3629.177979					
☑ Tetryl			<249.9999	<127.4999			Report
☑ 2,4,6-TNT			<249.9999	<83.3333			
☑ 1-Nitronaphthalene	A	421.336365	249.9999	83.3333			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:38:05

LANCASTER LABORATORIES

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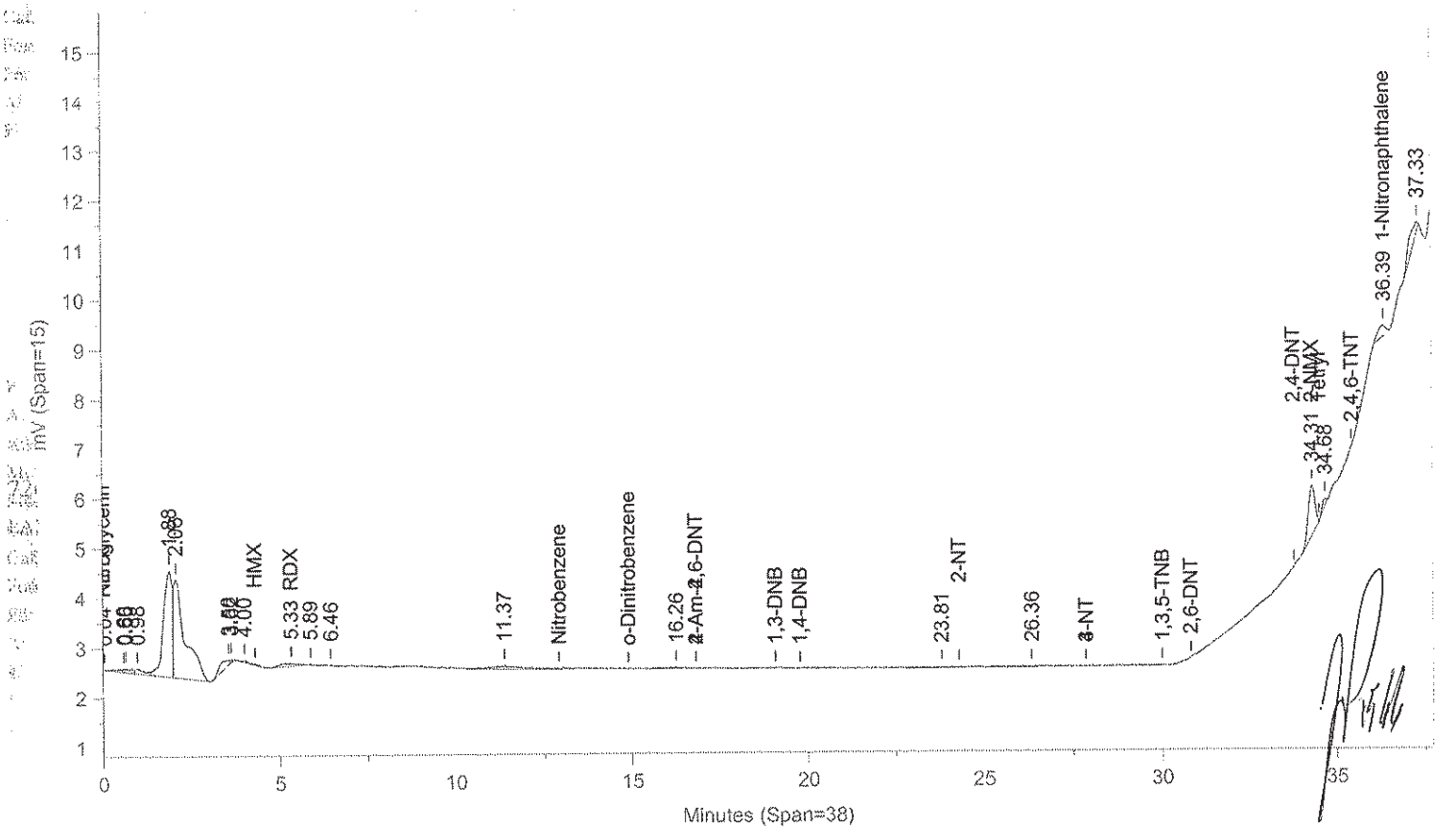
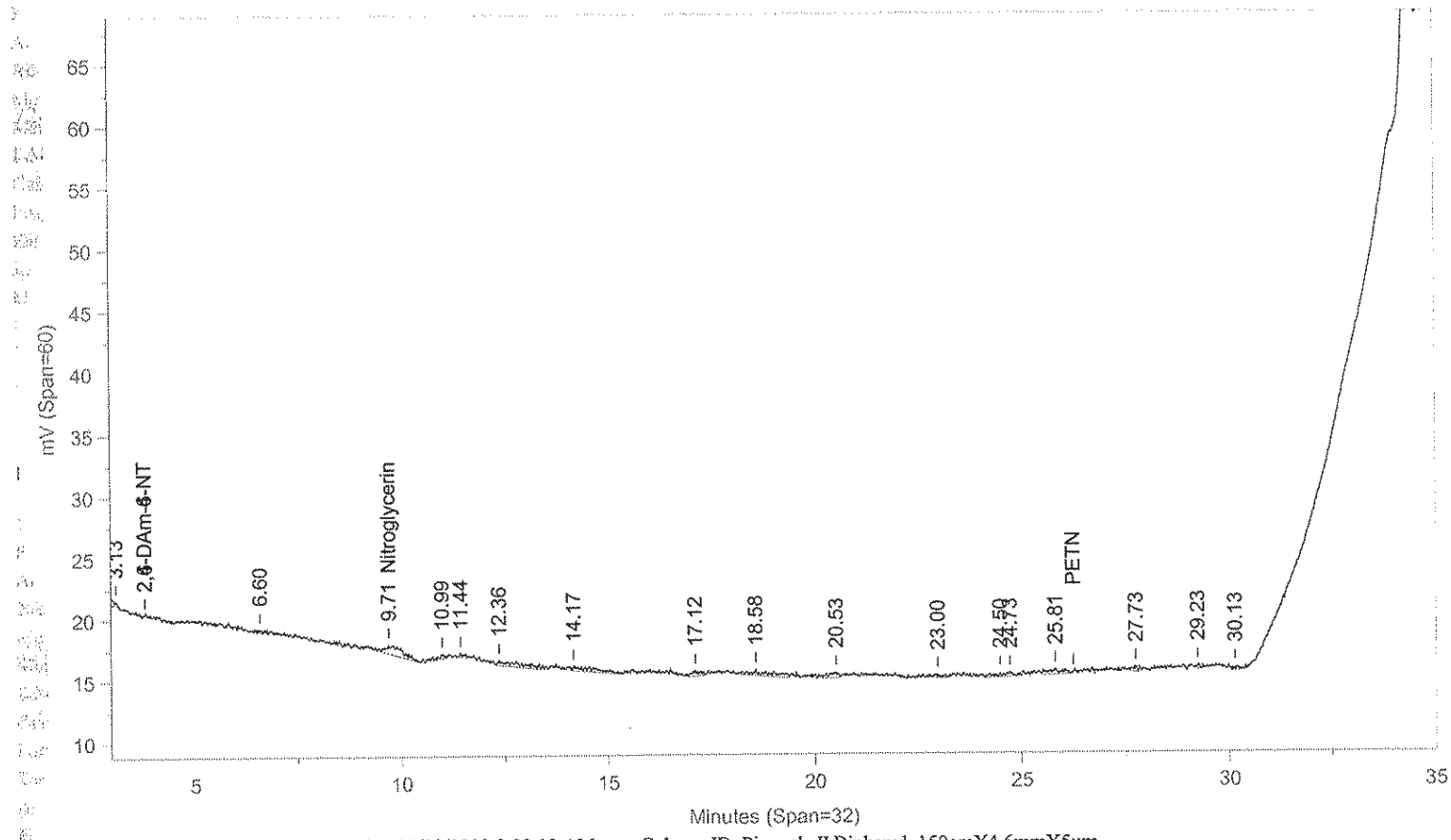


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 8:23:13 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.91R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 8:23:13 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.4 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.328	2261	-28.374	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.71	21744	1782.802	Nitroglycerin
34.312	13347	3629.178	2-NMX	.	0	.	2-NMX
36.395	3670	421.336	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.91A
Area File: C:\CPWIN\DATA1\4C12310B.91A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:26:32 PM
File Reported On: 11/18/2013 at 3:26:42 PM
RT

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Data Summary

Sample Name: 7266806 2C152 Sample ID: AA **Batchnumber: 133140019A**

Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 18, 2013 09:48:09
Instrument	X6329A
Result file	4E12310.93R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 82% (63 - 150) Conc: 3737.665039

Analysis Report (B)

Injected on	Nov 18, 2013 09:48:09
Instrument	Y6329A
Result file	4C12310.93R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 100% (63 - 150) Conc: 4554.217285

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.91	7.98	33	1.318318
2-NMX	25.41	25.27	26.09	14015	3737.665039

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	12.75	12.82	13.07	7957	C
2-NMX	34.12	34.30	34.32	15632	4554.21728
1-Nitronaphthalene	36.36	36.39	36.56	991	307.81069

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5454.5456	<1818.1819			
☑ PETN			<5454.5456	<1818.1819			
☑ HMX			<681.8182	<227.2727			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-Trinitrobenzene			<272.7273	<90.9091			
☑ 1,4-Dinitrobenzene			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ 2,4,6-Trinitrotoluene			<272.7273	<90.9091			
☑ 4-Amino-2,6-dinitrotoluene			<272.7273	<136.3636			
☑ 2-Amino-4,6-dinitrotoluene			<272.7273	<90.9091			
☑ 2,6-Dinitrotoluene			<272.7273	<90.9091			
☑ 2,4-Dinitrotoluene			<272.7273	<90.9091			
☑ 2-Nitrotoluene			<272.7273	<181.8182			
☑ 4-Nitrotoluene			<272.7273	<181.8182			
☑ 3-Nitrotoluene			<272.7273	<227.2727			
☑ 2-NMX	A	3737.665039				19.70	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Chemical Specialist Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266806 2C152 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 09:48:09
Instrument : CP12--X6329A
Result file : 4E12310.93R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 82% (63-150) Conc.: 3737.66503

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.08	4.20	348	-77.533859
2,4,6-TNT	7.78	7.91	7.98	33	1.318318
Tetryl breakdown	8.27	8.30	8.52	79	2.076415
2-NMX	25.41	25.27	26.09	14015	3737.665039

Analysis Report (B)

Injected on : NOV 18, 2013 09:48:09
Instrument : CP12--X6329B
Result file : 4E12310B.93R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 89% (63-150) Conc.: 4038.69897

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.42	26.24	217006	4038.698975

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5454.546	<1818.182			Report Confirmation
☑ PETN			<5454.546	<1818.182			
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ 2,4,6-TNT			<272.7273	<90.9091			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			Report Confirmation.
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☐ 2-NMX	A	3737.665039				7.74	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Technical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:26:54

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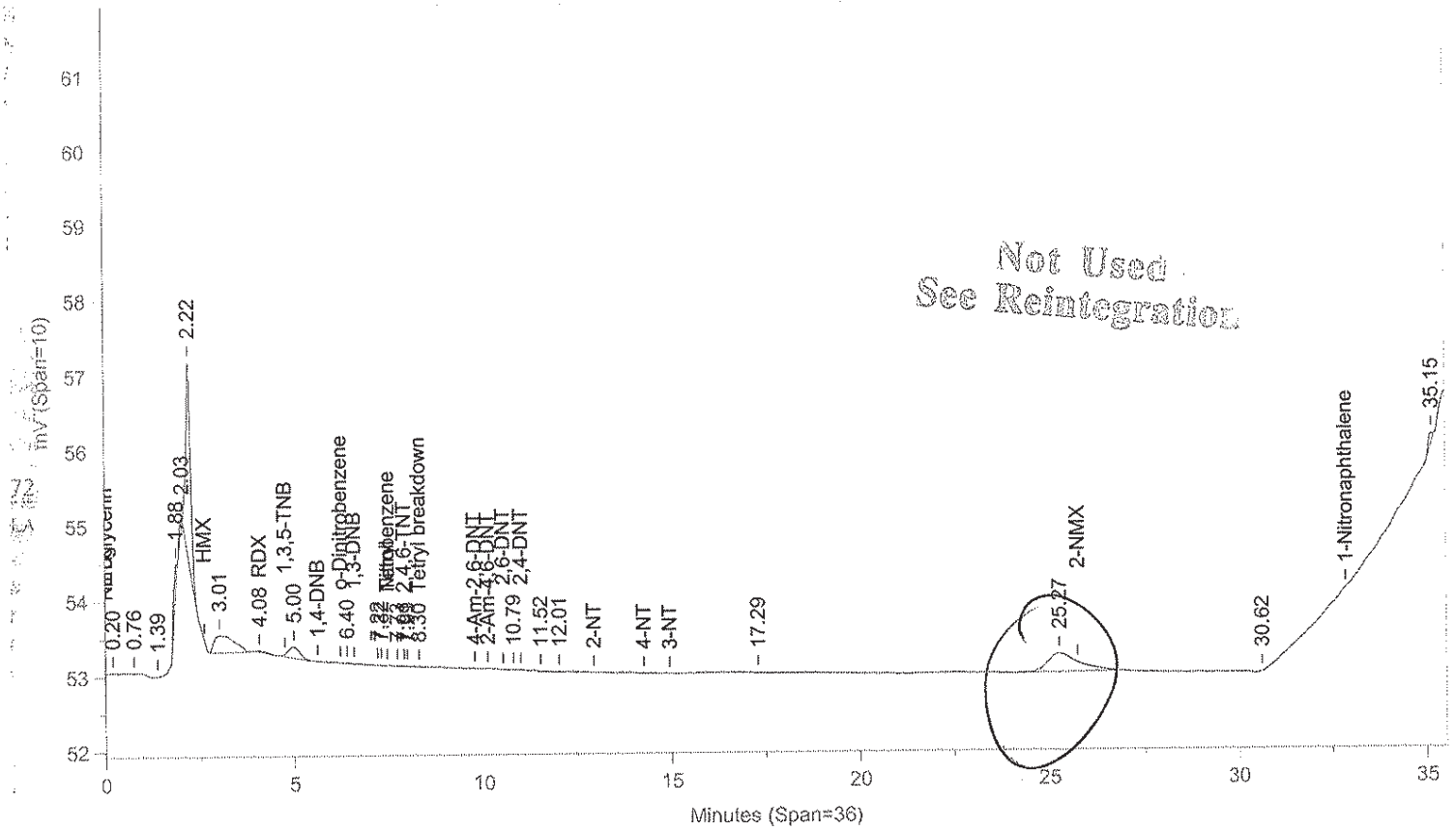
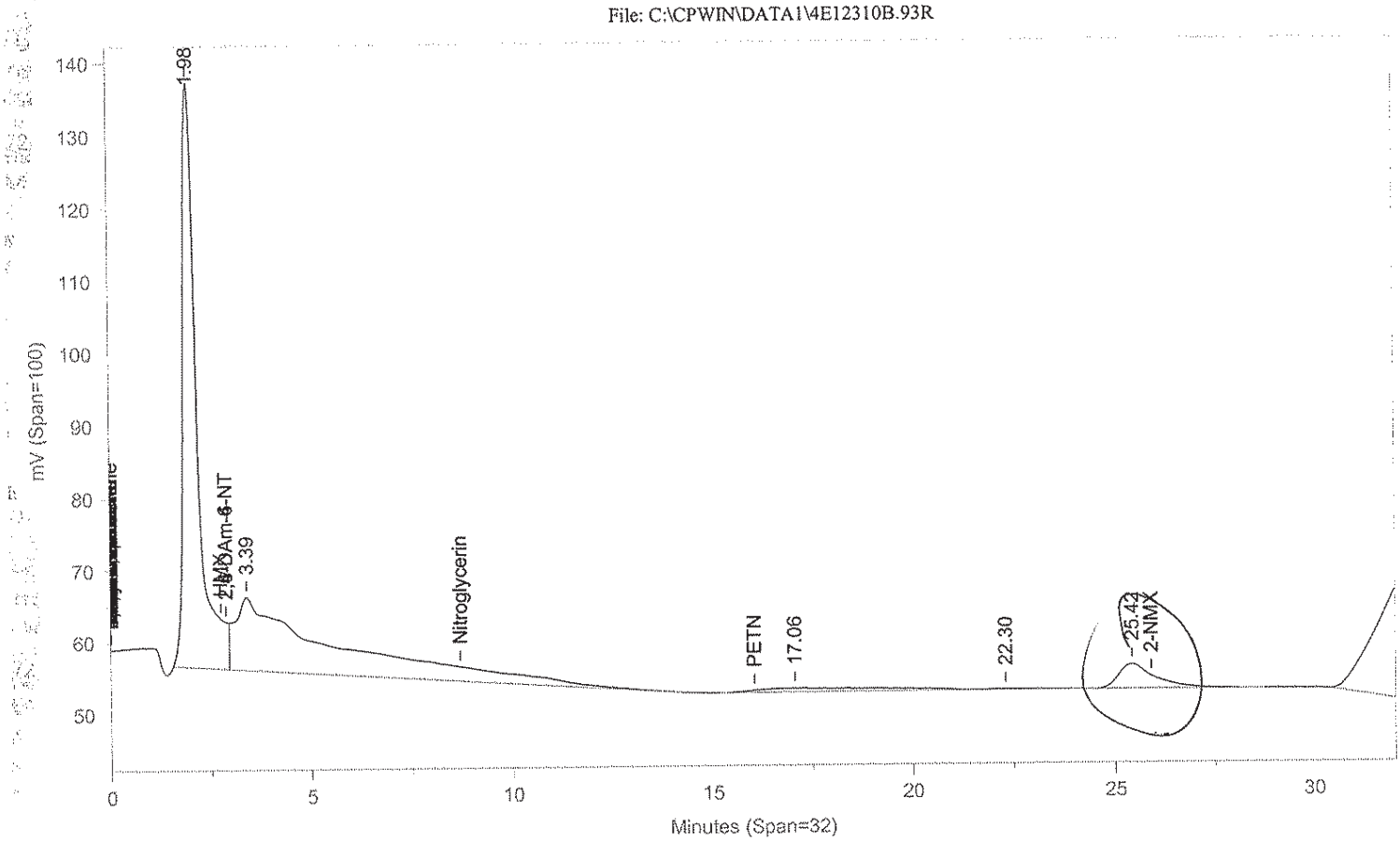


Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:48:08 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.93R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:48:08 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.084	348	-77.534	RDX	.	0	.	RDX
7.911	33	1.318	2,4,6-TNT	.	0	.	2,4,6-TNT
8.299	79	2.076	Tetryl breakdown	.	0	.	Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\4E12310.93A
Area File: C:\CPWIN\DATA1\4E12310B.93A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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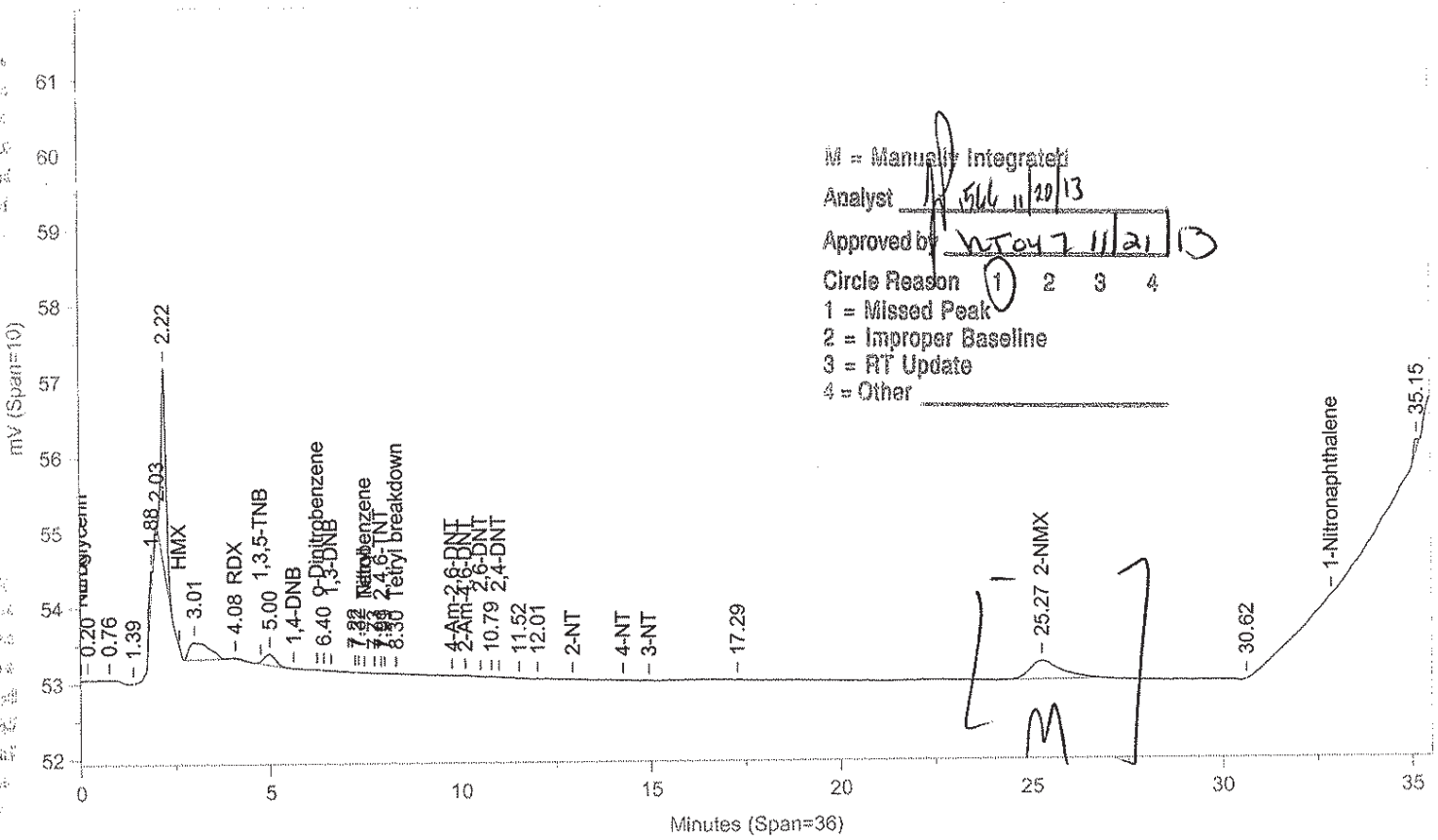
File Reported On: 11/18/2013 at 3:01:09 PM

Not Used
See Reintegration

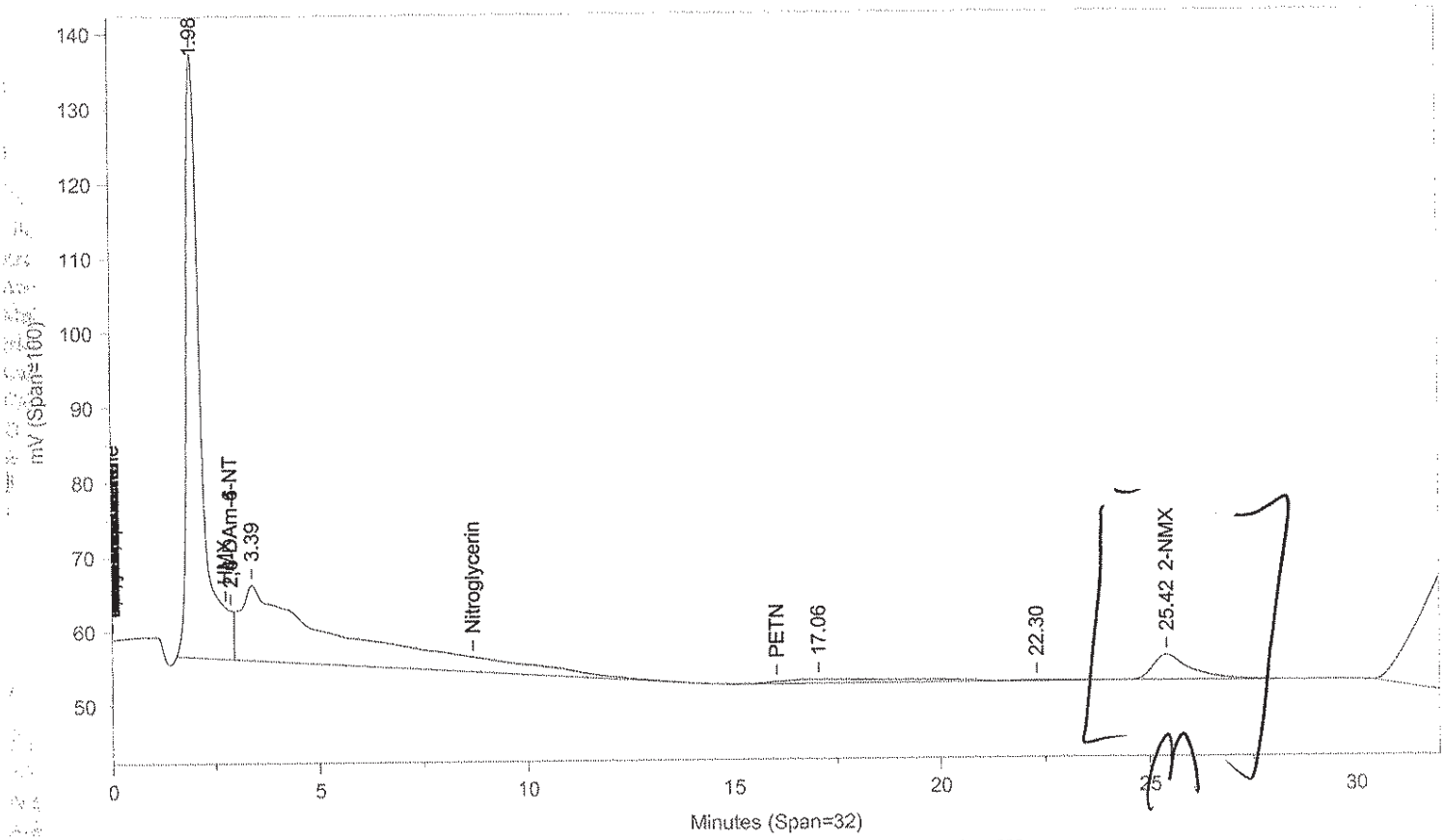
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.93R



M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:48:08 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.93R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:48:08 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.084	348	-77.534	RDX	.	0	.	RDX
7.911	33	1.318	2,4,6-TNT	.	0	.	2,4,6-TNT
8.299	79	2.076	Tetryl breakdown	.	0	.	Tetryl breakdown
25.269	14015	3737.665	2-NMX	25.421	217006	4038.699	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:55:30 PM
File Reported On: 11/20/2013 at 12:55:29 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266806 2C152 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 09:48:09
Instrument : CP12--Y6329A
Result file : 4C12310.93R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 100% (63-150) Conc.: 4554.21728

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.21	5.36	1099	-125.215698
Nitrobenzene	12.75	12.82	13.07	7957	358.987518
2-NMX	34.12	34.30	34.32	15632	4554.217285
1-Nitronaphthalene	36.36	36.39	36.56	991	307.810699

Analysis Report (B)

Injected on : NOV 18, 2013 09:48:09
Instrument : CP12--Y6329B
Result file : 4C12310B.93R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
PETN	26.02	26.15	26.44	41792	3199.152588

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	3199.152588	<5454.546	<1818.182	J		N/C
☑ Nitroglycerin			<5454.546	<1818.182			
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ Nitrobenzene	A	358.987518	< 272.7273	< 90.9091			N/C
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☐ 2-NMX	A	4554.217285					
☑ Tetryl			<272.7273	<139.0909			
☑ 2,4,6-TNT			<272.7273	<90.9091			
☑ 1-Nitronaphthalene	A	307.810699	272.7273	90.9091			

Units: ug/kg

James H. Place
Senior Chemist
Reviewed by: _____
Date: NOV 21 2013

Valerie J. Tomayko
Principal Specialist
Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:38:22

LANCASTER LABORATORIES

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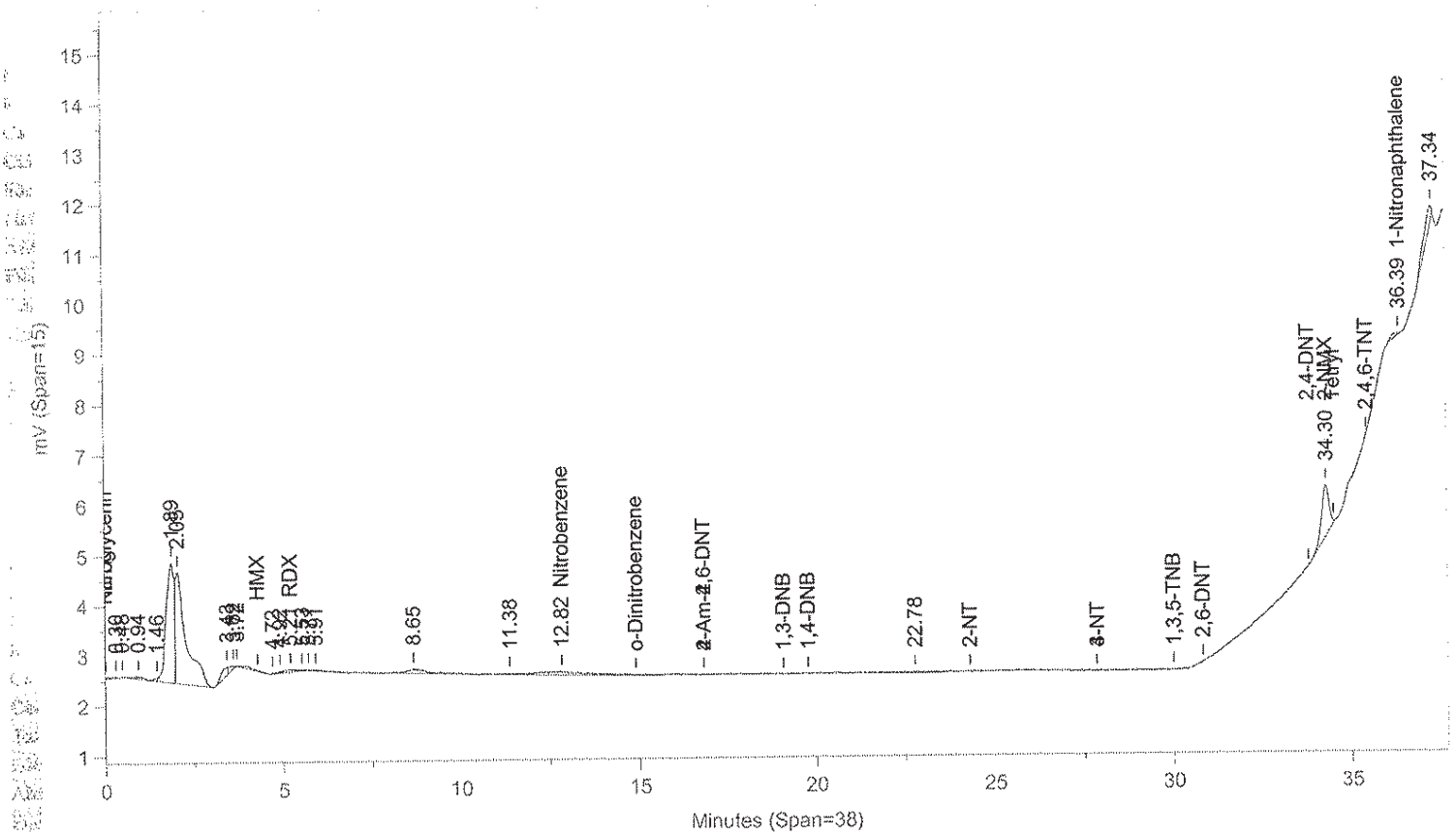
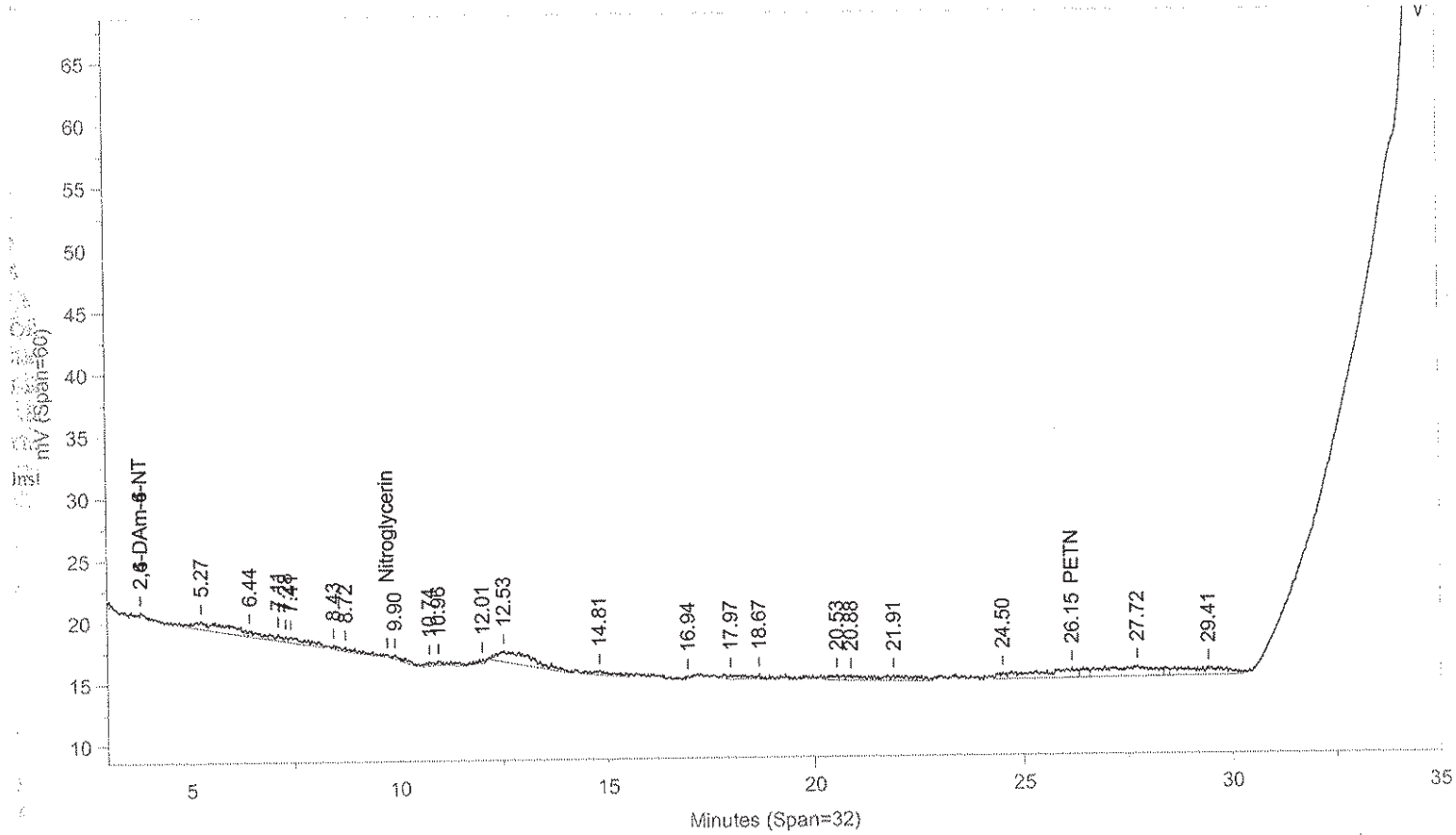


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 9:48:08 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.93R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 9:48:08 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.206	1099	-125.216	RDX	.	0	.	RDX
12.82	7957	358.988	Nitrobenzene	.	0	.	Nitrobenzene
.	0	.	PETN	26.148	41792	3199.153	PETN
24.303	15632	4554.217	2-NMX	.	0	.	2-NMX
36.388	991	307.811	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.93A
Area File: C:\CPWIN\DATA1\4C12310B.93A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:27:32 PM
File Reported On: 11/18/2013 at 3:27:42 PM

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Data Summary

Sample Name: 7266808 2C151 Sample ID: AA **Batchnumber: 133140019A**

Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 18, 2013 10:30:40
Instrument	X6329A
Result file	4E12310.94R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 97% (63 - 150) Conc: 4219.067871

Analysis Report (B)

Injected on	Nov 18, 2013 10:30:40
Instrument	Y6329A
Result file	4C12310.94R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 97% (63 - 150) Conc: 4228.100586

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.50	7.61	146	3.683561
2,4,6-Trinitrotoluene	7.78	7.82	7.98	24	0.913057
2,4-Dinitrotoluene	10.86	11.05	11.14	30	0.777918
2-NMX	25.41	25.22	26.09	16539	4219.067871

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.32	34.32	15118	4228.10058€

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5217.3911	<1739.1304			
☑ PETN			<5217.3911	<1739.1304			
☑ HMX			<652.1739	<217.3913			
☑ RDX			<260.8696	<108.6956			
☑ 1,3,5-Trinitrobenzene			<260.8696	<86.9565			
☑ 1,4-Dinitrobenzene			<260.8696	<86.9565			
☑ o-Dinitrobenzene			<260.8696	<86.9565			
☑ 1,3-DNB			<260.8696	<86.9565			
☑ Tetryl			<260.8696	<133.0435			
☑ Nitrobenzene			<260.8696	<86.9565			
☑ 2,4,6-Trinitrotoluene			<260.8696	<86.9565			
☑ 4-Amino-2,6-dinitrotoluene			<260.8696	<130.4348			
☑ 2-Amino-4,6-dinitrotoluene			<260.8696	<86.9565			
☑ 2,6-Dinitrotoluene			<260.8696	<86.9565			
☑ 2,4-Dinitrotoluene			<260.8696	<86.9565			
☑ 2-Nitrotoluene			<260.8696	<173.913			
☑ 4-Nitrotoluene			<260.8696	<173.913			
☑ 3-Nitrotoluene			<260.8696	<217.3913			
☑ 2-NMX	A	4219.067871				0.21	
☑ 1-Nitronaphthalene			<260.8696	<86.9565			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266808 2C151 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 10:30:40
Instrument : CP12--X6329A
Result file : 4E12310.94R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 97% (63-150) Conc.: 4219.06787

Peak name	Min	R.T.	Max	Area	Amount
Tetryl	7.33	7.50	7.61	146	3.683561
2,4,6-TNT	7.78	7.82	7.98	24	0.913057
2,4-DNT	10.86	11.05	11.14	30	0.777918
2-NMX	25.41	25.22	26.09	16539	4219.067871

Analysis Report (B)

Injected on : NOV 18, 2013 10:30:40
Instrument : CP12--X6329B
Result file : 4E12310B.94R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 94% (63-150) Conc.: 4091.24023

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.32	26.24	229821	4091.240234

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5217.39	<1739.13			Report Confirmation
☑ PETN			<5217.39	<1739.13			
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ Tetryl			<260.8695	<133.0434			
☑ Nitrobenzene			<260.8695	<86.9565			
☑ 2,4,6-TNT			<260.8695	<86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			Report Confirmation.
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☐ 2-NMX	A	4219.067871				3.08	
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

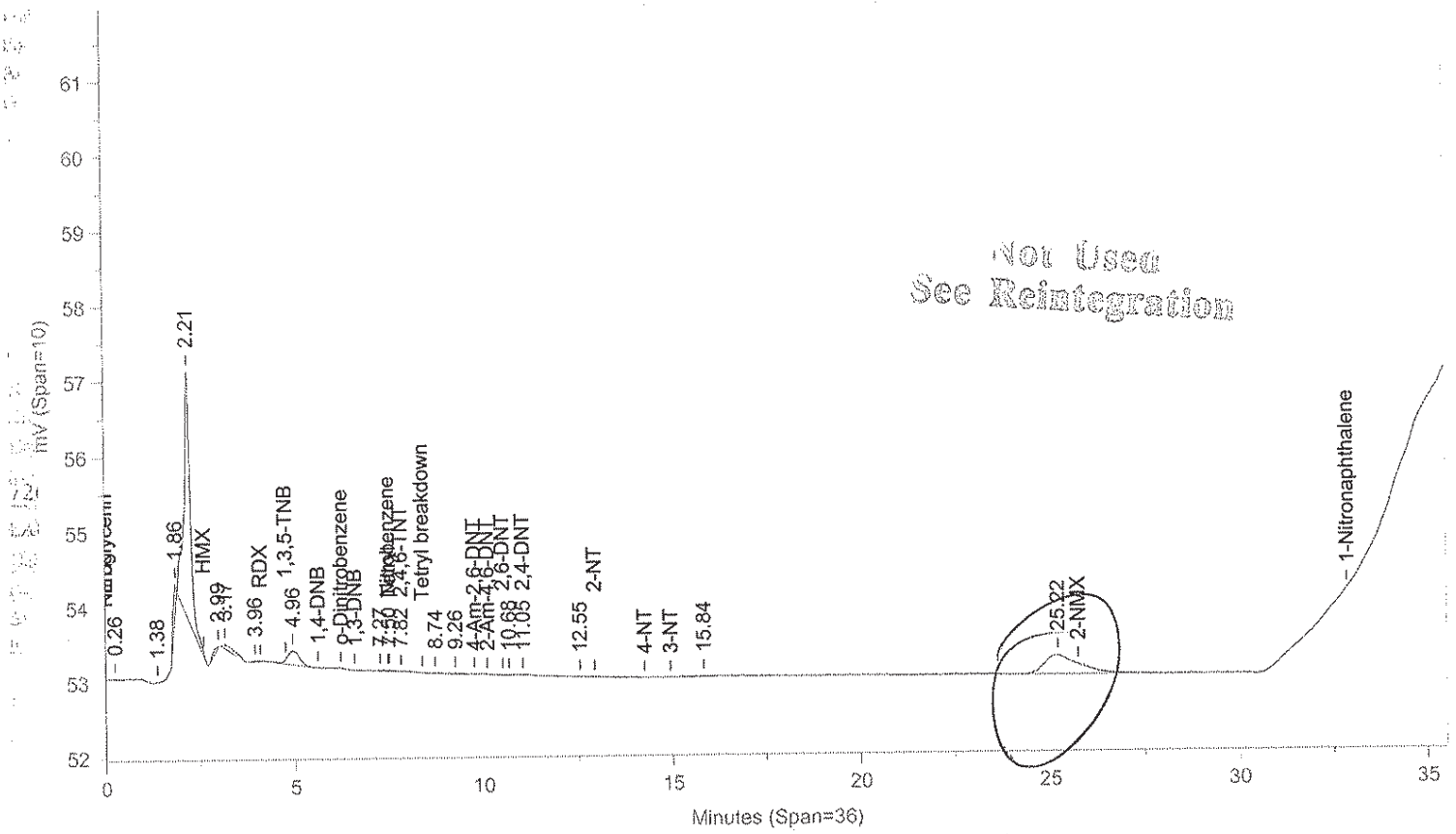
Verified by: Valerie L. Tomayko, Chemistry Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

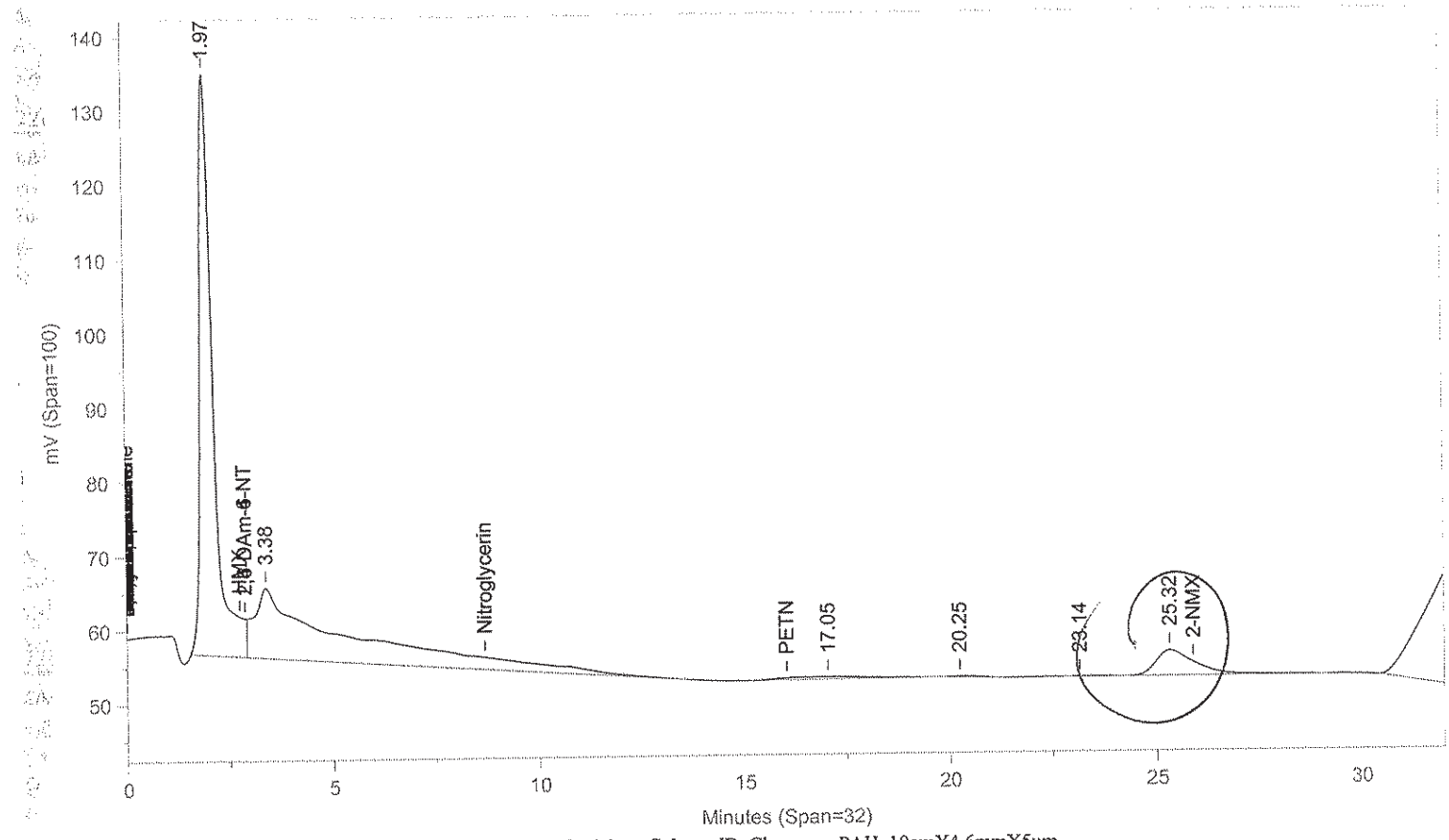
Printed on: 11/20/2013 13:27:07

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.94R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 10:30:39 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.94R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 10:30:39 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.498	146	3.684	Tetryl	.		0	. Tetryl
7.816	24	.913	2,4,6-TNT	.		0	. 2,4,6-TNT
11.05	30	.778	2,4-DNT	.		0	. 2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.94A
Area File: C:\CPWIN\DATA1\4E12310B.94A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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File Reported On: 11/18/2013 at 3:01:39 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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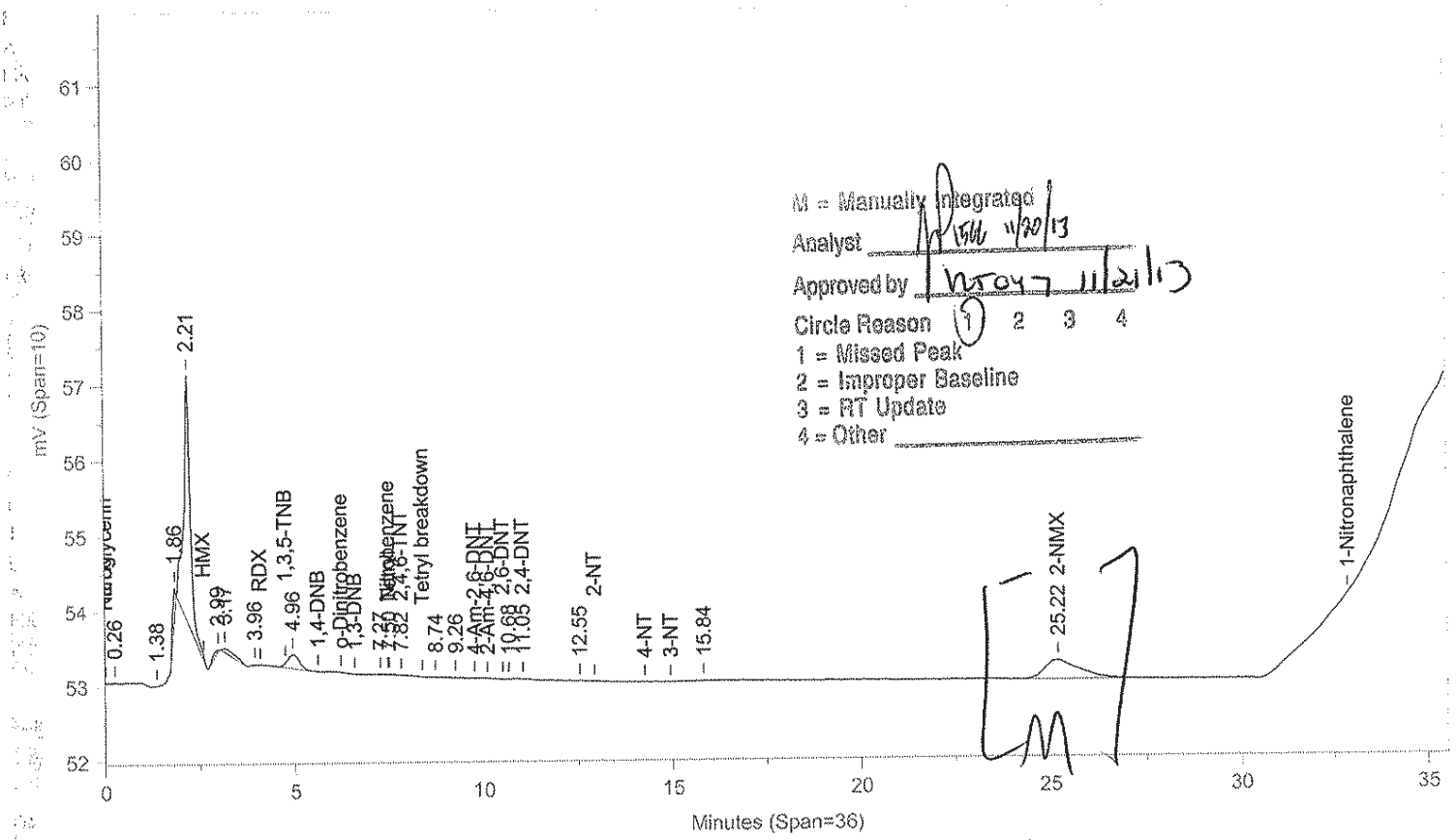
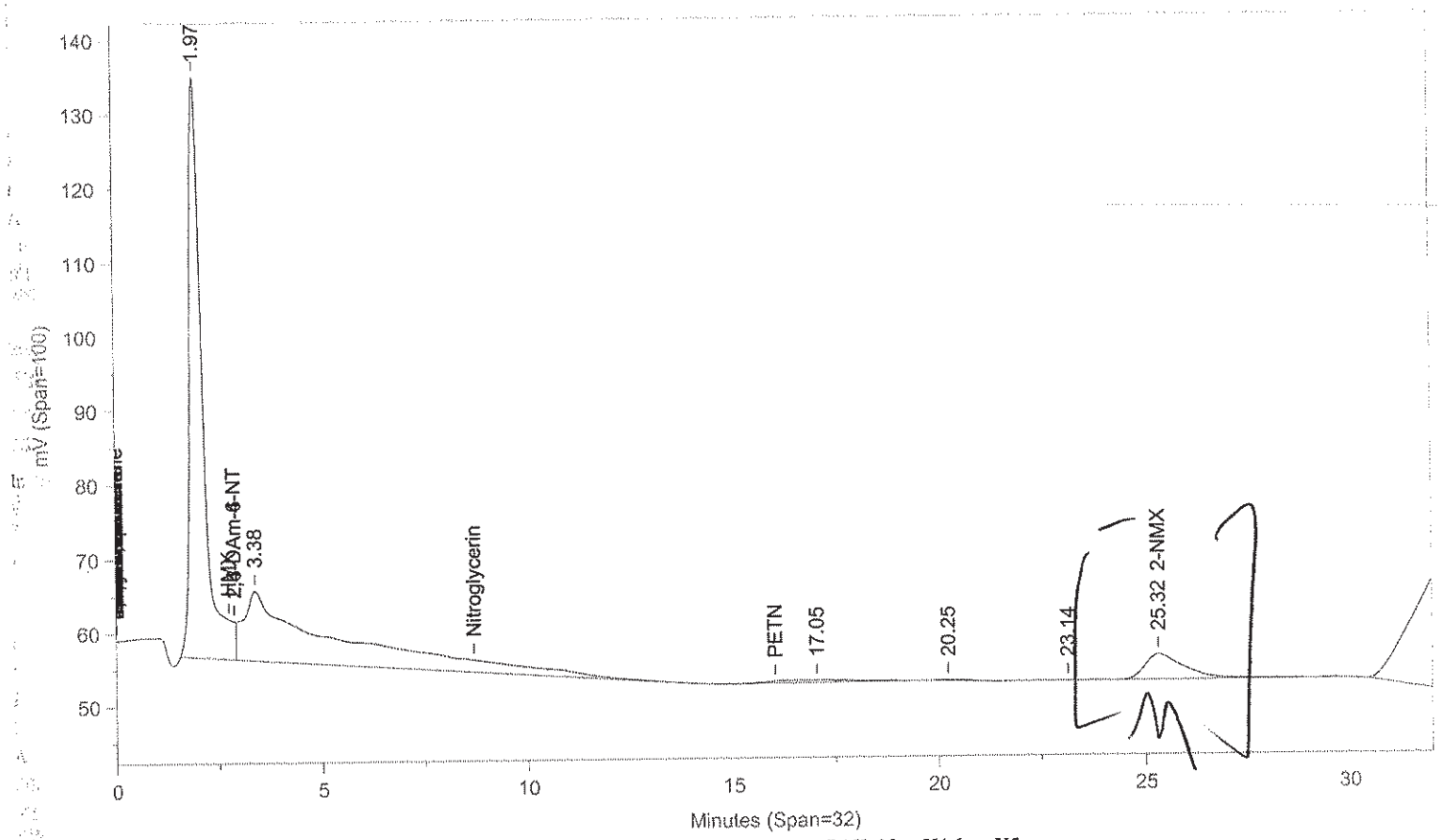


Instrument ID: CP12--X6329A Injected On: 11/18/2013 10:30:39 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.94R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 10:30:39 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.498	146	3.684	Tetryl	.	0	.	Tetryl
7.816	24	.913	2,4,6-TNT	.	0	.	2,4,6-TNT
11.05	30	.778	2,4-DNT	.	0	.	2,4-DNT
25.219	16539	4219.068	2-NMX	25.323	229821	4091.24	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 1:08:58 PM
File Reported On: 11/20/2013 at 1:08:56 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266808 2C151 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 10:30:40
Instrument : CP12--Y6329A
Result file : 4C12310.94R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 97% (63-150) Conc.: 4228.10058(

Analysis Report (B)

Injected on : NOV 18, 2013 10:30:40
Instrument : CP12--Y6329B
Result file : 4C12310B.94R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.18	5.36	1443	-93.085251
2-NMX	34.12	34.32	34.32	15118	4228.100586

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5217.39	<1739.13			Report
☑ Nitroglycerin			<5217.39	<1739.13			
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ Nitrobenzene			<260.8695	<86.9565			Report
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			Report
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☐ 2-NMX	A	4228.100586					
☑ Tetryl			<260.8695	<133.0434			Report
☑ 2,4,6-TNT			<260.8695	<86.9565			
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

Valerie L. Tomaszewski
Principal Specialist

Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:38:38

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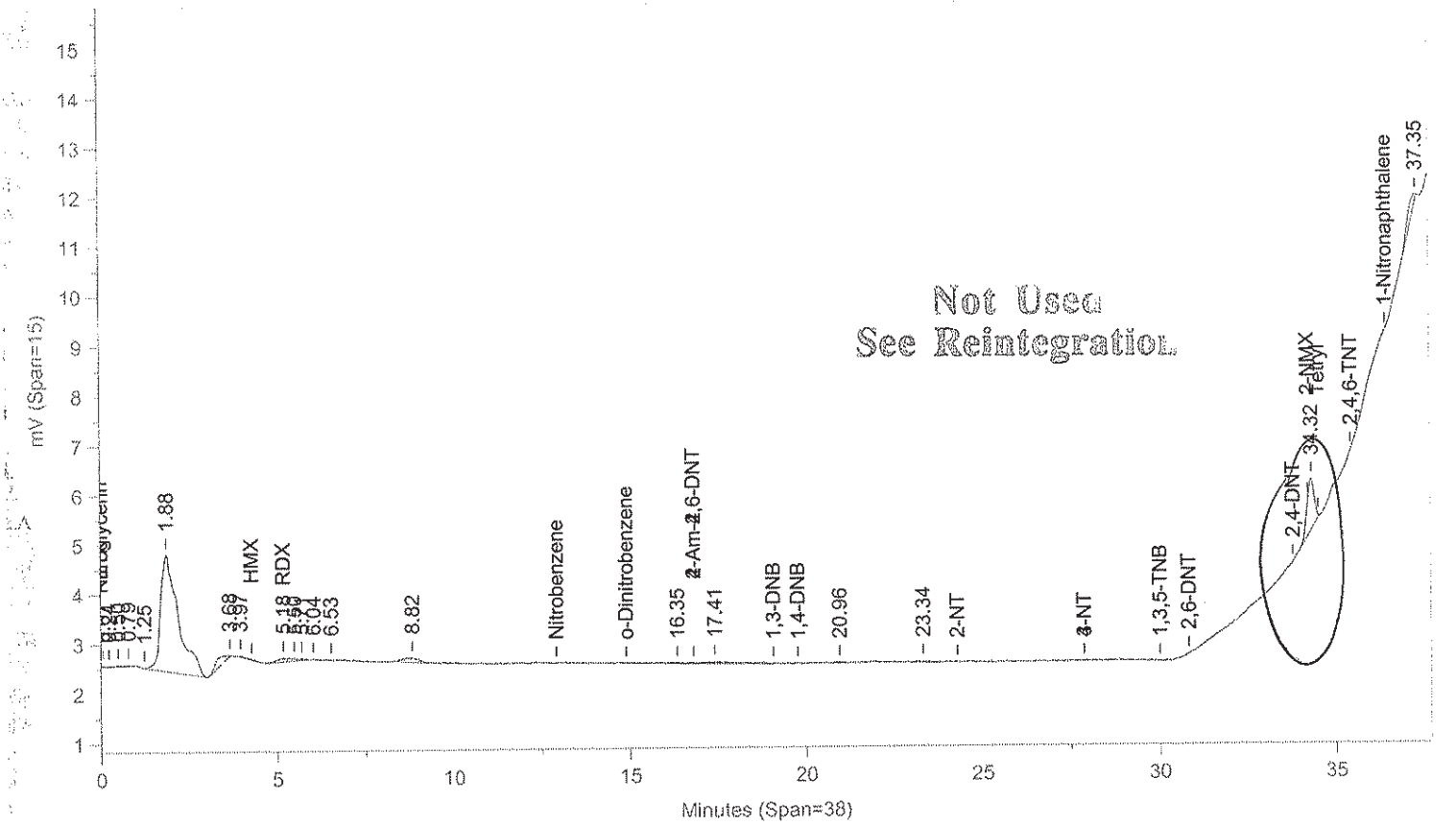
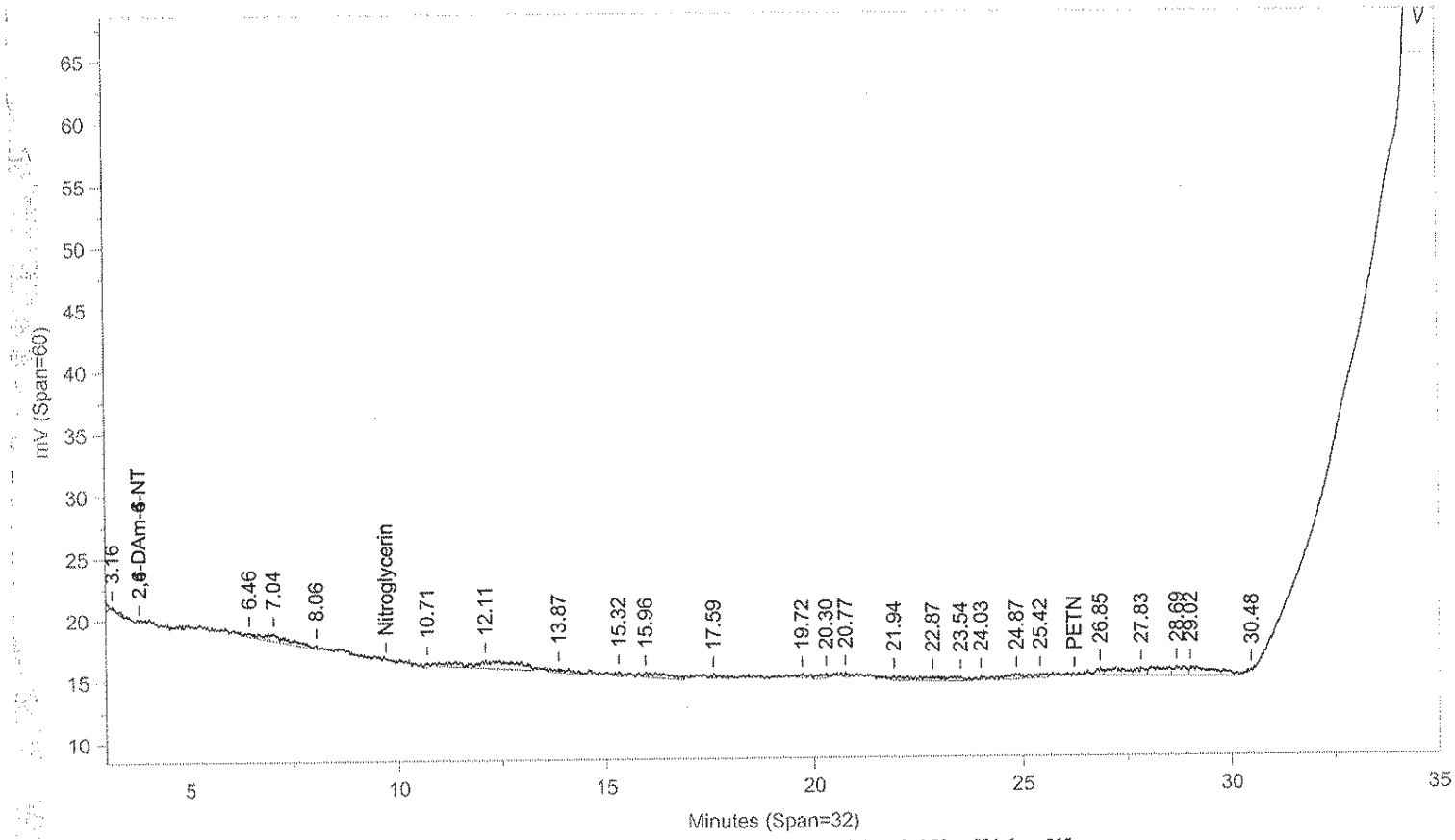
File: C:\CPWIN\DATA1\4C12310.94R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 10:30:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.94R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 10:30:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.185	1443	-93.085	RDX			0	RDX

Files:
Area File: C:\CPWIN\DATA1\4C12310.94A
Area File: C:\CPWIN\DATA1\4C12310B.94A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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File Reported On: 11/18/2013 at 3:28:13 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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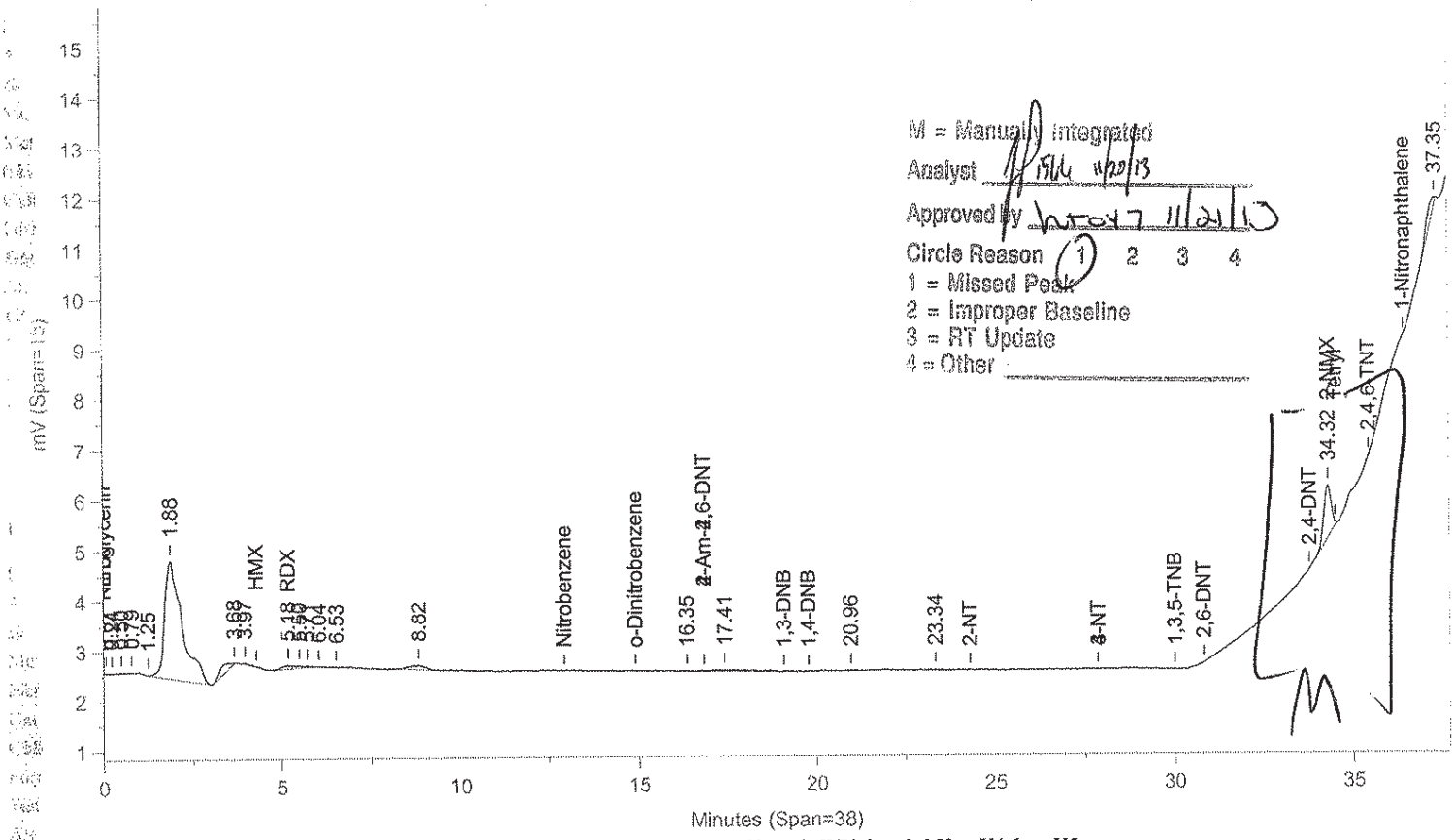
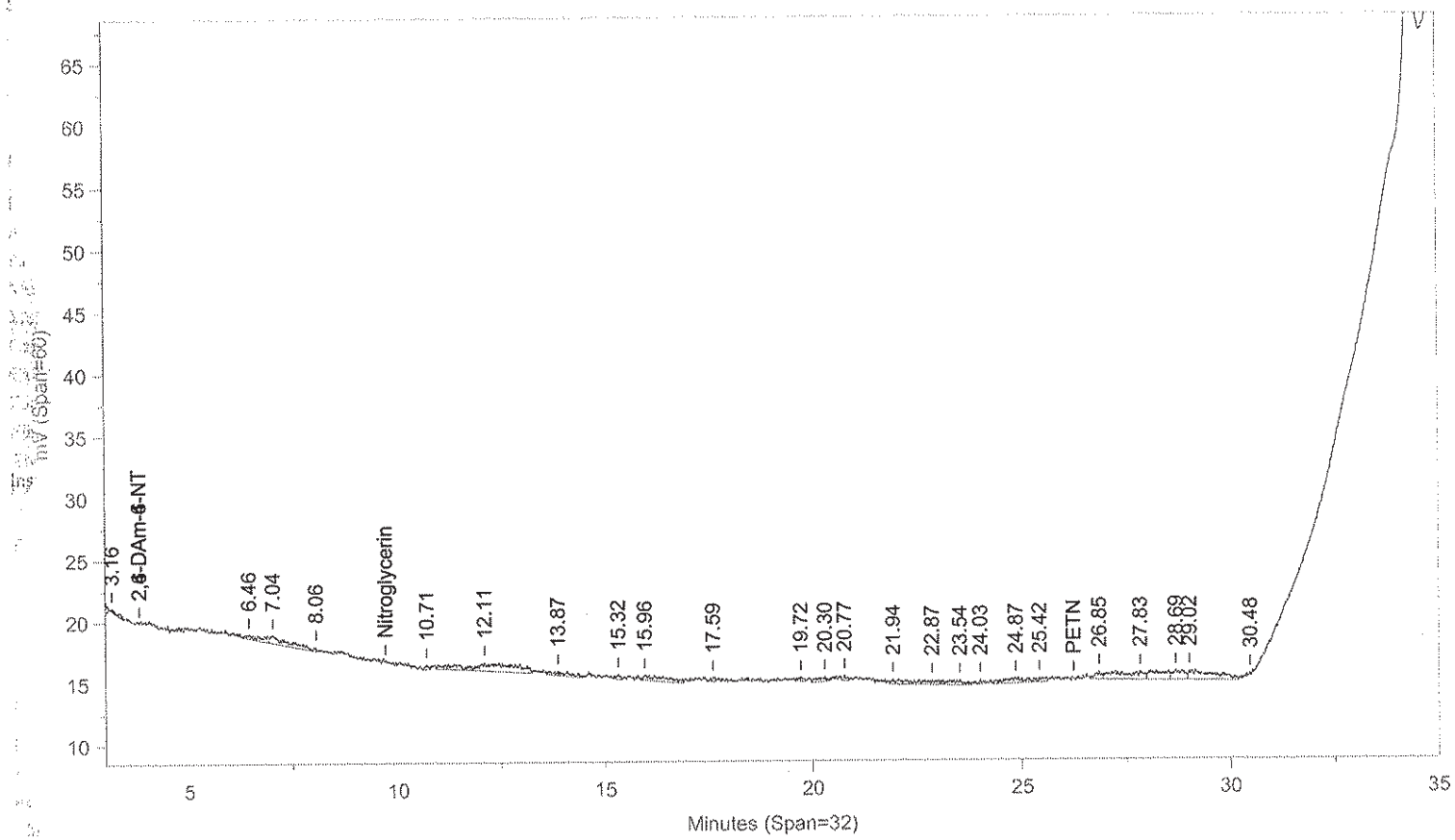


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 10:30:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.94R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 10:30:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.185	1443	-93.085	RDX	.	0	.	RDX
34.319	15118	4228.101	2-NMX	.	0	.	2-NMX

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Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:15:28 PM
File Reported On: 11/20/2013 at 3:15:26 PM

Standards Data

Explosives

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

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1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/10/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1331899999	
2	CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1331899999	
3	CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1331899999	
4	CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1331899999	
5	CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1331899999	
6	NITR31324O	6	CCAL	PV		8330.MET	1	1	1	0	1331899999	
7	NITR31324M	7	CCAL	PX		8330.MET	1	1	1	0	1331899999	
8	MS1330124B	8	CCAL	AH		8330.MET	1	50	1	0	1331899999	
9	MS1330124B	9	CCAL	AH		8330.MET	1	50	1	0	1331899999	
10	MS1330124B	10	CCAL	AH		8330.MET	1	50	1	0	1331899999	
11	MS1330124B	11	CCAL	AH		8330.MET	1	50	1	0	1331899999	
12	BLANKA 11/12/13	12	BLK	AA		8330.MET	2	20	1	0	133140021A	10132
13	LCSA 11/12/13	13	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
14	LCSDDIA 11/12/13	14	LCSD	AA		8330.MET	2	20	1	0	133140021A	10132
15	LCSDIA 11/12/13	15	LCS	AA		8330.MET	2	20	1	0	133140021A	10132
16	7269438	16	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
17	7269438MS	17	MS	AA		8330.MET	2	20	1	0	133140021A	10132
18	NITR31324O	18	CCAL	PV		8330.MET	1	1	1	0	1331899999	
19	NITR31324M	19	CCAL	PX		8330.MET	1	1	1	0	1331899999	
20	7269438MSD	20	MSD	AA		8330.MET	2.2	20	1	0	133140021A	10132
21	7269454	21	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
22	7269467	22	T	AA		8330.MET	2	20	1	0	133140021A	10132
23	7269472	23	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
24	7269475	24	T	AA		8330.MET	2.1	20	1	0	133140021A	10132
25	7269478	25	T	AA		8330.MET	2.2	20	1	0	133140021A	10132
26	7269484	26	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
27	7269487	27	T	AA		8330.MET	2.3	20	1	0	133140021A	10132
28	BLANKA 11/12/13	28	BLK	AA		8330.MET	2	20	1	0	133160009A	10132
29	LCSA 11/12/13	29	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
30	NITR31324O	30	CCAL	PV		8330.MET	1	1	1	0	1331899999	
31	NITR31324M	31	CCAL	PX		8330.MET	1	1	1	0	1331899999	
32	LCSDDIA 11/12/13	32	LCSD	AA		8330.MET	2	20	1	0	133160009A	10132
33	LCSDIA 11/12/13	33	LCS	AA		8330.MET	2	20	1	0	133160009A	10132
34	7269501	34	T	AA		8330.MET	2	20	1	0	133160009A	10132
35	7269504	35	T	AA		8330.MET	2	20	1	0	133160009A	10132
36	7269514	36	T	AA		8330.MET	2	20	1	0	133160009A	10132
37	7269520	37	T	AA		8330.MET	2	20	1	0	133160009A	10132
38	7269526	38	T	AA		8330.MET	2	20	1	0	133160009A	10132
39	7269529	39	T	AA		8330.MET	2	20	1	0	133160009A	10132
40	7269532	40	T	AA		8330.MET	2	20	1	0	133160009A	10132
41	7269538	41	T	AA		8330.MET	2	20	1	0	133160009A	10132
42	NITR31324O	42	CCAL	PV		8330.MET	1	1	1	0	1331899999	
43	NITR31324M	43	CCAL	PX		8330.MET	1	1	1	0	1331899999	
44	7269541	44	T	AA		8330.MET	2	20	1	0	133160009A	10132
45	7269544	45	T	AA		8330.MET	2	20	1	0	133160009A	10132
46	7269550	46	T	AA		8330.MET	2	20	1	0	133160009A	10132
47	7269553	47	T	AA		8330.MET	2	20	1	0	133160009A	10132
48	7269559	48	T	AA		8330.MET	2	20	1	0	133160009A	10132
49	7270974	49	T	AA		8330.MET	2	20	1	0	133160009A	10132
50	7270975MS	50	MS	AA		8330.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	7270976MSD	51	MSD	AA		8330.MET	2	20	1	0	133160009A	10132
52	7270986	52	T	AA		8330.MET	2	20	1	0	133160009A	10132
53	7270989	53	T	AA		8330.MET	2	20	1	0	133160009A	10132
54	NITR31324O	54	CCAL	PV		8330.MET	1	1	1	0	1331899999	
55	NITR31324M	55	CCAL	PX		8330.MET	1	1	1	0	1331899999	
56	7270995	56	T	AA		8330.MET	2	20	1	0	133160009A	10132
57	7271001	57	T	AA		8330.MET	2	20	1	0	133160009A	10132
58	NITR31324O	58	CCAL	PV		8330.MET	1	1	1	0	1331899999	
59	NITR31324M	59	CCAL	PX		8330.MET	1	1	1	0	1331899999	
60	BLANKA 11/11/13	60	BLK	AA		8330.MET	500	10	1	0	133130015A	06916
61	LCSA 11/11/13	61	LCS	AA		8330.MET	500	10	1	0	133130015A	06916
62	7265223	62	T	AA		8330.MET	500	10	1	0	133130015A	06916
63	7265224	63	T	AA		8330.MET	500	10	1	0	133130015A	06916
64	7265228	64	T	AA		8330.MET	500	10	1	0	133130015A	06916
65	7265230	65	T	AA		8330.MET	500	10	1	0	133130015A	06916
66	7265231MS	66	MS	AA		8330.MET	500	10	1	0	133130015A	06916
67	7265232MSD	67	MSD	AA		8330.MET	500	10	1	0	133130015A	06916
68	7265235	68	T	AA		8330.MET	500	10	1	0	133130015A	06916
69	7265238	69	T	AA		8330.MET	500	10	1	0	133130015A	06916
70	NITR31324O	70	CCAL	PV		8330.MET	1	1	1	0	1331899999	
71	7265240	71	T	AA		8330.MET	500	10	1	0	133130015A	06916
72	7265243	72	T	AA		8330.MET	500	10	1	0	133130015A	06916
73	7265247	73	T	AA		8330.MET	500	10	1	0	133130015A	06916
74	7265248	74	T	AA		8330.MET	500	10	1	0	133130015A	06916
75	BLANKA 11/12/13	75	BLK	AA		8330.MET	500	10	1	0	133140016A	06916
76	LCSA 11/12/13	76	LCS	AA		8330.MET	500	10	1	0	133140016A	06916
77	LCSDA 11/12/13	77	LCSD	AA		8330.MET	500	10	1	0	133140016A	06916
78	7266798	78	T	AA		8330.MET	500	10	1	0	133140016A	06916
79	7266799	79	T	AA		8330.MET	500	10	1	0	133140016A	06916
80	7266805	80	T	AA		8330.MET	500	10	1	0	133140016A	06916
81	NITR31324O	81	CCAL	PV		8330.MET	1	1	1	0	1331899999	
82	7266807	82	T	AA		8330.MET	500	10	1	0	133140016A	06916
83	7266810	83	T	AA		8330.MET	500	10	1	0	133140016A	06916
84	7266811	84	T	AA		8330.MET	500	10	1	0	133140016A	06916
85	7266819	85	T	AA		8330.MET	500	10	1	0	133140016A	06916
86	BLANKA 11/12/13	86	BLK	AA		8330.MET	2	20	1	0	133140019A	06918
87	LCSA 11/12/13	87	LCS	AA		8330.MET	2	20	1	0	133140019A	06918
88	7266800	88	T	AA		8330.MET	2	20	1	0	133140019A	06918
89	7266801MS	89	MS	AA		8330.MET	2.3	20	1	0	133140019A	06918
90	7266802MSD	90	MSD	AA		8330.MET	2.3	20	1	0	133140019A	06918
91	7266804	91	T	AA		8330.MET	2.4	20	1	0	133140019A	06918
92	NITR31324O	92	CCAL	PV		8330.MET	1	1	1	0	1331899999	
93	7266806	93	T	AA		8330.MET	2.2	20	1	0	133140019A	06918
94	7266808	94	T	AA		8330.MET	2.3	20	1	0	133140019A	06918
95	NITR31324O	95	CCAL	PV		8330.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/22/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13
11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131



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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/8/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1331899999	
2	CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1331899999	
3	CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1331899999	
4	CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1331899999	
5	CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1331899999	
6	NITR31324O	6	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
7	NITR31324M	7	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
8	MS1330124B	8	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
9	MS1330124B	9	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
10	MS1330124B	10	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
11	MS1330124B	11	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
12	BLANKA 11/12/13	12	BLK	AA		8330C.MET	2	20	1	0	133140021A	10132
13	LCSA 11/12/13	13	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
14	LCSDDIA 11/12/13	14	LCSD	AA		8330C.MET	2	20	1	0	133140021A	10132
15	LCSDIA 11/12/13	15	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
16	7269438	16	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
17	7269438MS	17	MS	AA		8330C.MET	2	20	1	0	133140021A	10132
18	NITR31324O	18	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
19	NITR31324M	19	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
20	7269438MSD	20	MSD	AA		8330C.MET	2.2	20	1	0	133140021A	10132
21	7269454	21	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
22	7269467	22	T	AA		8330C.MET	2	20	1	0	133140021A	10132
23	7269472	23	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
24	7269475	24	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
25	7269478	25	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
26	7269484	26	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
27	7269487	27	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
28	BLANKA 11/12/13	28	BLK	AA		8330C.MET	2	20	1	0	133160009A	10132
29	LCSA 11/12/13	29	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
30	NITR31324O	30	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
31	NITR31324M	31	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
32	LCSDDIA 11/12/13	32	LCSD	AA		8330C.MET	2	20	1	0	133160009A	10132
33	LCSDIA 11/12/13	33	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
34	7269501	34	T	AA		8330C.MET	2	20	1	0	133160009A	10132
35	7269504	35	T	AA		8330C.MET	2	20	1	0	133160009A	10132
36	7269514	36	T	AA		8330C.MET	2	20	1	0	133160009A	10132
37	7269520	37	T	AA		8330C.MET	2	20	1	0	133160009A	10132
38	7269526	38	T	AA		8330C.MET	2	20	1	0	133160009A	10132
39	7269529	39	T	AA		8330C.MET	2	20	1	0	133160009A	10132
40	7269532	40	T	AA		8330C.MET	2	20	1	0	133160009A	10132
41	7269538	41	T	AA		8330C.MET	2	20	1	0	133160009A	10132
42	NITR31324O	42	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
43	NITR31324M	43	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
44	7269541	44	T	AA		8330C.MET	2	20	1	0	133160009A	10132
45	7269544	45	T	AA		8330C.MET	2	20	1	0	133160009A	10132
46	7269550	46	T	AA		8330C.MET	2	20	1	0	133160009A	10132
47	7269553	47	T	AA		8330C.MET	2	20	1	0	133160009A	10132
48	7269559	48	T	AA		8330C.MET	2	20	1	0	133160009A	10132
49	7270974	49	T	AA		8330C.MET	2	20	1	0	133160009A	10132
50	7270975MS	50	MS	AA		8330C.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270976MSD	51	MSD	AA		8330C.MET	2	20	1	0	133160009A	10132
52 7270986	52	T	AA		8330C.MET	2	20	1	0	133160009A	10132
53 7270989	53	T	AA		8330C.MET	2	20	1	0	133160009A	10132
54 NITR31324O	54	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
55 NITR31324M	55	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
56 7270995	56	T	AA		8330C.MET	2	20	1	0	133160009A	10132
57 7271001	57	T	AA		8330C.MET	2	20	1	0	133160009A	10132
58 NITR31324O	58	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
59 NITR31324M	59	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
60 BLANKA 11/11/13	60	BLK	AA		8330C.MET	500	10	1	0	133130015A	06916
61 LCSA 11/11/13	61	LCS	AA		8330C.MET	500	10	1	0	133130015A	06916
62 7265223	62	T	AA		8330C.MET	500	10	1	0	133130015A	06916
63 7265224	63	T	AA		8330C.MET	500	10	1	0	133130015A	06916
64 7265228	64	T	AA		8330C.MET	500	10	1	0	133130015A	06916
65 7265230	65	T	AA		8330C.MET	500	10	1	0	133130015A	06916
66 7265231MS	66	MS	AA		8330C.MET	500	10	1	0	133130015A	06916
67 7265232MSD	67	MSD	AA		8330C.MET	500	10	1	0	133130015A	06916
68 7265235	68	T	AA		8330C.MET	500	10	1	0	133130015A	06916
69 7265238	69	T	AA		8330C.MET	500	10	1	0	133130015A	06916
70 NITR31324O	70	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
71 7265240	71	T	AA		8330C.MET	500	10	1	0	133130015A	06916
72 7265243	72	T	AA		8330C.MET	500	10	1	0	133130015A	06916
73 7265247	73	T	AA		8330C.MET	500	10	1	0	133130015A	06916
74 7265248	74	T	AA		8330C.MET	500	10	1	0	133130015A	06916
75 BLANKA 11/12/13	75	BLK	AA		8330C.MET	500	10	1	0	133140016A	06916
76 LCSA 11/12/13	76	LCS	AA		8330C.MET	500	10	1	0	133140016A	06916
77 LCSDA 11/12/13	77	LCSD	AA		8330C.MET	500	10	1	0	133140016A	06916
78 7266798	78	T	AA		8330C.MET	500	10	1	0	133140016A	06916
79 7266799	79	T	AA		8330C.MET	500	10	1	0	133140016A	06916
80 7266805	80	T	AA		8330C.MET	500	10	1	0	133140016A	06916
81 NITR31324O	81	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
82 7266807	82	T	AA		8330C.MET	500	10	1	0	133140016A	06916
83 7266810	83	T	AA		8330C.MET	500	10	1	0	133140016A	06916
84 7266811	84	T	AA		8330C.MET	500	10	1	0	133140016A	06916
85 7266819	85	T	AA		8330C.MET	500	10	1	0	133140016A	06916
86 BLANKA 11/12/13	86	BLK	AA		8330C.MET	2	20	1	0	133140019A	06918
87 LCSA 11/12/13	87	LCS	AA		8330C.MET	2	20	1	0	133140019A	06918
88 7266800	88	T	AA		8330C.MET	2	20	1	0	133140019A	06918
89 7266801MS	89	MS	AA		8330C.MET	2.3	20	1	0	133140019A	06918
90 7266802MSD	90	MSD	AA		8330C.MET	2.3	20	1	0	133140019A	06918
91 7266804	91	T	AA		8330C.MET	2.4	20	1	0	133140019A	06918
92 NITR31324O	92	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
93 7266806	93	T	AA		8330C.MET	2.2	20	1	0	133140019A	06918
94 7266808	94	T	AA		8330C.MET	2.3	20	1	0	133140019A	06918
95 NITR31324O	95	CCAL	PV		8330C.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/22/13

11/15/2013

LANCASTER LABORATORIES

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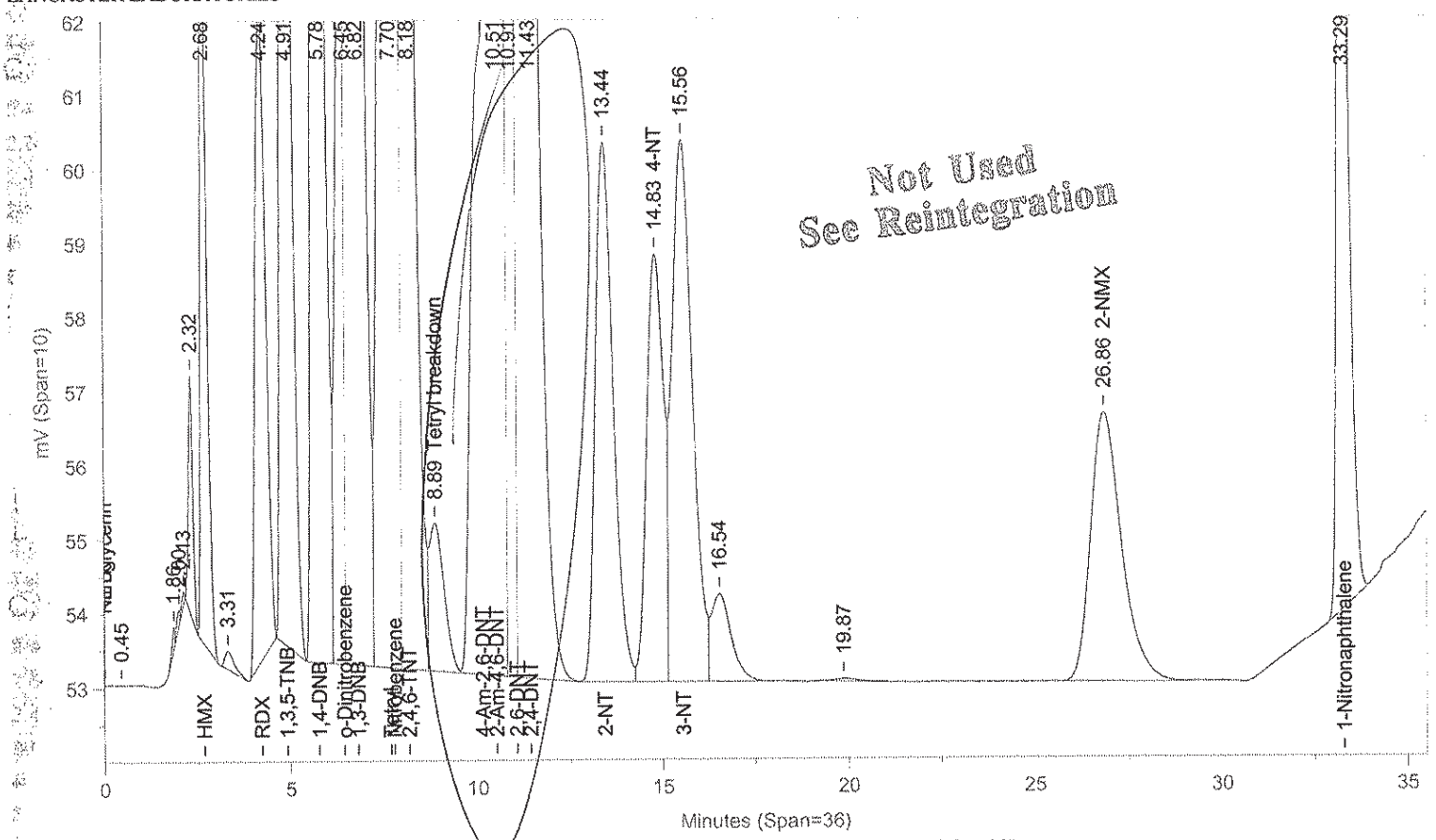
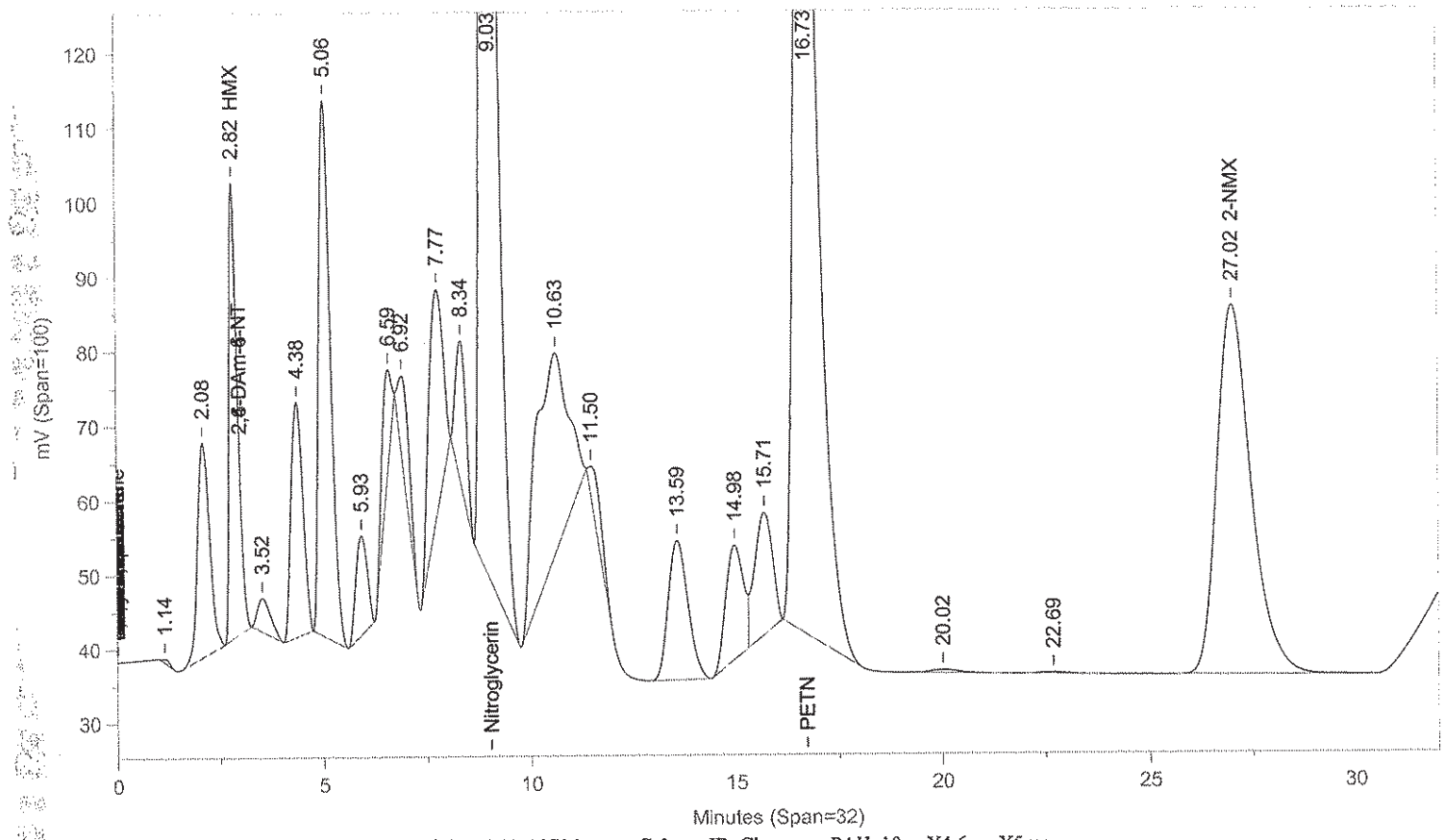


Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

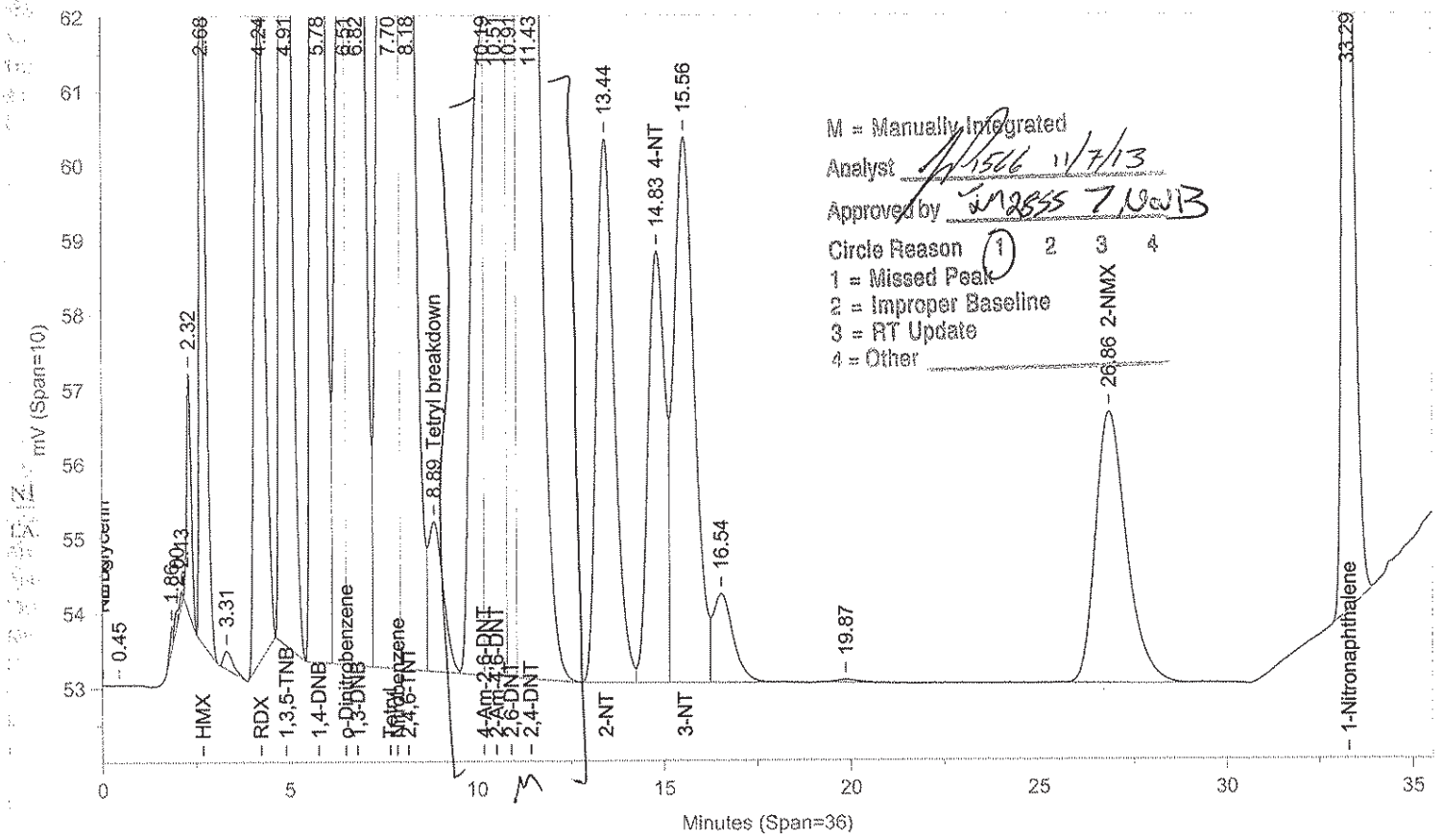
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	2030.674	HMX
4.236	173918	1997.862	RDX	.	0	.	RDX
4.915	403513	1913.478	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	1961.54	1,4-DNB	.	0	.	1,4-DNB
6.454	152192	1597.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	685139	2107.093	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	1762.438	Tetryl	.	0	.	Tetryl
8.184	451815	2029.189	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	153.795	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	38324.7	Nitroglycerin
10.513	624304	2944.329	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.432	677076	2101.777	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	1962.143	2-NT	.	0	.	2-NT
14.835	183964	2051.322	4-NT	.	0	.	4-NT
15.56	279402	2045.584	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	39994.64	PETN
26.863	207607	5974.572	2-NMX	27.017	2865768	5842.708	2-NMX
33.287	288442	2013.93	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.04A
Area File: C:\CPWIN\DATA1\1E12310B.04A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:04 PM
File Reported On: 11/7/2013 at 2:18:21 PM

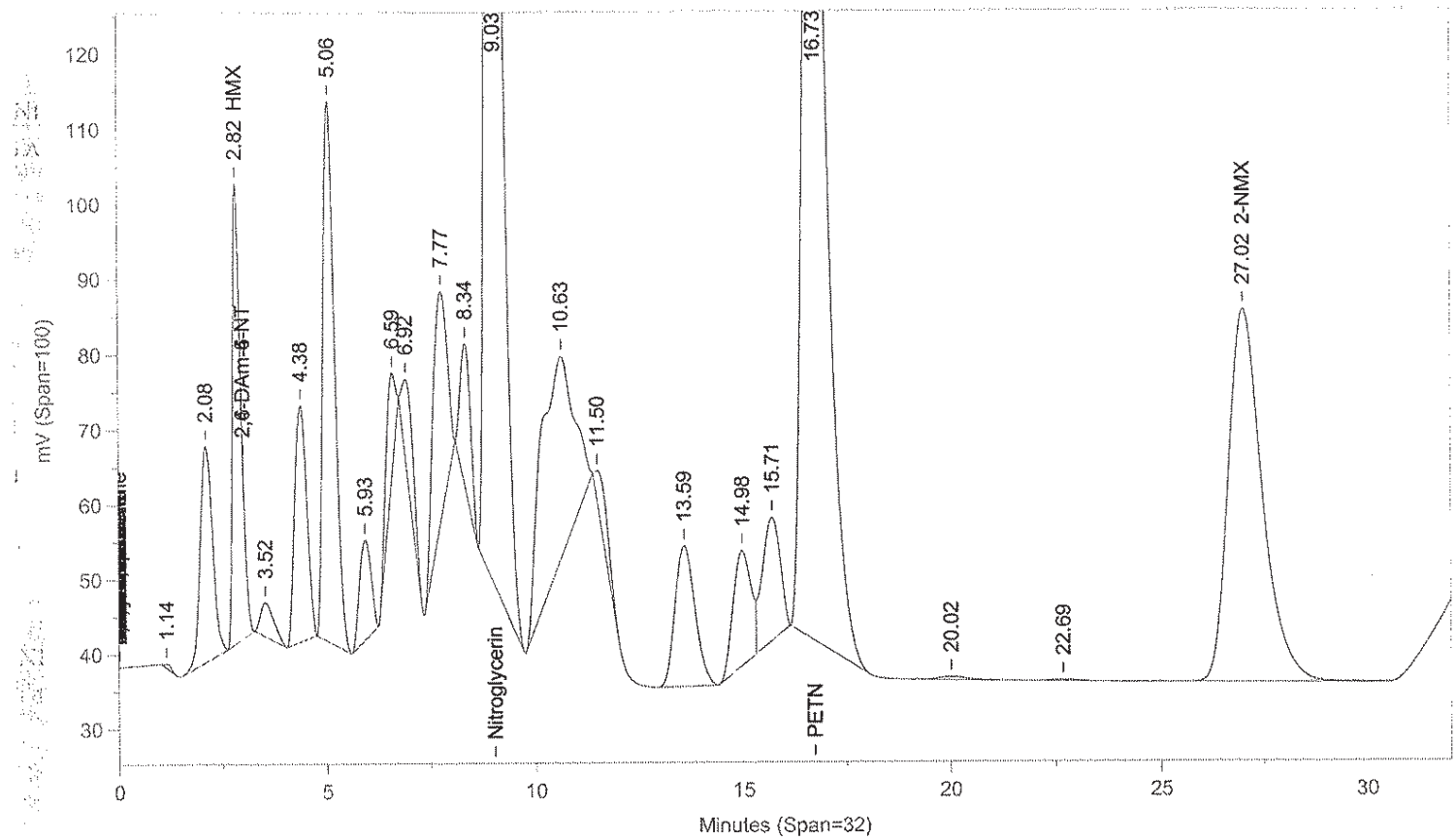
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.04R

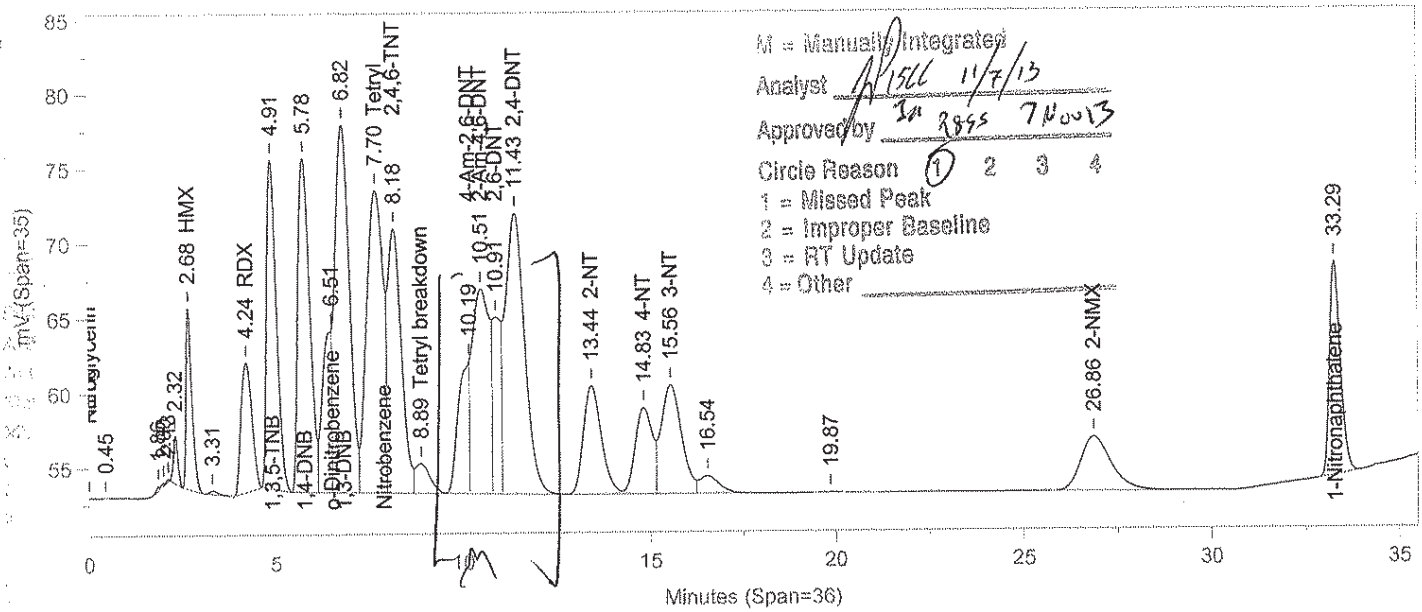


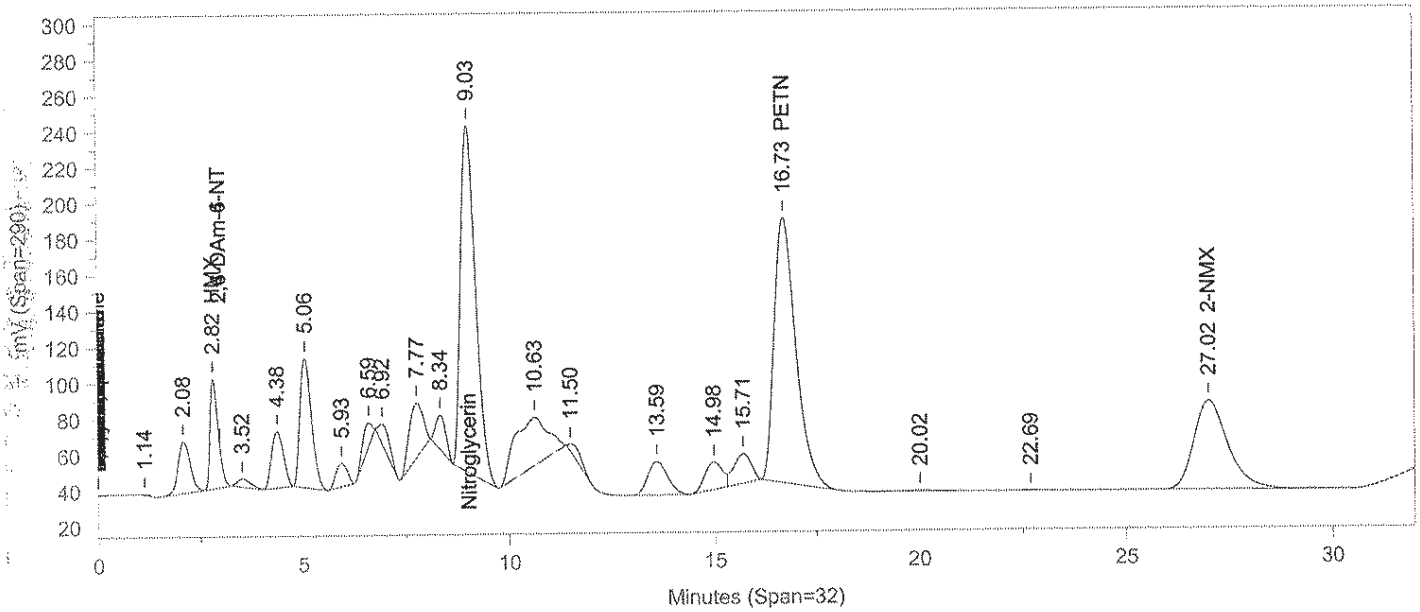
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.45
2.32
2.68 HMX
3.31
4.24 RDX
4.91
1,3,5-TNB
5.78
1,4-DNB
6.54
m-Dinitrobenzene
6.82
1,3-DNB
7.70 Tetryl
8.18
Nitrobenzene
2,4,6-TNT
8.89 Tetryl breakdown
10.19
4-Am-2,6-DNT
10.51
2-Am-4,6-DNT
10.91
11.43 2,4-DNT
13.44 2-NT
14.83 4-NT
15.56 3-NT
16.54
19.87
26.86 2-NMX
33.29
1-Nitronaphthalene
mV (Span=35)
Minutes (Span=36)


1.14
2.08
2.82 HMX
3.52
4.38
5.06
5.93
6.59
6.82
7.77
8.34
9.03
Nitroglycerin
10.63
11.50
13.59
14.98
15.71
16.73 PETN
20.02
22.69
27.02 2-NMX
mV (Span=290)
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	1984.604	HMX
4.236	173918	1972.348	RDX	.	0	.	RDX
4.915	403513	1976.331	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	2360.433	1,4-DNB	.	0	.	1,4-DNB
6.511	177323	2224.521	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	660009	2472.194	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	3148.742	Tetryl + Breakdown = 672829	.	0	.	Tetryl
8.184	451815	2717.684	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	3636.271	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	45613.86	Nitroglycerin
10.189	180347	1818.67	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.513	443957	2009.276	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.91	183813	3932.204	2,6-DNT	.	0	.	2,6-DNT
11.432	677076	2478.647	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	2251.094	2-NT	.	0	.	2-NT
14.835	183964	2373.201	4-NT	.	0	.	4-NT
15.56	279402	2573.633	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	55137.47	PETN
26.863	207607	7934.855	2-NMX	27.017	2865768	6985.688	2-NMX
33.287	288442	2400.829	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:25:24 PM
File Reported On: 11/7/2013 at 3:25:22 PM

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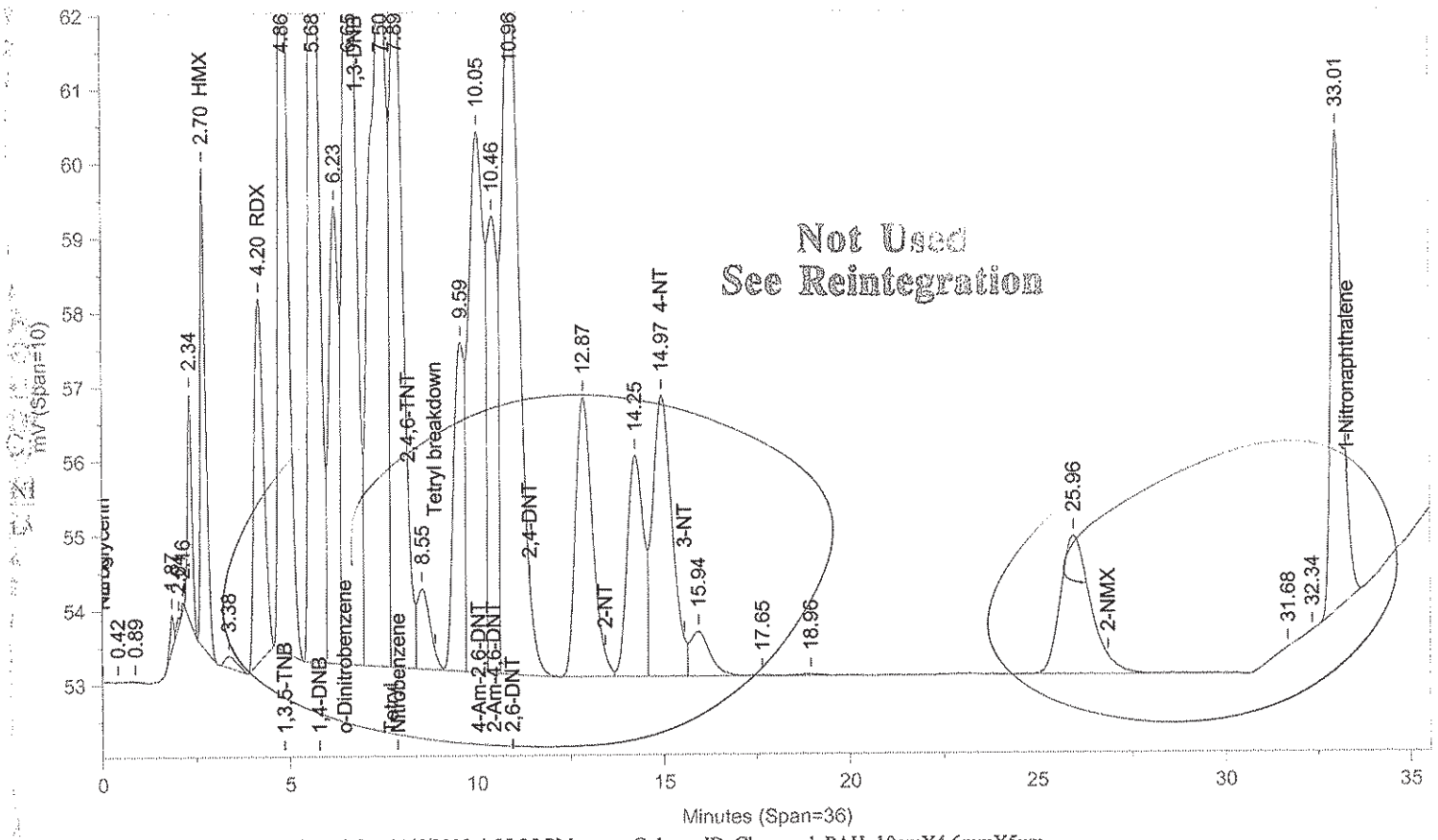
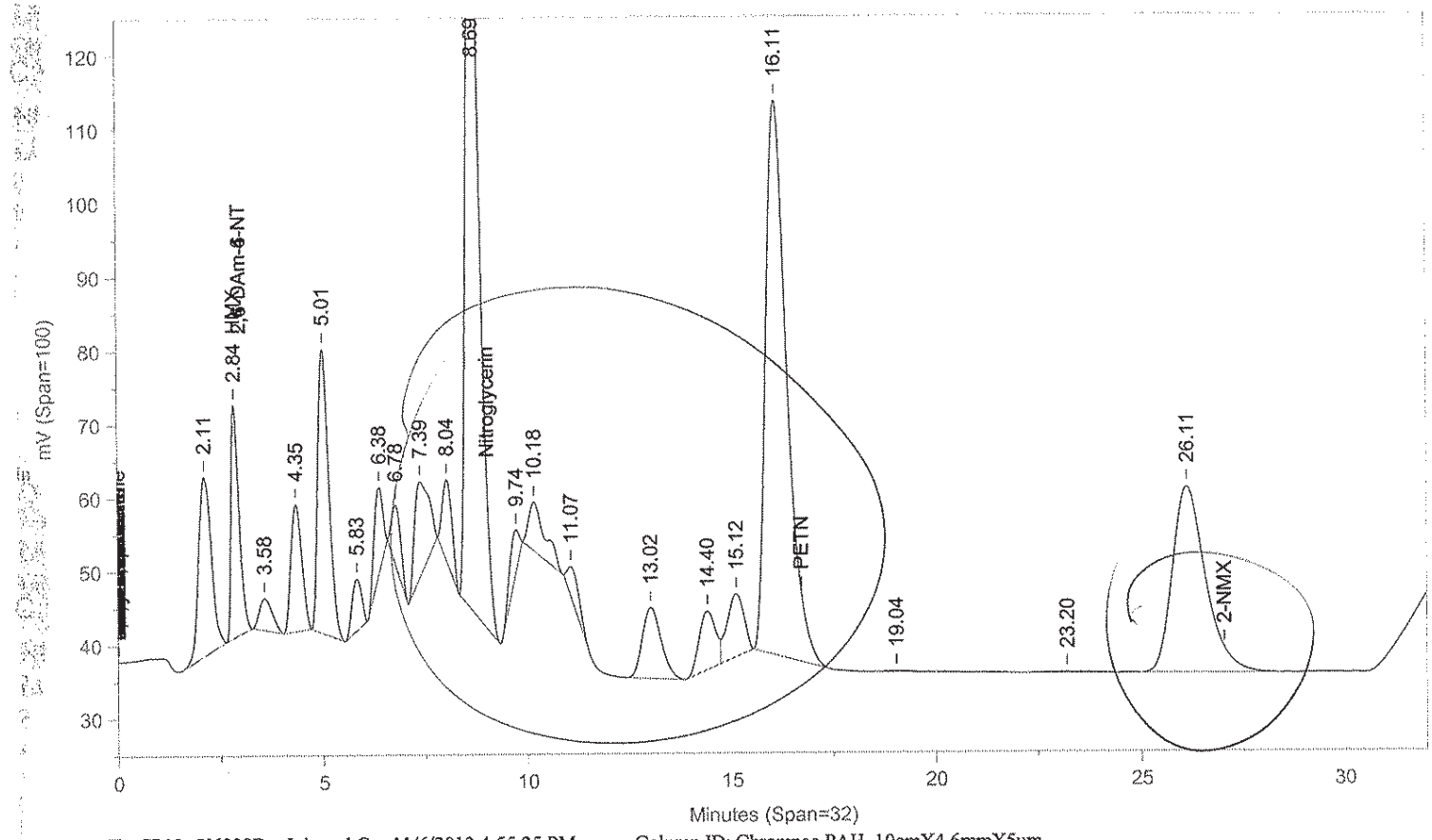
File: C:\CPWIN\DATA1\1E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

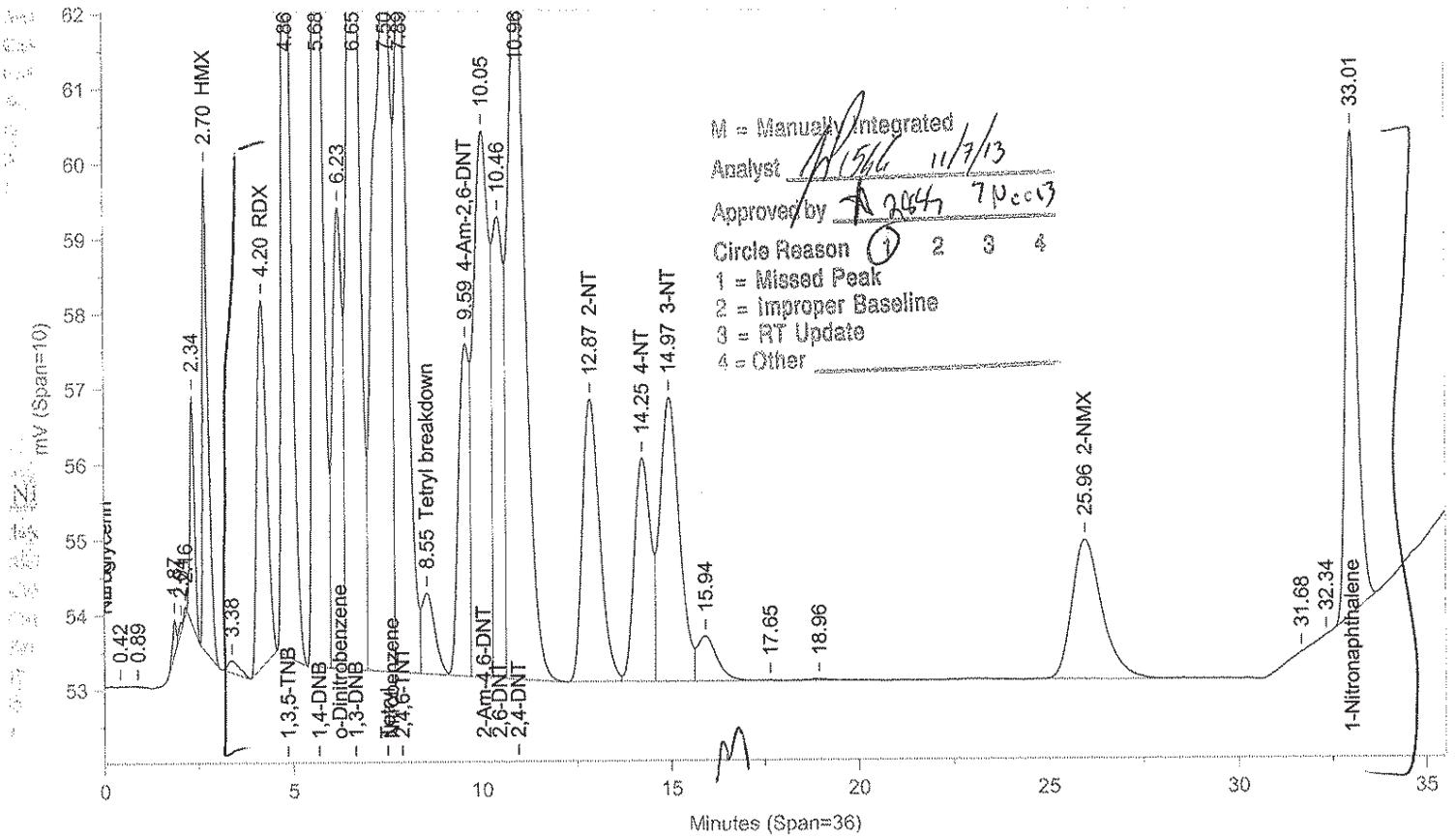
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1024.722	HMX
4.202	87948	996.505	RDX	.	0	.	RDX
4.861	205100	973.585	1,3,5-TNB	.	0	.	1,3,5-TNB
7.887	229234	785.825	Nitrobenzene	.	0	.	Nitrobenzene
10.049	212049	2649.713	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.461	118086	509.17	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.956	313494	33930.22	2,6-DNT	.	0	.	2,6-DNT
14.966	137062	1528.788	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.05A
Area File: C:\CPWIN\DATA1\1E12310B.05A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:48 PM
File Reported On: 11/7/2013 at 2:19:04 PM

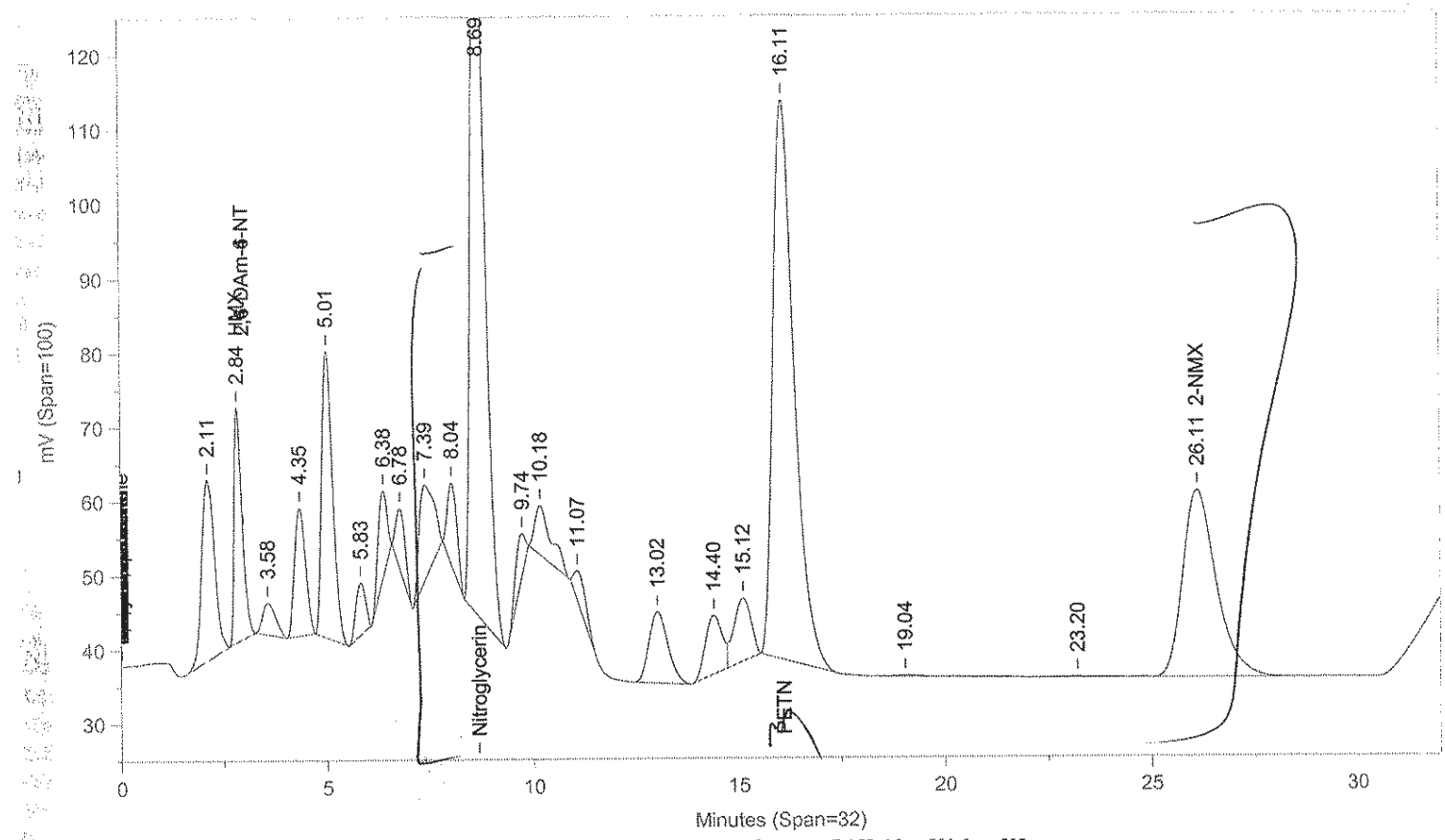
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.05R

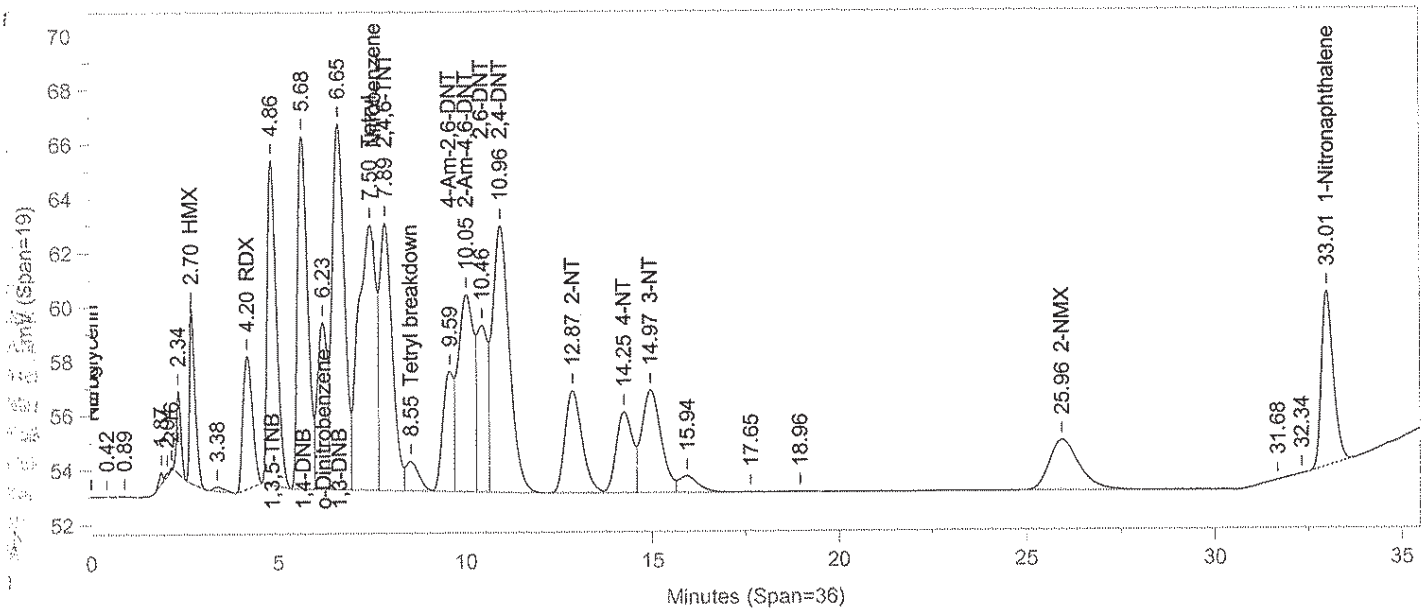


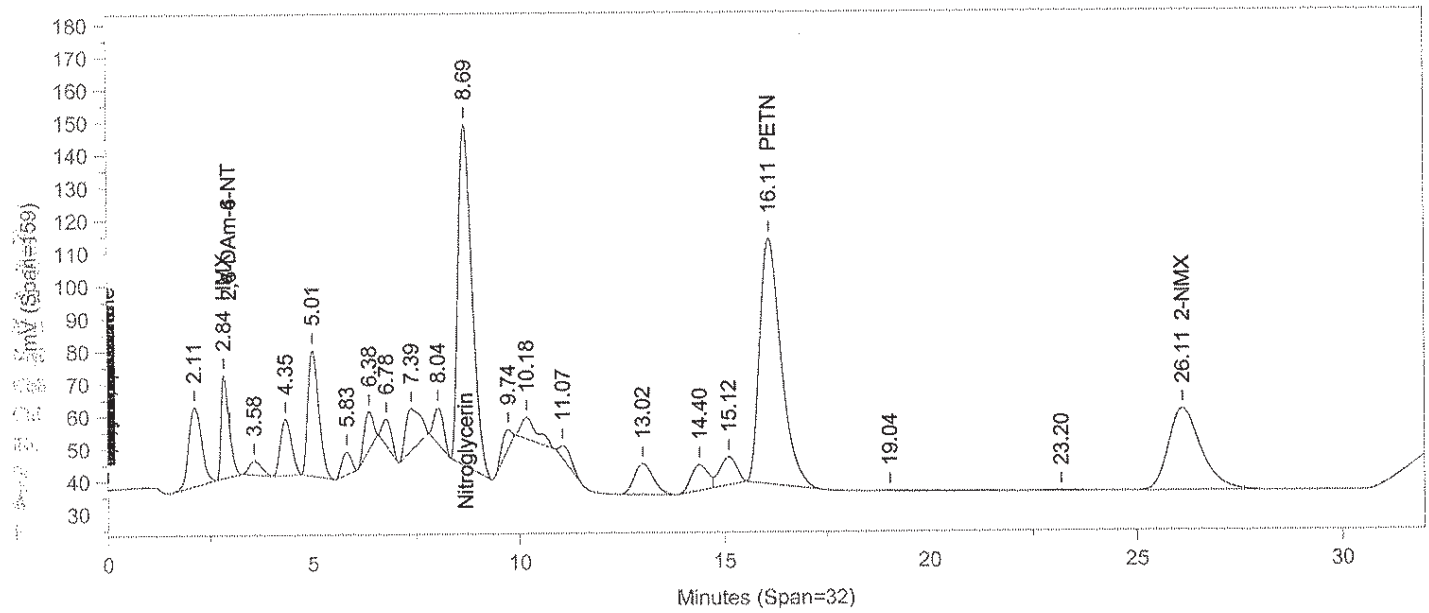
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


0.42
0.89
2.34
2.70 HMX
3.38
4.20 RDX
4.86
5.68
6.65
7.50
7.89
8.55 Tetryl breakdown
9.59
10.05
10.46
10.96
12.87 2-NT
14.25 4-NT
14.97 3-NT
15.94
17.65
18.96
25.96 2-NMX
31.68
32.34
33.01 1-Nitronaphthalene
1,3,5-TNB
1,4-DNB
1,3-DNB
Minutes (Span=36)


2.11
2.84
3.58
4.35
5.01
5.83
6.38
6.78
7.39
8.04
8.69
9.74
10.18
11.07
13.02
14.40
15.12
16.11 PETN
19.04
23.20
26.11 2-NMX
Nitroglycerin
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1012.248	HMX
4.202	87948	991.209	RDX	.	0	.	RDX
4.861	205100	1004.541	1,3,5-TNB	.	0	.	1,3,5-TNB
5.682	248639	1195.627	1,4-DNB	.	0	.	1,4-DNB
6.226	112229	1407.916	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.65	306036	1146.317	1,3-DNB	.	0	.	1,3-DNB
7.496	315157	1603.592	Tetryl + Breakdown = 340,823	.	0	.	Tetryl
7.887	229234	1378.849	2,4,6-TNT	.	0	.	2,4,6-TNT
8.549	25666	1728.286	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.694	2450463	22806.54	Nitroglycerin
9.594	89879	906.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.049	212049	959.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.461	118086	2097.385	2,6-DNT	.	0	.	2,6-DNT
10.956	313494	1147.641	2,4-DNT	.	0	.	2,4-DNT
12.871	120282	1103.257	2-NT	.	0	.	2-NT
14.253	91440	1179.606	4-NT	.	0	.	4-NT
14.966	137062	1262.512	3-NT	.	0	.	3-NT
.	0	.	PETN	16.108	2722253	27468.08	PETN
25.961	102777	3928.2	2-NMX	26.113	1408885	3434.344	2-NMX
33.014	142444	1239.326	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:34:34 PM
File Reported On: 11/7/2013 at 3:34:33 PM

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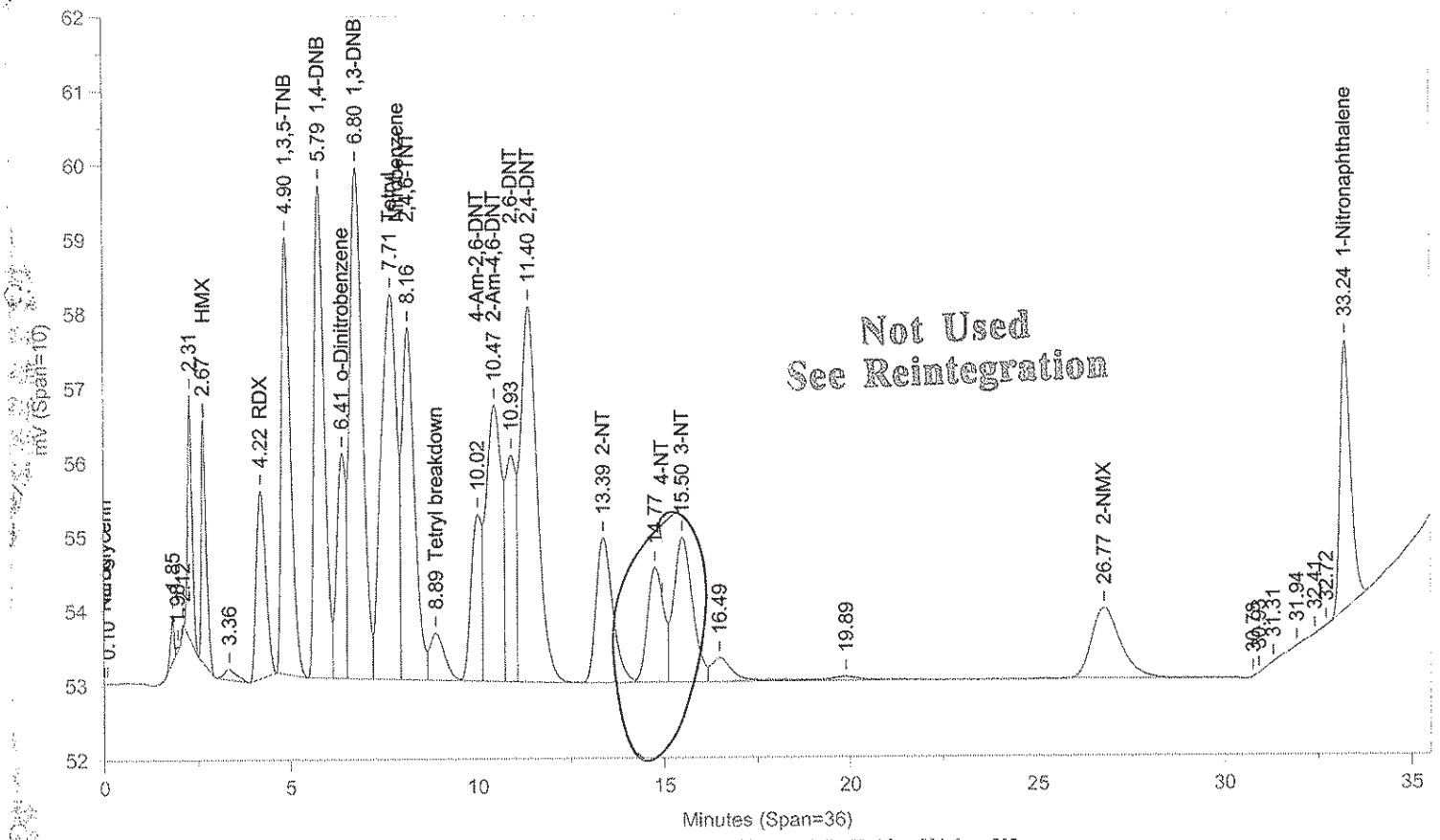
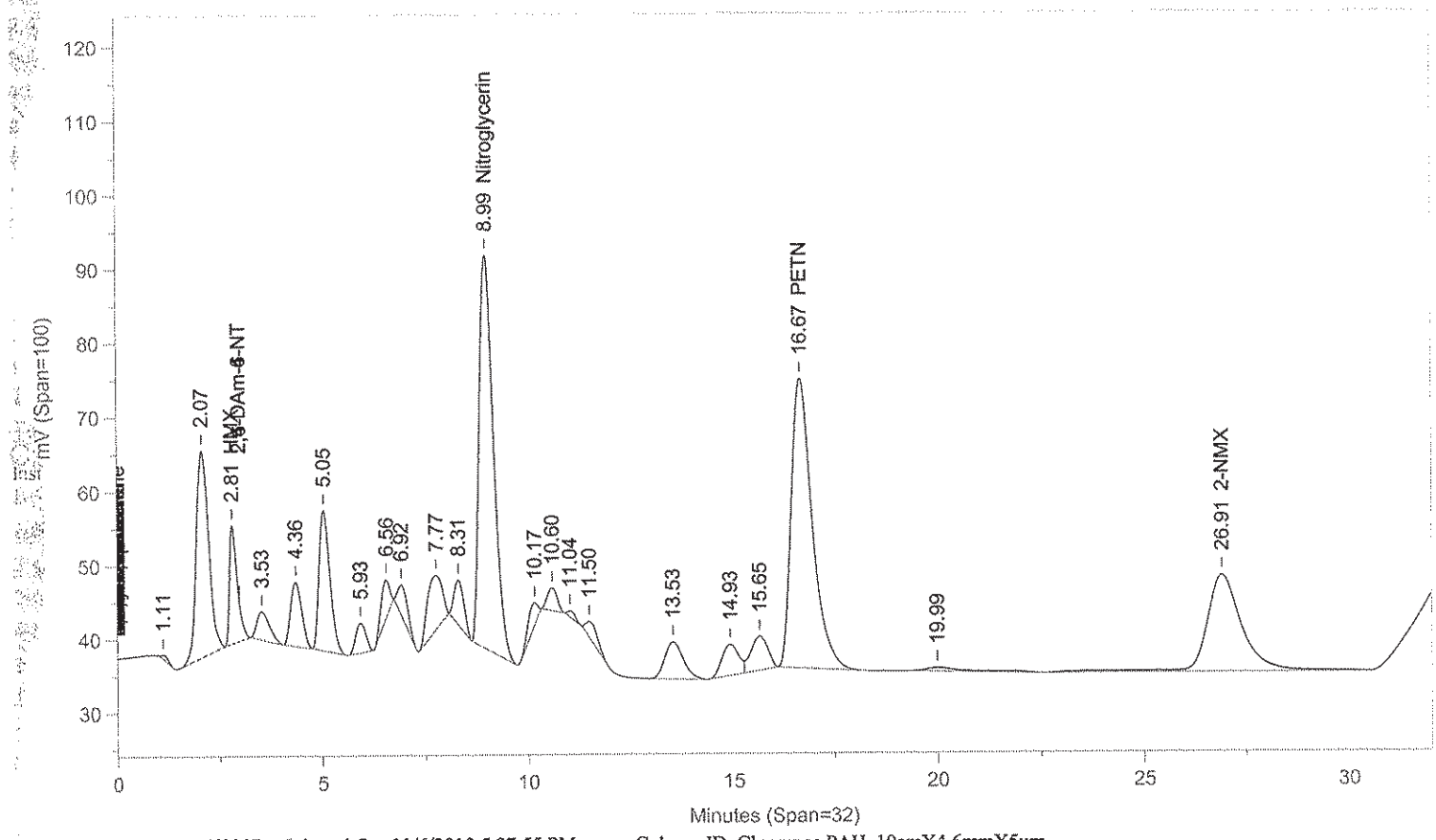
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

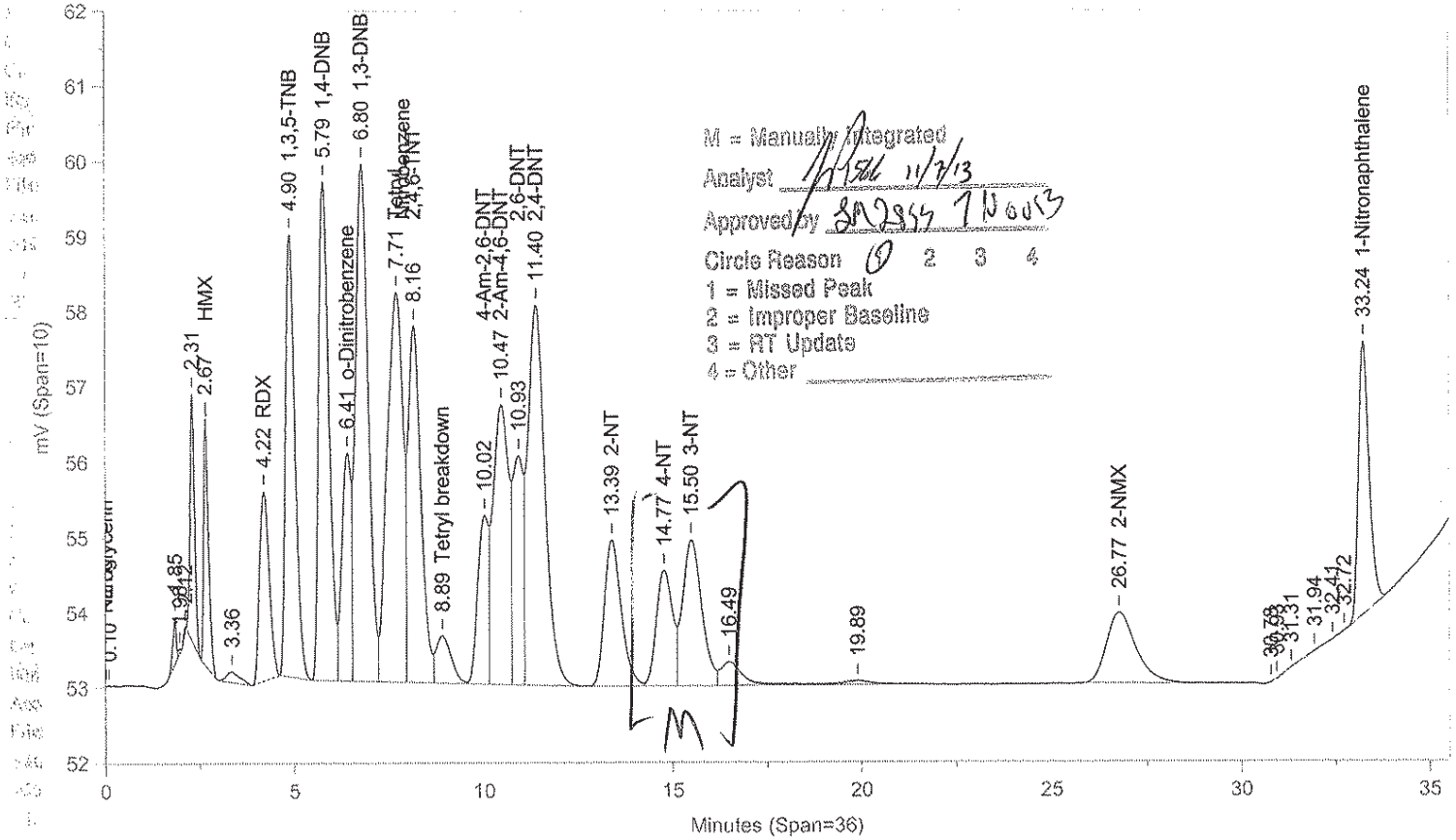
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	511.198	HMX
4.216	45161	503.754	RDX	.	0	.	RDX
4.899	101540	481.274	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	597.575	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	638.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	589.429	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	527.707	Tetryl	.	0	.	Tetryl
8.159	109953	592.518	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	72.629	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11816.78	Nitroglycerin
10.022	44007	436.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	501.563	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	456.94	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	596.64	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	583.272	2-NT	.	0	.	2-NT
15.496	68775	607.768	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	12349.17	PETN
26.768	51441	1767.312	2-NMX	26.91	804532	1952.055	2-NMX
33.236	71524	677.433	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.06A
Area File: C:\CPWIN\DATA1\1E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:19:30 PM
File Reported On: 11/7/2013 at 2:19:47 PM

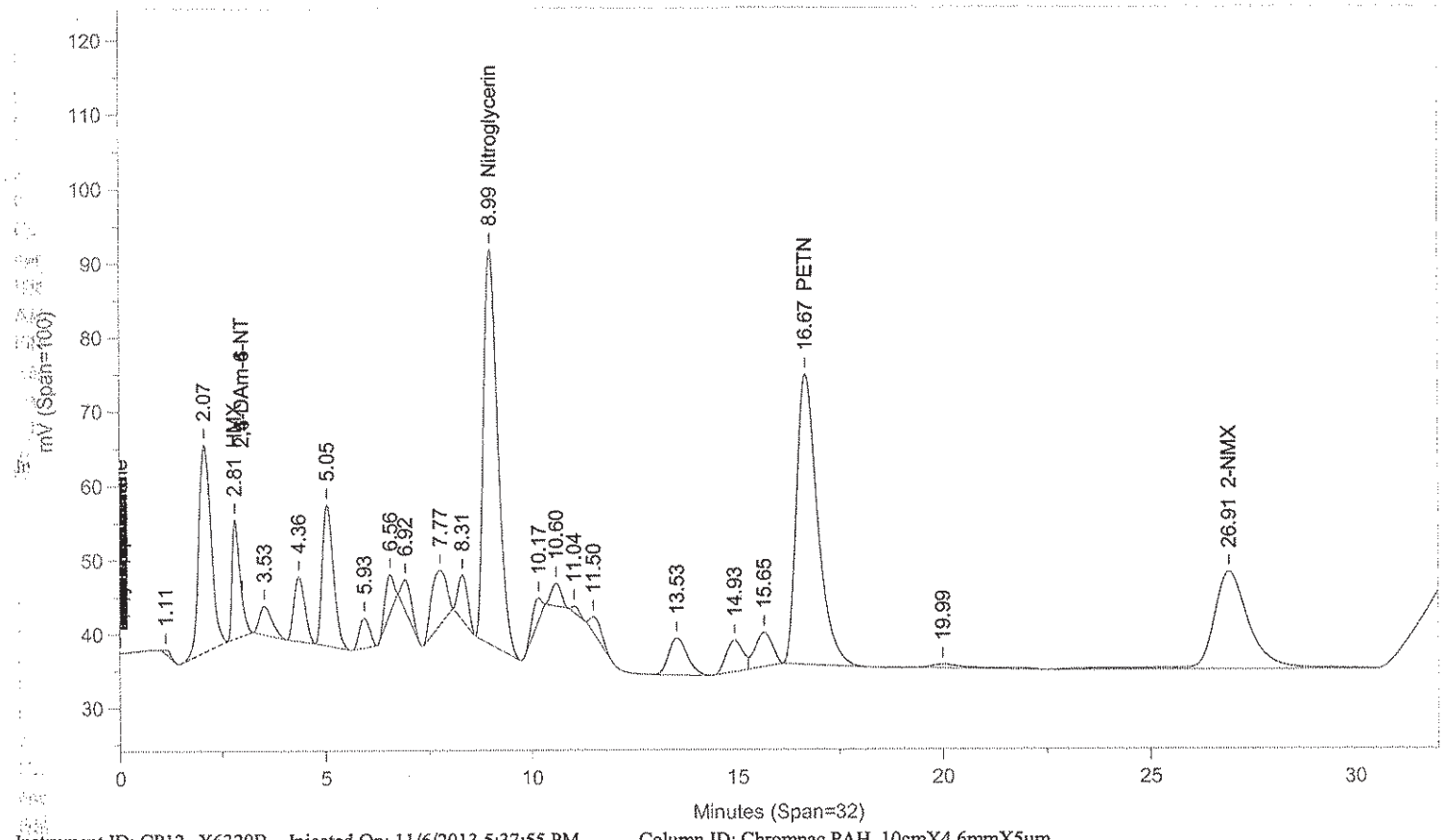
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	510.519	HMX
4.216	45161	502.899	RDX	.	0	.	RDX
4.899	101540	497.322	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	601.558	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	636.928	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	600.669	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	767.889	Tetryl + Breakdown = 168264	.	0	.	Tetryl
8.159	109953	661.368	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	1168.216	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11854.74	Nitroglycerin
10.022	44007	443.776	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	489.236	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	477.694	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	583.866	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	560.392	2-NT	.	0	.	2-NT
14.774	46394	598.498	4-NT	.	0	.	4-NT
15.496	68775	633.506	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	14148.57	PETN
26.768	51441	1966.102	2-NMX	26.91	804532	1961.154	2-NMX
33.236	71524	675.115	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:56:28 PM
File Reported On: 11/7/2013 at 3:56:27 PM

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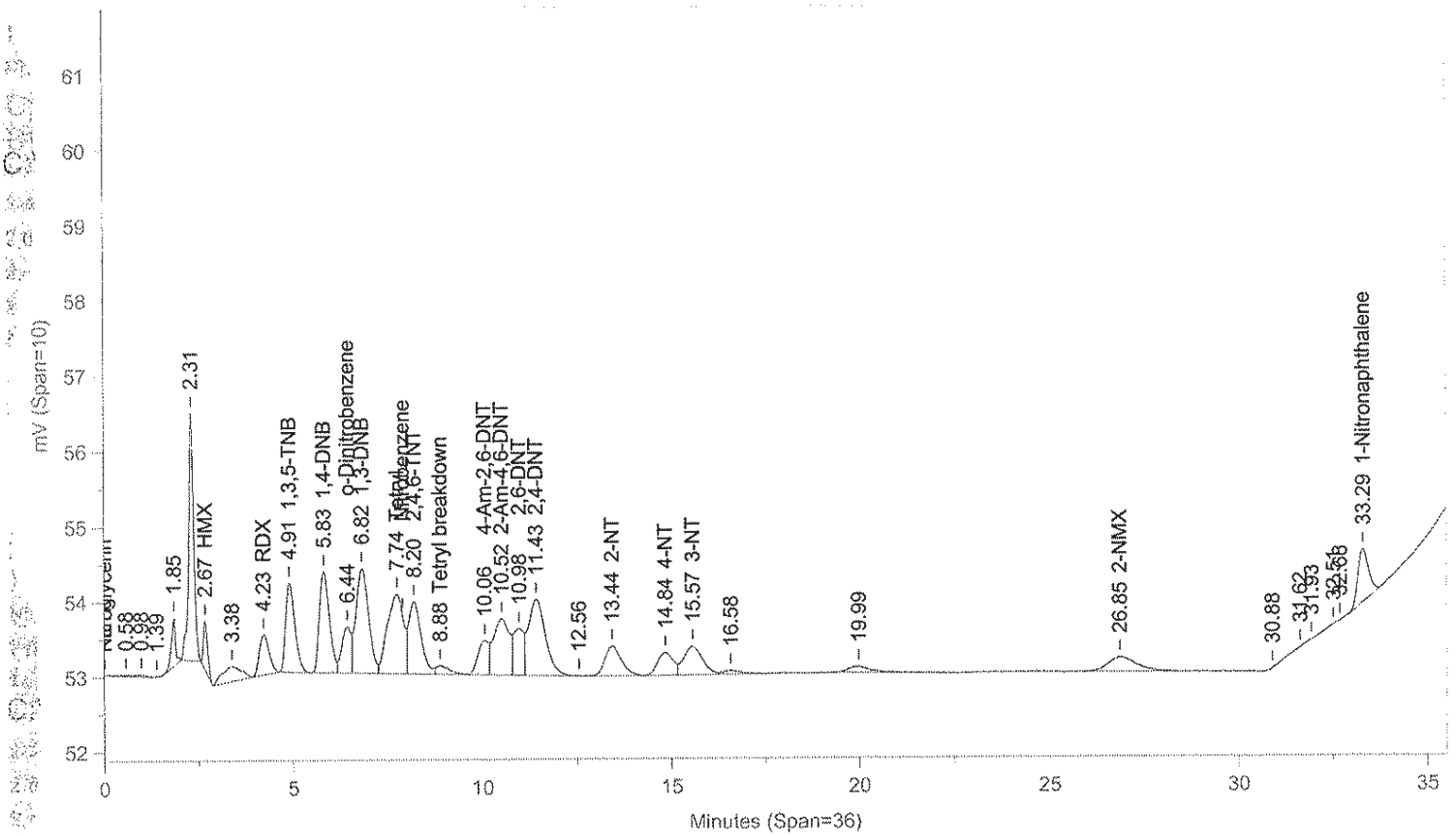
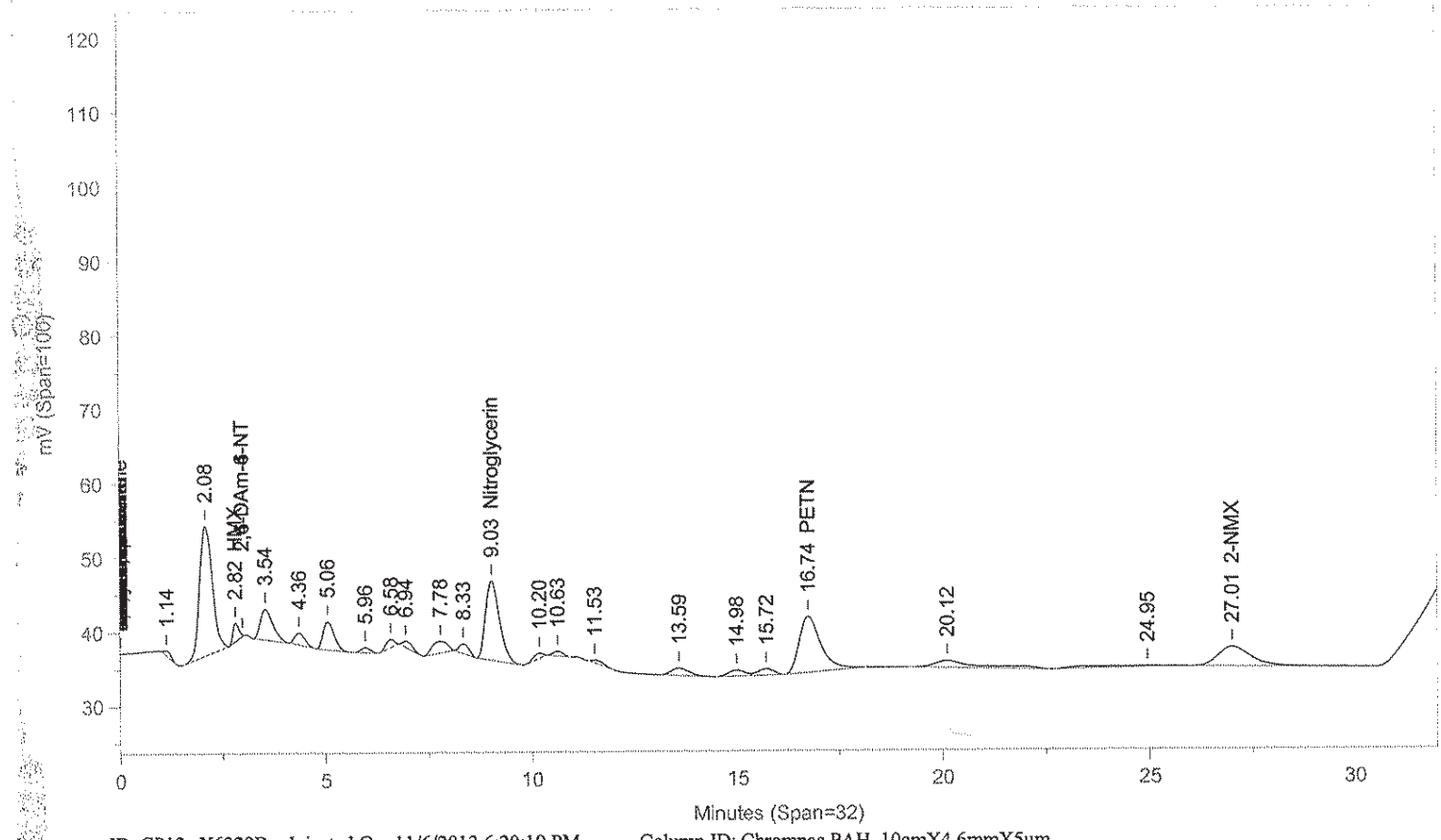
File: C:\CPWIN\DATA1\1E12310.07R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.07R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

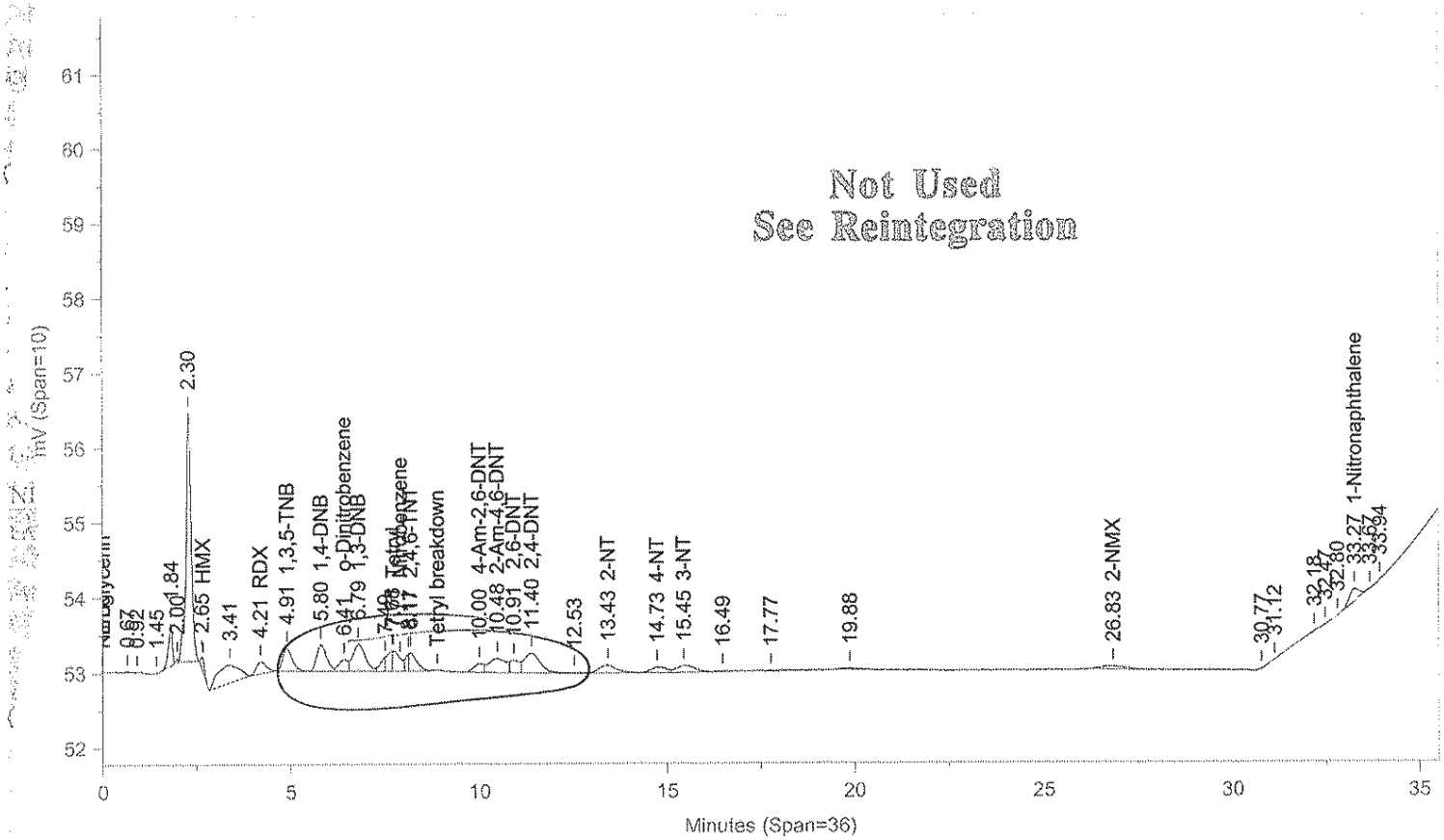
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.817	24794	69.601	HMX
4.233	9542	95.872	RDX	.	0	.	RDX
4.913	20537	97.357	1,3,5-TNB	.	0	.	1,3,5-TNB
5.828	24892	118.679	1,4-DNB	.	0	.	1,4-DNB
6.439	10260	128.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.822	31744	116.544	1,3-DNB	.	0	.	1,3-DNB
7.741	31577	113.932	Tetryl + Breakdown = 34309	.	0	.	Tetryl
8.199	21629	116.547	2,4,6-TNT	.	0	.	2,4,6-TNT
8.878	2732	14.728	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	254397	2350.772	Nitroglycerin
10.065	9029	89.976	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.517	22305	103.167	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.983	11803	-905.124	2,6-DNT	.	0	.	2,6-DNT
11.432	31810	118.828	2,4-DNT	.	0	.	2,4-DNT
13.444	12318	117.604	2-NT	.	0	.	2-NT
14.842	9006	110.395	4-NT	.	0	.	4-NT
15.573	13215	117.012	3-NT	.	0	.	3-NT
.	0	.	PETN	16.741	278777	2451.791	PETN
26.846	10728	369.242	2-NMX	27.013	151561	363.794	2-NMX
33.294	13694	217.299	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.07A
Area File: C:\CPWIN\DATA1\1E12310B.07A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:14 PM
File Reported On: 11/7/2013 at 2:20:30 PM

James H. Place
Senior Chemist

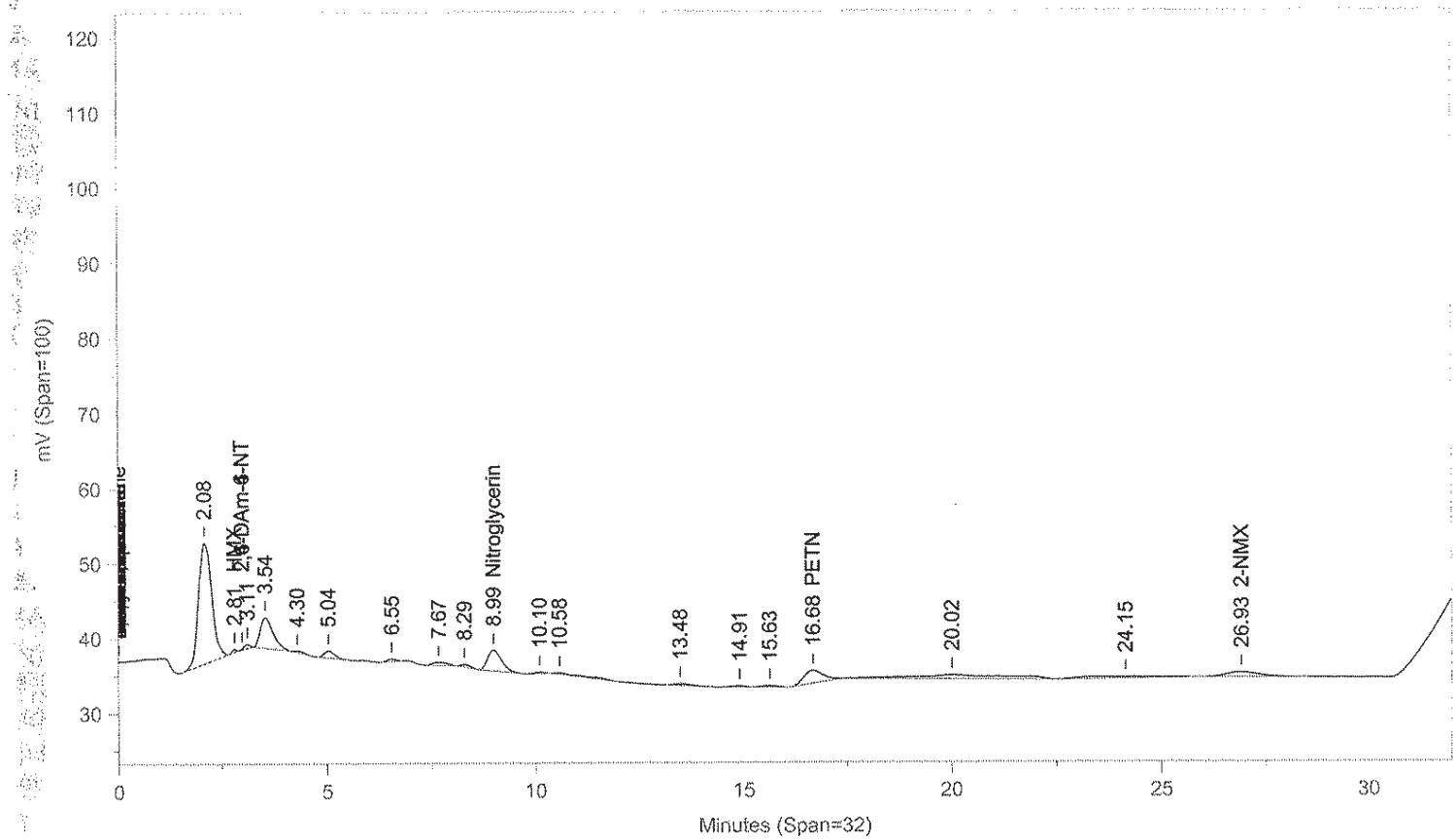
NOV 07 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.08R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

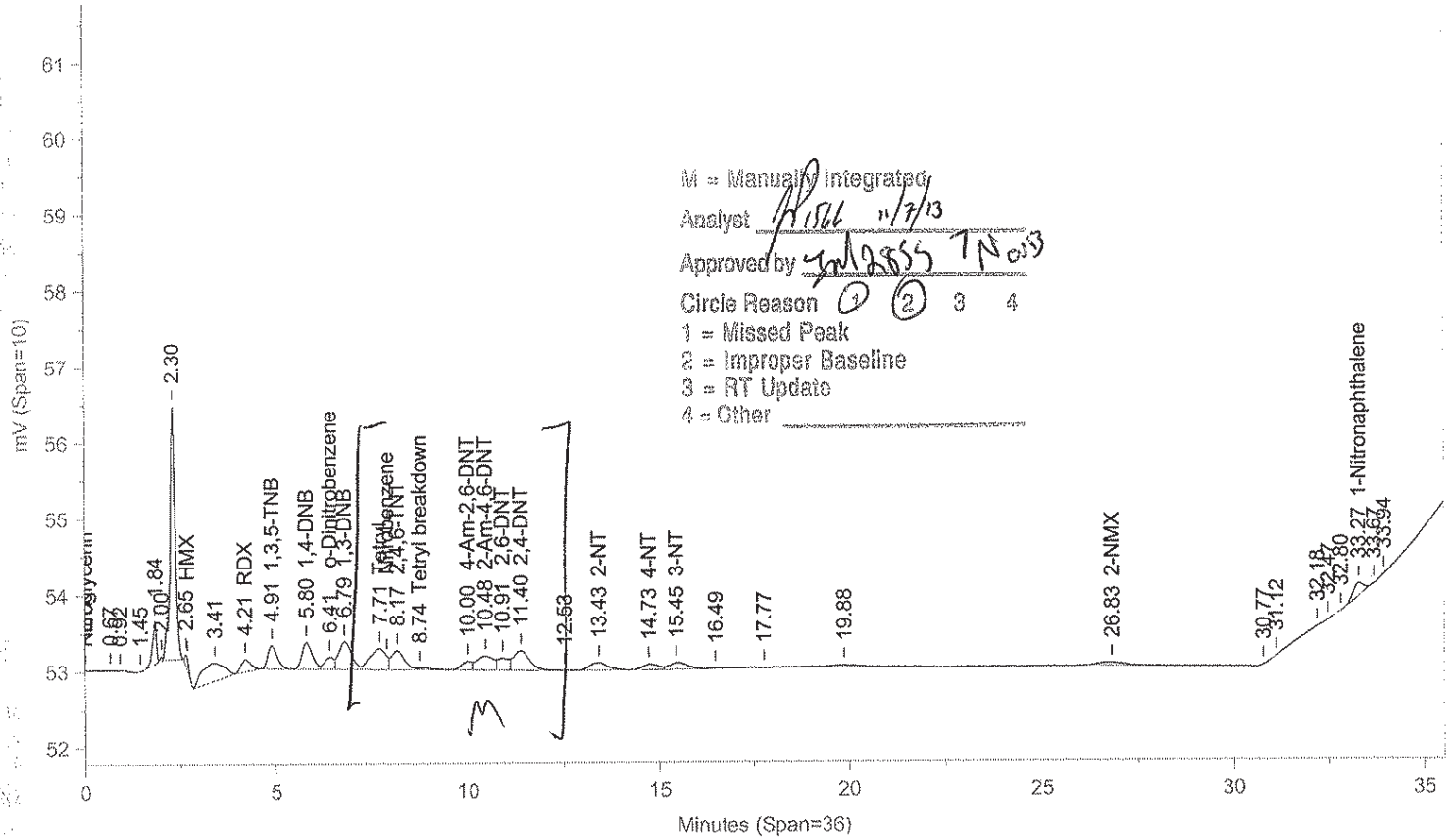
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	24.521	HMX
4.208	2956	20.84	RDX	.	0	.	RDX
4.907	5333	25.317	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6450	30.761	1,4-DNB	.	0	.	1,4-DNB
6.412	2688	33.602	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8139	29.978	1,3-DNB	.	0	.	1,3-DNB
7.715	3855	14.308	Tetryl	.	0	.	Tetryl
8.166	3527	19.204	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.991	66170	609.364	Nitroglycerin
9.997	2141	21.334	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	6131	28.312	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	2702	-1152.824	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	29.313	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	31.816	2-NT	.	0	.	2-NT
14.733	2115	26.078	4-NT	.	0	.	4-NT
15.451	3131	28.146	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	487.427	PETN
26.83	2335	79.388	2-NMX	26.928	37099	88.281	2-NMX
33.267	3188	133.477	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.08A
Area File: C:\CPWIN\DATA1\1E12310B.08A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:58 PM
File Reported On: 11/7/2013 at 2:21:13 PM

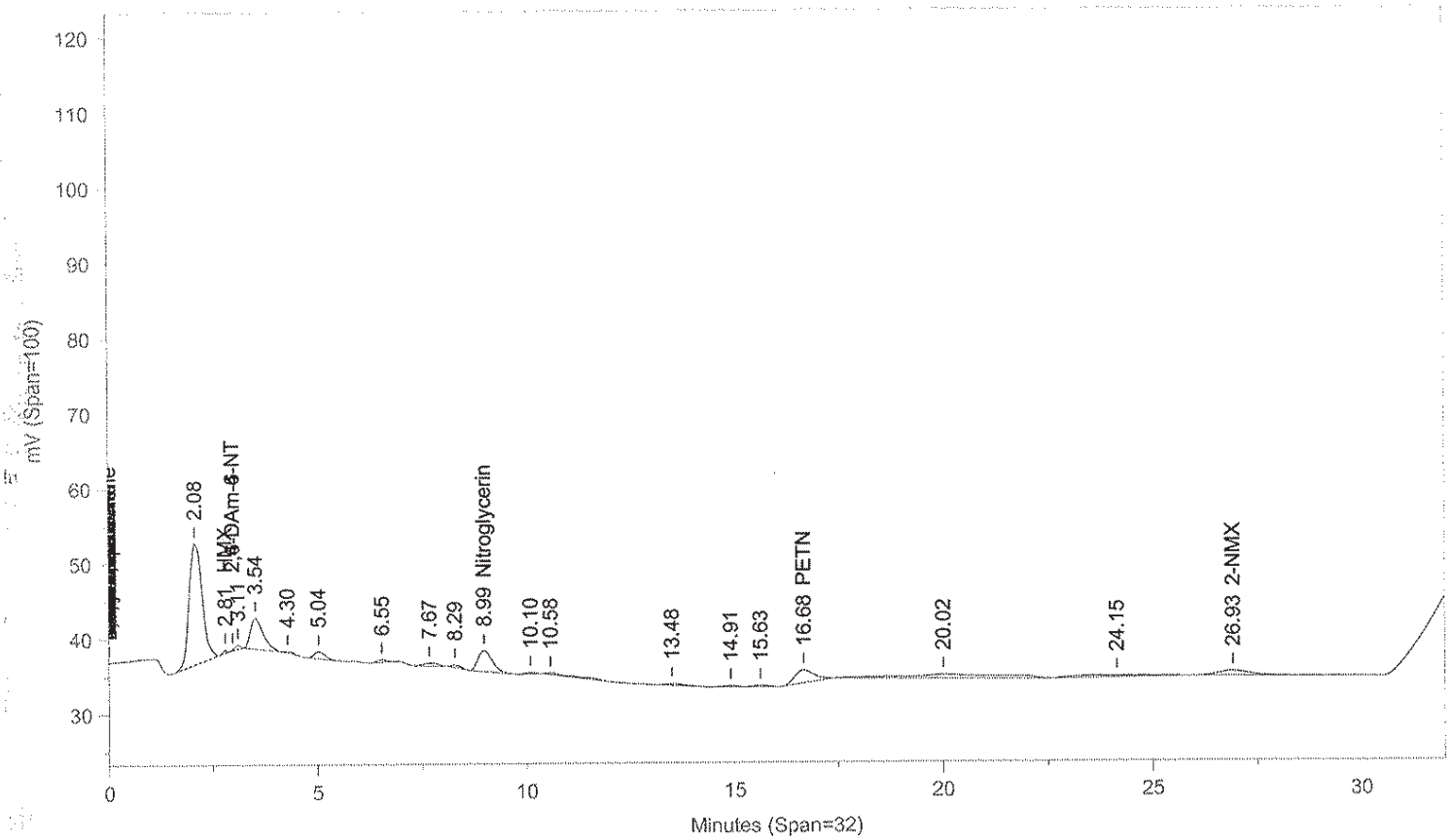
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.08R

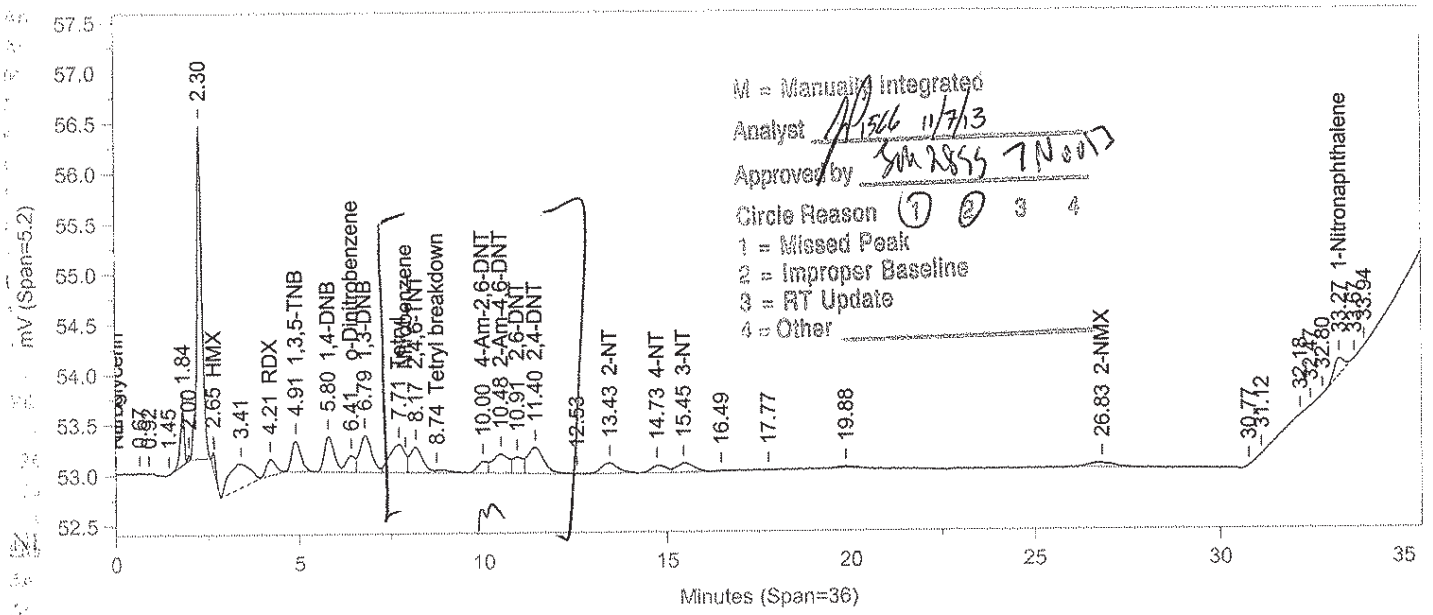


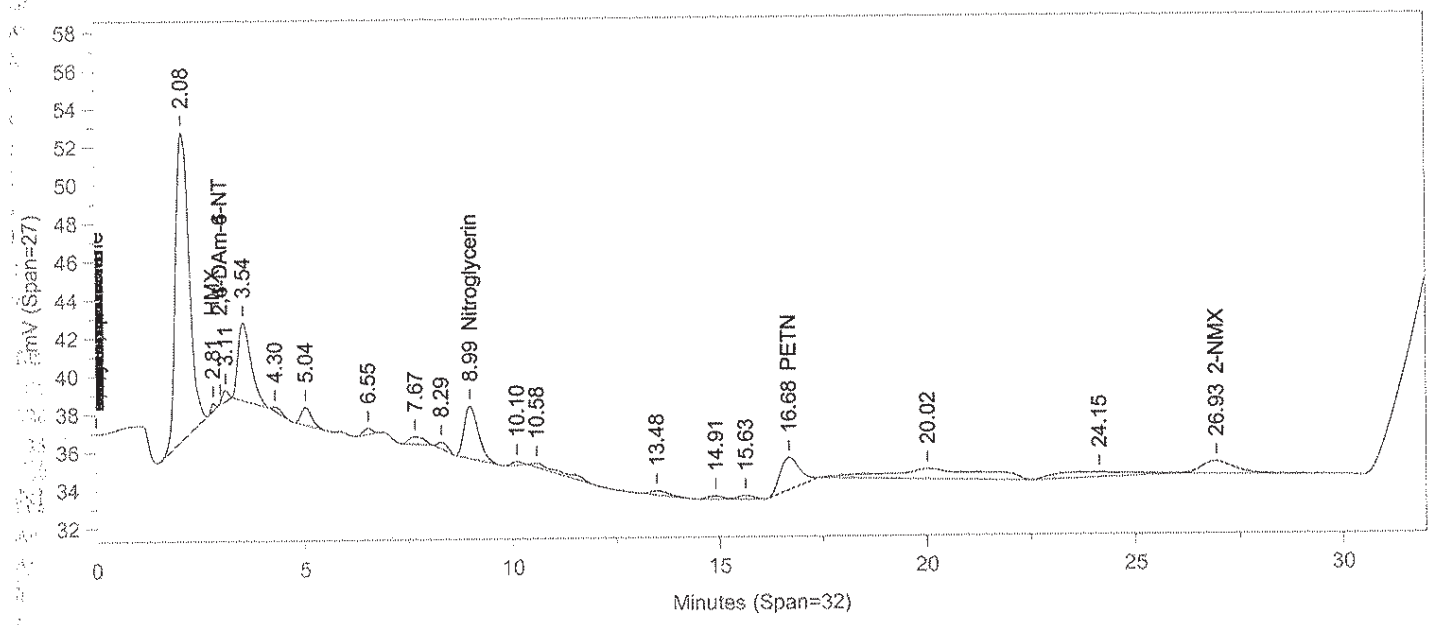
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=5.2)
Minutes (Span=36)
2.30
1.84
2.65 HMX
3.41
4.21 RDX
4.91 1,3,5-TNB
5.80 1,4-DNB
6.41 o-Dinitrobenzene
6.79 1,3-DNB
7.71 Tetryl
8.17 2,4,6-TNT
8.74 Tetryl breakdown
10.00 4-Am-2,6-DNT
10.48 2-Am-4,6-DNT
10.91 2,6-DNT
11.40 2,4-DNT
12.53
13.43 2-NT
14.73 4-NT
15.45 3-NT
16.49
17.77
19.88
26.83 2-NMX
30.77
31.12
32.18
32.80
33.27
33.64
1-Nitronaphthalene


mV (Span=27)
Minutes (Span=32)
2.08
2.81 HMX
3.11
3.54
4.30
5.04
6.55
7.67
8.29
8.99 Nitroglycerin
10.10
10.58
13.48
14.91
15.63
16.68 PETN
20.02
24.15
26.93 2-NMX

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

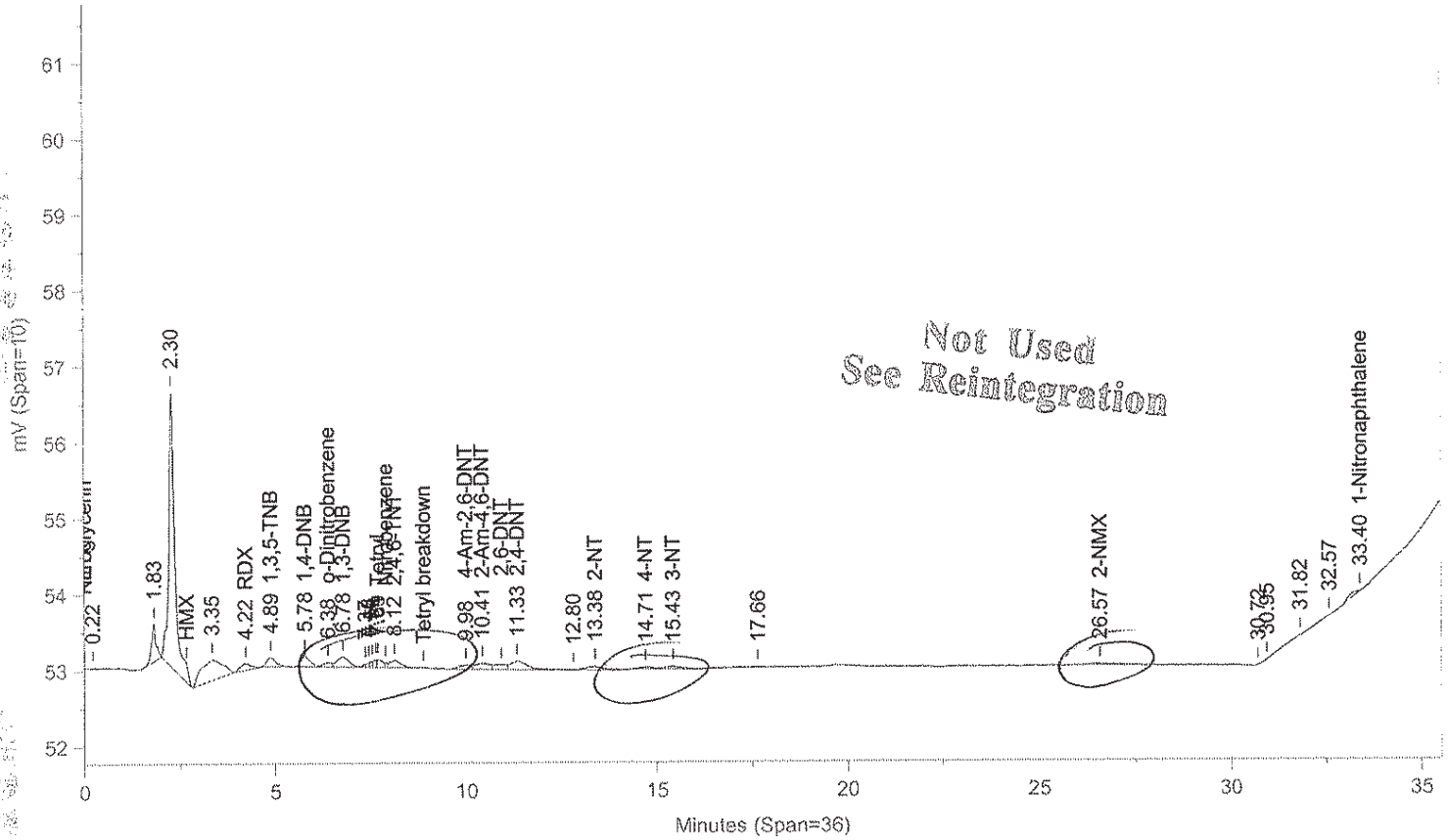
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	23.632	HMX
4.208	2956	21.232	RDX	.	0	.	RDX
4.907	5333	26.121	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6512	31.316	1,4-DNB	.	0	.	1,4-DNB
6.412	2784	34.922	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8427	31.566	1,3-DNB	.	0	.	1,3-DNB
7.715	8012	40.766	Tetryl + Breakdown = 8798	.	0	.	Tetryl
8.166	5917	35.592	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	786	52.959	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.991	66170	615.85	Nitroglycerin
9.997	2141	21.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	5748	26.017	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	3229	-1108.926	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	28.758	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	30.48	2-NT	.	0	.	2-NT
14.733	2115	27.284	4-NT	.	0	.	4-NT
15.451	3131	28.84	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	559.844	PETN
26.83	2335	89.238	2-NMX	26.928	37099	90.433	2-NMX
33.267	3188	131.465	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:03:50 PM
File Reported On: 11/7/2013 at 4:03:49 PM

James H. Place
Senior Chemist

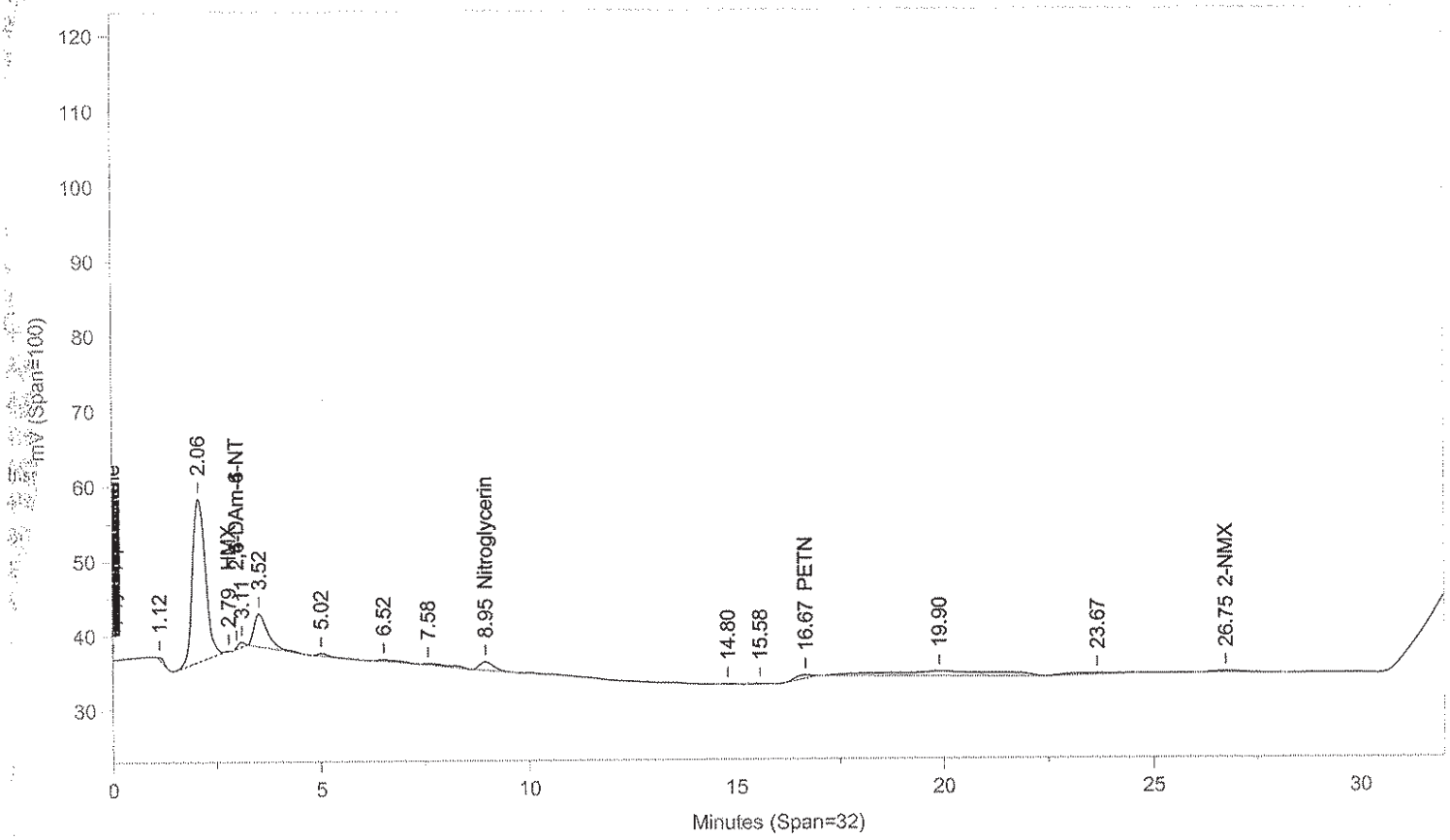
NOV 07 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

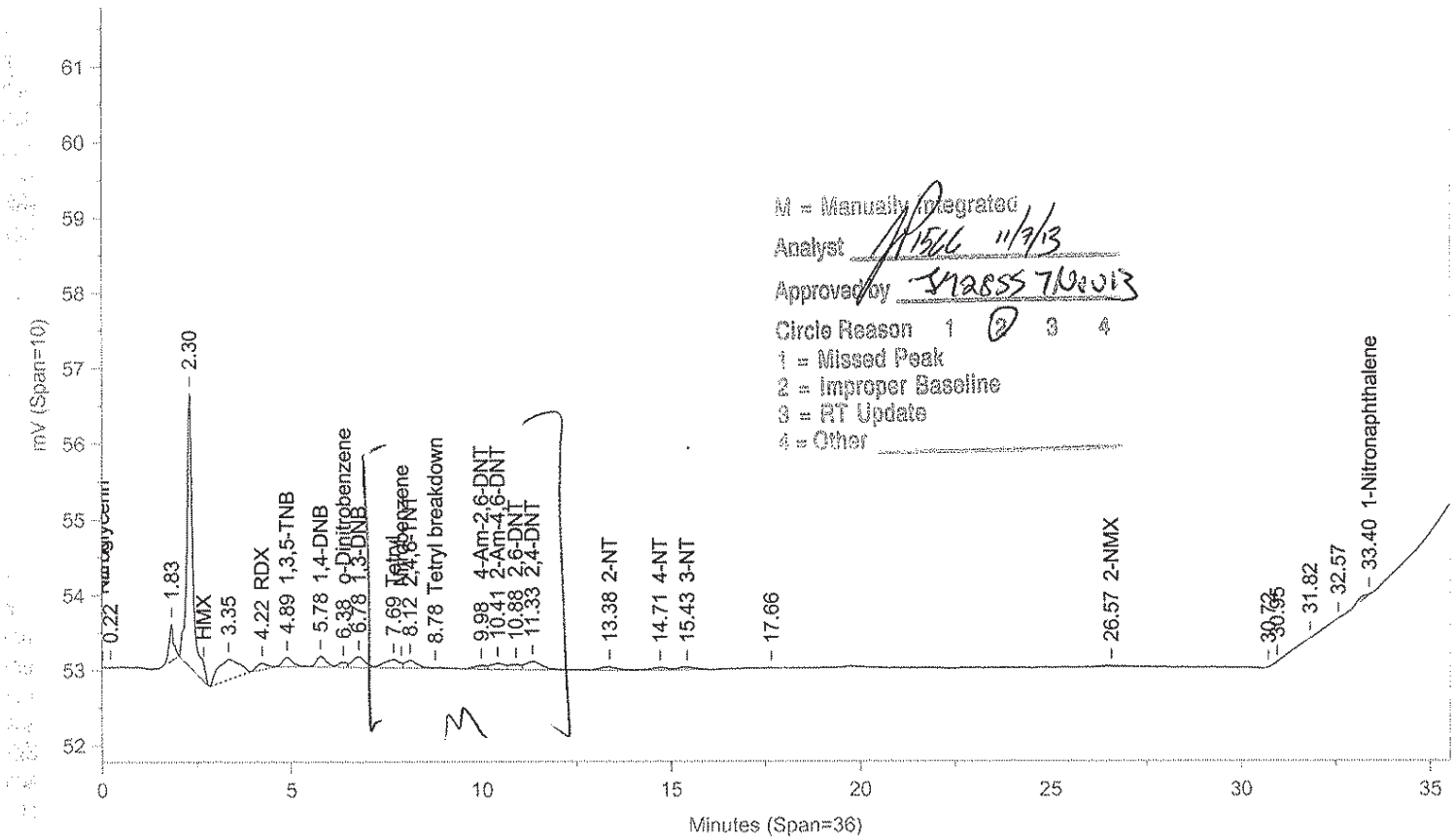
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.787	HMX
4.225	1736	7.531	RDX	.	0	.	RDX
4.89	1977	9.425	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2377	11.319	1,4-DNB	.	0	.	1,4-DNB
6.383	924	11.363	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	2972	10.921	1,3-DNB	.	0	.	1,3-DNB
7.688	968	4.046	Tetryl	.	0	.	Tetryl
8.117	1973	11.416	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.948	27434	252.901	Nitroglycerin
9.982	1196	12.208	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2110	9.538	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.328	3508	13.173	2,4-DNT	.	0	.	2,4-DNT
13.377	1479	14.488	2-NT	.	0	.	2-NT
14.712	591	7.36	4-NT	.	0	.	4-NT
15.433	1102	9.95	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	121.455	PETN
26.571	638	22.009	2-NMX	26.751	13456	31.305	2-NMX
33.395	956	114.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.09A
Area File: C:\CPWIN\DATA1\1E12310B.09A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:21:40 PM
File Reported On: 11/7/2013 at 2:21:56 PM

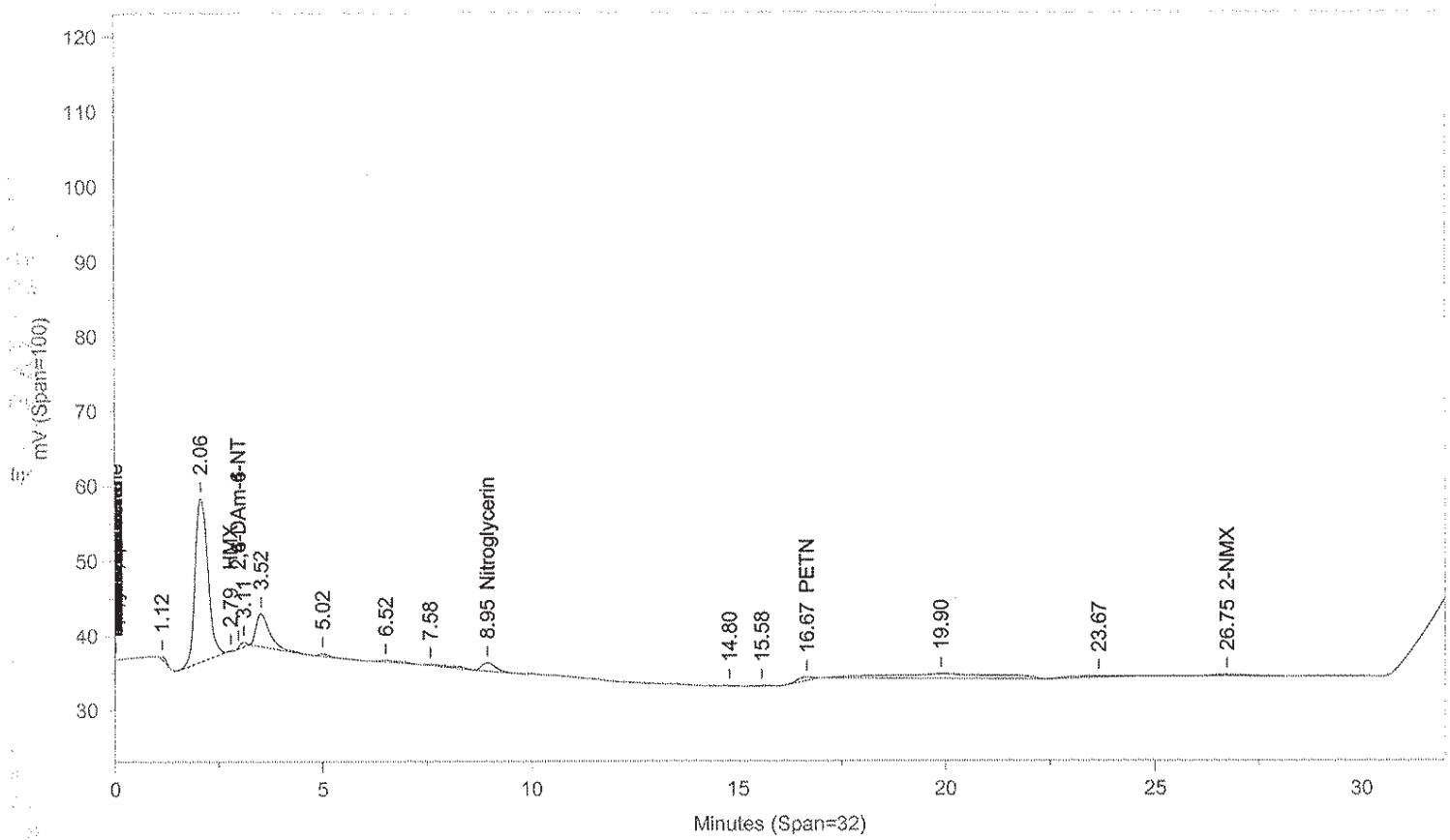
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.09R

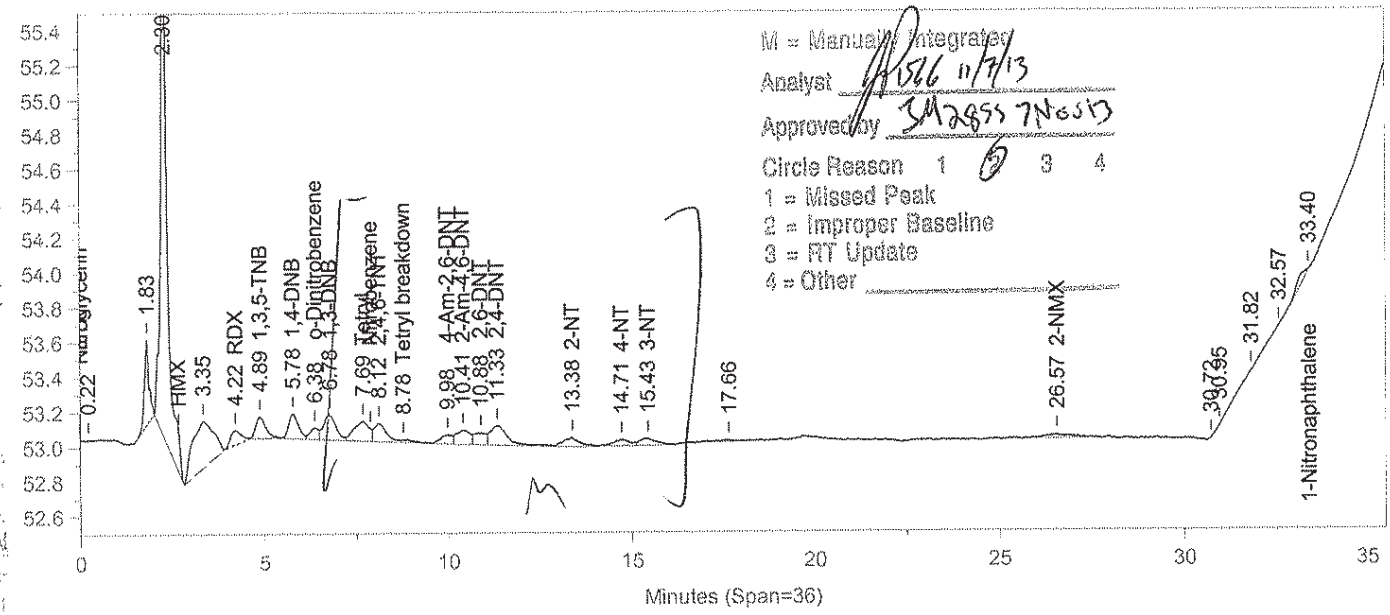


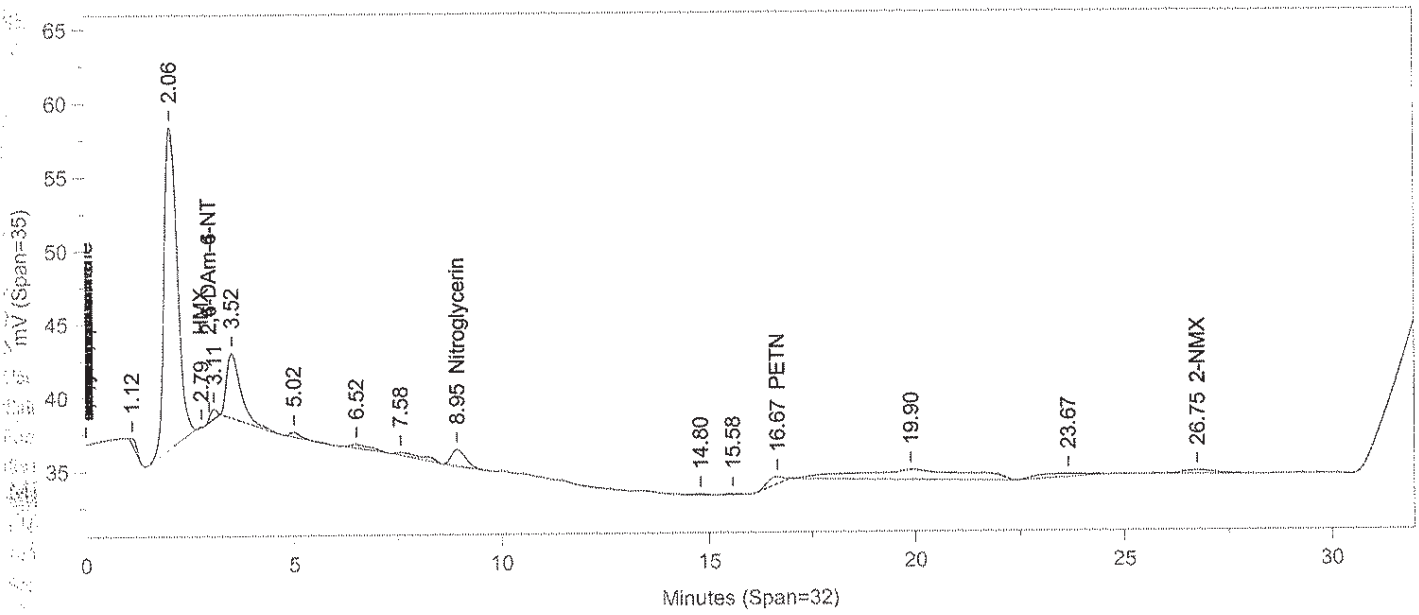
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.22
1.83
2.90
HMX
3.35
4.22 RDX
4.89 1,3,5-TNB
5.78 1,4-DNB
6.38 o-Dinitrobenzene
6.78 1,3-DNB
7.69 Tetryl
8.12 2,4,6-TNT
8.78 Tetryl breakdown
9.88 4-Am-2,6-DNT
10.41 2-Am-4,6-DNT
10.88 2,6-DNT
11.33 2,4-DNT
13.38 2-NT
14.71 4-NT
15.43 3-NT
17.66
26.57 2-NMX
30.95
31.82
32.57
33.40
1-Nitronaphthalene
mV (Span=3.0)
Minutes (Span=36)


1.12
2.06
2.79 HMX
3.11 4-Am-2,6-DNT
3.52
5.02
6.52
7.58
8.95 Nitroglycerin
14.80
15.58
16.67 PETN
19.90
23.67
26.75 2-NMX
mV (Span=35)
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.592	HMX
4.225	1736	7.303	RDX	.	0	.	RDX
4.89	2392	11.716	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2658	12.781	1,4-DNB	.	0	.	1,4-DNB
6.383	1043	13.088	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	3377	12.648	1,3-DNB	.	0	.	1,3-DNB
7.688	3245	16.513	Tetryl + Breakdown = 3C32	.	0	.	Tetryl
8.117	2433	14.635	2,4,6-TNT	.	0	.	2,4,6-TNT
8.783	387	26.066	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.948	27434	255.328	Nitroglycerin
9.982	1195	12.047	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2109	9.545	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.884	1529	-1156.4	2,6-DNT	.	0	.	2,6-DNT
11.328	3833	14.033	2,4-DNT	.	0	.	2,4-DNT
13.377	1661	15.232	2-NT	.	0	.	2-NT
14.712	1093	14.101	4-NT	.	0	.	4-NT
15.433	1326	12.218	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	133.712	PETN
26.571	1037	39.626	2-NMX	26.751	13456	32.801	2-NMX
33.395	956	113.71	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:17:50 PM
File Reported On: 11/7/2013 at 4:17:49 PM

James H. Place
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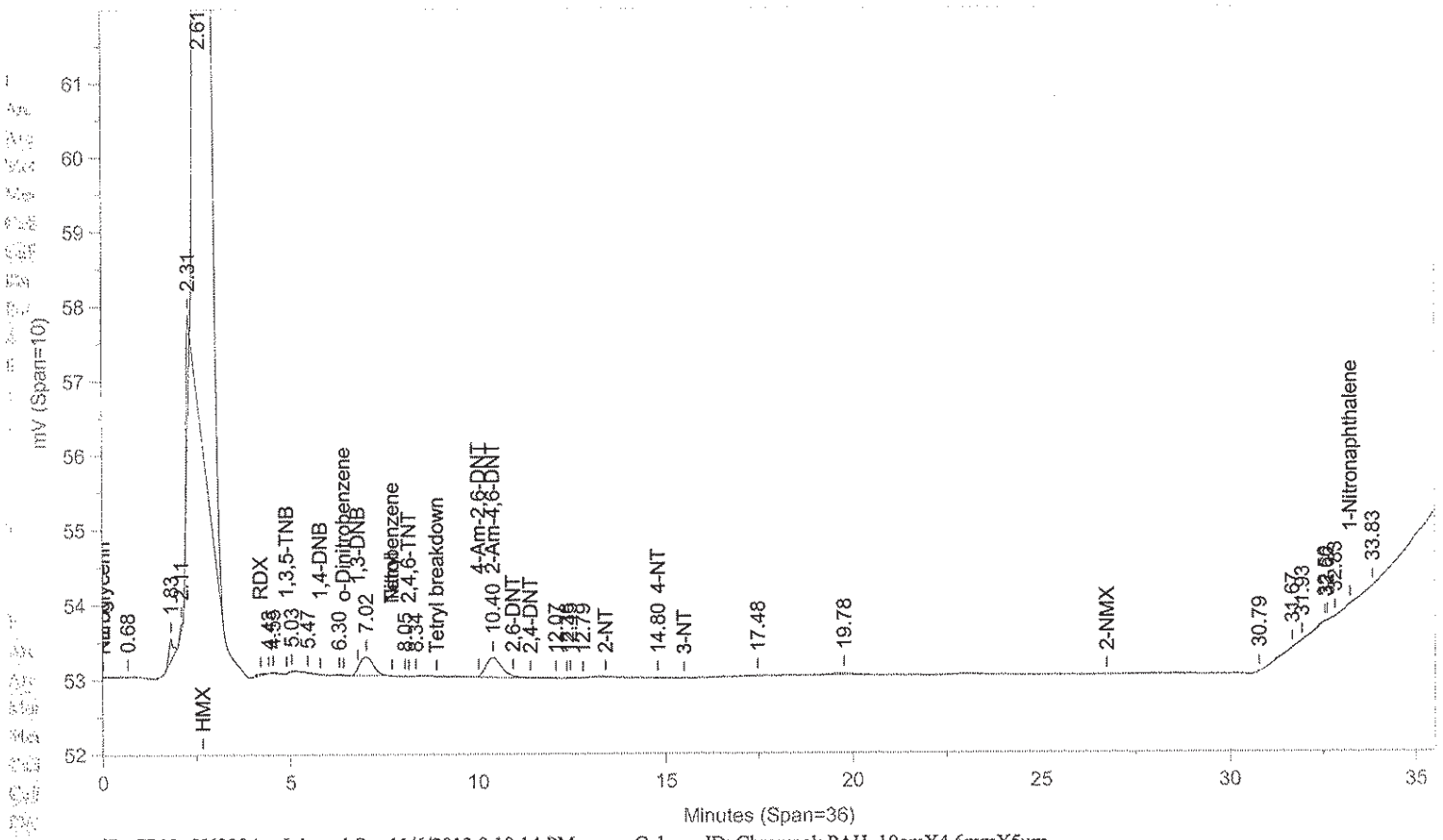
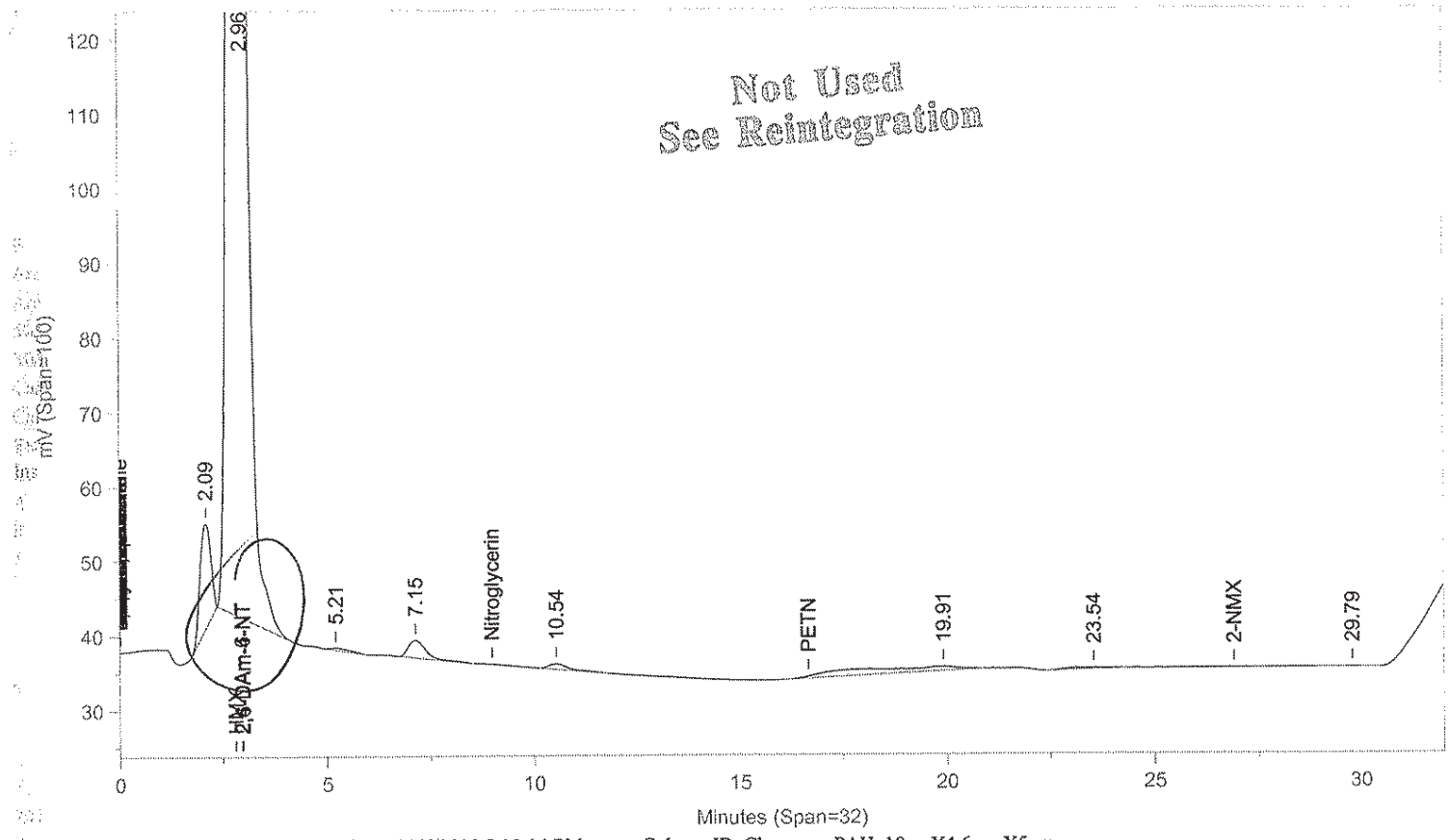
NOV 0 7 2013

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

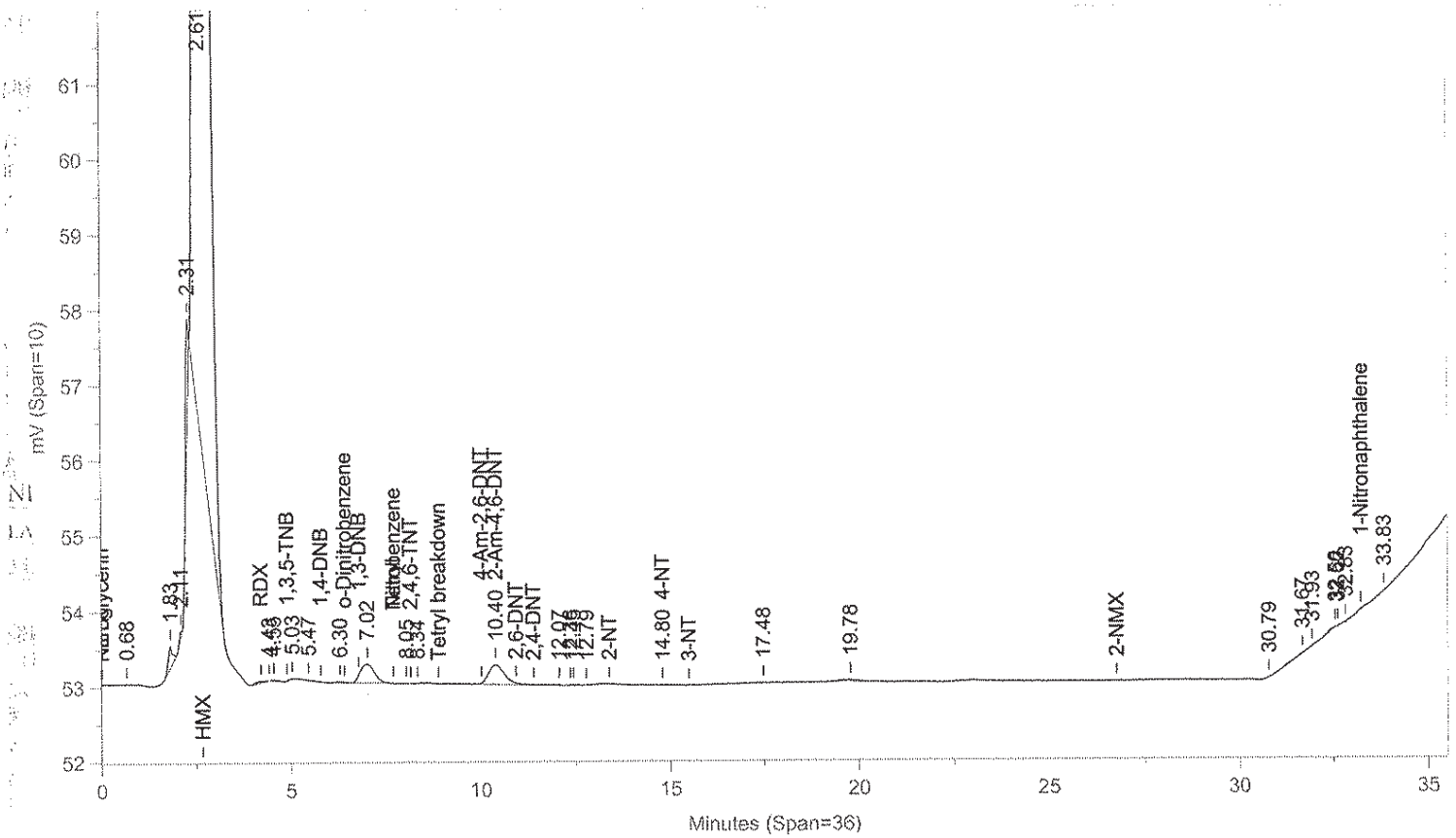
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5296932	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.11A
Area File: C:\CPWIN\DATA1\1E12310B.11A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:18 PM
File Reported On: 11/7/2013 at 4:32:28 PM

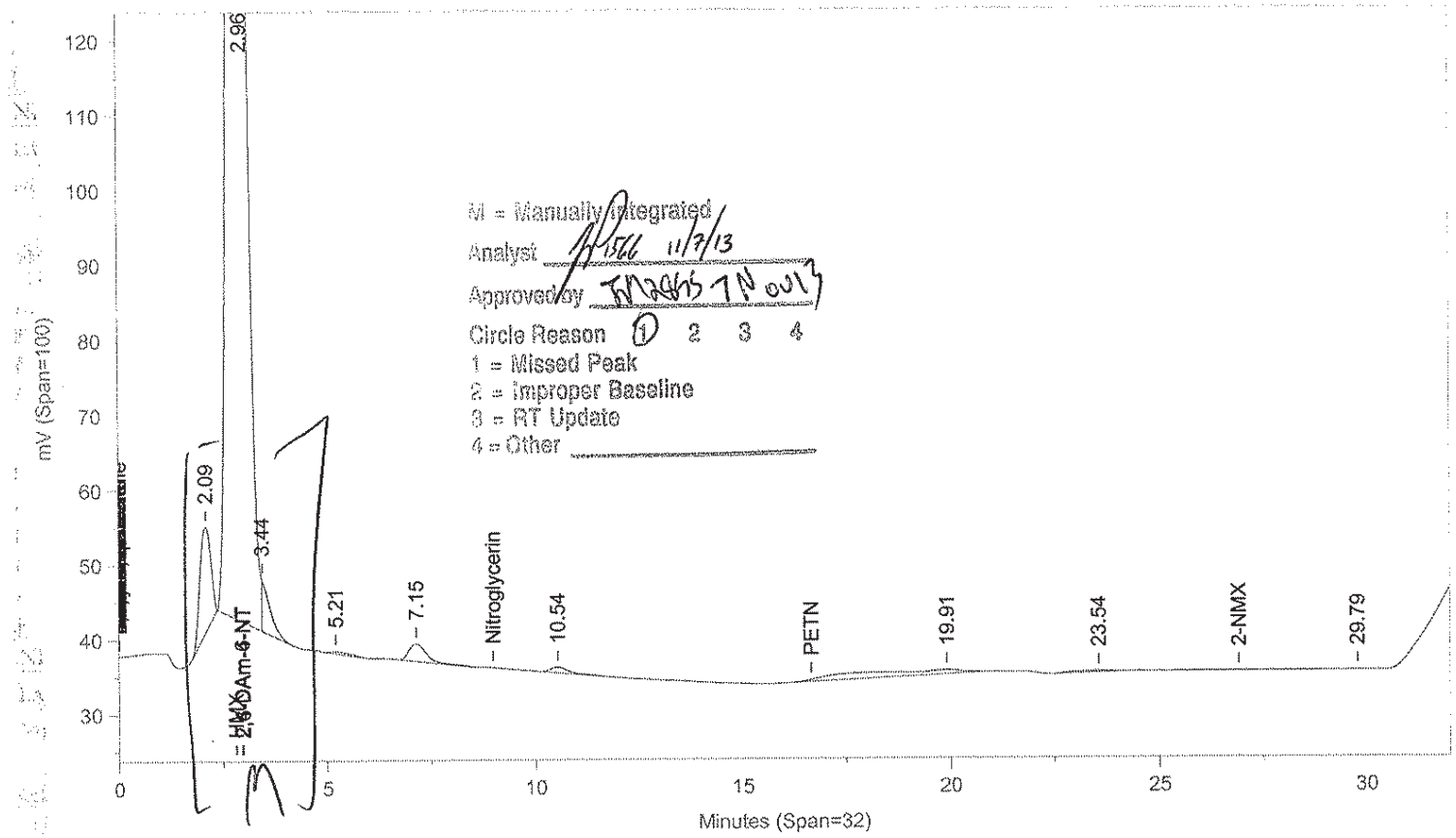
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

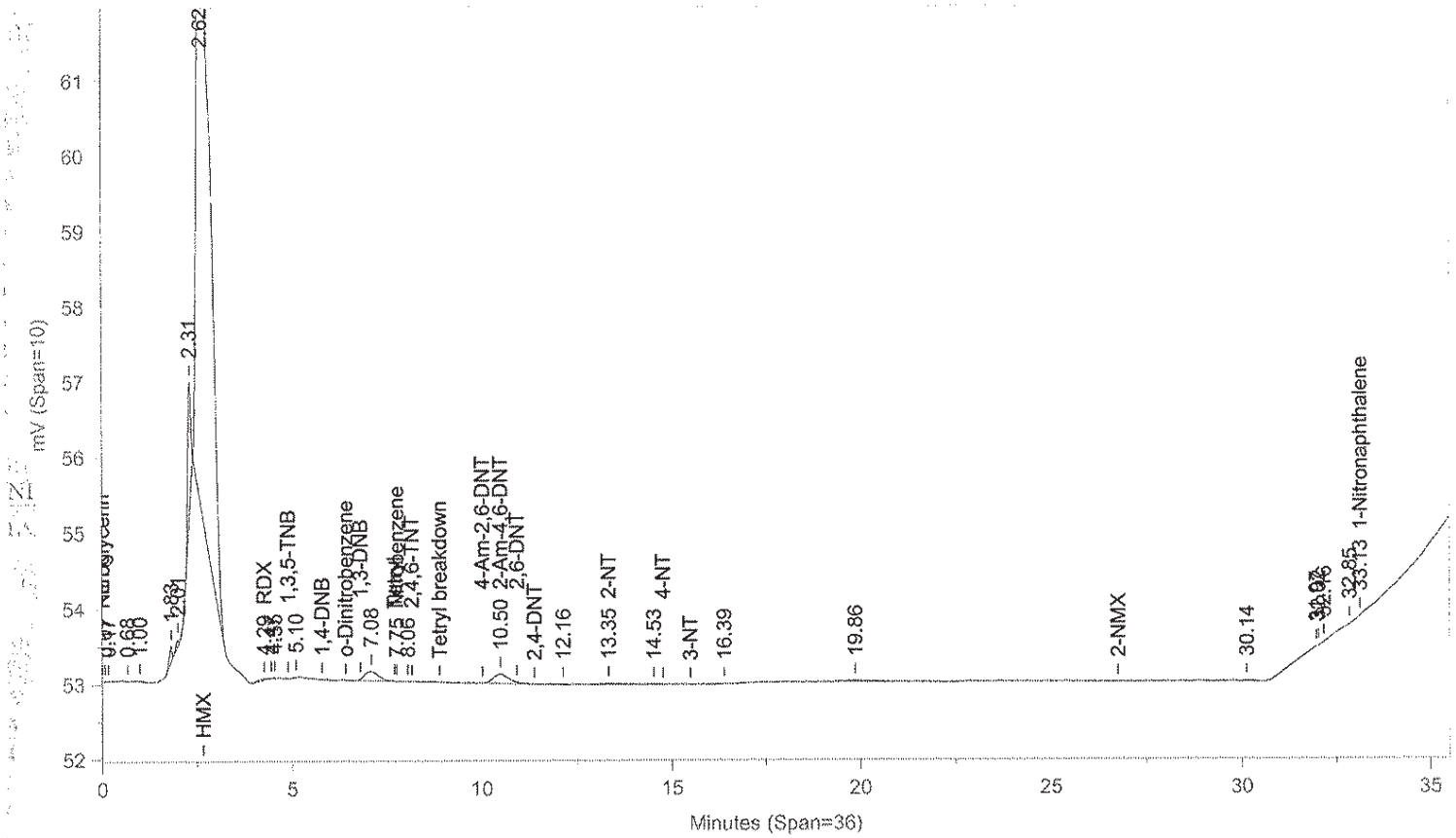
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5203836	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

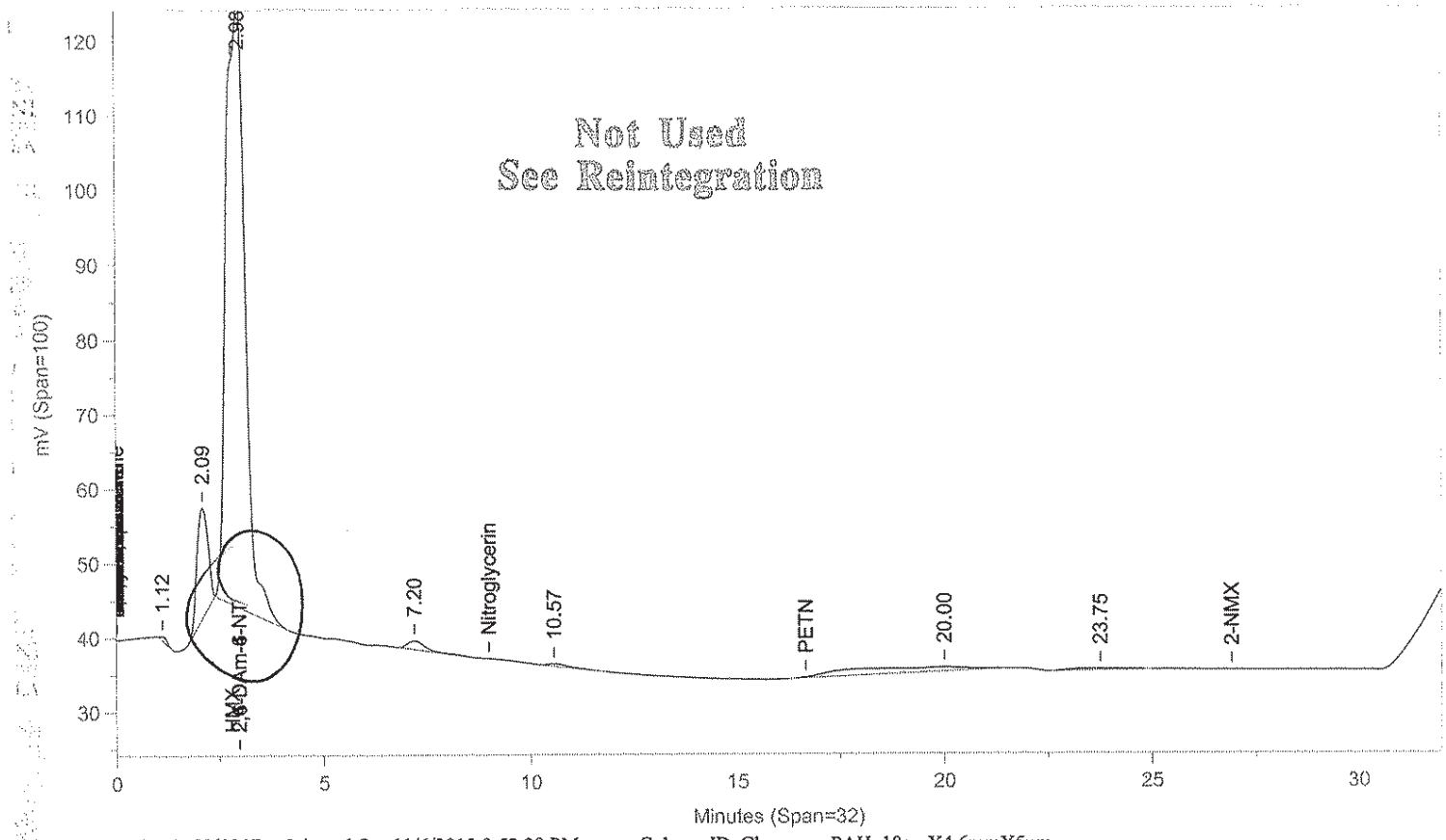
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:38:00 PM
File Reported On: 11/7/2013 at 4:37:58 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

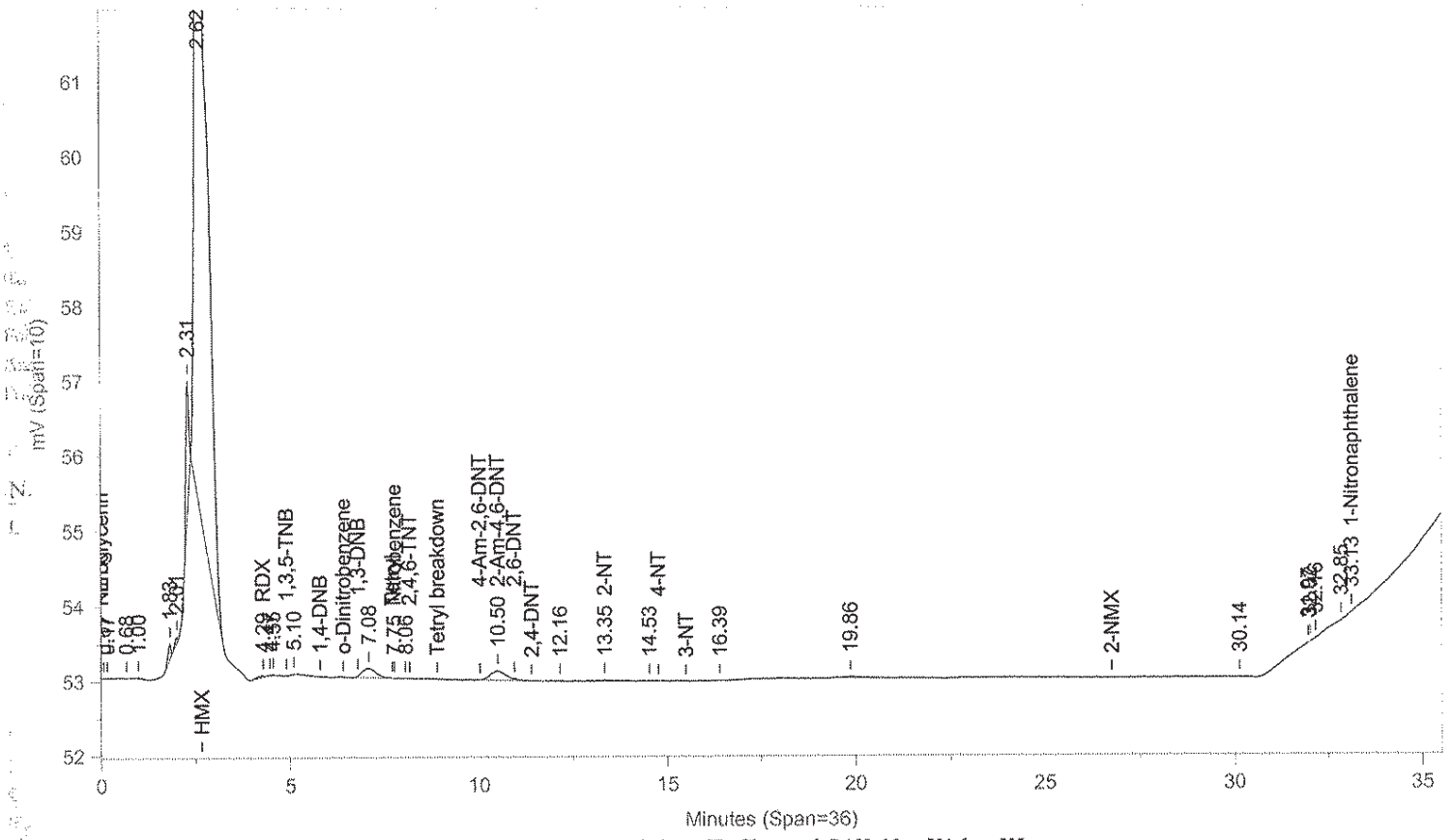
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.984	2610277	.	2,4-DAm-6-NT
4.286	315	-8.906	RDX	.	0	.	RDX
7.752	6	.019	Nitrobenzene	.	0	.	Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
13.345	694	5.246	2-NT	.	0	.	2-NT
33.134	9	.07	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.12A
Area File: C:\CPWIN\DATA1\1E12310B.12A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:48 PM
File Reported On: 11/7/2013 at 4:32:58 PM

Not Used
See Reintegration

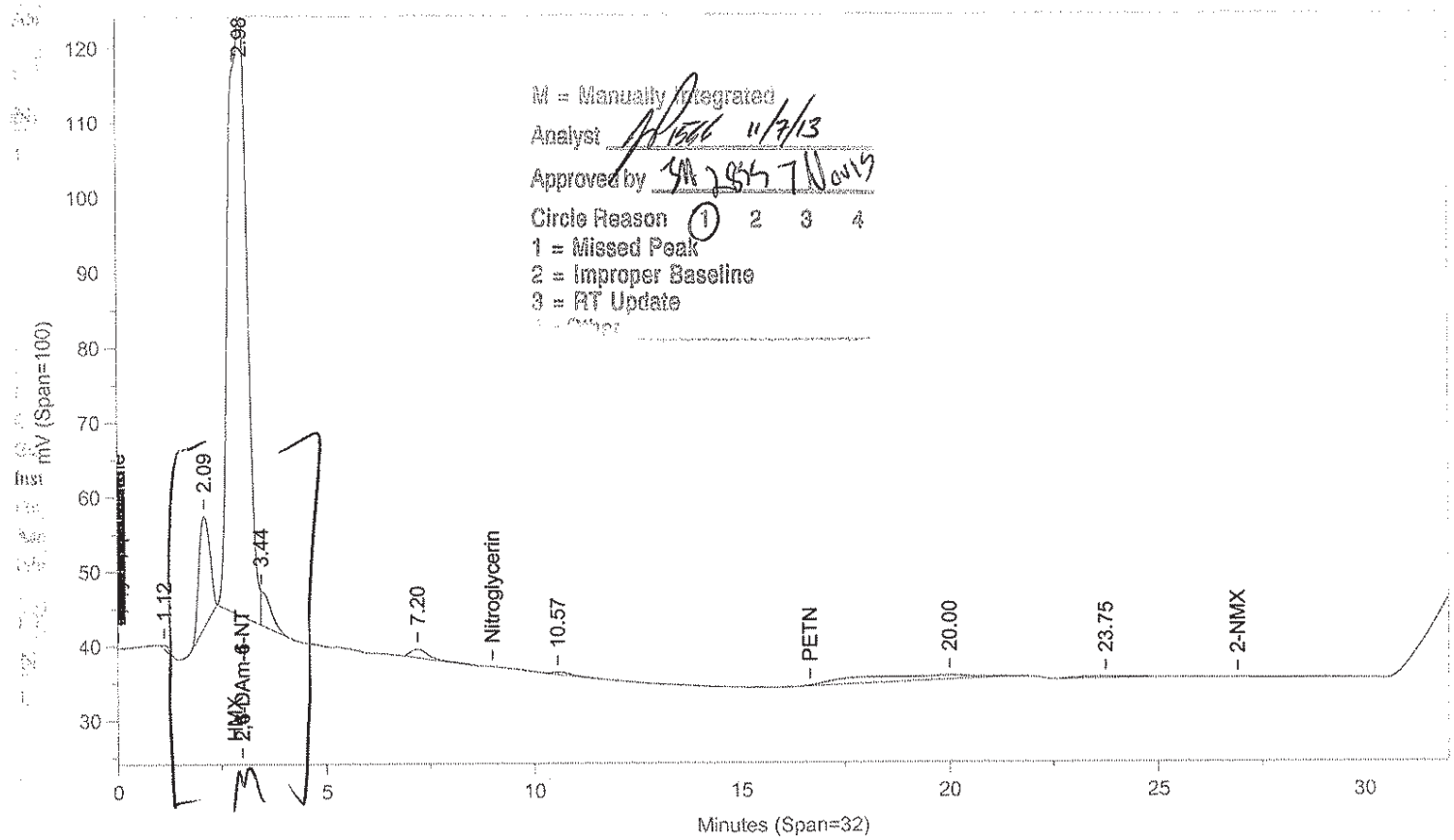
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R

M = Manually Integrated
Analyst 11/7/13
Approved by 7 Nov 13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

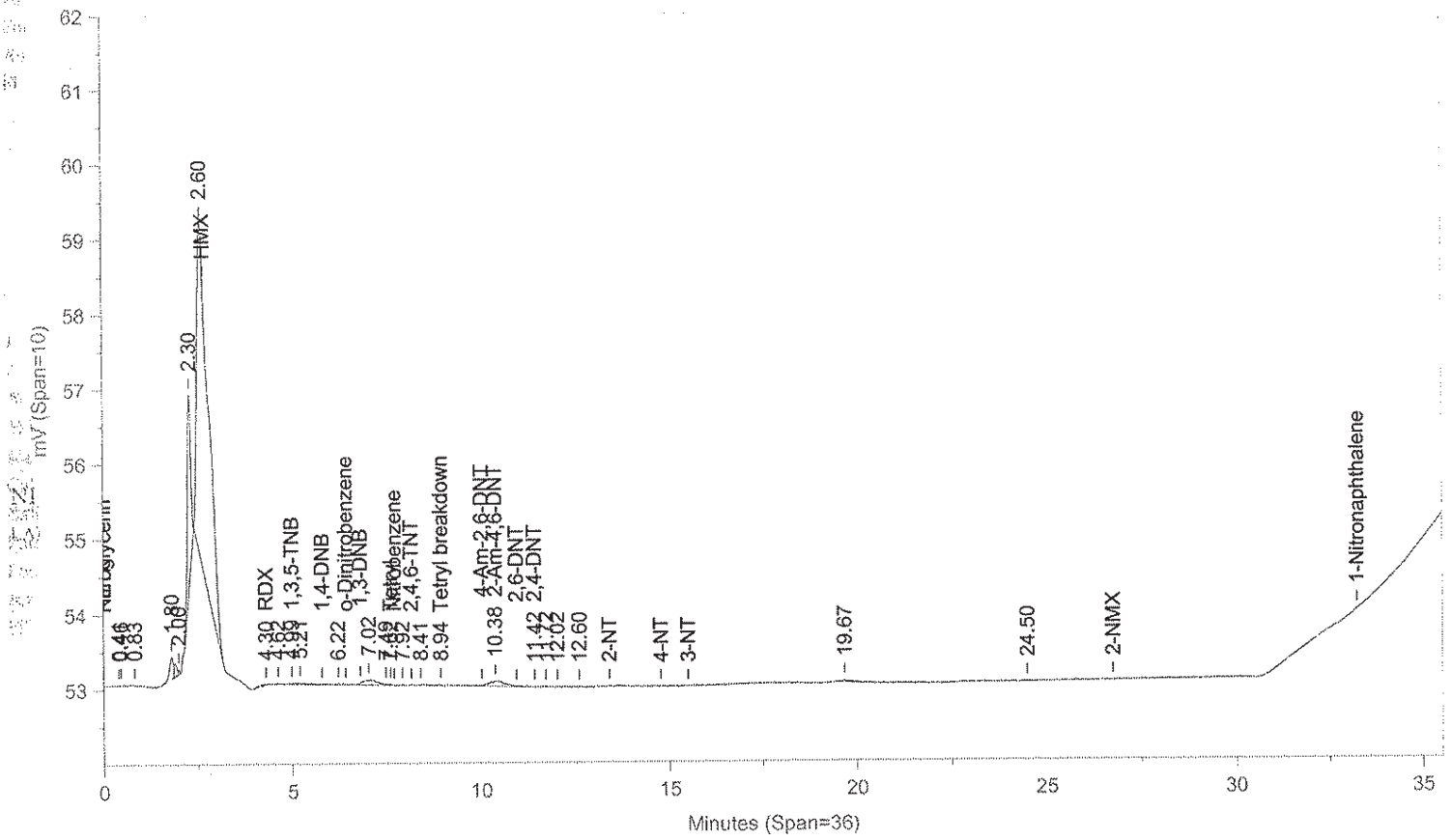
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.984	2533808	.	2,4-DAm-6-NT
4.286	315	-8.906	RDX	.	0	.	RDX
7.752	6	.019	Nitrobenzene	.	0	.	Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
13.345	694	5.246	2-NT	.	0	.	2-NT
33.134	9	.07	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

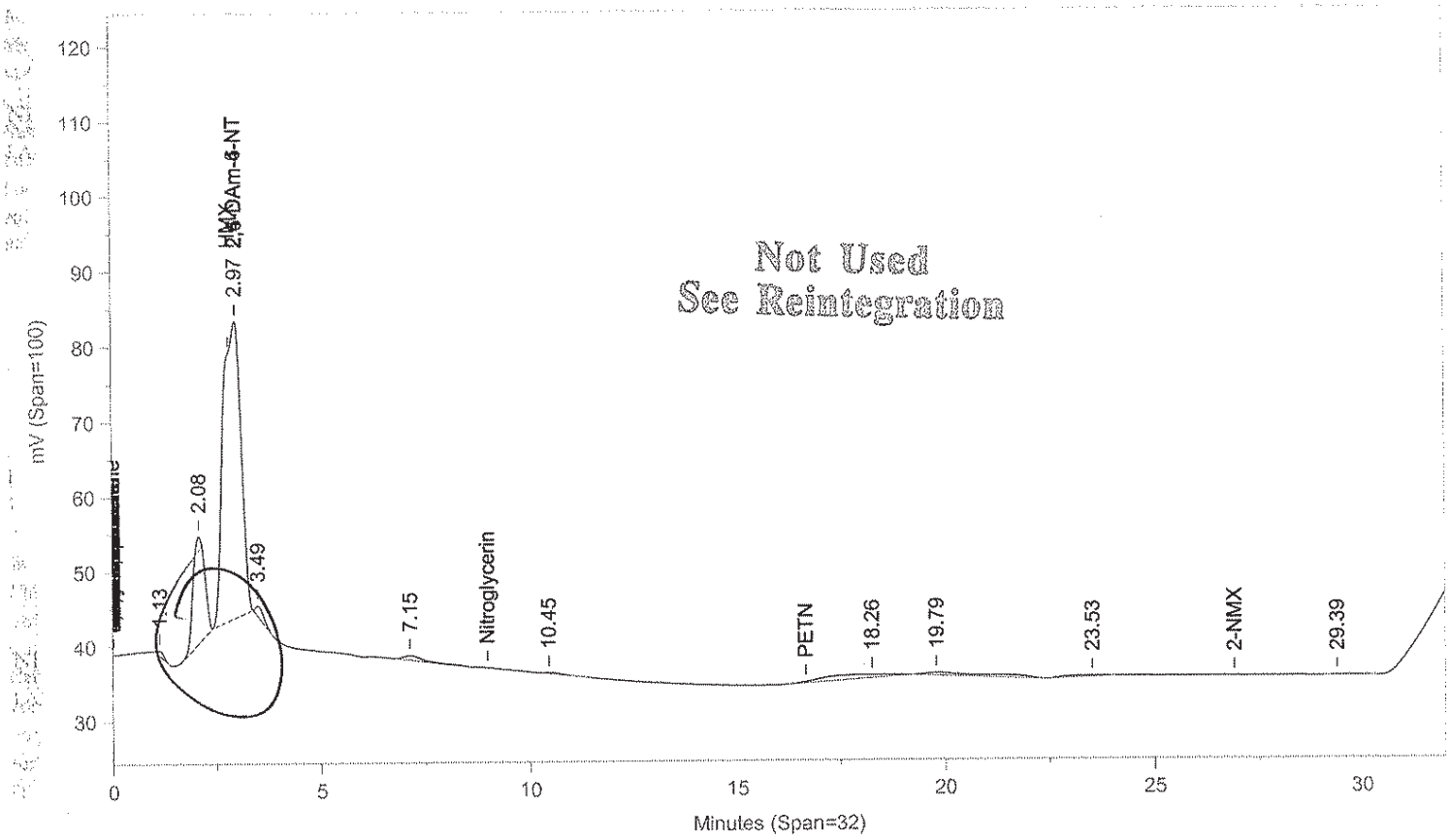
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:39:16 PM
File Reported On: 11/7/2013 at 4:39:14 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

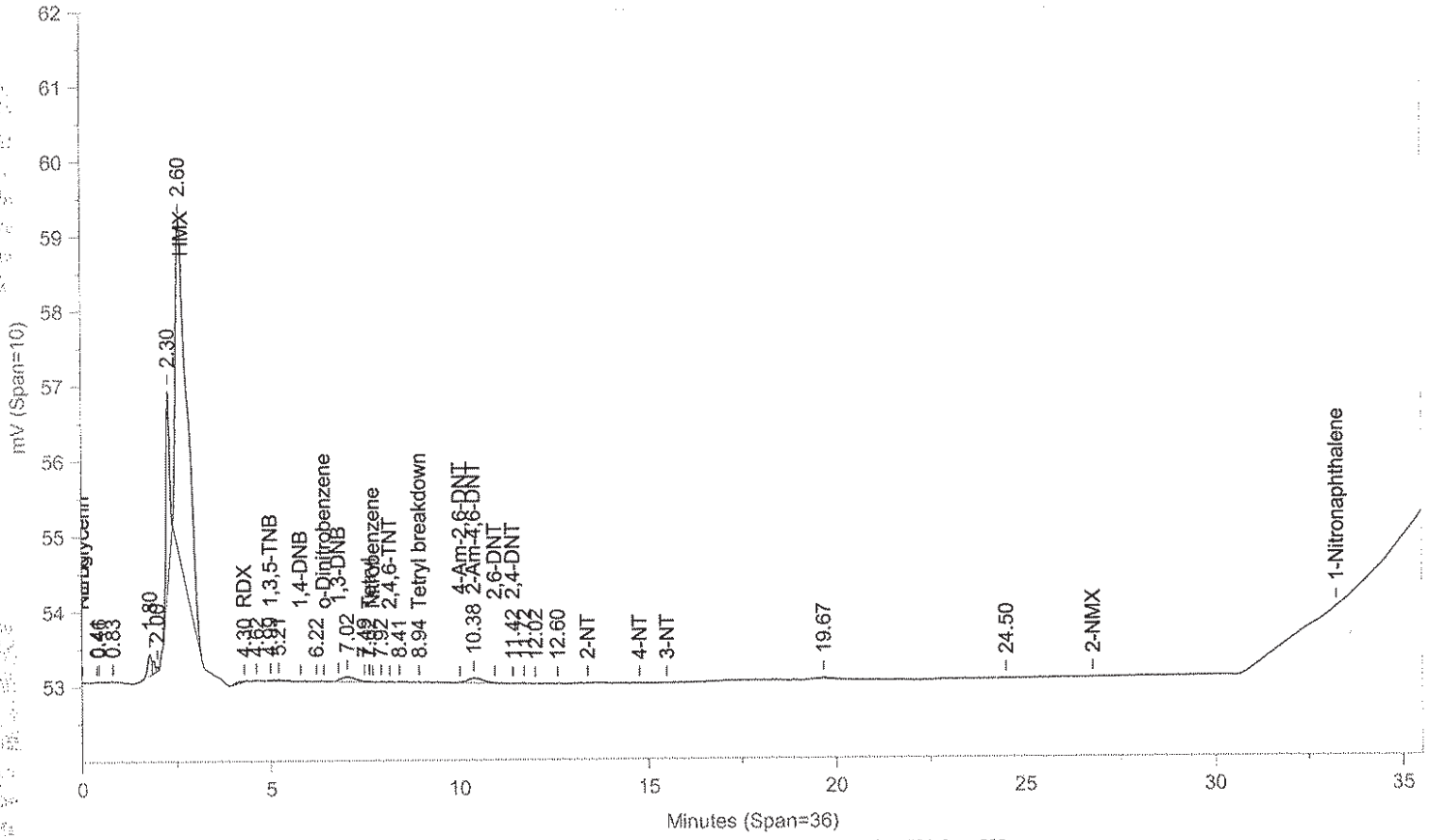
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1176025	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.13A
Area File: C:\CPWIN\DATA1\1E12310B.13A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:18 PM
File Reported On: 11/7/2013 at 4:33:28 PM

Not Used
See Reintegration

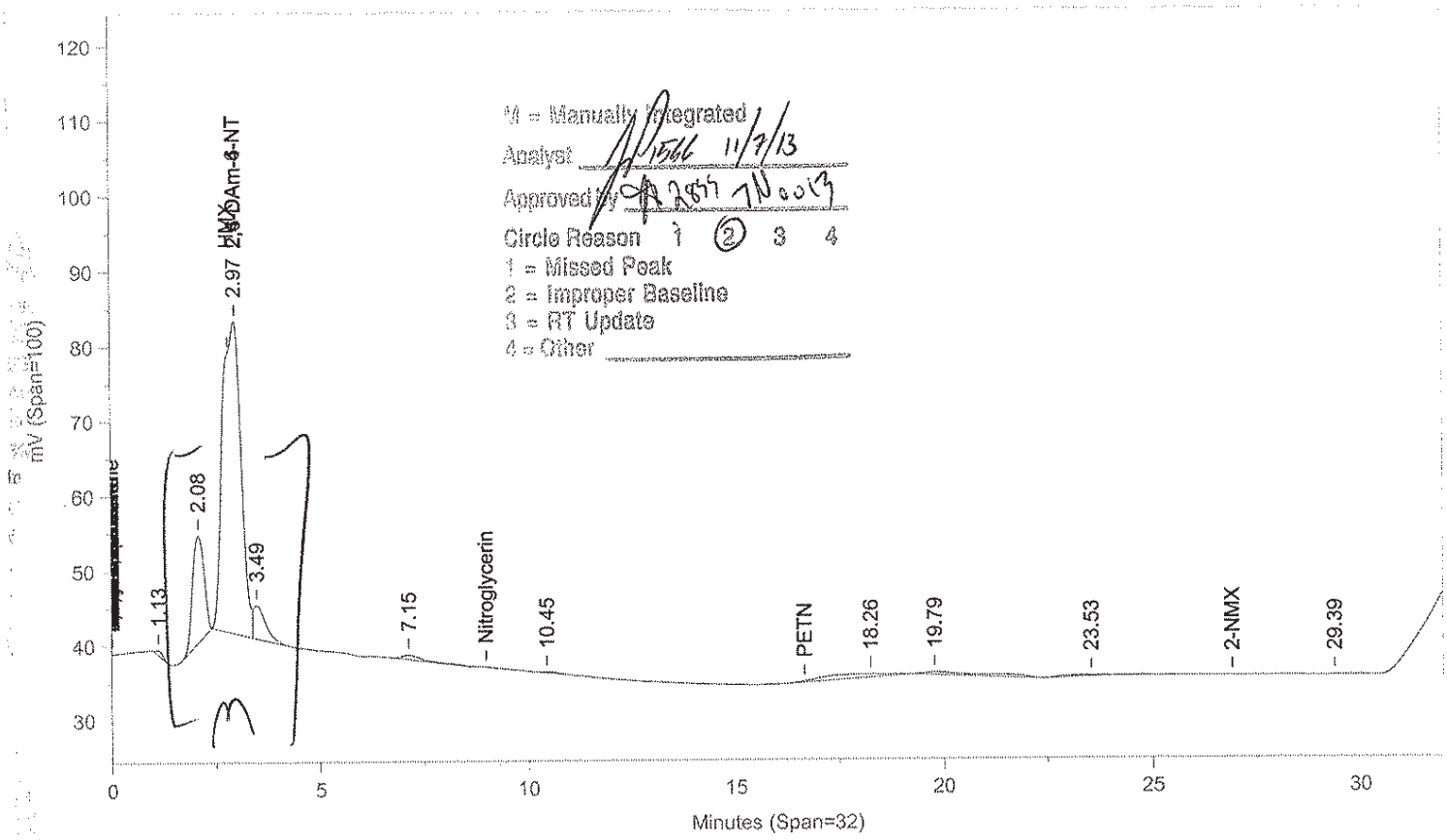
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



M = Manually Integrated
Analyst 11/7/13
Approved by 11/7/2013
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1287697	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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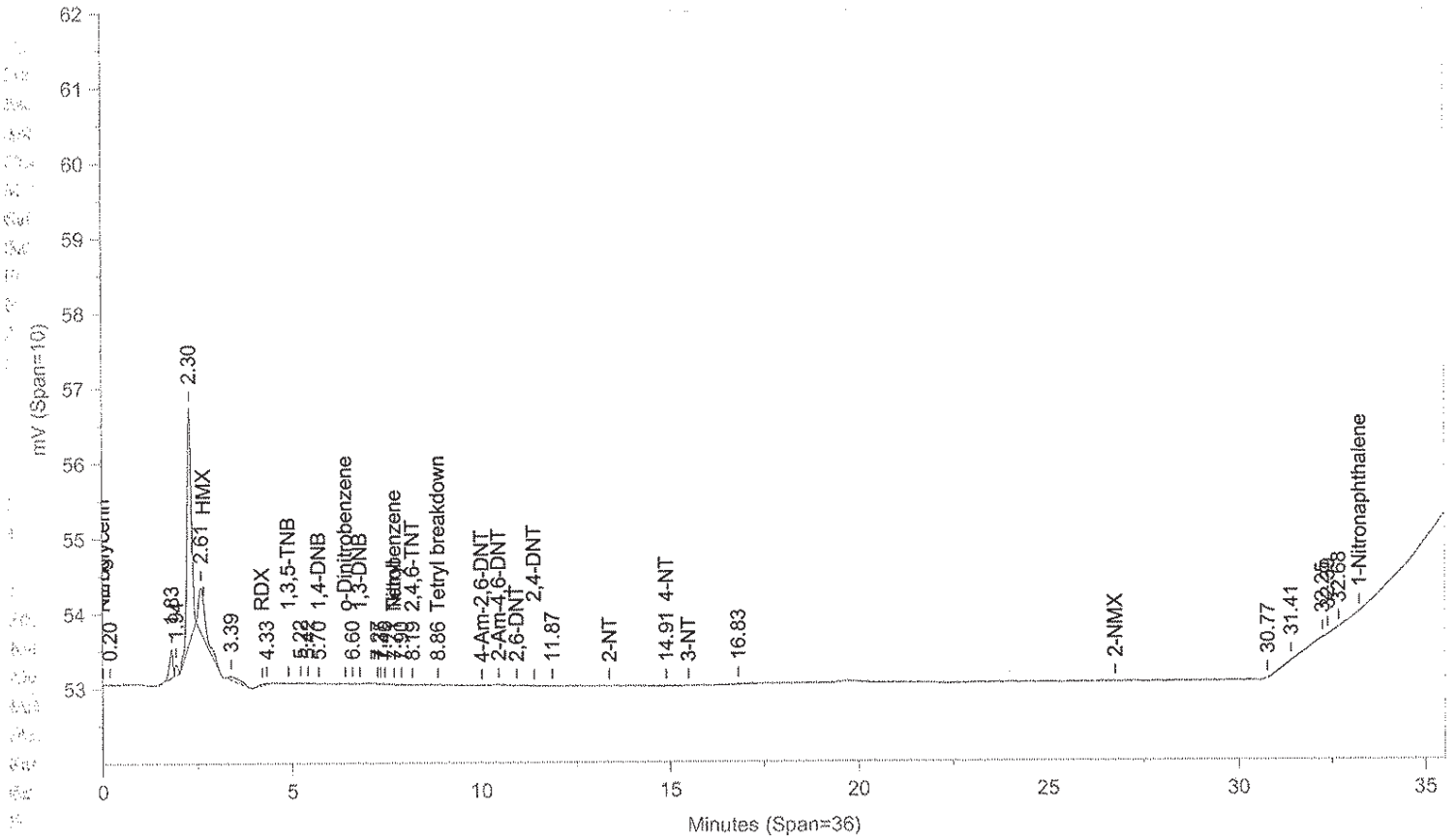
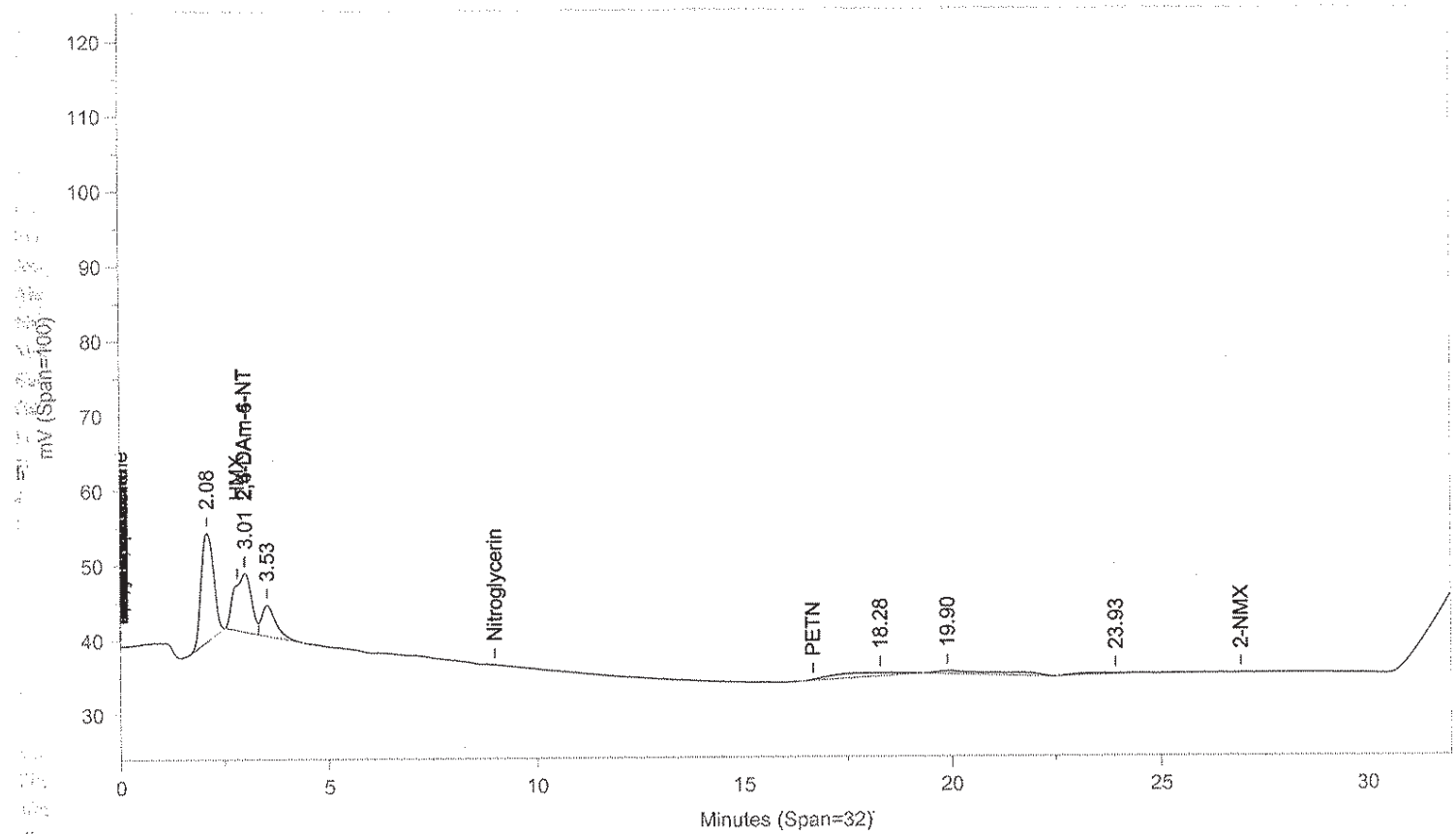
File Reported On: 11/7/2013 at 4:40:42 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.14R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.14R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1

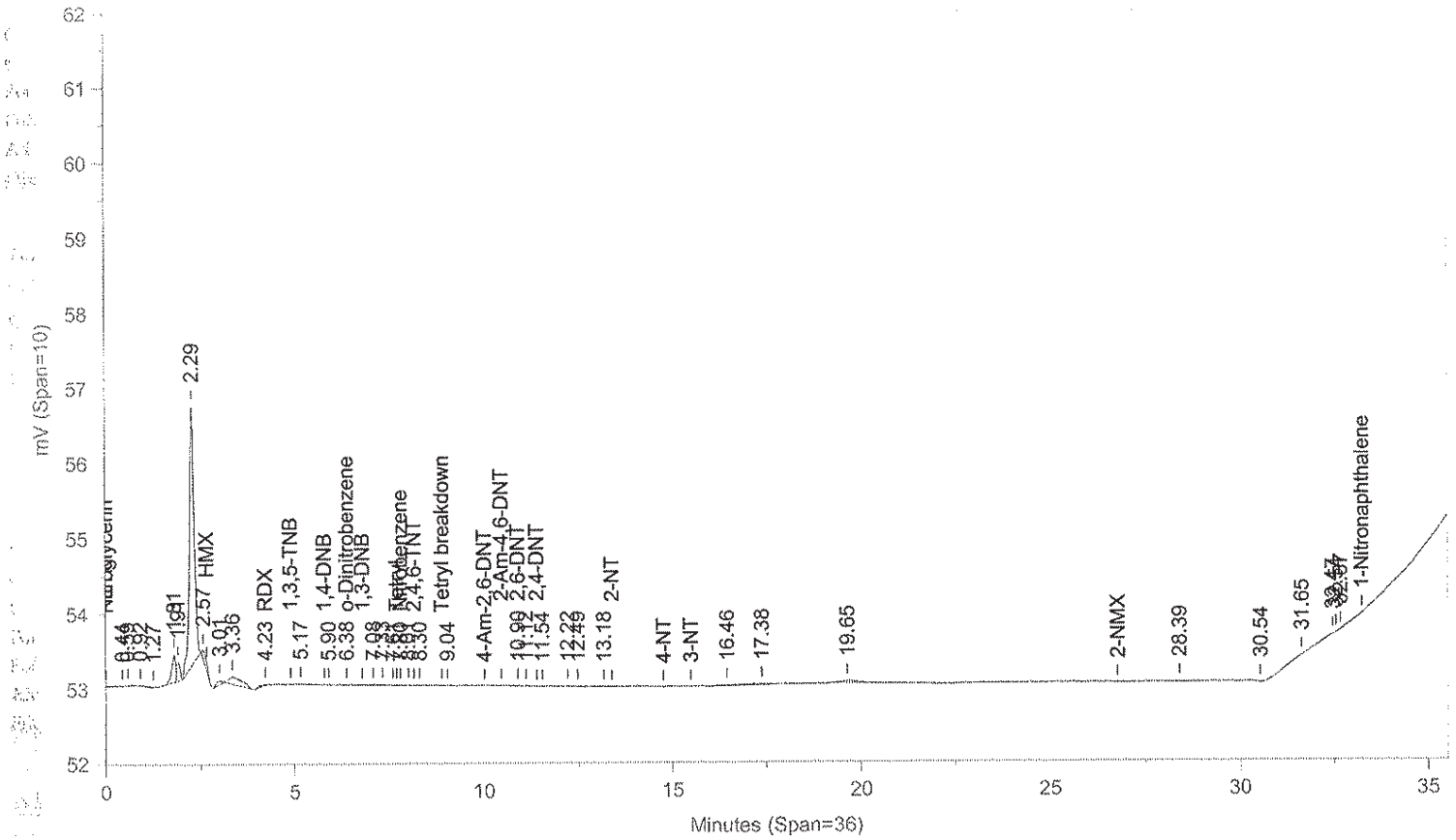
Dilution Factor: 1

Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.006	225601	.	2,4-DAm-6-NT
5.701	20	.078	1,4-DNB	.	0	.	1,4-DNB
7.706	5	.014	Tetryl	.	0	.	Tetryl
8.189	38	.167	2,4,6-TNT	.	0	.	2,4,6-TNT
8.865	15	.044	Tetryl breakdown	.	0	.	Tetryl breakdown
14.91	201	2.138	4-NT	.	0	.	4-NT

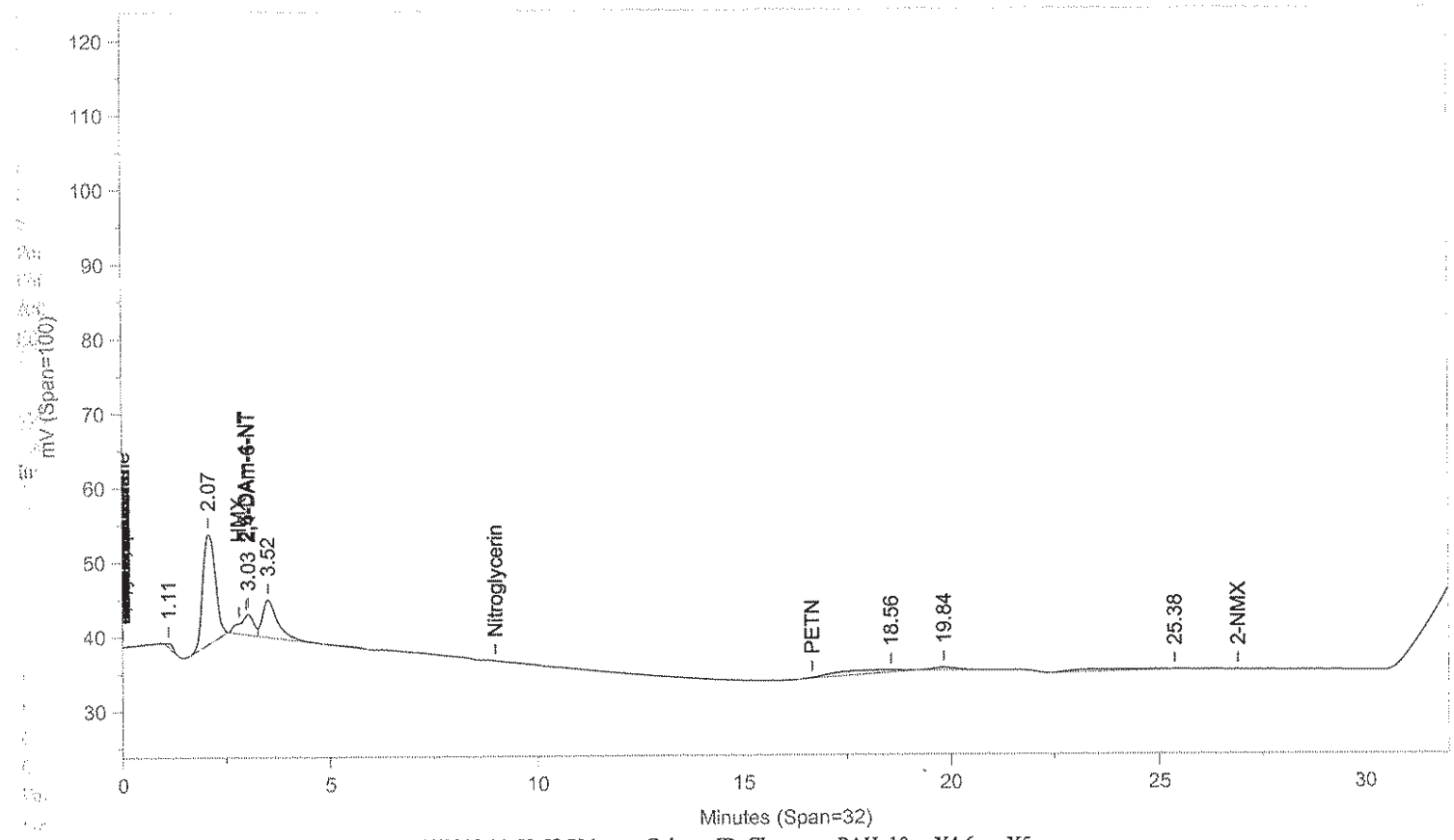
Files:
Area File: C:\CPWIN\DATA1\1E12310.14A
Area File: C:\CPWIN\DATA1\1E12310B.14A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:50 PM
File Reported On: 11/7/2013 at 4:33:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.15R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.15R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

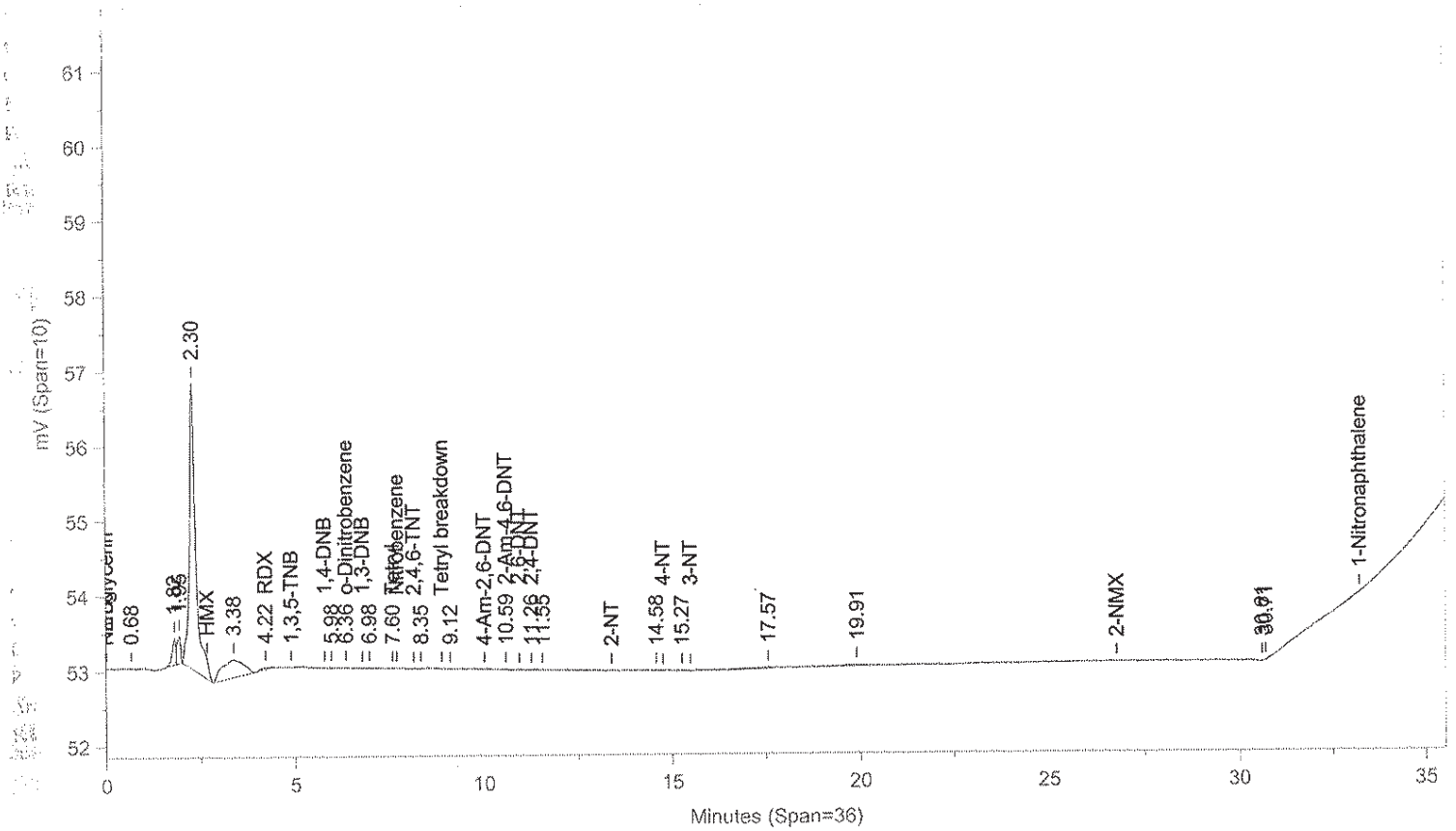
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.033	66258	.	2,4-DAm-6-NT
4.231	292	-9.173	RDX	.	0	.	RDX
6.378	115	1.119	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.8	52	.151	Nitrobenzene	.	0	.	Nitrobenzene
10.905	31	.257	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.15A
Area File: C:\CPWIN\DATA1\1E12310B.15A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:20 PM
Re Reported On: 11/7/2013 at 4:34:29 PM

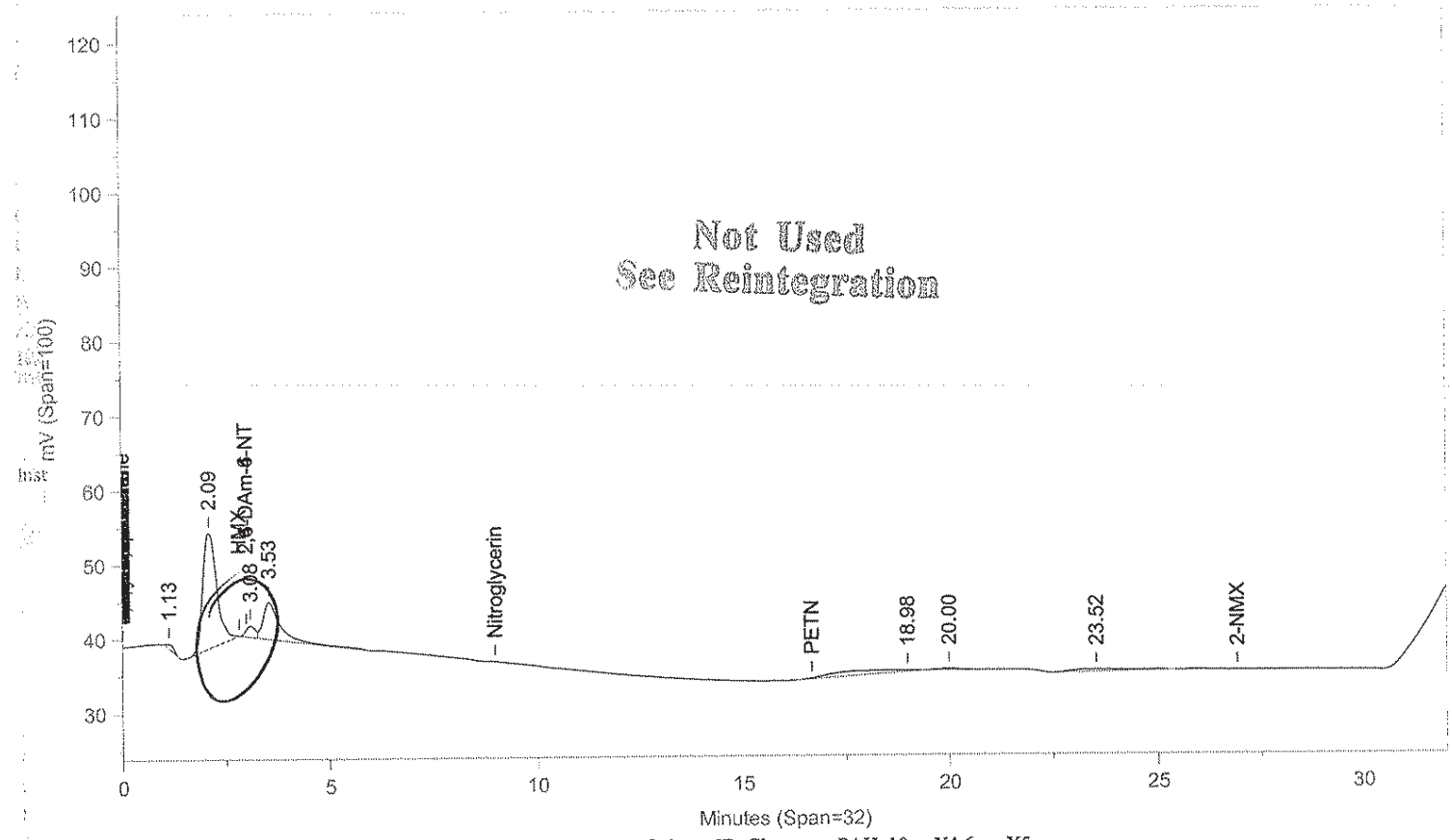
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

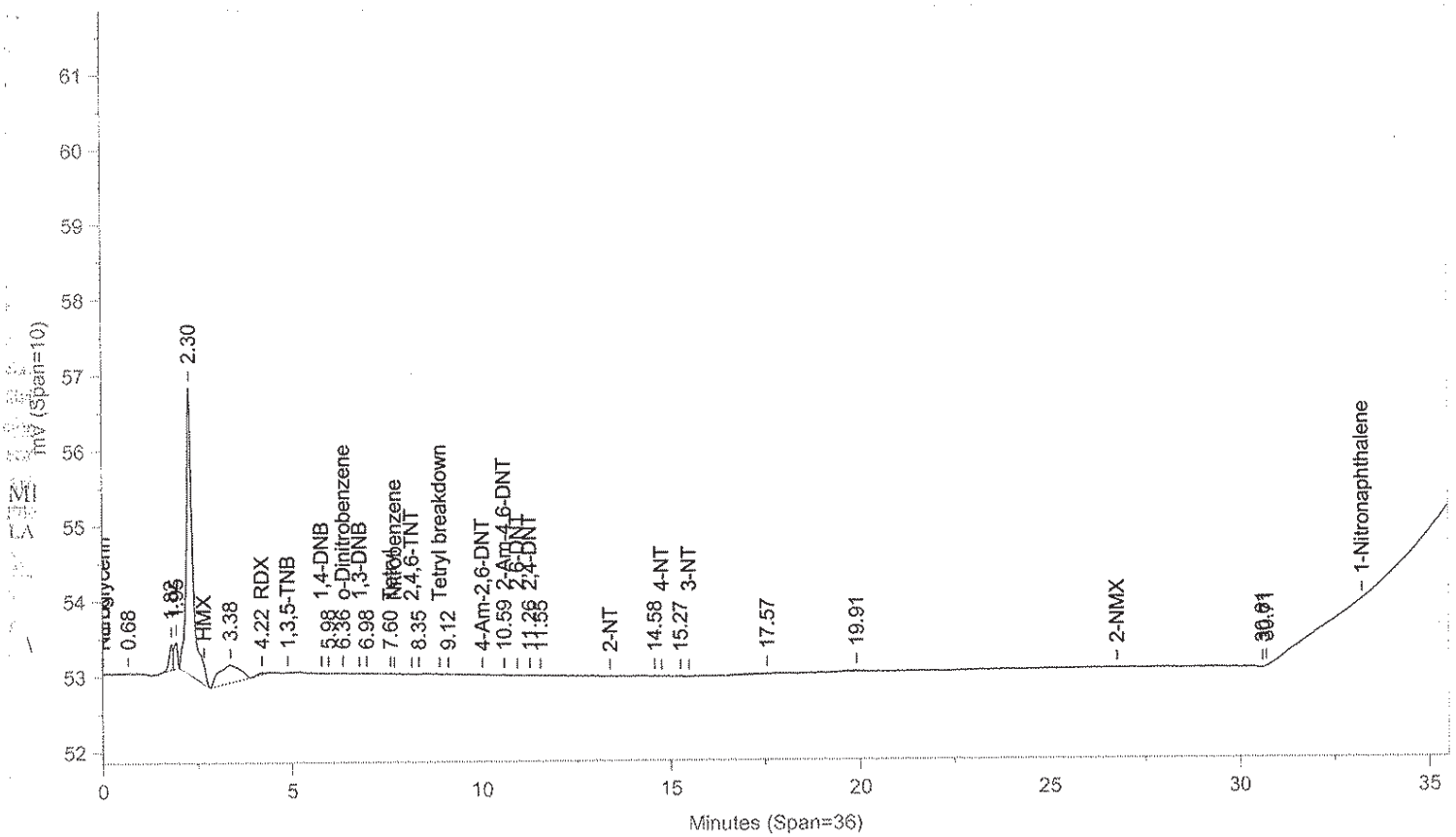
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.16A
Area File: C:\CPWIN\DATA1\1E12310B.16A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:50 PM
File Reported On: 11/7/2013 at 4:35:00 PM

Not Used
See Reintegration

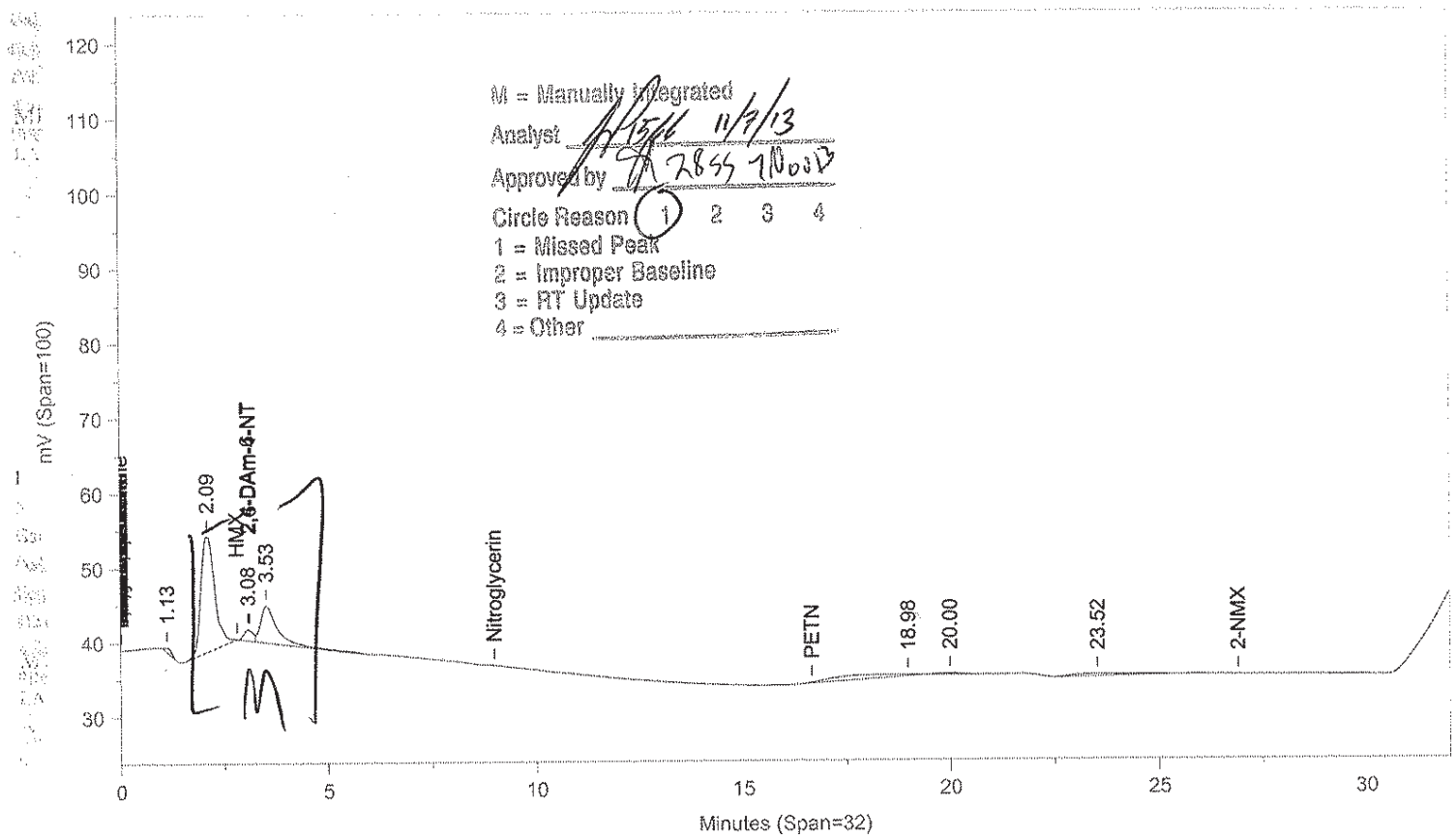
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R

M = Manually Integrated
Analyst 11/7/13
Approved by 11/8/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

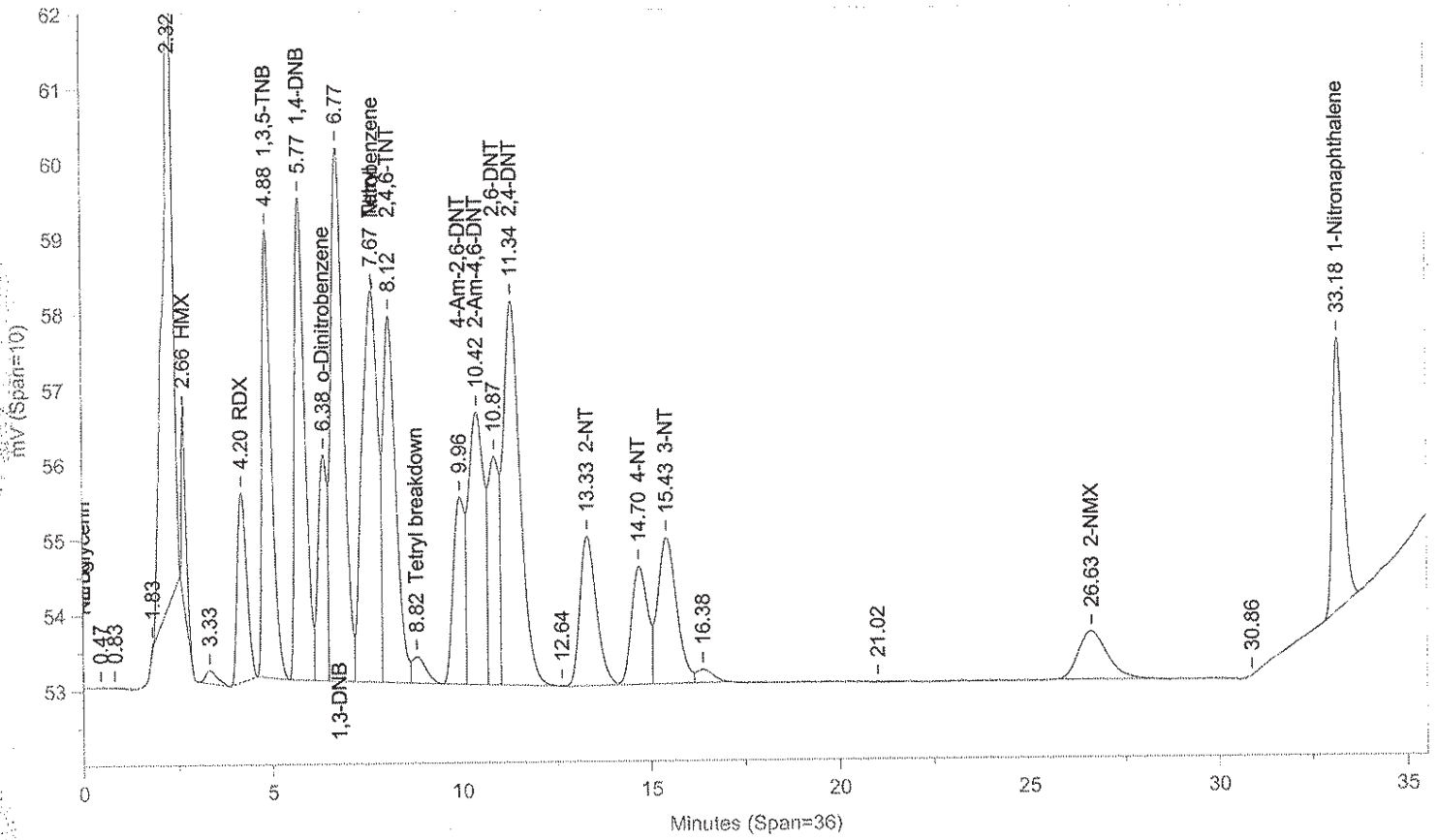
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.084	23496	.	2,4-DAm-6-NT
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:44:58 PM
File Reported On: 11/7/2013 at 4:44:56 PM

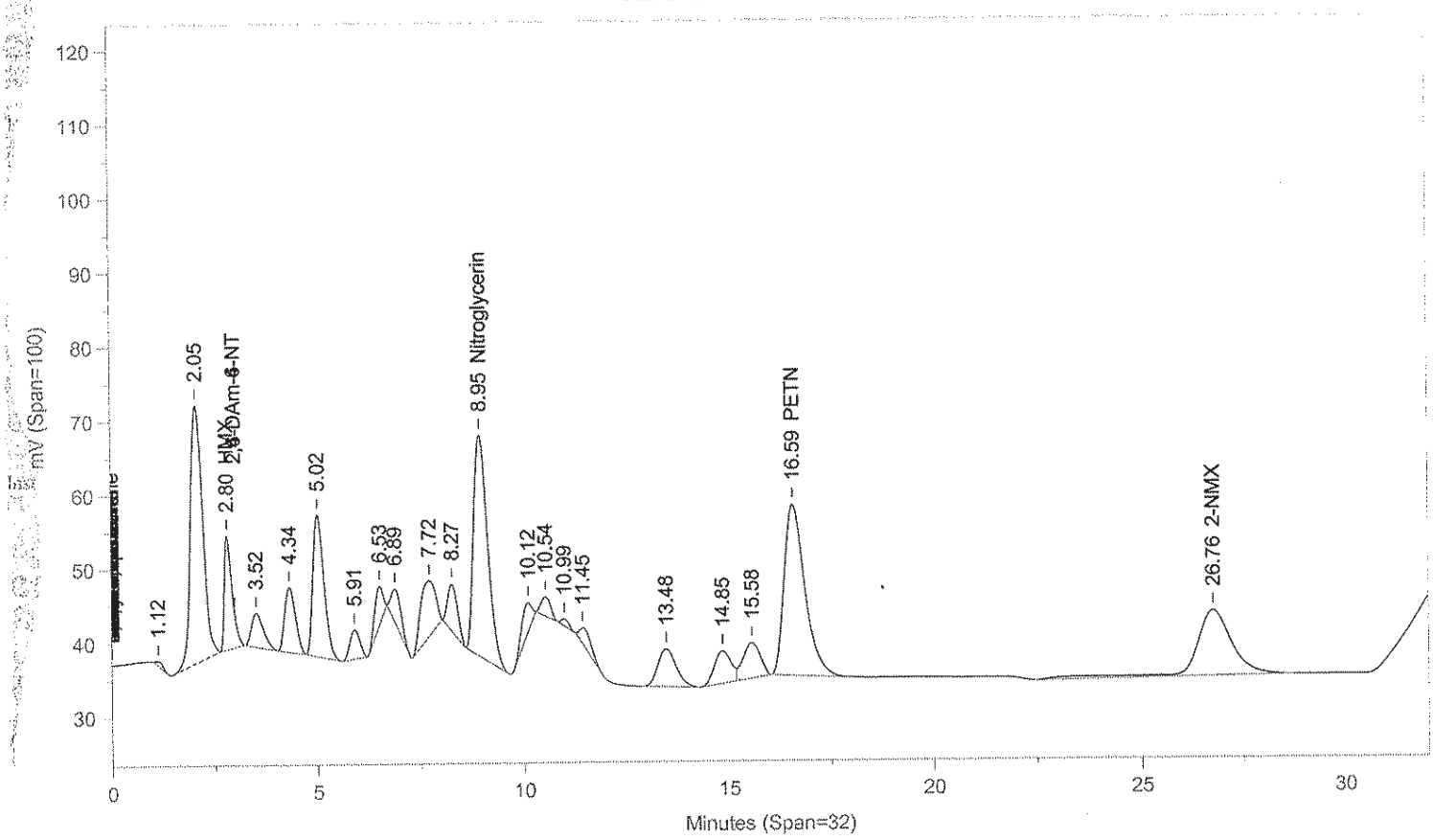
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.10R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.10R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

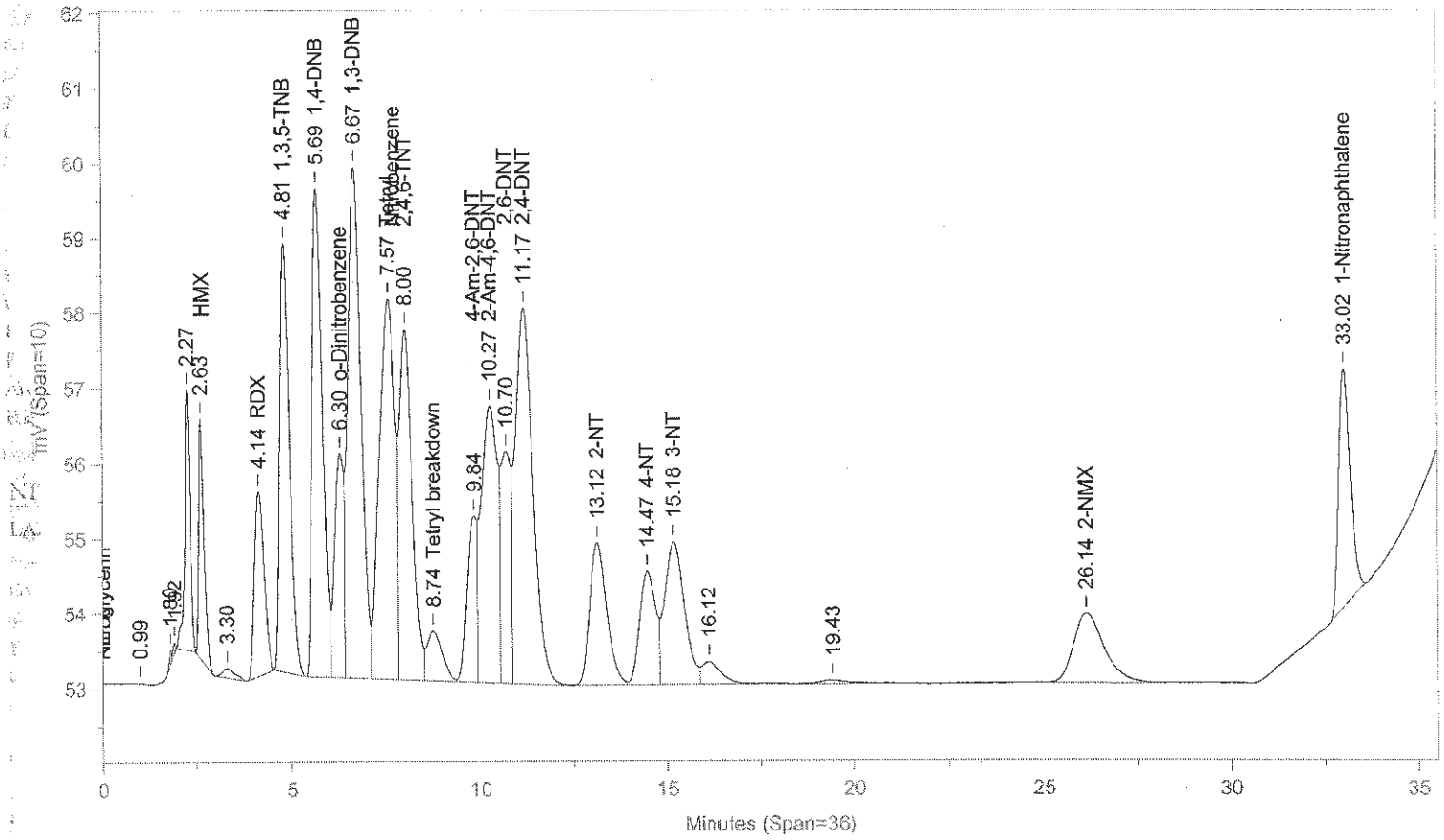
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.799	203173	485.075	HMX
4.196	44563	496.073	RDX	.	0	.	RDX
4.878	103862	492.035	1,3,5-TNB	.	0	.	1,3,5-TNB
5.766	118827	466.405	1,4-DNB	.	0	.	1,4-DNB
6.38	49974	485.012	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.767	162830	501.796	1,3-DNB	.	0	.	1,3-DNB
7.669	151315	437.752	Tetryl	.	0	.	Tetryl
8.122	112252	492.632	2,4,6-TNT	.	0	.	2,4,6-TNT
8.816	8751	25.317	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.952	693352	5425.07	Nitroglycerin
9.965	51904	553.225	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.417	101911	465.313	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.873	59347	488.148	2,6-DNT	.	0	.	2,6-DNT
11.337	159047	480.845	2,4-DNT	.	0	.	2,4-DNT
13.328	60902	460.363	2-NT	.	0	.	2-NT
14.7	46563	496.259	4-NT	.	0	.	4-NT
15.426	67550	498.877	3-NT	.	0	.	3-NT
.	0	.	PETN	16.585	811052	5923.12	PETN
26.628	33626	986.469	2-NMX	26.76	543834	1113.345	2-NMX
33.185	71489	544.173	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

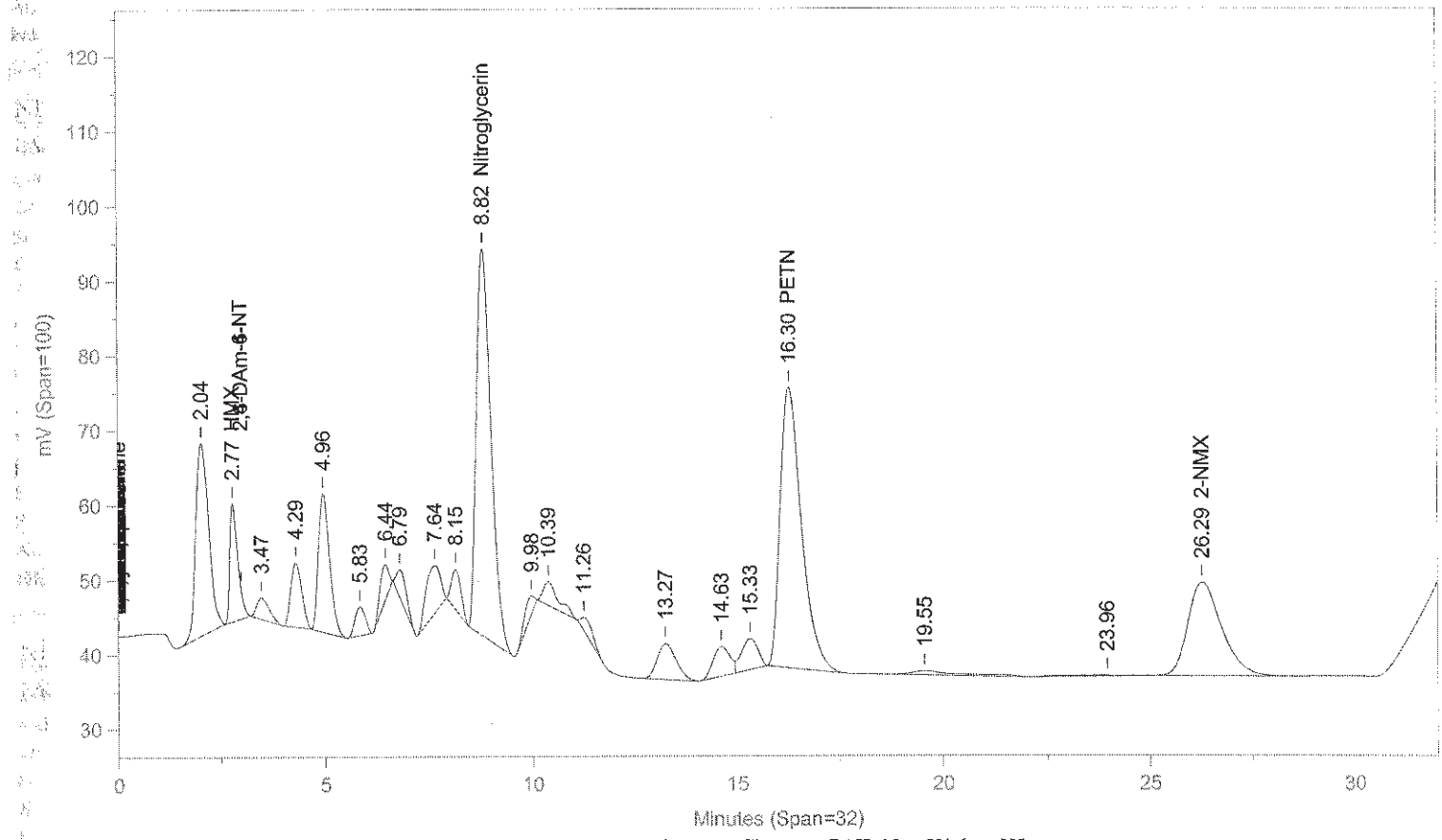
Files:
Area File: C:\CPWIN\DATA1\1E12310.10A
Area File: C:\CPWIN\DATA1\1E12310B.10A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:31:48 PM
File Reported On: 11/7/2013 at 4:31:57 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

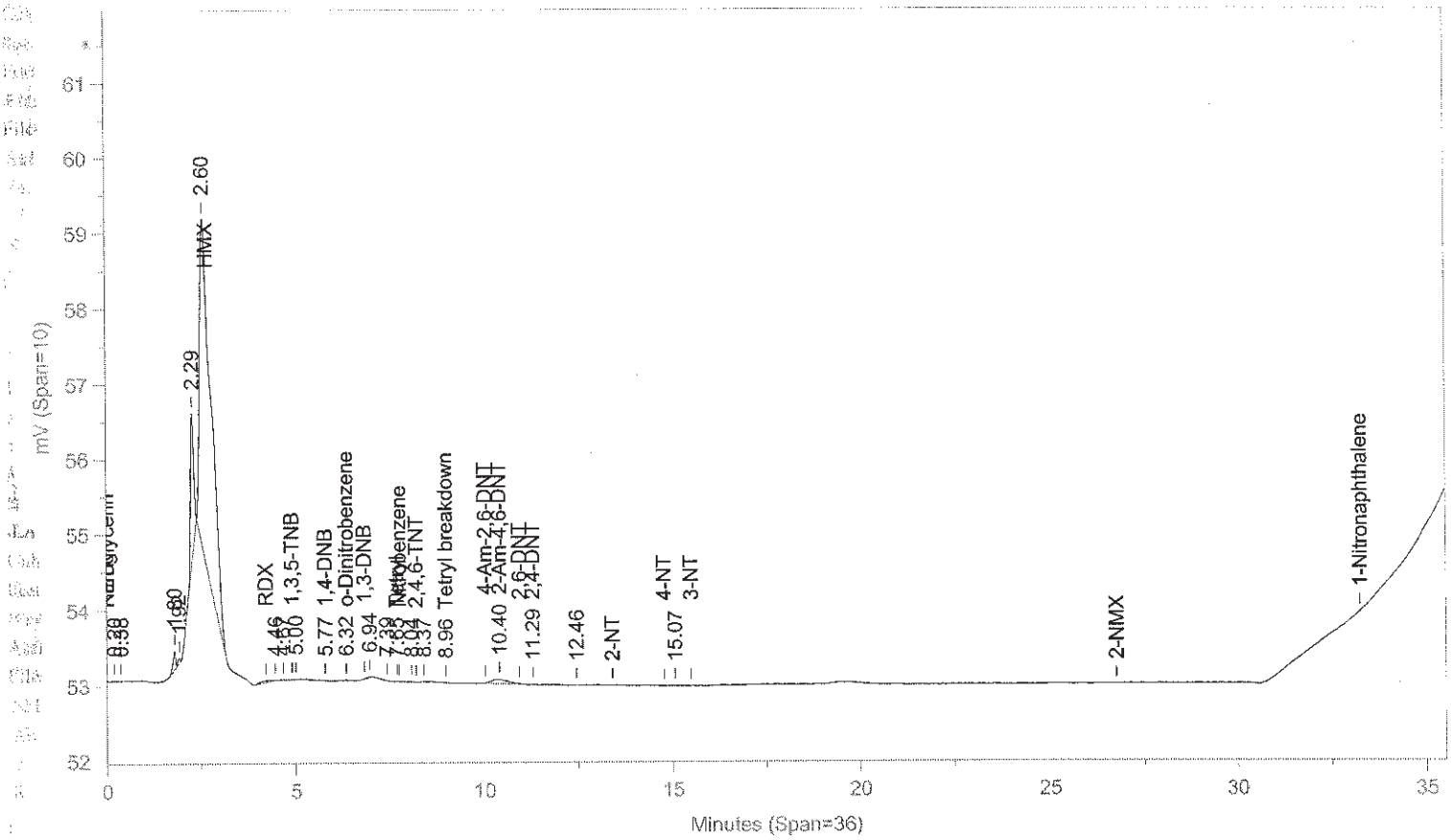
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.769	211572	504.407	HMX
4.144	44221	492.169	RDX	.	0	.	RDX
4.814	100245	474.9	1,3,5-TNB	.	0	.	1,3,5-TNB
5.688	125052	490.836	1,4-DNB	.	0	.	1,4-DNB
6.295	48820	473.808	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.675	162581	501.027	1,3-DNB	.	0	.	1,3-DNB
7.568	145022	419.546	Tetryl	.	0	.	Tetryl
8.004	109830	482.003	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	19154	55.413	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.821	1259876	9857.789	Nitroglycerin
9.844	41479	442.106	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.268	109243	498.79	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.697	56843	467.555	2,6-DNT	.	0	.	2,6-DNT
11.171	163706	494.931	2,4-DNT	.	0	.	2,4-DNT
13.121	60215	455.169	2-NT	.	0	.	2-NT
14.473	45093	480.588	4-NT	.	0	.	4-NT
15.178	69225	511.244	3-NT	.	0	.	3-NT
.	0	.	PETN	16.299	1376269	10049.65	PETN
26.14	52315	1534.716	2-NMX	26.295	704594	1442.454	2-NMX
33.023	69722	530.724	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

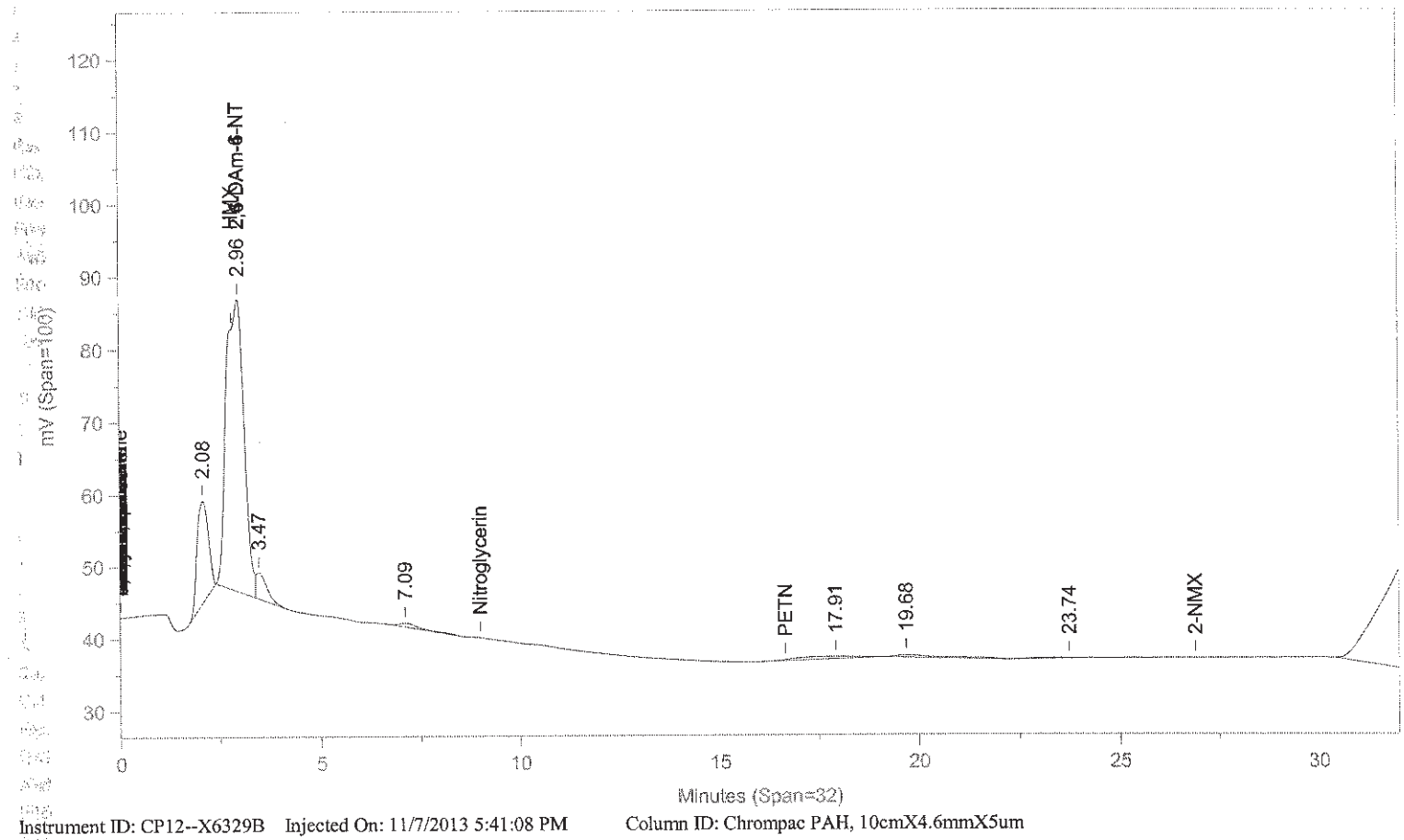
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:03:00 PM
File Reported On: 11/8/2013 at 1:02:59 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.40R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.40R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

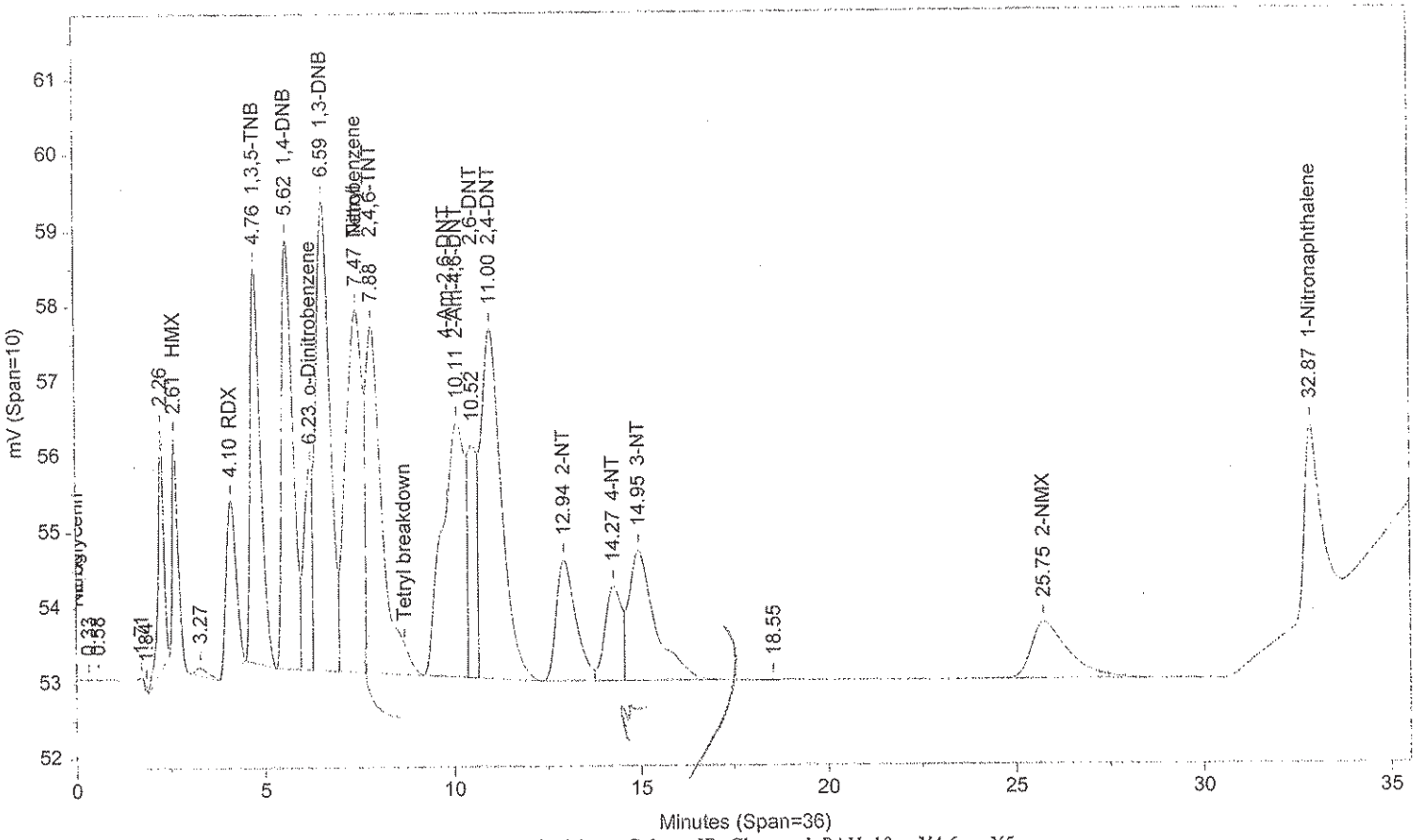
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.957	1233081	511.388	2,4-DAm-6-NT
5.772	41	.163	1,4-DNB	.	0	.	1,4-DNB
6.317	71	.692	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.65	66	.19	Tetryl	.	0	.	Tetryl
8.958	36	.105	Tetryl breakdown	.	0	.	Tetryl breakdown
10.398	1681	7.677	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.291	91	.275	2,4-DNT	.	0	.	2,4-DNT

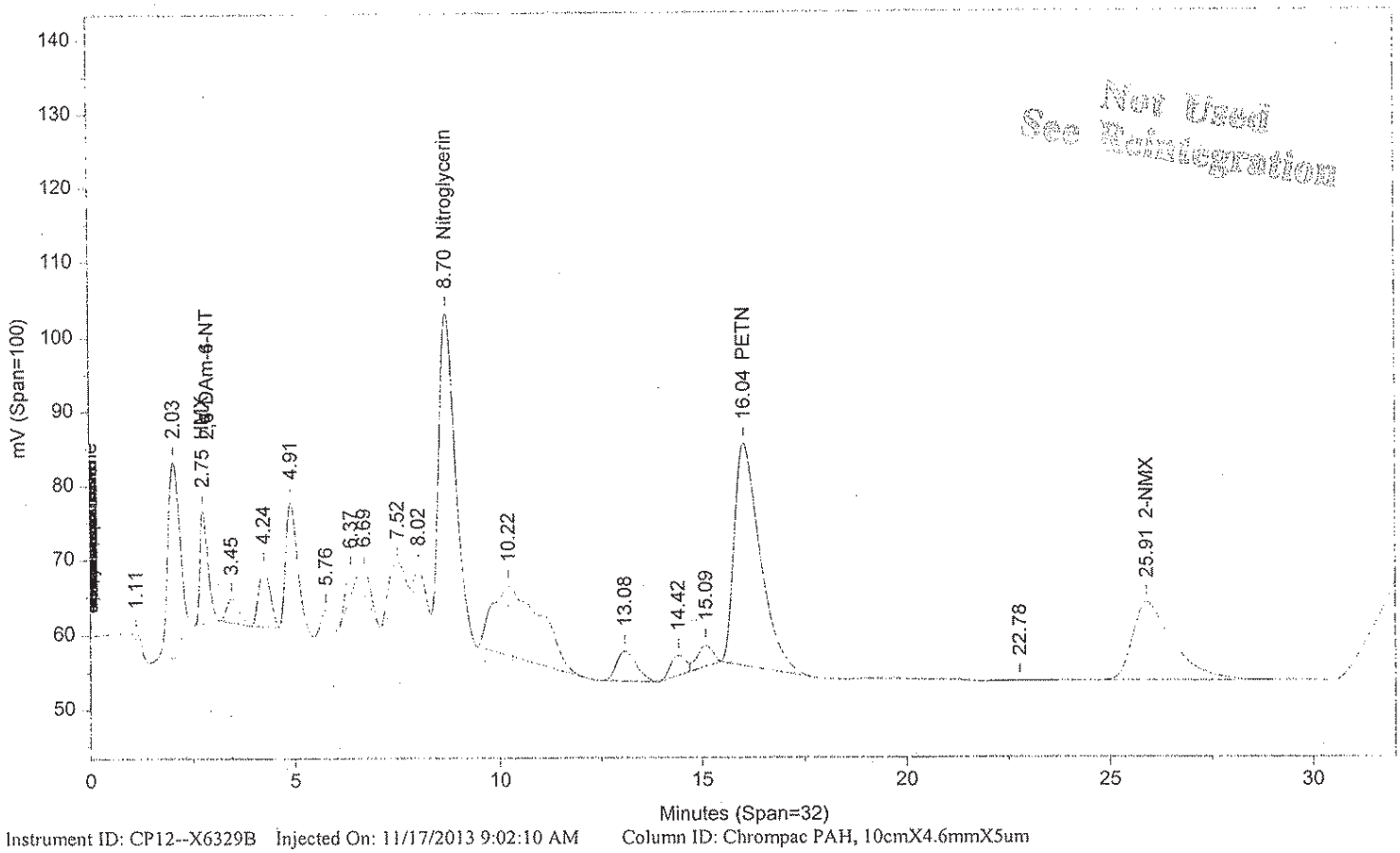
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:04:58 PM
File Reported On: 11/8/2013 at 1:04:58 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	40946	397.391	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	164441	506.762	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	134888	591.974	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
10.111	141225	644.817	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	50399	414.552	2,6-DNT	.	0	.	2,6-DNT
10.997	178956	541.037	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	38746	412.947	4-NT	.	0	.	4-NT
14.953	86090	635.799	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.58A
Area File: C:\CPWIN\DATA1\4E12310B.58A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:34:44 PM
File Reported On: 11/17/2013 at 9:34:54 PM

Not Used
See Reintegration

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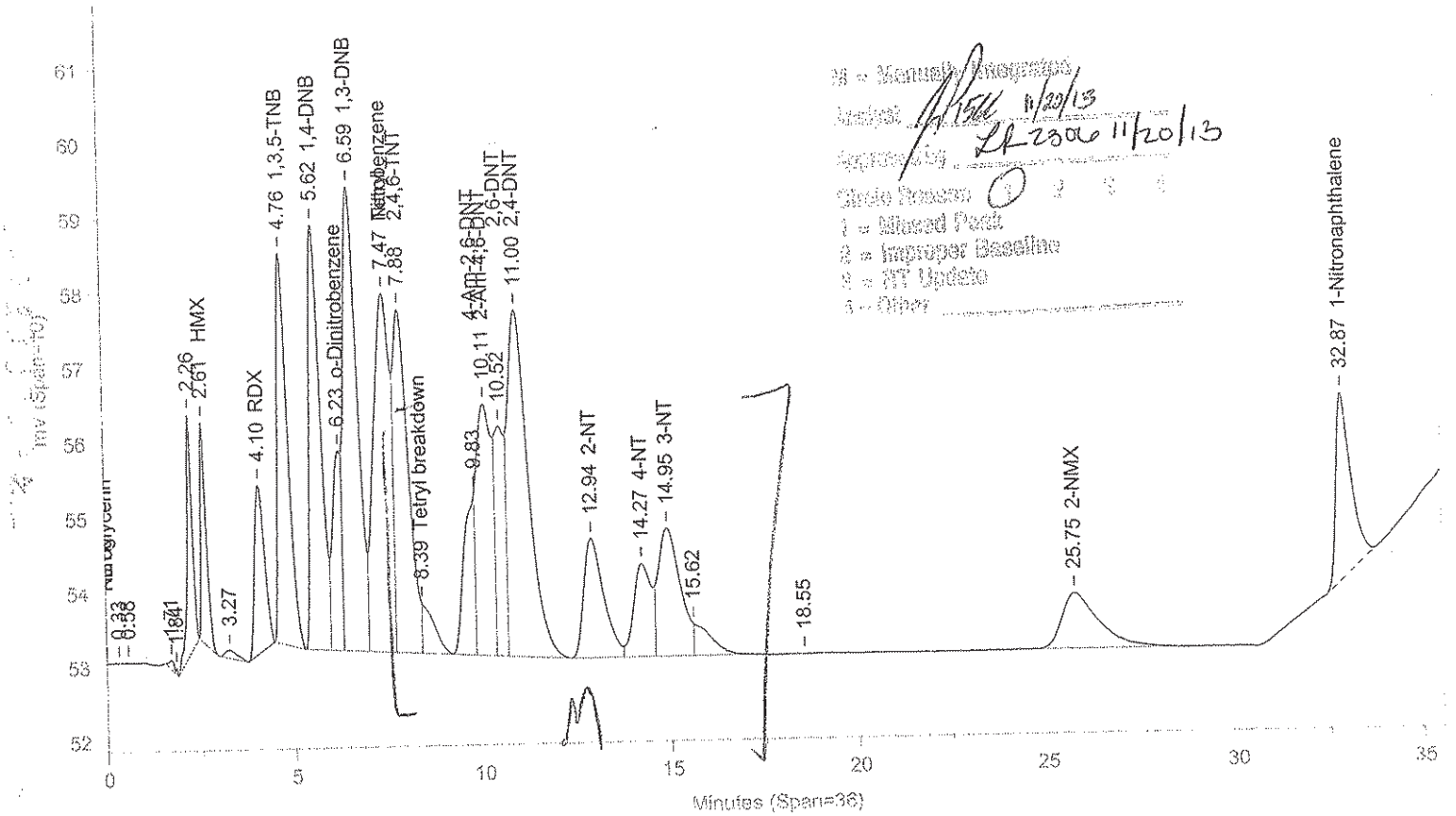
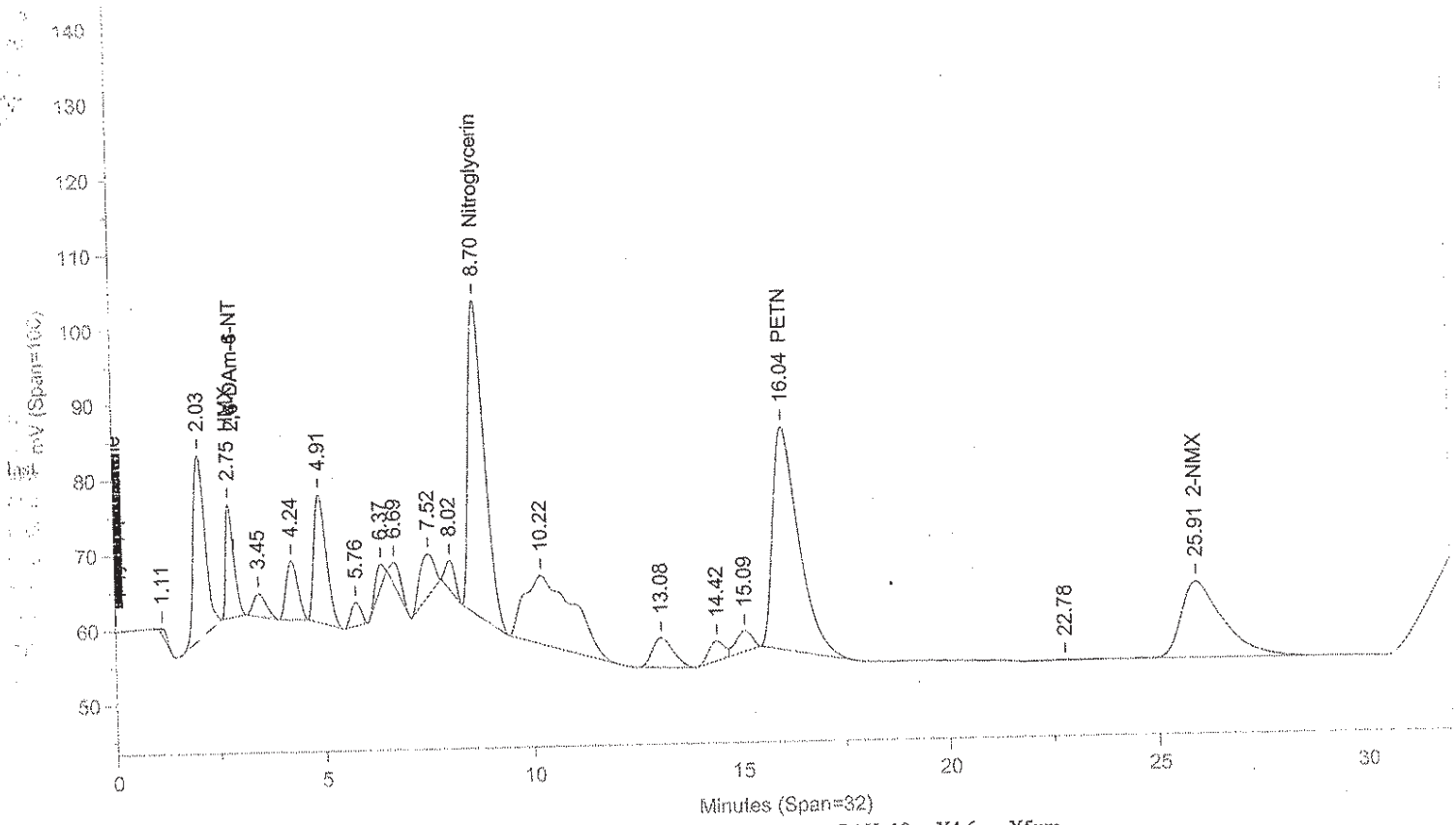
File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	44487	431.76	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	160900	495.849	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	120242	527.699	2,4,6-TNT	.	0	.	2,4,6-TNT
8.394	14646	42.37	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
9.828	43098	459.362	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.111	98128	448.039	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	57322	471.496	2,6-DNT	.	0	.	2,6-DNT
10.997	172033	520.107	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	41535	442.67	4-NT	.	0	.	4-NT
14.953	69382	512.407	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:02:00 PM
File Reported On: 11/20/2013 at 2:01:58 PM

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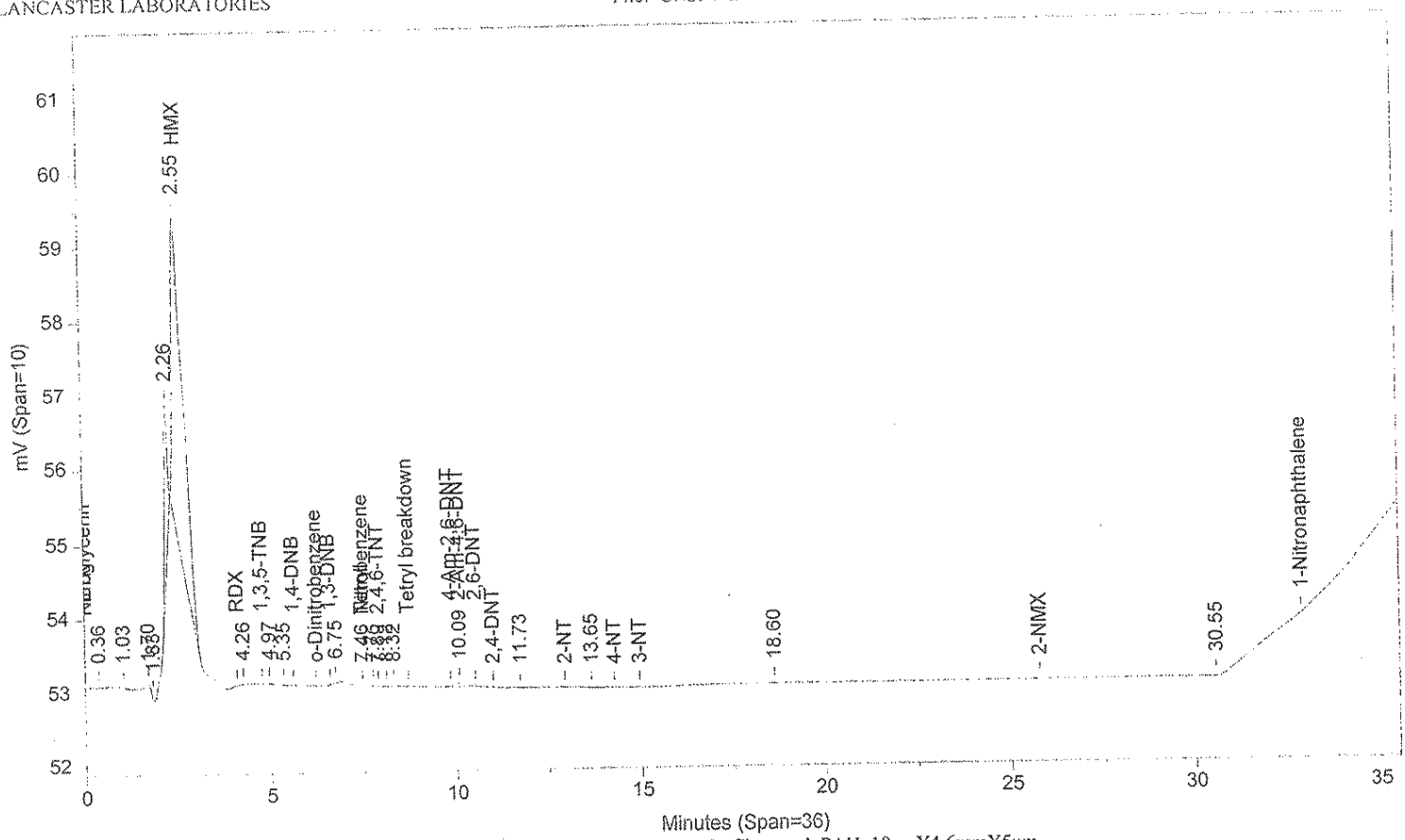
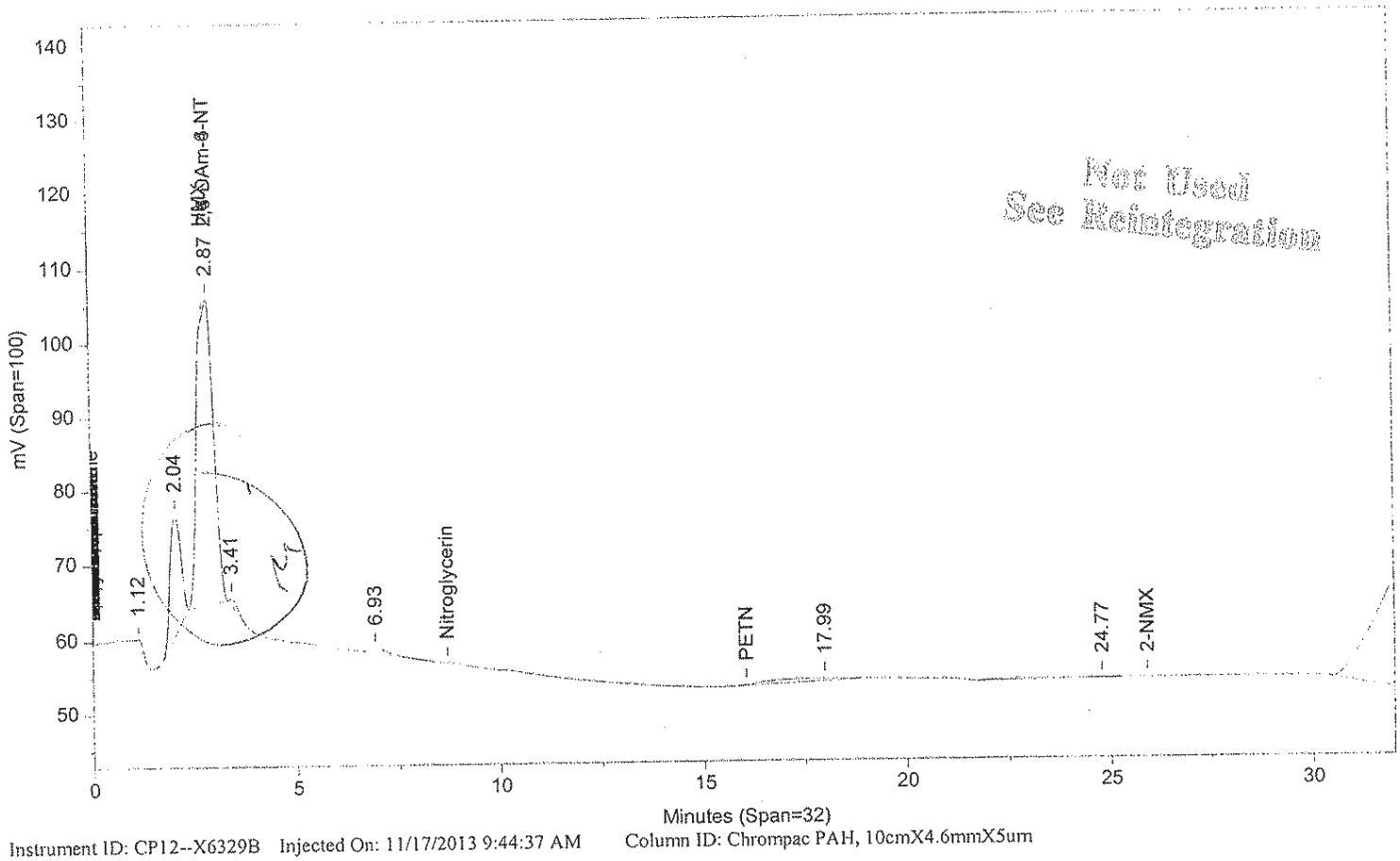
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

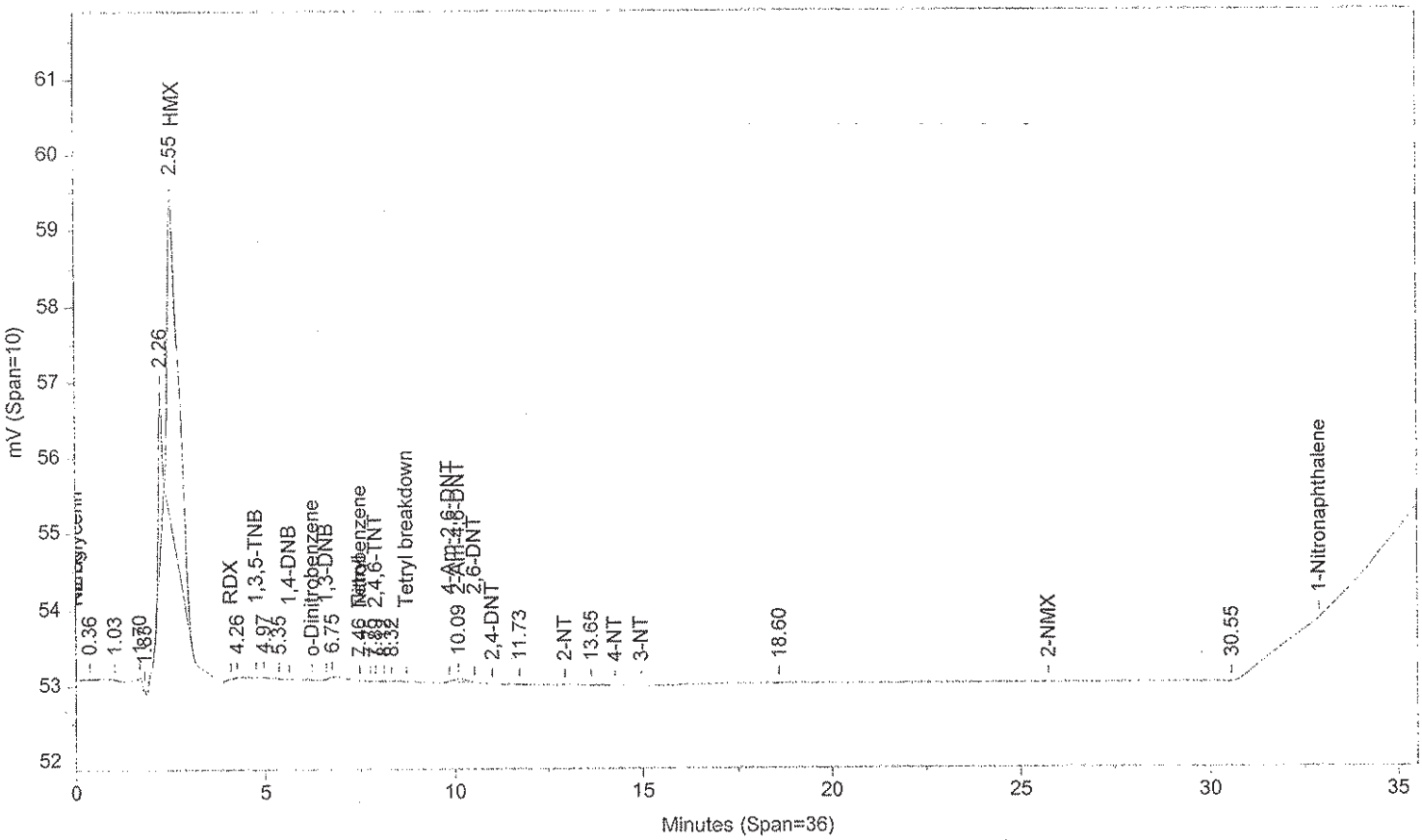
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.872	1178739	488.851	2,4-DAm-6-NT
7.46	8	.024	Tetryl	.	0	.	Tetryl
7.893	3	.014	2,4,6-TNT	.	0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.59A
Area File: C:\CPWIN\DATA1\4E12310B.59A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:35:08 PM
File Reported On: 11/17/2013 at 9:35:18 PM

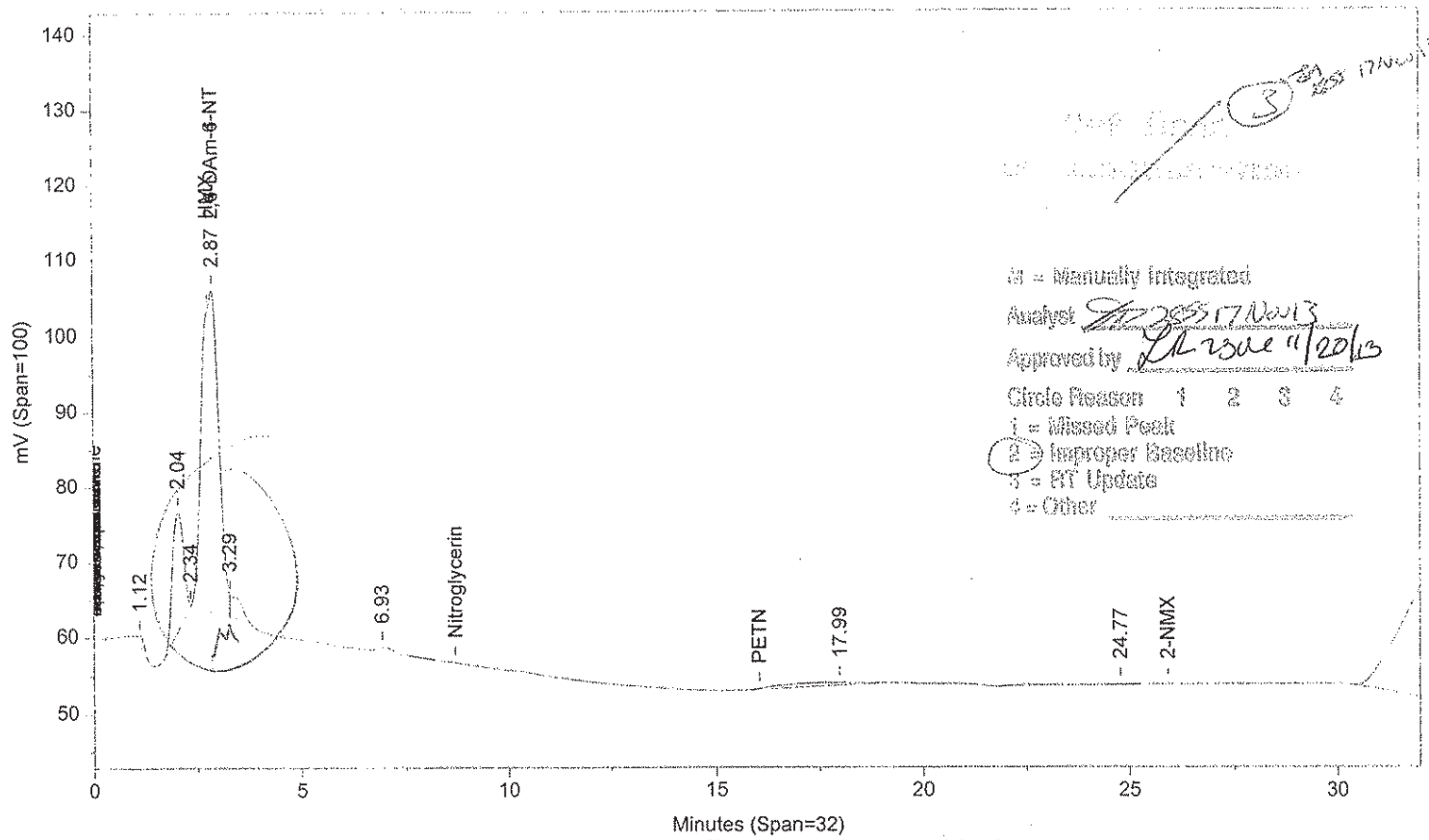
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

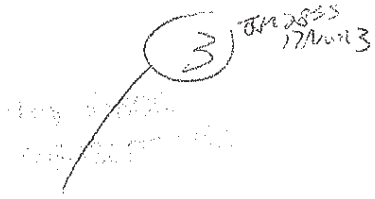
Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

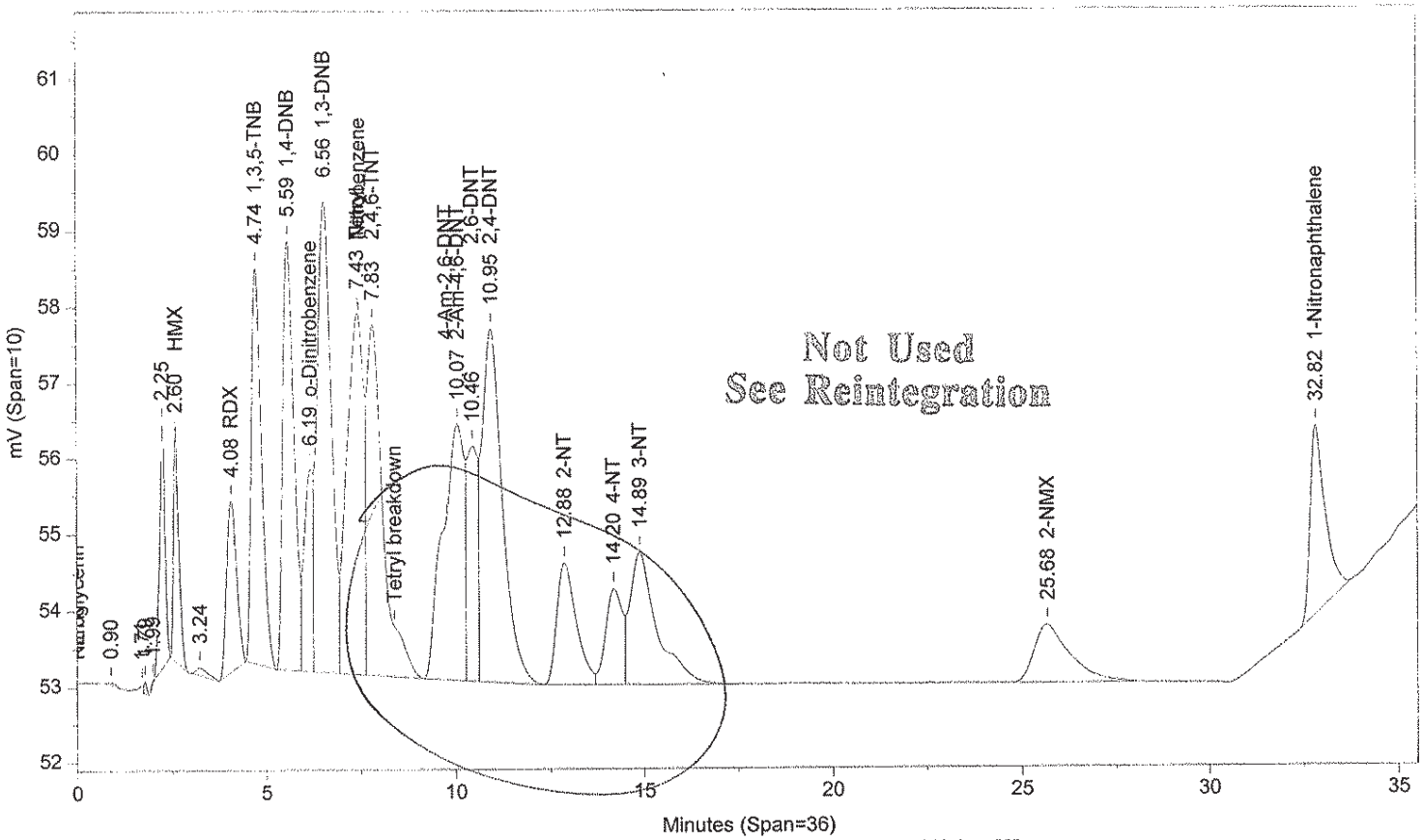
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.872	1248850	517.928	2,4-DAm-6-NT
7.46	8	.024	Tetryl	.	0	.	Tetryl
7.893	3	.014	2,4,6-TNT	.	0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:39:42 PM
File Reported On: 11/17/2013 at 9:39:40 PM

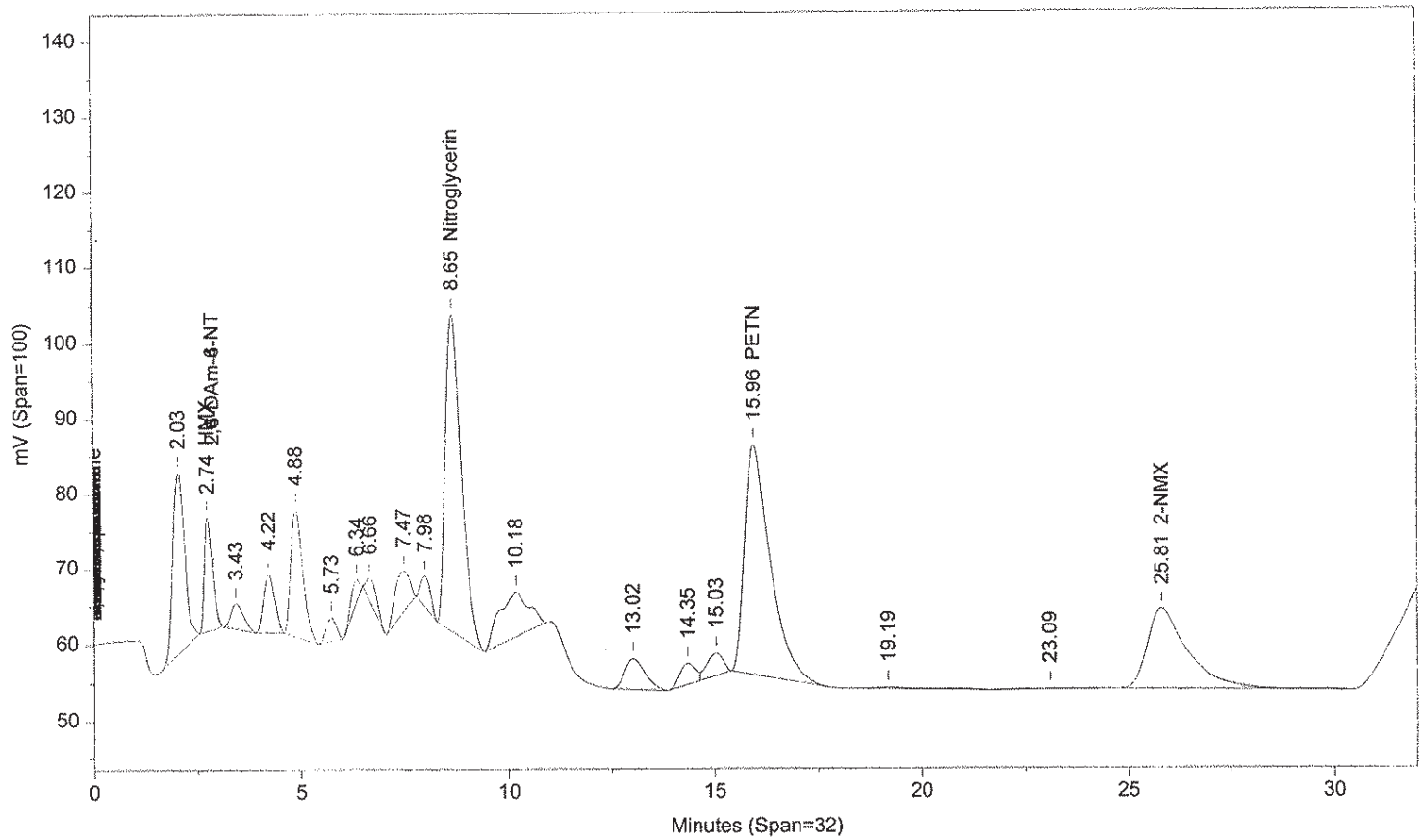


LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

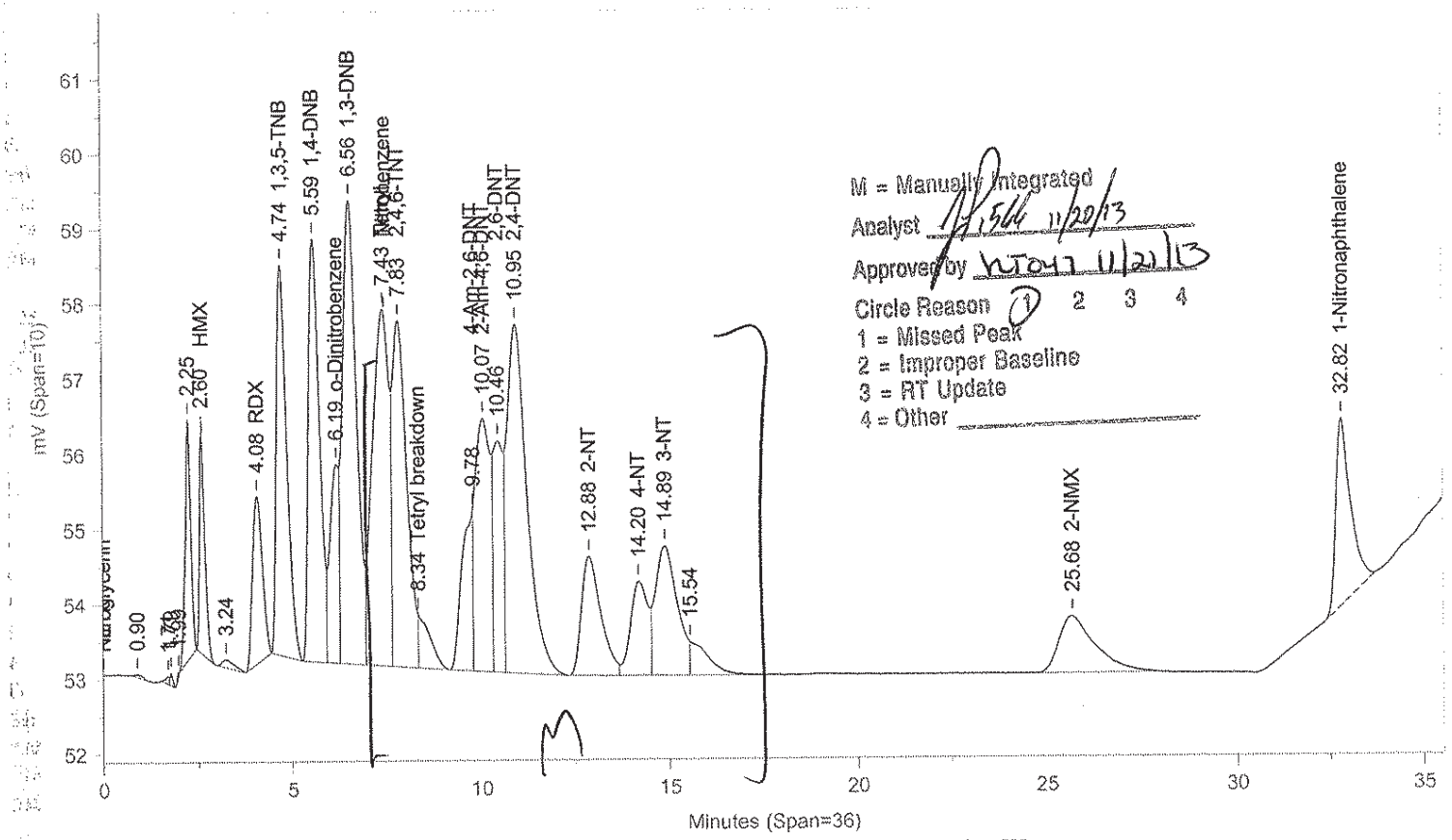
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
5.594	115984	455.243	1,4-DNB	.	0	.	1,4-DNB
6.185	41369	401.496	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	162842	501.834	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	136262	598.005	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
10.066	131566	600.715	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	61117	502.711	2,6-DNT	.	0	.	2,6-DNT
10.945	175735	531.298	2,4-DNT	.	0	.	2,4-DNT
12.88	58146	439.533	2-NT	.	0	.	2-NT
14.195	39023	415.902	4-NT	.	0	.	4-NT
14.893	86814	641.143	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.70A
Area File: C:\CPWIN\DATA1\4E12310B.70A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:06:14 PM
File Reported On: 11/17/2013 at 10:06:24 PM

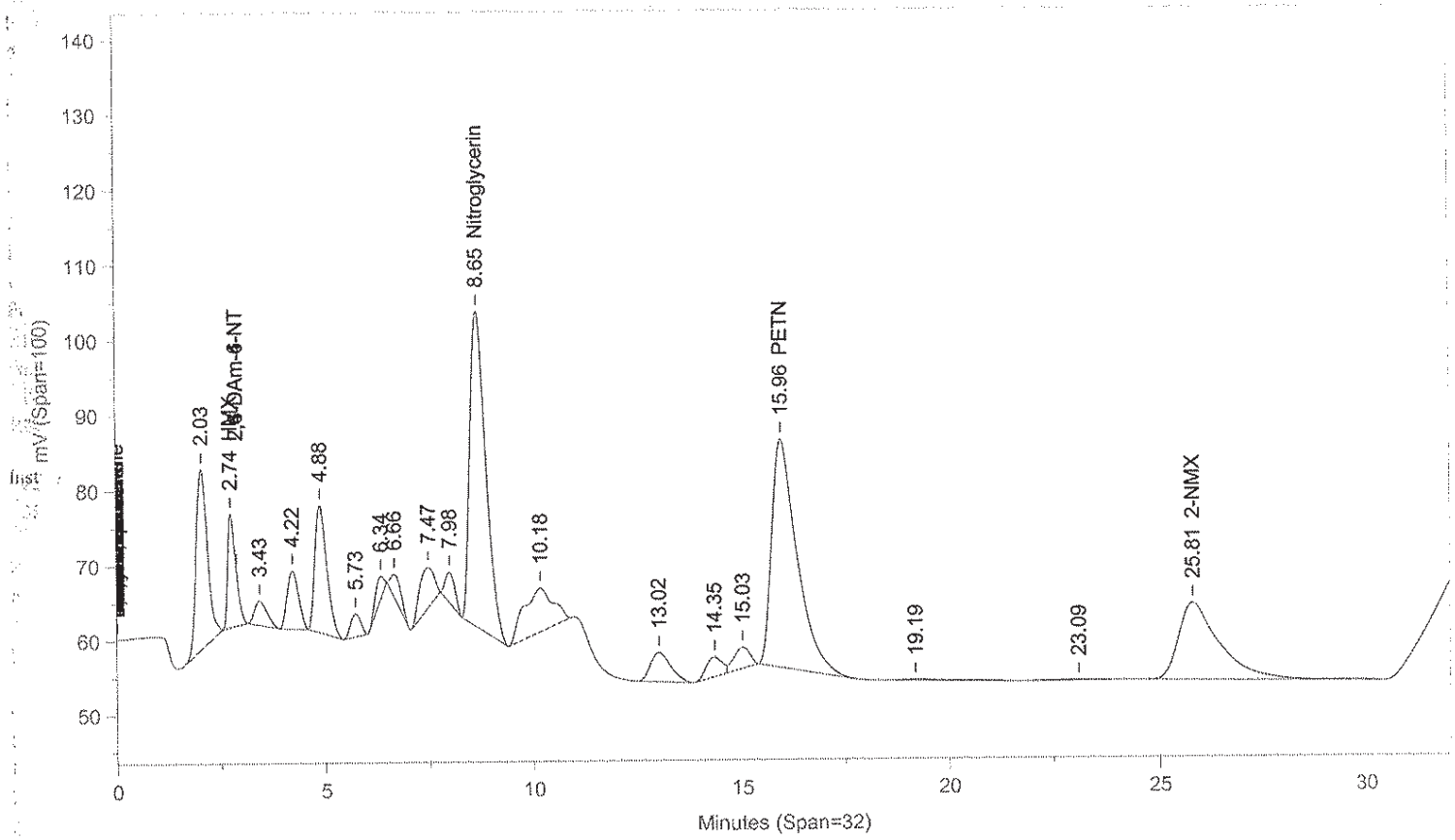
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
5.594	115148	451.963	1,4-DNB	.	0	.	1,4-DNB
6.185	43947	426.516	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	161100	496.466	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	120817	530.221	2,4,6-TNT	.	0	.	2,4,6-TNT
8.339	15445	44.683	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
9.783	42586	453.907	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.066	95774	437.294	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	57266	471.029	2,6-DNT	.	0	.	2,6-DNT
10.945	172793	522.403	2,4-DNT	.	0	.	2,4-DNT
12.88	57944	438.009	2-NT	.	0	.	2-NT
14.195	40855	435.427	4-NT	.	0	.	4-NT
14.893	69741	515.059	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:38:36 AM
File Reported On: 11/20/2013 at 11:38:35 AM

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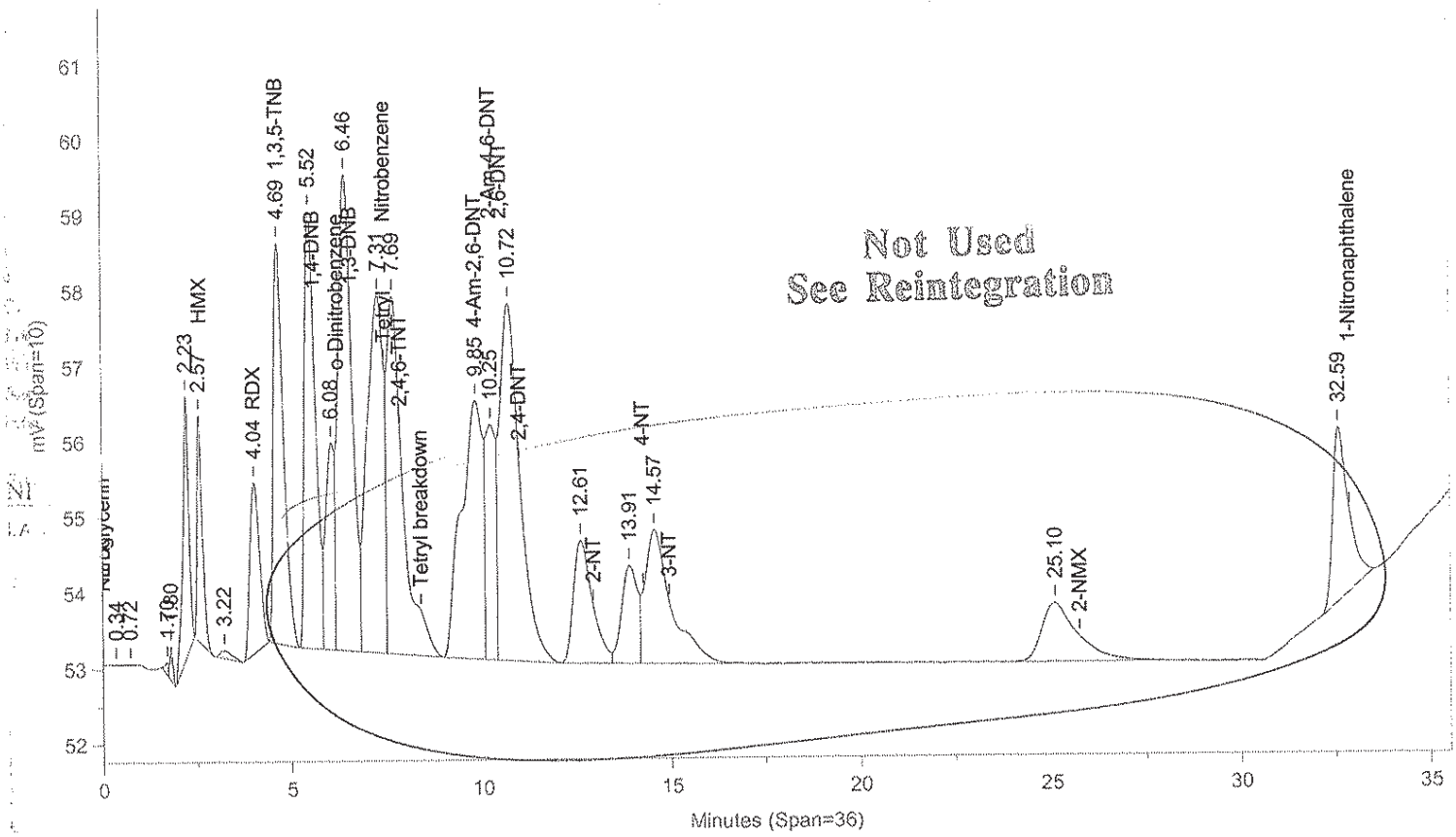
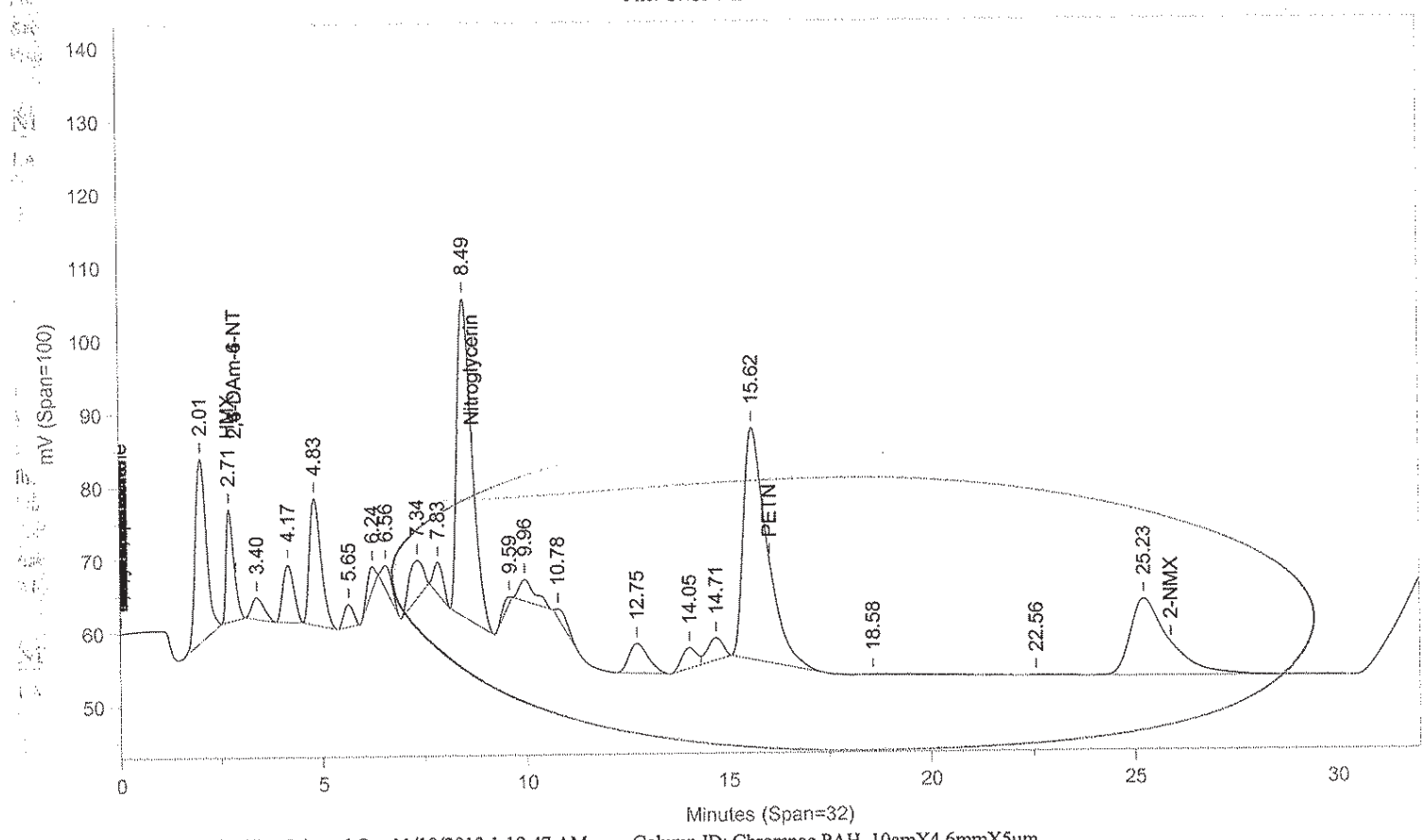
File: C:\CPWIN\DATA1\4E12310.81R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

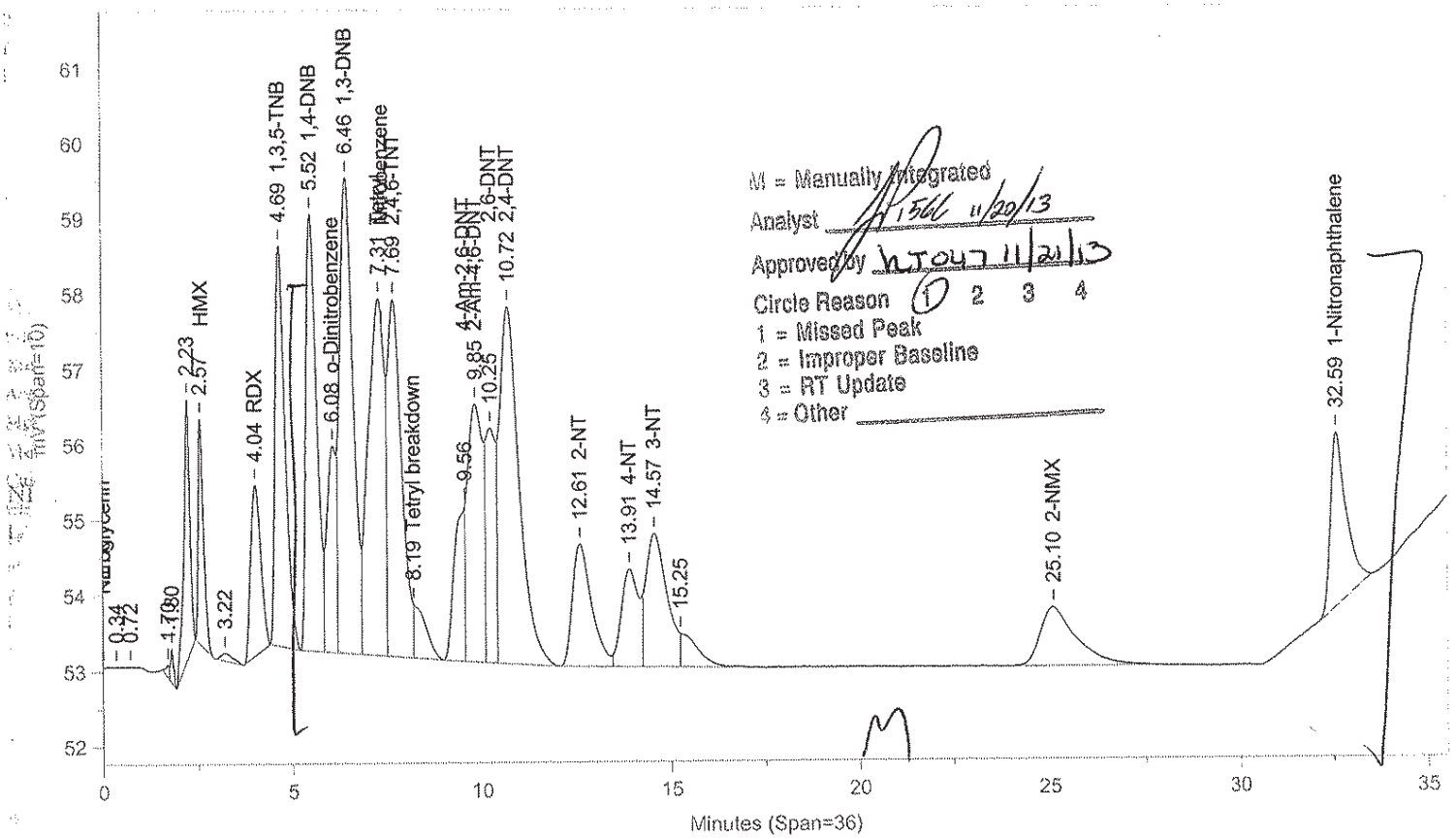
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX	.	0	.	RDX
4.686	97867	463.633	1,3,5-TNB	.	0	.	1,3,5-TNB
9.847	132871	1416.217	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.245	58432	266.792	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.81A
Area File: C:\CPWIN\DATA1\4E12310B.81A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:54:56 PM
File Reported On: 11/18/2013 at 2:55:05 PM

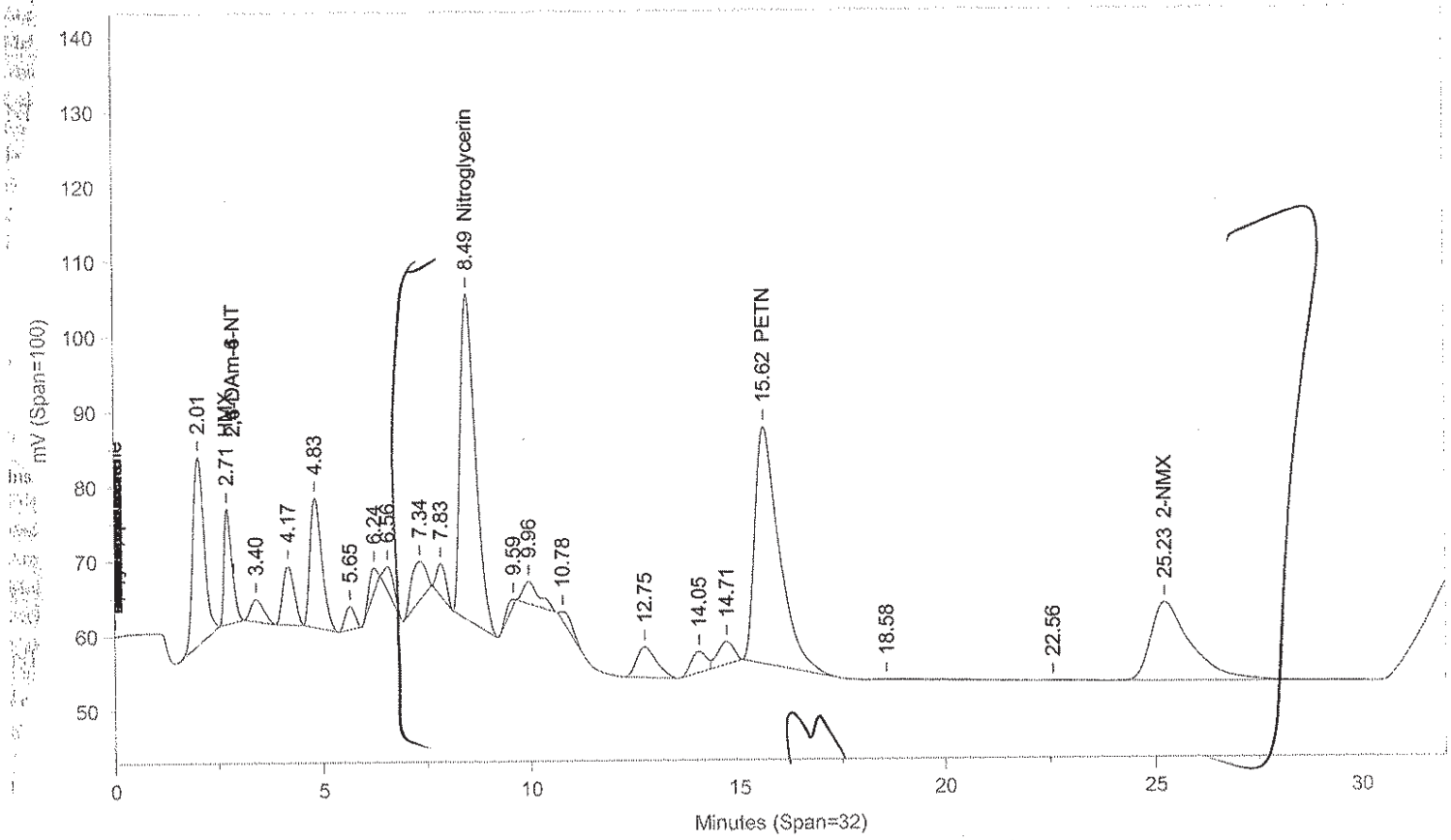
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.81R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX	.	0	.	RDX
4.686	97867	463.633	1,3,5-TNB	.	0	.	1,3,5-TNB
5.519	115053	451.59	1,4-DNB	.	0	.	1,4-DNB
6.079	47815	464.059	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.458	154985	477.621	1,3-DNB	.	0	.	1,3-DNB
7.307	143270	414.478	Tetryl	.	0	.	Tetryl
7.693	120080	526.989	2,4,6-TNT	.	0	.	2,4,6-TNT
8.194	15765	45.608	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.486	1114974	8724.021	Nitroglycerin
9.561	40042	426.794	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.847	96727	441.642	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.245	58451	480.778	2,6-DNT	.	0	.	2,6-DNT
10.722	170170	514.474	2,4-DNT	.	0	.	2,4-DNT
12.608	57529	434.872	2-NT	.	0	.	2-NT
13.906	41793	445.426	4-NT	.	0	.	4-NT
14.565	67914	501.566	3-NT	.	0	.	3-NT
.	0	.	PETN	15.621	1294734	9454.381	PETN
25.103	50813	1490.667	2-NMX	25.232	709127	1451.734	2-NMX
32.587	66811	508.567	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:12:06 PM
File Reported On: 11/20/2013 at 12:12:06 PM

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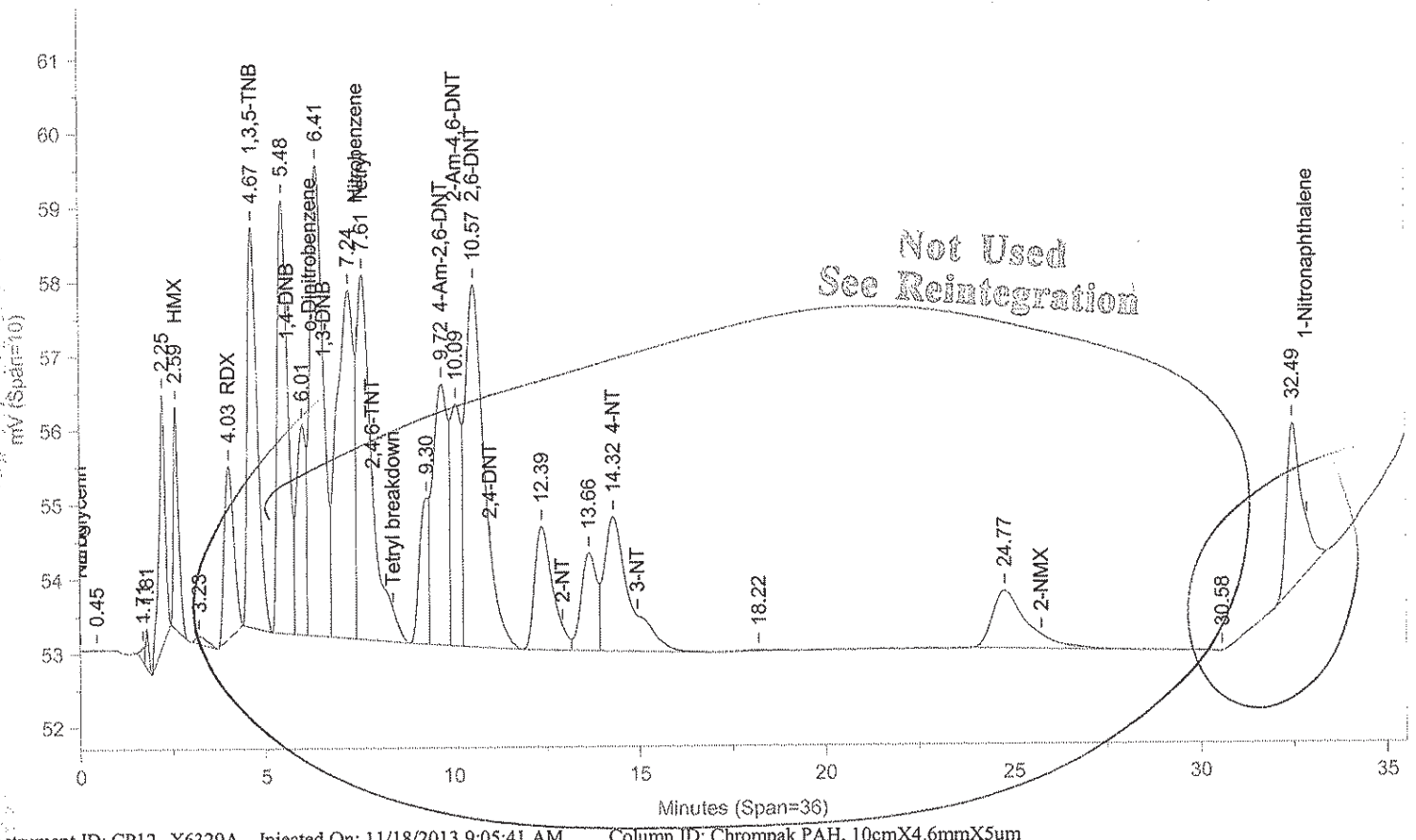
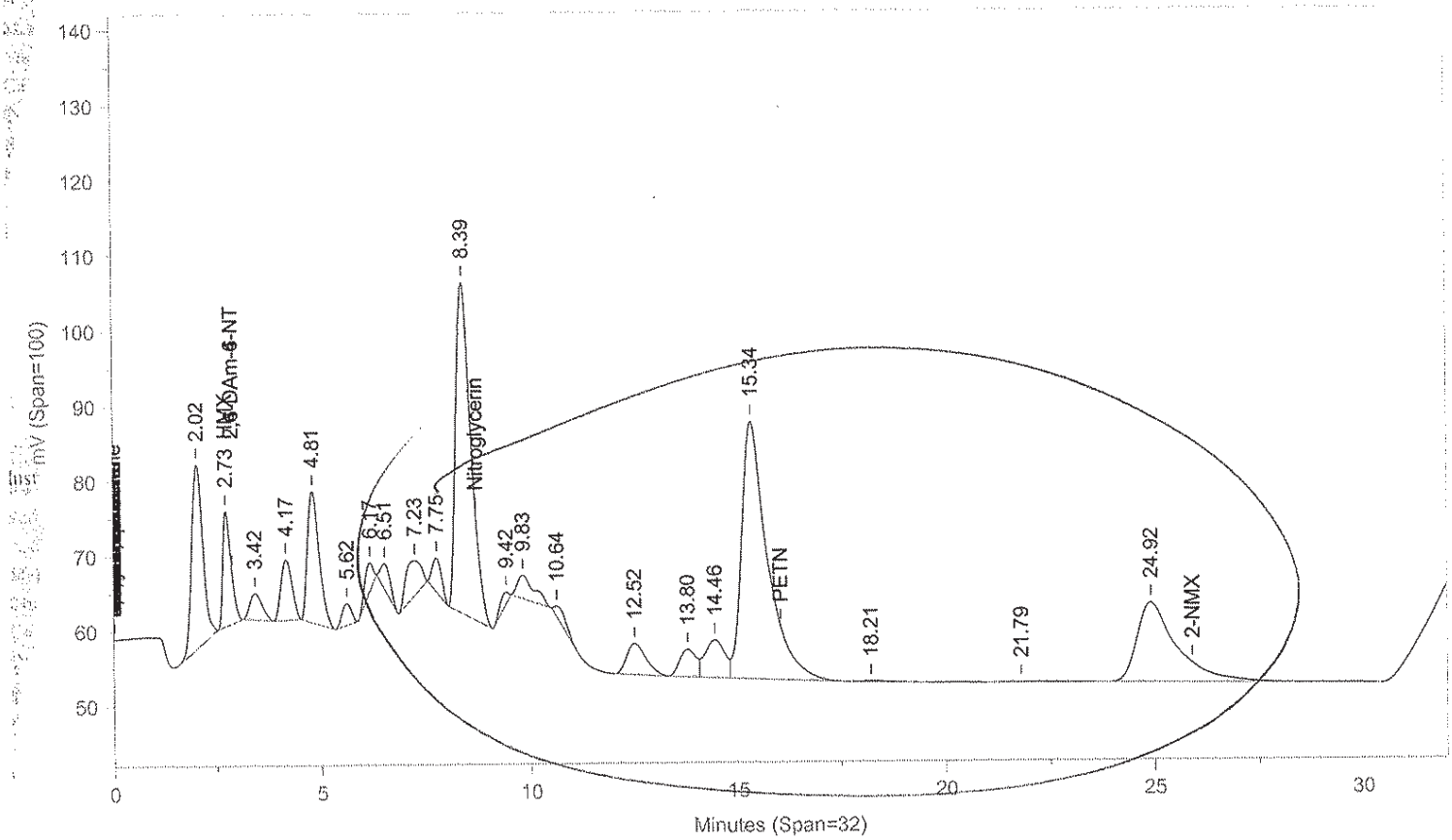
File: C:\CPWIN\DATA1\4E12310.92R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.92R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

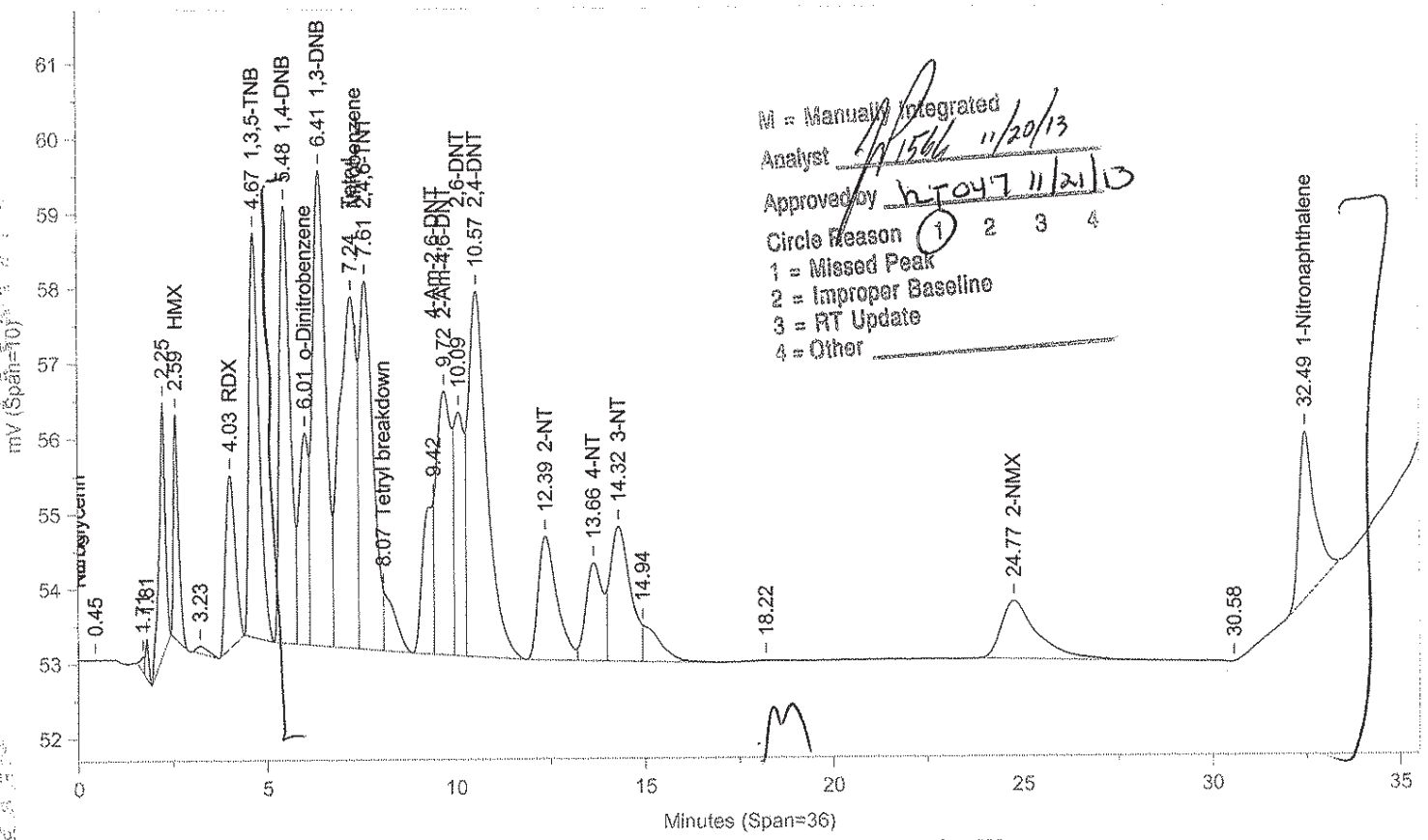
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.728	207985	496.151	HMX
4.035	41850	465.108	RDX	.	0	.	RDX
4.667	98548	466.857	1,3,5-TNB	.	0	.	1,3,5-TNB
7.608	138818	401.6	Tetryl	.	0	.	Tetryl
9.715	99923	1065.046	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.091	62542	285.561	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.569	172893	1422.1	2,6-DNT	.	0	.	2,6-DNT
13.324	85466	910.881	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.92A
Area File: C:\CPWIN\DATA1\4E12310B.92A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:00:28 PM
File Reported On: 11/18/2013 at 3:00:39 PM

Not Used
See Reintegration

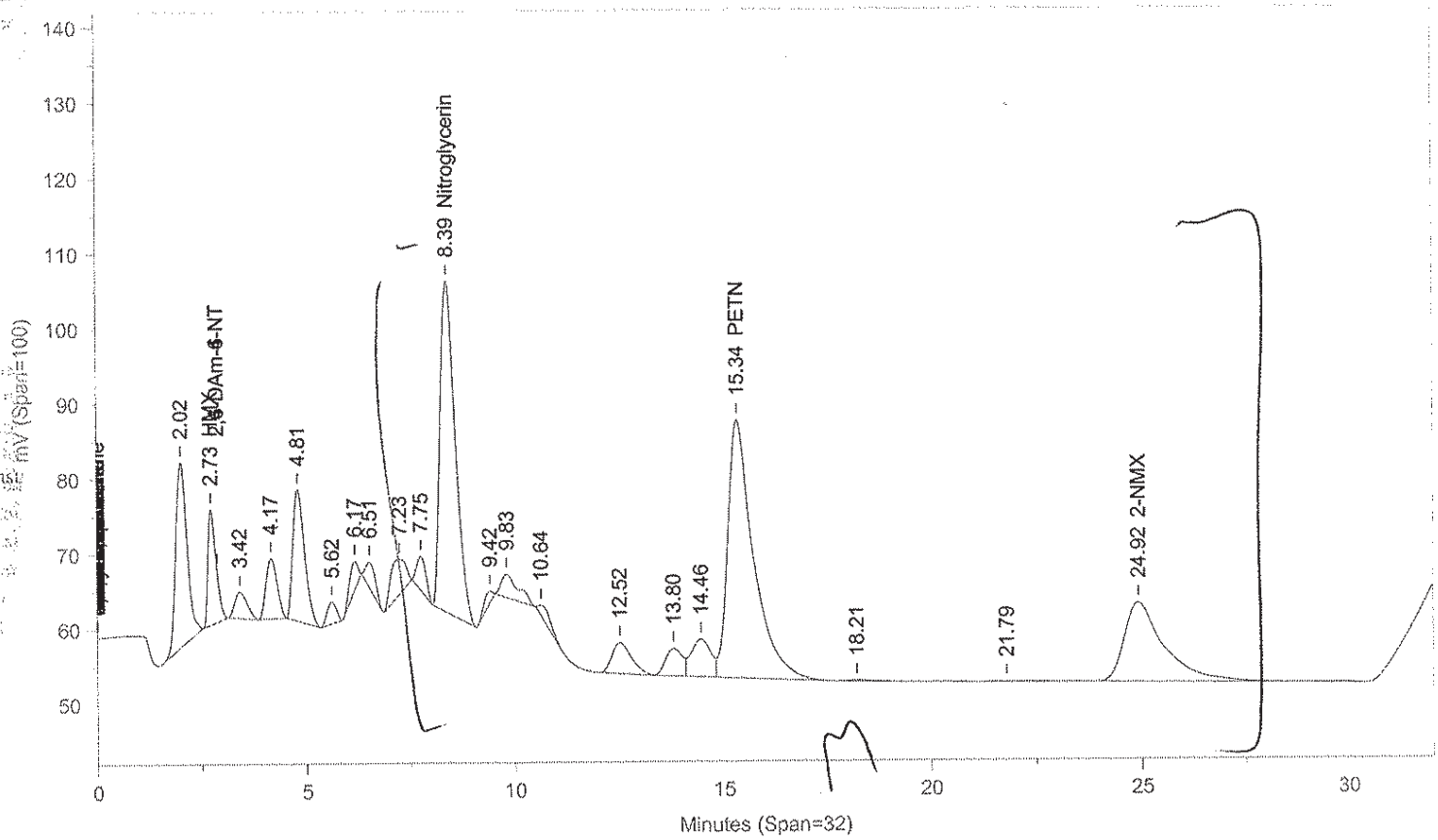
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.92R



M = Manually Integrated
Analyst _____ 11/20/13
Approved by _____ 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other _____

Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.92R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

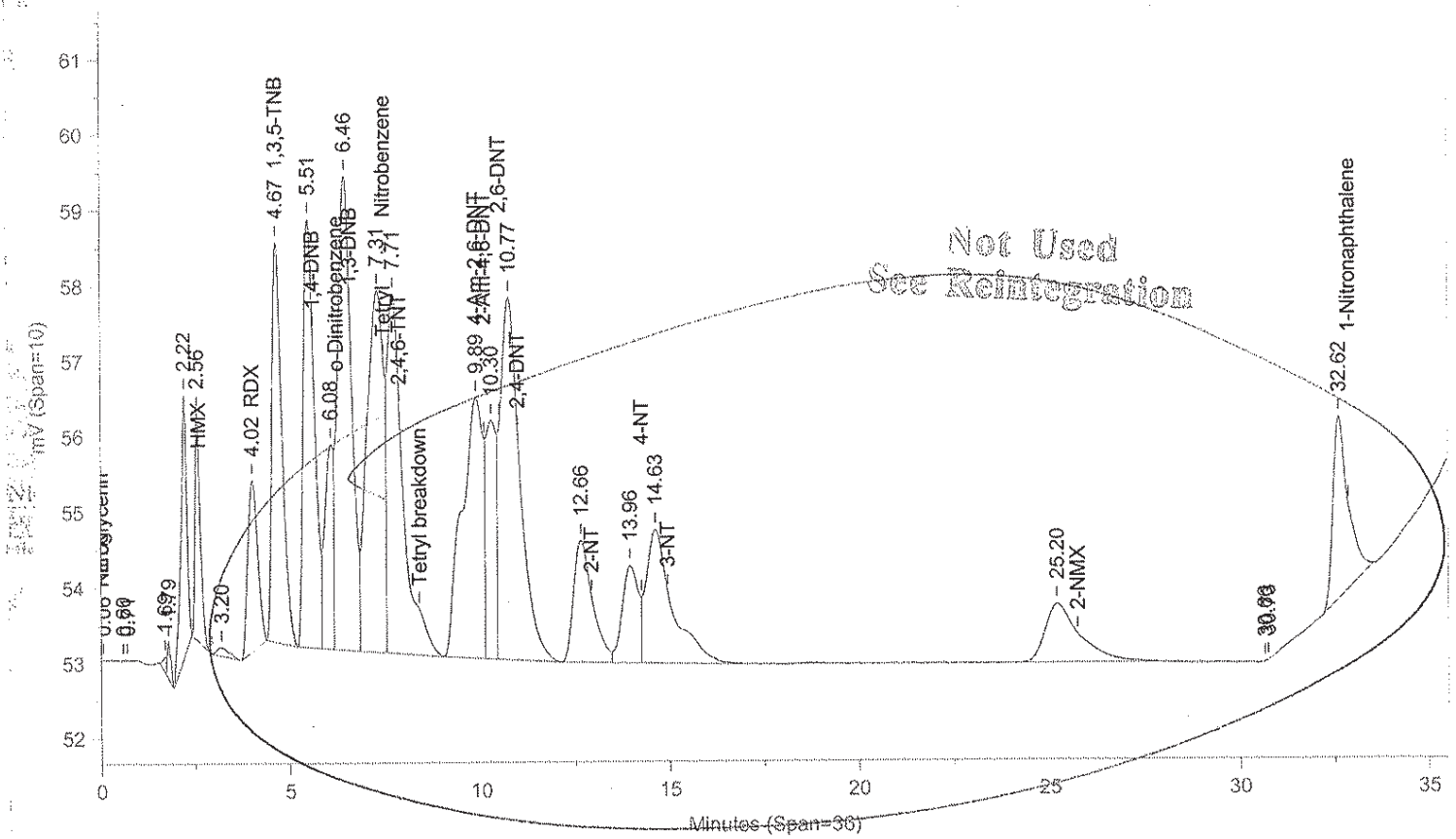
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.728	207985	496.151	HMX
4.035	41850	465.108	RDX	.	0	.	RDX
4.667	98548	466.857	1,3,5-TNB	.	0	.	1,3,5-TNB
5.481	113721	446.361	1,4-DNB	.	0	.	1,4-DNB
6.015	48417	469.901	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.405	155140	478.098	1,3-DNB	.	0	.	1,3-DNB
7.238	147370	426.339	Tetryl	.	0	.	Tetryl
7.608	121993	535.382	2,4,6-TNT	.	0	.	2,4,6-TNT
8.072	16826	48.677	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.393	1108866	8676.229	Nitroglycerin
9.422	40706	433.869	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.715	97668	445.94	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.091	61458	505.514	2,6-DNT	.	0	.	2,6-DNT
10.569	168921	510.698	2,4-DNT	.	0	.	2,4-DNT
12.39	56942	430.429	2-NT	.	0	.	2-NT
13.66	41395	441.179	4-NT	.	0	.	4-NT
14.324	66518	491.253	3-NT	.	0	.	3-NT
.	0	.	PETN	15.341	1481747	10819.72	PETN
24.771	50165	1471.643	2-NMX	24.922	707222	1447.833	2-NMX
32.489	65309	497.133	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

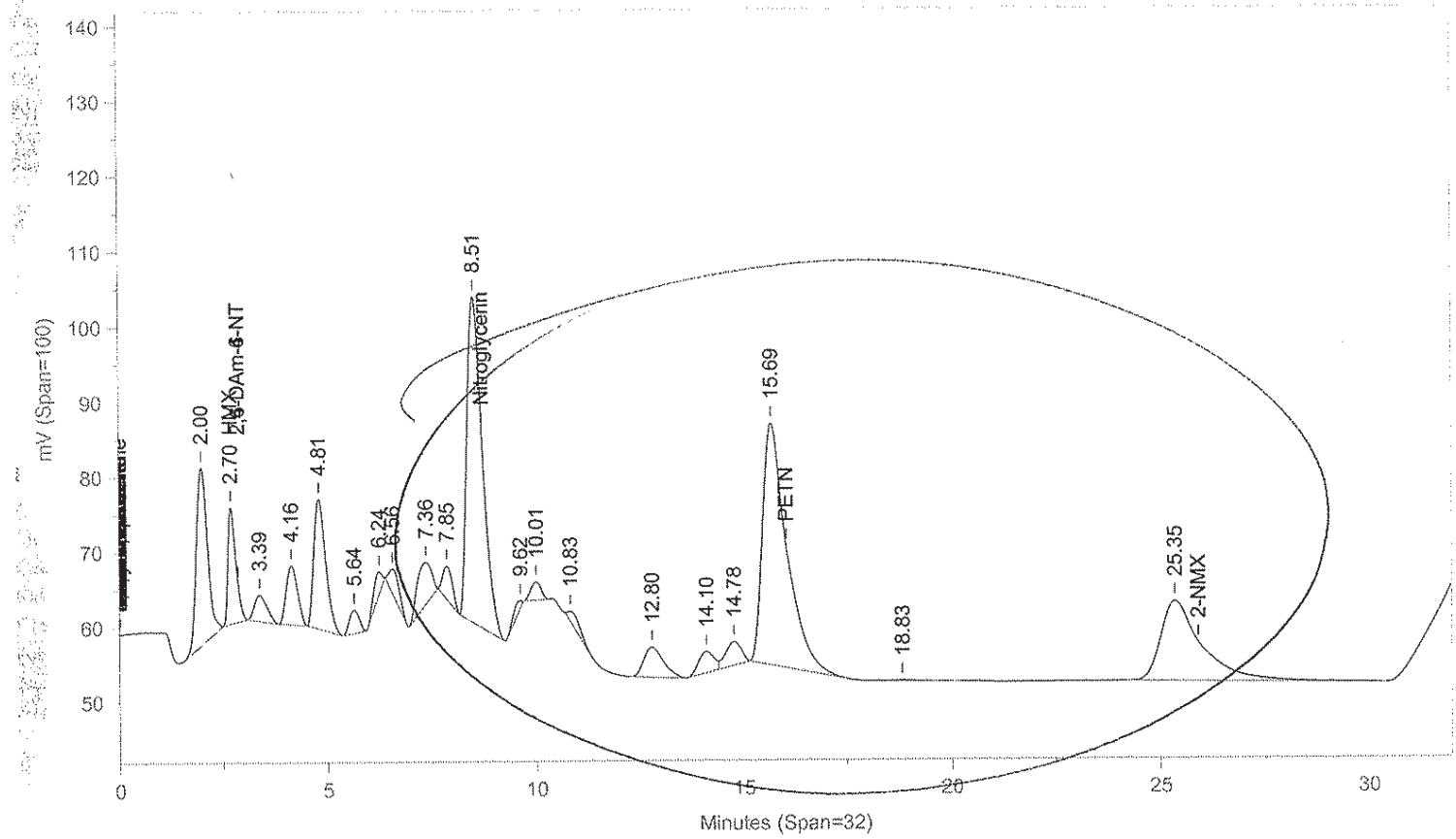
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:53:20 PM
File Reported On: 11/20/2013 at 12:53:18 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.95R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 11:13:09 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.95R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 11:13:09 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

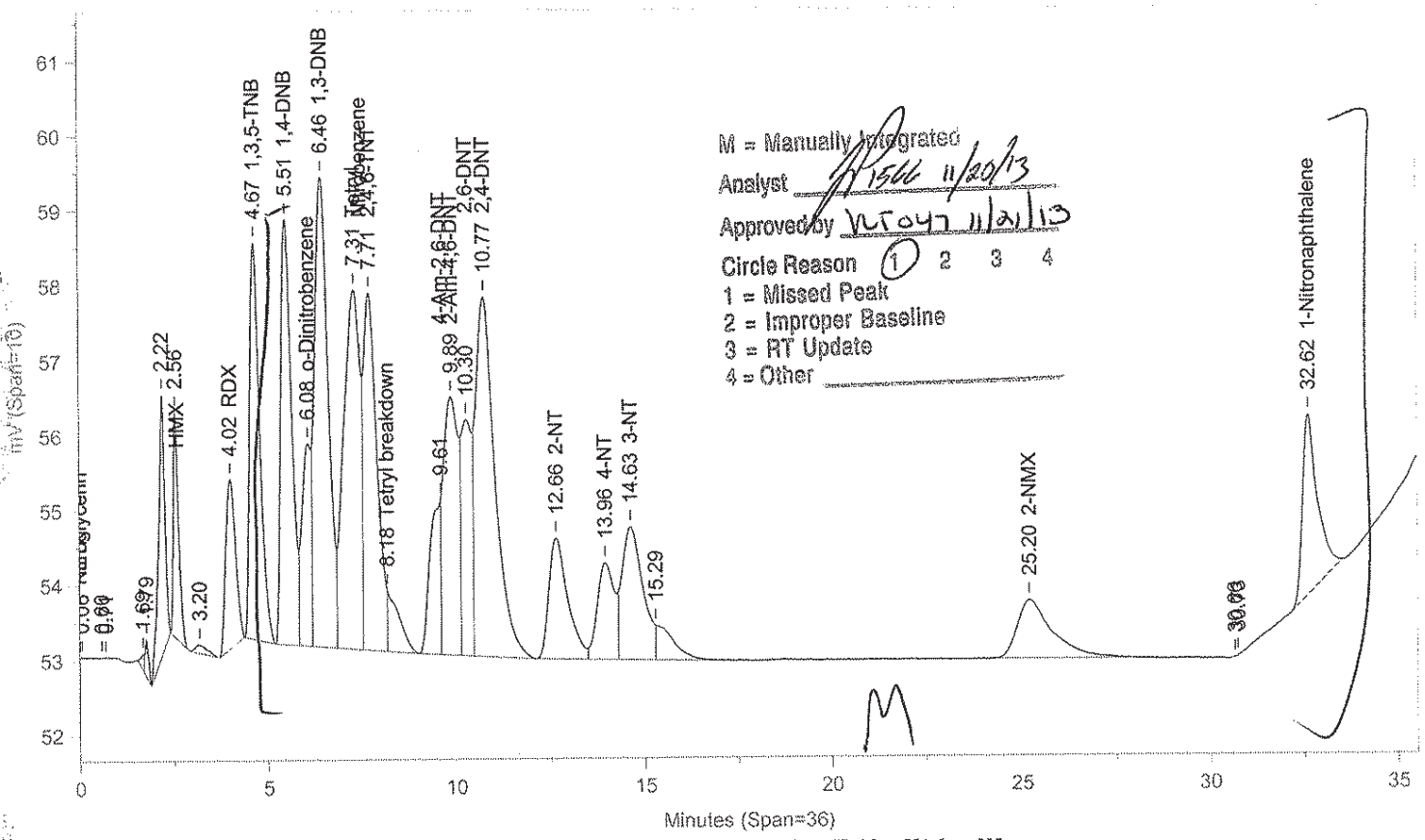
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.698	206557	492.863	HMX
4.021	41549	461.672	RDX	.	0	.	RDX
4.667	98253	465.463	1,3,5-TNB	.	0	.	1,3,5-TNB
9.893	132452	1411.758	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.95A
Area File: C:\CPWIN\DATA1\4E12310B.95A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:02:00 PM
File Reported On: 11/18/2013 at 3:02:10 PM
R

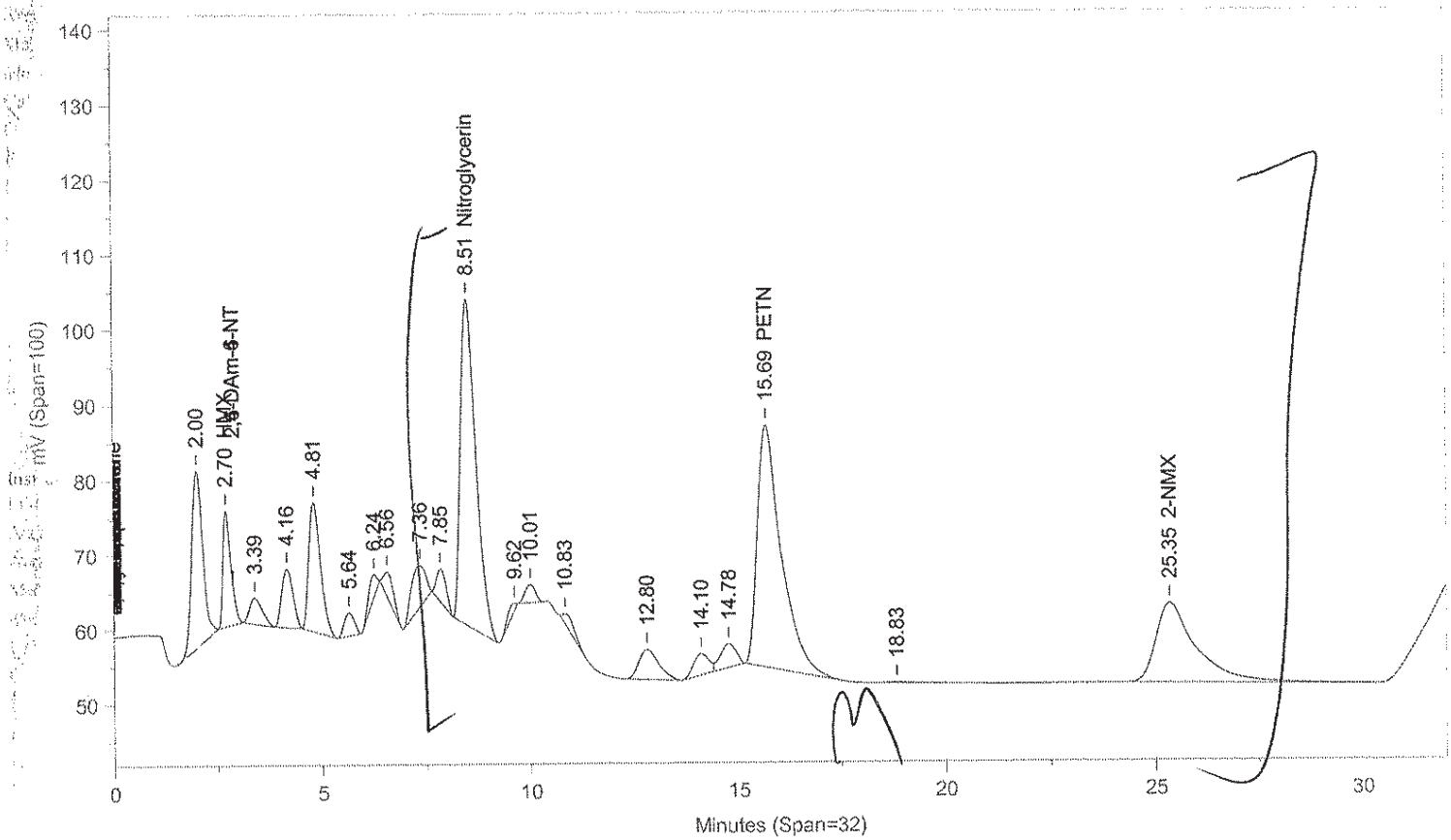
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.95R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 11:13:09 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.95R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 11:13:09 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.698	206557	492.863	HMX
4.021	41549	461.672	RDX	.	0	.	RDX
4.667	98253	465.463	1,3,5-TNB	.	0	.	1,3,5-TNB
5.508	114436	449.17	1,4-DNB	.	0	.	1,4-DNB
6.084	46365	449.986	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.455	157147	484.281	1,3-DNB	.	0	.	1,3-DNB
7.308	145171	419.979	Tetryl	.	0	.	Tetryl
7.711	119838	525.924	2,4,6-TNT	.	0	.	2,4,6-TNT
8.178	17483	50.579	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.508	1121136	8772.23	Nitroglycerin
9.606	40210	428.587	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.893	96127	438.903	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.296	62075	510.587	2,6-DNT	.	0	.	2,6-DNT
10.765	169556	512.616	2,4-DNT	.	0	.	2,4-DNT
12.664	56580	427.694	2-NT	.	0	.	2-NT
13.956	40912	436.029	4-NT	.	0	.	4-NT
14.629	67325	497.216	3-NT	.	0	.	3-NT
.	0	.	PETN	15.689	1307545	9547.908	PETN
25.204	49632	1456.008	2-NMX	25.353	724480	1483.164	2-NMX
32.623	66969	509.765	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 1:15:28 PM
File Reported On: 11/20/2013 at 1:15:26 PM

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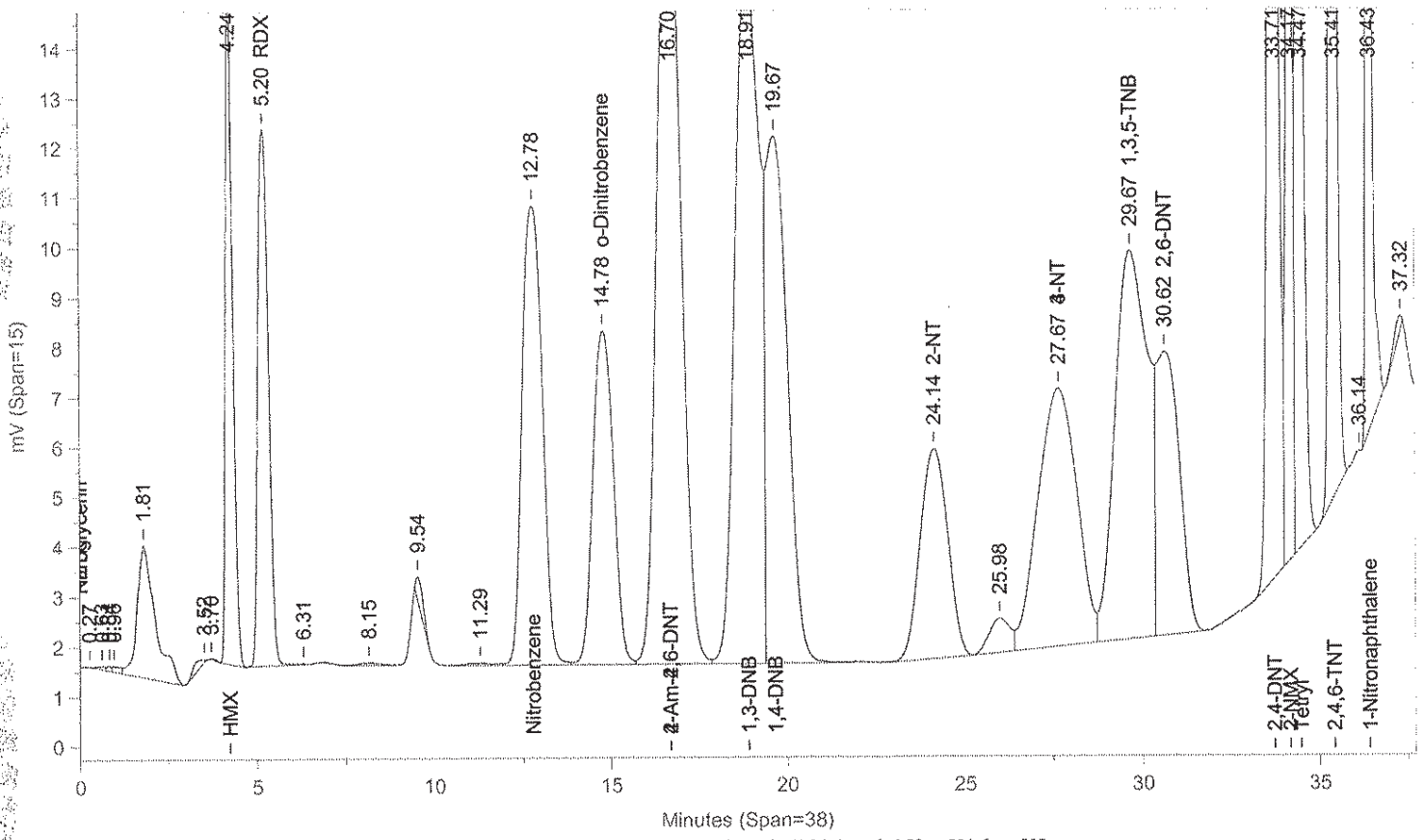
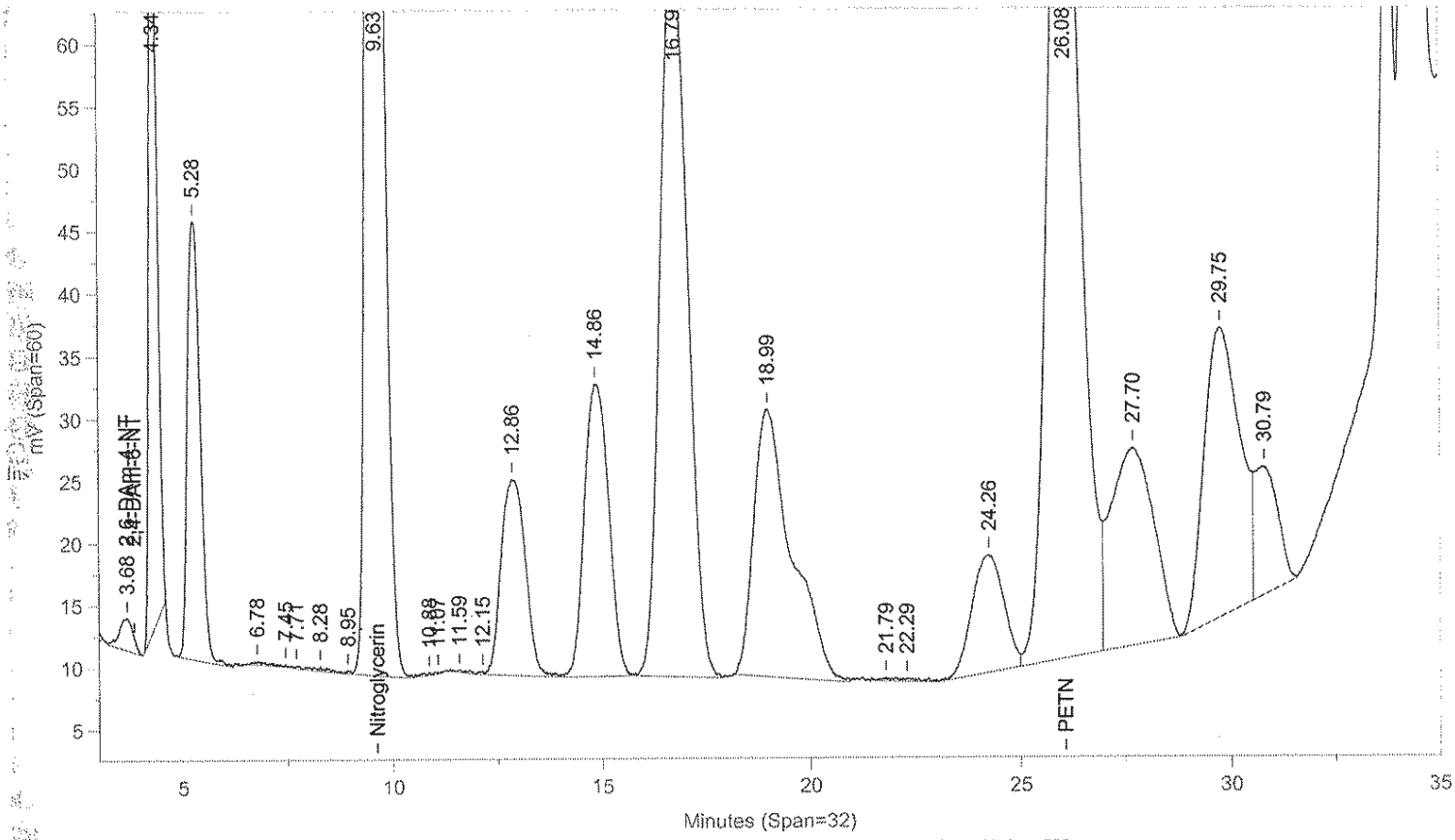
File: C:\CPWIN\DATA1\1C12310.04R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.04R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.679	57898	3967.84	2,6-DAm-4-NT
4.245	191071	1822.663	HMX	.	0	.	HMX
5.199	224070	1976.111	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.628	3769975	43871.91	Nitroglycerin
12.782	369767	2065.282	Nitrobenzene	.	0	.	Nitrobenzene
14.784	274911	2411.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.703	761872	6863.797	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
18.907	676453	2411.108	1,3-DNB	.	0	.	1,3-DNB
19.671	450747	-43499.	1,4-DNB	.	0	.	1,4-DNB
24.138	229577	2379.561	2-NT	.	0	.	2-NT
.	0	.	PETN	26.077	4139229	-934754.9	PETN
27.667	397033	-52385.42	4-NT	.	0	.	4-NT
29.671	491541	-87636.54	1,3,5-TNB	.	0	.	1,3,5-TNB
30.618	255956	-73129.59	2,6-DNT	.	0	.	2,6-DNT
33.71	552207	6048.482	2,4-DNT	.	0	.	2,4-DNT
34.167	208653	6174.048	2-NMX	.	0	.	2-NMX
34.468	312750	2032.832	Tetryl	.	0	.	Tetryl
35.408	426797	2008.424	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	322421	2019.438	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.04A
Area File: C:\CPWIN\DATA1\1C12310B.04A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:27:54 PM
File Reported On: 11/7/2013 at 5:28:10 PM

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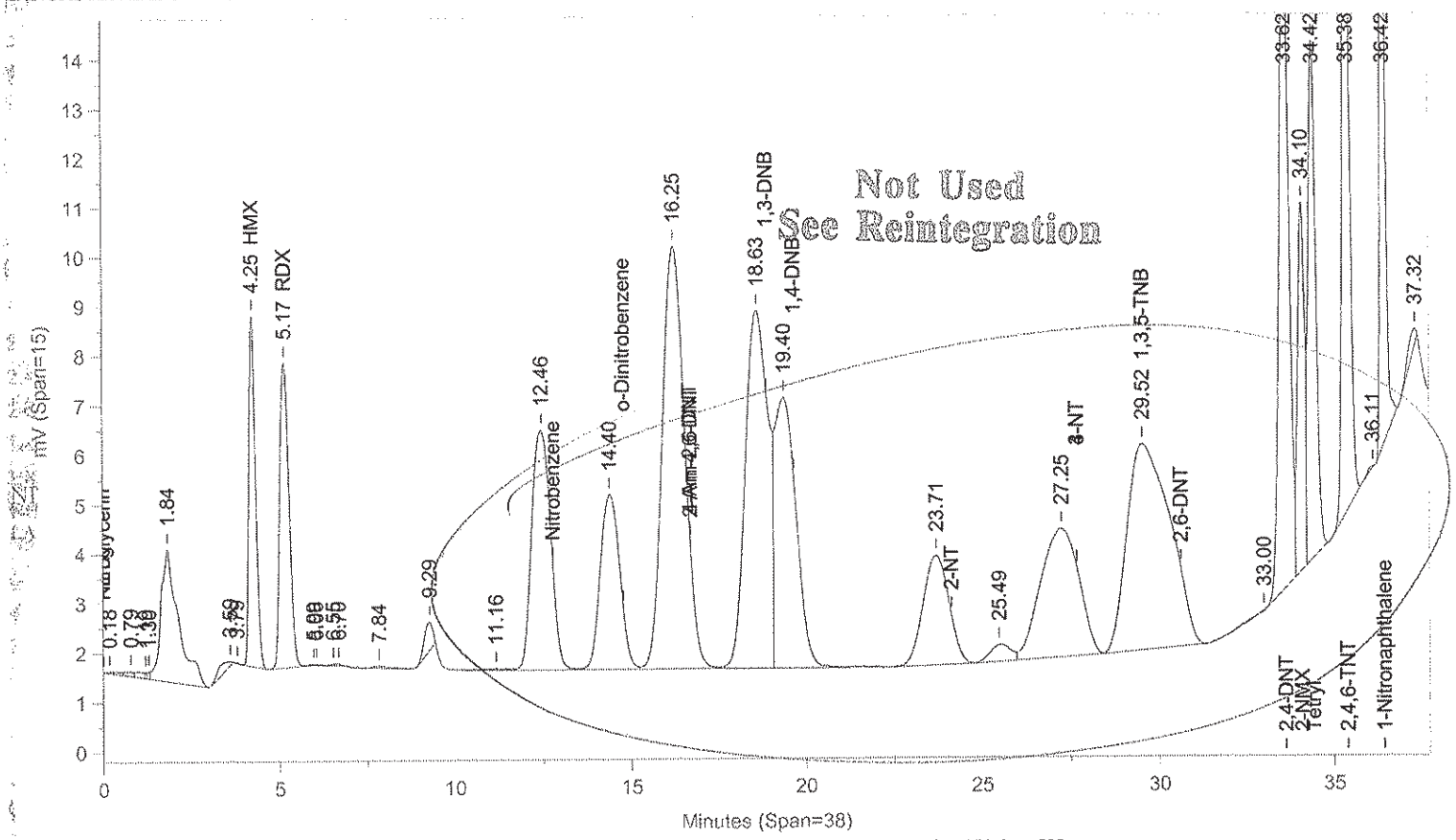
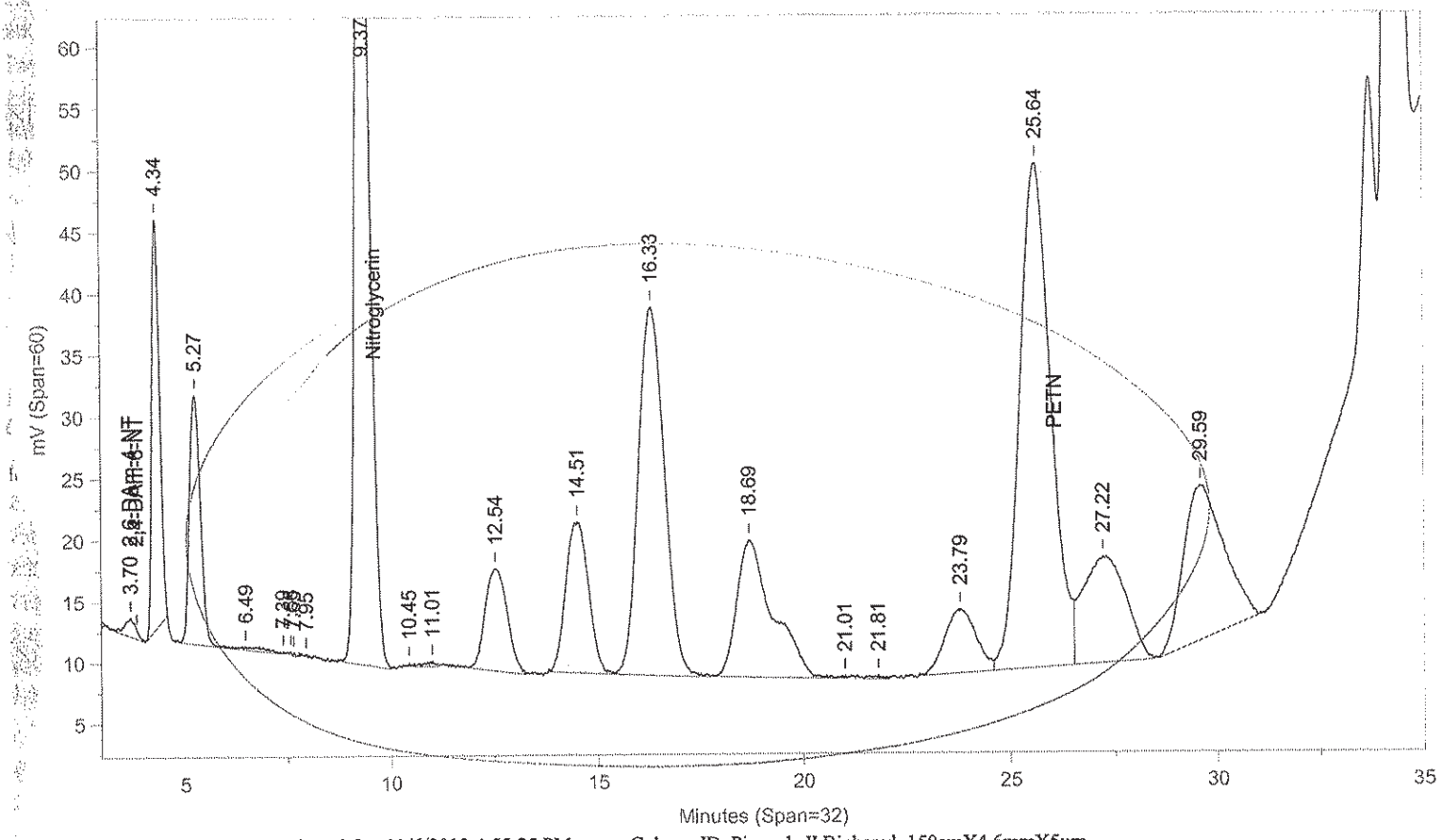
File: C:\CPWIN\DATA1\1C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

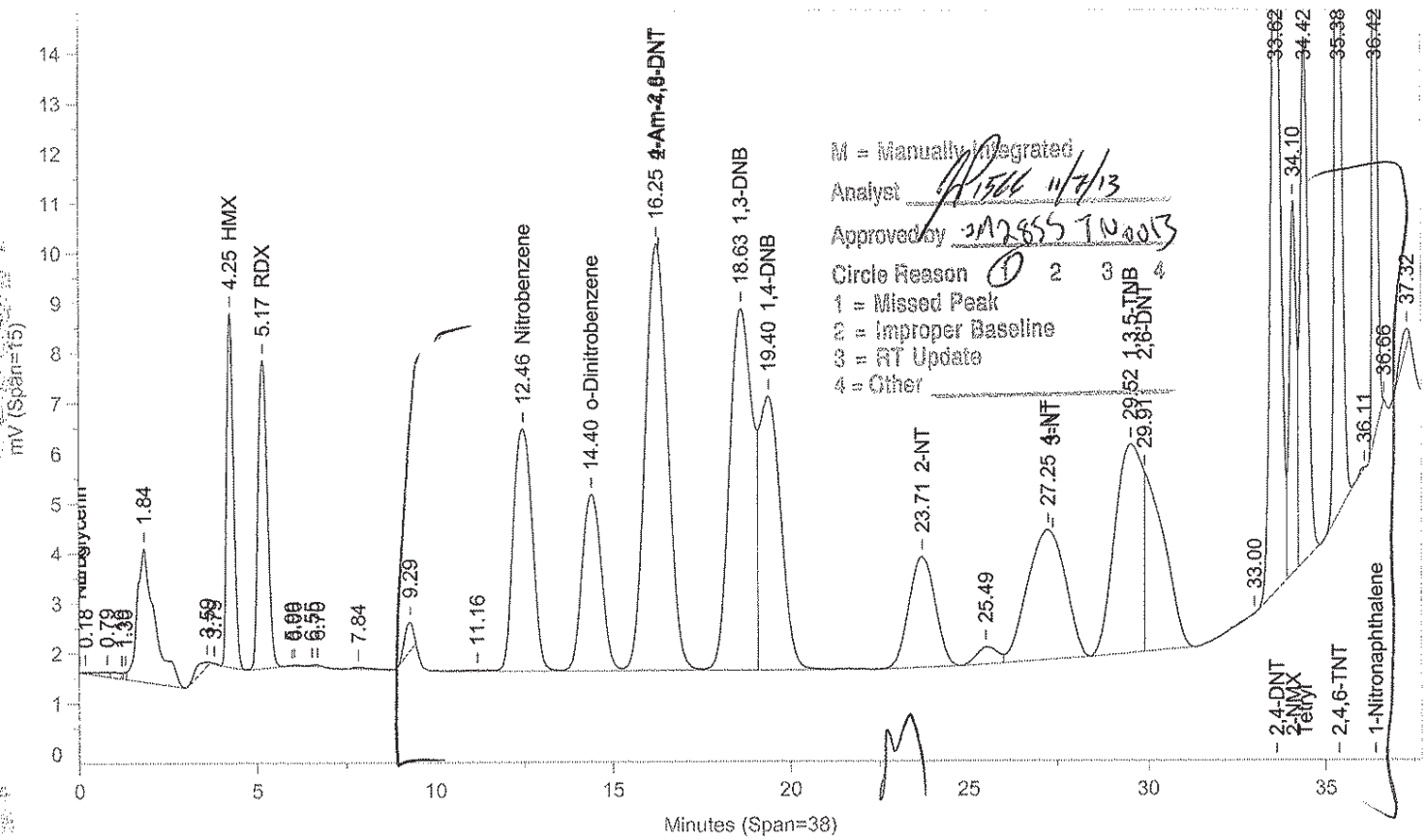
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
29.524	356142	1778.783	1,3,5-TNB	.	0	.	1,3,5-TNB
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	156160	990.7	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Del
Files:
Area File: C:\CPWIN\DATA1\1C12310.05A
Area File: C:\CPWIN\DATA1\1C12310B.05A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:28:36 PM
File Reported On: 11/7/2013 at 5:28:52 PM

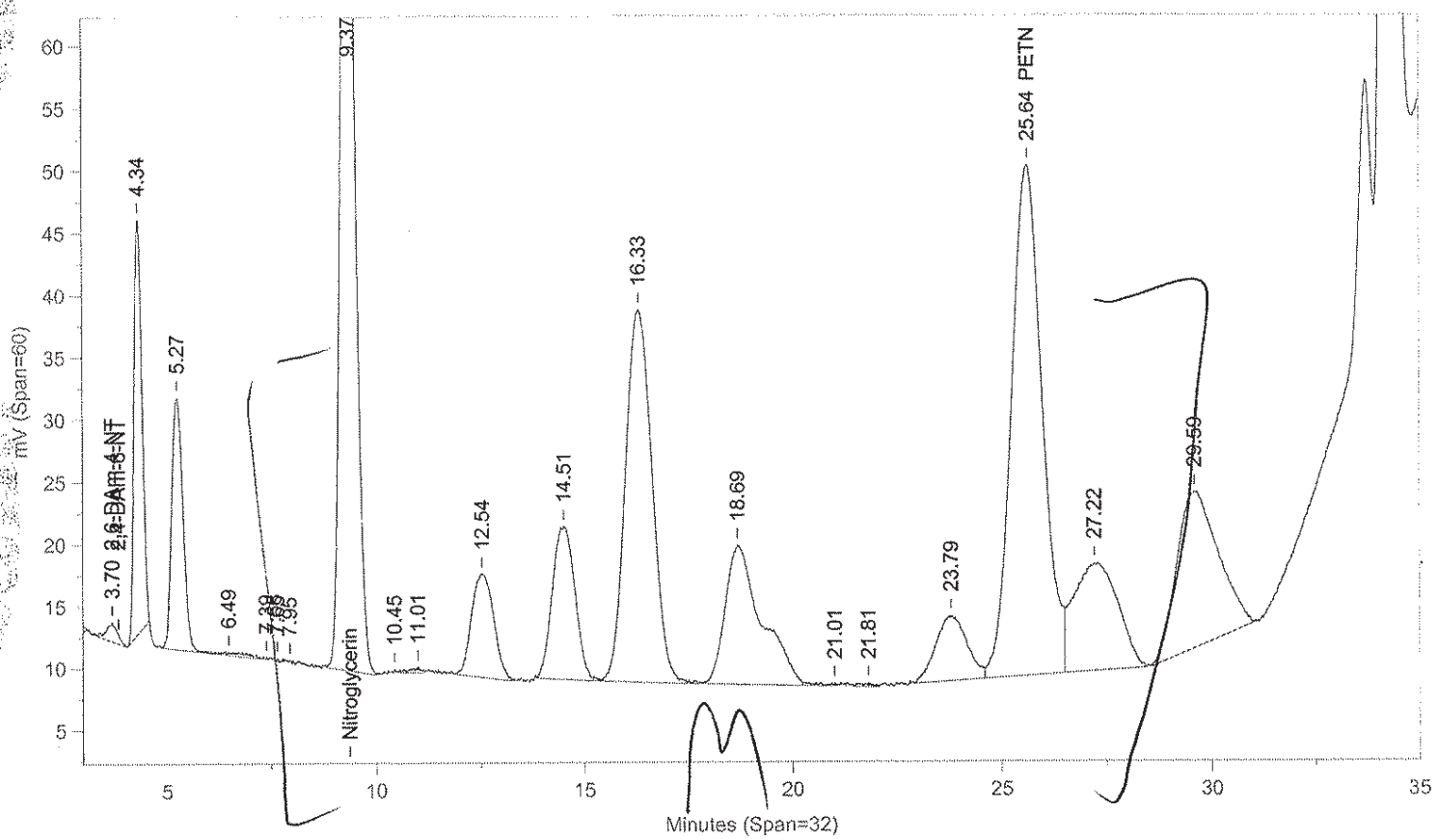
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.372	1890557	22000.77	Nitroglycerin
12.462	181116	1011.597	Nitrobenzene	.	0	.	Nitrobenzene
14.4	137002	1246.378	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.246	375569	16890.87	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.63	329986	979.561	1,3-DNB	.	0	.	1,3-DNB
19.399	228175	1342.629	1,4-DNB	.	0	.	1,4-DNB
23.714	114933	1238.688	2-NT	.	0	.	2-NT
.	0	.	PETN	25.643	2110257	25588.42	PETN
27.246	192701	1298.439	4-NT	.	0	.	4-NT
29.524	218305	892.047	1,3,5-TNB	.	0	.	1,3,5-TNB
29.911	137837	1423.023	2,6-DNT	.	0	.	2,6-DNT
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	148002	940.223	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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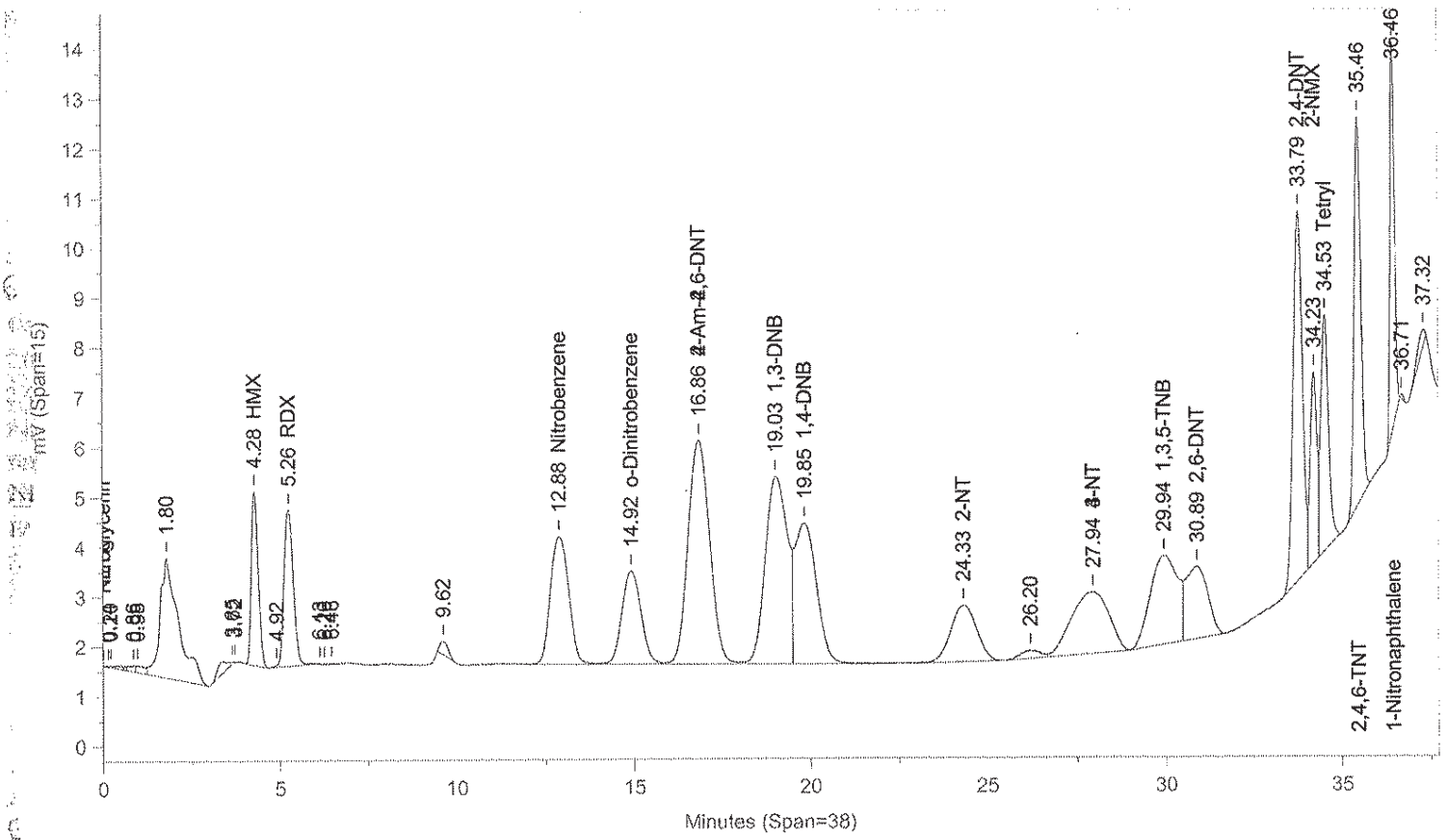
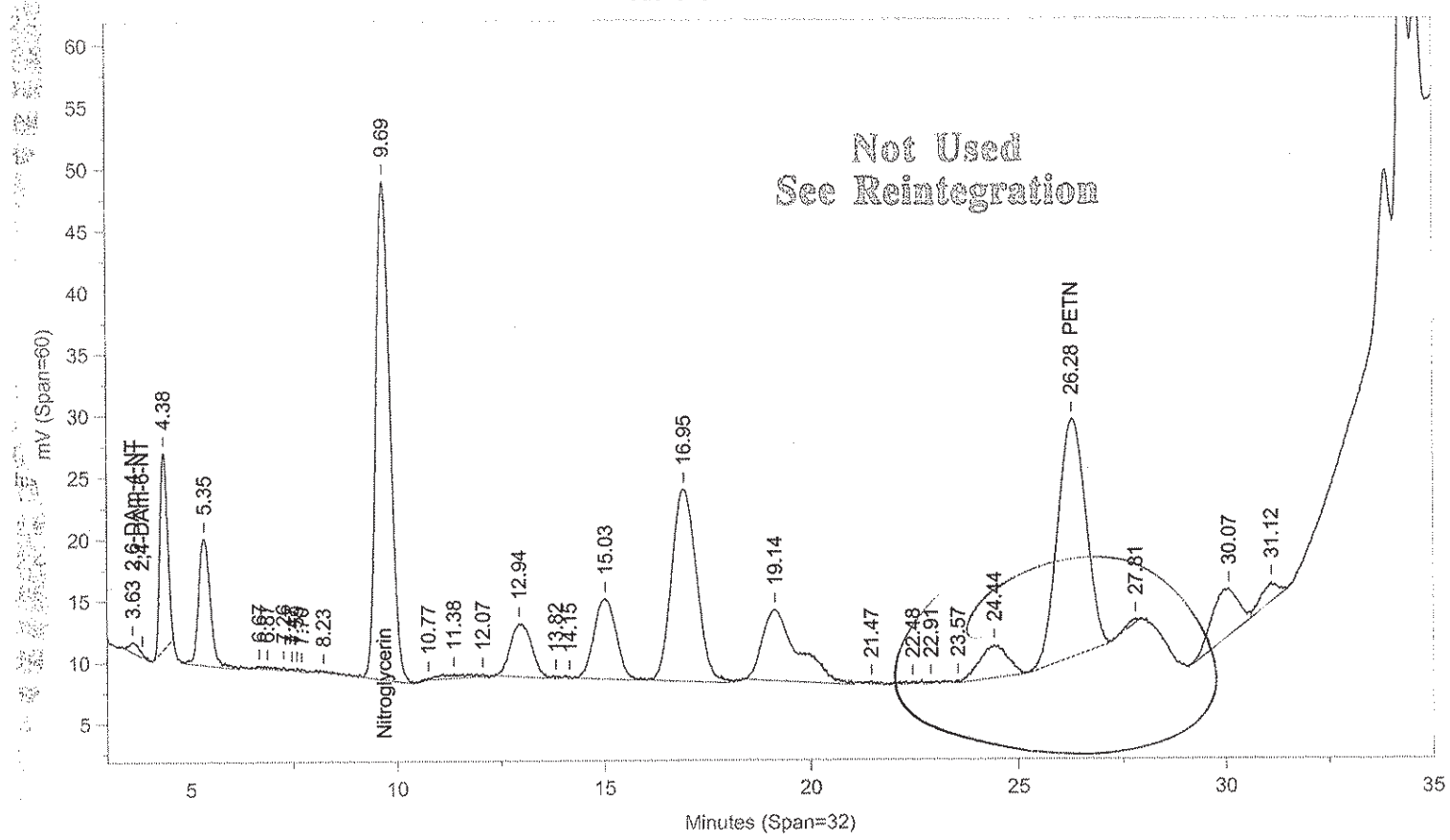
File: C:\CPWIN\DATA1\1C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	524.855	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	638.922	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
Thr .	0	.	PETN	26.283	902583	12224.59	PETN
27.943	89504	537.507	3-NT	.	0	.	3-NT
29.943	96529	519.996	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	592.811	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	1484.672	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1763.87	2-NMX	.	0	.	2-NMX
34.529	70299	551.1	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.06A
Area File: C:\CPWIN\DATA1\1C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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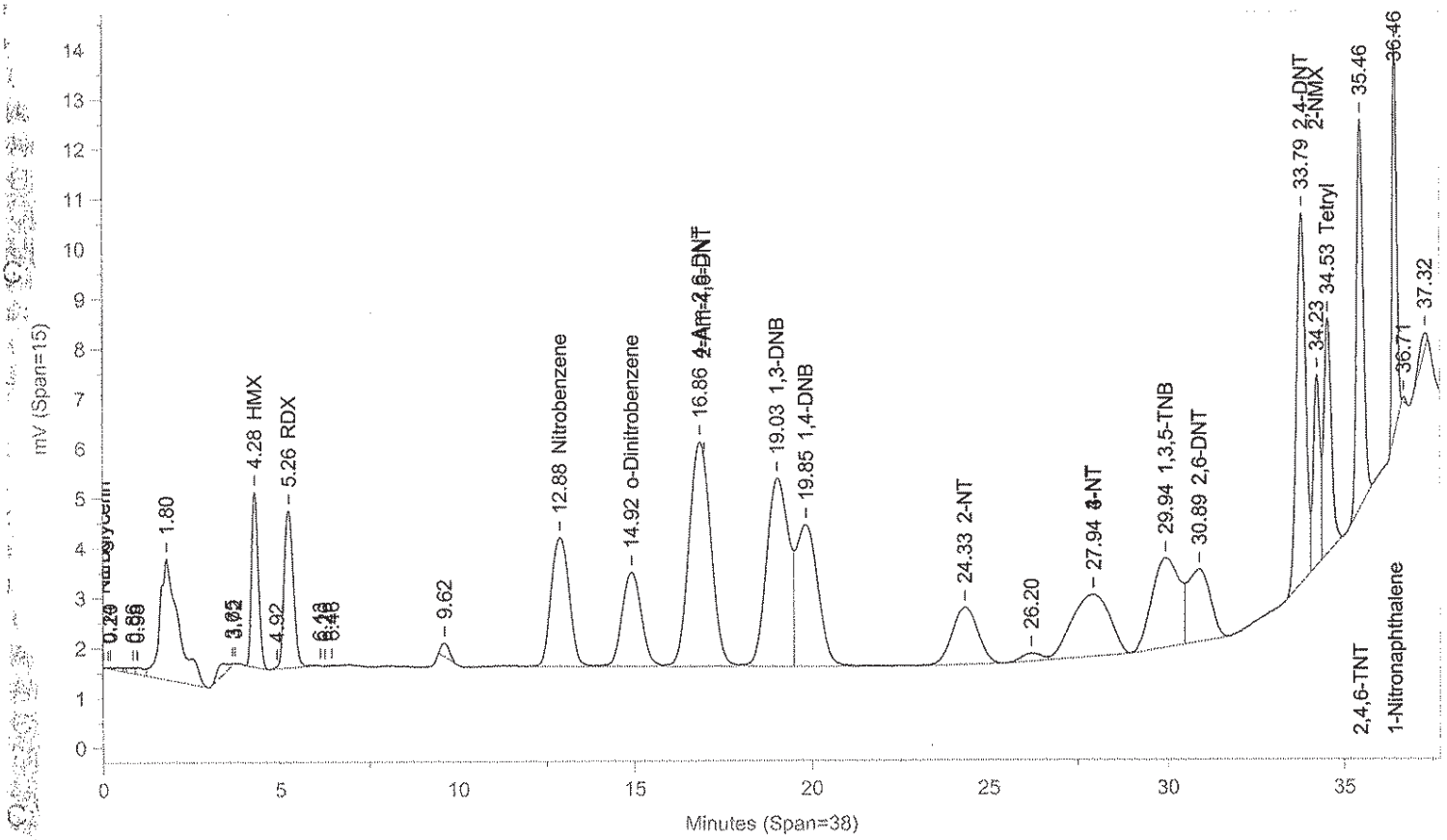
File Reported On: 11/7/2013 at 5:55:20 PM

Not Used
See Reintegration

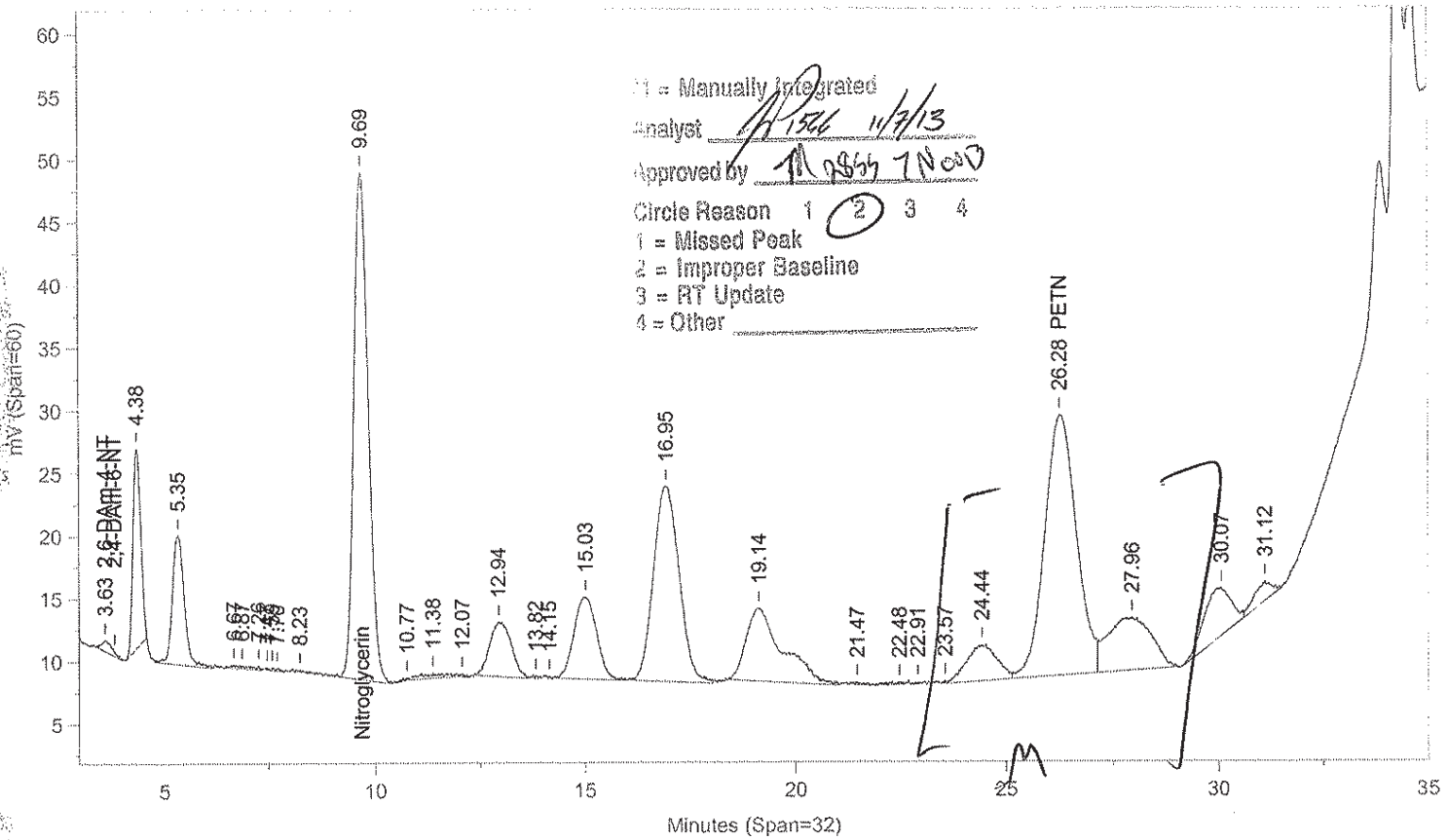
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



1 = Manually Integrated

Analyst [signature] 11/7/13

Approved by [signature]

Circle Reason 1 2 3 4

1 = Missed Peak

2 = Improper Baseline

3 = RT Update

4 = Other

Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

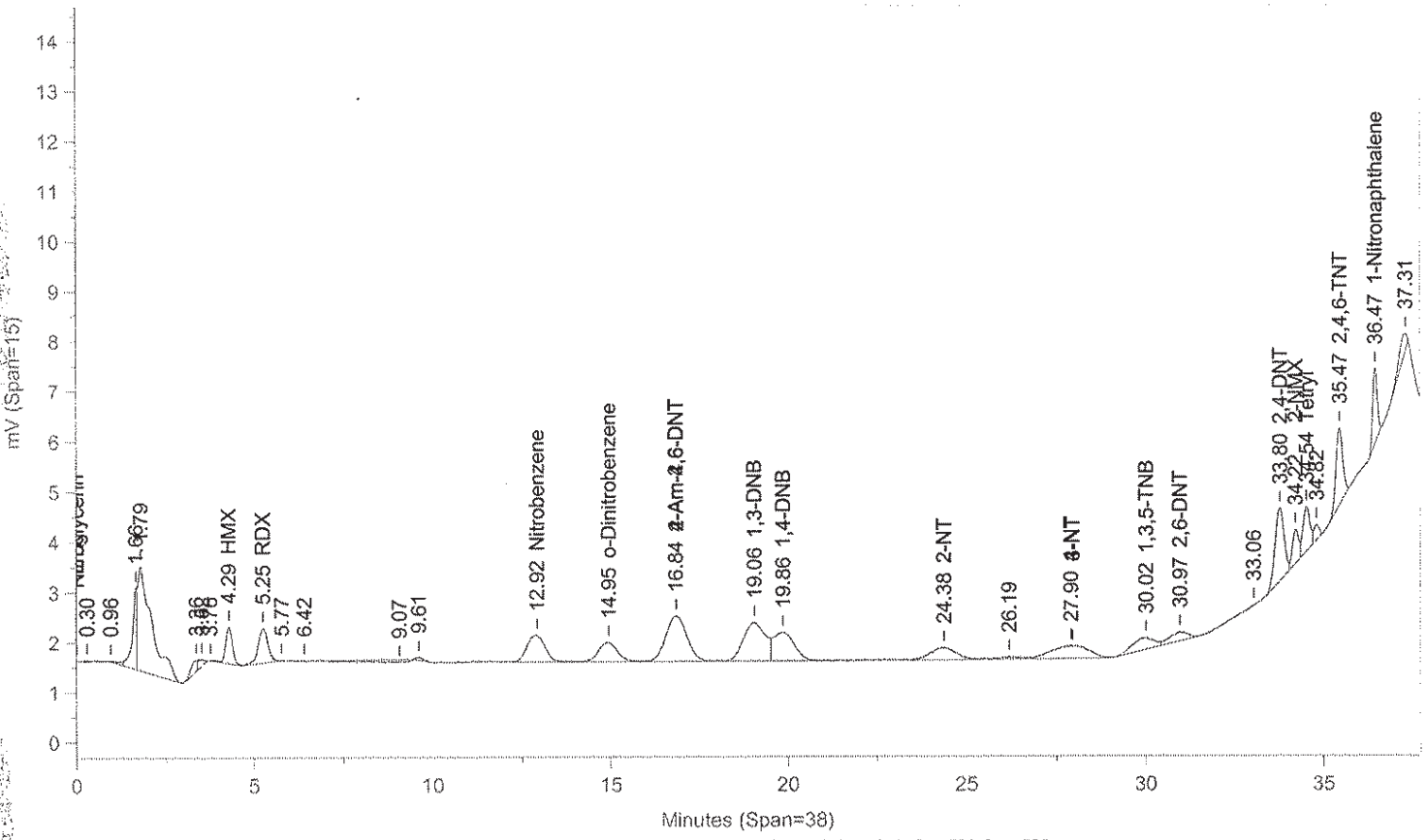
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	903.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	527.832	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
.	0	.	PETN	26.283	1060666	13973.9	PETN
27.943	89504	484.021	3-NT	.	0	.	3-NT
29.943	96529	444.725	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	502.767	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	524.804	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1480.088	2-NMX	.	0	.	2-NMX
34.529	70299	461.521	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

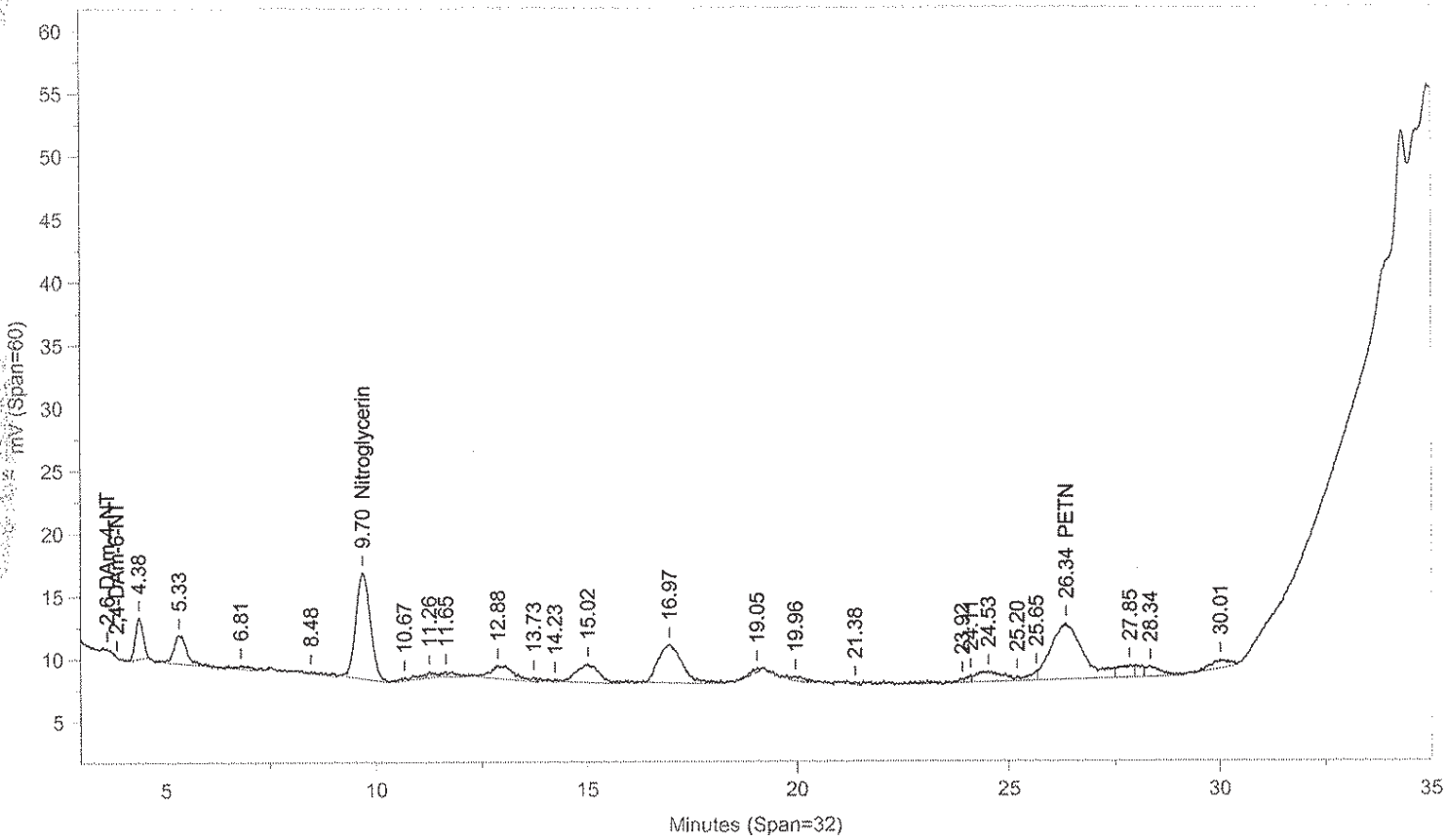
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:01:06 PM
File Reported On: 11/7/2013 at 6:01:05 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.07R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.07R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	9705	92.578	HMX	.	0	.	HMX
5.25	13260	94.755	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	201241	2341.884	Nitroglycerin
12.918	19313	92.346	Nitrobenzene	.	0	.	Nitrobenzene
14.954	14700	96.405	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.843	38007	256.469	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.055	33551	85.63	1,3-DNB	.	0	.	1,3-DNB
19.864	23955	130.294	1,4-DNB	.	0	.	1,4-DNB
24.378	12732	104.748	2-NT	.	0	.	2-NT
.	0	.	PETN	26.336	230586	4788.424	PETN
27.904	18291	216.058	4-NT	.	0	.	4-NT
30.021	10514	108.133	1,3,5-TNB	.	0	.	1,3,5-TNB
30.969	6696	79.784	2,6-DNT	.	0	.	2,6-DNT
33.797	25689	188.292	2,4-DNT	.	0	.	2,4-DNT
34.223	8406	365.011	2-NMX	.	0	.	2-NMX
34.535	12114	116.624	Tetryl	.	0	.	Tetryl
35.47	20303	102.873	2,4,6-TNT	.	0	.	2,4,6-TNT
36.465	13423	112.718	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.07A
Area File: C:\CPWIN\DATA1\1C12310B.07A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:46 PM
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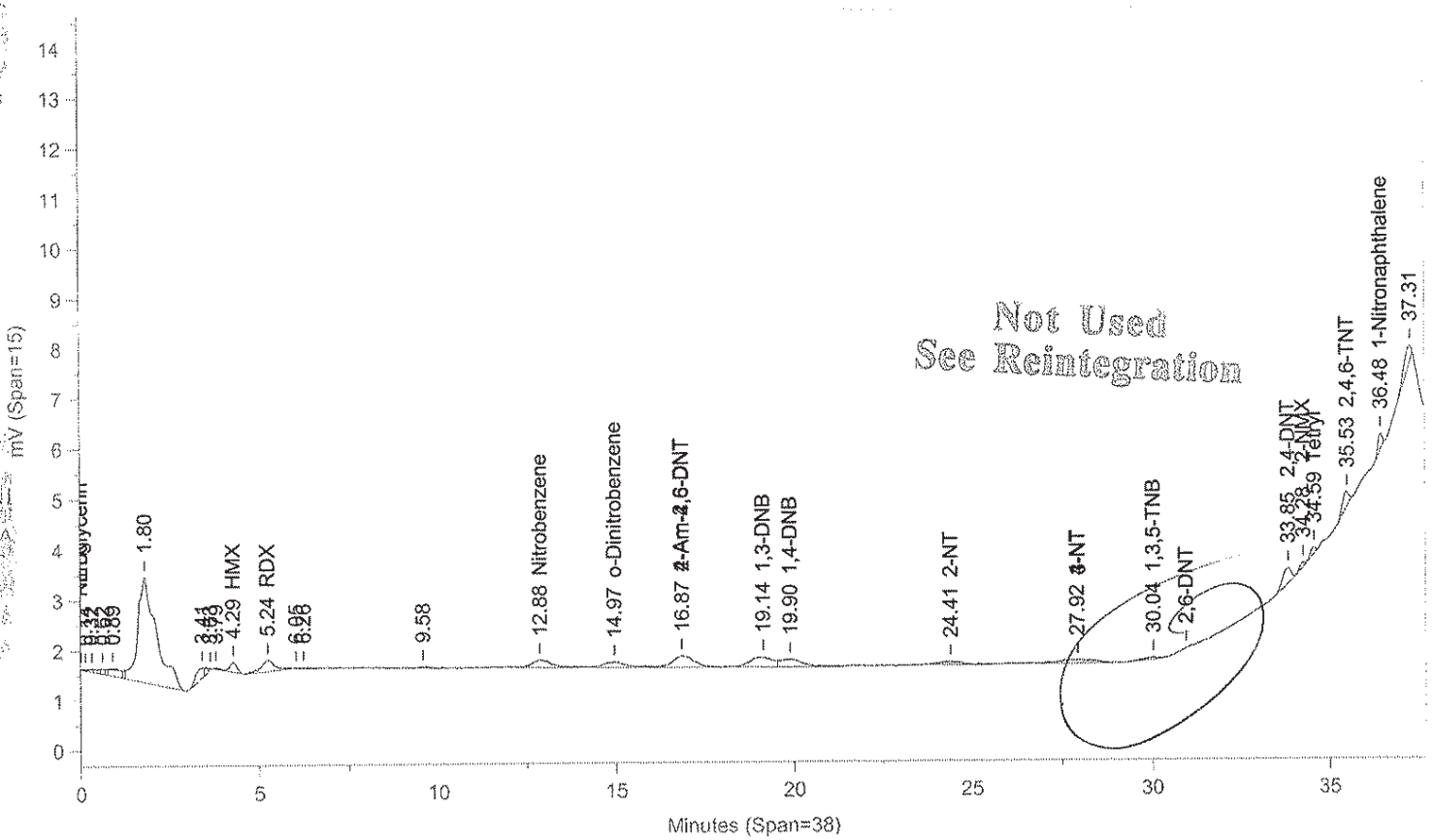
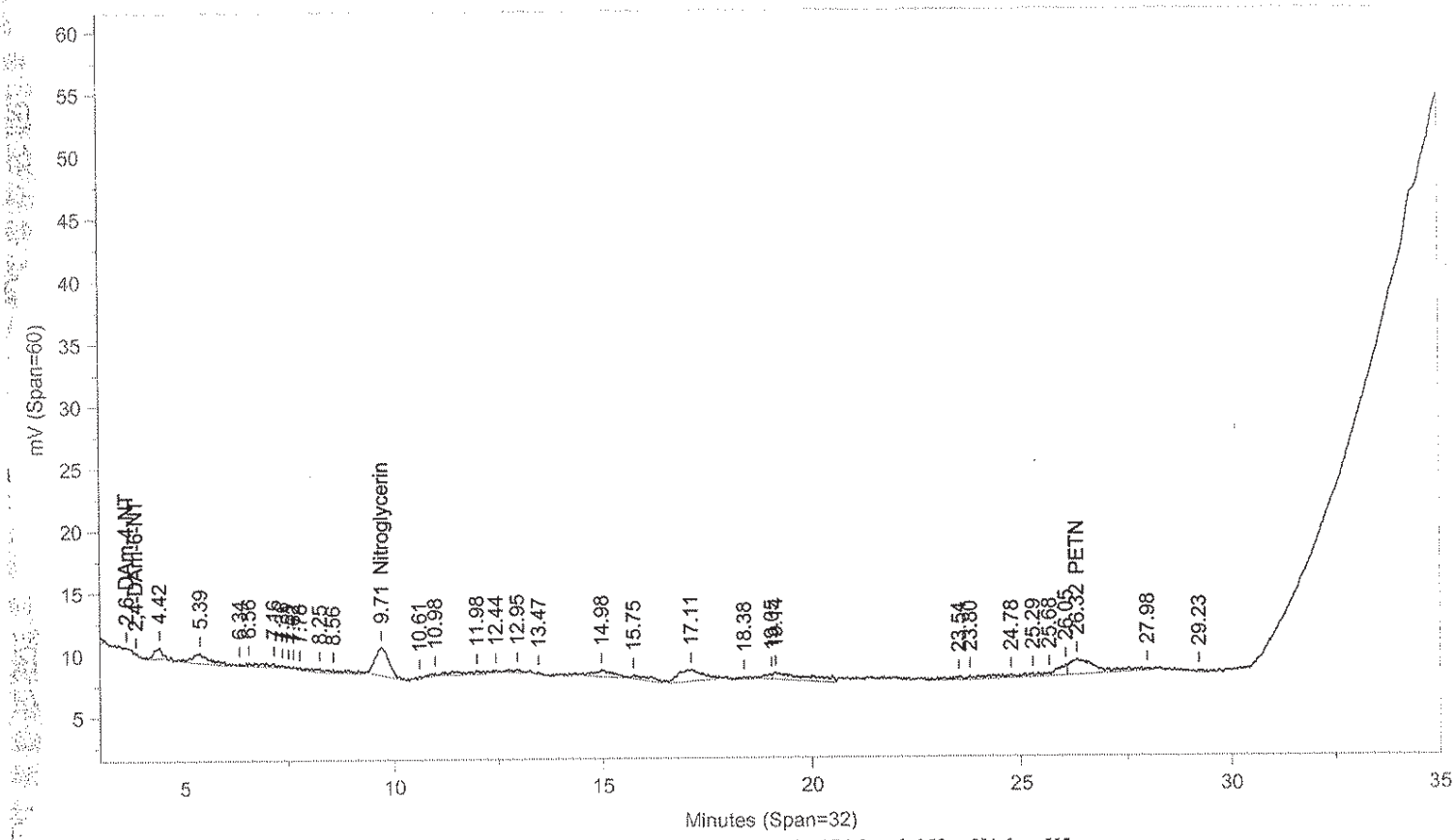
File: C:\CPWIN\DATA1\1C12310.08R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

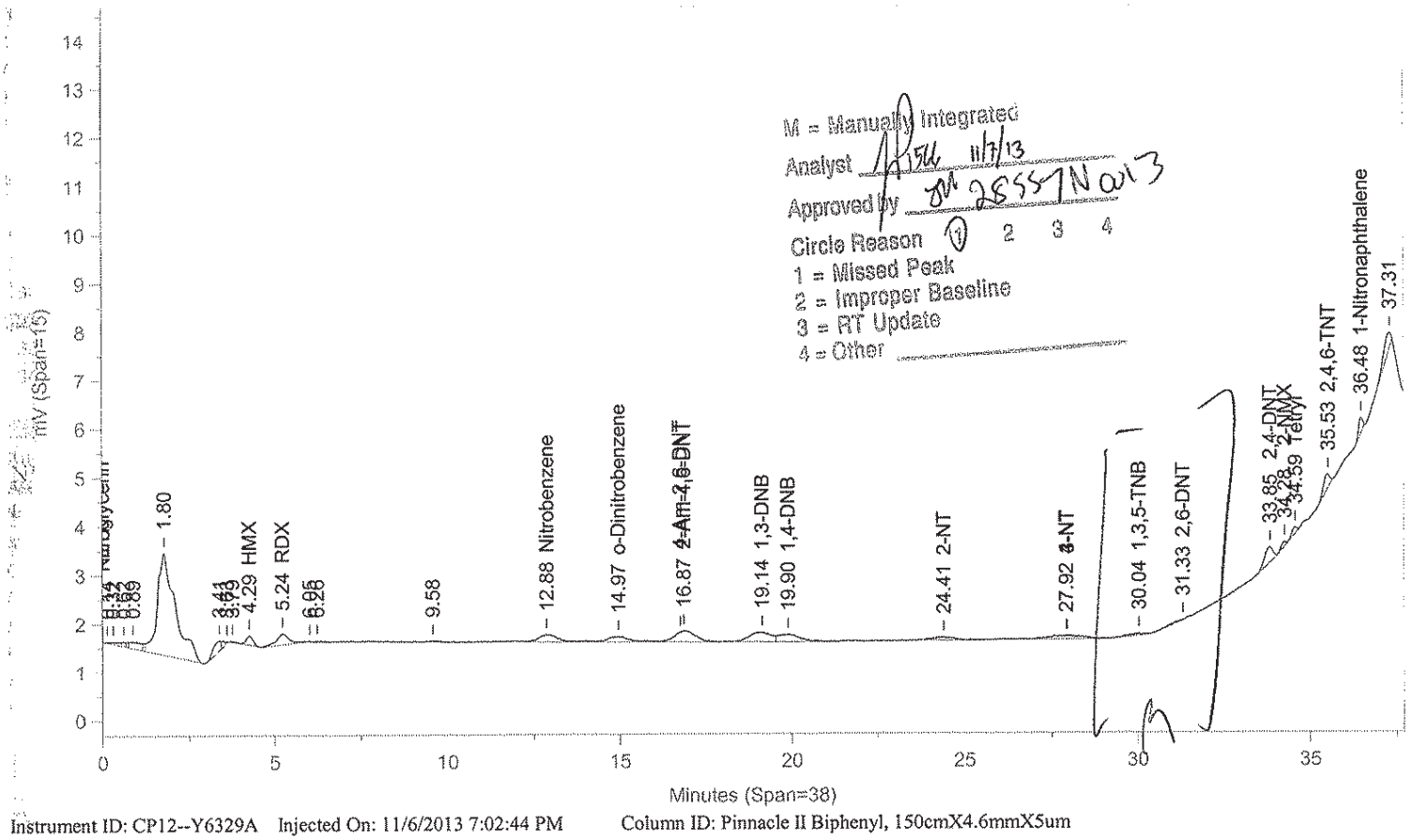
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	31.978	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
.	0	.	PETN	26.317	53186	2825.361	PETN
27.921	5159	130.897	4-NT	.	0	.	4-NT
30.044	1535	61.155	1,3,5-TNB	.	0	.	1,3,5-TNB
33.849	5674	31.663	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	94.822	2-NMX	.	0	.	2-NMX
34.589	1463	30.879	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.08A
Area File: C:\CPWIN\DATA1\1C12310B.08A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:56:30 PM
File Reported On: 11/7/2013 at 5:56:46 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

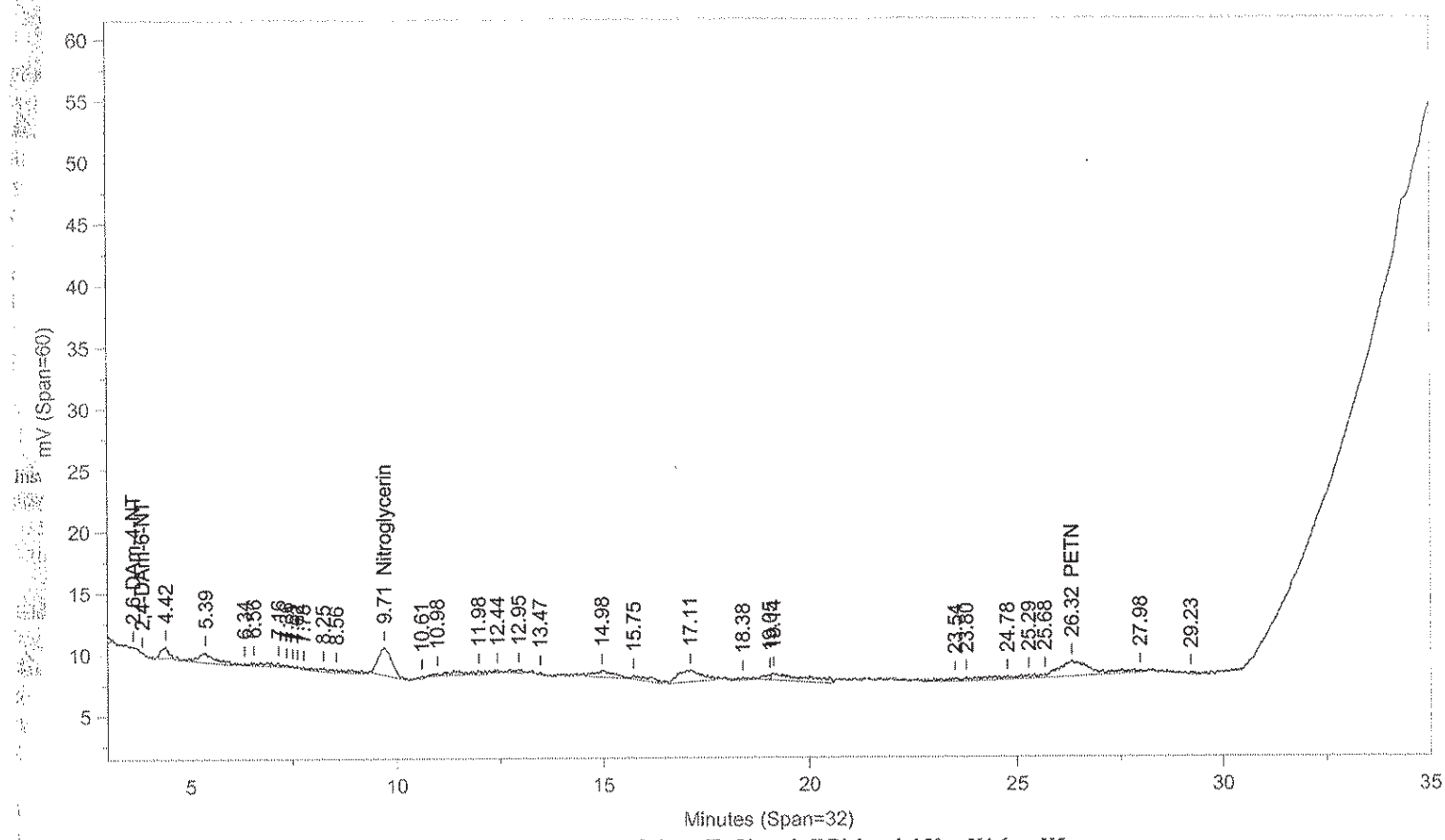
File: C:\CPWIN\DATA1\1C12310.08R



M = Manually Integrated
Analyst 11/7/13
Approved by 28557 Nov 13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	22.972	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
Del .	0	.	PETN	26.317	65376	2960.251	PETN
27.921	5159	124.367	4-NT	.	0	.	4-NT
30.044	1535	59.474	1,3,5-TNB	.	0	.	1,3,5-TNB
31.327	842	22.119	2,6-DNT	.	0	.	2,6-DNT
33.849	5674	21.969	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	86.759	2-NMX	.	0	.	2-NMX
34.589	1463	28.339	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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LANCASTER LABORATORIES

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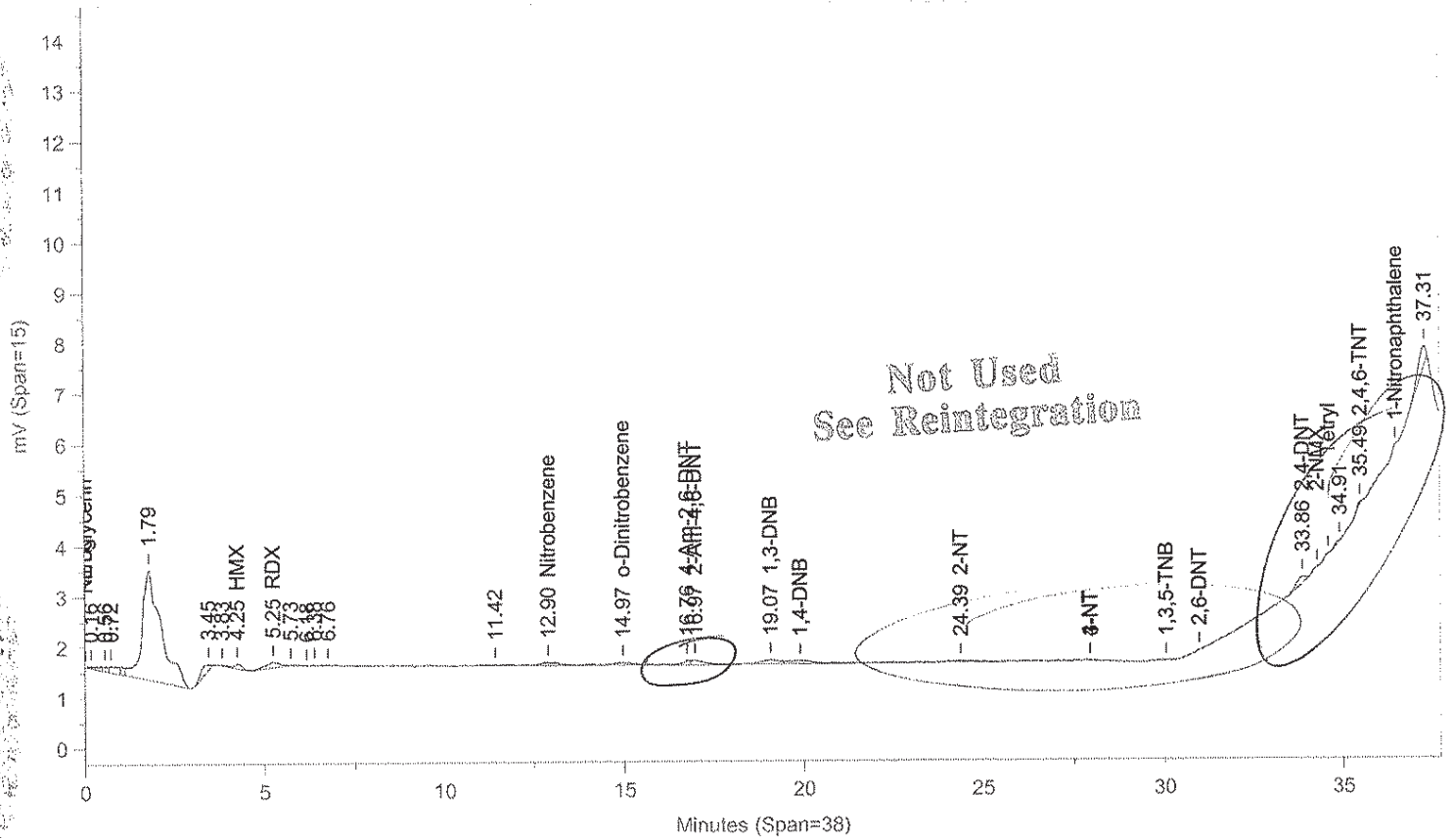
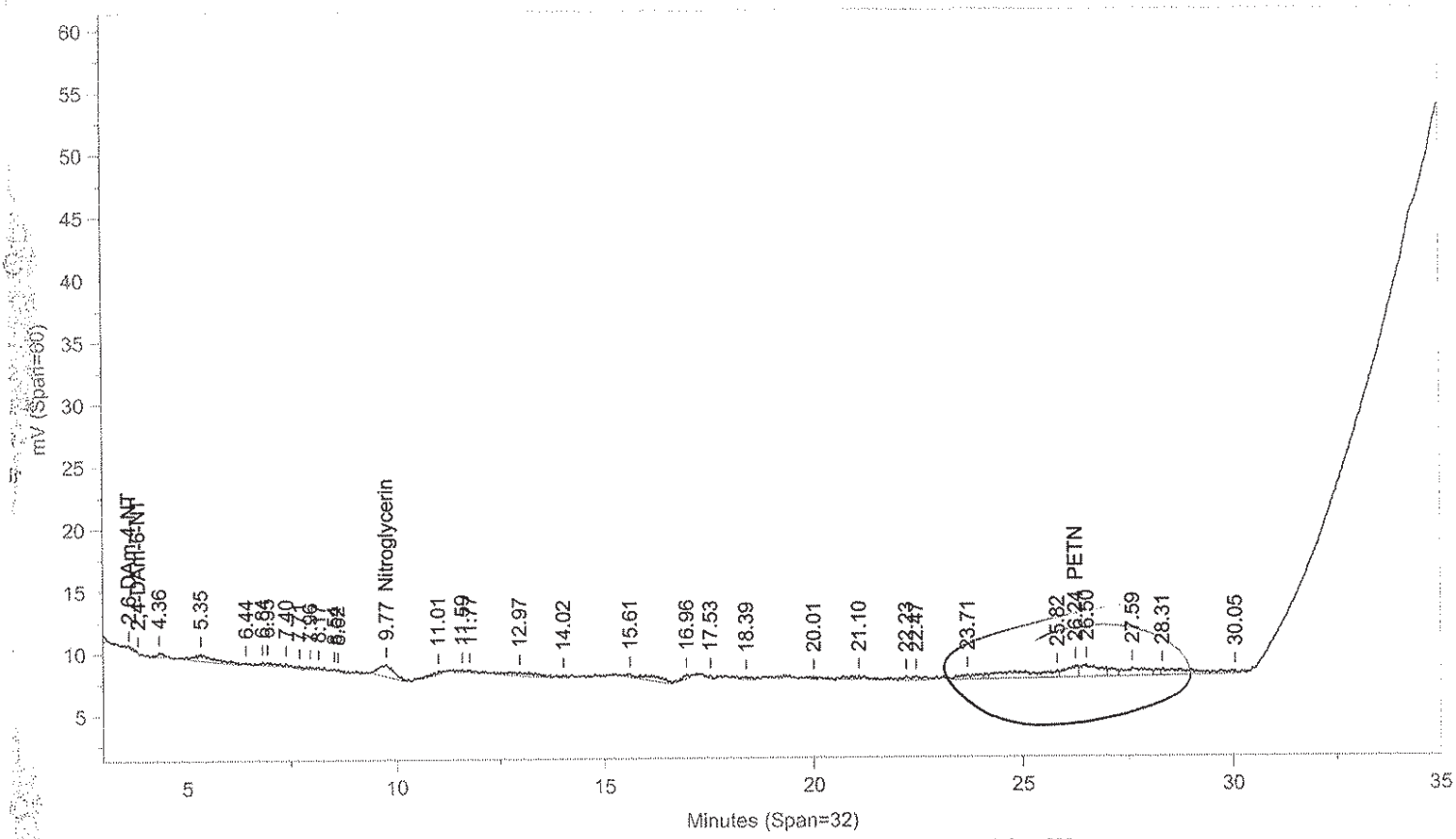


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.764	1335	6.315	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
16.971	2667	8.868	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	6671	17.025	1,3-DNB	.	0	.	1,3-DNB
24.388	1102	3.981	2-NT	.	0	.	2-NT
.	0	.	PETN	26.245	18259	2438.867	PETN
33.863	2480	11.429	2,4-DNT	.	0	.	2,4-DNT
35.493	474	9.918	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.09A
Area File: C:\CPWIN\DATA1\1C12310B.09A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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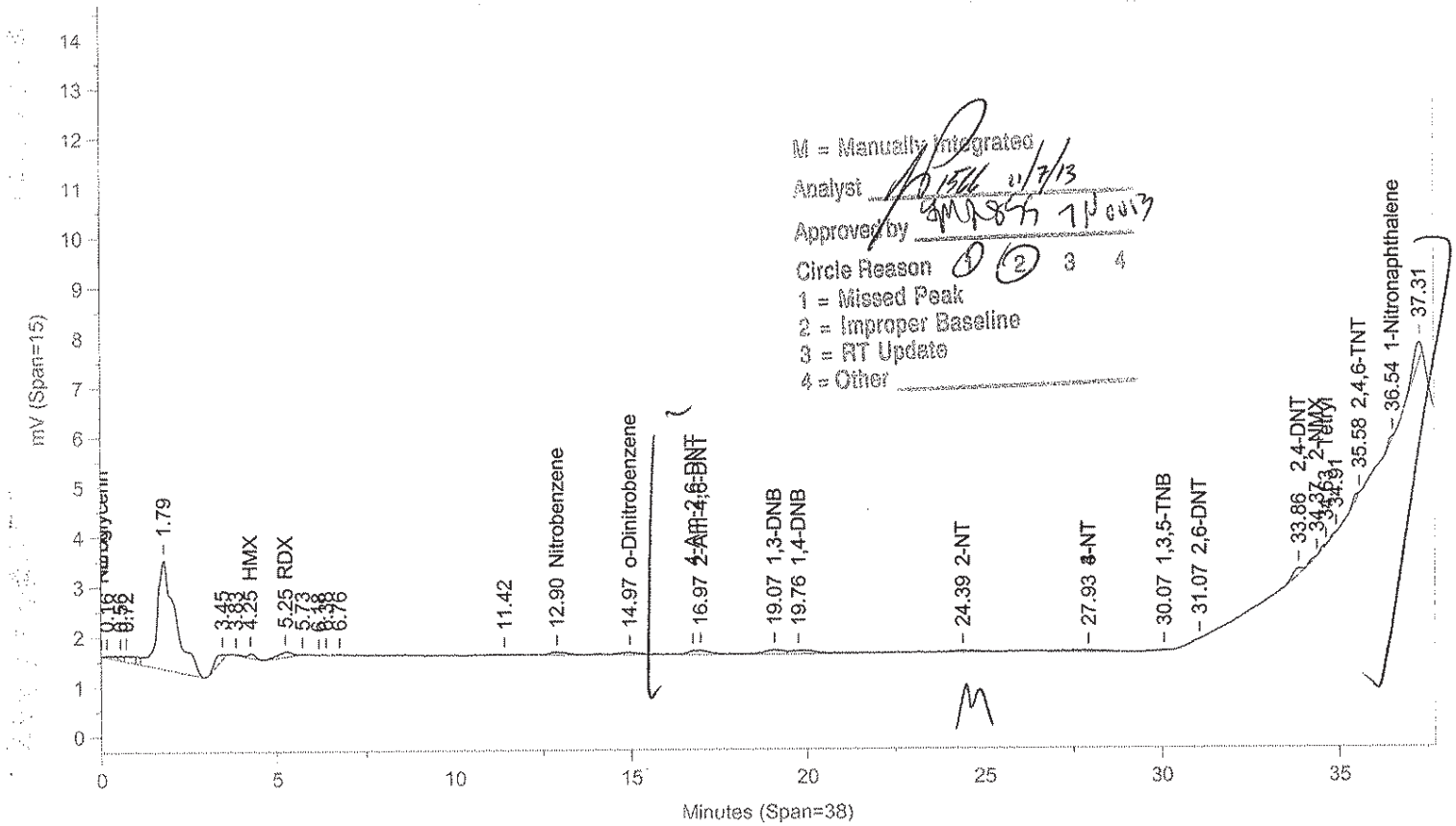
File Reported On: 11/7/2013 at 5:57:29 PM

Not Used
See Reintegration

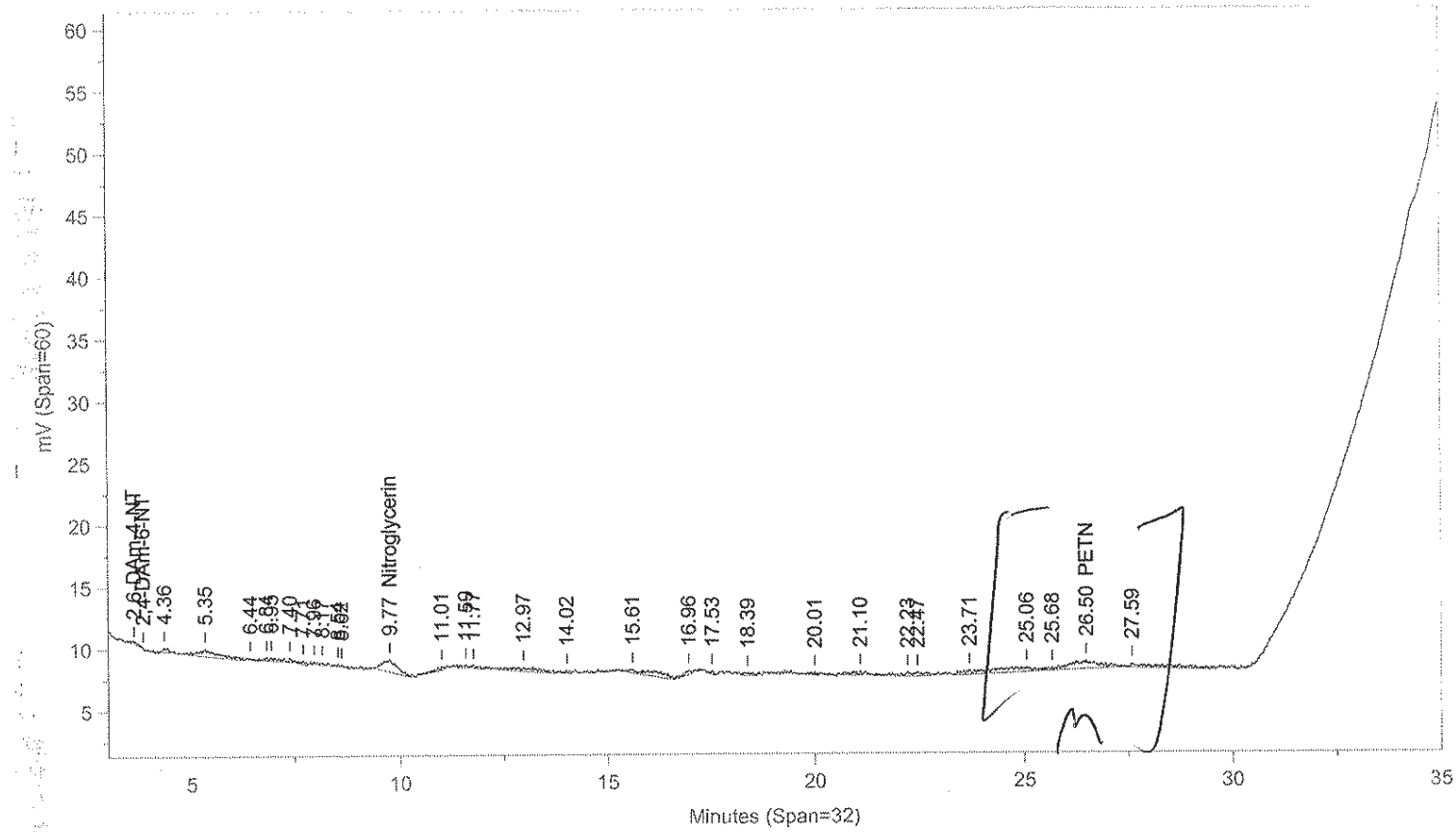
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.09R



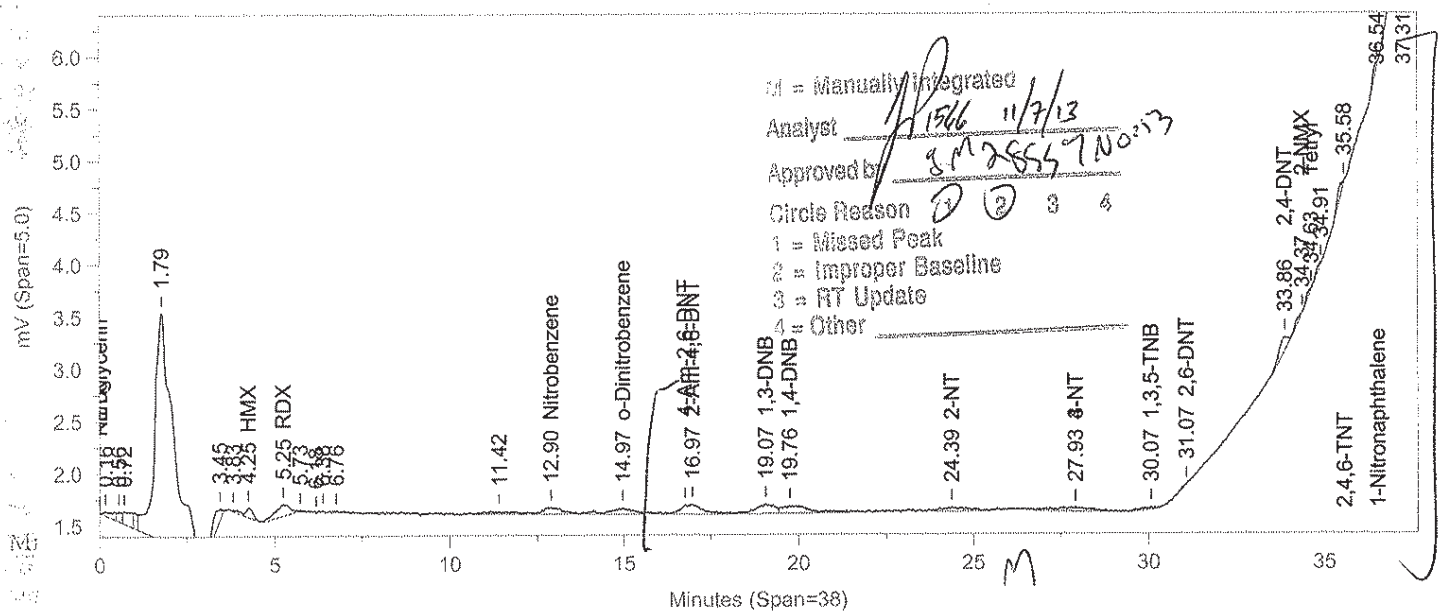
M = Manually Integrated
Analyst 11/7/13
Approved by 11/7/13
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

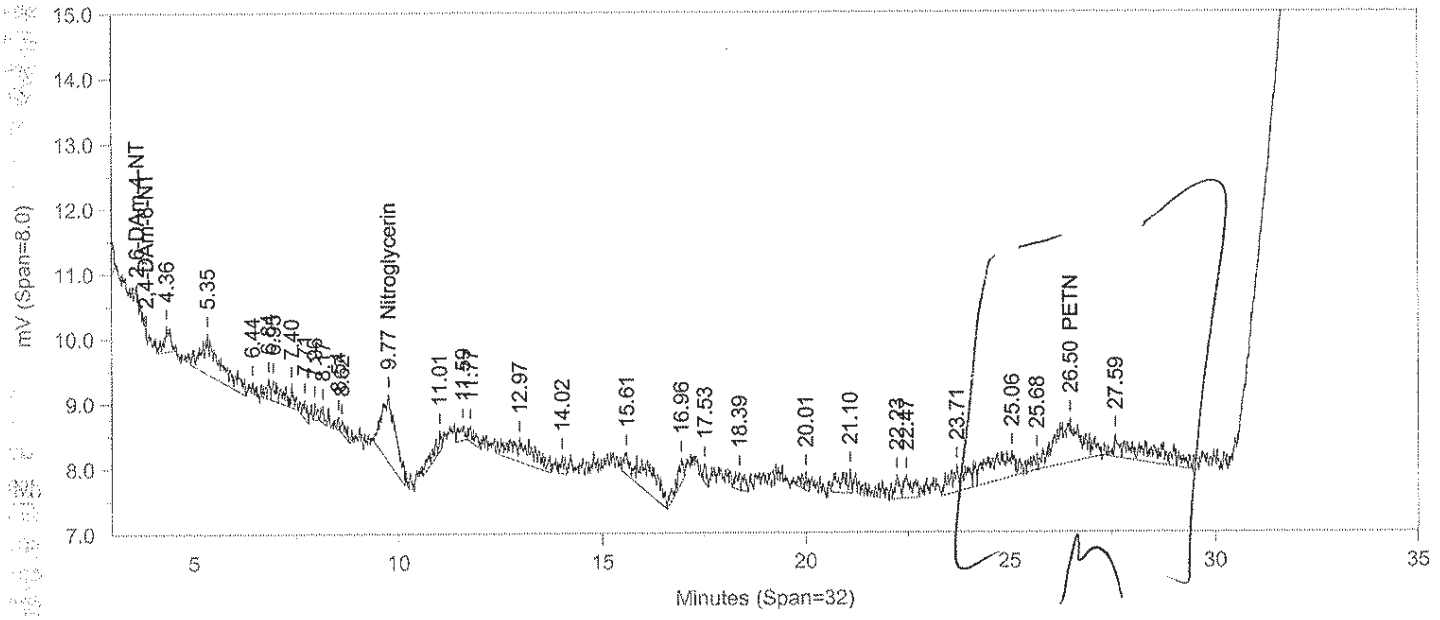
Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=5.0)
Minutes (Span=38)
1.79
HMX
RDX
Nitrobenzene
o-Dinitrobenzene
1,3-DNB
1,4-DNB
2-NT
3-NT
1,3,5-TNB
2,6-DNT
2,4-DNT
2,4,6-TNT
1-Nitronaphthalene


mV (Span=8.0)
Minutes (Span=32)
Nitroglycerin
PETN

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

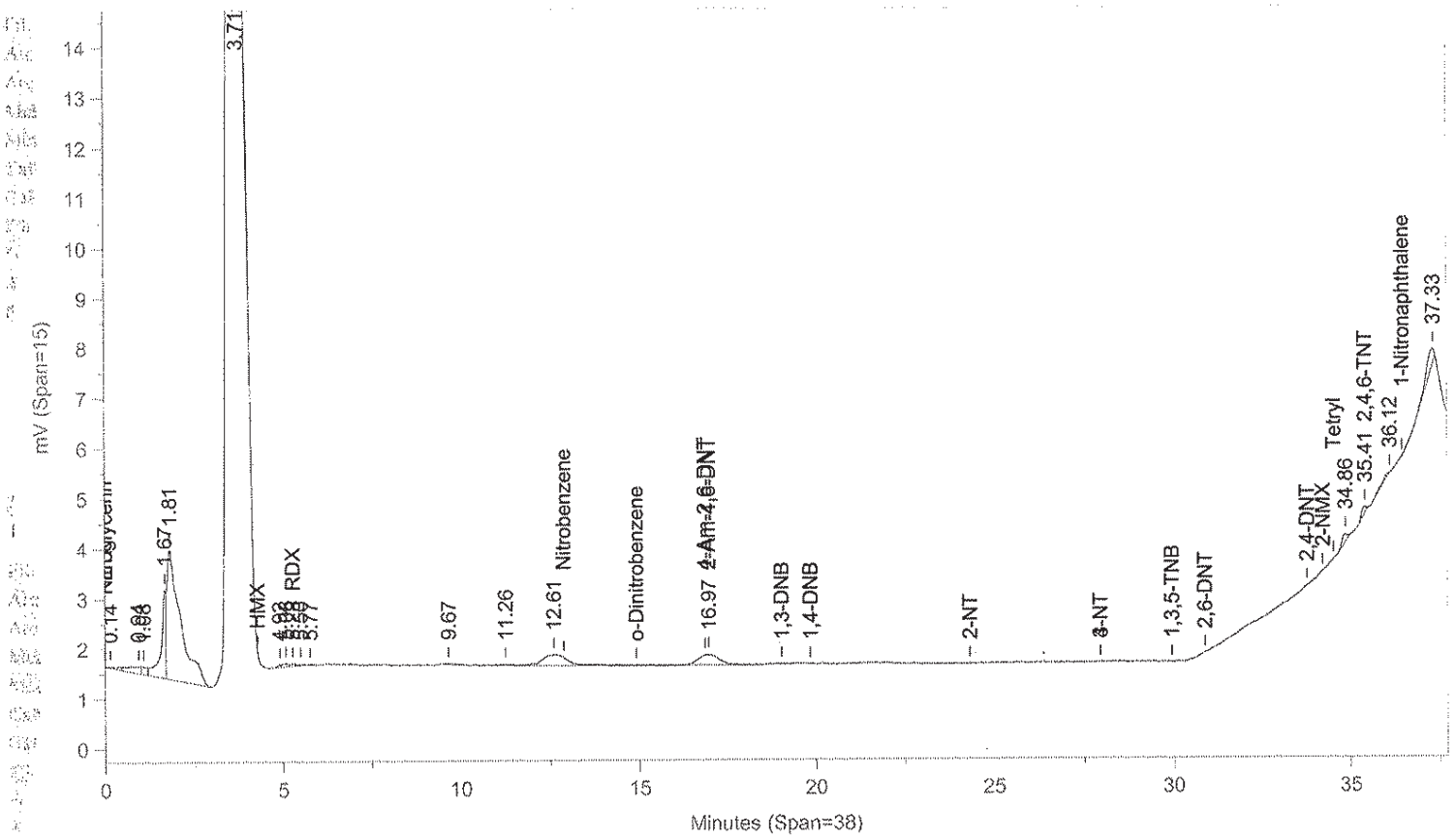
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.971	4003	13.308	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	3481	8.885	1,3-DNB	.	0	.	1,3-DNB
19.76	4154	8.624	1,4-DNB	.	0	.	1,4-DNB
24.388	2024	11.972	2-NT	.	0	.	2-NT
.	0	.	PETN	26.497	30004	2568.832	PETN
27.935	2865	60.908	3-NT	.	0	.	3-NT
30.067	645	55.864	1,3,5-TNB	.	0	.	1,3,5-TNB
31.068	286	17.88	2,6-DNT	.	0	.	2,6-DNT
33.863	2480	9.602	2,4-DNT	.	0	.	2,4-DNT
34.367	547	73.17	2-NMX	.	0	.	2-NMX
34.63	498	22.266	Tetryl	.	0	.	Tetryl
35.583	1137	13.028	2,4,6-TNT	.	0	.	2,4,6-TNT
36.542	828	34.277	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:17:14 PM
File Reported On: 11/7/2013 at 6:17:13 PM

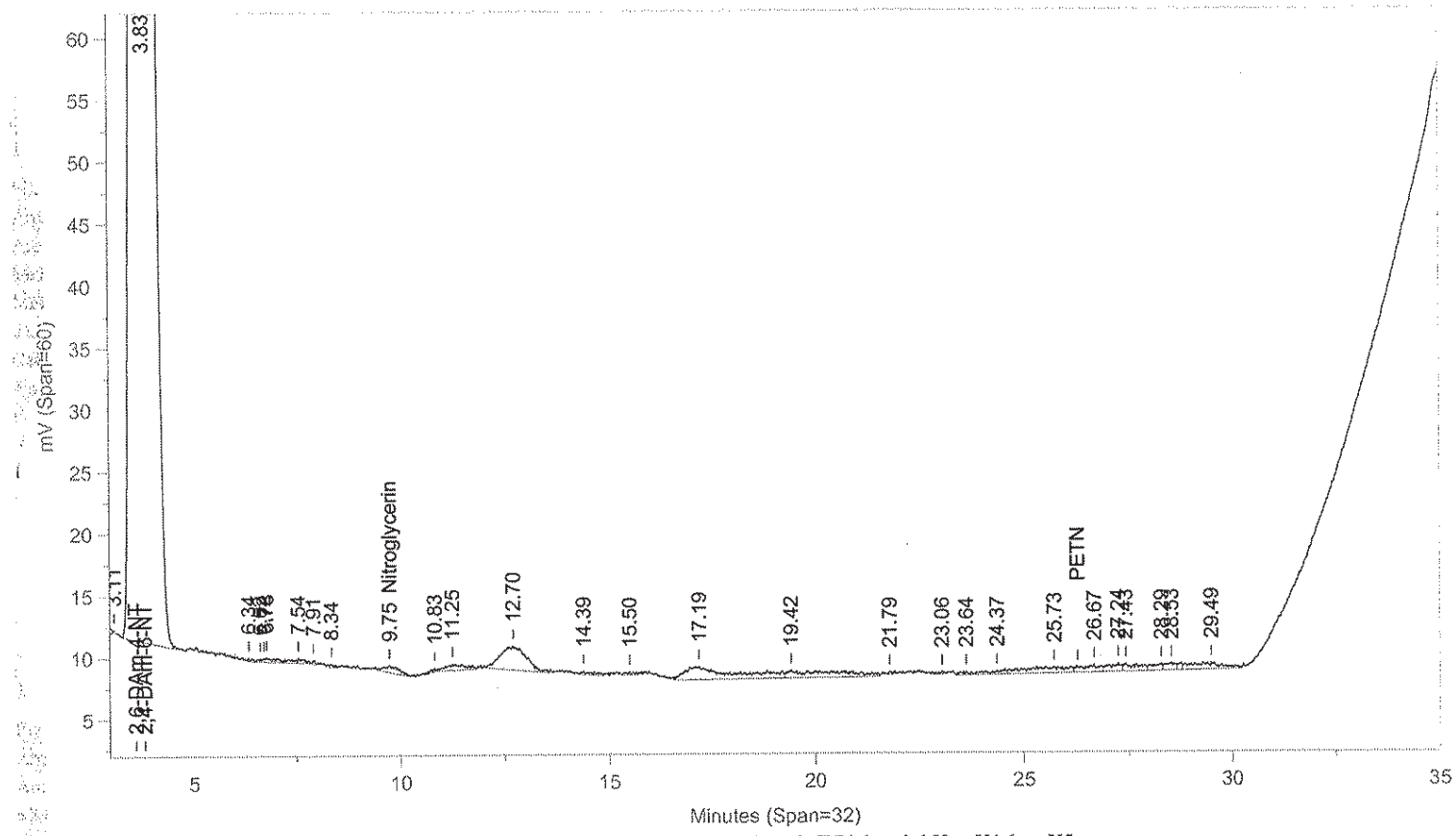
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.11R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.11R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

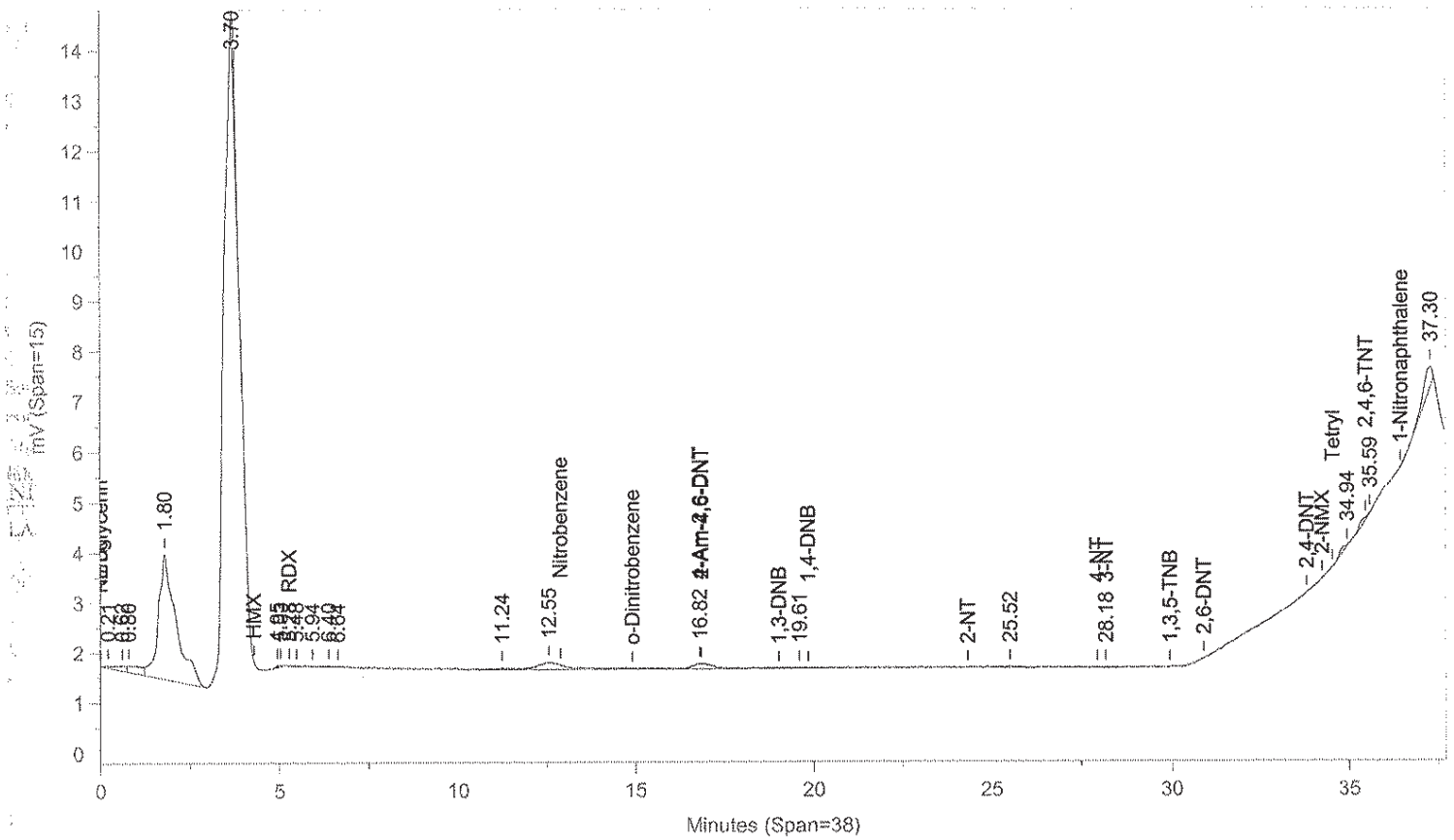
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.832	4661927	.	2,4-DAm-6-NT
5.279	536	-18.797	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.75	14347	141.154	Nitroglycerin
16.969	9184	23.769	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
35.414	1426	13.506	2,4,6-TNT	.	0	.	2,4,6-TNT

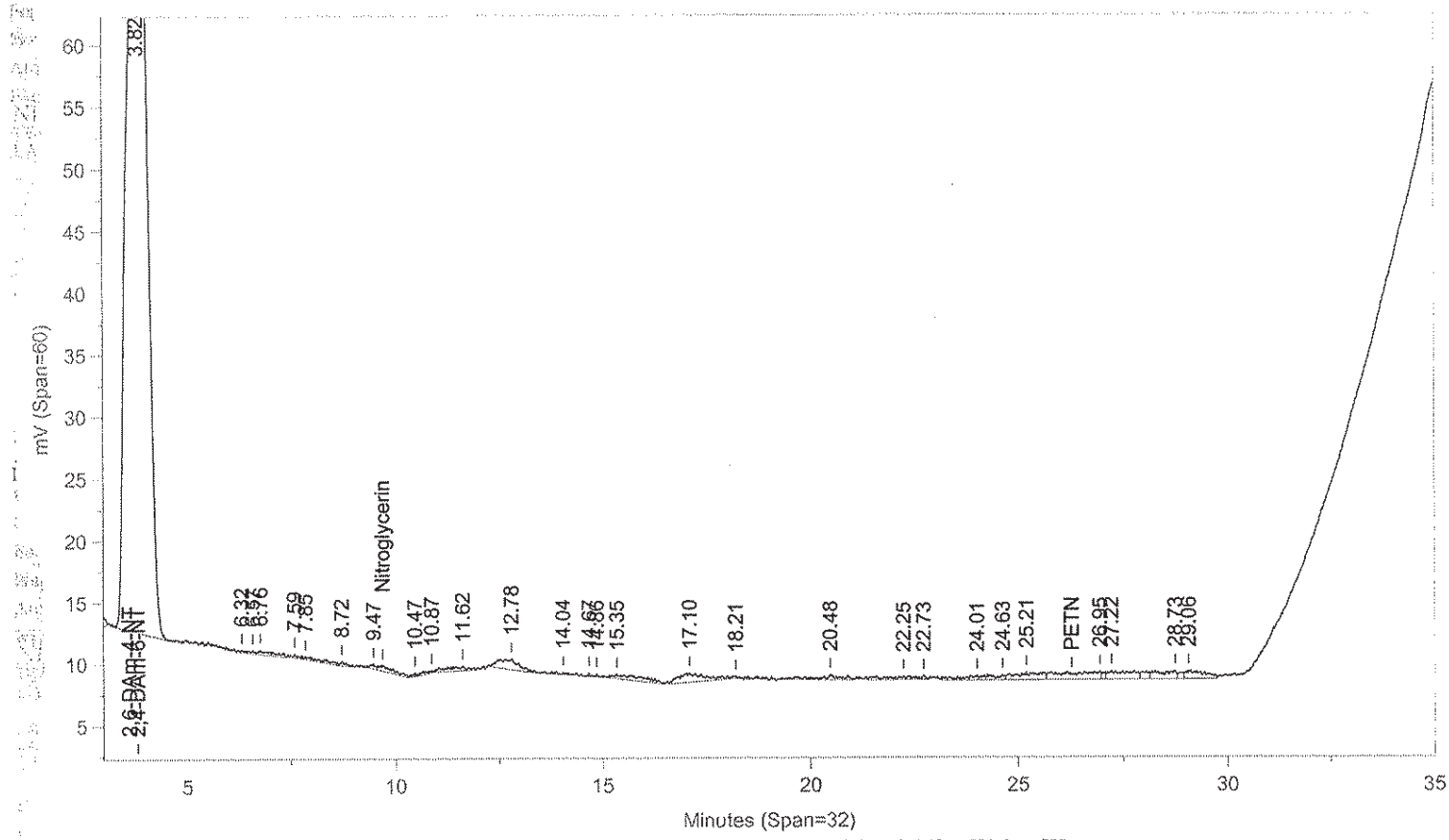
Files:
Area File: C:\CPWIN\DATA1\1C12310.11A
Area File: C:\CPWIN\DATA1\1C12310B.11A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:48 PM
File Reported On: 11/7/2013 at 6:27:56 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.12R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.12R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

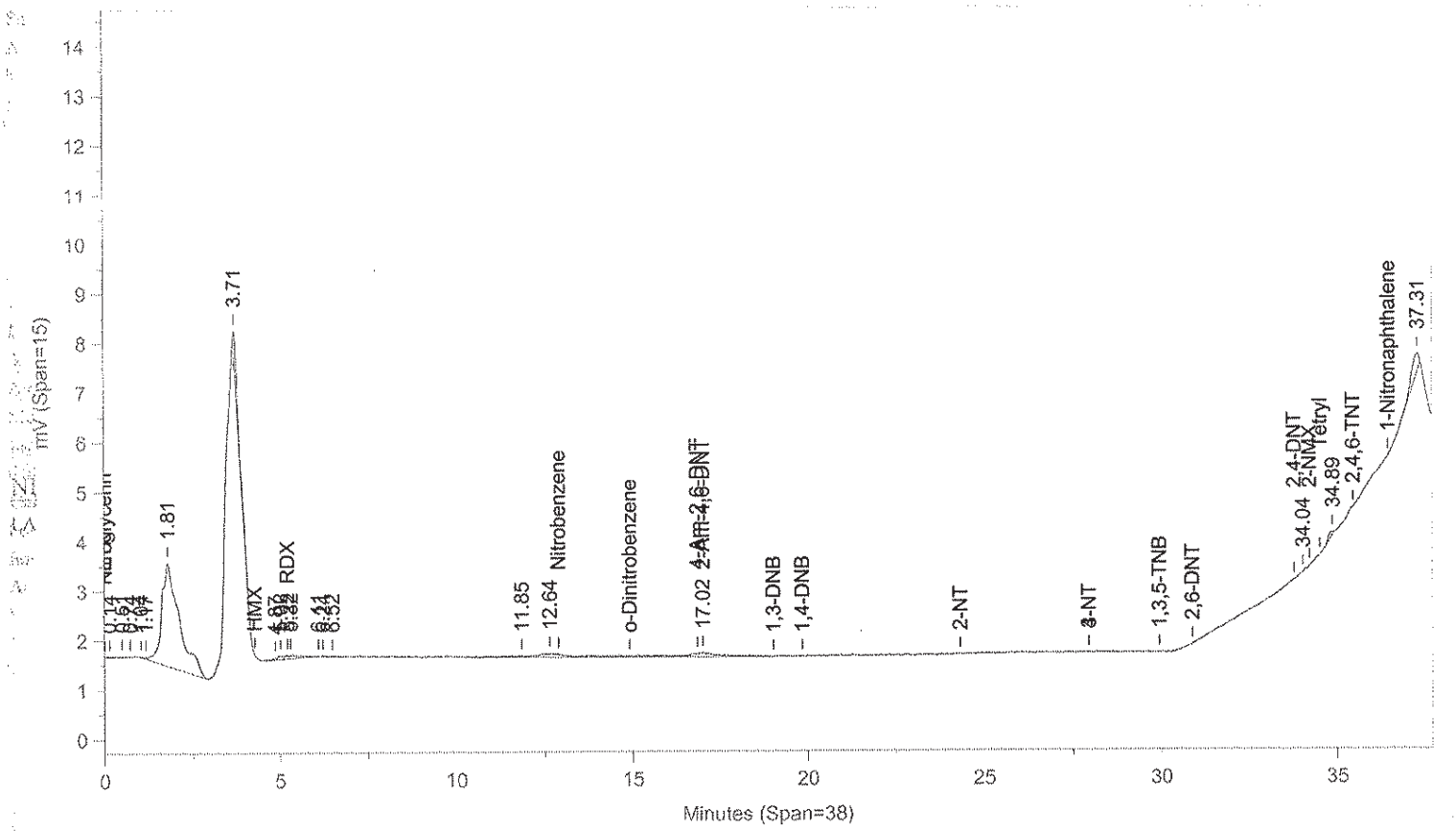
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.823	2340450	.	2,4-DAm-6-NT
5.279	49	-23.145	RDX	.	0	.	RDX
16.818	4954	12.834	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
28.178	393	14.232	3-NT	.	0	.	3-NT

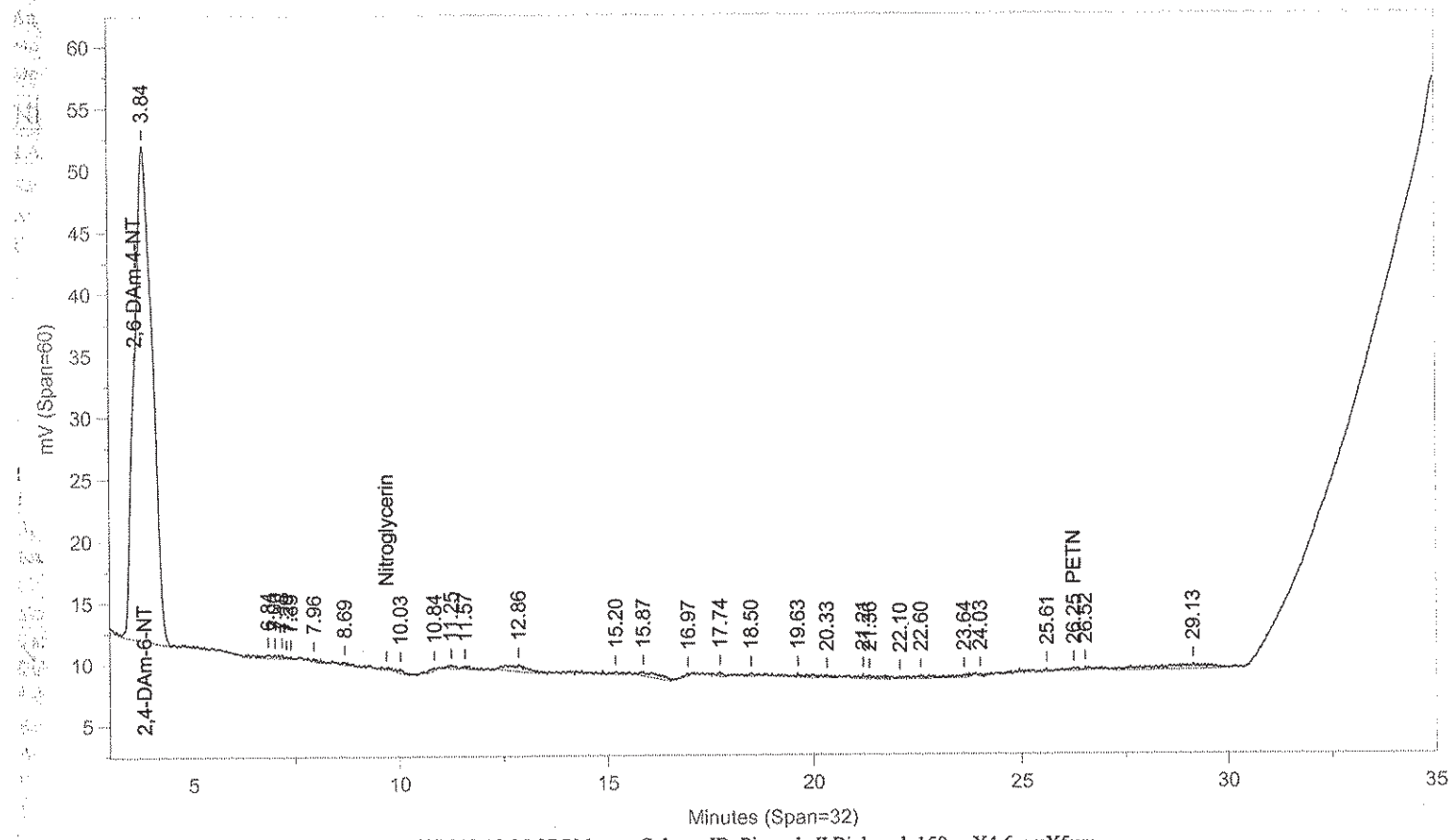
Files:
Area File: C:\CPWIN\DATA1\1C12310.12A
Area File: C:\CPWIN\DATA1\1C12310B.12A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:16 PM
File Reported On: 11/7/2013 at 6:28:25 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.13R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.13R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.836	1186674	.	2,4-DAm-6-NT
5.219	575	-18.452	RDX	.	0	.	RDX
17.017	5070	13.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.249	2969	25.002	PETN

Files:
Area File: C:\CPWIN\DATA1\1C12310.13A
Area File: C:\CPWIN\DATA1\1C12310B.13A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:46 PM
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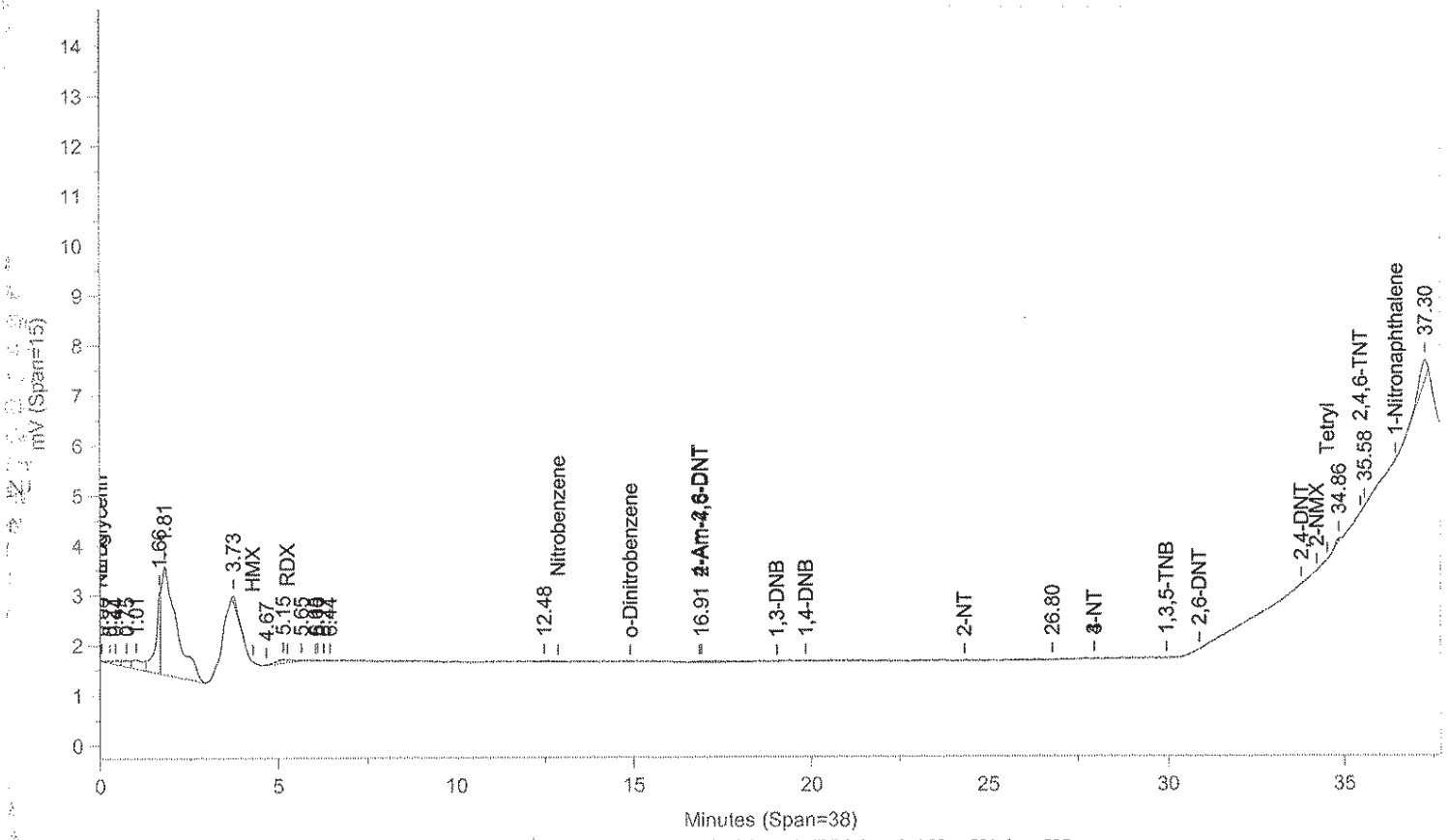
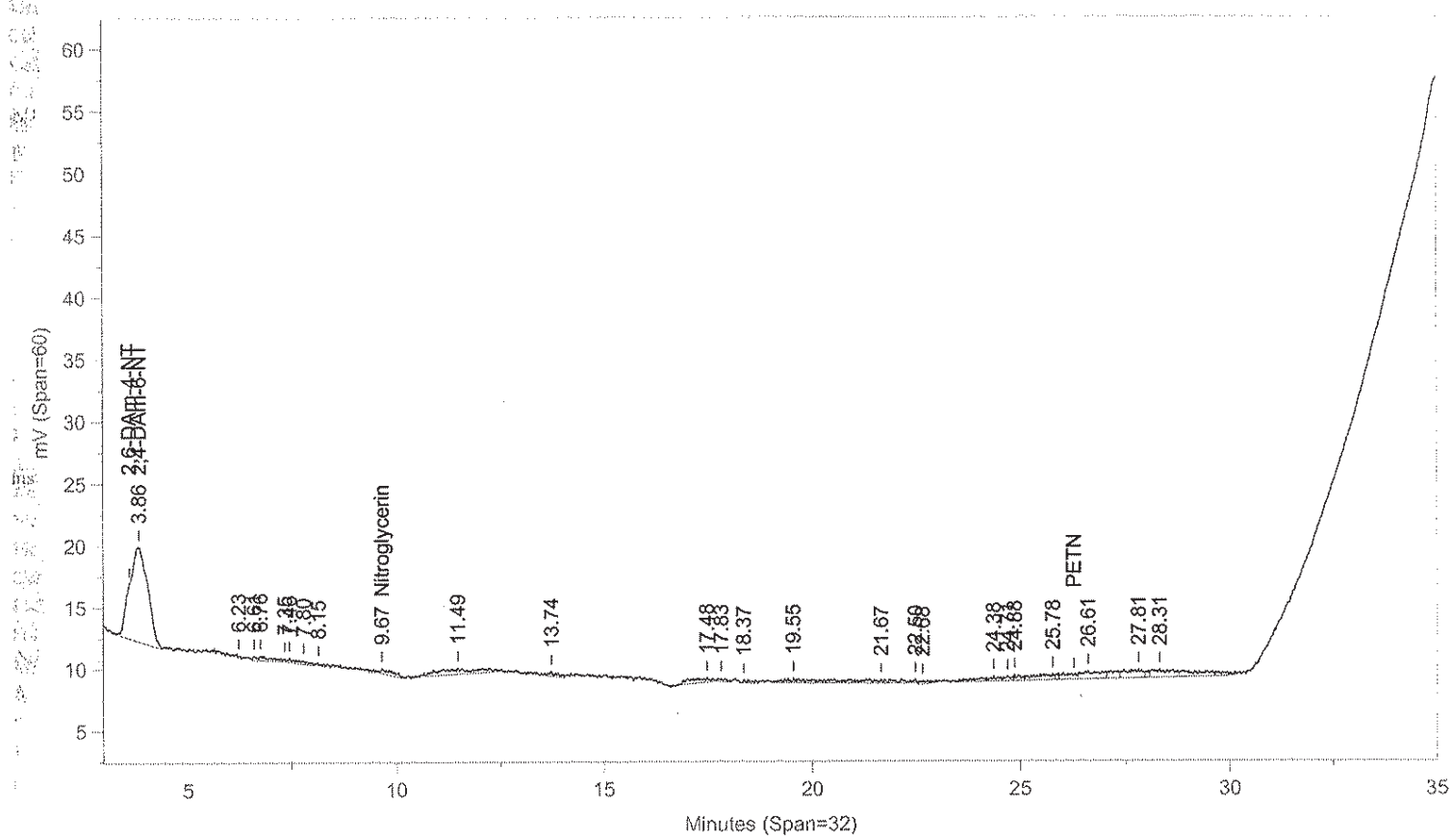
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.14R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.14R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

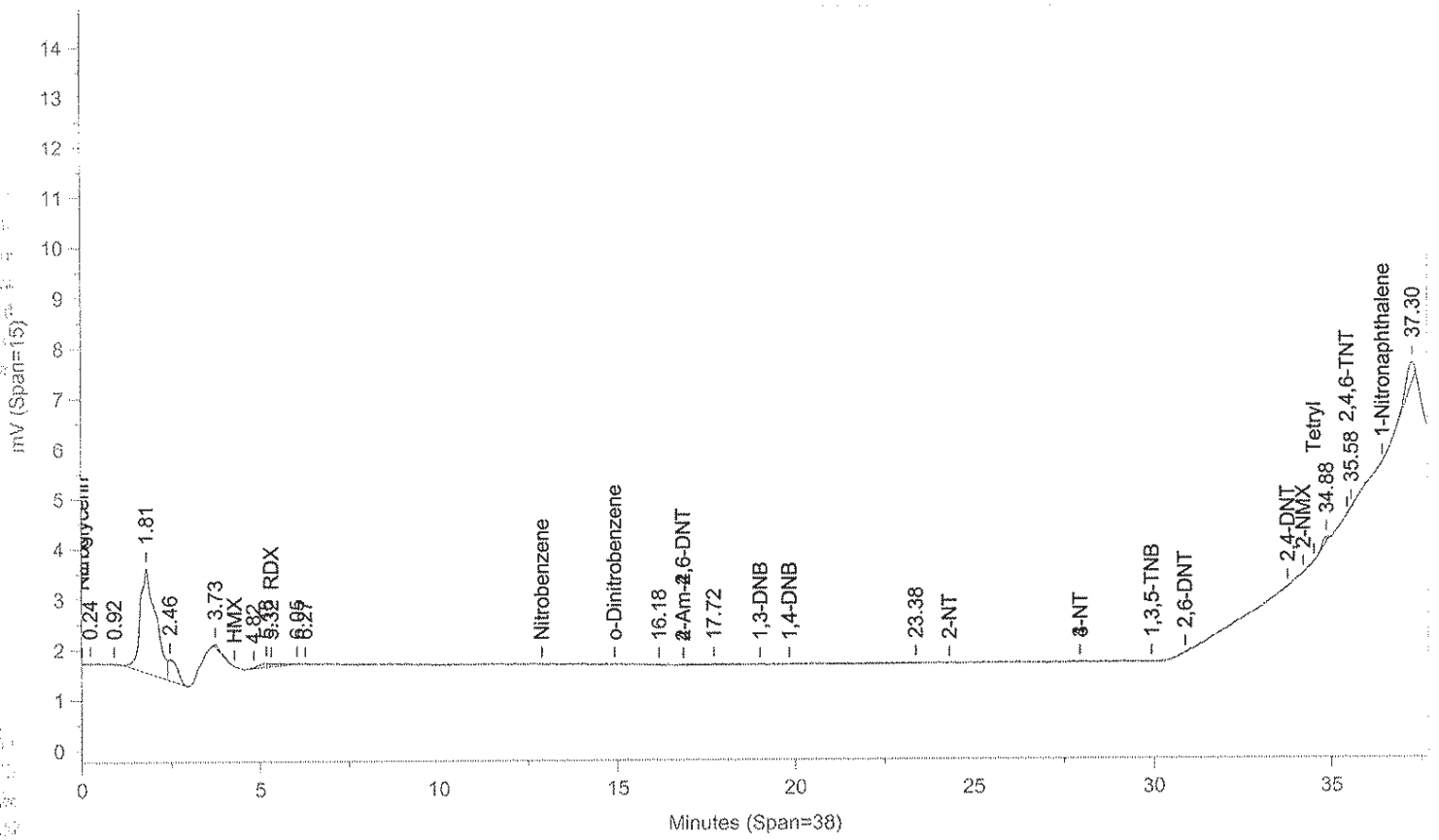
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.856	229995	.	2,4-DAm-6-NT
.	0	.	Nitroglycerin	9.671	8117	79.86	Nitroglycerin
16.913	1854	4.799	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

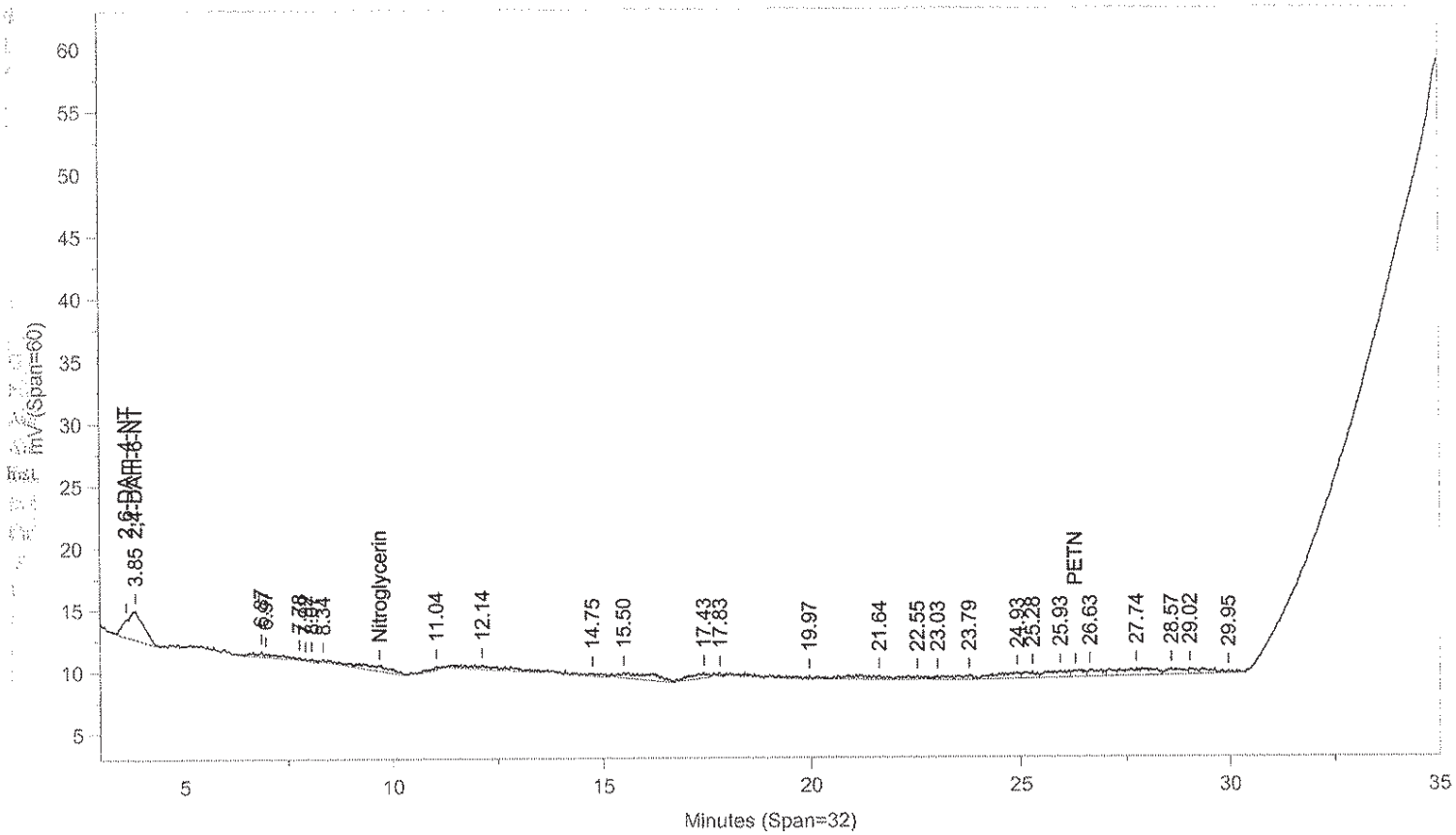
Files:
Area File: C:\CPWIN\DATA1\1C12310.14A
Area File: C:\CPWIN\DATA1\1C12310B.14A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:14 PM
File Reported On: 11/7/2013 at 6:29:23 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.15R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.15R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	3.849	68461	.	2,4-DAm-6-NT
5.316	1474	-10.427	RDX	.	0	.	RDX

Files:
Area File: C:\CPWIN\DATA1\1C12310.15A
Area File: C:\CPWIN\DATA1\1C12310B.15A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:44 PM
File Reported On: 11/7/2013 at 6:29:53 PM

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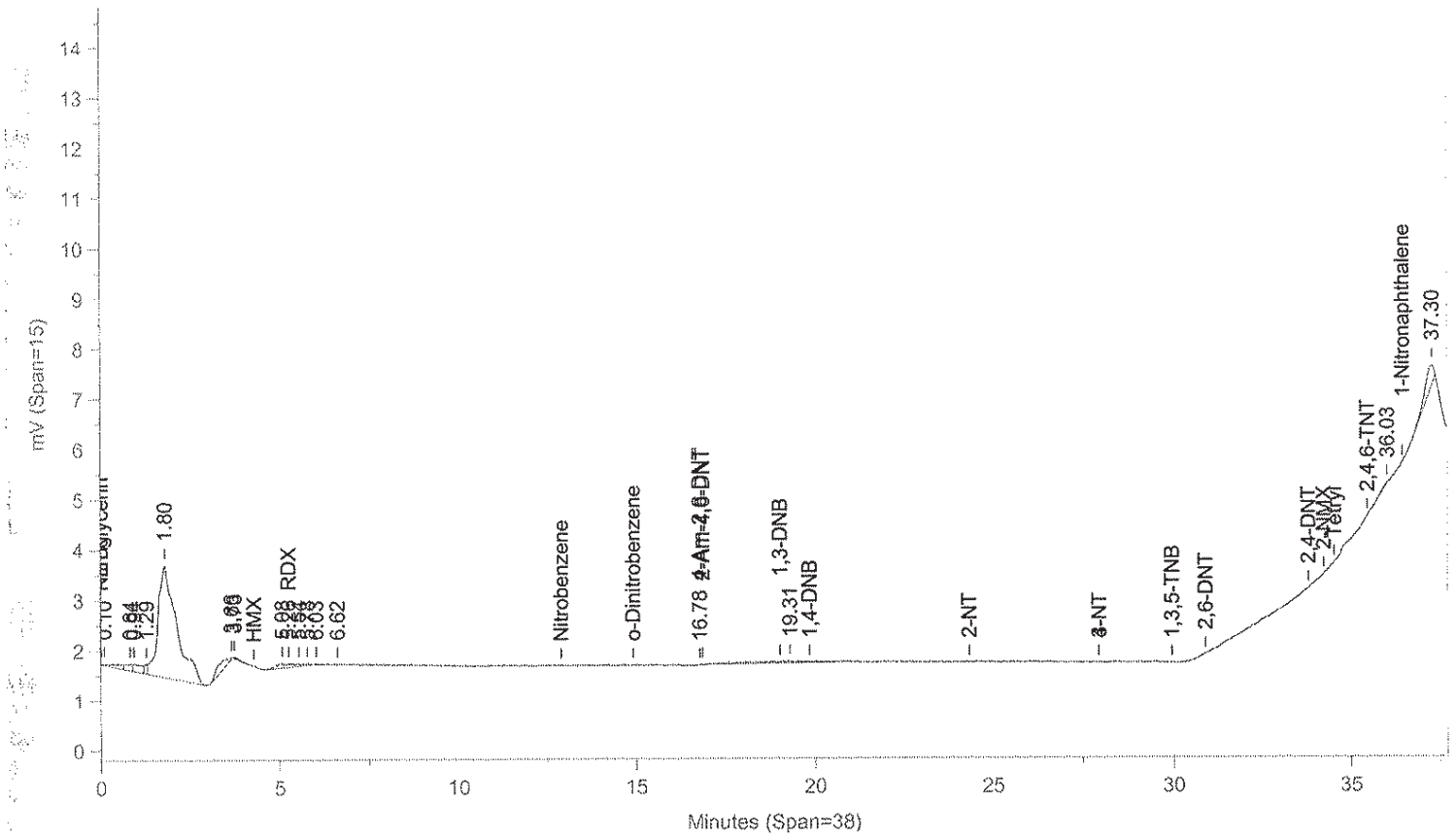
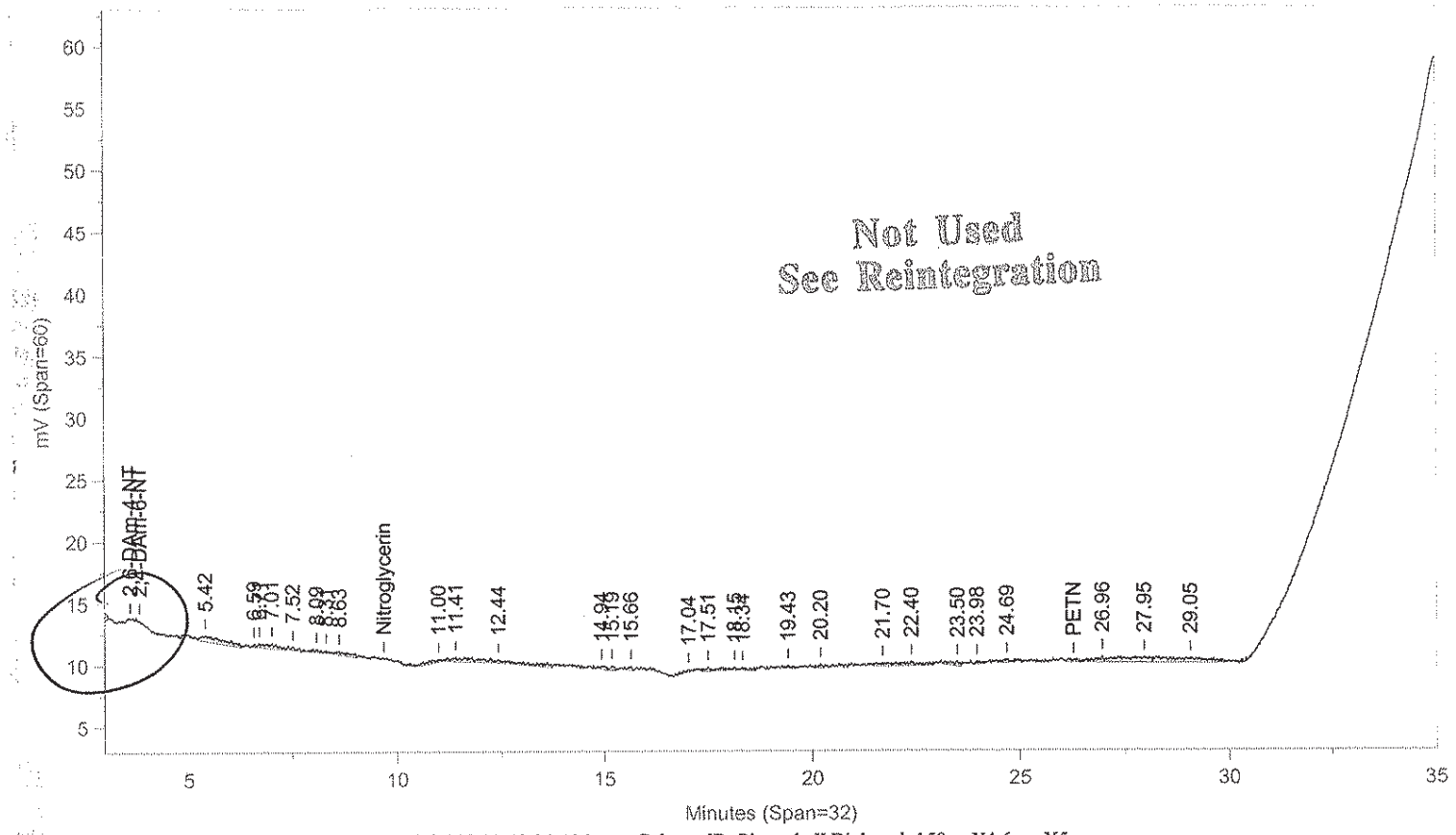
File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

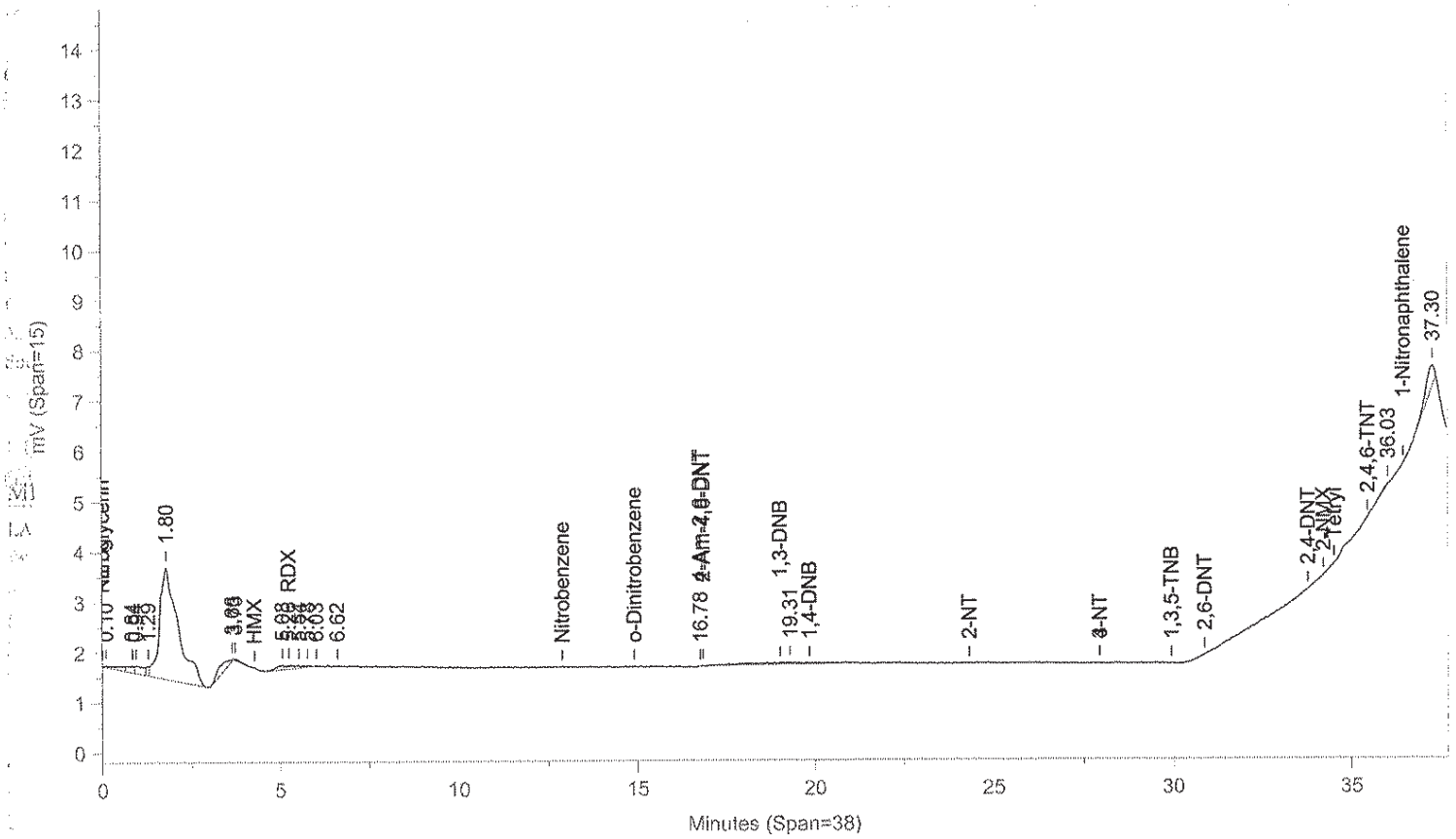
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.26	863	-15.881	RDX	.	0	.	RDX
16.782	22	.057	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.16A
Area File: C:\CPWIN\DATA1\1C12310B.16A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:30:14 PM
File Reported On: 11/7/2013 at 6:30:23 PM

Not Used
See Reintegration

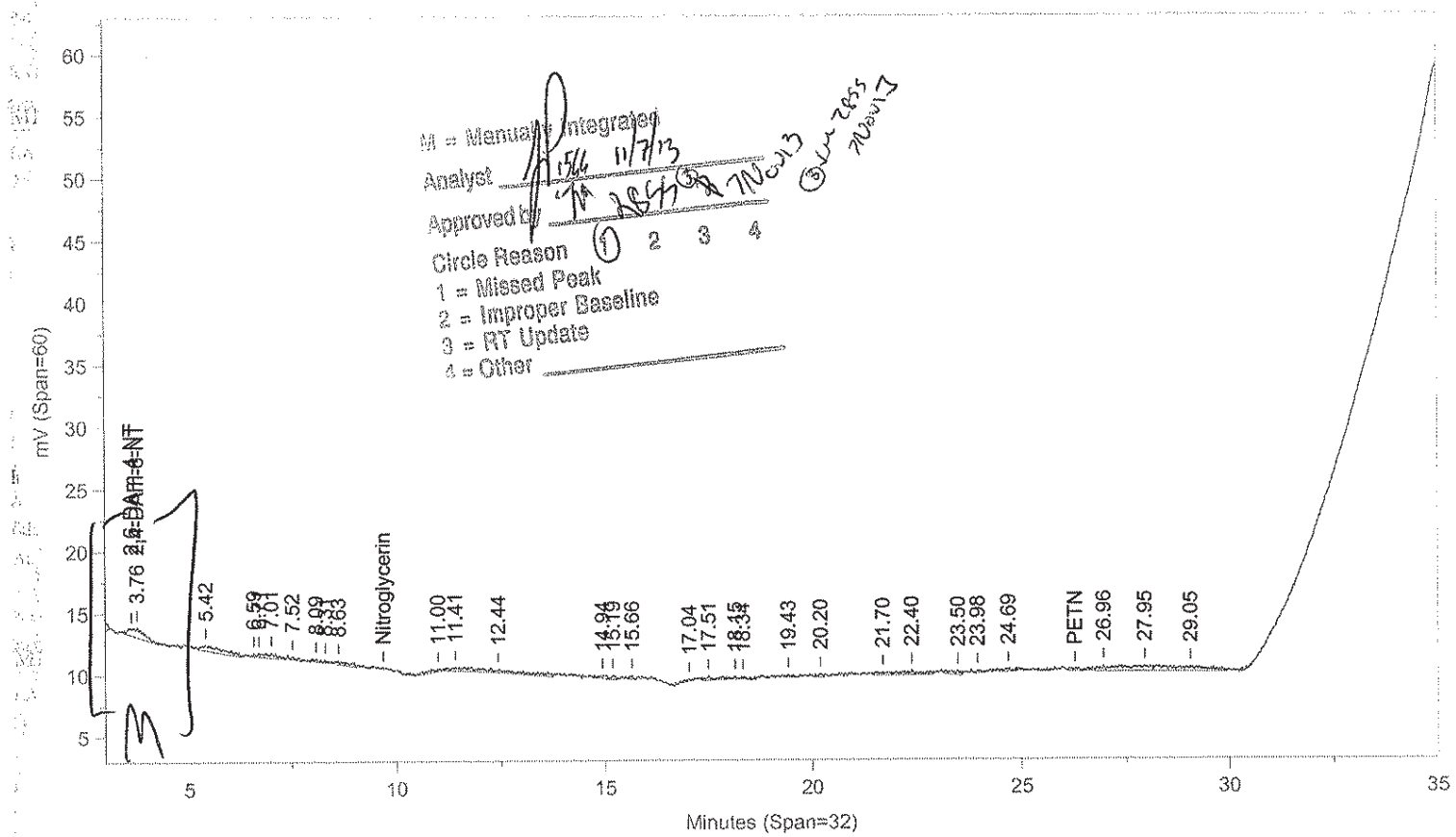
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



M = Manually Integrated
Analyst
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.761	17579	.	2,4-DAm-6-NT
5.26	863	-15.881	RDX	.	0	.	RDX
16.782	22	.057	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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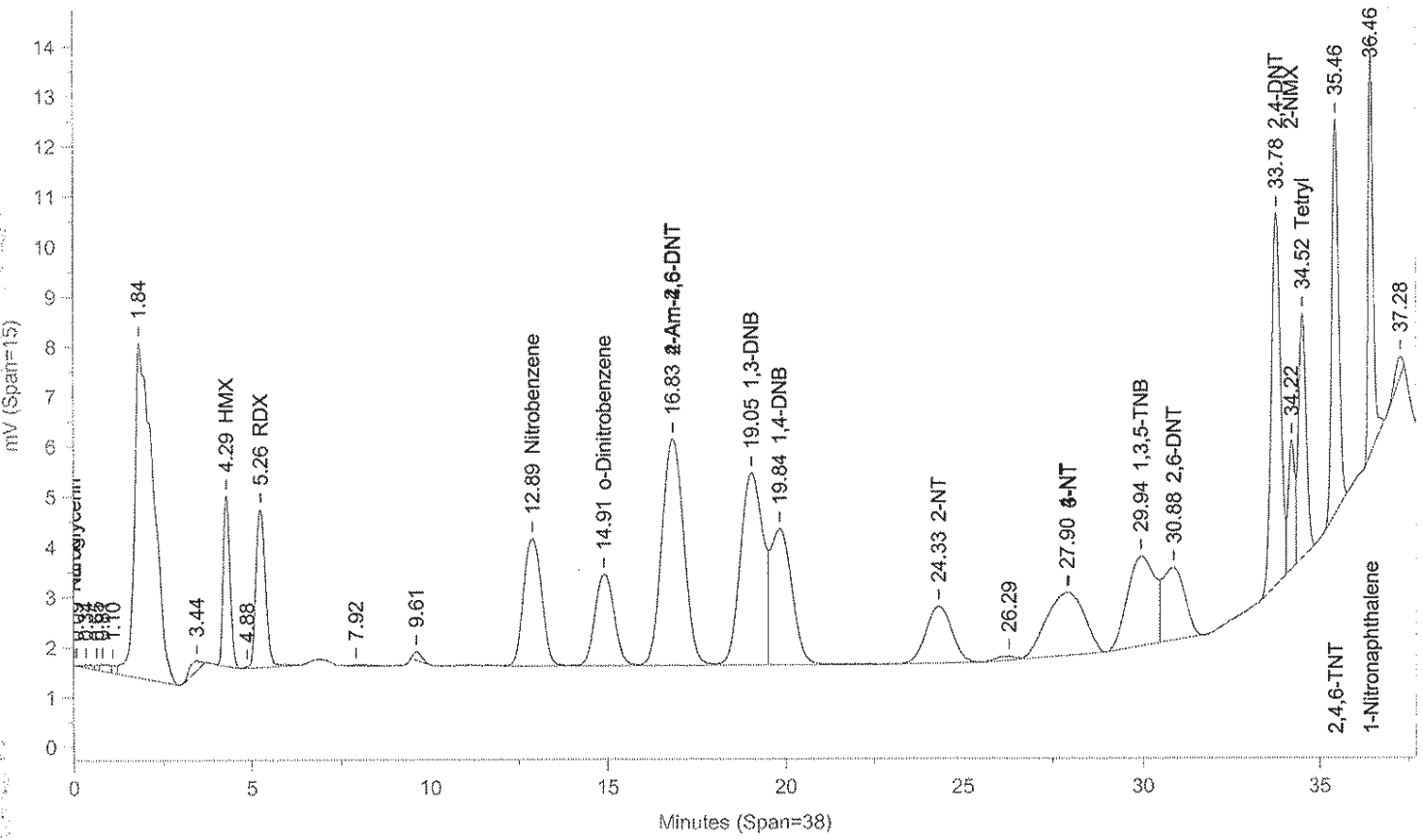
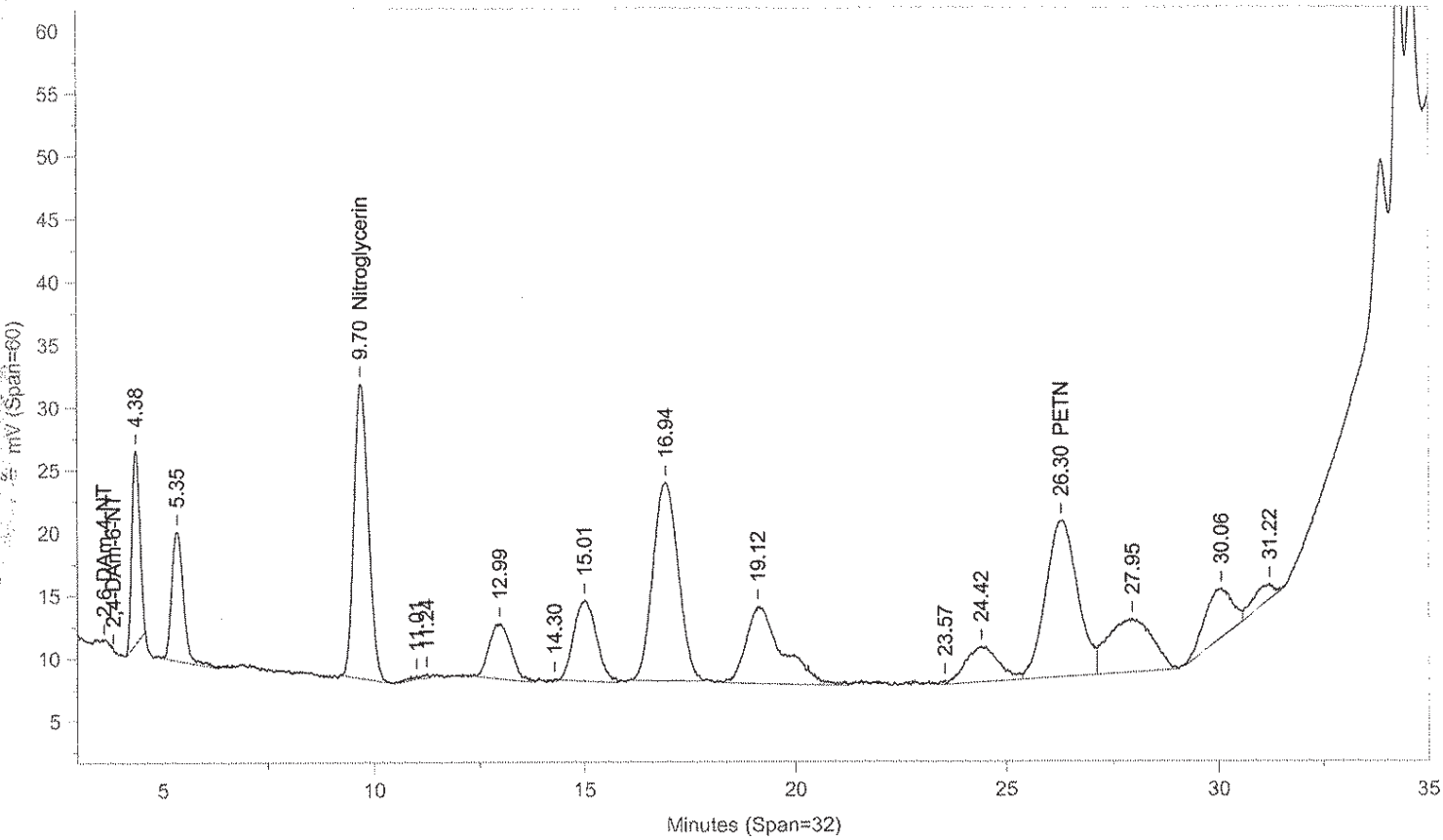
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.10R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.10R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.287	46501	443.578	HMX	.	0	.	HMX
5.259	58978	502.759	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	556021	5470.547	Nitroglycerin
12.894	91644	496.281	Nitrobenzene	.	0	.	Nitrobenzene
14.913	69876	502.214	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.833	192980	499.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.051	169180	499.488	1,3-DNB	.	0	.	1,3-DNB
19.836	116438	500.616	1,4-DNB	.	0	.	1,4-DNB
24.331	58749	501.957	2-NT	.	0	.	2-NT
.	0	.	PETN	26.296	636924	5363.191	PETN
27.897	90471	466.62	4-NT	.	0	.	4-NT
29.945	96363	443.532	1,3,5-TNB	.	0	.	1,3,5-TNB
30.883	63428	498.299	2,6-DNT	.	0	.	2,6-DNT
33.782	136607	528.912	2,4-DNT	.	0	.	2,4-DNT
34.22	32718	990.46	2-NMX	.	0	.	2-NMX
34.522	72541	475.026	Tetryl	.	0	.	Tetryl
35.457	105784	503.005	2,4,6-TNT	.	0	.	2,4,6-TNT
36.455	78595	517.657	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.10A
Area File: C:\CPWIN\DATA1\1C12310B.10A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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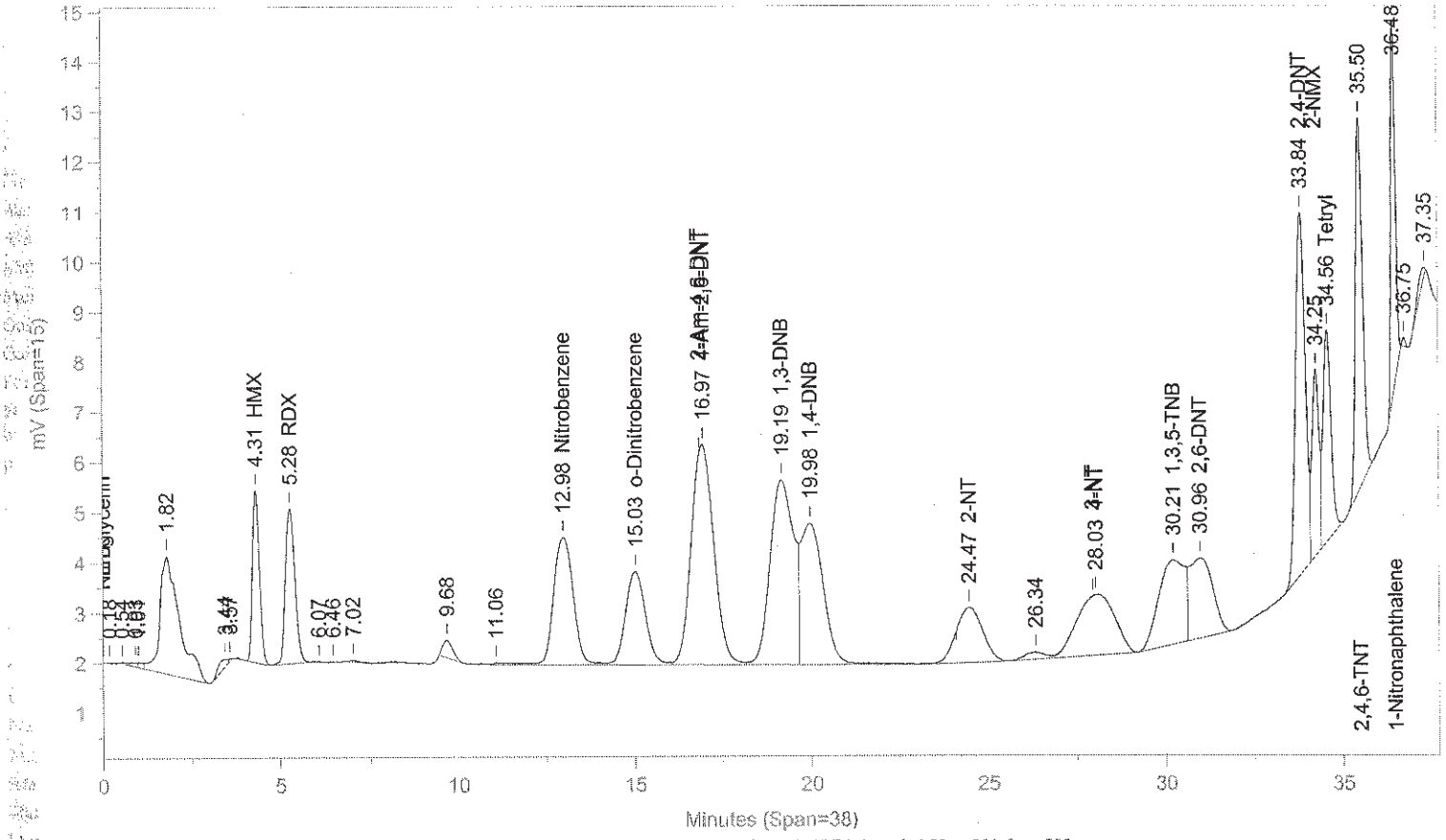
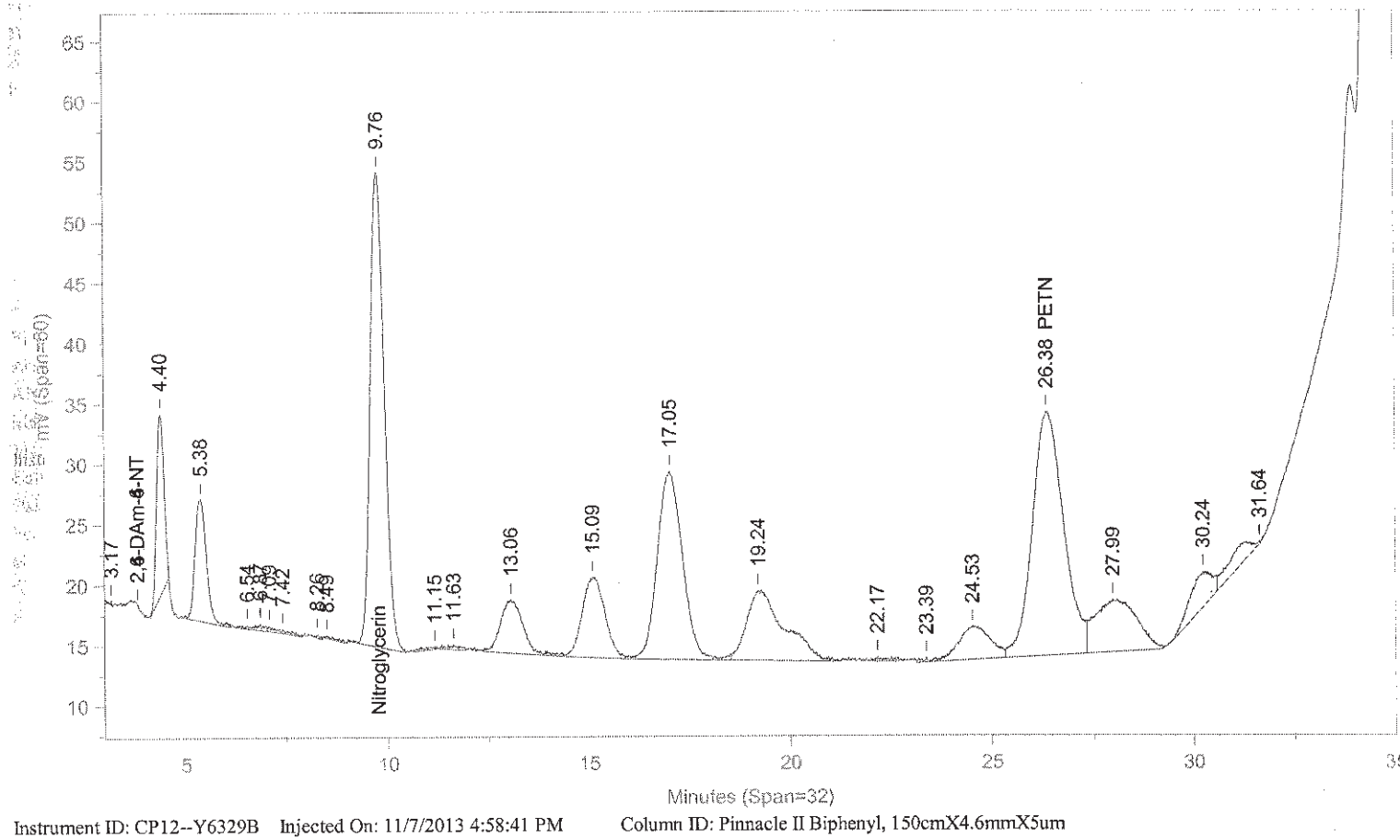
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.39R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 4:58:41 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

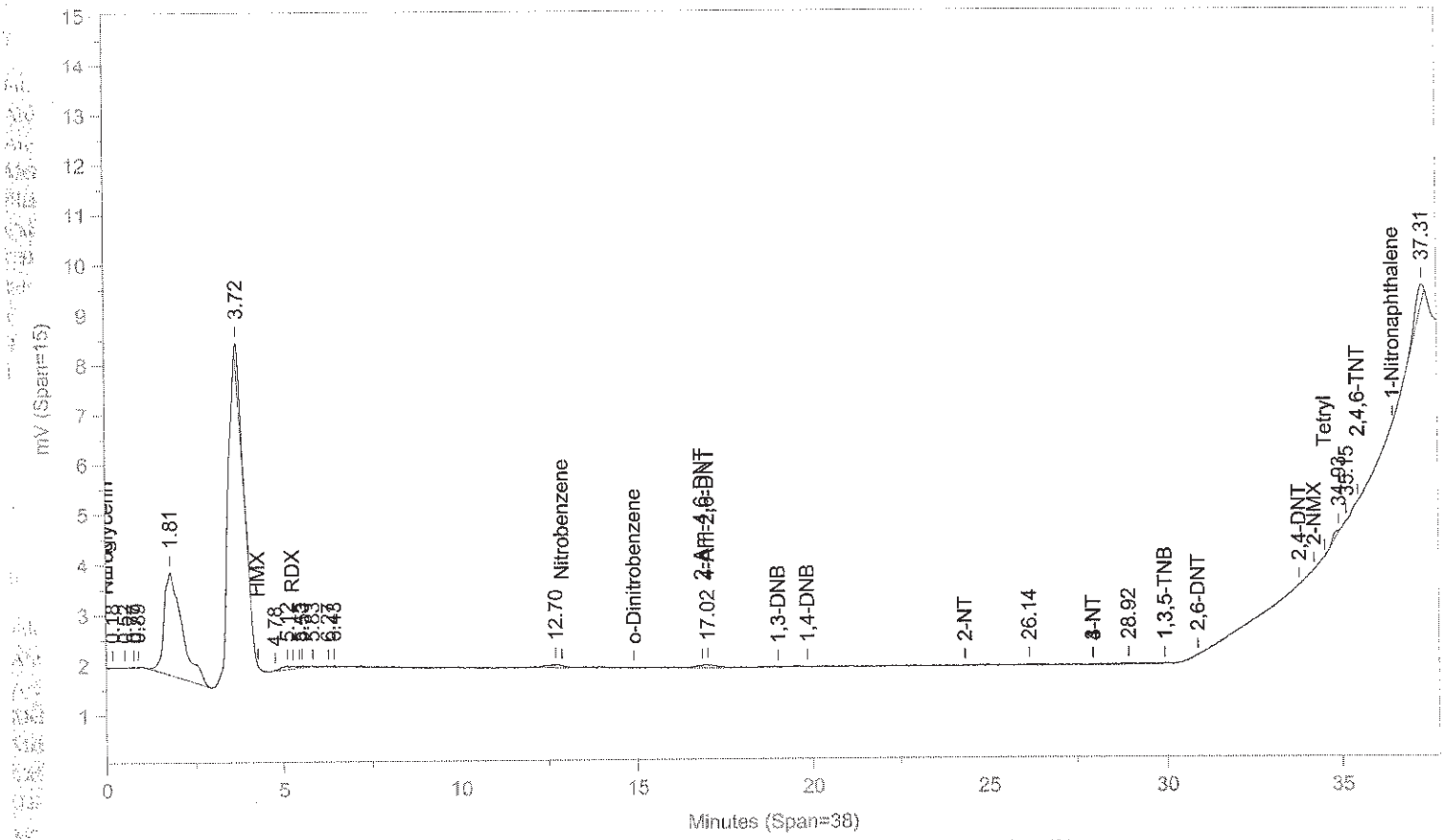
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.311	47688	454.906	HMX	.	0	.	HMX
15.284	58311	496.808	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.76	965616	9500.457	Nitroglycerin
12.977	95535	517.516	Nitrobenzene	.	0	.	Nitrobenzene
15.029	73460	528.576	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.965	193472	501.229	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.194	170028	501.992	1,3-DNB	.	0	.	1,3-DNB
19.984	122864	529.074	1,4-DNB	.	0	.	1,4-DNB
24.467	57690	492.764	2-NT	.	0	.	2-NT
.	0	.	PETN	26.381	1091611	9191.866	PETN
28.029	88638	457.418	4-NT	.	0	.	4-NT
30.212	87708	408.416	1,3,5-TNB	.	0	.	1,3,5-TNB
30.964	71686	561.447	2,6-DNT	.	0	.	2,6-DNT
33.841	135149	523.268	2,4-DNT	.	0	.	2,4-DNT
34.248	50237	1492.375	2-NMX	.	0	.	2-NMX
34.565	65961	433.595	Tetryl	.	0	.	Tetryl
35.5	104716	497.999	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	69797	462.81	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

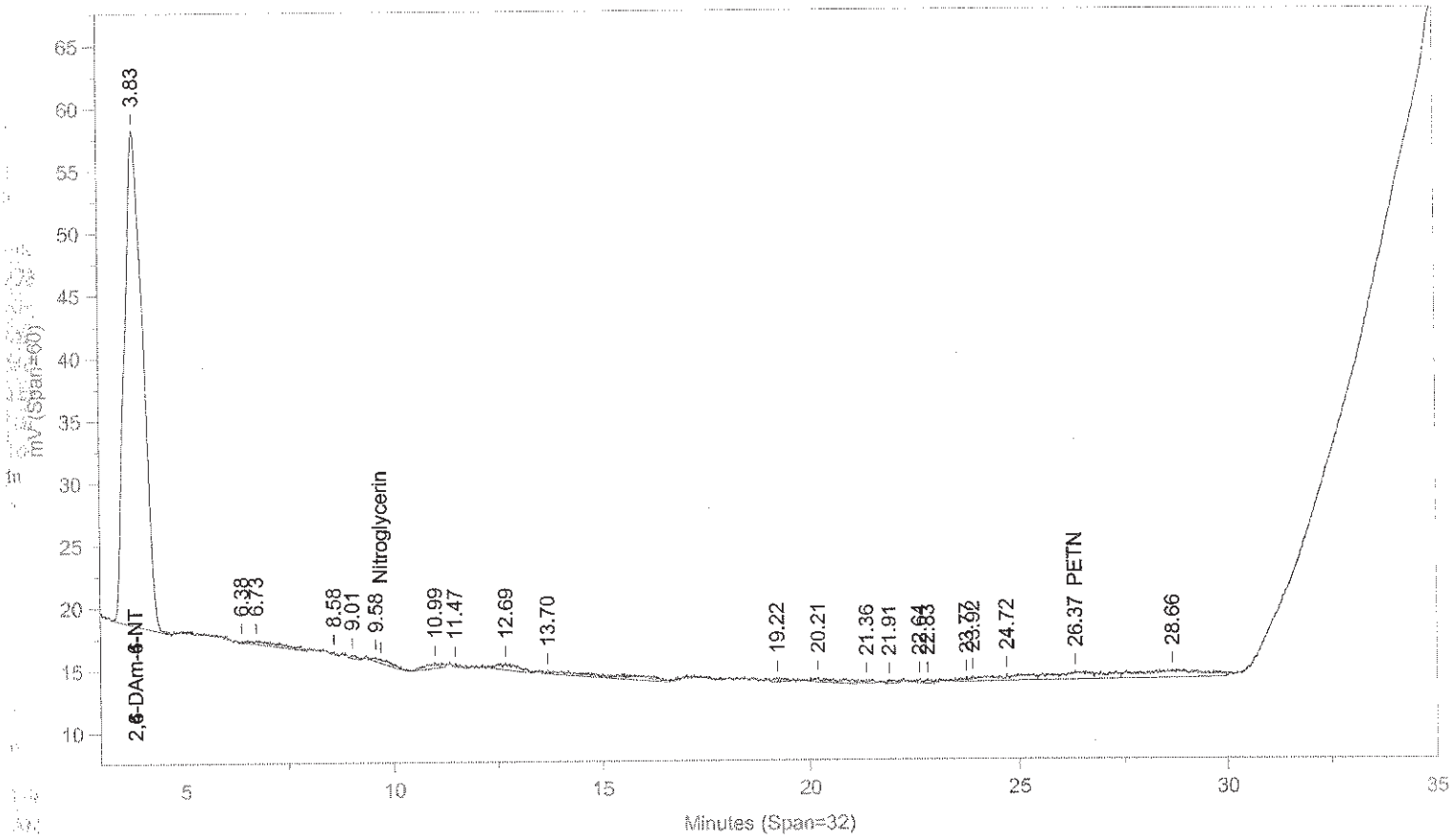
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:45:10 PM
File Reported On: 11/8/2013 at 1:45:09 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1C12310.40R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.40R



Instrument ID: CP12--Y6329B Injected On: 11/7/2013 5:41:08 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

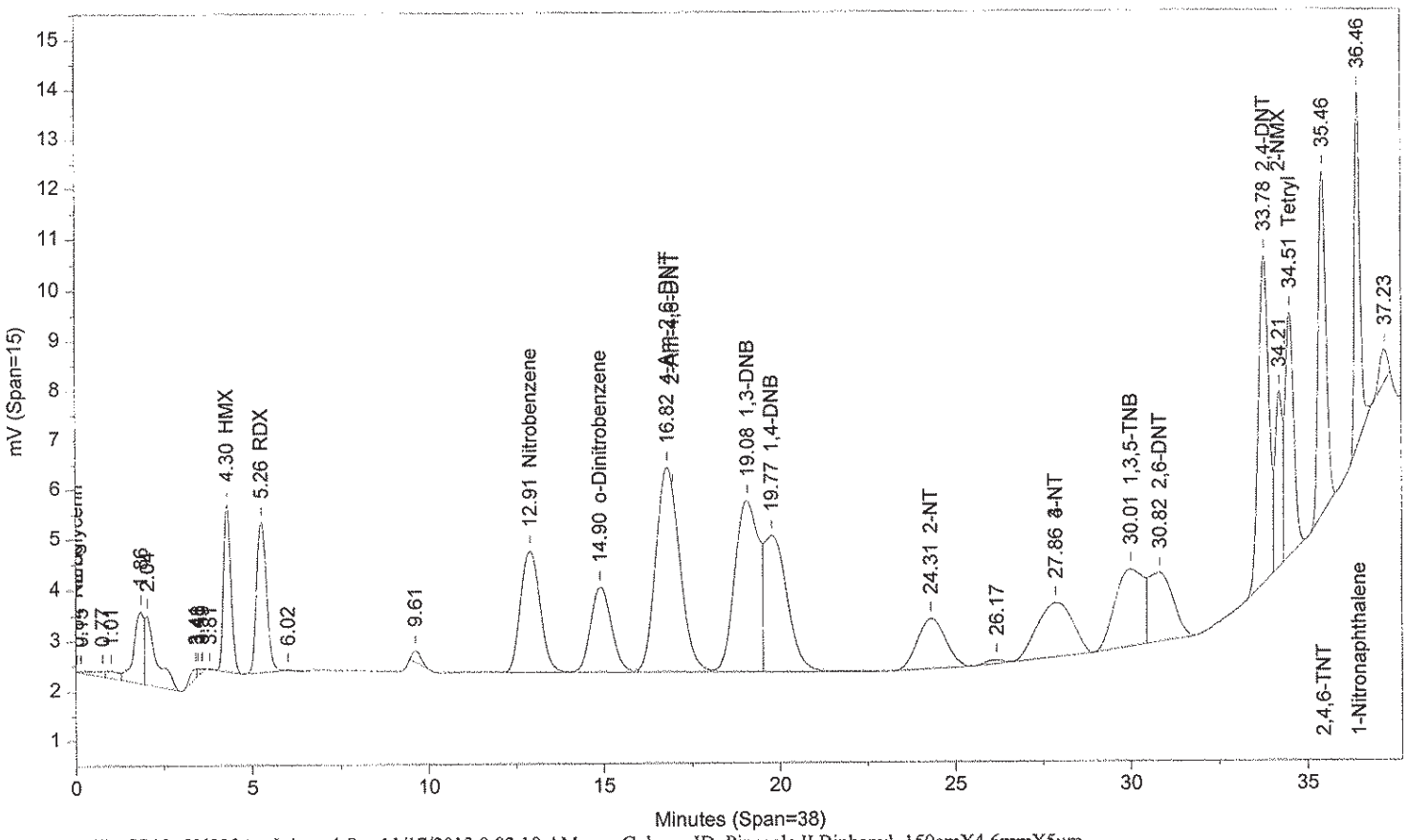
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.834	1187636	538.776	2,6-DAm-4-NT
17.016	3106	8.046	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.366	46924	395.12	PETN

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/8/2013 1:45:46 PM
File Reported On: 11/8/2013 at 1:45:44 PM

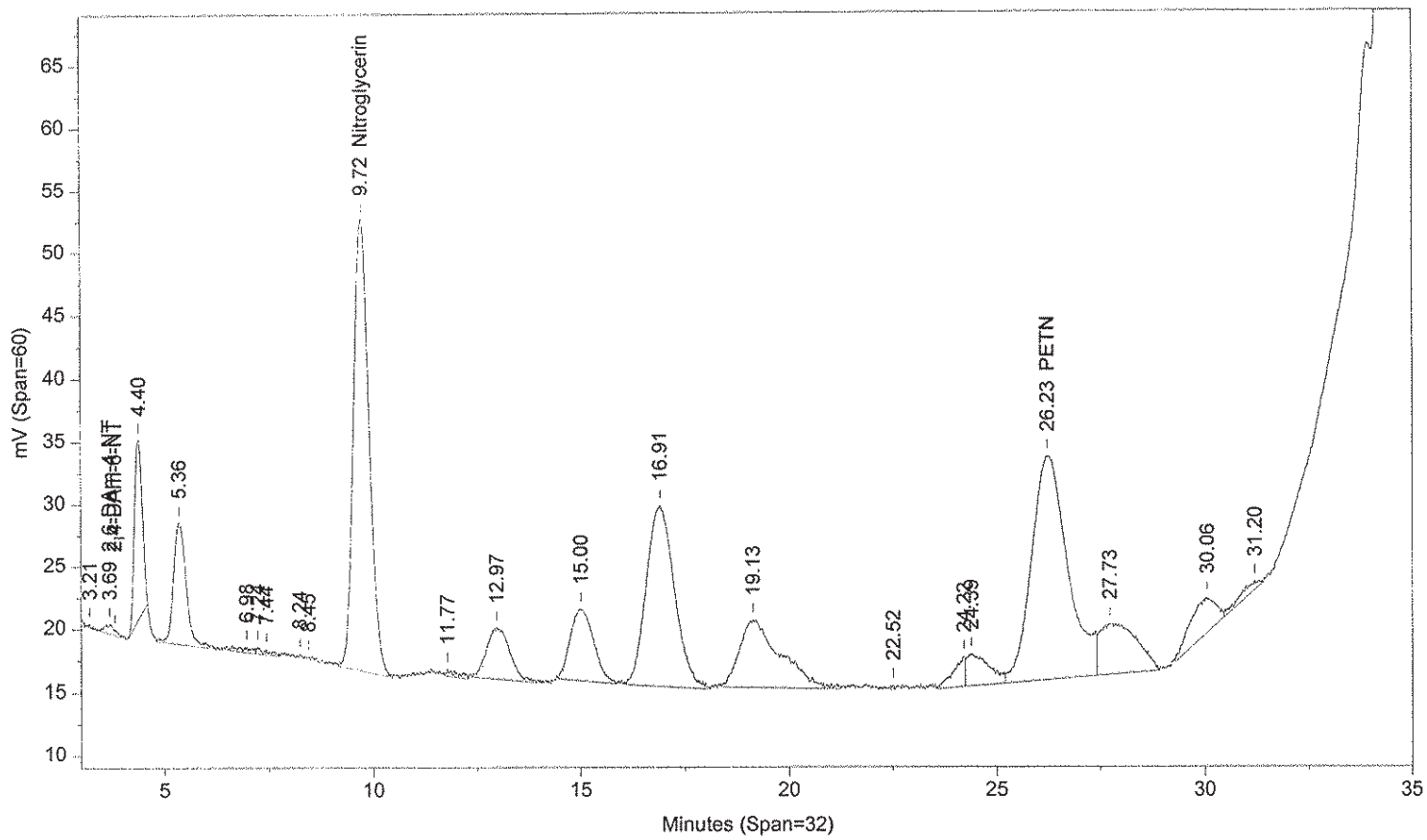
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.58R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.58R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

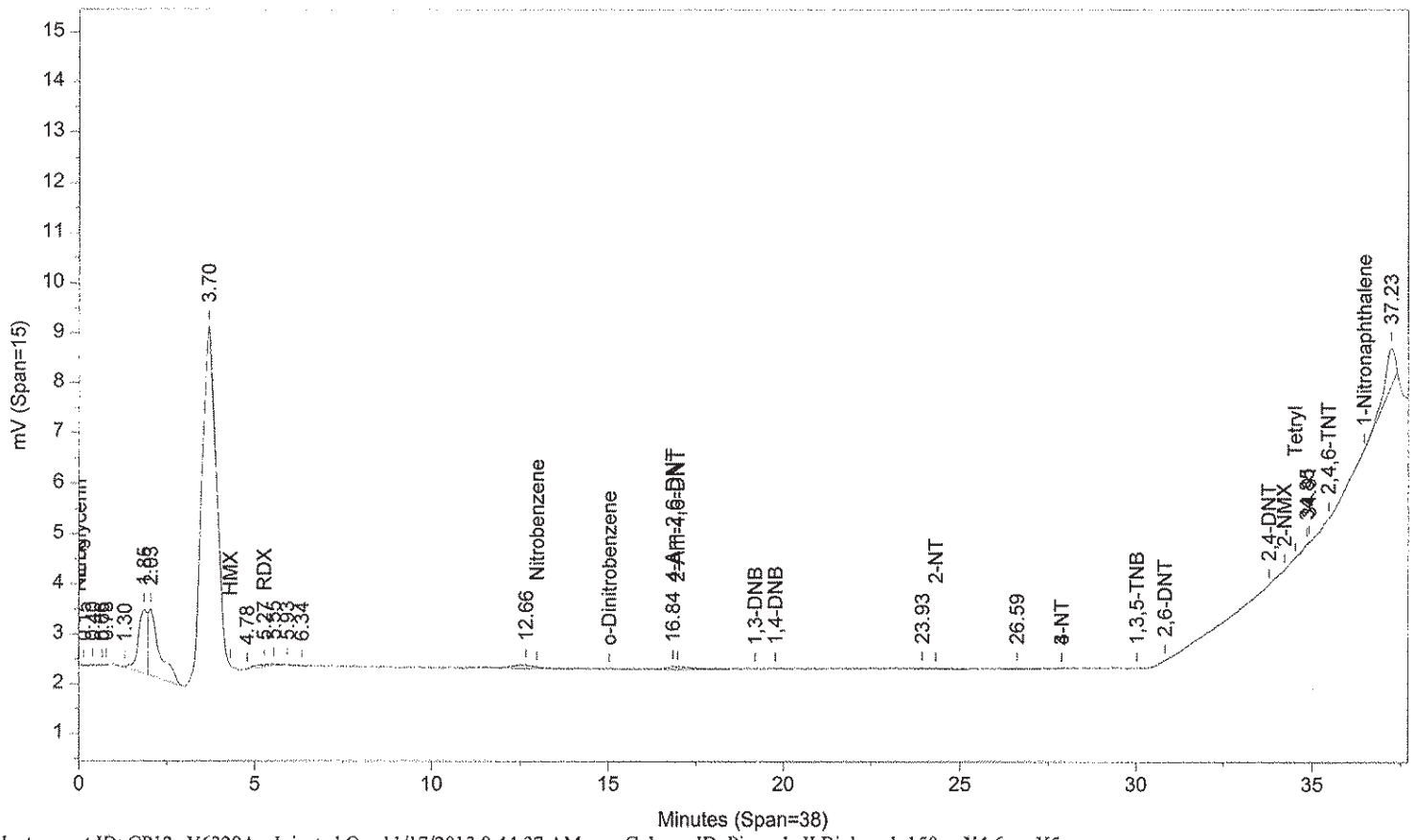
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.694	14543	6.598	2,6-DAm-4-NT
4.297	48637	463.959	HMX	.	0	.	HMX
5.262	58707	500.342	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.719	943360	9281.488	Nitroglycerin
12.911	93190	504.717	Nitrobenzene	.	0	.	Nitrobenzene
14.9	69827	501.855	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.817	192246	498.054	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.078	163081	481.48	1,3-DNB	.	0	.	1,3-DNB
19.773	124527	536.437	1,4-DNB	.	0	.	1,4-DNB
24.306	55862	476.901	2-NT	.	0	.	2-NT
.	0	.	PETN	26.233	1085988	9144.518	PETN
27.861	76417	394.058	3-NT	.	0	.	3-NT
30.009	85309	398.681	1,3,5-TNB	.	0	.	1,3,5-TNB
30.816	64444	506.07	2,6-DNT	.	0	.	2,6-DNT
33.782	135750	525.596	2,4-DNT	.	0	.	2,4-DNT
34.215	52158	1547.416	2-NMX	.	0	.	2-NMX
34.513	83687	545.21	Tetryl	.	0	.	Tetryl
35.458	105419	501.296	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	78051	514.265	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

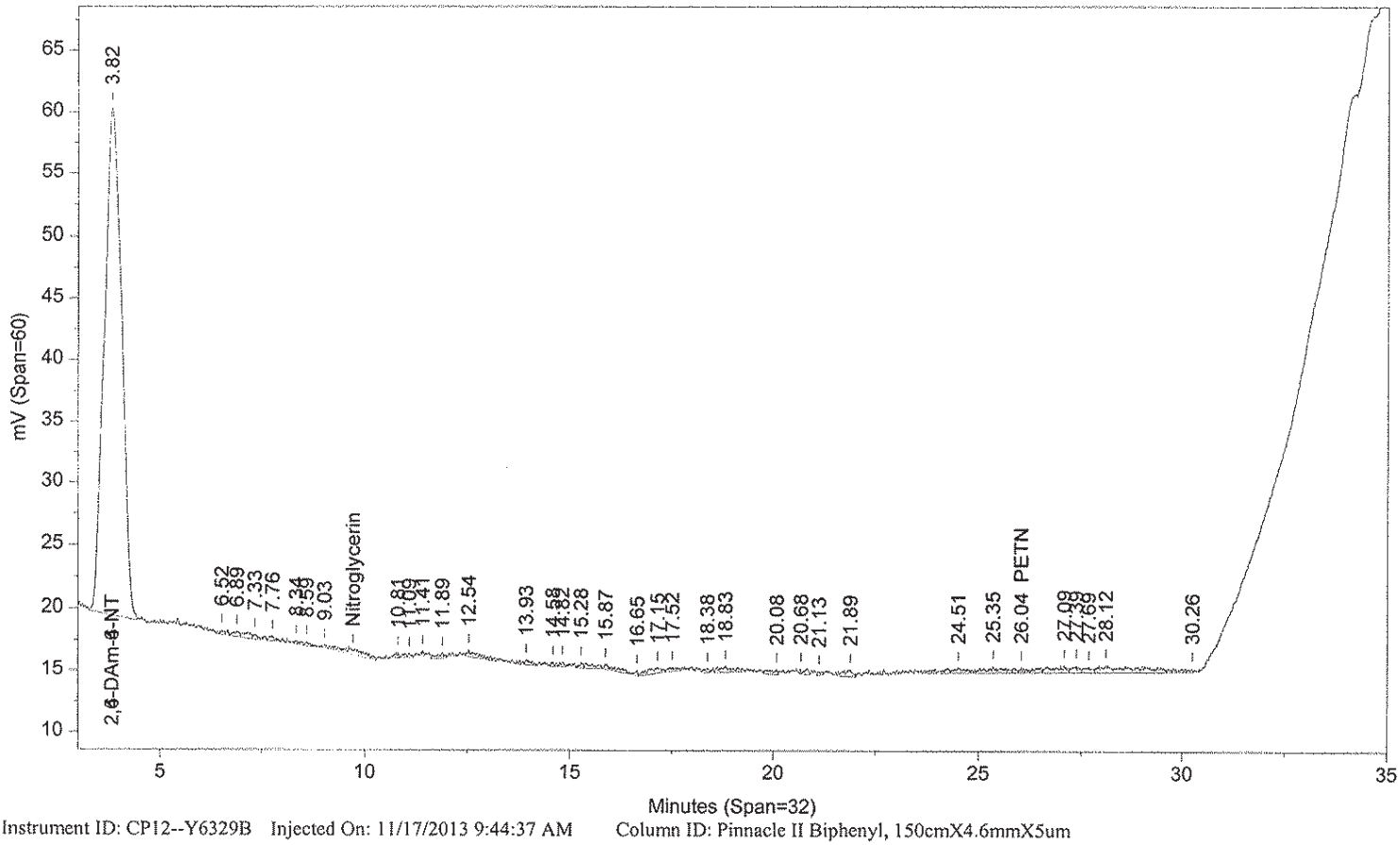
Files:
Area File: C:\CPWIN\DATA1\4C12310.58A
Area File: C:\CPWIN\DATA1\4C12310B.58A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:10 PM
File Reported On: 11/17/2013 at 9:49:20 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.59R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.59R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

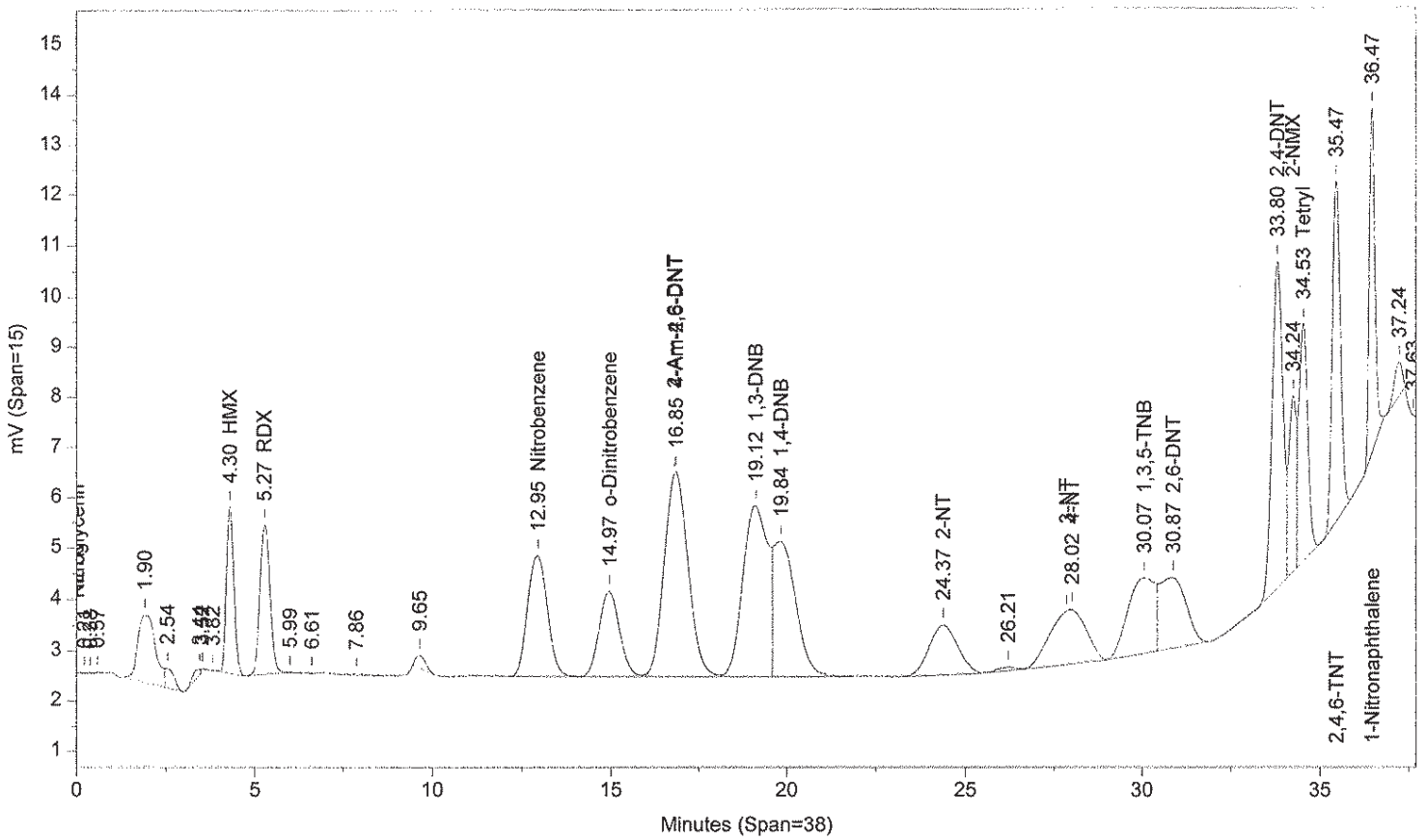
Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.818	1194434	541.86	2,6-DAm-4-NT
5.271	1214	-12.751	RDX	.	0	.	RDX
16.844	3478	9.011	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.04	9091	76.554	PETN

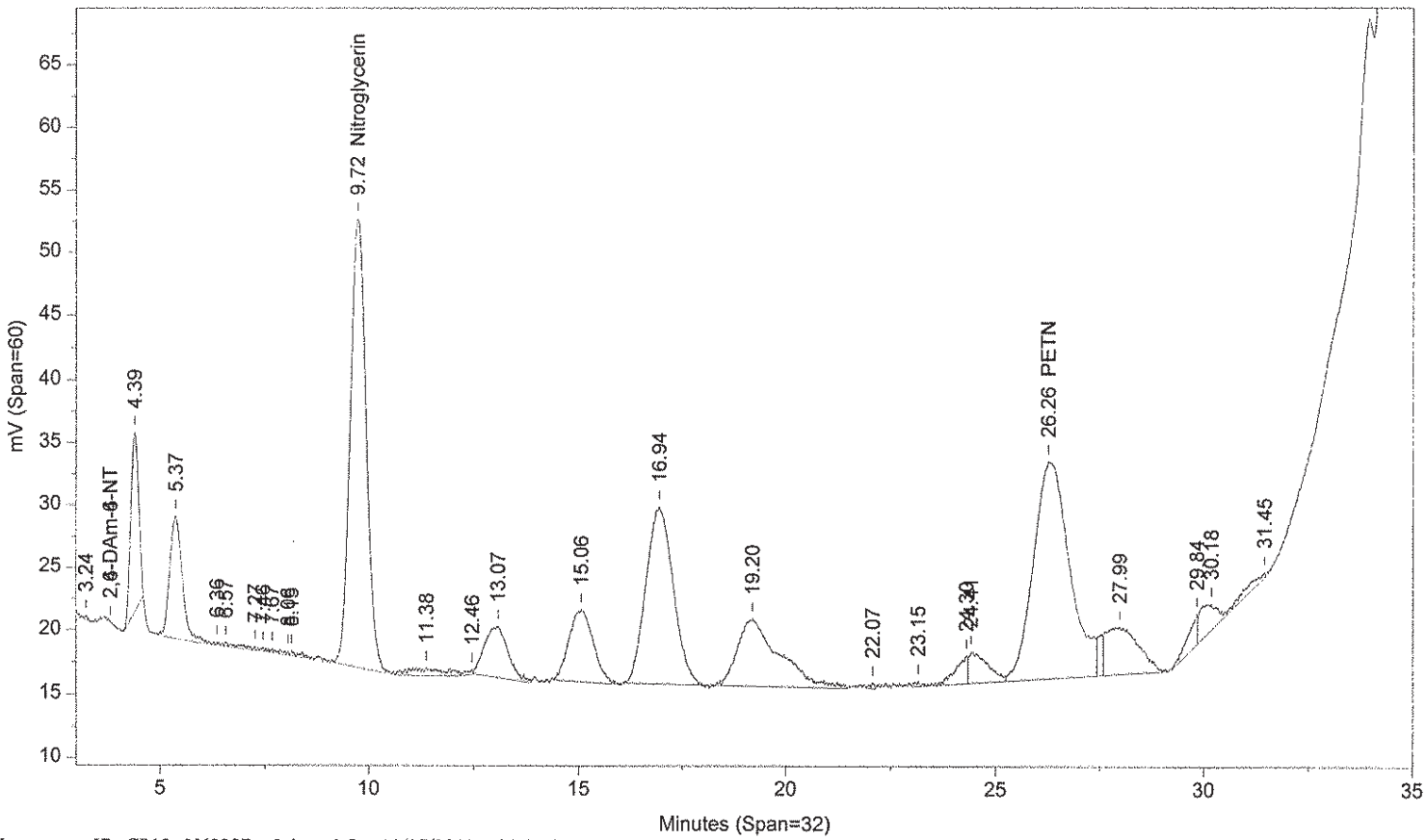
Files:
Area File: C:\CPWIN\DATA1\4C12310.59A
Area File: C:\CPWIN\DATA1\4C12310B.59A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:32 PM
File Reported On: 11/17/2013 at 9:49:43 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.70R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.70R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.301	48255	460.316	HMX	.	0	.	HMX
5.268	57969	493.76	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.722	947131	9318.583	Nitroglycerin
12.947	92582	501.4	Nitrobenzene	.	0	.	Nitrobenzene
14.966	69092	496.444	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.854	190987	494.793	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.121	168398	497.18	1,3-DNB	.	0	.	1,3-DNB
19.842	114801	493.37	1,4-DNB	.	0	.	1,4-DNB
24.372	55388	472.786	2-NT	.	0	.	2-NT
.	0	.	PETN	26.261	1046086	8808.525	PETN
28.017	75737	392.638	4-NT	.	0	.	4-NT
30.066	77417	366.656	1,3,5-TNB	.	0	.	1,3,5-TNB
30.871	70888	555.345	2,6-DNT	.	0	.	2,6-DNT
33.798	136400	528.11	2,4-DNT	.	0	.	2,4-DNT
34.237	51099	1517.054	2-NMX	.	0	.	2-NMX
34.531	83024	541.032	Tetryl	.	0	.	Tetryl
35.47	106258	505.23	2,4,6-TNT	.	0	.	2,4,6-TNT
36.472	76815	506.558	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.70A
Area File: C:\CPWIN\DATA1\4C12310B.70A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:20:20 PM
File Reported On: 11/17/2013 at 10:20:29 PM

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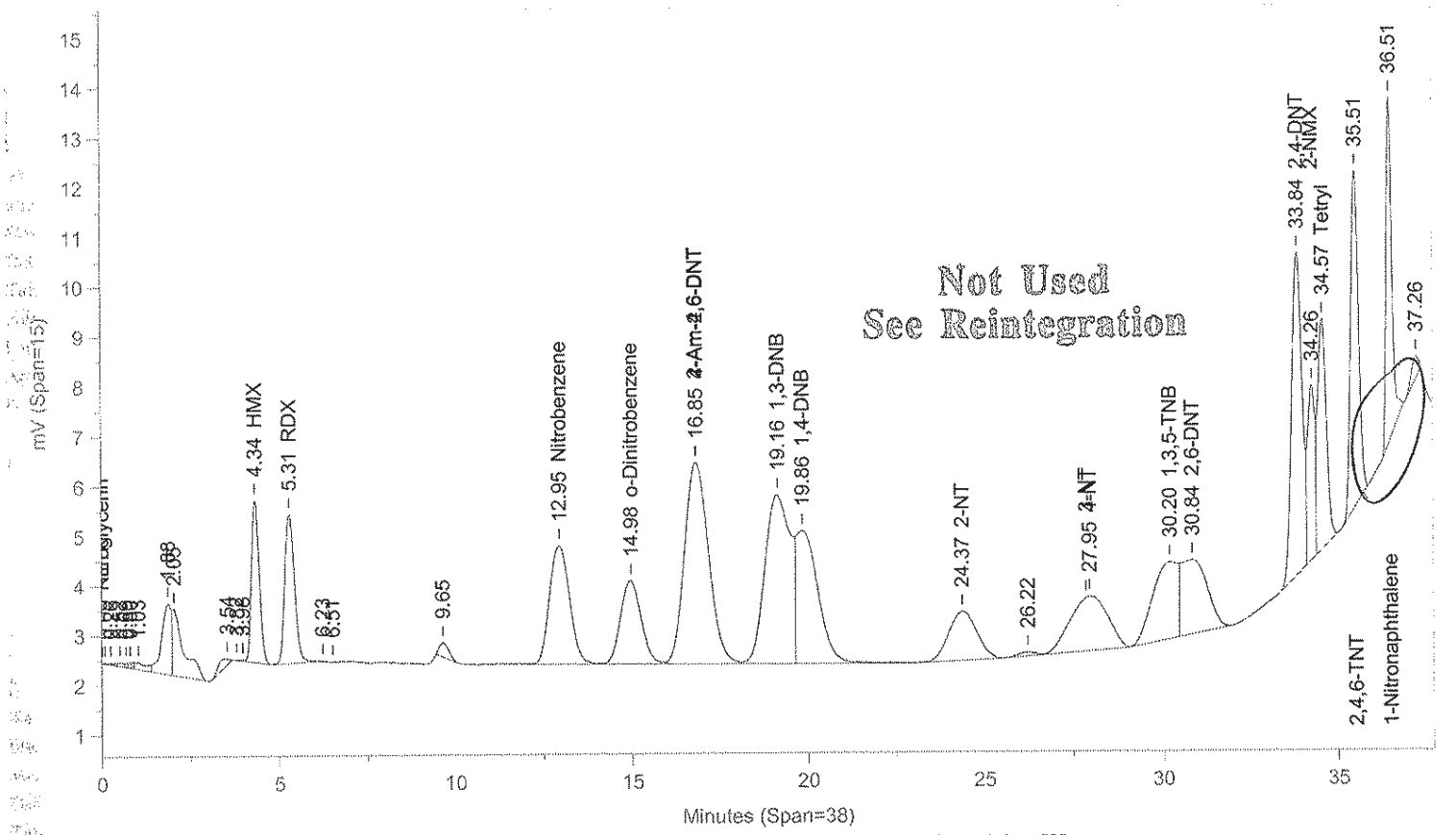
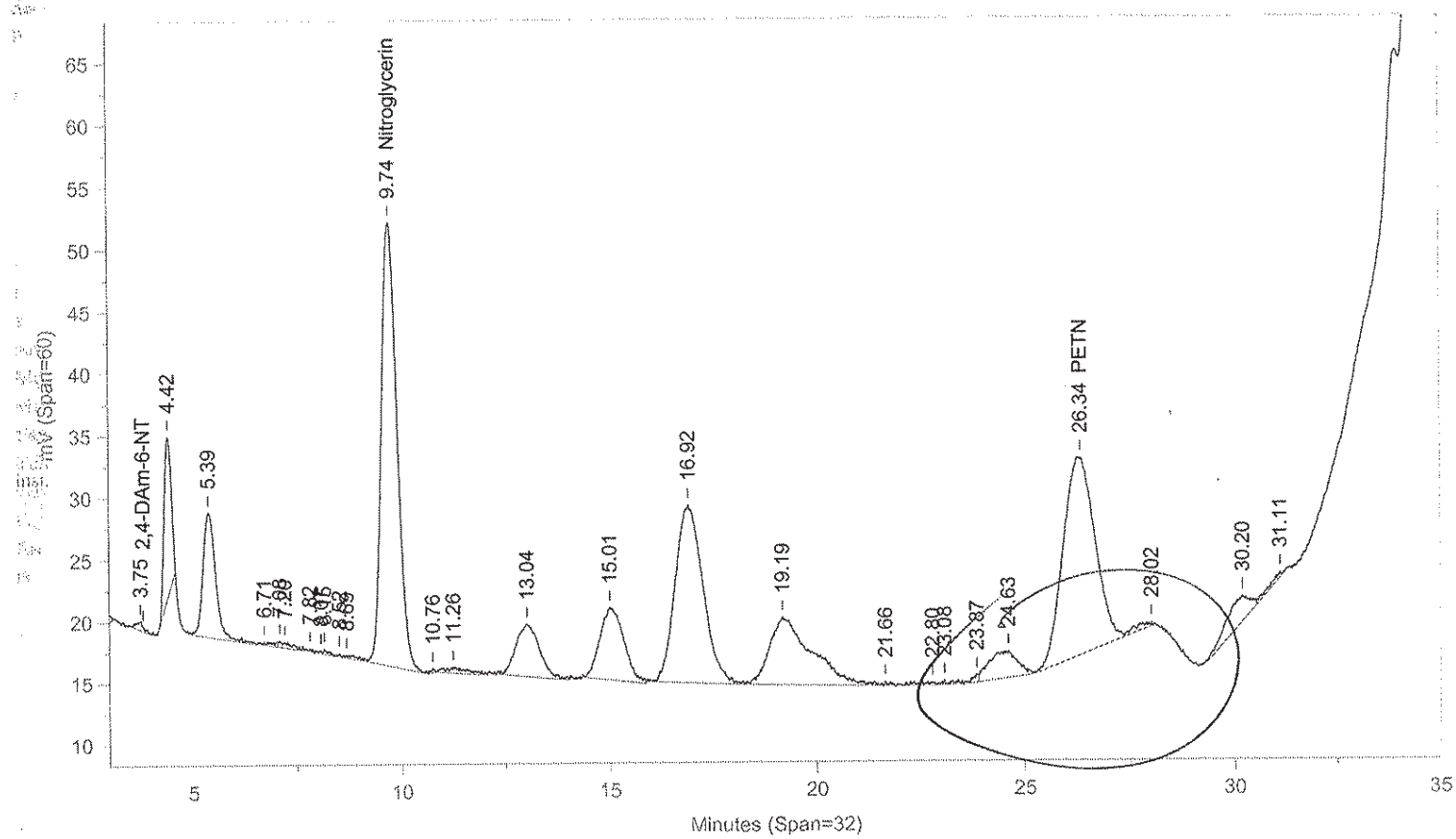
File: C:\CPWIN\DATA1\4C12310.81R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.81R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	852692	7180.06	PETN
27.95	80386	415.982	4-NT	.	0	.	4-NT
30.199	76457	362.763	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	76891	601.25	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	79216	521.527	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.81A
Area File: C:\CPWIN\DATA1\4C12310B.81A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:21:30 PM
File Reported On: 11/18/2013 at 3:21:40 PM

Not Used
See Reintegration

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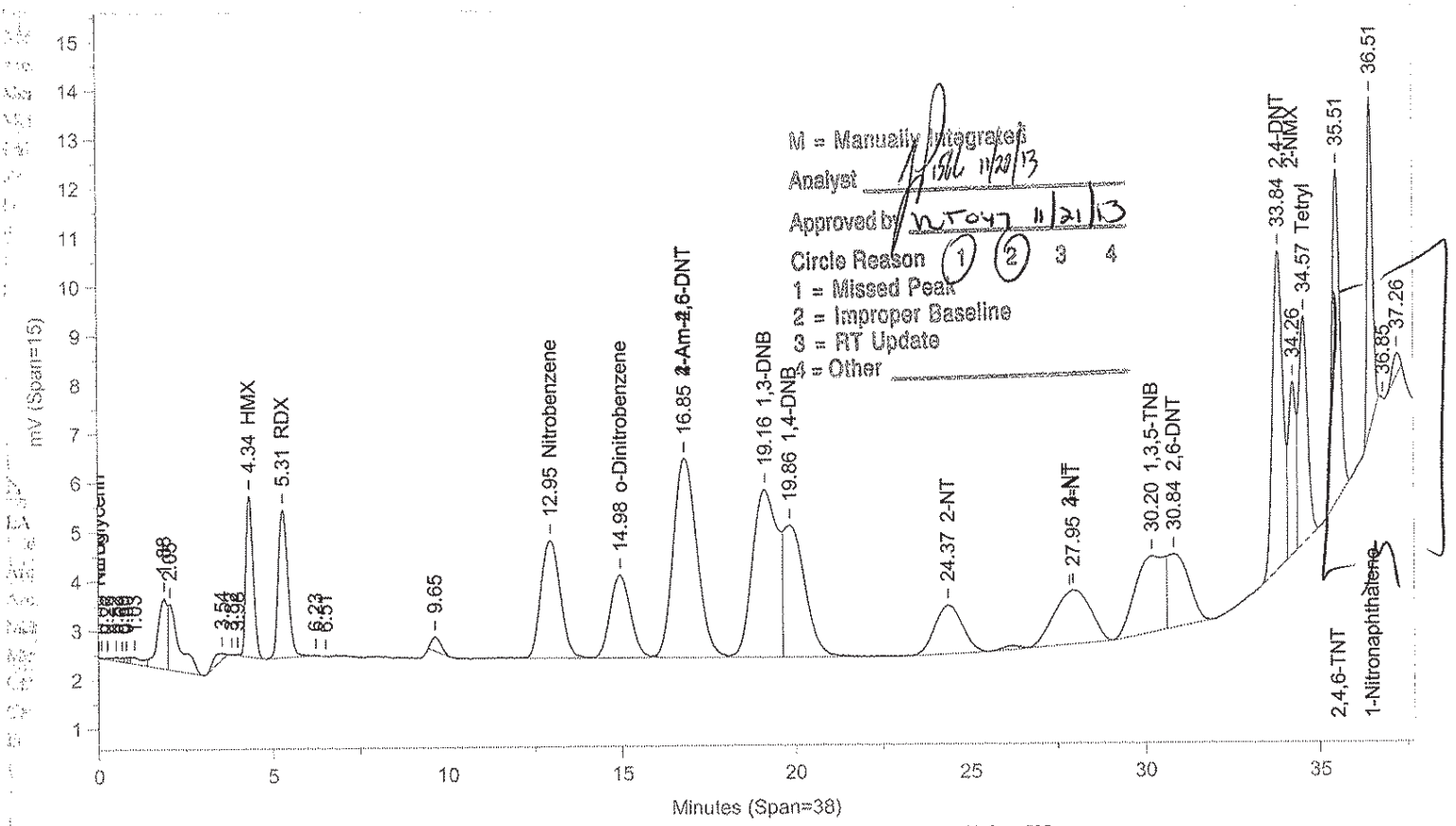
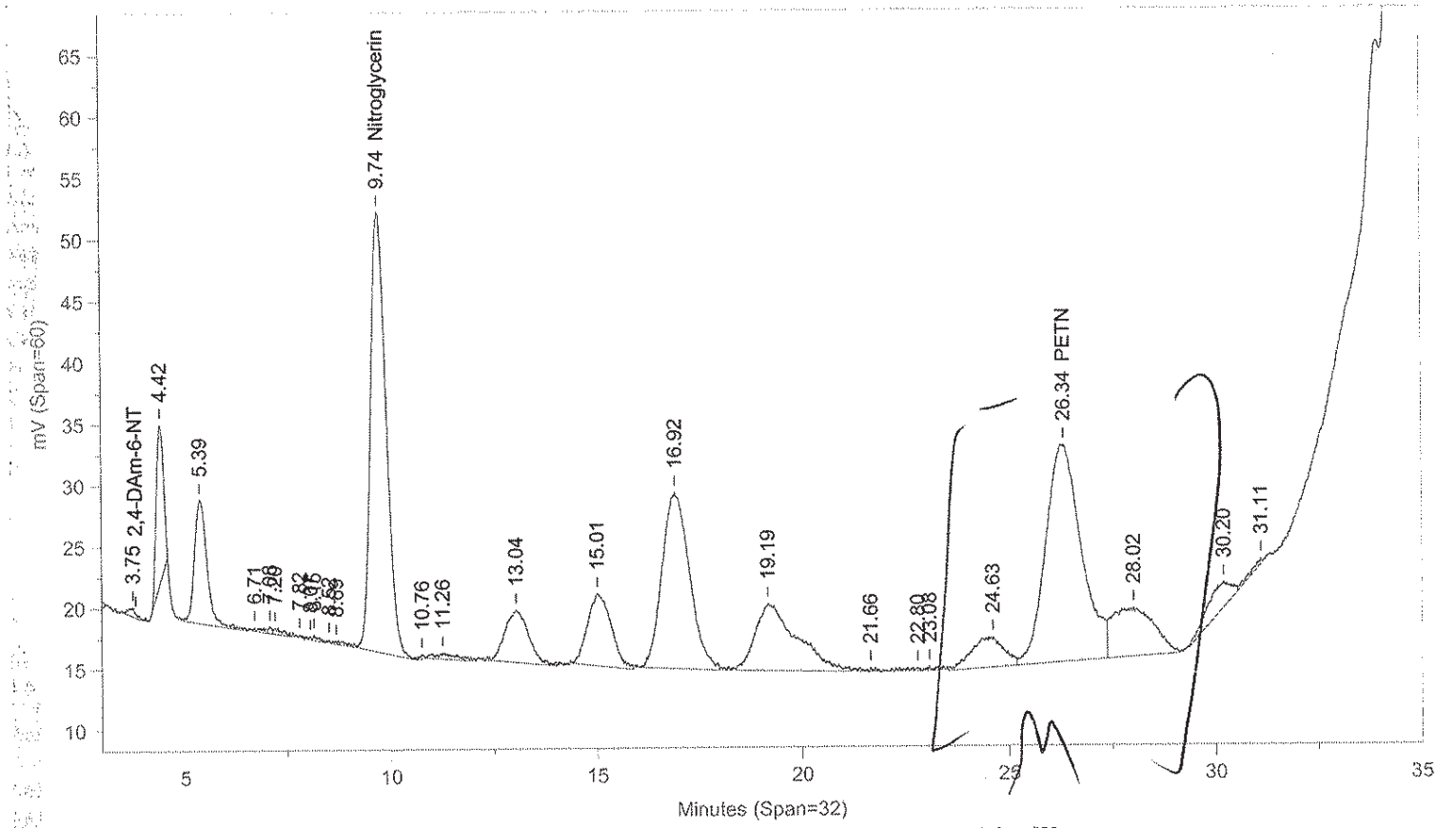
File: C:\CPWIN\DATA1\4C12310.81R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.81R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

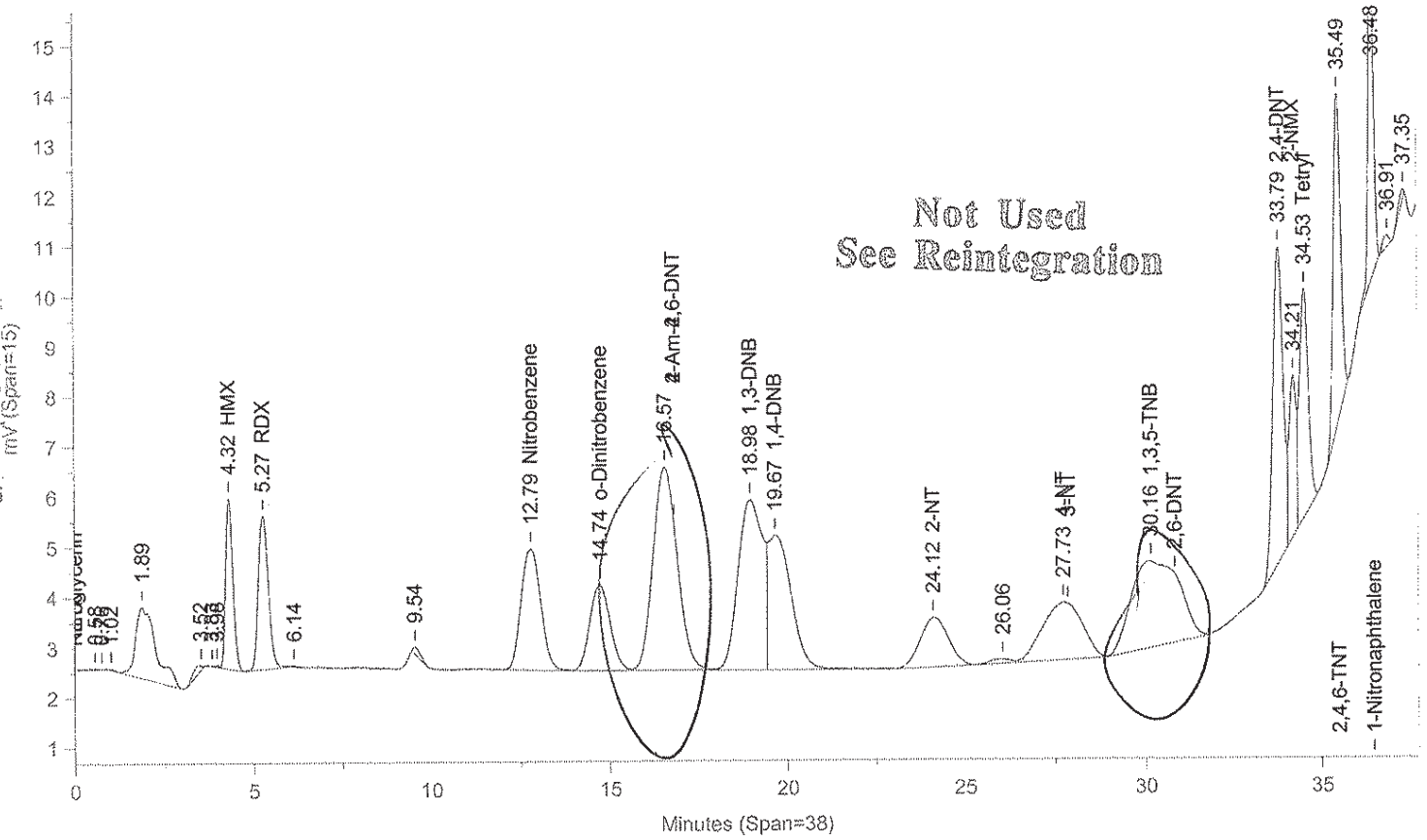
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	1069600	9006.529	PETN
27.95	83244	430.33	4-NT	.	0	.	4-NT
30.199	91228	422.696	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	62120	488.303	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	71874	475.755	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:49:40 PM
File Reported On: 11/20/2013 at 2:49:38 PM

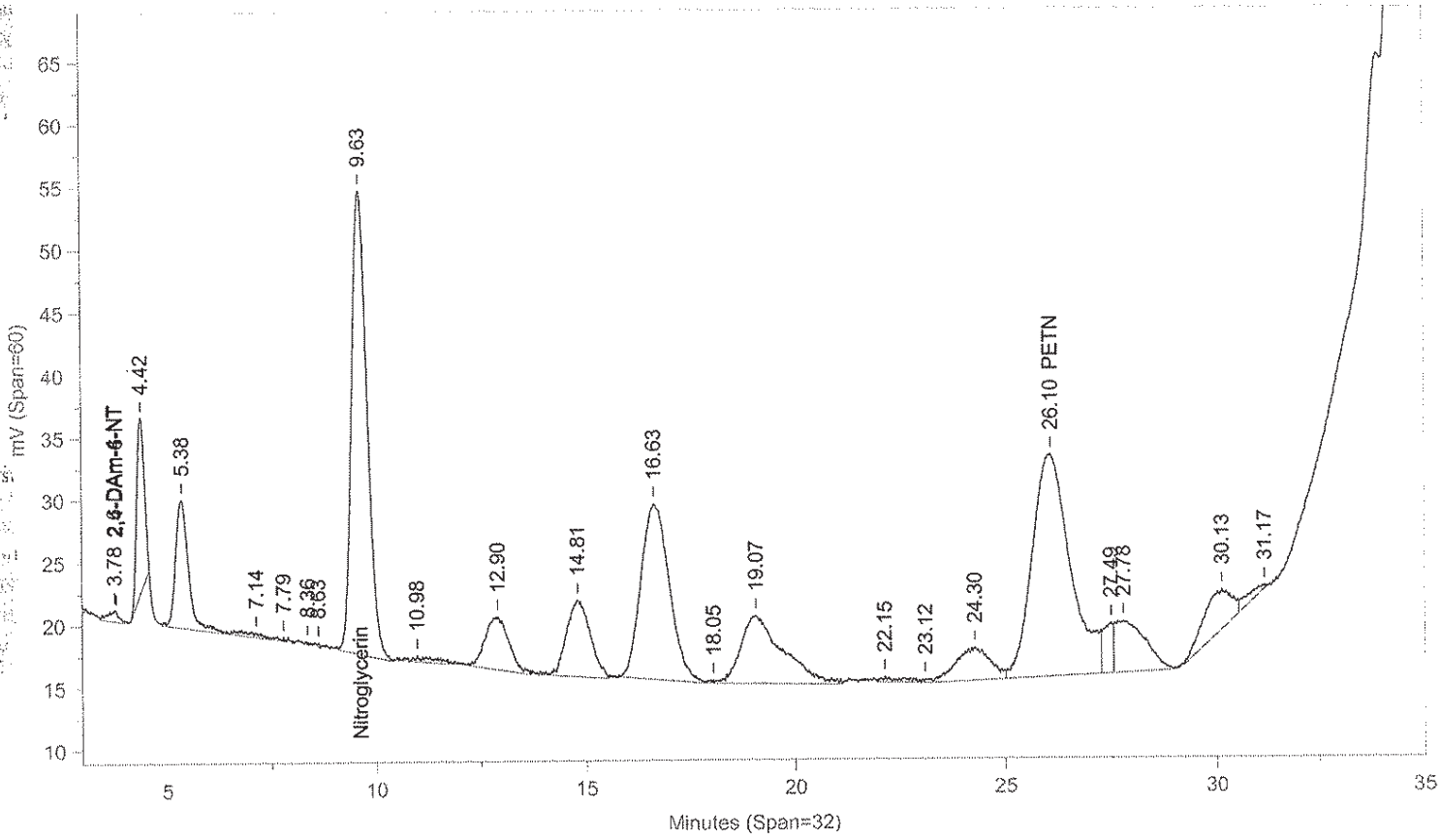
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.92R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.92R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.782	16845	7.642	2,6-DAm-4-NT
4.322	48964	467.078	HMX	.	0	.	HMX
5.275	59443	506.908	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.633	955893	9404.795	Nitroglycerin
12.788	92510	501.005	Nitrobenzene	.	0	.	Nitrobenzene
14.744	68316	490.741	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
18.978	162128	478.667	1,3-DNB	.	0	.	1,3-DNB
19.665	120486	518.542	1,4-DNB	.	0	.	1,4-DNB
24.117	55393	472.83	2-NT	.	0	.	2-NT
.	0	.	PETN	26.099	1097494	9241.408	PETN
27.725	86540	446.882	4-NT	.	0	.	4-NT
30.156	159173	698.393	1,3,5-TNB	.	0	.	1,3,5-TNB
33.794	130557	505.487	2,4-DNT	.	0	.	2,4-DNT
34.212	45773	1364.477	2-NMX	.	0	.	2-NMX
34.529	77508	506.302	Tetryl	.	0	.	Tetryl
35.487	97884	465.949	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	71283	472.073	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.92A
Area File: C:\CPWIN\DATA1\4C12310B.92A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:27:02 PM
File Reported On: 11/18/2013 at 3:27:13 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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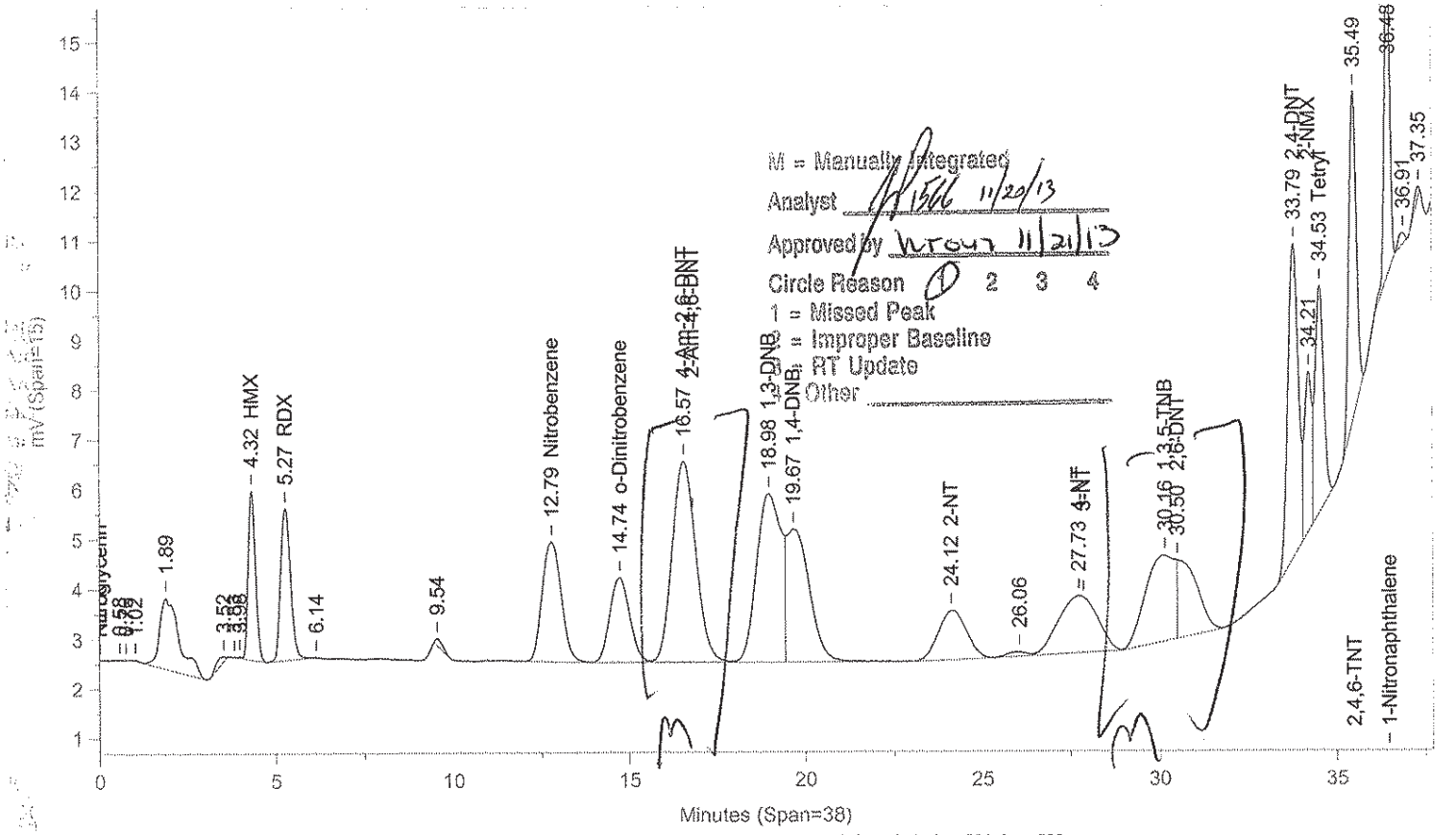
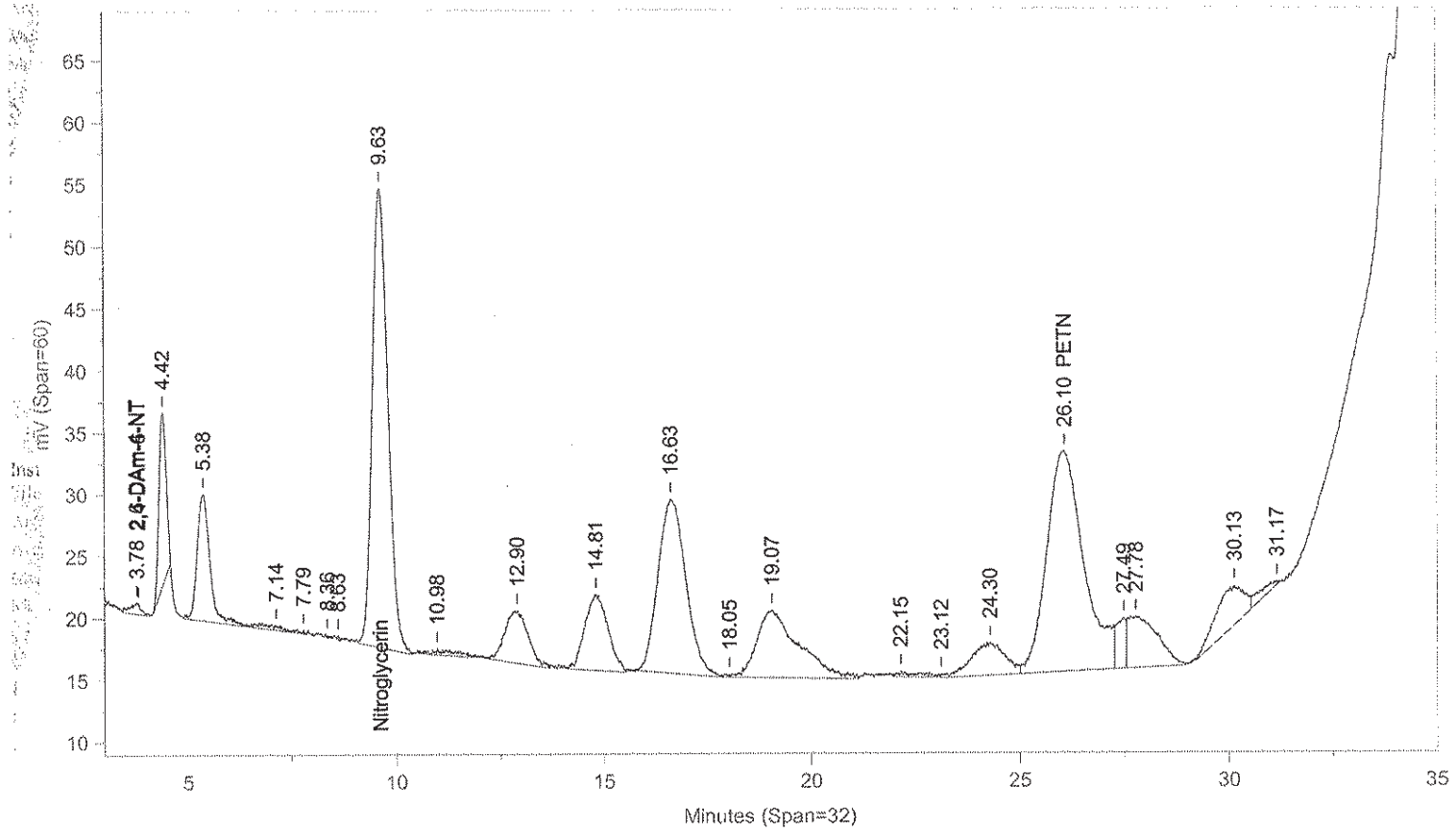


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.92R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

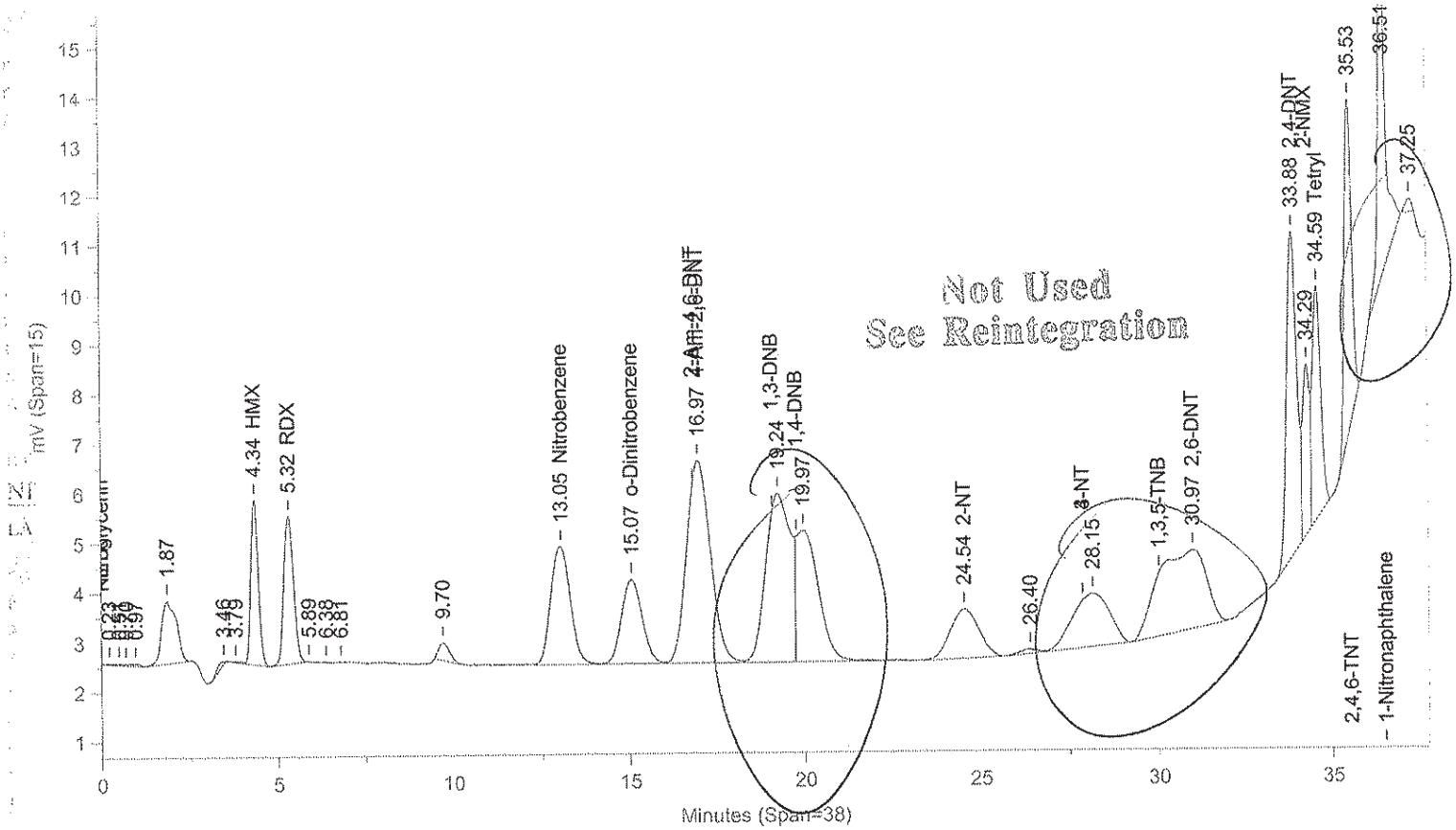
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.782	16845	7.642	2,6-DAm-4-NT
4.322	48964	467.078	HMX	.	0	.	HMX
5.275	59443	506.908	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.633	955893	9404.795	Nitroglycerin
12.788	92510	501.005	Nitrobenzene	.	0	.	Nitrobenzene
14.744	68316	490.741	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.567	191351	495.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.978	162128	478.667	1,3-DNB	.	0	.	1,3-DNB
19.665	120486	518.542	1,4-DNB	.	0	.	1,4-DNB
24.117	55393	472.83	2-NT	.	0	.	2-NT
.	0	.	PETN	26.099	1097494	9241.408	PETN
27.725	86540	446.882	4-NT	.	0	.	4-NT
30.156	99787	457.425	1,3,5-TNB	.	0	.	1,3,5-TNB
30.498	59387	467.399	2,6-DNT	.	0	.	2,6-DNT
33.794	130557	505.487	2,4-DNT	.	0	.	2,4-DNT
34.212	45773	1364.477	2-NMX	.	0	.	2-NMX
34.529	77508	506.302	Tetryl	.	0	.	Tetryl
35.487	97884	465.949	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	71283	472.073	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:13:28 PM
File Reported On: 11/20/2013 at 3:13:27 PM

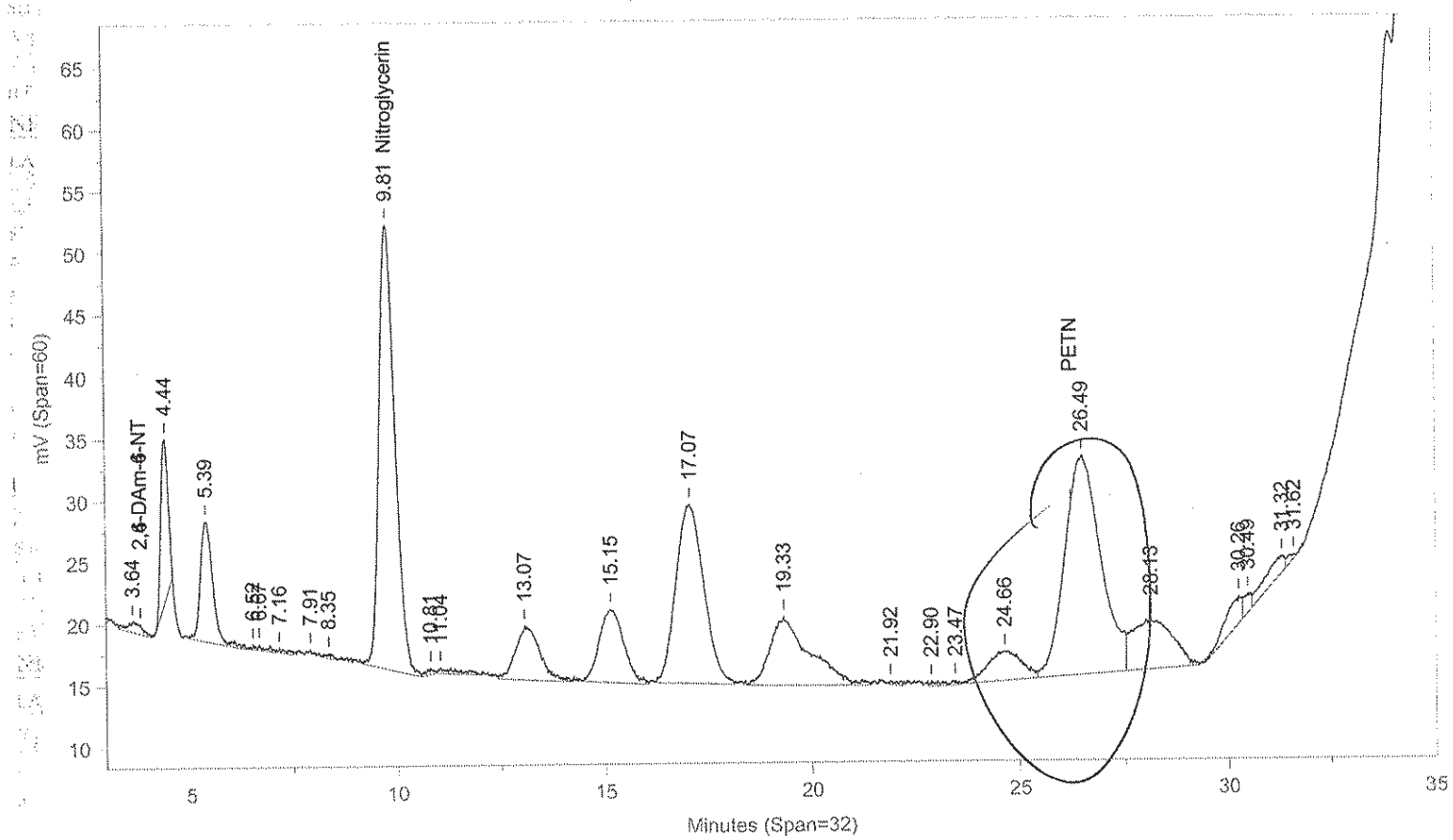
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.95R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 11:13:09 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.95R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 11:13:09 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

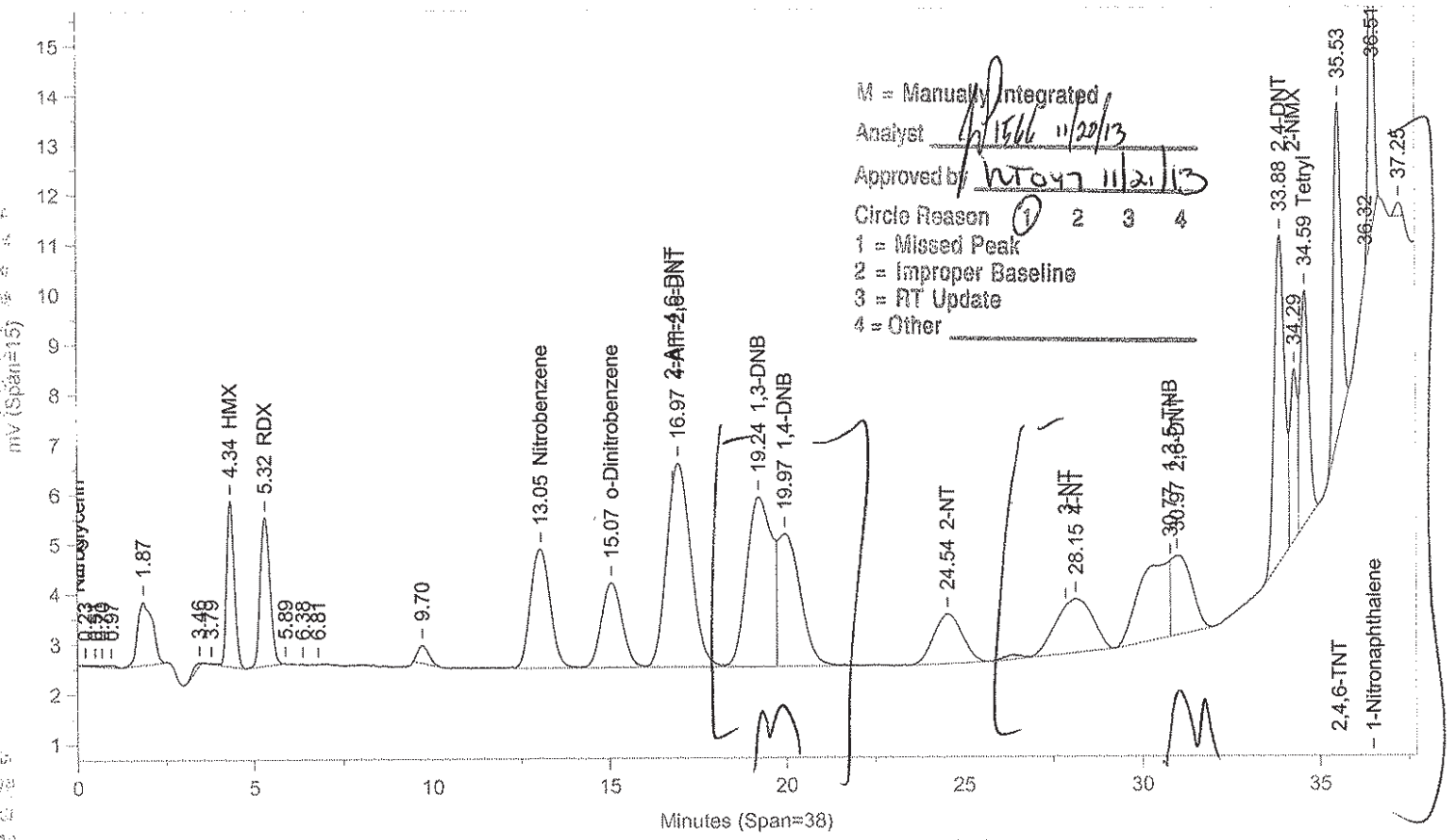
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.336	48998	467.398	HMX	.	0	.	HMX
5.316	58055	494.525	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.807	954397	9390.076	Nitroglycerin
13.049	92733	502.226	Nitrobenzene	.	0	.	Nitrobenzene
15.065	69447	499.059	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.97	192502	498.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
24.537	56091	478.889	2-NT	.	0	.	2-NT
30.972	153799	1189.343	2,6-DNT	.	0	.	2,6-DNT
33.879	134705	521.548	2,4-DNT	.	0	.	2,4-DNT
34.287	49421	1468.99	2-NMX	.	0	.	2-NMX
34.59	78852	514.767	Tetryl	.	0	.	Tetryl
35.53	100196	476.797	2,4,6-TNT	.	0	.	2,4,6-TNT
36.51	111413	722.245	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Sar
Files:
Area File: C:\CPWIN\DATA1\4C12310.95A
Area File: C:\CPWIN\DATA1\4C12310B.95A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:28:32 PM
File Reported On: 11/18/2013 at 3:28:43 PM

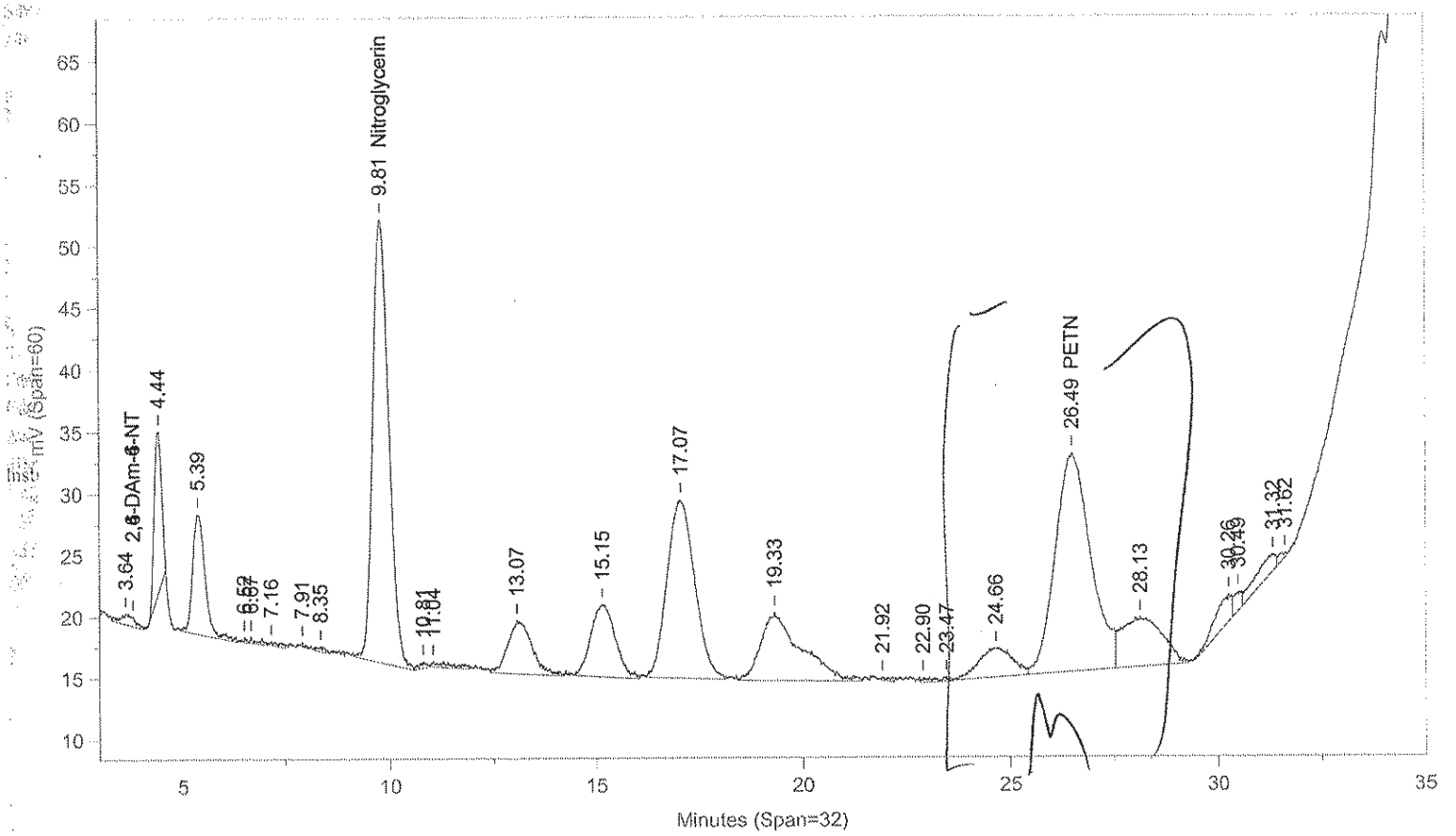
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.95R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 11:13:09 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.95R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 11:13:09 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.336	48998	467.398	HMX	.	0	.	HMX
5.316	58055	494.525	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.807	954397	9390.076	Nitroglycerin
13.049	92733	502.226	Nitrobenzene	.	0	.	Nitrobenzene
15.065	69447	499.059	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.97	192502	498.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.236	168232	496.688	1,3-DNB	.	0	.	1,3-DNB
19.972	117190	503.946	1,4-DNB	.	0	.	1,4-DNB
24.537	56091	478.889	2-NT	.	0	.	2-NT
.	0	.	PETN	26.495	1055136	8884.732	PETN
28.145	81060	419.364	4-NT	.	0	.	4-NT
30.772	90664	420.407	1,3,5-TNB	.	0	.	1,3,5-TNB
30.972	63584	499.496	2,6-DNT	.	0	.	2,6-DNT
33.879	134705	521.548	2,4-DNT	.	0	.	2,4-DNT
34.287	49421	1468.99	2-NMX	.	0	.	2-NMX
34.59	78852	514.767	Tetryl	.	0	.	Tetryl
35.53	100196	476.797	2,4,6-TNT	.	0	.	2,4,6-TNT
36.51	72286	478.324	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:23:30 PM
File Reported On: 11/20/2013 at 3:23:30 PM

Raw QC Data

Explosives

eurofins

Lancaster Laboratories Environmental

Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314 BLK Sample ID:AA **Batchnumber: 133140016A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 21:03:57
Instrument	X6329A
Result file	4E12310.75R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 95% (73 - 122) Conc: 9.489713

Analysis Report (B)

Injected on	Nov 17, 2013 21:03:57
Instrument	Y6329A
Result file	4C12310.75R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 116% (73 - 122) Conc: 11.631649

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.66	4.80	4.86	24	0.002315
2,4,6-Trinitrotoluene	7.78	7.80	7.98	7	0.000617
2-NMX	25.41	25.37	26.09	16174	9.489713

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.30	34.32	18446	11.631649

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<15	<5.2			
PETN			<18	<6			
HMX			<2	<0.65			
RDX			<0.5	<0.2			
1,3,5-Trinitrobenzene			<0.6	<0.2			
1,4-Dinitrobenzene			<0.6	<0.3			
o-Dinitrobenzene			<0.6	<0.2			
1,3-DNB			<0.6	<0.2			
Tetryl			<0.6	<0.4			
Nitrobenzene			<0.6	<0.2			
2,4,6-Trinitrotoluene			<0.6	<0.2			
4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
2,6-Dinitrotoluene			<1.3	<0.45			
2,4-Dinitrotoluene			<2	<0.72			
2-Nitrotoluene			<0.75	<0.25			
4-Nitrotoluene			<1.2	<0.6			
3-Nitrotoluene			<1.2	<0.4			
2-NMX	A	9.489713				20.28	
1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Verified by: Valerie L. Tomaydes, Principal Specialist

Date: NOV 2 1 2013 Date: NOV 2 1 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--X6329A
Result file : 4E12310.75R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 95% (73-122) Conc.: 9.489713

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.05	4.20	130	-0.220435
1,3,5-TNB	4.66	4.80	4.86	24	0.002315
2,4,6-TNT	7.78	7.80	7.98	7	0.000617
Tetryl breakdown	8.27	8.43	8.52	10	0.000600
2-NMX	25.41	25.37	26.09	16174	9.489713

Analysis Report (B)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--X6329B
Result file : 4E12310B.75R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 96% (73-122) Conc.: 9.626623

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.50	26.24	235115	9.626623

$RDX \frac{130}{110.0628} \times \frac{10}{500} = 0.023623$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.489713				1.43	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

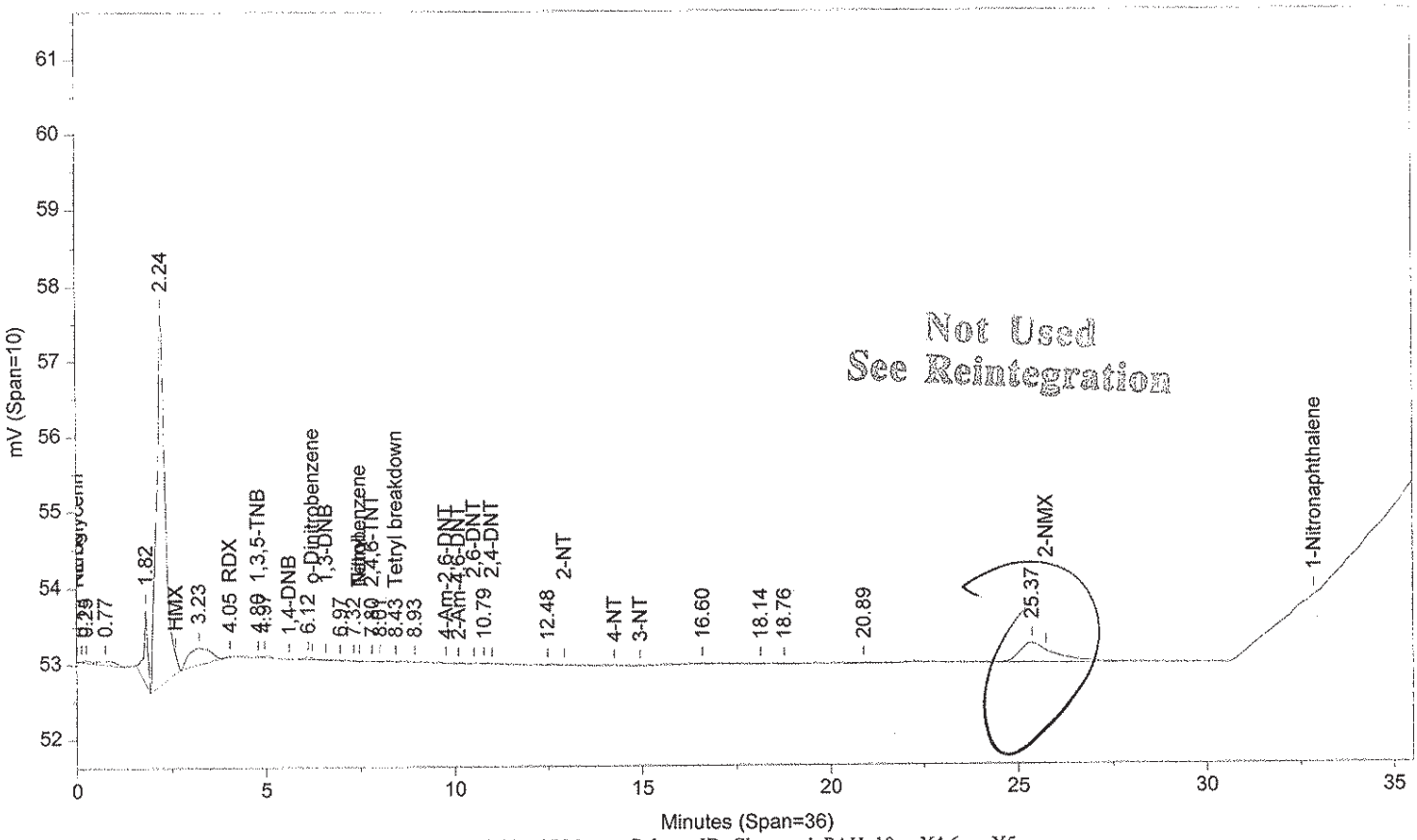
Verified by: Valerie L. Tomaghi
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

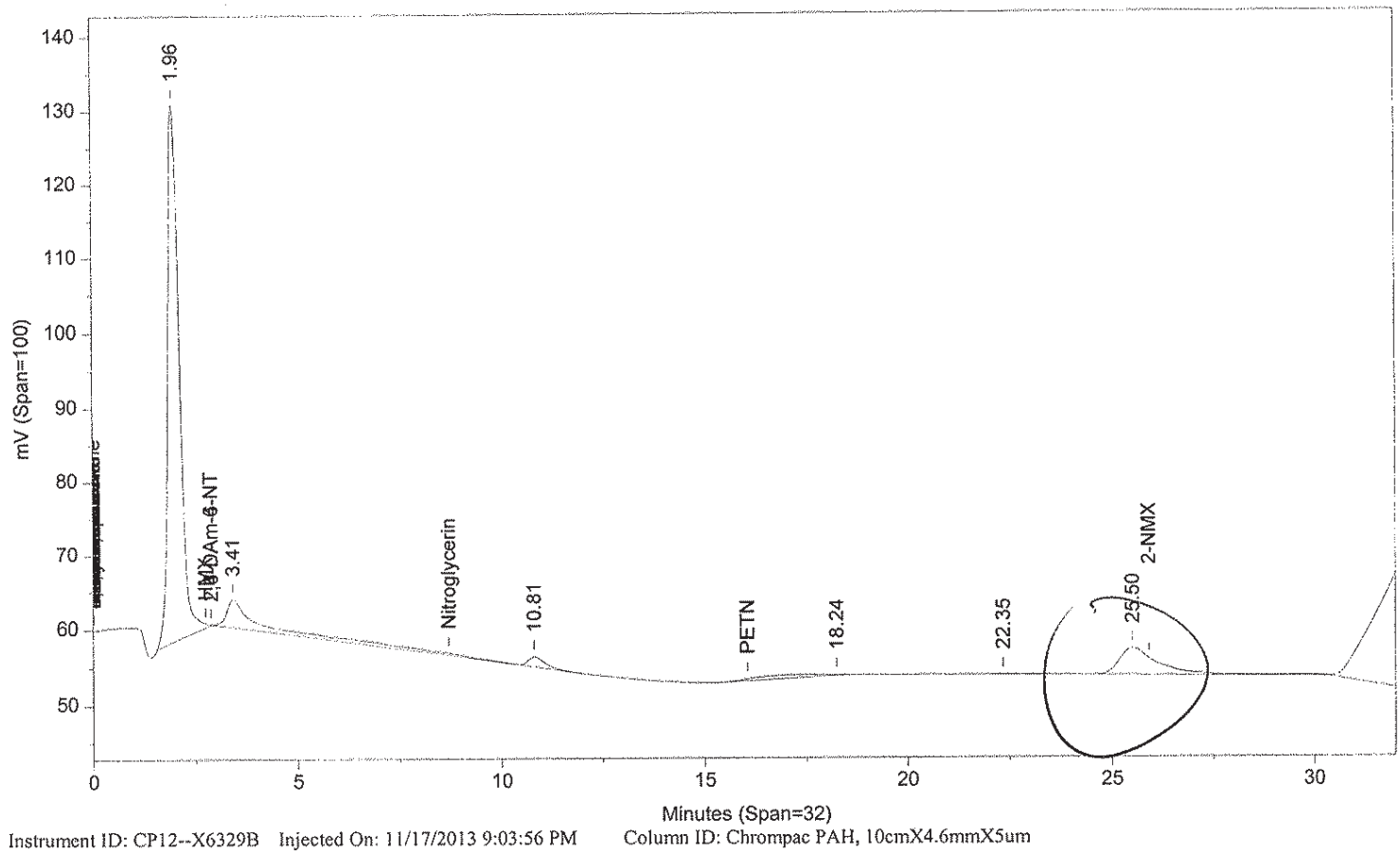
Printed on: 11/20/2013 13:23:29

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.75R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.75R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

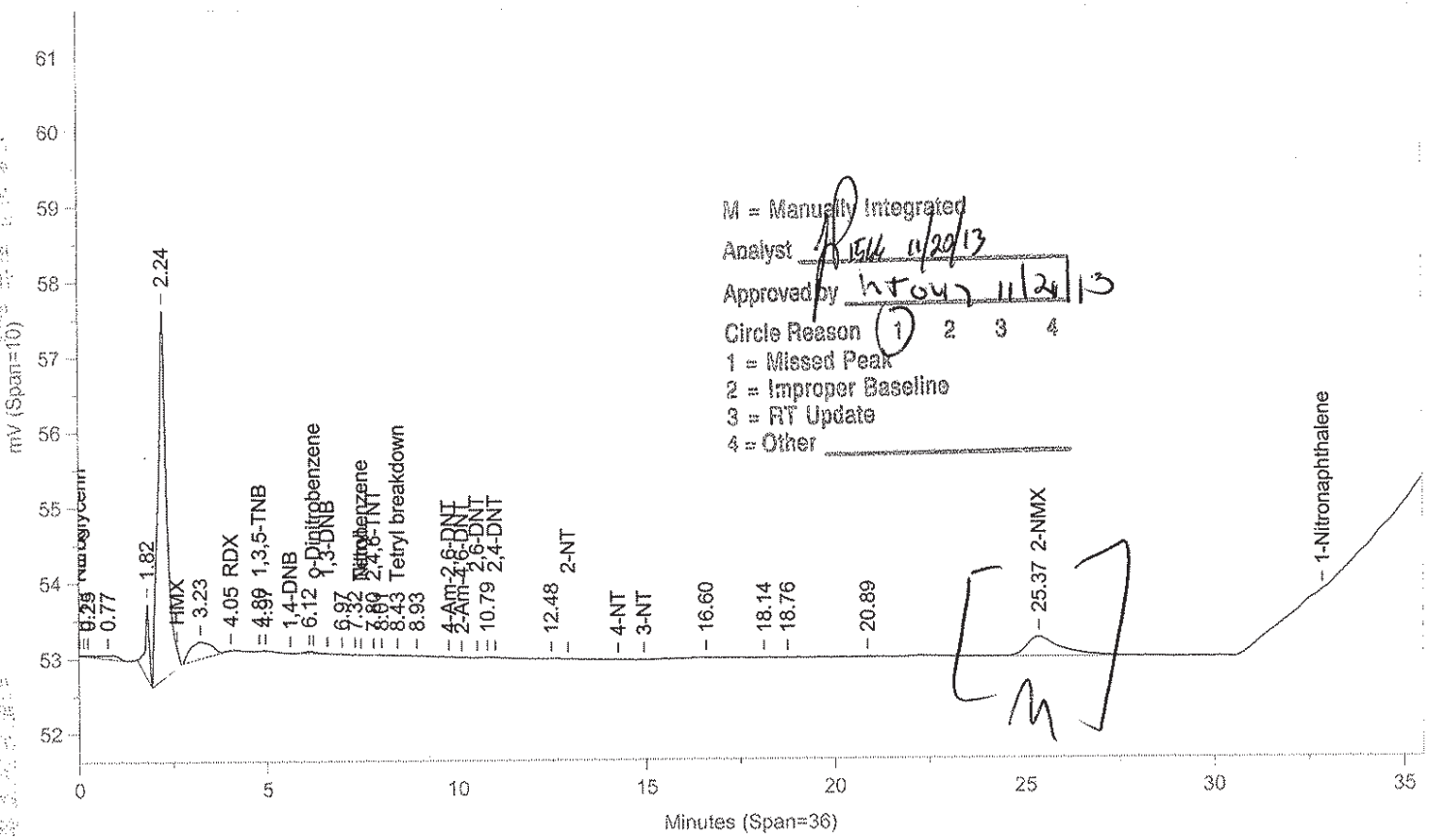
Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.051	130	-.22	RDX	.	0	.	RDX
4.805	24	.002	1,3,5-TNB	.	0	.	1,3,5-TNB
7.8	7	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
8.434	10	.001	Tetryl breakdown	.	0	.	Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\4E12310.75A
Area File: C:\CPWIN\DATA1\4E12310B.75A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:08:10 PM
File Reported On: 11/17/2013 at 10:08:20 PM

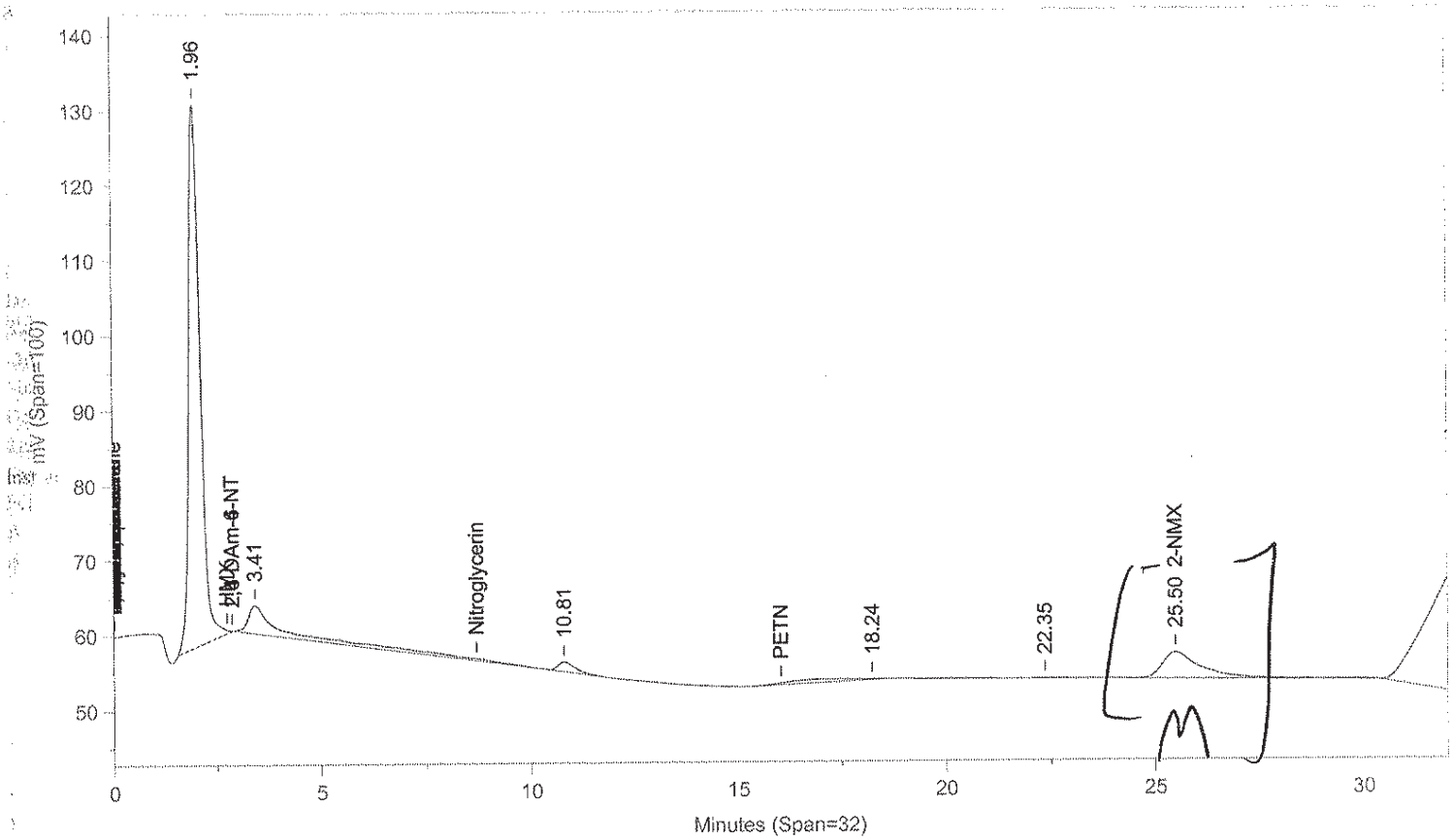
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.75R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.75R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.051	130	-.22	RDX	.	0	.	RDX
4.805	24	.002	1,3,5-TNB	.	0	.	1,3,5-TNB
7.8	7	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
8.434	10	.001	Tetryl breakdown	.	0	.	Tetryl breakdown
25.371	16174	9.49	2-NMX	25.5	235115	9.627	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:42:20 AM
File Reported On: 11/20/2013 at 11:42:19 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--Y6329A
Result file : 4C12310.75R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 116% (73-122) Conc.: 11.631649

Analysis Report (B)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--Y6329B
Result file : 4C12310B.75R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.21	5.36	629	-0.359424
2-NMX	34.12	34.30	34.32	18446	11.631649

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.631649					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

Valerie L. Tomayko
Principal Specialist

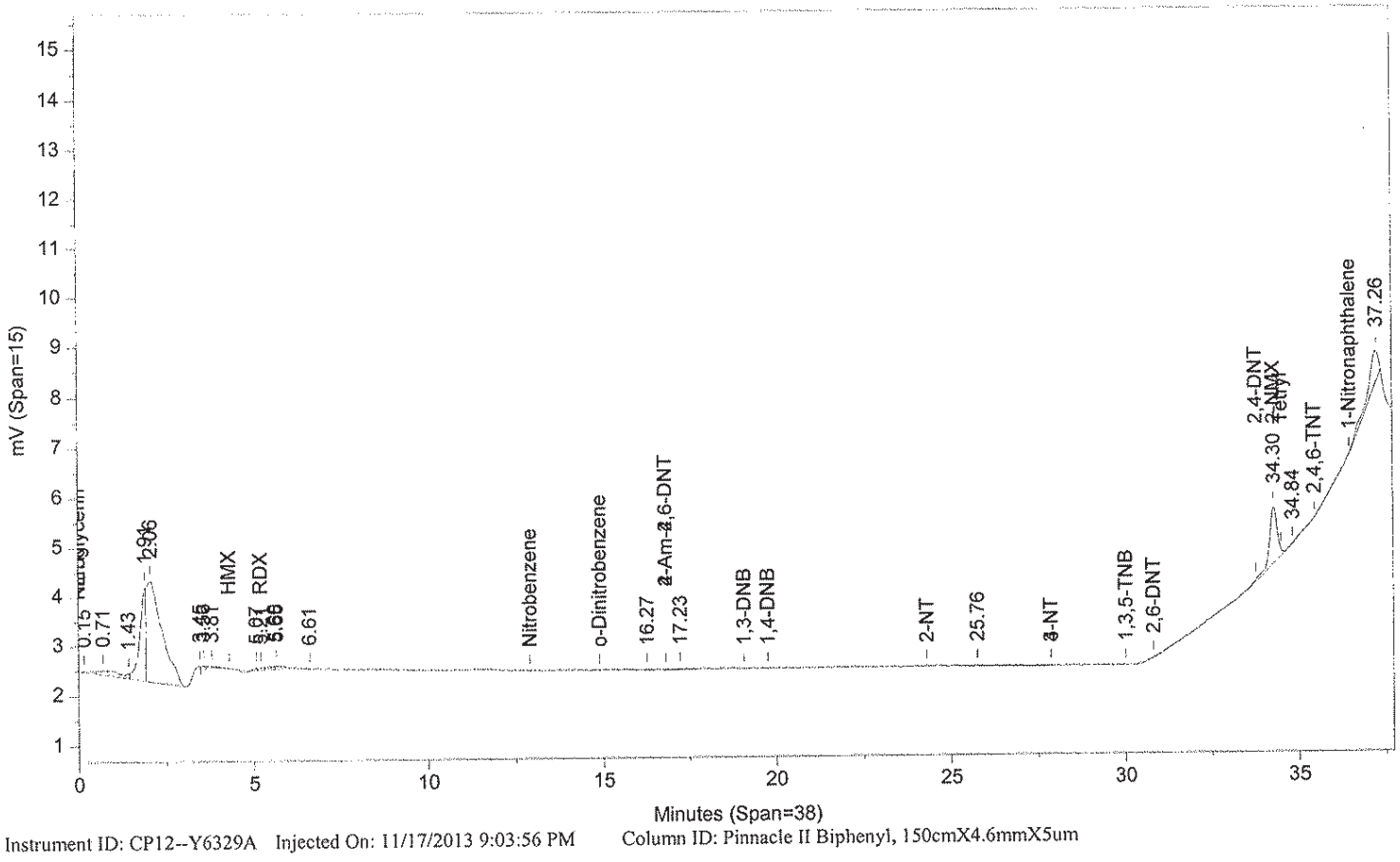
Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

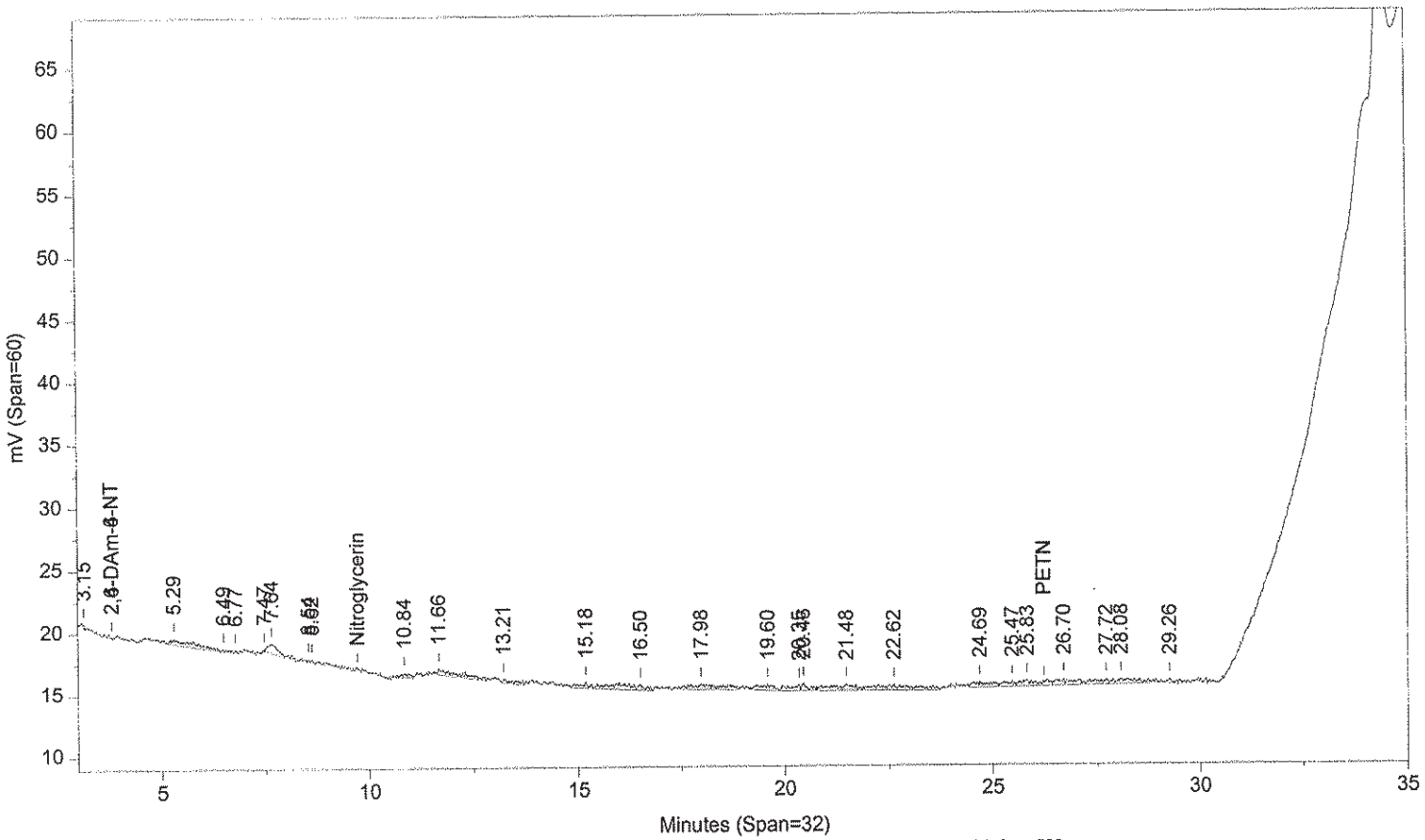
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.75R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.75R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.206	629	-.359	RDX	.	0	.	RDX
34.303	18446	11.632	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.75A
Area File: C:\CPWIN\DATA1\4C12310B.75A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:22:14 PM
File Reported On: 11/17/2013 at 10:22:24 PM

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Data Summary

Sample Name: BLANKA 11/12/13 PBLK19314 BLK Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 04:50:51
Instrument X6329A
Result file 4E12310.86R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 93% (63 - 150) Conc: 4647.113281

Analysis Report (B)

Injected on Nov 18, 2013 04:50:51
Instrument Y6329A
Result file 4C12310.86R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 104% (63 - 150) Conc: 5221.740234

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.48	7.61	41	1.811347
2,4-Dinitrotoluene	10.86	11.06	11.14	38	1.142539
2-NMX	25.41	24.56	26.09	15841	4647.113281

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.26	4.40	202	19.247635
4-Amino-2,6-dinitrotoluer	16.66	16.80	16.98	405	10.487151
2-NMX	34.12	34.23	34.32	16373	5221.740234

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<6000	<2000			
PETN			<6000	<2000			
HMX			<750	<250			
RDX			<300	<125			
1,3,5-Trinitrobenzene			<300	<100			
1,4-Dinitrobenzene			<300	<100			
o-Dinitrobenzene			<300	<100			
1,3-DNB			<300	<100			
Tetryl			<300	<153			
Nitrobenzene			<300	<100			
2,4,6-Trinitrotoluene			<300	<100			
4-Amino-2,6-dinitrotoluene			<300	<150			
2-Amino-4,6-dinitrotoluene			<300	<100			
2,6-Dinitrotoluene			<300	<100			
2,4-Dinitrotoluene			<300	<100			
2-Nitrotoluene			<300	<200			
4-Nitrotoluene			<300	<200			
3-Nitrotoluene			<300	<250			
2-NMX	A	4647.113281				11.65	
1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK19314 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 04:50:51
Instrument : CP12--X6329A
Result file : 4E12310.86R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 93% (63-150) Conc.: 4647.11328

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.04	4.20	192	-103.182220
Tetryl	7.33	7.48	7.61	41	1.180747
Tetryl breakdown	8.27	8.31	8.52	22	0.630600
2,4-DNT	10.86	11.06	11.14	38	1.142539
2-NMX	25.41	24.56	26.09	15841	4647.113281

Analysis Report (B)

Injected on : NOV 18, 2013 04:50:51
Instrument : CP12--X6329B
Result file : 4E12310B.86R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 96% (63-150) Conc.: 4817.17871

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	24.67	26.24	235304	4817.178711

$RDX \frac{192}{110.0628} \times \frac{20}{2} = 17.44459$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			+Breakdown = 1.811347
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			Report Confirmation.
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4647.113281				3.59	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

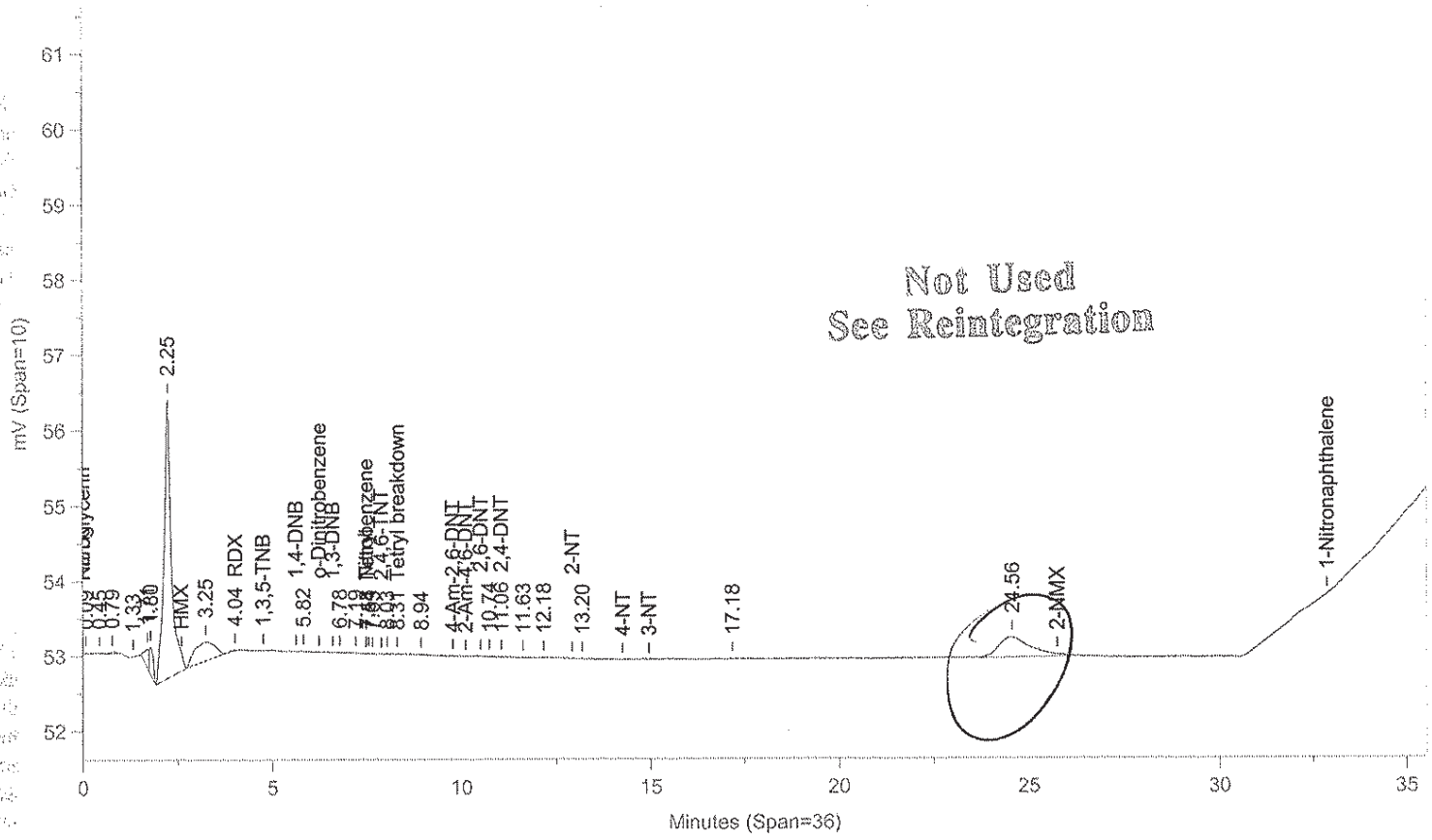
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

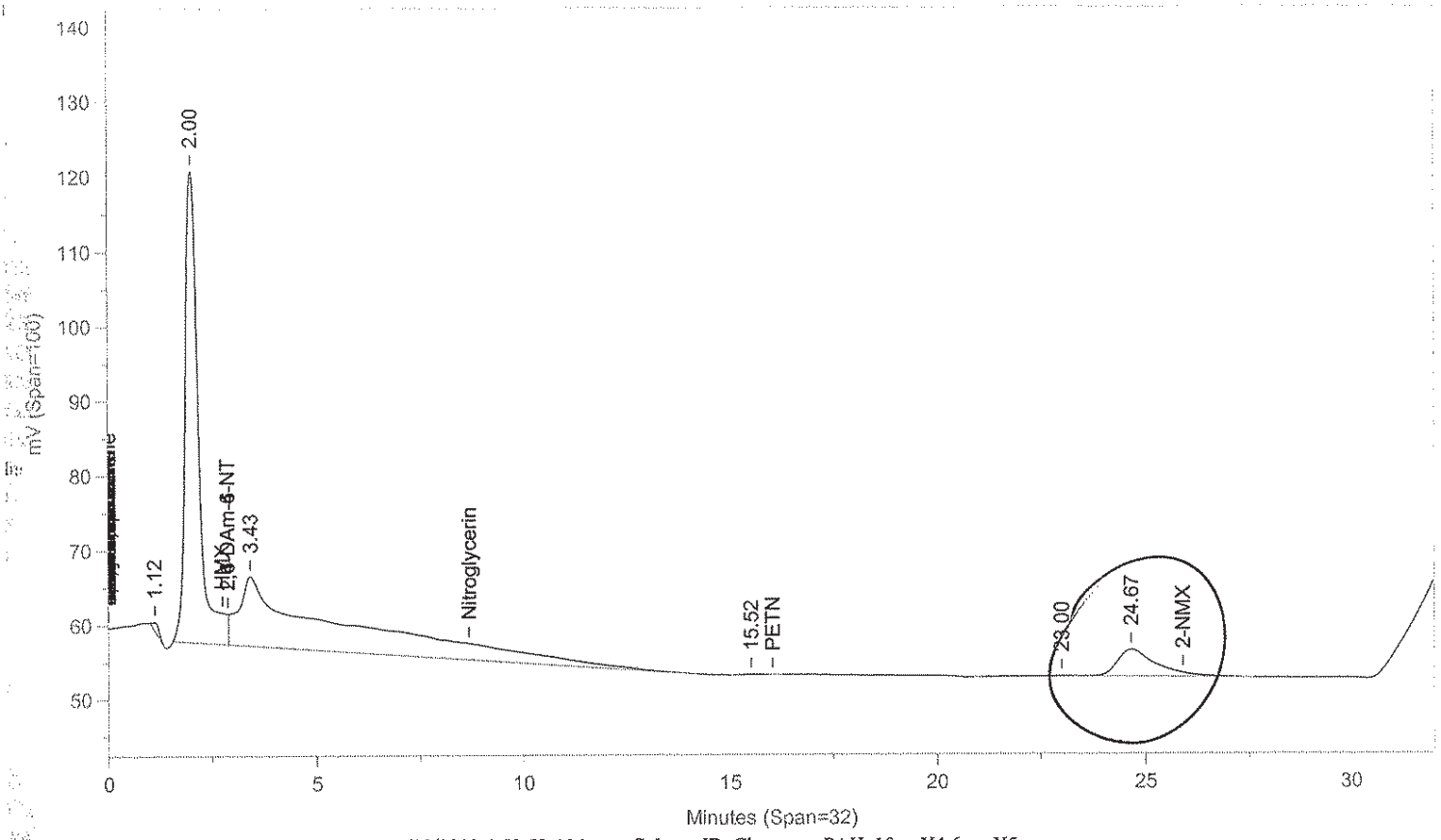
Printed on: 11/20/2013 13:25:30

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.86R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 4:50:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.86R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 4:50:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.035	192	-103.182	RDX	.	0	.	RDX
4.485	41	1.181	Tetryl	.	0	.	Tetryl
3.306	22	.631	Tetryl breakdown	.	0	.	Tetryl breakdown
1.06	38	1.143	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.86A
Area File: C:\CPWIN\DATA1\4E12310B.86A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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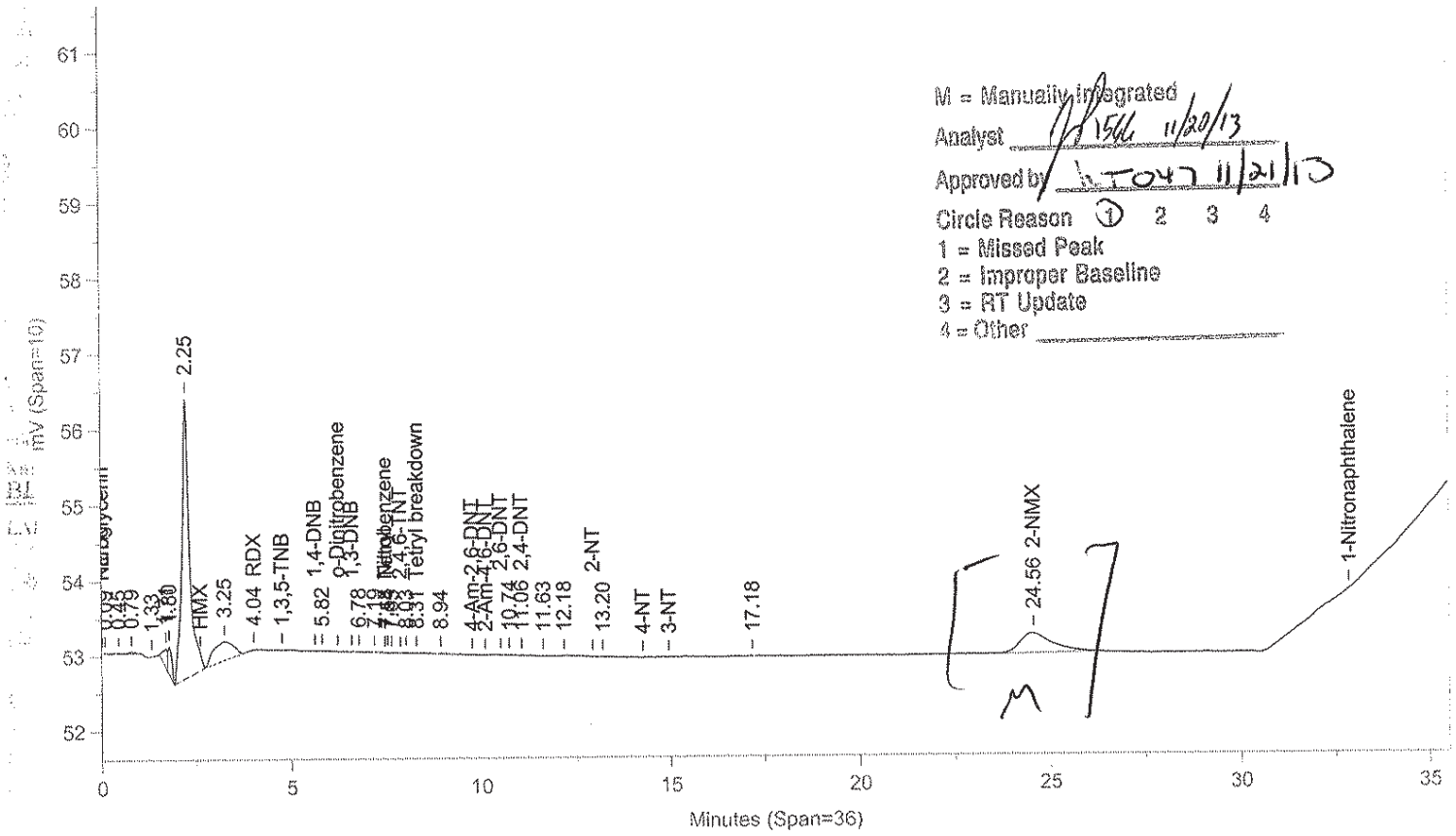
File Reported On: 11/18/2013 at 2:57:35 PM

Not Used
See Reintegration

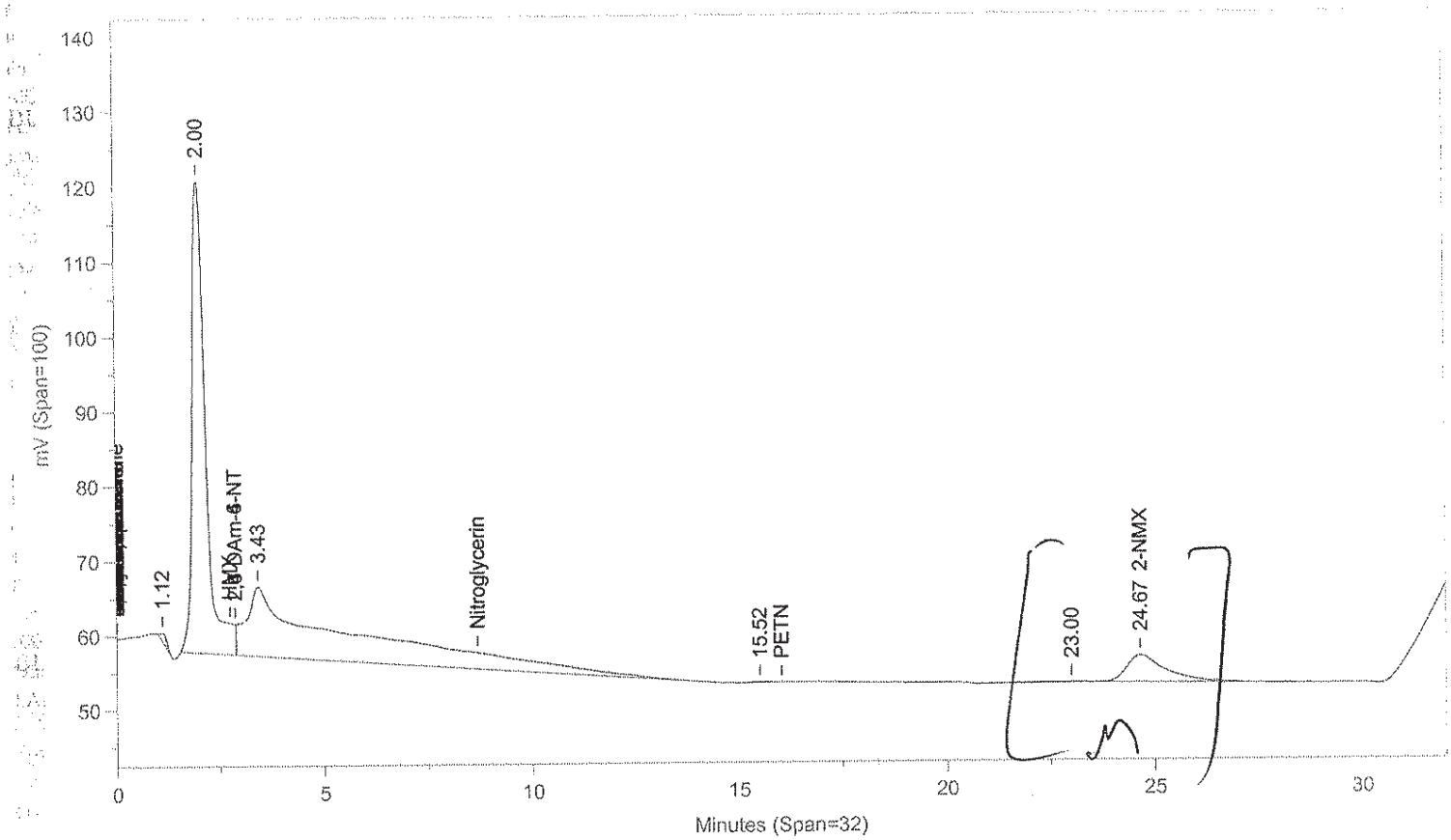
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.86R



M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 4:50:50 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.86R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 4:50:50 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.035	192	-103.182	RDX	.	0	.	RDX
7.485	41	1.181	Tetryl	.	0	.	Tetryl
8.306	22	.631	Tetryl breakdown	.	0	.	Tetryl breakdown
11.06	38	1.143	2,4-DNT	.	0	.	2,4-DNT
24.564	15841	4647.113	2-NMX	24.667	235304	4817.179	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:32:36 PM
File Reported On: 11/20/2013 at 12:32:34 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK19314Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 18, 2013 04:50:51
Instrument	: CP12--Y6329A
Result file	: 4C12310.86R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET
%SSR(2-NMX)	: 104% (63-150) Conc.: 5221.74023

Analysis Report (B)

Injected on	: NOV 18, 2013 04:50:51
Instrument	: CP12--Y6329B
Result file	: 4C12310B.86R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET
%SSR(2-NMX)	: *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.26	4.40	202	19.247635
RDX	5.16	5.26	5.36	1091	-138.473053
4-Am-2,6-DNT	16.66	16.80	16.98	405	10.487151
2-NMX	34.12	34.23	34.32	16373	5221.740234

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			Report
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			Report
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5221.740234					
☑ Tetryl			<300	<153			Report
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Materials Specialist

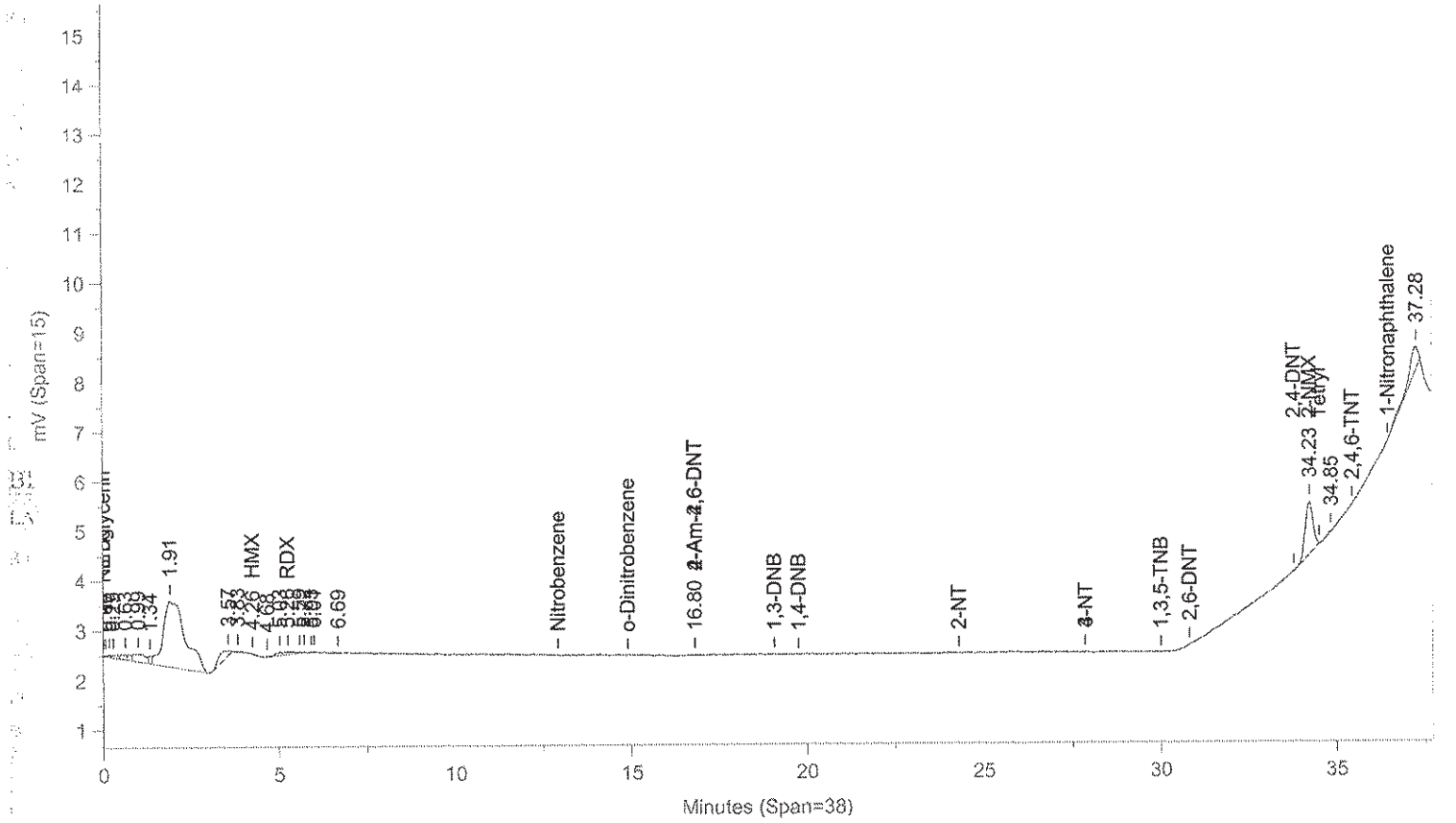
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

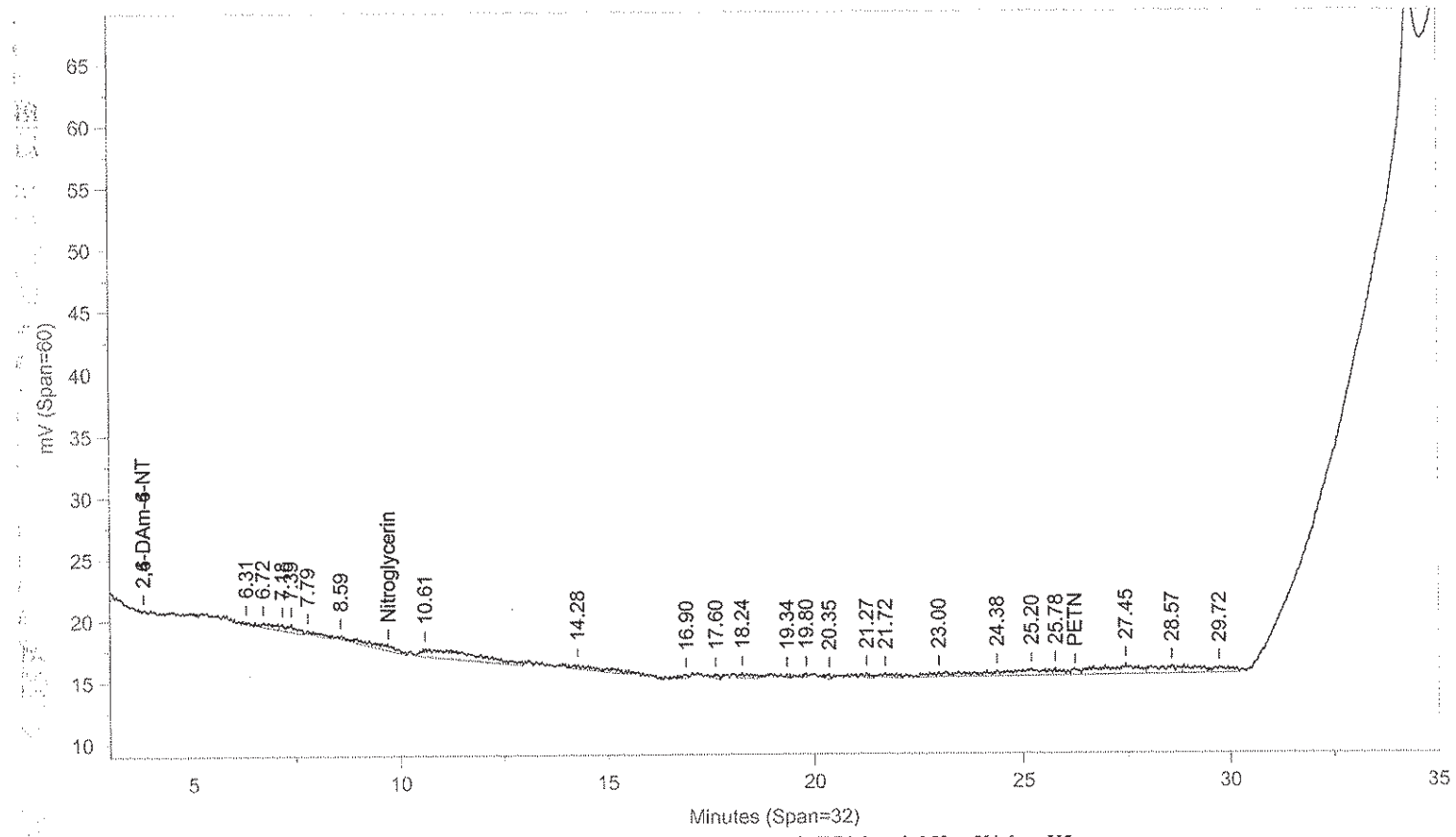
Printed on: 11/20/2013 15:36:59

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.86R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 4:50:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.86R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 4:50:50 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.26	202	19.248	HMX	.	0	.	HMX
5.26	1091	-138.473	RDX	.	0	.	RDX
16.8	405	10.487	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
34.233	16373	5221.74	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.86A
Area File: C:\CPWIN\DATA1\4C12310B.86A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:24:02 PM
File Reported On: 11/18/2013 at 3:24:12 PM
RT

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Data Summary

Sample Name: LCSA 11/12/13 LCS16314 LCS Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 21:46:24
Instrument X6329A
Result file 4E12310.76R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 87% (73 - 122) Conc: 8.669675

Analysis Report (B)

Injected on Nov 17, 2013 21:46:23
Instrument Y6329A
Result file 4C12310.76R
Calibration file 3C12310
Method file 8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.05	4.20	41187	9.150897
1,3,5-Trinitrobenzene	4.66	4.70	4.86	98370	9.32035
1,4-Dinitrobenzene	5.52	5.56	5.72	235505	18.487419
o-Dinitrobenzene	6.13	6.14	6.33	108405	21.042051
1,3-DNB	6.49	6.50	6.69	173402	10.68751
Tetryl	7.33	7.40	7.61	137683	8.957262
2,4,6-Trinitrotoluene	7.78	7.78	7.98	123025	10.798244
4-Amino-2,6-dinitrotoluer	9.69	9.55	9.97	43059	9.179037
2-Amino-4,6-dinitrotoluer	9.97	9.97	10.25	96706	8.830966
2,6-Dinitrotoluene	10.38	10.40	10.66	63653	10.471285
2,4-Dinitrotoluene	10.86	10.86	11.14	167898	10.152086
2-Nitrotoluene	12.80	12.76	13.08	57144	8.639166
4-Nitrotoluene	14.10	14.08	14.43	42220	8.999383
3-Nitrotoluene	14.79	14.76	15.12	66773	9.862768
2-NMX	25.41	25.41	26.09	14776	8.669675
1-Nitronaphthalene	32.62	32.72	33.11	138869	21.141434

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.34	4.40	40507	7.728072
RDX	5.16	5.32	5.36	55865	9.499586
Nitrobenzene	12.75	13.04	13.07	89897	9.734917
o-Dinitrobenzene	14.72	15.09	15.08	142280	20.694586
4-Amino-2,6-dinitrotoluer	16.66	16.98	16.98	195723	10.14122
1,3-DNB	18.93	19.26	19.23	140893	8.319469
1,4-Dinitrobenzene	19.62	20.03	19.92	263338	23.022066
2-Nitrotoluene	24.05	24.57	24.57	53642	9.152677
4-Nitrotoluene	27.60	28.17	28.12	79370	8.217587
1,3,5-Trinitrobenzene	29.81	30.21	30.21	73178	6.98918
2,6-Dinitrotoluene	30.62	31.01	31.02	78915	12.334536
2,4-Dinitrotoluene	33.67	33.87	33.89	141159	10.930724
2-NMX	34.12	34.35	34.32	13310	8.688906
Tetryl	34.41	34.58	34.61	75708	9.899279
2,4,6-Trinitrotoluene	35.36	35.52	35.56	107077	10.181443
1-Nitronaphthalene	36.36	36.50	36.56	155151	19.898338

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	210.273712	15	5.2		4.03	
PETN	A	234.025406	18	6		10.63	
HMX	A	7.860485	2	0.65		1.70	
RDX	A	9.150897	0.5	0.2		3.74	
1,3,5-Trinitrobenzene	A	9.32035	0.6	0.2		28.59	
1,4-Dinitrobenzene	A	18.487419	0.6	0.3		21.85	
o-Dinitrobenzene	A	21.042051	0.6	0.2		1.67	
1,3-DNB	A	10.68751	0.6	0.2		24.92	
Tetryl	B	9.899279	0.6	0.4		9.99	
Nitrobenzene	B	9.734917	0.6	0.2		8.32	
2,4,6-Trinitrotoluene	A	10.798244	0.6	0.2		5.88	
4-Amino-2,6-dinitrotoluene	A	9.179037	0.6	0.3		9.96	
2-Amino-4,6-dinitrotoluene	A	8.830966	0.6	0.2		13.81	
2,6-Dinitrotoluene	A	10.471285	1.3	0.45		16.34	
2,4-Dinitrotoluene	A	10.152086	2	0.72		7.39	
2-Nitrotoluene	A	8.639166	0.75	0.25		5.77	
4-Nitrotoluene	A	8.999383	1.2	0.6		9.08	
3-Nitrotoluene	A	9.862768	1.2	0.4		18.20	
2-NMX	A	8.669675				0.22	
1-Nitronaphthalene	A	21.141434	0.6	0.2		6.06	

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Data Summary

Sample Name: LCSA 11/12/13 LCS16314 LCS Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 21:46:24
Instrument	X6329A
Result file	4E12310.76R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 21:46:23
Instrument	Y6329A
Result file	4C12310.76R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place Senior Chemist
Date: NOV 2 1 2013

Verified by:
Date: NOV 2 1 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329A
Result file : 4E12310.76R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 87% (73-122) Conc.: 8.669675

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.05	4.20	41187	9.150897
1,3,5-TNB	4.66	4.70	4.86	98370	9.320350
1,4-DNB	5.52	5.56	5.72	235505	18.487419
o-Dinitrobenzene	6.13	6.14	6.33	108405	21.042051
1,3-DNB	6.49	6.50	6.69	173402	10.687510
Tetryl	7.33	7.40	7.61	137683	7.966315
2,4,6-TNT	7.78	7.78	7.98	123025	10.798244
Tetryl breakdown	8.27	8.36	8.52	17127	0.990947
4-Am-2,6-DNT	9.63	9.55	9.91	43059	9.179037
2-Am-4,6-DNT	9.97	9.97	10.25	96706	8.830966
2,6-DNT	10.38	10.40	10.66	63653	10.471285
2,4-DNT	10.86	10.86	11.14	167898	10.152086
2-NT	12.80	12.76	13.08	57144	8.639166
4-NT	14.10	14.08	14.43	42220	8.999383
3-NT	14.79	14.76	15.12	66773	9.862768
2-NMX	25.41	25.41	26.09	14776	8.669675
1-Nitronaphthalene	32.62	32.72	33.11	138869	21.141434

Analysis Report (B)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329B
Result file : 4E12310B.76R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 92% (73-122) Conc.: 9.248772

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.71	2.85	163181	7.860485
Nitroglycerin	8.51	8.57	8.89	1343702	210.273712
PETN	15.75	15.80	16.33	1602494	234.025406
2-NMX	25.57	25.58	26.24	225887	9.248772

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	210.273712	15	5.2			
☑ PETN	B	234.025406	18	6			
☑ HMX	B	7.860485	2	0.65			
☑ RDX	A	9.150897	0.5	0.2			
☑ 1,3,5-TNB	A	9.320350	0.6	0.2			
☑ 1,4-DNB	A	18.487419	0.6	0.3			
☑ o-Dinitrobenzene	A	21.042051	0.6	0.2			
☑ 1,3-DNB	A	10.687510	0.6	0.2			
☑ Tetryl	A	7.966315	0.6	0.4			+Breakdown = 8.957262
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.798244	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	9.179037	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.830966	0.6	0.2			
☑ 2,6-DNT	A	10.471285	1.3	0.45			
☑ 2,4-DNT	A	10.152086	2	0.72			
☑ 2-NT	A	8.639166	0.75	0.25			
☑ 4-NT	A	8.999383	1.2	0.6			
☑ 3-NT	A	9.862768	1.2	0.4			
☐ 2-NMX	A	8.669675				6.46	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329A
Result file : 4E12310.76R
Calibration file : 3E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329B
Result file : 4E12310B.76R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	21.141434	0.6	0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

Valerie L. Tomayko
Principal Specialist

Verified by: _____
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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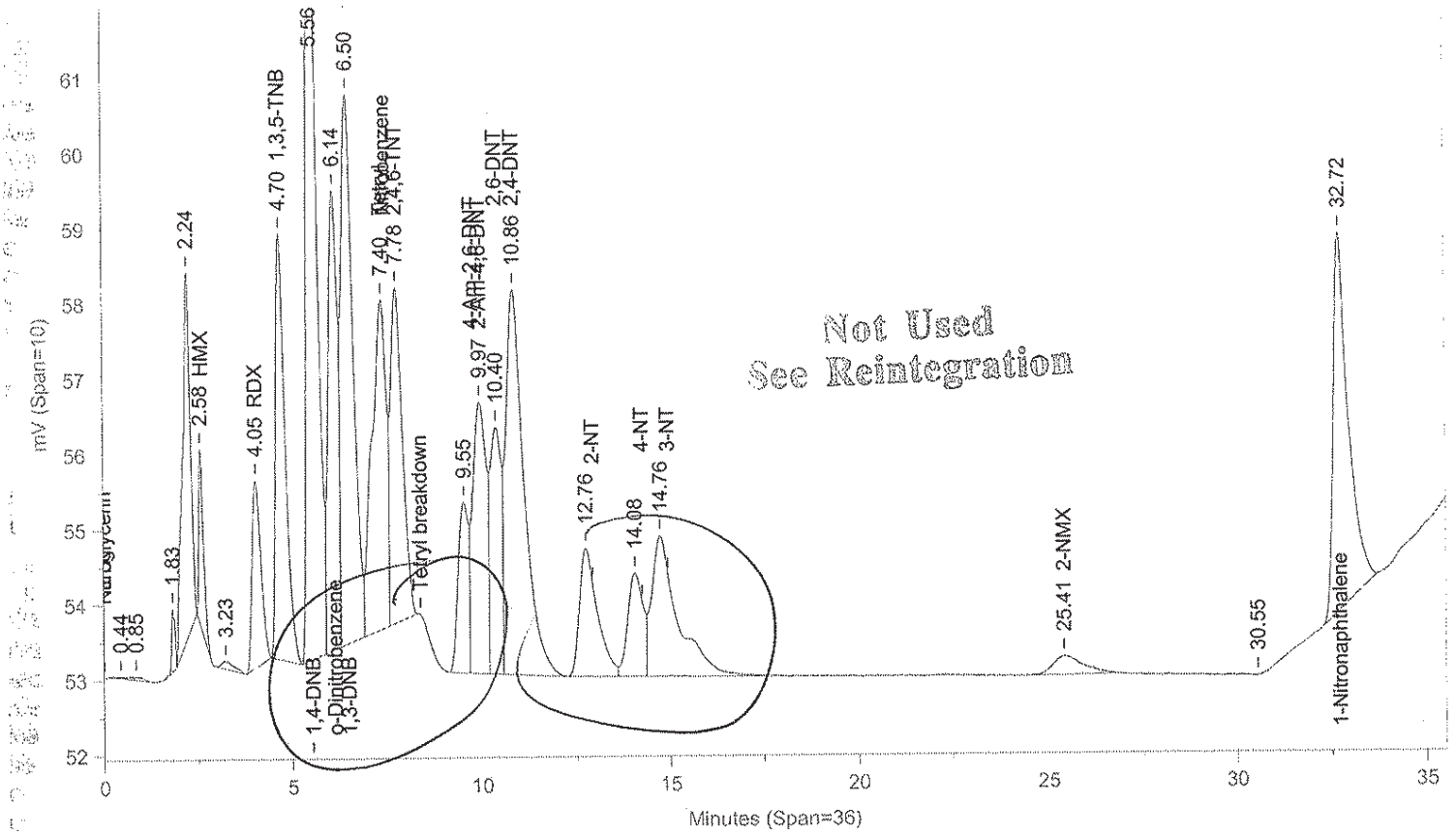
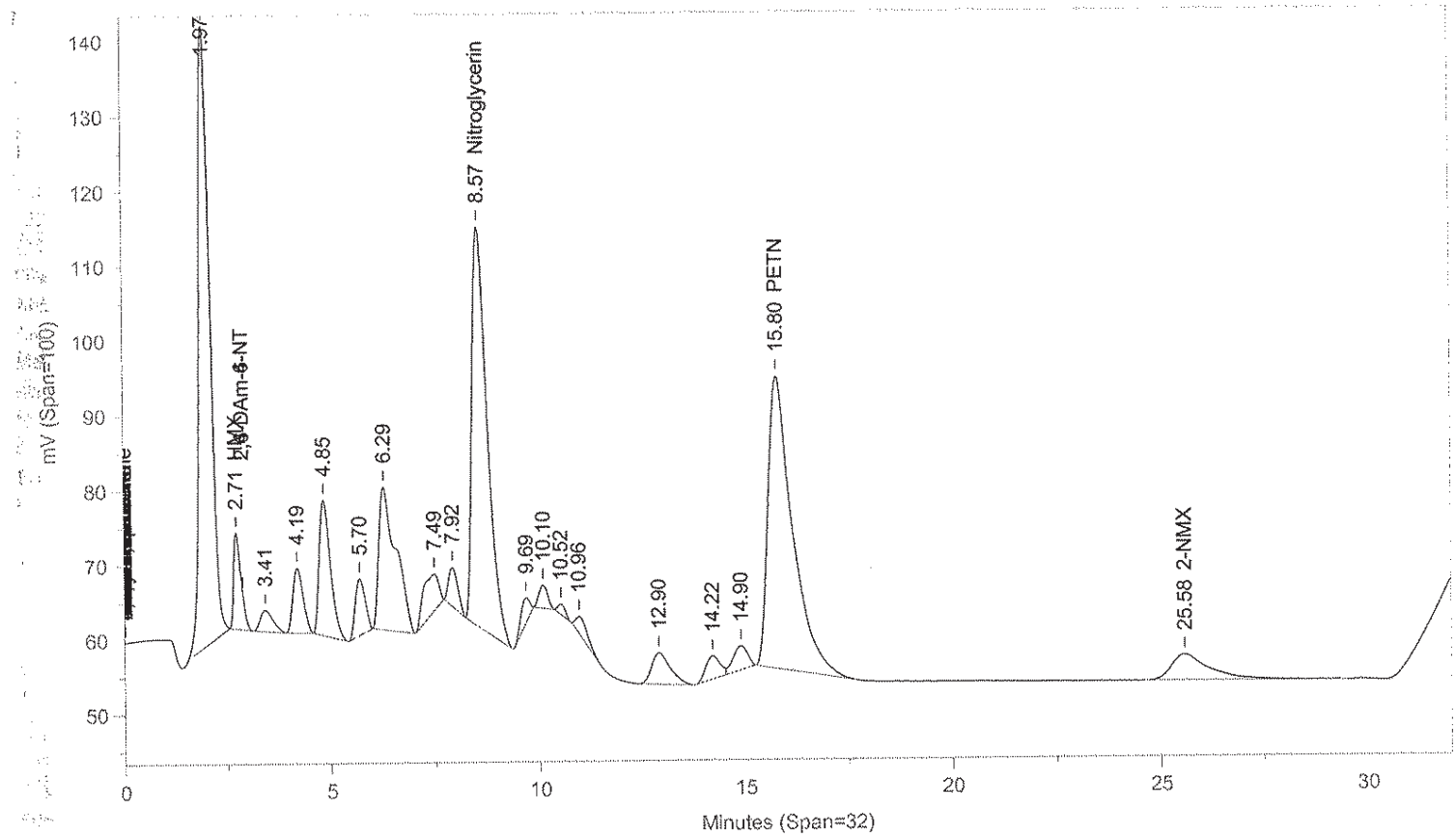
File: C:\CPWIN\DATA1\4E12310.76R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.76R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.714	163181	7.86	HMX
4.052	41187	9.151	RDX	.	0	.	RDX
4.702	98370	9.32	1,3,5-TNB	.	0	.	1,3,5-TNB
5.56	230997	18.134	1,4-DNB	.	0	.	1,4-DNB
6.139	105060	20.393	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.502	161014	9.924	1,3-DNB	.	0	.	1,3-DNB
7.396	117830	6.818	Tetryl	.	0	.	Tetryl
7.779	95218	8.358	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.571	1343702	210.274	Nitroglycerin
9.973	91292	8.337	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.401	66305	10.908	2,6-DNT	.	0	.	2,6-DNT
10.858	170659	10.319	2,4-DNT	.	0	.	2,4-DNT
.	0	.	PETN	15.8	1602494	234.025	PETN
25.41	13723	8.052	2-NMX	25.584	225887	9.249	2-NMX
32.719	140437	21.38	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.76A
Area File: C:\CPWIN\DATA1\4E12310B.76A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:52:22 PM
File Reported On: 11/18/2013 at 2:52:31 PM

Not Used
See Reintegration

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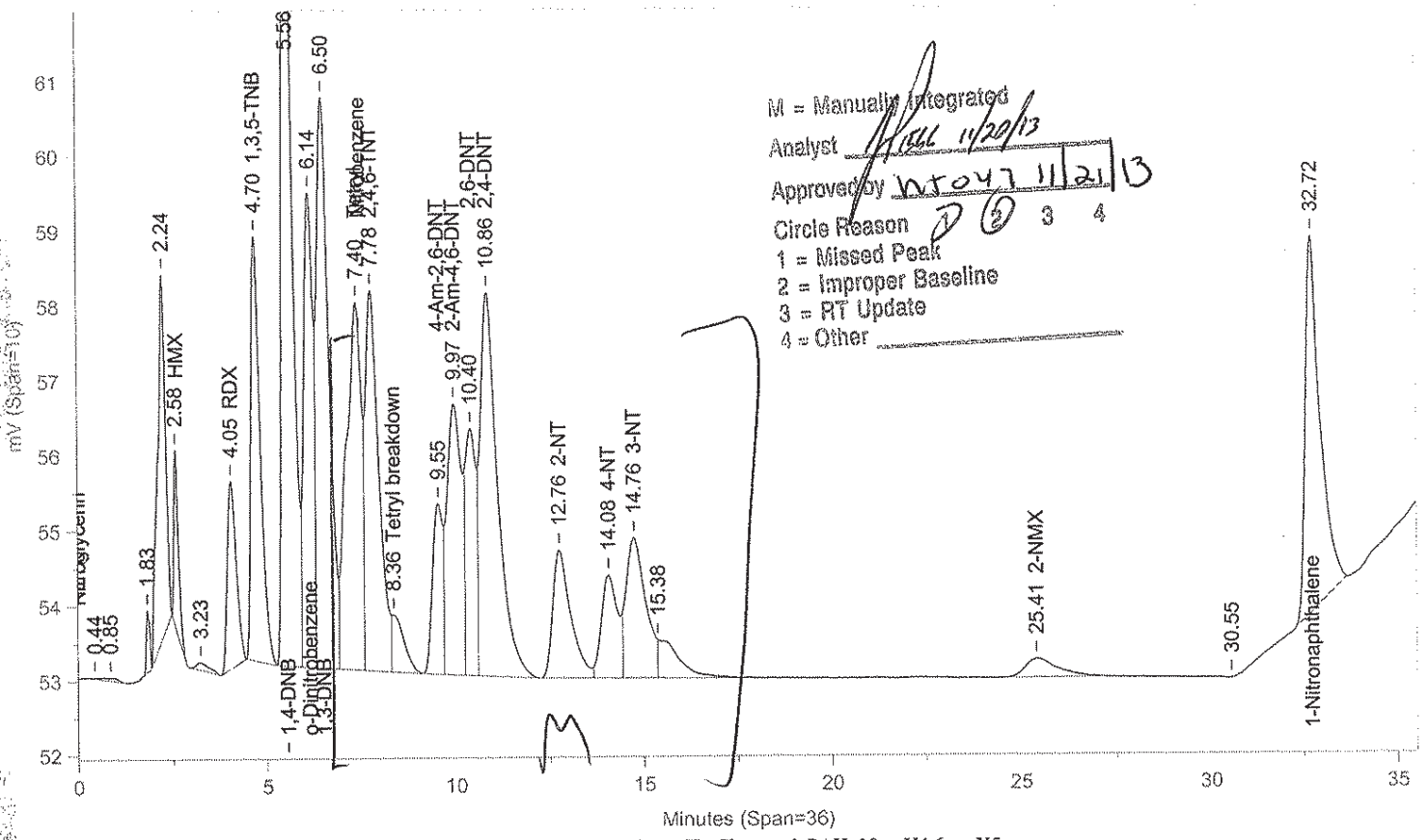
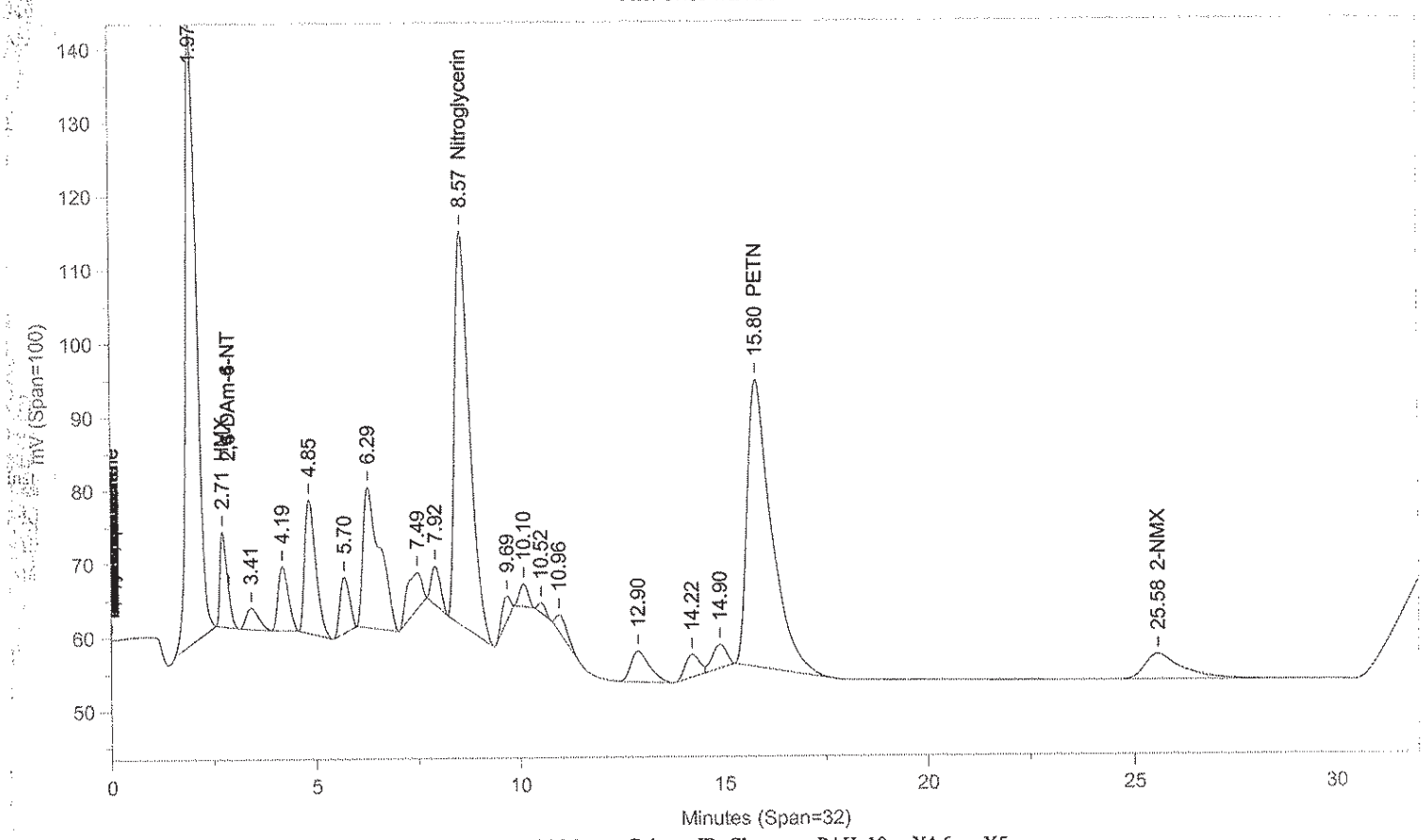
File: C:\CPWIN\DATA1\4E12310.76R



M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.76R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.714	163181	7.86	HMX
4.052	41187	9.151	RDX	.	0	.	RDX
4.702	98370	9.32	1,3,5-TNB	.	0	.	1,3,5-TNB
5.56	235505	18.487	1,4-DNB	.	0	.	1,4-DNB
6.139	108405	21.042	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.502	173402	10.688	1,3-DNB	.	0	.	1,3-DNB
7.396	137683	7.966	Tetryl	.	0	.	Tetryl
7.779	123025	10.798	2,4,6-TNT	.	0	.	2,4,6-TNT
8.355	17127	.991	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.571	1343702	210.274	Nitroglycerin
9.548	43059	9.179	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.973	96706	8.831	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.401	63653	10.471	2,6-DNT	.	0	.	2,6-DNT
10.858	167898	10.152	2,4-DNT	.	0	.	2,4-DNT
12.761	57144	8.639	2-NT	.	0	.	2-NT
14.084	42220	8.999	4-NT	.	0	.	4-NT
14.757	66773	9.863	3-NT	.	0	.	3-NT
.	0	.	PETN	15.8	1602494	234.025	PETN
25.41	14776	8.67	2-NMX	25.584	225887	9.249	2-NMX
32.719	138869	21.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:54:48 AM
File Reported On: 11/20/2013 at 11:54:47 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:46:23
Instrument : CP12--Y6329A
Result file : 4C12310.76R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 87% (73-122) Conc.: 8.688906

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.34	4.40	40507	7.728072
RDX	5.16	5.32	5.36	55865	9.499586
Nitrobenzene	12.75	13.04	13.07	89897	9.734917
o-Dinitrobenzene	14.72	15.09	15.08	142280	20.694586
4-Am-2,6-DNT	16.66	16.98	16.98	195723	10.141220
1,3-DNB	18.93	19.26	19.23	140893	8.319469
1,4-DNB	19.62	20.03	19.92	263338	23.022066
2-NT	24.05	24.57	24.57	53642	9.152677
4-NT	27.60	28.17	28.12	79370	8.217587
1,3,5-TNB	29.81	30.21	30.21	73178	6.989180
2,6-DNT	30.62	31.01	31.02	78915	12.334536
2,4-DNT	33.67	33.87	33.89	141159	10.930724
2-NMX	34.12	34.35	34.32	13310	8.688906
Tetryl	34.41	34.58	34.61	75708	9.899279
2,4,6-TNT	35.36	35.52	35.56	107077	10.181443
1-Nitronaphthalene	36.36	36.50	36.56	155151	19.898338

Analysis Report (B)

Injected on : NOV 17, 2013 21:46:23
Instrument : CP12--Y6329B
Result file : 4C12310B.76R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.80	9.82	1112589	218.929626
PETN	26.02	26.45	26.44	1249411	210.412308

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	210.412308	18	6			
☑ Nitroglycerin	B	218.929626	15	5.2			
☑ HMX	A	7.728072	2	0.65			
☑ RDX	A	9.499586	0.5	0.2			
☑ Nitrobenzene	A	9.734917	0.6	0.2			
☑ o-Dinitrobenzene	A	20.694586	0.6	0.2			
☑ 4-Am-2,6-DNT	A	10.141220	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.319469	0.6	0.2			
☑ 1,4-DNB	A	23.022066	0.6	0.3			
☑ 2-NT	A	9.152677	0.75	0.25			
☑ 4-NT	A	8.217587	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	6.989180	0.6	0.2			
☑ 2,6-DNT	A	12.334536	1.3	0.45			
☑ 2,4-DNT	A	10.930724	2	0.72			
☐ 2-NMX	A	8.688906					
☑ Tetryl	A	9.899279	0.6	0.4			
☑ 2,4,6-TNT	A	10.181443	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:02

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 21:46:23
Instrument	: CP12--Y6329A
Result file	: 4C12310.76R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 21:46:23
Instrument	: CP12--Y6329B
Result file	: 4C12310B.76R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	19.898338	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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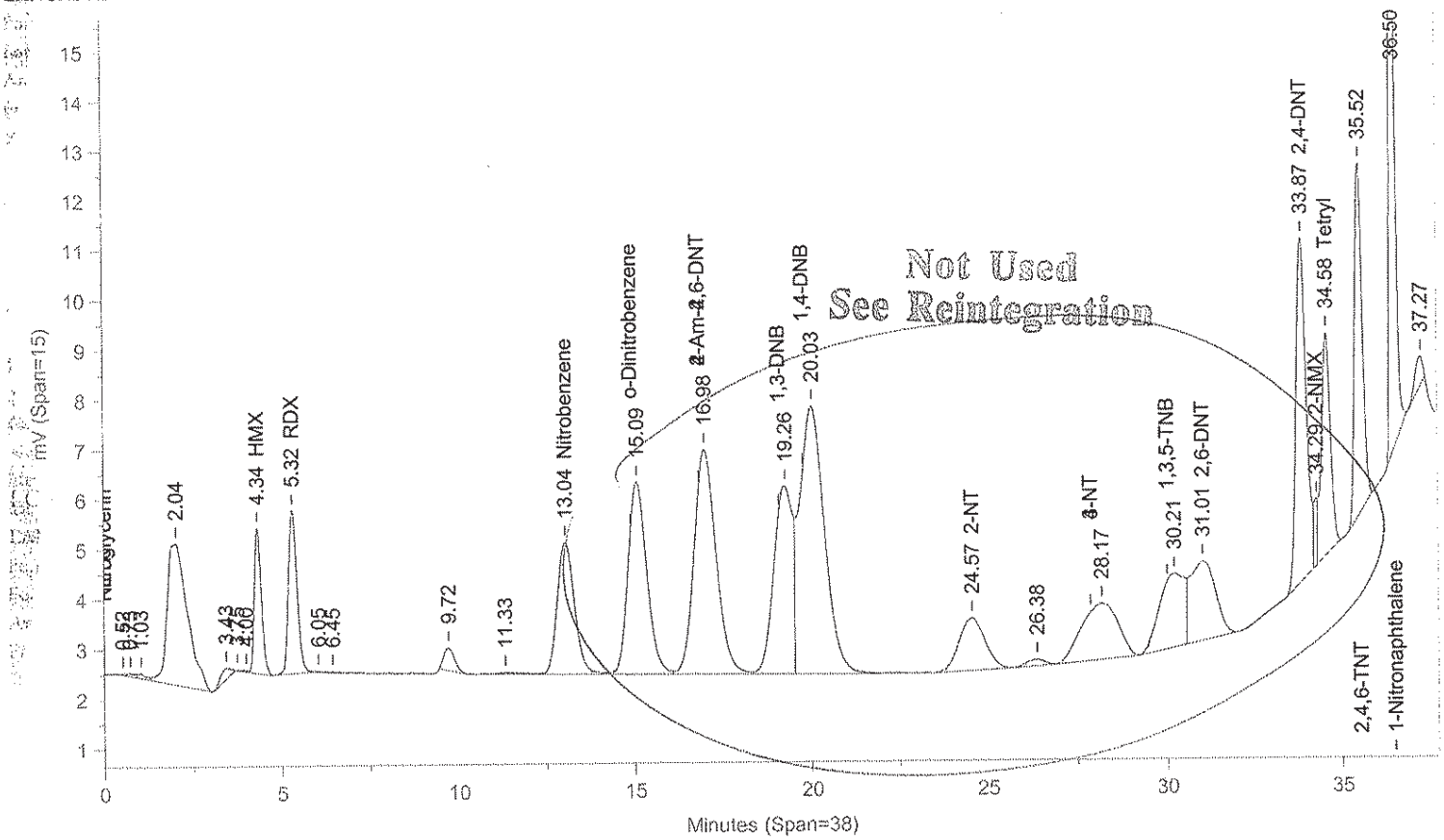
File: C:\CPWIN\DATA1\4C12310.76R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:46:22 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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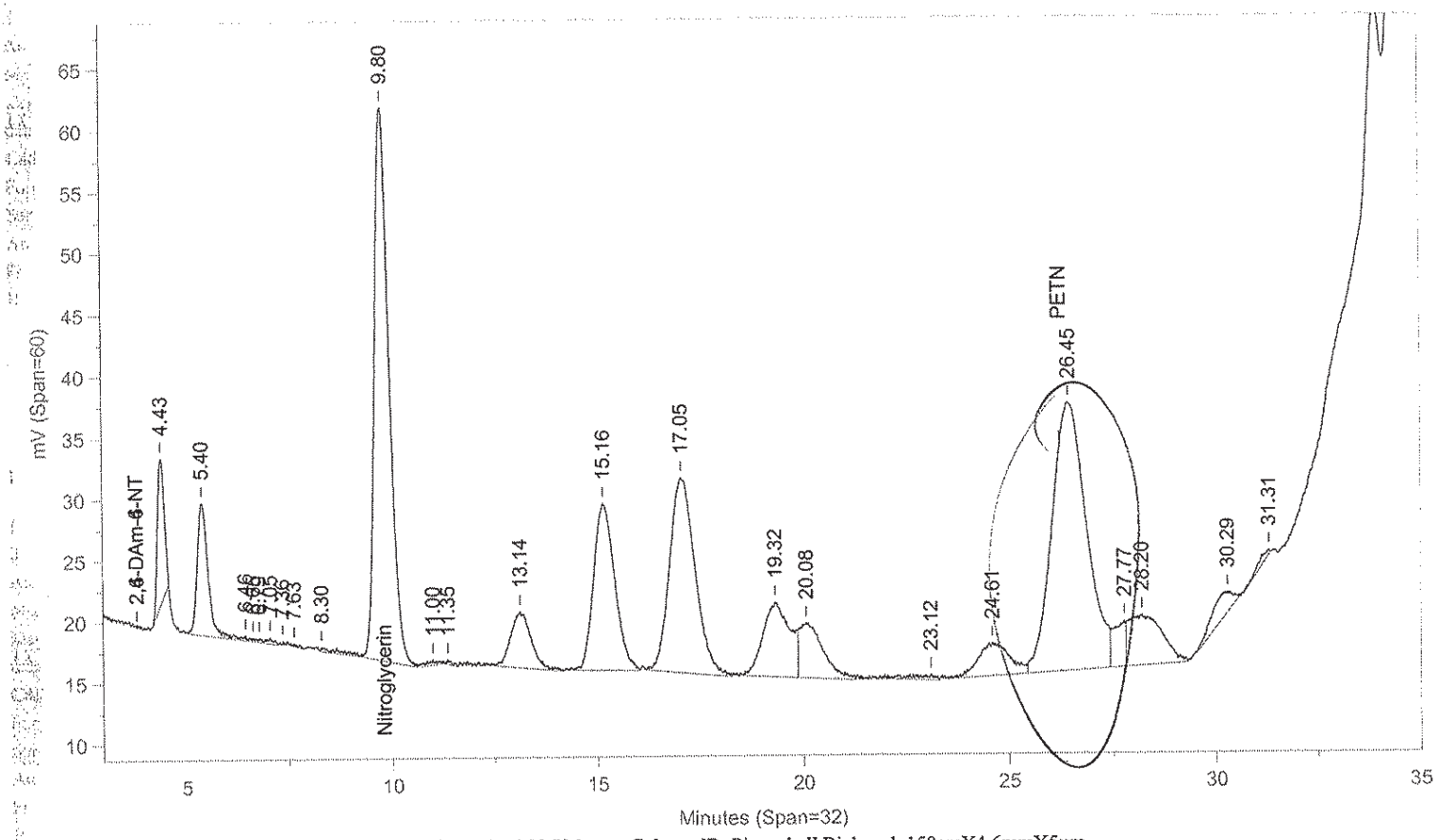


Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

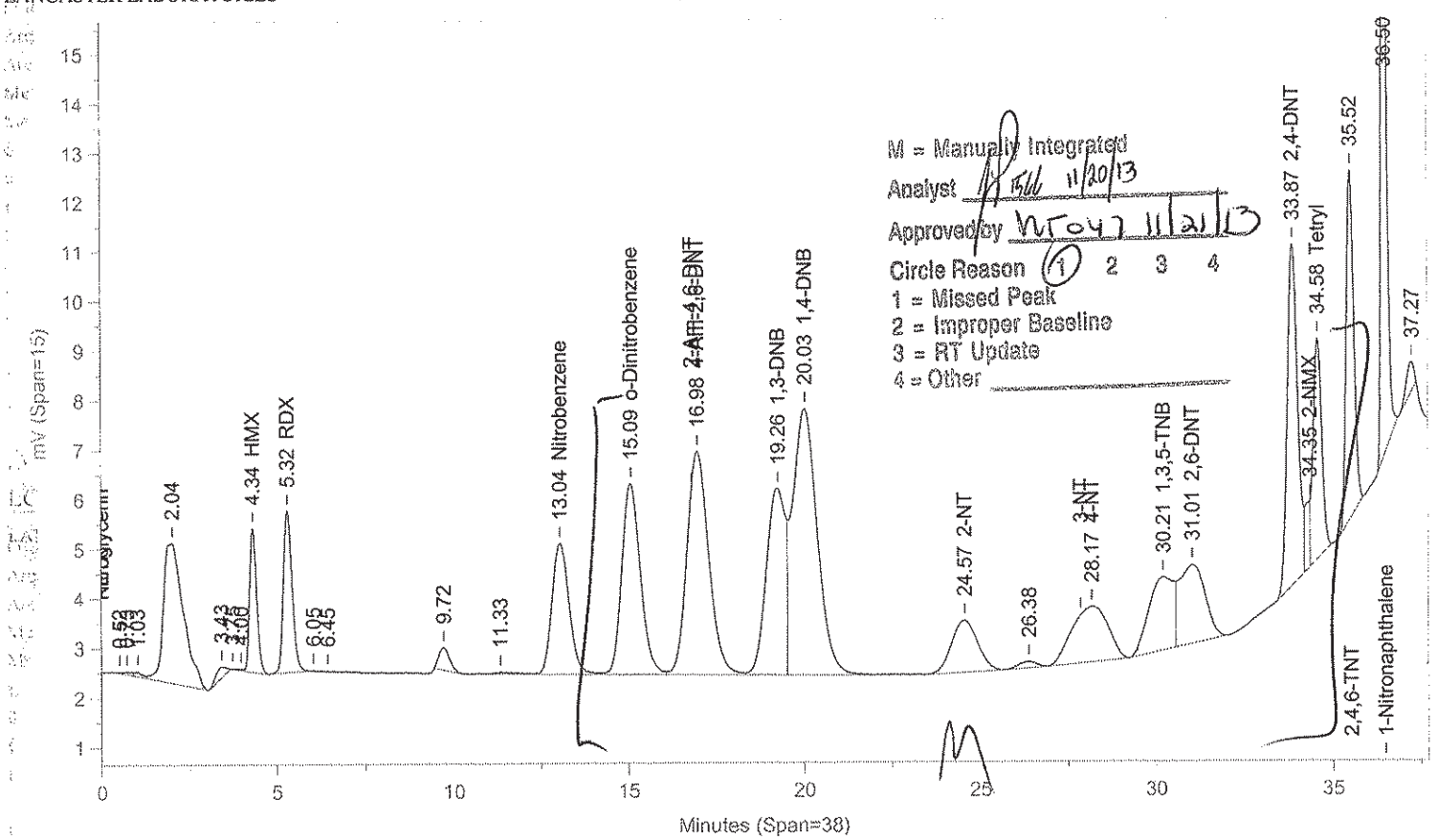
Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.337	40507	7.728	HMX	.	0	.	HMX
5.316	55865	9.5	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.805	1112589	218.93	Nitroglycerin
13.045	89897	9.735	Nitrobenzene	.	0	.	Nitrobenzene
24.565	53642	9.153	2-NT	.	0	.	2-NT
31.014	78915	12.335	2,6-DNT	.	0	.	2,6-DNT
33.871	141597	10.965	2,4-DNT	.	0	.	2,4-DNT
34.286	9346	6.417	2-NMX	.	0	.	2-NMX
34.579	79234	10.343	Tetryl	.	0	.	Tetryl
35.519	107077	10.181	2,4,6-TNT	.	0	.	2,4,6-TNT
36.503	155151	19.898	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.76A
Area File: C:\CPWIN\DATA1\4C12310B.76A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:19:00 PM
File Reported On: 11/18/2013 at 3:19:09 PM

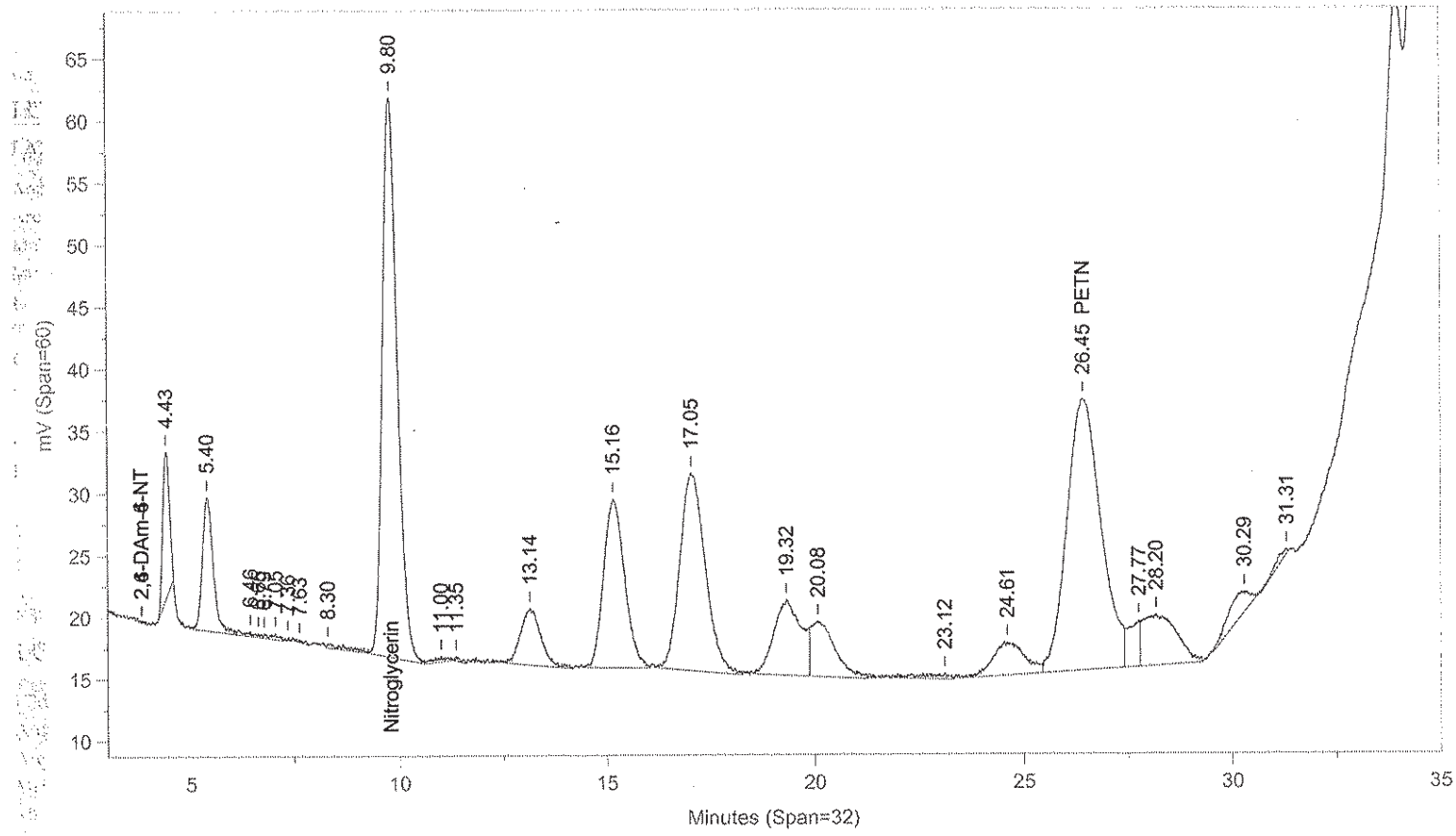
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.76R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:46:22 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.76R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.337	40507	7.728	HMX	.	0	.	HMX
5.316	55865	9.5	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.805	1112589	218.93	Nitroglycerin
13.045	89897	9.735	Nitrobenzene	.	0	.	Nitrobenzene
15.093	142280	20.695	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.981	195723	10.141	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.264	140893	8.319	1,3-DNB	.	0	.	1,3-DNB
20.034	263338	23.022	1,4-DNB	.	0	.	1,4-DNB
24.565	53642	9.153	2-NT	.	0	.	2-NT
.	0	.	PETN	26.45	1249411	210.412	PETN
28.166	79370	8.218	4-NT	.	0	.	4-NT
30.211	73178	6.989	1,3,5-TNB	.	0	.	1,3,5-TNB
31.014	78915	12.335	2,6-DNT	.	0	.	2,6-DNT
33.871	141159	10.931	2,4-DNT	.	0	.	2,4-DNT
34.35	13310	8.689	2-NMX	.	0	.	2-NMX
34.579	75708	9.899	Tetryl	.	0	.	Tetryl
35.519	107077	10.181	2,4,6-TNT	.	0	.	2,4,6-TNT
36.503	155151	19.898	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:42:34 PM
File Reported On: 11/20/2013 at 2:42:33 PM

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Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314 LCSD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 22:28:50
Instrument X6329A
Result file 4E12310.77R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 93% (73 - 122) Conc: 9.352804

Analysis Report (B)

Injected on Nov 17, 2013 22:28:50
Instrument Y6329A
Result file 4C12310.77R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) * 126% (73 - 122) Conc: 12.567383

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.00	3.82	4.20	41281	9.172319	HMX	4.20	4.44	4.40	41096	7.840355
1,3,5-Trinitrobenzene	4.66	4.42	4.86	99345	9.412722	RDX	5.16	5.44	5.36	58935	10.047509
1,4-Dinitrobenzene	5.52	5.21	5.72	240924	18.912798	Nitrobenzene	12.75	13.23	13.07	88940	9.630445
o-Dinitrobenzene	6.13	5.71	6.33	112673	21.870337	o-Dinitrobenzene	14.72	15.27	15.08	140258	20.397144
1,3-DNB	6.49	6.08	6.69	168335	10.375187	4-Amino-2,6-dinitrotoluer	16.66	17.15	16.98	193980	10.050929
Tetryl	7.33	6.89	7.61	142329	9.324655	1,3-DNB	18.93	19.58	19.23	147642	8.717997
2,4,6-Trinitrotoluene	7.78	7.23	7.98	124891	10.962006	1,4-Dinitrobenzene	19.62	20.40	19.92	257693	22.52206
4-Amino-2,6-dinitrotoluer	9.69	8.83	9.97	42654	9.092693	2-Nitrotoluene	24.05	24.86	24.57	54787	9.351515
2-Amino-4,6-dinitrotoluer	9.97	9.23	10.25	95267	8.699529	4-Nitrotoluene	27.60	28.62	28.12	87884	9.072639
2,6-Dinitrotoluene	10.38	9.62	10.66	66087	10.871756	1,3,5-Trinitrobenzene	29.81	31.16	30.21	90192	8.369838
2,4-Dinitrotoluene	10.86	10.05	11.14	170848	10.330473	2,6-Dinitrotoluene	30.62	31.33	31.02	77296	12.08692
2-Nitrotoluene	12.80	11.80	13.08	57334	8.667852	2,4-Dinitrotoluene	33.67	34.06	33.89	134550	10.418971
4-Nitrotoluene	14.10	13.05	14.43	41459	8.83715	2-NMX	34.12	34.29	34.32	20079	12.567383
3-Nitrotoluene	14.79	13.69	15.12	68789	10.160467	Tetryl	34.41	34.73	34.61	76226	9.964551
2-NMX	25.41	23.69	26.09	15941	9.352804	2,4,6-Trinitrotoluene	35.36	35.68	35.56	107906	10.259212
1-Nitronaphthalene	32.62	31.88	33.11	138676	21.111973	1-Nitronaphthalene	36.36	36.61	36.56	153890	19.741182

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	209.103775	15	5.2		4.77	
PETN	A	236.448532	18	6		10.87	
HMX	A	8.123042	2	0.65		3.54	
RDX	A	9.172319	0.5	0.2		9.11	
1,3,5-Trinitrobenzene	A	9.412722	0.6	0.2		11.73	
1,4-Dinitrobenzene	A	18.912798	0.6	0.3		17.42	
o-Dinitrobenzene	A	21.870337	0.6	0.2		6.97	
1,3-DNB	A	10.375187	0.6	0.2		17.36	
Tetryl	B	9.964551	0.6	0.4		6.63	
Nitrobenzene	B	9.630445	0.6	0.2		3.23	
2,4,6-Trinitrotoluene	A	10.962006	0.6	0.2		6.62	
4-Amino-2,6-dinitrotoluene	A	9.092693	0.6	0.3		10.01	
2-Amino-4,6-dinitrotoluene	A	8.699529	0.6	0.2		14.41	
2,6-Dinitrotoluene	A	10.871756	1.3	0.45		10.59	
2,4-Dinitrotoluene	A	10.330473	2	0.72		0.85	
2-Nitrotoluene	A	8.667852	0.75	0.25		7.59	
4-Nitrotoluene	A	8.83715	1.2	0.6		2.63	
3-Nitrotoluene	A	10.160467	1.2	0.4		11.31	
2-NMX	A	9.352804				29.33	
1-Nitronaphthalene	A	21.111973	0.6	0.2		6.71	

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Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314 LCSD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 22:28:50
Instrument	X6329A
Result file	4E12310.77R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 22:28:50
Instrument	Y6329A
Result file	4C12310.77R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--X6329A
Result file : 4E12310.77R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 93% (73-122) Conc.: 9.352804

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	3.82	4.20	41281	9.172319
1,3,5-TNB	4.66	4.42	4.86	99345	9.412722
1,4-DNB	5.52	5.21	5.72	240924	18.912798
o-Dinitrobenzene	6.13	5.71	6.33	112673	21.870337
1,3-DNB	6.49	6.08	6.69	168335	10.375187
Tetryl	7.33	6.89	7.61	142329	8.235116
2,4,6-TNT	7.78	7.23	7.98	124891	10.962006
Tetryl breakdown	8.27	7.67	8.52	18831	1.089539
4-Am-2,6-DNT	9.63	8.83	9.91	42654	9.092693
2-Am-4,6-DNT	9.97	9.23	10.25	95267	8.699529
2,6-DNT	10.38	9.62	10.66	66087	10.871756
2,4-DNT	10.86	10.05	11.14	170848	10.330473
2-NT	12.80	11.80	13.08	57334	8.667852
4-NT	14.10	13.05	14.43	41459	8.837150
3-NT	14.79	13.69	15.12	68789	10.160467
2-NMX	25.41	23.69	26.09	15941	9.352804
1-Nitronaphthalene	32.62	31.88	33.11	138676	21.111973

Analysis Report (B)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--X6329B
Result file : 4E12310B.77R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 91% (73-122) Conc.: 9.126577

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.60	2.85	168885	8.123042
Nitroglycerin	8.51	7.97	8.89	1336226	209.103775
PETN	15.75	14.67	16.33	1619089	236.448532
2-NMX	25.57	23.84	26.24	222902	9.126577

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	209.103775	15	5.2			
☑ PETN	B	236.448532	18	6			
☑ HMX	B	8.123042	2	0.65			
☑ RDX	A	9.172319	0.5	0.2			
☑ 1,3,5-TNB	A	9.412722	0.6	0.2			
☑ 1,4-DNB	A	18.912798	0.6	0.3			
☑ o-Dinitrobenzene	A	21.870337	0.6	0.2			
☑ 1,3-DNB	A	10.375187	0.6	0.2			
☑ Tetryl	A	8.235116	0.6	0.4			+Breakdown = 9.324655
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.962006	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	9.092693	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.699529	0.6	0.2			
☑ 2,6-DNT	A	10.871756	1.3	0.45			
☑ 2,4-DNT	A	10.330473	2	0.72			
☑ 2-NT	A	8.667852	0.75	0.25			
☑ 4-NT	A	8.837150	1.2	0.6			
☑ 3-NT	A	10.160467	1.2	0.4			
☐ 2-NMX	A	9.352804				2.45	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSDA** 11/12/13 LCSD16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--X6329A
Result file	: 4E12310.77R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--X6329B
Result file	: 4E12310B.77R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	21.111973	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:23:49

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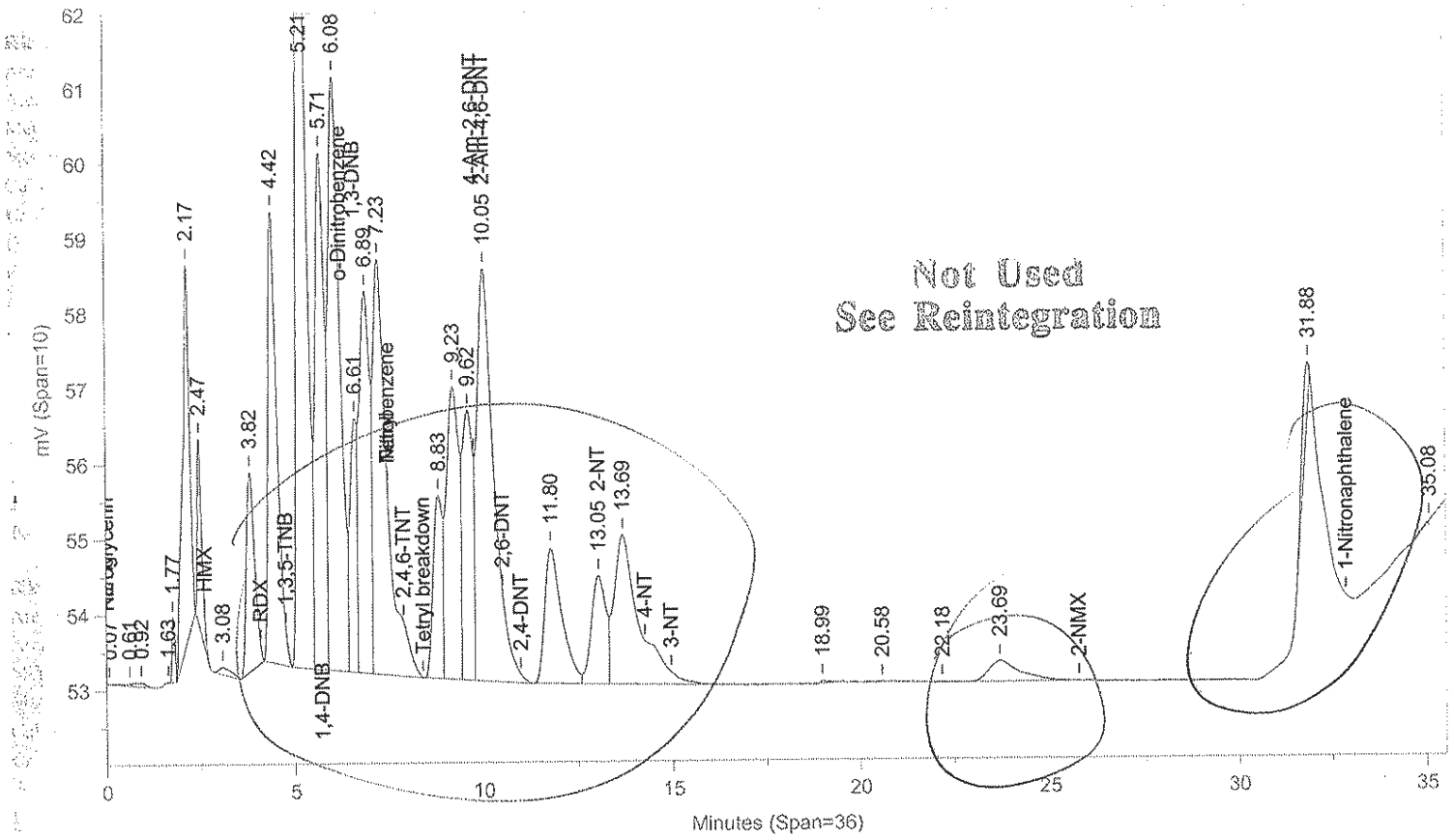
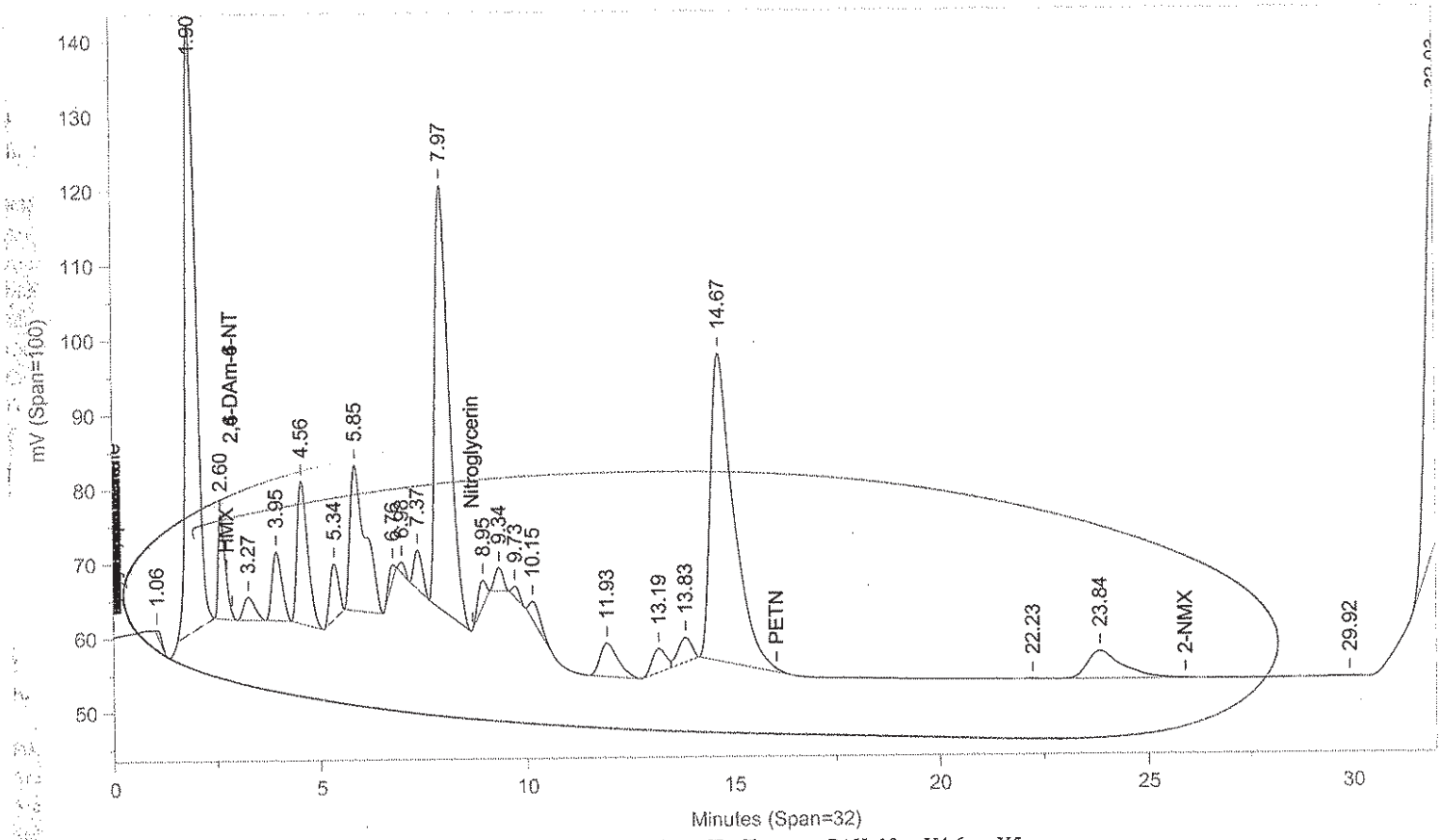


Instrument ID: CP12--X6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.77R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.708	118923	9.336	1,4-DNB	.	0	.	1,4-DNB
6.614	43633	2.689	1,3-DNB	.	0	.	1,3-DNB
10.053	170848	15.601	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
13.053	38611	5.837	2-NT	.	0	.	2-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.77A
Area File: C:\CPWIN\DATA1\4E12310B.77A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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File Reported On: 11/18/2013 at 2:53:03 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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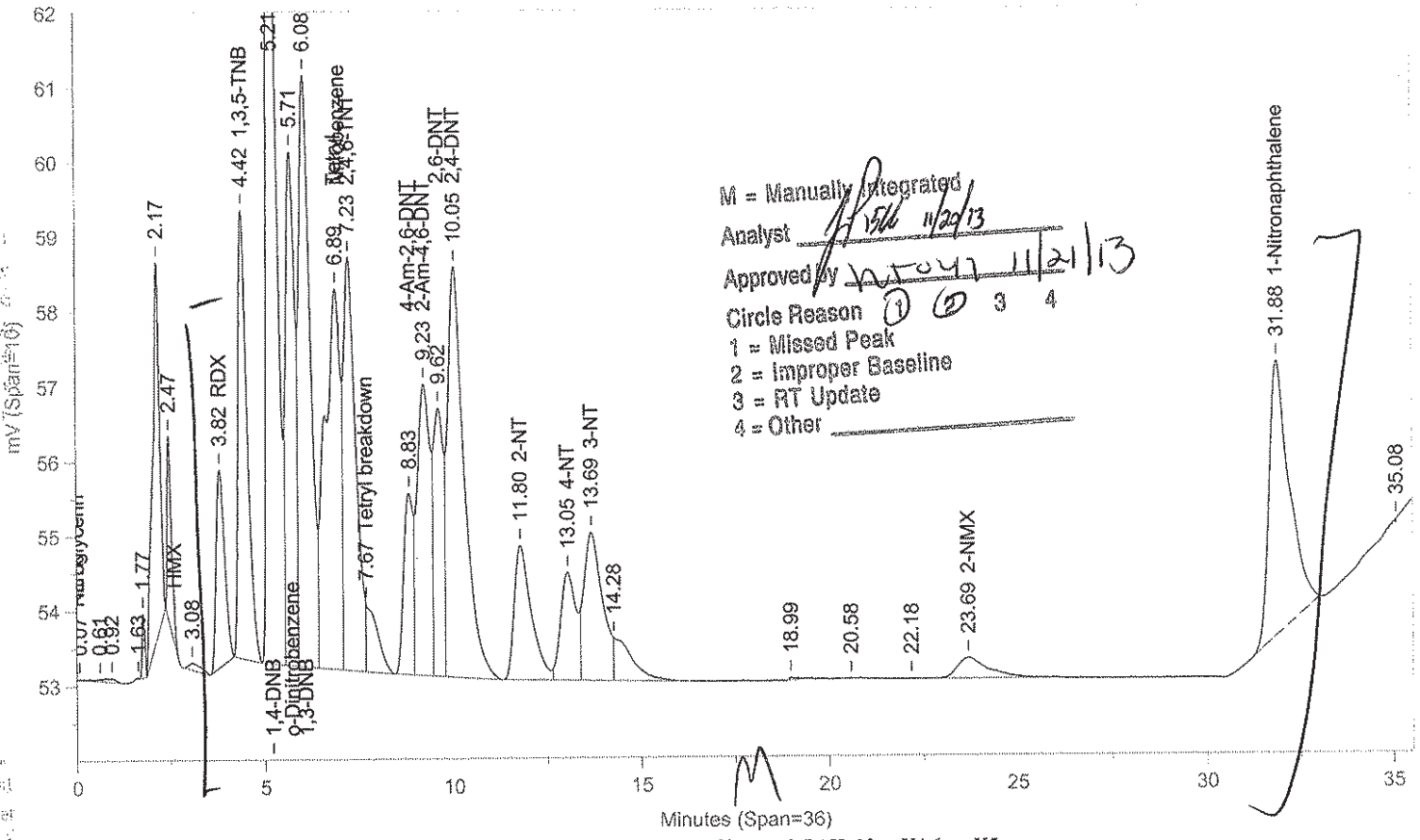
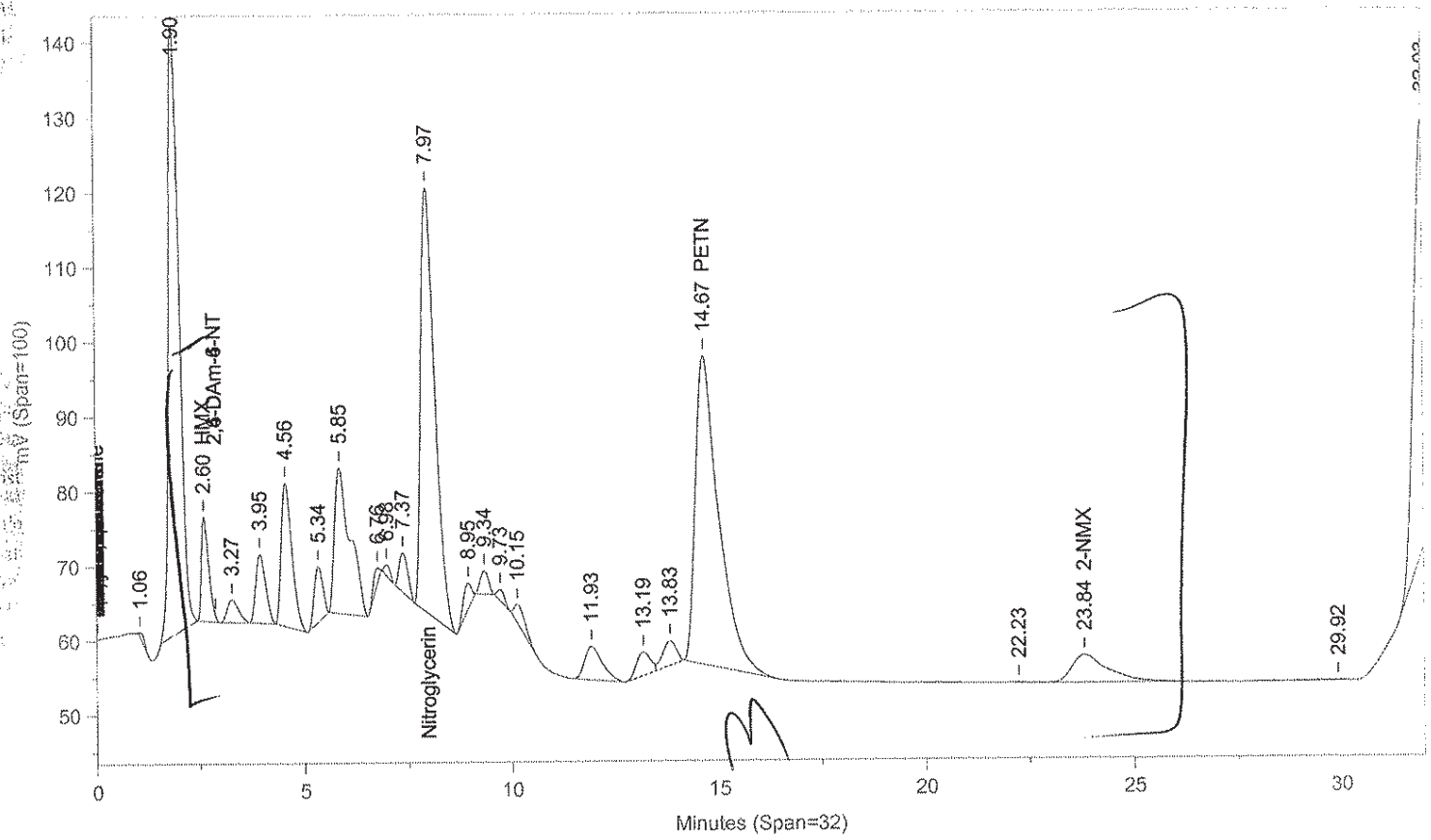


M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.77R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.602	168885	8.123	HMX
3.816	41281	9.172	RDX	.	0	.	RDX
4.424	99345	9.413	1,3,5-TNB	.	0	.	1,3,5-TNB
5.209	240924	18.913	1,4-DNB	.	0	.	1,4-DNB
5.708	112673	21.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.079	168335	10.375	1,3-DNB	.	0	.	1,3-DNB
6.893	142329	8.235	Tetryl	.	0	.	Tetryl
7.235	124891	10.962	2,4,6-TNT	.	0	.	2,4,6-TNT
7.672	18831	1.09	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	7.971	1336226	209.104	Nitroglycerin
8.827	42654	9.093	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.227	95267	8.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
9.616	66087	10.872	2,6-DNT	.	0	.	2,6-DNT
10.053	170848	10.33	2,4-DNT	.	0	.	2,4-DNT
11.797	57334	8.668	2-NT	.	0	.	2-NT
13.053	41459	8.837	4-NT	.	0	.	4-NT
13.693	68789	10.16	3-NT	.	0	.	3-NT
.	0	.	PETN	14.666	1619089	236.449	PETN
23.69	15941	9.353	2-NMX	23.836	222902	9.127	2-NMX
31.884	138676	21.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:02:18 PM
File Reported On: 11/20/2013 at 12:02:16 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--Y6329A
Result file : 4C12310.77R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : *126% (73-122) Conc.: 12.567383

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.44	4.40	41096	7.840355
RDX	5.16	5.44	5.36	58935	10.047509
Nitrobenzene	12.75	13.23	13.07	88940	9.630445
o-Dinitrobenzene	14.72	15.27	15.08	140258	20.397144
4-Am-2,6-DNT	16.66	17.15	16.98	193980	10.050929
1,3-DNB	18.93	19.58	19.23	147642	8.717997
1,4-DNB	19.62	20.40	19.92	257693	22.522060
2-NT	24.05	24.86	24.57	54787	9.351515
4-NT	27.60	28.62	28.12	87884	9.072639
1,3,5-TNB	29.81	31.16	30.21	90192	8.369838
2,6-DNT	30.62	31.33	31.02	77296	12.086920
2,4-DNT	33.67	34.06	33.89	134550	10.418971
2-NMX	34.12	34.29	34.32	20079	12.567383
Tetryl	34.41	34.73	34.61	76226	9.964551
2,4,6-TNT	35.36	35.68	35.56	107906	10.259212
1-Nitronaphthalene	36.36	36.61	36.56	153890	19.741182

Analysis Report (B)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--Y6329B
Result file : 4C12310B.77R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.95	9.82	1114636	219.332565
PETN	26.02	26.81	26.44	1259257	212.070557

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	212.070557	18	6			
☑ Nitroglycerin	B	219.332565	15	5.2			
☑ HMX	A	7.840355	2	0.65			
☑ RDX	A	10.047509	0.5	0.2			
☑ Nitrobenzene	A	9.630445	0.6	0.2			
☑ o-Dinitrobenzene	A	20.397144	0.6	0.2			
☑ 4-Am-2,6-DNT	A	10.050929	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.717997	0.6	0.2			
☑ 1,4-DNB	A	22.522060	0.6	0.3			
☑ 2-NT	A	9.351515	0.75	0.25			
☑ 4-NT	A	9.072639	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	8.369838	0.6	0.2			
☑ 2,6-DNT	A	12.086920	1.3	0.45			
☑ 2,4-DNT	A	10.418971	2	0.72			
☐ 2-NMX	A	12.567383					
☑ Tetryl	A	9.964551	0.6	0.4			
☑ 2,4,6-TNT	A	10.259212	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:12

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--Y6329A
Result file	: 4C12310.77R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--Y6329B
Result file	: 4C12310B.77R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	19.741182	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place Senior Chemist

Date: NOV 2 1 2013

Verified by: Valerie L. Tomayko Principal Specialist

Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:12

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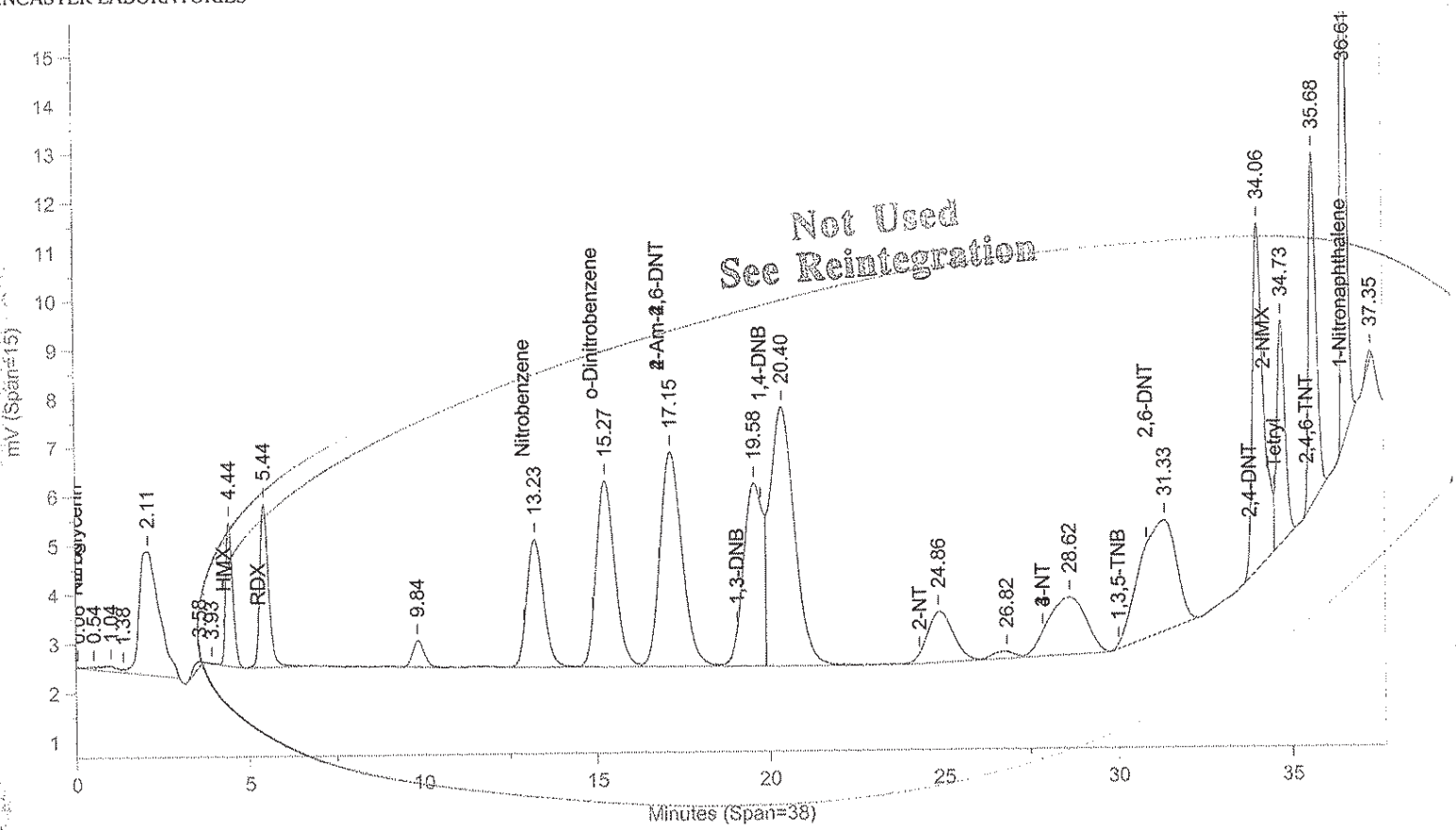
File: C:\CPWIN\DATA1\4C12310.77R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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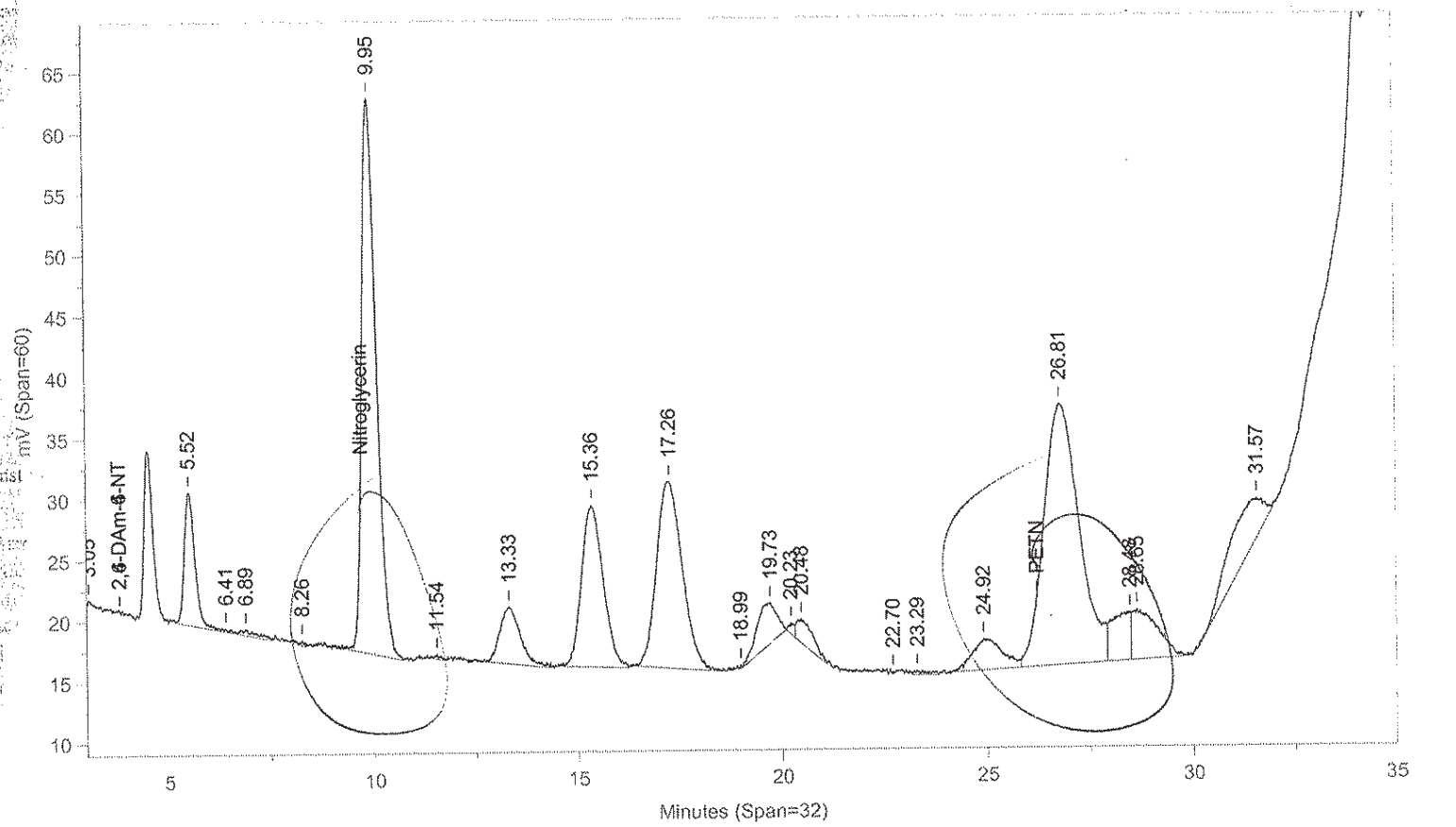

Instrument ID: CP12--Y6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B

Files:
Area File: C:\CPWIN\DATA1\4C12310.77A
Area File: C:\CPWIN\DATA1\4C12310B.77A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:19:30 PM
File Reported On: 11/18/2013 at 3:19:40 PM

Not Used
See Reintegration

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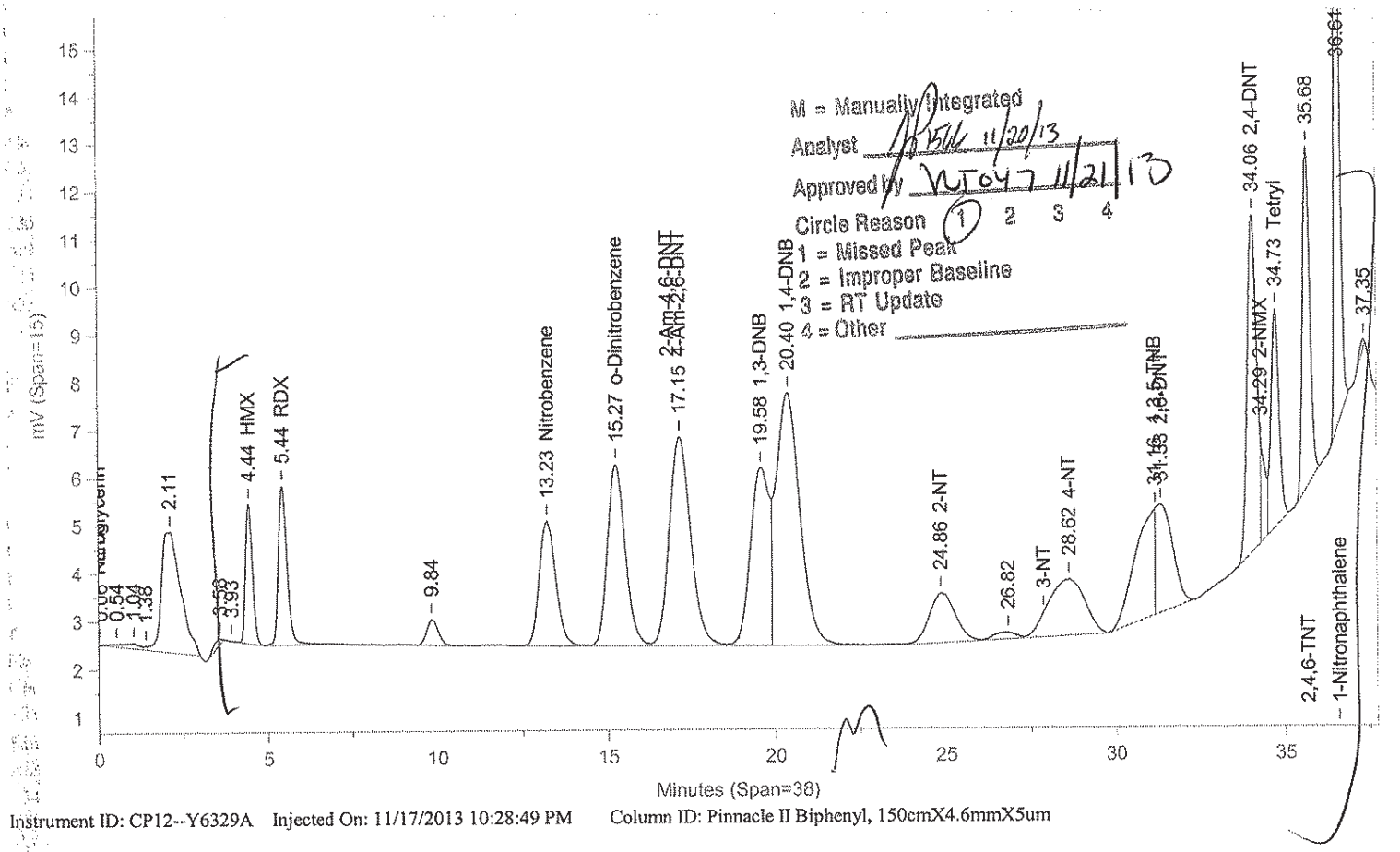
File: C:\CPWIN\DATA1\4C12310.77R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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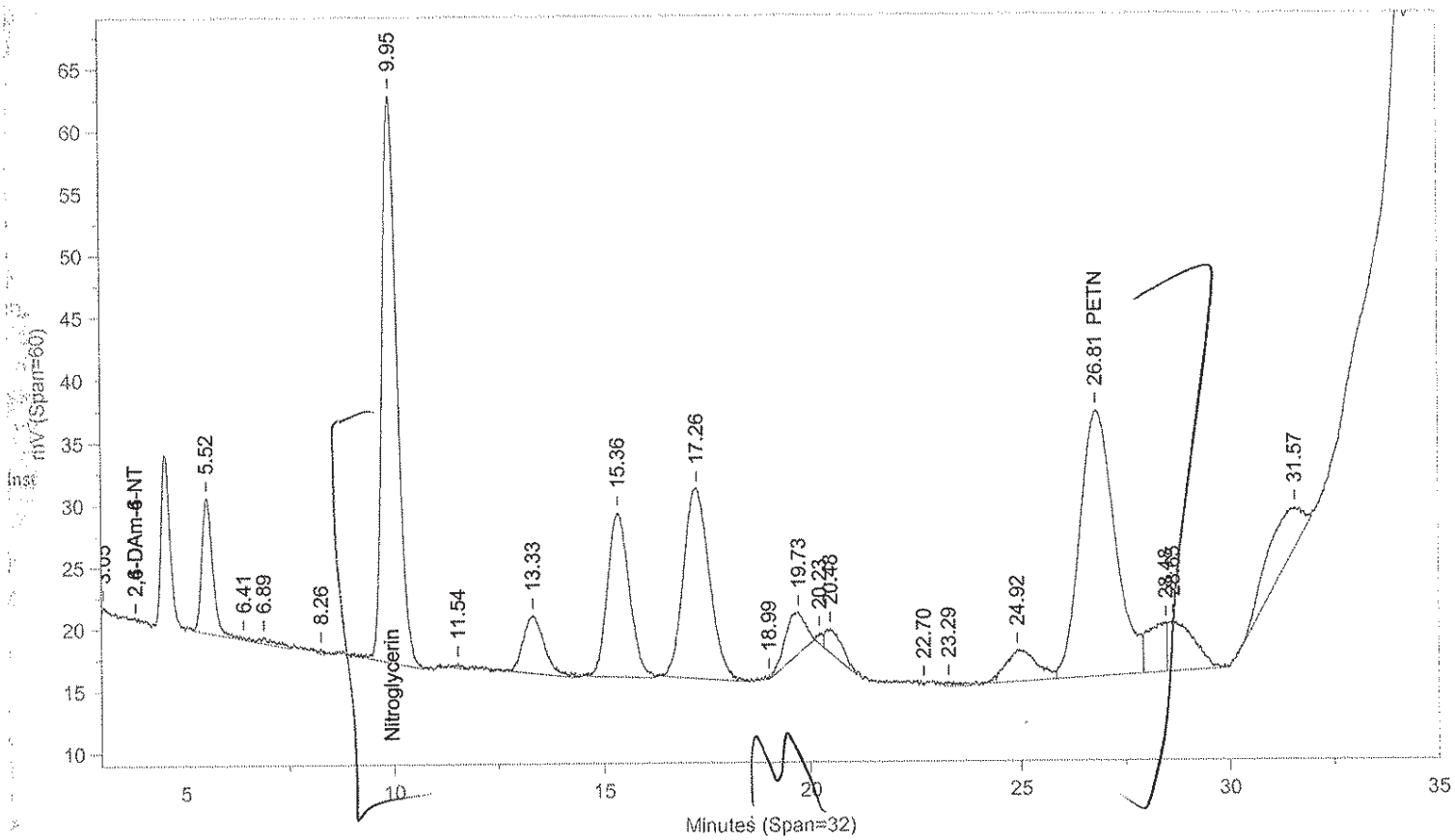

Instrument ID: CP12--Y6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.436	41096	7.84	HMX	.	0	.	HMX
5.436	58935	10.048	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.952	1114636	219.333	Nitroglycerin
13.234	88940	9.63	Nitrobenzene	.	0	.	Nitrobenzene
15.267	140258	20.397	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.155	193980	10.051	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.583	147642	8.718	1,3-DNB	.	0	.	1,3-DNB
20.4	257693	22.522	1,4-DNB	.	0	.	1,4-DNB
24.856	54787	9.352	2-NT	.	0	.	2-NT
.	0	.	PETN	26.81	1259257	212.071	PETN
28.619	87884	9.073	4-NT	.	0	.	4-NT
31.161	90192	8.37	1,3,5-TNB	.	0	.	1,3,5-TNB
31.332	77296	12.087	2,6-DNT	.	0	.	2,6-DNT
34.058	134550	10.419	2,4-DNT	.	0	.	2,4-DNT
34.289	20079	12.567	2-NMX	.	0	.	2-NMX
34.729	76226	9.965	Tetryl	.	0	.	Tetryl
35.676	107906	10.259	2,4,6-TNT	.	0	.	2,4,6-TNT
36.611	153890	19.741	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:45:58 PM
File Reported On: 11/20/2013 at 2:45:56 PM

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Data Summary

Sample Name: LCSA 11/12/13 LCS19314 LCS Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 05:33:20
Instrument X6329A
Result file 4E12310.87R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 91% (63 - 150) Conc: 4541.139648

Analysis Report (B)

Injected on Nov 18, 2013 05:33:20
Instrument Y6329A
Result file 4C12310.87R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 73% (63 - 150) Conc: 3672.459717

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.04	4.20	42255	4697.333496	HMX	4.20	4.34	4.40	35996	3433.676514
1,3,5-Trinitrobenzene	4.66	4.68	4.86	97791	4632.730469	RDX	5.16	5.32	5.36	59650	5087.599609
1,4-Dinitrobenzene	5.52	5.54	5.72	240476	9438.830078	Nitrobenzene	12.75	13.06	13.07	91890	4976.25293
o-Dinitrobenzene	6.13	6.11	6.33	110384	10713.066406	o-Dinitrobenzene	14.72	15.08	15.08	145307	10569.912109
1,3-DNB	6.49	6.47	6.69	181377	5589.521484	4-Amino-2,6-dinitrotoluer	16.66	16.98	16.98	197482	5116.183594
Tetryl	7.33	7.34	7.61	147235	4417.595001	1,3-DNB	18.93	19.30	19.23	139924	4131.135254
2,4,6-Trinitrotoluene	7.78	7.74	7.98	128647	5645.842773	1,4-Dinitrobenzene	19.62	20.04	19.92	275907	12067.598633
4-Amino-2,6-dinitrotoluer	9.69	9.63	9.97	43873	4676.251465	2-Nitrotoluene	24.05	24.55	24.57	59764	5107.666016
2-Amino-4,6-dinitrotoluer	9.97	9.93	10.25	99505	4543.278809	4-Nitrotoluene	27.60	28.23	28.12	85975	4440.448242
2,6-Dinitrotoluene	10.38	10.33	10.66	62250	5120.259766	1,3,5-Trinitrobenzene	29.81	30.79	30.21	87947	4093.825439
2,4-Dinitrotoluene	10.86	10.80	11.14	176601	5339.15332	2,6-Dinitrotoluene	30.62	31.05	31.02	68274	5353.598633
2-Nitrotoluene	12.80	12.70	13.08	58111	4392.70459	2,4-Dinitrotoluene	33.67	33.89	33.89	144488	5594.27832
4-Nitrotoluene	14.10	14.01	14.43	42152	4492.522461	2-NMX	34.12	34.21	34.32	10965	3672.459717
3-Nitrotoluene	14.79	14.67	15.12	80141	5918.600586	Tetryl	34.41	34.61	34.61	82077	5350.732422
2-NMX	25.41	25.29	26.09	15480	4541.139648	2,4,6-Trinitrotoluene	35.36	35.54	35.56	111109	5279.859375
1-Nitronaphthalene	32.62	32.66	33.11	151983	11568.896484	1-Nitronaphthalene	36.36	36.52	36.56	169652	10853.182617

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	18910.890625	6000	2000		54.72	
PETN	B	15837.402344	6000	2000		15.64	
HMX	A	3417.388672	750	250		0.48	
RDX	A	4697.333496	300	125		7.98	
1,3,5-Trinitrobenzene	A	4632.730469	300	100		12.35	
1,4-Dinitrobenzene	A	9438.830078	300	100		24.45	
o-Dinitrobenzene	A	10713.066406	300	100		1.35	
1,3-DNB	A	5589.521484	300	100		30.01	
Tetryl	B	5350.732422	300	153		19.11	
Nitrobenzene	B	4976.25293	300	100		11.89	
2,4,6-Trinitrotoluene	A	5645.842773	300	100		6.70	
4-Amino-2,6-dinitrotoluene	A	4676.251465	300	150		8.99	
2-Amino-4,6-dinitrotoluene	A	4543.278809	300	100		11.86	
2,6-Dinitrotoluene	A	5120.259766	300	100		4.46	
2,4-Dinitrotoluene	A	5339.15332	300	100		4.67	
2-Nitrotoluene	B	5107.666016	300	200		15.05	
4-Nitrotoluene	A	4492.522461	300	200		1.17	
3-Nitrotoluene	A	5918.600586	300	250		28.54	
2-NMX	A	4541.139648				21.15	
1-Nitronaphthalene	A	11568.896484	300	100		6.38	

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Data Summary

Sample Name: LCSA 11/12/13 LCS19314 LCS Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	Nov 18, 2013 05:33:20
Instrument	X6329A
Result file	4E12310.87R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 18, 2013 05:33:20
Instrument	Y6329A
Result file	4C12310.87R
Calibration file	3C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Verified by: KTOY

Date: NOV 21 2013 Date: 12/9/13

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS19314 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--X6329A
Result file : 4E12310.87R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 91% (63-150) Conc.: 4541.13964

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.04	4.20	42255	4697.333496
1,3,5-TNB	4.66	4.68	4.86	97791	4632.730469
1,4-DNB	5.52	5.54	5.72	240476	9438.830078
o-Dinitrobenzene	6.13	6.11	6.33	110384	10713.066406
1,3-DNB	6.49	6.47	6.69	181377	5589.521484
Tetryl	7.33	7.34	7.61	147235	4259.503906
2,4,6-TNT	7.78	7.74	7.98	128647	5645.842773
Tetryl breakdown	8.27	8.34	8.52	5465	158.091095
4-Am-2,6-DNT	9.63	9.63	9.91	43873	4676.251465
2-Am-4,6-DNT	9.97	9.93	10.25	99505	4543.278809
2,6-DNT	10.38	10.33	10.66	62250	5120.259766
2,4-DNT	10.86	10.80	11.14	176601	5339.153320
2-NT	12.80	12.70	13.08	58111	4392.704590
4-NT	14.10	14.01	14.43	42152	4492.522461
3-NT	14.79	14.67	15.12	80141	5918.600586
2-NMX	25.41	25.29	26.09	15480	4541.139648
1-Nitronaphthalene	32.62	32.66	33.11	151983	11568.896484

Analysis Report (B)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--X6329B
Result file : 4E12310B.87R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 100% (63-150) Conc.: 4982.44775

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.71	2.85	140900	3417.388672
Nitroglycerin	8.51	8.53	8.89	137848	10785.830078
PETN	15.75	15.73	16.33	185215	13540.158203
2-NMX	25.57	25.45	26.24	243377	4982.447754

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	10785.830078	6000	2000			Report Confirmation
☑ PETN	B	13540.158203	6000	2000			
☑ HMX	B	3417.388672	750	250			Corrected Value = 3862.25 87% recovery
☑ RDX	A	4697.333496	300	125			
☑ 1,3,5-TNB	A	4632.730469	300	100			
☑ 1,4-DNB	A	9438.830078	300	100			
☑ o-Dinitrobenzene	A	10713.066406	300	100			
☑ 1,3-DNB	A	5589.521484	300	100			
☑ Tetryl	A	4259.503906	300	153			+ Breakdown = 4417.595001
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT	A	5645.842773	300	100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	4676.251465	300	150			
☑ 2-Am-4,6-DNT	A	4543.278809	300	100			
☑ 2,6-DNT	A	5120.259766	300	100			
☑ 2,4-DNT	A	5339.153320	300	100			
☑ 2-NT	A	4392.704590	300	200			Report Confirmation.
☑ 4-NT	A	4492.522461	300	200			
☑ 3-NT	A	5918.600586	300	250			
☐ 2-NMX	A	4541.139648				9.27	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS19314 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--X6329A
Result file : 4E12310.87R
Calibration file : 3E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--X6329B
Result file : 4E12310B.87R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11568.896484	300	100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

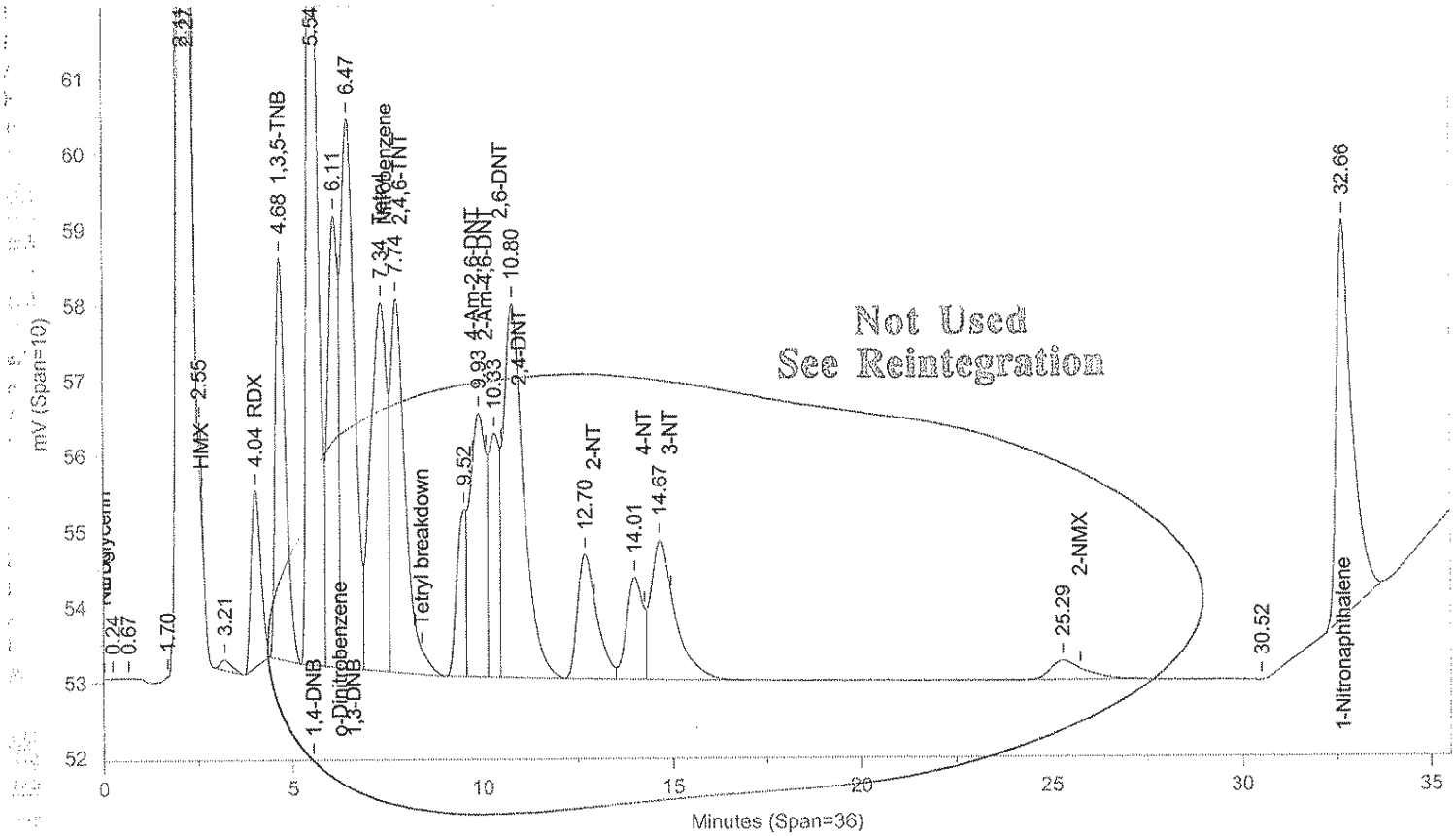
Verified by: Valerie L. Tomayko, Chemical Specialist

Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

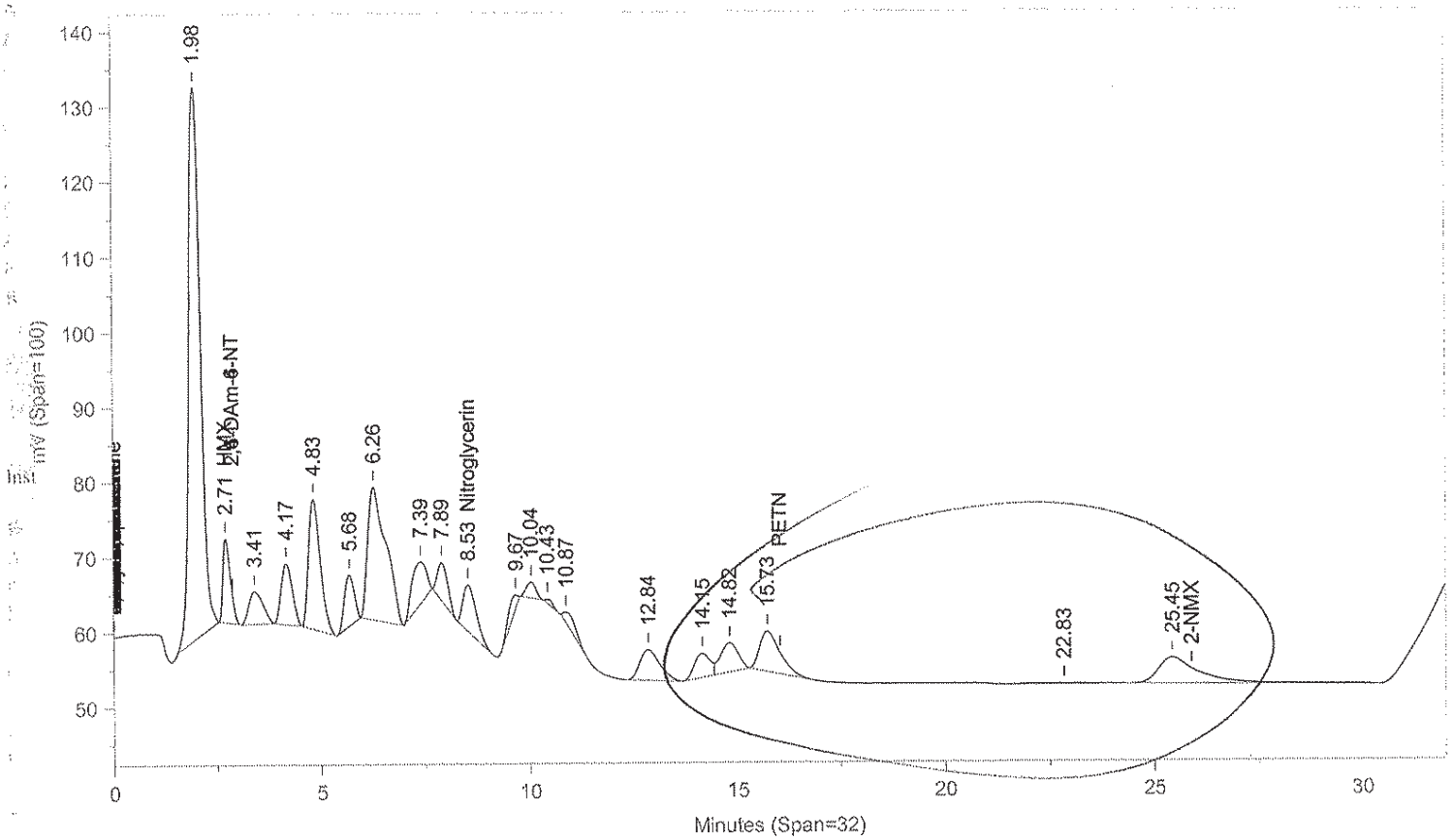
* Recovery outside QC Limits

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.87R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 5:33:19 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.87R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 5:33:19 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

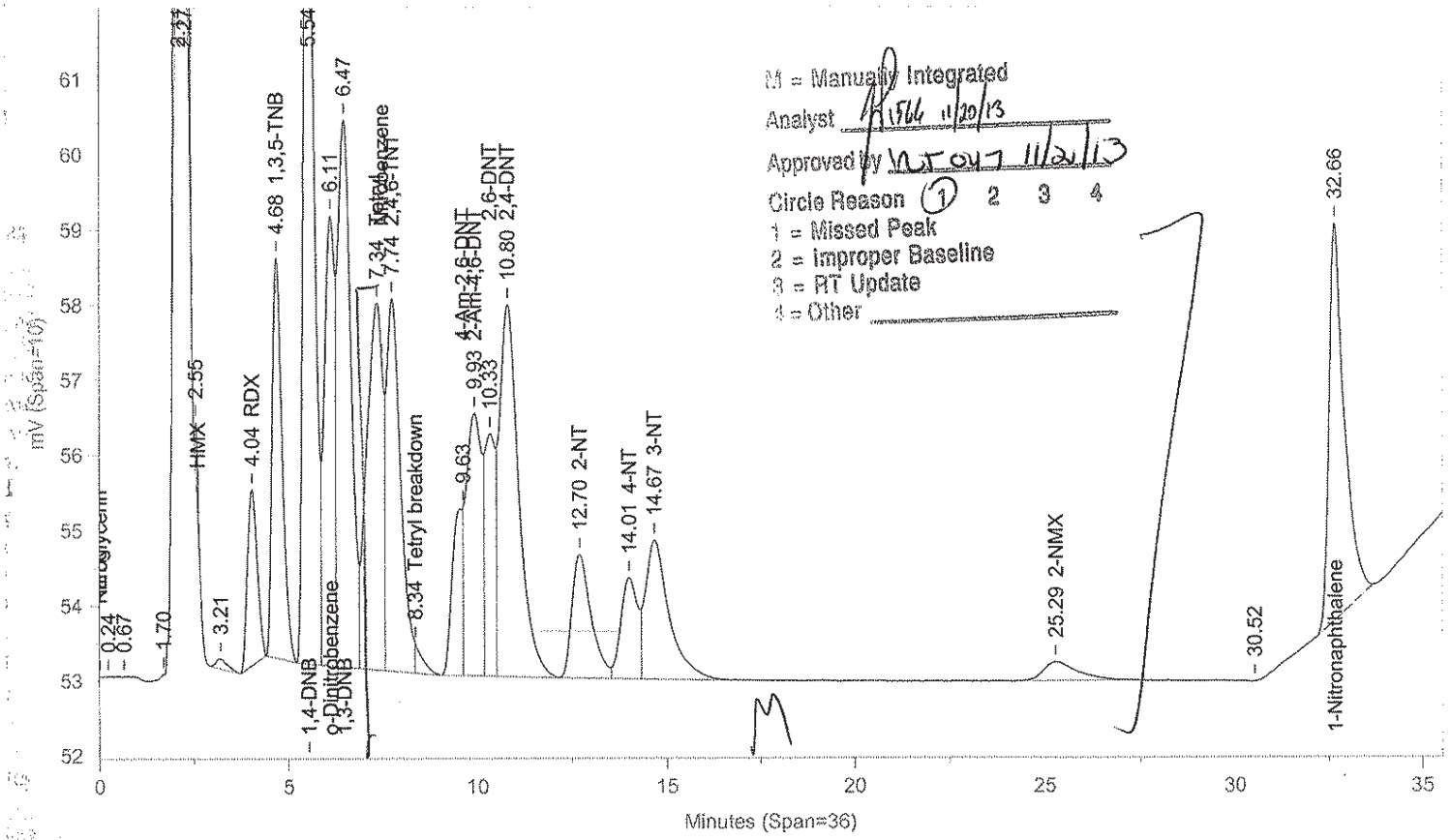
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	140900	3417.389	HMX
4.037	42255	4697.333	RDX	.	0	.	RDX
4.685	97791	4632.73	1,3,5-TNB	.	0	.	1,3,5-TNB
6.539	240476	9438.83	1,4-DNB	.	0	.	1,4-DNB
7.342	146323	4233.106	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.525	137848	10785.83	Nitroglycerin
32.664	151983	11568.9	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.87A
Area File: C:\CPWIN\DATA1\4E12310B.87A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:57:56 PM
File Reported On: 11/18/2013 at 2:58:06 PM

Not Used
See Reintegration

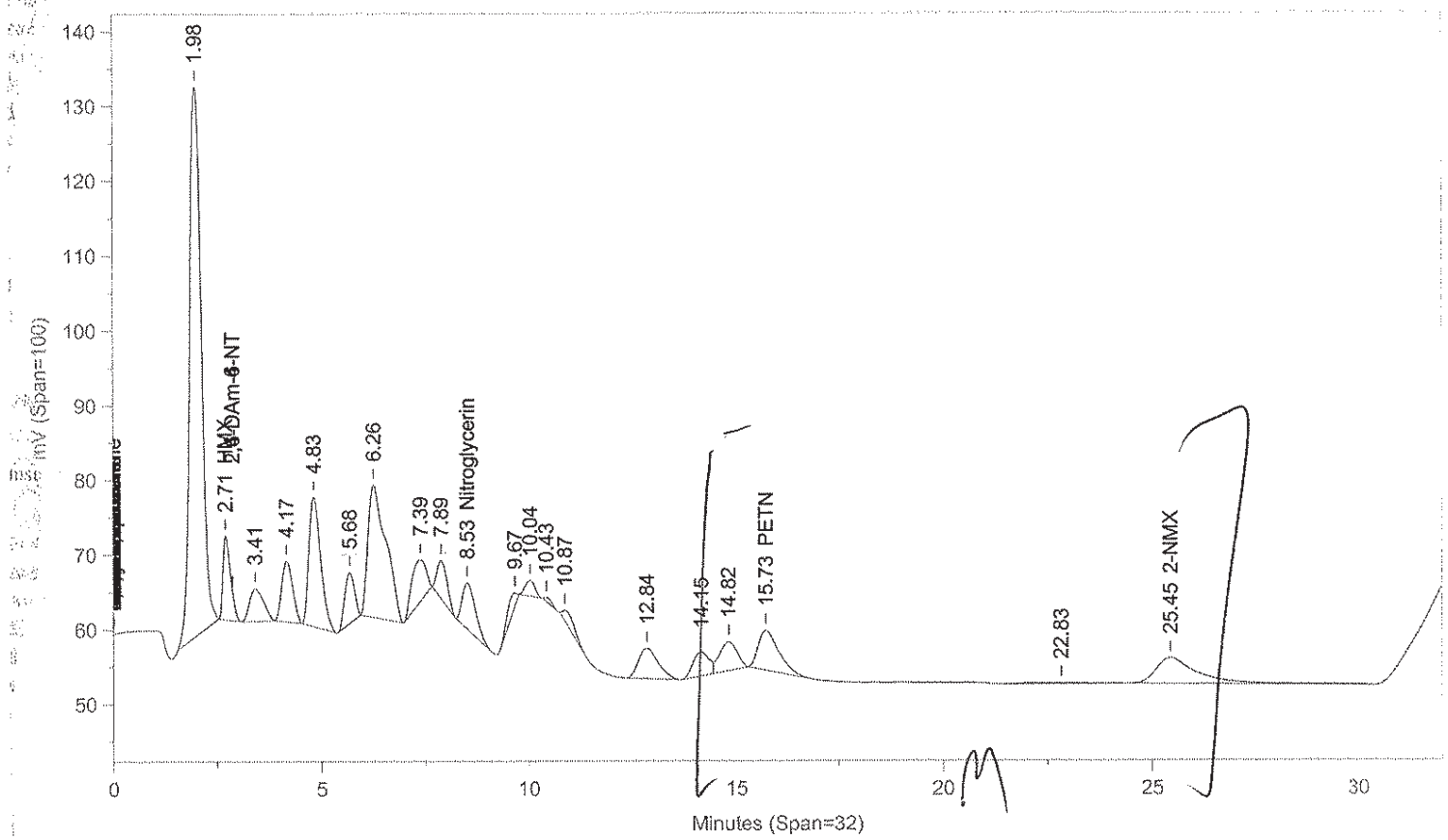
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.87R

M = Manually Integrated
Analyst 1566 11/20/13
Approved by [illegible] 11/21/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--X6329A Injected On: 11/18/2013 5:33:19 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.87R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 5:33:19 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	140900	3417.389	HMX
4.037	42255	4697.333	RDX	.	0	.	RDX
4.685	97791	4632.73	1,3,5-TNB	.	0	.	1,3,5-TNB
5.539	240476	9438.83	1,4-DNB	.	0	.	1,4-DNB
6.111	110384	10713.07	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.467	181377	5589.521	1,3-DNB	.	0	.	1,3-DNB
7.342	147235	4259.504	Tetryl	.	0	.	Tetryl
7.741	128647	5645.843	2,4,6-TNT	.	0	.	2,4,6-TNT
8.344	5465	158.091	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.525	137848	10785.83	Nitroglycerin
9.628	43873	4676.251	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.926	99505	4543.279	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.33	62250	5120.26	2,6-DNT	.	0	.	2,6-DNT
10.802	176601	5339.153	2,4-DNT	.	0	.	2,4-DNT
12.704	58111	4392.705	2-NT	.	0	.	2-NT
14.005	42152	4492.522	4-NT	.	0	.	4-NT
14.674	80141	5918.601	3-NT	.	0	.	3-NT
.	0	.	PETN	15.729	185215	13540.16	PETN
25.29	15480	4541.14	2-NMX	25.448	243377	4982.448	2-NMX
32.664	151983	11568.9	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:40:50 PM
File Reported On: 11/20/2013 at 12:40:49 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS19314 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--Y6329A
Result file : 4C12310.87R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 73% (63-150) Conc.: 3672.45971

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.34	4.40	35996	3433.676514
RDX	5.16	5.32	5.36	59650	5087.599609
Nitrobenzene	12.75	13.06	13.07	91890	4976.252930
o-Dinitrobenzene	14.72	15.08	15.08	145307	10569.912109
4-Am-2,6-DNT	16.66	16.98	16.98	197482	5116.183594
1,3-DNB	18.93	19.30	19.23	139924	4131.135254
1,4-DNB	19.62	20.04	19.92	275907	12067.598633
2-NT	24.05	24.55	24.57	59764	5107.666016
4-NT	27.60	28.23	28.12	85975	4440.448242
1,3,5-TNB	29.81	30.79	30.21	87947	4093.825439
2,6-DNT	30.62	31.05	31.02	68274	5353.598633
2,4-DNT	33.67	33.89	33.89	144488	5594.278320
2-NMX	34.12	34.21	34.32	10965	3672.459717
Tetryl	34.41	34.61	34.61	82077	5350.732422
2,4,6-TNT	35.36	35.54	35.56	111109	5279.859375
1-Nitronaphthalene	36.36	36.52	36.56	169652	10853.182617

Analysis Report (B)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--Y6329B
Result file : 4C12310B.87R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.64	3.73	4.00	19826	89.943092
Nitroglycerin	9.62	9.81	9.82	192208	18910.890625
PETN	26.02	26.50	26.44	188082	15837.402344

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	15837.402344	6000	2000			Report
☑ Nitroglycerin	B	18910.890625	6000	2000			"
☑ HMX	A	3433.676514	750	250			
☑ RDX	A	5087.599609	300	125			
☑ Nitrobenzene	A	4976.252930	300	100			Report
☑ o-Dinitrobenzene	A	10569.912109	300	100			
☑ 4-Am-2,6-DNT	A	5116.183594	300	150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB	A	4131.135254	300	100			
☑ 1,4-DNB	A	12067.598633	300	100			
☑ 2-NT	A	5107.666016	300	200			Report
☑ 4-NT	A	4440.448242	300	200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB	A	4093.825439	300	100			
☑ 2,6-DNT	A	5353.598633	300	100			
☑ 2,4-DNT	A	5594.278320	300	100			
☐ 2-NMX	A	3672.459717					
☑ Tetryl	A	5350.732422	300	153			Report.
☑ 2,4,6-TNT	A	5279.859375	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:37:10

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS19314 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--Y6329A
Result file : 4C12310.87R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

Analysis Report (B)

Injected on : NOV 18, 2013 05:33:20
Instrument : CP12--Y6329B
Result file : 4C12310B.87R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	10853.182617	300	100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Peer Review Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

LANCASTER LABORATORIES

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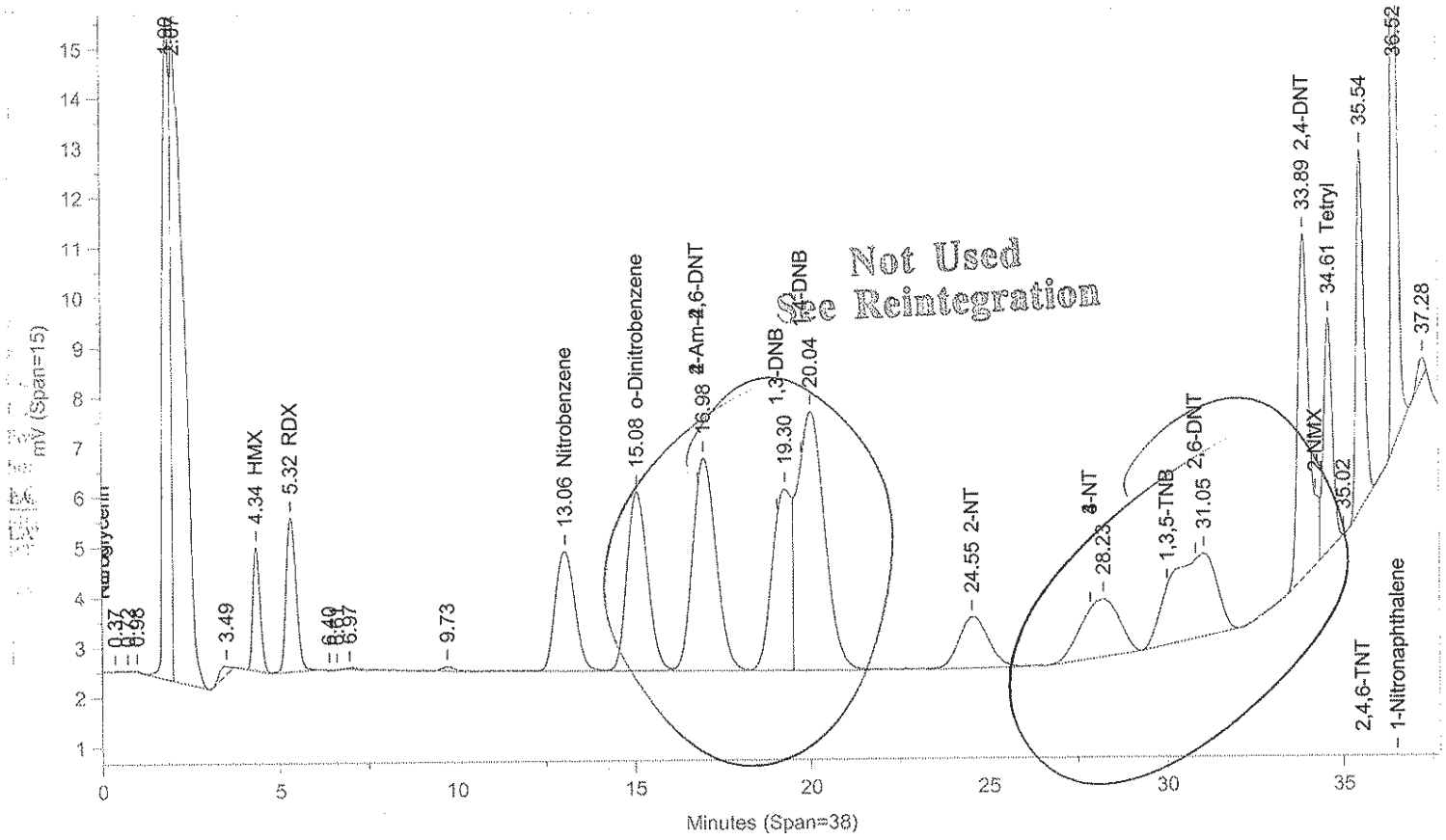
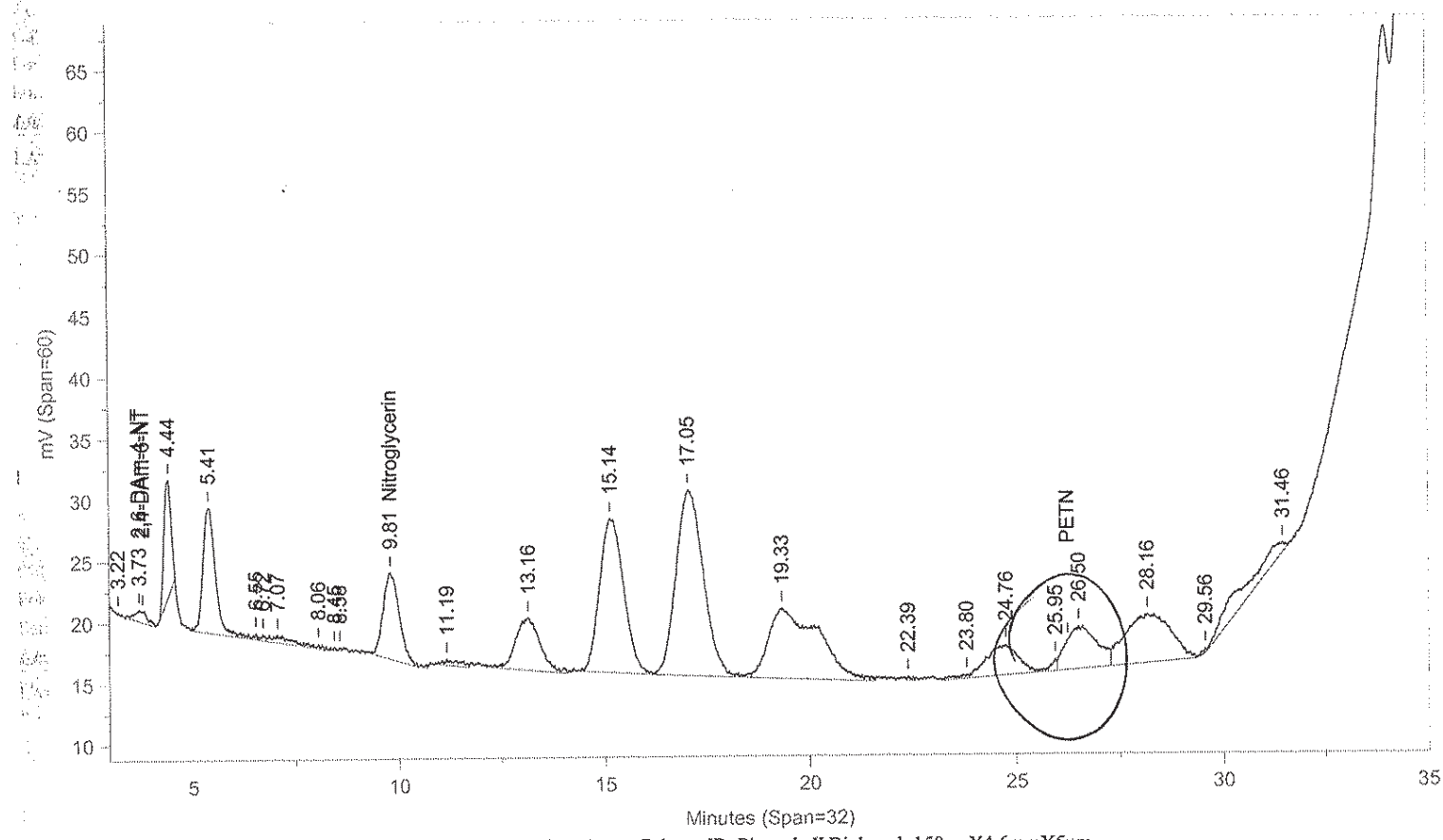


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 5:33:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.87R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 5:33:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.733	19826	89.943	2,6-DAm-4-NT
4.342	35996	3433.677	HMX	.	0	.	HMX
5.316	59650	5087.6	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.81	192208	18910.89	Nitroglycerin
13.06	91890	4976.253	Nitrobenzene	.	0	.	Nitrobenzene
15.078	145307	10569.91	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
24.549	59764	5107.666	2-NT	.	0	.	2-NT
33.892	155453	6018.814	2,4-DNT	.	0	.	2,4-DNT
34.609	82077	5350.732	Tetryl	.	0	.	Tetryl
35.541	111109	5279.859	2,4,6-TNT	.	0	.	2,4,6-TNT
36.516	169652	10853.18	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.87A
Area File: C:\CPWIN\DATA1\4C12310B.87A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
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Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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Not Used
See Reintegration

LANCASTER LABORATORIES

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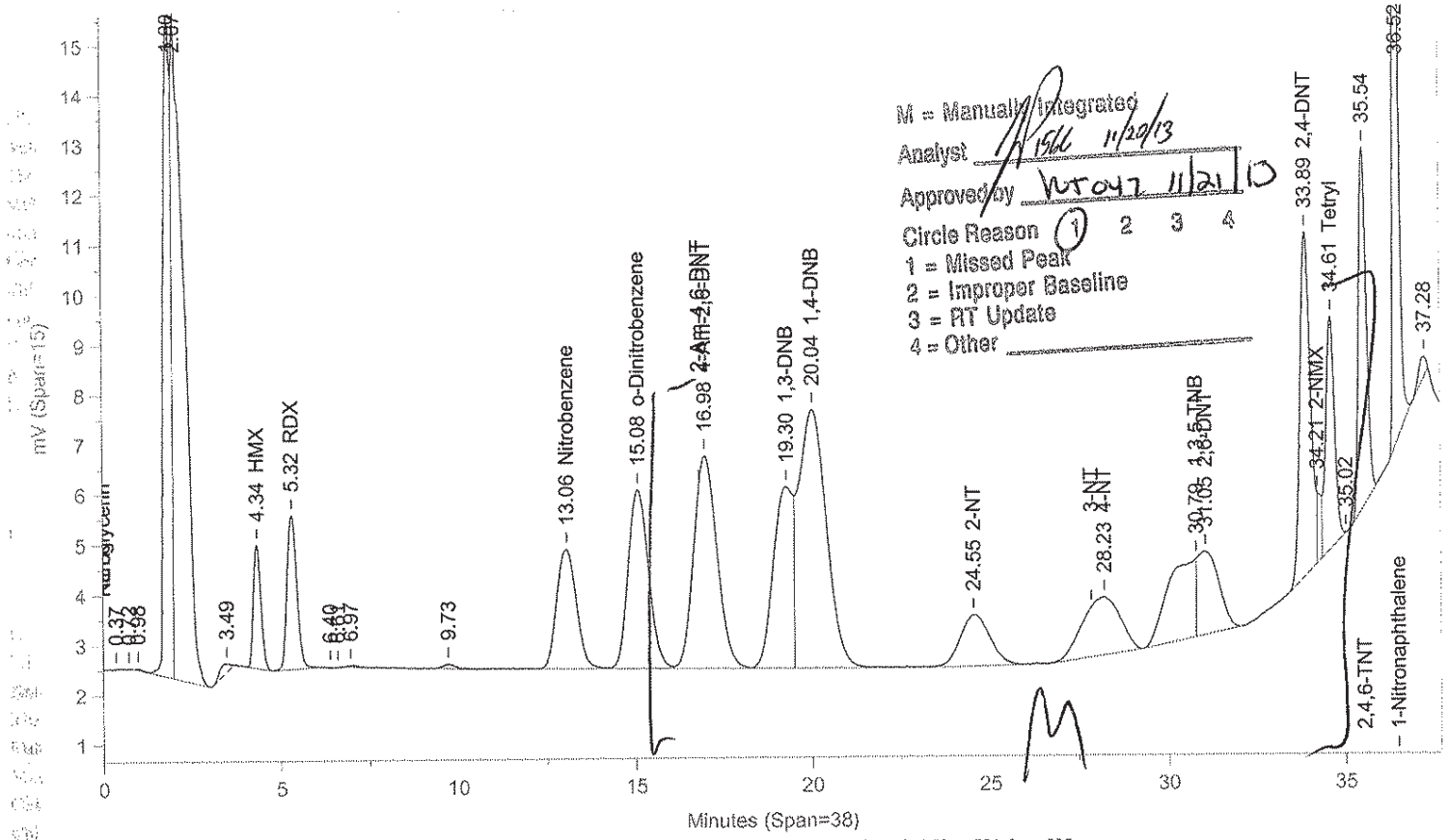
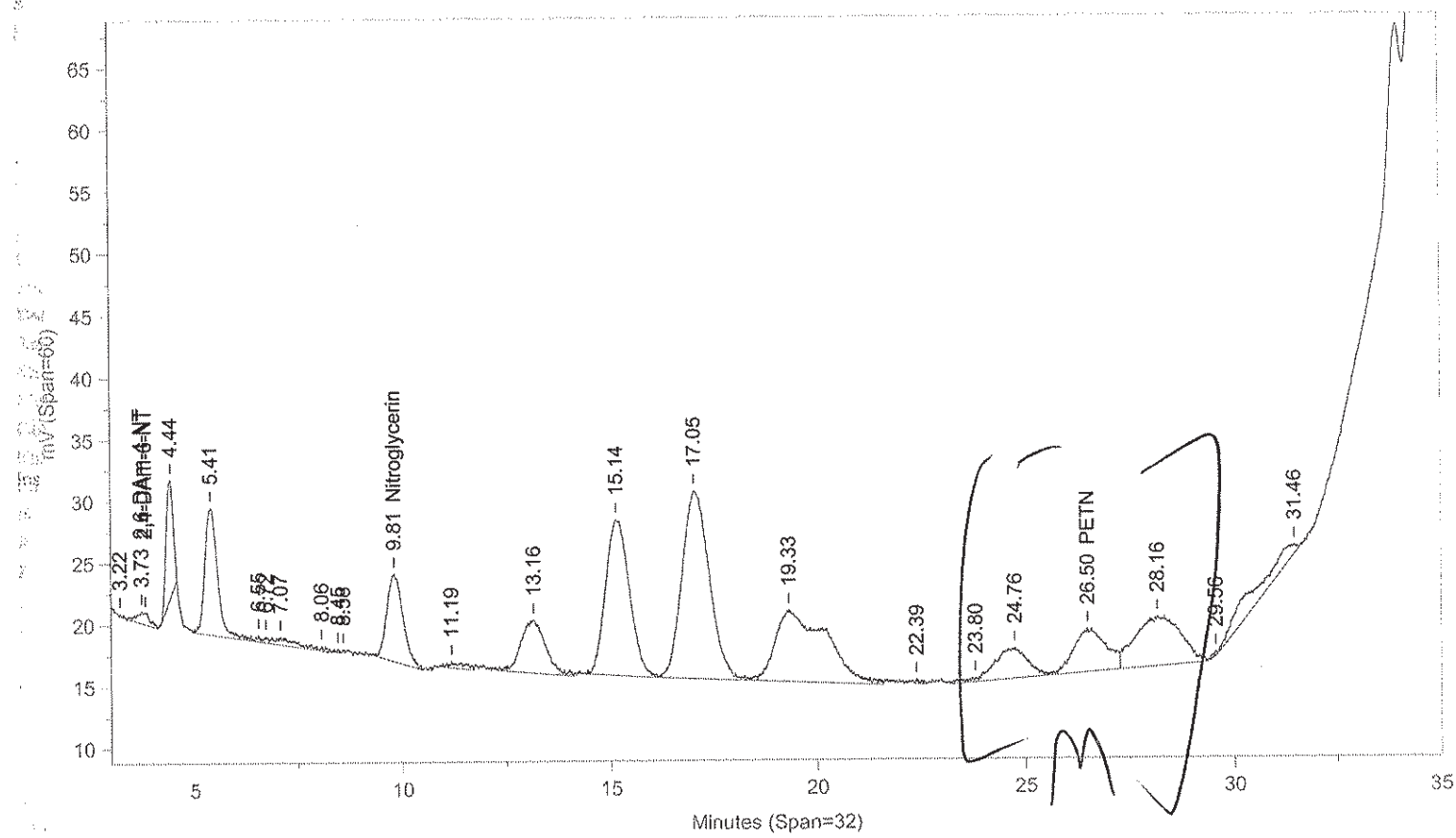


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 5:33:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.87R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 5:33:19 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.733	19826	89.943	2,6-DAm-4-NT
4.342	35996	3433.677	HMX	.	0	.	HMX
5.316	59650	5087.6	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.81	192208	18910.89	Nitroglycerin
13.06	91890	4976.253	Nitrobenzene	.	0	.	Nitrobenzene
15.078	145307	10569.91	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.984	197482	5116.184	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.296	139924	4131.135	1,3-DNB	.	0	.	1,3-DNB
20.036	275907	12067.6	1,4-DNB	.	0	.	1,4-DNB
24.549	59764	5107.666	2-NT	.	0	.	2-NT
.	0	.	PETN	26.504	188082	15837.4	PETN
28.228	85975	4440.448	4-NT	.	0	.	4-NT
30.794	87947	4093.825	1,3,5-TNB	.	0	.	1,3,5-TNB
31.047	68274	5353.599	2,6-DNT	.	0	.	2,6-DNT
33.892	144488	5594.278	2,4-DNT	.	0	.	2,4-DNT
34.211	10965	3672.46	2-NMX	.	0	.	2-NMX
34.609	82077	5350.732	Tetryl	.	0	.	Tetryl
35.541	111109	5279.859	2,4,6-TNT	.	0	.	2,4,6-TNT
36.516	169652	10853.18	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:02:08 PM
File Reported On: 11/20/2013 at 3:02:06 PM

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Data Summary

Sample Name: 7266801 MS 2G124 MS Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 06:58:17
Instrument X6329A
Result file 4E12310.89R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 86% (63 - 150) Conc: 3731.897949

Analysis Report (B)

Injected on Nov 18, 2013 06:58:17
Instrument Y6329A
Result file 4C12310.89R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) * 62% (63 - 150) Conc: 2711.306152

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.02	4.20	35739	3438.005371
1,3,5-Trinitrobenzene	4.66	4.67	4.86	85798	3534.415771
1,4-Dinitrobenzene	5.52	5.52	5.72	204398	6976.292969
o-Dinitrobenzene	6.13	6.09	6.33	95427	8053.426758
1,3-DNB	6.49	6.45	6.69	153962	4125.793457
Tetryl	7.33	7.34	7.61	108140	2902.555954
2,4,6-Trinitrotoluene	7.78	7.73	7.98	106959	4081.791748
4-Amino-2,6-dinitrotoluer	9.69	9.49	9.97	32756	3035.990234
2-Amino-4,6-dinitrotoluer	9.97	9.91	10.25	78359	3111.094971
2,6-Dinitrotoluene	10.38	10.33	10.66	55640	3979.616211
2,4-Dinitrotoluene	10.86	10.78	11.14	151600	3985.497803
2-Nitrotoluene	12.80	12.68	13.08	49725	3268.505615
4-Nitrotoluene	14.10	14.00	14.43	35337	3274.940674
3-Nitrotoluene	14.79	14.66	15.12	70522	4528.890137
2-NMX	25.41	25.30	26.09	14629	3731.897949
1-Nitronaphthalene	32.62	32.65	33.11	130430	8633.306641

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.35	4.40	29800	2471.85498
RDX	5.16	5.33	5.36	49723	3653.63549
Nitrobenzene	12.75	13.10	13.07	78906	3710.867432
o-Dinitrobenzene	14.72	15.13	15.08	122566	7736.819824
4-Amino-2,6-dinitrotoluer	16.66	17.05	16.98	159893	3602.07031
1,3-DNB	18.93	19.32	19.23	125772	3228.964111
1,4-Dinitrobenzene	19.62	20.10	19.92	232493	8821.88574
2-Nitrotoluene	24.05	24.62	24.57	52085	3862.00073
4-Nitrotoluene	27.60	28.23	28.12	74762	3371.64355
1,3,5-Trinitrobenzene	29.81	30.81	30.21	71263	2971.18481
2,6-Dinitrotoluene	30.62	31.07	31.02	61797	4224.57421
2,4-Dinitrotoluene	33.67	33.92	33.89	121565	4092.81127
2-NMX	34.12	34.30	34.32	9030	2711.30615
Tetryl	34.41	34.62	34.61	48108	2792.81884
2,4,6-Trinitrotoluene	35.36	35.56	35.56	88744	3678.93774
1-Nitronaphthalene	36.36	36.52	36.56	133905	7499.73535

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	14127.999023	5217.3911	1739.1304		26.39	
☑ PETN	B	11860.633789	5217.3911	1739.1304		10.71	
☑ HMX	A	2436.743408	652.1739	217.3913		1.43	
☑ RDX	A	3438.005371	260.8696	108.6956		6.08	
☑ 1,3,5-Trinitrobenzene	A	3534.415771	260.8696	86.9565		17.32	
☑ 1,4-Dinitrobenzene	A	6976.292969	260.8696	86.9565		23.36	
☑ o-Dinitrobenzene	A	8053.426758	260.8696	86.9565		4.01	
☑ 1,3-DNB	A	4125.793457	260.8696	86.9565		24.39	
☑ Tetryl	B	2792.818848	260.8696	133.0435		3.85	
☑ Nitrobenzene	B	3710.867432	260.8696	86.9565		24.44	
☑ 2,4,6-Trinitrotoluene	A	4081.791748	260.8696	86.9565		10.38	
☑ 4-Amino-2,6-dinitrotoluene	A	3035.990234	260.8696	130.4348		17.06	
☑ 2-Amino-4,6-dinitrotoluene	A	3111.094971	260.8696	86.9565		14.63	
☑ 2,6-Dinitrotoluene	A	3979.616211	260.8696	86.9565		5.97	
☑ 2,4-Dinitrotoluene	A	3985.497803	260.8696	86.9565		2.66	
☑ 2-Nitrotoluene	B	3862.000732	260.8696	173.913		16.65	
☑ 4-Nitrotoluene	A	3274.940674	260.8696	173.913		2.91	
☑ 3-Nitrotoluene	A	4528.890137	260.8696	217.3913		29.30	
☑ 2-NMX	A	3731.897949				31.68	
☑ 1-Nitronaphthalene	A	8633.306641	260.8696	86.9565		14.05	

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Data Summary

Sample Name: 7266801 MS 2G124 MS Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 18, 2013 06:58:17
Instrument	X6329A
Result file	4E12310.89R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 18, 2013 06:58:17
Instrument	Y6329A
Result file	4C12310.89R
Calibration file	3C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266801** MS 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--X6329A
Result file : 4E12310.89R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 86% (63-150) Conc.: 3731.89794

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.02	4.20	35739	3438.005371
1,3,5-TNB	4.66	4.67	4.86	85798	3534.415771
1,4-DNB	5.52	5.52	5.72	204398	6976.292969
o-Dinitrobenzene	6.13	6.09	6.33	95427	8053.426758
1,3-DNB	6.49	6.45	6.69	153962	4125.793457
Tetryl	7.33	7.34	7.61	108140	2720.424316
2,4,6-TNT	7.78	7.73	7.98	106959	4081.791748
Tetryl breakdown	8.27	8.36	8.52	7240	182.131638
4-Am-2,6-DNT	9.63	9.49	9.91	32756	3035.990234
2-Am-4,6-DNT	9.97	9.91	10.25	78359	3111.094971
2,6-DNT	10.38	10.33	10.66	55640	3979.616211
2,4-DNT	10.86	10.78	11.14	151600	3985.497803
2-NT	12.80	12.68	13.08	49725	3268.505615
4-NT	14.10	14.00	14.43	35337	3274.940674
3-NT	14.79	14.66	15.12	70522	4528.890137
2-NMX	25.41	25.30	26.09	14629	3731.897949
1-Nitronaphthalene	32.62	32.65	33.11	130430	8633.306641

Analysis Report (B)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--X6329B
Result file : 4E12310B.89R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 89% (63-150) Conc.: 3861.34863

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.69	2.85	114175	2436.743408
Nitroglycerin	8.51	8.52	8.89	159239	10834.378906
PETN	15.75	15.71	16.33	167585	10654.830078
2-NMX	25.57	25.44	26.24	216907	3861.348633

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	10834.378906	5217.39	1739.13			Report Confirmation
☑ PETN	B	10654.830078	5217.39	1739.13			
☑ HMX	B	2436.743408	652.1738	217.3913			Corrected Value = ~~3936.25~~ 62% recovery
☑ RDX	A	3438.005371	260.8695	108.6956			3422.82
☑ 1,3,5-TNB	A	3534.415771	260.8695	86.9565			
☑ 1,4-DNB	A	6976.292969	260.8695	86.9565			WT047 11/21/13
☑ o-Dinitrobenzene	A	8053.426758	260.8695	86.9565			
☑ 1,3-DNB	A	4125.793457	260.8695	86.9565			
☑ Tetryl	A	2720.424316	260.8695	133.0434			+ Breakdown = 2902.555954
☑ Nitrobenzene			<260.8695	<86.9565			
☑ 2,4,6-TNT	A	4081.791748	260.8695	86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	3035.990234	260.8695	130.4348			
☑ 2-Am-4,6-DNT	A	3111.094971	260.8695	86.9565			
☑ 2,6-DNT	A	3979.616211	260.8695	86.9565			
☑ 2,4-DNT	A	3985.497803	260.8695	86.9565			
☑ 2-NT	A	3268.505615	260.8695	173.913			Report Confirmation.
☑ 4-NT	A	3274.940674	260.8695	173.913			
☑ 3-NT	A	4528.890137	260.8695	217.3913			
☐ 2-NMX	A	3731.897949				3.41	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:26:12

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266801** MS 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 18, 2013 06:58:17
Instrument	: CP12--X6329A
Result file	: 4E12310.89R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 18, 2013 06:58:17
Instrument	: CP12--X6329B
Result file	: 4E12310B.89R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	8633.306641	260.8695	86.9565			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____ NOV 21 2013
Date: _____

Verified by: _____
Valerie L. Tomayko
Principal Specialist

Date: _____ NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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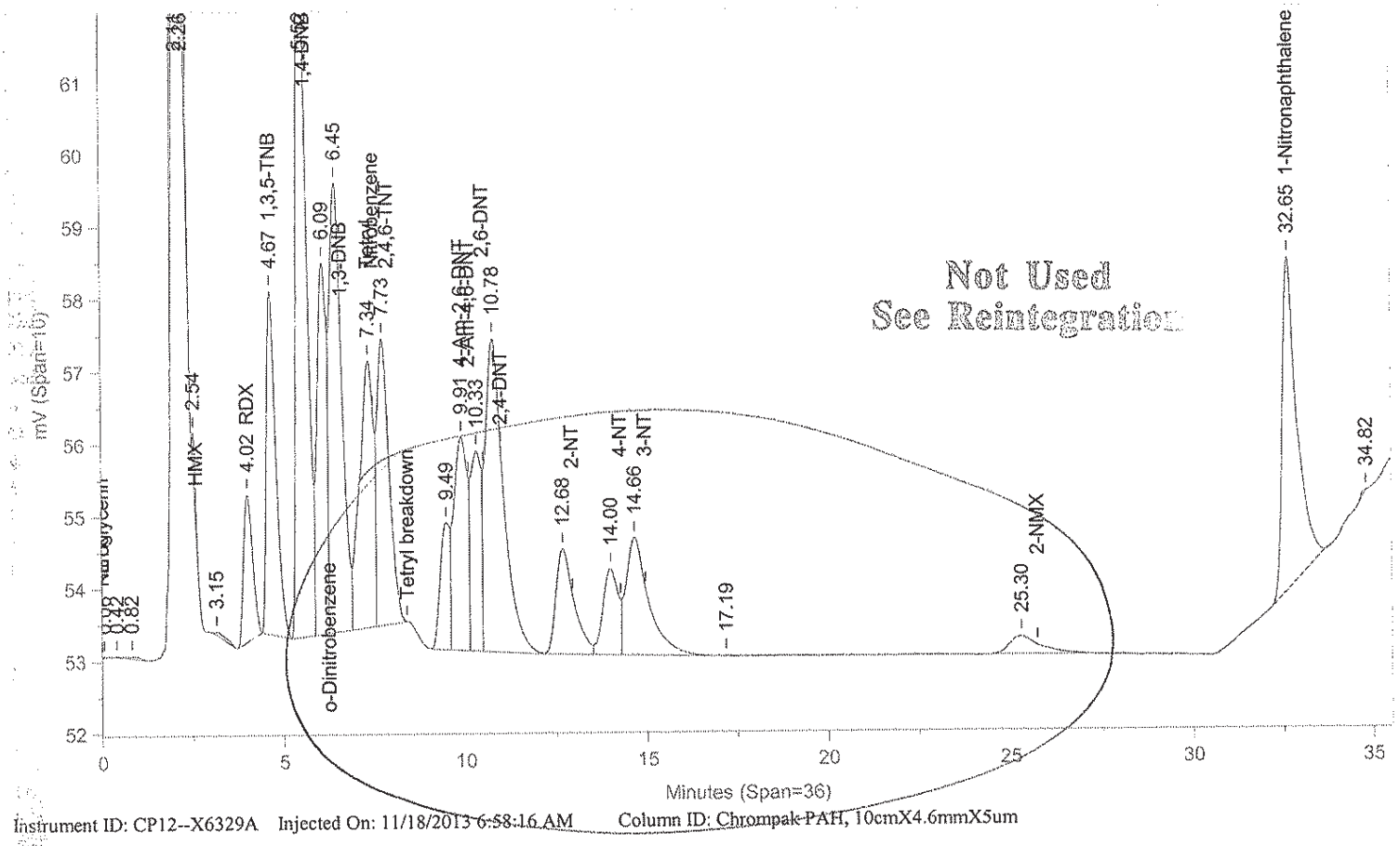

Instrument ID: CP12--X6329A Injected On: 11/18/2013 6:58:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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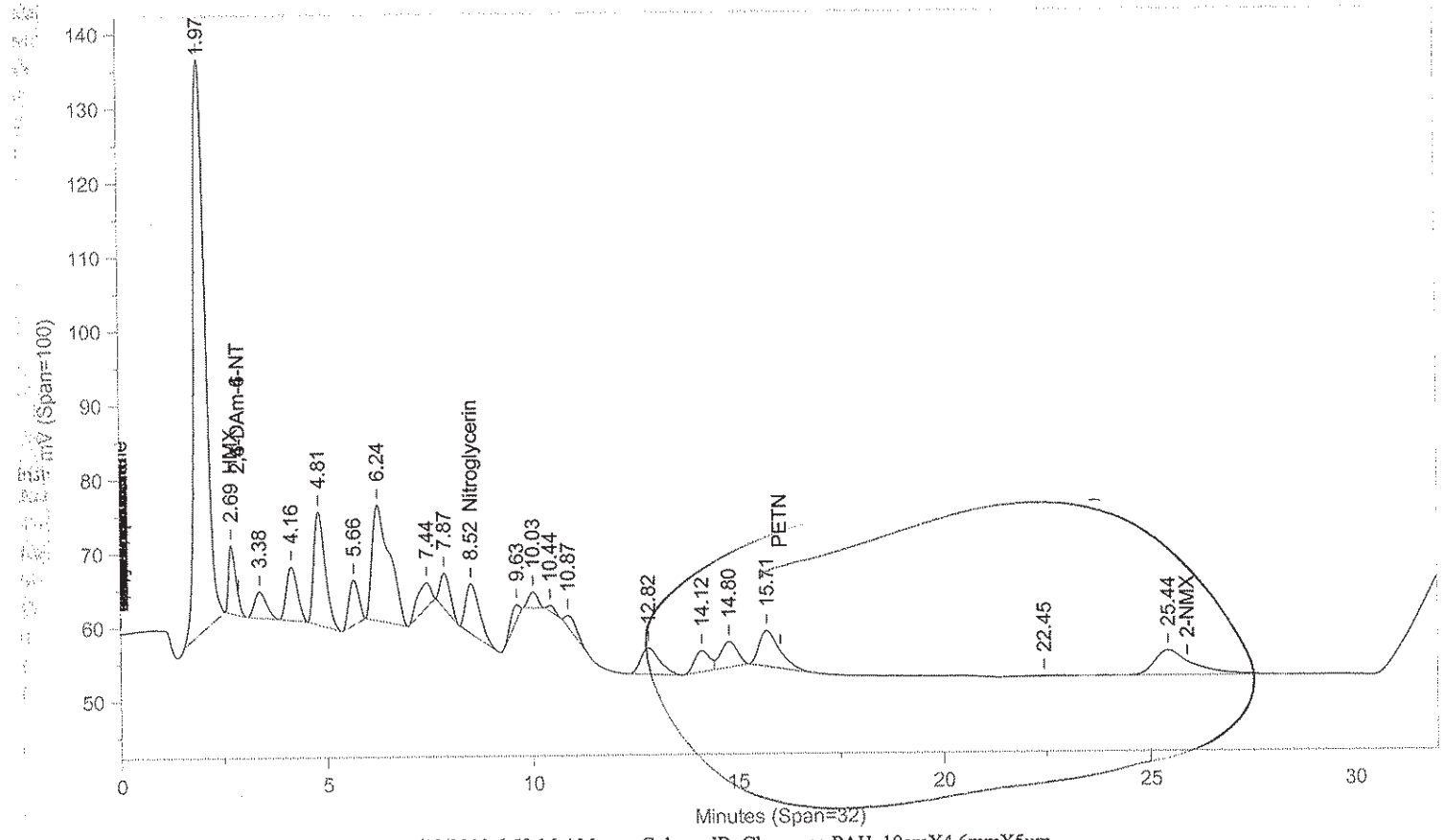

Instrument ID: CP12--X6329B Injected On: 11/18/2013 6:58:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.693	114175	2436.743	HMX
4.022	35739	3438.005	RDX	.	0	.	RDX
4.67	85798	3534.416	1,3,5-TNB	.	0	.	1,3,5-TNB
7.34	99413	2500.875	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.516	159239	10834.38	Nitroglycerin
9.909	78359	7262.573	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
12.652	130430	8633.307	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.89A
Area File: C:\CPWIN\DATA1\4E12310B.89A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:58:56 PM
File Reported On: 11/18/2013 at 2:59:06 PM

Not Used
See Reintegration

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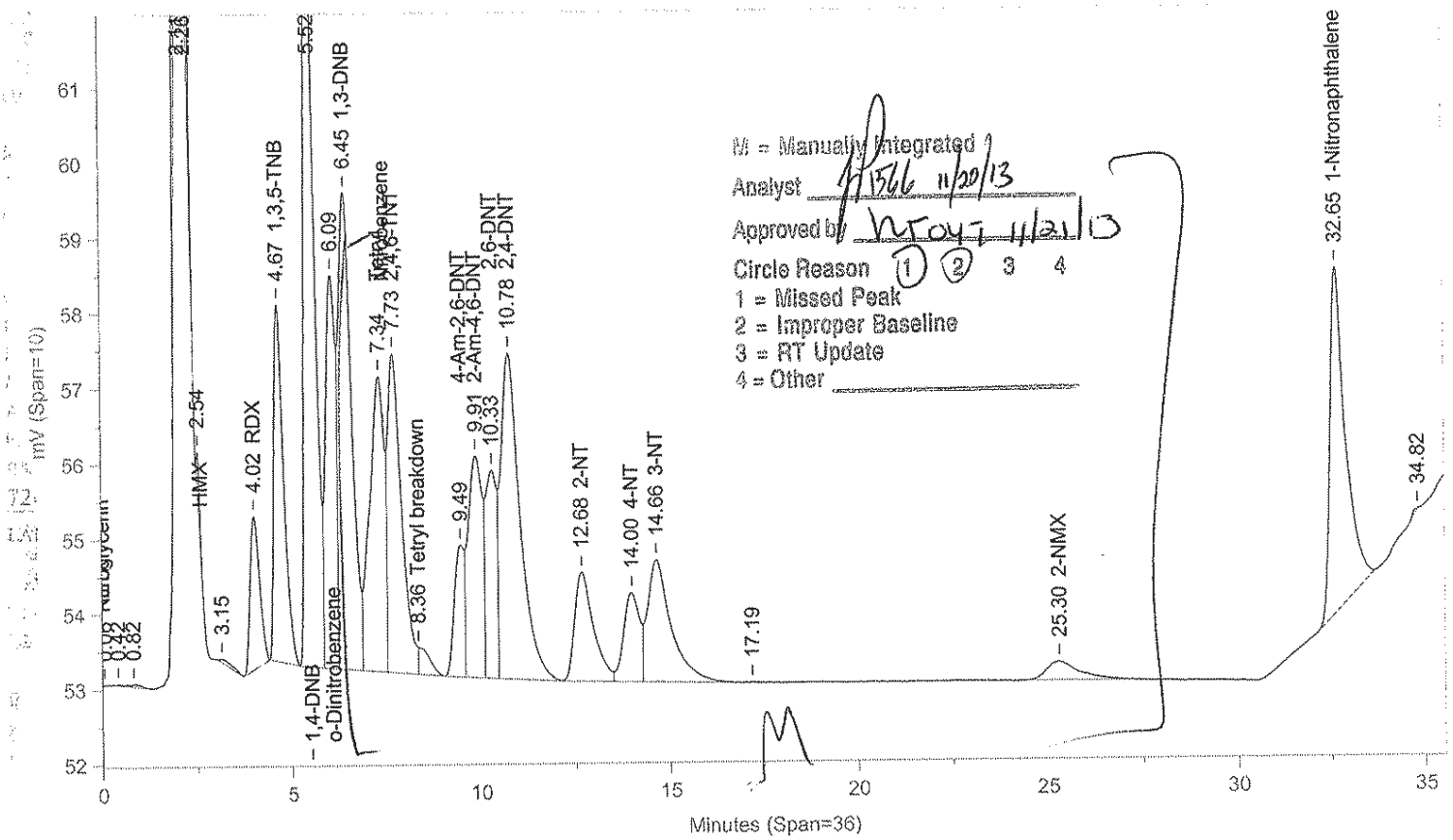
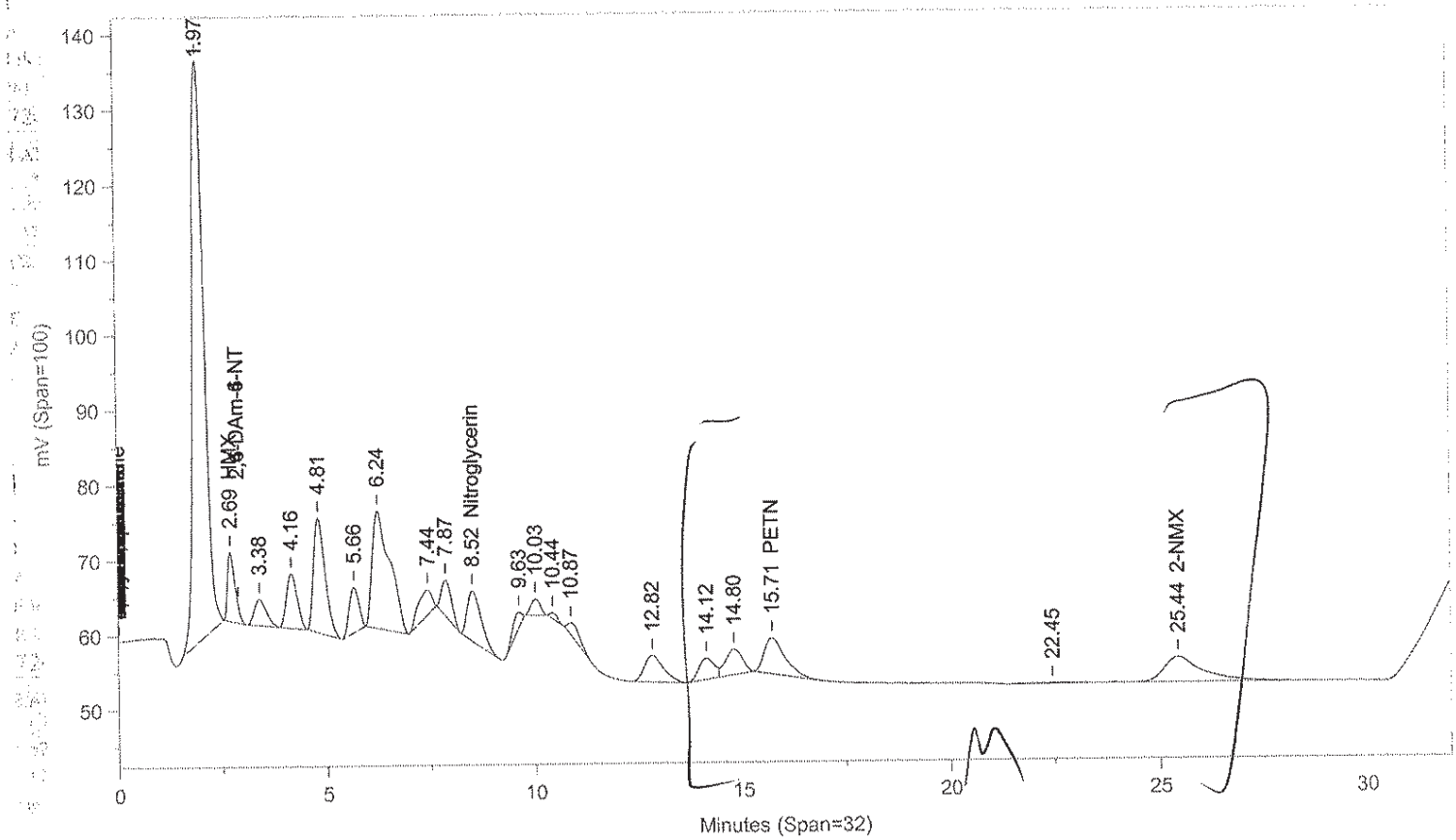
File: C:\CPWIN\DATA1\4E12310.89R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 6:58:16 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.89R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 6:58:16 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.693	114175	2436.743	HMX
4.022	35739	3438.005	RDX	.	0	.	RDX
4.67	85798	3534.416	1,3,5-TNB	.	0	.	1,3,5-TNB
5.523	204398	6976.293	1,4-DNB	.	0	.	1,4-DNB
6.093	95427	8053.427	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.449	153962	4125.793	1,3-DNB	.	0	.	1,3-DNB
7.34	108140	2720.424	Tetryl	.	0	.	Tetryl
7.726	106959	4081.792	2,4,6-TNT	.	0	.	2,4,6-TNT
8.356	7240	182.132	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.516	159239	10834.38	Nitroglycerin
9.488	32756	3035.99	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.909	78359	3111.095	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.329	55640	3979.616	2,6-DNT	.	0	.	2,6-DNT
10.785	151600	3985.498	2,4-DNT	.	0	.	2,4-DNT
12.68	49725	3268.506	2-NT	.	0	.	2-NT
13.998	35337	3274.941	4-NT	.	0	.	4-NT
14.664	70522	4528.89	3-NT	.	0	.	3-NT
.	0	.	PETN	15.715	167585	10654.83	PETN
25.305	14629	3731.898	2-NMX	25.435	216907	3861.349	2-NMX
32.652	130430	8633.307	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

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Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:46:00 PM
File Reported On: 11/20/2013 at 12:45:59 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266801** MS 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--Y6329A
Result file : 4C12310.89R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : *62% (63-150) Conc.: 2711.30615

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.35	4.40	29800	2471.854980
RDX	5.16	5.33	5.36	49723	3653.635498
Nitrobenzene	12.75	13.10	13.07	78906	3710.867432
o-Dinitrobenzene	14.72	15.13	15.08	122566	7736.819824
4-Am-2,6-DNT	16.66	17.05	16.98	159893	3602.070313
1,3-DNB	18.93	19.32	19.23	125772	3228.964111
1,4-DNB	19.62	20.10	19.92	232493	8821.885742
2-NT	24.05	24.62	24.57	52085	3862.000732
4-NT	27.60	28.23	28.12	74762	3371.643555
1,3,5-TNB	29.81	30.81	30.21	71263	2971.184814
2,6-DNT	30.62	31.07	31.02	61797	4224.574219
2,4-DNT	33.67	33.92	33.89	121565	4092.811279
2-NMX	34.12	34.30	34.32	9030	2711.306152
Tetryl	34.41	34.62	34.61	48108	2792.818848
2,4,6-TNT	35.36	35.56	35.56	88744	3678.937744
1-Nitronaphthalene	36.36	36.52	36.56	133905	7499.735352

Analysis Report (B)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--Y6329B
Result file : 4C12310B.89R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.83	9.82	165135	14127.999023
PETN	26.02	26.63	26.44	161983	11860.633789

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	11860.633789	5217.39	1739.13			Report
☑ Nitroglycerin	B	14127.999023	5217.39	1739.13			
☑ HMX	A	2471.854980	652.1738	217.3913			
☑ RDX	A	3653.635498	260.8695	108.6956			
☑ Nitrobenzene	A	3710.867432	260.8695	86.9565			Report
☑ o-Dinitrobenzene	A	7736.819824	260.8695	86.9565			
☑ 4-Am-2,6-DNT	A	3602.070313	260.8695	130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB	A	3228.964111	260.8695	86.9565			
☑ 1,4-DNB	A	8821.885742	260.8695	86.9565			
☑ 2-NT	A	3862.000732	260.8695	173.913			Report
☑ 4-NT	A	3371.643555	260.8695	173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB	A	2971.184814	260.8695	86.9565			
☑ 2,6-DNT	A	4224.574219	260.8695	86.9565			
☑ 2,4-DNT	A	4092.811279	260.8695	86.9565			
☐ 2-NMX	A	2711.306152					
☑ Tetryl	A	2792.818848	260.8695	133.0434			Report
☑ 2,4,6-TNT	A	3678.937744	260.8695	86.9565			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:37:37

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266801** MS 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--Y6329A
Result file : 4C12310.89R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

Analysis Report (B)

Injected on : NOV 18, 2013 06:58:17
Instrument : CP12--Y6329B
Result file : 4C12310B.89R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	7499.735352	260.8695	86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:37:37

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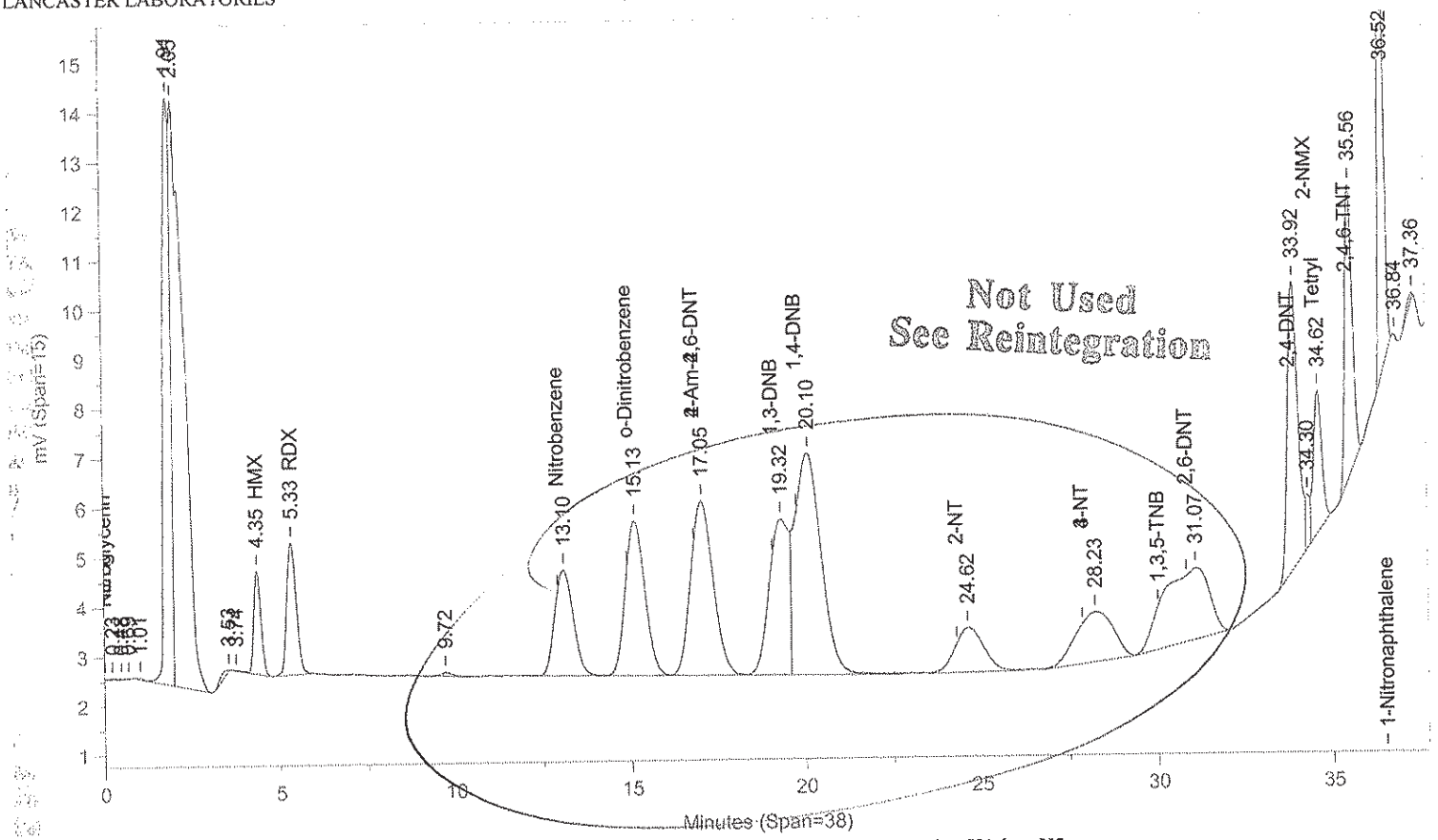
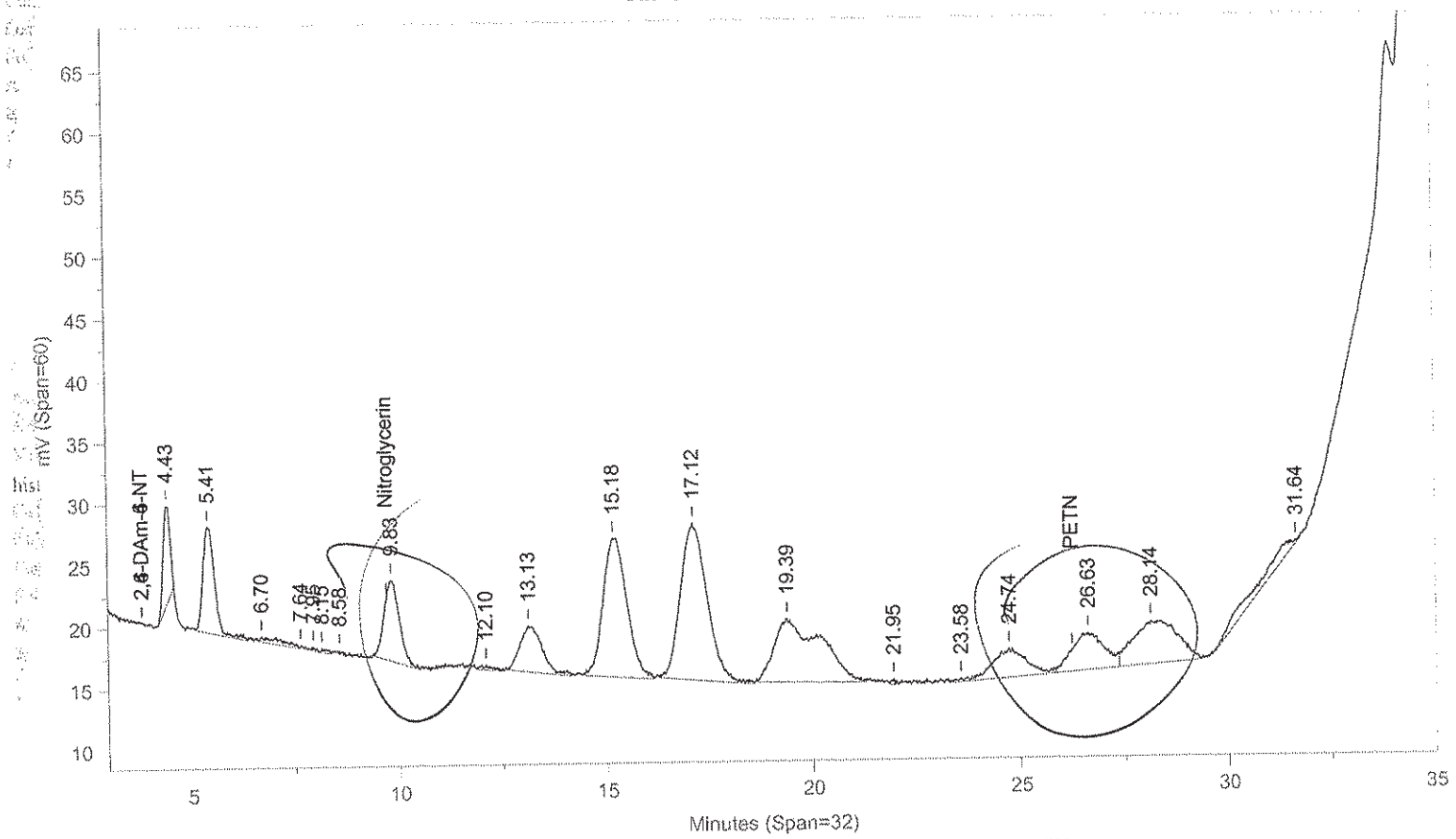


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 6:58:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.89R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 6:58:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.349	29800	2471.855	HMX	.		0	. HMX
5.334	49723	3653.635	RDX	.		0	. RDX
34.301	9030	2711.306	2-NMX	.		0	. 2-NMX
36.525	133905	7499.735	1-Nitronaphthalene	.		0	. 1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.89A
Area File: C:\CPWIN\DATA1\4C12310B.89A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:25:32 PM
File Reported On: 11/18/2013 at 3:25:42 PM

Not Used
See Reintegration

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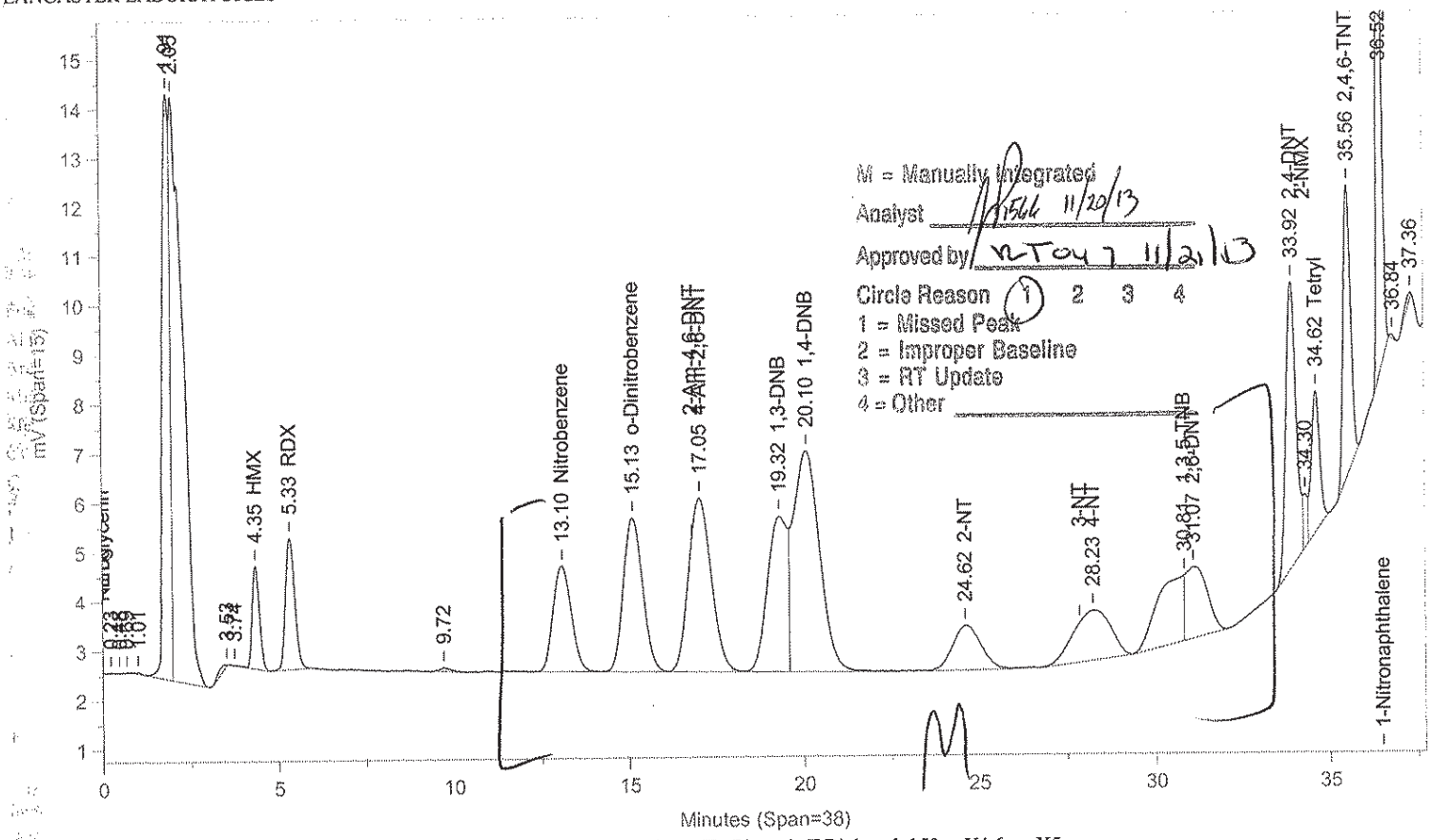
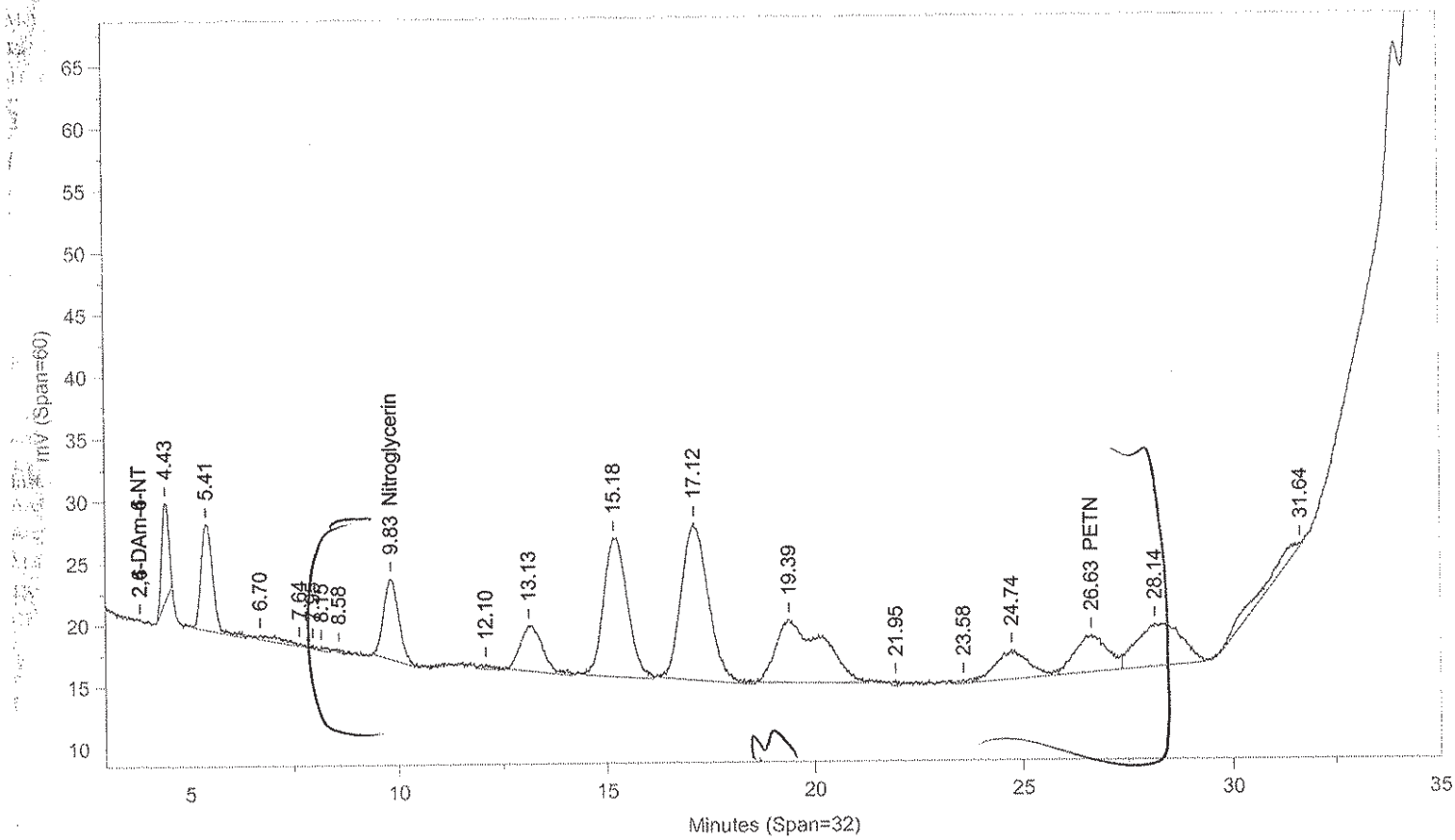
File: C:\CPWIN\DATA1\4C12310.89R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 6:58:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.89R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 6:58:16 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.349	29800	2471.855	HMX	.	0	.	HMX
5.334	49723	3653.635	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.832	165135	14128.	Nitroglycerin
13.095	78906	3710.867	Nitrobenzene	.	0	.	Nitrobenzene
15.127	122566	7736.82	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.048	159893	3602.07	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.316	125772	3228.964	1,3-DNB	.	0	.	1,3-DNB
20.104	232493	8821.886	1,4-DNB	.	0	.	1,4-DNB
24.617	52085	3862.001	2-NT	.	0	.	2-NT
.	0	.	PETN	26.631	161983	11860.63	PETN
28.228	74762	3371.644	4-NT	.	0	.	4-NT
30.806	71263	2971.185	1,3,5-TNB	.	0	.	1,3,5-TNB
31.068	61797	4224.574	2,6-DNT	.	0	.	2,6-DNT
33.919	121565	4092.811	2,4-DNT	.	0	.	2,4-DNT
34.301	9030	2711.306	2-NMX	.	0	.	2-NMX
34.623	48108	2792.819	Tetryl	.	0	.	Tetryl
35.56	88744	3678.938	2,4,6-TNT	.	0	.	2,4,6-TNT
36.525	133905	7499.735	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:06:40 PM
File Reported On: 11/20/2013 at 3:06:39 PM

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Data Summary

Sample Name: 7266802 MSD 2G124 MSD Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 18, 2013 07:40:42
Instrument X6329A
Result file 4E12310.90R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 81% (63 - 150) Conc: 3532.418945

Analysis Report (B)

Injected on Nov 18, 2013 07:40:42
Instrument Y6329A
Result file 4C12310.90R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) * 60% (63 - 150) Conc: 2594.597168

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.00	4.20	39344	3795.77124
1,3,5-Trinitrobenzene	4.66	4.64	4.86	93069	3833.953857
1,4-Dinitrobenzene	5.52	5.46	5.72	220467	7524.76416
o-Dinitrobenzene	6.13	5.97	6.33	114721	9681.75
1,3-DNB	6.49	6.37	6.69	158513	4247.751465
Tetryl	7.33	7.21	7.61	121218	3283.684173
2,4,6-Trinitrotoluene	7.78	7.57	7.98	116549	4447.745117
4-Amino-2,6-dinitrotoluer	9.69	9.23	9.97	37037	3432.740234
2-Amino-4,6-dinitrotoluer	9.97	9.66	10.25	85447	3392.53125
2,6-Dinitrotoluene	10.38	10.07	10.66	64684	4626.498047
2,4-Dinitrotoluene	10.86	10.53	11.14	161918	4256.738281
2-Nitrotoluene	12.80	12.35	13.08	53452	3513.485596
4-Nitrotoluene	14.10	13.63	14.43	36774	3408.106689
3-Nitrotoluene	14.79	14.28	15.12	76570	4917.296387
2-NMX	25.41	24.73	26.09	13847	3532.418945
1-Nitronaphthalene	32.62	32.49	33.11	138582	9172.889648

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.30	4.40	33260	2758.878174
RDX	5.16	5.25	5.36	56804	4203.114746
Nitrobenzene	12.75	12.75	13.07	86176	4055.940918
o-Dinitrobenzene	14.72	14.69	15.08	135580	8569.158203
4-Amino-2,6-dinitrotoluer	16.66	16.53	16.98	177639	4001.844482
1,3-DNB	18.93	18.98	19.23	133470	3426.598633
1,4-Dinitrobenzene	19.62	19.73	19.92	253952	9648.15625
2-Nitrotoluene	24.05	24.16	24.57	54986	4080.844971
4-Nitrotoluene	27.60	27.73	28.12	87939	3947.035889
1,3,5-Trinitrobenzene	29.81	30.08	30.21	91115	3671.647949
2,6-Dinitrotoluene	30.62	30.51	31.02	58978	4037.129883
2,4-Dinitrotoluene	33.67	33.80	33.89	130632	4398.087891
2-NMX	34.12	34.23	34.32	8561	2594.597168
Tetryl	34.41	34.54	34.61	56373	3245.385742
2,4,6-Trinitrotoluene	35.36	35.50	35.56	97530	4037.300049
1-Nitronaphthalene	36.36	36.49	36.56	154025	8590.435547

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	16975.751953	5217.3911	1739.1304		36.95	
☑ PETN	B	15382.143555	5217.3911	1739.1304		24.75	
☑ HMX	A	2728.757324	652.1739	217.3913		1.10	
☑ RDX	A	3795.77124	260.8696	108.6956		10.19	
☑ 1,3,5-Trinitrobenzene	A	3833.953857	260.8696	86.9565		4.32	
☑ 1,4-Dinitrobenzene	A	7524.76416	260.8696	86.9565		24.73	
☑ o-Dinitrobenzene	A	9681.75	260.8696	86.9565		12.19	
☑ 1,3-DNB	A	4247.751465	260.8696	86.9565		21.40	
☑ Tetryl	B	3245.385742	260.8696	133.0435		1.17	
☑ Nitrobenzene	B	4055.940918	260.8696	86.9565		21.04	
☑ 2,4,6-Trinitrotoluene	A	4447.745117	260.8696	86.9565		9.67	
☑ 4-Amino-2,6-dinitrotoluene	A	3432.740234	260.8696	130.4348		15.31	
☑ 2-Amino-4,6-dinitrotoluene	A	3392.53125	260.8696	86.9565		16.48	
☑ 2,6-Dinitrotoluene	A	4626.498047	260.8696	86.9565		13.61	
☑ 2,4-Dinitrotoluene	A	4256.738281	260.8696	86.9565		3.27	
☑ 2-Nitrotoluene	B	4080.844971	260.8696	173.913		14.94	
☑ 4-Nitrotoluene	A	3408.106689	260.8696	173.913		14.65	
☑ 3-Nitrotoluene	A	4917.296387	260.8696	217.3913		21.89	
☑ 2-NMX	A	3532.418945				30.61	
☑ 1-Nitronaphthalene	A	9172.889648	260.8696	86.9565		6.56	

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Data Summary

Sample Name: 7266802 MSD 2G124 MSD Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 18, 2013 07:40:42
Instrument	X6329A
Result file	4E12310.90R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 18, 2013 07:40:42
Instrument	Y6329A
Result file	4C12310.90R
Calibration file	3C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Assistant Supervisor

Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266802** MSD 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 07:40:42
Instrument : CP12--X6329A
Result file : 4E12310.90R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 81% (63-150) Conc.: 3532.41894!

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.00	4.20	39344	3795.771240
1,3,5-TNB	4.66	4.64	4.86	93069	3833.953857
1,4-DNB	5.52	5.46	5.72	220467	7524.764160
o-Dinitrobenzene	6.13	5.97	6.33	114721	9681.750000
1,3-DNB	6.49	6.37	6.69	158513	4247.751465
Tetryl	7.33	7.21	7.61	121218	3049.422607
2,4,6-TNT	7.78	7.57	7.98	116549	4447.745117
Tetryl breakdown	8.27	8.11	8.52	9312	234.261566
4-Am-2,6-DNT	9.63	9.23	9.91	37037	3432.740234
2-Am-4,6-DNT	9.97	9.66	10.25	85447	3392.531250
2,6-DNT	10.38	10.07	10.66	64684	4626.498047
2,4-DNT	10.86	10.53	11.14	161918	4256.738281
2-NT	12.80	12.35	13.08	53452	3513.485596
4-NT	14.10	13.63	14.43	36774	3408.106689
3-NT	14.79	14.28	15.12	76570	4917.296387
2-NMX	25.41	24.73	26.09	13847	3532.418945
1-Nitronaphthalene	32.62	32.49	33.11	138582	9172.889648

Analysis Report (B)

Injected on : NOV 18, 2013 07:40:42
Instrument : CP12--X6329B
Result file : 4E12310B.90R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 105% (63-150) Conc.: 4545.97998

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.72	2.85	128765	2728.757324
Nitroglycerin	8.51	8.34	8.89	171681	11680.871094
PETN	15.75	15.29	16.33	188675	11993.741211
2-NMX	25.57	24.89	26.24	255366	4545.979980

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	11680.871094	5217.39	1739.13			Report Confirmation
☑ PETN	B	11993.741211	5217.39	1739.13			
☑ HMX	B	2728.757324	652.1738	217.3913			Corrected Value = ~~3936.25~~ 69% recovery
☑ RDX	A	3795.771240	260.8695	108.6956			⑧ wrong value using 2.3 grams
☑ 1,3,5-TNB	A	3833.953857	260.8695	86.9565			
☑ 1,4-DNB	A	7524.764160	260.8695	86.9565			11/21/13
☑ o-Dinitrobenzene	A	9681.750000	260.8695	86.9565			
☑ 1,3-DNB	A	4247.751465	260.8695	86.9565			
☑ Tetryl	A	3049.422607	260.8695	133.0434			+ Breakdown = 3283.684173
☑ Nitrobenzene			<260.8695	<86.9565			
☑ 2,4,6-TNT	A	4447.745117	260.8695	86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	3432.740234	260.8695	130.4348			
☑ 2-Am-4,6-DNT	A	3392.531250	260.8695	86.9565			
☑ 2,6-DNT	A	4626.498047	260.8695	86.9565			
☑ 2,4-DNT	A	4256.738281	260.8695	86.9565			
☑ 2-NT	A	3513.485596	260.8695	173.913			
☑ 4-NT	A	3408.106689	260.8695	173.913			
☑ 3-NT	A	4917.296387	260.8695	217.3913			
☐ 2-NMX	A	3532.418945				25.09	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:26:25

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266802** MSD 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 18, 2013 07:40:42
Instrument	: CP12--X6329A
Result file	: 4E12310.90R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 18, 2013 07:40:42
Instrument	: CP12--X6329B
Result file	: 4E12310B.90R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	9172.889648	260.8695	86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie J. Tomayko, Technical Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:26:25

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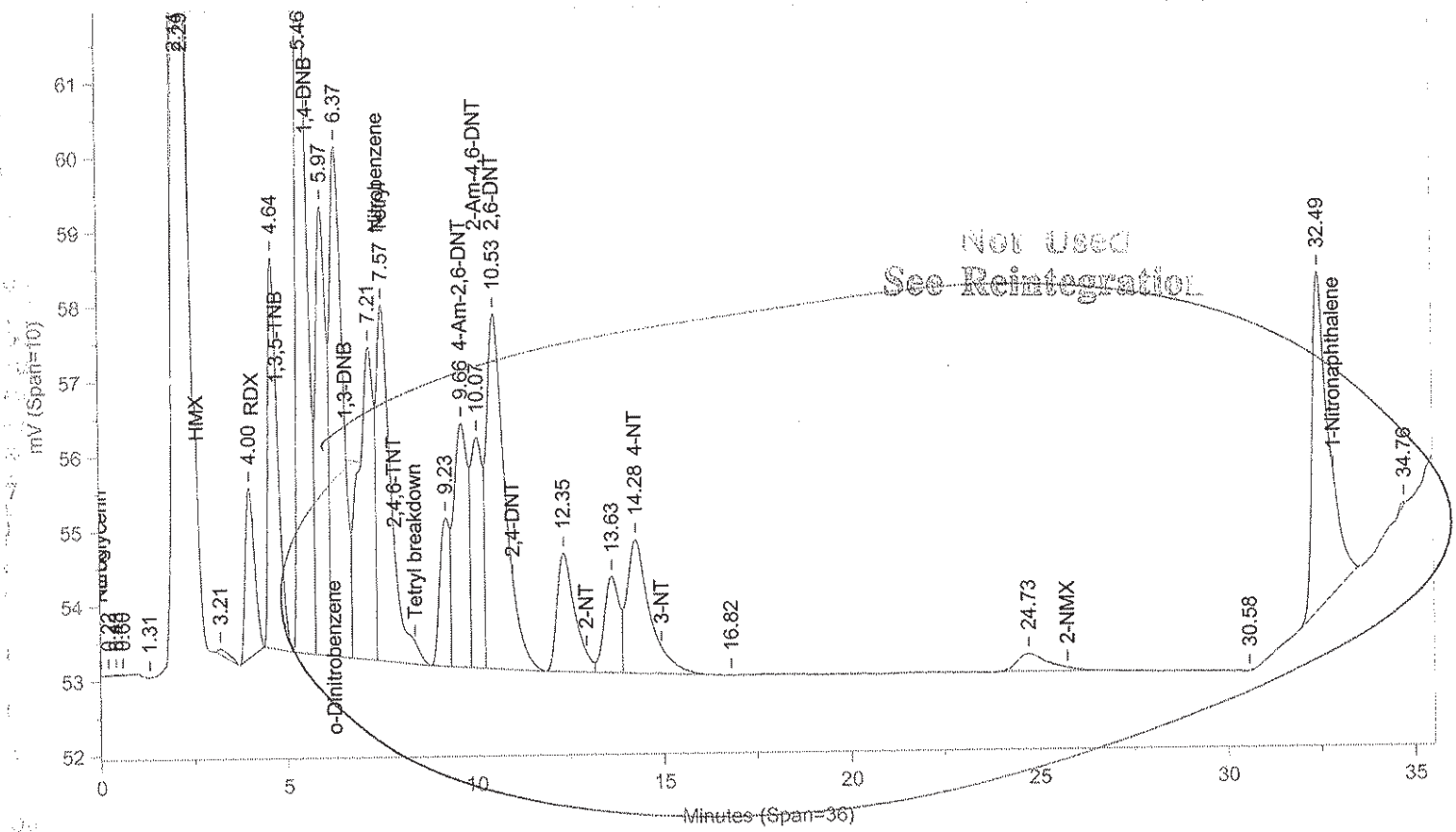
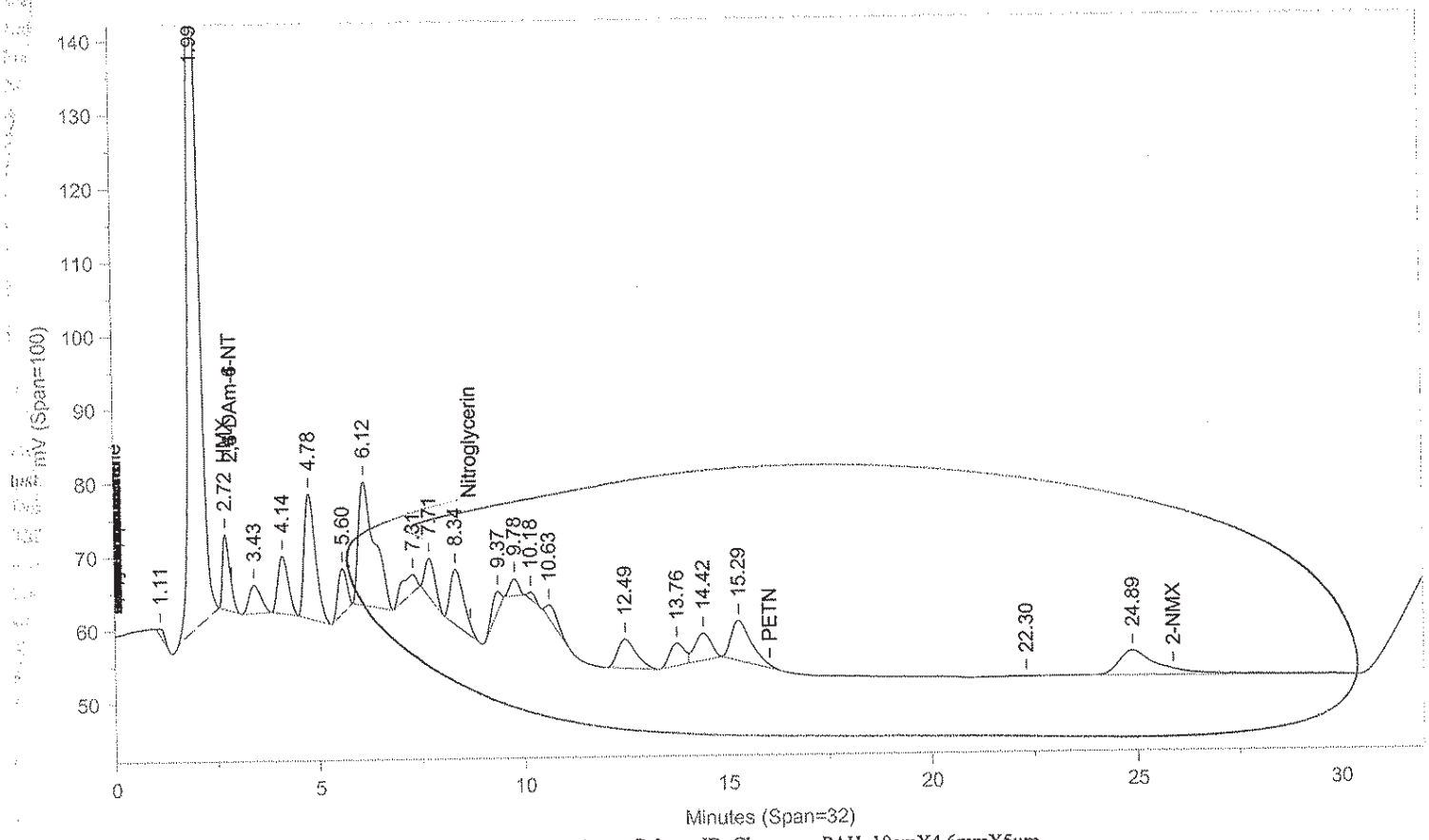
File: C:\CPWIN\DATA1\4E12310.90R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 7:40:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.90R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 7:40:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.715	128765	2728.757	HMX
7.565	125861	3166.213	Tetryl	.	0	.	Tetryl
9.659	85447	7919.561	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.073	64684	2568.164	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.529	161918	11581.12	2,6-DNT	.	0	.	2,6-DNT
14.283	76570	7096.241	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.90A
Area File: C:\CPWIN\DATA1\4E12310B.90A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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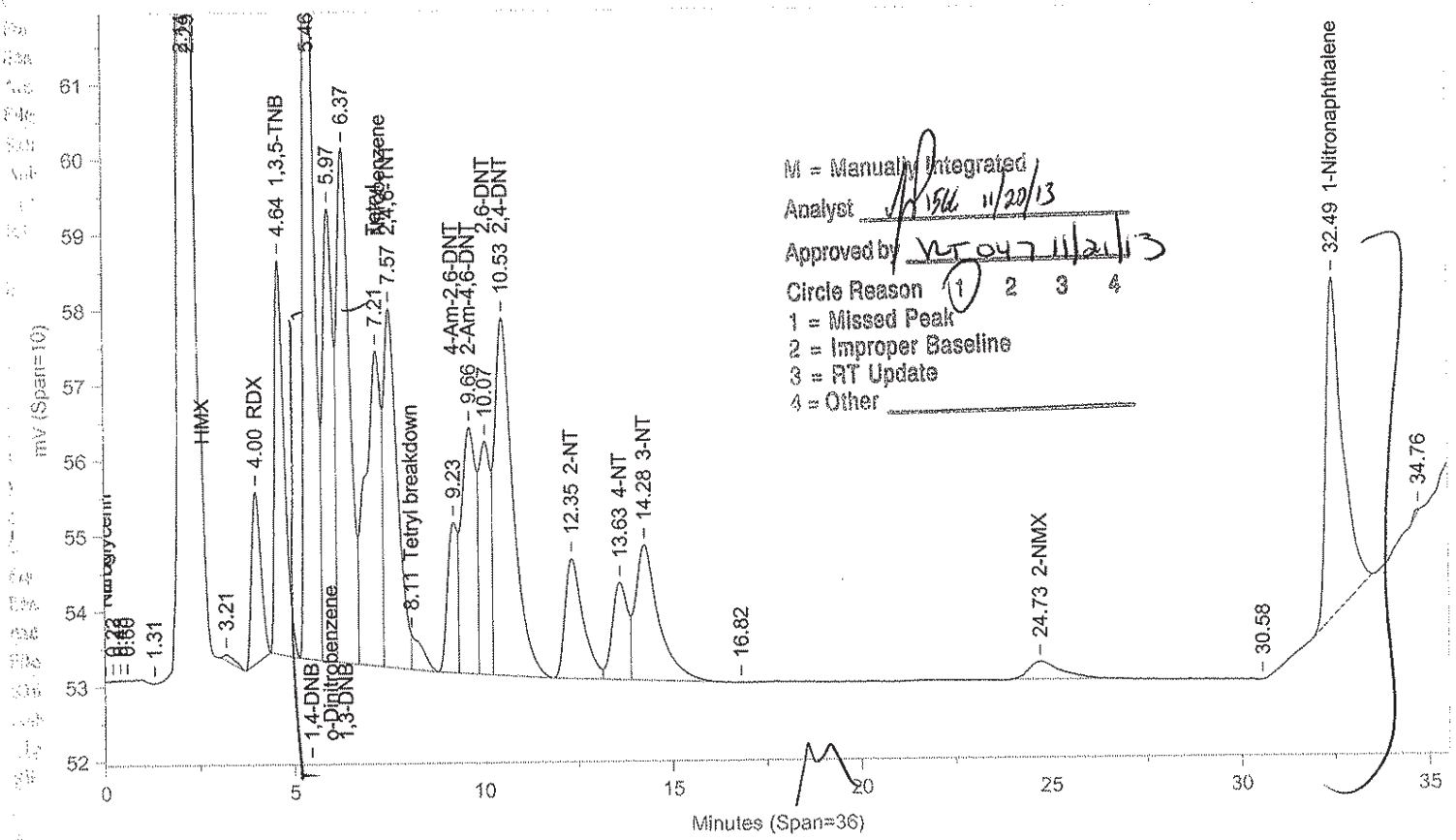
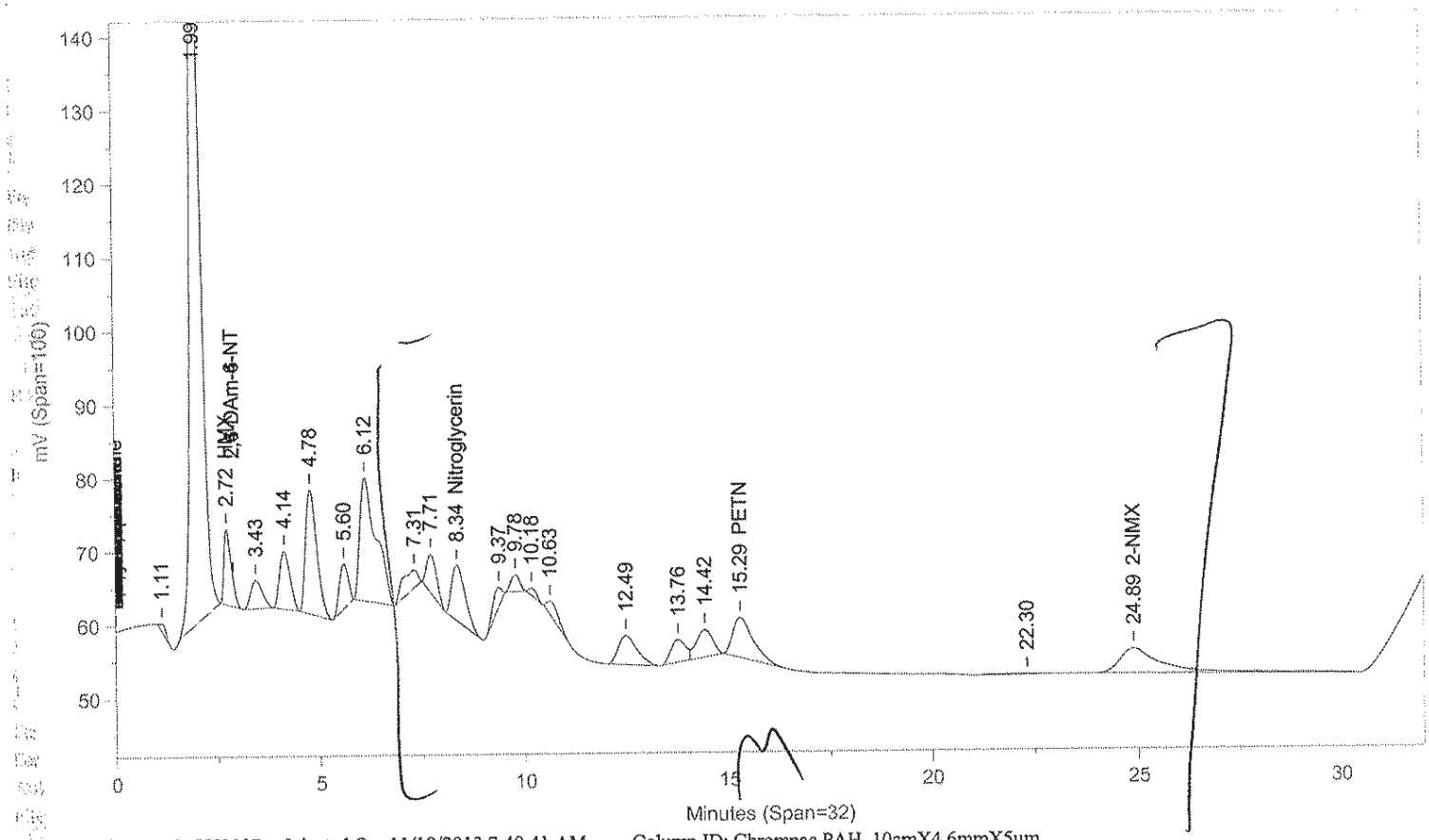
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.90R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 7:40:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.90R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 7:40:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.715	128765	2728.757	HMX
3.999	39344	3795.771	RDX	.	0	.	RDX
4.639	93069	3833.954	1,3,5-TNB	.	0	.	1,3,5-TNB
5.457	220467	7524.764	1,4-DNB	.	0	.	1,4-DNB
5.97	114721	9681.75	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.365	158513	4247.751	1,3-DNB	.	0	.	1,3-DNB
7.213	121218	3049.423	Tetryl	.	0	.	Tetryl
7.565	116549	4447.745	2,4,6-TNT	.	0	.	2,4,6-TNT
8.106	9312	234.262	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.345	171681	11680.87	Nitroglycerin
9.229	37037	3432.74	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.659	85447	3392.531	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.073	64684	4626.498	2,6-DNT	.	0	.	2,6-DNT
10.529	161918	4256.738	2,4-DNT	.	0	.	2,4-DNT
12.345	53452	3513.486	2-NT	.	0	.	2-NT
13.632	36774	3408.107	4-NT	.	0	.	4-NT
14.283	76570	4917.296	3-NT	.	0	.	3-NT
.	0	.	PETN	15.287	188675	11993.74	PETN
24.733	13847	3532.419	2-NMX	24.893	255366	4545.98	2-NMX
32.485	138582	9172.89	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:49:00 PM
File Reported On: 11/20/2013 at 12:48:59 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266802** MSD 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 18, 2013 07:40:42
Instrument : CP12--Y6329A
Result file : 4C12310.90R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : *60% (63-150) Conc.: 2594.59716

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.30	4.40	33260	2758.878174
RDX	5.16	5.25	5.36	56804	4203.114746
Nitrobenzene	12.75	12.75	13.07	86176	4055.940918
o-Dinitrobenzene	14.72	14.69	15.08	135580	8569.158203
4-Am-2,6-DNT	16.66	16.53	16.98	177639	4001.844482
1,3-DNB	18.93	18.98	19.23	133470	3426.598633
1,4-DNB	19.62	19.73	19.92	253952	9648.156250
2-NT	24.05	24.16	24.57	54986	4080.844971
4-NT	27.60	27.73	28.12	87939	3947.035889
1,3,5-TNB	29.81	30.08	30.21	91115	3671.647949
2,6-DNT	30.62	30.51	31.02	58978	4037.129883
2,4-DNT	33.67	33.80	33.89	130632	4398.087891
2-NMX	34.12	34.23	34.32	8561	2594.597168
Tetryl	34.41	34.54	34.61	56373	3245.385742
2,4,6-TNT	35.36	35.50	35.56	97530	4037.300049
1-Nitronaphthalene	36.36	36.49	36.56	154025	8590.435547

Analysis Report (B)

Injected on : NOV 18, 2013 07:40:42
Instrument : CP12--Y6329B
Result file : 4C12310B.90R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.60	9.82	198421	16975.751953
PETN	26.02	26.06	26.44	210077	15382.143555

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	15382.143555	5217.39	1739.13			
☑ Nitroglycerin	B	16975.751953	5217.39	1739.13			
☑ HMX	A	2758.878174	652.1738	217.3913			
☑ RDX	A	4203.114746	260.8695	108.6956			
☑ Nitrobenzene	A	4055.940918	260.8695	86.9565			
☑ o-Dinitrobenzene	A	8569.158203	260.8695	86.9565			
☑ 4-Am-2,6-DNT	A	4001.844482	260.8695	130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB	A	3426.598633	260.8695	86.9565			
☑ 1,4-DNB	A	9648.156250	260.8695	86.9565			
☑ 2-NT	A	4080.844971	260.8695	173.913			
☑ 4-NT	A	3947.035889	260.8695	173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB	A	3671.647949	260.8695	86.9565			
☑ 2,6-DNT	A	4037.129883	260.8695	86.9565			
☑ 2,4-DNT	A	4398.087891	260.8695	86.9565			
☐ 2-NMX	A	2594.597168					
☑ Tetryl	A	3245.385742	260.8695	133.0434			
☑ 2,4,6-TNT	A	4037.300049	260.8695	86.9565			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:37:50

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266802** MSD 2G124 Sample ID: AA **Batchnumber: 133140019A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM05 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 18, 2013 07:40:42
Instrument	: CP12--Y6329A
Result file	: 4C12310.90R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 18, 2013 07:40:42
Instrument	: CP12--Y6329B
Result file	: 4C12310B.90R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	8590.435547	260.8695	86.9565			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 21 2013

Valerie L. Tomayko
Principal Specialist

Verified by: _____
Date: NOV 21 2013

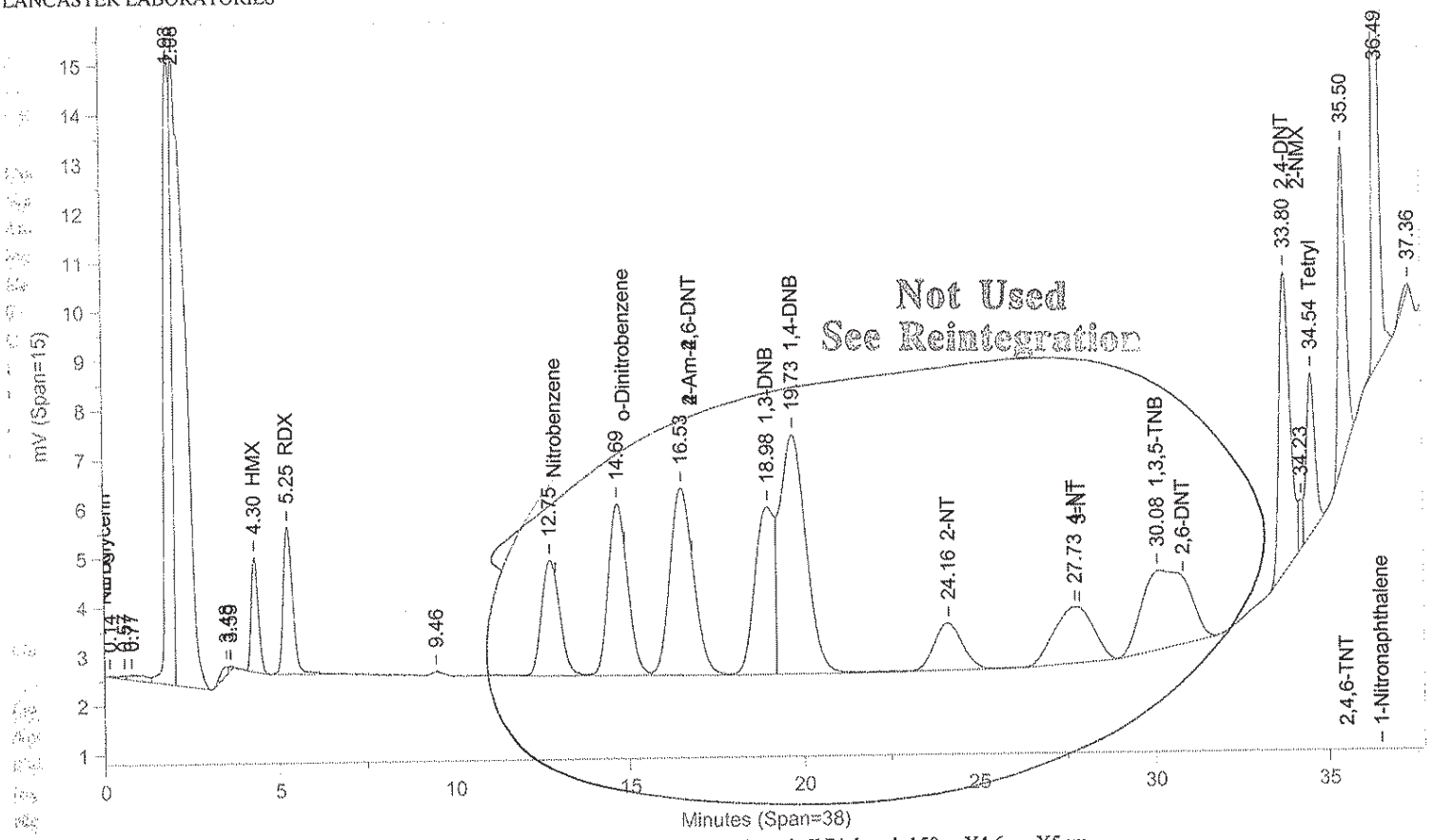
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:37:50

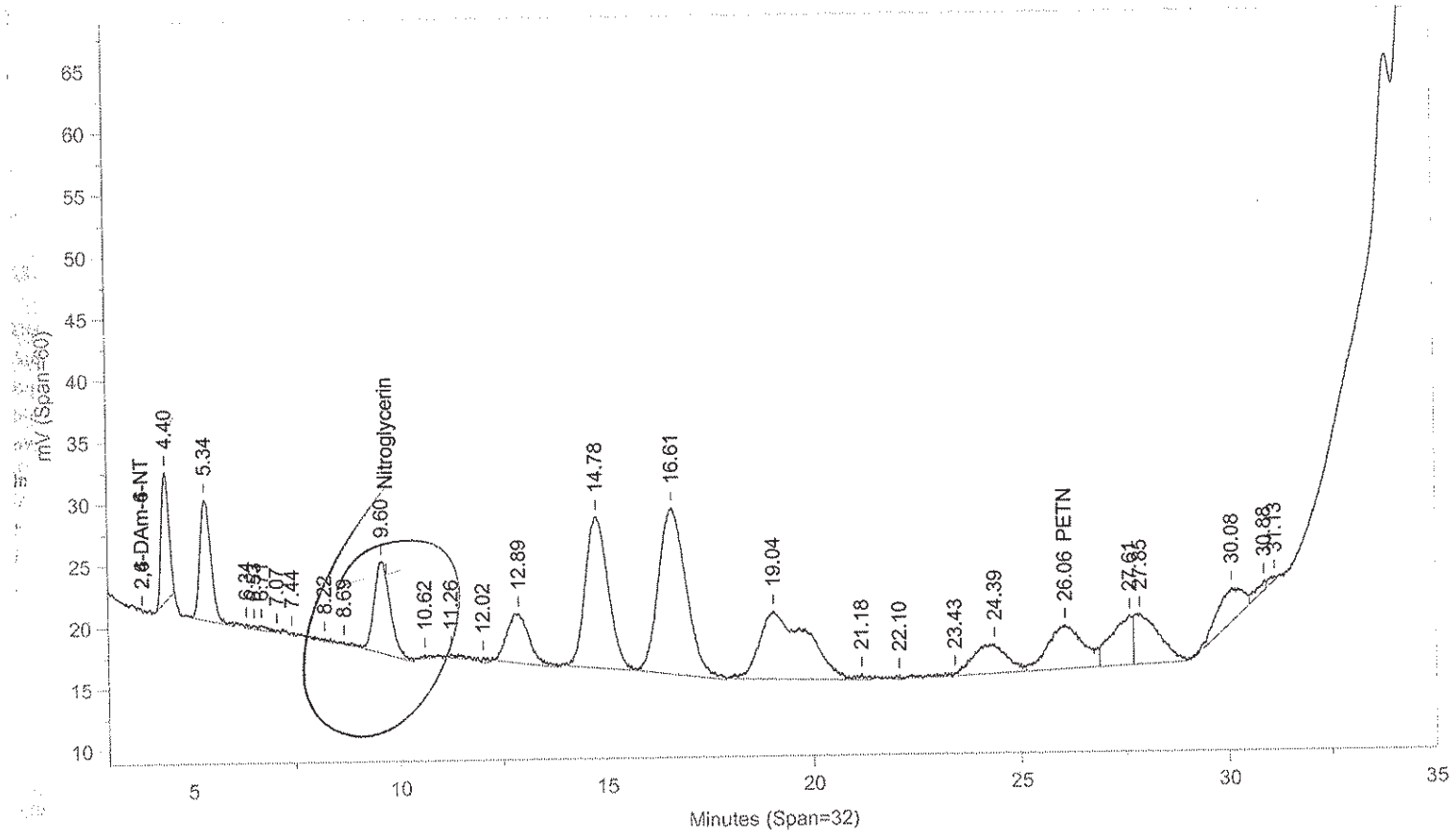
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.90R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 7:40:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.90R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 7:40:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

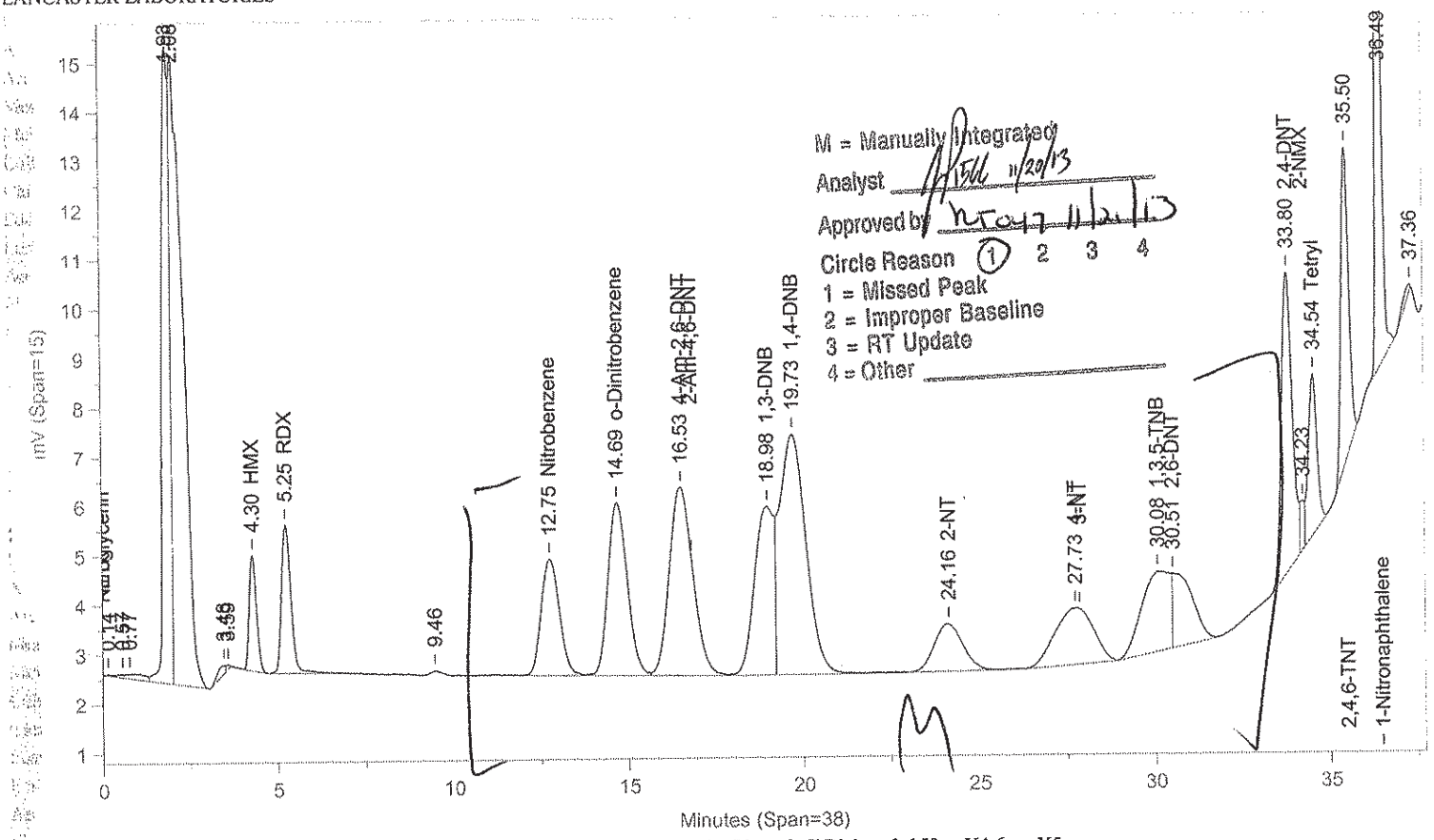
Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.3	33260	2758.878	HMX	.	0	.	HMX
5.252	56804	4203.115	RDX	.	0	.	RDX
18.984	133470	3426.599	1,3-DNB	.	0	.	1,3-DNB
19.728	253952	9648.156	1,4-DNB	.	0	.	1,4-DNB
24.156	54986	4080.845	2-NT	.	0	.	2-NT
.	0	.	PETN	26.06	210077	15382.14	PETN
27.733	87939	3947.036	4-NT	.	0	.	4-NT
30.081	150093	5752.583	1,3,5-TNB	.	0	.	1,3,5-TNB
33.804	130632	4398.088	2,4-DNT	.	0	.	2,4-DNT
34.234	8561	2594.597	2-NMX	.	0	.	2-NMX
34.542	56373	3245.386	Tetryl	.	0	.	Tetryl
35.497	97530	4037.3	2,4,6-TNT	.	0	.	2,4,6-TNT
36.488	154025	8590.436	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.90A
Area File: C:\CPWIN\DATA1\4C12310B.90A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:26:02 PM
File Reported On: 11/18/2013 at 3:26:12 PM

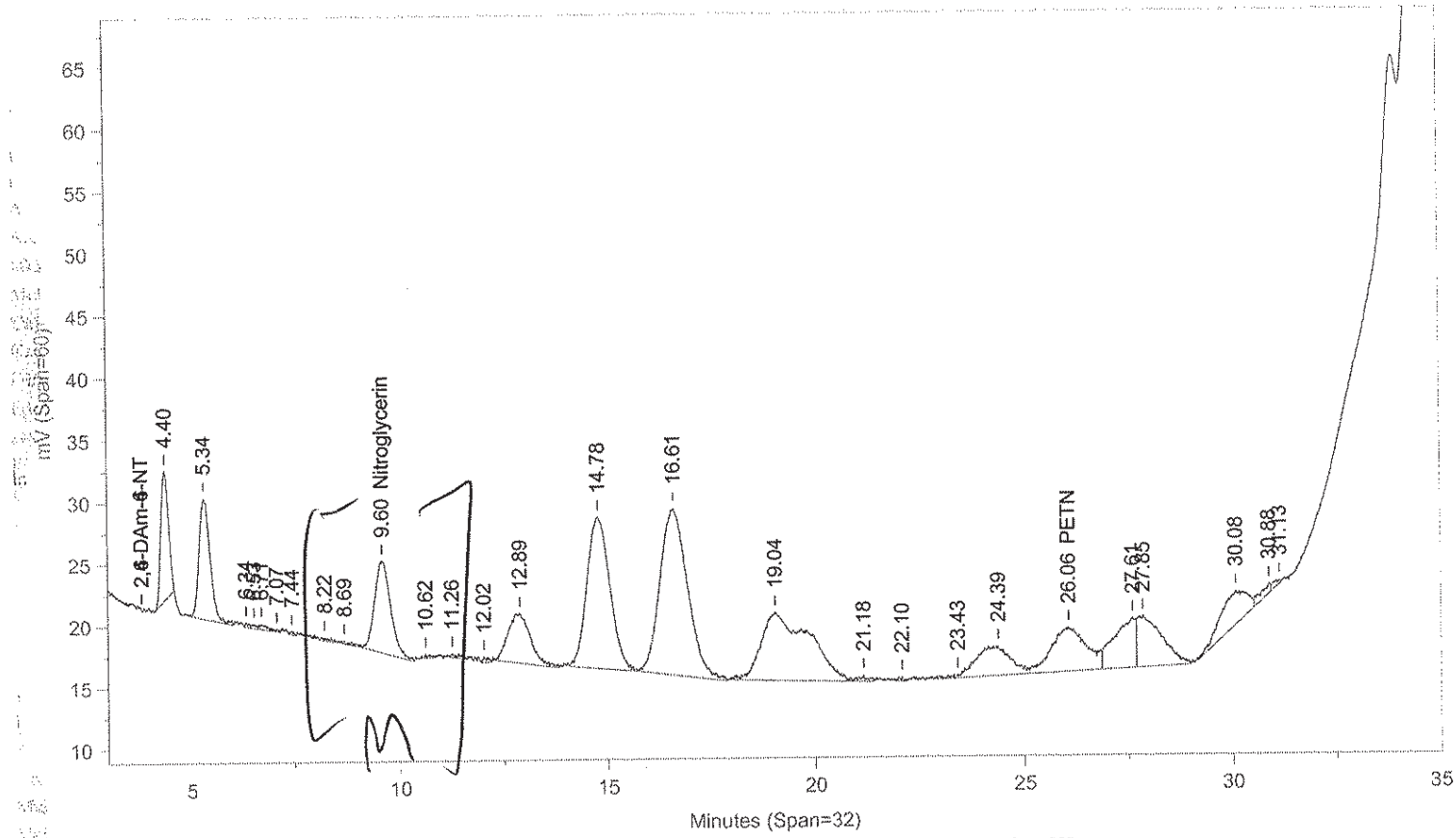
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.90R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 7:40:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.90R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 7:40:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.3	33260	2758.878	HMX	.	0	.	HMX
5.252	56804	4203.115	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.598	198421	16975.75	Nitroglycerin
12.751	86176	4055.941	Nitrobenzene	.	0	.	Nitrobenzene
14.689	135580	8569.158	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.526	177639	4001.844	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.984	133470	3426.599	1,3-DNB	.	0	.	1,3-DNB
19.728	253952	9648.156	1,4-DNB	.	0	.	1,4-DNB
24.156	54986	4080.845	2-NT	.	0	.	2-NT
.	0	.	PETN	26.06	210077	15382.14	PETN
27.733	87939	3947.036	4-NT	.	0	.	4-NT
30.081	91115	3671.648	1,3,5-TNB	.	0	.	1,3,5-TNB
30.511	58978	4037.13	2,6-DNT	.	0	.	2,6-DNT
33.804	130632	4398.088	2,4-DNT	.	0	.	2,4-DNT
34.234	8561	2594.597	2-NMX	.	0	.	2-NMX
34.542	56373	3245.386	Tetryl	.	0	.	Tetryl
35.497	97530	4037.3	2,4,6-TNT	.	0	.	2,4,6-TNT
36.488	154025	8590.436	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:09:22 PM
File Reported On: 11/20/2013 at 3:09:20 PM

Extraction/Distillation/Digestion Logs

Explosives

Organic Extraction Batchlog Assigned to: 572 Edwin Ortiz

Reviewed by: [illegible] Start Date: 11-12-13 Start time: 15:00

Tech 1: 572 Tech 2:

133140016A

Dept: 24 Prep Analysis: 06915 Nitroaromatics/Amines Wat Ext Nitroaromatics/Amines in Water

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
BLANKA	PBLK16314	500	SS1330824A	0.5	NA	NA	10				=D.I.#50
LCSA	LCS16314	500	SS1330824A	0.5	MS1326324A	0.5	10				
LCSDA	LCSD16314	500	SS1330824A	0.5	MS1326324A	0.5	10				

Solvent Used	Lot No.
ACN	#7097
CaCl2 sol'n	2125 110413A
Poropak cart.	3833115A
Syringe Filter	2182031L

Spike Solutions: Witness: NA

MS1326324A WATER EXPLOSIVES SPIKE

SS1330824A EXPLOSIVE WATER SURROGAT

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7266798	FB106	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
2	7266799	FB206	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
3	7266805	2B152	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N
4	7266807	2B151	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N
5	7266810	2D123	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
6	7266811	2D121	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
7	7266819	3--FD	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N

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NA 11-12-13

Rack ID:		Work Station	GRL room
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133140016A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2991 William Saadeh Reviewed by: [illegible] Start Date: 11/12/13 Start time: 11:00

133140019A Tech 1: WHS 2991 Tech 2: [illegible] 11-13-13 Finished

Dept: 24 Prep Analysis: 06917 Nitroaromatics/Amines Sol Ext Nitroaromatics/Amines in Solid

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266801MS	2G124	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	Brown Mud
7266802MSD	2G124	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	↓
BLANKA	PBLK19314	2.0	SS1327424A	0.1			20	Z	Z	Z	Sand
LCSA	LCS19314	2.0	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	Z	↓

Solvent Used	Lot No.
Acetonitrile	47097
CaCl2 solution	7121112013A
Syringe Filter	2185-9691
Sand	013021-AE

Start Time: 1230
Stop Time: 9:45 11-13-13 [illegible]

Spike Solutions: Witness: NA
MS1330124B SOIL EXPLOSIVE SPIKE
SS1327424A EXPLOSIVE SOIL SURROGATE

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7266800BKG	2G124	2.0	SS1327424A	0.1	20	Z	Z	34A	Brown Mud	06918	1688	11/18/2013	N
2 7266804	2G125	2.4	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N
3 7266806	2C152	2.2	SS1327424A	0.1	20	Z	Z	34A		06918	1688	11/18/2013	N
4 7266808	2C151	2.3	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N

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[illegible] 11-13-13

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133140019A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM05

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7266798	FB-01_11062013	X		Field Blank
7266799	FB-02_11062013	X		Field Blank
7266805	SW-R2-B-15-2	X		
7266807	SW-R2-B-15-1	X		

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

Method defined actions are taken for any failed matrix QC.

Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM05

ICP Metals

Fraction: Metals in Liquid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266798 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	33.4	U		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266799 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	82.8	U		P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.42	U		MS
7440-39-3	Barium	0.33	U		P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	33.4	U		P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	43.0	U		P
7439-92-1	Lead	0.085	U		MS
7439-95-4	Magnesium	16.7	U		P
7439-96-5	Manganese	0.83	U		P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	98.0	U		P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	167	U		P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	2.0	U		P

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266805 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1430			P
7440-36-0	Antimony	0.46	B		MS
7440-38-2	Arsenic	3.8			MS
7440-39-3	Barium	70.6			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	1.0	B		P
7440-70-2	Calcium	25000			P
7440-47-3	Chromium	6.5	B		P
7440-48-4	Cobalt	12.4			P
7440-50-8	Copper	10.5			P
7439-89-6	Iron	21000			P
7439-92-1	Lead	22.5			MS
7439-95-4	Magnesium	9730			P
7439-96-5	Manganese	1620			P
7439-97-6	Mercury	0.080	B		CV
7440-02-0	Nickel	7.4	B		P
7440-09-7	Potassium	3180			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	53100			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	5.6			P
7440-66-6	Zinc	61.7			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266807 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	646			P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	0.55	B		MS
7440-39-3	Barium	63.7			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	61700			P
7440-47-3	Chromium	2.5	B		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	2290			P
7439-92-1	Lead	5.0			MS
7439-95-4	Magnesium	26300			P
7439-96-5	Manganese	416			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	3860			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	82000			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	B		P
7440-66-6	Zinc	15.0	B		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM05
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Aluminum	P31105F	*65230BKG
Barium		7266798
Beryllium		7266799
Cadmium		7266805
Calcium		7266807
Chromium		P31105FB
Cobalt		P31105FQ
Copper		
Iron		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM05
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Antimony	P31150D	*65230BKG
Arsenic		7266798
Lead		7266799
Thallium		7266805
		7266807
		P31150DB
		P31150DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM05
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Mercury	P31113F	7266798
		7266799
		7266805
		7266807
		P31113FB
		P31113FQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)
Aluminum		30000.0	30176.99	100.6	25000.0	24955.95	99.8	25000.0	24726.46	98.9
Barium		600.0	609.15	101.5	500.0	499.68	99.9	500.0	496.82	99.4
Beryllium		600.0	593.69	98.9	500.0	488.66	97.7	500.0	494.36	98.9
Cadmium		600.0	597.55	99.6	500.0	492.78	98.6	500.0	493.39	98.7
Calcium		30000.0	29827.29	99.4	25000.0	24490.30	98.0	25000.0	24603.43	98.4
Chromium		600.0	604.82	100.8	500.0	490.15	98.0	500.0	497.80	99.6
Cobalt		600.0	597.72	99.6	500.0	490.31	98.1	500.0	495.22	99.0
Copper		600.0	610.50	101.8	500.0	496.11	99.2	500.0	492.97	98.6
Iron		30000.0	29995.66	100.0	25000.0	24716.42	98.9	25000.0	24622.22	98.5
Magnesium		30000.0	29645.04	98.8	25000.0	24462.84	97.9	25000.0	24155.72	96.6
Manganese		600.0	598.46	99.7	500.0	493.88	98.8	500.0	485.39	97.1
Nickel		600.0	600.88	100.1	500.0	493.24	98.6	500.0	496.83	99.4
Potassium		30000.0	29994.13	100.0	25000.0	24625.67	98.5	25000.0	24752.09	99.0
Selenium		600.0	600.32	100.1	500.0	493.84	98.8	500.0	492.14	98.4
Silver		600.0	608.96	101.5	500.0	500.97	100.2	500.0	491.58	98.3
Sodium		30000.0	29765.38	99.2	25000.0	24526.94	98.1	25000.0	24354.94	97.4
Vanadium		600.0	612.87	102.1	500.0	499.38	99.9	500.0	499.91	100.0
Zinc		600.0	601.98	100.3	500.0	493.07	98.6	500.0	493.28	98.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24696.12	98.8	25000.0	24803.55	99.2
Barium					500.0	503.83	100.8	500.0	497.85	99.6
Beryllium					500.0	493.68	98.7	500.0	496.89	99.4
Cadmium					500.0	491.82	98.4	500.0	495.61	99.1
Calcium					25000.0	24539.08	98.2	25000.0	24684.15	98.7
Chromium					500.0	497.51	99.5	500.0	502.03	100.4
Cobalt					500.0	493.97	98.8	500.0	491.69	98.3
Copper					500.0	499.11	99.8	500.0	491.78	98.4
Iron					25000.0	24634.85	98.5	25000.0	24617.89	98.5
Magnesium					25000.0	24255.20	97.0	25000.0	24100.07	96.4
Manganese					500.0	489.70	97.9	500.0	496.55	99.3
Nickel					500.0	495.04	99.0	500.0	494.73	98.9
Potassium					25000.0	24764.57	99.1	25000.0	24793.57	99.2
Selenium					500.0	491.77	98.4	500.0	480.23	96.0
Silver					500.0	499.06	99.8	500.0	500.08	100.0
Sodium					25000.0	24413.96	97.7	25000.0	24309.18	97.2
Vanadium					500.0	502.32	100.5	500.0	505.78	101.2
Zinc					500.0	493.01	98.6	500.0	490.44	98.1

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium		30000.0	30752.96	102.5	25000.0	24976.56	99.9	25000.0	25683.00	102.7
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium					25000.0	25355.25	101.4	25000.0	25128.45	100.5
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	55.03	110.1	25.0	26.66	106.6	25.0	26.82	107.3
Arsenic	75	500.0	527.62	105.5	250.0	262.48	105.0	250.0	265.46	106.2
Lead	208	50.0	51.98	104.0	25.0	26.10	104.4	25.0	25.88	103.5
Thallium	203	50.0	50.82	101.6	25.0	25.60	102.4	25.0	25.62	102.5

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	27.19	108.8	25.0	27.39	109.6
Arsenic	75				250.0	264.97	106.0	250.0	261.40	104.6
Lead	208				25.0	26.51	106.0	25.0	26.43	105.7
Thallium	203				25.0	26.09	104.4	25.0	25.90	103.6

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	54.97	109.9	25.0	25.99	104.0	25.0	25.31	101.2
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	25.09	100.4	25.0	25.98	103.9
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.51	100.4	1.0	0.99	99.0	1.0	0.91	91.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.96	96.0	1.0	0.97	97.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	188.38	94.2	203.93	102.0
Barium		5.0	5.36	107.2	5.29	105.8
Beryllium		5.0	4.89	97.8	4.95	99.0
Cadmium		5.0	5.42	108.4	5.34	106.8
Calcium		200.0	184.37	92.2	190.68	95.3
Chromium		15.0	14.63	97.5	14.96	99.7
Cobalt		5.0	4.58	91.6	4.41	88.2
Copper		10.0	9.89	98.9	9.31	93.1
Iron		200.0	191.73	95.9	198.04	99.0
Magnesium		100.0	97.59	97.6	97.80	97.8
Manganese		5.0	5.18	103.6	5.12	102.4
Nickel		10.0	10.29	102.9	10.07	100.7
Potassium		500.0	530.32	106.1	545.74	109.1
Selenium		20.0	20.74	103.7	20.68	103.4
Silver		5.0	5.35	107.0	5.18	103.6
Sodium		1000.0	948.70	94.9	941.03	94.1
Vanadium		5.0	5.06	101.2	5.12	102.4
Zinc		20.0	17.26	86.3	19.74	98.7

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium						
Silver						
Sodium		1000.0	980.32	98.0	975.31	97.5
Vanadium						
Zinc						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.42	142.0	0.81	81.0
Arsenic	75	2.0	2.00	100.0	2.01	100.5
Lead	208	1.0	0.99	99.0	1.07	107.0
Thallium	203	0.5	0.52	104.0	0.45	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.15	115.0	1.04	104.0
Arsenic						
Lead						
Thallium						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.20	100.0	0.18	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U		82.800	U	P31105FB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.330	U	P31105FB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.670	U	P31105FB
Cadmium		0.49	B	0.43	B	0.33	B	0.34	B		0.760	U	P31105FB
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		33.400	U	P31105FB
Chromium		0.55	U	-0.57	B	0.55	U	0.55	U		1.600	U	P31105FB
Cobalt		0.44	U	0.44	U	0.44	U	0.44	U		1.300	U	P31105FB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		2.700	U	P31105FB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		43.000	U	P31105FB
Magnesium		16.7	U	16.7	U	16.7	U	16.7	U		16.700	U	P31105FB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.830	U	P31105FB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		1.500	U	P31105FB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		98.000	U	P31105FB
Selenium		2.4	U	2.4	U	2.4	U	3.1	B		8.400	U	P31105FB
Silver		0.75	U	0.75	U	0.75	U	0.75	U		2.100	U	P31105FB
Sodium		167	U	167	U	167	U	167	U		167.000	U	P31105FB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		2.000	U	P31105FB
Zinc		-2.3	B	-2.4	B	-2.4	B	-2.4	B		-2.610	B	P31105FB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum				33.4	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.47	B								
Calcium				33.4	U								
Chromium				0.55	U								
Cobalt				-0.50	B								
Copper				1.7	U								
Iron				33.4	U								
Magnesium				16.7	U								
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				2.4	U								
Silver				0.75	U								
Sodium				167	U								
Vanadium				0.83	U								
Zinc				-2.5	B								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium		167	U	167	U	167	U	167	U				
Vanadium													
Zinc													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331606T71
Calibration Date(s): 11/12/2013 - 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium													
Silver													
Sodium				167	U								
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.74	B	0.33	U	0.33	U	0.33	U				
Arsenic	75	0.40	U	0.40	U	0.40	U	0.40	U	75	0.420	U	P31150DB
Lead	208	0.026	U	0.026	U	0.026	U	0.026	U	208	0.085	U	P31150DB
Thallium	203	0.15	U	0.15	U	0.15	U	0.15	U	203	0.150	U	P31150DB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Antimony	121			0.39	B								
Arsenic	75			0.40	U								
Lead	208			0.026	U								
Thallium	203			0.15	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.96	B	0.33	U	0.33	U	0.33	U	121	0.340	U	P31150DB
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Antimony	121			0.33	U								
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	-0.063	B	0.060	U		0.060	U	P31113FB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 16315
Run Name: 1331501T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	495613	99.1	494019.8	98.8	497664	99.5	495788.0	99.2
Barium	0	500	0		497.0	99.4	0		497.0	99.4
Beryllium	0	500	0		508.8	101.8	0		514.8	103.0
Cadmium	0	1000	1		963.6	96.4	0		960.1	96.0
Calcium	500000	500000	493688	98.7	495171.2	99.0	498282	99.7	501223.9	100.2
Chromium	0	500	2		484.5	96.9	2		494.0	98.8
Cobalt	0	500	2		491.9	98.4	2		491.1	98.2
Copper	0	500	-1		531.1	106.2	-1		528.8	105.8
Iron	200000	200000	198567	99.3	198022.4	99.0	199502	99.8	199163.0	99.6
Magnesium	500000	500000	496854	99.4	492973.0	98.6	493002	98.6	490047.4	98.0
Manganese	0	500	3		482.5	96.5	3		485.2	97.0
Nickel	0	1000	3		976.9	97.7	3		973.6	97.4
Potassium	0	0	19		50.3		44		21.5	
Selenium	0	50	3		51.6	103.2	2		51.7	103.4
Silver	0	200	0		219.1	109.6	1		219.3	109.7
Sodium	0	0	53		47.1		15		-2.0	
Vanadium	0	500	-2		495.7	99.1	-2		499.8	100.0
Zinc	0	1000	11		1035.2	103.5	11		1022.0	102.2

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 16315
Run Name: 1331606T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	510447	102.1	506971.8	101.4	511505	102.3	514188.8	102.8
Barium										
Beryllium										
Cadmium										
Calcium	500000	500000	509853	102.0	508042.2	101.6	504768	101.0	508460.1	101.7
Chromium										
Cobalt										
Copper										
Iron	200000	200000	204106	102.1	202940.9	101.5	203974	102.0	205641.1	102.8
Magnesium	500000	500000	507940	101.6	510903.9	102.2	516065	103.2	517468.0	103.5
Manganese										
Nickel										
Potassium										
Selenium										
Silver										
Sodium	0	0	40		31.6		24		23.3	
Vanadium										
Zinc										

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9696	97.0	9618.4	96.2
Antimony	121	0	0	0		0.1	
Arsenic	75	0	20	0		19.0	95.0
Calcium	44	10000	10000	9010	90.1	8923.0	89.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9709	97.1	9588.2	95.9
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9569	95.7	9585.4	95.9
Molybdenum	98	200	200	197	98.5	198.5	99.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9510	95.1	9612.0	96.1
Sodium	23	10000	10000	9494	94.9	9495.1	95.0
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	202	101.0	187.4	93.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9807	98.1	10019.6	100.2
Antimony	121	0	0	0		-0.1	
Arsenic	75	0	20	0		19.5	97.5
Calcium	44	10000	10000	9551	95.5	9713.4	97.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9733	97.3	10129.2	101.3
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9688	96.9	9908.7	99.1
Molybdenum	98	200	200	198	99.0	199.5	99.8
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9824	98.2	10198.7	102.0
Sodium	23	10000	10000	9677	96.8	10063.8	100.6
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	196	98.0	204.1	102.1

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9625	96.3	9589.2	95.9
Antimony	121	0	0	0		0.1	
Arsenic							
Calcium	44	10000	10000	9804	98.0	9725.1	97.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9730	97.3	9719.1	97.2
Lead							
Magnesium	24	10000	10000	9580	95.8	9592.4	95.9
Molybdenum	98	200	200	200	100.0	201.3	100.7
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9818	98.2	9799.8	98.0
Sodium	23	10000	10000	9659	96.6	9667.2	96.7
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	211	105.5	203.0	101.5

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9480	94.8	9915.5	99.2
Antimony	121	0	0	0		0.0	
Arsenic							
Calcium	44	10000	10000	9516	95.2	9934.2	99.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9743	97.4	10135.0	101.4
Lead							
Magnesium	24	10000	10000	9362	93.6	9819.0	98.2
Molybdenum	98	200	200	193	96.5	201.1	100.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9750	97.5	10311.7	103.1
Sodium	23	10000	10000	9410	94.1	9888.2	98.9
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	195	97.5	201.2	100.6

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM05
Matrix: WATER

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31105FQ	UG/L	2000.00	2088.05		90 - 112	104	P	Yes
Antimony	121	P31150DQ	UG/L	6.00	5.63		80 - 120	94	MS	Yes
Arsenic	75	P31150DQ	UG/L	10.00	10.03		86 - 120	100	MS	Yes
Barium		P31105FQ	UG/L	2000.00	2058.61		90 - 110	103	P	Yes
Beryllium		P31105FQ	UG/L	50.00	51.26		90 - 111	103	P	Yes
Cadmium		P31105FQ	UG/L	50.00	51.09		90 - 112	102	P	Yes
Calcium		P31105FQ	UG/L	4000.00	4098.01		90 - 112	102	P	Yes
Chromium		P31105FQ	UG/L	200.00	205.97		90 - 110	103	P	Yes
Cobalt		P31105FQ	UG/L	500.00	512.50		90 - 110	103	P	Yes
Copper		P31105FQ	UG/L	250.00	260.00		90 - 112	104	P	Yes
Iron		P31105FQ	UG/L	1000.00	1010.17		90 - 112	101	P	Yes
Lead	208	P31150DQ	UG/L	15.00	14.80		90 - 110	99	MS	Yes
Magnesium		P31105FQ	UG/L	2000.00	2017.59		89 - 110	101	P	Yes
Manganese		P31105FQ	UG/L	500.00	511.47		90 - 110	102	P	Yes
Mercury		P31113FQ	UG/L	1.00	0.97		80 - 120	97	CV	Yes
Nickel		P31105FQ	UG/L	500.00	522.14		90 - 111	104	P	Yes
Potassium		P31105FQ	UG/L	10000.00	10156.07		90 - 110	102	P	Yes
Selenium		P31105FQ	UG/L	150.00	156.07		80 - 120	104	P	Yes
Silver		P31105FQ	UG/L	50.00	56.23		80 - 120	112	P	Yes
Sodium		P31105FQ	UG/L	10000.00	10152.52		87 - 114	102	P	Yes
Thallium	203	P31150DQ	UG/L	2.00	1.86		90 - 115	93	MS	Yes
Vanadium		P31105FQ	UG/L	500.00	525.39		90 - 110	105	P	Yes
Zinc		P31105FQ	UG/L	500.00	508.29		90 - 110	102	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM05
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: *65230BKG Serial Dilution Lab Sample ID: *65230L
Batch ID(s): P31105F, P31150D
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		147.9800	B	414.0000	U	100		P
Antimony	121	0.3400	U	1.7000	U			MS
Arsenic	75	0.4200	U	2.1000	U			MS
Barium		39.3600		40.7000		3		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		36101.7400		36750.4500		2		P
Chromium		1.6000	U	8.0000	U			P
Cobalt		1.3000	U	6.5000	U			P
Copper		2.7000	U	13.5000	U			P
Iron		1448.7200		1419.5500		2		P
Lead	208	0.7250	B	0.7550	B	4		MS
Magnesium		14386.8200		14718.5000		2		P
Manganese		739.0500		751.7500		2		P
Nickel		1.5000	U	7.5000	U			P
Potassium		1957.7300		1964.1000	B	0		P
Selenium		8.4000	U	42.0000	U			P
Silver		2.1000	U	10.5000	U			P
Sodium		71595.0200		73022.3500		2		P
Thallium	203	0.1500	U	0.7500	U			MS
Vanadium		2.0000	U	10.0000	U			P
Zinc		2.0700	B	10.0000	U	100		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.55
Cobalt	228.62		0.44
Copper	327.40		1.7
Iron	261.19		33.4
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		2.4
Silver	328.06		0.75
Sodium	589.59		167
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
_____
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: MS
Instrument ID: 19204
Date: 10/2013

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.33
Arsenic	75		0.40
Lead	208		0.026
Thallium	203		0.15

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM05
Matrix: WATER

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	82.8
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	1.3
Copper	327.40		10.0	2.7
Iron	261.19		200	43.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.5
Potassium	766.49		500	98.0
Selenium	196.09		20.0	8.4
Silver	328.06		5.0	2.1
Sodium	589.59		1000	167
Vanadium	292.40		5.0	2.0
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM05
Matrix: WATER

Method: MS
Date: 06/2013

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		1.0	0.34
Arsenic	75		2.0	0.42
Lead	208		1.0	0.085
Thallium	203		0.50	0.15

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM05
Matrix: WATER

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000770	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	-0.0000200	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000150	0.0000000	0.0002620
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0001000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0099760
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002000	0.0000000	0.0000000	-0.0000040
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	0.0002000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0001180	0.0000000	0.0000000	0.0000000	0.0018400
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0004790	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	-0.0000600	-0.0094600
Zinc	213.86	0.0000000	0.0000000	0.0012000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	TI	V	ZR	--
Aluminum	308.21	0.0000000	0.0000000	0.0100000	0.0000000	
Beryllium	313.04	0.0000000	0.0000040	0.0001160	0.0000000	
Cadmium	226.50	-0.0000780	0.0000000	0.0000000	0.0000000	
Cobalt	228.62	0.0001140	0.0020220	0.0000000	0.0000000	
Copper	327.40	0.0000000	0.0001460	-0.0000340	0.0000000	
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0006500	
Vanadium	292.40	0.0000000	0.0007950	0.0000000	0.0000000	
Zinc	213.86	0.0053800	0.0000000	0.0000000	0.0000000	

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM05

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Barium	455.4	10.00	5000.0
Beryllium	313.04	10.00	5000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	10000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	10000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
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_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM05

Method: P
Batch ID: P31105F

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266798	11/09/2013	50.00	50
7266799	11/09/2013	50.00	50
7266805	11/09/2013	50.00	50
7266807	11/09/2013	50.00	50
*65230BKG	11/09/2013	50.00	50
P31105FB	11/09/2013	50.00	50
P31105FQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM05

Method: MS
Batch ID: P31150D

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266798	11/09/2013	50.00	50
7266799	11/09/2013	50.00	50
7266805	11/09/2013	50.00	50
7266807	11/09/2013	50.00	50
*65230BKG	11/09/2013	50.00	50
P31150DB	11/09/2013	50.00	50
P31150DQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM05

Method: CV
Batch ID: P31113F

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266798	11/08/2013	40.00	40
7266799	11/08/2013	40.00	40
7266805	11/08/2013	40.00	40
7266807	11/08/2013	40.00	40
P31113FB	11/08/2013	40.00	40
P31113FQ	11/08/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	00:43	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
S	1.00	00:46	X						X				X		X				X			X										
S	1.00	00:50				X	X	X			X	X				X		X		X	X				X							
S	1.00	00:54								X														X								
ICV	1.00	00:58	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICB	1.00	01:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
LLC	1.00	01:05	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	01:09	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	01:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	01:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	01:21	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FB	1.00	01:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FQ	1.00	01:29	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
*65230BKG	1.00	01:32	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	01:36																														
ZZZZZZ	1.00	01:40																														
ZZZZZZ	1.00	01:43																														
ZZZZZZ	1.00	01:47																														
*65230L	5.00	01:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	01:55																														
ZZZZZZ	1.00	01:58																														
CCV	1.00	02:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:06	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:10																														
ZZZZZZ	1.00	02:14																														
ZZZZZZ	1.00	02:17																														
ZZZZZZ	1.00	02:21																														
ZZZZZZ	1.00	02:25																														
ZZZZZZ	1.00	02:29																														
ZZZZZZ	1.00	02:32																														
7266798	1.00	02:36	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7266799	1.00	02:40	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7266805	1.00	02:44	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	02:47	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7266807	1.00	02:55	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X			X	X							
ZZZZZZ	1.00	02:59																														
ZZZZZZ	1.00	03:02																														

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	03:06																													
LLC	1.00	03:10	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	03:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	03:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	03:22	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	03:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16315
Run Name: 1331606T71

Run Start Date: 11/12/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	22:56																				X										
S	1.00	23:00																				X										
S	1.00	23:04																														
S	1.00	23:08																														
ICV	1.00	23:11																				X										
ICB	1.00	23:15																				X										
LLC	1.00	23:19																				X										
ICSA	1.00	23:23																				X										
ICSAB	1.00	23:27																				X										
CCV	1.00	23:31																				X										
CCB	1.00	23:35																				X										
ZZZZZZ	5.00	23:38																														
ZZZZZZ	5.00	23:42																														
ZZZZZZ	5.00	23:46																														
ZZZZZZ	5.00	23:50																														
ZZZZZZ	5.00	23:53																														
ZZZZZZ	25.00	23:57																														
ZZZZZZ	5.00	00:01																														
ZZZZZZ	5.00	00:05																														
ZZZZZZ	5.00	00:09																														
ZZZZZZ	5.00	00:12																														
CCV	1.00	00:16																				X										
CCB	1.00	00:20																				X										
ZZZZZZ	5.00	00:24																														
ZZZZZZ	5.00	00:27																														
ZZZZZZ	5.00	00:31																														
ZZZZZZ	25.00	00:35																														
ZZZZZZ	5.00	00:39																														
ZZZZZZ	5.00	00:42																														
ZZZZZZ	5.00	00:46																														
ZZZZZZ	5.00	00:51																														
ZZZZZZ	5.00	00:54																														
ZZZZZZ	2.00	00:58																														
CCV	1.00	01:02																				X										
CCB	1.00	01:06																				X										
7266807	2.00	01:10																				X										
LLC	1.00	01:13																				X										
ICSA	1.00	01:17																				X										

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16315
Run Name: 1331606T71

Run Start Date: 11/12/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ICSAB	1.00	01:21																				X										
CCV	1.00	01:25																				X										
CCB	1.00	01:29																				X										

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	02:11		X	X									X									X										
S	1.00	02:13		X	X									X									X										
CCS	1.00	02:15		X	X									X									X										
CCS	1.00	02:17		X	X									X									X										
ICV	1.00	02:19		X	X									X									X										
ICB	1.00	02:21		X	X									X									X										
LLC	1.00	02:23		X	X									X									X										
ICSA	1.00	02:25		X	X									X									X										
ICSAB	1.00	02:27		X	X									X									X										
CCV	1.00	02:29		X	X									X									X										
CCB	1.00	02:31		X	X									X									X										
P31150DB	1.00	02:33			X									X									X										
P31150DQ	1.00	02:35			X									X									X										
*65230BKG	1.00	02:37		X	X									X									X										
ZZZZZZ	1.00	02:39																															
ZZZZZZ	1.00	02:41																															
ZZZZZZ	1.00	02:43																															
ZZZZZZ	1.00	02:45																															
*65230L	5.00	02:47		X	X									X									X										
7266798	1.00	02:49		X	X									X									X										
7266799	1.00	02:51		X	X									X									X										
CCV	1.00	02:53		X	X									X									X										
CCB	1.00	02:55		X	X									X									X										
ZZZZZZ	1.00	02:57																															
ZZZZZZ	1.00	02:59																															
ZZZZZZ	1.00	03:01																															
ZZZZZZ	1.00	03:03																															
ZZZZZZ	1.00	03:05																															
ZZZZZZ	1.00	03:07																															
7266805	1.00	03:09			X									X									X										
7266807	1.00	03:11		X	X									X									X										
ZZZZZZ	1.00	03:13																															
ZZZZZZ	1.00	03:15																															
CCV	1.00	03:17		X	X									X									X										
CCB	1.00	03:19		X	X									X									X										
ZZZZZZ	1.00	03:21																															
ZZZZZZ	1.00	03:23																															
ZZZZZZ	1.00	03:25																															

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	03:27																														
LLC	1.00	03:29		X	X									X									X									
ICSA	1.00	03:31		X	X									X									X									
ICSAB	1.00	03:33		X	X									X									X									
CCV	1.00	03:35		X	X									X									X									
CCB	1.00	03:37		X	X									X									X									

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	21:54		X																												
S	1.00	21:56		X																												
CCS	1.00	21:58		X																												
CCS	1.00	22:00		X																												
ICV	1.00	22:02		X																												
ICB	1.00	22:04		X																												
LLC	1.00	22:06		X																												
ICSA	1.00	22:08		X																												
ICSAB	1.00	22:10		X																												
CCV	1.00	22:12		X																												
CCB	1.00	22:14		X																												
ZZZZZZ	1.00	22:16																														
ZZZZZZ	1.00	22:18																														
ZZZZZZ	1.00	22:20																														
ZZZZZZ	1.00	22:22																														
ZZZZZZ	1.00	22:24																														
ZZZZZZ	1.00	22:26																														
ZZZZZZ	1.00	22:28																														
ZZZZZZ	5.00	22:30																														
ZZZZZZ	1.00	22:32																														
ZZZZZZ	1.00	22:34																														
CCV	1.00	22:36		X																												
CCB	1.00	22:38		X																												
ZZZZZZ	1.00	22:40																														
ZZZZZZ	5.00	22:42																														
P31150DB	1.00	22:44		X																												
P31150DQ	1.00	22:46		X																												
ZZZZZZ	1.00	22:48																														
ZZZZZZ	1.00	22:50																														
ZZZZZZ	1.00	22:52																														
7266805	1.00	22:54		X																												
ZZZZZZ	1.00	22:56																														
CCV	1.00	22:58		X																												
CCB	1.00	23:00		X																												
LLC	1.00	23:02		X																												
ICSA	1.00	23:04		X																												
ICSAB	1.00	23:06		X																												
CCV	1.00	23:08		X																												

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
CCB	1.00	23:10		X																												

METHODS:	LEGEND:
P = ICP Atomic Emission Spectrometer	BKG = Background
MS = ICP Mass Spectrometry	DUP = Duplicate
CV = Cold Vapor	MS = Matrix Spike
AF = Cold Vapor Atomic Fluorescence	MSD = Matrix Spike Duplicate
	A = Post Digest Spike
	L = Serial Dilution
	B = Blank
	Q = Laboratory Control Sample
	Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM05
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	06:09															X															
S0.2	1.00	06:11															X															
S0.5	1.00	06:13															X															
S1.0	1.00	06:16															X															
S2.5	1.00	06:18															X															
S5.0	1.00	06:20															X															
ICV	1.00	06:22															X															
ICB	1.00	06:24															X															
CRA	1.00	06:26															X															
CCV	1.00	06:28															X															
CCB	1.00	06:30															X															
ZZZZZZ	1.00	06:32																														
ZZZZZZ	1.00	06:34																														
ZZZZZZ	1.00	06:36																														
ZZZZZZ	1.00	06:38																														
ZZZZZZ	1.00	06:40																														
ZZZZZZ	1.00	06:42																														
ZZZZZZ	1.00	06:44																														
ZZZZZZ	1.00	06:54																														
ZZZZZZ	1.00	06:56																														
ZZZZZZ	1.00	06:58																														
CCV	1.00	07:00															X															
CCB	1.00	07:02															X															
ZZZZZZ	1.00	07:05																														
ZZZZZZ	1000.00	07:07																														
ZZZZZZ	1.00	07:11																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:17																														
ZZZZZZ	1.00	07:19																														
ZZZZZZ	1.00	07:21																														
ZZZZZZ	1.00	07:23																														
ZZZZZZ	1.00	07:25																														
CCV	1.00	07:27															X															
CCB	1.00	07:29															X															
ZZZZZZ	1.00	07:31																														
ZZZZZZ	1.00	07:33																														
ZZZZZZ	1.00	07:35																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	07:37																													
ZZZZZZ	1.00	07:40																													
ZZZZZZ	1.00	07:42																													
ZZZZZZ	1.00	07:44																													
ZZZZZZ	1.00	07:46																													
ZZZZZZ	1.00	07:48																													
ZZZZZZ	1.00	07:50																													
CCV	1.00	07:52															X														
CCB	1.00	07:54															X														
ZZZZZZ	1.00	07:56																													
ZZZZZZ	1.00	07:58																													
ZZZZZZ	1.00	08:00																													
ZZZZZZ	1.00	08:02																													
ZZZZZZ	1.00	08:04																													
ZZZZZZ	1.00	08:06																													
ZZZZZZ	1.00	08:08																													
ZZZZZZ	1.00	08:10																													
ZZZZZZ	1.00	08:12																													
ZZZZZZ	1.00	08:14																													
CCV	1.00	08:16															X														
CCB	1.00	08:18															X														
ZZZZZZ	1.00	08:20																													
P31113FB	1.00	08:22															X														
P31113FQ	1.00	08:24															X														
ZZZZZZ	1.00	08:27																													
ZZZZZZ	1.00	08:29																													
ZZZZZZ	1.00	08:31																													
ZZZZZZ	1.00	08:33																													
ZZZZZZ	1.00	08:35																													
ZZZZZZ	1.00	08:37																													
ZZZZZZ	1.00	08:39																													
CCV	1.00	08:41															X														
CCB	1.00	08:43															X														
7266798	1.00	08:45															X														
7266799	1.00	08:47															X														
7266805	1.00	08:49															X														
7266807	1.00	08:51															X														
ZZZZZZ	1.00	08:53																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:55																													
ZZZZZZ	1.00	08:57																													
ZZZZZZ	1.00	08:59																													
ZZZZZZ	1.00	09:01																													
ZZZZZZ	1.00	09:03																													
CCV	1.00	09:06															X														
CCB	1.00	09:08															X														
ZZZZZZ	1.00	09:11																													
ZZZZZZ	1.00	09:13																													
ZZZZZZ	1.00	09:15																													
ZZZZZZ	1.00	09:17																													
ZZZZZZ	1.00	09:19																													
ZZZZZZ	1.00	09:21																													
ZZZZZZ	1.00	09:23																													
ZZZZZZ	1.00	09:25																													
ZZZZZZ	1.00	09:27																													
ZZZZZZ	1.00	09:29																													
CCV	1.00	09:31															X														
CCB	1.00	09:33															X														
ZZZZZZ	1.00	09:35																													
ZZZZZZ	1.00	09:37																													
ZZZZZZ	1.00	09:39																													
ZZZZZZ	1.00	09:42																													
ZZZZZZ	1.00	09:44																													
ZZZZZZ	1.00	09:46																													
ZZZZZZ	1.00	09:48																													
ZZZZZZ	1.00	09:50																													
ZZZZZZ	1.00	09:52																													
ZZZZZZ	1.00	09:54																													
CCV	1.00	09:56															X														
CCB	1.00	09:58															X														
ZZZZZZ	1.00	10:00																													
ZZZZZZ	1.00	10:02																													
ZZZZZZ	1.00	10:04																													
ZZZZZZ	1.00	10:06																													
ZZZZZZ	1.00	10:08																													
ZZZZZZ	1.00	10:10																													
ZZZZZZ	1.00	10:12																													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	10:14																													
ZZZZZZ	1.00	10:16																													
CRA	1.00	10:18															X														
CCV	1.00	10:20															X														
CCB	1.00	10:22															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331901E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	02:11	100		100											
S	02:13	99		102											
CCS	02:15	102		103											
CCS	02:17	102		102											
ICV	02:19	98		101											
ICB	02:21	99		99											
LLC	02:23	97		100											
ICSA	02:25	95		101											
ICSAB	02:27	93		99											
CCV	02:29	96		99											
CCB	02:31	93		95											
P31150DB	02:33	94		99											
P31150DQ	02:35	93		96											
*65230BKG	02:37	87		89											
ZZZZZZ	02:39														
ZZZZZZ	02:41														
ZZZZZZ	02:43														
ZZZZZZ	02:45														
*65230L	02:47	93		96											
7266798	02:49	92		98											
7266799	02:51	94		99											
CCV	02:53	96		99											
CCB	02:55	95		97											
ZZZZZZ	02:57														
ZZZZZZ	02:59														
ZZZZZZ	03:01														
ZZZZZZ	03:03														
ZZZZZZ	03:05														
ZZZZZZ	03:07														
7266805	03:09	89		93											
7266807	03:11	90		91											
ZZZZZZ	03:13														
ZZZZZZ	03:15														
CCV	03:17	96		98											
CCB	03:19	95		97											
ZZZZZZ	03:21														
ZZZZZZ	03:23														
ZZZZZZ	03:25														

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM05

Instrument ID: 19204 Start Date: 11/15/2013
Run Name: 1331901E05 End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	03:27														
LLC	03:29	92		96											
ICSA	03:31	92		96											
ICSAB	03:33	93		96											
CCV	03:35	95		96											
CCB	03:37	92		94											

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM05

Instrument ID: 19204
Run Name: 1331906E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	21:54	100													
S	21:56	97													
CCS	21:58	98													
CCS	22:00	103													
ICV	22:02	99													
ICB	22:04	100													
LLC	22:06	98													
ICSA	22:08	97													
ICSAB	22:10	98													
CCV	22:12	99													
CCB	22:14	101													
ZZZZZZ	22:16														
ZZZZZZ	22:18														
ZZZZZZ	22:20														
ZZZZZZ	22:22														
ZZZZZZ	22:24														
ZZZZZZ	22:26														
ZZZZZZ	22:28														
ZZZZZZ	22:30														
ZZZZZZ	22:32														
ZZZZZZ	22:34														
CCV	22:36	98													
CCB	22:38	98													
ZZZZZZ	22:40														
ZZZZZZ	22:42														
P31150DB	22:44	101													
P31150DQ	22:46	95													
ZZZZZZ	22:48														
ZZZZZZ	22:50														
ZZZZZZ	22:52														
7266805	22:54	93													
ZZZZZZ	22:56														
CCV	22:58	100													
CCB	23:00	101													
LLC	23:02	99													
ICSA	23:04	97													
ICSAB	23:06	98													
CCV	23:08	98													

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM05

Instrument ID: 19204 Start Date: 11/15/2013
Run Name: 1331906E05 End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
CCB	23:10	101													

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

Raw Data

Metals in Liquid

ICP Data

Metals in Liquid

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ICP-AES Run Data Report

1331501T71

Reviewed By
Joanne M Gates

Reviewed Date
11/11/2013 5:07AM

Data File Name 1331501T71.TXT
Run Name: 1331501T71

Verified By:
Deborah A Krady
Jennifer L Moyer

Verified Date
11/11/2013 1:32PM
11/14/2013 10:10AM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2106

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/11/2013 00:43

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00198	43.897	-0.00293	-0.00175	-0.00124
AL	0.000	0.00492	9.393	0.00546	0.00472	0.00460
AS	0.000	-0.00591	75.918	-0.00753	-0.00084	-0.00937
B	0.000	-0.00001	22.956	-0.00001	-0.00001	-0.00001
BA	0.000	0.00030	4.681	0.00031	0.00029	0.00029
BE	0.000	-0.00750	5.383	-0.00787	-0.00756	-0.00707
CA	0.000	0.00256	3.377	0.00264	0.00247	0.00255
CD	0.000	0.00560	51.652	0.00686	0.00229	0.00764
CO	0.000	-0.00554	78.803	-0.01056	-0.00258	-0.00349
CR	0.000	-0.00001	235.266	0.00001	0.00000	-0.00002
CU	0.000	0.01467	6.546	0.01536	0.01357	0.01508
FE	0.000	0.00015	43.391	0.00009	0.00023	0.00014
K	0.000	0.15292	8.334	0.15453	0.13944	0.16477
LI	0.000	0.00239	13.097	0.00216	0.00225	0.00274
MG	0.000	0.00019	29.400	0.00014	0.00025	0.00019
MN	0.000	0.00107	27.801	0.00109	0.00076	0.00135
MO	0.000	0.00844	28.584	0.01010	0.00567	0.00954
NA	0.000	0.00532	5.233	0.00500	0.00550	0.00547
NI	0.000	0.05895	8.513	0.05637	0.06473	0.05575
P	0.000	0.00003	136.118	0.00006	0.00005	-0.00002
PB	0.000	0.00688	53.308	0.00929	0.00266	0.00870
S	0.000	0.00005	142.075	-0.00003	0.00009	0.00009
SB	0.000	-0.00030	13.693	-0.00028	-0.00035	-0.00027
SE	0.000	0.01245	4.900	0.01266	0.01176	0.01292
SI	0.000	0.00013	38.423	0.00018	0.00010	0.00010
SN	0.000	0.00604	36.062	0.00850	0.00525	0.00436
SR	0.000	-0.00006	12.051	-0.00007	-0.00005	-0.00005
TI	0.000	0.00214	27.232	0.00156	0.00214	0.00272
TL	0.000	-0.00017	916.219	0.00160	-0.00145	-0.00067
V	0.000	-0.00050	58.565	-0.00084	-0.00032	-0.00034
Y1	0.000	15892.46559	0.369	15845.33360	15874.02040	15958.04277
Y2A	0.000	624556.14646	0.841	618494.37086	627828.34331	627345.72522
Y2R	0.000	33265.31116	0.477	33335.41750	33376.99960	33083.51637
ZN	0.000	0.11659	3.231	0.11688	0.12021	0.11269
ZR	0.000	0.00007	74.751	0.00013	0.00002	0.00008

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/11/2013 00:46

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.43631	0.157	12.45836	12.42918	12.42139
CA	50.000	1.61130	0.504	1.61990	1.60377	1.61023
FE	50.000	0.57155	0.418	0.57388	0.56910	0.57166
K	50.000	20.28594	0.266	20.34023	20.23228	20.28533
MG	50.000	3.76321	0.355	3.77606	3.74938	3.76418
NA	50.000	1.88416	0.409	1.89125	1.87596	1.88527
S	50.000	0.84945	0.152	0.84837	0.85088	0.84910
SI	50.000	0.36637	0.333	0.36701	0.36496	0.36713
Y1	50.000	15521.98611	0.018	15523.81168	15523.37041	15518.77624
Y2R	50.000	32754.02165	0.246	32661.32649	32807.47500	32793.26347

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/11/2013 00:50

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.45383	0.105	1.45469	1.45206	1.45472
AS	1.000	1.44089	0.307	1.43816	1.44600	1.43851
B	1.000	0.00608	0.356	0.00605	0.00608	0.00610
BA	1.000	1.40908	0.189	1.40600	1.41080	1.41042
BE	1.000	43.07968	0.219	43.13816	43.12995	42.97093
CD	1.000	32.46134	0.245	32.40792	32.55283	32.42327
CO	1.000	15.78943	0.255	15.76005	15.83524	15.77301
CU	1.000	1.24554	0.279	1.24953	1.24319	1.24389
LI	1.000	0.22134	0.873	0.22107	0.21956	0.22340
MN	1.000	5.62630	0.160	5.63626	5.61871	5.62392
NI	1.000	8.53442	0.409	8.52221	8.57380	8.50725
P	1.000	0.03205	0.180	0.03212	0.03205	0.03200
PB	1.000	2.92276	0.637	2.90876	2.94389	2.91563
SE	1.000	1.23479	0.505	1.23368	1.24150	1.22918
SR	1.000	1.50627	0.207	1.50675	1.50912	1.50293
TL	1.000	1.65730	0.480	1.65239	1.66648	1.65302
Y1	1.000	15672.87765	0.210	15684.52503	15635.73085	15698.37708
Y2A	1.000	600124.05603	0.362	597642.41871	601691.92588	601037.82349
Y2R	1.000	32957.05530	0.659	33017.28963	33137.79488	32716.08140
ZN	1.000	28.96500	0.327	28.94274	29.06897	28.88329

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 4 Date/Time: 11/11/2013 00:54

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.01817	0.515	0.01826	0.01807	0.01817
MO	1.000	10.22952	0.527	10.17537	10.23002	10.28316
SB	1.000	0.03945	0.312	0.03934	0.03944	0.03958
SN	1.000	3.38757	0.656	3.36498	3.38829	3.40944
TI	1.000	5.20647	0.620	5.23422	5.17103	5.21415
V	1.000	1.59681	0.661	1.60666	1.58568	1.59807
Y1	1.000	15972.32475	0.277	16021.27048	15960.49271	15935.21108
Y2A	1.000	626377.35287	0.994	620364.82462	632802.40066	625964.83333
Y2R	1.000	33294.85985	0.739	33418.03974	33454.90206	33011.63776
ZR	1.000	0.08301	0.805	0.08242	0.08287	0.08374

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/11/2013 00:58

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60896	10,554.22	0.258	0.60888	0.60742	0.61057
AL	30.17699	4,947.53	1.001	30.06254	30.51960	29.94883
AS	0.60053	267.53	0.602	0.60129	0.59660	0.60371
B	0.60138	2,234.12	0.229	0.60192	0.59982	0.60241
BA	0.60915	512,064.72	0.303	0.61083	0.60717	0.60944
BE	0.59369	305,111.84	0.385	0.59505	0.59498	0.59106
CA	29.82729	31,776.67	0.906	29.64906	30.13804	29.69476
CD	0.59755	6,123.69	0.007	0.59752	0.59759	0.59753
CO	0.59772	2,963.00	0.202	0.59881	0.59793	0.59642
CR	0.60482	6,553.05	0.202	0.60523	0.60345	0.60579
CU	0.61050	9,146.39	0.411	0.61305	0.60803	0.61043
FE	29.99566	11,349.00	0.946	29.82114	30.32318	29.84266
K	29.99413	8,069.30	0.820	29.77201	30.25831	29.95206
LI	0.60434	4,447.14	0.778	0.60123	0.60975	0.60205
MG	29.64504	74,173.05	0.959	29.51961	29.97037	29.44512
MN	0.59846	40,174.83	0.188	0.59952	0.59728	0.59858
MO	0.61667	1,977.03	0.044	0.61640	0.61694	0.61666
NA	29.76538	37,072.97	0.767	29.64526	30.02853	29.62235
NI	0.60088	1,615.04	0.067	0.60109	0.60113	0.60041
P	0.61163	307.23	0.378	0.61130	0.60950	0.61408
PB	0.60444	562.15	0.349	0.60685	0.60357	0.60291
S	29.98723	7,979.49	0.253	30.07436	29.95193	29.93540
SB	0.62984	387.57	0.414	0.62683	0.63142	0.63126
SE	0.60032	234.13	0.449	0.59799	0.59971	0.60327
SI	30.60082	7,398.46	0.804	30.41000	30.87853	30.51393
SN	0.60988	647.90	0.290	0.61120	0.61056	0.60787
SR	0.60234	541,180.92	0.591	0.60238	0.59876	0.60588
TI	0.62125	38,596.94	0.211	0.62275	0.62056	0.62042
TL	0.59387	308.93	0.688	0.59774	0.58959	0.59427
V	0.61287	11,684.38	0.327	0.61419	0.61057	0.61385
Y1	15662.29696	15,662.30	0.266	15615.26393	15676.82142	15694.80554
Y2A	596502.95842	596,502.96	0.280	594574.31984	597479.84406	597454.71135
Y2R	32989.70060	32,989.70	0.611	33064.93604	32761.21603	33142.94974
ZN	0.60198	5,503.31	0.208	0.60325	0.60074	0.60194
ZR	0.60519	1,658.17	1.243	0.60197	0.61378	0.59981

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 6

Date/Time: 11/11/2013 01:02

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.87	237.471	0.00029	-0.00023	0.00033
AL	0.00178	3.56	772.897	-0.01077	0.01642	-0.00033
AS	0.00006	-1.64	3116.433	0.00009	0.00175	-0.00167
B	0.00120	-2.20	75.367	0.00022	0.00201	0.00138
BA	-0.00001	173.15	131.697	-0.00001	0.00000	-0.00003
BE	0.00008	-81.23	3.898	0.00008	0.00008	0.00008
CA	-0.01384	69.86	19.665	-0.01672	-0.01350	-0.01131
CD	0.00049	2.10	4.155	0.00052	0.00048	0.00048
CO	-0.00017	-1.12	32.089	-0.00019	-0.00020	-0.00011
CR	-0.00012	-4.58	285.976	0.00004	0.00011	-0.00051
CU	-0.00003	181.63	958.680	-0.00020	0.00031	-0.00021
FE	-0.00422	3.49	17.844	-0.00461	-0.00336	-0.00470
K	0.04328	112.86	140.040	0.08684	0.06893	-0.02594
LI	-0.00179	66.02	66.770	-0.00311	-0.00079	-0.00147
MG	0.00017	0.38	1174.036	0.00069	0.00180	-0.00199
MN	-0.00008	7.50	104.780	0.00002	-0.00014	-0.00012
MO	0.00015	3.17	119.567	0.00030	0.00020	-0.00005
NA	-0.02563	144.37	18.384	-0.02423	-0.02177	-0.03088
NI	0.00021	19.28	171.901	-0.00019	0.00049	0.00032
P	-0.00206	-0.59	42.420	-0.00112	-0.00284	-0.00222
PB	0.00382	2.41	14.267	0.00323	0.00431	0.00392
S	0.00232	1.43	65.444	0.00403	0.00114	0.00178
SB	-0.00082	-5.08	22.669	-0.00089	-0.00097	-0.00061
SE	-0.00155	3.35	30.307	-0.00117	-0.00140	-0.00207
SI	0.00488	5.38	212.007	-0.00293	0.00096	0.01659
SN	-0.00069	1.18	121.899	-0.00132	0.00026	-0.00100
SR	0.00004	-13.74	50.497	0.00005	0.00002	0.00004
TI	-0.00009	21.10	18.949	-0.00007	-0.00010	-0.00008
TL	-0.00139	-0.79	41.089	-0.00081	-0.00142	-0.00196
V	-0.00014	-10.83	226.068	0.00018	-0.00015	-0.00043
Y1	15884.91125	15,884.91	0.226	15846.07345	15891.95387	15916.70642
Y2A	620823.16667	620,823.17	0.434	618485.00000	620210.41667	623774.08333
Y2R	33118.98907	33,118.99	0.346	33099.75075	33242.05361	33015.16287
ZN	-0.00234	15.73	4.452	-0.00223	-0.00244	-0.00235
ZR	0.00191	7.73	25.401	0.00160	0.00166	0.00247

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/11/2013 01:05

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00535	74.37	3.884	0.00537	0.00555	0.00513
AL	0.18838	34.15	7.905	0.17255	0.19046	0.20212
AS	0.01875	6.97	9.003	0.01700	0.01887	0.02037
B	0.04735	171.40	3.714	0.04854	0.04533	0.04817
BA	0.00536	4,836.85	0.714	0.00538	0.00538	0.00531
BE	0.00489	2,474.03	0.682	0.00493	0.00488	0.00486
CA	0.18437	281.41	1.907	0.18308	0.18167	0.18834
CD	0.00542	53.49	2.427	0.00557	0.00533	0.00535
CO	0.00458	22.95	7.844	0.00498	0.00448	0.00428
CR	0.01463	160.68	0.672	0.01474	0.01457	0.01457
CU	0.00989	331.02	4.684	0.00970	0.01042	0.00955
FE	0.19173	78.20	4.725	0.19073	0.20125	0.18321
K	0.53032	242.56	4.766	0.55312	0.50314	0.53471
LI	0.01780	207.92	8.451	0.01607	0.01879	0.01855
MG	0.09759	247.66	1.068	0.09769	0.09858	0.09650
MN	0.00518	372.53	1.367	0.00513	0.00515	0.00526
MO	0.00993	35.08	3.152	0.01006	0.01015	0.00957
NA	0.94870	1,355.95	0.052	0.94917	0.94819	0.94872
NI	0.01029	46.70	8.274	0.01066	0.01090	0.00932
P	0.09586	49.30	0.976	0.09547	0.09692	0.09517
PB	0.01771	15.44	4.934	0.01832	0.01671	0.01810
S	0.47788	130.40	0.109	0.47848	0.47759	0.47756
SB	0.01943	7.75	13.622	0.01730	0.01860	0.02240
SE	0.02074	12.07	14.823	0.02356	0.02120	0.01746
SI	0.06258	19.38	11.234	0.07066	0.05922	0.05786
SN	0.01938	22.84	3.366	0.02012	0.01910	0.01891
SR	0.00521	4,789.55	0.456	0.00522	0.00522	0.00518
TI	0.01000	668.00	1.293	0.00994	0.01014	0.00991
TL	0.02958	15.58	2.468	0.03037	0.02893	0.02944
V	0.00506	90.83	1.900	0.00517	0.00499	0.00502
Y1	15963.18376	15,963.18	0.433	15987.98242	15885.02100	16016.54786
Y2A	616585.78699	616,585.79	0.534	613698.15859	615885.20239	620174.00000
Y2R	33095.53084	33,095.53	0.825	33290.40379	33212.88362	32783.30510
ZN	0.01726	195.91	0.652	0.01729	0.01713	0.01735
ZR	0.04642	129.91	1.769	0.04685	0.04694	0.04547

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 8

Date/Time: 11/11/2013 01:09

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00046	-42.60	79.543	0.00089	0.00022	0.00028
AL	495.61294	79,440.67	0.949	500.11354	495.99173	490.73354
AS	0.00466	0.30	31.819	0.00462	0.00320	0.00616
B	0.00480	344.65	50.532	0.00204	0.00661	0.00573
BA	0.00041	461.77	0.653	0.00040	0.00041	0.00040
BE	-0.00028	-236.37	8.171	-0.00028	-0.00031	-0.00026
CA	493.68847	482,943.49	0.823	494.05668	497.55287	489.45584
CD	0.00085	296.31	69.236	0.00018	0.00107	0.00129
CO	0.00217	9.43	15.554	0.00186	0.00253	0.00211
CR	0.00238	20.28	24.080	0.00299	0.00231	0.00185
CU	-0.00086	280.32	14.447	-0.00100	-0.00077	-0.00081
FE	198.56706	68,963.40	0.950	200.40892	198.65345	196.63881
K	0.01934	100.06	299.510	0.05962	-0.04705	0.04547
LI	0.00100	131.53	74.458	0.00084	0.00182	0.00035
MG	496.85419	966,298.47	1.451	502.72024	499.03999	488.80235
MN	0.00332	209.82	0.917	0.00328	0.00334	0.00333
MO	-0.00142	-1.73	39.588	-0.00181	-0.00078	-0.00168
NA	0.05339	228.07	10.966	0.06013	0.04962	0.05041
NI	0.00276	13.09	17.820	0.00304	0.00219	0.00305
P	0.01438	6.88	4.484	0.01505	0.01432	0.01377
PB	0.00316	81.04	121.853	0.00708	-0.00061	0.00299
S	-0.00215	0.20	187.799	0.00113	-0.00092	-0.00664
SB	-0.01409	-11.95	22.283	-0.01279	-0.01181	-0.01767
SE	0.00261	6.65	124.026	0.00419	-0.00111	0.00476
SI	0.01995	8.50	41.113	0.02702	0.01096	0.02185
SN	0.00448	5.98	4.147	0.00458	0.00460	0.00427
SR	0.00246	1,931.99	1.213	0.00246	0.00243	0.00249
TI	-0.00048	-3.58	17.113	-0.00054	-0.00051	-0.00038
TL	0.00549	2.52	53.758	0.00505	0.00279	0.00864
V	-0.00212	36.62	10.918	-0.00200	-0.00239	-0.00197
Y1	14114.67699	14,114.68	0.099	14117.51365	14099.52058	14126.99673
Y2A	532123.42402	532,123.42	0.204	531915.06304	533297.36231	531157.84672
Y2R	31125.56029	31,125.56	0.761	30953.85689	31027.09458	31395.72940
ZN	0.01092	282.04	2.497	0.01064	0.01093	0.01119
ZR	0.00446	13.86	31.076	0.00288	0.00502	0.00548

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 9

Date/Time: 11/11/2013 01:13

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21906	3,350.53	0.442	0.21795	0.21965	0.21960
AL	494.01979	79,359.63	0.539	494.00211	491.36411	496.69317
AS	0.10142	39.83	1.423	0.10303	0.10023	0.10101
B	0.00641	349.61	23.927	0.00496	0.00625	0.00802
BA	0.49704	373,500.50	0.511	0.49457	0.49964	0.49692
BE	0.50875	233,681.85	0.383	0.50650	0.50976	0.50998
CA	495.17121	485,481.81	0.349	493.44400	496.90008	495.16955
CD	0.96364	9,119.92	0.201	0.96456	0.96141	0.96494
CO	0.49192	2,192.98	0.099	0.49143	0.49193	0.49241
CR	0.48451	4,691.61	0.638	0.48106	0.48542	0.48704
CU	0.53107	7,263.03	0.224	0.53012	0.53240	0.53068
FE	198.02243	68,939.52	0.563	197.90126	196.97385	199.19219
K	0.05026	108.04	20.386	0.04293	0.06197	0.04588
LI	0.00051	128.63	93.782	0.00080	0.00077	-0.00004
MG	492.97299	962,650.86	1.637	486.93749	489.83964	502.14184
MN	0.48246	28,951.85	0.347	0.48053	0.48352	0.48334
MO	-0.00122	-1.14	21.634	-0.00152	-0.00110	-0.00104
NA	0.04709	221.22	7.239	0.04318	0.04866	0.04942
NI	0.97688	2,343.42	0.124	0.97610	0.97627	0.97828
P	0.01350	7.66	9.604	0.01458	0.01206	0.01385
PB	0.05375	122.88	2.699	0.05498	0.05413	0.05215
S	-0.00112	0.44	471.058	-0.00498	0.00492	-0.00331
SB	0.62146	346.14	0.734	0.62146	0.62602	0.61689
SE	0.05163	23.62	1.309	0.05088	0.05178	0.05221
SI	0.01989	8.51	17.405	0.02382	0.01854	0.01730
SN	0.00345	5.00	58.223	0.00140	0.00542	0.00355
SR	0.00244	1,914.24	0.247	0.00243	0.00244	0.00244
TI	-0.00030	13.55	50.733	-0.00021	-0.00048	-0.00022
TL	0.10716	50.99	1.568	0.10860	0.10531	0.10756
V	0.49573	8,590.70	0.319	0.49390	0.49669	0.49659
Y1	14113.49081	14,113.49	0.089	14125.75067	14114.00400	14100.71776
Y2A	533180.98872	533,180.99	0.344	535267.99934	531828.21831	532446.74851
Y2R	31196.83505	31,196.84	0.616	31282.76360	31330.94692	30976.79462
ZN	1.03521	8,615.39	0.154	1.03337	1.03603	1.03622
ZR	0.00692	20.27	36.177	0.00905	0.00756	0.00416

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 10

Date/Time: 11/11/2013 01:17

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50097	8,715.49	1.105	0.50719	0.49917	0.49656
AL	24.95595	4,048.92	0.332	24.99187	24.86116	25.01481
AS	0.49327	219.26	0.248	0.49468	0.49265	0.49248
B	0.48068	1,793.43	1.140	0.48450	0.47441	0.48314
BA	0.49968	421,840.52	1.427	0.50745	0.49815	0.49344
BE	0.48866	252,169.15	1.226	0.49558	0.48525	0.48515
CA	24.49030	25,848.44	0.226	24.46201	24.45487	24.55402
CD	0.49278	5,046.48	0.190	0.49381	0.49199	0.49253
CO	0.49031	2,428.95	0.234	0.49141	0.49038	0.48912
CR	0.49015	5,332.35	1.290	0.49744	0.48615	0.48686
CU	0.49611	7,497.15	0.788	0.50059	0.49342	0.49431
FE	24.71642	9,265.38	0.292	24.66796	24.68187	24.79943
K	24.62567	6,575.67	0.133	24.60645	24.60713	24.66343
LI	0.49792	3,640.53	0.443	0.49925	0.49913	0.49537
MG	24.46284	60,704.90	0.102	24.44879	24.44801	24.49171
MN	0.49388	33,295.70	1.342	0.50146	0.49101	0.48917
MO	0.50441	1,616.67	0.118	0.50496	0.50451	0.50377
NA	24.52694	30,269.15	0.086	24.52889	24.50490	24.54702
NI	0.49324	1,328.25	0.253	0.49453	0.49315	0.49205
P	0.49869	250.43	0.178	0.49830	0.49970	0.49806
PB	0.49633	461.18	0.549	0.49848	0.49724	0.49326
S	24.49771	6,515.07	0.078	24.51425	24.50205	24.47685
SB	0.51504	315.91	0.435	0.51741	0.51295	0.51477
SE	0.49384	193.18	0.727	0.49756	0.49358	0.49039
SI	25.44051	6,089.13	0.312	25.45226	25.35589	25.51336
SN	0.50211	533.44	0.159	0.50303	0.50170	0.50161
SR	0.49637	447,846.97	0.941	0.50174	0.49321	0.49416
TI	0.50134	31,283.98	1.120	0.50781	0.49777	0.49844
TL	0.48753	253.45	0.237	0.48845	0.48792	0.48623
V	0.49938	9,558.85	1.281	0.50675	0.49542	0.49596
Y1	15653.05763	15,653.06	0.229	15618.06877	15651.45599	15689.64814
Y2A	599071.96970	599,071.97	1.225	590654.44592	602413.40411	604148.05906
Y2R	32654.04074	32,654.04	0.122	32696.52847	32647.69092	32617.90284
ZN	0.49307	4,511.79	0.118	0.49359	0.49245	0.49318
ZR	0.49749	1,349.72	0.768	0.49571	0.49489	0.50188

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 11

Date/Time: 11/11/2013 01:21

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-24.03	169.564	0.00009	-0.00021	-0.00017
AL	0.00606	4.25	472.079	-0.02661	0.01821	0.02657
AS	-0.00132	-2.27	126.605	-0.00212	-0.00245	0.00060
B	0.00021	-5.97	423.463	-0.00053	0.00122	-0.00005
BA	-0.00005	137.52	50.034	-0.00008	-0.00003	-0.00005
BE	0.00008	-80.52	23.574	0.00011	0.00008	0.00007
CA	-0.00636	77.56	62.828	-0.00749	-0.00192	-0.00967
CD	0.00043	1.43	23.623	0.00052	0.00032	0.00045
CO	-0.00031	-1.85	49.948	-0.00032	-0.00016	-0.00047
CR	-0.00057	-9.72	53.516	-0.00023	-0.00081	-0.00068
CU	-0.00023	178.68	331.323	-0.00093	-0.00034	0.00058
FE	-0.00445	3.40	94.024	-0.00917	-0.00294	-0.00123
K	0.02582	107.80	69.417	0.01431	0.01667	0.04646
LI	-0.00380	51.28	54.235	-0.00149	-0.00545	-0.00445
MG	0.00825	20.83	14.390	0.00937	0.00701	0.00838
MN	-0.00010	6.02	13.992	-0.00009	-0.00011	-0.00012
MO	0.00024	3.45	79.056	0.00037	0.00002	0.00032
NA	-0.03836	128.07	16.585	-0.03425	-0.04569	-0.03515
NI	-0.00004	18.61	1458.778	0.00022	-0.00065	0.00032
P	-0.00176	-0.44	27.316	-0.00222	-0.00180	-0.00126
PB	0.00336	1.98	70.654	0.00602	0.00263	0.00144
S	0.00183	1.30	67.488	0.00245	0.00263	0.00041
SB	-0.00175	-5.65	188.660	-0.00263	0.00190	-0.00452
SE	0.00147	4.52	259.131	0.00281	-0.00283	0.00444
SI	0.00133	4.51	289.762	0.00576	-0.00050	-0.00127
SN	-0.00024	1.66	161.386	-0.00019	-0.00064	0.00012
SR	0.00004	-14.47	30.183	0.00002	0.00004	0.00005
TI	-0.00007	22.10	98.012	-0.00002	-0.00005	-0.00015
TL	-0.00073	-0.44	85.138	-0.00133	-0.00009	-0.00078
V	0.00002	-7.78	651.506	-0.00011	0.00011	0.00005
Y1	15864.00989	15,864.01	0.123	15841.46904	15876.44957	15874.11106
Y2A	621009.00557	621,009.01	0.593	620313.65894	617725.58333	624987.77445
Y2R	32998.37826	32,998.38	0.684	32975.33420	32785.22251	33234.57808
ZN	-0.00235	15.64	6.362	-0.00243	-0.00217	-0.00244
ZR	-0.00074	0.43	322.461	0.00154	-0.00054	-0.00323

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/11/2013 01:25

Sample Number: **PBW** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-19.28	46.297	0.00027	0.00012	0.00014
AL	0.02746	7.91	146.337	0.01094	-0.00183	0.07327
AS	-0.00259	-2.86	38.567	-0.00352	-0.00273	-0.00153
B	0.00194	0.57	14.526	0.00165	0.00194	0.00222
BA	0.00006	238.32	18.941	0.00006	0.00007	0.00005
BE	0.00007	-90.20	6.655	0.00007	0.00007	0.00007
CA	0.03075	119.36	4.036	0.03207	0.03058	0.02961
CD	0.00041	1.28	23.141	0.00051	0.00032	0.00041
CO	-0.00058	-3.18	60.894	-0.00019	-0.00067	-0.00088
CR	-0.00011	-4.52	449.364	0.00011	-0.00067	0.00023
CU	-0.00040	178.37	154.994	0.00016	-0.00105	-0.00029
FE	-0.00404	3.62	174.302	0.00156	-0.01195	-0.00173
K	0.02017	108.37	208.884	-0.02079	0.01792	0.06337
LI	-0.00310	57.35	51.877	-0.00231	-0.00205	-0.00496
MG	0.00587	15.09	8.179	0.00555	0.00564	0.00642
MN	-0.00008	7.93	101.226	-0.00014	-0.00010	0.00001
MO	-0.00003	2.59	761.843	0.00019	-0.00005	-0.00022
NA	-0.03843	130.46	9.825	-0.04240	-0.03800	-0.03489
NI	0.00022	19.35	84.395	0.00001	0.00032	0.00034
P	-0.00022	0.34	95.455	0.00001	-0.00029	-0.00039
PB	0.00229	0.99	28.113	0.00184	0.00201	0.00303
S	0.00065	0.98	347.501	-0.00194	0.00181	0.00207
SB	-0.00077	-5.05	278.678	0.00165	-0.00153	-0.00243
SE	0.00268	5.00	37.904	0.00151	0.00318	0.00334
SI	0.00026	4.34	2144.175	-0.00316	-0.00276	0.00670
SN	0.01363	16.57	4.963	0.01392	0.01411	0.01285
SR	0.00025	192.10	4.054	0.00026	0.00026	0.00024
TI	-0.00012	18.95	69.168	-0.00021	-0.00005	-0.00010
TL	-0.00190	-1.05	87.263	-0.00336	-0.00224	-0.00010
V	0.00007	-6.68	392.655	-0.00021	0.00006	0.00037
Y1	15900.74112	15,900.74	0.161	15882.00227	15890.32709	15929.89401
Y2A	628865.21713	628,865.22	0.205	627750.58333	628570.41667	630274.65139
Y2R	33640.54231	33,640.54	0.450	33625.72283	33497.17951	33798.72459
ZN	-0.00261	13.27	2.132	-0.00257	-0.00260	-0.00268
ZR	-0.00070	0.55	351.857	0.00133	0.00001	-0.00345

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/11/2013 01:29

Sample Number: **LCSW** Class: **** Batch: 133115705006

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05623	995.78	1.795	0.05630	0.05720	0.05519
AL	2.08805	352.04	1.525	2.10468	2.10812	2.05134
AS	0.15272	68.38	1.189	0.15384	0.15062	0.15369
B	2.00409	7,506.48	0.580	1.99882	2.01742	1.99604
BA	2.05861	1,785,566.57	0.595	2.05708	2.07155	2.04719
BE	0.05126	27,107.44	0.802	0.05123	0.05169	0.05087
CA	4.09801	4,487.07	0.419	4.10842	4.07818	4.10744
CD	0.05109	522.26	0.153	0.05101	0.05117	0.05110
CO	0.51250	2,566.16	0.166	0.51227	0.51179	0.51344
CR	0.20597	2,300.98	0.703	0.20613	0.20732	0.20444
CU	0.26000	4,131.79	1.083	0.25903	0.26317	0.25780
FE	1.01017	392.60	0.462	1.01444	1.00520	1.01087
K	10.15607	2,825.81	0.438	10.20313	10.11463	10.15046
LI	1.02631	7,564.05	0.271	1.02861	1.02321	1.02711
MG	2.01759	5,149.58	0.347	2.01533	2.01200	2.02545
MN	0.51147	35,437.47	0.828	0.51162	0.51563	0.50716
MO	2.07716	6,707.61	0.041	2.07699	2.07640	2.07807
NA	10.15252	12,882.99	0.310	10.18220	10.11954	10.15581
NI	0.52214	1,426.04	0.080	0.52193	0.52186	0.52262
P	1.03462	522.48	0.285	1.03135	1.03548	1.03705
PB	0.15329	140.67	1.532	0.15070	0.15391	0.15527
S	1.00782	271.15	0.371	1.01166	1.00419	1.00761
SB	0.53312	324.68	0.462	0.53057	0.53330	0.53549
SE	0.15607	64.26	2.045	0.15326	0.15541	0.15954
SI	1.07237	265.83	0.667	1.07956	1.07227	1.06527
SN	4.10897	4,390.00	0.137	4.11221	4.10246	4.11224
SR	1.02669	952,035.96	0.868	1.03212	1.03154	1.01640
TI	1.04604	67,038.74	0.745	1.04407	1.05463	1.03941
TL	0.15302	80.54	1.626	0.15199	0.15586	0.15121
V	0.52539	10,042.35	0.698	0.52567	0.52890	0.52159
Y1	15790.61989	15,790.62	0.118	15777.44567	15811.89448	15782.51950
Y2A	615642.53552	615,642.54	0.785	616307.58333	610511.03185	620108.99137
Y2R	33305.05766	33,305.06	0.419	33148.64797	33416.52500	33350.00000
ZN	0.50829	4,666.56	0.106	0.50809	0.50889	0.50787
ZR	1.02277	2,827.50	0.304	1.02474	1.01919	1.02438

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/11/2013 01:32

Sample Number: **7265230** Class: U*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00006	-22.83	816.844	0.00032	-0.00066	0.00015
AL	0.14798	27.45	11.932	0.14769	0.16578	0.13047
AS	-0.00062	-2.12	391.176	-0.00125	-0.00269	0.00206
B	0.02871	100.48	2.405	0.02933	0.02797	0.02883
BA	0.03936	33,247.92	0.669	0.03952	0.03906	0.03950
BE	0.00007	-83.45	26.576	0.00007	0.00006	0.00009
CA	36.10174	38,423.67	1.066	36.11494	35.71059	36.47969
CD	0.00047	4.24	21.016	0.00040	0.00058	0.00043
CO	0.00016	0.59	286.469	0.00056	-0.00035	0.00027
CR	0.00085	6.14	78.599	0.00136	0.00111	0.00009
CU	0.00017	192.27	480.425	0.00033	-0.00070	0.00086
FE	1.44872	555.35	0.973	1.44516	1.43675	1.46425
K	1.95773	620.80	3.543	1.93849	1.90001	2.03468
LI	-0.00060	78.43	551.349	-0.00143	0.00304	-0.00340
MG	14.38682	36,196.96	0.978	14.41747	14.23339	14.50961
MN	0.73905	49,599.99	0.811	0.74162	0.73219	0.74332
MO	0.00043	4.03	62.081	0.00022	0.00033	0.00073
NA	71.59502	88,909.58	0.865	71.62095	70.96297	72.20113
NI	-0.00048	17.18	112.871	-0.00108	-0.00006	-0.00028
P	0.03141	16.20	4.482	0.03300	0.03088	0.03034
PB	0.00965	8.64	25.362	0.00700	0.01183	0.01010
S	5.03989	1,346.22	0.684	5.07006	5.04729	5.00231
SB	-0.00004	-4.53	1783.541	-0.00042	0.00075	-0.00044
SE	-0.00012	4.02	1633.879	0.00207	-0.00153	-0.00089
SI	8.45978	2,047.98	1.072	8.49767	8.35629	8.52536
SN	0.00019	2.10	462.651	0.00112	0.00010	-0.00064
SR	0.10686	95,948.92	0.742	0.10734	0.10594	0.10729
TI	0.00525	351.56	2.419	0.00536	0.00528	0.00511
TL	0.00047	0.47	248.702	0.00070	-0.00079	0.00150
V	0.00042	0.11	81.051	0.00077	0.00040	0.00009
Y1	15714.63478	15,714.63	0.481	15648.47144	15698.50697	15796.92595
Y2A	596416.16899	596,416.17	0.907	592873.25813	602645.98540	593729.26344
Y2R	32984.79468	32,984.79	1.052	32884.12318	33370.95808	32699.30279
ZN	0.00207	56.57	7.716	0.00225	0.00202	0.00194
ZR	-0.00254	-4.49	27.725	-0.00290	-0.00300	-0.00173

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/11/2013 01:36

Sample Number: **7265230** Class: UP** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02581	436.57	1.051	0.02551	0.02604	0.02588
AL	1.15395	190.77	3.101	1.12455	1.14349	1.19380
AS	0.50178	225.55	0.729	0.49959	0.50600	0.49974
B	0.22618	816.24	0.263	0.22647	0.22549	0.22657
BA	0.09025	75,809.51	0.624	0.08967	0.09030	0.09079
BE	0.02079	10,542.02	0.808	0.02063	0.02077	0.02096
CA	36.27031	38,300.71	1.381	36.57403	35.69239	36.54451
CD	0.05067	515.58	1.271	0.04995	0.05119	0.05087
CO	0.10029	497.19	0.515	0.09994	0.10088	0.10004
CR	0.20125	2,172.36	0.678	0.19970	0.20179	0.20226
CU	0.51031	7,661.19	0.518	0.50791	0.50988	0.51315
FE	1.92021	728.62	1.729	1.94135	1.88194	1.93735
K	3.92499	1,134.49	1.678	3.89430	3.88009	4.00058
LI	1.00721	7,299.07	1.133	1.01678	0.99459	1.01026
MG	15.25597	38,071.08	1.404	15.37260	15.00877	15.38653
MN	0.78819	52,760.68	0.666	0.78298	0.78811	0.79348
MO	0.20752	667.22	0.904	0.20541	0.20899	0.20818
NA	72.14205	88,887.71	1.214	72.74881	71.13807	72.53927
NI	0.15137	421.25	0.642	0.15025	0.15178	0.15206
P	1.07994	540.96	0.725	1.07091	1.08406	1.08486
PB	0.51085	468.23	0.631	0.50742	0.51382	0.51129
S	4.95652	1,319.87	0.646	4.91966	4.97261	4.97729
SB	0.41705	254.74	1.044	0.41208	0.42015	0.41893
SE	0.81691	316.78	0.863	0.80899	0.81922	0.82252
SI	8.35317	2,006.50	1.103	8.43982	8.25632	8.36336
SN	0.61520	653.68	0.666	0.61099	0.61917	0.61543
SR	0.12592	112,785.98	0.648	0.12510	0.12593	0.12673
TI	0.10705	6,655.09	0.584	0.10646	0.10698	0.10771
TL	1.00501	521.33	0.378	1.00062	1.00721	1.00719
V	0.10424	1,954.53	0.564	0.10416	0.10369	0.10486
Y1	15665.98071	15,665.98	0.412	15731.50736	15602.31988	15664.11490
Y2A	594860.42911	594,860.43	0.560	597207.86330	596324.40279	591049.02123
Y2R	32728.21619	32,728.22	1.207	32580.22537	33175.96942	32428.45378
ZN	0.12283	1,154.01	0.536	0.12207	0.12323	0.12318
ZR	1.01181	2,748.48	1.493	1.01759	0.99467	1.02318

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/11/2013 01:40

Sample Number: **7265233** Class: D*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-19.59	655.885	-0.00028	0.00087	-0.00028
AL	0.13709	25.73	15.589	0.13655	0.15872	0.11599
AS	-0.00057	-2.08	306.014	0.00088	-0.00251	-0.00008
B	0.02733	94.47	1.779	0.02721	0.02691	0.02786
BA	0.04036	33,738.62	1.468	0.04103	0.03990	0.04015
BE	0.00006	-91.31	16.821	0.00005	0.00006	0.00006
CA	36.31482	38,789.86	0.585	36.37759	36.48881	36.07806
CD	0.00052	4.68	15.221	0.00051	0.00045	0.00061
CO	0.00004	-0.03	570.293	0.00021	0.00011	-0.00021
CR	0.00055	2.86	48.708	0.00040	0.00086	0.00039
CU	0.00014	190.15	88.917	0.00021	0.00022	0.00000
FE	1.42910	549.88	0.571	1.43610	1.43106	1.42014
K	1.92313	613.94	1.632	1.90157	1.90867	1.95913
LI	-0.00168	70.76	74.419	-0.00262	-0.00026	-0.00214
MG	14.61023	36,889.18	0.597	14.67254	14.64756	14.51060
MN	0.74972	49,802.40	1.341	0.76079	0.74115	0.74721
MO	0.00055	4.40	29.993	0.00060	0.00069	0.00037
NA	72.13141	89,898.30	0.588	72.32117	72.42765	71.64541
NI	0.00020	18.85	321.733	-0.00004	-0.00028	0.00091
P	0.03339	17.08	4.545	0.03254	0.03248	0.03514
PB	0.00798	7.06	10.529	0.00709	0.00809	0.00876
S	5.10862	1,355.85	0.455	5.12918	5.11332	5.08337
SB	-0.00127	-5.27	108.619	-0.00237	-0.00172	0.00028
SE	0.00157	4.64	211.357	0.00048	0.00529	-0.00106
SI	8.47716	2,059.60	1.169	8.51875	8.54873	8.36401
SN	-0.00048	1.37	43.595	-0.00046	-0.00070	-0.00028
SR	0.10958	97,390.48	1.384	0.11126	0.10831	0.10916
TI	0.00495	329.04	5.232	0.00503	0.00515	0.00465
TL	-0.00261	-1.12	26.918	-0.00181	-0.00287	-0.00314
V	0.00054	2.33	34.215	0.00042	0.00075	0.00045
Y1	15614.04288	15,614.04	0.366	15578.68363	15583.45700	15679.98801
Y2A	590368.28135	590,368.28	1.303	581596.88122	595963.91838	593544.04446
Y2R	33102.75239	33,102.75	0.524	32966.77310	33043.32669	33298.15737
ZN	0.00194	55.09	4.701	0.00205	0.00187	0.00191
ZR	0.00195	7.80	147.531	0.00495	0.00164	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/11/2013 01:43

Sample Number: **7265231** Class: R*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05647	955.99	1.761	0.05545	0.05652	0.05744
AL	2.11668	352.25	1.897	2.16249	2.08752	2.10004
AS	0.15493	68.68	1.297	0.15363	0.15391	0.15724
B	2.09032	7,486.96	1.488	2.06249	2.08460	2.12389
BA	2.04839	1,698,483.79	1.837	2.01512	2.04082	2.08923
BE	0.05271	26,649.19	1.667	0.05189	0.05261	0.05364
CA	40.40870	42,856.52	0.537	40.60408	40.44665	40.17537
CD	0.05060	514.34	0.465	0.05075	0.05072	0.05033
CO	0.50582	2,511.32	0.398	0.50813	0.50489	0.50444
CR	0.20741	2,215.18	1.824	0.20347	0.20776	0.21101
CU	0.25760	3,930.26	1.599	0.25398	0.25673	0.26208
FE	1.97179	751.66	0.558	1.96881	1.98398	1.96257
K	12.15566	3,319.40	0.638	12.24481	12.11867	12.10349
LI	1.01793	7,411.58	0.433	1.01932	1.02148	1.01299
MG	16.40890	41,127.25	0.341	16.44279	16.43953	16.34437
MN	1.14212	75,635.23	1.552	1.12675	1.13808	1.16151
MO	2.08458	6,673.98	0.307	2.09035	2.08571	2.07769
NA	81.85559	101,315.01	0.482	82.06709	82.09943	81.40026
NI	0.51161	1,385.89	0.417	0.51367	0.51175	0.50941
P	1.07571	538.52	0.639	1.08218	1.07645	1.06849
PB	0.15480	141.69	0.926	0.15617	0.15331	0.15492
S	6.05167	1,610.27	0.301	6.06350	6.06080	6.03070
SB	0.53449	322.74	0.398	0.53694	0.53343	0.53311
SE	0.15240	62.43	1.298	0.15262	0.15425	0.15032
SI	9.41826	2,272.56	0.771	9.49145	9.41710	9.34622
SN	4.13345	4,378.35	0.448	4.15081	4.13558	4.11397
SR	1.11425	987,757.21	1.814	1.09656	1.10993	1.13628
TI	1.05949	64,913.24	1.611	1.04435	1.05614	1.07799
TL	0.15440	80.80	0.918	0.15411	0.15316	0.15594
V	0.53351	9,753.11	1.563	0.52654	0.53123	0.54275
Y1	15655.59535	15,655.60	0.326	15602.23452	15660.74069	15703.81086
Y2A	588613.38753	588,613.39	1.297	595272.22960	590289.23358	580278.69940
Y2R	32882.11148	32,882.11	0.443	32723.02894	32914.83051	33008.47500
ZN	0.50834	4,627.41	0.445	0.51084	0.50774	0.50644
ZR	1.02864	2,807.58	0.575	1.03404	1.02957	1.02232

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/11/2013 01:47

Sample Number: **7265232** Class: M*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05644	958.27	1.721	0.05599	0.05756	0.05578
AL	2.07571	345.19	1.195	2.04852	2.08149	2.09712
AS	0.15544	68.27	0.932	0.15654	0.15380	0.15598
B	2.10293	7,553.65	0.618	2.10707	2.11335	2.08837
BA	2.04935	1,704,241.48	0.257	2.04330	2.05293	2.05181
BE	0.05280	26,769.12	0.555	0.05286	0.05305	0.05248
CA	40.90927	43,332.21	0.856	40.53617	41.23039	40.96123
CD	0.05086	512.13	0.349	0.05091	0.05066	0.05101
CO	0.50816	2,499.31	0.382	0.51030	0.50767	0.50650
CR	0.20742	2,221.62	0.583	0.20713	0.20875	0.20638
CU	0.25945	3,968.72	0.749	0.25969	0.26127	0.25740
FE	1.94441	740.40	0.499	1.93321	1.94964	1.95038
K	12.22431	3,333.56	0.959	12.09217	12.26468	12.31607
LI	1.01467	7,379.16	0.469	1.00985	1.01936	1.01480
MG	16.60624	41,568.09	0.608	16.49356	16.68825	16.63692
MN	1.14044	75,740.83	0.613	1.14357	1.14532	1.13243
MO	2.09804	6,654.26	0.525	2.10968	2.09663	2.08780
NA	82.80291	102,360.16	0.754	82.13870	83.37799	82.89205
NI	0.51561	1,383.52	0.411	0.51784	0.51537	0.51362
P	1.08336	537.28	0.584	1.08852	1.08525	1.07629
PB	0.15406	139.70	0.225	0.15369	0.15412	0.15437
S	6.19029	1,631.75	0.248	6.20749	6.18550	6.17790
SB	0.54234	324.53	0.331	0.54253	0.54402	0.54045
SE	0.15871	64.24	1.267	0.15991	0.15983	0.15639
SI	9.54471	2,300.20	1.067	9.44728	9.65037	9.53649
SN	4.14278	4,347.22	0.441	4.16235	4.13984	4.12614
SR	1.11522	991,486.49	0.337	1.11939	1.11417	1.11209
TI	1.06175	65,238.69	0.571	1.06004	1.06848	1.05673
TL	0.15509	80.40	1.060	0.15696	0.15387	0.15444
V	0.53473	9,802.08	0.461	0.53470	0.53721	0.53228
Y1	15509.34396	15,509.34	0.318	15455.20751	15520.86192	15551.96243
Y2A	590237.47512	590,237.48	0.597	588860.65030	587612.88985	594238.88520
Y2R	32842.48458	32,842.48	0.629	32997.60000	32608.20040	32921.65335
ZN	0.51275	4,623.56	0.293	0.51437	0.51247	0.51140
ZR	1.02867	2,804.20	0.964	1.02079	1.03980	1.02542

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/11/2013 01:51

Sample Number: **7265230** Class: UL** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00016	-19.46	101.929	-0.00003	0.00025	0.00025
AL	0.02470	7.36	46.528	0.02402	0.01357	0.03652
AS	-0.00147	-2.37	73.554	-0.00247	-0.00163	-0.00032
B	0.00889	27.40	6.629	0.00930	0.00822	0.00916
BA	0.00814	7,297.33	0.540	0.00812	0.00819	0.00811
BE	0.00006	-93.42	22.265	0.00004	0.00006	0.00007
CA	7.35009	7,977.97	0.516	7.31313	7.38895	7.34818
CD	0.00042	1.86	13.454	0.00047	0.00044	0.00036
CO	-0.00024	-1.46	89.479	-0.00035	-0.00038	0.00001
CR	0.00016	-1.43	57.928	0.00021	0.00022	0.00005
CU	-0.00016	182.67	497.375	-0.00101	-0.00009	0.00061
FE	0.28391	114.02	2.808	0.27522	0.29088	0.28564
K	0.39282	207.23	16.213	0.45508	0.32779	0.39560
LI	-0.00357	54.19	43.030	-0.00509	-0.00361	-0.00202
MG	2.94370	7,509.71	0.496	2.93231	2.96017	2.93863
MN	0.15035	10,507.10	0.730	0.15023	0.15150	0.14931
MO	0.00060	4.62	34.288	0.00077	0.00066	0.00037
NA	14.60447	18,452.27	0.305	14.56313	14.65175	14.59852
NI	-0.00042	17.53	64.954	-0.00070	-0.00040	-0.00016
P	0.00676	3.86	2.761	0.00693	0.00656	0.00678
PB	0.00468	3.39	55.975	0.00172	0.00561	0.00671
S	0.99842	269.39	0.686	1.00613	0.99611	0.99303
SB	-0.00113	-5.25	106.705	-0.00194	0.00025	-0.00169
SE	0.00299	5.13	89.443	0.00065	0.00590	0.00241
SI	1.70992	421.31	0.798	1.69437	1.71984	1.71556
SN	-0.00056	1.32	155.773	-0.00134	0.00037	-0.00070
SR	0.02175	20,280.01	0.605	0.02173	0.02189	0.02163
TI	0.00128	109.42	5.583	0.00122	0.00126	0.00136
TL	-0.00113	-0.59	131.284	-0.00271	0.00021	-0.00088
V	0.00028	-2.58	24.355	0.00022	0.00027	0.00036
Y1	15835.92333	15,835.92	0.462	15764.40845	15832.78396	15910.57758
Y2A	620414.96242	620,414.96	0.519	622133.15037	616699.23689	622412.50000
Y2R	33300.94447	33,300.94	0.521	33332.65000	33113.77470	33456.40872
ZN	-0.00205	18.57	3.482	-0.00213	-0.00200	-0.00201
ZR	0.00049	3.83	389.756	-0.00045	0.00267	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/11/2013 01:55

Sample Number: **7265223** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00019	-25.98	53.678	-0.00009	-0.00018	-0.00029
AL	0.60546	104.70	2.908	0.58794	0.60529	0.62315
AS	-0.00017	-1.88	521.602	-0.00030	-0.00101	0.00079
B	0.01525	53.33	4.612	0.01605	0.01498	0.01472
BA	0.03323	29,416.50	0.597	0.03306	0.03345	0.03318
BE	0.00014	-53.20	2.034	0.00014	0.00013	0.00014
CA	3.02895	3,388.94	0.892	3.00731	3.05921	3.02033
CD	0.00047	3.70	12.142	0.00051	0.00050	0.00041
CO	0.00001	-0.10	3530.348	0.00011	0.00021	-0.00030
CR	0.00066	4.21	58.709	0.00065	0.00105	0.00027
CU	0.00524	264.75	7.296	0.00482	0.00535	0.00556
FE	1.08428	427.32	1.145	1.07212	1.09693	1.08378
K	1.09610	401.82	2.526	1.12675	1.08863	1.07291
LI	-0.00254	62.29	154.380	0.00180	-0.00583	-0.00360
MG	0.90104	2,335.14	0.844	0.89232	0.90444	0.90635
MN	0.14039	9,875.26	0.482	0.13976	0.14110	0.14029
MO	0.00015	3.18	247.358	-0.00014	0.00002	0.00057
NA	1.27223	1,795.87	1.793	1.25124	1.29650	1.26896
NI	0.00115	21.80	5.264	0.00114	0.00121	0.00109
P	0.47416	241.26	0.426	0.47573	0.47488	0.47188
PB	0.00971	8.46	13.155	0.00990	0.01088	0.00835
S	2.01787	546.34	0.434	2.01208	2.02795	2.01360
SB	-0.00148	-5.50	91.694	-0.00302	-0.00048	-0.00093
SE	0.00299	5.16	12.762	0.00302	0.00260	0.00336
SI	4.27313	1,062.34	0.922	4.22999	4.30722	4.28220
SN	-0.00009	1.83	1169.143	-0.00082	-0.00051	0.00107
SR	0.01939	18,186.49	0.775	0.01924	0.01954	0.01938
TI	0.01350	904.04	0.564	0.01351	0.01357	0.01342
TL	-0.00057	-0.30	207.151	-0.00100	0.00077	-0.00148
V	0.00433	79.63	5.278	0.00458	0.00413	0.00429
Y1	15914.33544	15,914.34	0.234	15909.90735	15879.52727	15953.57171
Y2A	624421.13660	624,421.14	0.362	626471.64005	621995.76974	624796.00000
Y2R	33805.21225	33,805.21	0.753	34076.24750	33571.37145	33768.01779
ZN	0.02038	224.07	0.367	0.02034	0.02046	0.02032
ZR	0.00027	3.30	546.835	0.00053	0.00163	-0.00133

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/11/2013 01:58

Sample Number: **7265224** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00027	-27.56	213.780	0.00030	-0.00087	-0.00025
AL	0.43297	75.64	8.779	0.41423	0.47671	0.40796
AS	-0.00153	-2.47	64.651	-0.00040	-0.00197	-0.00222
B	0.01431	49.38	8.283	0.01323	0.01558	0.01413
BA	0.02563	22,736.43	1.030	0.02556	0.02540	0.02592
BE	0.00012	-60.35	11.244	0.00012	0.00011	0.00014
CA	2.47552	2,776.92	1.032	2.47416	2.45068	2.50173
CD	0.00063	4.95	15.599	0.00053	0.00073	0.00063
CO	0.00007	0.14	493.465	-0.00002	0.00044	-0.00022
CR	0.00073	4.96	68.005	0.00107	0.00016	0.00095
CU	0.00186	212.64	45.836	0.00262	0.00094	0.00202
FE	0.87424	344.52	0.644	0.86878	0.87392	0.88002
K	1.39000	480.49	6.364	1.29083	1.41842	1.46076
LI	-0.00378	52.94	92.894	-0.00745	-0.00343	-0.00045
MG	0.72965	1,885.30	0.949	0.72423	0.72726	0.73745
MN	0.08767	6,174.06	1.156	0.08721	0.08696	0.08883
MO	0.00028	3.59	51.720	0.00039	0.00034	0.00012
NA	1.65171	2,270.81	1.964	1.64653	1.62217	1.68642
NI	0.00115	21.71	35.323	0.00157	0.00076	0.00112
P	0.27063	137.26	0.586	0.27189	0.26885	0.27115
PB	0.00539	4.25	49.219	0.00233	0.00705	0.00680
S	1.47213	396.96	0.326	1.47720	1.47154	1.46764
SB	-0.00123	-5.32	115.271	0.00032	-0.00246	-0.00156
SE	0.00160	4.59	122.273	0.00170	-0.00041	0.00351
SI	2.88288	715.91	0.721	2.87242	2.86940	2.90683
SN	0.00011	2.03	119.493	0.00018	-0.00004	0.00020
SR	0.01733	16,261.22	1.078	0.01725	0.01720	0.01755
TI	0.00708	486.65	1.320	0.00705	0.00700	0.00718
TL	-0.00077	-0.42	240.037	0.00124	-0.00117	-0.00238
V	0.00175	27.50	12.705	0.00201	0.00164	0.00161
Y1	15840.90488	15,840.90	0.084	15839.44715	15828.44714	15854.82035
Y2A	624670.01938	624,670.02	0.687	626621.92282	627636.22754	619751.90776
Y2R	33700.14133	33,700.14	1.586	33162.52495	34231.36971	33706.52933
ZN	0.01156	142.77	0.554	0.01154	0.01163	0.01151
ZR	-0.00116	-0.73	27.076	-0.00092	-0.00152	-0.00105

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 22

Date/Time: 11/11/2013 02:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49158	8,531.03	0.611	0.49108	0.48886	0.49481
AL	24.72646	4,036.85	0.644	24.87211	24.55659	24.75067
AS	0.49257	217.31	1.102	0.49520	0.48633	0.49619
B	0.50213	1,866.84	0.701	0.49962	0.50061	0.50615
BA	0.49682	418,418.05	0.549	0.49767	0.49376	0.49901
BE	0.49436	254,493.31	0.713	0.49267	0.49199	0.49841
CA	24.60343	26,130.43	0.450	24.67771	24.47632	24.65625
CD	0.49339	5,014.68	0.291	0.49342	0.49194	0.49481
CO	0.49522	2,434.97	0.086	0.49562	0.49477	0.49528
CR	0.49780	5,402.59	0.798	0.49554	0.49548	0.50239
CU	0.49297	7,432.93	0.479	0.49087	0.49252	0.49553
FE	24.62222	9,288.21	0.436	24.72378	24.50998	24.63289
K	24.75209	6,650.44	0.593	24.72734	24.61914	24.90978
LI	0.49302	3,628.16	0.659	0.49674	0.49077	0.49155
MG	24.15572	60,326.52	0.238	24.21819	24.10525	24.14371
MN	0.48539	32,645.28	0.635	0.48393	0.48332	0.48893
MO	0.51082	1,624.89	0.171	0.51178	0.51058	0.51008
NA	24.35494	30,246.85	0.531	24.45161	24.20795	24.40528
NI	0.49683	1,327.79	0.330	0.49610	0.49569	0.49871
P	0.50120	249.80	0.141	0.50198	0.50101	0.50061
PB	0.50496	465.50	0.423	0.50706	0.50503	0.50279
S	24.49391	6,465.25	0.201	24.50597	24.43969	24.53607
SB	0.51484	313.42	0.469	0.51464	0.51254	0.51736
SE	0.49214	191.09	0.499	0.49452	0.48962	0.49230
SI	25.06394	6,036.75	0.379	25.13288	24.95553	25.10341
SN	0.50745	535.05	0.175	0.50810	0.50644	0.50781
SR	0.48898	440,092.50	1.354	0.48802	0.48290	0.49603
TI	0.51021	31,759.61	0.689	0.50846	0.50791	0.51426
TL	0.49438	255.07	0.332	0.49327	0.49361	0.49627
V	0.49991	9,545.03	0.834	0.49823	0.49685	0.50466
Y1	15535.75608	15,535.76	0.068	15525.31565	15546.47176	15535.48082
Y2A	597585.21345	597,585.21	0.746	597441.10816	602115.04645	593199.48573
Y2R	32859.40724	32,859.41	0.284	32783.04856	32963.20595	32831.96721
ZN	0.49328	4,479.89	0.240	0.49277	0.49243	0.49463
ZR	0.49680	1,356.31	0.358	0.49871	0.49519	0.49649

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 23 Date/Time: 11/11/2013 02:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-20.35	157.249	0.00017	-0.00008	0.00021
AL	-0.00196	2.91	1030.125	0.00421	0.01445	-0.02455
AS	-0.00016	-1.73	574.370	-0.00114	-0.00007	0.00072
B	0.00030	-5.58	529.761	-0.00110	0.00205	-0.00005
BA	-0.00006	131.97	16.688	-0.00005	-0.00005	-0.00007
BE	0.00008	-80.00	5.902	0.00009	0.00008	0.00008
CA	-0.00678	76.26	7.473	-0.00678	-0.00628	-0.00729
CD	0.00033	0.45	5.153	0.00032	0.00032	0.00035
CO	-0.00032	-1.87	60.832	-0.00046	-0.00010	-0.00040
CR	-0.00038	-7.43	53.140	-0.00057	-0.00017	-0.00038
CU	-0.00051	173.37	57.161	-0.00053	-0.00021	-0.00079
FE	-0.00552	2.96	120.864	-0.01098	0.00192	-0.00750
K	0.00032	99.86	1618.107	0.04276	-0.02643	-0.01538
LI	-0.00301	56.26	66.089	-0.00188	-0.00530	-0.00184
MG	0.00223	5.52	70.960	0.00401	0.00099	0.00169
MN	-0.00003	10.97	168.530	-0.00006	0.00003	-0.00007
MO	0.00014	3.13	125.556	0.00034	0.00009	-0.00001
NA	-0.05809	102.40	10.037	-0.06321	-0.05932	-0.05175
NI	-0.00030	17.86	111.533	0.00004	-0.00031	-0.00062
P	-0.00133	-0.22	62.732	-0.00052	-0.00218	-0.00127
PB	0.00419	2.74	36.743	0.00402	0.00274	0.00580
S	-0.00171	0.34	53.571	-0.00273	-0.00097	-0.00142
SB	-0.00230	-5.99	79.956	-0.00060	-0.00425	-0.00205
SE	0.00108	4.36	165.507	0.00299	-0.00053	0.00077
SI	0.00634	5.67	237.512	0.01661	0.01335	-0.01094
SN	-0.00070	1.16	49.172	-0.00032	-0.00100	-0.00078
SR	0.00003	-23.66	26.498	0.00003	0.00002	0.00003
TI	0.00001	27.17	390.223	0.00000	0.00006	-0.00003
TL	-0.00058	-0.36	230.770	-0.00213	0.00021	0.00018
V	0.00017	-4.80	85.873	0.00013	0.00004	0.00032
Y1	15825.07012	15,825.07	0.068	15823.66216	15836.54254	15815.00567
Y2A	617300.28933	617,300.29	0.740	620023.83333	619848.75000	612028.28467
Y2R	32627.82576	32,627.83	0.788	32587.16580	32902.92766	32393.38382
ZN	-0.00241	15.01	4.407	-0.00253	-0.00233	-0.00237
ZR	-0.00238	-3.97	21.883	-0.00231	-0.00189	-0.00293

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/11/2013 02:10

Sample Number: **7265228** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00033	-28.08	144.399	-0.00071	0.00021	-0.00051
AL	0.06364	13.68	18.951	0.06614	0.05053	0.07425
AS	-0.00059	-1.97	145.497	0.00011	-0.00153	-0.00034
B	0.02215	76.64	8.653	0.02248	0.02009	0.02387
BA	0.02092	18,317.52	0.463	0.02101	0.02093	0.02082
BE	0.00008	-80.41	20.595	0.00010	0.00007	0.00007
CA	9.02627	9,704.50	0.619	9.09076	8.99262	8.99542
CD	0.00051	2.59	17.790	0.00060	0.00042	0.00050
CO	-0.00045	-2.52	12.925	-0.00051	-0.00040	-0.00043
CR	-0.00007	-4.02	808.859	0.00040	-0.00074	0.00012
CU	-0.00010	182.96	259.912	-0.00001	-0.00037	0.00010
FE	0.18386	75.09	3.321	0.19061	0.18226	0.17872
K	0.60815	262.94	9.645	0.63978	0.64420	0.54047
LI	-0.00299	58.20	19.082	-0.00237	-0.00310	-0.00349
MG	3.69702	9,358.90	0.155	3.69910	3.70140	3.69056
MN	0.00920	649.64	0.713	0.00920	0.00926	0.00913
MO	0.00015	3.20	162.727	0.00044	0.00007	-0.00005
NA	5.22630	6,667.16	0.345	5.24253	5.22944	5.20693
NI	0.00043	20.01	101.457	0.00037	0.00090	0.00003
P	0.02749	14.48	1.754	0.02700	0.02752	0.02796
PB	0.00491	3.48	36.529	0.00666	0.00307	0.00501
S	0.71759	195.70	0.077	0.71695	0.71794	0.71789
SB	0.00048	-4.28	289.212	-0.00020	0.00207	-0.00043
SE	0.00069	4.26	278.058	0.00254	-0.00131	0.00086
SI	0.17317	46.12	3.853	0.16552	0.17777	0.17623
SN	-0.00055	1.34	55.621	-0.00021	-0.00062	-0.00081
SR	0.03024	27,976.30	0.621	0.03039	0.03030	0.03003
TI	0.00182	142.79	5.194	0.00182	0.00172	0.00191
TL	0.00064	0.29	49.536	0.00094	0.00031	0.00066
V	0.00035	-0.96	113.078	-0.00010	0.00064	0.00052
Y1	15987.33900	15,987.34	0.209	15979.62941	15958.49977	16023.88782
Y2A	615232.14648	615,232.15	0.638	612282.01725	613724.17219	619690.25000
Y2R	33053.45325	33,053.45	0.315	33025.19960	32966.25675	33168.90341
ZN	-0.00041	33.73	18.617	-0.00043	-0.00032	-0.00047
ZR	-0.00022	1.88	401.191	-0.00116	-0.00008	0.00058

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/11/2013 02:14

Sample Number: **7265235** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-18.17	98.211	0.00027	-0.00002	0.00029
AL	0.01984	6.51	66.167	0.00724	0.01883	0.03344
AS	-0.00077	-2.11	140.354	-0.00005	-0.00024	-0.00201
B	0.02648	90.24	1.634	0.02605	0.02692	0.02646
BA	0.03779	31,521.66	0.669	0.03750	0.03796	0.03791
BE	0.00005	-92.61	39.457	0.00004	0.00004	0.00008
CA	36.32546	38,763.23	0.343	36.36782	36.18523	36.42332
CD	0.00040	2.64	9.144	0.00043	0.00036	0.00041
CO	0.00020	0.75	53.782	0.00029	0.00023	0.00008
CR	0.00043	1.53	128.728	0.00061	-0.00019	0.00087
CU	-0.00107	172.25	28.879	-0.00123	-0.00071	-0.00126
FE	0.92637	357.91	1.200	0.92027	0.91964	0.93920
K	1.98659	630.20	2.041	2.03263	1.95622	1.97091
LI	-0.00308	60.53	77.605	-0.00438	-0.00453	-0.00032
MG	14.56845	36,748.42	0.379	14.56287	14.51627	14.62623
MN	0.63059	41,786.58	0.549	0.62662	0.63220	0.63297
MO	0.00010	2.97	279.671	0.00042	-0.00012	0.00000
NA	72.16331	89,850.19	0.237	72.22104	71.97106	72.29782
NI	0.00002	18.47	1221.134	-0.00033	-0.00046	0.00083
P	0.01651	8.70	9.625	0.01567	0.01834	0.01551
PB	0.00614	5.33	58.890	0.00462	0.01027	0.00353
S	5.02696	1,338.68	0.341	5.04079	5.03233	5.00776
SB	-0.00162	-5.50	38.276	-0.00095	-0.00174	-0.00217
SE	-0.00037	3.89	390.882	0.00124	-0.00083	-0.00152
SI	8.31569	2,018.51	0.331	8.34570	8.30984	8.29154
SN	-0.00067	1.18	55.662	-0.00065	-0.00031	-0.00106
SR	0.10907	96,693.91	0.589	0.10833	0.10938	0.10950
TI	0.00194	143.87	2.802	0.00190	0.00192	0.00200
TL	-0.00066	-0.16	239.454	-0.00179	-0.00134	0.00115
V	0.00031	-2.18	38.244	0.00023	0.00044	0.00025
Y1	15666.61851	15,666.62	0.259	15645.44134	15640.96983	15713.44435
Y2A	588834.88166	588,834.88	0.490	592092.65096	587812.62442	586599.36961
Y2R	33069.85733	33,069.86	0.117	33035.02295	33111.57500	33062.97405
ZN	-0.00094	28.93	0.989	-0.00095	-0.00093	-0.00094
ZR	0.00039	3.56	457.320	-0.00016	-0.00107	0.00241

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/11/2013 02:17

Sample Number: **7265238** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00012	-23.22	370.913	-0.00062	0.00014	0.00012
AL	0.10677	20.65	6.880	0.10987	0.09838	0.11206
AS	0.00088	-1.27	27.652	0.00060	0.00098	0.00104
B	0.04446	153.86	1.867	0.04531	0.04442	0.04365
BA	0.03831	32,030.31	0.596	0.03842	0.03805	0.03847
BE	0.00004	-98.37	73.233	0.00005	0.00007	0.00001
CA	57.60706	61,094.24	0.500	57.93854	57.42116	57.46149
CD	0.00057	3.32	16.163	0.00058	0.00048	0.00066
CO	-0.00036	-1.98	34.037	-0.00035	-0.00024	-0.00049
CR	0.00134	11.35	12.091	0.00135	0.00150	0.00118
CU	-0.00050	190.11	142.499	-0.00130	-0.00025	0.00005
FE	0.27531	109.49	1.434	0.27838	0.27669	0.27085
K	1.74822	564.31	2.990	1.79812	1.75268	1.69386
LI	0.00020	86.26	668.378	-0.00124	0.00147	0.00038
MG	22.27748	55,793.79	0.327	22.35909	22.21932	22.25403
MN	0.10018	6,664.02	0.842	0.10026	0.09929	0.10097
MO	0.00016	3.12	237.278	-0.00022	0.00016	0.00052
NA	90.84912	112,589.78	0.454	91.32435	90.58347	90.63955
NI	0.00019	18.82	229.549	-0.00003	0.00067	-0.00009
P	0.01862	9.69	6.145	0.01993	0.01782	0.01811
PB	0.00832	7.22	10.688	0.00825	0.00923	0.00746
S	8.80954	2,329.90	0.663	8.74220	8.83923	8.84718
SB	-0.00233	-5.90	45.002	-0.00143	-0.00209	-0.00349
SE	0.00176	4.57	16.285	0.00198	0.00144	0.00188
SI	7.88684	1,906.50	0.401	7.92301	7.87298	7.86453
SN	-0.00083	1.01	17.129	-0.00095	-0.00085	-0.00067
SR	0.13190	117,212.09	0.743	0.13201	0.13086	0.13281
TI	0.00505	335.75	1.543	0.00504	0.00498	0.00514
TL	0.00100	0.50	120.689	0.00155	0.00185	-0.00038
V	0.00022	-3.53	191.584	-0.00019	0.00021	0.00063
Y1	15563.44040	15,563.44	0.517	15656.06260	15522.42771	15511.83089
Y2A	590197.35678	590,197.36	0.475	589824.23689	593167.63437	587600.19907
Y2R	32929.46330	32,929.46	0.274	32866.43699	33033.01416	32888.93876
ZN	0.00048	40.84	23.898	0.00035	0.00058	0.00052
ZR	-0.00113	-0.63	146.546	-0.00120	-0.00276	0.00056

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/11/2013 02:21

Sample Number: **7265240** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00024	-16.94	49.367	0.00029	0.00010	0.00032
AL	0.05111	11.63	24.243	0.06347	0.03869	0.05118
AS	-0.00143	-2.29	185.288	0.00131	-0.00163	-0.00399
B	0.04296	146.63	0.168	0.04299	0.04301	0.04288
BA	0.03746	30,996.90	0.467	0.03734	0.03766	0.03737
BE	0.00003	-102.85	13.724	0.00003	0.00003	0.00003
CA	56.53889	60,210.21	0.092	56.50607	56.51158	56.59901
CD	0.00041	1.45	10.250	0.00037	0.00042	0.00045
CO	-0.00036	-1.99	37.862	-0.00050	-0.00023	-0.00035
CR	0.00117	9.36	15.655	0.00104	0.00109	0.00138
CU	-0.00034	189.93	61.903	-0.00057	-0.00015	-0.00032
FE	0.11834	50.17	6.907	0.12754	0.11559	0.11190
K	1.81099	583.33	2.016	1.84299	1.77121	1.81877
LI	-0.00115	76.73	141.118	-0.00076	0.00024	-0.00292
MG	21.88996	55,054.06	0.171	21.84730	21.90598	21.91660
MN	0.07560	4,979.82	0.621	0.07524	0.07613	0.07542
MO	0.00011	2.96	121.467	0.00011	-0.00002	0.00023
NA	89.60207	111,498.52	0.017	89.60601	89.58532	89.61487
NI	0.00077	20.34	22.468	0.00091	0.00057	0.00082
P	0.02190	11.31	7.024	0.02177	0.02043	0.02350
PB	0.00683	5.82	5.003	0.00647	0.00715	0.00688
S	8.81494	2,328.30	0.227	8.82355	8.82916	8.79210
SB	-0.00181	-5.57	89.221	-0.00361	-0.00051	-0.00130
SE	-0.00034	3.76	982.738	-0.00199	-0.00254	0.00351
SI	7.66590	1,860.74	0.139	7.67430	7.65394	7.66945
SN	-0.00074	1.10	82.239	-0.00114	-0.00004	-0.00103
SR	0.13162	115,753.91	0.494	0.13116	0.13236	0.13133
TI	0.00322	220.67	4.539	0.00339	0.00312	0.00315
TL	0.00092	0.45	168.995	0.00263	-0.00042	0.00055
V	0.00056	2.88	81.177	0.00091	0.00072	0.00005
Y1	15542.93632	15,542.94	0.229	15519.50450	15525.32712	15583.97735
Y2A	584082.58682	584,082.59	0.564	586392.91639	580310.46782	585544.37624
Y2R	33063.27100	33,063.27	0.420	33188.30975	33087.55000	32913.95326
ZN	0.00009	37.18	147.176	0.00009	-0.00004	0.00022
ZR	-0.00137	-1.28	72.045	-0.00228	-0.00032	-0.00151

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/11/2013 02:25

Sample Number: **7265243** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00016	-23.67	319.897	-0.00053	0.00042	-0.00037
AL	0.06476	13.88	29.527	0.06093	0.08551	0.04784
AS	-0.00233	-2.70	105.513	-0.00002	-0.00490	-0.00206
B	0.04386	149.93	1.296	0.04427	0.04411	0.04321
BA	0.03777	31,259.56	0.571	0.03797	0.03779	0.03754
BE	0.00002	-107.32	80.202	0.00000	0.00002	0.00004
CA	51.11149	54,525.10	0.277	51.27437	51.01907	51.04102
CD	0.00040	1.35	23.240	0.00048	0.00042	0.00030
CO	-0.00035	-1.97	42.953	-0.00044	-0.00044	-0.00018
CR	0.00079	5.39	20.563	0.00061	0.00086	0.00091
CU	-0.00072	182.27	6.967	-0.00067	-0.00075	-0.00075
FE	0.14220	59.33	4.967	0.14489	0.14752	0.13419
K	3.09687	926.91	1.371	3.11442	3.04846	3.12772
LI	-0.00448	52.04	17.328	-0.00530	-0.00438	-0.00376
MG	20.76692	52,319.84	0.390	20.85925	20.73373	20.70778
MN	0.21029	13,836.06	0.643	0.21176	0.21004	0.20908
MO	0.00019	3.24	76.656	0.00027	0.00027	0.00002
NA	86.57408	107,876.79	0.379	86.95043	86.42045	86.35137
NI	-0.00005	18.23	1258.162	0.00003	0.00057	-0.00076
P	0.04842	24.53	2.544	0.04962	0.04716	0.04848
PB	0.00556	4.31	31.607	0.00382	0.00552	0.00733
S	10.30816	2,730.55	0.081	10.30435	10.30235	10.31778
SB	-0.00184	-5.61	223.577	0.00228	-0.00594	-0.00186
SE	-0.00097	3.55	228.663	-0.00176	-0.00269	0.00154
SI	3.76382	916.92	0.254	3.77261	3.75361	3.76523
SN	-0.00057	1.29	75.267	-0.00008	-0.00087	-0.00075
SR	0.12008	105,637.90	0.593	0.12081	0.12004	0.11938
TI	0.00263	185.15	4.651	0.00265	0.00250	0.00275
TL	0.00062	0.34	149.393	0.00106	0.00124	-0.00045
V	-0.00037	-14.79	58.118	-0.00039	-0.00015	-0.00058
Y1	15588.36163	15,588.36	0.040	15595.17228	15587.14780	15582.76482
Y2A	584297.69409	584,297.69	0.481	581618.77903	584049.76775	587224.53550
Y2R	33106.48857	33,106.49	0.212	33025.53871	33145.46769	33148.45931
ZN	-0.00114	26.32	15.907	-0.00123	-0.00093	-0.00125
ZR	-0.00008	2.26	3045.099	0.00252	-0.00069	-0.00206

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/11/2013 02:29

Sample Number: **7265247** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00002	-21.87	709.796	-0.00005	0.00017	-0.00007
AL	0.04654	10.89	56.353	0.04732	0.07238	0.01994
AS	-0.00113	-2.19	114.037	-0.00061	-0.00259	-0.00018
B	0.07889	290.50	1.093	0.07884	0.07977	0.07805
BA	-0.00003	159.75	34.376	-0.00004	-0.00002	-0.00002
BE	0.00005	-97.45	14.477	0.00005	0.00005	0.00006
CA	0.05805	146.51	4.884	0.05626	0.05658	0.06132
CD	0.00037	0.84	6.498	0.00038	0.00034	0.00039
CO	-0.00054	-3.01	42.346	-0.00045	-0.00080	-0.00037
CR	-0.00029	-6.48	166.371	-0.00010	0.00006	-0.00084
CU	-0.00075	170.10	111.955	-0.00036	-0.00172	-0.00018
FE	-0.00674	2.53	14.994	-0.00569	-0.00683	-0.00771
K	-0.01450	97.36	391.211	0.05015	-0.05596	-0.03769
LI	-0.00328	55.13	89.555	-0.00224	-0.00660	-0.00100
MG	0.00385	9.70	37.283	0.00221	0.00445	0.00489
MN	-0.00007	8.20	76.585	-0.00001	-0.00010	-0.00011
MO	0.00015	3.18	264.281	0.00029	0.00045	-0.00030
NA	0.02737	210.10	4.840	0.02587	0.02791	0.02835
NI	-0.00039	17.77	25.901	-0.00027	-0.00043	-0.00046
P	0.00034	0.63	299.930	0.00138	-0.00065	0.00029
PB	0.00419	2.76	41.416	0.00387	0.00263	0.00605
S	0.00263	1.52	13.135	0.00271	0.00293	0.00225
SB	-0.00017	-4.68	498.900	0.00073	-0.00094	-0.00029
SE	0.00217	4.82	44.743	0.00110	0.00243	0.00299
SI	0.00593	5.64	97.753	0.00237	0.01261	0.00280
SN	-0.00073	1.14	108.514	-0.00001	-0.00060	-0.00159
SR	0.00040	322.70	1.834	0.00039	0.00040	0.00040
TI	0.00007	31.07	174.033	0.00018	-0.00006	0.00009
TL	0.00002	-0.05	5558.652	0.00101	-0.00088	-0.00008
V	-0.00017	-11.48	120.321	0.00002	-0.00014	-0.00039
Y1	15960.34720	15,960.35	0.389	15990.50823	16001.63989	15888.89348
Y2A	618914.95897	618,914.96	0.053	619293.79562	618738.91463	618712.16667
Y2R	33084.71612	33,084.72	0.513	33246.43569	33099.76538	32907.94728
ZN	-0.00052	32.44	19.953	-0.00062	-0.00041	-0.00053
ZR	-0.00154	-1.74	101.571	-0.00329	-0.00030	-0.00101

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/11/2013 02:32

Sample Number: **7265248** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-15.83	5.702	0.00039	0.00035	0.00037
AL	0.04006	9.97	46.806	0.01909	0.04585	0.05522
AS	-0.00282	-2.94	75.609	-0.00476	-0.00054	-0.00315
B	0.00382	7.83	41.393	0.00515	0.00424	0.00207
BA	0.00023	387.93	4.348	0.00024	0.00022	0.00022
BE	0.00007	-86.90	15.730	0.00006	0.00008	0.00008
CA	0.07322	164.97	4.237	0.07681	0.07145	0.07141
CD	0.00045	1.63	15.521	0.00052	0.00045	0.00038
CO	-0.00011	-0.80	135.162	0.00005	-0.00024	-0.00013
CR	-0.00017	-5.22	252.495	-0.00049	0.00032	-0.00034
CU	-0.00083	171.82	103.239	-0.00049	-0.00181	-0.00020
FE	-0.00017	5.11	3714.344	-0.00571	-0.00150	0.00670
K	-0.05142	88.71	32.392	-0.06825	-0.03495	-0.05107
LI	-0.00293	58.53	55.882	-0.00467	-0.00142	-0.00270
MG	0.00322	8.24	35.826	0.00242	0.00270	0.00454
MN	-0.00007	8.65	25.896	-0.00005	-0.00009	-0.00006
MO	0.00030	3.62	35.931	0.00037	0.00035	0.00017
NA	-0.03979	128.33	21.393	-0.03021	-0.04267	-0.04649
NI	-0.00036	17.63	72.886	-0.00006	-0.00051	-0.00050
P	0.00006	0.48	751.774	-0.00030	0.00057	-0.00010
PB	0.00346	2.07	43.361	0.00520	0.00255	0.00264
S	-0.00052	0.66	429.620	-0.00067	0.00179	-0.00268
SB	-0.00060	-4.89	232.169	0.00038	-0.00218	0.00001
SE	0.00208	4.72	91.044	0.00316	0.00320	-0.00011
SI	0.01119	7.00	80.047	0.02109	0.00366	0.00881
SN	-0.00069	1.17	86.816	-0.00094	-0.00001	-0.00112
SR	0.00049	412.17	1.456	0.00048	0.00048	0.00049
TI	0.00003	29.08	392.652	0.00008	-0.00011	0.00013
TL	0.00130	0.62	81.946	0.00010	0.00215	0.00165
V	-0.00020	-12.22	126.951	0.00005	-0.00045	-0.00019
Y1	15753.80175	15,753.80	0.155	15779.85470	15731.48323	15750.06733
Y2A	629702.62181	629,702.62	0.752	632608.94877	632258.75000	624240.16667
Y2R	33544.75261	33,544.75	0.473	33371.07892	33581.07029	33682.10863
ZN	-0.00172	21.15	4.980	-0.00174	-0.00180	-0.00163
ZR	-0.00174	-2.33	29.686	-0.00233	-0.00155	-0.00135

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 31 Date/Time: 11/11/2013 02:36

Sample Number: **7266798** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-17.02	60.988	0.00052	0.00023	0.00017
AL	0.02143	6.87	55.395	0.01558	0.01363	0.03509
AS	-0.00102	-2.12	95.446	0.00010	-0.00167	-0.00147
B	0.00201	0.83	30.240	0.00259	0.00138	0.00206
BA	-0.00008	119.33	11.314	-0.00007	-0.00007	-0.00009
BE	0.00007	-89.78	16.370	0.00007	0.00008	0.00006
CA	0.03271	121.36	10.203	0.03196	0.03636	0.02981
CD	0.00043	1.41	6.277	0.00044	0.00044	0.00040
CO	-0.00064	-3.47	2.407	-0.00063	-0.00064	-0.00066
CR	-0.00015	-5.05	218.453	-0.00030	-0.00039	0.00023
CU	-0.00085	171.97	70.770	-0.00121	-0.00118	-0.00016
FE	-0.00898	1.70	93.883	-0.01467	-0.01299	0.00071
K	-0.01053	99.94	624.195	-0.08459	0.01223	0.04078
LI	-0.00490	44.13	59.646	-0.00799	-0.00451	-0.00219
MG	0.00131	3.31	81.584	0.00010	0.00170	0.00212
MN	-0.00003	11.17	67.771	-0.00005	-0.00001	-0.00004
MO	-0.00010	2.36	319.206	-0.00019	0.00024	-0.00034
NA	-0.05325	111.61	11.242	-0.05949	-0.05269	-0.04756
NI	-0.00007	18.43	334.740	-0.00004	-0.00034	0.00015
P	-0.00087	0.01	112.916	-0.00123	-0.00163	0.00024
PB	0.00496	3.45	49.632	0.00622	0.00654	0.00212
S	-0.00048	0.67	61.598	-0.00014	-0.00060	-0.00070
SB	-0.00200	-5.79	81.078	-0.00387	-0.00094	-0.00120
SE	0.00047	4.11	162.505	0.00057	-0.00034	0.00117
SI	0.00652	5.87	88.721	0.01250	0.00610	0.00096
SN	-0.00071	1.15	18.718	-0.00059	-0.00085	-0.00070
SR	0.00025	184.78	2.845	0.00025	0.00025	0.00024
TI	0.00001	27.57	1712.562	0.00015	-0.00014	0.00002
TL	-0.00037	-0.25	34.692	-0.00030	-0.00029	-0.00052
V	0.00009	-6.42	112.362	0.00010	-0.00002	0.00018
Y1	15803.57805	15,803.58	0.160	15774.62774	15815.32298	15820.78343
Y2A	631154.23005	631,154.23	0.028	631062.12575	631040.75365	631359.81076
Y2R	33605.32205	33,605.32	0.321	33537.78954	33729.77904	33548.39756
ZN	-0.00293	10.31	4.252	-0.00283	-0.00307	-0.00289
ZR	-0.00132	-1.15	82.862	-0.00186	-0.00203	-0.00006

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/11/2013 02:40

Sample Number: **7266799** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00012	-20.38	428.212	-0.00043	0.00056	0.00023
AL	0.01202	5.33	100.145	0.02447	0.00045	0.01113
AS	-0.00189	-2.53	40.358	-0.00258	-0.00202	-0.00107
B	0.00185	0.22	35.571	0.00260	0.00140	0.00154
BA	-0.00007	127.00	15.500	-0.00007	-0.00006	-0.00007
BE	0.00007	-89.00	12.292	0.00007	0.00008	0.00006
CA	0.02402	112.25	8.539	0.02234	0.02340	0.02630
CD	0.00044	1.54	13.430	0.00038	0.00049	0.00045
CO	-0.00044	-2.48	61.705	-0.00074	-0.00035	-0.00022
CR	-0.00013	-4.73	193.798	-0.00041	0.00005	-0.00002
CU	-0.00049	176.82	185.576	-0.00053	0.00044	-0.00138
FE	-0.01059	1.08	20.661	-0.01221	-0.00810	-0.01145
K	-0.06375	85.76	15.062	-0.05269	-0.06852	-0.07003
LI	-0.00391	51.54	18.405	-0.00369	-0.00332	-0.00471
MG	-0.00013	-0.38	144.488	0.00008	-0.00027	-0.00019
MN	-0.00007	8.68	91.758	-0.00009	-0.00011	0.00000
MO	0.00023	3.43	69.588	0.00016	0.00012	0.00042
NA	-0.05674	107.51	7.948	-0.05834	-0.05164	-0.06023
NI	-0.00006	18.57	121.496	-0.00007	-0.00014	0.00002
P	0.00002	0.46	3672.234	-0.00028	-0.00035	0.00068
PB	0.00262	1.29	49.574	0.00282	0.00123	0.00380
S	0.00018	0.85	2145.123	0.00378	0.00044	-0.00370
SB	-0.00104	-5.22	83.330	-0.00137	-0.00171	-0.00006
SE	0.00195	4.72	105.446	0.00316	-0.00043	0.00313
SI	0.01289	7.46	44.616	0.00862	0.01062	0.01943
SN	-0.00044	1.45	2.753	-0.00043	-0.00044	-0.00045
SR	0.00024	177.07	2.080	0.00024	0.00024	0.00023
TI	-0.00007	22.13	154.881	0.00004	-0.00019	-0.00007
TL	0.00062	0.27	99.254	0.00071	0.00119	-0.00004
V	0.00025	-3.15	94.288	0.00036	-0.00002	0.00041
Y1	15892.25682	15,892.26	0.384	15961.17177	15845.20099	15870.39771
Y2A	628551.32515	628,551.33	0.190	627495.75000	629843.68787	628314.53759
Y2R	33700.75184	33,700.75	0.100	33662.21012	33724.84512	33715.20028
ZN	-0.00264	12.97	1.239	-0.00261	-0.00268	-0.00264
ZR	-0.00066	0.70	127.356	-0.00117	-0.00110	0.00031

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 33 Date/Time: 11/11/2013 02:44

Sample Number: **7266805** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-18.73	37.452	0.00053	0.00025	0.00034
AL	1.42833	240.31	0.895	1.41592	1.44146	1.42762
AS	0.00794	-0.62	20.562	0.00723	0.00981	0.00678
B	0.02384	120.46	1.981	0.02371	0.02436	0.02343
BA	0.07064	59,903.28	0.441	0.07092	0.07069	0.07031
BE	0.00043	100.72	1.406	0.00043	0.00044	0.00042
CA	24.95612	27,018.85	1.018	24.66511	25.13280	25.07044
CD	0.00102	41.68	21.148	0.00124	0.00102	0.00081
CO	0.01237	61.48	0.536	0.01242	0.01229	0.01239
CR	0.00647	67.46	9.060	0.00703	0.00653	0.00586
CU	0.01050	335.84	3.783	0.01041	0.01016	0.01094
FE	20.97573	8,071.94	1.167	20.70598	21.18338	21.03783
K	3.17934	960.04	3.181	3.06610	3.26071	3.21121
LI	-0.00047	79.19	597.267	-0.00044	-0.00329	0.00233
MG	9.73402	24,916.63	1.204	9.59911	9.81061	9.79233
MN	1.62296	109,595.65	0.312	1.62858	1.62154	1.61875
MO	0.00175	8.26	19.610	0.00188	0.00136	0.00201
NA	53.06416	66,972.93	1.092	52.40241	53.48084	53.30923
NI	0.00738	36.93	4.612	0.00744	0.00768	0.00701
P	0.33599	168.73	0.396	0.33746	0.33564	0.33487
PB	0.02626	25.70	3.714	0.02644	0.02713	0.02520
S	11.14431	2,971.92	0.070	11.13857	11.15321	11.14114
SB	0.00013	-4.41	253.471	-0.00014	0.00048	0.00004
SE	0.00225	5.33	9.270	0.00240	0.00234	0.00201
SI	13.10309	3,219.36	0.951	12.96053	13.19085	13.15789
SN	-0.00032	1.56	175.198	0.00029	-0.00043	-0.00081
SR	0.09537	86,167.65	0.378	0.09567	0.09546	0.09497
TI	0.04483	2,825.65	1.303	0.04550	0.04443	0.04457
TL	-0.00368	-1.34	52.296	-0.00221	-0.00296	-0.00586
V	0.00564	109.25	5.927	0.00602	0.00550	0.00540
Y1	15693.71749	15,693.72	0.058	15683.36064	15697.30306	15700.48878
Y2A	600163.48706	600,163.49	0.523	596856.17120	600538.81885	603095.47113
Y2R	33500.22888	33,500.23	0.869	33835.72500	33349.27058	33315.69107
ZN	0.06169	610.86	0.718	0.06202	0.06118	0.06186
ZR	-0.00042	1.35	212.146	0.00061	-0.00101	-0.00087

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/11/2013 02:47

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49906	8,669.45	1.025	0.49316	0.50225	0.50176
AL	24.69612	4,056.65	1.176	24.77751	24.37359	24.93727
AS	0.49203	218.02	0.387	0.49014	0.49200	0.49395
B	0.49543	1,844.34	0.644	0.49357	0.49912	0.49360
BA	0.50383	424,723.73	1.360	0.49645	0.50999	0.50505
BE	0.49368	254,393.55	0.873	0.48912	0.49769	0.49422
CA	24.53908	26,222.49	1.001	24.57121	24.27895	24.76707
CD	0.49182	5,020.73	0.523	0.48989	0.49083	0.49474
CO	0.49397	2,439.44	0.549	0.49164	0.49333	0.49695
CR	0.49751	5,404.61	1.047	0.49250	0.50290	0.49713
CU	0.49911	7,530.26	1.055	0.49313	0.50307	0.50111
FE	24.63485	9,350.09	0.885	24.70325	24.39096	24.81034
K	24.76457	6,694.71	0.572	24.78320	24.61442	24.89608
LI	0.49634	3,674.40	1.357	0.49737	0.48915	0.50249
MG	24.25520	60,944.67	0.945	24.30772	24.00420	24.45367
MN	0.48970	32,966.77	0.856	0.48530	0.49364	0.49015
MO	0.50986	1,628.93	0.560	0.50792	0.50852	0.51314
NA	24.41396	30,506.06	0.990	24.47505	24.14760	24.61924
NI	0.49504	1,328.84	0.607	0.49281	0.49386	0.49845
P	0.50222	251.41	0.139	0.50177	0.50302	0.50185
PB	0.50117	464.07	1.260	0.49492	0.50105	0.50755
S	24.53877	6,505.41	0.313	24.46900	24.52630	24.62099
SB	0.51650	315.82	0.372	0.51680	0.51445	0.51825
SE	0.49177	191.78	0.683	0.48832	0.49194	0.49503
SI	25.10166	6,083.01	0.748	25.08676	24.92171	25.29651
SN	0.50415	533.91	0.508	0.50168	0.50398	0.50679
SR	0.49477	445,745.60	1.090	0.49038	0.50079	0.49314
TI	0.50983	31,766.98	0.948	0.50450	0.51394	0.51105
TL	0.49265	255.30	0.682	0.48953	0.49222	0.49621
V	0.50232	9,600.98	0.942	0.49730	0.50670	0.50295
Y1	15603.79777	15,603.80	0.340	15648.14065	15618.13411	15545.11854
Y2A	598182.95178	598,182.95	0.919	603582.36563	592594.55873	598371.93099
Y2R	33062.24687	33,062.25	0.583	33069.49440	33251.17477	32866.07143
ZN	0.49301	4,497.02	0.490	0.49064	0.49290	0.49547
ZR	0.49621	1,363.02	1.164	0.49930	0.48954	0.49978

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 35 Date/Time: 11/11/2013 02:51

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-21.15	504.563	0.00026	0.00028	-0.00033
AL	0.01116	5.07	202.238	0.03463	0.00925	-0.01039
AS	-0.00115	-2.18	3.160	-0.00112	-0.00119	-0.00114
B	0.00024	-5.92	414.912	0.00128	-0.00066	0.00009
BA	-0.00010	101.83	9.866	-0.00010	-0.00009	-0.00010
BE	0.00009	-80.47	25.569	0.00011	0.00007	0.00008
CA	-0.00973	73.98	22.631	-0.01110	-0.00719	-0.01090
CD	0.00034	0.54	32.120	0.00045	0.00023	0.00035
CO	-0.00037	-2.09	43.116	-0.00021	-0.00052	-0.00036
CR	-0.00004	-3.72	568.620	-0.00030	0.00015	0.00003
CU	-0.00077	171.47	82.959	-0.00129	-0.00006	-0.00095
FE	-0.00426	3.46	171.497	-0.00692	-0.00985	0.00400
K	0.03831	111.06	57.248	0.06328	0.02944	0.02220
LI	-0.00231	61.97	83.714	-0.00289	-0.00389	-0.00015
MG	0.00086	2.11	59.061	0.00069	0.00045	0.00143
MN	-0.00002	11.97	31.618	-0.00001	-0.00002	-0.00002
MO	0.00000	2.68	3719.449	-0.00011	0.00024	-0.00012
NA	-0.05586	106.31	9.116	-0.05556	-0.06109	-0.05092
NI	-0.00022	18.05	53.036	-0.00030	-0.00009	-0.00027
P	-0.00115	-0.13	108.636	-0.00096	-0.00001	-0.00248
PB	0.00352	2.12	72.976	0.00635	0.00135	0.00285
S	0.00108	1.09	279.517	-0.00241	0.00295	0.00271
SB	-0.00037	-4.77	432.268	0.00036	0.00074	-0.00221
SE	0.00307	5.12	27.771	0.00220	0.00311	0.00390
SI	0.01242	7.19	15.767	0.01187	0.01079	0.01459
SN	-0.00128	0.54	65.481	-0.00222	-0.00104	-0.00059
SR	0.00004	-13.92	22.466	0.00004	0.00004	0.00003
TI	0.00002	28.15	370.529	0.00011	0.00000	-0.00004
TL	0.00087	0.40	75.878	0.00044	0.00162	0.00054
V	-0.00002	-8.58	852.926	0.00011	0.00006	-0.00024
Y1	15802.85013	15,802.85	0.056	15805.04230	15810.33109	15793.17700
Y2A	624570.29654	624,570.30	0.379	621913.50000	626443.33333	625354.05629
Y2R	32990.65513	32,990.66	0.465	32881.53432	33166.03510	32924.39597
ZN	-0.00236	15.43	1.172	-0.00238	-0.00233	-0.00238
ZR	0.00000	2.47	9838.329	0.00186	0.00138	-0.00324

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 36 Date/Time: 11/11/2013 02:55

Sample Number: **7266807** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.03	518.244	-0.00046	0.00085	0.00000
AL	0.64605	108.42	3.391	0.66408	0.62167	0.65241
AS	-0.00073	-2.25	202.141	-0.00163	0.00098	-0.00154
B	0.03500	121.63	5.434	0.03286	0.03566	0.03649
BA	0.06369	52,262.14	0.627	0.06414	0.06354	0.06339
BE	0.00006	-86.48	33.899	0.00005	0.00005	0.00009
CA	61.71819	65,312.60	0.434	62.01919	61.50669	61.62867
CD	0.00057	6.56	9.089	0.00053	0.00055	0.00063
CO	0.00022	1.06	104.685	-0.00003	0.00041	0.00027
CR	0.00248	23.08	15.992	0.00293	0.00228	0.00222
CU	0.00255	231.73	2.787	0.00258	0.00260	0.00247
FE	2.29238	872.63	0.378	2.28430	2.29131	2.30154
K	3.86486	1,123.51	1.135	3.82568	3.91224	3.85666
LI	-0.00092	78.43	440.038	-0.00001	-0.00536	0.00261
MG	26.32628	65,711.24	0.357	26.43469	26.27250	26.27165
MN	0.41572	27,164.60	0.482	0.41788	0.41537	0.41392
MO	0.00098	5.73	20.037	0.00118	0.00079	0.00097
NA	93.96964	116,234.73	0.407	94.39436	93.65140	93.86316
NI	0.00147	22.04	19.109	0.00177	0.00123	0.00140
P	0.28371	141.05	0.244	0.28432	0.28296	0.28386
PB	0.00985	8.75	10.707	0.00906	0.01105	0.00945
S	4.99977	1,319.85	0.041	5.00030	5.00148	4.99752
SB	-0.00207	-5.73	94.701	-0.00262	-0.00370	0.00011
SE	-0.00027	3.87	343.048	-0.00033	0.00068	-0.00115
SI	7.35845	1,775.74	0.548	7.39319	7.31425	7.36790
SN	-0.00046	1.39	101.921	0.00007	-0.00082	-0.00063
SR	0.18219	159,277.55	0.598	0.18342	0.18181	0.18134
TI	0.02579	1,582.74	0.816	0.02601	0.02559	0.02577
TL	0.00053	0.38	266.421	-0.00053	-0.00002	0.00215
V	0.00200	30.61	7.096	0.00203	0.00185	0.00213
Y1	15530.13683	15,530.14	0.094	15514.24438	15543.11004	15533.05606
Y2A	580549.18713	580,549.19	0.496	577385.20239	581238.88520	583023.47379
Y2R	32867.94320	32,867.94	0.196	32939.98402	32815.55456	32848.29103
ZN	0.01502	172.08	0.166	0.01499	0.01504	0.01503
ZR	0.00037	3.48	73.051	0.00006	0.00058	0.00047

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 37 Date/Time: 11/11/2013 02:59

Sample Number: **7266810** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00043	-18.94	98.275	0.00041	0.00086	0.00002
AL	0.51235	87.50	1.269	0.51747	0.50504	0.51455
AS	0.00848	-1.18	5.880	0.00832	0.00808	0.00904
B	0.03162	161.96	1.796	0.03204	0.03097	0.03184
BA	0.13270	112,216.96	0.119	0.13253	0.13283	0.13275
BE	0.00014	-49.48	8.323	0.00015	0.00013	0.00013
CA	19.70756	21,164.75	0.113	19.69586	19.73322	19.69361
CD	0.00047	47.56	10.815	0.00046	0.00053	0.00043
CO	0.00209	10.29	11.597	0.00213	0.00182	0.00230
CR	0.00204	19.13	16.071	0.00205	0.00171	0.00237
CU	0.00687	277.43	16.106	0.00811	0.00597	0.00654
FE	27.96776	10,650.67	0.072	27.94725	27.96836	27.98768
K	1.92533	616.10	5.641	2.02601	1.93974	1.81025
LI	-0.00141	71.10	120.440	0.00053	-0.00262	-0.00213
MG	7.97699	20,245.55	0.221	7.97740	7.99441	7.95915
MN	2.05605	138,640.10	0.104	2.05484	2.05480	2.05851
MO	-0.00018	2.07	91.453	-0.00037	-0.00010	-0.00007
NA	54.89136	68,638.81	0.194	54.80200	55.00922	54.86285
NI	0.00162	21.25	14.179	0.00186	0.00159	0.00141
P	0.30091	151.38	0.307	0.30178	0.29994	0.30103
PB	0.04353	41.51	1.608	0.04272	0.04389	0.04397
S	4.52715	1,209.54	0.279	4.52964	4.53836	4.51346
SB	0.00000	-4.50	)476.722	0.00037	0.00046	-0.00083
SE	-0.00148	4.07	63.444	-0.00056	-0.00145	-0.00243
SI	9.04604	2,203.50	0.202	9.03082	9.06624	9.04106
SN	-0.00015	1.74	284.332	0.00005	-0.00064	0.00014
SR	0.11219	101,233.55	0.120	0.11204	0.11228	0.11225
TI	0.02056	1,307.94	1.240	0.02057	0.02081	0.02030
TL	-0.00369	-1.20	36.031	-0.00216	-0.00460	-0.00430
V	0.00220	45.32	4.752	0.00215	0.00232	0.00214
Y1	15716.99602	15,717.00	0.114	15703.96776	15709.55896	15737.46133
Y2A	599300.40367	599,300.40	0.135	599748.09224	598367.86662	599785.25216
Y2R	33191.61867	33,191.62	0.364	33174.50199	33080.17551	33320.17850
ZN	0.04211	441.32	0.517	0.04201	0.04195	0.04235
ZR	-0.00073	0.50	222.636	0.00018	-0.00259	0.00023

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 38 Date/Time: 11/11/2013 03:02

Sample Number: **7266811** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-21.90	135.244	0.00002	0.00002	0.00025
AL	0.21870	39.17	4.145	0.20995	0.21811	0.22805
AS	0.00511	-0.92	24.458	0.00366	0.00578	0.00587
B	0.02903	122.74	3.065	0.02841	0.02863	0.03005
BA	0.09936	83,885.38	0.950	0.09835	0.09952	0.10022
BE	0.00009	-75.71	31.018	0.00006	0.00009	0.00011
CA	19.09107	20,477.36	0.184	19.10169	19.11972	19.05181
CD	0.00053	22.73	7.282	0.00048	0.00054	0.00056
CO	0.00082	3.91	49.032	0.00056	0.00129	0.00062
CR	0.00089	6.53	60.155	0.00074	0.00148	0.00044
CU	0.00268	219.38	34.926	0.00248	0.00370	0.00186
FE	12.43872	4,744.73	0.405	12.47247	12.46281	12.38087
K	2.03635	644.93	1.051	2.04228	2.01262	2.05416
LI	-0.00339	56.54	25.103	-0.00416	-0.00247	-0.00353
MG	7.88559	19,986.35	0.267	7.90794	7.88259	7.86622
MN	1.48641	100,014.97	0.720	1.47524	1.48745	1.49656
MO	0.00009	2.92	262.249	-0.00008	0.00034	0.00000
NA	54.71784	68,326.70	0.352	54.87010	54.78193	54.50147
NI	0.00109	20.72	42.827	0.00073	0.00162	0.00093
P	0.14027	70.76	1.137	0.14168	0.13854	0.14059
PB	0.02166	20.28	12.329	0.02173	0.01895	0.02429
S	4.37908	1,169.19	0.235	4.38198	4.38762	4.36765
SB	-0.00113	-5.21	98.700	-0.00214	0.00006	-0.00131
SE	0.00034	4.47	555.360	0.00241	-0.00015	-0.00124
SI	7.70028	1,873.71	0.145	7.68888	7.71120	7.70078
SN	-0.00008	1.81	408.932	0.00013	0.00010	-0.00047
SR	0.10905	98,187.25	0.779	0.10813	0.10922	0.10981
TI	0.00944	613.24	2.082	0.00927	0.00966	0.00941
TL	-0.00282	-0.96	27.386	-0.00218	-0.00261	-0.00368
V	0.00112	17.81	9.175	0.00102	0.00111	0.00123
Y1	15706.01889	15,706.02	0.054	15711.57285	15696.17010	15710.31373
Y2A	598020.07299	598,020.07	0.796	602763.60319	598047.69409	593248.92170
Y2R	33145.27297	33,145.27	0.219	33073.22500	33144.41118	33218.18272
ZN	0.02088	235.86	0.272	0.02081	0.02091	0.02091
ZR	0.00118	5.72	42.200	0.00061	0.00153	0.00139

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 39 Date/Time: 11/11/2013 03:06

Sample Number: **7266819** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-23.81	78.040	0.00002	0.00007	0.00013
AL	1.42952	238.38	0.964	1.43595	1.41370	1.43892
AS	0.00825	-0.49	12.292	0.00708	0.00879	0.00889
B	0.02776	134.10	2.896	0.02684	0.02811	0.02832
BA	0.07289	61,451.29	0.384	0.07262	0.07288	0.07318
BE	0.00041	88.36	2.705	0.00042	0.00040	0.00040
CA	25.30889	27,156.89	0.626	25.47879	25.16552	25.28237
CD	0.00121	44.06	16.131	0.00108	0.00113	0.00144
CO	0.01189	59.57	3.213	0.01231	0.01156	0.01181
CR	0.00601	62.03	3.600	0.00623	0.00600	0.00580
CU	0.01111	342.86	4.750	0.01076	0.01085	0.01171
FE	21.03173	8,021.94	0.549	21.16448	20.97610	20.95461
K	4.13209	1,206.42	0.452	4.14059	4.14500	4.11069
LI	0.00077	87.56	243.061	0.00080	-0.00112	0.00264
MG	9.86497	25,027.92	0.394	9.90738	9.85661	9.83092
MN	1.67241	112,282.15	0.532	1.66573	1.66899	1.68251
MO	0.00182	8.55	19.296	0.00155	0.00170	0.00222
NA	53.56486	67,006.26	0.463	53.85103	53.41555	53.42800
NI	0.00688	35.90	11.688	0.00744	0.00725	0.00596
P	0.37890	191.69	0.660	0.37634	0.38133	0.37902
PB	0.02753	27.08	1.494	0.02711	0.02756	0.02793
S	10.90852	2,931.56	0.241	10.93848	10.89797	10.88912
SB	-0.00057	-4.88	237.467	-0.00176	-0.00084	0.00090
SE	0.00211	5.33	13.979	0.00215	0.00180	0.00239
SI	13.12017	3,195.07	0.366	13.17479	13.08449	13.10124
SN	0.00081	2.77	52.494	0.00126	0.00041	0.00076
SR	0.09654	86,721.82	0.434	0.09613	0.09651	0.09697
TI	0.04409	2,763.30	0.586	0.04390	0.04399	0.04439
TL	-0.00385	-1.42	8.518	-0.00351	-0.00417	-0.00386
V	0.00558	107.46	5.165	0.00590	0.00551	0.00533
Y1	15815.16057	15,815.16	0.255	15770.01665	15827.89232	15847.57275
Y2A	596698.65627	596,698.66	0.490	598434.05773	598340.49436	593321.41672
Y2R	33202.81312	33,202.81	0.442	33040.74351	33326.48881	33241.20703
ZN	0.06154	614.27	0.572	0.06186	0.06116	0.06159
ZR	0.00134	6.19	20.982	0.00124	0.00166	0.00113

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 40

Date/Time: 11/11/2013 03:10

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00518	71.35	4.392	0.00492	0.00527	0.00534
AL	0.20393	36.52	7.831	0.22097	0.20148	0.18932
AS	0.01881	6.96	13.385	0.01752	0.02171	0.01720
B	0.04700	170.22	1.770	0.04604	0.04744	0.04752
BA	0.00529	4,785.13	1.279	0.00522	0.00534	0.00532
BE	0.00495	2,504.90	1.490	0.00487	0.00502	0.00495
CA	0.19068	286.61	0.491	0.18972	0.19071	0.19160
CD	0.00534	52.37	0.681	0.00534	0.00537	0.00530
CO	0.00441	21.97	3.797	0.00436	0.00460	0.00428
CR	0.01496	164.55	0.968	0.01483	0.01512	0.01493
CU	0.00931	322.43	2.217	0.00909	0.00932	0.00950
FE	0.19804	80.13	5.201	0.19324	0.20986	0.19101
K	0.54574	245.30	12.323	0.58809	0.58094	0.46819
LI	0.01679	199.46	16.322	0.01366	0.01876	0.01794
MG	0.09780	246.81	1.125	0.09718	0.09907	0.09714
MN	0.00512	368.20	1.397	0.00505	0.00519	0.00510
MO	0.01017	35.70	1.732	0.01036	0.01014	0.01002
NA	0.94103	1,339.15	0.900	0.93198	0.94234	0.94876
NI	0.01007	45.87	5.312	0.00948	0.01052	0.01022
P	0.09622	49.23	0.924	0.09725	0.09571	0.09571
PB	0.01881	16.39	7.455	0.02005	0.01729	0.01911
S	0.48246	130.95	0.922	0.48044	0.48755	0.47937
SB	0.01919	7.55	8.715	0.02074	0.01940	0.01742
SE	0.02068	11.98	12.843	0.01763	0.02193	0.02249
SI	0.06329	19.43	10.805	0.05731	0.07075	0.06181
SN	0.01948	22.83	0.848	0.01962	0.01930	0.01952
SR	0.00516	4,745.18	1.525	0.00507	0.00522	0.00518
TI	0.00997	666.93	1.500	0.00981	0.01001	0.01010
TL	0.02922	15.31	5.698	0.02796	0.03111	0.02860
V	0.00512	92.05	4.484	0.00485	0.00523	0.00527
Y1	15878.84335	15,878.84	0.146	15898.84290	15853.51542	15884.17172
Y2A	617064.51395	617,064.51	0.988	623834.16667	612003.98142	615355.39378
Y2R	32917.23155	32,917.23	0.898	33117.17348	32577.72564	33056.79554
ZN	0.01974	217.49	0.447	0.01971	0.01967	0.01984
ZR	0.04915	136.64	2.171	0.05035	0.04876	0.04833

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 41

Date/Time: 11/11/2013 03:13

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00069	-38.90	42.155	0.00079	0.00092	0.00036
AL	497.66448	79,514.27	0.807	502.09809	496.61840	494.27696
AS	0.00332	-0.18	120.965	-0.00131	0.00543	0.00585
B	0.00512	344.62	91.003	0.00064	0.00478	0.00995
BA	0.00038	440.20	3.348	0.00037	0.00039	0.00038
BE	-0.00033	-255.17	6.674	-0.00035	-0.00031	-0.00032
CA	498.28175	485,674.02	0.798	502.69836	497.16709	494.97981
CD	0.00039	296.49	93.171	0.00002	0.00040	0.00074
CO	0.00223	9.79	12.117	0.00254	0.00207	0.00208
CR	0.00203	16.70	14.208	0.00198	0.00177	0.00234
CU	-0.00080	280.47	79.510	-0.00152	-0.00055	-0.00033
FE	199.50165	69,044.89	0.798	201.29584	198.94679	198.26231
K	0.04355	105.73	114.481	0.02027	0.10078	0.00959
LI	0.00013	125.63	1370.558	0.00039	-0.00171	0.00170
MG	493.00182	957,322.61	0.502	495.82538	491.97355	491.20654
MN	0.00324	203.93	1.280	0.00329	0.00322	0.00322
MO	-0.00145	-1.82	40.630	-0.00165	-0.00191	-0.00079
NA	0.01526	182.88	34.859	0.00996	0.02060	0.01521
NI	0.00333	14.55	4.553	0.00348	0.00332	0.00318
P	0.01413	6.84	17.770	0.01623	0.01480	0.01135
PB	0.00184	81.12	126.807	0.00452	0.00076	0.00024
S	0.00010	0.75	5556.531	-0.00097	-0.00504	0.00632
SB	-0.01484	-12.50	20.179	-0.01787	-0.01476	-0.01188
SE	0.00153	6.35	216.420	0.00033	-0.00102	0.00528
SI	0.02559	9.76	34.518	0.01539	0.03084	0.03053
SN	0.00276	4.38	59.148	0.00116	0.00268	0.00442
SR	0.00246	1,918.53	0.619	0.00248	0.00245	0.00246
TI	-0.00060	-10.07	23.117	-0.00075	-0.00050	-0.00054
TL	0.00596	2.76	38.211	0.00389	0.00559	0.00840
V	-0.00217	35.87	15.817	-0.00246	-0.00226	-0.00179
Y1	14260.32191	14,260.32	0.088	14252.04022	14274.69616	14254.22936
Y2A	528074.62398	528,074.62	0.386	527643.49701	530291.97080	526288.40411
Y2R	31020.45359	31,020.45	0.547	30876.59553	30977.14785	31207.61738
ZN	0.01107	286.98	1.486	0.01106	0.01091	0.01124
ZR	0.00392	12.42	72.150	0.00065	0.00557	0.00552

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 42

Date/Time: 11/11/2013 03:17

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21925	3,312.16	0.627	0.21882	0.22079	0.21814
AL	495.78798	78,559.79	0.443	498.16642	493.83756	495.35995
AS	0.10240	40.53	3.807	0.09920	0.10674	0.10125
B	0.00676	348.37	20.644	0.00517	0.00735	0.00777
BA	0.49704	368,921.09	0.699	0.49401	0.50083	0.49627
BE	0.51484	233,584.17	0.494	0.51229	0.51737	0.51484
CA	501.22386	484,492.59	0.052	501.49291	500.96843	501.21024
CD	0.96005	9,138.91	0.067	0.95966	0.96079	0.95970
CO	0.49106	2,201.22	0.116	0.49142	0.49135	0.49040
CR	0.49397	4,724.82	0.124	0.49328	0.49444	0.49420
CU	0.52883	7,147.00	0.363	0.52809	0.53101	0.52738
FE	199.16302	68,370.95	0.468	200.20076	198.40071	198.88758
K	0.02154	99.43	57.291	0.03543	0.01734	0.01185
LI	-0.00067	119.52	127.879	-0.00003	-0.00034	-0.00164
MG	490.04744	945,112.20	0.062	489.82318	490.39403	489.92512
MN	0.48518	28,758.35	0.403	0.48470	0.48733	0.48351
MO	-0.00146	-1.83	35.315	-0.00151	-0.00194	-0.00092
NA	-0.00202	161.42	665.048	-0.00027	-0.01622	0.01044
NI	0.97358	2,348.36	0.100	0.97421	0.97407	0.97246
P	0.01207	7.05	1.806	0.01225	0.01183	0.01214
PB	0.05553	125.34	4.805	0.05826	0.05542	0.05293
S	-0.00751	-1.09	57.691	-0.01213	-0.00353	-0.00687
SB	0.61366	343.67	0.706	0.60932	0.61368	0.61799
SE	0.05170	23.79	7.991	0.05589	0.04763	0.05158
SI	0.02086	8.61	35.929	0.01225	0.02442	0.02590
SN	0.00434	5.87	32.445	0.00405	0.00587	0.00310
SR	0.00242	1,875.45	0.644	0.00240	0.00243	0.00242
TI	-0.00014	22.24	15.686	-0.00012	-0.00014	-0.00017
TL	0.10281	49.23	3.097	0.10618	0.10241	0.09985
V	0.49982	8,555.49	0.231	0.49851	0.50068	0.50028
Y1	14191.40307	14,191.40	0.088	14199.71600	14177.06063	14197.43259
Y2A	526653.14643	526,653.15	0.392	528111.97744	524289.06768	527558.39416
Y2R	30767.43977	30,767.44	0.138	30746.82944	30739.13586	30816.35402
ZN	1.02202	8,556.46	0.122	1.02254	1.02293	1.02060
ZR	0.00717	20.59	35.491	0.00546	0.01009	0.00595

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 43

Date/Time: 11/11/2013 03:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50008	8,563.20	0.666	0.49716	0.49936	0.50371
AL	24.80355	3,977.16	0.939	24.70185	25.07007	24.63874
AS	0.48773	217.00	0.031	0.48790	0.48768	0.48762
B	0.48678	1,786.91	0.792	0.48915	0.48233	0.48886
BA	0.49785	413,709.35	0.647	0.49806	0.49454	0.50097
BE	0.49689	252,395.03	0.544	0.49511	0.49557	0.50000
CA	24.68415	25,748.02	0.667	24.63778	24.86692	24.54774
CD	0.49561	5,080.78	0.243	0.49424	0.49612	0.49648
CO	0.49169	2,438.60	0.114	0.49107	0.49217	0.49184
CR	0.50203	5,375.90	0.707	0.50016	0.49980	0.50612
CU	0.49178	7,316.43	0.791	0.48852	0.49073	0.49608
FE	24.61789	9,120.88	0.725	24.59048	24.80851	24.45469
K	24.79357	6,542.49	0.851	24.68149	25.03708	24.66213
LI	0.48922	3,536.57	0.636	0.48701	0.49277	0.48787
MG	24.10007	59,114.48	0.704	24.03453	24.29270	23.97297
MN	0.49655	32,950.66	0.743	0.49377	0.49516	0.50074
MO	0.50453	1,618.84	0.118	0.50519	0.50436	0.50404
NA	24.30918	29,651.74	0.660	24.26967	24.48581	24.17207
NI	0.49473	1,333.70	0.075	0.49472	0.49511	0.49437
P	0.49466	248.70	0.215	0.49475	0.49568	0.49356
PB	0.50211	466.94	0.392	0.49994	0.50260	0.50377
S	24.06911	6,408.21	0.025	24.06830	24.07559	24.06343
SB	0.50807	311.95	0.225	0.50690	0.50813	0.50919
SE	0.48023	188.18	0.620	0.48186	0.47679	0.48203
SI	25.23529	5,969.52	0.698	25.14474	25.43841	25.12272
SN	0.50550	537.62	0.285	0.50547	0.50407	0.50696
SR	0.49446	439,113.14	0.682	0.49096	0.49474	0.49769
TI	0.50865	31,241.47	0.522	0.50760	0.50669	0.51167
TL	0.49173	255.92	0.432	0.49103	0.49004	0.49411
V	0.50578	9,530.61	0.745	0.50280	0.50453	0.51002
Y1	15670.43437	15,670.43	0.168	15697.20379	15644.63538	15669.46394
Y2A	589622.64986	589,622.65	0.549	591744.94028	591226.85800	585896.15129
Y2R	32273.64880	32,273.65	0.613	32410.82134	32046.79705	32363.32801
ZN	0.49044	4,493.14	0.027	0.49029	0.49053	0.49051
ZR	0.49709	1,332.87	1.125	0.49759	0.50241	0.49126

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 44

Date/Time: 11/11/2013 03:25

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00020	-25.43	129.284	-0.00037	0.00010	-0.00032
AL	0.00123	3.36	650.701	0.00372	-0.00775	0.00773
AS	-0.00036	-1.82	59.463	-0.00061	-0.00021	-0.00027
B	-0.00059	-8.85	245.715	0.00075	-0.00038	-0.00214
BA	-0.00008	111.58	15.525	-0.00007	-0.00010	-0.00008
BE	0.00010	-73.23	20.721	0.00011	0.00007	0.00010
CA	-0.00354	78.51	49.645	-0.00190	-0.00332	-0.00539
CD	0.00047	1.86	21.283	0.00043	0.00040	0.00058
CO	-0.00050	-2.77	6.926	-0.00054	-0.00047	-0.00050
CR	-0.00022	-5.68	157.970	0.00014	-0.00024	-0.00057
CU	-0.00014	177.20	546.069	-0.00025	0.00067	-0.00084
FE	-0.00197	4.22	69.736	-0.00268	-0.00039	-0.00285
K	0.01610	102.50	117.218	-0.00552	0.02929	0.02453
LI	-0.00277	57.24	73.889	-0.00513	-0.00161	-0.00156
MG	0.00598	14.67	20.210	0.00736	0.00515	0.00541
MN	-0.00011	5.70	51.912	-0.00006	-0.00010	-0.00017
MO	0.00000	2.65	3429.887	0.00007	-0.00014	0.00006
NA	-0.06696	90.19	11.055	-0.07150	-0.07095	-0.05842
NI	0.00009	18.81	378.997	0.00039	-0.00026	0.00013
P	-0.00178	-0.44	35.432	-0.00106	-0.00226	-0.00200
PB	0.00329	1.90	79.716	0.00046	0.00377	0.00564
S	0.00050	0.93	426.033	0.00261	0.00048	-0.00161
SB	-0.00061	-4.90	231.015	0.00042	-0.00221	-0.00003
SE	0.00212	4.74	62.622	0.00241	0.00327	0.00067
SI	0.00161	4.46	310.905	-0.00013	0.00726	-0.00230
SN	-0.00095	0.89	89.779	-0.00157	-0.00130	0.00002
SR	0.00002	-24.80	52.701	0.00002	0.00004	0.00002
TI	0.00005	29.55	27.764	0.00007	0.00005	0.00004
TL	-0.00040	-0.26	164.748	0.00036	-0.00071	-0.00086
V	0.00046	1.03	45.297	0.00025	0.00045	0.00067
Y1	15755.27011	15,755.27	0.140	15780.65144	15740.45833	15744.70055
Y2A	611050.32073	611,050.32	0.797	607421.78169	616582.36563	609146.81486
Y2R	32149.09891	32,149.10	0.592	32036.31369	32368.78494	32042.19809
ZN	-0.00245	14.65	5.077	-0.00241	-0.00235	-0.00259
ZR	-0.00147	-1.53	76.665	-0.00058	-0.00275	-0.00109

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ICP-AES Run Data Report

1331606T71

Reviewed By
John W Yanzuk

Reviewed Date
11/13/2013 2:07AM

Data File Name 1331606T71.TXT
Run Name: 1331606T71

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:12AM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/12/2013 22:56

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00238	48.039	-0.00120	-0.00245	-0.00347
AL	0.000	0.00472	80.391	0.00086	0.00485	0.00844
AS	0.000	-0.00554	42.860	-0.00790	-0.00315	-0.00556
B	0.000	0.00001	157.260	0.00000	0.00003	0.00000
BA	0.000	0.00018	17.935	0.00016	0.00016	0.00021
BE	0.000	-0.01202	6.859	-0.01281	-0.01210	-0.01117
CA	0.000	0.00332	5.919	0.00311	0.00335	0.00350
CD	0.000	0.00485	76.231	0.00059	0.00726	0.00668
CO	0.000	-0.00713	12.299	-0.00813	-0.00650	-0.00677
CR	0.000	-0.00001	69.201	-0.00001	-0.00002	0.00000
CU	0.000	0.01465	4.816	0.01440	0.01410	0.01545
FE	0.000	0.00011	31.511	0.00008	0.00015	0.00009
K	0.000	0.18493	27.049	0.18052	0.13726	0.23700
LI	0.000	0.00043	69.112	0.00051	0.00010	0.00068
MG	0.000	0.00010	86.782	0.00016	0.00015	0.00000
MN	0.000	0.00104	56.243	0.00098	0.00165	0.00049
MO	0.000	0.00744	18.719	0.00839	0.00808	0.00584
NA	0.000	0.00394	5.746	0.00375	0.00419	0.00387
NI	0.000	0.06271	4.216	0.06288	0.06527	0.05999
P	0.000	0.00001	405.662	0.00002	-0.00003	0.00004
PB	0.000	0.00985	20.730	0.00762	0.01164	0.01029
S	0.000	0.00015	37.149	0.00019	0.00017	0.00008
SB	0.000	-0.00042	4.417	-0.00041	-0.00044	-0.00041
SE	0.000	0.01109	21.281	0.01036	0.00918	0.01373
SI	0.000	0.00017	23.838	0.00014	0.00022	0.00015
SN	0.000	0.00407	22.042	0.00385	0.00330	0.00506
SR	0.000	-0.00012	14.929	-0.00010	-0.00013	-0.00013
TI	0.000	0.00433	30.150	0.00310	0.00570	0.00418
TL	0.000	0.00150	85.723	0.00212	0.00002	0.00235
V	0.000	-0.00114	22.593	-0.00137	-0.00086	-0.00119
Y1	0.000	15738.49110	0.074	15725.14088	15743.61335	15746.71907
Y2A	0.000	452650.81840	0.281	453367.25282	453404.67817	451180.52422
Y2R	0.000	29119.35362	0.452	29109.11089	29255.84894	28993.10104
ZN	0.000	0.05360	4.738	0.05454	0.05554	0.05072
ZR	0.000	0.00028	34.738	0.00026	0.00019	0.00038

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/12/2013 23:00

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	14.65953	0.291	14.64106	14.62927	14.70827
CA	50.000	2.13471	0.419	2.13470	2.12577	2.14367
FE	50.000	0.69077	0.384	0.69040	0.68832	0.69359
K	50.000	27.90847	0.214	27.86480	27.88414	27.97648
MG	50.000	4.40754	0.352	4.40653	4.39255	4.42354
NA	50.000	2.47136	0.305	2.47097	2.46402	2.47909
S	50.000	0.83024	0.159	0.83166	0.82999	0.82906
SI	50.000	0.43194	0.347	0.43117	0.43098	0.43367
Y1	50.000	15288.35431	0.153	15265.52707	15287.19189	15312.34397
Y2R	50.000	28787.34006	0.365	28785.14080	28893.40977	28683.46959

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/12/2013 23:04

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.87086	0.800	1.86220	1.88813	1.86225
AS	1.000	1.45918	0.918	1.46531	1.46842	1.44382
B	1.000	0.02083	0.780	0.02085	0.02098	0.02066
BA	1.000	1.78208	0.699	1.77662	1.79634	1.77328
BE	1.000	60.51794	0.438	60.47255	60.80306	60.27821
CD	1.000	34.72583	0.815	34.89021	34.88817	34.39911
CO	1.000	17.42726	0.898	17.53147	17.50310	17.24721
CU	1.000	1.62109	0.567	1.61772	1.63150	1.61406
LI	1.000	0.32071	0.460	0.31931	0.32057	0.32225
MN	1.000	7.23976	0.983	7.22522	7.31706	7.17701
NI	1.000	9.24308	0.757	9.28578	9.28107	9.16238
P	1.000	0.03289	0.491	0.03293	0.03302	0.03271
PB	1.000	3.38352	0.434	3.39189	3.39210	3.36657
SE	1.000	1.21957	0.866	1.22693	1.22433	1.20747
SR	1.000	1.88198	0.908	1.87391	1.90160	1.87043
TL	1.000	1.84759	0.525	1.85423	1.85208	1.83645
Y1	1.000	15524.49947	0.619	15470.29382	15467.70584	15635.49873
Y2A	1.000	442105.87260	0.679	442386.56271	438975.38155	444955.67352
Y2R	1.000	29259.14826	0.570	29447.47757	29199.41165	29130.55556
ZN	1.000	29.06735	0.746	29.22785	29.15357	28.82063

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 4

Date/Time: 11/12/2013 23:08

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.02542	0.416	0.02534	0.02554	0.02537
MO	1.000	11.55889	0.128	11.57069	11.56364	11.54234
SB	1.000	0.04030	0.209	0.04027	0.04023	0.04039
SN	1.000	3.83129	0.114	3.83204	3.82658	3.83525
TI	1.000	6.11362	0.506	6.10489	6.14796	6.08800
V	1.000	2.10463	0.430	2.09798	2.11492	2.10098
Y1	1.000	15709.42362	0.176	15712.32543	15735.54697	15680.39845
Y2A	1.000	458659.37846	0.400	459314.29993	456587.65760	460076.17784
Y2R	1.000	29384.51464	0.741	29619.76419	29343.38397	29190.39576
ZR	1.000	0.10684	1.161	0.10541	0.10748	0.10764

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/12/2013 23:11

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.61767	10,150.82	0.758	0.62269	0.61688	0.61343
AL	31.44807	5,381.67	0.176	31.45152	31.50154	31.39114
AS	0.61026	271.23	0.387	0.61176	0.61149	0.60754
B	0.60001	5,643.00	0.979	0.60621	0.59929	0.59453
BA	0.61104	478,554.91	0.500	0.61326	0.61230	0.60756
BE	0.60316	320,810.90	0.710	0.60612	0.60510	0.59825
CA	31.07332	38,827.11	0.192	31.00439	31.10863	31.10692
CD	0.60816	6,569.86	0.141	0.60842	0.60886	0.60720
CO	0.60658	3,269.88	0.089	0.60654	0.60714	0.60607
CR	0.60363	6,741.75	0.905	0.60686	0.60672	0.59732
CU	0.61291	8,789.02	0.558	0.61512	0.61463	0.60897
FE	31.13132	12,602.00	0.098	31.10577	31.12326	31.16491
K	30.87172	10,108.17	0.205	30.86135	30.81412	30.93968
LI	0.61416	5,762.70	0.156	0.61378	0.61345	0.61525
MG	30.73315	79,714.02	0.172	30.67765	30.78275	30.73904
MN	0.60799	38,689.73	0.500	0.61100	0.60803	0.60492
MO	0.61862	2,207.69	0.220	0.61901	0.61975	0.61711
NA	30.75296	44,444.97	0.198	30.71091	30.72517	30.82280
NI	0.60965	1,747.99	0.209	0.60910	0.61111	0.60875
P	0.61659	312.97	0.315	0.61438	0.61802	0.61737
PB	0.60979	646.75	0.442	0.60674	0.61184	0.61079
S	30.57631	7,835.36	0.038	30.56818	30.57113	30.58962
SB	0.63032	390.11	0.056	0.63072	0.63005	0.63020
SE	0.60907	230.96	0.177	0.60862	0.61030	0.60829
SI	31.03902	7,834.30	0.100	31.00338	31.05463	31.05906
SN	0.60877	720.30	0.149	0.60786	0.60967	0.60877
SR	0.60660	501,665.75	0.441	0.60939	0.60634	0.60406
TI	0.62785	33,749.84	0.512	0.63037	0.62895	0.62424
TL	0.60317	344.83	0.273	0.60270	0.60500	0.60181
V	0.61546	11,394.87	0.797	0.61983	0.61641	0.61015
Y1	15430.99278	15,430.99	0.042	15424.59877	15437.56894	15430.81063
Y2A	439457.42092	439,457.42	0.606	437355.64035	438563.03915	442453.58328
Y2R	29210.29006	29,210.29	0.099	29183.11390	29207.10012	29240.65616
ZN	0.61376	5,539.81	0.103	0.61450	0.61338	0.61342
ZR	0.60773	1,899.86	0.379	0.60737	0.60563	0.61020

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 6

Date/Time: 11/12/2013 23:15

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00002	-16.33	2360.541	0.00054	-0.00056	-0.00005
AL	0.00302	3.28	427.660	0.01689	-0.00860	0.00076
AS	-0.00102	-2.13	220.516	0.00038	-0.00363	0.00018
B	0.00140	18.03	20.735	0.00140	0.00169	0.00111
BA	0.00002	94.82	62.810	0.00001	0.00003	0.00001
BE	0.00002	-89.07	2.731	0.00002	0.00002	0.00002
CA	-0.00272	93.93	153.162	-0.00377	0.00187	-0.00626
CD	0.00047	1.89	18.659	0.00038	0.00048	0.00056
CO	-0.00036	-2.06	92.426	-0.00043	0.00000	-0.00066
CR	-0.00055	-8.60	41.198	-0.00032	-0.00077	-0.00056
CU	0.00009	135.35	386.147	0.00022	-0.00032	0.00038
FE	-0.00205	2.36	372.954	0.00051	0.00398	-0.01064
K	0.04659	123.62	60.757	0.01516	0.07008	0.05454
LI	0.00084	20.44	158.801	0.00063	-0.00038	0.00225
MG	0.00193	4.33	69.501	0.00038	0.00278	0.00262
MN	-0.00004	7.10	216.957	0.00005	-0.00004	-0.00011
MO	-0.00007	2.07	143.449	-0.00003	0.00001	-0.00019
NA	-0.02032	86.07	39.952	-0.01612	-0.02968	-0.01517
NI	-0.00051	18.20	127.949	-0.00074	0.00023	-0.00102
P	-0.00164	-0.69	120.582	-0.00319	0.00059	-0.00231
PB	0.00464	3.22	19.622	0.00566	0.00435	0.00391
S	0.00098	2.57	258.537	0.00376	0.00034	-0.00117
SB	-0.00069	-5.62	203.008	-0.00214	-0.00061	0.00067
SE	-0.00197	2.73	145.341	-0.00382	0.00132	-0.00340
SI	0.01927	9.84	10.578	0.01788	0.01833	0.02161
SN	-0.00010	1.15	385.997	0.00032	-0.00046	-0.00017
SR	0.00000	-35.90	2059.006	0.00000	-0.00001	0.00000
TI	-0.00016	30.52	77.963	-0.00015	-0.00004	-0.00030
TL	0.00017	0.57	279.489	0.00019	-0.00032	0.00063
V	-0.00001	-5.70	909.303	0.00004	-0.00007	0.00001
Y1	15674.57190	15,674.57	0.110	15686.21342	15682.68249	15654.81980
Y2A	457132.70294	457,132.70	0.481	459581.65229	455330.15926	456486.29728
Y2R	29322.29504	29,322.30	0.417	29201.30608	29445.72684	29319.85221
ZN	-0.00047	12.54	16.045	-0.00040	-0.00045	-0.00055
ZR	-0.00219	1.33	88.380	-0.00402	-0.00016	-0.00239

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/12/2013 23:19

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00507	71.07	7.172	0.00532	0.00465	0.00524
AL	0.22461	41.31	12.946	0.25204	0.19412	0.22766
AS	0.01881	6.98	11.245	0.02112	0.01696	0.01836
B	0.04822	462.77	1.505	0.04740	0.04878	0.04847
BA	0.00540	4,462.82	0.723	0.00538	0.00538	0.00545
BE	0.00492	2,606.98	0.873	0.00489	0.00489	0.00496
CA	0.20553	355.43	3.282	0.20436	0.21279	0.19945
CD	0.00538	55.92	3.248	0.00554	0.00541	0.00520
CO	0.00457	25.08	7.426	0.00496	0.00436	0.00438
CR	0.01467	167.57	2.072	0.01493	0.01434	0.01474
CU	0.01087	292.43	4.704	0.01067	0.01049	0.01145
FE	0.21069	89.33	1.674	0.20694	0.21395	0.21117
K	0.49608	270.13	3.217	0.47860	0.49979	0.50986
LI	0.02139	213.90	8.124	0.02336	0.02005	0.02077
MG	0.10310	271.16	0.951	0.10275	0.10234	0.10420
MN	0.00525	355.47	0.289	0.00525	0.00527	0.00524
MO	0.00993	38.43	1.240	0.00986	0.01008	0.00987
NA	0.98032	1,536.26	0.655	0.98604	0.97337	0.98155
NI	0.01001	48.66	4.615	0.00998	0.00957	0.01049
P	0.09777	50.54	0.550	0.09734	0.09759	0.09837
PB	0.01889	18.47	7.597	0.01732	0.02013	0.01922
S	0.49154	130.63	1.457	0.48343	0.49416	0.49702
SB	0.01947	7.24	8.189	0.01785	0.02103	0.01952
SE	0.01846	10.51	10.220	0.01944	0.01967	0.01629
SI	0.06186	20.66	7.754	0.06727	0.05813	0.06018
SN	0.02027	25.68	0.781	0.02045	0.02019	0.02016
SR	0.00513	4,357.85	0.830	0.00511	0.00510	0.00518
TI	0.01012	602.33	1.736	0.01006	0.00998	0.01032
TL	0.02981	17.75	6.048	0.03125	0.03038	0.02779
V	0.00512	91.82	4.733	0.00538	0.00508	0.00489
Y1	15723.69645	15,723.70	0.119	15727.79177	15739.98533	15703.31224
Y2A	455237.24840	455,237.25	0.616	456404.51228	457270.27206	452036.96085
Y2R	29364.68584	29,364.69	0.681	29558.56431	29376.41773	29159.07548
ZN	0.02300	226.15	0.206	0.02295	0.02304	0.02301
ZR	0.04725	156.03	2.987	0.04562	0.04811	0.04802

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 8 Date/Time: 11/12/2013 23:23

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00048	-37.08	32.898	0.00066	0.00043	0.00035
AL	510.44681	86,753.63	0.204	511.27318	510.79103	509.27622
AS	-0.00036	-1.30	490.915	0.00062	0.00070	-0.00241
B	0.01307	991.88	2.267	0.01339	0.01303	0.01280
BA	0.00047	401.08	4.435	0.00049	0.00045	0.00046
BE	-0.00038	-269.67	2.468	-0.00038	-0.00038	-0.00037
CA	509.85315	593,145.65	0.176	510.53561	510.18415	508.83970
CD	-0.00129	305.88	14.055	-0.00142	-0.00108	-0.00135
CO	0.00225	11.09	14.310	0.00259	0.00195	0.00221
CR	0.00159	14.12	25.040	0.00178	0.00186	0.00113
CU	0.00021	255.88	488.793	-0.00087	0.00117	0.00033
FE	204.10592	76,909.05	0.211	204.57413	204.01935	203.72429
K	0.06842	124.65	41.690	0.08598	0.03551	0.08377
LI	0.00227	100.91	81.872	0.00012	0.00336	0.00333
MG	507.94012	1,034,242.10	0.558	510.00970	509.10114	504.70954
MN	0.00336	201.35	1.919	0.00342	0.00329	0.00336
MO	-0.00111	-1.54	22.920	-0.00138	-0.00087	-0.00109
NA	0.04002	165.40	14.085	0.03445	0.03990	0.04572
NI	0.00315	14.63	26.192	0.00220	0.00354	0.00372
P	0.01126	5.37	4.873	0.01162	0.01062	0.01152
PB	-0.00332	87.44	64.828	-0.00261	-0.00161	-0.00573
S	-0.00134	1.78	243.946	-0.00189	-0.00431	0.00217
SB	-0.01949	-15.91	19.634	-0.01796	-0.01666	-0.02384
SE	0.00364	6.67	22.551	0.00399	0.00423	0.00270
SI	0.02179	10.00	9.782	0.01933	0.02311	0.02293
SN	0.00380	5.28	8.189	0.00399	0.00344	0.00397
SR	0.00248	1,821.86	0.525	0.00249	0.00248	0.00246
TI	0.00286	173.28	6.695	0.00264	0.00301	0.00292
TL	0.00257	1.76	122.637	0.00508	0.00358	-0.00096
V	-0.00398	8.75	17.638	-0.00365	-0.00479	-0.00351
Y1	14170.76959	14,170.77	0.565	14114.40965	14135.53780	14262.36132
Y2A	397547.00685	397,547.01	0.453	395608.11796	397865.54009	399167.36249
Y2R	27962.97318	27,962.97	0.592	27841.59840	27895.76271	28151.55844
ZN	0.01179	278.35	0.560	0.01172	0.01185	0.01179
ZR	0.00340	17.90	23.427	0.00362	0.00406	0.00251

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 9 Date/Time: 11/12/2013 23:27

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22163	3,269.57	0.417	0.22064	0.22247	0.22177
AL	506.97181	86,440.61	0.044	507.23015	506.84459	506.84069
AS	0.10796	43.43	3.093	0.11059	0.10909	0.10421
B	0.01177	980.15	8.492	0.01064	0.01213	0.01254
BA	0.50514	359,419.98	0.342	0.50600	0.50315	0.50626
BE	0.50628	244,625.89	0.437	0.50396	0.50652	0.50837
CA	508.04218	593,154.17	0.184	508.44756	506.97359	508.70539
CD	0.95700	9,693.54	0.515	0.96006	0.95962	0.95131
CO	0.48673	2,393.74	0.592	0.48870	0.48806	0.48342
CR	0.48175	4,887.78	0.484	0.47982	0.48110	0.48434
CU	0.53589	7,127.26	0.387	0.53350	0.53708	0.53710
FE	202.94094	76,750.68	0.022	202.93236	202.98846	202.90200
K	0.04015	116.27	101.832	0.04609	0.07774	-0.00338
LI	0.00145	93.54	138.843	-0.00045	0.00355	0.00123
MG	510.90393	1,042,486.15	0.357	509.50288	510.24188	512.96704
MN	0.48816	28,223.04	0.146	0.48774	0.48898	0.48775
MO	-0.00157	-3.02	17.434	-0.00126	-0.00178	-0.00166
NA	0.03160	154.26	49.519	0.02408	0.04959	0.02113
NI	0.96446	2,504.19	0.455	0.96657	0.96739	0.95942
P	0.01117	6.50	18.490	0.01352	0.01037	0.00962
PB	0.04960	137.36	8.307	0.05405	0.04882	0.04592
S	-0.00652	0.55	55.126	-0.00277	-0.00994	-0.00684
SB	0.61611	350.10	0.767	0.61863	0.61904	0.61065
SE	0.05409	23.90	7.170	0.05275	0.05847	0.05107
SI	0.02489	10.78	14.103	0.02205	0.02881	0.02380
SN	0.00279	4.16	52.324	0.00381	0.00112	0.00345
SR	0.00244	1,803.63	0.441	0.00244	0.00245	0.00243
TI	0.00319	196.63	6.236	0.00326	0.00334	0.00296
TL	0.10245	54.79	3.383	0.10093	0.10641	0.09999
V	0.50183	8,584.60	0.584	0.49844	0.50363	0.50340
Y1	14106.09713	14,106.10	0.376	14064.66707	14087.73506	14165.88925
Y2A	399232.23989	399,232.24	0.258	400177.40225	399382.90258	398136.41484
Y2R	28060.05994	28,060.06	0.186	28109.53047	28005.56444	28065.08492
ZN	1.03615	8,653.34	0.611	1.03763	1.04161	1.02921
ZR	0.00440	20.98	29.278	0.00431	0.00574	0.00317

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 10 Date/Time: 11/12/2013 23:31

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50760	8,372.15	0.872	0.51021	0.50249	0.51011
AL	25.61736	4,393.99	0.198	25.55951	25.63808	25.65449
AS	0.49836	222.85	0.961	0.50349	0.49757	0.49400
B	0.49116	4,638.41	1.063	0.49149	0.48579	0.49621
BA	0.50541	397,404.34	0.921	0.50648	0.50032	0.50944
BE	0.49632	265,011.80	0.797	0.49761	0.49188	0.49947
CA	25.53528	32,018.08	0.332	25.53919	25.61796	25.44868
CD	0.49919	5,434.05	0.163	0.49986	0.49942	0.49829
CO	0.49835	2,707.38	0.180	0.49878	0.49895	0.49732
CR	0.49751	5,578.19	0.809	0.49761	0.49344	0.50149
CU	0.50442	7,284.77	1.083	0.50895	0.49836	0.50596
FE	25.48636	10,354.05	0.288	25.44819	25.57096	25.43994
K	25.15160	8,277.11	0.322	25.12204	25.24324	25.08952
LI	0.50112	4,716.76	0.451	0.50144	0.50320	0.49871
MG	25.23327	65,757.64	0.384	25.21415	25.33831	25.14736
MN	0.50061	31,983.92	0.824	0.50288	0.49585	0.50309
MO	0.50666	1,822.64	0.269	0.50665	0.50803	0.50530
NA	24.97656	36,213.84	0.295	24.99527	25.03898	24.89542
NI	0.49984	1,447.82	0.114	0.50045	0.49973	0.49933
P	0.50680	259.27	0.460	0.50949	0.50539	0.50552
PB	0.49783	531.82	0.274	0.49876	0.49846	0.49626
S	24.96261	6,447.14	0.087	24.97539	24.97492	24.93753
SB	0.51685	321.47	0.364	0.51893	0.51526	0.51637
SE	0.50011	191.74	0.319	0.49922	0.50195	0.49915
SI	25.50787	6,456.17	0.065	25.51108	25.52264	25.48989
SN	0.49899	595.24	0.669	0.50047	0.50132	0.49517
SR	0.50039	415,451.59	1.048	0.50225	0.49447	0.50445
TI	0.51629	27,869.20	0.797	0.51827	0.51156	0.51904
TL	0.49528	285.45	0.410	0.49742	0.49338	0.49504
V	0.50658	9,415.57	0.835	0.50759	0.50194	0.51022
Y1	15551.38126	15,551.38	0.185	15534.25754	15535.26582	15584.62040
Y2A	441201.27184	441,201.27	0.809	439887.19310	445239.71466	438476.90776
Y2R	29287.75701	29,287.76	0.398	29248.16404	29196.15077	29418.95621
ZN	0.50139	4,564.07	0.040	0.50160	0.50136	0.50121
ZR	0.49599	1,556.14	0.522	0.49506	0.49892	0.49400

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 11

Date/Time: 11/12/2013 23:35

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-16.52	804.458	-0.00028	-0.00008	0.00026
AL	0.01404	5.19	180.909	-0.01527	0.02785	0.02953
AS	-0.00077	-2.02	256.991	-0.00124	-0.00249	0.00141
B	0.00042	8.63	113.462	0.00096	0.00009	0.00020
BA	0.00002	99.65	42.187	0.00003	0.00001	0.00003
BE	0.00002	-92.57	87.798	0.00003	0.00000	0.00001
CA	0.00676	105.89	34.562	0.00465	0.00637	0.00927
CD	0.00049	2.11	4.020	0.00051	0.00048	0.00048
CO	-0.00037	-2.11	62.603	-0.00056	-0.00044	-0.00011
CR	-0.00051	-8.17	46.825	-0.00076	-0.00028	-0.00050
CU	0.00005	134.63	1012.816	0.00057	-0.00047	0.00005
FE	-0.00457	1.33	54.357	-0.00229	-0.00722	-0.00419
K	-0.06754	86.53	39.837	-0.03652	-0.08452	-0.08159
LI	0.00127	24.50	40.365	0.00183	0.00084	0.00112
MG	0.00802	20.36	13.722	0.00928	0.00732	0.00745
MN	-0.00008	4.13	117.516	0.00002	-0.00016	-0.00010
MO	-0.00019	1.64	52.791	-0.00024	-0.00008	-0.00027
NA	-0.02433	80.34	36.635	-0.02636	-0.01457	-0.03205
NI	-0.00042	18.49	90.337	-0.00085	-0.00023	-0.00017
P	-0.00342	-1.61	15.727	-0.00352	-0.00390	-0.00284
PB	0.00368	2.21	25.060	0.00470	0.00291	0.00343
S	-0.00012	2.29	144.367	-0.00009	0.00003	-0.00029
SB	0.00022	-5.05	358.553	0.00065	-0.00069	0.00071
SE	0.00032	3.60	530.375	-0.00041	0.00223	-0.00087
SI	0.00904	7.26	34.370	0.00569	0.00960	0.01183
SN	0.00051	1.89	201.666	0.00147	-0.00056	0.00062
SR	-0.00002	-54.03	48.086	-0.00001	-0.00003	-0.00002
TI	-0.00013	32.55	128.335	0.00006	-0.00025	-0.00019
TL	-0.00004	0.45	3136.735	-0.00110	0.00113	-0.00014
V	-0.00022	-9.87	73.519	-0.00041	-0.00009	-0.00017
Y1	15706.20233	15,706.20	0.084	15691.37814	15716.82554	15710.40331
Y2A	456885.21345	456,885.21	0.193	456208.12873	457883.11214	456564.39947
Y2R	29345.01830	29,345.02	0.569	29179.47053	29342.24241	29513.34197
ZN	-0.00048	12.49	10.257	-0.00051	-0.00042	-0.00050
ZR	-0.00091	5.33	181.325	-0.00155	-0.00215	0.00097

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/12/2013 23:38

Sample Number: **7265053** Class: U*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00030	-21.25	38.604	-0.00038	-0.00017	-0.00036
AL	2.31983	399.30	0.446	2.33158	2.31211	2.31580
AS	0.02343	8.68	6.297	0.02221	0.02301	0.02507
B	0.02406	244.77	1.394	0.02427	0.02367	0.02424
BA	0.02093	16,770.27	0.848	0.02091	0.02077	0.02112
BE	0.00019	1.93	6.957	0.00020	0.00019	0.00017
CA	5.50836	6,986.27	0.255	5.51167	5.52044	5.49298
CD	0.00030	5.77	21.592	0.00032	0.00035	0.00023
CO	0.00050	3.17	27.029	0.00034	0.00057	0.00058
CR	0.00589	64.81	2.559	0.00571	0.00598	0.00596
CU	0.00274	172.05	35.446	0.00181	0.00375	0.00267
FE	3.29580	1,345.66	0.319	3.30551	3.28463	3.29725
K	1.14000	478.31	3.172	1.13230	1.10831	1.17939
LI	0.00259	37.62	62.903	0.00166	0.00447	0.00164
MG	2.22741	5,850.80	0.399	2.22239	2.23767	2.22216
MN	0.11063	7,176.56	0.627	0.11048	0.11002	0.11138
MO	0.00077	5.10	28.159	0.00070	0.00101	0.00060
NA	21.78180	31,578.43	0.179	21.81149	21.73751	21.79641
NI	0.00220	25.73	9.645	0.00236	0.00228	0.00196
P	0.03495	18.06	3.860	0.03483	0.03635	0.03366
PB	0.00567	5.41	3.854	0.00590	0.00564	0.00546
S	3.78512	984.93	0.596	3.80949	3.76501	3.78086
SB	-0.00130	-5.97	68.340	-0.00189	-0.00172	-0.00028
SE	0.00190	4.25	43.426	0.00248	0.00226	0.00096
SI	4.49775	1,141.83	0.177	4.50639	4.49067	4.49619
SN	0.00217	3.87	7.200	0.00209	0.00207	0.00235
SR	0.03495	29,398.25	0.808	0.03490	0.03469	0.03525
TI	0.04716	2,616.43	0.878	0.04727	0.04670	0.04750
TL	0.00037	0.74	360.244	-0.00040	-0.00040	0.00190
V	0.00500	91.38	5.334	0.00479	0.00490	0.00530
Y1	15637.16193	15,637.16	0.278	15589.95667	15645.86292	15675.66620
Y2A	447513.80226	447,513.80	0.817	448211.01526	450773.12541	443557.26609
Y2R	29270.76580	29,270.77	0.135	29273.89222	29229.84403	29308.56117
ZN	0.01011	111.05	1.347	0.01018	0.00996	0.01020
ZR	0.00070	10.35	252.428	0.00140	-0.00131	0.00202

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/12/2013 23:42

Sample Number: **7265053** Class: UP** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02384	393.50	0.691	0.02396	0.02365	0.02390
AL	3.44772	593.36	1.296	3.47497	3.47203	3.39616
AS	0.50283	227.61	0.406	0.50194	0.50517	0.50139
B	0.21334	2,011.09	0.143	0.21303	0.21334	0.21364
BA	0.07168	57,227.28	0.301	0.07187	0.07145	0.07173
BE	0.01982	10,641.68	0.481	0.01991	0.01972	0.01983
CA	6.67779	8,458.61	0.265	6.65826	6.68247	6.69265
CD	0.04926	537.07	0.542	0.04908	0.04913	0.04957
CO	0.09828	535.93	0.367	0.09843	0.09787	0.09854
CR	0.20042	2,277.56	0.258	0.20013	0.20101	0.20011
CU	0.49185	7,202.20	0.224	0.49291	0.49071	0.49194
FE	3.91400	1,599.24	0.200	3.90731	3.92258	3.91209
K	3.18151	1,142.35	1.128	3.14705	3.17880	3.21867
LI	0.97158	9,133.04	0.087	0.97061	0.97197	0.97216
MG	3.28038	8,624.14	0.194	3.27461	3.28722	3.27933
MN	0.17308	11,220.17	0.275	0.17318	0.17350	0.17256
MO	0.19760	714.15	0.223	0.19711	0.19773	0.19796
NA	24.54065	35,606.62	0.221	24.48559	24.59422	24.54214
NI	0.15115	453.01	0.449	0.15174	0.15129	0.15041
P	1.02885	526.36	0.658	1.02116	1.03391	1.03148
PB	0.49441	522.08	0.425	0.49245	0.49415	0.49663
S	3.93873	1,021.91	0.208	3.93382	3.93416	3.94819
SB	0.39578	245.21	0.323	0.39458	0.39564	0.39712
SE	0.77845	296.78	0.489	0.77737	0.77530	0.78268
SI	4.65060	1,181.90	0.181	4.65712	4.64108	4.65360
SN	0.58506	699.57	0.232	0.58518	0.58365	0.58636
SR	0.05566	46,837.35	0.135	0.05575	0.05562	0.05563
TI	0.14840	8,151.82	0.769	0.14951	0.14723	0.14845
TL	0.96735	556.59	0.196	0.96521	0.96801	0.96883
V	0.10364	1,932.16	0.135	0.10377	0.10349	0.10364
Y1	15592.87655	15,592.88	0.248	15622.73448	15606.80426	15549.09091
Y2A	447413.12763	447,413.13	0.348	445789.54877	447555.93895	448893.89516
Y2R	29306.34212	29,306.34	0.142	29335.88694	29258.84232	29324.29711
ZN	0.12799	1,183.35	0.446	0.12756	0.12778	0.12864
ZR	0.96827	3,032.05	0.041	0.96835	0.96862	0.96784

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/12/2013 23:46

Sample Number: **7265053** Class: D*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00018	-19.24	67.632	-0.00020	-0.00005	-0.00030
AL	2.50981	430.59	1.062	2.51840	2.53111	2.47992
AS	0.02206	8.00	4.775	0.02159	0.02327	0.02132
B	0.02628	265.28	4.449	0.02552	0.02571	0.02763
BA	0.02168	17,287.08	0.201	0.02167	0.02173	0.02164
BE	0.00020	6.64	3.310	0.00020	0.00019	0.00019
CA	5.67433	7,173.96	0.093	5.66828	5.67654	5.67818
CD	0.00033	6.37	67.568	0.00050	0.00008	0.00040
CO	0.00066	4.11	32.020	0.00042	0.00077	0.00080
CR	0.00615	67.47	2.316	0.00629	0.00601	0.00614
CU	0.00215	162.74	10.719	0.00197	0.00241	0.00206
FE	3.49435	1,422.55	0.127	3.48976	3.49860	3.49470
K	1.22471	504.40	2.985	1.24525	1.18250	1.24637
LI	0.00229	34.73	75.572	0.00223	0.00059	0.00405
MG	2.30458	6,036.69	0.081	2.30302	2.30663	2.30408
MN	0.11413	7,370.28	0.017	0.11412	0.11415	0.11412
MO	0.00075	5.02	14.542	0.00066	0.00087	0.00073
NA	22.45535	32,461.49	0.121	22.42672	22.45832	22.48100
NI	0.00303	27.99	30.220	0.00212	0.00395	0.00301
P	0.03737	19.23	3.012	0.03866	0.03677	0.03667
PB	0.00697	6.84	2.282	0.00684	0.00692	0.00714
S	3.94267	1,022.07	0.342	3.95469	3.94521	3.92812
SB	-0.00132	-5.96	272.992	0.00218	-0.00114	-0.00499
SE	-0.00043	3.36	229.021	-0.00036	-0.00145	0.00052
SI	4.79202	1,212.86	0.253	4.79203	4.80415	4.77987
SN	0.00129	2.81	67.206	0.00118	0.00221	0.00048
SR	0.03598	30,133.54	0.253	0.03597	0.03608	0.03590
TI	0.05156	2,844.23	0.849	0.05203	0.05148	0.05116
TL	0.00014	0.60	613.516	-0.00082	0.00062	0.00061
V	0.00549	100.57	1.772	0.00540	0.00548	0.00560
Y1	15579.68721	15,579.69	0.149	15554.81847	15583.57795	15600.66520
Y2A	445495.20018	445,495.20	0.092	445316.29064	445203.41739	445965.89250
Y2R	29190.06207	29,190.06	0.268	29264.30000	29197.47303	29108.41317
ZN	0.01087	117.67	1.485	0.01105	0.01074	0.01083
ZR	0.00047	9.59	378.827	-0.00156	0.00116	0.00181

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/12/2013 23:50

Sample Number: **7265053** Class: R*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01053	163.56	4.426	0.01038	0.01015	0.01105
AL	4.91312	856.08	0.127	4.90787	4.92003	4.91146
AS	0.05409	22.74	3.824	0.05648	0.05286	0.05294
B	0.39181	3,713.59	0.573	0.39247	0.38931	0.39366
BA	0.41457	334,163.86	0.690	0.41525	0.41142	0.41702
BE	0.00979	5,264.27	0.900	0.00987	0.00969	0.00980
CA	6.28290	8,072.70	0.172	6.29374	6.27216	6.28281
CD	0.00991	111.03	0.750	0.00988	0.00999	0.00985
CO	0.09721	532.13	0.295	0.09748	0.09691	0.09725
CR	0.04605	527.30	1.748	0.04642	0.04513	0.04661
CU	0.05080	873.93	0.939	0.05076	0.05034	0.05129
FE	3.91730	1,622.37	0.036	3.91643	3.91893	3.91655
K	3.54626	1,278.02	1.733	3.47986	3.60116	3.55777
LI	0.19626	1,880.92	0.335	0.19581	0.19702	0.19596
MG	2.74405	7,313.64	0.292	2.75289	2.73724	2.74202
MN	0.20896	13,690.73	0.541	0.20957	0.20765	0.20965
MO	0.38727	1,400.14	0.129	0.38747	0.38763	0.38670
NA	23.79955	35,004.67	0.170	23.75348	23.81538	23.82981
NI	0.10217	314.41	0.762	0.10268	0.10127	0.10255
P	0.23285	119.47	0.256	0.23280	0.23348	0.23229
PB	0.03508	37.32	1.990	0.03550	0.03546	0.03427
S	4.03402	1,048.63	0.124	4.03198	4.03974	4.03036
SB	0.09759	55.80	1.640	0.09607	0.09744	0.09926
SE	0.02732	13.86	3.081	0.02809	0.02642	0.02746
SI	7.78842	2,002.87	0.500	7.77826	7.83143	7.75557
SN	0.76520	916.36	0.194	0.76565	0.76354	0.76640
SR	0.23074	196,358.61	0.537	0.23091	0.22942	0.23188
TI	0.25331	14,033.10	0.930	0.25371	0.25078	0.25543
TL	0.02890	17.30	1.757	0.02898	0.02936	0.02836
V	0.10147	1,878.46	0.423	0.10184	0.10100	0.10156
Y1	15623.37263	15,623.37	0.167	15620.83133	15598.59867	15650.68789
Y2A	452262.28710	452,262.29	0.673	450304.11413	455770.57067	450712.17651
Y2R	29705.05884	29,705.06	0.204	29774.85543	29666.03510	29674.28600
ZN	0.10887	1,006.33	0.068	0.10891	0.10891	0.10879
ZR	0.19198	615.98	0.903	0.19269	0.19324	0.19001

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/12/2013 23:53

Sample Number: **7265053** Class: M*** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00976	149.34	2.570	0.00954	0.00971	0.01003
AL	4.89872	851.23	0.263	4.90990	4.90165	4.88462
AS	0.05190	21.64	4.614	0.04933	0.05229	0.05407
B	0.38963	3,662.63	0.962	0.38726	0.38768	0.39395
BA	0.40967	327,502.31	0.636	0.40822	0.40810	0.41267
BE	0.00973	5,188.83	0.927	0.00968	0.00968	0.00983
CA	6.20409	7,950.83	0.071	6.20280	6.20045	6.20901
CD	0.00966	107.88	0.996	0.00957	0.00976	0.00965
CO	0.09539	519.85	0.562	0.09550	0.09481	0.09586
CR	0.04579	519.96	0.540	0.04553	0.04602	0.04580
CU	0.05005	855.97	1.348	0.04980	0.04954	0.05082
FE	3.92237	1,620.00	0.373	3.93131	3.90550	3.93029
K	3.48030	1,252.86	0.690	3.48734	3.45357	3.49999
LI	0.19058	1,821.83	0.733	0.19194	0.19066	0.18915
MG	2.71812	7,224.68	0.269	2.72612	2.71183	2.71641
MN	0.20618	13,397.97	0.720	0.20517	0.20549	0.20789
MO	0.38228	1,375.97	0.188	0.38284	0.38253	0.38147
NA	23.53489	34,521.85	0.213	23.52111	23.49317	23.59040
NI	0.09999	306.76	0.631	0.10062	0.09935	0.10000
P	0.23019	117.58	0.691	0.23193	0.22881	0.22982
PB	0.03498	37.05	5.357	0.03322	0.03695	0.03476
S	3.98163	1,030.42	0.221	3.99157	3.97481	3.97853
SB	0.09425	53.46	2.053	0.09251	0.09391	0.09634
SE	0.02916	14.49	4.411	0.02980	0.02768	0.03001
SI	7.78991	1,997.76	0.134	7.80048	7.78964	7.77962
SN	0.75208	896.66	0.064	0.75261	0.75198	0.75167
SR	0.22738	191,910.14	0.732	0.22640	0.22644	0.22930
TI	0.25053	13,766.07	0.610	0.24963	0.24967	0.25230
TL	0.02797	16.68	8.172	0.02985	0.02543	0.02864
V	0.10036	1,842.82	0.581	0.09975	0.10041	0.10092
Y1	15553.66123	15,553.66	0.166	15526.46847	15577.84277	15556.67244
Y2A	448548.47101	448,548.47	0.712	450378.83212	450404.01460	444862.56631
Y2R	29623.67073	29,623.67	0.301	29557.75604	29725.06491	29588.19126
ZN	0.10663	981.63	0.177	0.10675	0.10672	0.10641
ZR	0.19032	609.04	0.396	0.19118	0.18998	0.18979

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/12/2013 23:57

Sample Number: **7265053** Class: UL** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00042	-22.85	181.951	-0.00008	0.00011	-0.00131
AL	0.47733	84.17	1.832	0.46819	0.48561	0.47820
AS	0.00395	0.07	11.375	0.00421	0.00343	0.00421
B	0.00593	63.20	10.037	0.00625	0.00524	0.00629
BA	0.00445	3,631.68	1.035	0.00450	0.00441	0.00444
BE	0.00003	-83.10	27.506	0.00004	0.00003	0.00002
CA	1.14617	1,527.86	0.418	1.14792	1.14984	1.14074
CD	0.00043	2.60	25.960	0.00038	0.00055	0.00035
CO	-0.00040	-2.14	21.159	-0.00032	-0.00049	-0.00040
CR	0.00119	11.38	19.689	0.00095	0.00142	0.00120
CU	0.00023	134.78	297.751	0.00036	-0.00051	0.00083
FE	0.69307	285.04	0.918	0.69734	0.68576	0.69612
K	0.27457	197.00	15.232	0.25598	0.24525	0.32246
LI	0.00037	16.23	414.117	0.00161	0.00088	-0.00137
MG	0.46928	1,230.40	0.567	0.47042	0.46624	0.47118
MN	0.02342	1,527.57	0.621	0.02342	0.02328	0.02357
MO	0.00026	3.26	65.351	0.00015	0.00018	0.00046
NA	4.57267	6,706.72	0.495	4.54806	4.59254	4.57741
NI	0.00011	19.80	462.082	0.00020	0.00055	-0.00042
P	0.00686	3.65	8.105	0.00662	0.00750	0.00647
PB	0.00572	4.57	17.378	0.00656	0.00597	0.00462
S	0.78419	205.12	0.511	0.78040	0.78378	0.78838
SB	0.00012	-5.06	1275.861	-0.00006	0.00178	-0.00135
SE	-0.00412	1.92	55.493	-0.00153	-0.00585	-0.00498
SI	0.95165	244.99	1.240	0.94766	0.96492	0.94236
SN	-0.00010	1.14	714.812	-0.00082	0.00066	-0.00015
SR	0.00739	6,194.34	0.371	0.00742	0.00737	0.00739
TI	0.00976	572.73	0.250	0.00979	0.00974	0.00975
TL	0.00031	0.66	646.119	-0.00198	0.00119	0.00172
V	0.00104	14.65	22.111	0.00080	0.00105	0.00126
Y1	15578.80110	15,578.80	0.034	15578.43098	15573.70328	15584.26905
Y2A	447775.31520	447,775.32	0.320	446298.10883	449164.00133	447863.83543
Y2R	29211.68048	29,211.68	0.408	29314.29143	29081.14000	29239.61000
ZN	0.00121	28.19	11.480	0.00135	0.00108	0.00119
ZR	-0.00076	5.77	130.431	-0.00005	-0.00190	-0.00033

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/13/2013 00:01

Sample Number: **7265054** Class: **** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00044	-23.11	99.172	-0.00015	-0.00022	-0.00093
AL	0.19775	37.01	7.287	0.18682	0.19235	0.21408
AS	0.00032	-1.59	437.260	0.00177	-0.00104	0.00023
B	0.02779	267.57	0.353	0.02773	0.02790	0.02773
BA	0.01225	9,884.92	0.126	0.01225	0.01224	0.01227
BE	0.00002	-90.70	76.194	0.00001	0.00003	0.00001
CA	1.24143	1,670.57	0.492	1.24378	1.23450	1.24601
CD	0.00035	1.68	11.224	0.00034	0.00032	0.00039
CO	-0.00036	-1.97	16.466	-0.00039	-0.00040	-0.00029
CR	0.00001	-2.06	812.556	0.00008	-0.00006	0.00000
CU	0.00099	146.14	18.848	0.00103	0.00114	0.00078
FE	0.64638	269.90	1.227	0.64655	0.65422	0.63836
K	0.92293	412.88	2.959	0.95339	0.91477	0.90063
LI	0.00344	45.47	74.396	0.00639	0.00196	0.00196
MG	0.63458	1,687.96	0.754	0.63878	0.62937	0.63558
MN	0.05309	3,461.07	0.529	0.05319	0.05278	0.05332
MO	0.00067	4.73	38.733	0.00094	0.00043	0.00063
NA	23.83247	34,968.77	0.296	23.91146	23.77531	23.81065
NI	0.00021	20.17	56.956	0.00008	0.00022	0.00032
P	0.00201	1.18	53.613	0.00077	0.00264	0.00263
PB	0.00373	2.49	40.448	0.00547	0.00292	0.00280
S	3.48596	906.99	0.290	3.47773	3.48292	3.49722
SB	-0.00058	-5.53	193.261	-0.00140	0.00069	-0.00102
SE	-0.00075	3.20	238.120	-0.00172	0.00131	-0.00183
SI	1.54426	400.19	0.955	1.55650	1.54839	1.52789
SN	0.00218	3.89	26.920	0.00282	0.00206	0.00167
SR	0.01492	12,573.07	0.321	0.01486	0.01494	0.01495
TI	0.00452	286.52	2.230	0.00446	0.00445	0.00463
TL	-0.00023	0.36	637.574	0.00144	-0.00095	-0.00116
V	0.00039	2.19	99.695	0.00032	0.00005	0.00082
Y1	15632.21869	15,632.22	0.075	15645.62521	15624.21102	15626.81985
Y2A	449055.22008	449,055.22	0.246	450185.26875	449007.00066	447973.39084
Y2R	29633.92809	29,633.93	0.463	29503.71588	29777.26000	29620.80838
ZN	0.00379	51.50	0.993	0.00382	0.00380	0.00375
ZR	-0.00077	5.83	196.311	-0.00068	0.00070	-0.00233

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/13/2013 00:05

Sample Number: **7265056** Class: **** Batch: 133115705004

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00034	-22.20	87.125	-0.00016	-0.00017	-0.00068
AL	2.70328	475.44	0.162	2.69855	2.70722	2.70406
AS	0.00837	1.88	19.154	0.00769	0.00722	0.01020
B	0.02737	277.17	0.814	0.02734	0.02717	0.02761
BA	0.02270	18,518.79	0.019	0.02270	0.02271	0.02270
BE	0.00016	-12.53	9.935	0.00014	0.00016	0.00018
CA	5.78019	7,492.96	0.393	5.75648	5.80174	5.78236
CD	0.00049	6.55	8.678	0.00052	0.00051	0.00044
CO	0.00113	6.77	16.922	0.00092	0.00117	0.00129
CR	0.00679	76.45	6.817	0.00717	0.00691	0.00627
CU	0.00300	179.38	14.752	0.00345	0.00300	0.00256
FE	2.57044	1,074.23	0.496	2.55575	2.57874	2.57683
K	1.23087	519.36	1.489	1.23431	1.24723	1.21107
LI	0.00337	45.94	69.985	0.00224	0.00608	0.00179
MG	2.16569	5,818.36	0.282	2.15894	2.16725	2.17087
MN	0.10740	7,096.35	0.263	0.10720	0.10726	0.10772
MO	0.00107	6.18	3.929	0.00106	0.00103	0.00111
NA	18.53844	27,505.95	0.244	18.50184	18.58891	18.52457
NI	0.00272	27.27	1.763	0.00269	0.00269	0.00277
P	0.01333	6.99	8.468	0.01357	0.01210	0.01432
PB	0.00640	6.27	9.396	0.00576	0.00650	0.00695
S	3.75842	978.06	0.034	3.75976	3.75824	3.75726
SB	-0.00021	-5.28	572.046	0.00066	0.00028	-0.00156
SE	0.00165	4.14	133.102	0.00402	-0.00033	0.00126
SI	5.10302	1,324.31	0.346	5.09947	5.12220	5.08738
SN	0.00088	2.33	17.586	0.00097	0.00070	0.00097
SR	0.03680	31,535.96	0.330	0.03685	0.03667	0.03689
TI	0.06314	3,554.71	0.561	0.06274	0.06342	0.06324
TL	0.00026	0.67	134.052	0.00017	0.00064	-0.00003
V	0.00510	94.94	3.478	0.00526	0.00491	0.00513
Y1	15638.03362	15,638.03	0.162	15639.69069	15611.90435	15662.50583
Y2A	455800.04424	455,800.04	0.204	454882.05043	456738.68613	455779.39615
Y2R	29937.60295	29,937.60	0.521	30111.36863	29809.89022	29891.55000
ZN	0.02912	281.79	0.389	0.02910	0.02924	0.02902
ZR	-0.00081	5.76	49.510	-0.00096	-0.00111	-0.00035

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/13/2013 00:09

Sample Number: **7265057** Class: U*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00039	-22.15	120.885	0.00012	-0.00079	-0.00049
AL	0.04113	9.93	52.529	0.02133	0.03788	0.06417
AS	0.00112	-1.18	81.859	0.00104	0.00025	0.00209
B	0.02563	245.42	0.780	0.02544	0.02560	0.02584
BA	0.01088	8,771.45	0.509	0.01082	0.01093	0.01089
BE	0.00001	-96.45	116.493	0.00000	0.00001	0.00001
CA	1.71213	2,268.21	0.615	1.71486	1.70050	1.72103
CD	0.00050	2.70	6.835	0.00053	0.00047	0.00048
CO	-0.00009	-0.55	179.942	0.00008	-0.00024	-0.00012
CR	0.00028	1.05	112.410	0.00059	-0.00004	0.00030
CU	-0.00017	129.61	84.290	-0.00032	-0.00004	-0.00014
FE	0.32644	138.00	0.582	0.32427	0.32779	0.32727
K	0.70522	341.58	4.541	0.73995	0.67686	0.69883
LI	0.00298	41.30	28.389	0.00304	0.00380	0.00211
MG	0.79166	2,107.30	0.147	0.79294	0.79136	0.79067
MN	0.05159	3,357.84	0.284	0.05156	0.05175	0.05146
MO	0.00102	5.99	31.199	0.00085	0.00138	0.00082
NA	35.57259	52,172.20	0.079	35.54029	35.58738	35.59008
NI	0.00064	21.37	51.835	0.00069	0.00028	0.00094
P	0.00059	0.45	73.484	0.00097	0.00012	0.00067
PB	0.00335	2.06	29.381	0.00221	0.00395	0.00389
S	5.63579	1,461.73	0.122	5.63930	5.62788	5.64019
SB	-0.00254	-6.76	82.351	-0.00213	-0.00069	-0.00481
SE	0.00171	4.12	86.095	0.00127	0.00051	0.00335
SI	1.76114	456.00	0.401	1.76484	1.75300	1.76558
SN	0.00054	1.91	101.829	0.00016	0.00029	0.00116
SR	0.01192	10,023.22	0.073	0.01191	0.01192	0.01193
TI	0.00167	130.37	2.153	0.00165	0.00165	0.00171
TL	-0.00034	0.30	216.263	0.00049	-0.00061	-0.00088
V	-0.00006	-6.82	747.120	-0.00063	0.00018	0.00025
Y1	15598.20261	15,598.20	0.068	15610.24865	15593.92526	15590.43391
Y2A	448311.82261	448,311.82	0.461	450541.93762	446463.00597	447930.52422
Y2R	29653.53665	29,653.54	0.472	29624.47127	29530.36675	29805.77192
ZN	0.00325	46.24	2.366	0.00320	0.00334	0.00320
ZR	-0.00070	6.05	386.010	0.00225	-0.00135	-0.00299

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/13/2013 00:12

Sample Number: **7265057** Class: UP** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02436	402.95	1.134	0.02457	0.02405	0.02447
AL	1.04635	185.17	1.301	1.05332	1.05507	1.03067
AS	0.47839	216.66	0.671	0.47509	0.47857	0.48150
B	0.21355	1,999.12	0.541	0.21424	0.21222	0.21420
BA	0.06085	48,618.31	0.653	0.06099	0.06041	0.06117
BE	0.01944	10,438.67	0.509	0.01941	0.01935	0.01954
CA	2.71930	3,557.63	0.088	2.71721	2.72191	2.71877
CD	0.04888	527.31	0.322	0.04883	0.04906	0.04876
CO	0.09688	527.44	0.354	0.09649	0.09710	0.09706
CR	0.19100	2,171.54	0.322	0.19168	0.19047	0.19085
CU	0.49608	7,265.67	0.706	0.49842	0.49205	0.49777
FE	0.82971	347.05	1.326	0.81821	0.83077	0.84014
K	2.63040	978.34	1.773	2.59562	2.68339	2.61219
LI	0.96919	9,252.47	0.147	0.97082	0.96854	0.96821
MG	1.76517	4,715.49	0.368	1.77265	1.76186	1.76101
MN	0.10980	7,125.17	0.427	0.10979	0.10934	0.11028
MO	0.19713	711.94	0.407	0.19628	0.19722	0.19788
NA	38.18651	56,207.11	0.096	38.14781	38.19129	38.22044
NI	0.14623	438.81	0.361	0.14578	0.14610	0.14681
P	0.99520	508.81	0.207	0.99590	0.99682	0.99289
PB	0.48756	513.56	0.120	0.48811	0.48695	0.48762
S	5.71966	1,481.90	0.256	5.72874	5.72744	5.70279
SB	0.39262	243.02	0.380	0.39093	0.39318	0.39375
SE	0.77581	295.53	0.384	0.77485	0.77343	0.77915
SI	1.83090	475.63	0.967	1.82753	1.81513	1.85004
SN	0.57881	691.62	0.328	0.57675	0.57920	0.58049
SR	0.03139	26,406.76	0.532	0.03144	0.03120	0.03152
TI	0.10052	5,537.72	0.590	0.10052	0.09992	0.10111
TL	0.95849	551.07	0.648	0.95240	0.96483	0.95823
V	0.09760	1,816.36	0.646	0.09702	0.09749	0.09827
Y1	15581.88706	15,581.89	0.211	15619.35746	15558.13953	15568.16419
Y2A	447638.89626	447,638.90	0.487	447299.40279	449969.50896	445647.77704
Y2R	29764.60388	29,764.60	0.378	29646.79449	29870.78337	29776.23377
ZN	0.12221	1,127.59	0.191	0.12204	0.12247	0.12210
ZR	0.95793	3,046.67	0.107	0.95880	0.95820	0.95679

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 22

Date/Time: 11/13/2013 00:16

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50888	8,306.08	0.170	0.50862	0.50985	0.50818
AL	26.19720	4,498.49	0.284	26.14818	26.16053	26.28288
AS	0.50503	223.47	0.269	0.50528	0.50625	0.50357
B	0.50790	4,744.56	0.614	0.50550	0.51142	0.50676
BA	0.51416	400,073.55	0.302	0.51518	0.51492	0.51237
BE	0.50580	267,266.85	0.135	0.50521	0.50655	0.50565
CA	25.51992	32,034.29	0.118	25.55466	25.50136	25.50375
CD	0.50011	5,387.62	0.139	0.49946	0.50084	0.50004
CO	0.50177	2,697.39	0.147	0.50177	0.50251	0.50104
CR	0.50731	5,628.83	0.322	0.50554	0.50876	0.50763
CU	0.51375	7,339.61	0.403	0.51305	0.51607	0.51211
FE	25.96867	10,560.78	0.143	25.93017	25.97173	26.00411
K	25.42932	8,376.53	0.275	25.50864	25.40236	25.37697
LI	0.51518	4,854.02	0.305	0.51379	0.51486	0.51688
MG	25.29377	65,986.72	0.064	25.30454	25.27526	25.30151
MN	0.49885	31,540.06	0.457	0.49691	0.50136	0.49828
MO	0.51258	1,824.54	0.087	0.51249	0.51307	0.51219
NA	25.68300	37,276.03	0.106	25.66853	25.66602	25.71446
NI	0.50590	1,449.72	0.201	0.50595	0.50688	0.50486
P	0.51481	260.60	0.197	0.51427	0.51598	0.51418
PB	0.50709	536.08	0.683	0.51043	0.50731	0.50352
S	25.36414	6,481.97	0.110	25.38484	25.37532	25.33226
SB	0.52679	324.31	0.294	0.52853	0.52557	0.52626
SE	0.50712	192.33	0.267	0.50724	0.50841	0.50571
SI	26.03378	6,596.39	0.303	26.02177	25.96154	26.11803
SN	0.50401	594.91	0.258	0.50551	0.50317	0.50335
SR	0.49998	410,791.76	0.816	0.49537	0.50315	0.50141
TI	0.52498	28,042.84	0.347	0.52345	0.52700	0.52450
TL	0.49860	284.34	0.248	0.49717	0.49932	0.49930
V	0.51514	9,475.61	0.208	0.51472	0.51636	0.51435
Y1	15387.96103	15,387.96	0.172	15387.86086	15361.53272	15414.48951
Y2A	436591.87127	436,591.87	0.202	437287.45853	435602.55474	436885.60053
Y2R	29319.95298	29,319.95	0.449	29232.42273	29471.34742	29256.08878
ZN	0.50848	4,579.78	0.046	0.50839	0.50829	0.50874
ZR	0.51129	1,605.64	0.464	0.51042	0.50947	0.51397

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 23 Date/Time: 11/13/2013 00:20

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-10.70	216.153	-0.00005	-0.00010	0.00110
AL	0.00008	2.83	7840.556	0.00655	-0.00020	-0.00612
AS	-0.00131	-2.27	48.831	-0.00194	-0.00066	-0.00133
B	0.00042	8.77	48.762	0.00019	0.00052	0.00057
BA	0.00001	92.00	114.533	0.00003	0.00001	0.00000
BE	0.00002	-90.90	8.525	0.00002	0.00002	0.00002
CA	-0.00725	89.75	20.044	-0.00839	-0.00561	-0.00774
CD	0.00034	0.46	33.490	0.00042	0.00039	0.00021
CO	-0.00062	-3.45	31.576	-0.00079	-0.00065	-0.00040
CR	-0.00042	-7.17	89.684	-0.00086	-0.00019	-0.00021
CU	-0.00031	130.57	37.385	-0.00024	-0.00044	-0.00024
FE	-0.00663	0.50	33.794	-0.00843	-0.00412	-0.00735
K	0.02618	118.96	55.610	0.03578	0.03333	0.00943
LI	0.00075	20.07	265.609	-0.00112	0.00286	0.00052
MG	0.00165	3.66	46.094	0.00236	0.00175	0.00085
MN	0.00000	9.68	3900.599	0.00007	0.00001	-0.00008
MO	0.00015	2.89	290.145	0.00021	0.00056	-0.00031
NA	-0.02778	76.54	51.043	-0.01765	-0.04398	-0.02171
NI	-0.00039	18.61	47.674	-0.00034	-0.00059	-0.00023
P	-0.00231	-1.04	1.864	-0.00226	-0.00235	-0.00230
PB	0.00308	1.57	33.824	0.00200	0.00316	0.00409
S	0.00282	3.06	95.023	0.00579	0.00057	0.00211
SB	0.00060	-4.81	149.832	0.00039	-0.00018	0.00159
SE	-0.00058	3.27	680.255	-0.00511	0.00221	0.00115
SI	0.00749	6.97	82.256	0.01457	0.00461	0.00330
SN	-0.00002	1.26	3525.944	-0.00009	-0.00063	0.00067
SR	0.00001	-30.02	127.555	0.00001	0.00001	0.00000
TI	-0.00009	35.03	142.902	-0.00015	-0.00017	0.00006
TL	0.00073	0.89	126.767	0.00147	-0.00031	0.00102
V	-0.00021	-9.73	134.068	-0.00012	0.00002	-0.00052
Y1	15731.04720	15,731.05	0.198	15723.57690	15765.27965	15704.28505
Y2A	461262.81796	461,262.82	0.170	462131.78500	460616.19111	461040.47777
Y2R	29822.55622	29,822.56	0.388	29700.86740	29930.92866	29835.87260
ZN	-0.00037	13.45	20.345	-0.00046	-0.00035	-0.00032
ZR	-0.00283	-0.70	66.740	-0.00077	-0.00324	-0.00448

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/13/2013 00:24

Sample Number: **7265057** Class: D*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00027	-20.48	31.816	-0.00033	-0.00017	-0.00030
AL	0.03493	8.98	21.787	0.02652	0.03692	0.04134
AS	0.00066	-1.39	212.109	0.00024	0.00223	-0.00048
B	0.02474	240.76	0.708	0.02453	0.02482	0.02485
BA	0.01044	8,550.22	0.475	0.01048	0.01038	0.01045
BE	0.00002	-93.42	44.070	0.00001	0.00002	0.00001
CA	1.64245	2,213.54	0.171	1.64211	1.64541	1.63983
CD	0.00031	0.63	16.804	0.00025	0.00035	0.00032
CO	-0.00020	-1.13	81.524	-0.00018	-0.00036	-0.00004
CR	0.00018	-0.07	194.906	-0.00023	0.00038	0.00040
CU	0.00039	139.78	108.035	0.00001	0.00032	0.00084
FE	0.30830	132.53	2.150	0.30181	0.30802	0.31506
K	0.70402	346.42	4.246	0.67569	0.73527	0.70110
LI	0.00347	46.61	55.860	0.00398	0.00510	0.00133
MG	0.76048	2,055.57	0.343	0.75787	0.76048	0.76308
MN	0.04962	3,280.68	0.274	0.04962	0.04948	0.04975
MO	0.00130	7.03	19.446	0.00158	0.00124	0.00108
NA	34.28070	51,057.58	0.513	34.26584	34.46358	34.11269
NI	0.00051	21.09	137.751	-0.00011	0.00127	0.00037
P	0.00030	0.31	556.175	-0.00162	0.00126	0.00126
PB	0.00371	2.44	12.974	0.00390	0.00406	0.00316
S	5.48454	1,427.72	0.339	5.46313	5.49644	5.49405
SB	-0.00093	-5.76	80.163	-0.00019	-0.00169	-0.00092
SE	-0.00100	3.11	374.393	-0.00317	0.00333	-0.00317
SI	1.71473	450.95	0.991	1.70506	1.73436	1.70477
SN	0.00119	2.70	36.114	0.00167	0.00084	0.00107
SR	0.01147	9,794.29	0.367	0.01145	0.01144	0.01152
TI	0.00158	127.13	9.407	0.00156	0.00144	0.00173
TL	0.00024	0.63	531.333	0.00120	0.00072	-0.00120
V	-0.00031	-11.75	63.407	-0.00053	-0.00015	-0.00026
Y1	15654.72140	15,654.72	0.053	15663.73842	15647.18444	15653.24135
Y2A	455412.89538	455,412.90	0.344	454933.14532	457161.34705	454144.19376
Y2R	30111.66690	30,111.67	0.593	30216.63674	29905.36177	30213.00220
ZN	0.00314	45.41	1.368	0.00313	0.00319	0.00310
ZR	-0.00166	3.06	35.156	-0.00100	-0.00186	-0.00212

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/13/2013 00:27

Sample Number: **7265057** Class: R*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01027	159.81	5.126	0.00968	0.01069	0.01043
AL	0.50972	92.73	2.653	0.49418	0.51615	0.51883
AS	0.03012	12.19	3.000	0.03047	0.02910	0.03080
B	0.39544	3,731.76	0.816	0.39220	0.39548	0.39865
BA	0.40063	322,989.28	0.283	0.39990	0.40193	0.40004
BE	0.00966	5,196.97	0.872	0.00961	0.00962	0.00976
CA	2.51727	3,318.44	0.286	2.51563	2.51104	2.52514
CD	0.01011	107.77	1.488	0.01017	0.00994	0.01023
CO	0.09751	535.06	0.509	0.09806	0.09711	0.09734
CR	0.03845	439.93	2.079	0.03771	0.03834	0.03929
CU	0.04967	857.03	1.491	0.04935	0.04914	0.05052
FE	0.53434	225.87	0.689	0.53546	0.53733	0.53022
K	2.69340	1,004.49	1.693	2.64137	2.71245	2.72638
LI	0.19769	1,907.95	0.486	0.19864	0.19771	0.19672
MG	1.19350	3,205.94	0.342	1.19441	1.18904	1.19706
MN	0.15001	9,833.00	0.853	0.14914	0.14942	0.15148
MO	0.39203	1,422.43	0.145	0.39138	0.39227	0.39244
NA	38.14575	56,449.21	0.324	38.23704	38.00506	38.19515
NI	0.09967	308.58	0.927	0.09872	0.10057	0.09972
P	0.19891	102.46	0.294	0.19952	0.19884	0.19836
PB	0.03219	32.77	3.792	0.03237	0.03331	0.03089
S	5.93534	1,547.33	0.094	5.94000	5.92914	5.93687
SB	0.10163	58.54	0.808	0.10257	0.10120	0.10111
SE	0.02781	14.04	4.050	0.02828	0.02862	0.02652
SI	2.10415	548.80	0.864	2.12345	2.08733	2.10168
SN	0.77368	929.83	0.307	0.77128	0.77374	0.77602
SR	0.20833	177,319.49	0.504	0.20756	0.20790	0.20953
TI	0.20028	11,105.89	0.616	0.19940	0.19976	0.20169
TL	0.02933	17.57	5.364	0.02752	0.03039	0.03008
V	0.09560	1,762.89	0.789	0.09484	0.09560	0.09635
Y1	15679.52311	15,679.52	0.168	15704.37942	15651.98028	15682.20964
Y2A	452331.64123	452,331.64	0.400	453922.26277	452706.93431	450365.72661
Y2R	29924.79530	29,924.80	0.119	29883.96924	29950.49860	29939.91807
ZN	0.10236	947.94	0.114	0.10249	0.10226	0.10234
ZR	0.18915	611.51	1.353	0.19183	0.18673	0.18890

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/13/2013 00:31

Sample Number: **7265057** Class: M*** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00977	149.73	2.598	0.00979	0.00951	0.01001
AL	0.51505	93.30	4.767	0.51170	0.54110	0.49235
AS	0.02979	11.95	12.149	0.03363	0.02643	0.02933
B	0.38330	3,577.22	0.251	0.38403	0.38365	0.38221
BA	0.39152	312,141.30	0.386	0.39244	0.39234	0.38977
BE	0.00934	4,966.18	0.328	0.00935	0.00937	0.00931
CA	2.41211	3,172.54	0.258	2.41885	2.40658	2.41090
CD	0.00961	101.64	2.220	0.00964	0.00939	0.00981
CO	0.09329	508.65	0.474	0.09353	0.09355	0.09278
CR	0.03691	417.54	1.214	0.03726	0.03706	0.03640
CU	0.04755	816.89	1.850	0.04856	0.04712	0.04696
FE	0.52563	221.44	0.913	0.52384	0.52198	0.53107
K	2.55677	955.69	1.804	2.59334	2.50495	2.57204
LI	0.18894	1,817.52	0.120	0.18881	0.18881	0.18920
MG	1.13934	3,049.49	0.296	1.14322	1.13758	1.13721
MN	0.14278	9,255.93	0.123	0.14293	0.14283	0.14259
MO	0.37688	1,358.78	0.093	0.37727	0.37674	0.37662
NA	36.66633	54,069.43	0.106	36.64285	36.64499	36.71116
NI	0.09639	297.14	0.079	0.09632	0.09637	0.09647
P	0.19094	97.73	0.673	0.19242	0.19033	0.19008
PB	0.03271	33.11	2.787	0.03166	0.03333	0.03313
S	5.66641	1,467.86	0.288	5.66809	5.68181	5.64934
SB	0.09754	55.62	1.886	0.09651	0.09966	0.09645
SE	0.02873	14.30	8.587	0.02951	0.02596	0.03070
SI	2.03371	528.69	0.492	2.04507	2.02623	2.02982
SN	0.74489	889.54	0.275	0.74422	0.74719	0.74326
SR	0.19935	167,786.93	0.282	0.19951	0.19980	0.19872
TI	0.19337	10,604.73	0.337	0.19408	0.19280	0.19322
TL	0.02796	16.66	2.574	0.02851	0.02823	0.02714
V	0.09187	1,675.13	0.321	0.09187	0.09216	0.09157
Y1	15579.09334	15,579.09	0.167	15549.14011	15594.79280	15593.34710
Y2A	447312.78478	447,312.78	0.346	446318.57996	446524.45255	449095.32183
Y2R	29817.19064	29,817.19	0.111	29842.07950	29829.74620	29779.74620
ZN	0.09824	904.63	0.369	0.09837	0.09852	0.09783
ZR	0.18390	592.61	0.372	0.18315	0.18450	0.18404

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/13/2013 00:35

Sample Number: **7265057** Class: UL** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00043	-23.28	39.179	-0.00061	-0.00028	-0.00040
AL	0.02216	6.69	66.286	0.03912	0.01354	0.01382
AS	-0.00033	-1.82	745.210	-0.00320	0.00112	0.00109
B	0.00557	58.10	5.463	0.00562	0.00585	0.00525
BA	0.00230	1,955.83	0.474	0.00230	0.00229	0.00231
BE	0.00000	-103.08	298.864	0.00000	0.00000	0.00000
CA	0.35522	553.47	1.043	0.35891	0.35150	0.35524
CD	0.00045	1.75	21.797	0.00046	0.00054	0.00035
CO	-0.00031	-1.76	99.767	0.00003	-0.00058	-0.00037
CR	-0.00021	-4.65	327.959	-0.00088	-0.00024	0.00049
CU	-0.00019	131.32	318.944	-0.00003	-0.00086	0.00032
FE	0.06628	30.87	4.510	0.06364	0.06953	0.06567
K	0.12885	153.40	32.034	0.08633	0.16876	0.13145
LI	-0.00055	7.71	394.660	-0.00279	-0.00036	0.00151
MG	0.16657	446.80	0.686	0.16533	0.16758	0.16679
MN	0.01063	712.95	0.323	0.01061	0.01060	0.01067
MO	0.00026	3.26	15.966	0.00024	0.00030	0.00022
NA	7.43734	11,097.60	0.237	7.41806	7.45254	7.44140
NI	-0.00032	18.73	95.197	-0.00016	-0.00012	-0.00067
P	-0.00025	0.03	96.342	0.00003	-0.00039	-0.00037
PB	0.00366	2.22	33.184	0.00233	0.00395	0.00470
S	1.16857	306.16	0.105	1.16904	1.16718	1.16950
SB	-0.00199	-6.44	144.615	-0.00072	0.00003	-0.00529
SE	0.00068	3.73	21.142	0.00073	0.00052	0.00079
SI	0.37261	101.32	0.795	0.37292	0.37540	0.36950
SN	0.00014	1.44	245.490	0.00032	-0.00025	0.00034
SR	0.00252	2,135.27	0.616	0.00252	0.00251	0.00254
TI	0.00016	48.28	66.736	0.00010	0.00028	0.00009
TL	0.00029	0.64	268.351	-0.00060	0.00085	0.00063
V	-0.00013	-8.08	355.850	0.00036	-0.00053	-0.00021
Y1	15661.86459	15,661.86	0.083	15673.97589	15663.50777	15648.11013
Y2A	457223.16965	457,223.17	0.389	457588.65295	458791.87127	455288.98474
Y2R	29915.82168	29,915.82	0.225	29849.71046	29913.38520	29984.36938
ZN	-0.00018	15.21	92.443	0.00001	-0.00026	-0.00029
ZR	-0.00130	4.19	124.722	-0.00264	0.00050	-0.00175

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/13/2013 00:39

Sample Number: **7263023** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00008	-14.39	472.861	-0.00014	0.00054	-0.00015
AL	0.44218	79.77	3.299	0.43287	0.45899	0.43467
AS	-0.00022	-1.82	602.245	0.00073	-0.00173	0.00034
B	0.01806	176.59	1.048	0.01789	0.01826	0.01802
BA	0.01184	9,583.75	0.813	0.01195	0.01178	0.01179
BE	0.00004	-80.55	5.576	0.00004	0.00004	0.00004
CA	5.97983	7,714.94	0.218	5.96607	5.99200	5.98142
CD	0.00059	4.05	10.248	0.00059	0.00065	0.00053
CO	0.00044	2.42	21.287	0.00036	0.00054	0.00041
CR	0.00073	6.17	68.210	0.00130	0.00050	0.00039
CU	0.00039	140.06	205.952	0.00010	0.00130	-0.00023
FE	0.52676	221.85	1.151	0.52616	0.52101	0.53309
K	0.86122	394.93	2.481	0.88586	0.84765	0.85016
LI	0.00158	28.77	76.848	0.00022	0.00256	0.00196
MG	1.35696	3,630.74	0.467	1.35106	1.36365	1.35617
MN	0.14569	9,510.60	1.092	0.14751	0.14498	0.14458
MO	0.00056	4.35	3.756	0.00055	0.00059	0.00055
NA	29.17053	43,027.52	0.074	29.15867	29.15731	29.19560
NI	0.00138	23.51	24.851	0.00102	0.00171	0.00139
P	0.00684	3.66	17.083	0.00809	0.00667	0.00577
PB	0.00376	2.60	33.553	0.00406	0.00484	0.00237
S	7.53964	1,958.20	0.193	7.55439	7.53923	7.52530
SB	-0.00133	-6.00	170.927	-0.00196	-0.00320	0.00119
SE	-0.00014	3.45	2175.926	0.00191	0.00118	-0.00349
SI	2.00690	521.64	0.637	2.02155	2.00108	1.99806
SN	0.09204	111.36	1.081	0.09149	0.09145	0.09319
SR	0.02803	23,728.97	0.795	0.02829	0.02789	0.02791
TI	0.01076	631.18	2.003	0.01052	0.01083	0.01093
TL	0.00003	0.55	3436.628	0.00119	-0.00015	-0.00094
V	0.00087	11.21	26.467	0.00113	0.00070	0.00078
Y1	15625.73361	15,625.73	0.184	15659.00766	15608.69061	15609.50256
Y2A	450495.15594	450,495.16	0.855	446049.17054	452565.12940	452871.16788
Y2R	29808.58691	29,808.59	0.143	29795.51614	29774.12316	29856.12143
ZN	0.04483	421.09	0.331	0.04473	0.04500	0.04475
ZR	-0.00059	6.43	349.053	-0.00293	0.00092	0.00024

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/13/2013 00:42

Sample Number: **7263026** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00076	-29.16	20.584	-0.00070	-0.00094	-0.00065
AL	1.12747	200.15	1.485	1.11363	1.14609	1.12268
AS	0.00262	-0.65	32.478	0.00325	0.00296	0.00165
B	0.02353	235.26	6.303	0.02524	0.02260	0.02275
BA	0.01469	11,986.10	2.240	0.01507	0.01454	0.01447
BE	0.00010	-46.38	28.376	0.00013	0.00008	0.00009
CA	2.31316	3,062.28	0.268	2.32012	2.30821	2.31115
CD	0.00038	3.61	43.813	0.00032	0.00024	0.00056
CO	0.00042	2.50	37.724	0.00024	0.00049	0.00054
CR	0.00397	43.75	5.179	0.00393	0.00420	0.00379
CU	0.00186	160.95	36.190	0.00148	0.00145	0.00263
FE	1.58595	664.92	0.291	1.58990	1.58708	1.58087
K	0.81655	382.25	6.221	0.75817	0.84088	0.85061
LI	0.00143	26.92	12.823	0.00159	0.00146	0.00123
MG	1.15971	3,120.11	0.255	1.15917	1.16290	1.15706
MN	0.08374	5,522.25	0.046	0.08375	0.08377	0.08370
MO	0.00093	5.71	31.074	0.00098	0.00120	0.00062
NA	19.51459	28,981.49	0.103	19.51988	19.49243	19.53147
NI	0.00142	23.64	51.470	0.00119	0.00083	0.00224
P	0.01892	9.86	5.981	0.02022	0.01834	0.01819
PB	0.00659	5.87	49.191	0.01002	0.00358	0.00615
S	2.73429	713.36	0.268	2.72583	2.73842	2.73862
SB	-0.00139	-6.05	71.731	-0.00044	-0.00130	-0.00242
SE	0.00231	4.38	34.116	0.00141	0.00260	0.00290
SI	2.66385	694.53	0.523	2.67920	2.65200	2.66035
SN	0.00096	2.43	102.674	0.00008	0.00078	0.00203
SR	0.02305	19,693.43	0.973	0.02330	0.02299	0.02286
TI	0.02294	1,313.34	0.158	0.02297	0.02293	0.02290
TL	0.00023	0.64	308.711	-0.00041	0.00100	0.00010
V	0.00247	42.90	2.502	0.00253	0.00246	0.00241
Y1	15663.96109	15,663.96	0.062	15671.56169	15652.96822	15667.35335
Y2A	454718.76797	454,718.77	0.496	452800.63039	454151.99071	457203.68281
Y2R	29971.95199	29,971.95	0.056	29963.05821	29991.18705	29961.61071
ZN	0.00569	69.69	0.548	0.00567	0.00568	0.00573
ZR	-0.00018	7.76	1305.771	0.00255	-0.00132	-0.00178

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/13/2013 00:46

Sample Number: **7263027** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-57.32	350.907	0.00025	0.00019	-0.00022
AL	83.41717	15,410.82	0.351	83.09942	83.47693	83.67518
AS	0.04909	16.66	4.038	0.04904	0.05109	0.04712
B	0.04767	1,663.40	2.891	0.04872	0.04611	0.04818
BA	0.59074	493,625.25	0.391	0.59221	0.58808	0.59194
BE	0.00875	4,878.42	0.101	0.00874	0.00875	0.00876
CA	13.80818	18,636.62	0.207	13.77703	13.83333	13.81418
CD	-0.00221	399.69	13.750	-0.00189	-0.00249	-0.00226
CO	0.08071	472.86	0.360	0.08062	0.08047	0.08103
CR	0.32129	3,827.61	0.348	0.32258	0.32055	0.32076
CU	0.11618	1,824.60	0.917	0.11718	0.11506	0.11629
FE	234.75973	98,915.05	0.284	233.99333	235.07280	235.21305
K	5.40435	1,999.56	1.163	5.34558	5.39689	5.47059
LI	0.10045	1,026.63	2.046	0.10276	0.09976	0.09883
MG	16.95118	47,545.99	0.206	16.91242	16.96125	16.97988
MN	2.27216	154,239.69	0.675	2.27035	2.25781	2.28831
MO	0.02083	81.45	0.449	0.02094	0.02076	0.02079
NA	11.83109	18,471.10	0.253	11.79659	11.84936	11.84732
NI	0.12300	376.30	0.529	0.12348	0.12327	0.12226
P	4.27232	2,298.43	0.133	4.26610	4.27363	4.27725
PB	0.06179	100.75	1.806	0.06303	0.06088	0.06145
S	1.14655	314.94	0.103	1.14691	1.14523	1.14751
SB	0.00316	-2.43	33.747	0.00205	0.00327	0.00417
SE	-0.00514	5.07	82.682	-0.00567	-0.00911	-0.00065
SI	13.10913	3,562.70	0.079	13.11285	13.11712	13.09741
SN	0.00932	13.05	4.068	0.00967	0.00937	0.00891
SR	0.14028	123,745.33	0.420	0.14018	0.13974	0.14091
TI	0.92412	52,971.81	0.355	0.92459	0.92063	0.92714
TL	-0.00895	-3.48	22.124	-0.01018	-0.01001	-0.00667
V	0.22396	4,571.59	0.402	0.22432	0.22294	0.22463
Y1	16418.40823	16,418.41	0.077	16406.32343	16417.47650	16431.42477
Y2A	468864.20040	468,864.20	0.446	468415.16257	471143.62973	467033.80889
Y2R	31424.95428	31,424.95	0.085	31443.80496	31394.28144	31436.77645
ZN	0.37838	3,828.67	0.054	0.37814	0.37845	0.37853
ZR	0.02921	106.58	3.939	0.02886	0.03050	0.02828

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 31 Date/Time: 11/13/2013 00:51

Sample Number: **7266685** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00083	-29.89	69.240	-0.00062	-0.00148	-0.00039
AL	0.01482	5.35	61.417	0.02493	0.01223	0.00729
AS	0.01040	2.60	19.388	0.01083	0.01218	0.00821
B	0.11861	1,119.24	0.193	0.11883	0.11838	0.11862
BA	0.05424	43,005.99	0.504	0.05399	0.05420	0.05453
BE	-0.00001	-104.76	126.792	-0.00002	-0.00001	0.00000
CA	13.81714	17,546.10	0.163	13.79746	13.84166	13.81229
CD	0.00040	7.50	18.280	0.00034	0.00048	0.00039
CO	-0.00053	-2.93	50.012	-0.00084	-0.00035	-0.00042
CR	0.00016	-0.28	191.300	0.00044	-0.00018	0.00023
CU	0.00068	144.49	68.174	0.00038	0.00044	0.00121
FE	3.68972	1,521.26	0.256	3.68417	3.70062	3.68437
K	2.65725	980.62	1.558	2.69644	2.61394	2.66136
LI	0.00571	68.73	10.955	0.00587	0.00623	0.00502
MG	3.94666	10,465.64	0.121	3.94188	3.95142	3.94667
MN	0.30539	19,645.29	0.528	0.30352	0.30633	0.30631
MO	0.00040	3.76	18.696	0.00048	0.00034	0.00039
NA	47.97282	70,113.14	0.196	48.03003	47.86458	48.02385
NI	-0.00047	17.95	134.363	-0.00116	-0.00032	0.00008
P	0.04853	24.88	0.499	0.04850	0.04879	0.04830
PB	0.00549	4.77	50.391	0.00256	0.00586	0.00806
S	0.08559	24.40	1.562	0.08512	0.08710	0.08455
SB	-0.00220	-6.53	37.399	-0.00257	-0.00125	-0.00276
SE	-0.00273	2.52	45.086	-0.00188	-0.00218	-0.00415
SI	3.88308	996.44	0.624	3.85785	3.88523	3.90617
SN	-0.00010	1.15	620.234	-0.00078	0.00025	0.00024
SR	0.10146	84,777.75	0.572	0.10085	0.10154	0.10200
TI	0.00289	195.14	4.424	0.00285	0.00279	0.00303
TL	-0.00132	-0.16	67.197	-0.00042	-0.00219	-0.00133
V	-0.00001	-4.42	3035.846	-0.00040	0.00003	0.00033
Y1	15555.32715	15,555.33	0.033	15552.67835	15552.02718	15561.27591
Y2A	444138.19951	444,138.20	0.372	445764.86397	444186.86131	442462.87326
Y2R	29567.06910	29,567.07	0.069	29588.85223	29548.59056	29563.76449
ZN	0.00089	27.98	11.536	0.00081	0.00101	0.00087
ZR	-0.00047	6.76	500.723	0.00211	-0.00106	-0.00245

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/13/2013 00:54

Sample Number: **7266686** Class: **** Batch: 133115705005

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00032	-21.46	80.241	-0.00060	-0.00025	-0.00010
AL	0.01807	5.96	44.087	0.02005	0.00930	0.02485
AS	0.01059	2.71	3.473	0.01068	0.01019	0.01091
B	0.11837	1,118.80	0.442	0.11845	0.11885	0.11781
BA	0.05348	42,492.18	0.678	0.05389	0.05332	0.05322
BE	-0.00001	-107.00	93.301	0.00000	-0.00003	-0.00001
CA	13.93879	17,871.24	0.144	13.96204	13.92681	13.92752
CD	0.00038	7.06	33.768	0.00025	0.00038	0.00051
CO	-0.00041	-2.25	81.601	-0.00043	-0.00073	-0.00006
CR	0.00015	-0.42	229.605	-0.00001	0.00056	-0.00009
CU	-0.00006	134.36	882.681	-0.00038	0.00055	-0.00035
FE	3.55037	1,478.16	0.264	3.55530	3.55624	3.53958
K	2.64350	985.54	2.841	2.72538	2.57781	2.62732
LI	0.00523	64.81	31.326	0.00679	0.00352	0.00538
MG	3.97251	10,636.28	0.250	3.97804	3.97846	3.96104
MN	0.30766	19,834.70	0.568	0.30968	0.30673	0.30658
MO	0.00045	3.94	65.332	0.00012	0.00053	0.00069
NA	47.73990	70,449.75	0.140	47.77290	47.66289	47.78391
NI	-0.00037	18.30	26.789	-0.00034	-0.00028	-0.00047
P	0.03651	18.80	5.758	0.03803	0.03739	0.03411
PB	0.00527	4.53	34.689	0.00607	0.00318	0.00655
S	0.08618	24.61	4.183	0.09028	0.08349	0.08478
SB	-0.00121	-5.91	101.328	-0.00216	-0.00163	0.00017
SE	-0.00144	3.02	84.120	-0.00038	-0.00117	-0.00275
SI	3.86646	1,001.82	0.247	3.86731	3.85652	3.87557
SN	0.00065	2.05	138.795	0.00001	0.00169	0.00026
SR	0.10278	86,065.24	0.697	0.10360	0.10246	0.10228
TI	0.00276	188.33	5.563	0.00289	0.00279	0.00259
TL	-0.00042	0.35	333.791	-0.00190	0.00090	-0.00027
V	0.00010	-2.46	265.037	0.00009	0.00035	-0.00015
Y1	15592.39143	15,592.39	0.133	15574.04783	15614.78835	15588.33811
Y2A	445113.42623	445,113.43	0.657	442022.92634	445482.44857	447834.90378
Y2R	29853.80500	29,853.81	0.223	29792.33153	29924.59016	29844.49330
ZN	0.00096	28.55	10.607	0.00094	0.00108	0.00088
ZR	-0.00114	4.70	161.080	-0.00301	0.00066	-0.00107

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 33 Date/Time: 11/13/2013 00:58

Sample Number: **7265238** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 2.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00037	-21.63	177.382	-0.00109	-0.00018	0.00017
AL	0.06076	13.29	17.378	0.07034	0.04944	0.06251
AS	0.00046	-1.45	380.415	0.00210	-0.00139	0.00068
B	0.01822	173.69	2.395	0.01820	0.01866	0.01779
BA	0.01751	13,940.79	0.311	0.01753	0.01755	0.01745
BE	-0.00002	-112.64	15.601	-0.00002	-0.00002	-0.00003
CA	26.09701	33,066.86	0.132	26.13610	26.07120	26.08372
CD	0.00046	1.95	16.238	0.00038	0.00053	0.00046
CO	-0.00045	-2.43	44.533	-0.00067	-0.00030	-0.00037
CR	0.00049	3.38	49.752	0.00033	0.00037	0.00077
CU	0.00042	147.03	42.875	0.00022	0.00058	0.00047
FE	0.12248	53.70	1.962	0.12428	0.12340	0.11975
K	0.77930	365.26	5.235	0.80788	0.73258	0.79743
LI	0.00358	50.42	25.239	0.00287	0.00328	0.00460
MG	10.29428	27,263.73	0.133	10.30959	10.29013	10.28314
MN	0.04541	2,930.20	0.089	0.04540	0.04545	0.04537
MO	-0.00002	2.25	1959.973	0.00013	0.00019	-0.00036
NA	41.37004	60,543.54	0.102	41.41852	41.34485	41.34674
NI	0.00020	19.99	219.081	0.00038	-0.00029	0.00050
P	0.00770	4.06	15.492	0.00699	0.00908	0.00703
PB	0.00652	5.56	30.140	0.00706	0.00817	0.00434
S	3.96803	1,023.31	0.328	3.96733	3.95538	3.98139
SB	-0.00090	-5.68	196.048	-0.00191	0.00113	-0.00191
SE	-0.00006	3.42	5913.291	0.00293	-0.00441	0.00129
SI	3.54240	910.43	0.421	3.53236	3.55952	3.53533
SN	-0.00007	1.18	340.262	-0.00023	0.00021	-0.00021
SR	0.05975	49,934.25	0.044	0.05972	0.05975	0.05978
TI	0.00555	339.56	2.228	0.00560	0.00564	0.00541
TL	0.00003	0.50	3300.620	0.00069	0.00171	-0.00232
V	-0.00016	-8.42	256.809	0.00031	-0.00046	-0.00034
Y1	15499.18823	15,499.19	0.202	15477.13543	15534.98634	15485.44291
Y2A	444336.17562	444,336.18	0.211	443252.15660	444866.12475	444890.24552
Y2R	29598.60661	29,598.61	0.047	29591.20352	29614.81815	29589.79816
ZN	0.00070	23.02	19.268	0.00064	0.00086	0.00061
ZR	-0.00067	6.13	182.466	0.00068	-0.00100	-0.00169

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/13/2013 01:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51225	8,468.70	0.757	0.51654	0.51122	0.50900
AL	25.95635	4,508.84	0.201	26.00178	25.89927	25.96799
AS	0.50872	225.97	0.294	0.50717	0.51015	0.50885
B	0.49791	4,712.43	0.911	0.50275	0.49724	0.49375
BA	0.51095	402,689.66	0.869	0.51586	0.50980	0.50720
BE	0.49775	266,387.52	1.016	0.50274	0.49787	0.49263
CA	25.44614	32,313.02	0.133	25.48484	25.42229	25.43129
CD	0.50121	5,418.26	0.130	0.50188	0.50117	0.50058
CO	0.50159	2,706.04	0.069	0.50188	0.50168	0.50121
CR	0.49805	5,597.17	0.741	0.50160	0.49832	0.49423
CU	0.51255	7,416.97	1.001	0.51821	0.51124	0.50820
FE	25.71612	10,579.96	0.055	25.73040	25.71593	25.70203
K	25.28016	8,424.76	0.174	25.32259	25.23461	25.28328
LI	0.50860	4,847.89	0.262	0.50947	0.50926	0.50707
MG	25.23485	66,599.02	0.126	25.27137	25.21947	25.21372
MN	0.50167	32,126.02	0.786	0.50583	0.50118	0.49800
MO	0.51140	1,826.87	0.159	0.51187	0.51186	0.51046
NA	25.35525	37,229.17	0.180	25.38840	25.37412	25.30322
NI	0.50570	1,454.38	0.254	0.50683	0.50597	0.50430
P	0.51346	260.85	0.635	0.51621	0.51430	0.50986
PB	0.50214	532.74	0.856	0.50672	0.49820	0.50150
S	25.36862	6,506.37	0.087	25.39338	25.36125	25.35123
SB	0.52342	323.34	0.663	0.52735	0.52217	0.52076
SE	0.50881	193.65	0.364	0.50668	0.51008	0.50967
SI	25.80473	6,614.36	0.135	25.84170	25.77244	25.80005
SN	0.50269	595.48	0.155	0.50223	0.50359	0.50224
SR	0.50181	417,606.41	0.598	0.50528	0.50010	0.50005
TI	0.52194	28,239.18	0.786	0.52575	0.52248	0.51760
TL	0.49673	284.29	0.239	0.49797	0.49664	0.49560
V	0.50954	9,492.27	0.924	0.51468	0.50852	0.50543
Y1	15443.16712	15,443.17	0.176	15414.96670	15445.29169	15469.24296
Y2A	442225.51427	442,225.51	0.872	438284.20703	442399.33643	445992.99934
Y2R	29660.41893	29,660.42	0.124	29618.02639	29679.74405	29683.48633
ZN	0.50846	4,595.84	0.133	0.50922	0.50825	0.50792
ZR	0.50411	1,601.60	0.605	0.50639	0.50529	0.50065

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 35 Date/Time: 11/13/2013 01:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00058	-26.07	66.571	-0.00041	-0.00031	-0.00103
AL	0.00011	2.83	1611.652	0.00859	-0.01472	0.00646
AS	0.00023	-1.55	121.474	0.00003	0.00010	0.00054
B	0.00059	10.28	40.389	0.00033	0.00079	0.00063
BA	-0.00001	77.32	139.968	-0.00001	0.00000	-0.00001
BE	0.00003	-88.65	52.490	0.00002	0.00004	0.00002
CA	-0.00010	98.50	3544.911	0.00363	-0.00031	-0.00362
CD	0.00039	1.04	45.673	0.00047	0.00052	0.00019
CO	-0.00039	-2.22	6.071	-0.00038	-0.00038	-0.00042
CR	-0.00062	-9.45	22.724	-0.00046	-0.00074	-0.00066
CU	0.00012	136.38	527.392	0.00072	0.00021	-0.00056
FE	-0.00541	1.00	69.948	-0.00722	-0.00106	-0.00795
K	0.00114	110.26	4201.916	0.03144	0.02618	-0.05419
LI	0.00127	24.86	43.616	0.00069	0.00133	0.00179
MG	0.00504	12.68	101.858	0.01074	0.00358	0.00079
MN	-0.00003	7.90	190.719	-0.00007	-0.00004	0.00003
MO	0.00014	2.83	262.448	-0.00018	0.00053	0.00007
NA	-0.03103	71.53	22.359	-0.02869	-0.02556	-0.03883
NI	0.00004	19.75	461.518	-0.00002	0.00022	-0.00010
P	-0.00224	-0.99	49.988	-0.00287	-0.00095	-0.00289
PB	0.00312	1.60	59.999	0.00519	0.00154	0.00264
S	0.00037	2.41	354.340	0.00184	-0.00008	-0.00065
SB	-0.00174	-6.28	63.925	-0.00221	-0.00047	-0.00255
SE	0.00194	4.21	6.501	0.00180	0.00196	0.00205
SI	0.01078	7.80	76.376	0.02028	0.00569	0.00638
SN	-0.00067	0.47	27.739	-0.00073	-0.00046	-0.00082
SR	0.00000	-34.87	1283.284	0.00000	0.00002	-0.00001
TI	-0.00015	31.62	131.627	0.00007	-0.00030	-0.00020
TL	0.00072	0.88	91.272	0.00054	0.00145	0.00017
V	0.00013	-3.20	182.970	-0.00007	0.00038	0.00007
Y1	15664.44589	15,664.45	0.188	15646.58363	15698.47610	15648.27793
Y2A	459259.59965	459,259.60	0.185	458322.06370	459479.52887	459977.20637
Y2R	29716.25262	29,716.25	0.323	29732.06793	29613.38183	29803.30809
ZN	-0.00024	14.66	38.647	-0.00013	-0.00028	-0.00030
ZR	-0.00158	3.27	45.333	-0.00216	-0.00181	-0.00078

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 36 Date/Time: 11/13/2013 01:10

Sample Number: **7266807** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 2.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00057	-25.27	54.454	-0.00076	-0.00021	-0.00074
AL	0.29449	53.61	9.025	0.31251	0.30699	0.26396
AS	0.00080	-1.41	114.631	0.00136	0.00129	-0.00026
B	0.01406	139.98	5.086	0.01461	0.01325	0.01432
BA	0.02719	21,678.79	0.356	0.02725	0.02708	0.02723
BE	0.00002	-86.95	27.314	0.00003	0.00002	0.00002
CA	26.80342	33,909.56	0.237	26.87671	26.76555	26.76800
CD	0.00045	3.39	34.901	0.00045	0.00061	0.00030
CO	-0.00030	-1.54	58.974	-0.00021	-0.00018	-0.00050
CR	0.00093	8.43	7.154	0.00088	0.00101	0.00091
CU	0.00113	157.75	42.899	0.00062	0.00120	0.00158
FE	1.00756	417.78	0.383	1.00457	1.00619	1.01191
K	1.63240	644.35	1.802	1.60099	1.63690	1.65931
LI	0.00102	26.21	94.058	0.00164	0.00152	-0.00009
MG	11.51272	30,433.29	0.046	11.51637	11.50671	11.51507
MN	0.17686	11,424.86	0.224	0.17731	0.17661	0.17665
MO	0.00000	2.30	9722.503	-0.00004	-0.00019	0.00023
NA	40.99562	59,910.77	0.202	40.91047	41.00087	41.07552
NI	0.00037	20.40	69.074	0.00015	0.00030	0.00064
P	0.12112	61.59	1.670	0.12016	0.12344	0.11974
PB	0.00657	5.65	16.355	0.00608	0.00582	0.00780
S	2.15195	555.49	0.657	2.13668	2.16458	2.15460
SB	-0.00063	-5.51	40.470	-0.00068	-0.00087	-0.00036
SE	-0.00111	3.07	225.680	0.00037	-0.00399	0.00030
SI	3.13567	805.31	0.937	3.10811	3.16657	3.13232
SN	0.00056	1.92	84.109	0.00041	0.00019	0.00109
SR	0.07699	64,568.94	0.287	0.07709	0.07674	0.07714
TI	0.01410	806.60	0.881	0.01413	0.01397	0.01421
TL	0.00103	1.13	59.388	0.00161	0.00039	0.00109
V	0.00053	5.04	24.832	0.00046	0.00068	0.00045
Y1	15484.76225	15,484.76	0.179	15515.46393	15461.82169	15477.00113
Y2A	445844.89051	445,844.89	0.425	444675.87923	448031.61911	444827.17319
Y2R	29556.28508	29,556.29	0.148	29606.05547	29524.44045	29538.35931
ZN	0.00936	101.04	1.737	0.00928	0.00954	0.00924
ZR	-0.00059	6.37	209.232	0.00082	-0.00109	-0.00150

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 37

Date/Time: 11/13/2013 01:13

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00471	64.92	10.465	0.00451	0.00435	0.00527
AL	0.21233	39.75	0.738	0.21234	0.21076	0.21389
AS	0.01870	6.91	5.101	0.01786	0.01974	0.01852
B	0.04841	465.03	1.525	0.04756	0.04892	0.04874
BA	0.00545	4,503.58	0.520	0.00547	0.00542	0.00545
BE	0.00495	2,631.30	0.081	0.00496	0.00495	0.00496
CA	0.20876	364.52	1.745	0.20760	0.21284	0.20583
CD	0.00548	56.80	1.059	0.00541	0.00552	0.00551
CO	0.00443	24.30	3.141	0.00447	0.00455	0.00428
CR	0.01452	165.98	3.836	0.01509	0.01448	0.01398
CU	0.01008	281.10	0.431	0.01003	0.01009	0.01011
FE	0.21011	90.35	5.575	0.19943	0.20825	0.22263
K	0.47459	266.84	5.003	0.45946	0.50195	0.46235
LI	0.02164	219.23	7.977	0.01983	0.02182	0.02327
MG	0.10209	272.28	0.476	0.10215	0.10157	0.10253
MN	0.00519	351.60	0.872	0.00523	0.00519	0.00514
MO	0.01016	39.15	0.715	0.01013	0.01024	0.01011
NA	0.97531	1,550.49	0.204	0.97691	0.97308	0.97592
NI	0.01006	48.66	1.922	0.00988	0.01002	0.01026
P	0.09848	50.77	1.287	0.09888	0.09950	0.09706
PB	0.01849	17.99	9.393	0.02043	0.01797	0.01707
S	0.49879	132.18	0.871	0.50256	0.49975	0.49404
SB	0.01862	6.68	5.131	0.01752	0.01921	0.01913
SE	0.02134	11.57	13.779	0.02168	0.02409	0.01824
SI	0.06267	21.16	8.534	0.06201	0.05768	0.06832
SN	0.02036	25.72	3.431	0.02117	0.01998	0.01993
SR	0.00514	4,373.66	0.739	0.00518	0.00510	0.00515
TI	0.01012	603.03	0.632	0.01006	0.01018	0.01012
TL	0.02940	17.47	5.654	0.03000	0.02752	0.03068
V	0.00499	89.42	5.816	0.00516	0.00466	0.00516
Y1	15682.91299	15,682.91	0.073	15683.46731	15694.05240	15671.21925
Y2A	455672.51714	455,672.52	0.531	453001.12807	457722.46184	456293.96151
Y2R	29777.69218	29,777.69	0.185	29835.53340	29726.01634	29771.52681
ZN	0.02344	229.53	0.442	0.02332	0.02348	0.02352
ZR	0.04675	156.63	2.312	0.04563	0.04682	0.04779

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 38 Date/Time: 11/13/2013 01:17

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00033	-39.38	23.125	0.00038	0.00036	0.00024
AL	511.50514	87,383.13	0.370	512.20313	512.94764	509.36466
AS	0.00375	0.42	29.702	0.00491	0.00269	0.00365
B	0.00993	968.00	27.926	0.00677	0.01196	0.01105
BA	0.00045	390.12	5.994	0.00043	0.00044	0.00048
BE	-0.00038	-273.00	1.246	-0.00039	-0.00038	-0.00038
CA	504.76777	590,382.82	0.104	505.37400	504.43887	504.49044
CD	-0.00089	306.47	22.264	-0.00066	-0.00097	-0.00103
CO	0.00222	10.80	6.786	0.00220	0.00237	0.00208
CR	0.00147	13.08	66.955	0.00259	0.00112	0.00071
CU	0.00070	261.02	40.349	0.00045	0.00065	0.00101
FE	203.97442	77,252.28	0.392	204.19436	204.64044	203.08847
K	0.01715	109.27	242.069	0.02918	0.05133	-0.02905
LI	0.00103	89.51	163.329	-0.00039	0.00288	0.00059
MG	516.06471	1,052,189.77	0.879	515.21047	520.96634	512.01732
MN	0.00333	200.30	1.214	0.00330	0.00330	0.00337
MO	-0.00114	-1.60	43.473	-0.00129	-0.00154	-0.00058
NA	0.02439	144.56	39.401	0.01776	0.01999	0.03541
NI	0.00356	15.53	7.835	0.00383	0.00328	0.00357
P	0.01148	5.42	14.422	0.01057	0.01339	0.01048
PB	-0.00022	89.66	1441.138	-0.00336	0.00307	-0.00038
S	-0.00114	1.80	751.805	0.00544	0.00194	-0.01079
SB	-0.01838	-15.11	5.425	-0.01802	-0.01951	-0.01762
SE	0.00154	5.89	298.591	0.00679	-0.00177	-0.00040
SI	0.01528	8.47	82.420	0.01310	0.00391	0.02881
SN	0.00304	4.40	32.876	0.00396	0.00198	0.00316
SR	0.00245	1,803.32	1.158	0.00241	0.00245	0.00247
TI	0.00290	175.78	6.537	0.00279	0.00279	0.00312
TL	0.00371	2.33	101.782	0.00254	0.00793	0.00065
V	-0.00347	17.52	12.200	-0.00356	-0.00300	-0.00383
Y1	14027.60998	14,027.61	0.283	14001.31043	14008.19284	14073.32667
Y2A	398699.06684	398,699.07	0.951	402326.73956	399008.13492	394762.32604
Y2R	28105.24825	28,105.25	0.321	28017.07293	28101.26924	28197.40260
ZN	0.01487	300.38	1.151	0.01506	0.01483	0.01472
ZR	0.00488	22.45	27.256	0.00545	0.00336	0.00583

LANCASTER LABORATORIES

Run Name: 1331606T71 Instrument ID: 16315

Tube: 39 Date/Time: 11/13/2013 01:21

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22296	3,251.92	0.104	0.22282	0.22284	0.22323
AL	514.18879	87,368.13	0.276	512.58434	515.28493	514.69708
AS	0.10226	40.91	2.573	0.10321	0.10429	0.09929
B	0.01087	973.25	7.008	0.01126	0.01136	0.01000
BA	0.51212	360,264.87	0.174	0.51217	0.51297	0.51120
BE	0.51450	245,787.26	0.253	0.51300	0.51520	0.51530
CA	508.46009	591,242.87	0.545	505.61262	511.14682	508.62084
CD	0.96266	9,656.91	0.689	0.96714	0.96581	0.95504
CO	0.48842	2,378.33	0.825	0.49137	0.49005	0.48382
CR	0.49073	4,922.64	0.210	0.48966	0.49172	0.49082
CU	0.54666	7,182.69	0.089	0.54707	0.54679	0.54612
FE	205.64114	77,426.13	0.212	205.14355	205.82618	205.95369
K	-0.03088	93.82	95.828	0.00307	-0.05124	-0.04447
LI	0.00050	84.72	239.447	-0.00085	0.00142	0.00092
MG	517.46795	1,048,473.94	0.175	516.42623	517.92724	518.05038
MN	0.48948	27,979.59	0.345	0.48755	0.49022	0.49068
MO	-0.00136	-2.30	36.410	-0.00107	-0.00193	-0.00107
NA	0.02329	142.19	35.967	0.02011	0.03280	0.01698
NI	0.97276	2,500.56	0.794	0.97953	0.97440	0.96435
P	0.01060	6.19	15.523	0.00878	0.01101	0.01199
PB	0.04673	134.58	7.877	0.05011	0.04281	0.04728
S	-0.00095	1.85	850.583	-0.00741	-0.00351	0.00808
SB	0.62316	350.67	0.811	0.62698	0.62507	0.61743
SE	0.05286	23.27	9.855	0.05526	0.05644	0.04688
SI	0.01916	9.35	27.253	0.01930	0.02431	0.01387
SN	0.00293	4.27	46.595	0.00293	0.00156	0.00429
SR	0.00246	1,793.54	0.407	0.00246	0.00246	0.00244
TI	0.00327	198.61	4.086	0.00328	0.00314	0.00340
TL	0.10035	53.19	3.494	0.09926	0.09752	0.10427
V	0.51065	8,636.44	0.348	0.50872	0.51101	0.51221
Y1	13966.82363	13,966.82	0.554	13894.33067	13957.86138	14048.27885
Y2A	394718.03623	394,718.04	0.262	395762.55799	393691.55070	394700.00000
Y2R	27947.75980	27,947.76	0.416	28073.65902	27844.57542	27925.04496
ZN	1.05008	8,682.53	0.836	1.05589	1.05436	1.03997
ZR	0.00444	20.99	66.465	0.00135	0.00723	0.00474

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 40

Date/Time: 11/13/2013 01:25

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50790	8,381.47	0.887	0.50302	0.51190	0.50879
AL	25.94312	4,395.27	0.176	25.94867	25.98563	25.89507
AS	0.50548	224.90	0.154	0.50489	0.50637	0.50519
B	0.49118	4,641.98	0.545	0.48914	0.49421	0.49018
BA	0.50268	395,459.16	0.734	0.49842	0.50472	0.50489
BE	0.49450	264,174.40	0.434	0.49283	0.49692	0.49374
CA	25.41106	31,471.85	0.345	25.50446	25.33059	25.39814
CD	0.50258	5,442.53	0.084	0.50291	0.50272	0.50210
CO	0.49890	2,696.29	0.161	0.49857	0.49831	0.49982
CR	0.49595	5,563.42	0.688	0.49425	0.49988	0.49371
CU	0.50439	7,287.98	1.030	0.49907	0.50945	0.50465
FE	25.69348	10,309.68	0.220	25.74175	25.70739	25.63129
K	24.99332	8,124.70	0.464	25.10172	24.87125	25.00701
LI	0.50181	4,665.36	0.930	0.49885	0.50719	0.49939
MG	25.23191	64,946.98	0.296	25.31571	25.17234	25.20766
MN	0.50031	31,981.44	0.526	0.49733	0.50233	0.50126
MO	0.50674	1,813.43	0.082	0.50721	0.50652	0.50648
NA	25.12845	35,986.12	0.279	25.20069	25.12385	25.06080
NI	0.50399	1,452.05	0.060	0.50376	0.50433	0.50387
P	0.51032	259.72	0.459	0.50920	0.51301	0.50875
PB	0.49975	531.18	0.349	0.50163	0.49818	0.49945
S	25.19448	6,473.12	0.110	25.22363	25.16849	25.19132
SB	0.52266	323.44	0.280	0.52359	0.52098	0.52342
SE	0.50341	191.98	0.237	0.50206	0.50387	0.50431
SI	25.90551	6,476.24	0.124	25.92015	25.92770	25.86869
SN	0.49980	593.11	0.123	0.49987	0.50038	0.49915
SR	0.49616	412,156.78	0.458	0.49371	0.49820	0.49657
TI	0.52051	28,110.96	0.648	0.51672	0.52316	0.52165
TL	0.49588	284.30	0.291	0.49633	0.49427	0.49704
V	0.50653	9,419.49	0.466	0.50409	0.50880	0.50669
Y1	15470.41395	15,470.41	0.189	15439.08703	15497.17846	15474.97634
Y2A	441410.35169	441,410.35	0.257	441340.80956	440313.50365	442576.74187
Y2R	28928.17191	28,928.17	0.340	28814.58000	28980.14368	28989.79204
ZN	0.50881	4,606.86	0.090	0.50925	0.50884	0.50834
ZR	0.50132	1,553.44	0.600	0.50460	0.50065	0.49870

LANCASTER LABORATORIES

Run Name: 1331606T71

Instrument ID: 16315

Tube: 41

Date/Time: 11/13/2013 01:29

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00029	-20.93	197.626	-0.00061	-0.00064	0.00037
AL	0.02646	7.37	56.163	0.02148	0.04316	0.01473
AS	-0.00001	-1.66	5118.575	0.00121	-0.00141	0.00017
B	-0.00004	4.27	296.541	-0.00014	0.00010	-0.00009
BA	0.00003	104.18	52.007	0.00001	0.00004	0.00003
BE	0.00003	-84.70	23.219	0.00003	0.00004	0.00003
CA	0.00422	103.67	69.790	0.00166	0.00744	0.00356
CD	0.00069	4.24	56.199	0.00044	0.00113	0.00048
CO	-0.00014	-0.83	260.426	-0.00051	0.00021	-0.00012
CR	-0.00060	-9.20	71.033	-0.00012	-0.00077	-0.00092
CU	-0.00018	131.30	116.500	-0.00041	-0.00004	-0.00007
FE	-0.00015	3.16	2151.246	0.00285	-0.00372	0.00040
K	0.00086	109.83	2884.696	0.02843	-0.00675	-0.01912
LI	0.00234	34.90	32.629	0.00270	0.00146	0.00285
MG	0.01003	25.93	4.088	0.00956	0.01021	0.01033
MN	-0.00007	4.65	93.228	-0.00012	0.00001	-0.00011
MO	0.00032	3.50	29.637	0.00024	0.00043	0.00030
NA	-0.02725	76.85	25.555	-0.03223	-0.03022	-0.01929
NI	0.00004	19.77	1042.645	-0.00048	0.00041	0.00020
P	-0.00230	-1.03	15.855	-0.00221	-0.00198	-0.00270
PB	0.00387	2.40	52.080	0.00483	0.00523	0.00155
S	0.00221	2.89	547.052	-0.00806	0.01554	-0.00085
SB	-0.00145	-6.10	50.953	-0.00201	-0.00061	-0.00174
SE	-0.00131	2.98	148.686	0.00091	-0.00213	-0.00273
SI	0.01148	7.95	16.951	0.01359	0.00976	0.01107
SN	-0.00005	1.22	1076.444	-0.00061	0.00020	0.00027
SR	0.00001	-31.01	171.683	0.00001	0.00001	-0.00001
TI	-0.00006	35.93	182.233	0.00006	-0.00009	-0.00017
TL	0.00067	0.85	122.190	-0.00017	0.00146	0.00072
V	-0.00002	-5.98	2895.025	-0.00033	0.00054	-0.00025
Y1	15660.29120	15,660.29	0.206	15623.23320	15675.85104	15681.78935
Y2A	456854.88830	456,854.89	0.166	457420.93563	455993.29794	457150.43132
Y2R	29622.32873	29,622.33	0.222	29555.60440	29687.30032	29624.08147
ZN	-0.00001	16.69	4466.649	-0.00034	0.00058	-0.00027
ZR	-0.00125	4.31	107.992	-0.00280	-0.00058	-0.00037

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

1331901E05

Date File Name: 13K15A01.E05

Run Name: 1331901E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 6020

Reviewed By:	Reviewed Date
Deborah A Krady	11/15/2013 07:18

Verified By:	Verified Date
Deborah A Krady	11/18/2013 06:49
Nina C Haller	11/15/2013 10:20

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331901E05 Date/Time: 11/15/2013 2:11:30
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	8022.12000	0.000	1.94570	1.27756	-3.22326
MG	24	0.00000	16.67000	0.000	0.10367	-0.17674	0.07307
AL	27	0.00000	6.67000	0.000	-0.60501	-0.60501	1.21001
K	39	0.00000	1746.83000	0.000	0.18847	-2.22000	2.03153
CA	44	0.00000	6.67000	0.000	-4.08813	-4.08813	8.17626
SC-1	45	23903.20000	0.00000	0.000	23205.73000	23916.55000	24587.33000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	0.000	0.02278	-0.01139	-0.01139
CR	52	0.00000	243.35000	0.000	-0.13876	0.12518	0.01359
MN	55	0.00000	40.00000	0.000	-0.02836	0.03161	-0.00325
FE	57	0.00000	10.00000	0.000	0.01352	0.65511	-0.66863
CO	59	0.00000	30.00000	0.000	-0.00585	0.00602	-0.00017
NI	60	0.00000	23.33000	0.000	0.01607	0.01519	-0.03126
CU	63	0.00000	216.68000	0.000	0.00449	0.04137	-0.04585
ZN	66	0.00000	16.67000	0.000	-0.11512	0.23024	-0.11512
GE-1	72	9886.55000	0.00000	0.000	9432.95000	10043.36000	10183.34000
AS	75	0.00000	6.67000	0.000	0.06056	0.01429	-0.07485
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01543
MO	98	0.00000	30.00000	0.000	0.01644	-0.00014	-0.01630
AG	107	0.00000	43.33000	0.000	-0.01277	0.01418	-0.00141
CD	111	0.00000	1.33000	0.000	-0.00481	0.00962	-0.00481
IN-1	115	49602.46000	0.00000	0.000	49016.69000	49643.14000	50147.54000
SN	120	0.00000	1892.75000	0.000	-1.30296	-1.03099	2.33395
SB	121	0.00000	110.01000	0.000	0.00177	0.05975	-0.06152
BA	137	0.00000	10.00000	0.000	0.00056	-0.03695	0.03638
TB-1	159	267842.84000	0.00000	0.000	265946.97000	269299.53000	268282.01000
TL	203	0.00000	43.33000	0.000	0.00842	-0.00739	-0.00103
PB	208	0.00000	260.02000	0.000	0.00273	0.00127	-0.00400
BI-1	209	224786.42000	0.00000	0.000	226921.25000	222565.23000	224872.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:13:30
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24317.03000	0.00000	0.000	25448.75000	23706.10000	23796.23000
AL	27	10000.00000	108892.77000	3.600	9638.49150	10366.79212	9994.71639
CA	44	10000.00000	16134.39000	0.500	9989.88170	9960.48061	10049.63769
CR	52	1000.00000	793257.41000	3.200	965.55481	1029.97663	1004.46856
FE	57	10000.00000	153460.75000	4.000	9532.86042	10216.72730	10250.41229
K	39	10000.00000	263636.00000	2.500	9742.37893	10234.65326	10022.96781
MG	24	10000.00000	384508.39000	3.100	9646.11814	10155.72199	10198.15986
MN	55	1000.00000	323296.51000	3.000	965.51710	1015.46624	1019.01666
NA	23	10000.00000	816433.32000	3.600	9579.82507	10213.33795	10206.83698
TI	47	1000.00000	13332.16000	0.400	998.03580	1004.41868	997.54552
V	51	1000.00000	612839.58000	3.500	960.19232	1022.30212	1017.50557
IN-1	115	49032.99000	0.00000	0.000	48975.41000	48686.03000	49437.54000
AG	107	100.00000	256064.42000	2.300	101.65997	100.92012	97.41990
AS	75	1000.00000	88649.93000	1.700	1010.21805	1009.85278	979.92917
BA	137	1000.00000	266665.85000	1.800	1014.06862	1006.75992	979.17146
CD	111	100.00000	27368.27000	2.500	101.76719	101.08970	97.14312
CO	59	1000.00000	1643536.85000	0.900	1004.25124	1005.89852	989.85024
CU	63	1000.00000	1264171.07000	1.500	1011.90290	1004.45233	983.64477
MO	98	100.00000	122935.30000	2.100	101.45098	100.92294	97.62608
NI	60	1000.00000	427414.77000	2.000	1019.16509	1001.18527	979.64964
SB	121	100.00000	65841.51000	2.100	100.88270	101.54382	97.57348
SN	120	100.00000	85477.55000	0.400	100.48908	99.71985	99.79107
SR	88	100.00000	42231.82000	2.400	100.96132	101.72786	97.31082
ZN	66	1000.00000	142993.74000	2.600	1012.50464	1017.66455	969.83080
BI-1	209	230119.42000	0.00000	0.000	229828.92000	230378.92000	230150.41000
PB	208	100.00000	1024355.64000	1.100	101.28137	99.57518	99.14345
TL	203	100.00000	318322.19000	0.500	100.52844	99.54175	99.92981
GE-1	72	10213.34000	0.00000	0.000	10813.67000	9492.87000	10333.49000
TB-1	159	272294.64000	0.00000	0.000	273994.82000	268178.96000	274710.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:15:31
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24333.84000	0.00000	0.000	24707.69000	24327.09000	23966.75000
AL	27	1.86400	26.67000	125.600	-0.60501	2.14664	4.05003
CA	44	6.11400	16.67000	207.500	20.32117	2.10967	-4.08813
CR	52	-0.06300	196.68000	0.000	-0.08720	-0.00812	-0.09308
FE	57	4.33900	76.67000	47.700	2.53475	3.88627	6.59735
K	39	10.81300	2063.55000	118.300	24.60691	-0.65559	8.48696
MG	24	2.15500	100.00000	52.500	1.60513	3.45574	1.40472
MN	55	0.13100	83.33000	32.900	0.17869	0.12165	0.09400
NA	23	-6.65000	7631.89000	0.000	-6.98568	-6.87524	-6.08894
TI	47	1.00700	13.33000	86.600	0.00000	1.49944	1.52198
V	51	0.14000	93.34000	34.000	0.18116	0.15159	0.08786
IN-1	115	50456.74000	0.00000	0.000	51037.51000	49329.03000	51003.67000
AG	107	0.06700	220.01000	39.600	0.06212	0.09590	0.04340
AS	75	0.35000	38.67000	24.300	0.33697	0.44093	0.27217
BA	137	0.14400	50.00000	65.200	0.17921	0.03760	0.21540
CD	111	0.01900	6.67000	79.500	0.02327	0.03151	0.00221
CO	59	0.14300	273.34000	14.800	0.14566	0.12109	0.16331
CU	63	0.22700	516.69000	22.600	0.22562	0.17639	0.27912
MO	98	0.20500	290.01000	11.800	0.17897	0.22645	0.21040
NI	60	0.20400	113.34000	19.500	0.17063	0.24821	0.19330
SB	121	1.14900	886.73000	29.100	0.81357	1.48261	1.15060
SN	120	-0.88100	1156.75000	0.000	-1.16708	-0.99970	-0.47650
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01505
ZN	66	0.40700	76.67000	22.000	0.35518	0.51049	0.35549
BI-1	209	232567.35000	0.00000	0.000	234537.77000	229524.78000	233639.51000
PB	208	0.00900	360.02000	70.100	0.00180	0.01122	0.01345
TL	203	0.04600	193.34000	39.000	0.03236	0.03967	0.06657
GE-1	72	10019.87000	0.00000	0.000	10413.44000	9562.91000	10083.27000
TB-1	159	276709.07000	0.00000	0.000	276466.17000	276971.48000	276689.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:17:32
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24267.04000	0.00000	0.000	23816.50000	23946.58000	25038.04000
AL	27	3.04300	40.00000	78.000	0.33187	4.05395	4.74203
CA	44	-0.07400	6.67000	0.000	-4.08813	-4.08813	7.95549
CR	52	-0.21300	76.67000	0.000	-0.15603	-0.23365	-0.24923
FE	57	0.84600	23.33000	87.200	-0.00398	1.31449	1.22804
K	39	-5.29200	1633.48000	0.000	-5.45192	-2.30225	-8.12329
MG	24	1.38700	70.00000	22.000	1.68169	1.40627	1.07336
MN	55	0.07000	63.33000	90.500	0.00071	0.12558	0.08461
NA	23	-9.79500	7355.13000	0.000	-4.22783	-14.17000	-10.98682
TI	47	0.24300	3.33000	173.200	0.00000	0.00000	0.72843
V	51	0.07100	50.00000	42.500	0.08848	0.08794	0.03611
IN-1	115	50748.13000	0.00000	0.000	49042.37000	50548.88000	52653.14000
AG	107	0.01100	73.33000	40.200	0.01456	0.00605	0.01242
AS	75	0.06500	12.67000	109.300	0.12816	0.07834	-0.01182
BA	137	0.02400	16.67000	182.500	0.07553	-0.00057	-0.00203
CD	111	0.00400	2.67000	233.600	0.00249	-0.00481	0.01560
CO	59	0.03900	96.67000	61.300	0.05498	0.01149	0.04997
CU	63	0.14900	416.69000	24.500	0.17051	0.10665	0.16929
MO	98	0.05500	100.00000	39.500	0.04896	0.07835	0.03636
NI	60	-0.00900	20.00000	0.000	-0.05414	0.03664	-0.01056
SB	121	0.20500	253.35000	47.200	0.15376	0.14425	0.31603
SN	120	-1.25800	836.73000	0.000	-1.24365	-1.31929	-1.21064
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01433
ZN	66	0.49900	90.01000	61.600	0.65406	0.69897	0.14537
BI-1	209	228559.81000	0.00000	0.000	227817.69000	227395.35000	230466.40000
PB	208	-0.00400	220.01000	0.000	-0.00429	-0.00128	-0.00746
TL	203	0.01800	100.01000	30.200	0.02103	0.01155	0.02062
GE-1	72	10139.96000	0.00000	0.000	10373.43000	10113.21000	9933.25000
TB-1	159	276142.45000	0.00000	0.000	272873.18000	275129.04000	280425.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:19:32
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24393.93000	0.00000	0.000	24266.98000	24858.07000	24056.74000
AL	27	4975.93500	54383.95000	3.600	5033.83116	4776.29893	5117.67526
CA	44	4847.40500	7845.30000	4.900	5023.64805	4576.42395	4942.14417
CR	52	509.03100	405440.55000	1.800	510.12511	499.34710	517.62187
FE	57	4978.66100	76720.85000	1.800	5064.41099	4884.49908	4987.07314
K	39	5049.85800	134473.60000	2.900	5067.92147	4894.29537	5187.35665
MG	24	5005.99200	193226.58000	1.500	5024.05920	4921.08723	5072.83016
MN	55	505.69900	164108.21000	2.700	510.31474	490.09008	516.69350
NA	23	4949.41300	409812.12000	1.900	4952.11463	4856.27341	5039.85029
TI	47	494.73000	6614.84000	4.400	517.20347	474.07925	492.90644
V	51	510.66100	314185.03000	1.600	509.76364	502.93424	519.28629
IN-1	115	48371.31000	0.00000	0.000	48272.54000	48244.74000	48596.66000
AG	107	51.55400	130256.96000	2.000	51.72117	52.50277	50.43851
AS	75	527.62000	46150.63000	1.500	519.41880	528.52360	534.91902
BA	137	519.86600	136772.79000	0.700	522.21945	521.51147	515.86755
CD	111	51.61500	13937.01000	1.700	51.97326	52.26326	50.60806
CO	59	486.47200	788798.87000	0.500	483.75440	488.08633	487.57674
CU	63	524.49100	654228.42000	0.700	523.75593	528.61494	521.10241
MO	98	51.81400	62858.06000	0.200	51.79316	51.91400	51.73529
NI	60	529.73400	223387.68000	0.200	528.67861	529.39229	531.13147
SB	121	55.02700	35791.83000	2.100	55.30164	56.00034	53.77882
SN	120	51.51900	44331.87000	0.600	51.58803	51.81365	51.15583
SR	88	52.40100	21834.34000	1.600	52.72210	53.04191	51.43831
ZN	66	514.55000	72597.83000	2.300	524.98860	516.58516	502.07615
BI-1	209	227649.72000	0.00000	0.000	229139.90000	227002.30000	226806.95000
PB	208	51.98100	526891.73000	0.500	52.23641	51.94923	51.75646
TL	203	50.82400	160070.62000	1.000	50.89523	51.30335	50.27296
GE-1	72	10626.89000	0.00000	0.000	10553.54000	10703.58000	10623.55000
TB-1	159	270475.38000	0.00000	0.000	270485.86000	272501.50000	268438.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:21:32
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23809.66000	0.00000	0.000	23916.39000	23856.34000	23656.24000
AL	27	1.26200	20.00000	147.800	3.12686	1.26563	-0.60501
CA	44	-4.08800	0.00000	0.000	-4.08813	-4.08813	-4.08813
CR	52	-0.16900	110.01000	0.000	-0.16949	-0.13060	-0.20680
FE	57	1.33100	30.00000	132.700	-0.66863	1.98553	2.67713
K	39	-0.24700	1733.50000	0.000	0.49752	2.61455	-3.85218
MG	24	2.39500	106.67000	53.200	1.93705	1.41326	3.83338
MN	55	0.09500	70.00000	200.800	0.31450	-0.03101	0.00156
NA	23	-14.96400	6808.22000	0.000	-12.04926	-23.42129	-9.42001
TI	47	1.52500	20.00000	173.200	4.57556	0.00000	0.00000
V	51	0.14400	93.34000	56.600	0.23726	0.08832	0.10592
IN-1	115	49111.73000	0.00000	0.000	49102.61000	49674.13000	48558.46000
AG	107	0.04300	153.34000	27.100	0.03012	0.05272	0.04642
AS	75	0.23300	27.33000	52.900	0.35319	0.23692	0.10740
BA	137	0.13800	46.67000	68.600	0.22517	0.03708	0.15238
CD	111	0.00700	3.33000	151.000	-0.00481	0.01683	0.00995
CO	59	0.19700	353.35000	20.100	0.18857	0.16217	0.24003
CU	63	0.16600	426.69000	78.700	0.17799	0.29114	0.03009
MO	98	0.09800	150.01000	23.400	0.08949	0.08015	0.12363
NI	60	0.07900	56.67000	139.100	0.01595	0.01514	0.20576
SB	121	0.74100	596.70000	27.900	0.50277	0.84045	0.87892
SN	120	2.45500	3936.16000	121.400	3.76208	4.55852	-0.95610
SR	88	0.03200	16.67000	155.900	0.08686	0.01566	-0.00772
ZN	66	0.02500	20.00000	283.300	0.09438	-0.04609	0.02611
BI-1	209	223283.69000	0.00000	0.000	224171.34000	223315.02000	222364.72000
PB	208	0.02500	503.36000	34.800	0.01812	0.03439	0.02151
TL	203	0.03000	136.68000	16.100	0.03450	0.02497	0.03164
GE-1	72	9736.43000	0.00000	0.000	9592.99000	9833.17000	9783.13000
TB-1	159	268067.66000	0.00000	0.000	272804.37000	268013.79000	263384.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:23:32
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23082.16000	0.00000	0.000	22885.26000	23846.73000	22514.49000
AL	27	111.93900	1163.41000	5.500	118.35327	106.07242	111.39175
CA	44	187.92300	293.35000	14.100	213.33809	160.30691	190.12490
CR	52	2.00000	1743.49000	17.000	2.23356	2.15670	1.60856
FE	57	109.71700	1610.14000	13.000	93.40957	116.17206	119.57039
K	39	212.09000	6958.27000	4.600	205.58448	207.40656	223.27973
MG	24	99.89500	3663.88000	3.300	103.67552	97.35718	98.65137
MN	55	2.50800	806.72000	22.500	3.12629	2.01799	2.37849
NA	23	195.76300	22778.10000	6.100	209.49933	187.63893	190.15075
TI	47	15.51300	196.68000	28.800	10.36118	18.35646	17.82250
V	51	0.61100	363.35000	11.400	0.62958	0.67023	0.53449
IN-1	115	48067.40000	0.00000	0.000	47372.47000	49140.70000	47689.02000
AG	107	0.50200	1300.11000	9.800	0.54122	0.44710	0.51744
AS	75	2.00400	180.67000	0.700	2.00342	2.01868	1.98962
BA	137	2.33900	620.04000	15.500	2.40842	1.94623	2.66212
CD	111	0.53700	145.33000	10.300	0.48681	0.52745	0.59624
CO	59	0.59300	983.41000	18.300	0.71256	0.56483	0.50125
CU	63	2.14700	2873.71000	9.900	2.09887	2.38045	1.96179
MO	98	0.57500	723.38000	19.900	0.50630	0.70639	0.51113
NI	60	2.25100	966.73000	7.100	2.10126	2.42061	2.23128
SB	121	1.41900	1020.08000	9.800	1.47196	1.26122	1.52364
SN	120	0.69300	2390.27000	14.700	0.79647	0.59235	0.69032
SR	88	1.21800	506.70000	13.700	1.26679	1.03187	1.35571
ZN	66	16.19000	2283.58000	14.500	15.23161	14.47019	18.86963
BI-1	209	223870.08000	0.00000	0.000	222902.97000	225480.70000	223226.56000
PB	208	0.99100	10131.69000	2.400	1.00948	0.96476	0.99893
TL	203	0.51600	1640.16000	6.800	0.53758	0.53448	0.47523
GE-1	72	9903.19000	0.00000	0.000	10253.40000	9092.68000	10363.50000
TB-1	159	261949.60000	0.00000	0.000	263538.04000	261028.61000	261282.16000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:25:32
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23302.29000	0.00000	0.000	23155.46000	22824.86000	23926.56000
AL	27	9696.41600	101233.04000	2.200	9735.41816	9885.19101	9468.63997
CA	44	9009.88900	13935.89000	3.600	9252.64890	8646.20569	9130.81224
CR	52	-0.19200	90.00000	0.000	-0.19133	-0.20303	-0.18236
FE	57	9709.47400	142885.70000	2.300	9778.92292	9894.51331	9454.98557
K	39	9510.23200	240398.67000	2.400	9594.32800	9684.88411	9251.48501
MG	24	9568.80500	352769.64000	1.800	9669.57372	9663.25657	9373.58524
MN	55	0.05700	56.67000	138.100	-0.02815	0.07206	0.12579
NA	23	9494.13000	743608.89000	2.500	9575.95863	9677.09265	9229.33748
TI	47	202.16800	2580.29000	6.600	208.75169	210.97623	186.77718
V	51	0.01700	16.67000	56.000	0.02285	0.00598	0.02175
IN-1	115	47029.39000	0.00000	0.000	46859.32000	46026.77000	48202.07000
AG	107	-0.00200	36.67000	0.000	-0.00033	-0.01252	0.00716
AS	75	0.00200	6.67000	4010.100	-0.07485	-0.02678	0.10875
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00300	2.00000	276.700	0.01048	-0.00481	0.00262
CO	59	0.02200	63.34000	88.300	0.00745	0.01439	0.04388
CU	63	0.14400	380.02000	11.100	0.12840	0.14222	0.16034
MO	98	196.83500	232016.85000	2.600	201.45639	197.75920	191.28903
NI	60	0.00300	23.33000	506.600	0.01931	-0.00429	-0.00654
SB	121	0.11900	180.01000	121.800	0.28008	-0.00356	0.08196
SN	120	-0.92500	1040.63000	0.000	-1.58592	-0.42624	-0.76359
SR	88	0.05800	26.67000	51.400	0.04184	0.09318	0.04045
ZN	66	0.41700	73.34000	53.000	0.25076	0.33188	0.66746
BI-1	209	226144.62000	0.00000	0.000	225631.85000	226331.31000	226470.70000
PB	208	0.01700	433.35000	41.000	0.01086	0.02465	0.01569
TL	203	0.00200	50.00000	455.900	0.01175	0.00209	-0.00750
GE-1	72	9416.24000	0.00000	0.000	9883.21000	9472.99000	8892.52000
TB-1	159	261865.85000	0.00000	0.000	262194.82000	259258.10000	264144.62000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:27:32
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23212.41000	0.00000	0.000	22825.01000	23966.71000	22845.50000
AL	27	9618.38400	100040.68000	1.700	9603.31877	9465.81363	9786.01829
CA	44	8923.02400	13735.66000	3.900	9300.58527	8605.47954	8863.00605
CR	52	20.30500	15610.73000	3.700	21.13712	19.69336	20.08447
FE	57	9588.20300	140536.64000	2.800	9772.79494	9279.93142	9711.88227
K	39	9611.97600	242086.55000	1.000	9723.16180	9560.29917	9552.46670
MG	24	9585.35600	351967.90000	2.200	9721.75921	9343.63943	9690.66977
MN	55	19.27000	5974.57000	14.300	19.99951	16.21721	21.59436
NA	23	9495.12100	740751.71000	3.100	9792.22445	9212.85768	9480.28073
TI	47	187.37200	2386.95000	9.800	166.21970	197.88373	198.01218
V	51	-0.00600	3.33000	0.000	0.00598	-0.01139	-0.01139
IN-1	115	46209.32000	0.00000	0.000	48741.49000	44963.40000	44923.08000
AG	107	19.94900	48148.02000	3.000	19.50693	20.63492	19.70427
AS	75	19.04600	1593.42000	8.100	17.28805	19.70659	20.14297
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.96400	5142.14000	5.300	18.75046	20.41401	20.72760
CO	59	19.15100	29658.61000	3.600	18.37813	19.69805	19.37656
CU	63	20.67100	24791.45000	4.600	19.60563	21.01724	21.39034
MO	98	198.51200	229600.47000	5.200	186.52552	204.22823	204.78136
NI	60	19.33200	7802.01000	2.800	18.70911	19.57087	19.71632
SB	121	0.05300	133.34000	231.400	-0.05851	0.18274	0.03362
SN	120	-1.09200	883.61000	0.000	-1.49026	-1.19380	-0.59161
SR	88	0.08500	36.67000	64.500	0.06374	0.14721	0.04397
ZN	66	19.82300	2676.99000	14.100	17.12262	22.69000	19.65673
BI-1	209	221562.93000	0.00000	0.000	220215.99000	222513.86000	221958.94000
PB	208	0.01100	366.68000	67.300	0.01993	0.00734	0.00641
TL	203	-0.00200	36.67000	0.000	-0.00732	-0.00089	0.00240
GE-1	72	9556.28000	0.00000	0.000	8922.67000	9943.14000	9803.02000
TB-1	159	257628.15000	0.00000	0.000	257299.59000	261886.79000	253698.06000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:29:32
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	22521.38000	0.00000	0.000	23095.30000	22885.11000	21583.73000
AL	27	2616.59400	26389.93000	4.100	2532.57856	2579.27135	2737.93334
CA	44	2543.78400	3810.57000	7.700	2503.19269	2756.85163	2371.30844
CR	52	267.98700	197049.32000	3.400	262.13631	263.24576	278.57783
FE	57	2573.03000	36581.58000	4.000	2494.73212	2535.00883	2689.34762
K	39	2613.63300	65036.17000	2.400	2550.84093	2612.35374	2677.70505
MG	24	2581.58100	91954.75000	3.600	2478.01058	2605.14337	2661.58786
MN	55	267.45500	80108.34000	3.400	262.35741	261.99672	278.01173
NA	23	2555.87700	198923.70000	3.300	2492.84294	2522.12036	2652.66881
TI	47	264.46500	3250.46000	19.800	240.10105	228.75560	324.53709
V	51	271.27300	153961.44000	4.400	260.18833	269.79246	283.83798
IN-1	115	47410.95000	0.00000	0.000	46368.97000	48764.21000	47099.67000
AG	107	25.84900	64016.23000	2.100	26.47282	25.43143	25.64130
AS	75	262.47700	22495.55000	2.600	269.22248	255.63173	262.57596
BA	137	258.84600	66733.09000	1.900	263.74135	253.92987	258.86802
CD	111	25.78600	6824.71000	1.200	25.72371	25.51848	26.11609
CO	59	243.78700	387306.40000	2.300	249.05843	238.00062	244.30224
CU	63	263.02200	321558.35000	2.300	269.41008	257.51742	262.13787
MO	98	26.81600	31883.41000	6.000	28.56562	26.44013	25.44095
NI	60	266.90600	110297.09000	1.700	270.70915	261.90559	268.10247
SB	121	26.65700	17042.54000	2.700	27.40383	25.97300	26.59550
SN	120	25.04300	22048.33000	1.500	24.62901	25.13987	25.35904
SR	88	25.67900	10490.22000	0.400	25.64010	25.78569	25.61185
ZN	66	267.11600	36932.38000	3.100	276.38376	261.03967	263.92405
BI-1	209	223353.66000	0.00000	0.000	224305.56000	223249.14000	222506.27000
PB	208	26.10000	259682.57000	1.800	25.61436	26.55312	26.13298
TL	203	25.59800	79118.96000	1.700	25.31289	26.09946	25.38065
GE-1	72	9613.01000	0.00000	0.000	9572.98000	9372.94000	9893.10000
TB-1	159	261234.37000	0.00000	0.000	261091.32000	262686.73000	259925.05000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:31:32
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22447.99000	0.00000	0.000	22434.62000	22334.67000	22574.68000
AL	27	4.36000	50.00000	81.900	0.38958	5.38923	7.30234
CA	44	4.85900	13.33000	211.400	16.07370	-4.08813	2.59078
CR	52	-0.20600	76.67000	0.000	-0.24213	-0.13207	-0.24256
FE	57	2.85800	50.00000	42.800	4.27050	2.16636	2.13622
K	39	0.68200	1656.81000	778.700	5.42203	-5.05432	1.67763
MG	24	2.18400	93.34000	31.800	2.09412	1.53959	2.91845
MN	55	0.09800	66.67000	53.400	0.10900	0.14370	0.04095
NA	23	-16.36100	6314.70000	0.000	-12.88143	-15.44881	-20.75220
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07100	46.67000	13.900	0.07696	0.05961	0.07641
IN-1	115	45998.29000	0.00000	0.000	45859.90000	46131.73000	46003.24000
AG	107	0.01800	83.34000	135.800	0.04596	0.00823	-0.00003
AS	75	0.11000	15.33000	104.200	0.23873	0.06903	0.02134
BA	137	0.05600	23.33000	147.600	0.08333	0.12248	-0.03695
CD	111	0.01100	4.00000	72.600	0.01863	0.01072	0.00298
CO	59	0.08800	163.34000	30.200	0.11860	0.07252	0.07278
CU	63	0.15700	386.69000	68.300	0.27025	0.14151	0.05805
MO	98	0.15800	210.01000	47.000	0.14973	0.08817	0.23590
NI	60	0.02100	30.00000	319.400	-0.02912	-0.00440	0.09551
SB	121	0.29900	286.68000	40.700	0.37111	0.36795	0.15865
SN	120	-1.21300	793.39000	0.000	-1.23955	-1.25806	-1.14063
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.18300	40.00000	71.000	0.33350	0.10787	0.10849
BI-1	209	213061.92000	0.00000	0.000	216030.52000	216071.11000	207084.14000
PB	208	0.00600	303.34000	73.600	0.00522	0.00209	0.01091
TL	203	0.02700	120.01000	31.100	0.02293	0.03631	0.02103
GE-1	72	9259.41000	0.00000	0.000	8882.51000	9472.91000	9422.82000
TB-1	159	253861.50000	0.00000	0.000	255713.43000	251971.99000	253899.08000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:33:32
Tube Number: 12 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22481.42000	0.00000	0.000	22474.61000	22765.21000	22204.43000
AL	27	0.39200	10.00000	256.600	-0.60501	0.37514	1.40479
CA	44	2.61900	10.00000	3.200	2.62052	2.53488	2.70215
CR	52	-0.27900	23.33000	0.000	-0.26952	-0.29696	-0.26902
FE	57	0.74300	20.00000	96.600	0.03571	0.72206	1.47009
K	39	6.67700	1803.51000	99.400	13.13837	-0.12526	7.01834
MG	24	2.84500	116.67000	26.300	2.93313	2.05758	3.54366
MN	55	0.13100	76.67000	65.200	0.20891	0.03956	0.14528
NA	23	4.32300	7871.98000	83.700	8.50118	2.21815	2.25082
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	5497.500	0.02389	-0.01139	-0.01139
IN-1	115	46537.09000	0.00000	0.000	46724.28000	45753.75000	47133.25000
AG	107	0.01200	70.00000	154.200	0.00791	-0.00412	0.03208
AS	75	-0.02000	4.67000	0.000	0.01985	-0.05067	-0.02791
BA	137	2.75800	706.71000	15.700	2.28494	3.13796	2.84995
CD	111	-0.00200	0.67000	0.000	-0.00481	-0.00481	0.00279
CO	59	0.03300	80.00000	38.900	0.04583	0.03414	0.01996
CU	63	0.07500	293.35000	52.800	0.06285	0.04234	0.11844
MO	98	0.07900	120.00000	18.500	0.09528	0.07165	0.06885
NI	60	-0.03000	10.00000	0.000	-0.02959	-0.05414	-0.00546
SB	121	0.01000	110.00000	1132.700	0.13768	-0.08412	-0.02321
SN	120	6.25500	6728.59000	5.500	6.58843	6.27519	5.90257
SR	88	1.61200	650.05000	14.000	1.60751	1.38800	1.83982
ZN	66	0.59200	96.67000	79.400	0.61875	0.10971	1.04896
BI-1	209	221545.11000	0.00000	0.000	220675.21000	221784.84000	222175.27000
PB	208	-0.00100	243.34000	0.000	-0.00766	-0.00370	0.00739
TL	203	0.00500	56.67000	216.400	-0.00406	0.01546	0.00238
GE-1	72	9426.15000	0.00000	0.000	9442.83000	9332.73000	9502.90000
TB-1	159	254102.34000	0.00000	0.000	259358.73000	252380.17000	250568.12000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:35:33
Tube Number: 13 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23105.41000	22374.24000	23015.41000
AL	27	1966.23500	20131.70000	2.700	1998.64708	1905.23896	1994.82046
CA	44	3778.02800	5727.82000	1.100	3774.93364	3736.63806	3822.51216
CR	52	51.02200	38244.94000	1.900	50.95841	52.00231	50.10483
FE	57	1015.82000	14653.24000	4.700	983.57233	1070.26650	993.62081
K	39	9905.22400	245338.88000	0.600	9911.29187	9961.17721	9843.20282
MG	24	1981.29400	71585.40000	1.800	1950.88688	2021.78007	1971.21365
MN	55	50.32000	15317.10000	3.400	48.88864	52.23961	49.83279
NA	23	9776.49500	750207.12000	1.400	9692.04553	9935.15287	9702.28570
TI	47	258.70700	3237.10000	7.900	235.25826	268.22260	272.64024
V	51	50.52700	29090.98000	4.900	49.61438	53.31297	48.65304
IN-1	115	46365.85000	0.00000	0.000	46058.63000	46883.91000	46155.01000
AG	107	49.13600	118991.23000	2.300	49.53891	47.84501	50.02419
AS	75	10.03300	846.70000	11.500	10.99765	8.74978	10.35126
BA	137	48.72700	12298.41000	2.000	48.24644	49.86899	48.06510
CD	111	5.01700	1300.06000	4.700	4.99742	5.26095	4.79290
CO	59	233.54900	362991.54000	0.600	234.89031	232.12980	233.62724
CU	63	50.77400	60891.11000	3.100	52.30794	50.88533	49.12872
MO	98	48.92300	56890.41000	2.100	49.96372	48.88732	47.91708
NI	60	52.12000	21086.35000	3.500	54.02835	51.92464	50.40742
SB	121	5.41800	3470.51000	2.500	5.34105	5.33964	5.57202
SN	120	60.95200	49952.28000	1.400	61.84840	60.88685	60.12070
SR	88	41.50800	16578.45000	1.500	41.60474	40.84781	42.07169
ZN	66	50.42400	6831.57000	5.000	52.53203	47.65440	51.08460
BI-1	209	216388.39000	0.00000	0.000	215309.72000	216435.99000	217419.47000
PB	208	14.80200	142783.28000	1.700	15.03933	14.83882	14.52760
TL	203	1.86300	5617.89000	3.900	1.94428	1.80708	1.83877
GE-1	72	9466.23000	0.00000	0.000	9112.73000	9552.93000	9733.03000
TB-1	159	246982.99000	0.00000	0.000	246957.83000	247931.72000	246059.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:37:33
Tube Number: 14 Batch: 133116050004A
Sample Number: **7265230** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21760.35000	0.00000	0.000	22524.70000	21223.01000	21533.35000
AL	27	19.79100	200.01000	27.900	26.14249	16.21795	17.01172
CA	44	35136.81300	50681.90000	3.300	33866.99248	36158.86671	35384.57924
CR	52	-0.07000	170.01000	0.000	-0.17439	-0.09385	0.05956
FE	57	984.52100	13548.99000	3.000	1002.62427	950.69375	1000.24501
K	39	1983.48600	48057.50000	4.100	1890.23089	2038.82434	2021.40128
MG	24	14844.45300	510868.89000	2.900	14350.77088	15182.42689	15000.16056
MN	55	655.07200	189573.14000	3.100	637.63508	677.07694	650.50342
NA	23	73633.85700	5335204.51000	2.900	71380.58543	75623.99323	73896.99220
TI	47	0.27000	3.33000	173.200	0.80971	0.00000	0.00000
V	51	0.11700	70.00000	64.500	0.11181	0.19410	0.04384
IN-1	115	43133.51000	0.00000	0.000	42403.43000	44618.23000	42378.86000
AG	107	0.01300	66.67000	43.400	0.01945	0.00907	0.01043
AS	75	0.40000	36.67000	56.000	0.47299	0.14829	0.57772
BA	137	38.28800	8999.43000	5.400	36.31067	40.44350	38.11076
CD	111	0.00100	1.33000	1183.700	-0.00481	-0.00481	0.01210
CO	59	0.49000	733.38000	13.500	0.56597	0.45005	0.45366
CU	63	0.44600	683.38000	17.100	0.50738	0.36074	0.47115
MO	98	0.26000	306.68000	39.900	0.20154	0.19927	0.38053
NI	60	0.41000	173.34000	51.400	0.64929	0.25442	0.32487
SB	121	0.01900	106.67000	140.400	-0.00731	0.01825	0.04557
SN	120	-0.86300	1003.41000	0.000	-1.22843	-0.69954	-0.66049
SR	88	109.66800	40718.19000	3.800	113.31776	105.16075	110.52563
ZN	66	6.85800	876.72000	3.900	7.16327	6.64820	6.76285
BI-1	209	200673.84000	0.00000	0.000	201038.43000	200883.51000	200099.57000
PB	208	0.72500	6704.18000	5.700	0.75428	0.74257	0.67707
TL	203	0.00800	60.00000	186.700	0.00769	-0.00669	0.02225
GE-1	72	8619.14000	0.00000	0.000	8512.55000	8642.44000	8702.42000
TB-1	159	235528.46000	0.00000	0.000	237468.38000	234553.14000	234563.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:39:33
Tube Number: 15 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22050.85000	0.00000	0.000	22765.28000	21403.22000	21984.06000
AL	27	217.59100	2153.55000	12.800	191.52155	214.17328	247.07673
CA	44	34955.29300	51109.52000	2.600	34618.08206	35967.00323	34280.79382
CR	52	3.88700	3020.38000	10.200	3.64694	3.66969	4.34514
FE	57	1156.57100	16114.52000	2.900	1147.91358	1193.61418	1128.18459
K	39	2346.84600	57354.41000	2.100	2324.16484	2402.91297	2313.46057
MG	24	14534.94600	506891.46000	3.000	14050.62265	14911.86900	14642.34676
MN	55	621.75600	182334.45000	3.300	598.11409	630.41019	636.74427
NA	23	71473.10700	5247441.90000	3.400	69015.43748	73858.79587	71545.08830
TI	47	28.42700	343.35000	6.300	26.43965	28.97435	29.86807
V	51	1.21500	680.04000	15.700	1.08575	1.43341	1.12473
IN-1	115	43426.36000	0.00000	0.000	44646.45000	41819.25000	43813.39000
AG	107	1.05200	2426.96000	14.100	0.99571	0.94047	1.22042
AS	75	4.40900	352.67000	9.300	4.55859	3.94588	4.72243
BA	137	40.63800	9586.42000	11.000	39.22316	45.66017	37.02993
CD	111	0.93300	227.33000	7.600	0.86994	0.92051	1.00924
CO	59	1.39400	2046.88000	19.500	1.13809	1.68003	1.36436
CU	63	4.24800	4937.52000	9.600	3.78429	4.54333	4.41738
MO	98	1.14900	1276.77000	8.500	1.05695	1.13960	1.25052
NI	60	4.80500	1836.84000	7.500	4.39146	5.04868	4.97363
SB	121	2.26300	1413.46000	2.700	2.24024	2.33157	2.21791
SN	120	2.91600	3800.61000	14.000	2.79390	3.37155	2.58136
SR	88	107.09900	40053.49000	3.100	103.66087	107.24791	110.38770
ZN	66	38.00900	4824.21000	3.700	36.67989	39.49582	37.84979
BI-1	209	202665.95000	0.00000	0.000	204107.69000	201453.69000	202436.46000
PB	208	2.62000	23864.71000	2.200	2.62702	2.67312	2.56006
TL	203	1.03000	2927.06000	3.400	1.03477	1.06295	0.99343
GE-1	72	9222.74000	0.00000	0.000	8532.35000	9552.98000	9582.89000
TB-1	159	240469.64000	0.00000	0.000	240558.73000	238529.94000	242320.25000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:41:33
Tube Number: 16 Batch: 133116050004A
Sample Number: **7265233** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21476.83000	0.00000	0.000	22094.24000	21583.69000	20752.57000
AL	27	29.44500	290.02000	13.100	32.72408	30.41106	25.20093
CA	44	35330.11200	50330.92000	0.100	35300.62830	35357.98210	35331.72413
CR	52	-0.07800	163.34000	0.000	0.00855	-0.14006	-0.10371
FE	57	981.96000	13312.05000	8.300	888.07875	1020.66452	1037.13685
K	39	1972.61100	47208.73000	3.200	1911.11522	2038.96034	1967.75733
MG	24	14603.68400	496194.69000	1.800	14299.62641	14764.76412	14746.66251
MN	55	637.74000	182158.93000	2.700	619.27975	641.09695	652.84205
NA	23	73380.92700	5248140.65000	2.400	71518.22748	73569.23433	75055.31795
TI	47	0.56800	6.67000	86.700	0.82549	0.00000	0.87885
V	51	0.06800	43.33000	28.400	0.07832	0.08045	0.04592
IN-1	115	43723.54000	0.00000	0.000	43301.48000	44801.54000	43067.61000
AG	107	-0.00600	23.33000	0.000	-0.00784	-0.01241	0.00111
AS	75	0.41300	38.67000	28.800	0.30835	0.54244	0.38749
BA	137	37.66200	8966.16000	5.000	39.42296	37.85538	35.70747
CD	111	0.00100	1.33000	751.300	-0.00481	0.00319	0.00351
CO	59	0.48500	736.72000	6.400	0.51941	0.47478	0.45997
CU	63	0.21200	430.03000	14.200	0.20664	0.18539	0.24472
MO	98	0.18500	230.01000	29.400	0.12316	0.22507	0.20732
NI	60	0.30500	136.67000	13.400	0.26378	0.30437	0.34544
SB	121	-0.12000	26.67000	0.000	-0.09673	-0.14898	-0.11368
SN	120	-1.41600	603.40000	0.000	-1.34376	-1.33410	-1.57059
SR	88	104.23600	39241.46000	4.200	108.81555	100.18603	103.70619
ZN	66	2.51700	336.68000	29.100	1.78548	3.25267	2.51245
BI-1	209	199792.09000	0.00000	0.000	198865.47000	201831.60000	198679.20000
PB	208	0.70200	6470.82000	5.000	0.71082	0.73117	0.66287
TL	203	0.00300	46.67000	277.400	0.00793	-0.00672	0.00795
GE-1	72	8955.94000	0.00000	0.000	9262.81000	8922.60000	8682.42000
TB-1	159	237212.35000	0.00000	0.000	234819.47000	242689.02000	234128.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:43:33
Tube Number: 17 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21930.66000	0.00000	0.000	22053.98000	21383.33000	22354.66000
AL	27	2094.88000	20582.12000	4.400	2050.39484	2201.43349	2032.81241
CA	44	40728.28800	59213.86000	3.800	39938.71231	42499.95481	39746.19666
CR	52	52.87900	38067.65000	2.500	51.36963	53.69386	53.57251
FE	57	1992.77500	27612.01000	3.600	1911.51360	2044.87556	2021.93505
K	39	12476.63000	296384.53000	2.400	12134.74140	12721.32185	12573.82699
MG	24	17375.12100	602785.25000	2.700	17049.84982	17911.21627	17164.29557
MN	55	715.19900	208650.03000	2.400	699.94441	733.29866	712.35372
NA	23	85628.88700	6253954.70000	1.900	84248.61574	87377.72983	85260.31617
TI	47	257.88100	3100.40000	5.200	242.34095	265.29342	266.00911
V	51	52.90900	29261.36000	4.900	50.26988	55.48715	52.96930
IN-1	115	44690.35000	0.00000	0.000	43711.29000	44919.15000	45440.61000
AG	107	50.83400	118658.23000	2.200	50.91203	51.91163	49.67843
AS	75	10.89800	886.70000	6.800	10.52923	11.74643	10.41780
BA	137	89.86400	21851.55000	2.900	90.67160	86.92079	92.00085
CD	111	4.87600	1217.39000	10.300	5.14309	4.29468	5.19161
CO	59	241.83600	362303.57000	0.100	241.73125	241.77863	241.99914
CU	63	51.25300	59249.14000	0.700	50.87063	51.29031	51.59935
MO	98	52.03500	58329.25000	1.000	51.46741	52.24809	52.38859
NI	60	52.66200	20532.49000	1.600	53.30728	52.97130	51.70610
SB	121	6.86200	4207.36000	6.600	7.22410	7.00879	6.35177
SN	120	51.32600	40816.37000	1.400	50.62640	52.04496	51.30615
SR	88	152.40900	58659.04000	1.700	154.24906	153.57479	149.40297
ZN	66	56.49500	7378.48000	3.200	56.85073	54.55511	58.07981
BI-1	209	209080.61000	0.00000	0.000	207250.37000	208359.63000	211631.83000
PB	208	15.44400	143943.87000	0.700	15.33207	15.55263	15.44683
TL	203	1.96300	5717.97000	4.400	1.88432	2.05474	1.95096
GE-1	72	9182.78000	0.00000	0.000	8892.63000	9232.77000	9422.95000
TB-1	159	248948.97000	0.00000	0.000	244395.45000	251533.49000	250917.97000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:45:33
Tube Number: 18 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22931.94000	0.00000	0.000	22404.60000	22855.20000	23536.01000
AL	27	1977.39500	20328.59000	2.700	1939.54034	2039.10895	1953.53477
CA	44	38330.23400	58280.83000	2.400	39205.26185	38439.15960	37346.27964
CR	52	49.98600	37640.03000	2.900	51.30067	48.40267	50.25457
FE	57	1882.60000	27268.23000	5.700	1875.21179	1993.62299	1778.96623
K	39	11762.20900	292211.32000	2.200	11960.35216	11853.30532	11472.97097
MG	24	16295.12700	591178.22000	1.800	16510.25285	16410.11945	15965.00804
MN	55	670.40300	204518.33000	2.200	672.76515	683.56757	654.87691
NA	23	81325.35700	6210851.37000	1.700	82580.08410	81594.36299	79801.62379
TI	47	250.39100	3147.09000	2.400	254.01540	253.80097	243.35590
V	51	51.82100	29972.45000	2.100	52.69087	52.19089	50.57976
IN-1	115	45701.28000	0.00000	0.000	45330.78000	45680.92000	46092.15000
AG	107	49.07500	117154.56000	1.000	48.91767	49.64074	48.66616
AS	75	9.89600	824.03000	4.600	9.68673	9.58757	10.41348
BA	137	87.31700	21714.90000	2.100	85.27999	87.88933	88.78291
CD	111	4.83800	1235.39000	2.700	4.80106	4.98388	4.72945
CO	59	233.17100	357236.40000	0.900	230.70888	234.56570	234.23753
CU	63	51.70400	61121.91000	2.000	50.55685	51.92381	52.63283
MO	98	50.13600	57459.24000	2.000	51.04903	50.32463	49.03346
NI	60	49.98500	19935.17000	2.400	50.43730	48.64348	50.87496
SB	121	6.07700	3827.27000	12.300	5.21559	6.44812	6.56723
SN	120	49.24000	40111.65000	2.700	49.47778	47.83272	50.41025
SR	88	147.23200	57956.76000	0.900	148.09527	147.85190	145.74990
ZN	66	53.44900	7138.37000	3.300	53.22577	55.29574	51.82420
BI-1	209	213356.84000	0.00000	0.000	213817.38000	214043.96000	212209.18000
PB	208	14.81500	140910.08000	1.100	14.72289	14.71502	15.00709
TL	203	1.98500	5898.01000	3.500	2.00190	2.04371	1.90814
GE-1	72	9282.84000	0.00000	0.000	8832.65000	9432.81000	9583.07000
TB-1	159	251288.33000	0.00000	0.000	249830.99000	253430.41000	250603.59000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:47:33
Tube Number: 19 Batch: 133116050004A
Sample Number: **7265230** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22915.23000	0.00000	0.000	23675.99000	22614.92000	22454.78000
AL	27	6.27800	70.00000	56.000	2.22232	8.27493	8.33826
CA	44	7082.32600	10760.23000	6.700	6646.52507	7592.25328	7008.20053
CR	52	-0.21700	70.00000	0.000	-0.21983	-0.21558	-0.21491
FE	57	186.80600	2710.31000	9.100	170.51022	204.44393	185.46301
K	39	402.82600	11617.44000	2.200	396.07901	399.36561	413.03358
MG	24	2974.53200	107833.58000	2.300	2900.55931	2991.64193	3031.39476
MN	55	129.16400	39377.47000	5.200	121.47302	133.73995	132.27898
NA	23	14844.84100	1139433.00000	0.700	14810.64973	14757.82755	14966.04463
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02900	23.33000	68.300	0.03884	0.00614	0.04157
IN-1	115	46297.95000	0.00000	0.000	47168.24000	45534.24000	46191.37000
AG	107	0.00800	60.00000	92.400	0.00362	0.01696	0.00405
AS	75	0.09300	14.00000	53.500	0.08932	0.14380	0.04489
BA	137	7.48800	1893.53000	9.200	7.33121	8.24185	6.88983
CD	111	0.00500	2.67000	162.500	0.01038	0.01093	-0.00481
CO	59	0.20100	340.02000	1.900	0.19704	0.20475	0.20159
CU	63	0.06100	273.35000	176.500	-0.06271	0.12856	0.11592
MO	98	0.20300	263.35000	18.400	0.16182	0.21230	0.23485
NI	60	0.09500	60.00000	53.500	0.04315	0.09703	0.14455
SB	121	-0.04200	76.67000	0.000	-0.07075	-0.00181	-0.05260
SN	120	-1.10500	883.40000	0.000	-1.17983	-1.18098	-0.95461
SR	88	21.70300	8659.14000	6.400	22.64392	22.35961	20.10534
ZN	66	1.51400	220.01000	3.000	1.55698	1.46637	1.51811
BI-1	209	216132.14000	0.00000	0.000	213766.38000	217418.04000	217211.99000
PB	208	0.15100	1700.12000	4.100	0.15483	0.15386	0.14368
TL	203	-0.01300	3.33000	0.000	-0.01389	-0.01389	-0.01056
GE-1	72	9319.45000	0.00000	0.000	9332.79000	9122.69000	9502.88000
TB-1	159	252957.09000	0.00000	0.000	254069.47000	249723.06000	255078.73000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:49:33
Tube Number: 20 Batch: 133116050004A
Sample Number: **7266798** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22251.15000	0.00000	0.000	22434.74000	22184.36000	22134.34000
AL	27	2.39600	30.00000	82.800	4.36791	0.40080	2.41924
CA	44	2.66300	10.00000	252.400	9.35302	-4.08813	2.72365
CR	52	-0.23700	53.34000	0.000	-0.29676	-0.22755	-0.18582
FE	57	-0.19200	6.67000	0.000	-0.66863	-0.66863	0.76170
K	39	6.83000	1790.16000	92.300	14.10998	3.31888	3.06074
MG	24	2.59300	106.67000	62.700	1.24908	4.40182	2.12851
MN	55	0.08800	63.33000	133.000	0.20951	-0.02389	0.07822
NA	23	3.05900	7698.62000	255.000	6.95470	-5.92353	8.14675
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00700	10.00000	275.200	-0.01139	0.00648	0.02443
IN-1	115	45824.40000	0.00000	0.000	45897.44000	45512.22000	46063.53000
AG	107	-0.00100	36.67000	0.000	-0.00416	-0.01247	0.01242
AS	75	-0.05900	1.33000	0.000	-0.07485	-0.05054	-0.05083
BA	137	-0.01000	6.67000	0.000	-0.03695	0.04385	-0.03695
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00306	-0.00481
CO	59	0.01700	53.33000	21.500	0.01448	0.01476	0.02084
CU	63	0.23400	476.69000	42.300	0.27834	0.12018	0.30199
MO	98	0.05100	86.67000	55.000	0.07136	0.06340	0.01905
NI	60	-0.02900	10.00000	0.000	-0.00415	-0.05414	-0.02923
SB	121	-0.07300	56.67000	0.000	-0.06813	-0.10008	-0.05229
SN	120	-0.95700	990.28000	0.000	-0.56236	-1.09026	-1.21844
SR	88	0.00100	3.33000	2043.700	0.01758	-0.00772	-0.00772
ZN	66	0.06000	23.33000	74.400	0.03430	0.11090	0.03376
BI-1	209	219660.31000	0.00000	0.000	219294.92000	221000.09000	218685.93000
PB	208	0.02300	483.36000	51.900	0.02115	0.01265	0.03669
TL	203	-0.00500	26.67000	0.000	0.00260	-0.00734	-0.01058
GE-1	72	9262.82000	0.00000	0.000	9652.96000	8992.71000	9142.80000
TB-1	159	251165.55000	0.00000	0.000	249033.65000	254569.08000	249893.92000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:51:33
Tube Number: 21 Batch: 133116050004A
Sample Number: **7266799** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22491.33000	0.00000	0.000	23355.76000	22184.25000	21933.97000
AL	27	1.38100	20.00000	4.800	1.30572	1.40662	1.42958
CA	44	-1.82300	3.33000	0.000	-4.08813	2.70833	-4.08813
CR	52	-0.28800	16.67000	0.000	-0.29730	-0.26899	-0.29645
FE	57	0.72500	20.00000	90.500	1.36466	0.75848	0.05307
K	39	0.11700	1646.81000	3510.300	0.94457	3.73758	-4.33193
MG	24	2.50200	103.34000	76.300	0.64130	2.40758	4.45710
MN	55	-0.01400	33.33000	0.000	-0.02898	-0.09165	0.08008
NA	23	-6.68100	7048.27000	0.000	-10.94643	3.96992	-13.06604
TI	47	0.27400	3.33000	173.200	0.00000	0.82214	0.00000
V	51	0.01900	16.67000	148.200	-0.01139	0.02435	0.04283
IN-1	115	46673.65000	0.00000	0.000	46186.54000	46846.99000	46987.42000
AG	107	0.00400	50.00000	284.500	-0.00839	0.01193	0.00777
AS	75	-0.02800	4.00000	0.000	-0.05090	-0.00401	-0.02776
BA	137	-0.02400	3.33000	0.000	0.00286	-0.03695	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00300	33.33000	402.700	0.01428	-0.01165	0.00738
CU	63	0.07700	296.68000	84.600	0.09915	0.12848	0.00375
MO	98	0.01600	46.67000	175.900	0.03621	-0.01574	0.02669
NI	60	-0.01300	16.67000	0.000	0.02038	-0.00516	-0.05414
SB	121	-0.10200	40.00000	0.000	-0.13333	-0.10195	-0.07039
SN	120	-1.55000	536.71000	0.000	-1.47503	-1.59829	-1.57520
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.69200	110.01000	20.300	0.55306	0.69010	0.83365
BI-1	209	222016.39000	0.00000	0.000	224807.65000	220912.42000	220329.10000
PB	208	-0.00600	193.34000	0.000	-0.00600	-0.00463	-0.00865
TL	203	-0.00500	26.67000	0.000	-0.00745	-0.01061	0.00252
GE-1	72	9436.21000	0.00000	0.000	9352.81000	9753.13000	9202.70000
TB-1	159	253344.12000	0.00000	0.000	251921.40000	252645.60000	255465.35000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:53:33
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	23192.07000	0.00000	0.000	24076.65000	23255.46000	22244.11000
AL	27	2575.36900	26746.91000	4.200	2454.34903	2613.11305	2658.64423
CA	44	2523.85800	3887.26000	5.600	2407.24715	2680.45291	2483.87316
CR	52	265.15200	200790.46000	2.900	256.58368	267.09871	271.77291
FE	57	2586.08300	37857.49000	4.900	2441.09448	2655.62565	2661.52848
K	39	2566.33400	65778.91000	3.800	2538.09607	2485.97087	2674.93546
MG	24	2585.09200	94828.78000	3.300	2488.83896	2643.90635	2622.53103
MN	55	263.35000	81213.33000	3.800	253.60237	262.78854	273.66037
NA	23	2535.24200	203205.67000	4.200	2451.72008	2500.45018	2653.55698
TI	47	260.72000	3310.44000	5.700	248.49962	256.48795	277.17186
V	51	270.62300	158150.46000	4.300	258.30150	272.08379	281.48320
IN-1	115	47844.94000	0.00000	0.000	48262.39000	47609.29000	47663.13000
AG	107	25.57500	63935.99000	2.400	25.24235	26.28332	25.20061
AS	75	265.45500	22968.15000	0.800	263.10970	265.95293	267.30177
BA	137	256.92200	66856.20000	2.500	249.37661	261.09417	260.29647
CD	111	26.05100	6958.12000	2.500	25.61311	26.81529	25.72468
CO	59	243.11200	389901.20000	1.100	240.39075	245.46290	243.48197
CU	63	262.93500	324506.81000	0.500	261.50520	263.14523	264.15353
MO	98	25.93000	31125.23000	2.500	25.19170	26.41030	26.18790
NI	60	262.86600	109649.70000	1.500	260.61629	267.36436	260.61652
SB	121	26.82200	17309.43000	2.900	26.01241	26.88963	27.56357
SN	120	25.11700	22305.46000	5.700	24.20797	24.37329	26.77037
SR	88	25.40900	10470.23000	8.000	23.11738	26.06970	27.03976
ZN	66	262.11100	36588.68000	0.700	261.98122	260.44814	263.90328
BI-1	209	221908.83000	0.00000	0.000	221788.04000	222701.11000	221237.34000
PB	208	25.88000	255830.71000	0.900	25.98026	25.60918	26.05033
TL	203	25.62000	78676.43000	2.000	26.17980	25.48212	25.19769
GE-1	72	9636.40000	0.00000	0.000	9022.77000	9743.12000	10143.31000
TB-1	159	256863.67000	0.00000	0.000	260234.66000	259903.57000	250452.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:55:34
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.34000	0.00000	0.000	22574.70000	21923.98000	24577.34000
AL	27	2.88800	36.67000	61.500	1.37183	2.44826	4.84317
CA	44	2.65700	10.00000	251.400	9.26969	2.78901	-4.08813
CR	52	-0.21600	70.00000	0.000	-0.13397	-0.24054	-0.27302
FE	57	1.13200	26.67000	85.100	1.43501	0.05340	1.90767
K	39	0.49900	1686.83000	1629.300	5.37917	5.01105	-8.89223
MG	24	1.60400	73.33000	57.000	2.35831	1.86493	0.58751
MN	55	0.05200	53.34000	375.000	0.27406	-0.02268	-0.09495
NA	23	-11.89900	6788.23000	0.000	-8.23314	-3.97235	-23.49232
TI	47	0.49500	6.67000	173.200	0.00000	0.00000	1.48417
V	51	0.06900	46.67000	65.900	0.02373	0.11518	0.06926
IN-1	115	47146.78000	0.00000	0.000	48869.64000	44793.89000	47776.82000
AG	107	0.01600	80.00000	33.400	0.01467	0.02180	0.01138
AS	75	0.13200	18.00000	109.800	0.28733	-0.00076	0.11038
BA	137	0.01700	13.33000	372.100	-0.03695	0.08619	0.00154
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.06800	133.34000	61.800	0.03693	0.11519	0.05067
CU	63	0.07200	290.02000	173.600	0.03676	0.21143	-0.03159
MO	98	0.10800	156.68000	8.100	0.10636	0.10043	0.11770
NI	60	0.04300	40.00000	198.900	-0.03066	0.02269	0.13795
SB	121	0.27900	280.02000	24.300	0.20068	0.31728	0.31836
SN	120	-0.94000	1026.78000	0.000	-1.20411	-0.69235	-0.92308
SR	88	0.04100	20.00000	57.300	0.03980	0.01820	0.06518
ZN	66	0.03600	20.00000	559.100	-0.11512	0.26763	-0.04335
BI-1	209	218400.51000	0.00000	0.000	218217.59000	219588.47000	217395.47000
PB	208	0.00200	270.01000	354.500	-0.00333	0.00881	-0.00015
TL	203	0.00800	66.67000	92.800	0.01262	0.01245	-0.00058
GE-1	72	10019.90000	0.00000	0.000	9943.18000	9893.17000	10223.35000
TB-1	159	260067.29000	0.00000	0.000	258764.23000	260082.75000	261354.90000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:57:34
Tube Number: 24 Batch: 133116050004A
Sample Number: **7265223** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23405.96000	0.00000	0.000	23365.90000	23235.85000	23616.14000
AL	27	622.42400	6534.75000	2.700	639.34669	622.76520	605.15901
CA	44	3019.91000	4694.12000	1.900	3080.89532	3013.70272	2965.13287
CR	52	0.65100	733.39000	33.400	0.63376	0.87643	0.44211
FE	57	1114.39400	16491.48000	4.500	1093.96864	1078.27455	1170.93964
K	39	1113.61200	29792.03000	2.600	1106.46392	1145.06404	1089.30744
MG	24	907.16800	33618.32000	0.900	910.47951	898.13532	912.89017
MN	55	141.95200	44235.45000	3.000	140.68994	146.76464	138.40217
NA	23	1288.92700	108231.19000	0.500	1293.53772	1292.33790	1280.90391
TI	47	9.88000	126.67000	18.900	10.92861	10.98978	7.72288
V	51	4.05300	2400.27000	6.000	4.23065	3.77656	4.15211
IN-1	115	48329.42000	0.00000	0.000	48411.67000	48518.95000	48057.64000
AG	107	0.03300	126.67000	44.500	0.05057	0.02674	0.02317
AS	75	1.31300	121.33000	34.000	1.82171	1.13353	0.98400
BA	137	30.60100	8052.28000	3.800	30.92556	29.30227	31.57466
CD	111	0.09900	28.00000	20.400	0.09140	0.08380	0.12193
CO	59	0.58100	970.06000	10.200	0.64756	0.56000	0.53451
CU	63	4.64400	5997.91000	5.300	4.37449	4.86034	4.69862
MO	98	0.17100	236.68000	11.500	0.18176	0.14841	0.18328
NI	60	2.35100	1013.41000	6.400	2.24456	2.52328	2.28539
SB	121	0.21000	243.35000	73.700	0.37364	0.18796	0.06719
SN	120	-1.02900	983.67000	0.000	-1.33990	-1.25725	-0.49042
SR	88	18.42200	7671.99000	0.500	18.51124	18.32617	18.42993
ZN	66	23.35700	3308.78000	6.100	24.82053	23.28083	21.97093
BI-1	209	231848.94000	0.00000	0.000	231070.06000	232721.81000	231754.94000
PB	208	5.04100	52285.76000	0.200	5.03228	5.03891	5.05322
TL	203	0.03700	163.34000	13.300	0.04244	0.03272	0.03603
GE-1	72	9683.11000	0.00000	0.000	10003.34000	9913.23000	9132.75000
TB-1	159	261619.98000	0.00000	0.000	258760.07000	259300.43000	266799.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:59:34
Tube Number: 25 Batch: 133116050004A
Sample Number: **7265224** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.30000	0.00000	0.000	22644.72000	23756.37000	22674.80000
AL	27	457.26400	4720.80000	11.200	424.15150	431.52231	516.11760
CA	44	2786.32200	4260.68000	5.600	2952.67069	2763.48850	2642.80829
CR	52	0.51500	620.04000	10.100	0.51499	0.46347	0.56795
FE	57	961.20900	13985.85000	3.800	942.71843	937.25637	1003.65368
K	39	1482.09500	38418.14000	5.200	1518.75298	1392.83268	1534.69968
MG	24	802.35000	29230.51000	4.100	833.52875	767.33485	806.18584
MN	55	94.30400	28920.58000	1.300	95.51628	93.06903	94.32774
NA	23	1822.88400	147296.29000	3.500	1881.44481	1755.42745	1831.77987
TI	47	8.41100	106.67000	53.500	3.22167	10.74898	11.26170
V	51	1.78500	1043.41000	1.900	1.77443	1.75758	1.82449
IN-1	115	49162.94000	0.00000	0.000	48602.13000	49884.14000	49002.55000
AG	107	0.01400	80.00000	94.500	0.00302	0.02939	0.01068
AS	75	1.14900	108.67000	12.500	1.26802	0.98958	1.18932
BA	137	27.67000	7405.28000	4.700	28.64680	26.17595	28.18710
CD	111	0.02700	8.67000	78.300	0.00256	0.03828	0.03906
CO	59	0.56100	953.40000	6.300	0.58358	0.52026	0.57865
CU	63	1.97900	2723.66000	4.400	2.00955	2.04686	1.88087
MO	98	0.14100	203.34000	30.600	0.18916	0.12770	0.10601
NI	60	1.73500	766.71000	9.000	1.62181	1.67073	1.91250
SB	121	0.17300	223.34000	11.300	0.17200	0.19323	0.15402
SN	120	-1.20700	853.39000	0.000	-1.43991	-1.18966	-0.99153
SR	88	17.23700	7301.83000	3.700	17.84088	17.28920	16.58115
ZN	66	14.82800	2140.22000	12.200	15.97252	12.74022	15.77094
BI-1	209	231288.26000	0.00000	0.000	229288.26000	230659.31000	233917.22000
PB	208	2.89800	30092.35000	0.500	2.89269	2.91337	2.88683
TL	203	0.03000	140.01000	9.500	0.03026	0.02687	0.03248
GE-1	72	9699.72000	0.00000	0.000	10243.40000	9693.07000	9162.68000
TB-1	159	260944.53000	0.00000	0.000	261091.87000	261781.73000	259960.00000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:01:34
Tube Number: 26 Batch: 133116050004A
Sample Number: **7265228** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23632.71000	0.00000	0.000	24186.66000	22264.33000	24447.15000
AL	27	34.66900	376.69000	30.000	32.60836	25.45309	45.94607
CA	44	9114.61900	14282.86000	2.100	8976.48521	9338.40699	9028.96595
CR	52	-0.17100	106.67000	0.000	-0.19641	-0.11774	-0.19762
FE	57	182.25900	2727.02000	13.400	202.90209	188.47787	155.39800
K	39	605.26900	17115.31000	4.800	598.65416	636.99961	580.15293
MG	24	3732.25600	139433.82000	3.500	3695.89207	3876.38311	3624.49317
MN	55	9.24100	2937.04000	8.200	9.07438	10.07141	8.57671
NA	23	5263.94500	421133.33000	5.100	5176.82867	5564.11744	5050.88816
TI	47	0.49700	6.67000	173.200	0.00000	0.00000	1.49207
V	51	0.38400	233.34000	38.000	0.25087	0.54060	0.36159
IN-1	115	48505.38000	0.00000	0.000	49373.90000	47829.71000	48312.52000
AG	107	-0.01000	16.67000	0.000	-0.01280	-0.00867	-0.00875
AS	75	0.89100	84.67000	2.000	0.88856	0.87340	0.90972
BA	137	19.70800	5207.69000	3.300	19.40602	20.45656	19.26210
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.04300	100.01000	48.700	0.05449	0.05684	0.01903
CU	63	0.86600	1293.44000	10.100	0.76538	0.92533	0.90637
MO	98	0.17300	240.01000	32.700	0.20198	0.20929	0.10787
NI	60	0.30000	150.01000	26.600	0.38734	0.28167	0.23083
SB	121	0.21400	246.68000	16.600	0.24226	0.22424	0.17403
SN	120	-1.37400	703.38000	0.000	-1.32149	-1.24332	-1.55657
SR	88	28.97300	12101.34000	5.300	27.20854	29.81171	29.89873
ZN	66	3.11400	456.69000	11.200	3.21858	3.39798	2.72402
BI-1	209	225375.01000	0.00000	0.000	225244.22000	224756.99000	226123.82000
PB	208	0.99400	10225.12000	1.500	0.99973	1.00395	0.97685
TL	203	-0.00900	16.67000	0.000	-0.00426	-0.01067	-0.01069
GE-1	72	9886.43000	0.00000	0.000	9973.02000	10133.44000	9552.83000
TB-1	159	261558.07000	0.00000	0.000	263354.20000	262299.25000	259020.76000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:03:34
Tube Number: 27 Batch: 133116050004A
Sample Number: **7265235** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22521.35000	0.00000	0.000	22514.79000	22764.95000	22284.31000
AL	27	9.62700	103.34000	14.900	8.31442	11.15785	9.40897
CA	44	36028.73500	53816.91000	1.500	35956.98815	35521.78166	36607.43615
CR	52	-0.11100	146.68000	0.000	-0.11989	-0.13544	-0.07667
FE	57	1009.23000	14366.33000	1.800	1008.68627	991.33371	1027.66910
K	39	2000.03200	50180.23000	1.400	2032.44529	1983.21231	1984.43947
MG	24	15168.52200	540557.81000	1.300	15174.37312	14964.47763	15366.71414
MN	55	641.08600	192116.04000	0.600	639.09858	638.81748	645.34084
NA	23	75441.45500	5659764.29000	1.900	75267.04855	74136.13810	76921.17771
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.13500	83.34000	26.500	0.16469	0.14535	0.09535
IN-1	115	46287.86000	0.00000	0.000	46267.73000	46394.72000	46201.13000
AG	107	-0.00800	20.00000	0.000	-0.01254	0.00396	-0.01668
AS	75	0.37900	38.00000	54.700	0.23597	0.61661	0.28430
BA	137	38.41300	9679.92000	3.300	37.37063	39.84560	38.02135
CD	111	0.00600	2.67000	324.400	0.02616	-0.00481	-0.00481
CO	59	0.45300	730.04000	20.000	0.39467	0.40640	0.55671
CU	63	0.12400	350.02000	60.600	0.09867	0.06450	0.20822
MO	98	0.16300	216.68000	11.200	0.14819	0.15632	0.18300
NI	60	0.25100	123.34000	54.300	0.39219	0.24258	0.11967
SB	121	-0.02600	86.67000	0.000	-0.00441	-0.03702	-0.03648
SN	120	-1.29100	736.72000	0.000	-1.48906	-1.04865	-1.33564
SR	88	108.49100	43258.03000	1.200	107.49863	109.96508	108.00883
ZN	66	2.13200	303.35000	12.000	2.10838	2.39793	1.88885
BI-1	209	214246.21000	0.00000	0.000	213851.27000	215925.74000	212961.62000
PB	208	0.34700	3553.64000	9.000	0.33445	0.38199	0.32329
TL	203	-0.00500	26.67000	0.000	-0.01051	0.00286	-0.00710
GE-1	72	9683.08000	0.00000	0.000	9673.06000	9402.90000	9973.27000
TB-1	159	255273.73000	0.00000	0.000	254093.24000	256801.48000	254926.48000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:05:34
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265238** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23696.19000	22965.14000	21833.75000
AL	27	73.05000	753.38000	1.500	71.90578	73.24241	74.00318
CA	44	54035.28900	81736.93000	4.300	52250.49907	53189.06602	56666.30132
CR	52	0.55800	643.38000	34.200	0.40078	0.50347	0.77019
FE	57	258.90100	3743.88000	1.300	261.23765	255.09363	260.37029
K	39	1672.00800	42744.16000	5.300	1606.93322	1636.74297	1772.34653
MG	24	22203.29300	801371.99000	4.000	21294.97886	22266.79273	23048.10735
MN	55	99.37500	30192.85000	3.800	95.59332	99.46134	103.07012
NA	23	89388.17300	6790769.69000	3.900	86297.65183	88748.66623	93118.20051
TI	47	0.55700	6.67000	173.200	0.00000	0.00000	1.67067
V	51	0.56900	336.69000	27.700	0.67456	0.64464	0.38808
IN-1	115	45897.66000	0.00000	0.000	46349.62000	45208.00000	46135.37000
AG	107	0.00000	40.00000	0.000	0.00811	0.00026	-0.00838
AS	75	0.18100	21.33000	85.200	0.33089	0.02303	0.18890
BA	137	36.37600	9086.18000	4.800	35.79575	38.32865	35.00491
CD	111	0.01100	4.00000	143.400	0.02611	0.01104	-0.00481
CO	59	0.30900	503.36000	4.700	0.31670	0.29216	0.31825
CU	63	0.86900	1226.76000	20.100	0.83475	1.05749	0.71328
MO	98	0.11500	160.01000	14.800	0.13068	0.11694	0.09681
NI	60	0.38800	176.68000	17.400	0.39140	0.45340	0.31887
SB	121	-0.08900	46.67000	0.000	-0.14954	-0.03364	-0.08480
SN	120	-1.36700	670.04000	0.000	-1.36382	-1.18644	-1.55050
SR	88	130.97200	51763.85000	3.600	127.57626	136.28565	129.05305
ZN	66	4.48700	616.70000	21.200	4.24997	3.67756	5.53390
BI-1	209	212305.13000	0.00000	0.000	209399.06000	213684.94000	213831.40000
PB	208	1.88700	18074.96000	3.000	1.82130	1.91365	1.92494
TL	203	-0.00500	26.67000	0.000	-0.00353	-0.00374	-0.00712
GE-1	72	8929.28000	0.00000	0.000	8302.39000	9142.71000	9342.74000
TB-1	159	251229.14000	0.00000	0.000	251029.45000	251149.47000	251508.49000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:07:34
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265240** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22985.28000	0.00000	0.000	23395.87000	23485.96000	22074.00000
AL	27	27.31400	286.68000	14.500	26.10024	24.09767	31.74380
CA	44	54331.74700	82796.00000	2.400	54540.71052	52919.25513	55535.27569
CR	52	0.21400	393.35000	21.400	0.17416	0.26362	0.20318
FE	57	126.50200	1846.84000	8.600	115.71729	137.51567	126.27319
K	39	1800.66800	46242.64000	3.500	1747.71129	1783.52982	1870.76213
MG	24	22272.81500	809569.94000	3.100	21864.08564	21874.54609	23079.81257
MN	55	76.77400	23509.37000	2.800	74.33162	78.05144	77.93930
NA	23	90114.84400	6893409.69000	3.900	89373.64923	87075.19892	93895.68506
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.33400	200.01000	15.800	0.37835	0.27558	0.34781
IN-1	115	44386.04000	0.00000	0.000	45004.41000	44612.43000	43541.28000
AG	107	-0.00400	30.00000	0.000	0.00460	-0.00380	-0.01228
AS	75	0.28400	28.67000	59.400	0.12179	0.27230	0.45868
BA	137	38.53100	9309.64000	1.500	37.88918	39.00523	38.69835
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00322	-0.00481
CO	59	0.22600	363.35000	17.300	0.24715	0.24948	0.18069
CU	63	0.34900	593.37000	44.100	0.47686	0.17820	0.39169
MO	98	0.08700	123.34000	35.700	0.06439	0.07412	0.12235
NI	60	0.45200	196.68000	69.000	0.37923	0.79449	0.18299
SB	121	-0.09200	43.33000	0.000	-0.13249	-0.08204	-0.06285
SN	120	-1.40400	620.06000	0.000	-1.68994	-1.14619	-1.37568
SR	88	135.96700	51964.30000	3.400	131.69999	135.23269	140.96816
ZN	66	2.33500	316.68000	34.100	2.70414	1.42219	2.87763
BI-1	209	208998.34000	0.00000	0.000	210365.33000	206444.76000	210184.94000
PB	208	0.54400	5303.92000	1.200	0.55088	0.54442	0.53748
TL	203	-0.00700	20.00000	0.000	-0.01389	0.00012	-0.00701
GE-1	72	9483.01000	0.00000	0.000	9543.08000	9152.78000	9753.17000
TB-1	159	246797.33000	0.00000	0.000	244514.10000	246473.43000	249404.47000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:09:34
Tube Number: 30 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22541.30000	0.00000	0.000	21403.20000	22614.59000	23606.11000
AL	27	1294.86100	13061.75000	6.600	1393.80331	1246.02648	1244.75338
CA	44	24135.74700	36026.76000	5.600	25275.95706	24483.14614	22648.13777
CR	52	5.52500	4280.68000	9.600	6.13254	5.29948	5.14170
FE	57	21037.91900	299019.81000	5.900	22386.85363	20763.43831	19963.46590
K	39	3285.47100	81263.90000	7.100	3538.02355	3236.89196	3081.49750
MG	24	10008.96800	356500.11000	4.700	10441.61119	10085.25442	9500.03767
MN	55	1650.59200	494208.90000	5.100	1738.32099	1643.40155	1570.05274
NA	23	54596.50800	4094941.81000	5.500	57445.54722	54859.73987	51484.23762
TI	47	38.22900	470.03000	22.700	47.72225	30.64828	36.31606
V	51	5.54300	3160.41000	5.500	5.28651	5.87940	5.46402
IN-1	115	44151.75000	0.00000	0.000	44588.69000	42625.83000	45240.72000
AG	107	0.01700	76.67000	53.800	0.02627	0.01477	0.00872
AS	75	3.80500	310.01000	6.900	3.64665	3.66218	4.10650
BA	137	70.01700	16818.98000	1.000	69.44143	70.78472	69.82414
CD	111	0.74200	184.00000	2.300	0.72643	0.76010	0.73965
CO	59	12.07600	17876.13000	6.700	12.26609	12.77576	11.18475
CU	63	11.52700	13312.22000	5.500	10.82252	11.72026	12.03705
MO	98	2.28300	2550.31000	7.900	2.38265	2.39053	2.07457
NI	60	8.62300	3335.44000	9.200	9.14499	9.01673	7.70613
SB	121	0.44300	360.02000	27.500	0.30276	0.51683	0.51035
SN	120	-1.08400	860.06000	0.000	-1.00103	-1.23363	-1.01867
SR	88	98.71700	37514.73000	3.900	98.21173	102.76211	95.17668
ZN	66	68.70200	8852.57000	6.200	64.50089	73.02972	68.57491
BI-1	209	208380.44000	0.00000	0.000	204692.32000	211626.81000	208822.20000
PB	208	22.53000	209145.58000	1.300	22.84513	22.29755	22.44766
TL	203	0.08200	276.68000	16.000	0.08149	0.09545	0.06921
GE-1	72	9482.96000	0.00000	0.000	9372.90000	9482.85000	9593.13000
TB-1	159	247114.96000	0.00000	0.000	244492.67000	244632.36000	252219.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:11:37
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266807** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22181.14000	0.00000	0.000	22064.43000	22264.67000	22214.32000
AL	27	559.21300	5564.42000	5.000	575.93532	526.63916	575.06453
CA	44	59826.23000	88015.53000	1.800	60927.91134	59766.30240	58784.47696
CR	52	1.03000	970.07000	11.600	1.16163	0.92818	0.99998
FE	57	2330.58300	32664.00000	3.700	2412.21253	2340.65413	2238.88117
K	39	3916.45800	95227.51000	0.600	3891.52874	3925.04724	3932.79757
MG	24	27008.44300	948006.81000	1.000	27240.47548	26722.71622	27062.13797
MN	55	426.93700	126017.41000	2.100	437.16116	420.07389	423.57675
NA	23	96634.82800	7138598.64000	2.200	98633.89285	94345.24829	96925.34410
TI	47	16.45600	200.01000	23.400	20.66584	15.56498	13.13719
V	51	1.94300	1093.42000	9.300	2.07291	2.01859	1.73763
IN-1	115	44825.62000	0.00000	0.000	46115.98000	44280.10000	44080.79000
AG	107	0.00300	46.67000	323.900	-0.00838	0.01359	0.00504
AS	75	0.54600	50.00000	54.400	0.30895	0.44978	0.87876
BA	137	62.77800	15307.36000	3.400	61.07389	62.06996	65.18994
CD	111	0.10200	26.67000	11.500	0.08842	0.10847	0.10898
CO	59	0.54100	840.06000	12.700	0.53837	0.47384	0.61143
CU	63	3.82200	4610.81000	6.500	3.70880	4.10625	3.65017
MO	98	0.40200	476.69000	32.400	0.25256	0.46225	0.49160
NI	60	0.67200	283.34000	7.900	0.61754	0.72311	0.67458
SB	121	0.11900	170.01000	96.600	0.01228	0.10389	0.24048
SN	120	-0.53900	1279.08000	0.000	-1.44848	1.01655	-1.18651
SR	88	182.14400	70324.98000	0.400	181.55613	182.89684	181.97806
ZN	66	19.98700	2626.99000	2.700	19.51706	20.56350	19.87911
BI-1	209	203722.19000	0.00000	0.000	204533.14000	203803.41000	202830.02000
PB	208	4.97600	45350.77000	2.400	5.02091	4.83913	5.06878
TL	203	0.00400	50.00000	318.500	0.01086	-0.01034	0.01107
GE-1	72	8952.58000	0.00000	0.000	8982.60000	8752.45000	9122.68000
TB-1	159	243422.16000	0.00000	0.000	246637.52000	242192.38000	241436.58000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:13:37
Tube Number: 32 Batch: 133116050004A
Sample Number: **7265243** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22511.48000	0.00000	0.000	22755.16000	22174.36000	22604.91000
AL	27	21.19600	220.01000	15.800	19.00754	19.52124	25.06048
CA	44	50462.21200	75339.72000	1.800	49427.47173	51084.51446	50874.64891
CR	52	-0.20100	80.00000	0.000	-0.27002	-0.18606	-0.14776
FE	57	156.72500	2236.91000	8.700	154.47875	171.39282	144.30280
K	39	3199.71400	79228.82000	4.300	3100.99231	3357.13059	3141.01825
MG	24	21830.96900	777553.19000	2.400	21324.13279	22351.79592	21816.97829
MN	55	212.22000	63583.09000	3.600	203.47332	215.94742	217.23819
NA	23	91155.62900	6834706.98000	0.900	91395.86741	91840.18943	90230.83085
TI	47	1.35000	16.67000	124.200	0.00000	0.82250	3.22735
V	51	0.18200	110.00000	25.000	0.16283	0.14951	0.23415
IN-1	115	45255.74000	0.00000	0.000	45833.60000	44540.27000	45393.34000
AG	107	0.00000	40.00000	7556.700	0.00003	-0.01238	0.01285
AS	75	0.35000	34.67000	40.300	0.21478	0.49638	0.33943
BA	137	38.92700	9586.47000	4.300	37.52429	40.76204	38.49581
CD	111	0.00000	1.33000	2023.300	-0.00481	-0.00481	0.01097
CO	59	0.27200	440.02000	4.700	0.27490	0.28341	0.25802
CU	63	0.62800	930.06000	17.500	0.54981	0.57942	0.75336
MO	98	0.38500	463.36000	26.900	0.31521	0.50420	0.33607
NI	60	0.49700	216.68000	55.000	0.19616	0.56404	0.72935
SB	121	-0.07300	56.67000	0.000	-0.00288	-0.14889	-0.06704
SN	120	-0.09300	1646.67000	0.000	-1.32854	-1.06553	2.11614
SR	88	121.57700	47378.36000	4.500	120.78416	127.45320	116.49294
ZN	66	2.63100	363.36000	27.400	3.32653	1.88667	2.68006
BI-1	209	211369.41000	0.00000	0.000	215024.20000	212332.54000	206751.50000
PB	208	0.07900	993.39000	20.000	0.09315	0.08302	0.06205
TL	203	-0.00600	23.33000	0.000	-0.00380	-0.00367	-0.01039
GE-1	72	9472.87000	0.00000	0.000	9212.74000	9342.84000	9863.04000
TB-1	159	249814.98000	0.00000	0.000	254312.18000	248367.95000	246764.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:15:37
Tube Number: 33 Batch: 133116050004A
Sample Number: **7265247** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23422.42000	0.00000	0.000	22975.04000	23816.49000	23475.72000
AL	27	0.33200	10.00000	489.000	-0.60501	2.20564	-0.60501
CA	44	17.35200	33.33000	85.300	9.03693	8.57321	34.44727
CR	52	-0.24900	46.67000	0.000	-0.24374	-0.25896	-0.24516
FE	57	1.38400	30.00000	149.400	3.46533	-0.66863	1.35427
K	39	5.14800	1840.17000	145.400	11.78006	6.62870	-2.96508
MG	24	5.49800	220.01000	25.800	6.43555	6.19260	3.86624
MN	55	0.20700	103.34000	64.600	0.33252	0.22166	0.06658
NA	23	81.37700	14199.32000	13.600	93.03951	79.99846	71.09428
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00500	10.00000	311.700	-0.01139	0.00526	0.02238
IN-1	115	46363.09000	0.00000	0.000	44619.46000	45595.98000	48873.84000
AG	107	-0.01500	3.33000	0.000	-0.01668	-0.01248	-0.01668
AS	75	0.02900	8.67000	61.100	0.04911	0.02220	0.01569
BA	137	0.04500	20.00000	241.700	0.16909	0.00338	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00500	36.67000	463.600	-0.00465	-0.01148	0.03081
CU	63	0.02400	230.01000	218.800	0.03903	0.06859	-0.03469
MO	98	0.02100	53.33000	187.700	-0.02425	0.04574	0.04105
NI	60	-0.03800	6.67000	0.000	-0.02843	-0.05414	-0.03067
SB	121	-0.12700	23.33000	0.000	-0.13220	-0.08384	-0.16563
SN	120	-1.47400	593.37000	0.000	-1.46189	-1.50395	-1.45626
SR	88	0.05100	23.33000	104.900	0.09636	-0.00772	0.06355
ZN	66	0.45200	76.67000	9.800	0.49967	0.41130	0.44616
BI-1	209	219392.35000	0.00000	0.000	224290.80000	210964.61000	222921.64000
PB	208	-0.00900	166.67000	0.000	-0.01296	-0.00149	-0.01188
TL	203	-0.01100	10.00000	0.000	-0.01066	-0.01046	-0.01064
GE-1	72	9382.88000	0.00000	0.000	9382.90000	9032.73000	9733.02000
TB-1	159	253242.66000	0.00000	0.000	255489.35000	247433.84000	256804.78000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:17:37
Tube Number: 34
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23325.81000	0.00000	0.000	22654.95000	23195.61000	24126.87000
AL	27	2545.46500	26600.25000	3.200	2637.05865	2514.87464	2484.46299
CA	44	2637.12300	4077.32000	11.800	2991.28035	2505.33714	2414.75142
CR	52	264.13500	201166.53000	3.700	273.07511	265.60570	253.72451
FE	57	2594.51700	38234.85000	1.500	2590.15120	2635.07472	2558.32468
K	39	2577.68200	66451.86000	2.900	2651.12804	2580.10845	2501.81037
MG	24	2604.55300	96074.94000	4.000	2688.21163	2637.32562	2488.12324
MN	55	266.43300	82703.57000	1.000	269.26061	266.07036	263.96861
NA	23	2559.13300	206257.88000	4.400	2655.46095	2584.69571	2437.24257
TI	47	256.97500	3283.79000	4.100	264.09248	261.87142	244.96012
V	51	267.99200	157619.57000	2.700	270.06458	274.04566	259.86433
IN-1	115	47705.70000	0.00000	0.000	46396.80000	48185.88000	48534.41000
AG	107	26.45600	65933.20000	1.800	26.85861	26.57481	25.93601
AS	75	264.96600	22855.33000	1.400	268.60723	264.88412	261.40648
BA	137	259.42700	67301.82000	1.900	264.85471	254.90775	258.51798
CD	111	26.33700	7009.46000	5.100	27.82519	25.24460	25.94215
CO	59	245.86300	393056.94000	2.100	251.42124	244.75054	241.41720
CU	63	267.19200	328689.87000	2.200	274.03576	263.85587	263.68432
MO	98	26.65100	31883.67000	3.400	27.69595	26.21875	26.03893
NI	60	269.70900	112117.77000	3.500	280.51946	265.79359	262.81375
SB	121	27.18500	17492.95000	0.300	27.22591	27.24739	27.08147
SN	120	24.94500	22088.38000	4.700	26.24543	24.59117	23.99901
SR	88	25.72000	10566.91000	3.000	26.50082	25.70966	24.95018
ZN	66	265.31800	36922.36000	1.000	268.44002	263.96023	263.55404
BI-1	209	220273.01000	0.00000	0.000	220358.24000	221787.18000	218673.61000
PB	208	26.51200	260139.31000	0.900	26.63634	26.23120	26.66944
TL	203	26.09100	79530.66000	3.000	25.17947	26.47480	26.61964
GE-1	72	9532.97000	0.00000	0.000	10123.30000	9653.07000	8822.55000
TB-1	159	257498.71000	0.00000	0.000	259524.76000	253791.64000	259179.72000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:19:38
Tube Number: 35
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23335.81000	0.00000	0.000	23466.08000	23976.44000	22564.90000
AL	27	3.55300	43.33000	67.700	6.05109	1.25626	3.35038
CA	44	0.10400	6.67000	6971.200	-4.08813	8.48875	-4.08813
CR	52	-0.20600	80.00000	0.000	-0.08844	-0.27208	-0.25611
FE	57	1.37700	30.00000	53.100	0.68052	1.31202	2.13744
K	39	1.45700	1740.16000	249.700	-1.75197	0.71314	5.41095
MG	24	2.82000	120.01000	20.300	2.52154	2.45822	3.48000
MN	55	0.08800	66.67000	145.700	0.22685	0.06257	-0.02560
NA	23	-9.19400	7111.67000	0.000	-10.85721	-14.52976	-2.19553
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07800	53.33000	96.900	0.15755	0.07128	0.00618
IN-1	115	46884.59000	0.00000	0.000	46977.60000	46610.05000	47066.11000
AG	107	-0.00300	33.33000	0.000	0.01185	-0.01668	-0.00447
AS	75	0.11400	16.00000	143.300	0.30191	0.02009	0.01917
BA	137	0.17200	53.34000	102.400	0.35448	0.16029	0.00212
CD	111	0.02300	7.33000	155.300	0.06383	0.01056	-0.00481
CO	59	0.07500	146.68000	17.300	0.08995	0.06519	0.07073
CU	63	0.09200	316.68000	68.400	0.11114	0.02180	0.14358
MO	98	0.04700	83.33000	45.600	0.02670	0.04422	0.06898
NI	60	0.04400	40.00000	147.700	0.11680	0.01970	-0.00539
SB	121	0.23200	250.01000	56.600	0.08842	0.34646	0.26226
SN	120	-1.39900	660.04000	0.000	-1.38781	-1.46928	-1.33955
SR	88	0.00900	6.67000	323.600	-0.00772	0.04210	-0.00772
ZN	66	0.20200	43.33000	41.200	0.24984	0.10558	0.24915
BI-1	209	217643.36000	0.00000	0.000	216713.06000	218117.07000	218099.96000
PB	208	0.00600	310.01000	92.700	0.01238	0.00183	0.00389
TL	203	0.01000	73.33000	72.800	0.00613	0.01926	0.00600
GE-1	72	9983.17000	0.00000	0.000	10373.34000	9733.08000	9843.09000
TB-1	159	257895.51000	0.00000	0.000	258208.86000	259065.52000	256412.14000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:21:38
Tube Number: 36 Batch: 133116050004A
Sample Number: **7266810** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22861.84000	0.00000	0.000	23175.49000	22244.23000	23165.80000
AL	27	483.56000	4957.56000	5.100	456.80197	506.05349	487.82522
CA	44	20609.37600	31244.22000	3.700	19738.27045	21182.84635	20907.01166
CR	52	1.62600	1443.45000	7.400	1.50092	1.74208	1.63396
FE	57	29124.73200	420533.89000	1.700	28962.82583	29678.53390	28732.83761
K	39	2038.67400	51871.53000	3.600	2061.72215	2097.74727	1956.55327
MG	24	8504.71000	307636.86000	1.900	8556.65910	8633.04654	8324.42570
MN	55	2191.60700	666377.13000	2.400	2167.19060	2252.27247	2155.35682
NA	23	59133.78000	4503840.76000	2.700	57762.43963	60889.75762	58749.14274
TI	47	17.51500	220.01000	16.300	20.46285	14.75936	17.32142
V	51	2.17300	1260.10000	9.200	2.40069	2.09172	2.02517
IN-1	115	45755.83000	0.00000	0.000	47077.32000	43876.57000	46313.59000
AG	107	0.01400	73.33000	63.300	0.02400	0.00951	0.00813
AS	75	5.00200	420.68000	9.000	5.02427	4.53904	5.44275
BA	137	137.81200	34268.96000	4.700	130.85685	143.59718	138.98163
CD	111	0.16800	44.00000	12.600	0.16263	0.19117	0.14992
CO	59	2.63900	4080.63000	11.700	2.97989	2.55932	2.37859
CU	63	7.88400	9486.18000	8.600	7.92431	8.54143	7.18633
MO	98	0.33200	410.02000	15.200	0.37403	0.27579	0.34614
NI	60	2.08000	850.06000	6.500	2.06606	2.22070	1.95235
SB	121	0.12800	180.01000	5.300	0.13541	0.12337	0.12427
SN	120	-0.14800	1582.45000	0.000	-1.37713	2.16912	-1.23653
SR	88	119.11000	46900.31000	3.900	115.24241	124.31366	117.77325
ZN	66	46.78800	6248.04000	7.700	45.41849	50.85073	44.09480
BI-1	209	217179.85000	0.00000	0.000	216391.60000	219596.85000	215551.11000
PB	208	39.57000	382672.16000	1.100	39.73356	39.07008	39.90637
TL	203	0.01300	80.00000	53.400	0.01953	0.00587	0.01295
GE-1	72	9686.36000	0.00000	0.000	10153.22000	9733.05000	9172.80000
TB-1	159	256745.17000	0.00000	0.000	257163.77000	253040.70000	260031.03000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:23:38
Tube Number: 37 Batch: 133116050004A
Sample Number: **7266811** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23923.21000	0.00000	0.000	23586.01000	24026.75000	24156.88000
AL	27	184.71900	1986.86000	14.600	179.15700	213.94569	161.05371
CA	44	18810.00700	29848.75000	1.400	19113.06538	18655.65584	18661.29931
CR	52	0.47500	613.37000	19.200	0.46906	0.56953	0.38721
FE	57	12582.54300	190157.45000	0.800	12678.42532	12591.53341	12477.67103
K	39	2010.31600	53562.78000	2.600	2032.14082	2049.01528	1949.79126
MG	24	8061.85700	305180.31000	1.500	8199.95512	8016.14102	7969.47623
MN	55	1493.71600	475390.21000	1.700	1518.66674	1493.35217	1469.12954
NA	23	55833.55100	4451892.12000	0.700	56281.37826	55610.25189	55609.02243
TI	47	5.84300	76.67000	14.700	5.41292	6.83181	5.28501
V	51	0.87700	536.70000	13.000	0.76182	0.87963	0.98972
IN-1	115	47043.55000	0.00000	0.000	47838.17000	46336.73000	46955.75000
AG	107	-0.00100	40.00000	0.000	0.00734	-0.01668	0.00779
AS	75	2.09500	184.67000	10.200	2.30692	2.09762	1.88051
BA	137	98.78400	25276.48000	3.000	95.31760	100.51288	100.52076
CD	111	0.10700	29.33000	23.400	0.08507	0.13437	0.10202
CO	59	1.42800	2280.25000	7.500	1.37904	1.35348	1.55148
CU	63	3.66800	4657.48000	7.100	3.96661	3.56472	3.47415
MO	98	0.18300	243.35000	25.600	0.14253	0.23404	0.17115
NI	60	1.29000	550.04000	22.400	1.00110	1.57996	1.28968
SB	121	0.02400	120.01000	319.800	0.09944	-0.05296	0.02500
SN	120	-1.04000	947.18000	0.000	-1.28027	-0.64048	-1.20009
SR	88	111.70900	45246.06000	4.500	106.69442	116.68369	111.74885
ZN	66	22.90300	3157.06000	3.000	22.10802	23.19842	23.40204
BI-1	209	219487.68000	0.00000	0.000	218163.84000	220429.98000	219869.22000
PB	208	17.11500	167424.26000	1.300	17.36366	16.90726	17.07471
TL	203	0.00400	53.33000	226.400	0.01263	0.00251	-0.00402
GE-1	72	9973.19000	0.00000	0.000	9733.07000	9903.07000	10283.43000
TB-1	159	256981.53000	0.00000	0.000	258628.10000	254497.48000	257819.02000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:25:38
Tube Number: 38 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22818.51000	0.00000	0.000	23145.83000	23135.52000	22174.18000
AL	27	1280.88300	13088.54000	7.900	1242.50857	1204.46593	1395.67553
CA	44	25226.49300	38177.98000	3.800	24149.33356	26008.61386	25521.53138
CR	52	5.07500	4010.61000	5.300	5.34290	4.80219	5.07922
FE	57	21245.99300	306127.84000	3.200	21183.39695	20597.48758	21957.09399
K	39	4277.38200	106814.32000	1.300	4234.23885	4256.81355	4341.09485
MG	24	10294.79200	371613.50000	2.300	10128.58887	10184.62953	10571.15706
MN	55	1721.36300	522335.86000	3.200	1685.65885	1693.86760	1784.56367
NA	23	56362.62400	4285332.85000	2.000	55604.79030	55823.85417	57659.22694
TI	47	33.41400	416.69000	23.800	33.88554	25.22741	41.12793
V	51	5.57500	3213.76000	3.800	5.35021	5.60963	5.76397
IN-1	115	45587.72000	0.00000	0.000	46072.43000	44549.91000	46140.81000
AG	107	0.06200	186.68000	6.800	0.05814	0.06070	0.06633
AS	75	4.15100	348.68000	8.900	4.36716	3.72438	4.36058
BA	137	74.85500	18567.55000	6.500	79.59057	75.03802	69.93666
CD	111	0.77500	198.67000	4.600	0.78842	0.73511	0.80278
CO	59	11.30500	17298.92000	1.800	11.13168	11.52599	11.25749
CU	63	11.48700	13699.09000	3.700	11.93450	11.44199	11.08371
MO	98	2.18000	2516.95000	6.100	2.07996	2.33101	2.12872
NI	60	8.43700	3377.15000	8.600	8.21373	7.85232	9.24593
SB	121	0.43600	366.69000	24.200	0.35245	0.55432	0.40018
SN	120	-0.65300	1223.43000	0.000	-0.69675	-0.86834	-0.39397
SR	88	98.84500	38800.60000	3.200	98.60929	102.10997	95.81509
ZN	66	69.45500	9246.10000	3.700	66.66388	71.64194	70.06064
BI-1	209	215456.87000	0.00000	0.000	217928.18000	212981.27000	215461.15000
PB	208	21.62600	207595.66000	1.000	21.58099	21.86037	21.43571
TL	203	0.07100	253.35000	5.900	0.07570	0.06759	0.07001
GE-1	72	9646.35000	0.00000	0.000	9873.21000	9002.59000	10063.24000
TB-1	159	251762.65000	0.00000	0.000	253081.54000	251960.07000	250246.34000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:27:39
Tube Number: 39 Batch: 133116050004A
Sample Number: **7265248** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22524.83000	0.00000	0.000	23856.78000	21082.91000	22634.79000
AL	27	2.61200	33.34000	112.600	5.94302	1.51171	0.38079
CA	44	-1.98100	3.33000	0.000	2.23185	-4.08813	-4.08813
CR	52	-0.27000	30.00000	0.000	-0.27189	-0.29589	-0.24274
FE	57	11.18000	170.01000	40.000	15.92022	10.59454	7.02422
K	39	3.81200	1733.48000	151.000	-2.83449	7.03465	7.23496
MG	24	4.57100	176.68000	30.500	3.53256	6.15350	4.02627
MN	55	0.46100	176.68000	20.100	0.56765	0.40929	0.40583
NA	23	11.24400	8392.23000	41.500	7.96059	16.58150	9.18909
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00500	3.33000	0.000	-0.01139	0.00741	-0.01139
IN-1	115	47216.49000	0.00000	0.000	46158.14000	47338.84000	48152.50000
AG	107	-0.01000	16.67000	0.000	-0.01668	-0.00454	-0.00873
AS	75	-0.00400	6.00000	0.000	-0.00295	0.01862	-0.02890
BA	137	0.18400	56.67000	53.800	0.20206	0.27378	0.07761
CD	111	0.00000	1.33000	5768.300	-0.00481	-0.00481	0.01007
CO	59	0.00300	33.33000	132.600	0.00783	0.00089	0.00057
CU	63	0.18200	426.69000	25.800	0.21698	0.19913	0.12846
MO	98	0.01000	40.00000	7.500	0.01032	0.00946	0.00889
NI	60	0.05100	43.33000	69.700	0.04528	0.01856	0.08881
SB	121	-0.03500	83.34000	0.000	-0.11715	-0.03958	0.05124
SN	120	-1.43300	636.71000	0.000	-1.39837	-1.38181	-1.51782
SR	88	0.11500	50.00000	35.500	0.06774	0.13943	0.13695
ZN	66	1.92000	280.02000	33.100	2.33652	1.18878	2.23498
BI-1	209	221849.88000	0.00000	0.000	223085.41000	218587.11000	223877.11000
PB	208	0.01700	426.68000	27.100	0.02135	0.01822	0.01215
TL	203	-0.00800	16.67000	0.000	-0.00741	-0.01389	-0.00420
GE-1	72	9589.62000	0.00000	0.000	9182.82000	10023.12000	9562.91000
TB-1	159	251633.56000	0.00000	0.000	252560.50000	249361.30000	252978.88000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:29:40
Tube Number: 40
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21954.03000	0.00000	0.000	21543.66000	21513.36000	22805.06000
AL	27	90.17200	890.06000	17.900	106.08253	90.67302	73.76078
CA	44	215.60500	320.02000	13.200	184.87970	241.22010	220.71417
CR	52	1.87800	1566.80000	17.100	1.62391	2.23911	1.77220
FE	57	100.02200	1396.78000	9.700	89.71394	108.97583	101.37721
K	39	211.73900	6618.15000	5.100	210.10985	201.87049	223.23672
MG	24	108.32600	3773.88000	8.100	118.08044	105.90717	100.99136
MN	55	2.41500	743.38000	10.500	2.14247	2.46011	2.64326
NA	23	199.85900	21950.38000	7.000	213.88085	199.91989	185.77718
TI	47	19.76500	236.68000	27.900	25.39914	19.49965	14.39640
V	51	0.60600	340.02000	35.600	0.83512	0.57831	0.40583
IN-1	115	45812.42000	0.00000	0.000	44607.27000	46862.94000	45967.04000
AG	107	0.49900	1233.43000	5.900	0.51999	0.46555	0.51245
AS	75	2.00600	172.00000	13.900	2.23144	1.69554	2.09102
BA	137	1.85200	470.03000	9.400	1.94169	1.65024	1.96316
CD	111	0.47600	123.33000	14.800	0.39680	0.53038	0.50184
CO	59	0.54200	860.06000	5.300	0.55050	0.51039	0.56613
CU	63	2.04200	2610.30000	6.700	2.17858	2.04074	1.90656
MO	98	0.51100	616.70000	24.800	0.38713	0.63975	0.50515
NI	60	2.01400	826.72000	11.700	1.77190	2.02675	2.24205
SB	121	0.81100	600.04000	17.700	0.88782	0.90080	0.64574
SN	120	0.69500	2276.92000	41.300	1.02319	0.49143	0.56984
SR	88	1.00000	400.03000	41.600	0.72109	1.47884	0.80056
ZN	66	17.38800	2340.26000	7.000	16.95204	18.76519	16.44695
BI-1	209	215334.25000	0.00000	0.000	217134.12000	212562.91000	216305.72000
PB	208	1.07100	10505.16000	3.800	1.04840	1.11802	1.04522
TL	203	0.45300	1390.13000	22.300	0.55224	0.45554	0.35048
GE-1	72	9569.67000	0.00000	0.000	8862.57000	9983.20000	9863.23000
TB-1	159	250587.36000	0.00000	0.000	249576.68000	252153.80000	250031.60000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:31:41
Tube Number: 41
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22548.02000	0.00000	0.000	22234.09000	22354.71000	23055.26000
AL	27	9806.83100	99094.80000	1.100	9925.00685	9779.07669	9716.40903
CA	44	9550.51100	14292.88000	2.300	9344.35937	9523.46458	9783.70968
CR	52	-0.12900	133.34000	0.000	-0.13126	-0.07741	-0.17752
FE	57	9733.30900	138625.39000	1.600	9876.24197	9750.11953	9573.56631
K	39	9823.86300	240234.92000	3.400	10179.56626	9770.97235	9521.05020
MG	24	9688.15400	345591.69000	2.500	9904.38366	9733.49994	9426.57734
MN	55	0.00700	40.00000	909.200	-0.05792	0.00896	0.07008
NA	23	9677.05900	733363.27000	1.900	9814.25323	9751.96610	9464.95788
TI	47	196.28100	2423.58000	11.000	199.35253	216.22758	173.26231
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	45747.90000	0.00000	0.000	46075.99000	45482.76000	45684.95000
AG	107	-0.00600	26.67000	0.000	-0.00421	0.00437	-0.01668
AS	75	-0.07500	0.00000	0.000	-0.07485	-0.07485	-0.07485
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00600	2.67000	160.700	0.01074	0.01094	-0.00481
CO	59	-0.00700	16.67000	0.000	-0.01154	-0.00490	-0.00496
CU	63	0.01400	216.68000	71.400	0.00718	0.00949	0.02567
MO	98	197.55400	226584.05000	0.500	197.43238	198.51305	196.71625
NI	60	0.01200	26.67000	502.900	0.07035	-0.05414	0.02119
SB	121	-0.11700	30.00000	0.000	-0.10088	-0.08364	-0.16563
SN	120	-1.52000	550.04000	0.000	-1.39689	-1.60530	-1.55669
SR	88	0.04300	20.00000	118.300	0.04268	-0.00772	0.09394
ZN	66	0.33400	60.00000	44.200	0.48031	0.33722	0.18511
BI-1	209	216591.06000	0.00000	0.000	216958.90000	219484.59000	213329.70000
PB	208	0.00900	340.02000	63.300	0.00612	0.01599	0.00561
TL	203	-0.00700	20.00000	0.000	-0.00389	-0.00730	-0.01050
GE-1	72	9166.03000	0.00000	0.000	9502.84000	9192.71000	8802.54000
TB-1	159	249449.51000	0.00000	0.000	250730.48000	250340.25000	247277.79000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:33:41
Tube Number: 42
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22141.12000	0.00000	0.000	22244.52000	22204.36000	21974.49000
AL	27	10019.56300	99430.37000	1.300	9928.43683	10170.67823	9959.57373
CA	44	9713.35100	14269.41000	2.400	9455.22318	9900.56235	9784.26676
CR	52	21.32800	15637.32000	0.900	21.55882	21.19807	21.22764
FE	57	10129.22500	141685.49000	1.300	10210.83840	9977.01846	10199.81694
K	39	10198.68200	244918.70000	1.400	10056.34268	10206.43628	10333.26749
MG	24	9908.73000	347177.66000	0.900	9841.65234	9868.73481	10015.80211
MN	55	20.35200	6031.27000	7.500	18.69937	21.71364	20.64166
NA	23	10063.82500	748758.22000	1.300	9941.58189	10040.80195	10209.09214
TI	47	204.06400	2476.97000	8.300	185.32307	218.51720	208.35081
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	46176.90000	0.00000	0.000	44959.34000	47260.68000	46310.67000
AG	107	19.86800	47927.74000	2.800	20.31686	19.25306	20.03406
AS	75	19.49900	1631.42000	10.200	21.50464	17.52779	19.46553
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.80900	5106.79000	0.700	19.93761	19.82340	19.66521
CO	59	19.10100	29575.19000	3.800	19.90617	18.52463	18.87265
CU	63	20.24100	24287.20000	3.000	20.57809	19.55135	20.59316
MO	98	199.47900	230826.12000	3.100	204.73369	192.62796	201.07673
NI	60	20.79700	8388.96000	3.200	21.30868	20.04969	21.03234
SB	121	-0.08000	53.34000	0.000	-0.11586	-0.00780	-0.11731
SN	120	-1.20900	803.81000	0.000	-1.36331	-0.65913	-1.60371
SR	88	0.09300	40.00000	47.200	0.12140	0.11511	0.04242
ZN	66	21.50600	2907.01000	10.600	24.14139	20.20243	20.17503
BI-1	209	215923.44000	0.00000	0.000	219368.36000	214346.85000	214055.11000
PB	208	0.01900	430.02000	59.200	0.01191	0.03167	0.01285
TL	203	-0.00100	40.00000	0.000	0.00589	0.00298	-0.01051
GE-1	72	9416.20000	0.00000	0.000	9092.68000	9372.86000	9783.05000
TB-1	159	251066.32000	0.00000	0.000	250693.77000	251699.18000	250806.01000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:35:40
Tube Number: 43
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22538.07000	0.00000	0.000	22104.30000	24276.93000	21232.97000
AL	27	2583.79900	25985.86000	10.000	2600.62531	2318.13636	2832.63656
CA	44	2583.78800	3870.58000	5.500	2731.57274	2573.70323	2446.08931
CR	52	268.13700	196917.88000	6.000	271.22159	250.59984	282.58968
FE	57	2646.86500	37576.93000	7.000	2747.27973	2433.42009	2759.89599
K	39	2651.99600	65849.14000	6.800	2724.70916	2446.80833	2784.47058
MG	24	2645.18700	94088.52000	6.200	2703.46964	2460.72946	2771.36284
MN	55	265.90200	79572.31000	5.500	265.72146	251.47706	280.50817
NA	23	2583.59600	200542.33000	8.500	2634.25016	2343.43675	2773.10080
TI	47	266.90700	3283.79000	11.700	294.60701	232.92523	273.18744
V	51	272.52400	154482.80000	6.500	274.60178	253.91458	289.05507
IN-1	115	47190.07000	0.00000	0.000	46376.13000	48127.99000	47066.08000
AG	107	25.85700	63758.12000	0.900	26.05396	25.91171	25.60613
AS	75	261.40200	22302.63000	2.600	264.57192	253.74184	265.89252
BA	137	259.18200	66518.77000	1.300	262.90730	256.01966	258.61889
CD	111	26.28500	6922.76000	2.800	26.70143	25.43883	26.71356
CO	59	244.71700	387060.48000	1.300	247.08876	241.03474	246.02673
CU	63	263.04900	320159.28000	1.400	267.28721	260.05907	261.80088
MO	98	26.05300	30841.61000	1.800	26.43292	25.53630	26.18922
NI	60	267.34900	109971.37000	1.900	271.71190	261.69914	268.63506
SB	121	27.38600	17426.17000	3.600	27.47991	26.36475	28.31203
SN	120	24.13100	21197.27000	5.200	25.46029	22.93982	23.99415
SR	88	25.40900	10320.13000	8.600	27.71509	23.37484	25.13686
ZN	66	263.40300	36254.50000	2.700	267.52361	255.21352	267.47254
BI-1	209	216372.26000	0.00000	0.000	219008.88000	215874.90000	214233.00000
PB	208	26.42500	254666.08000	1.700	25.90694	26.62806	26.73888
TL	203	25.89800	77540.93000	1.200	25.56371	26.14354	25.98785
GE-1	72	9949.79000	0.00000	0.000	9452.82000	10373.31000	10023.25000
TB-1	159	252087.02000	0.00000	0.000	250036.19000	250732.77000	255492.09000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:37:41
Tube Number: 44
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23098.73000	0.00000	0.000	23495.89000	23145.36000	22654.94000
AL	27	1.94700	26.67000	113.500	3.19365	3.25118	-0.60501
CA	44	0.25500	6.67000	2953.400	-4.08813	8.94034	-4.08813
CR	52	-0.18800	93.34000	0.000	-0.10176	-0.19128	-0.26985
FE	57	1.15300	26.67000	123.200	0.67881	2.75098	0.03010
K	39	-5.53200	1546.80000	0.000	-9.73673	-16.07557	9.21687
MG	24	1.20300	60.00000	24.500	1.17275	0.92417	1.51159
MN	55	0.10200	70.00000	4.100	0.09840	0.10179	0.10672
NA	23	-23.27100	5964.56000	0.000	-24.66402	-26.23602	-18.91379
TI	47	1.05100	13.33000	173.200	0.00000	3.15199	0.00000
V	51	0.12600	80.00000	26.300	0.15735	0.09138	0.12860
IN-1	115	45486.74000	0.00000	0.000	43539.38000	48371.46000	44549.38000
AG	107	0.00900	60.00000	175.300	0.01411	-0.00876	0.02201
AS	75	0.15300	18.67000	67.400	0.25544	0.15384	0.04931
BA	137	0.07100	26.67000	90.000	0.13197	0.07709	0.00433
CD	111	0.00300	2.00000	262.200	0.01165	0.00260	-0.00481
CO	59	0.06400	123.34000	75.700	0.11903	0.04366	0.02886
CU	63	0.01300	213.34000	361.700	0.06203	0.00681	-0.03030
MO	98	0.17000	223.35000	33.400	0.17732	0.22317	0.11007
NI	60	0.07800	53.33000	70.700	0.02491	0.13559	0.07462
SB	121	0.39300	340.02000	14.300	0.38259	0.34324	0.45387
SN	120	-1.40100	636.71000	0.000	-1.34869	-1.46040	-1.39488
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	-0.06500	6.67000	0.000	-0.03637	-0.04423	-0.11512
BI-1	209	211989.68000	0.00000	0.000	212746.77000	212635.23000	210587.03000
PB	208	0.00100	250.01000	900.000	-0.00275	0.00572	-0.00145
TL	203	0.01400	83.34000	88.300	0.02010	0.02352	-0.00015
GE-1	72	9282.81000	0.00000	0.000	9492.88000	8622.42000	9733.14000
TB-1	159	252058.98000	0.00000	0.000	254095.21000	251138.47000	250943.26000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:39:41
Tube Number: 45
Sample Number: **LRS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22902.00000	0.00000	0.000	22765.28000	23996.78000	21943.94000
AL	27	49907.15100	511504.25000	4.800	50243.94927	47351.15040	52126.35309
CA	44	49899.52900	75734.21000	3.000	50343.04895	48238.83562	51116.70350
CR	52	509.97300	380898.72000	4.600	514.23984	484.70992	530.97000
FE	57	49743.64400	718953.27000	3.400	50003.51786	47933.08602	51294.32892
K	39	53502.80400	1319932.58000	5.200	53546.32107	50713.17129	56248.91861
MG	24	50889.42900	1841430.34000	5.200	51556.08882	47948.97602	53163.22325
MN	55	507.51200	154424.04000	5.500	503.98102	481.71028	536.84589
NA	23	50730.60500	3867933.48000	4.900	51996.69779	47884.47704	52310.63891
TI	47	526.80600	6611.46000	1.800	527.28194	516.93919	536.19615
V	51	517.36100	298411.84000	5.300	521.58415	487.96713	542.53036
IN-1	115	44912.15000	0.00000	0.000	45586.97000	44254.29000	44895.18000
AG	107	509.40000	1194553.84000	1.600	503.75234	518.69437	505.75227
AS	75	532.08800	43204.74000	1.700	522.53608	539.92821	533.80054
BA	137	519.64200	126921.22000	2.300	517.08850	532.45302	509.38458
CD	111	511.73900	128286.79000	0.800	511.14603	516.34448	507.72779
CO	59	483.73300	728167.31000	1.400	478.42358	491.27115	481.50439
CU	63	515.75800	597299.00000	1.400	515.45542	523.01905	508.79839
MO	98	533.88700	601028.33000	1.500	527.19312	542.40799	532.05930
NI	60	522.49300	204561.89000	0.800	519.39624	527.04468	521.03902
SB	121	447.05200	269244.08000	2.100	441.70335	457.67452	441.77900
SN	120	528.94000	406781.66000	1.100	525.34047	535.84847	525.63216
SR	88	528.43500	204398.25000	2.000	526.40939	540.02407	518.87158
ZN	66	516.76800	67691.82000	1.400	511.29019	524.66569	514.34933
BI-1	209	207984.13000	0.00000	0.000	208145.58000	209544.66000	206262.15000
PB	208	538.58100	4985023.28000	1.000	537.90793	533.54062	544.29512
TL	203	549.03200	1579373.98000	0.900	553.81935	544.17867	549.09735
GE-1	72	9819.76000	0.00000	0.000	9813.08000	9853.10000	9793.11000
TB-1	159	254038.68000	0.00000	0.000	250571.09000	259187.87000	252357.07000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:41:40
Tube Number: 46
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21970.85000	0.00000	0.000	20422.42000	22765.25000	22724.89000
AL	27	16.15200	166.68000	46.900	11.41342	24.88069	12.16048
CA	44	12.12500	23.33000	117.200	18.06023	22.40389	-4.08813
CR	52	-0.06700	170.01000	0.000	0.10967	-0.05469	-0.25649
FE	57	15.89700	226.68000	40.400	22.58624	15.32493	9.78072
K	39	13.29300	1906.86000	106.300	28.99928	9.25255	1.62797
MG	24	14.44300	513.36000	22.000	17.81624	13.99425	11.51719
MN	55	0.05200	50.00000	317.000	0.24252	-0.05950	-0.02630
NA	23	3.58200	7591.88000	445.300	21.85351	-7.55508	-3.55333
TI	47	0.80200	10.00000	99.900	0.00000	1.60231	0.80258
V	51	0.14500	86.67000	60.200	0.14390	0.05827	0.23285
IN-1	115	46669.42000	0.00000	0.000	44774.89000	46693.90000	48539.48000
AG	107	0.28900	740.05000	29.000	0.38538	0.24991	0.23189
AS	75	0.16300	20.00000	29.800	0.19692	0.18575	0.10747
BA	137	0.09600	33.33000	109.000	0.20944	0.00243	0.07669
CD	111	0.09900	26.67000	56.500	0.16323	0.07192	0.06162
CO	59	0.10400	190.01000	26.300	0.13523	0.08421	0.09262
CU	63	0.23100	480.03000	22.000	0.27224	0.24577	0.17403
MO	98	1.07500	1286.77000	1.500	1.07167	1.06081	1.09353
NI	60	0.15100	83.34000	23.800	0.12521	0.19154	0.13496
SB	121	10.28100	6551.52000	8.700	9.48148	10.10765	11.25433
SN	120	2.03100	3392.69000	17.500	1.83184	1.82016	2.43969
SR	88	0.09400	40.00000	83.900	0.17379	0.09174	0.01620
ZN	66	0.39800	70.00000	35.200	0.26779	0.54580	0.37938
BI-1	209	212678.22000	0.00000	0.000	210481.50000	210388.49000	217164.68000
PB	208	0.12700	1446.76000	22.700	0.15765	0.12355	0.10025
TL	203	0.22700	706.72000	31.900	0.25063	0.28511	0.14593
GE-1	72	9716.35000	0.00000	0.000	10213.26000	9743.07000	9192.71000
TB-1	159	254720.30000	0.00000	0.000	251596.19000	254838.63000	257726.09000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

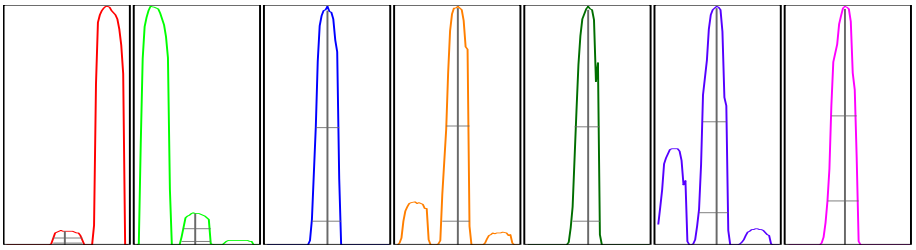
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		8.0 V	Deflect		13.2 V	
Extract 2		-170.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-90 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

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ICP-MS Run Data Report

1331906E05

Date File Name: 13K15J03.E05

Run Name: 1331906E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 6020

Reviewed By: John P Hook
Reviewed Date: 11/17/2013 12:12

Verified By: Deborah A Krady
Verified Date: 11/18/2013 06:49

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331906E05 Date/Time: 11/15/2013 21:54:03
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	1246.77000	0.000	2.74033	-3.77416	1.03382
MG	24	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AL	27	0.00000	13.33000	0.000	0.72569	0.84106	-1.56674
K	39	0.00000	880.06000	0.000	-2.94931	-2.96282	5.91214
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	16381.35000	0.00000	0.000	16498.02000	15707.51000	16938.53000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.00000	86.67000	0.000	-0.04821	-0.04271	0.09092
MN	55	0.00000	60.00000	0.000	-0.04689	0.05664	-0.00975
FE	57	0.00000	6.67000	0.000	-0.59689	-0.59689	1.19377
CO	59	0.00000	306.68000	0.000	0.06703	-0.01260	-0.05443
NI	60	0.00000	86.67000	0.000	0.05228	0.15246	-0.20474
CU	63	0.00000	320.02000	0.000	-0.03453	0.15305	-0.11852
ZN	66	0.00000	6.67000	0.000	0.14749	-0.07374	-0.07374
GE-1	72	5834.54000	0.00000	0.000	6021.24000	5741.17000	5741.22000
AS	75	0.00000	27.33000	0.000	-0.17436	0.34433	-0.16997
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AG	107	0.00000	6.67000	0.000	-0.00404	0.00808	-0.00404
CD	111	0.00000	4.00000	0.000	-0.02292	0.01086	0.01206
IN-1	115	31328.11000	0.00000	0.000	31224.36000	31926.66000	30833.32000
SN	120	0.00000	523.37000	0.000	0.05125	-0.15315	0.10190
SB	121	0.00000	30.00000	0.000	0.04439	-0.06753	0.02314
BA	137	0.00000	23.33000	0.000	-0.13751	0.03578	0.10173
TB-1	159	188070.14000	0.00000	0.000	185017.85000	191684.61000	187507.95000
TL	203	0.00000	10.00000	0.000	0.00910	-0.00455	-0.00455
PB	208	0.00000	70.00000	0.000	-0.00261	0.00123	0.00138
BI-1	209	164481.53000	0.00000	0.000	161396.94000	167185.02000	164862.63000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:56:03
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14853.30000	0.00000	0.000	15567.30000	14536.25000	14456.35000
AL	27	10000.00000	78490.57000	3.400	9632.59002	10289.88471	10077.52527
CA	44	10000.00000	10093.24000	1.400	10160.13077	9948.49278	9891.37645
CR	52	1000.00000	493735.77000	4.100	953.81736	1033.84886	1012.33379
FE	57	10000.00000	97915.56000	1.200	9869.26434	10037.62990	10093.10576
K	39	10000.00000	166758.74000	2.900	9673.11030	10110.16203	10216.72767
MG	24	10000.00000	271777.42000	3.000	9650.13151	10173.28823	10176.58026
MN	55	1000.00000	204440.93000	3.100	964.64549	1019.04978	1016.30472
NA	23	10000.00000	554987.18000	4.200	9522.13830	10330.33630	10147.52540
TI	47	1000.00000	8469.02000	9.900	886.72971	1066.39832	1046.87197
V	51	1000.00000	374931.49000	3.200	963.76039	1023.34481	1012.89480
IN-1	115	30463.04000	0.00000	0.000	30716.58000	30386.26000	30286.29000
AG	107	100.00000	157554.55000	1.400	101.54318	99.44085	99.01597
AS	75	1000.00000	50785.82000	1.400	984.46970	1011.06204	1004.46827
BA	137	1000.00000	165206.86000	1.000	992.28825	1010.91679	996.79497
CD	111	100.00000	16947.69000	1.100	98.85765	101.02244	100.11991
CO	59	1000.00000	938849.10000	0.800	1007.84926	999.24686	992.90388
CU	63	1000.00000	781067.15000	1.200	993.94442	1013.79186	992.26373
MO	98	100.00000	74620.31000	0.400	99.85569	100.45524	99.68907
NI	60	1000.00000	264379.43000	1.300	985.55839	1011.61020	1002.83141
SB	121	100.00000	43610.11000	2.500	97.23805	100.57848	102.18346
SN	120	100.00000	52962.50000	1.100	99.25747	99.50422	101.23831
SR	88	100.00000	26671.23000	0.600	100.32964	99.27496	100.39541
ZN	66	1000.00000	88204.09000	1.100	998.77085	990.10292	1011.12624
BI-1	209	159267.35000	0.00000	0.000	159233.46000	159061.74000	159506.86000
PB	208	100.00000	699110.77000	1.300	101.54958	99.09744	99.35298
TL	203	100.00000	216923.57000	0.800	100.83092	99.20754	99.96154
GE-1	72	5827.87000	0.00000	0.000	6111.31000	5040.92000	6331.38000
TB-1	159	181604.00000	0.00000	0.000	184643.08000	180760.19000	179408.73000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:58:05
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15667.33000	0.00000	0.000	15317.17000	15687.28000	15997.54000
AL	27	10.56400	100.00000	54.800	16.95321	5.66598	9.07193
CA	44	9.46000	10.00000	99.200	9.61132	18.76912	0.00000
CR	52	1.00700	603.37000	48.300	1.54970	0.85798	0.61283
FE	57	12.95200	140.01000	6.600	12.27543	13.90522	12.67597
K	39	9.13300	1000.06000	98.500	13.36427	-1.19464	15.22895
MG	24	7.69400	220.01000	39.400	8.19997	10.44317	4.43780
MN	55	1.09400	293.35000	11.400	1.20270	1.12169	0.95864
NA	23	4.81200	1466.79000	101.600	6.61709	8.54300	-0.72498
TI	47	1.51400	13.33000	115.400	3.42576	1.11498	0.00000
V	51	1.00800	396.69000	39.800	1.39552	1.03458	0.59384
IN-1	115	30827.57000	0.00000	0.000	30981.19000	30689.72000	30811.81000
AG	107	0.17600	286.68000	16.000	0.20819	0.15979	0.15914
AS	75	1.32200	94.67000	19.300	1.53293	1.39599	1.03782
BA	137	0.95900	183.34000	45.800	1.29114	1.12444	0.46107
CD	111	0.07400	16.67000	47.700	0.10474	0.08252	0.03542
CO	59	1.02600	1276.77000	12.300	1.15976	0.90934	1.00983
CU	63	1.05800	1150.09000	24.700	1.35375	0.96349	0.85679
MO	98	0.26900	203.35000	62.200	0.46122	0.15964	0.18551
NI	60	1.06600	370.02000	20.400	1.28286	0.84740	1.06722
SB	121	0.95400	450.02000	25.500	0.69953	1.18509	0.97595
SN	120	0.56700	816.72000	40.100	0.39671	0.82606	0.47963
SR	88	0.03700	10.00000	0.500	0.03687	0.03722	0.03707
ZN	66	0.93500	90.00000	24.500	0.70664	1.16434	0.93513
BI-1	209	164095.73000	0.00000	0.000	165376.54000	158521.06000	168389.59000
PB	208	0.11100	866.71000	30.600	0.14601	0.10819	0.07828
TL	203	0.12000	276.68000	34.100	0.15973	0.12052	0.07830
GE-1	72	6157.98000	0.00000	0.000	6171.27000	6091.33000	6211.34000
TB-1	159	185192.34000	0.00000	0.000	183775.92000	184475.92000	187325.19000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:00:06
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	16514.88000	0.00000	0.000	17549.17000	15817.49000	16177.97000
AL	27	-0.38900	10.00000	0.000	-1.56674	-0.37121	0.77104
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.04700	113.34000	97.600	0.09940	0.01350	0.02827
FE	57	1.22900	20.00000	152.700	1.13146	-0.59689	3.15280
K	39	-1.43400	856.72000	0.000	-5.13521	0.68256	0.15186
MG	24	1.03700	33.33000	173.200	3.11163	0.00000	0.00000
MN	55	0.00800	63.33000	1159.800	0.10543	-0.08333	0.00235
NA	23	-4.21400	993.40000	0.000	-3.67842	-3.55048	-5.41447
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09000	36.67000	86.000	0.02255	0.17517	0.07340
IN-1	115	32342.37000	0.00000	0.000	32777.90000	33015.86000	31233.36000
AG	107	0.01400	30.00000	147.800	0.00186	0.03696	0.00215
AS	75	-0.09900	22.67000	0.000	0.06556	-0.30219	-0.05918
BA	137	-0.04300	16.67000	0.000	0.08754	-0.13751	-0.07846
CD	111	-0.01200	2.00000	0.000	-0.02292	-0.00114	-0.01141
CO	59	0.13300	450.03000	68.500	0.23697	0.09531	0.06692
CU	63	0.07200	390.02000	93.900	0.13875	0.07582	0.00283
MO	98	0.05000	40.00000	23.000	0.06227	0.04946	0.03921
NI	60	-0.09900	60.00000	0.000	-0.24655	-0.17724	0.12594
SB	121	0.19900	123.34000	4.900	0.18837	0.20769	0.20102
SN	120	0.07300	583.37000	238.800	0.25083	0.06610	-0.09781
SR	88	0.01200	3.33000	173.200	0.00000	0.00000	0.03657
ZN	66	0.17500	23.33000	91.400	0.34775	0.03087	0.14742
BI-1	209	168448.56000	0.00000	0.000	166851.25000	168518.24000	169976.19000
PB	208	0.00700	123.34000	64.100	0.01218	0.00520	0.00373
TL	203	0.00800	30.00000	223.500	-0.00455	-0.00019	0.03001
GE-1	72	6291.36000	0.00000	0.000	6671.47000	5861.22000	6341.40000
TB-1	159	188512.99000	0.00000	0.000	186786.79000	189204.72000	189547.46000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:02:06
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15433.75000	0.00000	0.000	16097.79000	15016.68000	15186.78000
AL	27	5173.44100	42189.37000	4.600	4900.32781	5270.89223	5349.10291
CA	44	5105.18300	5344.33000	7.400	4728.94160	5098.83710	5487.77007
CR	52	517.11700	265416.14000	3.200	498.10008	526.33140	526.92090
FE	57	5047.28400	51330.90000	3.200	4863.90034	5150.27092	5127.67935
K	39	5186.00200	90249.44000	3.600	4970.24865	5304.05565	5283.70151
MG	24	5088.82300	143666.52000	5.100	4806.68708	5136.95824	5322.82283
MN	55	515.10600	109478.31000	2.400	500.91759	523.71777	520.68259
NA	23	5084.21400	293944.25000	2.500	4948.33886	5098.22881	5206.07549
TI	47	503.77300	4440.71000	4.700	482.50165	528.89469	499.92366
V	51	529.13900	206179.66000	2.800	512.01597	536.39423	539.00588
IN-1	115	31001.44000	0.00000	0.000	30977.48000	30469.41000	31557.43000
AG	107	52.31600	83863.32000	1.800	52.65322	53.03989	51.25441
AS	75	538.61200	27846.42000	1.500	538.99810	546.61181	530.22498
BA	137	526.40700	88508.63000	2.000	538.04178	524.07215	517.10825
CD	111	52.69000	9087.78000	2.400	53.62862	53.16551	51.27474
CO	59	534.85300	511027.61000	2.000	539.24281	542.86938	522.44559
CU	63	536.79200	426682.34000	3.400	547.88238	547.00035	515.49208
MO	98	55.44300	42091.80000	2.700	56.48828	56.11372	53.72585
NI	60	544.83300	146603.06000	2.300	553.76176	550.30033	530.43608
SB	121	54.97000	24418.29000	2.000	54.97946	53.87722	56.05316
SN	120	53.54700	29086.80000	5.500	55.11822	55.34672	50.17651
SR	88	52.16300	14159.60000	4.600	54.85272	50.32774	51.30887
ZN	66	519.67700	46645.45000	1.200	522.31925	524.21199	512.49903
BI-1	209	161228.65000	0.00000	0.000	163557.39000	159025.82000	161102.75000
PB	208	53.79500	380710.03000	1.200	53.09123	54.37388	53.92121
TL	203	52.45300	115174.77000	1.200	51.79760	53.02751	52.53244
GE-1	72	6208.07000	0.00000	0.000	6191.41000	6461.52000	5971.27000
TB-1	159	184802.67000	0.00000	0.000	187544.24000	182692.75000	184171.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:04:07
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15457.23000	0.00000	0.000	15657.31000	14866.91000	15847.46000
AL	27	2.95900	36.67000	67.700	3.26430	4.79311	0.81979
CA	44	12.53700	13.33000	173.200	37.61009	0.00000	0.00000
CR	52	0.44100	306.68000	43.300	0.57196	0.52988	0.22181
FE	57	2.32400	30.00000	69.500	1.34030	1.44329	4.18797
K	39	-2.07300	793.38000	0.000	3.46461	-4.63022	-5.05350
MG	24	4.22900	120.01000	11.400	4.53423	3.67302	4.47983
MN	55	0.46800	156.67000	79.900	0.89248	0.31914	0.19124
NA	23	1.15300	1240.10000	263.900	4.66293	-0.49623	-0.70830
TI	47	0.74500	6.67000	173.200	2.23422	0.00000	0.00000
V	51	0.47800	186.68000	54.000	0.75843	0.42601	0.24979
IN-1	115	31320.59000	0.00000	0.000	31365.28000	30752.45000	31844.04000
AG	107	0.04500	80.00000	14.900	0.03912	0.05255	0.04454
AS	75	0.48700	52.67000	78.100	0.89553	0.14318	0.42196
BA	137	0.31400	76.67000	21.600	0.39165	0.28226	0.26787
CD	111	0.03500	10.00000	67.000	0.05732	0.03554	0.01095
CO	59	0.59600	880.06000	33.600	0.71730	0.70628	0.36535
CU	63	0.35100	600.04000	45.500	0.51121	0.35168	0.19123
MO	98	0.27400	210.01000	10.300	0.29937	0.27879	0.24359
NI	60	0.67700	270.02000	42.900	0.34459	0.88250	0.80520
SB	121	0.95900	460.03000	8.500	1.04669	0.88708	0.94215
SN	120	0.85400	977.87000	139.200	0.17628	2.22637	0.15901
SR	88	0.08500	23.33000	107.100	0.18208	0.07428	0.00000
ZN	66	0.66300	66.67000	67.300	1.13767	0.60013	0.25165
BI-1	209	159251.88000	0.00000	0.000	158932.52000	157921.71000	160901.41000
PB	208	0.05000	420.02000	23.500	0.05484	0.05958	0.03706
TL	203	0.06800	156.68000	37.400	0.09248	0.04194	0.06847
GE-1	72	6258.01000	0.00000	0.000	6391.40000	6371.36000	6011.28000
TB-1	159	182569.90000	0.00000	0.000	181390.00000	185464.29000	180855.41000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:06:06
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14946.70000	0.00000	0.000	15687.32000	14045.82000	15106.96000
AL	27	104.96100	836.72000	17.200	90.05353	124.99757	99.83208
CA	44	235.18900	240.01000	13.900	262.77639	199.15486	243.63622
CR	52	2.22400	1180.09000	10.000	2.00761	2.45327	2.21020
FE	57	103.58000	1023.41000	16.900	84.48108	107.38274	118.87477
K	39	202.22700	4177.32000	6.200	188.66926	204.85678	213.15355
MG	24	107.69100	2950.37000	3.900	112.44972	106.14808	104.47550
MN	55	2.17000	500.03000	12.600	2.09380	2.47314	1.94412
NA	23	203.88700	12491.34000	5.600	190.81612	210.91231	209.93226
TI	47	13.67300	116.67000	35.300	16.72573	16.18987	8.10466
V	51	0.71600	270.01000	4.200	0.68128	0.73272	0.73366
IN-1	115	30706.32000	0.00000	0.000	30261.07000	31503.36000	30354.52000
AG	107	0.53500	856.73000	15.300	0.59667	0.56685	0.44191
AS	75	2.06700	132.67000	22.300	2.13706	2.48944	1.57531
BA	137	2.06900	366.69000	22.600	2.60502	1.73582	1.86742
CD	111	0.53600	95.33000	11.800	0.60682	0.51351	0.48643
CO	59	0.67200	936.73000	20.800	0.78726	0.71277	0.51650
CU	63	2.06500	1936.86000	12.800	2.34967	2.01839	1.82697
MO	98	0.50200	376.69000	19.600	0.56663	0.38878	0.55144
NI	60	2.25400	683.37000	17.700	2.38744	1.80516	2.56900
SB	121	1.14500	533.37000	23.800	0.83327	1.26371	1.33710
SN	120	1.93800	1543.48000	31.500	1.54249	2.64178	1.63041
SR	88	0.79100	213.34000	26.400	0.75492	1.01520	0.60208
ZN	66	16.69500	1490.13000	5.400	17.73317	16.15389	16.19891
BI-1	209	158768.62000	0.00000	0.000	162731.17000	158185.94000	155388.74000
PB	208	1.08800	7651.06000	5.100	1.10495	1.02604	1.13415
TL	203	0.50900	1110.09000	10.000	0.46022	0.56177	0.50582
GE-1	72	5601.14000	0.00000	0.000	5511.17000	5741.17000	5551.07000
TB-1	159	180140.09000	0.00000	0.000	179670.19000	180944.51000	179805.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:08:06
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.08000	0.00000	0.000	15567.25000	14886.57000	14666.41000
AL	27	9625.48900	76525.59000	2.600	9337.50881	9719.85533	9819.10397
CA	44	9803.53700	10009.80000	6.100	9649.11152	9298.77954	10462.72070
CR	52	0.05000	103.34000	58.300	0.01625	0.06457	0.06793
FE	57	9729.96100	96457.54000	2.200	9509.92562	9743.89923	9936.05872
K	39	9817.54800	165831.74000	2.600	9534.74736	9888.13004	10029.76771
MG	24	9579.92400	263696.88000	3.000	9287.07372	9589.53318	9863.16465
MN	55	0.00500	56.67000	2779.900	0.10620	-0.16940	0.07961
NA	23	9658.67000	543071.86000	3.500	9339.09232	9632.23049	10004.68813
TI	47	210.83800	1813.53000	2.700	215.74870	204.46343	212.30302
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30480.44000	0.00000	0.000	30193.83000	29731.78000	31515.70000
AG	107	-0.00200	3.33000	0.000	-0.00404	0.00247	-0.00404
AS	75	-0.28400	12.00000	0.000	-0.36130	-0.23773	-0.25372
BA	137	-0.07600	10.00000	0.000	0.04572	-0.13751	-0.13751
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01151
CO	59	0.05600	350.02000	90.300	0.10166	0.06450	0.00168
CU	63	0.07000	363.35000	102.000	0.06830	0.14114	-0.00074
MO	98	199.92200	149174.32000	3.800	206.72523	201.32398	191.71796
NI	60	-0.11600	53.33000	0.000	-0.12602	-0.12305	-0.09745
SB	121	0.07800	63.33000	47.800	0.11765	0.07351	0.04335
SN	120	-0.16500	423.36000	0.000	-0.43321	0.02446	-0.08721
SR	88	0.08800	23.33000	137.300	0.22697	0.03842	0.00000
ZN	66	0.52600	53.33000	45.600	0.38382	0.39093	0.80300
BI-1	209	156162.01000	0.00000	0.000	154650.81000	154578.44000	159256.77000
PB	208	0.02100	206.68000	28.100	0.02716	0.01686	0.01751
TL	203	0.00300	16.67000	219.200	-0.00455	0.00495	0.00928
GE-1	72	6057.96000	0.00000	0.000	5851.19000	6071.29000	6251.40000
TB-1	159	182258.51000	0.00000	0.000	180428.32000	184776.19000	181571.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:10:06
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15333.77000	0.00000	0.000	15627.42000	15176.91000	15196.97000
AL	27	9589.20100	77736.99000	3.700	9180.02933	9735.20057	9852.37225
CA	44	9725.05900	10129.87000	2.300	9772.17427	9479.95093	9923.05237
CR	52	19.71000	10139.98000	6.400	20.46693	18.24542	20.41749
FE	57	9719.06000	98246.80000	2.900	9438.11420	9994.54633	9724.52063
K	39	9799.82600	168833.31000	1.300	9656.44381	9888.80984	9854.22309
MG	24	9592.37800	269286.63000	2.400	9324.35769	9727.91431	9724.86147
MN	55	20.89800	4467.42000	4.300	19.85508	21.50555	21.33333
NA	23	9667.16600	554371.20000	2.700	9369.17037	9851.84420	9780.48269
TI	47	202.98200	1780.18000	9.600	210.44214	180.95419	217.55035
V	51	0.01700	6.67000	173.200	0.00000	0.00000	0.05209
IN-1	115	30601.08000	0.00000	0.000	31606.83000	30305.29000	29891.11000
AG	107	19.47800	30821.89000	1.500	19.14482	19.66050	19.62832
AS	75	20.09000	1048.71000	12.100	17.28978	21.73827	21.24343
BA	137	-0.07600	10.00000	0.000	-0.13751	-0.13751	0.04758
CD	111	20.05800	3413.04000	7.600	18.38552	20.43401	21.35507
CO	59	20.48200	19594.74000	6.500	19.32871	21.93099	20.18514
CU	63	20.26000	16197.96000	4.300	19.79621	21.26908	19.71412
MO	98	201.28500	150773.67000	3.600	192.92277	204.35913	206.57342
NI	60	19.47300	5247.64000	6.900	17.91888	20.26203	20.23848
SB	121	0.06200	56.67000	57.800	0.06515	0.02472	0.09615
SN	120	-0.27100	370.02000	0.000	-0.12651	-0.53100	-0.15571
SR	88	0.03600	10.00000	173.200	0.10841	0.00000	0.00000
ZN	66	20.16600	1790.17000	9.000	18.06786	21.24060	21.18941
BI-1	209	158775.14000	0.00000	0.000	156689.27000	160064.26000	159571.89000
PB	208	0.02400	233.34000	14.800	0.02377	0.02734	0.02031
TL	203	0.00600	23.33000	301.200	-0.00455	0.02756	-0.00455
GE-1	72	5754.50000	0.00000	0.000	5751.15000	5931.23000	5581.11000
TB-1	159	182323.13000	0.00000	0.000	179793.92000	183977.40000	183198.06000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:12:06
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15737.45000	0.00000	0.000	15457.19000	16508.05000	15247.11000
AL	27	2483.63300	20648.95000	5.700	2570.35394	2319.45578	2561.08828
CA	44	2614.12300	2790.33000	6.600	2552.80505	2479.48862	2810.07392
CR	52	250.56900	131151.91000	3.500	254.99685	240.38151	256.32909
FE	57	2529.56400	26229.69000	3.600	2589.58106	2425.62578	2573.48588
K	39	2492.62800	44645.67000	5.400	2497.31400	2356.45384	2624.11575
MG	24	2457.58700	70732.41000	4.700	2515.96011	2324.89779	2531.90324
MN	55	254.61900	55174.97000	4.700	254.15837	242.95160	266.74632
NA	23	2437.09300	144252.90000	3.000	2441.57392	2360.73308	2508.97249
TI	47	254.42200	2286.92000	4.500	250.10621	245.84111	267.31825
V	51	254.80100	101192.26000	4.000	257.42839	243.57158	263.40303
IN-1	115	31053.05000	0.00000	0.000	30118.72000	31938.47000	31101.97000
AG	107	25.45000	40852.53000	3.200	26.03551	24.50953	25.80433
AS	75	264.83900	13726.03000	2.400	271.95777	262.15014	260.40762
BA	137	262.78700	44259.09000	2.000	268.70555	260.39507	259.26068
CD	111	26.09800	4509.29000	3.000	26.97302	25.47991	25.84206
CO	59	260.62900	249538.58000	2.400	265.28058	253.62769	262.97727
CU	63	261.94000	208757.41000	1.500	265.88417	261.84636	258.08931
MO	98	26.25000	19962.18000	1.300	26.62293	26.00211	26.12347
NI	60	268.27600	72333.53000	2.400	274.92073	262.34885	267.55768
SB	121	25.98700	11571.08000	5.600	27.30278	26.24614	24.41295
SN	120	26.22900	14546.77000	5.100	25.32072	25.58810	27.77952
SR	88	25.88700	7031.72000	4.900	27.34907	24.96797	25.34519
ZN	66	273.84800	24614.39000	2.700	281.88791	267.01113	272.64411
BI-1	209	161103.25000	0.00000	0.000	159408.35000	161283.63000	162617.77000
PB	208	26.28800	185939.68000	1.200	26.64260	26.05372	26.16790
TL	203	25.53500	56035.44000	0.500	25.59464	25.61690	25.39290
GE-1	72	5827.87000	0.00000	0.000	5511.11000	6411.42000	5561.09000
TB-1	159	184242.17000	0.00000	0.000	181078.59000	185939.57000	185708.34000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:14:07
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15977.63000	0.00000	0.000	16427.97000	16678.35000	14826.58000
AL	27	4.60400	53.33000	83.500	4.18877	8.63766	0.98412
CA	44	5.97400	6.67000	173.200	17.92287	0.00000	0.00000
CR	52	0.19800	186.67000	54.200	0.19011	0.09477	0.30875
FE	57	2.87400	36.67000	35.000	4.01889	2.13100	2.47170
K	39	-6.22200	743.39000	0.000	-1.66820	-13.08819	-3.90925
MG	24	3.80600	113.34000	46.800	5.31872	4.25665	1.84151
MN	55	0.16600	96.67000	112.600	0.35189	0.16841	-0.02208
NA	23	0.70500	1250.10000	281.200	1.37112	-1.52459	2.26794
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.16300	66.67000	33.700	0.21685	0.16613	0.10679
IN-1	115	31518.18000	0.00000	0.000	32656.93000	30684.49000	31213.11000
AG	107	0.04100	73.33000	11.500	0.03741	0.04638	0.03933
AS	75	0.34400	45.33000	64.300	0.32500	0.57491	0.13338
BA	137	0.21400	60.00000	73.300	0.25778	0.34329	0.03974
CD	111	0.00000	4.00000	0.000	0.01011	-0.02292	0.01164
CO	59	0.39800	696.71000	25.500	0.50739	0.38059	0.30636
CU	63	0.28400	550.03000	5.700	0.29608	0.28976	0.26561
MO	98	0.28900	223.35000	42.700	0.27503	0.17297	0.41856
NI	60	0.11300	116.67000	189.100	-0.03454	0.35926	0.01545
SB	121	0.23400	136.67000	31.500	0.31772	0.20582	0.17878
SN	120	0.06600	563.37000	49.100	0.09529	0.03138	0.07021
SR	88	0.06100	16.67000	70.200	0.03498	0.03722	0.10978
ZN	66	0.14400	20.00000	71.900	0.24355	0.15138	0.03691
BI-1	209	163622.12000	0.00000	0.000	164881.46000	165780.94000	160203.97000
PB	208	0.02600	253.35000	42.600	0.03731	0.02331	0.01593
TL	203	0.03900	96.67000	12.100	0.03553	0.04417	0.03670
GE-1	72	6211.33000	0.00000	0.000	6071.25000	6671.51000	5891.22000
TB-1	159	183184.42000	0.00000	0.000	184575.56000	186365.90000	178611.79000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:16:08
Tube Number: 12 Batch: 133156050001A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15944.26000	0.00000	0.000	16147.77000	15357.05000	16327.95000
AL	27	-0.38000	10.00000	0.000	-0.39567	-0.33537	-0.40859
CA	44	6.07800	6.67000	173.200	18.23388	0.00000	0.00000
CR	52	-0.08800	36.67000	0.000	-0.02723	-0.07923	-0.15751
FE	57	0.35800	10.00000	262.200	1.28146	0.39064	-0.59689
K	39	-0.02300	853.39000	0.000	-0.31199	2.72218	-2.48067
MG	24	1.47400	43.33000	51.000	1.01450	1.06674	2.34105
MN	55	0.07000	73.33000	213.000	0.09278	0.20587	-0.08907
NA	23	0.11300	1213.43000	2202.200	-2.23437	2.70915	-0.13677
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.05800	23.33000	50.700	0.07354	0.07732	0.02424
IN-1	115	31665.21000	0.00000	0.000	31514.36000	31765.05000	31716.21000
AG	107	0.00600	16.67000	286.200	0.02664	-0.00404	-0.00404
AS	75	-0.09000	22.67000	0.000	0.05097	-0.18025	-0.14188
BA	137	-0.07900	10.00000	0.000	-0.07899	-0.07945	-0.07936
CD	111	0.00400	4.67000	811.200	-0.02292	-0.00028	0.03376
CO	59	0.03800	346.68000	210.200	0.12529	0.01961	-0.03105
CU	63	-0.07300	263.35000	0.000	-0.14930	-0.00385	-0.06476
MO	98	0.09500	73.33000	20.800	0.09068	0.07711	0.11584
NI	60	-0.09800	60.00000	0.000	-0.09744	-0.20803	0.01018
SB	121	0.00600	33.33000	556.700	-0.00100	-0.02352	0.04265
SN	120	-0.14000	453.36000	0.000	0.04184	-0.18559	-0.27593
SR	88	0.02400	6.67000	173.200	0.00000	0.07191	0.00000
ZN	66	2.36200	223.34000	28.200	2.22791	1.77482	3.08447
BI-1	209	164881.30000	0.00000	0.000	167182.03000	165541.23000	161920.64000
PB	208	0.01500	180.00000	15.600	0.01758	0.01510	0.01284
TL	203	0.00100	13.33000	699.600	-0.00455	-0.00455	0.01359
GE-1	72	6301.41000	0.00000	0.000	6201.38000	6461.50000	6241.36000
TB-1	159	186786.79000	0.00000	0.000	187075.70000	185908.65000	187376.03000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:18:10
Tube Number: 13 Batch: 133156050001A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15947.51000	0.00000	0.000	16057.63000	15927.44000	15857.47000
AL	27	1997.58600	16858.40000	2.400	1953.10602	2047.54225	1992.11042
CA	44	4214.34900	4564.09000	6.000	3924.57711	4326.46180	4392.00835
CR	52	49.50200	26350.23000	0.800	49.93148	49.11194	49.46295
FE	57	1060.11000	11153.95000	4.700	1079.29859	1003.31714	1097.71325
K	39	10089.45400	180778.48000	0.300	10051.65280	10117.27707	10099.43144
MG	24	1978.35100	57773.98000	2.400	1938.65594	2030.15532	1966.24054
MN	55	52.06800	11494.09000	3.200	51.16521	54.00345	51.03552
NA	23	9929.69100	592326.31000	2.200	9717.83175	10146.19574	9925.04440
TI	47	271.95700	2480.28000	8.100	296.31400	253.70250	265.85536
V	51	50.77700	20459.17000	2.600	51.15567	51.84718	49.32734
IN-1	115	31603.51000	0.00000	0.000	31238.56000	31396.61000	32175.35000
AG	107	52.53200	85863.66000	1.400	51.85824	53.29333	52.44522
AS	75	10.39700	574.01000	19.100	12.58166	9.91603	8.69358
BA	137	54.27600	9319.63000	5.400	56.25817	55.68095	50.88876
CD	111	5.20500	918.70000	7.300	5.64033	4.92462	5.05073
CO	59	267.69900	260931.68000	1.200	267.48178	270.90249	264.71288
CU	63	54.78400	44687.00000	2.000	55.77951	54.94911	53.62207
MO	98	53.51600	41420.44000	4.100	52.47993	56.05994	52.00729
NI	60	53.50500	14756.60000	1.100	53.79493	53.89032	52.82981
SB	121	6.20700	2837.03000	6.900	6.62298	5.76558	6.23273
SN	120	53.36400	29566.62000	1.200	54.10691	52.93919	53.04543
SR	88	43.14000	11937.89000	1.100	42.79480	42.94320	43.68055
ZN	66	54.03000	4950.91000	1.700	54.55474	52.95975	54.57656
BI-1	209	165454.26000	0.00000	0.000	164326.33000	164903.08000	167133.38000
PB	208	15.83200	115039.45000	0.400	15.88165	15.85338	15.76106
TL	203	2.06200	4655.87000	4.400	2.09591	2.13087	1.95955
GE-1	72	6568.17000	0.00000	0.000	6281.41000	6671.56000	6751.53000
TB-1	159	186830.22000	0.00000	0.000	188316.97000	183098.86000	189074.84000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:20:13
Tube Number: 14 Batch: 133156050001A
Sample Number: **7265131** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14793.32000	0.00000	0.000	14836.63000	15267.19000	14276.13000
AL	27	16.74300	143.34000	37.200	23.92588	13.29797	13.00395
CA	44	64176.25100	64458.18000	2.100	64214.88880	62829.37204	65484.49142
CR	52	0.59100	370.02000	27.000	0.71360	0.64966	0.41094
FE	57	53841.48400	524847.45000	3.200	54400.37139	51883.94426	55240.13494
K	39	9434.65900	156757.77000	3.200	9509.73659	9102.54712	9691.69323
MG	24	20939.40900	566851.22000	3.400	21143.84962	20140.04125	21534.33704
MN	55	1195.49400	243484.43000	2.700	1210.60851	1157.87985	1217.99425
NA	23	61996.66000	3423332.97000	2.000	61972.50823	60754.18223	63263.28808
TI	47	1.58700	13.33000	113.100	3.53671	0.00000	1.22519
V	51	1.13900	426.69000	9.600	1.14723	1.24451	1.02591
IN-1	115	29379.28000	0.00000	0.000	30298.70000	29160.15000	28679.00000
AG	107	0.04200	70.00000	12.700	0.04702	0.04238	0.03642
AS	75	60.23500	2971.61000	5.200	56.60660	62.08912	62.00957
BA	137	164.42300	26217.96000	2.100	163.90906	168.03428	161.32481
CD	111	0.00100	4.00000	2120.100	0.02455	0.00174	-0.02292
CO	59	1.10000	1286.77000	19.000	1.30017	1.11842	0.88217
CU	63	0.28200	510.03000	43.400	0.18258	0.24536	0.41941
MO	98	1.39800	1006.74000	15.000	1.36097	1.62412	1.21004
NI	60	0.77000	276.68000	29.500	0.59611	1.02701	0.68790
SB	121	0.98200	440.03000	24.800	0.73988	1.22683	0.98047
SN	120	0.33400	660.05000	64.800	0.17835	0.58178	0.24330
SR	88	346.32500	89058.74000	1.500	341.62434	345.43817	351.91134
ZN	66	4.52000	390.03000	25.700	3.68832	5.84890	4.02134
BI-1	209	152222.23000	0.00000	0.000	152674.22000	151885.45000	152107.01000
PB	208	0.09200	676.71000	1.200	0.09032	0.09234	0.09219
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00028	0.00028
GE-1	72	6027.96000	0.00000	0.000	6131.39000	5751.10000	6201.40000
TB-1	159	177016.78000	0.00000	0.000	177094.47000	175578.40000	178377.48000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:22:12
Tube Number: 15 Batch: 133156050001A
Sample Number: **7265131** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13655.69000	0.00000	0.000	14056.06000	13825.73000	13085.28000
AL	27	234.43600	1703.49000	6.300	219.08779	248.75671	235.46220
CA	44	66600.50300	61759.00000	2.600	64670.50961	68033.30863	67097.69037
CR	52	4.69900	2203.55000	5.800	4.52571	4.56032	5.01097
FE	57	55627.29500	500513.59000	3.100	54033.75439	55365.64658	57482.48373
K	39	10103.37600	154893.56000	3.300	9760.79337	10119.35186	10429.98225
MG	24	21645.18600	540882.23000	3.100	21065.96082	21500.01801	22369.57995
MN	55	1230.89300	231357.44000	3.200	1198.82704	1219.37399	1274.47761
NA	23	63573.85900	3238756.20000	3.900	61541.46695	62819.50110	66360.60786
TI	47	33.01200	256.68000	31.200	36.08802	21.50800	41.44005
V	51	2.25200	776.72000	9.800	2.05582	2.49091	2.20831
IN-1	115	28514.12000	0.00000	0.000	28978.20000	28617.58000	27946.59000
AG	107	0.93200	1380.11000	1.100	0.94360	0.92851	0.92322
AS	75	60.30500	2890.26000	0.500	60.61822	60.17218	60.12582
BA	137	167.55800	25934.23000	1.900	171.25871	166.06106	165.35560
CD	111	1.07100	173.33000	8.400	1.03176	1.00736	1.17362
CO	59	1.82300	1880.18000	4.400	1.74358	1.90568	1.81964
CU	63	4.28000	3417.13000	6.200	4.32965	3.99376	4.51807
MO	98	2.30700	1610.14000	8.600	2.08517	2.36826	2.46895
NI	60	5.26200	1380.12000	1.800	5.17231	5.36222	5.25113
SB	121	2.95100	1230.10000	9.500	2.70636	2.88785	3.25895
SN	120	4.00200	2443.62000	10.900	4.01896	4.42693	3.55892
SR	88	347.43100	86721.12000	1.300	343.09414	346.93394	352.26526
ZN	66	33.49400	2773.65000	11.400	33.42244	37.34519	29.71410
BI-1	209	149076.80000	0.00000	0.000	148463.89000	151351.01000	147415.50000
PB	208	2.06900	13599.57000	0.700	2.07632	2.05311	2.07724
TL	203	1.02200	2083.56000	7.600	1.02920	0.94156	1.09632
GE-1	72	5587.78000	0.00000	0.000	5431.08000	5811.14000	5521.12000
TB-1	159	171632.66000	0.00000	0.000	171699.65000	173204.51000	169993.81000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:24:15
Tube Number: 16 Batch: 133156050001A
Sample Number: **7265134** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13945.88000	0.00000	0.000	14226.09000	14836.57000	12774.98000
AL	27	9.67700	83.34000	58.400	3.75033	15.00398	10.27533
CA	44	63901.50800	60270.57000	8.700	61312.10785	60092.29386	70300.12112
CR	52	0.57300	336.69000	21.600	0.64535	0.43000	0.64244
FE	57	54504.00800	499715.46000	6.000	54259.20585	51375.84130	57876.97601
K	39	9508.85100	148594.08000	6.000	9503.40312	8937.91242	10085.23822
MG	24	21014.12000	534790.64000	7.100	20948.42833	19561.35388	22532.57857
MN	55	1205.54200	230632.68000	8.200	1188.73259	1116.12903	1311.76436
NA	23	62407.02500	3238593.18000	7.100	62281.06443	58029.14505	66910.86427
TI	47	1.68600	13.33000	110.600	3.68850	0.00000	1.36916
V	51	1.24900	440.03000	13.700	1.05735	1.38737	1.30142
IN-1	115	28119.22000	0.00000	0.000	29350.41000	27939.34000	27067.90000
AG	107	-0.00400	0.00000	0.000	-0.00404	-0.00404	-0.00404
AS	75	58.22900	2752.90000	2.600	58.98393	56.48969	59.21215
BA	137	164.84500	25156.19000	0.900	165.49649	163.08426	165.95382
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.78500	956.73000	18.300	0.89895	0.62347	0.83365
CU	63	0.03900	313.35000	257.500	0.01520	-0.04779	0.15085
MO	98	1.23000	846.72000	15.300	1.11279	1.44664	1.13123
NI	60	0.89900	296.68000	6.000	0.93980	0.83822	0.91803
SB	121	1.06400	453.36000	17.800	0.90884	1.00821	1.27523
SN	120	0.07200	503.37000	229.500	-0.10110	0.08837	0.22980
SR	88	349.33700	85950.39000	2.500	342.73026	345.86597	359.41612
ZN	66	4.60500	380.02000	23.400	4.63361	3.51152	5.66869
BI-1	209	148282.64000	0.00000	0.000	149209.75000	148767.09000	146871.08000
PB	208	0.05700	433.36000	18.100	0.04530	0.06078	0.06479
TL	203	-0.00100	6.67000	0.000	0.00529	-0.00455	-0.00455
GE-1	72	5230.96000	0.00000	0.000	5711.12000	5190.96000	4790.81000
TB-1	159	170974.00000	0.00000	0.000	175051.50000	167878.42000	169992.07000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:26:15
Tube Number: 17 Batch: 133156050001A
Sample Number: **7265132** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13418.76000	0.00000	0.000	12845.08000	13565.52000	13845.68000
AL	27	2030.24700	14412.82000	1.900	2069.20085	1991.29506	2030.24373
CA	44	71181.88700	64839.61000	2.800	72905.57070	71615.98087	69024.11027
CR	52	50.41300	22554.82000	4.100	52.59377	50.14691	48.49912
FE	57	57676.66000	509768.72000	4.500	60231.34220	57807.99712	54990.64106
K	39	20391.10700	306328.74000	4.700	21430.00238	20179.47159	19563.84769
MG	24	23995.11200	589011.10000	4.200	25099.69725	23760.30785	23125.33180
MN	55	1272.54000	234993.60000	4.200	1318.04054	1285.08277	1214.49647
NA	23	75233.08100	3765867.86000	4.100	78357.89703	75094.64937	72246.69721
TI	47	271.84800	2083.56000	11.900	292.79779	234.68705	288.05923
V	51	51.52300	17442.34000	5.600	54.53985	51.23482	48.79556
IN-1	115	27112.13000	0.00000	0.000	27234.18000	27602.61000	26499.59000
AG	107	48.40700	67870.36000	0.800	48.59502	47.94508	48.68157
AS	75	69.42200	3158.31000	6.100	72.64388	64.66539	70.95743
BA	137	225.64400	33186.84000	1.600	225.91709	221.96618	229.04800
CD	111	5.61100	850.03000	3.500	5.52237	5.83914	5.47256
CO	59	252.61900	211257.44000	1.200	255.25797	249.44904	253.15127
CU	63	51.39700	35983.59000	1.400	51.05868	50.89619	52.23470
MO	98	54.30300	36061.94000	0.800	54.68271	53.80455	54.42318
NI	60	53.11400	12568.22000	2.100	51.79927	53.77742	53.76554
SB	121	7.44600	2920.37000	15.600	7.17045	8.71999	6.44769
SN	120	52.07700	24755.57000	3.400	52.59349	50.12973	53.50758
SR	88	409.08600	97111.30000	0.500	410.75986	409.73356	406.76397
ZN	66	53.05200	4167.34000	5.400	51.17051	51.61294	56.37201
BI-1	209	140973.15000	0.00000	0.000	143254.76000	142219.58000	137445.12000
PB	208	16.08300	99553.57000	1.500	15.90382	15.98906	16.35725
TL	203	2.12600	4087.36000	7.900	1.93317	2.20551	2.23952
GE-1	72	5324.33000	0.00000	0.000	5371.01000	5551.08000	5050.91000
TB-1	159	165180.06000	0.00000	0.000	165902.09000	166586.25000	163051.83000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:28:17
Tube Number: 18 Batch: 133156050001A
Sample Number: **7265133** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13799.15000	0.00000	0.000	14065.96000	13785.84000	13545.65000
AL	27	1988.53800	14519.67000	1.500	1968.83429	1973.18092	2023.59946
CA	44	67700.83200	63458.10000	1.400	68215.95104	66645.32558	68241.22080
CR	52	49.15200	22641.71000	0.900	49.57716	49.21244	48.66602
FE	57	54982.34000	500272.56000	0.500	54964.14764	54693.05489	55289.81739
K	39	19317.94100	298768.84000	1.600	18983.66655	19375.74011	19594.41533
MG	24	22564.45800	570146.45000	1.500	22513.51310	22256.49890	22923.36172
MN	55	1198.74300	227859.36000	0.600	1201.53178	1190.15728	1204.54077
NA	23	71036.18900	3660266.19000	0.400	70735.09457	71322.06016	71051.41158
TI	47	266.62900	2103.54000	2.100	269.86714	260.11792	269.90051
V	51	51.81900	18059.65000	2.600	50.76403	51.36413	53.32810
IN-1	115	27069.00000	0.00000	0.000	27058.19000	27181.59000	26967.22000
AG	107	48.99200	68586.62000	2.500	50.38857	48.18874	48.39867
AS	75	67.76900	3080.29000	2.400	69.65924	66.82333	66.82436
BA	137	223.34100	32802.93000	0.200	223.08696	223.09395	223.84339
CD	111	4.86000	735.35000	7.700	5.21287	4.89808	4.47053
CO	59	252.76400	211053.25000	0.900	254.22999	250.18111	253.87951
CU	63	50.64100	35412.72000	3.900	51.17704	52.28090	48.46634
MO	98	53.24000	35300.02000	2.100	54.20646	51.98888	53.52400
NI	60	53.63200	12671.67000	5.800	56.52895	54.02163	50.34689
SB	121	6.88700	2693.67000	4.000	7.14006	6.92725	6.59396
SN	120	52.43700	24892.05000	3.600	53.69350	50.25676	53.36022
SR	88	404.44300	95845.05000	2.700	412.07881	391.99869	409.25100
ZN	66	52.75700	4140.64000	4.700	55.46138	52.28645	50.52446
BI-1	209	140526.96000	0.00000	0.000	141531.72000	138325.32000	141723.84000
PB	208	15.91200	98198.08000	2.200	16.22970	15.95714	15.54819
TL	203	2.06900	3967.32000	4.000	2.06056	2.15621	1.99039
GE-1	72	5374.33000	0.00000	0.000	5421.02000	5421.00000	5280.98000
TB-1	159	162868.41000	0.00000	0.000	163610.64000	161256.37000	163738.22000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:30:17
Tube Number: 19 Batch: 133156050001A
Sample Number: **7265131** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14082.76000	0.00000	0.000	14105.93000	14146.22000	13996.13000
AL	27	7.38700	66.67000	11.000	7.81740	6.45390	7.89101
CA	44	12828.24200	12271.31000	1.500	13029.87865	12659.51854	12795.32774
CR	52	0.08400	113.34000	80.100	0.05555	0.16120	0.03575
FE	57	11345.63800	105353.73000	2.100	11167.66000	11246.88136	11622.37360
K	39	1964.04400	31685.05000	1.700	2003.53016	1947.05130	1941.55201
MG	24	4280.86200	110391.79000	2.500	4285.36981	4171.89137	4385.32342
MN	55	246.23300	47804.11000	2.300	243.38093	242.63608	252.68055
NA	23	12376.68600	651739.94000	0.900	12506.74663	12284.24441	12339.06841
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.42100	150.01000	11.100	0.44900	0.44772	0.36768
IN-1	115	28838.82000	0.00000	0.000	29761.10000	28628.31000	28127.04000
AG	107	0.17600	266.68000	28.600	0.11942	0.19185	0.21597
AS	75	11.44100	574.01000	13.200	10.08627	13.06355	11.17185
BA	137	33.87000	5317.76000	0.600	33.76439	33.75265	34.09417
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.48200	710.05000	9.500	0.46770	0.53279	0.44407
CU	63	0.12800	386.69000	69.600	0.03573	0.13462	0.21346
MO	98	0.45700	320.02000	41.500	0.26064	0.47061	0.63867
NI	60	0.00400	80.00000	1298.500	-0.04575	0.04545	0.01094
SB	121	0.14400	86.67000	57.000	0.04989	0.20102	0.18098
SN	120	0.25800	610.04000	33.700	0.16009	0.32659	0.28779
SR	88	68.16700	17192.43000	6.000	64.31634	67.73987	72.44409
ZN	66	1.08000	96.67000	19.800	1.31902	1.01207	0.90863
BI-1	209	149672.63000	0.00000	0.000	151503.02000	148807.20000	148707.67000
PB	208	0.03200	270.01000	39.500	0.01740	0.04086	0.03629
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00532	-0.00455
GE-1	72	5821.21000	0.00000	0.000	5621.16000	6031.32000	5811.16000
TB-1	159	170019.26000	0.00000	0.000	171173.83000	168052.30000	170831.66000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:32:19
Tube Number: 20 Batch: 133156050001A
Sample Number: **7265741** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14079.40000	0.00000	0.000	14866.60000	14316.43000	13055.17000
AL	27	1.97600	26.67000	68.100	3.52125	1.07502	1.33024
CA	44	4112.32100	3923.93000	6.300	4050.82309	3887.58147	4398.55913
CR	52	-0.05300	50.00000	0.000	0.04465	-0.11553	-0.08845
FE	57	532.91600	4944.24000	4.000	515.67960	525.97745	557.09242
K	39	1538.04900	24877.75000	8.700	1411.19419	1524.16786	1678.78529
MG	24	3742.52800	96259.28000	5.700	3535.70662	3733.31950	3958.55733
MN	55	14.86100	2923.70000	9.600	13.21504	15.55947	15.80873
NA	23	66034.23200	3461231.09000	6.900	61915.51555	65207.03390	70980.14666
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04500	16.67000	92.600	0.05325	0.08294	0.00000
IN-1	115	28878.90000	0.00000	0.000	28083.19000	29671.73000	28881.77000
AG	107	0.05000	80.00000	36.100	0.04416	0.03506	0.06961
AS	75	2.25300	133.33000	6.800	2.42861	2.14939	2.18085
BA	137	23.88200	3757.28000	7.500	25.93660	23.11112	22.59704
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.17300	436.70000	45.700	0.09849	0.16374	0.25559
CU	63	0.21600	453.36000	45.300	0.27000	0.27374	0.10294
MO	98	0.19900	140.01000	33.900	0.27621	0.15136	0.16963
NI	60	0.37400	173.34000	19.100	0.29877	0.38234	0.44137
SB	121	-0.04300	10.00000	0.000	-0.06753	-0.06753	0.00507
SN	120	-0.03300	466.70000	0.000	0.02090	-0.05181	-0.06687
SR	88	38.51400	9736.39000	2.400	39.34110	38.66036	37.54137
ZN	66	2.60100	223.34000	9.300	2.87809	2.48725	2.43771
BI-1	209	149020.68000	0.00000	0.000	148361.30000	150128.55000	148572.18000
PB	208	0.01200	143.34000	6.000	0.01183	0.01309	0.01180
TL	203	0.01000	30.00000	127.900	0.02514	0.00523	0.00039
GE-1	72	5581.10000	0.00000	0.000	5381.04000	5851.20000	5511.07000
TB-1	159	172509.54000	0.00000	0.000	172708.63000	174881.72000	169938.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:34:20
Tube Number: 21 Batch: 133156050001A
Sample Number: **7265742** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14696.50000	0.00000	0.000	14496.34000	14486.19000	15106.96000
AL	27	-1.56700	0.00000	0.000	-1.56674	-1.56674	-1.56674
CA	44	3748.77700	3743.88000	2.600	3707.32188	3679.42134	3859.58906
CR	52	0.05400	103.34000	98.200	0.00835	0.11223	0.04146
FE	57	27.02900	266.68000	31.000	25.55828	36.04664	19.48170
K	39	1498.17100	25388.69000	5.200	1528.75574	1555.84057	1409.91647
MG	24	3602.60900	96922.66000	2.400	3672.17783	3629.30318	3506.34464
MN	55	10.96500	2270.25000	9.600	11.05447	11.96480	9.87575
NA	23	63485.77200	3482245.16000	3.500	65012.90927	64468.48744	60975.91933
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30385.15000	0.00000	0.000	32277.06000	29129.69000	29748.70000
AG	107	0.02000	36.67000	131.600	-0.00404	0.01588	0.04797
AS	75	1.77700	116.67000	11.500	2.00826	1.70463	1.61799
BA	137	22.35200	3693.89000	10.200	20.43409	24.87313	21.74830
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.16300	450.03000	17.800	0.17517	0.18384	0.12975
CU	63	0.33200	566.70000	60.800	0.25588	0.17907	0.56056
MO	98	0.10400	76.67000	65.400	0.07589	0.18220	0.05489
NI	60	0.38500	183.35000	83.700	0.25449	0.75149	0.14808
SB	121	-0.03600	13.33000	0.000	-0.04588	0.00445	-0.06753
SN	120	0.37200	710.31000	110.900	0.82885	0.26457	0.02389
SR	88	36.31800	9646.35000	4.400	34.47737	37.26099	37.21592
ZN	66	3.71600	330.02000	28.500	2.49455	4.31357	4.33838
BI-1	209	153408.08000	0.00000	0.000	153690.44000	154074.93000	152458.87000
PB	208	0.09500	703.37000	0.700	0.09410	0.09532	0.09494
TL	203	0.01000	30.00000	48.500	0.00501	0.01451	0.00990
GE-1	72	5704.51000	0.00000	0.000	5421.11000	5641.16000	6051.26000
TB-1	159	177177.38000	0.00000	0.000	177527.60000	177145.00000	176859.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:36:21
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.15000	0.00000	0.000	15307.01000	15317.05000	14496.38000
AL	27	2441.83300	19424.29000	3.100	2462.01109	2359.04253	2504.44403
CA	44	2859.26500	2927.03000	10.600	2895.29289	3143.33941	2539.16329
CR	52	250.37500	125298.06000	2.800	244.74455	248.04339	258.33709
FE	57	2466.80900	24480.88000	2.100	2499.92601	2494.35822	2406.14387
K	39	2485.69400	42584.03000	3.300	2413.93751	2466.17587	2576.96738
MG	24	2463.36200	67802.04000	3.300	2428.21043	2406.58947	2555.28712
MN	55	254.70900	52798.41000	1.400	252.90108	252.40320	258.82154
NA	23	2510.95200	142026.05000	3.300	2475.77865	2452.16038	2604.91768
TI	47	261.00300	2240.22000	9.700	259.41497	236.39953	287.19484
V	51	253.48100	96265.57000	2.700	247.70880	251.80626	260.92814
IN-1	115	30717.23000	0.00000	0.000	31360.45000	31215.59000	29575.64000
AG	107	25.19800	40027.56000	0.800	25.19014	25.00270	25.39985
AS	75	263.86400	13528.54000	1.500	262.20318	260.99777	268.39157
BA	137	257.33000	42862.35000	2.500	253.22832	253.99121	264.77083
CD	111	25.17000	4297.90000	7.300	23.51865	24.83765	27.15251
CO	59	255.54100	241990.09000	2.700	251.55874	251.51164	263.55141
CU	63	257.61700	202971.80000	3.600	250.61979	253.93380	268.29846
MO	98	25.86000	19451.51000	1.500	25.69927	25.56973	26.31050
NI	60	257.90300	68776.06000	3.000	252.32192	254.79553	266.59106
SB	121	25.30500	11137.46000	5.900	23.98844	24.99610	26.92986
SN	120	25.51900	14002.98000	5.500	23.90933	26.37100	26.27551
SR	88	25.31300	6798.34000	7.100	25.02771	23.67902	27.23321
ZN	66	258.86200	23008.95000	4.000	250.65288	255.47350	270.45973
BI-1	209	161404.02000	0.00000	0.000	164356.52000	160406.82000	159448.71000
PB	208	25.87400	183336.59000	1.900	25.39173	26.36216	25.86762
TL	203	25.24400	55493.95000	1.600	24.89133	25.15537	25.68535
GE-1	72	6094.64000	0.00000	0.000	6001.25000	6101.26000	6181.42000
TB-1	159	181798.70000	0.00000	0.000	183988.81000	182319.00000	179088.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:38:22
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14990.09000	0.00000	0.000	14526.40000	14806.65000	15637.23000
AL	27	0.57800	16.67000	338.300	1.03683	2.26470	-1.56674
CA	44	6.69200	6.67000	86.600	10.13453	9.94271	0.00000
CR	52	0.11300	133.34000	114.800	0.23562	0.12669	-0.02297
FE	57	4.93400	53.34000	141.600	12.97616	1.45159	0.37295
K	39	-6.04900	703.38000	0.000	-14.08164	0.98173	-5.04820
MG	24	3.78000	103.34000	32.600	3.38321	5.16353	2.79366
MN	55	0.48700	153.34000	94.600	0.93275	0.51773	0.01166
NA	23	5.53500	1446.79000	47.800	3.28824	8.45035	4.86631
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.17800	66.67000	46.300	0.27248	0.13366	0.12656
IN-1	115	30782.23000	0.00000	0.000	29669.19000	31834.63000	30842.87000
AG	107	0.06700	113.34000	6.300	0.06766	0.06278	0.07120
AS	75	0.19000	36.00000	193.300	0.49103	-0.21869	0.29689
BA	137	0.04300	30.00000	150.100	0.11112	0.03628	-0.01793
CD	111	0.00800	5.33000	219.400	-0.01080	0.01096	0.02371
CO	59	0.31300	596.70000	22.300	0.38260	0.24319	0.31386
CU	63	-0.07600	253.35000	0.000	-0.08130	-0.05373	-0.09331
MO	98	0.11600	86.67000	41.400	0.12384	0.06412	0.15885
NI	60	0.00100	83.34000	24606.300	0.22702	-0.28067	0.05681
SB	121	0.32400	173.34000	22.900	0.23873	0.37158	0.36304
SN	120	0.61000	851.00000	180.400	-0.20835	1.86105	0.17705
SR	88	0.01300	3.33000	173.200	0.03850	0.00000	0.00000
ZN	66	0.19300	23.33000	152.700	0.50832	0.14325	-0.07374
BI-1	209	157021.35000	0.00000	0.000	156217.65000	156631.63000	158214.78000
PB	208	0.02300	223.34000	102.700	0.04575	-0.00094	0.02345
TL	203	0.02200	56.67000	65.300	0.00955	0.03764	0.01865
GE-1	72	5881.21000	0.00000	0.000	5561.14000	6051.24000	6031.25000
TB-1	159	177887.13000	0.00000	0.000	179297.58000	177420.66000	176943.16000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:40:22
Tube Number: 24 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15447.16000	0.00000	0.000	16187.76000	15707.45000	14446.27000
AL	27	2.91700	36.67000	46.200	1.93781	4.45278	2.36028
CA	44	31.23100	33.33000	64.800	54.56649	18.74502	20.38148
CR	52	0.04300	103.34000	100.700	0.02817	0.09125	0.00893
FE	57	4.02000	46.67000	58.500	5.02424	1.33412	5.70186
K	39	-6.05700	713.38000	0.000	-21.42438	-6.37862	9.63118
MG	24	1.06300	30.00000	6.000	1.01200	1.04294	1.13399
MN	55	0.16400	93.34000	155.400	0.22650	0.38028	-0.11616
NA	23	40.11900	3467.12000	20.300	32.47708	39.20832	48.67098
TI	47	0.72000	6.67000	173.200	2.16101	0.00000	0.00000
V	51	0.07400	30.00000	99.000	0.14671	0.07560	0.00000
IN-1	115	30473.78000	0.00000	0.000	31306.89000	30734.28000	29380.16000
AG	107	0.02400	43.33000	19.600	0.02067	0.02113	0.02887
AS	75	-0.21600	15.33000	0.000	-0.32862	-0.20789	-0.11179
BA	137	0.04400	30.00000	236.300	-0.01970	0.16251	-0.01197
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.27400	556.70000	30.300	0.35634	0.27384	0.19061
CU	63	0.10300	390.02000	162.900	-0.06042	0.27594	0.09446
MO	98	0.05000	36.67000	60.100	0.02608	0.03985	0.08337
NI	60	0.11000	113.34000	99.400	0.23538	0.05813	0.03622
SB	121	0.09400	70.00000	67.000	0.02177	0.13714	0.12280
SN	120	-0.27300	366.68000	0.000	-0.17408	-0.42378	-0.22060
SR	88	0.03700	10.00000	100.600	0.03648	0.07433	0.00000
ZN	66	3.13700	283.35000	10.700	2.90522	3.52262	2.98290
BI-1	209	159566.64000	0.00000	0.000	163368.64000	160003.41000	155327.88000
PB	208	0.06600	526.69000	6.200	0.06146	0.06580	0.06954
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00463	-0.00455
GE-1	72	5907.87000	0.00000	0.000	6231.33000	5921.24000	5571.05000
TB-1	159	180252.29000	0.00000	0.000	180681.52000	183186.81000	176888.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:42:22
Tube Number: 25 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15937.55000	0.00000	0.000	15356.93000	15827.39000	16628.34000
AL	27	1.23200	23.33000	155.900	3.35879	-0.37196	0.70772
CA	44	15.59700	16.67000	123.900	9.58644	37.20594	0.00000
CR	52	0.03300	100.00000	341.100	0.15565	-0.06257	0.00516
FE	57	1.96700	26.67000	61.100	3.35327	1.31948	1.22718
K	39	-2.50800	810.06000	0.000	1.55852	-10.08423	1.00098
MG	24	1.35400	40.00000	46.500	0.71116	1.38005	1.97036
MN	55	0.20800	103.34000	99.500	0.44233	0.05419	0.12610
NA	23	3.96200	1446.79000	40.000	3.23262	2.87093	5.78216
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	91.000	0.05155	0.07503	0.00000
IN-1	115	31063.65000	0.00000	0.000	30845.32000	31642.84000	30702.80000
AG	107	0.01900	36.67000	36.100	0.01477	0.02652	0.01486
AS	75	-0.14600	19.33000	0.000	-0.01447	-0.29273	-0.12939
BA	137	-0.01800	20.00000	0.000	0.10164	-0.13751	-0.01738
CD	111	-0.01500	1.33000	0.000	0.00039	-0.02292	-0.02292
CO	59	0.15300	450.03000	78.300	0.05071	0.12350	0.28502
CU	63	-0.06200	266.68000	0.000	-0.04272	-0.07632	-0.06651
MO	98	0.05700	43.33000	58.700	0.09265	0.02580	0.05319
NI	60	0.10300	113.34000	104.900	0.13155	0.19309	-0.01657
SB	121	0.04500	50.00000	46.800	0.02311	0.06500	0.04629
SN	120	-0.03900	500.03000	0.000	-0.04916	0.20290	-0.27188
SR	88	0.02400	6.67000	173.200	0.00000	0.07219	0.00000
ZN	66	1.52200	143.34000	12.600	1.49401	1.34535	1.72628
BI-1	209	162010.62000	0.00000	0.000	160700.65000	162275.71000	163055.50000
PB	208	0.02600	253.34000	24.000	0.02577	0.01981	0.03225
TL	203	-0.00300	3.33000	0.000	-0.00455	-0.00455	-0.00005
GE-1	72	6014.60000	0.00000	0.000	5961.23000	6001.28000	6081.29000
TB-1	159	182178.47000	0.00000	0.000	185353.63000	181227.89000	179953.90000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:44:22
Tube Number: 26 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15326.99000	0.00000	0.000	15797.30000	15146.85000	15036.83000
AL	27	0.90200	20.00000	7.200	0.82737	0.93018	0.94845
CA	44	32.48100	33.34000	149.000	9.31920	0.00000	88.12437
CR	52	-0.13200	13.33000	0.000	-0.11946	-0.11783	-0.15751
FE	57	1.35100	20.00000	142.200	3.24315	1.40558	-0.59689
K	39	0.13100	823.39000	3727.000	-2.65239	5.78746	-2.74078
MG	24	5.47700	153.34000	18.200	4.49405	6.48961	5.44764
MN	55	0.23900	106.67000	77.200	0.14673	0.45217	0.11936
NA	23	17.17900	2143.57000	19.900	14.61726	21.07036	15.84979
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	173.200	0.12528	0.00000	0.00000
IN-1	115	31535.84000	0.00000	0.000	31536.13000	31607.44000	31463.96000
AG	107	0.02700	50.00000	40.100	0.03275	0.01432	0.03284
AS	75	-0.33000	10.00000	0.000	-0.06360	-0.44436	-0.48216
BA	137	2.65000	476.70000	5.300	2.72799	2.48820	2.73468
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01150
CO	59	0.25900	560.04000	44.800	0.39262	0.18561	0.19822
CU	63	-0.10800	233.35000	0.000	-0.14947	-0.00189	-0.17370
MO	98	0.00900	6.67000	173.200	0.00000	0.00000	0.02595
NI	60	-0.01200	83.34000	0.000	-0.13414	0.08427	0.01280
SB	121	-0.02300	20.00000	0.000	0.02112	-0.02330	-0.06753
SN	120	7.35300	4520.90000	10.400	8.09027	7.40859	6.56023
SR	88	1.90800	526.70000	10.700	1.77479	1.80693	2.14188
ZN	66	0.87500	86.67000	68.800	0.25482	1.45621	0.91421
BI-1	209	163024.71000	0.00000	0.000	162892.56000	166367.95000	159813.62000
PB	208	0.01200	156.67000	26.600	0.00851	0.01361	0.01457
TL	203	0.00000	10.00000	0.000	-0.00455	0.00428	0.00005
GE-1	72	5961.24000	0.00000	0.000	5741.17000	5871.19000	6271.36000
TB-1	159	182796.35000	0.00000	0.000	185675.78000	183961.56000	178751.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:46:22
Tube Number: 27 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.23000	0.00000	0.000	15567.45000	15006.71000	14726.52000
AL	27	1874.80700	15000.06000	7.400	1966.03531	1942.41884	1715.96649
CA	44	3840.64900	3937.28000	3.200	3745.48742	3797.11045	3979.35000
CR	52	49.43300	24907.87000	1.600	48.68561	49.38679	50.22712
FE	57	939.59200	9352.74000	5.700	879.34076	979.96708	959.46899
K	39	9837.32100	166882.26000	1.300	9695.61079	9917.18808	9899.16322
MG	24	1874.32900	51813.67000	1.700	1837.19833	1887.58421	1898.20306
MN	55	48.49300	10129.97000	5.500	45.45811	49.68384	50.33734
NA	23	9529.43000	538096.09000	2.400	9318.53426	9504.75067	9765.00620
TI	47	231.02800	1996.86000	7.100	243.83717	236.62612	212.62179
V	51	49.88300	19027.47000	2.000	49.12593	51.04067	49.48297
IN-1	115	29873.99000	0.00000	0.000	29233.48000	30779.90000	29608.59000
AG	107	51.16800	79021.96000	2.600	52.45267	49.83628	51.21649
AS	75	10.24800	536.01000	1.500	10.15454	10.16413	10.42466
BA	137	52.00400	8439.15000	8.900	50.78522	48.10691	57.11926
CD	111	5.17000	862.70000	2.900	5.08162	5.08216	5.34484
CO	59	257.99400	237648.70000	2.300	263.70387	252.06284	258.21513
CU	63	52.33100	40353.24000	2.800	52.87681	50.64541	53.46941
MO	98	51.18800	37444.55000	3.300	53.11164	50.37670	50.07599
NI	60	53.26900	13879.22000	4.100	54.98223	50.81627	54.00807
SB	121	5.63200	2433.62000	9.500	5.52761	5.15568	6.21221
SN	120	64.66200	33759.66000	4.200	62.64053	63.62361	67.72125
SR	88	40.53300	10590.35000	5.800	42.32934	37.86264	41.40612
ZN	66	53.67200	4644.11000	5.600	55.46558	50.20553	55.34557
BI-1	209	157119.07000	0.00000	0.000	158682.90000	155265.40000	157408.91000
PB	208	15.35000	105918.65000	0.900	15.19864	15.40665	15.44503
TL	203	1.99000	4267.46000	2.100	1.98087	1.95361	2.03423
GE-1	72	5687.81000	0.00000	0.000	5491.07000	6131.31000	5441.04000
TB-1	159	177792.41000	0.00000	0.000	177357.50000	178126.40000	177893.32000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:48:22
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14222.82000	0.00000	0.000	13825.78000	15016.90000	13825.77000
AL	27	222.43700	1683.49000	13.700	255.59868	216.30537	195.40663
CA	44	36626.32300	35322.03000	5.500	37678.99673	34296.97483	37902.99617
CR	52	4.21400	2066.87000	3.700	4.38631	4.08598	4.16890
FE	57	1164.79300	10917.14000	3.700	1203.13751	1117.76602	1173.47586
K	39	2409.96500	39042.42000	4.000	2480.58698	2299.18199	2450.12589
MG	24	14513.58400	377535.41000	4.000	14923.20679	13845.43101	14772.11400
MN	55	642.90600	125893.30000	2.200	652.14620	626.59244	649.97860
NA	23	72819.85600	3863105.15000	3.500	74722.07038	69880.35181	73857.14661
TI	47	27.33200	220.01000	74.000	50.60643	17.47244	13.91735
V	51	1.05000	376.69000	10.300	1.17385	1.00167	0.97345
IN-1	115	29215.62000	0.00000	0.000	29225.88000	29352.12000	29068.85000
AG	107	1.05700	1603.47000	12.700	1.18703	0.91835	1.06705
AS	75	3.73800	207.33000	11.300	3.33999	4.18208	3.69115
BA	137	42.45500	6748.34000	3.200	41.96010	43.97897	41.42648
CD	111	0.93600	156.00000	20.100	1.04743	1.04282	0.71924
CO	59	1.71600	1830.16000	15.800	1.40397	1.86109	1.88229
CU	63	4.41700	3603.86000	12.900	3.91573	4.29608	5.03990
MO	98	1.27200	910.07000	6.400	1.35504	1.26576	1.19382
NI	60	4.18300	1140.08000	15.700	4.37631	3.45296	4.71889
SB	121	2.13400	920.06000	12.200	2.32409	1.83751	2.24079
SN	120	4.01100	2506.98000	9.200	3.73825	4.43041	3.86352
SR	88	108.24800	27686.22000	3.400	110.49684	103.98072	110.26751
ZN	66	37.88700	3210.43000	9.700	41.17642	33.93756	38.54727
BI-1	209	153557.80000	0.00000	0.000	153571.56000	156297.16000	150804.69000
PB	208	2.73400	18491.76000	2.000	2.68374	2.79286	2.72411
TL	203	0.91200	1916.86000	4.600	0.89917	0.87871	0.95958
GE-1	72	5481.10000	0.00000	0.000	4770.82000	5851.29000	5821.19000
TB-1	159	175526.92000	0.00000	0.000	176931.36000	178155.21000	171494.18000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:50:22
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14149.50000	0.00000	0.000	14366.36000	14676.53000	13405.62000
AL	27	2111.81500	15793.99000	4.000	2062.00276	2063.52954	2209.91366
CA	44	42418.14300	40726.59000	3.300	42042.55660	41224.12567	43987.74575
CR	52	51.44300	24267.08000	4.600	49.06052	51.44548	53.82247
FE	57	2005.88300	18686.85000	5.800	1969.20999	1913.11618	2135.32374
K	39	12592.00900	199625.53000	6.000	12207.06823	12103.26494	13465.69235
MG	24	16961.08300	438834.11000	4.800	16619.61320	16371.56754	17892.06954
MN	55	710.64300	138386.59000	3.400	704.97666	689.86982	737.08123
NA	23	85516.67900	4512896.39000	3.800	84690.92589	82792.47808	89066.63190
TI	47	256.35100	2073.55000	10.900	225.25955	278.90375	264.88999
V	51	53.25600	19004.10000	5.900	53.26076	50.11032	56.39775
IN-1	115	29526.65000	0.00000	0.000	29937.14000	30033.15000	28609.67000
AG	107	49.50600	75552.71000	3.600	49.02574	48.03492	51.45801
AS	75	9.80200	508.01000	2.400	9.66308	10.07012	9.67412
BA	137	90.47400	14503.48000	1.800	90.21080	89.00135	92.21066
CD	111	4.80500	791.36000	12.500	4.22894	4.75415	5.43171
CO	59	250.06200	227740.96000	0.500	249.55660	249.04341	251.58702
CU	63	50.59700	38599.01000	2.500	49.80832	52.04398	49.93781
MO	98	52.65200	38075.95000	0.900	52.64261	52.18738	53.12594
NI	60	49.89200	12855.17000	3.400	48.63454	49.20804	51.83362
SB	121	6.18500	2643.66000	8.300	6.77380	5.93724	5.84507
SN	120	50.46800	26144.32000	2.600	49.03964	50.70027	51.66438
SR	88	145.31800	37561.16000	3.000	140.43704	148.60255	146.91418
ZN	66	54.48400	4664.15000	6.100	57.96892	51.34160	54.14039
BI-1	209	150673.64000	0.00000	0.000	149521.94000	152459.89000	150039.10000
PB	208	15.93500	105445.15000	0.400	16.01275	15.87213	15.92099
TL	203	1.93400	3980.67000	7.600	1.87652	2.10041	1.82599
GE-1	72	5874.57000	0.00000	0.000	5971.25000	5240.99000	6411.48000
TB-1	159	176366.30000	0.00000	0.000	175304.04000	178367.30000	175427.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:52:22
Tube Number: 30 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15000.08000	0.00000	0.000	14786.53000	14406.29000	15807.43000
AL	27	1981.71800	15727.24000	2.700	1930.40447	2037.88648	1976.86204
CA	44	38437.96500	39096.22000	5.400	38882.03750	40266.33495	36165.52203
CR	52	48.29700	24130.38000	7.400	50.98010	49.69775	44.21206
FE	57	1840.13700	18173.20000	5.800	1889.67051	1912.13407	1718.60652
K	39	11516.44500	193665.01000	5.000	11730.39309	11956.60073	10862.34223
MG	24	15635.53900	428707.67000	5.800	15714.72023	16503.39127	14688.50642
MN	55	659.92100	136210.18000	3.900	668.30652	680.57982	630.87636
NA	23	78635.52700	4398138.16000	4.500	80212.91122	81120.69694	74572.97388
TI	47	222.38800	1896.85000	17.400	222.40733	261.06243	183.69489
V	51	48.73600	18446.62000	4.100	48.39722	50.88422	46.92588
IN-1	115	29655.66000	0.00000	0.000	30879.36000	28827.25000	29260.38000
AG	107	48.47500	74273.43000	4.300	46.07080	49.65334	49.70228
AS	75	9.87500	513.34000	7.000	9.70217	10.63804	9.28333
BA	137	87.08200	14013.05000	4.800	82.79166	87.28732	91.16675
CD	111	4.67600	776.02000	5.500	4.91435	4.40511	4.70822
CO	59	244.45600	223492.84000	2.600	237.38139	250.05076	245.93464
CU	63	48.92100	37470.18000	2.300	47.80834	48.86670	50.08823
MO	98	49.89200	36218.70000	2.900	48.46557	51.34863	49.86093
NI	60	48.94900	12681.60000	1.900	49.97929	48.67878	48.18978
SB	121	6.62500	2837.03000	4.600	6.33865	6.94025	6.59751
SN	120	51.24000	26658.70000	0.600	50.99755	51.58957	51.13333
SR	88	143.07400	37136.90000	1.200	141.15657	144.61374	143.45126
ZN	66	53.84700	4627.45000	2.500	52.84076	55.40942	53.28933
BI-1	209	151381.12000	0.00000	0.000	151573.51000	151924.28000	150645.56000
PB	208	15.75500	104738.50000	1.700	15.73253	15.49289	16.03891
TL	203	2.07300	4284.09000	8.100	2.26779	1.97245	1.97951
GE-1	72	5821.23000	0.00000	0.000	6221.48000	5931.17000	5311.04000
TB-1	159	177536.59000	0.00000	0.000	181783.42000	177156.64000	173669.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:54:23
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14723.22000	0.00000	0.000	14426.29000	14316.23000	15427.15000
AL	27	1272.88800	9889.79000	12.000	1339.82562	1380.55560	1098.28261
CA	44	24669.79500	24630.79000	6.300	24978.71236	26035.68256	22994.99067
CR	52	5.16400	2606.96000	2.900	5.32246	5.02858	5.14218
FE	57	20647.56500	200211.58000	4.600	21339.49824	21037.89316	19565.30509
K	39	3218.26500	53679.51000	6.500	3317.49956	3359.04176	2978.25291
MG	24	9904.91200	266659.00000	5.500	10224.81606	10208.54287	9281.37667
MN	55	1626.94500	329518.14000	5.000	1691.49068	1652.84681	1536.49631
NA	23	54685.13900	3002343.08000	5.500	56806.97671	55989.96743	51258.47207
TI	47	39.60900	333.35000	18.200	47.28744	32.98867	38.55071
V	51	5.27900	1956.87000	15.100	5.13133	6.13855	4.56744
IN-1	115	29236.52000	0.00000	0.000	29526.25000	29476.27000	28707.03000
AG	107	0.12600	196.68000	32.900	0.17279	0.09437	0.11048
AS	75	3.52800	197.33000	7.900	3.82916	3.47007	3.28433
BA	137	72.52900	11521.08000	1.300	73.65390	71.90086	72.03115
CD	111	0.72100	120.67000	25.500	0.74427	0.52600	0.89142
CO	59	13.30700	12274.60000	2.300	13.62709	13.26509	13.02930
CU	63	12.21200	9452.93000	5.700	12.26632	12.88371	11.48544
MO	98	2.38000	1703.50000	18.100	2.72408	1.89759	2.51734
NI	60	8.01900	2113.57000	7.400	7.33475	8.32540	8.39634
SB	121	0.46000	220.01000	32.900	0.45326	0.31187	0.61420
SN	120	1.25600	1117.05000	69.500	0.60183	0.91983	2.24686
SR	88	97.10100	24848.46000	2.800	96.43167	94.81137	100.06100
ZN	66	68.39600	5797.86000	10.500	63.34063	76.57579	65.27037
BI-1	209	151679.24000	0.00000	0.000	154457.12000	151379.40000	149201.21000
PB	208	23.00800	153237.60000	0.000	23.01777	23.00171	23.00433
TL	203	0.05700	126.68000	11.300	0.06201	0.05851	0.04959
GE-1	72	5661.12000	0.00000	0.000	5881.22000	5331.00000	5771.15000
TB-1	159	176646.90000	0.00000	0.000	178327.05000	176954.33000	174659.33000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:56:23
Tube Number: 32 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.15000	0.00000	0.000	15136.97000	14486.14000	15677.33000
AL	27	1205.10000	9629.57000	2.500	1191.84766	1238.94853	1184.50454
CA	44	26293.49800	26947.45000	3.200	26552.60892	26982.08606	25345.80042
CR	52	4.90400	2543.65000	5.300	5.20420	4.71882	4.78923
FE	57	20695.51500	205848.49000	4.100	20432.50479	21654.75545	19999.28471
K	39	4149.46600	70807.68000	4.300	4033.85897	4354.14664	4060.39312
MG	24	9897.59900	273395.33000	4.300	9981.90306	10271.51970	9439.37331
MN	55	1700.25000	353323.25000	3.400	1686.70496	1763.98630	1650.05891
NA	23	55752.98600	3140133.39000	4.600	55599.11246	58404.37773	53255.46899
TI	47	37.40900	323.35000	10.400	33.51102	37.43266	41.28257
V	51	4.94800	1886.85000	12.400	5.64879	4.70016	4.49452
IN-1	115	29985.38000	0.00000	0.000	30158.70000	29709.24000	30088.21000
AG	107	0.06700	110.00000	61.100	0.03443	0.11313	0.05380
AS	75	3.87100	219.33000	9.300	3.65835	4.28715	3.66814
BA	137	72.87700	11871.32000	2.500	73.81950	74.06916	70.74231
CD	111	0.62400	108.00000	7.100	0.62088	0.58221	0.67019
CO	59	12.25600	11614.15000	5.100	12.55935	12.66652	11.54215
CU	63	11.00100	8759.21000	5.100	11.49591	11.11085	10.39496
MO	98	2.16000	1586.83000	21.200	1.88172	1.91023	2.68677
NI	60	8.16700	2206.88000	4.400	7.74753	8.37390	8.37935
SB	121	0.56900	273.35000	9.700	0.55821	0.52062	0.62938
SN	120	0.59100	806.72000	23.300	0.43404	0.68990	0.64967
SR	88	100.61800	26410.92000	3.200	99.71954	104.15676	97.97717
ZN	66	66.76300	5801.19000	7.800	60.74987	69.34613	70.19422
BI-1	209	153197.58000	0.00000	0.000	150492.29000	154985.08000	154115.38000
PB	208	22.25000	149663.85000	1.000	22.48690	22.22758	22.03644
TL	203	0.06300	140.01000	40.600	0.07840	0.03335	0.07645
GE-1	72	5937.93000	0.00000	0.000	6241.49000	5761.14000	5811.15000
TB-1	159	178544.36000	0.00000	0.000	178187.56000	181834.35000	175611.17000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:58:24
Tube Number: 33
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15430.48000	0.00000	0.000	15727.41000	14846.71000	15717.32000
AL	27	2479.09800	20225.16000	3.800	2414.21838	2586.84991	2436.22518
CA	44	2327.91300	2436.95000	7.100	2153.15653	2479.27774	2351.30344
CR	52	249.47900	128083.51000	3.000	247.26204	257.76308	243.41280
FE	57	2509.36100	25522.46000	3.400	2516.16804	2590.78942	2421.12634
K	39	2465.31500	43339.01000	3.200	2456.99950	2548.20773	2390.73861
MG	24	2420.88300	68373.52000	2.900	2428.09094	2486.50947	2348.04809
MN	55	255.02400	54229.19000	2.200	254.93323	260.60022	249.53813
NA	23	2486.95500	144361.12000	2.300	2477.55205	2548.28350	2435.02896
TI	47	274.78500	2423.60000	1.200	274.72557	278.06185	271.56785
V	51	253.37700	98726.05000	2.600	253.23696	260.15602	246.73879
IN-1	115	31459.50000	0.00000	0.000	31003.72000	31233.52000	32141.27000
AG	107	25.28100	41129.77000	3.700	26.28611	24.43610	25.12045
AS	75	253.19300	13299.02000	0.900	254.33929	254.54116	250.69985
BA	137	254.68200	43467.02000	1.200	253.34032	258.16448	252.53978
CD	111	25.22300	4416.59000	2.200	25.51794	25.57184	24.58043
CO	59	253.78900	246208.22000	2.500	259.59888	254.70899	247.06023
CU	63	256.29600	206933.61000	1.600	260.24254	256.49074	252.15536
MO	98	25.26200	19468.33000	1.700	25.57308	24.75729	25.45656
NI	60	251.10800	68614.64000	1.900	256.57090	249.27368	247.47804
SB	121	25.09000	11320.84000	2.600	25.09948	25.74292	24.42669
SN	120	29.67700	16589.53000	14.400	27.75757	34.56265	26.70968
SR	88	24.76500	6814.99000	7.000	26.01568	25.49471	22.78398
ZN	66	253.77600	23118.98000	1.800	251.97310	259.09060	250.26370
BI-1	209	163947.21000	0.00000	0.000	164779.61000	163253.93000	163808.10000
PB	208	25.73900	185282.50000	0.200	25.80493	25.73449	25.67684
TL	203	25.04700	55938.68000	2.000	25.51597	25.11371	24.51128
GE-1	72	5794.53000	0.00000	0.000	5781.16000	5451.13000	6151.30000
TB-1	159	183672.01000	0.00000	0.000	184172.17000	180479.72000	186364.14000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:00:25
Tube Number: 34
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15283.80000	0.00000	0.000	14496.51000	16147.91000	15206.99000
AL	27	2.52200	33.33000	51.100	1.04220	3.11752	3.40736
CA	44	6.61200	6.67000	86.700	10.15542	0.00000	9.68096
CR	52	0.11400	136.67000	165.600	0.29863	0.12169	-0.07846
FE	57	7.14500	76.67000	71.900	13.00414	5.03811	3.39222
K	39	5.27500	903.41000	188.000	14.36797	-5.29603	6.75169
MG	24	3.87100	106.67000	43.000	5.27399	2.02899	4.30941
MN	55	0.58900	180.01000	35.600	0.48443	0.45255	0.83131
NA	23	1.68300	1250.10000	237.100	6.10888	0.58573	-1.64411
TI	47	1.85000	16.67000	90.300	0.00000	3.24952	2.30038
V	51	0.20800	80.00000	34.200	0.19113	0.14707	0.28634
IN-1	115	31529.55000	0.00000	0.000	31234.34000	32436.57000	30917.73000
AG	107	0.04900	86.67000	6.900	0.04549	0.04962	0.05225
AS	75	0.01100	28.00000	907.300	-0.09762	0.10873	0.02317
BA	137	0.05800	33.33000	157.300	0.15770	0.03305	-0.01822
CD	111	-0.00400	3.33000	0.000	-0.01141	0.01033	-0.01129
CO	59	0.34500	643.37000	47.100	0.52418	0.30284	0.20733
CU	63	0.04500	356.69000	149.600	0.02782	-0.01198	0.12050
MO	98	0.08100	63.34000	101.400	0.07842	0.16363	0.00000
NI	60	0.18500	136.67000	69.100	0.27356	0.03845	0.24233
SB	121	0.31000	170.01000	41.600	0.20101	0.27725	0.45245
SN	120	0.01700	536.70000	373.400	0.08809	-0.04069	0.00505
SR	88	0.06000	16.67000	92.600	0.10970	0.07043	0.00000
ZN	66	0.44200	46.67000	118.400	1.03206	0.03274	0.26139
BI-1	209	160647.12000	0.00000	0.000	160114.56000	161850.85000	159975.95000
PB	208	0.02400	240.01000	57.400	0.02448	0.03819	0.01027
TL	203	0.02300	60.00000	53.300	0.03672	0.01360	0.01840
GE-1	72	5827.90000	0.00000	0.000	6081.33000	5321.01000	6081.35000
TB-1	159	183087.54000	0.00000	0.000	183536.56000	181866.38000	183859.68000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:02:28
Tube Number: 35
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15010.08000	0.00000	0.000	15197.03000	14736.48000	15096.73000
AL	27	86.30000	696.71000	10.000	79.32041	95.96513	83.61438
CA	44	186.27100	190.01000	8.100	203.44302	179.83094	175.53968
CR	52	1.91000	1033.41000	15.000	1.82036	1.67818	2.23171
FE	57	97.73500	973.40000	21.200	81.23831	91.00070	120.96485
K	39	204.86800	4244.01000	3.100	212.19571	202.11499	200.29384
MG	24	93.69600	2576.94000	7.000	93.79308	87.08922	100.20504
MN	55	2.03400	476.70000	25.100	2.21774	1.45770	2.42669
NA	23	198.24500	12237.93000	8.700	194.09995	217.18103	183.45265
TI	47	19.07600	163.34000	60.300	25.32196	26.11333	5.79296
V	51	0.55400	210.01000	6.100	0.54699	0.59094	0.52440
IN-1	115	30948.85000	0.00000	0.000	31544.50000	31035.81000	30266.23000
AG	107	0.48900	790.05000	7.100	0.50479	0.51313	0.44960
AS	75	1.76700	118.00000	19.600	2.02894	1.37462	1.89867
BA	137	2.04100	366.69000	28.300	2.25959	2.47714	1.38582
CD	111	0.45900	82.67000	30.400	0.39882	0.35939	0.61860
CO	59	0.58000	856.73000	12.500	0.65999	0.56096	0.51895
CU	63	2.30600	2143.55000	11.300	2.08947	2.59539	2.23314
MO	98	0.65600	496.70000	14.900	0.60830	0.59196	0.76889
NI	60	1.75400	556.70000	27.200	1.61971	2.28280	1.35873
SB	121	1.03700	490.03000	13.200	1.12899	1.10356	0.87930
SN	120	1.91200	1536.81000	5.200	1.88210	2.02247	1.82994
SR	88	1.11800	303.35000	22.100	1.37599	0.88328	1.09447
ZN	66	17.34600	1560.14000	3.700	16.89918	17.06597	18.07260
BI-1	209	160323.17000	0.00000	0.000	161064.08000	159941.97000	159963.45000
PB	208	1.12400	7981.13000	3.000	1.14761	1.14006	1.08577
TL	203	0.51100	1126.76000	8.200	0.55622	0.47292	0.50500
GE-1	72	5877.89000	0.00000	0.000	5761.18000	5821.19000	6051.31000
TB-1	159	180267.73000	0.00000	0.000	180693.83000	179296.23000	180813.12000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:04:28
Tube Number: 36
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14900.12000	0.00000	0.000	15647.49000	15086.92000	13965.96000
AL	27	9479.86100	74511.16000	7.100	8776.35053	9540.46026	10122.77074
CA	44	9515.78800	9612.98000	5.300	8968.95622	9624.49433	9953.91314
CR	52	0.03200	93.34000	384.000	-0.08068	0.16125	0.01465
FE	57	9743.13400	95526.90000	5.600	9319.87738	9546.04414	10363.48112
K	39	9750.41700	162904.40000	5.700	9323.01212	9544.28835	10383.94976
MG	24	9362.11800	254846.47000	6.300	8823.55257	9275.98789	9986.81401
MN	55	0.18400	93.34000	65.600	0.24354	0.26251	0.04500
NA	23	9410.15800	523334.82000	6.100	8948.16258	9226.77639	10055.53593
TI	47	194.84700	1663.49000	13.400	222.46815	170.43776	191.63589
V	51	0.02600	10.00000	173.200	0.00000	0.07871	0.00000
IN-1	115	30490.85000	0.00000	0.000	31334.99000	29692.40000	30445.15000
AG	107	0.02300	43.33000	107.900	0.04533	0.02852	-0.00404
AS	75	-0.27400	12.67000	0.000	-0.02237	-0.39904	-0.40204
BA	137	-0.05700	13.33000	0.000	-0.01980	-0.01329	-0.13751
CD	111	-0.00700	2.67000	0.000	-0.02292	0.00130	0.00070
CO	59	0.11900	410.03000	30.600	0.13819	0.14154	0.07687
CU	63	-0.01000	303.35000	0.000	0.06381	-0.09468	0.00038
MO	98	193.24000	144252.41000	2.900	187.56606	198.83130	193.32204
NI	60	-0.11400	53.33000	0.000	-0.20653	-0.08398	-0.05188
SB	121	-0.00600	26.67000	0.000	-0.02292	0.00309	0.00134
SN	120	-0.08300	466.70000	0.000	-0.21185	-0.22850	0.19189
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.44900	46.67000	123.300	1.02851	0.39155	-0.07374
BI-1	209	155596.36000	0.00000	0.000	154458.45000	155549.13000	156781.51000
PB	208	0.01600	176.67000	22.200	0.01688	0.01230	0.01939
TL	203	0.00000	10.00000	6056.800	-0.00455	-0.00455	0.00950
GE-1	72	5731.16000	0.00000	0.000	6111.31000	5541.11000	5541.06000
TB-1	159	179126.86000	0.00000	0.000	179095.99000	179682.48000	178602.11000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:06:28
Tube Number: 37
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14803.13000	0.00000	0.000	15196.68000	14576.34000	14636.38000
AL	27	9915.54900	77593.49000	3.300	9542.72590	10076.61963	10127.30095
CA	44	9934.18300	9989.79000	4.100	10029.73669	10285.00680	9487.80471
CR	52	20.49300	10166.56000	2.800	19.86361	21.00467	20.60986
FE	57	10134.99100	98917.52000	1.200	10006.73952	10160.54972	10237.68249
K	39	10311.66000	171442.60000	2.000	10103.43298	10314.93408	10516.61202
MG	24	9819.02900	266149.50000	0.800	9730.50314	9870.22961	9856.35543
MN	55	20.56100	4240.68000	8.800	18.56144	22.05357	21.06893
NA	23	9888.22900	547452.98000	1.300	9743.23761	9991.08874	9930.36204
TI	47	201.20600	1703.49000	8.500	208.34442	213.61128	181.66177
V	51	0.01800	6.67000	173.200	0.00000	0.00000	0.05409
IN-1	115	30681.37000	0.00000	0.000	30563.46000	31396.65000	30083.99000
AG	107	20.24800	32130.72000	1.700	19.87442	20.29111	20.57767
AS	75	19.82500	1040.04000	1.200	20.01854	19.54994	19.90703
BA	137	0.00100	23.33000	6020.300	-0.01683	0.09744	-0.07621
CD	111	19.91700	3401.70000	3.100	20.37880	19.21891	20.15411
CO	59	20.70400	19861.74000	3.700	20.37186	20.15391	21.58701
CU	63	20.23200	16217.88000	1.700	20.39596	19.83196	20.46757
MO	98	201.09500	151081.20000	2.400	200.78597	196.34864	206.14982
NI	60	21.40400	5781.18000	1.800	21.10664	21.27273	21.83142
SB	121	-0.01400	23.33000	0.000	0.02394	-0.02301	-0.04430
SN	120	-0.13600	443.36000	0.000	-0.19268	0.13812	-0.35400
SR	88	0.11300	30.00000	100.500	0.11211	0.00000	0.22780
ZN	66	22.57700	2013.54000	6.300	23.32093	23.47048	20.93850
BI-1	209	157909.96000	0.00000	0.000	159852.69000	159630.15000	154247.05000
PB	208	0.02100	213.34000	54.500	0.01456	0.01459	0.03464
TL	203	0.00000	10.00000	9967.400	0.00464	0.00005	-0.00455
GE-1	72	5771.18000	0.00000	0.000	5821.19000	5631.15000	5861.20000
TB-1	159	180496.23000	0.00000	0.000	182480.62000	180165.84000	178842.24000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:08:28
Tube Number: 38
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15090.29000	0.00000	0.000	14866.87000	15447.30000	14956.70000
AL	27	2458.75200	19627.80000	3.400	2433.08659	2391.82687	2551.34194
CA	44	2631.91600	2696.97000	7.400	2505.58345	2535.35017	2854.81305
CR	52	254.80900	127946.36000	3.900	259.93443	243.28721	261.20563
FE	57	2519.03500	25061.73000	3.800	2628.09435	2450.69535	2478.31406
K	39	2565.90700	44097.54000	2.600	2548.91412	2509.37100	2639.43648
MG	24	2455.10000	67821.80000	2.700	2479.06759	2379.52922	2506.70189
MN	55	258.08500	53660.80000	4.800	271.27133	246.82931	256.15416
NA	23	2475.54300	140535.74000	3.500	2558.98628	2384.46159	2483.18119
TI	47	268.39200	2316.91000	9.600	281.21195	285.37440	238.58909
V	51	257.55200	98172.63000	1.800	256.88671	253.26596	262.50452
IN-1	115	30570.14000	0.00000	0.000	30556.49000	29574.88000	31579.05000
AG	107	25.80900	40799.19000	1.000	25.91670	25.99657	25.51253
AS	75	267.84200	13663.32000	2.900	272.96786	271.81024	258.74853
BA	137	263.36100	43657.63000	2.300	263.10091	269.65242	257.33103
CD	111	26.26700	4467.28000	3.400	26.63327	26.91006	25.25774
CO	59	260.64300	245623.12000	3.000	262.88606	266.96295	252.07911
CU	63	259.14300	203195.82000	3.500	260.13154	267.80176	249.49536
MO	98	26.46800	19805.28000	3.700	26.89738	27.15417	25.35293
NI	60	261.93400	69518.09000	3.100	266.68996	266.63685	252.47651
SB	121	25.97500	11377.73000	5.400	26.42989	27.09624	24.39782
SN	120	26.04100	14216.49000	1.000	26.06631	26.27652	25.78024
SR	88	26.12600	6988.36000	4.200	27.10651	26.34469	24.92680
ZN	66	267.51900	23669.82000	2.800	268.23037	274.67759	259.64797
BI-1	209	162871.56000	0.00000	0.000	160629.98000	164839.70000	163145.00000
PB	208	25.60000	183058.52000	1.300	25.97178	25.43605	25.39311
TL	203	24.80100	55025.65000	0.500	24.66186	24.90763	24.83231
GE-1	72	5831.18000	0.00000	0.000	5761.16000	5891.17000	5841.21000
TB-1	159	183042.03000	0.00000	0.000	185537.48000	181147.38000	182441.23000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:10:28
Tube Number: 39
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14583.17000	0.00000	0.000	14086.16000	14196.11000	15467.24000
AL	27	2.62500	33.33000	146.300	1.11820	-0.23467	6.99147
CA	44	17.00000	16.67000	127.800	0.00000	41.48128	9.51807
CR	52	0.12600	136.67000	84.300	0.24791	0.05420	0.07568
FE	57	6.97200	73.33000	67.800	10.16940	1.53969	9.20807
K	39	-0.37400	776.72000	0.000	0.30986	-3.21418	1.78365
MG	24	3.32300	86.67000	125.600	8.14164	0.76932	1.05914
MN	55	0.08400	70.00000	170.300	0.24853	-0.01121	0.01472
NA	23	1.29800	1176.76000	21.200	1.55344	1.00666	1.33261
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.26300	96.67000	10.900	0.28100	0.27882	0.23032
IN-1	115	31588.63000	0.00000	0.000	32266.77000	31876.16000	30622.95000
AG	107	0.06500	113.34000	70.300	0.10384	0.07483	0.01491
AS	75	-0.01100	26.67000	0.000	0.03764	-0.29439	0.22437
BA	137	0.03500	30.00000	491.000	0.03395	0.20961	-0.13751
CD	111	0.01100	6.00000	107.300	0.01051	-0.00036	0.02404
CO	59	0.32300	623.37000	33.500	0.24575	0.44614	0.27598
CU	63	0.04700	360.02000	258.500	0.18353	-0.04195	-0.00194
MO	98	0.20500	160.00000	52.100	0.32897	0.14088	0.14664
NI	60	0.14500	126.67000	93.200	0.04032	0.29783	0.09717
SB	121	0.22800	133.34000	5.600	0.21408	0.23946	0.22920
SN	120	-0.00400	526.70000	0.000	0.05420	-0.06078	-0.00453
SR	88	0.01200	3.33000	173.200	0.03540	0.00000	0.00000
ZN	66	0.32000	36.67000	117.400	0.67555	0.35967	-0.07374
BI-1	209	159761.38000	0.00000	0.000	159346.68000	158742.50000	161194.95000
PB	208	0.01600	180.00000	131.600	0.04037	0.00468	0.00305
TL	203	0.02500	63.33000	57.600	0.03692	0.02783	0.00912
GE-1	72	5807.84000	0.00000	0.000	5661.12000	6081.29000	5681.10000
TB-1	159	183078.54000	0.00000	0.000	183340.78000	183564.51000	182330.33000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

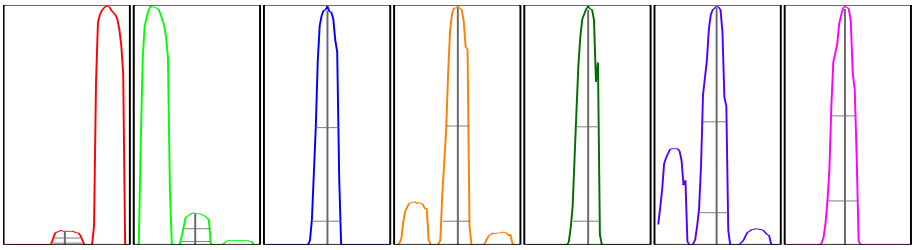
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	13.2 V			
Extract 2	-170.0 V	Cell Entrance	-30 V	Plate Bias	-40 V			

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
Omega Bias		-90 V				Cell Exit	-50 V	

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

1331301M07

Mercury Run Data Report

Data File Name: 1331301.M07

Run Name: 1331301M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By	Reviewed Date
Damary Valentin	11/09/2013 11:11AM
Robert Strocko	11/10/2013 7:52AM

Method Reference Name(s):

EPA 245.1 rev 3

SW-846 7470A

Verified By:	Verified Date
Robert Strocko	11/10/2013 8:08AM

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/09/2013 06:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	-195.0

2 Burn Date/Time: 11/09/2013 06:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1297.0

3 Burn Date/Time: 11/09/2013 06:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3341.0

4 Burn Date/Time: 11/09/2013 06:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6780.0

5 Burn Date/Time: 11/09/2013 06:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	17599.0

6 Burn Date/Time: 11/09/2013 06:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33500.0

CorrelationCoefficient = 1.00000
Slope = 6762.0434000000
Y-Intercept = 18.5334500000

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/09/2013 06:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.5089	16989.0

8 Burn Date/Time: 11/09/2013 06:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0245	-155.0

9 Burn Date/Time: 11/09/2013 06:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.2007	1369.0

10 Burn Date/Time: 11/09/2013 06:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9922	6725.0

11 Burn Date/Time: 11/09/2013 06:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0131	-78.0

12 Burn Date/Time: 11/09/2013 06:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0029	-9.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/09/2013 06:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9861	6684.0		

14 Burn Date/Time: 11/09/2013 06:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266787	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1178	808.0		

15 Burn Date/Time: 11/09/2013 06:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7259627	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0347	246.0		

16 Burn Date/Time: 11/09/2013 06:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266429	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1537	1051.0		

17 Burn Date/Time: 11/09/2013 06:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266478	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0000	775166.0		

18 Burn Date/Time: 11/09/2013 06:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
Z266778		40.0000	40	1.00

AVG (ppb)	Intensity
-0.6260	-4225.0

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/09/2013 06:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	D*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.1359	-909.0		

20 Burn Date/Time: 11/09/2013 06:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	R*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9105	6172.0		

21 Burn Date/Time: 11/09/2013 06:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	M*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9764	6618.0		

22 Burn Date/Time: 11/09/2013 07:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9131	6190.0

23 Burn Date/Time: 11/09/2013 07:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0634	-418.0

24 Burn Date/Time: 11/09/2013 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266780	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1414	968.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/09/2013 07:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266478	**********	40	40	1000.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.4370	23269.0		

26 Burn Date/Time: 11/09/2013 07:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	U*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0303	216.0		

27 Burn Date/Time: 11/09/2013 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1671	1142.0		

28 Burn Date/Time: 11/09/2013 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9753	6611.0		

29 Burn Date/Time: 11/09/2013 07:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260277	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0159	-97.0		

30 Burn Date/Time: 11/09/2013 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	U*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0050	45.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/09/2013 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	D*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0185	136.0		

32 Burn Date/Time: 11/09/2013 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	R*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9829	6662.0		

33 Burn Date/Time: 11/09/2013 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262109	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	117.0		

34 Burn Date/Time: 11/09/2013 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9913	6719.0

35 Burn Date/Time: 11/09/2013 07:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0210	-131.0

36 Burn Date/Time: 11/09/2013 07:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0118	-69.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/09/2013 07:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0005	6781.0		

38 Burn Date/Time: 11/09/2013 07:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267642	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0125	-74.0		

39 Burn Date/Time: 11/09/2013 07:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267643	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0004	8.0		

40 Burn Date/Time: 11/09/2013 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267644	U*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0013	20.0		

41 Burn Date/Time: 11/09/2013 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267647	D*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0084	-46.0		

42 Burn Date/Time: 11/09/2013 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267645	R*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0118	6858.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/09/2013 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267646	M*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9839	6669.0		

44 Burn Date/Time: 11/09/2013 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267648	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0083	-45.0		

45 Burn Date/Time: 11/09/2013 07:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267649	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0059	-29.0		

46 Burn Date/Time: 11/09/2013 07:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9846	6674.0

47 Burn Date/Time: 11/09/2013 07:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0158	-96.0

48 Burn Date/Time: 11/09/2013 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267651	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0027	29.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/09/2013 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267254	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0064	54.0		

50 Burn Date/Time: 11/09/2013 08:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267256	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0232	168.0		

51 Burn Date/Time: 11/09/2013 08:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267259	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0266	191.0		

52 Burn Date/Time: 11/09/2013 08:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0013	2.0		

53 Burn Date/Time: 11/09/2013 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0189	6906.0		

54 Burn Date/Time: 11/09/2013 08:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSWD	**********	1	1	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9908	6716.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/09/2013 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265560	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0087	-48.0		

56 Burn Date/Time: 11/09/2013 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265561	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0071	-37.0		

57 Burn Date/Time: 11/09/2013 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267302	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0050	-23.0		

58 Burn Date/Time: 11/09/2013 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9767	6620.0

59 Burn Date/Time: 11/09/2013 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0227	-143.0

60 Burn Date/Time: 11/09/2013 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267303	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0025	-6.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/09/2013 08:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0021	25.0		

62 Burn Date/Time: 11/09/2013 08:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9674	6557.0		

63 Burn Date/Time: 11/09/2013 08:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	U*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0315	224.0		

64 Burn Date/Time: 11/09/2013 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	D*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0474	332.0		

65 Burn Date/Time: 11/09/2013 08:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	R*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0655	7221.0		

66 Burn Date/Time: 11/09/2013 08:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	M*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0195	6910.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/09/2013 08:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267634	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0168	-103.0		

68 Burn Date/Time: 11/09/2013 08:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267635	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0003	13.0		

69 Burn Date/Time: 11/09/2013 08:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267636	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0090	72.0		

70 Burn Date/Time: 11/09/2013 08:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9595	6504.0

71 Burn Date/Time: 11/09/2013 08:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0024	-5.0

72 Burn Date/Time: 11/09/2013 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266798	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	117.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/09/2013 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266799	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0149	112.0		

74 Burn Date/Time: 11/09/2013 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266805	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0803	554.0		

75 Burn Date/Time: 11/09/2013 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266807	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0130	99.0		

76 Burn Date/Time: 11/09/2013 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266810	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0455	319.0		

77 Burn Date/Time: 11/09/2013 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266811	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0244	176.0		

78 Burn Date/Time: 11/09/2013 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266819	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0621	431.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/09/2013 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266680	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0034	34.0		

80 Burn Date/Time: 11/09/2013 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266685	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0047	43.0		

81 Burn Date/Time: 11/09/2013 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266686	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0015	21.0		

82 Burn Date/Time: 11/09/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9846	6674.0

83 Burn Date/Time: 11/09/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0127	-75.0

84 Burn Date/Time: 11/09/2013 09:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266688	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/09/2013 09:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266689	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0047	43.0		

86 Burn Date/Time: 11/09/2013 09:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266691	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0030	31.0		

87 Burn Date/Time: 11/09/2013 09:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266692	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0015	21.0		

88 Burn Date/Time: 11/09/2013 09:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0009	5.0		

89 Burn Date/Time: 11/09/2013 09:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0077	6830.0		

90 Burn Date/Time: 11/09/2013 09:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266277	**********	10	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8267	5605.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/09/2013 09:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264523	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0053	-25.0		

92 Burn Date/Time: 11/09/2013 09:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264524	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

93 Burn Date/Time: 11/09/2013 09:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264525	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0073	60.0		

94 Burn Date/Time: 11/09/2013 09:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9774	6625.0

95 Burn Date/Time: 11/09/2013 09:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0164	-100.0

96 Burn Date/Time: 11/09/2013 09:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264526	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0080	-43.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/09/2013 09:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264527	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0031	32.0		

98 Burn Date/Time: 11/09/2013 09:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264529	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0010	4.0		

99 Burn Date/Time: 11/09/2013 09:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264530	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0025	28.0		

100 Burn Date/Time: 11/09/2013 09:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264531	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0036	35.0		

101 Burn Date/Time: 11/09/2013 09:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264532	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0152	114.0		

102 Burn Date/Time: 11/09/2013 09:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264533	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0293	209.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/09/2013 09:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264534	**********	10	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3618	2459.0		

104 Burn Date/Time: 11/09/2013 09:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264535	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0204	149.0		

105 Burn Date/Time: 11/09/2013 09:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264536	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0052	46.0		

106 Burn Date/Time: 11/09/2013 09:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9614	6517.0

107 Burn Date/Time: 11/09/2013 09:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0143	-86.0

108 Burn Date/Time: 11/09/2013 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264537	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0395	278.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/09/2013 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264539	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0009	5.0		

110 Burn Date/Time: 11/09/2013 10:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265535	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1027	706.0		

111 Burn Date/Time: 11/09/2013 10:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266596	**********	4	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0038	-15.0		

112 Burn Date/Time: 11/09/2013 10:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266600	**********	4	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0016	22.0		

113 Burn Date/Time: 11/09/2013 10:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	U*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0036	35.0		

114 Burn Date/Time: 11/09/2013 10:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	D*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/09/2013 10:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	R*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9944	6740.0		

116 Burn Date/Time: 11/09/2013 10:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	M*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9895	6707.0		

117 Burn Date/Time: 11/09/2013 10:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1816	1240.0

118 Burn Date/Time: 11/09/2013 10:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
0.9675	6558.0

119 Burn Date/Time: 11/09/2013 10:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0105	-60.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 5705 ICP SW846 Water

Batch# 13 311 5705 006

Balance ID#: CLEAR **Start Time:** 11/9/13 8:30 **End Time:** 11/9/13 12:39 **Hot Block:** 12

Pipette ID: W/1000

Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HCL	P13301C	5.00
HNO3	1113030	3.00
ICP Spike 1A	1317716#29	1.00
ICP Spike 1B	1317717#29	1.00
LCS A1	1317716#29	1.00
LCS B1	1317717#29	1.00

Method Ref: SW-846 3010A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184

11/9/2013

v 1.0.1

Batch# 13 311 5705 006

LLENS Batch Chronology and Change Log - ICP SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:07	01184
2)	Sample Vol		11/9/13 9:43	01184
3)	Final Vol	CLEAR	11/9/13 9:43	01184
4)	Trial		11/9/13 9:43	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:43	01184

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5705 ICP SW846 Water

Batch# 13 311 5705 006

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Balance ID#: CLEAR **Start Time:** 11/9/13 8:37 **End Time:** 11/9/13 12:48 **Hot Block:** 13

Pipette ID: JU06758
Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	1113030	3.00
ICP/MS Spike	1316309#5	0.50
LCS	1316309#5	0.50

Method Ref: SW-846 3010A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184
11/9/2013
v 1.0.1

Batch# 13 311 6050 004

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:10	01184
2)	Sample Vol		11/9/13 9:41	01184
3)	Final Vol	CLEAR	11/9/13 9:41	01184
4)	Trial		11/9/13 9:41	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:41	01184

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 13 311 5713 006

Balance ID#: CLEAR **Start Time:** 11/8/13 11:05 **End Time:** 11/8/13 13:05 **Hot Block:** 14

Pipette ID: HJ29630

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	H13-297S	3.20
5%KMnO4	H13-305B	6.00
H2SO4	135111	2.00
HNO3	111303	1.00
LCS	H13-312A	0.04
Spike 1ppm Hg	H13-312A	0.04

Method Ref: SW-846 7470A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	**7267633U**	11/18/13 09:35		WW	P7			138a	1306159	
4)	**7267633D**	11/18/13 09:35		WW	P7			138a	1306159	
5)	**7267633R**	11/18/13 09:35		WW	P7			038a	1306159	
6)	**7267633M**	11/18/13 09:35		WW	P7			138a	1306159	
7)	7267634	11/18/13 09:35		WW	P7			008a	1306159	
8)	7267635	11/18/13 09:35		WW	P7			008a	1306159	
9)	7267636	11/18/13 09:35		WW	P7			008a	1306159	
10)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
11)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
12)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
13)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
14)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
15)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
16)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266680FB	11/18/13 19:00		WW	N8			008a	1306159	
18)	7266685	11/18/13 19:00		WW	N8			008a	1306159	
19)	7266686	11/18/13 19:00		WW	N8			008a	1306159	
20)	7266688FB	11/18/13 19:00		WW	N8			008a	1306159	
21)	7266689FB	11/18/13 19:00		WW	N8			008a	1306159	
22)	7266691	11/18/13 19:00		WW	N8			008a	1306159	
23)	7266692	11/18/13 19:00		WW	N8			008a	1306159	

Prep Employee: DSV00354

11/8/2013

v 1.0.1

Batch# 13 311 5713 006

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 15:56	00354
2)	Sample Vol		11/8/13 12:12	00354
3)	Final Vol	CLEAR	11/8/13 12:12	00354
4)	Trial		11/8/13 12:12	00354
5)	Upload Prep	US19VDIELA06	11/8/13 14:23	00354

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 13 311 5713 006

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
7267633U	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633D	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633R	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633M	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267634	11/18/13	P7	NS28D	NSD62-02	40.0000		40.0000	1
7267635	11/18/13	P7	NS34D	NSD62-03	40.0000		40.0000	1
7267636	11/18/13	P7	NS035	NSD62-04	40.0000		40.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	40.0000		40.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	40.0000		40.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	40.0000		40.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	40.0000		40.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	40.0000		40.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	40.0000		40.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	40.0000		40.0000	1
7266680FB	11/18/13	N8	F0612	CP187-05FB	40.0000		40.0000	1
7266685	11/18/13	N8	236B7	CP188-01	40.0000		40.0000	1
7266686	11/18/13	N8	36B7F	CP188-02	40.0000		40.0000	1
7266688FB	11/18/13	N8	F1168	CP188-04FB	40.0000		40.0000	1
7266689FB	11/18/13	N8	F116F	CP188-05FB	40.0000		40.0000	1
7266691	11/18/13	N8	246B6	CP188-07	40.0000		40.0000	1
7266692	11/18/13	N8	46B6F	CP188-08	40.0000		40.0000	1

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	✓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C	✓			
9	Hg-5700 ICV	E	↓			↓	.25ml	1	4	111330
10	CCV	F	↓			↓	.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13	↓ ↓	I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	↓ M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

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XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM823	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		HI3-1616CC	10	1.0	DU354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15% HNO_3		HI3-1616CC	10	1.0	DU354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8				↓	↓	↓	↓	0.1				
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 6ml KMnO4		HI3-297A HI3-302C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16							↓	5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
18				to volume w/ DI H_2O			2000	5%	NSM823	11-04-13	5-04-14	RT
19				To vol w/ 0.15% HNO_3		HI3-1616CC	10	1.0	DU354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L Inter Cont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-238D	1.0ml			
2	Hg-0.1mg/L Inter Cont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		m	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	Si	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

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11 – Solutions Plus
12 – SPEX Industries
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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15% HNO3	H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DV354

Footnotes

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 StdCal	HI3-309W	Hg-0.1mg/L Cal		11-12-13	HI3-309B	.50ml			
2		X	Hg-1.0mg/L Cal			HI3-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-10mg/L Inter Cal	HI3-310A	Hg-10mg/L Cal		4-15-14	HI3-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	HI3-310M				
9	1.0mg/L Inter Conf	C	10mg/L Conf		4-15-14	HI3-288D				
10	0.1mg/L Inter Conf	D	1.0mg/L Conf		11-13-13	HI3-310C				
11	Hg-5700 ICV	E					.25ml	1	H	1113030
12	CCV	F	11-6-130V354 (3)				.20			
13	CRA	G	Hg-0.1mg/L ~~Pal Conf~~			HI3-310D	.20			
14	StdCal	H	Hg-0.1mg/L Cal			HI3-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			HI3-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	HI3-310N	$KMnO_4$ #1	6	4-10-18	46760	100.04g			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Hg/Cu 25ml Km	Aegia NO4	H13-3091BB H13-3022D	100	0.5 µg/L	DLJ54	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1:3			11-05-13	
7				To Vol w/ 0.15% HNO3		H13161CC	10	1.0	DLJ54	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2Cr2O7 1ml Km NO4		H13-297B H13-302E	100	2.5 µg/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume		w/DIH2O	2000	5%	NSM823	11-06-13	5-06-14	RT

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Footnotes

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E = Al $(NO_3)_3$ (40%)
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-310P	$KMnO_4$ #1	6	4-10-18	46760	100.03g			
2	↓ ↓	↓ R	↓ ↓	↓	↓	↓	100.07g			
3	Hg 1.0mg/L InterCont	H13-311A	Hg 10mg/L Cont	–	4-15-14	H13-288D	1.0ml			
4	Hg 0.1mg/L InterCont	311B	Hg 1.0mg/L Cont	–	11-14-13	H13-311A	1.0ml			
5	Stannous Chloride	311C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #23	200.03g			
6	Stannous Chloride	311D	↓	6	↓	↓ #5	200.03g			
7	Hydroxylamine	H13-311E	$NH_2OH \cdot HCl$	6	10-26-19	54809 #23	240.01g			
8	↓	↓	NaCl	6	3-17-18	48151 #1	240.01g			
9	Hg 1.0mg/L InterCal	H13-312A	Hg 10mg/L Cal	–	4-15-14	H13-288C	1.0ml			
10	Hg 1.0mg/L InterCal	H13-313A	Hg 10mg/L Cal		4-15-14	H13-288C	1.0ml			
11	Hg 0.1mg/L InterCal	B	Hg 1.0mg/L Cal		11-16-13	H13-313A				
12	Hg 1.0mg/L InterCont	C	Hg 10mg/L Cont		4-15-14	H13-288D				
13	Hg 0.1mg/L InterCont	D	Hg 1.0mg/L Cont		11-16-13	H13-313C	↓			
14	Hg 5700 ICV	E	↓		↓	↓	.25ml	1	24	111363D
15	CCV	F	↓			↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1mg/L Cont			H13-313D	.20			
17	Stk. Cal	H	Hg 0.1mg/L Cal			H13-313B	.20			
18	↓	I	↓			↓	.50			
19	↓	J	Hg 1.0mg/L Cal			H13-313A	.20			
20	↓ ↓	↓ K	↓		↓	↓	.25 ↓	↓	↓	↓

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM213	11-06-13	5-06-14	RT
2	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-07-13	11-14-13	RT
4				↓	↓	↓	10	0.1			↓	
5	200	6	40272				2000	10%			5-07-14	
6	↓	↓	↓				↓	10%			↓	
7								12%				
8							↓	↓	↓	↓	↓	↓
9				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-08-13	11-15-13	RT
10				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-09-13	11-16-13	RT
11								0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H13-2975 H13-3056	100	2.5 µg/L				
15	↓	↓	↓	↓	↓	↓	200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

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Footnotes

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
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RT = Room Temperature Storage

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H13-313L	Hg 1.0 mg/L Cal	—	11-16-13	H13-313A	.50 ml	1	4	1113030
2	↓	M						↓	↓	↓
3	Hg 5701 ICV	N	Hg 1.0 mg/L Cont		11-16-13	H13-313C	.25 ml			
4	CCV	O					.10			
5	CCV	P					.10			
6	CCV	Q					.10			
7	CCV	R	↓			↓	.10			
8	CRA	S	Hg 0.1 mg/L Cont			H13-313D	.20			
9	Std Cal	T	Hg 0.1 mg/L Cal			H13-313B	.20			
10		U	↓			↓	.50			
11		V	Hg 1.0 mg/L Cal			H13-313A	.10			
12		W					.25			
13		X	↓		↓	↓	.50 Y			
14	↓	Y								
15	SI	Z	Hg 0.1 mg/L Cal		11-16-13	H13-313B	.10 ml			
16	CRA	AA	Hg 0.1 mg/L Cont			H13-313D	.10 ml			
17	↓ CRA	BB	↓		↓	↓	.40 ml			
18	Aqua Regia	↓ CC						20	4	1113030
19	Hg 1.0 mg/L InterCal	H13-315A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0 ml			
20	Hg 0.1 mg/L InterCal	315B	Hg 1.0 mg/L Cal		11-18-13	H13-315A	1.0 mL			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	135111	3.2ml $H_2S_2O_8$ 10ml KMnO4		H13-2973 H13-305C	100	5.0ug/L	DL354	11-09-13	11-16-13	RT
2	↓	↓	↓	↓	↓	↓		0.0				
3				5ml Aqua Regia 15ml KmNO4		H13-313CC H13-305C		2.5				
4								1.0				
5								1.0				
6								1.0				
7								1.0				
8								0.2				
9								0.2				
10								0.5				
11								1.0				
12								2.5				
13								5.0				
14								0.0				
15								0.1				
16								0.1				
17				↓	↓	↓	↓	0.4			↓	
18	60	6	40272				80	1:3	↓	↓	11-09-13	↓
19				To Vol w/ 0.15% HNO_3		H13-116CC	10	1.0	DL354	11-11-13	11-18-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

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C = KCl
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E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Stannous Chloride	H13-315C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #3	200.06g	—		
2	Hydroxylamine	H13-315D	$NH_2OH \cdot HCl$	6	10-26-19	54869 #3	240.04g			
3	↓	↓	NaCl	6	3-17-18	48151 #1	240.08g			
4	Potassium Permanganate	H13-315E	$KMnO_4$ #1	6	4-10-18	46760	100.03g			
5	↓	↓ F	↓	↓	↓	46760	100.04g			
6	↓	↓ G	↓	↓	↓	46760	100.07g			
7	Hg 1.0 mg/L Inter Cont	H13-316A	Hg 10 mg/L Cont	—	4-15-14	H13-288D	1.0 ml			
8	Hg 0.1 mg/L Inter Cont	316B	Hg 1.0 mg/L Cont	—	11-19-13	H13-316A	1.0 ml			
9	Potassium Persulfate	H13-316C	$K_2S_2O_8$ # 3	6	9-29-15	42220	100.04g			
10	Hg 1.0 mg/L Inter Cal	H13-317A	Hg 10 mg/L Cal	7	4-15-14	H13-288C	1.0 ml			
11	0.1 mg/L Inter Cal	B	1.0 mg/L Cal		11-20-13	H13-317A	↓			
12	1.0 mg/L Inter Cont	C	10 mg/L Cont		4-15-14	H13-288D				
13	↓ 0.1 mg/L Inter Cont	D	↓ 1.0 mg/L Cont	↓	11-20-13	H13-317C	↓			
14	Hg 5700 ICV	E	↓	7	↓	↓	.25 ml	1	4	1113030
15	CCV	F	↓			↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1 mg/L Cont			H13-317D	.20			
17	Std Cal	H	Hg 0.1 mg/L Cal			H13-317B	.20			
18	↓	I	↓			↓	.50			
19		J	Hg 1.0 mg/L Cal			H13-317A	.20			
20	↓	↓ K	↓	↓	↓	↓	.25 ↓	↓	↓	↓

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	200	3 ③11-11-13 DY354	52250				2000	10%	DW354	11-11-13	5-11-14	RT
2								12%				
3												
4				to volume w/ DI H_2O			2000	5%	NSM823	11-11-13	5-11-14	RT
5												
6												
7				To volume 0.15% HNO_3		H13-1601CC	10	1.0	DW354	11-12-13	11-19-13	RT
8							10	0.1				
9				to volume w/ DI H_2O			2000	5%	NSM823	11-12-13	5-12-14	RT
10				To volume 0.15% HNO_3		H13-1601CC	10	1.0	DW354	11-13-13	11-20-13	RT
11								0.1				
12								1.0				
13								0.1				
14	2ml H_2SO_4	H	135111	3.2ml $K_2S_2O_8$ 1ml KMnO4		H13-3008N H13-3108	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Metals in Solid Data

Case Narrative/Conformance Summary

Metals in Solid

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Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM05

ICP Metals

Fraction: Metals in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7266800	SD-R2-G-12-4		X	Background/
7266801	SD-R2-G-12-4_MS		X	Matrix Spike
7266802	SD-R2-G-12-4_MSD		X	Matrix Spike Duplicate
7266803	SD-R2-G-12-4_DUP		X	Duplicate
7266804	SD-R2-G-12-5		X	
7266806	SD-R2-C-15-2		X	
7266808	SD-R2-C-15-1		X	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Method defined actions are taken for any failed matrix QC.

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Case Narrative/Conformance Summary

CLIENT: Hercules Incorporated
SDG: KVM05

ICP Metals

Fraction: Metals in Solid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Solid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266800BKG % Solids: 36.1
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15900			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	22.6			P
7440-39-3	Barium	380			P
7440-41-7	Beryllium	0.48	B		P
7440-43-9	Cadmium	3.3			P
7440-70-2	Calcium	6340			P
7440-47-3	Chromium	73.3			P
7440-48-4	Cobalt	40.6			P
7440-50-8	Copper	44.1			P
7439-89-6	Iron	72400			P
7439-92-1	Lead	92.6			P
7439-95-4	Magnesium	2540			P
7439-96-5	Manganese	7280			P
7439-97-6	Mercury	3.3			CV
7440-02-0	Nickel	18.3			P
7440-09-7	Potassium	766			P
7782-49-2	Selenium	4.2	B		P
7440-22-4	Silver	2.5			P
7440-23-5	Sodium	474			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	41.3			P
7440-66-6	Zinc	438			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266801MS % Solids: 36.1
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21300			P
7440-36-0	Antimony	98.5			P
7440-38-2	Arsenic	59.0			P
7440-39-3	Barium	834			P
7440-41-7	Beryllium	13.1			P
7440-43-9	Cadmium	16.0			P
7440-70-2	Calcium	7800			P
7440-47-3	Chromium	134			P
7440-48-4	Cobalt	166			P
7440-50-8	Copper	123			P
7439-89-6	Iron	66600			P
7439-92-1	Lead	136			P
7439-95-4	Magnesium	3550			P
7439-96-5	Manganese	7070			P
7439-97-6	Mercury	3.2			CV
7440-02-0	Nickel	153			P
7440-09-7	Potassium	4120			P
7782-49-2	Selenium	45.1			P
7440-22-4	Silver	15.6			P
7440-23-5	Sodium	3220			P
7440-28-0	Thallium	39.8			P
7440-62-2	Vanadium	180			P
7440-66-6	Zinc	502			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266802MSD % Solids: 36.1
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	23000			P
7440-36-0	Antimony	95.7			P
7440-38-2	Arsenic	58.9			P
7440-39-3	Barium	835			P
7440-41-7	Beryllium	13.1			P
7440-43-9	Cadmium	15.8			P
7440-70-2	Calcium	8160			P
7440-47-3	Chromium	142			P
7440-48-4	Cobalt	162			P
7440-50-8	Copper	118			P
7439-89-6	Iron	62800			P
7439-92-1	Lead	143			P
7439-95-4	Magnesium	3700			P
7439-96-5	Manganese	6760			P
7439-97-6	Mercury	3.2			CV
7440-02-0	Nickel	150			P
7440-09-7	Potassium	4220			P
7782-49-2	Selenium	44.6			P
7440-22-4	Silver	15.4			P
7440-23-5	Sodium	3190			P
7440-28-0	Thallium	38.8			P
7440-62-2	Vanadium	182			P
7440-66-6	Zinc	495			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266803DUP % Solids: 36.1
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	16600			P
7440-36-0	Antimony	2.0	U		P
7440-38-2	Arsenic	18.6			P
7440-39-3	Barium	370			P
7440-41-7	Beryllium	0.46	B		P
7440-43-9	Cadmium	3.4			P
7440-70-2	Calcium	6160			P
7440-47-3	Chromium	75.2			P
7440-48-4	Cobalt	41.0			P
7440-50-8	Copper	44.8			P
7439-89-6	Iron	67300			P
7439-92-1	Lead	95.6			P
7439-95-4	Magnesium	2550			P
7439-96-5	Manganese	7140			P
7439-97-6	Mercury	1.8			CV
7440-02-0	Nickel	19.2			P
7440-09-7	Potassium	792			P
7782-49-2	Selenium	5.3	B		P
7440-22-4	Silver	2.2			P
7440-23-5	Sodium	485			P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	41.6			P
7440-66-6	Zinc	408			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266804 % Solids: 33.7
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	21700			P
7440-36-0	Antimony	2.2	U		P
7440-38-2	Arsenic	11.3			P
7440-39-3	Barium	144			P
7440-41-7	Beryllium	1.0	B		P
7440-43-9	Cadmium	1.1	B		P
7440-70-2	Calcium	5100			P
7440-47-3	Chromium	74.5			P
7440-48-4	Cobalt	10.3			P
7440-50-8	Copper	56.8			P
7439-89-6	Iron	24300			P
7439-92-1	Lead	123			P
7439-95-4	Magnesium	3090			P
7439-96-5	Manganese	371			P
7439-97-6	Mercury	3.9			CV
7440-02-0	Nickel	20.2			P
7440-09-7	Potassium	891			P
7782-49-2	Selenium	2.3	U		P
7440-22-4	Silver	0.86	B		P
7440-23-5	Sodium	498			P
7440-28-0	Thallium	1.5	U		P
7440-62-2	Vanadium	50.7			P
7440-66-6	Zinc	350			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266806 % Solids: 12.6
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8460			P
7440-36-0	Antimony	5.9	U		P
7440-38-2	Arsenic	5.6	U		P
7440-39-3	Barium	82.4			P
7440-41-7	Beryllium	0.91	B		P
7440-43-9	Cadmium	1.0	B		P
7440-70-2	Calcium	6580			P
7440-47-3	Chromium	14.4			P
7440-48-4	Cobalt	5.8			P
7440-50-8	Copper	23.6			P
7439-89-6	Iron	12400			P
7439-92-1	Lead	105			P
7439-95-4	Magnesium	1370			P
7439-96-5	Manganese	384			P
7439-97-6	Mercury	0.10	B		CV
7440-02-0	Nickel	10.6			P
7440-09-7	Potassium	324	B		P
7782-49-2	Selenium	6.3	U		P
7440-22-4	Silver	1.6	B		P
7440-23-5	Sodium	304	B		P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	25.7			P
7440-66-6	Zinc	117			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266808 % Solids: 21.2
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9620			P
7440-36-0	Antimony	3.4	U		P
7440-38-2	Arsenic	5.1	B		P
7440-39-3	Barium	117			P
7440-41-7	Beryllium	0.74	B		P
7440-43-9	Cadmium	1.0	B		P
7440-70-2	Calcium	16200			P
7440-47-3	Chromium	20.6			P
7440-48-4	Cobalt	3.6			P
7440-50-8	Copper	31.6			P
7439-89-6	Iron	13400			P
7439-92-1	Lead	84.4			P
7439-95-4	Magnesium	2320			P
7439-96-5	Manganese	331			P
7439-97-6	Mercury	0.21	B		CV
7440-02-0	Nickel	8.5			P
7440-09-7	Potassium	416			P
7782-49-2	Selenium	5.6	B		P
7440-22-4	Silver	0.94	B		P
7440-23-5	Sodium	692			P
7440-28-0	Thallium	2.4	U		P
7440-62-2	Vanadium	33.8			P
7440-66-6	Zinc	132			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Solid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM05
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Aluminum	P31208B	7266800BKG
Antimony		7266801MS
Arsenic		7266802MSD
Barium		7266803DUP
Beryllium		7266804
Cadmium		7266806
Calcium		7266808
Chromium		P31208BB
Cobalt		P31208BQ
Copper		
Iron		
Lead		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Thallium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM05
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Mercury	P31211B	7266800BKG
		7266801MS
		7266802MSD
		7266803DUP
		7266804
		7266806
		7266808
		P31211BB
		P31211BQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)
Aluminum		30000.0	30588.98	102.0	25000.0	24553.54	98.2	25000.0	24706.75	98.8
Antimony		600.0	639.19	106.5	500.0	511.61	102.3	500.0	519.14	103.8
Arsenic		600.0	612.01	102.0	500.0	494.26	98.9	500.0	503.91	100.8
Barium		600.0	624.57	104.1	500.0	500.90	100.2	500.0	503.25	100.7
Beryllium		600.0	611.15	101.9	500.0	488.32	97.7	500.0	487.15	97.4
Cadmium		600.0	614.17	102.4	500.0	493.42	98.7	500.0	501.89	100.4
Calcium		30000.0	30310.92	101.0	25000.0	24290.41	97.2	25000.0	24411.69	97.6
Chromium		600.0	614.07	102.3	500.0	485.21	97.0	500.0	485.75	97.2
Cobalt		600.0	609.66	101.6	500.0	492.74	98.5	500.0	504.31	100.9
Copper		600.0	631.76	105.3	500.0	505.38	101.1	500.0	501.79	100.4
Iron		30000.0	30165.74	100.6	25000.0	24225.11	96.9	25000.0	24290.41	97.2
Lead		600.0	619.46	103.2	500.0	497.94	99.6	500.0	508.78	101.8
Magnesium		30000.0	29941.39	99.8	25000.0	24035.67	96.1	25000.0	24181.39	96.7
Manganese		600.0	616.38	102.7	500.0	496.62	99.3	500.0	498.88	99.8
Nickel		600.0	616.11	102.7	500.0	495.80	99.2	500.0	503.06	100.6
Potassium		30000.0	30477.59	101.6	25000.0	24390.50	97.6	25000.0	24527.21	98.1
Selenium		600.0	621.85	103.6	500.0	499.97	100.0	500.0	509.45	101.9
Silver		600.0	622.59	103.8	500.0	500.47	100.1	500.0	502.46	100.5
Sodium		30000.0	30062.91	100.2	25000.0	24128.48	96.5	25000.0	24393.40	97.6
Thallium		600.0	609.48	101.6	500.0	490.28	98.1	500.0	503.05	100.6
Vanadium		600.0	615.67	102.6	500.0	493.04	98.6	500.0	492.30	98.5
Zinc		600.0	621.92	103.7	500.0	498.37	99.7	500.0	506.44	101.3

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24287.04	97.1	25000.0	24286.44	97.1
Antimony					500.0	508.68	101.7	500.0	503.29	100.7
Arsenic					500.0	506.48	101.3	500.0	503.82	100.8
Barium					500.0	494.64	98.9	500.0	482.21	96.4
Beryllium					500.0	474.14	94.8	500.0	464.52	92.9
Cadmium					500.0	500.93	100.2	500.0	497.10	99.4
Calcium					25000.0	23730.06	94.9	25000.0	23644.50	94.6
Chromium					500.0	468.70	93.7	500.0	457.99	91.6
Cobalt					500.0	508.03	101.6	500.0	504.31	100.9
Copper					500.0	486.21	97.2	500.0	476.14	95.2
Iron					25000.0	23713.82	94.9	25000.0	23598.60	94.4
Lead					500.0	504.11	100.8	500.0	501.18	100.2
Magnesium					25000.0	23579.14	94.3	25000.0	23371.08	93.5
Manganese					500.0	490.83	98.2	500.0	483.62	96.7
Nickel					500.0	499.50	99.9	500.0	495.83	99.2
Potassium					25000.0	23874.57	95.5	25000.0	23688.41	94.8
Selenium					500.0	510.57	102.1	500.0	500.21	100.0
Silver					500.0	491.86	98.4	500.0	484.78	97.0
Sodium					25000.0	23821.69	95.3	25000.0	23648.21	94.6
Thallium					500.0	498.26	99.7	500.0	494.67	98.9
Vanadium					500.0	481.53	96.3	500.0	472.14	94.4
Zinc					500.0	503.07	100.6	500.0	498.21	99.6

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24398.91	97.6			
Antimony					500.0	518.36	103.7			
Arsenic					500.0	517.95	103.6			
Barium					500.0	499.44	99.9			
Beryllium					500.0	477.09	95.4			
Cadmium					500.0	507.39	101.5			
Calcium					25000.0	23658.40	94.6			
Chromium					500.0	467.87	93.6			
Cobalt					500.0	515.54	103.1			
Copper					500.0	491.26	98.3			
Iron					25000.0	23637.16	94.5			
Lead					500.0	513.15	102.6			
Magnesium					25000.0	23568.40	94.3			
Manganese					500.0	496.27	99.3			
Nickel					500.0	506.65	101.3			
Potassium					25000.0	23865.60	95.5			
Selenium					500.0	516.55	103.3			
Silver					500.0	497.13	99.4			
Sodium					25000.0	23906.45	95.6			
Thallium					500.0	502.19	100.4			
Vanadium					500.0	485.66	97.1			
Zinc					500.0	508.88	101.8			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331703T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	30506.62	101.7	25000.0	25097.16	100.4	25000.0	24987.26	99.9
Antimony		600.0	623.22	103.9	500.0	507.23	101.4	500.0	516.02	103.2
Arsenic		600.0	597.60	99.6	500.0	484.96	97.0	500.0	488.79	97.8
Barium		600.0	597.51	99.6	500.0	492.52	98.5	500.0	487.43	97.5
Beryllium		600.0	583.74	97.3	500.0	484.71	96.9	500.0	476.37	95.3
Cadmium		600.0	596.81	99.5	500.0	487.19	97.4	500.0	489.30	97.9
Calcium		30000.0	30032.62	100.1	25000.0	24917.15	99.7	25000.0	24509.24	98.0
Chromium		600.0	587.37	97.9	500.0	489.98	98.0	500.0	487.97	97.6
Cobalt		600.0	597.55	99.6	500.0	487.91	97.6	500.0	490.05	98.0
Copper		600.0	597.28	99.5	500.0	495.26	99.1	500.0	495.18	99.0
Iron		30000.0	29980.91	99.9	25000.0	24829.36	99.3	25000.0	24512.75	98.1
Lead		600.0	599.97	100.0	500.0	491.66	98.3	500.0	492.59	98.5
Magnesium		30000.0	29503.60	98.3	25000.0	24423.36	97.7	25000.0	24210.31	96.8
Manganese		600.0	593.23	98.9	500.0	489.41	97.9	500.0	483.99	96.8
Nickel		600.0	595.50	99.3	500.0	486.96	97.4	500.0	490.83	98.2
Potassium		30000.0	30018.73	100.1	25000.0	24743.03	99.0	25000.0	24565.95	98.3
Selenium		600.0	605.27	100.9	500.0	488.82	97.8	500.0	495.39	99.1
Silver		600.0	602.16	100.4	500.0	495.13	99.0	500.0	491.95	98.4
Sodium		30000.0	29649.98	98.8	25000.0	24485.73	97.9	25000.0	24473.93	97.9
Thallium		600.0	591.51	98.6	500.0	485.91	97.2	500.0	489.90	98.0
Vanadium		600.0	602.92	100.5	500.0	497.02	99.4	500.0	490.19	98.0
Zinc		600.0	603.08	100.5	500.0	489.28	97.9	500.0	494.22	98.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: P
Run Name: 1331703T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	25215.85	100.9	25000.0	24635.81	98.5
Antimony					500.0	512.97	102.6	500.0	510.60	102.1
Arsenic					500.0	501.63	100.3	500.0	500.90	100.2
Barium					500.0	494.23	98.8	500.0	477.13	95.4
Beryllium					500.0	478.15	95.6	500.0	462.09	92.4
Cadmium					500.0	495.12	99.0	500.0	494.02	98.8
Calcium					25000.0	24778.60	99.1	25000.0	24003.33	96.0
Chromium					500.0	482.27	96.5	500.0	464.25	92.9
Cobalt					500.0	499.86	100.0	500.0	499.49	99.9
Copper					500.0	489.09	97.8	500.0	474.70	94.9
Iron					25000.0	24804.50	99.2	25000.0	24003.35	96.0
Lead					500.0	499.79	100.0	500.0	498.42	99.7
Magnesium					25000.0	24368.04	97.5	25000.0	23703.31	94.8
Manganese					500.0	490.73	98.1	500.0	477.87	95.6
Nickel					500.0	494.28	98.9	500.0	490.59	98.1
Potassium					25000.0	24809.49	99.2	25000.0	24074.93	96.3
Selenium					500.0	500.49	100.1	500.0	500.83	100.2
Silver					500.0	495.44	99.1	500.0	483.19	96.6
Sodium					25000.0	24612.95	98.5	25000.0	24018.46	96.1
Thallium					500.0	494.63	98.9	500.0	493.37	98.7
Vanadium					500.0	494.37	98.9	500.0	478.52	95.7
Zinc					500.0	496.88	99.4	500.0	495.70	99.1

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.44	97.6	1.0	1.03	103.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.04	104.0	1.0	0.95	95.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.01	101.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.02	102.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	1.01	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.03	103.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.02	102.0			

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	212.85	106.4	215.00	107.5
Antimony		20.0	21.73	108.7	20.96	104.8
Arsenic		20.0	18.41	92.1	19.79	99.0
Barium		5.0	5.41	108.2	5.52	110.4
Beryllium		5.0	4.84	96.8	5.01	100.2
Cadmium		5.0	5.00	100.0	5.13	102.6
Calcium		200.0	197.88	98.9	185.08	92.5
Chromium		15.0	15.09	100.6	14.53	96.9
Cobalt		5.0	5.21	104.2	5.36	107.2
Copper		10.0	10.47	104.7	10.79	107.9
Iron		200.0	210.87	105.4	239.54	119.8
Lead		15.0	14.32	95.5	16.16	107.7
Magnesium		100.0	102.17	102.2	98.72	98.7
Manganese		5.0	5.11	102.2	6.15	123.0
Nickel		10.0	10.04	100.4	10.31	103.1
Potassium		500.0	437.67	87.5	405.01	81.0
Selenium		20.0	22.82	114.1	25.02	125.1
Silver		5.0	6.90	138.0	6.94	138.8
Sodium		1000.0	973.71	97.4	959.48	95.9
Thallium		30.0	32.87	109.6	33.46	111.5
Vanadium		5.0	4.45	89.0	5.16	103.2
Zinc		20.0	18.99	95.0	19.81	99.1

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: P
Run Name: 1331703T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	196.05	98.0	213.62	106.8
Antimony		20.0	21.48	107.4	20.00	100.0
Arsenic		20.0	15.87	79.4	16.15	80.8
Barium		5.0	5.31	106.2	5.26	105.2
Beryllium		5.0	3.64	72.8	3.63	72.6
Cadmium		5.0	4.85	97.0	4.89	97.8
Calcium		200.0	195.09	97.5	194.79	97.4
Chromium		15.0	15.15	101.0	14.89	99.3
Cobalt		5.0	5.28	105.6	5.41	108.2
Copper		10.0	8.29	82.9	8.62	86.2
Iron		200.0	206.78	103.4	250.39	125.2
Lead		15.0	15.82	105.5	15.32	102.1
Magnesium		100.0	90.61	90.6	93.09	93.1
Manganese		5.0	5.13	102.6	5.76	115.2
Nickel		10.0	9.57	95.7	9.95	99.5
Potassium		500.0	375.16	75.0	378.71	75.7
Selenium		20.0	24.47	122.4	19.91	99.6
Silver		5.0	6.54	130.8	6.17	123.4
Sodium		1000.0	1006.14	100.6	988.98	98.9
Thallium		30.0	31.21	104.0	30.75	102.5
Vanadium		5.0	3.57	71.4	3.39	67.8
Zinc		20.0	19.47	97.4	19.70	98.5

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.19	95.0	0.17	85.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U		7.200	U	P31208BB
Antimony		2.0	U	2.0	U	2.0	U	2.0	U		0.740	U	P31208BB
Arsenic		2.3	U	2.3	U	2.3	U	2.3	U		0.700	U	P31208BB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.033	U	P31208BB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.067	U	P31208BB
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U		0.076	U	P31208BB
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		3.300	U	P31208BB
Chromium		0.61	U	0.61	U	0.61	U	0.61	U		0.160	U	P31208BB
Cobalt		0.26	U	0.26	U	0.26	U	0.35	B		0.099	U	P31208BB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		0.290	U	P31208BB
Iron		33.4	U	33.4	U	43.1	B	33.4	U		3.600	U	P31208BB
Lead		1.8	U	1.8	U	-1.9	B	1.8	U		0.500	U	P31208BB
Magnesium		16.7	U	25.7	B	16.7	U	16.7	U		1.700	U	P31208BB
Manganese		0.83	U	0.83	U	1.7	B	0.83	U		0.083	U	P31208BB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		0.130	U	P31208BB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		8.300	U	P31208BB
Selenium		3.4	U	3.4	U	3.4	U	3.4	U		0.800	U	P31208BB
Silver		1.8	B	1.4	B	1.6	B	1.7	B				
Sodium		167	U	167	U	167	U	167	U		16.700	U	P31208BB
Thallium		1.9	U	1.9	U	1.9	U	1.9	U		0.520	U	P31208BB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		0.130	U	P31208BB
Zinc		2.0	U	2.0	U	2.0	U	2.0	U		0.200	U	P31208BB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331503T72
Calibration Date(s): 11/11/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (MG/KG) Mass		C	Lab Sample ID
Aluminum				33.4	U	41.7	B						
Antimony				2.0	U	2.0	U						
Arsenic				2.3	U	2.3	U						
Barium				0.33	U	0.33	U						
Beryllium				0.67	U	0.67	U						
Cadmium				0.33	U	0.33	U						
Calcium				33.4	U	33.4	U						
Chromium				0.61	U	0.61	U						
Cobalt				0.26	U	0.26	U						
Copper				1.7	U	1.7	U						
Iron				33.4	U	33.4	U						
Lead				1.8	U	1.8	U						
Magnesium				16.7	U	24.8	B						
Manganese				0.83	U	0.83	U						
Nickel				1.0	U	1.0	U						
Potassium				83.4	U	83.4	U						
Selenium				3.4	B	3.4	U						
Silver				1.6	B	1.3	B						
Sodium				167	U	167	U						
Thallium				1.9	U	1.9	U						
Vanadium				0.83	U	0.83	U						
Zinc				2.0	U	2.0	U						

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331703T72
Calibration Date(s): 11/13/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U				
Antimony		2.0	U	2.0	U	2.0	U	2.0	U				
Arsenic		-2.5	B	2.3	U	-3.4	B	2.3	U				
Barium		0.33	U	0.33	U	0.33	U	0.33	U				
Beryllium		-1.1	B	-1.1	B	-1.2	B	-1.0	B				
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U				
Calcium		33.4	U	33.4	U	33.4	U	33.4	U				
Chromium		0.61	U	0.61	U	0.61	U	0.61	U				
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U				
Copper		-1.8	B	-1.9	B	-1.7	B	1.7	U				
Iron		33.4	U	33.4	U	33.4	U	48.3	B				
Lead		1.8	U	1.8	U	1.8	U	1.8	U				
Magnesium		16.7	U	20.1	B	16.7	U	16.7	U				
Manganese		0.83	U	0.83	U	0.83	U	0.83	U				
Nickel		1.0	U	1.0	U	1.0	U	1.0	U				
Potassium		-101	B	-90.0	B	-142	B	-132	B				
Selenium		3.4	U	3.4	U	3.4	U	3.4	U				
Silver		1.6	B	1.6	B	1.9	B	1.6	B		0.170	U	P31208BB
Sodium		167	U	167	U	167	U	167	U				
Thallium		-2.6	B	1.9	U	-1.9	B	-2.0	B				
Vanadium		-1.3	B	-1.4	B	-1.6	B	-1.5	B				
Zinc		2.0	U	2.0	U	2.0	U	2.0	U				

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: P
Run Name: 1331703T72
Calibration Date(s): 11/13/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (MG/KG) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Antimony				2.0	U								
Arsenic				-2.3	B								
Barium				0.33	U								
Beryllium				-1.0	B								
Cadmium				0.33	U								
Calcium				33.4	U								
Chromium				0.96	B								
Cobalt				0.26	U								
Copper				1.7	U								
Iron				33.4	U								
Lead				1.8	U								
Magnesium				16.7	U								
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				-101	B								
Selenium				3.4	U								
Silver				1.5	B								
Sodium				167	U								
Thallium				-2.9	B								
Vanadium				-1.5	B								
Zinc				2.0	U								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.010	U	P31211BB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM05

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 16417
Run Name: 1331503T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	487799	97.6	487879.8	97.6	499544	99.9	483517.9	96.7
Antimony	0	600	-7		615.6	102.6	-5		633.7	105.6
Arsenic	0	100	-8		98.4	98.4	-3		101.3	101.3
Barium	0	500	0		480.6	96.1	0		484.4	96.9
Beryllium	0	500	0		482.0	96.4	0		483.6	96.7
Cadmium	0	1000	2		907.3	90.7	1		939.0	93.9
Calcium	500000	500000	488541	97.7	494529.0	98.9	497513	99.5	479639.7	95.9
Chromium	0	500	1		453.1	90.6	2		447.6	89.5
Cobalt	0	500	0		446.7	89.3	0		469.3	93.9
Copper	0	500	6		515.5	103.1	7		512.0	102.4
Iron	200000	200000	196503	98.3	197305.4	98.7	199324	99.7	191651.5	95.8
Lead	0	50	4		48.1	96.2	4		51.7	103.4
Magnesium	500000	500000	518309	103.7	516920.4	103.4	532086	106.4	503422.7	100.7
Manganese	0	500	3		464.9	93.0	4		477.0	95.4
Nickel	0	1000	2		885.7	88.6	2		911.5	91.2
Potassium	0	0	-117		-75.8		-175		-77.9	
Selenium	0	50	4		50.3	100.6	2		53.3	106.6
Silver	0	200	2		210.0	105.0	2		215.1	107.6
Sodium	0	0	23		26.6		5		9.8	
Thallium	0	100	1		87.5	87.5	1		87.6	87.6
Vanadium	0	500	-4		468.0	93.6	-4		473.6	94.7
Zinc	0	1000	5		1012.5	101.3	5		1043.1	104.3

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM05

Instrument ID: 16417
Run Name: 1331703T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	504571	100.9	508328.0	101.7	497569	99.5	498965.6	99.8
Antimony	0	600	-9		630.7	105.1	-10		627.8	104.6
Arsenic	0	100	-13		87.5	87.5	-16		89.4	89.4
Barium	0	500	0		493.4	98.7	0		487.6	97.5
Beryllium	0	500	-1		506.2	101.2	-1		492.3	98.5
Cadmium	0	1000	5		934.8	93.5	6		936.5	93.7
Calcium	500000	500000	508463	101.7	511932.3	102.4	496643	99.3	500996.7	100.2
Chromium	0	500	3		482.0	96.4	3		467.8	93.6
Cobalt	0	500	-1		456.1	91.2	-1		459.2	91.8
Copper	0	500	1		520.6	104.1	2		506.5	101.3
Iron	200000	200000	204420	102.2	206072.1	103.0	199566	99.8	200323.4	100.2
Lead	0	50	3		49.2	98.4	4		47.0	94.0
Magnesium	500000	500000	549702	109.9	551835.2	110.4	538925	107.8	535292.4	107.1
Manganese	0	500	3		481.7	96.3	4		474.1	94.8
Nickel	0	1000	3		909.5	91.0	2		905.7	90.6
Potassium	0	0	-137		-113.0		-173		-117.3	
Selenium	0	50	4		56.1	112.2	2		49.8	99.6
Silver	0	200	2		215.6	107.8	1		213.2	106.6
Sodium	0	0	23		19.4		18		14.1	
Thallium	0	100	0		85.2	85.2	-3		83.7	83.7
Vanadium	0	500	-6		494.7	98.9	-6		484.1	96.8
Zinc	0	1000	8		1035.1	103.5	9		1035.4	103.5

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266800BKG Matrix Spike Lab Sample ID: 7266801MS Matrix Spike Duplicate Lab Sample ID: 7266802MSD
Batch Id(s): P31208B, P31211B

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Aluminum		5747.0168		7698.5257		8285.8832		198.0198	198.0198	MG/KG	986		1282		7			20	P
Antimony		0.7327	U	35.5475		34.5594		49.5050	49.5050	MG/KG	72	N	70	N	3		75 - 125	20	P
Arsenic		8.1584		21.3139		21.2782		14.8515	14.8515	MG/KG	89		88		0		75 - 125	20	P
Barium		137.2386		300.9673		301.3574		198.0198	198.0198	MG/KG	83		83		0		75 - 125	20	P
Beryllium		0.1743	B	4.7436		4.7446		4.9505	4.9505	MG/KG	92		92		0		83 - 119	20	P
Cadmium		1.1921		5.7792		5.6931		4.9505	4.9505	MG/KG	93		91		2		75 - 125	20	P
Calcium		2289.1980		2816.3020		2945.6950		396.0396	396.0396	MG/KG	133		166		4			20	P
Chromium		26.4475		48.4574		51.4010		19.8020	19.8020	MG/KG	111		126	N	6		75 - 125	20	P
Cobalt		14.6634		59.8842		58.5851		49.5050	49.5050	MG/KG	91		89		2		78 - 113	20	P
Copper		15.9356		44.3535		42.5218		24.7525	24.7525	MG/KG	115		107		4		75 - 125	20	P
Iron		26146.6455		24033.7376		22655.4574		99.0099	99.0099	MG/KG	-2134		-3526		6			20	P
Lead		33.4426		48.9426		51.5713		14.8515	14.8515	MG/KG	104		122		5		75 - 125	20	P
Magnesium		917.7139		1281.4089		1334.3495		198.0198	198.0198	MG/KG	184		210		4			20	P
Manganese		2627.4950		2553.0990		2438.8515		49.5050	49.5050	MG/KG	-150		-381		5			20	P
Mercury		1.2030		1.1681		1.1445		0.1647	0.1612	MG/KG	-21		-36		2			20	CV
Nickel		6.5950		55.1743		54.3208		49.5050	49.5050	MG/KG	98		96		2		75 - 125	20	P
Potassium		276.3634		1486.0436		1523.0307		990.0990	990.0990	MG/KG	122		126	N	2		75 - 125	20	P
Selenium		1.5059	B	16.2792		16.0980		14.8515	14.8515	MG/KG	99		98		1		75 - 125	20	P
Silver		0.8891		5.6347		5.5594		4.9505	4.9505	MG/KG	96		94		1		75 - 125	20	P
Sodium		171.2832		1161.0614		1151.4495		990.0990	990.0990	MG/KG	100		99		1		75 - 125	20	P
Thallium		0.5149	U	14.3535		14.0020		14.8515	14.8515	MG/KG	97		94		2		78 - 119	20	P
Vanadium		14.8921		64.9644		65.5663		49.5050	49.5050	MG/KG	101		102		1		75 - 125	20	P
Zinc		157.9832		181.0851		178.6960		49.5050	49.5050	MG/KG	47	N	42	N	1		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 5B
POST DIGEST SPIKE SAMPLE RECOVERY
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266800BKG Post Digest Spike Lab Sample ID: 7266800A
Batch ID(s): P31208B
Concentration Units: UG/L

Analyte	Mass	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony			387.5500		7.4000	U	400.0000	97		P
Chromium			445.9300		267.1200		200.0000	89		P
Potassium			4684.0600		2791.2700		2000.0000	95		P
Zinc			1705.4200		1595.6300		120.0000	91		P

Comments:
_____
_____
_____
_____

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266800BKG Duplicate Lab Sample ID: 7266803DUP
Batch ID(s): P31208B, P31211B
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			5747.0168		5975.6861		4		P
Antimony			-1.6535	B	-1.6644	B	-1		P
Arsenic		2.0	8.1584		6.7129		19		P
Barium			137.2386		133.7307		3		P
Beryllium			0.1743	B	0.1673	B	4		P
Cadmium		0.5	1.1921		1.2446		4		P
Calcium			2289.1980		2223.9218		3		P
Chromium			26.4475		27.1307		3		P
Cobalt			14.6634		14.8089		1		P
Copper			15.9356		16.1792		2		P
Iron			26146.6455		24287.4495		7		P
Lead			33.4426		34.5287		3		P
Magnesium			917.7139		919.5010		0		P
Manganese			2627.4950		2578.4307		2		P
Mercury		0.5	1.2030		0.6504		60	*	CV
Nickel			6.5950		6.9317		5		P
Potassium			276.3634		285.9980		3		P
Selenium			1.5059	B	1.8960	B	23		P
Silver		0.5	0.8891		0.8119		9		P
Sodium		99.0	171.2832		174.9089		2		P
Thallium			0.5149	U	0.5149	U			P
Vanadium			14.8921		15.0287		1		P
Zinc			157.9832		147.3178		7		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM05
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31208BQ	UG/L	200000.0	205412.0		80 - 120	103	P	Yes
Antimony		P31208BQ	UG/L	50000.0	50289.0		80 - 120	101	P	Yes
Arsenic		P31208BQ	UG/L	15000.0	15696.0		80 - 120	105	P	Yes
Barium		P31208BQ	UG/L	200000.0	206896.0		80 - 120	103	P	Yes
Beryllium		P31208BQ	UG/L	5000.0	4864.0		80 - 120	97	P	Yes
Cadmium		P31208BQ	UG/L	5000.0	5153.0		80 - 120	103	P	Yes
Calcium		P31208BQ	UG/L	400000.0	397507.0		80 - 120	99	P	Yes
Chromium		P31208BQ	UG/L	20000.0	20023.0		80 - 120	100	P	Yes
Cobalt		P31208BQ	UG/L	50000.0	52626.0		80 - 120	105	P	Yes
Copper		P31208BQ	UG/L	25000.0	26622.0		80 - 120	106	P	Yes
Iron		P31208BQ	UG/L	100000.0	100247.0		80 - 120	100	P	Yes
Lead		P31208BQ	UG/L	15000.0	16021.0		80 - 120	107	P	Yes
Magnesium		P31208BQ	UG/L	200000.0	197088.0		80 - 120	99	P	Yes
Manganese		P31208BQ	UG/L	50000.0	51590.0		80 - 120	103	P	Yes
Mercury		P31211BQ	UG/L	100.0	101.8		80 - 120	102	CV	Yes
Nickel		P31208BQ	UG/L	50000.0	53385.0		80 - 120	107	P	Yes
Potassium		P31208BQ	UG/L	1000000.0	987236.0		80 - 120	99	P	Yes
Selenium		P31208BQ	UG/L	15000.0	15919.0		80 - 120	106	P	Yes
Silver		P31208BQ	UG/L	5000.0	5260.0		80 - 120	105	P	Yes
Sodium		P31208BQ	UG/L	1000000.0	989081.0		80 - 120	99	P	Yes
Thallium		P31208BQ	UG/L	15000.0	16137.0		80 - 120	108	P	Yes
Vanadium		P31208BQ	UG/L	50000.0	49124.0		80 - 120	98	P	Yes
Zinc		P31208BQ	UG/L	50000.0	51775.0		80 - 120	104	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM05
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266800BKG Serial Dilution Lab Sample ID: 7266800L
Batch ID(s): P31208B
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		58044.8700		59846.6500		3		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		82.4000		57.3000	B	30		P
Barium		1386.1100		1466.7500		6		P
Beryllium		1.7600	B	3.3500	U	100		P
Cadmium		12.0400		15.4000	B	28		P
Calcium		23120.9000		23856.2000		3		P
Chromium		267.1200		276.5000		4		P
Cobalt		148.1000		156.0000		5		P
Copper		160.9500		156.0500		3		P
Iron		264081.1200		249944.3500		5		P
Lead		337.7700		371.6500		10		P
Magnesium		9268.9100		9502.3500		3		P
Manganese		5307.5400		5861.6500		10		P
Nickel		66.6100		69.2000		4		P
Potassium		2791.2700		2137.8000	B	23		P
Selenium		15.2100	B	40.0000	U	100		P
Silver		8.9800		13.5500	B	51		P
Sodium		1729.9600		1796.8500	B	4		P
Thallium		5.2000	U	26.0000	U			P
Vanadium		150.4100		149.3500		1		P
Zinc		1595.6300		1613.5500		1		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Antimony	206.83		2.0
Arsenic	189.04		2.3
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.61
Cobalt	228.62		0.26
Copper	327.40		1.7
Iron	261.19		33.4
Lead	220.35		1.8
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		3.4
Silver			
Sodium	589.59		167
Thallium	190.86		1.9
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: P
Instrument ID: 16417
Date: 11/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Nickel			
Potassium			
Selenium			
Silver	328.06		0.75
Sodium			
Thallium			
Vanadium			
Zinc			

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
_____
_____
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_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM05
Matrix: SOIL

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	72.1
Antimony	206.83		20.0	7.4
Arsenic	189.04		20.0	7.0
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	0.99
Copper	327.40		10.0	2.9
Iron	261.19		200	36.2
Lead	220.35		15.0	5.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.3
Potassium	766.49		500	83.4
Selenium	196.09		20.0	8.0
Silver	328.06		5.0	1.7
Sodium	589.59		1000	167
Thallium	190.86		30.0	5.2
Vanadium	292.40		5.0	1.3
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM05
Matrix: SOIL

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.60	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0000000	0.0000000	0.0000170	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0001240	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000810	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0001340	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	-0.0000580	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	-0.0000140	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0278000
Antimony	206.83	0.0000000	0.0160000	0.0000000	0.0000000	-0.0026800
Arsenic	189.04	0.0000000	0.0004690	0.0000000	0.0000000	0.0012120
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	-0.0000400	0.0000160	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002200	0.0000000	0.0000000	0.0000710
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	-0.0007830
Lead	220.35	-0.0007200	-0.0000520	0.0001970	0.0000000	-0.0021700
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0005900	0.0000000	0.0000000	0.0000000	0.0007680
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0039800	0.0002880	0.0000000	0.0009070	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0045500
Zinc	213.86	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000

Comments:
_____
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM05

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	SI	TI	V	ZR
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0320000	0.0000000
Antimony	206.83	0.0001630	0.0000000	0.0000000	0.0004560	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	-0.0000140	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0001240	0.0000000	0.0023400	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000000	-0.0057500	0.0000000	0.0000000
Lead	220.35	-0.0000500	0.0000280	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0080000
Thallium	190.86	0.0000000	0.0000000	-0.0018400	-0.0418000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0003400	0.0000000	0.0000000
Zinc	213.86	0.0049600	0.0000000	0.0000000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM05

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Antimony	206.83	10.00	10000.0
Arsenic	189.04	10.00	20000.0
Barium	455.4	10.00	10000.0
Beryllium	313.04	10.00	10000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Lead	220.35	10.00	10000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	20000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	20000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Thallium	190.86	10.00	10000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM05

Method: P
Batch ID: P31208B

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7266804	11/10/2013	1.02	100
7266806	11/10/2013	1.00	100
7266808	11/10/2013	1.02	100
7266800BKG	11/10/2013	1.01	100
7266803DUP	11/10/2013	1.01	100
7266802MSD	11/10/2013	1.01	100
7266801MS	11/10/2013	1.01	100
P31208BB	11/10/2013	1.00	100
P31208BQ	11/10/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM05

Method: CV
Batch ID: P31211B

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7266804	11/11/2013	0.64	100
7266806	11/11/2013	0.64	100
7266808	11/11/2013	0.63	100
7266800BKG	11/11/2013	0.63	100
7266803DUP	11/11/2013	0.63	100
7266802MSD	11/11/2013	0.62	100
7266801MS	11/11/2013	0.61	100
P31211BB	11/11/2013	0.60	100
P31211BQ	11/11/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16417
Run Name: 1331503T72

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
S	1.00	12:37	X						X				X		X				X			X										
S	1.00	12:41			X	X	X	X			X	X		X		X		X		X	X		X		X							
S	1.00	12:46		X						X														X								
ICV	1.00	12:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICB	1.00	12:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
LLC	1.00	12:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	13:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	13:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	13:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
P31208BB	1.00	13:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X							
P31208BQ	1.00	13:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	13:28																														
ZZZZZZ	1.00	13:32																														
ZZZZZZ	1.00	13:36																														
ZZZZZZ	1.00	13:40																														
ZZZZZZ	1.00	13:44																														
ZZZZZZ	1.00	13:48																														
ZZZZZZ	1.00	13:53																														
ZZZZZZ	1.00	14:00																														
CCV	1.00	14:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	14:13																														
ZZZZZZ	1.00	14:17																														
ZZZZZZ	1.00	14:21																														
ZZZZZZ	1.00	14:26																														
ZZZZZZ	1.00	14:30																														
ZZZZZZ	1.00	14:34																														
ZZZZZZ	1.00	14:38																														
ZZZZZZ	1.00	14:42																														
7266804	1.00	14:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X							
7266806	1.00	14:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X							
CCV	1.00	14:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	14:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
7266808	1.00	15:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X							
ZZZZZZ	1.00	15:06																														
ZZZZZZ	1.00	15:10																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16417
Run Name: 1331503T72

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	15:14																													
ZZZZZZ	1.00	15:19																													
ZZZZZZ	1.00	15:22																													
ZZZZZZ	1.00	15:27																													
ZZZZZZ	1.00	15:31																													
ZZZZZZ	1.00	15:35																													
ZZZZZZ	5.00	15:39																													
CCV	1.00	15:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	15:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
LLC	1.00	15:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	15:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	16:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	16:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	16:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16417
Run Name: 1331703T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	09:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
S	1.00	09:51	X						X				X		X				X			X										
S	1.00	09:55			X	X	X	X			X	X		X		X		X		X	X		X		X							
S	1.00	10:00		X						X														X								
ICV	1.00	10:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICB	1.00	10:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
LLC	1.00	10:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	10:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	10:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	10:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	10:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
P31208BB	1.00	10:34																			X											
7266800BKG	1.00	10:38	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X							
7266800A	1.00	10:42		X					X										X						X							
7266803DUP	1.00	10:46	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X							
7266801MS	1.00	10:51	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X							
7266802MSD	1.00	10:55	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X							
7266800L	5.00	10:59	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X							
7266800BKG	5.00	11:03														X																
7266800A	5.00	11:08																														
7266803DUP	5.00	11:12														X																
CCV	1.00	11:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	11:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
7266801MS	5.00	11:25														X																
7266802MSD	5.00	11:29														X																
7266800L	25.00	11:33														X																
ZZZZZZ	1.00	11:37																														
ZZZZZZ	5.00	11:41																														
ZZZZZZ	5.00	11:46																														
7266804	1.00	11:50																			X											
7266806	1.00	11:54																			X											
7266808	1.00	11:58																			X											
ZZZZZZ	1.00	12:02																														
CCV	1.00	12:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	12:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ZZZZZZ	5.00	12:14																														
ZZZZZZ	1.00	12:19																														
ZZZZZZ	1.00	12:23																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
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LEGEND:
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: P
Instrument ID: 16417
Run Name: 1331703T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	12:27																													
ZZZZZZ	2.00	12:31																													
LLC	1.00	12:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSA	1.00	12:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
ICSAB	1.00	12:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCV	1.00	12:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							
CCB	1.00	12:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X							

METHODS:
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM05
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	06:47															X															
S0.2	1.00	06:49															X															
S0.5	1.00	06:51															X															
S1.0	1.00	06:53															X															
S2.5	1.00	06:55															X															
S5.0	1.00	06:57															X															
ICV	1.00	06:59															X															
ICB	1.00	07:01															X															
CRA	1.00	07:03															X															
CCV	1.00	07:05															X															
CCB	1.00	07:07															X															
ZZZZZZ	1.00	07:09																														
ZZZZZZ	1.00	07:11																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:17																														
ZZZZZZ	1.00	07:19																														
ZZZZZZ	1.00	07:21																														
ZZZZZZ	1.00	07:23																														
ZZZZZZ	1.00	07:25																														
ZZZZZZ	1.00	07:27																														
CCV	1.00	07:30															X															
CCB	1.00	07:32															X															
ZZZZZZ	1.00	07:34																														
ZZZZZZ	1.00	07:36																														
ZZZZZZ	1.00	07:38																														
ZZZZZZ	1.00	07:40																														
ZZZZZZ	1.00	07:42																														
ZZZZZZ	1.00	07:44																														
ZZZZZZ	1.00	07:46																														
ZZZZZZ	1.00	07:48																														
ZZZZZZ	1.00	07:50																														
ZZZZZZ	1.00	07:52																														
CCV	1.00	07:54															X															
CCB	1.00	07:56															X															
ZZZZZZ	1.00	07:58																														
ZZZZZZ	1.00	08:00																														
ZZZZZZ	1.00	08:02																														

METHODS:
P = ICP Atomic Emission Spectrometer
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:04																														
ZZZZZZ	1.00	08:06																														
ZZZZZZ	1.00	08:08																														
P31211BB	1.00	08:10															X															
P31211BQ	1.00	08:12															X															
7266800BKG	1.00	08:14																														
ZZZZZZ	1.00	08:16																														
CCV	1.00	08:18															X															
CCB	1.00	08:20															X															
7266800BKG	5.00	08:30															X															
7266800A	5.00	08:32																														
ZZZZZZ	1.00	08:34																														
7266801MS	5.00	08:36															X															
7266802MSD	5.00	08:38															X															
7266803DUP	1.00	08:42															X															
7266801MS	1.00	08:45																														
7266802MSD	1.00	08:47																														
7266804	1.00	08:49																														
7266806	1.00	08:51															X															
CCV	1.00	08:53															X															
CCB	1.00	08:55															X															
7266808	1.00	08:57															X															
ZZZZZZ	1.00	08:59																														
ZZZZZZ	1.00	09:01																														
ZZZZZZ	1.00	09:03																														
ZZZZZZ	1.00	09:06																														
ZZZZZZ	1.00	09:08																														
ZZZZZZ	1.00	09:10																														
ZZZZZZ	1.00	09:12																														
ZZZZZZ	1.00	09:14																														
ZZZZZZ	1.00	09:16																														
CCV	1.00	09:18															X															
CCB	1.00	09:20															X															
ZZZZZZ	1.00	09:22																														
ZZZZZZ	1.00	09:24																														
ZZZZZZ	1.00	09:26																														
ZZZZZZ	1.00	09:28																														
ZZZZZZ	1.00	09:30																														

METHODS:
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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	09:32																													
ZZZZZZ	1.00	09:34																													
7266804	5.00	09:36															X														
ZZZZZZ	1.00	09:38																													
ZZZZZZ	1.00	09:40																													
CCV	1.00	09:42															X														
CCB	1.00	09:44															X														
ZZZZZZ	1.00	09:46																													
ZZZZZZ	1.00	09:48																													
ZZZZZZ	1.00	09:50																													
ZZZZZZ	1.00	09:52																													
ZZZZZZ	1.00	09:54																													
ZZZZZZ	1.00	09:56																													
ZZZZZZ	1.00	09:58																													
ZZZZZZ	1.00	10:00																													
ZZZZZZ	1.00	10:02																													
ZZZZZZ	1.00	10:04																													
CCV	1.00	10:06															X														
CCB	1.00	10:08															X														
ZZZZZZ	1.00	10:28																													
ZZZZZZ	1.00	10:30																													
ZZZZZZ	1.00	10:32																													
ZZZZZZ	1.00	10:34																													
ZZZZZZ	1.00	10:36																													
ZZZZZZ	1.00	10:38																													
ZZZZZZ	1.00	10:40																													
ZZZZZZ	1.00	10:42																													
ZZZZZZ	1.00	10:44																													
ZZZZZZ	1.00	10:46																													
CCV	1.00	10:48															X														
CCB	1.00	10:50															X														
ZZZZZZ	1.00	10:52																													
ZZZZZZ	1.00	10:54																													
ZZZZZZ	1.00	10:56																													
ZZZZZZ	1.00	10:58																													
ZZZZZZ	10.00	11:00																													
ZZZZZZ	2.50	11:02																													
ZZZZZZ	1.00	11:04																													

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM05

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	11:06																													
ZZZZZZ	1.00	11:08																													
ZZZZZZ	1.00	11:10																													
CCV	1.00	11:12															X														
CCB	1.00	11:14															X														
ZZZZZZ	1.00	11:16																													
ZZZZZZ	1.00	11:18																													
ZZZZZZ	1.00	11:20																													
ZZZZZZ	1.00	11:23																													
ZZZZZZ	1.00	11:25																													
ZZZZZZ	1.00	11:27																													
ZZZZZZ	1.00	11:29																													
ZZZZZZ	1.00	11:31																													
ZZZZZZ	1.00	11:33																													
ZZZZZZ	1.00	11:35																													
CCV	1.00	11:37															X														
CCB	1.00	11:39															X														
ZZZZZZ	1.00	11:41																													
ZZZZZZ	1.00	11:43																													
ZZZZZZ	1.00	11:45																													
ZZZZZZ	1.00	11:47																													
ZZZZZZ	1.00	11:49																													
ZZZZZZ	1.00	11:51																													
ZZZZZZ	1.00	11:53																													
ZZZZZZ	1.00	11:55																													
ZZZZZZ	1.00	11:57																													
ZZZZZZ	1.00	11:59																													
CCV	1.00	12:03															X														
CCB	1.00	12:05															X														
ZZZZZZ	5.00	12:07																													
CRA	1.00	12:09															X														
CCV	1.00	12:11															X														
CCB	1.00	12:13															X														

METHODS:
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Raw Data

Metals in Solid

ICP Data

Metals in Solid

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ICP-AES Run Data Report

1331503T72

Reviewed By
Maria A Orrs

Reviewed Date
11/11/2013 6:53PM

Data File Name 1331503T72.TXT
Run Name: 1331503T72

Verified By:
Jennifer L Moyer

Verified Date
11/15/2013 9:10AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 0420

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/11/2013 12:33

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00160	90.111	-0.00232	0.00006	-0.00255
AL	0.000	0.01236	6.920	0.01214	0.01164	0.01331
AS	0.000	-0.00495	48.171	-0.00731	-0.00499	-0.00254
B	0.000	0.00000	421.852	-0.00001	0.00000	0.00002
BA	0.000	0.00014	17.194	0.00017	0.00014	0.00012
BE	0.000	-0.06424	1.645	-0.06428	-0.06317	-0.06528
CA	0.000	0.00389	0.914	0.00386	0.00393	0.00390
CD	0.000	-0.01108	27.387	-0.01282	-0.01285	-0.00758
CO	0.000	0.00793	7.787	0.00792	0.00856	0.00732
CR	0.000	-0.00001	224.678	-0.00002	0.00001	-0.00001
CU	0.000	-0.00541	20.772	-0.00470	-0.00671	-0.00483
FE	0.000	-0.00005	70.009	-0.00002	-0.00008	-0.00004
K	0.000	-0.06866	16.326	-0.05652	-0.07082	-0.07863
LI	0.000	0.00253	22.623	0.00311	0.00196	0.00253
MG	0.000	0.00012	88.067	0.00001	0.00013	0.00023
MN	0.000	0.00269	23.059	0.00199	0.00291	0.00317
MO	0.000	0.00334	98.690	0.00520	-0.00047	0.00529
NA	0.000	-0.00061	111.507	-0.00125	0.00011	-0.00070
NI	0.000	0.02872	10.145	0.03072	0.03006	0.02538
P	0.000	-0.00001	114.827	-0.00001	0.00000	-0.00003
PB	0.000	0.01153	28.996	0.00868	0.01070	0.01521
S	0.000	-0.00024	9.650	-0.00022	-0.00026	-0.00024
SB	0.000	0.00007	63.580	0.00004	0.00004	0.00012
SE	0.000	0.00062	124.920	0.00001	0.00150	0.00036
SI	0.000	0.00023	22.028	0.00022	0.00029	0.00019
SN	0.000	0.00560	45.204	0.00304	0.00810	0.00567
SR	0.000	-0.00041	7.519	-0.00045	-0.00039	-0.00039
TI	0.000	0.00207	52.146	0.00186	0.00111	0.00323
TL	0.000	-0.01271	13.915	-0.01211	-0.01132	-0.01470
V	0.000	-0.00244	26.559	-0.00190	-0.00226	-0.00316
Y1	0.000	23469.70153	0.175	23469.49627	23510.84799	23428.76033
Y2A	0.000	333762.38364	0.326	333992.27061	334717.17088	332577.70944
Y2R	0.000	22683.15569	0.169	22640.64687	22693.36755	22715.45264
ZN	0.000	0.05924	3.781	0.06006	0.05671	0.06096
ZR	0.000	0.00022	99.974	0.00003	0.00017	0.00046

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/11/2013 12:37

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.31065	0.902	12.18249	12.37895	12.37052
CA	50.000	2.23283	0.910	2.20956	2.24192	2.24700
FE	50.000	0.66188	0.825	0.65558	0.66491	0.66516
K	50.000	38.83879	0.376	38.67877	38.87234	38.96528
MG	50.000	3.99082	0.605	3.96326	4.00825	4.00096
NA	50.000	2.35350	0.286	2.34573	2.35764	2.35712
S	50.000	0.45156	0.316	0.45171	0.45290	0.45006
SI	50.000	0.45423	0.578	0.45147	0.45670	0.45452
Y1	50.000	22505.76599	0.364	22486.05116	22435.40265	22595.84416
Y2R	50.000	22843.83667	0.705	23025.43938	22718.10638	22787.96426

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/11/2013 12:41

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.09547	1.354	2.06864	2.09261	2.12517
AS	1.000	0.92528	0.156	0.92508	0.92395	0.92682
B	1.000	0.02431	0.826	0.02410	0.02435	0.02449
BA	1.000	2.00148	1.306	1.97157	2.02000	2.01287
BE	1.000	68.41142	0.878	67.71803	68.76737	68.74885
CD	1.000	36.82252	0.245	36.72703	36.83425	36.90630
CO	1.000	12.53449	0.316	12.49017	12.54694	12.56635
CU	1.000	1.87239	1.328	1.85130	1.86608	1.89980
LI	1.000	0.25487	0.533	0.25641	0.25385	0.25435
MN	1.000	10.02835	1.208	9.89875	10.04751	10.13878
NI	1.000	8.57301	0.185	8.55532	8.58586	8.57786
P	1.000	0.02401	0.252	0.02395	0.02402	0.02406
PB	1.000	2.95435	0.227	2.94662	2.95825	2.95819
SE	1.000	0.78250	0.380	0.78267	0.77945	0.78538
SR	1.000	2.34102	1.125	2.31073	2.35377	2.35857
TL	1.000	1.57531	0.139	1.57380	1.57430	1.57781
Y1	1.000	22953.43787	0.109	22972.81117	22962.44085	22925.06161
Y2A	1.000	327973.25961	0.924	331471.79021	326134.03515	326313.95349
Y2R	1.000	23169.88876	0.572	23016.98981	23253.12438	23239.55209
ZN	1.000	27.44789	0.172	27.40087	27.44766	27.49515

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 4 Date/Time: 11/11/2013 12:46

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03257	0.491	0.03274	0.03255	0.03242
MO	1.000	10.28146	0.122	10.29309	10.26817	10.28312
SB	1.000	0.03348	0.325	0.03348	0.03337	0.03359
SN	1.000	2.75159	0.153	2.75211	2.74714	2.75552
TI	1.000	9.16744	0.369	9.17311	9.19810	9.13110
V	1.000	2.19000	0.524	2.18857	2.20211	2.17931
Y1	1.000	23726.34696	0.138	23747.35931	23742.96136	23688.72020
Y2A	1.000	341004.14731	0.382	339845.05640	340754.81088	342412.57465
Y2R	1.000	23316.72385	0.638	23165.11361	23462.59489	23322.46304
ZR	1.000	0.10674	0.116	0.10671	0.10664	0.10688

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/11/2013 12:50

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.62259	8,509.98	0.200	0.62369	0.62284	0.62124
AL	30.58898	3,462.91	0.320	30.54260	30.70143	30.52290
AS	0.61201	256.61	0.751	0.60673	0.61411	0.61517
B	0.62070	5,053.20	0.300	0.61936	0.61992	0.62282
BA	0.62457	405,140.04	0.853	0.62939	0.61885	0.62547
BE	0.61115	270,816.72	0.244	0.61284	0.61059	0.61002
CA	30.31092	31,197.25	0.311	30.24172	30.41829	30.27274
CD	0.61417	10,400.35	0.108	0.61394	0.61365	0.61491
CO	0.60966	3,505.70	0.093	0.60947	0.60921	0.61030
CR	0.61407	6,471.28	0.050	0.61442	0.61393	0.61385
CU	0.63176	7,609.05	0.227	0.63191	0.63312	0.63026
FE	30.16574	9,243.34	0.409	30.03792	30.28444	30.17487
K	30.47759	10,870.23	0.202	30.50469	30.40705	30.52102
LI	0.62494	3,698.02	0.485	0.62765	0.62166	0.62550
MG	29.94139	55,431.02	0.064	29.92055	29.94497	29.95863
MN	0.61638	40,071.67	0.322	0.61865	0.61497	0.61552
MO	0.61784	2,905.69	0.136	0.61824	0.61687	0.61839
NA	30.06291	32,486.22	0.127	30.10407	30.02886	30.05581
NI	0.61611	2,418.98	0.094	0.61602	0.61673	0.61557
P	0.62699	344.15	0.179	0.62661	0.62825	0.62610
PB	0.61946	845.70	0.605	0.62203	0.61516	0.62120
S	30.15610	6,224.80	0.184	30.18406	30.09208	30.19216
SB	0.63919	491.73	0.325	0.63841	0.64155	0.63762
SE	0.62185	222.37	0.220	0.62272	0.62255	0.62028
SI	30.82745	6,433.36	0.229	30.75063	30.84233	30.88938
SN	0.60387	760.92	0.353	0.60263	0.60265	0.60633
SR	0.61494	466,539.63	0.977	0.61697	0.61967	0.60818
TI	0.62658	37,282.13	0.168	0.62773	0.62633	0.62567
TL	0.60948	417.55	0.209	0.61085	0.60834	0.60925
V	0.61567	8,739.87	0.217	0.61671	0.61614	0.61416
Y1	22866.79730	22,866.80	0.117	22865.92832	22893.94283	22840.52074
Y2A	324084.74529	324,084.75	0.238	323200.08306	324609.46844	324444.68439
Y2R	22961.47311	22,961.47	0.160	22942.48650	23003.82118	22938.11164
ZN	0.62192	7,857.54	0.141	0.62153	0.62131	0.62293
ZR	0.61472	1,508.61	0.763	0.61280	0.62007	0.61130

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/11/2013 12:54

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00182	-10.68	15.675	0.00159	0.00214	0.00173
AL	-0.00816	4.77	714.049	-0.04901	0.05857	-0.03404
AS	-0.00201	-3.47	116.713	-0.00465	-0.00016	-0.00123
B	0.00087	8.27	46.203	0.00133	0.00063	0.00064
BA	0.00013	135.61	5.449	0.00013	0.00013	0.00012
BE	0.00015	-408.00	16.790	0.00013	0.00013	0.00017
CA	0.00159	91.31	281.969	0.00657	-0.00210	0.00029
CD	-0.00003	-4.46	112.806	0.00000	-0.00005	-0.00002
CO	-0.00002	3.62	901.782	0.00018	-0.00022	-0.00003
CR	0.00009	-2.77	150.280	-0.00006	0.00018	0.00014
CU	0.00031	-34.70	192.083	0.00038	0.00085	-0.00031
FE	0.01572	4.64	32.189	0.02153	0.01330	0.01232
K	-0.04344	-19.82	63.598	-0.01266	-0.06610	-0.05156
LI	-0.00136	50.42	83.432	-0.00179	-0.00221	-0.00007
MG	0.00683	15.72	10.671	0.00754	0.00608	0.00687
MN	0.00009	24.50	33.631	0.00006	0.00010	0.00011
MO	0.00001	1.64	1285.739	-0.00016	0.00014	0.00006
NA	-0.01406	-29.38	34.814	-0.01971	-0.01115	-0.01132
NI	-0.00027	12.46	14.254	-0.00026	-0.00025	-0.00032
P	0.00073	0.09	139.823	0.00158	-0.00040	0.00102
PB	-0.00134	3.58	28.151	-0.00170	-0.00095	-0.00137
S	0.00045	-4.64	202.705	0.00082	-0.00059	0.00113
SB	0.00051	2.04	143.911	0.00049	-0.00021	0.00124
SE	0.00251	0.84	117.871	-0.00090	0.00433	0.00411
SI	0.00180	5.69	355.417	-0.00218	0.00919	-0.00160
SN	0.00003	2.69	2051.635	0.00045	0.00034	-0.00070
SR	-0.00007	-70.75	14.346	-0.00008	-0.00006	-0.00007
TI	0.00033	34.93	23.475	0.00032	0.00042	0.00026
TL	0.00029	-5.77	243.811	0.00093	0.00043	-0.00048
V	-0.00026	-11.50	129.510	-0.00011	-0.00064	-0.00003
Y1	23630.52974	23,630.53	0.407	23615.88760	23542.44271	23733.25890
Y2A	341103.57222	341,103.57	2.423	334790.31188	338060.96549	350459.43928
Y2R	23027.09935	23,027.10	0.091	23004.29656	23045.20958	23031.79191
ZN	-0.00104	14.59	5.557	-0.00103	-0.00100	-0.00111
ZR	-0.00072	3.29	177.883	-0.00169	-0.00118	0.00073

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/11/2013 12:58

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00690	68.22	11.749	0.00630	0.00658	0.00782
AL	0.21285	29.85	8.054	0.22917	0.21440	0.19499
AS	0.01841	5.52	9.729	0.02007	0.01863	0.01651
B	0.04988	419.43	0.478	0.04960	0.05001	0.05002
BA	0.00541	3,772.28	0.177	0.00542	0.00540	0.00541
BE	0.00484	1,798.18	0.216	0.00483	0.00483	0.00485
CA	0.19788	294.50	4.474	0.19250	0.20810	0.19305
CD	0.00500	83.61	2.106	0.00506	0.00488	0.00506
CO	0.00521	34.82	2.451	0.00506	0.00530	0.00526
CR	0.01509	165.25	3.590	0.01537	0.01544	0.01447
CU	0.01047	95.65	2.065	0.01055	0.01023	0.01064
FE	0.21087	65.43	2.283	0.20611	0.21075	0.21574
K	0.43767	152.49	8.303	0.39939	0.47170	0.44193
LI	0.02099	180.58	8.747	0.01889	0.02233	0.02174
MG	0.10217	195.65	2.724	0.10161	0.09971	0.10519
MN	0.00511	371.08	0.619	0.00515	0.00510	0.00509
MO	0.00976	49.09	1.098	0.00979	0.00964	0.00985
NA	0.97371	1,042.82	1.810	0.96773	0.99355	0.95985
NI	0.01004	54.22	2.213	0.01029	0.00990	0.00992
P	0.09820	55.28	1.275	0.09897	0.09676	0.09887
PB	0.01432	25.44	1.001	0.01439	0.01415	0.01440
S	0.47094	95.99	0.187	0.47162	0.47127	0.46995
SB	0.02173	18.78	7.251	0.02314	0.02003	0.02200
SE	0.02282	8.37	6.439	0.02114	0.02384	0.02350
SI	0.10389	27.10	11.637	0.09810	0.09578	0.11779
SN	0.01980	28.40	3.097	0.01999	0.01912	0.02030
SR	0.00503	4,035.63	0.203	0.00504	0.00502	0.00503
TI	0.01000	645.30	0.210	0.01001	0.00998	0.01002
TL	0.03287	18.46	3.924	0.03436	0.03205	0.03220
V	0.00445	59.03	6.070	0.00414	0.00462	0.00460
Y1	23677.24006	23,677.24	0.381	23620.12926	23781.32161	23630.26930
Y2A	343836.37251	343,836.37	0.090	344080.03657	343489.46583	343939.61513
Y2R	23057.72911	23,057.73	0.758	23152.04051	22856.12784	23165.01897
ZN	0.01899	273.92	0.367	0.01892	0.01898	0.01906
ZR	0.04754	121.79	5.488	0.04554	0.05049	0.04659

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/11/2013 13:02

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00162	-11.18	45.376	0.00114	0.00247	0.00125
AL	487.79869	54,335.82	0.410	485.78909	487.82039	489.78660
AS	-0.00815	-16.24	18.653	-0.00888	-0.00640	-0.00916
B	-0.02468	783.12	7.109	-0.02365	-0.02671	-0.02369
BA	0.00032	228.26	2.655	0.00031	0.00032	0.00032
BE	-0.00002	-419.52	73.162	-0.00003	-0.00001	-0.00002
CA	488.54122	457,947.70	1.047	492.31282	482.71895	490.59190
CD	0.00162	368.67	9.059	0.00178	0.00157	0.00150
CO	-0.00031	1.62	106.598	-0.00002	-0.00068	-0.00023
CR	0.00144	-45.18	22.840	0.00113	0.00140	0.00178
CU	0.00607	157.88	6.263	0.00646	0.00604	0.00570
FE	196.50253	54,618.66	0.304	195.84615	196.64450	197.01695
K	-0.11720	-44.82	25.200	-0.08934	-0.14816	-0.11411
LI	-0.00603	319.95	39.771	-0.00871	-0.00527	-0.00410
MG	518.30898	705,257.30	1.038	512.49307	523.11454	519.31934
MN	0.00337	215.05	2.869	0.00347	0.00335	0.00328
MO	-0.00114	-3.46	4.925	-0.00108	-0.00115	-0.00118
NA	0.02347	10.97	34.567	0.01536	0.02345	0.03158
NI	0.00184	-2.47	20.827	0.00179	0.00148	0.00224
P	0.01308	6.20	2.994	0.01309	0.01346	0.01267
PB	0.00381	128.24	62.467	0.00572	0.00114	0.00456
S	-0.12740	-29.02	4.980	-0.12078	-0.13343	-0.12801
SB	-0.00669	8.69	38.568	-0.00404	-0.00684	-0.00919
SE	0.00403	-0.80	73.239	0.00073	0.00494	0.00643
SI	0.01593	8.39	20.337	0.01907	0.01612	0.01260
SN	0.00393	6.79	6.628	0.00385	0.00423	0.00372
SR	0.00200	1,367.82	0.313	0.00199	0.00200	0.00201
TI	-0.00393	-200.07	2.158	-0.00386	-0.00402	-0.00390
TL	0.00059	-4.64	313.493	-0.00085	-0.00005	0.00266
V	-0.00422	-41.57	8.568	-0.00436	-0.00450	-0.00381
Y1	20699.75893	20,699.76	0.250	20665.22318	20674.84342	20759.21018
Y2A	295141.70532	295,141.71	0.294	294900.09940	296104.95361	294420.06296
Y2R	22334.36176	22,334.36	0.074	22323.45027	22353.34861	22326.28640
ZN	0.00516	322.02	2.584	0.00530	0.00504	0.00514
ZR	0.00409	14.62	23.740	0.00297	0.00456	0.00474

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 9 Date/Time: 11/11/2013 13:06

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.20995	2,592.76	2.240	0.21281	0.21252	0.20452
AL	487.87983	53,993.04	0.995	482.32628	491.32816	489.98506
AS	0.09836	24.68	2.551	0.09662	0.10124	0.09723
B	-0.02746	770.77	14.054	-0.02377	-0.02715	-0.03147
BA	0.48061	286,163.36	2.814	0.48893	0.48790	0.46501
BE	0.48197	195,948.88	2.668	0.49024	0.48852	0.46716
CA	494.52904	460,145.08	1.374	487.23820	495.66310	500.68581
CD	0.90732	14,092.63	0.379	0.91066	0.90750	0.90379
CO	0.44670	2,306.19	0.426	0.44863	0.44664	0.44482
CR	0.45307	4,331.48	2.846	0.46258	0.45824	0.43839
CU	0.51548	5,852.61	2.653	0.52612	0.52025	0.50005
FE	197.30542	54,465.83	1.002	195.02233	198.48292	198.41101
K	-0.07576	-30.27	29.749	-0.09986	-0.05520	-0.07223
LI	-0.00545	324.73	27.901	-0.00449	-0.00720	-0.00466
MG	516.92038	699,477.66	0.349	515.48548	518.94257	516.33309
MN	0.46486	27,743.07	2.711	0.47203	0.47224	0.45030
MO	-0.00132	-4.19	14.134	-0.00111	-0.00137	-0.00147
NA	0.02664	14.18	22.663	0.02014	0.03208	0.02770
NI	0.88570	3,105.48	0.291	0.88760	0.88674	0.88277
P	0.01028	6.09	7.008	0.01037	0.01096	0.00952
PB	0.04812	180.77	3.905	0.05005	0.04802	0.04630
S	-0.12720	-28.79	4.437	-0.12175	-0.12683	-0.13302
SB	0.61555	435.68	0.507	0.61808	0.61650	0.61206
SE	0.05034	14.11	2.064	0.04915	0.05108	0.05080
SI	0.01119	7.37	71.765	0.00414	0.00949	0.01993
SN	0.00400	6.83	14.884	0.00376	0.00356	0.00468
SR	0.00198	1,365.33	2.498	0.00201	0.00201	0.00192
TI	-0.00369	-169.83	4.012	-0.00385	-0.00364	-0.00357
TL	0.08754	40.60	1.320	0.08886	0.08698	0.08677
V	0.46798	6,140.03	2.539	0.47680	0.47267	0.45447
Y1	20571.60078	20,571.60	0.199	20528.81475	20575.41831	20610.56930
Y2A	297627.09852	297,627.10	2.944	292241.46786	292901.92180	307737.90590
Y2R	22190.16710	22,190.17	0.791	22390.85281	22113.66587	22065.98262
ZN	1.01252	11,658.40	0.358	1.01666	1.01090	1.00999
ZR	0.00359	13.36	38.882	0.00504	0.00347	0.00225

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 10 Date/Time: 11/11/2013 13:11

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50047	6,886.48	0.241	0.49932	0.50036	0.50173
AL	24.55354	2,792.49	0.075	24.53593	24.55214	24.57254
AS	0.49426	206.82	0.616	0.49532	0.49083	0.49664
B	0.48745	4,002.06	0.237	0.48742	0.48632	0.48862
BA	0.50090	327,437.15	0.156	0.50066	0.50177	0.50026
BE	0.48832	217,964.95	0.172	0.48753	0.48920	0.48822
CA	24.29041	25,147.76	0.715	24.46238	24.29380	24.11506
CD	0.49342	8,357.07	0.368	0.49308	0.49180	0.49538
CO	0.49274	2,834.73	0.245	0.49189	0.49221	0.49412
CR	0.48521	5,151.95	0.149	0.48501	0.48601	0.48461
CU	0.50538	6,126.66	0.188	0.50486	0.50647	0.50480
FE	24.22511	7,473.30	0.790	24.37139	24.29537	24.00858
K	24.39050	8,736.55	0.390	24.49987	24.32746	24.34417
LI	0.50110	2,989.79	0.322	0.50289	0.50063	0.49977
MG	24.03567	44,825.21	0.472	24.15146	24.03105	23.92450
MN	0.49662	32,538.78	0.098	0.49668	0.49611	0.49707
MO	0.49508	2,329.30	0.247	0.49524	0.49378	0.49621
NA	24.12848	26,185.18	0.416	24.24136	24.04945	24.09462
NI	0.49580	1,949.70	0.225	0.49456	0.49611	0.49672
P	0.50323	276.23	0.293	0.50255	0.50221	0.50492
PB	0.49794	681.02	0.273	0.49704	0.49728	0.49950
S	24.21528	4,998.97	0.157	24.18755	24.19973	24.25856
SB	0.51161	393.93	1.209	0.51722	0.50498	0.51261
SE	0.49997	178.82	0.689	0.49711	0.49901	0.50380
SI	25.02151	5,245.68	0.260	25.09503	24.97191	24.99758
SN	0.48272	608.94	0.417	0.48178	0.48135	0.48503
SR	0.49537	378,720.97	0.468	0.49269	0.49678	0.49663
TI	0.49864	29,901.90	0.121	0.49814	0.49931	0.49847
TL	0.49028	334.92	0.256	0.48969	0.48942	0.49171
V	0.49304	7,051.64	0.180	0.49326	0.49207	0.49380
Y1	22873.07860	22,873.08	0.181	22870.60077	22915.61250	22833.02251
Y2A	326587.47134	326,587.47	0.203	327065.81565	325831.48210	326865.11628
Y2R	23062.62546	23,062.63	0.806	22903.57000	23017.29042	23267.01597
ZN	0.49837	6,303.78	0.287	0.49790	0.49723	0.49998
ZR	0.49237	1,214.63	0.563	0.49541	0.48999	0.49170

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/11/2013 13:15

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00138	-17.00	34.400	0.00123	0.00191	0.00100
AL	0.01854	7.85	97.075	0.00127	0.03720	0.01717
AS	0.00071	-2.26	215.637	-0.00085	0.00077	0.00220
B	0.00076	7.42	9.378	0.00068	0.00081	0.00080
BA	0.00011	120.41	15.436	0.00010	0.00009	0.00012
BE	0.00021	-380.35	15.316	0.00018	0.00024	0.00019
CA	0.01848	109.61	21.493	0.01966	0.02173	0.01405
CD	-0.00004	-4.70	110.607	0.00000	-0.00003	-0.00009
CO	0.00000	3.73	)513.814	0.00012	-0.00010	-0.00001
CR	0.00017	-1.83	145.278	-0.00001	0.00007	0.00045
CU	0.00043	-33.05	82.671	0.00078	0.00045	0.00006
FE	0.01413	4.18	33.637	0.01097	0.01183	0.01960
K	-0.05081	-22.62	26.073	-0.04017	-0.04660	-0.06565
LI	-0.00080	54.07	359.422	-0.00335	-0.00138	0.00232
MG	0.02574	51.76	6.516	0.02744	0.02571	0.02408
MN	0.00003	20.05	401.395	0.00014	-0.00005	-0.00002
MO	0.00010	2.06	119.088	0.00003	0.00003	0.00024
NA	-0.00771	-22.67	104.190	-0.01643	-0.00605	-0.00063
NI	-0.00015	12.88	479.618	-0.00089	0.00054	-0.00010
P	0.00051	-0.03	234.051	-0.00023	0.00190	-0.00013
PB	-0.00051	4.71	361.732	-0.00265	0.00034	0.00077
S	0.00279	-4.11	16.041	0.00322	0.00233	0.00282
SB	0.00143	2.75	132.314	-0.00056	0.00163	0.00322
SE	0.00074	0.19	187.979	0.00224	0.00047	-0.00049
SI	-0.00031	5.30	3075.330	0.00636	-0.01116	0.00387
SN	-0.00021	2.37	436.491	0.00047	-0.00122	0.00014
SR	-0.00009	-88.13	29.508	-0.00011	-0.00006	-0.00010
TI	0.00015	23.95	99.751	-0.00002	0.00025	0.00024
TL	0.00103	-5.18	157.893	0.00276	0.00076	-0.00044
V	-0.00034	-12.80	55.809	-0.00035	-0.00014	-0.00052
Y1	23470.05806	23,470.06	0.038	23469.52292	23461.31849	23479.33276
Y2A	341518.67129	341,518.67	1.428	335887.63298	344229.67817	344438.70272
Y2R	23204.06674	23,204.07	0.252	23260.64149	23143.72500	23207.83373
ZN	-0.00090	16.33	6.664	-0.00084	-0.00096	-0.00090
ZR	-0.00058	3.65	91.252	0.00002	-0.00078	-0.00099

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/11/2013 13:19

Sample Number: **PBS** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00175	-11.97	33.253	0.00190	0.00111	0.00224
AL	-0.01124	4.64	314.605	-0.03780	0.02891	-0.02484
AS	-0.00055	-2.78	392.036	0.00189	-0.00135	-0.00219
B	0.00082	8.07	23.208	0.00061	0.00085	0.00098
BA	0.00014	146.13	5.368	0.00014	0.00013	0.00015
BE	0.00015	-417.70	22.309	0.00011	0.00016	0.00016
CA	0.03020	127.28	2.956	0.02952	0.03121	0.02988
CD	0.00017	-1.14	72.016	0.00003	0.00023	0.00024
CO	0.00027	5.28	104.750	-0.00002	0.00029	0.00055
CR	0.00051	1.97	65.455	0.00051	0.00084	0.00017
CU	0.00091	-27.48	104.382	0.00051	0.00200	0.00023
FE	0.01638	5.11	38.339	0.02345	0.01428	0.01143
K	-0.04915	-23.03	42.286	-0.07306	-0.03536	-0.03904
LI	-0.00227	47.59	162.563	0.00071	-0.00640	-0.00112
MG	0.01671	36.16	9.611	0.01714	0.01807	0.01494
MN	0.00011	26.80	20.912	0.00014	0.00010	0.00010
MO	-0.00003	1.42	755.069	-0.00027	0.00011	0.00007
NA	0.04170	32.73	4.500	0.04039	0.04087	0.04385
NI	-0.00034	12.05	81.046	-0.00063	-0.00032	-0.00008
P	0.01532	8.24	6.005	0.01462	0.01497	0.01636
PB	-0.00058	4.63	93.134	-0.00033	-0.00021	-0.00119
S	0.00784	-3.02	25.658	0.00803	0.00975	0.00574
SB	-0.00012	1.55	651.953	-0.00093	0.00068	-0.00012
SE	0.00228	0.78	141.794	0.00163	0.00578	-0.00058
SI	-0.00356	4.81	255.736	-0.01389	0.00325	-0.00003
SN	0.01665	23.99	7.805	0.01559	0.01625	0.01810
SR	-0.00003	-44.93	17.345	-0.00003	-0.00003	-0.00004
TI	0.00043	42.02	14.724	0.00050	0.00039	0.00039
TL	0.00095	-5.24	82.947	0.00008	0.00116	0.00162
V	-0.00025	-11.72	183.511	0.00025	-0.00066	-0.00034
Y1	23428.12768	23,428.13	4.988	24039.57889	24164.17200	22080.63216
Y2A	349424.79540	349,424.80	0.353	348702.47180	348722.21301	350849.70139
Y2R	24245.32487	24,245.32	0.394	24304.28814	24135.09193	24296.59454
ZN	-0.00009	26.59	170.064	-0.00027	0.00000	-0.00001
ZR	-0.00102	2.66	97.349	-0.00148	0.00012	-0.00171

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/11/2013 13:23

Sample Number: **LCSW** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05260	829.86	0.756	0.05305	0.05237	0.05236
AL	2.05412	255.65	0.867	2.05469	2.07164	2.03602
AS	0.15696	67.12	0.539	0.15748	0.15742	0.15598
B	2.00165	16,573.13	0.649	2.01251	2.00518	1.98727
BA	2.06896	1,408,949.45	0.449	2.07967	2.06294	2.06428
BE	0.04864	22,187.04	0.785	0.04895	0.04875	0.04821
CA	3.97507	4,356.06	0.362	3.99054	3.97257	3.96210
CD	0.05153	889.33	0.213	0.05159	0.05160	0.05140
CO	0.52626	3,115.84	0.164	0.52707	0.52535	0.52635
CR	0.20023	2,215.76	0.703	0.20134	0.20071	0.19865
CU	0.26622	3,271.29	0.910	0.26889	0.26563	0.26415
FE	1.00247	323.39	0.789	1.00903	0.99368	1.00469
K	9.87236	3,663.51	0.377	9.88304	9.90308	9.83096
LI	1.00941	6,153.24	0.428	1.01381	1.00927	1.00516
MG	1.97088	3,855.32	0.408	1.97656	1.97439	1.96168
MN	0.51590	35,214.99	0.808	0.51941	0.51699	0.51129
MO	2.03640	9,834.76	0.115	2.03902	2.03568	2.03449
NA	9.89081	11,119.59	0.430	9.92557	9.90341	9.84343
NI	0.53385	2,162.63	0.142	0.53466	0.53316	0.53373
P	1.06311	597.33	0.078	1.06403	1.06242	1.06287
PB	0.16021	221.00	0.723	0.16133	0.16026	0.15902
S	1.01961	208.25	0.591	1.02645	1.01508	1.01731
SB	0.50289	389.51	0.334	0.50277	0.50462	0.50127
SE	0.15919	58.44	0.608	0.15953	0.15993	0.15809
SI	0.42075	99.80	3.250	0.40683	0.42124	0.43417
SN	4.02812	5,199.24	0.041	4.02880	4.02626	4.02931
SR	1.02828	819,115.35	0.903	1.01968	1.03812	1.02705
TI	1.01434	63,272.72	0.810	1.02226	1.01491	1.00586
TL	0.16137	99.16	1.327	0.16384	0.16026	0.16001
V	0.49124	7,214.45	0.758	0.49432	0.49230	0.48710
Y1	23490.32611	23,490.33	0.197	23445.21620	23537.85062	23487.91150
Y2A	340264.78918	340,264.79	0.941	337078.95612	340235.23557	343480.17585
Y2R	23909.61539	23,909.62	0.004	23910.61439	23909.12500	23909.10679
ZN	0.51775	6,688.12	0.149	0.51834	0.51687	0.51802
ZR	1.00125	2,555.33	0.485	1.00676	0.99939	0.99759

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/11/2013 13:28

Sample Number: **7266800** Class: U*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00603	54.93	10.868	0.00674	0.00590	0.00545
AL	55.23638	6,892.39	6.671	53.18608	53.03248	59.49058
AS	0.07464	20.13	6.485	0.08014	0.07105	0.07271
B	-0.01610	1,356.22	86.921	-0.00855	-0.00750	-0.03224
BA	1.30082	952,484.82	0.649	1.30076	1.30928	1.29241
BE	0.00303	1,008.82	0.302	0.00304	0.00303	0.00303
CA	21.72931	24,733.55	6.674	20.91261	20.87150	23.40380
CD	-0.00608	535.45	87.030	-0.00159	-0.00475	-0.01192
CO	0.09563	816.24	14.876	0.10989	0.09555	0.08144
CR	0.24225	2,796.58	1.278	0.24181	0.24554	0.23940
CU	0.15070	1,846.08	1.987	0.15280	0.15202	0.14727
FE	247.67418	76,321.80	7.632	237.05119	236.47285	269.49850
K	2.77844	1,089.48	5.892	2.73772	2.63893	2.95868
LI	0.04203	347.57	11.625	0.03932	0.03909	0.04767
MG	8.87267	18,320.12	6.262	8.58114	8.52353	9.51334
MN	22.72040	1,666,665.06	1.359	22.36431	22.91461	22.88228
MO	0.00272	20.25	19.759	0.00325	0.00272	0.00218
NA	1.67349	1,981.44	5.363	1.62893	1.61475	1.77679
NI	0.04401	221.18	12.138	0.04968	0.04328	0.03908
P	4.25973	3,301.71	14.620	4.89289	4.23843	3.64786
PB	0.21892	432.21	15.486	0.25403	0.21634	0.18638
S	3.04079	880.51	14.673	3.49814	3.01753	2.60669
SB	-0.01777	10.78	16.042	-0.01454	-0.01882	-0.01994
SE	0.01271	6.00	15.746	0.01457	0.01059	0.01298
SI	5.46053	1,262.74	4.865	5.28247	5.33322	5.76590
SN	0.01841	36.44	15.156	0.02068	0.01924	0.01529
SR	0.09233	79,061.95	1.803	0.09338	0.09320	0.09041
TI	1.77029	118,716.47	1.665	1.78580	1.78877	1.73629
TL	0.00328	7.64	58.582	0.00466	0.00410	0.00109
V	0.13806	2,255.13	1.431	0.13941	0.13898	0.13579
Y1	32714.66682	32,714.67	9.009	29767.80909	32713.99121	35662.20016
Y2A	365843.75691	365,843.76	0.291	367058.89184	365399.88388	365072.49502
Y2R	25385.43441	25,385.43	4.389	25980.61377	26075.68945	24100.00000
ZN	1.03282	18,750.87	15.119	1.19059	1.02952	0.87834
ZR	0.01228	38.64	18.084	0.00993	0.01257	0.01435

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/11/2013 13:32

Sample Number: **7266800** Class: UP** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00294	29.92	6.949	0.00283	0.00318	0.00282
AL	3.18741	857.71	23.641	4.03920	2.91533	2.60769
AS	0.02017	16.39	14.166	0.02329	0.01957	0.01767
B	0.00447	289.64	16.972	0.00388	0.00532	0.00419
BA	0.04537	81,537.76	15.771	0.05200	0.04634	0.03778
BE	0.00161	723.35	8.019	0.00173	0.00162	0.00147
CA	1.30583	3,370.25	23.205	1.64445	1.21281	1.06023
CD	0.00084	108.56	12.727	0.00072	0.00086	0.00093
CO	0.00602	120.32	13.579	0.00696	0.00563	0.00547
CR	0.01619	452.09	16.503	0.01847	0.01685	0.01325
CU	0.02024	562.32	16.057	0.02317	0.02079	0.01674
FE	12.78709	9,264.25	23.603	16.17545	11.79879	10.38704
K	0.24124	191.99	28.464	0.31501	0.22955	0.17918
LI	0.04859	799.96	24.788	0.06204	0.04494	0.03879
MG	0.57463	2,541.84	22.817	0.72095	0.53516	0.46780
MN	0.95259	171,298.53	15.958	1.09273	0.97405	0.79099
MO	0.00450	70.03	15.052	0.00528	0.00421	0.00402
NA	0.19778	468.96	23.031	0.24824	0.18540	0.15970
NI	0.00327	75.35	24.533	0.00419	0.00288	0.00274
P	0.18209	306.41	12.354	0.20763	0.17338	0.16524
PB	0.01910	96.68	13.369	0.02191	0.01844	0.01694
S	0.11776	60.52	9.106	0.12953	0.11520	0.10855
SB	0.00687	24.09	15.413	0.00808	0.00641	0.00612
SE	0.02095	22.85	11.733	0.02355	0.02065	0.01866
SI	0.16138	91.44	30.486	0.21776	0.13922	0.12716
SN	0.01424	63.12	12.910	0.01635	0.01342	0.01295
SR	0.00379	7,904.51	15.785	0.00433	0.00388	0.00315
TI	0.06419	10,585.22	16.574	0.07380	0.06600	0.05276
TL	0.03292	56.49	10.577	0.03686	0.03159	0.03029
V	0.00844	316.86	16.870	0.00973	0.00869	0.00691
Y1	70619.15109	70,619.15	0.627	70117.78481	70958.01145	70781.65700
Y2A	896146.04098	896,146.04	0.696	903151.91030	891178.98671	894107.22591
Y2R	54104.20866	54,104.21	2.179	52744.86336	54724.12500	54843.63763
ZN	0.04117	1,720.09	12.944	0.04723	0.03903	0.03724
ZR	0.05098	304.55	26.826	0.06628	0.04672	0.03994

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/11/2013 13:36

Sample Number: **7266803** Class: D*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00703	68.61	9.451	0.00700	0.00638	0.00771
AL	60.03725	7,245.48	0.908	60.66597	59.75253	59.69324
AS	0.08424	19.27	3.014	0.08630	0.08501	0.08140
B	-0.00444	1,399.18	183.973	-0.00647	-0.01140	0.00455
BA	1.34960	961,817.94	6.705	1.36031	1.25423	1.43426
BE	0.00315	1,038.58	2.694	0.00317	0.00306	0.00322
CA	22.21951	24,455.43	1.001	22.45067	22.20077	22.00709
CD	0.00625	600.32	16.981	0.00661	0.00709	0.00506
CO	0.15593	960.84	4.018	0.15921	0.15987	0.14870
CR	0.26430	2,981.88	4.092	0.26465	0.25331	0.27494
CU	0.16698	1,995.45	3.729	0.16606	0.16127	0.17362
FE	243.82805	72,820.93	1.060	246.52740	243.57806	241.37869
K	2.99037	1,134.07	0.199	2.98667	2.99724	2.98721
LI	0.04446	351.80	2.623	0.04461	0.04555	0.04323
MG	9.28292	18,530.31	1.147	9.39334	9.27461	9.18080
MN	22.96584	1,639,007.86	7.838	23.41838	20.98275	24.49638
MO	0.00341	18.26	4.523	0.00333	0.00359	0.00332
NA	1.77217	2,029.38	1.015	1.78669	1.77778	1.75206
NI	0.07001	267.92	3.956	0.07174	0.07146	0.06681
P	6.26975	3,560.27	3.747	6.40288	6.40784	5.99851
PB	0.35739	512.03	3.350	0.36131	0.36691	0.34395
S	4.85706	1,035.09	3.627	4.95193	4.96549	4.65377
SB	-0.01283	11.75	24.856	-0.01445	-0.00916	-0.01489
SE	0.01636	5.70	13.419	0.01572	0.01880	0.01456
SI	5.70761	1,275.50	0.779	5.75153	5.66268	5.70863
SN	0.03034	42.25	4.102	0.03088	0.03122	0.02891
SR	0.09893	82,549.25	3.741	0.09854	0.09544	0.10281
TI	2.06348	134,828.77	3.860	2.05894	1.98620	2.14529
TL	0.00728	8.19	29.987	0.00543	0.00969	0.00671
V	0.15007	2,386.59	4.094	0.15047	0.14374	0.15601
Y1	23771.68909	23,771.69	2.497	23470.35767	23389.29024	24455.41936
Y2A	356981.75182	356,981.75	5.700	352368.86198	379241.29064	339335.10285
Y2R	24503.00419	24,503.00	0.527	24355.21062	24560.35172	24593.45024
ZN	1.52639	20,116.81	3.619	1.55596	1.56053	1.46266
ZR	0.01595	47.01	17.540	0.01576	0.01326	0.01884

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/11/2013 13:40

Sample Number: **7266801** Class: R*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05410	829.66	1.412	0.05431	0.05473	0.05325
AL	74.47004	9,295.43	4.904	70.25286	76.60608	76.55117
AS	0.23515	86.74	3.805	0.22484	0.24089	0.23971
B	1.88567	17,132.42	2.698	1.87109	1.94225	1.84368
BA	3.07036	2,119,134.20	1.726	3.10162	3.00916	3.10030
BE	0.04956	22,923.65	2.048	0.04915	0.05071	0.04881
CA	26.93359	30,582.95	4.907	25.40759	27.68389	27.70929
CD	0.05634	1,428.08	1.338	0.05626	0.05713	0.05562
CO	0.63465	3,784.72	1.957	0.62151	0.64620	0.63623
CR	0.47842	5,296.40	2.355	0.47175	0.49143	0.47208
CU	0.44487	5,369.47	2.787	0.43814	0.45918	0.43728
FE	230.00101	71,379.75	5.559	215.23738	237.35826	237.40741
K	14.55894	5,721.16	5.316	13.66530	14.99982	15.01170
LI	1.01116	6,540.75	5.156	0.95107	1.03795	1.04445
MG	12.46986	25,672.38	4.956	11.75795	12.78289	12.86875
MN	23.01087	1,591,093.69	1.517	23.40794	22.75294	22.87175
MO	1.97601	9,515.69	2.170	1.93084	2.01616	1.98101
NA	11.32215	13,476.88	5.067	10.66040	11.62717	11.67888
NI	0.58018	2,314.01	2.141	0.56694	0.59159	0.58199
P	7.12290	3,988.62	2.167	6.96145	7.26893	7.13833
PB	0.51655	722.89	1.881	0.50650	0.52589	0.51727
S	5.64204	1,183.45	1.995	5.52342	5.74739	5.65530
SB	0.37976	312.51	2.357	0.37073	0.38864	0.37990
SE	0.17590	64.05	3.110	0.17034	0.18127	0.17610
SI	5.99797	1,387.89	3.008	5.78992	6.11179	6.09219
SN	3.82824	4,927.15	2.189	3.73867	3.90477	3.84129
SR	1.11820	902,780.00	3.063	1.11878	1.15215	1.08366
TI	4.03087	254,815.75	2.509	3.99012	4.14602	3.95649
TL	0.15244	99.17	1.694	0.14963	0.15470	0.15300
V	0.64029	9,621.92	2.297	0.63628	0.65658	0.62800
Y1	23427.86738	23,427.87	1.523	23787.04641	23073.65878	23422.89695
Y2A	344877.52278	344,877.52	1.172	340218.50066	346977.60451	347436.46317
Y2R	25336.68941	25,336.69	3.041	26226.37697	24887.03556	24896.65570
ZN	1.91558	24,813.50	2.156	1.87217	1.95439	1.92018
ZR	0.71410	1,930.87	5.134	0.67178	0.73437	0.73616

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/11/2013 13:44

Sample Number: **7266802** Class: M*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	k	0.00284	43.49	40.665	0.00157	0.00382	0.00314
AL		18.35812	3,212.20	84.685	34.02540	18.11402	2.93495
AS	k	0.01269	3.10	53.810	0.02047	0.00767	0.00995
B	k	0.03286	1,218.37	73.624	0.00610	0.05319	0.03929
BA		0.07409	137,038.77	20.426	0.08920	0.07413	0.05893
BE	k	0.00212	1,393.89	12.997	0.00239	0.00213	0.00184
CA		6.46333	10,440.96	84.380	11.96217	6.37199	1.05582
CD	k	-0.00220	61.90	247.889	-0.00848	0.00131	0.00057
CO	k	0.00941	179.97	8.163	0.01018	0.00865	0.00938
CR	k	0.01435	393.78	26.591	0.01847	0.01362	0.01095
CU	k	0.00928	190.15	29.955	0.01227	0.00878	0.00678
FE		46.00329	21,492.13	86.249	86.53538	44.23455	7.23995
K		3.26862	1,807.26	86.487	6.18433	3.08181	0.53972
LI		0.21200	2,003.03	87.586	0.40084	0.20554	0.02963
MG		2.96108	8,582.07	83.718	5.44837	2.94429	0.49057
MN		0.63006	116,700.66	20.462	0.75710	0.63375	0.49933
MO		0.02812	411.39	9.747	0.03067	0.02522	0.02847
NA		2.48939	4,145.21	84.763	4.63117	2.42452	0.41249
NI	k	0.00751	119.69	28.895	0.00995	0.00581	0.00675
P	k	0.10304	172.41	8.706	0.11181	0.09388	0.10345
PB	k	0.00494	43.09	31.229	0.00318	0.00560	0.00604
S	k	0.08741	40.28	11.454	0.09847	0.07897	0.08479
SB	k	0.00113	14.11	335.757	-0.00324	0.00353	0.00309
SE	k	0.00351	3.41	24.793	0.00260	0.00359	0.00433
SI		1.57969	519.02	91.108	3.06761	1.47676	0.19469
SN		0.05863	234.40	10.052	0.06399	0.05232	0.05957
SR		0.02565	55,393.12	20.598	0.03091	0.02568	0.02034
TI	k	0.10704	18,152.24	21.407	0.12945	0.10803	0.08365
TL	k	0.00918	2.71	3.510	0.00946	0.00883	0.00926
V	k	0.01600	635.07	19.534	0.01889	0.01644	0.01268
Y1		70384.71055	70,384.71	3.878	71823.71893	72093.95000	67236.46271
Y2A		924462.43079	924,462.43	0.887	916182.97342	924633.05648	932571.26246
Y2R		0.00000	0.00	0.000	39494.96611	24590.98361	56157.49152
ZN	k	0.02448	1,151.68	12.682	0.02110	0.02511	0.02721
ZR		0.15323	588.55	88.668	0.29250	0.14616	0.02104

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/11/2013 13:48

Sample Number: **Z266800**

Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00239	-6.44	4.101	0.00237	0.00249	0.00230
AL	0.90407	244.03	11.898	1.00633	0.91399	0.79189
AS	0.00619	-0.29	19.179	0.00704	0.00483	0.00670
B	0.00052	69.48	47.170	0.00073	0.00025	0.00059
BA	0.01563	27,791.52	8.535	0.01711	0.01525	0.01453
BE	0.00083	-224.41	1.008	0.00082	0.00084	0.00084
CA	0.37101	1,069.52	11.097	0.41122	0.37286	0.32894
CD	0.00004	12.38	144.998	-0.00002	0.00008	0.00006
CO	0.00107	30.07	18.246	0.00123	0.00112	0.00085
CR	0.00370	93.69	9.874	0.00412	0.00356	0.00343
CU	0.00126	-63.62	24.529	0.00115	0.00161	0.00103
FE	3.80452	2,670.63	11.060	4.22036	3.81427	3.37894
K	0.02429	10.03	96.301	-0.00190	0.04311	0.03166
LI	-0.00466	71.20	11.585	-0.00479	-0.00513	-0.00407
MG	0.15758	677.69	10.106	0.17277	0.15897	0.14101
MN	0.33753	59,906.16	8.370	0.36888	0.32968	0.31403
MO	-0.00010	3.15	40.217	-0.00007	-0.00008	-0.00015
NA	0.01855	13.61	62.735	0.00512	0.02501	0.02552
NI	-0.00169	18.19	5.566	-0.00164	-0.00180	-0.00163
P	0.05484	88.85	7.759	0.05903	0.05498	0.05052
PB	0.00047	17.94	95.453	0.00073	0.00072	-0.00005
S	0.04643	14.89	4.700	0.04862	0.04640	0.04426
SB	-0.00240	0.26	16.127	-0.00195	-0.00258	-0.00266
SE	0.00080	0.59	117.403	0.00076	-0.00012	0.00175
SI	0.03743	29.73	5.874	0.03968	0.03730	0.03529
SN	-0.00116	3.31	20.859	-0.00106	-0.00098	-0.00144
SR	0.00112	2,281.19	9.231	0.00123	0.00110	0.00103
TI	0.02212	3,622.58	8.451	0.02421	0.02156	0.02060
TL	0.00648	-2.97	3.139	0.00642	0.00630	0.00670
V	0.00232	71.73	8.297	0.00253	0.00217	0.00225
Y1	68502.89650	68,502.90	0.488	68207.42109	68435.26533	68866.00306
Y2A	884789.25803	884,789.26	1.120	875490.61462	895219.85050	883657.30897
Y2R	52093.21814	52,093.22	1.196	51801.35311	51669.72317	52808.57814
ZN	0.01185	537.94	10.002	0.01291	0.01207	0.01057
ZR	-0.00029	9.79	114.841	0.00007	-0.00060	-0.00035

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/11/2013 13:53

Sample Number: **7265116** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00316	19.40	4.715	0.00314	0.00332	0.00302
AL	96.76901	11,529.32	0.264	96.69094	97.05465	96.56144
AS	0.07370	13.41	4.156	0.07723	0.07218	0.07169
B	0.06500	1,942.13	6.483	0.06424	0.06121	0.06953
BA	0.38631	257,967.34	1.675	0.38737	0.37938	0.39219
BE	0.00650	2,501.12	0.503	0.00650	0.00646	0.00653
CA	9.74341	10,648.38	0.198	9.72134	9.75693	9.75197
CD	0.00271	546.38	3.021	0.00263	0.00279	0.00270
CO	0.06977	436.67	0.501	0.06973	0.07014	0.06944
CR	0.21105	2,208.26	1.361	0.21183	0.20787	0.21346
CU	0.38929	4,633.22	1.794	0.39028	0.38187	0.39573
FE	256.21796	75,065.84	0.119	256.56313	255.98812	256.10262
K	16.22690	6,089.81	0.349	16.26350	16.25550	16.16171
LI	0.20307	1,306.11	0.619	0.20168	0.20413	0.20341
MG	22.13841	43,309.65	0.122	22.14538	22.10860	22.16124
MN	1.69900	113,668.72	1.208	1.69857	1.67870	1.71973
MO	0.01689	81.50	2.815	0.01728	0.01702	0.01636
NA	0.81143	908.50	2.168	0.79296	0.81333	0.82800
NI	0.13658	520.84	0.449	0.13727	0.13634	0.13612
P	2.22273	1,224.71	0.313	2.22885	2.22416	2.21516
PB	0.30016	428.94	0.437	0.30051	0.29871	0.30126
S	16.77585	3,484.42	0.323	16.83820	16.74974	16.73961
SB	0.00300	23.65	29.940	0.00358	0.00197	0.00346
SE	0.00759	2.21	28.149	0.00708	0.00575	0.00993
SI	3.58140	791.56	0.343	3.58800	3.56721	3.58899
SN	0.03834	51.09	2.701	0.03864	0.03919	0.03718
SR	0.08234	64,293.15	1.272	0.08220	0.08137	0.08345
TI	2.22262	135,908.10	1.370	2.22410	2.19146	2.25230
TL	0.00530	-12.19	27.379	0.00696	0.00426	0.00469
V	0.28729	4,249.55	1.292	0.28674	0.28388	0.29124
Y1	23038.03858	23,038.04	0.178	23011.36364	23017.58062	23085.17150
Y2A	333635.00860	333,635.01	0.990	333421.83333	337038.56383	330444.62865
Y2R	24168.92429	24,168.92	0.108	24195.43097	24168.06137	24143.28053
ZN	0.53289	7,072.20	0.361	0.53459	0.53328	0.53080
ZR	0.09733	255.86	0.543	0.09761	0.09671	0.09765

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/11/2013 14:00

Sample Number: **7265117** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00071	0.37	16.072	0.00067	0.00062	0.00083
AL	67.75253	8,055.47	0.365	67.84702	67.93845	67.47211
AS	0.08395	17.36	1.477	0.08526	0.08280	0.08378
B	-0.02161	1,319.78	10.570	-0.01935	-0.02392	-0.02157
BA	0.14832	100,508.24	0.460	0.14899	0.14763	0.14833
BE	0.00164	288.03	0.995	0.00163	0.00163	0.00166
CA	1.80836	2,052.21	0.321	1.81110	1.81229	1.80168
CD	-0.00004	529.36	93.701	-0.00006	0.00000	-0.00005
CO	0.00213	36.72	3.674	0.00215	0.00204	0.00220
CR	0.17873	1,880.14	1.283	0.18099	0.17640	0.17880
CU	0.12291	1,364.15	0.816	0.12406	0.12228	0.12238
FE	267.33369	77,826.63	0.324	268.18636	267.35801	266.45669
K	6.80901	2,549.26	0.436	6.83927	6.77999	6.80779
LI	0.07305	507.21	2.833	0.07349	0.07487	0.07080
MG	3.77141	7,437.86	0.196	3.77990	3.76633	3.76801
MN	0.27228	18,495.62	0.382	0.27293	0.27108	0.27282
MO	0.00673	33.89	1.194	0.00664	0.00673	0.00681
NA	1.98936	2,245.82	0.929	2.00971	1.97362	1.98475
NI	0.00690	8.97	7.177	0.00700	0.00734	0.00637
P	0.45042	251.66	0.470	0.44797	0.45154	0.45174
PB	0.08924	135.88	0.042	0.08919	0.08926	0.08926
S	3.61836	756.34	0.507	3.63747	3.61672	3.60090
SB	-0.01685	9.02	8.642	-0.01635	-0.01571	-0.01849
SE	0.00425	1.15	30.818	0.00375	0.00573	0.00326
SI	4.38113	965.73	0.529	4.35645	4.38453	4.40242
SN	0.02312	32.30	3.985	0.02290	0.02414	0.02233
SR	0.06753	53,489.57	0.499	0.06787	0.06719	0.06753
TI	1.48136	91,899.06	0.682	1.49191	1.47177	1.48040
TL	0.00397	-10.13	15.346	0.00340	0.00390	0.00461
V	0.17817	2,684.20	0.500	0.17912	0.17806	0.17735
Y1	23373.03926	23,373.04	0.172	23342.30257	23358.26339	23418.55183
Y2A	338448.40285	338,448.40	0.722	335852.10683	340704.12234	338788.97939
Y2R	24135.85896	24,135.86	0.389	24068.64754	24095.91399	24243.01537
ZN	0.08066	1,423.75	0.304	0.08091	0.08063	0.08043
ZR	0.23460	608.46	0.680	0.23279	0.23579	0.23522

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/11/2013 14:05

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50246	6,957.43	1.015	0.50827	0.49872	0.50039
AL	24.70675	2,814.87	0.611	24.87773	24.59173	24.65078
AS	0.50391	209.09	0.668	0.50721	0.50048	0.50404
B	0.48947	4,043.37	0.959	0.49487	0.48640	0.48714
BA	0.50325	331,037.58	0.240	0.50422	0.50365	0.50190
BE	0.48715	218,799.60	0.800	0.49159	0.48426	0.48561
CA	24.41169	25,318.30	0.260	24.48177	24.35848	24.39481
CD	0.50189	8,425.73	0.109	0.50171	0.50251	0.50146
CO	0.50431	2,875.67	0.159	0.50433	0.50349	0.50510
CR	0.48575	5,189.68	1.123	0.49202	0.48212	0.48310
CU	0.50179	6,120.41	1.247	0.50901	0.49795	0.49840
FE	24.29041	7,506.88	0.157	24.32358	24.24856	24.29909
K	24.52721	8,801.21	0.391	24.57577	24.41679	24.58907
LI	0.50493	3,017.48	0.980	0.50746	0.49923	0.50809
MG	24.18139	45,174.89	0.188	24.22693	24.13596	24.18127
MN	0.49888	32,890.43	0.668	0.50262	0.49621	0.49781
MO	0.50441	2,352.48	0.098	0.50397	0.50494	0.50433
NA	24.39340	26,520.07	0.321	24.42678	24.30401	24.44940
NI	0.50306	1,960.83	0.170	0.50248	0.50405	0.50266
P	0.51093	277.98	0.334	0.51067	0.51276	0.50937
PB	0.50878	689.55	0.254	0.50750	0.50874	0.51009
S	24.80874	5,076.87	0.135	24.77408	24.81140	24.84074
SB	0.51914	396.12	0.160	0.51830	0.51916	0.51996
SE	0.50945	180.62	0.522	0.50638	0.51092	0.51105
SI	25.24535	5,302.02	0.424	25.14956	25.22569	25.36080
SN	0.49384	617.48	0.451	0.49128	0.49530	0.49495
SR	0.49992	384,589.64	0.606	0.50244	0.49656	0.50076
TI	0.49788	30,042.08	0.961	0.50339	0.49473	0.49551
TL	0.50305	341.20	0.278	0.50157	0.50321	0.50435
V	0.49230	7,084.10	1.093	0.49851	0.48892	0.48948
Y1	22673.24960	22,673.25	0.159	22697.22722	22631.82514	22690.69643
Y2A	328633.12647	328,633.13	0.696	326040.19934	330370.18272	329488.99735
Y2R	23103.71354	23,103.71	0.476	23053.42541	23229.89022	23027.82500
ZN	0.50644	6,348.85	0.149	0.50562	0.50710	0.50660
ZR	0.49858	1,232.07	0.818	0.50304	0.49505	0.49764

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/11/2013 14:09

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00158	-14.27	4.228	0.00164	0.00159	0.00151
AL	0.00829	6.74	188.060	0.02235	0.01102	-0.00849
AS	-0.00048	-2.76	418.643	-0.00037	-0.00254	0.00147
B	0.00085	8.33	86.419	0.00037	0.00169	0.00048
BA	0.00020	184.39	17.455	0.00024	0.00017	0.00019
BE	0.00023	-373.78	2.543	0.00022	0.00023	0.00022
CA	-0.00647	84.28	29.372	-0.00429	-0.00779	-0.00732
CD	-0.00007	-5.14	137.733	-0.00014	0.00004	-0.00011
CO	0.00008	4.19	207.412	-0.00007	0.00004	0.00027
CR	0.00032	-0.17	82.164	0.00023	0.00062	0.00012
CU	0.00033	-34.62	198.293	0.00039	-0.00035	0.00094
FE	0.04311	13.38	30.386	0.05491	0.04542	0.02901
K	-0.08211	-34.19	46.090	-0.07846	-0.12165	-0.04623
LI	-0.00215	46.55	77.520	-0.00264	-0.00029	-0.00351
MG	0.00341	9.44	50.485	0.00503	0.00361	0.00160
MN	0.00166	132.83	8.416	0.00182	0.00160	0.00155
MO	0.00025	2.73	46.274	0.00013	0.00035	0.00026
NA	-0.01002	-25.38	60.839	-0.00429	-0.01643	-0.00934
NI	-0.00026	12.34	82.381	-0.00007	-0.00049	-0.00022
P	0.00192	0.75	24.644	0.00175	0.00245	0.00155
PB	-0.00187	2.81	53.562	-0.00103	-0.00297	-0.00160
S	0.00094	-4.47	253.915	0.00272	-0.00178	0.00189
SB	0.00149	2.77	101.439	0.00069	0.00054	0.00323
SE	0.00177	0.56	76.108	0.00127	0.00330	0.00074
SI	0.00851	7.20	44.010	0.00429	0.01144	0.00981
SN	0.00051	3.27	160.853	0.00078	-0.00041	0.00117
SR	-0.00004	-50.42	13.218	-0.00005	-0.00004	-0.00004
TI	0.00040	39.65	14.225	0.00045	0.00042	0.00034
TL	0.00044	-5.58	246.053	0.00059	-0.00071	0.00144
V	-0.00009	-9.08	135.525	-0.00022	-0.00001	-0.00003
Y1	23295.66656	23,295.67	0.140	23260.16447	23324.23395	23302.60125
Y2A	343976.19443	343,976.19	0.610	342753.23490	342776.21102	346399.13736
Y2R	23382.65365	23,382.65	0.523	23510.89129	23369.50440	23267.56528
ZN	-0.00088	16.56	5.365	-0.00089	-0.00082	-0.00091
ZR	-0.00144	1.55	78.297	-0.00014	-0.00200	-0.00218

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/11/2013 14:13

Sample Number: **7265118** Class: **** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00114	-16.69	28.901	0.00148	0.00082	0.00113
AL	64.48730	7,774.63	0.848	64.17528	64.16769	65.11894
AS	0.03265	6.52	2.320	0.03343	0.03262	0.03191
B	0.02355	676.68	0.727	0.02370	0.02336	0.02357
BA	0.11488	79,476.05	0.609	0.11424	0.11477	0.11563
BE	0.00221	563.96	1.261	0.00220	0.00224	0.00220
CA	1.66128	1,919.63	1.002	1.65478	1.64886	1.68020
CD	0.00062	175.11	23.198	0.00072	0.00068	0.00045
CO	0.01722	126.95	0.955	0.01739	0.01722	0.01706
CR	0.08557	931.61	1.264	0.08491	0.08498	0.08682
CU	0.03272	254.22	1.759	0.03215	0.03270	0.03330
FE	83.60870	26,717.22	0.839	83.21333	83.19414	84.41863
K	4.77428	1,811.31	0.515	4.74604	4.78603	4.79076
LI	0.21026	1,361.63	1.444	0.20699	0.21079	0.21299
MG	5.83620	11,658.60	0.671	5.79603	5.83825	5.87433
MN	0.27980	19,400.52	0.654	0.27817	0.27945	0.28178
MO	0.00352	18.62	11.893	0.00389	0.00306	0.00360
NA	0.91294	1,037.01	1.583	0.89631	0.92011	0.92241
NI	0.02728	113.39	1.076	0.02753	0.02696	0.02736
P	0.57371	323.07	0.235	0.57508	0.57238	0.57367
PB	0.08314	136.17	0.538	0.08365	0.08279	0.08298
S	17.49049	3,720.16	0.178	17.52591	17.47849	17.46706
SB	-0.00289	6.23	53.357	-0.00221	-0.00180	-0.00465
SE	0.00252	0.54	63.490	0.00234	0.00102	0.00421
SI	3.26469	731.21	0.298	3.25637	3.26233	3.27538
SN	0.01986	28.36	1.222	0.01997	0.02003	0.01958
SR	0.04803	38,831.89	0.651	0.04773	0.04801	0.04836
TI	1.54512	97,844.13	0.577	1.53941	1.54055	1.55540
TL	0.00241	-10.65	39.307	0.00151	0.00340	0.00233
V	0.14939	2,281.08	0.783	0.14940	0.14821	0.15055
Y1	23577.01574	23,577.02	0.093	23570.78337	23558.76141	23601.50243
Y2A	345479.72825	345,479.73	0.834	347597.54479	346641.17452	342200.46543
Y2R	24476.57299	24,476.57	0.745	24596.91740	24565.92995	24266.87163
ZN	0.16085	2,210.55	0.179	0.16101	0.16102	0.16051
ZR	0.03320	91.92	6.181	0.03084	0.03453	0.03424

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/11/2013 14:17

Sample Number: **7265119** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-12.37	242.497	0.00005	-0.00027	0.00114
AL	42.44471	5,222.84	0.644	42.13435	42.54904	42.65075
AS	0.03517	9.73	1.065	0.03549	0.03476	0.03527
B	0.00342	349.16	11.205	0.00382	0.00306	0.00338
BA	0.17836	126,930.84	0.366	0.17822	0.17779	0.17907
BE	0.00127	120.92	0.699	0.00126	0.00127	0.00128
CA	2.27579	2,648.65	0.700	2.25771	2.28196	2.28771
CD	0.00066	119.55	8.679	0.00072	0.00062	0.00063
CO	0.00457	62.13	7.866	0.00419	0.00490	0.00463
CR	0.14774	1,688.64	0.389	0.14754	0.14730	0.14839
CU	0.12340	1,432.24	0.312	0.12298	0.12374	0.12347
FE	54.17005	17,888.55	0.612	53.79066	54.31699	54.40250
K	5.45443	2,113.36	0.983	5.40243	5.45135	5.50952
LI	0.04010	317.71	3.300	0.04115	0.04054	0.03862
MG	2.27732	4,654.64	0.353	2.26975	2.28575	2.27645
MN	0.32284	23,028.73	0.543	0.32213	0.32156	0.32484
MO	0.00388	20.90	3.713	0.00382	0.00404	0.00377
NA	0.76766	887.84	0.041	0.76730	0.76785	0.76783
NI	0.00854	42.50	2.992	0.00857	0.00877	0.00827
P	0.31986	184.99	0.540	0.31797	0.32023	0.32137
PB	0.10506	165.68	0.609	0.10442	0.10570	0.10506
S	1.19755	256.17	0.482	1.19157	1.20309	1.19797
SB	-0.00446	3.83	18.600	-0.00450	-0.00361	-0.00527
SE	0.00240	0.61	67.469	0.00400	0.00243	0.00076
SI	2.85620	653.84	0.288	2.85591	2.86455	2.84813
SN	0.02040	29.81	1.015	0.02020	0.02037	0.02061
SR	0.05930	49,332.11	0.419	0.05924	0.05910	0.05958
TI	2.14250	139,586.07	0.413	2.14197	2.13393	2.15160
TL	0.00204	-9.38	35.175	0.00139	0.00192	0.00281
V	0.06534	1,031.85	0.115	0.06543	0.06529	0.06531
Y1	24192.92650	24,192.93	0.356	24289.44267	24165.34390	24123.99294
Y2A	355450.09401	355,450.09	0.325	355163.40411	356719.89051	354466.98739
Y2R	24989.05339	24,989.05	0.395	25083.11727	24886.46789	24997.57500
ZN	0.03345	548.83	0.662	0.03320	0.03362	0.03352
ZR	0.17806	479.45	1.171	0.18039	0.17739	0.17638

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/11/2013 14:21

Sample Number: **7265120** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00072	-25.41	31.955	0.00090	0.00080	0.00046
AL	36.14219	4,443.80	0.824	36.47414	35.89791	36.05453
AS	0.01643	2.53	3.375	0.01690	0.01582	0.01658
B	0.03788	530.63	1.620	0.03774	0.03735	0.03855
BA	0.08270	58,833.92	0.352	0.08258	0.08303	0.08248
BE	0.00165	305.44	0.721	0.00164	0.00166	0.00164
CA	2.51917	2,919.00	0.834	2.54246	2.50164	2.51341
CD	0.00057	76.63	24.604	0.00041	0.00067	0.00063
CO	0.01261	103.58	1.503	0.01241	0.01263	0.01279
CR	0.04994	562.25	0.718	0.05033	0.04986	0.04962
CU	0.05335	535.95	0.957	0.05393	0.05297	0.05316
FE	34.43189	11,452.59	1.042	34.84635	34.22282	34.22650
K	3.78091	1,462.34	1.121	3.79225	3.73399	3.81647
LI	0.11367	781.12	1.368	0.11394	0.11200	0.11507
MG	3.78010	7,712.18	0.631	3.80533	3.77709	3.75788
MN	0.22524	16,060.23	0.409	0.22461	0.22630	0.22480
MO	0.00573	29.91	0.509	0.00571	0.00576	0.00572
NA	0.92561	1,072.74	1.316	0.93963	0.91763	0.91957
NI	0.02067	94.48	2.620	0.02052	0.02022	0.02127
P	0.54066	310.35	0.525	0.54364	0.53799	0.54037
PB	0.08211	131.11	0.746	0.08146	0.08268	0.08217
S	13.01203	2,819.80	0.505	13.06408	12.93824	13.03376
SB	-0.00057	4.28	37.140	-0.00034	-0.00076	-0.00061
SE	0.00368	1.12	26.621	0.00388	0.00262	0.00454
SI	3.24313	741.04	0.600	3.26448	3.23852	3.22638
SN	0.01968	28.66	3.591	0.01892	0.01977	0.02033
SR	0.05503	45,744.91	0.327	0.05498	0.05524	0.05489
TI	1.68819	109,908.04	0.214	1.68461	1.69184	1.68811
TL	0.00325	-8.50	67.674	0.00552	0.00113	0.00310
V	0.08629	1,353.57	0.492	0.08671	0.08631	0.08586
Y1	24029.45351	24,029.45	0.390	23963.01972	24136.62178	23988.71902
Y2A	355184.22362	355,184.22	0.108	355477.52157	354750.58062	355324.56868
Y2R	24969.34717	24,969.35	0.932	24705.47671	25145.73756	25056.82725
ZN	0.08643	1,209.96	0.381	0.08665	0.08605	0.08660
ZR	0.01673	49.97	6.272	0.01579	0.01652	0.01786

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/11/2013 14:26

Sample Number: **7265121** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-11.32	162.940	-0.00002	0.00001	-0.00028
AL	52.57612	6,454.06	0.433	52.40261	52.83371	52.49204
AS	0.04695	6.50	2.326	0.04820	0.04642	0.04622
B	-0.01265	964.23	14.761	-0.01050	-0.01366	-0.01380
BA	0.20817	145,633.46	1.243	0.21032	0.20889	0.20530
BE	0.00188	410.42	1.602	0.00191	0.00185	0.00187
CA	1.89761	2,219.28	0.259	1.89645	1.90301	1.89337
CD	0.00115	393.25	11.124	0.00116	0.00101	0.00127
CO	0.00323	51.04	7.793	0.00294	0.00337	0.00338
CR	0.19828	2,191.62	1.212	0.20103	0.19726	0.19655
CU	0.27442	3,375.32	1.316	0.27829	0.27384	0.27114
FE	185.21460	57,739.00	0.209	184.83967	185.61207	185.19206
K	5.81168	2,246.51	0.173	5.80152	5.81184	5.82167
LI	0.05924	437.05	3.086	0.06135	0.05817	0.05821
MG	2.92236	5,955.49	0.279	2.92264	2.93038	2.91406
MN	0.38329	26,875.92	1.352	0.38859	0.38303	0.37824
MO	0.00865	43.99	2.566	0.00890	0.00861	0.00846
NA	0.93836	1,085.96	0.760	0.93416	0.94659	0.93432
NI	0.00694	19.36	2.045	0.00691	0.00710	0.00682
P	0.37443	213.75	0.427	0.37615	0.37299	0.37415
PB	0.10603	161.45	1.088	0.10711	0.10618	0.10481
S	0.88062	182.61	0.252	0.87880	0.87997	0.88310
SB	-0.01235	7.26	14.313	-0.01352	-0.01032	-0.01321
SE	0.00562	1.76	60.333	0.00528	0.00241	0.00916
SI	3.57626	815.21	0.469	3.58761	3.58420	3.55697
SN	0.02140	30.68	0.706	0.02137	0.02156	0.02126
SR	0.06124	50,082.12	1.177	0.06187	0.06139	0.06046
TI	1.98353	127,050.69	1.227	2.00740	1.98444	1.95875
TL	0.00191	-9.24	20.129	0.00225	0.00149	0.00199
V	0.07339	1,152.75	0.882	0.07385	0.07367	0.07265
Y1	23830.53046	23,830.53	0.123	23823.25581	23862.81000	23805.52558
Y2A	349444.53661	349,444.54	0.727	351644.49237	346664.15063	350024.96682
Y2R	24926.95489	24,926.95	0.116	24945.18463	24893.54903	24942.13102
ZN	0.05682	1,029.79	0.699	0.05724	0.05645	0.05676
ZR	0.23567	631.24	1.034	0.23728	0.23687	0.23287

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/11/2013 14:30

Sample Number: **7265123** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00156	-6.71	18.597	0.00188	0.00150	0.00131
AL	79.01591	9,609.47	0.611	79.48877	78.52417	79.03479
AS	0.03676	3.30	9.522	0.03553	0.04071	0.03404
B	0.05718	1,414.02	3.923	0.05468	0.05902	0.05784
BA	0.39609	273,294.13	0.400	0.39429	0.39730	0.39668
BE	0.00387	1,342.95	0.503	0.00388	0.00384	0.00387
CA	6.05432	6,796.58	0.617	6.08117	6.01169	6.07010
CD	0.00152	351.97	7.962	0.00140	0.00151	0.00165
CO	0.05414	367.07	0.753	0.05440	0.05367	0.05435
CR	0.13511	1,459.35	1.134	0.13338	0.13630	0.13564
CU	0.47715	5,872.11	0.319	0.47872	0.47569	0.47705
FE	163.75076	51,013.65	0.773	164.63743	162.30078	164.31408
K	12.20208	4,675.31	0.278	12.23993	12.19206	12.17424
LI	0.11764	799.25	0.615	0.11847	0.11713	0.11732
MG	23.99489	47,892.13	0.396	24.07123	23.88836	24.02509
MN	2.06519	142,757.22	0.307	2.06676	2.05820	2.07059
MO	0.00187	10.63	9.840	0.00184	0.00170	0.00207
NA	0.86454	989.50	0.176	0.86299	0.86460	0.86603
NI	0.10384	411.90	0.545	0.10370	0.10336	0.10446
P	2.96616	1,671.21	0.480	2.96649	2.95177	2.98022
PB	0.10217	163.24	1.737	0.10313	0.10012	0.10326
S	0.07237	8.65	2.210	0.07059	0.07281	0.07369
SB	-0.00620	9.79	19.748	-0.00557	-0.00761	-0.00541
SE	0.00350	0.83	96.174	-0.00014	0.00414	0.00650
SI	7.26840	1,634.58	1.075	7.35787	7.21378	7.23357
SN	0.02173	30.75	2.098	0.02210	0.02187	0.02122
SR	0.05895	47,554.90	0.324	0.05906	0.05873	0.05906
TI	3.15717	199,464.76	0.271	3.14811	3.15824	3.16515
TL	0.00317	-13.67	63.139	0.00151	0.00539	0.00260
V	0.23792	3,636.86	0.348	0.23830	0.23697	0.23849
Y1	23558.16320	23,558.16	0.381	23518.33988	23661.04744	23495.10229
Y2A	344698.90511	344,698.91	0.168	345346.13470	344514.01792	344236.56271
Y2R	24681.59689	24,681.60	0.419	24620.24023	24800.87413	24623.67632
ZN	0.30144	4,134.96	0.440	0.30182	0.29997	0.30254
ZR	0.06630	179.73	3.322	0.06398	0.06656	0.06836

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/11/2013 14:34

Sample Number: **7265124** Class: **** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00142	-2.40	42.626	0.00167	0.00073	0.00187
AL	68.97927	8,350.76	0.105	68.93143	69.06285	68.94354
AS	0.04537	-20.86	8.596	0.04581	0.04904	0.04127
B	-0.12400	2,450.71	3.924	-0.12491	-0.12835	-0.11875
BA	0.14942	102,422.43	0.473	0.14986	0.14860	0.14979
BE	0.00297	912.22	0.639	0.00299	0.00296	0.00295
CA	2.19555	2,516.28	0.509	2.20671	2.19555	2.18438
CD	-0.00981	1,044.23	0.799	-0.00989	-0.00982	-0.00973
CO	0.00352	47.11	8.465	0.00331	0.00386	0.00339
CR	0.15202	1,489.59	0.706	0.15170	0.15114	0.15322
CU	0.13078	1,397.90	1.407	0.12930	0.13019	0.13284
FE	614.90488	153,847.39	0.131	615.58086	615.12083	614.01295
K	5.61155	2,138.34	1.383	5.53318	5.68833	5.61314
LI	0.07297	516.18	1.875	0.07450	0.07253	0.07188
MG	3.52424	7,077.76	0.080	3.52744	3.52210	3.52320
MN	1.00212	68,807.73	0.522	1.00574	0.99611	1.00449
MO	0.00152	8.75	25.833	0.00167	0.00107	0.00180
NA	1.12418	1,285.61	0.459	1.12208	1.12040	1.13006
NI	0.00832	-26.79	7.347	0.00881	0.00851	0.00763
P	1.10428	610.53	0.360	1.10656	1.10660	1.09969
PB	0.12550	168.25	2.001	0.12419	0.12840	0.12393
S	7.68180	1,593.96	0.150	7.68610	7.66873	7.69056
SB	-0.03788	15.92	0.805	-0.03810	-0.03753	-0.03800
SE	0.00488	1.36	68.726	0.00570	0.00119	0.00775
SI	3.57462	803.30	0.320	3.57478	3.56311	3.58597
SN	0.02307	31.89	2.354	0.02249	0.02357	0.02314
SR	0.04176	33,452.33	0.573	0.04190	0.04148	0.04189
TI	1.68425	105,687.45	0.669	1.68380	1.67321	1.69573
TL	0.00415	-10.97	37.858	0.00530	0.00236	0.00478
V	0.22663	3,487.38	0.750	0.22699	0.22478	0.22812
Y1	23129.23753	23,129.24	0.105	23110.36849	23120.80557	23156.53854
Y2A	342348.10067	342,348.10	0.548	341998.75332	344373.25813	340672.29056
Y2R	24574.35307	24,574.35	0.188	24521.18222	24604.40795	24597.46905
ZN	0.12394	2,426.66	0.054	0.12386	0.12395	0.12399
ZR	0.12123	322.73	0.093	0.12134	0.12123	0.12111

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/11/2013 14:38

Sample Number: **7265125** Class: **** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00139	-16.37	42.558	0.00206	0.00101	0.00108
AL	62.72964	8,031.02	0.169	62.82903	62.74200	62.61790
AS	0.01449	-2.35	11.009	0.01535	0.01548	0.01265
B	0.05599	1,072.75	4.428	0.05655	0.05328	0.05815
BA	0.11263	81,388.72	1.727	0.11333	0.11043	0.11412
BE	0.00626	2,587.41	1.105	0.00625	0.00619	0.00633
CA	9.91750	11,653.71	0.769	9.99844	9.90704	9.84701
CD	0.00107	215.93	12.621	0.00103	0.00097	0.00123
CO	0.02705	173.30	0.467	0.02693	0.02703	0.02718
CR	0.06714	751.73	1.563	0.06764	0.06593	0.06785
CU	0.07058	869.31	1.689	0.07061	0.06937	0.07175
FE	97.20196	32,798.34	0.812	98.00089	97.18324	96.42175
K	5.72812	2,308.69	0.483	5.75929	5.71870	5.70638
LI	0.27602	1,883.18	0.534	0.27646	0.27723	0.27438
MG	9.84040	20,831.22	0.446	9.88728	9.83365	9.80027
MN	0.44009	31,863.19	1.643	0.44153	0.43225	0.44649
MO	0.03952	198.16	0.370	0.03952	0.03938	0.03967
NA	6.85194	8,368.96	0.712	6.87685	6.88324	6.79572
NI	0.04988	208.21	0.488	0.04979	0.05015	0.04969
P	2.77121	1,602.18	0.197	2.77667	2.77120	2.76575
PB	0.08121	135.62	2.502	0.08301	0.08161	0.07900
S	109.09755	23,840.07	0.316	109.49343	108.86434	108.93487
SB	-0.00524	5.15	16.250	-0.00451	-0.00504	-0.00617
SE	0.00533	1.63	26.572	0.00381	0.00558	0.00661
SI	2.29706	548.19	0.500	2.28569	2.30867	2.29683
SN	0.01815	26.82	2.122	0.01784	0.01858	0.01803
SR	0.21208	179,151.54	1.667	0.21307	0.20816	0.21502
TI	0.38172	25,261.22	1.589	0.38396	0.37485	0.38635
TL	0.00214	-8.60	70.586	0.00296	0.00040	0.00307
V	0.12581	2,001.02	1.707	0.12675	0.12335	0.12732
Y1	24190.95862	24,190.96	0.293	24113.03769	24251.44874	24208.38942
Y2A	360918.29794	360,918.30	1.428	359242.20305	366701.64234	356811.04844
Y2R	25992.00961	25,992.01	0.733	25790.92678	26015.22260	26169.87946
ZN	0.12018	1,753.96	0.538	0.12092	0.11972	0.11990
ZR	0.01182	38.43	13.885	0.00993	0.01287	0.01265

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/11/2013 14:42

Sample Number: **7265126** Class: **** Batch: 133125708002

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00159	-3.05	27.239	0.00198	0.00112	0.00166
AL	148.37283	18,314.64	0.472	147.91943	149.17996	148.01910
AS	0.03817	-7.55	14.857	0.03340	0.04444	0.03666
B	-0.03097	1,726.17	6.627	-0.03308	-0.03084	-0.02898
BA	0.26160	180,848.80	0.670	0.26004	0.26350	0.26127
BE	0.00393	1,375.13	0.285	0.00392	0.00394	0.00392
CA	2.12533	2,481.63	0.702	2.12455	2.14062	2.11082
CD	-0.00115	670.51	18.931	-0.00091	-0.00134	-0.00120
CO	0.01559	108.46	1.641	0.01567	0.01531	0.01580
CR	0.18921	2,009.81	1.154	0.18678	0.19100	0.18987
CU	0.13652	1,591.62	1.269	0.13579	0.13850	0.13527
FE	347.52718	101,044.87	0.509	346.40772	349.56667	346.60715
K	8.18053	3,173.95	0.075	8.18017	8.17457	8.18685
LI	0.43122	2,785.59	0.192	0.43154	0.43183	0.43028
MG	7.60402	15,503.90	0.451	7.61428	7.63198	7.56580
MN	0.38359	26,579.56	0.712	0.38107	0.38650	0.38321
MO	0.00317	16.81	1.366	0.00313	0.00317	0.00322
NA	3.61807	4,244.14	0.278	3.61470	3.62937	3.61014
NI	0.06529	232.72	1.069	0.06573	0.06566	0.06449
P	1.07573	601.15	0.229	1.07823	1.07564	1.07332
PB	0.12744	208.46	2.133	0.12535	0.12644	0.13051
S	15.41542	3,247.27	0.073	15.42559	15.41743	15.40325
SB	-0.02267	10.18	20.126	-0.02076	-0.01937	-0.02787
SE	0.01119	3.31	27.957	0.01473	0.00881	0.01003
SI	4.17165	952.93	0.275	4.18452	4.16790	4.16254
SN	0.02380	33.18	1.022	0.02381	0.02404	0.02355
SR	0.07451	60,222.05	0.571	0.07419	0.07499	0.07435
TI	0.95973	60,756.65	0.713	0.95340	0.96700	0.95878
TL	0.00191	-15.75	32.569	0.00251	0.00127	0.00196
V	0.33898	5,189.65	0.947	0.33617	0.34248	0.33829
Y1	23377.83860	23,377.84	0.141	23339.87409	23398.00733	23395.63437
Y2A	345338.08892	345,338.09	0.631	347191.52289	342938.03915	345884.70471
Y2R	25004.79313	25,004.79	0.291	25082.18563	24994.23192	24937.96185
ZN	0.22736	3,405.20	0.080	0.22756	0.22731	0.22721
ZR	0.09490	258.25	1.314	0.09612	0.09494	0.09363

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/11/2013 14:46

Sample Number: **7266804** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00298	7.66	24.498	0.00382	0.00250	0.00262
AL	74.67978	9,504.90	0.963	74.97960	75.20063	73.85910
AS	0.03899	9.69	4.210	0.04061	0.03901	0.03733
B	0.01404	619.59	1.735	0.01430	0.01381	0.01401
BA	0.49632	356,899.64	0.511	0.49463	0.49924	0.49508
BE	0.00350	1,220.08	0.368	0.00349	0.00351	0.00350
CA	17.53760	20,384.80	0.951	17.60728	17.65820	17.34730
CD	0.00384	239.46	3.340	0.00378	0.00376	0.00399
CO	0.03529	254.05	0.850	0.03563	0.03509	0.03514
CR	0.25610	2,965.06	0.480	0.25629	0.25723	0.25479
CU	0.19527	2,401.72	1.088	0.19481	0.19759	0.19342
FE	83.46322	28,151.74	1.116	84.15357	83.83266	82.40343
K	3.06239	1,224.51	1.510	3.09682	3.08054	3.00981
LI	0.06336	490.82	0.039	0.06338	0.06337	0.06333
MG	10.61930	22,334.33	0.991	10.66859	10.69087	10.49844
MN	1.27380	91,778.03	0.393	1.27511	1.27802	1.26826
MO	0.00519	27.72	3.677	0.00532	0.00497	0.00528
NA	1.71242	2,066.90	1.332	1.70963	1.73650	1.69115
NI	0.06952	294.21	0.423	0.06974	0.06963	0.06918
P	4.46514	2,610.41	0.103	4.46556	4.46951	4.46037
PB	0.42370	634.86	0.427	0.42392	0.42539	0.42179
S	7.35522	1,619.36	0.125	7.36023	7.36083	7.34458
SB	-0.00575	6.36	9.172	-0.00629	-0.00524	-0.00570
SE	0.00637	1.98	17.325	0.00690	0.00711	0.00510
SI	2.09342	497.02	1.297	2.11794	2.09809	2.06424
SN	0.03288	46.91	0.685	0.03263	0.03298	0.03305
SR	0.08012	67,368.20	0.569	0.08039	0.08038	0.07959
TI	2.34186	154,209.09	0.456	2.34400	2.35130	2.33026
TL	0.00300	-11.74	42.252	0.00158	0.00342	0.00400
V	0.17444	2,772.25	0.627	0.17406	0.17567	0.17359
Y1	24457.22846	24,457.23	0.163	24482.24903	24478.25493	24411.18141
Y2A	359260.03650	359,260.04	0.441	359243.86198	357684.72130	360851.52621
Y2R	25834.59546	25,834.60	0.844	25773.07884	25653.94396	26076.76359
ZN	1.20168	16,156.01	0.157	1.20163	1.20359	1.19982
ZR	0.01062	34.88	9.593	0.00974	0.01174	0.01039

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/11/2013 14:50

Sample Number: **7266806** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00186	-10.04	7.536	0.00199	0.00188	0.00171
AL	10.65613	1,318.87	1.003	10.63338	10.77250	10.56251
AS	0.00673	-0.61	11.202	0.00668	0.00750	0.00600
B	0.00436	131.44	7.635	0.00398	0.00458	0.00452
BA	0.10386	74,479.51	1.274	0.10233	0.10468	0.10456
BE	0.00115	62.07	2.289	0.00115	0.00112	0.00117
CA	8.28834	9,412.08	0.210	8.26899	8.30273	8.29329
CD	0.00131	50.99	1.664	0.00131	0.00133	0.00129
CO	0.00737	54.50	5.056	0.00714	0.00780	0.00717
CR	0.01815	202.46	1.947	0.01854	0.01787	0.01803
CU	0.02974	324.41	2.505	0.02948	0.03058	0.02916
FE	15.60176	5,250.23	0.649	15.55300	15.71813	15.53413
K	0.40857	154.53	7.577	0.44419	0.38819	0.39332
LI	0.00622	108.47	8.660	0.00682	0.00579	0.00604
MG	1.72213	3,532.99	0.249	1.72185	1.72655	1.71800
MN	0.48416	34,782.19	1.311	0.47686	0.48836	0.48726
MO	0.00216	12.26	8.008	0.00196	0.00228	0.00224
NA	0.38291	436.58	3.287	0.39716	0.37334	0.37822
NI	0.01333	66.52	2.609	0.01374	0.01312	0.01314
P	0.91407	523.68	0.034	0.91443	0.91393	0.91386
PB	0.13244	195.10	0.289	0.13237	0.13285	0.13209
S	7.98480	1,725.16	0.102	7.99410	7.97911	7.98119
SB	0.00074	3.58	48.336	0.00069	0.00112	0.00041
SE	0.00561	1.97	37.660	0.00609	0.00744	0.00330
SI	2.07680	478.54	0.164	2.08058	2.07589	2.07395
SN	0.01996	28.98	2.986	0.02026	0.02036	0.01928
SR	0.04451	37,297.79	1.294	0.04385	0.04486	0.04483
TI	0.45372	29,791.72	1.071	0.44813	0.45688	0.45616
TL	0.00194	-5.90	45.929	0.00197	0.00103	0.00282
V	0.03239	506.47	2.135	0.03164	0.03252	0.03300
Y1	23980.58636	23,980.59	0.140	24018.52777	23968.79997	23954.43135
Y2A	358107.71953	358,107.72	0.788	361327.05707	356057.14997	356938.95156
Y2R	25069.57648	25,069.58	0.157	25112.71965	25035.38254	25060.62725
ZN	0.14749	1,977.20	0.087	0.14743	0.14740	0.14764
ZR	0.00341	14.60	41.917	0.00494	0.00317	0.00211

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/11/2013 14:54

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49186	6,991.84	0.260	0.49318	0.49063	0.49178
AL	24.28704	2,828.64	0.596	24.26238	24.15622	24.44251
AS	0.50648	211.32	0.469	0.50739	0.50378	0.50826
B	0.46868	3,977.41	0.932	0.47309	0.46858	0.46436
BA	0.49464	334,055.71	0.389	0.49654	0.49469	0.49269
BE	0.47414	218,630.23	0.534	0.47697	0.47209	0.47336
CA	23.73006	25,163.40	0.408	23.71421	23.64226	23.83370
CD	0.50093	8,453.10	0.318	0.50241	0.49924	0.50115
CO	0.50803	2,911.89	0.291	0.50890	0.50632	0.50886
CR	0.46870	5,141.27	0.270	0.47016	0.46791	0.46803
CU	0.48621	6,087.93	0.385	0.48836	0.48495	0.48531
FE	23.71382	7,493.38	0.331	23.70459	23.64035	23.79653
K	23.87457	8,757.42	0.468	23.78058	23.84517	23.99797
LI	0.48796	2,983.07	0.584	0.48781	0.48519	0.49088
MG	23.57914	45,042.89	0.277	23.55806	23.52691	23.65243
MN	0.49083	33,224.34	0.655	0.49392	0.48750	0.49107
MO	0.50257	2,356.28	0.376	0.50396	0.50042	0.50333
NA	23.82169	26,474.18	0.292	23.76300	23.80358	23.89848
NI	0.49950	1,957.40	0.264	0.50081	0.49818	0.49952
P	0.51024	279.03	0.310	0.51185	0.50869	0.51017
PB	0.50411	686.83	0.588	0.50636	0.50075	0.50522
S	24.91710	5,126.09	0.203	24.95202	24.85922	24.94007
SB	0.50868	390.12	0.244	0.50760	0.51004	0.50840
SE	0.51057	181.98	0.186	0.50976	0.51161	0.51034
SI	24.75266	5,314.22	0.505	24.72442	24.64427	24.88929
SN	0.49209	618.56	0.316	0.49295	0.49030	0.49302
SR	0.48822	385,618.51	0.562	0.49093	0.48830	0.48544
TI	0.47988	29,731.19	0.455	0.48238	0.47896	0.47831
TL	0.49826	339.91	0.156	0.49804	0.49912	0.49761
V	0.48153	7,113.49	0.395	0.48279	0.47934	0.48245
Y1	22793.39706	22,793.40	0.096	22780.20063	22818.61015	22781.38039
Y2A	337406.68469	337,406.68	0.655	334865.33333	338470.07979	338884.64096
Y2R	23617.54660	23,617.55	0.500	23700.23981	23670.17500	23482.22500
ZN	0.50307	6,339.39	0.278	0.50418	0.50150	0.50352
ZR	0.48619	1,228.32	0.367	0.48654	0.48426	0.48777

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 35 Date/Time: 11/11/2013 14:58

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00172	-12.47	16.977	0.00206	0.00153	0.00158
AL	-0.00611	5.21	233.931	0.01009	-0.01693	-0.01149
AS	0.00059	-2.31	264.828	-0.00121	0.00137	0.00161
B	0.00084	8.20	109.495	0.00063	0.00004	0.00185
BA	0.00004	75.97	84.127	0.00001	0.00003	0.00007
BE	0.00027	-361.97	6.209	0.00025	0.00027	0.00028
CA	-0.01685	75.29	17.312	-0.02009	-0.01442	-0.01606
CD	0.00000	-4.09	2363.246	0.00007	-0.00010	0.00003
CO	0.00035	5.80	29.782	0.00031	0.00047	0.00027
CR	-0.00008	-4.80	799.986	0.00061	-0.00067	-0.00018
CU	0.00027	-36.15	47.255	0.00012	0.00036	0.00032
FE	0.00085	0.02	552.579	0.00574	-0.00367	0.00049
K	-0.04028	-19.47	17.247	-0.03541	-0.04823	-0.03719
LI	0.00097	66.62	72.201	0.00020	0.00156	0.00115
MG	-0.00212	-1.20	21.934	-0.00159	-0.00245	-0.00232
MN	0.00005	22.63	41.406	0.00004	0.00005	0.00008
MO	0.00018	2.44	93.326	0.00015	0.00036	0.00003
NA	-0.02691	-45.11	24.697	-0.03157	-0.02985	-0.01930
NI	-0.00034	12.11	37.623	-0.00031	-0.00023	-0.00048
P	-0.00003	-0.34	2436.833	-0.00081	0.00019	0.00053
PB	-0.00099	4.04	107.290	-0.00055	-0.00220	-0.00022
S	0.00163	-4.36	154.010	-0.00096	0.00407	0.00179
SB	0.00030	1.87	143.160	0.00000	0.00011	0.00079
SE	0.00105	0.30	183.646	0.00323	0.00041	-0.00048
SI	0.00346	6.29	179.452	0.00527	0.00857	-0.00345
SN	-0.00039	2.14	132.086	-0.00056	0.00019	-0.00079
SR	-0.00010	-99.75	6.519	-0.00009	-0.00011	-0.00010
TI	0.00025	30.88	18.151	0.00023	0.00022	0.00030
TL	0.00059	-5.51	329.308	0.00268	0.00023	-0.00114
V	-0.00021	-11.18	59.808	-0.00031	-0.00025	-0.00007
Y1	23475.69193	23,475.69	0.425	23419.30683	23591.02120	23416.74777
Y2A	351597.46184	351,597.46	0.575	351014.10086	353845.55408	349932.73059
Y2R	23989.90539	23,989.91	0.377	23885.58307	24046.83753	24037.29557
ZN	-0.00098	15.33	3.320	-0.00095	-0.00101	-0.00096
ZR	-0.00118	2.24	92.916	-0.00176	-0.00186	0.00008

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/11/2013 15:02

Sample Number: **7266808** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00209	-5.96	23.043	0.00199	0.00261	0.00166
AL	20.80480	2,555.76	0.157	20.84134	20.79464	20.77842
AS	0.01097	0.44	21.379	0.01087	0.00868	0.01336
B	0.00800	235.96	4.932	0.00775	0.00779	0.00845
BA	0.25368	177,493.15	0.907	0.25138	0.25598	0.25369
BE	0.00161	283.47	2.043	0.00157	0.00164	0.00163
CA	35.02450	39,101.72	0.173	34.99061	35.09457	34.98830
CD	0.00223	93.41	3.042	0.00216	0.00224	0.00229
CO	0.00779	62.24	2.357	0.00800	0.00765	0.00773
CR	0.04457	494.00	0.833	0.04424	0.04497	0.04449
CU	0.06832	798.93	1.772	0.06735	0.06968	0.06794
FE	28.87067	9,610.53	0.062	28.86330	28.89105	28.85766
K	0.90059	344.28	0.548	0.90628	0.89763	0.89786
LI	0.01020	151.09	19.308	0.01001	0.01226	0.00834
MG	5.02050	10,220.36	0.201	5.02233	5.02957	5.00960
MN	0.71654	50,233.74	0.730	0.71063	0.72059	0.71839
MO	0.00303	16.37	1.974	0.00307	0.00296	0.00306
NA	1.49577	1,740.47	0.965	1.50806	1.49937	1.47989
NI	0.01844	84.87	2.359	0.01813	0.01893	0.01824
P	2.23891	1,269.08	0.165	2.23467	2.24067	2.24140
PB	0.18261	265.54	0.109	0.18259	0.18282	0.18242
S	7.52932	1,608.59	0.299	7.54033	7.50345	7.54417
SB	0.00044	4.56	432.499	-0.00062	0.00264	-0.00070
SE	0.01207	4.30	13.308	0.01303	0.01022	0.01297
SI	4.38560	998.56	0.464	4.39395	4.40043	4.36242
SN	0.02402	33.95	4.052	0.02450	0.02290	0.02466
SR	0.11359	92,919.27	1.036	0.11237	0.11473	0.11365
TI	0.87165	55,847.41	0.705	0.86601	0.87819	0.87074
TL	0.00147	-7.87	37.081	0.00102	0.00131	0.00208
V	0.07315	1,125.12	0.261	0.07294	0.07323	0.07330
Y1	23717.63547	23,717.64	0.098	23703.34976	23744.39112	23705.16552
Y2A	349509.48352	349,509.48	0.490	350368.44725	347537.90644	350622.09688
Y2R	24931.56759	24,931.57	0.313	24944.12235	24847.93041	25002.65000
ZN	0.28488	3,748.78	0.198	0.28544	0.28487	0.28432
ZR	0.00840	27.76	21.575	0.00818	0.01031	0.00671

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/11/2013 15:06

Sample Number: **7266676** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	k	0.00276	13.64	13.102	0.00291	0.00303	0.00235
AL	k	40.00323	4,778.34	0.602	39.76835	39.99176	40.24957
AS	k	-0.20077	-87.33	1.618	-0.20152	-0.19722	-0.20359
B	k	0.69691	5,673.89	0.558	0.69831	0.69991	0.69251
BA		0.14102	94,477.56	0.105	0.14095	0.14119	0.14092
BE	k	0.00384	1,294.42	0.549	0.00386	0.00386	0.00382
CA		0.41895	550.54	0.607	0.41783	0.41716	0.42186
CD	k	0.14916	2,490.44	0.123	0.14913	0.14899	0.14936
CO	k	0.02445	142.65	0.362	0.02443	0.02438	0.02455
CR	k	0.10264	1,115.32	0.704	0.10189	0.10271	0.10333
CU	k	0.22876	2,836.53	0.539	0.23016	0.22783	0.22830
FE	k	0.00000	344,555.31	0.000	0.00000	0.00000	0.00000
K		3.63643	1,366.33	0.663	3.66205	3.63305	3.61420
LI		0.02714	227.83	11.498	0.02449	0.02636	0.03058
MG	k	1.89314	3,757.61	0.413	1.88867	1.88859	1.90216
MN		3.38728	227,270.86	0.099	3.39073	3.38704	3.38406
MO		-0.00344	-14.53	6.785	-0.00317	-0.00355	-0.00360
NA		1.56644	1,774.26	0.489	1.57487	1.55992	1.56453
NI	k	-0.01373	-40.27	5.766	-0.01299	-0.01457	-0.01364
P	k	2.10295	1,140.69	0.114	2.10571	2.10134	2.10181
PB	k	0.12763	175.95	1.330	0.12847	0.12568	0.12875
S	k	3.51513	716.45	0.157	3.52142	3.51100	3.51298
SB	k	0.04634	36.26	5.665	0.04457	0.04935	0.04509
SE	k	0.01754	6.15	20.893	0.02100	0.01370	0.01792
SI		2.23486	497.87	0.422	2.22662	2.24516	2.23280
SN		0.02291	31.10	2.602	0.02317	0.02332	0.02222
SR		0.03191	24,979.63	0.052	0.03193	0.03189	0.03191
TI	k	1.21895	74,761.43	0.224	1.21918	1.22156	1.21611
TL	k	-0.00819	-9.43	6.971	-0.00868	-0.00757	-0.00832
V	k	0.34095	5,013.13	0.065	0.34098	0.34072	0.34116
Y1		22700.43390	22,700.43	0.108	22682.08647	22728.26768	22690.94756
Y2A		334592.32320	334,592.32	0.067	334333.58333	334723.33333	334720.05295
Y2R		24259.03431	24,259.03	0.302	24342.11707	24230.93220	24204.05365
ZN	k	0.61475	7,623.71	0.191	0.61610	0.61421	0.61394
ZR		0.09563	252.43	2.305	0.09618	0.09320	0.09750

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/11/2013 15:10

Sample Number: **7266677** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00250	7.18	20.190	0.00229	0.00307	0.00212
AL	97.12872	11,928.54	0.332	96.97827	97.49877	96.90911
AS	0.05135	8.04	2.871	0.05102	0.05296	0.05007
B	0.06826	1,668.57	2.511	0.07011	0.06795	0.06672
BA	0.44236	307,703.02	0.504	0.44423	0.44296	0.43989
BE	0.00474	1,771.24	1.040	0.00480	0.00473	0.00470
CA	6.36564	7,208.04	0.291	6.37052	6.38122	6.34517
CD	0.00192	409.97	8.162	0.00209	0.00179	0.00188
CO	0.07847	512.65	0.408	0.07849	0.07814	0.07877
CR	0.15459	1,683.12	0.856	0.15553	0.15516	0.15307
CU	0.48151	5,952.37	1.121	0.48514	0.48408	0.47531
FE	189.75963	59,007.77	0.353	189.26692	190.52248	189.48950
K	16.58347	6,415.45	0.436	16.52091	16.66267	16.56682
LI	0.16469	1,102.76	0.669	0.16450	0.16588	0.16370
MG	32.45728	65,114.80	0.264	32.44255	32.54946	32.37985
MN	2.18588	152,328.83	0.910	2.20229	2.19160	2.16375
MO	0.00254	13.84	9.585	0.00248	0.00281	0.00233
NA	3.73897	4,370.47	0.460	3.71926	3.75084	3.74681
NI	0.14433	569.99	0.854	0.14554	0.14437	0.14307
P	2.04819	1,150.73	0.046	2.04711	2.04856	2.04888
PB	0.21515	322.96	0.268	0.21487	0.21581	0.21477
S	0.44367	87.06	0.321	0.44520	0.44240	0.44340
SB	-0.00253	14.61	38.970	-0.00334	-0.00143	-0.00282
SE	0.00494	1.27	40.284	0.00348	0.00721	0.00414
SI	3.94423	898.00	0.629	3.96279	3.95387	3.91604
SN	0.02851	39.41	2.333	0.02824	0.02803	0.02927
SR	0.06523	53,052.26	1.014	0.06582	0.06537	0.06451
TI	3.41465	217,487.93	0.825	3.43848	3.42193	3.38354
TL	0.00328	-13.68	16.997	0.00359	0.00361	0.00263
V	0.23654	3,649.72	0.786	0.23813	0.23698	0.23450
Y1	23484.14604	23,484.15	0.122	23452.04503	23506.65934	23493.73376
Y2A	347519.24353	347,519.24	0.776	344733.41075	347710.68348	350113.63636
Y2R	24913.58718	24,913.59	0.172	24916.37517	24869.38735	24954.99900
ZN	0.35664	4,866.25	0.192	0.35732	0.35596	0.35665
ZR	0.06920	189.10	0.957	0.06862	0.06992	0.06905

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/11/2013 15:14

Sample Number: **7266678** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00304	14.83	10.232	0.00336	0.00274	0.00302
AL	131.14347	16,152.00	0.174	131.30491	130.88296	131.24255
AS	0.09578	24.00	1.362	0.09441	0.09700	0.09592
B	0.04962	1,837.91	1.629	0.05024	0.04870	0.04992
BA	0.46840	322,953.72	0.840	0.47293	0.46622	0.46603
BE	0.00636	2,515.55	0.948	0.00637	0.00629	0.00641
CA	15.40716	17,320.81	0.409	15.43754	15.33478	15.44916
CD	0.00092	518.39	30.157	0.00095	0.00118	0.00063
CO	0.11543	735.34	0.647	0.11461	0.11607	0.11560
CR	0.18559	1,996.52	0.800	0.18708	0.18411	0.18556
CU	0.40761	4,952.82	1.186	0.41214	0.40252	0.40817
FE	249.48583	75,717.06	0.402	250.13559	248.33164	249.99027
K	13.07070	5,065.25	0.247	13.07631	13.03601	13.09976
LI	0.19205	1,283.32	1.289	0.18920	0.19329	0.19365
MG	33.01188	66,336.38	0.171	32.95735	33.00839	33.06991
MN	3.85602	266,345.60	1.198	3.90853	3.82166	3.83786
MO	0.00400	21.13	4.267	0.00413	0.00407	0.00381
NA	1.50858	1,757.62	0.224	1.50827	1.50537	1.51210
NI	0.16158	639.21	0.417	0.16105	0.16135	0.16234
P	2.21690	1,259.45	0.503	2.20403	2.22322	2.22347
PB	0.31286	470.52	0.131	0.31305	0.31314	0.31239
S	0.61723	124.58	0.330	0.61496	0.61889	0.61783
SB	0.02860	43.68	8.945	0.02634	0.03138	0.02808
SE	0.00760	2.11	62.429	0.00333	0.01271	0.00676
SI	1.86790	429.13	0.577	1.86068	1.88029	1.86272
SN	0.03422	47.30	2.483	0.03513	0.03346	0.03405
SR	0.08162	65,802.36	0.971	0.08218	0.08071	0.08196
TI	3.18970	201,382.04	0.913	3.21890	3.16069	3.18950
TL	0.00461	-13.69	57.782	0.00641	0.00155	0.00587
V	0.31485	4,810.67	0.789	0.31673	0.31203	0.31578
Y1	23752.63195	23,752.63	0.179	23800.04328	23717.63335	23740.21920
Y2A	344476.13310	344,476.13	0.742	341657.57979	346646.23424	345124.58527
Y2R	24961.56406	24,961.56	0.421	25025.61353	25018.94091	24840.13775
ZN	0.39243	5,467.89	0.412	0.39056	0.39341	0.39332
ZR	0.06778	185.70	4.424	0.06484	0.07083	0.06768

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/11/2013 15:19

Sample Number: **7266679** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00208	0.62	18.801	0.00240	0.00221	0.00164
AL	117.65603	14,442.60	1.179	119.14477	116.40071	117.42262
AS	0.03930	-3.03	5.232	0.04125	0.03716	0.03950
B	-0.01702	1,477.74	25.526	-0.02198	-0.01390	-0.01517
BA	0.21338	148,193.19	1.175	0.21053	0.21526	0.21433
BE	0.00400	1,415.05	1.072	0.00395	0.00403	0.00402
CA	2.33698	2,706.26	1.032	2.36022	2.31208	2.33863
CD	-0.00023	560.51	183.267	-0.00072	0.00010	-0.00009
CO	0.01424	93.76	1.688	0.01413	0.01451	0.01407
CR	0.14969	1,594.03	0.915	0.14829	0.15103	0.14975
CU	0.11853	1,418.42	0.938	0.11725	0.11908	0.11925
FE	282.34005	84,184.99	1.349	286.44088	278.91091	281.66836
K	7.65061	2,954.18	1.333	7.63823	7.55541	7.75818
LI	0.31411	2,037.32	0.740	0.31415	0.31177	0.31642
MG	7.69884	15,623.28	0.669	7.75402	7.65204	7.69046
MN	0.29639	20,636.35	0.996	0.29299	0.29796	0.29824
MO	0.00235	12.97	15.822	0.00200	0.00231	0.00274
NA	5.10555	5,967.41	0.732	5.14764	5.07630	5.09272
NI	0.05350	194.95	0.575	0.05357	0.05316	0.05376
P	1.00247	564.69	0.295	1.00545	0.99954	1.00243
PB	0.10529	173.28	0.302	0.10558	0.10495	0.10533
S	17.19127	3,652.43	0.252	17.22223	17.14172	17.20986
SB	-0.01658	10.02	4.250	-0.01704	-0.01577	-0.01694
SE	0.00620	1.64	12.976	0.00695	0.00629	0.00535
SI	2.28498	522.12	1.007	2.31044	2.26566	2.27882
SN	0.02164	30.65	2.471	0.02133	0.02133	0.02226
SR	0.07430	60,321.54	1.293	0.07319	0.07492	0.07478
TI	0.41521	26,415.02	1.252	0.40930	0.41908	0.41725
TL	0.00397	-11.90	48.414	0.00579	0.00196	0.00417
V	0.28098	4,317.55	0.852	0.27825	0.28272	0.28196
Y1	23566.50592	23,566.51	0.126	23543.48043	23600.06331	23555.97403
Y2A	346943.48386	346,943.48	1.132	351305.85106	343690.99069	345833.60982
Y2R	24889.06550	24,889.07	0.706	24754.14172	25087.92500	24825.12979
ZN	0.19196	2,887.14	0.227	0.19146	0.19228	0.19214
ZR	0.06454	176.55	1.078	0.06438	0.06393	0.06530

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/11/2013 15:22

Sample Number: **7266681** Class: **** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00121	-11.17	71.879	0.00219	0.00090	0.00054
AL	78.03808	9,680.17	0.227	78.08741	78.18500	77.84183
AS	0.02978	-1.97	7.444	0.03127	0.02723	0.03084
B	0.05268	1,598.16	1.105	0.05284	0.05317	0.05204
BA	0.84162	588,098.68	0.564	0.83883	0.83894	0.84710
BE	0.00599	2,374.14	0.203	0.00597	0.00600	0.00599
CA	32.71984	36,902.53	0.216	32.67175	32.68691	32.80087
CD	0.00133	417.38	2.468	0.00130	0.00136	0.00131
CO	0.08482	538.24	0.801	0.08433	0.08560	0.08455
CR	0.16941	1,856.37	0.815	0.16829	0.16898	0.17095
CU	0.46100	5,776.16	0.934	0.45655	0.46514	0.46132
FE	199.14046	62,319.19	0.154	199.00510	198.92475	199.49153
K	16.21439	6,338.26	0.248	16.16998	16.22503	16.24816
LI	0.19212	1,306.61	1.258	0.18998	0.19474	0.19163
MG	35.71335	72,279.41	0.072	35.68836	35.71195	35.73974
MN	3.98139	278,729.11	0.277	3.97380	3.97634	3.99402
MO	0.00329	17.38	3.651	0.00315	0.00333	0.00338
NA	1.48844	1,748.76	0.316	1.48350	1.49286	1.48897
NI	0.17392	685.80	0.341	0.17387	0.17454	0.17336
P	3.78748	2,121.10	0.316	3.78354	3.80094	3.77796
PB	0.10497	164.09	1.353	0.10656	0.10384	0.10451
S	0.32578	61.99	1.535	0.32347	0.33152	0.32236
SB	-0.01014	9.53	7.236	-0.01022	-0.00937	-0.01083
SE	0.00550	1.56	36.856	0.00771	0.00508	0.00372
SI	5.20344	1,195.24	0.523	5.17386	5.22746	5.20900
SN	0.03429	46.72	1.063	0.03470	0.03402	0.03414
SR	0.10999	89,880.87	0.472	0.10939	0.11030	0.11028
TI	2.66251	170,374.37	0.460	2.64842	2.67042	2.66870
TL	0.00339	-11.59	56.068	0.00220	0.00239	0.00558
V	0.24580	3,806.13	0.308	0.24504	0.24656	0.24580
Y1	23419.76159	23,419.76	0.281	23431.23667	23349.03078	23479.01732
Y2A	349121.73745	349,121.74	0.130	349590.49436	349087.34240	348687.37558
Y2R	25174.64585	25,174.65	0.569	25300.83816	25203.96445	25019.13494
ZN	0.40666	5,504.99	0.293	0.40626	0.40800	0.40572
ZR	0.07335	202.21	0.559	0.07308	0.07382	0.07314

LANCASTER LABORATORIES

Run Name: 1331503T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/11/2013 15:27

Sample Number: **7266682** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00087	-9.06	49.125	0.00065	0.00136	0.00060
AL	62.37158	7,636.17	0.699	62.66730	61.87062	62.57681
AS	0.05055	3.04	4.111	0.05102	0.04828	0.05236
B	-0.02444	1,306.54	4.755	-0.02578	-0.02373	-0.02380
BA	0.19114	132,358.23	0.576	0.19209	0.18993	0.19139
BE	0.00133	144.65	3.571	0.00138	0.00130	0.00130
CA	1.48559	1,753.49	0.792	1.49386	1.47213	1.49079
CD	0.00040	533.67	98.093	0.00010	0.00084	0.00025
CO	0.00229	32.04	18.577	0.00216	0.00276	0.00194
CR	0.14134	1,501.23	0.365	0.14074	0.14165	0.14162
CU	0.10460	1,188.25	0.651	0.10389	0.10466	0.10525
FE	264.08227	79,285.17	0.919	265.11267	261.30939	265.82474
K	6.57111	2,533.25	1.372	6.58196	6.47601	6.65536
LI	0.07155	512.80	4.846	0.06770	0.07443	0.07252
MG	3.92319	7,966.99	0.658	3.92931	3.89485	3.94541
MN	0.33058	22,945.48	0.552	0.33268	0.32937	0.32969
MO	0.00195	11.02	15.691	0.00170	0.00229	0.00187
NA	2.03902	2,370.94	0.822	2.02169	2.04024	2.05514
NI	0.00894	17.58	4.308	0.00899	0.00929	0.00853
P	0.43267	243.23	0.581	0.42986	0.43344	0.43471
PB	0.08788	133.41	0.733	0.08861	0.08763	0.08740
S	2.84527	596.91	0.391	2.83781	2.83993	2.85805
SB	-0.01606	9.04	13.976	-0.01482	-0.01865	-0.01471
SE	0.00321	0.80	75.237	0.00589	0.00119	0.00256
SI	3.53995	804.66	0.481	3.53517	3.52582	3.55886
SN	0.02184	30.85	4.505	0.02237	0.02071	0.02244
SR	0.05433	43,973.71	0.738	0.05468	0.05389	0.05441
TI	1.06244	67,364.40	0.398	1.06293	1.05799	1.06640
TL	0.00359	-12.21	17.935	0.00295	0.00424	0.00359
V	0.25328	3,884.14	0.612	0.25502	0.25206	0.25275
Y1	23521.55409	23,521.55	0.027	23528.46718	23520.10059	23516.09452
Y2A	345878.67728	345,878.68	0.315	345413.90179	345097.62774	347124.50232
Y2R	24855.54889	24,855.55	0.711	24723.91261	25056.53869	24786.19537
ZN	0.07111	1,305.92	0.628	0.07084	0.07163	0.07087
ZR	0.13323	358.17	1.977	0.13406	0.13028	0.13535

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 43

Date/Time: 11/11/2013 15:31

Sample Number: **Z266800**

Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG		0.02483	429.00	23.073	0.02081	0.03138	0.02228
AL	k	52.51679	6,804.32	9.008	50.86112	48.83669	57.85257
AS		0.21674	105.64	110.386	0.49289	0.08589	0.07146
B	k	0.18363	2,854.56	34.449	0.14710	0.25668	0.14713
BA		1.29080	905,869.87	1.094	1.28024	1.30685	1.28532
BE	k	0.02169	9,818.55	15.275	0.01918	0.02545	0.02044
CA		20.94334	24,755.32	9.453	20.25561	19.39921	23.17519
CD		0.00109	640.42	3447.124	0.04398	-0.01602	-0.02470
CO		0.07885	675.45	141.934	0.20796	0.01914	0.00945
CR		0.42521	4,726.07	15.429	0.37471	0.49937	0.40155
CU	k	0.63222	8,009.59	16.582	0.55045	0.75041	0.59580
FE		227.22582	73,336.28	10.463	218.89778	208.73563	254.04404
K		4.35936	1,776.90	9.457	4.21402	4.03944	4.82462
LI		0.94506	6,352.07	10.391	0.91376	0.86632	1.05509
MG		9.06983	19,435.11	9.784	8.75326	8.38411	10.07212
MN		21.64800	1,533,709.25	9.194	22.58628	19.36186	22.99585
MO		0.06449	423.28	135.387	0.16520	0.01824	0.01003
NA		3.35758	4,139.61	10.794	3.23422	3.07294	3.76559
NI		0.07273	382.68	124.551	0.17725	0.02419	0.01677
P		2.43700	1,850.67	135.018	6.23238	0.69087	0.38775
PB		0.27426	527.41	136.168	0.70492	0.07812	0.03975
S		1.52762	423.72	134.107	3.89090	0.43649	0.25548
SB		0.10740	142.86	172.215	0.32067	0.01056	-0.00904
SE		0.26809	133.40	133.554	0.68109	0.07790	0.04527
SI	k	5.61668	1,345.37	13.837	5.21388	5.12359	6.51257
SN		0.19482	347.11	133.828	0.49551	0.05722	0.03173
SR		0.11497	93,271.42	16.963	0.09969	0.13694	0.10829
TI		1.90633	121,153.17	16.474	1.66093	2.26024	1.79780
TL		0.32315	329.48	130.837	0.81048	0.10506	0.05392
V	k	0.23508	3,612.98	17.303	0.20524	0.28141	0.21859
Y1		0.00000	0.00	0.000	26093.16343	62499.52058	67374.63860
Y2A		350921.87541	350,921.88	11.231	373265.75979	305415.17561	374084.69082
Y2R		26402.15929	26,402.16	5.970	26845.62787	27709.00000	24651.85000
ZN		0.54216	9,909.72	140.399	1.41996	0.14181	0.06469
ZR		0.90230	2,533.95	9.435	0.87072	0.83748	0.99871

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 44

Date/Time: 11/11/2013 15:35

Sample Number: **Z266802**

Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00336	36.90	4.437	0.00353	0.00327	0.00327
AL	2.31175	658.40	4.774	2.37615	2.37479	2.18432
AS	0.01048	5.03	7.463	0.01137	0.01014	0.00992
B	0.04345	1,083.57	7.485	0.04689	0.04303	0.04043
BA	0.06848	128,687.37	7.145	0.07361	0.06796	0.06387
BE	0.00202	1,279.90	4.450	0.00211	0.00201	0.00193
CA	0.80817	2,277.43	4.575	0.83706	0.82094	0.76650
CD	0.00088	68.67	9.467	0.00097	0.00080	0.00087
CO	0.01102	210.95	7.037	0.01186	0.01085	0.01034
CR	0.01251	366.97	5.832	0.01327	0.01244	0.01182
CU	0.00871	178.07	6.689	0.00921	0.00886	0.00807
FE	5.76223	4,403.62	4.530	5.94124	5.88275	5.46269
K	0.38507	328.87	9.609	0.41504	0.39645	0.34371
LI	0.02120	448.35	8.500	0.02076	0.02319	0.01967
MG	0.37970	1,768.84	4.619	0.39128	0.38831	0.35952
MN	0.58851	110,739.98	7.014	0.63189	0.58393	0.54971
MO	0.03230	475.05	7.234	0.03481	0.03191	0.03018
NA	0.31011	793.29	7.008	0.32538	0.31972	0.28523
NI	0.00789	134.35	8.805	0.00866	0.00768	0.00732
P	0.11808	199.04	6.925	0.12700	0.11629	0.11095
PB	0.00722	47.41	6.375	0.00740	0.00757	0.00670
S	0.09786	48.08	6.597	0.10419	0.09810	0.09129
SB	0.00366	14.95	20.771	0.00382	0.00433	0.00283
SE	0.00315	3.21	12.749	0.00350	0.00271	0.00325
SI	0.12534	77.75	3.973	0.12684	0.12939	0.11978
SN	0.06679	267.79	6.906	0.07179	0.06589	0.06269
SR	0.02380	52,228.71	7.127	0.02558	0.02364	0.02220
TI	0.09833	16,943.52	7.060	0.10562	0.09755	0.09181
TL	0.01002	3.96	4.204	0.01038	0.01012	0.00955
V	0.01499	594.62	9.309	0.01636	0.01503	0.01357
Y1	70843.67510	70,843.68	0.171	70711.31384	70870.82806	70948.88341
Y2A	938283.97010	938,283.97	0.618	932347.00997	938566.61130	943938.28904
Y2R	56705.75401	56,705.75	0.521	56682.15000	57012.00438	56423.10765
ZN	0.03134	1,318.40	7.253	0.03378	0.03096	0.02928
ZR	0.01707	115.52	3.241	0.01740	0.01736	0.01643

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/11/2013 15:39

Sample Number: **Z266800**

Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00234	-8.00	8.220	0.00246	0.00212	0.00245
AL	0.87632	240.36	2.300	0.89939	0.86214	0.86743
AS	0.00708	0.83	8.109	0.00699	0.00656	0.00770
B	0.00046	65.27	51.869	0.00057	0.00062	0.00019
BA	0.01851	32,252.67	5.565	0.01963	0.01828	0.01761
BE	0.00082	-234.55	0.715	0.00082	0.00082	0.00083
CA	0.34973	1,034.28	0.677	0.35189	0.35008	0.34720
CD	0.00013	15.84	15.730	0.00015	0.00013	0.00011
CO	0.00162	38.24	8.509	0.00177	0.00150	0.00159
CR	0.00411	103.47	5.198	0.00435	0.00403	0.00394
CU	0.00217	-33.54	5.282	0.00211	0.00210	0.00230
FE	3.69559	2,631.51	0.887	3.72989	3.69235	3.66454
K	0.00290	-7.45	422.417	-0.00731	0.01645	-0.00045
LI	-0.00568	58.57	4.517	-0.00544	-0.00595	-0.00564
MG	0.14718	642.46	1.156	0.14891	0.14714	0.14550
MN	0.40260	70,072.14	5.519	0.42675	0.39805	0.38301
MO	-0.00023	1.26	26.641	-0.00018	-0.00022	-0.00030
NA	0.01471	4.14	28.986	0.01467	0.01046	0.01899
NI	-0.00124	22.69	19.124	-0.00100	-0.00124	-0.00147
P	0.07818	122.37	4.742	0.08226	0.07725	0.07502
PB	0.00181	22.48	47.981	0.00281	0.00129	0.00133
S	0.06256	23.95	6.195	0.06630	0.06282	0.05856
SB	-0.00209	0.92	19.171	-0.00246	-0.00167	-0.00212
SE	0.00032	0.08	248.995	0.00115	-0.00042	0.00022
SI	0.03358	28.29	9.532	0.03386	0.03662	0.03024
SN	-0.00119	3.07	8.365	-0.00109	-0.00119	-0.00129
SR	0.00129	2,578.95	6.359	0.00138	0.00127	0.00122
TI	0.02586	4,148.17	5.723	0.02750	0.02548	0.02462
TL	0.00681	-2.06	2.254	0.00697	0.00681	0.00666
V	0.00241	73.96	8.264	0.00256	0.00249	0.00218
Y1	65973.77056	65,973.77	0.606	65616.96191	65898.41730	66405.93249
Y2A	867302.24253	867,302.24	0.466	871948.92027	864620.18272	865337.62458
Y2R	52799.66823	52,799.67	0.848	53309.75110	52616.74811	52472.50550
ZN	0.01785	733.40	6.055	0.01904	0.01758	0.01693
ZR	-0.00082	6.93	128.249	-0.00149	-0.00137	0.00039

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/11/2013 15:43

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.48478	6,978.18	3.595	0.50136	0.46662	0.48634
AL	24.28644	2,845.39	0.579	24.43128	24.15068	24.27735
AS	0.50382	211.39	1.327	0.51083	0.50312	0.49752
B	0.45635	3,924.51	3.800	0.47104	0.43722	0.46078
BA	0.48221	329,788.00	4.233	0.50565	0.46838	0.47260
BE	0.46452	216,873.82	3.856	0.48051	0.44516	0.46788
CA	23.64450	25,222.51	0.455	23.76876	23.58165	23.58310
CD	0.49710	8,435.98	1.709	0.50529	0.49769	0.48832
CO	0.50431	2,906.81	1.761	0.51339	0.50388	0.49565
CR	0.45799	5,086.30	4.026	0.47247	0.43723	0.46427
CU	0.47614	6,036.85	3.393	0.49235	0.46005	0.47601
FE	23.59860	7,501.65	0.605	23.76148	23.49506	23.53928
K	23.68841	8,741.05	0.320	23.60704	23.75703	23.70115
LI	0.47936	2,949.29	0.307	0.47847	0.47854	0.48106
MG	23.37108	44,916.61	0.141	23.33336	23.39411	23.38578
MN	0.48362	33,147.96	3.800	0.50071	0.46418	0.48595
MO	0.50002	2,357.65	1.558	0.50775	0.50016	0.49216
NA	23.64821	26,438.37	0.547	23.51613	23.77476	23.65373
NI	0.49583	1,954.08	1.719	0.50452	0.49550	0.48748
P	0.50609	278.31	1.852	0.51585	0.50528	0.49715
PB	0.50118	686.75	1.932	0.51119	0.50047	0.49187
S	24.73023	5,116.33	1.780	25.15589	24.75810	24.27670
SB	0.50329	388.12	1.680	0.51043	0.50550	0.49395
SE	0.50021	179.29	1.656	0.50837	0.50045	0.49181
SI	24.58690	5,310.29	0.504	24.48004	24.55793	24.72273
SN	0.48615	614.60	1.397	0.49253	0.48692	0.47901
SR	0.48324	386,403.22	4.449	0.50378	0.46090	0.48503
TI	0.46984	29,476.30	3.672	0.48464	0.45089	0.47397
TL	0.49467	339.52	1.497	0.50179	0.49522	0.48701
V	0.47214	7,062.34	3.571	0.48791	0.45437	0.47414
Y1	22926.02376	22,926.02	1.468	22590.71200	22923.57547	23263.78380
Y2A	342048.81486	342,048.81	4.695	327933.88704	359521.15129	338691.40625
Y2R	23758.20052	23,758.20	0.630	23609.93705	23755.23952	23909.42500
ZN	0.49821	6,314.10	1.663	0.50587	0.49934	0.48942
ZR	0.48386	1,229.77	0.296	0.48221	0.48463	0.48475

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 47

Date/Time: 11/11/2013 15:47

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00159	-13.73	21.804	0.00199	0.00137	0.00142
AL	0.02292	8.44	140.002	0.03712	-0.01382	0.04547
AS	-0.00058	-2.75	411.940	0.00208	-0.00248	-0.00133
B	0.00042	4.67	39.856	0.00058	0.00043	0.00025
BA	0.00008	99.82	15.792	0.00008	0.00006	0.00008
BE	0.00025	-362.40	4.923	0.00023	0.00025	0.00025
CA	-0.01801	72.37	2.451	-0.01773	-0.01851	-0.01778
CD	-0.00010	-5.51	13.226	-0.00011	-0.00009	-0.00009
CO	-0.00009	3.14	175.685	-0.00020	-0.00014	0.00008
CR	0.00006	-3.10	347.230	0.00030	-0.00005	-0.00007
CU	0.00029	-34.93	230.619	-0.00012	0.00105	-0.00007
FE	0.02604	8.00	28.824	0.01764	0.03208	0.02841
K	-0.06378	-27.58	9.355	-0.06334	-0.06995	-0.05804
LI	-0.00076	54.83	367.082	0.00039	0.00127	-0.00394
MG	-0.00015	2.61	352.036	-0.00068	0.00039	-0.00017
MN	0.00059	58.72	14.369	0.00050	0.00067	0.00059
MO	0.00013	2.15	73.395	0.00024	0.00008	0.00007
NA	-0.01264	-28.36	45.035	-0.01018	-0.00859	-0.01915
NI	-0.00032	11.90	123.831	-0.00040	-0.00066	0.00011
P	-0.00025	-0.45	55.860	-0.00023	-0.00040	-0.00012
PB	0.00060	6.09	72.754	0.00075	0.00094	0.00011
S	0.00237	-4.09	139.520	0.00115	0.00612	-0.00016
SB	0.00119	2.49	70.765	0.00205	0.00116	0.00036
SE	0.00342	1.14	36.135	0.00389	0.00434	0.00201
SI	-0.00220	4.94	190.282	-0.00309	0.00236	-0.00587
SN	-0.00024	2.26	3.415	-0.00024	-0.00023	-0.00025
SR	-0.00011	-99.83	17.636	-0.00008	-0.00011	-0.00012
TI	0.00027	31.40	30.573	0.00026	0.00036	0.00020
TL	0.00012	-5.71	465.342	0.00060	0.00022	-0.00047
V	-0.00027	-11.70	105.088	0.00005	-0.00038	-0.00047
Y1	22870.84203	22,870.84	0.302	22907.49600	22791.16451	22913.86557
Y2A	341811.57814	341,811.58	0.336	340594.22694	341964.92686	342875.58062
Y2R	23447.58000	23,447.58	0.321	23443.13422	23374.60080	23525.00499
ZN	-0.00085	16.58	7.945	-0.00092	-0.00082	-0.00080
ZR	0.00094	7.50	16.897	0.00088	0.00083	0.00113

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 48

Date/Time: 11/11/2013 15:51

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00694	68.43	2.609	0.00713	0.00677	0.00693
AL	0.21500	30.92	9.748	0.19168	0.22103	0.23228
AS	0.01979	5.95	9.642	0.02195	0.01834	0.01907
B	0.04886	408.38	0.872	0.04931	0.04879	0.04847
BA	0.00552	3,820.37	0.525	0.00555	0.00550	0.00550
BE	0.00501	1,866.20	0.448	0.00501	0.00503	0.00499
CA	0.18508	288.94	0.925	0.18597	0.18310	0.18615
CD	0.00513	83.54	0.920	0.00508	0.00518	0.00513
CO	0.00536	34.74	3.423	0.00518	0.00555	0.00535
CR	0.01453	157.93	3.986	0.01471	0.01388	0.01500
CU	0.01079	99.07	4.524	0.01075	0.01032	0.01130
FE	0.23954	76.37	1.268	0.23603	0.24140	0.24117
K	0.40501	144.68	7.238	0.37515	0.40612	0.43374
LI	0.02014	180.41	9.816	0.01950	0.02235	0.01856
MG	0.09872	194.25	1.630	0.09693	0.10006	0.09917
MN	0.00615	439.52	1.636	0.00611	0.00626	0.00607
MO	0.01035	50.53	1.295	0.01033	0.01023	0.01050
NA	0.95948	1,055.39	1.712	0.94590	0.95479	0.97774
NI	0.01031	53.81	1.844	0.01035	0.01011	0.01048
P	0.10246	56.10	0.469	0.10294	0.10247	0.10197
PB	0.01616	27.25	13.115	0.01737	0.01372	0.01741
S	0.49573	98.49	0.413	0.49800	0.49402	0.49518
SB	0.02096	17.68	8.763	0.02152	0.01891	0.02245
SE	0.02502	8.93	5.624	0.02375	0.02478	0.02653
SI	0.10431	27.92	3.070	0.10371	0.10145	0.10777
SN	0.02038	28.35	2.875	0.01977	0.02043	0.02094
SR	0.00515	4,105.75	0.534	0.00518	0.00516	0.00512
TI	0.01024	656.10	1.993	0.01045	0.01024	0.01004
TL	0.03346	18.36	2.798	0.03238	0.03408	0.03391
V	0.00516	69.22	5.370	0.00543	0.00517	0.00488
Y1	23022.75874	23,022.76	0.223	22970.93488	23023.83349	23073.50786
Y2A	341619.24606	341,619.25	0.673	339772.44016	340889.71077	344195.58726
Y2R	23683.53930	23,683.54	0.384	23630.87383	23631.07500	23788.66906
ZN	0.01981	276.63	1.068	0.02003	0.01978	0.01961
ZR	0.04800	126.29	2.314	0.04676	0.04889	0.04836

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 49

Date/Time: 11/11/2013 15:56

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00173	-9.70	51.364	0.00071	0.00236	0.00211
AL	499.54386	55,506.26	0.264	500.51642	500.07026	498.04489
AS	-0.00265	-13.81	111.999	0.00042	-0.00550	-0.00285
B	-0.02795	767.38	1.765	-0.02804	-0.02741	-0.02839
BA	0.00032	226.45	10.059	0.00035	0.00029	0.00031
BE	0.00008	-374.97	9.824	0.00008	0.00009	0.00008
CA	497.51285	464,436.93	0.607	500.99973	495.79809	495.74072
CD	0.00128	356.34	4.390	0.00123	0.00126	0.00134
CO	0.00034	4.86	77.688	0.00005	0.00041	0.00057
CR	0.00185	-41.75	38.745	0.00194	0.00109	0.00251
CU	0.00680	167.15	6.269	0.00631	0.00709	0.00701
FE	199.32433	55,178.06	0.204	199.78032	199.19455	198.99813
K	-0.17480	-64.63	24.387	-0.17641	-0.13139	-0.21660
LI	-0.00354	338.47	41.222	-0.00521	-0.00246	-0.00296
MG	532.08597	715,349.54	1.020	538.35453	529.05340	528.84998
MN	0.00413	258.40	2.269	0.00423	0.00412	0.00405
MO	-0.00159	-5.19	17.373	-0.00129	-0.00163	-0.00184
NA	0.00451	-8.99	278.898	0.01672	-0.00839	0.00518
NI	0.00201	-2.11	25.086	0.00143	0.00229	0.00230
P	0.01154	5.27	7.662	0.01232	0.01058	0.01173
PB	0.00367	126.70	46.026	0.00218	0.00332	0.00550
S	-0.12883	-28.34	2.269	-0.13197	-0.12832	-0.12619
SB	-0.00492	9.74	50.228	-0.00747	-0.00252	-0.00478
SE	0.00210	-1.43	141.902	0.00284	0.00464	-0.00118
SI	0.01178	7.52	24.577	0.01329	0.01361	0.00844
SN	0.00419	6.85	18.938	0.00327	0.00458	0.00470
SR	0.00206	1,399.14	1.003	0.00206	0.00204	0.00208
TI	-0.00380	-191.80	2.977	-0.00369	-0.00381	-0.00391
TL	0.00146	-3.94	108.147	0.00262	-0.00034	0.00211
V	-0.00391	-36.87	20.075	-0.00460	-0.00305	-0.00409
Y1	20018.18254	20,018.18	0.160	20010.05000	19990.99453	20053.50310
Y2A	292821.62580	292,821.63	0.954	290991.55070	296036.77932	291436.54738
Y2R	22271.17799	22,271.18	0.604	22117.40084	22329.33028	22366.80287
ZN	0.00549	318.37	4.270	0.00569	0.00523	0.00556
ZR	0.00488	16.44	63.655	0.00723	0.00136	0.00606

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 50

Date/Time: 11/11/2013 16:00

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21507	2,661.70	1.300	0.21194	0.21596	0.21732
AL	483.51788	55,288.88	0.173	482.87332	483.21983	484.46050
AS	0.10127	25.48	1.009	0.10010	0.10201	0.10169
B	-0.02641	751.91	6.180	-0.02540	-0.02829	-0.02553
BA	0.48435	288,962.70	0.512	0.48183	0.48444	0.48679
BE	0.48358	196,986.55	0.592	0.48177	0.48208	0.48688
CA	479.63972	462,171.75	0.505	478.67260	477.85055	482.39603
CD	0.93900	14,214.40	0.015	0.93910	0.93906	0.93883
CO	0.46932	2,364.83	0.183	0.47032	0.46887	0.46879
CR	0.44758	4,288.49	0.278	0.44720	0.44657	0.44897
CU	0.51198	5,820.88	0.968	0.50773	0.51078	0.51742
FE	191.65152	54,805.36	0.224	191.47057	191.34267	192.14132
K	-0.07788	-31.96	63.027	-0.02181	-0.09873	-0.11309
LI	-0.00265	342.46	36.855	-0.00375	-0.00188	-0.00231
MG	503.42274	710,189.73	0.739	502.68909	500.12391	507.45522
MN	0.47703	28,524.51	0.897	0.47356	0.47571	0.48181
MO	-0.00148	-4.75	40.227	-0.00087	-0.00150	-0.00205
NA	0.00978	-3.54	99.950	0.01166	-0.00080	0.01848
NI	0.91148	3,120.22	0.138	0.91003	0.91213	0.91228
P	0.01277	7.13	10.670	0.01134	0.01290	0.01406
PB	0.05174	179.82	6.490	0.05249	0.05465	0.04807
S	-0.12848	-28.33	5.881	-0.11999	-0.13099	-0.13447
SB	0.63367	436.87	0.654	0.63070	0.63841	0.63190
SE	0.05329	14.72	5.749	0.05024	0.05325	0.05637
SI	0.01096	7.57	57.159	0.00984	0.00533	0.01771
SN	0.00540	8.20	17.036	0.00639	0.00522	0.00458
SR	0.00204	1,407.35	1.259	0.00201	0.00205	0.00205
TI	-0.00378	-175.07	1.318	-0.00383	-0.00373	-0.00379
TL	0.08758	39.56	4.216	0.08732	0.09139	0.08402
V	0.47361	6,225.08	0.894	0.47162	0.47074	0.47847
Y1	20079.33182	20,079.33	0.182	20048.61768	20069.52568	20119.85211
Y2A	298059.97349	298,059.97	0.617	299487.57455	298705.68257	295986.66335
Y2R	22929.75820	22,929.76	0.504	22997.70779	22995.35650	22796.21031
ZN	1.04311	11,708.56	0.043	1.04345	1.04328	1.04260
ZR	0.00384	14.40	8.857	0.00415	0.00389	0.00347

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 51

Date/Time: 11/11/2013 16:04

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49713	7,002.88	0.876	0.49219	0.50041	0.49879
AL	24.39891	2,847.19	0.495	24.27074	24.51033	24.41567
AS	0.51795	213.25	0.192	0.51740	0.51736	0.51910
B	0.46813	3,936.65	1.149	0.46237	0.46900	0.47302
BA	0.49944	334,251.62	1.096	0.49321	0.50166	0.50345
BE	0.47709	218,010.77	0.874	0.47234	0.47879	0.48014
CA	23.65840	25,136.30	0.530	23.56239	23.80037	23.61245
CD	0.50739	8,444.94	0.279	0.50869	0.50760	0.50589
CO	0.51554	2,914.60	0.304	0.51716	0.51542	0.51403
CR	0.46787	5,085.84	0.614	0.46457	0.46921	0.46983
CU	0.49126	6,096.15	0.923	0.48649	0.49552	0.49177
FE	23.63716	7,483.76	0.751	23.45338	23.80783	23.65026
K	23.86560	8,771.09	0.249	23.83633	23.93393	23.82656
LI	0.48327	2,960.77	0.691	0.48055	0.48699	0.48226
MG	23.56840	45,109.50	0.387	23.48087	23.66283	23.56151
MN	0.49627	33,289.63	0.901	0.49128	0.49764	0.49990
MO	0.51020	2,359.52	0.145	0.51077	0.51048	0.50936
NA	23.90645	26,619.75	0.295	23.84931	23.98537	23.88467
NI	0.50665	1,958.28	0.082	0.50710	0.50658	0.50628
P	0.51477	277.69	0.268	0.51541	0.51319	0.51572
PB	0.51315	689.46	0.525	0.51599	0.51282	0.51064
S	25.31564	5,137.30	0.270	25.35948	25.35066	25.23678
SB	0.51836	391.95	0.409	0.52033	0.51863	0.51612
SE	0.51655	181.61	0.694	0.51289	0.52006	0.51670
SI	24.70689	5,314.68	0.398	24.61304	24.80922	24.69840
SN	0.49799	617.43	0.519	0.50062	0.49790	0.49546
SR	0.49640	388,548.52	0.201	0.49597	0.49568	0.49753
TI	0.48306	29,657.96	0.681	0.47931	0.48440	0.48546
TL	0.50219	337.98	0.474	0.50421	0.49957	0.50278
V	0.48566	7,109.55	0.954	0.48031	0.48848	0.48819
Y1	22483.39484	22,483.39	0.294	22436.25799	22455.01166	22558.91488
Y2A	334365.94443	334,365.94	0.503	336300.00000	333250.08328	333547.75000
Y2R	23663.10384	23,663.10	0.411	23692.82074	23554.37500	23742.11577
ZN	0.50888	6,324.69	0.217	0.50989	0.50904	0.50770
ZR	0.48771	1,234.54	0.185	0.48667	0.48824	0.48823

LANCASTER LABORATORIES

Run Name: 1331503T72

Instrument ID: 16417

Tube: 52

Date/Time: 11/11/2013 16:08

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00126	-19.00	29.083	0.00167	0.00097	0.00114
AL	0.04172	10.71	21.327	0.03671	0.05199	0.03645
AS	-0.00024	-2.63	1045.514	-0.00313	0.00132	0.00109
B	0.00061	6.25	40.036	0.00073	0.00033	0.00078
BA	0.00008	105.06	31.666	0.00009	0.00005	0.00010
BE	0.00028	-347.12	7.627	0.00029	0.00030	0.00026
CA	0.01246	105.52	26.846	0.01400	0.00862	0.01476
CD	-0.00004	-4.57	58.658	-0.00006	-0.00004	-0.00001
CO	0.00017	4.63	32.031	0.00018	0.00011	0.00021
CR	-0.00012	-5.08	138.854	0.00007	-0.00022	-0.00020
CU	0.00010	-37.68	394.281	-0.00011	0.00054	-0.00014
FE	0.01239	3.71	47.766	0.00906	0.00889	0.01922
K	-0.02408	-13.24	221.327	-0.05761	0.03737	-0.05201
LI	-0.00254	44.81	99.520	-0.00336	-0.00455	0.00030
MG	0.02482	51.06	4.063	0.02598	0.02416	0.02432
MN	0.00026	36.68	21.576	0.00028	0.00030	0.00020
MO	0.00006	1.81	510.961	0.00038	-0.00004	-0.00017
NA	-0.01300	-29.05	27.586	-0.01537	-0.01474	-0.00887
NI	-0.00041	11.65	89.526	-0.00070	-0.00053	0.00000
P	0.00069	0.06	38.141	0.00040	0.00092	0.00074
PB	-0.00136	3.48	71.922	-0.00077	-0.00083	-0.00249
S	-0.00361	-5.38	35.592	-0.00508	-0.00307	-0.00269
SB	-0.00028	1.40	430.416	-0.00088	0.00110	-0.00105
SE	0.00327	1.10	17.079	0.00280	0.00312	0.00388
SI	-0.00353	4.71	74.053	-0.00553	-0.00450	-0.00057
SN	-0.00014	2.41	225.023	-0.00019	0.00020	-0.00044
SR	-0.00009	-88.57	5.093	-0.00008	-0.00009	-0.00009
TI	0.00014	23.07	170.754	0.00033	0.00021	-0.00013
TL	0.00077	-5.28	23.622	0.00056	0.00085	0.00090
V	-0.00035	-13.13	102.135	-0.00011	-0.00018	-0.00076
Y1	23089.87347	23,089.87	0.119	23062.78133	23117.78763	23089.05146
Y2A	345115.59943	345,115.60	0.358	344288.65295	344522.22960	346535.91573
Y2R	23694.91937	23,694.92	0.217	23717.90068	23730.78842	23636.06901
ZN	-0.00057	20.21	24.281	-0.00071	-0.00043	-0.00056
ZR	-0.00189	0.43	132.509	-0.00200	0.00067	-0.00433

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ICP-AES Run Data Report

1331703T72

Reviewed By
Maria A Orrs

Reviewed Date
11/13/2013 1:44PM

Data File Name 1331703T72.TXT
Run Name: 1331703T72

Verified By:
Jennifer L Moyer

Verified Date
11/15/2013 9:15AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 0420

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/13/2013 09:47

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00179	35.068	-0.00229	-0.00198	-0.00109
AL	0.000	0.00801	146.669	0.01614	-0.00546	0.01335
AS	0.000	-0.00683	17.032	-0.00735	-0.00765	-0.00550
B	0.000	0.00003	17.521	0.00003	0.00004	0.00003
BA	0.000	0.00026	18.205	0.00028	0.00030	0.00021
BE	0.000	-0.12418	2.097	-0.12716	-0.12237	-0.12300
CA	0.000	0.00521	4.952	0.00526	0.00493	0.00544
CD	0.000	-0.01187	4.786	-0.01233	-0.01203	-0.01123
CO	0.000	0.00685	14.108	0.00582	0.00698	0.00774
CR	0.000	0.00001	133.009	0.00003	-0.00001	0.00002
CU	0.000	-0.00840	12.562	-0.00898	-0.00903	-0.00718
FE	0.000	0.00014	60.105	0.00022	0.00013	0.00006
K	0.000	-0.10592	18.192	-0.11051	-0.08477	-0.12247
LI	0.000	0.00348	13.806	0.00346	0.00396	0.00301
MG	0.000	0.00065	35.298	0.00091	0.00049	0.00054
MN	0.000	0.00403	14.814	0.00427	0.00335	0.00447
MO	0.000	0.00350	84.594	0.00676	0.00097	0.00277
NA	0.000	-0.00151	67.367	-0.00242	-0.00171	-0.00041
NI	0.000	0.03436	6.080	0.03637	0.03453	0.03220
P	0.000	-0.00003	71.595	-0.00001	-0.00004	-0.00003
PB	0.000	0.00863	1.525	0.00863	0.00877	0.00850
S	0.000	-0.00031	7.425	-0.00032	-0.00028	-0.00032
SB	0.000	0.00011	30.800	0.00015	0.00008	0.00012
SE	0.000	0.00077	104.579	0.00063	0.00004	0.00164
SI	0.000	0.00022	36.113	0.00030	0.00015	0.00020
SN	0.000	0.00489	39.500	0.00326	0.00702	0.00439
SR	0.000	-0.00053	1.435	-0.00052	-0.00054	-0.00053
TI	0.000	0.00529	19.506	0.00648	0.00463	0.00475
TL	0.000	-0.01667	9.098	-0.01725	-0.01495	-0.01781
V	0.000	-0.00441	36.553	-0.00410	-0.00615	-0.00298
Y1	0.000	22729.34486	0.606	22703.45585	22878.13292	22606.44581
Y2A	0.000	285573.53104	0.029	285661.36514	285559.31080	285499.91716
Y2R	0.000	18373.95889	0.527	18370.74033	18278.71756	18472.41878
ZN	0.000	0.05839	3.551	0.06005	0.05906	0.05607
ZR	0.000	-0.00019	45.163	-0.00023	-0.00026	-0.00009

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/13/2013 09:51

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.54636	0.148	13.55777	13.52320	13.55809
CA	50.000	2.61024	0.440	2.61987	2.59753	2.61332
FE	50.000	0.74434	0.391	0.74662	0.74106	0.74533
K	50.000	46.37125	0.235	46.39195	46.25346	46.46834
MG	50.000	4.44341	0.182	4.44925	4.43419	4.44678
NA	50.000	2.71734	0.347	2.71549	2.70897	2.72755
S	50.000	0.44667	0.277	0.44810	0.44608	0.44585
SI	50.000	0.47840	0.164	0.47865	0.47752	0.47903
Y1	50.000	21421.67752	0.095	21398.79763	21428.50097	21437.73396
Y2R	50.000	18335.65863	0.389	18273.49362	18413.41937	18320.06290

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/13/2013 09:55

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.50368	0.442	2.51627	2.49550	2.49927
AS	1.000	0.91350	0.315	0.91632	0.91056	0.91362
B	1.000	0.03212	1.309	0.03258	0.03202	0.03175
BA	1.000	2.42737	0.678	2.44532	2.42377	2.41301
BE	1.000	80.33516	0.812	81.01693	80.27202	79.71653
CD	1.000	38.04634	0.213	38.12745	38.04628	37.96529
CO	1.000	12.53813	0.218	12.56962	12.52325	12.52152
CU	1.000	2.47267	0.690	2.49090	2.47001	2.45709
LI	1.000	0.32896	0.418	0.33040	0.32880	0.32766
MN	1.000	11.32163	0.695	11.40919	11.29881	11.25689
NI	1.000	9.11652	0.196	9.12328	9.13002	9.09628
P	1.000	0.02561	0.314	0.02570	0.02556	0.02556
PB	1.000	3.14529	0.169	3.15130	3.14124	3.14333
SE	1.000	0.81695	0.228	0.81908	0.81559	0.81619
SR	1.000	2.75369	0.607	2.77187	2.75020	2.73899
TL	1.000	1.71012	0.111	1.71231	1.70886	1.70919
Y1	1.000	21589.13284	0.205	21569.67688	21557.85686	21639.86477
Y2A	1.000	273037.13828	0.899	270283.88005	273832.50497	274995.02982
Y2R	1.000	18034.34415	0.257	17997.52648	18086.45979	18019.04619
ZN	1.000	29.34079	0.227	29.40235	29.35011	29.26991

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 4 Date/Time: 11/13/2013 10:00

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03979	0.261	0.03977	0.03990	0.03969
MO	1.000	10.44707	0.046	10.45084	10.44872	10.44166
SB	1.000	0.03791	0.313	0.03784	0.03783	0.03804
SN	1.000	2.86567	0.203	2.87205	2.86062	2.86435
TI	1.000	11.16963	0.204	11.17139	11.19153	11.14596
V	1.000	2.54797	0.309	2.55151	2.55345	2.53895
Y1	1.000	22523.10151	0.103	22497.90515	22528.08338	22543.31601
Y2A	1.000	286574.80119	0.103	286491.63353	286330.84824	286901.92180
Y2R	1.000	18473.37766	0.182	18512.15382	18455.74318	18452.23598
ZR	1.000	0.12318	0.321	0.12345	0.12273	0.12336

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/13/2013 10:04

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60216	8,380.79	1.278	0.60121	0.61029	0.59499
AL	30.50662	3,063.04	0.754	30.77127	30.39439	30.35420
AS	0.59760	232.74	0.508	0.59965	0.59411	0.59902
B	0.57328	5,269.82	1.204	0.57444	0.57953	0.56587
BA	0.59751	400,585.48	1.166	0.59951	0.60325	0.58975
BE	0.58374	258,952.19	1.168	0.58574	0.58934	0.57615
CA	30.03262	29,140.56	0.679	30.26820	29.91489	29.91475
CD	0.59681	9,832.86	0.101	0.59621	0.59682	0.59742
CO	0.59755	3,235.81	0.073	0.59728	0.59733	0.59806
CR	0.58737	6,441.81	1.233	0.58906	0.59362	0.57944
CU	0.59728	8,101.44	1.397	0.60075	0.60334	0.58776
FE	29.98091	8,329.60	0.801	30.25813	29.83444	29.85016
K	30.01873	10,312.27	0.363	30.11820	30.03553	29.90248
LI	0.58298	3,596.58	0.685	0.58409	0.58630	0.57855
MG	29.50360	49,045.97	0.581	29.70090	29.41979	29.39011
MN	0.59323	37,106.78	1.178	0.59557	0.59874	0.58537
MO	0.61251	2,755.91	0.152	0.61193	0.61202	0.61359
NA	29.64998	29,819.36	0.431	29.79749	29.57326	29.57919
NI	0.59550	2,341.92	0.057	0.59573	0.59565	0.59511
P	0.60971	335.85	0.296	0.61085	0.61065	0.60762
PB	0.59997	820.78	0.125	0.59960	0.60083	0.59947
S	30.17501	5,800.89	0.243	30.24696	30.17789	30.10020
SB	0.62322	511.29	0.453	0.62645	0.62199	0.62122
SE	0.60527	212.74	0.204	0.60384	0.60600	0.60596
SI	30.95579	5,485.36	0.650	31.18816	30.84444	30.83477
SN	0.59334	732.99	0.178	0.59435	0.59343	0.59224
SR	0.59124	449,676.08	0.858	0.58724	0.59694	0.58953
TI	0.60441	37,346.90	1.165	0.60707	0.60974	0.59643
TL	0.59151	414.01	0.314	0.59028	0.59364	0.59061
V	0.60292	8,488.41	1.424	0.60674	0.60894	0.59309
Y1	21529.45889	21,529.46	0.236	21586.05023	21487.71743	21514.60903
Y2A	276201.48553	276,201.49	1.176	275218.27369	273558.73095	279827.45195
Y2R	18512.77672	18,512.78	0.497	18424.17582	18506.44742	18607.70692
ZN	0.60308	7,669.15	0.127	0.60387	0.60302	0.60234
ZR	0.60069	1,368.33	1.060	0.60793	0.59819	0.59595

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/13/2013 10:08

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00164	-10.60	21.900	0.00205	0.00148	0.00139
AL	0.02350	5.35	111.875	0.03091	0.04530	-0.00570
AS	-0.00246	-3.67	59.763	-0.00343	-0.00319	-0.00077
B	-0.00010	8.85	229.925	0.00013	-0.00012	-0.00031
BA	-0.00006	34.24	30.253	-0.00005	-0.00005	-0.00008
BE	-0.00108	-678.55	3.189	-0.00107	-0.00105	-0.00112
CA	-0.01001	87.22	64.461	-0.01516	-0.01209	-0.00277
CD	-0.00017	-6.74	51.360	-0.00015	-0.00010	-0.00027
CO	-0.00002	2.97	539.887	-0.00011	0.00001	0.00005
CR	-0.00001	-6.93	1633.400	-0.00046	0.00055	-0.00012
CU	-0.00181	-45.67	14.727	-0.00157	-0.00176	-0.00209
FE	0.00049	-0.90	693.641	-0.00019	0.00420	-0.00253
K	-0.10102	-23.76	24.272	-0.12886	-0.08266	-0.09153
LI	-0.00250	49.55	81.369	-0.00366	-0.00015	-0.00369
MG	-0.00779	-1.15	20.069	-0.00706	-0.00959	-0.00673
MN	-0.00004	20.77	54.473	-0.00001	-0.00005	-0.00005
MO	0.00028	2.89	67.260	0.00034	0.00044	0.00007
NA	-0.00633	-34.58	226.036	0.00824	-0.00687	-0.02035
NI	-0.00018	14.64	213.333	-0.00002	0.00010	-0.00063
P	0.00026	-0.47	446.999	-0.00108	0.00098	0.00089
PB	-0.00067	2.92	123.523	-0.00148	0.00019	-0.00073
S	-0.00476	-5.79	100.347	-0.00315	-0.01013	-0.00099
SB	-0.00033	2.28	463.080	-0.00091	0.00141	-0.00149
SE	0.00334	1.13	22.037	0.00362	0.00251	0.00390
SI	-0.00147	3.78	433.441	-0.00578	0.00586	-0.00451
SN	0.00004	2.24	942.284	0.00032	0.00016	-0.00036
SR	-0.00025	-168.05	3.788	-0.00026	-0.00024	-0.00025
TI	-0.00014	21.65	17.016	-0.00014	-0.00012	-0.00016
TL	-0.00263	-7.78	18.280	-0.00207	-0.00287	-0.00294
V	-0.00129	-17.92	22.626	-0.00161	-0.00104	-0.00121
Y1	22385.16107	22,385.16	0.154	22397.64283	22411.58407	22346.25633
Y2A	290047.18909	290,047.19	1.131	293082.25646	290493.78728	286565.52353
Y2R	18630.80822	18,630.81	0.495	18733.18553	18604.91517	18554.32395
ZN	-0.00077	16.07	7.728	-0.00070	-0.00081	-0.00079
ZR	0.00370	4.87	40.229	0.00198	0.00461	0.00449

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/13/2013 10:12

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00654	65.55	1.794	0.00666	0.00654	0.00642
AL	0.19605	22.88	14.579	0.16832	0.22541	0.19441
AS	0.01587	3.89	10.918	0.01393	0.01725	0.01643
B	0.04846	457.30	0.798	0.04806	0.04846	0.04884
BA	0.00531	3,776.21	0.639	0.00528	0.00534	0.00533
BE	0.00364	1,502.08	0.742	0.00360	0.00365	0.00365
CA	0.19509	288.64	5.059	0.19666	0.18453	0.20408
CD	0.00485	79.72	2.677	0.00473	0.00499	0.00485
CO	0.00528	33.03	6.742	0.00495	0.00566	0.00524
CR	0.01515	166.28	0.251	0.01513	0.01513	0.01520
CU	0.00829	97.38	6.419	0.00875	0.00843	0.00771
FE	0.20678	57.70	3.018	0.19968	0.21140	0.20927
K	0.37516	141.25	3.578	0.37634	0.38795	0.36118
LI	0.01744	171.25	6.643	0.01611	0.01794	0.01825
MG	0.09061	166.46	1.029	0.09156	0.08970	0.09056
MN	0.00513	356.47	1.352	0.00511	0.00508	0.00521
MO	0.01009	48.99	0.723	0.01004	0.01005	0.01017
NA	1.00614	994.58	1.989	1.01242	0.98375	1.02226
NI	0.00957	54.60	2.087	0.00951	0.00979	0.00940
P	0.09831	55.84	1.538	0.09781	0.09710	0.10000
PB	0.01582	26.26	9.602	0.01548	0.01450	0.01748
S	0.47763	91.22	0.703	0.47967	0.47946	0.47375
SB	0.02148	20.80	7.095	0.02305	0.02001	0.02138
SE	0.02447	8.91	9.276	0.02197	0.02640	0.02505
SI	0.10650	23.11	9.794	0.11774	0.10465	0.09712
SN	0.02074	28.91	2.714	0.02050	0.02033	0.02138
SR	0.00493	3,926.80	0.486	0.00491	0.00494	0.00495
TI	0.00991	666.05	0.836	0.00982	0.00995	0.00997
TL	0.03121	18.15	2.565	0.03189	0.03033	0.03140
V	0.00357	53.02	13.859	0.00409	0.00350	0.00311
Y1	22510.26622	22,510.27	0.356	22599.83342	22445.65348	22485.31175
Y2A	286923.51447	286,923.51	0.299	287266.98144	285948.64148	287554.92048
Y2R	18698.81950	18,698.82	1.088	18551.33973	18930.81384	18614.30495
ZN	0.01947	282.40	0.765	0.01934	0.01944	0.01963
ZR	0.05097	113.94	2.269	0.05176	0.04964	0.05151

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/13/2013 10:16

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00191	-5.25	13.857	0.00221	0.00182	0.00171
AL	504.57128	49,307.79	0.433	506.71185	504.65883	502.34315
AS	-0.01337	-17.52	18.056	-0.01572	-0.01351	-0.01089
B	-0.02925	875.03	9.533	-0.03221	-0.02887	-0.02667
BA	0.00007	106.97	28.588	0.00005	0.00007	0.00009
BE	-0.00136	-687.63	0.314	-0.00136	-0.00136	-0.00137
CA	508.46294	442,474.27	0.731	511.92557	508.92433	504.53893
CD	0.00503	421.23	4.687	0.00530	0.00494	0.00485
CO	-0.00070	-0.81	14.092	-0.00079	-0.00073	-0.00060
CR	0.00303	-35.12	22.944	0.00326	0.00357	0.00225
CU	0.00102	137.48	34.449	0.00141	0.00090	0.00074
FE	204.42022	50,725.12	0.619	205.69909	204.39230	203.16927
K	-0.13746	-34.65	36.646	-0.19146	-0.09173	-0.12920
LI	-0.00635	342.98	63.878	-0.00600	-0.00248	-0.01057
MG	549.70178	649,527.70	0.761	553.92749	549.61536	545.56249
MN	0.00342	210.27	0.696	0.00344	0.00339	0.00343
MO	-0.00140	-4.30	17.322	-0.00155	-0.00152	-0.00112
NA	0.02292	-4.75	44.524	0.01466	0.01976	0.03432
NI	0.00278	1.52	1.007	0.00281	0.00276	0.00278
P	0.00796	3.41	5.251	0.00801	0.00752	0.00835
PB	0.00254	129.22	51.704	0.00345	0.00313	0.00103
S	-0.14294	-29.99	2.475	-0.14372	-0.14603	-0.13908
SB	-0.00871	8.97	12.116	-0.00749	-0.00937	-0.00927
SE	0.00369	-0.97	145.788	-0.00224	0.00825	0.00506
SI	0.02126	7.48	43.828	0.01541	0.01637	0.03200
SN	0.00424	6.61	32.000	0.00384	0.00576	0.00314
SR	0.00173	1,196.95	0.941	0.00171	0.00173	0.00175
TI	-0.00440	-215.62	2.834	-0.00443	-0.00427	-0.00451
TL	-0.00041	-5.04	907.255	0.00382	-0.00311	-0.00194
V	-0.00574	-51.08	6.048	-0.00541	-0.00571	-0.00610
Y1	19407.41928	19,407.42	0.260	19370.70286	19386.48604	19465.06895
Y2A	245980.26591	245,980.27	0.939	246985.09934	247617.05298	243338.64542
Y2R	17790.98368	17,790.98	0.469	17707.10858	17791.96589	17873.87657
ZN	0.00794	361.84	1.085	0.00797	0.00800	0.00784
ZR	0.00738	12.73	20.587	0.00818	0.00832	0.00562

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/13/2013 10:21

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21559	2,605.93	0.792	0.21366	0.21618	0.21692
AL	508.32797	49,295.36	0.574	508.98154	505.13998	510.86240
AS	0.08753	18.30	4.812	0.09009	0.08983	0.08267
B	-0.02797	882.25	5.236	-0.02966	-0.02710	-0.02715
BA	0.49335	291,557.34	1.713	0.48643	0.49084	0.50277
BE	0.50623	197,935.27	1.049	0.50201	0.50448	0.51219
CA	511.93232	441,810.67	0.356	511.00922	514.03040	510.75734
CD	0.93479	14,013.88	0.362	0.93116	0.93785	0.93537
CO	0.45608	2,199.16	0.299	0.45461	0.45731	0.45632
CR	0.48196	4,606.56	0.863	0.47800	0.48159	0.48630
CU	0.52061	6,401.00	0.763	0.51763	0.51908	0.52512
FE	206.07206	50,700.63	0.546	206.73601	204.77412	206.70603
K	-0.11304	-26.41	37.373	-0.06430	-0.13911	-0.13572
LI	-0.00608	344.06	17.599	-0.00562	-0.00532	-0.00730
MG	551.83520	646,048.22	0.297	552.67841	549.94835	552.87885
MN	0.48165	26,561.29	0.921	0.47774	0.48074	0.48647
MO	-0.00149	-4.63	53.785	-0.00241	-0.00098	-0.00108
NA	0.01941	-8.11	38.272	0.01679	0.01365	0.02780
NI	0.90948	3,166.04	0.167	0.90779	0.91075	0.90990
P	0.00814	4.78	14.986	0.00867	0.00674	0.00899
PB	0.04923	184.74	8.811	0.04488	0.05355	0.04925
S	-0.15020	-30.94	3.113	-0.15555	-0.14687	-0.14820
SB	0.63066	472.60	0.510	0.62698	0.63204	0.63295
SE	0.05613	15.49	7.025	0.06063	0.05327	0.05449
SI	0.04674	11.72	31.697	0.06238	0.03292	0.04491
SN	0.00504	7.42	4.763	0.00494	0.00487	0.00532
SR	0.00176	1,202.80	1.115	0.00175	0.00174	0.00178
TI	-0.00407	-175.83	1.416	-0.00413	-0.00402	-0.00406
TL	0.08516	39.18	1.578	0.08442	0.08435	0.08671
V	0.49471	6,183.87	1.132	0.49051	0.49255	0.50106
Y1	19210.00456	19,210.00	0.197	19248.54343	19172.88322	19208.58704
Y2A	243467.84085	243,467.84	1.098	245732.45033	244153.80795	240517.26428
Y2R	17652.25417	17,652.25	0.157	17679.24905	17653.51009	17624.00339
ZN	1.03513	11,902.49	0.153	1.03354	1.03671	1.03516
ZR	0.00777	13.49	33.666	0.00567	0.01070	0.00693

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/13/2013 10:25

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49513	6,848.18	0.554	0.49209	0.49742	0.49588
AL	25.09716	2,499.22	0.147	25.13948	25.07152	25.08048
AS	0.48496	191.80	0.520	0.48500	0.48243	0.48747
B	0.47702	4,361.93	0.657	0.47405	0.48029	0.47672
BA	0.49252	328,416.37	0.132	0.49286	0.49177	0.49292
BE	0.48471	213,814.43	0.870	0.48338	0.48942	0.48131
CA	24.91715	24,010.18	0.570	24.98471	24.75386	25.01287
CD	0.48719	8,172.95	0.358	0.48867	0.48526	0.48762
CO	0.48791	2,690.91	0.345	0.48903	0.48598	0.48872
CR	0.48998	5,343.39	0.648	0.48768	0.49361	0.48866
CU	0.49526	6,677.90	0.500	0.49396	0.49812	0.49371
FE	24.82936	6,855.57	0.554	24.84017	24.68662	24.96129
K	24.74303	8,431.68	0.330	24.78624	24.64889	24.79395
LI	0.48598	2,983.95	0.244	0.48637	0.48464	0.48692
MG	24.42336	40,370.07	0.435	24.51073	24.30494	24.45441
MN	0.48941	30,449.40	0.529	0.48824	0.49237	0.48760
MO	0.49797	2,281.64	0.367	0.49956	0.49597	0.49837
NA	24.48573	24,417.47	0.400	24.57575	24.38154	24.49990
NI	0.48696	1,952.67	0.510	0.48935	0.48440	0.48713
P	0.49470	277.39	0.996	0.50022	0.49313	0.49074
PB	0.49166	685.59	0.066	0.49202	0.49139	0.49157
S	24.51871	4,798.50	0.386	24.59892	24.41421	24.54300
SB	0.50723	424.37	0.817	0.51186	0.50388	0.50596
SE	0.48882	174.93	0.822	0.49200	0.49015	0.48430
SI	25.27358	4,442.26	0.407	25.35899	25.15931	25.30245
SN	0.48314	608.13	0.418	0.48465	0.48084	0.48392
SR	0.48562	367,320.40	0.801	0.48132	0.48666	0.48888
TI	0.50284	30,905.18	0.986	0.50081	0.50849	0.49922
TL	0.48591	345.21	0.853	0.48886	0.48117	0.48771
V	0.49702	6,959.92	0.734	0.49603	0.50106	0.49396
Y1	21921.99590	21,922.00	0.408	21869.88943	22025.22330	21870.87498
Y2A	274674.72940	274,674.73	0.589	275350.81180	272829.35719	275844.01922
Y2R	18359.79770	18,359.80	0.144	18340.14759	18389.74551	18349.50000
ZN	0.48928	6,341.37	0.526	0.49199	0.48687	0.48899
ZR	0.49820	1,124.92	0.174	0.49908	0.49734	0.49819

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/13/2013 10:29

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00162	-11.05	13.068	0.00145	0.00186	0.00155
AL	0.02838	5.88	164.285	0.05068	-0.02521	0.05967
AS	-0.00165	-3.35	133.693	0.00039	-0.00398	-0.00135
B	0.00010	10.72	206.959	-0.00013	0.00014	0.00030
BA	-0.00003	56.09	13.356	-0.00003	-0.00003	-0.00002
BE	-0.00105	-662.80	1.777	-0.00106	-0.00103	-0.00106
CA	0.02105	118.76	21.627	0.02629	0.01810	0.01875
CD	-0.00010	-5.54	49.749	-0.00006	-0.00009	-0.00015
CO	0.00013	3.80	51.373	0.00020	0.00006	0.00013
CR	0.00014	-5.18	47.270	0.00020	0.00015	0.00007
CU	-0.00192	-47.03	10.358	-0.00182	-0.00178	-0.00215
FE	0.01211	2.41	41.998	0.01733	0.01182	0.00718
K	-0.08998	-20.12	83.767	-0.01981	-0.08048	-0.16966
LI	-0.00383	41.92	30.360	-0.00356	-0.00510	-0.00282
MG	0.02010	46.65	3.051	0.02079	0.01986	0.01963
MN	-0.00010	17.02	35.562	-0.00012	-0.00006	-0.00011
MO	0.00004	1.78	159.293	0.00004	0.00012	-0.00002
NA	0.00560	-22.72	308.183	0.00954	0.02054	-0.01328
NI	-0.00052	13.34	67.220	-0.00028	-0.00091	-0.00035
P	0.00109	0.00	35.763	0.00064	0.00126	0.00137
PB	0.00042	4.48	292.986	0.00129	0.00097	-0.00099
S	-0.00724	-6.31	31.642	-0.00470	-0.00915	-0.00787
SB	-0.00110	1.65	20.461	-0.00117	-0.00085	-0.00128
SE	0.00313	1.06	176.193	0.00925	0.00159	-0.00145
SI	-0.00349	3.46	76.823	-0.00214	-0.00175	-0.00657
SN	-0.00005	2.13	976.675	0.00052	-0.00038	-0.00029
SR	-0.00022	-145.60	7.050	-0.00023	-0.00020	-0.00022
TI	-0.00027	13.60	49.333	-0.00035	-0.00033	-0.00011
TL	-0.00132	-6.81	69.521	-0.00102	-0.00235	-0.00059
V	-0.00139	-19.37	9.147	-0.00153	-0.00127	-0.00138
Y1	22483.68245	22,483.68	0.079	22489.85551	22463.56819	22497.62365
Y2A	288547.10625	288,547.11	0.708	289425.69583	286212.97217	290002.65076
Y2R	18819.47946	18,819.48	0.720	18729.13343	18975.25495	18754.05000
ZN	-0.00073	16.68	9.691	-0.00066	-0.00080	-0.00073
ZR	0.00208	1.18	35.041	0.00211	0.00279	0.00133

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/13/2013 10:34

Sample Number: **PBS** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00146	-13.52	52.388	0.00071	0.00142	0.00223
AL	0.02692	5.92	108.219	0.00452	0.01638	0.05986
AS	-0.00186	-3.53	58.804	-0.00065	-0.00213	-0.00278
B	-0.00016	8.48	173.095	-0.00043	-0.00017	0.00012
BA	0.00006	117.97	65.674	0.00007	0.00001	0.00009
BE	-0.00116	-729.78	5.064	-0.00123	-0.00114	-0.00112
CA	0.02411	124.90	19.757	0.02941	0.02273	0.02018
CD	-0.00006	-5.06	50.542	-0.00003	-0.00008	-0.00008
CO	0.00016	4.10	40.351	0.00011	0.00023	0.00014
CR	0.00047	-1.38	87.945	0.00055	0.00084	0.00002
CU	-0.00173	-45.33	23.680	-0.00130	-0.00176	-0.00212
FE	0.01348	2.86	79.687	0.00555	0.02571	0.00919
K	-0.08062	-17.32	19.172	-0.06381	-0.08382	-0.09422
LI	-0.00091	61.31	194.751	-0.00271	0.00085	-0.00088
MG	0.01151	32.77	10.132	0.01243	0.01020	0.01191
MN	0.00014	33.37	64.547	0.00014	0.00005	0.00024
MO	0.00003	1.77	431.663	-0.00002	0.00018	-0.00007
NA	0.02437	-3.73	33.437	0.03000	0.02809	0.01503
NI	-0.00030	14.59	80.446	-0.00026	-0.00057	-0.00009
P	0.01525	8.34	5.948	0.01613	0.01432	0.01530
PB	-0.00050	3.26	35.103	-0.00056	-0.00065	-0.00031
S	0.00327	-4.31	46.421	0.00495	0.00285	0.00200
SB	-0.00074	2.01	43.500	-0.00044	-0.00070	-0.00108
SE	0.00104	0.30	102.528	0.00227	0.00051	0.00034
SI	0.00456	5.01	240.595	0.00620	0.01463	-0.00714
SN	0.01662	24.19	4.423	0.01589	0.01736	0.01661
SR	-0.00017	-103.66	10.836	-0.00018	-0.00016	-0.00015
TI	0.00006	35.13	134.656	-0.00003	0.00008	0.00012
TL	-0.00161	-7.20	25.527	-0.00124	-0.00205	-0.00154
V	-0.00167	-23.87	12.981	-0.00191	-0.00149	-0.00161
Y1	23074.11236	23,074.11	0.264	23004.02850	23104.85935	23113.44924
Y2A	294710.74046	294,710.74	0.948	291492.13055	296522.44864	296117.64220
Y2R	19303.33516	19,303.34	1.506	19245.05396	19046.26769	19618.68384
ZN	0.00039	32.19	6.080	0.00042	0.00037	0.00039
ZR	0.00300	3.43	54.919	0.00212	0.00197	0.00489

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/13/2013 10:38

Sample Number: **7266800** Class: U*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00898	99.10	0.722	0.00905	0.00898	0.00892
AL	58.04487	6,258.96	0.573	58.28067	57.66436	58.18958
AS	0.08240	16.21	1.794	0.08073	0.08356	0.08289
B	-0.01473	1,561.39	25.735	-0.01762	-0.01044	-0.01612
BA	1.38611	986,869.35	1.769	1.35799	1.40304	1.39731
BE	0.00176	652.74	2.231	0.00172	0.00176	0.00180
CA	23.12090	24,155.59	0.620	23.11450	22.98079	23.26740
CD	0.01204	744.05	3.562	0.01190	0.01252	0.01170
CO	0.14810	885.06	0.833	0.14705	0.14946	0.14778
CR	0.26712	3,021.51	1.333	0.26377	0.27086	0.26674
CU	0.16095	2,103.68	1.126	0.15923	0.16284	0.16078
FE	264.08112	71,373.40	0.588	264.70171	262.31406	265.22758
K	2.79127	1,041.31	0.246	2.79070	2.79841	2.78471
LI	0.03777	329.91	6.439	0.03764	0.04026	0.03540
MG	9.26891	16,735.55	0.475	9.28828	9.21855	9.29991
MN	23.96196	1,591,039.87	0.906	23.71983	24.13895	24.02710
MO	0.00356	18.75	5.095	0.00339	0.00375	0.00355
NA	1.72996	1,841.43	0.450	1.72104	1.73355	1.73530
NI	0.06661	261.13	1.437	0.06580	0.06767	0.06635
P	6.56087	3,853.37	0.160	6.55015	6.57106	6.56141
PB	0.33777	497.49	0.779	0.33475	0.33956	0.33899
S	4.84748	990.10	0.365	4.82751	4.86117	4.85376
SB	-0.01670	11.97	0.701	-0.01673	-0.01657	-0.01680
SE	0.01521	5.35	10.291	0.01552	0.01660	0.01351
SI	7.65828	1,461.47	0.312	7.68172	7.63390	7.65924
SN	0.02876	40.15	1.465	0.02924	0.02847	0.02855
SR	0.09911	80,081.67	1.037	0.09796	0.09995	0.09941
TI	1.97954	129,665.45	1.023	1.95711	1.99645	1.98507
TL	0.00229	5.84	42.346	0.00273	0.00295	0.00118
V	0.15041	2,299.60	1.293	0.14816	0.15163	0.15143
Y1	23032.17447	23,032.17	0.140	23045.23445	22995.39487	23055.89411
Y2A	293358.98498	293,358.98	1.193	297253.06494	290478.46256	292345.42744
Y2R	19895.31070	19,895.31	0.419	19870.21436	19988.35699	19827.36075
ZN	1.59563	21,805.89	0.200	1.59380	1.59931	1.59377
ZR	0.01816	40.71	6.537	0.01951	0.01728	0.01769

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/13/2013 10:42

Sample Number: **7266800** Class: UP** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02739	482.11	1.458	0.02704	0.02730	0.02782
AL	58.14186	6,268.04	0.544	58.48350	58.08236	57.85971
AS	0.56557	219.28	0.984	0.57138	0.56505	0.56029
B	0.17242	3,285.27	3.314	0.16646	0.17297	0.17784
BA	1.39377	993,792.59	1.460	1.37125	1.39922	1.41083
BE	0.02032	9,412.74	1.298	0.02005	0.02033	0.02057
CA	23.50162	24,541.25	0.879	23.71924	23.47722	23.30839
CD	0.06050	1,564.79	1.206	0.05998	0.06018	0.06133
CO	0.24278	1,418.85	0.332	0.24280	0.24196	0.24357
CR	0.44593	5,119.47	1.056	0.44114	0.44611	0.45055
CU	0.64501	9,142.09	1.482	0.63422	0.64835	0.65245
FE	257.36677	69,741.49	0.989	259.91118	257.37087	254.81826
K	4.68406	1,738.69	0.483	4.71000	4.67395	4.66823
LI	0.97964	6,426.82	0.486	0.98509	0.97628	0.97754
MG	9.99245	18,027.92	0.446	10.04394	9.96751	9.96589
MN	23.91960	1,590,502.88	1.371	23.68609	23.77811	24.29458
MO	0.19750	942.64	0.509	0.19703	0.19682	0.19866
NA	3.62931	3,894.77	0.472	3.64839	3.61527	3.62427
NI	0.20895	850.02	0.174	0.20874	0.20937	0.20873
P	7.48913	4,357.91	0.396	7.47806	7.46663	7.52271
PB	0.81142	1,170.69	0.616	0.81122	0.80653	0.81652
S	4.81046	972.83	0.335	4.80785	4.79580	4.82772
SB	0.38755	357.17	0.486	0.38636	0.38656	0.38972
SE	0.80975	301.51	0.592	0.80811	0.80599	0.81515
SI	7.45702	1,422.90	0.282	7.48080	7.44939	7.44088
SN	0.58694	768.29	0.529	0.58564	0.58469	0.59048
SR	0.11672	94,441.20	1.178	0.11524	0.11695	0.11796
TI	2.02800	133,035.11	1.213	2.00196	2.03119	2.05084
TL	0.95997	752.17	0.831	0.95542	0.95530	0.96918
V	0.24324	3,684.66	1.091	0.24042	0.24362	0.24569
Y1	22811.85462	22,811.85	0.442	22863.73176	22876.26515	22695.56696
Y2A	293788.18754	293,788.19	1.219	297430.41750	293663.18754	290270.95759
Y2R	19888.14430	19,888.14	0.523	19768.72258	19936.43814	19959.27218
ZN	1.70542	23,062.70	0.491	1.70204	1.69926	1.71496
ZR	0.96334	2,359.80	0.489	0.96849	0.96224	0.95927

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/13/2013 10:46

Sample Number: **7266803** Class: D*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00820	87.07	4.174	0.00781	0.00846	0.00834
AL	60.35443	6,448.04	0.302	60.29277	60.21122	60.55931
AS	0.06780	11.06	2.887	0.06992	0.06742	0.06607
B	-0.00320	1,538.30	106.555	0.00037	-0.00355	-0.00641
BA	1.35068	954,592.72	1.415	1.37250	1.34267	1.33687
BE	0.00169	613.73	3.149	0.00173	0.00163	0.00172
CA	22.46161	23,254.14	0.562	22.43030	22.35404	22.60049
CD	0.01257	708.42	1.453	0.01237	0.01260	0.01272
CO	0.14957	887.18	0.514	0.14940	0.14889	0.15041
CR	0.27402	3,085.66	1.111	0.27745	0.27296	0.27164
CU	0.16341	2,115.01	1.523	0.16598	0.16322	0.16102
FE	245.30324	66,236.05	0.545	244.78323	244.30540	246.82110
K	2.88858	1,067.16	1.126	2.87264	2.86710	2.92600
LI	0.04197	353.36	3.916	0.04240	0.04336	0.04015
MG	9.28696	16,612.62	0.308	9.28024	9.26234	9.31829
MN	23.30063	1,535,752.21	0.908	23.54342	23.20240	23.15607
MO	0.00313	16.50	9.491	0.00286	0.00344	0.00308
NA	1.76658	1,863.53	0.983	1.75279	1.76085	1.78609
NI	0.07001	275.15	0.258	0.06998	0.07021	0.06985
P	6.07348	3,533.67	0.250	6.06361	6.06585	6.09097
PB	0.34874	510.13	0.409	0.34912	0.34717	0.34994
S	4.81406	974.18	0.394	4.79750	4.80995	4.83473
SB	-0.01681	10.45	7.653	-0.01680	-0.01811	-0.01554
SE	0.01915	6.76	22.104	0.01835	0.02373	0.01538
SI	7.03255	1,329.97	0.303	7.01293	7.02953	7.05520
SN	0.03027	41.75	1.266	0.02983	0.03048	0.03051
SR	0.09805	78,641.92	1.538	0.09976	0.09750	0.09689
TI	2.12965	138,464.32	1.416	2.16379	2.11847	2.10668
TL	0.00186	4.72	60.375	0.00303	0.00176	0.00079
V	0.15179	2,301.74	1.908	0.15499	0.15102	0.14936
Y1	22816.42329	22,816.42	0.366	22867.28720	22861.97934	22720.00333
Y2A	291203.22509	291,203.23	1.300	287051.11001	292093.35653	294465.20875
Y2R	19711.05819	19,711.06	0.776	19765.05000	19829.72244	19538.40211
ZN	1.48791	20,144.46	0.217	1.48673	1.48543	1.49156
ZR	0.01855	41.30	2.536	0.01906	0.01847	0.01813

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/13/2013 10:51

Sample Number: **7266801** Class: R*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05691	881.70	1.476	0.05734	0.05745	0.05594
AL	77.75511	8,368.78	0.589	78.28361	77.46916	77.51258
AS	0.21527	74.32	0.625	0.21507	0.21404	0.21671
B	1.87241	19,035.85	0.860	1.89015	1.86836	1.85872
BA	3.03977	2,146,197.20	1.077	3.03580	3.07431	3.00918
BE	0.04791	22,217.40	0.871	0.04824	0.04804	0.04744
CA	28.44465	29,577.73	0.516	28.60908	28.39762	28.32726
CD	0.05837	1,502.84	0.580	0.05798	0.05854	0.05858
CO	0.60483	3,528.66	0.455	0.60357	0.60294	0.60798
CR	0.48942	5,577.97	0.724	0.49264	0.48999	0.48562
CU	0.44797	6,028.68	1.304	0.45324	0.44898	0.44169
FE	242.74075	66,020.13	0.704	244.64847	242.22247	241.35131
K	15.00904	5,529.15	0.846	15.12704	15.02544	14.87462
LI	1.00306	6,563.24	0.399	1.00681	1.00353	0.99885
MG	12.94223	23,245.65	0.471	13.00871	12.92897	12.88900
MN	22.67766	1,493,159.52	1.106	22.80207	22.84202	22.38887
MO	1.92215	9,188.81	0.337	1.91781	1.91905	1.92959
NA	11.72672	12,615.61	0.603	11.80426	11.71012	11.66579
NI	0.55726	2,307.75	0.353	0.55664	0.55568	0.55946
P	6.74951	3,939.40	0.232	6.73275	6.75205	6.76372
PB	0.49432	719.76	0.074	0.49426	0.49471	0.49398
S	5.50126	1,114.46	0.506	5.46935	5.52078	5.51363
SB	0.35903	329.73	0.778	0.36088	0.35582	0.36040
SE	0.16442	61.02	0.618	0.16435	0.16547	0.16344
SI	7.02328	1,338.73	0.892	7.09436	6.99944	6.97603
SN	3.70111	4,848.02	0.362	3.69174	3.69514	3.71645
SR	1.06647	854,241.81	1.063	1.07512	1.07066	1.05364
TI	4.12836	268,128.77	0.993	4.16130	4.14132	4.08245
TL	0.14497	98.64	0.407	0.14435	0.14552	0.14505
V	0.65614	9,686.46	1.111	0.66197	0.65849	0.64796
Y1	22883.32045	22,883.32	0.227	22893.45539	22929.45995	22827.04601
Y2A	290904.43450	290,904.43	1.059	288770.62624	289504.72167	294437.95560
Y2R	19831.82558	19,831.83	0.802	19659.02736	19864.42960	19972.01977
ZN	1.82896	24,779.14	0.220	1.82617	1.82712	1.83358
ZR	0.73451	1,793.26	0.219	0.73601	0.73471	0.73281

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/13/2013 10:55

Sample Number: **7266802** Class: M*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05615	877.01	1.068	0.05559	0.05608	0.05678
AL	83.68742	9,140.25	0.844	84.44464	83.04697	83.57064
AS	0.21491	75.85	0.744	0.21587	0.21306	0.21578
B	1.85971	18,946.73	1.262	1.86288	1.83483	1.88143
BA	3.04371	2,162,481.52	0.941	3.02597	3.02841	3.07675
BE	0.04792	22,364.50	0.768	0.04784	0.04760	0.04832
CA	29.75152	31,380.63	0.642	29.90621	29.53795	29.81040
CD	0.05750	1,476.21	0.951	0.05689	0.05793	0.05769
CO	0.59171	3,499.48	0.395	0.59018	0.59055	0.59440
CR	0.51915	5,964.15	1.075	0.52143	0.51279	0.52322
CU	0.42947	5,760.69	1.217	0.42837	0.42488	0.43516
FE	228.82012	63,538.06	0.787	230.19645	226.78162	229.48228
K	15.38261	5,749.85	0.221	15.36549	15.36055	15.42179
LI	0.99550	6,611.01	0.304	0.99895	0.99334	0.99421
MG	13.47693	24,554.59	0.211	13.49998	13.44517	13.48563
MN	21.48694	1,423,676.85	0.827	21.48152	21.31200	21.66730
MO	1.88946	9,135.15	0.332	1.88639	1.88531	1.89667
NA	11.62964	12,694.89	0.049	11.62324	11.63418	11.63151
NI	0.54864	2,299.40	0.342	0.54729	0.54785	0.55078
P	6.67921	3,942.58	0.473	6.66665	6.65584	6.71514
PB	0.52087	769.22	0.673	0.51747	0.52066	0.52447
S	5.30691	1,087.10	0.267	5.30861	5.29195	5.32016
SB	0.34905	324.29	0.442	0.34849	0.34786	0.35080
SE	0.16259	61.00	0.296	0.16288	0.16287	0.16204
SI	9.29364	1,795.31	0.335	9.31338	9.30978	9.25774
SN	3.62595	4,803.56	0.389	3.61471	3.62136	3.64179
SR	1.07277	864,719.21	0.731	1.06486	1.07290	1.08054
TI	4.62991	302,589.88	0.960	4.62662	4.58722	4.67590
TL	0.14142	95.10	1.169	0.14217	0.13952	0.14255
V	0.66222	9,841.72	0.984	0.66000	0.65711	0.66956
Y1	23143.37289	23,143.37	0.463	23188.64514	23220.48012	23020.99341
Y2A	292727.88270	292,727.88	0.777	292835.81842	294945.65938	290402.17031
Y2R	20122.77036	20,122.77	0.360	20051.52786	20196.40360	20120.37962
ZN	1.80483	24,714.37	0.427	1.79909	1.80181	1.81359
ZR	0.74265	1,839.78	0.354	0.74567	0.74095	0.74131

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/13/2013 10:59

Sample Number: **7266800** Class: UL** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00271	5.24	9.338	0.00247	0.00270	0.00297
AL	11.96933	1,229.94	1.048	11.97588	12.09132	11.84080
AS	0.01146	-0.89	7.561	0.01099	0.01093	0.01246
B	0.00212	346.44	1.467	0.00208	0.00214	0.00213
BA	0.29335	206,973.19	0.473	0.29203	0.29480	0.29322
BE	-0.00053	-425.36	3.422	-0.00052	-0.00055	-0.00053
CA	4.77124	4,837.73	1.111	4.77606	4.82167	4.71600
CD	0.00308	149.74	3.121	0.00317	0.00298	0.00308
CO	0.03120	186.40	0.452	0.03110	0.03113	0.03136
CR	0.05530	615.90	0.233	0.05535	0.05516	0.05540
CU	0.03121	386.56	2.192	0.03049	0.03128	0.03186
FE	49.98887	14,101.79	1.129	49.90588	50.59027	49.47046
K	0.42756	161.57	9.621	0.46184	0.38195	0.43888
LI	0.00525	101.38	34.001	0.00353	0.00709	0.00511
MG	1.90047	3,289.96	1.117	1.90759	1.91722	1.87659
MN	5.46978	359,800.58	0.082	5.46463	5.47177	5.47294
MO	0.00117	7.17	4.675	0.00122	0.00111	0.00119
NA	0.35937	341.65	0.995	0.35972	0.35563	0.36275
NI	0.01384	66.54	1.538	0.01368	0.01408	0.01375
P	1.31331	761.03	0.108	1.31494	1.31268	1.31231
PB	0.07433	111.28	1.347	0.07328	0.07443	0.07527
S	0.94692	187.01	0.672	0.94182	0.94490	0.95405
SB	-0.00270	4.80	46.484	-0.00198	-0.00414	-0.00197
SE	0.00249	0.77	48.341	0.00164	0.00387	0.00196
SI	1.53058	281.50	0.604	1.53079	1.53971	1.52123
SN	0.00675	11.00	8.929	0.00694	0.00723	0.00607
SR	0.02039	16,346.93	0.555	0.02028	0.02051	0.02039
TI	0.40796	26,497.04	0.367	0.40624	0.40895	0.40870
TL	-0.00144	-4.57	17.060	-0.00150	-0.00117	-0.00166
V	0.02987	453.24	2.619	0.03049	0.03013	0.02899
Y1	22739.19180	22,739.19	0.105	22725.47962	22725.45800	22766.63780
Y2A	290589.54606	290,589.55	0.158	291027.75017	290626.40822	290114.47979
Y2R	18951.03200	18,951.03	1.296	18802.64735	18815.83017	19234.61846
ZN	0.32271	4,370.38	0.052	0.32289	0.32266	0.32257
ZR	0.00562	9.47	2.999	0.00545	0.00578	0.00563

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/13/2013 11:03

Sample Number: **7266800** Class: U*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00301	9.79	7.311	0.00303	0.00322	0.00278
AL	11.54659	1,199.46	0.346	11.53965	11.51057	11.58953
AS	0.01302	-0.12	17.530	0.01566	0.01173	0.01168
B	0.00126	329.58	32.580	0.00166	0.00127	0.00084
BA	0.28414	202,356.96	0.267	0.28486	0.28334	0.28420
BE	-0.00056	-440.96	2.260	-0.00057	-0.00054	-0.00056
CA	4.59274	4,711.04	0.605	4.60430	4.56106	4.61285
CD	0.00321	148.73	4.306	0.00307	0.00320	0.00335
CO	0.03001	180.04	0.887	0.02991	0.03031	0.02981
CR	0.05402	607.36	0.634	0.05405	0.05435	0.05366
CU	0.03081	385.83	1.274	0.03047	0.03073	0.03124
FE	48.11130	13,729.66	0.427	48.26109	47.87722	48.19558
K	0.41954	160.41	6.845	0.45012	0.39314	0.41537
LI	0.00648	110.08	30.465	0.00420	0.00774	0.00750
MG	1.84252	3,224.77	0.398	1.83625	1.84073	1.85058
MN	5.30754	352,404.67	0.652	5.34560	5.29911	5.27792
MO	0.00079	5.35	31.981	0.00105	0.00055	0.00076
NA	0.34355	328.85	2.109	0.34398	0.35057	0.33610
NI	0.01362	66.10	2.413	0.01355	0.01398	0.01333
P	1.28157	745.03	0.361	1.27733	1.28650	1.28088
PB	0.07093	106.74	0.459	0.07072	0.07076	0.07130
S	0.92162	182.48	0.459	0.91778	0.92615	0.92094
SB	-0.00368	3.82	34.693	-0.00436	-0.00221	-0.00447
SE	0.00489	1.67	32.047	0.00436	0.00365	0.00665
SI	1.47986	275.26	0.290	1.48025	1.48394	1.47540
SN	0.00666	10.93	5.149	0.00698	0.00671	0.00630
SR	0.01977	15,994.31	0.299	0.01983	0.01972	0.01974
TI	0.39553	25,931.85	0.272	0.39672	0.39462	0.39525
TL	-0.00203	-5.11	64.762	-0.00235	-0.00315	-0.00058
V	0.02861	438.27	0.680	0.02842	0.02860	0.02881
Y1	22813.07201	22,813.07	0.137	22844.67404	22812.57411	22781.96787
Y2A	293321.10117	293,321.10	0.484	291688.86680	294261.76276	294012.67396
Y2R	19155.17711	19,155.18	0.520	19093.07079	19269.98104	19102.47950
ZN	0.31565	4,288.09	0.223	0.31484	0.31595	0.31615
ZR	0.00684	12.43	35.476	0.00513	0.00577	0.00961

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/13/2013 11:08

Sample Number: **7266800** Class: UP** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02194	399.35	1.934	0.02179	0.02242	0.02161
AL	12.97823	1,349.53	0.720	13.08097	12.89832	12.95541
AS	0.50475	205.40	0.697	0.50072	0.50719	0.50634
B	0.19286	2,125.87	0.170	0.19271	0.19264	0.19324
BA	0.34196	240,918.98	0.260	0.34287	0.34109	0.34191
BE	0.01844	8,423.61	0.656	0.01858	0.01838	0.01836
CA	5.78685	5,912.37	1.075	5.85745	5.76300	5.74008
CD	0.05293	1,013.08	0.534	0.05296	0.05319	0.05263
CO	0.13217	763.29	0.226	0.13250	0.13210	0.13191
CR	0.25484	2,919.97	0.859	0.25725	0.25427	0.25299
CU	0.54807	7,801.02	0.313	0.54720	0.54698	0.55005
FE	50.51443	14,409.37	1.029	51.07692	50.41457	50.05179
K	2.47200	889.70	0.600	2.48856	2.46752	2.45993
LI	0.98523	6,216.56	0.311	0.98820	0.98539	0.98209
MG	2.89517	5,060.29	0.461	2.91040	2.88952	2.88560
MN	5.56106	365,291.33	0.694	5.57920	5.51672	5.58725
MO	0.20246	962.76	0.270	0.20293	0.20259	0.20186
NA	2.37159	2,442.63	0.456	2.38315	2.36990	2.36172
NI	0.16597	695.30	0.430	0.16637	0.16640	0.16515
P	2.33732	1,355.76	0.262	2.34197	2.33961	2.33037
PB	0.58256	835.99	0.450	0.58553	0.58160	0.58056
S	0.96540	190.35	0.588	0.96976	0.95898	0.96746
SB	0.41416	360.34	0.399	0.41580	0.41417	0.41250
SE	0.79505	295.18	0.310	0.79689	0.79225	0.79601
SI	1.55753	289.91	0.761	1.54495	1.56848	1.55917
SN	0.59439	775.20	0.040	0.59412	0.59452	0.59454
SR	0.04078	32,613.49	0.447	0.04098	0.04062	0.04074
TI	0.51485	33,388.66	0.312	0.51606	0.51303	0.51547
TL	1.03876	803.23	0.701	1.04521	1.04021	1.03086
V	0.12998	1,926.01	0.192	0.13007	0.13016	0.12969
Y1	22728.91107	22,728.91	0.310	22662.92989	22720.53571	22803.26760
Y2A	290185.77424	290,185.77	0.403	288949.88403	291273.85686	290333.58184
Y2R	19166.49034	19,166.49	0.705	19015.47833	19207.96769	19276.02500
ZN	0.44902	6,058.76	0.388	0.45011	0.44994	0.44701
ZR	0.98463	2,324.47	0.875	0.99458	0.97966	0.97965

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/13/2013 11:12

Sample Number: **7266803** Class: D*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00331	14.22	8.257	0.00301	0.00354	0.00338
AL	12.17731	1,276.03	0.797	12.09235	12.28307	12.15650
AS	0.01181	-0.50	8.434	0.01251	0.01067	0.01226
B	0.00133	316.79	26.531	0.00173	0.00106	0.00121
BA	0.28297	202,097.38	1.097	0.28434	0.28516	0.27941
BE	-0.00057	-448.22	3.313	-0.00059	-0.00057	-0.00055
CA	4.53935	4,698.76	0.462	4.54369	4.55781	4.51656
CD	0.00313	142.95	3.282	0.00313	0.00303	0.00323
CO	0.03128	187.94	0.076	0.03130	0.03130	0.03126
CR	0.05542	626.18	1.545	0.05615	0.05563	0.05447
CU	0.03135	392.50	2.244	0.03154	0.03194	0.03058
FE	45.86434	13,216.37	0.729	45.62649	46.24643	45.72009
K	0.48984	187.00	5.860	0.50755	0.50526	0.45672
LI	0.00724	115.75	24.274	0.00914	0.00689	0.00568
MG	1.87067	3,302.80	0.237	1.86924	1.87566	1.86713
MN	5.20843	346,812.71	0.955	5.21746	5.25300	5.15481
MO	0.00072	5.05	18.935	0.00060	0.00070	0.00087
NA	0.36358	352.80	0.729	0.36442	0.36060	0.36570
NI	0.01404	68.15	4.358	0.01342	0.01404	0.01465
P	1.20772	702.69	0.330	1.20313	1.20990	1.21014
PB	0.07426	111.91	1.940	0.07468	0.07544	0.07266
S	0.94141	186.70	0.243	0.94299	0.94245	0.93879
SB	-0.00140	5.62	68.121	-0.00213	-0.00174	-0.00032
SE	0.00373	1.24	87.190	0.00033	0.00404	0.00681
SI	1.38529	260.21	1.184	1.37377	1.40408	1.37804
SN	0.00598	10.04	12.142	0.00537	0.00678	0.00578
SR	0.01981	16,075.82	1.116	0.01994	0.01993	0.01956
TI	0.42812	28,145.65	0.930	0.42996	0.43085	0.42355
TL	-0.00182	-5.09	91.288	-0.00016	-0.00347	-0.00182
V	0.02944	451.88	1.764	0.02939	0.02998	0.02895
Y1	22833.09772	22,833.10	0.201	22882.09766	22826.11159	22791.08393
Y2A	294172.79655	294,172.80	1.120	291969.01922	292588.96620	297960.40424
Y2R	19324.96439	19,324.96	0.658	19328.41476	19196.14348	19450.33493
ZN	0.29777	4,051.13	0.101	0.29745	0.29805	0.29782
ZR	0.00656	11.88	7.271	0.00613	0.00707	0.00647

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/13/2013 11:16

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49195	6,919.42	0.994	0.49557	0.49390	0.48639
AL	24.98726	2,536.97	0.693	24.79806	25.13749	25.02625
AS	0.48879	192.08	0.732	0.49184	0.48967	0.48485
B	0.47768	4,439.99	0.830	0.47851	0.48117	0.47337
BA	0.48743	330,546.22	0.928	0.49263	0.48439	0.48527
BE	0.47637	213,709.50	0.628	0.47673	0.47917	0.47322
CA	24.50924	24,082.18	0.496	24.36961	24.56682	24.59128
CD	0.48930	8,153.50	0.197	0.48821	0.48965	0.49005
CO	0.49005	2,684.76	0.217	0.48883	0.49076	0.49057
CR	0.48797	5,411.88	0.765	0.48674	0.49216	0.48500
CU	0.49518	6,790.45	1.132	0.49758	0.49919	0.48878
FE	24.51275	6,901.47	0.672	24.32271	24.61305	24.60248
K	24.56595	8,535.22	0.258	24.50328	24.56454	24.63003
LI	0.48410	3,030.65	0.379	0.48224	0.48417	0.48591
MG	24.21031	40,805.21	0.620	24.05423	24.22292	24.35377
MN	0.48399	30,624.04	0.795	0.48447	0.48757	0.47992
MO	0.50053	2,278.26	0.158	0.49979	0.50136	0.50045
NA	24.47393	24,883.24	0.480	24.33934	24.52598	24.55646
NI	0.49083	1,955.13	0.411	0.48865	0.49264	0.49120
P	0.49680	276.72	0.126	0.49744	0.49677	0.49620
PB	0.49259	682.30	0.246	0.49325	0.49333	0.49119
S	24.66505	4,795.30	0.382	24.62219	24.77315	24.59980
SB	0.51602	428.65	0.336	0.51760	0.51417	0.51630
SE	0.49539	176.11	0.569	0.49806	0.49567	0.49244
SI	25.17743	4,511.93	0.831	24.96145	25.19141	25.37944
SN	0.48566	607.26	0.244	0.48442	0.48578	0.48678
SR	0.48652	374,253.90	0.337	0.48787	0.48700	0.48470
TI	0.49748	31,096.17	0.766	0.49827	0.50084	0.49334
TL	0.48990	346.14	0.231	0.49117	0.48901	0.48951
V	0.49019	6,980.37	0.814	0.49067	0.49391	0.48598
Y1	21777.12500	21,777.13	0.135	21807.59131	21748.92022	21774.86348
Y2A	279342.61100	279,342.61	0.553	278917.57787	278055.50033	281054.75480
Y2R	18719.06886	18,719.07	0.353	18740.34816	18771.91931	18644.93911
ZN	0.49422	6,361.90	0.023	0.49409	0.49431	0.49425
ZR	0.49422	1,137.73	0.404	0.49193	0.49560	0.49512

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/13/2013 11:20

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00193	-6.47	33.764	0.00264	0.00135	0.00180
AL	0.00170	3.13	2515.448	0.03854	0.01156	-0.04502
AS	-0.00335	-4.02	17.169	-0.00371	-0.00268	-0.00364
B	0.00041	13.33	151.741	-0.00015	0.00030	0.00107
BA	0.00001	79.38	278.352	-0.00001	0.00002	0.00001
BE	-0.00115	-701.63	2.576	-0.00118	-0.00114	-0.00112
CA	-0.00946	87.34	14.612	-0.01098	-0.00828	-0.00912
CD	-0.00018	-6.89	16.262	-0.00021	-0.00015	-0.00018
CO	0.00004	3.28	628.041	-0.00016	0.00033	-0.00005
CR	0.00036	-2.60	139.831	0.00068	0.00060	-0.00022
CU	-0.00173	-44.07	32.820	-0.00235	-0.00123	-0.00161
FE	0.00198	-0.48	448.185	0.01204	-0.00480	-0.00129
K	-0.14231	-37.81	24.274	-0.15225	-0.17080	-0.10389
LI	-0.00455	36.99	49.469	-0.00715	-0.00313	-0.00337
MG	-0.00786	-1.26	18.995	-0.00631	-0.00929	-0.00797
MN	0.00055	58.52	8.951	0.00058	0.00049	0.00057
MO	0.00014	2.19	18.235	0.00011	0.00016	0.00014
NA	-0.00577	-33.90	194.016	0.00180	-0.00049	-0.01863
NI	-0.00062	12.79	35.057	-0.00055	-0.00045	-0.00087
P	-0.00014	-0.69	783.437	0.00092	-0.00119	-0.00013
PB	0.00073	4.86	45.377	0.00056	0.00111	0.00051
S	-0.00575	-5.95	50.140	-0.00726	-0.00243	-0.00757
SB	-0.00026	2.33	357.587	-0.00096	-0.00065	0.00081
SE	-0.00018	-0.16	1026.570	0.00137	-0.00228	0.00036
SI	0.01138	6.04	65.184	0.00937	0.00517	0.01959
SN	0.00085	3.26	86.094	0.00001	0.00136	0.00117
SR	-0.00023	-151.66	6.013	-0.00024	-0.00021	-0.00024
TI	-0.00010	24.02	119.258	-0.00018	0.00004	-0.00016
TL	-0.00192	-7.19	59.869	-0.00112	-0.00324	-0.00140
V	-0.00161	-22.45	9.067	-0.00158	-0.00177	-0.00148
Y1	22272.37242	22,272.37	0.121	22243.22147	22277.37302	22296.52278
Y2A	286362.49172	286,362.49	1.272	287788.43605	289074.80119	282224.23791
Y2R	18539.64228	18,539.64	0.412	18458.43331	18609.81448	18550.67905
ZN	-0.00070	16.90	5.467	-0.00066	-0.00073	-0.00071
ZR	0.00232	1.72	96.128	0.00260	-0.00004	0.00441

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/13/2013 11:25

Sample Number: **7266801** Class: R*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01296	171.60	2.670	0.01299	0.01329	0.01260
AL	15.79446	1,658.18	1.037	15.81358	15.62202	15.94779
AS	0.04265	12.55	2.966	0.04199	0.04186	0.04411
B	0.37262	3,780.04	0.509	0.37060	0.37290	0.37436
BA	0.65876	465,289.76	0.656	0.66175	0.66073	0.65381
BE	0.00890	3,984.82	0.857	0.00884	0.00887	0.00899
CA	5.77938	5,962.43	0.563	5.78853	5.74326	5.80636
CD	0.01261	304.29	0.696	0.01254	0.01271	0.01258
CO	0.12923	746.96	0.401	0.12928	0.12868	0.12972
CR	0.10172	1,155.82	0.904	0.10126	0.10278	0.10112
CU	0.08801	1,166.53	0.289	0.08780	0.08793	0.08829
FE	45.66074	13,177.75	0.562	45.68175	45.39418	45.90629
K	2.92801	1,061.94	0.637	2.91307	2.92202	2.94892
LI	0.20086	1,336.38	1.587	0.19719	0.20256	0.20285
MG	2.63742	4,656.30	0.360	2.64129	2.62661	2.64438
MN	5.15726	339,672.48	0.339	5.16020	5.13848	5.17310
MO	0.40215	1,901.15	0.402	0.40258	0.40037	0.40351
NA	2.38152	2,476.84	0.130	2.38263	2.37803	2.38392
NI	0.11759	494.18	0.327	0.11715	0.11774	0.11788
P	1.36218	785.21	0.202	1.35901	1.36361	1.36392
PB	0.10550	154.95	0.565	0.10573	0.10482	0.10594
S	1.09108	214.51	0.613	1.09596	1.08346	1.09381
SB	0.07292	67.97	0.417	0.07277	0.07327	0.07271
SE	0.03337	12.17	7.892	0.03596	0.03345	0.03070
SI	1.40764	265.21	1.236	1.41129	1.38870	1.42292
SN	0.78161	1,013.54	0.104	0.78191	0.78069	0.78223
SR	0.22575	180,890.48	0.394	0.22478	0.22593	0.22653
TI	0.84191	54,718.34	0.468	0.83760	0.84280	0.84532
TL	0.02997	15.94	5.902	0.03190	0.02843	0.02959
V	0.13308	1,964.82	0.845	0.13179	0.13358	0.13386
Y1	22614.53158	22,614.53	0.301	22606.37320	22686.41540	22550.80613
Y2A	290957.22885	290,957.23	0.284	291593.93638	291252.48509	290025.26508
Y2R	19352.47735	19,352.48	0.224	19353.62500	19395.23121	19308.57584
ZN	0.36978	4,967.46	0.389	0.37061	0.36812	0.37061
ZR	0.14841	350.58	2.061	0.14692	0.14639	0.15193

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/13/2013 11:29

Sample Number: **7266802** Class: M*** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.01307	172.30	3.207	0.01355	0.01292	0.01275
AL	17.44837	1,823.87	0.636	17.54842	17.46764	17.32905
AS	0.04147	12.06	2.024	0.04056	0.04163	0.04222
B	0.38269	3,824.86	2.035	0.39043	0.37486	0.38276
BA	0.66440	464,390.48	0.455	0.66674	0.66099	0.66546
BE	0.00918	4,070.76	3.163	0.00951	0.00900	0.00902
CA	6.16880	6,330.81	0.579	6.20530	6.16723	6.13389
CD	0.01246	296.63	1.040	0.01234	0.01259	0.01243
CO	0.12816	737.19	0.192	0.12793	0.12842	0.12812
CR	0.11180	1,259.84	2.789	0.11531	0.10934	0.11076
CU	0.08815	1,146.10	1.834	0.08996	0.08765	0.08684
FE	44.25532	12,726.54	0.743	44.58268	44.25852	43.92477
K	3.10011	1,119.02	0.872	3.12256	3.10766	3.07012
LI	0.20489	1,356.44	0.689	0.20525	0.20333	0.20609
MG	2.80288	4,926.81	0.490	2.80558	2.81507	2.78798
MN	4.92648	321,103.52	0.555	4.92823	4.89828	4.95293
MO	0.40194	1,886.11	0.034	0.40180	0.40207	0.40193
NA	2.41467	2,501.34	0.847	2.41055	2.43687	2.39659
NI	0.11776	491.39	0.267	0.11787	0.11800	0.11740
P	1.37285	785.52	0.289	1.37153	1.37732	1.36970
PB	0.11367	165.90	0.952	0.11464	0.11387	0.11250
S	1.06840	208.39	0.279	1.06534	1.07131	1.06855
SB	0.07235	67.03	2.116	0.07178	0.07409	0.07119
SE	0.03547	12.84	6.600	0.03276	0.03690	0.03673
SI	1.85675	346.90	0.972	1.87621	1.84057	1.85348
SN	0.78103	1,005.31	0.187	0.78267	0.78054	0.77987
SR	0.23048	182,758.57	1.777	0.23494	0.22689	0.22959
TI	0.97432	62,659.72	2.042	0.99591	0.95674	0.97031
TL	0.02986	15.22	4.166	0.03007	0.02853	0.03099
V	0.13840	2,023.37	2.362	0.14199	0.13558	0.13765
Y1	22447.63743	22,447.64	0.031	22454.10502	22440.10667	22448.70061
Y2A	287941.84891	287,941.85	0.749	287253.89331	290359.92379	286211.72962
Y2R	19272.94859	19,272.95	0.794	19142.63268	19234.85754	19441.35556
ZN	0.37290	4,969.69	0.084	0.37267	0.37278	0.37326
ZR	0.15563	366.29	1.729	0.15871	0.15373	0.15445

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/13/2013 11:33

Sample Number: **7266800** Class: UL** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 25.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00197	-5.80	15.546	0.00174	0.00186	0.00232
AL	2.51527	259.27	1.177	2.48515	2.51632	2.54436
AS	0.00003	-3.27	733.489	0.00024	-0.00002	-0.00015
B	0.00012	76.51	310.400	-0.00029	0.00044	0.00021
BA	0.06056	43,124.75	1.211	0.06076	0.06116	0.05974
BE	-0.00093	-615.88	3.959	-0.00089	-0.00096	-0.00094
CA	0.98336	1,069.60	0.687	0.98940	0.97607	0.98462
CD	0.00055	25.90	11.439	0.00049	0.00061	0.00054
CO	0.00646	40.60	2.911	0.00662	0.00650	0.00625
CR	0.01171	126.14	3.451	0.01147	0.01218	0.01149
CU	0.00508	44.79	14.903	0.00594	0.00479	0.00451
FE	10.25724	2,922.46	0.705	10.31864	10.17753	10.27554
K	-0.01573	5.79	63.039	-0.01772	-0.02450	-0.00497
LI	-0.00028	64.43	346.121	-0.00067	-0.00097	0.00081
MG	0.38893	679.57	0.366	0.39008	0.38733	0.38937
MN	1.17233	77,745.27	1.063	1.18061	1.17837	1.15800
MO	0.00035	3.21	5.235	0.00034	0.00037	0.00033
NA	0.05976	32.63	17.792	0.07112	0.05004	0.05813
NI	0.00244	24.15	7.198	0.00236	0.00264	0.00232
P	0.27500	157.10	0.617	0.27349	0.27684	0.27468
PB	0.01510	25.47	2.899	0.01560	0.01478	0.01491
S	0.18909	33.04	0.840	0.18725	0.18998	0.19003
SB	0.00018	3.63	1184.591	0.00232	0.00010	-0.00188
SE	0.00175	0.54	53.069	0.00220	0.00068	0.00237
SI	0.32344	62.37	3.819	0.31219	0.32146	0.33666
SN	0.00218	5.01	17.610	0.00257	0.00218	0.00180
SR	0.00411	3,345.37	1.183	0.00413	0.00415	0.00406
TI	0.08437	5,548.05	0.873	0.08479	0.08480	0.08352
TL	-0.00201	-6.81	32.905	-0.00131	-0.00262	-0.00210
V	0.00498	77.51	2.180	0.00508	0.00500	0.00486
Y1	22487.54172	22,487.54	0.189	22533.93309	22450.40325	22478.28882
Y2A	292911.47559	292,911.48	0.869	291212.72366	291685.38767	295836.31544
Y2R	18839.04877	18,839.05	0.808	18666.56675	18954.76285	18895.81671
ZN	0.06730	921.84	0.283	0.06709	0.06736	0.06745
ZR	0.00394	5.50	39.167	0.00465	0.00500	0.00217

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/13/2013 11:37

Sample Number: **7265116** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00309	21.35	1.706	0.00314	0.00309	0.00304
AL	96.42837	10,101.73	0.429	95.97689	96.78861	96.51962
AS	0.06007	7.06	3.803	0.05814	0.06259	0.05947
B	0.05968	2,162.22	2.597	0.06117	0.05980	0.05808
BA	0.36251	252,253.84	1.754	0.35981	0.36977	0.35794
BE	0.00466	1,969.66	0.966	0.00468	0.00468	0.00460
CA	9.79620	10,008.50	0.603	9.73295	9.84987	9.80578
CD	0.00841	649.71	8.148	0.00885	0.00876	0.00762
CO	0.06537	402.06	0.969	0.06542	0.06598	0.06472
CR	0.20925	2,294.78	0.828	0.20823	0.21125	0.20828
CU	0.37031	5,000.03	0.399	0.37193	0.36995	0.36904
FE	256.25827	67,453.94	0.563	254.79357	257.67621	256.30503
K	16.21987	5,816.97	0.606	16.17888	16.33205	16.14869
LI	0.19380	1,291.77	0.191	0.19413	0.19388	0.19340
MG	21.98436	38,264.85	0.573	21.90339	22.12942	21.92027
MN	1.62521	105,467.08	0.490	1.62323	1.63397	1.61843
MO	0.01575	75.63	1.839	0.01599	0.01582	0.01543
NA	0.81532	826.87	1.764	0.82700	0.81971	0.79926
NI	0.13181	523.30	0.956	0.13246	0.13261	0.13036
P	2.11117	1,212.68	1.081	2.12852	2.11966	2.08533
PB	0.28666	426.15	0.497	0.28516	0.28799	0.28682
S	16.33105	3,278.89	0.834	16.39354	16.42474	16.17486
SB	-0.00107	23.50	196.558	0.00128	-0.00170	-0.00278
SE	0.00627	1.75	43.621	0.00781	0.00788	0.00311
SI	6.97903	1,293.01	0.263	6.96341	6.97443	6.99925
SN	0.03769	50.77	0.748	0.03741	0.03769	0.03798
SR	0.07779	61,425.38	0.484	0.07788	0.07811	0.07737
TI	2.25277	144,184.29	0.695	2.25760	2.26545	2.23527
TL	0.00217	-14.87	53.726	0.00115	0.00192	0.00345
V	0.28036	4,152.92	0.325	0.27953	0.28134	0.28022
Y1	22516.87735	22,516.88	0.574	22410.57013	22479.22826	22660.83367
Y2A	286642.31279	286,642.31	0.853	286135.76872	284490.72233	289300.44732
Y2R	19309.47294	19,309.47	1.022	19515.04191	19121.62702	19291.74990
ZN	0.51030	7,091.15	1.079	0.51317	0.51379	0.50396
ZR	0.09893	231.94	0.692	0.09938	0.09814	0.09927

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/13/2013 11:41

Sample Number: **7265124** Class: **** Batch: 133125708002

Initial Vol: 1.01 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00169	-6.92	36.362	0.00171	0.00230	0.00107
AL	14.63368	1,492.39	0.399	14.64350	14.68649	14.57107
AS	-0.00230	-9.71	48.561	-0.00141	-0.00356	-0.00194
B	-0.00819	586.77	12.519	-0.00727	-0.00929	-0.00799
BA	0.03051	21,268.65	1.580	0.03106	0.03035	0.03014
BE	-0.00061	-453.58	6.396	-0.00065	-0.00057	-0.00061
CA	0.46333	555.10	1.588	0.45957	0.47181	0.45861
CD	0.00374	265.20	8.843	0.00399	0.00337	0.00386
CO	0.00013	8.49	110.573	0.00025	-0.00003	0.00018
CR	0.03196	322.30	1.450	0.03249	0.03176	0.03163
CU	0.02431	273.48	1.974	0.02471	0.02444	0.02378
FE	104.40832	28,591.81	0.725	103.96614	105.28238	103.97645
K	1.04950	377.19	6.343	0.98575	1.11857	1.04419
LI	0.01381	150.19	19.034	0.01373	0.01648	0.01123
MG	0.73775	1,276.20	0.312	0.73643	0.73641	0.74041
MN	0.20707	13,435.30	1.483	0.21039	0.20649	0.20432
MO	0.00010	2.01	125.095	-0.00001	0.00022	0.00007
NA	0.22899	205.78	7.609	0.24905	0.22035	0.21758
NI	0.00117	7.36	26.219	0.00104	0.00152	0.00095
P	0.21716	122.93	0.410	0.21818	0.21652	0.21679
PB	0.02490	38.18	2.290	0.02435	0.02549	0.02486
S	1.51763	296.50	0.332	1.52083	1.52025	1.51182
SB	-0.00698	4.83	4.533	-0.00732	-0.00691	-0.00670
SE	0.00139	0.35	142.094	0.00232	0.00275	-0.00088
SI	0.75912	140.66	0.569	0.75639	0.76410	0.75687
SN	0.00506	8.64	14.138	0.00571	0.00517	0.00430
SR	0.00822	6,506.68	2.080	0.00842	0.00815	0.00810
TI	0.35585	22,763.50	1.455	0.36176	0.35368	0.35210
TL	-0.00108	-8.36	121.712	0.00005	-0.00252	-0.00076
V	0.04584	686.11	1.792	0.04673	0.04567	0.04512
Y1	22294.48450	22,294.48	0.191	22340.51902	22256.82227	22286.11222
Y2A	286190.96532	286,190.97	1.208	282747.26640	286163.76740	289661.86216
Y2R	18813.65756	18,813.66	0.780	18836.04058	18656.94888	18947.98323
ZN	0.02907	550.05	0.744	0.02917	0.02882	0.02922
ZR	0.02847	62.41	8.786	0.03046	0.02929	0.02566

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/13/2013 11:46

Sample Number: **7265126** Class: **** Batch: 133125708002

Initial Vol: 1.04 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00170	-7.22	9.875	0.00171	0.00187	0.00153
AL	32.41550	3,337.16	0.439	32.44998	32.25919	32.53734
AS	0.00150	-6.06	130.428	0.00244	0.00279	-0.00075
B	-0.00193	420.25	73.309	-0.00137	-0.00088	-0.00353
BA	0.05479	38,264.77	0.845	0.05464	0.05531	0.05442
BE	-0.00041	-363.71	11.802	-0.00041	-0.00046	-0.00036
CA	0.46423	561.59	2.022	0.46841	0.45348	0.47079
CD	0.00238	171.72	5.740	0.00248	0.00244	0.00222
CO	0.00290	22.12	16.042	0.00312	0.00321	0.00236
CR	0.04182	448.32	1.138	0.04181	0.04230	0.04135
CU	0.02543	310.27	2.739	0.02512	0.02623	0.02495
FE	68.32427	19,183.19	0.867	68.24999	67.77246	68.95036
K	1.66009	596.14	0.738	1.67418	1.65197	1.65411
LI	0.08682	603.39	3.094	0.08769	0.08897	0.08381
MG	1.65928	2,882.44	0.188	1.66202	1.65589	1.65995
MN	0.08228	5,371.20	0.448	0.08188	0.08233	0.08261
MO	0.00063	4.51	29.122	0.00042	0.00071	0.00077
NA	0.76902	765.86	0.781	0.77553	0.76370	0.76784
NI	0.01416	64.63	2.500	0.01419	0.01379	0.01450
P	0.21920	124.54	0.730	0.22050	0.21741	0.21967
PB	0.02625	47.25	5.522	0.02791	0.02526	0.02557
S	3.13677	621.72	0.216	3.12919	3.13887	3.14225
SB	-0.00474	4.20	7.150	-0.00435	-0.00498	-0.00488
SE	0.00504	1.60	56.569	0.00716	0.00615	0.00180
SI	0.90142	167.95	1.113	0.90003	0.91208	0.89215
SN	0.00528	8.95	5.744	0.00495	0.00534	0.00555
SR	0.01542	12,221.35	0.797	0.01536	0.01556	0.01533
TI	0.20872	13,411.74	0.913	0.20899	0.21048	0.20669
TL	-0.00045	-8.61	276.225	-0.00057	0.00085	-0.00164
V	0.07113	1,055.21	1.305	0.07081	0.07217	0.07040
Y1	22376.01898	22,376.02	0.113	22404.20134	22368.93450	22354.92109
Y2A	287173.32118	287,173.32	0.209	287269.46653	286531.72631	287718.77071
Y2R	19002.70413	19,002.70	0.518	19059.28943	19059.71528	18889.10768
ZN	0.04757	743.06	0.507	0.04752	0.04783	0.04735
ZR	0.02456	53.90	1.900	0.02482	0.02402	0.02485

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/13/2013 11:50

Sample Number: **7266804** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00297	10.75	2.166	0.00290	0.00302	0.00297
AL	77.58255	8,553.83	0.076	77.54039	77.65021	77.55707
AS	0.03228	5.76	8.642	0.03227	0.02949	0.03507
B	0.01185	703.15	2.894	0.01183	0.01153	0.01221
BA	0.48910	359,152.70	0.822	0.48481	0.48972	0.49278
BE	0.00190	736.62	0.571	0.00191	0.00189	0.00188
CA	18.35426	19,631.87	0.186	18.33052	18.39333	18.33893
CD	0.00638	290.06	0.240	0.00640	0.00637	0.00637
CO	0.03438	238.22	1.035	0.03419	0.03479	0.03415
CR	0.26131	3,108.50	0.182	0.26076	0.26159	0.26157
CU	0.19254	2,640.94	0.823	0.19074	0.19370	0.19320
FE	87.53481	26,090.15	0.161	87.37597	87.64511	87.58334
K	3.13890	1,195.23	0.792	3.11211	3.14334	3.16126
LI	0.05881	472.94	1.365	0.05835	0.05973	0.05834
MG	10.96287	20,210.27	0.243	10.98112	10.93223	10.97526
MN	1.24814	85,480.50	0.382	1.24269	1.25024	1.25149
MO	0.00527	27.35	1.839	0.00520	0.00523	0.00538
NA	1.77420	1,930.83	0.775	1.75840	1.78076	1.78342
NI	0.06920	298.67	0.390	0.06896	0.06914	0.06949
P	4.41217	2,628.77	0.280	4.39869	4.42291	4.41492
PB	0.42126	641.96	0.923	0.41701	0.42210	0.42465
S	7.39188	1,537.49	0.625	7.33988	7.42808	7.40768
SB	-0.00619	7.70	20.116	-0.00632	-0.00736	-0.00488
SE	0.00728	2.30	22.814	0.00547	0.00764	0.00874
SI	5.50403	1,074.71	0.068	5.50772	5.50409	5.50028
SN	0.03403	47.78	1.421	0.03375	0.03459	0.03376
SR	0.07822	65,181.81	0.611	0.07773	0.07826	0.07868
TI	2.43534	164,485.82	0.466	2.42305	2.43755	2.44541
TL	0.00207	-12.73	95.271	0.00278	0.00358	-0.00016
V	0.17514	2,735.14	0.790	0.17364	0.17543	0.17636
Y1	23364.07581	23,364.08	0.277	23427.56060	23366.54669	23298.12013
Y2A	302482.93890	302,482.94	0.613	304091.60053	300453.61166	302903.60450
Y2R	20332.82050	20,332.82	0.032	20327.34064	20331.09793	20340.02294
ZN	1.19108	16,360.46	0.372	1.18622	1.19490	1.19214
ZR	0.01761	40.24	12.288	0.01970	0.01775	0.01538

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/13/2013 11:54

Sample Number: **7266806** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00199	-5.32	17.717	0.00199	0.00234	0.00164
AL	10.91361	1,170.72	0.228	10.91886	10.88658	10.93540
AS	0.00387	-2.07	46.407	0.00574	0.00216	0.00370
B	0.00318	146.80	13.092	0.00288	0.00365	0.00301
BA	0.10428	76,265.90	1.119	0.10460	0.10525	0.10298
BE	-0.00029	-323.60	3.825	-0.00029	-0.00030	-0.00028
CA	8.58370	8,996.79	0.108	8.59259	8.58446	8.57405
CD	0.00191	62.12	2.870	0.00187	0.00188	0.00197
CO	0.00747	52.53	1.686	0.00747	0.00760	0.00735
CR	0.01884	213.01	0.787	0.01883	0.01899	0.01869
CU	0.02835	361.55	4.337	0.02781	0.02976	0.02748
FE	16.13132	4,814.42	0.107	16.13704	16.11192	16.14499
K	0.40271	159.44	15.561	0.41966	0.45517	0.33332
LI	0.00221	88.97	68.228	0.00047	0.00314	0.00302
MG	1.76244	3,185.48	0.284	1.76733	1.75733	1.76266
MN	0.47996	32,727.21	0.869	0.48023	0.48398	0.47566
MO	0.00238	13.00	7.154	0.00251	0.00244	0.00218
NA	0.42370	425.78	2.889	0.40985	0.42822	0.43305
NI	0.01360	70.52	1.041	0.01363	0.01344	0.01372
P	0.90460	529.33	0.152	0.90542	0.90302	0.90537
PB	0.13251	197.69	1.035	0.13257	0.13385	0.13111
S	8.05152	1,647.90	0.474	8.08815	8.01206	8.05435
SB	-0.00026	3.88	371.371	0.00062	-0.00131	-0.00010
SE	0.00536	1.87	41.147	0.00469	0.00357	0.00782
SI	2.94265	560.87	1.023	2.96147	2.95856	2.90793
SN	0.02075	29.51	2.792	0.02127	0.02012	0.02085
SR	0.04419	36,657.37	1.098	0.04439	0.04454	0.04363
TI	0.47144	31,713.35	0.967	0.47398	0.47417	0.46618
TL	-0.00168	-8.62	65.702	-0.00101	-0.00108	-0.00296
V	0.03147	490.31	0.974	0.03157	0.03172	0.03113
Y1	22969.66132	22,969.66	0.236	22912.33520	22976.76727	23019.88148
Y2A	301041.04255	301,041.04	1.089	299375.49702	298928.92644	304818.70420
Y2R	19777.48604	19,777.49	0.677	19624.42706	19834.65411	19873.37695
ZN	0.14685	2,014.71	0.298	0.14728	0.14686	0.14641
ZR	0.00733	14.04	21.529	0.00768	0.00870	0.00560

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/13/2013 11:58

Sample Number: **7266808** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00204	-4.00	12.565	0.00186	0.00193	0.00233
AL	21.92926	2,320.47	0.336	21.85731	21.92595	22.00452
AS	0.00749	-1.38	8.601	0.00813	0.00684	0.00750
B	0.00658	267.04	7.886	0.00602	0.00669	0.00704
BA	0.25436	180,247.32	0.758	0.25216	0.25575	0.25516
BE	0.00023	-70.60	18.715	0.00021	0.00028	0.00020
CA	37.07357	37,887.96	0.084	37.03773	37.09189	37.09107
CD	0.00312	110.44	2.563	0.00321	0.00305	0.00310
CO	0.00752	57.36	1.146	0.00762	0.00746	0.00749
CR	0.04610	518.27	1.326	0.04544	0.04664	0.04622
CU	0.06606	868.68	1.641	0.06488	0.06700	0.06632
FE	30.69720	8,994.25	0.299	30.65242	30.80277	30.63643
K	0.83275	313.13	3.199	0.81086	0.86241	0.82499
LI	0.00869	148.49	29.853	0.00646	0.01154	0.00806
MG	5.22568	9,285.58	0.317	5.20861	5.24171	5.22673
MN	0.71732	47,409.13	0.879	0.71113	0.72373	0.71711
MO	0.00332	17.15	1.556	0.00329	0.00338	0.00329
NA	1.54465	1,610.70	0.563	1.53464	1.55025	1.54906
NI	0.01903	89.39	1.827	0.01913	0.01864	0.01931
P	2.22837	1,276.65	0.160	2.22918	2.23147	2.22447
PB	0.18488	270.04	0.510	0.18530	0.18380	0.18554
S	7.62090	1,525.76	0.068	7.62286	7.61500	7.62482
SB	-0.00022	5.29	692.497	-0.00111	-0.00105	0.00151
SE	0.01098	3.84	18.082	0.01327	0.00966	0.01002
SI	5.68771	1,066.52	0.258	5.67789	5.68066	5.70458
SN	0.02518	34.57	1.523	0.02492	0.02562	0.02500
SR	0.11335	91,122.46	0.879	0.11223	0.11413	0.11370
TI	0.89855	58,574.16	0.746	0.89103	0.90387	0.90074
TL	-0.00092	-9.62	132.460	0.00021	-0.00221	-0.00075
V	0.07330	1,103.88	0.387	0.07320	0.07362	0.07308
Y1	22473.30359	22,473.30	0.080	22473.08102	22455.51743	22491.31232
Y2A	291856.27899	291,856.28	0.878	293956.84228	288999.58582	292612.40888
Y2R	19528.83227	19,528.83	0.310	19590.06397	19468.91838	19527.51447
ZN	0.28383	3,784.39	0.110	0.28418	0.28357	0.28374
ZR	0.01081	22.27	9.719	0.01181	0.00971	0.01091

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/13/2013 12:02

Sample Number: **7266676** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	k	0.00280	16.93	21.305	0.00223	0.00342	0.00274
AL	k	41.48008	4,305.41	0.312	41.45416	41.36564	41.62043
AS	k	-0.26179	-106.00	0.720	-0.26378	-0.26003	-0.26156
B	k	0.74319	6,566.55	0.819	0.74121	0.73834	0.75002
BA		0.14357	95,824.78	1.045	0.14243	0.14300	0.14527
BE	k	0.00213	774.66	3.002	0.00211	0.00209	0.00220
CA		0.43760	539.44	2.523	0.42528	0.44091	0.44660
CD	k	0.18586	3,036.07	0.938	0.18387	0.18712	0.18660
CO	k	0.01869	103.60	0.802	0.01866	0.01886	0.01856
CR	k	0.11174	1,216.03	0.555	0.11225	0.11105	0.11192
CU	k	0.22417	3,031.20	0.774	0.22333	0.22302	0.22617
FE	k	0.00000	316,685.73	0.000	0.00000	0.00000	0.00000
K		3.71840	1,331.97	0.707	3.68921	3.74020	3.72578
LI		0.02746	238.11	3.004	0.02682	0.02717	0.02839
MG	k	1.94591	3,405.40	0.471	1.94614	1.93663	1.95495
MN		3.41637	212,517.97	1.192	3.38353	3.40364	3.46192
MO		-0.00418	-17.25	10.357	-0.00387	-0.00399	-0.00468
NA		1.61160	1,649.91	0.653	1.61354	1.62102	1.60024
NI	k	-0.00741	-14.19	5.379	-0.00701	-0.00781	-0.00742
P	k	2.07791	1,138.02	0.367	2.06984	2.07887	2.08501
PB	k	0.12229	168.83	1.281	0.12326	0.12313	0.12048
S	k	3.56644	680.34	0.260	3.55738	3.57591	3.56601
SB	k	0.04155	35.74	3.476	0.04224	0.03989	0.04251
SE	k	0.01582	5.46	36.613	0.01064	0.02207	0.01474
SI		4.40812	811.82	0.626	4.39875	4.38640	4.43919
SN		0.02352	31.02	3.259	0.02267	0.02416	0.02374
SR		0.03131	23,720.44	1.093	0.03108	0.03115	0.03170
TI	k	1.29392	79,406.04	0.937	1.28533	1.28865	1.30779
TL	k	-0.00750	-8.82	22.265	-0.00917	-0.00583	-0.00749
V	k	0.35018	4,925.34	1.227	0.34826	0.34718	0.35510
Y1		21487.74814	21,487.75	0.375	21573.91116	21475.07657	21414.25668
Y2A		274810.91230	274,810.91	1.005	275999.91716	276779.57256	271653.24718
Y2R		19158.34246	19,158.34	0.188	19193.18635	19160.61453	19121.22651
ZN	k	0.63277	7,938.58	0.390	0.62992	0.63428	0.63411
ZR		0.10325	240.32	3.141	0.09980	0.10372	0.10623

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/13/2013 12:06

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49544	6,964.29	0.330	0.49612	0.49357	0.49662
AL	25.21585	2,524.25	0.298	25.16435	25.18106	25.30213
AS	0.50163	197.04	0.333	0.49994	0.50328	0.50167
B	0.46881	4,359.36	0.384	0.46701	0.46880	0.47061
BA	0.49423	334,934.38	0.275	0.49499	0.49267	0.49505
BE	0.47815	214,365.73	0.479	0.47908	0.47554	0.47983
CA	24.77860	24,003.43	0.245	24.74262	24.74458	24.84860
CD	0.49512	8,243.56	0.007	0.49511	0.49509	0.49516
CO	0.49986	2,735.99	0.437	0.49862	0.49859	0.50238
CR	0.48227	5,344.99	0.751	0.47884	0.48191	0.48606
CU	0.48909	6,702.04	0.254	0.48954	0.48768	0.49003
FE	24.80450	6,884.85	0.329	24.89162	24.72986	24.79201
K	24.80949	8,498.84	0.216	24.79875	24.86763	24.76208
LI	0.48452	2,990.84	0.396	0.48241	0.48500	0.48616
MG	24.36804	40,491.93	0.174	24.35403	24.33438	24.41569
MN	0.49073	31,030.12	0.390	0.49195	0.48852	0.49172
MO	0.50672	2,304.47	0.144	0.50625	0.50635	0.50756
NA	24.61295	24,673.78	0.148	24.58488	24.65405	24.59993
NI	0.49428	1,967.11	0.106	0.49482	0.49424	0.49378
P	0.50353	280.21	0.124	0.50290	0.50356	0.50415
PB	0.49979	691.59	0.481	0.50235	0.49757	0.49947
S	25.09151	4,874.24	0.191	25.03682	25.11213	25.12558
SB	0.51297	425.75	0.157	0.51231	0.51272	0.51387
SE	0.50049	177.78	0.373	0.49845	0.50212	0.50091
SI	25.26876	4,464.81	0.441	25.25806	25.16314	25.38508
SN	0.49063	612.94	0.220	0.48938	0.49130	0.49120
SR	0.49005	376,706.13	0.933	0.49288	0.48477	0.49250
TI	0.49562	30,959.79	0.385	0.49656	0.49342	0.49687
TL	0.49463	349.28	0.160	0.49471	0.49537	0.49380
V	0.49437	7,035.18	0.451	0.49524	0.49184	0.49604
Y1	21758.90451	21,758.90	0.168	21743.47464	21800.62308	21732.61579
Y2A	279156.69870	279,156.70	0.597	278107.52154	281078.61166	278283.96289
Y2R	18456.43902	18,456.44	0.076	18458.19206	18469.50000	18441.62500
ZN	0.49688	6,390.77	0.041	0.49706	0.49666	0.49690
ZR	0.49839	1,131.26	0.700	0.50058	0.49437	0.50021

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 35 Date/Time: 11/13/2013 12:10

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00162	-11.32	25.699	0.00147	0.00129	0.00208
AL	0.01403	4.48	423.711	0.02024	-0.04828	0.07014
AS	-0.00110	-3.13	88.697	-0.00042	-0.00067	-0.00222
B	-0.00006	9.68	228.414	0.00010	-0.00013	-0.00015
BA	0.00002	89.16	190.798	0.00004	-0.00002	0.00002
BE	-0.00101	-660.85	4.185	-0.00105	-0.00099	-0.00098
CA	-0.01002	88.54	28.808	-0.01332	-0.00874	-0.00799
CD	-0.00022	-7.50	48.638	-0.00010	-0.00028	-0.00028
CO	-0.00012	2.41	31.656	-0.00015	-0.00008	-0.00013
CR	0.00041	-2.17	88.025	0.00067	0.00000	0.00055
CU	-0.00114	-37.05	5.719	-0.00109	-0.00112	-0.00121
FE	0.04830	12.82	8.397	0.04997	0.05125	0.04367
K	-0.13214	-34.99	31.571	-0.10341	-0.11302	-0.17999
LI	-0.00410	40.44	35.129	-0.00538	-0.00439	-0.00254
MG	-0.00607	1.81	15.159	-0.00539	-0.00712	-0.00569
MN	0.00050	57.57	8.096	0.00049	0.00054	0.00046
MO	0.00012	2.16	167.152	0.00007	-0.00005	0.00035
NA	-0.01322	-42.19	73.416	-0.00644	-0.02434	-0.00889
NI	-0.00047	13.54	54.274	-0.00057	-0.00018	-0.00065
P	0.00137	0.16	20.152	0.00121	0.00169	0.00121
PB	-0.00073	2.85	143.006	0.00029	-0.00179	-0.00069
S	-0.00434	-5.73	83.292	-0.00118	-0.00355	-0.00827
SB	-0.00027	2.35	567.235	-0.00177	0.00125	-0.00027
SE	-0.00018	-0.16	2054.563	-0.00365	0.00359	-0.00047
SI	0.00487	4.98	105.589	-0.00053	0.00544	0.00970
SN	0.00039	2.70	201.625	-0.00036	0.00033	0.00121
SR	-0.00019	-122.49	5.365	-0.00020	-0.00018	-0.00018
TI	-0.00009	25.68	94.455	-0.00004	-0.00004	-0.00018
TL	-0.00204	-7.36	34.879	-0.00137	-0.00279	-0.00197
V	-0.00152	-21.88	52.755	-0.00154	-0.00071	-0.00232
Y1	22482.51505	22,482.52	0.161	22479.60088	22447.92028	22520.02398
Y2A	297045.50475	297,045.50	0.484	295389.24785	297967.69384	297779.57256
Y2R	18912.81248	18,912.81	0.832	19065.59134	18751.14610	18921.70000
ZN	-0.00063	18.03	5.955	-0.00059	-0.00066	-0.00064
ZR	0.00285	3.00	76.514	0.00373	0.00037	0.00444

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/13/2013 12:14

Sample Number: **7266676** Class: **** Batch: 133125708002

Initial Vol: 1.00 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00177	-6.43	27.140	0.00127	0.00181	0.00222
AL	8.42697	871.46	0.275	8.42842	8.40309	8.44940
AS	-0.02056	-26.45	8.800	-0.02059	-0.02235	-0.01873
B	-0.03648	1,326.05	8.601	-0.03988	-0.03370	-0.03587
BA	0.02872	20,086.51	1.052	0.02841	0.02901	0.02874
BE	-0.00045	-381.94	4.205	-0.00043	-0.00046	-0.00046
CA	0.08129	180.40	3.593	0.08264	0.07794	0.08329
CD	0.00781	645.54	6.048	0.00740	0.00833	0.00769
CO	0.00332	24.92	10.528	0.00314	0.00372	0.00309
CR	0.03024	250.05	0.163	0.03026	0.03028	0.03019
CU	0.04830	588.41	0.466	0.04825	0.04854	0.04810
FE	263.66383	68,243.08	0.854	266.01945	261.53344	263.43860
K	0.63547	235.84	8.893	0.65595	0.67888	0.57157
LI	0.00314	85.71	36.924	0.00384	0.00180	0.00379
MG	0.39137	691.42	0.327	0.38995	0.39173	0.39243
MN	0.69687	45,309.35	0.923	0.68988	0.70254	0.69818
MO	-0.00096	-2.91	32.714	-0.00072	-0.00132	-0.00085
NA	0.31967	302.32	3.025	0.31784	0.33013	0.31105
NI	0.00556	5.76	2.956	0.00540	0.00555	0.00573
P	0.41631	235.44	0.076	0.41647	0.41651	0.41594
PB	0.03324	40.36	5.139	0.03140	0.03353	0.03478
S	0.71964	135.44	0.758	0.71334	0.72265	0.72292
SB	-0.01547	9.37	9.453	-0.01712	-0.01431	-0.01499
SE	0.00274	0.86	82.130	0.00318	0.00474	0.00030
SI	0.91152	170.20	0.249	0.91031	0.91415	0.91011
SN	0.00515	8.72	10.595	0.00576	0.00471	0.00497
SR	0.00617	4,905.80	1.277	0.00608	0.00621	0.00622
TI	0.26009	16,700.36	0.990	0.25738	0.26250	0.26038
TL	-0.00087	-8.26	72.530	-0.00061	-0.00040	-0.00158
V	0.06670	1,012.66	1.743	0.06550	0.06781	0.06679
Y1	22221.36535	22,221.37	0.359	22268.96161	22129.34688	22265.78755
Y2A	287110.64171	287,110.64	0.684	289097.33267	285170.89132	287063.70113
Y2R	19049.68283	19,049.68	0.676	18938.90940	19190.88915	19019.24995
ZN	0.09976	1,685.64	0.614	0.09909	0.10029	0.09991
ZR	0.02320	50.85	8.221	0.02329	0.02506	0.02125

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/13/2013 12:19

Sample Number: **7266677** Class: **** Batch: 133125708002

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00255	10.89	20.245	0.00239	0.00313	0.00213
AL	101.01968	10,737.39	0.619	100.64431	101.74192	100.67280
AS	0.03992	2.06	6.564	0.03705	0.04218	0.04054
B	0.06889	1,914.95	2.811	0.06750	0.06806	0.07110
BA	0.44375	312,654.99	1.012	0.43875	0.44506	0.44744
BE	0.00311	1,272.00	1.671	0.00311	0.00306	0.00316
CA	6.69834	6,977.99	0.373	6.68953	6.72654	6.67894
CD	0.00752	519.82	4.460	0.00769	0.00714	0.00774
CO	0.07729	485.39	0.545	0.07777	0.07700	0.07710
CR	0.16043	1,778.83	0.197	0.16026	0.16023	0.16079
CU	0.48856	6,661.91	0.744	0.48532	0.48787	0.49249
FE	199.43851	54,609.86	0.599	199.01755	200.78600	198.51198
K	17.33018	6,304.59	0.471	17.40950	17.33448	17.24654
LI	0.16516	1,125.68	1.227	0.16544	0.16703	0.16300
MG	33.66849	59,100.02	0.197	33.72163	33.68982	33.59402
MN	2.18577	143,613.21	0.582	2.17323	2.18541	2.19867
MO	0.00262	13.86	10.574	0.00233	0.00289	0.00265
NA	3.88219	4,105.67	0.115	3.88284	3.88630	3.87743
NI	0.14461	580.69	0.400	0.14504	0.14484	0.14395
P	2.04119	1,168.99	0.246	2.04695	2.03776	2.03884
PB	0.21382	326.32	0.194	0.21383	0.21339	0.21422
S	0.44856	82.77	2.557	0.45246	0.45757	0.43565
SB	-0.00783	12.95	15.123	-0.00648	-0.00831	-0.00870
SE	0.00770	2.26	49.952	0.01054	0.00332	0.00924
SI	8.49416	1,595.61	0.500	8.54218	8.46134	8.47895
SN	0.02904	39.48	2.762	0.02991	0.02834	0.02885
SR	0.06500	51,976.02	0.658	0.06456	0.06503	0.06541
TI	3.59778	233,136.09	0.459	3.58474	3.59226	3.61634
TL	0.00127	-15.80	47.152	0.00114	0.00075	0.00192
V	0.24172	3,632.13	0.551	0.24075	0.24118	0.24324
Y1	22441.92856	22,441.93	0.135	22435.17025	22415.60210	22475.01332
Y2A	290227.66181	290,227.66	0.295	290399.10537	290985.66932	289298.21074
Y2R	19589.37326	19,589.37	0.533	19598.79717	19480.62500	19688.69760
ZN	0.35797	5,000.66	0.136	0.35853	0.35770	0.35767
ZR	0.07419	175.51	0.950	0.07470	0.07449	0.07339

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/13/2013 12:23

Sample Number: **7266678** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00377	28.63	9.836	0.00394	0.00403	0.00335
AL	135.27672	14,674.10	0.277	134.90748	135.65726	135.26541
AS	0.08012	14.92	2.336	0.08109	0.08130	0.07796
B	0.04782	2,093.31	11.112	0.05337	0.04278	0.04730
BA	0.47310	333,768.72	0.992	0.47807	0.46875	0.47247
BE	0.00468	2,007.65	1.051	0.00473	0.00467	0.00463
CA	15.97664	16,803.81	0.608	15.94665	16.08518	15.89808
CD	0.00906	650.11	27.124	0.01189	0.00772	0.00756
CO	0.11734	694.49	5.998	0.12547	0.11329	0.11327
CR	0.18924	2,094.28	1.966	0.19353	0.18682	0.18738
CU	0.40856	5,529.96	1.676	0.41641	0.40541	0.40385
FE	258.20950	70,239.18	0.509	257.78428	259.68373	257.16047
K	13.48124	5,002.76	0.414	13.46560	13.54325	13.43487
LI	0.19083	1,321.10	1.096	0.19310	0.18899	0.19040
MG	33.91897	60,694.41	0.060	33.90308	33.94179	33.91204
MN	3.88053	255,274.50	1.357	3.94131	3.85143	3.84884
MO	0.00404	20.12	12.284	0.00452	0.00409	0.00353
NA	1.56481	1,669.19	1.166	1.57333	1.54387	1.57723
NI	0.16766	655.08	5.398	0.17805	0.16155	0.16336
P	2.28447	1,283.91	5.390	2.42650	2.21911	2.20780
PB	0.32418	480.04	6.387	0.34806	0.31327	0.31121
S	0.65720	121.66	5.647	0.69855	0.64625	0.62679
SB	0.02657	45.60	14.992	0.03038	0.02243	0.02689
SE	0.00793	2.15	36.134	0.00717	0.01110	0.00553
SI	6.04014	1,158.03	0.187	6.04857	6.02727	6.04459
SN	0.03632	47.93	5.645	0.03868	0.03509	0.03518
SR	0.08127	65,059.01	1.447	0.08262	0.08064	0.08054
TI	3.36184	218,128.06	1.419	3.41676	3.33083	3.33794
TL	0.00056	-16.93	177.565	-0.00017	0.00168	0.00016
V	0.32162	4,830.45	1.349	0.32661	0.31876	0.31950
Y1	22064.38370	22,064.38	4.509	20916.73437	22682.34667	22594.07005
Y2A	290631.73735	290,631.74	1.290	286305.99735	292959.90722	292629.30749
Y2R	19971.75626	19,971.76	0.358	19978.68353	19897.13516	20039.45009
ZN	0.40885	5,641.85	6.197	0.43810	0.39453	0.39390
ZR	0.07370	177.71	0.624	0.07422	0.07347	0.07340

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/13/2013 12:27

Sample Number: **7266679** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00190	1.53	3.560	0.00183	0.00192	0.00196
AL	122.06194	13,083.21	0.755	121.33951	123.09934	121.74695
AS	0.02234	-10.95	10.713	0.02052	0.02505	0.02144
B	-0.02066	1,699.50	5.566	-0.01951	-0.02181	-0.02066
BA	0.21143	149,928.78	1.083	0.21156	0.21365	0.20907
BE	0.00236	926.32	1.236	0.00235	0.00239	0.00233
CA	2.45901	2,648.13	1.078	2.43650	2.48824	2.45230
CD	0.00711	708.45	7.644	0.00764	0.00656	0.00712
CO	0.01259	80.84	3.616	0.01208	0.01295	0.01276
CR	0.15414	1,683.79	0.968	0.15405	0.15567	0.15269
CU	0.11404	1,526.16	1.111	0.11430	0.11515	0.11266
FE	295.39723	78,110.68	1.080	293.05184	299.03068	294.10917
K	7.91232	2,907.30	0.906	7.85951	7.99394	7.88351
LI	0.31084	2,067.65	0.656	0.31109	0.31274	0.30868
MG	7.96668	14,284.79	0.408	7.93249	7.99724	7.97030
MN	0.29310	19,396.99	1.077	0.29306	0.29627	0.28996
MO	0.00178	10.00	13.295	0.00191	0.00151	0.00193
NA	5.31591	5,676.91	0.248	5.31986	5.32666	5.30119
NI	0.05575	208.28	0.735	0.05585	0.05530	0.05610
P	0.98774	569.47	0.237	0.99000	0.98533	0.98789
PB	0.10372	174.26	1.726	0.10353	0.10202	0.10559
S	17.38895	3,507.27	0.556	17.49828	17.35345	17.31513
SB	-0.01823	11.33	8.368	-0.01929	-0.01648	-0.01891
SE	0.00315	0.50	134.334	-0.00172	0.00594	0.00523
SI	6.42172	1,216.77	0.094	6.41564	6.42767	6.42185
SN	0.02272	31.62	5.029	0.02206	0.02206	0.02404
SR	0.07273	58,511.46	0.990	0.07275	0.07344	0.07200
TI	0.46098	30,084.80	1.240	0.46107	0.46665	0.45522
TL	0.00201	-13.72	45.180	0.00219	0.00103	0.00282
V	0.28424	4,285.25	1.269	0.28515	0.28731	0.28027
Y1	22619.54647	22,619.55	0.347	22533.62109	22637.25092	22687.76741
Y2A	292041.30771	292,041.31	1.009	291809.80782	289216.36846	295097.74685
Y2R	19742.51238	19,742.51	0.557	19832.75070	19619.93614	19774.85030
ZN	0.19558	3,026.79	0.512	0.19673	0.19513	0.19489
ZR	0.07516	179.23	1.221	0.07452	0.07474	0.07621

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/13/2013 12:31

Sample Number: **7266679** Class: **** Batch: 133125708002

Initial Vol: 1.02 Final Vol: 100.00 DF: 2.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00171	-5.58	22.497	0.00211	0.00169	0.00134
AL	63.57814	6,647.10	0.132	63.65291	63.59379	63.48772
AS	0.00953	-7.27	23.454	0.01209	0.00855	0.00796
B	-0.00511	874.08	11.863	-0.00443	-0.00533	-0.00558
BA	0.11053	77,476.57	1.375	0.11226	0.10995	0.10939
BE	0.00061	105.30	2.707	0.00062	0.00061	0.00059
CA	1.28120	1,396.31	0.211	1.28302	1.27809	1.28249
CD	0.00447	359.73	5.536	0.00473	0.00442	0.00424
CO	0.00690	44.97	6.609	0.00687	0.00646	0.00737
CR	0.08072	871.27	1.868	0.08241	0.08021	0.07953
CU	0.05819	762.29	0.841	0.05876	0.05791	0.05791
FE	144.74167	39,952.05	0.356	144.89694	145.16140	144.16667
K	4.05292	1,460.57	0.192	4.06155	4.05078	4.04643
LI	0.16072	1,076.86	1.213	0.16296	0.15941	0.15980
MG	4.15940	7,306.06	0.116	4.16071	4.15405	4.16345
MN	0.15377	10,065.48	1.593	0.15624	0.15375	0.15134
MO	0.00112	6.80	19.430	0.00125	0.00086	0.00123
NA	2.73877	2,843.22	0.277	2.73201	2.74697	2.73734
NI	0.02859	114.47	0.881	0.02857	0.02885	0.02835
P	0.49895	285.46	0.678	0.50220	0.49919	0.49545
PB	0.05331	91.37	2.682	0.05166	0.05422	0.05405
S	8.69642	1,740.07	0.374	8.73394	8.67737	8.67795
SB	-0.00785	7.80	12.227	-0.00681	-0.00870	-0.00803
SE	0.00550	1.63	38.250	0.00322	0.00737	0.00591
SI	1.23284	231.60	0.406	1.23342	1.22757	1.23753
SN	0.01130	16.72	3.111	0.01134	0.01163	0.01093
SR	0.03802	30,236.63	1.607	0.03871	0.03783	0.03753
TI	0.22172	14,312.35	1.303	0.22481	0.22126	0.21909
TL	-0.00063	-11.15	96.598	-0.00133	-0.00034	-0.00022
V	0.14763	2,198.49	1.366	0.14974	0.14743	0.14572
Y1	22470.09254	22,470.09	0.344	22520.78921	22508.24341	22381.24500
Y2A	288543.13011	288,543.13	1.079	285161.44798	289175.94433	291291.99801
Y2R	19287.64531	19,287.65	0.187	19312.98565	19246.33599	19303.61428
ZN	0.09878	1,525.28	0.295	0.09910	0.09868	0.09854
ZR	0.03806	86.83	4.487	0.03997	0.03669	0.03751

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 41

Date/Time: 11/13/2013 12:35

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00617	62.20	10.290	0.00544	0.00646	0.00660
AL	0.21362	24.85	15.333	0.17926	0.24449	0.21710
AS	0.01615	4.01	12.421	0.01545	0.01842	0.01459
B	0.04651	454.60	1.264	0.04645	0.04713	0.04596
BA	0.00526	3,864.96	0.591	0.00525	0.00529	0.00523
BE	0.00363	1,552.77	0.706	0.00362	0.00366	0.00362
CA	0.19479	290.87	0.871	0.19464	0.19316	0.19655
CD	0.00489	80.64	1.631	0.00490	0.00480	0.00496
CO	0.00541	33.86	4.901	0.00512	0.00547	0.00564
CR	0.01489	168.85	0.952	0.01474	0.01491	0.01502
CU	0.00862	105.48	0.473	0.00867	0.00859	0.00860
FE	0.25039	70.68	2.175	0.25580	0.25046	0.24491
K	0.37871	143.67	6.828	0.38223	0.35128	0.40263
LI	0.01775	174.67	11.602	0.01659	0.02013	0.01654
MG	0.09309	172.17	2.179	0.09132	0.09530	0.09265
MN	0.00576	410.40	1.284	0.00572	0.00584	0.00571
MO	0.01028	50.04	3.476	0.00992	0.01064	0.01028
NA	0.98898	985.65	0.250	0.98752	0.98757	0.99183
NI	0.00995	56.32	2.952	0.01026	0.00968	0.00990
P	0.09760	55.59	1.001	0.09873	0.09698	0.09709
PB	0.01532	25.63	3.248	0.01499	0.01590	0.01509
S	0.48903	93.78	1.054	0.49349	0.49021	0.48339
SB	0.02000	19.60	5.391	0.02039	0.02082	0.01878
SE	0.01991	7.25	17.804	0.01957	0.01655	0.02361
SI	0.11041	24.01	10.362	0.12334	0.10631	0.10158
SN	0.02080	29.07	2.769	0.02030	0.02143	0.02066
SR	0.00484	3,982.17	0.379	0.00484	0.00486	0.00482
TI	0.00977	679.12	0.924	0.00972	0.00987	0.00971
TL	0.03075	17.85	3.555	0.03186	0.03071	0.02968
V	0.00339	52.15	4.693	0.00337	0.00325	0.00356
Y1	22573.87781	22,573.88	0.259	22577.70522	22513.57914	22630.34905
Y2A	296692.59443	296,692.59	0.609	296764.91054	294851.14314	298461.72962
Y2R	18859.34249	18,859.34	0.448	18783.37657	18950.46463	18844.18628
ZN	0.01970	286.27	0.159	0.01966	0.01972	0.01970
ZR	0.05091	114.80	2.111	0.05165	0.05140	0.04968

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 42

Date/Time: 11/13/2013 12:39

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00137	-12.05	11.727	0.00120	0.00151	0.00141
AL	497.56941	49,211.45	0.343	495.63361	498.84732	498.22731
AS	-0.01579	-17.99	10.880	-0.01472	-0.01777	-0.01487
B	-0.02980	863.27	1.031	-0.02945	-0.02994	-0.03001
BA	0.00013	143.48	11.604	0.00013	0.00011	0.00014
BE	-0.00129	-672.85	0.771	-0.00129	-0.00128	-0.00130
CA	496.64336	438,252.00	1.084	502.25128	491.51979	496.15900
CD	0.00578	420.60	6.682	0.00602	0.00598	0.00533
CO	-0.00057	-0.14	54.121	-0.00089	-0.00028	-0.00053
CR	0.00271	-37.67	7.658	0.00248	0.00287	0.00279
CU	0.00181	146.93	32.170	0.00126	0.00242	0.00175
FE	199.56571	50,236.57	0.363	198.73636	199.88574	200.07503
K	-0.17328	-47.05	16.971	-0.16724	-0.20523	-0.14736
LI	-0.00708	335.50	24.457	-0.00895	-0.00554	-0.00674
MG	538.92500	649,321.06	0.921	538.74612	543.97787	534.05101
MN	0.00382	237.58	1.275	0.00386	0.00384	0.00376
MO	-0.00124	-3.64	33.455	-0.00076	-0.00153	-0.00143
NA	0.01776	-9.87	69.467	0.00669	0.01553	0.03106
NI	0.00224	0.12	4.869	0.00232	0.00229	0.00212
P	0.01158	5.16	18.293	0.01384	0.01123	0.00965
PB	0.00400	128.34	6.812	0.00369	0.00416	0.00416
S	-0.14309	-29.76	6.474	-0.15240	-0.13387	-0.14301
SB	-0.00956	7.97	8.101	-0.01045	-0.00911	-0.00911
SE	0.00165	-1.57	217.202	-0.00184	0.00148	0.00530
SI	0.02450	8.12	11.411	0.02198	0.02750	0.02401
SN	0.00534	7.77	4.982	0.00504	0.00548	0.00551
SR	0.00177	1,250.93	0.417	0.00176	0.00177	0.00178
TI	-0.00383	-188.03	2.354	-0.00378	-0.00393	-0.00377
TL	-0.00292	-6.66	96.047	-0.00615	-0.00115	-0.00146
V	-0.00564	-51.35	8.786	-0.00506	-0.00592	-0.00593
Y1	19250.77092	19,250.77	0.070	19263.80413	19237.03050	19251.47813
Y2A	251378.20088	251,378.20	0.326	250545.36424	251405.62914	252183.60927
Y2R	18009.73767	18,009.74	0.214	18005.36749	17973.64082	18050.20471
ZN	0.00879	362.60	2.768	0.00888	0.00898	0.00851
ZR	0.00885	16.18	31.698	0.01202	0.00669	0.00785

LANCASTER LABORATORIES

Run Name: 1331703T72 Instrument ID: 16417

Tube: 43 Date/Time: 11/13/2013 12:44

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21323	2,649.09	0.220	0.21370	0.21276	0.21323
AL	498.96561	49,256.36	0.628	498.78939	495.92491	502.18253
AS	0.08935	19.36	4.061	0.08611	0.08867	0.09327
B	-0.02864	870.21	4.923	-0.02873	-0.02718	-0.03000
BA	0.48757	296,233.87	0.605	0.48675	0.49085	0.48512
BE	0.49227	197,865.19	0.193	0.49184	0.49160	0.49335
CA	500.99674	440,932.92	1.194	504.02908	494.10528	504.85586
CD	0.93651	14,121.34	0.153	0.93783	0.93672	0.93498
CO	0.45922	2,228.81	0.165	0.46007	0.45895	0.45864
CR	0.46781	4,596.27	0.210	0.46680	0.46876	0.46787
CU	0.50652	6,402.86	0.295	0.50659	0.50798	0.50499
FE	200.32338	50,310.07	1.093	200.96796	197.88441	202.11777
K	-0.11729	-28.31	31.060	-0.15031	-0.12337	-0.07821
LI	-0.00500	349.73	26.598	-0.00353	-0.00533	-0.00613
MG	535.29237	645,140.95	2.364	542.13785	520.69239	543.04687
MN	0.47411	26,877.86	0.146	0.47339	0.47416	0.47477
MO	-0.00154	-4.86	28.546	-0.00203	-0.00119	-0.00140
NA	0.01408	-13.52	75.036	0.02260	0.00226	0.01737
NI	0.90568	3,174.06	0.305	0.90847	0.90560	0.90295
P	0.00879	5.10	6.205	0.00820	0.00889	0.00927
PB	0.04697	181.02	6.959	0.04741	0.04999	0.04350
S	-0.14230	-29.75	2.768	-0.14130	-0.14664	-0.13896
SB	0.62784	473.14	0.951	0.63002	0.63241	0.62108
SE	0.04983	13.64	6.000	0.05172	0.04638	0.05138
SI	0.04035	10.83	19.940	0.03378	0.03794	0.04932
SN	0.00467	7.05	13.496	0.00523	0.00478	0.00399
SR	0.00176	1,237.68	1.566	0.00173	0.00175	0.00179
TI	-0.00386	-169.55	2.669	-0.00394	-0.00375	-0.00390
TL	0.08370	38.77	1.494	0.08238	0.08487	0.08386
V	0.48409	6,220.68	0.223	0.48528	0.48381	0.48318
Y1	19336.11430	19,336.11	0.218	19287.92414	19365.58563	19354.83312
Y2A	250271.08168	250,271.08	0.134	250630.29801	250217.30132	249965.64570
Y2R	17974.86869	17,974.87	0.890	17849.86020	18155.24716	17919.49870
ZN	1.03541	11,976.30	0.314	1.03889	1.03488	1.03246
ZR	0.00607	10.00	26.523	0.00425	0.00729	0.00669

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 44

Date/Time: 11/13/2013 12:48

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.48319	7,013.93	1.686	0.48808	0.48770	0.47378
AL	24.63581	2,548.67	0.744	24.43192	24.68844	24.78708
AS	0.50090	197.92	0.316	0.50262	0.50056	0.49951
B	0.45090	4,331.61	1.446	0.45460	0.45472	0.44337
BA	0.47713	333,962.53	1.504	0.48393	0.47782	0.46962
BE	0.46209	213,955.50	1.756	0.46626	0.46726	0.45273
CA	24.00333	24,035.09	0.216	23.97880	24.06282	23.96838
CD	0.49402	8,270.82	0.170	0.49497	0.49371	0.49337
CO	0.49949	2,749.33	0.214	0.50072	0.49885	0.49888
CR	0.46425	5,313.61	1.937	0.46751	0.47115	0.45408
CU	0.47470	6,717.59	2.146	0.48315	0.47755	0.46339
FE	24.00335	6,887.34	0.276	23.95523	24.07906	23.97576
K	24.07493	8,523.10	0.440	24.12965	24.14235	23.95277
LI	0.46589	2,974.57	0.337	0.46731	0.46616	0.46420
MG	23.70331	40,717.48	0.154	23.70290	23.73993	23.66708
MN	0.47787	31,209.29	1.590	0.48259	0.48191	0.46910
MO	0.50560	2,312.55	0.247	0.50686	0.50558	0.50436
NA	24.01846	24,881.68	0.330	24.03113	24.09055	23.93370
NI	0.49059	1,963.80	0.362	0.49261	0.48924	0.48994
P	0.50293	281.43	0.493	0.50537	0.50300	0.50041
PB	0.49842	693.51	0.256	0.49975	0.49829	0.49721
S	25.17801	4,919.07	0.209	25.21481	25.11768	25.20154
SB	0.51060	425.95	0.233	0.51182	0.50944	0.51053
SE	0.50083	178.92	0.416	0.50166	0.49846	0.50238
SI	24.74749	4,518.96	0.176	24.70918	24.73861	24.79469
SN	0.49066	616.49	0.298	0.49232	0.48953	0.49015
SR	0.47891	380,221.04	1.939	0.48348	0.48501	0.46822
TI	0.47756	30,811.79	1.955	0.48358	0.48230	0.46681
TL	0.49337	350.85	0.415	0.49464	0.49446	0.49101
V	0.47852	7,032.12	1.782	0.48327	0.48362	0.46868
Y1	21883.52656	21,883.53	0.270	21815.81191	21909.57121	21925.19656
Y2A	288365.74994	288,365.75	1.611	285451.87210	285923.54208	293721.83565
Y2R	19073.25393	19,073.25	0.220	19044.08237	19054.32941	19121.35000
ZN	0.49570	6,410.85	0.107	0.49632	0.49538	0.49541
ZR	0.48481	1,137.11	0.404	0.48420	0.48700	0.48323

LANCASTER LABORATORIES

Run Name: 1331703T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/13/2013 12:52

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00152	-12.40	12.454	0.00172	0.00135	0.00150
AL	0.02721	5.94	141.640	0.01524	-0.00392	0.07032
AS	-0.00231	-3.62	15.033	-0.00192	-0.00258	-0.00244
B	-0.00055	4.67	73.654	-0.00066	-0.00010	-0.00090
BA	-0.00005	40.10	53.099	-0.00004	-0.00003	-0.00008
BE	-0.00101	-658.32	3.978	-0.00099	-0.00106	-0.00099
CA	-0.00859	91.60	29.261	-0.00920	-0.00583	-0.01075
CD	-0.00008	-5.23	141.975	-0.00016	0.00005	-0.00014
CO	0.00013	3.82	156.959	-0.00001	0.00037	0.00004
CR	0.00096	4.32	61.129	0.00034	0.00150	0.00104
CU	-0.00146	-41.33	27.490	-0.00101	-0.00177	-0.00160
FE	0.00067	-0.88	740.969	0.00434	0.00263	-0.00497
K	-0.10083	-24.43	14.979	-0.10336	-0.11451	-0.08462
LI	-0.00286	48.89	142.326	-0.00112	0.00006	-0.00750
MG	-0.00127	10.26	37.621	-0.00171	-0.00134	-0.00076
MN	-0.00014	14.58	30.280	-0.00012	-0.00011	-0.00019
MO	0.00020	2.51	88.750	0.00008	0.00041	0.00012
NA	0.00201	-27.08	629.790	-0.01225	0.00633	0.01196
NI	0.00002	15.49	1960.160	0.00005	-0.00038	0.00040
P	-0.00052	-0.92	129.860	-0.00130	-0.00004	-0.00022
PB	0.00023	4.20	387.561	0.00076	0.00072	-0.00080
S	-0.00660	-6.16	59.671	-0.01100	-0.00535	-0.00343
SB	-0.00085	1.86	25.398	-0.00106	-0.00086	-0.00063
SE	-0.00020	-0.16	987.961	0.00169	-0.00004	-0.00224
SI	-0.00861	2.58	117.569	-0.01201	0.00277	-0.01660
SN	0.00058	2.94	113.239	0.00010	0.00134	0.00032
SR	-0.00022	-144.92	7.345	-0.00020	-0.00023	-0.00021
TI	-0.00021	17.25	12.880	-0.00021	-0.00019	-0.00024
TL	-0.00286	-7.96	24.371	-0.00330	-0.00206	-0.00323
V	-0.00152	-21.70	21.174	-0.00182	-0.00155	-0.00118
Y1	22419.46980	22,419.47	0.115	22418.84738	22445.48727	22394.07474
Y2A	294786.77932	294,786.78	0.782	297369.86415	294055.25182	292935.22200
Y2R	19261.73510	19,261.74	1.046	19343.58795	19032.19055	19409.42680
ZN	-0.00074	16.51	1.865	-0.00074	-0.00072	-0.00075
ZR	0.00462	7.25	45.818	0.00696	0.00405	0.00284

Mercury Data

Metals in Solid

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1331501M07

Mercury Run Data Report

Data File Name: 1331511.M07

Run Name: 1331501M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By
Damary Valentin

Reviewed Date
11/11/2013 12:26PM

Method Reference Name(s):
SW-846 7471A
SW-846 7471A modified

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 7:52AM

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/11/2013 06:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	144.0

2 Burn Date/Time: 11/11/2013 06:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1401.0

3 Burn Date/Time: 11/11/2013 06:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3301.0

4 Burn Date/Time: 11/11/2013 06:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6865.0

5 Burn Date/Time: 11/11/2013 06:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	16871.0

6 Burn Date/Time: 11/11/2013 06:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33032.0

CorrelationCoefficient = 1.00000
Slope = 6599.9132000000
Y-Intercept = 149.1330900000

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/11/2013 06:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4413	16262.0

8 Burn Date/Time: 11/11/2013 07:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0439	-142.0

9 Burn Date/Time: 11/11/2013 07:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1873	1384.0

10 Burn Date/Time: 11/11/2013 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
1.0295	6943.0

11 Burn Date/Time: 11/11/2013 07:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0224	0.0

12 Burn Date/Time: 11/11/2013 07:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/11/2013 07:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0335	6970.0		

14 Burn Date/Time: 11/11/2013 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266171	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6086	4165.0		

15 Burn Date/Time: 11/11/2013 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266172	**********	0.6024	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6730	4590.0		

16 Burn Date/Time: 11/11/2013 07:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266173	**********	0.6028	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2470	1778.0		

17 Burn Date/Time: 11/11/2013 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	U*********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0245	-14.0		

18 Burn Date/Time: 11/11/2013 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	UP********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0661	7185.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/11/2013 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	D*********	0.6404	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0294	-46.0		

20 Burn Date/Time: 11/11/2013 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	R*********	0.6043	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1229	7560.0		

21 Burn Date/Time: 11/11/2013 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	M*********	0.6247	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0966	7386.0		

22 Burn Date/Time: 11/11/2013 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
1.0441	7040.0

23 Burn Date/Time: 11/11/2013 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0332	-71.0

24 Burn Date/Time: 11/11/2013 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266175	**********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0085	6805.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/11/2013 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266176	**********	0.6136	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5898	4041.0		

26 Burn Date/Time: 11/11/2013 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266177	**********	0.6209	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1388	1064.0		

27 Burn Date/Time: 11/11/2013 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266178	**********	0.6185	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	39.0		

28 Burn Date/Time: 11/11/2013 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266179	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3620	2537.0		

29 Burn Date/Time: 11/11/2013 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266180	**********	0.6097	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6459	4411.0		

30 Burn Date/Time: 11/11/2013 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266181	**********	0.6011	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2909	2068.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/11/2013 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266182	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0157	44.0		

32 Burn Date/Time: 11/11/2013 07:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266183	**********	0.6198	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.7596	5162.0		

33 Burn Date/Time: 11/11/2013 07:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266184	**********	0.6173	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6104	4177.0		

34 Burn Date/Time: 11/11/2013 07:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
1.0446	7043.0

35 Burn Date/Time: 11/11/2013 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0294	-46.0

36 Burn Date/Time: 11/11/2013 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266185	**********	0.6194	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0980	795.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/11/2013 08:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266186	**********	0.6336	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0046	178.0		

38 Burn Date/Time: 11/11/2013 08:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268096	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6093	4170.0		

39 Burn Date/Time: 11/11/2013 08:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268097	**********	0.6074	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5807	3981.0		

40 Burn Date/Time: 11/11/2013 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268098	**********	0.6122	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3866	2700.0		

41 Burn Date/Time: 11/11/2013 08:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268099	**********	0.6321	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	46.0		

42 Burn Date/Time: 11/11/2013 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0166	38.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/11/2013 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0184	6870.0		

44 Burn Date/Time: 11/11/2013 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.9185	45815.0		

45 Burn Date/Time: 11/11/2013 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.9253	52461.0		

46 Burn Date/Time: 11/11/2013 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9543	6447.0

47 Burn Date/Time: 11/11/2013 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0415	-126.0

48 Burn Date/Time: 11/11/2013 08:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5052	10083.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/11/2013 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.5806	17182.0		

50 Burn Date/Time: 11/11/2013 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
Z266803		0.6348	100	1.00

AVG (ppb)	Intensity
0.8542	5786.0

51 Burn Date/Time: 11/11/2013 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4183	9510.0		

52 Burn Date/Time: 11/11/2013 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4196	9518.0		

53 Burn Date/Time: 11/11/2013 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266803	D*********	0.6348	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.1285	27399.0		

54 Burn Date/Time: 11/11/2013 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6820	44254.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/11/2013 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6391	43971.0		

56 Burn Date/Time: 11/11/2013 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.7650	51403.0		

57 Burn Date/Time: 11/11/2013 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266806	**********	0.6431	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0814	685.0		

58 Burn Date/Time: 11/11/2013 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
1.0140	6841.0

59 Burn Date/Time: 11/11/2013 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0303	-52.0

60 Burn Date/Time: 11/11/2013 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266808	**********	0.6283	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2758	1968.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/11/2013 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266676	**********	0.6067	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0461	452.0		

62 Burn Date/Time: 11/11/2013 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266677	**********	0.6417	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2409	1738.0		

63 Burn Date/Time: 11/11/2013 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266678	**********	0.6128	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2186	1591.0		

64 Burn Date/Time: 11/11/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266679	**********	0.6117	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1499	1137.0		

65 Burn Date/Time: 11/11/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266681	**********	0.6147	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0030	128.0		

66 Burn Date/Time: 11/11/2013 09:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266682	**********	0.6378	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0584	533.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/11/2013 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265116	**********	0.6392	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1647	1235.0		

68 Burn Date/Time: 11/11/2013 09:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265117	**********	0.6185	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1152	908.0		

69 Burn Date/Time: 11/11/2013 09:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265118	**********	0.6161	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0405	415.0		

70 Burn Date/Time: 11/11/2013 09:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
1.0443	7041.0

71 Burn Date/Time: 11/11/2013 09:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0307	-55.0

72 Burn Date/Time: 11/11/2013 09:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265119	**********	0.6194	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0085	92.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/11/2013 09:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265120	**********	0.6218	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0650	577.0		

74 Burn Date/Time: 11/11/2013 09:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265121	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0243	308.0		

75 Burn Date/Time: 11/11/2013 09:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265123	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0052	182.0		

76 Burn Date/Time: 11/11/2013 09:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265124	**********	0.6249	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0658	582.0		

77 Burn Date/Time: 11/11/2013 09:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265125	**********	0.6086	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1750	1303.0		

78 Burn Date/Time: 11/11/2013 09:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265126	**********	0.6024	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0924	758.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/11/2013 09:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6992	11364.0		

80 Burn Date/Time: 11/11/2013 09:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0341	-77.0		

81 Burn Date/Time: 11/11/2013 09:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9896	6680.0		

82 Burn Date/Time: 11/11/2013 09:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
1.0341	6974.0

83 Burn Date/Time: 11/11/2013 09:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0330	-70.0

84 Burn Date/Time: 11/11/2013 09:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265885	**********	0.6064	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1635	1227.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/11/2013 09:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266477	**********	0.6144	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2506	8403.0		

86 Burn Date/Time: 11/11/2013 09:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266809	**********	0.6123	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2406	1736.0		

87 Burn Date/Time: 11/11/2013 09:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266812	**********	0.6018	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9514	6428.0		

88 Burn Date/Time: 11/11/2013 09:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266813	**********	0.6373	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5417	10324.0		

89 Burn Date/Time: 11/11/2013 09:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	U*********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9064	6131.0		

90 Burn Date/Time: 11/11/2013 09:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	UP********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9687	13143.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/11/2013 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266817	D*********	0.6053	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8608	5830.0		

92 Burn Date/Time: 11/11/2013 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266815	R*********	0.6279	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9369	12933.0		

93 Burn Date/Time: 11/11/2013 10:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266816	M*********	0.6233	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8742	12519.0		

94 Burn Date/Time: 11/11/2013 10:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
1.0205	6884.0

95 Burn Date/Time: 11/11/2013 10:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0351	-84.0

96 Burn Date/Time: 11/11/2013 10:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266818	**********	0.6071	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8607	5829.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/11/2013 10:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	16.1754	106918.0		

98 Burn Date/Time: 11/11/2013 10:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265225	**********	0.6077	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0040	174.0		

99 Burn Date/Time: 11/11/2013 10:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265226	**********	0.6122	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1529	1157.0		

100 Burn Date/Time: 11/11/2013 10:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265227	**********	0.6141	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5547	3809.0		

101 Burn Date/Time: 11/11/2013 10:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265229	**********	0.6104	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3357	2364.0		

102 Burn Date/Time: 11/11/2013 10:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265234	**********	0.6308	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1747	1301.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/11/2013 10:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265236	**********	0.6315	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5463	3754.0		

104 Burn Date/Time: 11/11/2013 10:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265237	**********	0.6385	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5597	3842.0		

105 Burn Date/Time: 11/11/2013 10:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.9888	33078.0		

106 Burn Date/Time: 11/11/2013 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9748	6582.0

107 Burn Date/Time: 11/11/2013 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0354	-86.0

108 Burn Date/Time: 11/11/2013 10:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265242	**********	0.6258	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.4372	16235.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/11/2013 10:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265244	**********	0.6282	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9552	6453.0		

110 Burn Date/Time: 11/11/2013 10:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265245	**********	0.6209	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0909	748.0		

111 Burn Date/Time: 11/11/2013 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265246	**********	0.6355	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6472	4420.0		

112 Burn Date/Time: 11/11/2013 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	10.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.7097	11433.0		

113 Burn Date/Time: 11/11/2013 11:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	2.50	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1061	14050.0		

114 Burn Date/Time: 11/11/2013 11:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0407	-121.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/11/2013 11:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9607	6489.0		

116 Burn Date/Time: 11/11/2013 11:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267423	**********	0.6102	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.2265	21445.0		

117 Burn Date/Time: 11/11/2013 11:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268100	**********	0.6075	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8508	5764.0		

118 Burn Date/Time: 11/11/2013 11:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
1.0148	6846.0

119 Burn Date/Time: 11/11/2013 11:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0341	-77.0

120 Burn Date/Time: 11/11/2013 11:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268101	**********	0.6144	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9540	6445.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

121 Burn Date/Time: 11/11/2013 11:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268102	**********	0.6421	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4875	3366.0		

122 Burn Date/Time: 11/11/2013 11:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268103	**********	0.6026	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0203	14.0		

123 Burn Date/Time: 11/11/2013 11:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268104	**********	0.6366	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8505	5762.0		

124 Burn Date/Time: 11/11/2013 11:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268105	**********	0.6027	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6109	4180.0		

125 Burn Date/Time: 11/11/2013 11:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268106	**********	0.6215	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4995	3445.0		

126 Burn Date/Time: 11/11/2013 11:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268107	**********	0.6384	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0253	-19.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

127 Burn Date/Time: 11/11/2013 11:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268108	**********	0.6193	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4712	3258.0		

128 Burn Date/Time: 11/11/2013 11:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268109	**********	0.6300	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3292	2321.0		

129 Burn Date/Time: 11/11/2013 11:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268110	**********	0.6271	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4945	3412.0		

130 Burn Date/Time: 11/11/2013 11:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 11		1	1	1.00

AVG (ppb)	Intensity
1.0257	6918.0

131 Burn Date/Time: 11/11/2013 11:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 11		1	1	1.00

AVG (ppb)	Intensity
-0.0301	-51.0

132 Burn Date/Time: 11/11/2013 11:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268111	**********	0.6242	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

133 Burn Date/Time: 11/11/2013 11:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263643	**********	0.6209	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9998	6747.0		

134 Burn Date/Time: 11/11/2013 11:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263647	**********	0.6138	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4030	2808.0		

135 Burn Date/Time: 11/11/2013 11:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266523	**********	0.6099	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0273	328.0		

136 Burn Date/Time: 11/11/2013 11:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	U*********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1197	7539.0		

137 Burn Date/Time: 11/11/2013 11:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	UP********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1377	14258.0		

138 Burn Date/Time: 11/11/2013 11:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	D*********	0.6250	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8264	5603.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

139 Burn Date/Time: 11/11/2013 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	R*********	0.6169	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9907	13288.0		

140 Burn Date/Time: 11/11/2013 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	M*********	0.6306	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8897	12621.0		

141 Burn Date/Time: 11/11/2013 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	8.8181	58354.0		

142 Burn Date/Time: 11/11/2013 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 12		1	1	1.00

AVG (ppb)	Intensity
1.0264	6923.0

143 Burn Date/Time: 11/11/2013 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 12		1	1	1.00

AVG (ppb)	Intensity
-0.0306	-54.0

144 Burn Date/Time: 11/11/2013 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	5.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9260	12861.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

145 Burn Date/Time: 11/11/2013 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1682	1258.0

146 Burn Date/Time: 11/11/2013 12:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 13		1	1	1.00

AVG (ppb)	Intensity
1.0243	6909.0

147 Burn Date/Time: 11/11/2013 12:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 13		1	1	1.00

AVG (ppb)	Intensity
-0.0310	-57.0

Extraction/Distillation/Digestion Logs

Metals in Solid

LLENS Worksheet for 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 002

Balance ID#: 10685 **Start Time:** 11/10/13 22:15 **End Time:** 11/11/13 3:15 **Hot Block:** 4

Pipette ID: S/2000

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HNO3	P13-305B	10.00
30% H2O2	133502	4.00
HCL	40272	10.00
HNO3	1113030	5.00
ICP Spike 1A	1317716#30	2.00
ICP Spike 1B	1317717#30	2.00
LCS A1	1317716#30	2.00
LCS B1	1317717#30	2.00

Method Ref: SW-846 3050B

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
3)	7265116	11/15/13 19:30		SW	N8			034a	1306159	
4)	7265117	11/15/13 19:30		SW	N8			034a	1306159	
5)	7265118	11/15/13 19:30		SW	N8			034a	1306159	
6)	7265119	11/15/13 19:30		SW	N8			034a	1306159	
7)	7265120	11/15/13 19:30		SW	N8			034a	1306159	
8)	7265121	11/15/13 19:30		SW	N8			034a	1306159	
9)	7265123	11/15/13 19:30		SW	N8			034a	1306159	
10)	7265124	11/15/13 19:30		SW	N8			034a	1306159	
11)	7265125	11/15/13 19:30		SW	N8			034a	1306159	
12)	7265126	11/15/13 19:30		SW	N8			034a	1306159	
13)	**7266800U**	11/18/13 18:58		SW	N8			020a	1306159	
14)	**7266801R**	11/18/13 18:58		SW	N8			020a	1306159	
15)	**7266802M**	11/18/13 18:58		SW	N8			020a	1306159	
16)	**7266803D**	11/18/13 18:58		SW	N8			020a	1306159	
17)	7266804	11/18/13 18:58		SW	N8			020a	1306159	
18)	7266806	11/18/13 18:58		SW	N8			020a	1306159	
19)	7266808	11/18/13 18:58		SW	N8			020a	1306159	
20)	7266676	11/18/13 19:00		SW	N8			034a	1306159	
21)	7266677	11/18/13 19:00		SW	N8			034a	1306159	
22)	7266678	11/18/13 19:00		SW	N8			020a	1306159	
23)	7266679	11/18/13 19:00		SW	N8			020a	1306159	

Prep Employee: AMS00862

11/11/2013

v 1.0.1

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
24)	7266681	11/18/13 19:00		SW	N8			020a	1306159	
25)	7266682	11/18/13 19:00		SW	N8			020a	1306159	

Batch# 13 312 5708 002

LLENS Batch Chronology and Change Log - SW846 ICP/ICP MS Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:48	00862
2)	Sample Wt		11/10/13 22:15	00862
3)	Final Vol	10685	11/10/13 22:15	00862
4)	Trial		11/10/13 22:15	00862
5)	Upload Prep	US19VDIELA03	11/11/13 3:28	00862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 002

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					1.0000	100.0000	1
LCSW					1.0000	100.0000	1
7265116	11/15/13	N8	015D1	CP182-01	1.0300	100.0000	1
7265117	11/15/13	N8	015G4	CP182-02	1.0000	100.0000	1
7265118	11/15/13	N8	016F4	CP182-03	1.0100	100.0000	1
7265119	11/15/13	N8	016G4	CP182-04	1.0000	100.0000	1
7265120	11/15/13	N8	017F3	CP182-05	1.0300	100.0000	1
7265121	11/15/13	N8	017G2	CP182-06	1.0200	100.0000	1
7265123	11/15/13	N8	020D4	CP182-08	1.0200	100.0000	1
7265124	11/15/13	N8	020G3	CP182-09	1.0100	100.0000	1
7265125	11/15/13	N8	018G1	CP182-10	1.0100	100.0000	1
7265126	11/15/13	N8	018H1	CP182-11	1.0400	100.0000	1
7266800U	11/18/13	N8	2G124	KVM05-03BKG	1.0100	100.0000	1
7266801R	11/18/13	N8	2G124	KVM05-03MS	1.0100	100.0000	1
7266802M	11/18/13	N8	2G124	KVM05-03MSD	1.0100	100.0000	1
7266803D	11/18/13	N8	2G124	KVM05-03DUP	1.0100	100.0000	1
7266804	11/18/13	N8	2G125	KVM05-04	1.0200	100.0000	1
7266806	11/18/13	N8	2C152	KVM05-06	1.0000	100.0000	1
7266808	11/18/13	N8	2C151	KVM05-08	1.0200	100.0000	1
7266676	11/18/13	N8	999C3	CP187-01	1.0000	100.0000	1
7266677	11/18/13	N8	999G4	CP187-02	1.0300	100.0000	1
7266678	11/18/13	N8	013D1	CP187-03	1.0200	100.0000	1
7266679	11/18/13	N8	013G4	CP187-04	1.0200	100.0000	1
7266681	11/18/13	N8	001D1	CP187-06	1.0100	100.0000	1
7266682	11/18/13	N8	001G3	CP187-07	1.0300	100.0000	1

LLENS Worksheet for 5711 SW SW846 Hg Digest

Batch# 13 312 5711 002

Balance ID#: 19119 **Start Time:** 11/11/13 2:00 **End Time:** 11/11/13 2:30 **Hot Block:** 2

Pipette ID: S/100

Spike/Reagent	Lot#	Volume Added(mL)
5%KMnO4	H13-310P	15.00
Aqua Regia	P13-315A	5.00
LCS 1ppm Hg	P13-312A	0.10
Spike 1ppm Hg	P13-312A	0.10

Method Ref: SW-846 7471A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	0.6133g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	0.6034g Teflon chips used, Lot: J114-3H037
3)	**7266800U**	11/18/13 18:58		SW	N8			020a	1306159	
4)	**7266801R**	11/18/13 18:58		SW	N8			020a	1306159	
5)	**7266802M**	11/18/13 18:58		SW	N8			020a	1306159	
6)	**7266803D**	11/18/13 18:58		SW	N8			020a	1306159	
7)	7266804	11/18/13 18:58		SW	N8			020a	1306159	
8)	7266806	11/18/13 18:58		SW	N8			020a	1306159	
9)	7266808	11/18/13 18:58		SW	N8			020a	1306159	
10)	7266676	11/18/13 19:00		SW	N8			034a	1306159	
11)	7266677	11/18/13 19:00		SW	N8			034a	1306159	
12)	7266678	11/18/13 19:00		SW	N8			020a	1306159	
13)	7266679	11/18/13 19:00		SW	N8			020a	1306159	
14)	7266681	11/18/13 19:00		SW	N8			020a	1306159	
15)	7266682	11/18/13 19:00		SW	N8			020a	1306159	
16)	7265116	11/15/13 19:30		SW	N8			034a	1306159	
17)	7265117	11/15/13 19:30		SW	N8			034a	1306159	
18)	7265118	11/15/13 19:30		SW	N8			034a	1306159	
19)	7265119	11/15/13 19:30		SW	N8			034a	1306159	
20)	7265120	11/15/13 19:30		SW	N8			034a	1306159	
21)	7265121	11/15/13 19:30		SW	N8			034a	1306159	
22)	7265123	11/15/13 19:30		SW	N8			034a	1306159	
23)	7265124	11/15/13 19:30		SW	N8			034a	1306159	
24)	7265125	11/15/13 19:30		SW	N8			034a	1306159	
25)	7265126	11/15/13 19:30		SW	N8			034a	1306159	

Prep Employee: AMS00862

11/11/2013

Batch# 13 312 5711 002

LLENS Batch Chronology and Change Log - SW SW846 Hg Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:10	00862
2)	Sample Wt	19119	11/11/13 0:12	00862
3)	Final Vol	19119	11/11/13 0:12	00862
4)	Trial		11/11/13 0:12	00862
5)	Upload Prep	US19VDIELA03	11/11/13 3:32	00862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5711 SW SW846 Hg Digest

Batch# 13 312 5711 002

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					.6000	100.0000	1
LCSW					1.0000	100.0000	1
7266800U	11/18/13	N8	2G124	KVM05-03BKG	.6256	100.0000	1
7266801R	11/18/13	N8	2G124	KVM05-03MS	.6071	100.0000	1
7266802M	11/18/13	N8	2G124	KVM05-03MSD	.6202	100.0000	1
7266803D	11/18/13	N8	2G124	KVM05-03DUP	.6348	100.0000	1
7266804	11/18/13	N8	2G125	KVM05-04	.6393	100.0000	1
7266806	11/18/13	N8	2C152	KVM05-06	.6431	100.0000	1
7266808	11/18/13	N8	2C151	KVM05-08	.6283	100.0000	1
7266676	11/18/13	N8	999C3	CP187-01	.6067	100.0000	1
7266677	11/18/13	N8	999G4	CP187-02	.6417	100.0000	1
7266678	11/18/13	N8	013D1	CP187-03	.6128	100.0000	1
7266679	11/18/13	N8	013G4	CP187-04	.6117	100.0000	1
7266681	11/18/13	N8	001D1	CP187-06	.6147	100.0000	1
7266682	11/18/13	N8	001G3	CP187-07	.6378	100.0000	1
7265116	11/15/13	N8	015D1	CP182-01	.6392	100.0000	1
7265117	11/15/13	N8	015G4	CP182-02	.6185	100.0000	1
7265118	11/15/13	N8	016F4	CP182-03	.6161	100.0000	1
7265119	11/15/13	N8	016G4	CP182-04	.6194	100.0000	1
7265120	11/15/13	N8	017F3	CP182-05	.6218	100.0000	1
7265121	11/15/13	N8	017G2	CP182-06	.6108	100.0000	1
7265123	11/15/13	N8	020D4	CP182-08	.6108	100.0000	1
7265124	11/15/13	N8	020G3	CP182-09	.6249	100.0000	1
7265125	11/15/13	N8	018G1	CP182-10	.6086	100.0000	1
7265126	11/15/13	N8	018H1	CP182-11	.6024	100.0000	1

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	↓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	↓ 0.1mg/L InterCont	D	↓ 1.0mg/L Cont		11-11-13	H13-308C	↓			
9	Hg-5700 ICV	E	↓			↓	.25ml	1	4	111330
10	CCV	F	↓			↓	.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13	↓ ↓	I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	↓ M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM823	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DW354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DW354	11-04-13	11-11-13	RT
6				↓	↓	↓	↓	0.1	↓	↓	↓	↓
7				↓	↓	↓	↓	1.0	↓	↓	↓	↓
8				↓	↓	↓	↓	0.1	↓	↓	↓	↓
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1.6ml KMnO4		H13-297A H13-302C	100	2.5ug/L	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	100	0.2	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	200	1.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	↓	0.01	↓	↓	↓	↓
18				to volume w/ DI H_2O			2000	5%	NSM823	11-04-13	5-04-14	RT
19				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DW354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L Inter Cont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-238D	1.0ml			
2	Hg-0.1mg/L Inter Cont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		M	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	SI	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15%	HNO3 H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DV354

Footnotes

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 StdCal	HG-309W	Hg-0.1mg/L Cal		11-12-13	HI3-309B	.50ml			
2		X	Hg-1.0mg/L Cal			HI3-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-10mg/L Inter Cal	HI3-310A	Hg-10mg/L Cal		4-15-14	HI3-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	HI3-310M				
9	1.0mg/L Inter Conc	C	10mg/L Cont		4-15-14	HI3-288D				
10	0.1mg/L Inter Cont	D	1.0mg/L Cont		11-13-13	HI3-310C				
11	Hg-5700 ICV	E					.25ml	1	H	1113030
12	CCV	F	11-6-130V354 (3)				.20			
13	CRA	G	Hg-0.1mg/L ~~Pal Cont~~			HI3-310D	.20			
14	Std Cal	H	Hg-0.1mg/L Cal			HI3-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			HI3-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	HI3-310N	$KMnO_4$ #1	6	4-10-18	46760	100.04g			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Hg/Cu 25ml Km	Aegia NO4	H13-3049BB H13-3022D	100	0.5 µg/L	DLJ54	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To Vol w/ 0.15% HNO3		H13161CC	10	1.0	DLJ54	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2Cr2O7 1ml Km NO4		H13-297K H13-302E	100	2.5 µg/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume	w/ DI H2O		2000	5%	NSM823	11-06-13	5-06-14	RT

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Footnotes

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-310P	$KMnO_4$ #1	6	4-10-18	46760	100.03g			
2	↓ ↓	↓ R	↓ ↓	↓	↓	↓	100.07g			
3	Hg 1.0mg/L InterCont	H13-311A	Hg 10mg/L Cont	–	4-15-14	H13-288D	1.0ml			
4	Hg 0.1mg/L InterCont	311B	Hg 1.0mg/L Cont	–	11-14-13	H13-311A	1.0ml			
5	Stannous Chloride	311C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #23	200.03g			
6	Stannous Chloride	311D	↓	6	↓	↓ #5	200.03g			
7	Hydroxylamine	H13-311E	$NH_2OH \cdot HCl$	6	10-26-19	54809 #23	240.01g			
8	↓	↓	NaCl	6	3-17-18	48151 #1	240.01g			
9	Hg 1.0mg/L InterCal	H13-313A	Hg 10mg/L Cal	–	4-15-14	H13-288C	1.0ml			
10	Hg 1.0mg/L InterCal	H13-313A	Hg 10mg/L Cal		4-15-14	H13-288C	1.0ml			
11	Hg 0.1mg/L InterCal	B	Hg 1.0mg/L Cal		11-16-13	H13-313A				
12	Hg 1.0mg/L InterCont	C	Hg 10mg/L Cont		4-15-14	H13-288D				
13	Hg 0.1mg/L InterCont	D	Hg 1.0mg/L Cont		11-16-13	H13-313C	↓			
14	Hg 5700 ICV	E	↓		↓	↓	.25ml	1	24	111363D
15	CCV	F	↓			↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1mg/L Cont			H13-313D	.20			
17	Stk. Cal	H	Hg 0.1mg/L Cal			H13-313B	.20			
18	↓	I	↓			↓	.50			
19	↓	J	Hg 1.0mg/L Cal			H13-313A	.20			
20	↓ ↓	↓ K	↓		↓	↓	.25 ↓	↓	↓	↓

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM213	11-06-13	5-06-14	RT
2	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0 ③	DJ354	11-07-13	11-14-13	RT
4	↓	↓	↓	↓	↓	↓	10	0.1			↓	
5	200	6	40272				2000	10%			5-07-14	
6	↓	↓	↓				↓	10%			↓	
7								12%				
8							↓	↓	↓	↓	↓	↓
9				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-08-13	11-15-13	RT
10				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-09-13	11-16-13	RT
11							↓	0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H13-2975 H13-3056	100	2.5 µg/L				
15	↓	↓	↓	↓	↓	↓	200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

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Footnotes

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 Std Cal	H13-3131	Hg 1.0 mg/L Cal	—	11-16-13	H13-313A	.50ml	1	4	1113030
2	↓	m						↓	↓	↓
3	Hg-5701 ICV	N	Hg 1.0 mg/L Cont		11-16-13	H13-313C	.25ml			
4	CCV	O					.10			
5	CCV	P					.10			
6	CCV	Q					.10			
7	CCV	R	↓			↓	.10			
8	CRA	S	Hg 0.1 mg/L Cont			H13-313D	.20			
9	Std Cal	T	Hg 0.1 mg/L Cal			H13-313B	.20			
10		U	↓			↓	.50			
11		V	Hg 1.0 mg/L Cal			H13-313A	.10			
12		W					.25			
13		X	↓		↓	↓	.50Y			
14	↓	Y								
15	SI	Z	Hg 0.1 mg/L Cal		11-16-13	H13-313B	.10ml			
16	CRA	AA	Hg 0.1 mg/L Cont			H13-313D	.10ml			
17	CRA	BB	↓		↓	↓	.40ml			
18	Aqua Regia	CC						20	4	1113030
19	Hg 1.0 mg/L InterCal	H13-315A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0ml			
20	Hg 0.1 mg/L InterCal	315B	Hg 1.0 mg/L Cal		11-18-13	H13-315A	1.0mL			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	135111	3.2ml H_2SO_4 10ml $KMnO_4$		H13-2973 H13-305C	100	5.0ug/L	DL354	11-09-13	11-16-13	RT
2	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
3	—	—	—	5ml Aqua Regia 15ml $KMnO_4$		H13-313CC H13-305C	↓	2.5	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
5	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	2.5	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
17	—	—	—	↓	↓	↓	↓	0.4	↓	↓	↓	↓
18	60	6	40272	—	—	—	80	1:3	↓	↓	11-09-13	↓
19	—	—	—	To Vol w/ 0.15% HNO_3		H13-116CC	10	1.0	DL354	11-11-13	11-18-13	RT
20	—	—	—	↓	↓	↓	10	0.1	↓	↓	↓	↓

Footnotes

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B = CsCl (10%)
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E = Al $(NO_3)_3$ (40%)
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RT = Room Temperature Storage

* units are mL unless otherwise specified
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Stannous Chloride	H13-315C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #3	200.06g	—	—	—
2	Hydroxylamine	H13-315D	$NH_2OH \cdot HCl$	6	10-26-19	54869 #3	240.04g	—	—	—
3	↓	↓	NaCl	6	3-17-18	48151 #1	240.08g	—	—	—
4	Potassium Permanganate	H13-315E	$KMnO_4$ #1	6	4-10-18	46760	100.03g	—	—	—
5	↓	F	↓	↓	↓	46760	100.04g	—	—	—
6	↓	6	↓	↓	↓	46760	100.07g	—	—	—
7	Hg 1.0 mg/L Inter Cont	H13-316A	Hg 10 mg/L Cont	—	4-15-14	H13-288D	1.0 ml	—	—	—
8	Hg 0.1 mg/L Inter Cont	316B	Hg 1.0 mg/L Cont	—	11-19-13	H13-316A	1.0 ml	—	—	—
9	Potassium Persulfate	H13-316C	$K_2S_2O_8$ #3	6	9-29-15	42220	100.04g	—	—	—
10	Hg 1.0 mg/L Inter Cal	H13-317A	Hg 10 mg/L Cal	7	4-15-14	H13-288C	1.0 ml	—	—	—
11	0.1 mg/L Inter Cal	B	1.0 mg/L Cal		11-20-13	H13-317A	↓	—	—	—
12	1.0 mg/L Inter Cont	C	10 mg/L Cont		4-15-14	H13-288D	↓	—	—	—
13	↓ 0.1 mg/L Inter Cont	D	↓ 1.0 mg/L Cont		11-20-13	H13-317C	↓	—	—	—
14	Hg 5700 ICV	E	↓		↓	↓	.25 ml	1	4	1113030
15	CCV	F	↓		↓	↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1 mg/L Cont		↓	H13-317D	.20	↓	↓	↓
17	Std Cal	H	Hg 0.1 mg/L Cal		↓	H13-317B	.20	↓	↓	↓
18	↓	I	↓		↓	↓	.50	↓	↓	↓
19	↓	J	Hg 1.0 mg/L Cal		↓	H13-317A	.20	↓	↓	↓
20	↓	K	↓		↓	↓	.25	↓	↓	↓

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	200	3 ③11-11-13 DY354	52250				2000	10%	DW354	11-11-13	5-11-14	RT
2								12%				
3												
4				to volume w/ DI H_2O			2000	5%	NSM823	11-11-13	5-11-14	RT
5												
6												
7				To volume 0.15% HNO_3		HI3-1610CC	10	1.0	DW354	11-12-13	11-19-13	RT
8							10	0.1				
9				to volume w/ DI H_2O			2000	5%	NSM823	11-12-13	5-12-14	RT
10				To volume 0.15% HNO_3		HI3-1610CC	10	1.0	DW354	11-13-13	11-20-13	RT
11								0.1				
12								1.0				
13								0.1				
14	2ml H_2SO_4	H	135111	3.2ml H_2SO_4 1ml 1M $KMnO_4$		HI3-3088 HI3-3108	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266798	FB-01_11062013	X		1	Field Blank
7266800	SD-R2-G-12-4		X	1; 1; 1	Background/Unspiked
7266801	SD-R2-G-12-4_MS		X	1	Matrix Spike
7266803	SD-R2-G-12-4_DUP		X	1	Duplicate
7266804	SD-R2-G-12-5		X	1	
7266806	SD-R2-C-15-2		X	1	
7266808	SD-R2-C-15-1		X	1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Ashland, Inc.
SDG: KVM05

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
TOC by Lloyd Kahn	13315049531A	BLANK	11/11/2013 20:47:00
		LCS	11/11/2013 21:31:00
		7266800 UNSPK	11/11/2013 21:40:00
		7266801 MS	11/11/2013 21:55:00
		7266803 DUP	11/11/2013 22:09:00
		7266804	11/11/2013 22:17:00
		7266806	11/11/2013 22:33:00
		7266808	11/11/2013 22:45:00
Total Organic Carbon	13312049501A	P31249AB	11/08/2013 03:21:00
		P31249AQ	11/08/2013 03:07:00
Total Organic Carbon	13312049501B	7266798	11/08/2013 10:13:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM05
Matrix: LIQUID

Fraction: Instrumental Wet Chemistry

13312049501A / P31249AB Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Organic Carbon	TOC	11/08/13	N.D.	mg/l	0.50	1.0

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM05
Matrix: SOLID

Fraction: Instrumental Wet Chemistry

13315049531A / 7266800B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
TOC by Lloyd Kahn	TOC	11/11/13	N.D.	mg/kg	100	300

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

UNSPK: 7266800 MS: 7266801 **Parameter**	Batch: **13315049531A** (Sample number(s): 7266800-7266801, 7266803-7266804, 7266806, 7266808) **ME**	**Spike Added mg/kg**	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	83799	21950.39	107178.77	NA	102	NA	59-125	NA	NA

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

BKG: 7266800 DUP: 7266803	Batch: **13315049531A** (Sample number(s): 7266800-7266801, 7266803-7266804, 7266806, 7266808)				
Parameter	**ME**	**Unspiked Conc mg/kg**	**DUP Conc mg/kg**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	21950.39	21128.64	4	15

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: LIQUID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: P31249AQ	Batch: **13312049501B** (Sample number(s): 7266798)								
Parameter	**ME**	**Spike Added mg/l**	**LCS Conc mg/l**	**LCSD Conc mg/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Organic Carbon	TOC	25	25.23	NA	101	NA	91-113	NA	NA

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: SOLID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: 7266800	Batch: **13315049531A** (Sample number(s): 7266800-7266801, 7266803-7266804, 7266806, 7266808)								
Parameter	**ME**	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	5880	4346.85	NA	74	NA	47-143	NA	NA

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM05

Instrument ID: 15610
Calibration Date: 11/01/2013

Analysis	AUTO CAL1	AUTO CAL2	AUTO CAL3	AUTO CAL4	AUTO CAL5	AUTO CAL6	CC
TOC	12300	72009	98977	229220	458881	888166	0.9999

Acceptance Range:
ICV/CCV: 90%-110%
ICB/CCB: < LOQ

Concentration units: mg/L

Batch Numbers: 13312049501A, 13312049501B
Run Start Dates: 11/08/2013
Run Names: 1331201G03

	TOC		
Sample	True	Result	%Rec
ICV	25	25.443	102
ICB	0	ND	NA
High Chk	40	41.212	103
Low Chk	12.5	13.157	105
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.084	100
CCB	0	ND	NA
CCV2	25	25.072	100
CCB	0	ND	NA
CCV2	25	25.059	100
CCB	0	ND	NA

* = Out of Specification are immediately followed by two acceptable CCVs

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM05

Instrument ID: 08610
Calibration Date: 11/04/13

Analysis	0.3 mg C	0.9 mg C	3.0 mg C	6.0 mg C	CC
TOC	509	1275	3416	6312	0.9985

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < LOQ

Units: CTS

Batch Numbers: 13315049531A
Analysis Dates: 11/11/2013

	TOC		
Sample	True	Result	%Rec
ICV	3.0	2.547	85*
ICV	3.0	2.692	90
ICV	3.0	2.811	94
ICB	0	ND	NA
CCV2	3.0	3.002	100
CCB	0	ND	NA
CCV2	3.0	3.187	106
CCB	0	ND	NA

* = Out of Specifications

Raw Data

Instrumental Wet Chemistry

Fraction: Instrumental Wet Chemistry

00383: TOC by Lloyd Kahn Analyte Name	Default MDL	Default LOQ	Units
TOC by Lloyd Kahn	100	300	mg/kg
TOC by Lloyd Kahn	100	300	mg/kg

00273: Total Organic Carbon Analyte Name	Default MDL	Default LOQ	Units
Total Organic Carbon	0.50	1.0	mg/l

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.4.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [illegible]

Sucrose Soln Lot #: 042012 exp 4.20.15

15000mg/L KHP p. 10.20.13 e. 11.19.13

BK-146420 p.21

Run #: 1 3 3 0 8 C AL

— CALIB. —

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	BLANK	0.000	0.0				0027				
2	0.3 STD	509 cts.	1.0µl				0036				
3	0.9 STD	1275 cts.	3.0µl				0048				
4	3.0 STD	3416 cts.	10.0µl				0059				
5	6.0 STD	6312 cts.	20.0µl				0111				
6	ICV 3.0	2.547	0.2 mL	OS			0124		85%		
7	ICV 3.0	2.692	0.2 mL	IS			0133		90%		
8	ICV 3.0	2.811	0.2 mL	↓			0142		94%		
9	ICB	-.226	0.0				0149				
											N/A

Verified by: EP/[illegible] Date: 11/4/13

1941.03

177658 16

SOLIDS: EXTERNALLY ABORTED

Bk. 177658
p. 16

13308-CAL

Omega
Inst. 8610

11/4/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:21:08 2013

(1)

#0001 00:27:56 TC SPL#01 0.000 mg 0000000 cts 000.000 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:28:23 2013

#0001 00:36:47 TC STD#01 000.300 mgC 0000509 cts

(2)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
RF = 589.391 ugC/k-cts
R2 = 0.0000
OFFSET = 0 cts (0.00000 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:37:13 2013

#0001 00:48:14 TC STD#02 000.900 mgC 0001275 cts

(3)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
RF = 783.290 ugC/k-cts
R2 = 1.0000
OFFSET = 126 cts (-0.099 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:48:40 2013

#0001 00:59:46 TC STD#03 003.000 mgC 0003416 cts

(4)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
RF = 915.475 ugC/k-cts
R2 = 0.9958
OFFSET = 204 cts (-0.187 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:00:12 2013

#0001 01:11:50 TC STD#04 006.000 mgC 0006312 cts

(5)

CALIBRATION RESULTS:
STD TYPE = TC

STD#1 = 00.300 mgC	1 reps	Avg Area =	509.0 cts	%rsd =	0.00
STD#2 = 00.900 mgC	1 reps	Avg Area =	1275.0 cts	%rsd =	0.00
STD#3 = 03.000 mgC	1 reps	Avg Area =	3416.0 cts	%rsd =	0.00
STD#4 = 06.000 mgC	1 reps	Avg Area =	6312.0 cts	%rsd =	0.00

RF = 964.399 ugC/k-cts
R2 = 0.9970
OFFSET = 233 cts (-0.226 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:12:16 2013

(6)

#0001 01:24:48 TC SPL#01 3.000 mg 0002875 cts 002.547 mgC 84.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:25:15 2013

SOLIDS: EXTERNALLY ABORTED

(7)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:27:10 2013

#0001 01:33:56 TC SPL#01 3.000 mg 0003025 cts 002.692 mgC 89.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:35:44 2013

(8)

#0001 01:42:36 TC SPL#01 3.000 mg 0003149 cts 002.811 mgC 93.71 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:43:04 2013

(9)

#0001 01:49:49 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.11.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [illegible] Sm495

Sucrose Soln Lot #: 042012 exp. 4.20.15
15000mg/L KHP p. 10.20.13 e. 11.19.13
Bk. 146420 p. 21

Run #: 133151

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	CCV 3.0	3.002	0.2mL	(IS)			2030				
2	CCB	-.226	0.0	↓			2040				
3	PBS	-.226	0.0	0	1	300	2047	133150495318	✓		
4	LCSS	.386	88.8	4346.85	11.26	3378	2131		✓ HV=5580		
5	7266800-D	1.947	88.7	21950.39	11.27	3381	2140		✓		KUMO
6	7266801-R	3.837	35.8	107178.77	27.93	8379	2155		✓ SA=83799 102% (IS)		
7	7266803-D	1.741	82.4	21128.64	12.14	3642	2209		✓ R=4 (IS)		
8	7266804	.684	62.7	10909.09	15.95	4785	2217		✓		
9	7266806	2.477	92.5	26778.38	10.81	3243	2233		✓		
10	7266808	1.200	62.1	19323.67	16.10	4830	2245		✓		
11	7266809	1.131	44.2	25588.24	22.62	6786	2254	133150495318	✓		KUMOG
12	7266812	1.191	123.7	9628.13	8.08	2424	2311	↓	✓		↓
13	CCV 3.0	3.187	0.2mL	(IS)			2323		106%		
14	CCB	-.226	0.0	↓			2336				

Verified by: KF/11/15 Date: 11/12/13

177658

KUMOS Page 1 of 1790

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.11.13 – 11.12.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature]

Sucrose Soln Lot #: 042012 exp. 4.20.15

Run #: 133151

Inj #	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
15	7266813	2.940	122.5	24000.	8.16	2448	2345	133152495318	✓		KVM06
16	7266814-4	3.314	70.1	47275.32	14.27	4281	0004		✓		
17	7266815-A	3.259	19.9	163768.84	50.25	15075	0020		✓ SA=150754 77% EJ		
18	7266817-D	3.024	65.1	46451.61	15.36	4608	0035		✓ R=2 EJ		
19	7266816	8.302	247.1	RPT	—	—	0043				
20	7266818	.815	45.0	18111.11	22.22	6666	0105	↓	✓		↓
21	CCV 3.0	2.919	0.2mL	EJ	—	—	0119		97%		
22	CCB	-.226	0.0	↓	—	—	0143				
											n/a

Verified by: LEF/LLS Date: 11/12/13

1941.03

177658 32

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Bk. 177658
p. 31-32

13315-1

Asmyar
Inst. 8610
EP/LCS
11/12/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:23:24 2013

(1)

#0001 20:30:12 TC SPL#01 3.000 mg 0003347 cts 003.002 mgC 100.08 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:30:38 2013

(2)

#0001 20:40:03 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:40:30 2013

(3)

#0001 20:47:17 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:24:40 2013

(4)

#0001 21:31:44 TC SPL#01 88.800 mg 0000634 cts 000.386 mgC 0.43 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:33:16 2013

(5)

#0001 21:40:36 TC SPL#01 88.700 mg 0002253 cts 001.947 mgC 2.20 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:47:31 2013

(6)

#0001 21:55:18 TC SPL#01 35.800 mg 0004212 cts 003.837 mgC 10.72 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:01:52 2013

(7)

#0001 22:09:01 TC SPL#01 82.400 mg 0002039 cts 001.741 mgC 2.11 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:10:43 2013

(8)

#0001 22:17:28 TC SPL#01 62.700 mg 0000943 cts 000.684 mgC 1.09 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:26:14 2013

(9)

#0001 22:33:00 TC SPL#01 92.500 mg 0002802 cts 002.477 mgC 2.68 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:38:52 2013

10

#0001 22:45:40 TC SPL#01 62.100 mg 0001478 cts 001.200 mgC 1.93 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:46:57 2013

11

#0001 22:54:26 TC SPL#01 44.200 mg 0001407 cts 001.131 mgC 2.56 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:04:40 2013

12

#0001 23:11:25 TC SPL#01 123.700 mg 0001469 cts 001.191 mgC 0.96 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:16:30 2013

13

#0001 23:23:15 TC SPL#01 3.000 mg 0003539 cts 003.187 mgC 106.25 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:29:31 2013

14

#0001 23:36:25 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:38:40 2013

15

#0001 23:45:25 TC SPL#01 122.500 mg 0003282 cts 002.940 mgC 2.40 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:57:23 2013

16

#0001 00:04:10 TC SPL#01 70.100 mg 0003670 cts 003.314 mgC 4.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:13:00 2013

17

#0001 00:20:27 TC SPL#01 19.900 mg 0003613 cts 003.259 mgC 16.38 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:27:52 2013

18

#0001 00:35:21 TC SPL#01 65.100 mg 0003368 cts 003.024 mgC 4.64 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:36:42 2013

19

#0001 00:43:28 TC SPL#01 247.100 mg 0008842 cts 008.302 mgC 3.36 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:56:54 2013

20

#0001 01:05:16 TC SPL#01 45.000 mg 0001079 cts 000.815 mgC 1.81 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 01:13:03 2013

21

#0001 01:19:49 TC SPL#01 3.000 mg 0003261 cts 002.919 mgC 97.31 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 01:37:06 2013

22

#0001 01:43:52 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03

Data File Name: 13306CAL.G03

Run Start Date/Time: Friday, November 01, 2013 23:54:51

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

CALIB.

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS			
PB	0.0	-1.00	1.00

Analyst: JSMathur Date: 11.3.13

Verified By: 11/4/13 Date: 11/4/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
0 CLEANUP	11/1/2013 11:54:51PM	1.0	0.00000		2982
Comments:					
1 RINSE	11/2/2013 12:11:00AM	1.0	0.16100		2467
Comments:					
2 MBLANK	11/2/2013 12:17:28AM	1.0	0.00000		1340
Comments:					
3 S0	11/2/2013 1:13:12AM	1.0	0.00000		2573
Comments:					
4 S1.0	11/2/2013 1:27:23AM	1.0	1.00000		12300
Comments:					
5 S7.5	11/2/2013 1:34:03AM	1.0	7.50000		72009
Comments:					
6 S10.0	11/2/2013 1:43:13AM	1.0	10.00000		98977
Comments:					
7 S25.0	11/2/2013 1:51:32AM	1.0	25.00000		229220
Comments:					

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1330503G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time: 11/2/2013 1:59:55AM			
8	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
S50.0	1.0	50.00000		458881

Comments:

Injection #	Date/Time: 11/2/2013 2:08:09AM			
9	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
S100.0	1.0	100.00000		888166

Comments:

Injection #	Date/Time: 11/2/2013 2:21:54AM			
10	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
RINSE	1.0	0.25300		3214

Comments:

Injection #	Date/Time: 11/2/2013 2:29:11AM			
11	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
ICV	1.0	25.44300		225534

Comments: 1029. IS...

Injection #	Date/Time: 11/2/2013 2:36:55AM			
12	Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
ICB	1.0	0.09000		1766

Comments:

Analyst: [signature] 495 Date: 11.3.13

Verified By: BJG Date: 11/4/13

OI Corporation TOC Reporter
Instrument ID: E724730166 Wet - Chemistry

User ID:ism00495 Name:James S. Mathiot
Title:Chemist Dept:4027

Calibration - Quick View -TOC

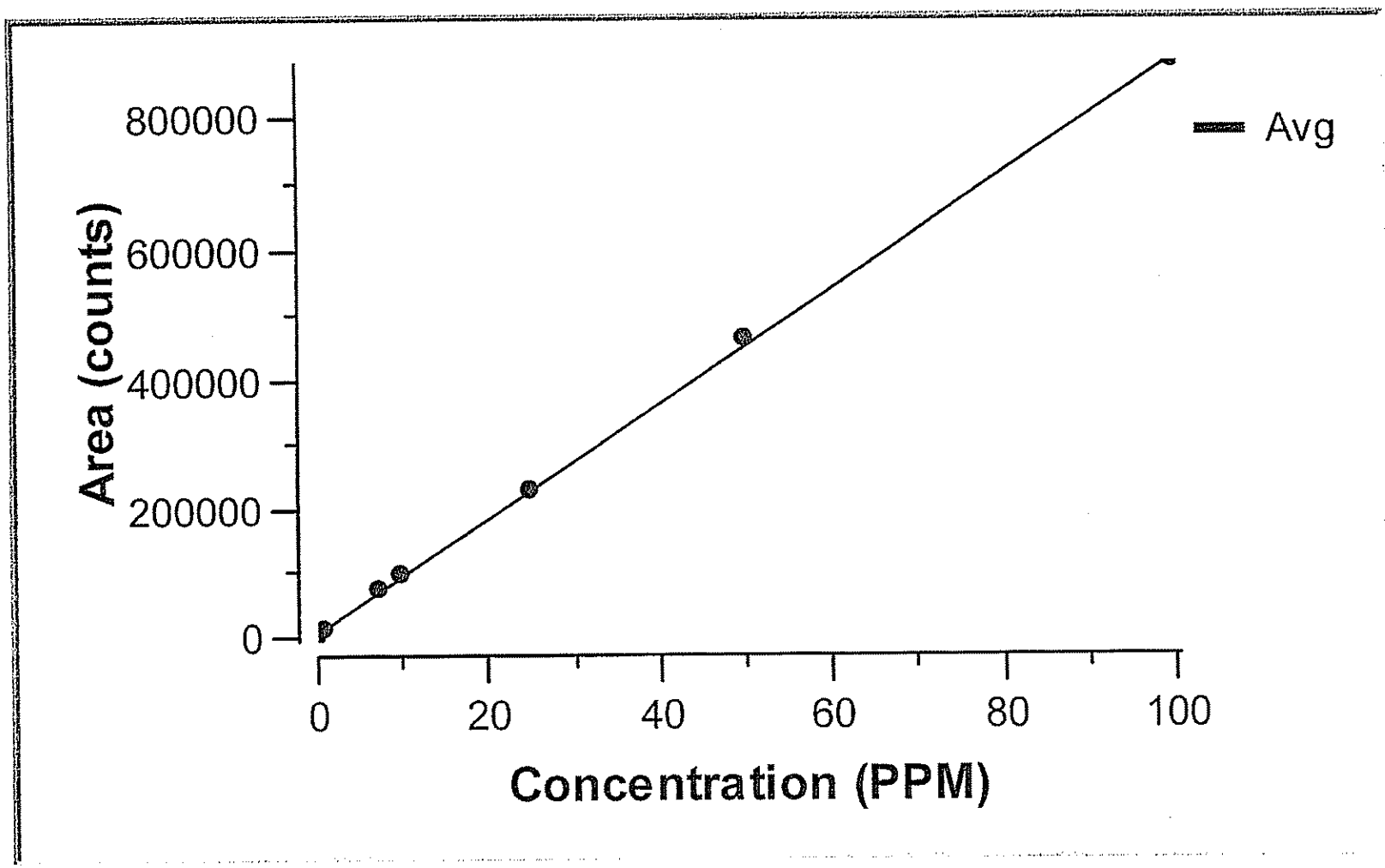
Revision: 19-lli-new - Jun 14, 2012; 03-47-17 PM
Modified By: toc
Date Created: 2012/06/14; 03:47 PM
Last Modified: 2013/11/02; 12:17 AM
Last Calibrated: 2013/11/02; 02:08 AM

RF(ugC/k-cnt): 0.2256
R2: 0.9998
Reagent Blank(cts): 970
Offset Area(cts): 6,700
Offset Mass(ugC): -1.51

Std #	Conc (PPM)	Volume (mL)	# Reps	Area	Std. Dev	%RSD	Date Analysed
RW	0.000	2.000	1	2,573	0	0.00	2013-11-02; 01:13AM
1	1.000	2.000	1	12,300	0	0.00	2013-11-02; 01:27AM
2	7.500	2.000	1	72,009	0	0.00	2013-11-02; 01:34AM
3	10.000	2.000	1	98,977	0	0.00	2013-11-02; 01:43AM
4	25.000	2.000	1	229,220	0	0.00	2013-11-02; 01:51AM
5	50.000	2.000	1	458,881	0	0.00	2013-11-02; 01:59AM
6	100.000	2.000	1	888,166	0	0.00	2013-11-02; 02:08AM

Erik J. Frederikson
Manager

NOV 0 4 2013


800000
600000
400000
200000
0
Area (counts)
0
20
40
60
80
100
Concentration (PPM)
Avg

NOV 0 4 2013

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Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03

Data File Name: 13312.G03

Run Start Date/Time: Friday, November 08, 2013 01:54:08

Instrument Number: 15610

Instrument Name: O.I. Analytical Aurora 1030

Employee ID: 0495

Calibration Information Location

Book ID	Page Number
173305	52

Initial Calibration Summary

Standards	Area Counts	True (mg/L)
S0	2573	0
S1.0	12300	1.0
S7.5	72009	7.5
S10.0	98977	10.0
S25.0	229220	25.0
S50.0	458881	50.0
S100.0	888166	100.0

File Name:	13306CAL.G03
Calibration Date/Time:	11/1/2013 11:54:51PM
Correlation Coefficient:	0.99988
Y Intercept:	6699.68456
Slope:	8864.22847

QC Values

Type	True (mg/L)	Lower Window (mg/L)	Upper Window (mg/L)
LCS	25.0	22.63	28.35
PB	0.0	-1.00	1.00

Analyst: JSMathur 495 Date: 11.8.13

Verified By: BF/US Date: 11/11/13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 0 — CLEANUP
Date/Time: 11/8/2013 1:54:08AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		3925

Comments:

Injection # 1 — RINSE
Date/Time: 11/8/2013 2:06:29AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.00000		2360

Comments:

Injection # 2 — 25 TIC
Date/Time: 11/8/2013 2:26:24AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.23700		224675

IS

Comments:

Injection # 3 — HIGH CH
Date/Time: 11/8/2013 2:32:59AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	41.21200		366281

Comments: TV=40 103%

Injection # 4 — LOW CHE
Date/Time: 11/8/2013 2:42:16AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	13.15700		117599

Comments: TV=12.5 105%

Injection # 5 — CCV2
Date/Time: 11/8/2013 2:50:29AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.07200		223211

% Recovery = 100

Comments:

Injection # 6 — CCB
Date/Time: 11/8/2013 2:58:16AM

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.14800		2280

Comments:

Injection # 7 — LCS
Date/Time: 11/8/2013 3:07:08AM Batch Number: 13312049501A Element: TOC

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.05800	25.23200	25.23200	223858

Comments: TV=25 101% (IS)

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection #	Date/Time	Batch Number	Element	V
8	11/8/2013 3:21:54AM	13312049501A	TOC	✓

Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.23300	0.13500	0.23300	2601

PB

Comments:

Injection #	Date/Time	Batch Number	Element	V
9	11/8/2013 3:37:18AM	13311049502A	TOC	✓

Class: ********** SDG: CLB88

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
25.0	43.07200	44.64600	1116.15000	389748

7261389

Comments:

Injection #	Date/Time	Batch Number	Element	V
10	11/8/2013 3:52:12AM	13312049501A	TOC	✓

Class: ********** SDG: CLB89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	2.16400	2.46600	2.46600	21489

7261416

Comments:

Injection #	Date/Time	Batch Number	Element	V
11	11/8/2013 4:07:03AM	13312049501A	TOC	✓

Class: ********** SDG: CLB89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.37500	1.59900	1.59900	14149

7261417

Comments:

Injection #	Date/Time	Batch Number	Element	V
12	11/8/2013 4:22:13AM	13312049501A	TOC	✓

Class: ********** SDG: CLB89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.30200	1.60400	1.60400	13852

7261418

Comments:

Injection #	Date/Time	Batch Number	Element	V
13	11/8/2013 4:37:36AM	13312049501A	TOC	

Class: ********** SDG: CLB89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	14.23400	16.98500	16.98500	139334

7261420

Comments: RPT- Rpd

Injection #	Date/Time	Batch Number	Element	V
14	11/8/2013 4:52:22AM	13312049501A	TOC	✓

Class: ********** SDG: CLB89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.07800	1.29700	1.29700	11497

7261435

Comments:

Injection #	Date/Time	Batch Number	Element	V
15	11/8/2013 5:07:43AM	13312049501A	TOC	✓

Class: ********** SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.76400	2.28200	2.28200	18899

7261436

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 16 — Date/Time: 11/8/2013 5:22:50AM — Batch Number: 13312049501A — Element: TOC — V

7261437 — Class: ********** — SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.52800	4.15800	4.15800	35033

Comments:

Injection # 17 — Date/Time: 11/8/2013 5:38:08AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.08400		223318

% Recovery = 100 (TS)

Comments:

Injection # 18 — Date/Time: 11/8/2013 5:45:55AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.26400		3308

Comments:

Injection # 19 — Date/Time: 11/8/2013 5:54:18AM — Batch Number: 13312049501A — Element: TOC — V

7261438 — Class: ********** — SDG: CLB90

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	2.13000	2.50400	2.50400	21509

Comments:

Injection # 20 — Date/Time: 11/8/2013 6:09:42AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: U********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.57400	3.89300	3.89300	34067

Comments:

Injection # 21 — Date/Time: 11/8/2013 6:24:59AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: D********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.65000	4.09400	4.09400	35298

Comments:

Injection # 22 — Date/Time: 11/8/2013 6:40:09AM — Batch Number: 13312049501A — Element: TOC — V

7261562 — Class: R********* — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	14.20100	14.82900	14.82900	129630

Comments: SA=10 10.99% (+S)

Injection # 23 — Date/Time: 11/8/2013 6:54:42AM — Batch Number: 13312049501A — Element: TOC — V

~~7251564~~ 7261564 — Class: ********** — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.32200	0.30600	0.32200	3753

Comments:

(3) asm 11.8.13

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 24 — Date/Time: 11/8/2013 7:10:03AM — Batch Number: 13312049501B — Element: TOC — V

7261566 — Class: ********** — SDG: CS037

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	3.50700	4.27900	4.27900	35481

Comments:

Injection # 25 — Date/Time: 11/8/2013 7:25:22AM — Batch Number: 13312049501B — Element: TOC — V

7261929 — Class: ********** — SDG: CP177

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	19.61200	22.51700	22.51700	187690

Comments: Rer- Rpd

Injection # 26 — Date/Time: 11/8/2013 7:40:10AM — Batch Number: 13312049501B — Element: TOC — V

7261930 — Class: ********** — SDG: CP177

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.55100	0.44300	0.55100	5378

Comments:

Injection # 27 — Date/Time: 11/8/2013 7:55:12AM — Batch Number: 13312049501B — Element: TOC — V

7262380 — Class: ********** — SDG: POM89

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.57500	0.47400	0.57500	5619

Comments:

Injection # 28 — Date/Time: 11/8/2013 8:10:24AM — Batch Number: 13312049501B — Element: TOC — V

7263060 — Class: ********** — SDG: KVM03

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.32600	0.27800	0.32600	3647

Comments:

Injection # 29 — Date/Time: 11/8/2013 8:25:53AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.07200		223214

% Recovery = 100

Comments:

Injection # 30 — Date/Time: 11/8/2013 8:33:33AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.17400		2515

Comments:

Injection # 31 — Date/Time: 11/8/2013 8:42:38AM — Batch Number: 13312049501B — Element: TOC — V

7265107 — Class: U********** — SDG: SOF26

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.87700	1.84800	1.87700	17483

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Injection # 32 — Date/Time: 11/8/2013 8:57:52AM — Batch Number: 13312049501B — Element: TOC — V

7265107 — Class: D********* — SDG: SOF26

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.84400	1.87900	1.87900	17472

Comments:

Injection # 33 — Date/Time: 11/8/2013 9:13:07AM — Batch Number: 13312049501B — Element: TOC — V

7265107 — Class: R********* — SDG: SOF26

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	12.26700	12.63600	12.63600	111343

Comments: SA=10 1089. IS

Injection # 34 — Date/Time: 11/8/2013 9:27:39AM — Batch Number: 13312049501B — Element: TOC — V

7265111 — Class: ********** — SDG: SOF27

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.79300	1.89000	1.89000	17293

Comments:

Injection # 35 — Date/Time: 11/8/2013 9:42:58AM — Batch Number: 13312049501B — Element: TOC — V

7265247 — Class: ********** — SDG: KVM04

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.25200	0.17500	0.25200	2863

Comments:

Injection # 36 — Date/Time: 11/8/2013 9:58:18AM — Batch Number: 13312049501B — Element: TOC — V

7266311 — Class: **********

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	1.74500	2.49200	2.49200	19749

Comments:

Injection # 37 — Date/Time: 11/8/2013 10:13:12AM — Batch Number: 13312049501B — Element: TOC — V

7266798 — Class: ********** — SDG: KVM05

Dil Factor	Raw Result 1 (mg/L)	Raw Result 2 (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.31100	0.20000	0.31100	3236

Comments:

Injection # 38 — Date/Time: 11/8/2013 10:28:48AM

CCV2

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	25.05900		223096

% Recovery = 100

Comments: IS

Injection # 39 — Date/Time: 11/8/2013 10:36:42AM

CCB

Dil Factor	Raw Result (mg/L)	Calculated Result (mg/L)	Area Counts
1.0	0.17700		2541

Comments:

Lancaster Laboratories Instrumental Water Quality Report

Run Name: 1331201G03 Instrument Number: 15610

Employee ID: 0495

Analyst: [signature] 495 Date: 11.8.13

Verified By: KP/LLS Date: 11/11/13

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

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Combustion TOC Prep Log
Analysis #2079, #0383

Phosphoric Lot #053113 exp 11.30.13

Oven ID# 1887

Oven Temperature (°C) 75°

Tray #: 30 Balance ID: B35614 Time In: 2015 Time Out: 2030

Position	Date	Analyst	Sample #	Weight (mg)	Batch Number	Comments
A1	11.11.13	[signature]	PBS	0.0	133150495314	
A2	↓	↓	LCSS	88.8	↓	
A3			7266800-U	88.7		
A4			7266801-R	35.8		
A5			7266803-D	82.4		
A6			7266804	62.7		
A7			7266806	92.5		
A8			7266808	62.1	↓	
B1			7266809	44.2	133150495318	
B2			7266812	123.7	↓	
B3			7266813	122.5		
B4			7266814-U	70.1		
B5			7266815-R	19.9		
B6			7266817-D	65.1		
B7			7266818	247.1	↓	
B8	↓	↓	7266818	45.0		
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						N/A

Verified by: BB/LDS Date: 11/12/13

Wet Chemistry Data

Case Narrative/Conformance Summary

Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Water Quality

Fraction: Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7266799	FB-02_11062013	X		Field Blank
7266805	SW-R2-B-15-2	X		
7266807	SW-R2-B-15-1	X		

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

Samples	pH	Total Hardness
7266799	DF1	DF1
7266805	DF1	DF5
7266807	DF1	DF1

No problems were encountered with the analysis of the samples.

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM05

Water Quality

Fraction: Wet Chemistry

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

QC Summary

Wet Chemistry

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Quality Control Reference List
Water Quality

CLIENT: Ashland, Inc.
SDG: KVM05

Fraction: Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
pH	13312002202A	P002202Q	11/08/2013 12:03:00
		7266799	11/08/2013 13:07:00
		7266805	11/08/2013 12:56:00
		7266807	11/08/2013 12:48:00
Total Hardness	13311001104A	P001104B	11/08/2013 00:36:00
		P001104Q	11/08/2013 00:44:00
		7266799	11/08/2013 04:03:00
		7266807	11/08/2013 04:44:00
Total Hardness	13326002101A	P002101B	11/22/2013 13:01:00
		P002101Q	11/22/2013 13:09:00
		7266805	11/22/2013 12:06:00

Quality Control Summary
Method Blank
Water Quality
SDG: KVM05
Matrix: LIQUID

Fraction: Wet Chemistry

13311001104A / P001104B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/08/13	N.D.	mg/l as CaCO3	3.0	5.0

13326002101A / P002101B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/22/13	N.D.	mg/l as CaCO3	3.0	5.0

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM05
Matrix: LIQUID

Water Quality
Fraction: Wet Chemistry

LCS: P001104	Batch: **13311001104A** (Sample number(s): 7266799, 7266807)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	41.15	NA	103	NA	96-110	NA	NA

LCS: P002202	Batch: **13312002202A** (Sample number(s): 7266799, 7266805, 7266807)								
Parameter	**ME**	**Spike Added Std. Units**	**LCS Conc Std. Units**	**LCSD Conc Std. Units**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
pH	MTR	6.86	6.79	NA	99	NA	92-106	NA	NA

LCS: P002101	Batch: **13326002101A** (Sample number(s): 7266805)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	39.86	NA	100	NA	96-110	NA	NA

Raw Data

Wet Chemistry

Fraction: Wet Chemistry

12152: pH Analyte Name	Default MDL	Default LOQ	Units
pH	0.010	0.010	Std. Units

12147: Total Hardness Analyte Name	Default MDL	Default LOQ	Units
Total Hardness	3.0	5.0	mg/l as CaCO3

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Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Bicarbonate	mg/l as CaCO3
Carbonate	mg/l as CaCO3
Phenolphthalein Alkalinity	mg/l as CaCO3
Specific Conductance	umhos/cm
Temperature of pH	Degrees C
Total Alkalinity	mg/l as CaCO3
pH	Std. Units

Analysis Name	QC Check	True Value	Acceptance Range
Specific Conductance	CCVSC1	147.00	132.30 - 161.70
Specific Conductance	CCVSC2	1413.00	1271.70 - 1554.30
Specific Conductance	CCVSC3	12900.00	11610.00 - 14190.00
pH	CCVPH2	7.00	6.27 - 7.73

Analysis Name	QC Check	Acceptance Range
Specific Conductance	CCB	< 5.00
Specific Conductance	PBW	< 5.00
Total Alkalinity	CCB	< 2.00
Total Alkalinity	PBW	< 2.00

Analysis Name	Reagent Name	Lot Info

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Specific Conductance	LCSSC	147.00	140.39 - 153.47	174884p68
Total Alkalinity	LCSAK	188.00	168.26 - 207.55	174884p56
pH	LCSPH	7.00	6.27 - 7.73	C129-02
pH	LCSSSFL	7.00	6.62 - 7.38	

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267643	26099		13312002201A	1	070A	11/08/2013 11:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.64	7.64	Y	Y		
Temperature of pH	20.87	20.87				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267651	26100		13312002201A	1	070A	11/08/2013 11:25

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.73	7.73	Y	Y		
Temperature of pH	21.09	21.09				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267642	26101		13312002201A	1	070A	11/08/2013 11:29

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.29	6.29	Y	Y		
Temperature of pH	20.99	20.99				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVSC3	26102	CCV		1	11/08/2013 11:30

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Specific Conductance	12510.00	12510.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26103	CCV		1	11/08/2013 11:35

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.80	6.80		
Temperature of pH	20.77	20.77		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	26104	CCB		1	11/08/2013 11:42

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	0.47	0.47		
Carbonate	0.00	0.00		
Specific Conductance	0.94	0.94		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	5.90	5.90		
Total Alkalinity	0.47	0.47		
Temperature of pH	20.54	20.54		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268203	26105		13312002201A	1	070A	11/08/2013 11:46

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.94	7.94	Y	Y		
Temperature of pH	20.38	20.38	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267644	26106	U	13312002201B	1	070A	11/08/2013 11:50

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.77	6.77	Y	Y		
Temperature of pH	20.23	20.23				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267647	26107	D	13312002201B	1	070A	11/08/2013 11:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26108	CCV		1	11/08/2013 11:58

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.41	20.41		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSPH	26109	Q	13312002202A	1	11/08/2013 12:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.79	6.79	Y			
Temperature of pH	20.65	20.65				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	26110	U	13312002202A	1	004A	11/08/2013 12:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	21.05	21.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	26111	D	13312002202A	1	004A	11/08/2013 12:12

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.46	7.46	Y	Y		
Temperature of pH	20.89	20.89				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	26112		13312002202A	1	004A	11/08/2013 12:15

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.96	7.96	Y	Y		
Temperature of pH	20.49	20.49				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	26113		13312002202A	1	004A	11/08/2013 12:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.20	7.20	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	26114		13312002202A	1	004A	11/08/2013 12:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.60	4.60	Y	Y		
Temperature of pH	20.12	20.12				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	26115		13312002202A	1	004A	11/08/2013 12:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.63	4.63	Y	Y		
Temperature of pH	20.04	20.04				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	26116		13312002202A	1	004A	11/08/2013 12:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.70	7.70	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	26117		13312002202A	1	004A	11/08/2013 12:35

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.03	6.03	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	26118		13312002202A	1	004A	11/08/2013 12:39

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.98	7.98	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26119	CCV		1	11/08/2013 12:43

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.29	20.29		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	26120		13312002202A	1	004A	11/08/2013 12:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.72	7.72	Y	Y		
Temperature of pH	20.67	20.67				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	26121		13312002202A	1	004A	11/08/2013 12:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.02	7.02	Y	Y		
Temperature of pH	20.59	20.59				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	26122		13312002202A	1	004A	11/08/2013 12:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.85	6.85	Y	Y		
Temperature of pH	20.40	20.40				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	26123		13312002202A	1	004A	11/08/2013 13:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.87	6.87	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	26124		13312002202A	1	004A	11/08/2013 13:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.90	6.90	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	26125		13312002202A	1	004A	11/08/2013 13:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.94	5.94	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	26126		13312002202A	1	004A	11/08/2013 13:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	20.02	20.02				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26127	U	13312002202B	1	070A	11/08/2013 13:16

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26128	D	13312002202B	1	070A	11/08/2013 13:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y			
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267842	26129		13312002202A	1	070A	11/08/2013 13:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.01	6.01	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26130	CCV		1	11/08/2013 13:28

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.62	20.62		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267839	26131		13312002202A	1	070A	11/08/2013 13:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.81	5.81	Y	Y		
Temperature of pH	20.73	20.73				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267841	26132		13312002202A	1	070A	11/08/2013 13:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.61	6.61	Y	Y		
Temperature of pH	20.47	20.47				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267843	26133		13312002202A	1	070A	11/08/2013 13:41

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.36	5.36	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26134	CCV		1	11/08/2013 13:44

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.83	6.83		
Temperature of pH	20.20	20.20		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26135	Q	13312002203A	1	11/08/2013 13:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.81	6.81	Y			
Temperature of pH	20.09	20.09				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26136	Y	13312002203A	1	11/08/2013 13:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y			
Temperature of pH	20.15	20.15				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265638	26137		13312002203A	1	004A	11/08/2013 13:58

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.79	5.79	Y	Y		
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265640	26138		13312002203A	1	004A	11/08/2013 14:02

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.52	5.52	Y	Y		
Temperature of pH	20.20	20.20				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263617	26139		13312002203A	1	004A	11/08/2013 14:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263615	26140		13312002203A	1	004A	11/08/2013 14:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.60	20.60				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26141	CCV		1	11/08/2013 14:13

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.82	6.82		
Temperature of pH	20.58	20.58		

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Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	174884/73

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261491	35488		13311001103A	1	007A	11/07/2013 23:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	23.70	23.70	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261492	35489		13311001103A	1	007A	11/07/2013 23:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	53.48	53.48	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261493	35490		13311001103A	1	007A	11/07/2013 23:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	103.03	103.03	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263051	35491		13311001104A	1	007A	11/08/2013 00:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.71	38.71	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263056	35492		13311001104A	1	007A	11/08/2013 00:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	36.91	36.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35493	CCV		1	11/08/2013 00:15

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	21.28	21.28		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35494	CCB		1	11/08/2013 00:20

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.15	1.15		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35495	B	13311001104A	1	11/08/2013 00:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35496	Q	13311001104A	1	11/08/2013 00:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.15	41.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35497	U	13311001104B	1	007A	11/08/2013 00:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.93	38.93	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35498	D	13311001104B	1	007A	11/08/2013 01:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.77	38.77	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263058	35499		13311001104A	1	007A	11/08/2013 01:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.78	38.78	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263059	35500		13311001104A	1	007A	11/08/2013 01:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	35501		13311001104A	1	007A	11/08/2013 01:40

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	35502		13311001104A	1	007A	11/08/2013 01:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	35503		13311001104A	1	007A	11/08/2013 02:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.58	38.58	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35504	CCV		1	11/08/2013 02:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	41.49	41.49		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35505	CCB		1	11/08/2013 02:17

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.18	1.18		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	35506	U	13311001104A	1	007A	11/08/2013 02:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.54	154.54	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265231	35507	R	13311001104A	1	007A	11/08/2013 02:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	190.84	190.84	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265232	35508	M	13311001104A	1	007A	11/08/2013 02:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	189.25	189.25	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	35509	D	13311001104A	1	007A	11/08/2013 02:57

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	155.14	155.14	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	35510		13311001104A	1	007A	11/08/2013 03:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.17	154.17	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	35511		13311001104A	1	007A	11/08/2013 03:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	237.40	237.40	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	35512		13311001104A	1	007A	11/08/2013 03:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	235.62	235.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	35513		13311001104A	1	007A	11/08/2013 03:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	221.52	221.52	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	35514		13311001104A	1	007A	11/08/2013 03:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.04	2.04	Y	Y		

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	35515		13311001104A	1	007A	11/08/2013 04:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH3	35516	CCV		1	11/08/2013 04:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	62.80	62.80		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35517	CCB		1	11/08/2013 04:16

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.26	1.26		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	35518		13311001104A	1	007A	11/08/2013 04:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	35519		13311001104A	1	007A	11/08/2013 04:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	264.91	264.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	35520		13311001104A	1	007A	11/08/2013 04:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	88.39	88.39	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	35521		13311001104A	1	007A	11/08/2013 05:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.97	86.97	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	35522		13311001104A	1	007A	11/08/2013 05:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	108.41	108.41	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260374	35523		13311001105A	10	007A	11/08/2013 05:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260375	35524		13311001105A	10	007A	11/08/2013 05:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	122.53	1225.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260376	35525		13311001105A	10	007A	11/08/2013 05:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	172.03	1720.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260377	35526		13311001105A	10	007A	11/08/2013 05:55

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	52.15	521.50	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260378	35527		13311001105A	10	007A	11/08/2013 06:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	232.14	2321.40	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35528	CCV		1	11/08/2013 06:13

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	42.53	42.53		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35529	CCB		1	11/08/2013 06:18

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.29	1.29		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35530	B	13311001105A	1	11/08/2013 06:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.16	1.16	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35531	Q	13311001105A	1	11/08/2013 06:32

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.21	41.21	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260379	35532		13311001105A	10	007A	11/08/2013 06:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	187.29	1872.90	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260876	35533		13311001105A	1	007A	11/08/2013 06:51

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	75.89	75.89	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266574	35534	U	13311001105A	1	007A	11/08/2013 07:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	137.67	137.67	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266575	35535	R	13311001105A	1	007A	11/08/2013 07:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	169.99	169.99	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266576	35536	M	13311001105A	1	007A	11/08/2013 07:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	171.28	171.28	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35537	CCV		1	11/08/2013 07:29

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	22.26	22.26		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35538	CCB		1	11/08/2013 07:45

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266577	35539	D	13311001105A	1	007A	11/08/2013 07:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	133.95	133.95	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266578	35540		13311001105A	1	007A	11/08/2013 08:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	136.69	136.69	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266579	35541		13311001105A	1	007A	11/08/2013 08:13

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	138.23	138.23	N		CCV is > 22 at 35537	

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Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	178368/11

Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
tap1	36068			1		11/22/2013 10:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	19.99	19.99				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	36069	CCV		1	11/22/2013 10:32

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	20.02	20.02		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36070	CCB		1	11/22/2013 10:47

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259632	36071		13326002101A	1	007A	11/22/2013 11:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7259632	36072		13326002101A	2	007A	11/22/2013 11:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	12.61	25.22	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260379	36073		133260021010	1	007A	11/22/2013 11:28

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261490	36074		13326002101A	1	007A	11/22/2013 11:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261490	36075		13326002101A	2	007A	11/22/2013 11:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.81	5.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	36076		13326002101A	5	007A	11/22/2013 11:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.01	10.05	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	36077		13326002101A	5	007A	11/22/2013 11:59

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.71	8.55	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	36078		13326002101A	5	007A	11/22/2013 12:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	22.19	110.95	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267643	36079		13326002101A	5	007A	11/22/2013 12:14

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.10	205.50	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267648	36080		13326002101A	5	007A	11/22/2013 12:22

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	45.70	228.50	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	36081	CCV		1	11/22/2013 12:30

Water Quality Run Report

Run Name: 20131122-21 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	40.34	40.34		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36082	CCB		1	11/22/2013 12:46

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	36083	B	13326002101A	1	11/22/2013 13:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	36084	Q	13326002101A	1	11/22/2013 13:09

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	39.86	39.86	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7270083	36085	U	13326002101B	1	007A	11/22/2013 13:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.12	86.12	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7270083	36086	D	13326002101B	1	007A	11/22/2013 13:28

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.15	86.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7276747	36087		13326002101A	1	007A	11/22/2013 13:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36088	U	13326002101A	1	007A	11/22/2013 13:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	47.95	47.95	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36089	D	13326002101A	1	007A	11/22/2013 14:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	48.30	48.30	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285563	36090	R	13326002101A	1	007A	11/22/2013 14:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	87.13	87.13	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285564	36091		13326002101A	1	007A	11/22/2013 14:18

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	20.43	20.43	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7285565	36092		13326002101A	1	007A	11/22/2013 14:26

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	42.48	42.48	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH3	36093	CCV		1	11/22/2013 14:35

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	63.76	63.76		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	36094	CCB		1	11/22/2013 14:50

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
7266800	2G124BKG
7266801	2G124MS
7266802	2G124MSD
7266803	2G124DUP
7266804	2G125
7266806	2C152
7266808	2C151

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13317820005A	Sample number(s): 7266800-7266804, 7266806, 7266808				
Moisture	100		99-101		
Moisture	100		99-101		
Moisture Duplicate	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 13317820005A	Sample number(s): 7266800-7266804, 7266806, 7266808			
Moisture	63.9	56.9	12*	5
Moisture	63.9	56.9	12*	5
Moisture Duplicate	63.9	56.9	12*	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: 06138820003

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0945	5.0324	1.6355	89.25	5/18/06 (1201/SWF)	5/19/06 (0236/CW)
P771706BKG	A	00111	1.1039	6.2255	5.8124	24.37	5/18/06 (1201/SWF)	5/19/06 (0236/CW)
P771706DUP	A	00111	1.0720	6.2777	5.8528	23.84	5/18/06 (1201/SWF)	5/19/06 (0236/CW)

Batch #: 06143820004

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0950	5.0350	1.6283	89.41	5/23/06 (1201/SWF)	5/24/06 (0236/CW)

Batch #: 13317820005

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0954	5.0403	1.6399	89.20	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266800BKG	A	00111	1.1566	7.0644	3.7096	63.86	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266801MS	A	00118				63.86	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266802MSD	A	00118				63.86	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266803DUP	A	00118				63.86	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266803DUP	A	00121	1.0853	7.7955	4.4477	56.87	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266804	A	00111	1.0914	6.2351	3.1946	66.27	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266806	A	00111	1.0928	7.8866	2.0863	87.40	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266808	A	00111	1.0828	8.3363	2.8490	78.81	11/13/13 (1201/SWF)	11/14/13 (0236/CW)

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Type I Data Package

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

Project: Hercules Phase II R.I.
Sediment and Surface Water Samples
Collected on 11/06/13

SDG# KVM06

GROUP	SAMPLE NUMBERS
1431972	7266809-7266819

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date:** **12/20/2013**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Wendy Kozma at (717) 556-7257.

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Sample Reference List for SDG Number KVM06
with a Data Package Type of I

06716 - Ashland, Inc.

Project: Hercules Phase II R.I.

Lab Sample Number	Lab Sample Code	Client Sample Description
7266809	2E131	SD-R2-E-13-1 Grab Sediment Sample
7266810	2D123	SW-R2-D-12-3 Grab Surface Water Sample
7266811	2D121	SW-R2-D-12-1 Grab Surface Water Sample
7266812	2C126	SD-R2-C-12-6 Grab Sediment Sample
7266813	2C111	SD-R2-C-11-1 Grab Sediment Sample
7266814	2E101	SD-R2-E-10-1 Grab Sediment Sample
7266815	2E101	SD-R2-E-10-1_MS Grab Sediment Sample
7266816	2E101	SD-R2-E-10-1_MSD Grab Sediment Sample
7266817	2E101	SD-R2-E-10-1_DUP Grab Sediment Sample
7266818	2E102	SD-R2-E-10-2 Grab Sediment Sample
7266819	3--FD	DUP-03 Grab Surface Water Sample

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Sample pH Log

SDG: KVM06

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #
7266810	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266810	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266811	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266811	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266819	007A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA
7266819	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA

Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

00259 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

00159 Mercury

The solution resulting from the mercury digestion is analyzed by Cold Vapor AA.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A, September 1994

05705 WW/TL SW 846 ICP Digest (tot)

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A, July 1992

05713 WW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7470A, September 1994

05711 SW SW846 Hg Digest

The sample is heated at 95 c with nitric acid, sulfuric acid, potassium persulfate, and potassium permanganate. Excess potassium permanganate is reduced with sodium chloride/hydroxylamine hydrochloride. Mercuric ions are reduced to mercury metal using stannous chloride.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 7471A Modified, September 1994.

01643 Aluminum
01743 Aluminum
06944 Antimony
06935 Arsenic
07046 Barium
06946 Barium
06947 Beryllium
07047 Beryllium
06949 Cadmium
07049 Cadmium
01750 Calcium
01650 Calcium
06951 Chromium
07051 Chromium
07052 Cobalt
06952 Cobalt
06953 Copper
07053 Copper
01654 Iron
01754 Iron
06955 Lead

01657 Magnesium
01757 Magnesium
06958 Manganese
07058 Manganese
06961 Nickel
07061 Nickel
01762 Potassium
01662 Potassium
07036 Selenium
06936 Selenium
07066 Silver
06966 Silver
01767 Sodium
01667 Sodium
06925 Thallium
06971 Vanadium
07071 Vanadium
07072 Zinc
06972 Zinc

The solution resulting from the metals digestion is analyzed by Trace ICP.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6010B, December 1996.

06024 Antimony
06025 Arsenic
06035 Lead
06045 Thallium

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020, September 1994.

06050 ICP/MS SW-846 Water Digest

The sample is digested with nitric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3010A Modified, July 1992

05708 SW SW846 ICP/ICP MS Digest

The sample is digested with nitric acid, hydrochloric acid and hydrogen peroxide.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3050B, December 1996

06915 Nitroaromatics/Amines Wat Ext

The sample is passed through a Porapak RDX cartridge. The cartridge is then eluted with acetonitrile and the extract is brought to 5 mL. The extract is diluted to 10 mL using a calcium chloride solution.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06916 Nitroaromatics/Amines in Water

The sample is extracted into acetonitrile using SPE on a Porapak RDX cartridge. The extract is analyzed using High Performance Liquid Chromatography with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06917 Nitroaromatics/Amines Sol Ext

The sample is extracted with acetonitrile in a vial using a chilled ultrasonic bath. The vial is centrifuged and the acetonitrile removed. The extract is brought to volume with calcium chloride solution and filtered prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

06918 Nitroaromatics/Amines in Solid

The sample is extracted into acetonitrile using an ultrasonic bath. The extract is analyzed using High Performance Liquid Chromatography (HPLC) with UV detection at two wavelengths for optimum sensitivity for all target compounds 214 and 254 nm. Confirmation of presumptive peaks is performed on a second column at the same two wavelengths.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8330, September 1994.

00813 BNA Water Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, December 1996

10724 PAH 8270 (microwave)
04678 TCL SW846 Semivolatiles/Waters

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270C, December 1996

10814 BNA Soil Microwave PAH

The sample aliquot is extracted using microwave extraction with 1:1 methylene chloride and acetone. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3546, Revision 0, February 2007.

00383 TOC by Lloyd Kahn

Total organic carbon is determined by acidifying a sample aliquot and heating it to remove any inorganic carbon. The sample is then heated to 900oC for combustion of the remaining organic carbon. The resulting carbon dioxide from the organic carbon is detected by a nondispersive infrared detector that has been calibrated to directly display the mass of carbon dioxide detected. The mass is proportional to the mass of total organic carbon in the sample.

Reference: Lloyd Kahn (modified)

12152 pH

The activity of hydrogen ions in the sample is measured using a glass electrode and a reference electrode.

Reference: Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005, Method 4500 H/B-2000

12147 Total Hardness

The concentration of calcium and magnesium ions is determined by titration with EDTA to a blue endpoint, in the presence of Eriochrome Black T indicator. The result is expressed in mg/L calcium carbonate.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2340 C-1997

00111 Moisture
00118 Moisture
00121 Moisture Duplicate

A well-mixed sample is placed in a tared container and dried to a constant weight in an oven at 103-105C. The increase in weight is the total solids.

Reference: Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998, Method 2540 G-1997

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

November 25, 2013

Project: Hercules Phase II R.I.

Submittal Date: 11/06/2013
Group Number: 1431972
SDG: KVM06
PO Number: 4501686843
Release Number: KENVIL
State of Sample Origin: NJ

Client Sample Description	Lancaster Labs (LL) #
SD-R2-E-13-1 Grab Sediment Sample	7266809
SW-R2-D-12-3 Grab Surface Water Sample	7266810
SW-R2-D-12-1 Grab Surface Water Sample	7266811
SD-R2-C-12-6 Grab Sediment Sample	7266812
SD-R2-C-11-1 Grab Sediment Sample	7266813
SD-R2-E-10-1 Grab Sediment Sample	7266814
SD-R2-E-10-1_MS Grab Sediment Sample	7266815
SD-R2-E-10-1_MSD Grab Sediment Sample	7266816
SD-R2-E-10-1_DUP Grab Sediment Sample	7266817
SD-R2-E-10-2 Grab Sediment Sample	7266818
DUP-03 Grab Surface Water Sample	7266819

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Ashland	Attn: Ed Meeks
ELECTRONIC COPY TO	OBG	Attn: John Lucey

Respectfully Submitted,



Wendy A. Kozma
Principal Specialist Group Leader

(717) 556-7257

Sample Description: SD-R2-E-13-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266809
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E131 SDG#: KVM06-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		82	420	1
10724	Acenaphthylene	208-96-8	N.D.		82	420	1
10724	Anthracene	120-12-7	N.D.		82	420	1
10724	Benzo(a)anthracene	56-55-3	150	J	82	420	1
10724	Benzo(a)pyrene	50-32-8	200	J	82	420	1
10724	Benzo(b)fluoranthene	205-99-2	360	J	82	420	1
10724	Benzo(g,h,i)perylene	191-24-2	170	J	82	420	1
10724	Benzo(k)fluoranthene	207-08-9	110	J	82	420	1
10724	Chrysene	218-01-9	270	J	82	420	1
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		82	420	1
10724	Fluoranthene	206-44-0	430		82	420	1
10724	Fluorene	86-73-7	N.D.		82	420	1
10724	Indeno(1,2,3-cd)pyrene	193-39-5	160	J	82	420	1
10724	1-Methylnaphthalene	90-12-0	N.D.		82	420	1
10724	2-Methylnaphthalene	91-57-6	100	J	82	420	1
10724	Naphthalene	91-20-3	150	J	82	420	1
10724	Phenanthrene	85-01-8	290	J	82	420	1
10724	Pyrene	129-00-0	400	J	82	420	1
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		1,800	3,500	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		1,200	3,500	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		1,200	3,500	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		1,200	3,500	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		1,200	3,500	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		1,200	3,500	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		1,200	3,500	1
06918	HMX	2691-41-0	N.D.		2,900	8,800	1
06918	Nitrobenzene	98-95-3	N.D.		1,200	3,500	1
06918	Nitroglycerin	55-63-0	N.D.		24,000	71,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		1,200	3,500	1
06918	2-Nitrotoluene	88-72-2	N.D.		2,400	3,500	1
06918	3-Nitrotoluene	99-08-1	N.D.		2,900	3,500	1
06918	4-Nitrotoluene	99-99-0	N.D.		2,400	3,500	1
06918	PETN	78-11-5	N.D.		24,000	71,000	1
06918	RDX	121-82-4	N.D.		1,500	3,500	1
06918	Tetryl	479-45-8	N.D.		1,800	3,500	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		1,200	3,500	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		1,200	3,500	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	4,630		87.3	242	1
06944	Antimony	7440-36-0	N.D.		8.96	24.2	1
06935	Arsenic	7440-38-2	10.4	J	8.47	24.2	1
06946	Barium	7440-39-3	82.3		0.399	6.05	1
06947	Beryllium	7440-41-7	N.D.		0.811	6.05	1
06949	Cadmium	7440-43-9	1.65	J	0.920	6.05	1
01650	Calcium	7440-70-2	47,200		40.4	242	1
06951	Chromium	7440-47-3	14.9	J	1.94	18.2	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-13-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266809
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E131 SDG#: KVM06-01

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	2.60	J	1.20	6.05	1
06953	Copper	7440-50-8	50.0		3.51	12.1	1
01654	Iron	7439-89-6	10,900		43.8	242	1
06955	Lead	7439-92-1	222		6.05	18.2	1
01657	Magnesium	7439-95-4	6,000		20.2	121	1
06958	Manganese	7439-96-5	697		1.00	6.05	1
06961	Nickel	7440-02-0	17.2		1.57	12.1	1
01662	Potassium	7440-09-7	489	J	101	605	1
06936	Selenium	7782-49-2	N.D.		9.68	24.2	1
06966	Silver	7440-22-4	2.40	J	2.06	6.05	1
01667	Sodium	7440-23-5	808	J	202	1,210	1
06925	Thallium	7440-28-0	N.D.		6.29	36.3	1
06971	Vanadium	7440-62-2	33.3		1.57	6.05	1
06972	Zinc	7440-66-6	185		2.42	24.2	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.485	J	0.121	1.21	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	316,000		27,900	83,800	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	91.9		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 11:35	Joseph M Gambler	1
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 20:38	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-13-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266809
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:10 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E131 SDG#: KVM06-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:12	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 18:12	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 21:13	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 09:50	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/11/2013 22:54	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266810
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D123 SDG#: KVM06-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	15	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	15	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	10	31	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	15	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266810
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D123 SDG#: KVM06-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**	**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	10	31	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		**ug/l**	**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266810
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D123 SDG#: KVM06-02

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	512		82.8	200	1
07046	Barium	7440-39-3	133		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.		0.76	5.0	1
01750	Calcium	7440-70-2	19,700		33.4	200	1
07051	Chromium	7440-47-3	2.0	J	1.6	15.0	1
07052	Cobalt	7440-48-4	2.1	J	1.3	5.0	1
07053	Copper	7440-50-8	6.9	J	2.7	10.0	1
01754	Iron	7439-89-6	28,000		43.0	200	1
01757	Magnesium	7439-95-4	7,980		16.7	100	1
07058	Manganese	7439-96-5	2,060		0.83	5.0	1
07061	Nickel	7440-02-0	1.6	J	1.5	10.0	1
01762	Potassium	7440-09-7	1,930		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	54,900		167	1,000	1
07071	Vanadium	7440-62-2	2.2	J	2.0	5.0	1
07072	Zinc	7440-66-6	42.1		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.34	1.0	1
06025	Arsenic	7440-38-2	5.0		0.42	2.0	1
06035	Lead	7439-92-1	39.6		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	88,400		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.9		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-3 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266810
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D123 SDG#: KVM06-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 10:45	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/18/2013 02:43	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 02:59	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:21	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:21	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:21	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:21	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:53	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 04:53	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 13:00	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2D123

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266810
Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0393.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

page 1 of 1

FORM I SV-1

Sample Description: SW-R2-D-12-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266811
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:40 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D121 SDG#: KVM06-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles SW-846 8270C			ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266811
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:40 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D121 SDG#: KVM06-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	2-Methylphenol	95-48-7	N.D.	0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.	0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.					
04678	Naphthalene	91-20-3	N.D.	0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.	0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.	0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.	0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.	0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.	0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.	11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.	0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.	0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.					
04678	Di-n-octylphthalate	117-84-0	N.D.	2	5	1
04678	Pentachlorophenol	87-86-5	N.D.	1	5	1
04678	Phenanthrene	85-01-8	N.D.	0.1	0.5	1
04678	Phenol	108-95-2	N.D.	0.5	1	1
04678	Pyrene	129-00-0	N.D.	0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.	0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.	0.5	1	1
00893	**Semivolatile Library Search**					
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.					
Explosives	**SW-846 8330**		ug/l	ug/l	ug/l	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.	0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.	0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.	0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.	0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.	0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.	0.45	1.3	1
06916	HMX	2691-41-0	N.D.	0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.	0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.	5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.	0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.	0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.	0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.	0.60	1.2	1
06916	PETN	78-11-5	N.D.	6.0	18	1
06916	RDX	121-82-4	N.D.	0.20	0.50	1
06916	Tetryl	479-45-8	N.D.	0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.	0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.	0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266811
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:40 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D121 SDG#: KVM06-03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene					
Metals		**SW-846 6010B**	**ug/l**	**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	219	82.8	200	1
07046	Barium	7440-39-3	99.4	0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.	0.67	5.0	1
07049	Cadmium	7440-43-9	N.D.	0.76	5.0	1
01750	Calcium	7440-70-2	19,100	33.4	200	1
07051	Chromium	7440-47-3	N.D.	1.6	15.0	1
07052	Cobalt	7440-48-4	N.D.	1.3	5.0	1
07053	Copper	7440-50-8	N.D.	2.7	10.0	1
01754	Iron	7439-89-6	12,400	43.0	200	1
01757	Magnesium	7439-95-4	7,890	16.7	100	1
07058	Manganese	7439-96-5	1,490	0.83	5.0	1
07061	Nickel	7440-02-0	N.D.	1.5	10.0	1
01762	Potassium	7440-09-7	2,040	98.0	500	1
07036	Selenium	7782-49-2	N.D.	8.4	20.0	1
07066	Silver	7440-22-4	N.D.	2.1	5.0	1
01767	Sodium	7440-23-5	54,700	167	1,000	1
07071	Vanadium	7440-62-2	N.D.	2.0	5.0	1
07072	Zinc	7440-66-6	20.9	2.0	20.0	1
		SW-846 6020	**ug/l**	**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.	0.34	1.0	1
06025	Arsenic	7440-38-2	2.1	0.42	2.0	1
06035	Lead	7439-92-1	17.1	0.085	1.0	1
06045	Thallium	7440-28-0	N.D.	0.15	0.50	1
		SW-846 7470A	**ug/l**	**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.	0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**	**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	87,000	3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**	**Std. Units**	**Std. Units**	
12152	pH	n.a.	6.9	0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.					

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SW-R2-D-12-1 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266811
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 12:40 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2D121 SDG#: KVM06-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 11:12	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/18/2013 03:25	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 03:02	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 03:23	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:23	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:23	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:23	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:55	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 05:01	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 13:04	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
2D121

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266811
Sample wt/vol: 232 (g/mL) mL Lab File ID: dk0394.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
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4.					
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30.					

page 1 of 1

FORM I SV-1

Sample Description: SD-R2-C-12-6 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266812
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:05 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C126 SDG#: KVM06-04

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		58	300	5
10724	Acenaphthylene	208-96-8	N.D.		58	300	5
10724	Anthracene	120-12-7	N.D.		58	300	5
10724	Benzo(a)anthracene	56-55-3	120	J	58	300	5
10724	Benzo(a)pyrene	50-32-8	130	J	58	300	5
10724	Benzo(b)fluoranthene	205-99-2	230	J	58	300	5
10724	Benzo(g,h,i)perylene	191-24-2	130	J	58	300	5
10724	Benzo(k)fluoranthene	207-08-9	84	J	58	300	5
10724	Chrysene	218-01-9	200	J	58	300	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		58	300	5
10724	Fluoranthene	206-44-0	260	J	58	300	5
10724	Fluorene	86-73-7	N.D.		58	300	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	93	J	58	300	5
10724	1-Methylnaphthalene	90-12-0	N.D.		58	300	5
10724	2-Methylnaphthalene	91-57-6	N.D.		58	300	5
10724	Naphthalene	91-20-3	N.D.		58	300	5
10724	Phenanthrene	85-01-8	140	J	58	300	5
10724	Pyrene	129-00-0	270	J	58	300	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		230	450	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		150	450	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		150	450	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		150	450	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		150	450	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		150	450	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		150	450	1
06918	HMX	2691-41-0	N.D.		380	1,100	1
06918	Nitrobenzene	98-95-3	N.D.		180	450	1
06918	Nitroglycerin	55-63-0	8,100	J	3,000	9,100	1
06918	1-Nitronaphthalene	86-57-7	N.D.		150	450	1
06918	2-Nitrotoluene	88-72-2	N.D.		300	450	1
06918	3-Nitrotoluene	99-08-1	N.D.		380	450	1
06918	4-Nitrotoluene	99-99-0	N.D.		300	450	1
06918	PETN	78-11-5	N.D.		3,000	9,100	1
06918	RDX	121-82-4	N.D.		190	450	1
06918	Tetryl	479-45-8	N.D.		230	450	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		150	450	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		150	450	1
Reporting limits were raised due to interference from the sample matrix.							
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	6,970		12.4	34.4	1
06944	Antimony	7440-36-0	N.D.		1.27	3.44	1
06935	Arsenic	7440-38-2	4.60		1.20	3.44	1
06946	Barium	7440-39-3	66.4		0.0567	0.859	1
06947	Beryllium	7440-41-7	0.287	J	0.115	0.859	1
06949	Cadmium	7440-43-9	0.536	J	0.131	0.859	1
01650	Calcium	7440-70-2	1,920		5.74	34.4	1
06951	Chromium	7440-47-3	11.1		0.275	2.58	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-12-6 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266812
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:05 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C126 SDG#: KVM06-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	2.42	0.170	0.859	1
06953	Copper	7440-50-8	21.3	0.498	1.72	1
01654	Iron	7439-89-6	16,700	6.22	34.4	1
06955	Lead	7439-92-1	732	0.859	2.58	1
01657	Magnesium	7439-95-4	917	2.87	17.2	1
06958	Manganese	7439-96-5	90.9	0.143	0.859	1
06961	Nickel	7440-02-0	7.28	0.223	1.72	1
01662	Potassium	7440-09-7	396	14.3	85.9	1
06936	Selenium	7782-49-2	N.D.	1.38	3.44	1
06966	Silver	7440-22-4	0.382 J	0.292	0.859	1
01667	Sodium	7440-23-5	220	28.7	172	1
06925	Thallium	7440-28-0	N.D.	0.894	5.16	1
06971	Vanadium	7440-62-2	24.8	0.223	0.859	1
06972	Zinc	7440-66-6	113	0.344	3.44	1
	SW-846 7471A		**mg/kg**	**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.274	0.0173	0.173	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**	**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	16,700	1,400	4,210	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	**%**	
00111	Moisture	n.a.	42.4	0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 12:00	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 22:02	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-12-6 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266812
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:05 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C126 SDG#: KVM06-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:16	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 18:16	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 21:17	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 09:52	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/11/2013 23:11	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-11-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266813
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C111 SDG#: KVM06-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		100	520	5
10724	Acenaphthylene	208-96-8	N.D.		100	520	5
10724	Anthracene	120-12-7	N.D.		100	520	5
10724	Benzo(a)anthracene	56-55-3	N.D.		100	520	5
10724	Benzo(a)pyrene	50-32-8	N.D.		100	520	5
10724	Benzo(b)fluoranthene	205-99-2	170	J	100	520	5
10724	Benzo(g,h,i)perylene	191-24-2	N.D.		100	520	5
10724	Benzo(k)fluoranthene	207-08-9	N.D.		100	520	5
10724	Chrysene	218-01-9	190	J	100	520	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		100	520	5
10724	Fluoranthene	206-44-0	260	J	100	520	5
10724	Fluorene	86-73-7	N.D.		100	520	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.		100	520	5
10724	1-Methylnaphthalene	90-12-0	N.D.		100	520	5
10724	2-Methylnaphthalene	91-57-6	N.D.		100	520	5
10724	Naphthalene	91-20-3	N.D.		100	520	5
10724	Phenanthrene	85-01-8	150	J	100	520	5
10724	Pyrene	129-00-0	180	J	100	520	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		400	800	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		270	800	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		270	800	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		270	800	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		270	800	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		270	800	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		270	800	1
06918	HMX	2691-41-0	N.D.		660	2,000	1
06918	Nitrobenzene	98-95-3	N.D.		270	800	1
06918	Nitroglycerin	55-63-0	N.D.		5,300	16,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		270	800	1
06918	2-Nitrotoluene	88-72-2	N.D.		530	800	1
06918	3-Nitrotoluene	99-08-1	N.D.		660	800	1
06918	4-Nitrotoluene	99-99-0	N.D.		530	800	1
06918	PETN	78-11-5	N.D.		5,300	16,000	1
06918	RDX	121-82-4	N.D.		330	800	1
06918	Tetryl	479-45-8	N.D.		410	800	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		270	800	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		270	800	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	9,770		21.8	60.6	1
06944	Antimony	7440-36-0	5.67	J	2.24	6.06	1
06935	Arsenic	7440-38-2	88.1		2.12	6.06	1
06946	Barium	7440-39-3	215		0.0999	1.51	1
06947	Beryllium	7440-41-7	N.D.		0.203	1.51	1
06949	Cadmium	7440-43-9	0.908	J	0.230	1.51	1
01650	Calcium	7440-70-2	1,430		10.1	60.6	1
06951	Chromium	7440-47-3	15.2		0.484	4.54	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-11-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266813
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C111 SDG#: KVM06-05

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	1.97		0.300	1.51	1
06953	Copper	7440-50-8	65.8		0.878	3.03	1
01654	Iron	7439-89-6	9,610		11.0	60.6	1
06955	Lead	7439-92-1	2,470		1.51	4.54	1
01657	Magnesium	7439-95-4	722		5.06	30.3	1
06958	Manganese	7439-96-5	40.3		0.251	1.51	1
06961	Nickel	7440-02-0	8.22		0.394	3.03	1
01662	Potassium	7440-09-7	777		25.3	151	1
06936	Selenium	7782-49-2	N.D.		2.42	6.06	1
06966	Silver	7440-22-4	0.866	J	0.515	1.51	1
01667	Sodium	7440-23-5	205	J	50.6	303	1
06925	Thallium	7440-28-0	N.D.		1.57	9.08	1
06971	Vanadium	7440-62-2	26.2		0.394	1.51	1
06972	Zinc	7440-66-6	117		0.606	6.06	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.740		0.0288	0.288	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	73,400		2,500	7,490	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	67.3		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 12:25	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 22:45	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06935	Arsenic	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-C-11-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266813
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:30 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2C111 SDG#: KVM06-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06955	Lead	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:21	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 18:21	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/12/2013 21:21	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 09:54	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/11/2013 23:45	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266814
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		150	780	5
10724	Acenaphthylene	208-96-8	N.D.		150	780	5
10724	Anthracene	120-12-7	N.D.		150	780	5
10724	Benzo(a)anthracene	56-55-3	170	J	150	780	5
10724	Benzo(a)pyrene	50-32-8	200	J	150	780	5
10724	Benzo(b)fluoranthene	205-99-2	390	J	150	780	5
10724	Benzo(g,h,i)perylene	191-24-2	200	J	150	780	5
10724	Benzo(k)fluoranthene	207-08-9	170	J	150	780	5
10724	Chrysene	218-01-9	400	J	150	780	5
10724	Dibenz(a,h)anthracene	53-70-3	N.D.		150	780	5
10724	Fluoranthene	206-44-0	490	J	150	780	5
10724	Fluorene	86-73-7	N.D.		150	780	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	170	J	150	780	5
10724	1-Methylnaphthalene	90-12-0	N.D.		150	780	5
10724	2-Methylnaphthalene	91-57-6	N.D.		150	780	5
10724	Naphthalene	91-20-3	N.D.		150	780	5
10724	Phenanthrene	85-01-8	380	J	150	780	5
10724	Pyrene	129-00-0	440	J	150	780	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		650	1,300	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		430	1,300	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		430	1,300	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		430	1,300	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		430	1,300	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		430	1,300	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		430	1,300	1
06918	HMX	2691-41-0	N.D.		1,100	3,300	1
06918	Nitrobenzene	98-95-3	N.D.		430	1,300	1
06918	Nitroglycerin	55-63-0	N.D.		8,700	26,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		430	1,300	1
06918	2-Nitrotoluene	88-72-2	N.D.		870	1,300	1
06918	3-Nitrotoluene	99-08-1	N.D.		1,100	1,300	1
06918	4-Nitrotoluene	99-99-0	N.D.		870	1,300	1
06918	PETN	78-11-5	N.D.		8,700	26,000	1
06918	RDX	121-82-4	N.D.		540	1,300	1
06918	Tetryl	479-45-8	N.D.		670	1,300	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		430	1,300	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		430	1,300	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	5,250		329	913	10
06944	Antimony	7440-36-0	N.D.		33.8	91.3	10
06935	Arsenic	7440-38-2	N.D.		32.0	91.3	10
06946	Barium	7440-39-3	128		1.51	22.8	10
06947	Beryllium	7440-41-7	N.D.		3.06	22.8	10
06949	Cadmium	7440-43-9	N.D.		3.47	22.8	10
01650	Calcium	7440-70-2	14,500		153	913	10
06951	Chromium	7440-47-3	15.4	J	7.31	68.5	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266814
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06BKG

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	14.8	J	4.52	22.8	10
06953	Copper	7440-50-8	61.2		13.2	45.7	10
01654	Iron	7439-89-6	44,300		165	913	10
06955	Lead	7439-92-1	12,500		22.8	68.5	10
01657	Magnesium	7439-95-4	1,830		76.3	457	10
06958	Manganese	7439-96-5	1,360		3.79	22.8	10
06961	Nickel	7440-02-0	32.3	J	5.94	45.7	10
01662	Potassium	7440-09-7	N.D.		381	2,280	10
06936	Selenium	7782-49-2	N.D.		36.5	91.3	10
06966	Silver	7440-22-4	8.68	J	7.76	22.8	10
01667	Sodium	7440-23-5	N.D.		763	4,570	10
06925	Thallium	7440-28-0	N.D.		23.7	137	10
06971	Vanadium	7440-62-2	42.2		5.94	22.8	10
06972	Zinc	7440-66-6	82.3	J	9.13	91.3	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.680		0.0450	0.450	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	216,000		6,520	19,500	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	78.1		0.50	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 09:31	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/19/2013 23:27	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266814
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06BKG

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/13/2013 23:35	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 16:36	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 09:56	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/12/2013 00:04	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266815
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	12,000		150	780	5
10724	Acenaphthylene	208-96-8	13,000		150	780	5
10724	Anthracene	120-12-7	12,000		150	780	5
10724	Benzo(a)anthracene	56-55-3	13,000		150	780	5
10724	Benzo(a)pyrene	50-32-8	12,000		150	780	5
10724	Benzo(b)fluoranthene	205-99-2	12,000		150	780	5
10724	Benzo(g,h,i)perylene	191-24-2	12,000		150	780	5
10724	Benzo(k)fluoranthene	207-08-9	12,000		150	780	5
10724	Chrysene	218-01-9	13,000		150	780	5
10724	Dibenz(a,h)anthracene	53-70-3	12,000		150	780	5
10724	Fluoranthene	206-44-0	13,000		150	780	5
10724	Fluorene	86-73-7	12,000		150	780	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	12,000		150	780	5
10724	1-Methylnaphthalene	90-12-0	13,000		150	780	5
10724	2-Methylnaphthalene	91-57-6	12,000		150	780	5
10724	Naphthalene	91-20-3	17,000		150	780	5
10724	Phenanthrene	85-01-8	13,000		150	780	5
10724	Pyrene	129-00-0	13,000		150	780	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		ug/kg		ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	15,000		600	1,200	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	15,000		400	1,200	1
06918	1,2-Dinitrobenzene	528-29-0	39,000		400	1,200	1
06918	1,3-Dinitrobenzene	99-65-0	19,000		400	1,200	1
06918	1,4-Dinitrobenzene	100-25-4	33,000		400	1,200	1
06918	2,4-Dinitrotoluene	121-14-2	19,000		400	1,200	1
06918	2,6-Dinitrotoluene	606-20-2	19,000		400	1,200	1
06918	HMX	2691-41-0	11,000		990	3,000	1
06918	Nitrobenzene	98-95-3	18,000		400	1,200	1
06918	Nitroglycerin	55-63-0	75,000		7,900	24,000	1
06918	1-Nitronaphthalene	86-57-7	41,000		400	1,200	1
06918	2-Nitrotoluene	88-72-2	16,000		790	1,200	1
06918	3-Nitrotoluene	99-08-1	22,000		990	1,200	1
06918	4-Nitrotoluene	99-99-0	16,000		790	1,200	1
06918	PETN	78-11-5	67,000		7,900	24,000	1
06918	RDX	121-82-4	18,000		500	1,200	1
06918	Tetryl	479-45-8	14,000		610	1,200	1
06918	1,3,5-Trinitrobenzene	99-35-4	18,000		400	1,200	1
06918	2,4,6-Trinitrotoluene	118-96-7	19,000		400	1,200	1
Metals	**SW-846 6010B**		mg/kg		mg/kg	mg/kg	
01643	Aluminum	7429-90-5	8,900		329	913	10
06944	Antimony	7440-36-0	224		33.8	91.3	10
06935	Arsenic	7440-38-2	66.7	J	32.0	91.3	10
06946	Barium	7440-39-3	1,140		1.51	22.8	10
06947	Beryllium	7440-41-7	18.4	J	3.06	22.8	10
06949	Cadmium	7440-43-9	25.3		3.47	22.8	10
01650	Calcium	7440-70-2	17,600		153	913	10
06951	Chromium	7440-47-3	114		7.31	68.5	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266815
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MS

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	251		4.52	22.8	10
06953	Copper	7440-50-8	188		13.2	45.7	10
01654	Iron	7439-89-6	45,300		165	913	10
06955	Lead	7439-92-1	12,100		22.8	68.5	10
01657	Magnesium	7439-95-4	3,000		76.3	457	10
06958	Manganese	7439-96-5	1,970		3.79	22.8	10
06961	Nickel	7440-02-0	274		5.94	45.7	10
01662	Potassium	7440-09-7	5,610		381	2,280	10
06936	Selenium	7782-49-2	71.5	J	36.5	91.3	10
06966	Silver	7440-22-4	35.2		7.76	22.8	10
01667	Sodium	7440-23-5	5,410		763	4,570	10
06925	Thallium	7440-28-0	63.5	J	23.7	137	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
06971	Vanadium	7440-62-2	274		5.94	22.8	10
06972	Zinc	7440-66-6	312		9.13	91.3	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	1.41		0.0436	0.436	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	748,000		22,900	68,800	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00118	Moisture	n.a.	78.1		0.50	0.50	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 09:56	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/20/2013 00:10	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MS Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266815
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MS

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/13/2013 23:47	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 16:49	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:02	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/12/2013 00:20	James S Mathiot	1
00118	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266816
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/kg		ug/kg	ug/kg	
10724	Acenaphthene	83-32-9	13,000		150	780	5
10724	Acenaphthylene	208-96-8	14,000		150	780	5
10724	Anthracene	120-12-7	13,000		150	780	5
10724	Benzo(a)anthracene	56-55-3	14,000		150	780	5
10724	Benzo(a)pyrene	50-32-8	13,000		150	780	5
10724	Benzo(b)fluoranthene	205-99-2	13,000		150	780	5
10724	Benzo(g,h,i)perylene	191-24-2	13,000		150	780	5
10724	Benzo(k)fluoranthene	207-08-9	13,000		150	780	5
10724	Chrysene	218-01-9	14,000		150	780	5
10724	Dibenz(a,h)anthracene	53-70-3	13,000		150	780	5
10724	Fluoranthene	206-44-0	13,000		150	780	5
10724	Fluorene	86-73-7	13,000		150	780	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	13,000		150	780	5
10724	1-Methylnaphthalene	90-12-0	14,000		150	780	5
10724	2-Methylnaphthalene	91-57-6	12,000		150	780	5
10724	Naphthalene	91-20-3	13,000		150	780	5
10724	Phenanthrene	85-01-8	13,000		150	780	5
10724	Pyrene	129-00-0	13,000		150	780	5
Reporting limits were raised due to interference from the sample matrix.							
Explosives	**SW-846 8330**		ug/kg		ug/kg	ug/kg	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	16,000		600	1,200	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	14,000		400	1,200	1
06918	1,2-Dinitrobenzene	528-29-0	39,000		400	1,200	1
06918	1,3-Dinitrobenzene	99-65-0	19,000		400	1,200	1
06918	1,4-Dinitrobenzene	100-25-4	33,000		400	1,200	1
06918	2,4-Dinitrotoluene	121-14-2	19,000		400	1,200	1
06918	2,6-Dinitrotoluene	606-20-2	19,000		400	1,200	1
06918	HMX	2691-41-0	11,000		990	3,000	1
06918	Nitrobenzene	98-95-3	18,000		400	1,200	1
06918	Nitroglycerin	55-63-0	83,000		7,900	24,000	1
06918	1-Nitronaphthalene	86-57-7	41,000		400	1,200	1
06918	2-Nitrotoluene	88-72-2	15,000		790	1,200	1
06918	3-Nitrotoluene	99-08-1	22,000		990	1,200	1
06918	4-Nitrotoluene	99-99-0	16,000		790	1,200	1
06918	PETN	78-11-5	64,000		7,900	24,000	1
06918	RDX	121-82-4	16,000		500	1,200	1
06918	Tetryl	479-45-8	16,000		610	1,200	1
06918	1,3,5-Trinitrobenzene	99-35-4	17,000		400	1,200	1
06918	2,4,6-Trinitrotoluene	118-96-7	19,000		400	1,200	1
Metals	**SW-846 6010B**		mg/kg		mg/kg	mg/kg	
01643	Aluminum	7429-90-5	9,340		329	913	10
06944	Antimony	7440-36-0	216		33.8	91.3	10
06935	Arsenic	7440-38-2	75.6	J	32.0	91.3	10
06946	Barium	7440-39-3	1,070		1.51	22.8	10
06947	Beryllium	7440-41-7	17.9	J	3.06	22.8	10
06949	Cadmium	7440-43-9	24.7		3.47	22.8	10
01650	Calcium	7440-70-2	16,200		153	913	10
06951	Chromium	7440-47-3	109		7.31	68.5	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266816
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MSD

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06952	Cobalt	7440-48-4	246		4.52	22.8	10
06953	Copper	7440-50-8	179		13.2	45.7	10
01654	Iron	7439-89-6	41,000		165	913	10
06955	Lead	7439-92-1	12,800		22.8	68.5	10
01657	Magnesium	7439-95-4	2,910		76.3	457	10
06958	Manganese	7439-96-5	1,330		3.79	22.8	10
06961	Nickel	7440-02-0	269		5.94	45.7	10
01662	Potassium	7440-09-7	5,250		381	2,280	10
06936	Selenium	7782-49-2	65.7	J	36.5	91.3	10
06966	Silver	7440-22-4	31.4		7.76	22.8	10
01667	Sodium	7440-23-5	5,200		763	4,570	10
06925	Thallium	7440-28-0	66.3	J	23.7	137	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
06971	Vanadium	7440-62-2	264		5.94	22.8	10
06972	Zinc	7440-66-6	305		9.13	91.3	10
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	1.37		0.0440	0.440	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00118	Moisture	n.a.	78.1		0.50	0.50	1

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 10:21	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/20/2013 00:52	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_MSD Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266816
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06MSD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/13/2013 23:51	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 16:53	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:04	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00118	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_DUP Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266817
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06DUP

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	5,400		329	913	10
06944	Antimony	7440-36-0	N.D.		33.8	91.3	10
06935	Arsenic	7440-38-2	N.D.		32.0	91.3	10
06946	Barium	7440-39-3	119		1.51	22.8	10
06947	Beryllium	7440-41-7	N.D.		3.06	22.8	10
06949	Cadmium	7440-43-9	N.D.		3.47	22.8	10
01650	Calcium	7440-70-2	14,000		153	913	10
06951	Chromium	7440-47-3	17.6	J	7.31	68.5	10
06952	Cobalt	7440-48-4	12.6	J	4.52	22.8	10
06953	Copper	7440-50-8	62.5		13.2	45.7	10
01654	Iron	7439-89-6	37,900		165	913	10
06955	Lead	7439-92-1	12,500		22.8	68.5	10
01657	Magnesium	7439-95-4	1,770		76.3	457	10
06958	Manganese	7439-96-5	1,120		3.79	22.8	10
06961	Nickel	7440-02-0	31.1	J	5.94	45.7	10
01662	Potassium	7440-09-7	N.D.		381	2,280	10
06936	Selenium	7782-49-2	N.D.		36.5	91.3	10
06966	Silver	7440-22-4	9.13	J	7.76	22.8	10
01667	Sodium	7440-23-5	N.D.		763	4,570	10
06925	Thallium	7440-28-0	N.D.		23.7	137	10
06971	Vanadium	7440-62-2	40.7		5.94	22.8	10
06972	Zinc	7440-66-6	81.4	J	9.13	91.3	10
	Reporting limits for ICP metals were raised due to interference from the sample matrix.						
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.649		0.0453	0.453	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	212,000		7,010	21,000	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00118	Moisture	n.a.	78.1		0.50	0.50	1
00121	Moisture Duplicate	n.a.	78.0		0.50	0.50	1
	The duplicate moisture value is provided to assess the precision of the moisture test. For comparability purposes, the initial moisture determination is the value used to perform dry weight calculations.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-1_DUP Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266817
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 13:45 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E101 SDG#: KVM06-06DUP

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01643	Aluminum	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06946	Barium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06947	Beryllium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
01650	Calcium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06951	Chromium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06953	Copper	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06958	Manganese	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
01662	Potassium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06936	Selenium	SW-846 6010B	1	133125708003	11/13/2013 23:43	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
01667	Sodium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06971	Vanadium	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 16:44	Katlin N Cataldi	10
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:00	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/12/2013 00:35	James S Mathiot	1
00118	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1
00121	Moisture Duplicate	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266818
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 14:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E102 SDG#: KVM06-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/kg**		**ug/kg**	**ug/kg**	
10724	Acenaphthene	83-32-9	N.D.		93	480	5
10724	Acenaphthylene	208-96-8	180	J	93	480	5
10724	Anthracene	120-12-7	170	J	93	480	5
10724	Benzo(a)anthracene	56-55-3	440	J	93	480	5
10724	Benzo(a)pyrene	50-32-8	410	J	93	480	5
10724	Benzo(b)fluoranthene	205-99-2	730		93	480	5
10724	Benzo(g,h,i)perylene	191-24-2	280	J	93	480	5
10724	Benzo(k)fluoranthene	207-08-9	280	J	93	480	5
10724	Chrysene	218-01-9	660		93	480	5
10724	Dibenz(a,h)anthracene	53-70-3	110	J	93	480	5
10724	Fluoranthene	206-44-0	660		93	480	5
10724	Fluorene	86-73-7	N.D.		93	480	5
10724	Indeno(1,2,3-cd)pyrene	193-39-5	260	J	93	480	5
10724	1-Methylnaphthalene	90-12-0	120	J	93	480	5
10724	2-Methylnaphthalene	91-57-6	120	J	93	480	5
10724	Naphthalene	91-20-3	160	J	93	480	5
10724	Phenanthrene	85-01-8	300	J	93	480	5
10724	Pyrene	129-00-0	700		93	480	5
	Reporting limits were raised due to interference from the sample matrix.						
Explosives	**SW-846 8330**		**ug/kg**		**ug/kg**	**ug/kg**	
06918	4-Amino-2,6-Dinitrotoluene	19406-51-0	N.D.		380	760	1
06918	2-Amino-4,6-Dinitrotoluene	35572-78-2	N.D.		250	760	1
06918	1,2-Dinitrobenzene	528-29-0	N.D.		250	760	1
06918	1,3-Dinitrobenzene	99-65-0	N.D.		250	760	1
06918	1,4-Dinitrobenzene	100-25-4	N.D.		250	760	1
06918	2,4-Dinitrotoluene	121-14-2	N.D.		250	760	1
06918	2,6-Dinitrotoluene	606-20-2	N.D.		250	760	1
06918	HMX	2691-41-0	N.D.		640	1,900	1
06918	Nitrobenzene	98-95-3	N.D.		250	760	1
06918	Nitroglycerin	55-63-0	43,000		5,100	15,000	1
06918	1-Nitronaphthalene	86-57-7	N.D.		250	760	1
06918	2-Nitrotoluene	88-72-2	N.D.		510	760	1
06918	3-Nitrotoluene	99-08-1	N.D.		640	760	1
06918	4-Nitrotoluene	99-99-0	N.D.		510	760	1
06918	PETN	78-11-5	N.D.		5,100	15,000	1
06918	RDX	121-82-4	N.D.		320	760	1
06918	Tetryl	479-45-8	N.D.		390	760	1
06918	1,3,5-Trinitrobenzene	99-35-4	N.D.		250	760	1
06918	2,4,6-Trinitrotoluene	118-96-7	N.D.		250	760	1
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
01643	Aluminum	7429-90-5	18,000		19.6	54.4	1
06944	Antimony	7440-36-0	N.D.		10.1	27.2	5
	Reporting limits were raised due to interference from the sample matrix.						
06935	Arsenic	7440-38-2	43.1		1.90	5.44	1
06946	Barium	7440-39-3	186		0.0897	1.36	1
06947	Beryllium	7440-41-7	1.02	J	0.182	1.36	1
06949	Cadmium	7440-43-9	2.62		0.207	1.36	1
01650	Calcium	7440-70-2	2,690		9.08	54.4	1

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266818
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 14:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E102 SDG#: KVM06-07

CAT No.	Analysis Name	CAS Number	Dry Result		Dry Method Detection Limit*	Dry Limit of Quantitation	Dilution Factor
Metals	**SW-846 6010B**		**mg/kg**		**mg/kg**	**mg/kg**	
06951	Chromium	7440-47-3	20.2		0.435	4.08	1
06952	Cobalt	7440-48-4	10.0		0.269	1.36	1
06953	Copper	7440-50-8	67.9		0.789	2.72	1
01654	Iron	7439-89-6	109,000		49.2	272	5
06955	Lead	7439-92-1	109		1.36	4.08	1
01657	Magnesium	7439-95-4	2,660		4.54	27.2	1
06958	Manganese	7439-96-5	309		0.226	1.36	1
06961	Nickel	7440-02-0	20.8		0.354	2.72	1
01662	Potassium	7440-09-7	699		22.7	136	1
06936	Selenium	7782-49-2	N.D.		21.8	54.4	10
06966	Silver	7440-22-4	N.D.		0.462	1.36	1
01667	Sodium	7440-23-5	251	J	45.4	272	1
06925	Thallium	7440-28-0	N.D.		1.41	8.16	1
06971	Vanadium	7440-62-2	41.1		0.354	1.36	1
06972	Zinc	7440-66-6	464		0.544	5.44	1
	SW-846 7471A		**mg/kg**		**mg/kg**	**mg/kg**	
00159	Mercury	7439-97-6	0.397		0.0277	0.277	1
Wet Chemistry	**Lloyd Kahn modified**		**mg/kg**		**mg/kg**	**mg/kg**	
00383	TOC by Lloyd Kahn	n.a.	50,700		6,220	18,700	1
Wet Chemistry	**SM 2540 G-1997**		**%**		**%**	**%**	
00111	Moisture	n.a.	64.3		0.50	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10724	PAH 8270 (microwave)	SW-846 8270C	1	13316SLC026	11/18/2013 12:50	Joseph M Gambler	5
10814	BNA Soil Microwave PAH	SW-846 3546	1	13316SLC026	11/12/2013 18:45	Nicholas W Shroyer	1
06918	Nitroaromatics/Amines in Solid	SW-846 8330	1	133140020A	11/20/2013 01:35	James H Place	1
06917	Nitroaromatics/Amines Sol Ext	SW-846 8330	1	133140020A	11/12/2013 11:00	William H Saadeh	1
01643	Aluminum	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06944	Antimony	SW-846 6010B	1	133125708003	11/13/2013 18:33	Katlin N Cataldi	5

*=This limit was used in the evaluation of the final result

Sample Description: SD-R2-E-10-2 Grab Sediment Sample
Hercules Phase II R.I.

LL Sample # SW 7266818
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 14:00 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

2E102 SDG#: KVM06-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06935	Arsenic	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
06946	Barium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06947	Beryllium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06949	Cadmium	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
01650	Calcium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06951	Chromium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06952	Cobalt	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
06953	Copper	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
01654	Iron	SW-846 6010B	1	133125708003	11/13/2013 18:33	Katlin N Cataldi	5
06955	Lead	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
01657	Magnesium	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
06958	Manganese	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06961	Nickel	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
01662	Potassium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06936	Selenium	SW-846 6010B	1	133125708003	11/14/2013 00:45	John W Yanzuk II	10
06966	Silver	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
01667	Sodium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06925	Thallium	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
06971	Vanadium	SW-846 6010B	1	133125708003	11/12/2013 21:25	Katlin N Cataldi	1
06972	Zinc	SW-846 6010B	1	133125708003	11/13/2013 18:25	Katlin N Cataldi	1
00159	Mercury	SW-846 7471A	1	133125711003	11/11/2013 10:28	Damary Valentin	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133125708003	11/11/2013 22:27	Annamaria Stipkovits	1
05711	SW SW846 Hg Digest	SW-846 7471A modified	1	133125711003	11/11/2013 02:00	Annamaria Stipkovits	1
00383	TOC by Lloyd Kahn	Lloyd Kahn modified	1	13315049531B	11/12/2013 01:05	James S Mathiot	1
00111	Moisture	SM 2540 G-1997	1	13317820005B	11/13/2013 21:41	Scott W Freisher	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-03 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266819
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

3--FD SDG#: KVM06-08FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		ug/l	ug/l	ug/l	
04678	Acenaphthene	83-32-9	N.D.	0.1	0.5	1
04678	Acenaphthylene	208-96-8	N.D.	0.1	0.5	1
04678	Acetophenone	98-86-2	N.D.	0.5	1	1
04678	Anthracene	120-12-7	N.D.	0.1	0.5	1
04678	Atrazine	1912-24-9	N.D.	2	5	1
04678	Benzaldehyde	100-52-7	N.D.	1	5	1
04678	Benzo(a)anthracene	56-55-3	N.D.	0.1	0.5	1
04678	Benzo(a)pyrene	50-32-8	N.D.	0.1	0.5	1
04678	Benzo(b)fluoranthene	205-99-2	N.D.	0.1	0.5	1
04678	Benzo(g,h,i)perylene	191-24-2	N.D.	0.1	0.5	1
04678	Benzo(k)fluoranthene	207-08-9	N.D.	0.1	0.5	1
04678	1,1'-Biphenyl	92-52-4	N.D.	0.5	1	1
04678	4-Bromophenyl-phenylether	101-55-3	N.D.	0.5	1	1
04678	Butylbenzylphthalate	85-68-7	N.D.	2	5	1
04678	Di-n-butylphthalate	84-74-2	N.D.	2	5	1
04678	Caprolactam	105-60-2	N.D.	5	16	1
04678	Carbazole	86-74-8	N.D.	0.5	1	1
04678	4-Chloro-3-methylphenol	59-50-7	N.D.	0.5	1	1
04678	4-Chloroaniline	106-47-8	N.D.	0.5	1	1
04678	bis(2-Chloroethoxy)methane	111-91-1	N.D.	0.5	1	1
04678	bis(2-Chloroethyl)ether	111-44-4	N.D.	0.5	1	1
04678	2-Chloronaphthalene	91-58-7	N.D.	0.4	1	1
04678	2-Chlorophenol	95-57-8	N.D.	0.5	1	1
04678	4-Chlorophenyl-phenylether	7005-72-3	N.D.	0.5	1	1
04678	2,2'-oxybis(1-Chloropropane)	108-60-1	N.D.	0.5	1	1
	Bis(2-chloroisopropyl) ether CAS #39638-32-9 and 2,2'-Oxybis(1-chloropropane) CAS #108-60-1 cannot be separated chromatographically. The reported result represents the combined total of both compounds.					
04678	Chrysene	218-01-9	N.D.	0.1	0.5	1
04678	Dibenz(a,h)anthracene	53-70-3	N.D.	0.1	0.5	1
04678	Dibenzofuran	132-64-9	N.D.	0.5	1	1
04678	3,3'-Dichlorobenzidine	91-94-1	N.D.	2	5	1
04678	2,4-Dichlorophenol	120-83-2	N.D.	0.5	1	1
04678	Diethylphthalate	84-66-2	N.D.	2	5	1
04678	2,4-Dimethylphenol	105-67-9	N.D.	0.5	1	1
04678	Dimethylphthalate	131-11-3	N.D.	2	5	1
04678	4,6-Dinitro-2-methylphenol	534-52-1	N.D.	5	16	1
04678	2,4-Dinitrophenol	51-28-5	N.D.	11	32	1
04678	2,4-Dinitrotoluene	121-14-2	N.D.	1	5	1
04678	2,6-Dinitrotoluene	606-20-2	N.D.	0.5	1	1
04678	bis(2-Ethylhexyl)phthalate	117-81-7	N.D.	2	5	1
04678	Fluoranthene	206-44-0	N.D.	0.1	0.5	1
04678	Fluorene	86-73-7	N.D.	0.1	0.5	1
04678	Hexachlorobenzene	118-74-1	N.D.	0.1	0.5	1
04678	Hexachlorobutadiene	87-68-3	N.D.	0.5	1	1
04678	Hexachlorocyclopentadiene	77-47-4	N.D.	5	16	1
04678	Hexachloroethane	67-72-1	N.D.	1	5	1
04678	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.1	0.5	1
04678	Isophorone	78-59-1	N.D.	0.5	1	1
04678	2-Methylnaphthalene	91-57-6	N.D.	0.1	0.5	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-03 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266819
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

3--FD SDG#: KVM06-08FD

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C**		**ug/l**		**ug/l**	**ug/l**	
04678	2-Methylphenol	95-48-7	N.D.		0.5	1	1
04678	4-Methylphenol	106-44-5	N.D.		0.5	1	1
	3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds.						
04678	Naphthalene	91-20-3	N.D.		0.1	0.5	1
04678	2-Nitroaniline	88-74-4	N.D.		0.5	1	1
04678	3-Nitroaniline	99-09-2	N.D.		0.5	1	1
04678	4-Nitroaniline	100-01-6	N.D.		0.5	1	1
04678	Nitrobenzene	98-95-3	N.D.		0.5	1	1
04678	2-Nitrophenol	88-75-5	N.D.		0.5	1	1
04678	4-Nitrophenol	100-02-7	N.D.		11	32	1
04678	N-Nitroso-di-n-propylamine	621-64-7	N.D.		0.5	1	1
04678	N-Nitrosodiphenylamine	86-30-6	N.D.		0.5	1	1
	N-nitrosodiphenylamine decomposes in the GC inlet forming diphenylamine. The result reported for N-nitrosodiphenylamine represents the combined total of both compounds.						
04678	Di-n-octylphthalate	117-84-0	N.D.		2	5	1
04678	Pentachlorophenol	87-86-5	N.D.		1	5	1
04678	Phenanthrene	85-01-8	N.D.		0.1	0.5	1
04678	Phenol	108-95-2	N.D.		0.5	1	1
04678	Pyrene	129-00-0	N.D.		0.1	0.5	1
04678	2,4,5-Trichlorophenol	95-95-4	N.D.		0.5	1	1
04678	2,4,6-Trichlorophenol	88-06-2	N.D.		0.5	1	1
00893	**Semivolatile Library Search**						
	The results from the semivolatile library search are listed on the attached FORM 1 - SV-TIC. The qualifiers appearing in the "Q" column are defined on the back of this form.						
Explosives	**SW-846 8330**		**ug/l**		**ug/l**	**ug/l**	
06916	4-Amino-2,6-Dinitrotoluene	19406-51-0	0.92		0.30	0.60	1
06916	2-Amino-4,6-Dinitrotoluene	35572-78-2	0.36	J	0.20	0.60	1
06916	1,2-Dinitrobenzene	528-29-0	N.D.		0.20	0.60	1
06916	1,3-Dinitrobenzene	99-65-0	N.D.		0.20	0.60	1
06916	1,4-Dinitrobenzene	100-25-4	N.D.		0.30	0.60	1
06916	2,4-Dinitrotoluene	121-14-2	N.D.		0.72	2.0	1
06916	2,6-Dinitrotoluene	606-20-2	N.D.		0.45	1.3	1
06916	HMX	2691-41-0	N.D.		0.65	2.0	1
06916	Nitrobenzene	98-95-3	N.D.		0.20	0.60	1
06916	Nitroglycerin	55-63-0	N.D.		5.2	15	1
06916	1-Nitronaphthalene	86-57-7	N.D.		0.20	0.60	1
06916	2-Nitrotoluene	88-72-2	N.D.		0.25	0.75	1
06916	3-Nitrotoluene	99-08-1	N.D.		0.40	1.2	1
06916	4-Nitrotoluene	99-99-0	N.D.		0.60	1.2	1
06916	PETN	78-11-5	N.D.		6.0	18	1
06916	RDX	121-82-4	N.D.		0.20	0.50	1
06916	Tetryl	479-45-8	N.D.		0.40	0.60	1
06916	1,3,5-Trinitrobenzene	99-35-4	N.D.		0.20	0.60	1
06916	2,4,6-Trinitrotoluene	118-96-7	N.D.		0.20	0.60	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP-03 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266819
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

3--FD SDG#: KVM06-08FD

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
	The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance: 4-Amino-2,6-Dinitrotoluene						
Metals		**SW-846 6010B**	**ug/l**		**ug/l**	**ug/l**	
01743	Aluminum	7429-90-5	1,430		82.8	200	1
07046	Barium	7440-39-3	72.9		0.33	5.0	1
07047	Beryllium	7440-41-7	N.D.		0.67	5.0	1
07049	Cadmium	7440-43-9	1.2	J	0.76	5.0	1
01750	Calcium	7440-70-2	25,300		33.4	200	1
07051	Chromium	7440-47-3	6.0	J	1.6	15.0	1
07052	Cobalt	7440-48-4	11.9		1.3	5.0	1
07053	Copper	7440-50-8	11.1		2.7	10.0	1
01754	Iron	7439-89-6	21,000		43.0	200	1
01757	Magnesium	7439-95-4	9,860		16.7	100	1
07058	Manganese	7439-96-5	1,670		0.83	5.0	1
07061	Nickel	7440-02-0	6.9	J	1.5	10.0	1
01762	Potassium	7440-09-7	4,130		98.0	500	1
07036	Selenium	7782-49-2	N.D.		8.4	20.0	1
07066	Silver	7440-22-4	N.D.		2.1	5.0	1
01767	Sodium	7440-23-5	53,600		167	1,000	1
07071	Vanadium	7440-62-2	5.6		2.0	5.0	1
07072	Zinc	7440-66-6	61.5		2.0	20.0	1
		SW-846 6020	**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	0.57	J	0.34	1.0	1
06025	Arsenic	7440-38-2	4.2		0.42	2.0	1
06035	Lead	7439-92-1	21.6		0.085	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	0.50	1
		SW-846 7470A	**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	0.062	J	0.060	0.20	1
Wet Chemistry		**SM 2340 C-1997**	**ug/l**		**ug/l**	**ug/l**	
12147	Total Hardness	471-34-1	108,000		3,000	5,000	1
		SM 4500-H+ B-2000	**Std. Units**		**Std. Units**	**Std. Units**	
12152	pH	n.a.	7.0		0.010	0.010	1
	The 40 CFR Part 136 requires that this analysis be performed immediately (within 15 minutes) upon sample collection. Because this was not possible, the result may not be used for reporting purposes.						

General Sample Comments

State of New Jersey Lab Certification No. PA011

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

*=This limit was used in the evaluation of the final result

Sample Description: DUP-03 Grab Surface Water Sample
Hercules Phase II R.I.

LL Sample # WW 7266819
LL Group # 1431972
Account # 06716

Project Name: Hercules Phase II R.I.

Collected: 11/06/2013 by RB

Submitted: 11/06/2013 18:58
Reported: 11/25/2013 09:01

Ashland, Inc.
Bldg. 8139-48
500 Hercules Road
Wilmington DE 19808-1599

3--FD SDG#: KVM06-08FD

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
04678	TCL SW846 Semivolatiles/Waters	SW-846 8270C	1	13314WAD026	11/13/2013 11:39	Joseph M Gambler	1
00813	BNA Water Extraction	SW-846 3510C	1	13314WAD026	11/12/2013 09:35	Anna E Stager	1
06916	Nitroaromatics/Amines in Water	SW-846 8330	1	133140016A	11/18/2013 04:08	James H Place	1
06915	Nitroaromatics/Amines Wat Ext	SW-846 8330	1	133140016A	11/12/2013 15:00	Edwin Ortiz	1
01743	Aluminum	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07046	Barium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07049	Cadmium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
01750	Calcium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
01754	Iron	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
01757	Magnesium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07058	Manganese	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07061	Nickel	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
01762	Potassium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
01767	Sodium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	133115705006	11/11/2013 03:06	Tara L Snyder	1
06024	Antimony	SW-846 6020	1	133116050004A	11/15/2013 22:56	John P Hook	1
06025	Arsenic	SW-846 6020	1	133116050004A	11/15/2013 03:25	John P Hook	1
06035	Lead	SW-846 6020	1	133116050004A	11/15/2013 03:25	John P Hook	1
06045	Thallium	SW-846 6020	1	133116050004A	11/15/2013 03:25	John P Hook	1
00259	Mercury	SW-846 7470A	1	133115713006	11/09/2013 08:57	Damary Valentin	1
05705	WW/TL SW 846 ICP Digest (tot)	SW-846 3010A	1	133115705006	11/09/2013 08:30	James L Mertz	1
06050	ICP/MS SW-846 Water Digest	SW-846 3010A modified	1	133116050004	11/09/2013 08:37	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	133115713006	11/08/2013 11:05	Damary Valentin	1
12147	Total Hardness	SM 2340 C-1997	1	13311001104A	11/08/2013 05:11	Susan A Engle	1
12152	pH	SM 4500-H+ B-2000	1	13312002202A	11/08/2013 12:52	Michele L Graham	1

*=This limit was used in the evaluation of the final result

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3--FD

Lab Name: Lancaster Laboratories Contract:
Lab Code: LANCAS Case No.: SAS No.: SDG No.:
Matrix: (soil/water) WATER Lab Sample ID: 7266819
Sample wt/vol: 237 (g/mL) mL Lab File ID: dk0395.d
Level: (low/med) LOW Date Received: 11/06/13
% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13
Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13
Injection Volume: 0.5 (uL) Dilution Factor: 1
GPC Cleanup: N pH: Extraction: Sepf
CONCENTRATION UNITS:
Number TICs found: 4 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.153	6	J
2.		Unknown	2.730	5	J
3.		Unknown	3.225	4	J
4.		Unknown	14.282	7	J
5.					
6.	SVOCTIC	Total SVOC TICs		23	J
7.					
8.					
9.					
10.					
11.					
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page 1 of 1

FORM I SV-1

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13314WAD026	Sample number(s): 7266810-7266811,7266819								
Acenaphthene	N.D.	0.03	0.1	ug/l	94	91	69-122	2	30
Acenaphthylene	N.D.	0.03	0.1	ug/l	103	101	84-125	2	30
Acetophenone	N.D.	0.1	0.3	ug/l	88	87	71-110	2	30
Anthracene	N.D.	0.03	0.1	ug/l	98	99	82-116	1	30
Atrazine	N.D.	0.5	1	ug/l	107	109	67-127	1	30
Benzaldehyde	N.D.	0.3	1	ug/l	68	66	19-100	4	30
Benzo(a)anthracene	N.D.	0.03	0.1	ug/l	103	104	84-121	1	30
Benzo(a)pyrene	N.D.	0.03	0.1	ug/l	100	99	82-116	1	30
Benzo(b)fluoranthene	N.D.	0.03	0.1	ug/l	96	96	82-121	1	30
Benzo(g,h,i)perylene	N.D.	0.03	0.1	ug/l	125*	124*	81-121	1	30
Benzo(k)fluoranthene	N.D.	0.03	0.1	ug/l	100	100	81-122	1	30
1,1'-Biphenyl	N.D.	0.1	0.3	ug/l	93	91	60-120	2	30
4-Bromophenyl-phenylether	N.D.	0.1	0.3	ug/l	105	104	75-115	1	30
Butylbenzylphthalate	N.D.	0.5	1	ug/l	95	95	70-122	0	30
Di-n-butylphthalate	N.D.	0.5	1	ug/l	97	97	72-120	0	30
Caprolactam	N.D.	1.	4	ug/l	33	32	14-46	3	30
Carbazole	N.D.	0.1	0.3	ug/l	99	99	70-128	0	30
4-Chloro-3-methylphenol	N.D.	0.1	0.3	ug/l	98	98	67-131	0	30
4-Chloroaniline	N.D.	0.1	0.3	ug/l	84	87	46-112	4	30
bis(2-Chloroethoxy)methane	N.D.	0.1	0.3	ug/l	85	84	65-125	0	30
bis(2-Chloroethyl)ether	N.D.	0.1	0.3	ug/l	85	83	73-112	2	30
2-Chloronaphthalene	N.D.	0.1	0.3	ug/l	98	95	60-138	3	30
2-Chlorophenol	N.D.	0.1	0.3	ug/l	94	92	76-111	3	30
4-Chlorophenyl-phenylether	N.D.	0.1	0.3	ug/l	100	99	77-114	1	30
2,2'-oxybis(1-Chloropropane)	N.D.	0.1	0.3	ug/l	71	68	55-123	5	30
Chrysene	N.D.	0.03	0.1	ug/l	101	102	81-120	0	30
Dibenz(a,h)anthracene	N.D.	0.03	0.1	ug/l	127*	124	83-124	2	30
Dibenzofuran	N.D.	0.1	0.3	ug/l	97	95	81-110	2	30
3,3'-Dichlorobenzidine	N.D.	0.5	1	ug/l	71	73	47-108	3	30
2,4-Dichlorophenol	N.D.	0.1	0.3	ug/l	104	104	84-114	0	30
Diethylphthalate	N.D.	0.5	1	ug/l	95	92	60-121	3	30
2,4-Dimethylphenol	N.D.	0.1	0.3	ug/l	92	92	66-125	0	30
Dimethylphthalate	N.D.	0.5	1	ug/l	94	90	50-127	4	30
4,6-Dinitro-2-methylphenol	N.D.	1.	4	ug/l	103	102	68-131	1	30
2,4-Dinitrophenol	N.D.	3.	8	ug/l	99	100	43-137	1	30
2,4-Dinitrotoluene	N.D.	0.3	1	ug/l	106	107	81-120	1	30
2,6-Dinitrotoluene	N.D.	0.1	0.3	ug/l	106	107	81-124	0	30
bis(2-Ethylhexyl)phthalate	N.D.	0.5	1	ug/l	96	97	78-117	1	30
Fluoranthene	N.D.	0.03	0.1	ug/l	105	105	71-129	0	30
Fluorene	N.D.	0.03	0.1	ug/l	97	95	71-126	2	30
Hexachlorobenzene	N.D.	0.03	0.1	ug/l	109	109	74-126	0	30
Hexachlorobutadiene	N.D.	0.1	0.3	ug/l	100	102	56-119	1	30
Hexachlorocyclopentadiene	N.D.	1.	4	ug/l	102	97	21-126	5	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Hexachloroethane	N.D.	0.3	1	ug/l	77	77	55-109	0	30
Indeno(1,2,3-cd)pyrene	N.D.	0.03	0.1	ug/l	122*	120	83-121	2	30
Isophorone	N.D.	0.1	0.3	ug/l	90	91	68-124	1	30
2-Methylnaphthalene	N.D.	0.03	0.1	ug/l	91	91	63-120	0	30
2-Methylphenol	N.D.	0.1	0.3	ug/l	89	86	61-118	3	30
4-Methylphenol	N.D.	0.1	0.3	ug/l	84	81	54-112	3	30
Naphthalene	N.D.	0.03	0.1	ug/l	93	93	75-108	0	30
2-Nitroaniline	N.D.	0.1	0.3	ug/l	105	104	84-122	1	30
3-Nitroaniline	N.D.	0.1	0.3	ug/l	92	93	70-118	0	30
4-Nitroaniline	N.D.	0.1	0.3	ug/l	87	87	61-110	0	30
Nitrobenzene	N.D.	0.1	0.3	ug/l	89	88	67-123	1	30
2-Nitrophenol	N.D.	0.1	0.3	ug/l	109	108	84-118	1	30
4-Nitrophenol	N.D.	3.	8	ug/l	59	57	16-91	4	30
N-Nitroso-di-n-propylamine	N.D.	0.1	0.3	ug/l	82	81	71-117	1	30
N-Nitrosodiphenylamine	N.D.	0.1	0.3	ug/l	96	94	80-115	2	30
Di-n-octylphthalate	N.D.	0.5	1	ug/l	88	86	72-129	1	30
Pentachlorophenol	N.D.	0.3	1	ug/l	85	86	50-129	2	30
Phenanthrene	N.D.	0.03	0.1	ug/l	96	96	68-127	0	30
Phenol	N.D.	0.1	0.3	ug/l	53	51	23-82	4	30
Pyrene	N.D.	0.03	0.1	ug/l	97	97	81-112	0	30
2,4,5-Trichlorophenol	N.D.	0.1	0.3	ug/l	109	106	81-121	3	30
2,4,6-Trichlorophenol	N.D.	0.1	0.3	ug/l	105	103	84-119	2	30
Batch number: 13316SLC026	Sample number(s): 7266809,7266812-7266816,7266818								
Acenaphthene	N.D.	3.	17	ug/kg	97		83-111		
Acenaphthylene	N.D.	3.	17	ug/kg	106		83-127		
Anthracene	N.D.	3.	17	ug/kg	99		82-118		
Benzo(a)anthracene	N.D.	3.	17	ug/kg	95		81-117		
Benzo(a)pyrene	N.D.	3.	17	ug/kg	96		84-122		
Benzo(b)fluoranthene	N.D.	3.	17	ug/kg	99		76-124		
Benzo(g,h,i)perylene	N.D.	3.	17	ug/kg	99		77-122		
Benzo(k)fluoranthene	N.D.	3.	17	ug/kg	99		80-125		
Chrysene	N.D.	3.	17	ug/kg	97		77-116		
Dibenz(a,h)anthracene	N.D.	3.	17	ug/kg	100		81-123		
Fluoranthene	N.D.	3.	17	ug/kg	98		79-123		
Fluorene	N.D.	3.	17	ug/kg	97		86-118		
Indeno(1,2,3-cd)pyrene	N.D.	3.	17	ug/kg	99		77-122		
1-Methylnaphthalene	N.D.	3.	17	ug/kg	101		77-115		
2-Methylnaphthalene	N.D.	3.	17	ug/kg	94		80-114		
Naphthalene	N.D.	3.	17	ug/kg	98		77-115		
Phenanthrene	N.D.	3.	17	ug/kg	99		85-116		
Pyrene	N.D.	3.	17	ug/kg	101		81-114		
Batch number: 133140016A	Sample number(s): 7266810-7266811,7266819								
4-Amino-2,6-Dinitrotoluene	N.D.	0.30	0.60	ug/l	92*	91*	97-156	1	30
2-Amino-4,6-Dinitrotoluene	N.D.	0.20	0.60	ug/l	88	87	65-107	1	30
1,2-Dinitrobenzene	N.D.	0.20	0.60	ug/l	105	109	90-118	4	30
1,3-Dinitrobenzene	N.D.	0.20	0.60	ug/l	107	104	78-121	3	30
1,4-Dinitrobenzene	N.D.	0.30	0.60	ug/l	92	95	81-108	2	30
2,4-Dinitrotoluene	N.D.	0.72	2.0	ug/l	102	103	71-111	2	30
2,6-Dinitrotoluene	N.D.	0.45	1.3	ug/l	105	109	84-157	4	30
HMX	N.D.	0.65	2.0	ug/l	79	81	73-112	3	30
Nitrobenzene	N.D.	0.20	0.60	ug/l	97	96	71-111	1	30
Nitroglycerin	N.D.	5.2	15	ug/l	88	87	73-116	1	30
1-Nitronaphthalene	N.D.	0.20	0.60	ug/l	106	106	69-125	0	30
2-Nitrotoluene	N.D.	0.25	0.75	ug/l	86	87	74-115	0	30

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
3-Nitrotoluene	N.D.	0.40	1.2	ug/l	99	102	76-115	3	30
4-Nitrotoluene	N.D.	0.60	1.2	ug/l	90	88	76-120	2	30
PETN	N.D.	6.0	18	ug/l	98	99	73-126	1	30
RDX	N.D.	0.20	0.50	ug/l	92	92	70-117	0	30
Tetryl	N.D.	0.40	0.60	ug/l	99	100	43-133	1	30
1,3,5-Trinitrobenzene	N.D.	0.20	0.60	ug/l	93	94	72-119	1	30
2,4,6-Trinitrotoluene	N.D.	0.20	0.60	ug/l	108	110	75-119	2	30
Batch number: 133140020A	Sample number(s): 7266809,7266812-7266816,7266818								
4-Amino-2,6-Dinitrotoluene	N.D.	150.	300	ug/kg	99		98-143		
2-Amino-4,6-Dinitrotoluene	N.D.	100.	300	ug/kg	91		84-115		
1,2-Dinitrobenzene	N.D.	100.	300	ug/kg	110		94-129		
1,3-Dinitrobenzene	N.D.	100.	300	ug/kg	111		97-119		
1,4-Dinitrobenzene	N.D.	100.	300	ug/kg	94		83-122		
2,4-Dinitrotoluene	N.D.	100.	300	ug/kg	105		91-112		
2,6-Dinitrotoluene	N.D.	100.	300	ug/kg	107		86-137		
HMX	N.D.	250.	750	ug/kg	88		79-104		
Nitrobenzene	N.D.	100.	300	ug/kg	98		89-107		
Nitroglycerin	N.D.	2,000.	6,000	ug/kg	98		70-118		
1-Nitronaphthalene	N.D.	100.	300	ug/kg	119		83-122		
2-Nitrotoluene	N.D.	200.	300	ug/kg	91		91-113		
3-Nitrotoluene	N.D.	250.	300	ug/kg	111		88-121		
4-Nitrotoluene	N.D.	200.	300	ug/kg	94		89-119		
PETN	N.D.	2,000.	6,000	ug/kg	89		67-136		
RDX	N.D.	130.	300	ug/kg	95		87-111		
Tetryl	N.D.	150.	300	ug/kg	108		80-112		
1,3,5-Trinitrobenzene	N.D.	100.	300	ug/kg	94		83-119		
2,4,6-Trinitrotoluene	N.D.	100.	300	ug/kg	111		85-122		
Batch number: 133115705006	Sample number(s): 7266810-7266811,7266819								
Aluminum	N.D.	82.8	200	ug/l	104		90-112		
Barium	N.D.	0.33	5.0	ug/l	103		90-110		
Beryllium	N.D.	0.67	5.0	ug/l	103		90-111		
Cadmium	N.D.	0.76	5.0	ug/l	102		90-112		
Calcium	N.D.	33.4	200	ug/l	102		90-112		
Chromium	N.D.	1.6	15.0	ug/l	103		90-110		
Cobalt	N.D.	1.3	5.0	ug/l	103		90-110		
Copper	N.D.	2.7	10.0	ug/l	104		90-112		
Iron	N.D.	43.0	200	ug/l	101		90-112		
Magnesium	N.D.	16.7	100	ug/l	101		89-110		
Manganese	N.D.	0.83	5.0	ug/l	102		90-110		
Nickel	N.D.	1.5	10.0	ug/l	104		90-111		
Potassium	N.D.	98.0	500	ug/l	102		90-110		
Selenium	N.D.	8.4	20.0	ug/l	104		80-120		
Silver	N.D.	2.1	5.0	ug/l	112		80-120		
Sodium	N.D.	167.	1,000	ug/l	102		87-114		
Vanadium	N.D.	2.0	5.0	ug/l	105		90-110		
Zinc	N.D.	2.0	20.0	ug/l	102		90-110		
Batch number: 133115713006	Sample number(s): 7266810-7266811,7266819								
Mercury	N.D.	0.060	0.20	ug/l	97		80-120		
Batch number: 133116050004A	Sample number(s): 7266810-7266811,7266819								
Antimony	N.D.	0.34	1.0	ug/l	94		80-120		
Arsenic	N.D.	0.42	2.0	ug/l	100		86-120		
Lead	N.D.	0.085	1.0	ug/l	99		90-110		

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Analysis Name	Blank Result		Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Thallium	N.D.		0.15	0.50	ug/l	93		90-115		
Batch number: 133125708003	Sample number(s): 7266809,7266812-7266818									
Aluminum	9.00	J	7.21	20.0	mg/kg	110		80-120		
Antimony	N.D.		0.740	2.00	mg/kg	99		80-120		
Arsenic	N.D.		0.700	2.00	mg/kg	105		80-120		
Barium	N.D.		0.0330	0.500	mg/kg	103		80-120		
Beryllium	N.D.		0.0670	0.500	mg/kg	96		80-120		
Cadmium	N.D.		0.0760	0.500	mg/kg	102		80-120		
Calcium	10.1	J	3.34	20.0	mg/kg	105		80-120		
Chromium	N.D.		0.160	1.50	mg/kg	100		80-120		
Cobalt	N.D.		0.0990	0.500	mg/kg	103		80-120		
Copper	N.D.		0.290	1.00	mg/kg	105		80-120		
Iron	N.D.		3.62	20.0	mg/kg	102		80-120		
Lead	N.D.		0.500	1.50	mg/kg	106		80-120		
Magnesium	2.20	J	1.67	10.0	mg/kg	100		80-120		
Manganese	N.D.		0.0830	0.500	mg/kg	102		80-120		
Nickel	N.D.		0.130	1.00	mg/kg	106		80-120		
Potassium	N.D.		8.34	50.0	mg/kg	101		80-120		
Selenium	N.D.		0.800	2.00	mg/kg	103		80-120		
Silver	N.D.		0.170	0.500	mg/kg	105		80-120		
Sodium	N.D.		16.7	100	mg/kg	101		80-120		
Thallium	N.D.		0.520	3.00	mg/kg	107		80-120		
Vanadium	N.D.		0.130	0.500	mg/kg	98		80-120		
Zinc	N.D.		0.200	2.00	mg/kg	103		80-120		
Batch number: 133125711003	Sample number(s): 7266809,7266812-7266818									
Mercury	N.D.		0.0100	0.100	mg/kg	99		80-120		
Batch number: 13315049531B	Sample number(s): 7266809,7266812-7266815,7266817-7266818									
TOC by Lloyd Kahn	N.D.		100.	300	mg/kg	74		47-143		
Batch number: 13311001104A	Sample number(s): 7266810-7266811,7266819									
Total Hardness	N.D.		3,000.	5,000	ug/l	103		96-110		
Batch number: 13312002202A	Sample number(s): 7266810-7266811,7266819									
pH						99		93-106		
Batch number: 13317820005B	Sample number(s): 7266809,7266812-7266818									
Moisture						100		99-101		
Moisture						100		99-101		
Moisture Duplicate						100		99-101		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13316SLC026	Sample number(s): 7266809,7266812-7266816,7266818 UNSPK: 7266814								
Acenaphthene	79	83	61-128	5	30				
Acenaphthylene	84	90	67-130	7	30				

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Anthracene	80	86	41-142	7	30				
Benzo(a)anthracene	83	90	32-150	8	30				
Benzo(a)pyrene	80	82	36-151	4	30				
Benzo(b)fluoranthene	79	84	29-150	6	30				
Benzo(g,h,i)perylene	78	85	41-147	8	30				
Benzo(k)fluoranthene	78	85	44-145	9	30				
Chrysene	83	87	28-146	5	30				
Dibenz(a,h)anthracene	79	85	54-142	7	30				
Fluoranthene	82	84	30-151	3	30				
Fluorene	82	85	55-128	5	30				
Indeno(1,2,3-cd)pyrene	79	84	44-147	6	30				
1-Methylnaphthalene	84	89	82-115	7	30				
2-Methylnaphthalene	77	81	39-140	5	30				
Naphthalene	114	88	44-142	25	30				
Phenanthrene	80	84	34-147	4	30				
Pyrene	82	85	29-148	4	30				
Batch number: 133140020A	Sample number(s): 7266809,7266812-7266816,7266818 UNSPK: 7266814								
4-Amino-2,6-Dinitrotoluene	78*	82*	85-118	5	50				
2-Amino-4,6-Dinitrotoluene	74	73	69-113	1	50				
1,2-Dinitrobenzene	99	98	80-120	1	50				
1,3-Dinitrobenzene	98	97	89-119	1	50				
1,4-Dinitrobenzene	84	83	82-117	1	50				
2,4-Dinitrotoluene	95	95	81-111	0	50				
2,6-Dinitrotoluene	97	98	86-114	1	50				
HMX	72	73	72-107	1	50				
Nitrobenzene	90	89	86-108	2	50				
Nitroglycerin	94	105	73-116	11	50				
1-Nitronaphthalene	103	103	89-131	0	50				
2-Nitrotoluene	79	78*	79-112	1	50				
3-Nitrotoluene	108	108	72-119	0	50				
4-Nitrotoluene	79*	78*	90-118	1	50				
PETN	85	81	71-133	5	50				
RDX	88	82	75-108	7	50				
Tetryl	69	78	58-125	13	50				
1,3,5-Trinitrobenzene	88	85	58-135	4	50				
2,4,6-Trinitrotoluene	96	95	92-114	2	50				
Batch number: 133115705006	Sample number(s): 7266810-7266811,7266819 UNSPK: P265230 BKG: P265230								
Aluminum	98	96	75-125	2	20	148	J 137	J 8 (1)	20
Barium	100	100	78-118	0	20	39.4	40.4	3	20
Beryllium	105	106	87-114	0	20	N.D.	N.D.	0 (1)	20
Cadmium	101	102	83-116	1	20	N.D.	N.D.	0 (1)	20
Calcium	108 (2)	120 (2)	75-125	1	20	36,100	36,300	1	20
Chromium	104	104	76-120	0	20	N.D.	N.D.	0 (1)	20
Cobalt	101	102	82-112	0	20	N.D.	N.D.	0 (1)	20
Copper	103	104	86-122	1	20	N.D.	N.D.	0 (1)	20
Iron	52*	50*	75-125	1	20	1,450	1,430	1	20
Magnesium	101 (2)	111 (2)	75-125	1	20	14,400	14,600	2	20
Manganese	81	80	75-125	0	20	739	750	1	20
Nickel	102	103	86-115	1	20	N.D.	N.D.	0 (1)	20
Potassium	102	103	77-128	1	20	1,960	1,920	2 (1)	20

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Selenium	102	106	75-125	4	20	N.D.	N.D.	0 (1)	20
Silver	113	113	75-125	0	20	N.D.	N.D.	0 (1)	20
Sodium	103 (2)	112 (2)	75-125	1	20	71,600	72,100	1	20
Vanadium	107	107	90-117	0	20	N.D.	N.D.	0 (1)	20
Zinc	101	102	85-117	1	20	2.1 J	N.D.	200* (1)	20
Batch number: 133115713006	Sample number(s): 7266810-7266811,7266819 UNSPK: P267633 BKG: P267633								
Mercury	107	102	80-120	4	20	N.D.	N.D.	0 (1)	20
Batch number: 133116050004A	Sample number(s): 7266810-7266811,7266819 UNSPK: P265230 BKG: P265230								
Antimony	103	110	75-125	7	20	N.D.	N.D.	0 (1)	20
Arsenic	109	99	75-125	10	20	N.D.	N.D.	0 (1)	20
Lead	98	94	89-120	4	20	0.73 J	0.70 J	3 (1)	20
Thallium	98	99	85-125	1	20	N.D.	N.D.	0 (1)	20
Batch number: 133125708003	Sample number(s): 7266809,7266812-7266818 UNSPK: 7266814 BKG: 7266814								
Aluminum	400 (2)	448 (2)	75-125	5	20	1,150	1,180	3	20
Antimony	98	95	75-125	4	20	N.D.	N.D.	0 (1)	20
Arsenic	97	110	75-125	13	20	N.D.	N.D.	0 (1)	20
Barium	111	104	75-125	6	20	28.0	26.0	8	20
Beryllium	81*	78*	83-119	3	20	N.D.	N.D.	0 (1)	20
Cadmium	111	108	75-125	2	20	N.D.	N.D.	0 (1)	20
Calcium	171 (2)	94 (2)	75-125	8	20	3,180	3,060	4	20
Chromium	108	102	75-125	5	20	3.37 J	3.86 J	14 (1)	20
Cobalt	103	101	78-113	2	20	3.24 J	2.76 J	16 (1)	20
Copper	111	103	75-125	5	20	13.4	13.7	2 (1)	20
Iron	219 (2)	-728 (2)	75-125	10	20	9,700	8,310	15	20
Lead	-552 (2)	337 (2)	75-125	5	20	2,740	2,740	0	20
Magnesium	127*	118	75-125	3	20	402	387	4 (1)	20
Manganese	266 (2)	-14 (2)	75-125	39*	20	298	246	19	20
Nickel	106	104	75-125	2	20	7.08 J	6.80 J	4 (1)	20
Potassium	123	115	75-125	7	20	N.D.	N.D.	0 (1)	20
Selenium	104	96	75-125	8	20	N.D.	N.D.	0 (1)	20
Silver	116	99	75-125	11	20	1.90 J	2.00 J	5 (1)	20
Sodium	119	114	75-125	4	20	N.D.	N.D.	0 (1)	20
Thallium	93	97	78-119	4	20	N.D.	N.D.	0 (1)	20
Vanadium	102	97	75-125	4	20	9.25	8.92	4 (1)	20
Zinc	101	98	75-125	2	20	18.0 J	17.8 J	1 (1)	20
Batch number: 133125711003	Sample number(s): 7266809,7266812-7266818 UNSPK: 7266814 BKG: 7266814								
Mercury	100	95	80-120	3	20	0.149	0.142	5 (1)	20
Batch number: 13315049531B	Sample number(s): 7266809,7266812-7266815,7266817-7266818 UNSPK: 7266814 BKG: 7266814								
TOC by Lloyd Kahn	77		59-125			47,300	46,500	2	15
Batch number: 13311001104A	Sample number(s): 7266810-7266811,7266819 UNSPK: P265230 BKG: P265230								
Total Hardness	91	87	67-120	1	5	155,000	155,000	0	5
Batch number: 13312002202A	Sample number(s): 7266810-7266811,7266819 BKG: P265230								

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
pH						7.4	7.5	0	3
Batch number: 13317820005B	Sample number(s): 7266809,7266812-7266818 BKG: 7266814								
Moisture						78.1	78.0	0	5
Moisture						78.1	78.0	0	5
Moisture Duplicate						78.1	78.0	0	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL SW846 Semivolatiles/Waters
Batch number: 13314WAD026

	2-Fluorophenol	Phenol-d6	2,4,6-Tribromophenol	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7266810	59	40	108	87	95	93
7266811	54	38	81	86	97	99
7266819	61	42	116	89	97	94
Blank	62	45	126	89	97	114
LCS	71	51	129	89	99	112
LCSD	67	48	125	87	96	112
Limits:	10-107	10-83	22-150	60-123	63-121	47-146

Analysis Name: PAH 8270 (microwave)
Batch number: 13316SLC026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
7266809	86	94	93
7266812	75	81	82
7266813	73	83	83
7266814	74	83	82
7266815	76	84	83
7266816	75	82	85
7266818	77	85	84
Blank	89	100	101
LCS	88	98	98
MS	76	84	83
MSD	75	82	85
Limits:	60-120	69-120	66-137

Analysis Name: Nitroaromatics/Amines in Water
Batch number: 133140016A

	2-Nitro-m-xylene
7266810	95
7266811	74

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Quality Control Summary

Client Name: Ashland, Inc. Group Number: 1431972
Reported: 11/25/13 at 09:01 AM

Surrogate Quality Control

7266819	91
Blank	95
LCS	87
LCSD	93
Limits:	73-122

Analysis Name: Nitroaromatics/Amines in Solid
Batch number: 133140020A

	2-Nitro-m-xylene
7266809	91
7266812	97
7266813	90
7266814	92
7266815	84
7266816	79
7266818	93
Blank	89
LCS	97
MS	84
MSD	79
Limits:	63-150

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Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 6716 For Eurofins Lancaster Laboratories Environmental use only. Group # 1431972 Sample # 7266809-20
Instructions on reverse side correspond with circled numbers.

COC # 344661

1 Client Information

Client: Ashland	Acct. #:
Project Name/#: Hercules Phase II R.I.	PWSID #:
Project Manager: John Lucey	P.O. #:
Sampler: R. Barnes & M. Brady	Quote #:
Name of state where samples were collected: New Jersey	

2 Sample Identification / 3 Matrix / 4 Matrix / 5 Analysis Requested

Preservation Codes: SVOCs, Nitroaromatics, TAL Metals (N), Hardness (N), pH, PAHs, Nitroaromatics, metals, moisture, solids, TOC

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water (Potable / Ground / NPDES / Surface)	Other:	Total # of Containers	SVOCs	Nitroaromatics	TAL Metals	Hardness	pH	PAHs, Nitroaromatics, metals, moisture, solids	TOC				Remarks
SD-R2-E-13-1	11/6/13	1210	X		X			2											
SW-R2-D-12-3	11/6/13	1230	X			X		7	X	X	X	X	X						
SW-R2-D-12-1	11/6/13	1240	X			X		7	X	X	X	X	X						
SD-R2-C-12-6	11/6/13	1305	X		X			7						X	X				
SD-R2-C-11-1	11/6/13	1330	X		X			2						X	X				
SD-R2-E-10-1	11/6/13	1345	X		X			2						X	X				
SD-R2-E-10-1-MS	11/6/13	1345	X		X			2						X	X				QC
SD-R2-E-10-1-MSD	11/6/13	1345	X		X			2						X	X				QC
SD-R2-E-10-2	11/6/13	1400	X		X			2						X	X				
DUP-03	11/6/13		X			X		7	X	X	X	X	X						

For Lab Use Only
FSC:
SCR#:

Preservation Codes: H=HCl, T=Thiosulfate, N=HNO_3, B=NaOH, S=H_2SO_4, O=Other

6 Remarks

7 Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed:

E-mail address: John.Lucey@obg.com

8 Data Package Options (circle if required)

Type I (Validation/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) TX TRRP-13

Type IV (CLP SOW) MA MCP CT RCP

9

Relinquished by	Date	Time	Received by	Date	Time
Robert Barnes	11/6/13	1600	Washington	11/6/13	1600
Washington	11/6/13	1858			
			[signature]	11/6/13	1858

EDD Required? Yes No
If yes, format:

Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier: UPS ____ FedEx ____ Other ____

Temperature upon receipt 0.9-4.5 °C

A# 6716, Gr# 1431972, Sample 7266809-20

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 9:42 AM
To: Rachel L. Kreamer; Robert P. Barnes
Cc: Wendy Kozma
Subject: RE: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

Rachel,

The sample gets analyzed for PAHs, E&E compounds, TOC, solids, and moisture.

John

From: Rachel L. Kreamer [mailto:RKreamer@lancasterlabs.com]
Sent: Friday, November 08, 2013 9:40 AM
To: Robert P. Barnes
Cc: John Lucey; Wendy Kozma
Subject: RE: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

Bert,

Did you happen to get the second email yesterday, which addressed sample SD-R2-E-13-1 on the lab's Gr. 1431972? No analyses were x'd on the chain, but there must have been analyses on the bottle labels. Our entry personnel scheduled it for metals, PAHs, E&E compounds, TOC and moisture. Can you also confirm that these are correct for this location? I attached a copy for you.

Thanks
Rachel

From: Robert P. Barnes [mailto:Robert.Barnes@obg.com]
Sent: Thursday, November 07, 2013 5:11 PM
To: Rachel L. Kreamer
Cc: John Lucey; Wendy Kozma
Subject: RE: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

Rachel,

(1) All sediment samples labeled "SD-R2-C-15-2" were sampled at 1030.
(2) SW-R2-D-12-3 is indeed one of the samples we took yesterday - it should be labeled as having been sampled at 1230.

Thanks, and sorry for the confusion.

Bert

From: John Lucey
Sent: Thursday, November 07, 2013 11:01 AM
To: Robert P. Barnes
Subject: FW: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

A# 6716, Gr# 1431972, Samples 726809-20

Need your help here

From: Rachel L. Kreamer [mailto:RKreamer@lancasterlabs.com]
Sent: Thursday, November 07, 2013 10:59 AM
To: John Lucey
Cc: Wendy Kozma
Subject: FW: 1431593-Hercules Phase II R.I.-11/05/2013 20:32:00 Acknowledgement

Hi John.

I'm helping Wendy today and will make the corrections noted below.

Also, I've attached the chains and doc log for the samples we received yesterday. There are two discrepancies noted on the doc log. One is a time discrepancy on a sediment jar. The associated water sample was collected at 1020 and the sediment at 1030 per the chain. The sediment jar has the water collection time on it.

The other discrepancy is a sample ID on an amber liter for one of the surface waters. Can you confirm that it should be SW-R2-D-12-3?

Thanks
Rachel

A# 6716 , Gr# 1431972, Sample 7266809-20

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:33 AM
To: Wendy Kozma
Subject: RE: Ashland

yes and yes

From: Wendy Kozma [mailto:WKozma@lancasterlabs.com]
Sent: Friday, November 08, 2013 8:29 AM
To: John Lucey
Subject: RE: Ashland

OK--thanks for letting me know.

Does this include the Surfacewater/Sediment received this week?
And I'm confirming non-interpretive TICs? 10 VOC and 20 SVOC?

From: John Lucey [mailto:John.Lucey@obg.com]
Sent: Friday, November 08, 2013 8:10 AM
To: Wendy Kozma
Subject: Ashland

Wendy,

For all VOC and SVOC analyses we need to run TICs

John

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Environmental Sample Administration Receipt Documentation Log

1431972

Client/Project: Ashland

Date of Receipt: 11/6/13

Time of Receipt: 1858

Source Code: 01

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or ~~Dry Ice (DI)~~ or Ice Packs (IP)	~~Ice Present?~~ Y/N	Loose (L) ~~Bagged Ice (B)~~ or NA	~~Comments~~
1	DT121	4.5°	TB	WI	Y	B	
2	↓	2.9°	↓	↓	↓	↓	
3	↓	0.9°	↓	↓	↓	↓	
4	↓	1.5°	↓	↓	↓	↓	
5			↘				
6							

Number of Trip Blanks received NOT listed on chain of custody: 2 (HCl)

Paperwork Discrepancy/Unpacking Problems:

1 jar of SD-R2-C-15-2 time= 1020 - Gr. 1431971

1 amber of SW-R2-D-12-3 labeled SD-R2-D-12-3 - Gr. 1431972

Unpacker Signature/Emp#: [signature] 2308 **Date/Time:** 11/6/13 1959

Issued by Dept. 6042 Management

2174.06

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266809	SD-R2-E-13-1		X	1	
7266810	SW-R2-D-12-3	X		1	
7266811	SW-R2-D-12-1	X		1	
7266812	SD-R2-C-12-6		X	5	
7266813	SD-R2-C-11-1		X	5	
7266814	SD-R2-E-10-1		X	5	Unspiked
7266815	SD-R2-E-10-1_MS		X	5	Matrix Spike
7266816	SD-R2-E-10-1_MSD		X	5	Matrix Spike Duplicate
7266818	SD-R2-E-10-2		X	5	
7266819	DUP-03	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 7266810-7266811, 7266819: Analysis: 04678)
The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and the target analyte(s) was not detected in the sample, the data is reported.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

SAMPLE ANALYSIS:

(Sample number(s): 7266809, 7266812-7266816, 7266818: Analysis: 10724)
Reporting limits were raised due to interference from the sample matrix.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Ashland, Inc.
SDG: KVM06

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
PAH 8270 (microwave)	13316SLC026	SBLKLC316	11/18/2013 06:14:00
		316LCLCS	11/18/2013 06:38:00
		7266809	11/18/2013 11:35:00
		7266812	11/18/2013 12:00:00
		7266813	11/18/2013 12:25:00
		7266814 UNSPK	11/18/2013 09:31:00
		7266815 MS	11/18/2013 09:56:00
		7266816 MSD	11/18/2013 10:21:00
		7266818	11/18/2013 12:50:00
TCL SW846 Semivolatiles/Waters	13314WAD026	SBLKWD314	11/13/2013 05:51:00
		314WDLCS	11/13/2013 06:18:00
		314WDLCSD	11/13/2013 06:45:00
		7266810	11/13/2013 10:45:00
		7266811	11/13/2013 11:12:00
		7266819	11/13/2013 11:39:00

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: KVM06
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

13314WAD026 / SBLKWD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Benzaldehyde	11/13/13	N.D.	ug/l	0.3	1
Phenol	11/13/13	N.D.	ug/l	0.1	0.3
bis(2-Chloroethyl)ether	11/13/13	N.D.	ug/l	0.1	0.3
2-Chlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
2-Methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
2,2'-oxybis(1-Chloropropane)	11/13/13	N.D.	ug/l	0.1	0.3
4-Methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
N-Nitroso-di-n-propylamine	11/13/13	N.D.	ug/l	0.1	0.3
Acetophenone	11/13/13	N.D.	ug/l	0.1	0.3
Hexachloroethane	11/13/13	N.D.	ug/l	0.3	1
Nitrobenzene	11/13/13	N.D.	ug/l	0.1	0.3
Isophorone	11/13/13	N.D.	ug/l	0.1	0.3
2-Nitrophenol	11/13/13	N.D.	ug/l	0.1	0.3
2,4-Dimethylphenol	11/13/13	N.D.	ug/l	0.1	0.3
bis(2-Chloroethoxy)methane	11/13/13	N.D.	ug/l	0.1	0.3
2,4-Dichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
Naphthalene	11/13/13	N.D.	ug/l	0.03	0.1
4-Chloroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Hexachlorobutadiene	11/13/13	N.D.	ug/l	0.1	0.3
Caprolactam	11/13/13	N.D.	ug/l	1	4
4-Chloro-3-methylphenol	11/13/13	N.D.	ug/l	0.1	0.3
2-Methylnaphthalene	11/13/13	N.D.	ug/l	0.03	0.1
Hexachlorocyclopentadiene	11/13/13	N.D.	ug/l	1	4
2,4,6-Trichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
2,4,5-Trichlorophenol	11/13/13	N.D.	ug/l	0.1	0.3
1,1'-Biphenyl	11/13/13	N.D.	ug/l	0.1	0.3
2-Chloronaphthalene	11/13/13	N.D.	ug/l	0.1	0.3
2-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Dimethylphthalate	11/13/13	N.D.	ug/l	0.5	1
2,6-Dinitrotoluene	11/13/13	N.D.	ug/l	0.1	0.3
Acenaphthylene	11/13/13	N.D.	ug/l	0.03	0.1
3-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
Acenaphthene	11/13/13	N.D.	ug/l	0.03	0.1
2,4-Dinitrophenol	11/13/13	N.D.	ug/l	3	8
4-Nitrophenol	11/13/13	N.D.	ug/l	3	8
2,4-Dinitrotoluene	11/13/13	N.D.	ug/l	0.3	1
Dibenzofuran	11/13/13	N.D.	ug/l	0.1	0.3
Diethylphthalate	11/13/13	N.D.	ug/l	0.5	1
Fluorene	11/13/13	N.D.	ug/l	0.03	0.1
4-Chlorophenyl-phenylether	11/13/13	N.D.	ug/l	0.1	0.3
4-Nitroaniline	11/13/13	N.D.	ug/l	0.1	0.3
4,6-Dinitro-2-methylphenol	11/13/13	N.D.	ug/l	1	4
N-Nitrosodiphenylamine	11/13/13	N.D.	ug/l	0.1	0.3
4-Bromophenyl-phenylether	11/13/13	N.D.	ug/l	0.1	0.3
Hexachlorobenzene	11/13/13	N.D.	ug/l	0.03	0.1

Fraction: Semivolatiles by GC/MS

13314WAD026 / SBLKWD314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Atrazine	11/13/13	N.D.	ug/l	0.5	1
Pentachlorophenol	11/13/13	N.D.	ug/l	0.3	1
Phenanthrene	11/13/13	N.D.	ug/l	0.03	0.1
Anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Carbazole	11/13/13	N.D.	ug/l	0.1	0.3
Di-n-butylphthalate	11/13/13	N.D.	ug/l	0.5	1
Fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Butylbenzylphthalate	11/13/13	N.D.	ug/l	0.5	1
bis(2-Ethylhexyl)phthalate	11/13/13	N.D.	ug/l	0.5	1
3,3'-Dichlorobenzidine	11/13/13	N.D.	ug/l	0.5	1
Benzo(a)anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Chrysene	11/13/13	N.D.	ug/l	0.03	0.1
Di-n-octylphthalate	11/13/13	N.D.	ug/l	0.5	1
Benzo(b)fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(k)fluoranthene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(a)pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Indeno(1,2,3-cd)pyrene	11/13/13	N.D.	ug/l	0.03	0.1
Dibenz(a,h)anthracene	11/13/13	N.D.	ug/l	0.03	0.1
Benzo(g,h,i)perylene	11/13/13	N.D.	ug/l	0.03	0.1

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLKWD3144

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: SBLKWD314

Sample wt/vol: 1000 (g/mL) mL Lab File ID: dk0382.d

Level: (low/med) LOW Date Received:

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 5 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	19.417	2	J
2.		Unknown	19.948	2	J
3.		Unknown	20.466	3	J
4.		Unknown	20.979	2	J
5.		Unknown	21.533	2	J
6.					
7.	SVOCTIC	Total SVOC TICs		11	J
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1

Fraction: Semivolatiles by GC/MS

13316SLC026 / SBLKLC316 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Naphthalene	11/18/13	N.D.	ug/kg	3	17
2-Methylnaphthalene	11/18/13	N.D.	ug/kg	3	17
1-Methylnaphthalene	11/18/13	N.D.	ug/kg	3	17
Acenaphthylene	11/18/13	N.D.	ug/kg	3	17
Acenaphthene	11/18/13	N.D.	ug/kg	3	17
Fluorene	11/18/13	N.D.	ug/kg	3	17
Phenanthrene	11/18/13	N.D.	ug/kg	3	17
Anthracene	11/18/13	N.D.	ug/kg	3	17
Fluoranthene	11/18/13	N.D.	ug/kg	3	17
Pyrene	11/18/13	N.D.	ug/kg	3	17
Benzo(a)anthracene	11/18/13	N.D.	ug/kg	3	17
Chrysene	11/18/13	N.D.	ug/kg	3	17
Benzo(b)fluoranthene	11/18/13	N.D.	ug/kg	3	17
Benzo(k)fluoranthene	11/18/13	N.D.	ug/kg	3	17
Benzo(a)pyrene	11/18/13	N.D.	ug/kg	3	17
Indeno(1,2,3-cd)pyrene	11/18/13	N.D.	ug/kg	3	17
Dibenz(a,h)anthracene	11/18/13	N.D.	ug/kg	3	17
Benzo(g,h,i)perylene	11/18/13	N.D.	ug/kg	3	17

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Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM06
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

13314WAD026	2-Fluorophenol		Phenol-d6		2,4,6-Tribromophenol		Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	25 ug/l	Spike Added	25 ug/l	Spike Added	25 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWD314	62	10 - 107	45	10 - 83	126	22 - 150	89	60 - 123	97	63 - 121	114	47 - 146
314WDLCS	71	10 - 107	51	10 - 83	129	22 - 150	89	60 - 123	99	63 - 121	112	47 - 146
314WDLCSD	67	10 - 107	48	10 - 83	125	22 - 150	87	60 - 123	96	63 - 121	112	47 - 146
7266810	59	10 - 107	40	10 - 83	108	22 - 150	87	60 - 123	95	63 - 121	93	47 - 146
7266811	54	10 - 107	38	10 - 83	81	22 - 150	86	60 - 123	97	63 - 121	99	47 - 146
7266819	61	10 - 107	42	10 - 83	116	22 - 150	89	60 - 123	97	63 - 121	94	47 - 146

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: KVM06
Matrix: SOLID

Fraction: Semivolatiles by GC/MS

13316SLC026	Nitrobenzene-d5		2-Fluorobiphenyl		Terphenyl-d14	
	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg	Spike Added	3333.333 ug/kg
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKLC316	89	60 - 120	100	69 - 120	101	66 - 137
316LCLCS	88	60 - 120	98	69 - 120	98	66 - 137
7266809	86	60 - 120	94	69 - 120	93	66 - 137
7266812	75	60 - 120	81	69 - 120	82	66 - 137
7266813	73	60 - 120	83	69 - 120	83	66 - 137
7266814	74	60 - 120	83	69 - 120	82	66 - 137
7266815 MS	76	60 - 120	84	69 - 120	83	66 - 137
7266816 MSD	75	60 - 120	82	69 - 120	85	66 - 137
7266818	77	60 - 120	85	69 - 120	84	66 - 137

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 7266814 MS: 7266815 MSD: 7266816 **Analyte**	Batch: **13316SLC026** (Sample number(s): 7266809, 7266812-7266816, 7266818)								
	Spike Added ug/kg	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	3333.33	N.D.	3788.35	2944.88	114	88	44-142	25	30
2-Methylnaphthalene	3333.33	N.D.	2581.04	2704.8	77	81	39-140	5	30
1-Methylnaphthalene	3333.33	N.D.	2789.86	2977.66	84	89	82-115	7	30
Acenaphthylene	3333.33	N.D.	2786.04	2987.32	84	90	67-130	7	30
Acenaphthene	3333.33	N.D.	2638.67	2778.3	79	83	61-128	5	30
Fluorene	3333.33	N.D.	2722.61	2849.86	82	85	55-128	5	30
Phenanthrene	3333.33	83.18	2751.13	2868.96	80	84	34-147	4	30
Anthracene	3333.33	N.D.	2662.37	2859.22	80	86	41-142	7	30
Fluoranthene	3333.33	106.57	2827.21	2923.19	82	84	30-151	3	30
Pyrene	3333.33	96.15	2833.05	2945.7	82	85	29-148	4	30
Benzo(a)anthracene	3333.33	38.07	2802.84	3023.61	83	90	32-150	8	30
Chrysene	3333.33	87.08	2857.79	2993.42	83	87	28-146	5	30
Benzo(b)fluoranthene	3333.33	85.3	2704.66	2881.99	79	84	29-150	6	30
Benzo(k)fluoranthene	3333.33	37.1	2638.4	2874.13	78	85	44-145	9	30
Benzo(a)pyrene	3333.33	44.69	2696.99	2793.14	80	82	36-151	4	30
Indeno(1,2,3-cd)pyrene	3333.33	38.21	2661.94	2823.16	79	84	44-147	6	30
Dibenz(a,h)anthracene	3333.33	N.D.	2634.01	2827.23	79	85	54-142	7	30
Benzo(g,h,i)perylene	3333.33	43.62	2651.26	2869.	78	85	41-147	8	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314WDLCS LCSD: 314WDLCSD	Batch: **13314WAD026** (Sample number(s): 7266810-7266811, 7266819)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Benzaldehyde	12.5	8.52	8.21	68	66	19-100	4	30
Phenol	12.5	6.65	6.37	53	51	23-82	4	30
bis(2-Chloroethyl)ether	12.5	10.6	10.35	85	83	73-112	2	30
2-Chlorophenol	12.5	11.78	11.44	94	92	76-111	3	30
2-Methylphenol	12.5	11.09	10.79	89	86	61-118	3	30
2,2'-oxybis(1-Chloropropane)	12.5	8.87	8.48	71	68	55-123	5	30
4-Methylphenol	12.5	10.48	10.17	84	81	54-112	3	30
N-Nitroso-di-n-propylamine	12.5	10.29	10.15	82	81	71-117	1	30
Acetophenone	12.5	11.04	10.82	88	87	71-110	2	30
Hexachloroethane	12.5	9.57	9.62	77	77	55-109	0	30
Nitrobenzene	12.5	11.12	10.96	89	88	67-123	1	30
Isophorone	12.5	11.29	11.36	90	91	68-124	1	30
2-Nitrophenol	12.5	13.59	13.44	109	108	84-118	1	30
2,4-Dimethylphenol	12.5	11.55	11.54	92	92	66-125	0	30
bis(2-Chloroethoxy)methane	12.5	10.6	10.56	85	84	65-125	0	30
2,4-Dichlorophenol	12.5	13	12.96	104	104	84-114	0	30
Naphthalene	12.5	11.64	11.67	93	93	75-108	0	30
4-Chloroaniline	12.5	10.49	10.9	84	87	46-112	4	30
Hexachlorobutadiene	12.5	12.52	12.7	100	102	56-119	1	30
Caprolactam	12.5	4.17	4.04	33	32	14-46	3	30
4-Chloro-3-methylphenol	12.5	12.29	12.28	98	98	67-131	0	30
2-Methylnaphthalene	12.5	11.39	11.38	91	91	63-120	0	30
Hexachlorocyclopentadiene	25	25.39	24.26	102	97	21-126	5	30
2,4,6-Trichlorophenol	12.5	13.11	12.84	105	103	84-119	2	30
2,4,5-Trichlorophenol	12.5	13.57	13.21	109	106	81-121	3	30
1,1'-Biphenyl	12.5	11.61	11.33	93	91	60-120	2	30
2-Chloronaphthalene	12.5	12.19	11.89	98	95	60-138	3	30
2-Nitroaniline	12.5	13.13	12.96	105	104	84-122	1	30
Dimethylphthalate	12.5	11.78	11.3	94	90	50-127	4	30
2,6-Dinitrotoluene	12.5	13.31	13.31	106	107	81-124	0	30
Acenaphthylene	12.5	12.82	12.57	103	101	84-125	2	30
3-Nitroaniline	12.5	11.52	11.57	92	93	70-118	0	30
Acenaphthene	12.5	11.72	11.44	94	91	69-122	2	30
2,4-Dinitrophenol	25	24.68	24.99	99	100	43-137	1	30
4-Nitrophenol	12.5	7.4	7.12	59	57	16-91	4	30
2,4-Dinitrotoluene	12.5	13.3	13.42	106	107	81-120	1	30
Dibenzofuran	12.5	12.13	11.89	97	95	81-110	2	30
Diethylphthalate	12.5	11.9	11.51	95	92	60-121	3	30
Fluorene	12.5	12.16	11.9	97	95	71-126	2	30
4-Chlorophenyl-phenylether	12.5	12.55	12.39	100	99	77-114	1	30
4-Nitroaniline	12.5	10.84	10.83	87	87	61-110	0	30
4,6-Dinitro-2-methylphenol	12.5	12.92	12.81	103	102	68-131	1	30

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 314WDLCS LCSD: 314WDLCSD	Batch: **13314WAD026** (Sample number(s): 7266810-7266811, 7266819)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
N-Nitrosodiphenylamine	12.5	12.04	11.8	96	94	80-115	2	30
4-Bromophenyl-phenylether	12.5	13.09	12.98	105	104	75-115	1	30
Hexachlorobenzene	12.5	13.58	13.64	109	109	74-126	0	30
Atrazine	12.5	13.37	13.57	107	109	67-127	1	30
Pentachlorophenol	12.5	10.58	10.77	85	86	50-129	2	30
Phenanthrene	12.5	11.95	11.96	96	96	68-127	0	30
Anthracene	12.5	12.23	12.31	98	99	82-116	1	30
Carbazole	12.5	12.37	12.41	99	99	70-128	0	30
Di-n-butylphthalate	12.5	12.15	12.11	97	97	72-120	0	30
Fluoranthene	12.5	13.12	13.16	105	105	71-129	0	30
Pyrene	12.5	12.15	12.09	97	97	81-112	0	30
Butylbenzylphthalate	12.5	11.88	11.91	95	95	70-122	0	30
bis(2-Ethylhexyl)phthalate	12.5	12	12.09	96	97	78-117	1	30
3,3'-Dichlorobenzidine	12.5	8.9	9.17	71	73	47-108	3	30
Benzo(a)anthracene	12.5	12.9	12.97	103	104	84-121	1	30
Chrysene	12.5	12.66	12.71	101	102	81-120	0	30
Di-n-octylphthalate	12.5	10.94	10.78	88	86	72-129	1	30
Benzo(b)fluoranthene	12.5	12.02	11.95	96	96	82-121	1	30
Benzo(k)fluoranthene	12.5	12.55	12.46	100	100	81-122	1	30
Benzo(a)pyrene	12.5	12.47	12.38	100	99	82-116	1	30
Indeno(1,2,3-cd)pyrene	12.5	15.27	15.01	122 *	120	83-121	2	30
Dibenz(a,h)anthracene	12.5	15.86	15.54	127 *	124	83-124	2	30
Benzo(g,h,i)perylene	12.5	15.61	15.46	125 *	124 *	81-121	1	30

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: SOLID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 316LCLCS	Batch: **13316SLC026** (Sample number(s): 7266809, 7266812-7266816, 7266818)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Naphthalene	1666.67	1633.88	NA	98	NA	77-115	NA	NA
2-Methylnaphthalene	1666.67	1562.65	NA	94	NA	80-114	NA	NA
1-Methylnaphthalene	1666.67	1682.53	NA	101	NA	77-115	NA	NA
Acenaphthylene	1666.67	1770.63	NA	106	NA	83-127	NA	NA
Acenaphthene	1666.67	1624.66	NA	97	NA	83-111	NA	NA
Fluorene	1666.67	1620.64	NA	97	NA	86-118	NA	NA
Phenanthrene	1666.67	1642.21	NA	99	NA	85-116	NA	NA
Anthracene	1666.67	1655.7	NA	99	NA	82-118	NA	NA
Fluoranthene	1666.67	1635.57	NA	98	NA	79-123	NA	NA
Pyrene	1666.67	1681.91	NA	101	NA	81-114	NA	NA
Benzo(a)anthracene	1666.67	1577.57	NA	95	NA	81-117	NA	NA
Chrysene	1666.67	1619.81	NA	97	NA	77-116	NA	NA
Benzo(b)fluoranthene	1666.67	1646.64	NA	99	NA	76-124	NA	NA
Benzo(k)fluoranthene	1666.67	1658.14	NA	99	NA	80-125	NA	NA
Benzo(a)pyrene	1666.67	1607.8	NA	96	NA	84-122	NA	NA
Indeno(1,2,3-cd)pyrene	1666.67	1647.27	NA	99	NA	77-122	NA	NA
Dibenz(a,h)anthracene	1666.67	1662.96	NA	100	NA	81-123	NA	NA
Benzo(g,h,i)perylene	1666.67	1653.05	NA	99	NA	77-122	NA	NA

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0400y.d DFTPP Injection Date: 11/12/13

Instrument ID: HP10623 DFTPP Injection Time: 09:23

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	46.3
68	Less than 2.0% of mass 69	0.74 (1.28)1
69	Mass 69 relative abundance	57.9
70	Less than 2.0% of mass 69	0.39 (0.67)1
127	40.0 - 60.0% of mass 198	56.1
197	Less than 1.0% of mass 198	0.33
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.85
275	10.0 - 30.0% of mass 198	22.5
365	Greater than 1.00% of mass 198	2.68
441	Present, and less than mass 443	8.26
442	Greater than 40.0 % of mass 198	50.1
443	17.0 - 23.0% of mass 442	8.79 (17.5)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD3083 - SSTD30	ck0401.d	11/12/13	09:38
02	STD3083 - SSTD.5	ck0402.d	11/12/13	10:10
03	STD3083 - SSTD1	ck0403.d	11/12/13	10:35
04	STD3083 - SSTD120	ck0404.d	11/12/13	10:59
05	STD3083 - SSTD80	ck0405.d	11/12/13	11:24
06	STD3083 - SSTD50	ck0406.d	11/12/13	11:49
07	STD3083 - SSTD15	ck0407.d	11/12/13	12:13
08	STD3083 - SSTD5	ck0408.d	11/12/13	12:38
09	8270MDL3083 - SSTD0.50	ck0409.d	11/12/13	13:03
10	PAHMDL3083 - SSTD0.10	ck0410.d	11/12/13	13:27
11	8270ICV2463 - SSTD050	ck0411.d	11/12/13	13:52
12	BASICV2463 - SSTD050	ck0412.d	11/12/13	14:17

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0620y.d DFTPP Injection Date: 11/18/13

Instrument ID: HP10623 DFTPP Injection Time: 05:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.74 (1.9)1
69	Mass 69 relative abundance	38.7
70	Less than 2.0% of mass 69	0.12 (0.3)1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.78
441	Present, and less than mass 443	8.9
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	11.1 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD030 - SSTD3213	ck0621.d	11/18/13	05:29
02	SBLKLC316	ck0622.d	11/18/13	06:14
03	316LCLCS	ck0623.d	11/18/13	06:38
04	SBLKWA320	ck0624.d	11/18/13	07:03
05	320WALCS	ck0625.d	11/18/13	07:27
06	320WALCSD	ck0626.d	11/18/13	07:52
07	7279095	ck0627.d	11/18/13	08:17
08	7279096	ck0628.d	11/18/13	08:42
09	7279097	ck0629.d	11/18/13	09:07
10	7266814	ck0630.d	11/18/13	09:31
11	7266815MS	ck0631.d	11/18/13	09:56
12	7266816MSD	ck0632.d	11/18/13	10:21
13	7259331	ck0633.d	11/18/13	10:45
14	7265239	ck0634.d	11/18/13	11:10
15	7266809	ck0635.d	11/18/13	11:35
16	7266812	ck0636.d	11/18/13	12:00
17	7266813	ck0637.d	11/18/13	12:25
18	7266818	ck0638.d	11/18/13	12:50

FORM V SV

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: ck0620y.d DFTPP Injection Date: 11/18/13

Instrument ID: HP10623 DFTPP Injection Time: 05:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	30.3
68	Less than 2.0% of mass 69	0.74 (1.9)1
69	Mass 69 relative abundance	38.7
70	Less than 2.0% of mass 69	0.12 (0.3)1
127	40.0 - 60.0% of mass 198	49.2
197	Less than 1.0% of mass 198	0.15
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.67
275	10.0 - 30.0% of mass 198	22.7
365	Greater than 1.00% of mass 198	2.78
441	Present, and less than mass 443	8.9
442	Greater than 40.0 % of mass 198	59.6
443	17.0 - 23.0% of mass 442	11.1 (18.6)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7270464	ck0639.d	11/18/13	13:14
20	7270465	ck0640.d	11/18/13	13:39
21	7270466	ck0641.d	11/18/13	14:04
22	7270467	ck0642.d	11/18/13	14:29
23	7270468	ck0643.d	11/18/13	14:54
24	7270469	ck0644.d	11/18/13	15:19
25	7270470	ck0645.d	11/18/13	15:43
26	7270471	ck0646.d	11/18/13	16:08
27	7270472	ck0647.d	11/18/13	16:33

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dj1150.d DFTPP Injection Date: 10/29/13

Instrument ID: HP19760 DFTPP Injection Time: 07:25

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	48.0
68	Less than 2.0% of mass 69	0.85 (1.72)1
69	Mass 69 relative abundance	49.5
70	Less than 2.0% of mass 69	0.24 (0.48)1
127	40.0 - 60.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.75
275	10.0 - 30.0% of mass 198	19.9
365	Greater than 1.00% of mass 198	2.21
441	Present, and less than mass 443	7.23
442	Greater than 40.0 % of mass 198	47.3
443	17.0 - 23.0% of mass 442	9.02 (19.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD7.5	dj1181.d	10/29/13	11:28
02	STD2813 - SSTD.125	dj1182.d	10/29/13	11:55
03	STD2813 - SSTD30	dj1183.d	10/29/13	12:21
04	STD2813 - SSTD.25	dj1184.d	10/29/13	12:48
05	STD2813 - SSTD1.25	dj1185.d	10/29/13	13:15
06	STD2813 - SSTD3.75	dj1186.d	10/29/13	13:42
07	STD2813 - SSTD12.5	dj1187.d	10/29/13	14:08
08	STD2813 - SSTD20	dj1188.d	10/29/13	14:35
09	MDL2813 - SSTD0.125	dj1189.d	10/29/13	15:02
10	PAH2813 - SSTD0.025	dj1190.d	10/29/13	15:28
11	ICV2463 - SSTD12.5	dj1191.d	10/29/13	15:55
12	BASICV2463 - SSTD12.5	dj1192.d	10/29/13	16:22

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0380.d DFTPP Injection Date: 11/13/13

Instrument ID: HP19760 DFTPP Injection Time: 05:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.4
68	Less than 2.0% of mass 69	0.76 (1.69)1
69	Mass 69 relative abundance	44.6
70	Less than 2.0% of mass 69	0.47 (1.05)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.68
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.72
441	Present, and less than mass 443	9.95
442	Greater than 40.0 % of mass 198	66.7
443	17.0 - 23.0% of mass 442	12.8 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	STD2813 - SSTD12	dk0381.d	11/13/13	05:19
02	SBLKWD314	dk0382.d	11/13/13	05:51
03	314WDLCS	dk0383.d	11/13/13	06:18
04	314WDLCSD	dk0384.d	11/13/13	06:45
05	7266449DL	dk0385.d	11/13/13	07:11
06	7266450DL	dk0386.d	11/13/13	07:38
07	7266451DL	dk0387.d	11/13/13	08:05
08	7266590	dk0388.d	11/13/13	08:31
09	7266798	dk0389.d	11/13/13	08:58
10	7266799	dk0390.d	11/13/13	09:25
11	7266805	dk0391.d	11/13/13	09:51
12	7266807	dk0392.d	11/13/13	10:18
13	7266810	dk0393.d	11/13/13	10:45
14	7266811	dk0394.d	11/13/13	11:12
15	7266819	dk0395.d	11/13/13	11:39
16	7266823	dk0396.d	11/13/13	12:05
17	7266824	dk0397.d	11/13/13	12:32
18	7267172	dk0398.d	11/13/13	12:59

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: dk0380.d DFTPP Injection Date: 11/13/13

Instrument ID: HP19760 DFTPP Injection Time: 05:05

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	38.4
68	Less than 2.0% of mass 69	0.76 (1.69)1
69	Mass 69 relative abundance	44.6
70	Less than 2.0% of mass 69	0.47 (1.05)1
127	40.0 - 60.0% of mass 198	45.7
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.68
275	10.0 - 30.0% of mass 198	22.4
365	Greater than 1.00% of mass 198	2.72
441	Present, and less than mass 443	9.95
442	Greater than 40.0 % of mass 198	66.7
443	17.0 - 23.0% of mass 442	12.8 (19.2)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	7267633	dk0399.d	11/13/13	13:25
20	7267634	dk0400.d	11/13/13	13:52
21	7270635	dk0401.d	11/13/13	14:19
22	7270637	dk0402.d	11/13/13	14:46
23	7270638	dk0403.d	11/13/13	15:13
24	7270641	dk0404.d	11/13/13	15:39
25	7270643	dk0405.d	11/13/13	16:06
26	7270644	dk0406.d	11/13/13	16:33
27	7270742	dk0407.d	11/13/13	17:00

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane				0.657	0.613	0.705	0.685	0.626	0.639	0.654	5	AVG	
N-Nitrosodimethylamine				1.169	1.124	1.349	1.264	1.171	1.190	1.211	7	AVG	
Pyridine				1.771	1.771	2.170	1.861	1.763	1.931	1.878	8	AVG	
2-Picoline				1.780	1.854	2.053	2.016	1.883	1.910	1.916	5	AVG	
N-Nitrosomethylethylamine				0.957	0.853	0.992	0.934	0.873	0.887	0.916	6	AVG	
Methyl methanesulfonate				0.869	0.861	0.998	0.971	0.908	0.919	0.921	6	AVG	
N-Nitrosodiethylamine			1.050	0.813	0.847	0.958	0.936	0.885	0.881	0.910	9	AVG	
Ethyl methanesulfonate			0.793	0.846	0.803	0.851	0.871	0.816	0.821	0.829	3	AVG	
Benzaldehyde			1.762	1.612	0.983	0.860	0.939			1.231	34	1STDEG	
Aniline			3.265	2.842	2.785	3.206	3.146	2.976	3.105	3.046	6	AVG	
Phenol	*		2.706	2.274	2.388	2.705	2.714	2.571	2.623	2.569	7	AVG	*
bis(2-Chloroethyl)ether			1.846	1.786	1.745	1.930	1.856	1.797	1.804	1.824	3	AVG	
2-Chlorophenol			1.914	1.515	1.493	1.568	1.642	1.536	1.548	1.602	9	AVG	
1,3-Dichlorobenzene			1.764	1.586	1.547	1.600	1.696	1.556	1.570	1.617	5	AVG	
1,4-Dichlorobenzene	*		1.784	1.613	1.608	1.607	1.724	1.607	1.609	1.650	4	AVG	*
Benzyl alcohol				1.268	1.199	1.338	1.295	1.223	1.194	1.253	5	AVG	
1,2-Dichlorobenzene			1.614	1.478	1.523	1.535	1.630	1.527	1.535	1.549	3	AVG	
2-Methylphenol			1.837	1.594	1.633	1.754	1.782	1.660	1.674	1.705	5	AVG	
2,2'-oxybis(1-Chloropropane)			2.619	2.137	2.057	2.529	2.208	2.054	2.105	2.244	10	AVG	
bis(2-Chloroisopropyl)ether			2.659	2.137	2.057	2.529	2.208	2.054	2.105	2.250	11	AVG	
N-Nitrosopyrrolidine			1.051	0.919	0.953	1.092	1.077	1.017	1.033	1.021	6	AVG	
Acetophenone			2.701	2.655	2.490	2.566	2.587	2.428	2.366	2.542	5	AVG	
N-Nitroso-di-n-propylamine	#		1.822	1.452	1.478	1.765	1.648	1.582	1.642	1.627	8	AVG	#
N-Nitrosomorpholine				1.097	1.102	1.290	1.188	1.125	1.155	1.159	6	AVG	
4-Methylphenol			2.162	1.857	1.876	2.053	2.121	1.998	2.059	2.018	6	AVG	
o-Toluidine			3.019	2.713	2.775	3.006	3.029	2.880	2.960	2.912	4	AVG	
Hexachloroethane				0.636	0.597	0.629	0.657	0.624	0.625	0.628	3	AVG	
Nitrobenzene			0.492	0.415	0.421	0.493	0.474	0.449	0.455	0.457	7	AVG	
N-Nitrosopiperidine			0.223	0.188	0.196	0.208	0.210	0.197	0.196	0.203	6	AVG	
Isophorone			0.931	0.758	0.781	0.891	0.847	0.797	0.806	0.830	8	AVG	
2-Nitrophenol	*		0.156	0.134	0.153	0.162	0.172	0.167	0.167	0.159	8	AVG	*
2,4-Dimethylphenol			0.456	0.377	0.383	0.419	0.421	0.397	0.406	0.408	7	AVG	
O,O,O-triethylphosphorothioate				0.171	0.171	0.167	0.181	0.166	0.166	0.170	3	AVG	
bis(2-Chloroethoxy)methane			0.575	0.482	0.471	0.500	0.516	0.460	0.527	0.504	8	AVG	
Benzoic acid				0.212	0.269	0.291	0.250	0.288	0.279	0.265	11	AVG	
2,4-Dichlorophenol	*		0.279	0.263	0.274	0.274	0.297	0.277	0.281	0.278	4	AVG	*
1,2,4-Trichlorobenzene				0.289	0.294	0.283	0.313	0.290	0.287	0.293	4	AVG	
Naphthalene		1.110	1.082	1.019	1.026	1.050	1.112	1.038	1.052	1.061	3	AVG	
4-Chloroaniline			0.515	0.447	0.444	0.458	0.479	0.444	0.451	0.462	6	AVG	
2,6-Dichlorophenol			0.256	0.249	0.258	0.262	0.280	0.263	0.264	0.262	4	AVG	
Hexachloropropene				0.155	0.162	0.159	0.179	0.169	0.170	0.166	5	AVG	
Hexachlorobutadiene	*		0.158	0.150	0.149	0.136	0.155	0.141	0.138	0.147	6	AVG	*
Caprolactam				0.164	0.151	0.159	0.157	0.149	0.143	0.154	5	AVG	
N-Nitrosodi-n-butylamine				0.305	0.401	0.453	0.431	0.404	0.404	0.400	13	AVG	
4-Chloro-3-methylphenol	*		0.363	0.333	0.345	0.372	0.371	0.348	0.355	0.355	4	AVG	*
Safrole				0.269	0.281	0.277	0.298	0.281	0.280	0.281	3	AVG	
2-Methylnaphthalene		0.741	0.775	0.730	0.746	0.751	0.786	0.742	0.753	0.753	2	AVG	
1-Methylnaphthalene		0.698	0.707	0.665	0.682	0.684	0.725	0.675	0.677	0.689	3	AVG	
Hexachlorocyclopentadiene	#			0.182	0.195	0.198	0.226	0.218	0.218	0.206	8	AVG	#
1,2,4,5-Tetrachlorobenzene			0.495	0.475	0.472	0.446	0.509	0.474	0.468	0.477	4	AVG	
cis-Isosafrole				0.768	0.730	0.764	0.816	0.759	0.757	0.766	4	AVG	
2,4,6-Trichlorophenol	*		0.315	0.291	0.306	0.297	0.336	0.317	0.315	0.311	5	AVG	*

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

11-13-13

FORM VI SV-1

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD	CAL. METHOD	
2,4,5-Trichlorophenol			0.343	0.304	0.333	0.330	0.375	0.345	0.348	0.339	6	AVG	
trans-Isosafrole				0.527	0.529	0.544	0.574	0.539	0.539	0.542	3	AVG	
Isosafrole				0.469	0.471	0.485	0.511	0.480	0.480	0.483	3	AVG	
1,1'-Biphenyl			1.727	1.642	1.490	1.465	1.575	1.506	1.441	1.550	7	AVG	
2-Chloronaphthalene			1.288	1.072	1.025	1.006	1.351	1.014	1.146	1.129	12	AVG	
Diphenyl ether			0.776	0.766	0.756	0.756	0.809	0.771	0.769	0.772	2	AVG	
2-Nitroaniline			0.373	0.312	0.344	0.374	0.403	0.387	0.384	0.368	8	AVG	
1,4-Naphthoquinone				0.430	0.467	0.480	0.517	0.480	0.475	0.475	6	AVG	
1,4-Dinitrobenzene				0.104	0.127	0.133	0.165	0.166	0.164	0.143	18	1STDEG	
Dimethylphthalate				1.336	1.342	1.332	1.426	1.307	1.315	1.343	3	AVG	
1,3-Dinitrobenzene				0.140	0.181	0.183	0.223	0.220	0.220	0.195	17	1STDEG	
2,6-Dinitrotoluene			0.256	0.234	0.279	0.274	0.314	0.305	0.296	0.280	10	AVG	
Acenaphthylene		1.861	1.795	1.656	1.684	1.752	1.856	1.741	1.751	1.762	4	AVG	
3-Nitroaniline			0.322	0.302	0.331	0.341	0.378	0.359	0.357	0.342	7	AVG	
Acenaphthene	*	1.221	1.280	1.163	1.188	1.205	1.281	1.211	1.206	1.220	3	AVG	*
2,4-Dinitrophenol	#			0.062	0.081	0.081	0.102	0.111	0.108	0.091	21	1STDEG	#
Pentachlorobenzene			0.415	0.422	0.410	0.390	0.440	0.407	0.402	0.412	4	AVG	
4-Nitrophenol	#			0.185	0.200	0.215	0.229	0.221	0.220	0.212	8	AVG	#
Dibenzofuran			1.808	1.622	1.608	1.631	1.752	1.633	1.640	1.671	5	AVG	
2,4-Dinitrotoluene				0.282	0.337	0.349	0.414	0.393	0.394	0.361	14	AVG	
1-Naphthylamine				1.279	1.324	1.409	1.477	1.369	1.378	1.373	5	AVG	
2,3,4,6-Tetrachlorophenol			0.213	0.217	0.237	0.231	0.270	0.251	0.254	0.239	9	AVG	
2-Naphthylamine				1.303	1.365	1.448	1.513	1.400	1.398	1.404	5	AVG	
Diethylphthalate				1.367	1.361	1.401	1.470	1.366	1.359	1.387	3	AVG	
Thionazin				0.283	0.283	0.311	0.326	0.314	0.317	0.306	6	AVG	
Fluorene		1.462	1.494	1.376	1.379	1.413	1.507	1.439	1.429	1.437	3	AVG	
4-Chlorophenyl-phenylether			0.692	0.641	0.624	0.608	0.670	0.617	0.625	0.639	5	AVG	
5-Nitro-o-toluidine			0.339	0.320	0.362	0.390	0.428	0.408	0.410	0.380	11	AVG	
4-Nitroaniline			0.420	0.328	0.371	0.394	0.413	0.383	0.380	0.384	8	AVG	
4,6-Dinitro-2-methylphenol				0.055	0.066	0.067	0.088	0.093	0.094	0.077	21	1STDEG	
N-Nitrosodiphenylamine (1)	*		0.661	0.642	0.652	0.668	0.706	0.678	0.685	0.670	3	AVG	*
1,2-Diphenylhydrazine			0.950	0.861	0.900	1.052	0.980	0.971	1.008	0.960	7	AVG	
Tetraethyldithiopyrophosphate				0.127	0.129	0.147	0.141	0.136	0.141	0.137	6	AVG	
1,3,5-Trinitrobenzene				0.029	0.041	0.043	0.060	0.065	0.067	0.051	30	1STDEG	
Diallate (peak 1)				0.457	0.457	0.529	0.503	0.490	0.511	0.491	6	AVG	
Phorate			0.592	0.500	0.530	0.650	0.601	0.579	0.688	0.592	11	AVG	
Phenacetin			0.485	0.410	0.434	0.491	0.484	0.464	0.474	0.463	7	AVG	
4-Bromophenyl-phenylether				0.187	0.183	0.177	0.194	0.182	0.185	0.185	3	AVG	
Diallate (peak 2)				0.221	0.195	0.223	0.216	0.212	0.214	0.213	5	AVG	
Hexachlorobenzene		0.198	0.191	0.180	0.182	0.166	0.190	0.175	0.177	0.182	6	AVG	
Dimethoate				0.320	0.351	0.405	0.381	0.356	0.358	0.362	8	AVG	
Diallate TRANS/CIS				0.398	0.392	0.453	0.431	0.421	0.437	0.422	6	AVG	
Atrazine			0.249	0.230	0.207	0.201	0.186			0.215	12	AVG	
Pentachlorophenol	*			0.086	0.095	0.094	0.111	0.110	0.111	0.101	11	AVG	*
Pentachloronitrobenzene				0.070	0.077	0.076	0.087	0.082	0.084	0.079	8	AVG	
4-Aminobiphenyl			0.821	0.718	0.815	0.747	0.728	0.632	0.613	0.725	11	AVG	
Pronamide			0.355	0.321	0.337	0.356	0.370	0.350	0.356	0.349	5	AVG	
Dinoseb				0.057	0.085	0.090	0.124	0.132	0.138	0.104	30	1STDEG	
Phenanthrene		1.228	1.173	1.120	1.111	1.139	1.209	1.157	1.166	1.163	3	AVG	
Anthracene		1.244	1.182	1.124	1.160	1.189	1.238	1.214	1.224	1.197	3	AVG	
Carbazole			1.194	1.119	1.123	1.164	1.230	1.169	1.178	1.168	3	AVG	
Methyl parathion				0.141	0.196	0.226	0.251	0.242	0.245	0.217	19	1STDEG	

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date(s): 11/12/13 11/12/13

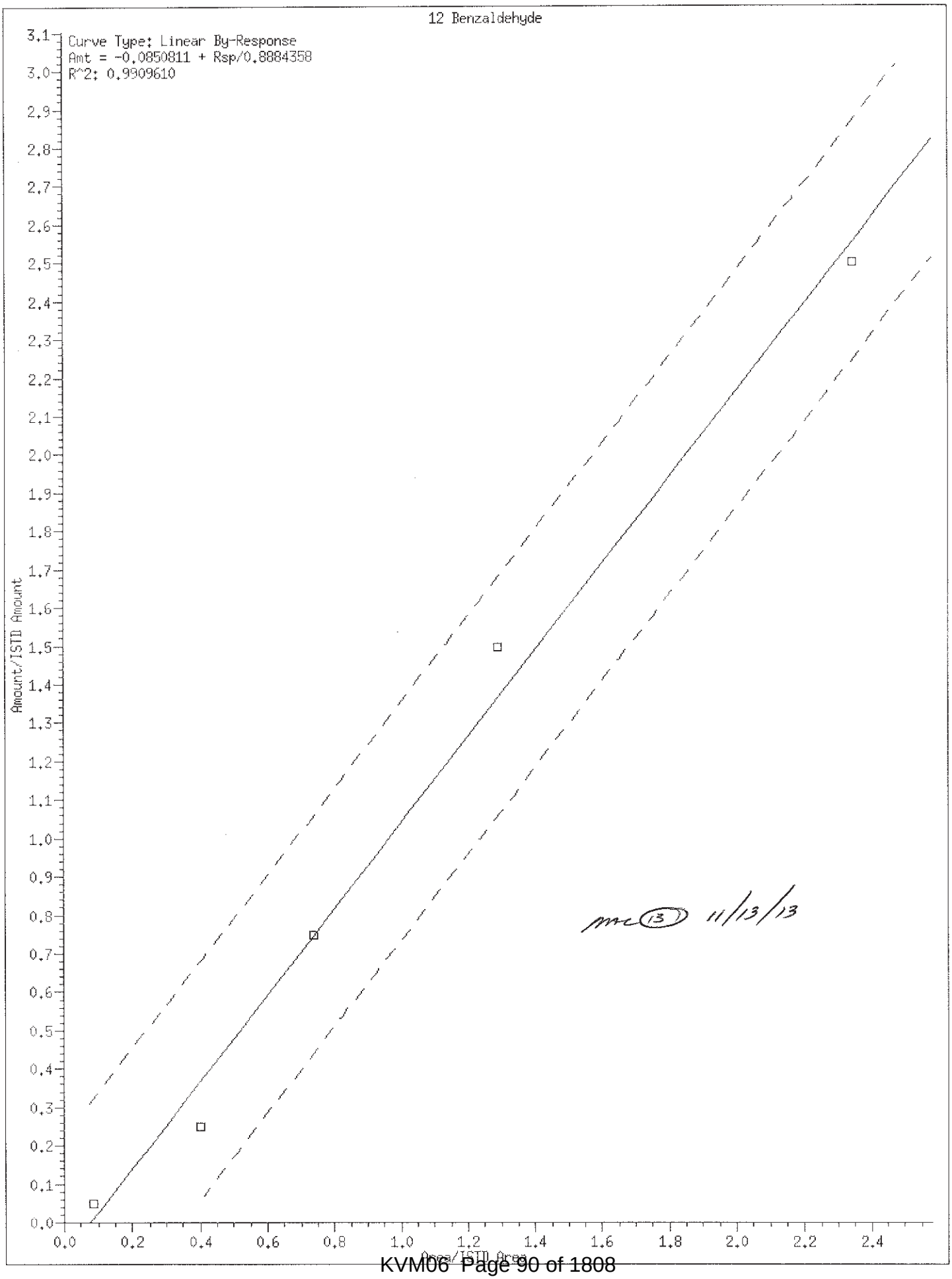
Calibration Times: 09:38 12:38

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

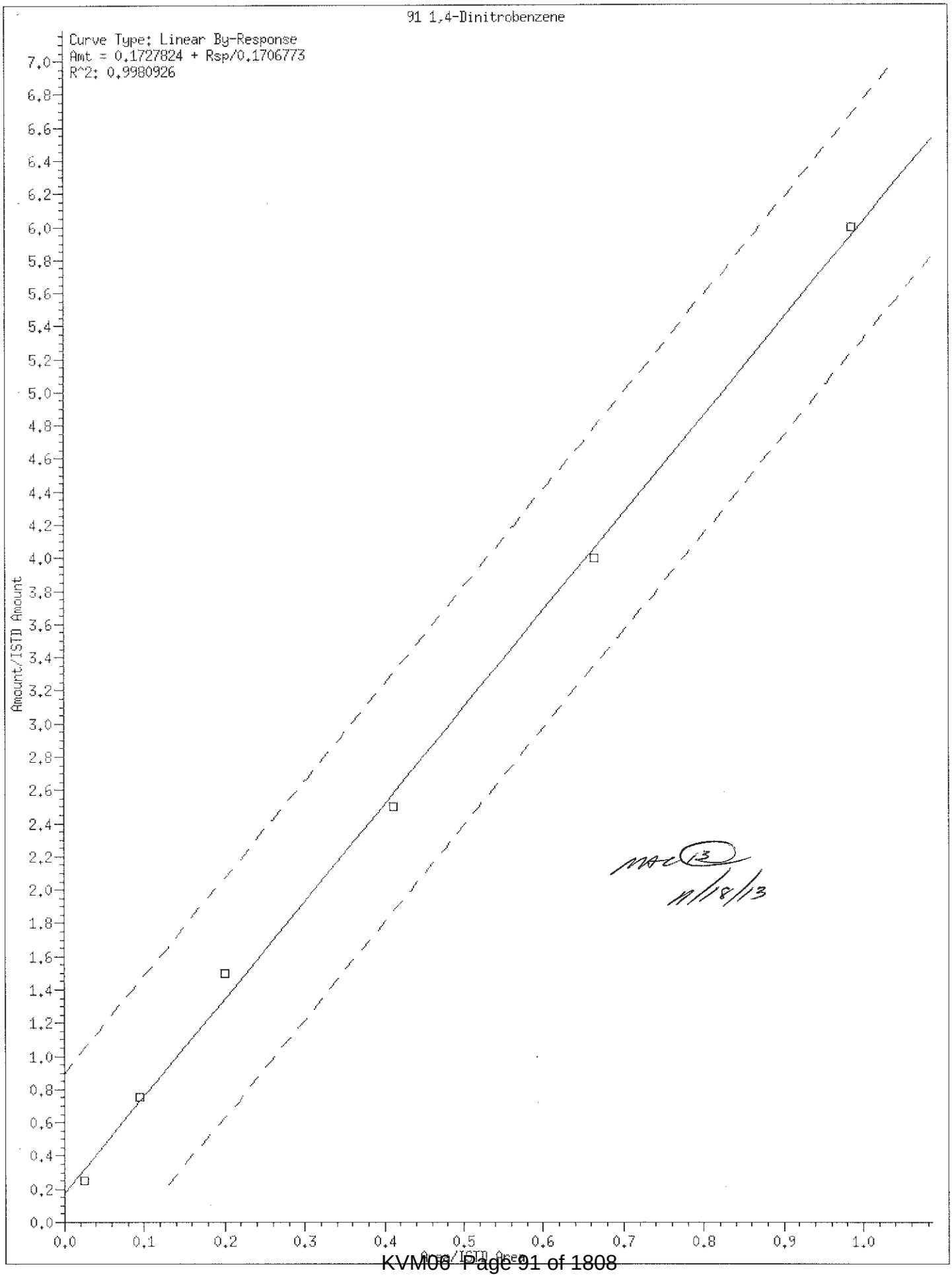
LAB FILE ID:RRF0.5 = ck0402.d RRF1 = ck0403.d RRF5 = ck0408.d RRF15 = ck0407.d
RRF30 = ck0401.d RRF50 = ck0406.d RRF80 = ck0405.d RRF120 = ck0404.d

COMPOUND		RRF0.5	RRF1	RRF5	RRF15	RRF30	RRF50	RRF80	RRF120	$\overline{RRF}$	% RSD		CAL. METHOD
Di-n-butylphthalate				1.313	1.349	1.410	1.447	1.367	1.383	1.378	3		AVG
Parathion				0.112	0.144	0.165	0.178	0.175	0.183	0.160	17		1STDEG
4-Nitroquinoline-1-oxide				0.040	0.062	0.072	0.095	0.099	0.105	0.079	32		1STDEG
Isodrin			0.161	0.125	0.125	0.126	0.131	0.127	0.126	0.131	10		AVG
Fluoranthene	*	1.258	1.298	1.252	1.277	1.276	1.380	1.331	1.330	1.300	3		AVG
Benzidine				0.811	0.780	0.835	0.908	0.795	0.783	0.819	6		AVG
Pyrene		1.166	1.117	1.058	1.078	1.074	1.171	1.101	1.122	1.111	4		AVG
p-Dimethylaminoazobenzene			0.200	0.198	0.220	0.217	0.237	0.218	0.225	0.216	6		AVG
Chlorobenzilate			0.317	0.298	0.331	0.352	0.364	0.342	0.354	0.337	7		AVG
3,3'-Dimethylbenzidine				0.652	0.660	0.698	0.759	0.662	0.675	0.684	6		AVG
Butylbenzylphthalate				0.499	0.518	0.540	0.565	0.523	0.535	0.530	4		AVG
2-Acetylaminofluorene				0.381	0.439	0.505	0.543	0.499	0.512	0.480	12		AVG
3,3'-Dichlorobenzidine				0.374	0.378	0.385	0.423	0.377	0.380	0.386	5		AVG
4,4'-Methylenebis(2-Chloroanil				0.168	0.179	0.190	0.210	0.192	0.192	0.189	8		AVG
Benzo(a)anthracene		0.985	1.028	0.967	1.002	1.004	1.129	1.036	1.045	1.024	5		AVG
Chrysene		0.994	1.036	0.976	0.959	0.948	1.046	0.971	0.973	0.988	4		AVG
bis(2-Ethylhexyl)phthalate				0.692	0.705	0.755	0.783	0.732	0.746	0.735	5		AVG
6-Methylchrysene				0.702	0.714	0.727	0.788	0.721	0.721	0.729	4		AVG
Di-n-octylphthalate	*			1.275	1.416	1.600	1.573	1.563	1.630	1.510	9		AVG
Dibenz(a,h)acridine				0.765	0.827	0.889	0.929	0.880	0.905	0.866	7		AVG
Dibenz(a,j)acridine				0.994	0.993	0.979	1.070	0.975	0.964	0.996	4		AVG
7,12-Dimethylbenz[a]anthracene			0.502	0.513	0.549	0.573	0.617	0.601	0.617	0.567	8		AVG
Benzo(b)fluoranthene		1.087	1.183	1.104	1.217	1.174	1.251	1.361	1.393	1.221	9		AVG
Quinoline				0.726	0.729	0.733	0.771	0.714	0.716	0.731	3		AVG
Benzo(k)fluoranthene		1.265	1.229	1.232	1.213	1.268	1.392	1.174	1.194	1.246	5		AVG
Benzo(a)pyrene	*	1.311	1.234	1.066	1.135	1.169	1.241	1.179	1.199	1.192	6		AVG
3-Methylcholanthrene			0.599	0.565	0.589	0.596	0.636	0.598	0.601	0.597	4		AVG
NDPA as diphenylamine				0.642	0.652	0.668	0.706	0.678	0.685	0.672	3		AVG
Indeno(1,2,3-cd)pyrene		1.224	1.259	1.239	1.260	1.269	1.361	1.260	1.274	1.268	3		AVG
Dibenz(a,h)anthracene		0.989	1.038	1.029	1.062	1.077	1.161	1.055	1.075	1.061	5		AVG
Benzo(g,h,i)perylene		1.077	1.136	1.073	1.048	1.069	1.143	1.043	1.054	1.080	4		AVG
Indene				3.591	3.362	3.575	3.518	3.354	3.360	3.460	3		AVG
1-Chloronaphthalene			1.189	1.047	1.106	1.115	1.167	1.146	1.005	1.111	6		AVG
2-Fluorophenol				1.464	1.443	1.524	1.573	1.476	1.498	1.496	3		AVG
Phenol-d5				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6		AVG
Phenol-d6				2.026	2.088	2.317	2.320	2.204	2.256	2.202	6		AVG
Nitrobenzene-d5				0.389	0.404	0.466	0.452	0.434	0.440	0.431	7		AVG
2-Fluorobiphenyl				1.233	1.224	1.239	1.338	1.256	1.255	1.258	3		AVG
2,4,6-Tribromophenol				0.117	0.118	0.114	0.131	0.122	0.123	0.121	5		AVG
Terphenyl-d14				0.705	0.702	0.685	0.758	0.713	0.727	0.715	4		AVG
									Average %RSD	7			

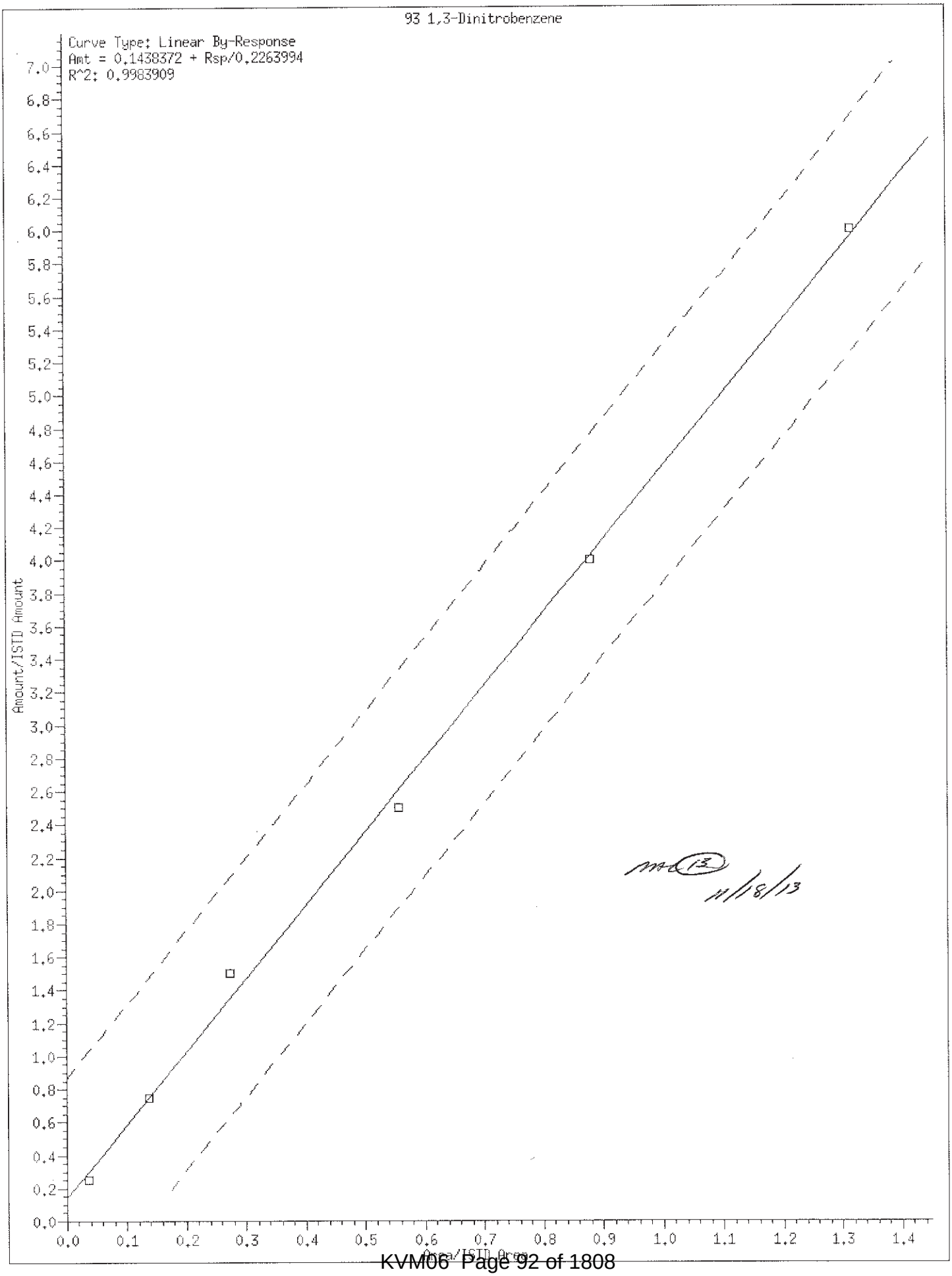
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.


12 Benzaldehyde
Curve Type: Linear By-Response
Amt = -0.0850811 + Rsp/0.8884358
R^2: 0.9909610
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.5
2.6
2.7
2.8
2.9
3.0
3.1

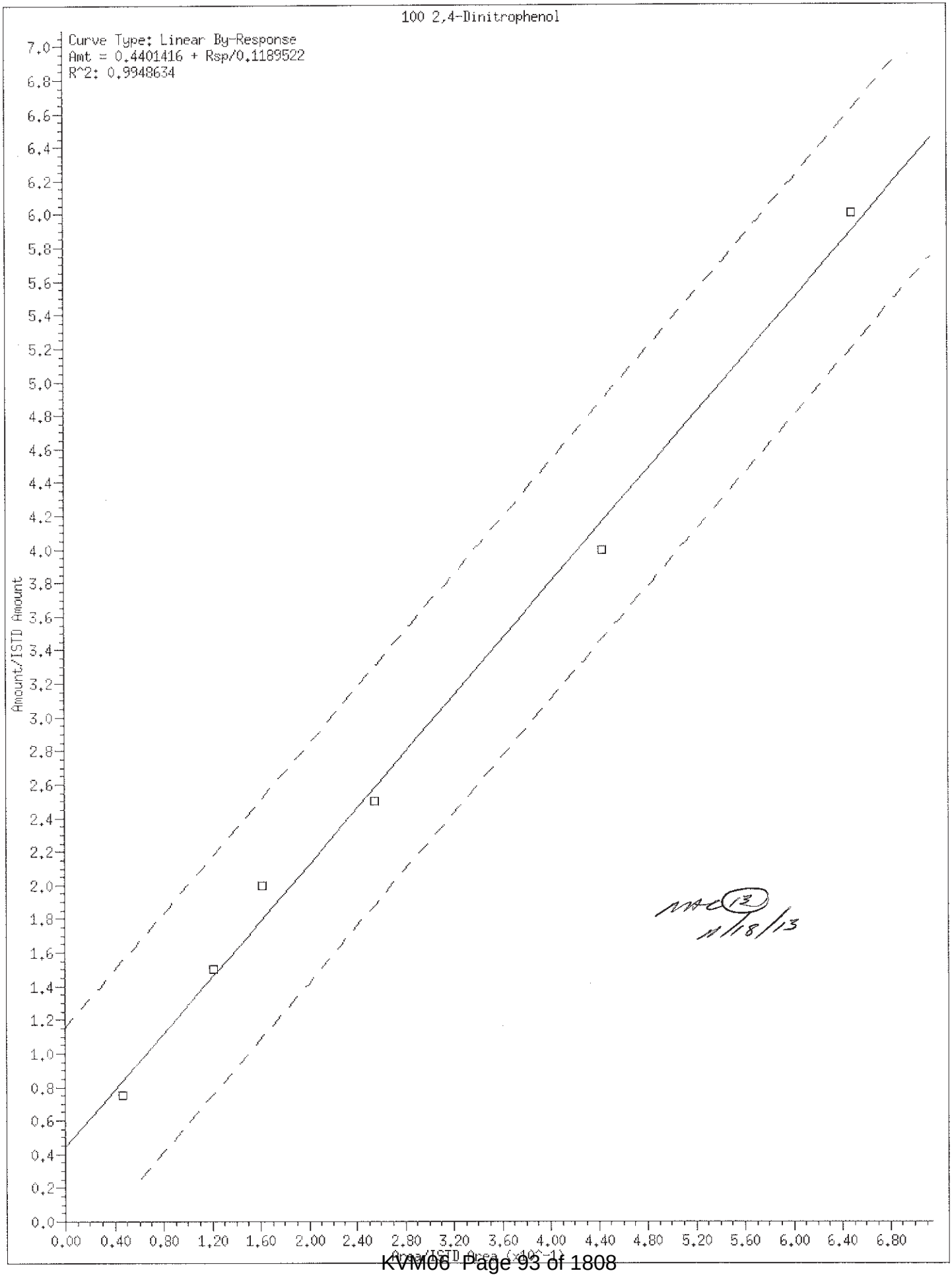
mc (13) 11/13/13


91 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1727824 + Rsp/0.1706773
R^2: 0.9980926
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
0.1
0.3
0.5
0.7
0.9

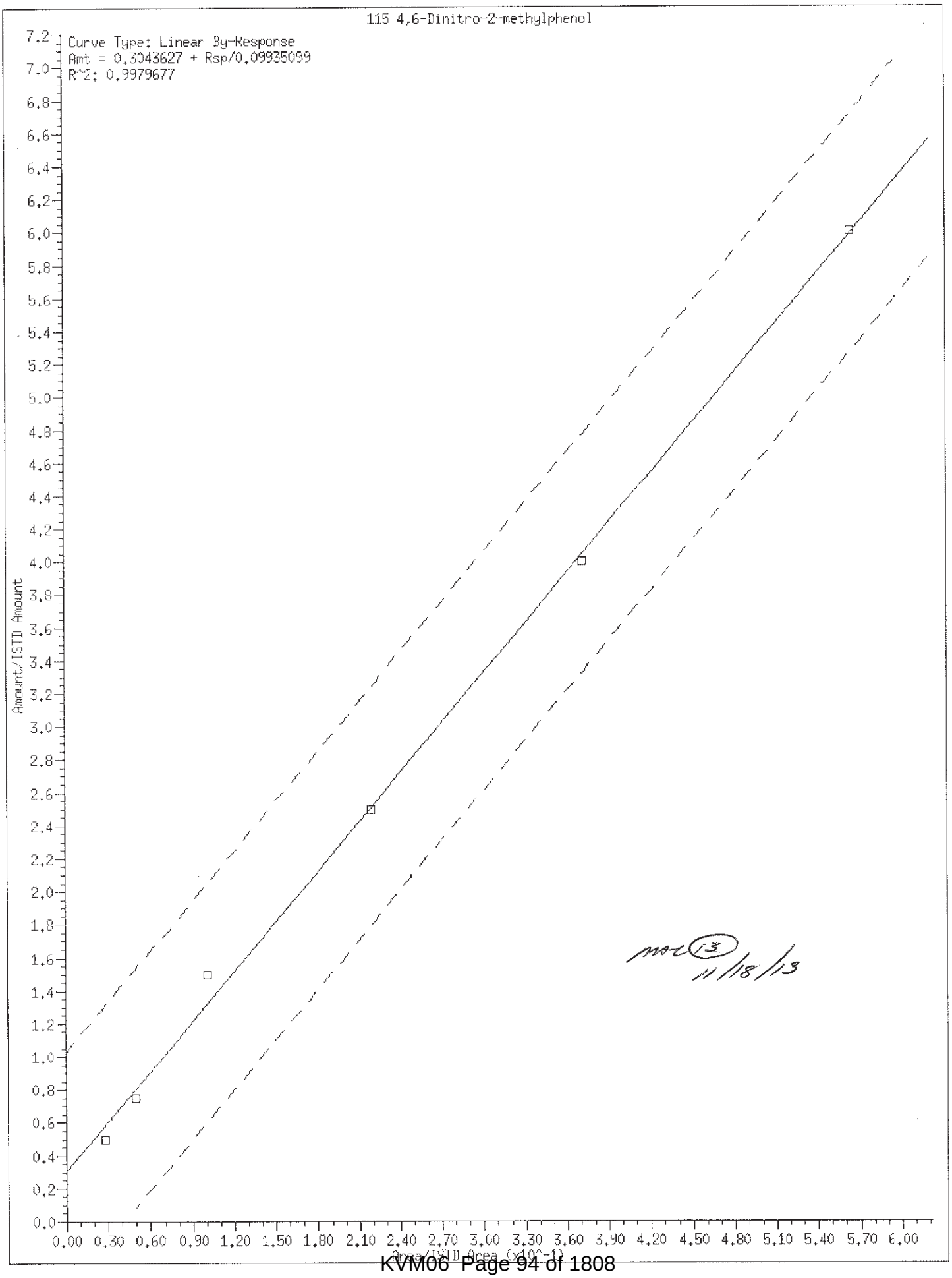
11/18/13


93 1,3-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1438372 + Rsp/0.2263994
R^2: 0.9983909
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0

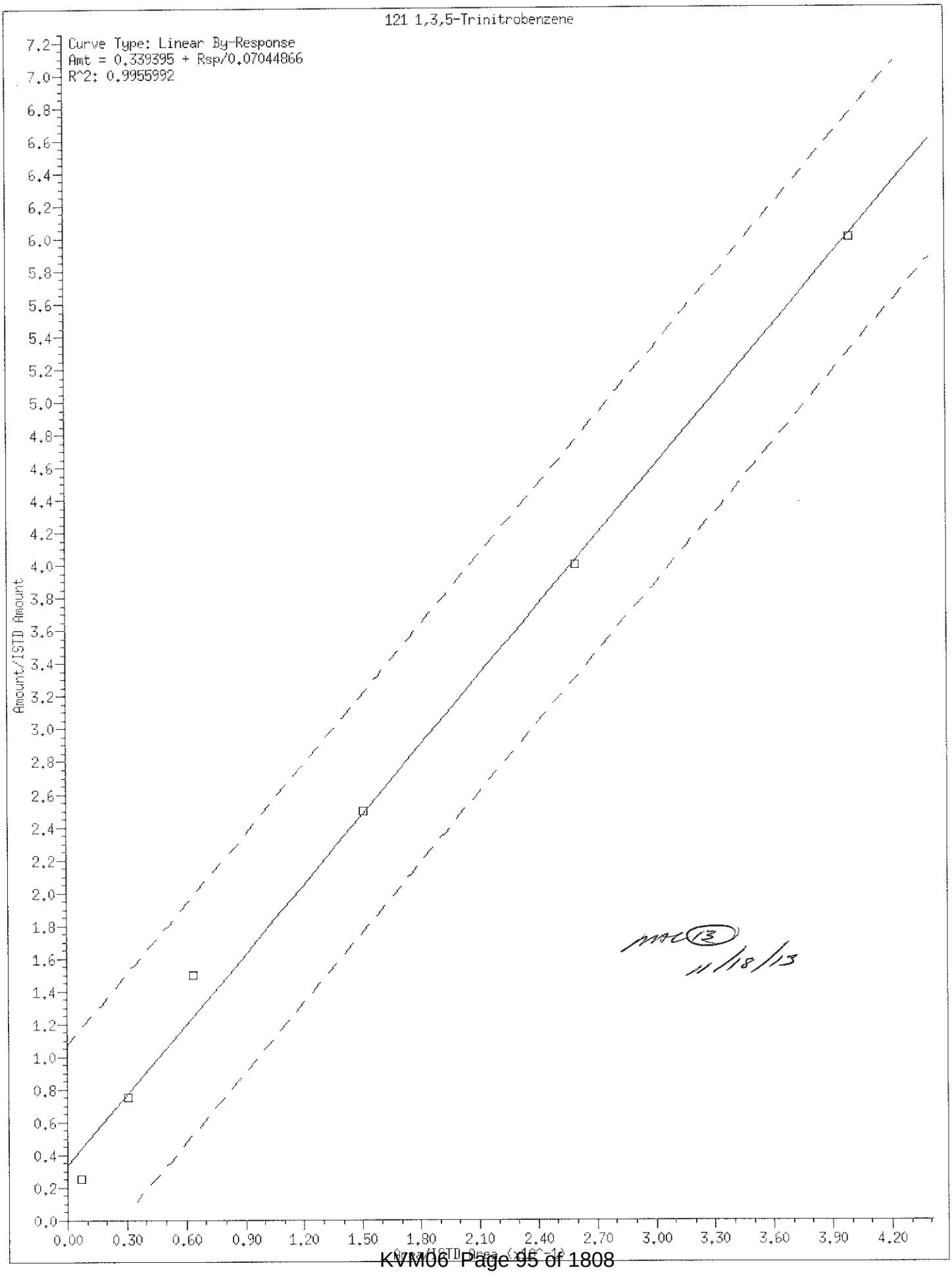
11/18/13



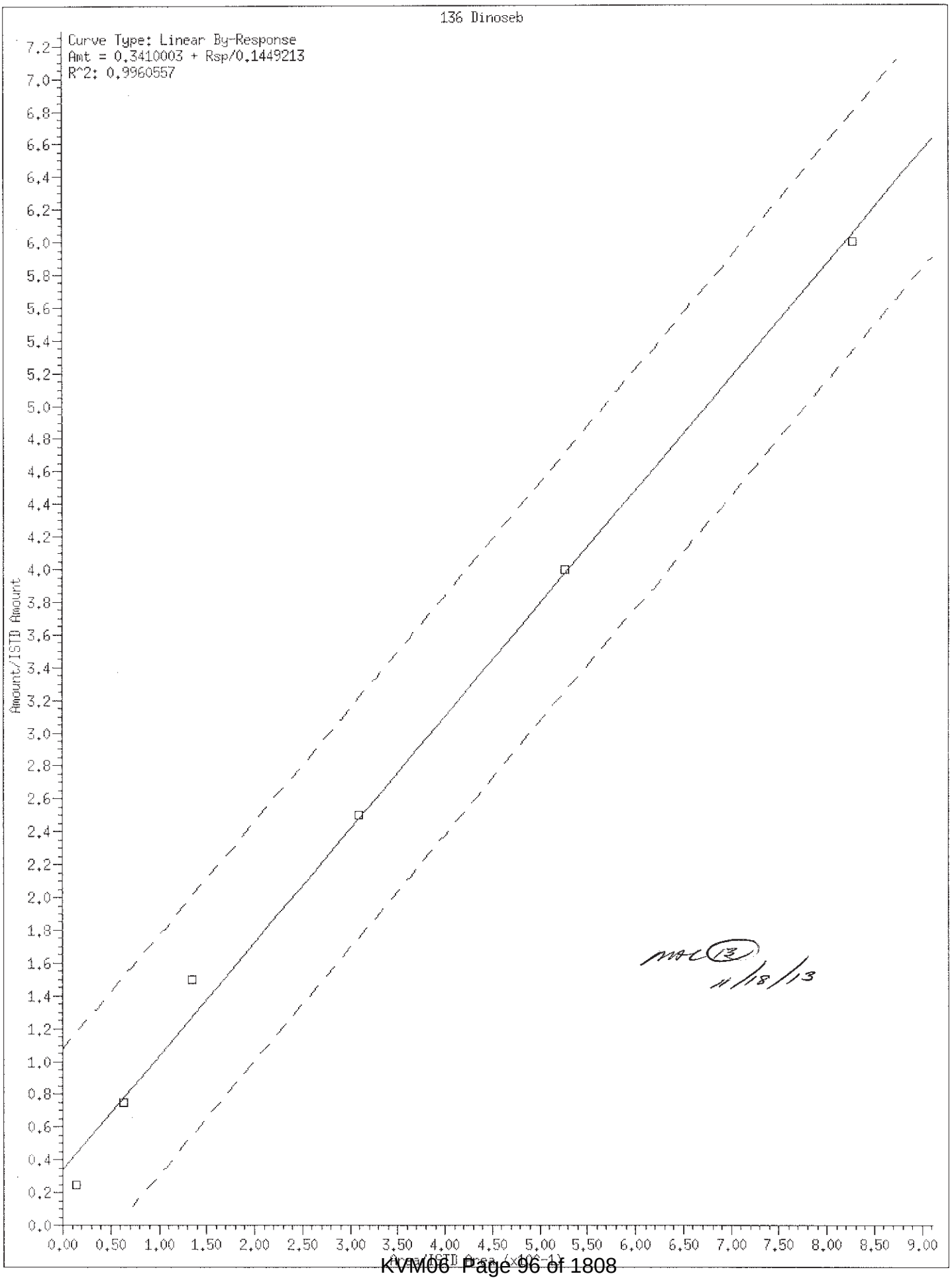
MAC (12) 11/18/13



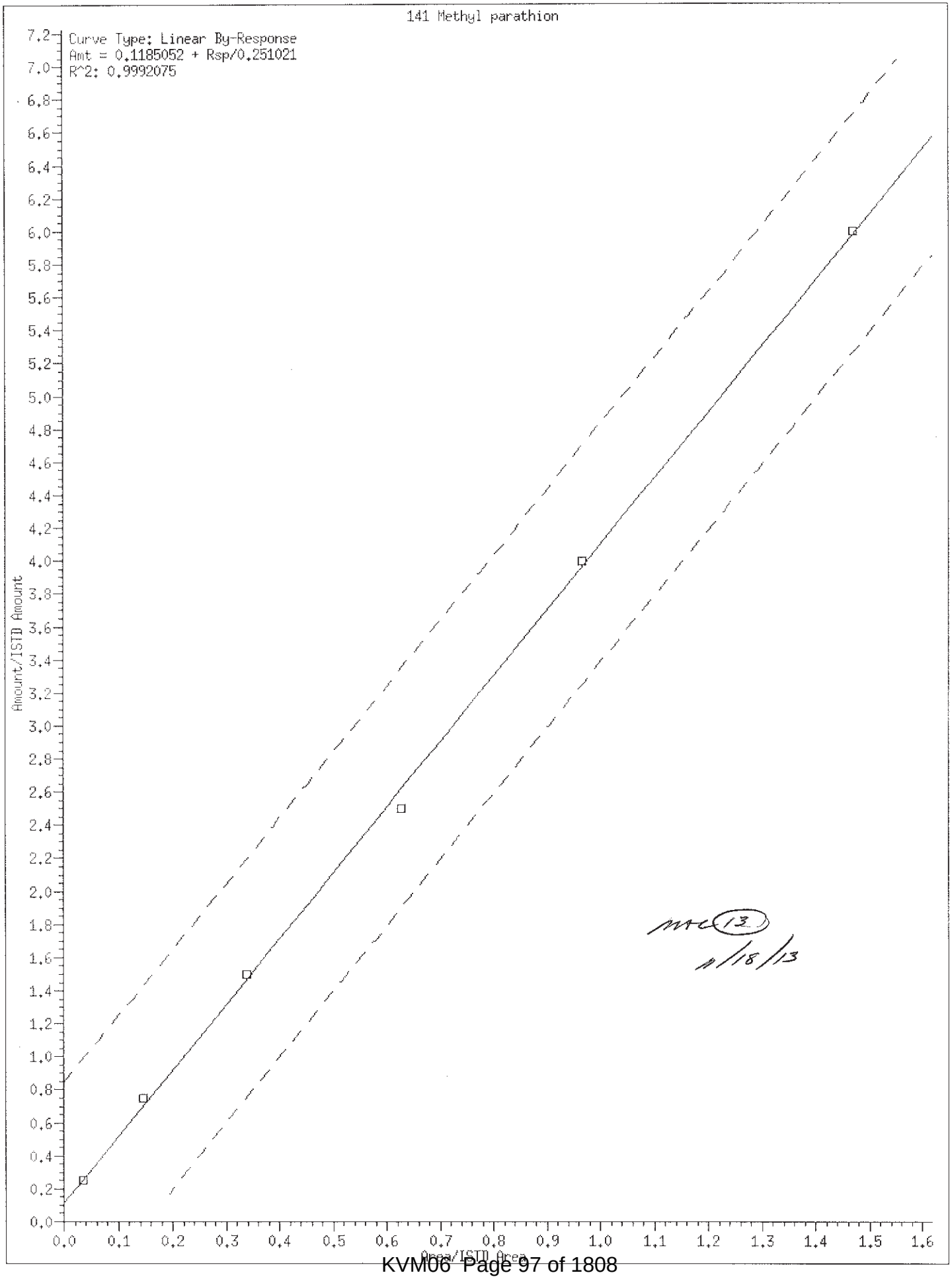
mac (13) 11/18/13



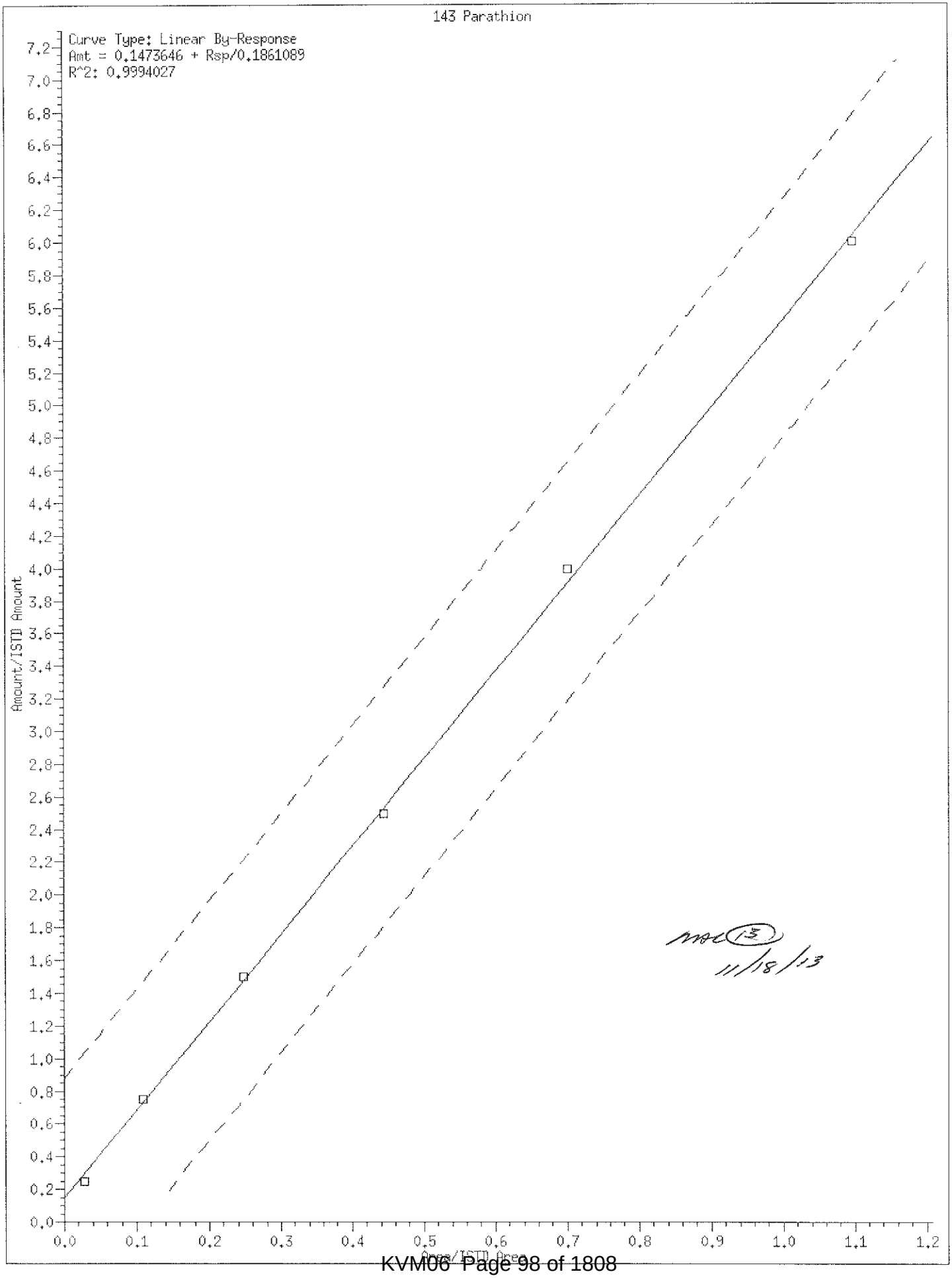
mac (13) 11/18/13


136 Dinoseb
Curve Type: Linear By-Response
Amt = 0.3410003 + Rsp/0.1449213
R^2: 0.9960557
Amount/ISTD Amount
Area/ISTD Area (x10E-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
5.50
6.00
6.50
7.00
7.50
8.00
8.50
9.00

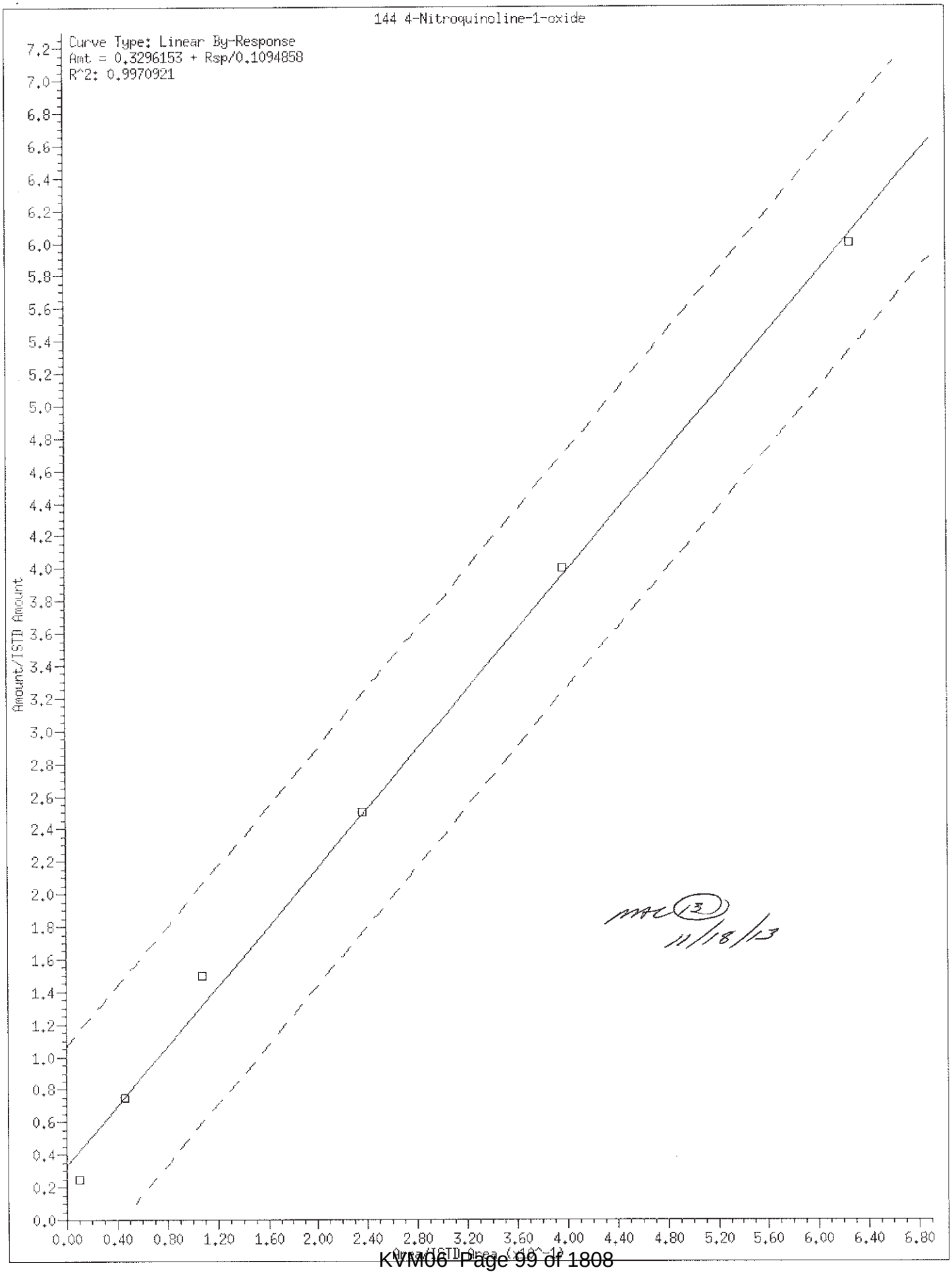
11/18/13



MC (13.1)
11/18/13



mac (13)
11/18/13


144 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.3296153 + Rsp/0.1094858
R^2: 0.9970921
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80

MAC (3) 11/18/13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d SSTD030
/chem/HP10623.i/13nov12a.b/ck0402.d SSTD0.50
/chem/HP10623.i/13nov12a.b/ck0403.d SSTD001
/chem/HP10623.i/13nov12a.b/ck0404.d SSTD120
/chem/HP10623.i/13nov12a.b/ck0405.d SSTD080
/chem/HP10623.i/13nov12a.b/ck0406.d SSTD050
/chem/HP10623.i/13nov12a.b/ck0407.d SSTD015
/chem/HP10623.i/13nov12a.b/ck0408.d SSTD005

Area Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	77457	114510	75301	103965	112327	97224	131335	105420	102192	18
Naphthalene-d8	361204	513472	339882	487375	520142	451858	603190	484406	470191	18
Acenaphthene-d10	222517	310493	207488	296224	313745	275969	377352	296800	287574	19
Phenanthrene-d10	404202	571166	383931	530074	570162	513309	694958	547696	526937	19
Pyrene-d10	503289	702415	473300	657394	718943	638551	855313	679864	653634	19
Perylene-d12	430377	629898	429576	539486	595376	568380	733981	600759	565979	18

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	ck0401.d	ck0402.d	ck0403.d	ck0404.d	ck0405.d	ck0406.d	ck0407.d	ck0408.d
1,4-Dichlorobenzene-d4	5.225	5.225	5.225	5.226	5.226	5.226	5.226	5.226
Naphthalene-d8	6.461	6.461	6.461	6.468	6.468	6.468	6.461	6.461
Acenaphthene-d10	8.177	8.171	8.171	8.177	8.177	8.177	8.177	8.171
Phenanthrene-d10	9.622	9.616	9.616	9.628	9.622	9.622	9.622	9.616
Pyrene-d10	10.999	10.999	10.999	11.005	11.005	10.999	10.999	10.999
Perylene-d12	13.606	13.606	13.606	13.612	13.612	13.612	13.606	13.606

Comments: MAC (13) 11/13/13

Report generated on 11/13/2013 at 00:1

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	50.00	47.96	-4	20	YES
N-Nitrosodimethylamine	50.00	43.72	-13	20	YES
Pyridine	50.00	47.53	-5	20	YES
2-Picoline	50.00	47.33	-5	20	YES
N-Nitrosomethylethylamine	50.00	47.41	-5	20	YES
Methyl methanesulfonate	50.00	54.11	8	20	YES
N-Nitrosodiethylamine	50.00	47.99	-4	20	YES
Ethyl methanesulfonate	50.00	51.16	2	20	YES
Aniline	50.00	49.00	-2	20	YES
Phenol	50.00	48.07	-4	20	YES
bis(2-Chloroethyl)ether	50.00	48.26	-3	20	YES
2-Chlorophenol	50.00	48.77	-2	20	YES
1,3-Dichlorobenzene	50.00	50.29	1	20	YES
1,4-Dichlorobenzene	50.00	50.27	1	20	YES
Benzyl alcohol	50.00	49.43	-1	20	YES
1,2-Dichlorobenzene	50.00	50.86	2	20	YES
2-Methylphenol	50.00	49.03	-2	20	YES
2,2'-oxybis(1-Chloropropane	50.00	44.07	-12	20	YES
bis(2-Chloroisopropyl)ether	50.00	43.96	-12	20	YES
N-Nitrosopyrrolidine	50.00	49.78	0	20	YES
Acetophenone	50.00	48.21	-4	20	YES
N-Nitroso-di-n-propylamine	50.00	45.85	-8	20	YES
N-Nitrosomorpholine	50.00	47.57	-5	20	YES
4-Methylphenol	50.00	48.84	-2	20	YES
o-Toluidine	50.00	48.77	-2	20	YES
Hexachloroethane	50.00	49.32	-1	20	YES
Nitrobenzene	50.00	44.62	-11	20	YES
N-Nitrosopiperidine	50.00	49.77	0	20	YES
Isophorone	50.00	48.53	-3	20	YES
2-Nitrophenol	50.00	49.37	-1	20	YES
2,4-Dimethylphenol	50.00	48.25	-3	20	YES
O,O,O-triethylphosphorothio	50.00	50.74	1	20	YES
bis(2-Chloroethoxy)methane	50.00	47.27	-5	20	YES
Benzoic acid	100.00	100.04	0	20	YES
2,4-Dichlorophenol	50.00	51.53	3	20	YES
1,2,4-Trichlorobenzene	50.00	53.64	7	20	YES
Naphthalene	50.00	49.91	0	20	YES

NC = Could not calculate

Comments: MC (12) 11/13/13

HIGH- 4-AMINOBIPHENYL 4-NITROQUINOLINE-1-OXIDE BENZALDEHYDE

LOW- NITROSODI-N-BUTYLAMINE INDENE

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
4-Chloroaniline	50.00	51.73	3	20	YES
2,6-Dichlorophenol	50.00	51.88	4	20	YES
Hexachloropropene	50.00	51.99	4	20	YES
Hexachlorobutadiene	50.00	51.57	3	20	YES
N-Nitrosodi-n-butylamine	50.00	38.17	-24	20	NO *
4-Chloro-3-methylphenol	50.00	50.50	1	20	YES
Safrole	50.00	51.53	3	20	YES
2-Methylnaphthalene	50.00	49.27	-1	20	YES
1-Methylnaphthalene	50.00	50.86	2	20	YES
Hexachlorocyclopentadiene	100.00	114.67	15	20	YES
1,2,4,5-Tetrachlorobenzene	50.00	49.72	-1	20	YES
cis-Isosafrole	5.50	5.67	3	20	YES
2,4,6-Trichlorophenol	50.00	50.84	2	20	YES
2,4,5-Trichlorophenol	50.00	53.22	6	20	YES
trans-Isosafrole	44.50	45.97	3	20	YES
Isosafrole	50.00	51.65	3	20	YES
1,1'-Biphenyl	50.00	47.21	-6	20	YES
2-Chloronaphthalene	50.00	58.78	18	20	YES
Diphenyl ether	50.00	50.47	1	20	YES
2-Nitroaniline	50.00	51.09	2	20	YES
1,4-Naphthoquinone	62.50	62.63	0	20	YES
1,4-Dinitrobenzene	50.00	46.69	-7	20	YES
Dimethylphthalate	50.00	51.10	2	20	YES
1,3-Dinitrobenzene	50.00	47.86	-4	20	YES
2,6-Dinitrotoluene	50.00	54.31	9	20	YES
Acenaphthylene	50.00	53.72	7	20	YES
3-Nitroaniline	50.00	54.04	8	20	YES
Acenaphthene	50.00	49.66	-1	20	YES
2,4-Dinitrophenol	100.00	99.41	-1	20	YES
Pentachlorobenzene	50.00	51.87	4	20	YES
4-Nitrophenol	50.00	52.41	5	20	YES
Dibenzofuran	50.00	49.40	-1	20	YES
2,4-Dinitrotoluene	50.00	55.30	11	20	YES
1-Naphthylamine	100.00	105.26	5	20	YES
2,3,4,6-Tetrachlorophenol	50.00	58.60	17	20	YES
2-Naphthylamine	100.00	102.68	3	20	YES
Diethylphthalate	50.00	50.91	2	20	YES

NC = Could not calculate

Comments:

* NON-CCC compound, ok if < ± 50% LB 1997

11/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Thionazin	50.00	47.52	-5	20	YES
Fluorene	50.00	51.14	2	20	YES
4-Chlorophenyl-phenylether	50.00	50.27	1	20	YES
5-Nitro-o-toluidine	50.00	55.72	11	20	YES
4-Nitroaniline	50.00	53.30	7	20	YES
4,6-Dinitro-2-methylphenol	50.00	49.87	0	20	YES
N-Nitrosodiphenylamine	50.00	51.00	2	20	YES
1,2-Diphenylhydrazine	50.00	47.81	-4	20	YES
Tetraethyldithiopyrophospha	50.00	46.11	-8	20	YES
1,3,5-Trinitrobenzene	50.00	48.72	-3	20	YES
Diallate (peak 1)	37.50	33.99	-9	20	YES
Phorate	50.00	44.71	-11	20	YES
Phenacetin	50.00	50.51	1	20	YES
4-Bromophenyl-phenylether	50.00	51.35	3	20	YES
Diallate (peak 2)	12.50	11.31	-10	20	YES
Hexachlorobenzene	50.00	50.51	1	20	YES
Dimethoate	50.00	47.93	-4	20	YES
Diallate TRANS/CIS	50.00	45.30	-9	20	YES
Pentachlorophenol	50.00	53.73	7	20	YES
Pentachloronitrobenzene	50.00	51.93	4	20	YES
4-Aminobiphenyl	50.00	66.98	34	20	NO *
Pronamide	50.00	49.24	-2	20	YES
Dinoseb	50.00	48.62	-3	20	YES
Phenanthrene	50.00	49.88	0	20	YES
Anthracene	50.00	51.31	3	20	YES
Carbazole	50.00	52.05	4	20	YES
Methyl parathion	50.00	48.83	-2	20	YES
Di-n-butylphthalate	50.00	50.47	1	20	YES
Parathion	50.00	51.49	3	20	YES
4-Nitroquinoline-1-oxide	600.00	770.33	28	20	NO P
Isodrin	50.00	48.07	-4	20	YES
Fluoranthene	50.00	52.98	6	20	YES
Benzidine	250.00	246.85	-1	20	YES
Pyrene	50.00	50.02	0	20	YES
p-Dimethylaminoazobenzene	50.00	53.06	6	20	YES
Chlorobenzilate	50.00	47.58	-5	20	YES
3,3'-Dimethylbenzidine	100.00	102.46	2	20	YES

NC = Could not calculate

Comments:

* NON-CCC compound, ok if < ±50% CS (95)

4/25/13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP10623

Method: SW-846 8270C File ID: ck0411.d

ICV SAMPLE ID: 8270ICV2463 BATCH: 13NOV12A026 Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Butylbenzylphthalate	50.00	49.18	-2	20	YES
2-Acetylaminofluorene	50.00	51.65	3	20	YES
3,3'-Dichlorobenzidine	50.00	49.72	-1	20	YES
4,4'-Methylenebis(2-Chloroa	50.00	49.37	-1	20	YES
Benzo(a)anthracene	50.00	52.16	4	20	YES
Chrysene	50.00	50.52	1	20	YES
bis(2-Ethylhexyl)phthalate	50.00	48.64	-3	20	YES
Di-n-octylphthalate	50.00	49.02	-2	20	YES
7,12-Dimethylbenz[a]anthrac	50.00	53.57	7	20	YES
Benzo(b)fluoranthene	50.00	49.93	0	20	YES
Benzo(k)fluoranthene	50.00	54.82	10	20	YES
Benzo(a)pyrene	50.00	50.56	1	20	YES
3-Methylcholanthrene	50.00	50.48	1	20	YES
Indeno(1,2,3-cd)pyrene	50.00	51.91	4	20	YES
Dibenz(a,h)anthracene	50.00	52.34	5	20	YES
Benzo(g,h,i)perylene	50.00	51.23	2	20	YES
6-Methylchrysene	50.00	49.68	-1	20	YES
Dibenz(a,h)acridine	50.00	49.96	0	20	YES
Dibenz(a,j)acridine	50.00	50.79	2	20	YES
Quinoline	50.00	50.58	1	20	YES
Indene	50.00	36.40	-27	20	NO ☆

NC = Could not calculate

Comments:

☆ Non-cc compound, o/c of ± 50%.

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP10623

Method: SW-846 8270C | File ID: ck0412.d

ICV SAMPLE ID: BASICV2463 | BATCH: 13NOV12A026 | Sample Name: SSTD050

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	50.00	79.82	60	20	NO
Caprolactam	50.00	48.35	-3	20	YES
Atrazine	50.00	52.72	5	20	YES

NC = Could not calculate

Comments: MAC (3) 11/13/13

* non-CCC compound, ok if < ± 50%

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.644	0.649	0.605	0.626	0.603	0.650	0.629	3	AVG
N-Nitrosodimethylamine		0.980	1.115	1.001	1.178	1.168	1.164	1.172	1.111	8	AVG
Pyridine			1.951	1.687	1.897	1.953	1.913	1.970	1.895	6	AVG
2-Picoline		2.157	1.905	1.890	2.018	2.008	1.988	2.008	1.996	4	AVG
N-Nitrosomethylethylamine		0.801	0.829	0.828	0.913	0.870	0.874	0.891	0.858	5	AVG
Methyl methanesulfonate		1.005	0.942	0.944	1.027	0.976	0.980	0.991	0.981	3	AVG
N-Nitrosodiethylamine		0.833	0.774	0.791	0.866	0.829	0.833	0.841	0.824	4	AVG
Ethyl methanesulfonate		0.845	0.764	0.765	0.817	0.787	0.795	0.790	0.795	4	AVG
Benzaldehyde			1.591	1.577	1.533	1.435	1.282	1.140	1.426	13	AVG
Aniline		3.071	2.865	2.832	3.030	2.871	2.852	2.825	2.907	3	AVG
Phenol		2.550	2.375	2.318	2.444	2.314	2.282	2.240	2.360	5	AVG
bis(2-Chloroethyl)ether		2.016	1.840	1.825	1.915	1.837	1.807	1.796	1.862	4	AVG
2-Chlorophenol		1.504	1.404	1.405	1.541	1.455	1.464	1.447	1.460	3	AVG
1,3-Dichlorobenzene		1.672	1.589	1.550	1.593	1.543	1.534	1.512	1.570	3	AVG
1,4-Dichlorobenzene		1.739	1.598	1.562	1.600	1.559	1.551	1.511	1.588	5	AVG
Benzyl alcohol			1.015	1.013	1.052	1.035	1.033	1.047	1.033	2	AVG
1,2-Dichlorobenzene		1.581	1.532	1.470	1.503	1.469	1.453	1.393	1.486	4	AVG
Indene		2.774	2.562	2.417	2.569	2.474	2.458	2.319	2.510	6	AVG
2-Methylphenol		1.536	1.430	1.441	1.531	1.447	1.446	1.424	1.465	3	AVG
2,2'-oxybis(1-Chloropropane)		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
bis(2-Chloroisopropyl)ether		2.584	2.357	2.293	2.376	2.229	2.168	2.173	2.312	6	AVG
N-Nitrosopyrrolidine		0.815	0.766	0.817	0.905	0.848	0.857	0.858	0.838	5	AVG
Acetophenone		2.429	2.337	2.282	2.249	2.241	2.257	2.241	2.291	3	AVG
N-Nitroso-di-n-propylamine		1.433	1.348	1.319	1.401	1.290	1.243	1.197	1.319	6	AVG
N-Nitrosomorpholine		1.186	1.089	1.039	1.078	0.994	0.961	0.931	1.040	8	AVG
4-Methylphenol		1.739	1.655	1.630	1.732	1.618	1.576	1.507	1.637	5	AVG
o-Toluidine		2.746	2.533	2.502	2.629	2.490	2.433	2.351	2.526	5	AVG
Hexachloroethane		0.722	0.667	0.657	0.690	0.659	0.660	0.646	0.671	4	AVG
Nitrobenzene		0.513	0.494	0.479	0.504	0.487	0.474	0.467	0.488	3	AVG
N-Nitrosopiperidine		0.202	0.194	0.197	0.209	0.203	0.199	0.197	0.200	3	AVG
Isophorone		0.853	0.815	0.807	0.874	0.843	0.821	0.815	0.832	3	AVG
2-Nitrophenol		0.143	0.146	0.155	0.192	0.178	0.180	0.180	0.168	12	AVG
2,4-Dimethylphenol		0.418	0.396	0.400	0.424	0.414	0.404	0.395	0.407	3	AVG
O,O,O-triethylphosphorothioate		0.188	0.177	0.179	0.181	0.184	0.180	0.175	0.181	3	AVG
bis(2-Chloroethoxy)methane		0.581	0.558	0.537	0.550	0.524	0.534	0.518	0.543	4	AVG
Benzoic acid				0.183	0.294	0.257	0.287	0.330	0.270	20	1STDEG
2,4-Dichlorophenol		0.287	0.271	0.283	0.299	0.297	0.291	0.283	0.287	3	AVG
1,2,4-Trichlorobenzene		0.355	0.328	0.312	0.317	0.320	0.314	0.300	0.321	5	AVG
Naphthalene	1.011	1.213	1.102	1.061	1.069	1.065	1.024	0.984	1.066	7	AVG
4-Chloroaniline		0.483	0.439	0.432	0.459	0.441	0.425	0.413	0.442	5	AVG
2,6-Dichlorophenol		0.274	0.274	0.277	0.286	0.282	0.275	0.264	0.276	3	AVG
Hexachloropropene		0.194	0.178	0.194	0.211	0.211	0.216	0.213	0.203	7	AVG
Hexachlorobutadiene		0.201	0.190	0.183	0.183	0.188	0.186	0.179	0.187	4	AVG
Quinoline		0.771	0.704	0.685	0.721	0.697	0.691	0.674	0.706	5	AVG
Caprolactam			0.118	0.127	0.134	0.131	0.130	0.129	0.128	5	AVG
N-Nitrosodi-n-butylamine			0.297	0.300	0.320	0.305	0.382	0.377	0.330	12	AVG
4-Chloro-3-methylphenol		0.339	0.321	0.335	0.371	0.353	0.350	0.346	0.345	5	AVG
Safrole		0.267	0.271	0.266	0.280	0.278	0.274	0.264	0.271	2	AVG
2-Methylnaphthalene	0.703	0.762	0.734	0.709	0.725	0.712	0.684	0.654	0.710	5	AVG
1-Methylnaphthalene	0.644	0.686	0.654	0.644	0.660	0.645	0.627	0.598	0.645	4	AVG
Hexachlorocyclopentadiene			0.229	0.245	0.293	0.281	0.297	0.297	0.273	11	AVG
1,2,4,5-Tetrachlorobenzene		0.626	0.594	0.571	0.579	0.568	0.566	0.552	0.580	4	AVG

BCM 10-29-13

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
cis-Isosafrole		0.081	0.079	0.081	0.091	0.087	0.087	0.089	0.085	6	AVG
2,4,6-Trichlorophenol		0.332	0.337	0.354	0.399	0.378	0.381	0.378	0.366	7	AVG
2,4,5-Trichlorophenol		0.361	0.336	0.361	0.415	0.390	0.397	0.384	0.378	7	AVG
trans-Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
Isosafrole		0.460	0.460	0.475	0.511	0.484	0.484	0.470	0.478	4	AVG
1,1'-Biphenyl		1.619	1.541	1.485	1.433	1.403	1.369	1.314	1.452	7	AVG
2-Chloronaphthalene		1.255	1.171	1.079	1.151	1.074	1.101	0.966	1.114	8	AVG
1-Chloronaphthalene		1.202	1.152	1.116	1.110	1.071	0.994	1.043	1.098	6	AVG
Diphenyl ether		0.844	0.835	0.802	0.829	0.786	0.782	0.747	0.803	4	AVG
2-Nitroaniline		0.286	0.305	0.340	0.405	0.367	0.369	0.358	0.347	12	AVG
1,4-Naphthoquinone			0.407	0.460	0.526	0.501	0.500	0.482	0.479	9	AVG
1,4-Dinitrobenzene			0.122	0.151	0.211	0.184	0.192	0.198	0.176	19	1STDEG
Dimethylphthalate			1.320	1.297	1.315	1.247	1.216	1.162	1.260	5	AVG
1,3-Dinitrobenzene			0.182	0.200	0.246	0.222	0.224	0.224	0.216	10	AVG
2,6-Dinitrotoluene		0.229	0.260	0.281	0.317	0.291	0.293	0.283	0.279	10	AVG
Acenaphthylene	1.693	1.708	1.693	1.689	1.783	1.684	1.675	1.601	1.691	3	AVG
3-Nitroaniline		0.252	0.294	0.321	0.365	0.335	0.337	0.339	0.320	12	AVG
Acenaphthene	1.224	1.268	1.181	1.154	1.194	1.121	1.110	1.053	1.163	6	AVG
2,4-Dinitrophenol				0.095	0.147	0.121	0.154	0.172	0.138	22	1STDEG
Pentachlorobenzene		0.525	0.460	0.452	0.466	0.452	0.456	0.439	0.464	6	AVG
4-Nitrophenol			0.158	0.192	0.231	0.212	0.215	0.217	0.204	13	AVG
Dibenzofuran		1.817	1.713	1.662	1.696	1.611	1.583	1.497	1.654	6	AVG
2,4-Dinitrotoluene		0.297	0.323	0.359	0.393	0.373	0.381	0.378	0.358	10	AVG
2,4_2,6-Dinitrotoluenes		0.527	0.583	0.640	0.710	0.664	0.674		0.633	11	AVG
1-Naphthylamine		1.203	1.209	1.214	1.240	1.193	1.197	1.160	1.202	2	AVG
2,3,4,6-Tetrachlorophenol		0.273	0.260	0.298	0.327	0.302	0.315	0.313	0.298	8	AVG
2-Naphthylamine		1.246	1.260	1.259	1.281	1.206	1.215	1.168	1.234	3	AVG
Diethylphthalate			1.251	1.221	1.296	1.222	1.239	1.217	1.241	2	AVG
Thionazin		0.281	0.274	0.274	0.284	0.265	0.257	0.242	0.268	6	AVG
Fluorene	1.345	1.412	1.371	1.346	1.392	1.318	1.268	1.199	1.331	5	AVG
4-Chlorophenyl-phenylether		0.724	0.695	0.663	0.663	0.636	0.631	0.610	0.660	6	AVG
5-Nitro-o-toluidine		0.322	0.361	0.369	0.384	0.355	0.359	0.355	0.358	5	AVG
4-Nitroaniline		0.293	0.324	0.337	0.349	0.338	0.333	0.333	0.330	5	AVG
4,6-Dinitro-2-methylphenol				0.086	0.126	0.119	0.133	0.139	0.121	17	1STDEG
N-Nitrosodiphenylamine (1)		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
1,2-Diphenylhydrazine		1.031	1.032	1.003	1.050	0.978	0.916	0.888	0.985	6	AVG
Tetraethyldithiopyrophosphate		0.142	0.134	0.142	0.154	0.144	0.141	0.139	0.142	4	AVG
1,3,5-Trinitrobenzene			0.043	0.062	0.094	0.088	0.099	0.103	0.081	29	1STDEG
Diallate (peak 1)		0.497	0.508	0.502	0.530	0.489	0.461	0.450	0.491	6	AVG
Phorate		0.549	0.588	0.593	0.635	0.582	0.546		0.582	6	AVG
Phenacetin		0.330	0.373	0.405	0.474	0.442	0.439	0.438	0.414	12	AVG
4-Bromophenyl-phenylether		0.202	0.202	0.195	0.203	0.197	0.192	0.191	0.197	3	AVG
Diallate (peak 2)		0.196	0.199	0.206	0.227	0.212	0.211	0.215	0.209	5	AVG
Hexachlorobenzene	0.200	0.211	0.198	0.190	0.197	0.190	0.188	0.187	0.195	4	AVG
Dimethoate			0.322	0.367	0.433	0.393	0.383	0.382	0.380	10	AVG
Atrazine		0.196	0.210	0.216	0.209	0.204	0.198	0.185	0.203	5	AVG
Pentachlorophenol			0.097	0.119	0.149	0.144	0.150	0.153	0.135	17	1STDEG
Pentachloronitrobenzene		0.071	0.085	0.093	0.098	0.097	0.096	0.093	0.091	10	AVG
4-Aminobiphenyl		0.743	0.765	0.784	0.837	0.804	0.776	0.742	0.779	4	AVG
Pronamide		0.263	0.300	0.331	0.369	0.354	0.348	0.341	0.329	11	AVG
Phenanthrene	1.182	1.238	1.172	1.109	1.117	1.074	1.033	0.997	1.115	7	AVG
Dinoseb			0.078	0.123	0.184	0.178	0.197	0.205	0.161	31	1STDEG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 10/29/13 10/29/13

Calibration Times: 11:28 14:35

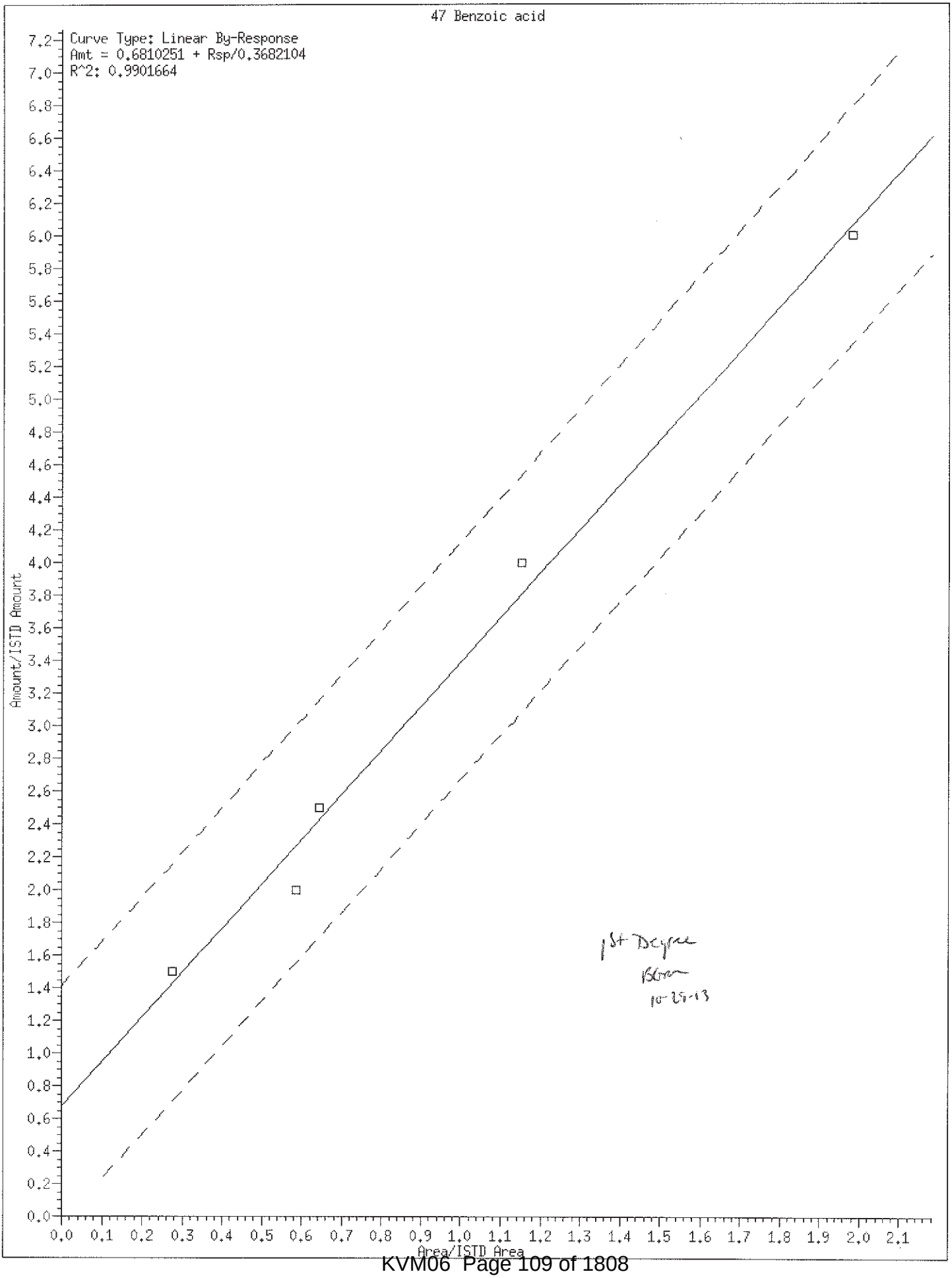
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

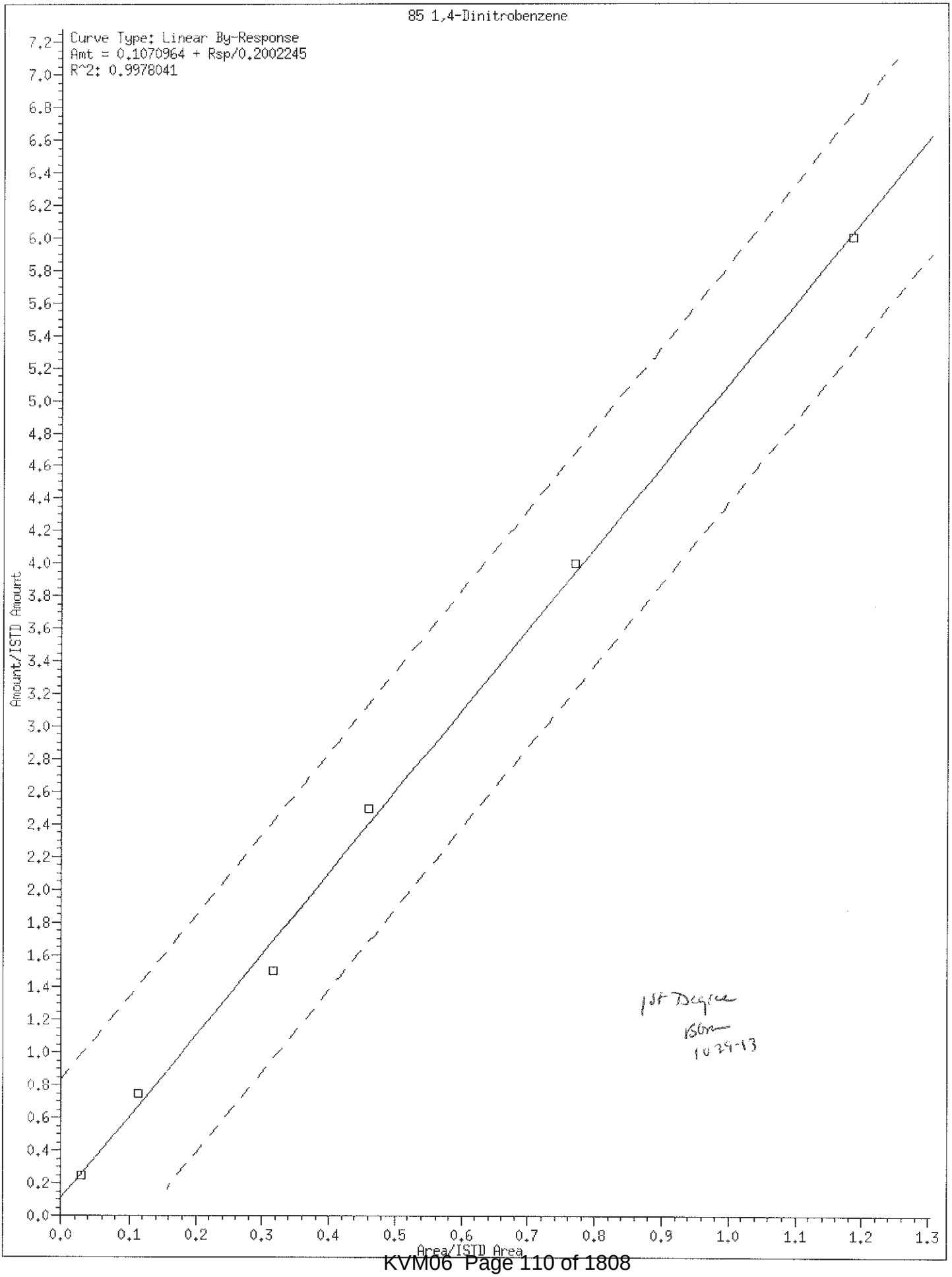
LAB FILE ID:RRF0.125 = dj1182.d RRF0.25 = dj1184.d RRF1.25 = dj1185.d RRF3.75 = dj1186.d
RRF7.5 = dj1181.d RRF12.5 = dj1187.d RRF20 = dj1188.d RRF30 = dj1183.d

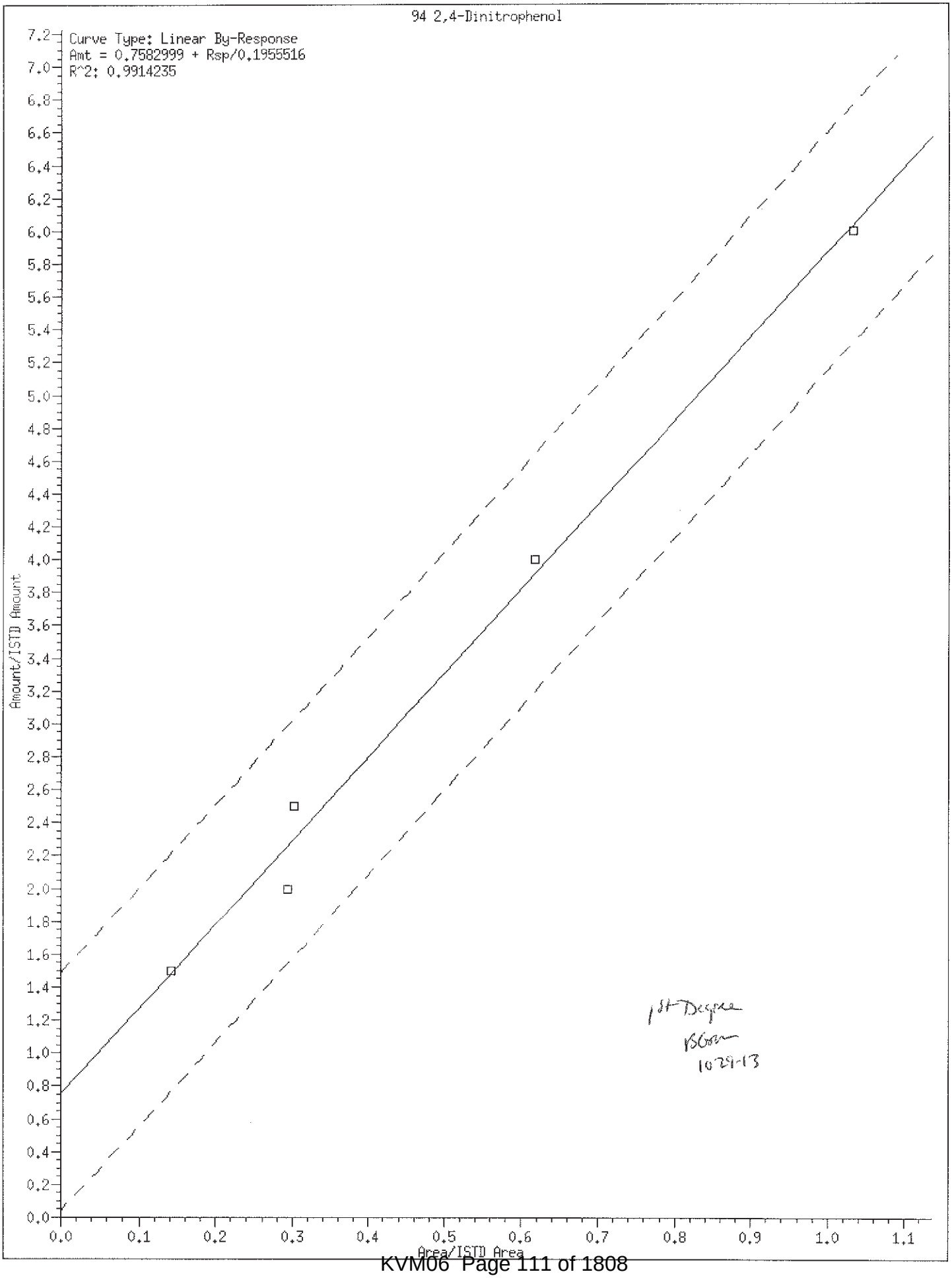
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Anthracene	1.117	1.108	1.139	1.122	1.170	1.118	1.072	1.049	1.112	3	AVG
Carbazole		1.086	1.072	1.083	1.145	1.085	1.046	1.015	1.076	4	AVG
Methyl parathion			0.186	0.238	0.313	0.282	0.286	0.285	0.265	17	1STDEG
Di-n-butylphthalate			1.169	1.259	1.410	1.310	1.270	1.227	1.274	6	AVG
Parathion			0.124	0.162	0.200	0.183	0.182	0.181	0.172	15	1STDEG
4-Nitroquinoline-1-oxide			0.031	0.053	0.101	0.095	0.118	0.130	0.088	43	1STDEG
Isodrin		0.125	0.127	0.133	0.142	0.138	0.136	0.134	0.134	4	AVG
Fluoranthene	1.229	1.221	1.220	1.264	1.329	1.285	1.257	1.228	1.254	3	AVG
Benzidine			0.559	0.651	0.702	0.675	0.646	0.617	0.642	8	AVG
Pyrene	1.163	1.156	1.080	1.034	1.057	1.037	0.996	0.969	1.062	7	AVG
p-Dimethylaminoazobenzene		0.126	0.155	0.184	0.220	0.213	0.214	0.216	0.190	19	1STDEG
Chlorobenzilate			0.264	0.285	0.330	0.308	0.304	0.302	0.299	8	AVG
3,3'-Dimethylbenzidine			0.461	0.592	0.722	0.695	0.667	0.644	0.630	15	AVG
Butylbenzylphthalate			0.403	0.443	0.498	0.470	0.454	0.443	0.452	7	AVG
2-Acetylaminofluorene			0.209	0.291	0.434	0.385	0.397	0.421	0.356	25	1STDEG
Benzo(a)anthracene	0.865	0.782	0.857	0.904	0.975	0.954	0.933	0.936	0.901	7	AVG
3,3'-Dichlorobenzidine			0.272	0.308	0.348	0.345	0.337	0.343	0.325	9	AVG
4,4'-Methylenebis(2-Chloroanil			0.138	0.163	0.188	0.184	0.178	0.180	0.172	11	AVG
Chrysene	0.884	0.883	0.909	0.896	0.914	0.895	0.858	0.847	0.886	3	AVG
bis(2-Ethylhexyl)phthalate			0.492	0.563	0.682	0.624	0.601	0.604	0.594	11	AVG
6-Methylchrysene		0.554	0.580	0.612	0.668	0.657	0.641	0.646	0.623	7	AVG
Dibenz(a,h)acridine			0.535	0.637	0.767	0.762	0.791	0.798	0.715	15	AVG
Di-n-octylphthalate			0.965	1.220	1.588	1.494	1.476	1.477	1.370	17	1STDEG
Dibenz(a,j)acridine			0.621	0.736	0.790	0.823	0.829	0.803	0.767	10	AVG
7,12-Dimethylbenz[a]anthracene		0.431	0.484	0.527	0.494	0.570	0.575	0.578	0.523	11	AVG
Benzo(b)fluoranthene	1.110	1.157	1.127	1.166	1.208	1.215	1.237	1.202	1.178	4	AVG
Benzo(k)fluoranthene	1.192	1.174	1.167	1.199	1.202	1.233	1.168	1.168	1.188	2	AVG
Benzo(a)pyrene	1.047	1.096	1.029	1.032	1.124	1.128	1.102	1.090	1.081	4	AVG
3-Methylcholanthrene		0.432	0.456	0.496	0.548	0.552	0.556	0.559	0.515	10	AVG
NDPA as diphenylamine		0.647	0.641	0.632	0.651	0.618	0.593	0.574	0.622	5	AVG
Indeno(1,2,3-cd)pyrene	0.806	0.767	0.875	0.959	1.037	1.052	1.061	1.030	0.948	12	AVG
Dibenz(a,h)anthracene	0.686	0.626	0.738	0.803	0.873	0.909	0.906	0.883	0.803	14	AVG
Benzo(g,h,i)perylene	0.723	0.759	0.749	0.785	0.841	0.859	0.857	0.821	0.799	7	AVG
Diallate TRANS/CIS		0.422	0.431	0.428	0.454	0.420	0.399	0.391	0.421	5	AVG
2-Fluorophenol		1.513	1.464	1.431	1.556	1.478	1.481	1.469	1.485	3	AVG
Phenol-d5		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Phenol-d6		2.121	2.041	1.991	2.140	2.018	1.997	1.964	2.039	3	AVG
Nitrobenzene-d5		0.483	0.457	0.451	0.479	0.461	0.449	0.441	0.460	3	AVG
2-Fluorobiphenyl		1.405	1.305	1.252	1.266	1.212	1.179	1.122	1.249	7	AVG
2,4,6-Tribromophenol		0.111	0.120	0.128	0.141	0.132	0.141	0.147	0.131	10	AVG
Terphenyl-d14		0.646	0.625	0.614	0.642	0.618	0.610	0.609	0.623	2	AVG

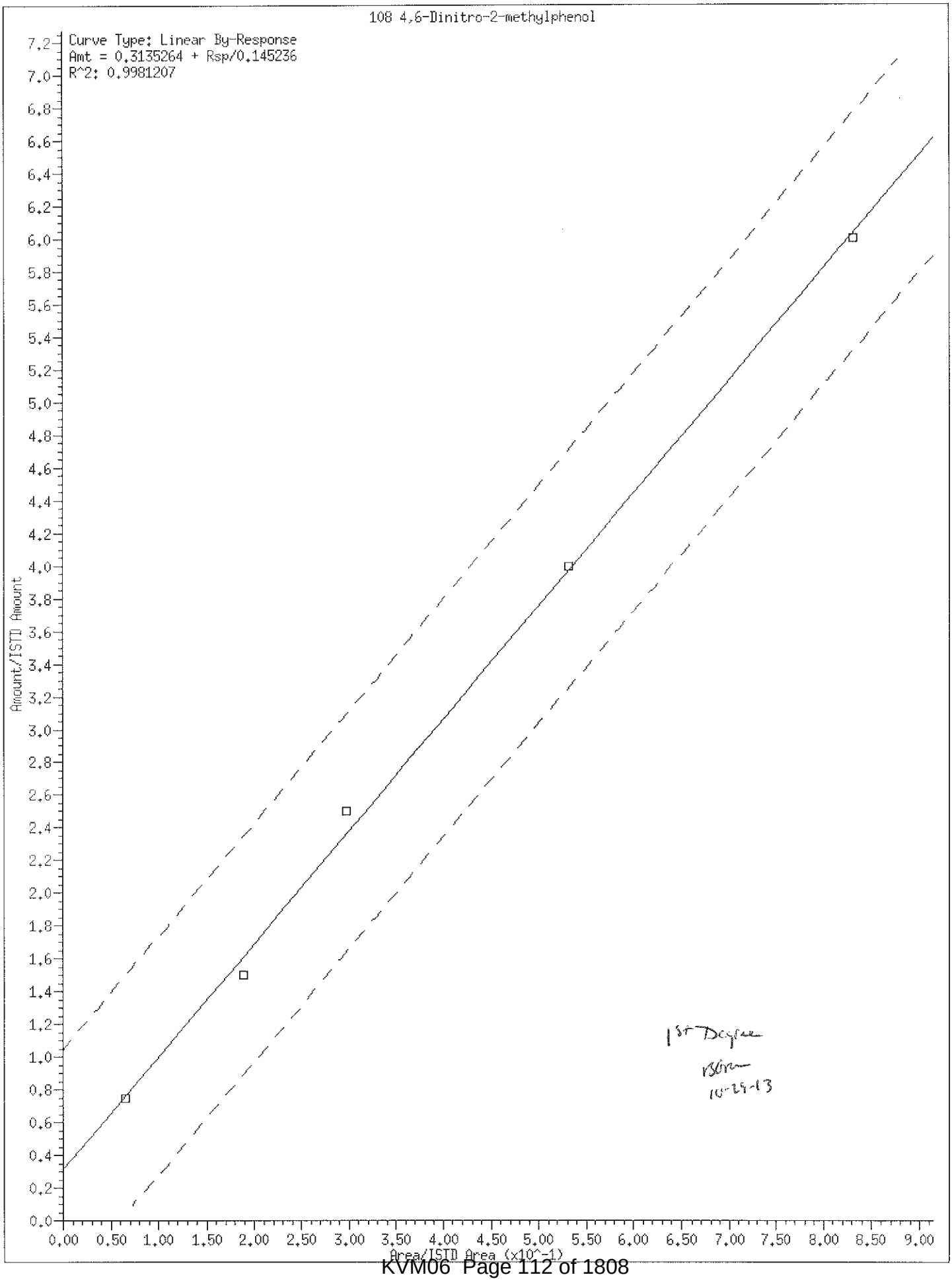
Average %RSD 7

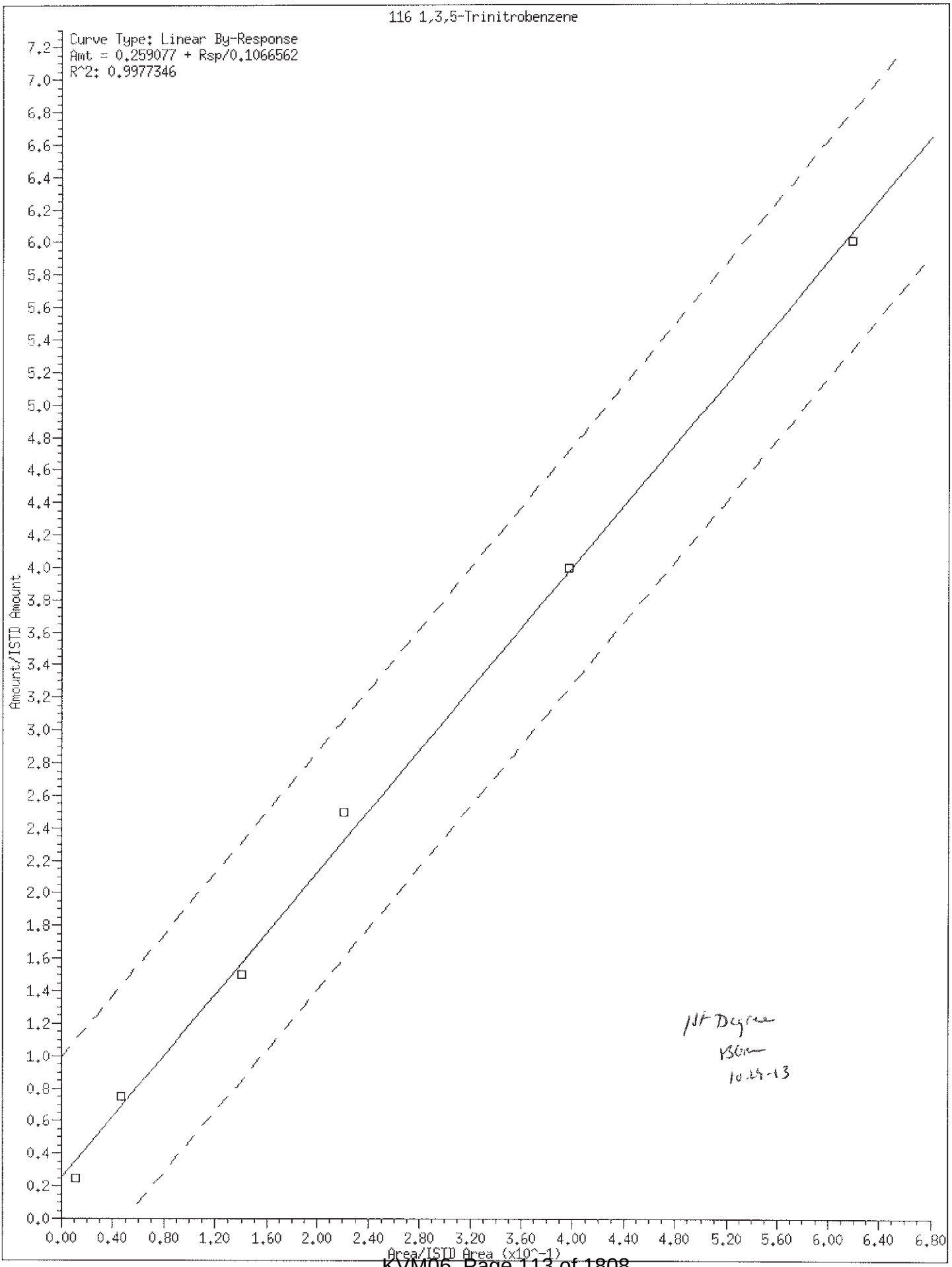
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid, Pentachlorophenol and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.

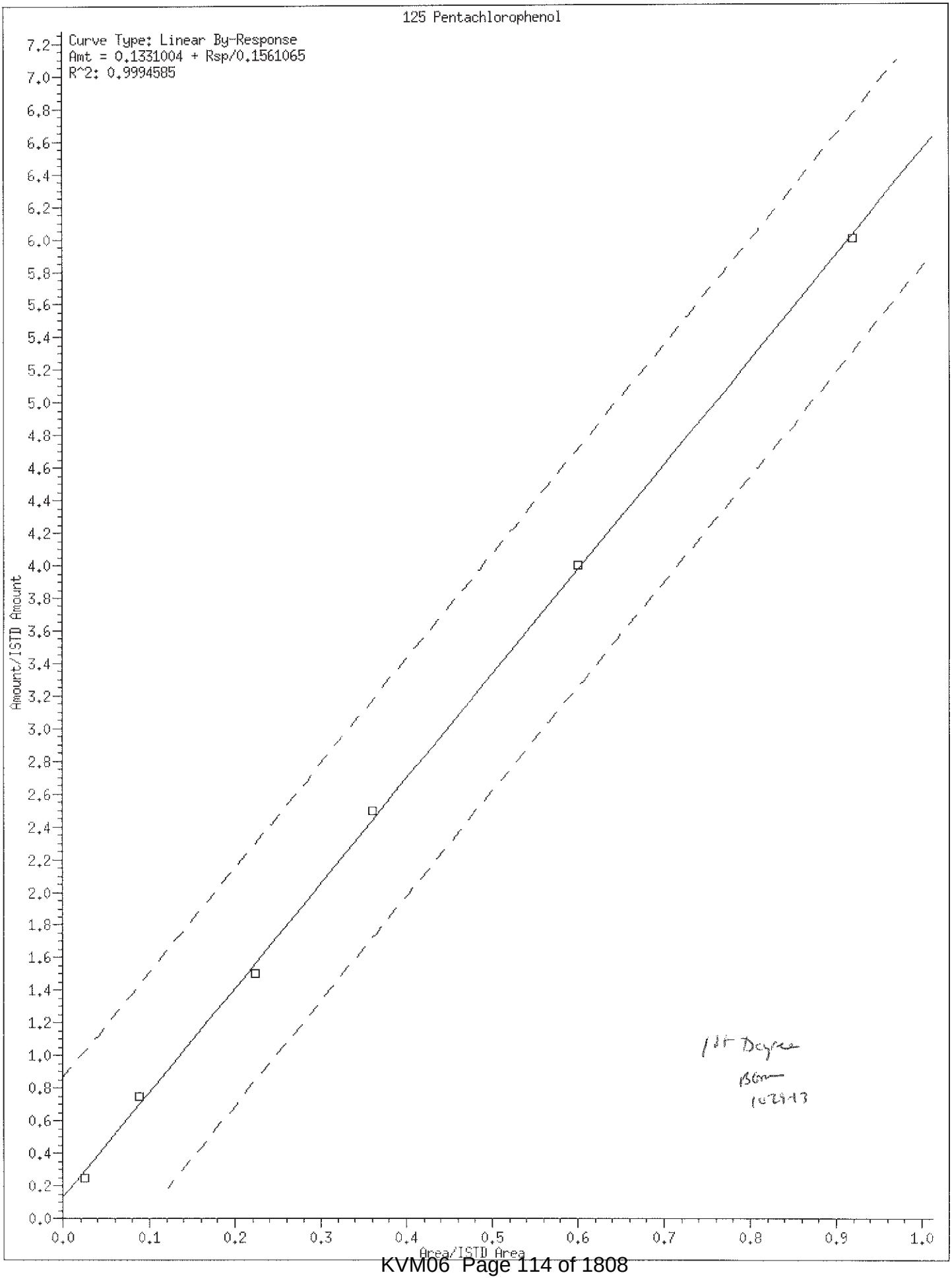

47 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.6810251 + Rsp/0.3682104
R^2: 0.9901664
Amount/ISTD Amount
Area/ISTD Area
1st Degree
10-25-13


85 1,4-Dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.1070964 + Rsp/0.2002245
R^2: 0.9978041
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BSM
10-29-13

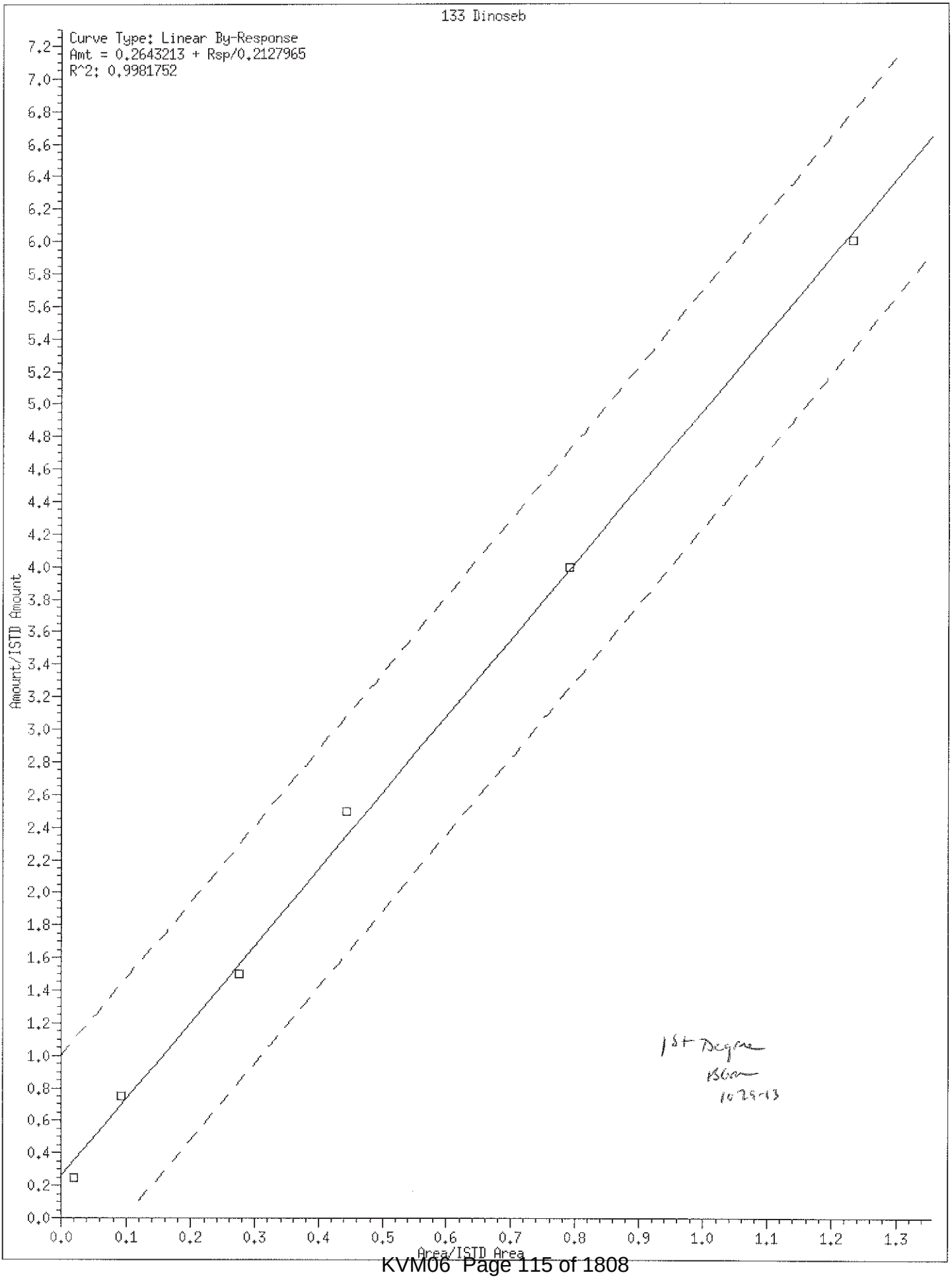

94 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0.7582999 + Rsp/0.1955516
R^2: 0.9914235
Amount/ISTD Amount
Area/ISTD Area
1st Degree
RSam
10-29-13

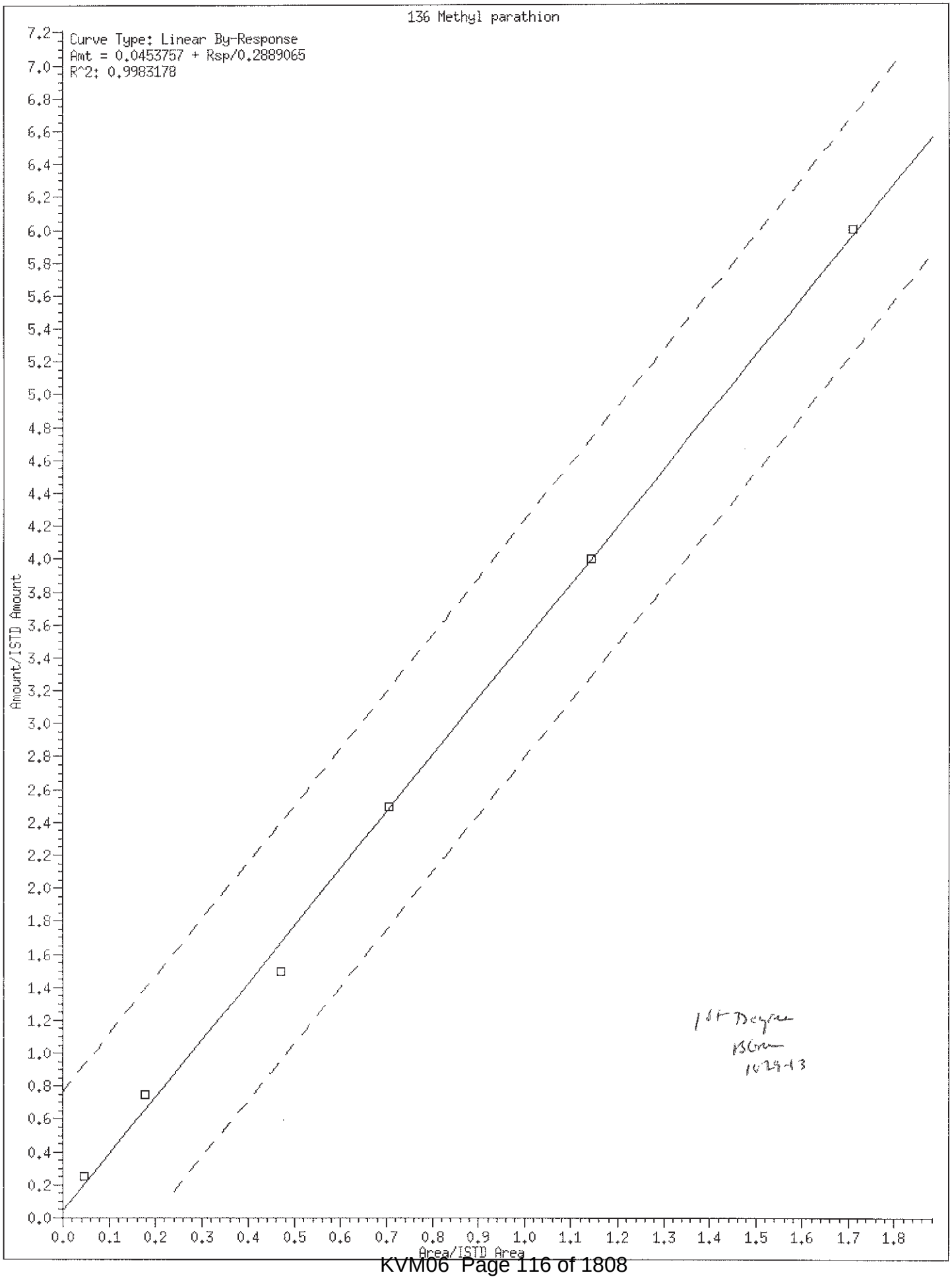

108 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.3135264 + Rsp/0.145236
R^2: 0.9981207
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
RSO
10-29-13

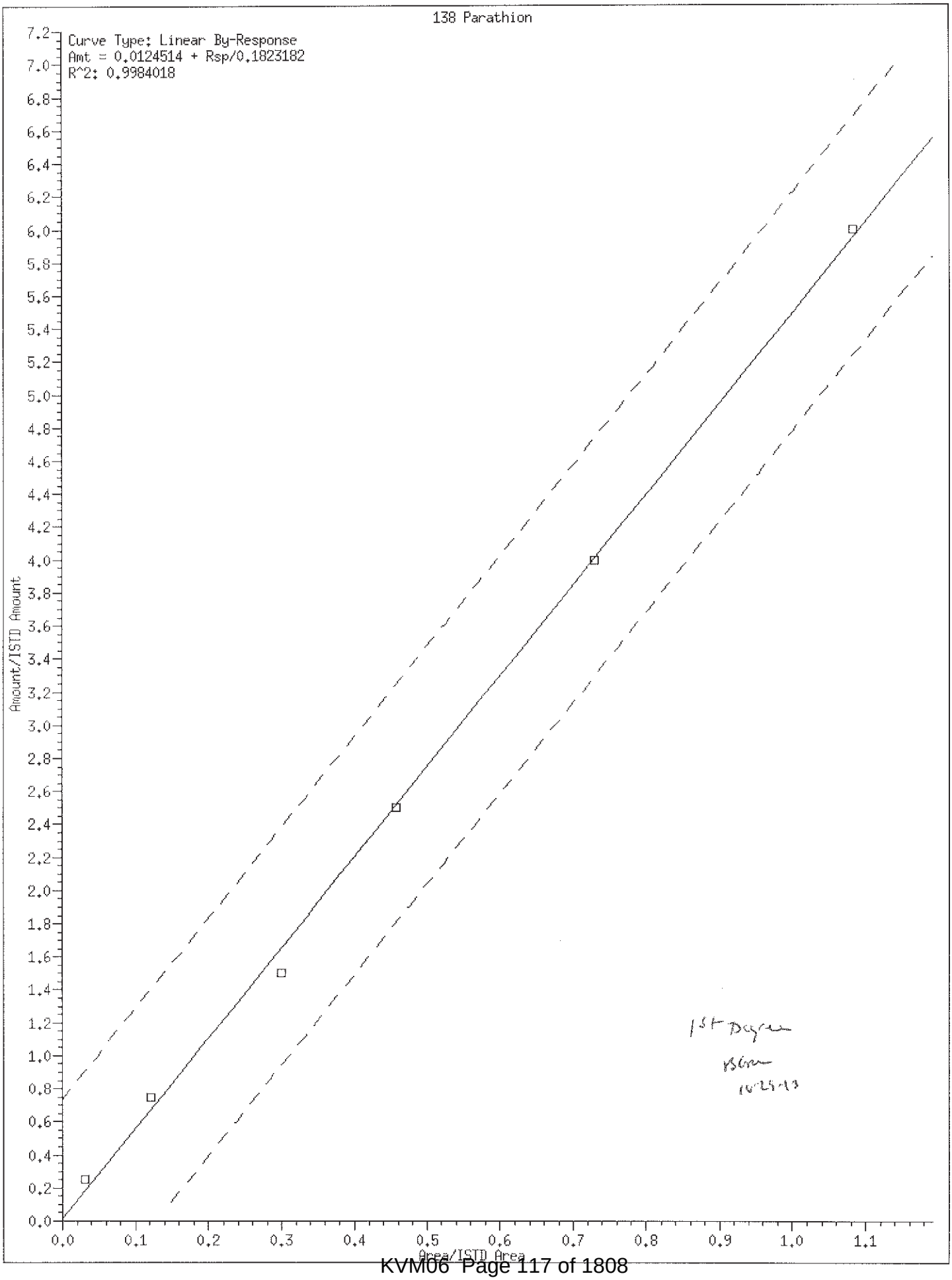

116 1,3,5-Trinitrobenzene
Curve Type: Linear By-Response
Amt = 0.259077 + Rsp/0.1066562
R^2: 0.9977346
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
0.00
0.40
0.80
1.20
1.60
2.00
2.40
2.80
3.20
3.60
4.00
4.40
4.80
5.20
5.60
6.00
6.40
6.80
1st Degree
RSO
10-24-13

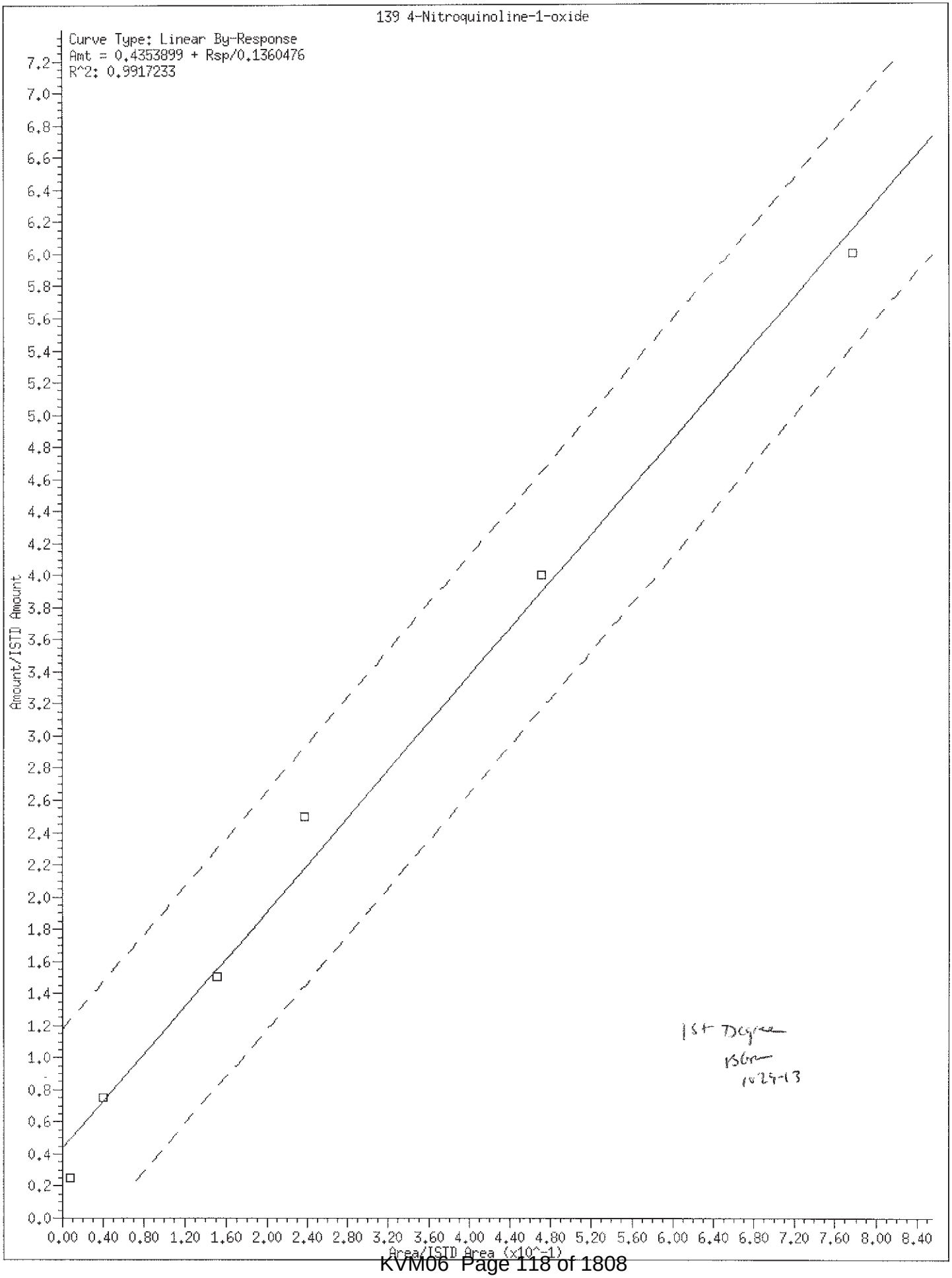


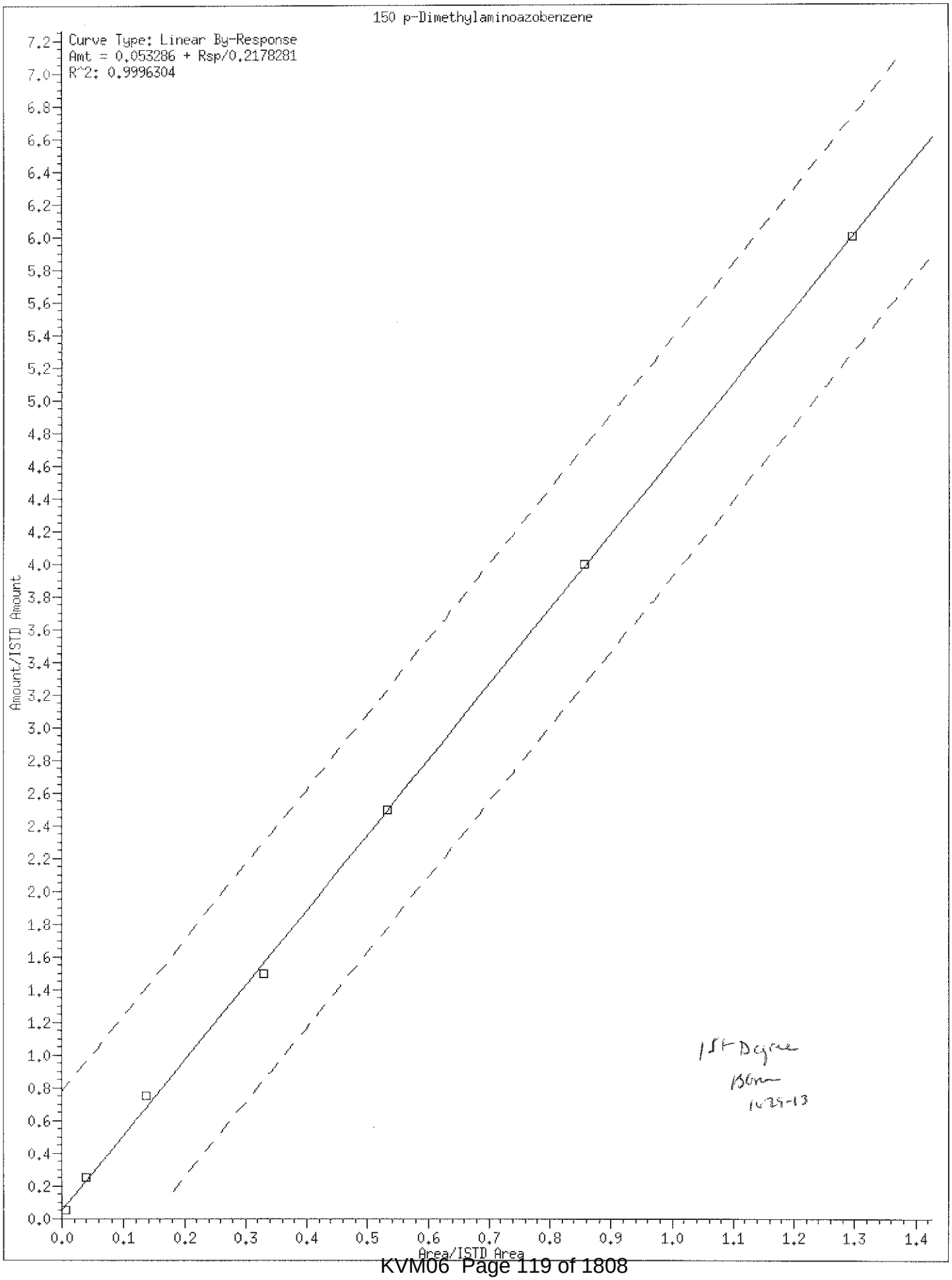
1st Degree
BGM
10/29/13

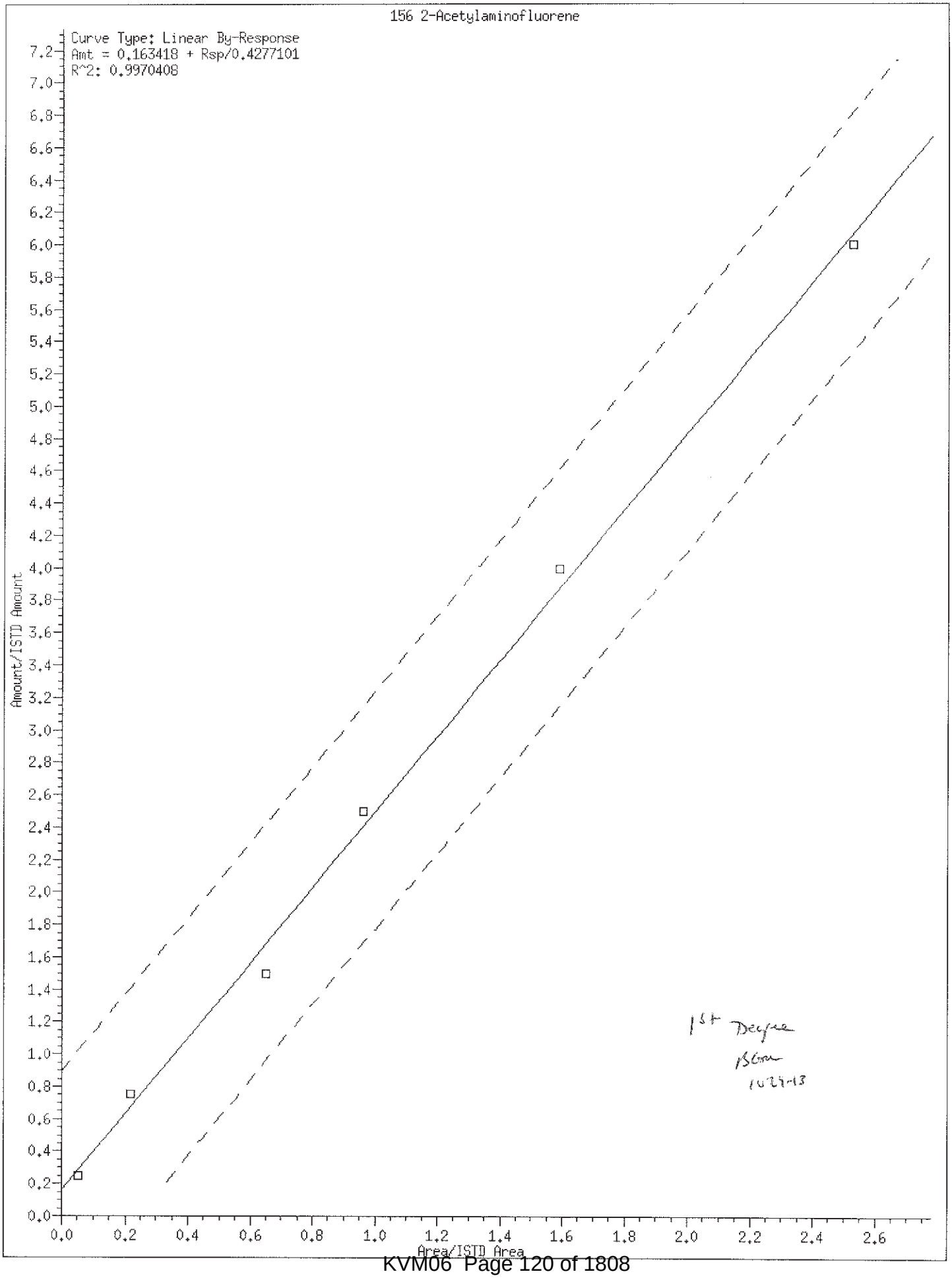

133 Dinoseb
Curve Type: Linear By-Response
Amt = 0.2643213 + Rsp/0.2127965
R^2: 0.9981752
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGA
10-29-13

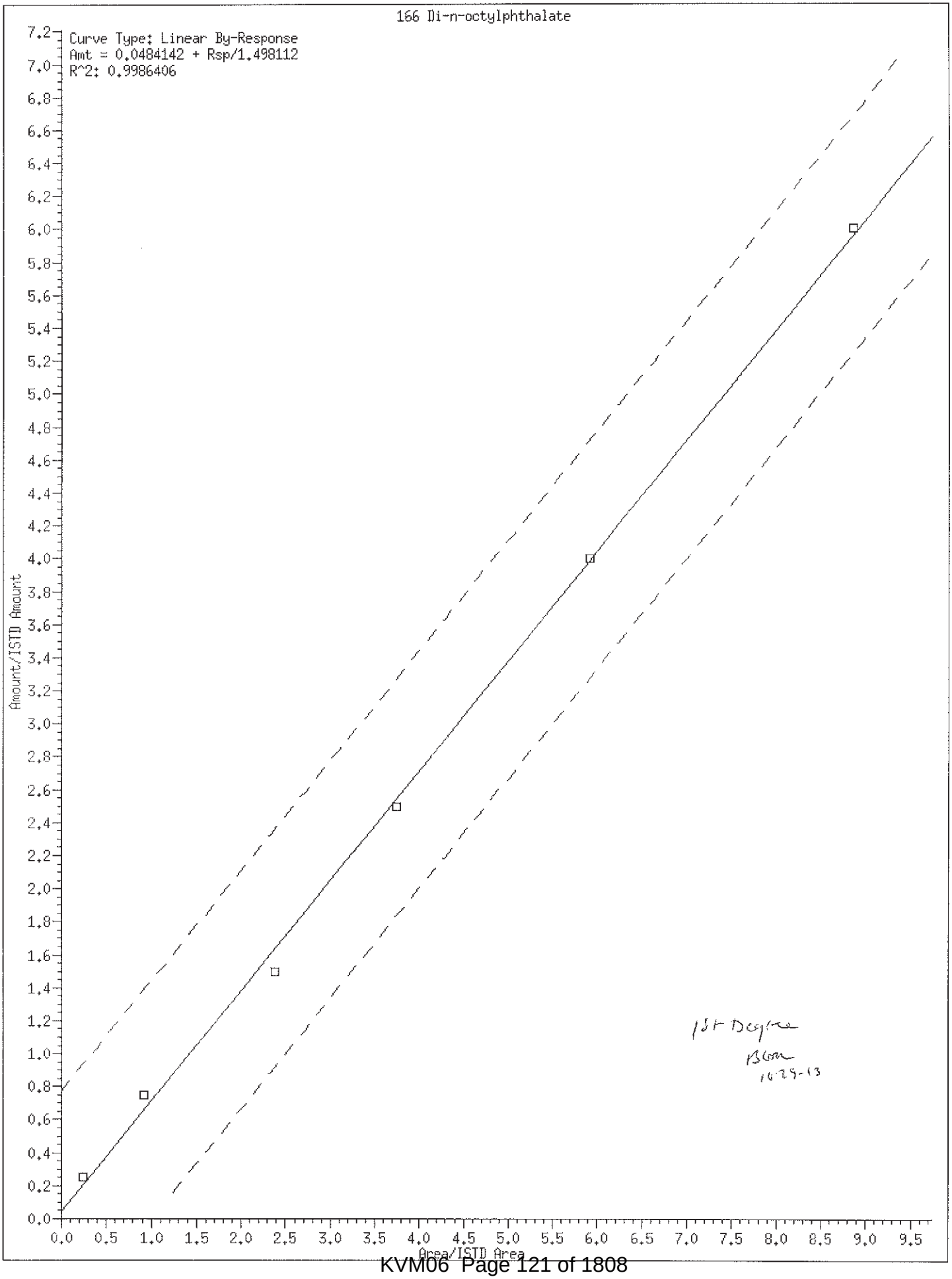

136 Methyl parathion
Curve Type: Linear By-Response
Amt = 0.0453757 + Rsp/0.2889065
R^2: 0.9983178
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BCm
10-29-13


138 Parathion
Curve Type: Linear By-Response
Amt = 0.0124514 + Rsp/0.1823182
R^2: 0.9984018
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
10-25-13


139 4-Nitroquinoline-1-oxide
Curve Type: Linear By-Response
Amt = 0.4353899 + Rsp/0.1360476
R^2: 0.9917233
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
1st Degree
BGM
10-29-13


150 p-Dimethylaminoazobenzene
Curve Type: Linear By-Response
Amt = 0.053286 + Rsp/0.2178281
R^2: 0.9996304
Amount/ISTD Amount
Area/ISTD Area
1st Degree
150mm
10-29-13


156 2-Acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.163418 + Rsp/0.4277101
R^2: 0.9970408
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
1st Degree
BCom
10-23-13


166 Di-n-octylphthalate
Curve Type: Linear By-Response
Amt = 0.0484142 + Rsp/1.498112
R^2: 0.9986406
Amount/ISTD Amount
Area/ISTD Area
1st Degree
BGM
1629-13

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d SSTD7.5
/chem/HP19760.i/13oct29.b/dj1182.d SSTD0.125
/chem/HP19760.i/13oct29.b/dj1183.d SSTD30
/chem/HP19760.i/13oct29.b/dj1184.d SSTD0.25
/chem/HP19760.i/13oct29.b/dj1185.d SSTD1.25
/chem/HP19760.i/13oct29.b/dj1186.d SSTD3.75
/chem/HP19760.i/13oct29.b/dj1187.d SSTD12.5
/chem/HP19760.i/13oct29.b/dj1188.d SSTD20

Area Summary

Internal Standard Name	File ID: dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d	Avg. Area	%RSD
1,4-Dichlorobenzene-d4	151909	172486	136880	126889	138331	140563	139035	134726	142602	10
Naphthalene-d8	608104	675195	543087	495519	535285	552831	538194	531119	559917	10
Acenaphthene-d10	340173	386904	309287	282862	303956	315878	311099	302476	319079	10
Phenanthrene-d10	574655	662675	533001	486096	512509	538913	522070	525961	544485	10
Pyrene-d10	743541	830589	680467	607939	649692	695223	668822	677846	694265	10
Perylene-d12	528760	590527	487829	409698	447306	486848	459604	467732	484788	11

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

BSG 10-29-13

Internal Standard Name	File ID: dj1181.d	dj1182.d	dj1183.d	dj1184.d	dj1185.d	dj1186.d	dj1187.d	dj1188.d
1,4-Dichlorobenzene-d4	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029
Naphthalene-d8	7.987	7.987	7.993	7.987	7.987	7.987	7.993	7.993
Acenaphthene-d10	10.797	10.791	10.797	10.791	10.791	10.791	10.797	10.797
Phenanthrene-d10	12.691	12.685	12.697	12.685	12.685	12.685	12.691	12.691
Pyrene-d10	14.649	14.644	14.649	14.644	14.644	14.644	14.644	14.650
Perylene-d12	19.120	19.114	19.126	19.114	19.114	19.114	19.114	19.120

Comments: _____

Report generated on 10/29/2013 at 21:53

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	12.81	3	30	YES
N-Nitrosodimethylamine	12.50	13.15	5	30	YES
Pyridine	12.50	11.90	-5	30	YES
2-Picoline	12.50	12.58	1	30	YES
N-Nitrosomethylethylamine	12.50	12.97	4	30	YES
Methyl methanesulfonate	12.50	13.65	9	30	YES
N-Nitrosodiethylamine	12.50	12.86	3	30	YES
Ethyl methanesulfonate	12.50	13.05	4	30	YES
Phenol	12.50	12.63	1	30	YES
Aniline	12.50	12.94	4	30	YES
bis(2-Chloroethyl)ether	12.50	12.52	0	30	YES
2-Chlorophenol	12.50	12.95	4	30	YES
1,3-Dichlorobenzene	12.50	12.74	2	30	YES
1,4-Dichlorobenzene	12.50	12.73	2	30	YES
Benzyl alcohol	12.50	13.05	4	30	YES
1,2-Dichlorobenzene	12.50	12.66	1	30	YES
Indene	12.50	11.89	-5	30	YES
2-Methylphenol	12.50	12.66	1	30	YES
2,2'-oxybis(1-Chloropropane	12.50	11.85	-5	30	YES
bis(2-Chloroisopropyl)ether	12.50	11.85	-5	30	YES
N-Nitrosopyrrolidine	12.50	13.14	5	30	YES
Acetophenone	12.50	12.38	-1	30	YES
N-Nitroso-di-n-propylamine	12.50	12.45	0	30	YES
N-Nitrosomorpholine	12.50	12.33	-1	30	YES
4-Methylphenol	12.50	12.58	1	30	YES
o-Toluidine	12.50	12.43	-1	30	YES
Hexachloroethane	12.50	12.67	1	30	YES
Nitrobenzene	12.50	12.46	0	30	YES
N-Nitrosopiperidine	12.50	13.34	7	30	YES
Isophorone	12.50	13.18	5	30	YES
2-Nitrophenol	12.50	13.55	8	30	YES
2,4-Dimethylphenol	12.50	12.95	4	30	YES
O,O,O-triethylphosphorothio	12.50	12.83	3	30	YES
Benzoic acid	25.00	22.14	-11	30	YES
bis(2-Chloroethoxy)methane	12.50	12.79	2	30	YES
2,4-Dichlorophenol	12.50	13.47	8	30	YES
1,2,4-Trichlorobenzene	12.50	13.27	6	30	YES

NC = Could not calculate

BSon 10-29-13

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Naphthalene	12.50	12.69	2	30	YES
4-Chloroaniline	12.50	13.20	6	30	YES
2,6-Dichlorophenol	12.50	13.42	7	30	YES
Hexachloropropene	12.50	14.21	14	30	YES
Hexachlorobutadiene	12.50	13.04	4	30	YES
Quinoline	12.50	12.68	1	30	YES
N-Nitrosodi-n-butylamine	12.50	12.00	-4	30	YES
4-Chloro-3-methylphenol	12.50	13.26	6	30	YES
Safrole	12.50	13.42	7	30	YES
2-Methylnaphthalene	12.50	12.56	0	30	YES
1-Methylnaphthalene	12.50	13.06	5	30	YES
Hexachlorocyclopentadiene	25.00	32.20	29	30	NO
1,2,4,5-Tetrachlorobenzene	12.50	12.53	0	30	YES
2,4,6-Trichlorophenol	12.50	13.16	5	30	YES
2,4,5-Trichlorophenol	12.50	13.20	6	30	YES
Isosafrole	12.50	13.37	7	30	YES
1,1'-Biphenyl	12.50	12.23	-2	30	YES
2-Chloronaphthalene	12.50	12.29	-2	30	YES
Diphenyl ether	12.50	12.54	0	30	YES
2-Nitroaniline	12.50	13.42	7	30	YES
1,4-Naphthoquinone	15.63	15.93	2	30	YES
1,4-Dinitrobenzene	12.50	12.46	0	30	YES
Dimethylphthalate	12.50	12.57	1	30	YES
1,3-Dinitrobenzene	12.50	13.22	6	30	YES
2,6-Dinitrotoluene	12.50	13.50	8	30	YES
Acenaphthylene	12.50	13.55	8	30	YES
3-Nitroaniline	12.50	13.57	9	30	YES
Acenaphthene	12.50	12.33	-1	30	YES
2,4-Dinitrophenol	25.00	24.19	-3	30	YES
Pentachlorobenzene	12.50	12.67	1	30	YES
4-Nitrophenol	12.50	13.36	7	30	YES
Dibenzofuran	12.50	12.48	0	30	YES
2,4-Dinitrotoluene	12.50	13.66	9	30	YES
1-Naphthylamine	25.00	24.62	-2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.94	12	30	YES
2-Naphthylamine	25.00	24.01	-4	30	YES
Diethylphthalate	12.50	12.76	2	30	YES

→ OK to use, not a cc
< 50%
[illegible]
10-29-13

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluorene	12.50	12.62	1	30	YES
Thionazin	12.50	11.96	-4	30	YES
4-Chlorophenyl-phenylether	12.50	12.40	-1	30	YES
5-Nitro-o-toluidine	12.50	13.20	6	30	YES
4-Nitroaniline	12.50	12.89	3	30	YES
4,6-Dinitro-2-methylphenol	12.50	12.86	3	30	YES
N-Nitrosodiphenylamine	12.50	13.29	6	30	YES
1,2-Diphenylhydrazine	12.50	12.44	0	30	YES
Tetraethyldithiopyrophospha	12.50	12.48	0	30	YES
1,3,5-Trinitrobenzene	12.50	12.77	2	30	YES
Diallate (peak 1)	9.38	9.16	-2	30	YES
Phorate	12.50	12.15	-3	30	YES
Phenacetin	12.50	13.76	10	30	YES
4-Bromophenyl-phenylether	12.50	12.70	2	30	YES
Diallate (peak 2)	3.13	3.10	-1	30	YES
Hexachlorobenzene	12.50	12.53	0	30	YES
Dimethoate	12.50	13.02	4	30	YES
Pentachlorophenol	12.50	12.57	1	30	YES
Pentachloronitrobenzene	12.50	13.79	10	30	YES
4-Aminobiphenyl	12.50	14.36	15	30	YES
Pronamide	12.50	12.93	3	30	YES
Phenanthrene	12.50	12.27	-2	30	YES
Dinoseb	12.50	13.11	5	30	YES
Anthracene	12.50	12.90	3	30	YES
Carbazole	12.50	13.08	5	30	YES
Methyl parathion	12.50	13.14	5	30	YES
Di-n-butylphthalate	12.50	13.10	5	30	YES
Parathion	12.50	12.45	0	30	YES
4-Nitroquinoline-1-oxide	150.00	168.75	13	30	YES
Isodrin	12.50	12.54	0	30	YES
Fluoranthene	12.50	13.25	6	30	YES
Benzidine	62.50	60.48	-3	30	YES
Pyrene	12.50	12.38	-1	30	YES
p-Dimethylaminoazobenzene	12.50	13.36	7	30	YES
Chlorobenzilate	12.50	12.37	-1	30	YES
3,3'-Dimethylbenzidine	25.00	25.93	4	30	YES
Butylbenzylphthalate	12.50	13.20	6	30	YES

NC = Could not calculate

Comments:

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1191.d

ICV SAMPLE ID: ICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2-Acetylaminofluorene	12.50	12.60	1	30	YES
Benzo(a)anthracene	12.50	13.47	8	30	YES
3,3'-Dichlorobenzidine	12.50	12.82	3	30	YES
4,4'-Methylenebis(2-Chloroa	12.50	12.73	2	30	YES
Chrysene	12.50	12.86	3	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.24	6	30	YES
6-Methylchrysene	12.50	12.50	0	30	YES
Di-n-octylphthalate	12.50	13.15	5	30	YES
Benzo(b)fluoranthene	12.50	13.52	8	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	13.66	9	30	YES
Benzo(k)fluoranthene	12.50	13.14	5	30	YES
Benzo(a)pyrene	12.50	13.57	9	30	YES
3-Methylcholanthrene	12.50	13.83	11	30	YES
Dibenz(a,h)acridine	12.50	13.41	7	30	YES
Dibenz(a,j)acridine	12.50	13.26	6	30	YES
Indeno(1,2,3-cd)pyrene	12.50	14.40	15	30	YES
Dibenz(a,h)anthracene	12.50	14.44	16	30	YES
Benzo(g,h,i)perylene	12.50	13.92	11	30	YES
Diallate TRANS/CIS	12.50	12.24	-2	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.

Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270C MINI File ID: dj1192.d

ICV SAMPLE ID: BASICV2463 BATCH: 13OCT29026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	12.50	13.17	5	30	YES
Caprolactam	12.50	13.12	5	30	YES
Atrazine	12.50	13.46	8	30	YES

BGM 10-29-13

NC = Could not calculate

Comments:

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	N-Nitrosodimethylamine	1.211	1.007	24.940	30.0	-17
	Pyridine	1.878	1.557	24.870	30.0	-17
	2-Picoline	1.916	1.806	28.280	30.0	-6
	N-Nitrosomethylethylamine	0.916	0.833	27.270	30.0	-9
	Methyl methanesulfonate	0.921	0.835	27.200	30.0	-9
	N-Nitrosodiethylamine	0.910	0.823	27.120	30.0	-10
	Ethyl methanesulfonate	0.829	0.795	28.800	30.0	-4
	Benzaldehyde	1.231	1.283	41.620	30.0	39
	Aniline	3.046	2.829	27.860	30.0	-7
*	Phenol	2.569	2.454	28.660	30.0	-4*
	bis(2-Chloroethyl)ether	1.824	1.707	28.080	30.0	-6
	2-Chlorophenol	1.602	1.495	27.980	30.0	-7
	1,3-Dichlorobenzene	1.617	1.574	29.210	30.0	-3
*	1,4-Dichlorobenzene	1.650	1.596	29.020	30.0	-3*
	Benzyl alcohol	1.253	1.148	27.490	30.0	-8
	1,2-Dichlorobenzene	1.549	1.525	29.540	30.0	-2
	2-Methylphenol	1.705	1.620	28.500	30.0	-5
	2,2'-oxybis(1-Chloropropane)	2.244	1.914	25.590	30.0	-15
	bis(2-Chloroisopropyl)ether	2.250	1.914	25.520	30.0	-15
	N-Nitrosopyrrolidine	1.020	0.990	29.090	30.0	-3
	Acetophenone	2.542	2.346	27.680	30.0	-8
#	N-Nitroso-di-n-propylamine	1.627	1.421	26.200	30.0	-13#
	N-Nitrosomorpholine	1.159	0.992	25.660	30.0	-14
	4-Methylphenol	2.018	1.872	27.830	30.0	-7
	o-Toluidine	2.912	2.768	28.510	30.0	-5
	Hexachloroethane	0.628	0.594	28.380	30.0	-5
	Nitrobenzene	0.457	0.402	26.390	30.0	-12
	N-Nitrosopiperidine	0.203	0.193	28.600	30.0	-5
	Isophorone	0.830	0.744	26.880	30.0	-10
*	2-Nitrophenol	0.159	0.167	31.470	30.0	5*
	2,4-Dimethylphenol	0.408	0.378	27.770	30.0	-7
	O,O,O-triethylphosphorothioate	0.170	0.171	30.190	30.0	1
	bis(2-Chloroethoxy)methane	0.504	0.442	26.280	30.0	-12
	Benzoic acid	0.265	0.243	36.790	40.0	-8
*	2,4-Dichlorophenol	0.278	0.284	30.720	30.0	2*
	1,2,4-Trichlorobenzene	0.292	0.289	29.660	30.0	-1

11-18-2013

FORM VII SV-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Naphthalene	1.061	1.026	29.000	30.0	-3
	4-Chloroaniline	0.462	0.440	28.520	30.0	-5
	2,6-Dichlorophenol	0.262	0.269	30.890	30.0	3
	Hexachloropropene	0.166	0.162	29.400	30.0	-2
*	Hexachlorobutadiene	0.147	0.141	28.790	30.0	-4*
	Caprolactam	0.154	0.147	28.760	30.0	-4
	N-Nitrosodi-n-butylamine	0.400	0.376	28.220	30.0	-6
*	4-Chloro-3-methylphenol	0.355	0.342	28.930	30.0	-4*
	Safrole	0.281	0.283	30.210	30.0	1
	2-Methylnaphthalene	0.753	0.739	29.450	30.0	-2
	1-Methylnaphthalene	0.689	0.667	29.050	30.0	-3
#	Hexachlorocyclopentadiene	0.206	0.178	25.860	30.0	-14#
	1,2,4,5-Tetrachlorobenzene	0.477	0.476	29.960	30.0	0
	cis-Isosafrole	0.766	0.710	3.060	3.3	-7
*	2,4,6-Trichlorophenol	0.311	0.324	31.220	30.0	4*
	2,4,5-Trichlorophenol	0.339	0.361	31.920	30.0	6
	trans-Isosafrole	0.542	0.512	25.230	26.7	-6
	Isosafrole	0.483	0.456	28.350	30.0	-6
	1,1'-Biphenyl	1.550	1.449	28.040	30.0	-7
	2-Chloronaphthalene	1.129	1.234	32.800	30.0	9
	Diphenyl ether	0.772	0.757	29.440	30.0	-2
	2-Nitroaniline	0.368	0.365	29.730	30.0	-1
	1,4-Naphthoquinone	0.475	0.458	28.910	30.0	-4
	1,4-Dinitrobenzene	0.143	0.158	31.170	30.0	4
	Dimethylphthalate	1.343	1.292	28.850	30.0	-4
	1,3-Dinitrobenzene	0.194	0.205	29.990	30.0	0
	2,6-Dinitrotoluene	0.280	0.286	30.630	30.0	2
	Acenaphthylene	1.762	1.681	28.620	30.0	-5
	3-Nitroaniline	0.342	0.350	30.770	30.0	3
*	Acenaphthene	1.219	1.154	28.400	30.0	-5*
#	2,4-Dinitrophenol	0.091	0.109	45.340	40.0	13#
	Pentachlorobenzene	0.412	0.420	30.600	30.0	2
#	4-Nitrophenol	0.212	0.207	29.310	30.0	-2#
	Dibenzofuran	1.671	1.615	29.010	30.0	-3
	2,4-Dinitrotoluene	0.361	0.374	31.070	30.0	4
	1-Naphthylamine	1.373	1.312	28.660	30.0	-4

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	2,3,4,6-Tetrachlorophenol	0.239	0.260	32.650	30.0	9
	2-Naphthylamine	1.405	1.359	29.020	30.0	-3
	Diethylphthalate	1.387	1.309	28.310	30.0	-6
	Thionazin	0.306	0.269	26.400	30.0	-12
	Fluorene	1.437	1.380	28.800	30.0	-4
	4-Chlorophenyl-phenylether	0.639	0.632	29.650	30.0	-1
	5-Nitro-o-toluidine	0.380	0.395	31.200	30.0	4
	4-Nitroaniline	0.384	0.368	28.720	30.0	-4
	4,6-Dinitro-2-methylphenol	0.077	0.090	33.190	30.0	11
*	N-Nitrosodiphenylamine (1)	0.670	0.655	29.320	30.0	-2*
	1,2-Diphenylhydrazine	0.960	0.820	25.610	30.0	-15
	Tetraethyldithiopyrophosphate	0.137	0.114	25.060	30.0	-16
	1,3,5-Trinitrobenzene	0.051	0.053	29.460	30.0	-2
	Diallate (peak 1)	0.491	0.426	19.520	22.5	-13
	Phorate	0.592	0.502	25.430	30.0	-15
	Phenacetin	0.463	0.406	26.260	30.0	-12
	4-Bromophenyl-phenylether	0.185	0.186	30.260	30.0	1
	Diallate (peak 2)	0.213	0.182	6.410	7.5	-15
	Hexachlorobenzene	0.182	0.185	30.480	30.0	2
	Dimethoate	0.362	0.324	26.870	30.0	-10
	Diallate TRANS/CIS	0.422	0.365	25.980	30.0	-13
	Atrazine	0.215	0.196	27.340	30.0	-9
*	Pentachlorophenol	0.101	0.109	32.340	30.0	8*
	Pentachloronitrobenzene	0.079	0.076	28.730	30.0	-4
	4-Aminobiphenyl	0.725	0.727	30.100	30.0	0
	Pronamide	0.349	0.321	27.550	30.0	-8
	Dinoseb	0.104	0.116	30.730	30.0	2
	Phenanthrene	1.163	1.109	28.610	30.0	-5
	Anthracene	1.197	1.152	28.860	30.0	-4
	Carbazole	1.168	1.111	28.520	30.0	-5
	Methyl parathion	0.217	0.218	28.370	30.0	-5
	Di-n-butylphthalate	1.378	1.233	26.830	30.0	-11
	Parathion	0.160	0.147	26.720	30.0	-11
	4-Nitroquinoline-1-oxide	0.079	0.064	24.150	30.0	-20
	Isodrin	0.131	0.119	27.240	30.0	-9
*	Fluoranthene	1.300	1.244	28.690	30.0	-4*

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP10623 Calibration Date: 11/18/13 Time: 05:29

Lab File ID: ck0621.d Init. Calib. Date(s): 11/12/13 11/12/13

Init. Calib. Times(s): 09:38 12:38

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

	COMPOUND	RRF	RRF321	ACTUAL CONC.	TRUE CONC.	% DRIFT
	Benzidine	0.819	0.802	88.200	90.0	-2
	Pyrene	1.111	1.080	29.180	30.0	-3
	p-Dimethylaminoazobenzene	0.216	0.208	28.780	30.0	-4
	Chlorobenzilate	0.337	0.312	27.790	30.0	-7
	3,3'-Dimethylbenzidine	0.684	0.726	31.820	30.0	6
	Butylbenzylphthalate	0.530	0.482	27.290	30.0	-9
	2-Acetylaminofluorene	0.480	0.451	28.170	30.0	-6
	3,3'-Dichlorobenzidine	0.386	0.385	29.870	30.0	0
	4,4'-Methylenebis(2-Chloroanil	0.189	0.189	30.130	30.0	0
	Benzo(a)anthracene	1.024	0.988	28.930	30.0	-4
	Chrysene	0.988	0.971	29.480	30.0	-2
	bis(2-Ethylhexyl)phthalate	0.735	0.650	26.530	30.0	-12
	6-Methylchrysene	0.729	0.712	29.310	30.0	-2
	Dibenz(a,h)acridine	0.866	0.843	29.220	30.0	-3
*	Di-n-octylphthalate	1.510	1.248	24.790	30.0	-17*
	Dibenz(a,j)acridine	0.996	1.009	30.410	30.0	1
	7,12-Dimethylbenz[a]anthracene	0.567	0.554	29.270	30.0	-2
	Quinoline	0.731	0.717	29.420	30.0	-2
	Benzo(b)fluoranthene	1.221	1.224	30.070	30.0	0
	Benzo(k)fluoranthene	1.246	1.163	28.010	30.0	-7
*	Benzo(a)pyrene	1.192	1.124	28.290	30.0	-6*
	3-Methylcholanthrene	0.597	0.575	28.860	30.0	-4
	NDPA as diphenylamine	0.672	0.655	29.250	30.0	-3
	Indeno(1,2,3-cd)pyrene	1.268	1.275	30.170	30.0	1
	Dibenz(a,h)anthracene	1.061	1.081	30.570	30.0	2
	Benzo(g,h,i)perylene	1.080	1.098	30.480	30.0	2
	Indene	3.460	3.159	27.390	30.0	-9
	1-Chloronaphthalene	1.111	1.087	29.360	30.0	-2
	2-Fluorophenol	1.496	1.444	57.900	60.0	-4
	Phenol-d5	2.202	2.101	57.250	60.0	-5
	Phenol-d6	2.202	2.101	57.250	60.0	-5
	Nitrobenzene-d5	0.431	0.396	55.200	60.0	-8
	2-Fluorobiphenyl	1.258	1.223	58.370	60.0	-3
	2,4,6-Tribromophenol	0.121	0.134	66.520	60.0	11
	Terphenyl-d14	0.715	0.692	58.100	60.0	-3

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP10623.i/13nov12a.b/ck0401.d
/chem/HP10623.i/13nov12a.b/ck0402.d
/chem/HP10623.i/13nov12a.b/ck0403.d
/chem/HP10623.i/13nov12a.b/ck0404.d
/chem/HP10623.i/13nov12a.b/ck0405.d
/chem/HP10623.i/13nov12a.b/ck0406.d
/chem/HP10623.i/13nov12a.b/ck0407.d **
/chem/HP10623.i/13nov12a.b/ck0408.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP10623.i/13nov18.b/ck0621.d

Area Summary

File ID:

Internal Standard Name	ck0621.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	99797	131335	65668	262670	Yes
Naphthalene-d8	463147	603190	301595	1206380	Yes
Acenaphthene-d10	289780	377352	188676	754704	Yes
Phenanthrene-d10	532095	694958	347479	1389916	Yes
Pyrene-d10	648763	855313	427656	1710626	Yes
Perylene-d12	579092	733981	366990	1467962	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	ck0621.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.053	5.226	Yes
Naphthalene-d8	6.289	6.461	Yes
Acenaphthene-d10	7.998	8.177	Yes
Phenanthrene-d10	9.437	9.622	Yes
Pyrene-d10	10.808	10.999	Yes
Perylene-d12	13.391	13.606	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-18-2013

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.629	0.625	12.410	12.5	-1
N-Nitrosodimethylamine	1.111	0.990	11.140	12.5	-11
Pyridine	1.895	1.668	11.000	12.5	-12
2-Picoline	1.996	1.793	11.230	12.5	-10
N-Nitrosomethylethylamine	0.858	0.774	11.280	12.5	-10
Methyl methanesulfonate	0.981	0.904	11.520	12.5	-8
N-Nitrosodiethylamine	0.824	0.765	11.610	12.5	-7
Ethyl methanesulfonate	0.795	0.747	11.750	12.5	-6
Benzaldehyde	1.426	1.246	10.920	12.5	-13
Aniline	2.907	2.598	11.170	12.5	-11
Phenol	2.360	2.106	11.160	12.5	-11
bis(2-Chloroethyl)ether	1.862	1.655	11.110	12.5	-11
2-Chlorophenol	1.460	1.425	12.200	12.5	-2
1,3-Dichlorobenzene	1.570	1.540	12.260	12.5	-2
1,4-Dichlorobenzene	1.589	1.559	12.270	12.5	-2
Benzyl alcohol	1.033	0.967	11.700	12.5	-6
1,2-Dichlorobenzene	1.486	1.458	12.260	12.5	-2
Indene	2.510	2.406	14.380	15.0	-4
2-Methylphenol	1.465	1.396	11.910	12.5	-5
2,2'-oxybis(1-Chloropropane)	2.312	1.756	9.500	12.5	-24
bis(2-Chloroisopropyl)ether	2.312	1.756	9.500	12.5	-24
N-Nitrosopyrrolidine	0.838	0.768	11.460	12.5	-8
Acetophenone	2.291	2.134	11.650	12.5	-7
N-Nitroso-di-n-propylamine	1.319	1.130	10.720	12.5	-14
N-Nitrosomorpholine	1.040	0.854	10.260	12.5	-18
4-Methylphenol	1.637	1.515	11.570	12.5	-7
o-Toluidine	2.526	2.323	11.490	12.5	-8
Hexachloroethane	0.671	0.636	11.830	12.5	-5
Nitrobenzene	0.488	0.450	11.510	12.5	-8
N-Nitrosopiperidine	0.200	0.194	12.100	12.5	-3
Isophorone	0.832	0.769	11.550	12.5	-8
2-Nitrophenol	0.168	0.189	14.080	12.5	13
2,4-Dimethylphenol	0.407	0.404	12.420	12.5	-1
O,O,O-triethylphosphorothioate	0.181	0.199	13.780	12.5	10
bis(2-Chloroethoxy)methane	0.543	0.492	11.310	12.5	-10
Benzoic acid	0.270	0.178	9.460	12.5	-24

FORM VII SV-1

11-15-15

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dichlorophenol	0.287	0.310	13.470	12.5	8
1,2,4-Trichlorobenzene	0.321	0.342	13.330	12.5	7
Naphthalene	1.066	1.054	12.360	12.5	-1
4-Chloroaniline	0.442	0.439	12.430	12.5	-1
2,6-Dichlorophenol	0.276	0.296	13.430	12.5	7
Hexachloropropene	0.203	0.242	14.920	12.5	19
Hexachlorobutadiene	0.187	0.215	14.350	12.5	15
Quinoline	0.706	0.701	12.410	12.5	-1
Caprolactam	0.128	0.128	12.520	12.5	0
N-Nitrosodi-n-butylamine	0.330	0.362	13.700	12.5	10
4-Chloro-3-methylphenol	0.345	0.353	12.780	12.5	2
Safrole	0.271	0.288	13.260	12.5	6
2-Methylnaphthalene	0.710	0.717	12.620	12.5	1
1-Methylnaphthalene	0.645	0.650	12.600	12.5	1
Hexachlorocyclopentadiene	0.273	0.299	13.680	12.5	9
1,2,4,5-Tetrachlorobenzene	0.580	0.599	12.920	12.5	3
cis-Isosafrole	0.085	0.084	12.330	12.5	-1
2,4,6-Trichlorophenol	0.366	0.402	13.760	12.5	10
2,4,5-Trichlorophenol	0.378	0.412	13.650	12.5	9
trans-Isosafrole	0.478	0.481	12.580	12.5	1
Isosafrole	0.478	0.481	12.580	12.5	1
1,1'-Biphenyl	1.452	1.387	11.940	12.5	-4
2-Chloronaphthalene	1.114	1.104	12.390	12.5	-1
1-Chloronaphthalene	1.098	1.063	12.100	12.5	-3
Diphenyl ether	0.803	0.803	12.490	12.5	0
2-Nitroaniline	0.347	0.379	13.650	12.5	9
1,4-Naphthoquinone	0.479	0.486	12.670	12.5	1
1,4-Dinitrobenzene	0.176	0.210	13.660	12.5	9
Dimethylphthalate	1.260	1.273	12.640	12.5	1
1,3-Dinitrobenzene	0.216	0.237	13.700	12.5	10
2,6-Dinitrotoluene	0.279	0.302	13.520	12.5	8
Acenaphthylene	1.691	1.667	12.330	12.5	-1
3-Nitroaniline	0.320	0.333	12.990	12.5	4
Acenaphthene	1.163	1.124	12.080	12.5	-3
2,4-Dinitrophenol	0.138	0.172	14.810	12.5	18
Pentachlorobenzene	0.464	0.511	13.750	12.5	10

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Nitrophenol	0.204	0.221	13.530	12.5	8
Dibenzofuran	1.654	1.662	12.560	12.5	0
2,4-Dinitrotoluene	0.358	0.401	14.020	12.5	12
2,4_2,6-Dinitrotoluenes	0.633	0.703	27.530	12.5	120
1-Naphthylamine	1.202	1.144	11.890	12.5	-5
2,3,4,6-Tetrachlorophenol	0.298	0.332	13.910	12.5	11
2-Naphthylamine	1.234	1.170	11.850	12.5	-5
Diethylphthalate	1.241	1.242	12.510	12.5	0
Thionazin	0.268	0.246	11.480	12.5	-8
Fluorene	1.331	1.317	12.360	12.5	-1
4-Chlorophenyl-phenylether	0.660	0.686	13.000	12.5	4
5-Nitro-o-toluidine	0.358	0.369	12.890	12.5	3
4-Nitroaniline	0.330	0.336	12.730	12.5	2
4,6-Dinitro-2-methylphenol	0.120	0.135	13.140	12.5	5
N-Nitrosodiphenylamine (1)	0.622	0.596	11.970	12.5	-4
1,2-Diphenylhydrazine	0.985	0.808	10.250	12.5	-18
Tetraethyldithiopyrophosphate	0.142	0.131	11.500	12.5	-8
1,3,5-Trinitrobenzene	0.082	0.103	13.360	12.5	7
Diallate (peak 1)	0.491	0.420	8.030	9.4	-14
Phorate	0.582	0.483	10.370	12.5	-17
Phenacetin	0.414	0.406	12.250	12.5	-2
4-Bromophenyl-phenylether	0.197	0.208	13.190	12.5	5
Diallate (peak 2)	0.209	0.182	2.720	3.1	-13
Hexachlorobenzene	0.195	0.214	13.690	12.5	10
Dimethoate	0.380	0.337	11.060	12.5	-11
Atrazine	0.203	0.202	12.440	12.5	0
Pentachlorophenol	0.135	0.135	11.460	12.5	-8
Pentachloronitrobenzene	0.091	0.102	14.000	12.5	12
4-Aminobiphenyl	0.779	0.761	12.220	12.5	-2
Pronamide	0.329	0.345	13.100	12.5	5
Phenanthrene	1.115	1.059	11.870	12.5	-5
Dinoseb	0.161	0.187	12.290	12.5	-2
Anthracene	1.112	1.095	12.310	12.5	-2
Carbazole	1.076	1.049	12.180	12.5	-3
Methyl parathion	0.265	0.268	11.830	12.5	-5
Di-n-butylphthalate	1.275	1.255	12.310	12.5	-1

(1) Cannot be Separated from Diphenylamine

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Parathion	0.172	0.171	11.810	12.5	-5
4-Nitroquinoline-1-oxide	0.088	0.094	10.830	12.5	-13
Isodrin	0.134	0.137	12.760	12.5	2
Fluoranthene	1.254	1.303	12.990	12.5	4
Benzidine	0.642	0.630	36.800	37.5	-2
Pyrene	1.061	1.015	11.950	12.5	-4
p-Dimethylaminoazobenzene	0.190	0.212	12.460	12.5	0
Chlorobenzilate	0.299	0.293	12.260	12.5	-2
3,3'-Dimethylbenzidine	0.630	0.684	13.560	12.5	9
Butylbenzylphthalate	0.452	0.439	12.150	12.5	-3
2-Acetylaminofluorene	0.356	0.401	12.550	12.5	0
Benzo(a)anthracene	0.901	0.958	13.290	12.5	6
3,3'-Dichlorobenzidine	0.325	0.369	14.180	12.5	13
4,4'-Methylenebis(2-Chloroanil	0.172	0.188	13.710	12.5	10
Chrysene	0.886	0.907	12.800	12.5	2
bis(2-Ethylhexyl)phthalate	0.594	0.585	12.310	12.5	-2
6-Methylchrysene	0.623	0.706	14.170	12.5	13
Dibenz(a,h)acridine	0.715	0.821	14.350	12.5	15
Di-n-octylphthalate	1.370	1.283	10.950	12.5	-12
Dibenz(a,j)acridine	0.767	0.954	15.560	12.5	24
7,12-Dimethylbenz[a]anthracene	0.523	0.538	12.870	12.5	3
Benzo(b)fluoranthene	1.178	1.193	12.660	12.5	1
Benzo(k)fluoranthene	1.188	1.164	12.250	12.5	-2
Benzo(a)pyrene	1.081	1.114	12.880	12.5	3
3-Methylcholanthrene	0.515	0.564	13.710	12.5	10
NDPA as diphenylamine	0.622	0.596	11.970	12.5	-4
Indeno(1,2,3-cd)pyrene	0.948	1.184	15.600	12.5	25
Dibenz(a,h)anthracene	0.803	1.005	15.640	12.5	25
Benzo(g,h,i)perylene	0.799	1.007	15.740	12.5	26
Diallate TRANS/CIS	0.421	0.361	10.720	12.5	-14
2-Fluorophenol	1.485	1.412	23.780	25.0	-5
Phenol-d5	2.039	1.875	22.990	25.0	-8
Phenol-d6	2.039	1.875	22.990	25.0	-8
Nitrobenzene-d5	0.460	0.433	23.530	25.0	-6
2-Fluorobiphenyl	1.249	1.235	24.730	25.0	-1

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 11/13/13 Time: 05:19

Lab File ID: dk0381.d Init. Calib. Date(s): 10/29/13 10/29/13

Init. Calib. Times(s): 11:28 14:35

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4,6-Tribromophenol	0.131	0.166	31.580	25.0	26
Terphenyl-d14	0.623	0.651	26.120	25.0	4
			Average %Drift:		8

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/13oct29.b/dj1181.d **
/chem/HP19760.i/13oct29.b/dj1182.d
/chem/HP19760.i/13oct29.b/dj1183.d
/chem/HP19760.i/13oct29.b/dj1184.d
/chem/HP19760.i/13oct29.b/dj1185.d
/chem/HP19760.i/13oct29.b/dj1186.d
/chem/HP19760.i/13oct29.b/dj1187.d
/chem/HP19760.i/13oct29.b/dj1188.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/13nov13.b/dk0381.d

Area Summary

File ID:

Internal Standard Name	dk0381.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	137427	151909	75954	303818	Yes
Naphthalene-d8	522469	608104	304052	1216208	Yes
Acenaphthene-d10	315923	340173	170086	680346	Yes
Phenanthrene-d10	559806	574655	287328	1149310	Yes
Pyrene-d10	730002	743541	371770	1487082	Yes
Perylene-d12	576555	528760	264380	1057520	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dk0381.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	5.924	6.029	Yes
Naphthalene-d8	7.888	7.987	Yes
Acenaphthene-d10	10.692	10.797	Yes
Phenanthrene-d10	12.592	12.691	Yes
Pyrene-d10	14.533	14.649	Yes
Perylene-d12	18.980	19.120	Yes

A "No" indicates the retention time is greater than 30 seconds from the RT of the referenced standard.

Comments: _____

11-15-13

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS1(DCB)			IS2(NPT)			IS3(ANT)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	99797		5.053		463147		6.289		289780		7.998	
	UPPER LIMIT	199594		5.553		926294		6.789		579560		8.498	
	LOWER LIMIT	49899		4.553		231574		5.789		144890		7.498	
	LLI SAMPLE NO.												
01	SBLKLC316	108136		5.053		457604		6.289		265192		7.992	
02	316LCLCS	107514		5.053		479532		6.289		297174		7.999	
03	SBLKWA320	107098		5.053		471092		6.289		293127		7.992	
04	320WALCS	105154		5.053		481398		6.289		300062		7.999	
05	320WALCSD	109600		5.053		511168		6.289		325233		7.999	
06	7279095	98433		5.047		433035		6.289		266611		7.992	
07	7279096	110213		5.047		483390		6.289		299695		7.992	
08	7279097	100835		5.047		455467		6.289		280262		7.992	
09	7266814	107025		5.053		477427		6.289		283446		7.999	
10	7266815MS	107594		5.047		502594		6.289		307763		7.998	
11	7266816MSD	96370		5.053		449143		6.289		282789		7.999	
12	7259331	108584		5.053		500712		6.295		357640		8.036	
13	7265239	101238		5.053		477699		6.289		303269		7.999	
14	7266809	112909		5.053		516746		6.289		319287		7.999	
15	7266812	106039		5.053		488759		6.289		300832		7.998	
16	7266813	97550		5.053		447911		6.289		282132		7.999	
17	7266818	105111		5.053		493164		6.289		298644		7.999	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	532095		9.437		648763		10.808		579092		13.391	
	UPPER LIMIT	1064190		9.937		1297526		11.308		1158184		13.891	
	LOWER LIMIT	266048		8.937		324382		10.308		289546		12.891	
	LLI SAMPLE NO.												
01	SBLKLC316	484724		9.431		573380		10.808		460346		13.385	
02	316LCLCS	531149		9.437		638813		10.808		518634		13.391	
03	SBLKWA320	534982		9.431		632296		10.808		543491		13.385	
04	320WALCS	528313		9.437		633982		10.808		570997		13.391	
05	320WALCSD	565610		9.437		675402		10.808		590988		13.391	
06	7279095	488611		9.431		583798		10.809		502501		13.385	
07	7279096	550286		9.431		654017		10.808		554705		13.385	
08	7279097	516643		9.431		613181		10.809		509896		13.385	
09	7266814	527791		9.431		656881		10.809		554023		13.385	
10	7266815MS	559040		9.437		684320		10.808		625511		13.391	
11	7266816MSD	505364		9.437		626815		10.809		586929		13.385	
12	7259331	405796		9.511		807046		10.876		591307		13.403	
13	7265239	542724		9.437		654957		10.809		596890		13.391	
14	7266809	564292		9.437		638376		10.809		523780		13.391	
15	7266812	536413		9.437		645374		10.808		569208		13.391	
16	7266813	524209		9.437		654292		10.809		577522		13.391	
17	7266818	547847		9.437		676438		10.809		577510		13.391	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS1(DCB)			IS2(NPT)			IS3(ANT)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	99797		5.053		463147		6.289		289780		7.998	
	UPPER LIMIT	199594		5.553		926294		6.789		579560		8.498	
	LOWER LIMIT	49899		4.553		231574		5.789		144890		7.498	
	LLI SAMPLE NO.												
18	7270464	121628		5.053		548418		6.289		331623		7.998	
19	7270465	116333		5.053		533434		6.289		326266		7.999	
20	7270466	105411		5.053		470761		6.289		288937		7.998	
21	7270467	117554		5.053		535445		6.289		320683		7.999	
22	7270468	102947		5.053		462924		6.289		292969		7.999	
23	7270469	118207		5.053		527814		6.289		323539		7.999	
24	7270470	114806		5.053		510477		6.289		309039		7.999	
25	7270471	107235		5.053		467781		6.289		291596		7.999	
26	7270472	111164		5.053		502357		6.289		308577		7.999	

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): ck0621.d Date Analyzed: 11/18/13

Instrument ID: HP10623 Time Analyzed: 05:29

		IS4(PHN)			IS5(PYR)			IS6(PRY)		
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	532095		9.437		648763		10.808		579092		13.391	
	UPPER LIMIT	1064190		9.937		1297526		11.308		1158184		13.891	
	LOWER LIMIT	266048		8.937		324382		10.308		289546		12.891	
	LLI SAMPLE NO.												
18	7270464	572668		9.437		640560		10.808		513324		13.391	
19	7270465	570643		9.437		633022		10.809		499007		13.391	
20	7270466	527365		9.437		618613		10.808		510117		13.391	
21	7270467	554239		9.437		634000		10.809		500133		13.391	
22	7270468	526471		9.437		618384		10.809		504897		13.391	
23	7270469	567281		9.437		646552		10.809		511387		13.391	
24	7270470	544787		9.437		612317		10.808		491550		13.391	
25	7270471	524293		9.437		610266		10.809		486174		13.391	
26	7270472	540102		9.437		618807		10.808		501578		13.391	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	137427	5.924	522469	7.888	315923	10.692
	UPPER LIMIT	274854	6.424	1044938	8.388	631846	11.192
	LOWER LIMIT	68714	5.424	261235	7.388	157962	10.192
	LLI SAMPLE NO.						
01	SBLKWD314	116893	5.924	441917	7.882	263542	10.686
02	314WDLCS	120892	5.924	460968	7.888	275060	10.692
03	314WDLCSD	121592	5.924	454668	7.888	277321	10.692
04	7266449DL	113310	5.924	415560	7.888	259635	10.686
05	7266450DL	120492	5.924	456215	7.882	278765	10.686
06	7266451DL	119692	5.924	439331	7.882	267896	10.686
07	7266590	124259	5.924	466177	7.882	272381	10.686
08	7266798	121116	5.924	461933	7.882	276636	10.686
09	7266799	123039	5.924	477986	7.883	282053	10.686
10	7266805	128584	5.924	489788	7.883	291304	10.686
11	7266807	125087	5.924	478541	7.882	283192	10.686
12	7266810	128316	5.924	495759	7.882	288695	10.686
13	7266811	130476	5.924	500764	7.882	290626	10.686
14	7266819	128426	5.924	489529	7.882	290260	10.686
15	7266823	132279	5.924	507246	7.883	294869	10.686
16	7266824	128022	5.924	487001	7.882	280600	10.686
17	7267172	127993	5.924	486134	7.883	281274	10.686

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	559806	12.592	730002	14.533	576555	18.980
	UPPER LIMIT	1119612	13.092	1460004	15.033	1153110	19.480
	LOWER LIMIT	279903	12.092	365001	14.033	288278	18.480
	LLI SAMPLE NO.						
01	SBLKWD314	462153	12.592	586235	14.527	470041	18.980
02	314WDLCS	468730	12.592	624100	14.527	486341	18.980
03	314WDLCSD	468707	12.592	624748	14.527	494320	18.980
04	7266449DL	468381	12.592	609342	14.527	465755	18.980
05	7266450DL	494379	12.592	639804	14.527	474488	18.980
06	7266451DL	475290	12.592	606093	14.527	447630	18.980
07	7266590	472498	12.592	625502	14.533	473283	18.980
08	7266798	489596	12.592	618104	14.527	472021	18.980
09	7266799	493530	12.592	609839	14.527	451379	18.980
10	7266805	528872	12.592	689351	14.527	495828	18.980
11	7266807	499367	12.592	638825	14.527	481341	18.980
12	7266810	506394	12.592	642017	14.527	476708	18.980
13	7266811	512701	12.592	629913	14.527	464719	18.980
14	7266819	514451	12.592	656174	14.527	465134	18.980
15	7266823	517078	12.592	633558	14.527	442752	18.980
16	7266824	494776	12.592	612628	14.527	416744	18.980
17	7267172	499119	12.592	611356	14.527	401539	18.980

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	137427	5.924	522469	7.888	315923	10.692
UPPER LIMIT	274854	6.424	1044938	8.388	631846	11.192
LOWER LIMIT	68714	5.424	261235	7.388	157962	10.192
LLI SAMPLE NO.						
18 7267633	124825	5.924	479125	7.883	277945	10.686
19 7267634	126397	5.924	480613	7.882	281340	10.686
20 7270635	124754	5.924	466964	7.882	281089	10.686
21 7270637	124627	5.924	475509	7.882	278731	10.686
22 7270638	126096	5.924	474534	7.882	280026	10.686
23 7270641	122956	5.924	462289	7.882	267972	10.686
24 7270643	119954	5.924	453415	7.882	260283	10.686
25 7270644	120882	5.924	454531	7.882	270609	10.686
26 7270742	114673	5.924	411085	7.888	251971	10.686

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID (Standard): dk0381.d Date Analyzed: 11/13/13

Instrument ID: HP19760 Time Analyzed: 05:19

		IS4(PHN)			IS5(PYR)			IS6(PRY)	
		AREA	#	RT	#	AREA	#	RT	#	AREA	#	RT	#
	12 HOUR STD	559806		12.592		730002		14.533		576555		18.980	
	UPPER LIMIT	1119612		13.092		1460004		15.033		1153110		19.480	
	LOWER LIMIT	279903		12.092		365001		14.033		288278		18.480	
	LLI SAMPLE NO.												
18	7267633	491773		12.592		629206		14.527		442225		18.980	
19	7267634	496258		12.592		637016		14.527		439913		18.980	
20	7270635	498067		12.592		639066		14.527		429217		18.980	
21	7270637	492411		12.592		622714		14.527		415522		18.980	
22	7270638	492103		12.592		616340		14.527		408572		18.980	
23	7270641	477159		12.592		590375		14.527		392741		18.980	
24	7270643	462173		12.592		573728		14.527		366243		18.980	
25	7270644	471949		12.592		587422		14.527		383743		18.980	
26	7270742	438197		12.592		591514		14.533		431295		18.980	

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Fraction: Semivolatiles by GC/MS

10724: PAH 8270 (microwave) Analyte Name	Default MDL	Default LOQ	Units
Naphthalene	3	17	ug/kg
2-Methylnaphthalene	3	17	ug/kg
1-Methylnaphthalene	3	17	ug/kg
Acenaphthylene	3	17	ug/kg
Acenaphthene	3	17	ug/kg
Fluorene	3	17	ug/kg
Phenanthrene	3	17	ug/kg
Anthracene	3	17	ug/kg
Fluoranthene	3	17	ug/kg
Pyrene	3	17	ug/kg
Benzo(a)anthracene	3	17	ug/kg
Chrysene	3	17	ug/kg
Benzo(b)fluoranthene	3	17	ug/kg
Benzo(k)fluoranthene	3	17	ug/kg
Benzo(a)pyrene	3	17	ug/kg
Indeno(1,2,3-cd)pyrene	3	17	ug/kg
Dibenz(a,h)anthracene	3	17	ug/kg
Benzo(g,h,i)perylene	3	17	ug/kg

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
Benzaldehyde	0.3	1	ug/l
Phenol	0.1	0.3	ug/l
bis(2-Chloroethyl)ether	0.1	0.3	ug/l
2-Chlorophenol	0.1	0.3	ug/l
2-Methylphenol	0.1	0.3	ug/l
2,2'-oxybis(1-Chloropropane)	0.1	0.3	ug/l
4-Methylphenol	0.1	0.3	ug/l
N-Nitroso-di-n-propylamine	0.1	0.3	ug/l
Acetophenone	0.1	0.3	ug/l
Hexachloroethane	0.3	1	ug/l
Nitrobenzene	0.1	0.3	ug/l
Isophorone	0.1	0.3	ug/l
2-Nitrophenol	0.1	0.3	ug/l
2,4-Dimethylphenol	0.1	0.3	ug/l
bis(2-Chloroethoxy)methane	0.1	0.3	ug/l
2,4-Dichlorophenol	0.1	0.3	ug/l
Naphthalene	0.03	0.1	ug/l
4-Chloroaniline	0.1	0.3	ug/l
Hexachlorobutadiene	0.1	0.3	ug/l
Caprolactam	1	4	ug/l
4-Chloro-3-methylphenol	0.1	0.3	ug/l
2-Methylnaphthalene	0.03	0.1	ug/l
Hexachlorocyclopentadiene	1	4	ug/l
2,4,6-Trichlorophenol	0.1	0.3	ug/l
2,4,5-Trichlorophenol	0.1	0.3	ug/l
1,1'-Biphenyl	0.1	0.3	ug/l

Fraction: Semivolatiles by GC/MS

04678: TCL SW846 Semivolatiles/Waters Analyte Name	Default MDL	Default LOQ	Units
2-Chloronaphthalene	0.1	0.3	ug/l
2-Nitroaniline	0.1	0.3	ug/l
Dimethylphthalate	0.5	1	ug/l
2,6-Dinitrotoluene	0.1	0.3	ug/l
Acenaphthylene	0.03	0.1	ug/l
3-Nitroaniline	0.1	0.3	ug/l
Acenaphthene	0.03	0.1	ug/l
2,4-Dinitrophenol	3	8	ug/l
4-Nitrophenol	3	8	ug/l
2,4-Dinitrotoluene	0.3	1	ug/l
Dibenzofuran	0.1	0.3	ug/l
Diethylphthalate	0.5	1	ug/l
Fluorene	0.03	0.1	ug/l
4-Chlorophenyl-phenylether	0.1	0.3	ug/l
4-Nitroaniline	0.1	0.3	ug/l
4,6-Dinitro-2-methylphenol	1	4	ug/l
N-Nitrosodiphenylamine	0.1	0.3	ug/l
4-Bromophenyl-phenylether	0.1	0.3	ug/l
Hexachlorobenzene	0.03	0.1	ug/l
Atrazine	0.5	1	ug/l
Pentachlorophenol	0.3	1	ug/l
Phenanthrene	0.03	0.1	ug/l
Anthracene	0.03	0.1	ug/l
Carbazole	0.1	0.3	ug/l
Di-n-butylphthalate	0.5	1	ug/l
Fluoranthene	0.03	0.1	ug/l
Pyrene	0.03	0.1	ug/l
Butylbenzylphthalate	0.5	1	ug/l
bis(2-Ethylhexyl)phthalate	0.5	1	ug/l
3,3'-Dichlorobenzidine	0.5	1	ug/l
Benzo(a)anthracene	0.03	0.1	ug/l
Chrysene	0.03	0.1	ug/l
Di-n-octylphthalate	0.5	1	ug/l
Benzo(b)fluoranthene	0.03	0.1	ug/l
Benzo(k)fluoranthene	0.03	0.1	ug/l
Benzo(a)pyrene	0.03	0.1	ug/l
Indeno(1,2,3-cd)pyrene	0.03	0.1	ug/l
Dibenz(a,h)anthracene	0.03	0.1	ug/l
Benzo(g,h,i)perylene	0.03	0.1	ug/l

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0635.d
Injection date and time: **18-NOV-2013 11:35**
Data file Sample Info. Line: 2E131;7266809;2;0;SAMPLE;;;
Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	112909 (13)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	516746 (12)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	319287 (10)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	564292 (6)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	638376 (-2)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	523780 (-10)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	956575	85.921	86%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.365(-0.001)	172	1881131	93.701	94%		69 - 120
156) Terphenyl-d14	(5)	11.018(-0.001)	244	2117174	92.772	93%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(0.000)	128	5020M	0.183	12.21			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	2399M	0.123	8.22			0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.456(0.000)	178	11582	0.353	23.53			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.612(0.000)	202	19333	0.527	35.13			0.1
154) Pyrene	(5)	10.827(0.000)	202	17180	0.485	32.31			0.1
166) Benzo(a)anthracene	(5)	11.995(-0.000)	228	5919	0.181	12.07			0.1
168) Chrysene	(5)	12.026(0.000)	228	10450	0.331	22.10			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	14027M	0.439	29.24			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	4281M	0.131	8.75			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	7753M	0.248	16.56			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(0.000)	276	6645	0.200	13.34			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.614(0.000)	276	5996M	0.212	14.13			0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0635.d Injection date and time: **18-NOV-2013 11:35**
Data file Sample Info. Line: 2E131;7266809;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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Total number of targets = 18

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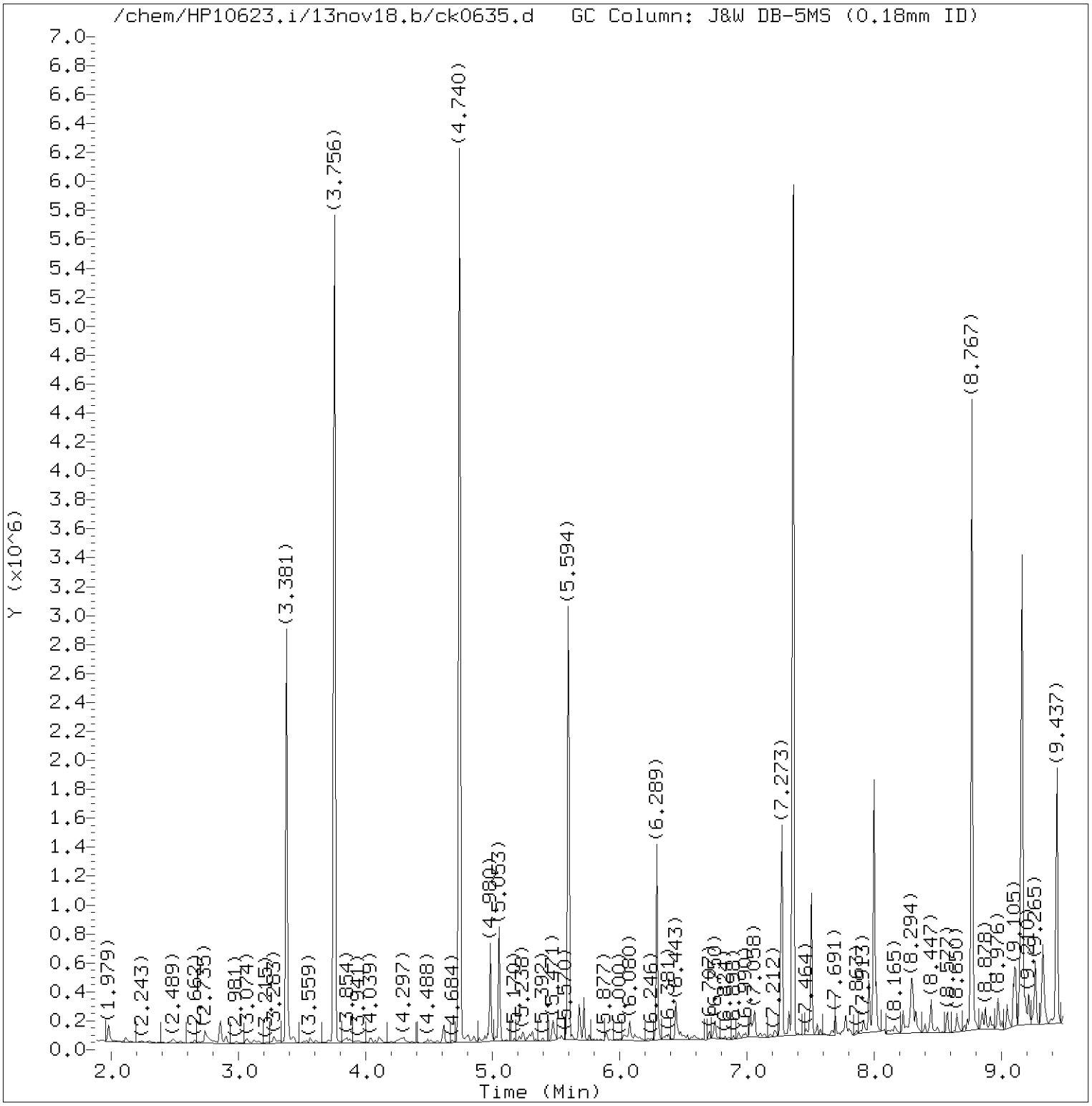
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

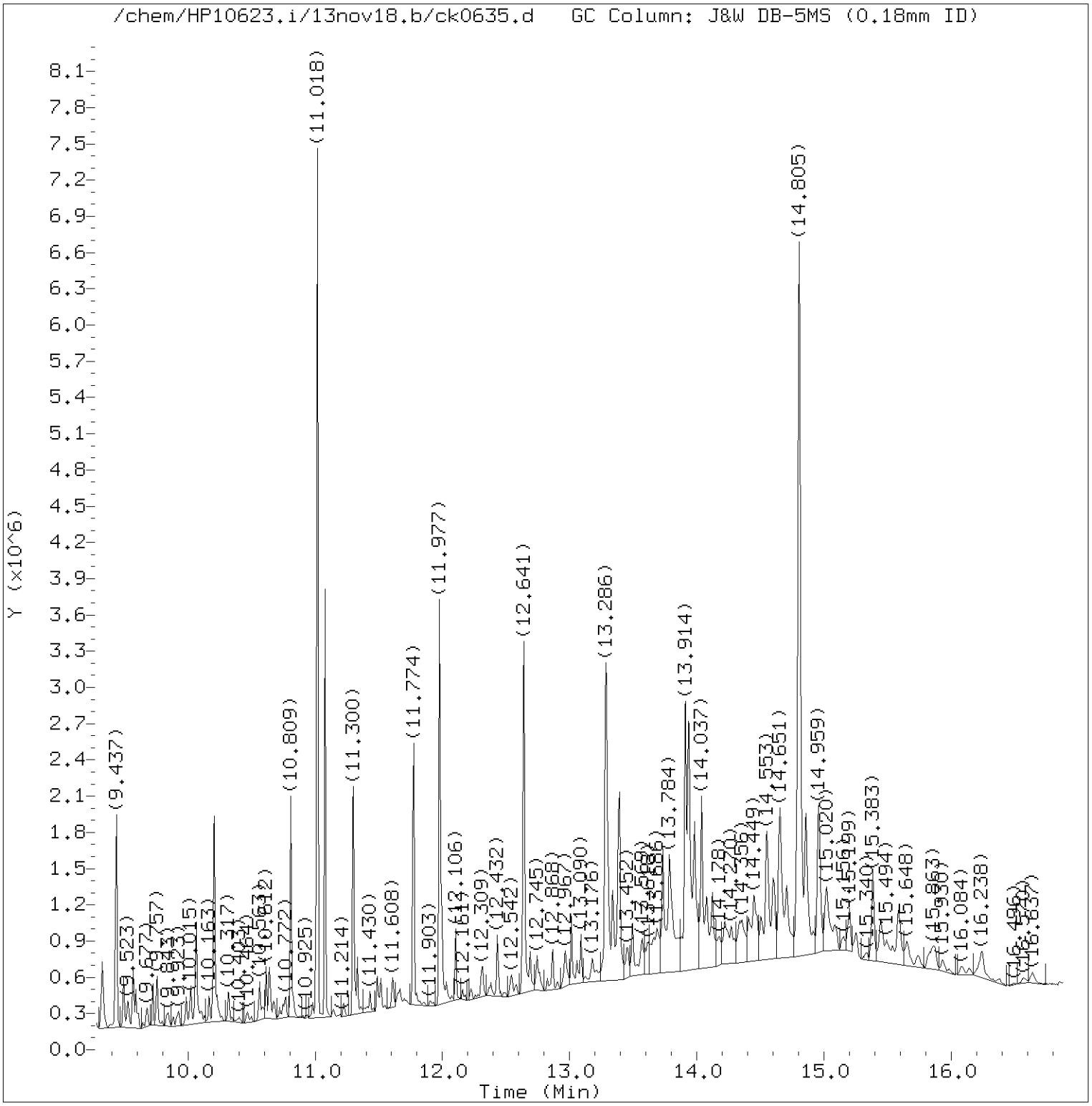
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

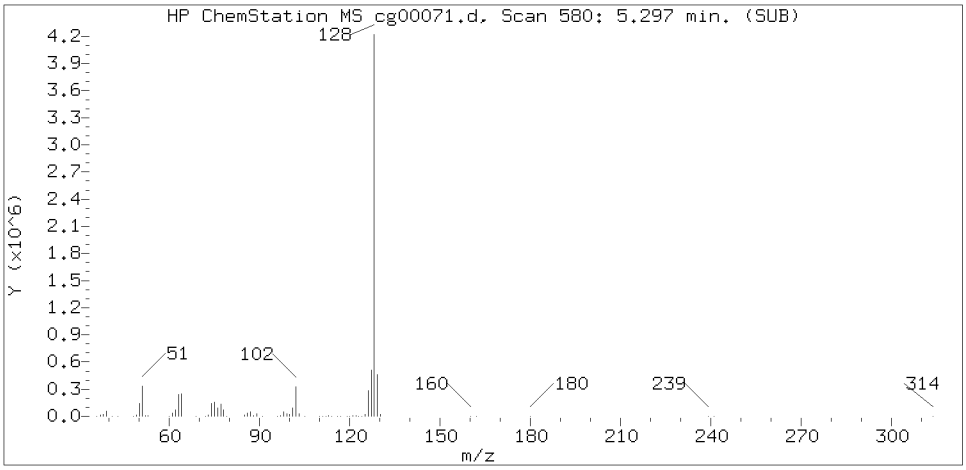
Sample Name: 2E131 Lab Sample ID: 7266809

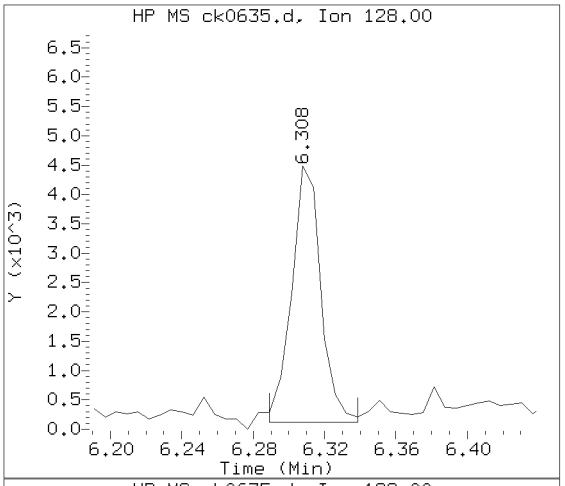
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	112909	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	956575	85.921
52)*Naphthalene-d8	(2)	6.289	136	516746	20.000
53) Naphthalene	(2)	6.308	128	5020M	0.183
70) 2-Methylnaphthalene	(2)	6.990	142	2399M	0.123
78)$2-Fluorobiphenyl	(3)	7.365	172	1881131	93.701
98)*Acenaphthene-d10	(3)	7.999	164	319287	20.000
135)*Phenanthrene-d10	(4)	9.437	188	564292	20.000
137) Phenanthrene	(4)	9.456	178	11582	0.353
147) Fluoranthene	(4)	10.612	202	19333	0.527
167)*Pyrene-d10	(5)	10.809	212	638376	20.000
154) Pyrene	(5)	10.827	202	17180	0.485
156)$Terphenyl-d14	(5)	11.018	244	2117174	92.772
166) Benzo(a)anthracene	(5)	11.995	228	5919	0.181
168) Chrysene	(5)	12.026	228	10450	0.331
172) Benzo(b)fluoranthene	(6)	13.034	252	14027M	0.439
173) Benzo(k)fluoranthene	(6)	13.059	252	4281M	0.131
174) Benzo(a)pyrene	(6)	13.336	252	7753M	0.248
175)*Perylene-d12	(6)	13.391	264	523780	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	6645	0.200
179) Benzo(g,h,i)perylene	(6)	14.615	276	5996M	0.212

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

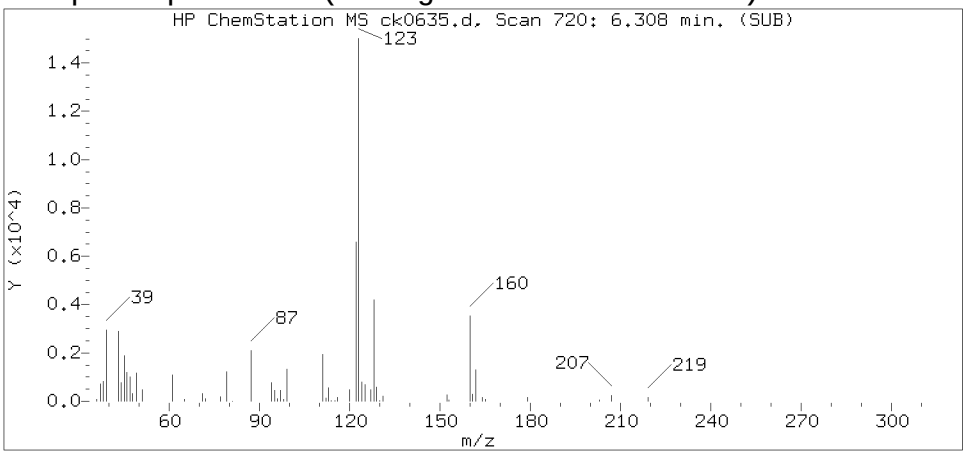
Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

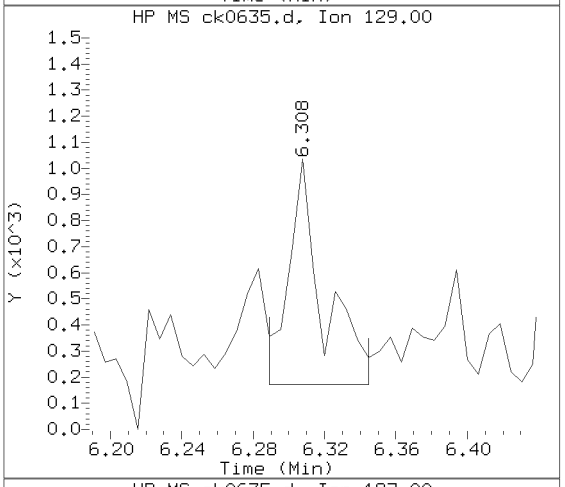
Reference Standard Spectrum for Naphthalene



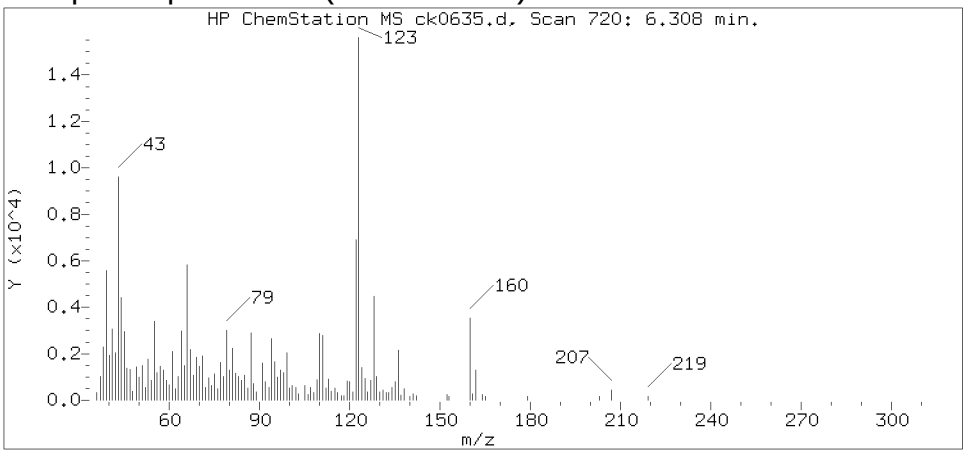


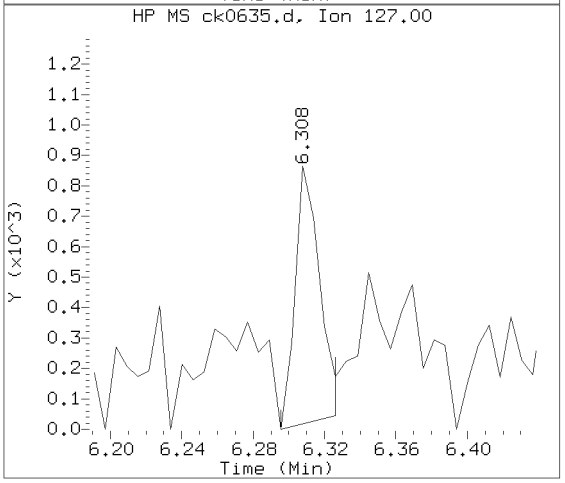
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

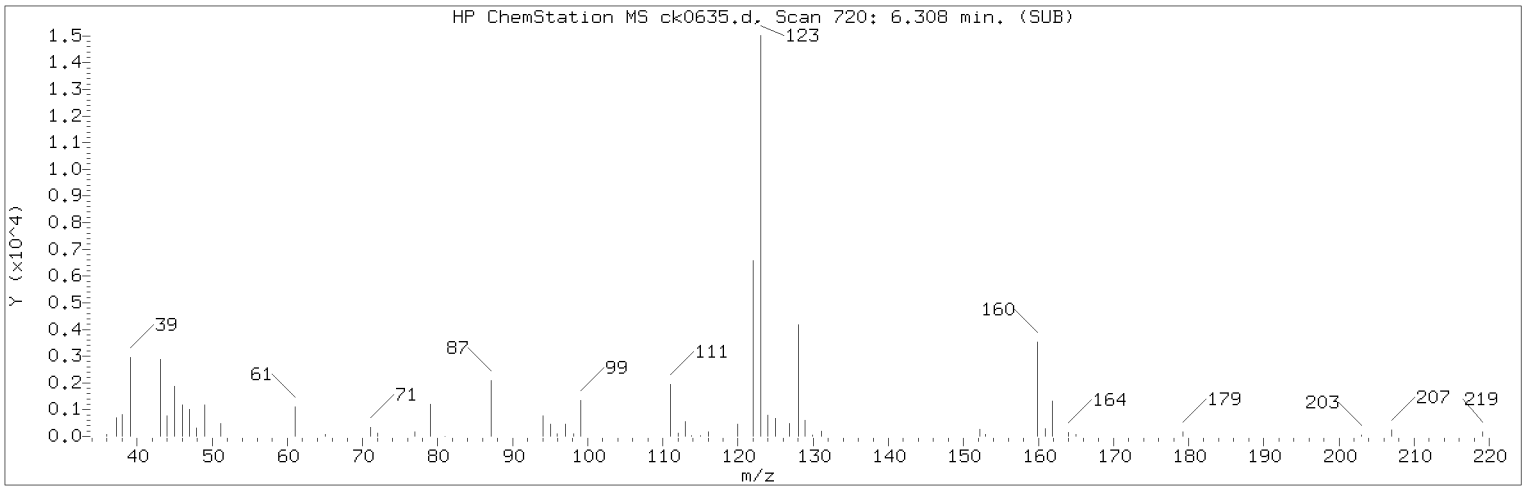
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

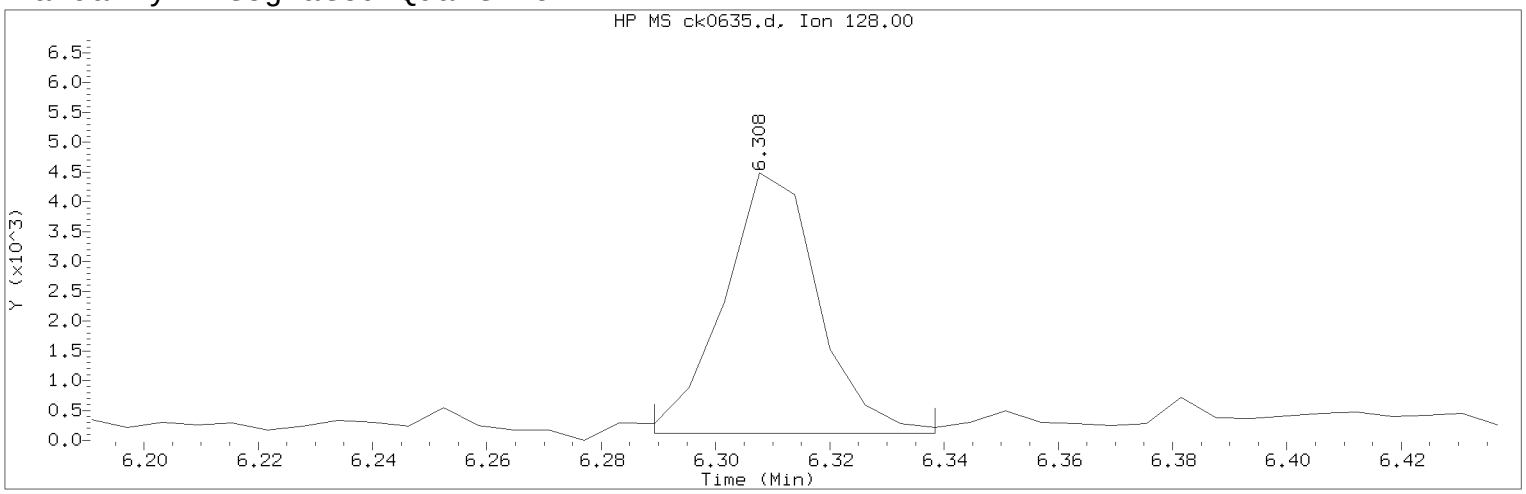
Compound Number	: 53
Compound Name	: Naphthalene
Scan Number	: 720
Retention Time (minutes)	: 6.308
Relative Retention Time	: 0.00000
Quant Ion	: 128.00
Area (flag)	: 5020M
On-column Amount (ng/ul)	: 0.1831

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

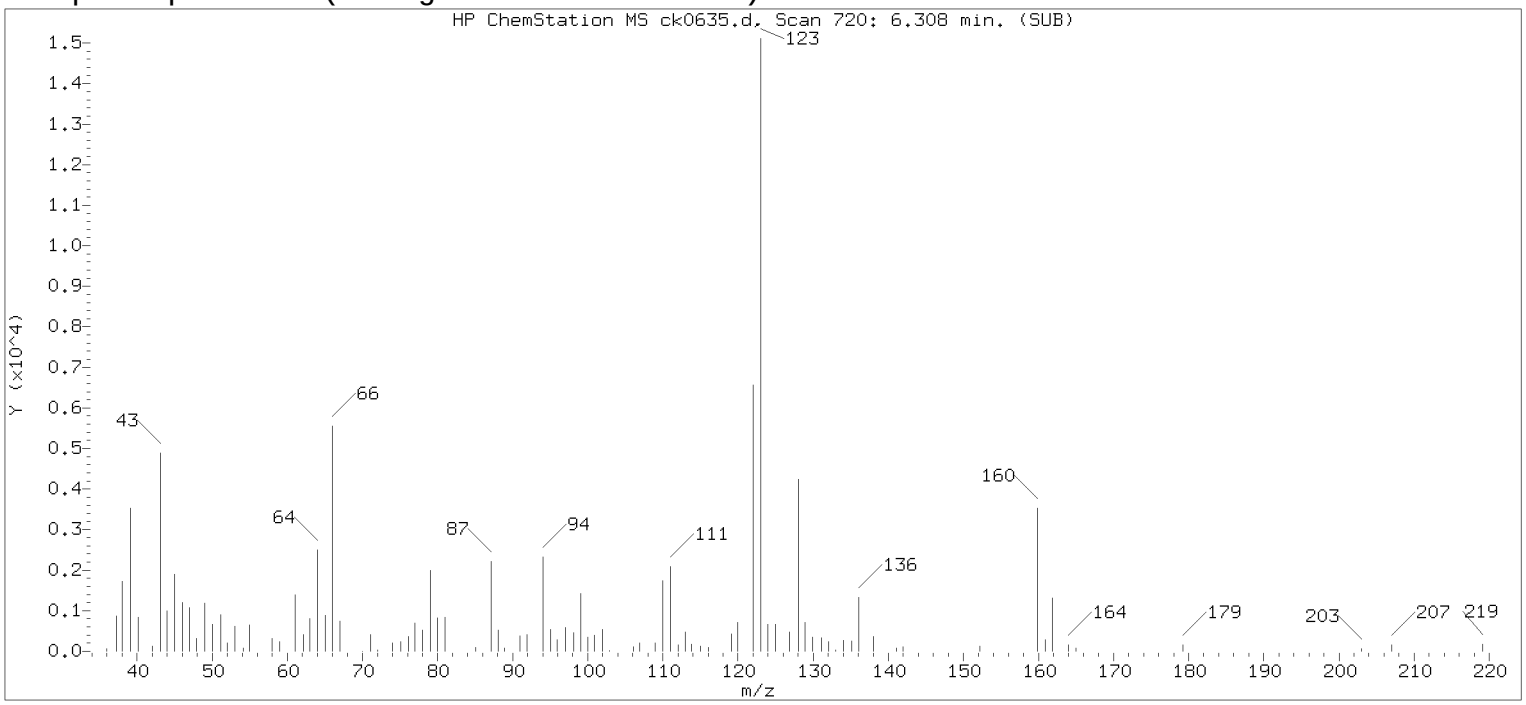
Compound Number : 53
Compound Name : Naphthalene
Scan Number : 720
Retention Time (minutes) : 6.308
Quant Ion : 128.00
Area (flag) : 5020M
On-column Amount (ng/ul) : 0.1831
Integration start scan : 716 Integration stop scan: 724
Y at integration start : 119 Y at integration end: 119

Reason for manual integration: improper integration

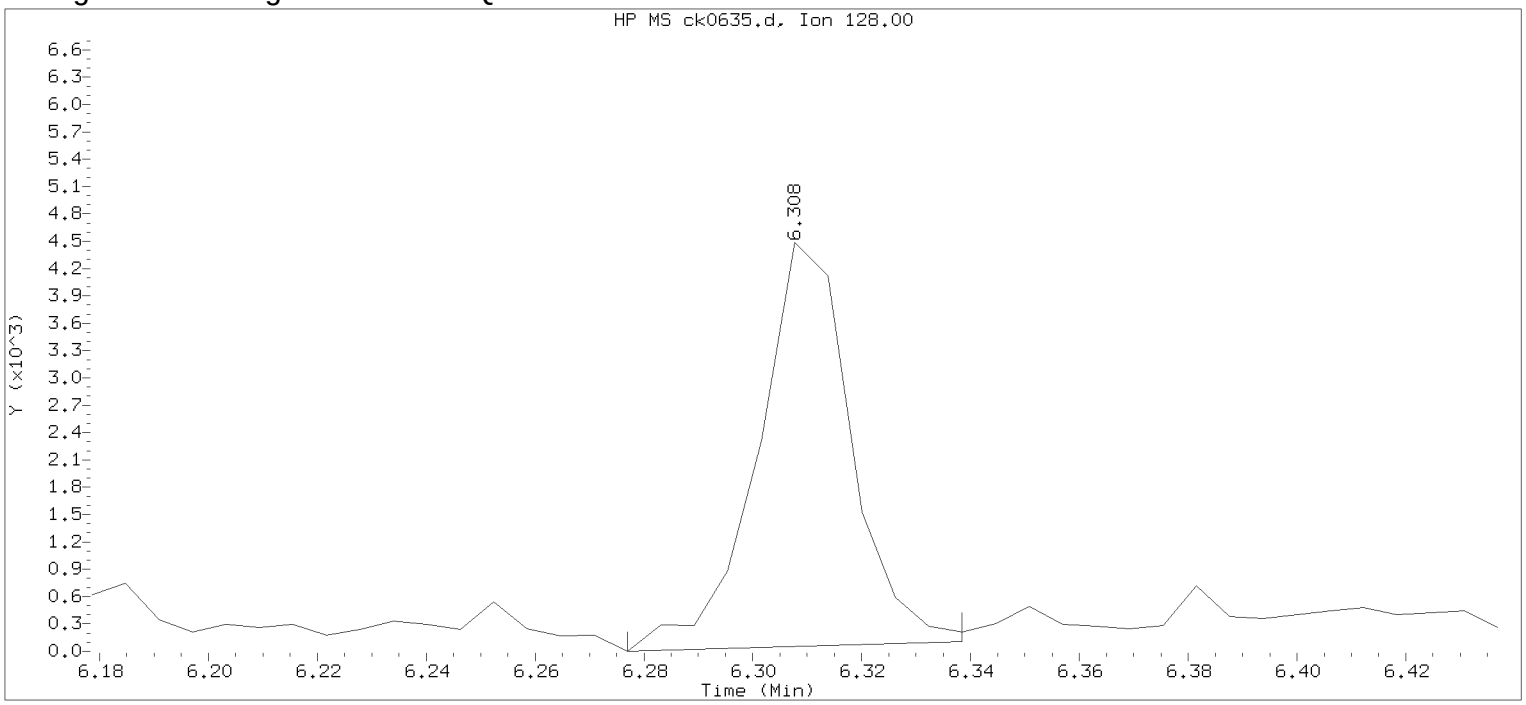
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

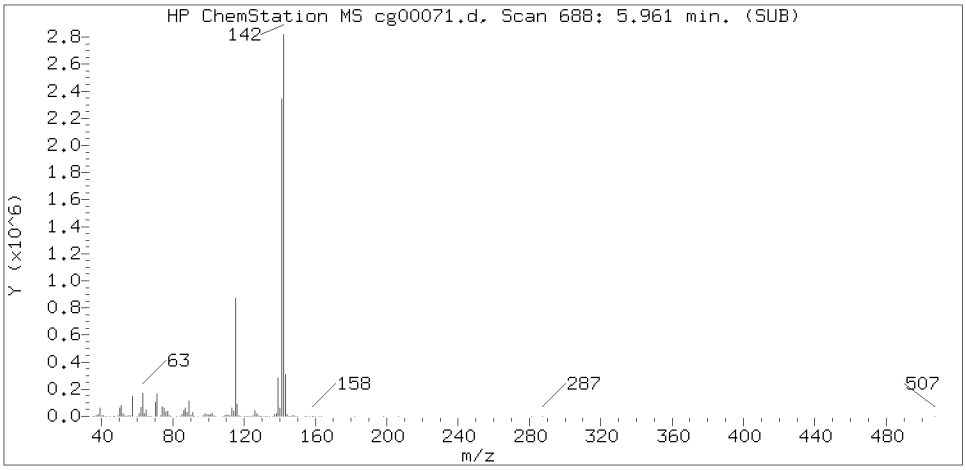
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

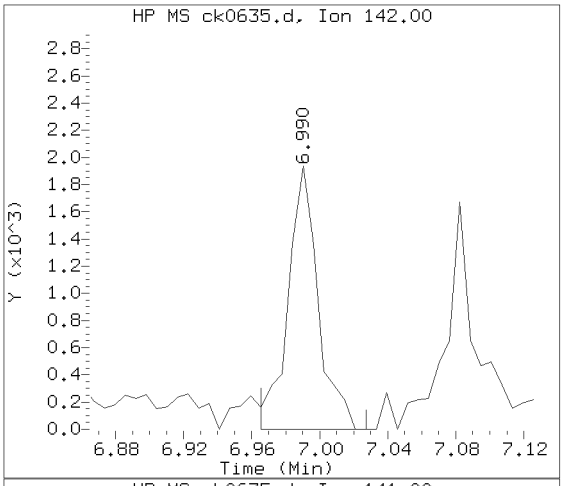
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 53		
Compound Name	: Naphthalene		
Scan Number	: 720		
Retention Time (minutes)	: 6.308		
Quant Ion	: 128.00		
Area	: 5284		
On-column Amount (ng/ul)	: 0.1927		
Integration start scan	: 714	Integration stop scan:	724
Y at integration start	: 0	Y at integration end:	107

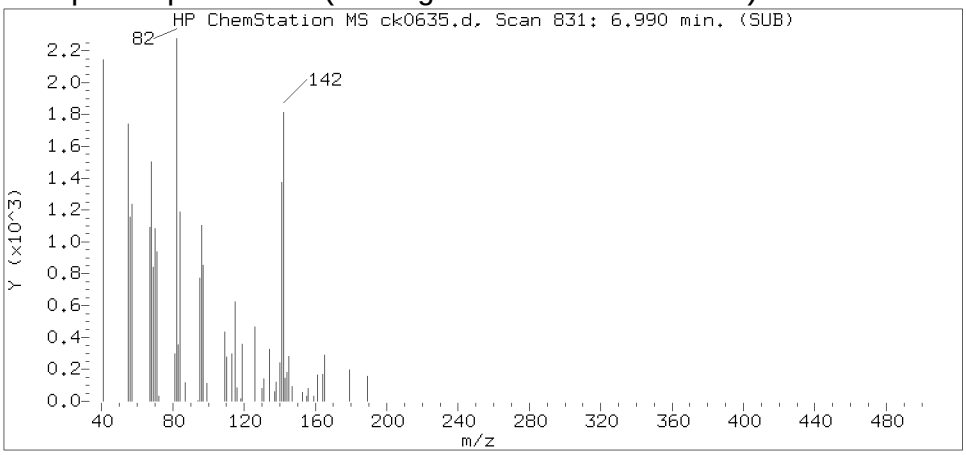
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user KVM06 jmg00346

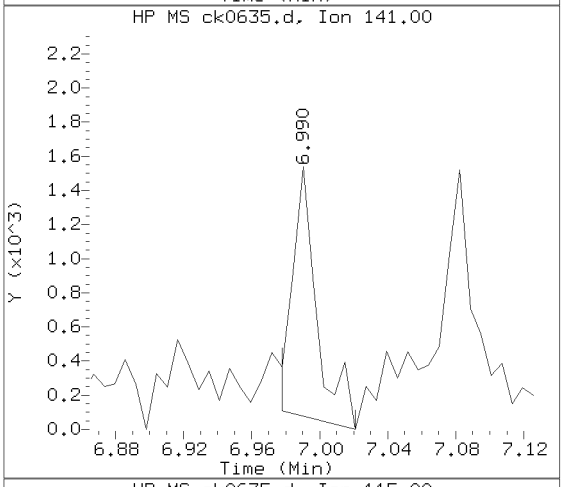
Reference Standard Spectrum for 2-Methylnaphthalene



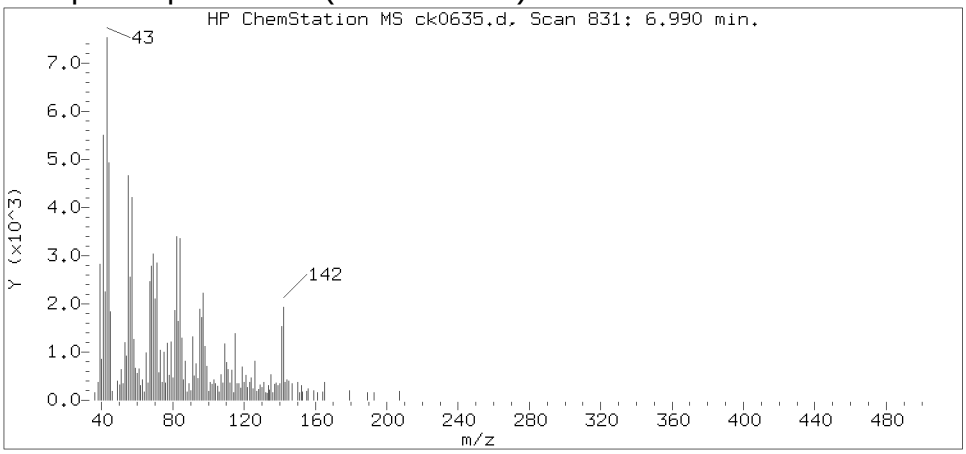


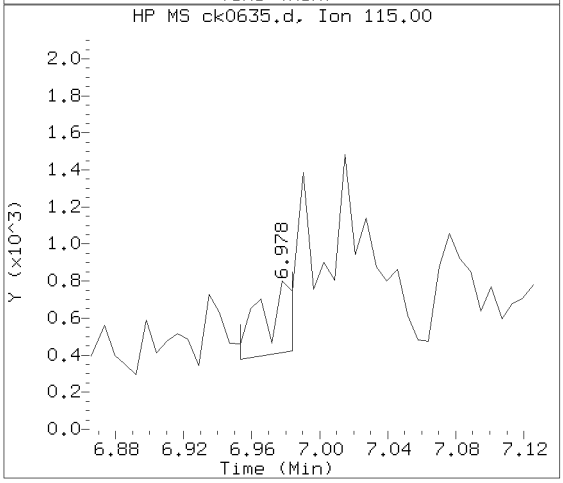
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

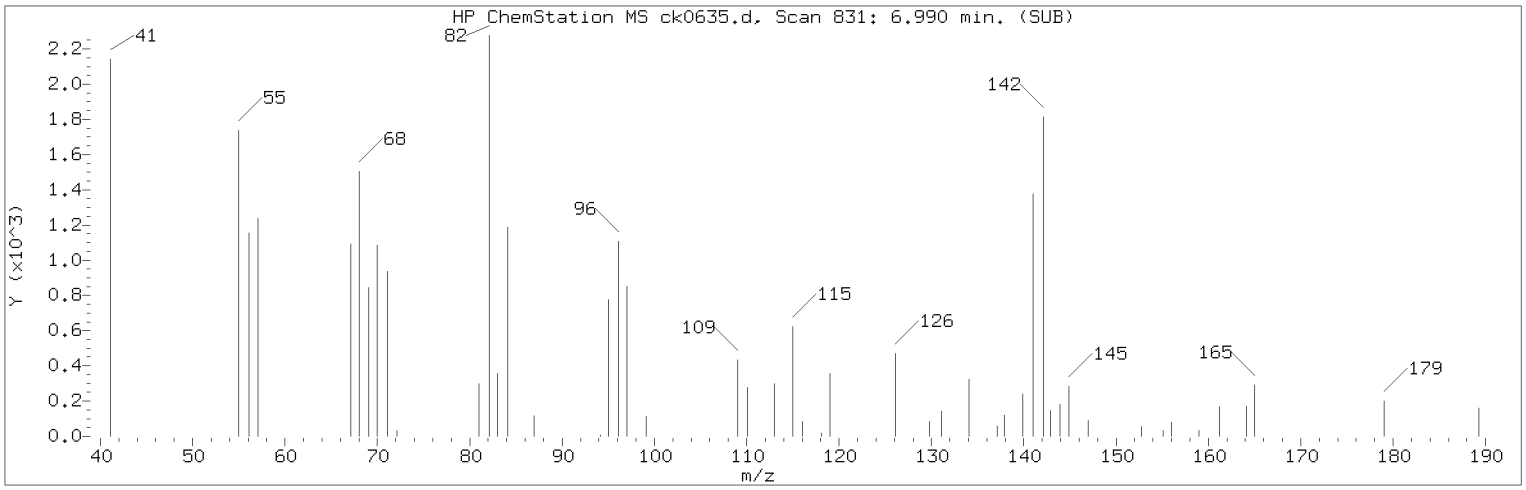
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

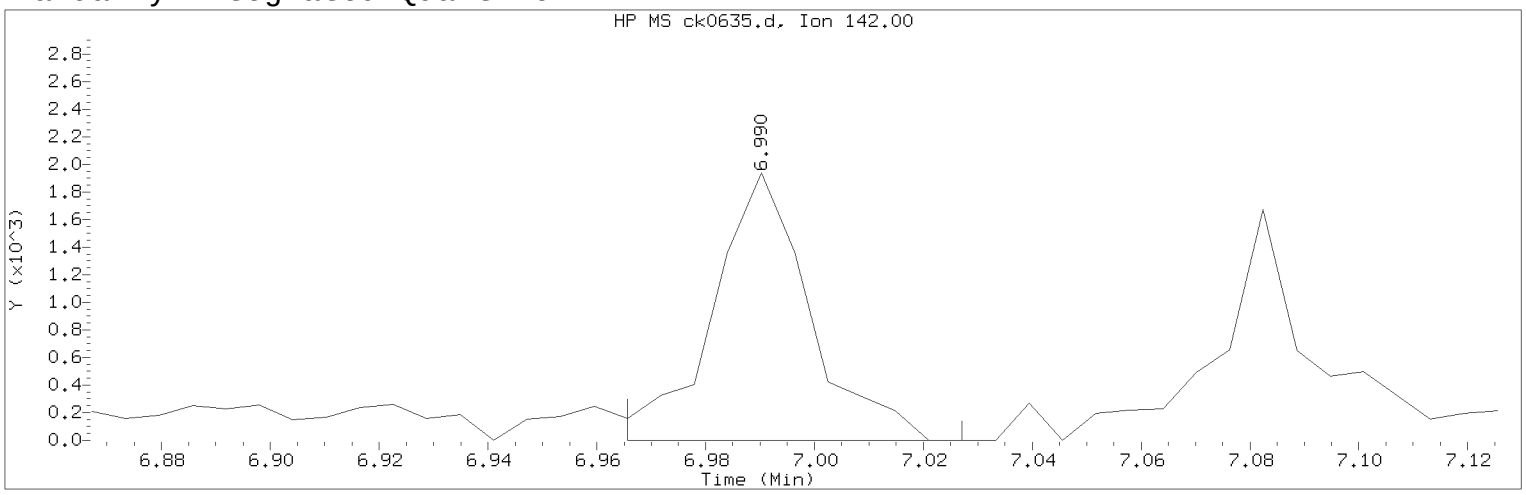
Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 831
Retention Time (minutes) : 6.990
Relative Retention Time : 0.00000
Quant Ion : 142.00
Area (flag) : 2399M
On-column Amount (ng/ul) : 0.1233

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

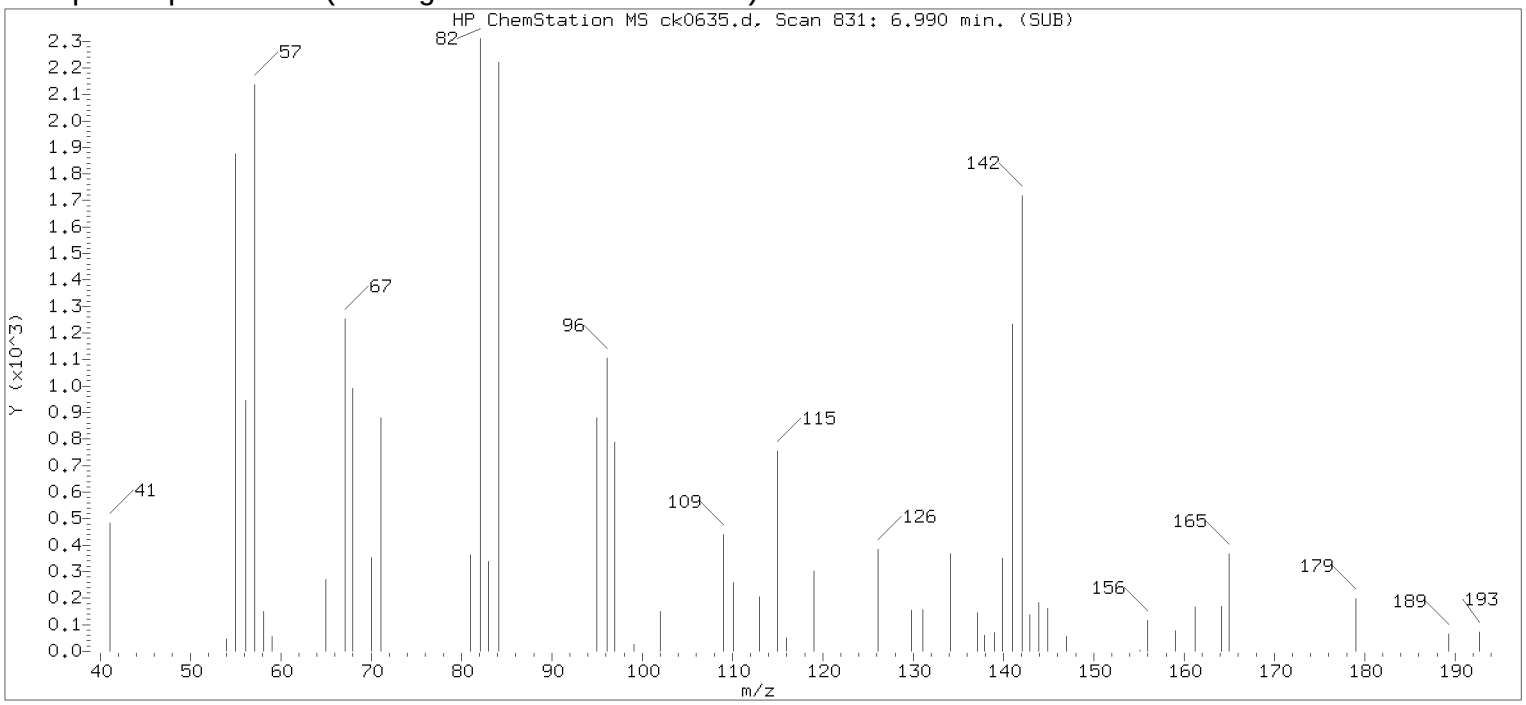
Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 831
Retention Time (minutes) : 6.990
Quant Ion : 142.00
Area (flag) : 2399M
On-column Amount (ng/ul) : 0.1233
Integration start scan : 826 Integration stop scan: 836
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

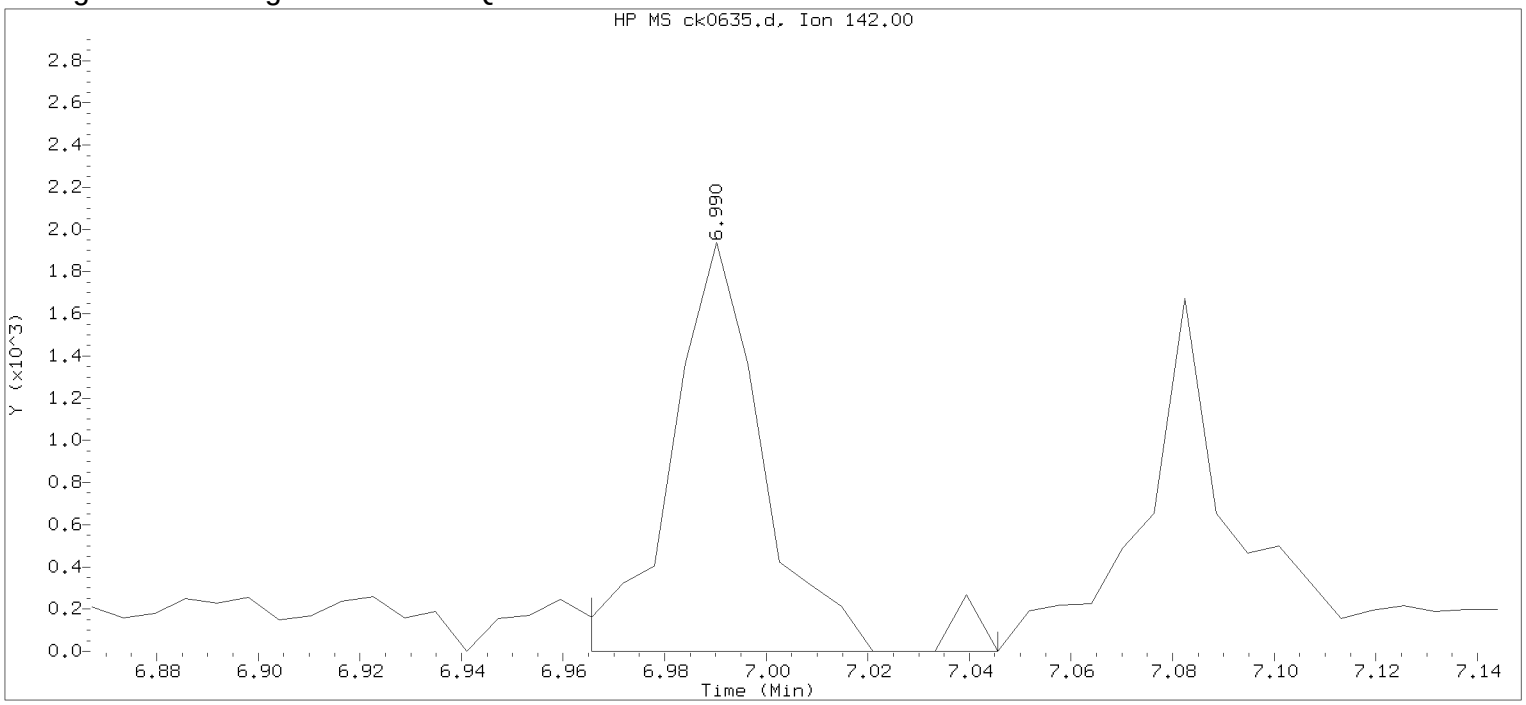
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

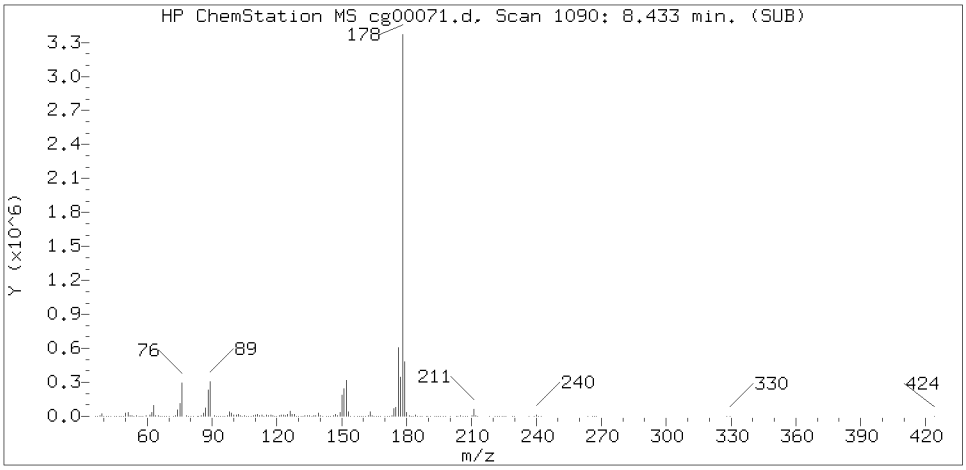
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

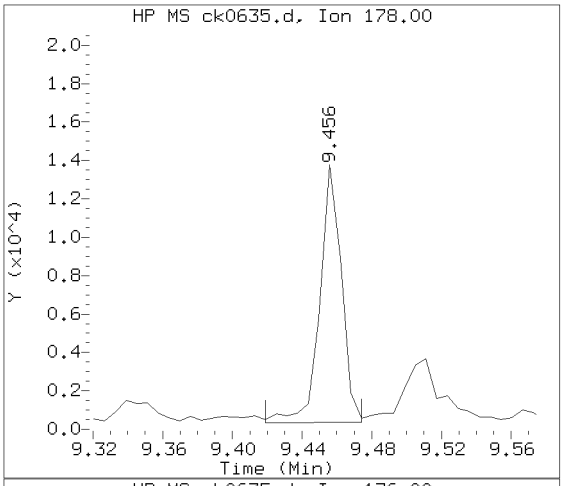
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 70		
Compound Name	: 2-Methylnaphthalene		
Scan Number	: 831		
Retention Time (minutes)	: 6.990		
Quant Ion	: 142.00		
Area	: 2468		
On-column Amount (ng/ul)	: 0.1269		
Integration start scan	: 826	Integration stop scan:	839
Y at integration start	: 0	Y at integration end:	0

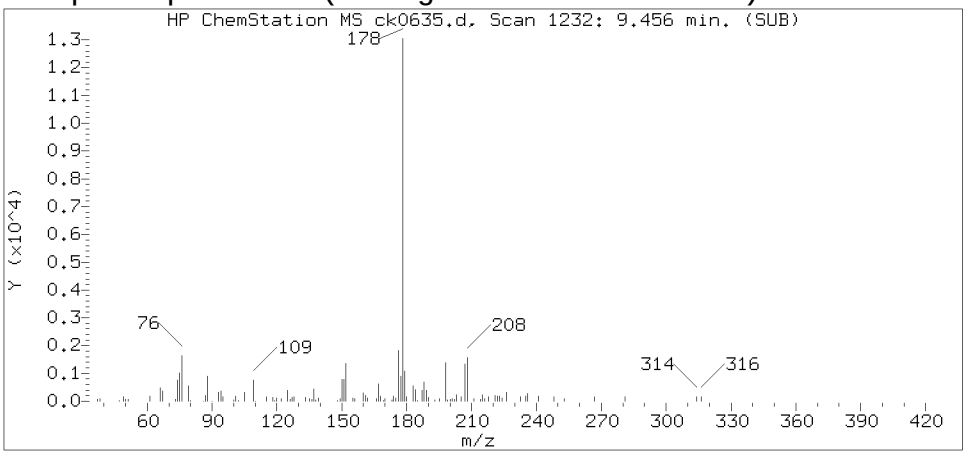
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user KVM06 jmg00346

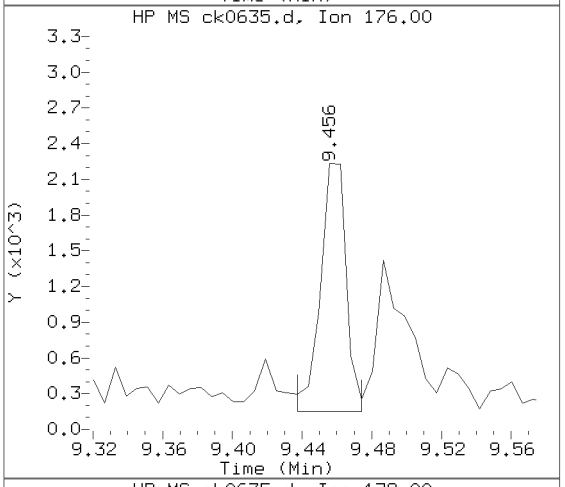
Reference Standard Spectrum for Phenanthrene



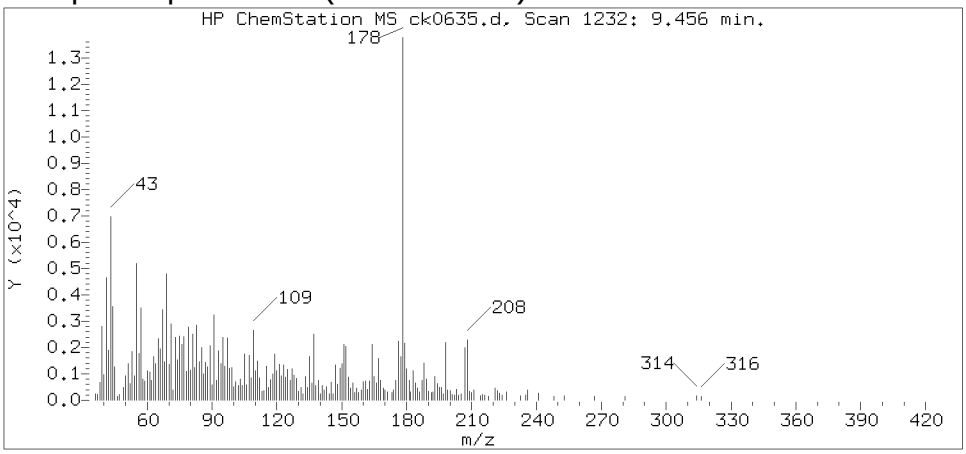


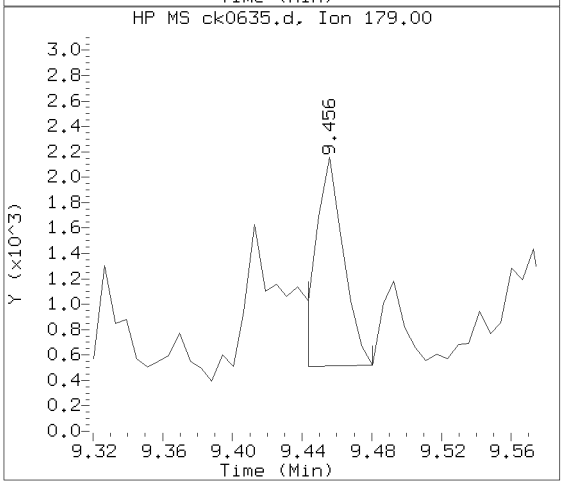
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

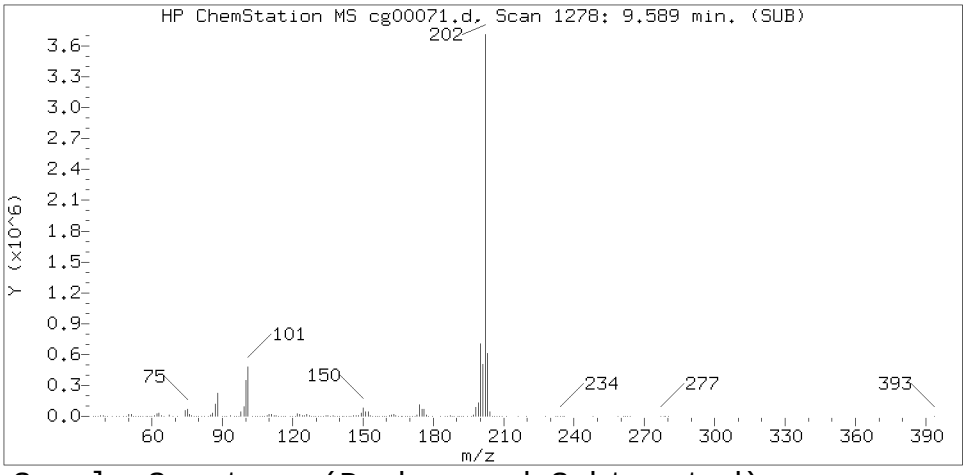
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

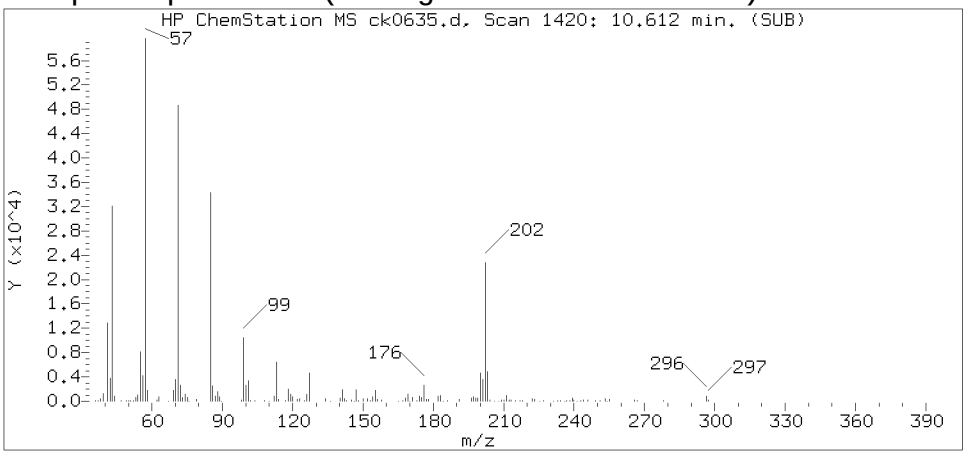
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1232
Retention Time (minutes) : 9.456
Relative Retention Time : 0.00000
Quant Ion : 178.00
Area (flag) : 11582
On-column Amount (ng/ul) : 0.3530

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

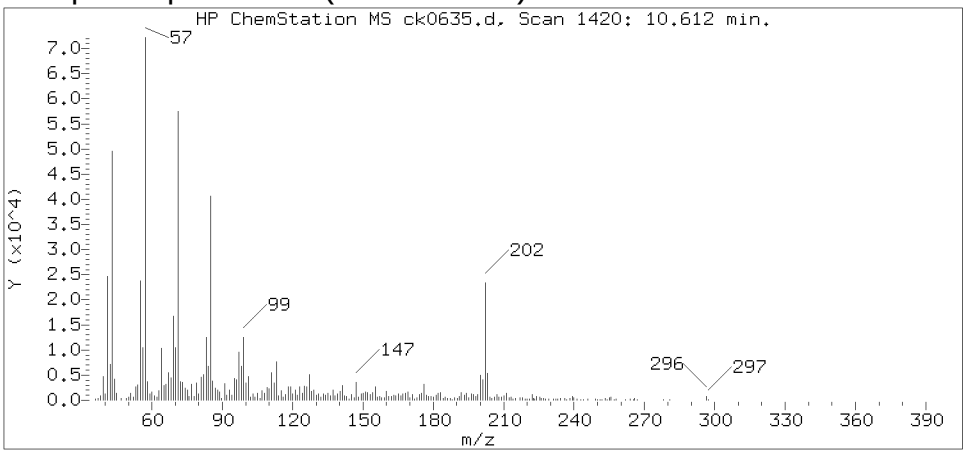
Reference Standard Spectrum for Fluoranthene

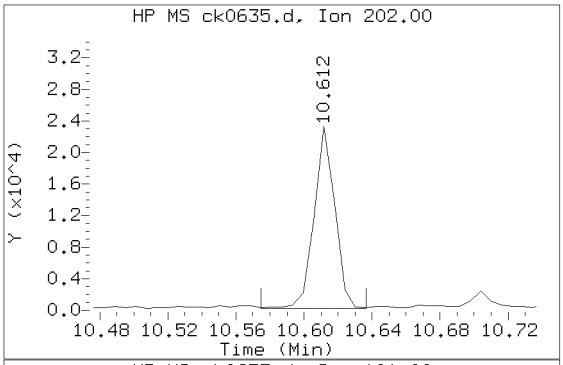


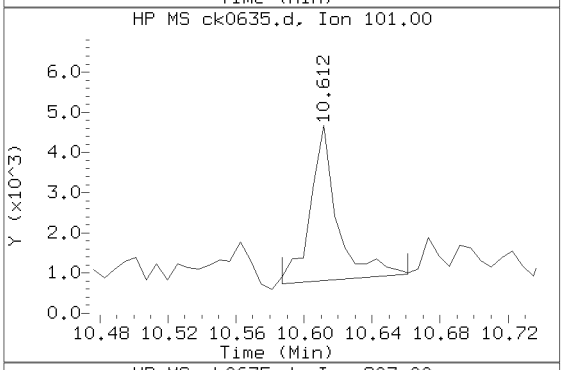
Sample Spectrum (Background Subtracted)

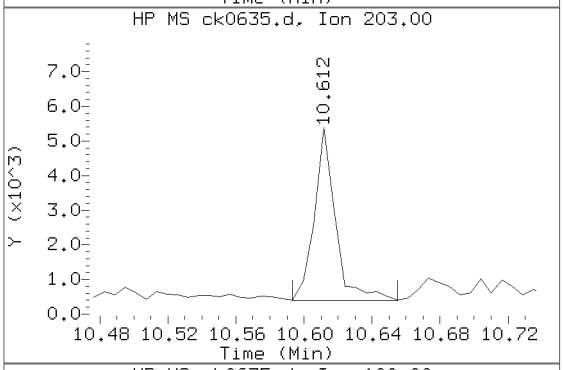


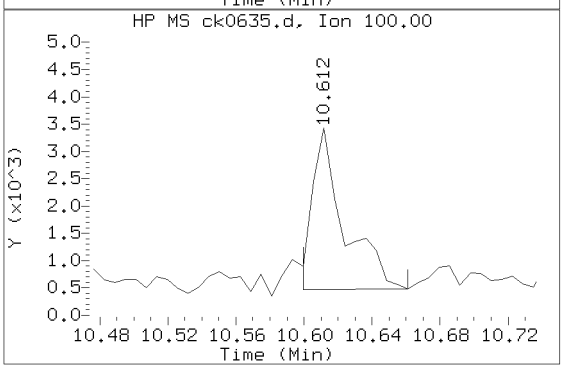
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

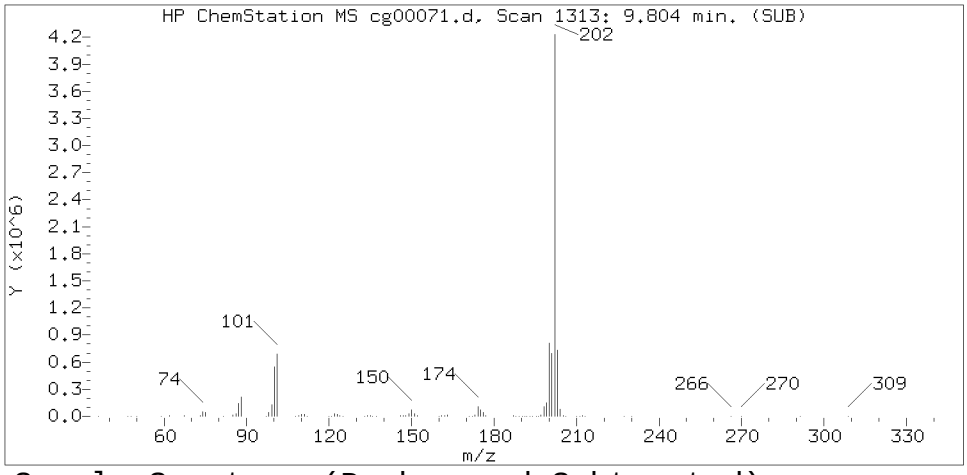
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

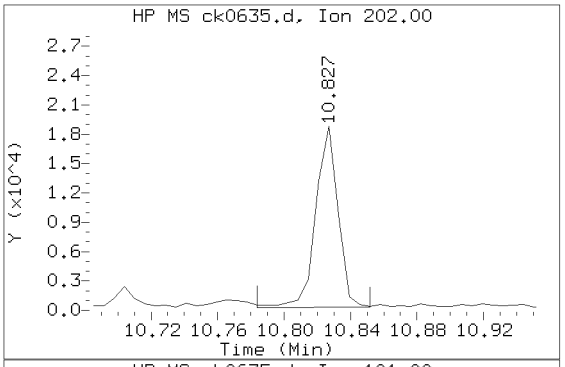
Sample Name: 2E131 Lab Sample ID: 7266809

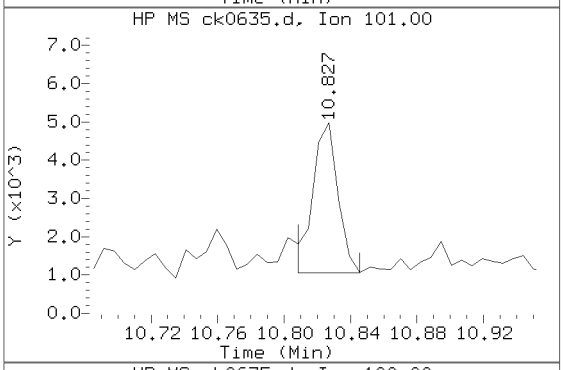
Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1420
Retention Time (minutes)	: 10.612
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 19333
On-column Amount (ng/ul)	: 0.5270

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

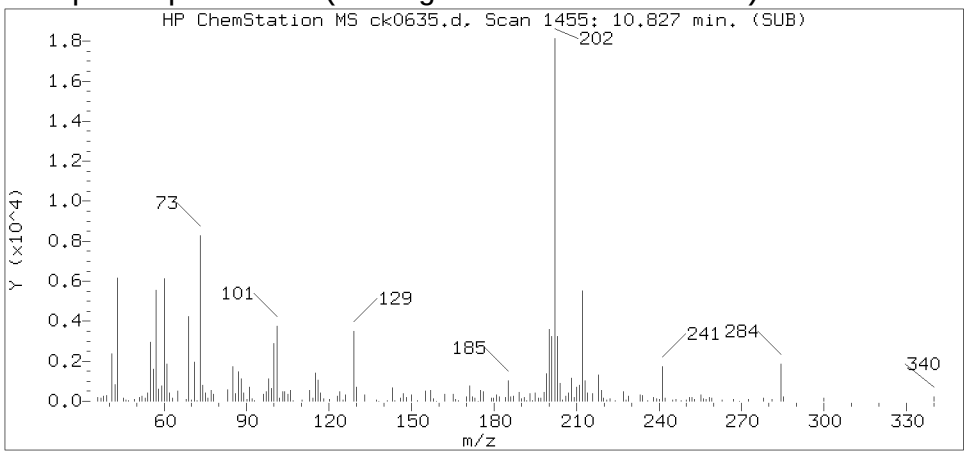
Reference Standard Spectrum for Pyrene

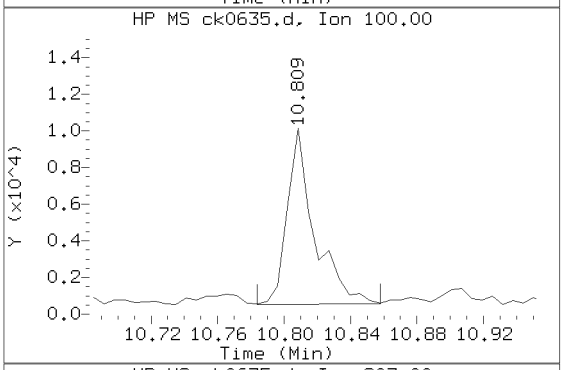




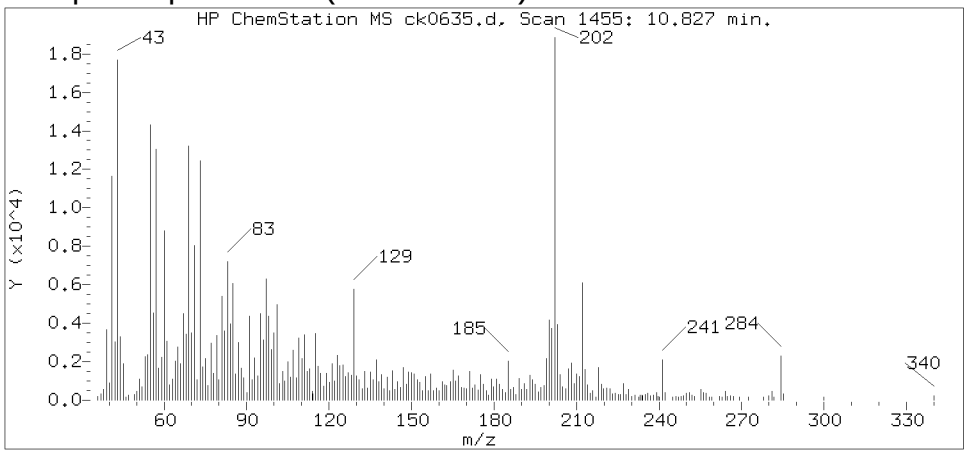


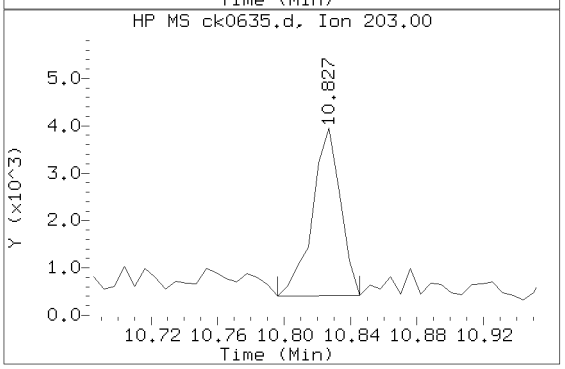
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

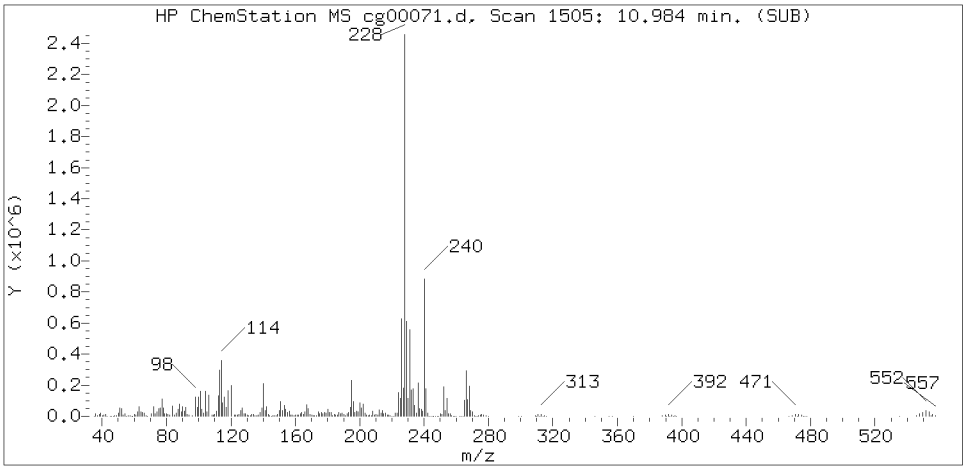
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

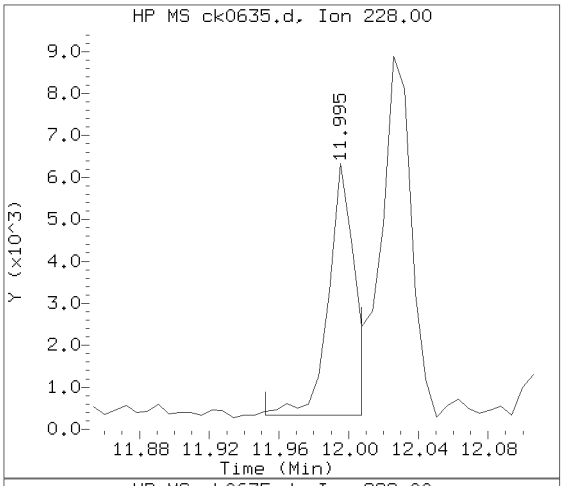
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1455
Retention Time (minutes)	: 10.827
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 17180
On-column Amount (ng/ul)	: 0.4846

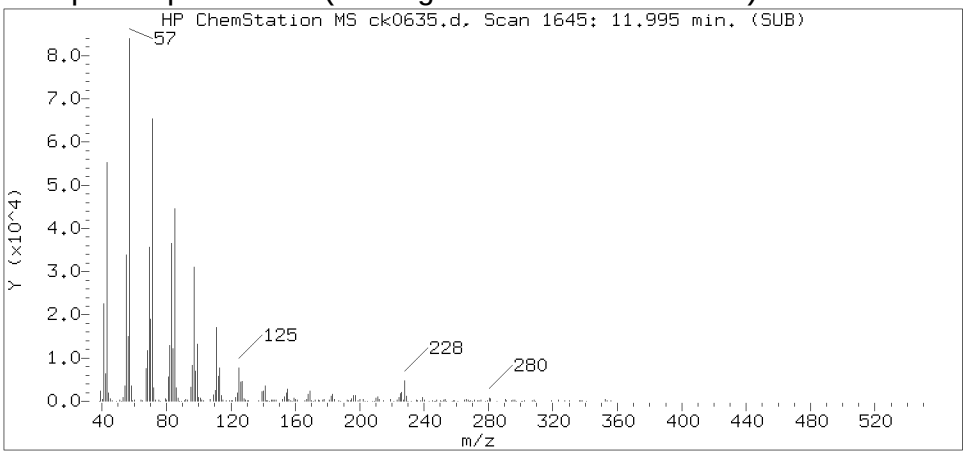
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

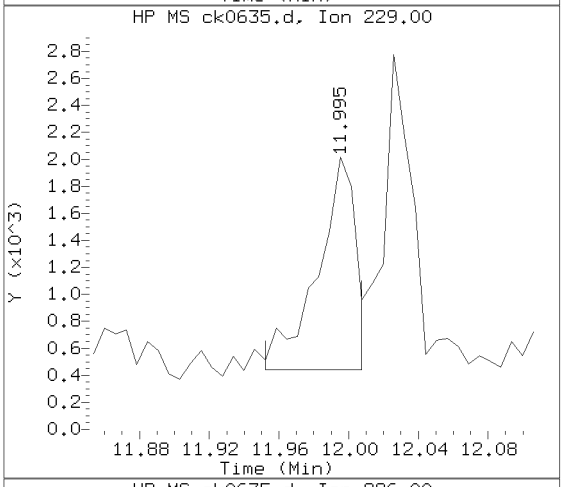
Reference Standard Spectrum for Benzo(a)anthracene



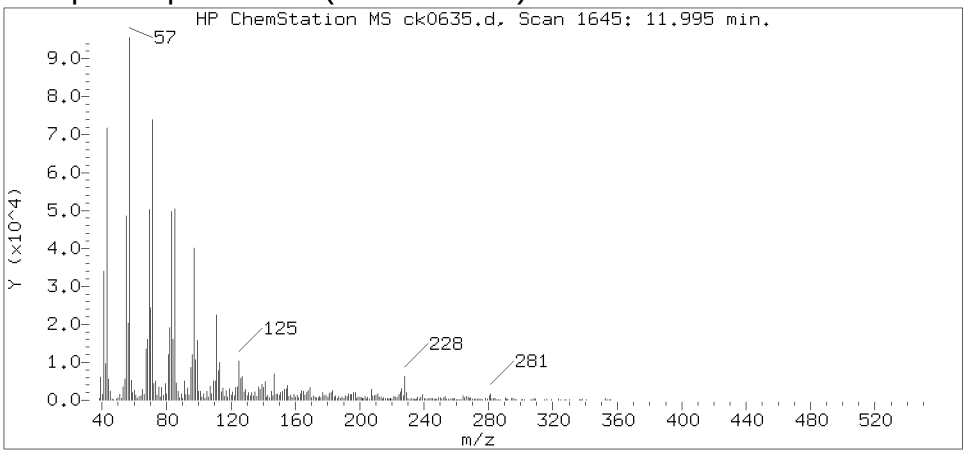


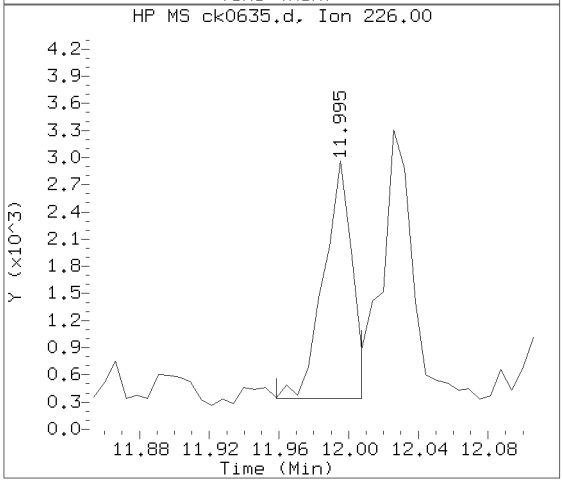
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

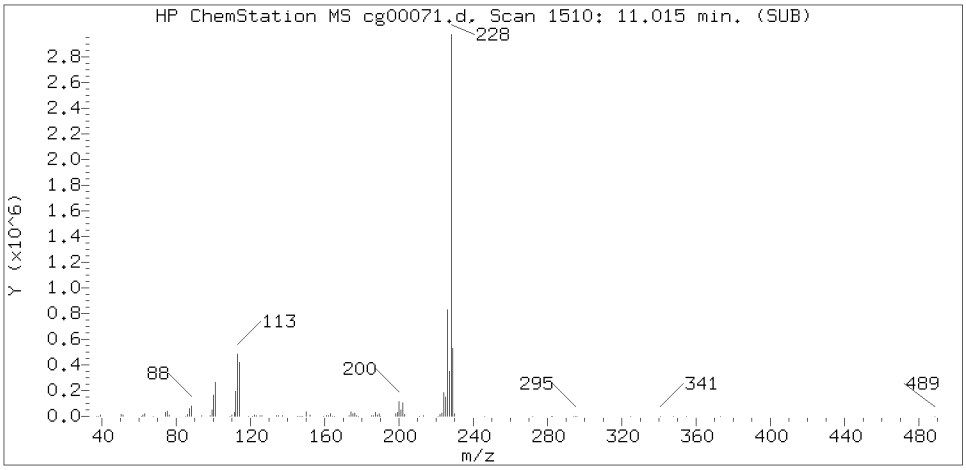
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

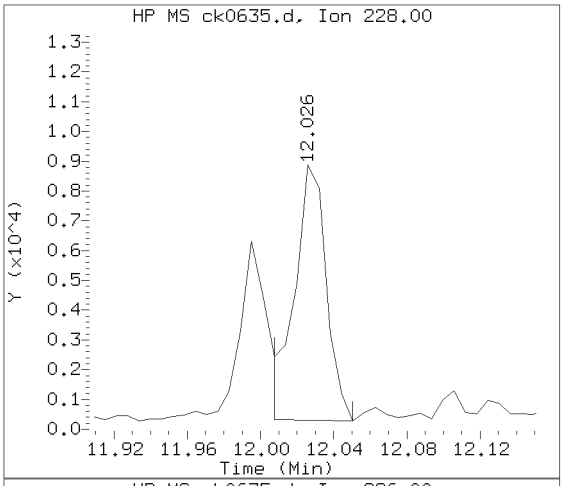
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number : 166
Compound Name : Benzo(a)anthracene
Scan Number : 1645
Retention Time (minutes) : 11.995
Relative Retention Time :-0.00000
Quant Ion : 228.00
Area (flag) : 5919
On-column Amount (ng/ul) : 0.1810

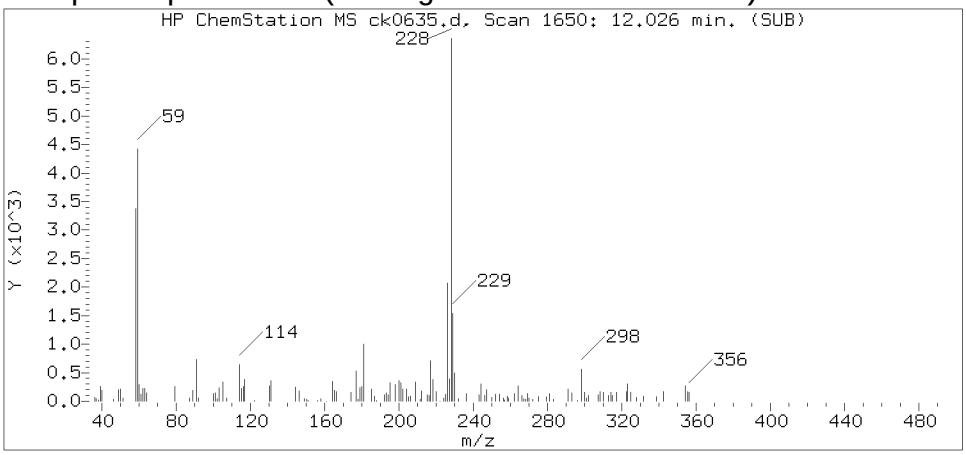
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

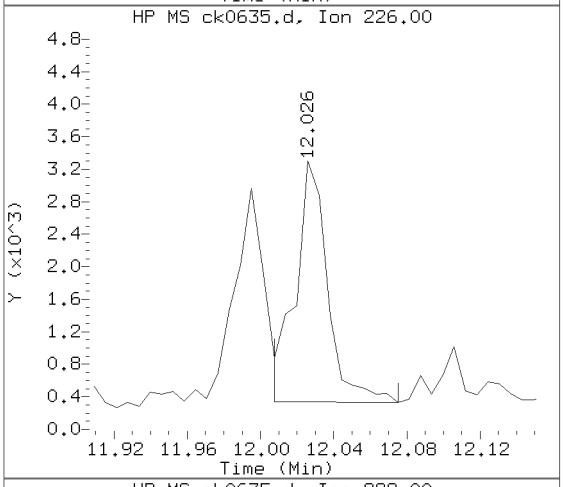
Reference Standard Spectrum for Chrysene



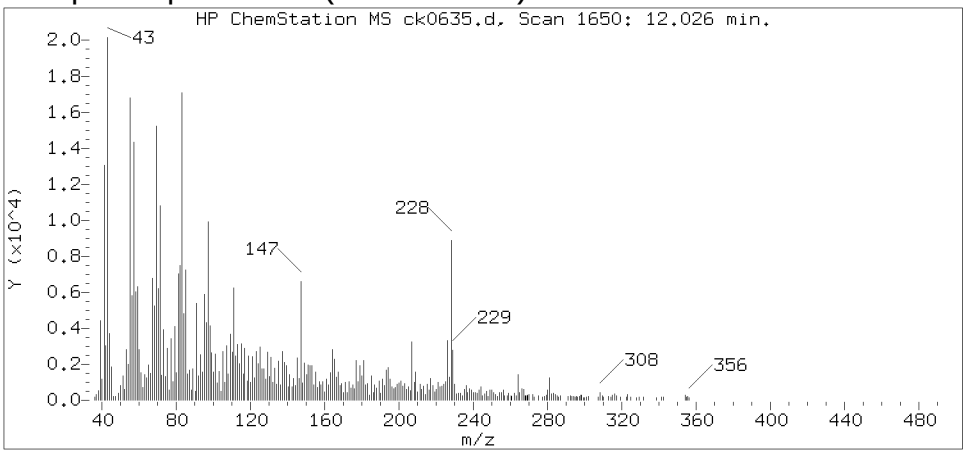


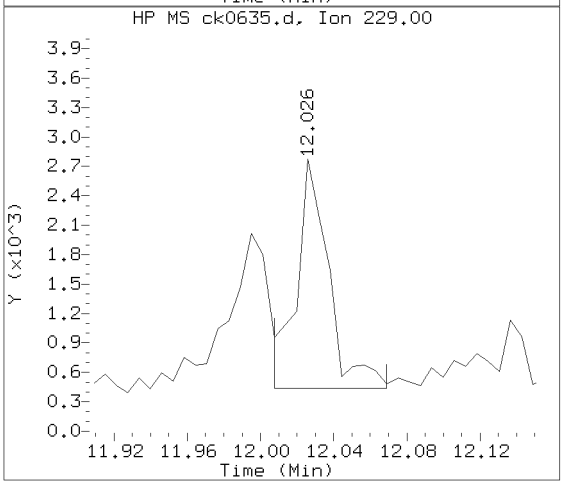
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1650
Retention Time (minutes)	: 12.026
Relative Retention Time	: 0.00057
Quant Ion	: 228.00
Area (flag)	: 10450
On-column Amount (ng/ul)	: 0.3315

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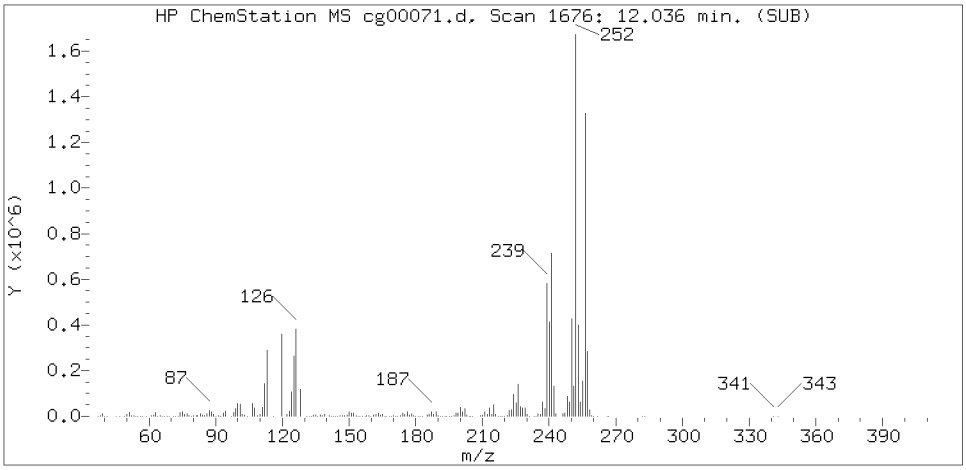
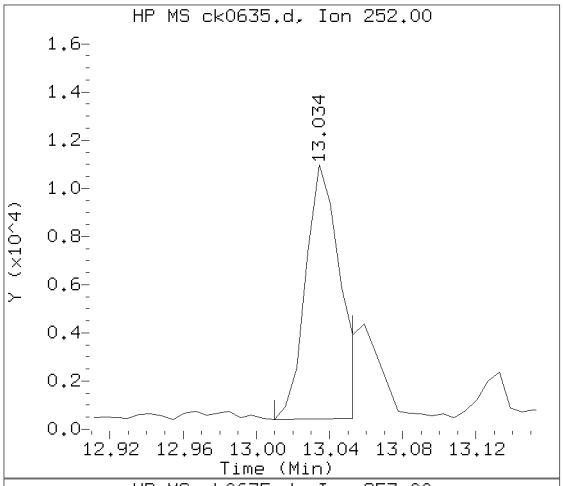
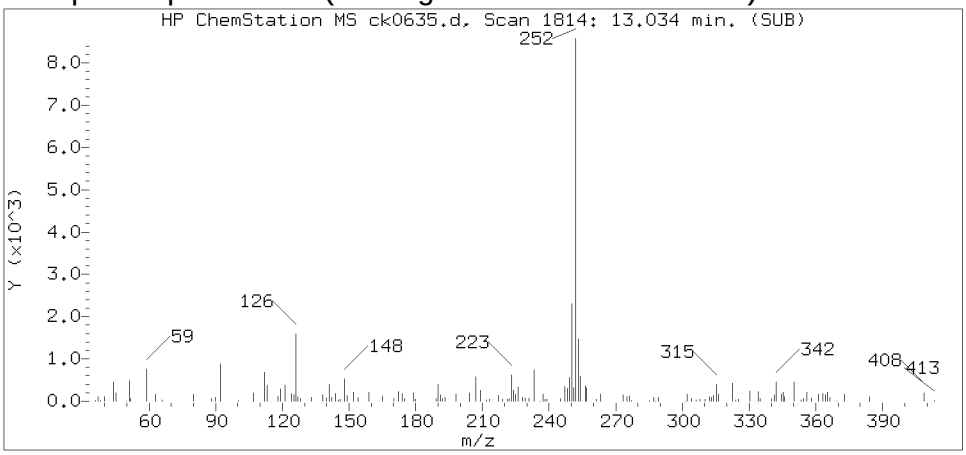
Target 3.5 esignature user ID: jmg00346

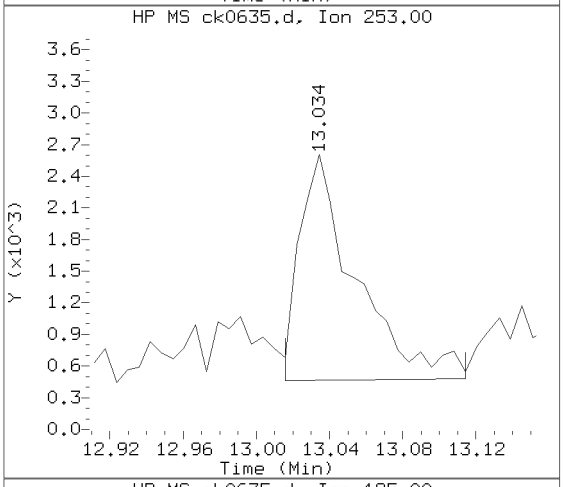
Reference Standard Spectrum for Benzo(b)fluoranthene



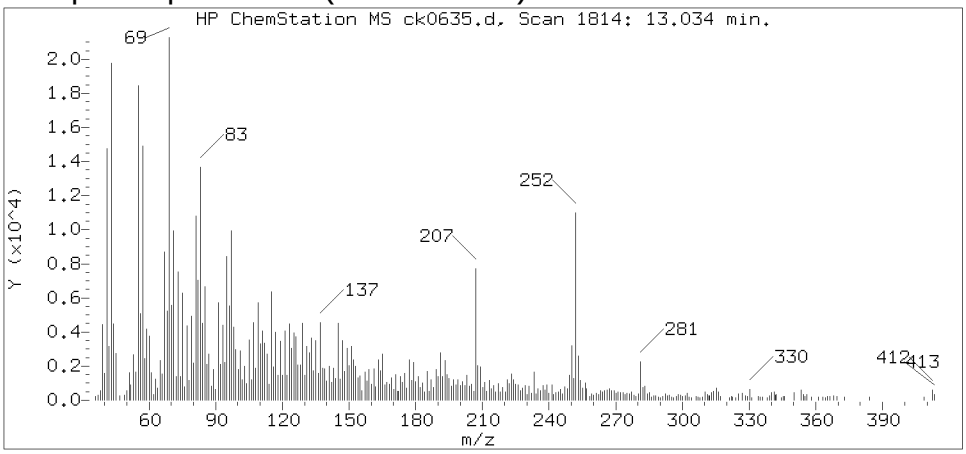


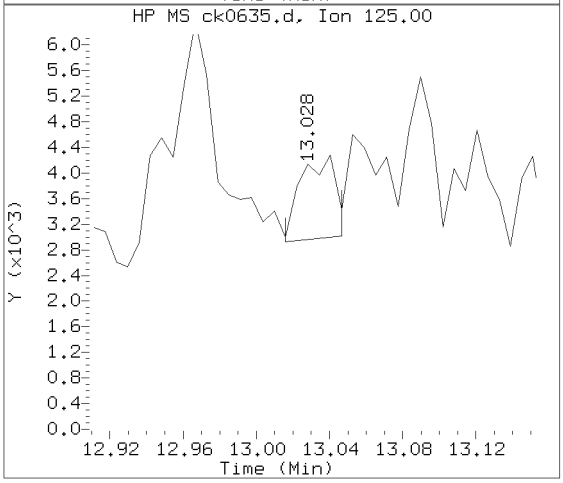
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

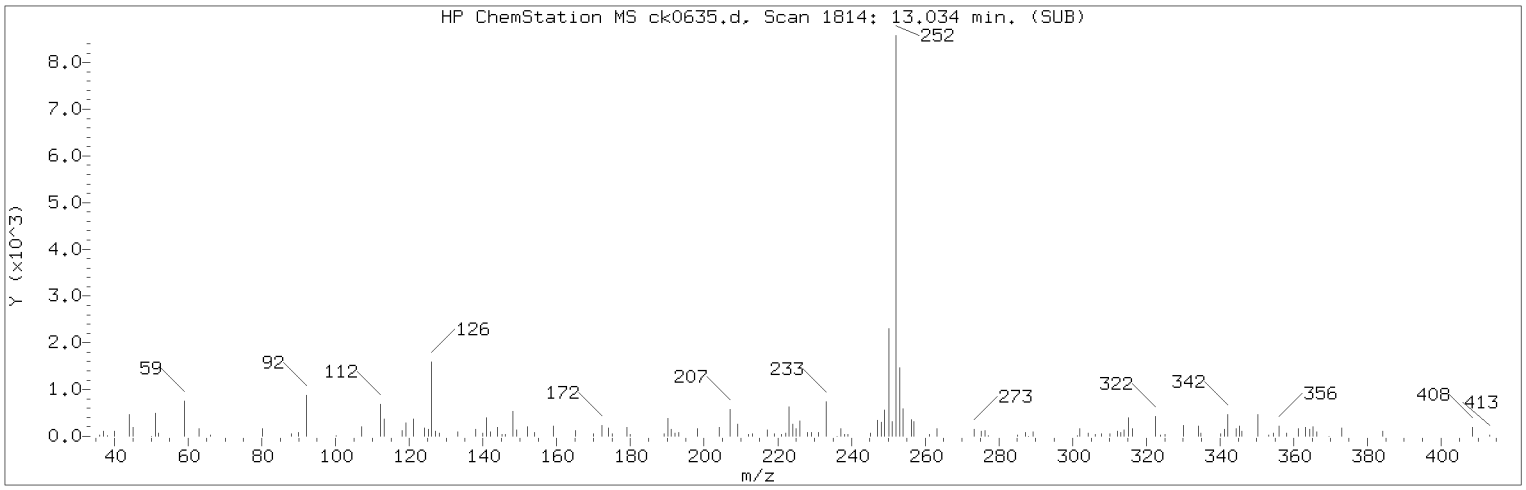
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

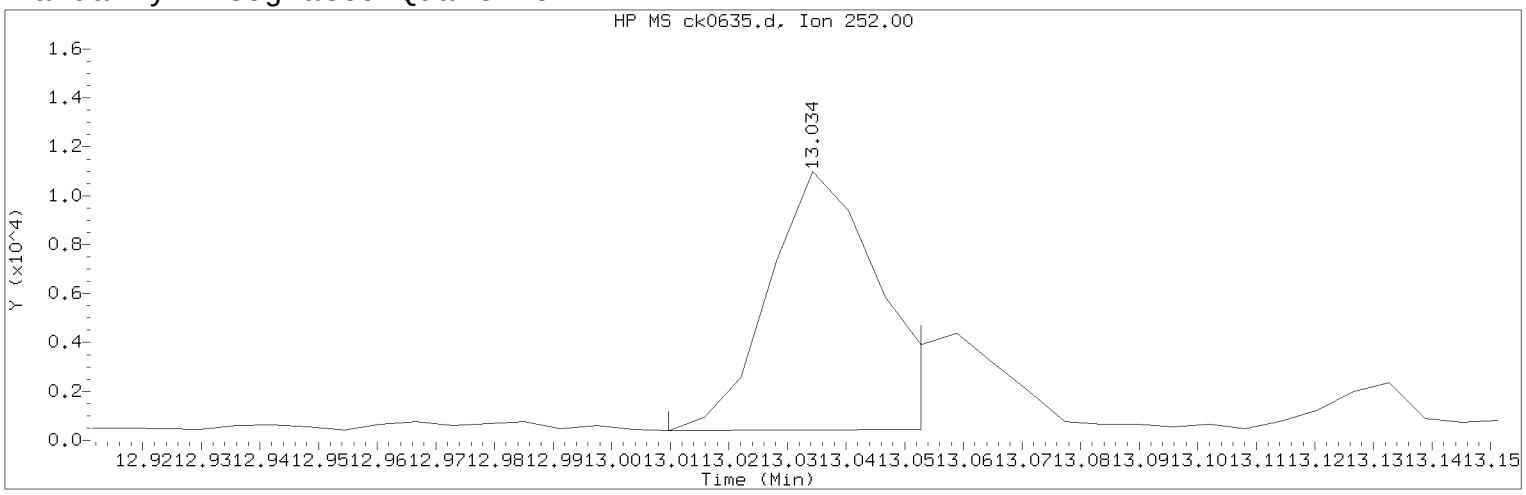
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 14027M
On-column Amount (ng/ul) : 0.4386

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

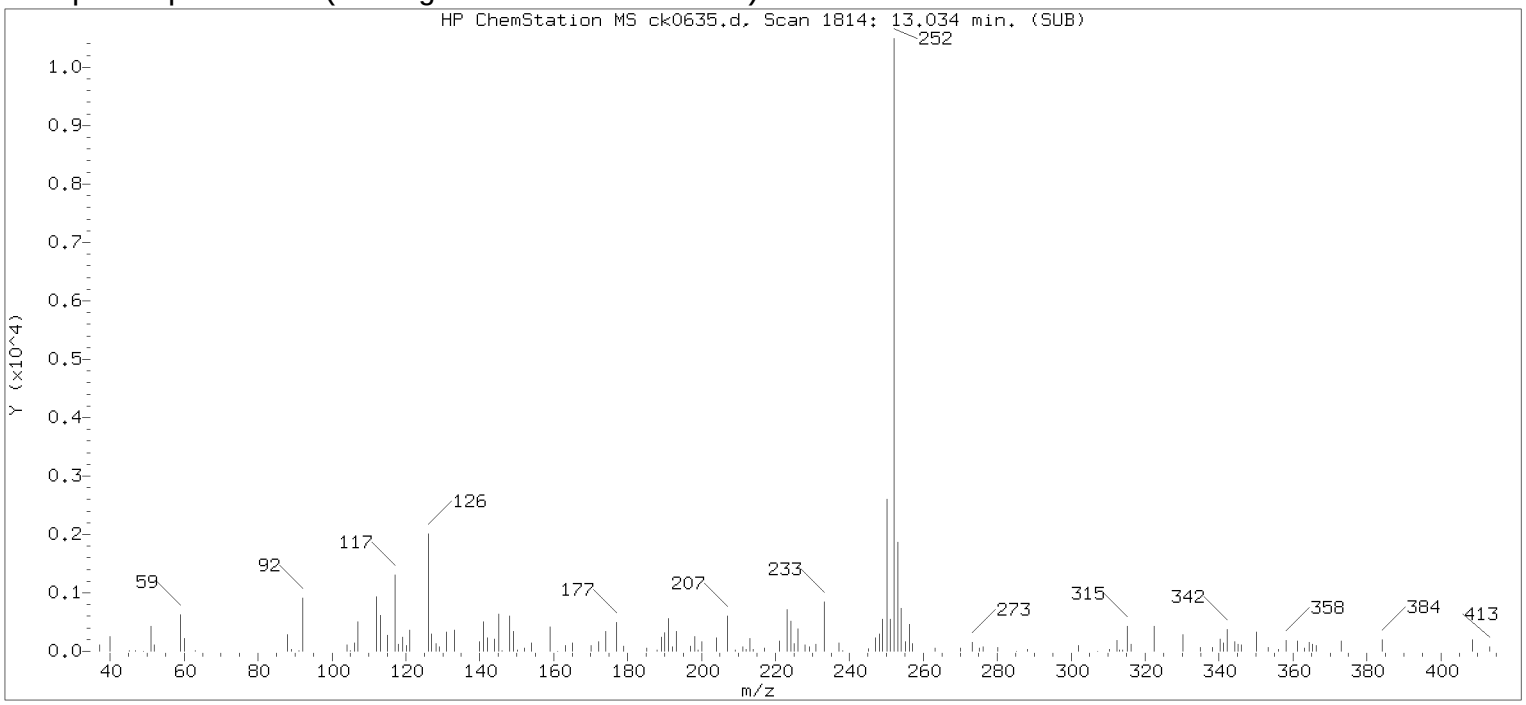
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 14027M
On-column Amount (ng/ul) : 0.4386
Integration start scan : 1809 Integration stop scan: 1816
Y at integration start : 398 Y at integration end: 451

Reason for manual integration: improper integration

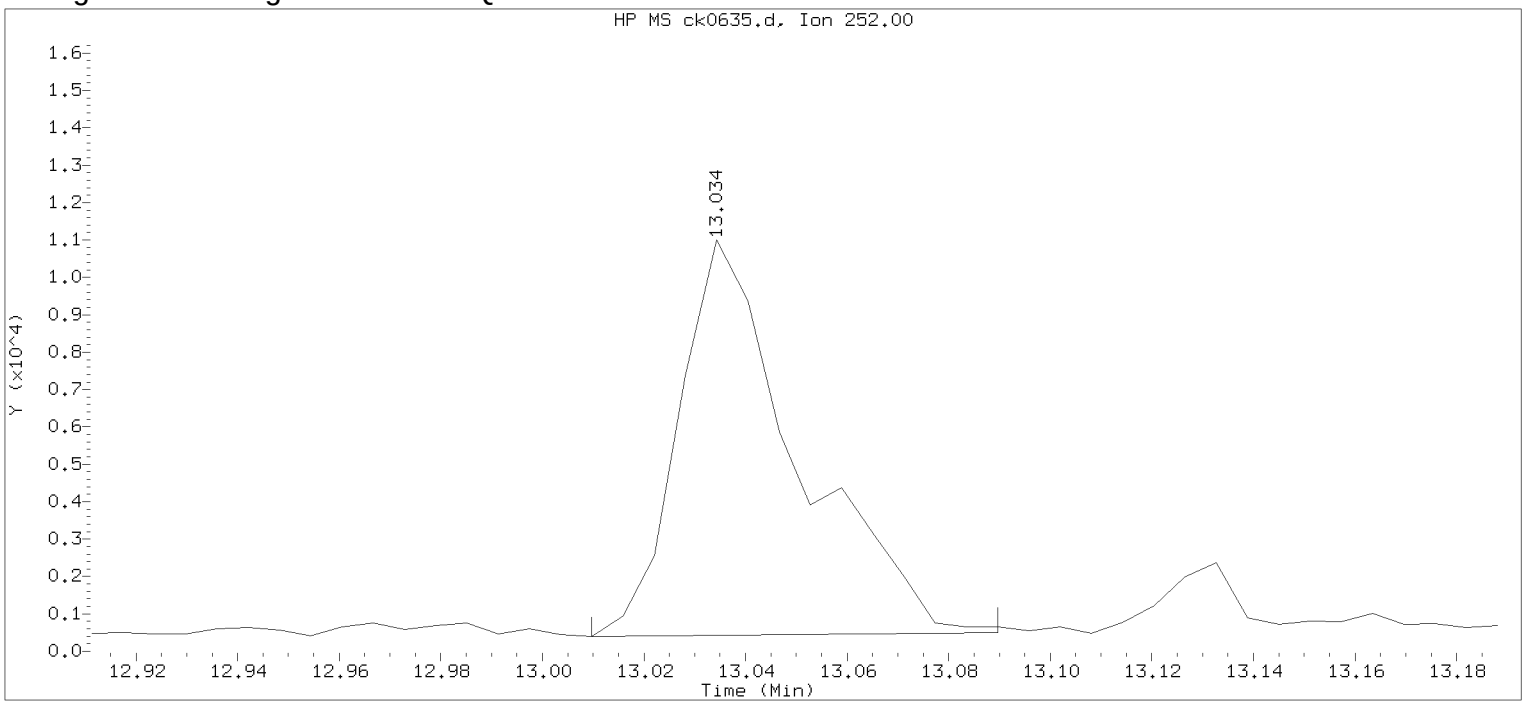
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

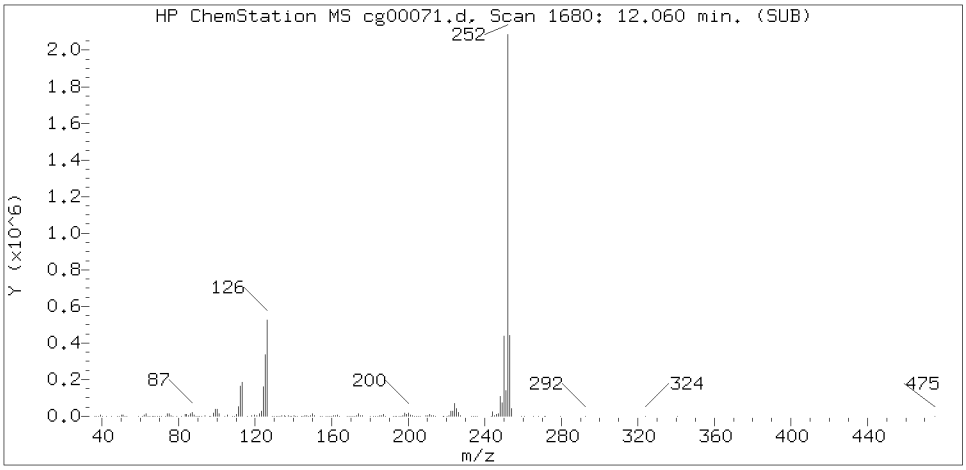
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

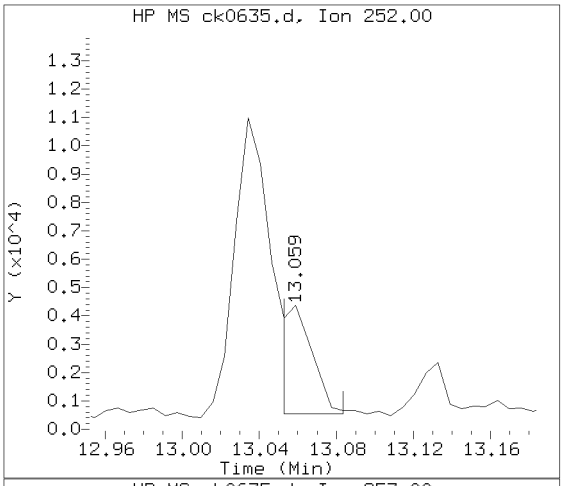
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 17217		
On-column Amount (ng/ul)	: 0.5383		
Integration start scan	: 1809	Integration stop scan:	1822
Y at integration start	: 398	Y at integration end:	498

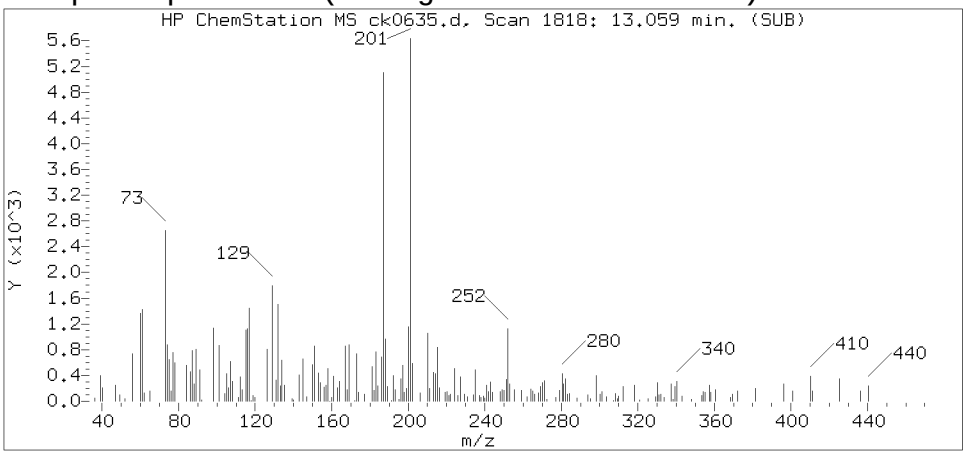
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user KVM06 jmg00346

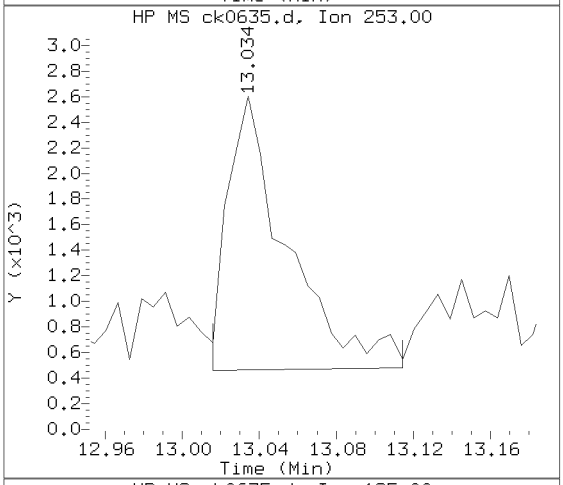
Reference Standard Spectrum for Benzo(k)fluoranthene



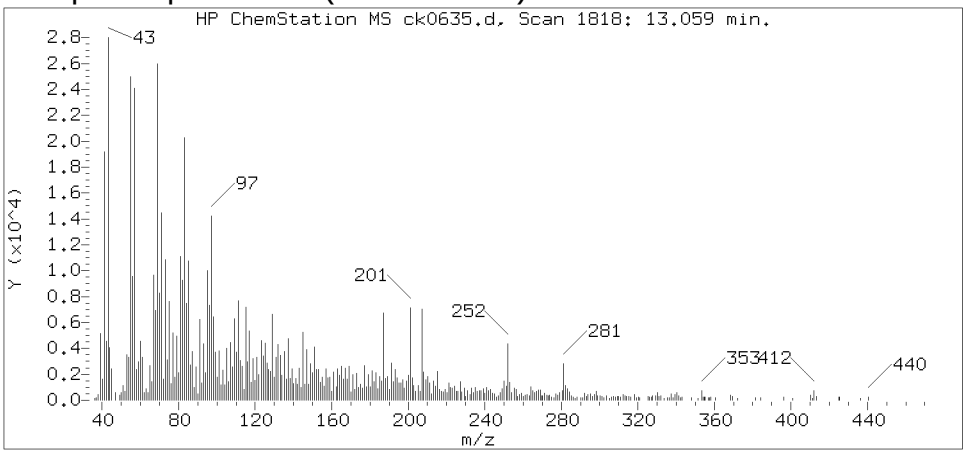


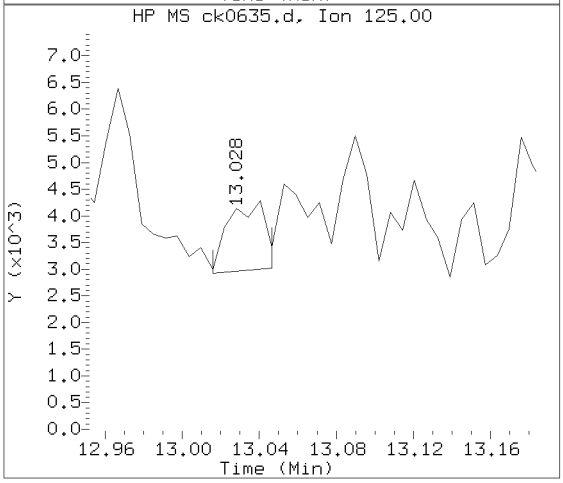
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

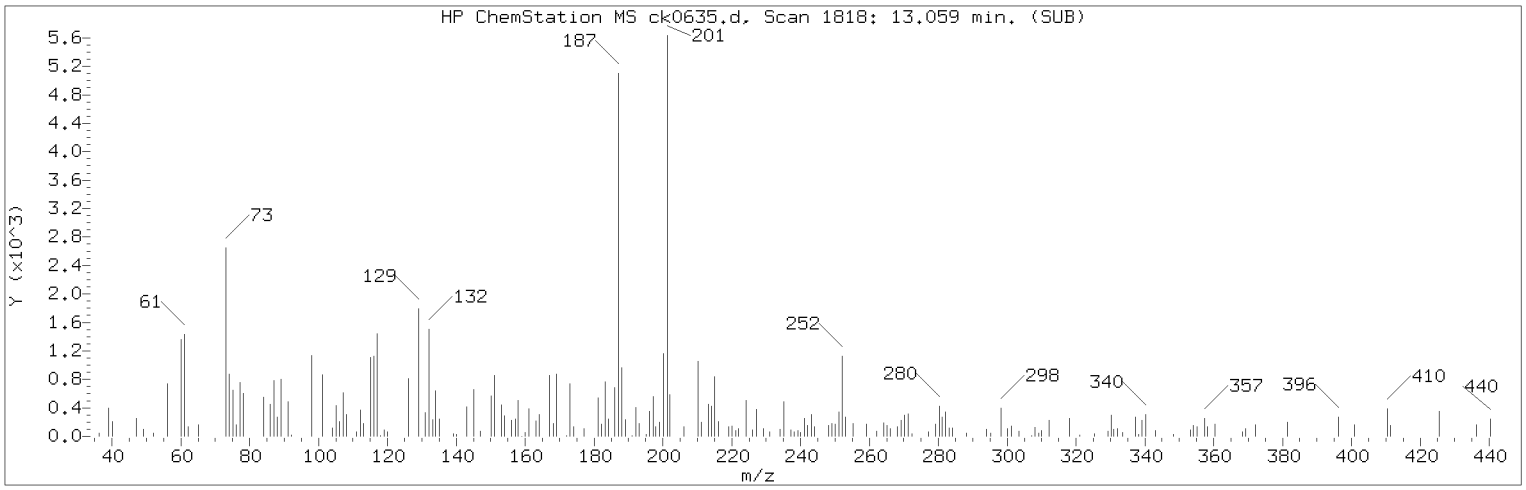
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

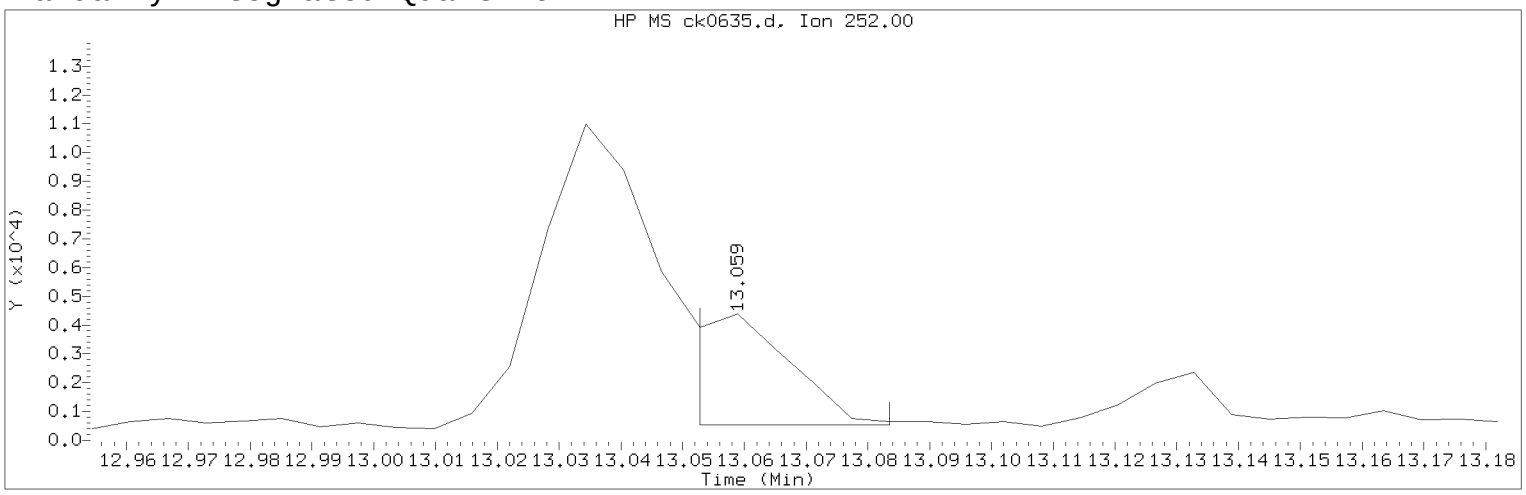
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Relative Retention Time : 0.00046
Quant Ion : 252.00
Area (flag) : 4281M
On-column Amount (ng/ul) : 0.1312

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

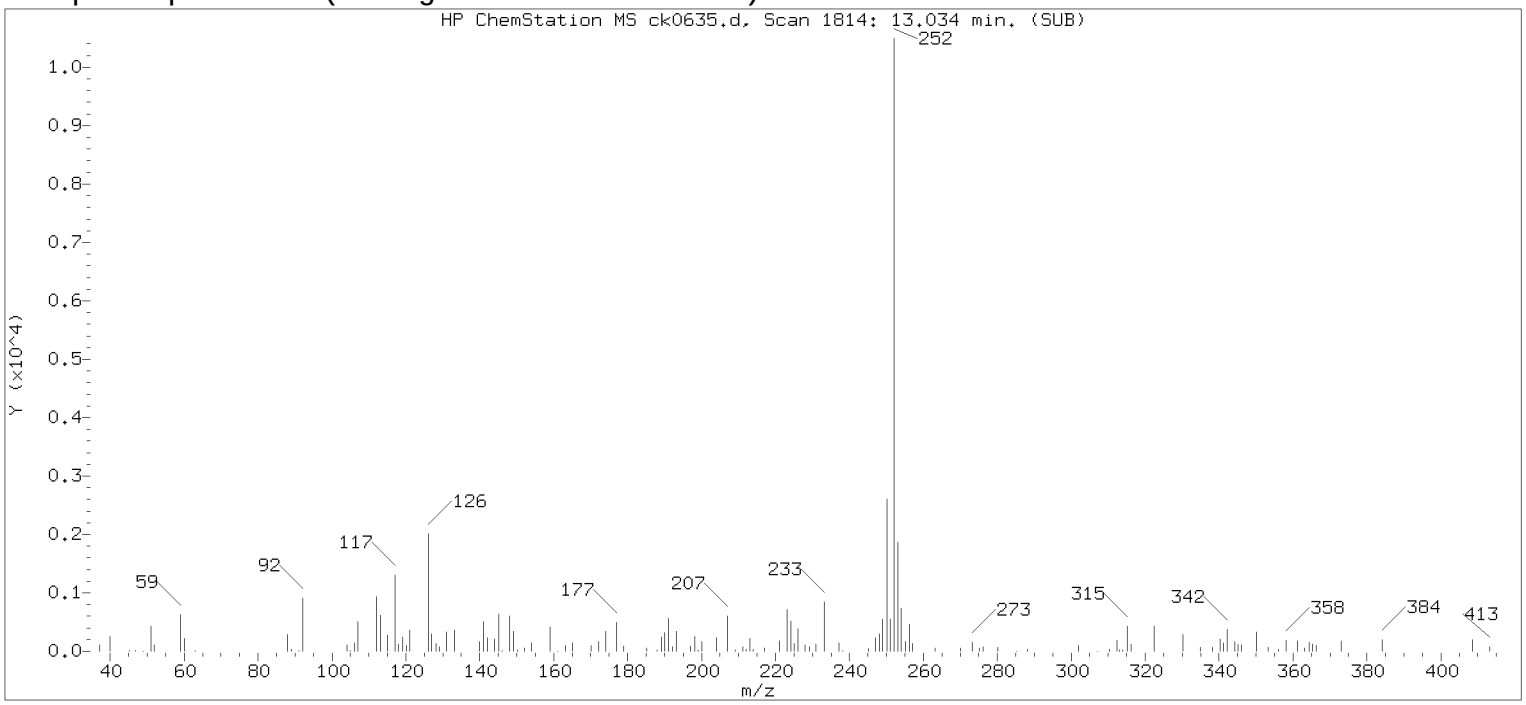
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Quant Ion : 252.00
Area (flag) : 4281M
On-column Amount (ng/ul) : 0.1312
Integration start scan : 1816 Integration stop scan: 1821
Y at integration start : 544 Y at integration end: 544

Reason for manual integration: improper integration

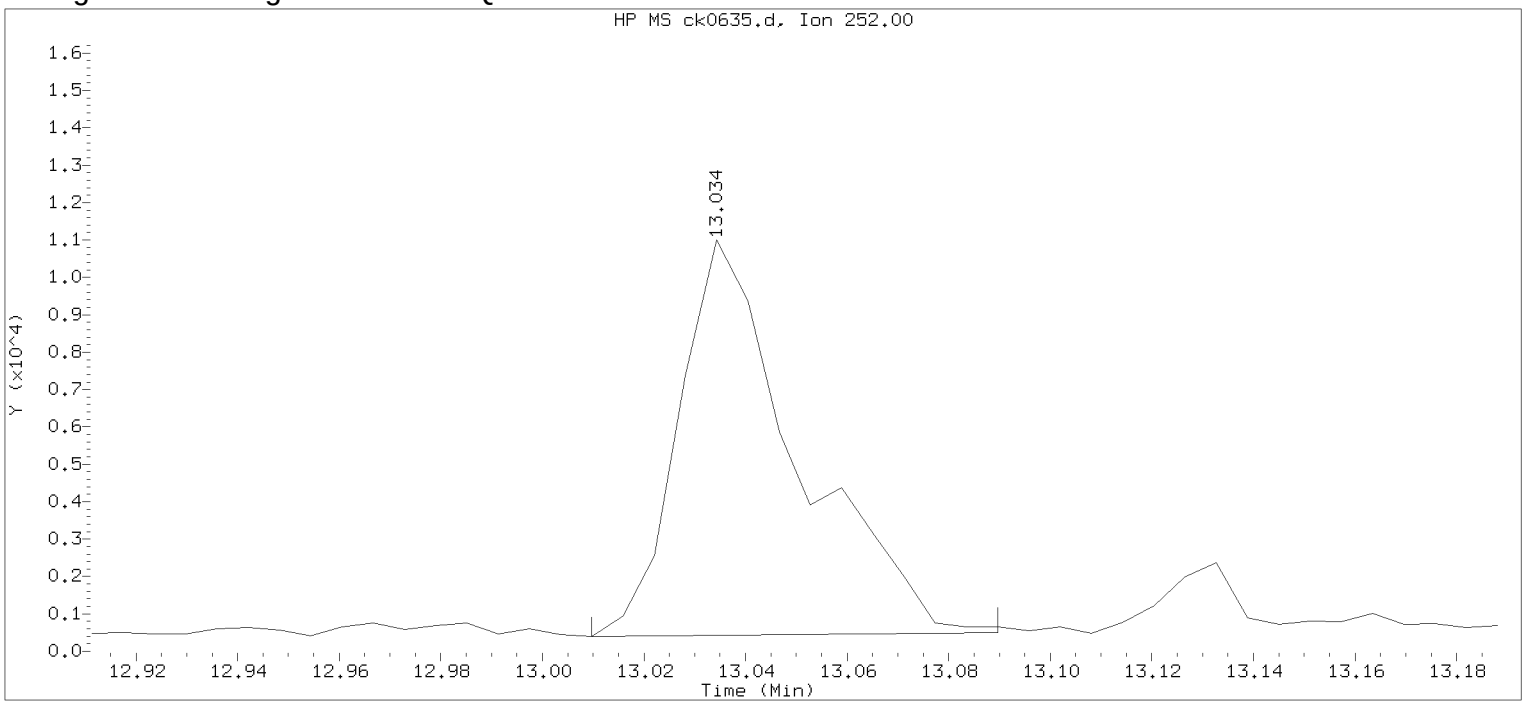
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

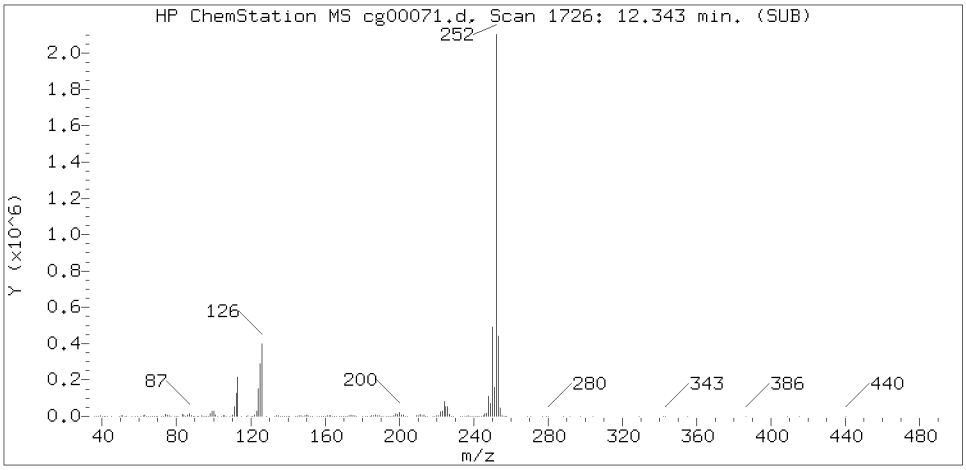
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

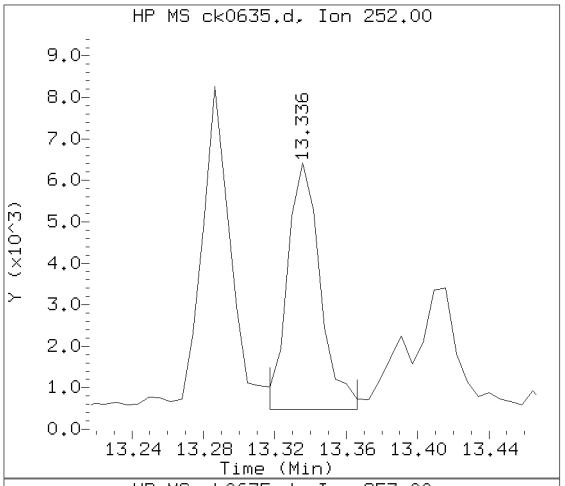
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 17217		
On-column Amount (ng/ul)	: 0.5277		
Integration start scan	: 1809	Integration stop scan:	1822
Y at integration start	: 398	Y at integration end:	498

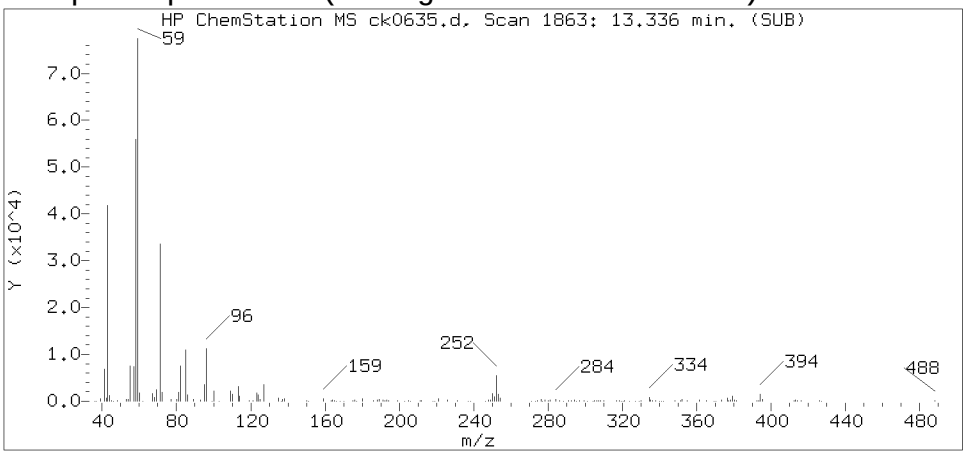
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user KVM06 jmg00346

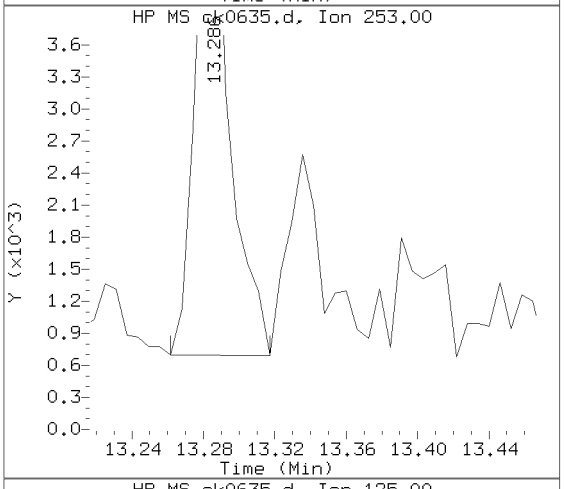
Reference Standard Spectrum for Benzo(a)pyrene



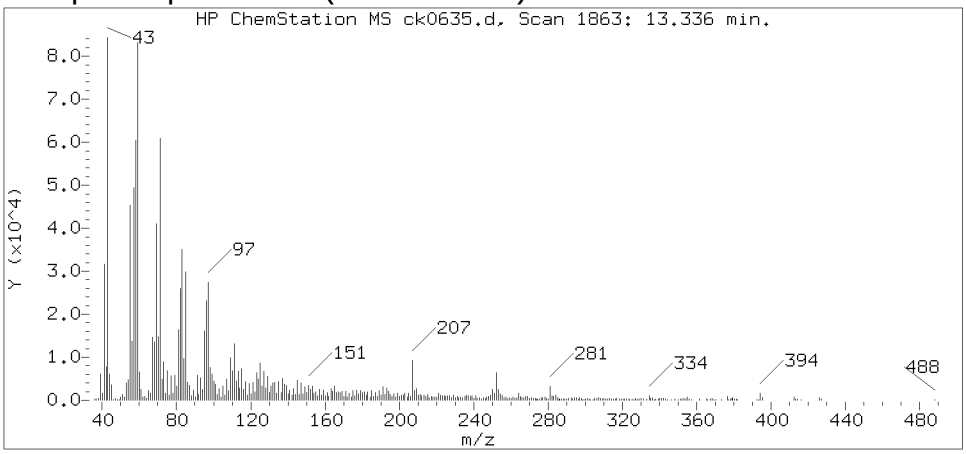


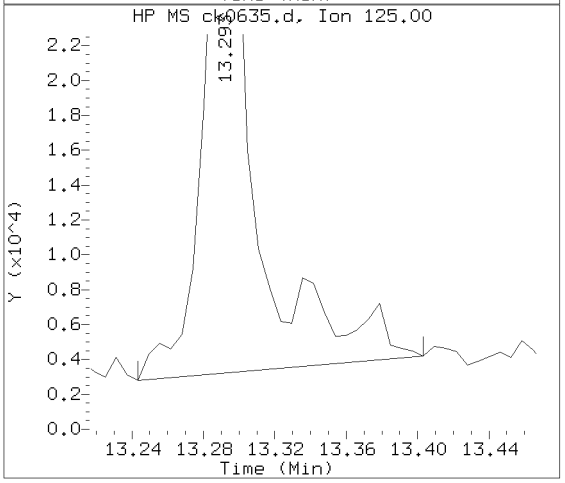
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

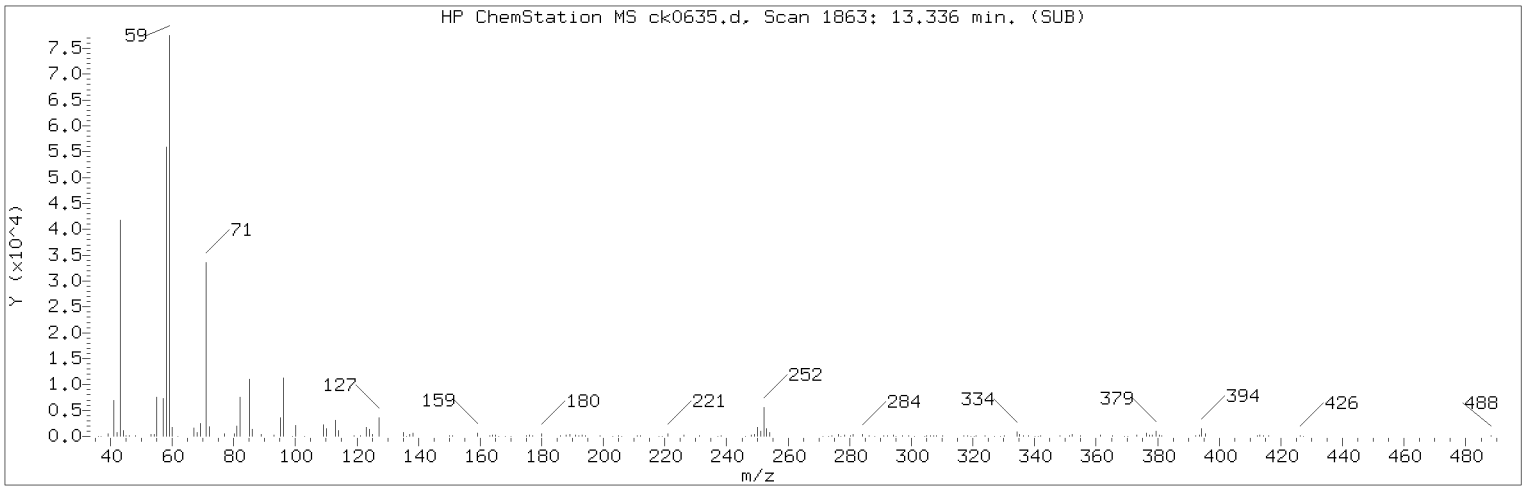
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

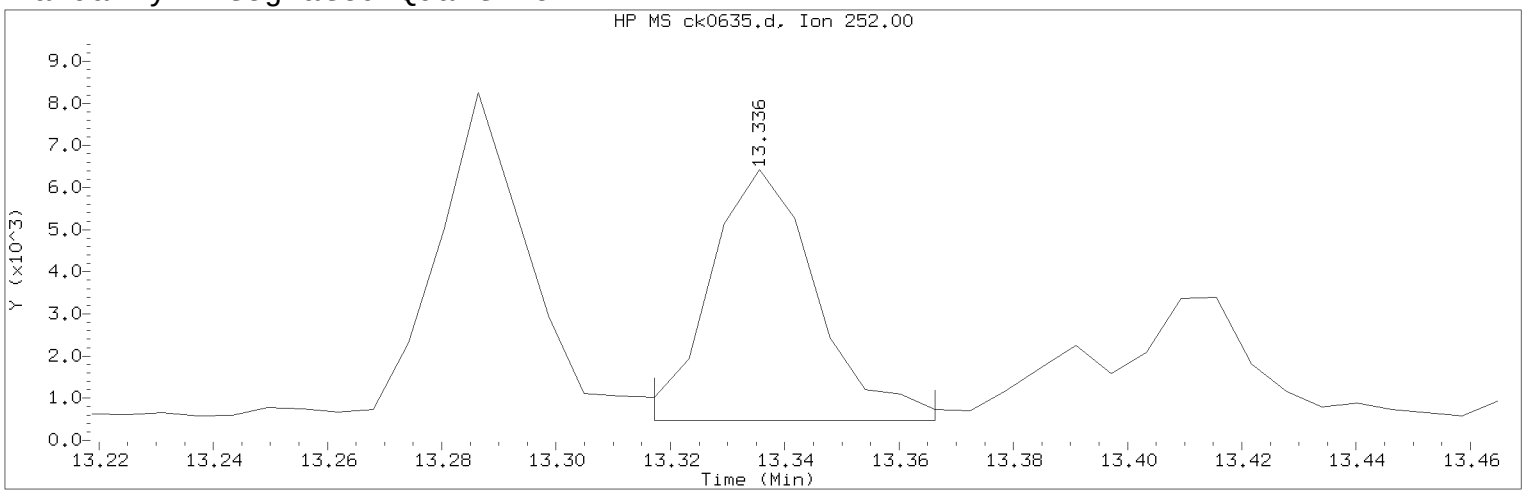
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 7753M
On-column Amount (ng/ul) : 0.2484

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

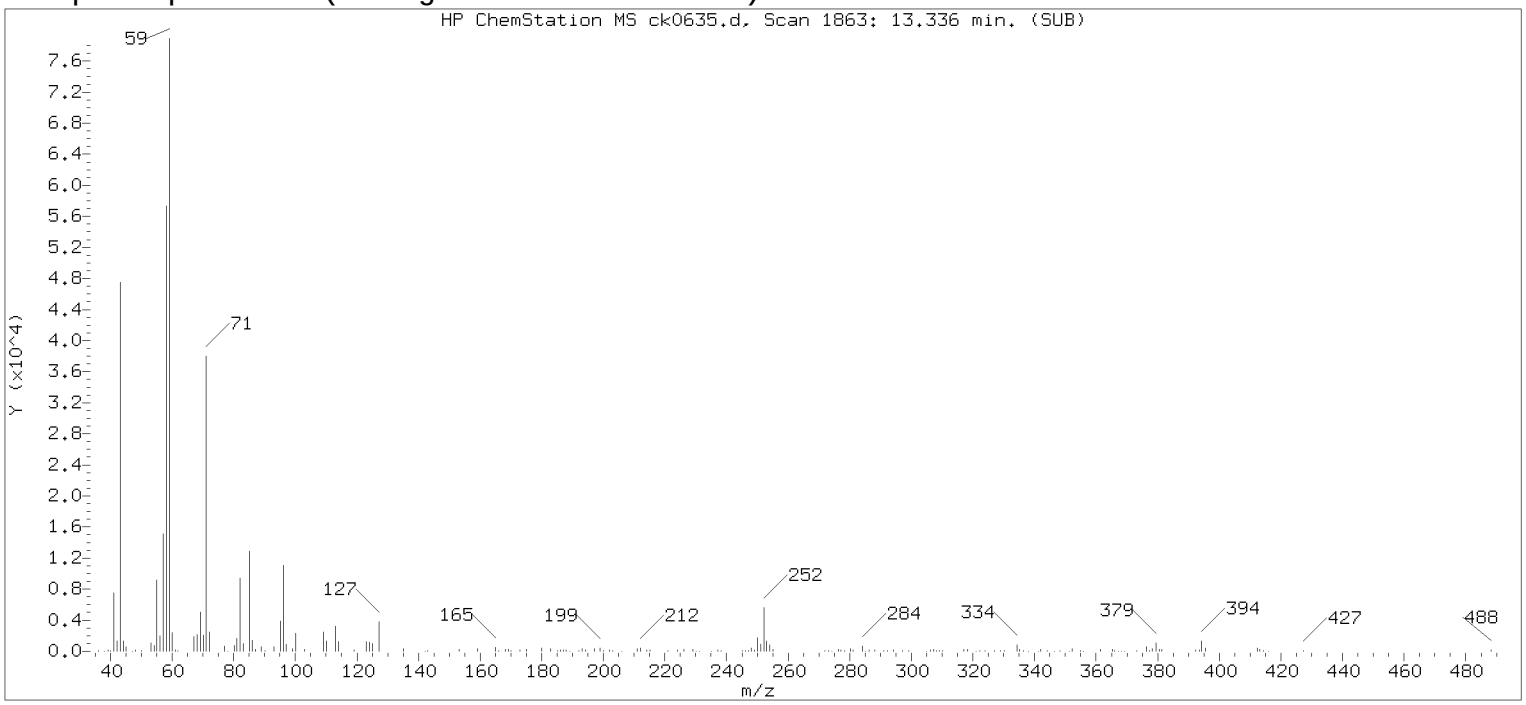
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Quant Ion : 252.00
Area (flag) : 7753M
On-column Amount (ng/ul) : 0.2484
Integration start scan : 1859 Integration stop scan: 1867
Y at integration start : 475 Y at integration end: 474

Reason for manual integration: improper integration

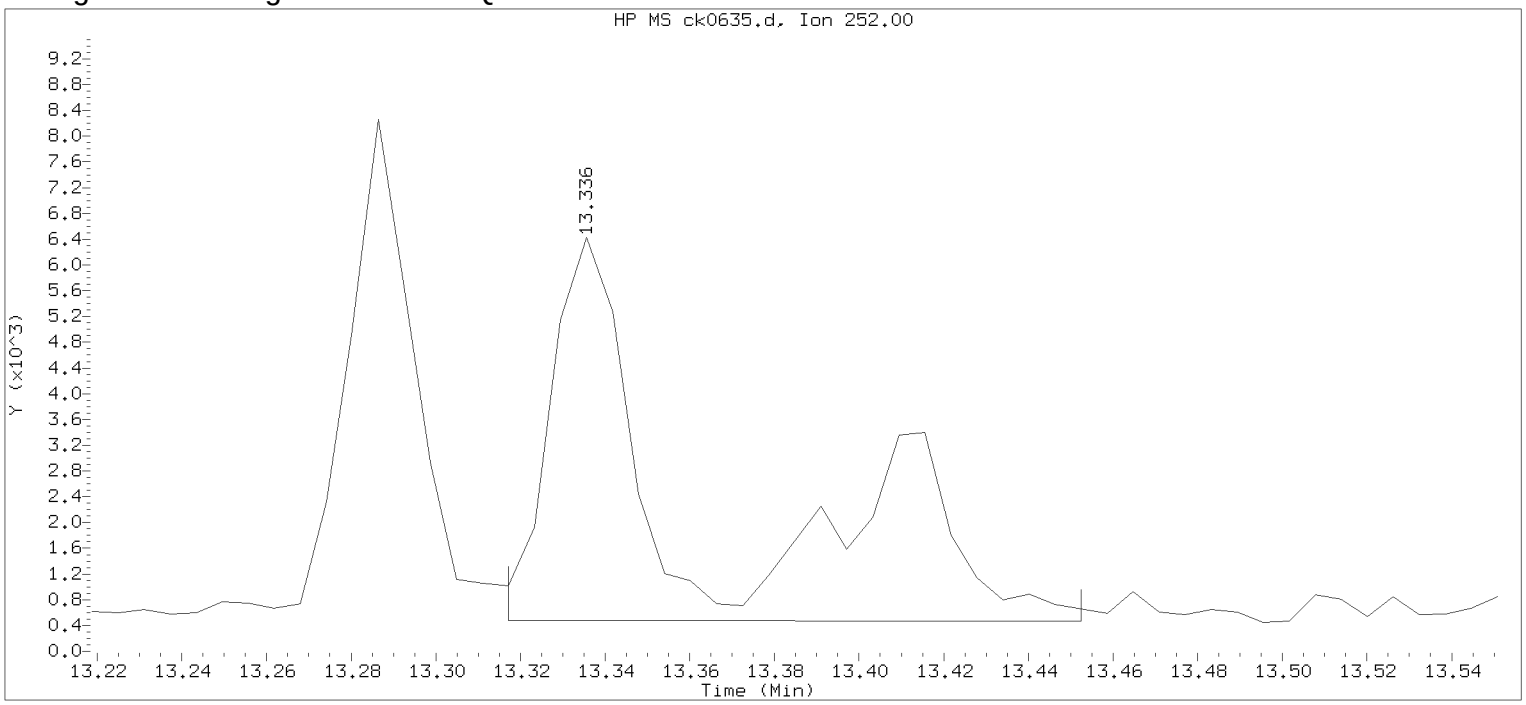
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

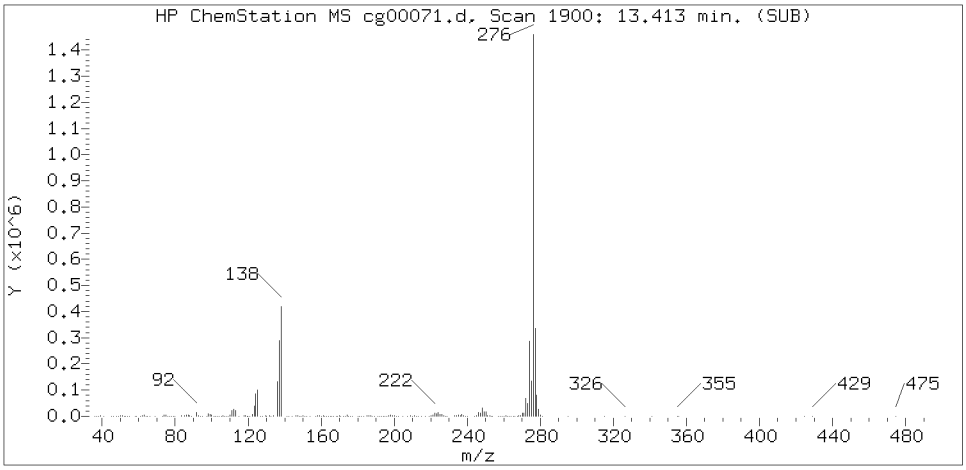
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

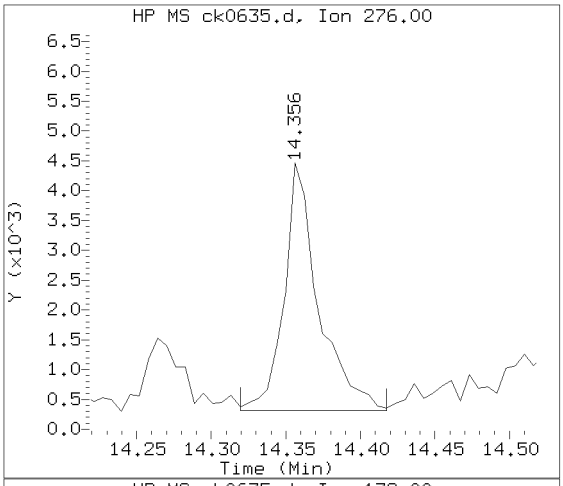
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Quant Ion : 252.00
Area : 13414
On-column Amount (ng/ul) : 0.4297
Integration start scan : 1859 Integration stop scan: 1881
Y at integration start : 475 Y at integration end: 470

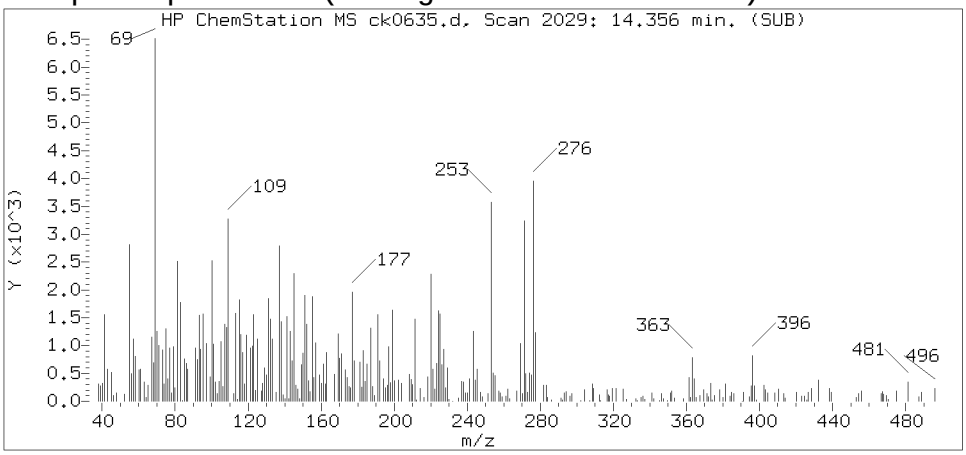
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

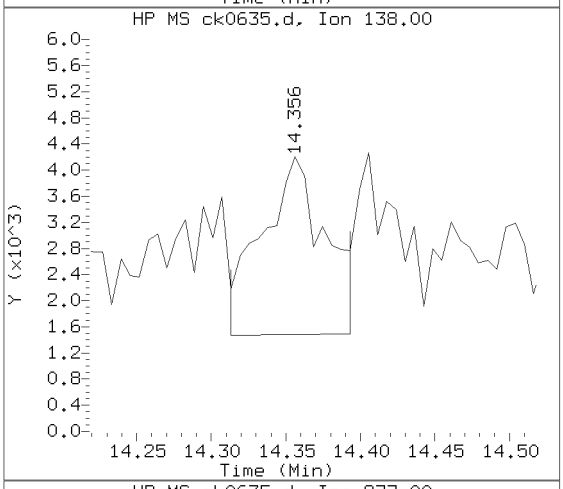
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



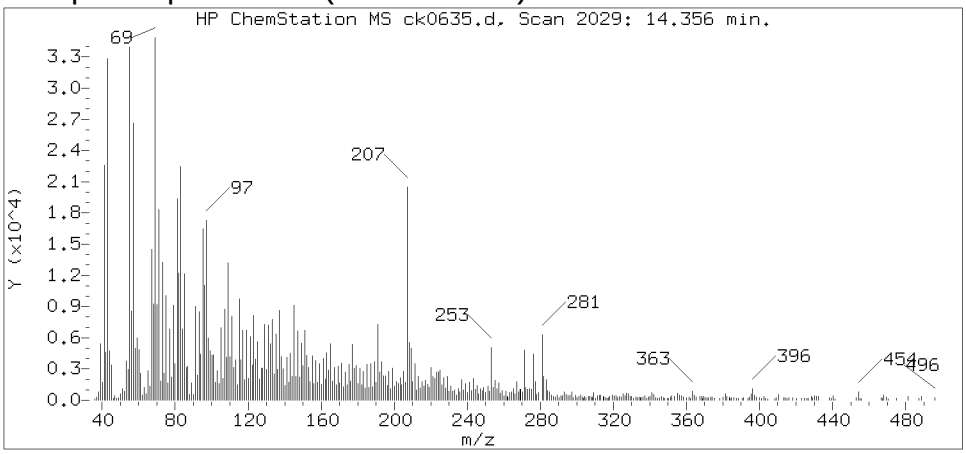


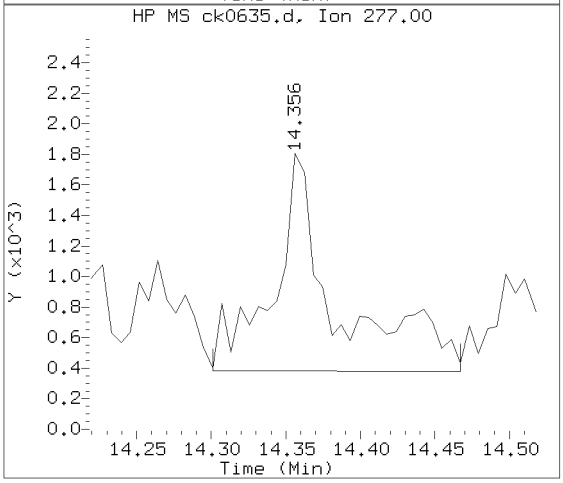
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

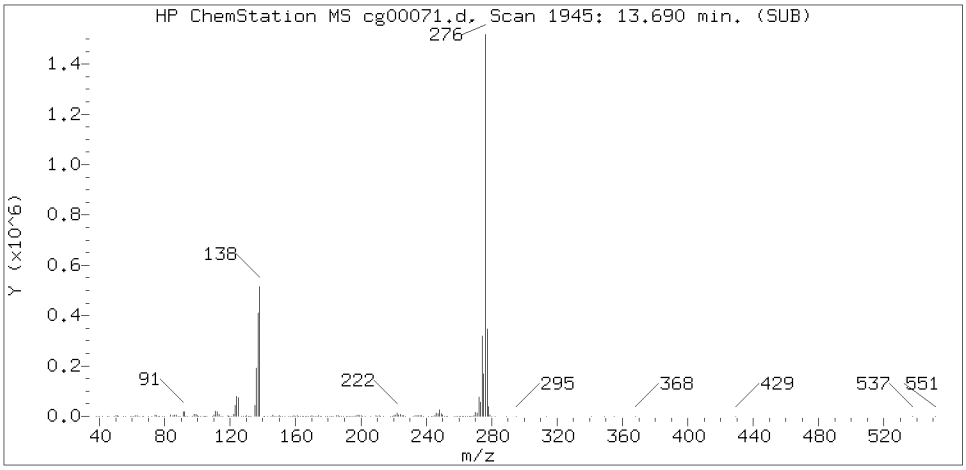
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

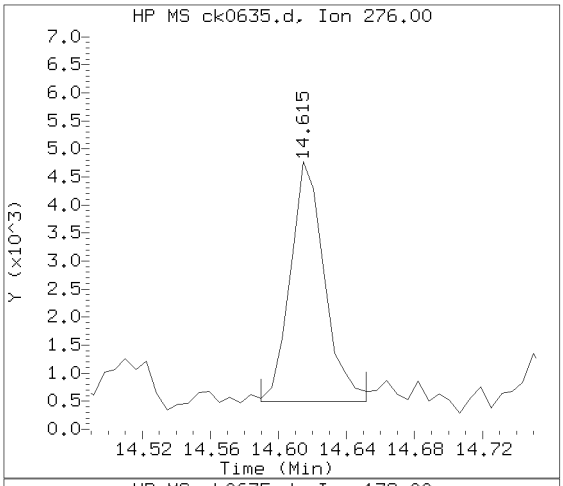
Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 177
Compound Name	: Indeno(1,2,3-cd)pyrene
Scan Number	: 2029
Retention Time (minutes)	: 14.356
Relative Retention Time	: 0.00046
Quant Ion	: 276.00
Area (flag)	: 6645
On-column Amount (ng/ul)	: 0.2001

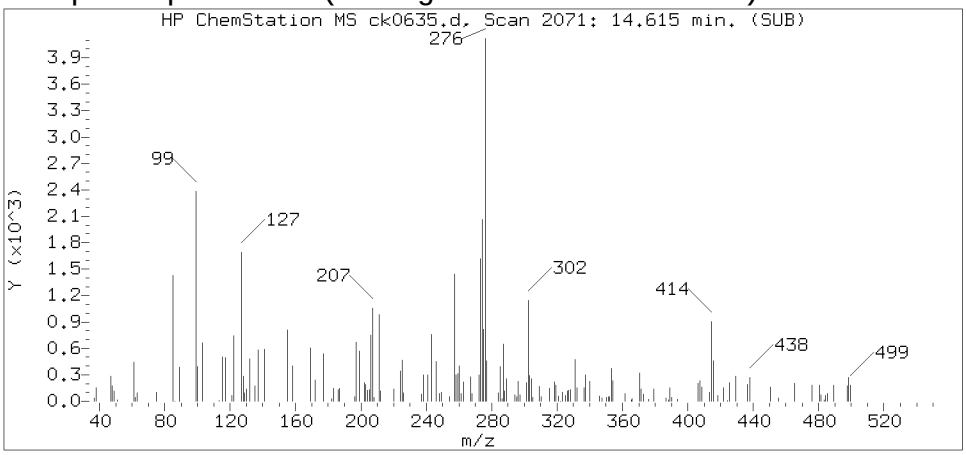
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

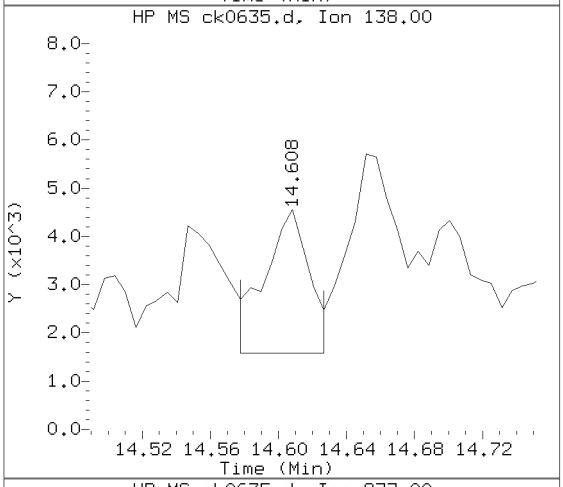
Reference Standard Spectrum for Benzo(g,h,i)perylene



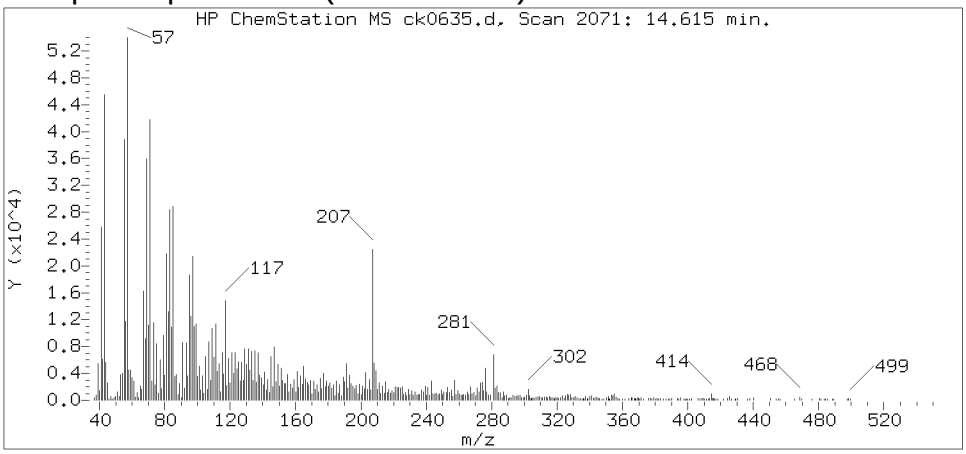


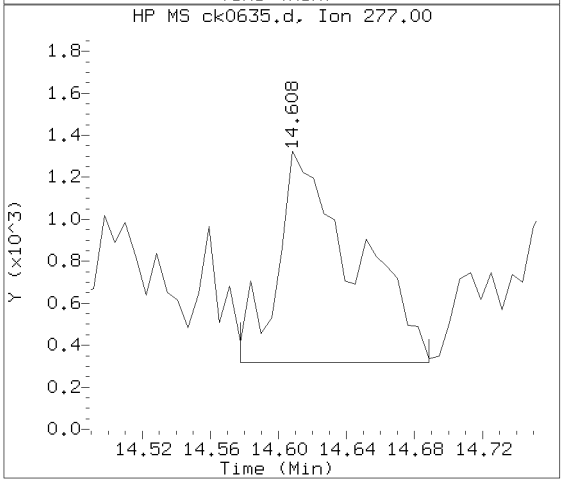
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

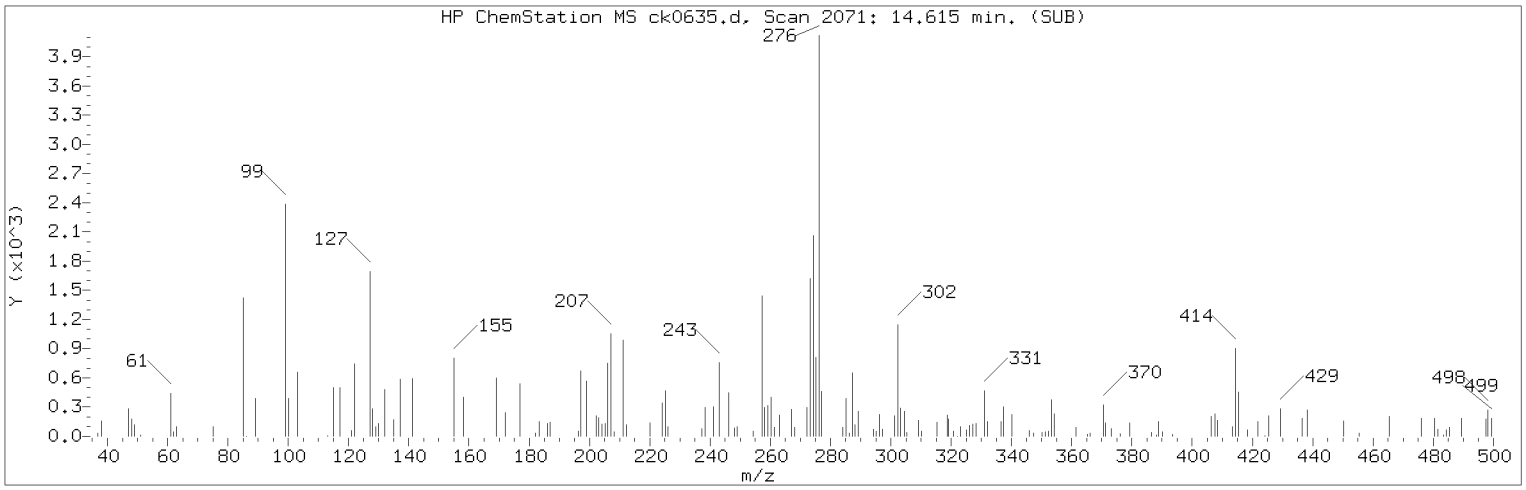
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

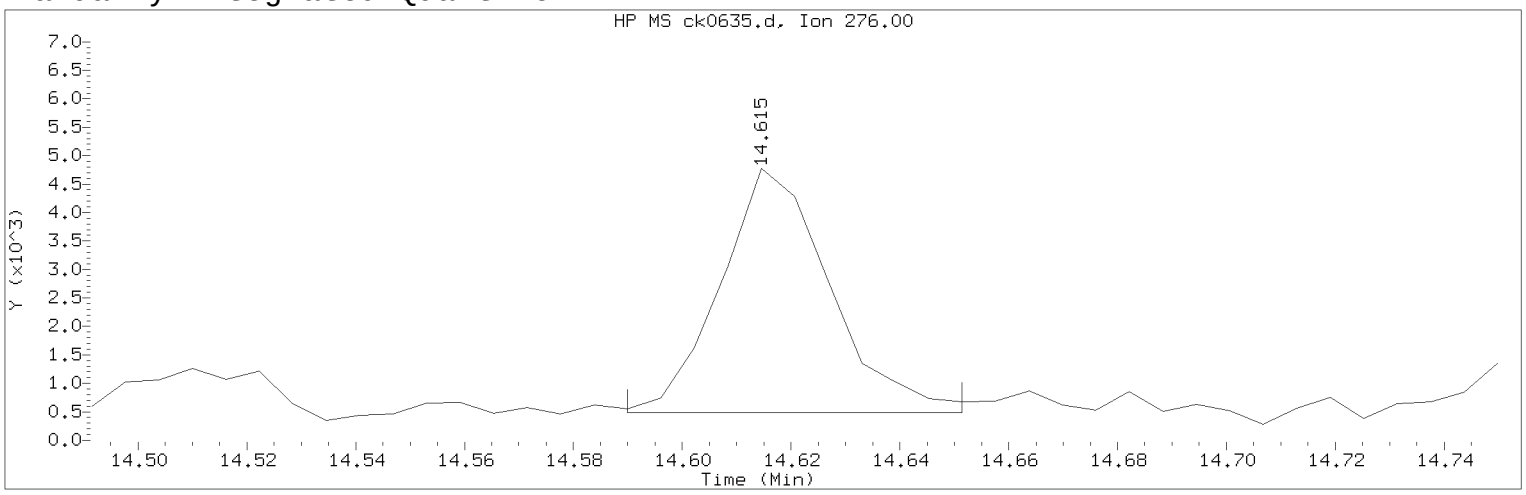
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2071
Retention Time (minutes) : 14.615
Relative Retention Time : 0.00046
Quant Ion : 276.00
Area (flag) : 5996M
On-column Amount (ng/ul) : 0.2119

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:02 jmg00346

Sample Name: 2E131 Lab Sample ID: 7266809

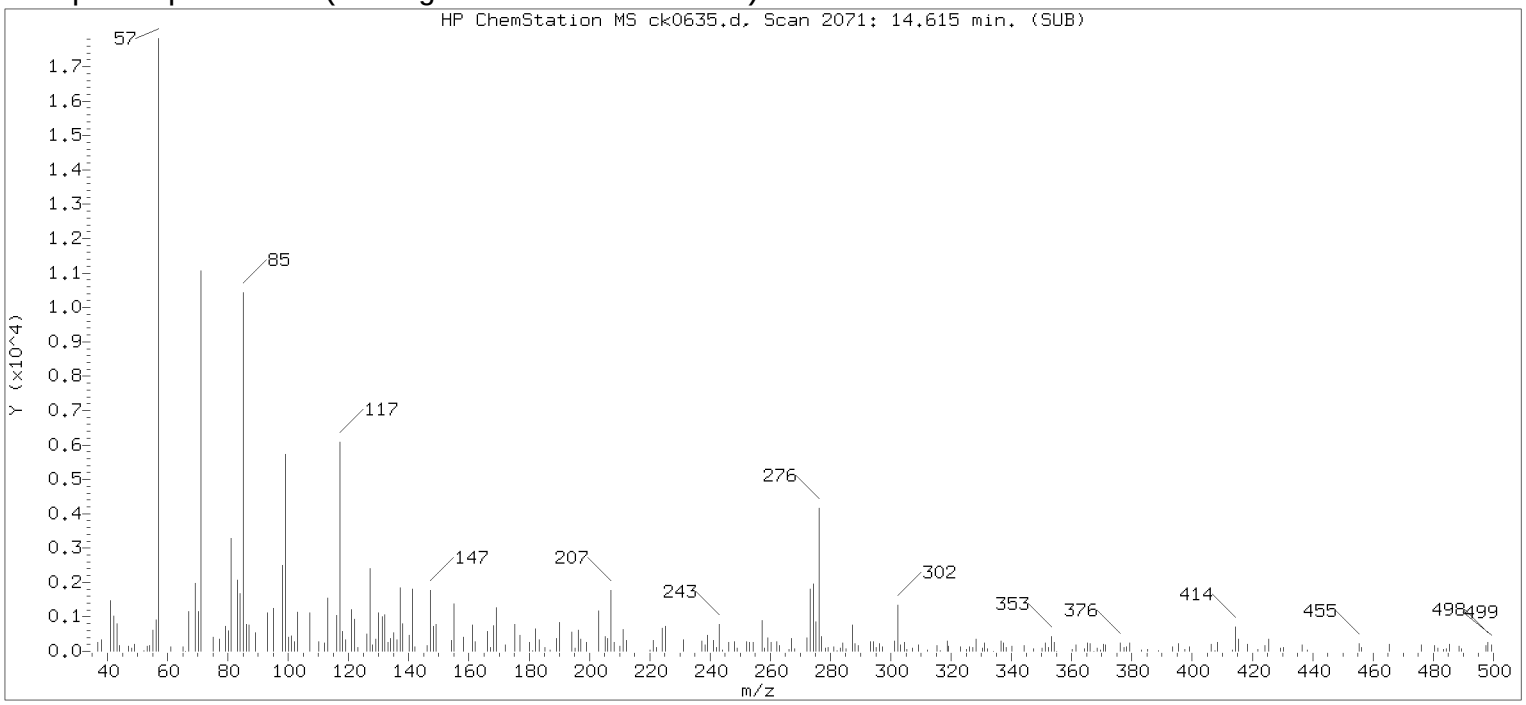
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2071
Retention Time (minutes) : 14.615
Quant Ion : 276.00
Area (flag) : 5996M
On-column Amount (ng/ul) : 0.2119
Integration start scan : 2066 Integration stop scan: 2076
Y at integration start : 488 Y at integration end: 488

Reason for manual integration: improper integration

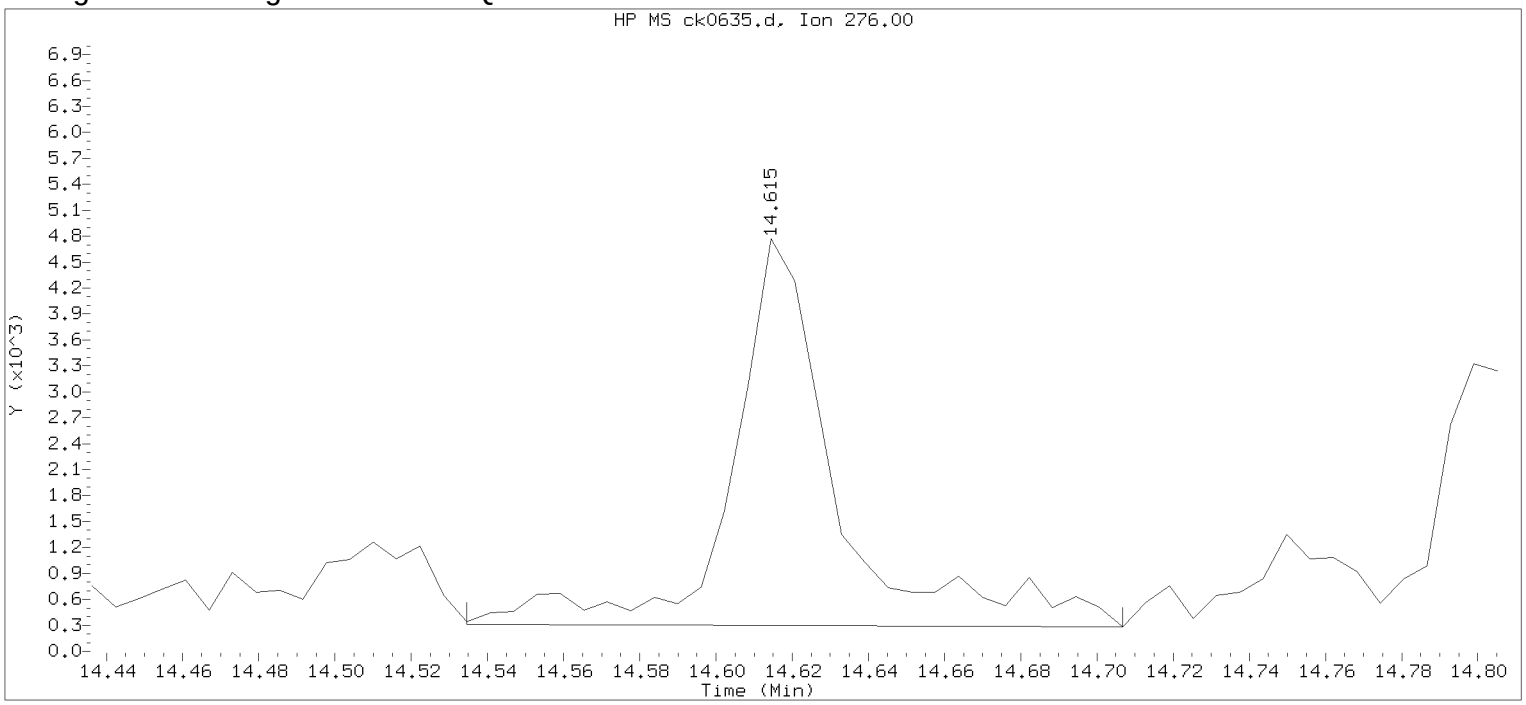
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:33.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:28.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0635.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 11:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:01 Automation

Sample Name: 2E131 Lab Sample ID: 7266809

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2071		
Retention Time (minutes)	: 14.615		
Quant Ion	: 276.00		
Area	: 8530		
On-column Amount (ng/ul)	: 0.3015		
Integration start scan	: 2057	Integration stop scan:	2085
Y at integration start	: 314	Y at integration end:	285

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:33.
Target 3.5 esignature user KVM06 jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0393.d Injection date and time: **13-NOV-2013 10:45**
Data file Sample Info. Line: 2D123;7266810;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	128316 (-7)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	495759 (-5)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	288695 (-9)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	506394 (-10)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	642017 (-12)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	476708 (-17)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.966(0.001)	112	1127332	29.589	59%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1051124	20.089	40%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.000)	82	991538	21.733	87%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1717503	23.823	95%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	407987	53.807	108%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	1860808	23.242	93%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:33. Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0393.d Injection date and time: **13-NOV-2013 10:45**
Data file Sample Info. Line: 2D123;7266810;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

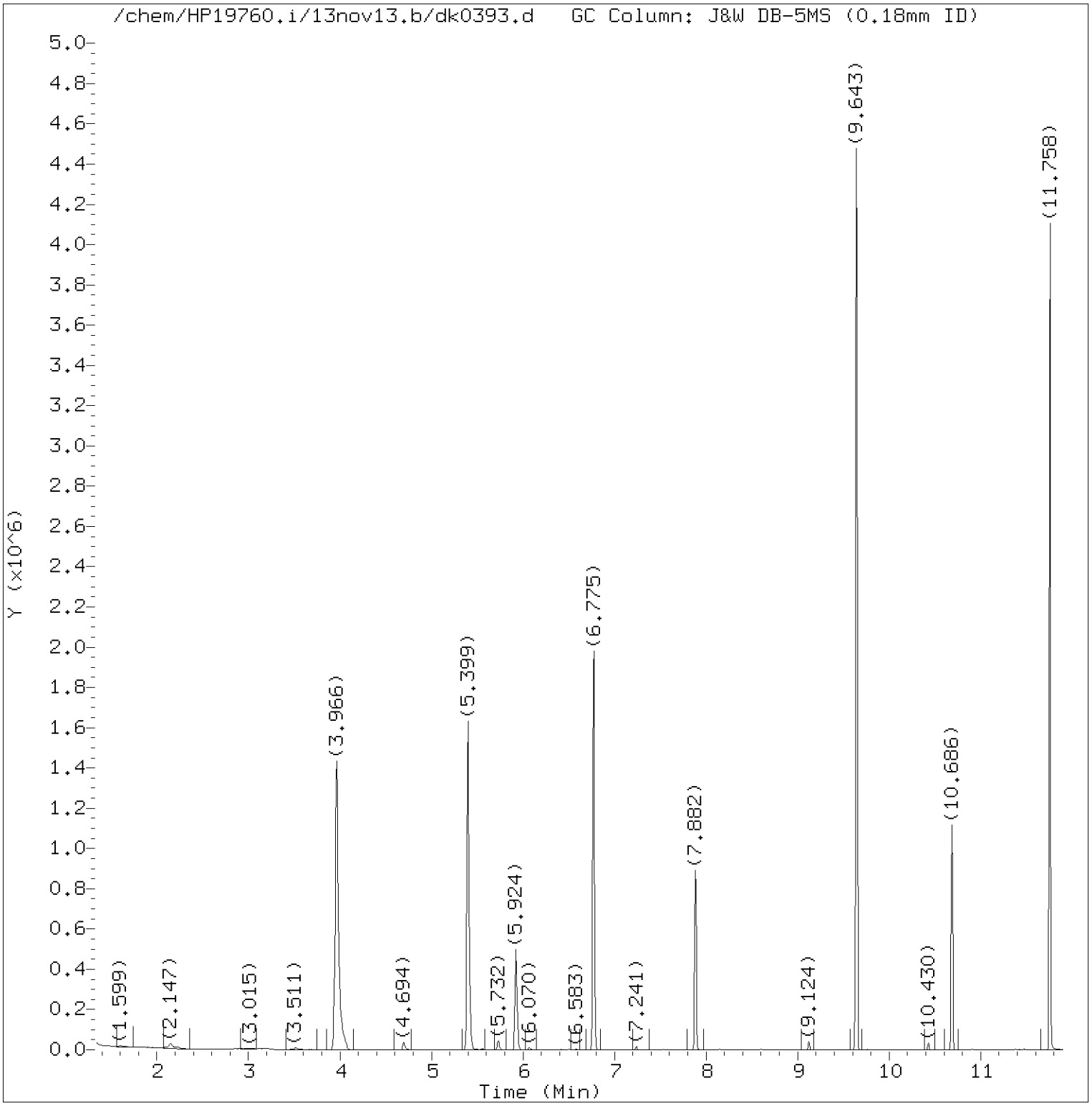
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 245 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:33. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:15. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

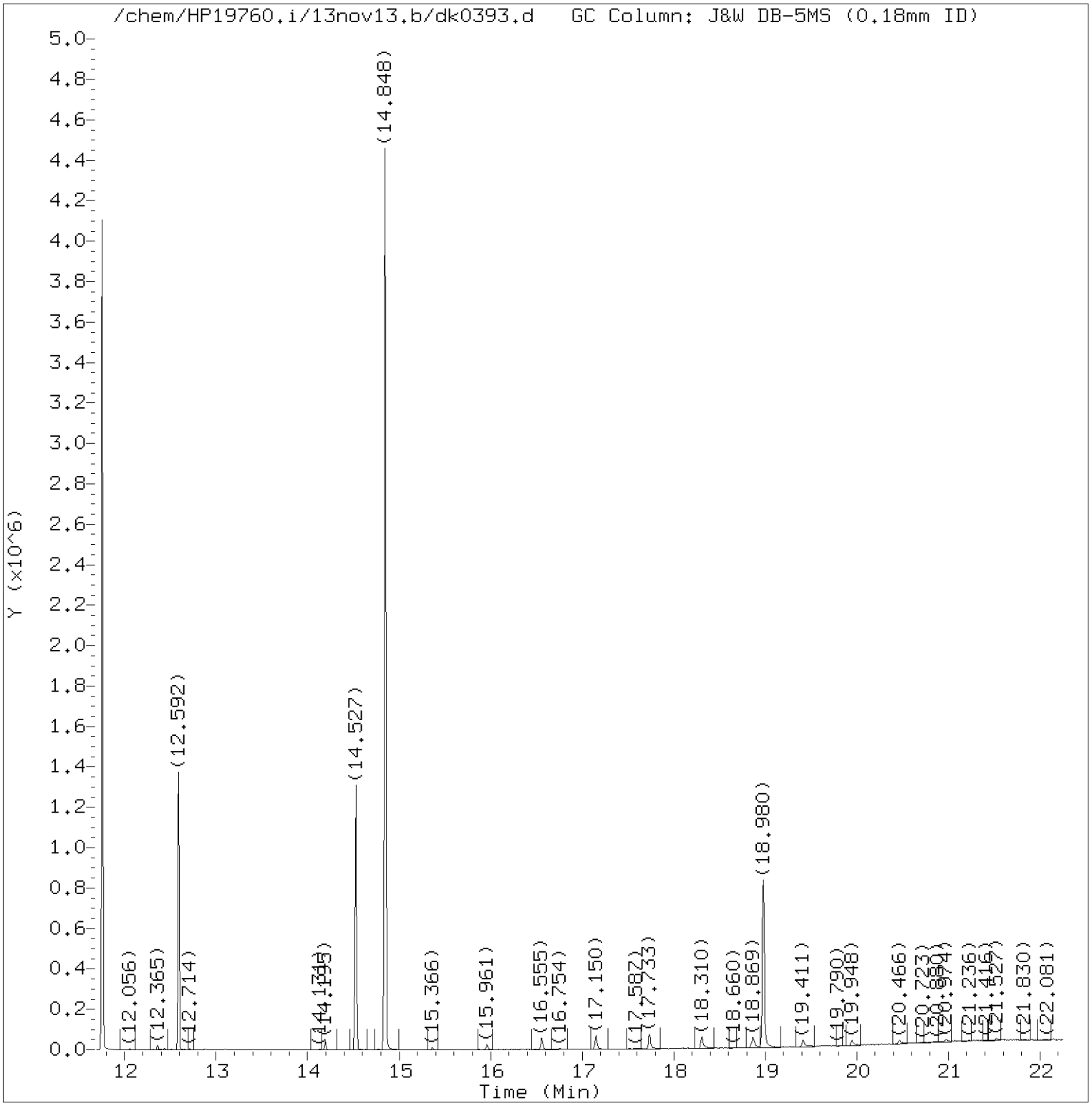
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:33.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:33.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.966	112	1127332	29.589
13)$Phenol-d6	(1)	5.399	99	1051124	20.089
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	128316	5.000
36)$Nitrobenzene-d5	(2)	6.775	82	991538	21.733
52)*Naphthalene-d8	(2)	7.882	136	495759	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1717503	23.823
92)*Acenaphthene-d10	(3)	10.686	164	288695	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	407987	53.807
130)*Phenanthrene-d10	(4)	12.592	188	506394	5.000
145)*Pyrene-d10	(5)	14.527	212	642017	5.000
149)$Terphenyl-d14	(5)	14.848	244	1860808	23.242
172)*Perylene-d12	(6)	18.980	264	476708	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:33.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2D123

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7266810

Sample wt/vol: 245 (g/mL) mL Lab File ID: dk0393.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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22.					
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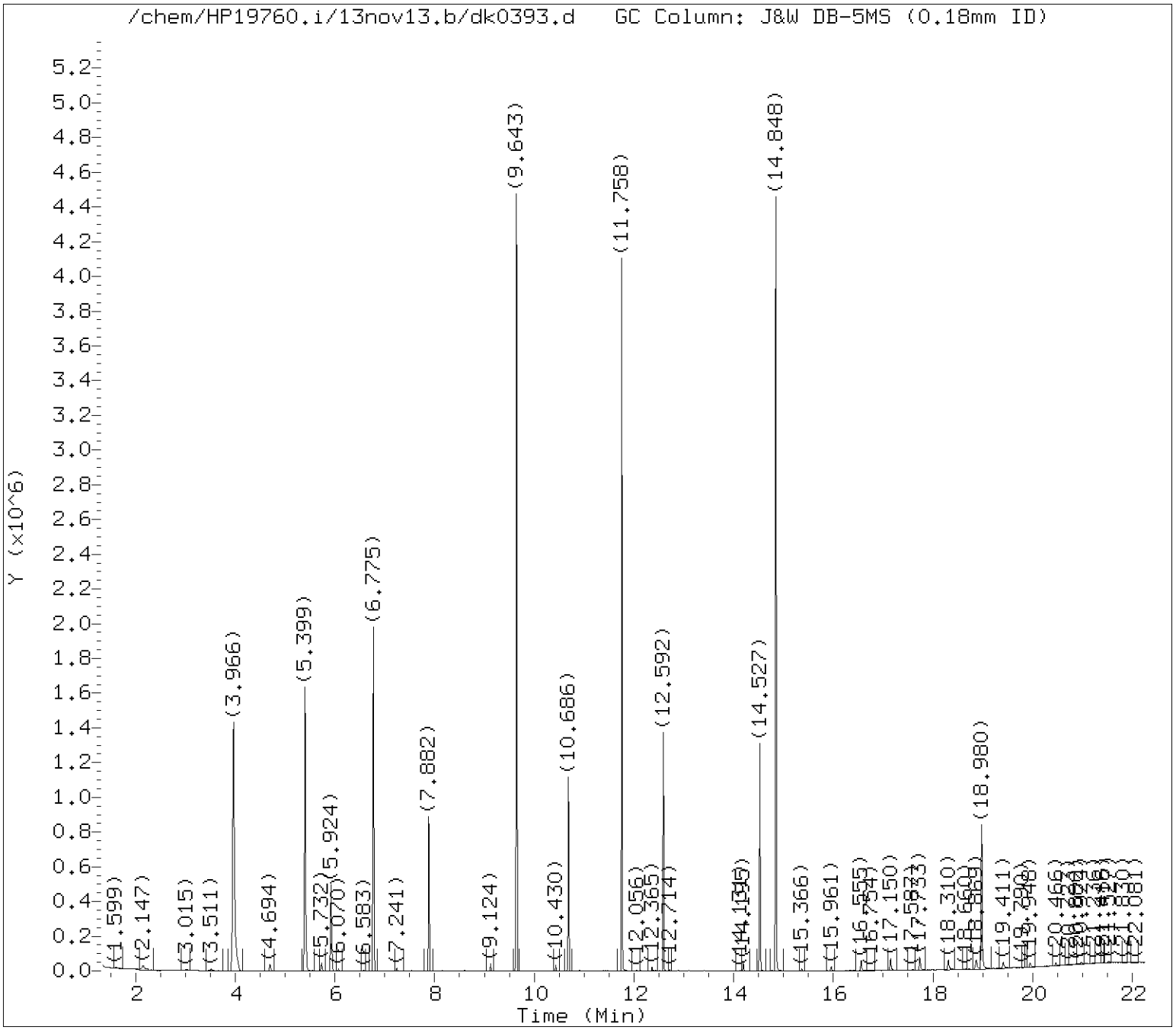
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

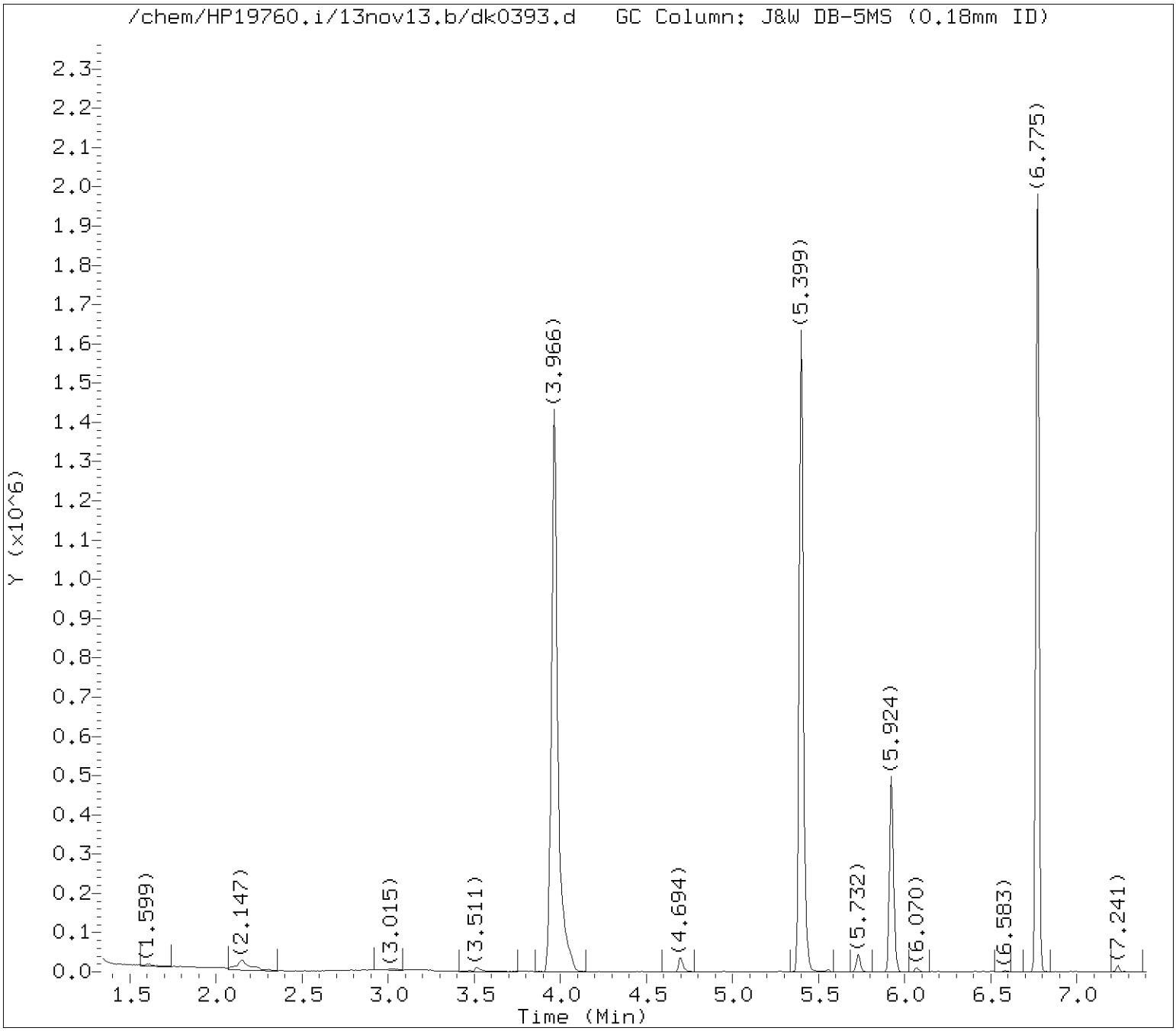
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

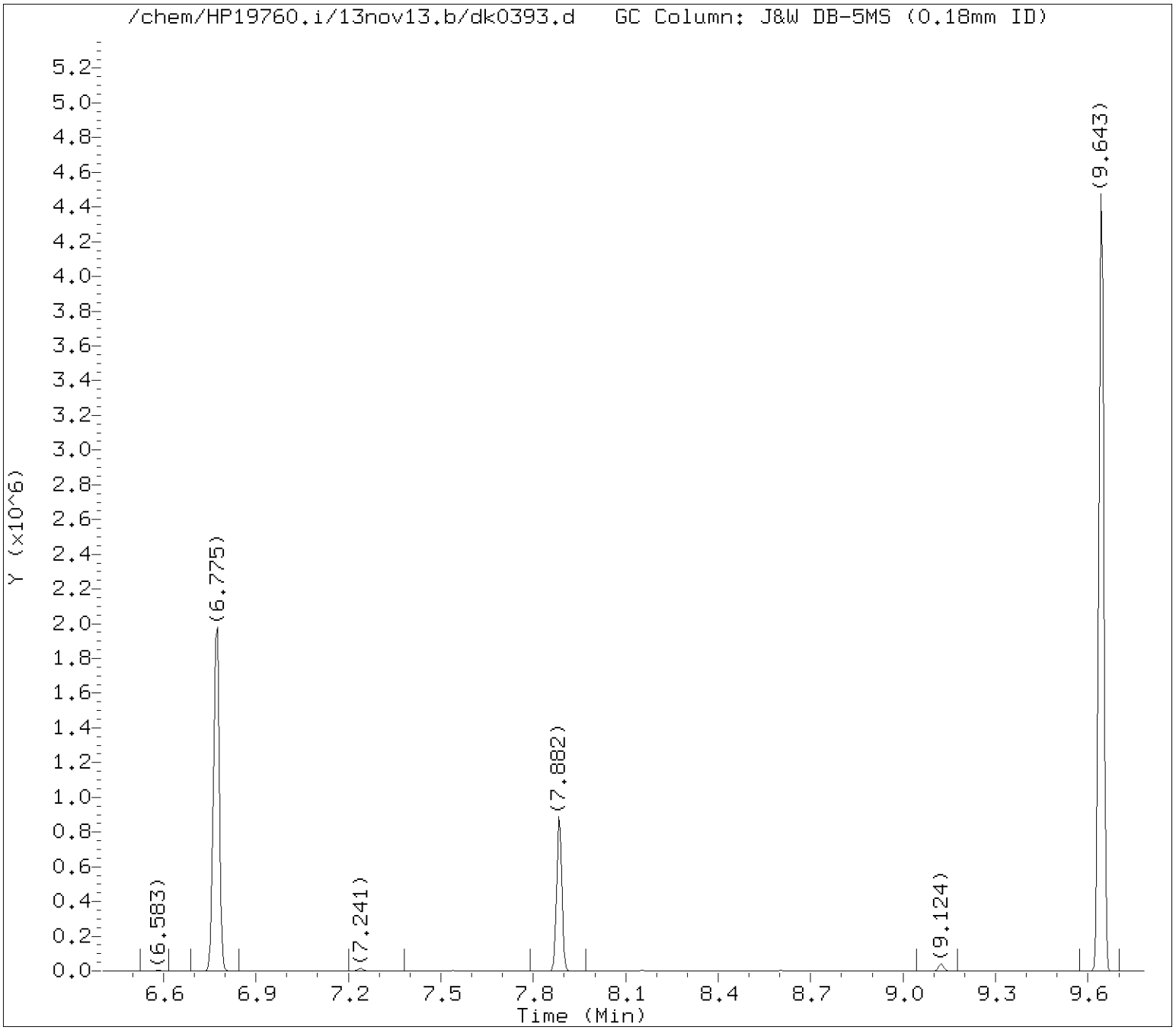
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

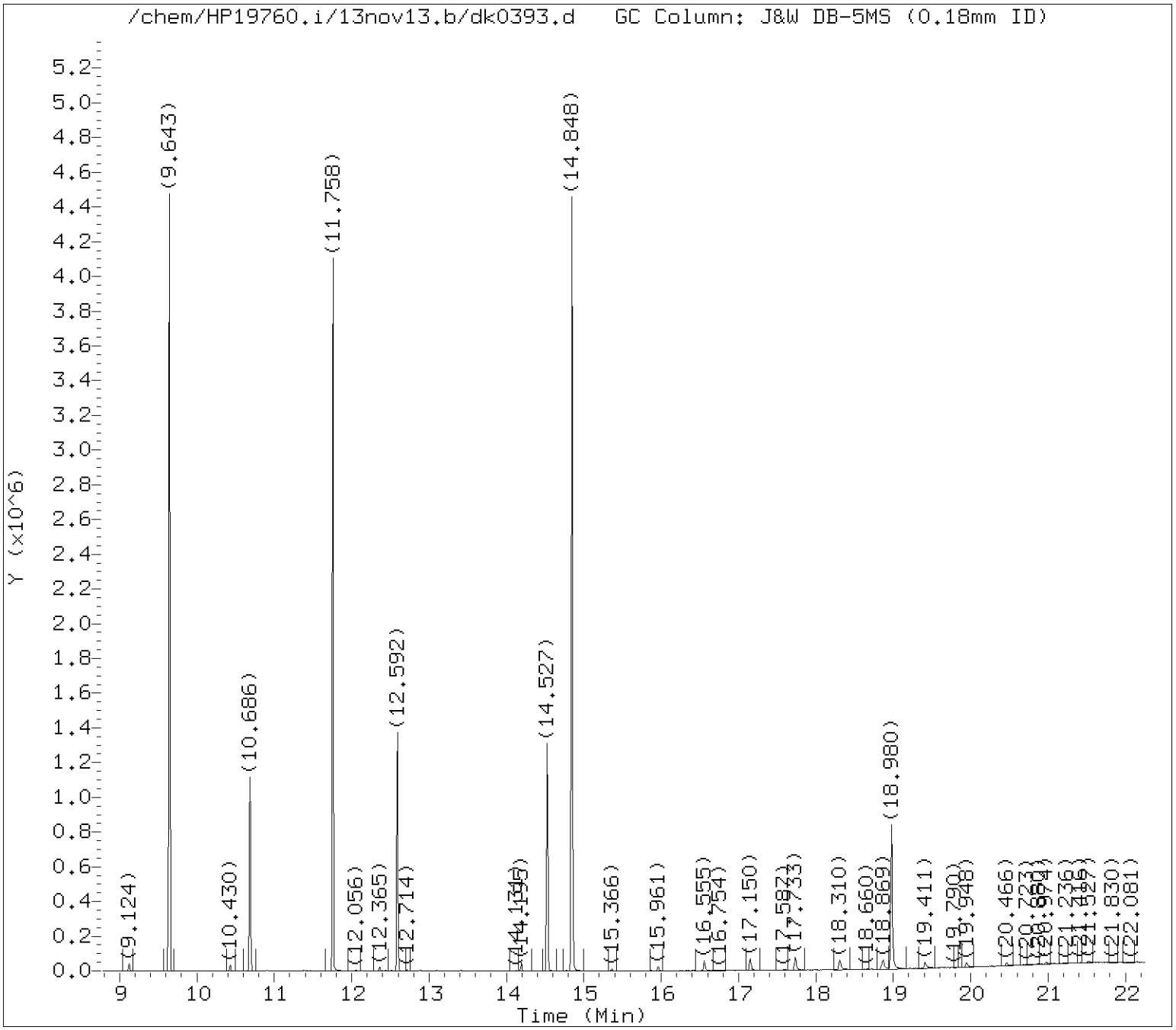
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

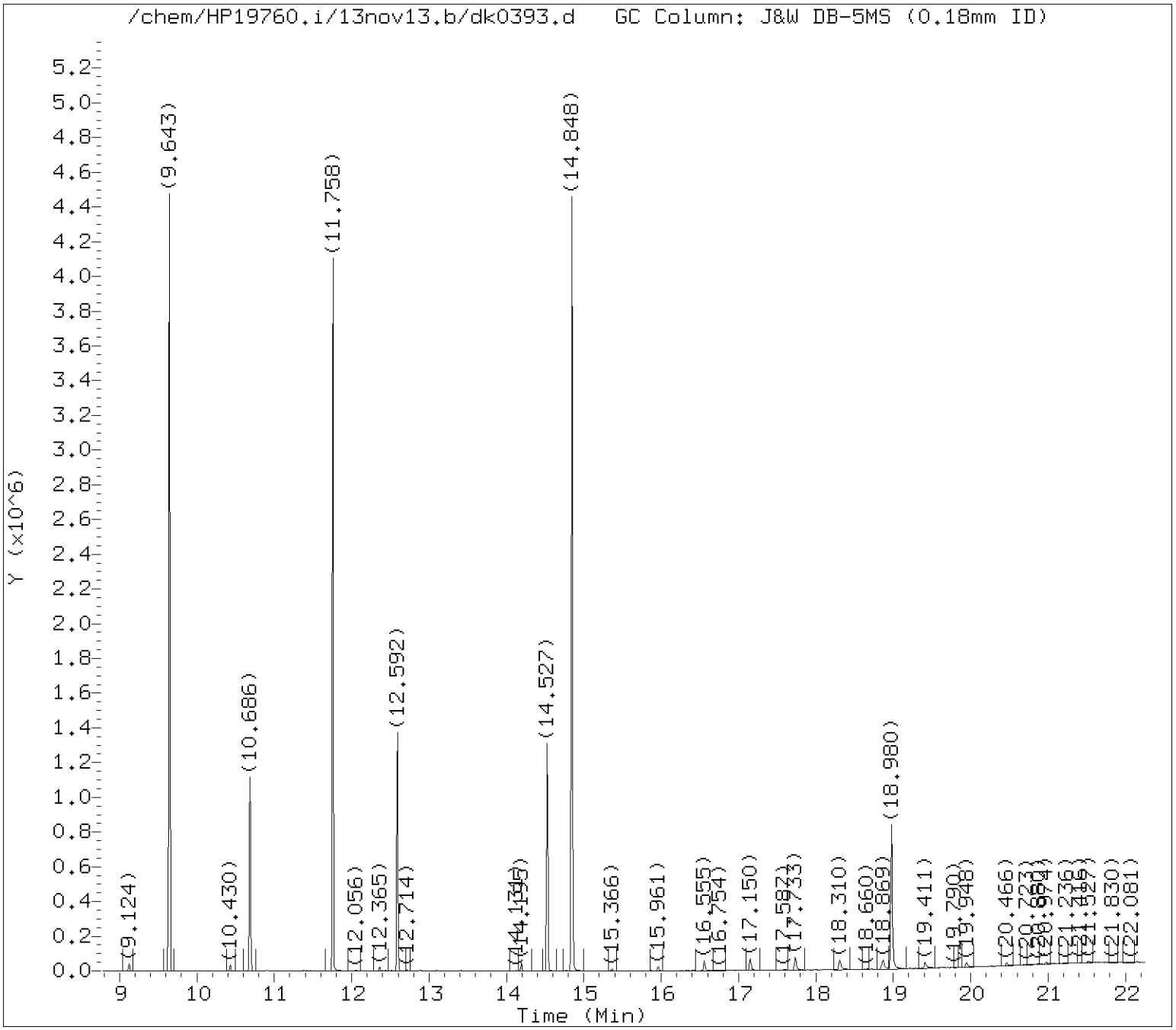
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

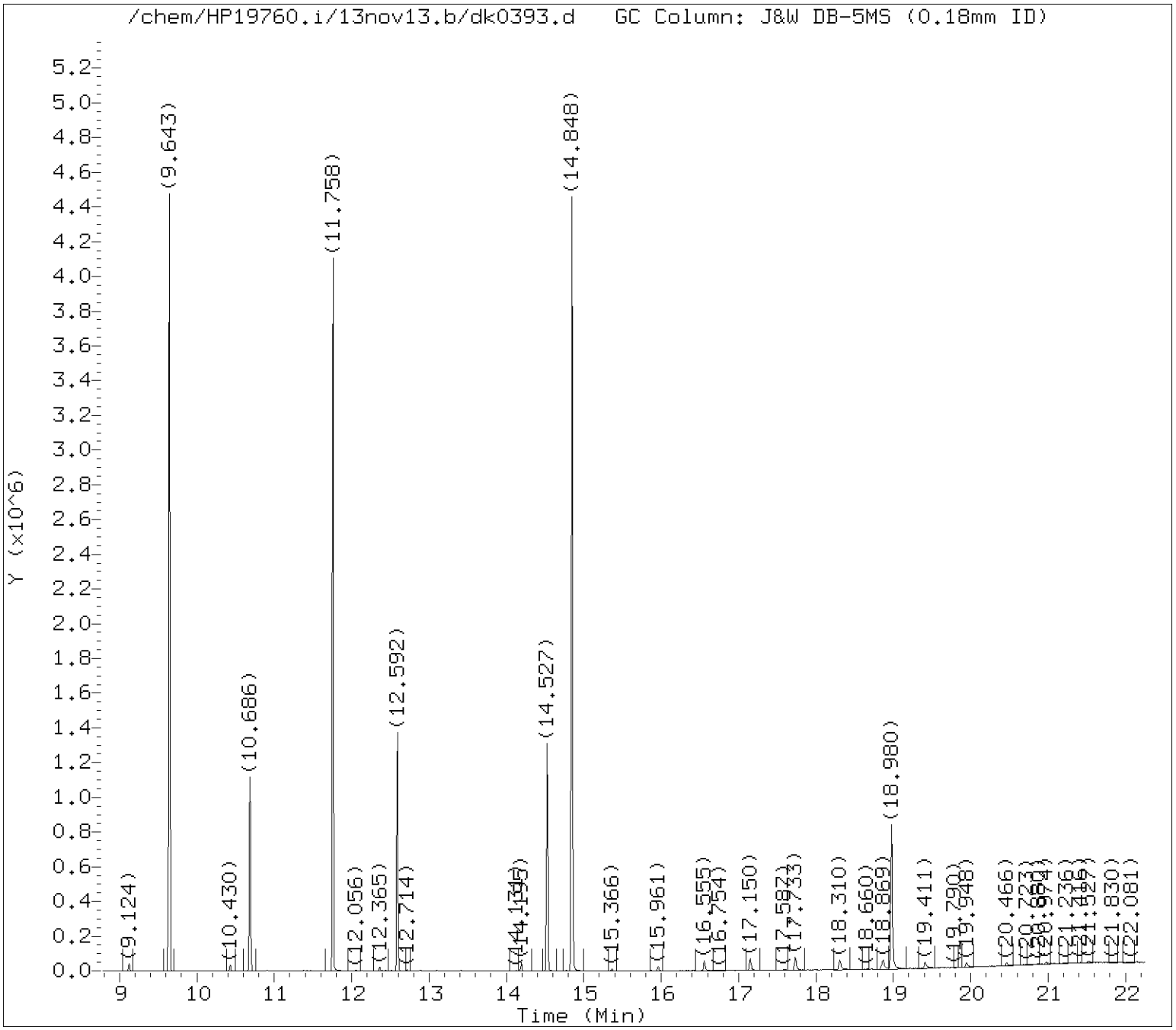
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.559

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

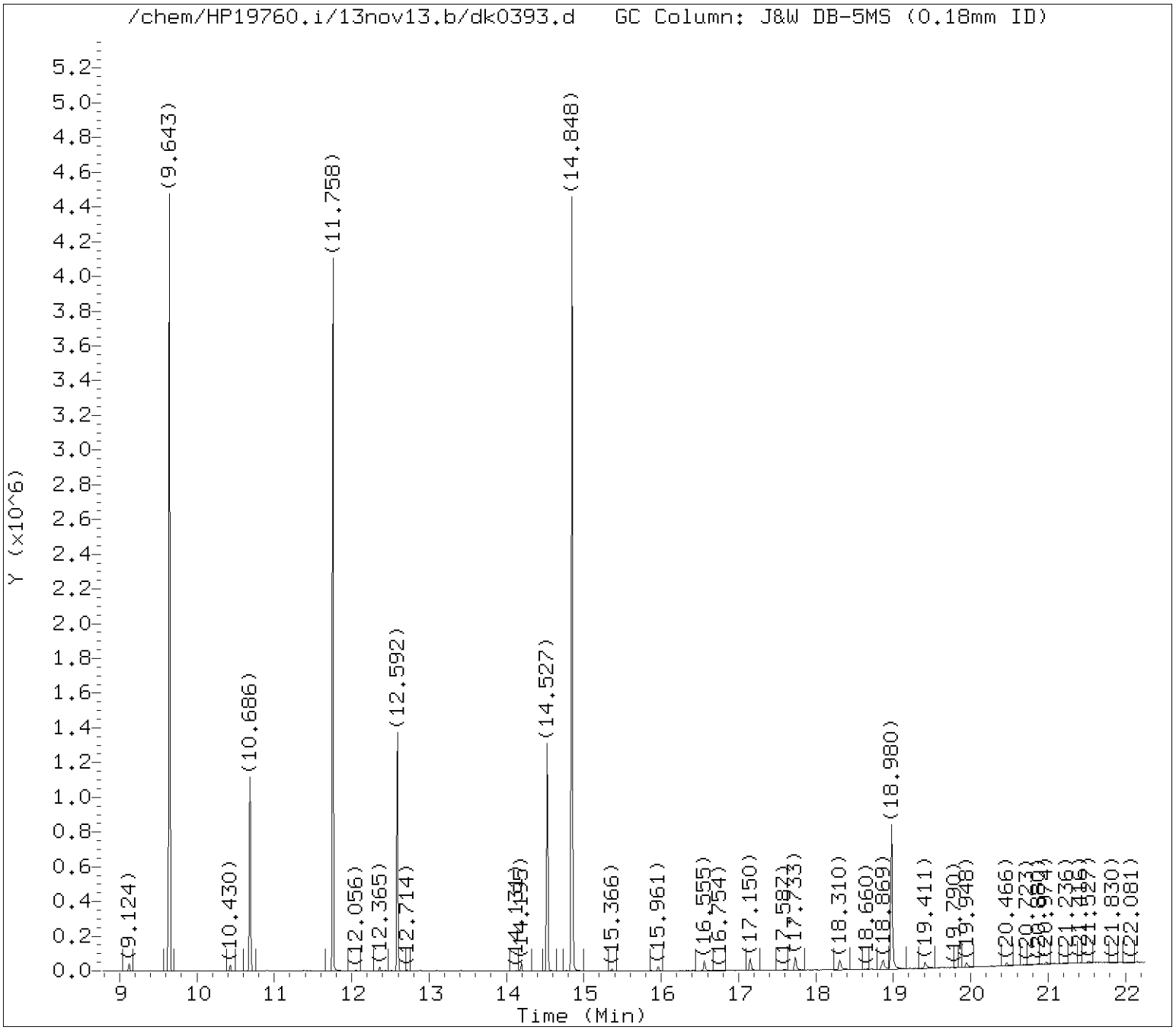
Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.559
Chromatogram End Time (min.): 16.754

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0393.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 10:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 20:59 ceb05247

Sample Name: 2D123 Lab Sample ID: 7266810

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0393.d
Lab Smp Id: 7266810 Client Smp ID: 2D123
Inj Date : 13-NOV-2013 10:45
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : 2D123;7266810;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;245;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0394.d
Injection date and time: **13-NOV-2013 11:12**
Data file Sample Info. Line: 2D121;7266811;1;0;SAMPLE;;;
Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 232 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	130476 (-5)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	500764 (-4)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	290626 (-8)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	512701 (-8)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	629913 (-14)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	464719 (-19)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.965(0.001)	112	1051843	27.151	54%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1004708	18.884	38%		10 - 83
36) Nitrobenzene-d5	(2)	6.769(0.001)	82	996344	21.620	86%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.642(0.000)	172	1754036	24.168	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	308228	40.380	81%		22 - 150
149) Terphenyl-d14	(5)	14.847(0.000)	244	1940911	24.708	99%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:35. Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0394.d Injection date and time: **13-NOV-2013 11:12**
Data file Sample Info. Line: 2D121;7266811;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

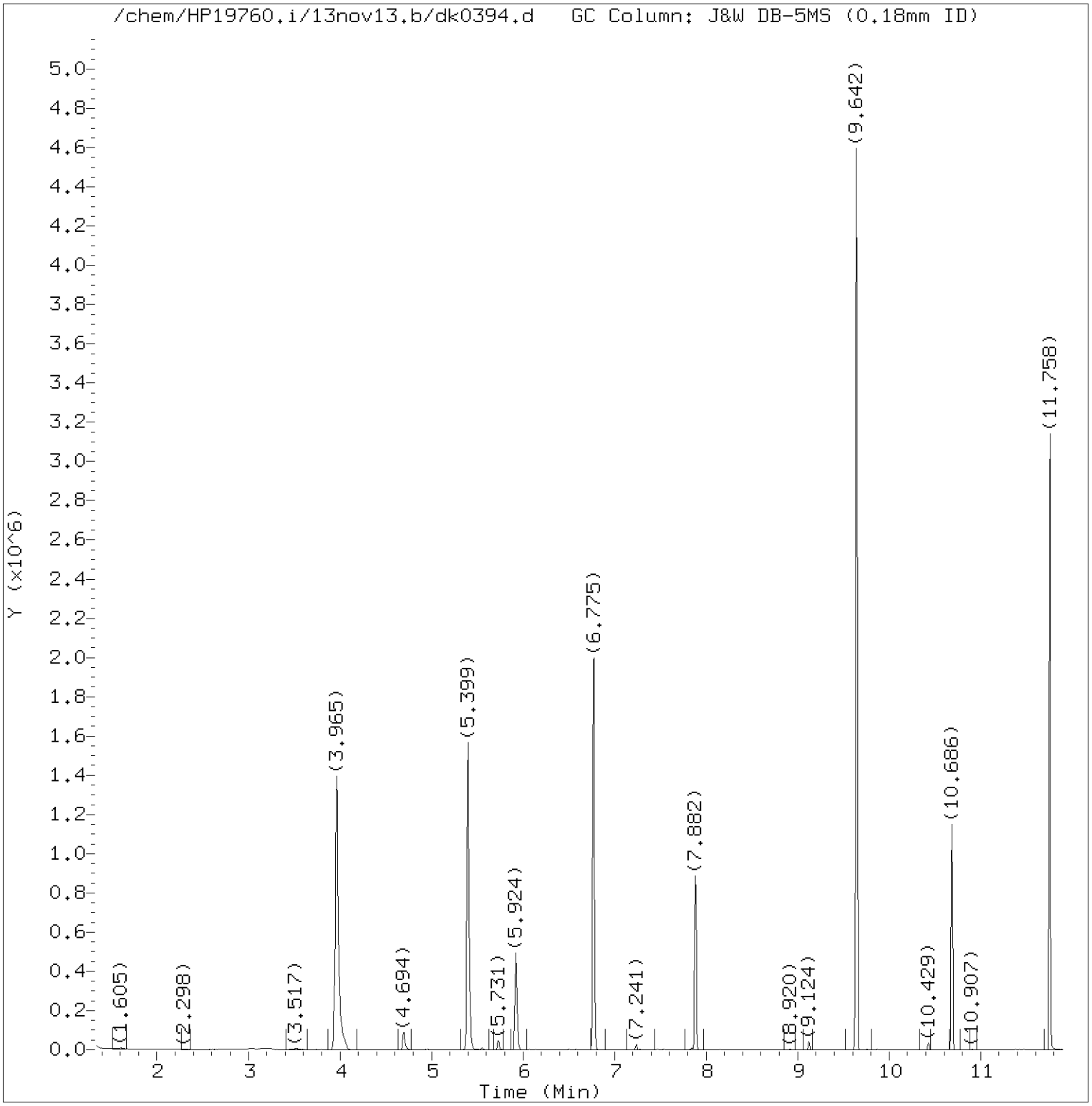
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 232 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:35. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:17. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

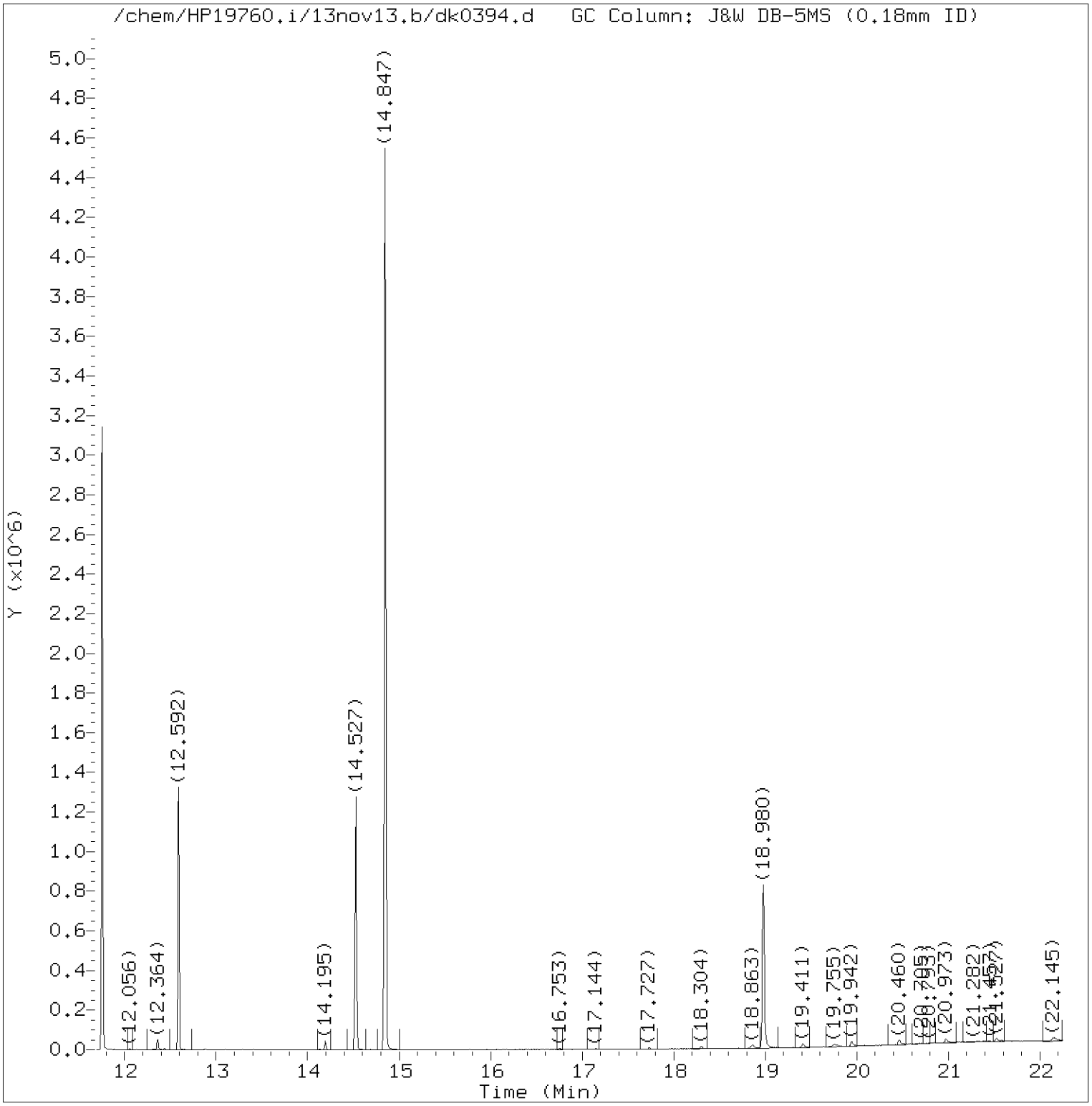
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:35.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:35.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.965	112	1051843	27.151
13)$Phenol-d6	(1)	5.399	99	1004708	18.884
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	130476	5.000
36)$Nitrobenzene-d5	(2)	6.769	82	996344	21.620
52)*Naphthalene-d8	(2)	7.882	136	500764	5.000
72)$2-Fluorobiphenyl	(3)	9.642	172	1754036	24.168
92)*Acenaphthene-d10	(3)	10.686	164	290626	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	308228	40.380
130)*Phenanthrene-d10	(4)	12.592	188	512701	5.000
145)*Pyrene-d10	(5)	14.527	212	629913	5.000
149)$Terphenyl-d14	(5)	14.847	244	1940911	24.708
172)*Perylene-d12	(6)	18.980	264	464719	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:35.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

2D121

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: 7266811

Sample wt/vol: 232 (g/mL) mL Lab File ID: dk0394.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 0 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	SVOCTIC	Total SVOC TICs		0	U
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
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20.					
21.					
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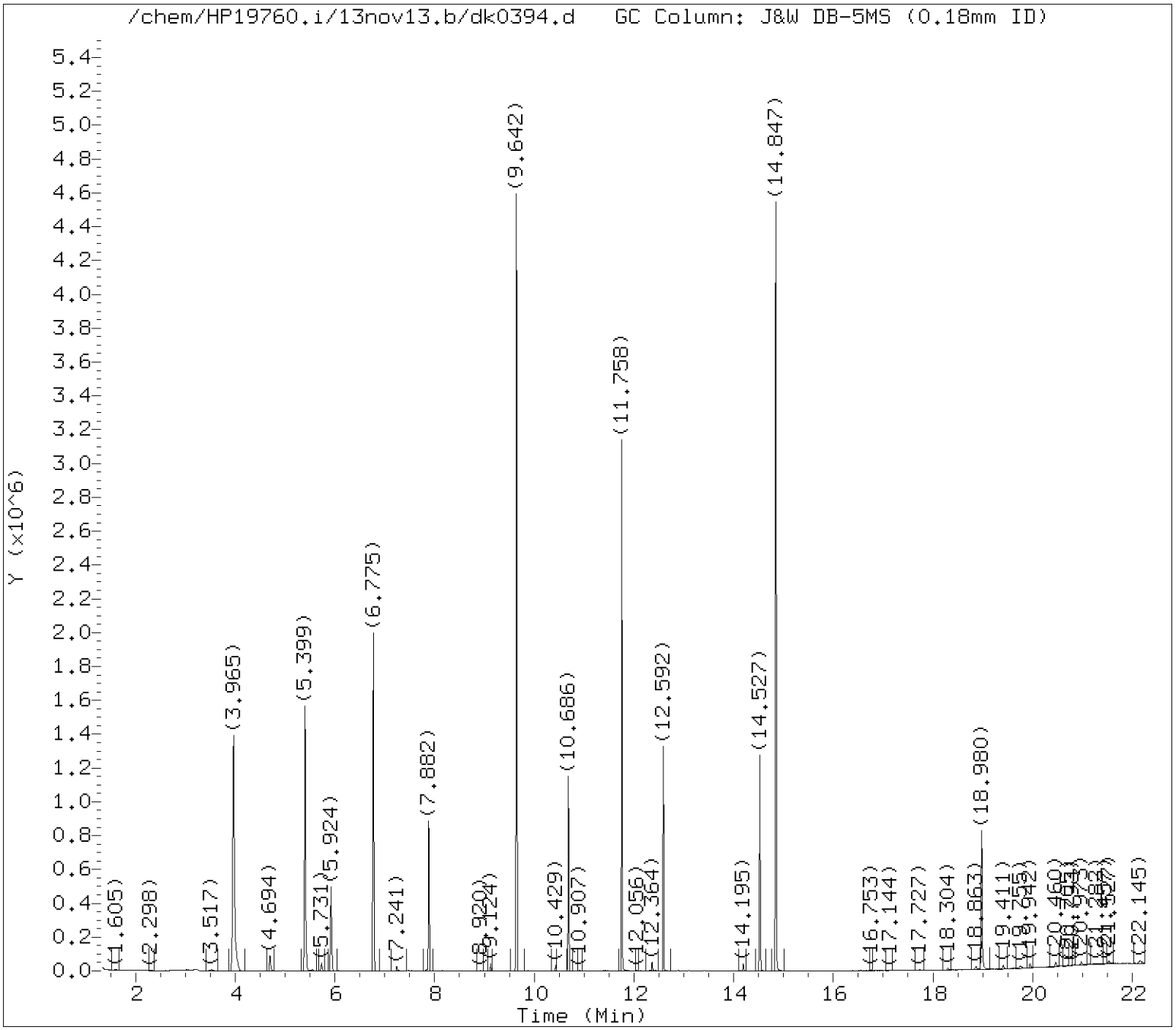
26.					
27.					
28.					
29.					
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

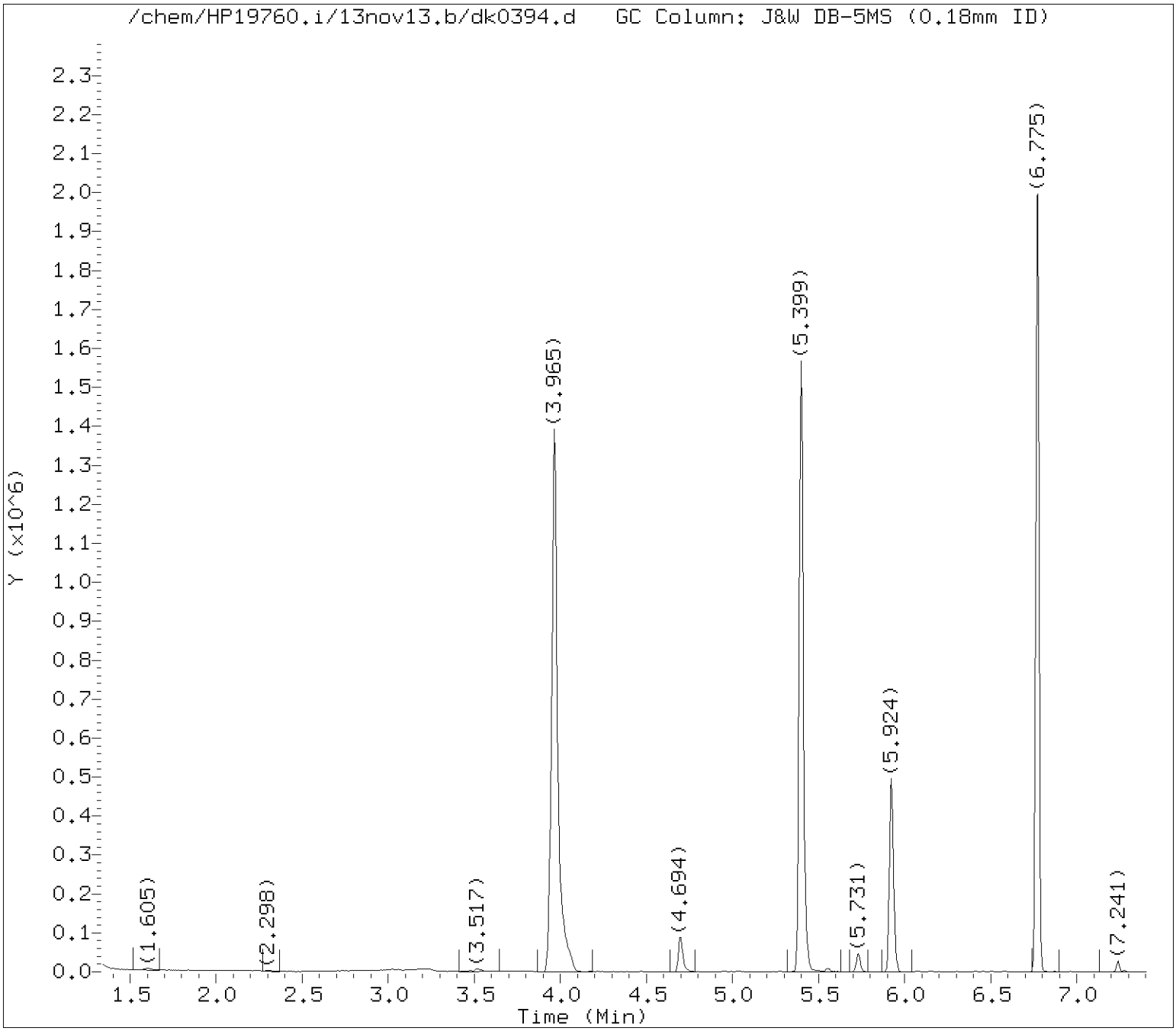
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Chromatogram Start Time (min.): 1.342
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

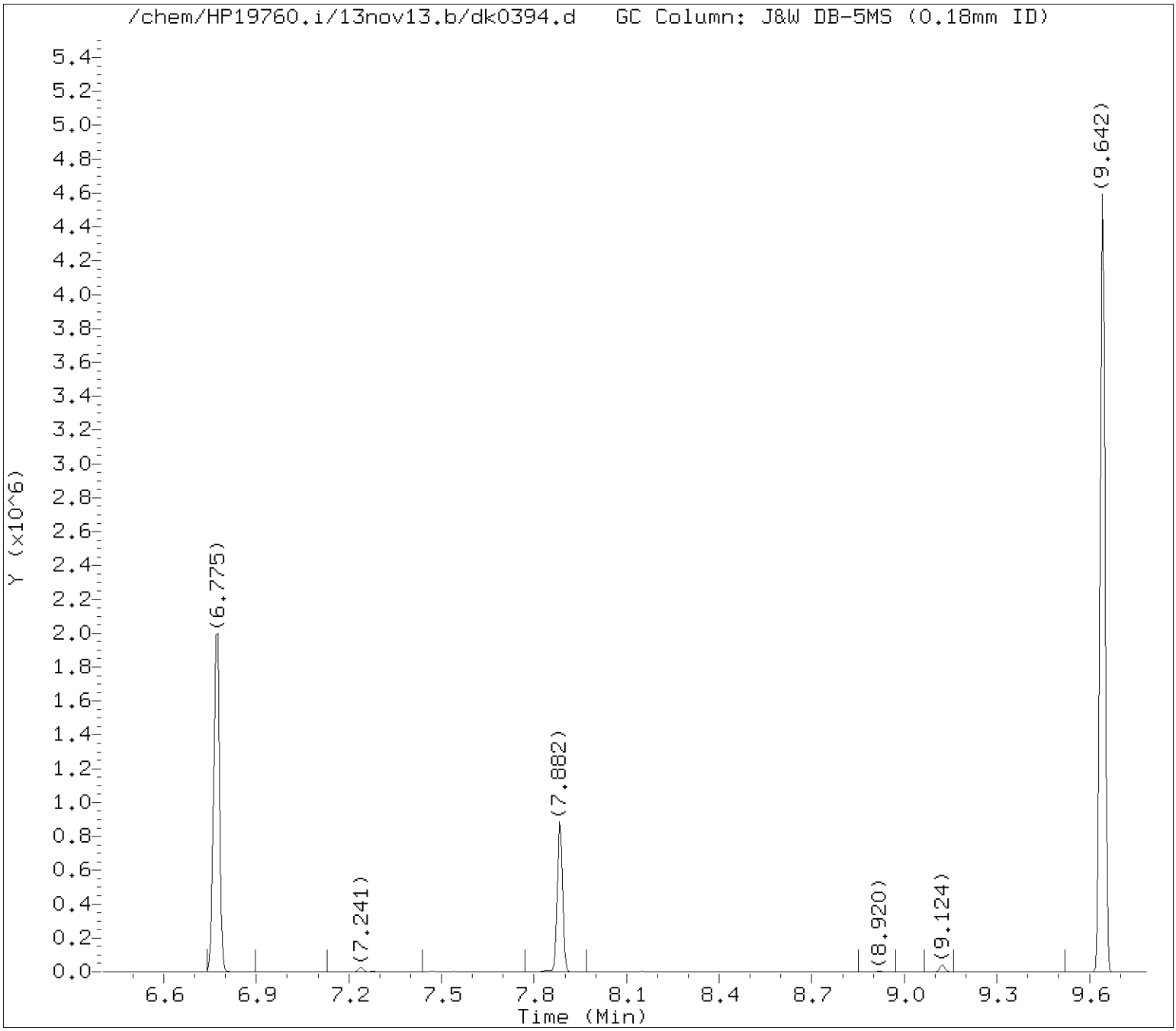
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.342
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

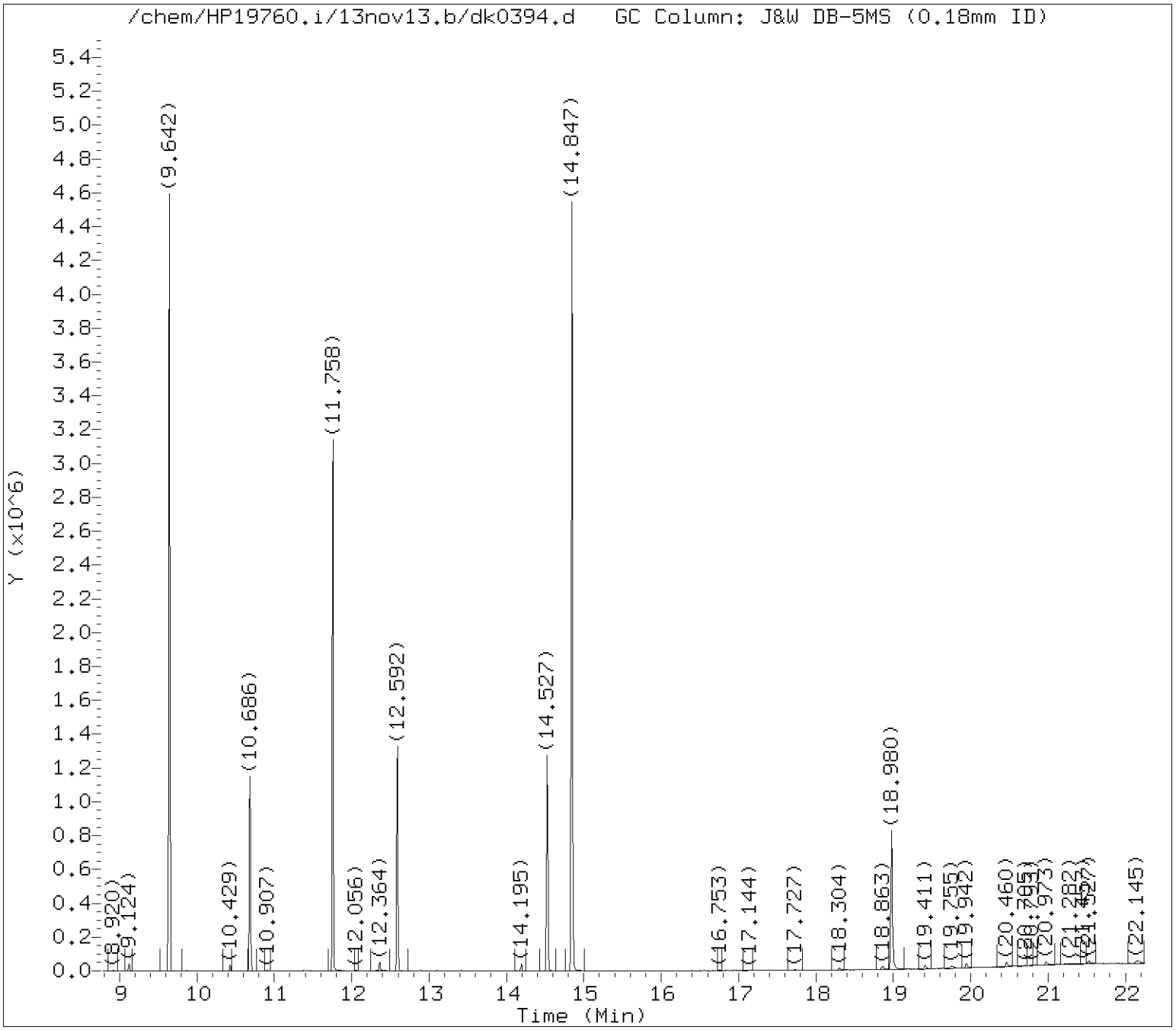
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

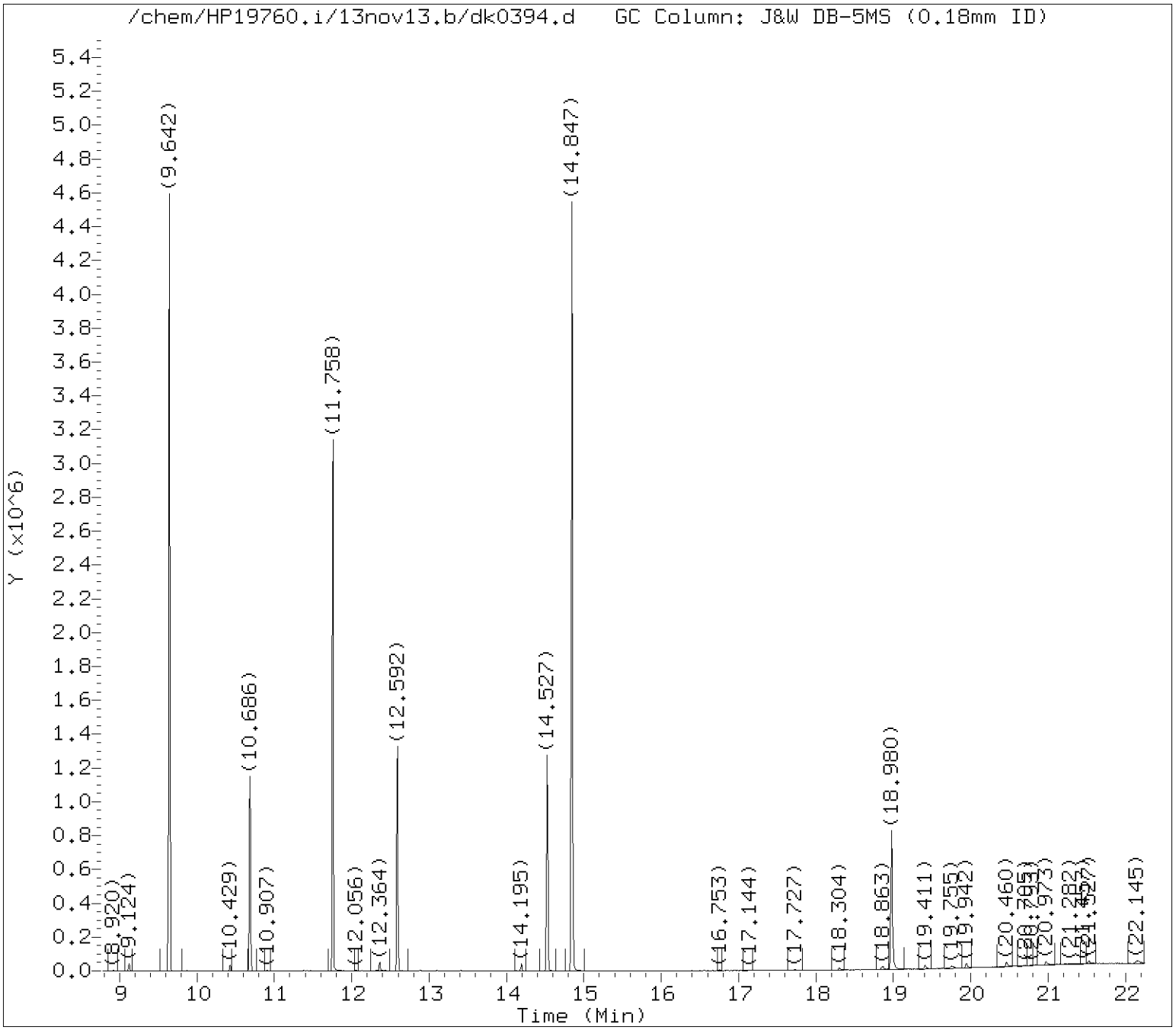
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

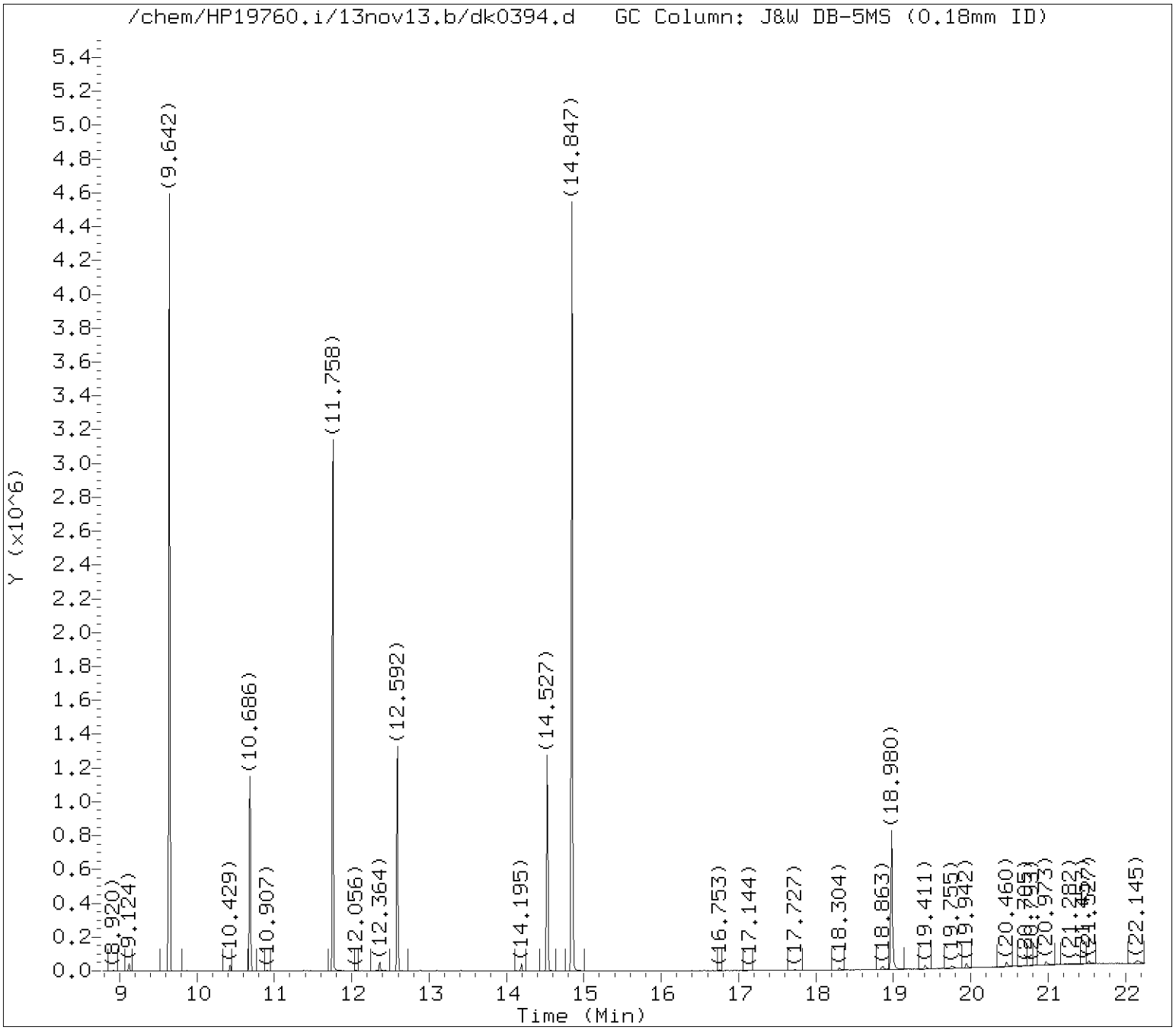
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.559

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

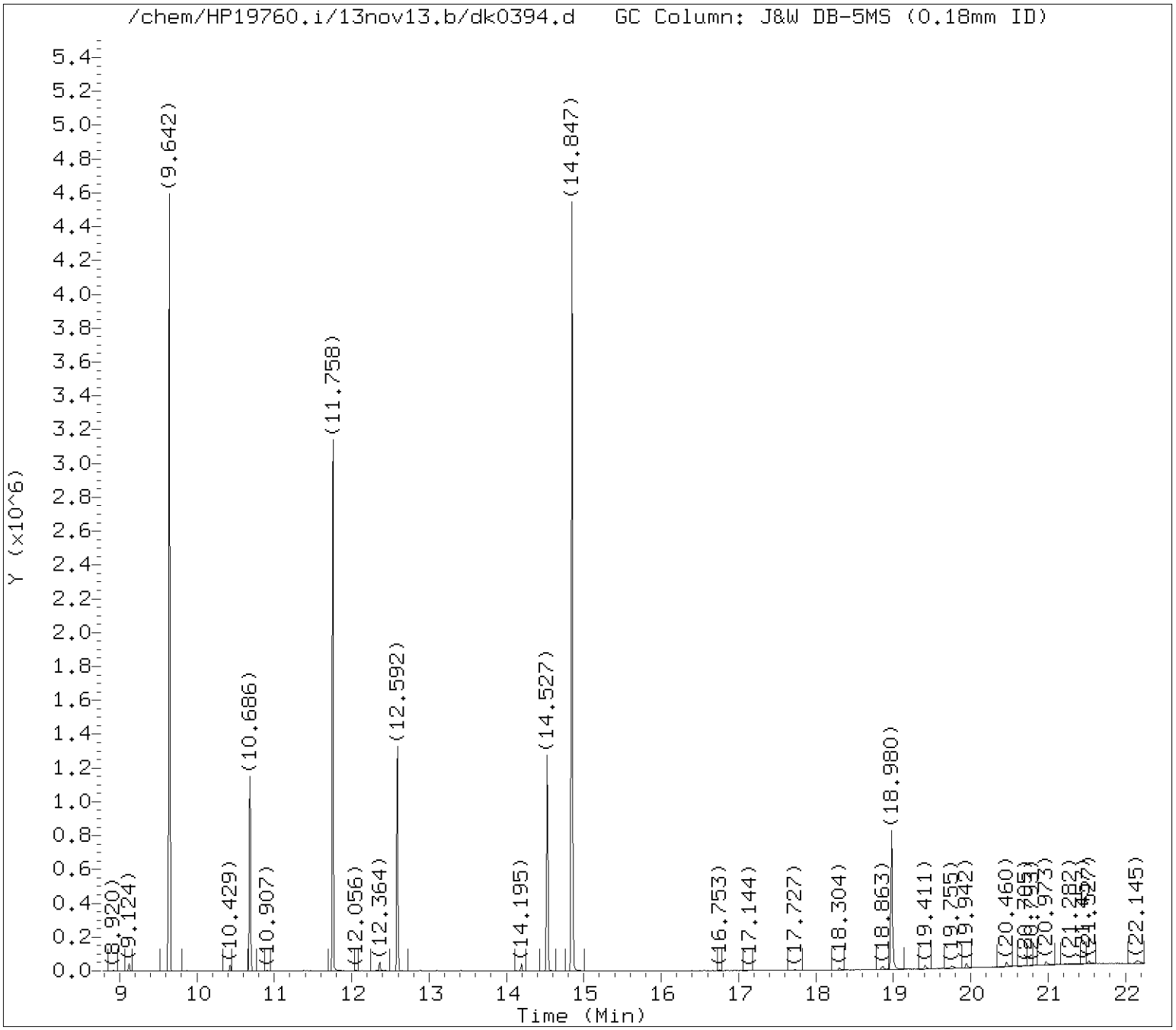
Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.559
Chromatogram End Time (min.): 16.753

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0394.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:12 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:02 ceb05247

Sample Name: 2D121 Lab Sample ID: 7266811

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.753
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0394.d
Lab Smp Id: 7266811 Client Smp ID: 2D121
Inj Date : 13-NOV-2013 11:12
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : 2D121;7266811;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;232;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 0 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

- NO TENTATIVELY IDENTIFIED COMPOUNDS -

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0636.d
Data file Sample Info. Line: 2C126;7266812;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Injection date and time: **18-NOV-2013 12:00**
Instrument ID: **HP10623.i** Batch: **13316SLC**

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	106039 (6)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	488759 (6)	20.00	
98) Acenaphthene-d10	7.998(0.000)	995	164	300832 (4)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	536413 (1)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	645374 (-1)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	569208 (-2)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	157817	14.987	75%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	307095	16.235	81%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	377345	16.356	82%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.456(0.000)	178	7671M	0.246	81.98			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.612(-0.000)	202	15606	0.447	149.16			0.1
154) Pyrene	(5)	10.827(-0.000)	202	16563	0.462	154.05			0.1
166) Benzo(a)anthracene	(5)	11.995(-0.000)	228	6728	0.204	67.84			0.1
168) Chrysene	(5)	12.032(-0.000)	228	11121	0.349	116.31			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	13655M	0.393	130.96			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	5155M	0.145	48.46			0.1
174) Benzo(a)pyrene	(6)	13.335(-0.000)	252	7675	0.226	75.42			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(0.000)	276	5777M	0.160	53.36			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.614(0.000)	276	6924	0.225	75.06			0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0636.d Injection date and time: **18-NOV-2013 12:00**
Data file Sample Info. Line: 2C126;7266812;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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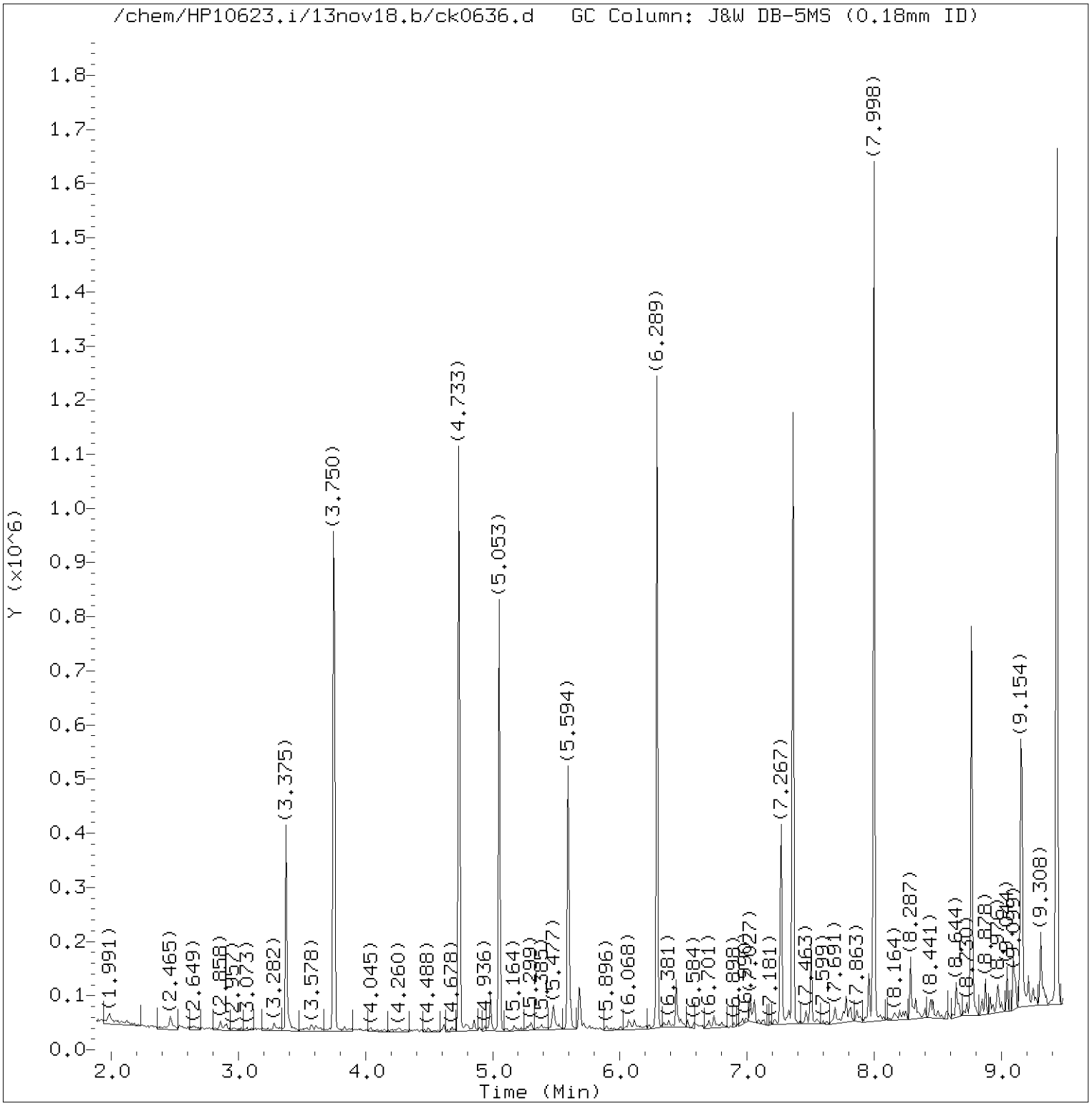
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:29. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

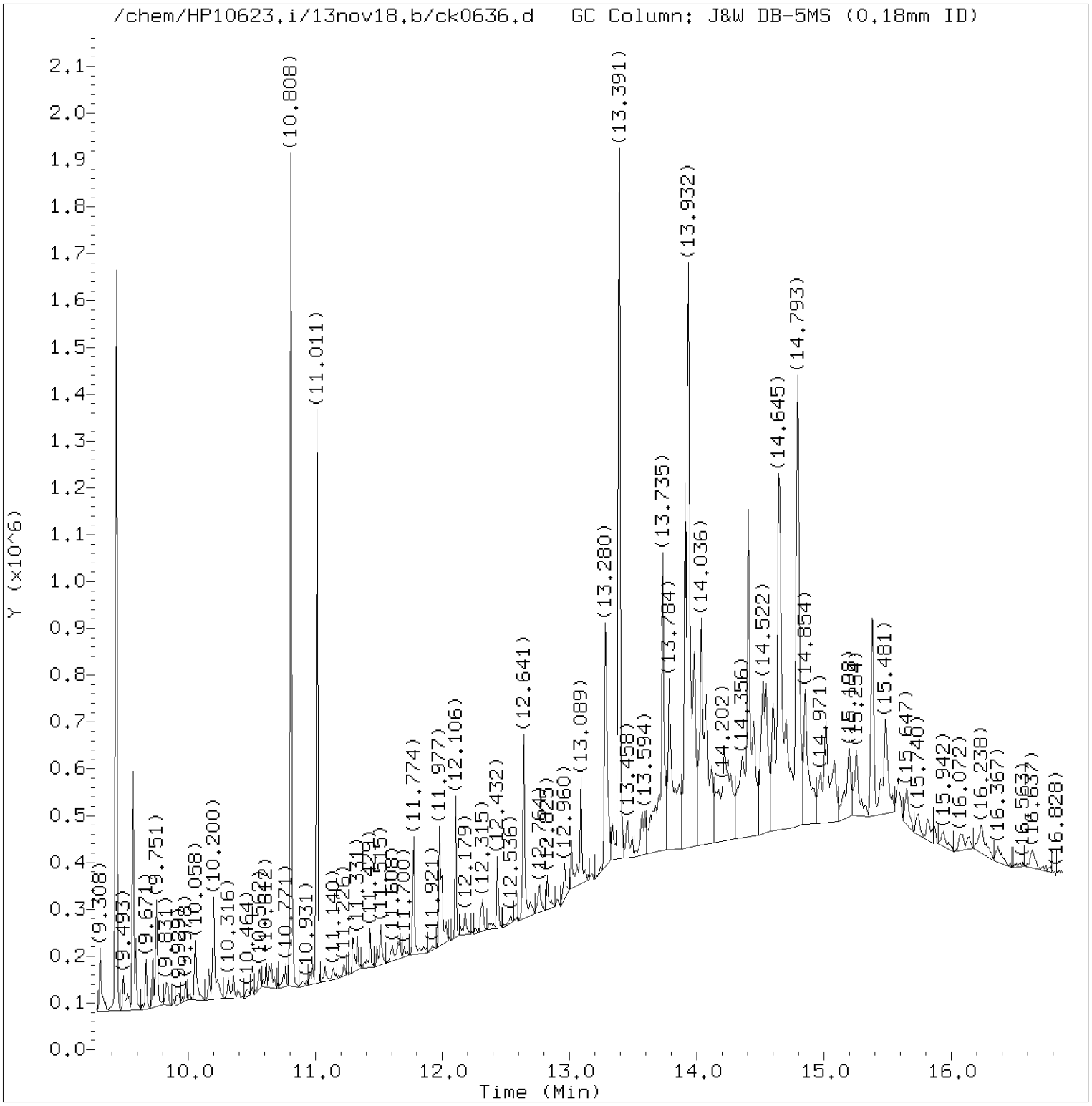
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

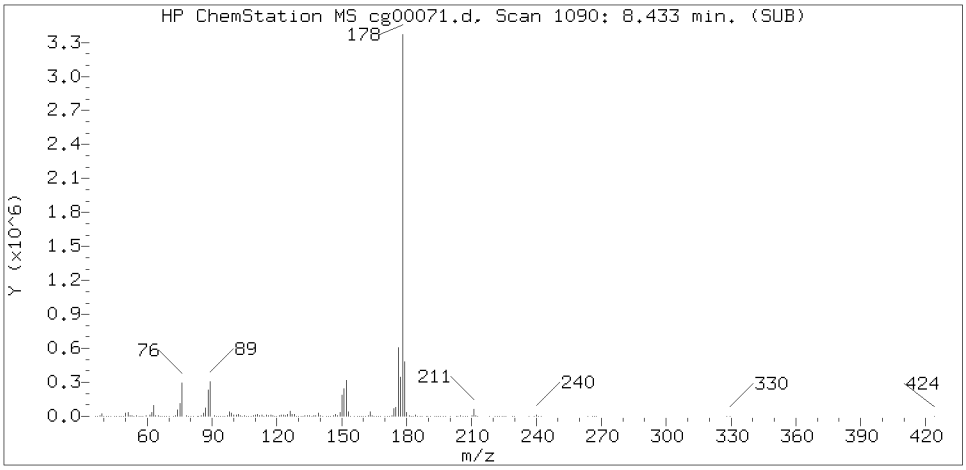
Sample Name: 2C126 Lab Sample ID: 7266812

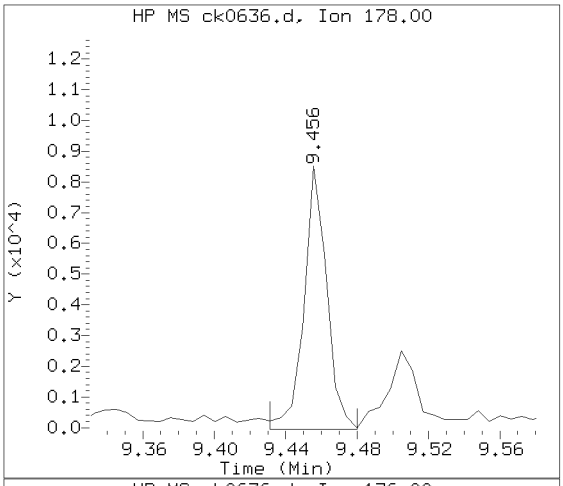
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	106039	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	157817	14.987
52)*Naphthalene-d8	(2)	6.289	136	488759	20.000
78)$2-Fluorobiphenyl	(3)	7.359	172	307095	16.235
98)*Acenaphthene-d10	(3)	7.998	164	300832	20.000
135)*Phenanthrene-d10	(4)	9.437	188	536413	20.000
137) Phenanthrene	(4)	9.456	178	7671M	0.246
147) Fluoranthene	(4)	10.612	202	15606	0.447
167)*Pyrene-d10	(5)	10.808	212	645374	20.000
154) Pyrene	(5)	10.827	202	16563	0.462
156)$Terphenyl-d14	(5)	11.011	244	377345	16.356
166) Benzo(a)anthracene	(5)	11.995	228	6728	0.204
168) Chrysene	(5)	12.032	228	11121	0.349
172) Benzo(b)fluoranthene	(6)	13.034	252	13655M	0.393
173) Benzo(k)fluoranthene	(6)	13.059	252	5155M	0.145
174) Benzo(a)pyrene	(6)	13.335	252	7675	0.226
175)*Perylene-d12	(6)	13.391	264	569208	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	5777M	0.160
179) Benzo(g,h,i)perylene	(6)	14.614	276	6924	0.225

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

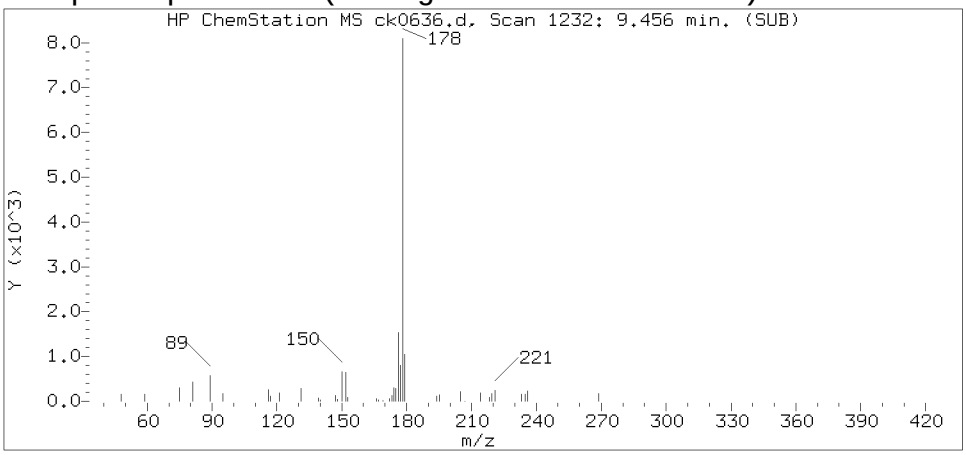
Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

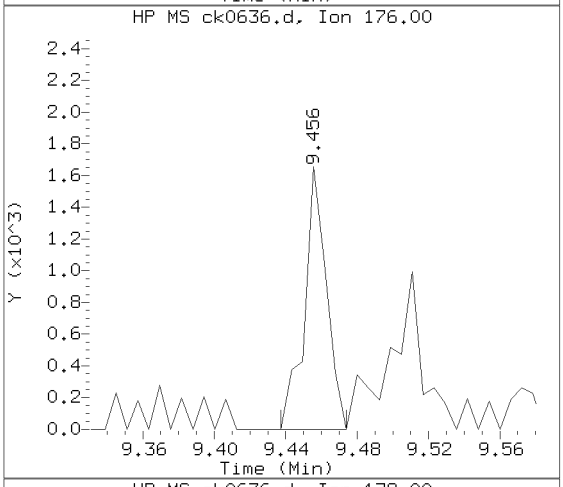
Reference Standard Spectrum for Phenanthrene



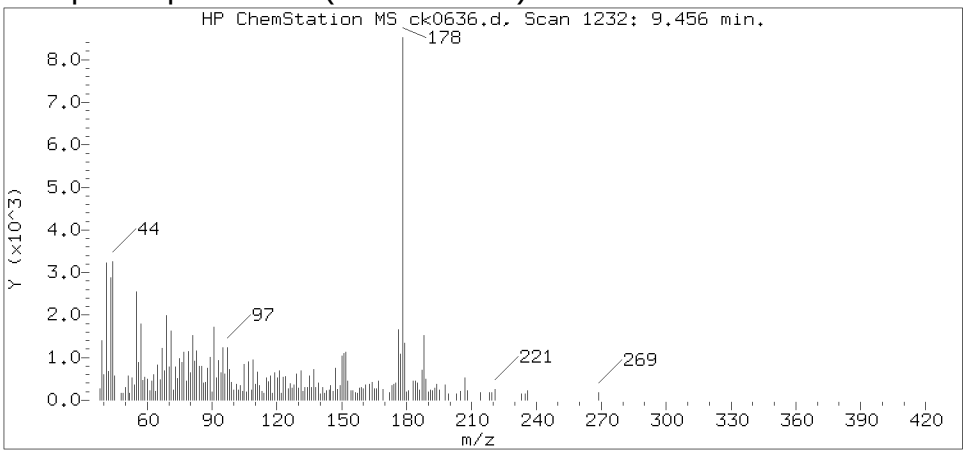


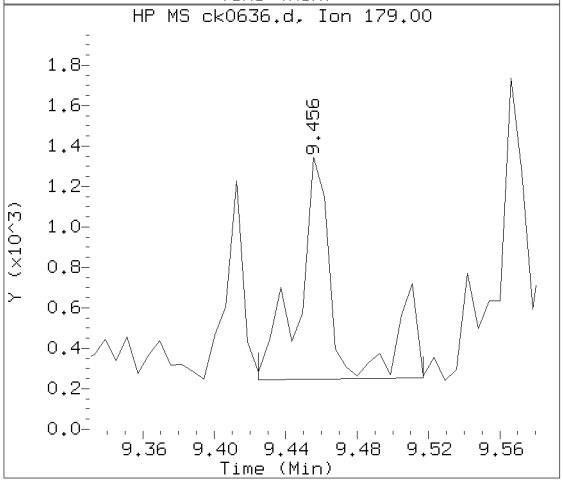
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

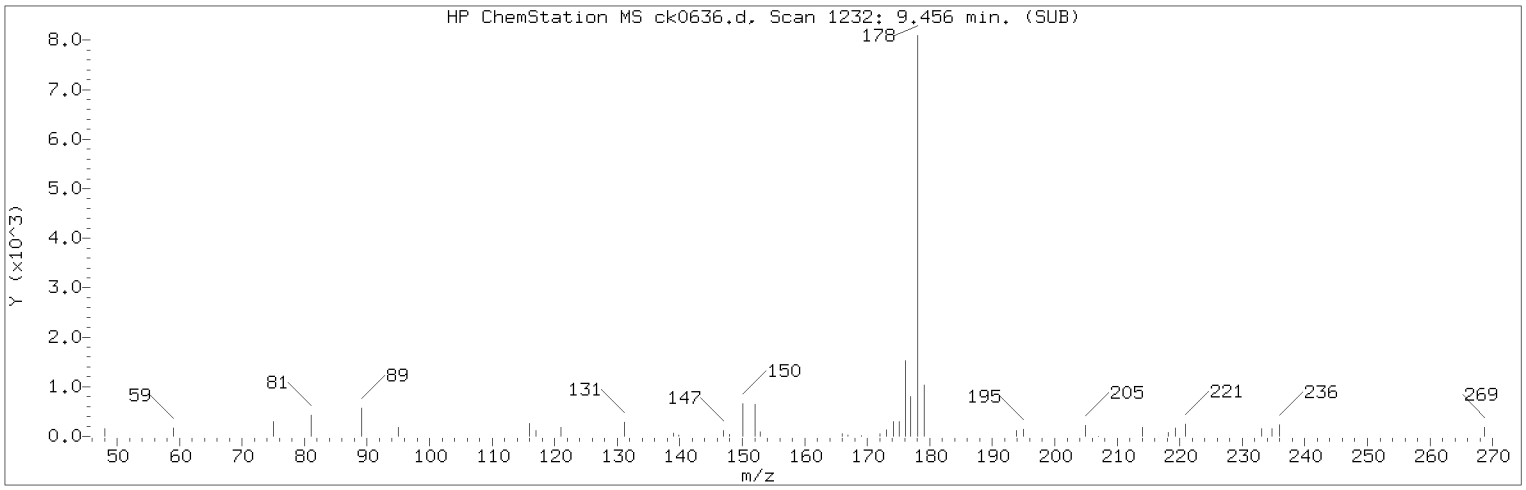
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

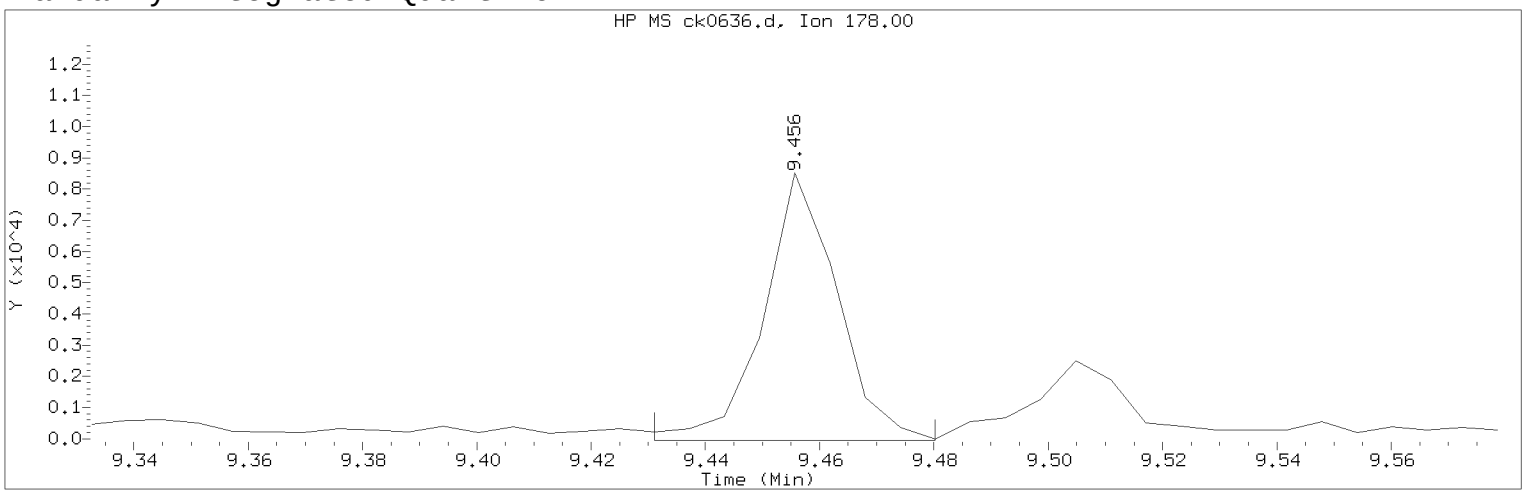
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1232
Retention Time (minutes) : 9.456
Relative Retention Time : 0.00000
Quant Ion : 178.00
Area (flag) : 7671M
On-column Amount (ng/ul) : 0.2460

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

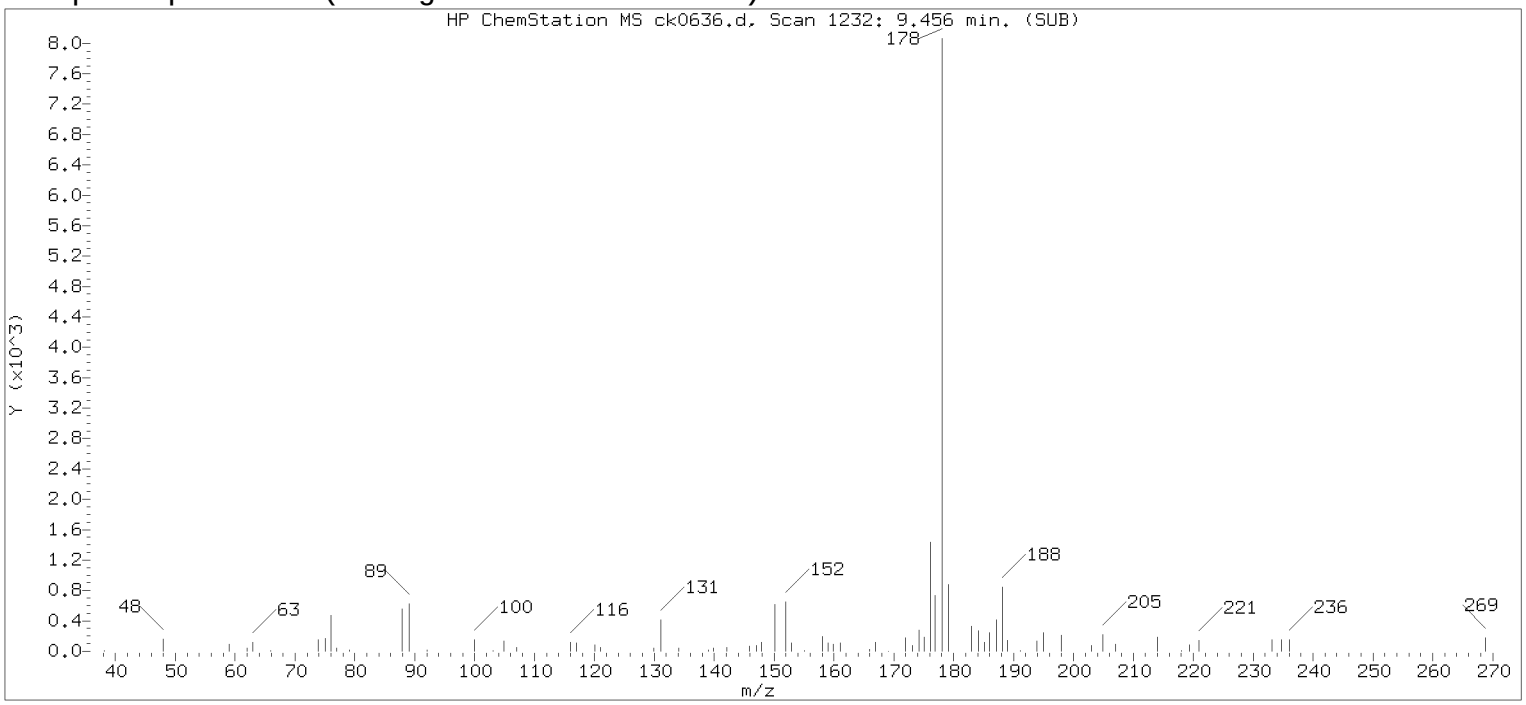
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1232
Retention Time (minutes) : 9.456
Quant Ion : 178.00
Area (flag) : 7671M
On-column Amount (ng/ul) : 0.2460
Integration start scan : 1227 Integration stop scan: 1235
Y at integration start : -50 Y at integration end: -50

Reason for manual integration: improper integration

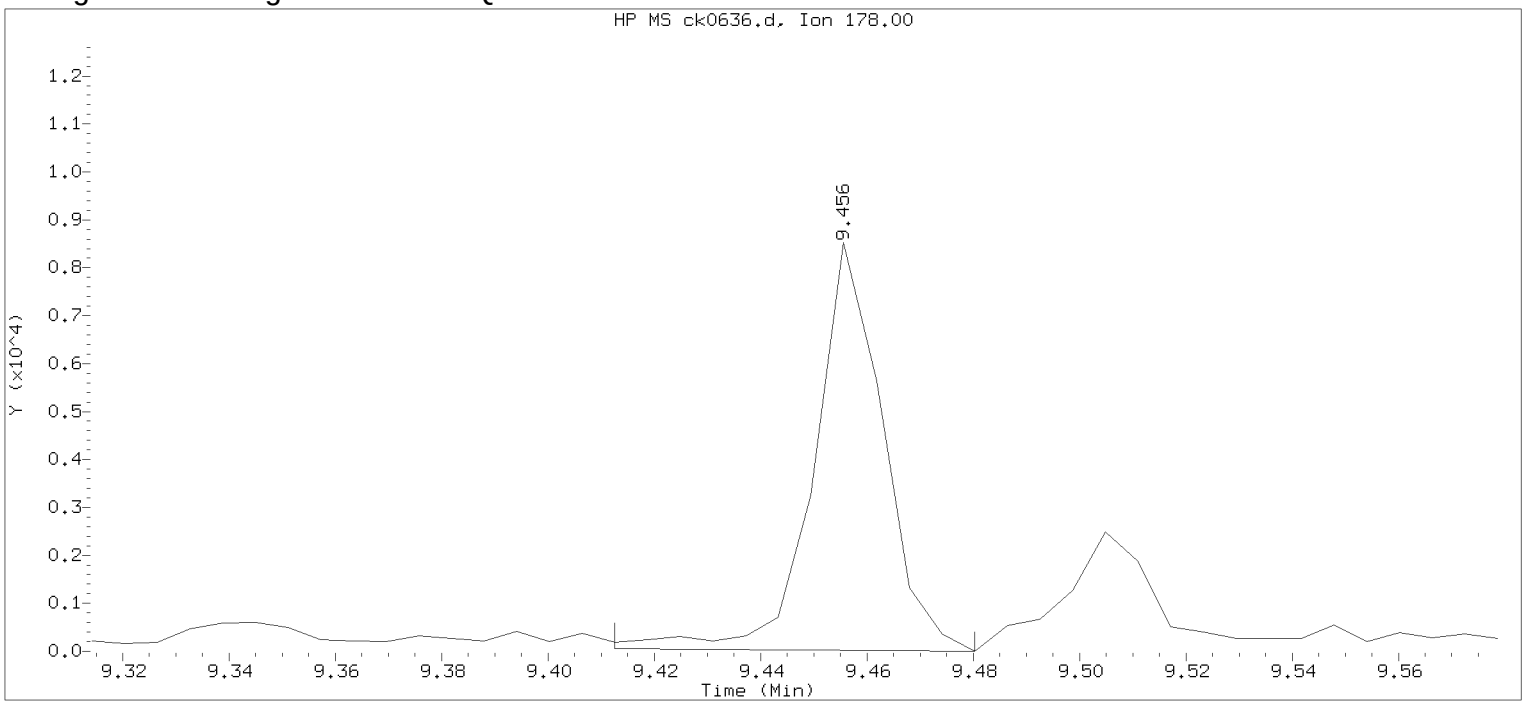
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

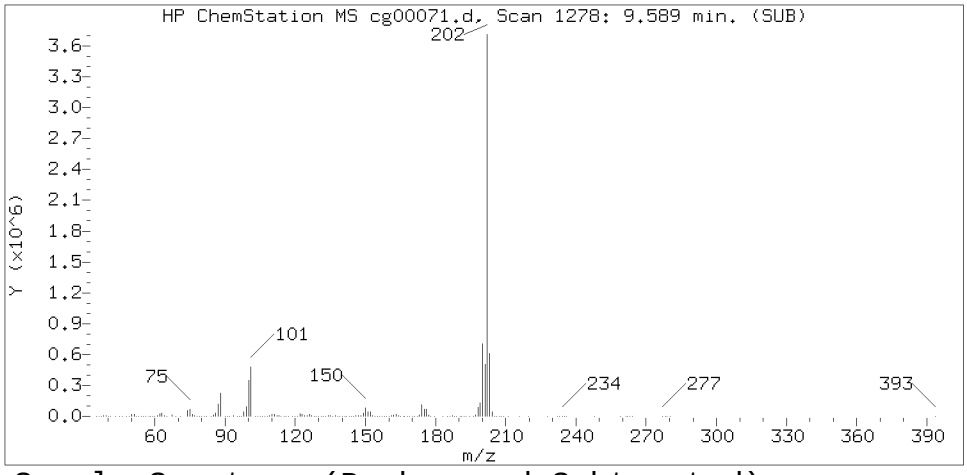
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:26 Automation

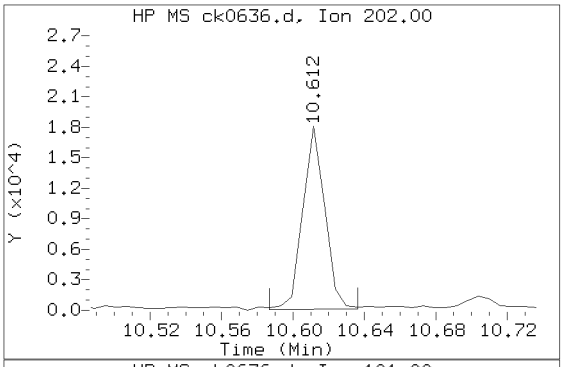
Sample Name: 2C126 Lab Sample ID: 7266812

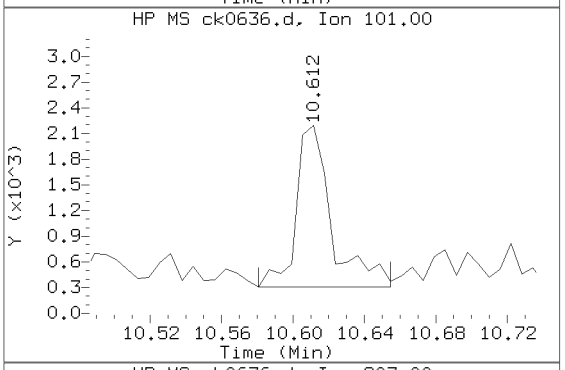
Compound Number	: 137		
Compound Name	: Phenanthrene		
Scan Number	: 1232		
Retention Time (minutes)	: 9.456		
Quant Ion	: 178.00		
Area	: 7626		
On-column Amount (ng/ul)	: 0.2445		
Integration start scan	: 1224	Integration stop scan:	1235
Y at integration start	: 57	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user KVM06 jmg00346

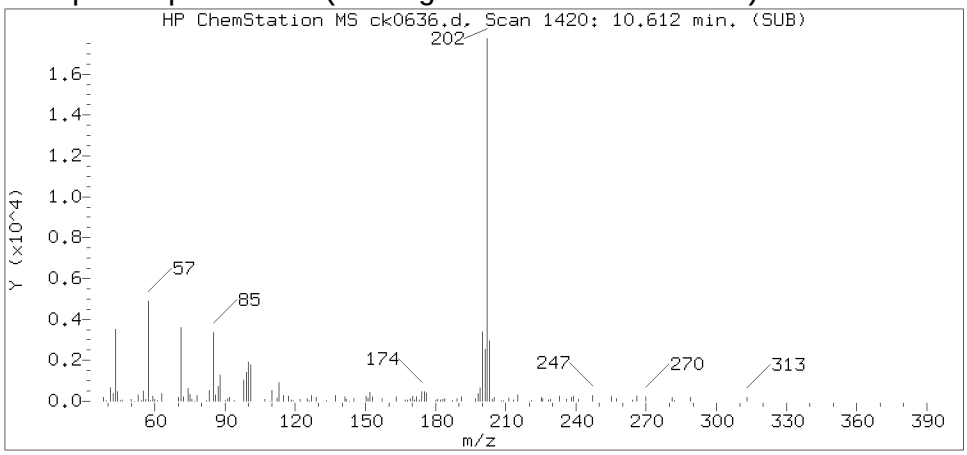
Reference Standard Spectrum for Fluoranthene

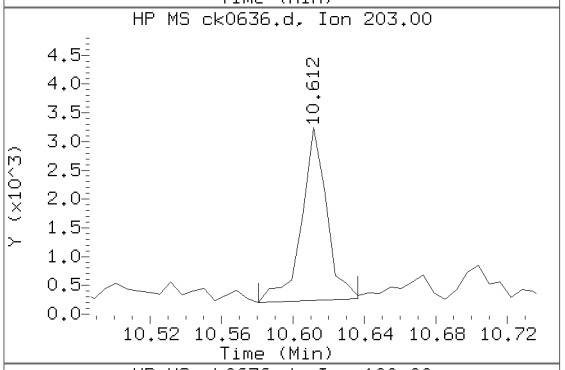




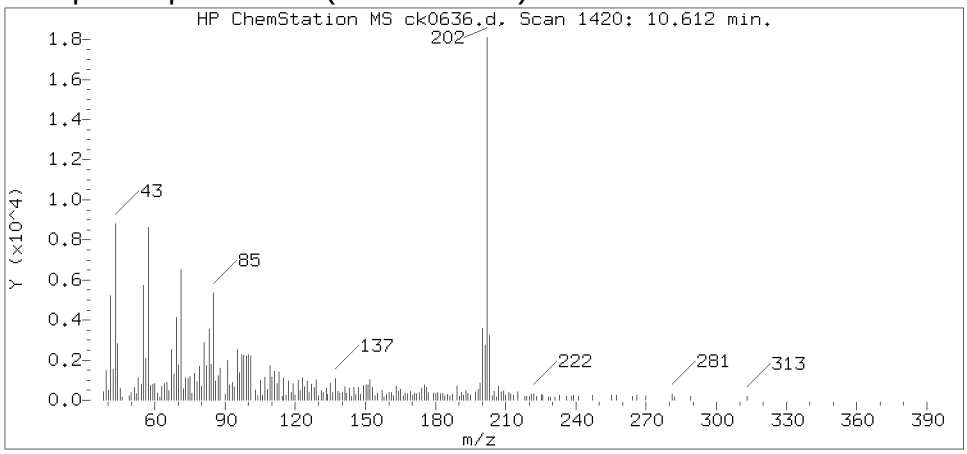


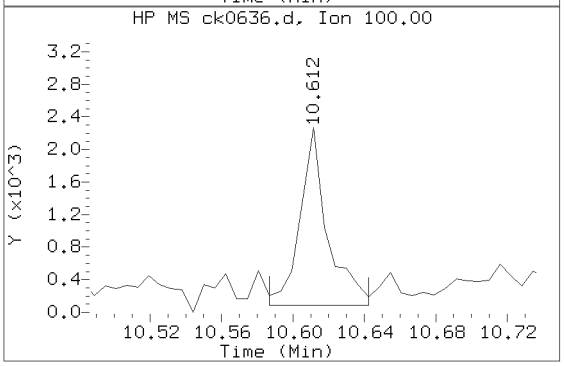
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1420
Retention Time (minutes) : 10.612
Relative Retention Time :-0.00000
Quant Ion : 202.00
Area (flag) : 15606
On-column Amount (ng/ul) : 0.4475

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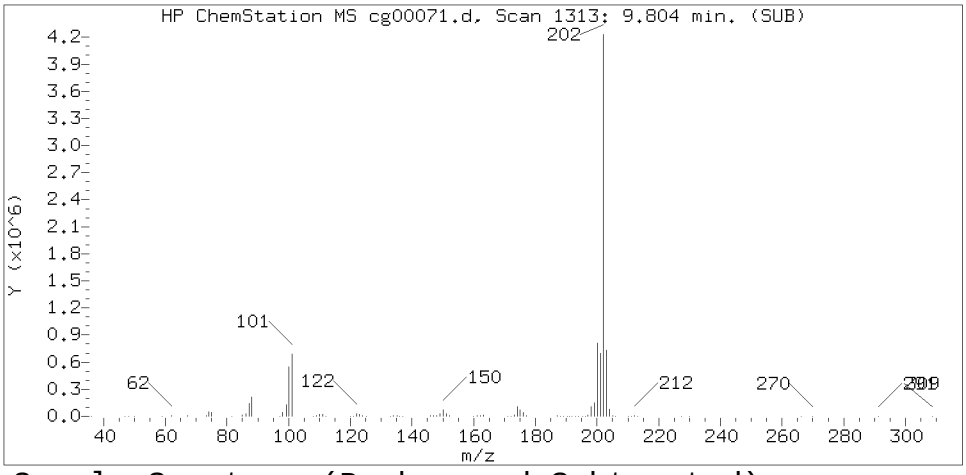
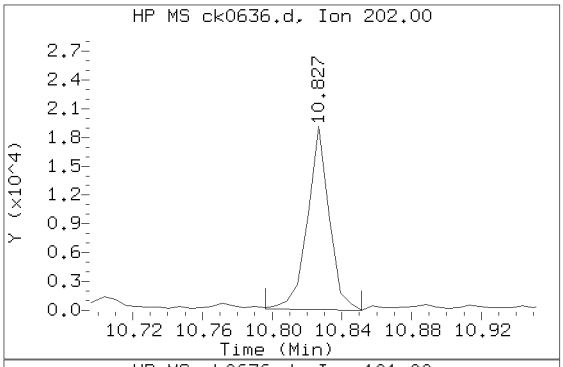
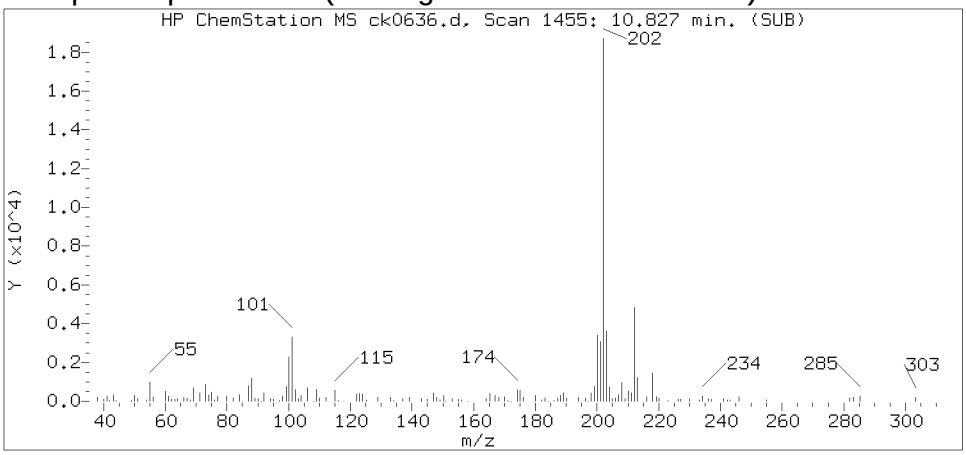
Target 3.5 esignature user ID: jmg00346

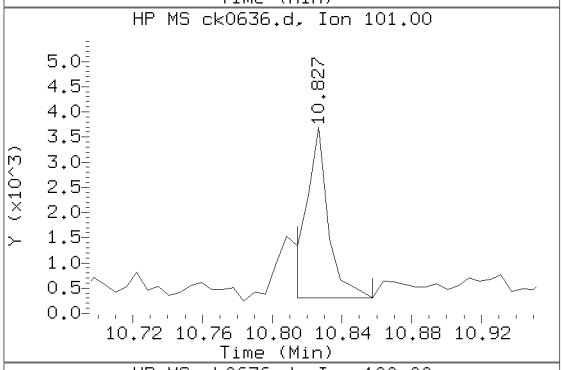
Reference Standard Spectrum for Pyrene

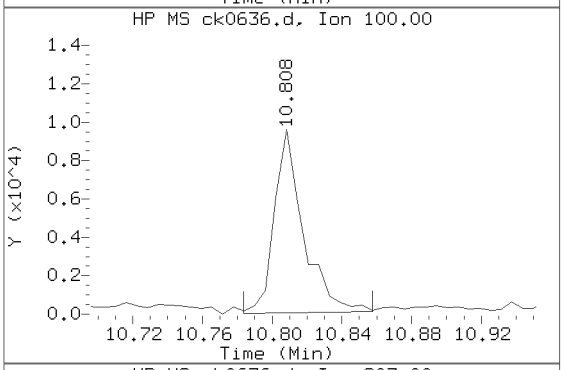




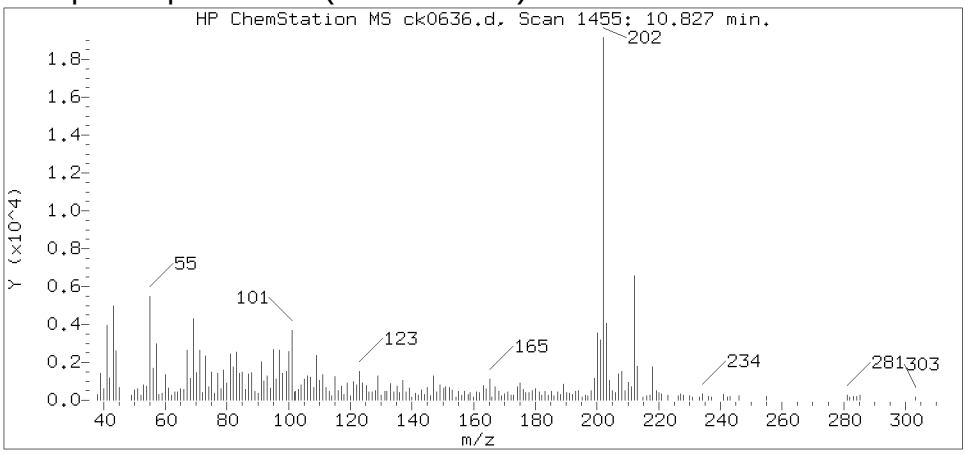
Sample Spectrum (Background Subtracted)

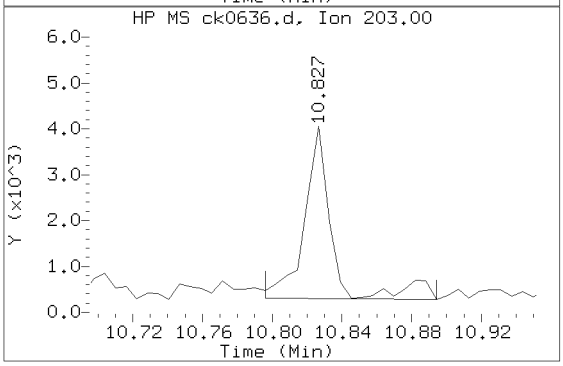






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

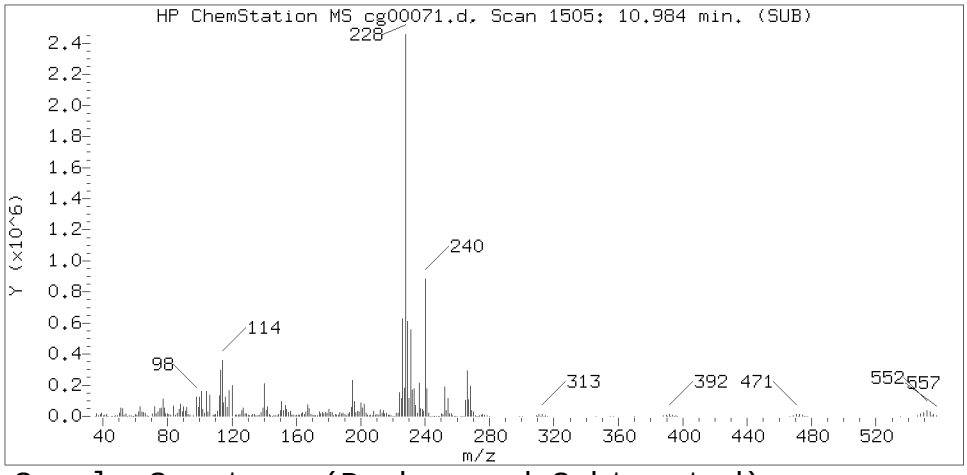
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

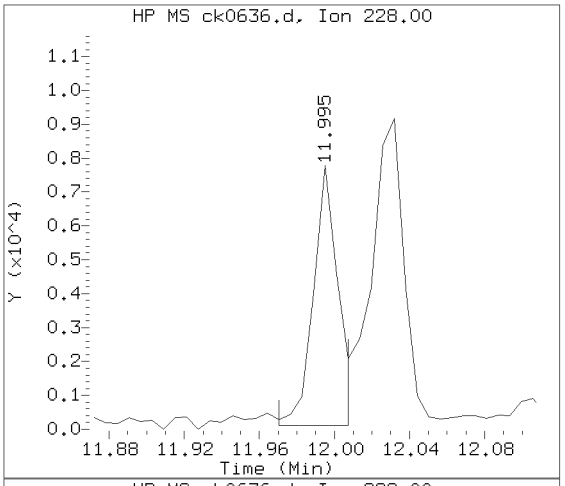
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1455
Retention Time (minutes)	: 10.827
Relative Retention Time	:-0.00000
Quant Ion	: 202.00
Area (flag)	: 16563
On-column Amount (ng/ul)	: 0.4621

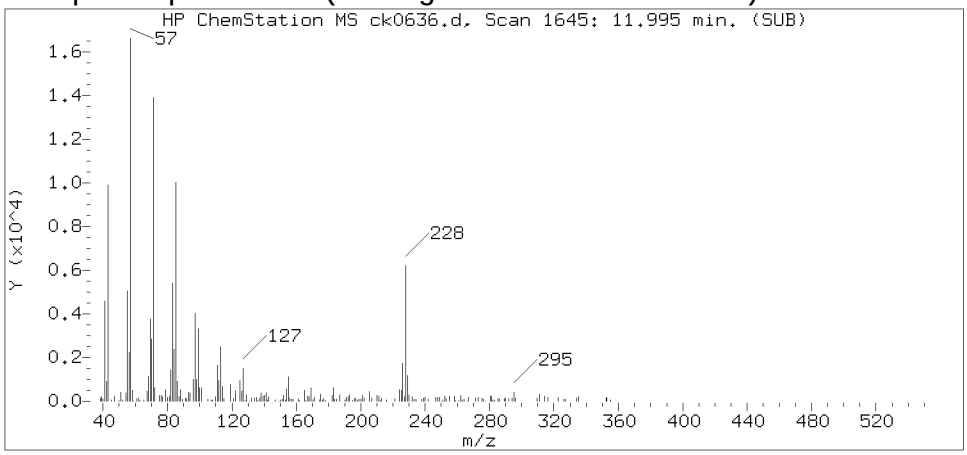
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

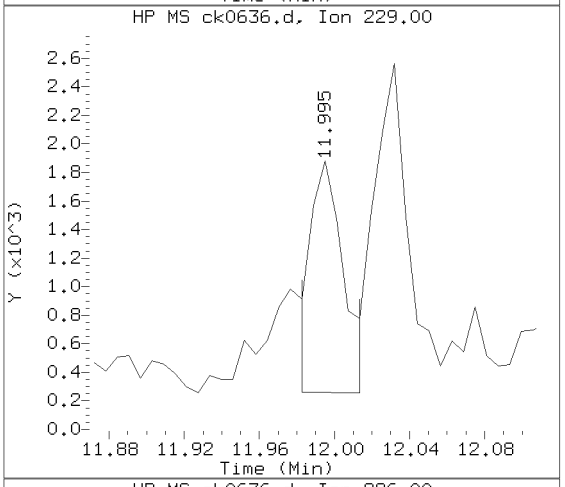
Reference Standard Spectrum for Benzo(a)anthracene



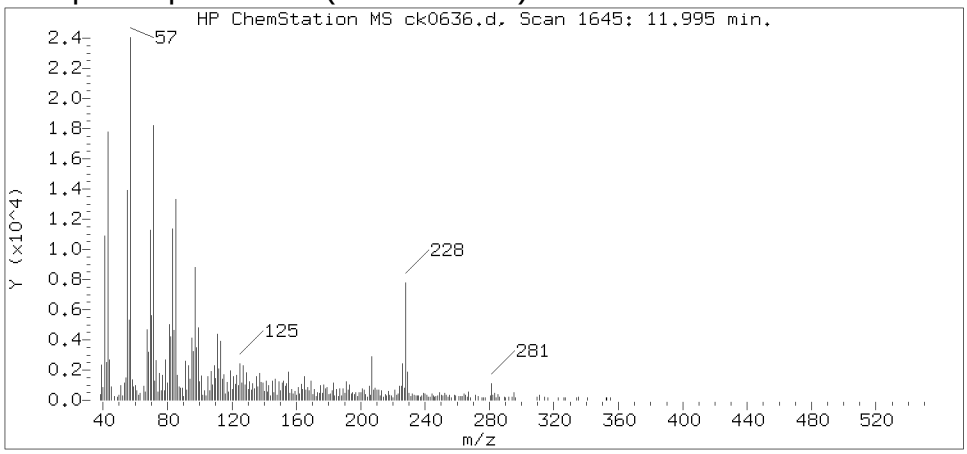


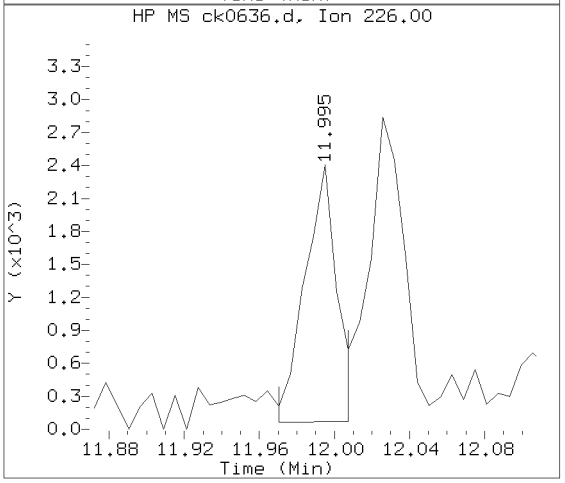
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

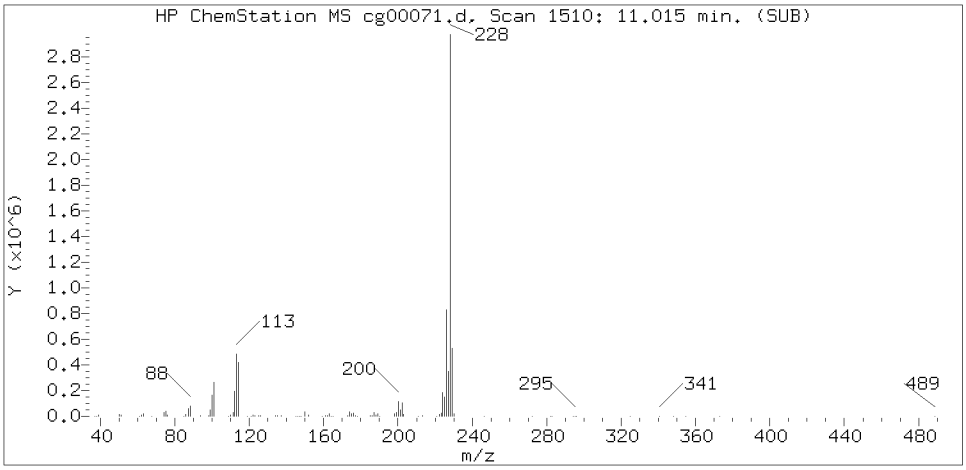
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

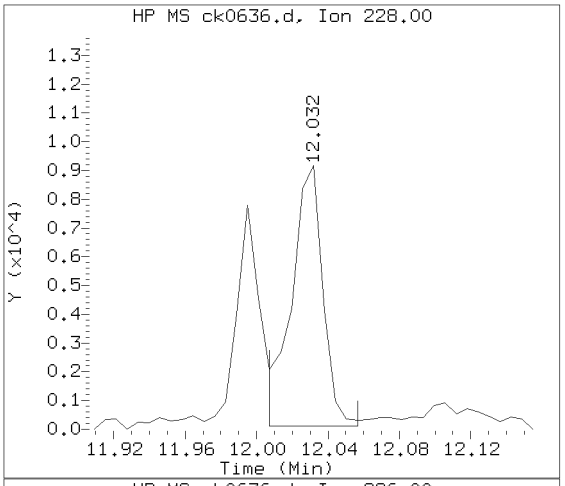
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number : 166
Compound Name : Benzo(a)anthracene
Scan Number : 1645
Retention Time (minutes) : 11.995
Relative Retention Time :-0.00000
Quant Ion : 228.00
Area (flag) : 6728
On-column Amount (ng/ul) : 0.2035

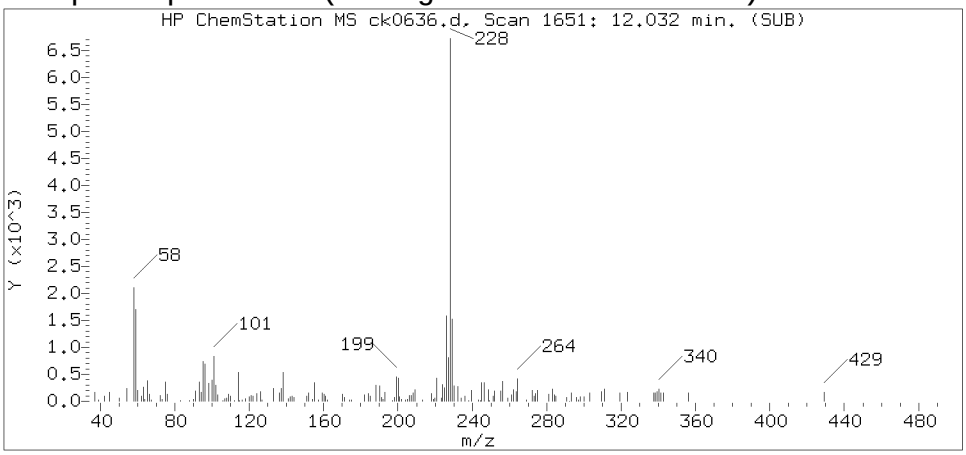
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

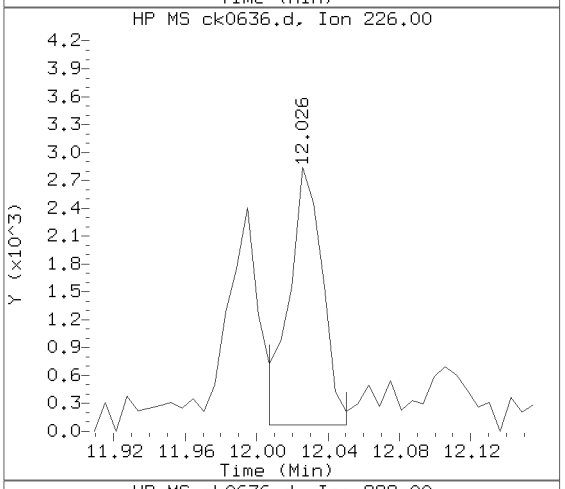
Reference Standard Spectrum for Chrysene



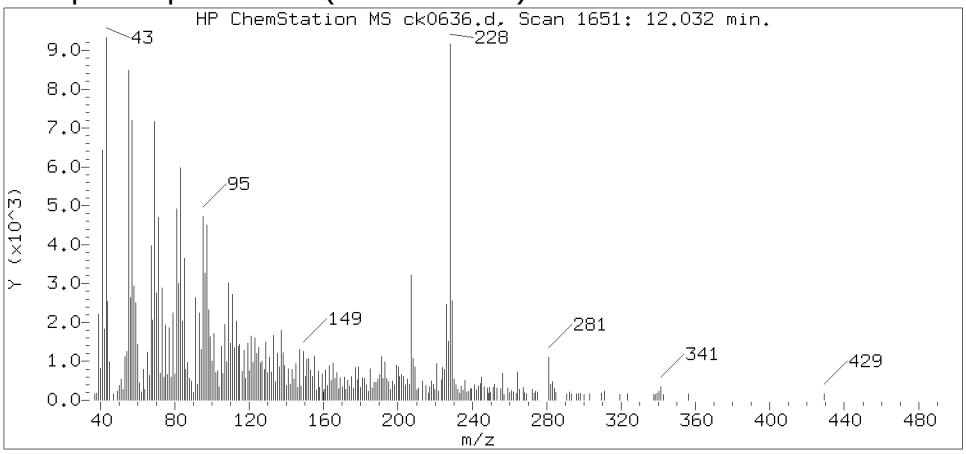


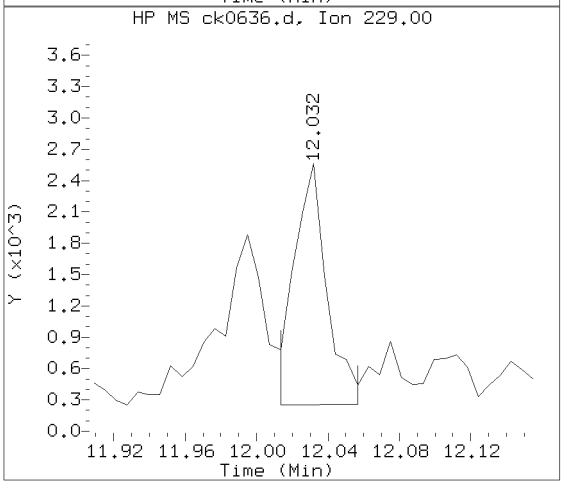
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

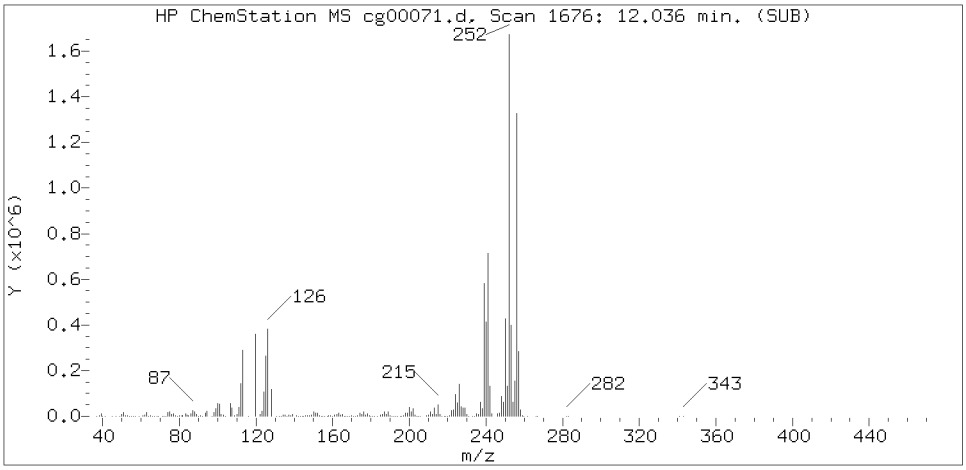
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

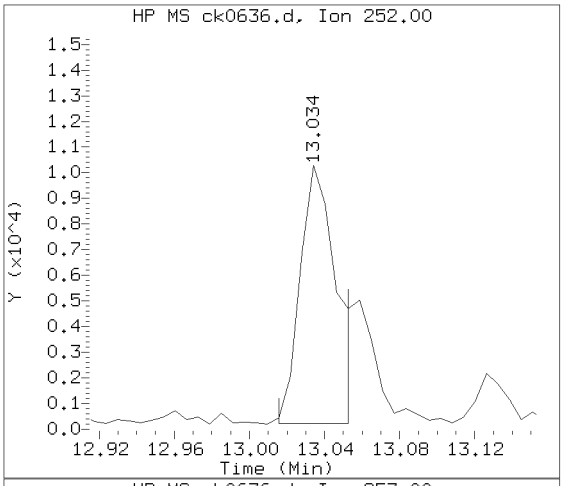
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number : 168
Compound Name : Chrysene
Scan Number : 1651
Retention Time (minutes) : 12.032
Relative Retention Time :-0.00000
Quant Ion : 228.00
Area (flag) : 11121
On-column Amount (ng/ul) : 0.3489

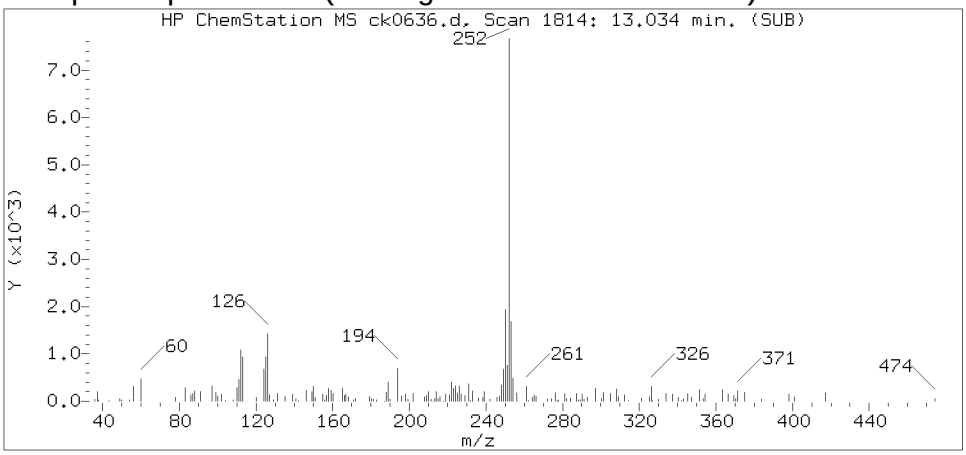
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

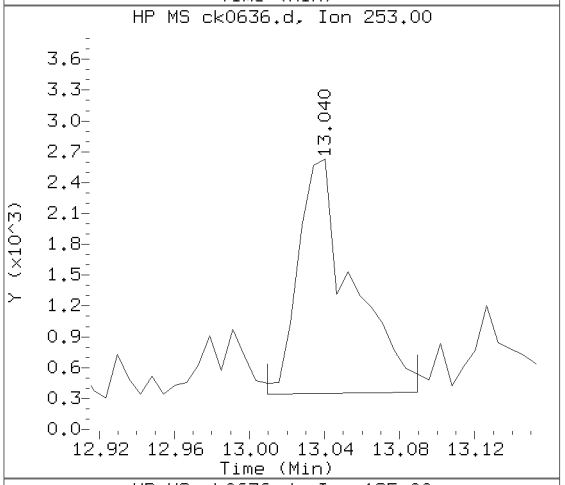
Reference Standard Spectrum for Benzo(b)fluoranthene



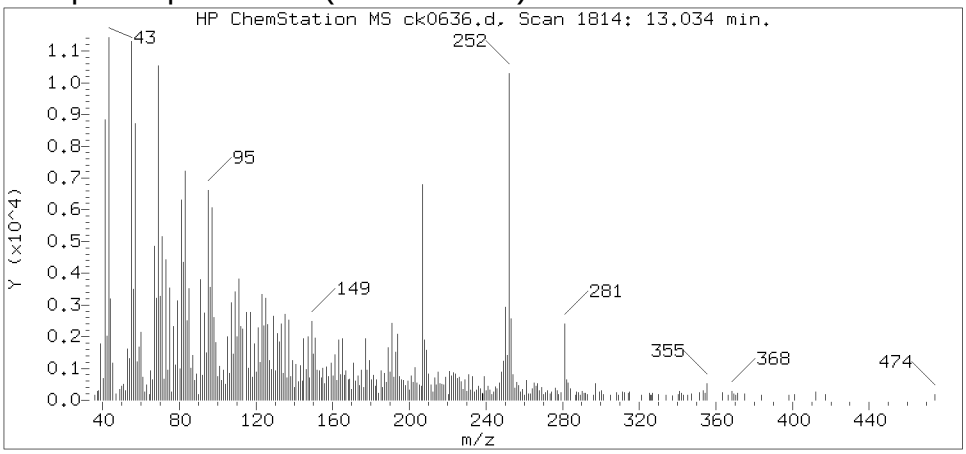


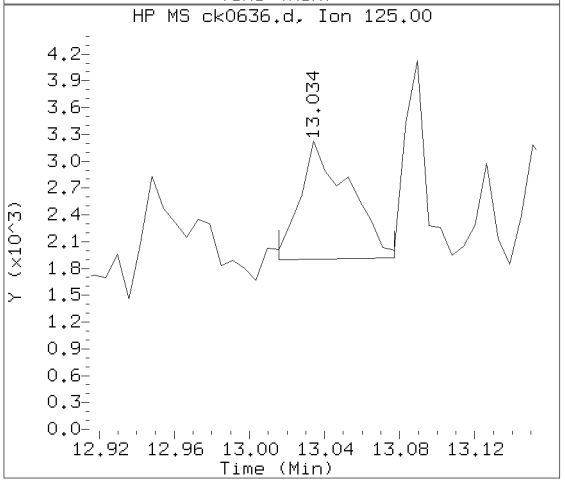
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

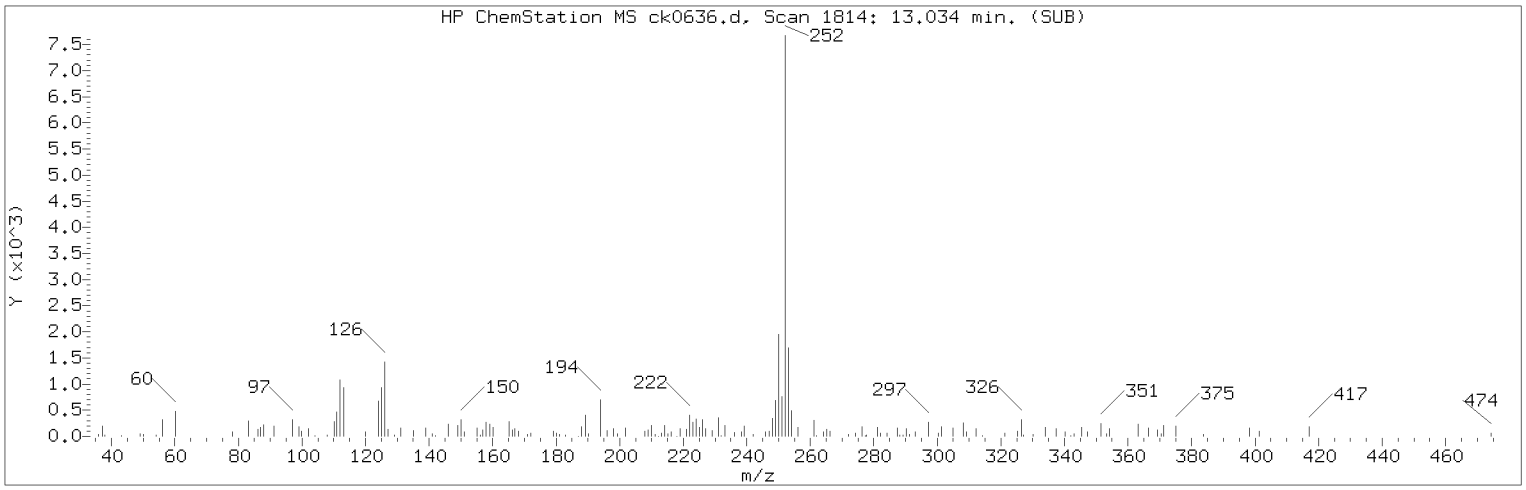
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

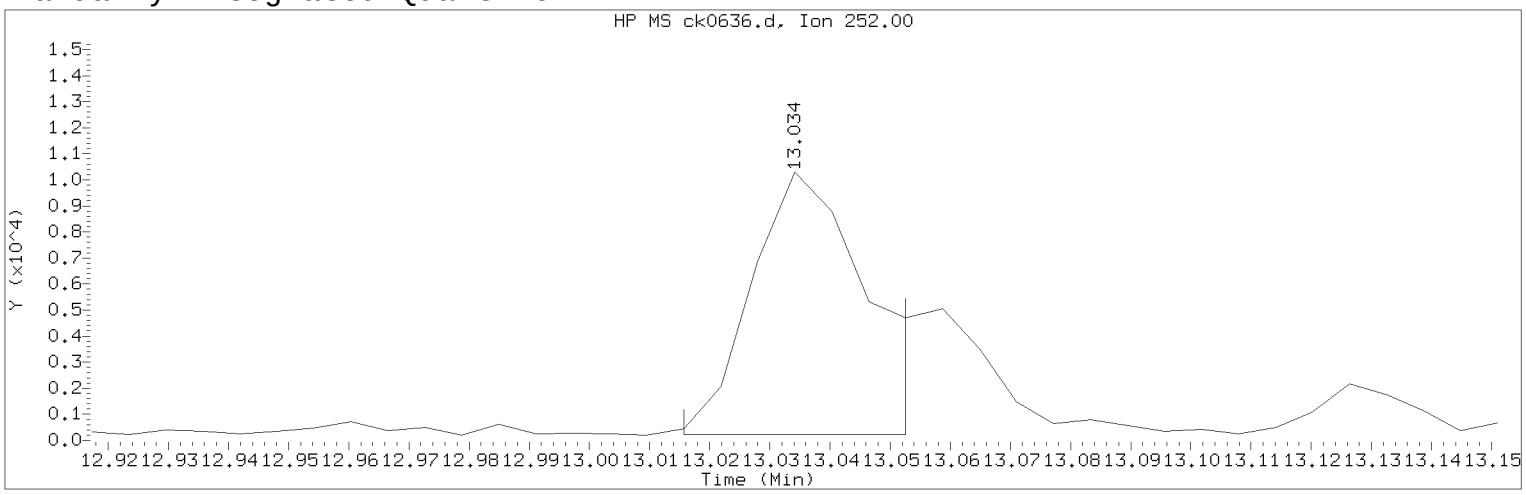
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 13655M
On-column Amount (ng/ul) : 0.3929

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

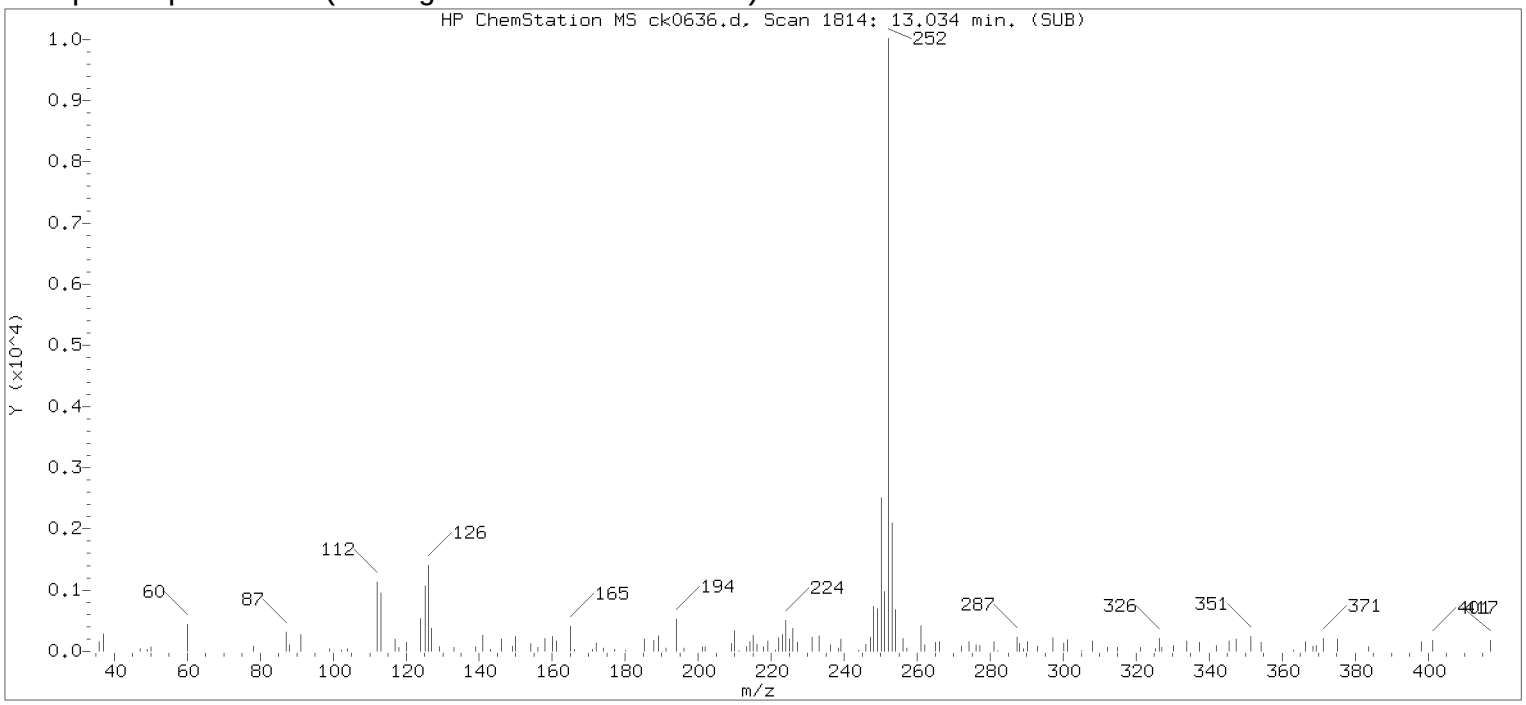
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 13655M
On-column Amount (ng/ul) : 0.3929
Integration start scan : 1810 Integration stop scan: 1816
Y at integration start : 214 Y at integration end: 214

Reason for manual integration: improper integration

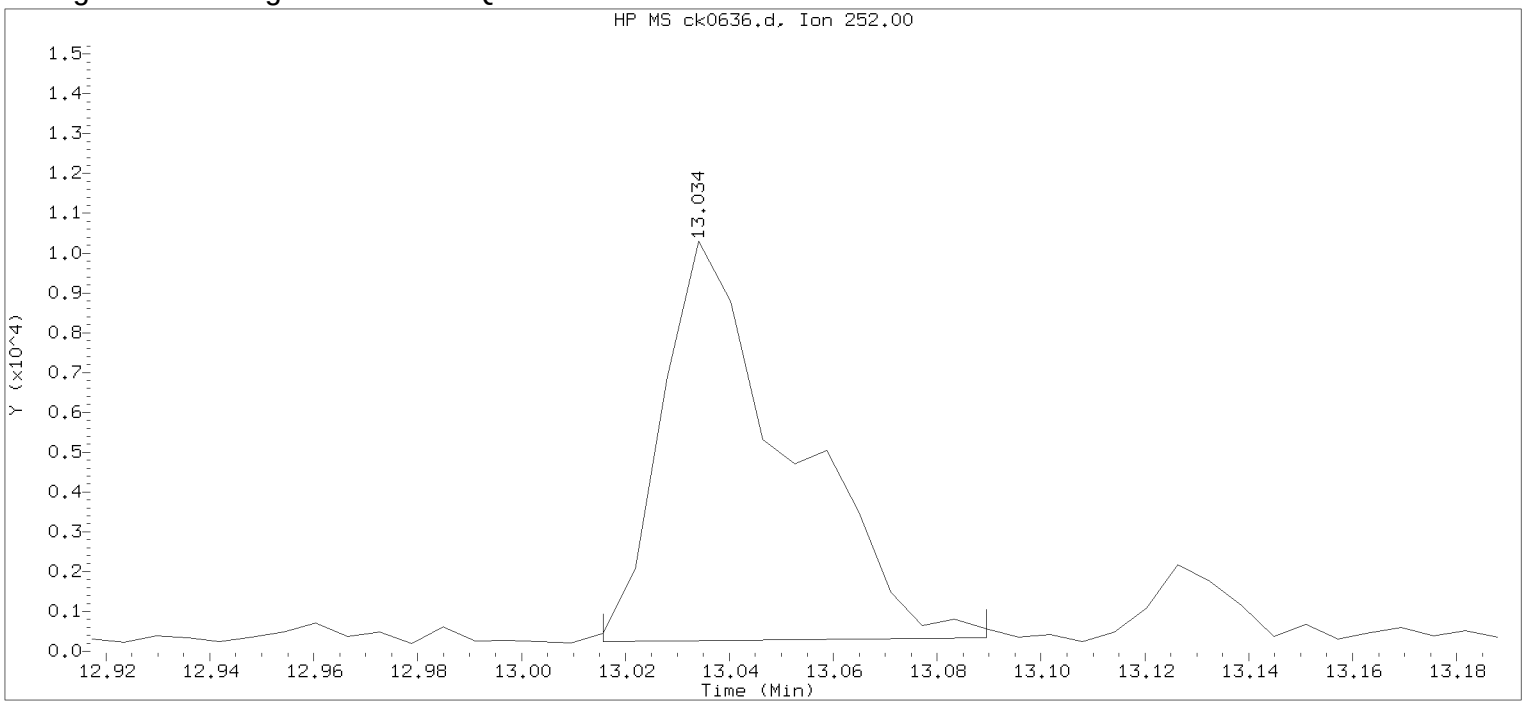
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

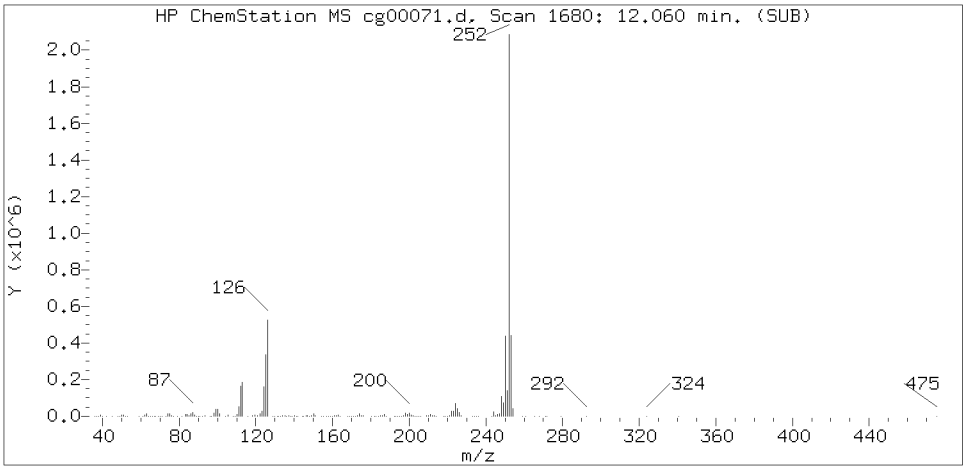
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:26 Automation

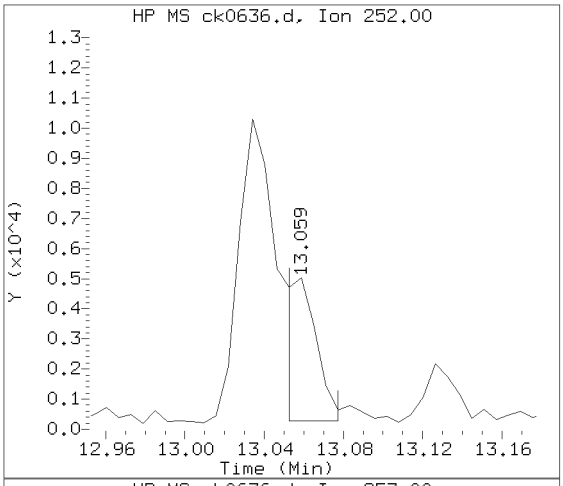
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 17156		
On-column Amount (ng/ul)	: 0.4936		
Integration start scan	: 1810	Integration stop scan:	1822
Y at integration start	: 249	Y at integration end:	339

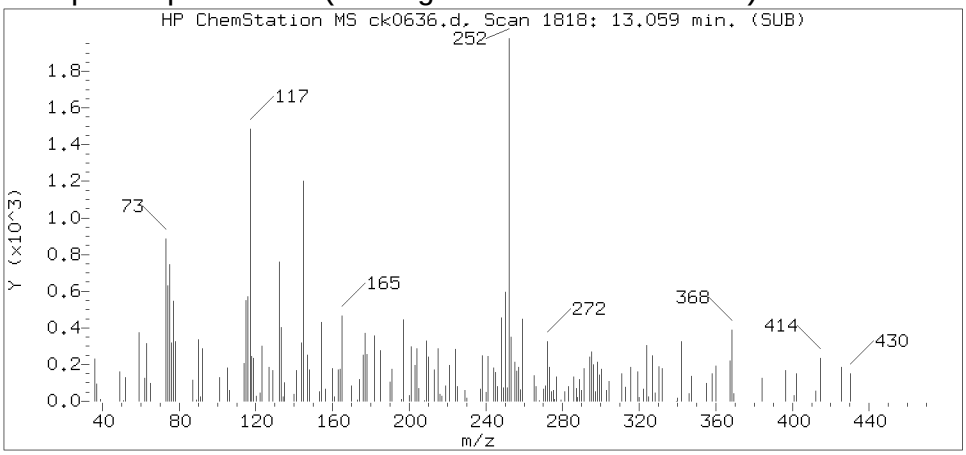
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user KVM06 jmg00346

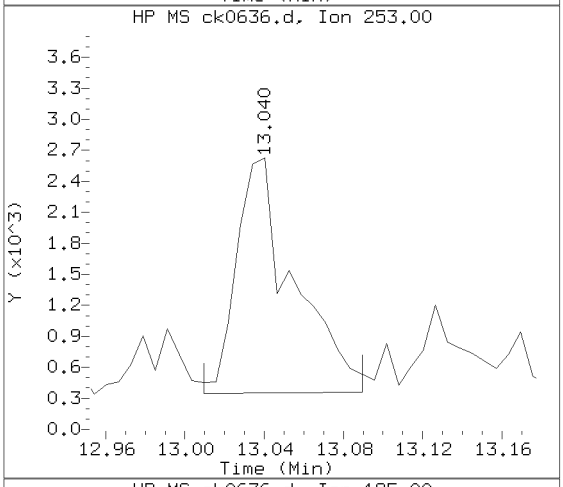
Reference Standard Spectrum for Benzo(k)fluoranthene



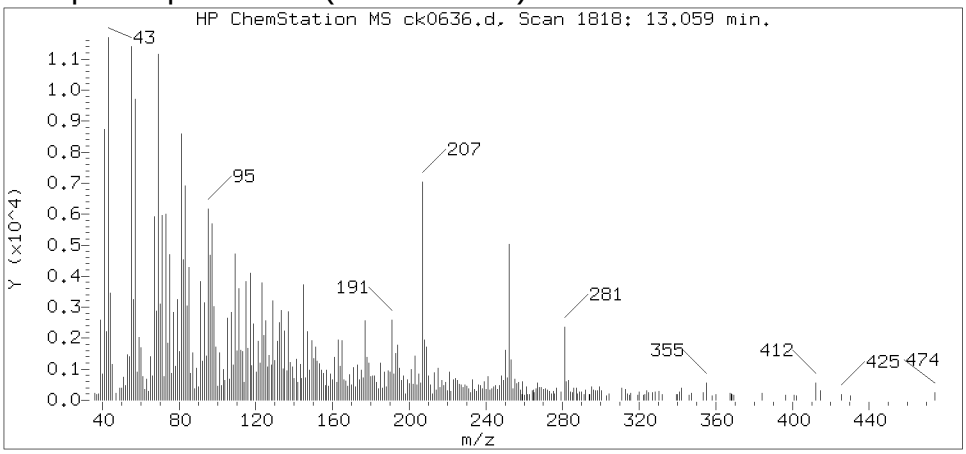


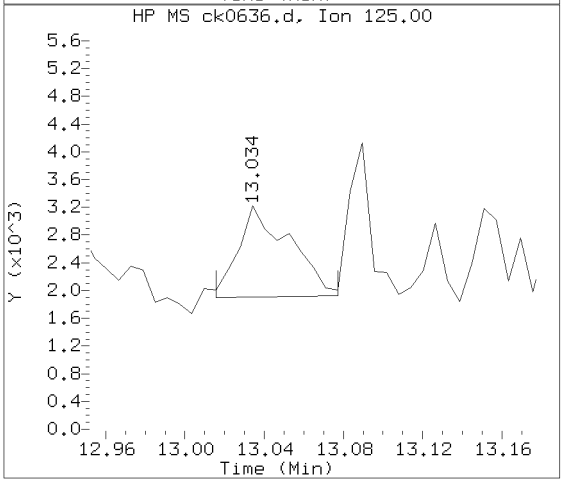
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

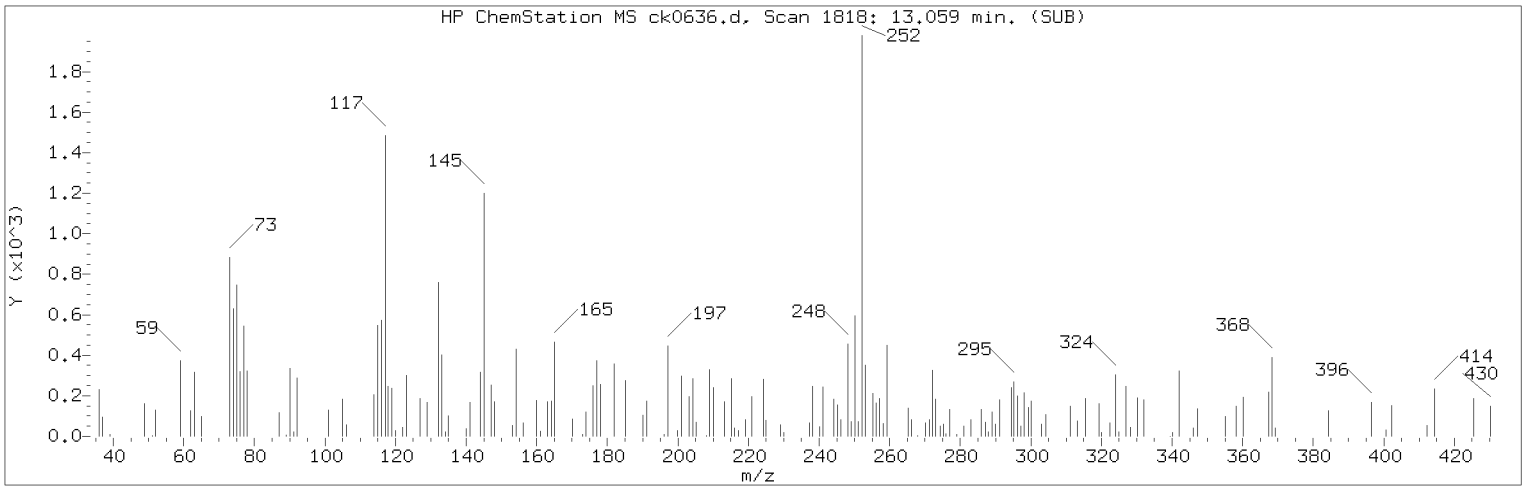
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

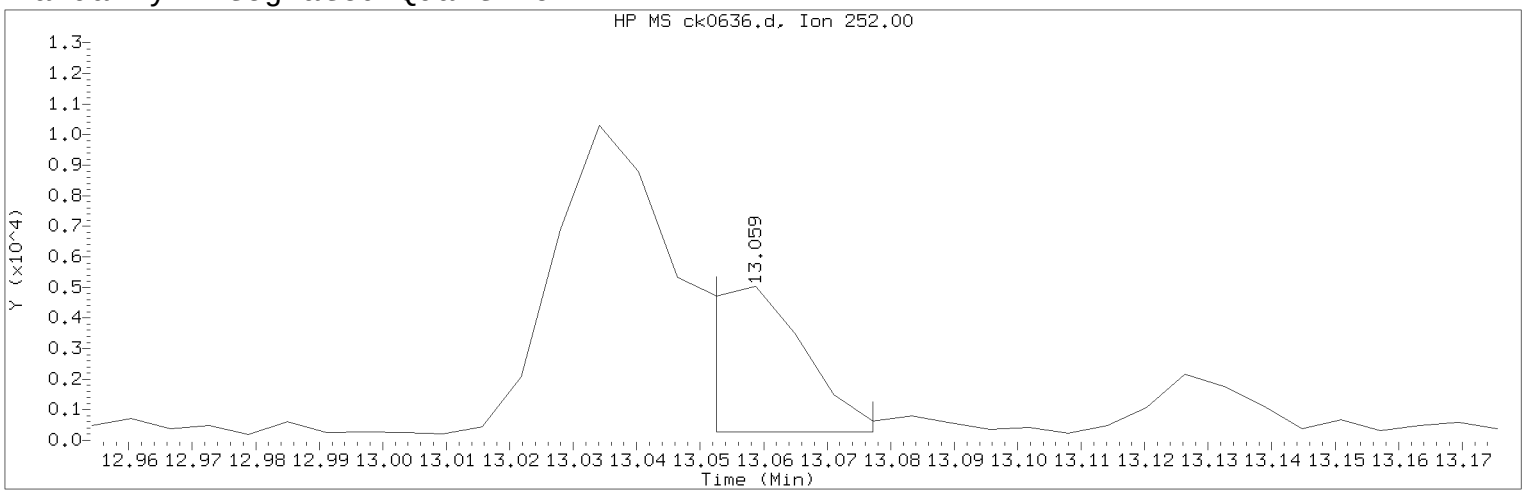
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Relative Retention Time : 0.00046
Quant Ion : 252.00
Area (flag) : 5155M
On-column Amount (ng/ul) : 0.1454

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

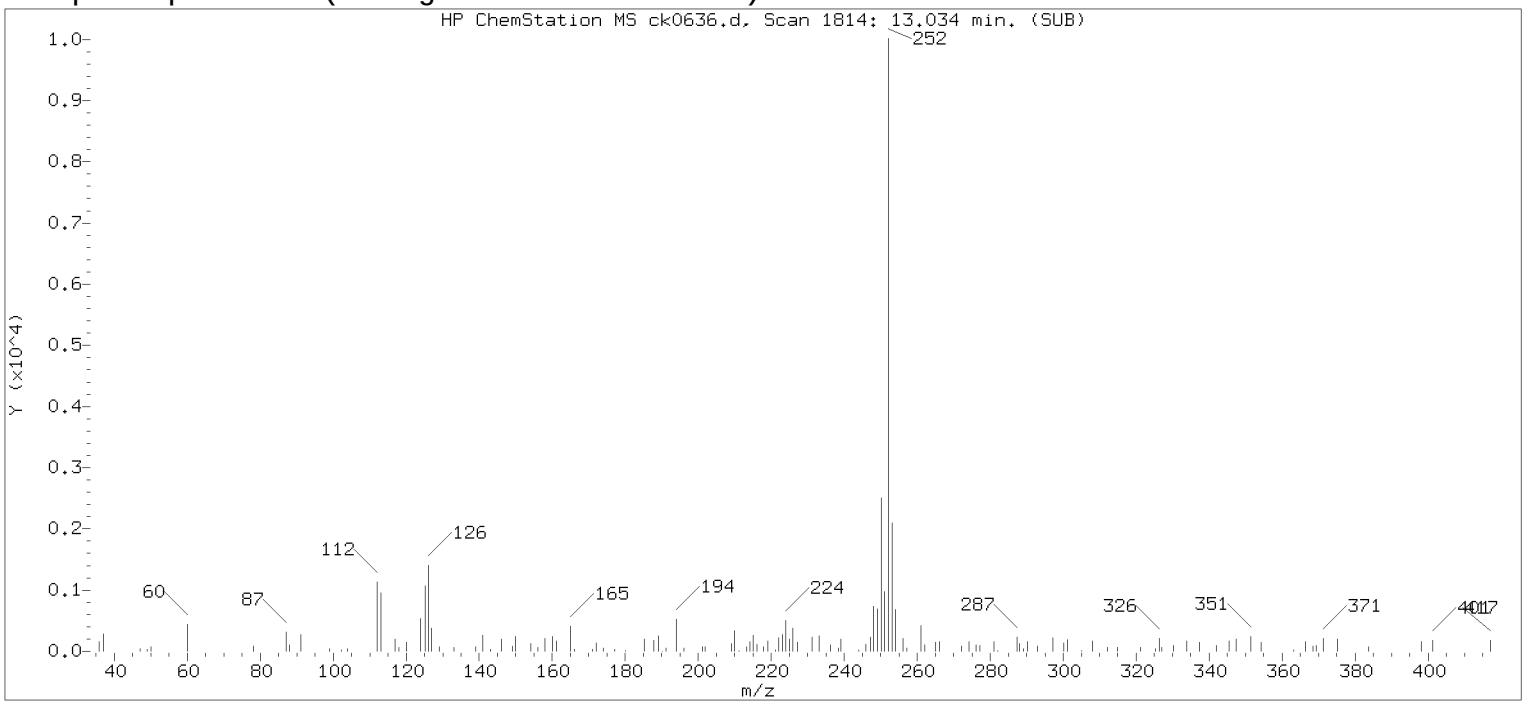
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Quant Ion : 252.00
Area (flag) : 5155M
On-column Amount (ng/ul) : 0.1454
Integration start scan : 1816 Integration stop scan: 1820
Y at integration start : 280 Y at integration end: 280

Reason for manual integration: improper integration

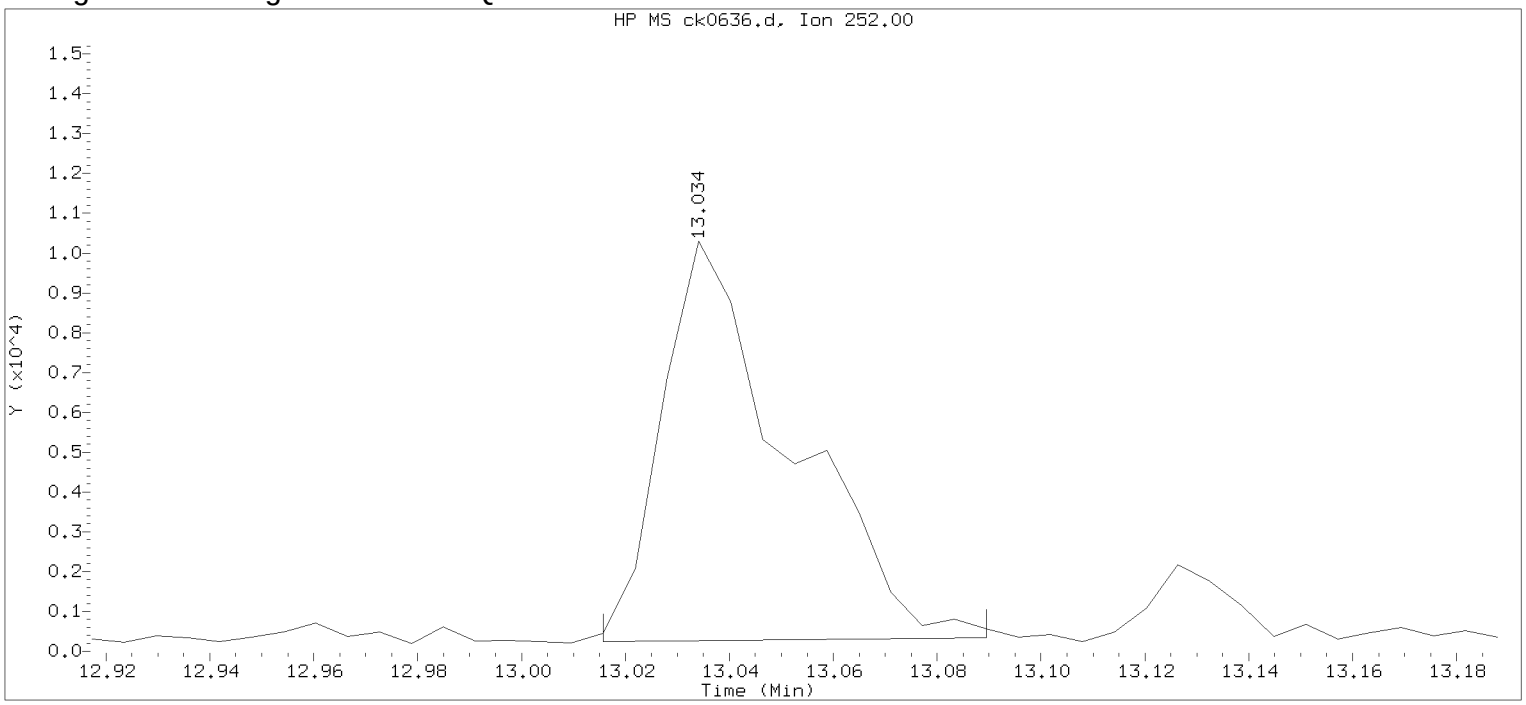
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

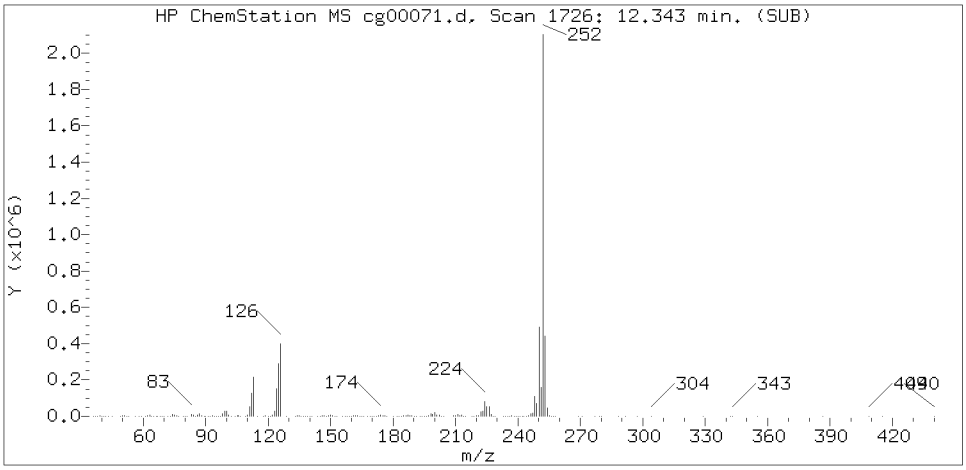
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:26 Automation

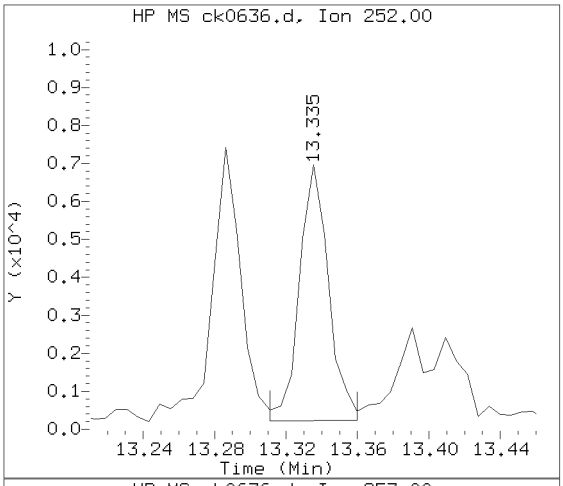
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 17156		
On-column Amount (ng/ul)	: 0.4838		
Integration start scan	: 1810	Integration stop scan:	1822
Y at integration start	: 249	Y at integration end:	339

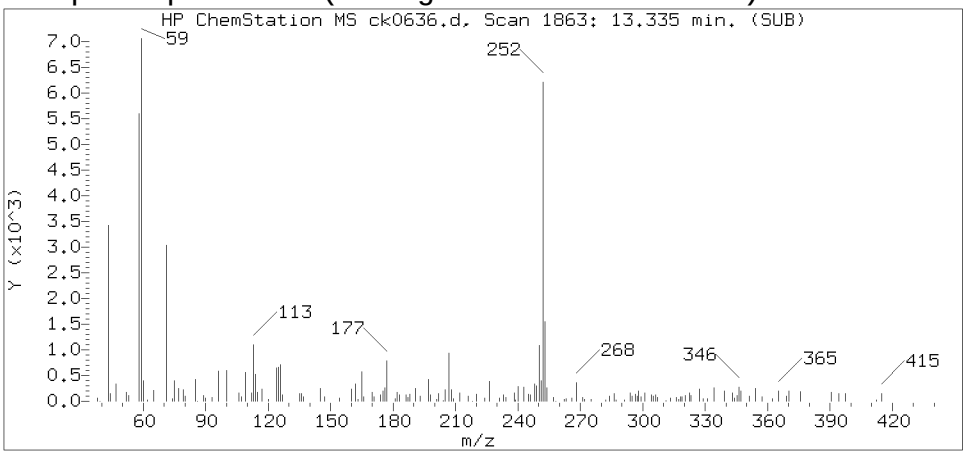
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user KVM06 jmg00346

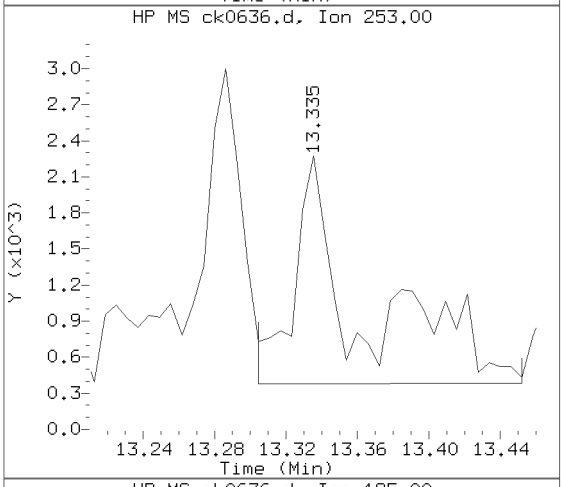
Reference Standard Spectrum for Benzo(a)pyrene



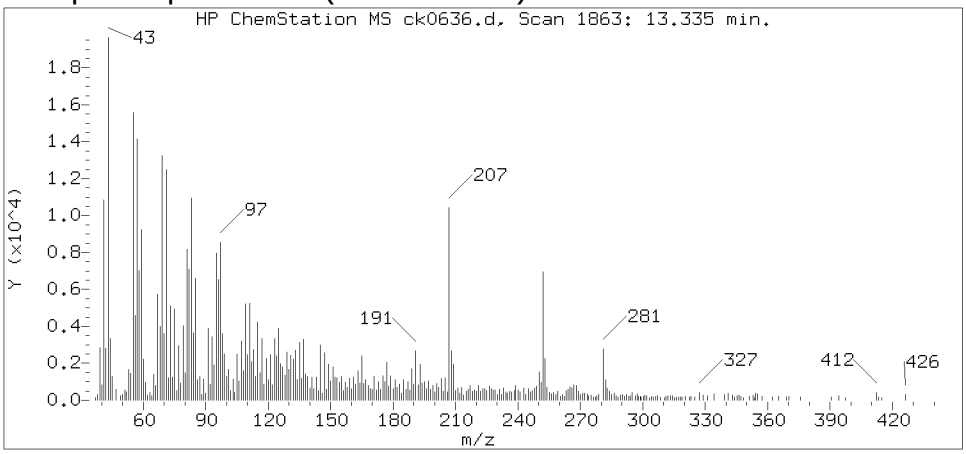


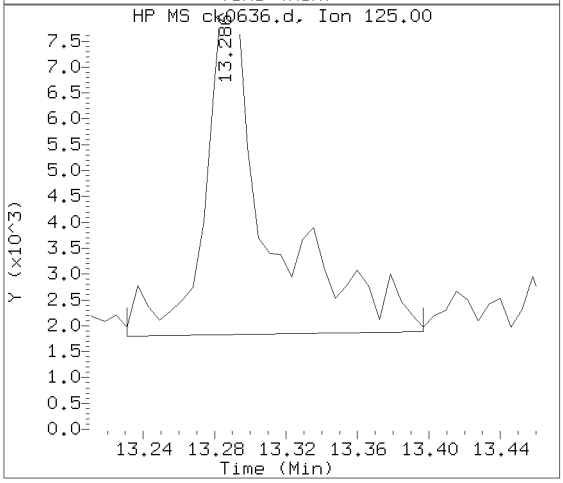
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

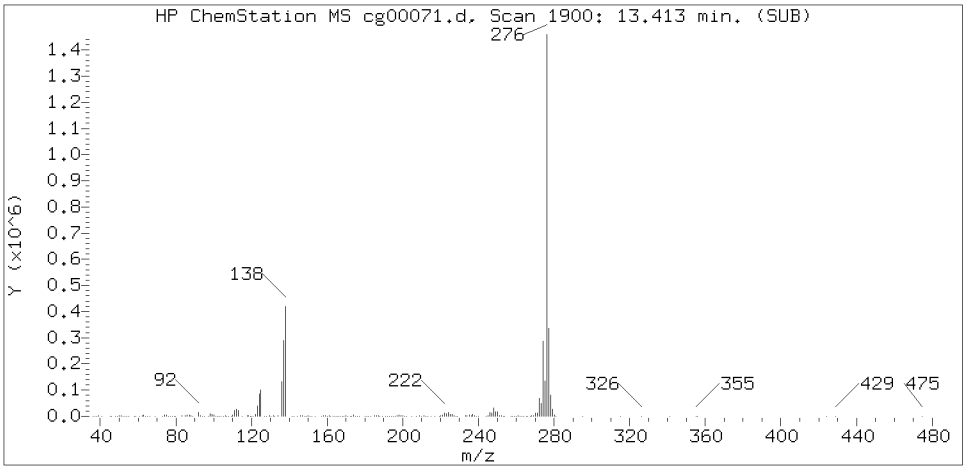
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

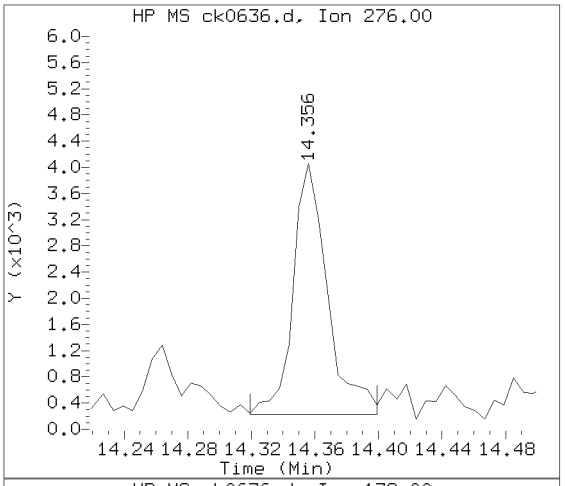
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.335
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 7675
On-column Amount (ng/ul) : 0.2262

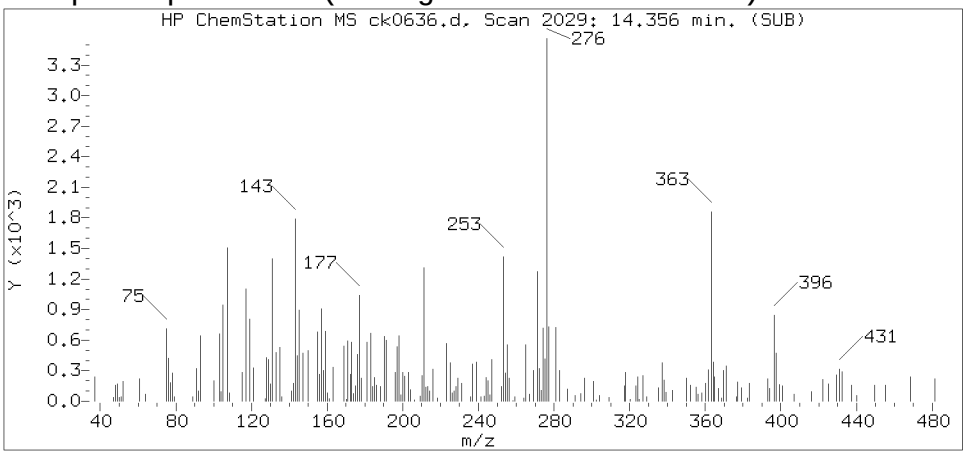
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

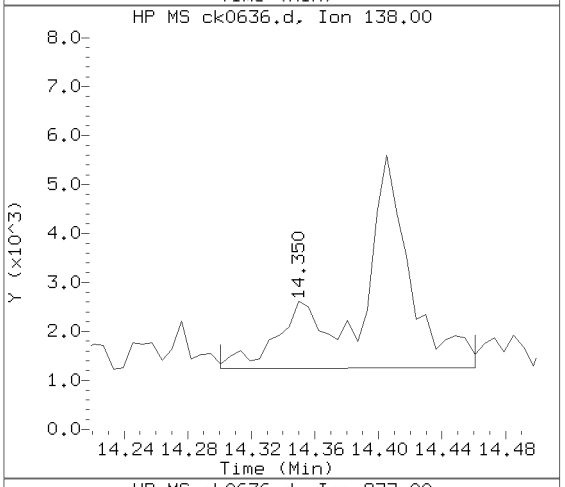
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



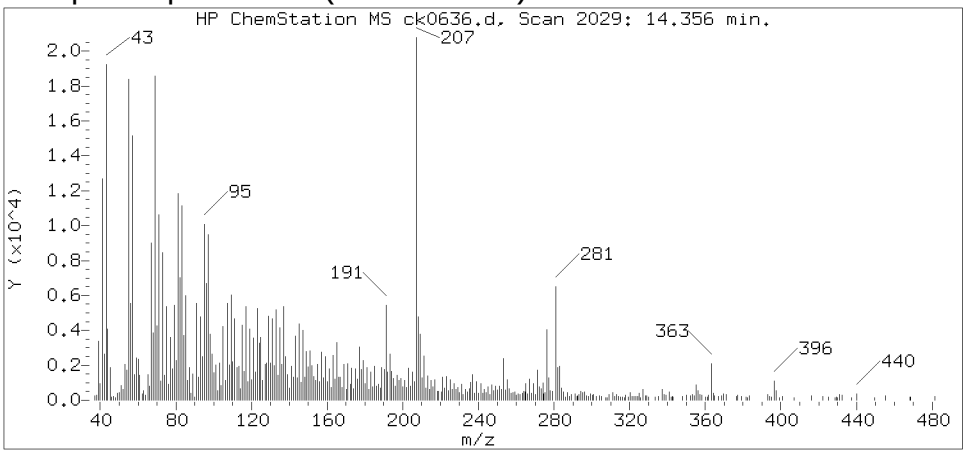


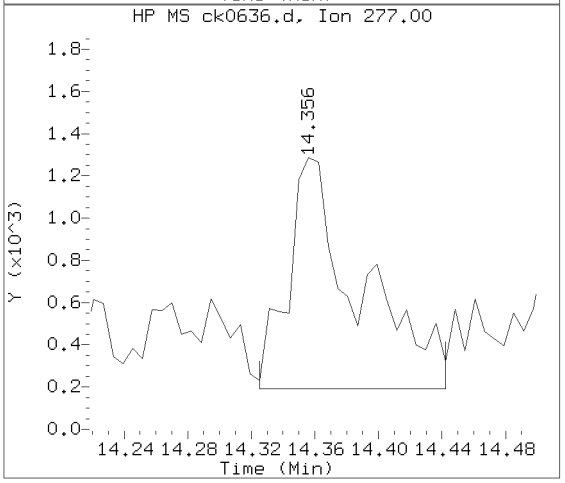
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

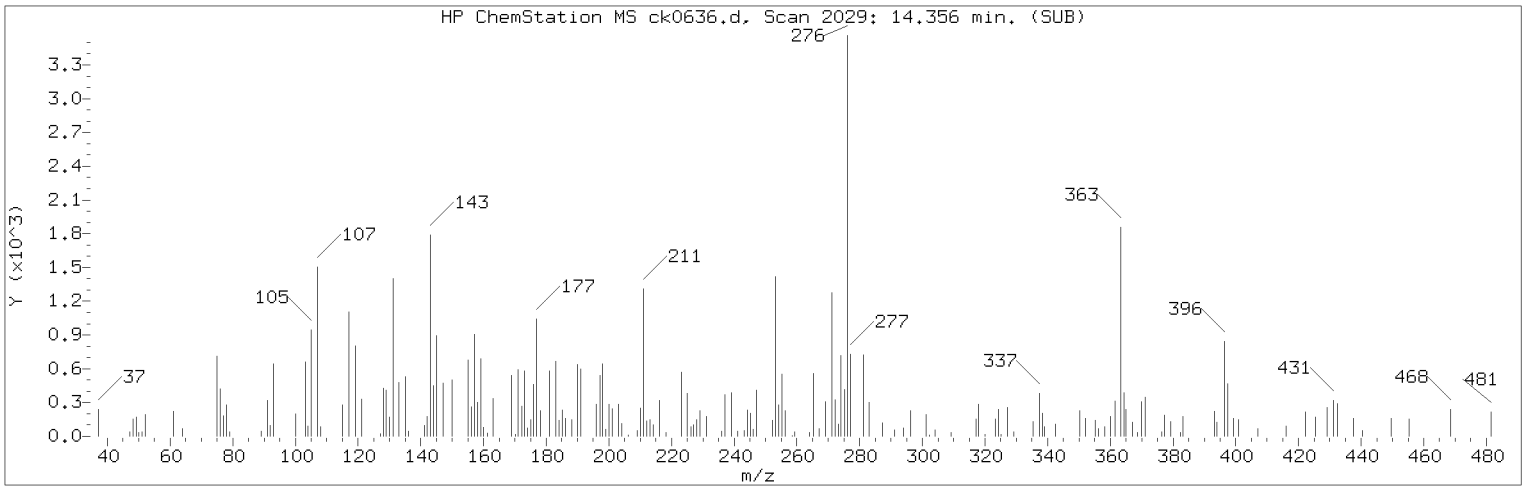
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

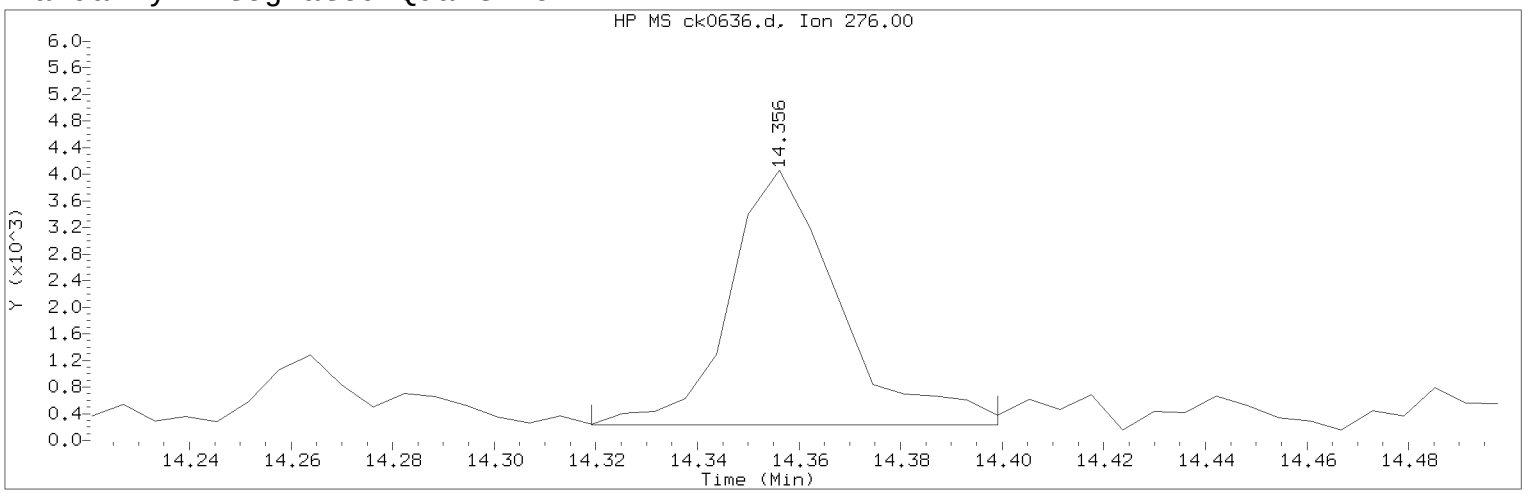
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2029
Retention Time (minutes) : 14.356
Relative Retention Time : 0.00046
Quant Ion : 276.00
Area (flag) : 5777M
On-column Amount (ng/ul) : 0.1601

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

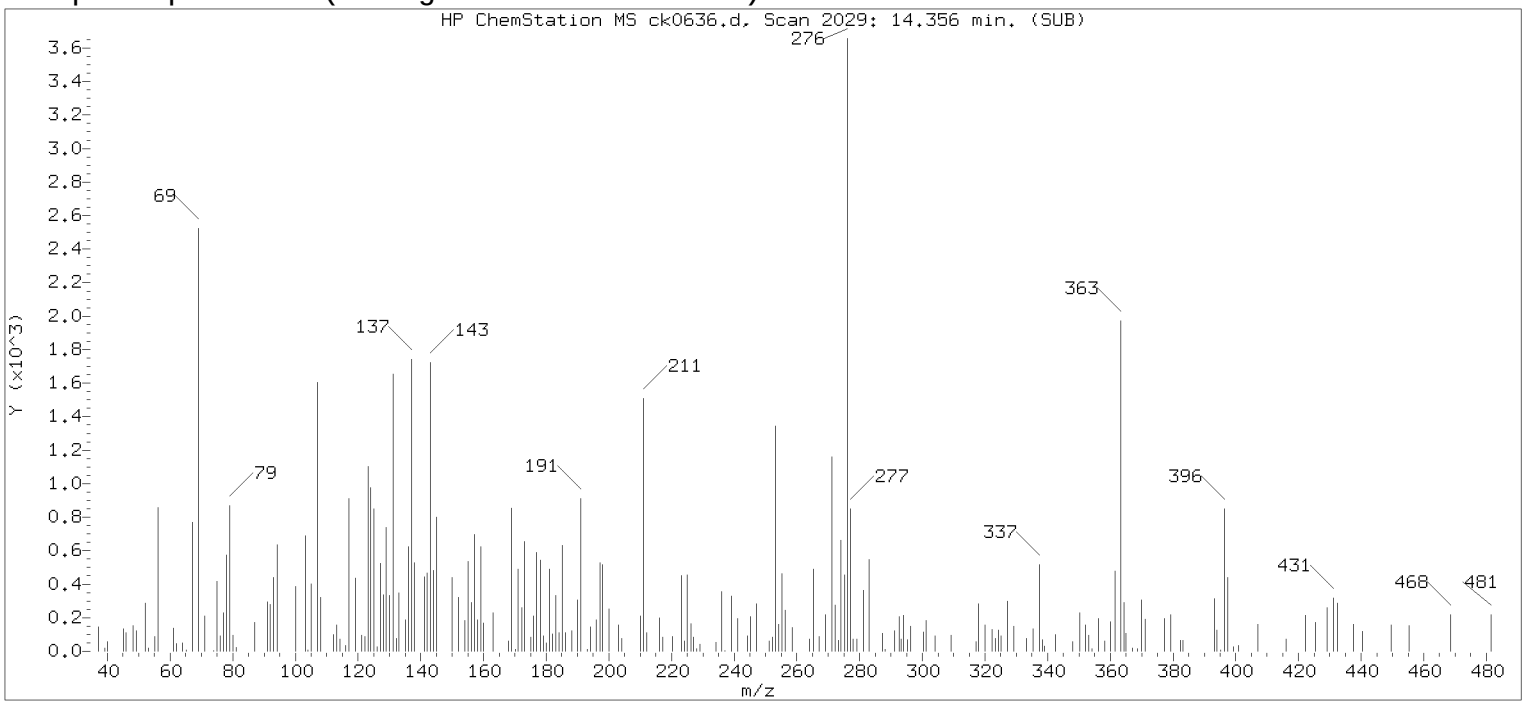
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2029
Retention Time (minutes) : 14.356
Quant Ion : 276.00
Area (flag) : 5777M
On-column Amount (ng/ul) : 0.1601
Integration start scan : 2022 Integration stop scan: 2035
Y at integration start : 227 Y at integration end: 227

Reason for manual integration: improper integration

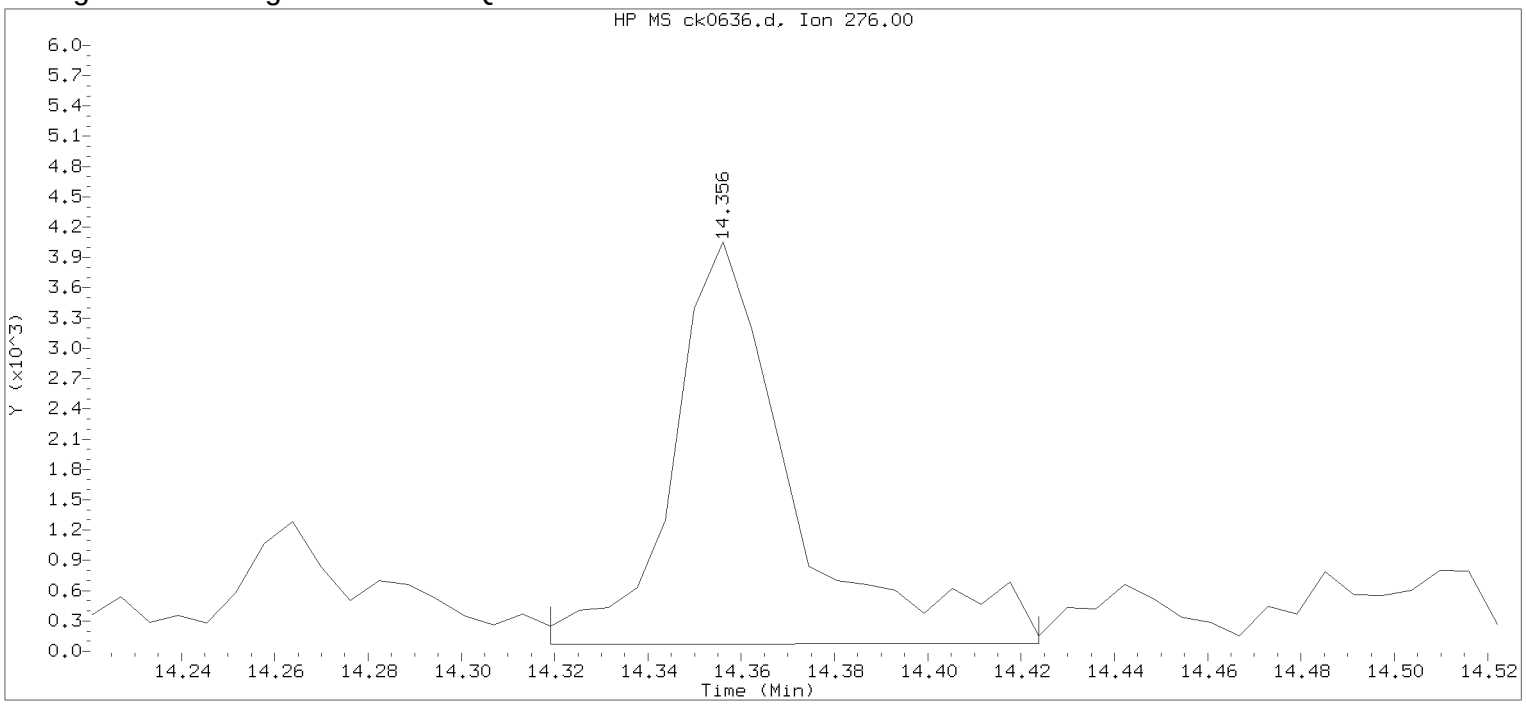
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:29.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

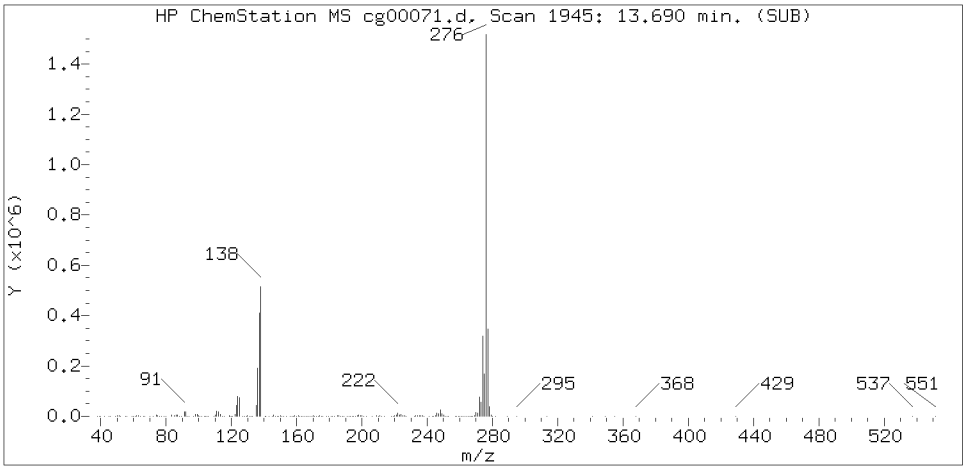
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:26 Automation

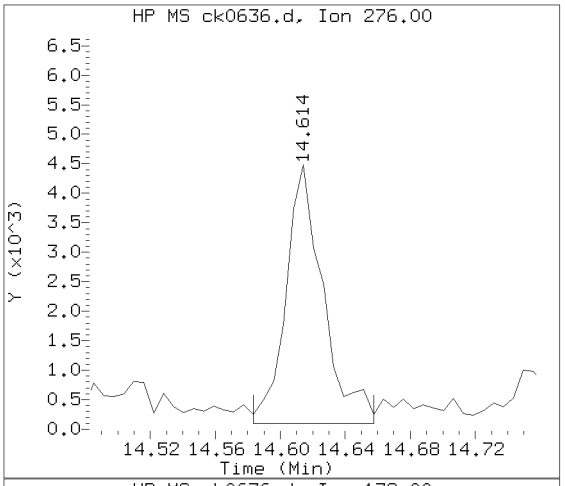
Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2029		
Retention Time (minutes)	: 14.356		
Quant Ion	: 276.00		
Area	: 7133		
On-column Amount (ng/ul)	: 0.1976		
Integration start scan	: 2022	Integration stop scan:	2039
Y at integration start	: 67	Y at integration end:	77

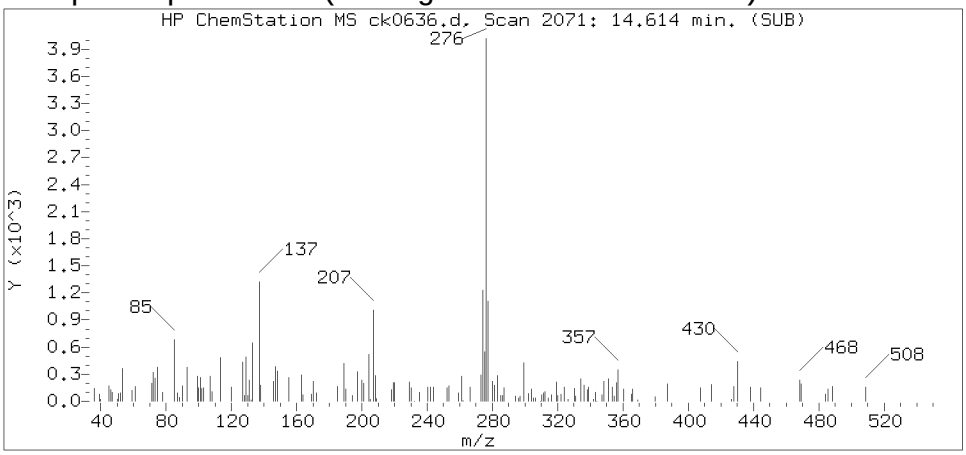
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user KVM06 jmg00346

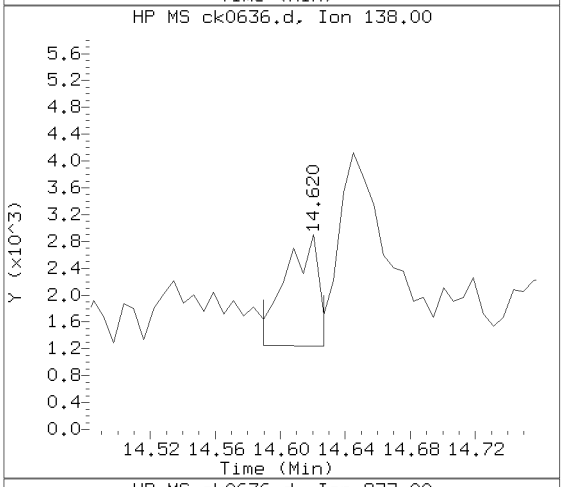
Reference Standard Spectrum for Benzo(g,h,i)perylene



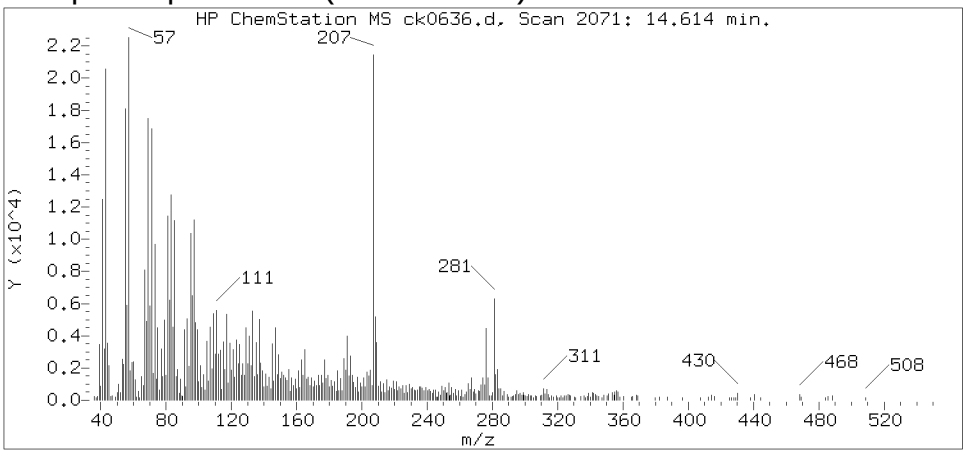


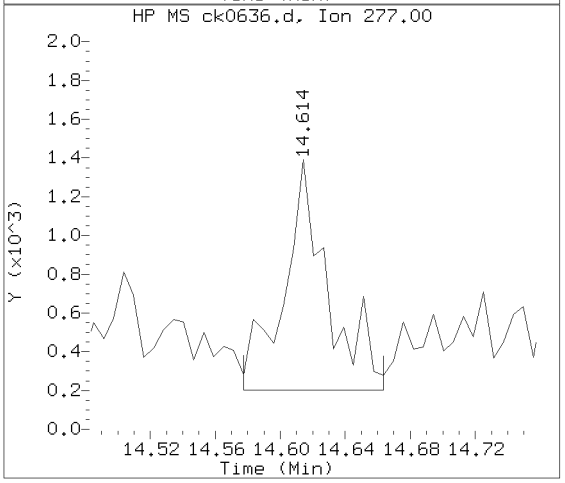
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0636.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:00 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:06 jmg00346

Sample Name: 2C126 Lab Sample ID: 7266812

Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2071
Retention Time (minutes) : 14.614
Relative Retention Time : 0.00046
Quant Ion : 276.00
Area (flag) : 6924
On-column Amount (ng/ul) : 0.2252

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:35.
Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0637.d
Data file Sample Info. Line: 2C111;7266813;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Injection date and time: **18-NOV-2013 12:25**
Instrument ID: **HP10623.i** Batch: **13316SLC**

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	97550 (-2)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	447911 (-3)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	282132 (-3)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	524209 (-1)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	654292 (1)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	577522 (0)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	141827	14.697	73%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	295532	16.659	83%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	390252	16.684	83%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.456(0.000)	178	4590	0.151	50.20			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.612(0.000)	202	8780M	0.258	85.88			0.1
154) Pyrene	(5)	10.827(0.000)	202	6278M	0.173	57.60			0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)	12.026(0.000)	228	5928	0.183	61.15			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	5878M	0.167	55.57			0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0637.d Injection date and time: **18-NOV-2013 12:25**
Data file Sample Info. Line: 2C111;7266813;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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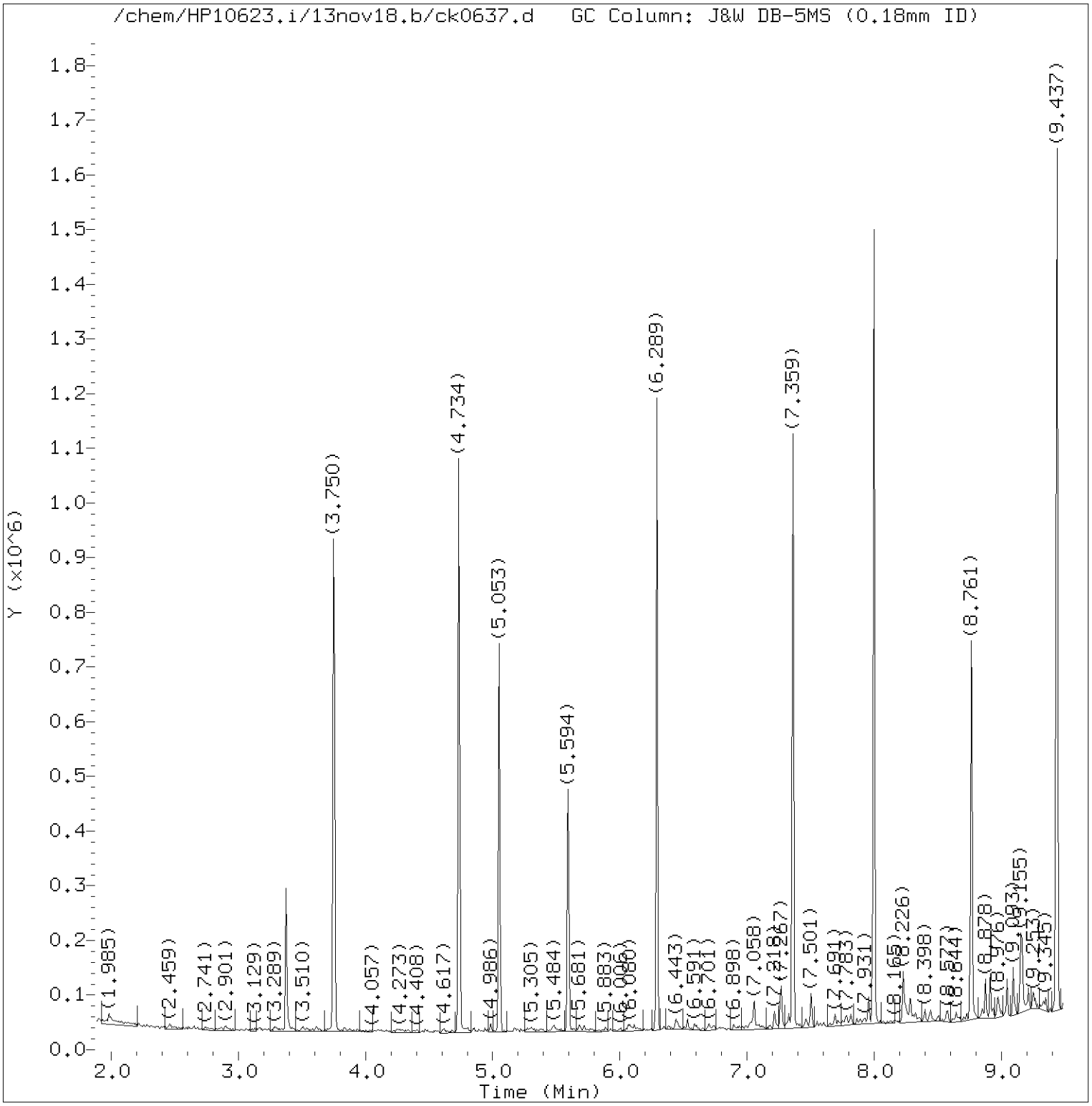
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:30. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

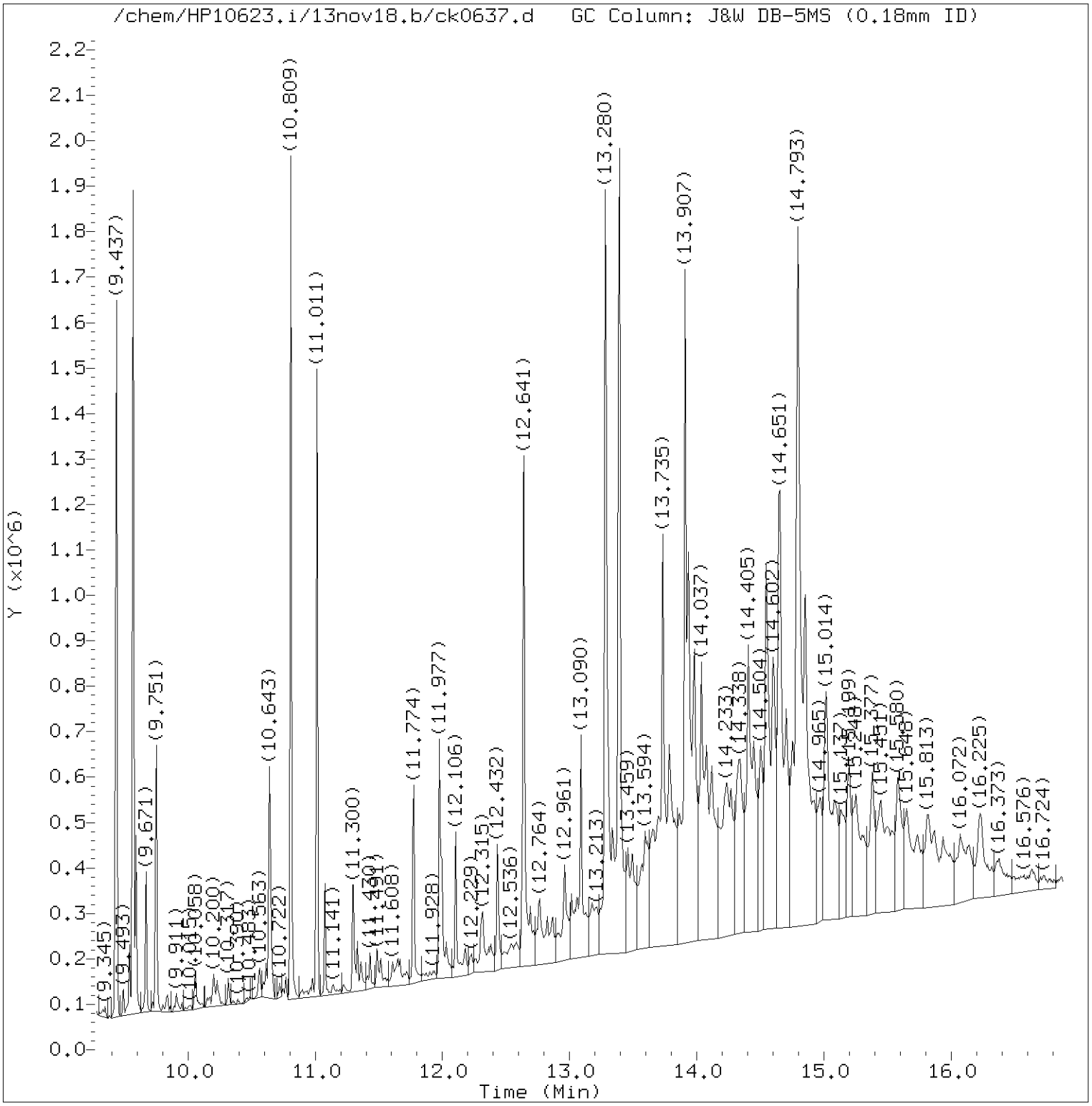
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	97550	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	141827	14.697
52)*Naphthalene-d8	(2)	6.289	136	447911	20.000
78)$2-Fluorobiphenyl	(3)	7.359	172	295532	16.659
98)*Acenaphthene-d10	(3)	7.999	164	282132	20.000
135)*Phenanthrene-d10	(4)	9.437	188	524209	20.000
137) Phenanthrene	(4)	9.456	178	4590	0.151
147) Fluoranthene	(4)	10.612	202	8780M	0.258
167)*Pyrene-d10	(5)	10.809	212	654292	20.000
154) Pyrene	(5)	10.827	202	6278M	0.173
156)$Terphenyl-d14	(5)	11.011	244	390252	16.684
168) Chrysene	(5)	12.026	228	5928	0.183
172) Benzo(b)fluoranthene	(6)	13.034	252	5878M	0.167
175)*Perylene-d12	(6)	13.391	264	577522	20.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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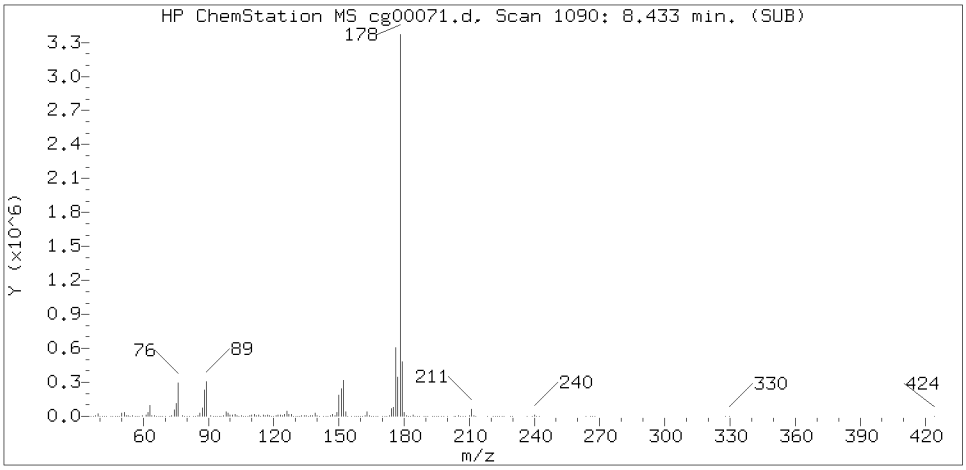
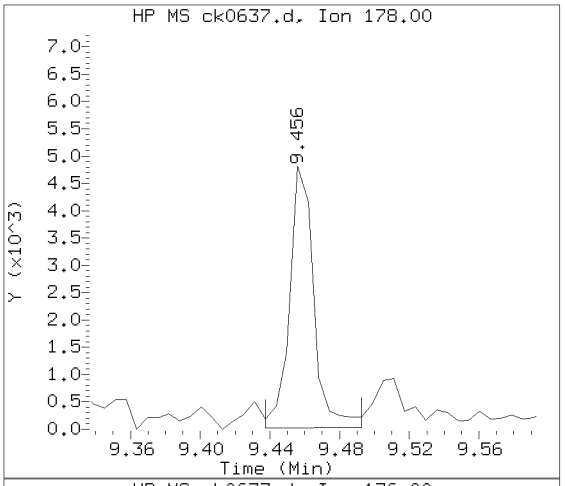
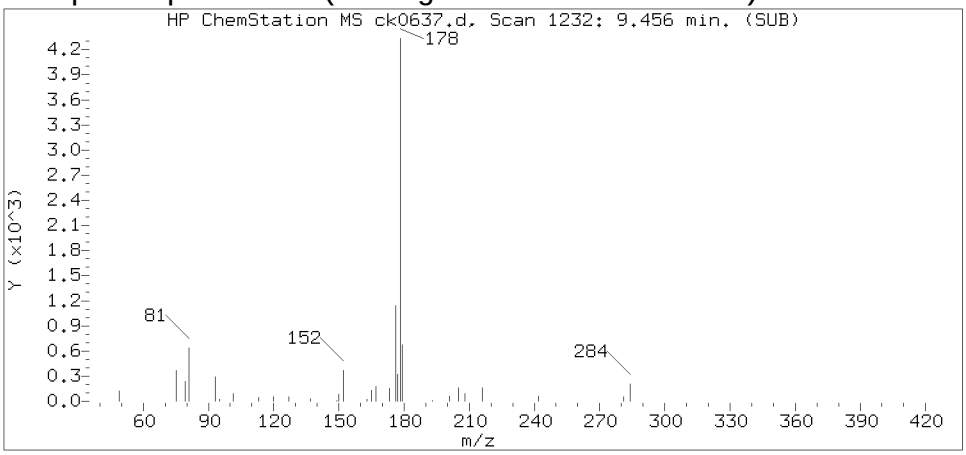
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

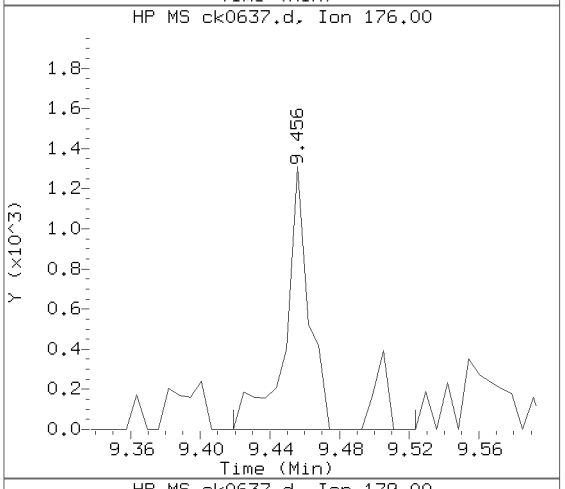
Reference Standard Spectrum for Phenanthrene



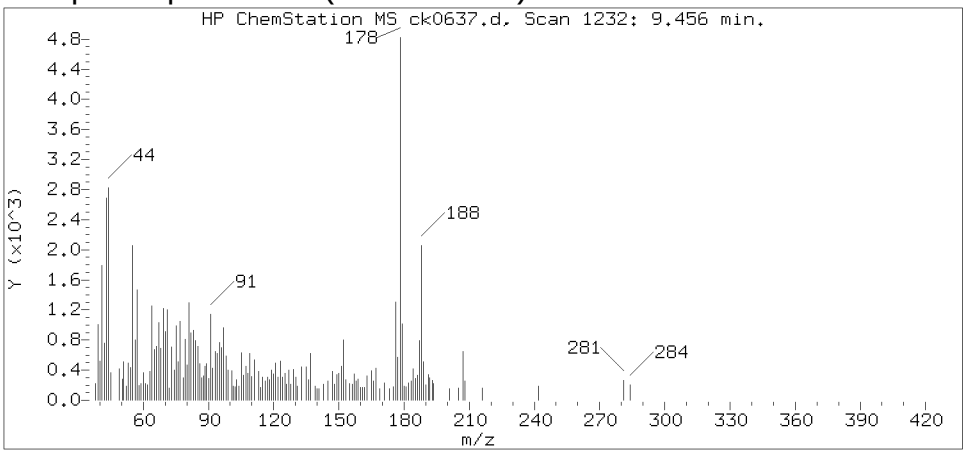


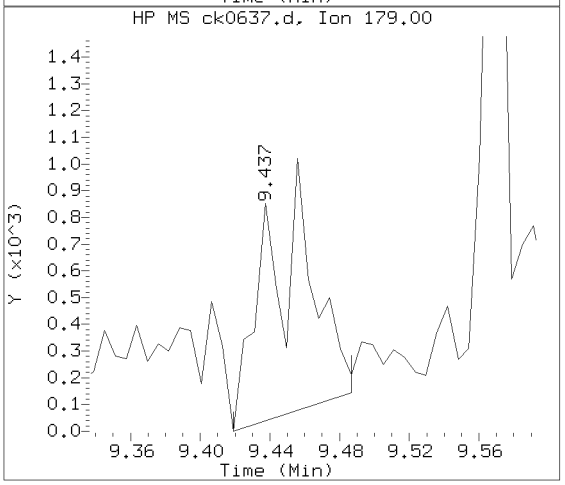
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

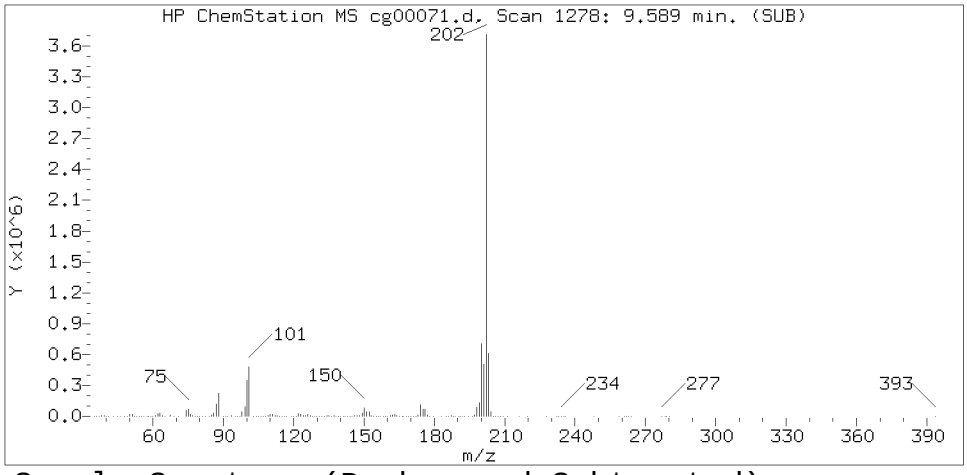
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

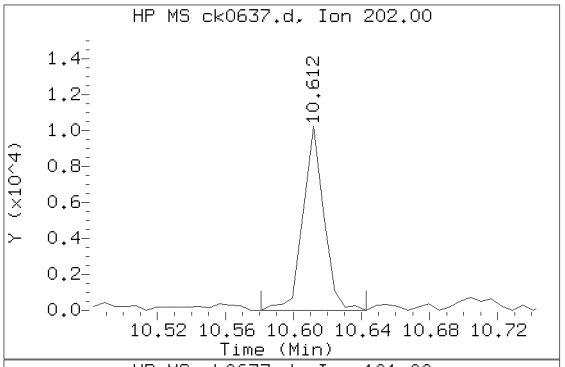
Sample Name: 2C111 Lab Sample ID: 7266813

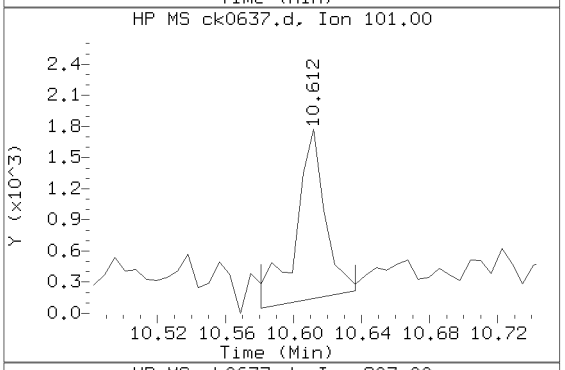
Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1232
Retention Time (minutes) : 9.456
Relative Retention Time : 0.00000
Quant Ion : 178.00
Area (flag) : 4590
On-column Amount (ng/ul) : 0.1506

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

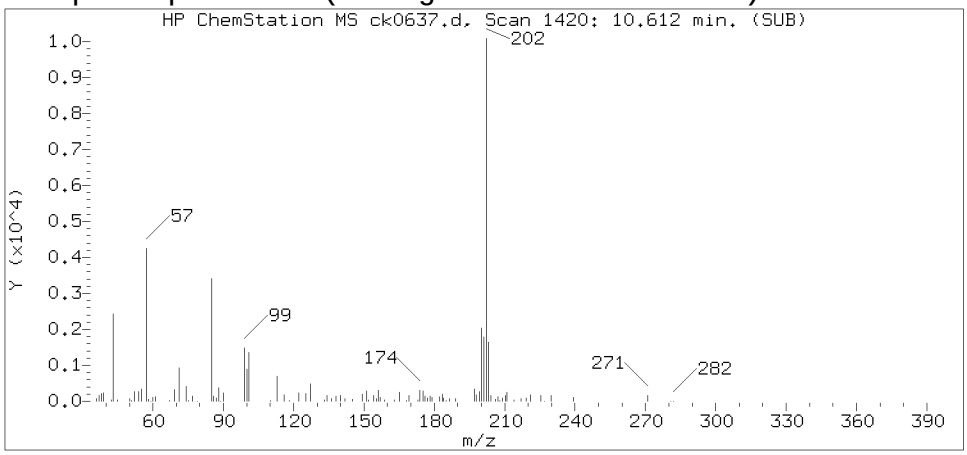
Reference Standard Spectrum for Fluoranthene

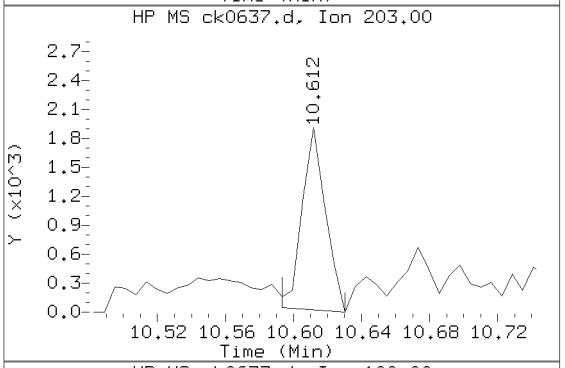




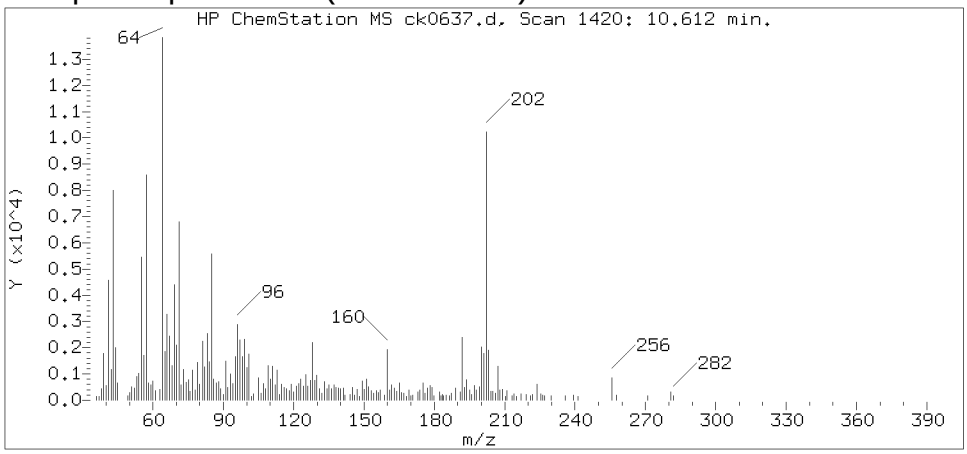


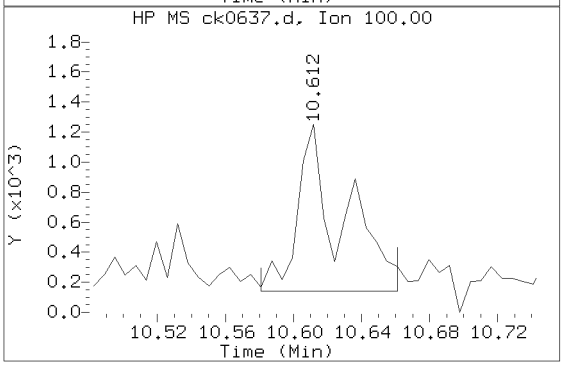
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

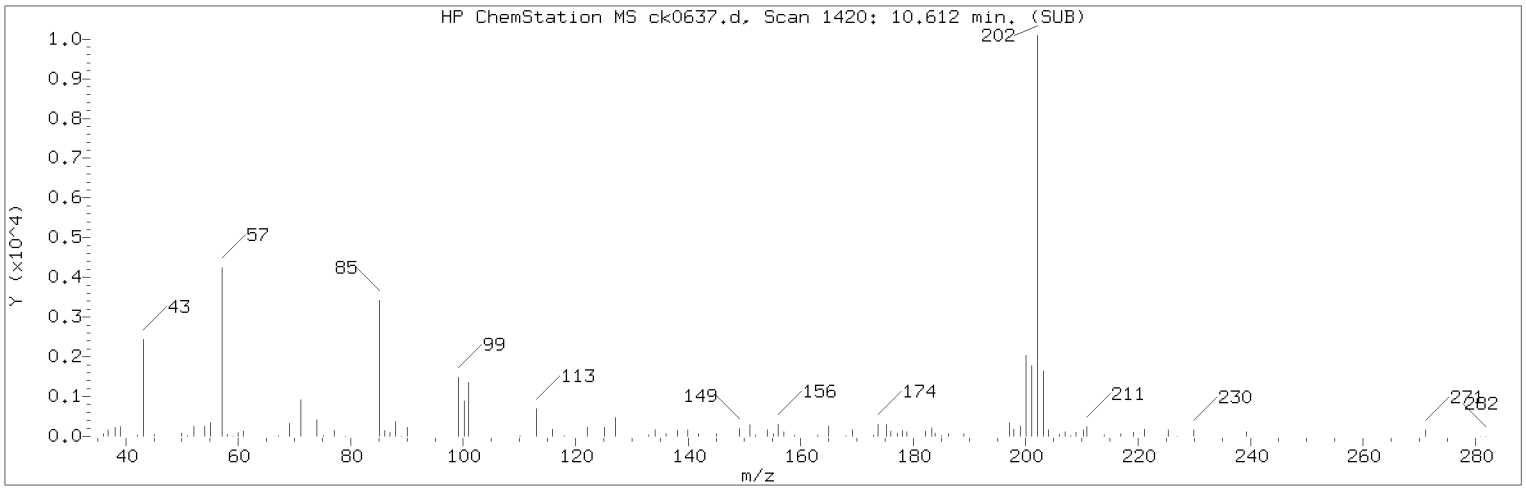
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

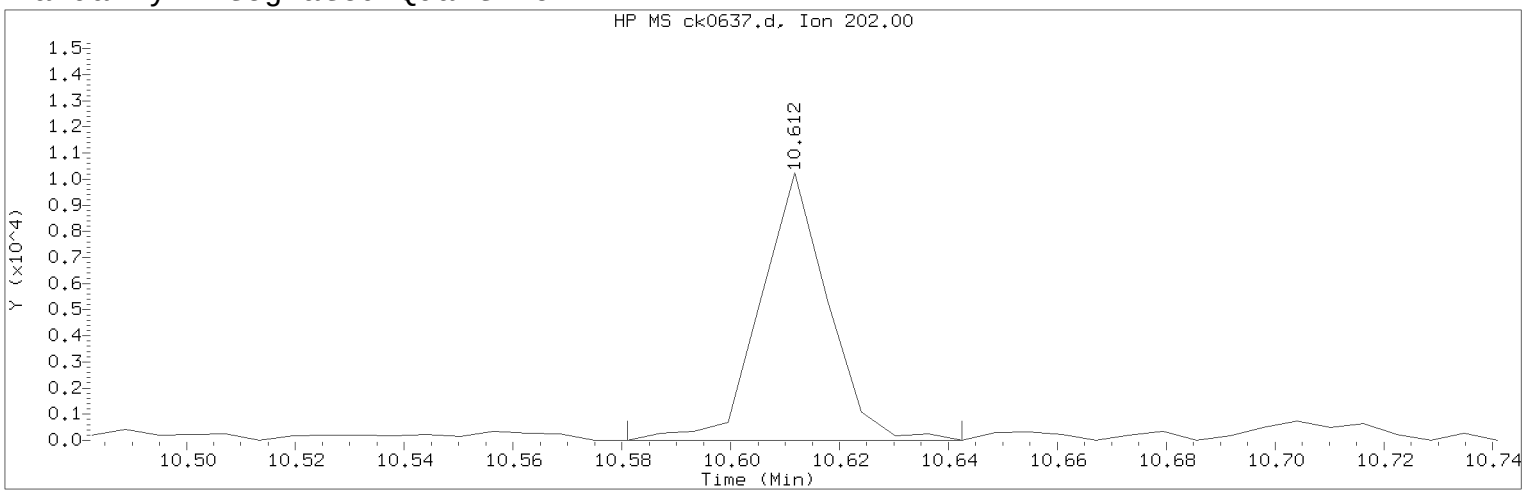
Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1420
Retention Time (minutes)	: 10.612
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 8780M
On-column Amount (ng/ul)	: 0.2576

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

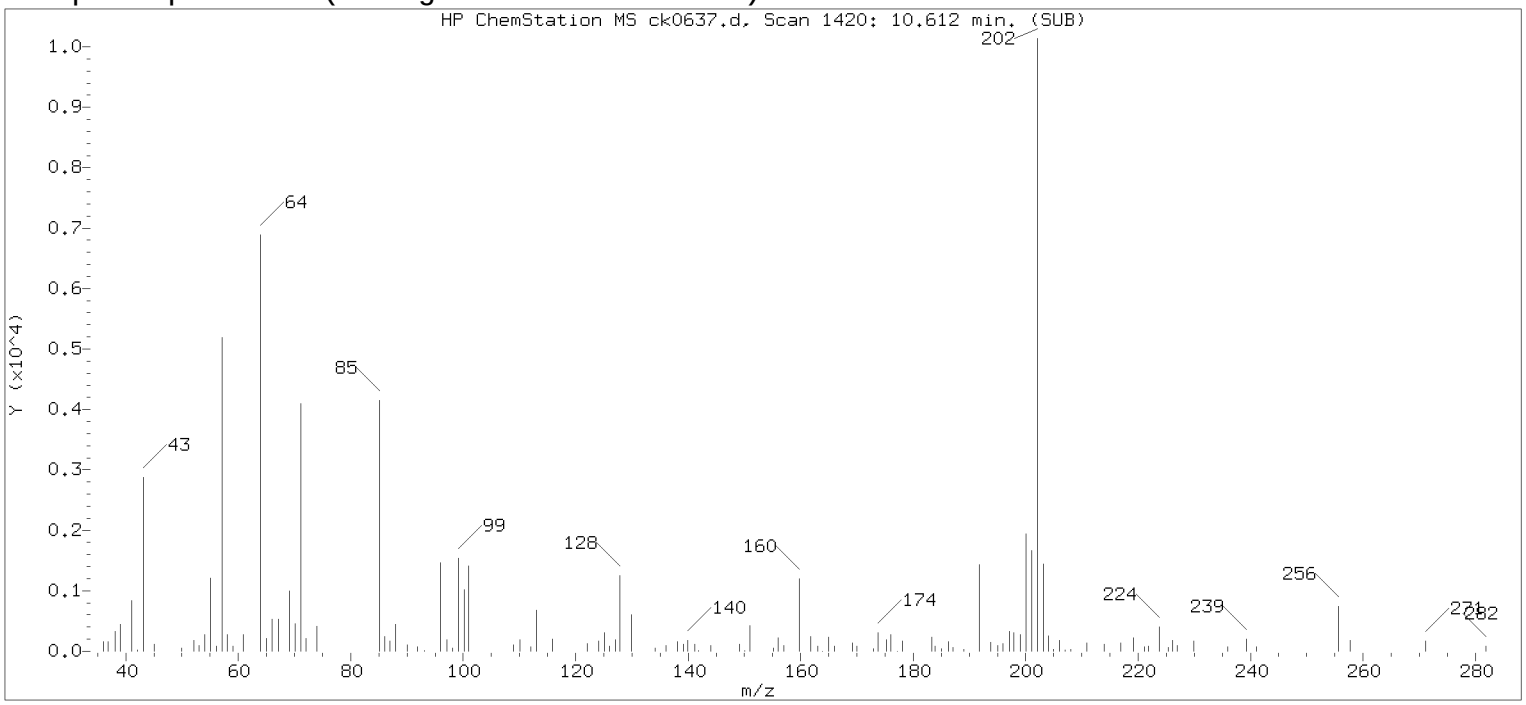
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1420
Retention Time (minutes) : 10.612
Quant Ion : 202.00
Area (flag) : 8780M
On-column Amount (ng/ul) : 0.2576
Integration start scan : 1414 Integration stop scan: 1424
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

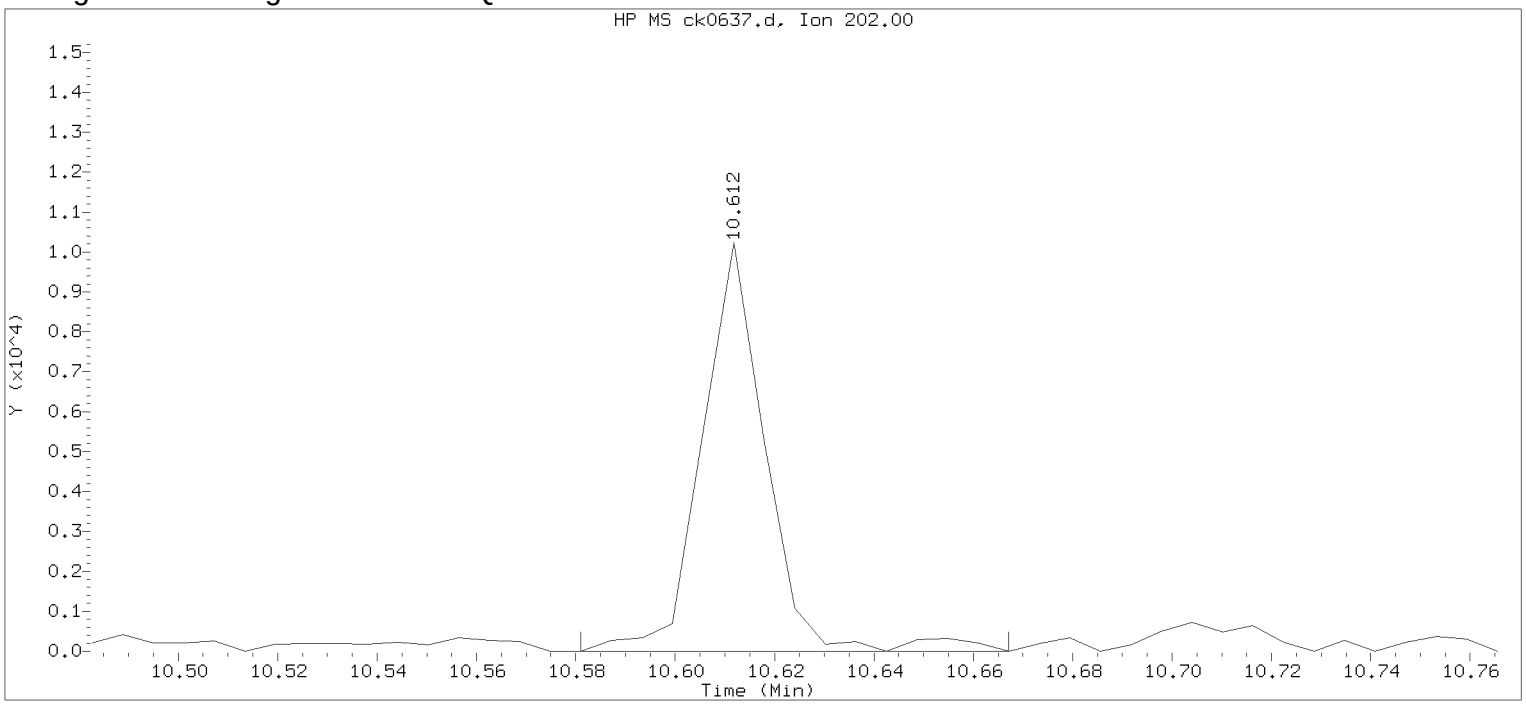
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

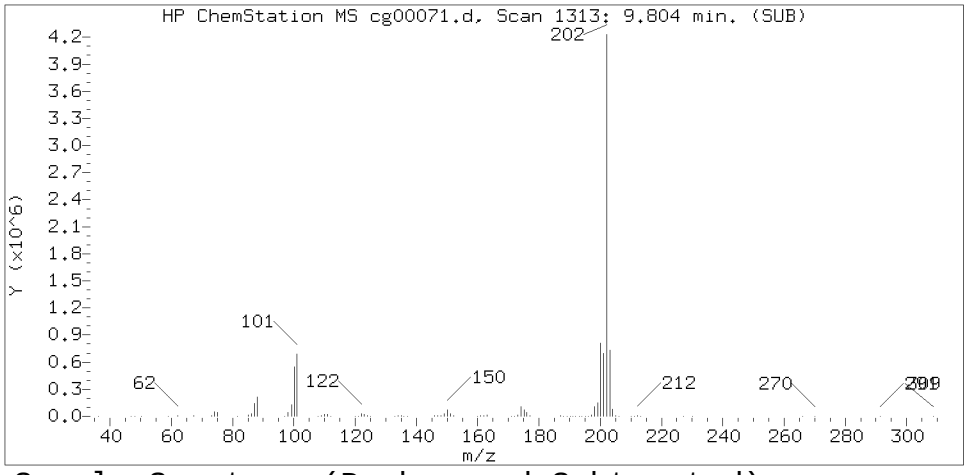
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:51 Automation

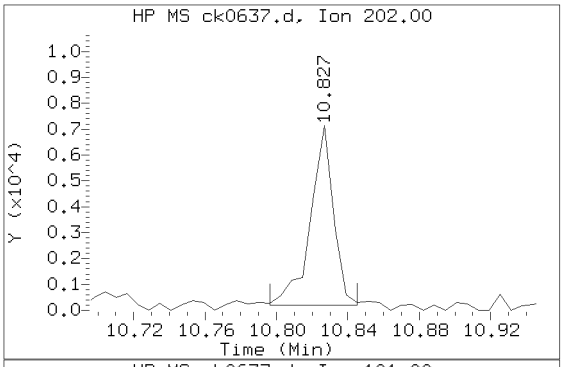
Sample Name: 2C111 Lab Sample ID: 7266813

Compound Number	: 147		
Compound Name	: Fluoranthene		
Scan Number	: 1420		
Retention Time (minutes)	: 10.612		
Quant Ion	: 202.00		
Area	: 9083		
On-column Amount (ng/ul)	: 0.2665		
Integration start scan	: 1414	Integration stop scan:	1428
Y at integration start	: 0	Y at integration end:	0

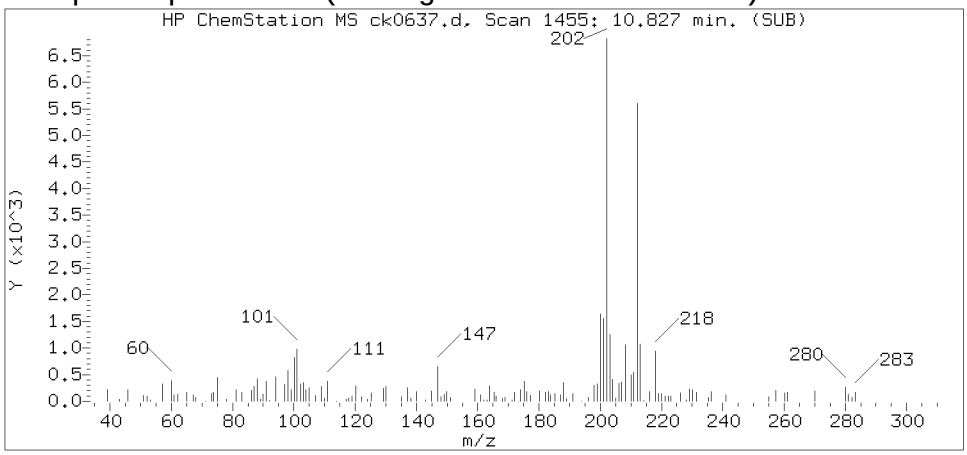
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

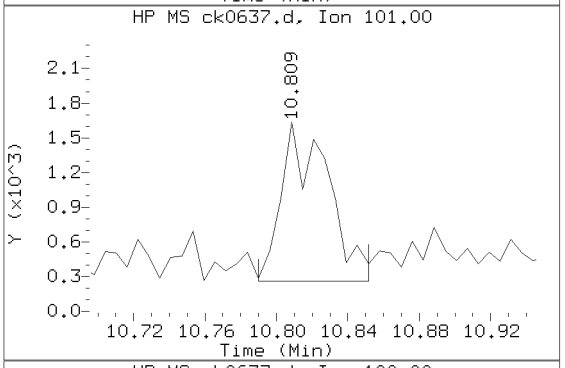
Reference Standard Spectrum for Pyrene

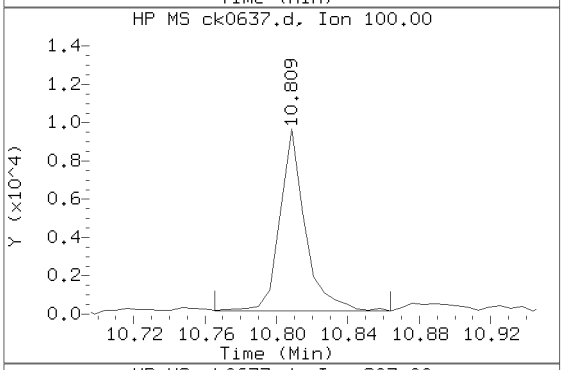




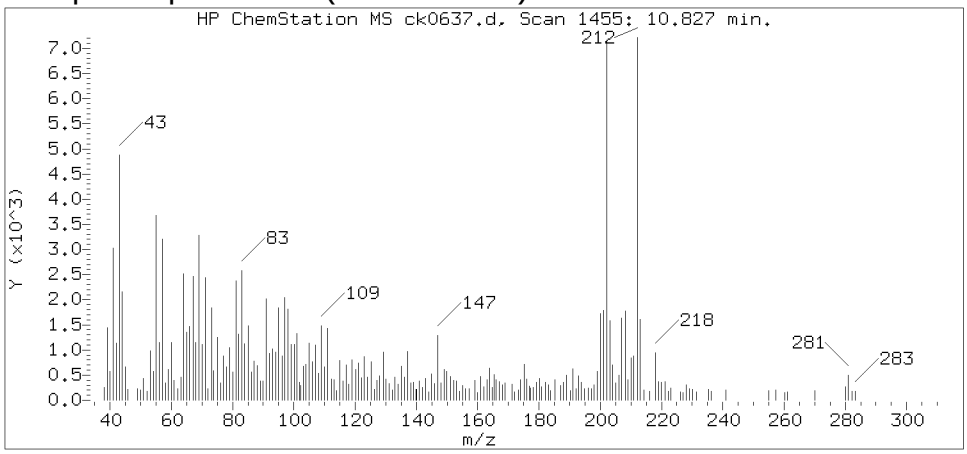
Sample Spectrum (Background Subtracted)

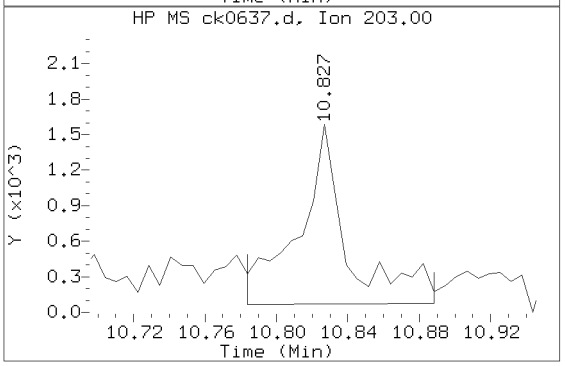






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

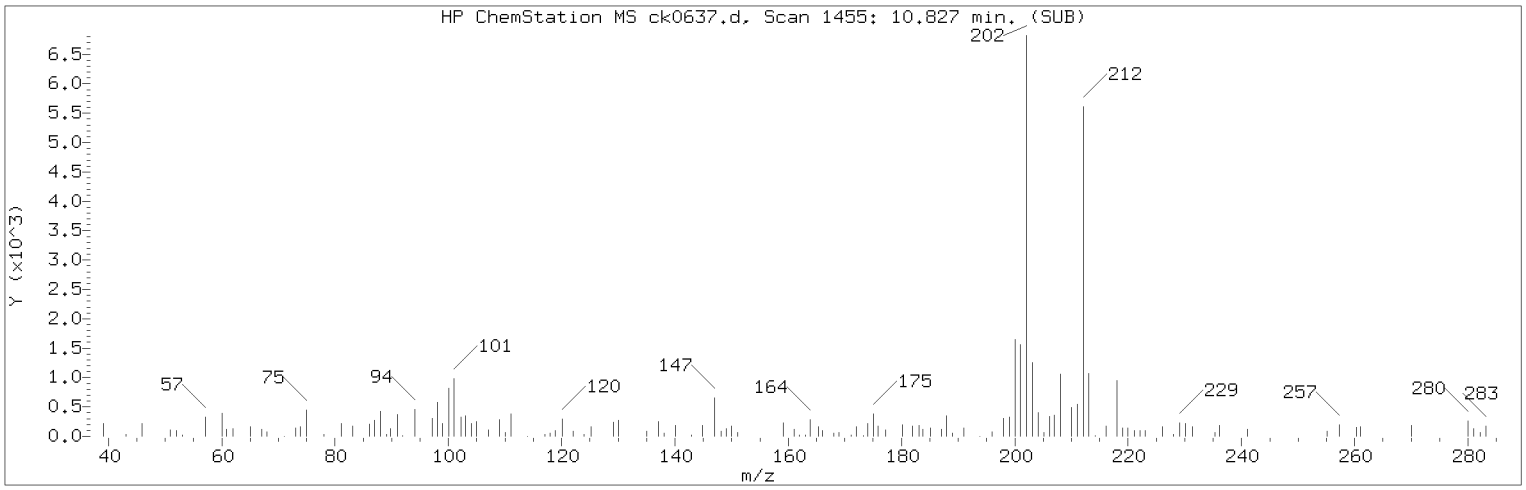
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

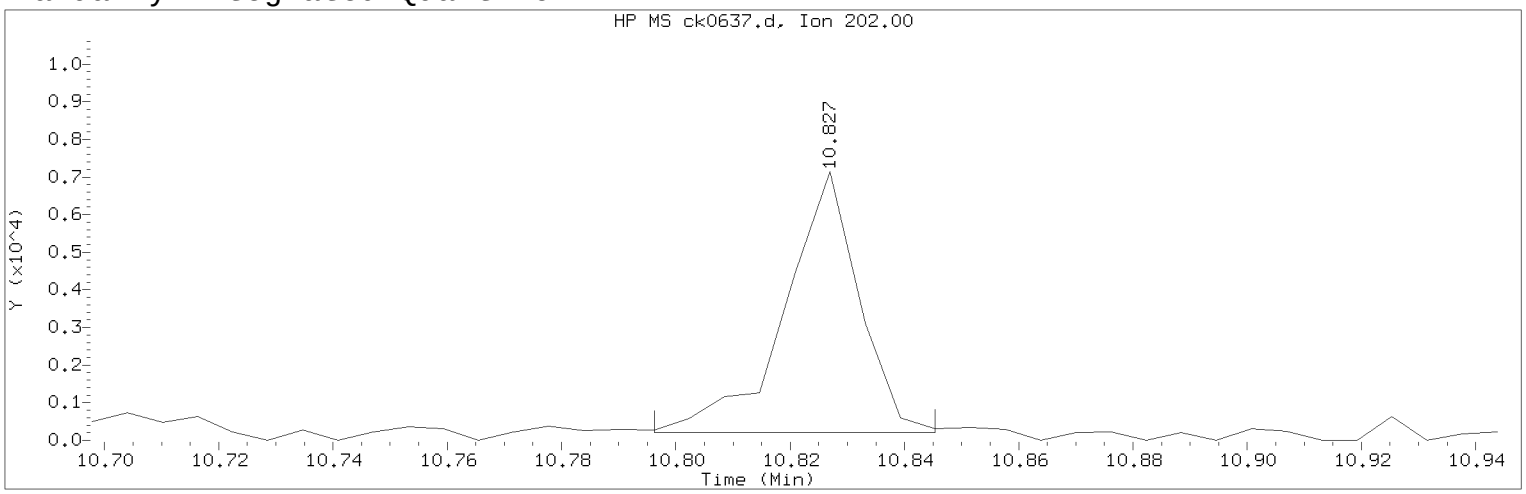
Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1455
Retention Time (minutes)	: 10.827
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 6278M
On-column Amount (ng/ul)	: 0.1728

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

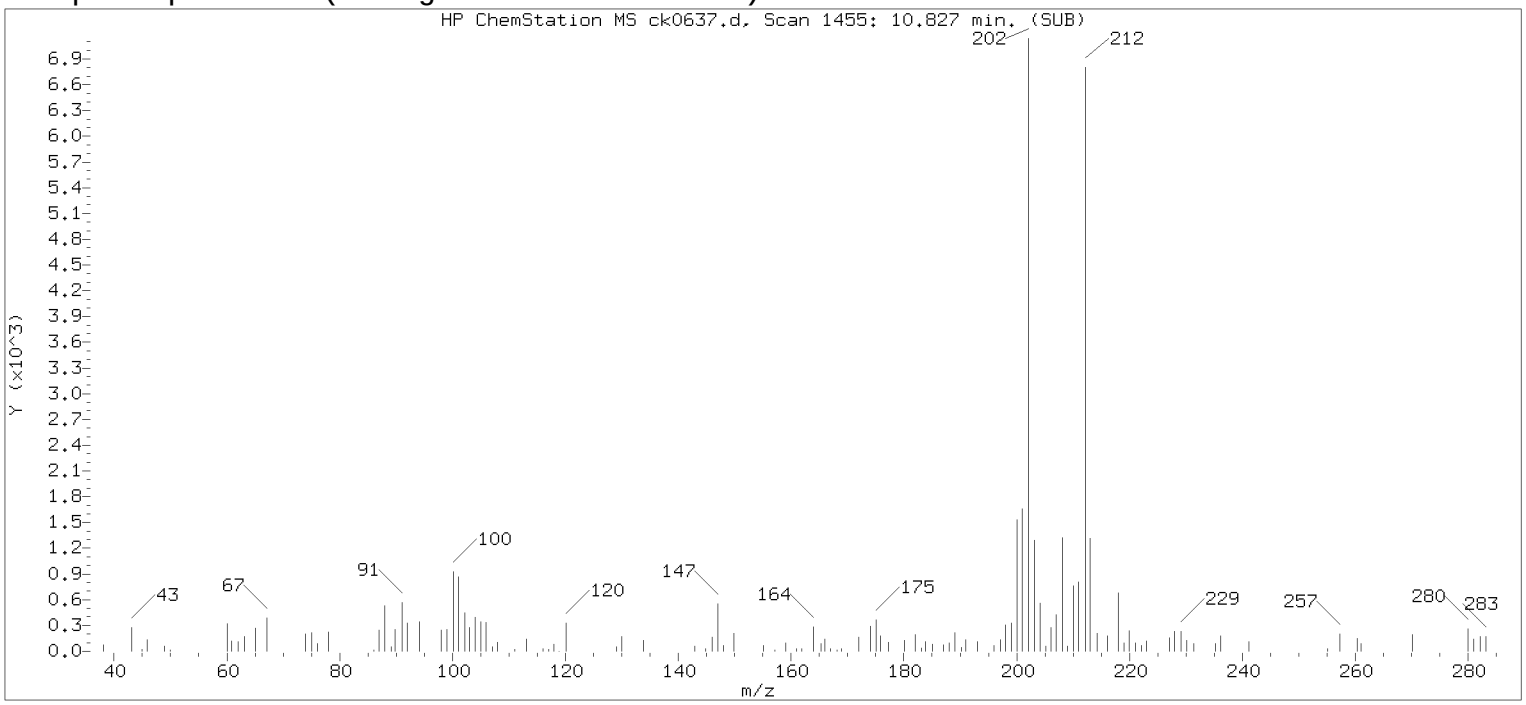
Compound Number : 154
Compound Name : Pyrene
Scan Number : 1455
Retention Time (minutes) : 10.827
Quant Ion : 202.00
Area (flag) : 6278M
On-column Amount (ng/ul) : 0.1728
Integration start scan : 1449 Integration stop scan: 1457
Y at integration start : 204 Y at integration end: 204

Reason for manual integration: improper integration

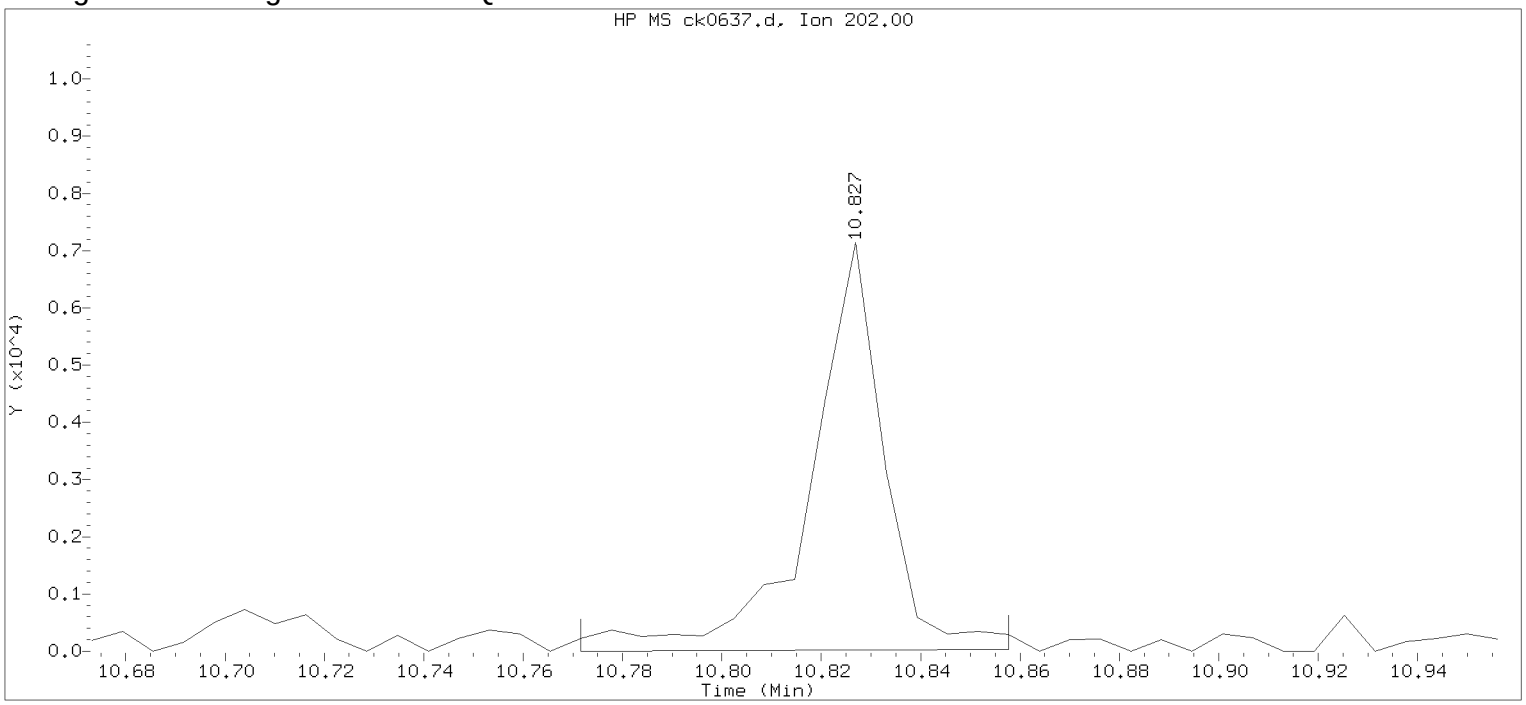
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

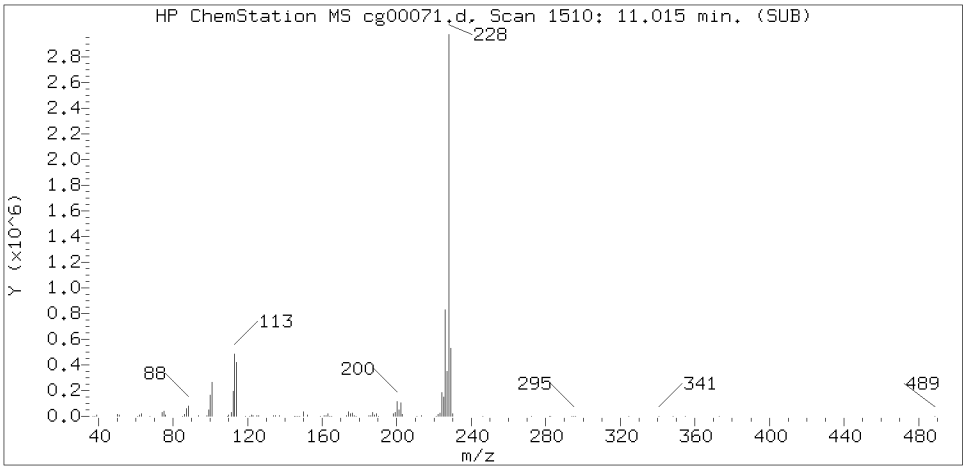
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:51 Automation

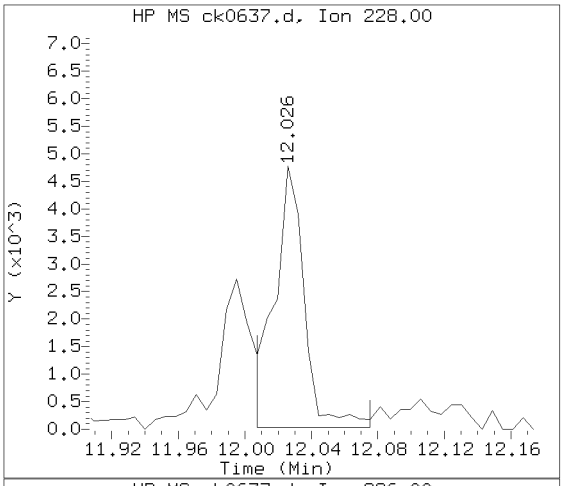
Sample Name: 2C111 Lab Sample ID: 7266813

Compound Number	: 154		
Compound Name	: Pyrene		
Scan Number	: 1455		
Retention Time (minutes)	: 10.827		
Quant Ion	: 202.00		
Area	: 7420		
On-column Amount (ng/ul)	: 0.2042		
Integration start scan	: 1445	Integration stop scan:	1459
Y at integration start	: 0	Y at integration end:	37

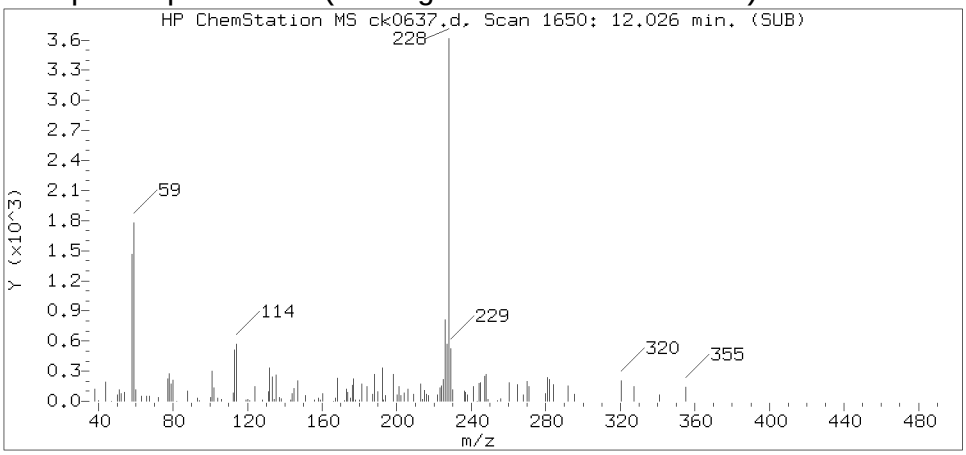
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

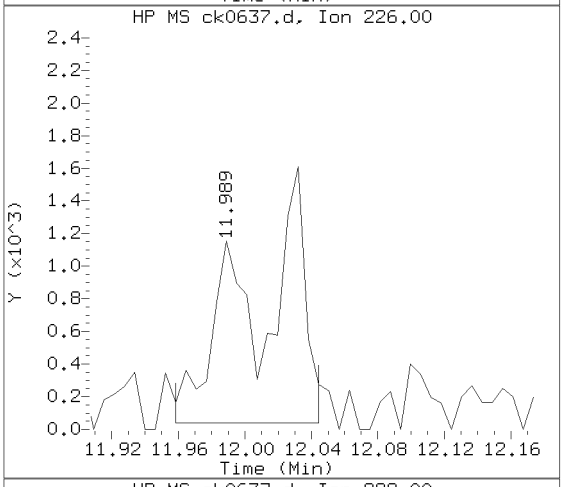
Reference Standard Spectrum for Chrysene



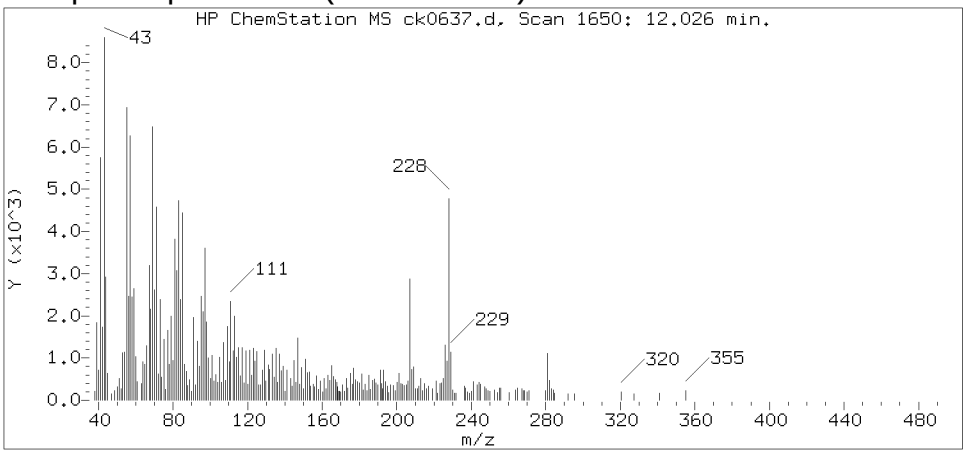


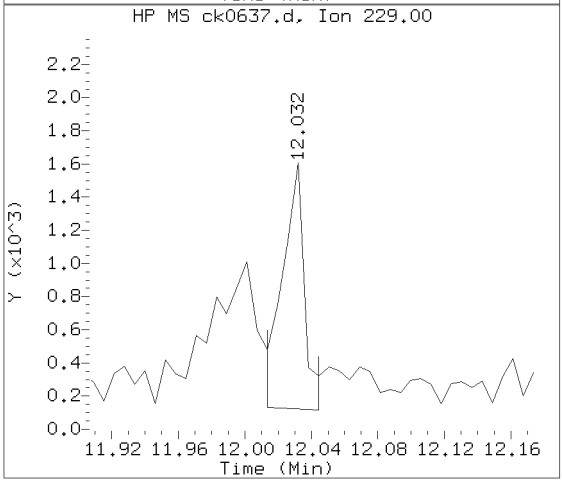
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

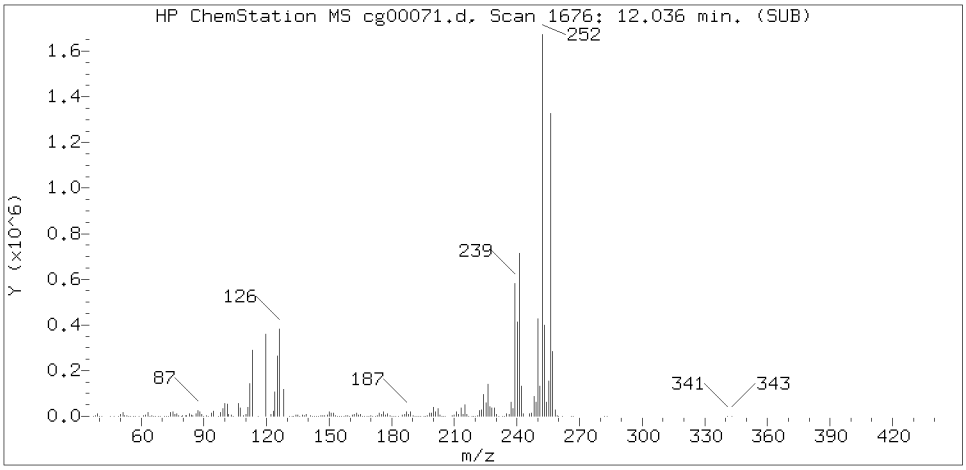
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

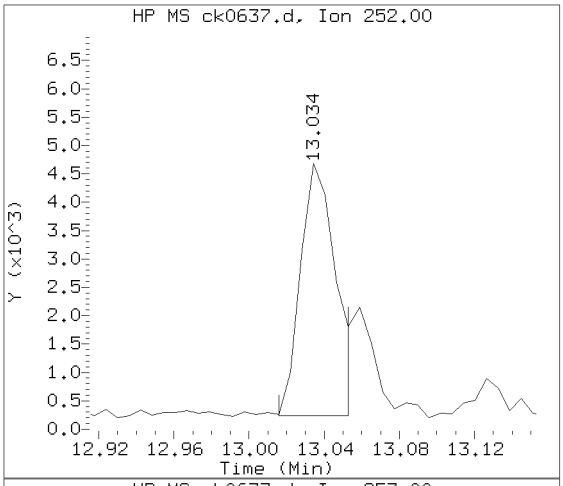
Sample Name: 2C111 Lab Sample ID: 7266813

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1650
Retention Time (minutes)	: 12.026
Relative Retention Time	: 0.00057
Quant Ion	: 228.00
Area (flag)	: 5928
On-column Amount (ng/ul)	: 0.1835

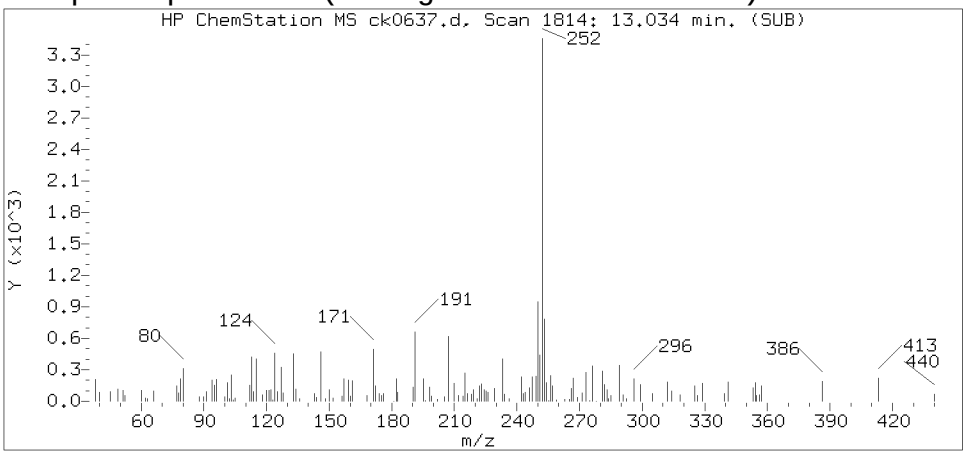
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

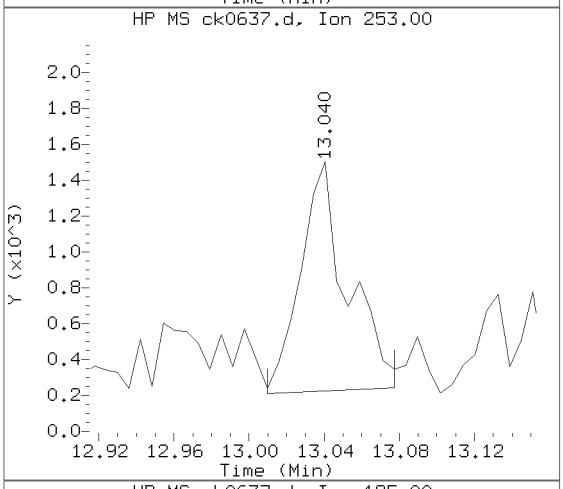
Reference Standard Spectrum for Benzo(b)fluoranthene



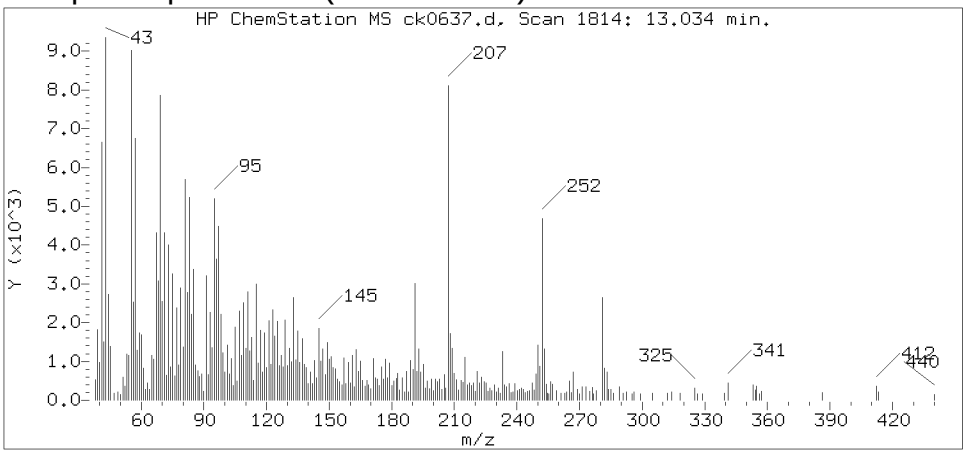


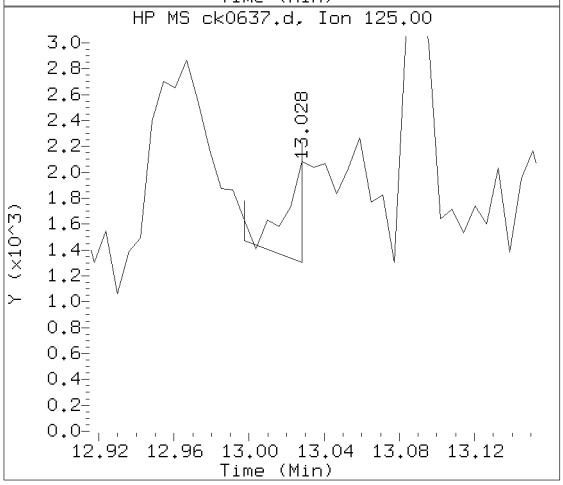
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

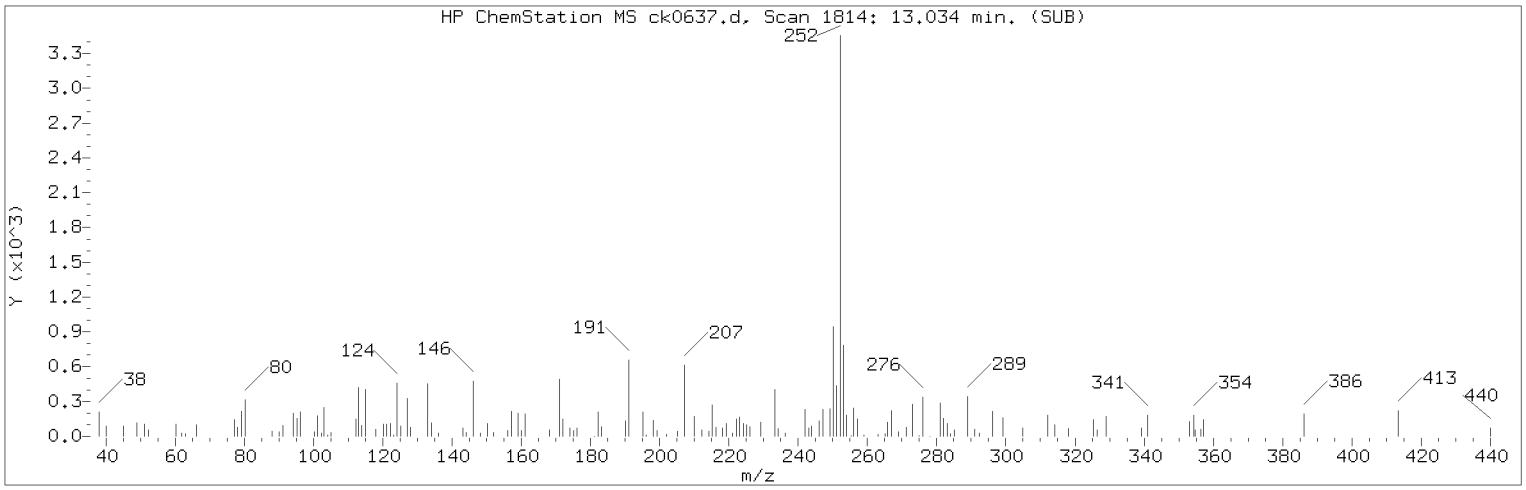
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

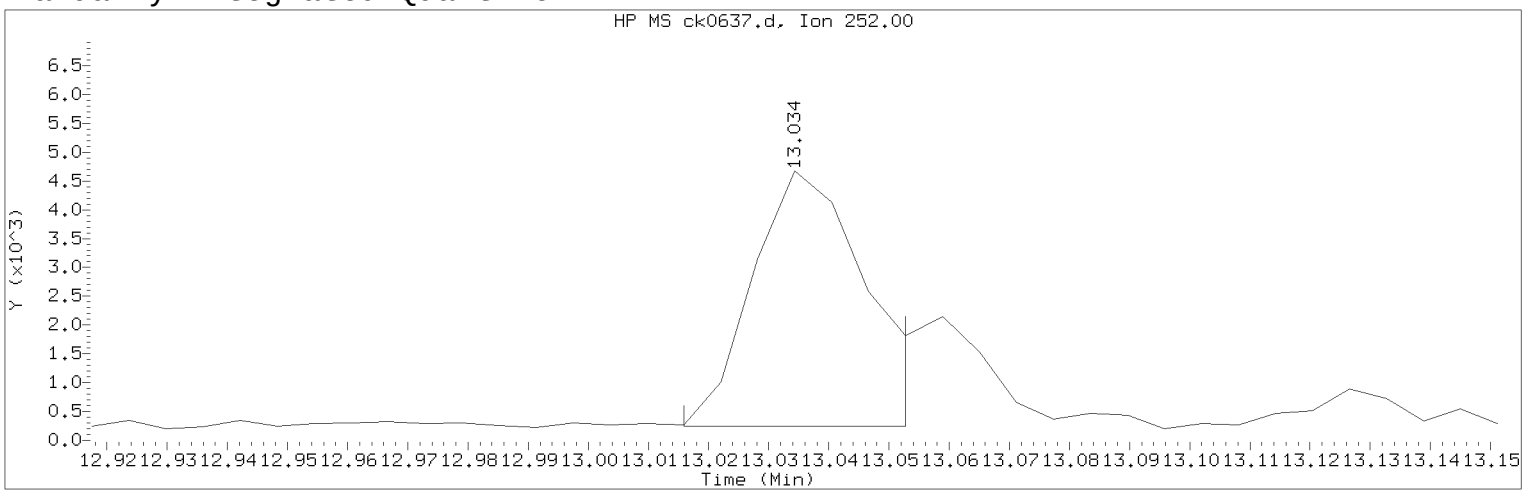
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 5878M
On-column Amount (ng/ul) : 0.1667

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:18 jmg00346

Sample Name: 2C111 Lab Sample ID: 7266813

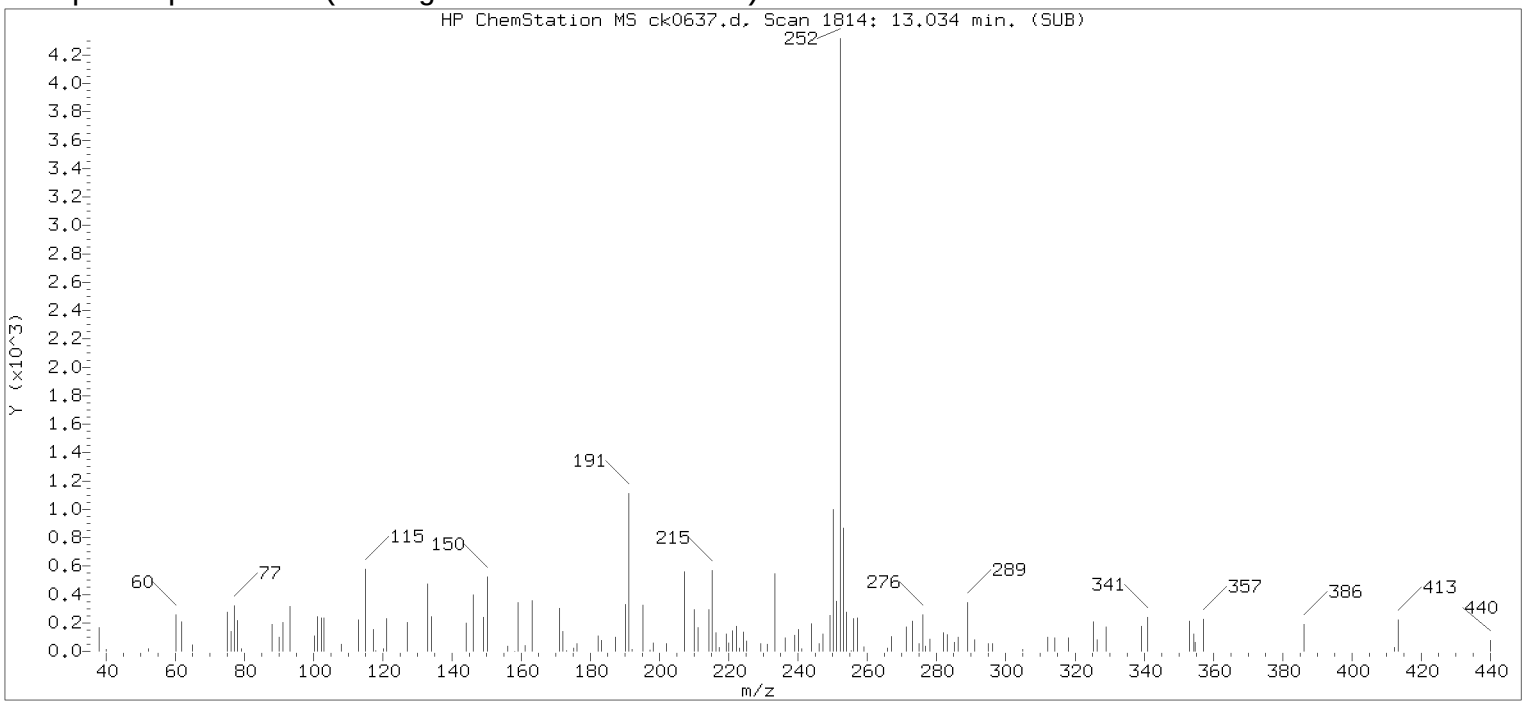
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 5878M
On-column Amount (ng/ul) : 0.1667
Integration start scan : 1810 Integration stop scan: 1816
Y at integration start : 243 Y at integration end: 243

Reason for manual integration: improper integration

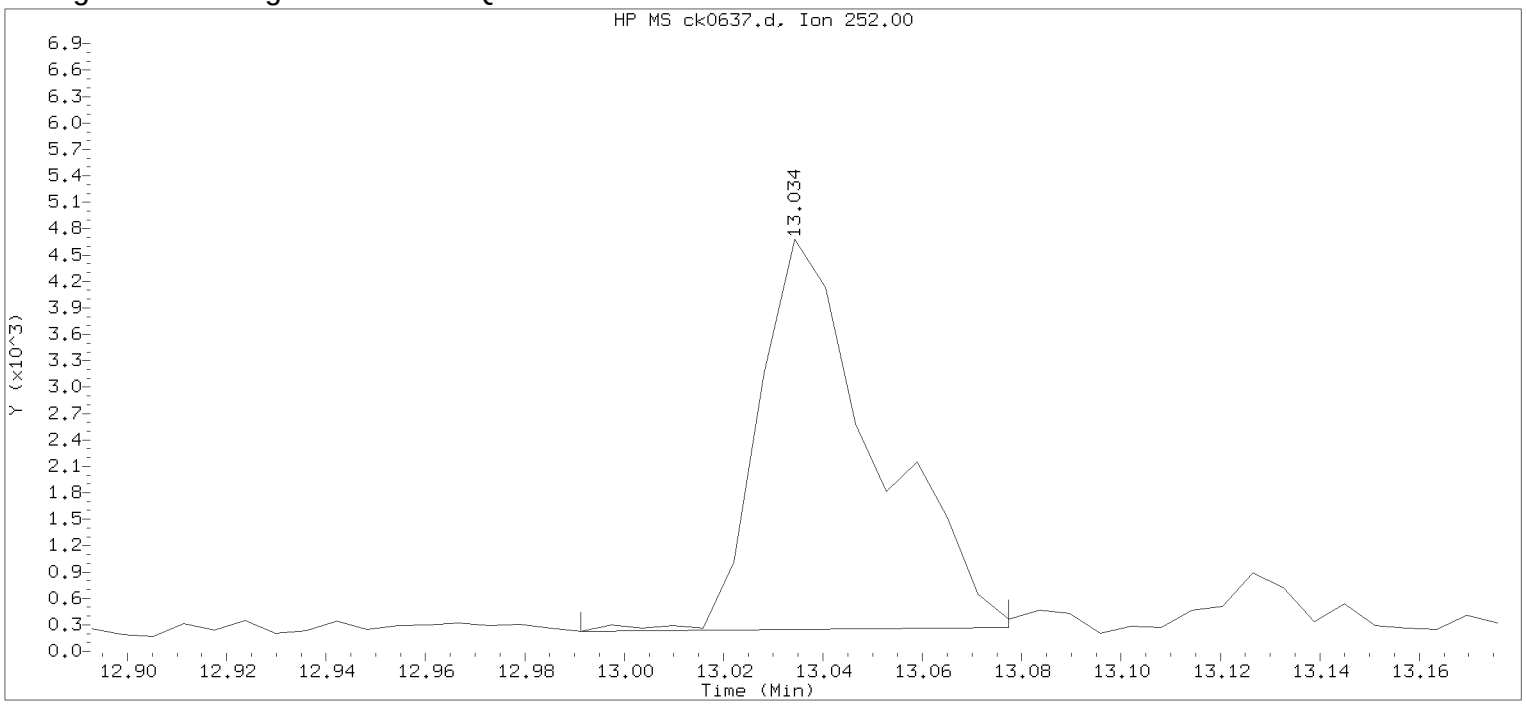
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:30.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0637.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:25 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 12:51 Automation

Sample Name: 2C111 Lab Sample ID: 7266813

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 7253		
On-column Amount (ng/ul)	: 0.2057		
Integration start scan	: 1806	Integration stop scan:	1820
Y at integration start	: 226	Y at integration end:	268

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00345

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0630.d
Data file Sample Info. Line: 2E101;7266814;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Injection date and time: **18-NOV-2013 09:31**
Instrument ID: **HP10623.i** Batch: **13316SLC**

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	107025 (7)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	477427 (3)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	283446 (-2)	20.00	
135) Phenanthrene-d10	9.431(0.006)	1228	188	527791 (-1)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	656881 (1)	20.00	
175) Perylene-d12	13.385(0.006)	1871	264	554023 (-4)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.588(0.001)	82	152007	14.778	74%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	295986	16.608	83%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	384273	16.364	82%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.456(-0.000)	178	7658	0.250	83.18			0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)	10.612(-0.000)	202	10971M	0.320	106.58			0.1
154) Pyrene	(5)	10.821(0.000)	202	10522	0.288	96.15			0.1
166) Benzo(a)anthracene	(5)	11.995(0.000)	228	3843	0.114	38.07			0.1
168) Chrysene	(5)	12.026(0.000)	228	8475	0.261	87.08			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	8657M	0.256	85.30			0.1
173) Benzo(k)fluoranthene	(6)	13.053(0.000)	252	3841M	0.111	37.10			0.1
174) Benzo(a)pyrene	(6)	13.329(0.000)	252	4426M	0.134	44.69			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(-0.000)	276	4027M	0.115	38.21			0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)	14.608(0.000)	276	3916M	0.131	43.62			0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0630.d Injection date and time: **18-NOV-2013 09:31**
Data file Sample Info. Line: 2E101;7266814;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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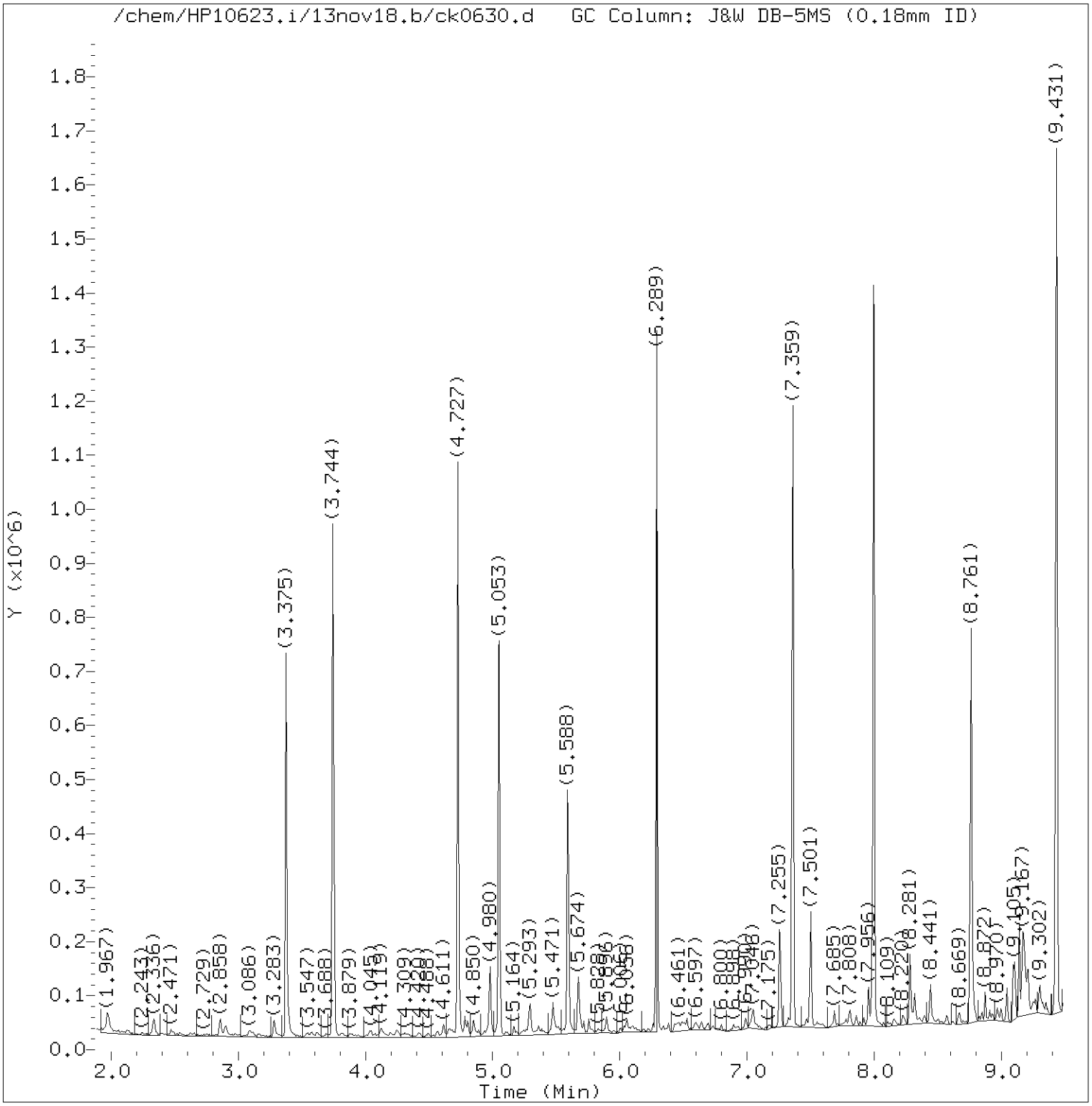
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

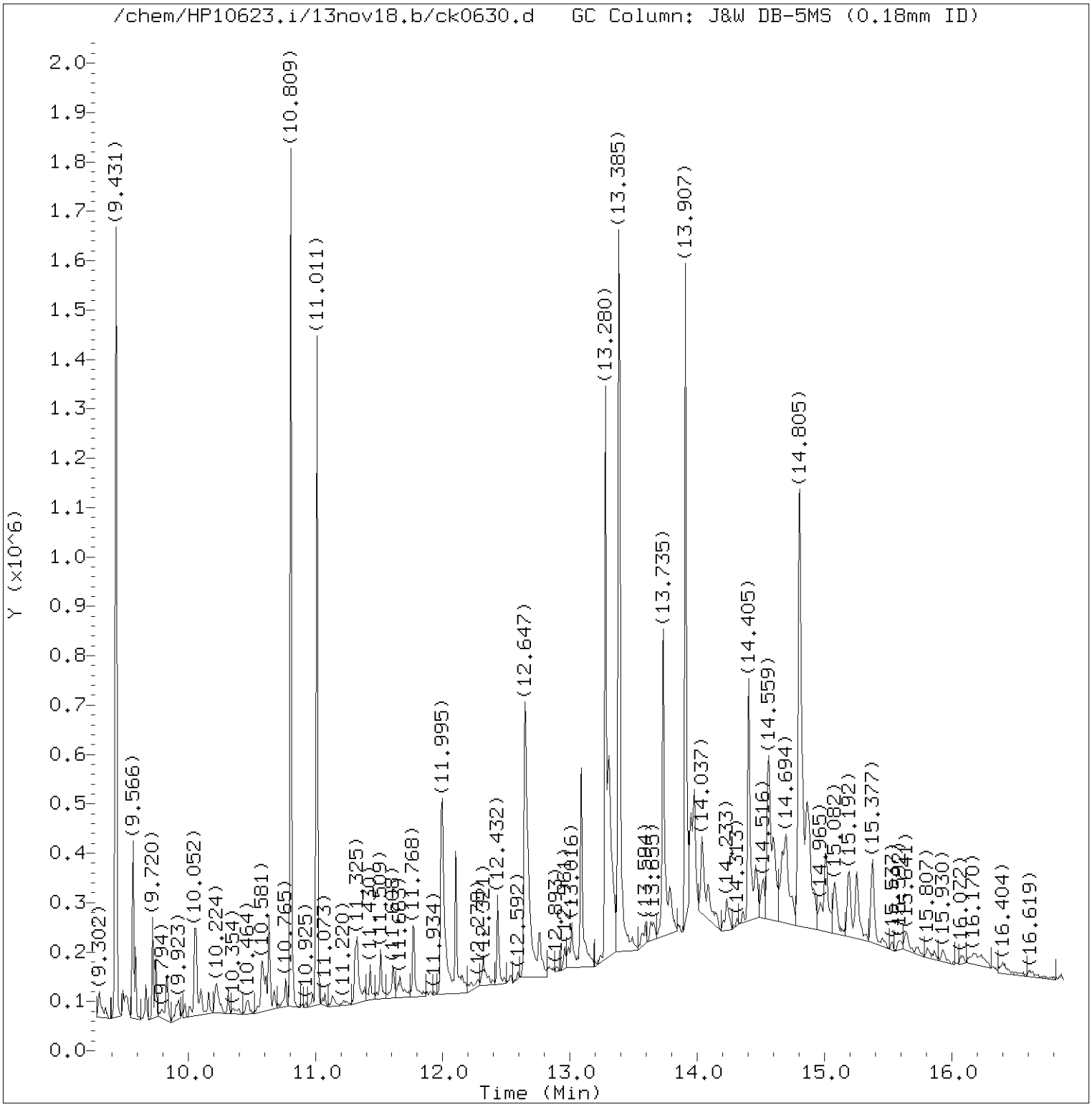
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	107025	20.000
38)$Nitrobenzene-d5	(2)	5.588	82	152007	14.778
52)*Naphthalene-d8	(2)	6.289	136	477427	20.000
78)$2-Fluorobiphenyl	(3)	7.359	172	295986	16.608
98)*Acenaphthene-d10	(3)	7.999	164	283446	20.000
135)*Phenanthrene-d10	(4)	9.431	188	527791	20.000
137) Phenanthrene	(4)	9.456	178	7658	0.250
147) Fluoranthene	(4)	10.612	202	10971M	0.320
167)*Pyrene-d10	(5)	10.809	212	656881	20.000
154) Pyrene	(5)	10.821	202	10522	0.288
156)$Terphenyl-d14	(5)	11.011	244	384273	16.364
166) Benzo(a)anthracene	(5)	11.995	228	3843	0.114
168) Chrysene	(5)	12.026	228	8475	0.261
172) Benzo(b)fluoranthene	(6)	13.034	252	8657M	0.256
173) Benzo(k)fluoranthene	(6)	13.053	252	3841M	0.111
174) Benzo(a)pyrene	(6)	13.329	252	4426M	0.134
175)*Perylene-d12	(6)	13.385	264	554023	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	4027M	0.115
179) Benzo(g,h,i)perylene	(6)	14.608	276	3916M	0.131

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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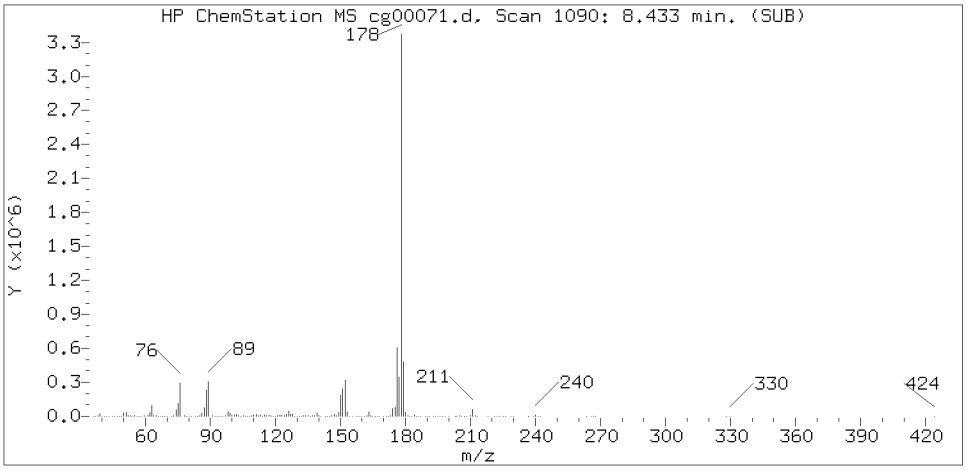
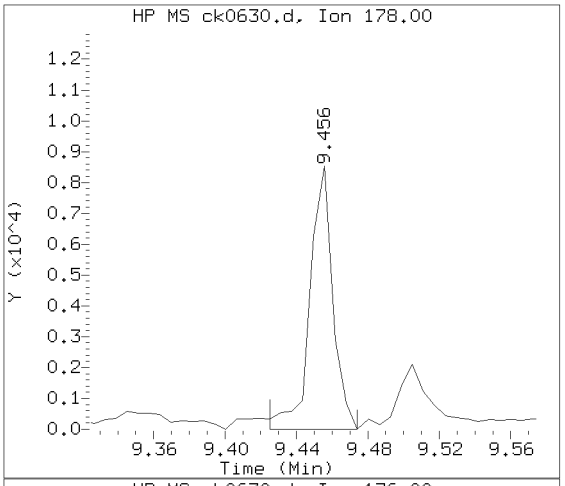
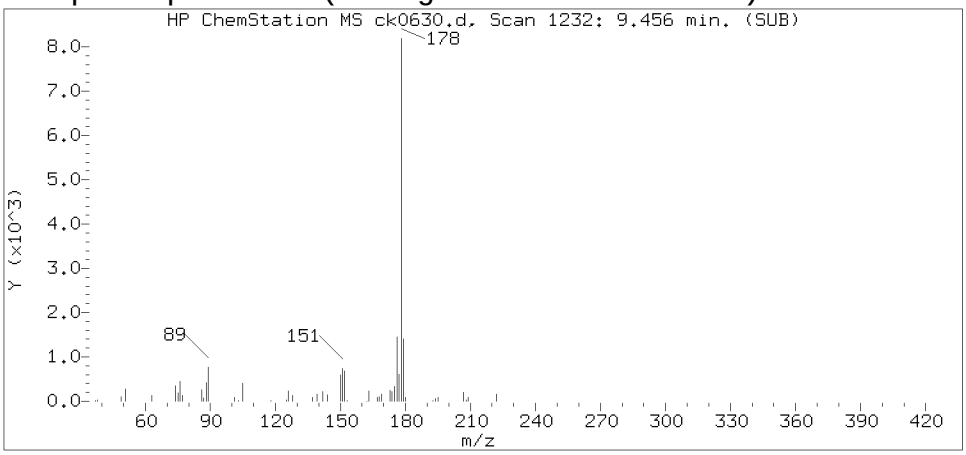
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

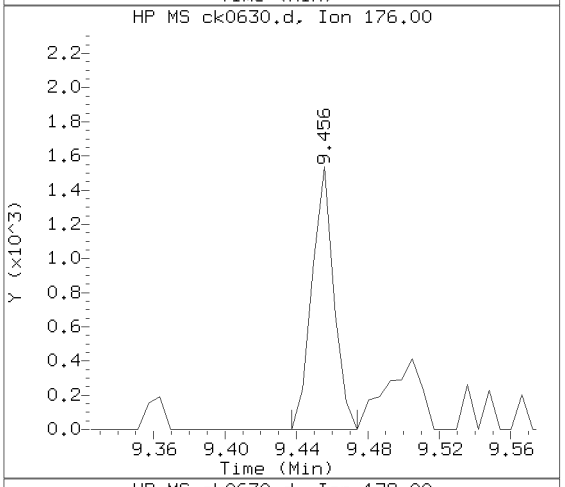
Reference Standard Spectrum for Phenanthrene



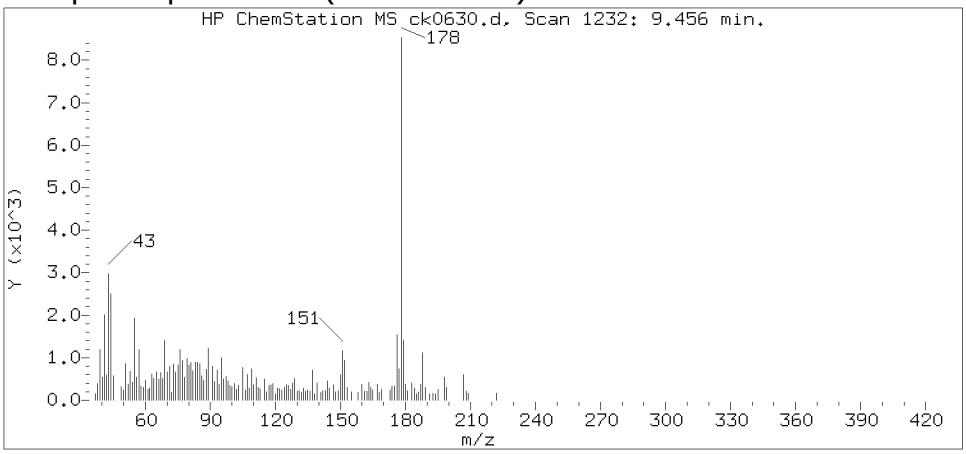


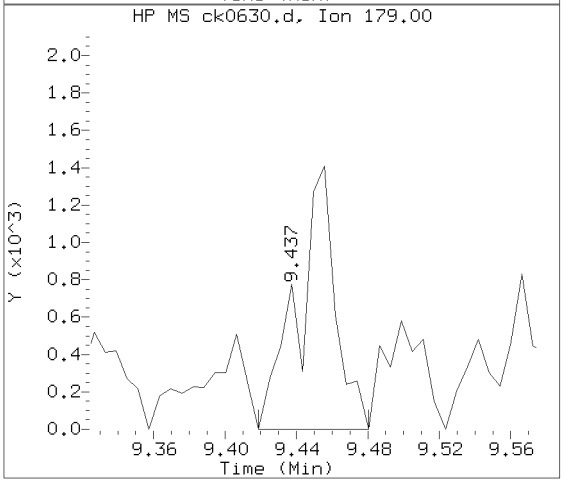
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number : 137
Compound Name : Phenanthrene
Scan Number : 1232
Retention Time (minutes) : 9.456
Relative Retention Time :-0.00065
Quant Ion : 178.00
Area (flag) : 7658
On-column Amount (ng/ul) : 0.2495

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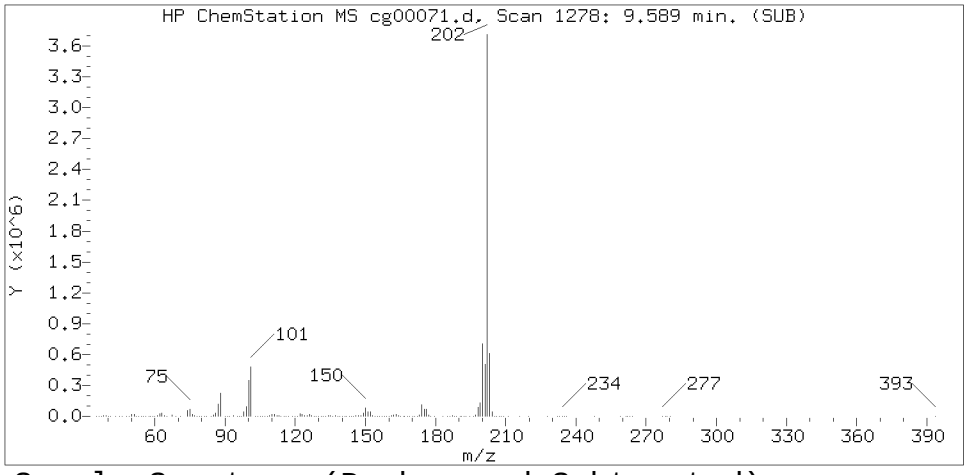
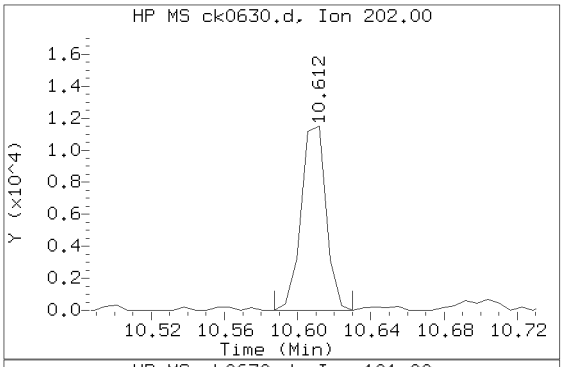
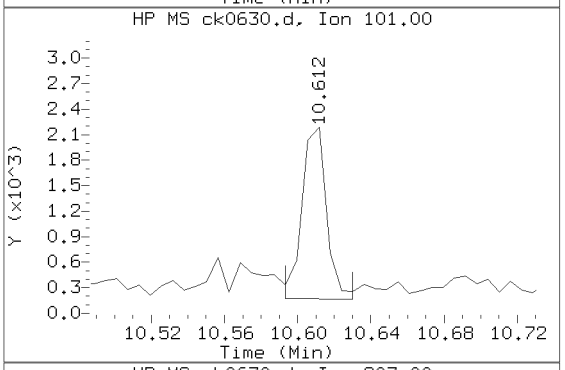
Target 3.5 esignature user ID: jmg00346

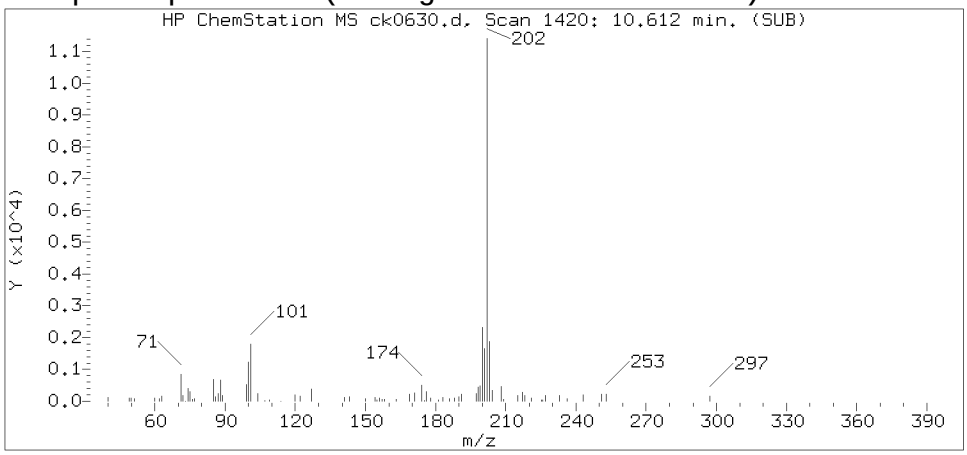
Reference Standard Spectrum for Fluoranthene

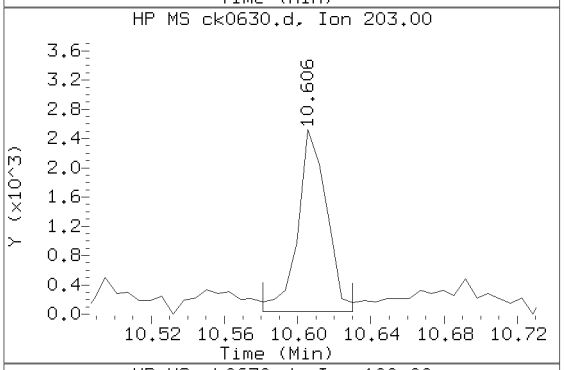




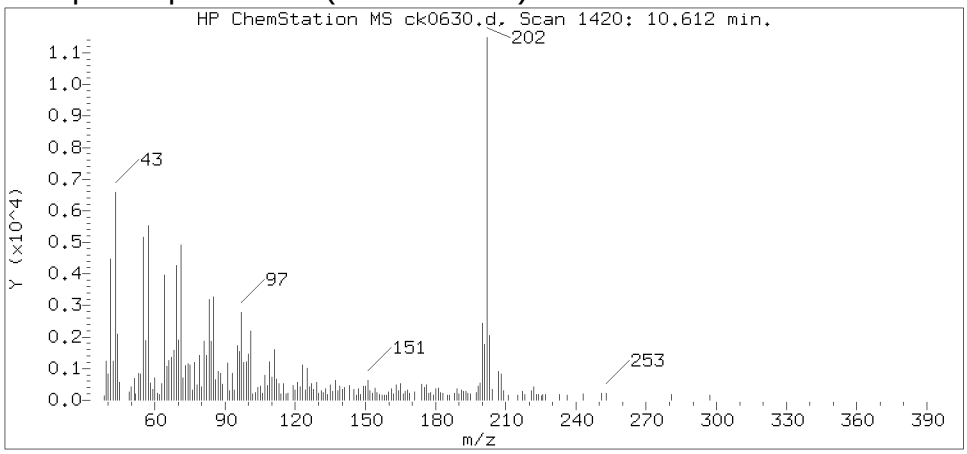


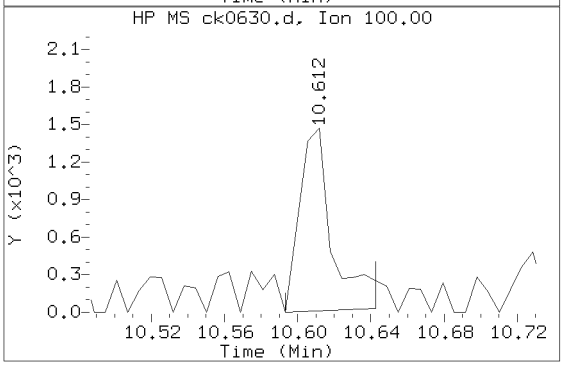
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1420
Retention Time (minutes) : 10.612
Relative Retention Time :-0.00073
Quant Ion : 202.00
Area (flag) : 10971M
On-column Amount (ng/ul) : 0.3197

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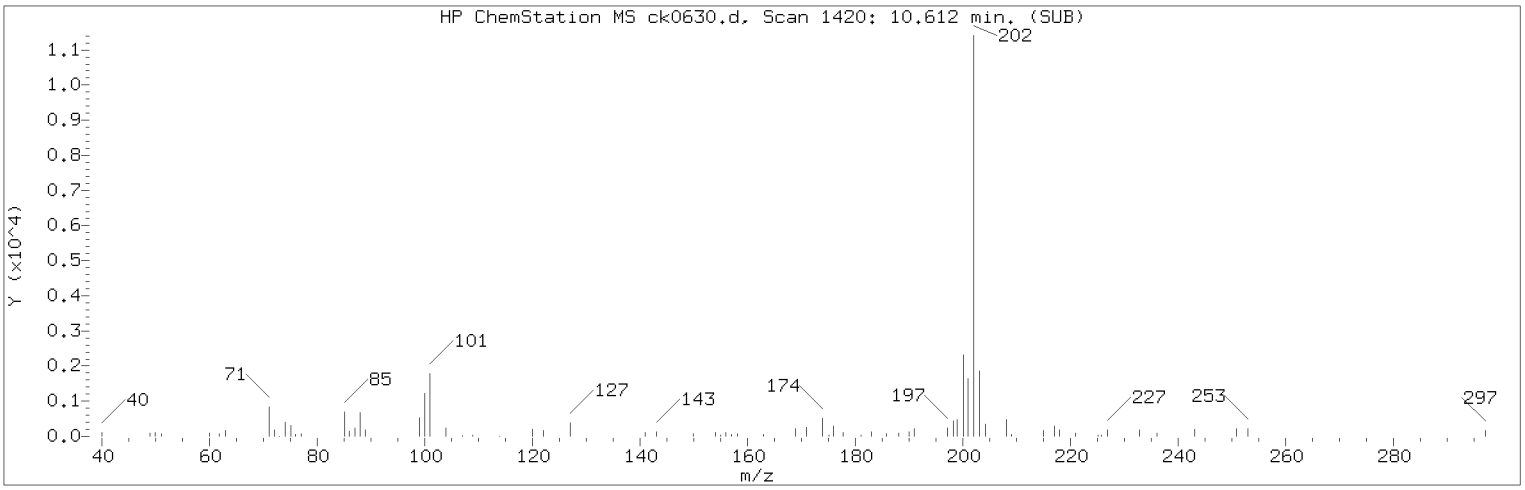
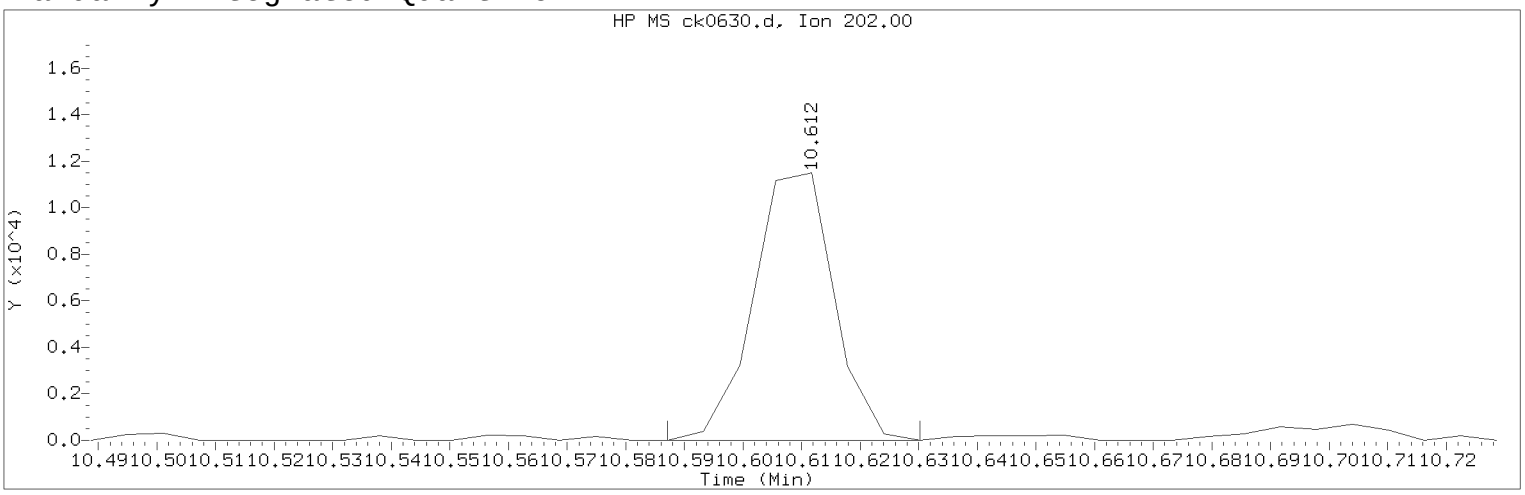
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

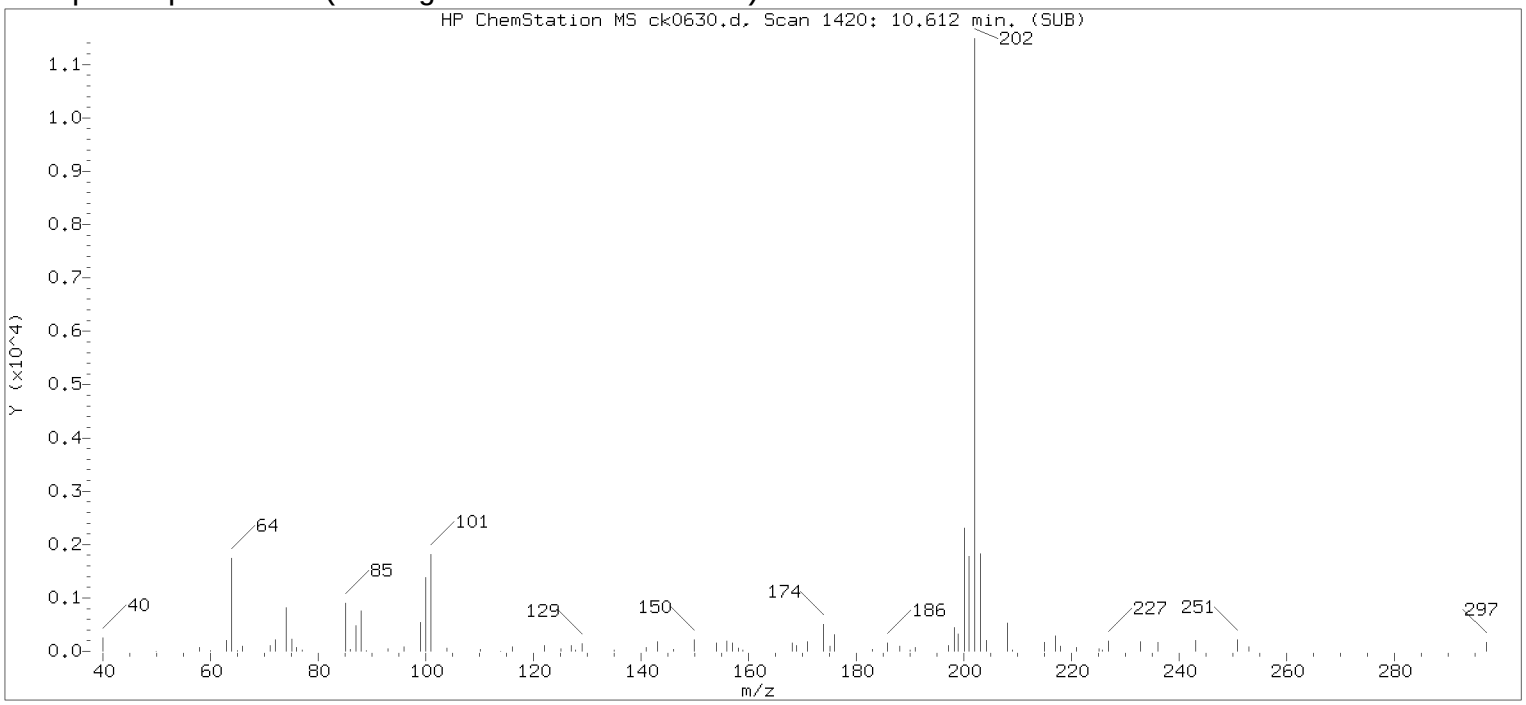
Compound Number : 147
Compound Name : Fluoranthene
Scan Number : 1420
Retention Time (minutes) : 10.612
Quant Ion : 202.00
Area (flag) : 10971M
On-column Amount (ng/ul) : 0.3197
Integration start scan : 1415 Integration stop scan: 1422
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

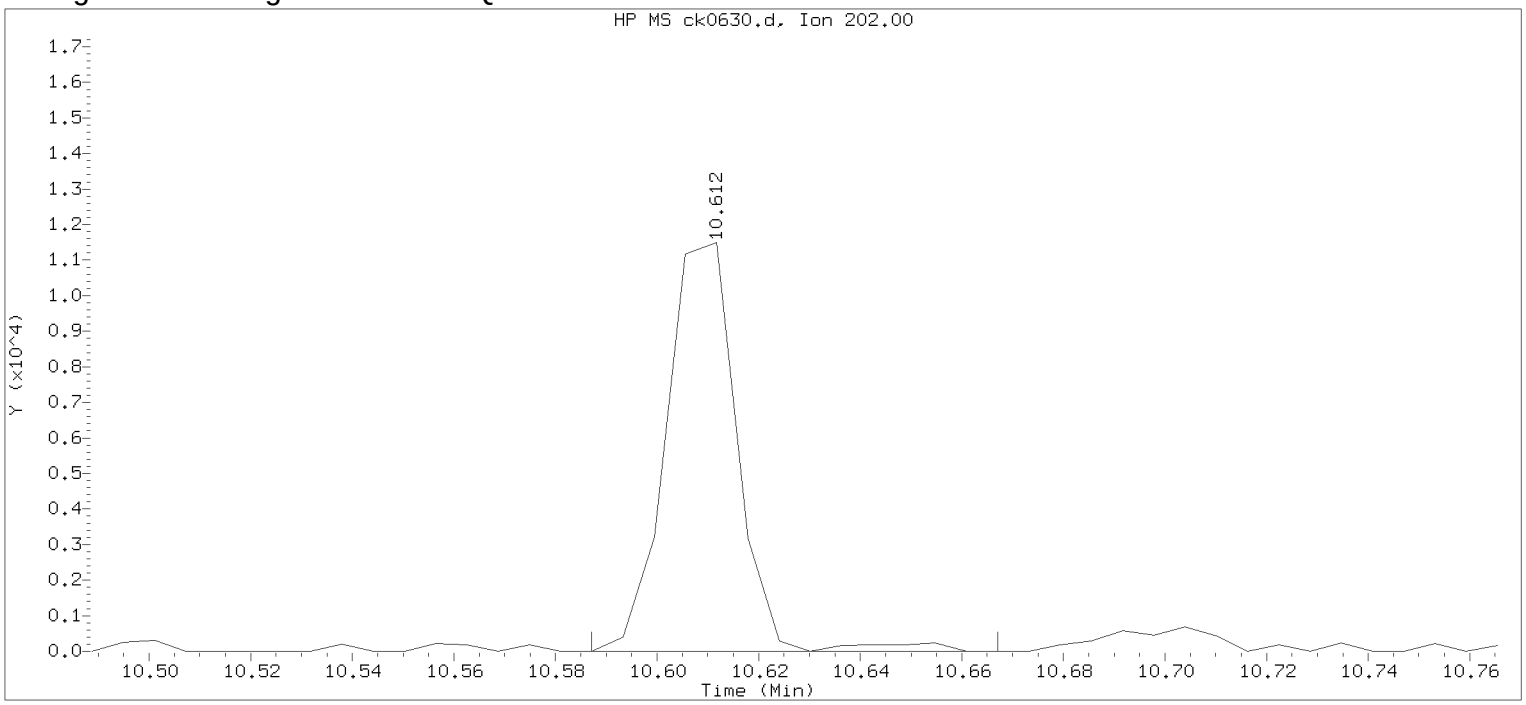
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 147		
Compound Name	: Fluoranthene		
Scan Number	: 1420		
Retention Time (minutes)	: 10.612		
Quant Ion	: 202.00		
Area	: 11245		
On-column Amount (ng/ul)	: 0.3277		
Integration start scan	: 1415	Integration stop scan:	1428
Y at integration start	: 0	Y at integration end:	0

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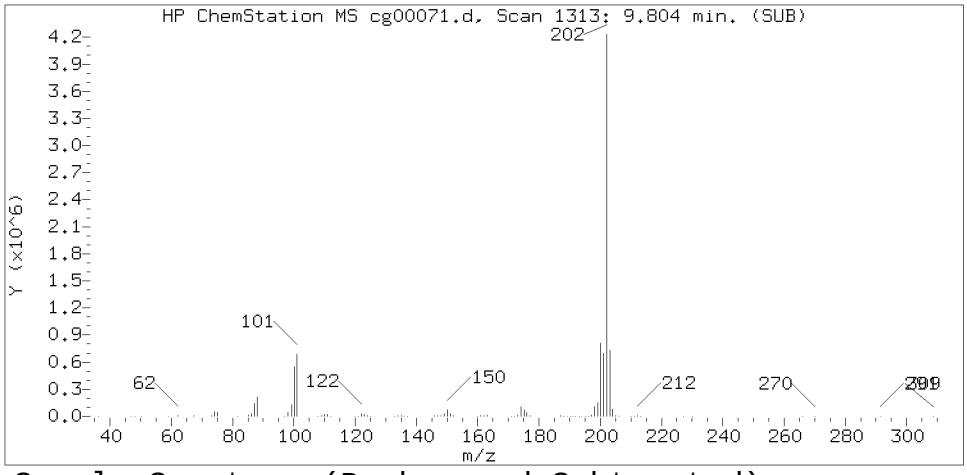
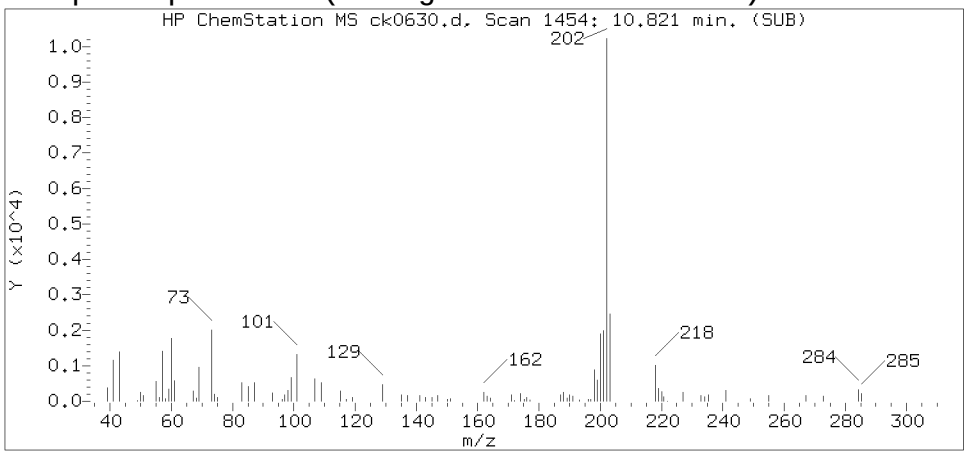
Target 3.5 esignature user KVM06 jmg00346

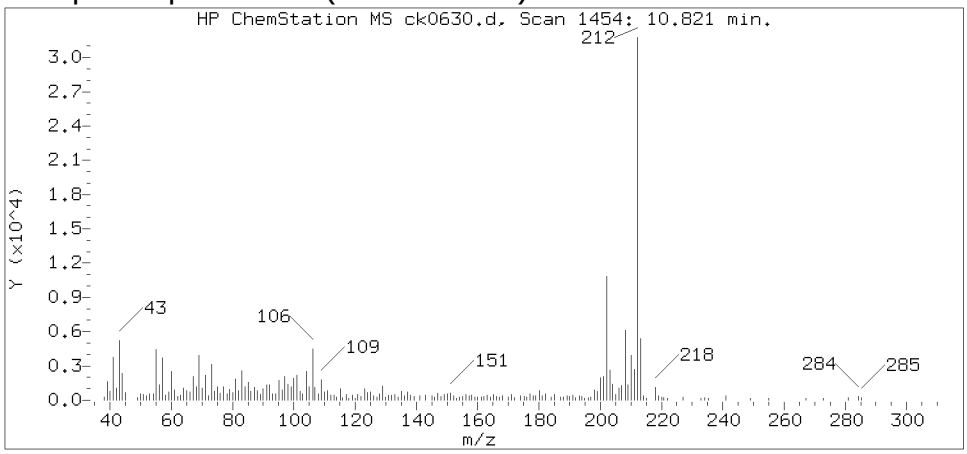
Reference Standard Spectrum for Pyrene

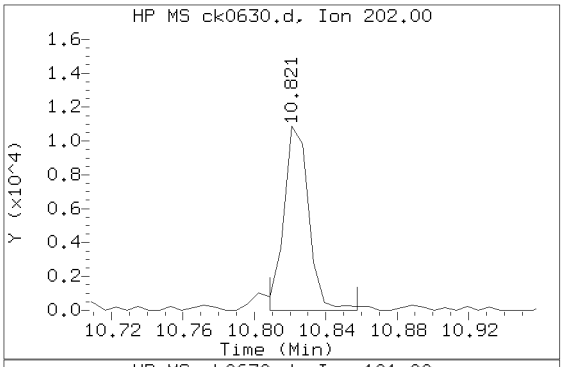


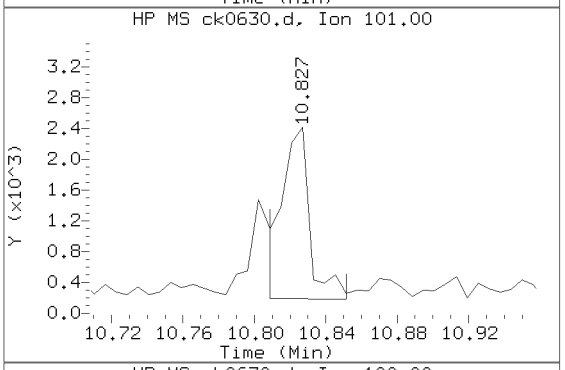
Sample Spectrum (Background Subtracted)

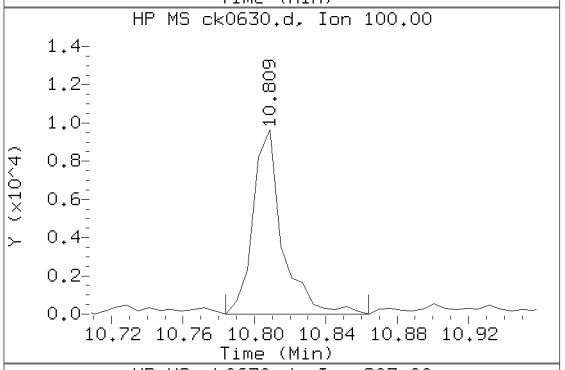


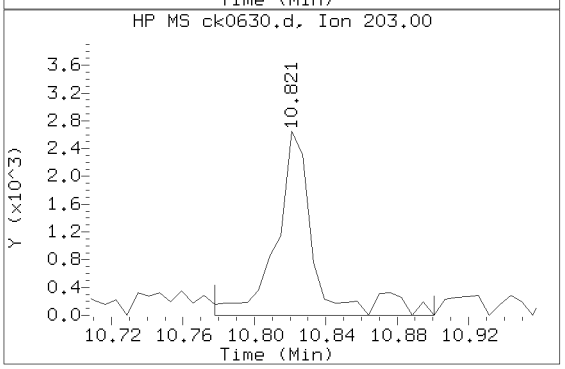
Sample Spectrum (Unaltered)











Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1454
Retention Time (minutes)	: 10.821
Relative Retention Time	: 0.00057
Quant Ion	: 202.00
Area (flag)	: 10522
On-column Amount (ng/ul)	: 0.2884

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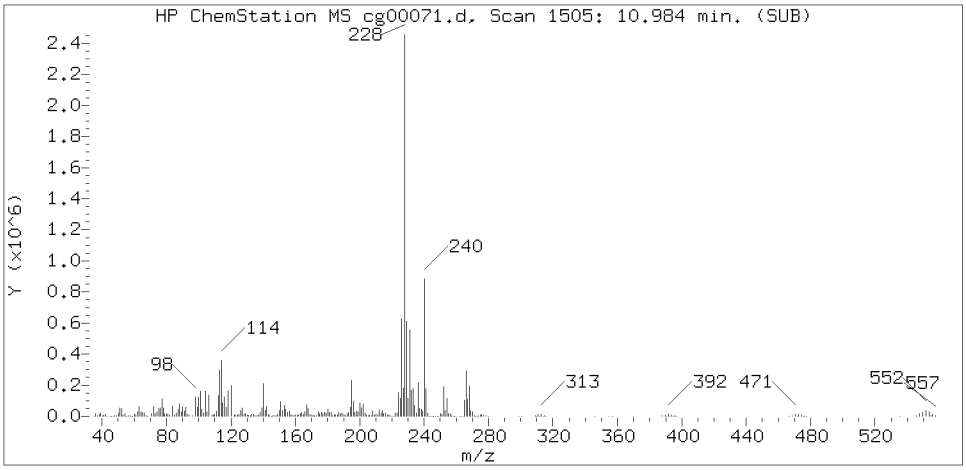
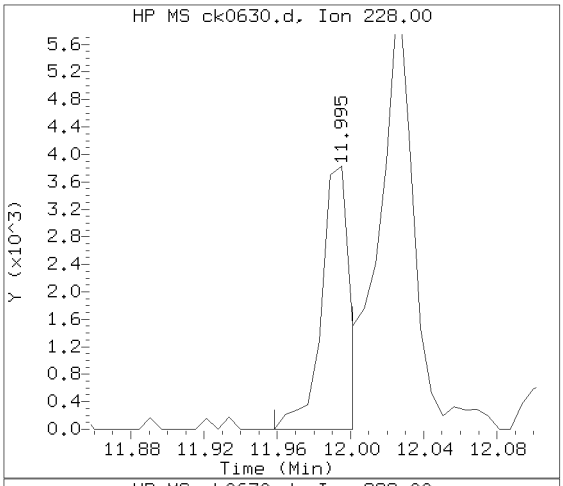
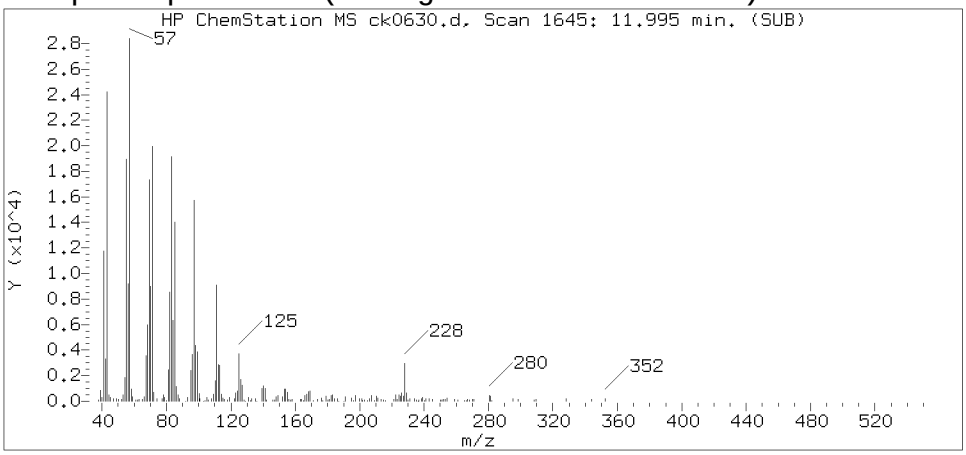
Target 3.5 esignature user ID: jmg00346

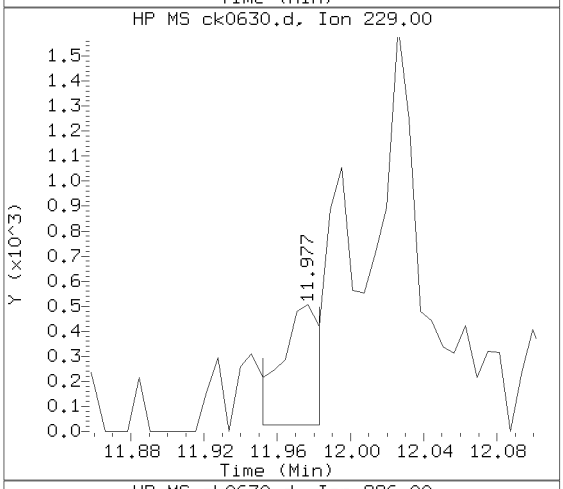
Reference Standard Spectrum for Benzo(a)anthracene



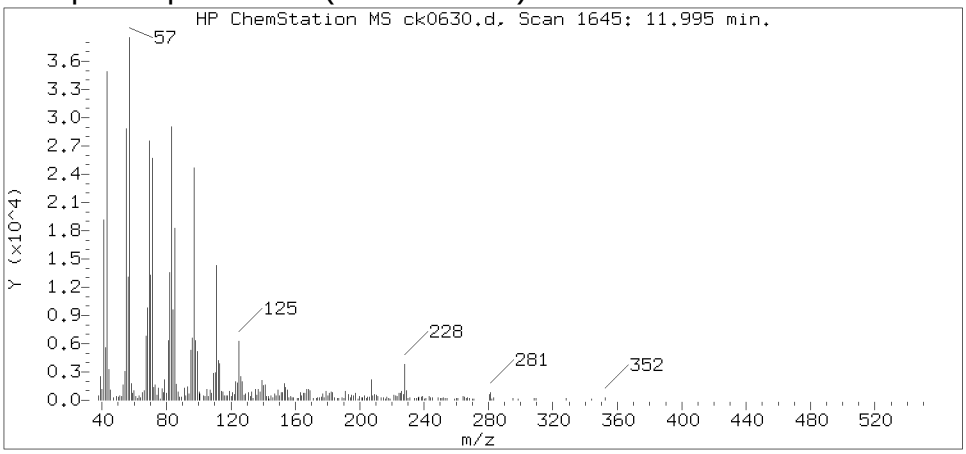


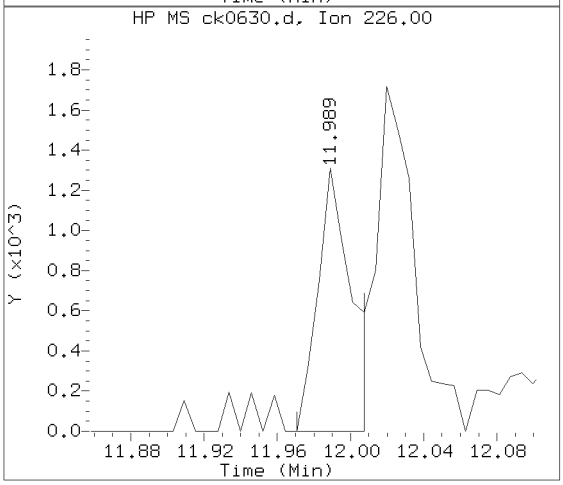
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1645
Retention Time (minutes)	: 11.995
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 3843
On-column Amount (ng/ul)	: 0.1142

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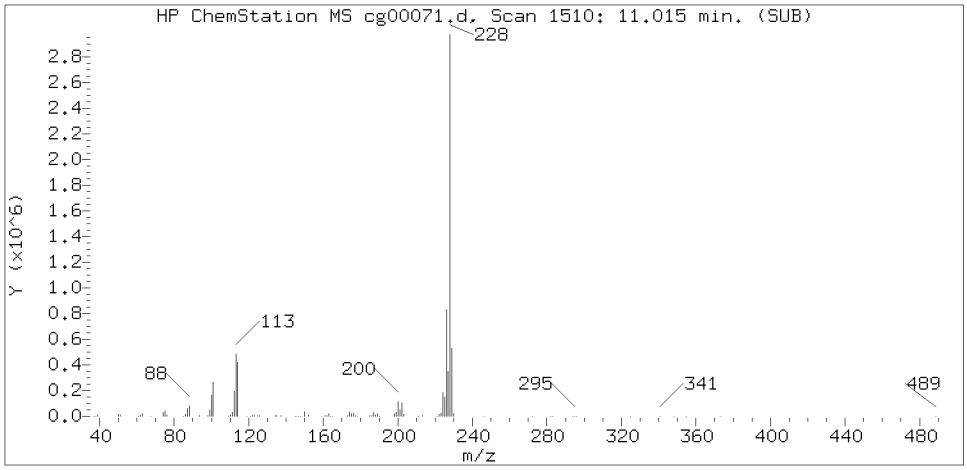
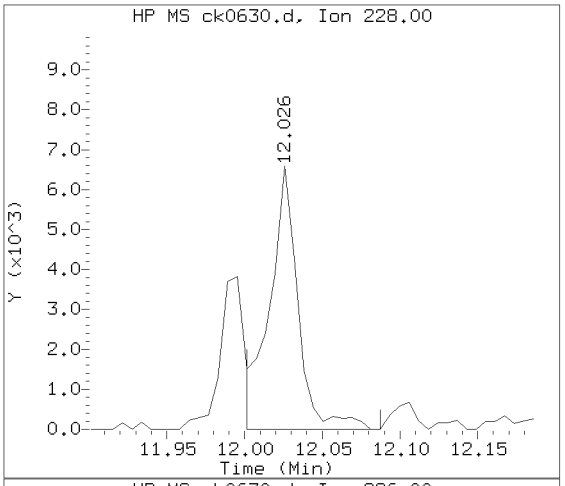
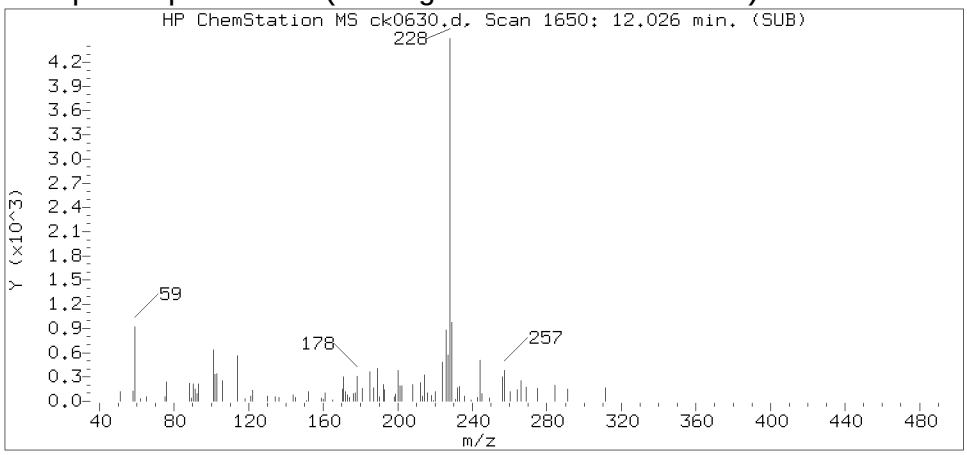
Target 3.5 esignature user ID: jmg00346

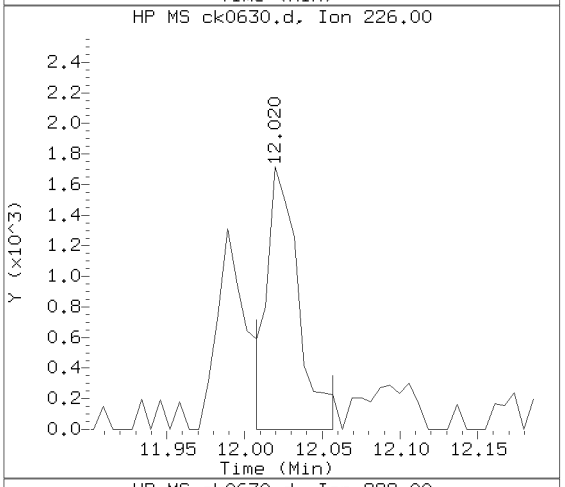
Reference Standard Spectrum for Chrysene



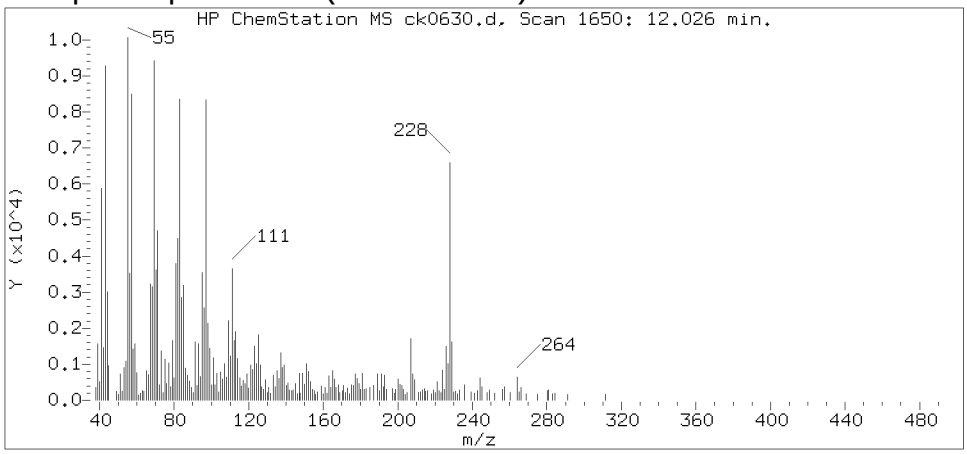


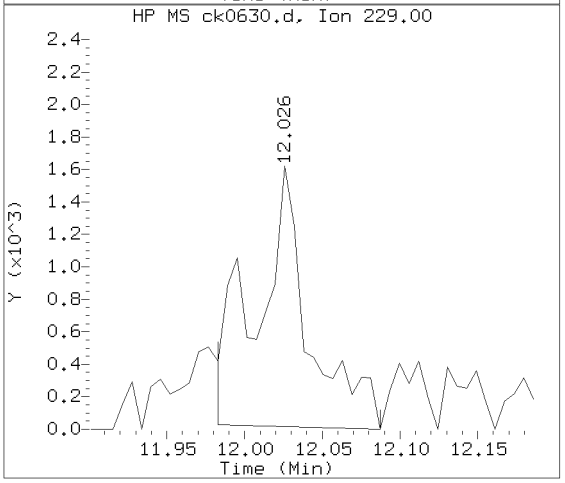
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

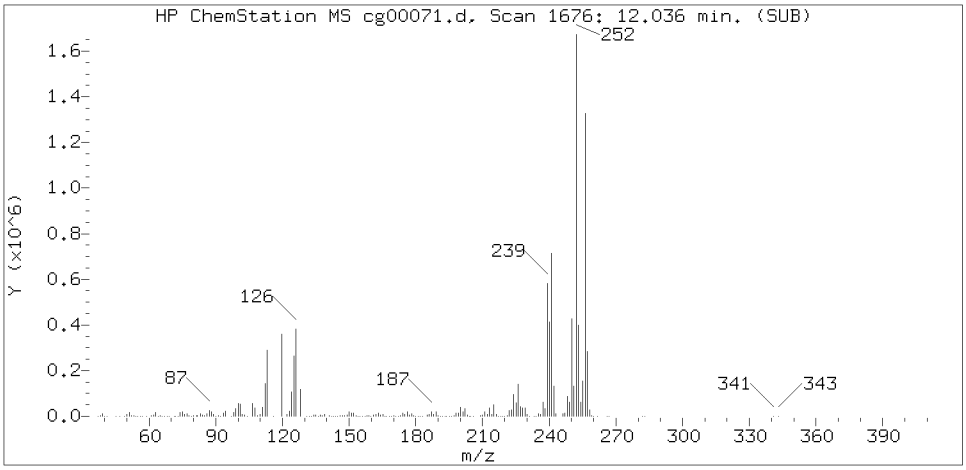
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

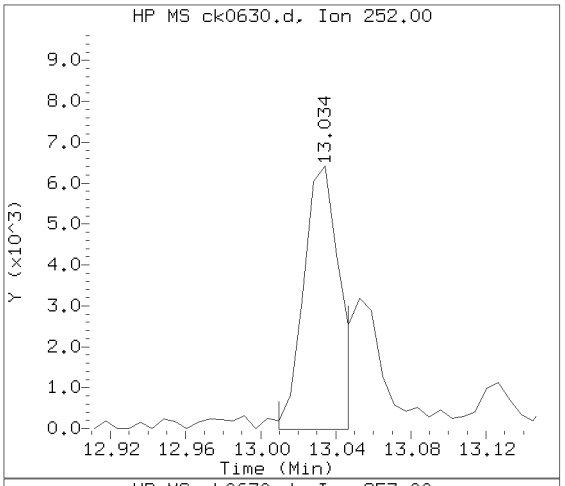
Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1650
Retention Time (minutes)	: 12.026
Relative Retention Time	: 0.00057
Quant Ion	: 228.00
Area (flag)	: 8475
On-column Amount (ng/ul)	: 0.2613

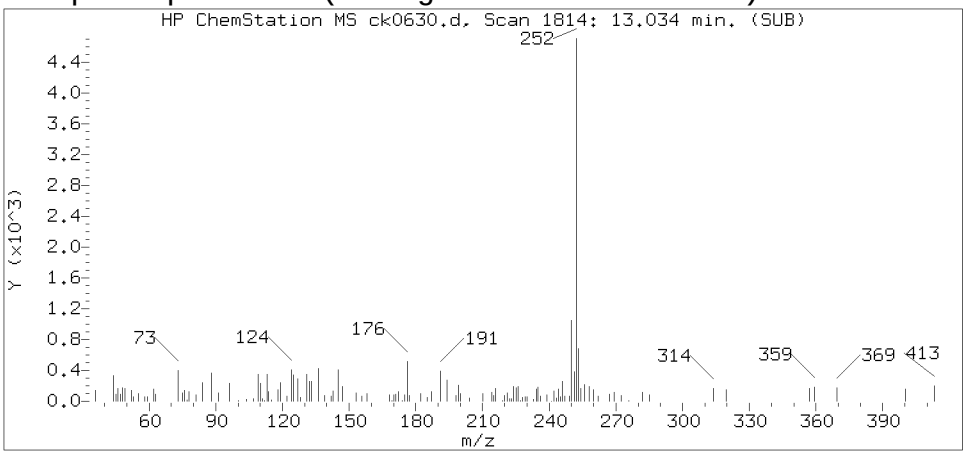
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

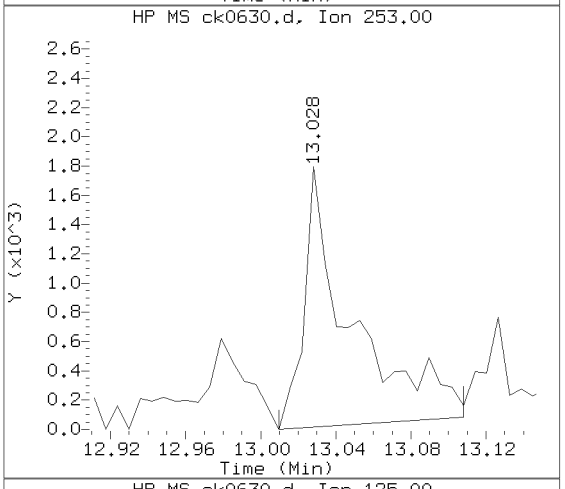
Reference Standard Spectrum for Benzo(b)fluoranthene



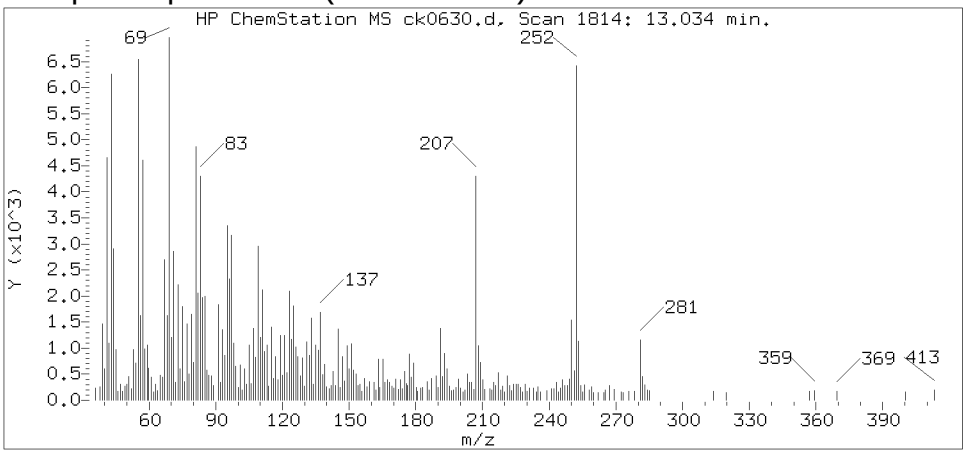


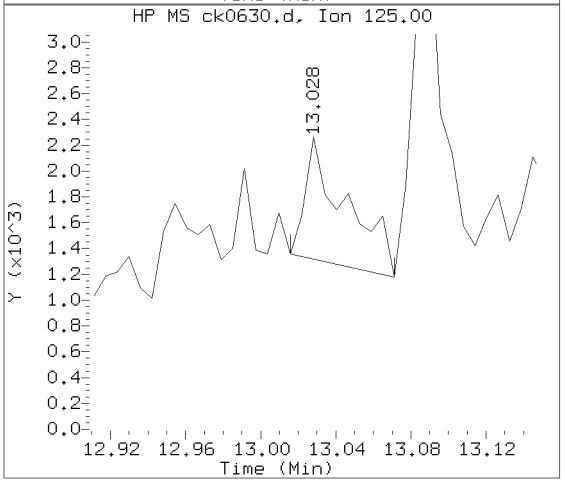
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

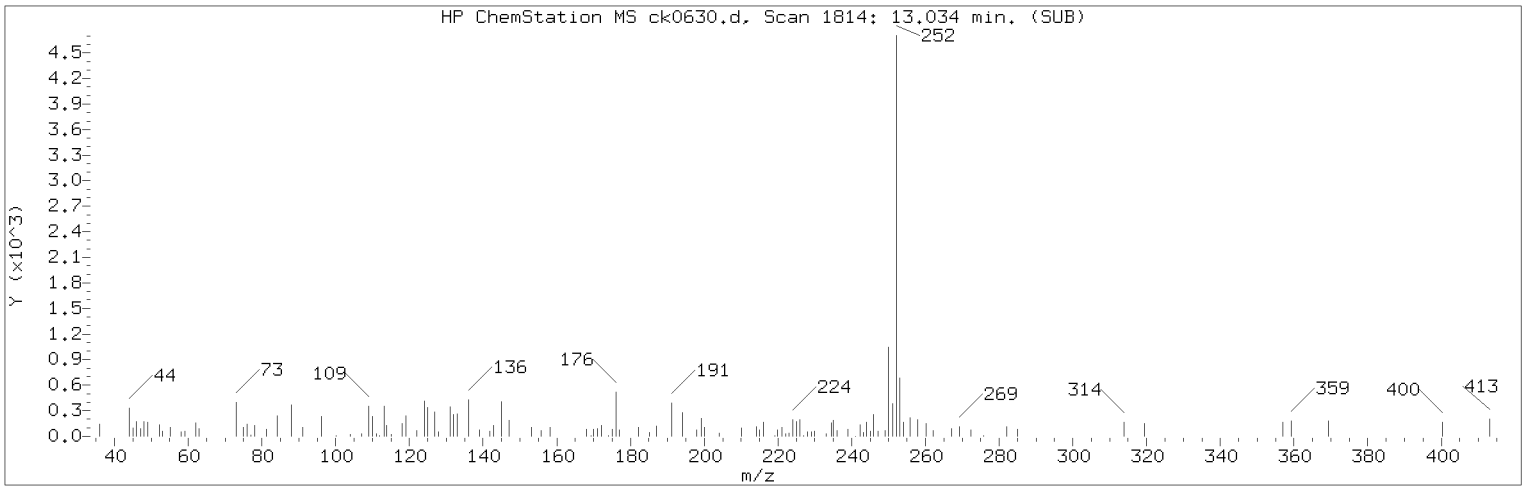
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

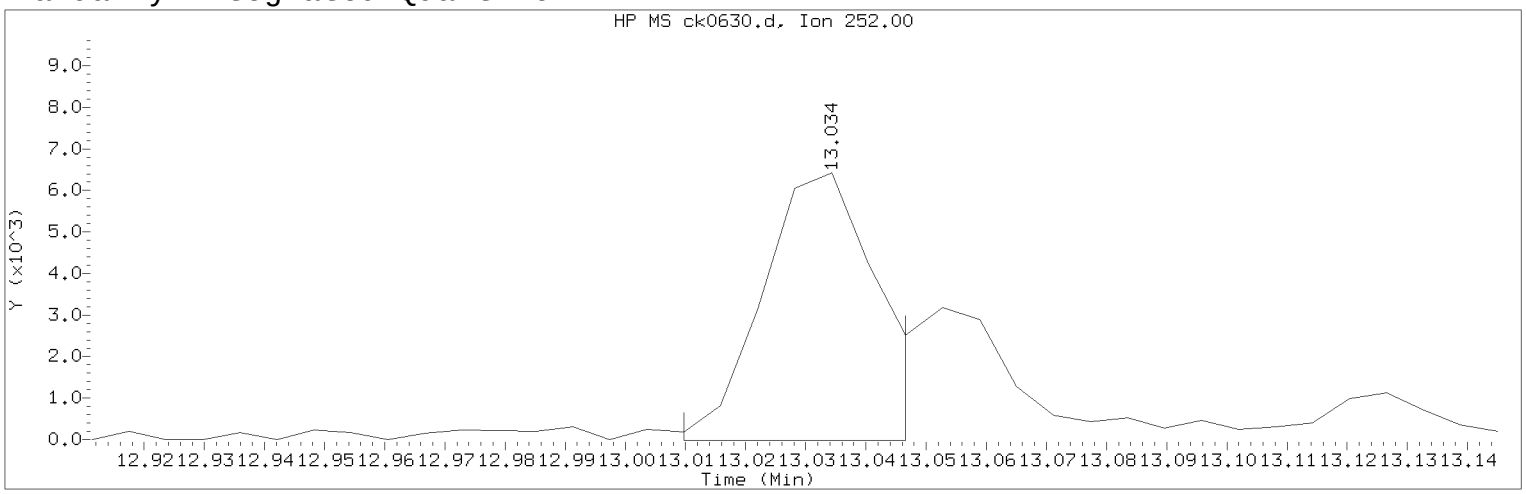
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00045
Quant Ion : 252.00
Area (flag) : 8657M
On-column Amount (ng/ul) : 0.2559

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

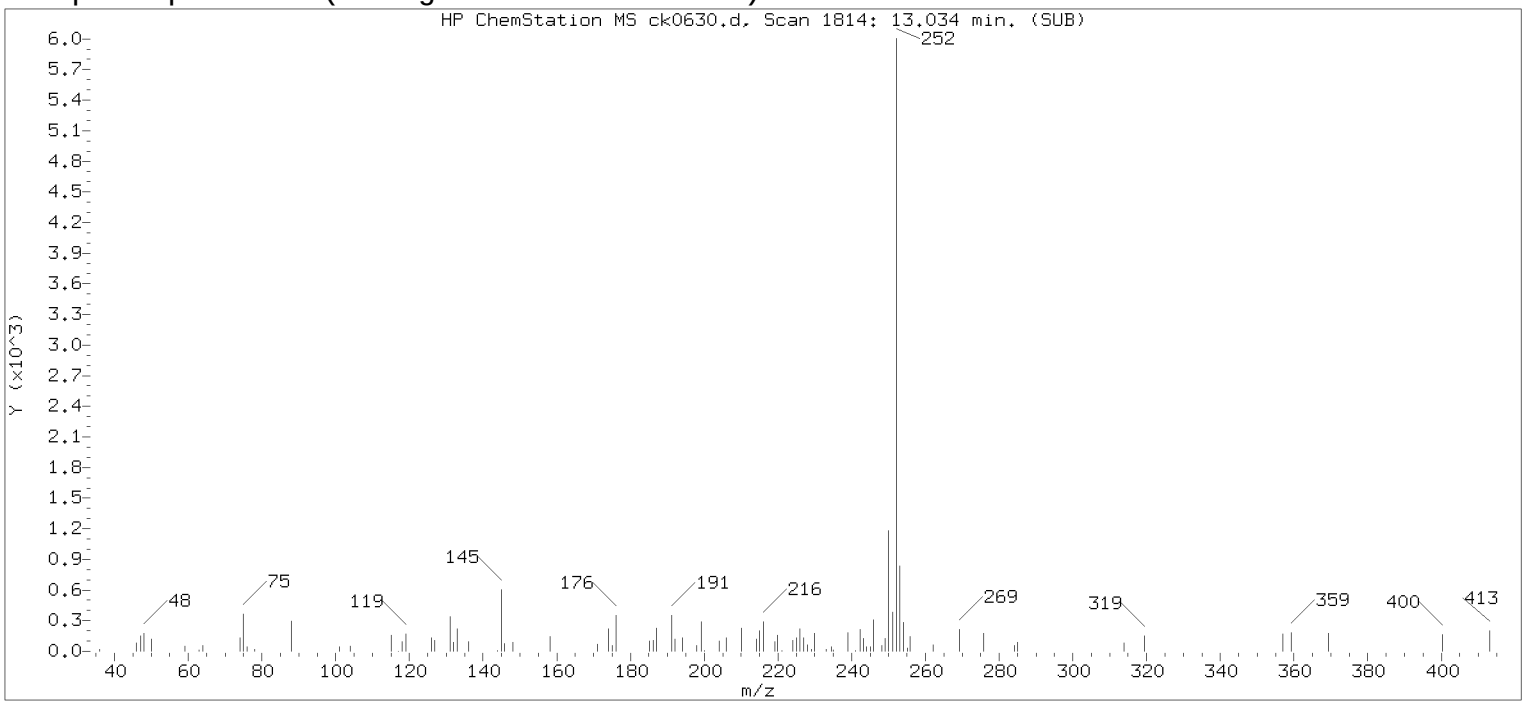
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 8657M
On-column Amount (ng/ul) : 0.2559
Integration start scan : 1809 Integration stop scan: 1815
Y at integration start : -15 Y at integration end: -15

Reason for manual integration: improper integration

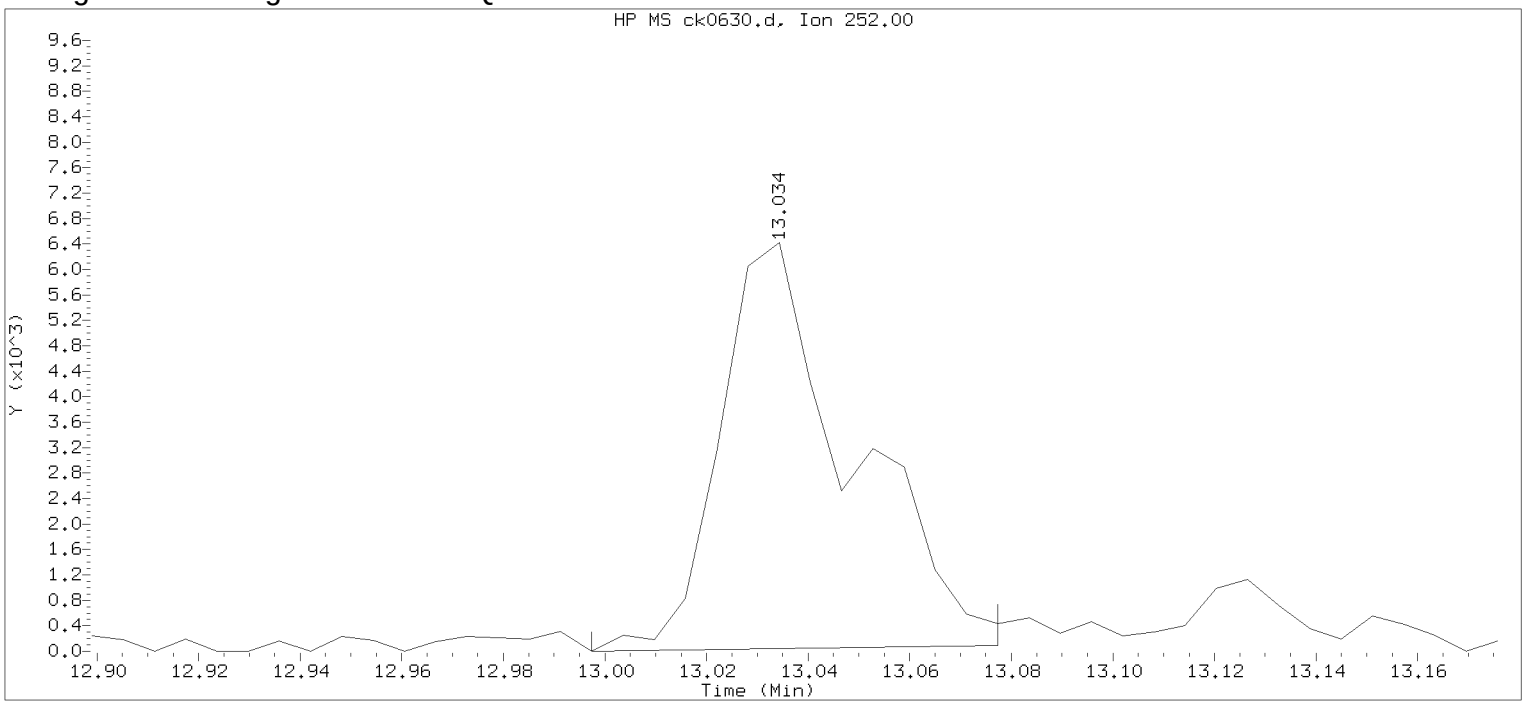
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

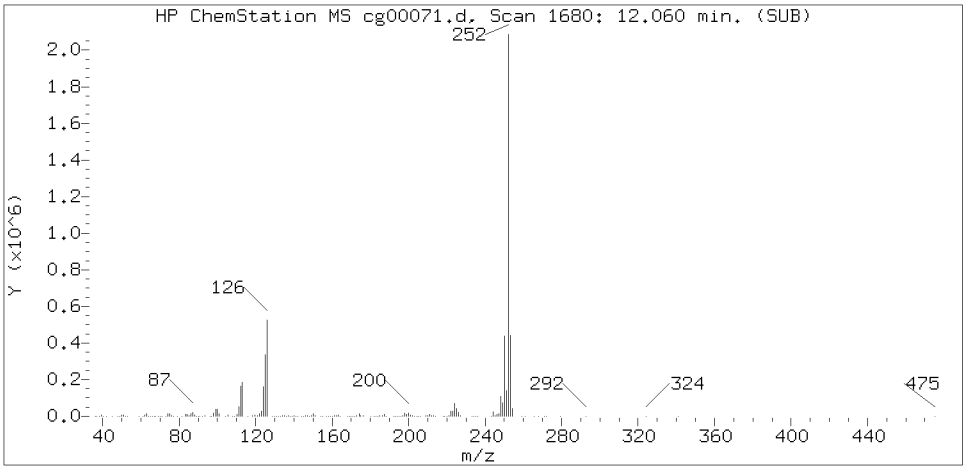
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

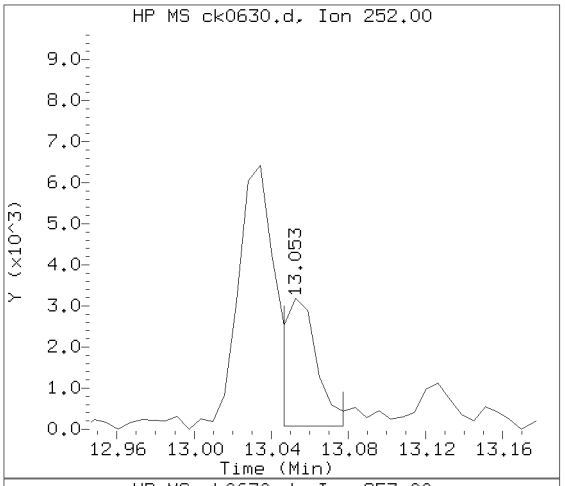
Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 11513		
On-column Amount (ng/ul)	: 0.3404		
Integration start scan	: 1807	Integration stop scan:	1820
Y at integration start	: 0	Y at integration end:	86

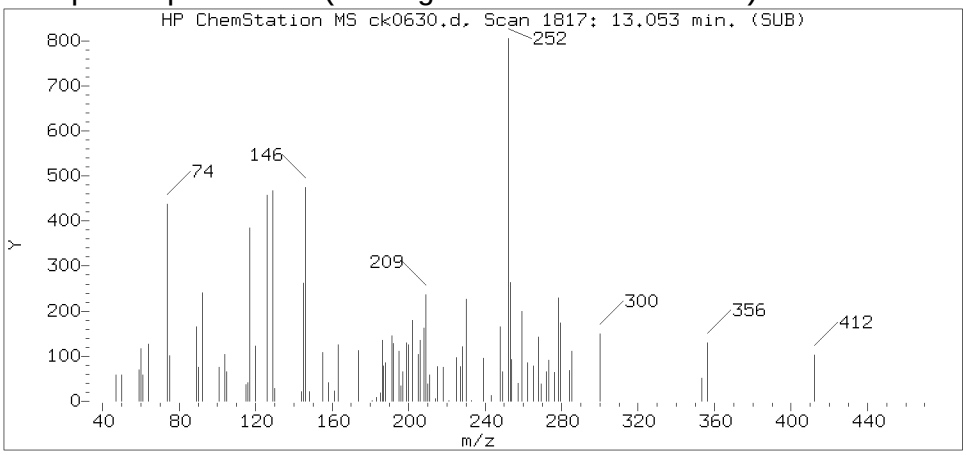
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user KVM06 jmg00346

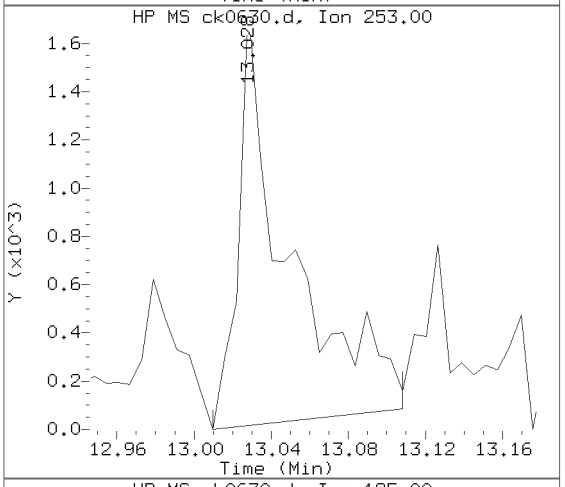
Reference Standard Spectrum for Benzo(k)fluoranthene



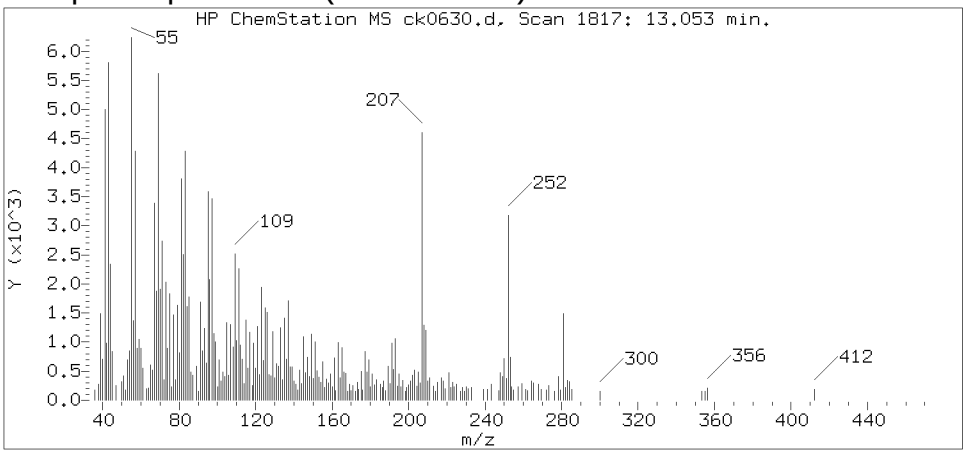


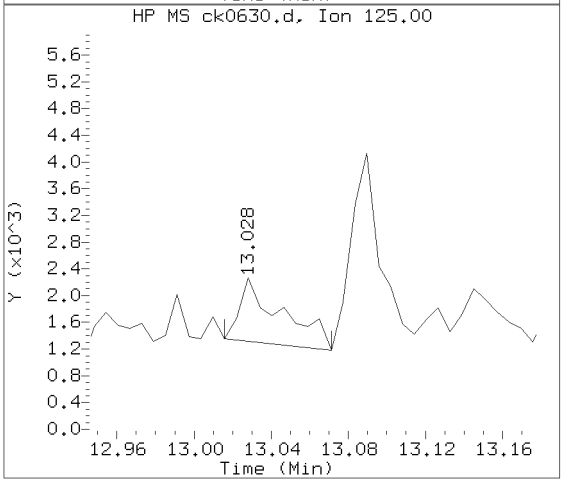
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

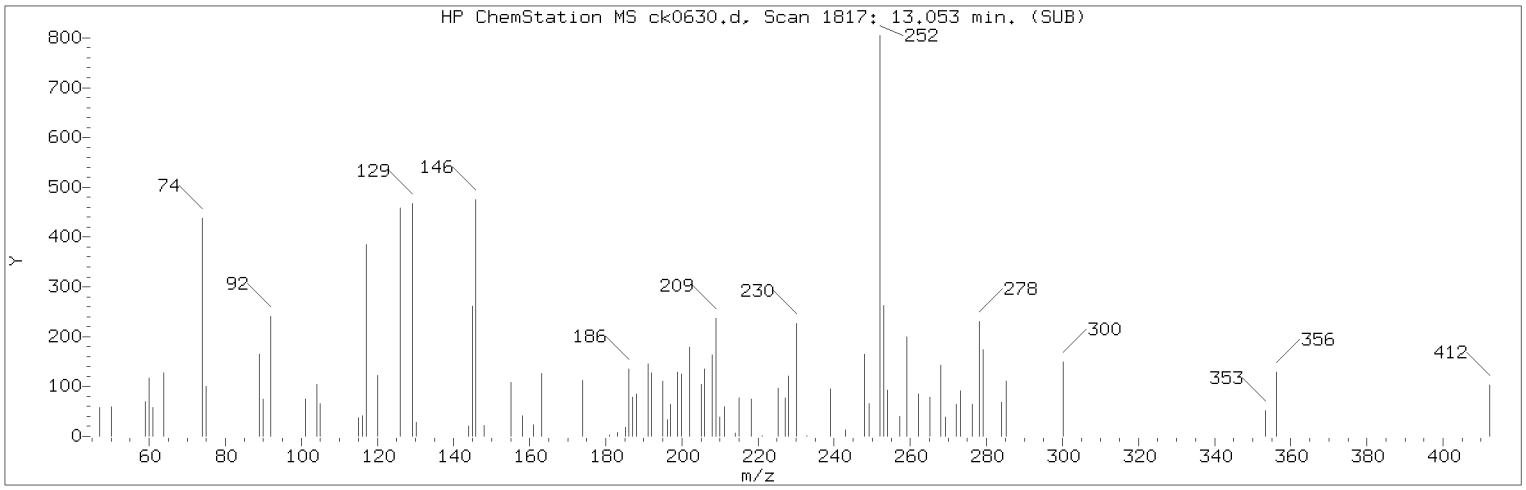
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

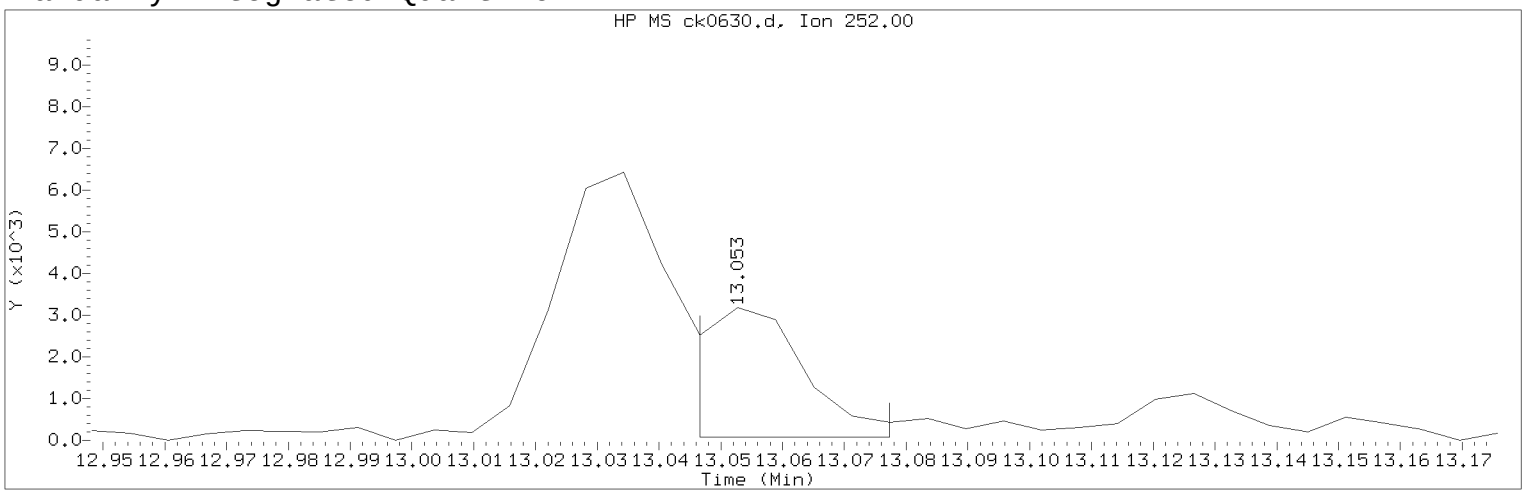
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1817
Retention Time (minutes) : 13.053
Relative Retention Time : 0.00047
Quant Ion : 252.00
Area (flag) : 3841M
On-column Amount (ng/ul) : 0.1113

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

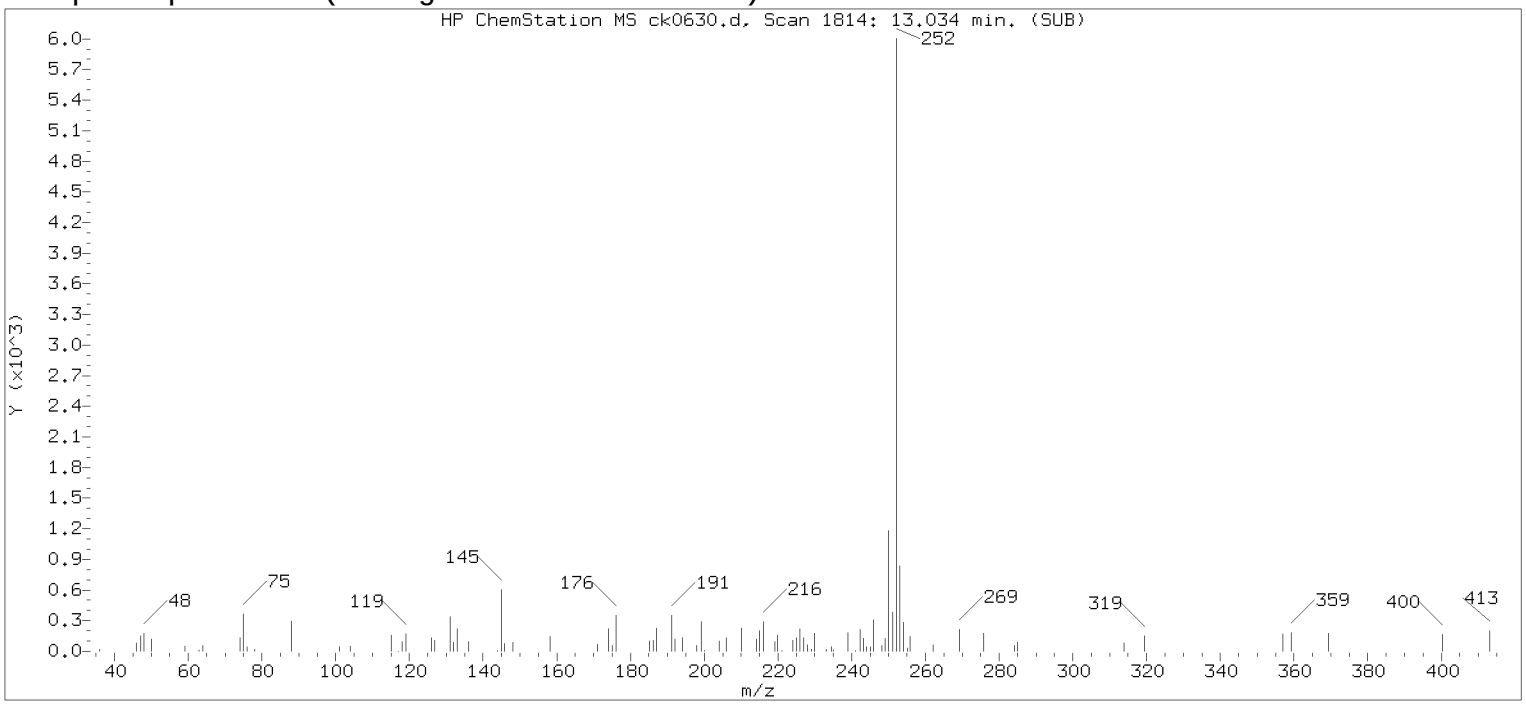
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1817
Retention Time (minutes) : 13.053
Quant Ion : 252.00
Area (flag) : 3841M
On-column Amount (ng/ul) : 0.1113
Integration start scan : 1815 Integration stop scan: 1820
Y at integration start : 81 Y at integration end: 81

Reason for manual integration: improper integration

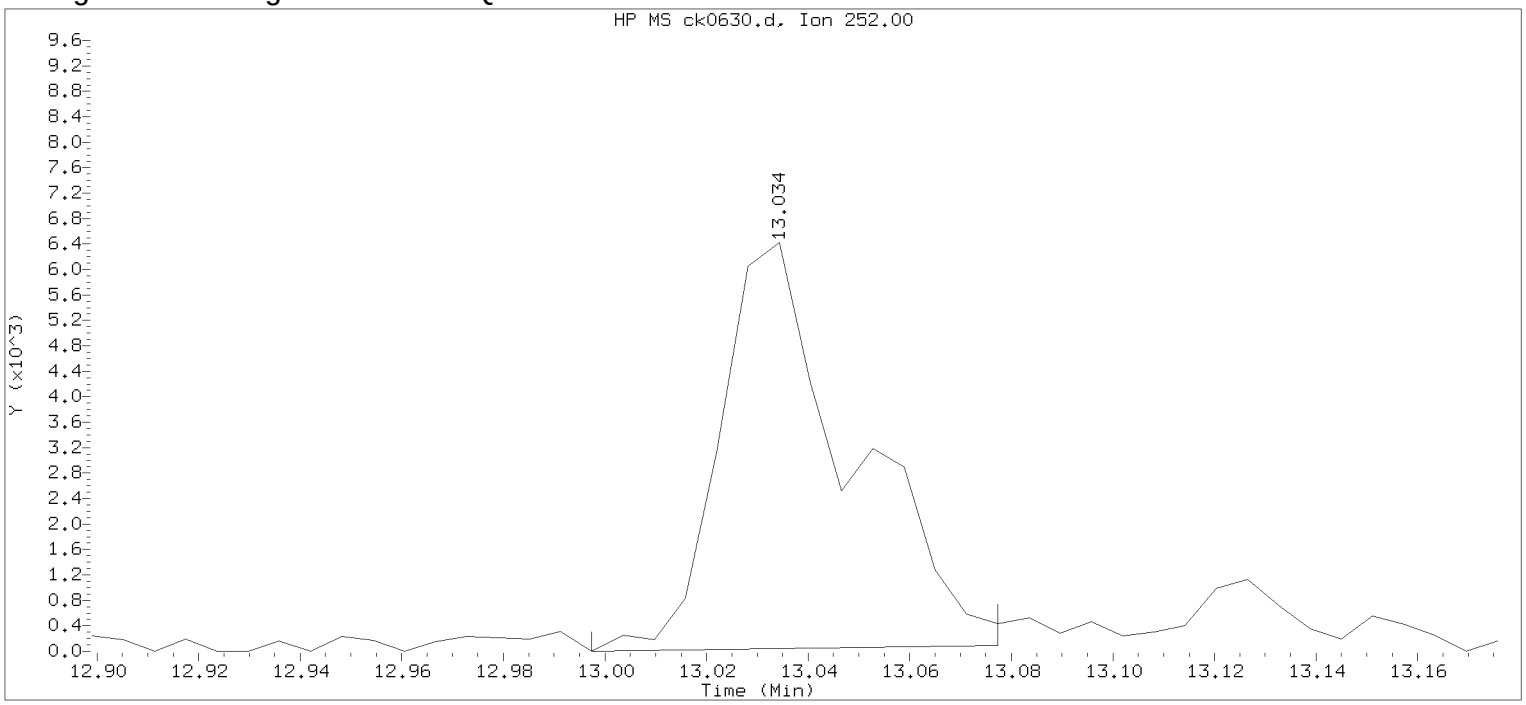
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

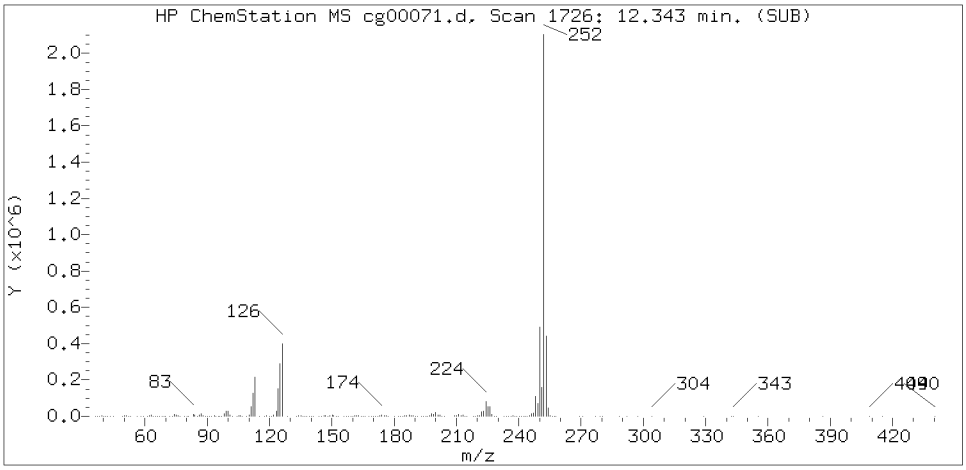
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

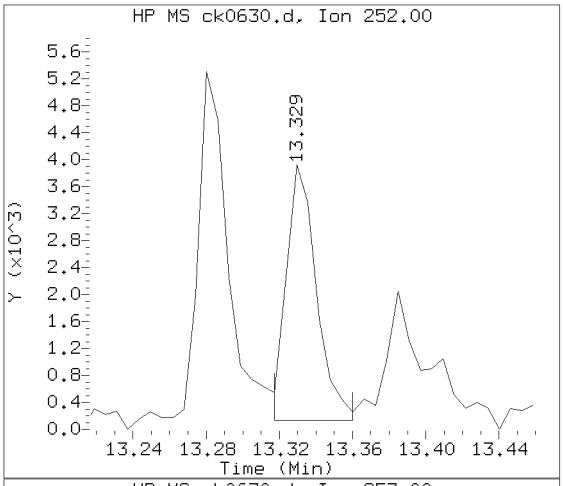
Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 11513		
On-column Amount (ng/ul)	: 0.3336		
Integration start scan	: 1807	Integration stop scan:	1820
Y at integration start	: 0	Y at integration end:	86

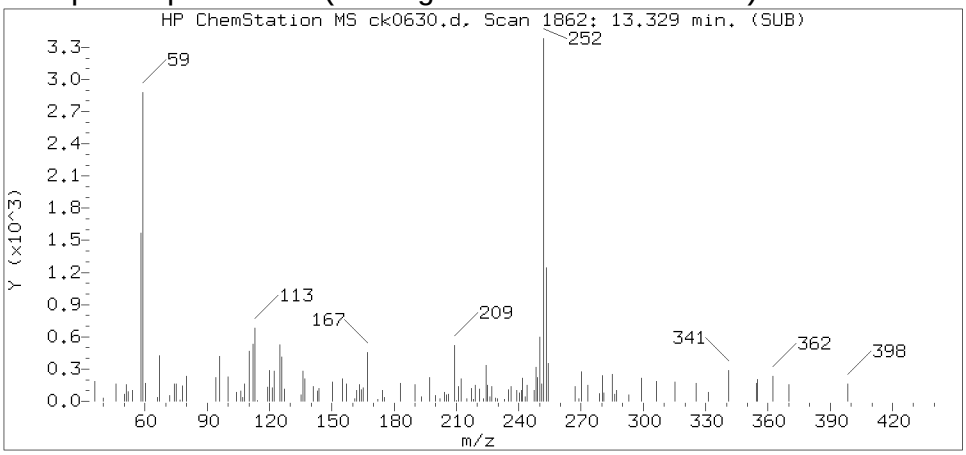
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user KVM06 jmg00346

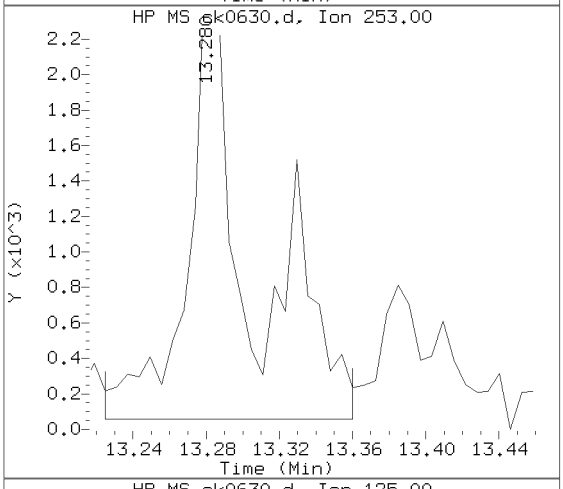
Reference Standard Spectrum for Benzo(a)pyrene



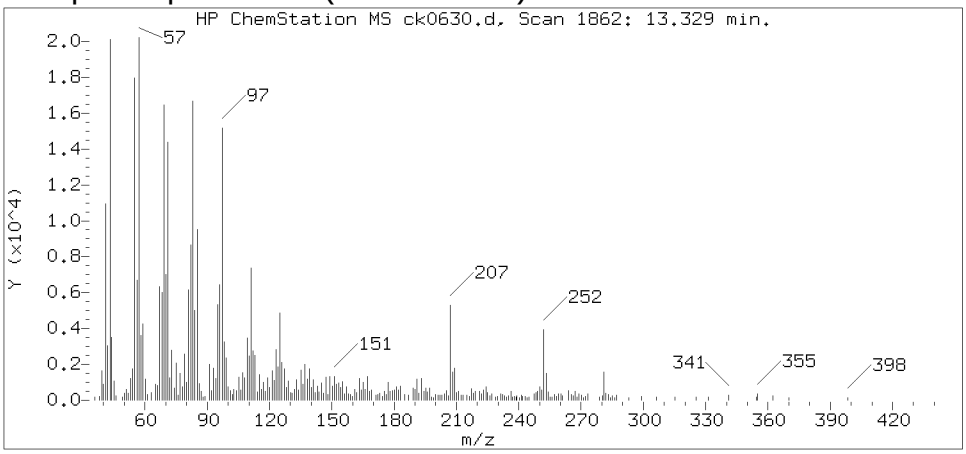


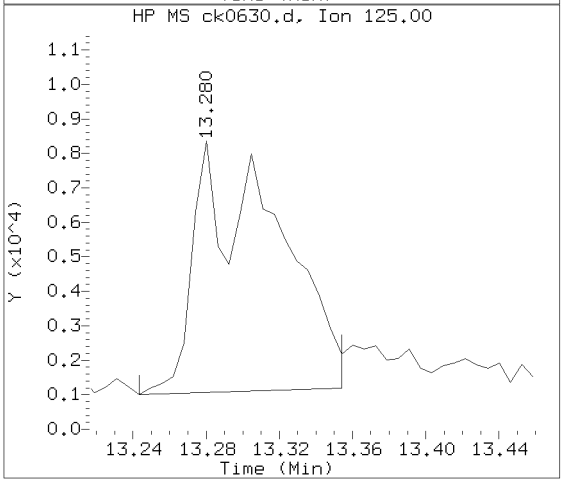
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

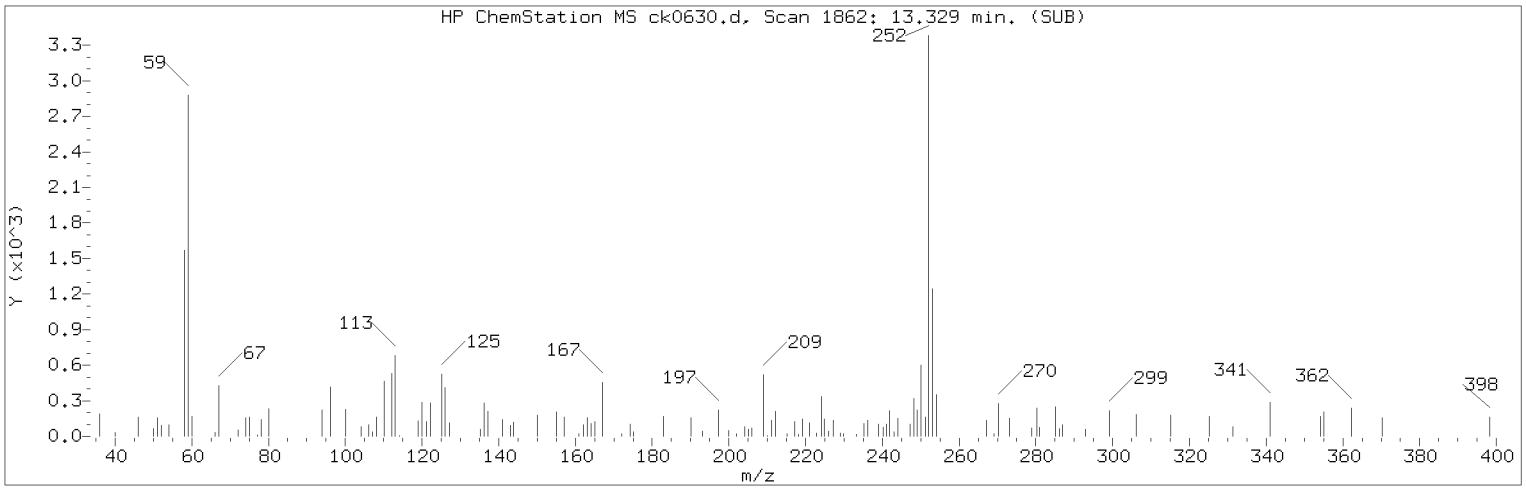
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

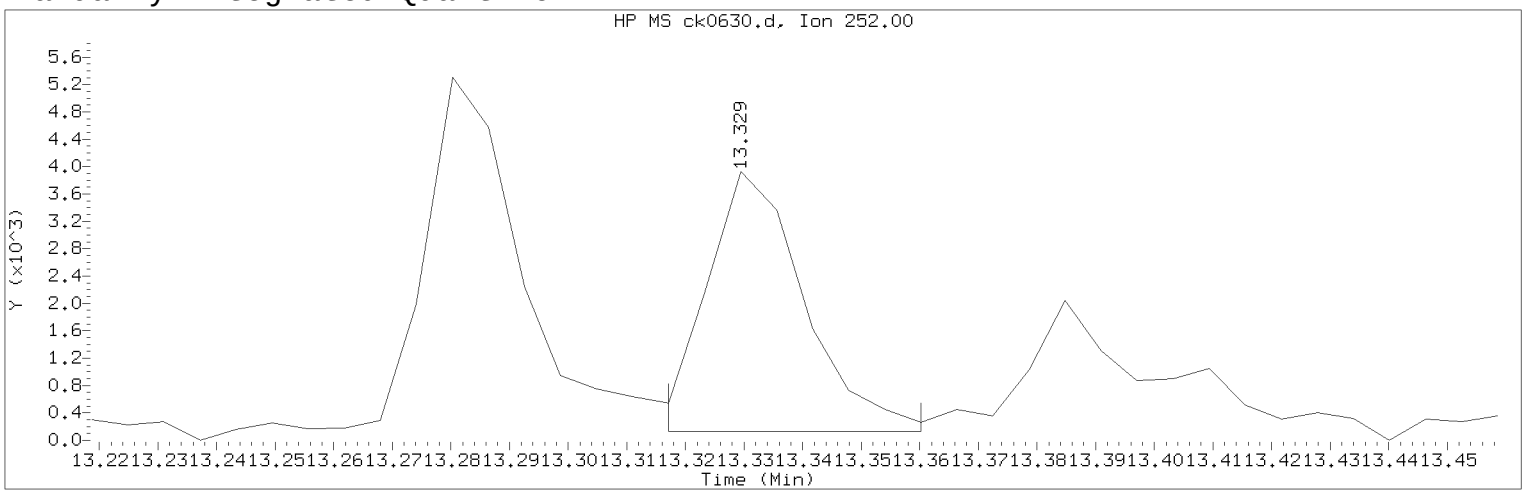
Compound Number	: 174
Compound Name	: Benzo(a)pyrene
Scan Number	: 1862
Retention Time (minutes)	: 13.329
Relative Retention Time	: 0.00000
Quant Ion	: 252.00
Area (flag)	: 4426M
On-column Amount (ng/ul)	: 0.1341

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

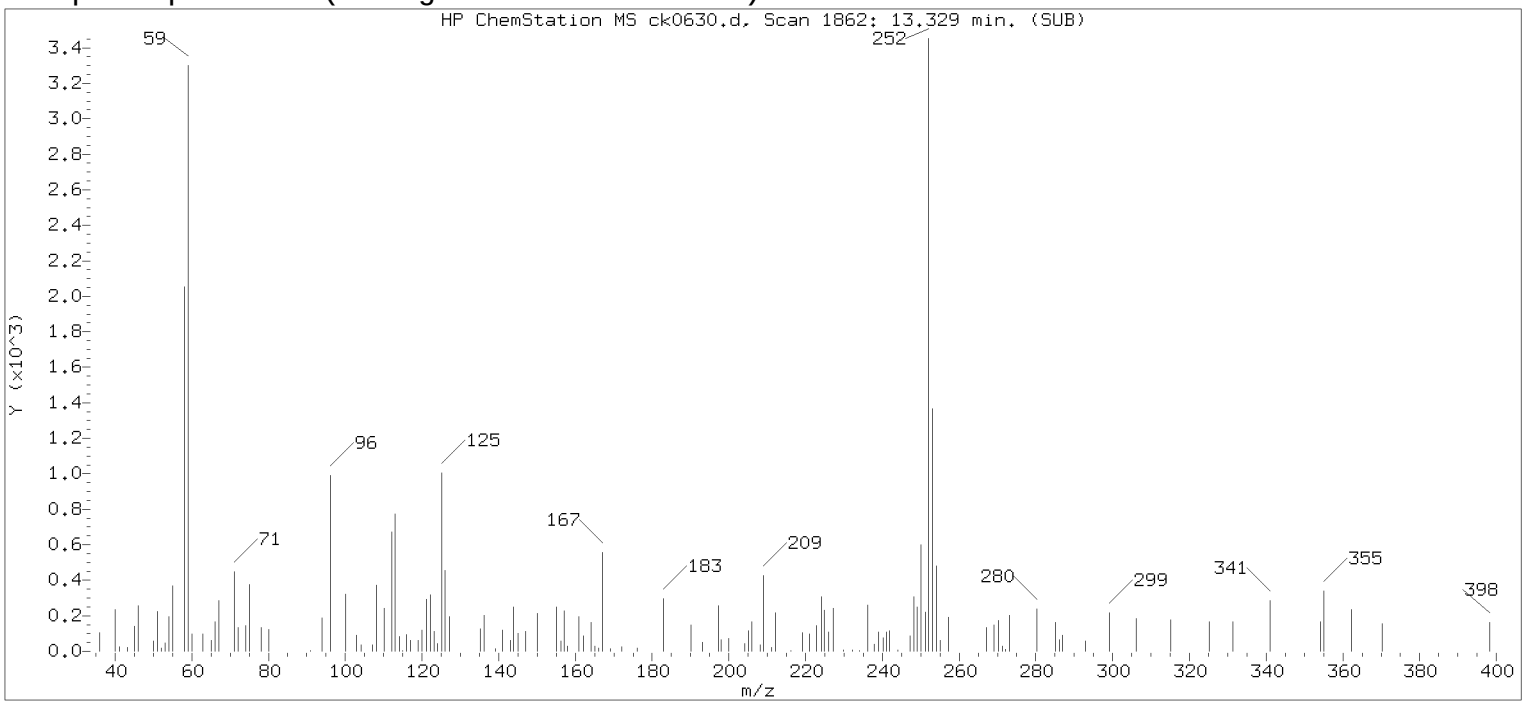
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1862
Retention Time (minutes) : 13.329
Quant Ion : 252.00
Area (flag) : 4426M
On-column Amount (ng/ul) : 0.1341
Integration start scan : 1859 Integration stop scan: 1866
Y at integration start : 131 Y at integration end: 131

Reason for manual integration: improper integration

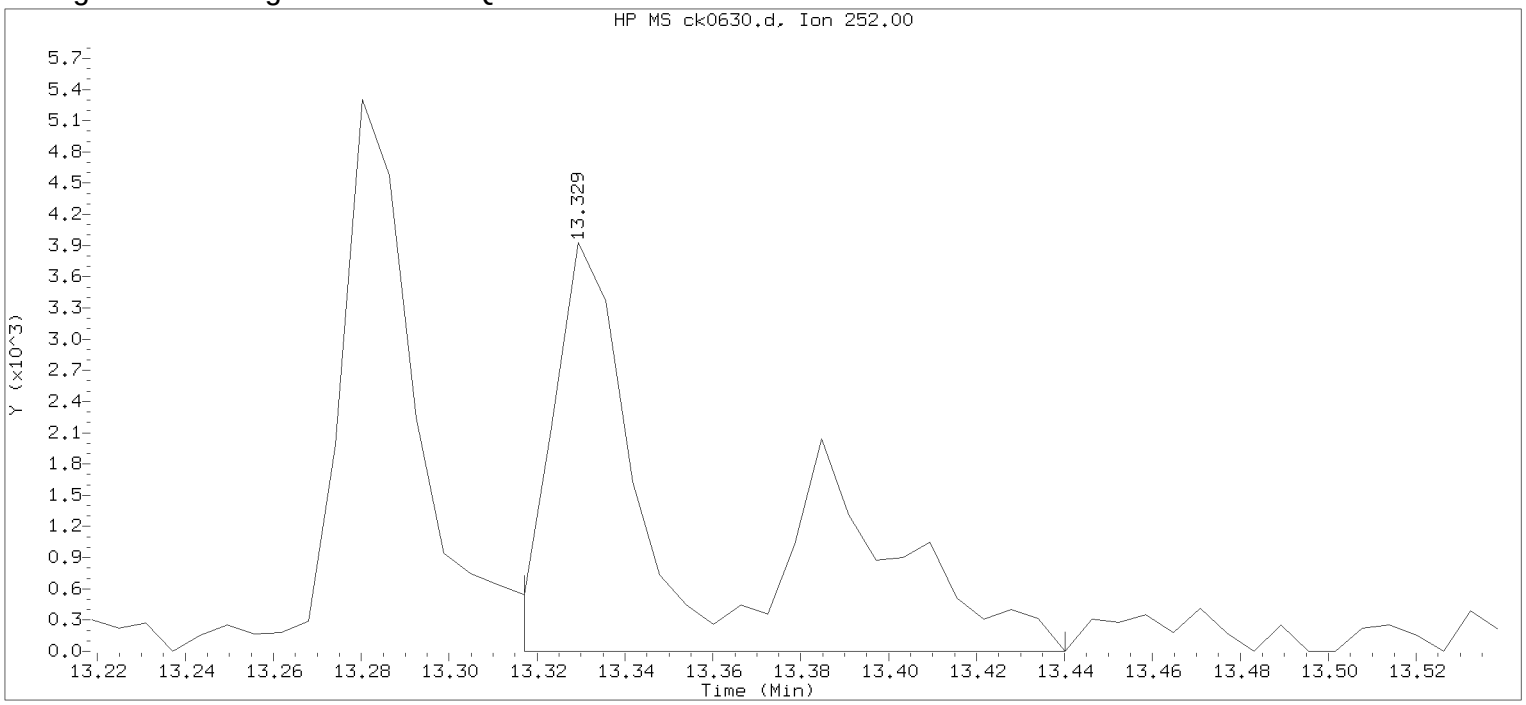
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

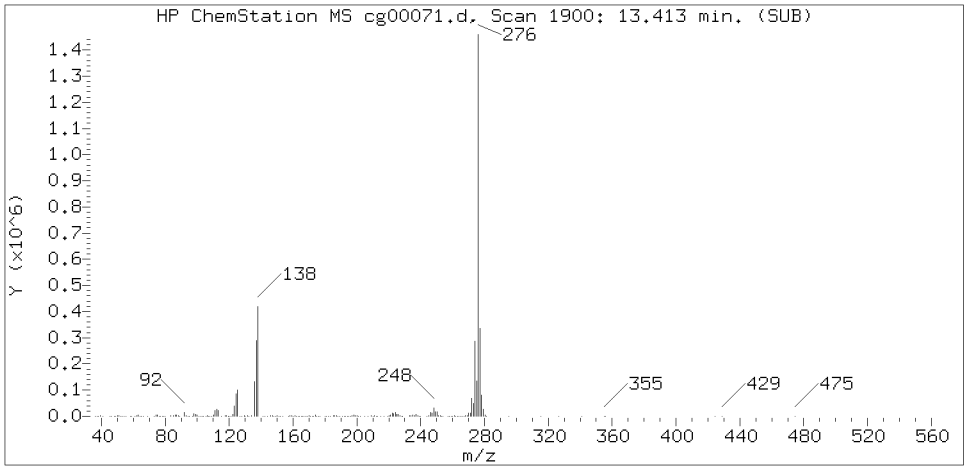
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

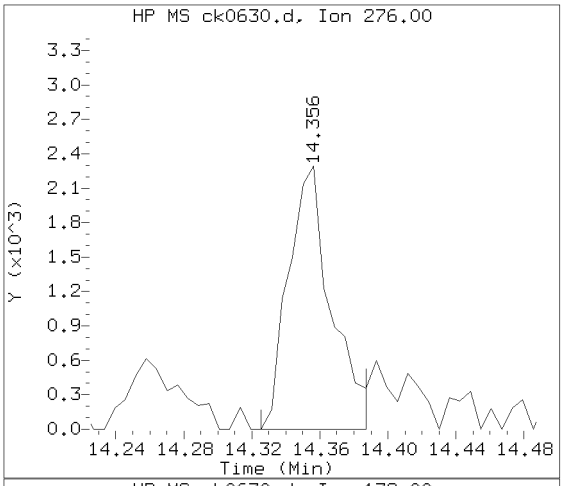
Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1862		
Retention Time (minutes)	: 13.329		
Quant Ion	: 252.00		
Area	: 8234		
On-column Amount (ng/ul)	: 0.2494		
Integration start scan	: 1859	Integration stop scan:	1879
Y at integration start	: 0	Y at integration end:	0

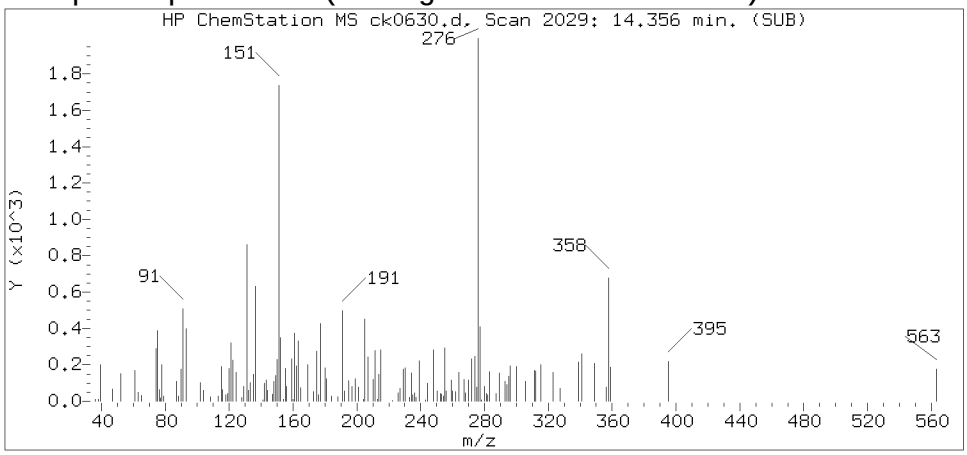
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user KVM06 jmg00346

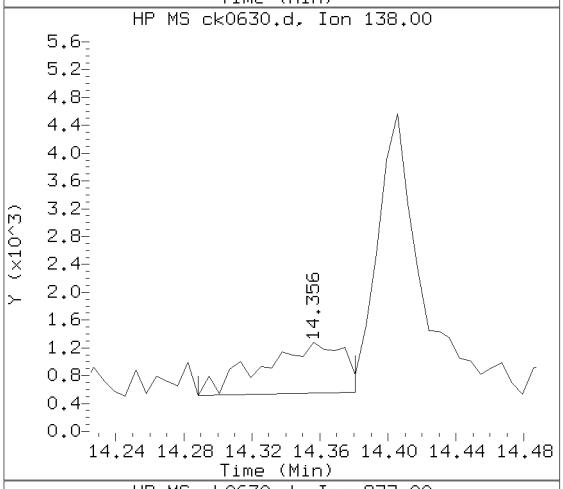
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



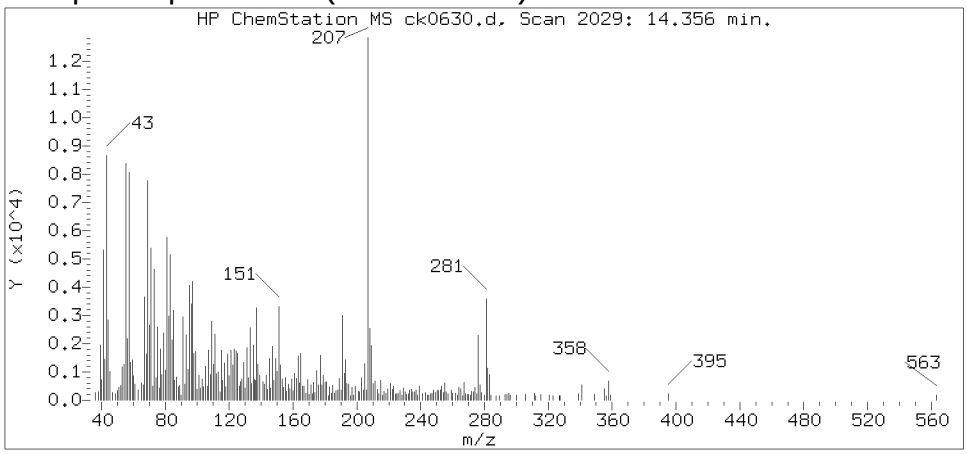


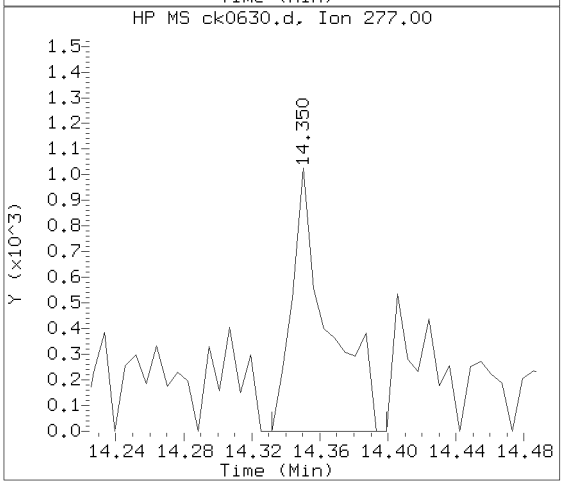
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

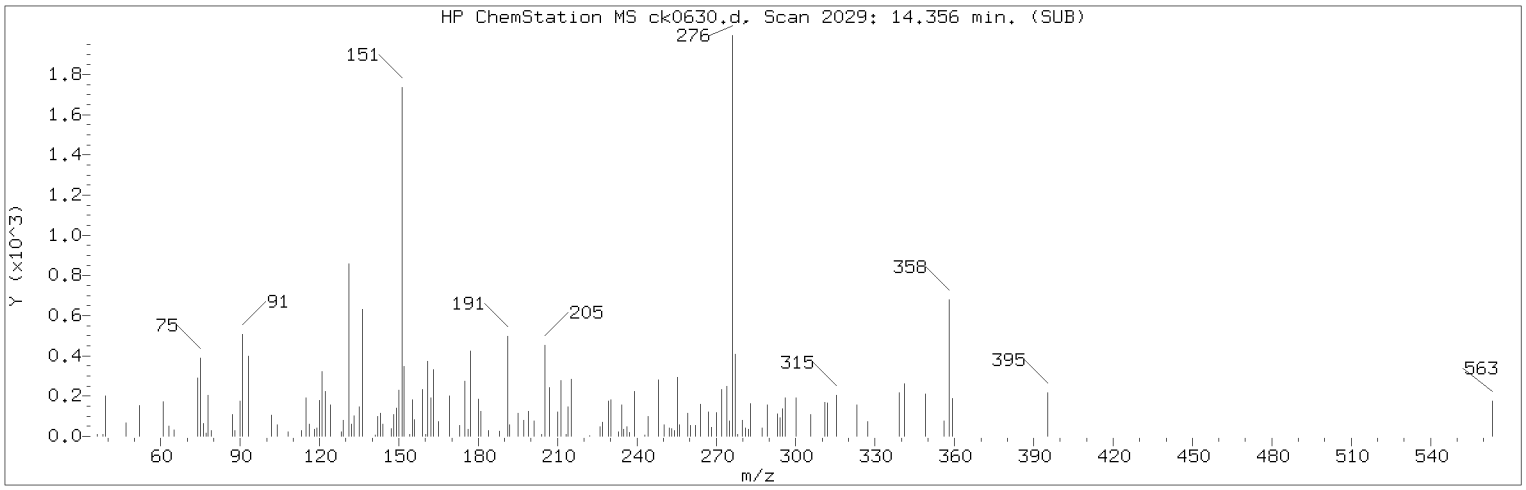
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

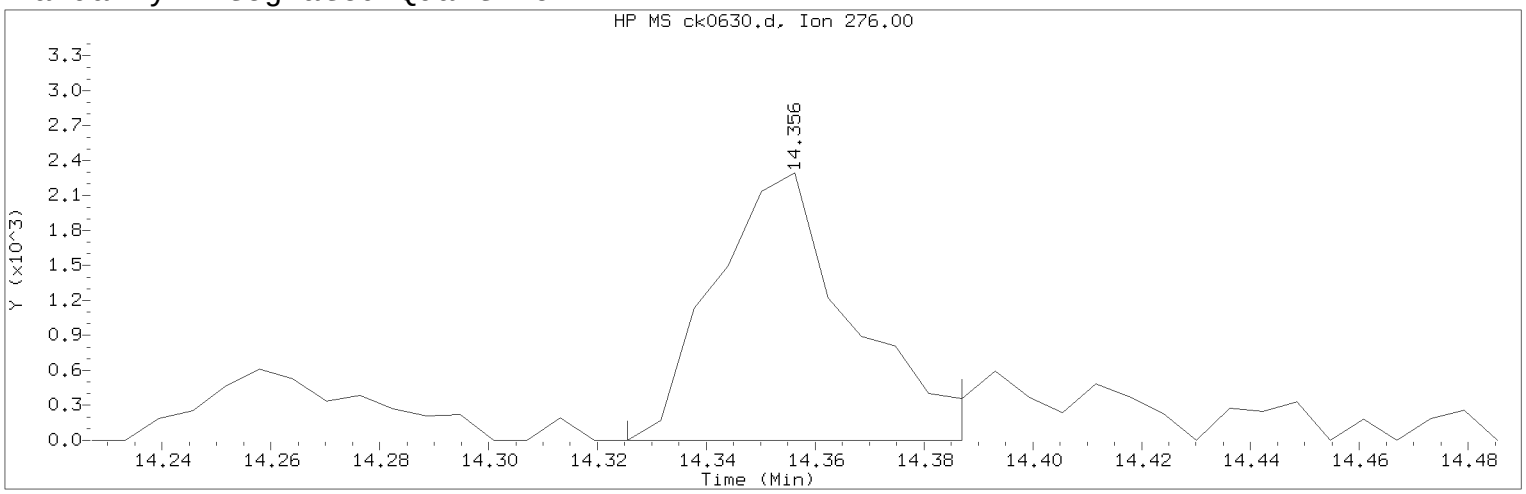
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2029
Retention Time (minutes) : 14.356
Relative Retention Time :-0.00003
Quant Ion : 276.00
Area (flag) : 4027M
On-column Amount (ng/ul) : 0.1146

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

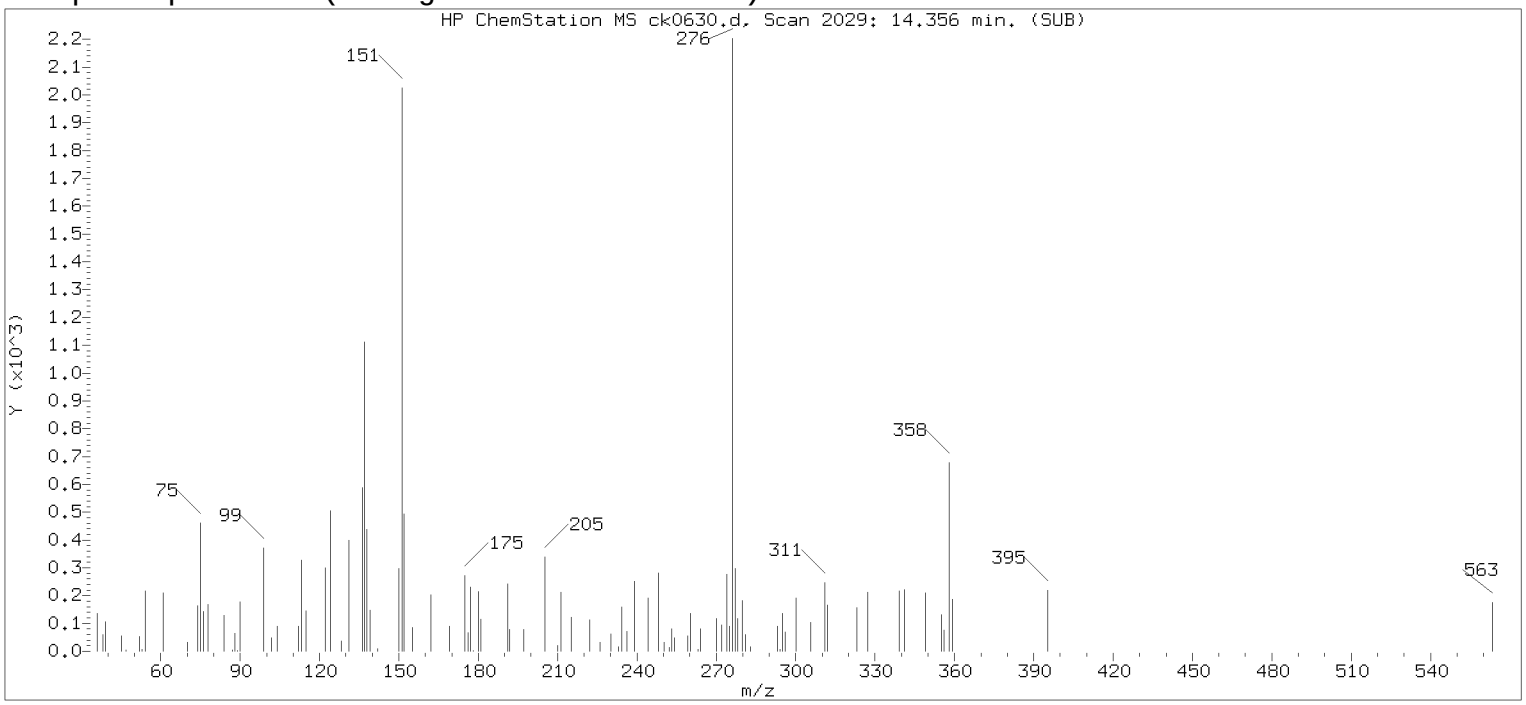
Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2029
Retention Time (minutes) : 14.356
Quant Ion : 276.00
Area (flag) : 4027M
On-column Amount (ng/ul) : 0.1146
Integration start scan : 2023 Integration stop scan: 2033
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

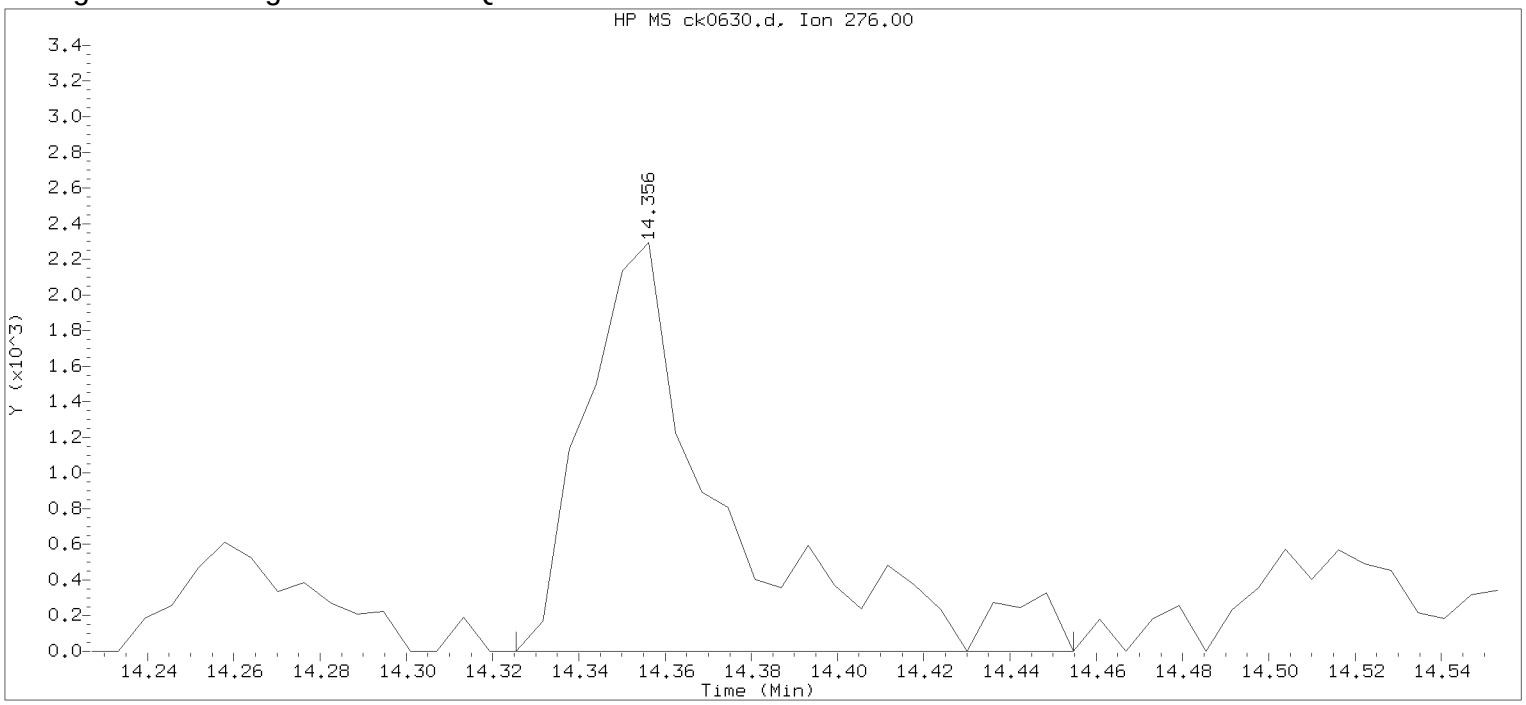
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

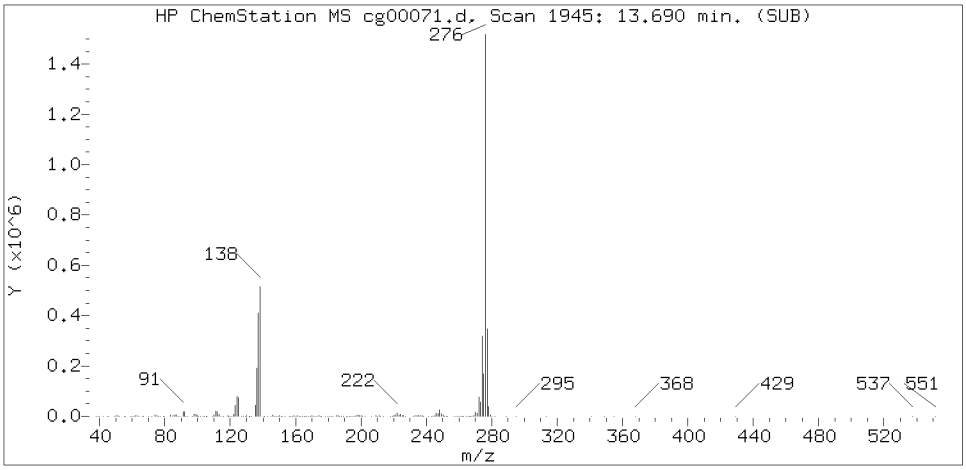
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

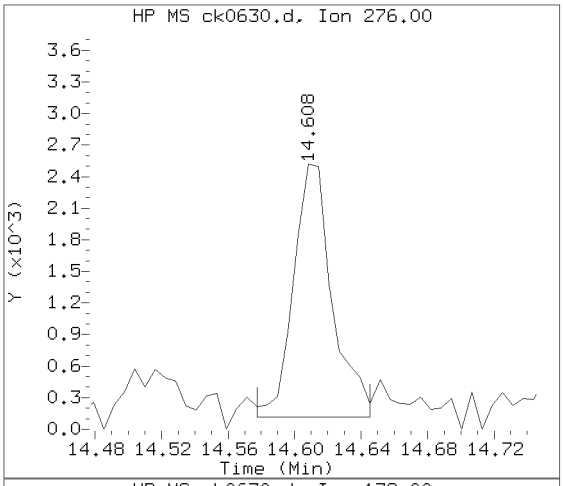
Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 177		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 2029		
Retention Time (minutes)	: 14.356		
Quant Ion	: 276.00		
Area	: 5187		
On-column Amount (ng/ul)	: 0.1477		
Integration start scan	: 2023	Integration stop scan:	2044
Y at integration start	: 0	Y at integration end:	0

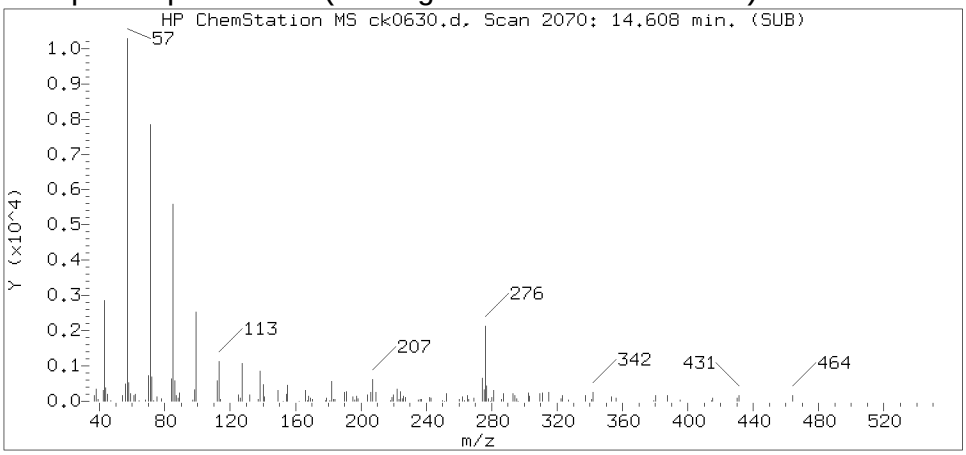
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user KVM06 jmg00346

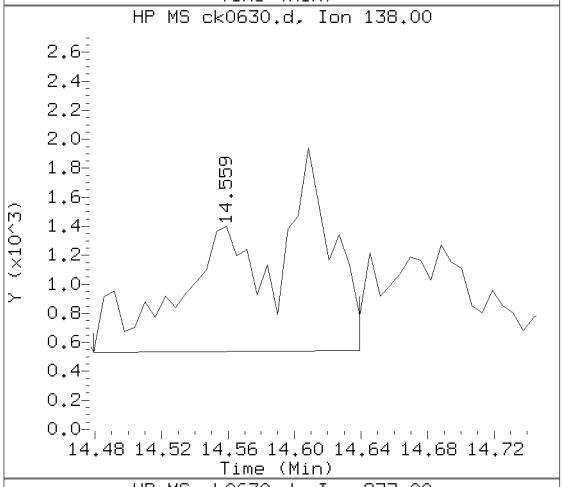
Reference Standard Spectrum for Benzo(g,h,i)perylene



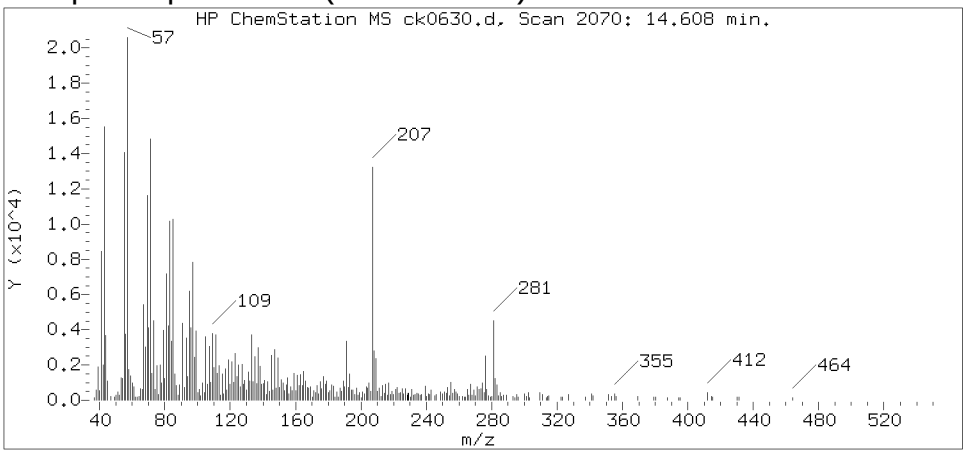


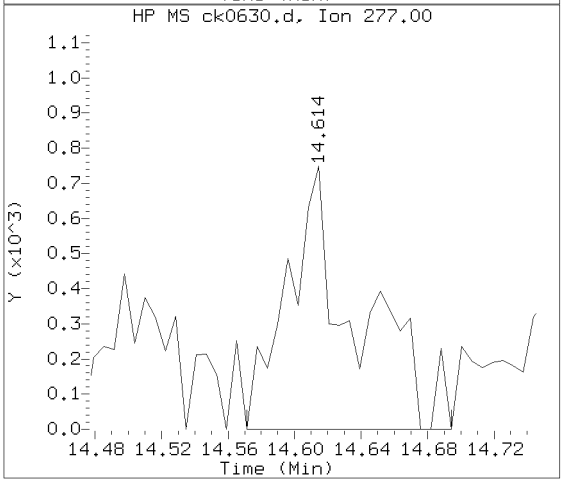
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

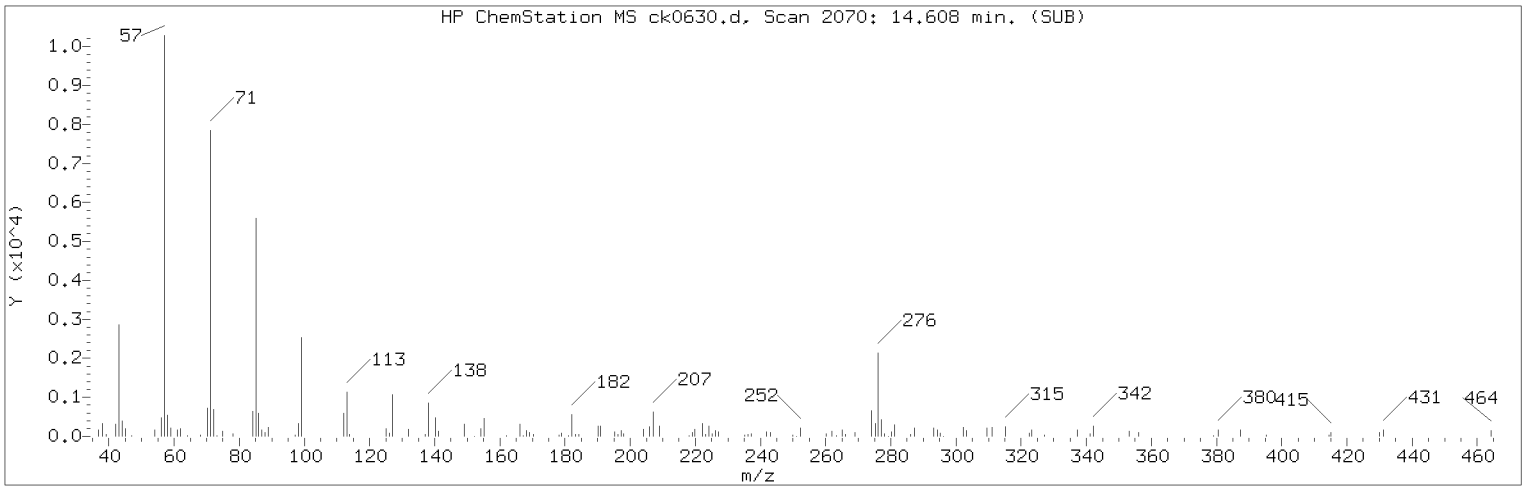
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

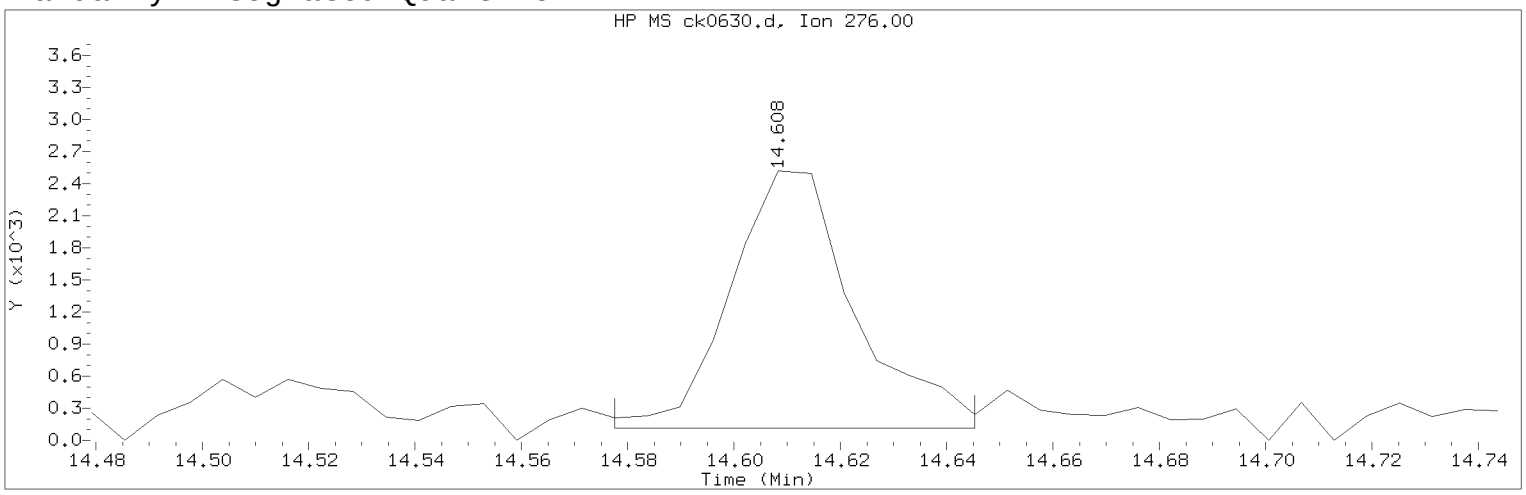
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2070
Retention Time (minutes)	: 14.608
Relative Retention Time	: 0.00042
Quant Ion	: 276.00
Area (flag)	: 3916M
On-column Amount (ng/ul)	: 0.1309

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:47 jmg00346

Sample Name: 2E101 Lab Sample ID: 7266814

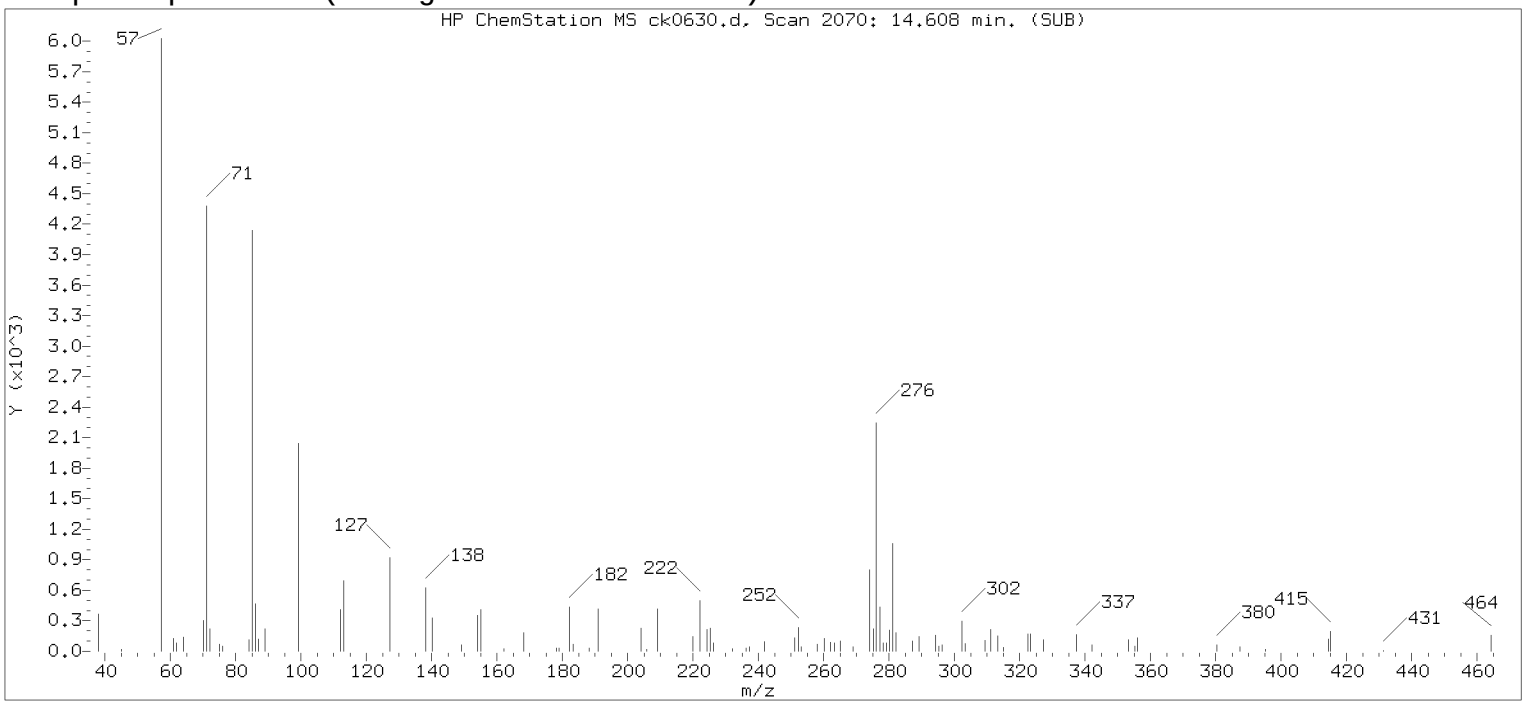
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2070
Retention Time (minutes) : 14.608
Quant Ion : 276.00
Area (flag) : 3916M
On-column Amount (ng/ul) : 0.1309
Integration start scan : 2064 Integration stop scan: 2075
Y at integration start : 116 Y at integration end: 116

Reason for manual integration: improper integration

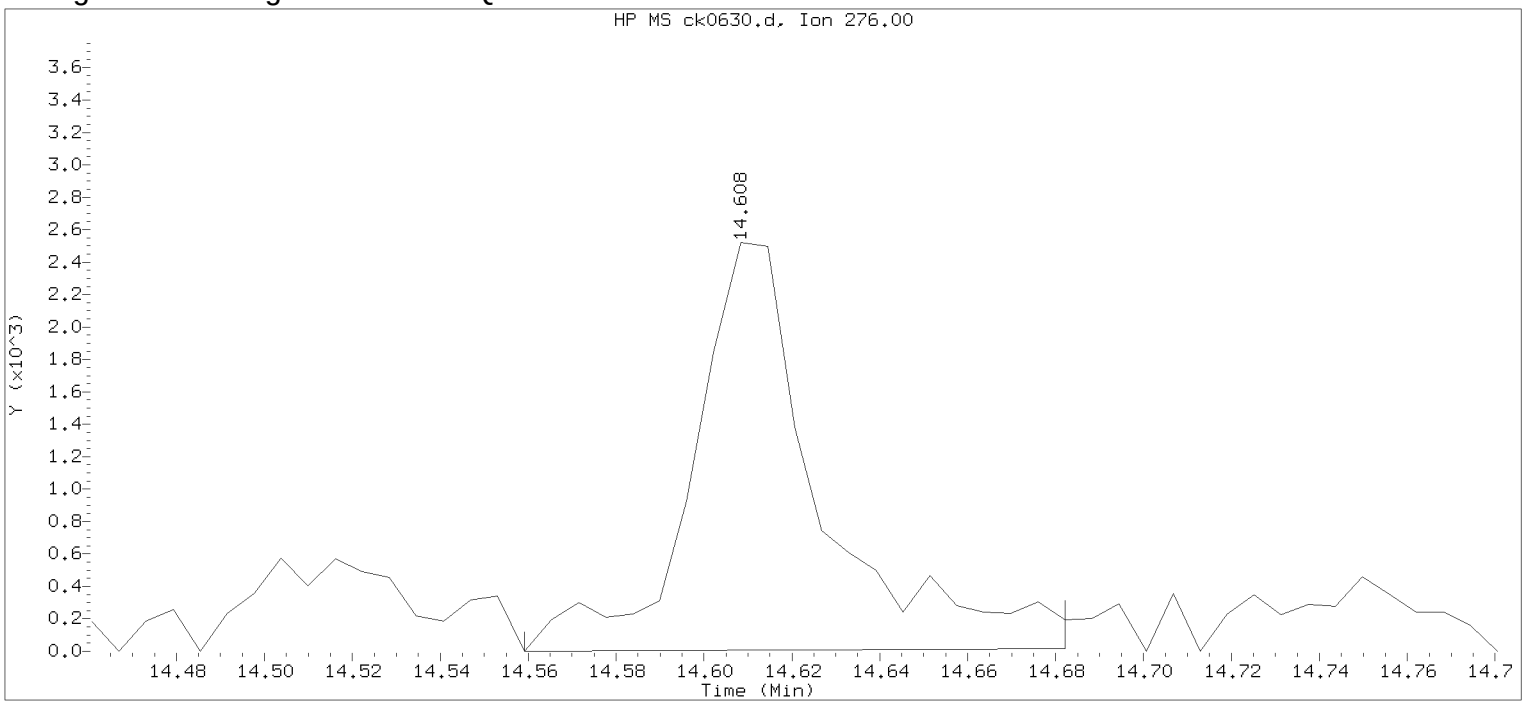
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:24.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0630.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:31 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 09:58 Automation

Sample Name: 2E101 Lab Sample ID: 7266814

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2070		
Retention Time (minutes)	: 14.608		
Quant Ion	: 276.00		
Area	: 5151		
On-column Amount (ng/ul)	: 0.1721		
Integration start scan	: 2061	Integration stop scan:	2081
Y at integration start	: 0	Y at integration end:	17

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:25.
Target 3.5 esignature user KVM06 jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0638.d
Data file Sample Info. Line: 2E102;7266818;2;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Injection date and time: **18-NOV-2013 12:50**
Instrument ID: **HP10623.i** Batch: **13316SLC**

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	105111 (5)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	493164 (6)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	298644 (3)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	547847 (3)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	676438 (4)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	577510 (0)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.595(0.000)	82	162678	15.311	77%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	320996	17.094	85%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	404257	16.717	84%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.314(-0.000)	128	4374M	0.167	55.72			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	2328M	0.125	41.79			0.1
71) 1-Methylnaphthalene	(2)	7.082(0.000)	142	2140M	0.126	41.99			0.1
95) Acenaphthylene	(3)	7.857(-0.000)	152	5049M	0.192	63.97			0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)	9.456(0.000)	178	10317	0.324	107.96			0.1
138) Anthracene	(4)	9.505(0.000)	178	6143	0.187	62.45			0.1
147) Fluoranthene	(4)	10.612(0.000)	202	25217	0.708	235.99			0.1
154) Pyrene	(5)	10.827(0.000)	202	28160	0.750	249.88			0.1
166) Benzo(a)anthracene	(5)	11.995(0.000)	228	16319	0.471	157.00			0.1
168) Chrysene	(5)	12.032(0.000)	228	23552	0.705	235.01			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	27546M	0.781	260.39			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	10908M	0.303	101.07			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	15247M	0.443	147.67			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.362(0.000)	276	10237	0.280	93.19			0.1
178) Dibenz(a,h)anthracene	(6)	14.381(0.000)	278	3709M	0.121	40.36			0.1
179) Benzo(g,h,i)perylene	(6)	14.614(0.000)	276	9307M	0.298	99.46			0.1

M = Compound was manually integrated.

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37. Target 3.5 esignature user ID: jmg00346

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP10623.i/13nov18.b/ck0638.d Injection date and time: **18-NOV-2013 12:50**
Data file Sample Info. Line: 2E102;7266818;2;0;SAMPLE;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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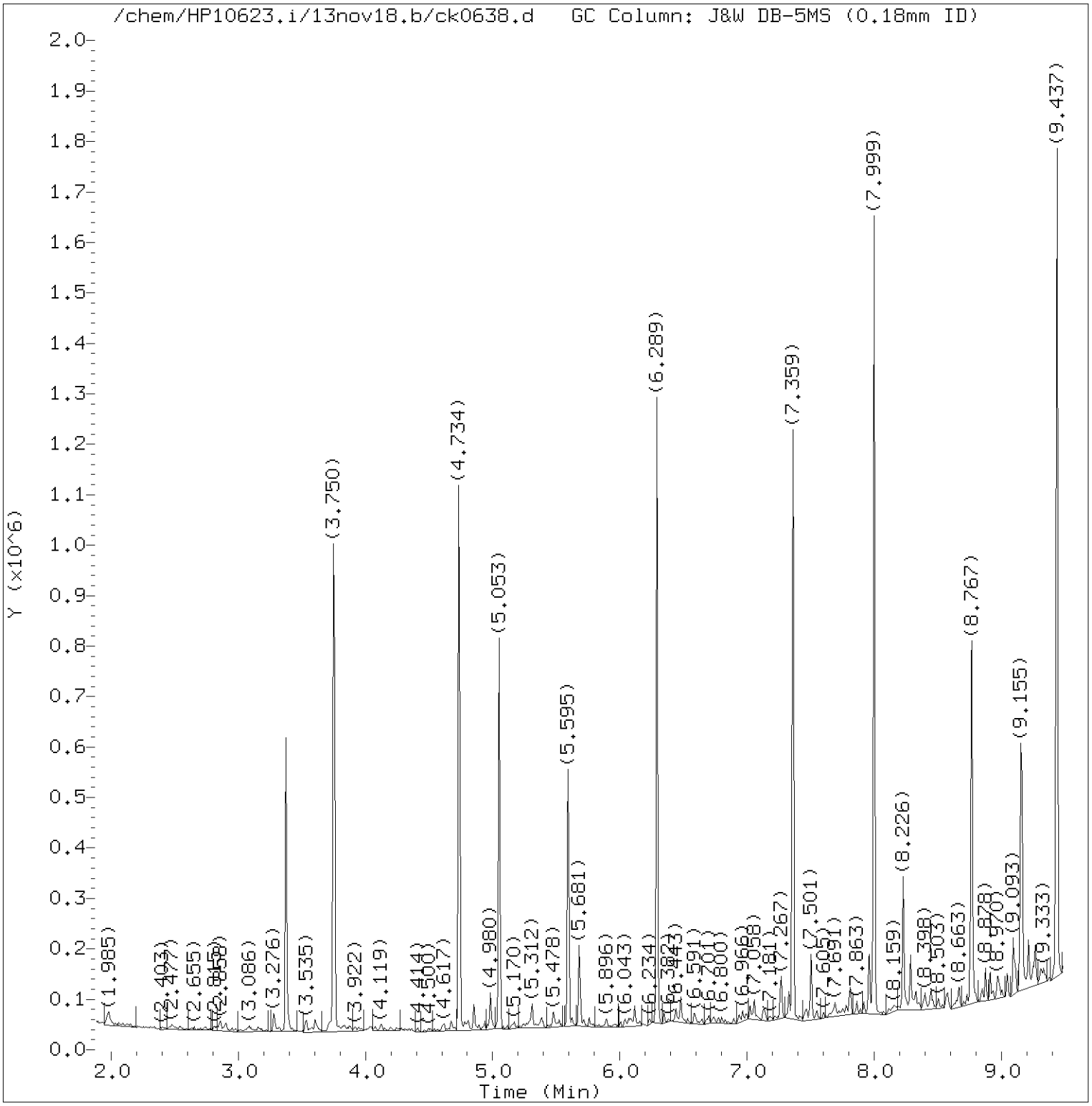
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

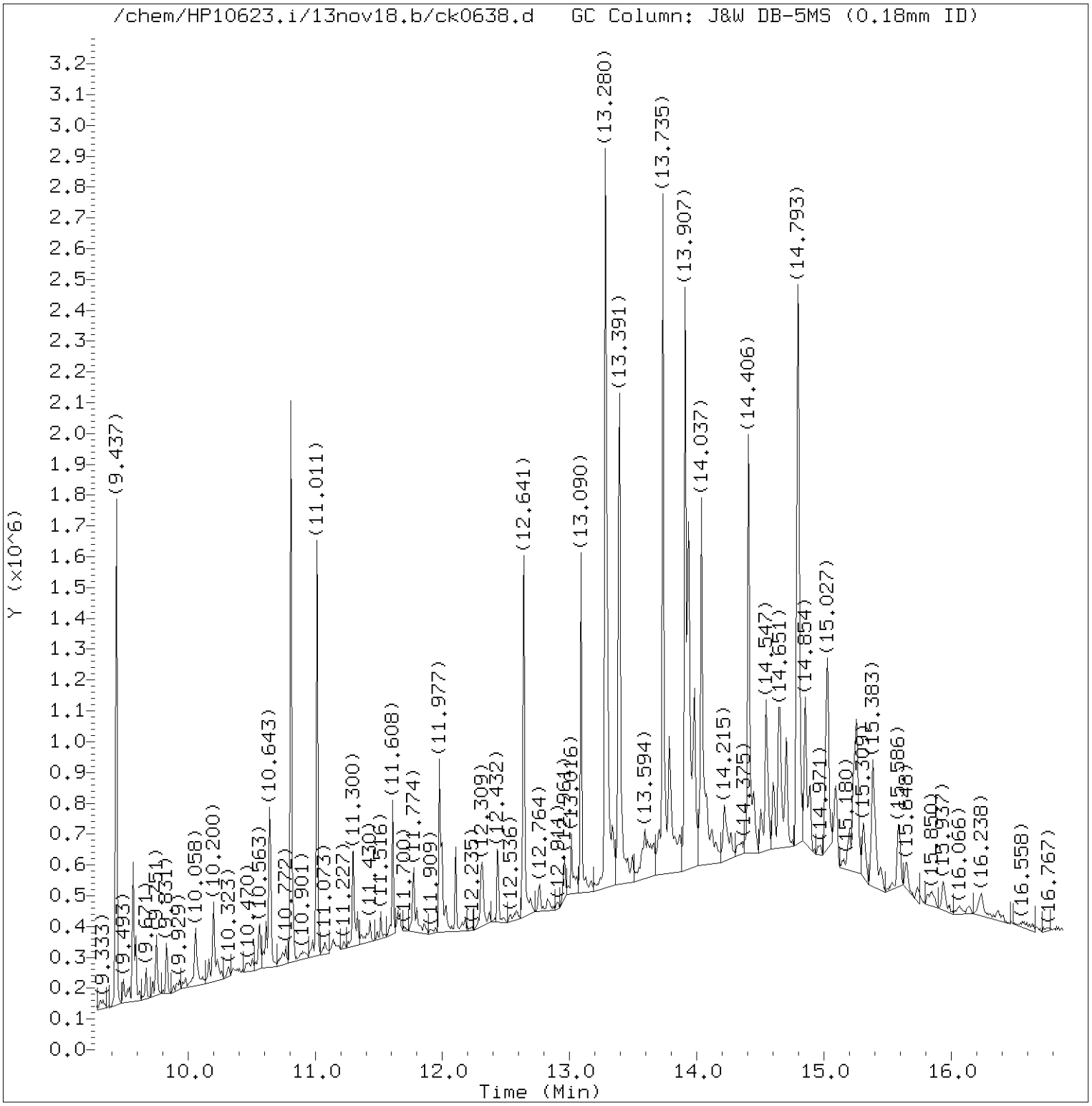
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

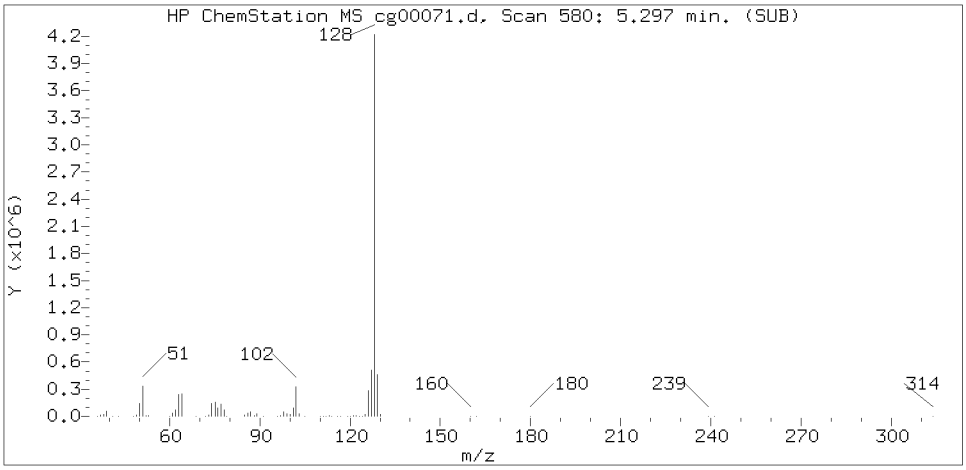
Sample Name: 2E102 Lab Sample ID: 7266818

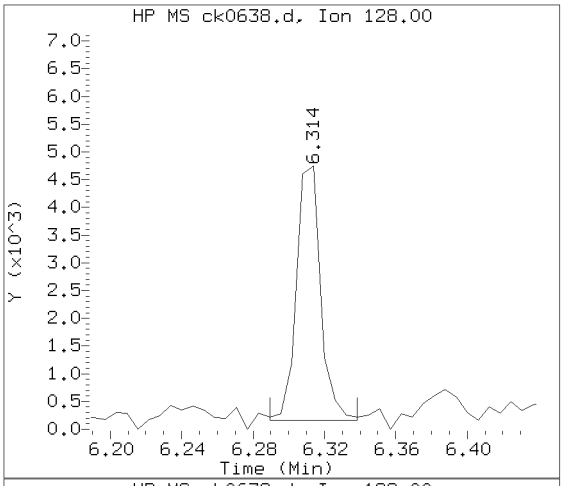
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	105111	20.000
38)$Nitrobenzene-d5	(2)	5.595	82	162678	15.311
52)*Naphthalene-d8	(2)	6.289	136	493164	20.000
53) Naphthalene	(2)	6.314	128	4374M	0.167
70) 2-Methylnaphthalene	(2)	6.990	142	2328M	0.125
71) 1-Methylnaphthalene	(2)	7.082	142	2140M	0.126
78)$2-Fluorobiphenyl	(3)	7.359	172	320996	17.094
95) Acenaphthylene	(3)	7.857	152	5049M	0.192
98)*Acenaphthene-d10	(3)	7.999	164	298644	20.000
135)*Phenanthrene-d10	(4)	9.437	188	547847	20.000
137) Phenanthrene	(4)	9.456	178	10317	0.324
138) Anthracene	(4)	9.505	178	6143	0.187
147) Fluoranthene	(4)	10.612	202	25217	0.708
167)*Pyrene-d10	(5)	10.809	212	676438	20.000
154) Pyrene	(5)	10.827	202	28160	0.750
156)$Terphenyl-d14	(5)	11.011	244	404257	16.717
166) Benzo(a)anthracene	(5)	11.995	228	16319	0.471
168) Chrysene	(5)	12.032	228	23552	0.705
172) Benzo(b)fluoranthene	(6)	13.034	252	27546M	0.781
173) Benzo(k)fluoranthene	(6)	13.059	252	10908M	0.303
174) Benzo(a)pyrene	(6)	13.336	252	15247M	0.443
175)*Perylene-d12	(6)	13.391	264	577510	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.362	276	10237	0.280
178) Dibenz(a,h)anthracene	(6)	14.381	278	3709M	0.121
179) Benzo(g,h,i)perylene	(6)	14.615	276	9307M	0.298

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

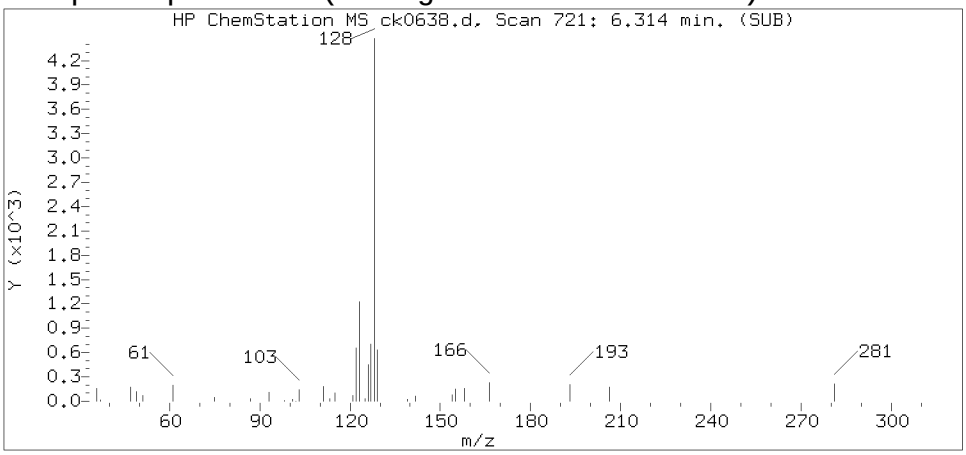
Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

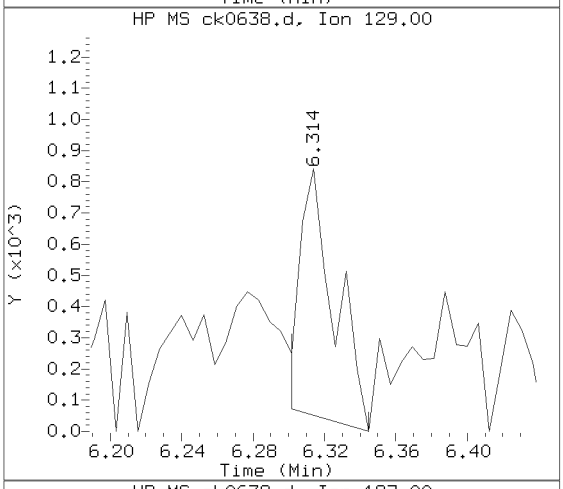
Reference Standard Spectrum for Naphthalene



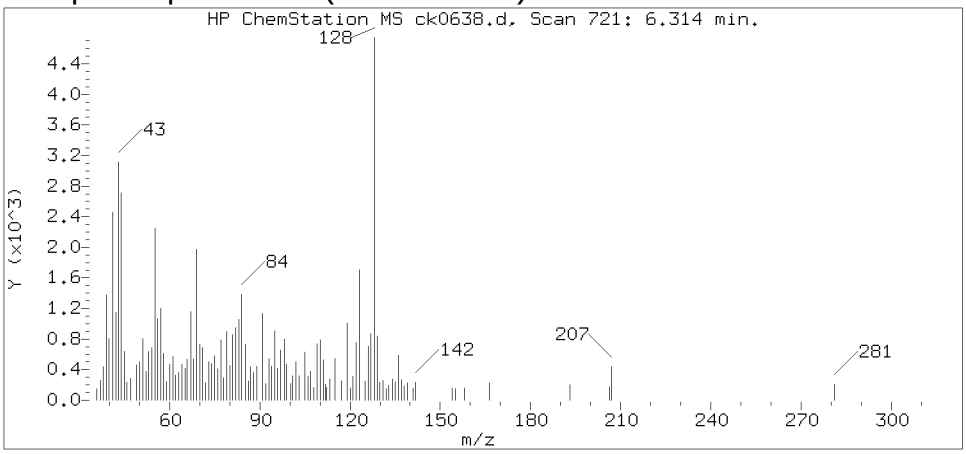


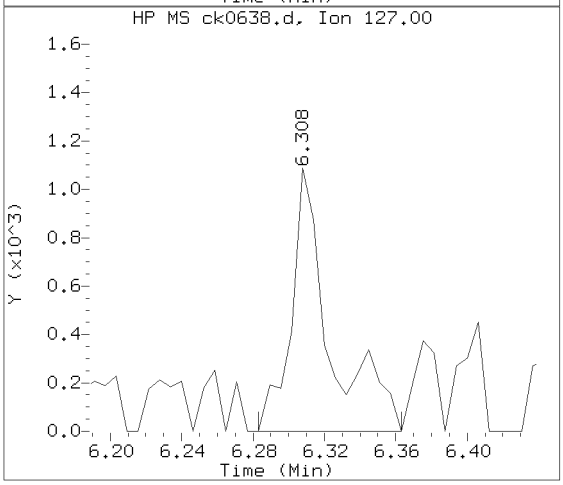
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

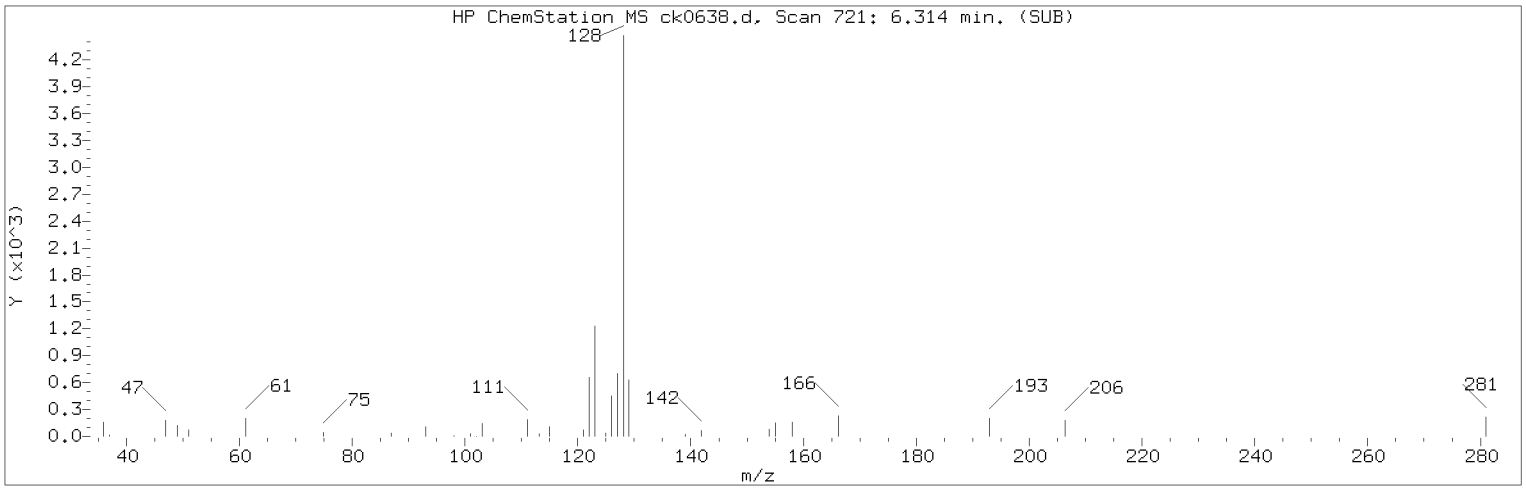
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

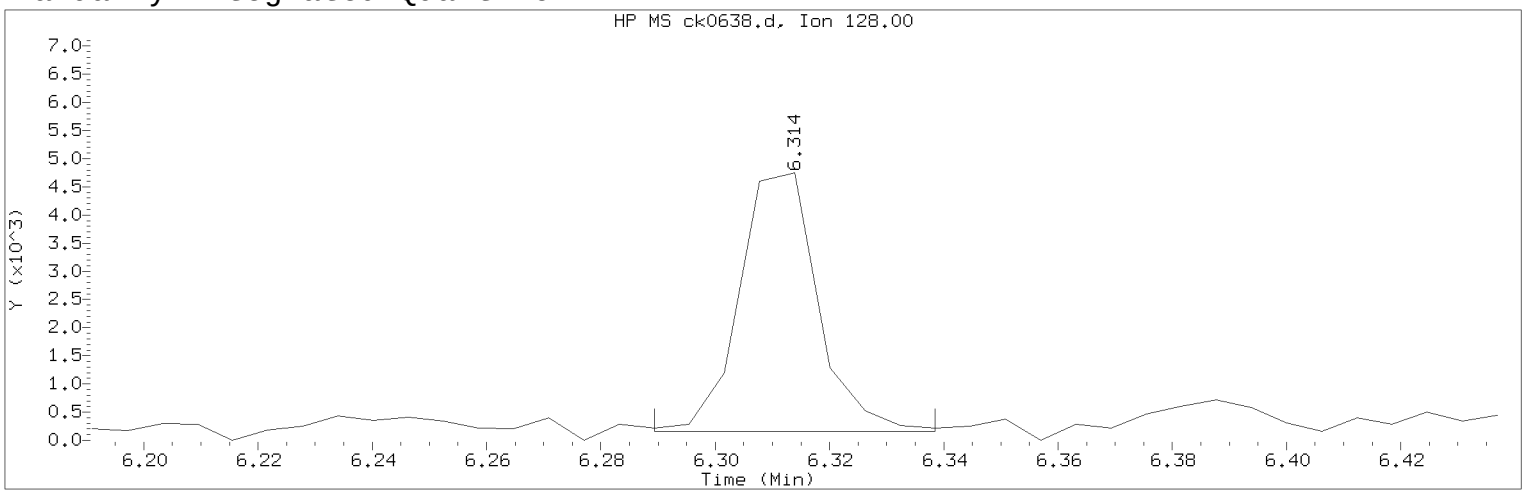
Compound Number : 53
Compound Name : Naphthalene
Scan Number : 721
Retention Time (minutes) : 6.314
Relative Retention Time :-0.00098
Quant Ion : 128.00
Area (flag) : 4374M
On-column Amount (ng/ul) : 0.1672

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

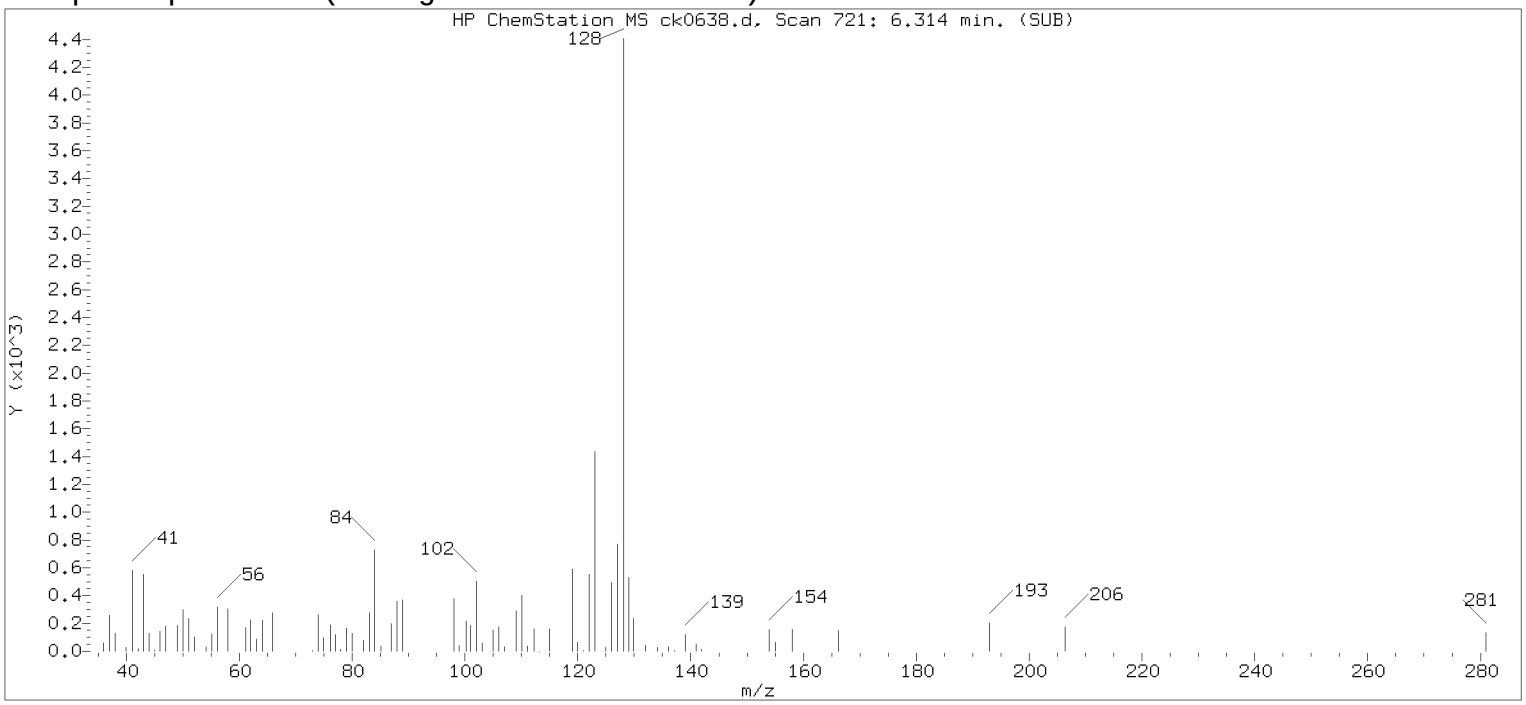
Compound Number : 53
Compound Name : Naphthalene
Scan Number : 721
Retention Time (minutes) : 6.314
Quant Ion : 128.00
Area (flag) : 4374M
On-column Amount (ng/ul) : 0.1672
Integration start scan : 716 Integration stop scan: 724
Y at integration start : 163 Y at integration end: 163

Reason for manual integration: improper integration

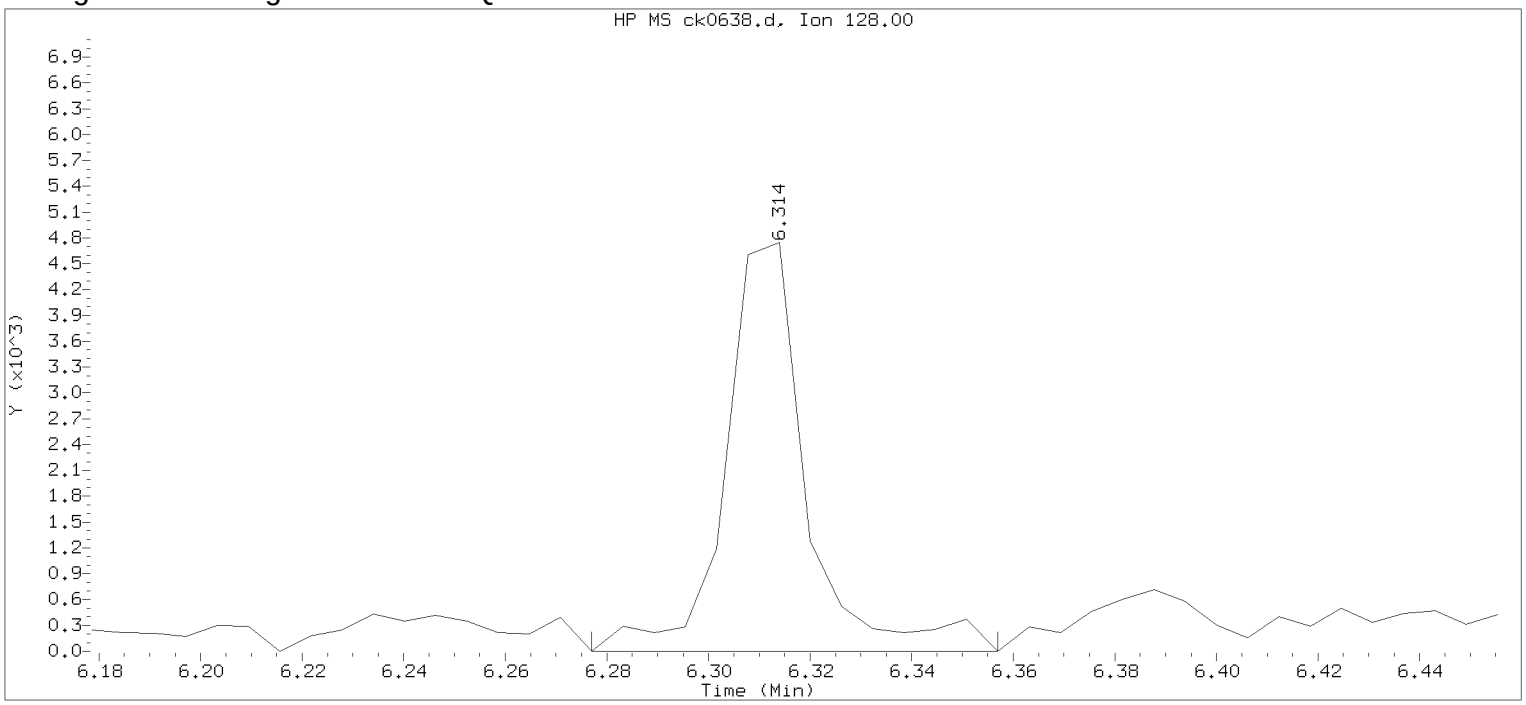
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

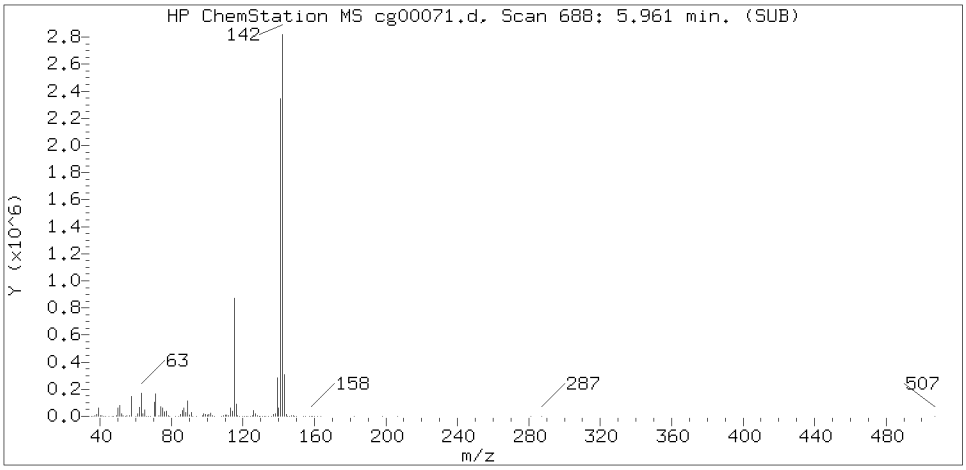
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

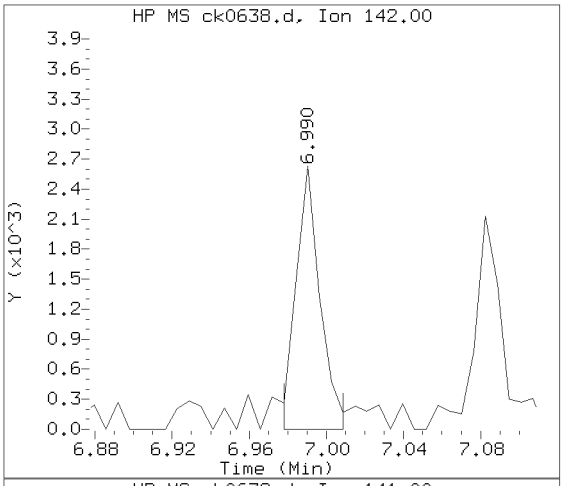
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 53		
Compound Name	: Naphthalene		
Scan Number	: 721		
Retention Time (minutes)	: 6.314		
Quant Ion	: 128.00		
Area	: 5252		
On-column Amount (ng/ul)	: 0.2007		
Integration start scan	: 714	Integration stop scan:	727
Y at integration start	: 0	Y at integration end:	0

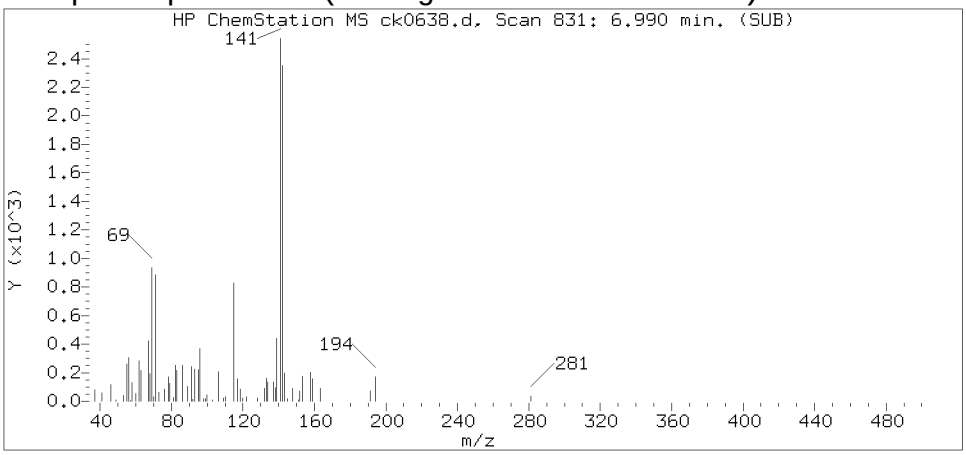
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

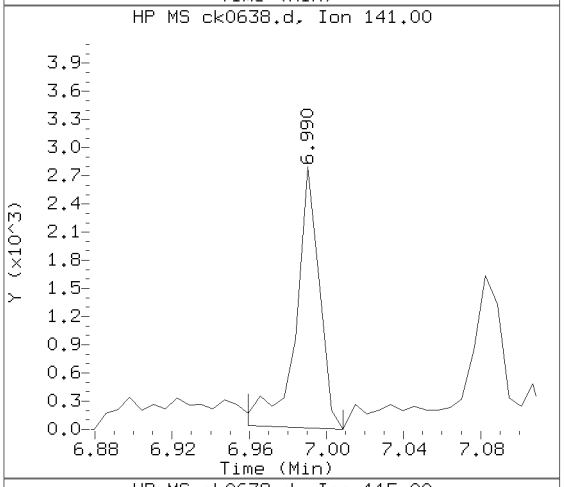
Reference Standard Spectrum for 2-Methylnaphthalene



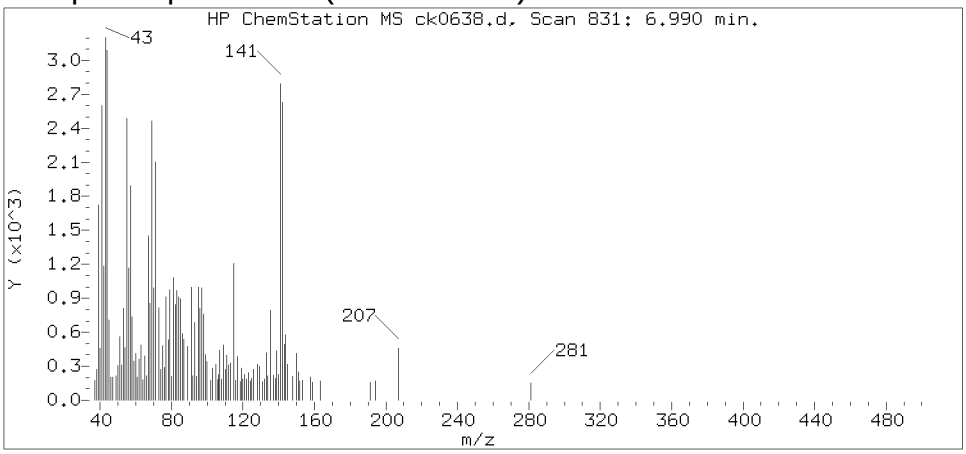


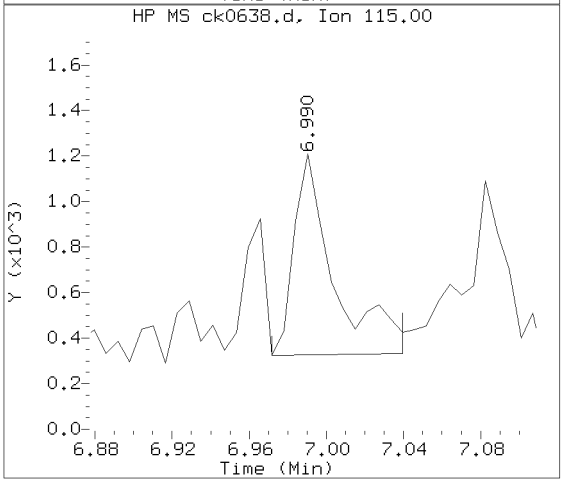
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

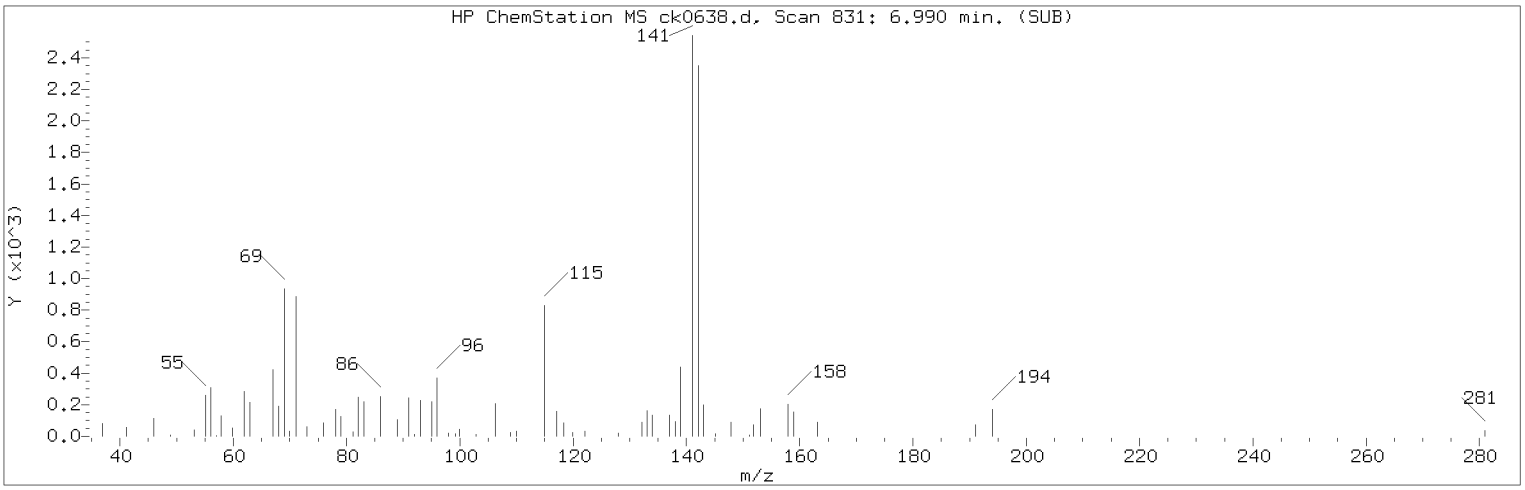
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

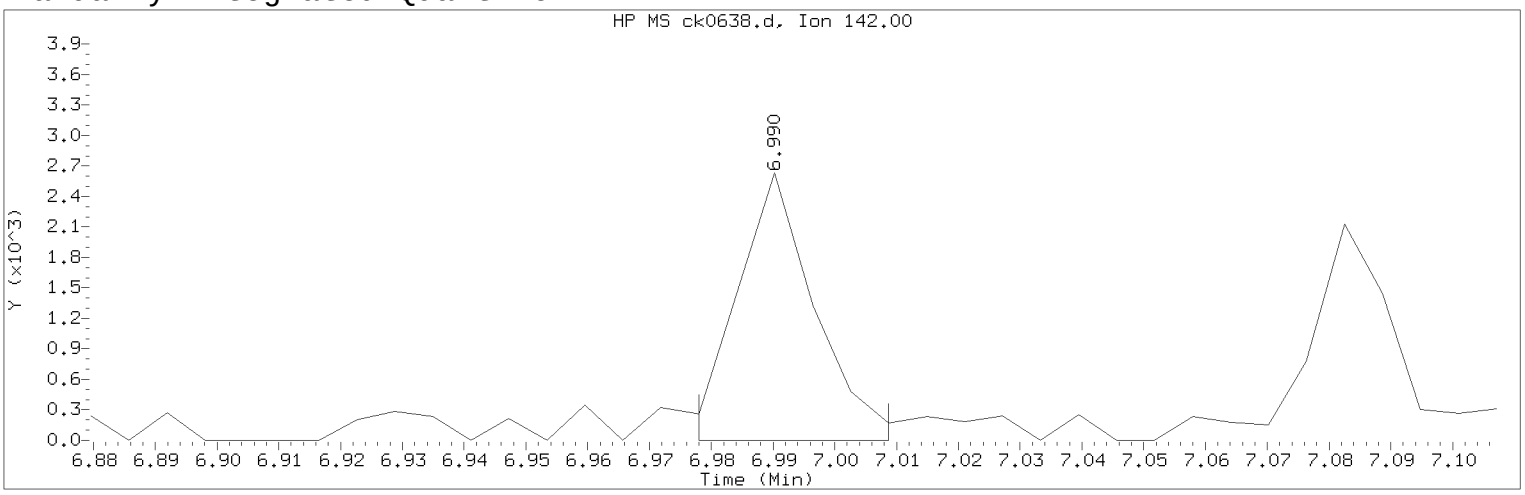
Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 831
Retention Time (minutes) : 6.990
Relative Retention Time : 0.00001
Quant Ion : 142.00
Area (flag) : 2328M
On-column Amount (ng/ul) : 0.1254

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

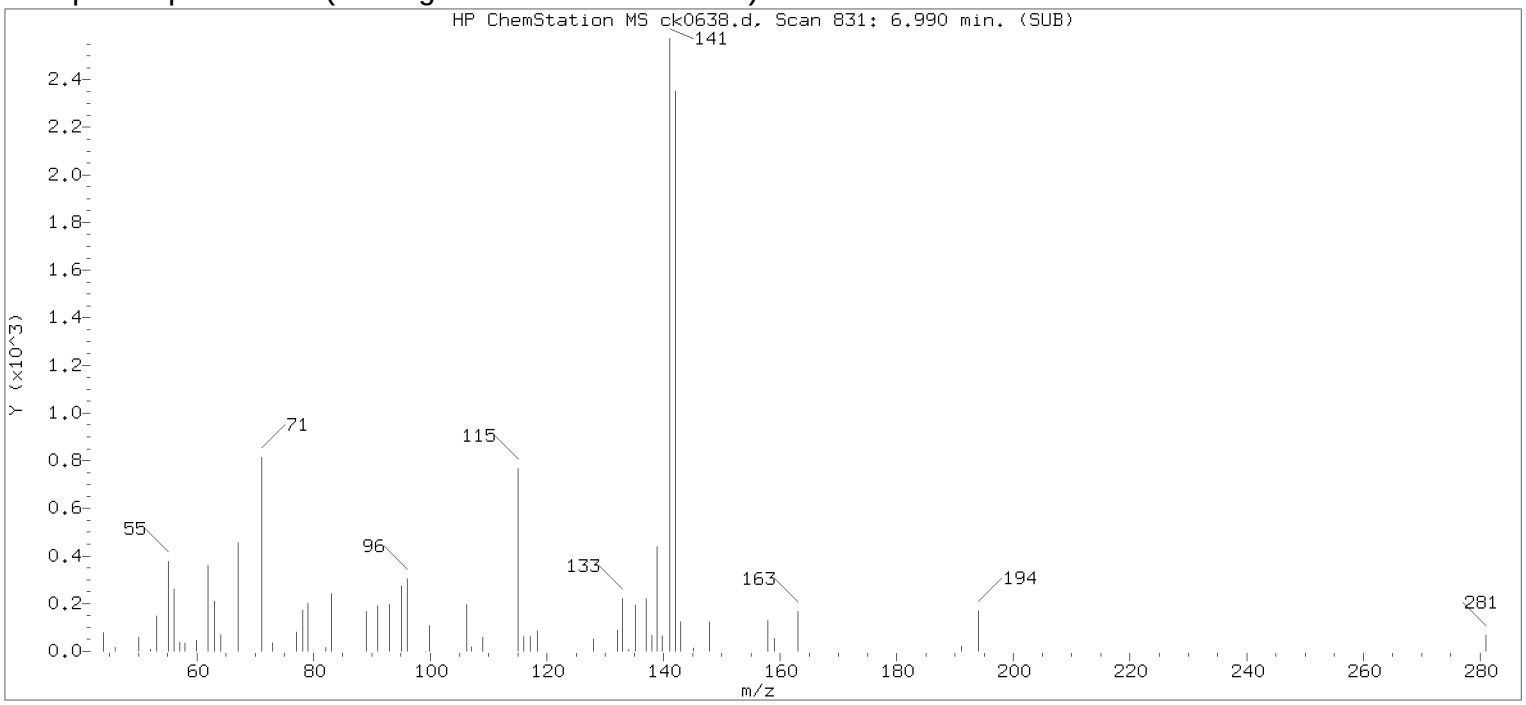
Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 831
Retention Time (minutes) : 6.990
Quant Ion : 142.00
Area (flag) : 2328M
On-column Amount (ng/ul) : 0.1254
Integration start scan : 828 Integration stop scan: 833
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

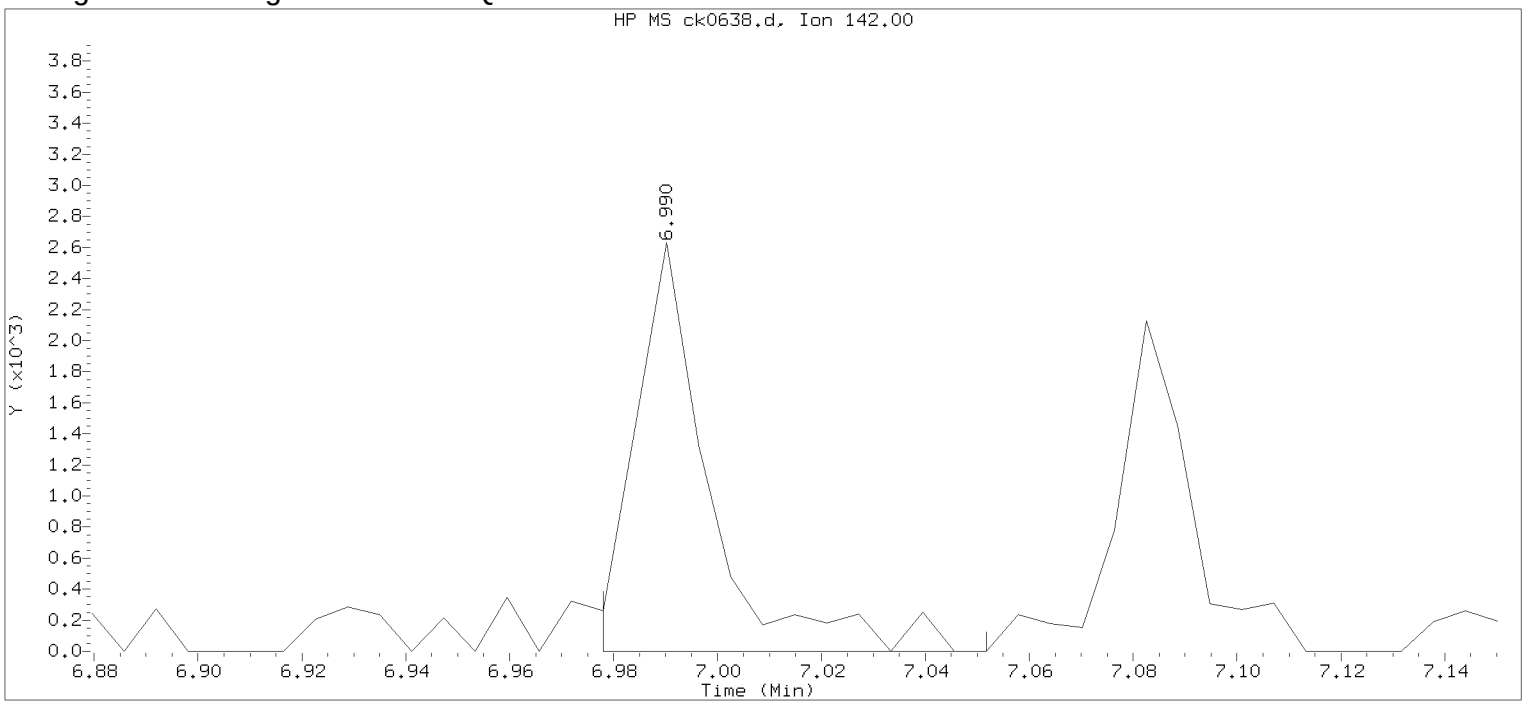
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

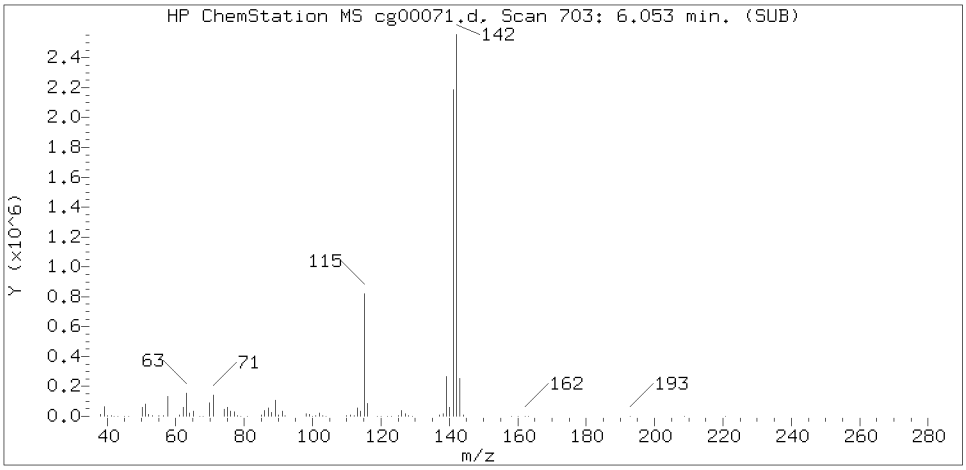
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

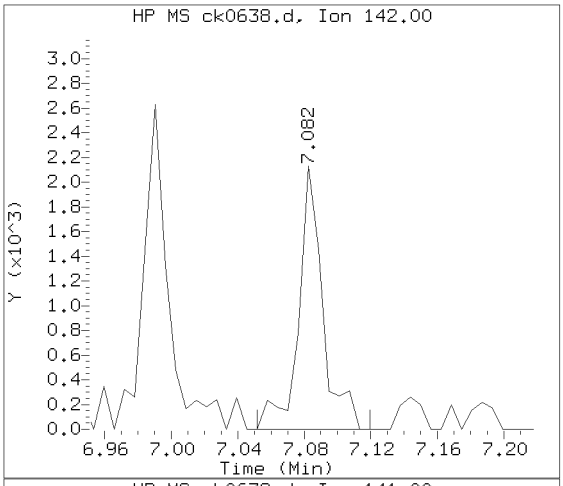
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number : 70
Compound Name : 2-Methylnaphthalene
Scan Number : 831
Retention Time (minutes) : 6.990
Quant Ion : 142.00
Area : 2616
On-column Amount (ng/ul) : 0.1409
Integration start scan : 828 Integration stop scan: 840
Y at integration start : 0 Y at integration end: 0

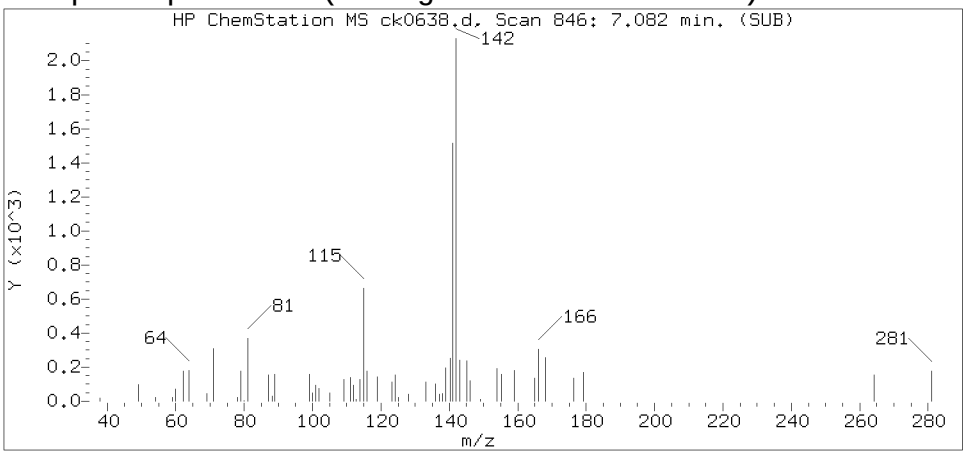
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

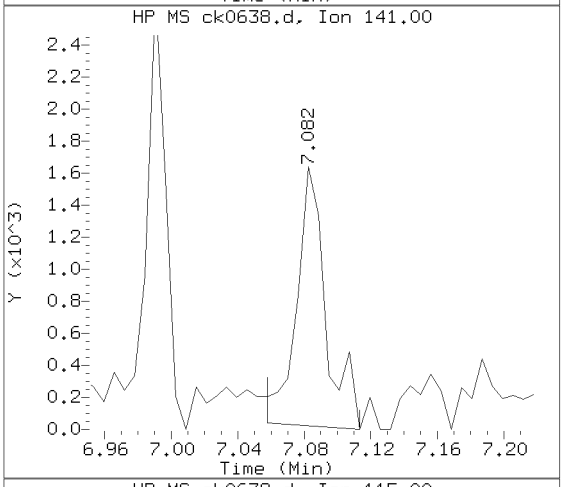
Reference Standard Spectrum for 1-Methylnaphthalene



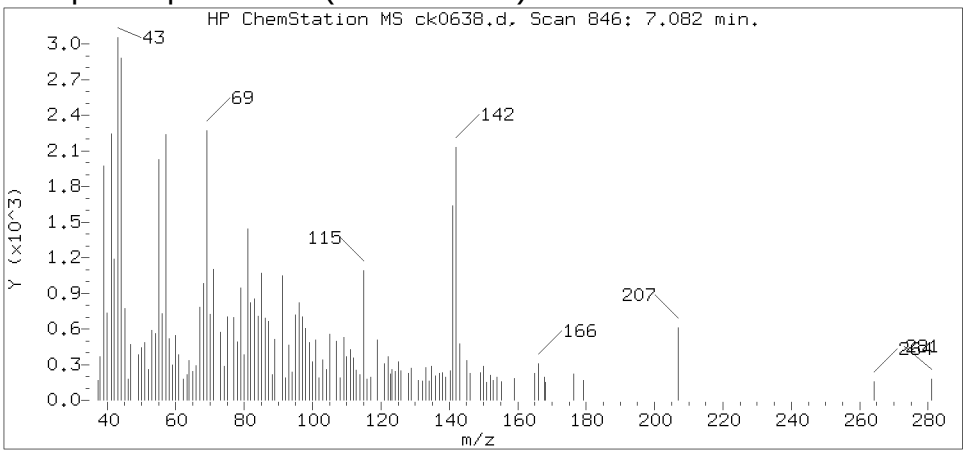


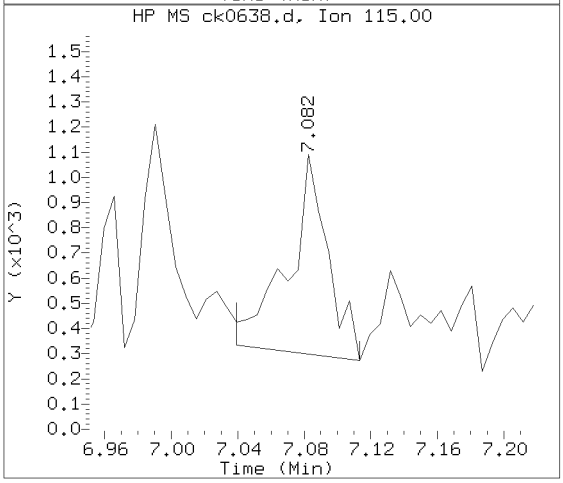
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

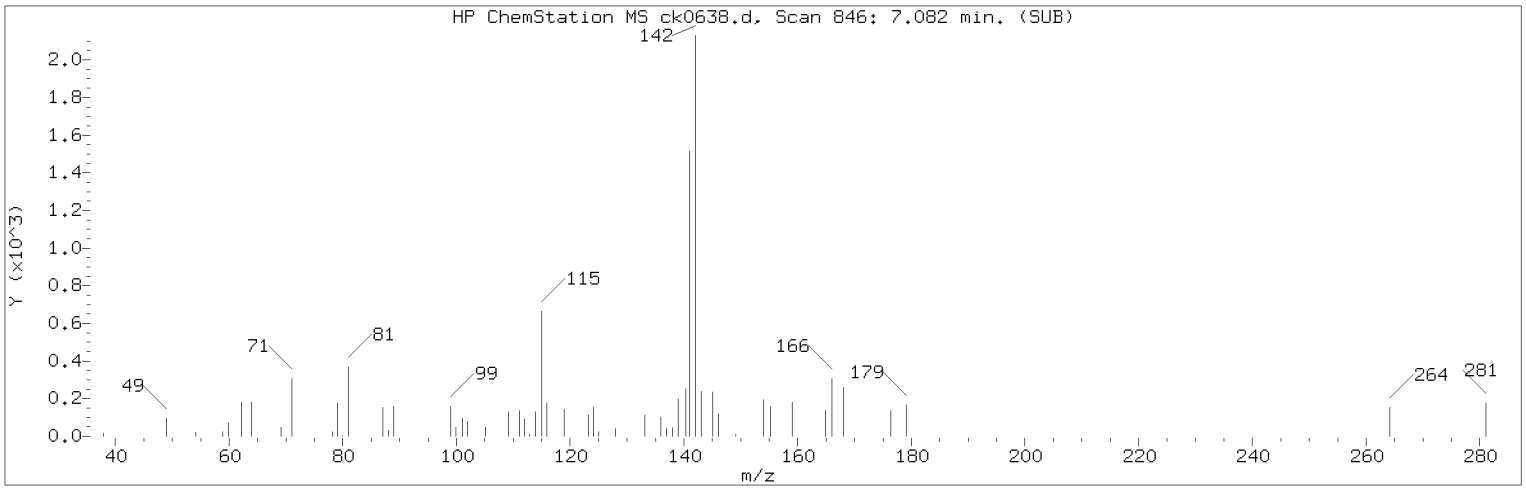
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

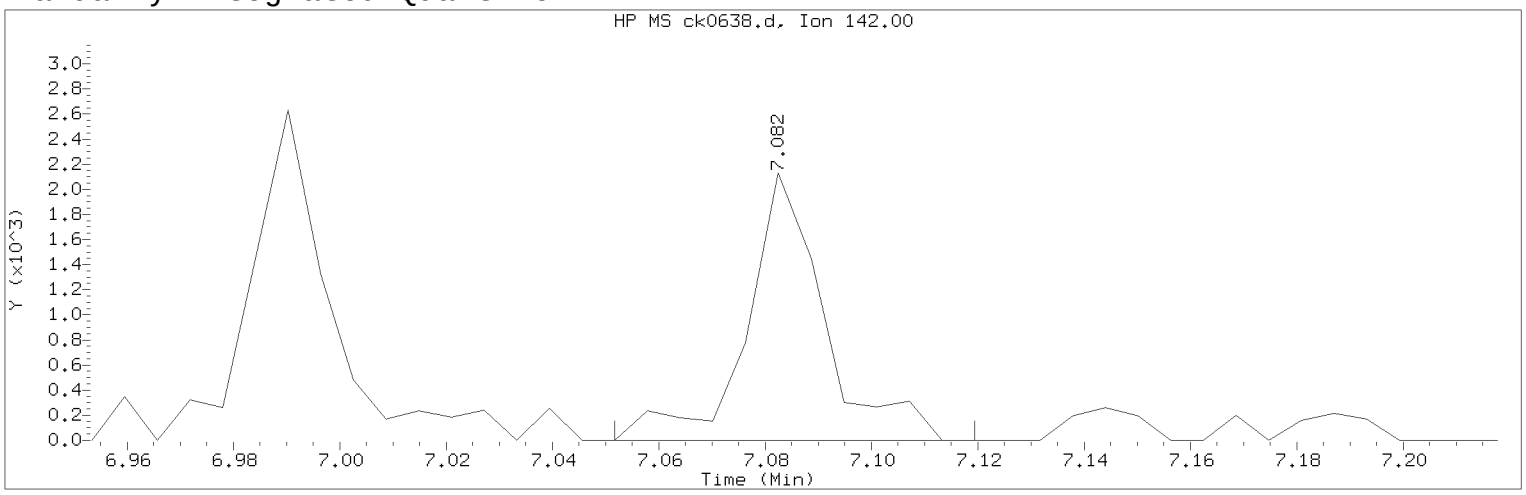
Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 846
Retention Time (minutes)	: 7.082
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 2140M
On-column Amount (ng/ul)	: 0.1260

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

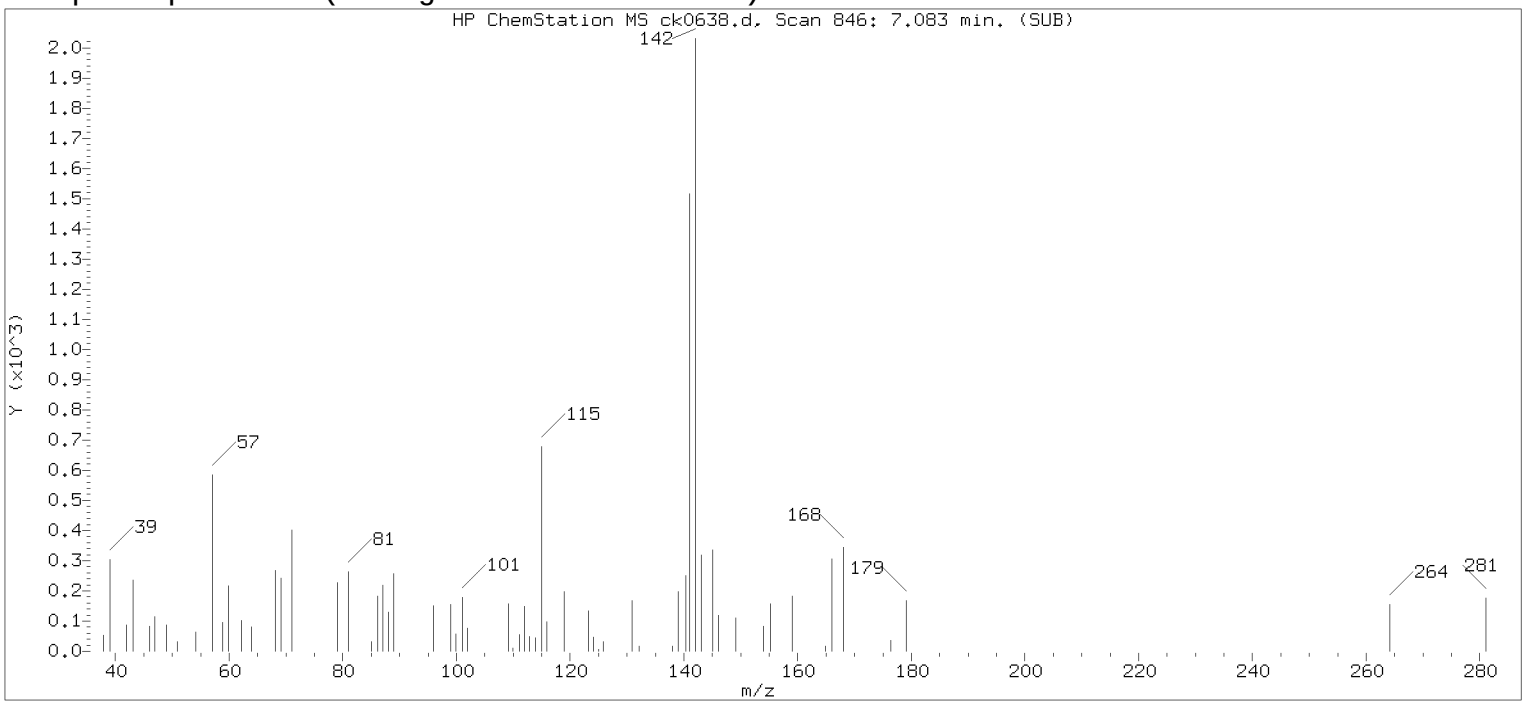
Compound Number : 71
Compound Name : 1-Methylnaphthalene
Scan Number : 846
Retention Time (minutes) : 7.082
Quant Ion : 142.00
Area (flag) : 2140M
On-column Amount (ng/ul) : 0.1260
Integration start scan : 840 Integration stop scan: 851
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

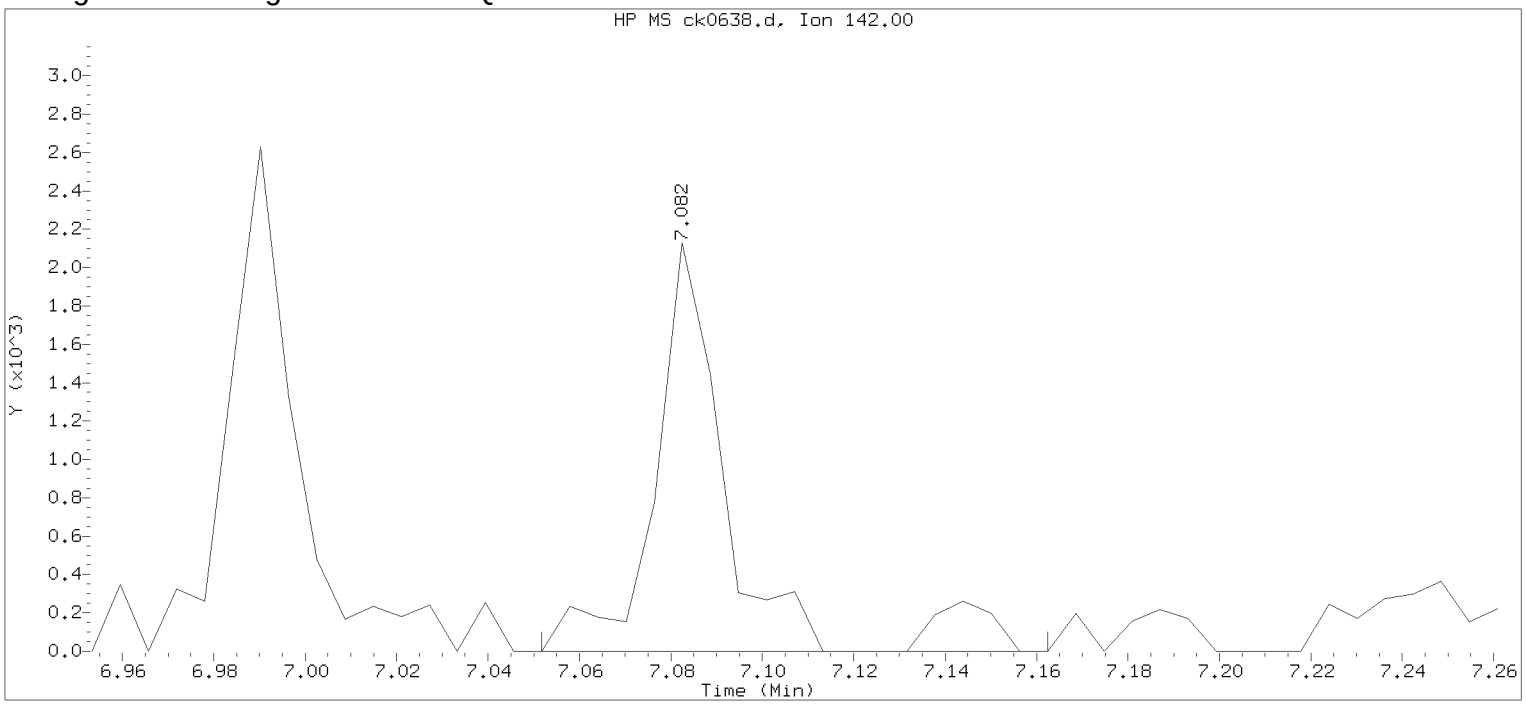
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

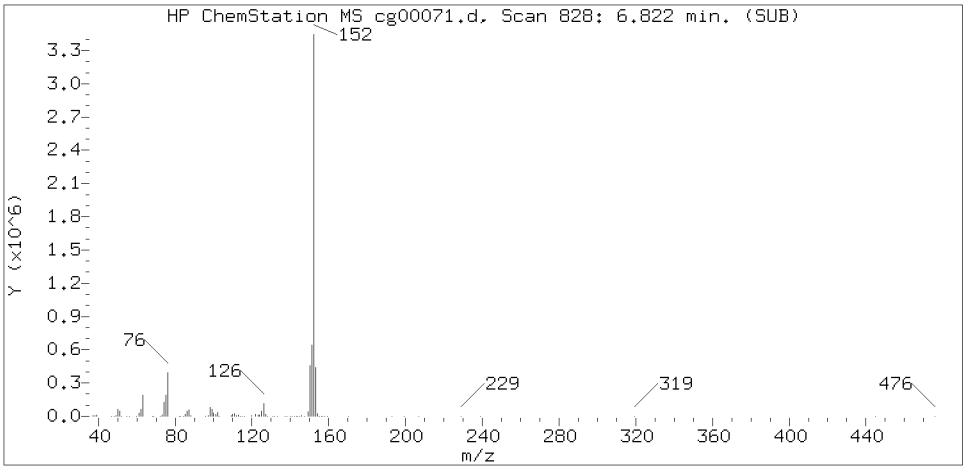
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

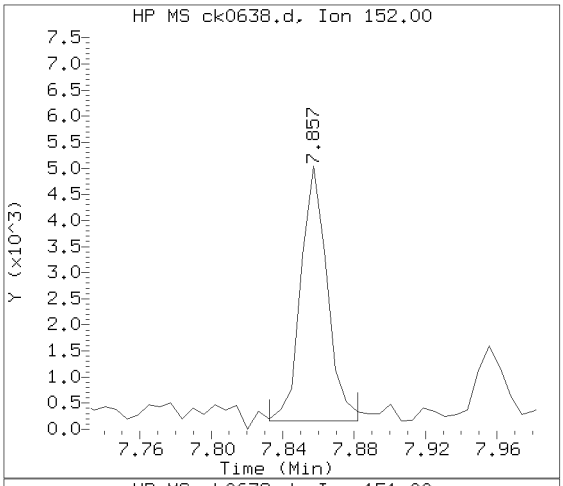
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 71
Compound Name	: 1-Methylnaphthalene
Scan Number	: 846
Retention Time (minutes)	: 7.082
Quant Ion	: 142.00
Area	: 2379
On-column Amount (ng/ul)	: 0.1401
Integration start scan	: 840 Integration stop scan: 858
Y at integration start	: 0 Y at integration end: 0

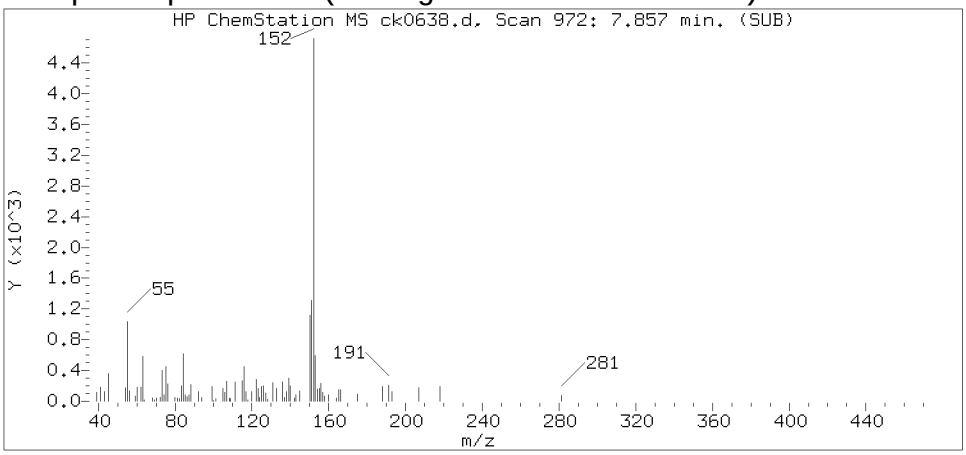
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

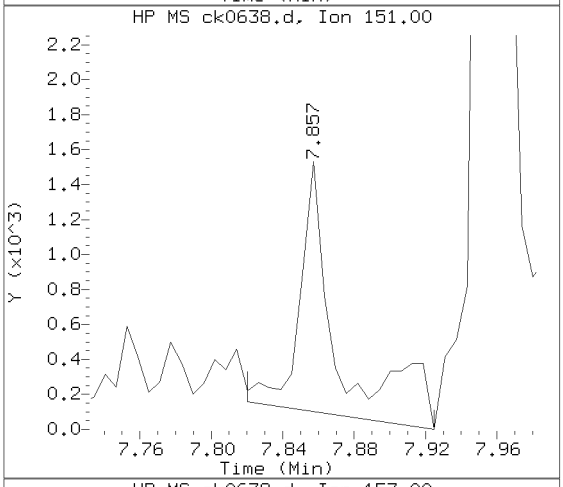
Reference Standard Spectrum for Acenaphthylene



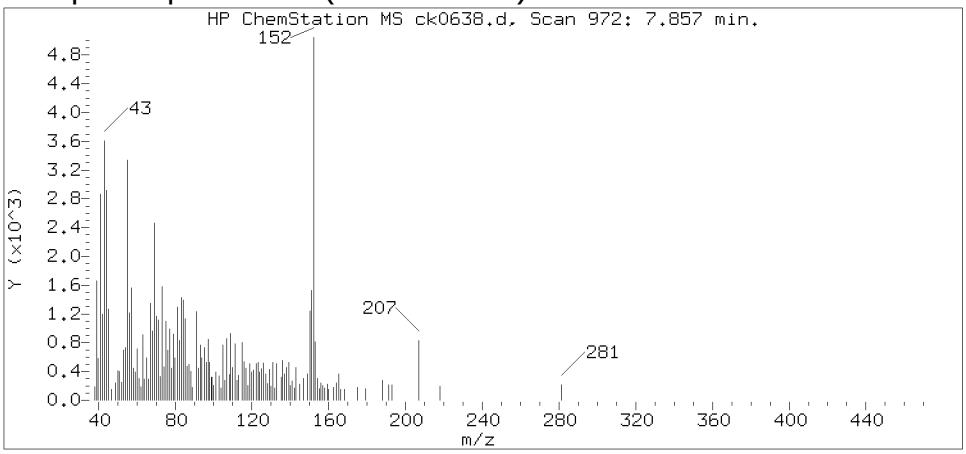


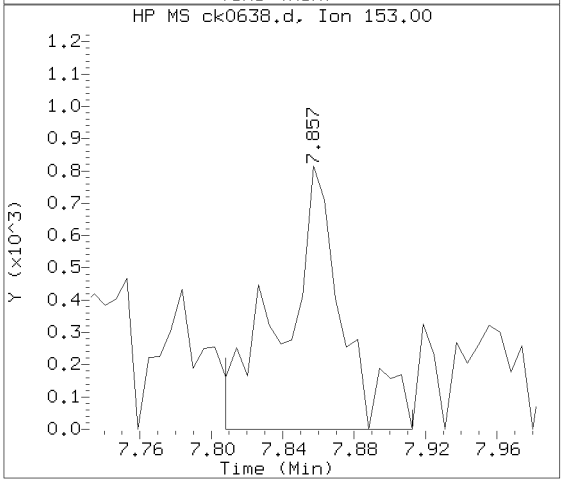
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

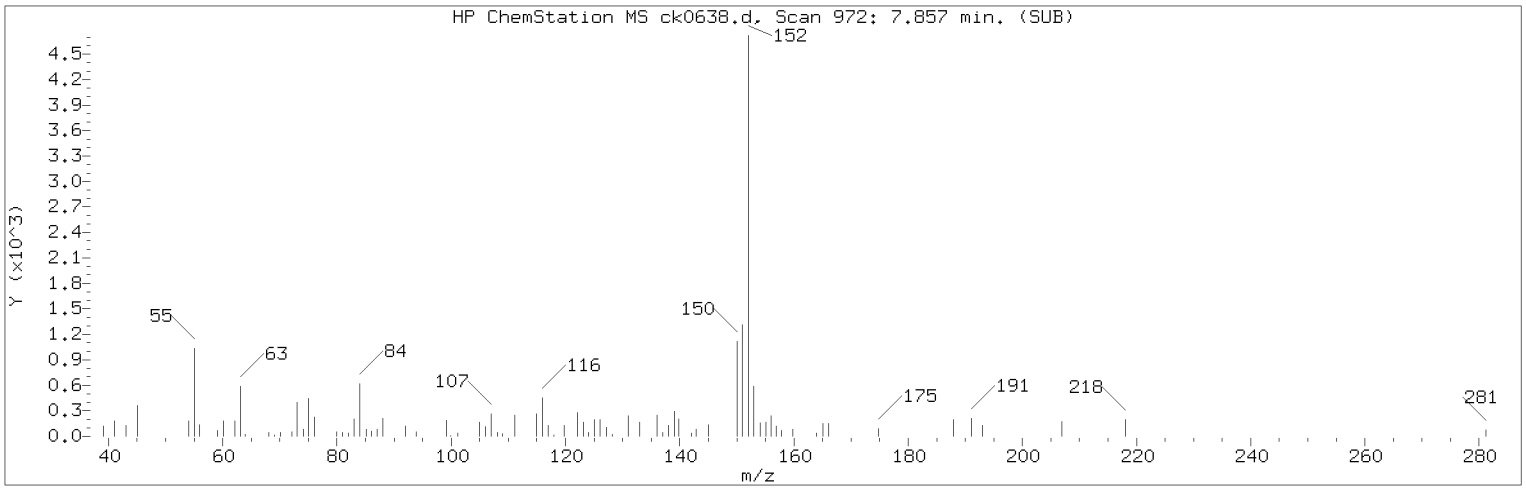
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

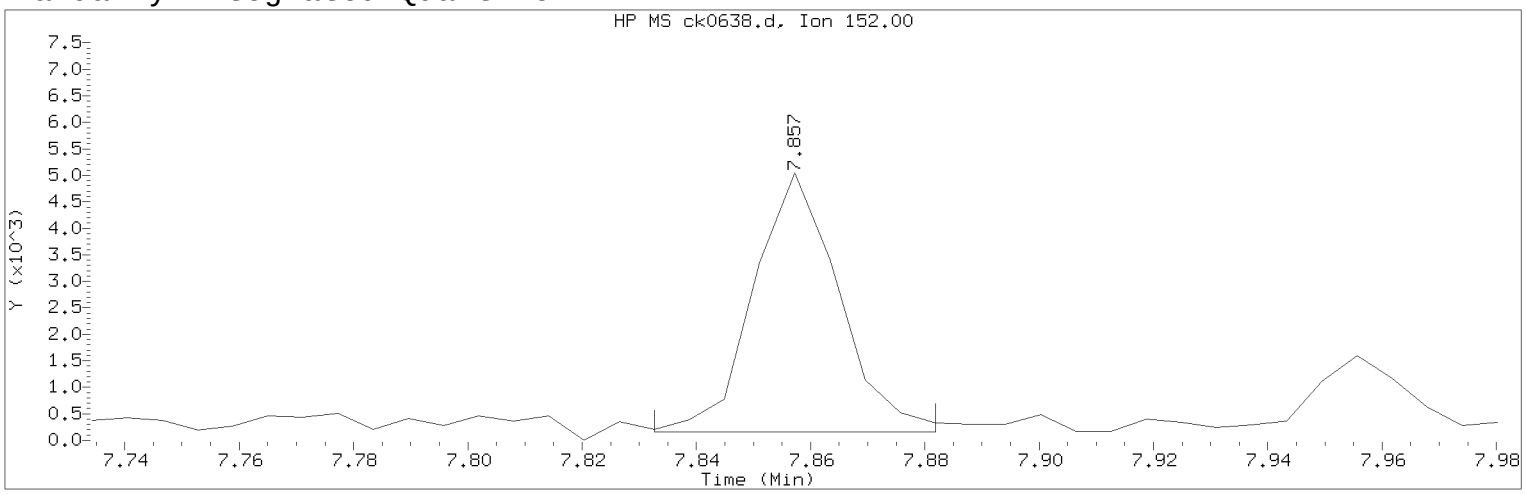
Compound Number : 95
Compound Name : Acenaphthylene
Scan Number : 972
Retention Time (minutes) : 7.857
Relative Retention Time :-0.00000
Quant Ion : 152.00
Area (flag) : 5049M
On-column Amount (ng/ul) : 0.1919

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

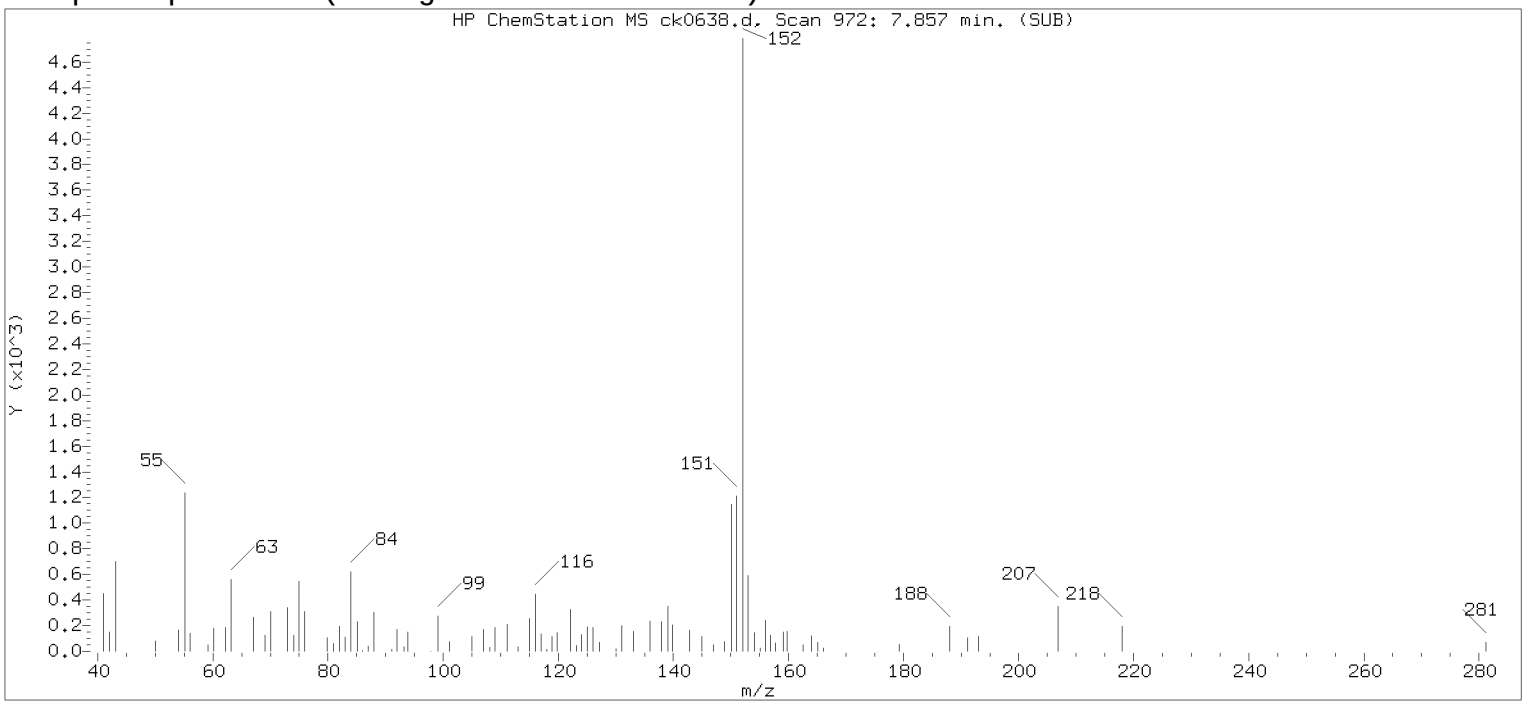
Compound Number : 95
Compound Name : Acenaphthylene
Scan Number : 972
Retention Time (minutes) : 7.857
Quant Ion : 152.00
Area (flag) : 5049M
On-column Amount (ng/ul) : 0.1919
Integration start scan : 967 Integration stop scan: 975
Y at integration start : 163 Y at integration end: 163

Reason for manual integration: improper integration

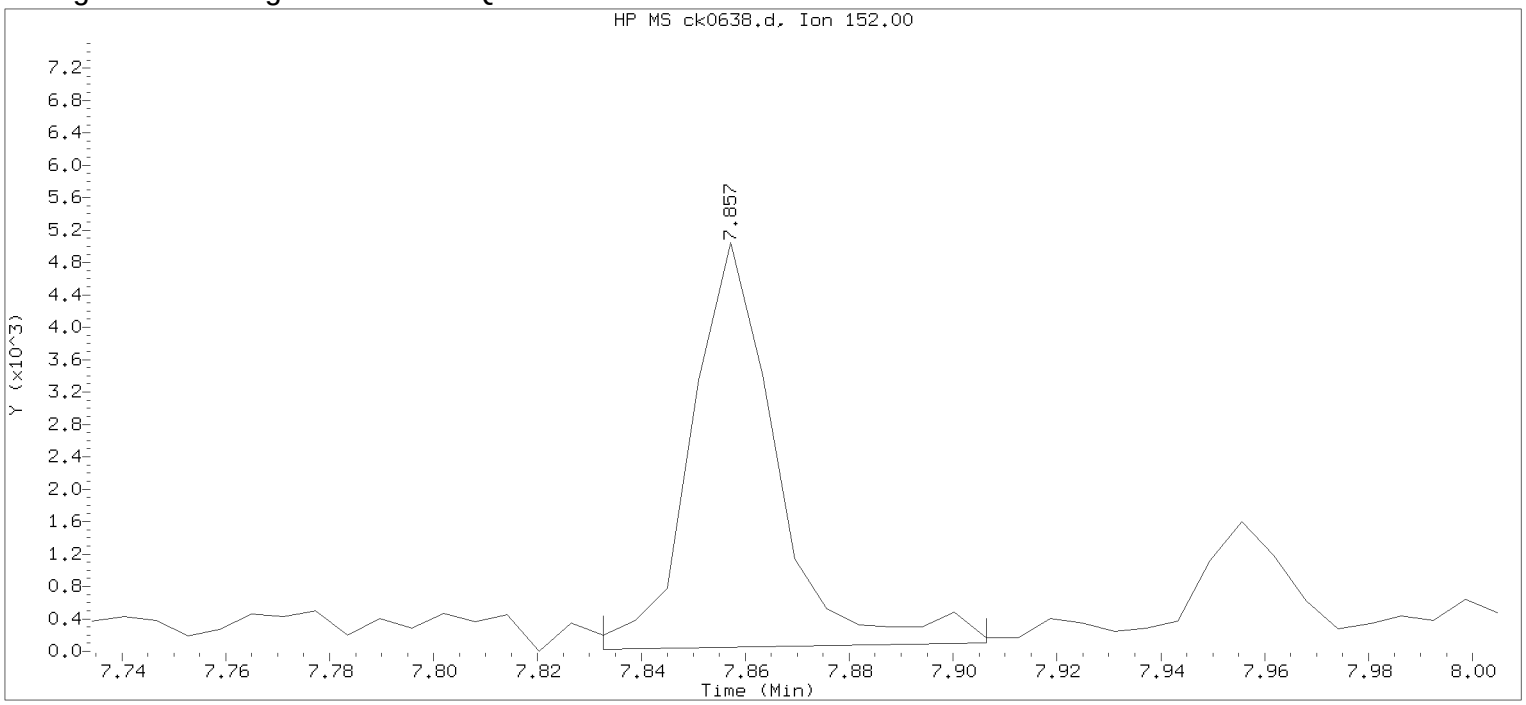
Analyst responsible for change: Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

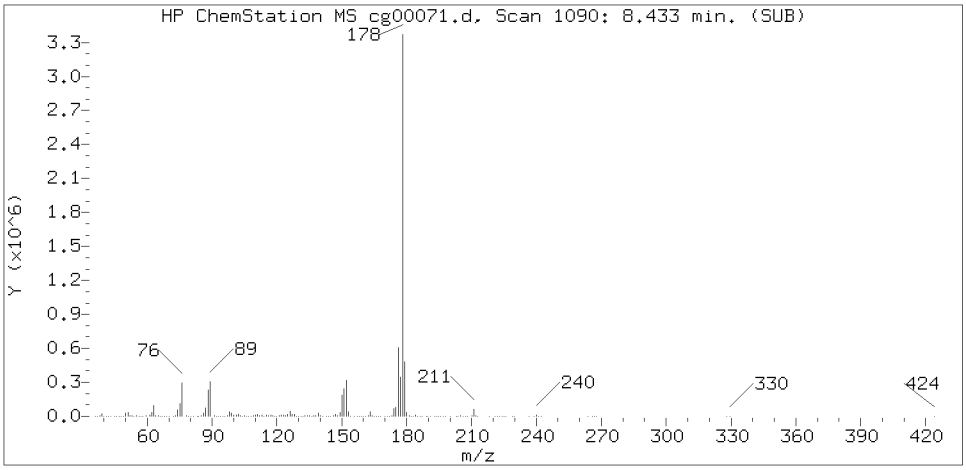
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

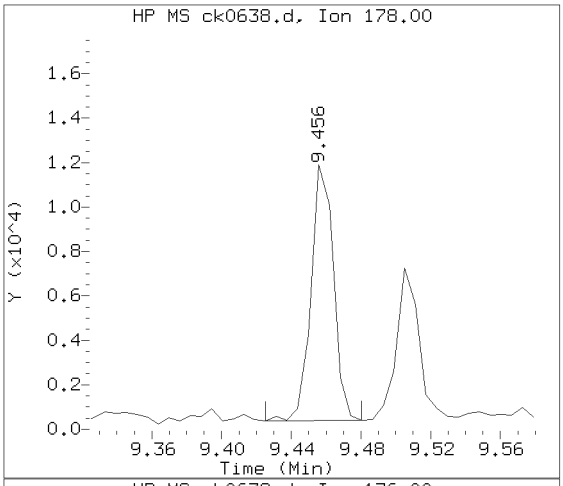
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 95
Compound Name	: Acenaphthylene
Scan Number	: 972
Retention Time (minutes)	: 7.857
Quant Ion	: 152.00
Area	: 5700
On-column Amount (ng/ul)	: 0.2166
Integration start scan	: 967 Integration stop scan: 979
Y at integration start	: 23 Y at integration end: 104

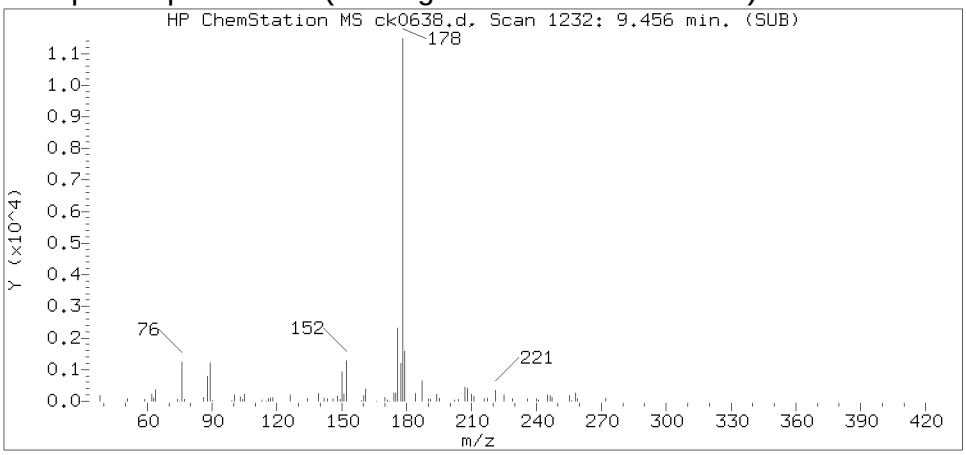
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

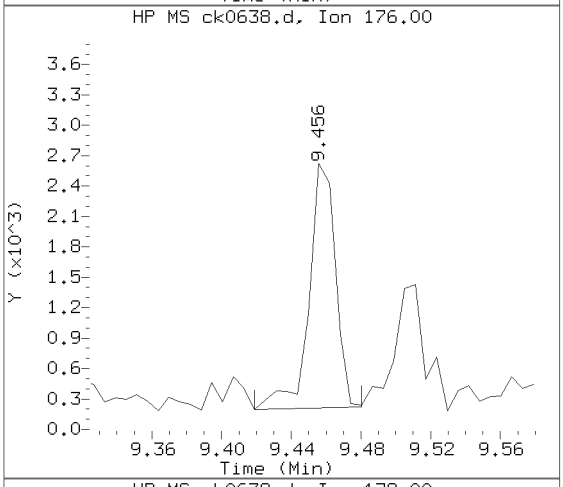
Reference Standard Spectrum for Phenanthrene



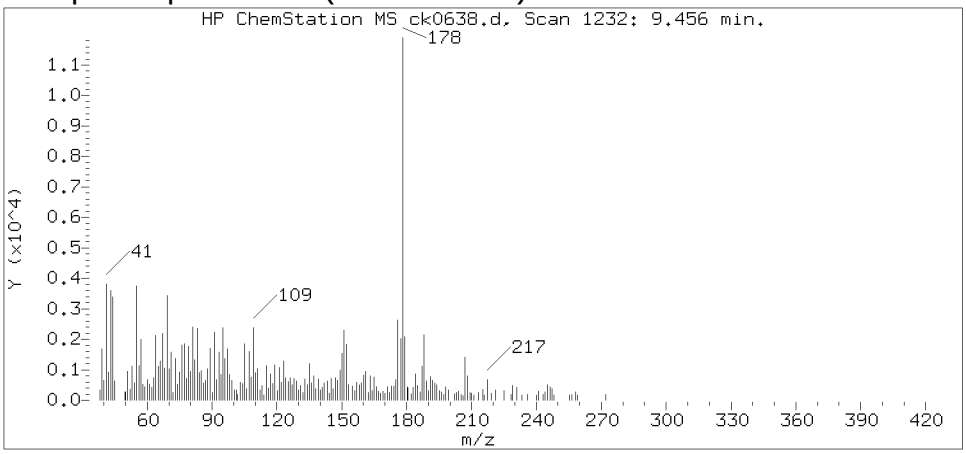


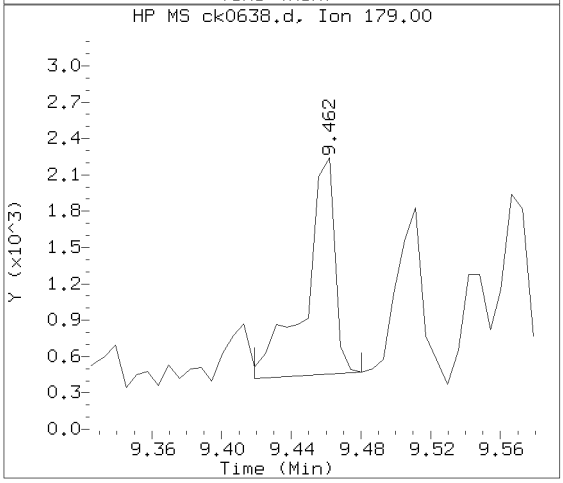
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

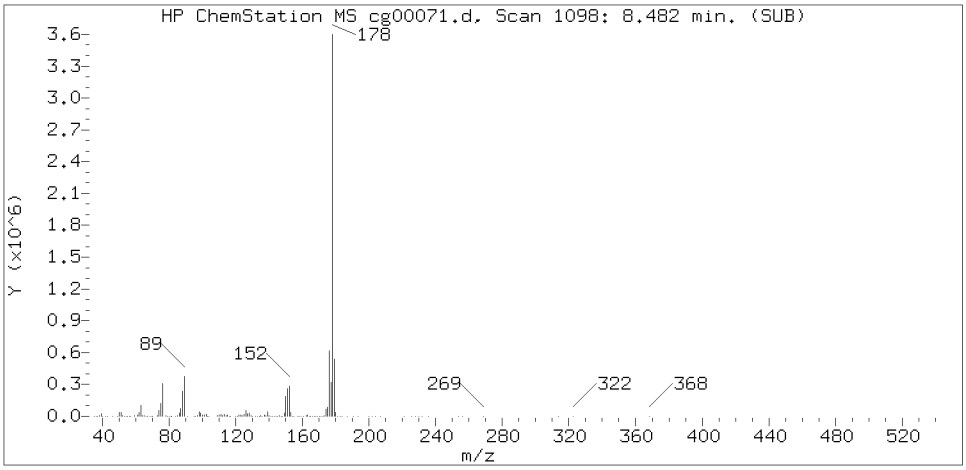
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

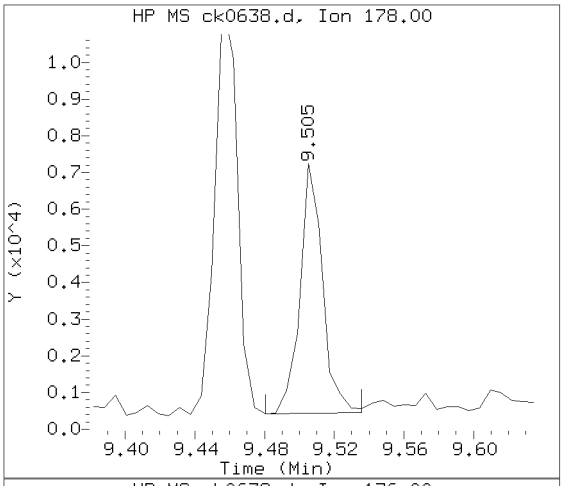
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 137
Compound Name	: Phenanthrene
Scan Number	: 1232
Retention Time (minutes)	: 9.456
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 10317
On-column Amount (ng/ul)	: 0.3239

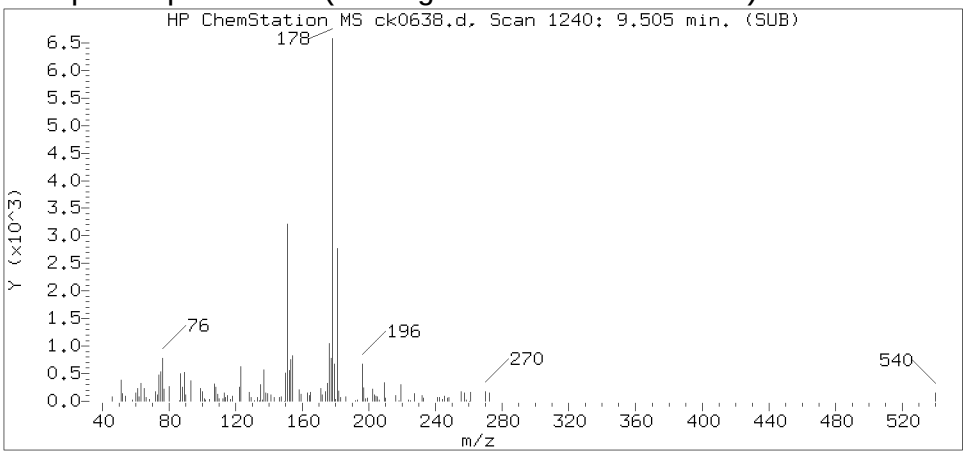
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

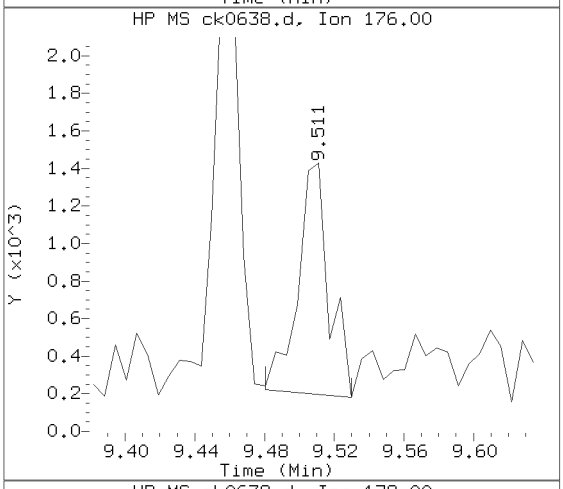
Reference Standard Spectrum for Anthracene



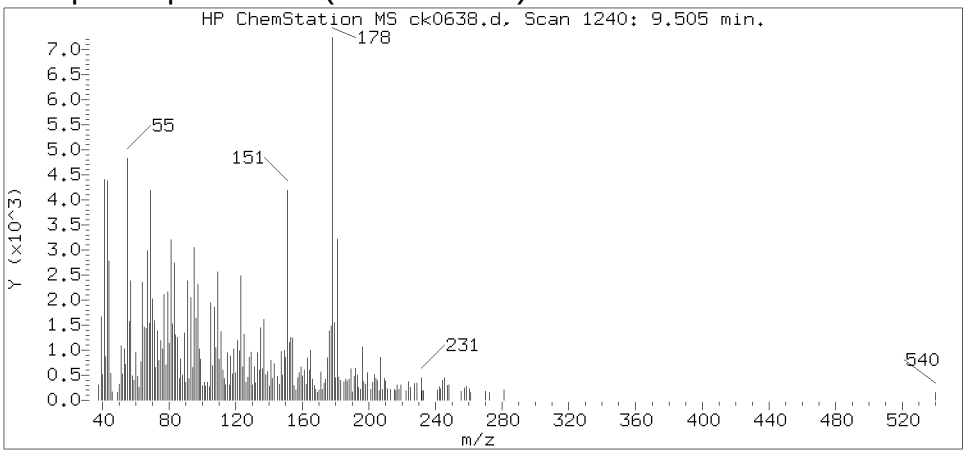


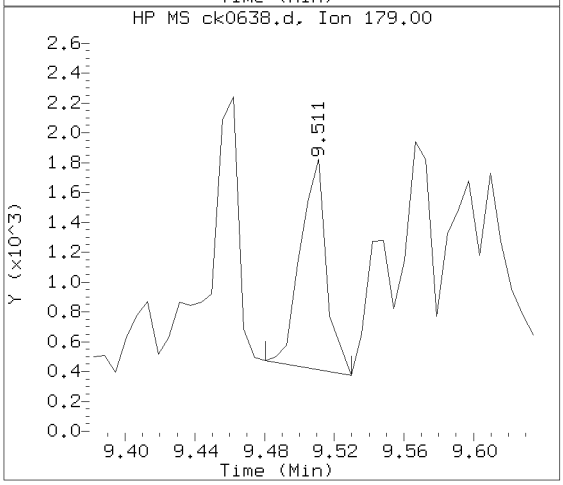
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

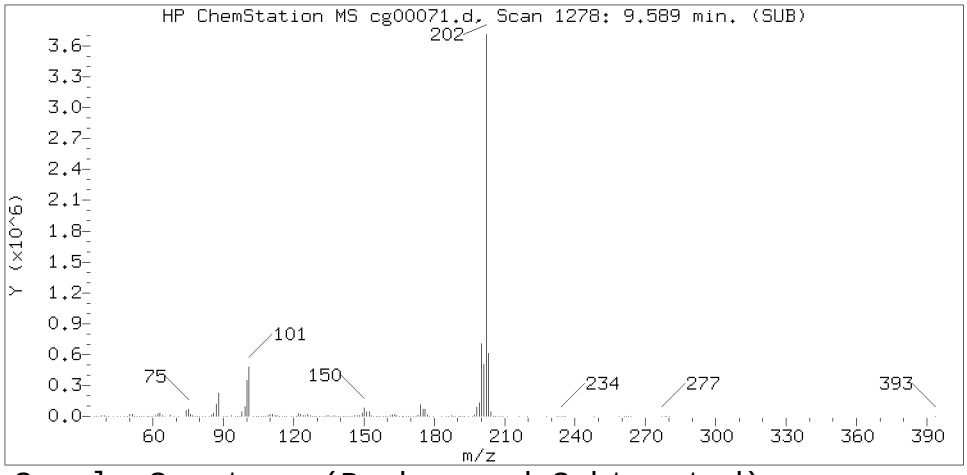
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

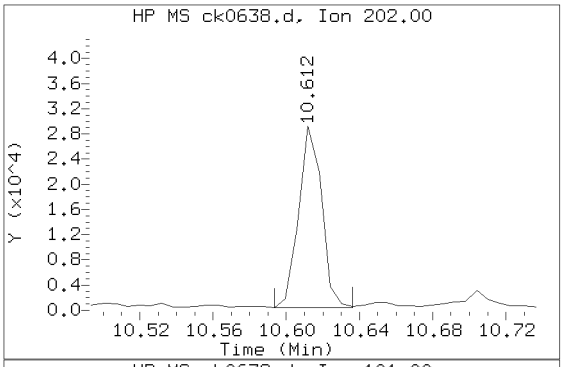
Sample Name: 2E102 Lab Sample ID: 7266818

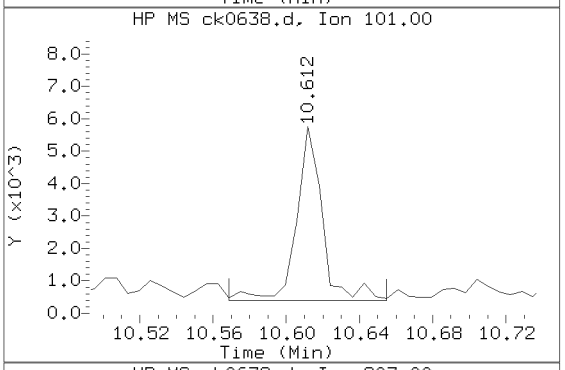
Compound Number : 138
Compound Name : Anthracene
Scan Number : 1240
Retention Time (minutes) : 9.505
Relative Retention Time : 0.00065
Quant Ion : 178.00
Area (flag) : 6143
On-column Amount (ng/ul) : 0.1873

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

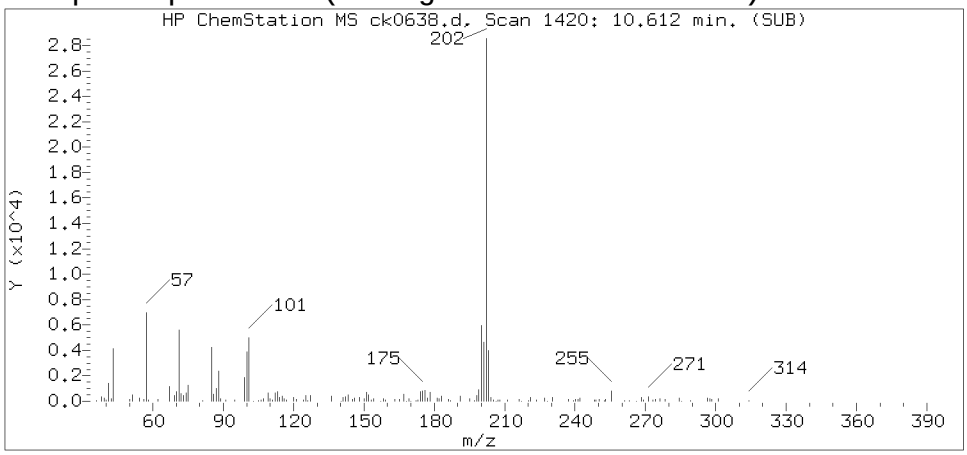
Reference Standard Spectrum for Fluoranthene

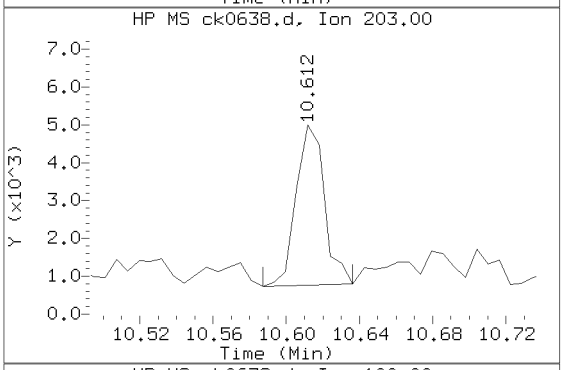




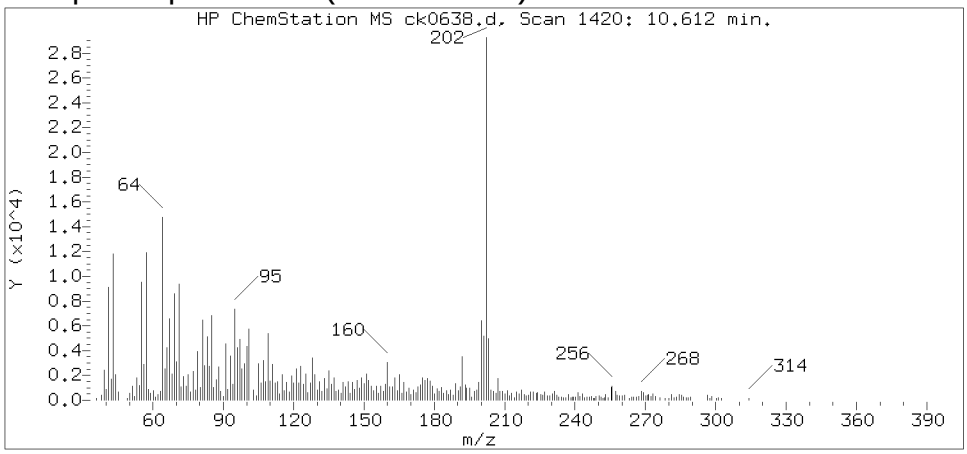


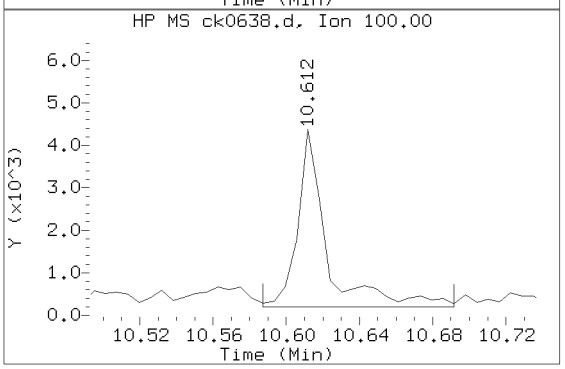
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

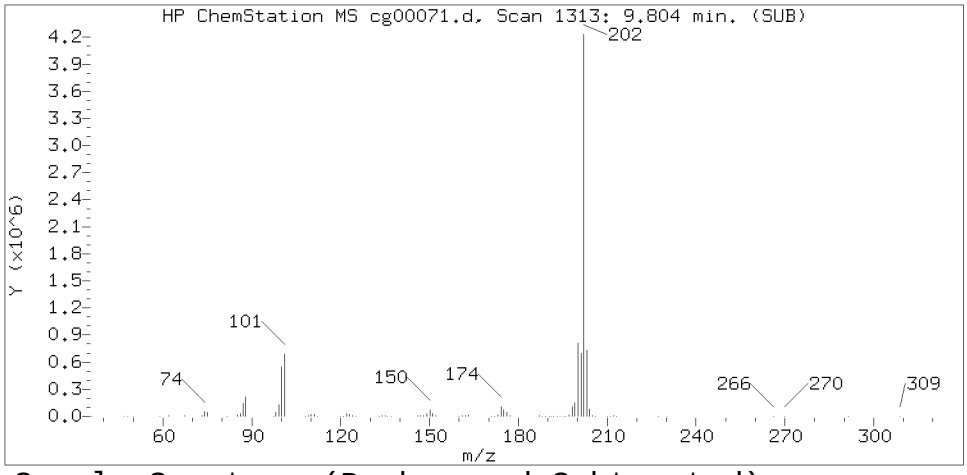
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

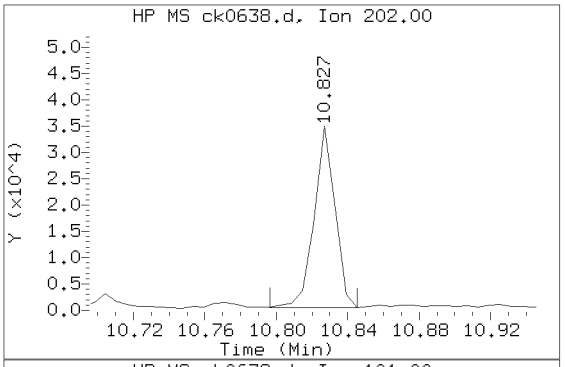
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 147
Compound Name	: Fluoranthene
Scan Number	: 1420
Retention Time (minutes)	: 10.612
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 25217
On-column Amount (ng/ul)	: 0.7080

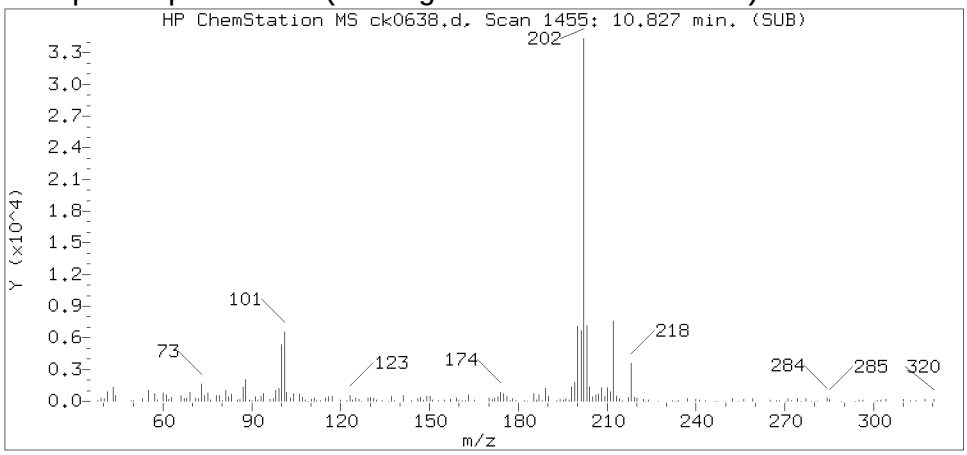
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

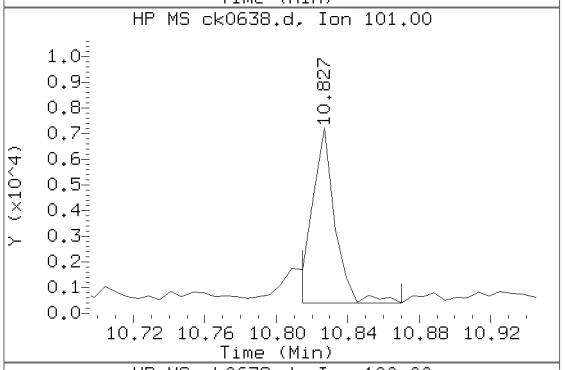
Reference Standard Spectrum for Pyrene

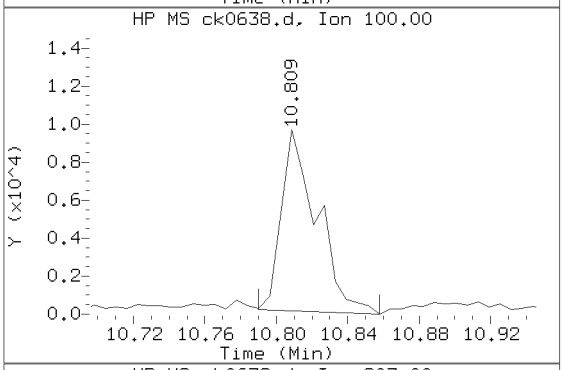




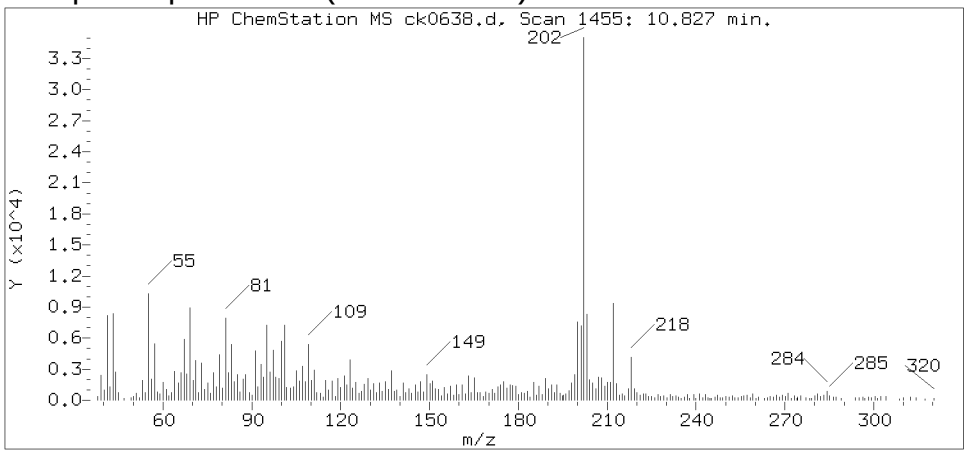
Sample Spectrum (Background Subtracted)

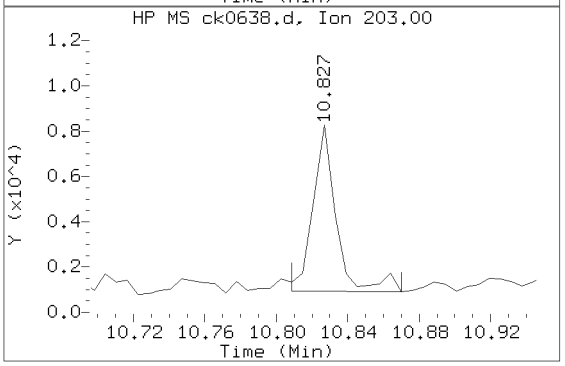






Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 154
Compound Name	: Pyrene
Scan Number	: 1455
Retention Time (minutes)	: 10.827
Relative Retention Time	: 0.00000
Quant Ion	: 202.00
Area (flag)	: 28160
On-column Amount (ng/ul)	: 0.7496

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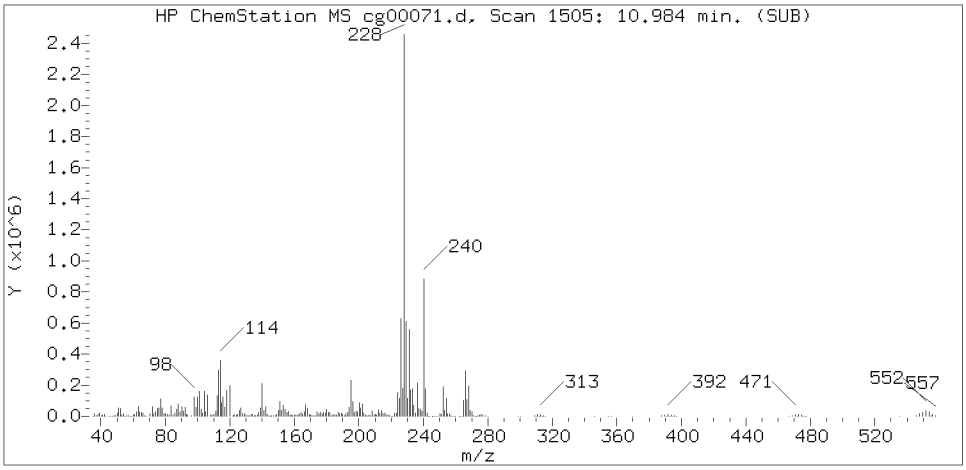
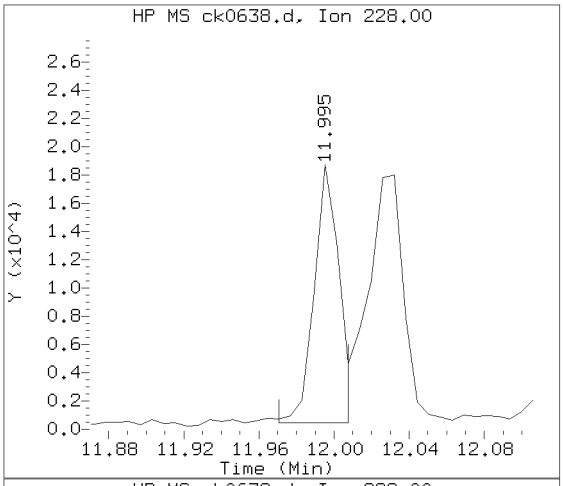
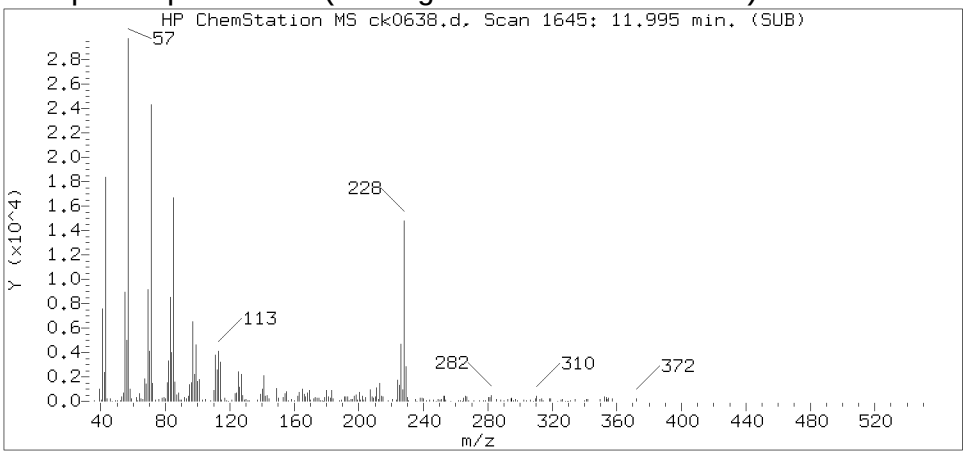
Target 3.5 esignature user ID: jmg00346

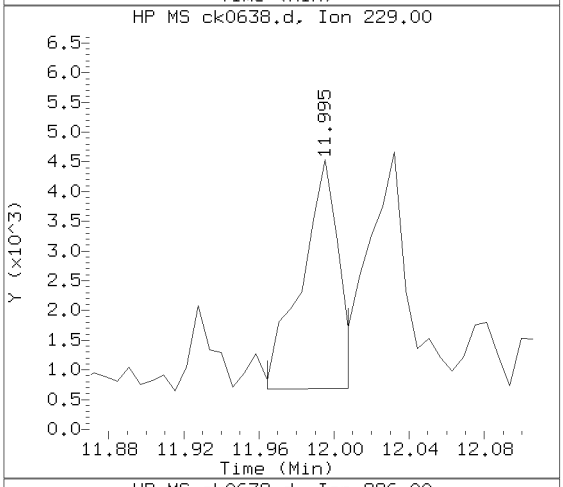
Reference Standard Spectrum for Benzo(a)anthracene



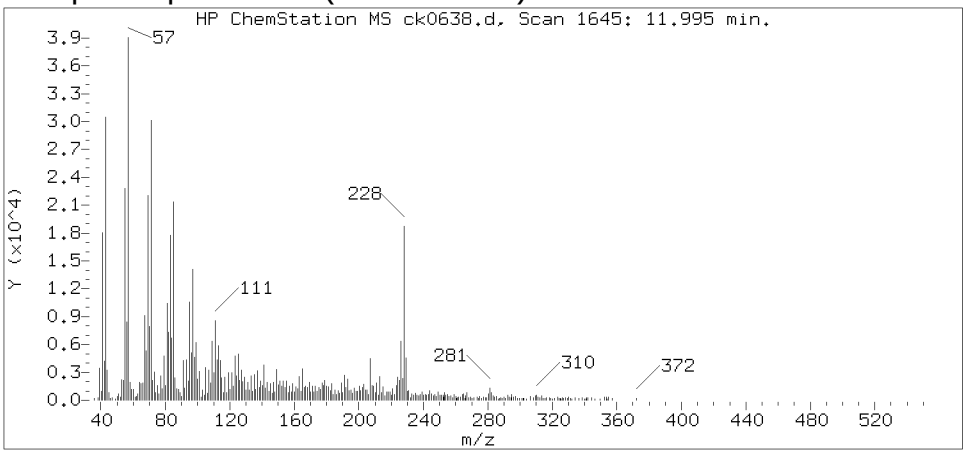


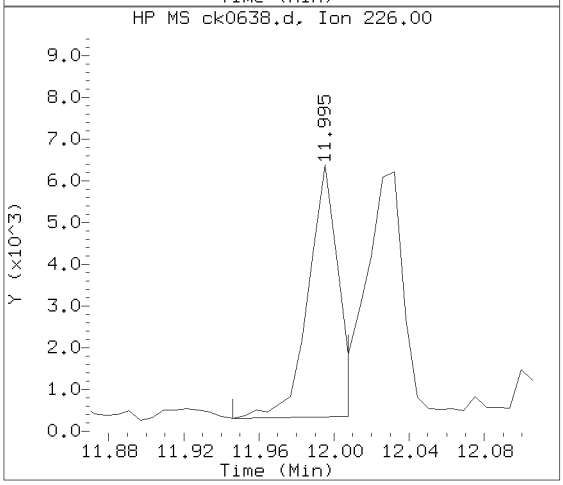
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

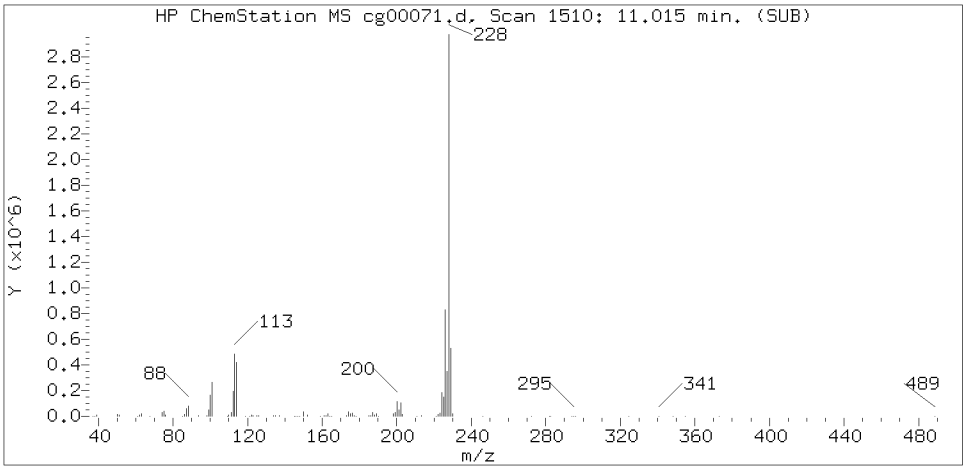
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

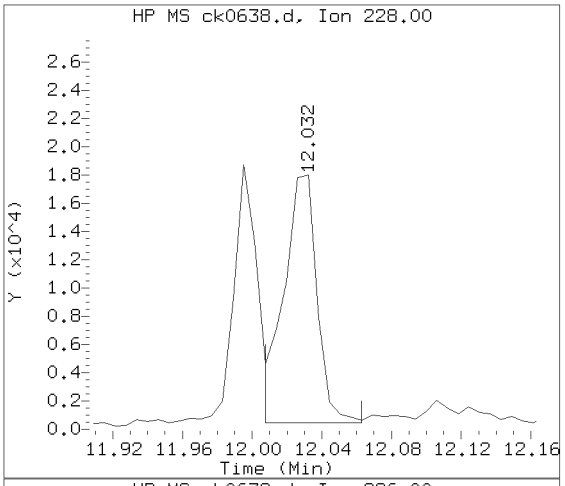
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 166
Compound Name	: Benzo(a)anthracene
Scan Number	: 1645
Retention Time (minutes)	: 11.995
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 16319
On-column Amount (ng/ul)	: 0.4710

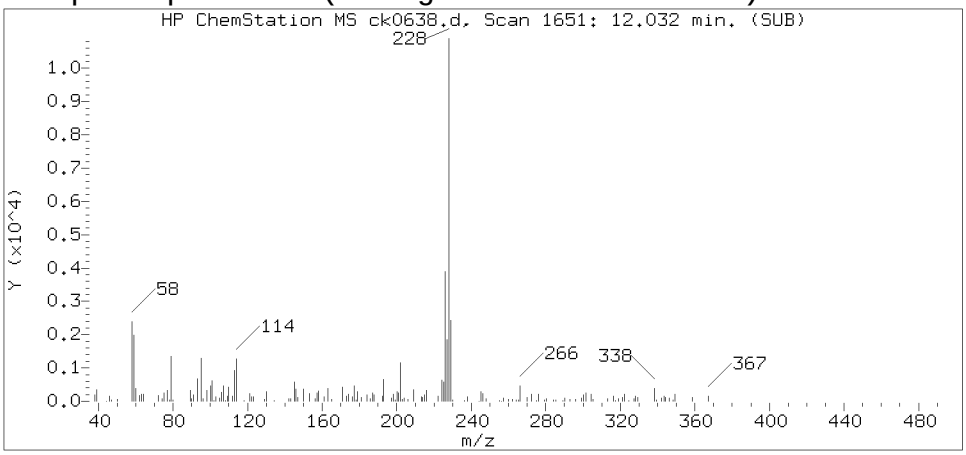
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

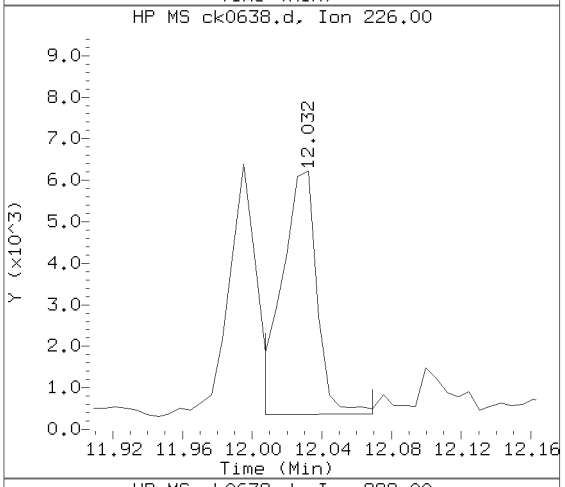
Reference Standard Spectrum for Chrysene



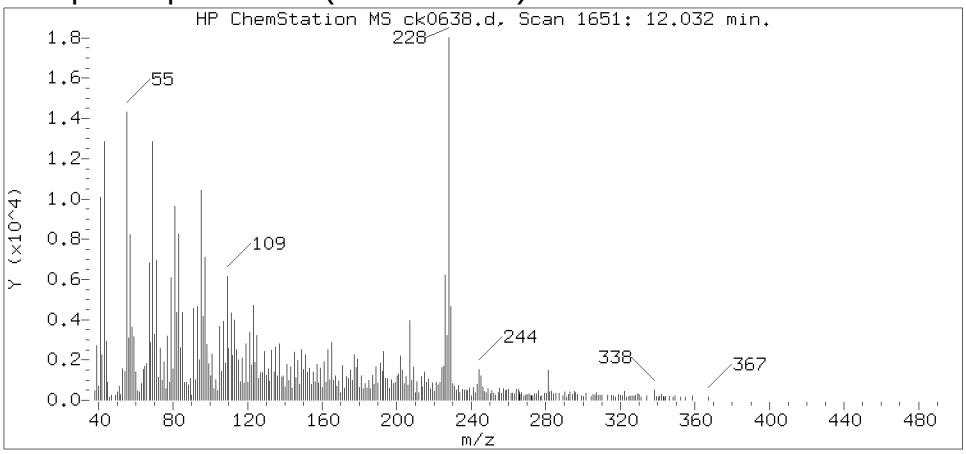


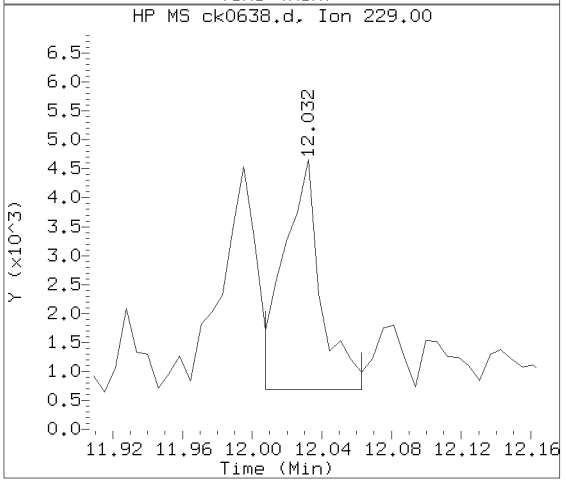
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

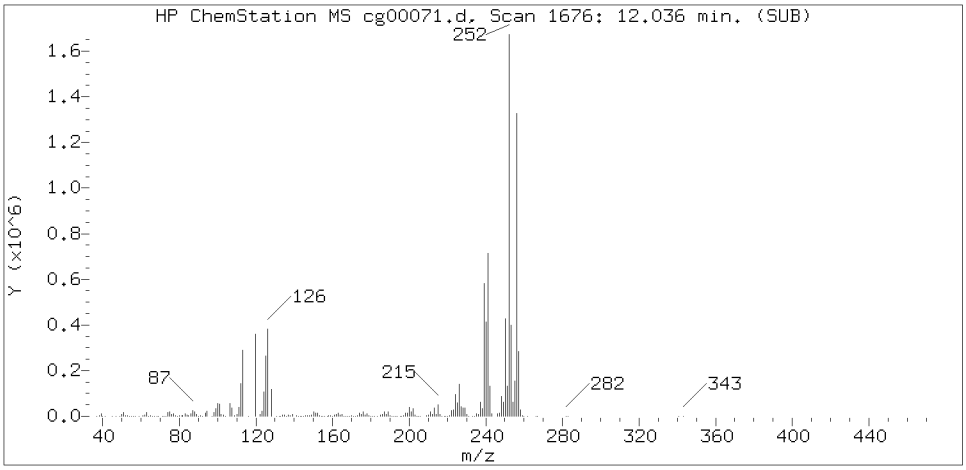
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

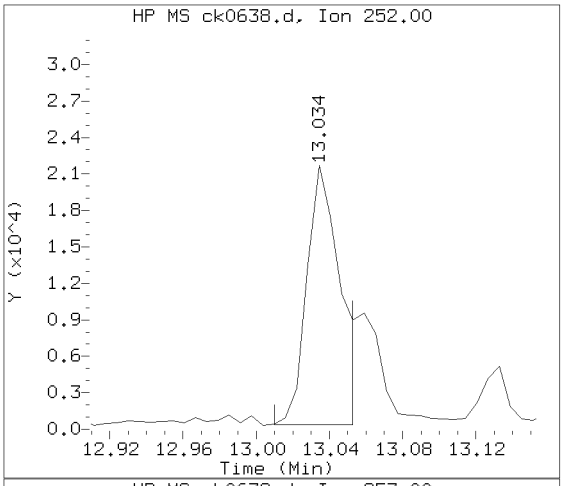
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 168
Compound Name	: Chrysene
Scan Number	: 1651
Retention Time (minutes)	: 12.032
Relative Retention Time	: 0.00000
Quant Ion	: 228.00
Area (flag)	: 23552
On-column Amount (ng/ul)	: 0.7050

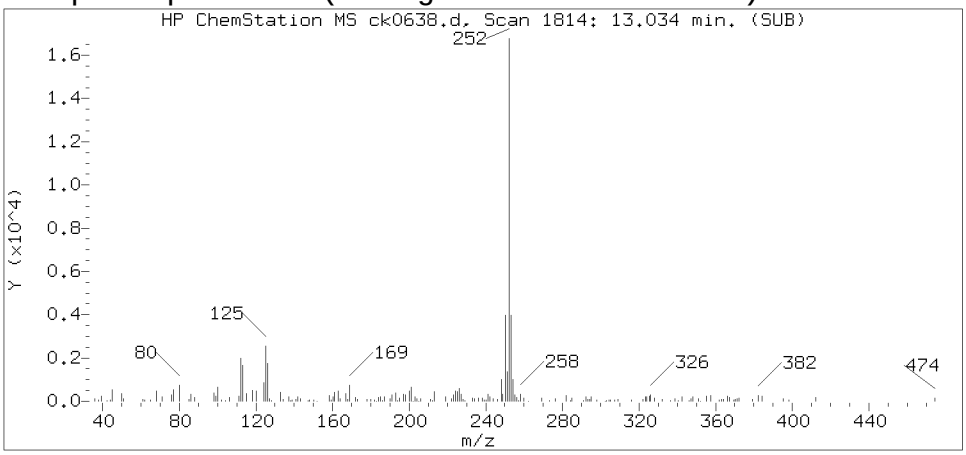
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

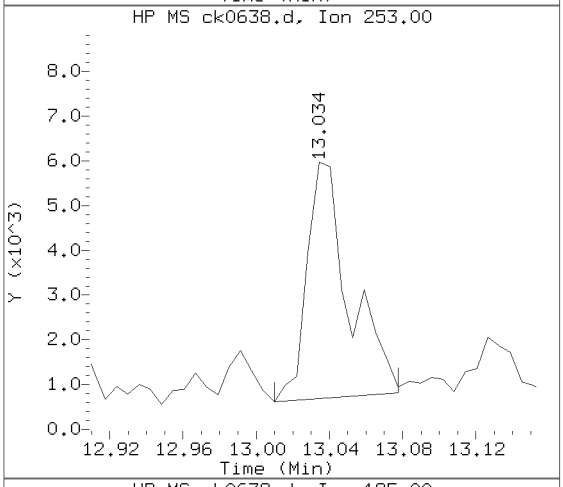
Reference Standard Spectrum for Benzo(b)fluoranthene



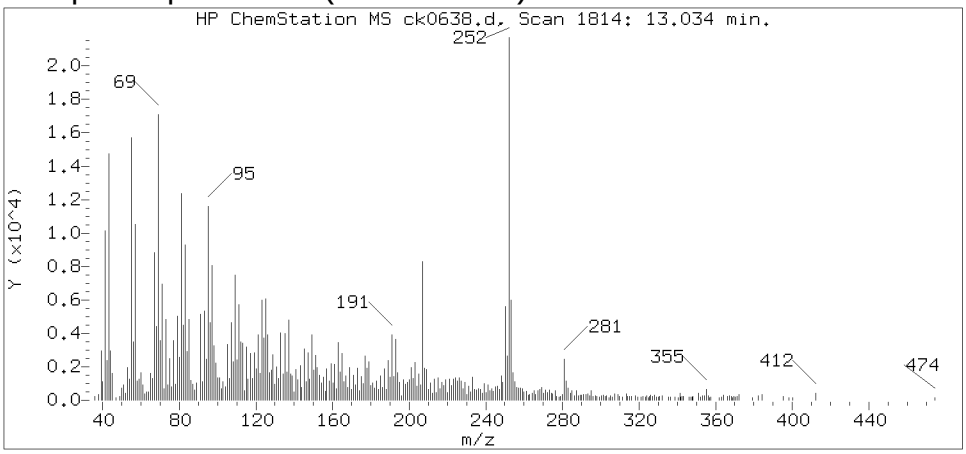


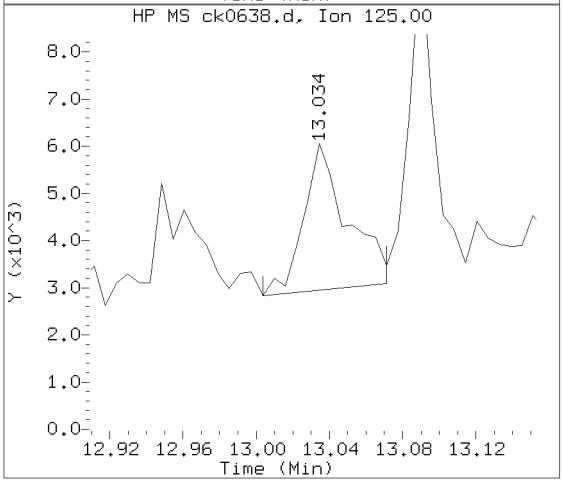
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

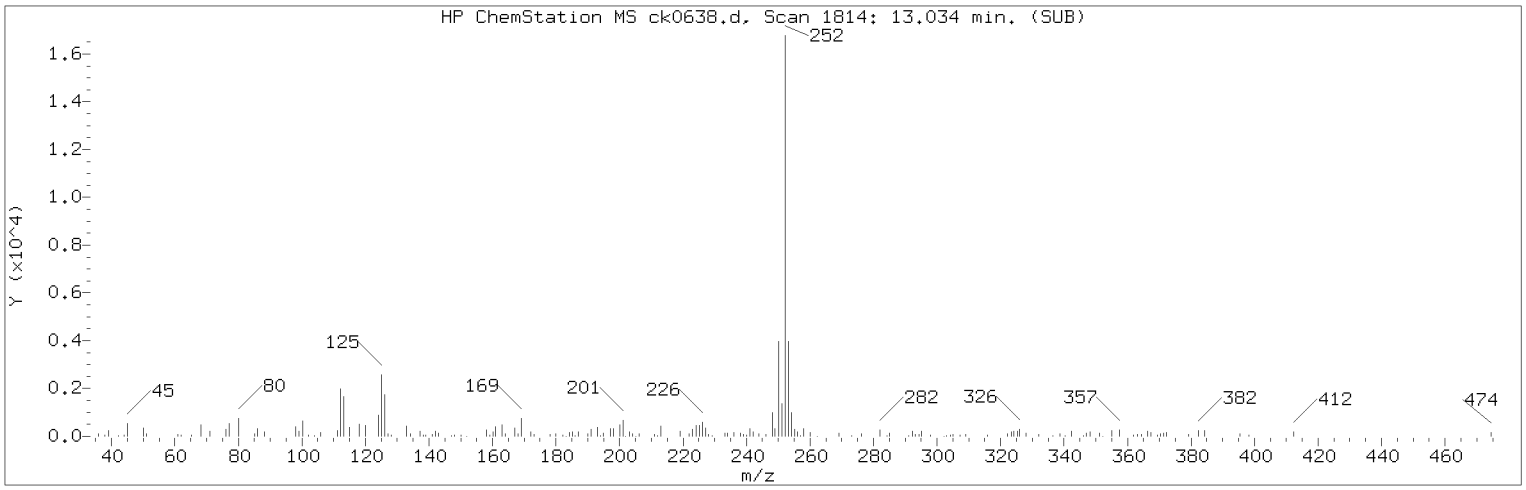
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

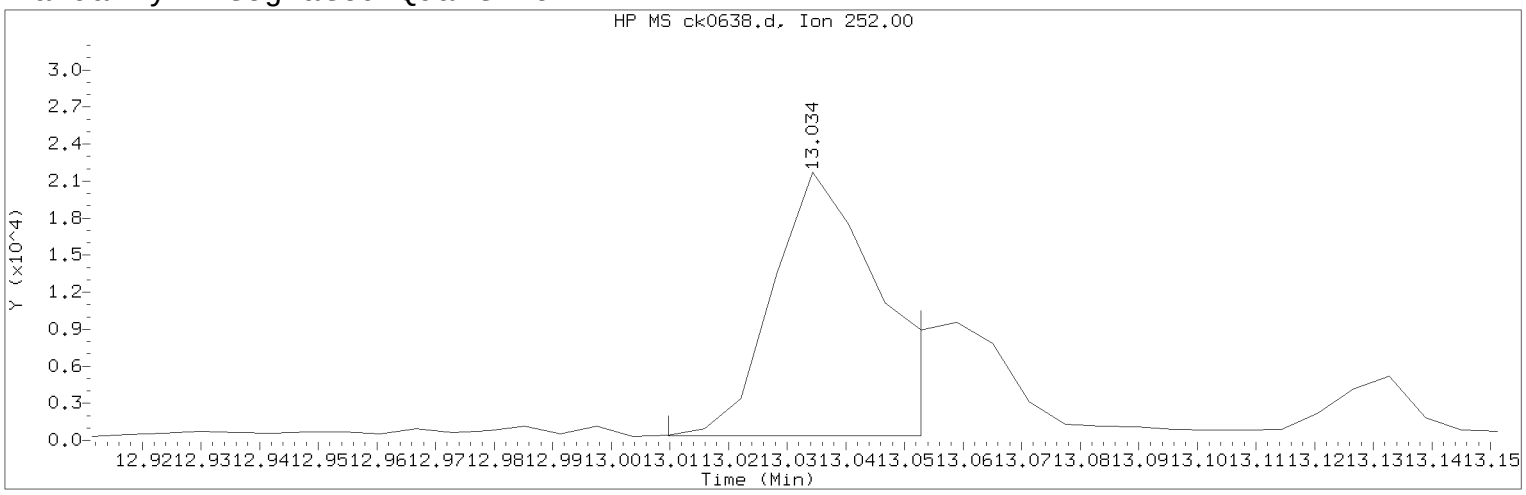
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 27546M
On-column Amount (ng/ul) : 0.7812

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

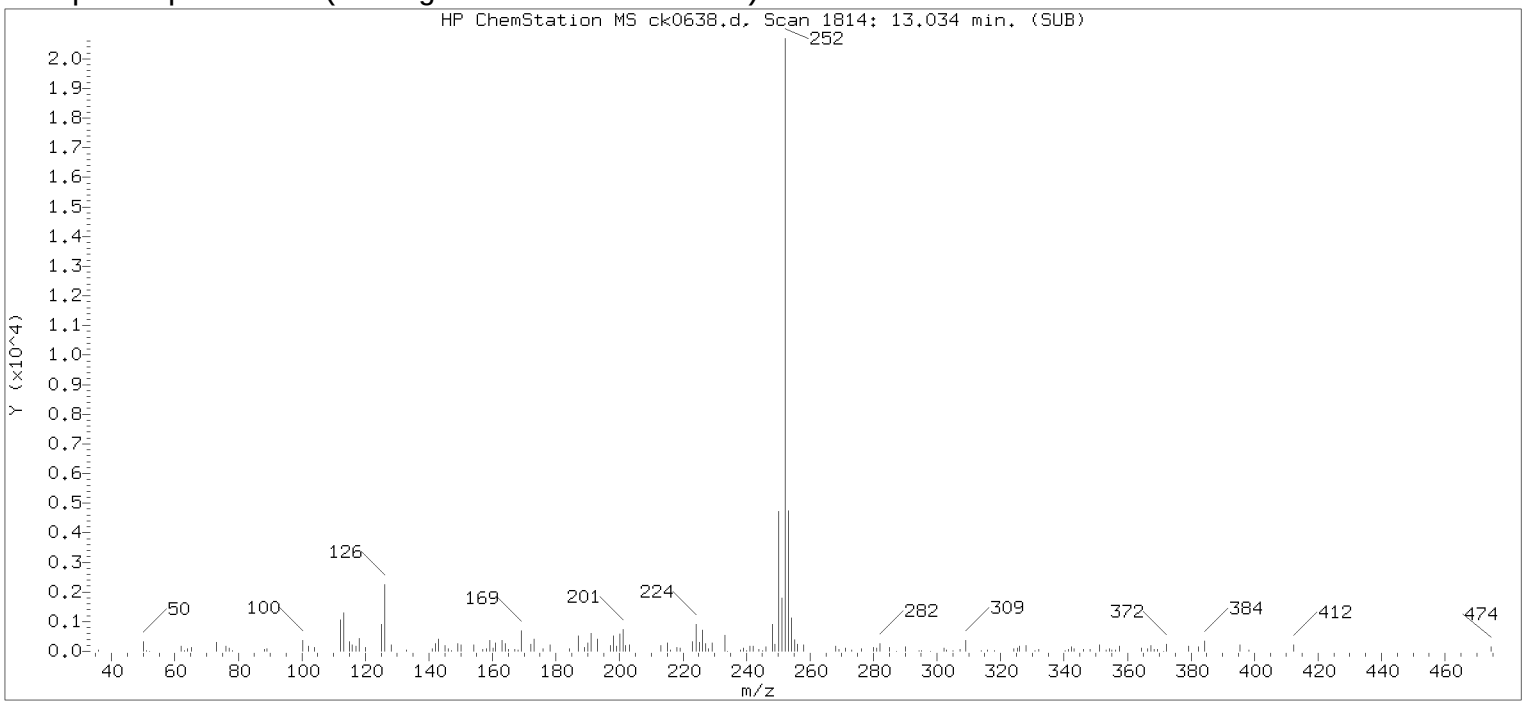
Compound Number : 172
Compound Name : Benzo(b)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area (flag) : 27546M
On-column Amount (ng/ul) : 0.7812
Integration start scan : 1809 Integration stop scan: 1816
Y at integration start : 364 Y at integration end: 364

Reason for manual integration: improper integration

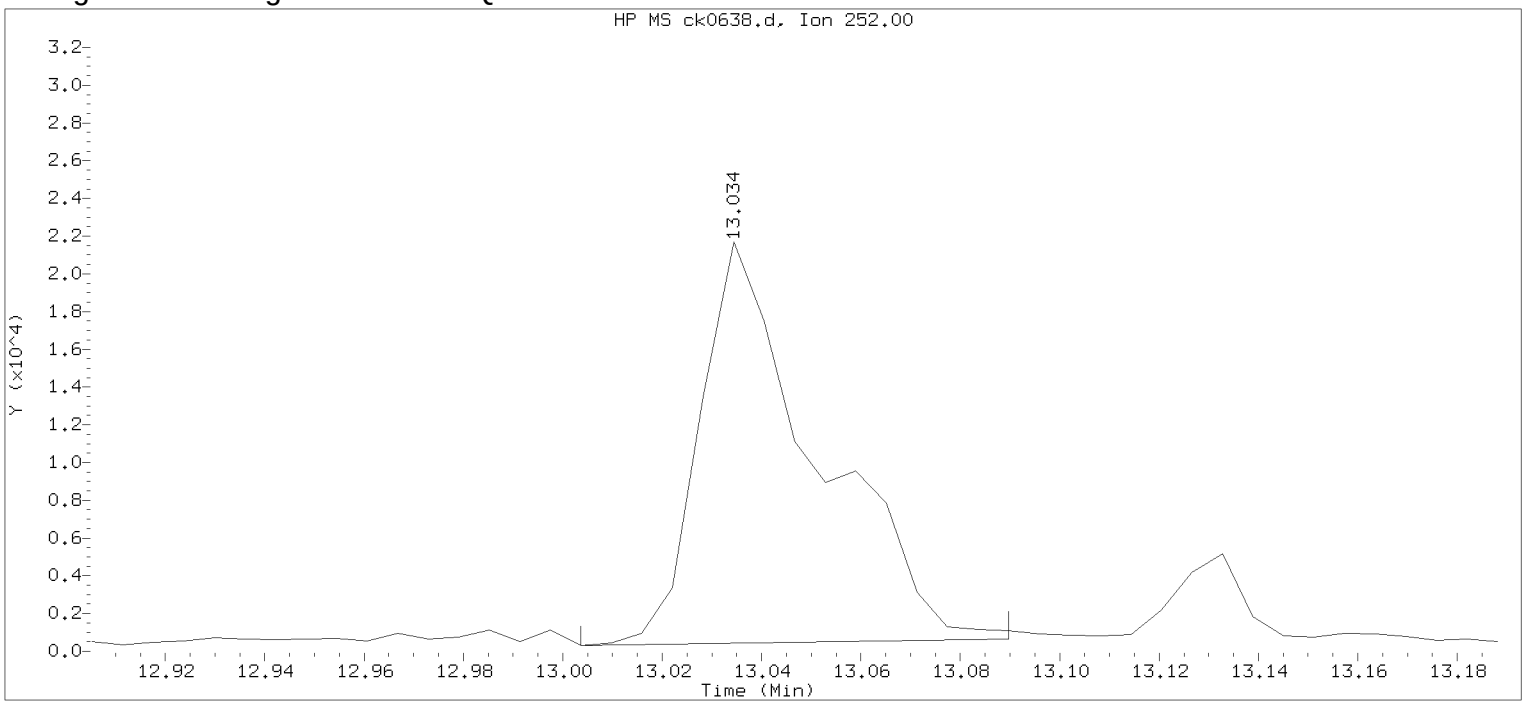
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

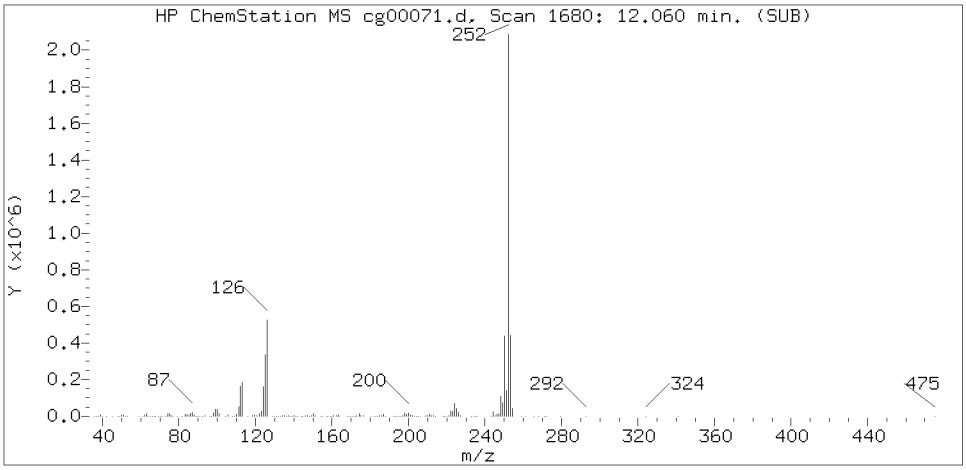
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

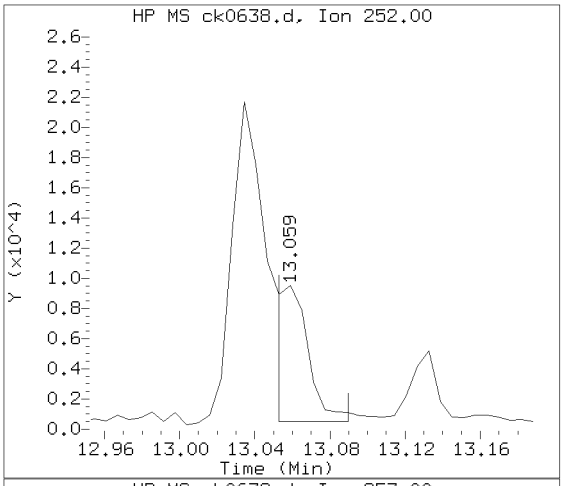
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 172		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 1814		
Retention Time (minutes)	: 13.034		
Quant Ion	: 252.00		
Area	: 34837		
On-column Amount (ng/ul)	: 0.9879		
Integration start scan	: 1808	Integration stop scan:	1822
Y at integration start	: 317	Y at integration end:	656

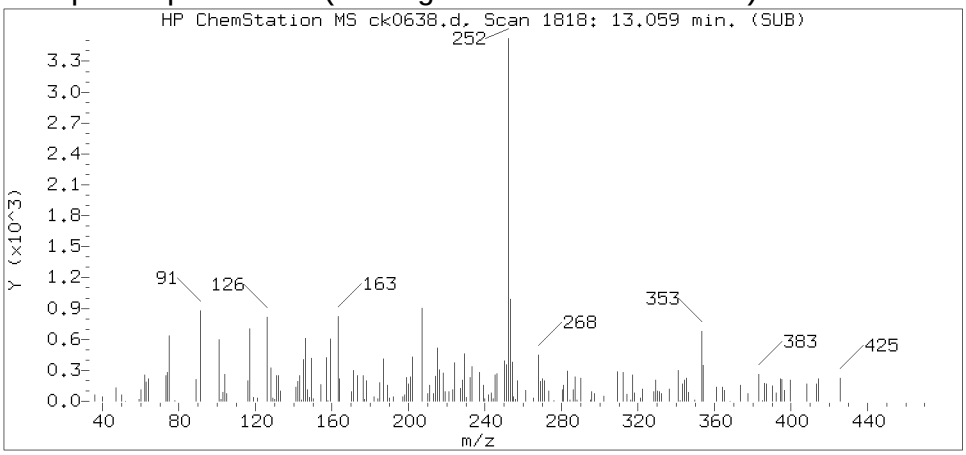
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

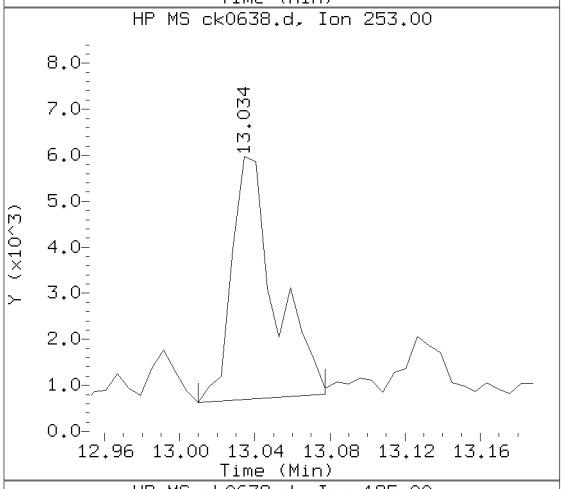
Reference Standard Spectrum for Benzo(k)fluoranthene



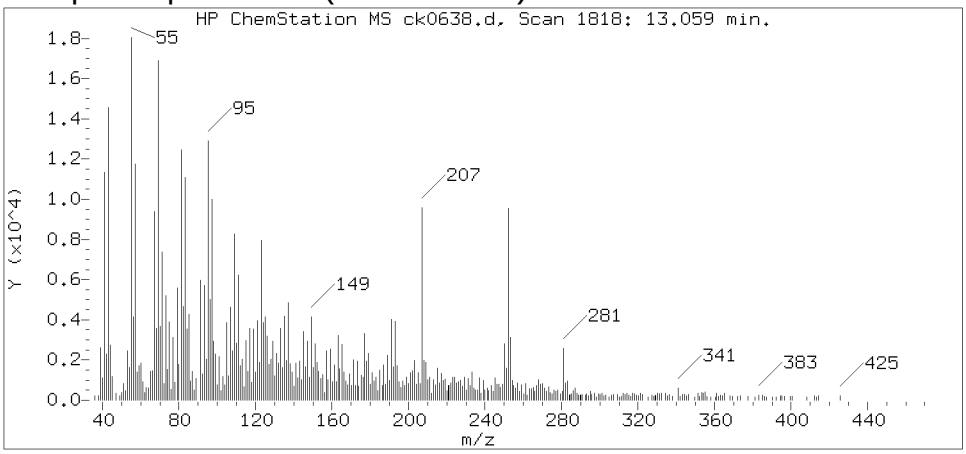


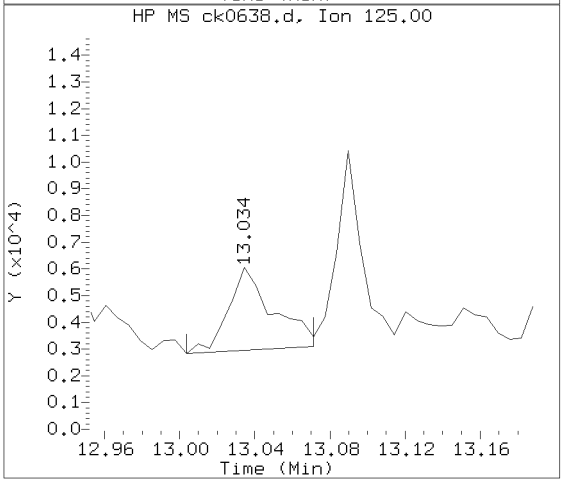
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

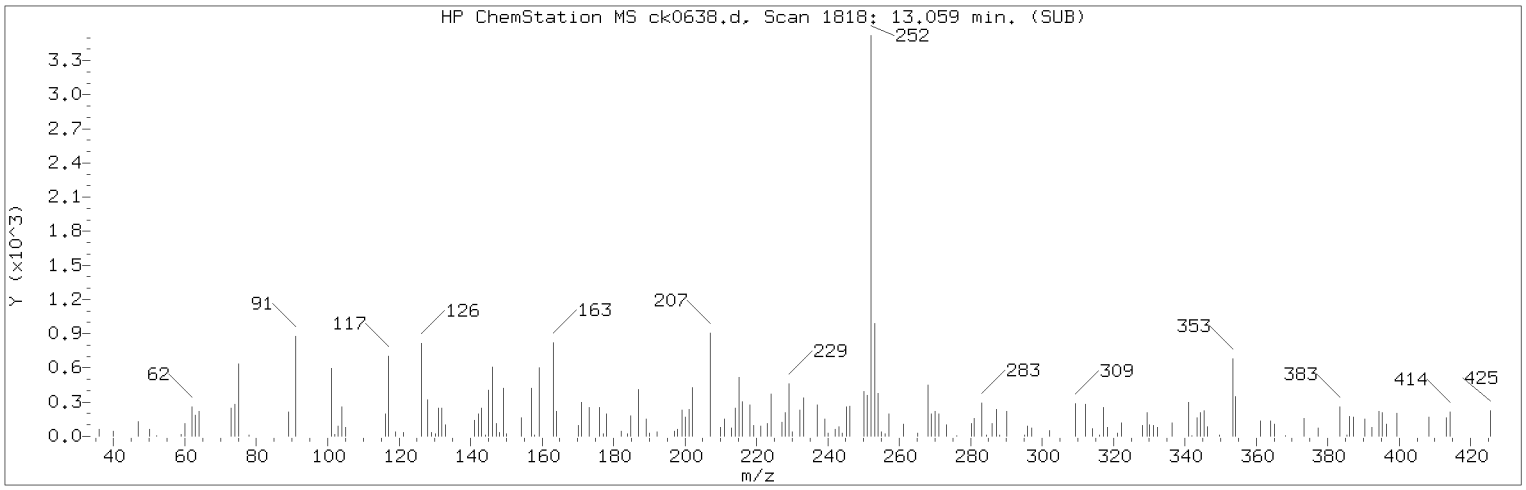
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

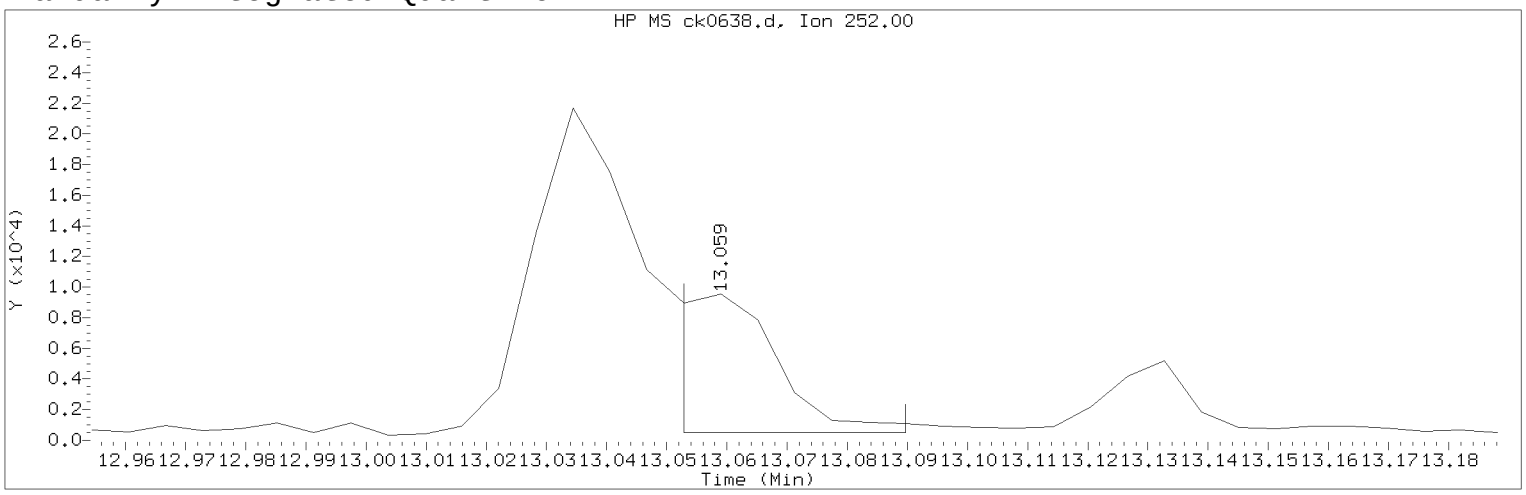
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Relative Retention Time : 0.00046
Quant Ion : 252.00
Area (flag) : 10908M
On-column Amount (ng/ul) : 0.3032

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

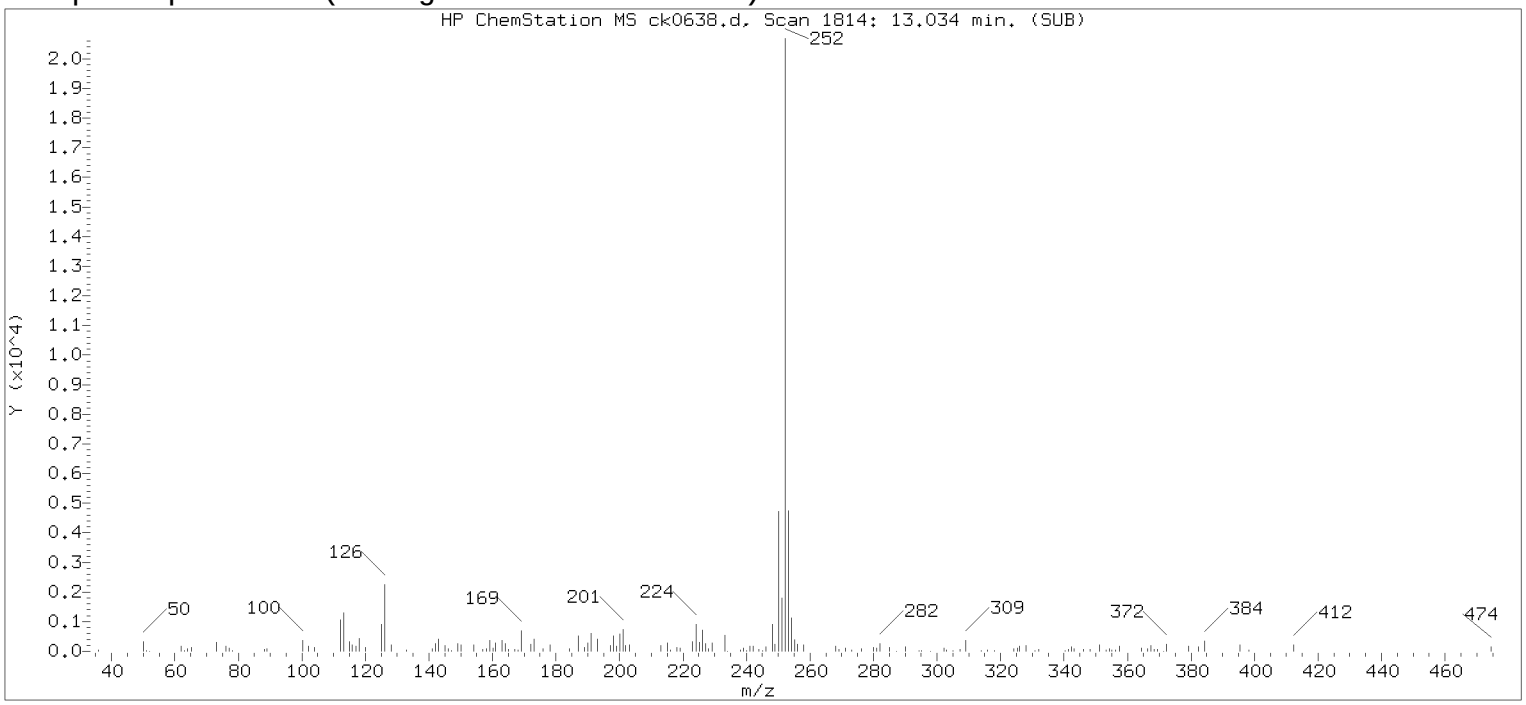
Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1818
Retention Time (minutes) : 13.059
Quant Ion : 252.00
Area (flag) : 10908M
On-column Amount (ng/ul) : 0.3032
Integration start scan : 1816 Integration stop scan: 1822
Y at integration start : 491 Y at integration end: 491

Reason for manual integration: improper integration

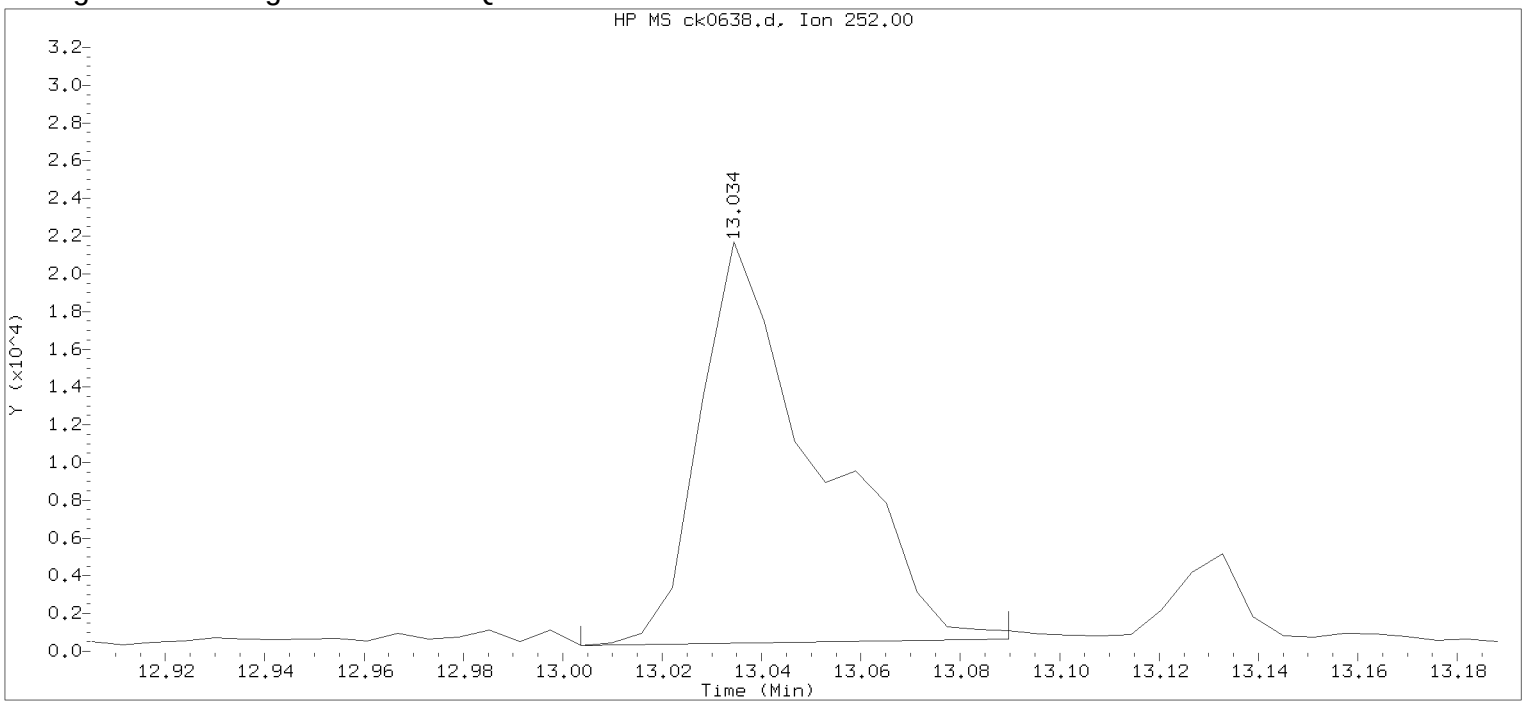
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

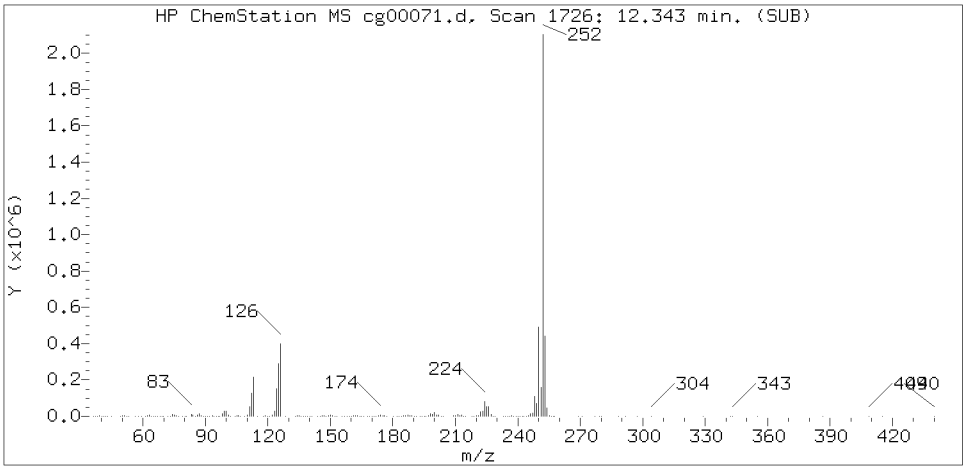
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

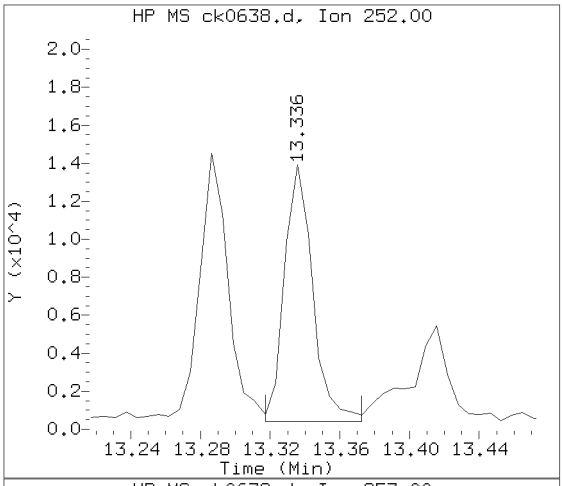
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number : 173
Compound Name : Benzo(k)fluoranthene
Scan Number : 1814
Retention Time (minutes) : 13.034
Quant Ion : 252.00
Area : 34837
On-column Amount (ng/ul) : 0.9683
Integration start scan : 1808 Integration stop scan: 1822
Y at integration start : 317 Y at integration end: 656

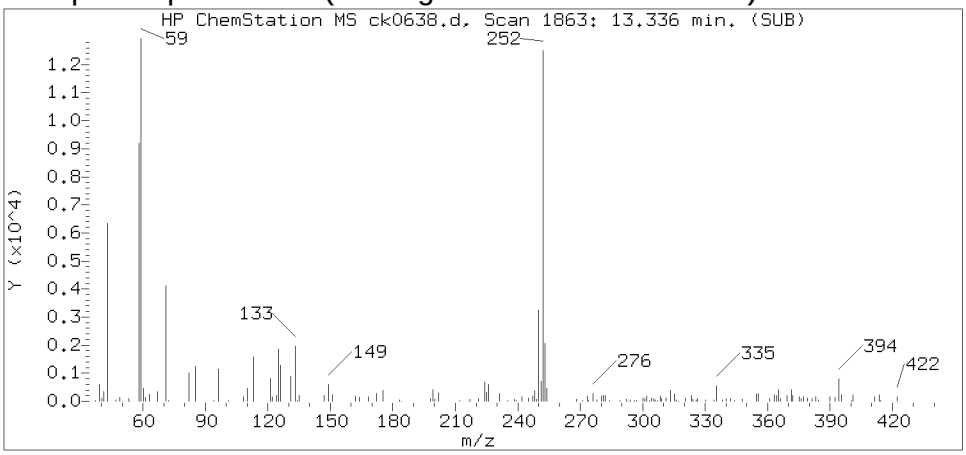
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

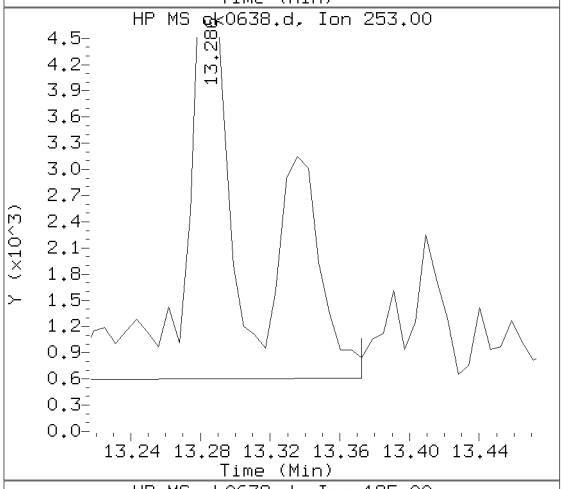
Reference Standard Spectrum for Benzo(a)pyrene



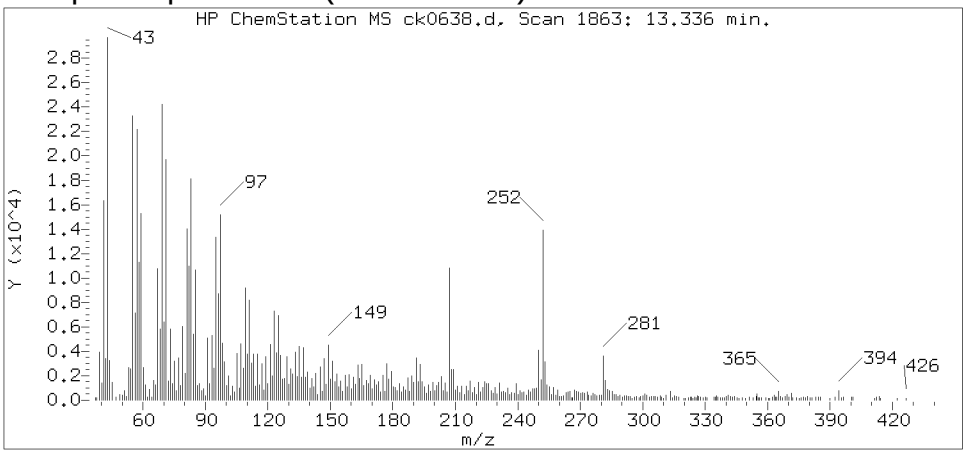


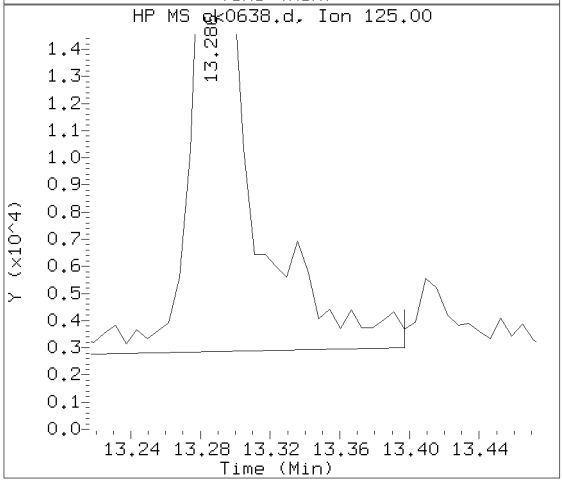
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

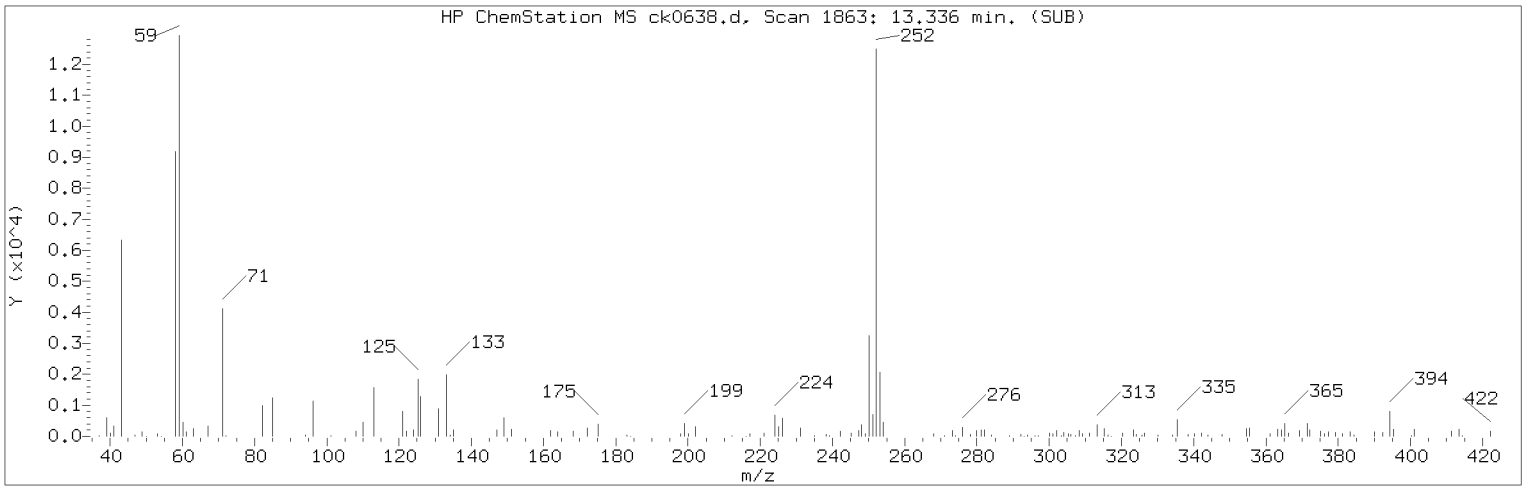
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

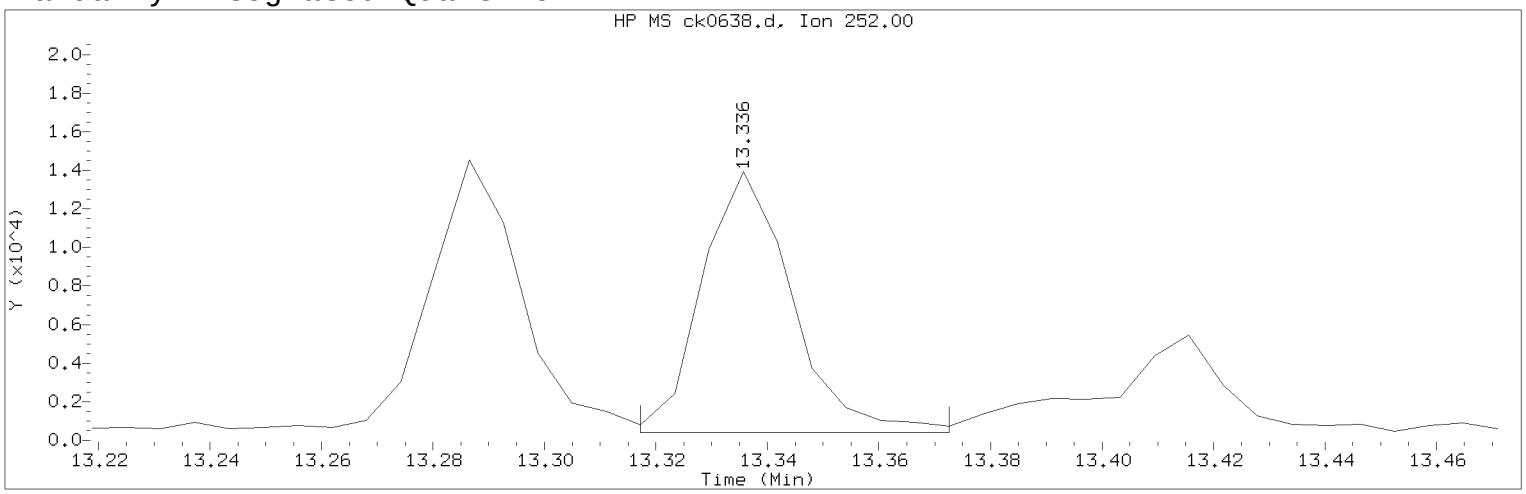
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Relative Retention Time :-0.00000
Quant Ion : 252.00
Area (flag) : 15247M
On-column Amount (ng/ul) : 0.4430

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

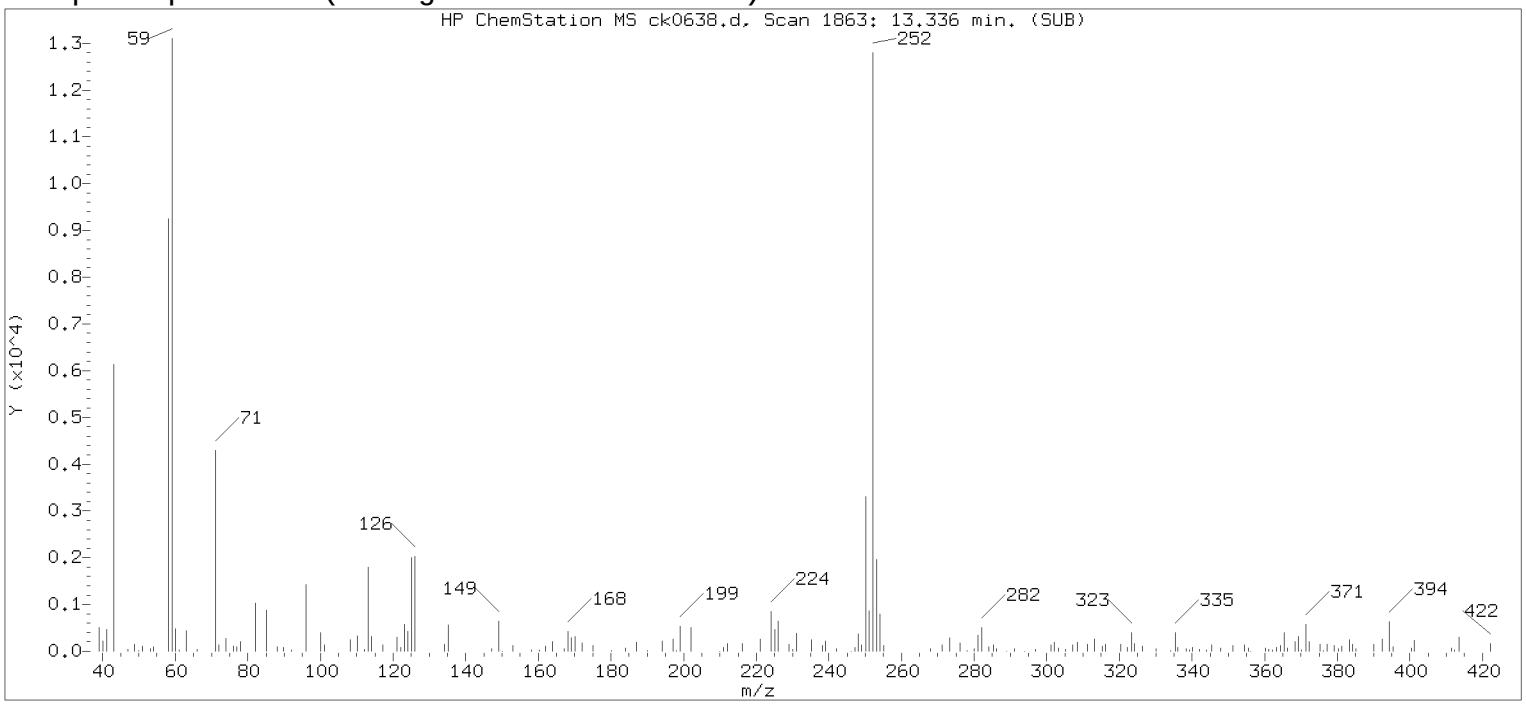
Compound Number : 174
Compound Name : Benzo(a)pyrene
Scan Number : 1863
Retention Time (minutes) : 13.336
Quant Ion : 252.00
Area (flag) : 15247M
On-column Amount (ng/ul) : 0.4430
Integration start scan : 1859 Integration stop scan: 1868
Y at integration start : 412 Y at integration end: 408

Reason for manual integration: improper integration

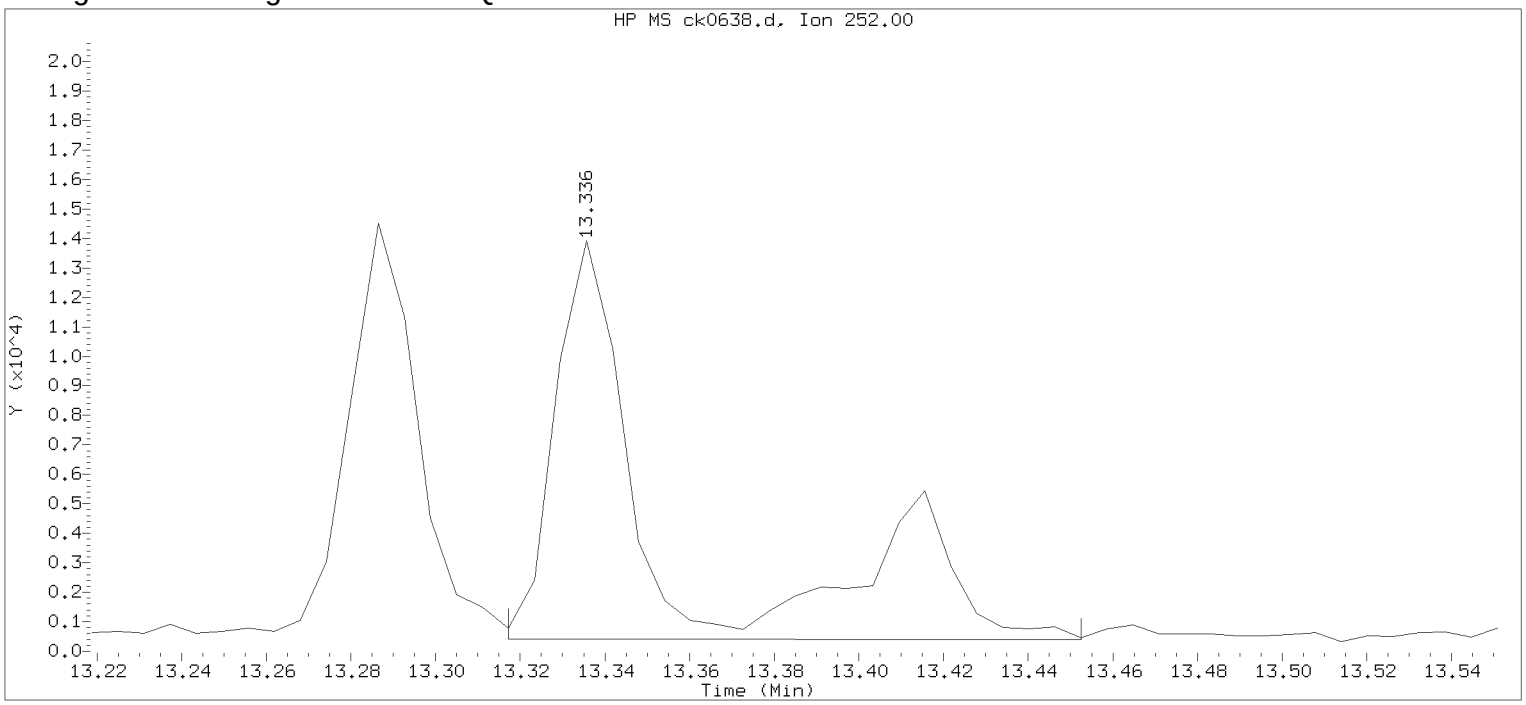
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

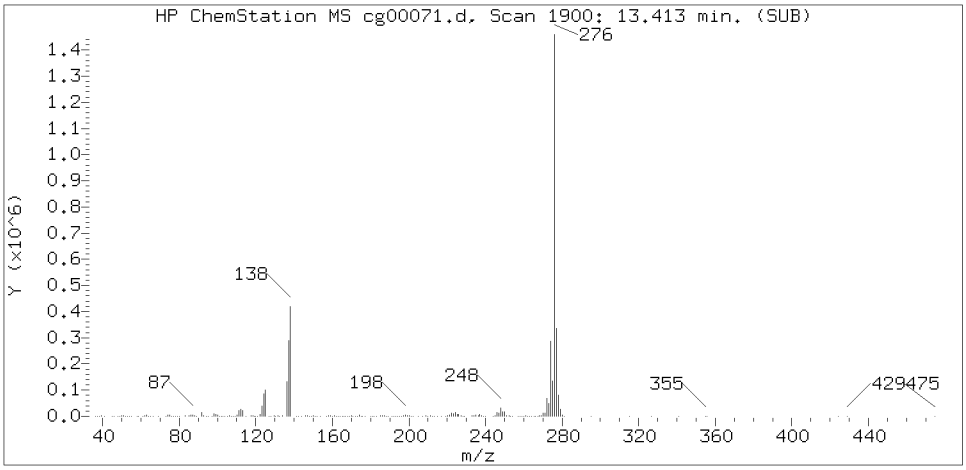
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

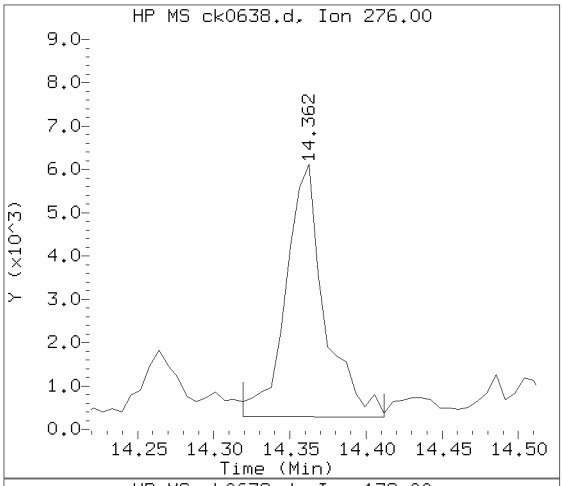
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1863		
Retention Time (minutes)	: 13.336		
Quant Ion	: 252.00		
Area	: 23048		
On-column Amount (ng/ul)	: 0.6697		
Integration start scan	: 1859	Integration stop scan:	1881
Y at integration start	: 412	Y at integration end:	401

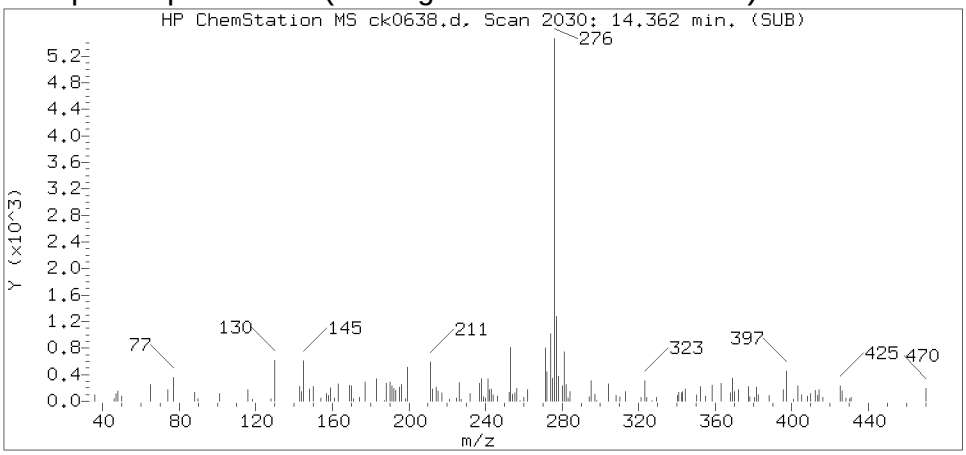
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

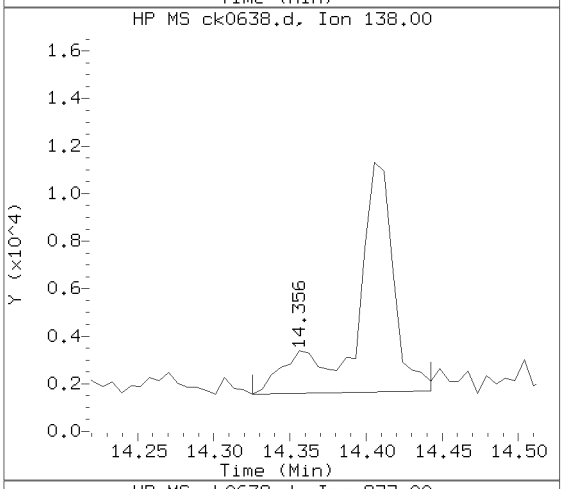
Reference Standard Spectrum for Indeno(1,2,3-cd)pyrene



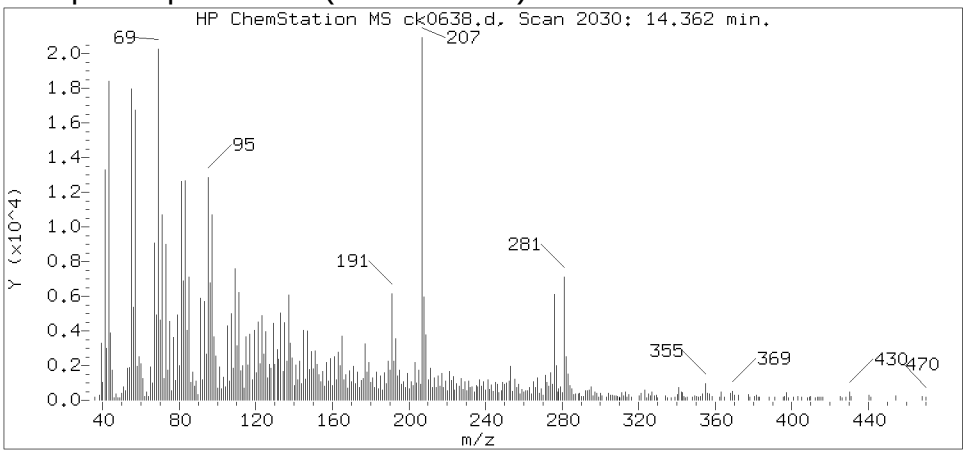


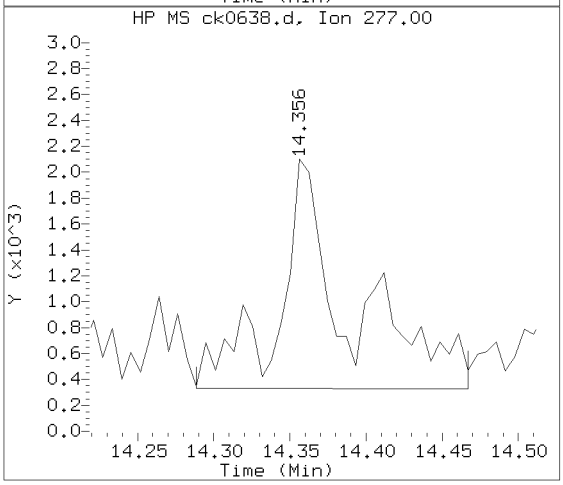
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

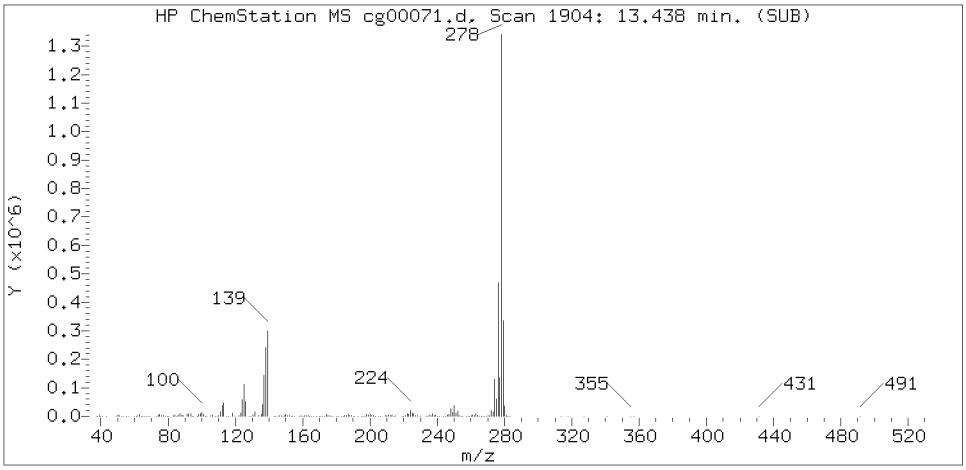
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

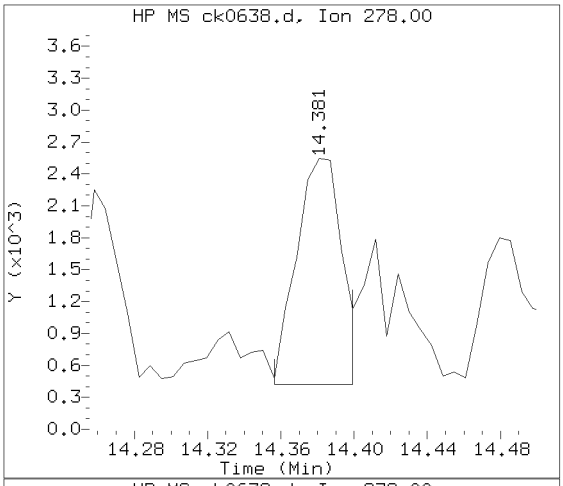
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number : 177
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 2030
Retention Time (minutes) : 14.362
Relative Retention Time : 0.00000
Quant Ion : 276.00
Area (flag) : 10237
On-column Amount (ng/ul) : 0.2796

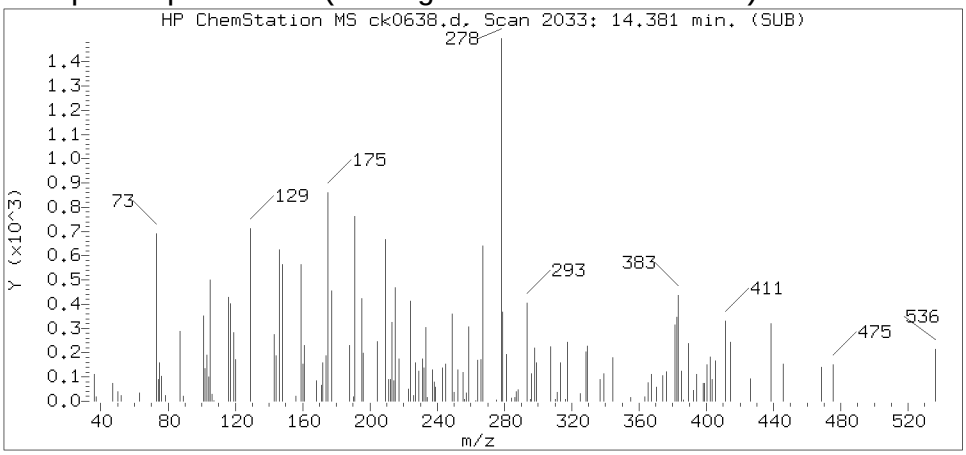
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

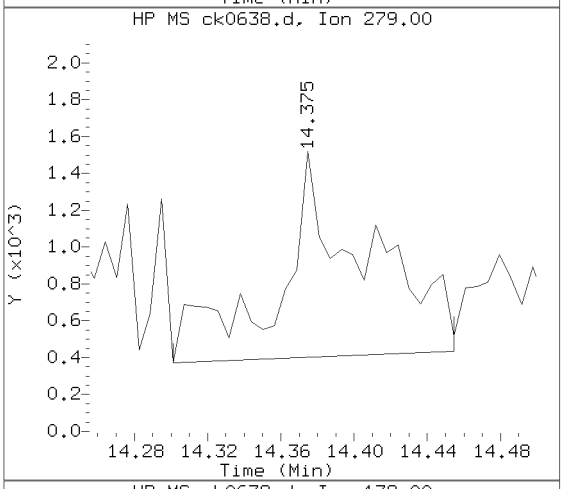
Reference Standard Spectrum for Dibenz(a,h)anthracene



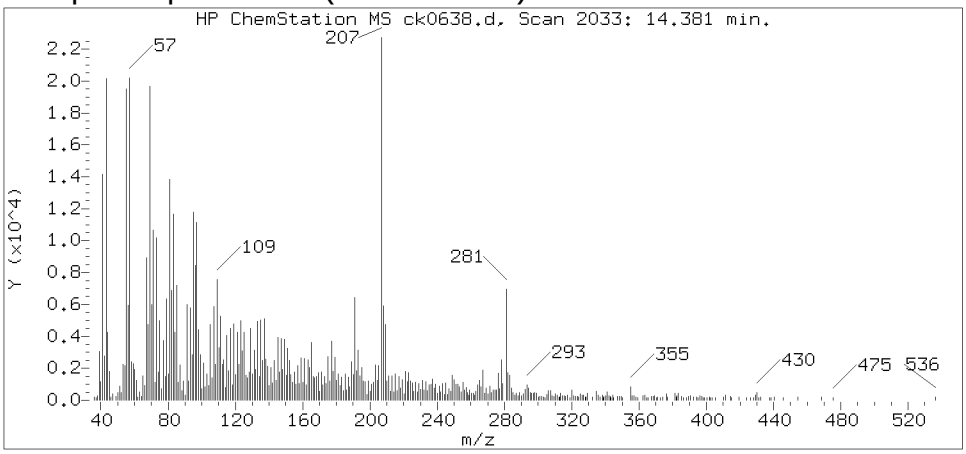


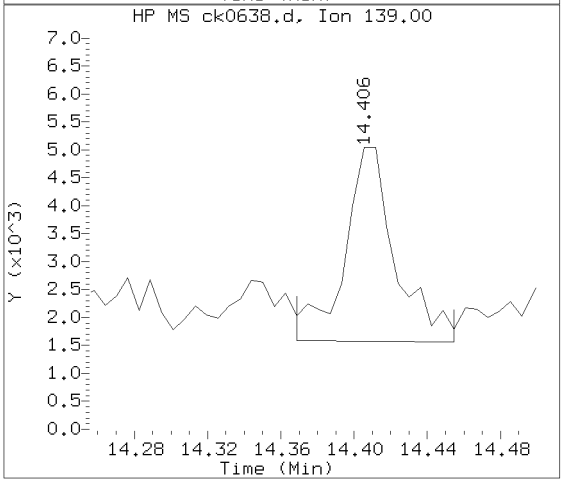
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

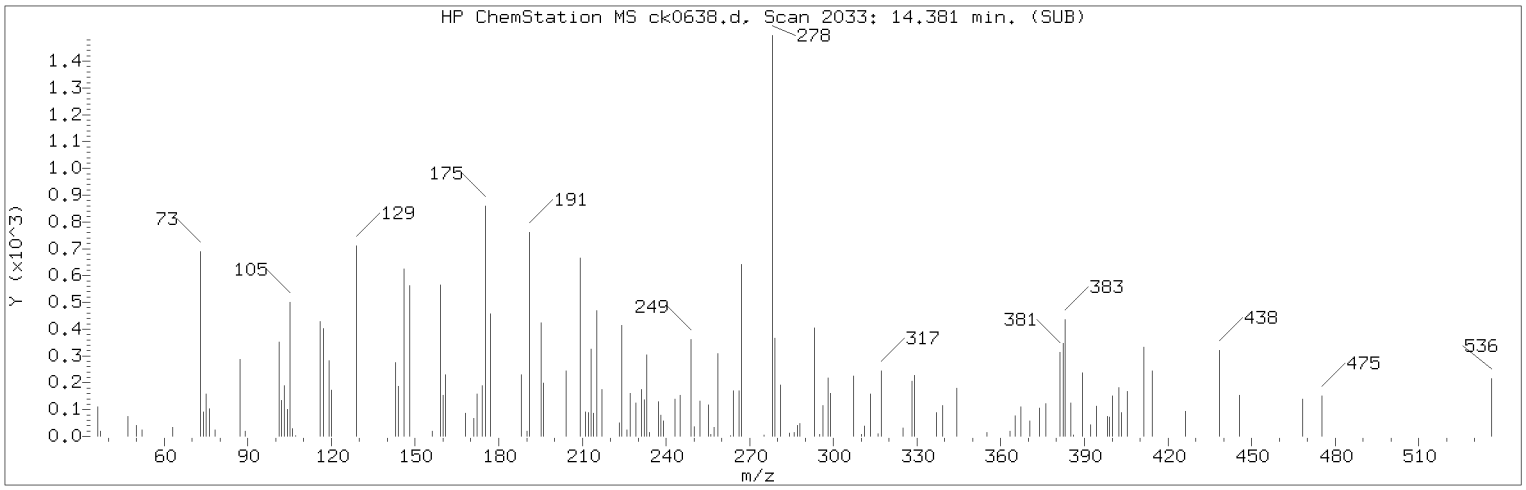
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

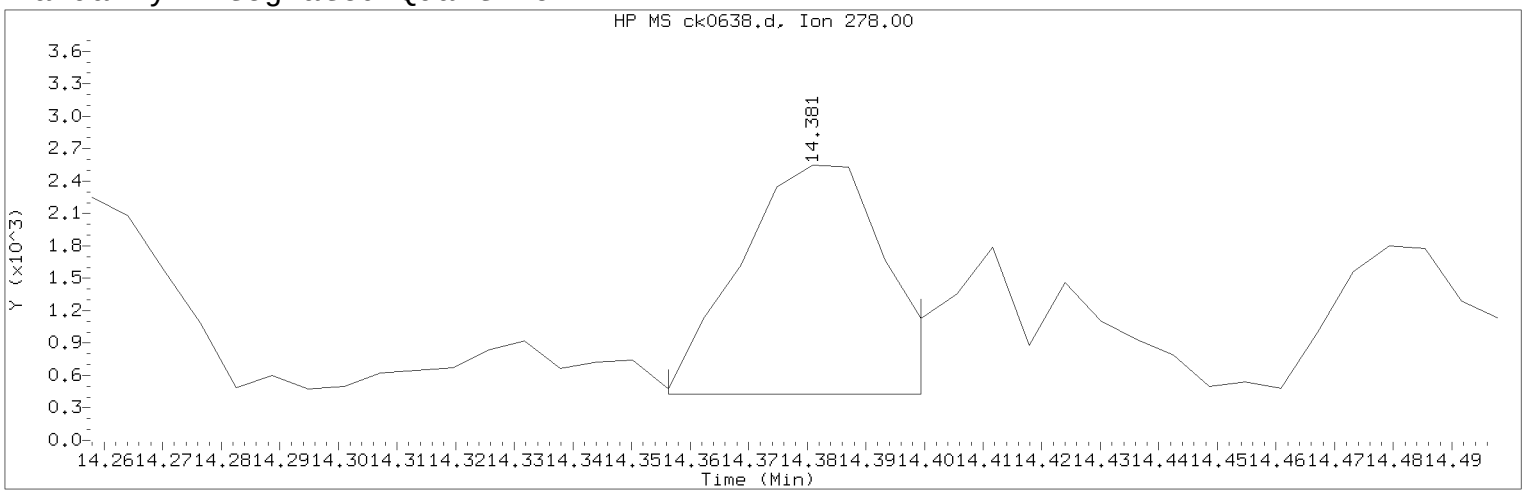
Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2033
Retention Time (minutes) : 14.381
Relative Retention Time : 0.00046
Quant Ion : 278.00
Area (flag) : 3709M
On-column Amount (ng/ul) : 0.1211

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

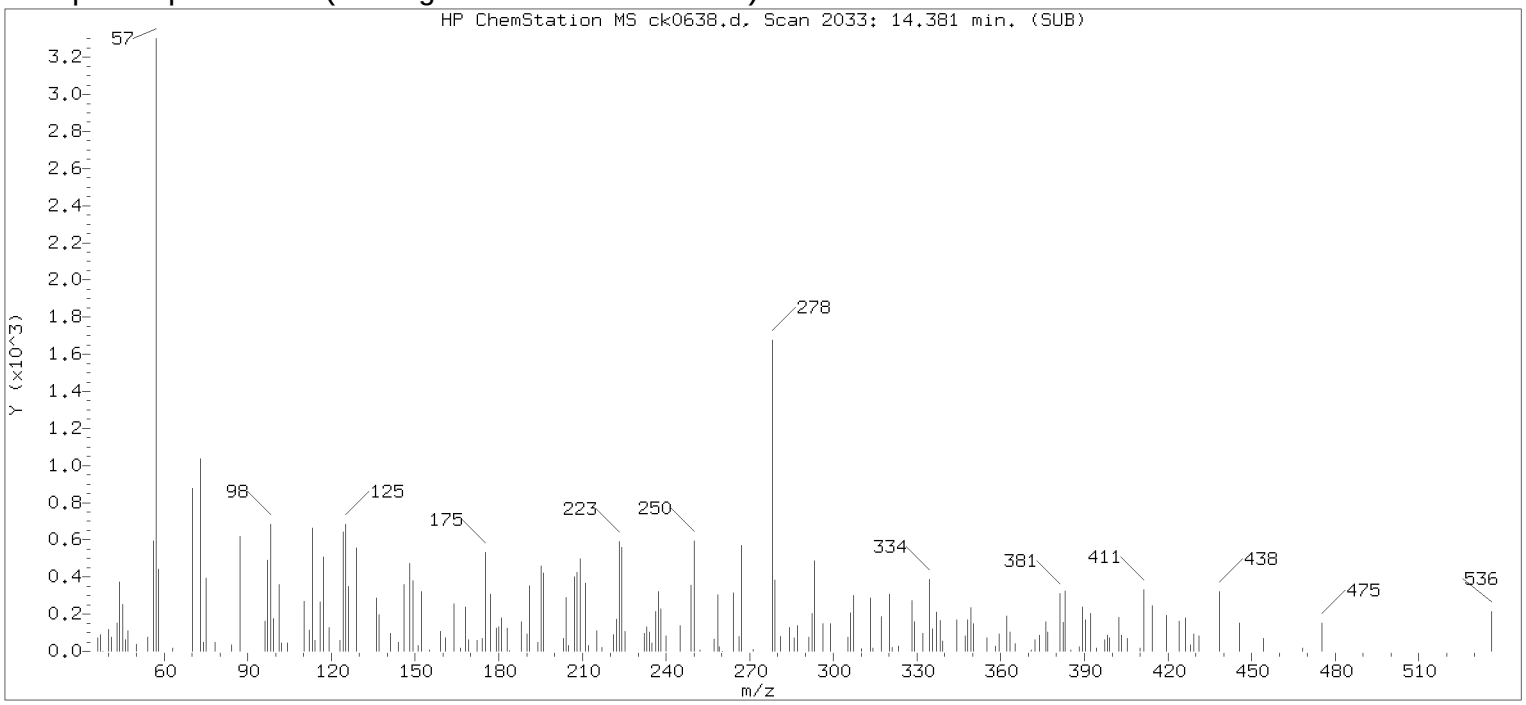
Compound Number : 178
Compound Name : Dibenz(a,h)anthracene
Scan Number : 2033
Retention Time (minutes) : 14.381
Quant Ion : 278.00
Area (flag) : 3709M
On-column Amount (ng/ul) : 0.1211
Integration start scan : 2028 Integration stop scan: 2035
Y at integration start : 425 Y at integration end: 425

Reason for manual integration: improper integration

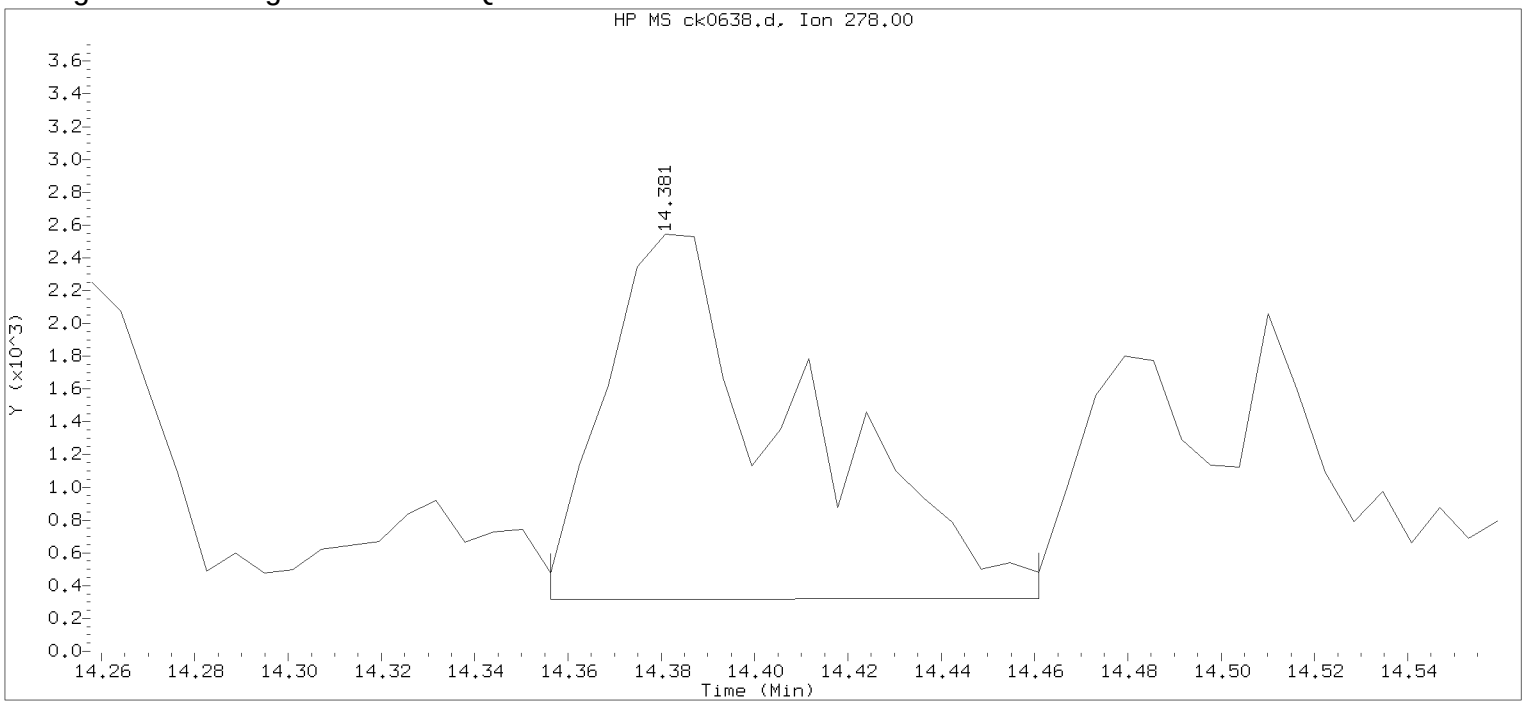
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

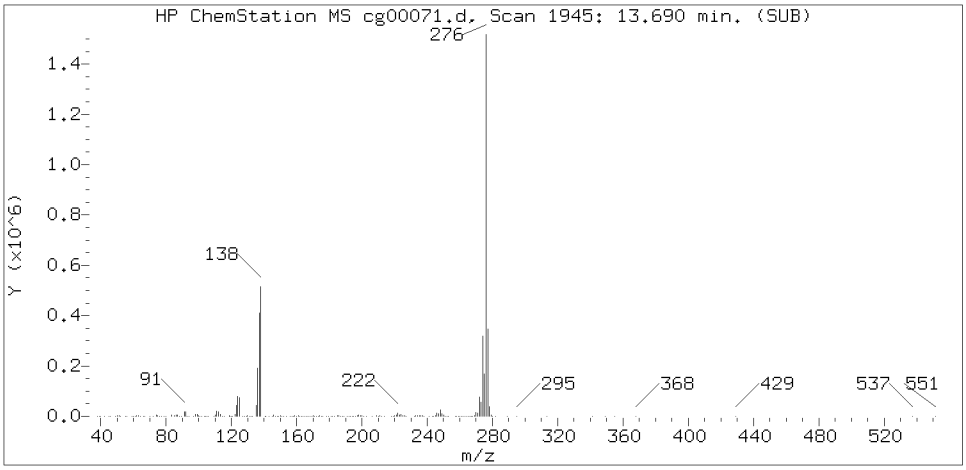
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

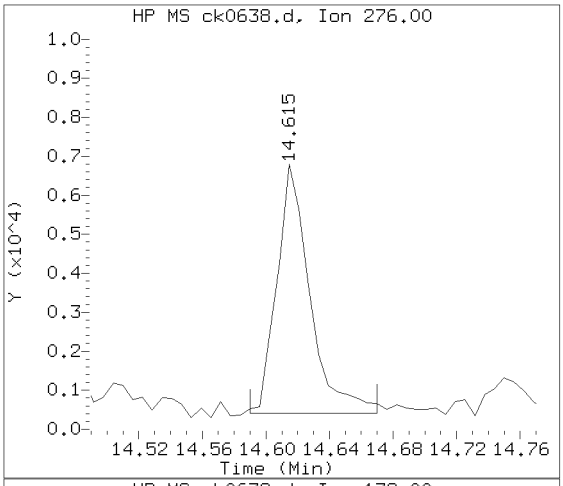
Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 178		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 2033		
Retention Time (minutes)	: 14.381		
Quant Ion	: 278.00		
Area	: 6410		
On-column Amount (ng/ul)	: 0.2093		
Integration start scan	: 2028	Integration stop scan	: 2045
Y at integration start	: 317	Y at integration end	: 321

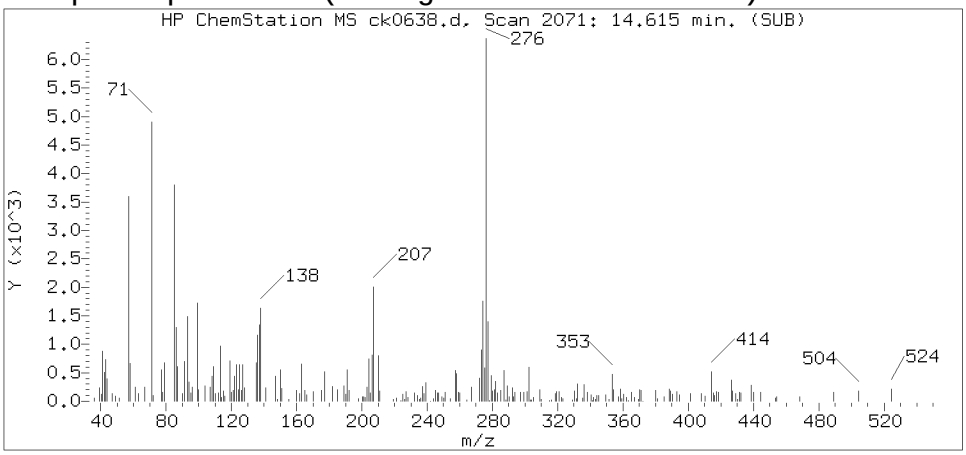
Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

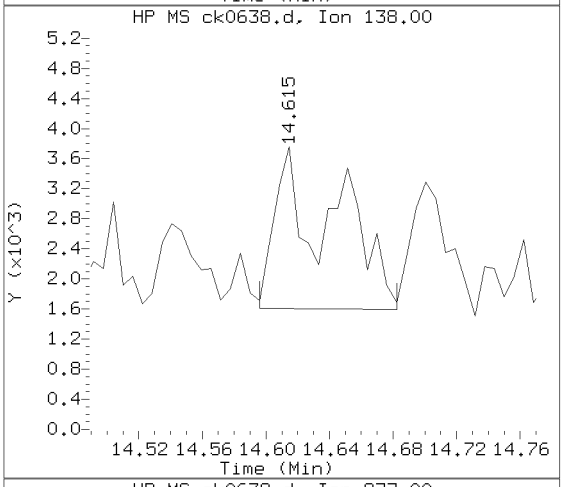
Reference Standard Spectrum for Benzo(g,h,i)perylene



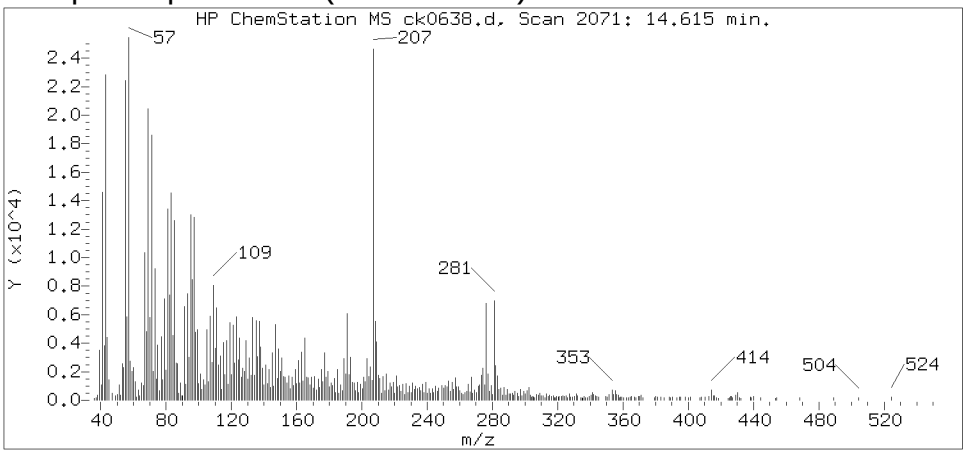


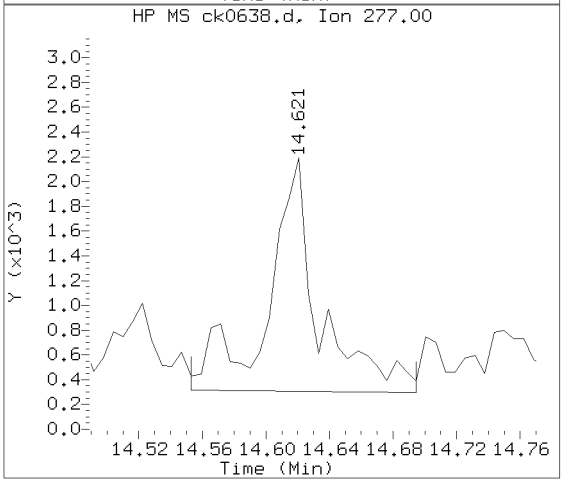
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

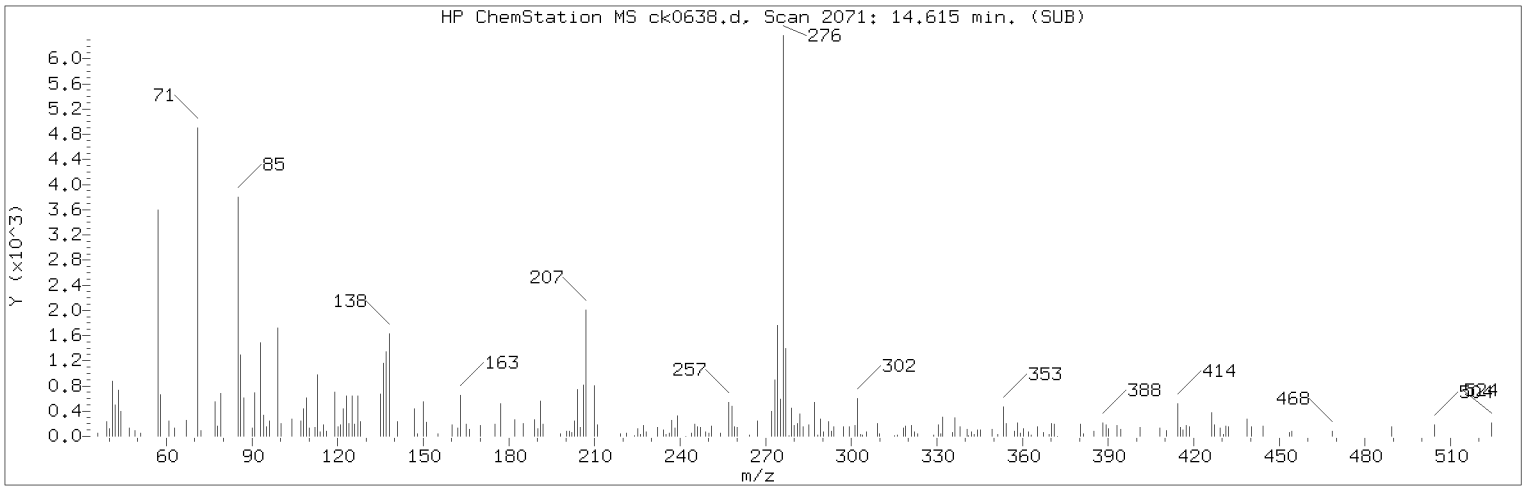
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

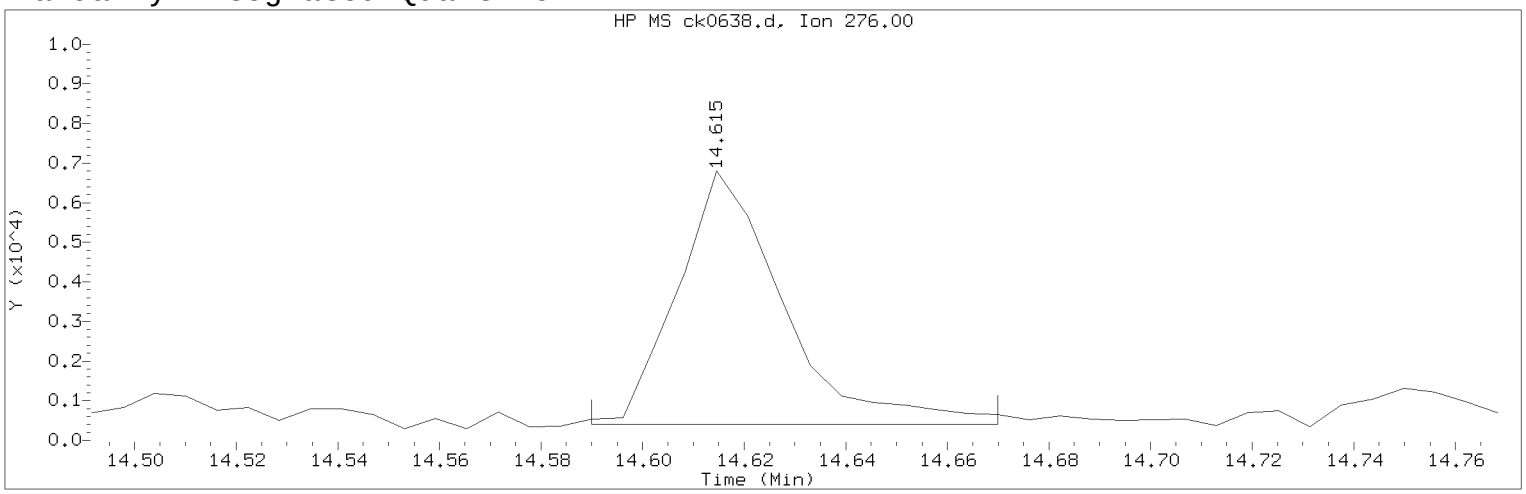
Compound Number	: 179
Compound Name	: Benzo(g,h,i)perylene
Scan Number	: 2071
Retention Time (minutes)	: 14.615
Relative Retention Time	: 0.00046
Quant Ion	: 276.00
Area (flag)	: 9307M
On-column Amount (ng/ul)	: 0.2984

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 05:20 jmg00346

Sample Name: 2E102 Lab Sample ID: 7266818

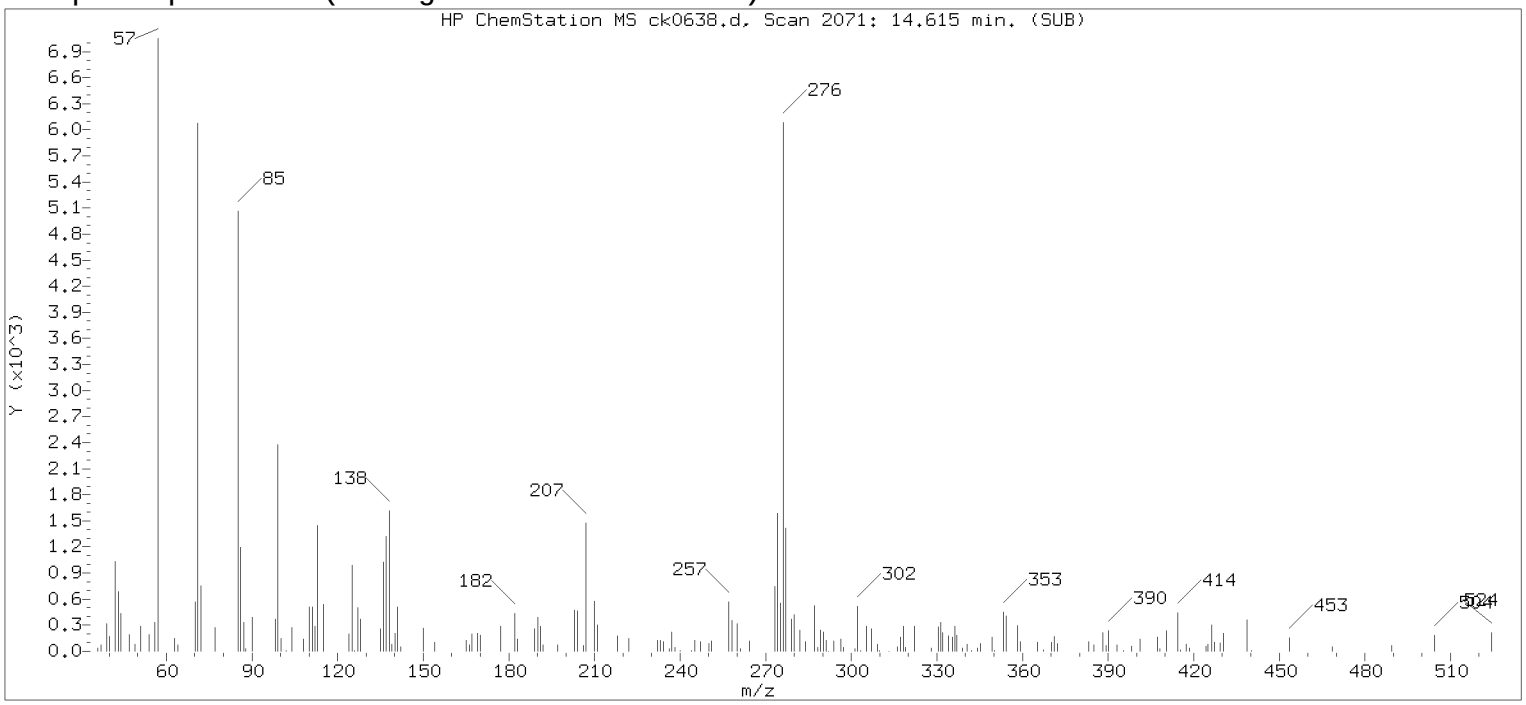
Compound Number : 179
Compound Name : Benzo(g,h,i)perylene
Scan Number : 2071
Retention Time (minutes) : 14.615
Quant Ion : 276.00
Area (flag) : 9307M
On-column Amount (ng/ul) : 0.2984
Integration start scan : 2066 Integration stop scan: 2079
Y at integration start : 404 Y at integration end: 404

Reason for manual integration: improper integration

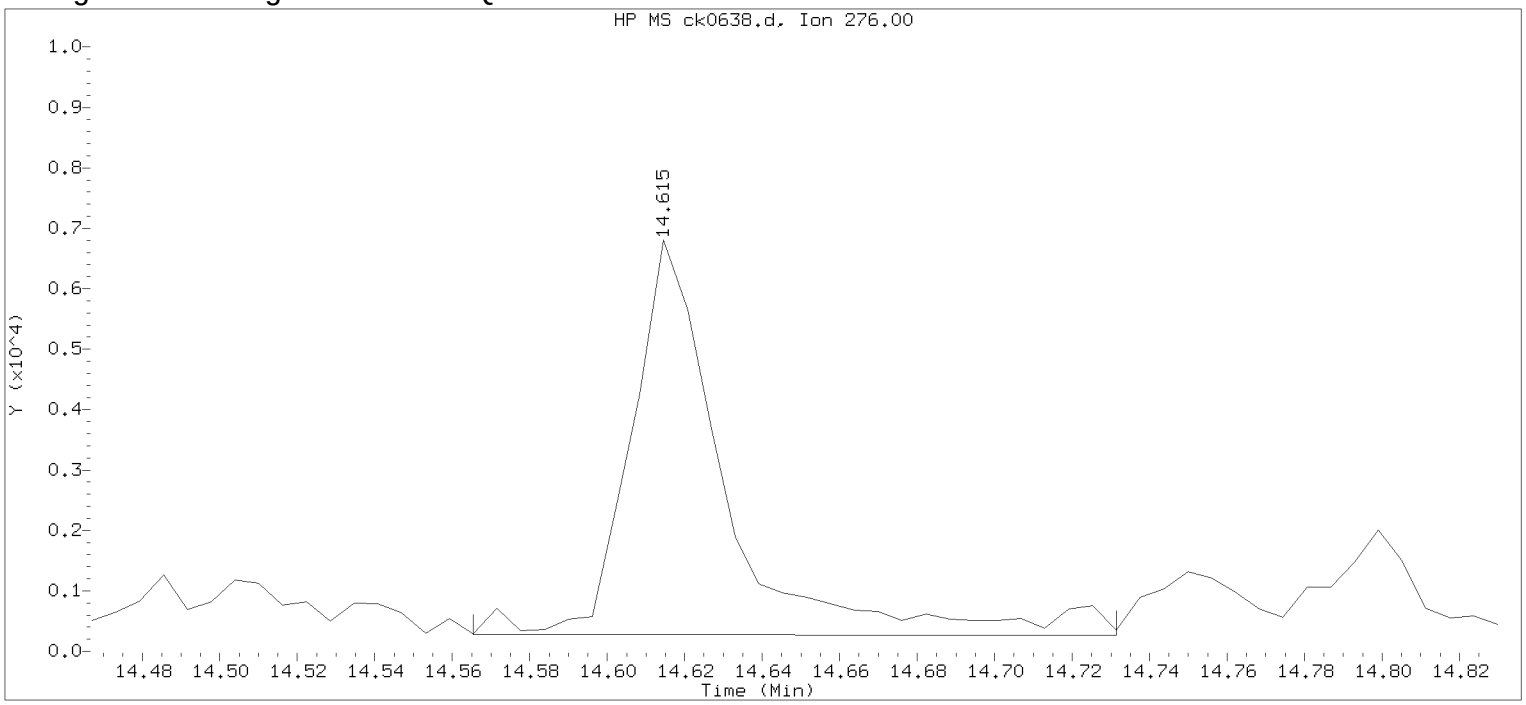
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:37.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:31.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0638.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 12:50 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: newall1
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 18-Nov-2013 13:16 Automation

Sample Name: 2E102 Lab Sample ID: 7266818

Compound Number	: 179		
Compound Name	: Benzo(g,h,i)perylene		
Scan Number	: 2071		
Retention Time (minutes)	: 14.615		
Quant Ion	: 276.00		
Area	: 11188		
On-column Amount (ng/ul)	: 0.3587		
Integration start scan	: 2062	Integration stop scan:	2089
Y at integration start	: 275	Y at integration end:	269

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:37.
Target 3.5 esignature user KVM06 jmg00346

Lancaster Labs

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/13nov13.b/dk0395.d
Data file Sample Info. Line: 3--FD;7266819;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Injection date and time: **13-NOV-2013 11:39**
Instrument ID: **HP19760.i** Batch: **13314WAD**

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	128426 (-7)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	489529 (-6)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	290260 (-8)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	514451 (-8)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	656174 (-10)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	465134 (-19)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.966(0.001)	112	1158953	30.393	61%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1097970	20.966	42%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.000)	82	1003905	22.284	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1765400	24.356	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	440690	57.807	116%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	1918471	23.445	94%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:36. Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Analysis Summary for GC/MS Semivolatiles 7266819

Data file: /chem/HP19760.i/13nov13.b/dk0395.d Injection date and time: **13-NOV-2013 11:39**
Data file Sample Info. Line: 3--FD;7266819;1;0;SAMPLE;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **WL2272**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

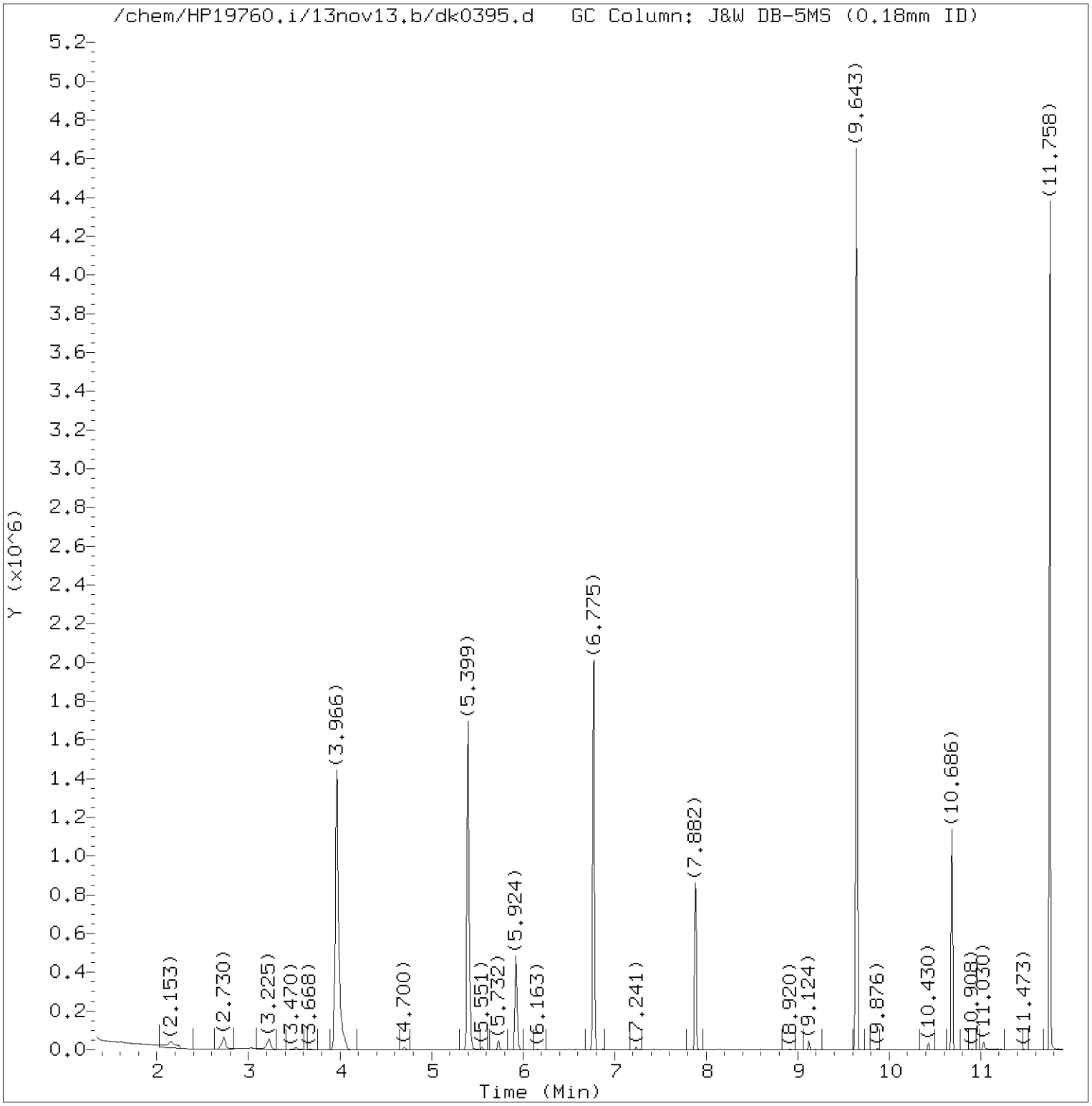
Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 237 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 65

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:36. Target 3.5 esignature user ID: ceb05247

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/14/2013 at 08:18. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

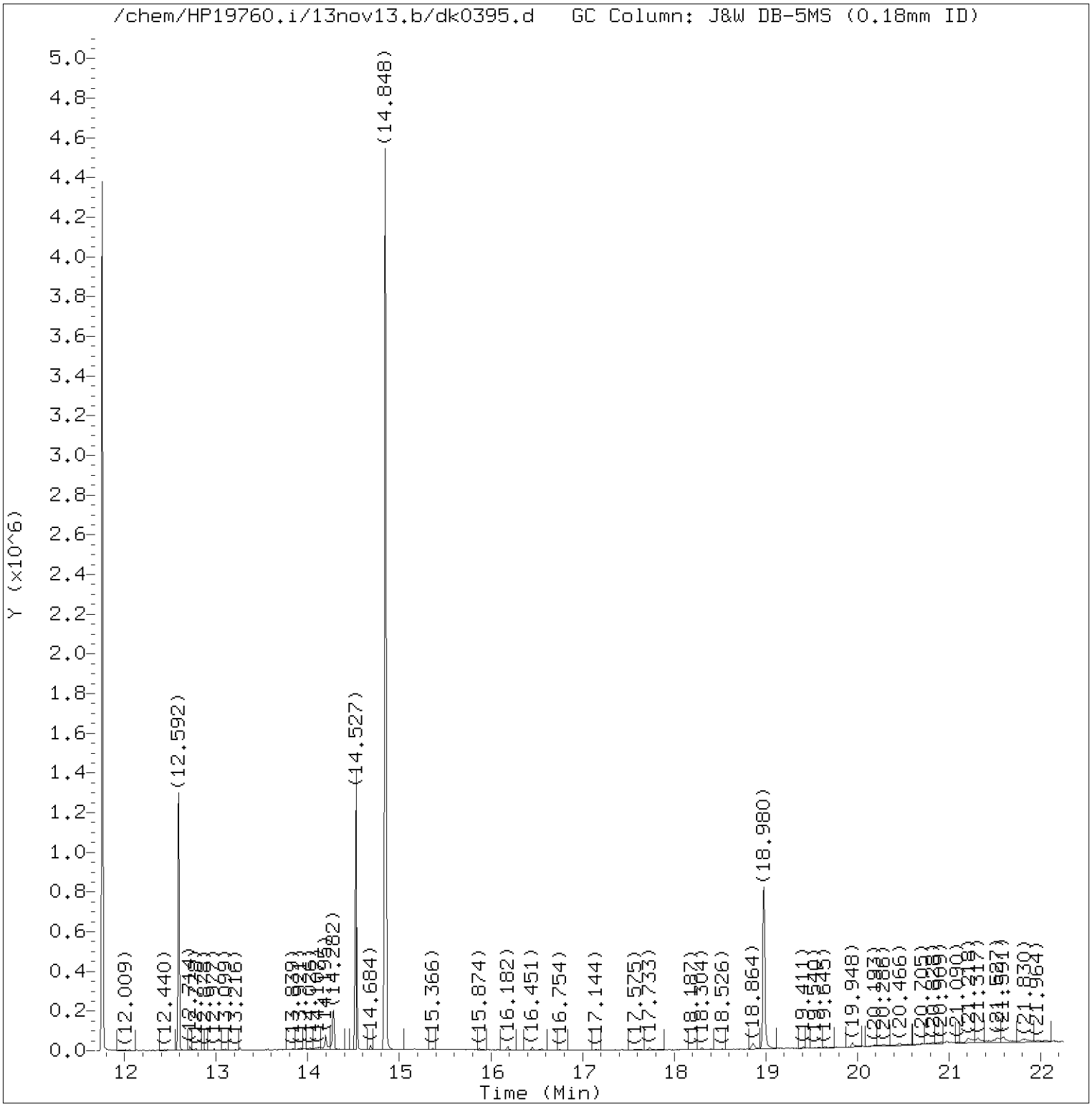
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:36.
Target 3.5 esignature user ID: ceb05247



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:36.
Target 3.5 esignature user ID: ceb05247

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.966	112	1158953	30.393
13)$Phenol-d6	(1)	5.399	99	1097970	20.966
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	128426	5.000
36)$Nitrobenzene-d5	(2)	6.775	82	1003905	22.284
52)*Naphthalene-d8	(2)	7.882	136	489529	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1765400	24.356
92)*Acenaphthene-d10	(3)	10.686	164	290260	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	440690	57.807
130)*Phenanthrene-d10	(4)	12.592	188	514451	5.000
145)*Pyrene-d10	(5)	14.527	212	656174	5.000
149)$Terphenyl-d14	(5)	14.848	244	1918471	23.445
172)*Perylene-d12	(6)	18.980	264	465134	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Catherine E. Bachman
on 11/13/2013 at 21:36.
Target 3.5 esignature user ID: ceb05247

1F

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

3--FD

Lab Name: Lancaster Laboratories Contract:

Lab Code: LANCAS Case No.: SAS No.: SDG No.:

Matrix: (soil/water) WATER Lab Sample ID: 7266819

Sample wt/vol: 237 (g/mL) mL Lab File ID: dk0395.d

Level: (low/med) LOW Date Received: 11/06/13

% Moisture: Decanted: (Y/N) Date Extracted: 11/12/13

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 11/13/13

Injection Volume: 0.5 (uL) Dilution Factor: 1

GPC Cleanup: N pH: Extraction: Sepf

CONCENTRATION UNITS:

Number TICs found: 4 (ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.153	6	J
2.		Unknown	2.730	5	J
3.		Unknown	3.225	4	J
4.		Unknown	14.282	7	J
5.					
6.	SVOCTIC	Total SVOC TICs		23	J
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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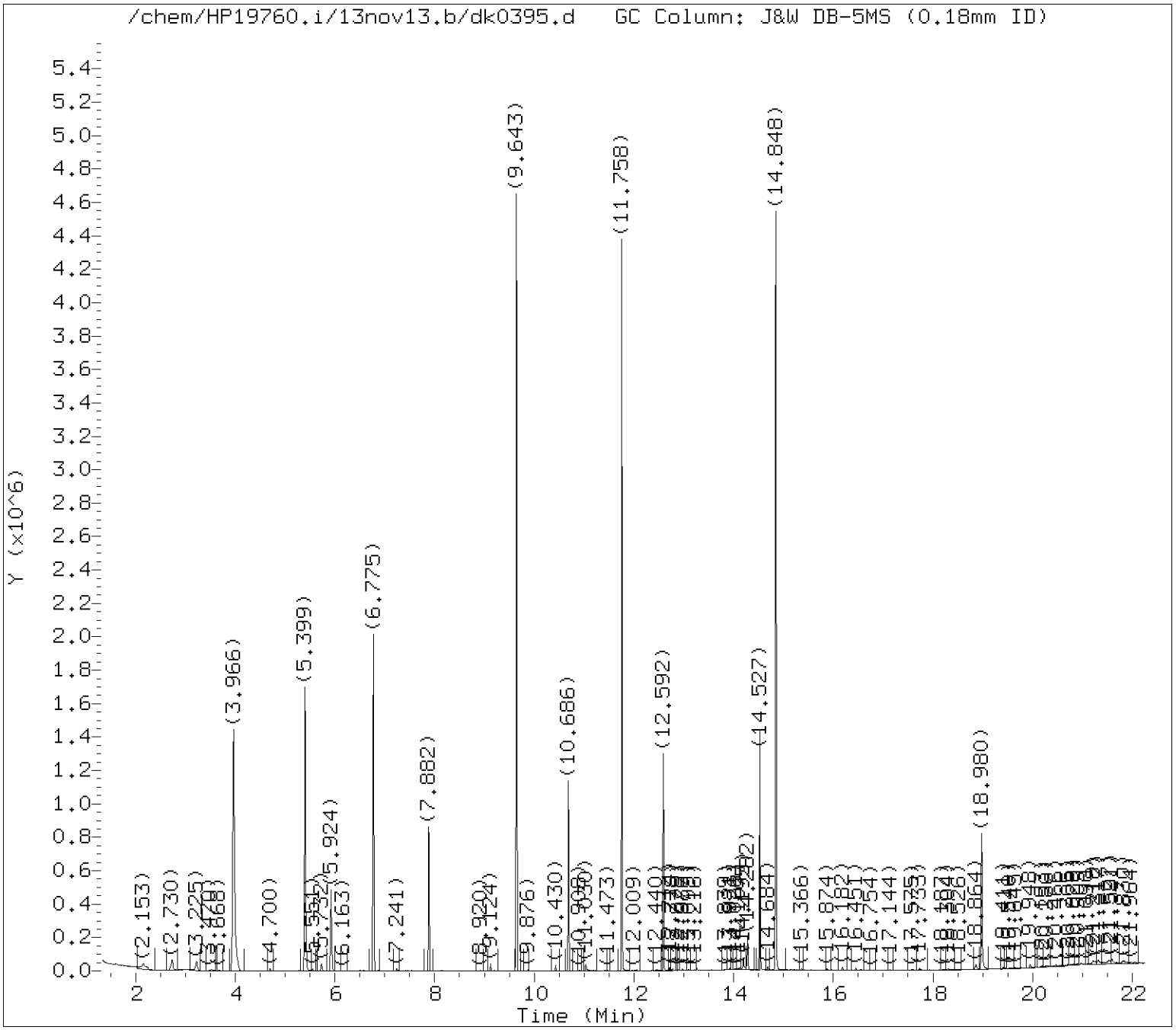
30.					

FORM I SV-1



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

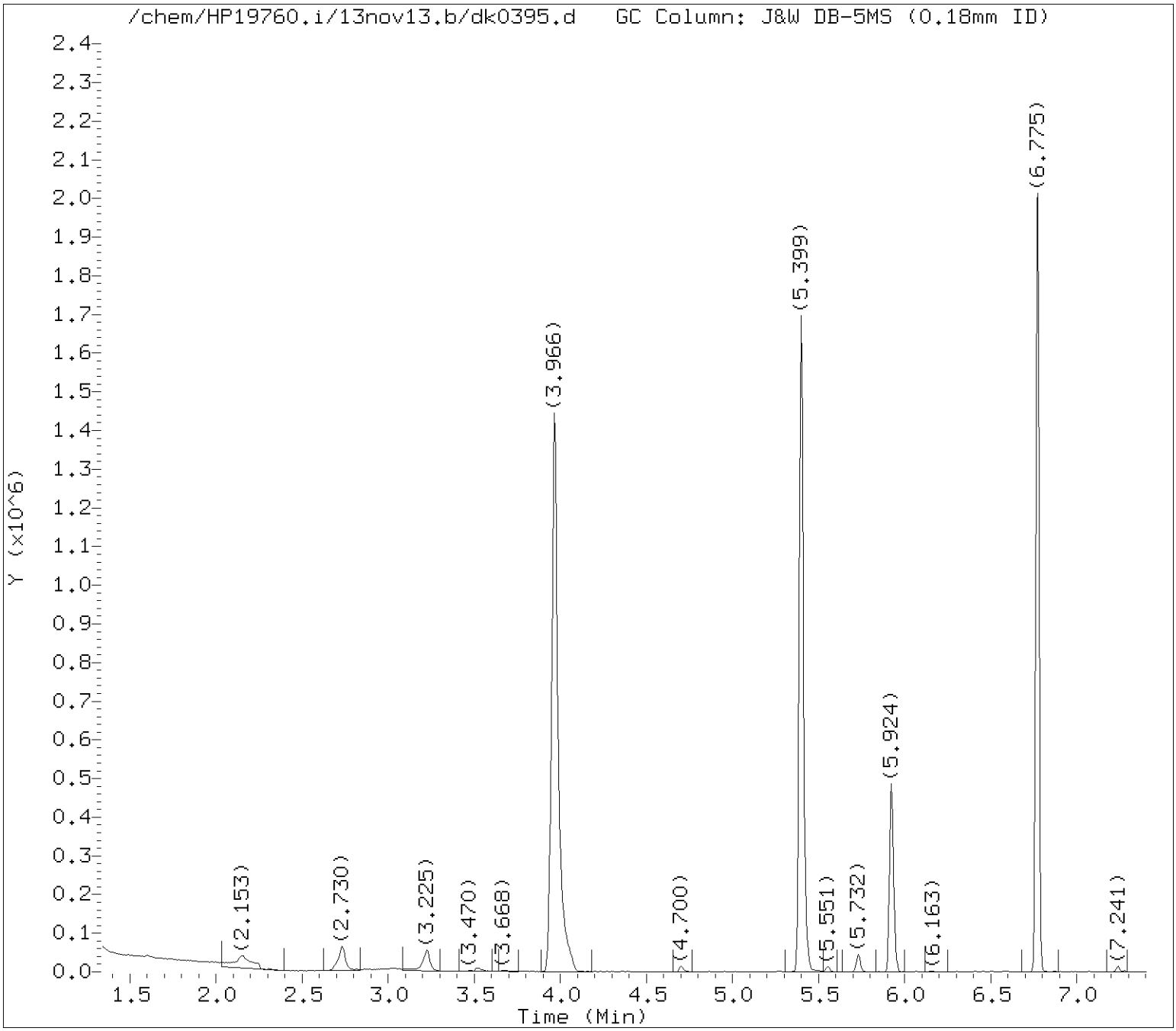
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

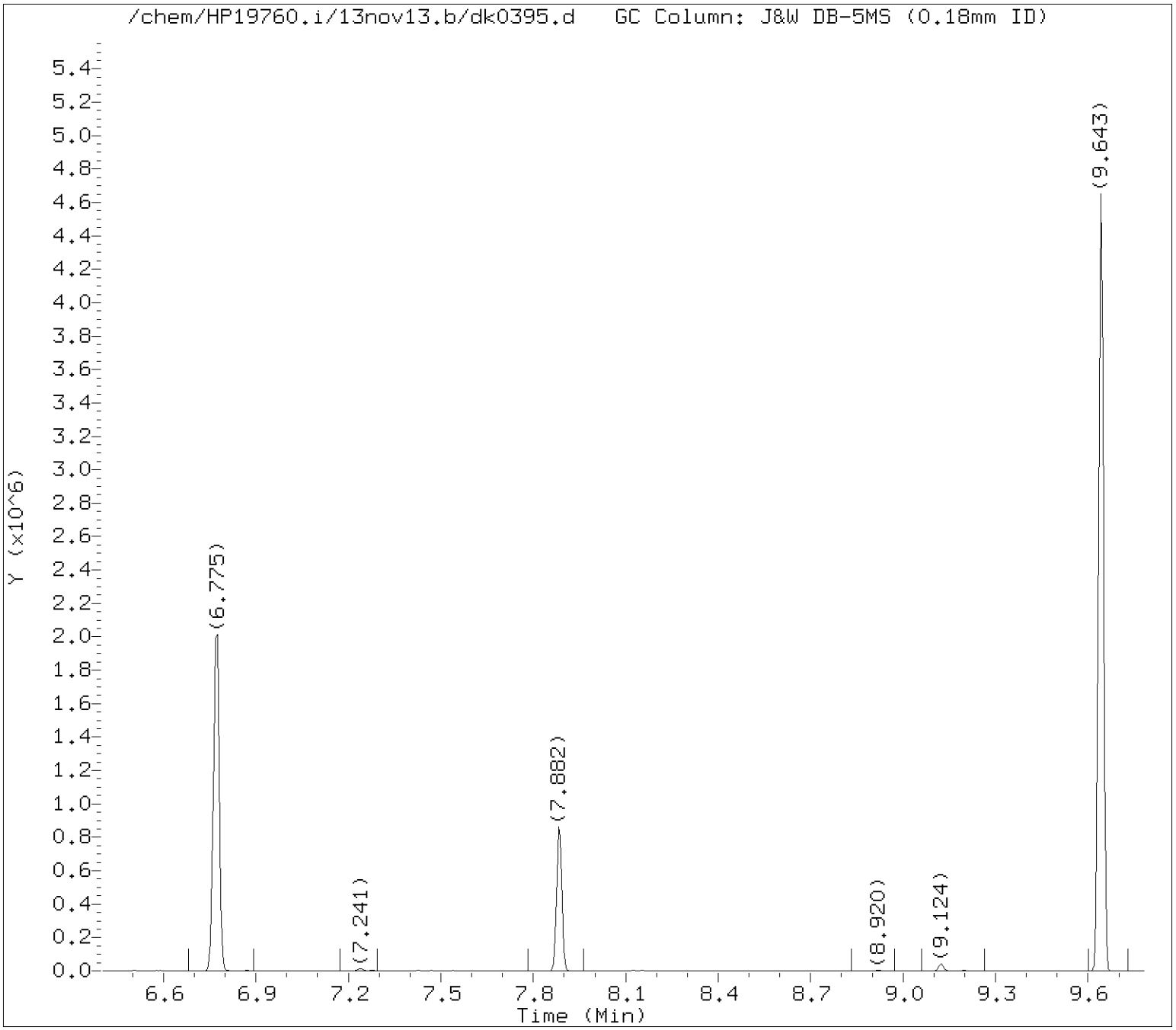
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

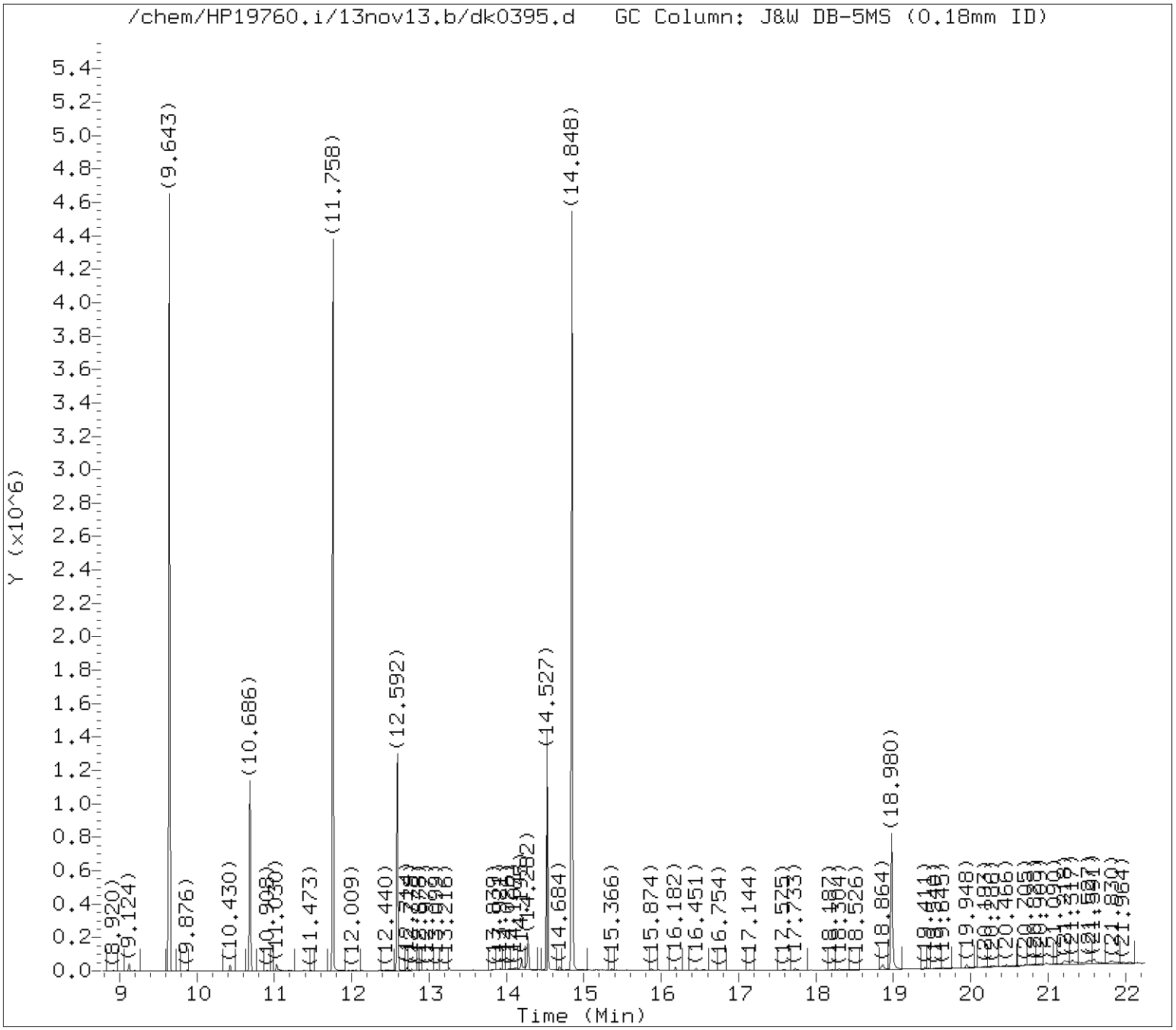
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

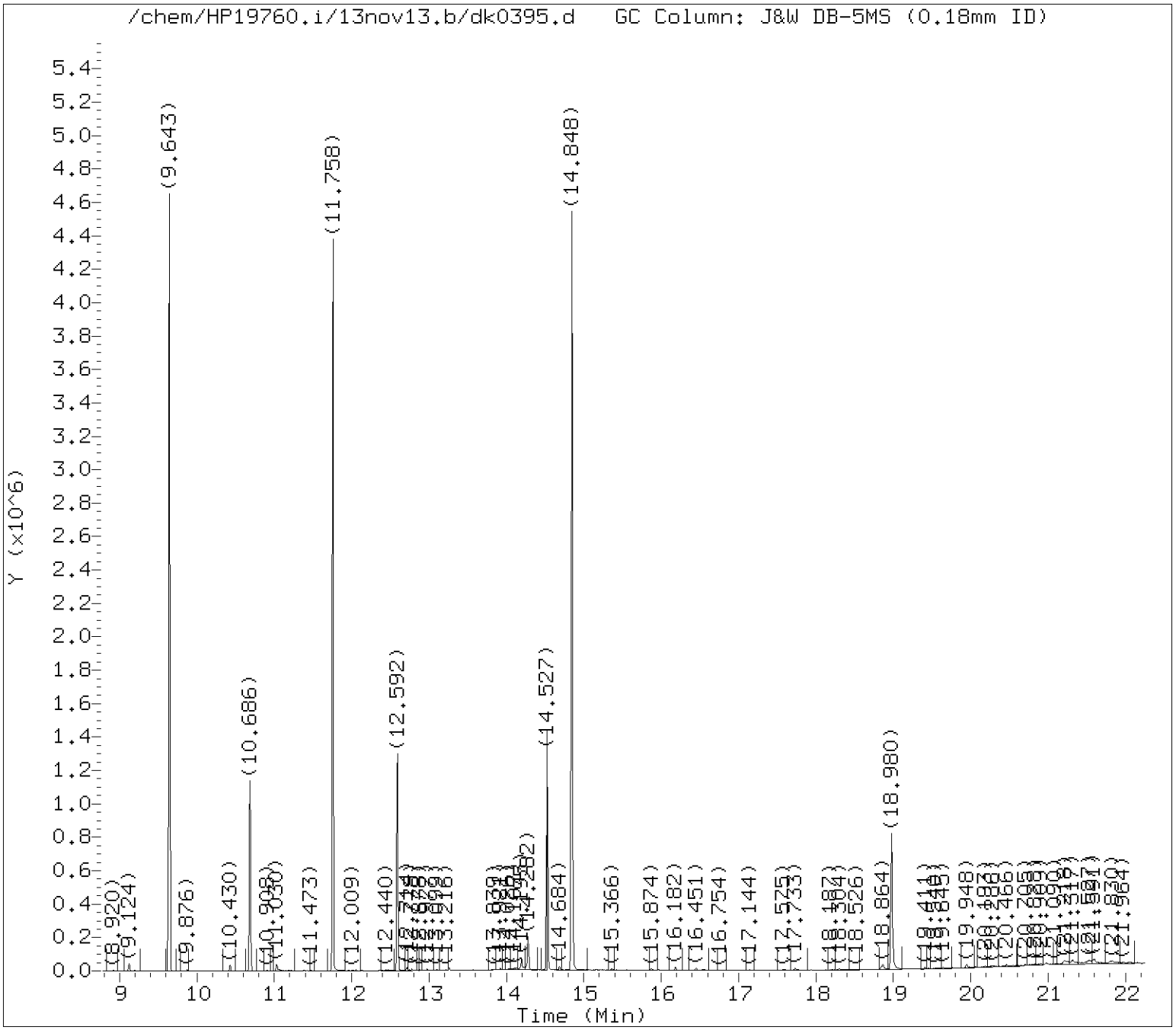
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

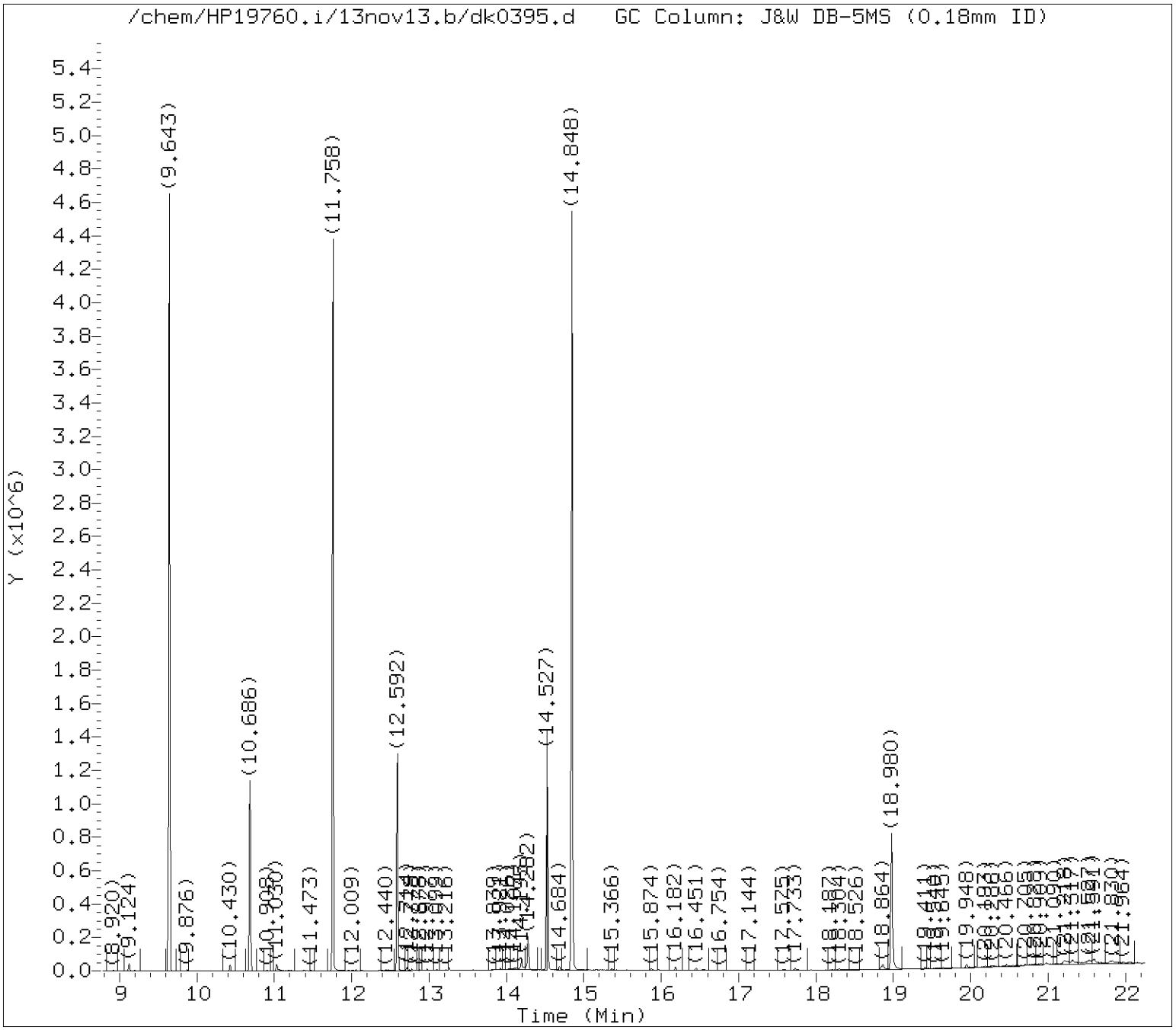
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.560

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

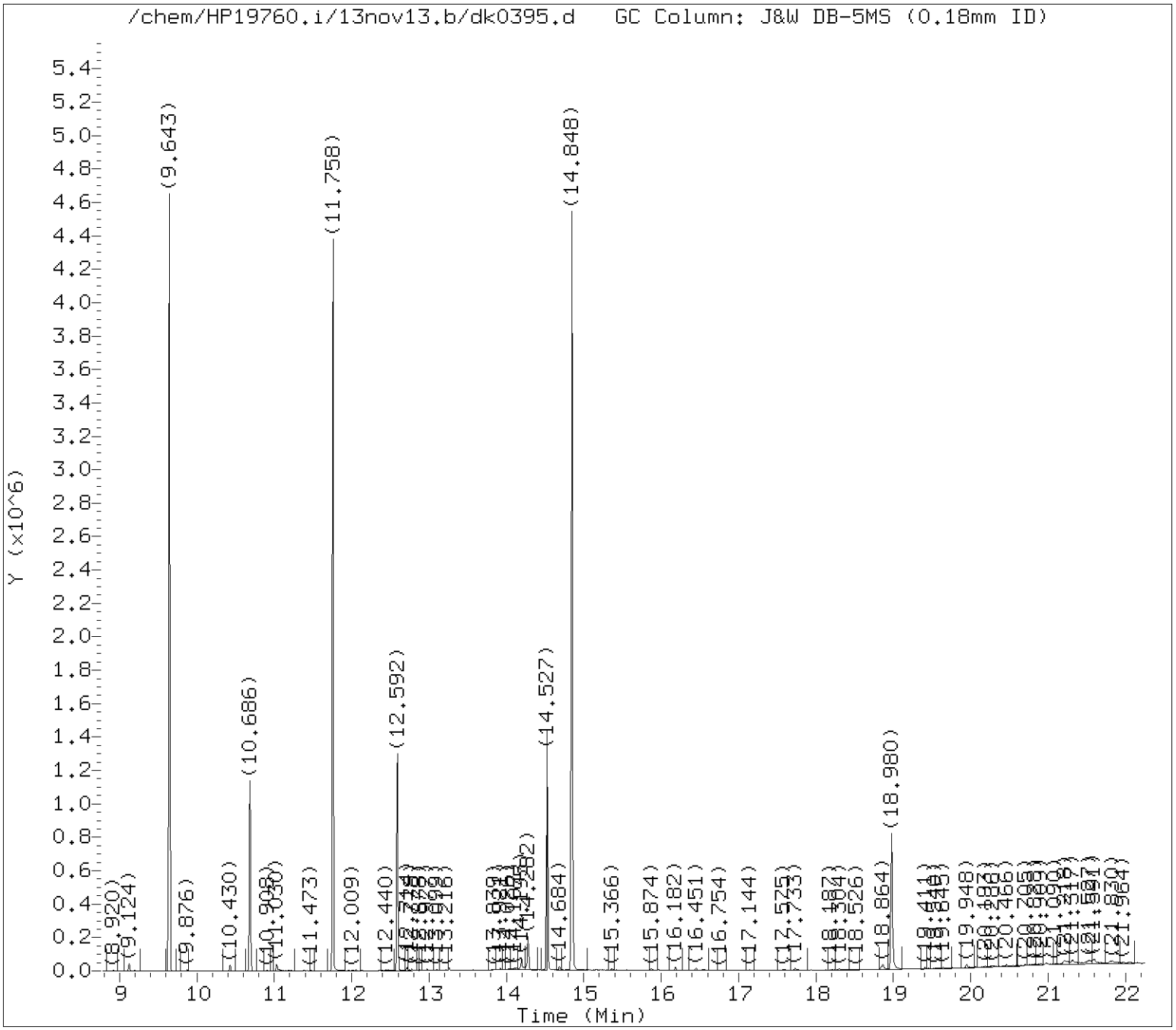
Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.560
Chromatogram End Time (min.): 16.754

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0395.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 11:39 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: WL2272
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 21:04 ceb05247

Sample Name: 3--FD Lab Sample ID: 7266819

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0395.d
Lab Smp Id: 7266819 Client Smp ID: 3--FD
Inj Date : 13-NOV-2013 11:39
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : 3--FD;7266819;1;0;SAMPLE;;;
Misc Info : 13314WAD;newall1;;237;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 4 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: WL2272.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	237.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 19 1,4-Dichlorobenzene-d4	5.924	810039	5.000
* 145 Pyrene-d10	14.527	843136	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
2,2-Dimethoxybutane					CAS #: 3453-99-4		
2.153	244809	1.51109117	6.37591	50	NIST98.l	35304	19
2-Butenoic acid, 4-nitrophenyl ester, (E					CAS #: 14617-88-0		
2.730	188250	1.16198199	4.90287	59	NIST98.l	22134	19

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
2-Pentene, 4-methyl-, (Z)-				CAS #: 691-38-3			
3.225	176429	1.08901801	4.59501	59	NIST98.l	22427	19
Cyclic octaatomic sulfur				CAS #: 10544-50-0			
14.282	278102	1.64921069	6.95869	96	NIST98.l	20663	145

Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0395.d

Date : 13-NOV-2013 11:39

Client ID: 3--FD

Instrument: HP19760.i

Sample Info: 3--FD;7266819;1;0;SAMPLE;;;

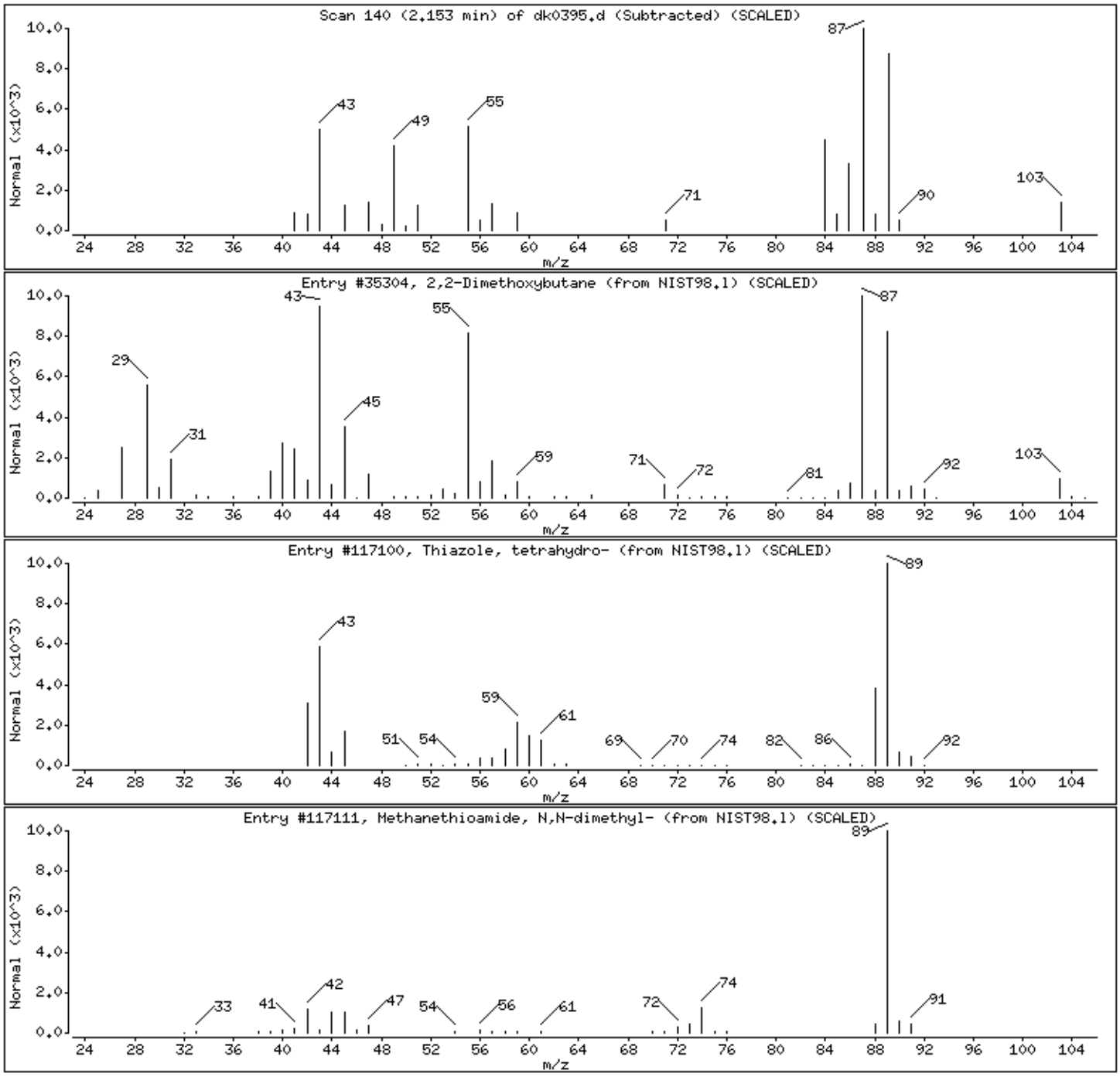
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2,2-Dimethoxybutane	3453-99-4	NIST98.1	35304	50	C6H14O2	118
Thiazole, tetrahydro-	504-78-9	NIST98.1	117100	38	C3H7NS	89
Methanethioamide, N,N-dimethyl-	758-16-7	NIST98.1	117111	32	C3H7NS	89



Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0395.d

Date : 13-NOV-2013 11:39

Client ID: 3--FD

Instrument: HP19760.i

Sample Info: 3--FD;7266819;1;0;SAMPLE;;;

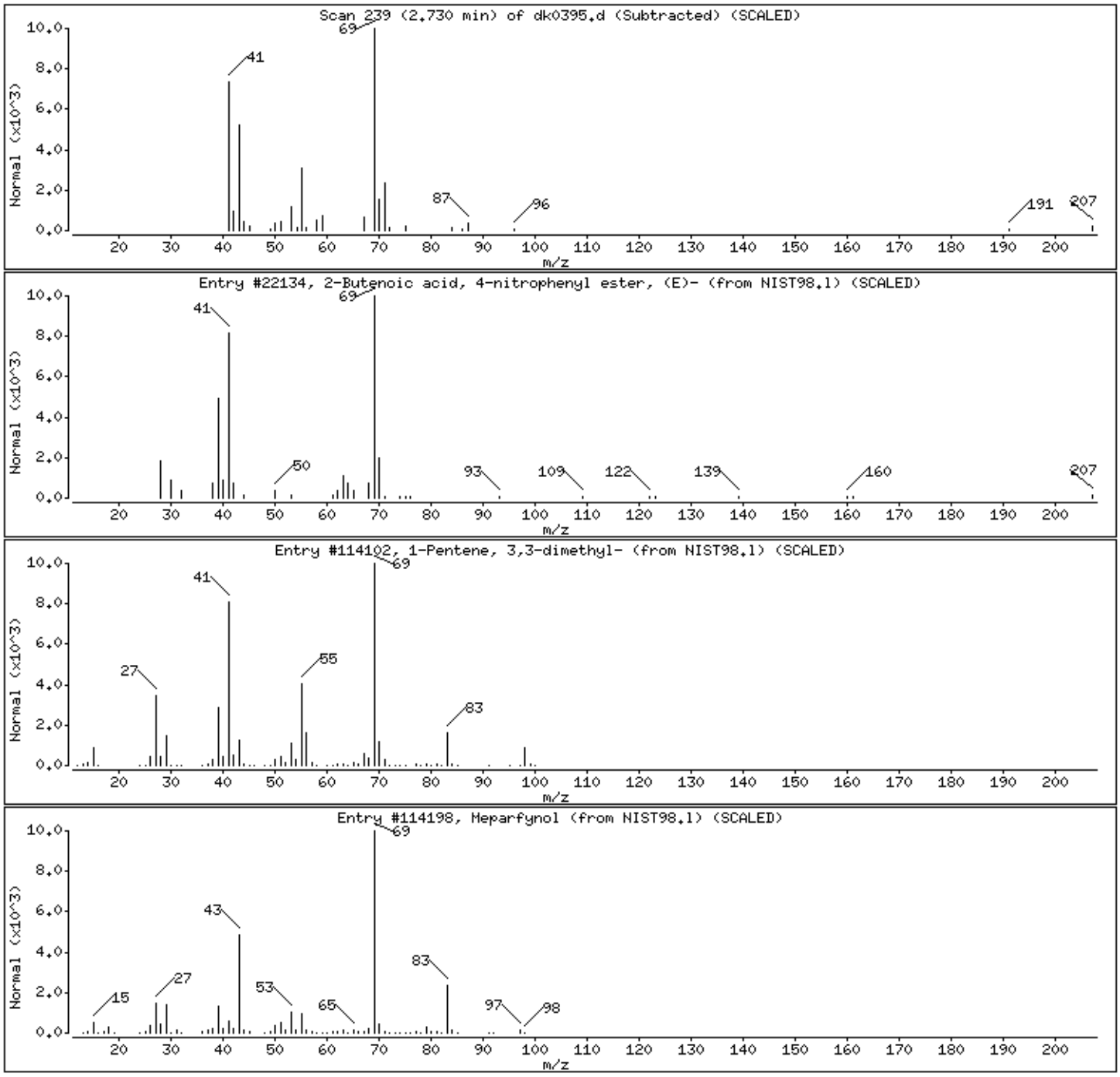
Volume Injected (uL): 0.5

Operator: jmg00346

Column phase: J&W DB-5MS

Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Butenoic acid, 4-nitrophenyl ester, (E	14617-88-0	NIST98.1	22134	59	C10H9NO4	207
1-Pentene, 3,3-dimethyl-	3404-73-7	NIST98.1	114102	45	C7H14	98
Meparfynol	77-75-8	NIST98.1	114198	38	C6H10O	98



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Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0395.d

Date : 13-NOV-2013 11:39

Client ID: 3--FD

Instrument: HP19760.i

Sample Info: 3--FD;7266819;1;0;SAMPLE;;;

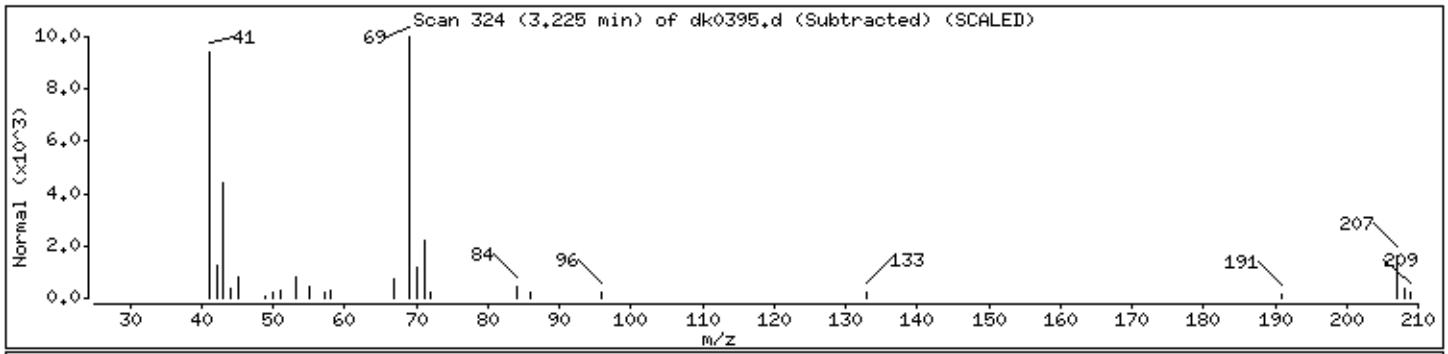
Volume Injected (uL): 0.5

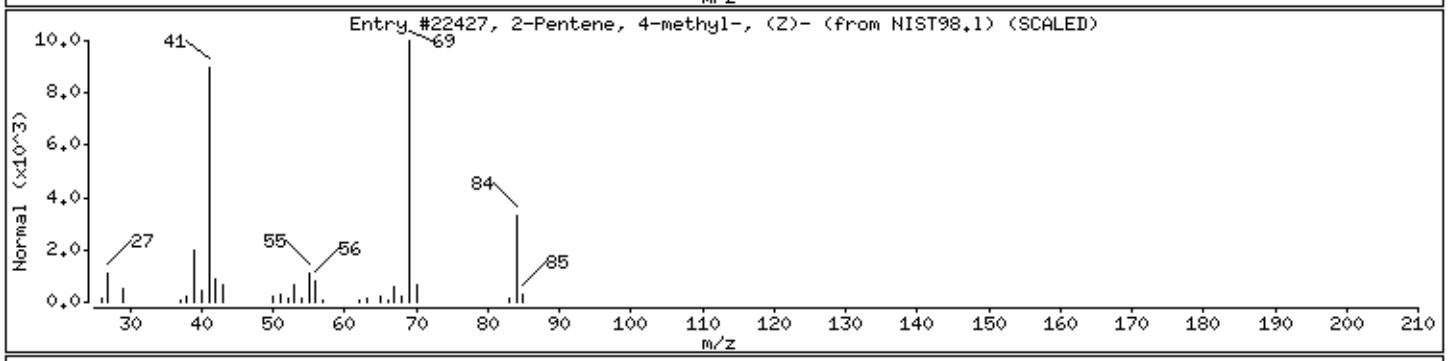
Operator: jmg00346

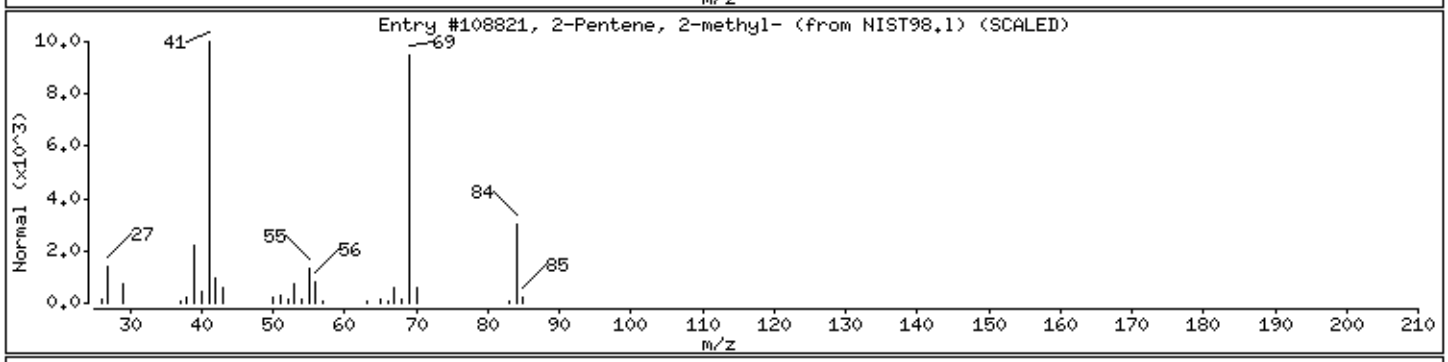
Column phase: J&W DB-5MS

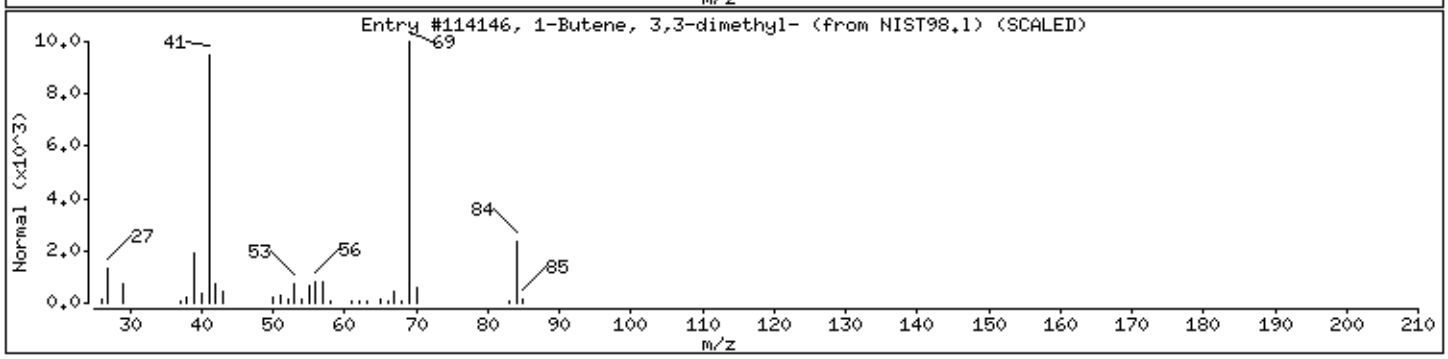
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
2-Pentene, 4-methyl-, (Z)-	691-38-3	NIST98.1	22427	59	C6H12	84
2-Pentene, 2-methyl-	625-27-4	NIST98.1	108821	53	C6H12	84
1-Butene, 3,3-dimethyl-	558-37-2	NIST98.1	114146	53	C6H12	84









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Data File: /chem/HP19760.i/13nov13.b/dk0395.d

Date : 13-NOV-2013 11:39

Client ID: 3--FD

Instrument: HP19760.i

Sample Info: 3--FD;7266819;1;0;SAMPLE;;;

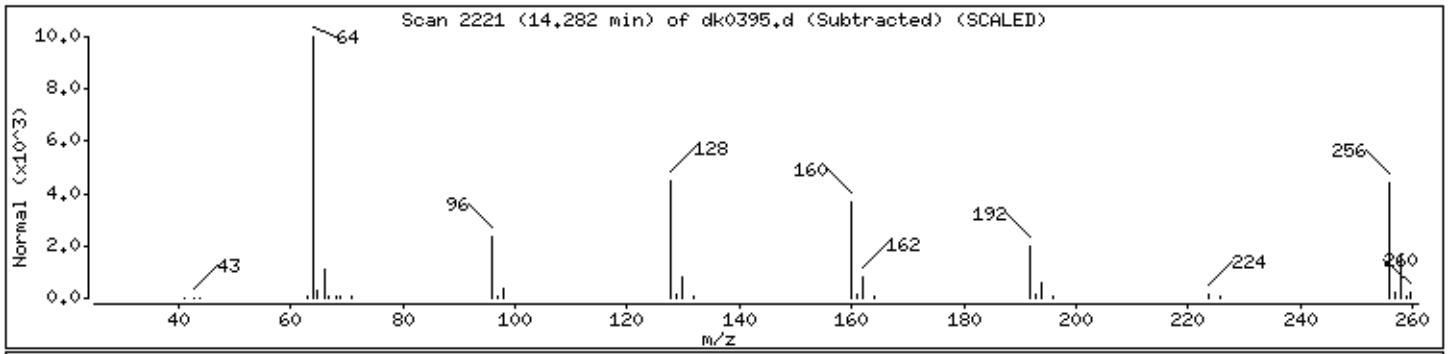
Volume Injected (uL): 0.5

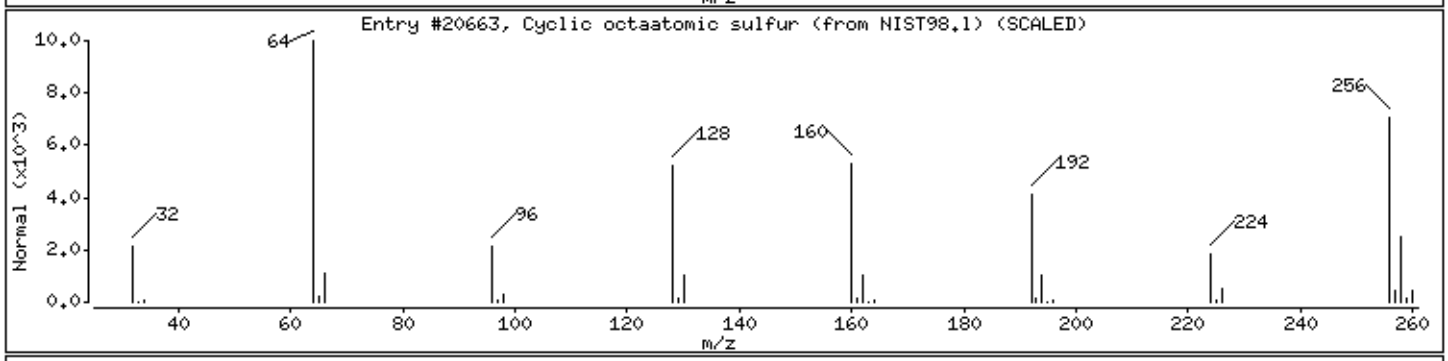
Operator: jmg00346

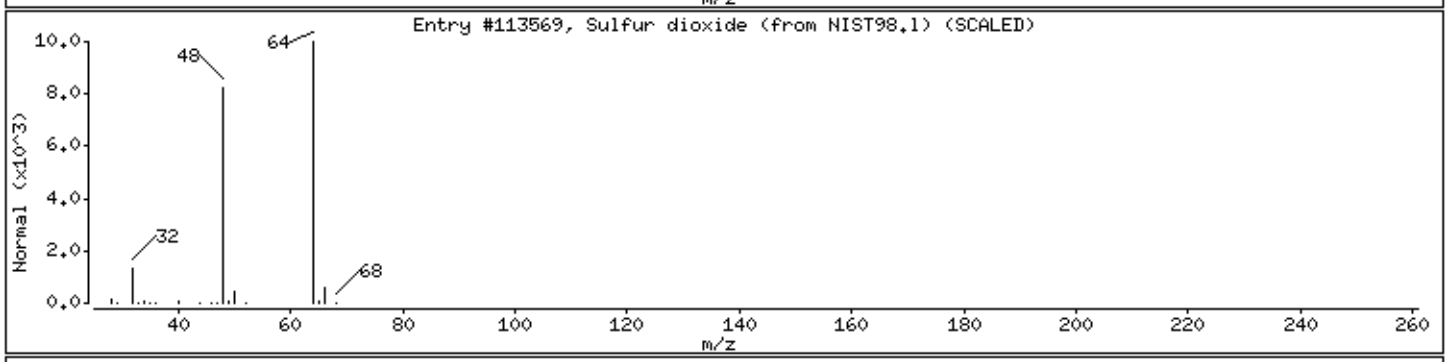
Column phase: J&W DB-5MS

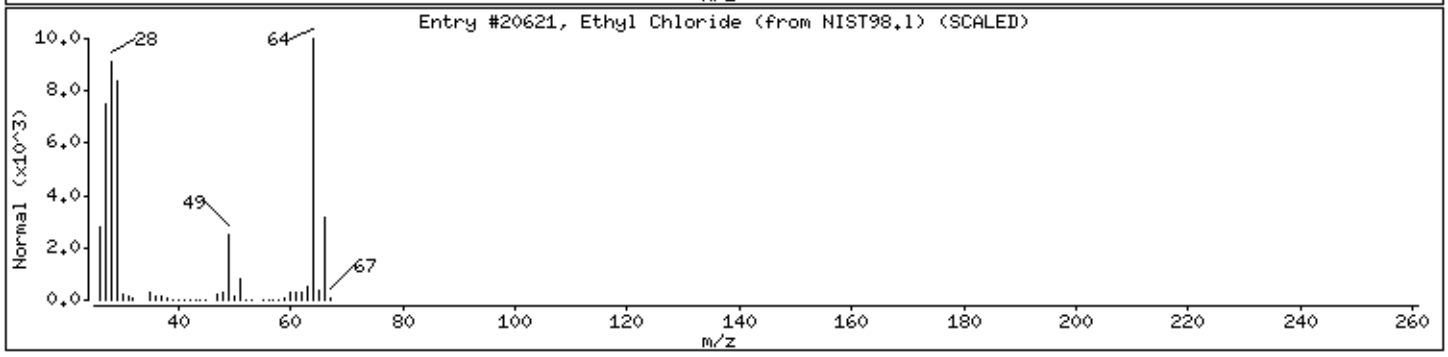
Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Cyclic octaatomic sulfur	10544-50-0	NIST98.1	20663	96	S8	256
Sulfur dioxide	7446-09-5	NIST98.1	113569	5	O2S	64
Ethyl Chloride	75-00-3	NIST98.1	20621	4	C2H5Cl	64









Digitally signed by Catherine E. Bachman on 11/13/2013 at 21:39.
Target 3.5 esignature user ID: ceb05247

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: mr 13 *** Shift #2 Analyst: *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

*

*

*

*

Data Directory Path is - C:\msdchem\1\DATA\13nov12a\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	ck0400.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:20			nu
1	ck0400z.D	50 NG/UL	DFTPP2843	12 Nov 2013	08:43			nu
1	ck0400y.D	50 NG/UL	DFTPP2843	12 Nov 2013	09:23			mr
2	ck0401.D	SSTD030	STD3083	12 Nov 2013	09:38			mr
3	ck0402.D	SSTD0.50	STD3083	12 Nov 2013	10:10			mr
9	ck0403.D	SSTD001	STD3083	12 Nov 2013	10:35			mr
4	ck0404.D	SSTD120	STD3083	12 Nov 2013	10:59			mr
5	ck0405.D	SSTD080	STD3083	12 Nov 2013	11:24			mr
6	ck0406.D	SSTD050	STD3083	12 Nov 2013	11:49			mr
7	ck0407.D	SSTD015	STD3083	12 Nov 2013	12:13			mr
8	ck0408.D	SSTD005	STD3083	12 Nov 2013	12:38			mr
3	ck0409.D	SSTD0.50	8270MDL3083	12 Nov 2013	13:03			mr
10	ck0410.D	SSTD0.10	PAHMDL3083	12 Nov 2013	13:27			mr
11	ck0411.D	SSTD050	8270ICV2463	12 Nov 2013	13:52			mr
12	ck0412.D	SSTD050	BASICV2463	12 Nov 2013	14:17			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP10623 **HP #03**

*** Shift #1 Analyst: _____ *** Shift #2 Analyst: _____ *

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = I or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

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*
*
*

Data Directory Path is - C:\msdchem\1\data\13nov18\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	CK0620.D	DFTPP	DFTPP	18 Nov 2013	04:49			nu
1	CK0620z.D	DFTPP	DFTPP	18 Nov 2013	05:00			nu
1	CK0620y.D	DFTPP	DFTPP	18 Nov 2013	05:14			mr
2	CK0621.D	SSTD3213	SSTD030	18 Nov 2013	05:29			mr
3	CK0622.D	SBLKLC3163	SBLKLC316	18 Nov 2013	06:14	13316SLC		mr
4	CK0623.D	316LCLCS3	316LCLCS	18 Nov 2013	06:38	13316SLC		mr
5	CK0624.D	SBLKWA3203	SBLKWA320	18 Nov 2013	07:03	13320WAA		mr
6	CK0625.D	320WALCS3	320WALCS	18 Nov 2013	07:27	13320WAA		mr
7	CK0626.D	320WALCSD3	320WALCSD	18 Nov 2013	07:52	13320WAA		mr
8	CK0627.D	14307	7279095	18 Nov 2013	08:17	13320WAA		mr
9	CK0628.D	93012	7279096	18 Nov 2013	08:42	13320WAA		mr
10	CK0629.D	73024	7279097	18 Nov 2013	09:07	13320WAA		mr
11	CK0630.D	2E101	7266814	18 Nov 2013	09:31	13316SLC	5	mr
12	CK0631.D	2E101MS	7266815	18 Nov 2013	09:56	13316SLC	5	mr
13	CK0632.D	2E101MSD	7266816	18 Nov 2013	10:21	13316SLC	5	mr
14	CK0633.D	PAYN7	7259331	18 Nov 2013	10:45	13316SLC		mr
15	CK0634.D	R2F14	7265239	18 Nov 2013	11:10	13316SLC	5	mr
16	CK0635.D	2E131	7266809	18 Nov 2013	11:35	13316SLC		mr
17	CK0636.D	2C126	7266812	18 Nov 2013	12:00	13316SLC	5	mr
18	CK0637.D	2C111	7266813	18 Nov 2013	12:25	13316SLC	5	mr
19	CK0638.D	2E102	7266818	18 Nov 2013	12:50	13316SLC	5	mr
20	CK0639.D	51931	7270464	18 Nov 2013	13:14	13316SLC		mr
21	CK0640.D	51932	7270465	18 Nov 2013	13:39	13316SLC		mr
22	CK0641.D	51933	7270466	18 Nov 2013	14:04	13316SLC		mr
23	CK0642.D	51934	7270467	18 Nov 2013	14:29	13316SLC		mr
24	CK0643.D	51935	7270468	18 Nov 2013	14:54	13316SLC		mr
25	CK0644.D	51936	7270469	18 Nov 2013	15:19	13316SLC		mr
26	CK0645.D	51937	7270470	18 Nov 2013	15:43	13316SLC		mr
27	CK0646.D	51938	7270471	18 Nov 2013	16:08	13316SLC		mr,f
28	CK0647.D	51939	7270472	18 Nov 2013	16:33	13316SLC		mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: BC *** Shift #2 Analyst: _____

Comment Code:

R	=	Reinjection necessary	X	=	Sample sent to be reextracted
S	=	Surrogate problem	I	=	Internal Standard problem
NU	=	Not used	F	=	Further dilution required
MR	=	Meets requirements	IUO	=	Internal use only
Cz	=	Confirms z, (z = 1 or X)	T	=	Injected outside valid tune period

Other problems or comments are as follows:

_____

_____

_____

_____

Data Directory Path is - C:\msdchem\1\data\13oct29\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DJ1150.D	DFTPP12.5	DFTPP1863	29 Oct 2013	07:25			nu
2	DJ1151.D	SSTD7.5	STD2813	29 Oct 2013	07:41			nu
3	DJ1152.D	SSTD0.125	STD2813	29 Oct 2013	08:13			nu
4	DJ1153.D	SSTD30	STD2813	29 Oct 2013	08:40			nu
5	DJ1154.D	SSTD0.25	STD2813	29 Oct 2013	09:06			nu
1	DJ1180.D	DFTPP12.5	DFTPP1863	29 Oct 2013	11:14			mr
2	DJ1181.D	SSTD7.5	STD2813	29 Oct 2013	11:28			mr
3	DJ1182.D	SSTD0.125	STD2813	29 Oct 2013	11:55			mr
4	DJ1183.D	SSTD30	STD2813	29 Oct 2013	12:21			mr
5	DJ1184.D	SSTD0.25	STD2813	29 Oct 2013	12:48			mr
6	DJ1185.D	SSTD1.25	STD2813	29 Oct 2013	13:15			mr
7	DJ1186.D	SSTD3.75	STD2813	29 Oct 2013	13:42			mr
8	DJ1187.D	SSTD12.5	STD2813	29 Oct 2013	14:08			mr
9	DJ1188.D	SSTD20	STD2813	29 Oct 2013	14:35			mr
3	DJ1189.D	SSTD0.125	MDL2813	29 Oct 2013	15:02			mr
10	DJ1190.D	SSTD0.025	PAH2813	29 Oct 2013	15:28			mr
11	DJ1191.D	SSTD12.5	ICV2463	29 Oct 2013	15:55			mr
12	DJ1192.D	SSTD12.5	BASICV2463	29 Oct 2013	16:22			mr

Lancaster Laboratories
Semi-Volatiles

Runlog for Hewlett Packard GC/MS System HP19760 **HP #04**

*** Shift #1 Analyst: JMG *** Shift #2 Analyst: CEB *

Comment Code:
R = Reinjection necessary
X = Sample sent to be reextracted
S = Surrogate problem
I = Internal Standard problem
NU = Not used
F = Further dilution required
MR = Meets requirements
IUO = Internal use only
Cz = Confirms z, (z = I or X)
T = Injected outside valid tune period

Other problems or comments are as follows:

*

*

*

*

Data Directory Path is - C:\msdchem\1\data\13nov13\

ALS Btl #	Laboratory File ID	Client ID	Lab Sample ID	Date injected	Time injected	Case and SDG Number or Extraction Batch Number	Dilution Factor	Comments
1	DK0380.D	DFTPP	DFTPP1863	13 Nov 2013	05:05			mr
2	DK0381.D	SSTD12.	STD2813	13 Nov 2013	05:19			mr
3	DK0382.D	SBLKWD3144	SBLKWD314	13 Nov 2013	05:51	13314WAD		mr
4	DK0383.D	314WDLCS4	314WDLCS	13 Nov 2013	06:18	13314WAD		mr
5	DK0384.D	314WDLCSD4	314WDLCSD	13 Nov 2013	06:45	13314WAD		mr
6	DK0385.D	CDC6PDL	7266449DL	13 Nov 2013	07:11	13312WAI	10	mr
7	DK0386.D	CDC06DL	7266450DL	13 Nov 2013	07:38	13312WAI	10	mr
8	DK0387.D	CDC07DL	7266451DL	13 Nov 2013	08:05	13312WAI	10	mr
9	DK0388.D	49CBT	7266590	13 Nov 2013	08:31	13314WAD		mr
10	DK0389.D	FB106	7266798	13 Nov 2013	08:58	13314WAD		mr
11	DK0390.D	FB206	7266799	13 Nov 2013	09:25	13314WAD		mr
12	DK0391.D	2B152	7266805	13 Nov 2013	09:51	13314WAD		mr
13	DK0392.D	2B151	7266807	13 Nov 2013	10:18	13314WAD		mr
14	DK0393.D	2D123	7266810	13 Nov 2013	10:45	13314WAD		mr
15	DK0394.D	2D121	7266811	13 Nov 2013	11:12	13314WAD		mr
16	DK0395.D	3--FD	7266819	13 Nov 2013	11:39	13314WAD		mr
17	DK0396.D	FF---	7266823	13 Nov 2013	12:05	13314WAD		mr
18	DK0397.D	PF-D-	7266824	13 Nov 2013	12:32	13314WAD		mr
19	DK0398.D	OM-EF	7267172	13 Nov 2013	12:59	13314WAD		mr
20	DK0399.D	NS40D	7267633	13 Nov 2013	13:25	13314WAD		mr
21	DK0400.D	NS28D	7267634	13 Nov 2013	13:52	13314WAD		mr
22	DK0401.D	TSINF	7270635	13 Nov 2013	14:19	13314WAD	10	mr
23	DK0402.D	401AP	7270637	13 Nov 2013	14:46	13314WAD	10	mr
24	DK0403.D	T501P	7270638	13 Nov 2013	15:13	13314WAD	10	mr
25	DK0404.D	TSEFF	7270641	13 Nov 2013	15:39	13314WAD	10	mr
26	DK0405.D	ELGAC	7270643	13 Nov 2013	16:06	13314WAD	10	mr
27	DK0406.D	SP901	7270644	13 Nov 2013	16:33	13314WAD	10	mr
28	DK0407.D	3521X	7270742	13 Nov 2013	17:00	13314WAD	5	mr

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

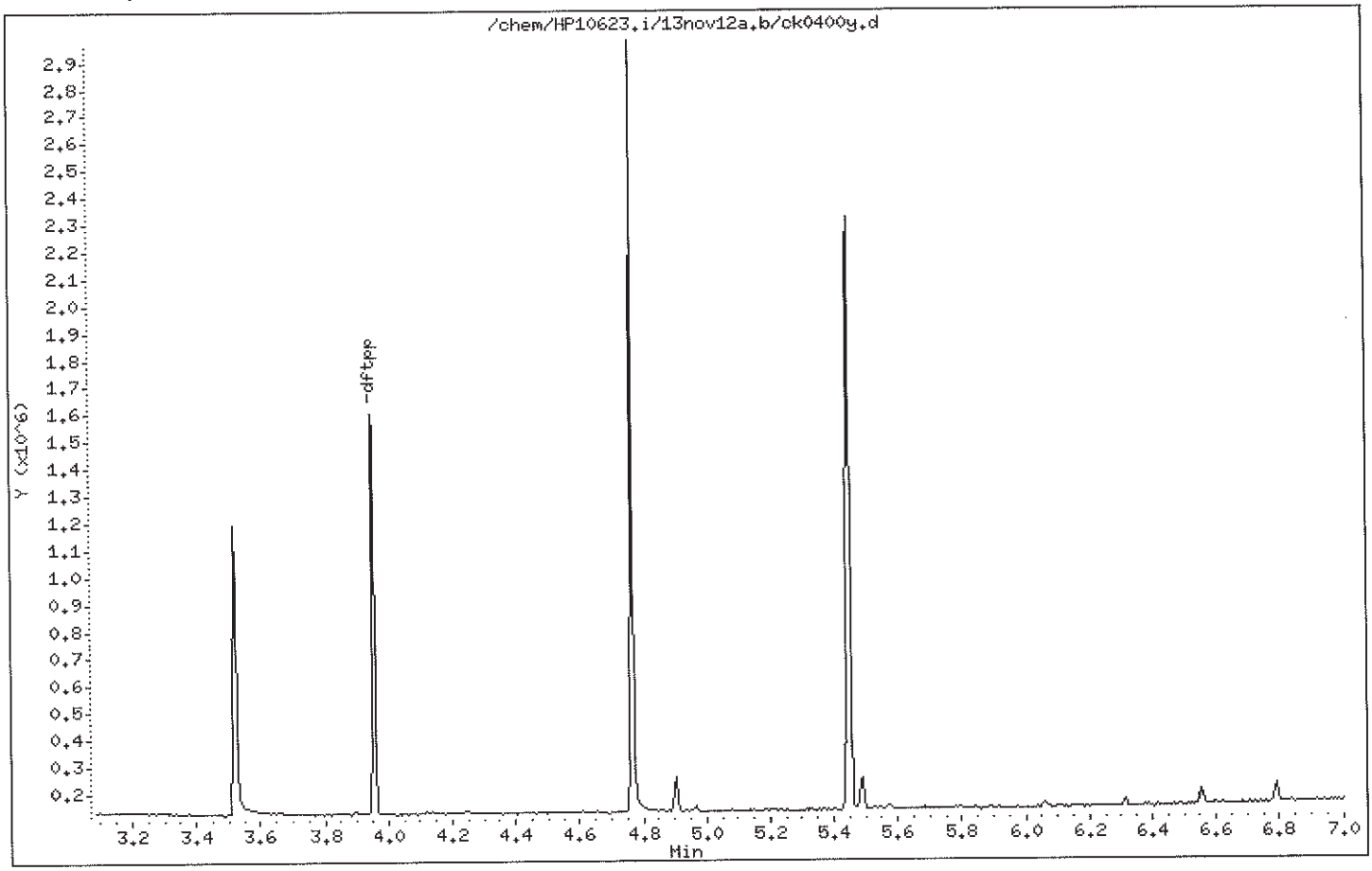
Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

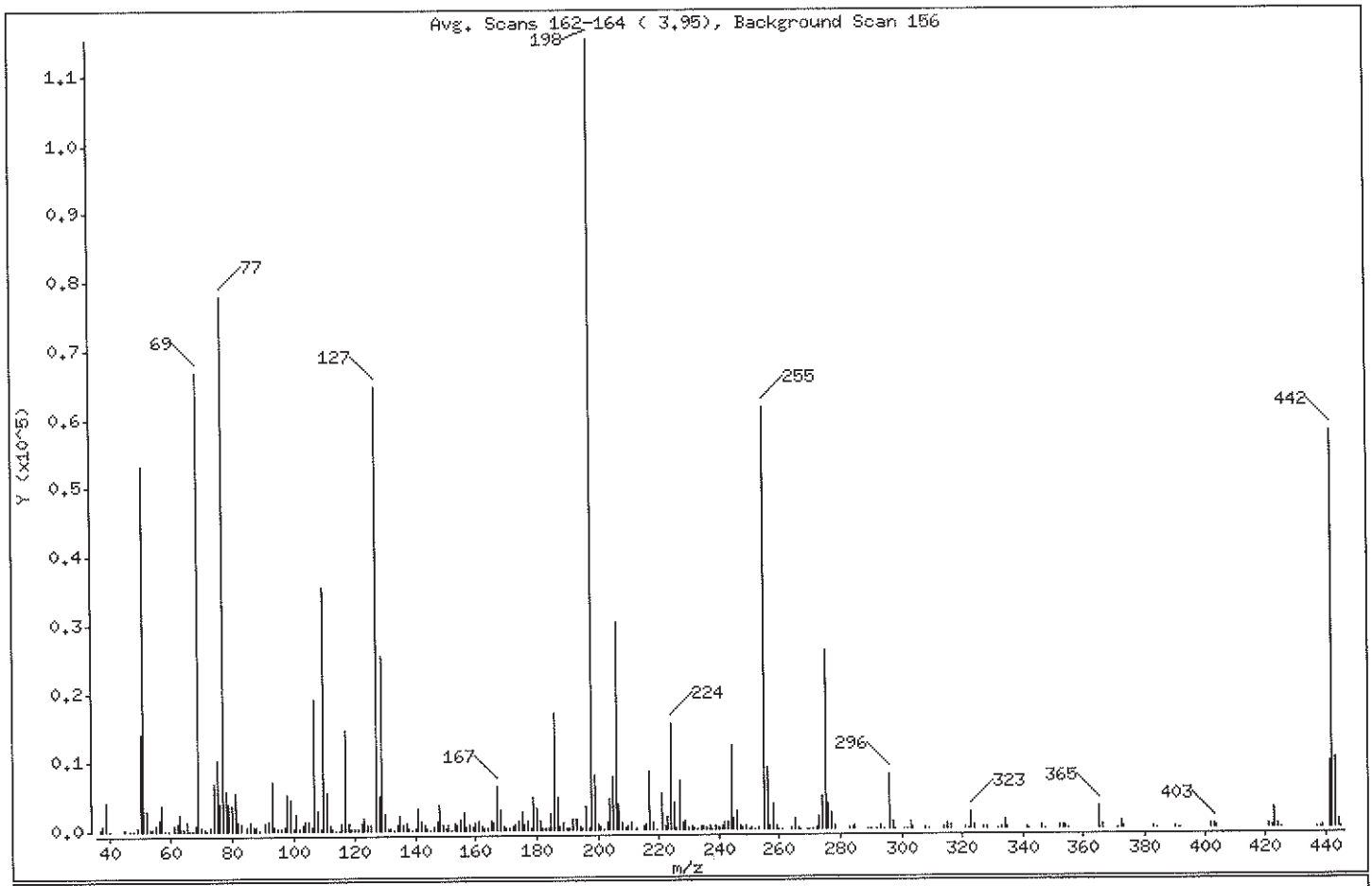
Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	46.32
68	Less than 2.00% of mass 69	0.74 (1.28)
69	Mass 69 relative abundance	57.87
70	Less than 2.00% of mass 69	0.39 (0.67)
127	40.00 - 60.00% of mass 198	56.14
197	Less than 1.00% of mass 198	0.33
199	5.00 - 9.00% of mass 198	6.85
275	10.00 - 30.00% of mass 198	22.54
365	Greater than 1.00% of mass 198	2.68
441	Present, but less than mass 443	8.26
442	40.00 - 99.99% of mass 198	50.09
443	17.00 - 23.00% of mass 442	8.79 (17.55)

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	204	118.00	1151	192.00	1652	272.00	203
38.00	685	119.00	337	193.00	1487	273.00	1806
39.00	4172	120.00	241	194.00	438	274.00	4671
40.00	132	121.00	307	195.00	245	275.00	25984
45.00	181	122.00	1112	196.00	3564	276.00	3732
47.00	56	123.00	1983	197.00	375	277.00	2413
48.00	50	124.00	901	198.00	115312	278.00	435
49.00	408	125.00	689	199.00	7904	283.00	228
50.00	13963	127.00	64744	200.00	689	284.00	341
51.00	53408	128.00	4920	201.00	589	285.00	432
52.00	2813	129.00	25328	202.00	57	289.00	54
53.00	293	130.00	2263	203.00	1014	290.00	59
54.00	259	131.00	268	204.00	4472	292.00	130
55.00	757	132.00	394	205.00	7568	293.00	491
56.00	1608	133.00	70	206.00	30232	294.00	102
57.00	3836	134.00	781	207.00	3702	296.00	7873
58.00	100	135.00	2031	208.00	1052	297.00	1131
59.00	79	136.00	772	209.00	158	298.00	62
61.00	779	137.00	1071	210.00	520	301.00	68
62.00	970	138.00	294	211.00	1171	302.00	96
63.00	2461	139.00	82	213.00	177	303.00	964
64.00	274	140.00	233	215.00	432	304.00	218
65.00	1399	141.00	3155	216.00	702	308.00	181
66.00	23	142.00	1224	217.00	8582	309.00	123
67.00	47	143.00	772	218.00	950	314.00	375
68.00	852	144.00	345	219.00	73	315.00	726
69.00	66728	145.00	73	221.00	5321	316.00	541
70.00	447	146.00	558	222.00	598	321.00	252
71.00	140	147.00	1279	223.00	1881	322.00	99
72.00	13	148.00	3579	224.00	15456	323.00	2338
73.00	436	149.00	696	225.00	3977	324.00	448
74.00	6819	150.00	212	226.00	386	327.00	373
75.00	10255	151.00	904	227.00	7080	328.00	257
76.00	4062	152.00	56	228.00	1185	332.00	125
77.00	77960	153.00	1062	229.00	1423	333.00	264

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
78.00	5704	154.00	675	230.00	273	334.00	1348
79.00	3956	155.00	1615	231.00	577	335.00	344
80.00	3581	156.00	2608	232.00	152	341.00	224
81.00	5489	157.00	458	233.00	106	342.00	76
82.00	1282	158.00	740	234.00	434	346.00	423
83.00	1057	159.00	580	235.00	590	347.00	53
85.00	530	160.00	1122	236.00	297	352.00	631
86.00	1229	161.00	1407	237.00	568	353.00	541
87.00	531	162.00	617	238.00	60	354.00	504
88.00	452	163.00	250	239.00	447	355.00	96
89.00	132	164.00	154	240.00	207	365.00	3089
91.00	998	165.00	1375	241.00	469	366.00	400
92.00	1456	166.00	1022	242.00	937	371.00	102
93.00	7115	167.00	6282	243.00	1111	372.00	1159
94.00	509	168.00	2856	244.00	12309	373.00	239
95.00	363	169.00	579	245.00	1710	383.00	200
96.00	234	170.00	185	246.00	2534	384.00	52
97.00	427	171.00	244	247.00	498	390.00	144
98.00	5329	172.00	626	248.00	161	391.00	62
99.00	4578	173.00	787	249.00	409	392.00	93
100.00	362	174.00	1250	250.00	50	402.00	488
101.00	2462	175.00	2582	251.00	146	403.00	658
102.00	360	176.00	794	252.00	60	404.00	187
103.00	853	177.00	1274	253.00	285	421.00	409
104.00	1354	178.00	361	255.00	61496	422.00	317
105.00	1323	179.00	4731	256.00	9058	423.00	2842
106.00	435	180.00	3075	257.00	598	424.00	556
107.00	19216	181.00	1448	258.00	3756	425.00	63
108.00	2961	182.00	293	259.00	495	437.00	53
109.00	195	183.00	281	260.00	75	438.00	121
110.00	35624	184.00	213	261.00	128	439.00	178
111.00	5599	185.00	2334	264.00	201	441.00	9525
112.00	743	186.00	16984	265.00	1539	442.00	57760
113.00	221	187.00	4756	266.00	315	443.00	10138
114.00	30	188.00	593	267.00	73	444.00	942

Data File: /chem/HP10623.i/13nov12a.b/ck0400y.d

Date : 12-NOV-2013 09:23

Client ID: 50 NG/UL

Instrument: HP10623.i

Sample Info: 50 NG/UL;DFTPP2843;

Operator: jmg00346

Column phase: DB-5

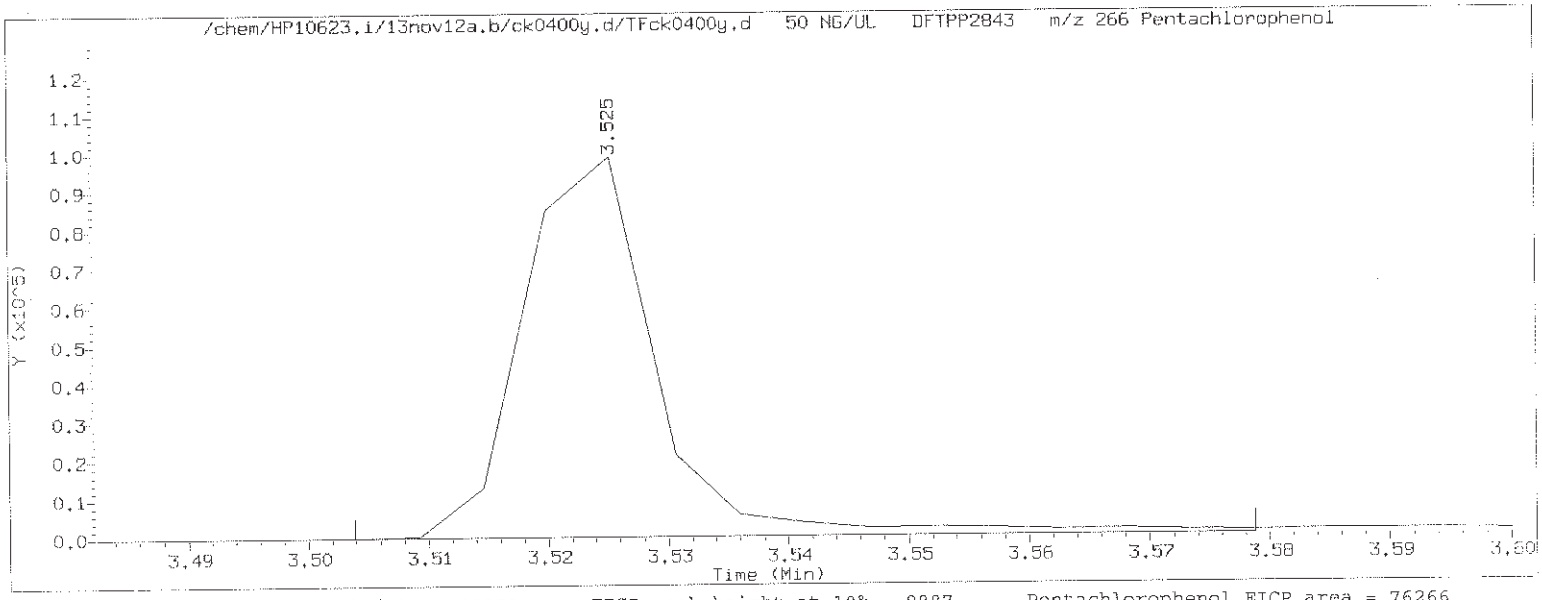
Column diameter: 0.25

Data File: ck0400y.d
Spectrum: Avg. Scans 162-164 (3.95), Background Scan 156
Location of Maximum: 198.00
Number of points: 290

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	50	189.00	1162	269.00	57	445.00	70
116.00	1125	190.00	284	270.00	66		
117.00	14669	191.00	349	271.00	57		

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346

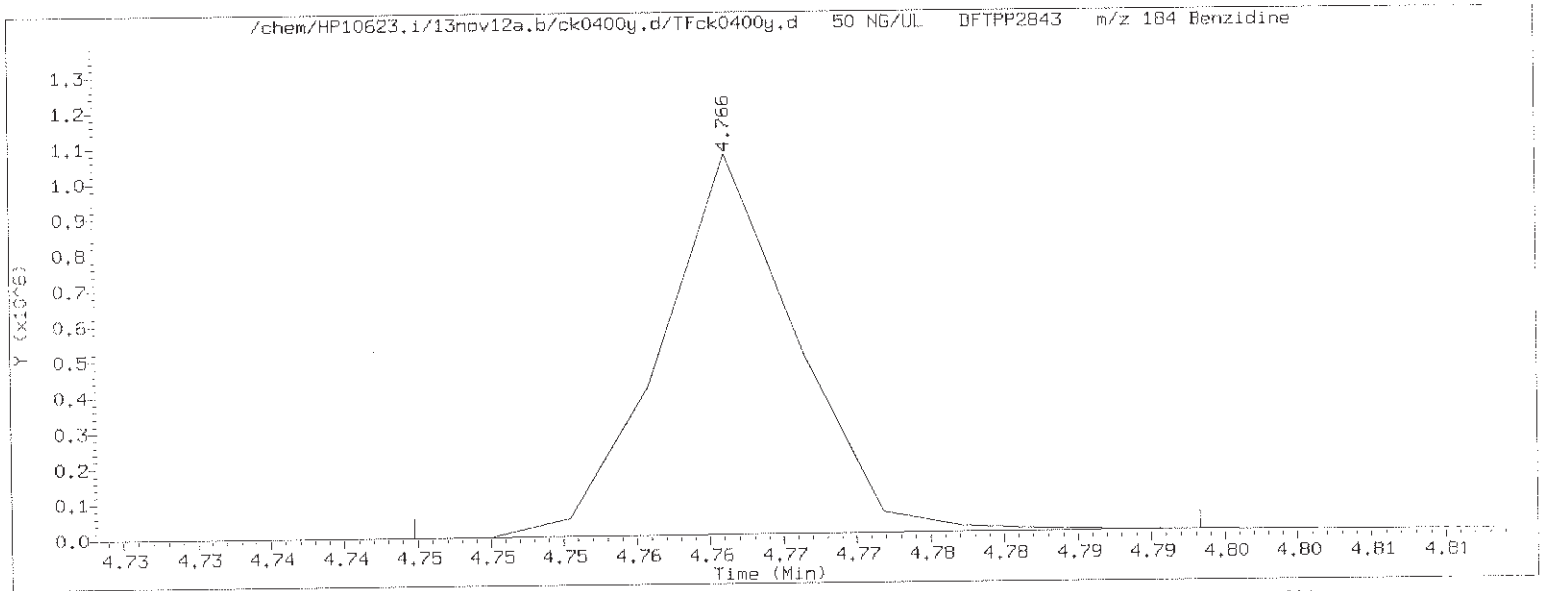


Pentachlorophenol EICP peak height = 98872 EICP peak height at 10% = 9887 Pentachlorophenol EICP area = 76266

Pentachlorophenol EICP peak apex (min.) = 3.525
RT at 10% of front half of EICP (min.) = 3.513
RT at 10% of back half of EICP (min.) = 3.534

'Front' peak width (min.) = 0.0118500000
'Tailing' peak width (min.) = 0.0091500000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0091500000}{0.0118500000} = 0.772$$



Benzidine EICP peak height = 1069531 EICP peak height at 10% = 106953 Benzidine EICP area = 682611

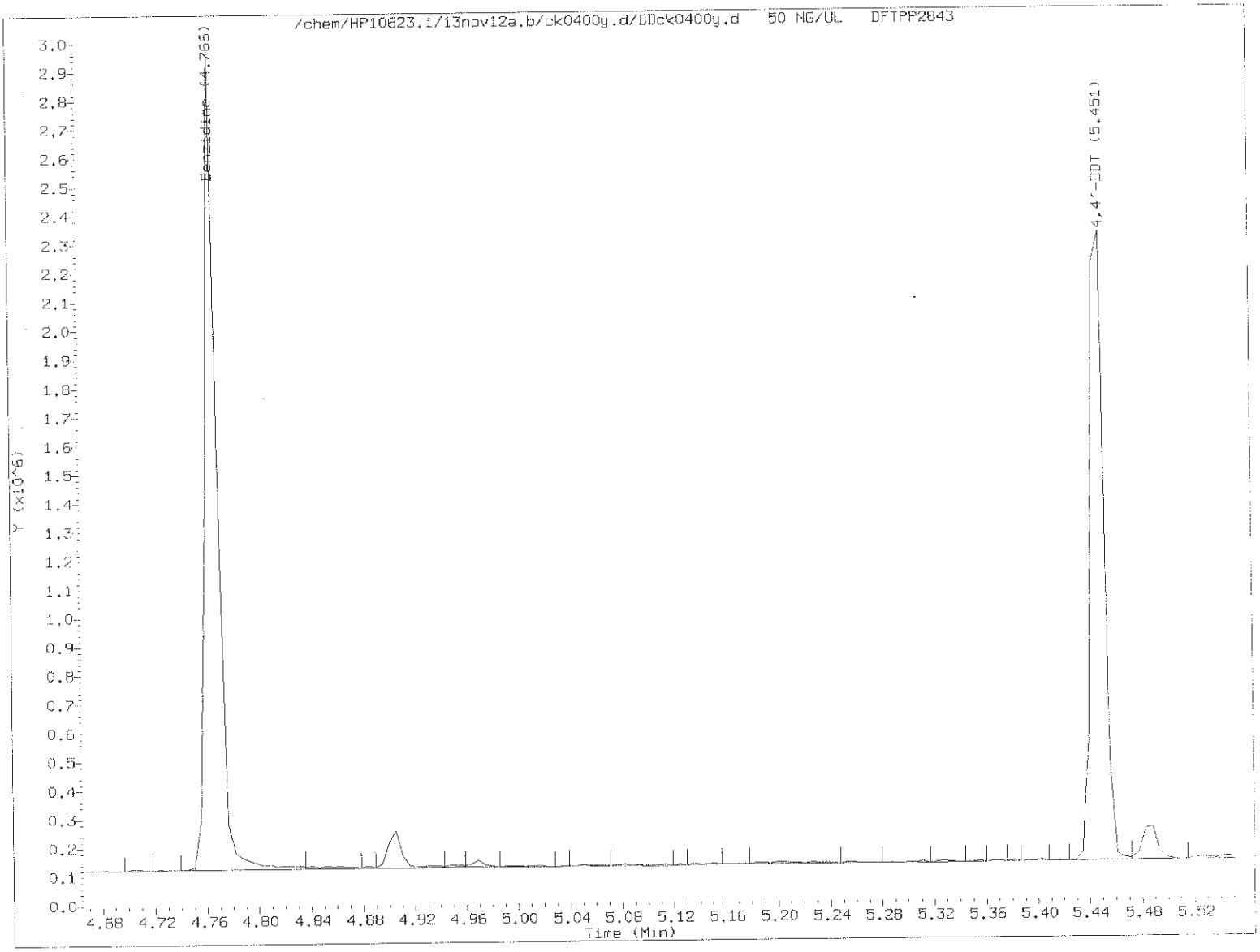
Benzidine EICP peak apex (min.) = 4.766
RT at 10% of front half of EICP (min.) = 4.756
RT at 10% of back half of EICP (min.) = 4.776

'Front' peak width (min.) = 0.0098333333
'Tailing' peak width (min.) = 0.0101166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0101166667}{0.0098333333} = 1.029$$

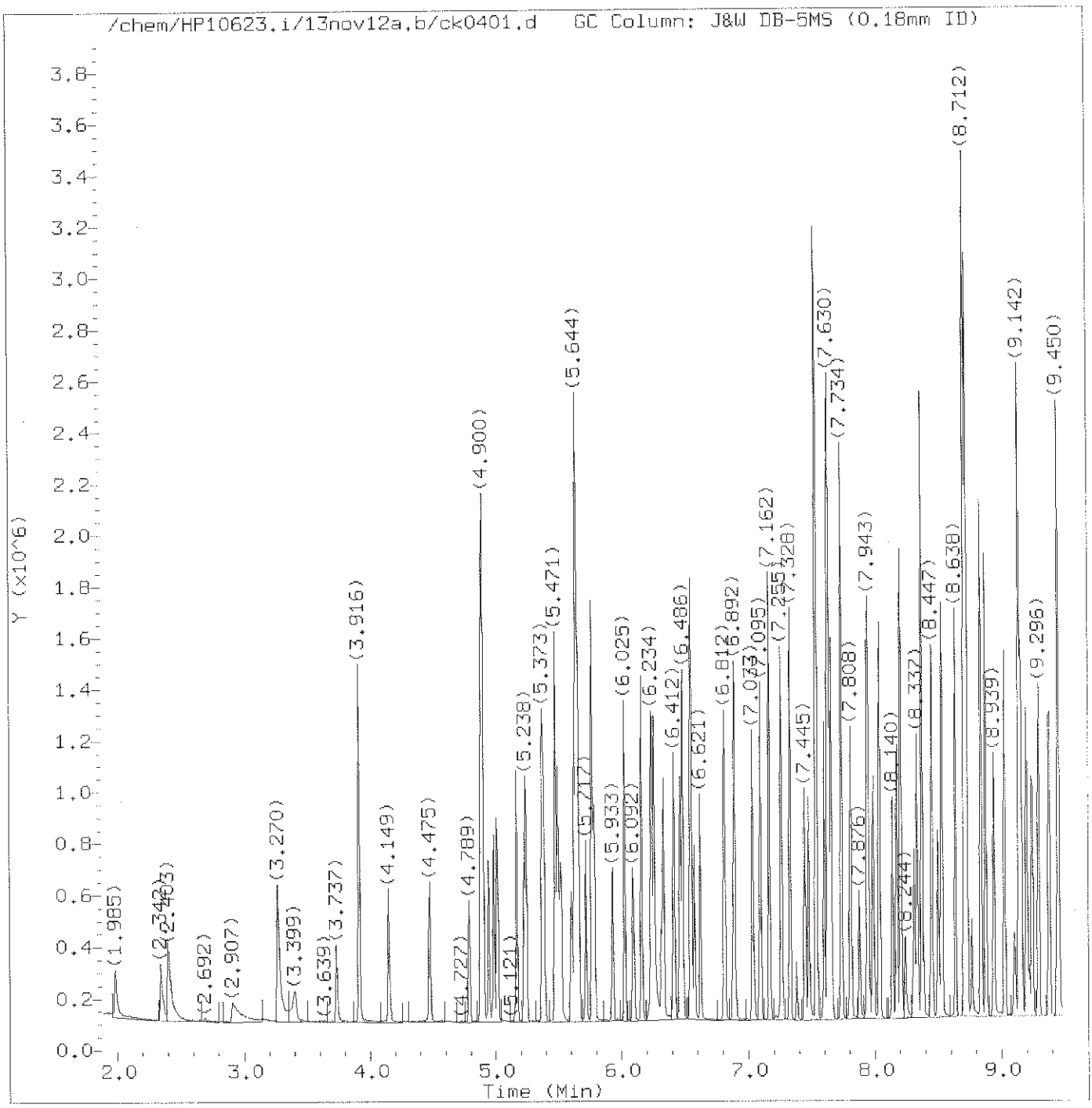
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP10623.i Injection Date: 12-NOV-2013 09:23 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 0}{0 + 0 + 1650105} \times 100 = 0.0$$



Total Ion Chromatogram (TIC)

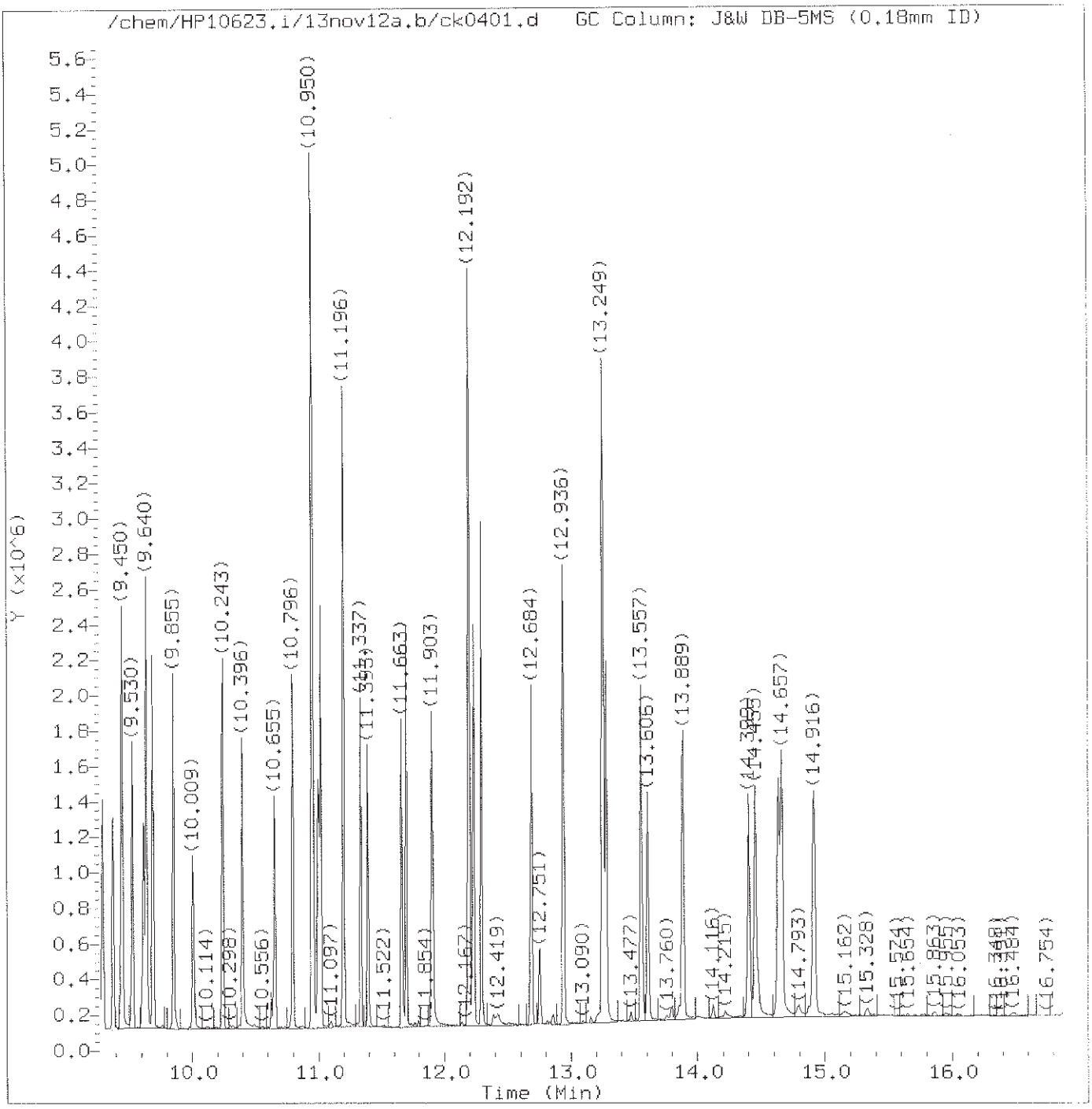
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	81893	32.323
2) N-Nitrosodimethylamine	(1)	2.342	74	156704	33.408
3) Pyridine	(1)	2.397	79	252093	34.667
5) 2-Picoline	(1)	3.270	93	238578	32.151
6) N-Nitrosomethylethylamine	(1)	3.399	88	115272	32.494
7) Methyl methanesulfonate	(1)	3.737	80	115913	32.497
9)$2-Fluorophenol	(1)	3.916	112	354062	30.548
10) N-Nitrosodiethylamine	(1)	4.149	102	111325	31.589
11) Ethyl methanesulfonate	(1)	4.475	109	98844	30.799
12) Benzaldehyde	(1)	4.789	77	99877	27.326
15)$Phenol-d6	(1)	4.887	99	538352	31.566
14)$Phenol-d5	(1)	4.887	99	538352	31.566
16) Phenol	(1)	4.900	94	314309	31.593
13) Aniline	(1)	4.900	93	372438	31.569
18) bis(2-Chloroethyl)ether	(1)	4.986	93	224247	31.750
19) 2-Chlorophenol	(1)	5.010	128	182131	29.347
20) 1,3-Dichlorobenzene	(1)	5.164	146	185926	29.688
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	77457	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	186718	29.215
24) Benzyl alcohol	(1)	5.373	108	155485	32.043
25) 1,2-Dichlorobenzene	(1)	5.385	146	178351	29.730
206) Indene	(1)	5.471	115	415413	31.000
26) 2-Methylphenol	(1)	5.496	108	203749	30.858
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	293836	33.808
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	293836	33.722
29) N-Nitrosopyrrolidine	(1)	5.601	100	126878	32.102
30) Acetophenone	(1)	5.625	105	298124	30.284
31) N-Nitroso-di-n-propylamine	(1)	5.644	70	205034	32.539
32) N-Nitrosomorpholine	(1)	5.644	56	149858	33.377
33) 4-Methylphenol	(1)	5.644	108	238518	30.519
34) o-Toluidine	(1)	5.656	106	349240	30.970
37) Hexachloroethane	(1)	5.717	117	73084	30.045
38)$Nitrobenzene-d5	(2)	5.767	82	505210	32.460
39) Nitrobenzene	(2)	5.785	77	267336	32.387
40) N-Nitrosopiperidine	(2)	5.933	114	112699	30.776
41) Isophorone	(2)	6.025	82	482496	32.191
42) 2-Nitrophenol	(2)	6.092	139	88042	30.681
44) 2,4-Dimethylphenol	(2)	6.160	107	227178	30.801
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	90355	29.381
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	270857	29.741

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d
Injection date and time: 12-NOV-2013 09:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:09
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.265	105	209906	43.907
49) 2,4-Dichlorophenol	(2)	6.332	162	148284	29.562
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	153077	28.973
52)*Naphthalene-d8	(2)	6.461	136	361204	20.000
53) Naphthalene	(2)	6.486	128	569014	29.691
56) 4-Chloroaniline	(2)	6.547	127	248002	29.696
57) 2,6-Dichlorophenol	(2)	6.554	162	141915	30.038
58) Hexachloropropene	(2)	6.578	213	86091	28.812
60) Hexachlorobutadiene	(2)	6.621	225	73712	27.816
194) Quinoline	(2)	6.812	129	397153	30.065
63) Caprolactam	(2)	6.886	113	85885	30.908
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	245265M	31.525
68) 4-Chloro-3-methylphenol	(2)	7.033	107	201458	31.414
69) Safrole	(2)	7.095	162	150150	29.578
70) 2-Methylnaphthalene	(2)	7.162	142	406905	29.918
71) 1-Methylnaphthalene	(2)	7.255	142	370806	29.795
72) Hexachlorocyclopentadiene	(3)	7.328	237	66120	28.828
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	148933	28.060
74) cis-Isosafrole	(3)	7.377	162	28054	3.292
75) 2,4,6-Trichlorophenol	(3)	7.445	196	99135	28.625
77) 2,4,5-Trichlorophenol	(3)	7.476	196	110011	29.134
78)$2-Fluorobiphenyl	(3)	7.531	172	827422	29.569
79) trans-Isosafrole	(3)	7.599	162	161733	26.811
80) Isosafrole	(3)	7.599	162	161733	30.124
83) 1,1'-Biphenyl	(3)	7.623	154	489134	28.372
84) 2-Chloronaphthalene	(3)	7.636	162	335653	26.729
85) 1-Chloronaphthalene	(3)	7.654	162	372212	30.117
88) Diphenyl ether	(3)	7.734	170	252217	29.368
89) 2-Nitroaniline	(3)	7.740	138	124694	30.438
90) 1,4-Naphthoquinone	(3)	7.808	158	160289	30.331
91) 1,4-Dinitrobenzene	(3)	7.876	168	44413	26.844
92) Dimethylphthalate	(3)	7.943	163	444697	29.761
93) 1,3-Dinitrobenzene	(3)	7.949	168	60984	27.087
94) 2,6-Dinitrotoluene	(3)	7.986	165	91316	29.342
95) Acenaphthylene	(3)	8.035	152	584873	29.833
97) 3-Nitroaniline	(3)	8.140	138	113917	29.975
98)*Acenaphthene-d10	(3)	8.177	164	222517	20.000
99) Acenaphthene	(3)	8.208	153	402167	29.641
100) 2,4-Dinitrophenol	(3)	8.244	184	35950	35.967
103) 4-Nitrophenol	(3)	8.312	109	71787	30.492

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	130256	28.399
104) Dibenzofuran	(3)	8.374	168	544349	29.288
105) 2,4-Dinitrotoluene	(3)	8.374	165	116516	28.973
106) 1-Naphthylamine	(3)	8.454	143	470452	30.804
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	77227	29.035
108) 2-Naphthylamine	(3)	8.527	143	483276	30.928
109) Diethylphthalate	(3)	8.638	149	467647	30.298
110) Thionazin	(3)	8.712	107	103874	30.514
111) Fluorene	(3)	8.712	166	471552	29.487
113) 5-Nitro-o-toluidine	(3)	8.724	152	130131	30.820
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	202981	28.532
114) 4-Nitroaniline	(3)	8.730	138	131607	30.795
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	40678	26.346
117) N-Nitrosodiphenylamine	(4)	8.841	169	405279	29.915
202) NDPA as diphenylamine	(4)	8.841	169	405279	29.844
118) 1,2-Diphenylhydrazine	(4)	8.878	77	637989	32.876
119)$2,4,6-Tribromophenol	(3)	8.945	330	76050	28.297
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	89301	32.286
121) 1,3,5-Trinitrobenzene	(4)	9.105	213	25810	24.916
122) Diallate (peak 1)	(4)	9.136	86	240722	24.241
123) Phorate	(4)	9.142	75	394362	32.983
124) Phenacetin	(4)	9.154	108	297458	31.771
125) 4-Bromophenyl-phenylether	(4)	9.204	248	107171	28.711
126) Diallate (peak 2)	(4)	9.222	86	33778	7.833
127) Hexachlorobenzene	(4)	9.247	284	100817	27.355
128) Dimethoate	(4)	9.296	87	245700	33.605
130) Atrazine	(4)	9.382	200	121986	28.105
131) Pentachlorophenol	(4)	9.437	266	57290	28.028
133) 4-Aminobiphenyl	(4)	9.450	169	452732	30.905
132) Pentachloronitrobenzene	(4)	9.456	237	45875	28.674
134) Pronamide	(4)	9.530	173	215987	30.588
135)*Phenanthrene-d10	(4)	9.622	188	404202	20.000
136) Dinoseb	(4)	9.640	211	54552	25.446
137) Phenanthrene	(4)	9.640	178	690619	29.385
138) Anthracene	(4)	9.689	178	720725	29.791
140) Carbazole	(4)	9.855	167	705956	29.903
141) Methyl parathion	(4)	10.009	109	136840	29.343
142) Di-n-butylphthalate	(4)	10.243	149	854793	30.688
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	43626	26.308
143) Parathion	(4)	10.403	109	100032	29.542

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	76584	28.834
147) Fluoranthene	(4)	10.802	202	773711	29.441
152) Benzidine	(5)	10.950	184	1891880	91.825
167)*Pyrene-d10	(5)	10.999	212	503289	20.000
154) Pyrene	(5)	11.017	202	810442	28.997
156)$Terphenyl-d14	(5)	11.196	244	1033822	28.730
158) p-Dimethylaminoazobenzene	(5)	11.337	225	163625	30.040
159) Chlorobenzilate	(5)	11.393	139	265463	31.330
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	526908	30.588
161) Butylbenzylphthalate	(5)	11.700	149	407296	30.537
162) 2-Acetylaminofluorene	(5)	11.903	181	381478	31.581
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	290307	29.872
166) Benzo(a)anthracene	(5)	12.192	228	757839	29.397
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	143791	30.288
168) Chrysene	(5)	12.229	228	715548	28.789
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	569996	30.802
189) 6-Methylchrysene	(5)	12.684	242	548565	29.912
170) Di-n-octylphthalate	(6)	12.936	149	1032709	31.791
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.249	256	370208	30.316
172) Benzo(b)fluoranthene	(6)	13.249	252	757915	28.840
173) Benzo(k)fluoranthene	(6)	13.280	252	818853	30.542
174) Benzo(a)pyrene	(6)	13.557	252	754869	29.431
175)*Perylene-d12	(6)	13.606	264	430377	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	384586	29.914
190) Dibenz(a,h)acridine	(6)	14.399	279	574141	30.813
191) Dibenz(a,j)acridine	(6)	14.455	279	632132	29.502
177) Indeno(1,2,3-cd)pyrene	(6)	14.633	276	819116	30.016
178) Dibenz(a,h)anthracene	(6)	14.657	278	695362	30.463
179) Benzo(g,h,i)perylene	(6)	14.916	276	690215	29.690
129) Diallate TRANS/CIS	(4)			274500	32.196

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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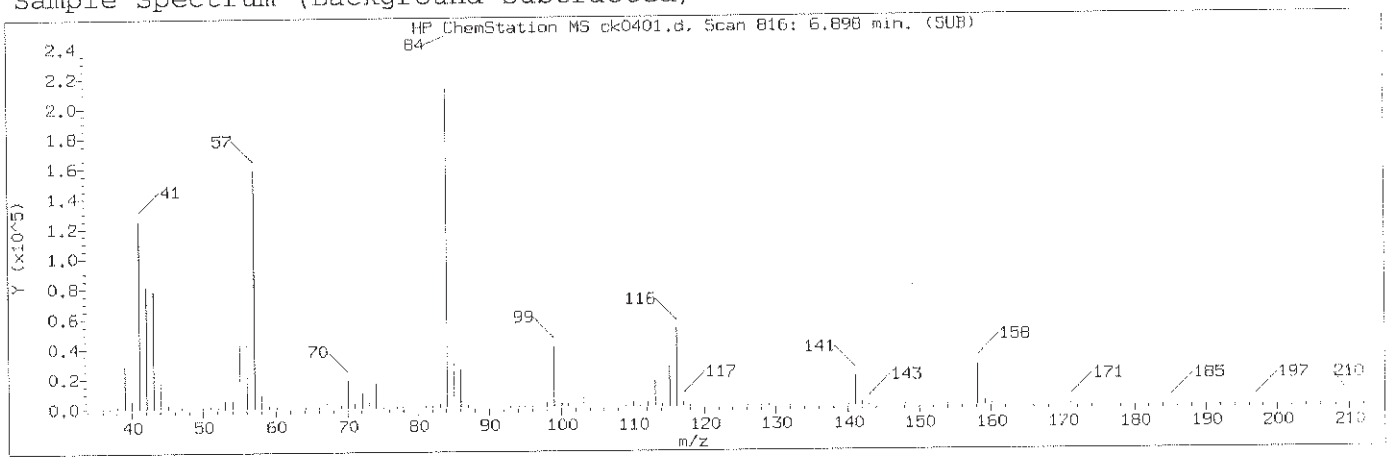
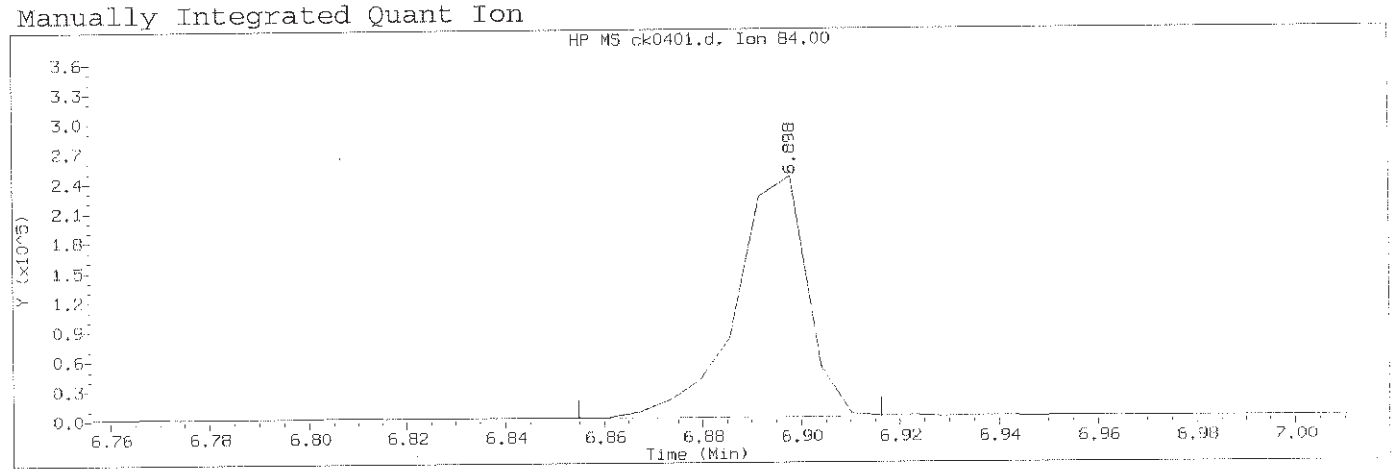
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:09
Date, time and analyst ID of latest file update: 12-Nov-2013 23:25 mac00013

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area (flag)	: 245265M		
On-Column Amount (ng/ul)	: 31.5253		
Integration start scan	: 808	Integration stop scan:	818
Y at integration start	: 1124	Y at integration end:	1124

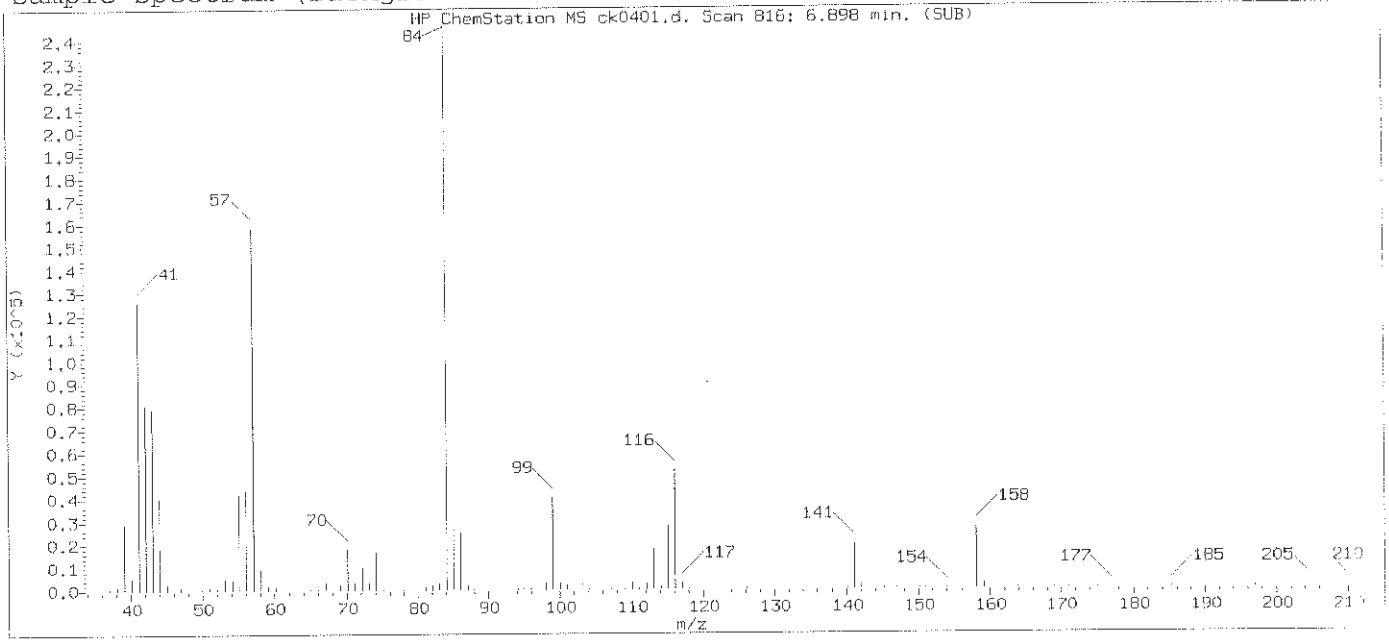
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

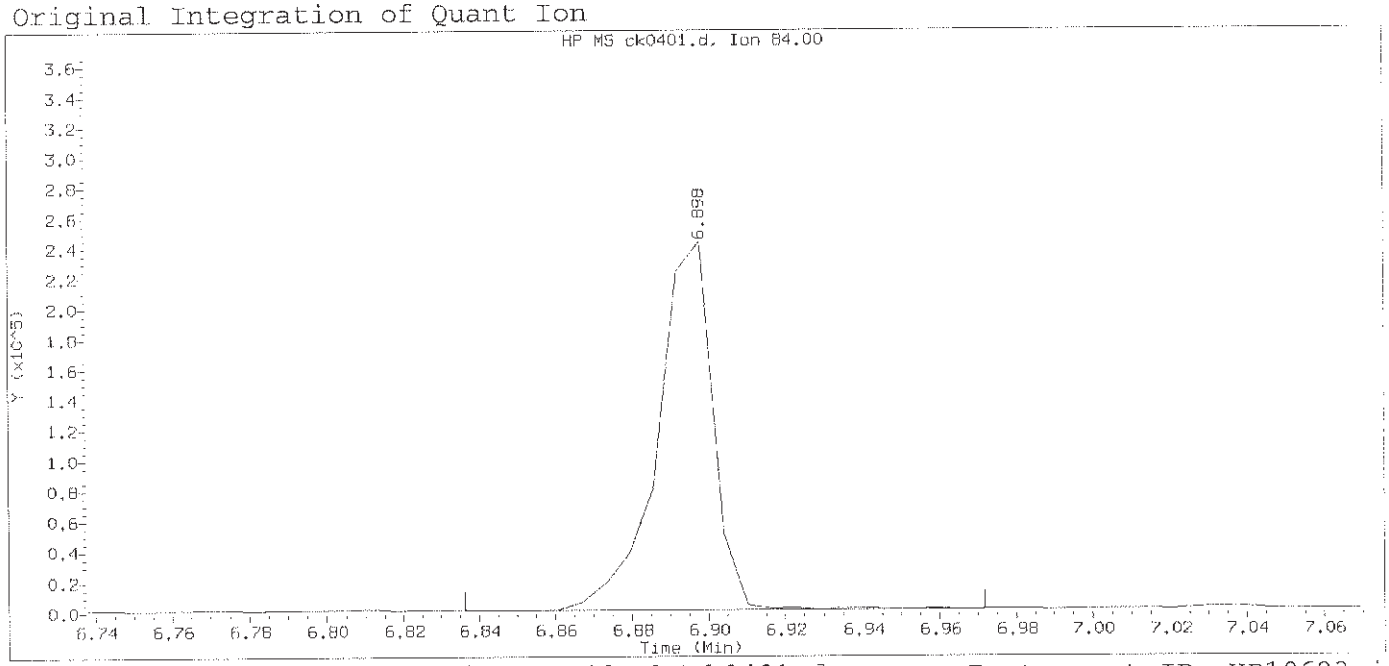
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0401.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 09:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:41
Date, time and analyst ID of latest file update: 12-Nov-2013 10:41 jmg00346

Sample Name: SSTD030 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 816		
Retention Time (minutes)	: 6.898		
Quant Ion	: 84.00		
Area	: 245989		
On-column Amount (ng/ul)	: 30.0000		
Integration start scan	: 805	Integration stop scan:	827
Y at integration start	: 1527	Y at integration end:	1527

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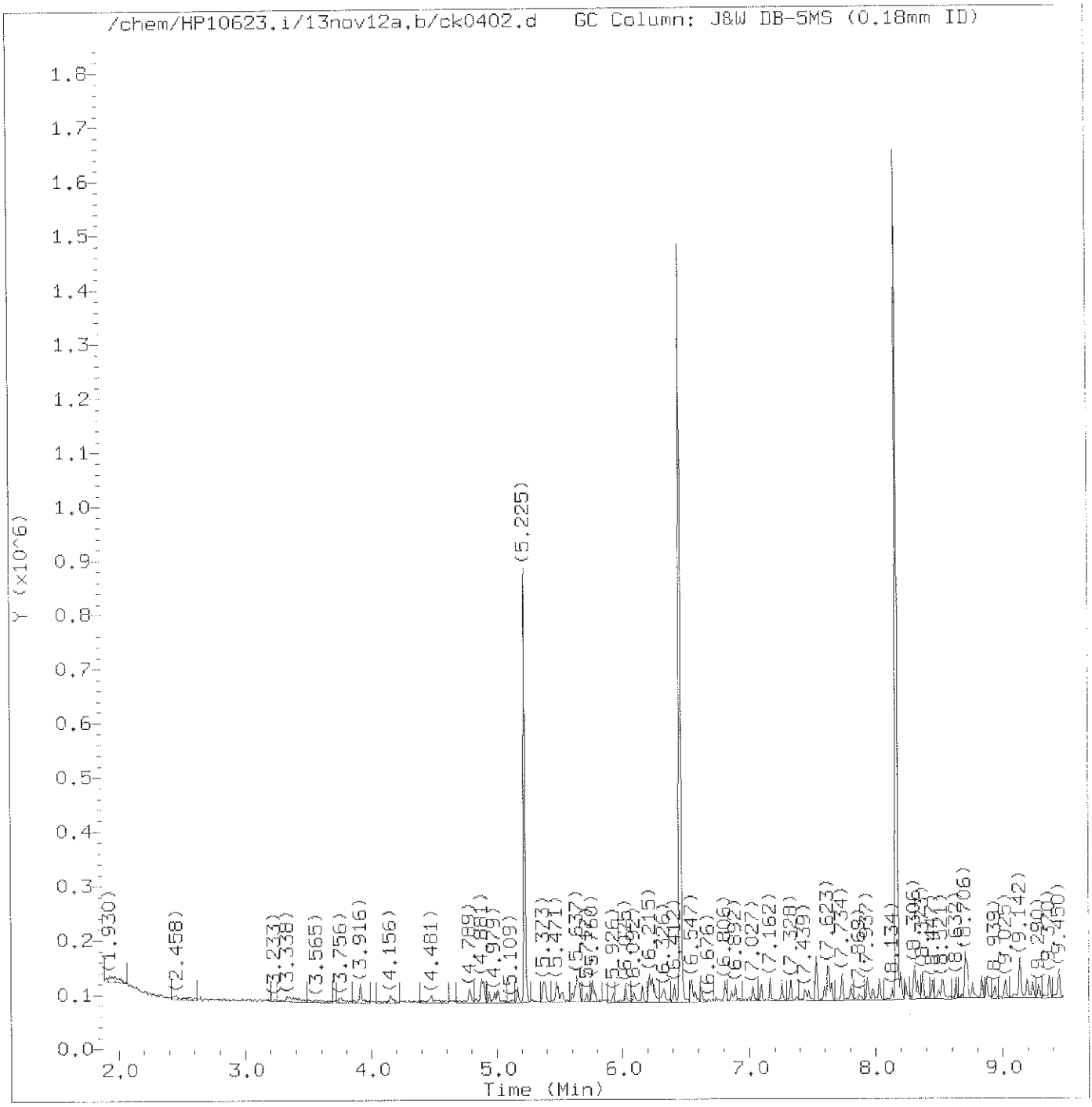
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

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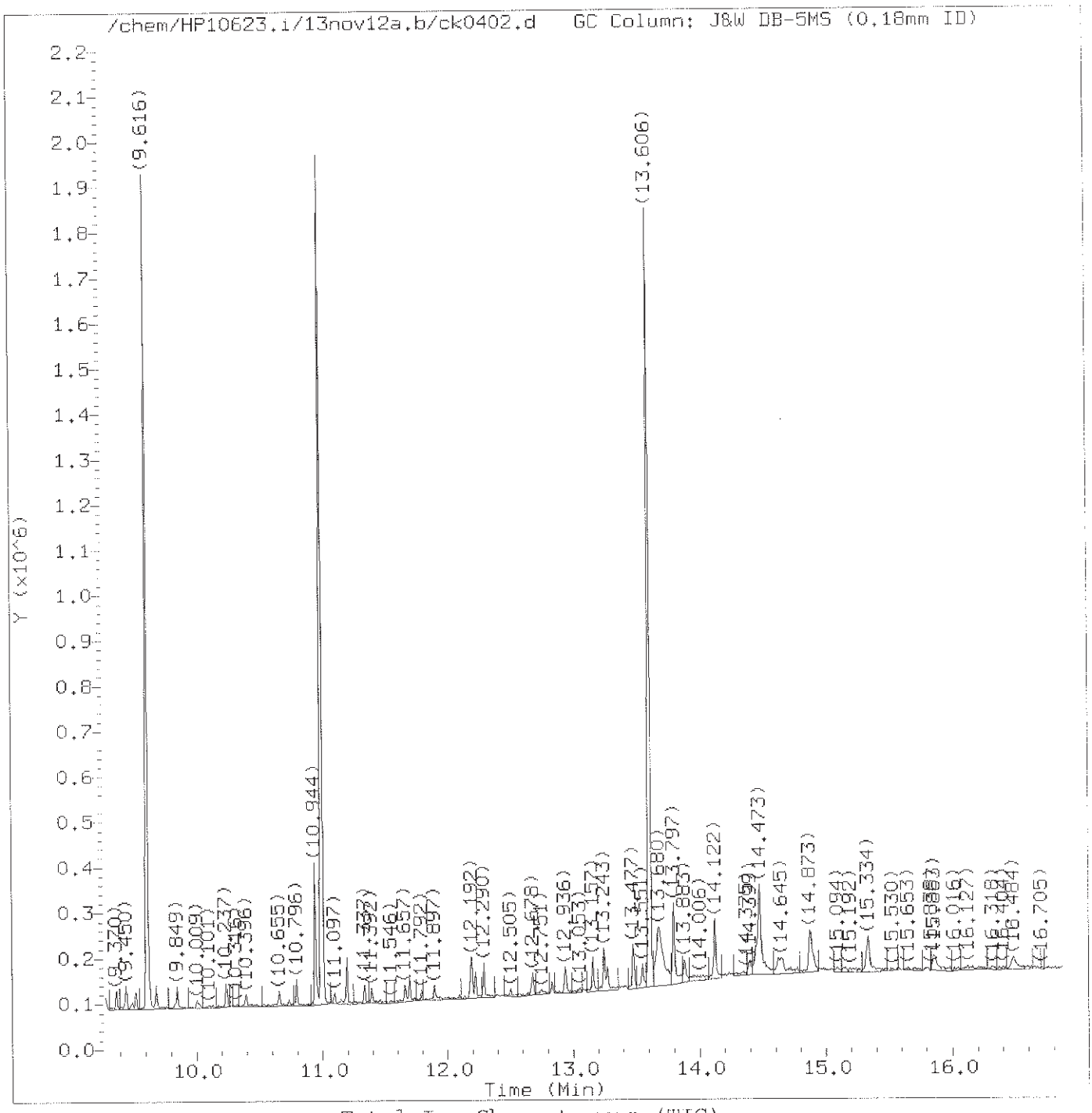
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.016	88	2502M	0.668
2) N-Nitrosodimethylamine	(1)	2.477	74	4899M	0.706
3) Pyridine	(1)	2.557	79	9243M	0.860
5) 2-Picoline	(1)	3.338	93	6292M	0.574
6) N-Nitrosomethylethylamine	(1)	3.430	88	7327	1.397
7) Methyl methanesulfonate	(1)	3.750	80	2840	0.539
9)$2-Fluorophenol	(1)	3.916	112	8559	0.500
10) N-Nitrosodiethylamine	(1)	4.156	102	2939	0.564
11) Ethyl methanesulfonate	(1)	4.481	109	2371	0.500
12) Benzaldehyde	(1)	4.789	77	5539	0.786
14)$Phenol-d5	(1)	4.881	99	12834	0.509
15)$Phenol-d6	(1)	4.881	99	12834	0.509
16) Phenol	(1)	4.893	94	7584	0.516
13) Aniline	(1)	4.899	93	9703	0.556
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6089	0.583
19) 2-Chlorophenol	(1)	5.010	128	5413	0.590
20) 1,3-Dichlorobenzene	(1)	5.164	146	4814	0.520
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	114510	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	4855	0.514
24) Benzyl alcohol	(1)	5.367	108	5339	0.744
25) 1,2-Dichlorobenzene	(1)	5.385	146	4782	0.539
206) Indene	(1)	5.471	115	9695	0.489
26) 2-Methylphenol	(1)	5.484	108	6800	0.697
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	10033	0.781
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10033	0.779
29) N-Nitrosopyrrolidine	(1)	5.600	100	3531	0.604
30) Acetophenone	(1)	5.619	105	7972	0.548
31) N-Nitroso-di-n-propylamine	(1)	5.631	70	5626	0.604
32) N-Nitrosomorpholine	(1)	5.643	56	9410	1.418
33) 4-Methylphenol	(1)	5.643	108	6760	0.585
34) o-Toluidine	(1)	5.656	106	8493	0.509
37) Hexachloroethane	(1)	5.717	117	2402	0.668
38)$Nitrobenzene-d5	(2)	5.760	82	11914	0.538
39) Nitrobenzene	(2)	5.779	77	6271	0.534
40) N-Nitrosopiperidine	(2)	5.926	114	2892	0.556
41) Isophorone	(2)	6.025	82	11651	0.547
42) 2-Nitrophenol	(2)	6.092	139	3089	0.757
44) 2,4-Dimethylphenol	(2)	6.154	107	5843	0.557
47) Benzoic acid	(2)	6.215	105	21525	3.167
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2406	0.550

M = Compound was manually integrated.
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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d
Injection date and time: 12-NOV-2013 10:10
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7084	0.547
49) 2,4-Dichlorophenol	(2)	6.332	162	3426	0.480
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	3762	0.501
52)*Naphthalene-d8	(2)	6.461	136	513472	20.000
53) Naphthalene	(2)	6.480	128	14248	0.523
56) 4-Chloroaniline	(2)	6.541	127	6400	0.539
57) 2,6-Dichlorophenol	(2)	6.547	162	3467	0.516
58) Hexachloropropene	(2)	6.578	213	2141	0.504
60) Hexachlorobutadiene	(2)	6.621	225	1846	0.490
194) Quinoline	(2)	6.806	129	10871	0.579
63) Caprolactam	(2)	6.861	113	2351	0.595
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4989	0.517
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5578	0.612
69) Safrole	(2)	7.095	162	3910	0.542
70) 2-Methylnaphthalene	(2)	7.162	142	9511	0.492
71) 1-Methylnaphthalene	(2)	7.254	142	8965	0.507
72) Hexachlorocyclopentadiene	(3)	7.322	237	1328	0.415
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3696	0.499
74) cis-Isosafrole	(3)	7.377	162	937	0.079
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2161	0.447
77) 2,4,5-Trichlorophenol	(3)	7.470	196	2786	0.529
78)$2-Fluorobiphenyl	(3)	7.531	172	19427	0.498
79) trans-Isosafrole	(3)	7.599	162	3814	0.453
80) Isosafrole	(3)	7.599	162	3814	0.509
83) 1,1'-Biphenyl	(3)	7.623	154	12551	0.522
84) 2-Chloronaphthalene	(3)	7.630	162	9196M	0.525
85) 1-Chloronaphthalene	(3)	7.648	162	9244M	0.536
88) Diphenyl ether	(3)	7.734	170	6275	0.524
89) 2-Nitroaniline	(3)	7.734	138	3528	0.617
90) 1,4-Naphthoquinone	(3)	7.802	158	3486	0.473
91) 1,4-Dinitrobenzene	(3)	7.869	168	1124M	0.506
92) Dimethylphthalate	(3)	7.937	163	11333	0.544
93) 1,3-Dinitrobenzene	(3)	7.943	168	1011	0.335
94) 2,6-Dinitrotoluene	(3)	7.980	165	2520	0.580
95) Acenaphthylene	(3)	8.029	152	14446	0.528
97) 3-Nitroaniline	(3)	8.134	138	2436	0.459
98)*Acenaphthene-d10	(3)	8.171	164	310493	20.000
99) Acenaphthene	(3)	8.201	153	9481	0.501
100) 2,4-Dinitrophenol	(3)	8.238	184	3333	2.363
103) 4-Nitrophenol	(3)	8.306	109	7791	2.372

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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	3152	0.492
105) 2,4-Dinitrotoluene	(3)	8.367	165	2878	0.513
104) Dibenzofuran	(3)	8.373	168	13586	0.524
106) 1-Naphthylamine	(3)	8.447	143	10096	0.474
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	1716	0.462
108) 2-Naphthylamine	(3)	8.527	143	11544	0.529
109) Diethylphthalate	(3)	8.632	149	11743	0.545
110) Thionazin	(3)	8.706	107	3537	0.745
111) Fluorene	(3)	8.706	166	11352	0.509
113) 5-Nitro-o-toluidine	(3)	8.718	152	2664	0.452
114) 4-Nitroaniline	(3)	8.718	138	3036	0.509
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	4955	0.499
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	3100	1.406
117) N-Nitrosodiphenylamine	(4)	8.835	169	9561	0.499
202) NDPA as diphenylamine	(4)	8.835	169	9561	0.498
118) 1,2-Diphenylhydrazine	(4)	8.878	77	14940	0.545
119)$2,4,6-Tribromophenol	(3)	8.939	330	1588	0.423
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3188	0.816
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	728M	0.502
122) Diallate (peak 1)	(4)	9.136	86	5379	0.383
124) Phenacetin	(4)	9.142	108	6266	0.474
123) Phorate	(4)	9.142	75	7915	0.468
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2742	0.520
126) Diallate (peak 2)	(4)	9.216	86	1405M	0.231
127) Hexachlorobenzene	(4)	9.240	284	2828	0.543
128) Dimethoate	(4)	9.290	87	5568	0.539
130) Atrazine	(4)	9.376	200	3843	0.627
131) Pentachlorophenol	(4)	9.437	266	886	0.307
133) 4-Aminobiphenyl	(4)	9.443	169	10935	0.528
132) Pentachloronitrobenzene	(4)	9.450	237	895M	0.396
134) Pronamide	(4)	9.529	173	4751	0.476
135)*Phenanthrene-d10	(4)	9.616	188	571166	20.000
136) Dinoseb	(4)	9.640	211	706M	0.237
137) Phenanthrene	(4)	9.640	178	17539	0.528
138) Anthracene	(4)	9.689	178	17770	0.520
140) Carbazole	(4)	9.849	167	17049	0.511
141) Methyl parathion	(4)	10.009	109	2488	0.402
142) Di-n-butylphthalate	(4)	10.237	149	19749	0.502
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	505M	0.224
143) Parathion	(4)	10.396	109	1848	0.406

M = Compound was manually integrated.
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on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	2126	0.566
147) Fluoranthene	(4)	10.796	202	17969	0.484
152) Benzidine	(5)	10.944	184	112842	3.924
167)*Pyrene-d10	(5)	10.999	212	702415	20.000
154) Pyrene	(5)	11.011	202	20471	0.525
156)$Terphenyl-d14	(5)	11.196	244	24851	0.495
158) p-Dimethylaminoazobenzene	(5)	11.337	225	3730	0.491
159) Chlorobenzilate	(5)	11.392	139	5584	0.472
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	12285	0.511
161) Butylbenzylphthalate	(5)	11.694	149	9239	0.496
162) 2-Acetylaminofluorene	(5)	11.897	181	6778	0.402
164) 3,3'-Dichlorobenzidine	(5)	12.179	252	6353	0.468
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	2765	0.417
166) Benzo(a)anthracene	(5)	12.192	228	17291	0.481
168) Chrysene	(5)	12.223	228	17453	0.503
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	15494	0.600
189) 6-Methylchrysene	(5)	12.678	242	12618	0.493
170) Di-n-octylphthalate	(6)	12.936	149	21571	0.454
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7301	0.408
172) Benzo(b)fluoranthene	(6)	13.243	252	17114	0.445
173) Benzo(k)fluoranthene	(6)	13.268	252	19921	0.508
174) Benzo(a)pyrene	(6)	13.551	252	20650	0.550
175)*Perylene-d12	(6)	13.606	264	629898	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	8691	0.462
190) Dibenz(a,h)acridine	(6)	14.399	279	12323	0.452
191) Dibenz(a,j)acridine	(6)	14.442	279	14068	0.449
177) Indeno(1,2,3-cd)pyrene	(6)	14.620	276	19278	0.483
178) Dibenz(a,h)anthracene	(6)	14.651	278	15572	0.466
179) Benzo(g,h,i)perylene	(6)	14.903	276	16966	0.499
129) Diallate TRANS/CIS	(4)			6784	0.563

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$ = Compound is a surrogate standard.

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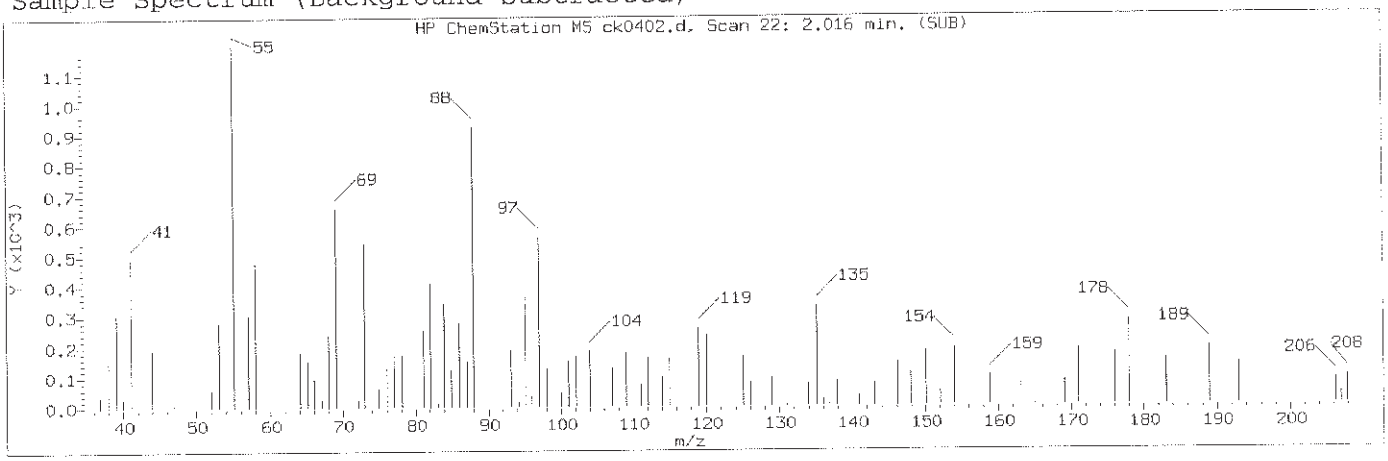
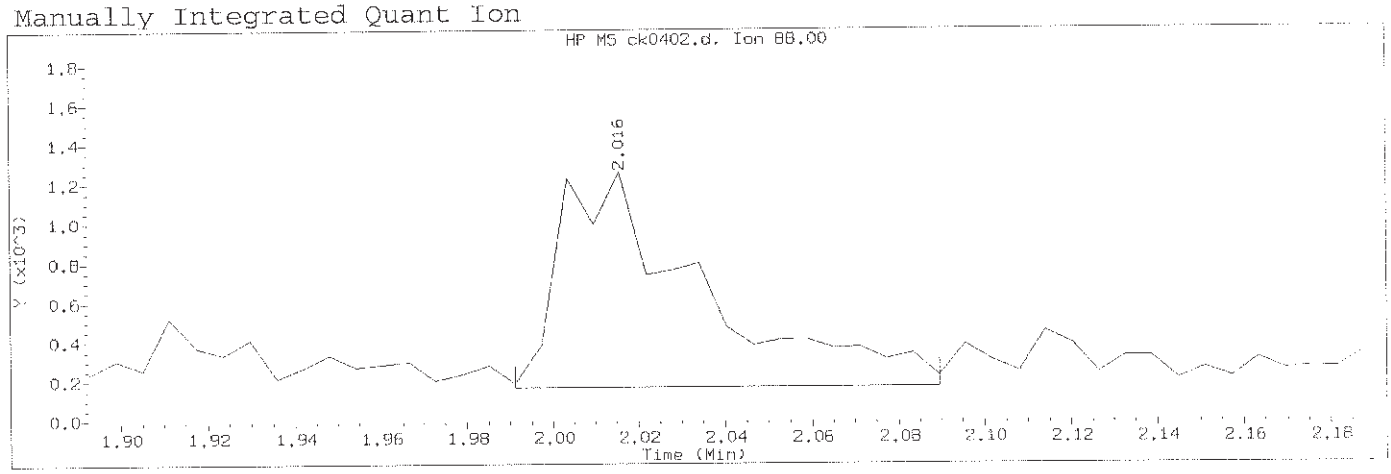
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 22		
Retention Time (minutes)	: 2.016		
Quant Ion	: 88.00		
Area (flag)	: 2502M		
On-Column Amount (ng/ul)	: 0.6680		
Integration start scan	: 17	Integration stop scan:	33
Y at integration start	: 164	Y at integration end:	164

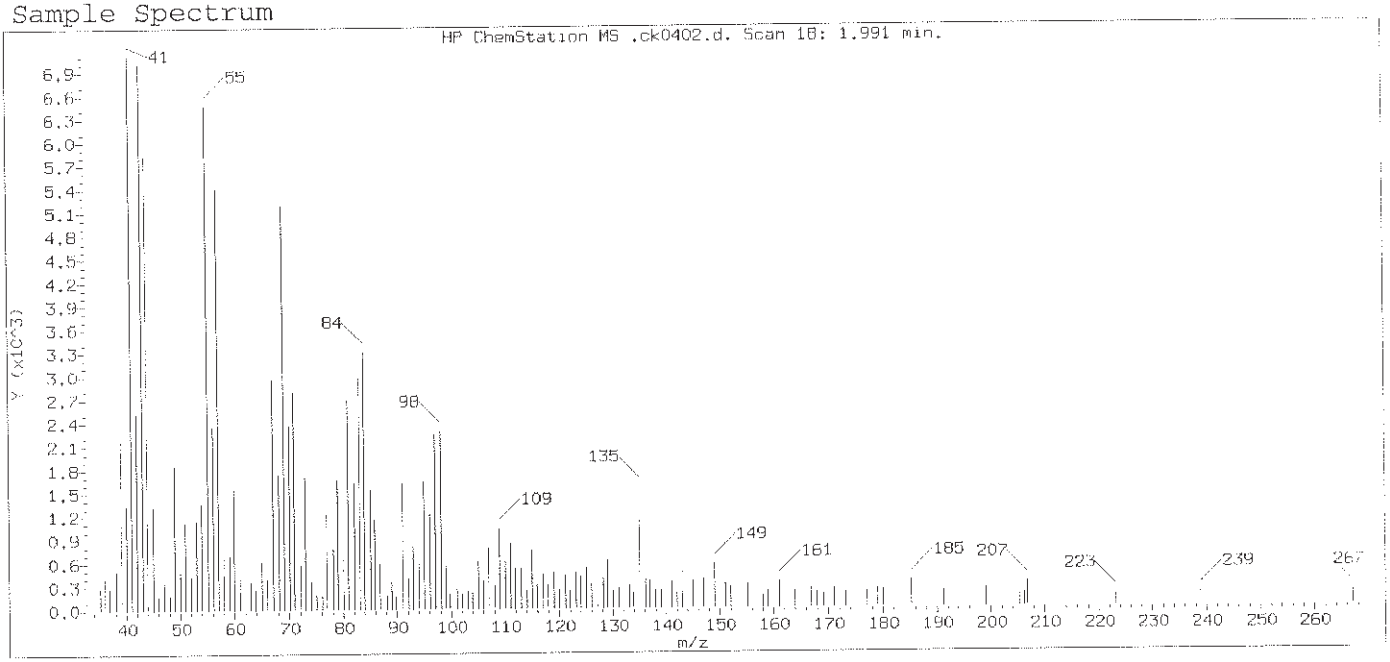
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

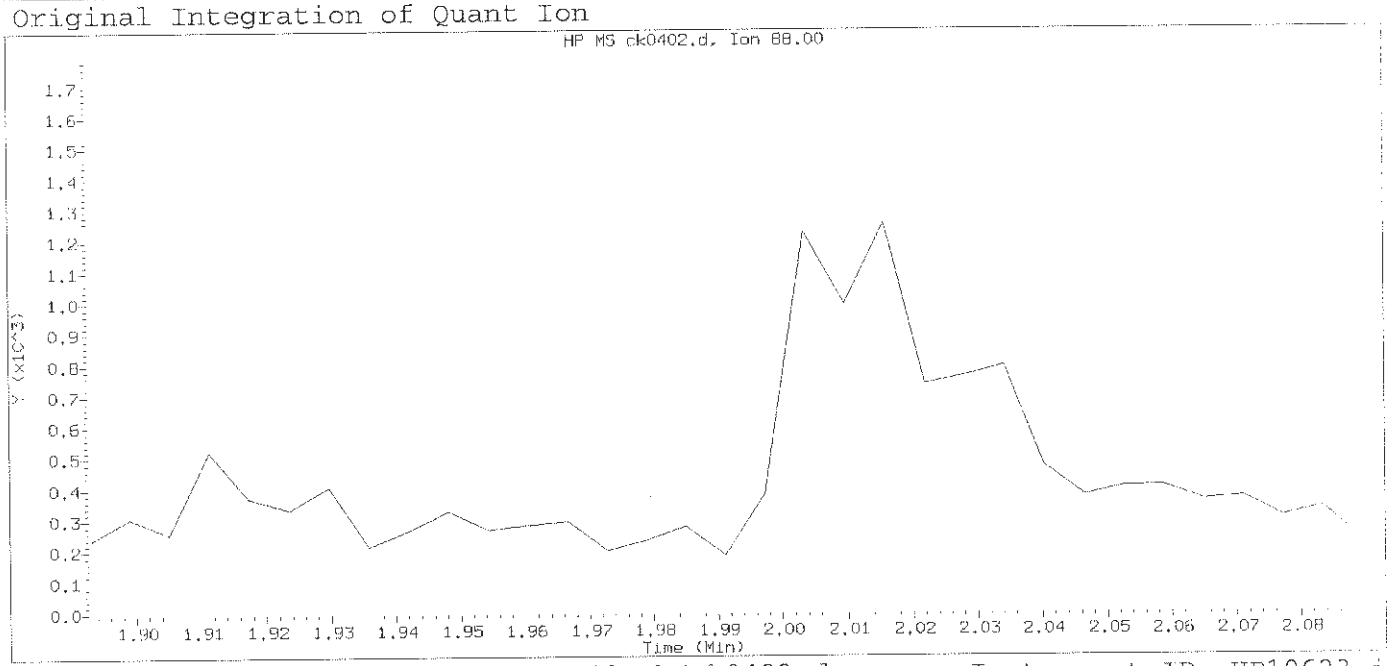
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

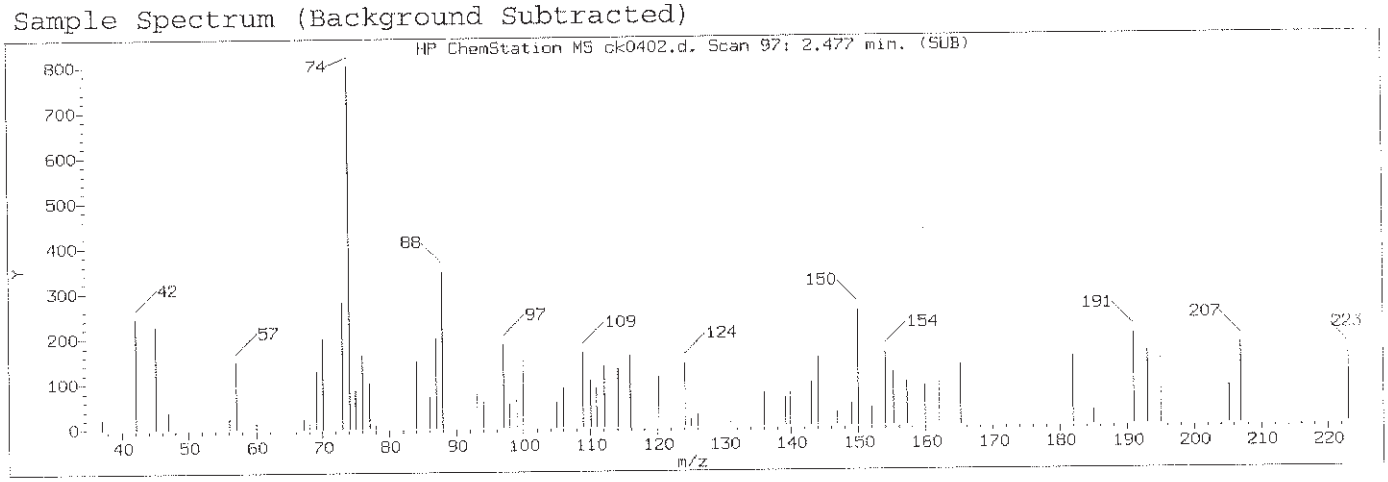
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

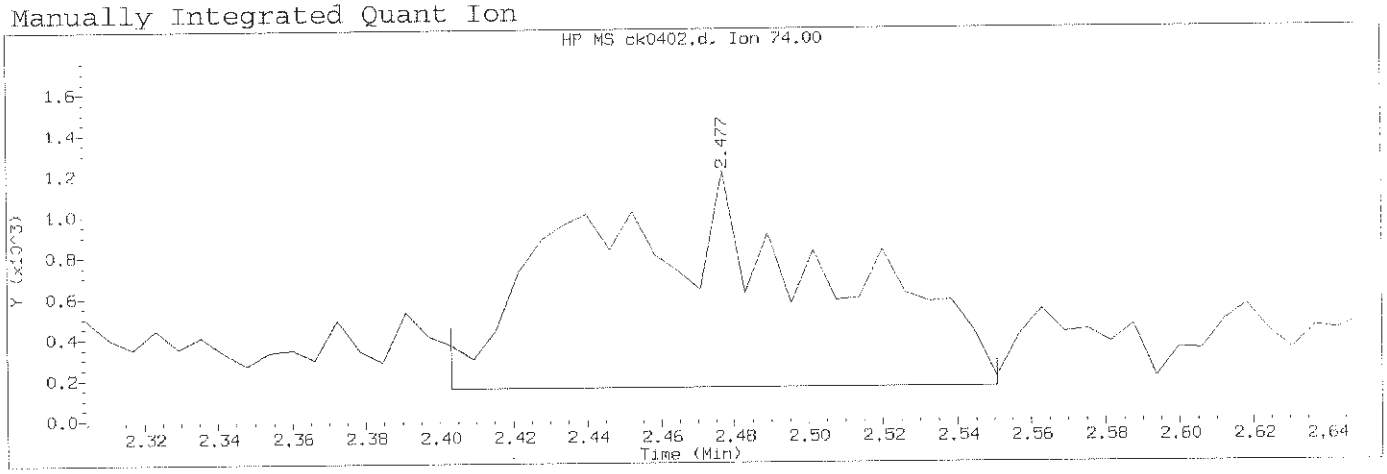
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.991
Quant Ion : 88.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

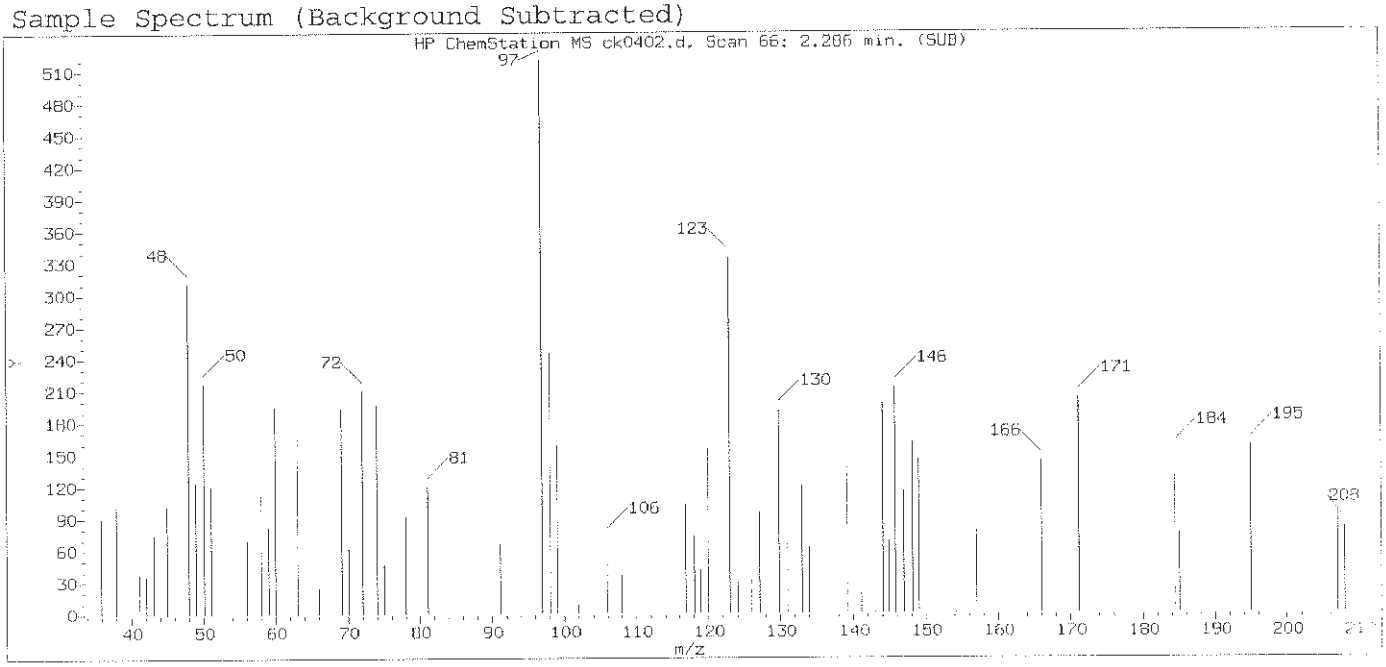
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 97		
Retention Time (minutes)	: 2.477		
Quant Ion	: 74.00		
Area (flag)	: 4899M		
On-Column Amount (ng/ul)	: 0.7065		
Integration start scan	: 84	Integration stop scan:	108
Y at integration start	: 152	Y at integration end:	152

Reason for manual integration: improper integration

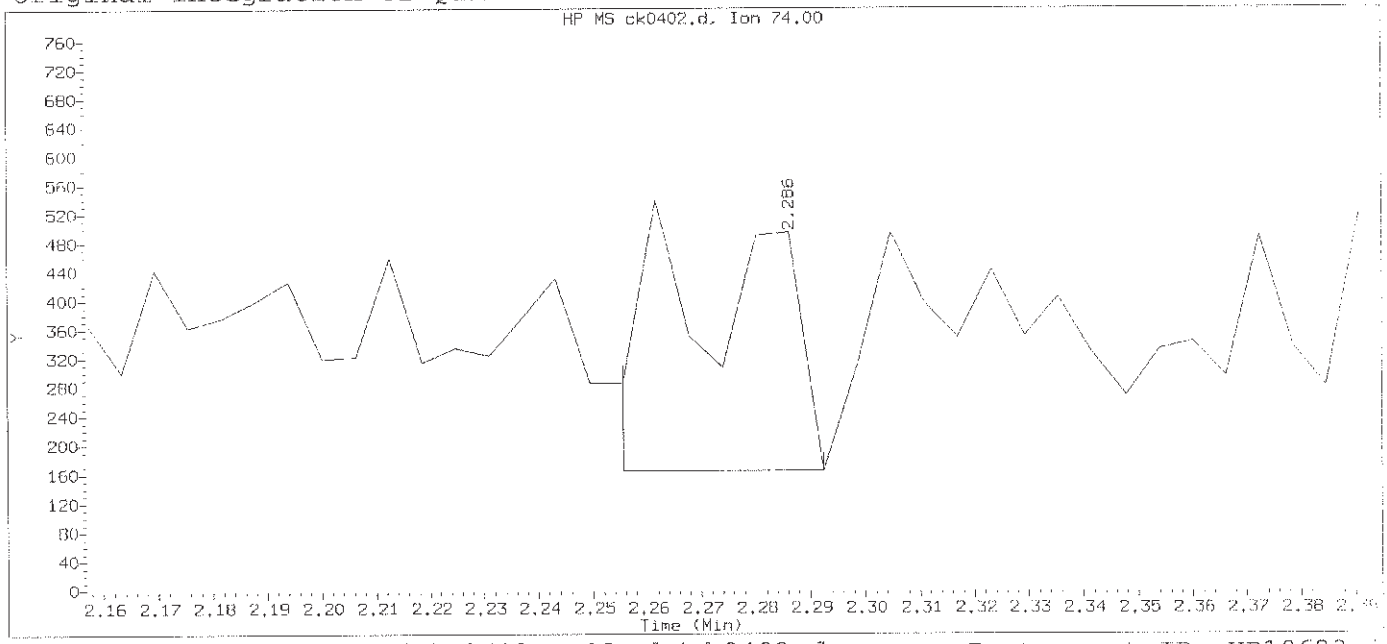
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

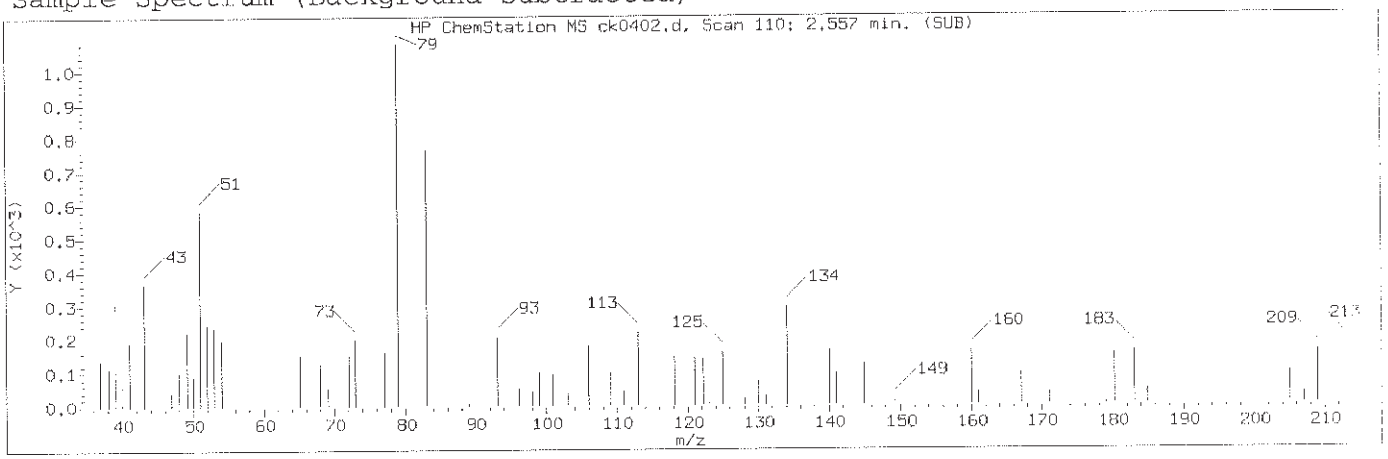
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

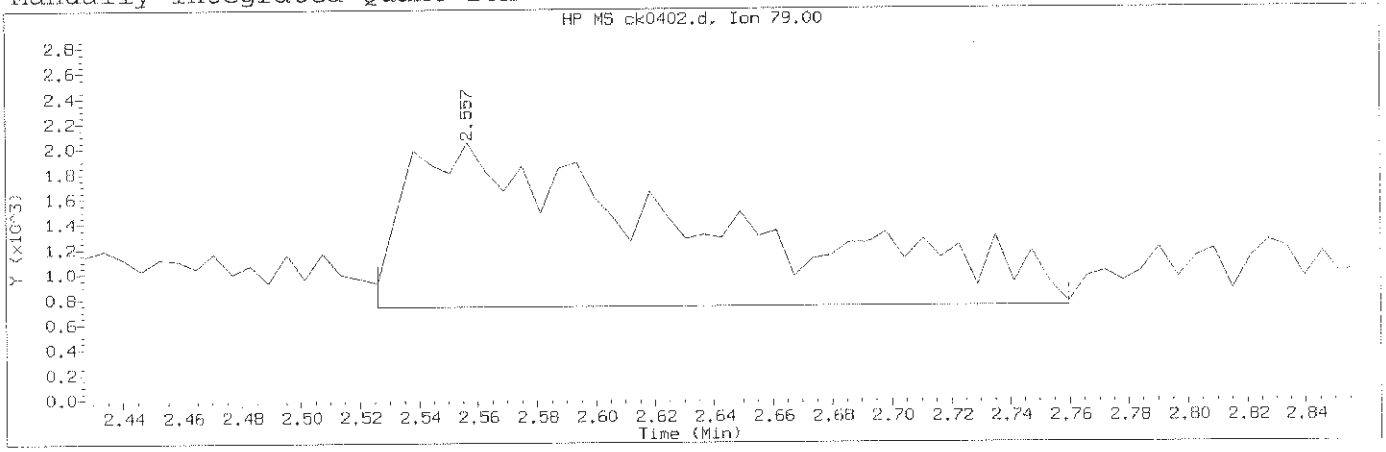
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 66		
Retention Time (minutes)	: 2.286		
Quant Ion	: 74.00		
Area	: 522		
On-column Amount (ng/ul)	: 0.0676		
Integration start scan	: 60	Integration stop scan:	66
Y at integration start	: 165	Y at integration end:	165

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 9243M		
On-Column Amount (ng/ul)	: 0.8598		
Integration start scan	: 104	Integration stop scan:	142
Y at integration start	: 732	Y at integration end:	732

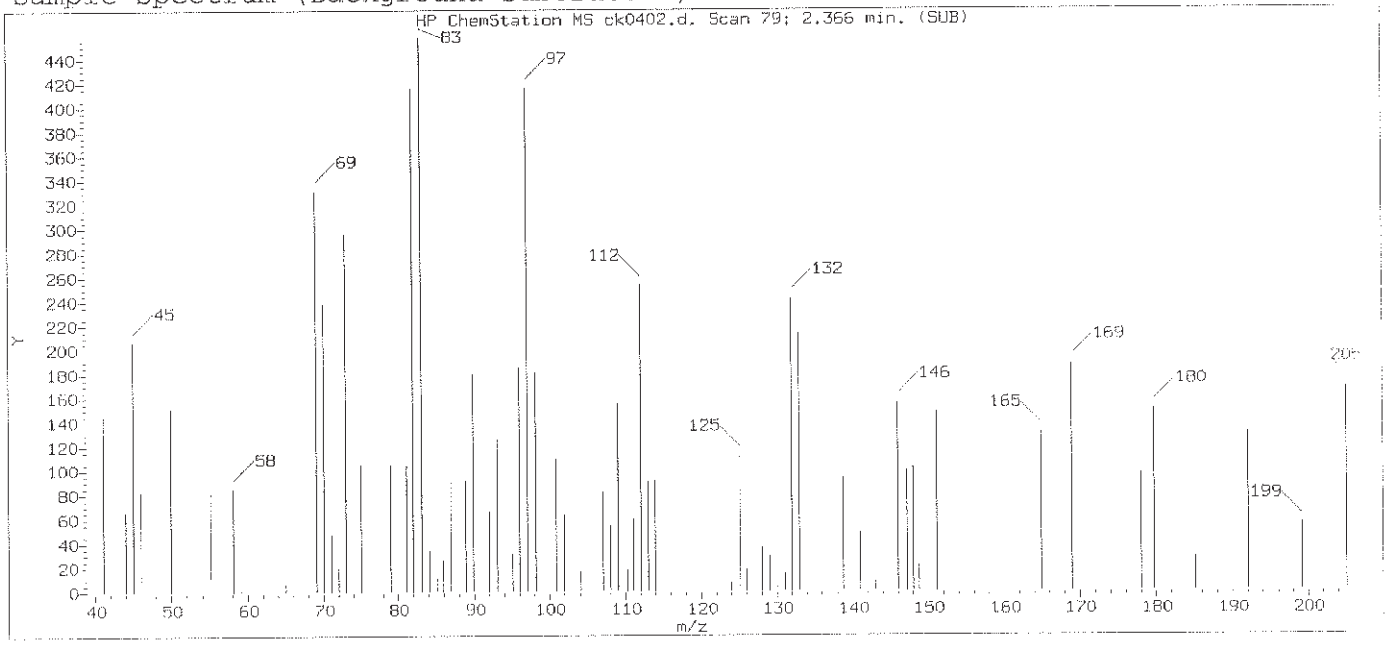
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

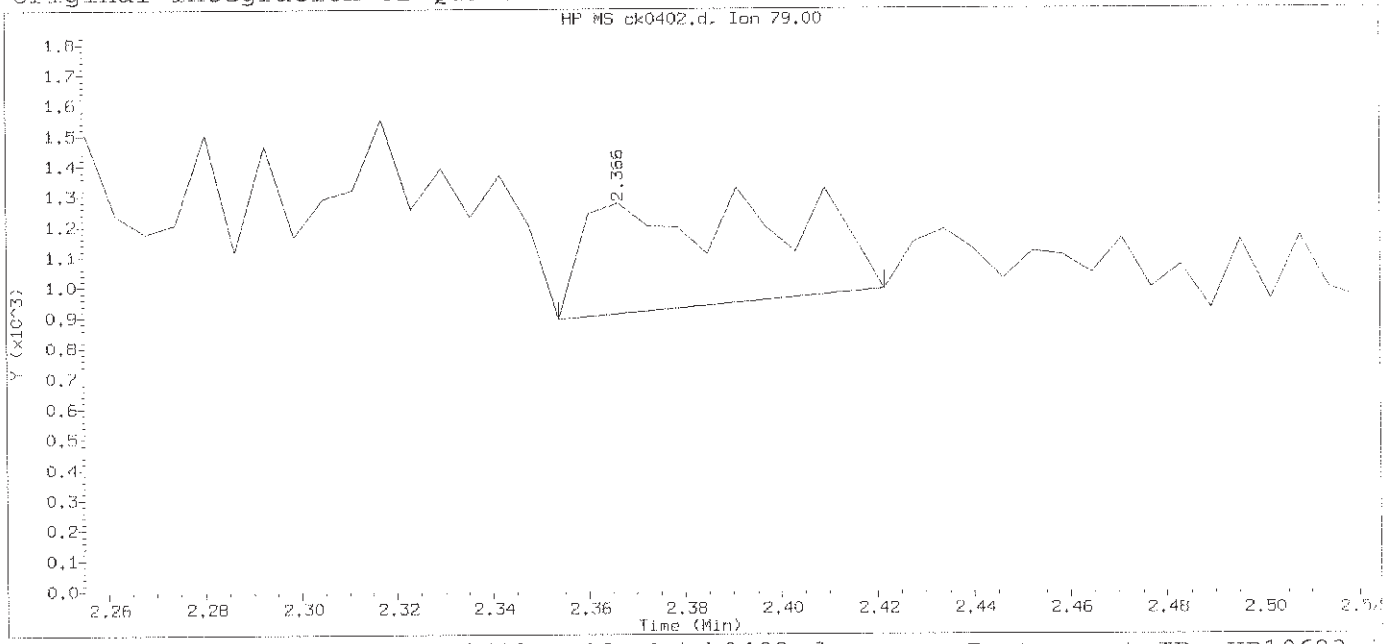
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval:_____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

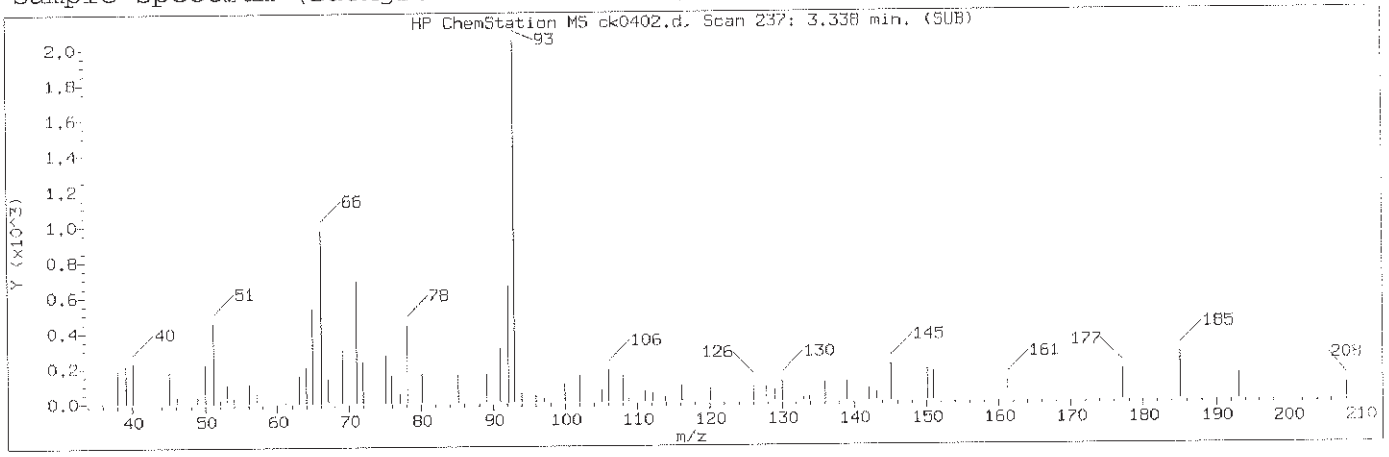
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

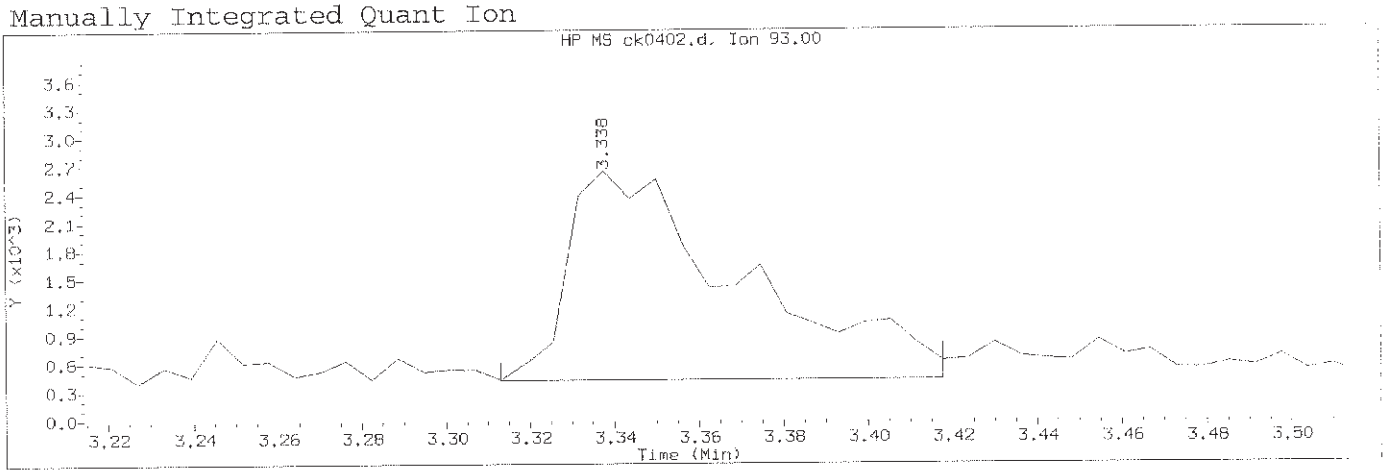
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 79.00		
Area	: 996		
On-column Amount (ng/ul)	: 0.0802		
Integration start scan	: 76	Integration stop scan:	87
Y at integration start	: 893	Y at integration end:	991

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6292M		
On-Column Amount (ng/ul)	: 0.5736		
Integration start scan	: 232	Integration stop scan:	249
Y at integration start	: 417	Y at integration end:	417

Reason for manual integration: improper integration

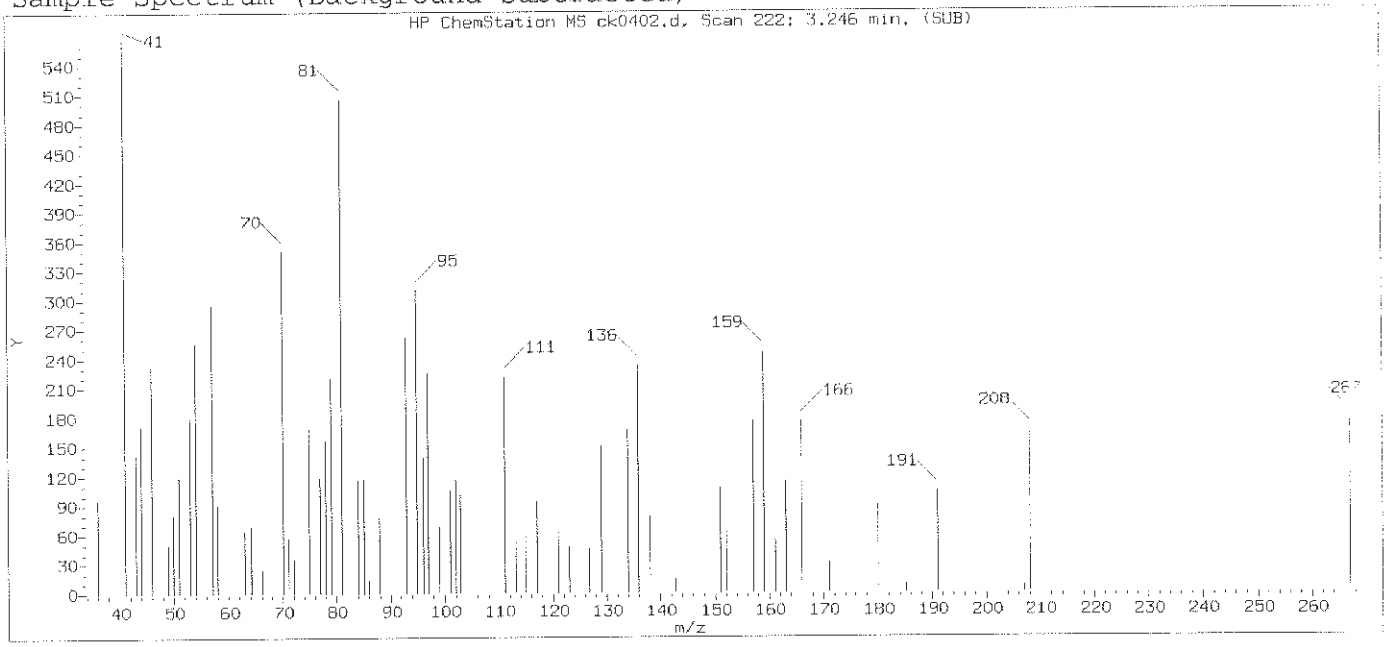
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

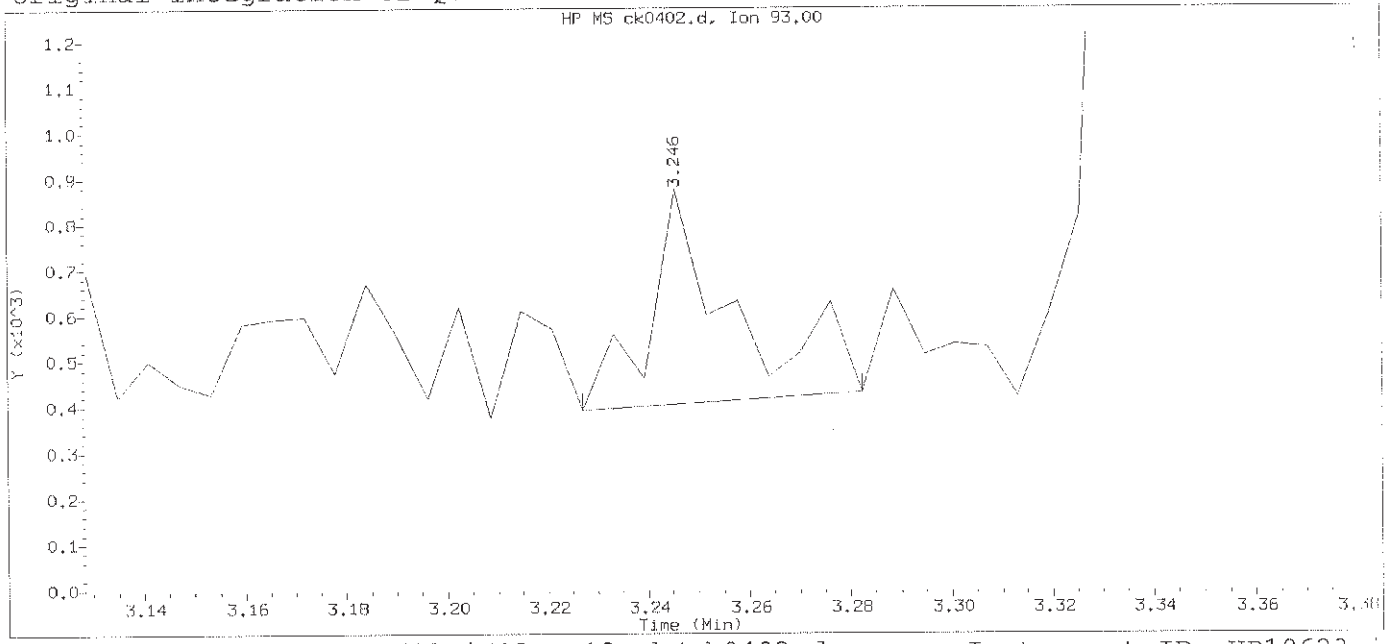
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 222		
Retention Time (minutes)	: 3.246		
Quant Ion	: 93.00		
Area	: 532		
On-column Amount (ng/ul)	: 0.0453		
Integration start scan	: 218	Integration stop scan:	227
Y at integration start	: 391	Y at integration end:	431

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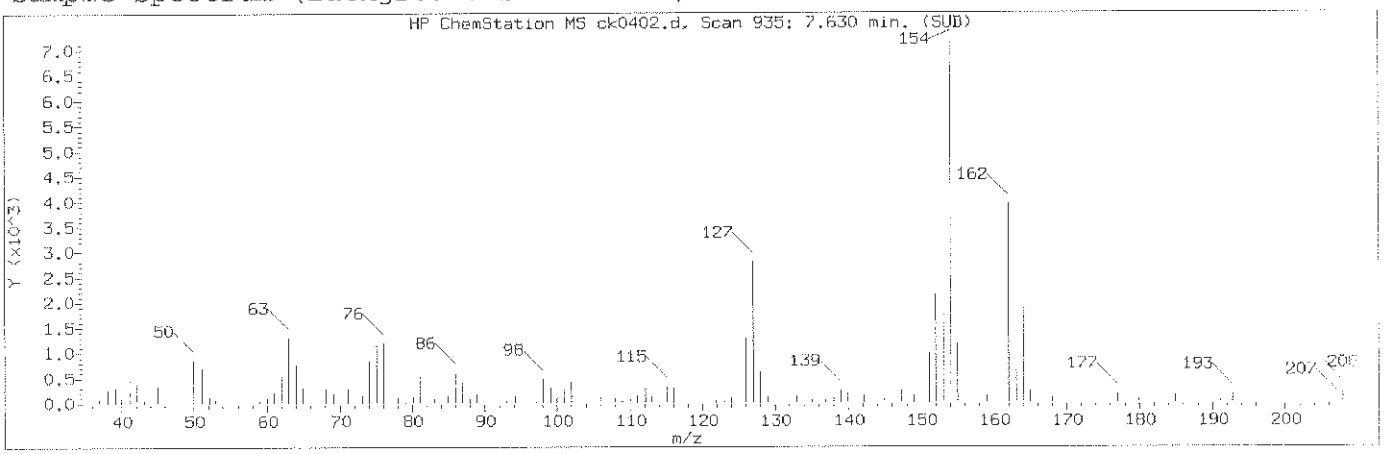
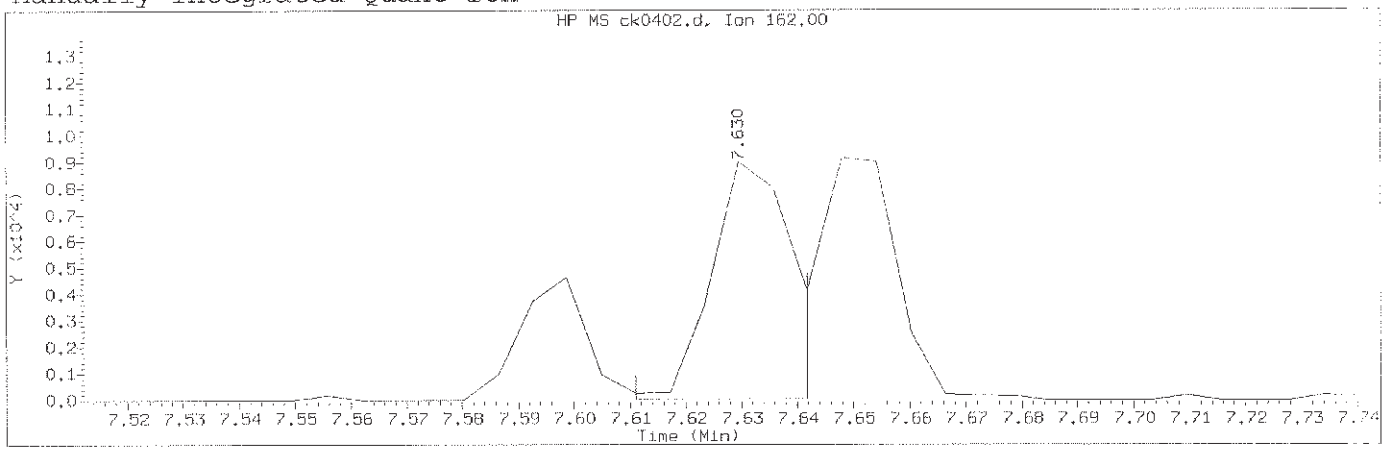
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 9196M		
On-Column Amount (ng/ul)	: 0.5248		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 47	Y at integration end:	54

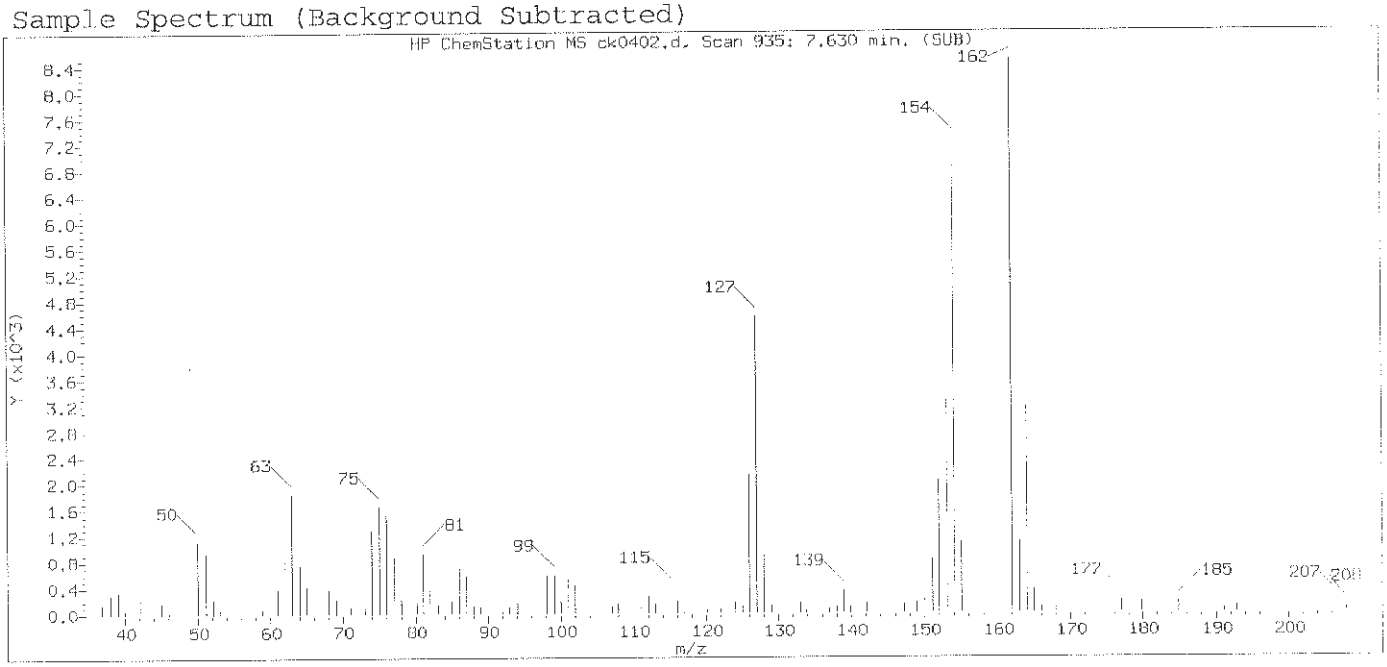
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

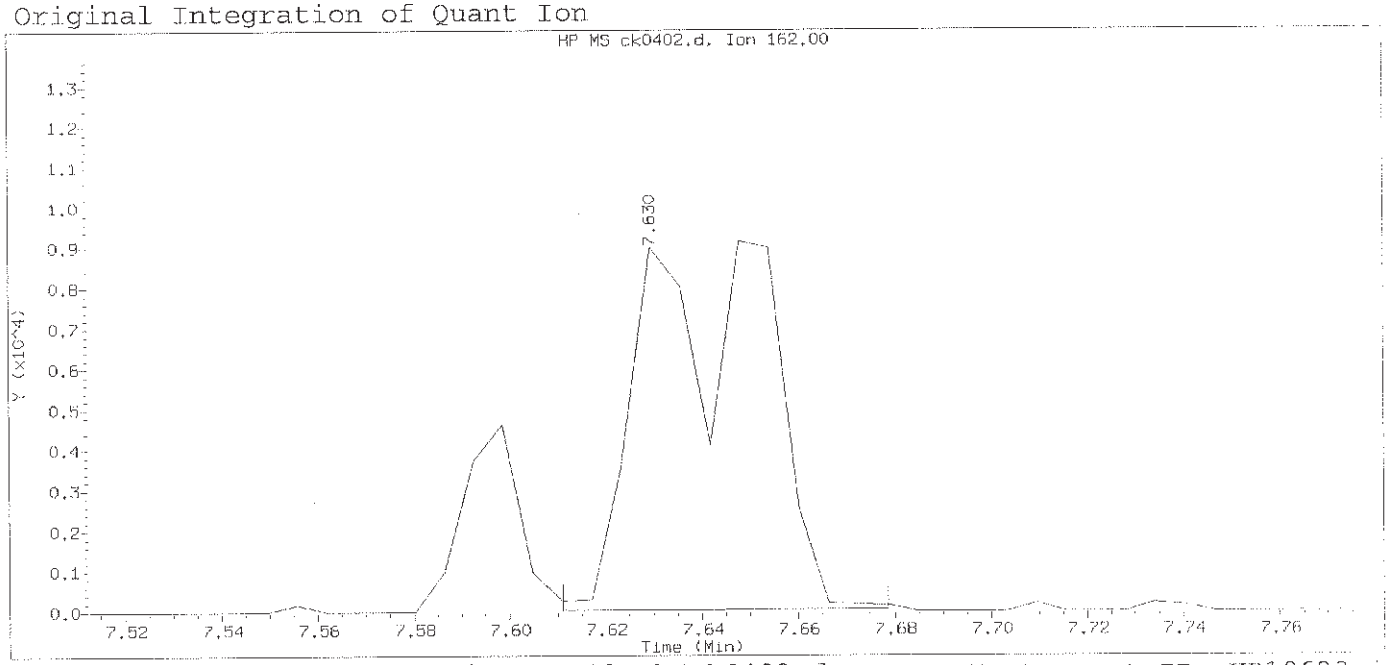
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16846		
On-column Amount (ng/ul)	: 1.0791		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 47	Y at integration end:	63

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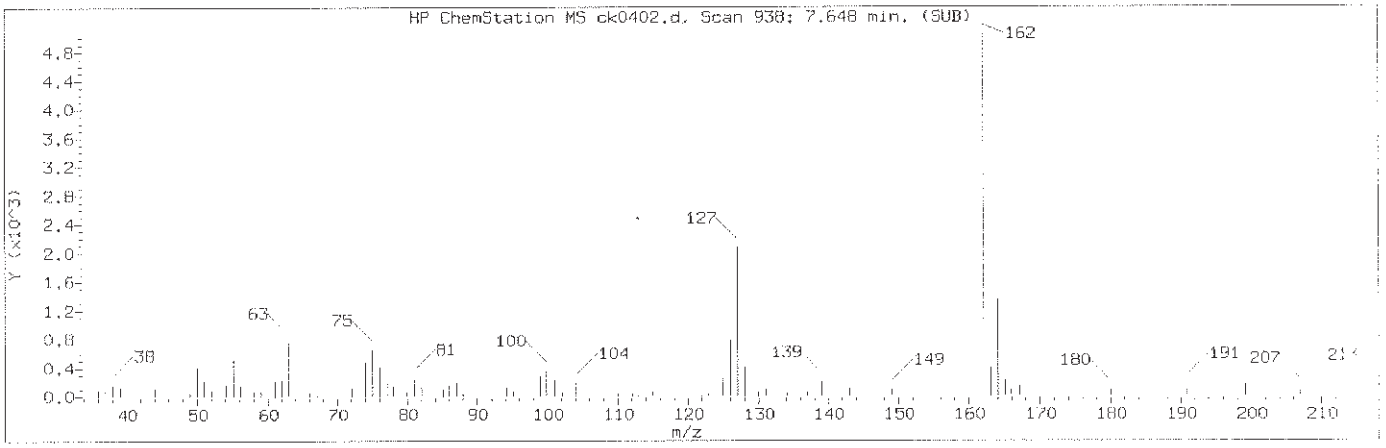
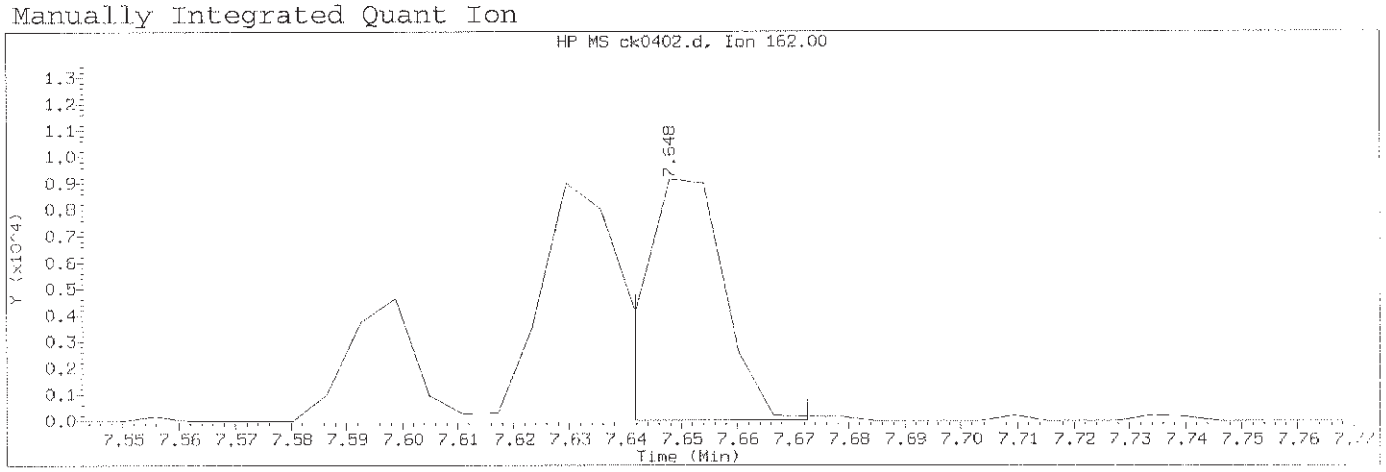
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 938		
Retention Time (minutes)	: 7.648		
Quant Ion	: 162.00		
Area (flag)	: 9244M		
On-Column Amount (ng/ul)	: 0.5360		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 26	Y at integration end:	26

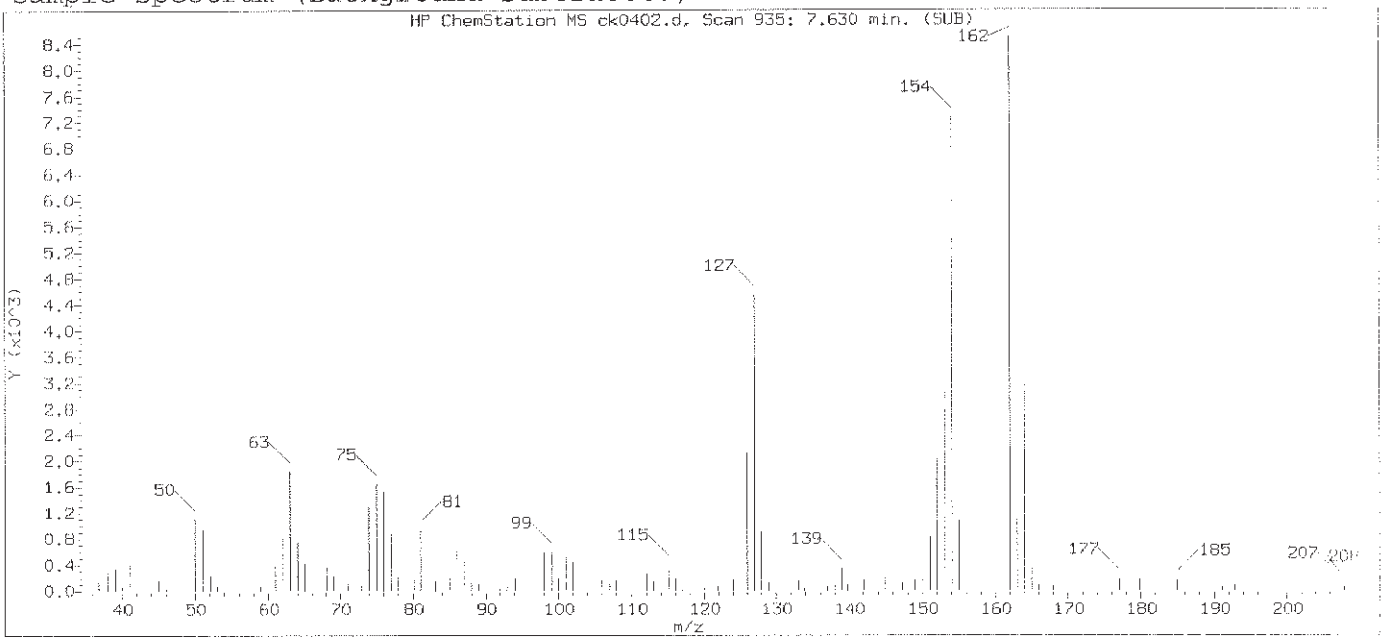
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

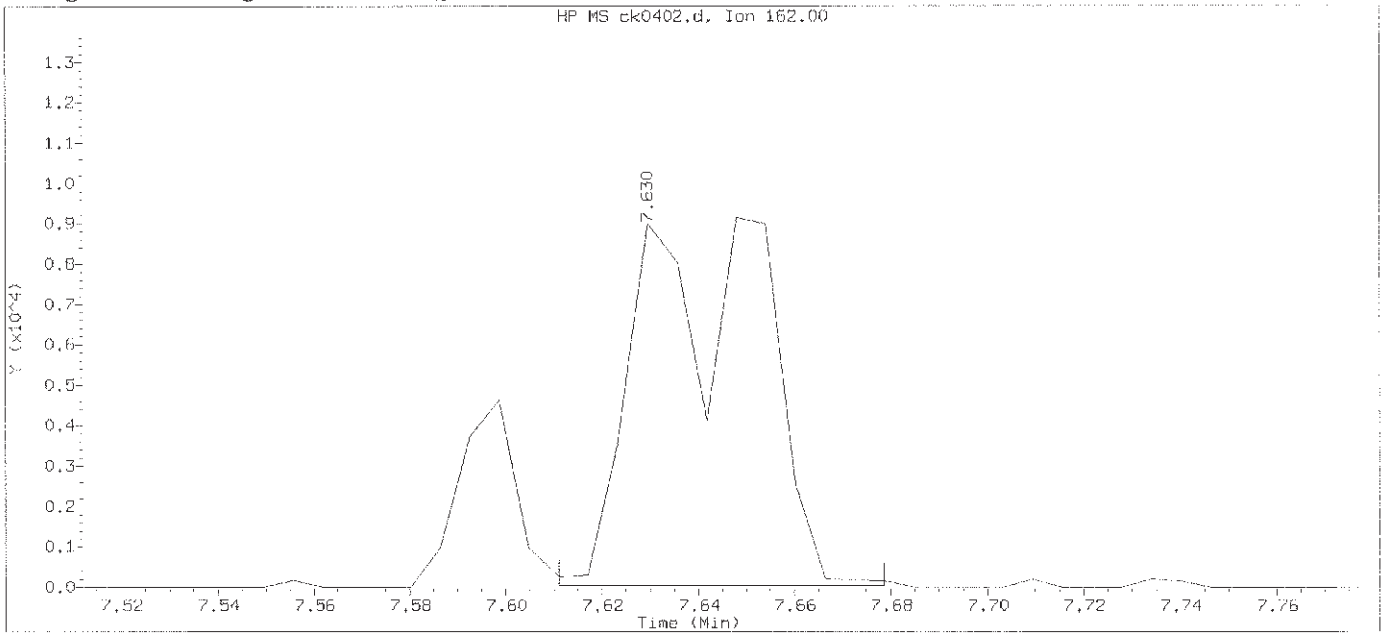
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 16903		
On-column Amount (ng/ul)	: 0.9764		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 41	Y at integration end:	41

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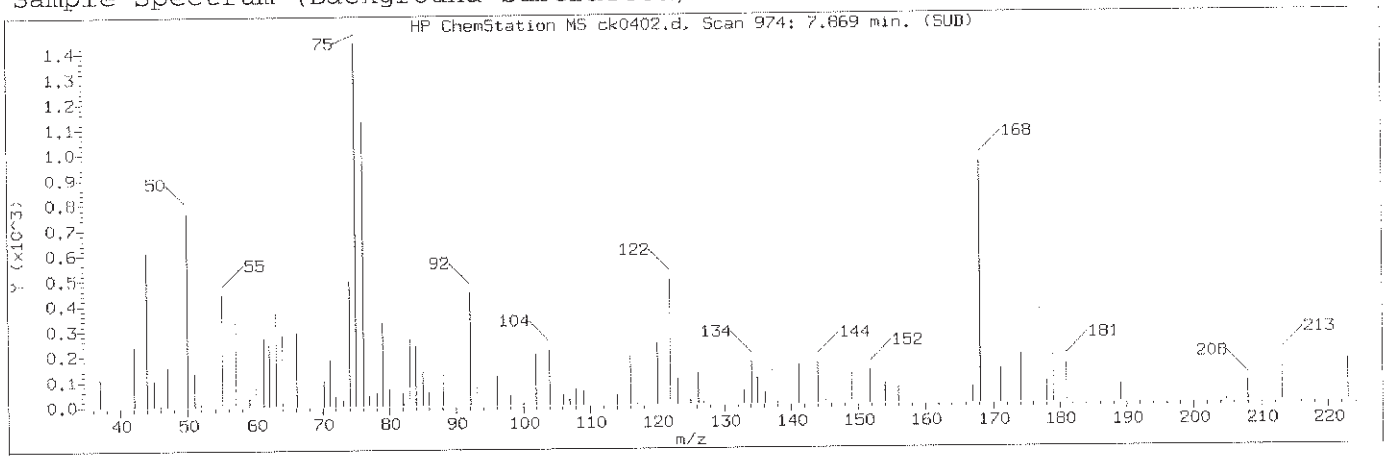
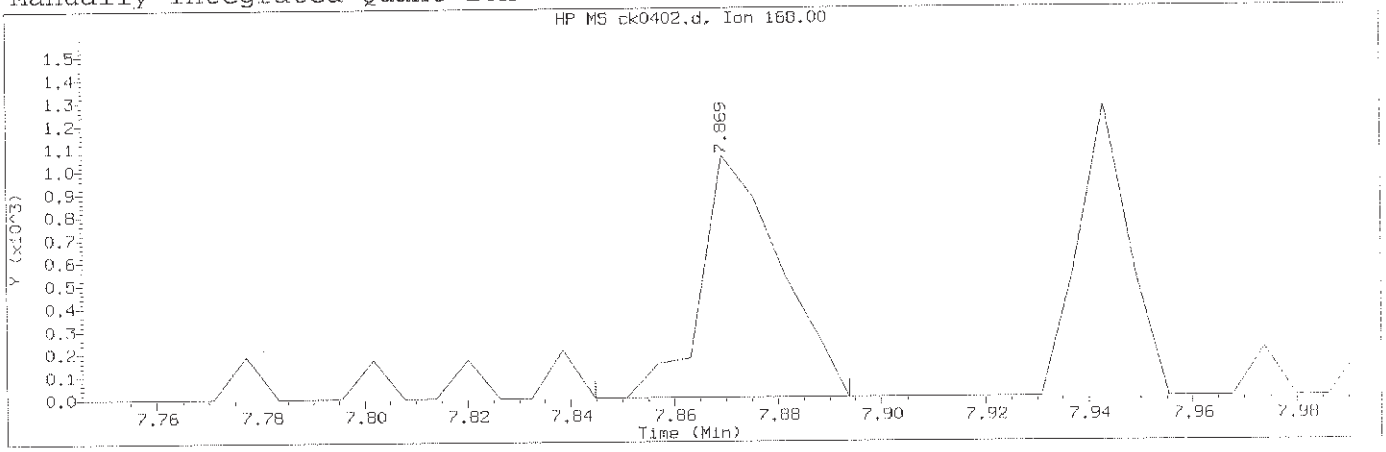
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 974		
Retention Time (minutes)	: 7.869		
Quant Ion	: 168.00		
Area (flag)	: 1124M		
On-Column Amount (ng/ul)	: 0.5059		
Integration start scan	: 969	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

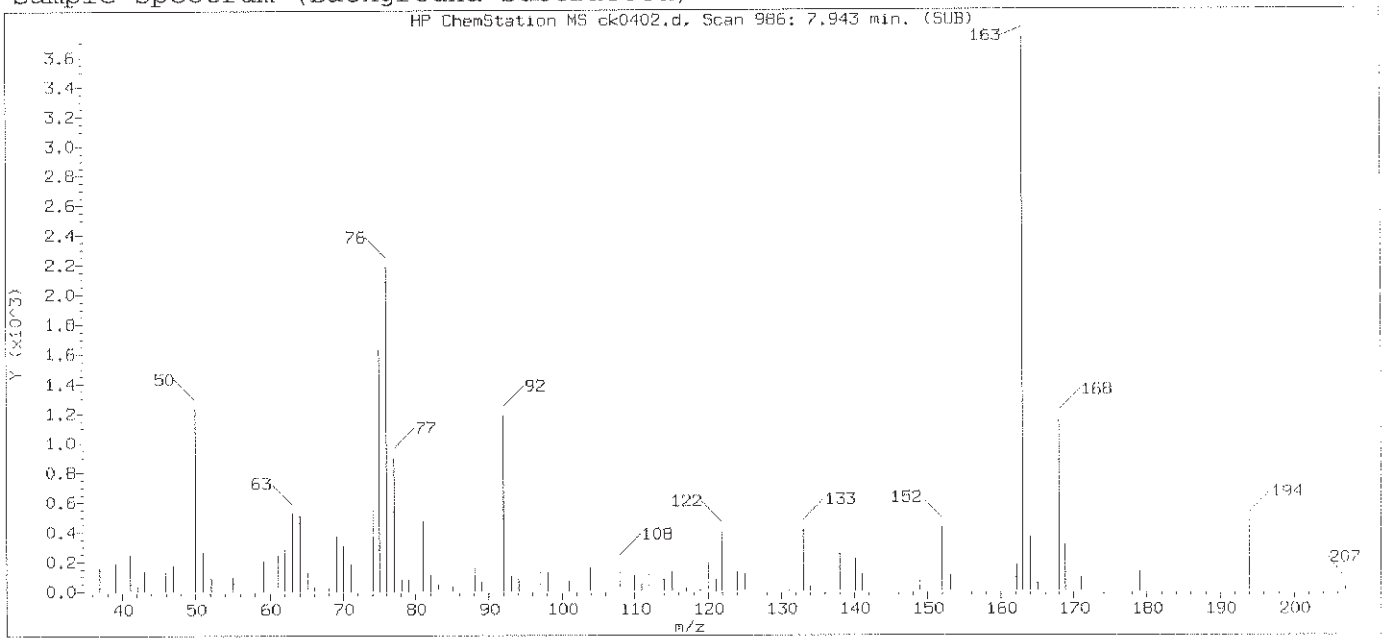
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.0 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

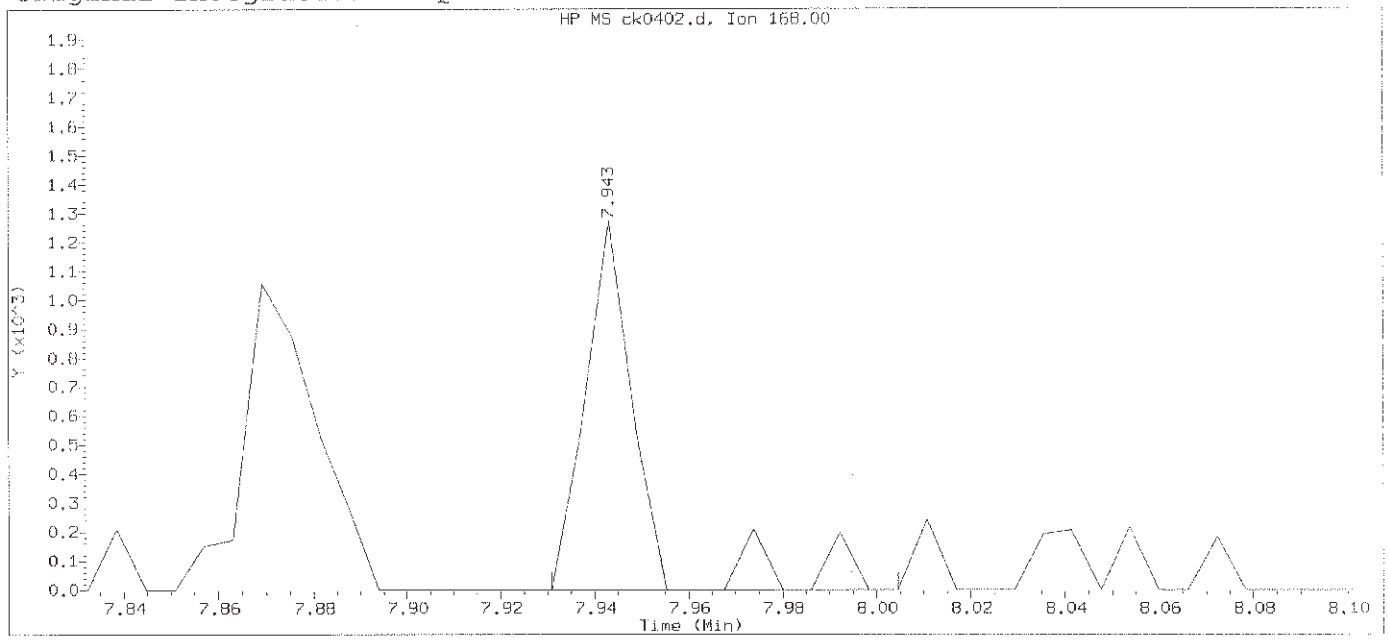
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

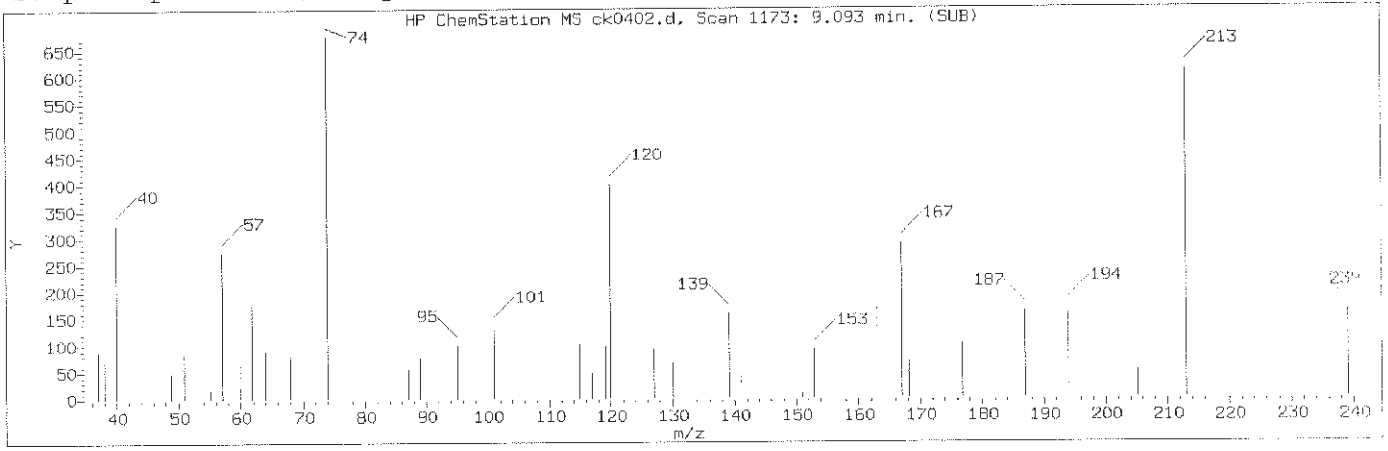
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

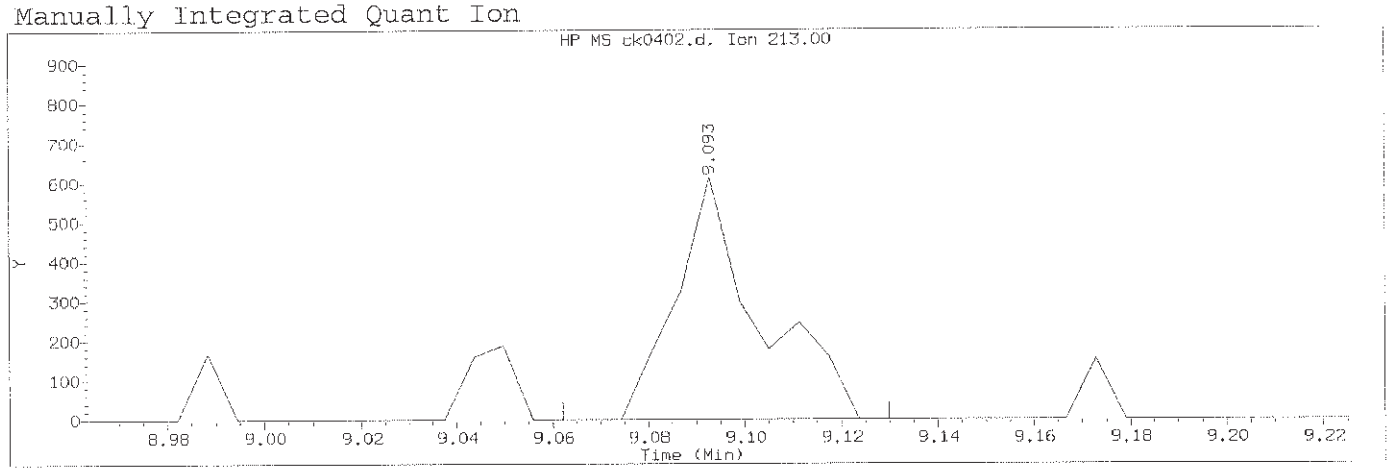
Compound Number	: 91		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area	: 1011		
On-column Amount (ng/ul)	: 0.4897		
Integration start scan	: 983	Integration stop scan:	995
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

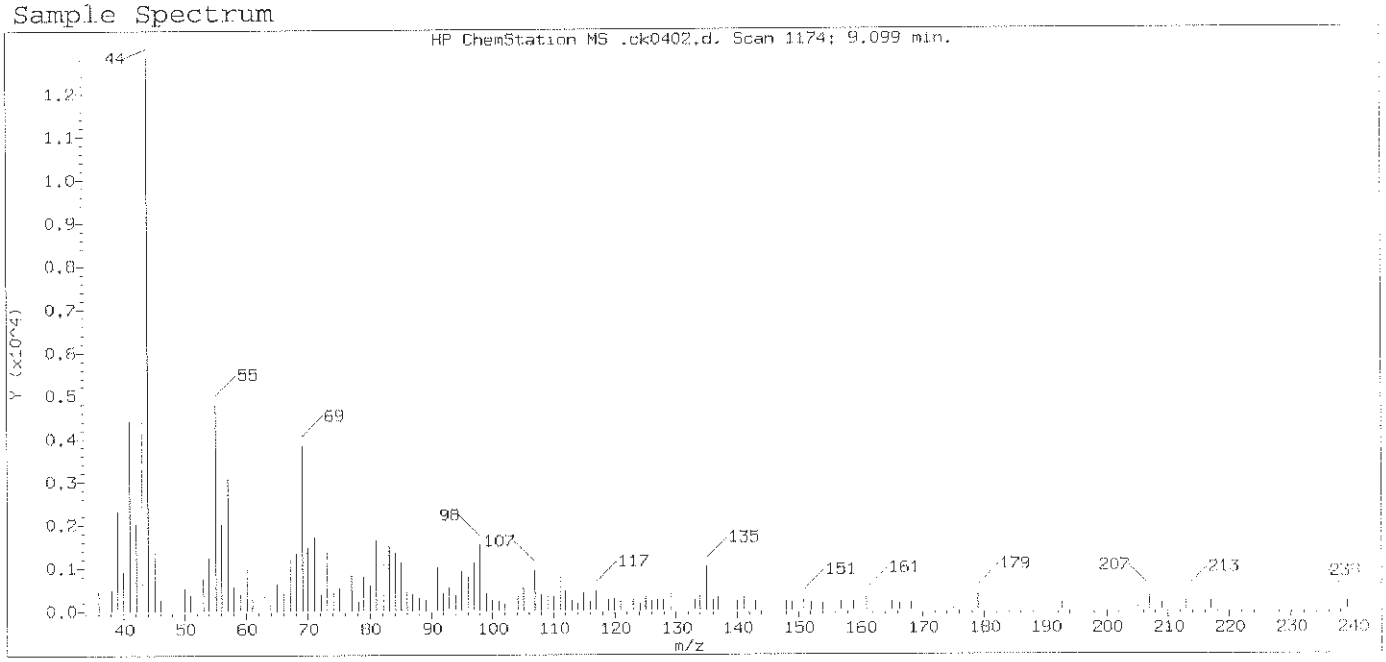
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 728M		
On-Column Amount (ng/ul)	: 0.5016		
Integration start scan	: 1167	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

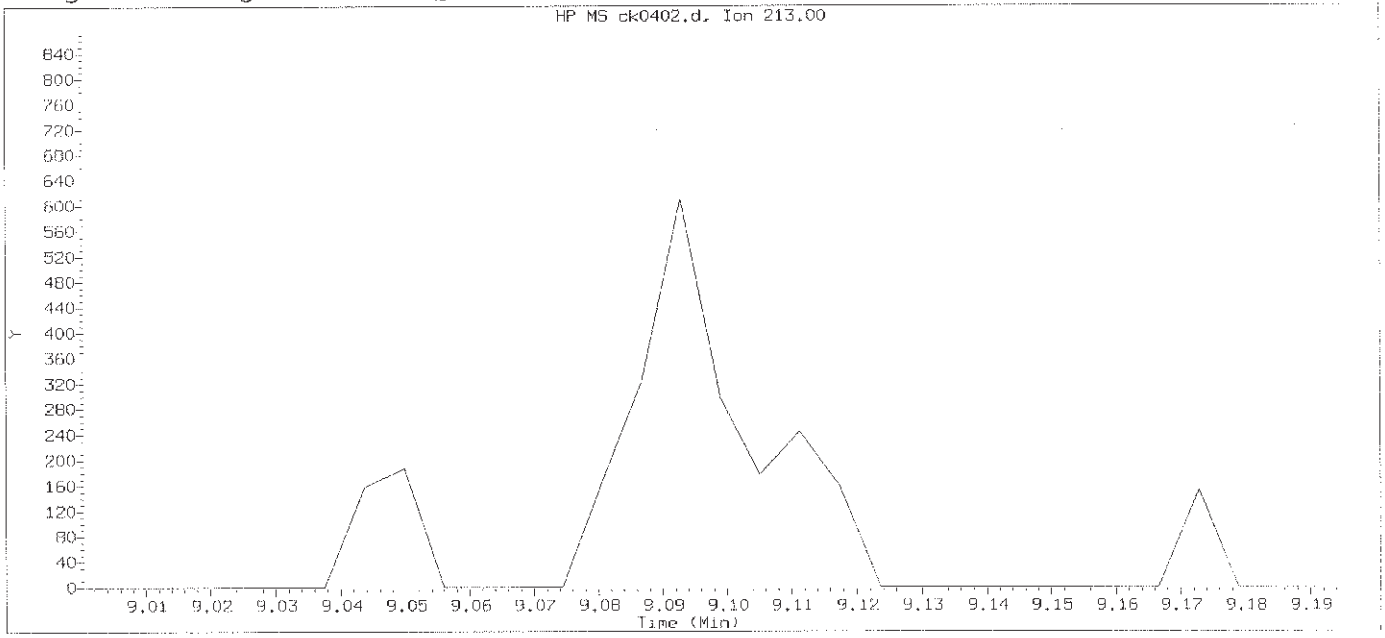
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

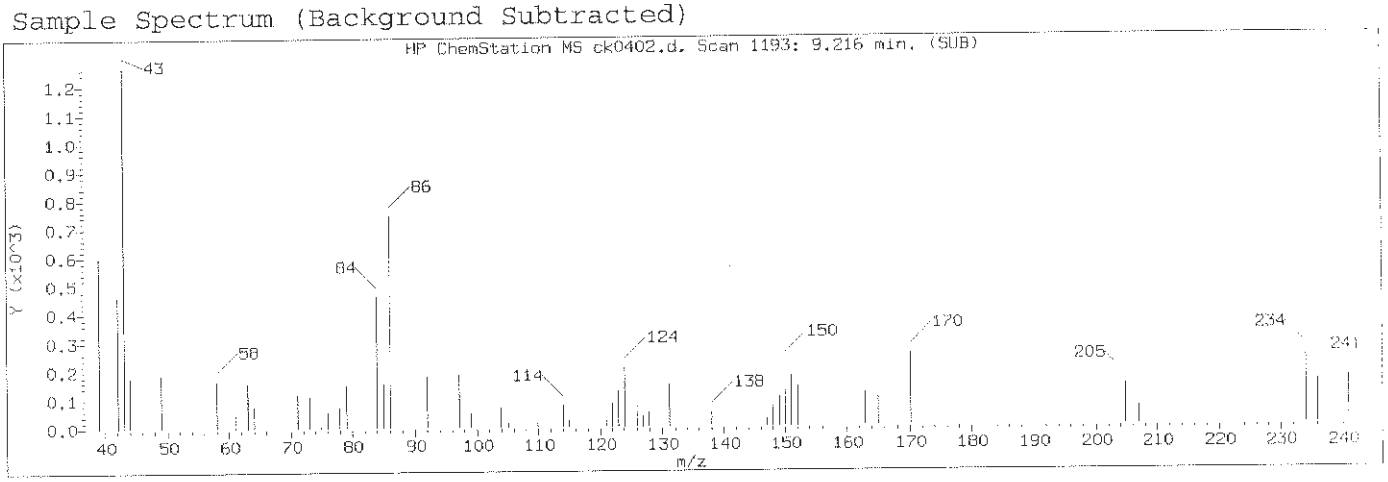
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

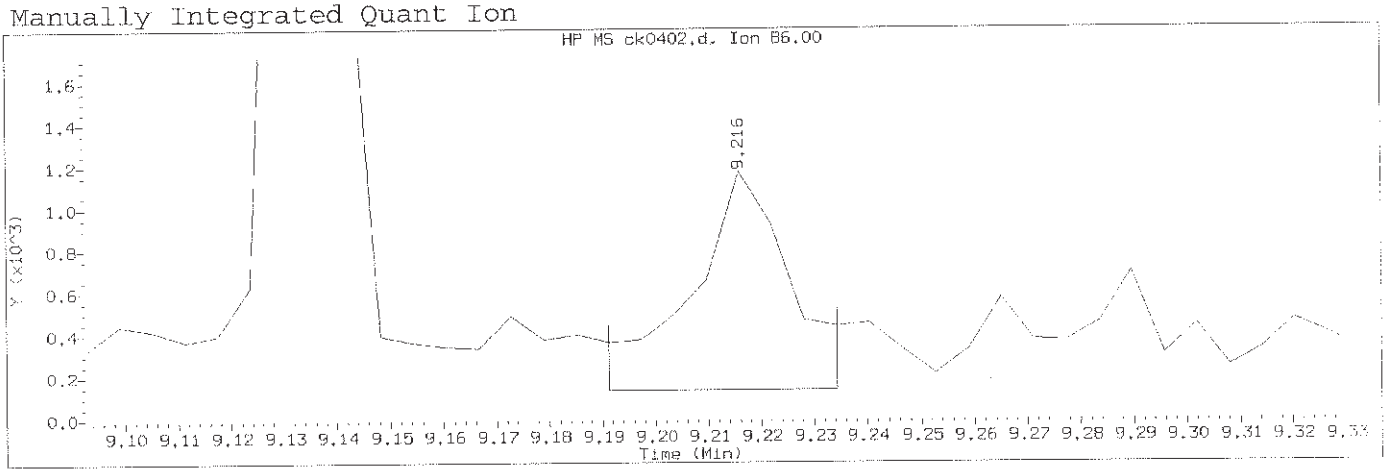
Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1193		
Retention Time (minutes)	: 9.216		
Quant Ion	: 86.00		
Area (flag)	: 1405M		
On-Column Amount (ng/ul)	: 0.2306		
Integration start scan	: 1188	Integration stop scan:	1195
Y at integration start	: 134	Y at integration end:	134

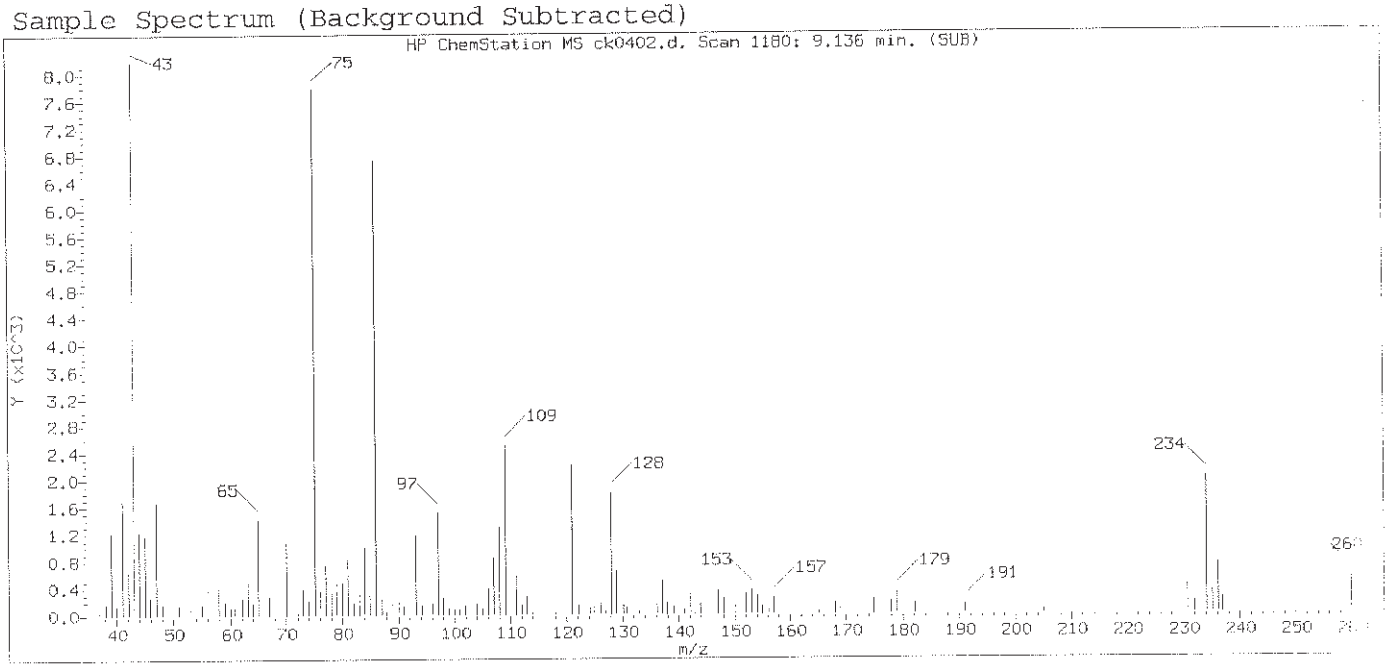
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

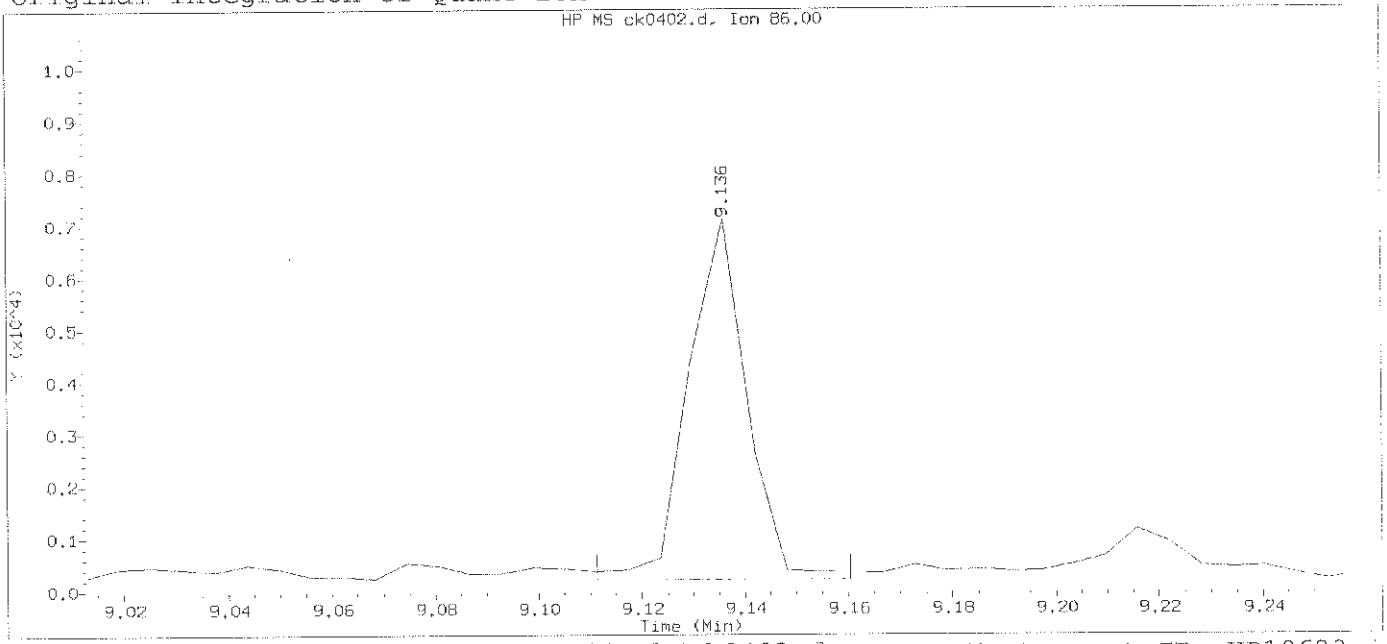
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

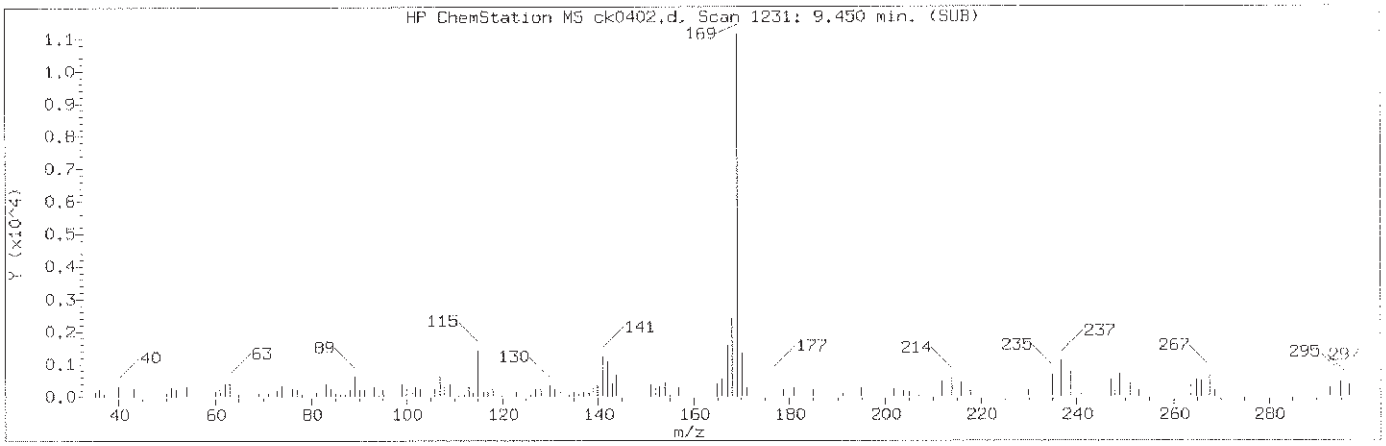
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

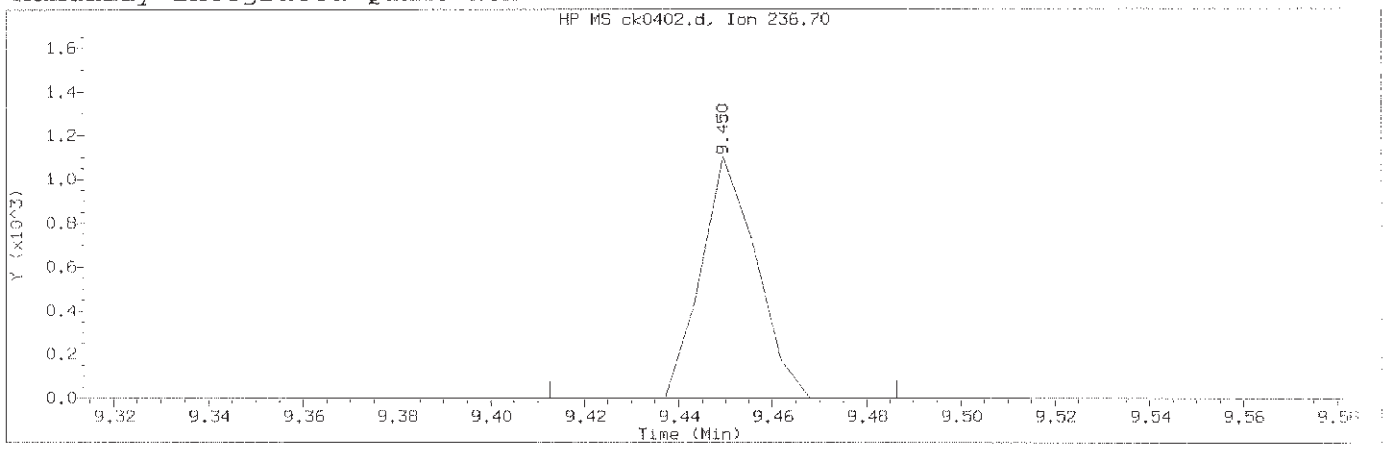
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5379		
On-column Amount (ng/ul)	: 0.8453		
Integration start scan	: 1175	Integration stop scan:	1183
Y at integration start	: 213	Y at integration end:	213

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 132		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1231		
Retention Time (minutes)	: 9.450		
Quant Ion	: 237.00		
Area (flag)	: 895M		
On-Column Amount (ng/ul)	: 0.3959		
Integration start scan	: 1224	Integration stop scan:	1236
Y at integration start	: 0	Y at integration end:	0

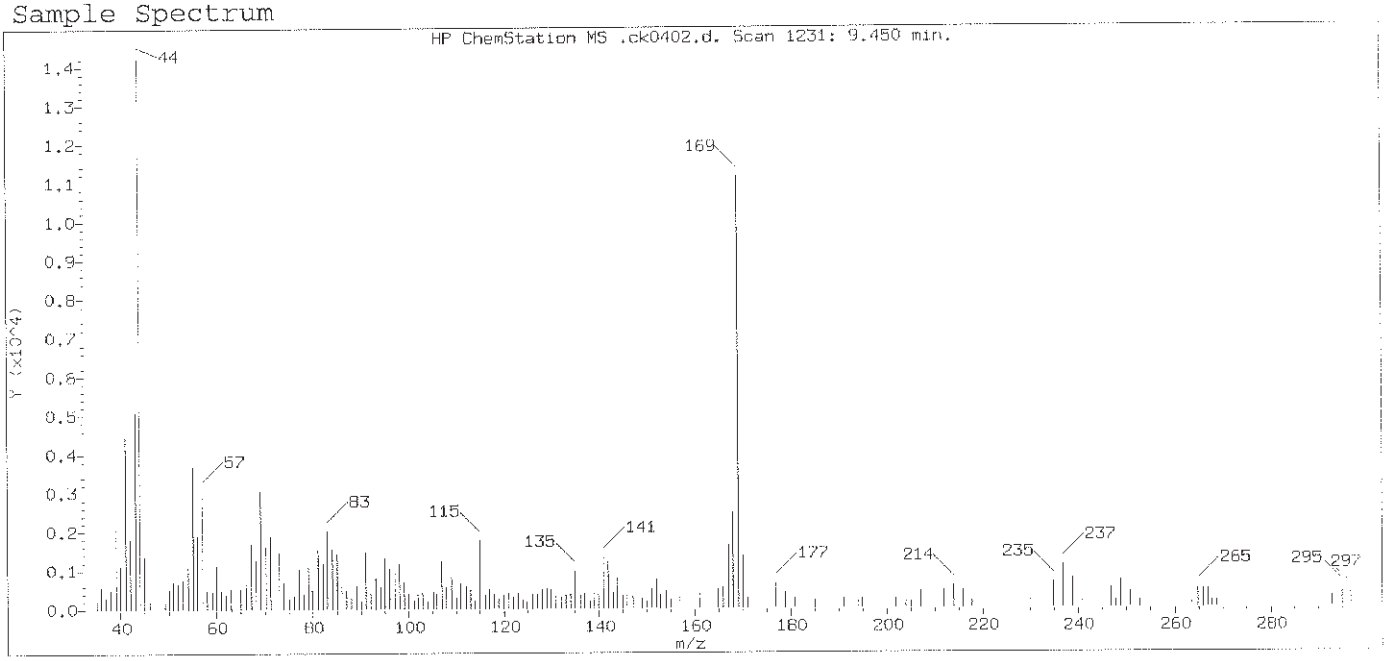
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

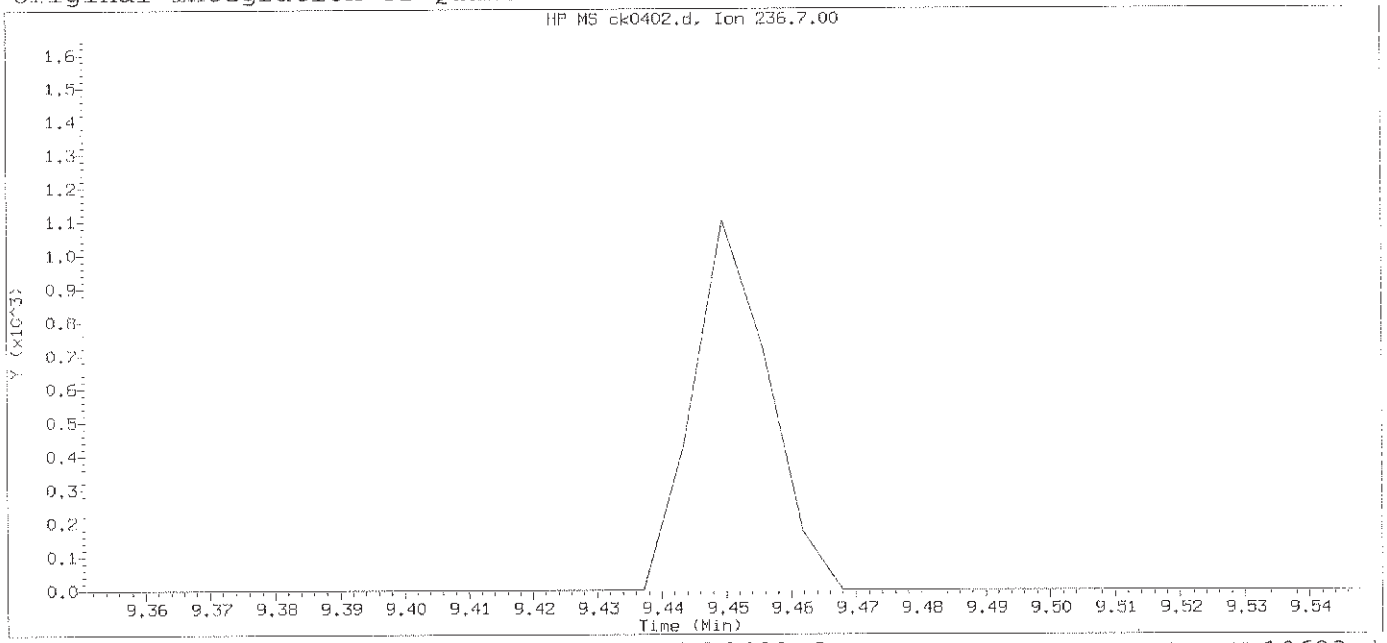
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

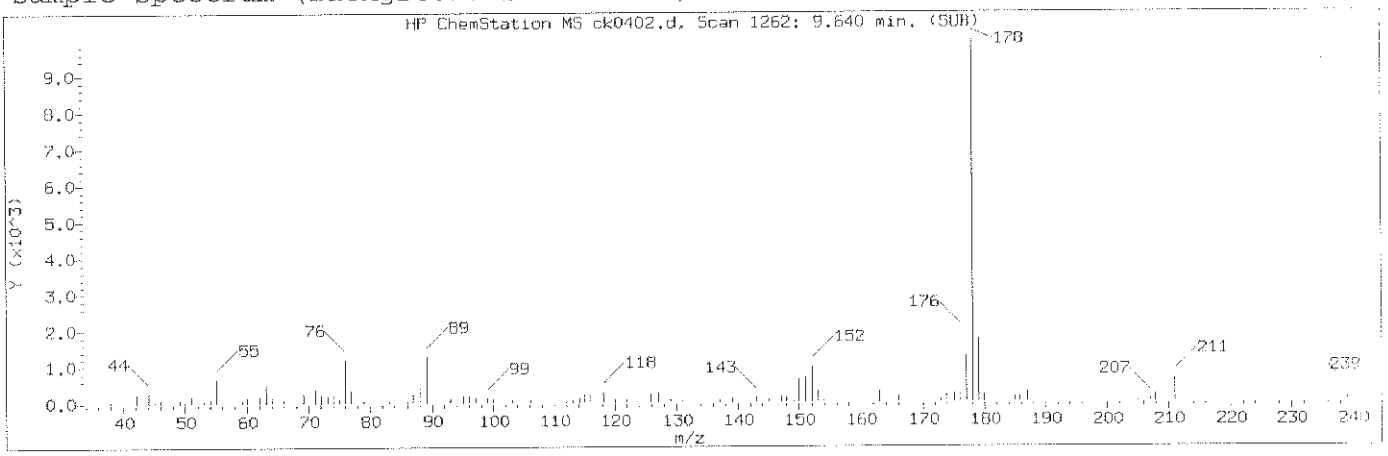
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

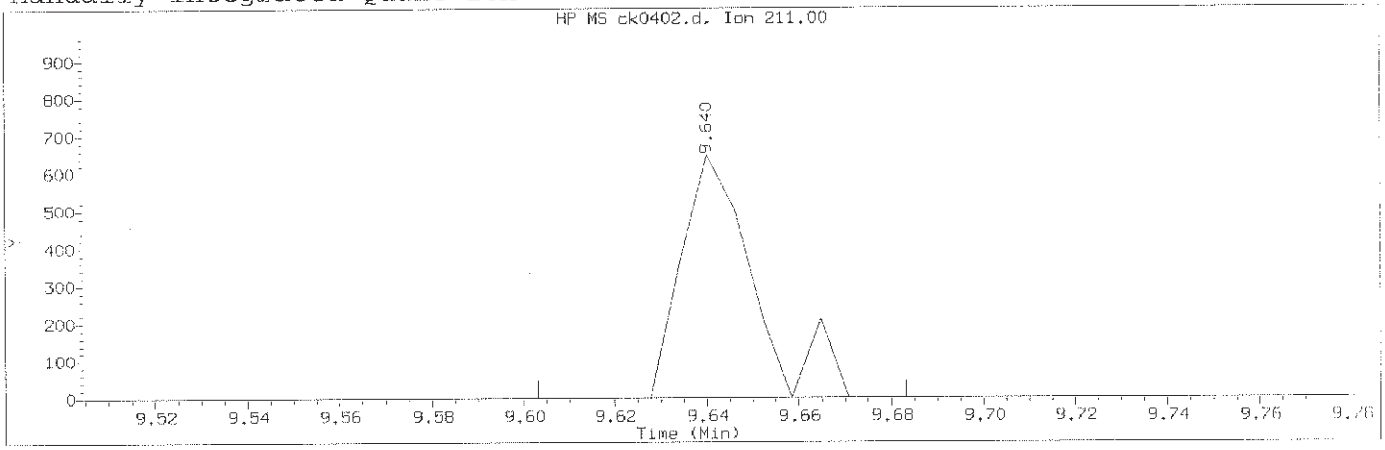
Compound Number : 132
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 9.450
Quant Ion : 237.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

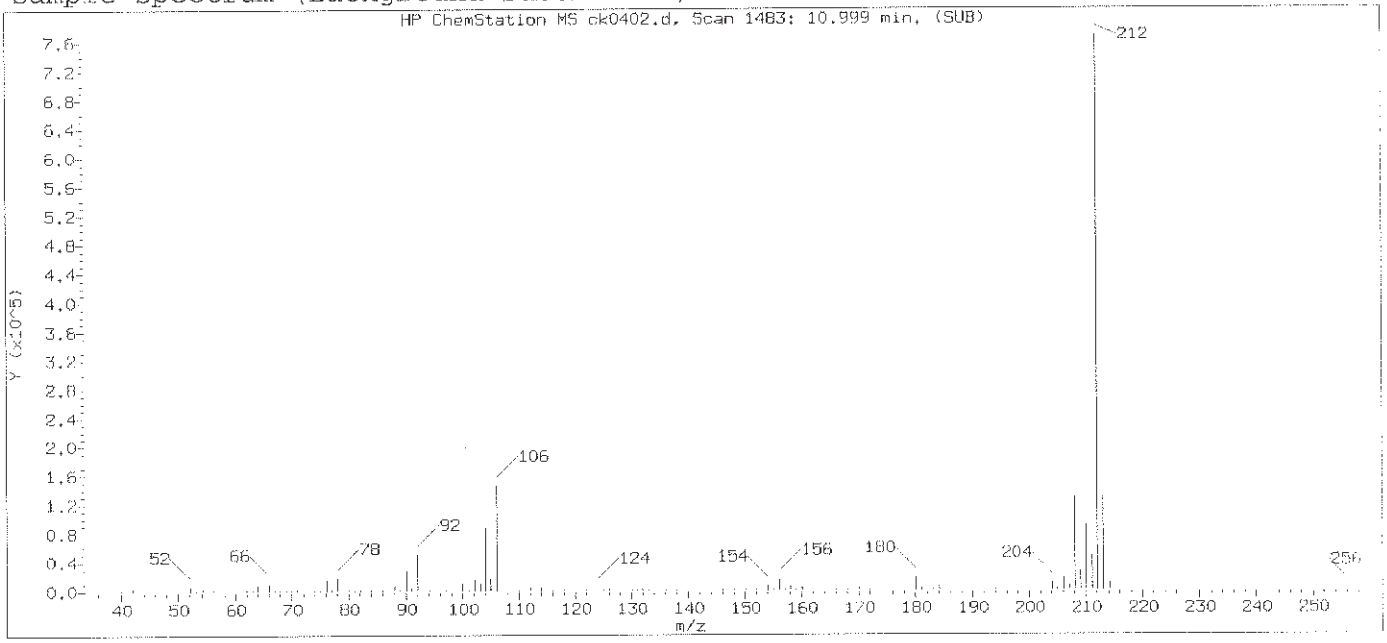
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 706M		
On-Column Amount (ng/ul)	: 0.2371		
Integration start scan	: 1255	Integration stop scan:	1268
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

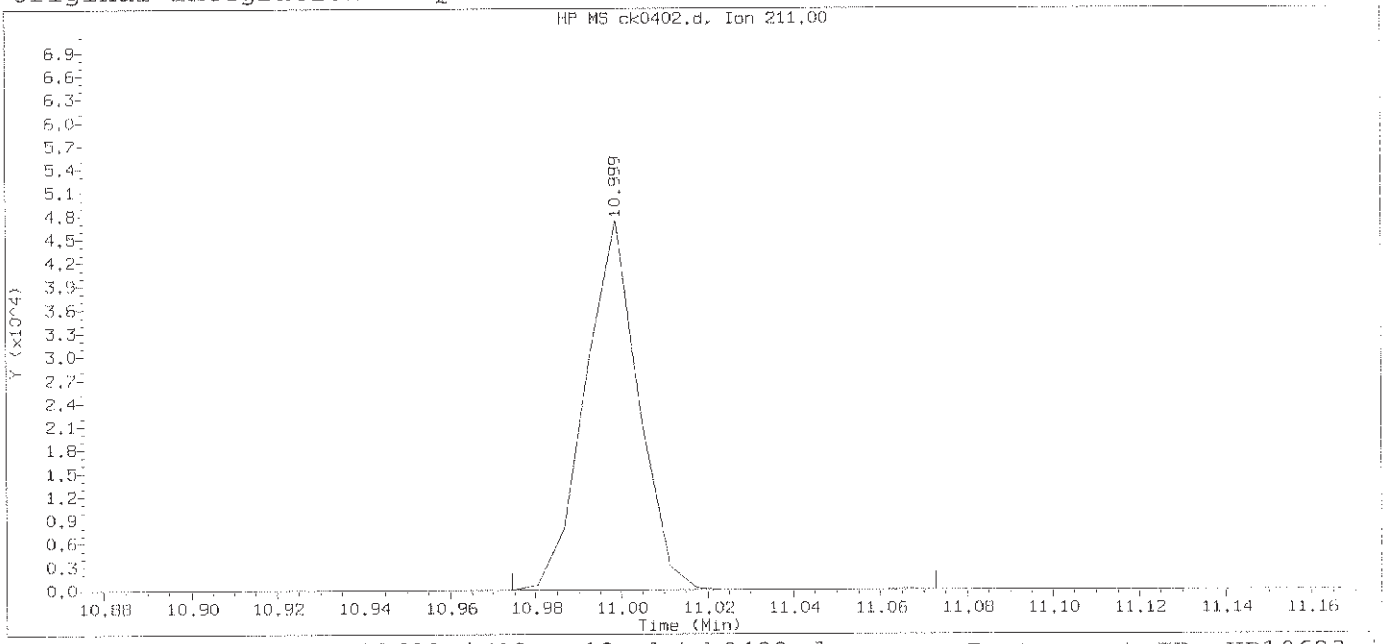
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

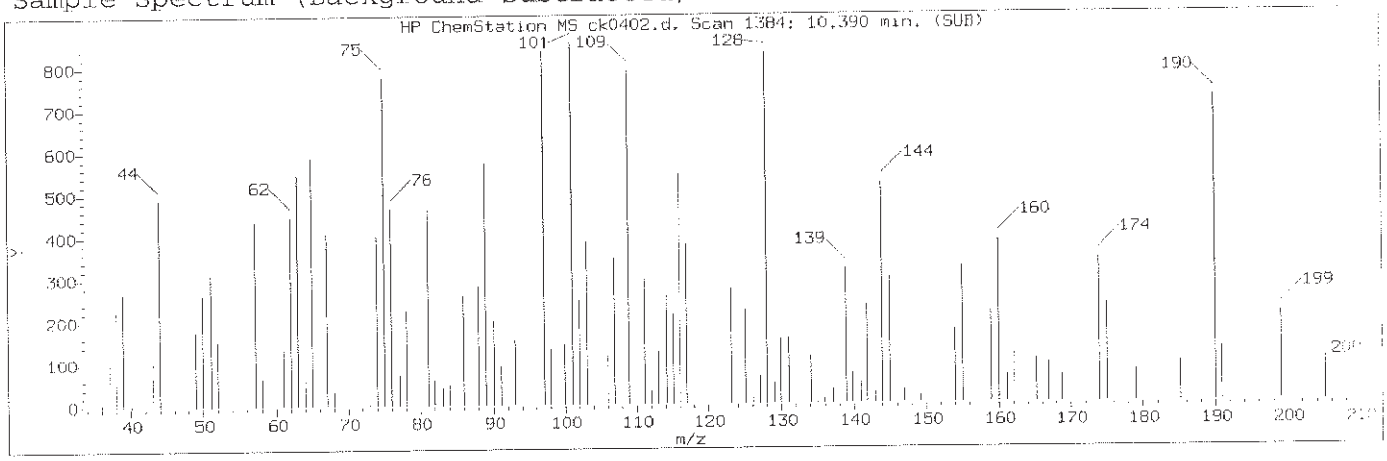
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

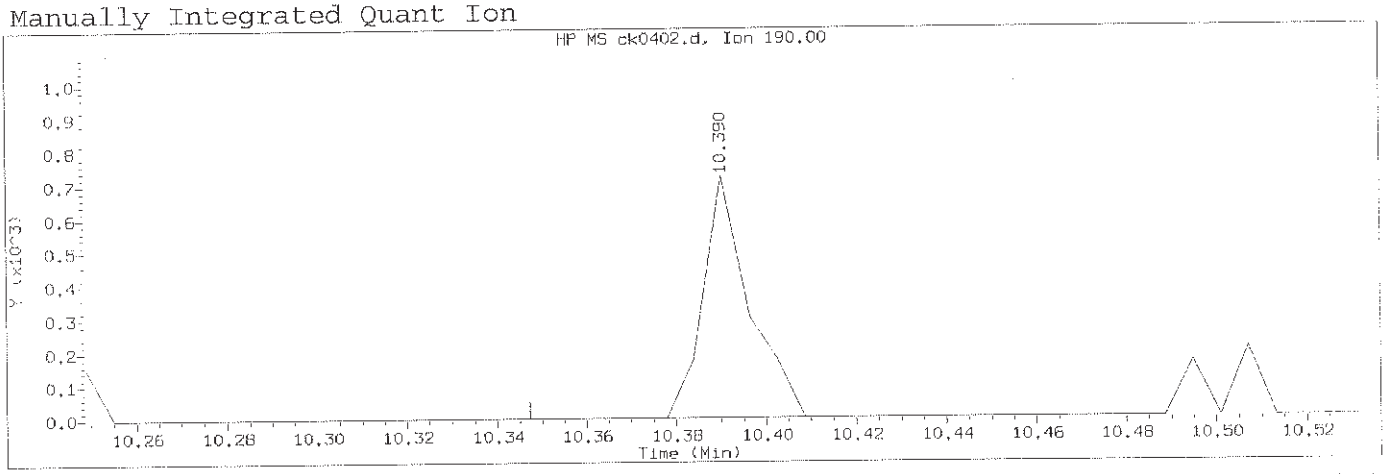
Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 40792		
On-column Amount (ng/ul)	: 15.8756		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number	: 144		
Compound Name	: 4-Nitroquinoline-1-oxide		
Scan Number	: 1384		
Retention Time (minutes)	: 10.390		
Quant Ion	: 190.00		
Area (flag)	: 505M		
On-Column Amount (ng/ul)	: 0.2244		
Integration start scan	: 1376	Integration stop scan:	1390
Y at integration start	: 0	Y at integration end:	0

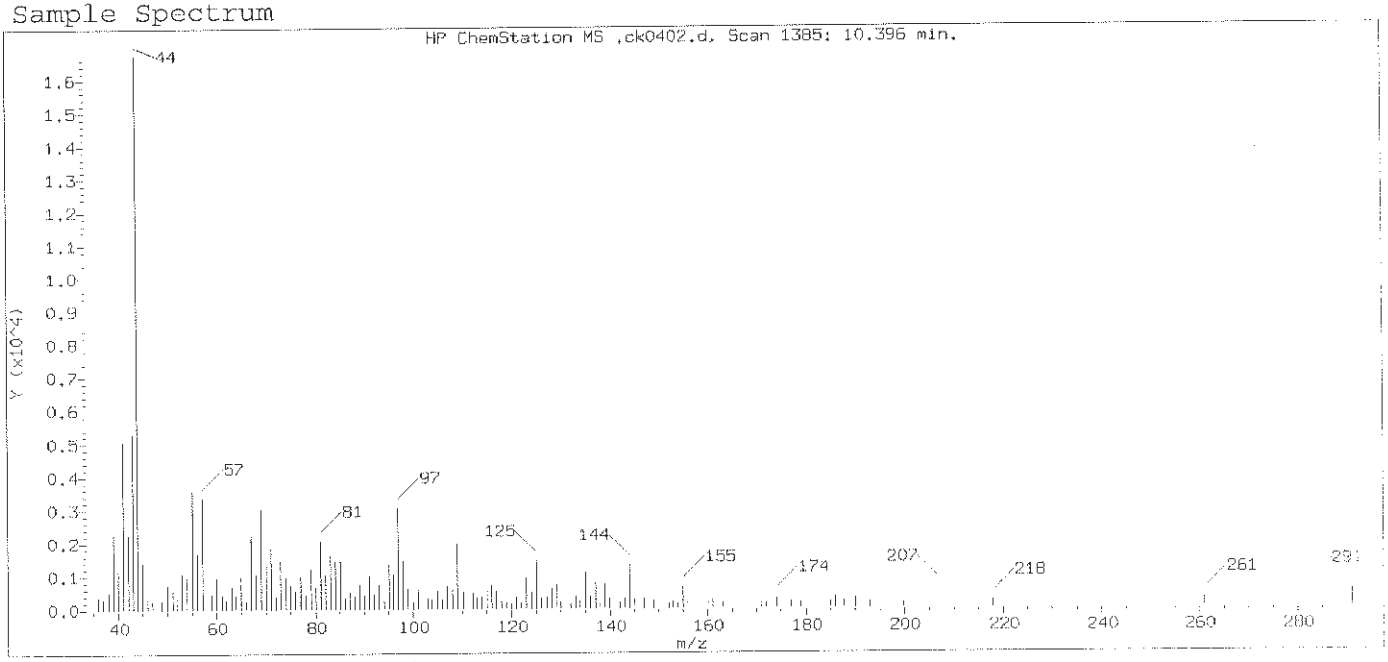
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013

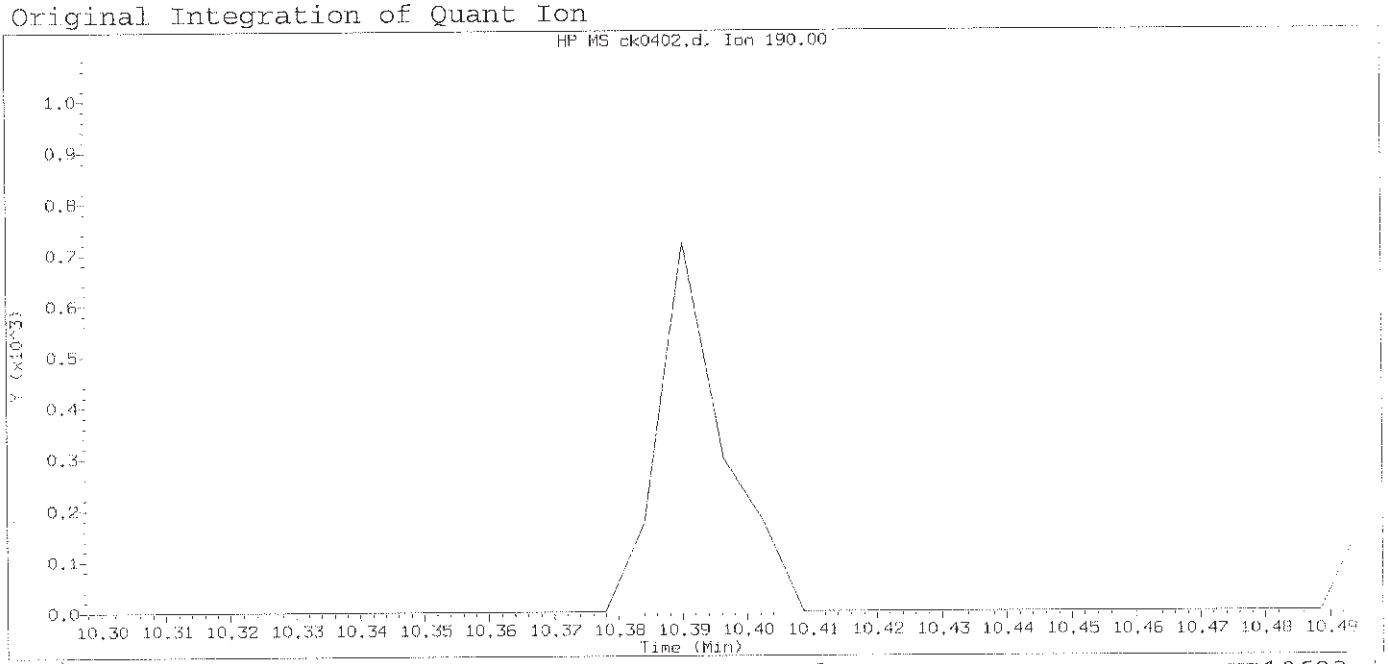
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



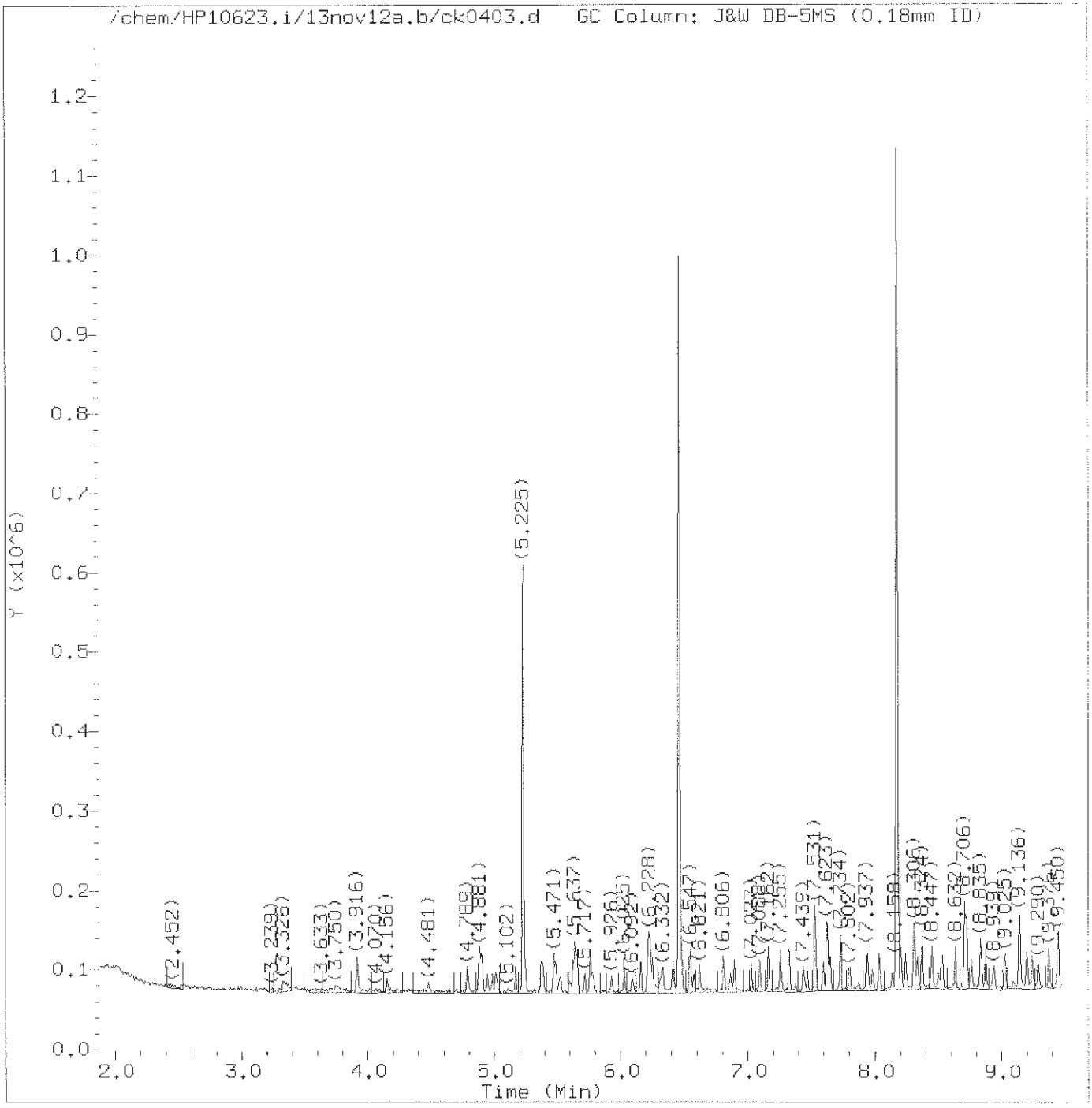
Data File: /chem/HP10623.i/13nov12a.b/ck0402.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:10 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 10:42
Date, time and analyst ID of latest file update: 12-Nov-2013 10:42 jmg00346

Sample Name: SSTD0.50 Lab Sample ID: STD3083

Compound Number : 144
Compound Name : 4-Nitroquinoline-1-oxide
Expected RT (minutes) : 10.397
Quant Ion : 190.00

Digitally signed by Mark A. Clark on 11/13/2013 at 01:16.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

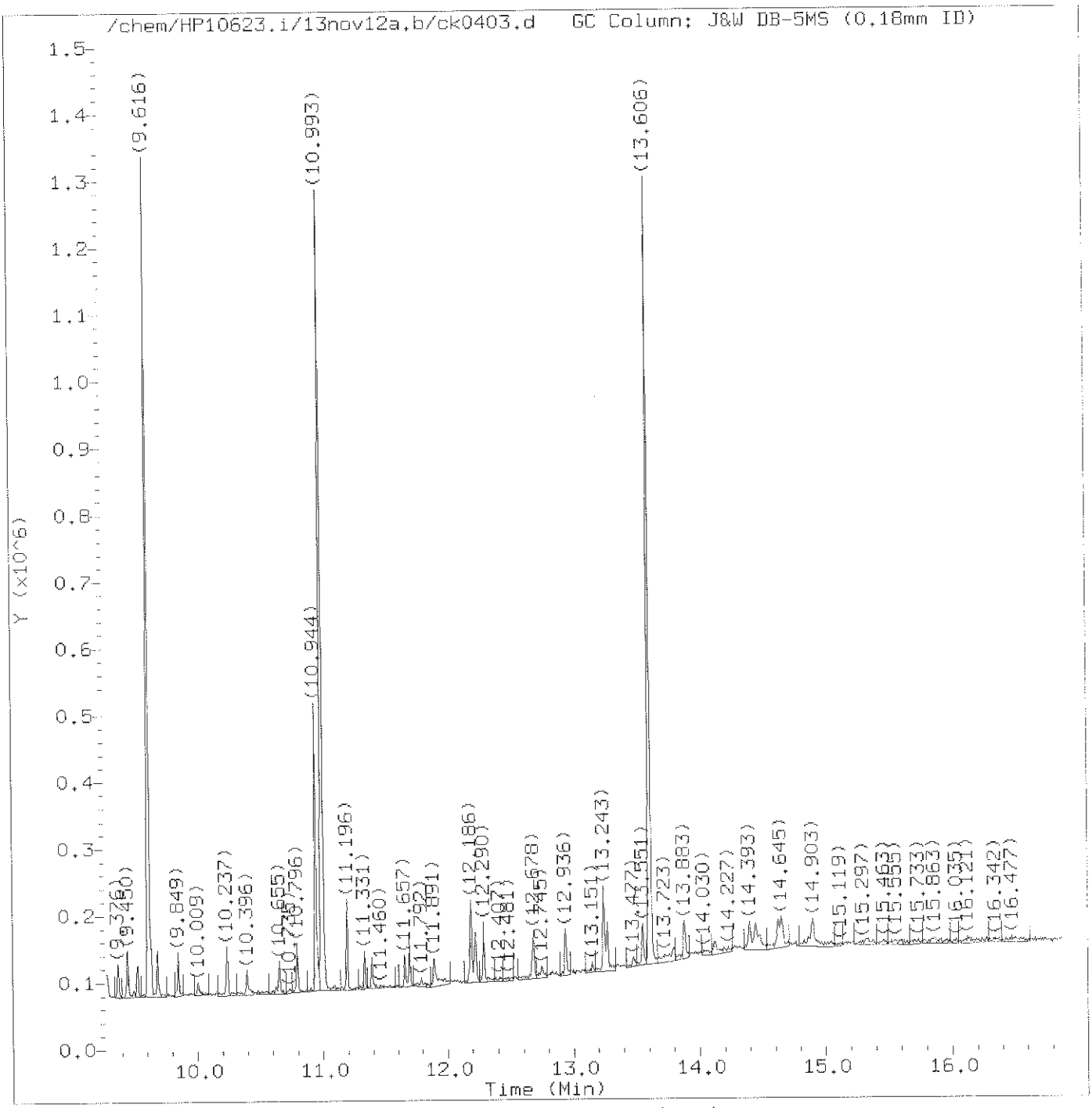
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d
Injection date and time: 12-NOV-2013 10:35

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001

Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.004	88	3656	1.484
2) N-Nitrosodimethylamine	(1)	2.428	74	4954M	1.086
3) Pyridine	(1)	2.526	79	8126M	1.149
5) 2-Picoline	(1)	3.332	93	7640	1.059
6) N-Nitrosomethylethylamine	(1)	3.424	88	7635	2.214
7) Methyl methanesulfonate	(1)	3.750	80	3852	1.111
9)$2-Fluorophenol	(1)	3.916	112	12694	1.127
10) N-Nitrosodiethylamine	(1)	4.156	102	3955	1.154
11) Ethyl methanesulfonate	(1)	4.481	109	2987	0.957
12) Benzaldehyde	(1)	4.789	77	6633	1.431
14)$Phenol-d5	(1)	4.881	99	15789	0.952
15)$Phenol-d6	(1)	4.881	99	15789	0.952
16) Phenol	(1)	4.893	94	10188	1.053
13) Aniline	(1)	4.900	93	12292	1.072
18) bis(2-Chloroethyl)ether	(1)	4.980	93	6952	1.012
19) 2-Chlorophenol	(1)	5.010	128	7207	1.195
20) 1,3-Dichlorobenzene	(1)	5.164	146	6641	1.091
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	75301	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	6717	1.081
24) Benzyl alcohol	(1)	5.373	108	6021	1.276
25) 1,2-Dichlorobenzene	(1)	5.385	146	6077	1.042
206) Indene	(1)	5.471	115	13120	1.007
26) 2-Methylphenol	(1)	5.484	108	6918	1.078
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9861M	1.167
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	10012M	1.182
29) N-Nitrosopyrrolidine	(1)	5.601	100	3958	1.030
30) Acetophenone	(1)	5.619	105	10169	1.063
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	6861	1.120
32) N-Nitrosomorpholine	(1)	5.644	56	5177	1.186
33) 4-Methylphenol	(1)	5.644	108	8140	1.071
34) o-Toluidine	(1)	5.656	106	11366	1.037
37) Hexachloroethane	(1)	5.711	117	3199	1.353
38)$Nitrobenzene-d5	(2)	5.760	82	15692	1.071
39) Nitrobenzene	(2)	5.779	77	8363	1.077
40) N-Nitrosopiperidine	(2)	5.926	114	3798	1.102
41) Isophorone	(2)	6.025	82	15814	1.121
42) 2-Nitrophenol	(2)	6.092	139	2659	0.985
44) 2,4-Dimethylphenol	(2)	6.160	107	7745	1.116
47) Benzoic acid	(2)	6.222	105	32094	7.134
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	3309	1.144

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	9764	1.139
49) 2,4-Dichlorophenol	(2)	6.332	162	4737	1.004
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	5420	1.090
52)*Naphthalene-d8	(2)	6.461	136	339882	20.000
53) Naphthalene	(2)	6.480	128	18386	1.020
56) 4-Chloroaniline	(2)	6.541	127	8745	1.113
57) 2,6-Dichlorophenol	(2)	6.547	162	4344	0.977
58) Hexachloropropene	(2)	6.578	213	2925	1.040
60) Hexachlorobutadiene	(2)	6.621	225	2683	1.076
194) Quinoline	(2)	6.806	129	13942	1.122
63) Caprolactam	(2)	6.861	113	2649	1.013
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	5919	0.927
68) 4-Chloro-3-methylphenol	(2)	7.027	107	6165	1.022
69) Safrole	(2)	7.095	162	5041	1.055
70) 2-Methylnaphthalene	(2)	7.162	142	13163	1.029
71) 1-Methylnaphthalene	(2)	7.255	142	12007	1.025
72) Hexachlorocyclopentadiene	(3)	7.322	237	2059	0.963
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	5139	1.038
74) cis-Isosafrole	(3)	7.377	162	1098	0.138
75) 2,4,6-Trichlorophenol	(3)	7.439	196	3272	1.013
77) 2,4,5-Trichlorophenol	(3)	7.470	196	3558	1.011
78)$2-Fluorobiphenyl	(3)	7.531	172	26857	1.029
79) trans-Isosafrole	(3)	7.599	162	5680	1.010
80) Isosafrole	(3)	7.599	162	5680	1.135
83) 1,1'-Biphenyl	(3)	7.623	154	17917	1.115
84) 2-Chloronaphthalene	(3)	7.630	162	13366M	1.141
85) 1-Chloronaphthalene	(3)	7.654	162	12335M	1.070
88) Diphenyl ether	(3)	7.734	170	8053	1.006
89) 2-Nitroaniline	(3)	7.734	138	3871	1.013
90) 1,4-Naphthoquinone	(3)	7.808	158	4795	0.973
91) 1,4-Dinitrobenzene	(3)	7.876	168	1149	0.774
92) Dimethylphthalate	(3)	7.937	163	15290	1.097
93) 1,3-Dinitrobenzene	(3)	7.943	168	1225	0.607
94) 2,6-Dinitrotoluene	(3)	7.980	165	2652	0.914
95) Acenaphthylene	(3)	8.029	152	18627	1.019
97) 3-Nitroaniline	(3)	8.134	138	3342	0.943
98)*Acenaphthene-d10	(3)	8.171	164	207488	20.000
99) Acenaphthene	(3)	8.201	153	13284	1.050
100) 2,4-Dinitrophenol	(3)	8.238	184	4350	4.615
103) 4-Nitrophenol	(3)	8.306	109	8684	3.956

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	4307	1.007
105) 2,4-Dinitrotoluene	(3)	8.367	165	3285	0.876
104) Dibenzofuran	(3)	8.374	168	18759	1.082
106) 1-Naphthylamine	(3)	8.447	143	15016	1.054
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	2214	0.893
108) 2-Naphthylamine	(3)	8.527	143	15652	1.074
109) Diethylphthalate	(3)	8.632	149	16824	1.169
110) Thionazin	(3)	8.706	107	2832	0.892
111) Fluorene	(3)	8.706	166	15496	1.039
113) 5-Nitro-o-toluidine	(3)	8.718	152	3513	0.892
114) 4-Nitroaniline	(3)	8.718	138	4353	1.092
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	7174	1.081
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	4114	2.776
117) N-Nitrosodiphenylamine	(4)	8.835	169	12684	0.986
202) NDPA as diphenylamine	(4)	8.835	169	12684	0.983
118) 1,2-Diphenylhydrazine	(4)	8.872	77	18230	0.989
119)$2,4,6-Tribromophenol	(3)	8.939	330	2017	0.805
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	3197	1.217
121) 1,3,5-Trinitrobenzene	(4)	9.087	213	512M	0.525
123) Phorate	(4)	9.136	75	11365	1.001
122) Diallate (peak 1)	(4)	9.136	86	7650	0.811
124) Phenacetin	(4)	9.142	108	9315	1.047
125) 4-Bromophenyl-phenylether	(4)	9.197	248	3336	0.941
126) Diallate (peak 2)	(4)	9.222	86	1656	0.404
127) Hexachlorobenzene	(4)	9.241	284	3671	1.049
128) Dimethoate	(4)	9.290	87	6609	0.952
130) Atrazine	(4)	9.376	200	4785	1.161
131) Pentachlorophenol	(4)	9.437	266	1189	0.612
133) 4-Aminobiphenyl	(4)	9.443	169	15759	1.133
132) Pentachloronitrobenzene	(4)	9.450	237	956	0.629
134) Pronamide	(4)	9.530	173	6820	1.017
135)*Phenanthrene-d10	(4)	9.616	188	383931	20.000
136) Dinoseb	(4)	9.640	211	1087M	0.543
137) Phenanthrene	(4)	9.640	178	22522	1.009
138) Anthracene	(4)	9.689	178	22698	0.988
140) Carbazole	(4)	9.849	167	22923	1.022
141) Methyl parathion	(4)	10.009	109	2378	0.571
142) Di-n-butylphthalate	(4)	10.237	149	28115	1.063
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	837	0.553
143) Parathion	(4)	10.396	109	2107	0.688

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	3084	1.222
147) Fluoranthene	(4)	10.796	202	24924	0.998
152) Benzidine	(5)	10.944	184	158131	8.161
167)*Pyrene-d10	(5)	10.999	212	473300	20.000
154) Pyrene	(5)	11.011	202	26424	1.005
156)$Terphenyl-d14	(5)	11.196	244	34221	1.011
158) p-Dimethylaminoazobenzene	(5)	11.331	225	4727	0.923
159) Chlorobenzilate	(5)	11.393	139	7491	0.940
160) 3,3'-Dimethylbenzidine	(5)	11.657	212	17197	1.062
161) Butylbenzylphthalate	(5)	11.694	149	13493	1.076
162) 2-Acetylaminofluorene	(5)	11.897	181	9317	0.820
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	9716	1.063
166) Benzo(a)anthracene	(5)	12.186	228	24335	1.004
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3999	0.896
168) Chrysene	(5)	12.223	228	24509	1.049
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	19101	1.098
189) 6-Methylchrysene	(5)	12.678	242	17250	1.000
170) Di-n-octylphthalate	(6)	12.936	149	28737	0.886
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	10787	0.885
172) Benzo(b)fluoranthene	(6)	13.243	252	25419	0.969
173) Benzo(k)fluoranthene	(6)	13.268	252	26389	0.986
174) Benzo(a)pyrene	(6)	13.551	252	26499	1.035
175)*Perylene-d12	(6)	13.606	264	429576	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	12858	1.002
190) Dibenz(a,h)acridine	(6)	14.393	279	15789	0.849
191) Dibenz(a,j)acridine	(6)	14.442	279	18629	0.871
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	27040	0.993
178) Dibenz(a,h)anthracene	(6)	14.645	278	22302	0.979
179) Benzo(g,h,i)perylene	(6)	14.897	276	24406	1.052
129) Diallate TRANS/CIS	(4)			9306	1.149

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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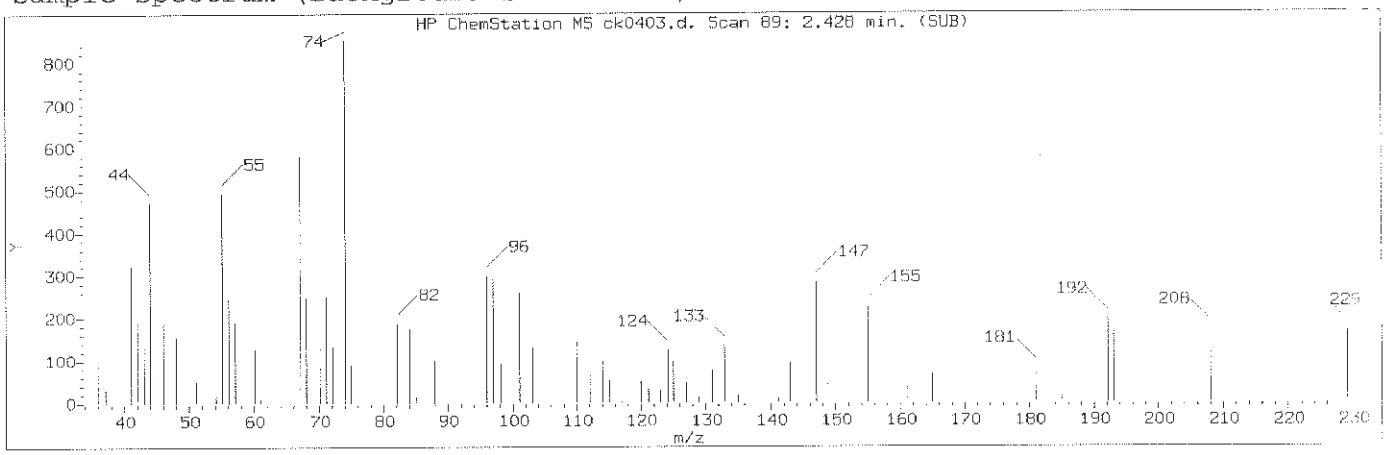
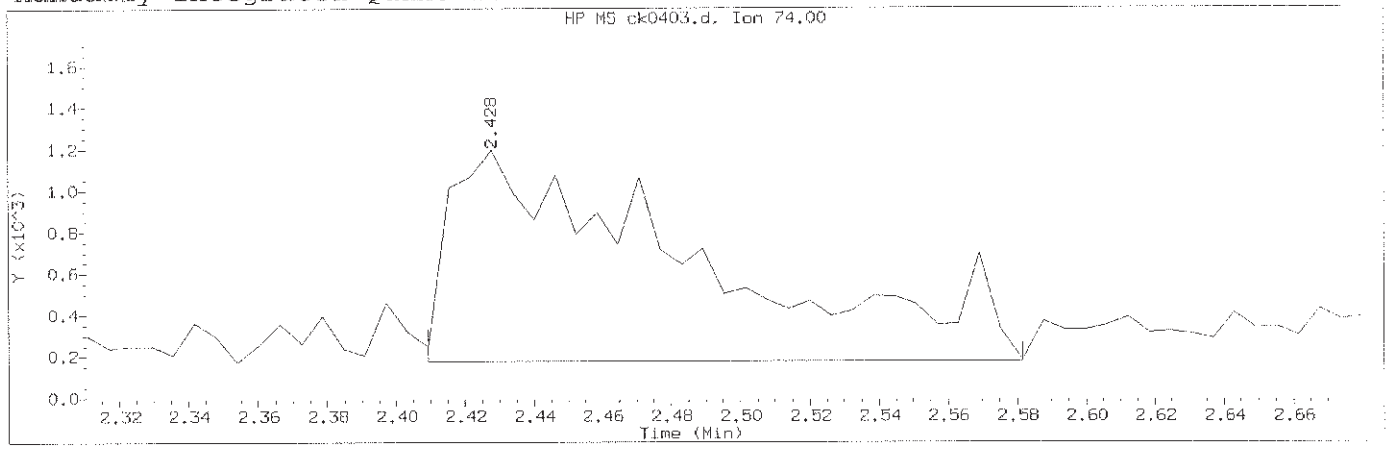
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area (flag)	: 4954M		
On-Column Amount (ng/ul)	: 1.0864		
Integration start scan	: 85	Integration stop scan:	113
Y at integration start	: 176	Y at integration end:	176

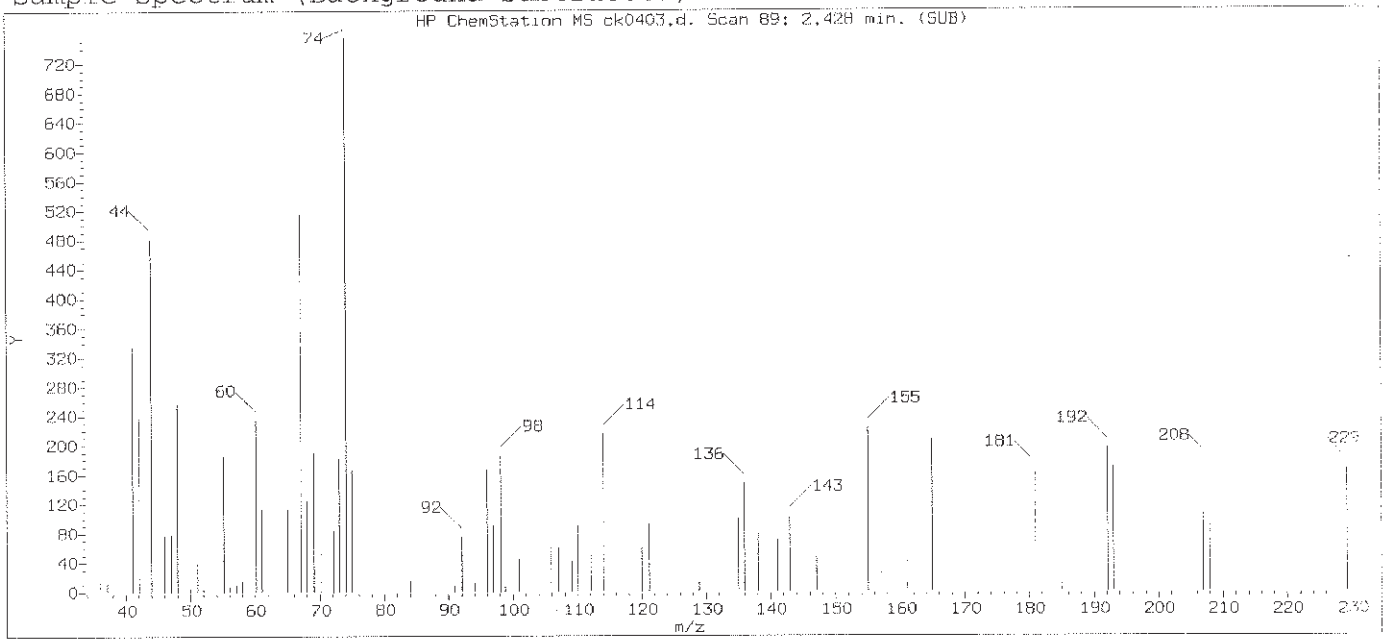
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

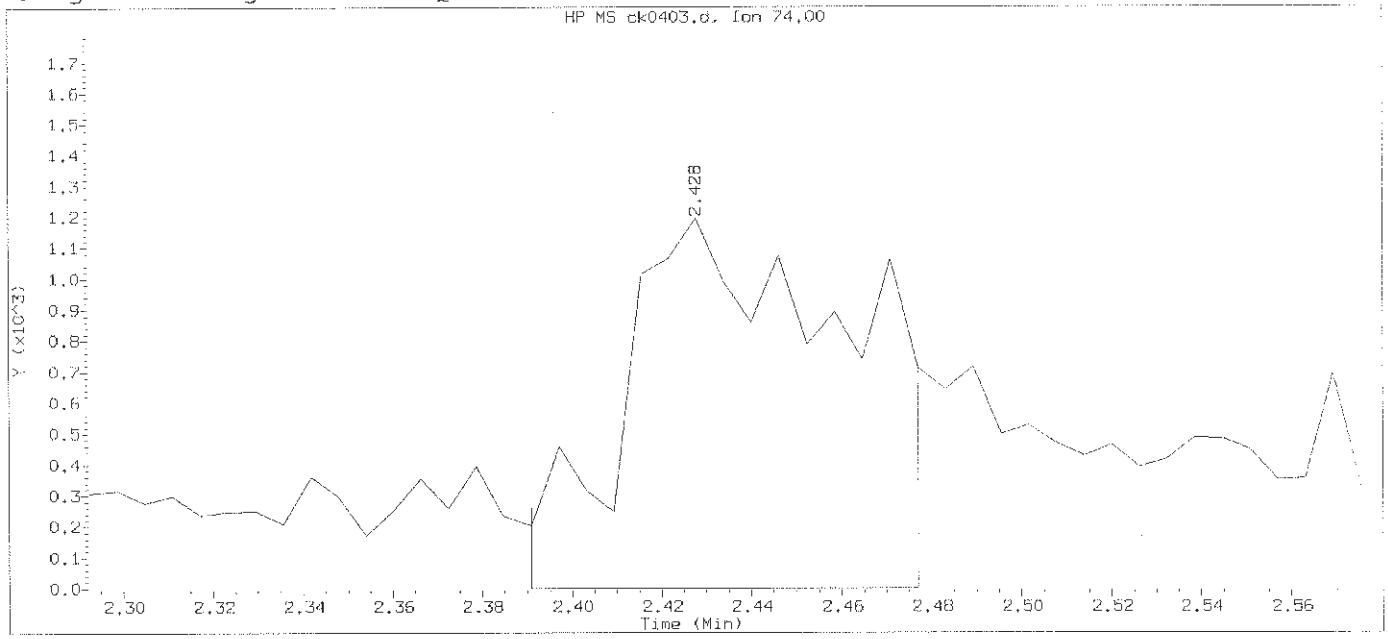
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 89		
Retention Time (minutes)	: 2.428		
Quant Ion	: 74.00		
Area	: 4113		
On-column Amount (ng/ul)	: 0.8101		
Integration start scan	: 82	Integration stop scan:	96
Y at integration start	: 0	Y at integration end:	0

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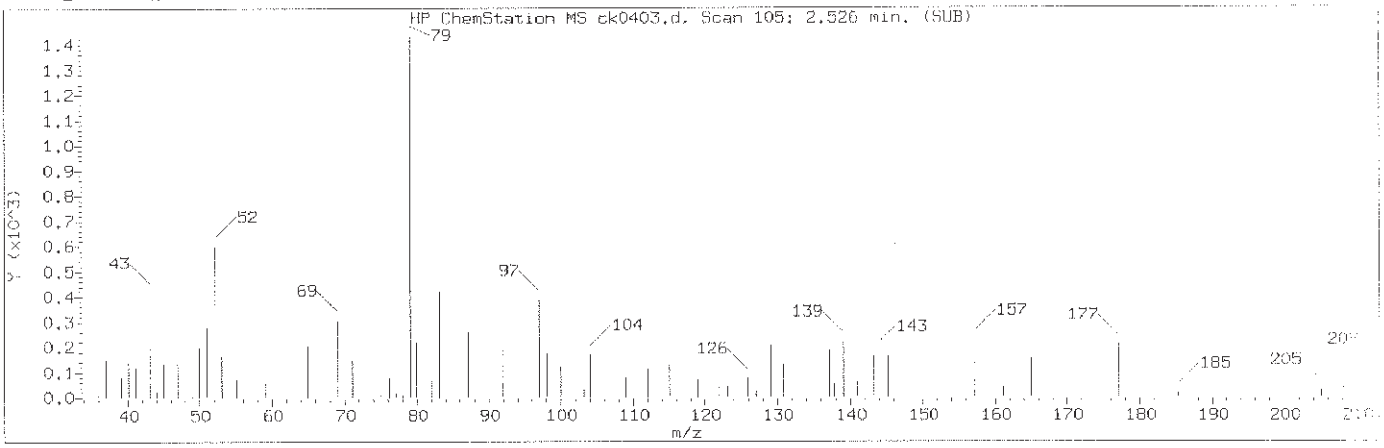
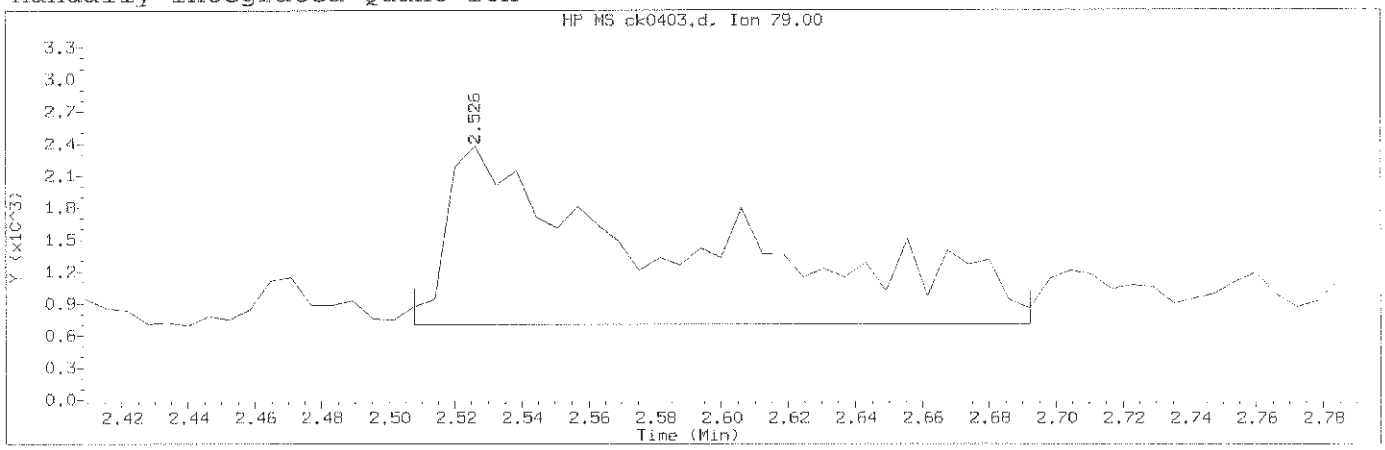
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area (flag)	: 8126M		
On-Column Amount (ng/ul)	: 1.1494		
Integration start scan	: 101	Integration stop scan:	131
Y at integration start	: 703	Y at integration end:	703

Reason for manual integration: improper integration

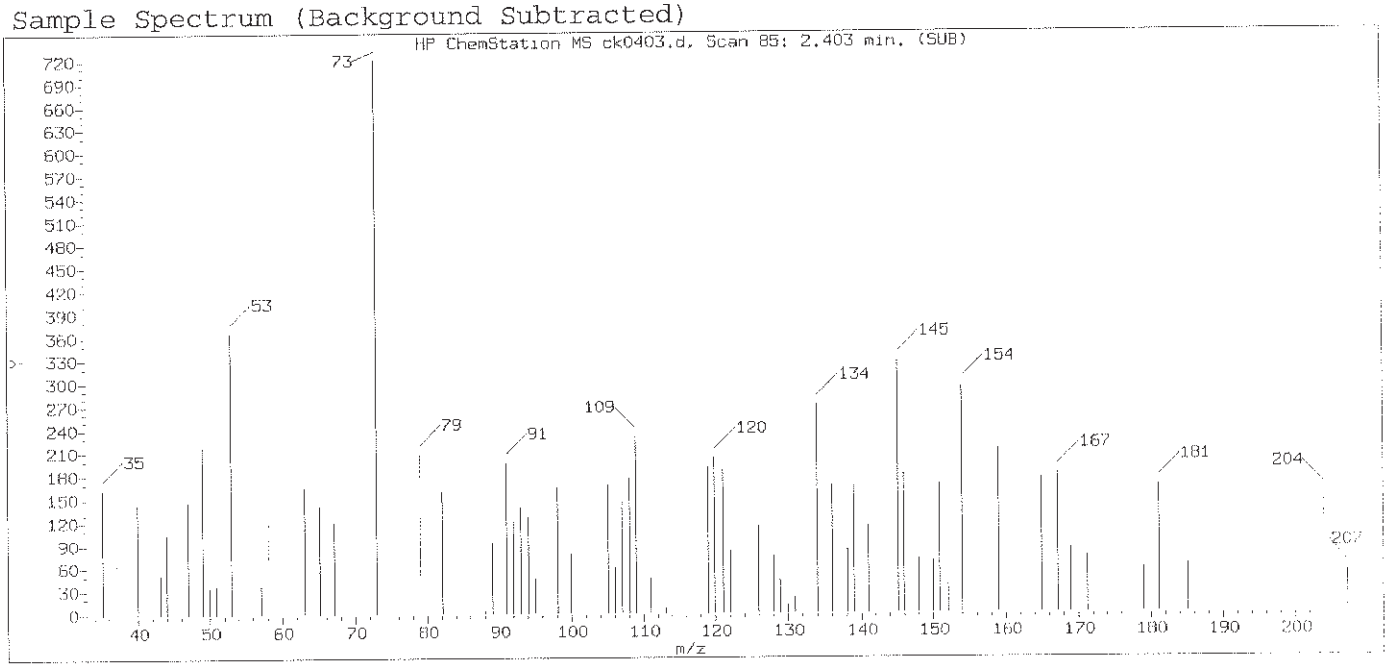
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 es[illegible]e user ID: mac00013

Mark A. Ratcliff
Senior Specialist

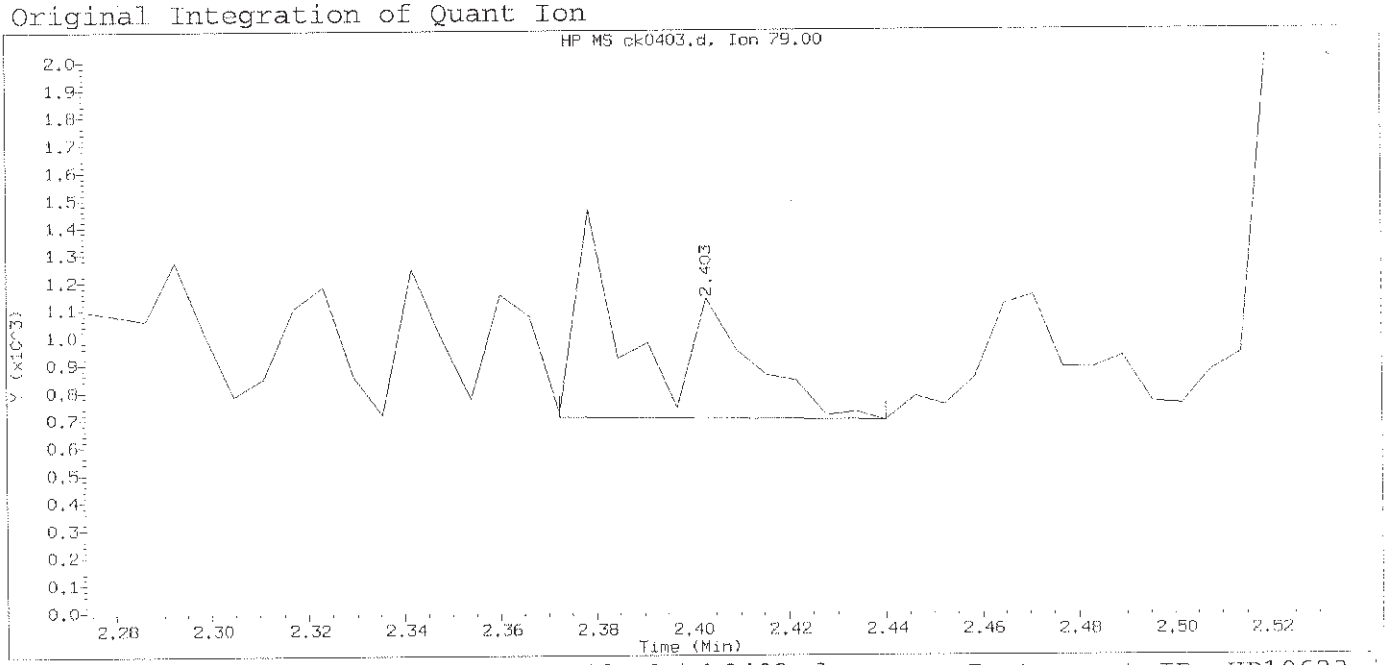
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 85		
Retention Time (minutes)	: 2.403		
Quant Ion	: 79.00		
Area	: 852		
On-column Amount (ng/ul)	: 0.1043		
Integration start scan	: 79	Integration stop scan:	90
Y at integration start	: 706	Y at integration end:	694

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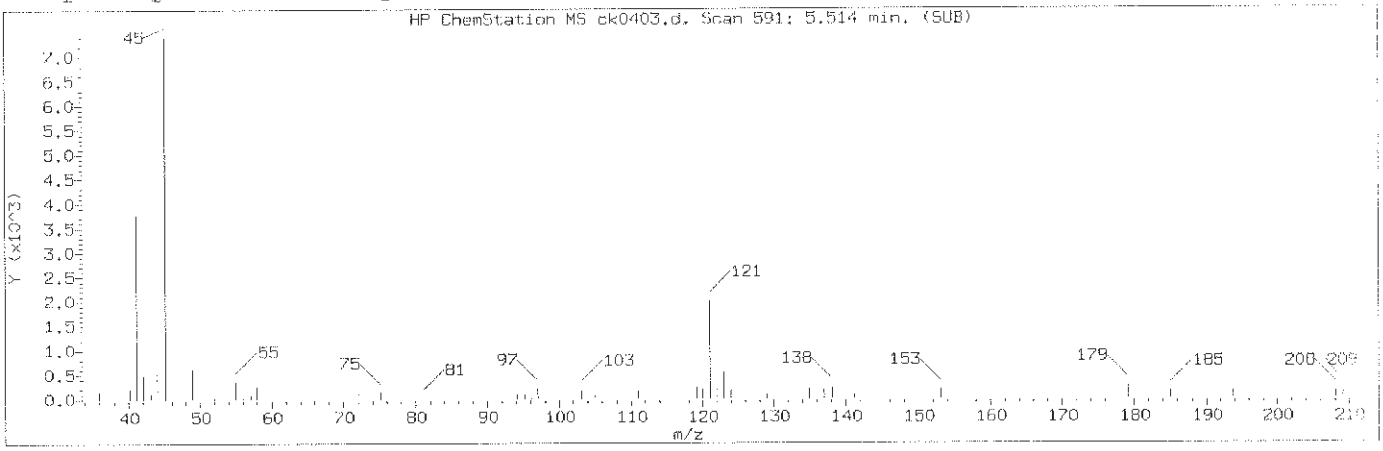
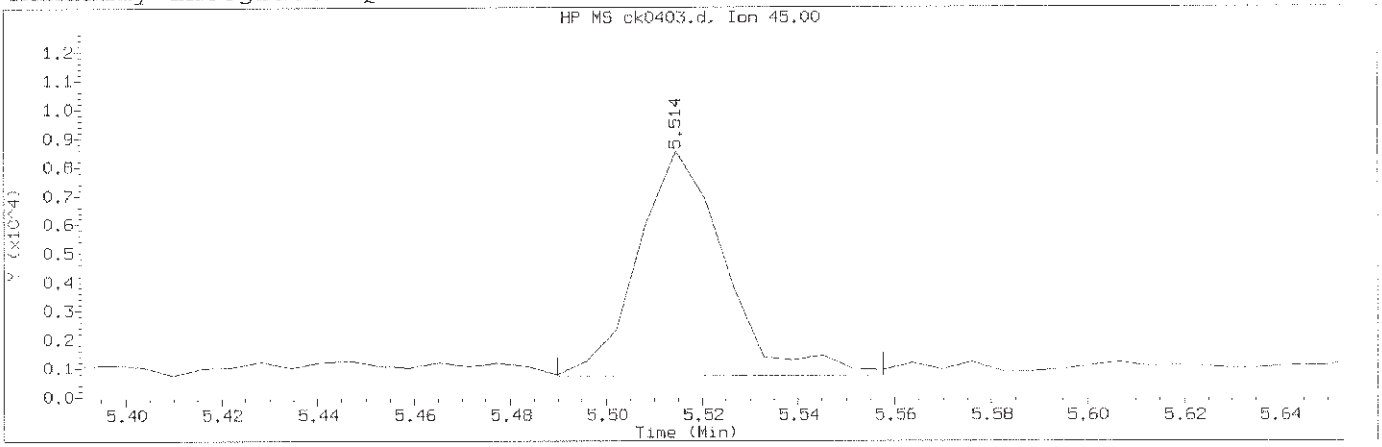
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 9861M		
On-Column Amount (ng/ul)	: 1.1671		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 723	Y at integration end:	723

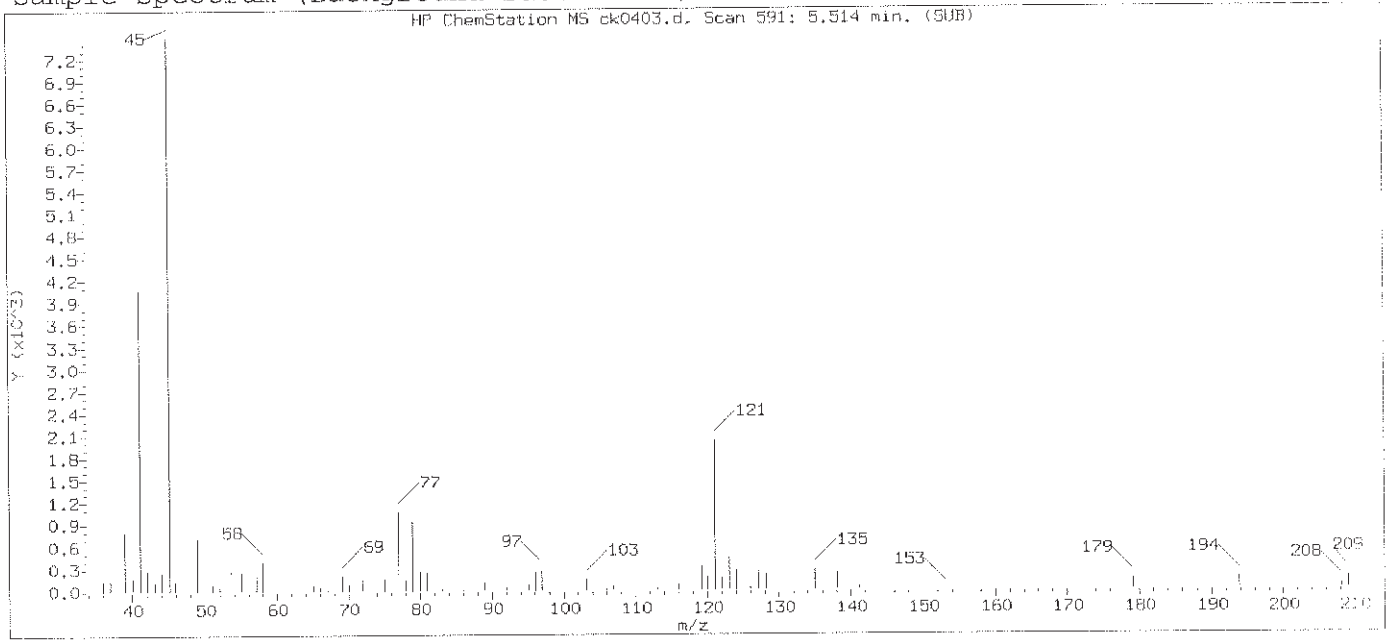
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

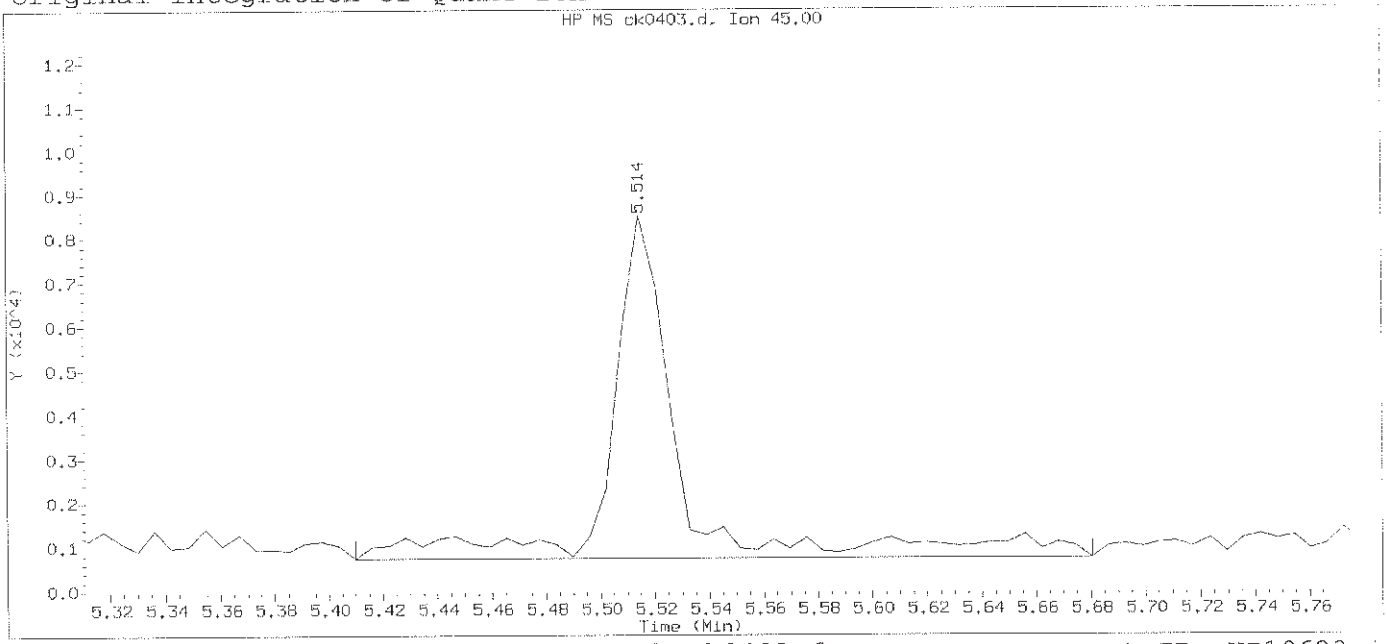
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

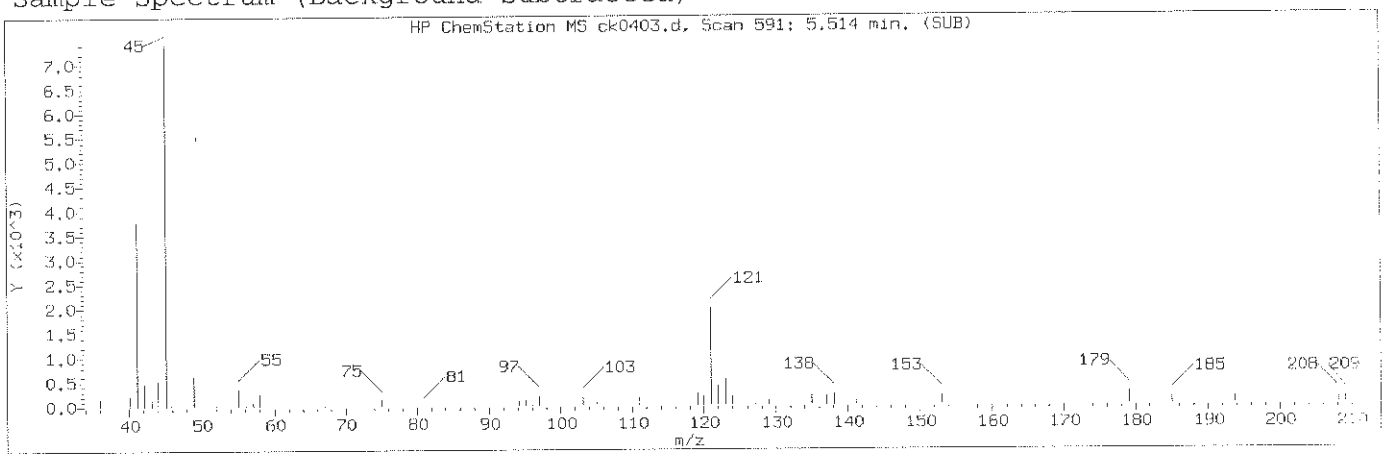
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

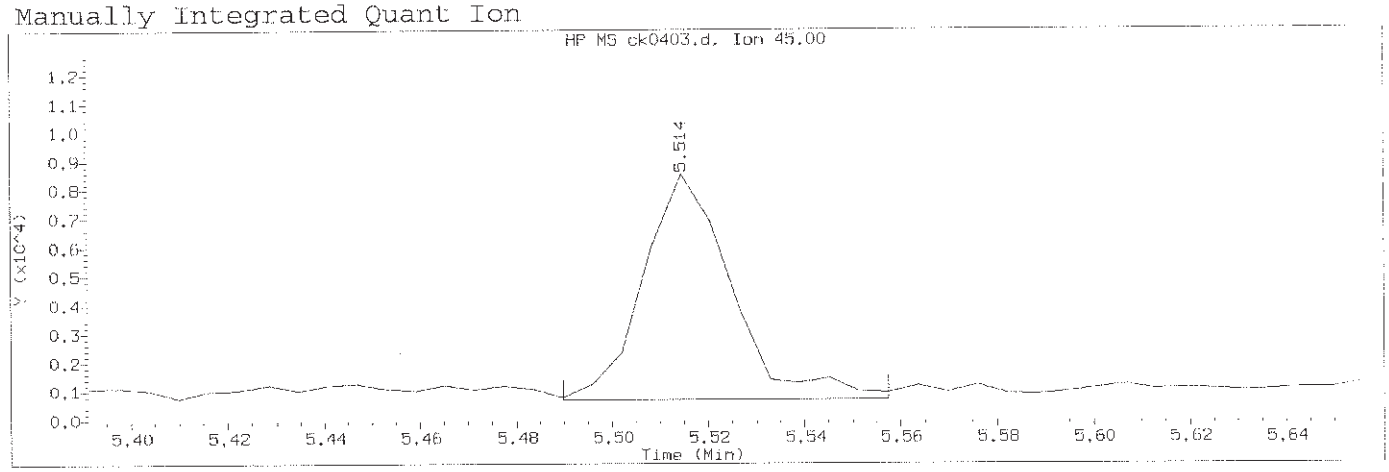
Compound Number	: 27		
Compound Name	: 2,2'-oxybis(1-Chloropropane)		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area (flag)	: 10012M		
On-Column Amount (ng/ul)	: 1.1819		
Integration start scan	: 586	Integration stop scan:	597
Y at integration start	: 689	Y at integration end:	689

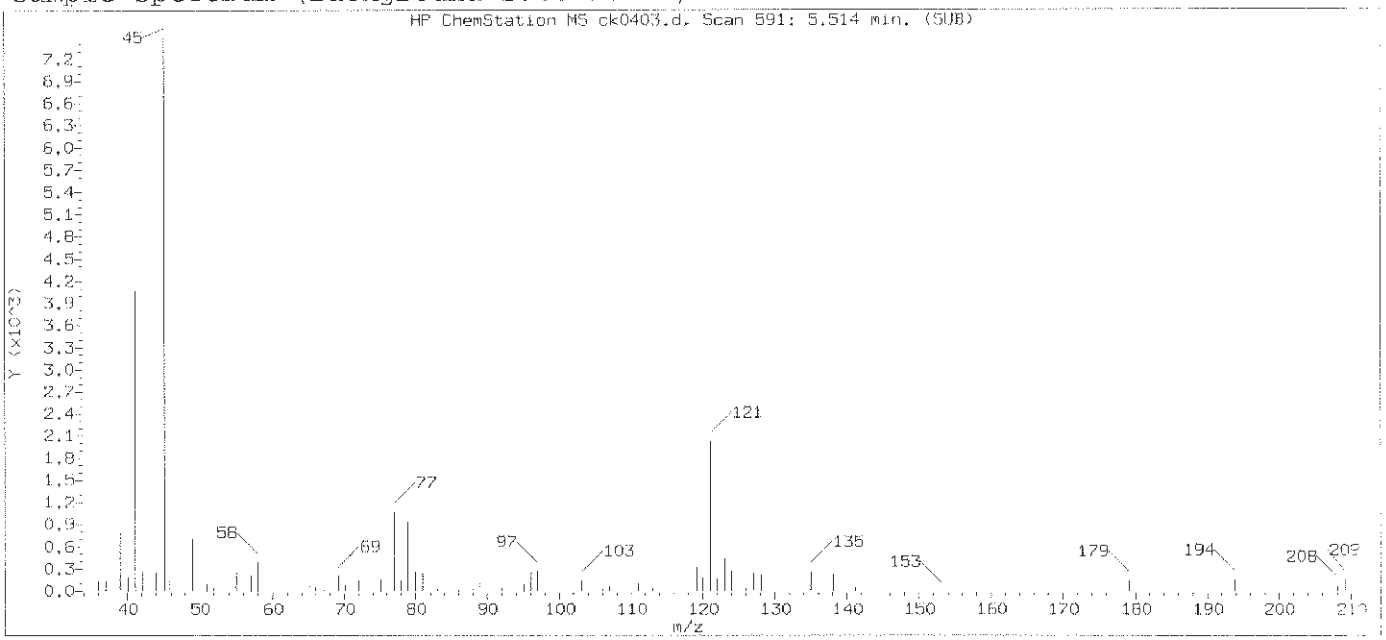
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

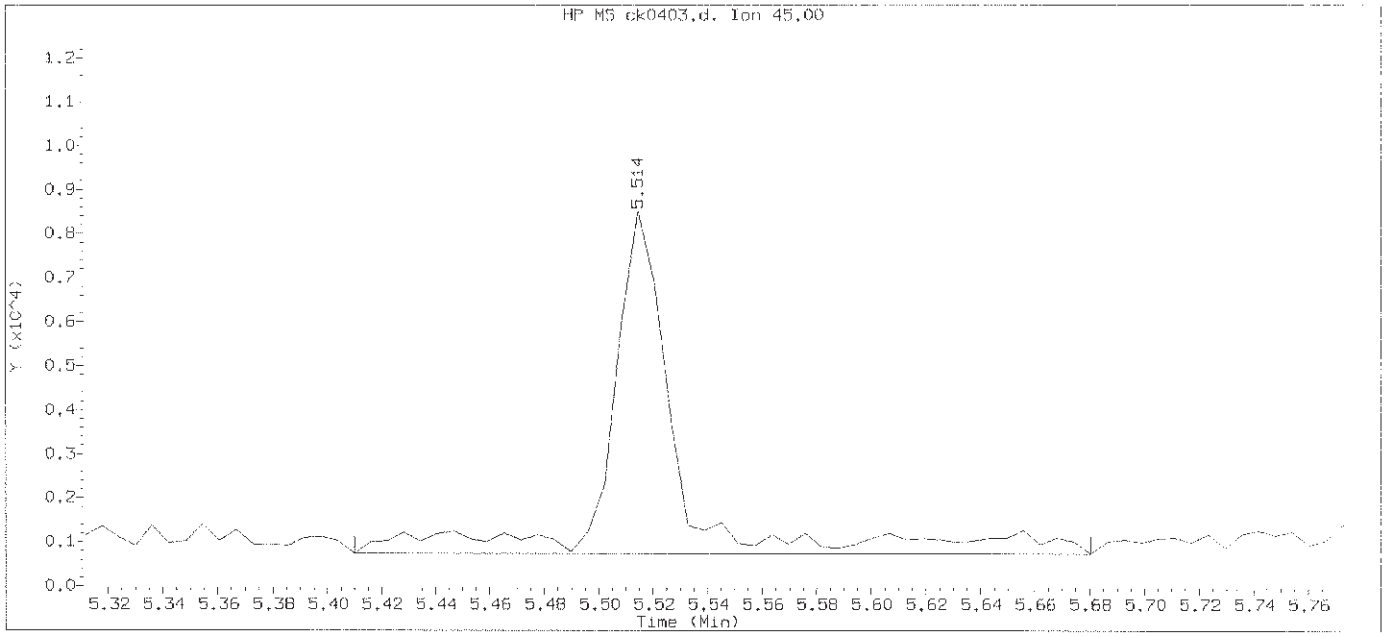
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

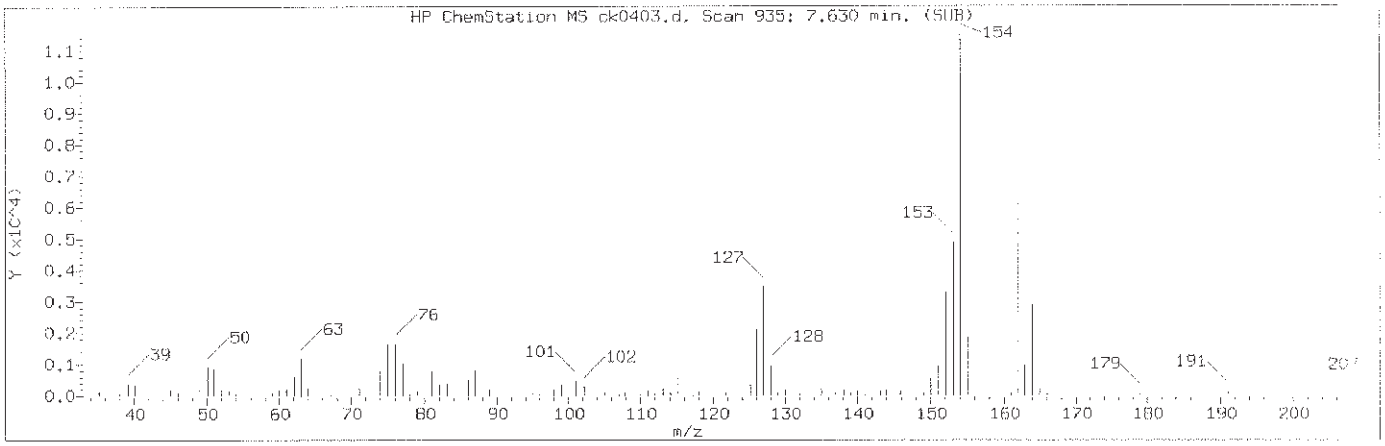
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

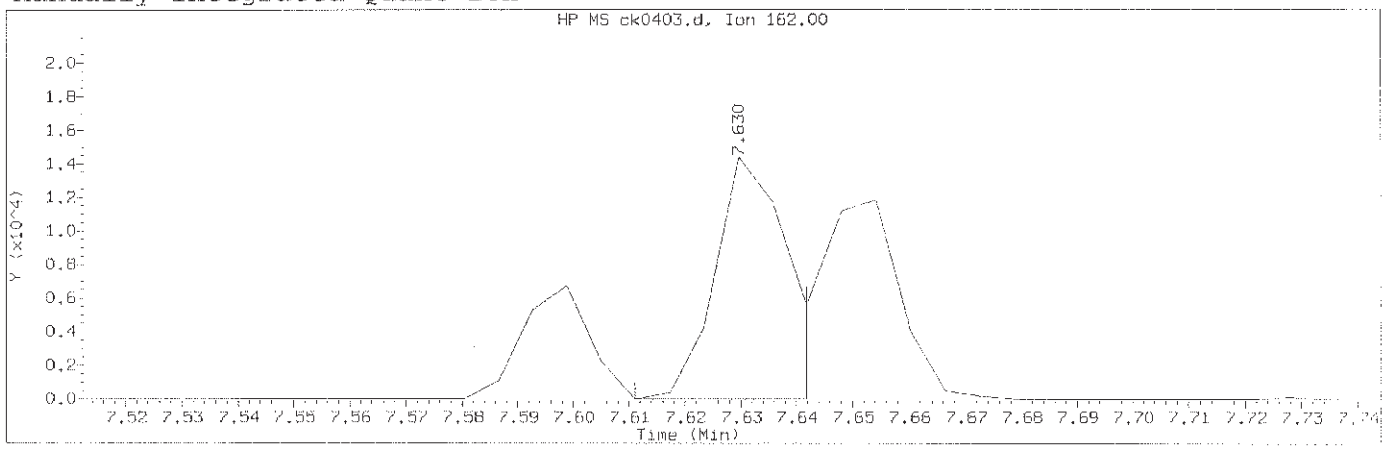
Compound Number	: 28		
Compound Name	: bis(2-Chloroisopropyl)ether		
Scan Number	: 591		
Retention Time (minutes)	: 5.514		
Quant Ion	: 45.00		
Area	: 13600		
On-column Amount (ng/ul)	: 1.1764		
Integration start scan	: 573	Integration stop scan:	617
Y at integration start	: 739	Y at integration end:	739

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 13366M		
On-Column Amount (ng/ul)	: 1.1415		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 0	Y at integration end:	0

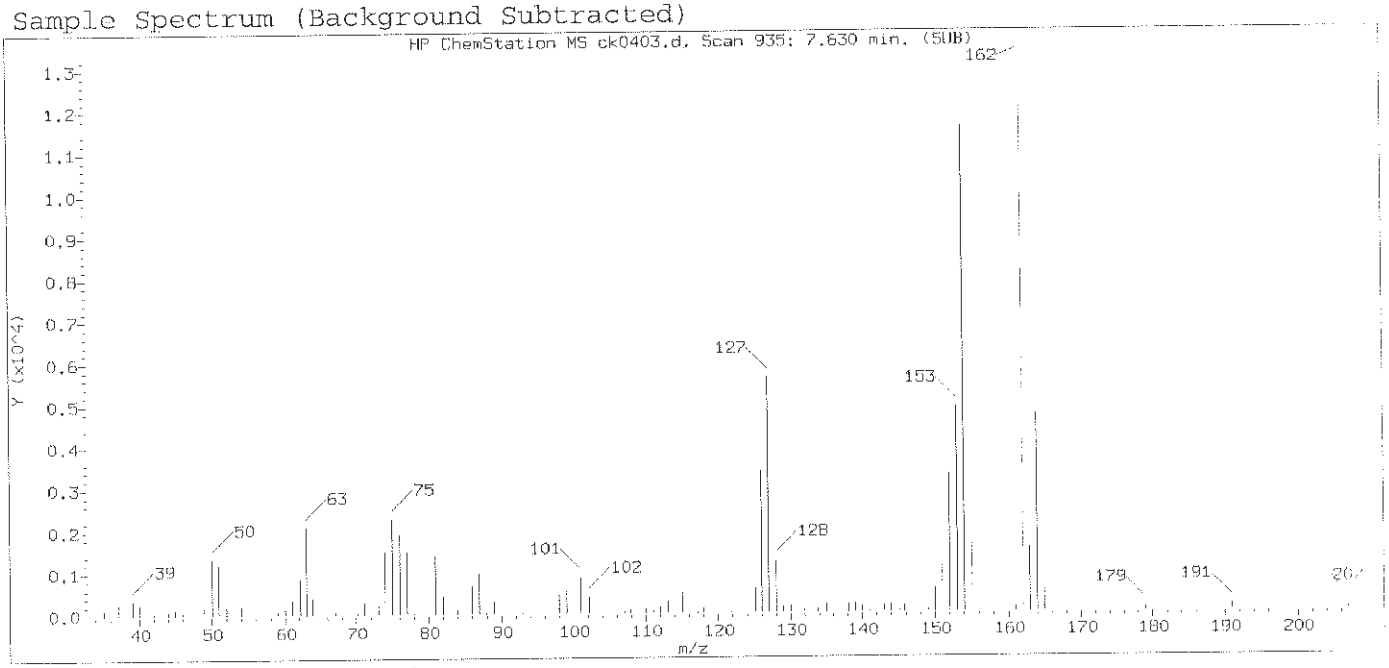
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

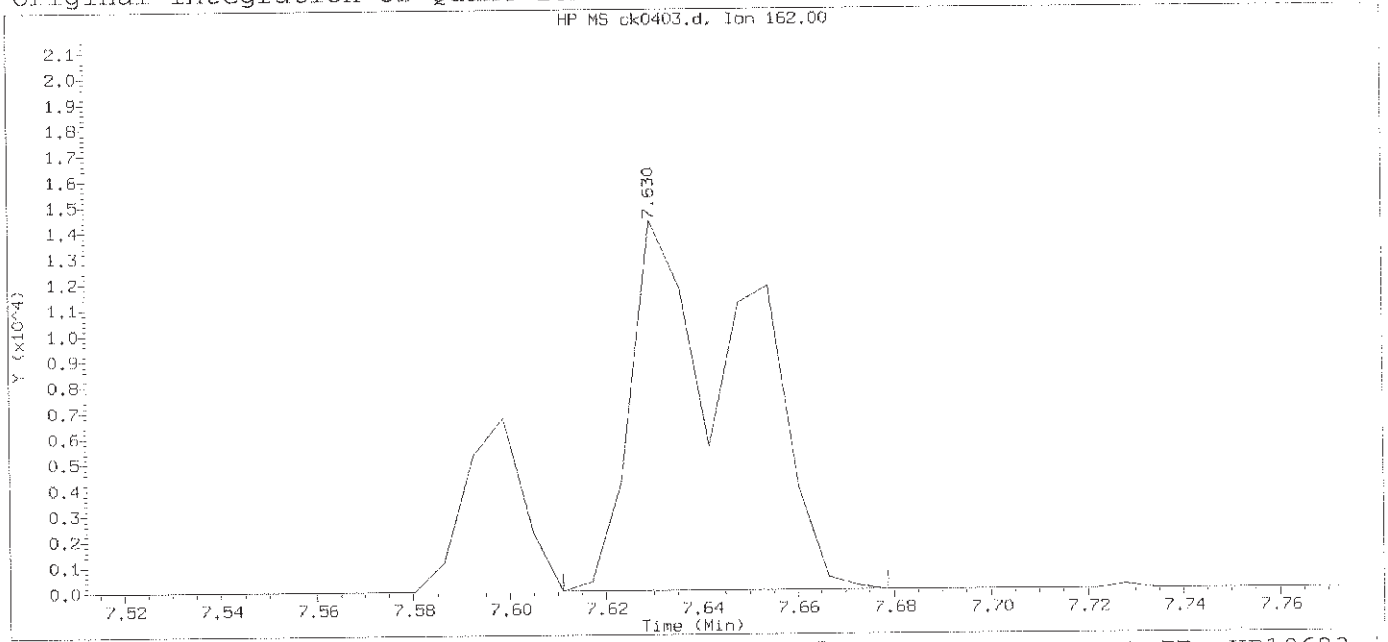
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

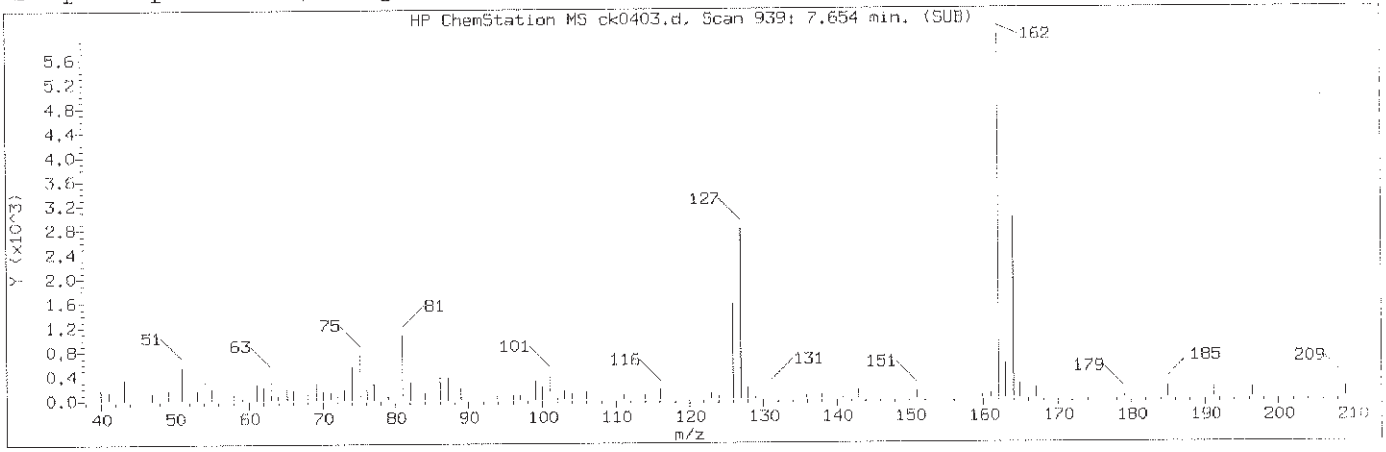
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

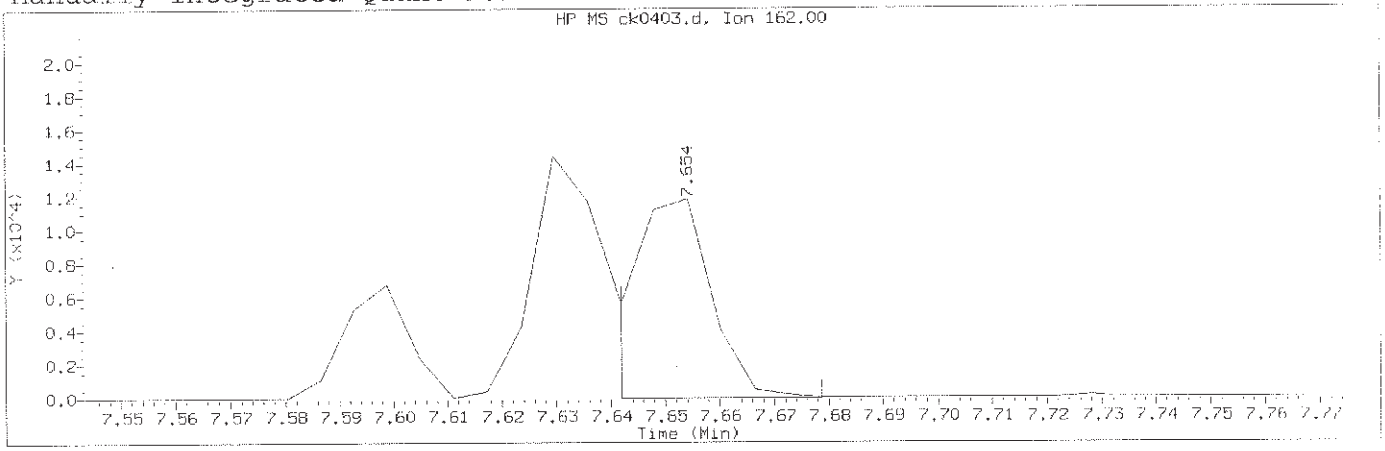
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3862		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 12335M		
On-Column Amount (ng/ul)	: 1.0704		
Integration start scan	: 936	Integration stop scan:	942
Y at integration start	: -29	Y at integration end:	-29

Reason for manual integration: improper integration

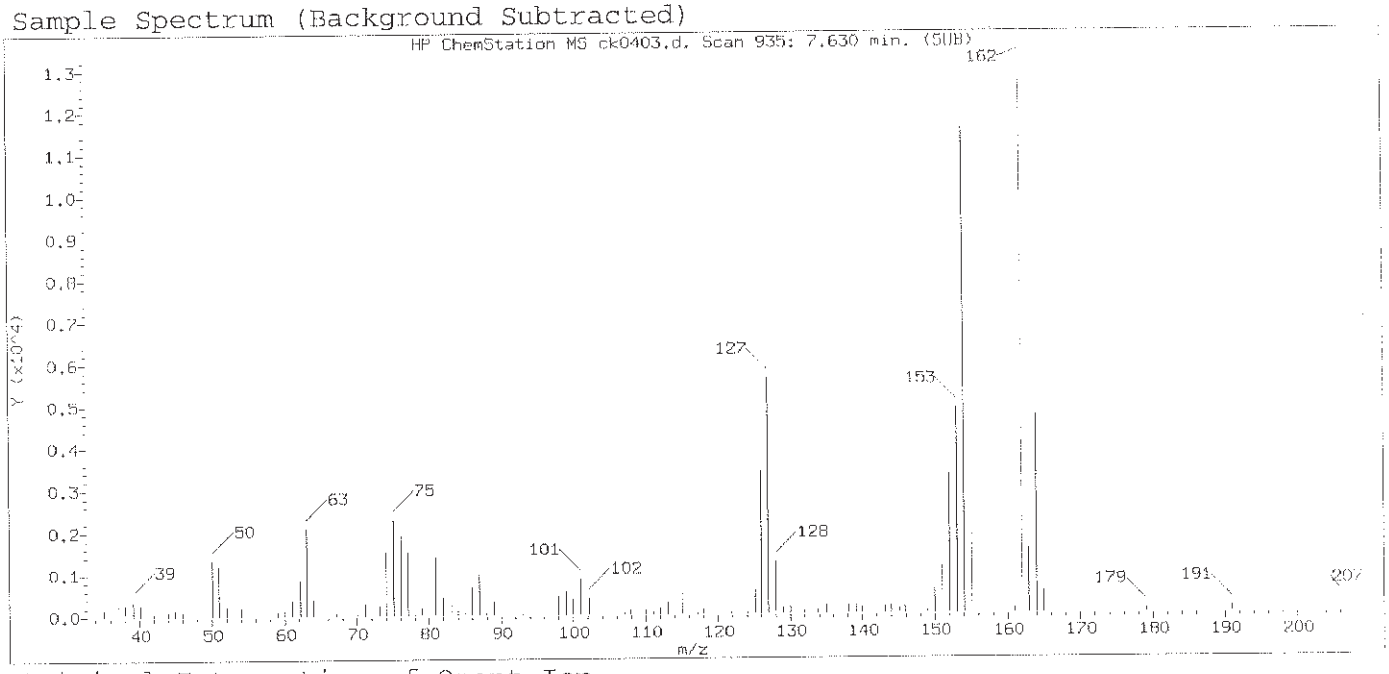
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

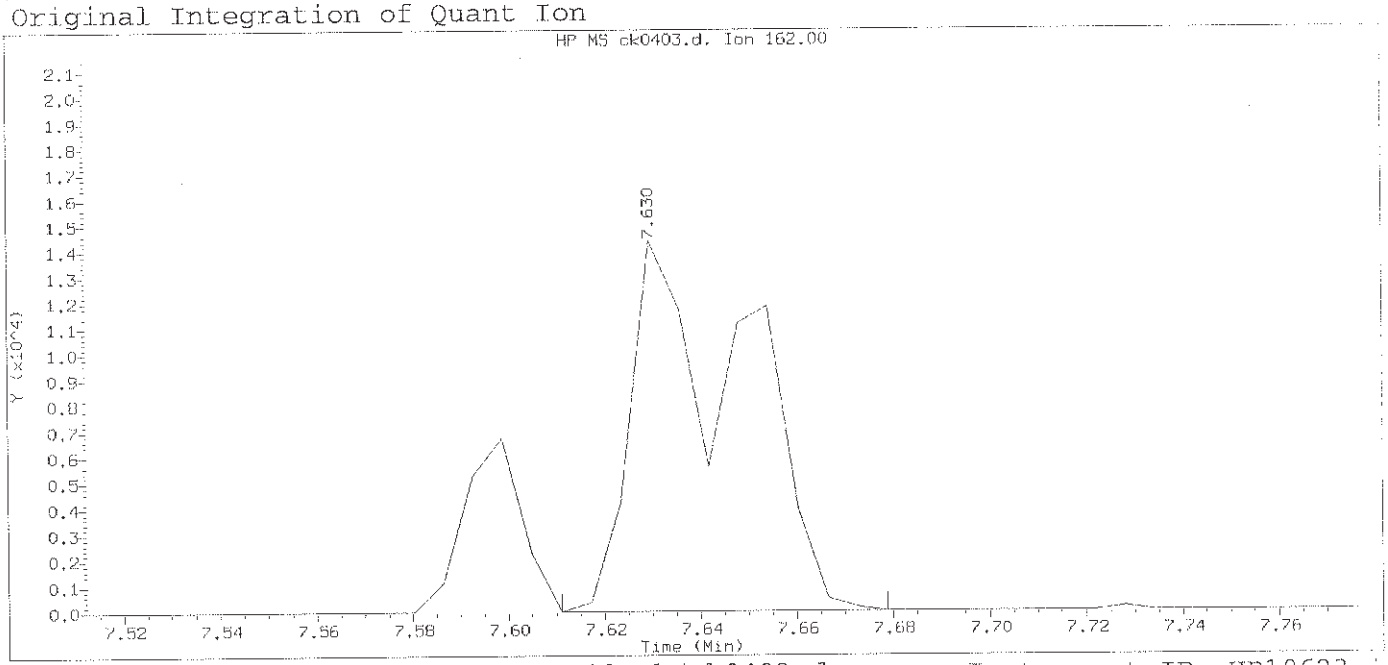
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 23561		
On-column Amount (ng/ul)	: 1.3414		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

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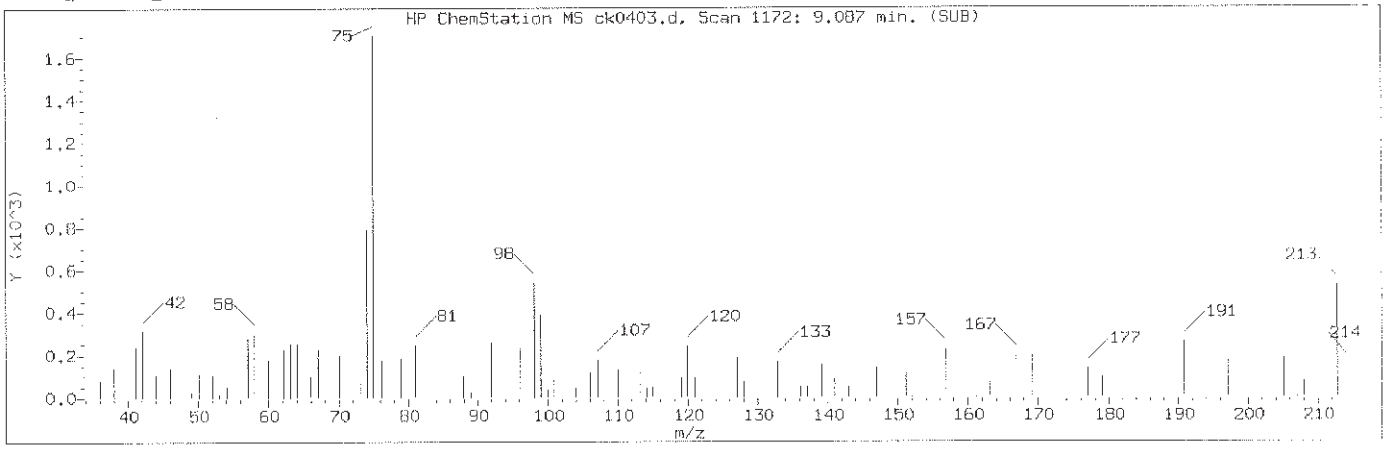
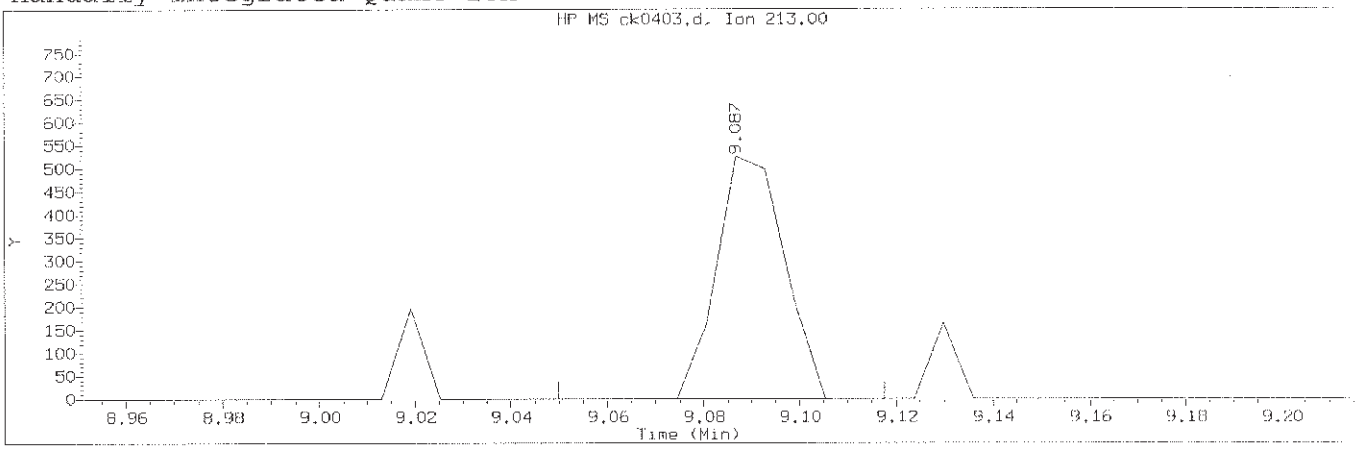
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1172		
Retention Time (minutes)	: 9.087		
Quant Ion	: 213.00		
Area (flag)	: 512M		
On-Column Amount (ng/ul)	: 0.5249		
Integration start scan	: 1165	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

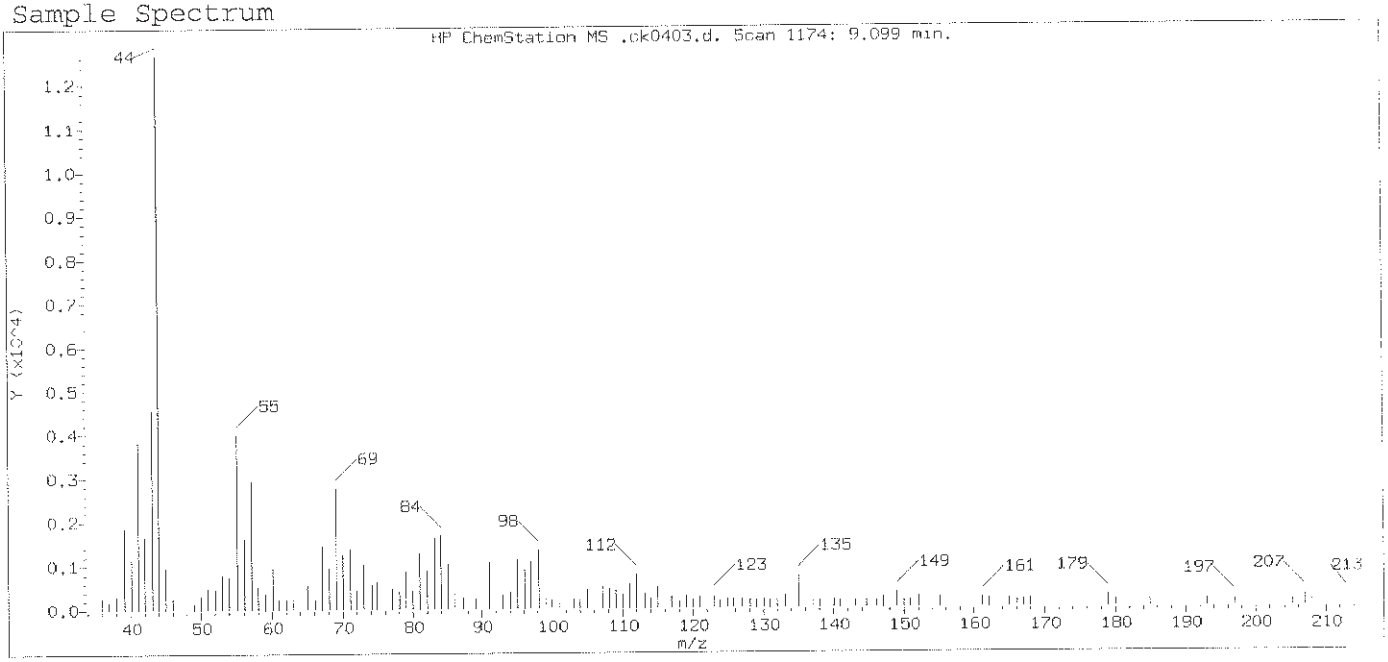
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 esignature user ID: mac00013

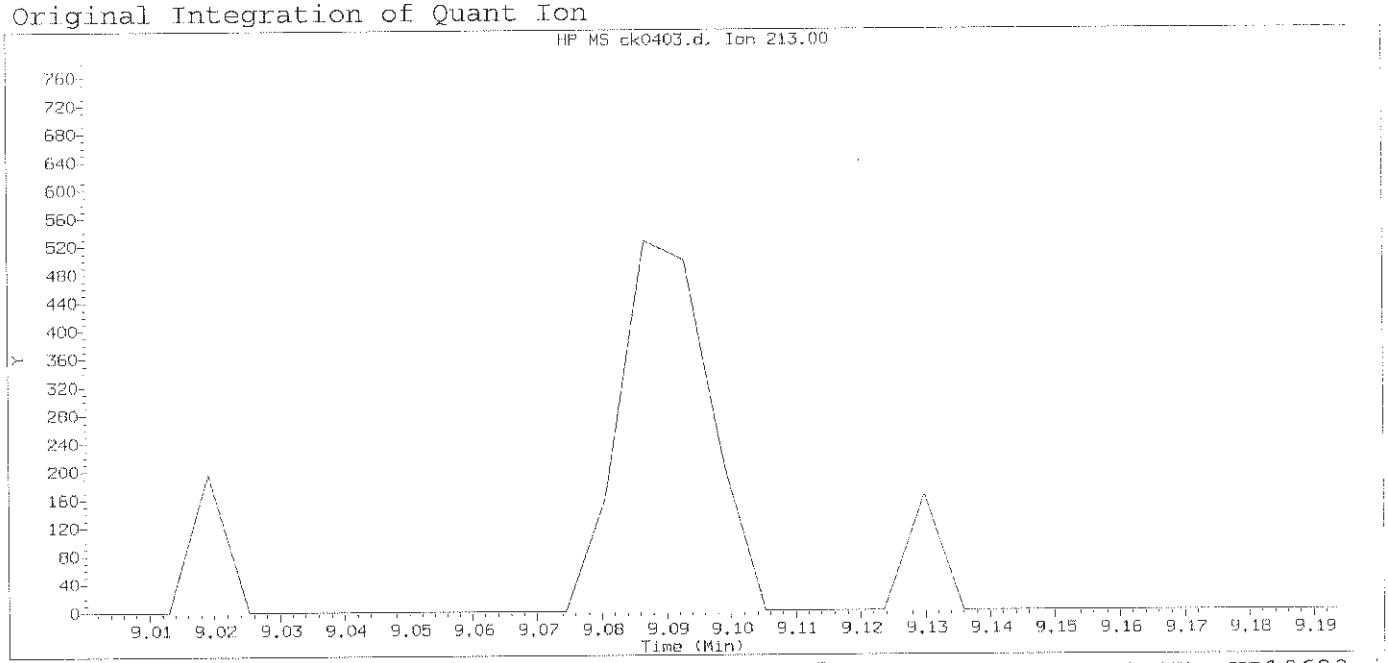
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

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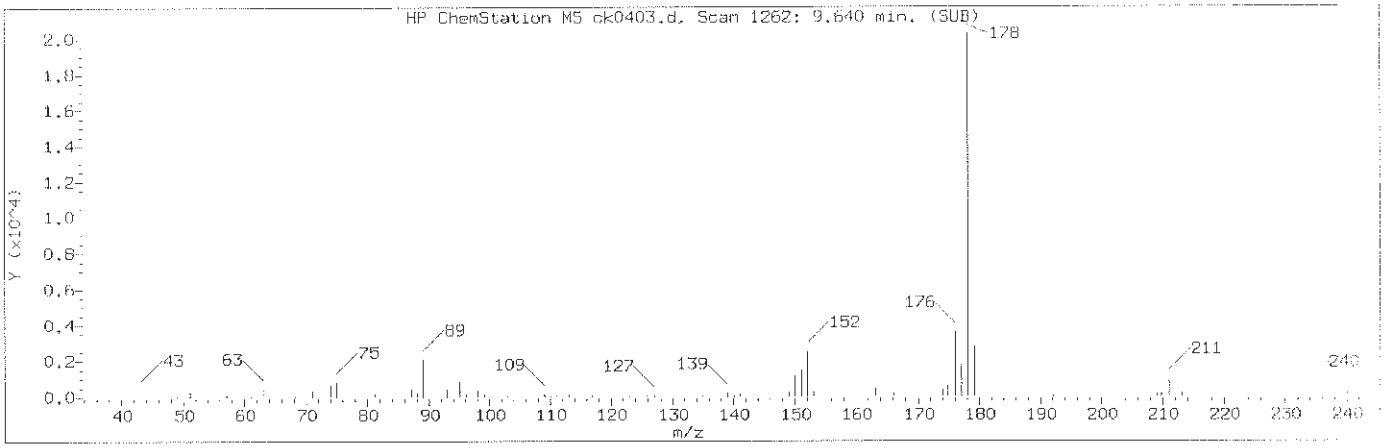
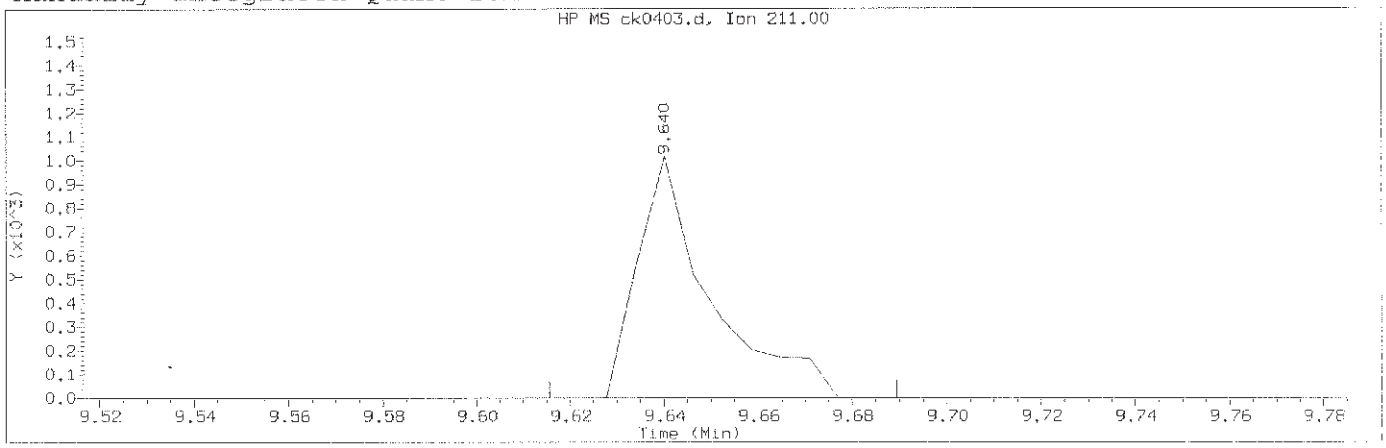
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area (flag)	: 1087M		
On-Column Amount (ng/ul)	: 0.5430		
Integration start scan	: 1257	Integration stop scan:	1269
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

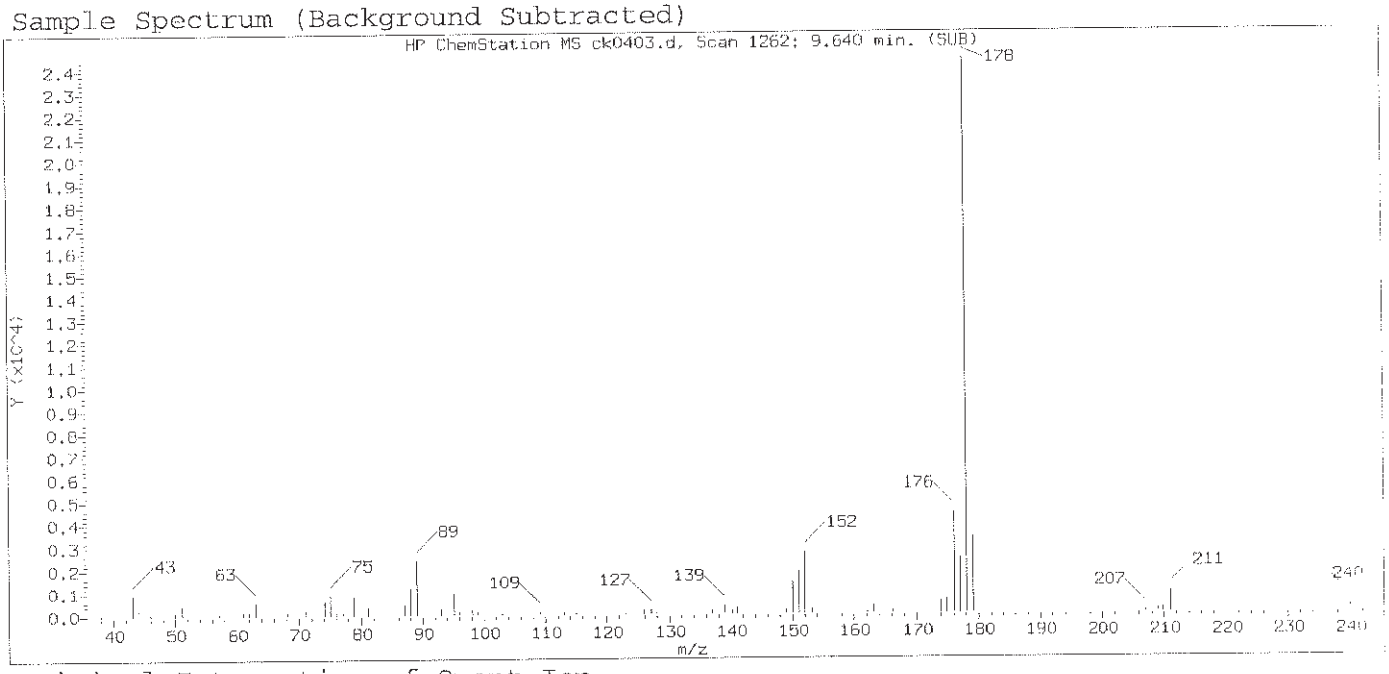
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:17.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

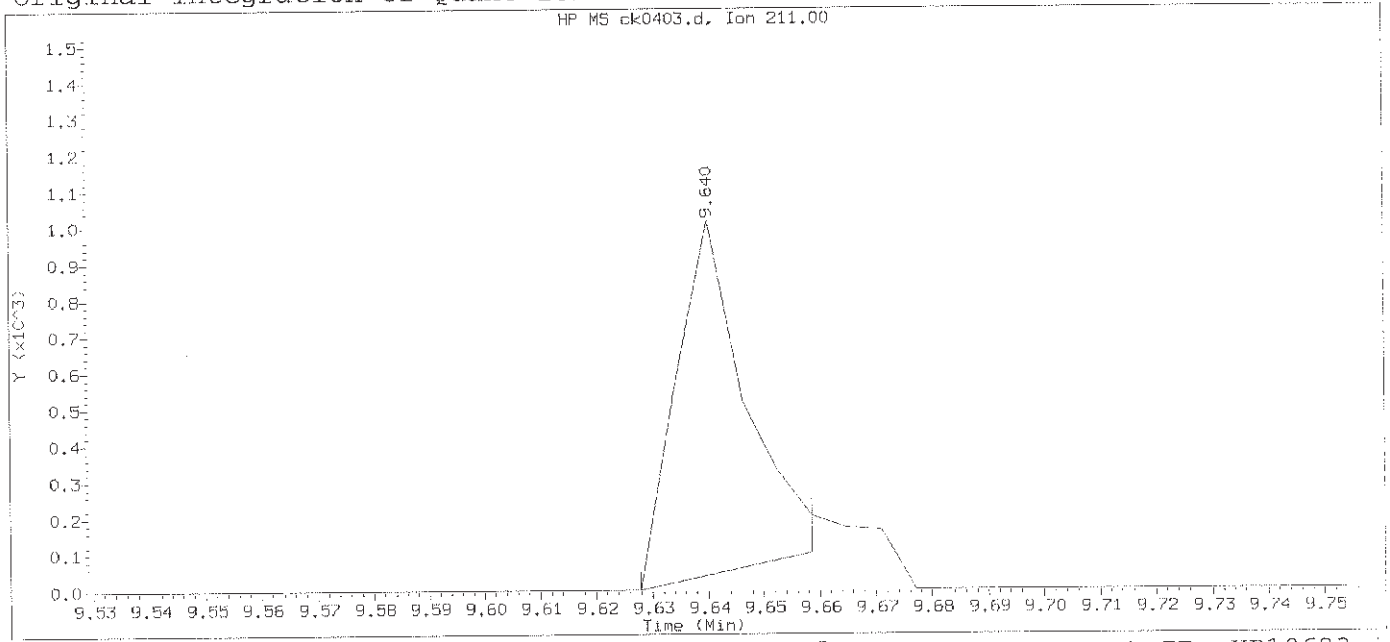
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0403.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:35 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:01
Date, time and analyst ID of latest file update: 12-Nov-2013 11:01 Automation

Sample Name: SSTD001 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1262		
Retention Time (minutes)	: 9.640		
Quant Ion	: 211.00		
Area	: 832		
On-column Amount (ng/ul)	: 0.4821		
Integration start scan	: 1259	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	101

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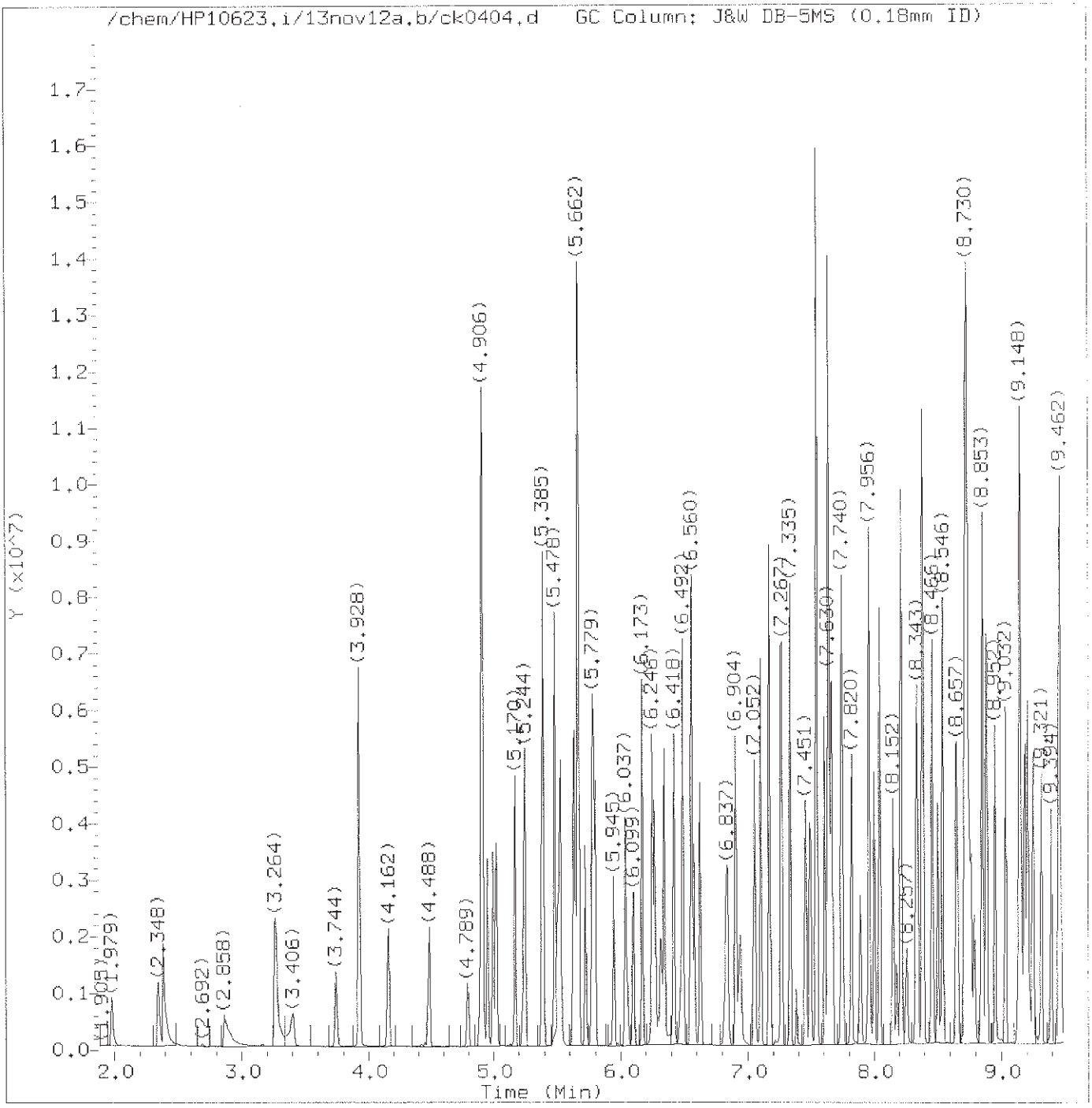
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

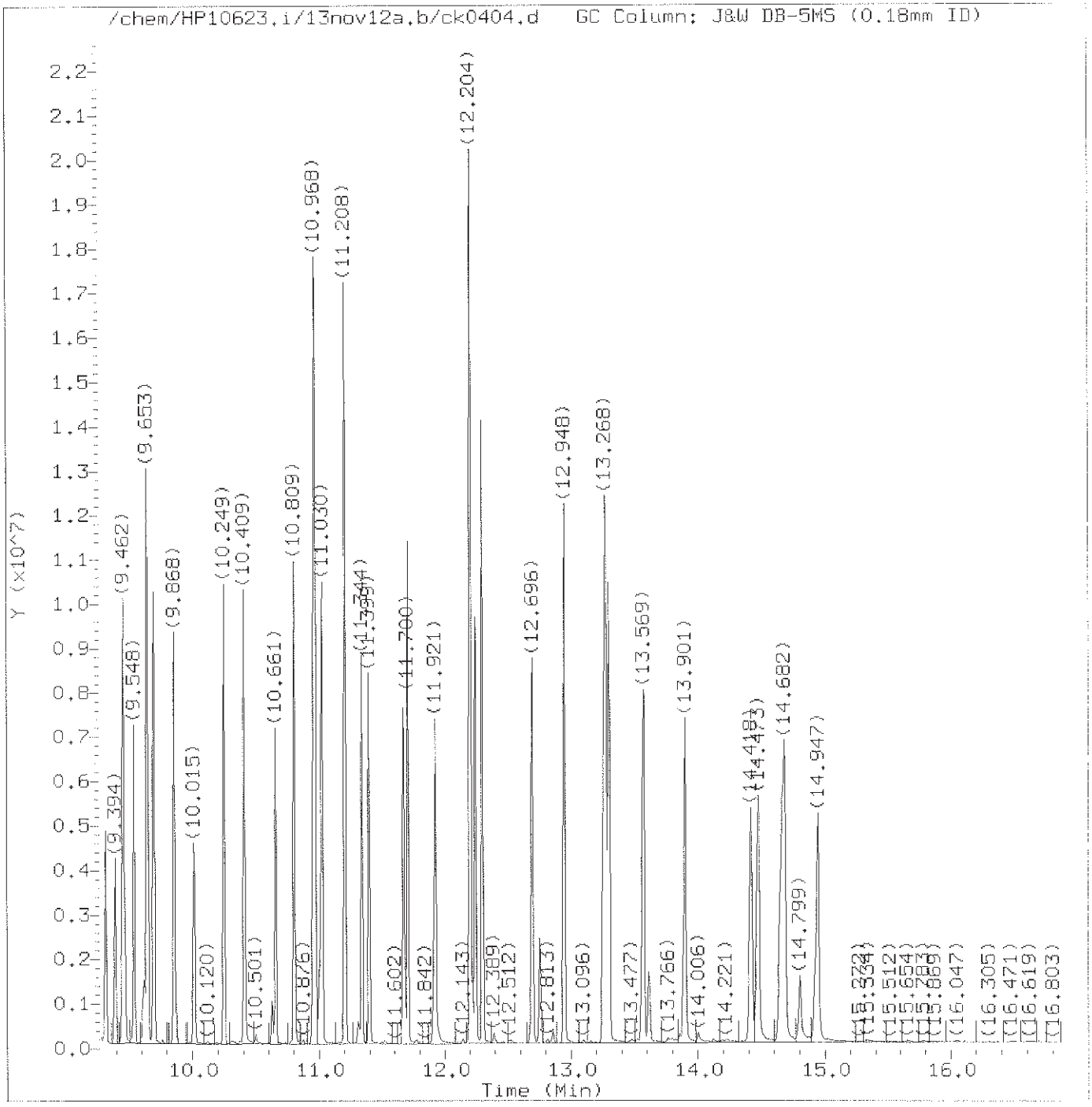
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	Qlon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	398795	117.270
2) N-Nitrosodimethylamine	(1)	2.348	74	742151	117.879
3) Pyridine	(1)	2.385	79	1204327	123.386
5) 2-Picoline	(1)	3.264	93	1191173	119.596
6) N-Nitrosomethylethylamine	(1)	3.406	88	553358	116.214
7) Methyl methanesulfonate	(1)	3.744	80	573067	119.700
9)$2-Fluorophenol	(1)	3.928	112	1869127	120.150
10) N-Nitrosodiethylamine	(1)	4.162	102	549404	116.145
11) Ethyl methanesulfonate	(1)	4.488	109	512186	118.903
12) Benzaldehyde	(1)	4.789	77	239575	50.173
15)$Phenol-d6	(1)	4.906	99	2814946	122.971
14)$Phenol-d5	(1)	4.906	99	2814946	122.971
13) Aniline	(1)	4.906	93	1936631	122.301
16) Phenol	(1)	4.912	94	1636135	122.526
18) bis(2-Chloroethyl)ether	(1)	4.992	93	1125526	118.726
19) 2-Chlorophenol	(1)	5.017	128	965818	115.945
20) 1,3-Dichlorobenzene	(1)	5.170	146	979337	116.504
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	103965	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	1003756	117.008
24) Benzyl alcohol	(1)	5.379	108	744719	114.342
25) 1,2-Dichlorobenzene	(1)	5.385	146	957351	118.894
206) Indene	(1)	5.478	115	2096143	116.540
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	1312918	112.545
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	1312918	112.259
26) 2-Methylphenol	(1)	5.527	108	1044241M	117.826
29) N-Nitrosopyrrolidine	(1)	5.631	100	644621	121.514
30) Acetophenone	(1)	5.638	105	1475769	111.687
33) 4-Methylphenol	(1)	5.662	108	1284338	122.433
32) N-Nitrosomorpholine	(1)	5.668	56	720241A	119.512
31) N-Nitroso-di-n-propylamine	(1)	5.668	70	1024425A	121.124
34) o-Toluidine	(1)	5.668	106	1846486	121.995
37) Hexachloroethane	(1)	5.718	117	389777	119.382
38)$Nitrobenzene-d5	(2)	5.779	82	2571559	122.450
39) Nitrobenzene	(2)	5.797	77	1329643	119.380
40) N-Nitrosopiperidine	(2)	5.945	114	572219	115.811
41) Isophorone	(2)	6.037	82	2356719	116.530
42) 2-Nitrophenol	(2)	6.105	139	488710	126.219
44) 2,4-Dimethylphenol	(2)	6.173	107	1186883	119.260
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	485104	116.907
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	1542458M	125.519

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.320	105	815004	126.346
49) 2,4-Dichlorophenol	(2)	6.345	162	822674	121.550
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	838364	117.598
52)*Naphthalene-d8	(2)	6.468	136	487375	20.000
53) Naphthalene	(2)	6.492	128	3076572	118.976
56) 4-Chloroaniline	(2)	6.554	127	1317377	116.907
57) 2,6-Dichlorophenol	(2)	6.560	162	772662	121.206
58) Hexachloropropene	(2)	6.578	213	495686	122.943
60) Hexachlorobutadiene	(2)	6.628	225	404428	113.108
194) Quinoline	(2)	6.843	129	2093475	117.451
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	1182208MA	121.485
63) Caprolactam	(2)	6.941	113	419377	111.854
68) 4-Chloro-3-methylphenol	(2)	7.052	107	1037587	119.911
69) Safrole	(2)	7.101	162	820159	119.736
70) 2-Methylnaphthalene	(2)	7.169	142	2202637	120.024
71) 1-Methylnaphthalene	(2)	7.267	142	1979369	117.874
72) Hexachlorocyclopentadiene	(3)	7.328	237	387341	126.858
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	832075	117.760
74) cis-Isosafrole	(3)	7.384	162	148091	13.055
75) 2,4,6-Trichlorophenol	(3)	7.458	196	560652	121.606
77) 2,4,5-Trichlorophenol	(3)	7.488	196	617685	122.880
78)$2-Fluorobiphenyl	(3)	7.544	172	4460940	119.752
79) trans-Isosafrole	(3)	7.605	162	853051	106.225
80) Isosafrole	(3)	7.605	162	853051	119.353
83) 1,1'-Biphenyl	(3)	7.636	154	2561525	111.609
84) 2-Chloronaphthalene	(3)	7.642	162	2036153	121.799
85) 1-Chloronaphthalene	(3)	7.667	162	1786834A	108.606
88) Diphenyl ether	(3)	7.740	170	1367218	119.588
89) 2-Nitroaniline	(3)	7.753	138	682699	125.182
90) 1,4-Naphthoquinone	(3)	7.820	158	844413	120.029
91) 1,4-Dinitrobenzene	(3)	7.888	168	292208	119.047
92) Dimethylphthalate	(3)	7.956	163	2337797	117.527
93) 1,3-Dinitrobenzene	(3)	7.962	168	390232	119.251
94) 2,6-Dinitrotoluene	(3)	7.999	165	526860	127.170
95) Acenaphthylene	(3)	8.042	152	3112269	119.250
97) 3-Nitroaniline	(3)	8.152	138	634912	125.496
98)*Acenaphthene-d10	(3)	8.177	164	296224	20.000
99) Acenaphthene	(3)	8.214	153	2143285	118.659
100) 2,4-Dinitrophenol	(3)	8.257	184	192454	118.038
103) 4-Nitrophenol	(3)	8.337	109	390890	124.719

M = Compound was manually integrated.
A = User selected an alternate hit.
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Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d
Injection date and time: 12-NOV-2013 10:59

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sublist used: newall1

Sample Name: SSTD120

Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	714495	117.017
104) Dibenzofuran	(3)	8.386	168	2914224	117.782
105) 2,4-Dinitrotoluene	(3)	8.392	165	700406	130.826
106) 1-Naphthylamine	(3)	8.466	143	2449421	120.476
107) 2,3,4,6-Tetrachlorophenol	(3)	8.509	232	451305	127.459
108) 2-Naphthylamine	(3)	8.546	143	2484193	119.421
109) Diethylphthalate	(3)	8.657	149	2415462	117.553
111) Fluorene	(3)	8.718	166	2540103	119.317
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	1110543	117.262
110) Thionazin	(3)	8.730	107	563773	124.406
113) 5-Nitro-o-toluidine	(3)	8.743	152	727951	129.509
114) 4-Nitroaniline	(3)	8.767	138	675934A	118.809
115) 4,6-Dinitro-2-methylphenol	(4)	8.792	198	299221	119.723
117) N-Nitrosodiphenylamine	(4)	8.853	169	2179897	122.698
202) NDPA as diphenylamine	(4)	8.853	169	2179897	122.406
118) 1,2-Diphenylhydrazine	(4)	8.884	77	3206144	125.982
119)$2,4,6-Tribromophenol	(3)	8.958	330	437175	122.193
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	447330	123.325
121) 1,3,5-Trinitrobenzene	(4)	9.136	213	212276	120.478
122) Diallate (peak 1)	(4)	9.148	86	1219924	93.676
123) Phorate	(4)	9.155	75	2188290M	139.560
124) Phenacetin	(4)	9.191	108	1508041	122.823
125) 4-Bromophenyl-phenylether	(4)	9.210	248	588059	120.129
126) Diallate (peak 2)	(4)	9.222	86	169919	30.045
127) Hexachlorobenzene	(4)	9.253	284	563038	116.493
128) Dimethoate	(4)	9.321	87	1137920	118.679
130) Atrazine	(4)	9.394	200	402424	70.700
131) Pentachlorophenol	(4)	9.450	266	351994	131.315
132) Pentachloronitrobenzene	(4)	9.462	237	266829	127.175
133) 4-Aminobiphenyl	(4)	9.462	169	1949097	101.456
134) Pronamide	(4)	9.548	173	1133279	122.383
135)*Phenanthrene-d10	(4)	9.628	188	530074	20.000
136) Dinoseb	(4)	9.646	211	439035	121.124
137) Phenanthrene	(4)	9.653	178	3706857	120.269
138) Anthracene	(4)	9.702	178	3894297	122.746
140) Carbazole	(4)	9.868	167	3745874	120.992
141) Methyl parathion	(4)	10.015	109	780017	119.613
142) Di-n-butylphthalate	(4)	10.249	149	4397140	120.377
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	332474	121.168
143) Parathion	(4)	10.409	109	581918	120.922

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

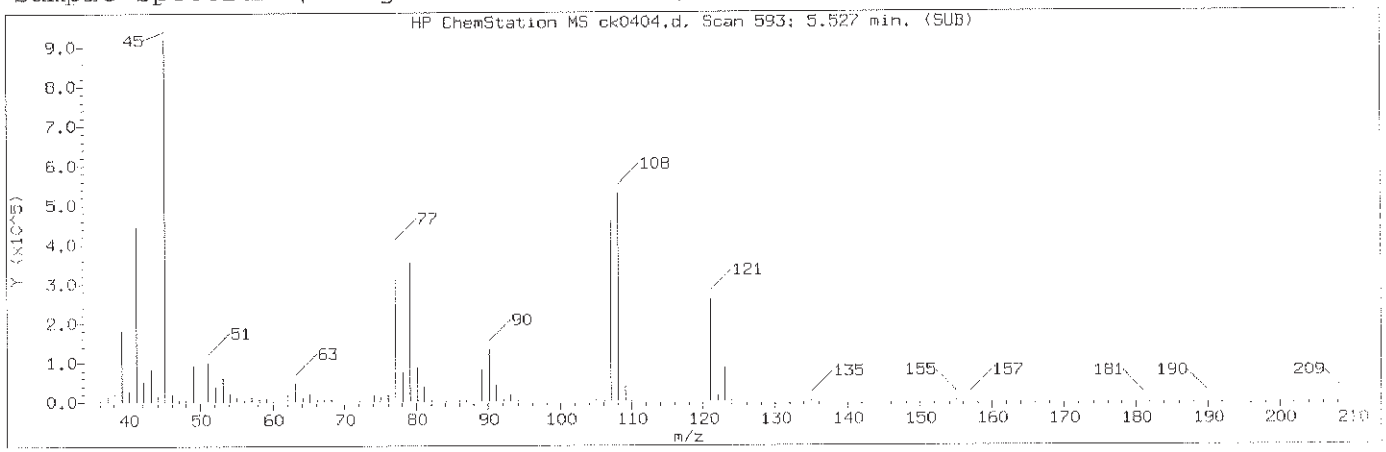
Sample Name: SSTD120 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	400372	114.947
147) Fluoranthene	(4)	10.809	202	4230747	122.761
152) Benzidine	(5)	10.975	184	9270730	344.486
167)*Pyrene-d10	(5)	11.005	212	657394	20.000
154) Pyrene	(5)	11.030	202	4426836	121.259
156)$Terphenyl-d14	(5)	11.208	244	5735835	122.034
158) p-Dimethylaminoazobenzene	(5)	11.344	225	887349	124.722
159) Chlorobenzilate	(5)	11.399	139	1395656	126.103
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2663290	118.366
161) Butylbenzylphthalate	(5)	11.706	149	2108453	121.025
162) 2-Acetylaminofluorene	(5)	11.921	181	2021224	128.105
164) 3,3'-Dichlorobenzidine	(5)	12.198	252	1498983	118.085
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	758170	122.263
166) Benzo(a)anthracene	(5)	12.204	228	4122074	122.416
168) Chrysene	(5)	12.247	228	3839201	118.255
169) bis(2-Ethylhexyl)phthalate	(5)	12.297	149	2944340	121.810
189) 6-Methylchrysene	(5)	12.696	242	2843627	118.707
170) Di-n-octylphthalate	(6)	12.948	149	5277690	129.610
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.268	256	1997972	130.520
172) Benzo(b)fluoranthene	(6)	13.274	252	4507467	136.831
173) Benzo(k)fluoranthene	(6)	13.299	252	3864269A	114.981
174) Benzo(a)pyrene	(6)	13.575	252	3882269	120.749
175)*Perylene-d12	(6)	13.612	264	539486	20.000
176) 3-Methylcholanthrene	(6)	13.901	268	1945486	120.720
190) Dibenz(a,h)acridine	(6)	14.418	279	2928415	125.375
191) Dibenz(a,j)acridine	(6)	14.473	279	3121340	116.211
177) Indeno(1,2,3-cd)pyrene	(6)	14.658	276	4123361	120.541
178) Dibenz(a,h)anthracene	(6)	14.682	278	3480308	121.633
179) Benzo(g,h,i)perylene	(6)	14.947	276	3410301	117.026
129) Diallate TRANS/CIS	(4)			1389843	124.304

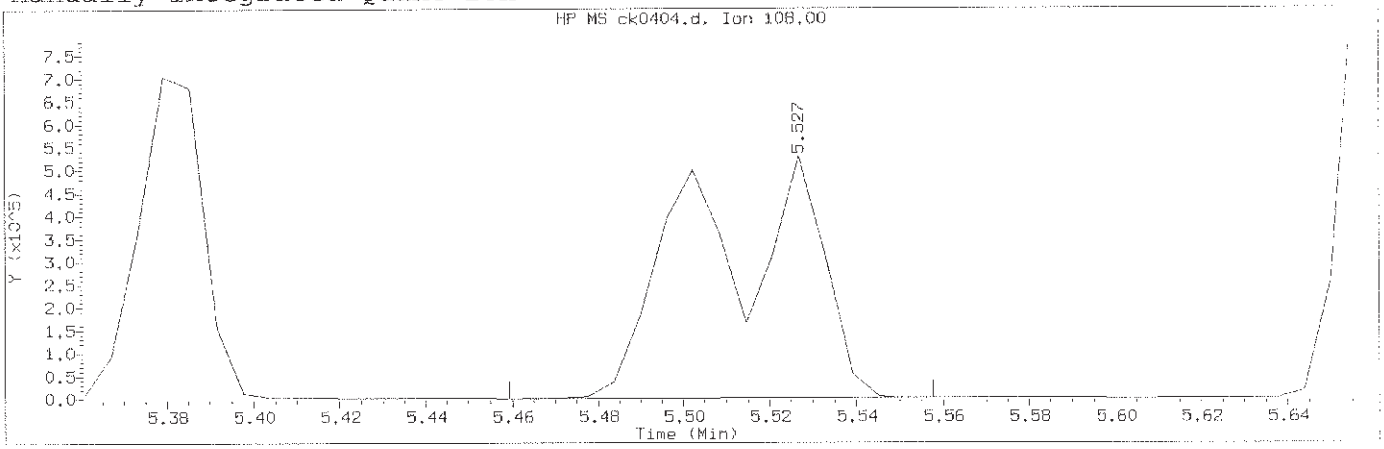
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

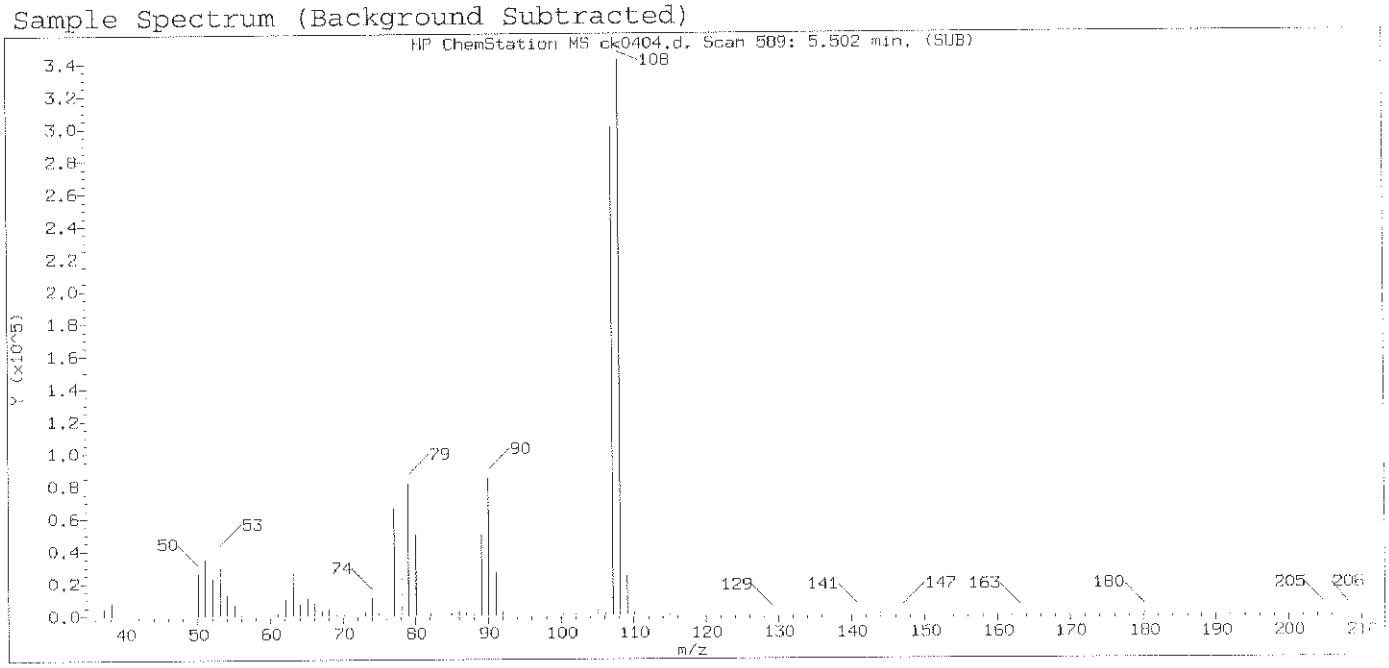
Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 593		
Retention Time (minutes)	: 5.527		
Quant Ion	: 108.00		
Area (flag)	: 1044241M		
On-Column Amount (ng/ul)	: 117.8262		
Integration start scan	: 581	Integration stop scan:	597
Y at integration start	: 544	Y at integration end:	1666

Reason for manual integration: improper integration

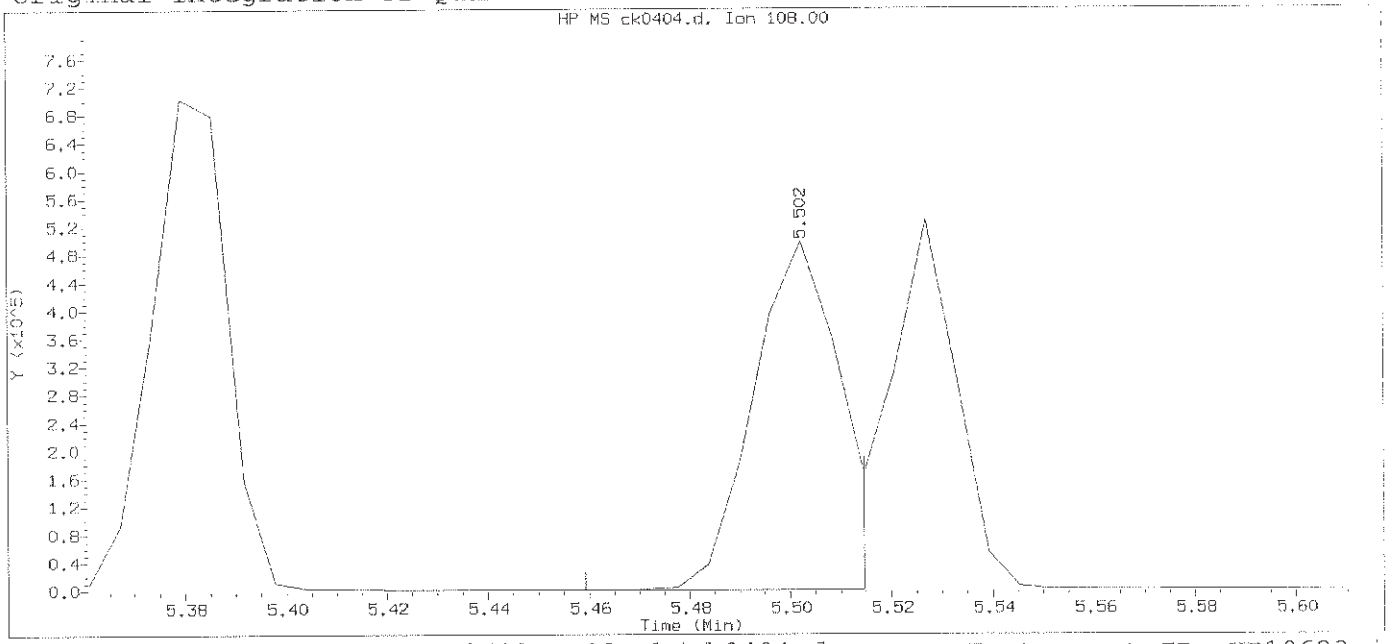
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 26		
Compound Name	: 2-Methylphenol		
Scan Number	: 589		
Retention Time (minutes)	: 5.502		
Quant Ion	: 108.00		
Area	: 575903		
On-column Amount (ng/ul)	: 73.6240		
Integration start scan	: 581	Integration stop scan:	590
Y at integration start	: 0	Y at integration end:	0

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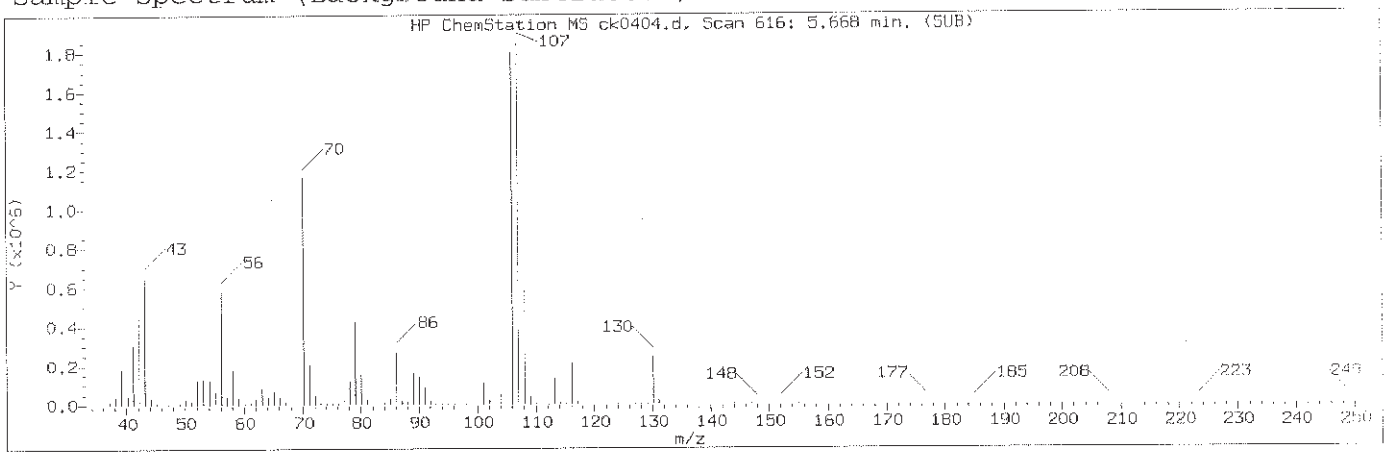
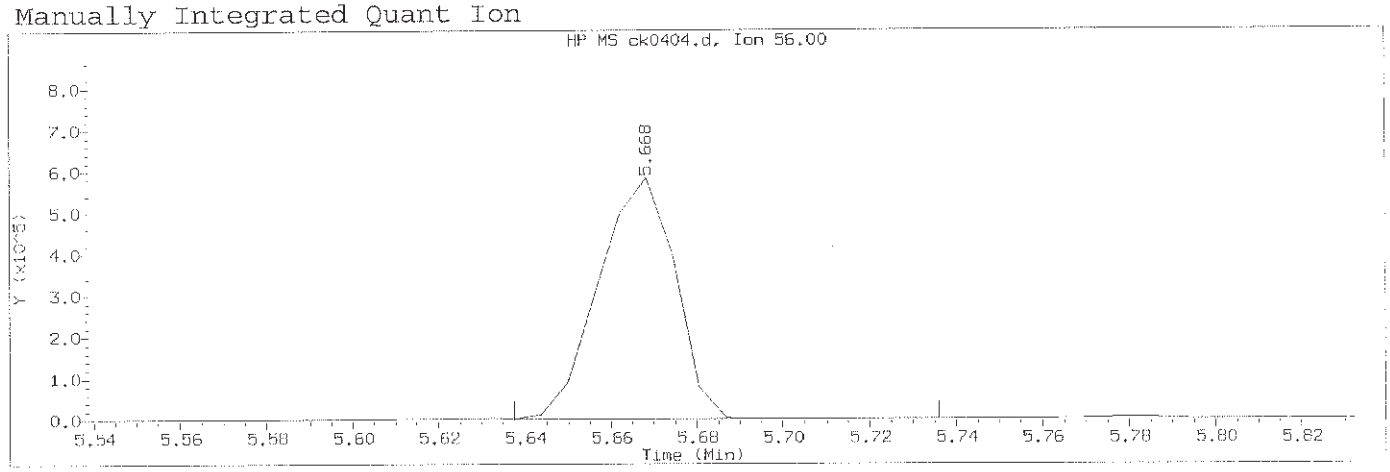
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 56.00		
Area (flag)	: 720241A		
On-Column Amount (ng/ul)	: 119.5124		
Integration start scan	: 610	Integration stop scan:	626
Y at integration start	: 1307	Y at integration end:	1307

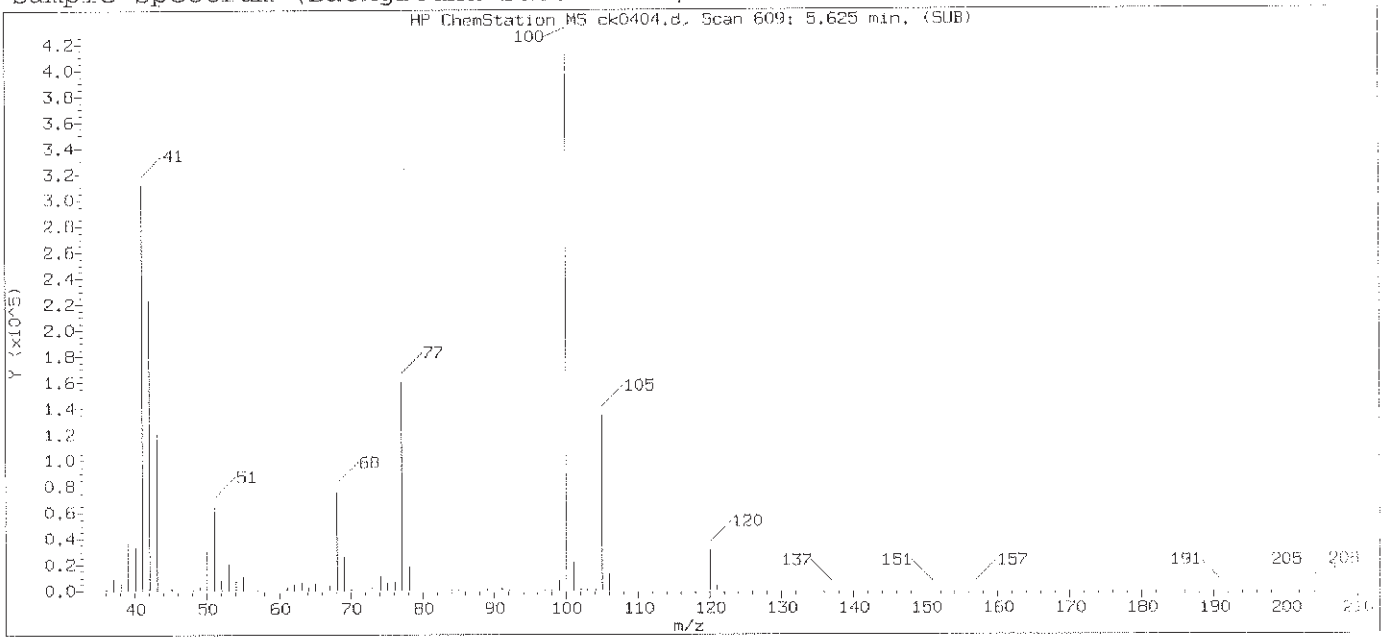
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

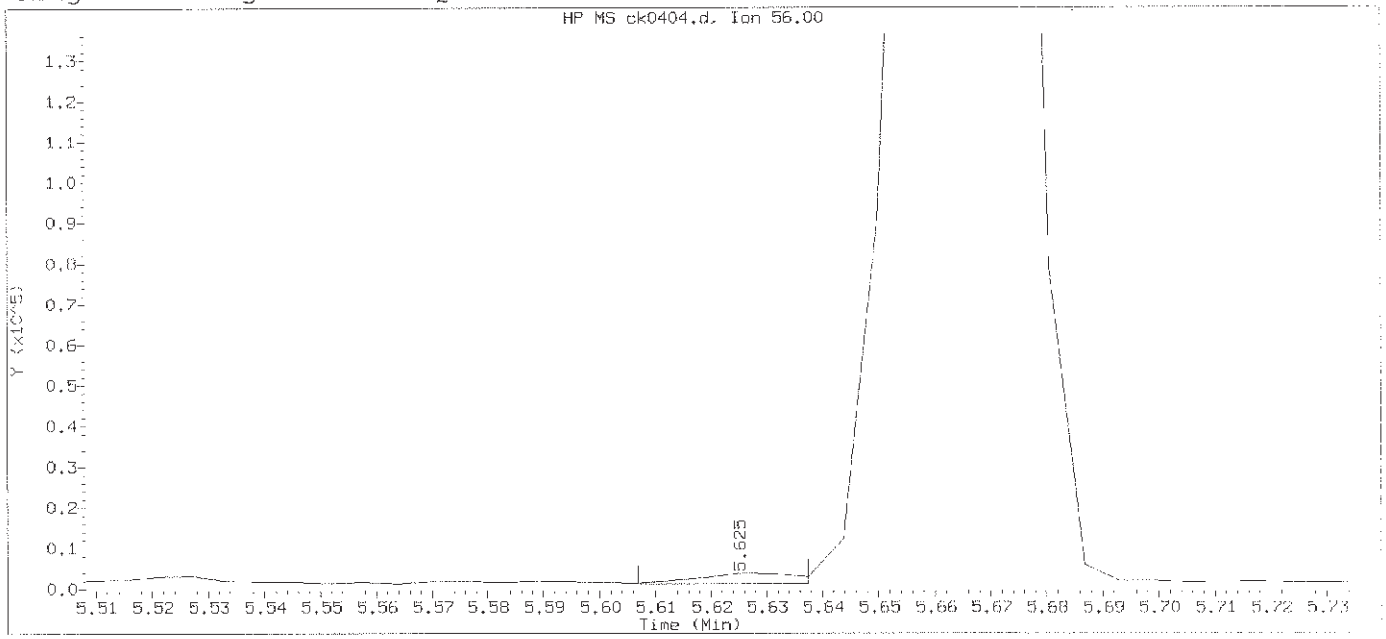
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 32		
Compound Name	: N-Nitrosomorpholine		
Scan Number	: 609		
Retention Time (minutes)	: 5.625		
Quant Ion	: 56.00		
Area	: 3067		
On-column Amount (ng/ul)	: 0.9114		
Integration start scan	: 605	Integration stop scan:	610
Y at integration start	: 1307	Y at integration end:	1307

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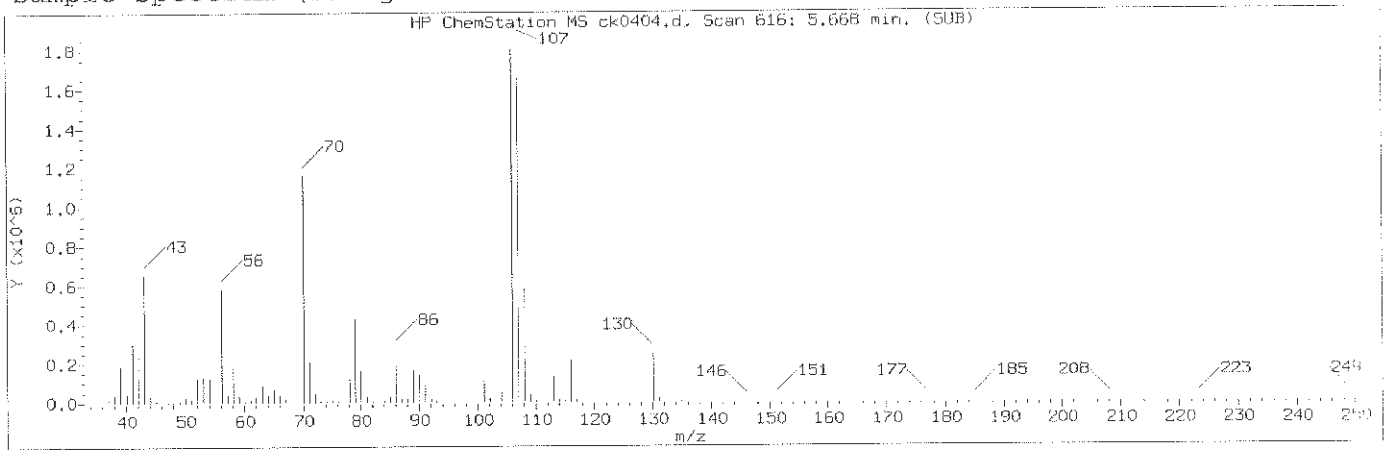
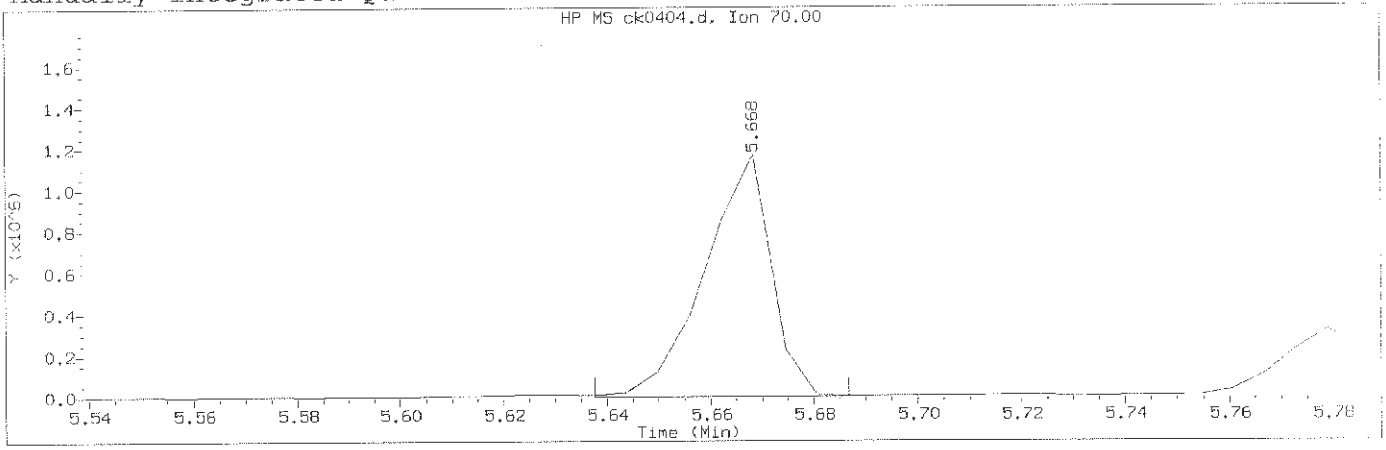
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 616		
Retention Time (minutes)	: 5.668		
Quant Ion	: 70.00		
Area (flag)	: 1024425A		
On-Column Amount (ng/ul)	: 121.1237		
Integration start scan	: 610	Integration stop scan:	618
Y at integration start	: 1062	Y at integration end:	1062

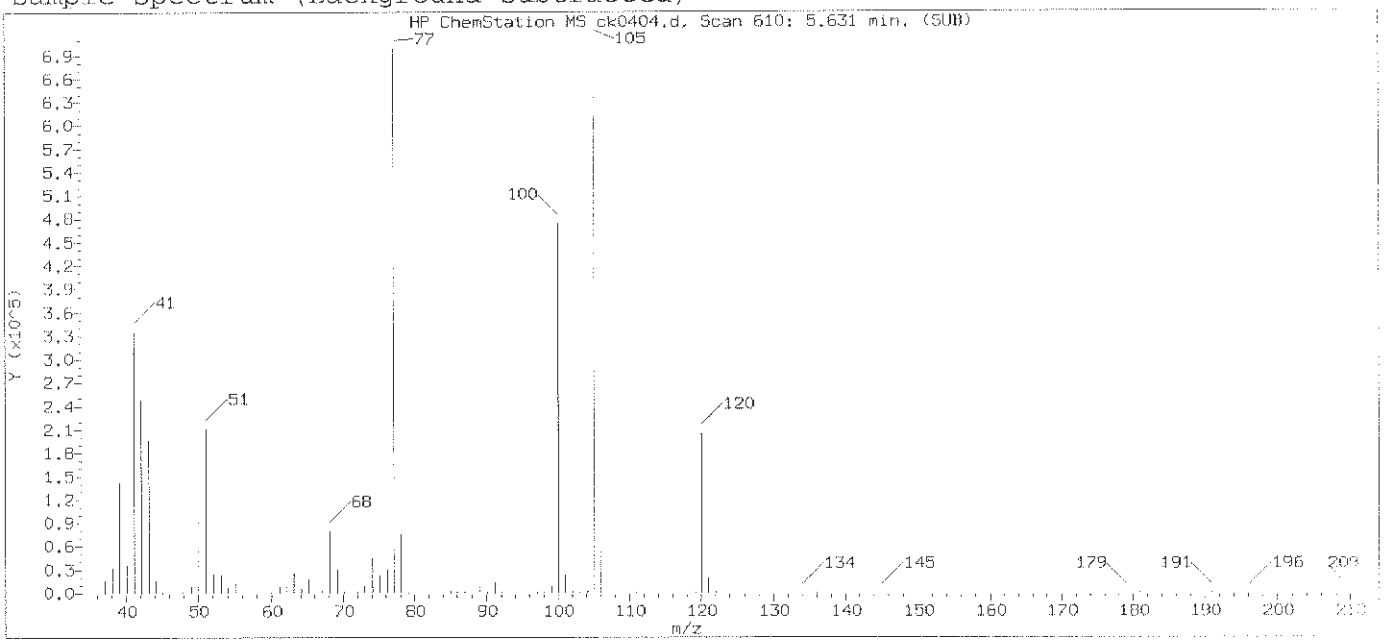
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

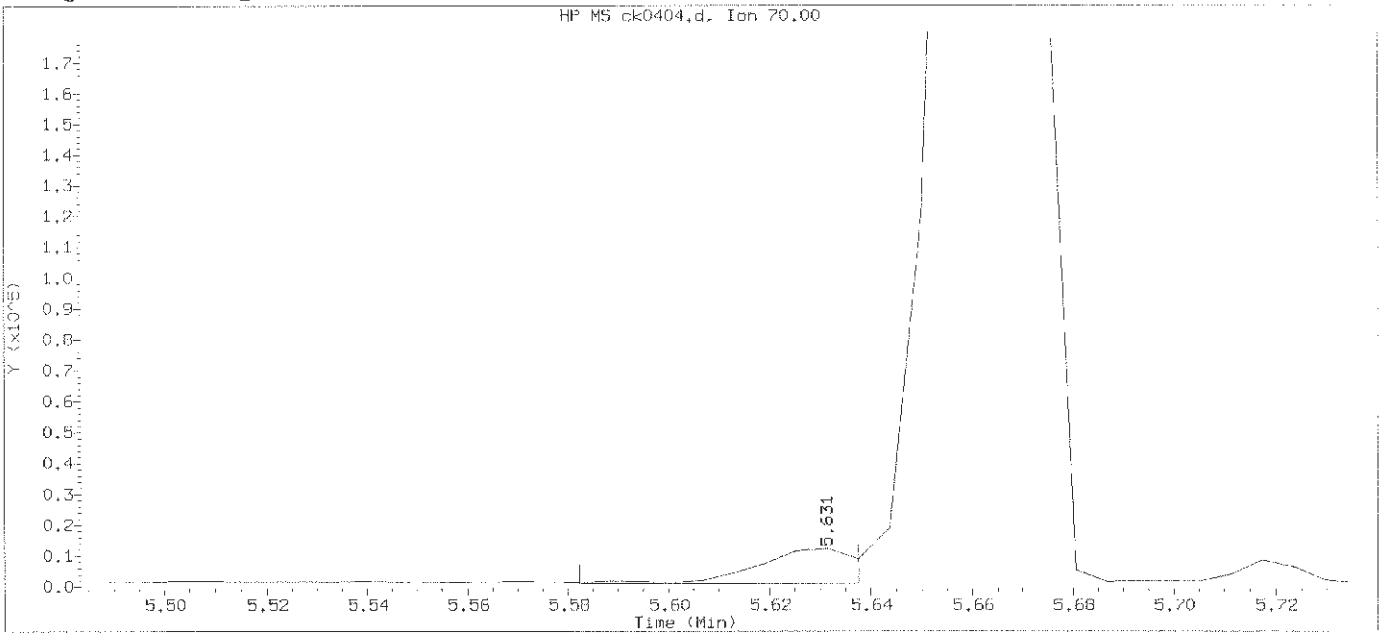
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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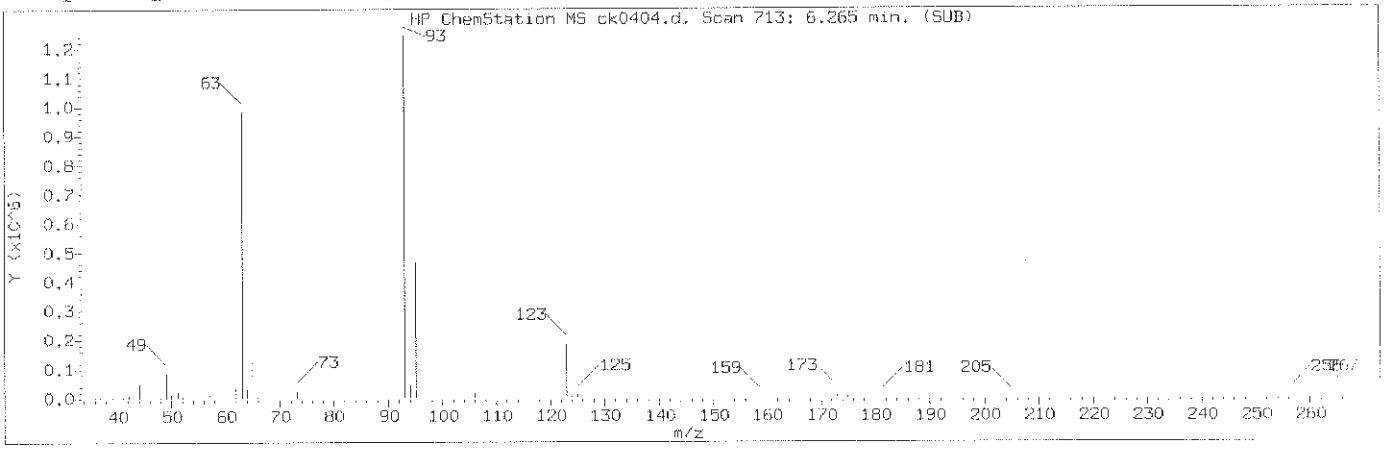
Sample Name: SSTD120 Lab Sample ID: STD3083

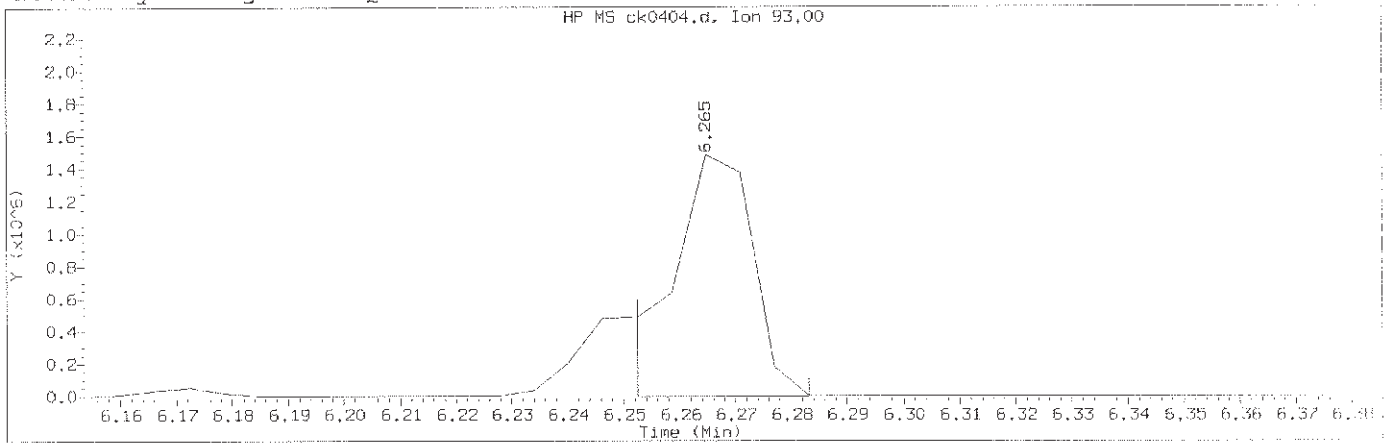
Compound Number	: 31		
Compound Name	: N-Nitroso-di-n-propylamine		
Scan Number	: 610		
Retention Time (minutes)	: 5.631		
Quant Ion	: 70.00		
Area	: 14177		
On-column Amount (ng/ul)	: 2.2666		
Integration start scan	: 601	Integration stop scan:	610
Y at integration start	: 1062	Y at integration end:	1062

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area (flag)	: 1542458M		
On-Column Amount (ng/ul)	: 125.5195		
Integration start scan	: 710	Integration stop scan:	715
Y at integration start	: -2375	Y at integration end:	-2375

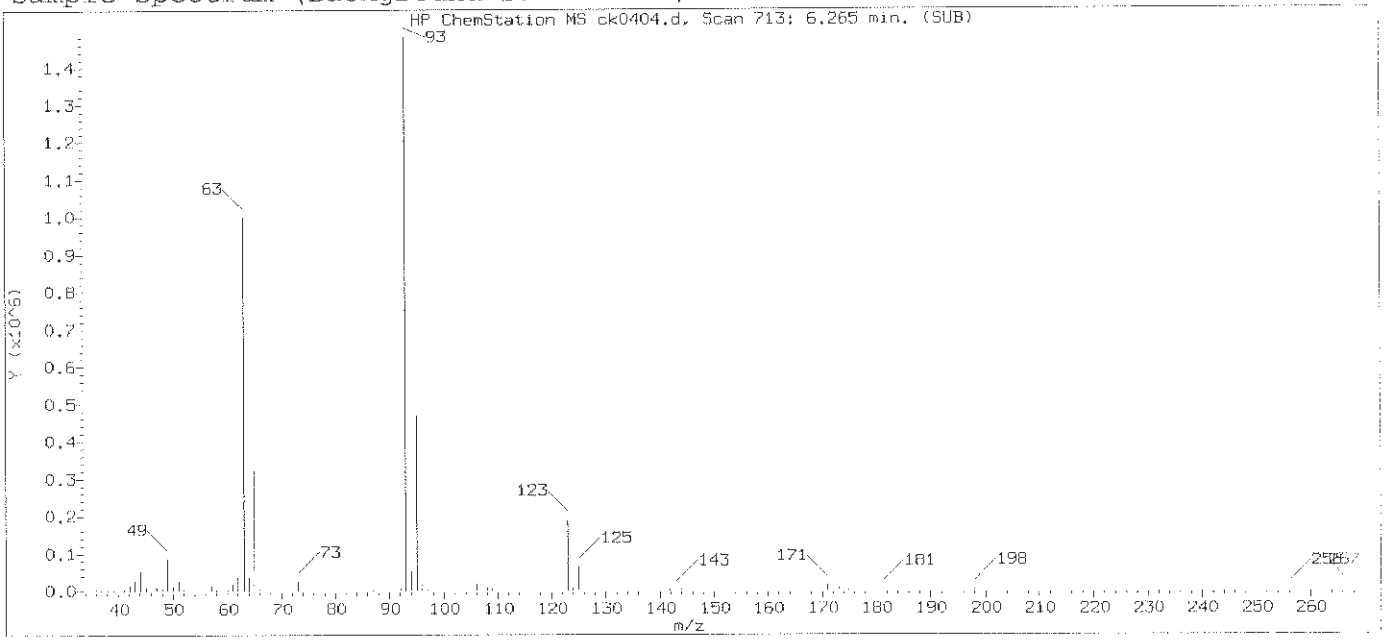
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

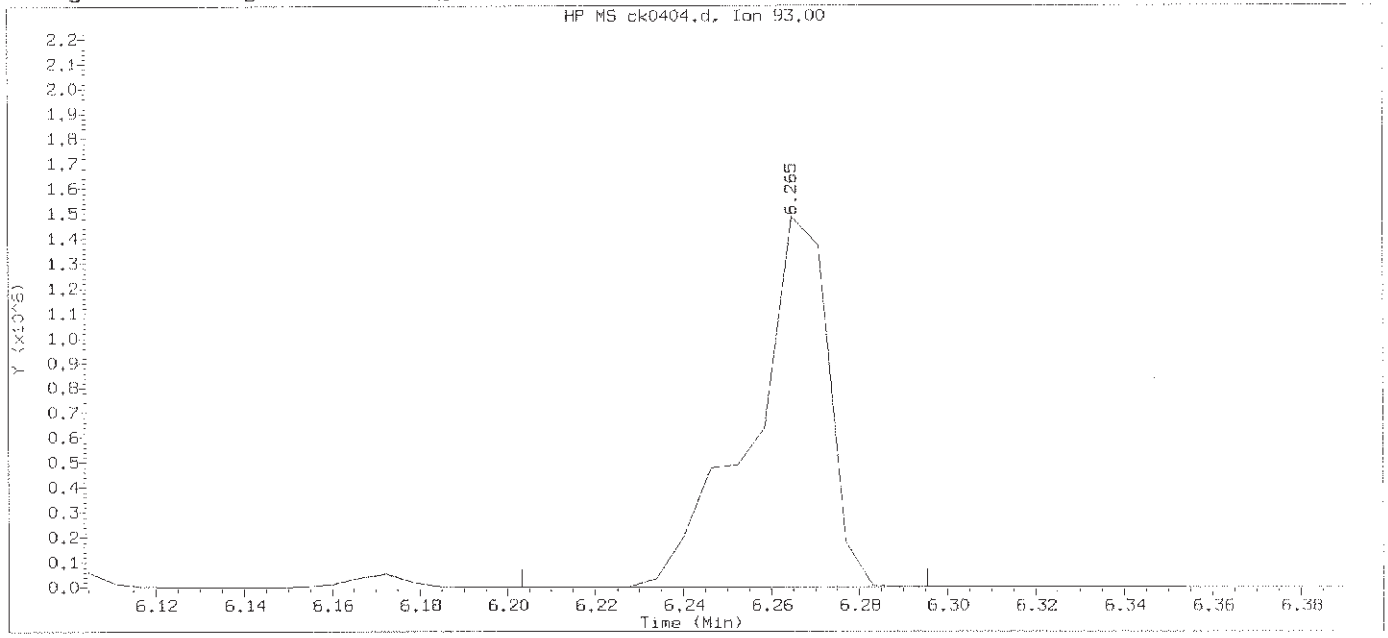
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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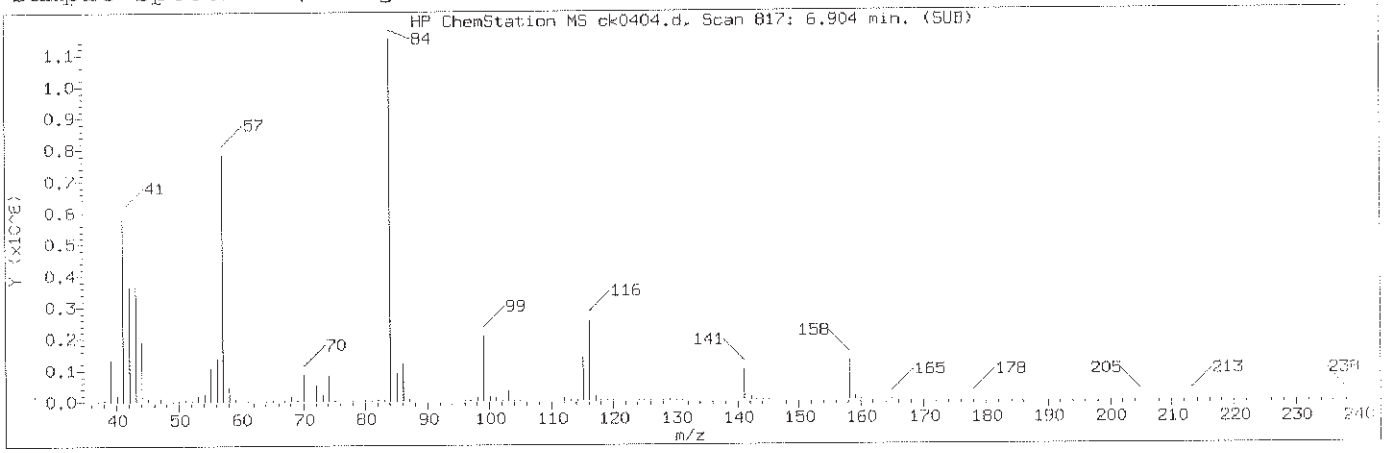
Sample Name: SSTD120 Lab Sample ID: STD3083

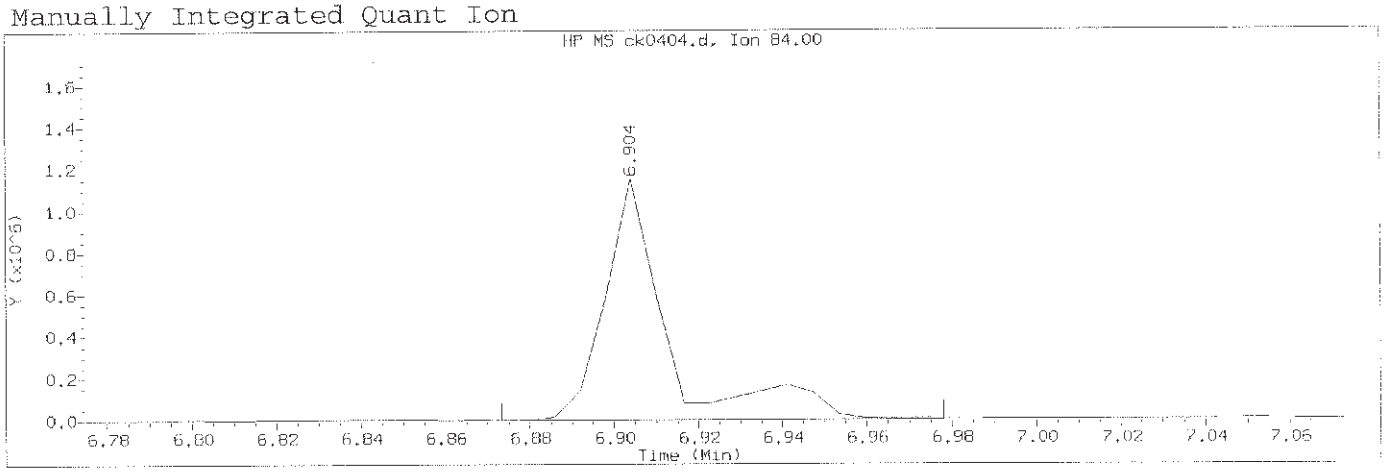
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 713		
Retention Time (minutes)	: 6.265		
Quant Ion	: 93.00		
Area	: 1804476		
On-column Amount (ng/ul)	: 131.3277		
Integration start scan	: 702	Integration stop scan:	717
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 1182208MA		
On-Column Amount (ng/ul)	: 121.4847		
Integration start scan	: 811	Integration stop scan:	828
Y at integration start	: 866	Y at integration end:	866

Reason for manual integration: improper integration

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on 11/13/2013 at 01:18.
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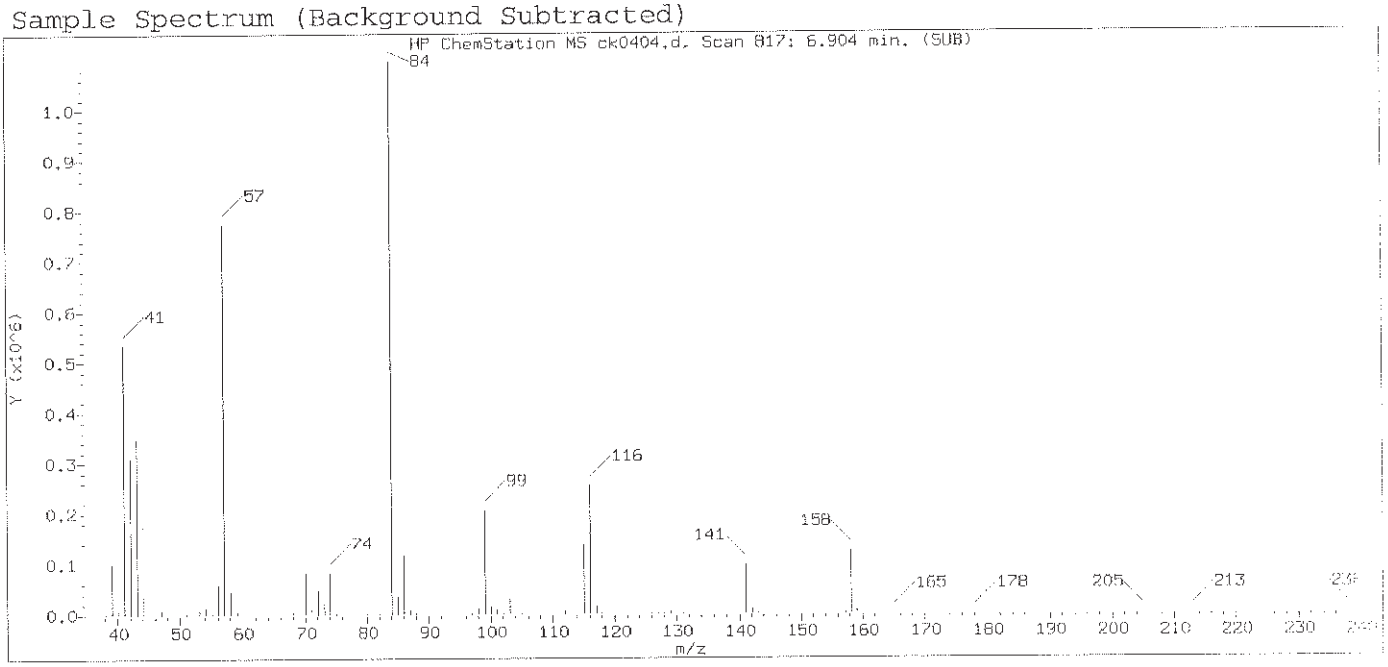
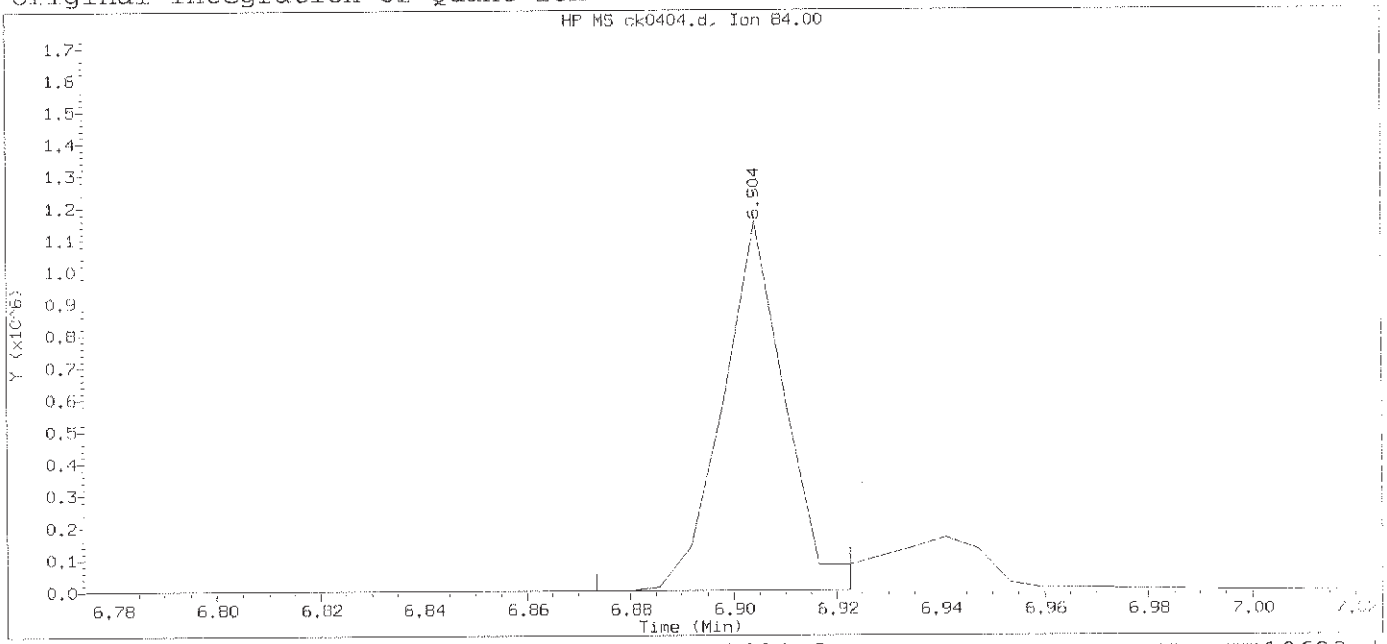
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



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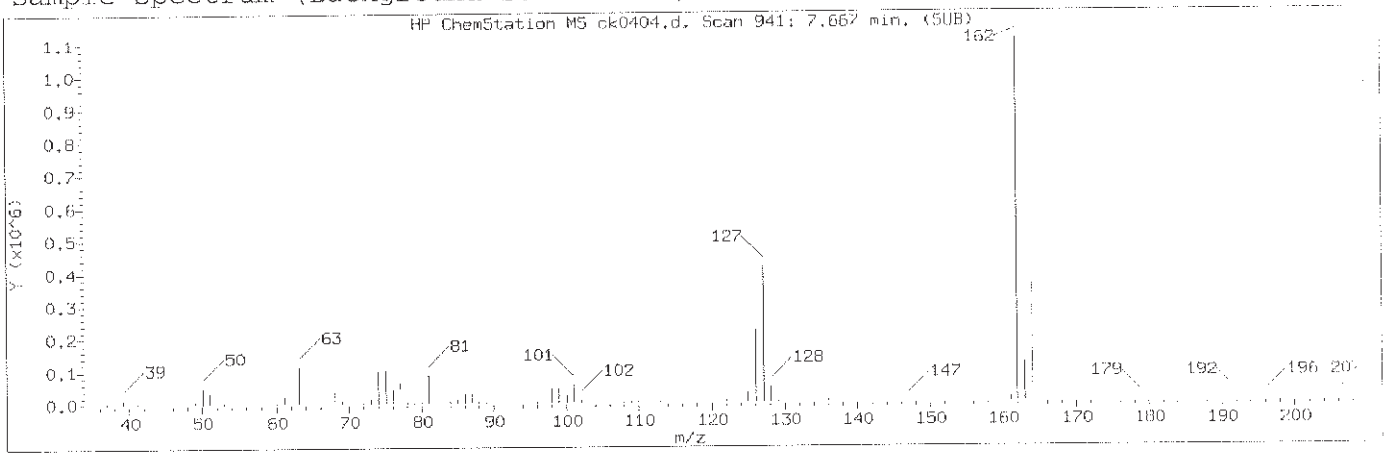
Sample Name: SSTD120 Lab Sample ID: STD3083

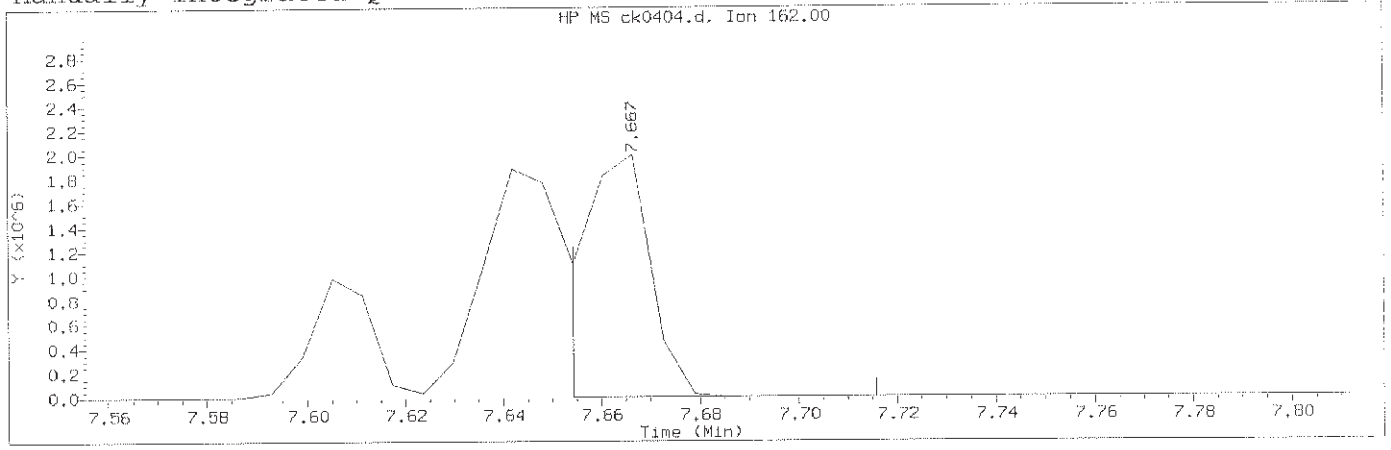
Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 948721		
On-column Amount (ng/ul)	: 100.0241		
Integration start scan	: 811	Integration stop scan:	819
Y at integration start	: 1061	Y at integration end:	1061

Digitally signed by Mark A. Clark on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 941		
Retention Time (minutes)	: 7.667		
Quant Ion	: 162.00		
Area (flag)	: 1786834A		
On-Column Amount (ng/ul)	: 108.6062		
Integration start scan	: 938	Integration stop scan:	948
Y at integration start	: 489	Y at integration end:	460

Reason for manual integration: improper integration

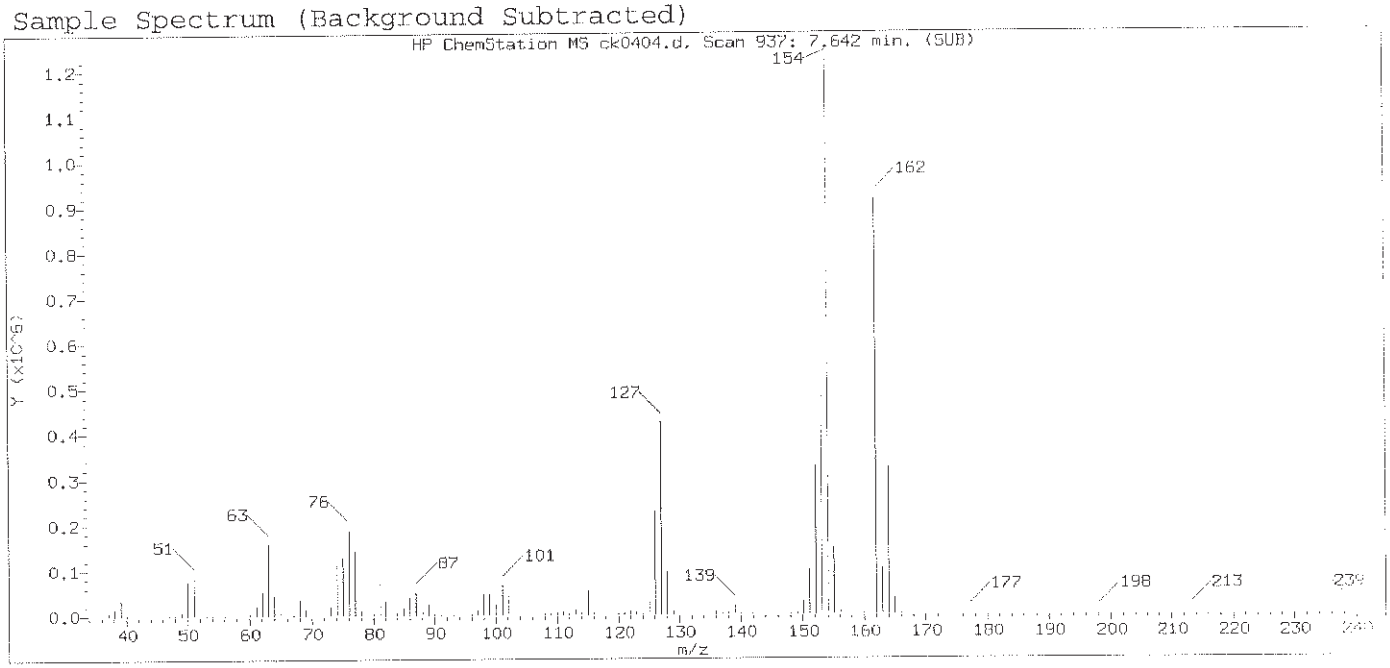
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

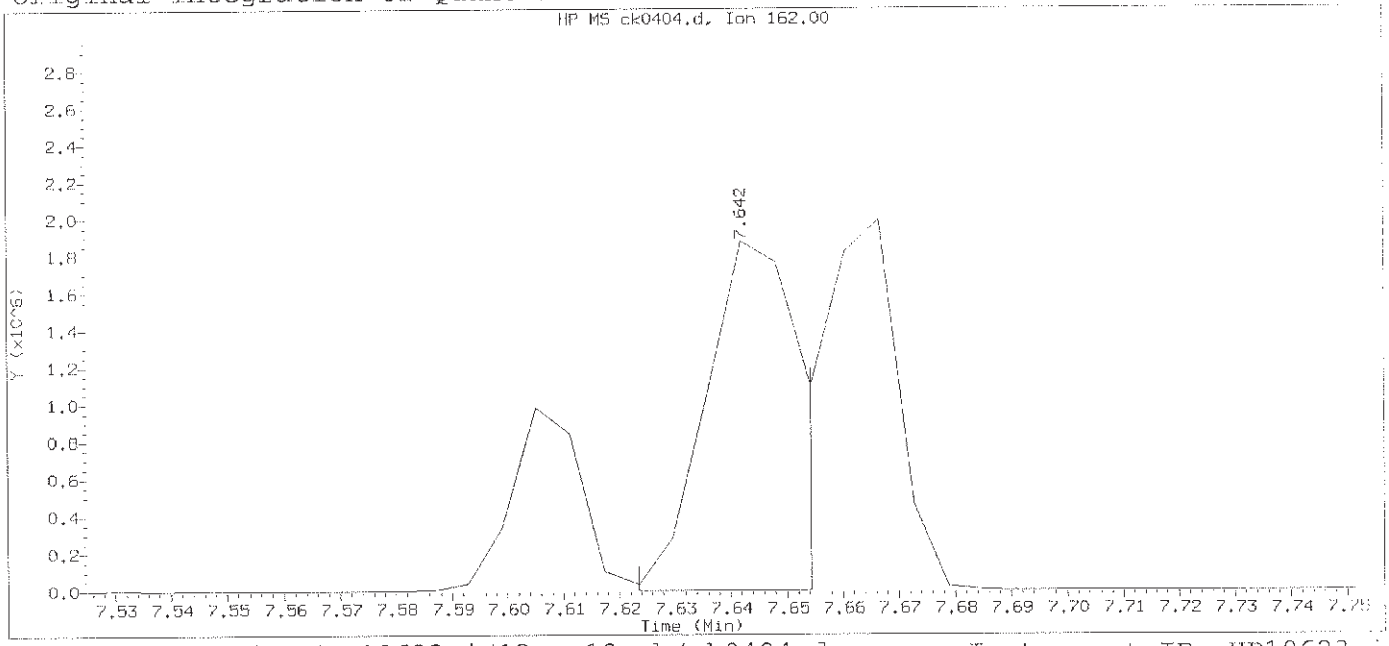
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 937		
Retention Time (minutes)	: 7.642		
Quant Ion	: 162.00		
Area	: 2036430		
On-column Amount (ng/ul)	: 119.5617		
Integration start scan	: 933	Integration stop scan:	938
Y at integration start	: 515	Y at integration end:	489

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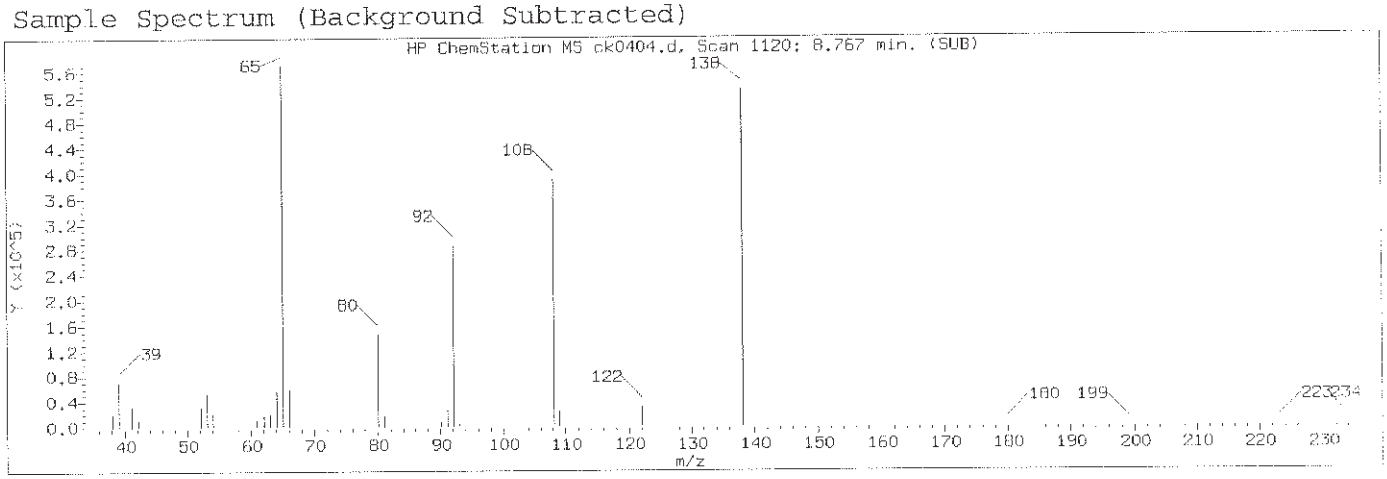
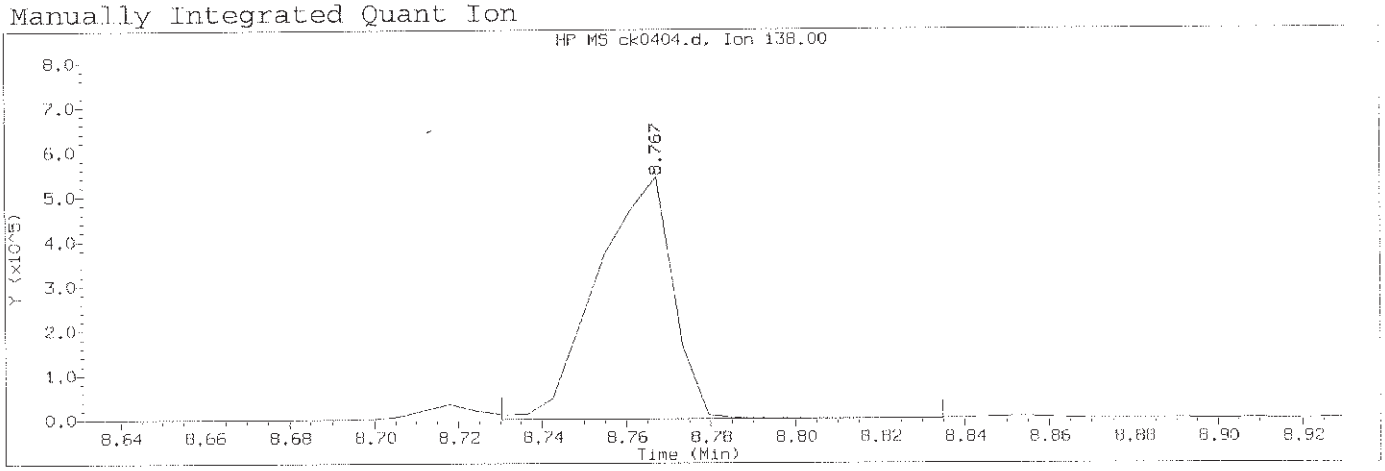
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1120		
Retention Time (minutes)	: 8.767		
Quant Ion	: 138.00		
Area (flag)	: 675934A		
On-Column Amount (ng/ul)	: 118.8095		
Integration start scan	: 1113	Integration stop scan:	1130
Y at integration start	: 267	Y at integration end:	362

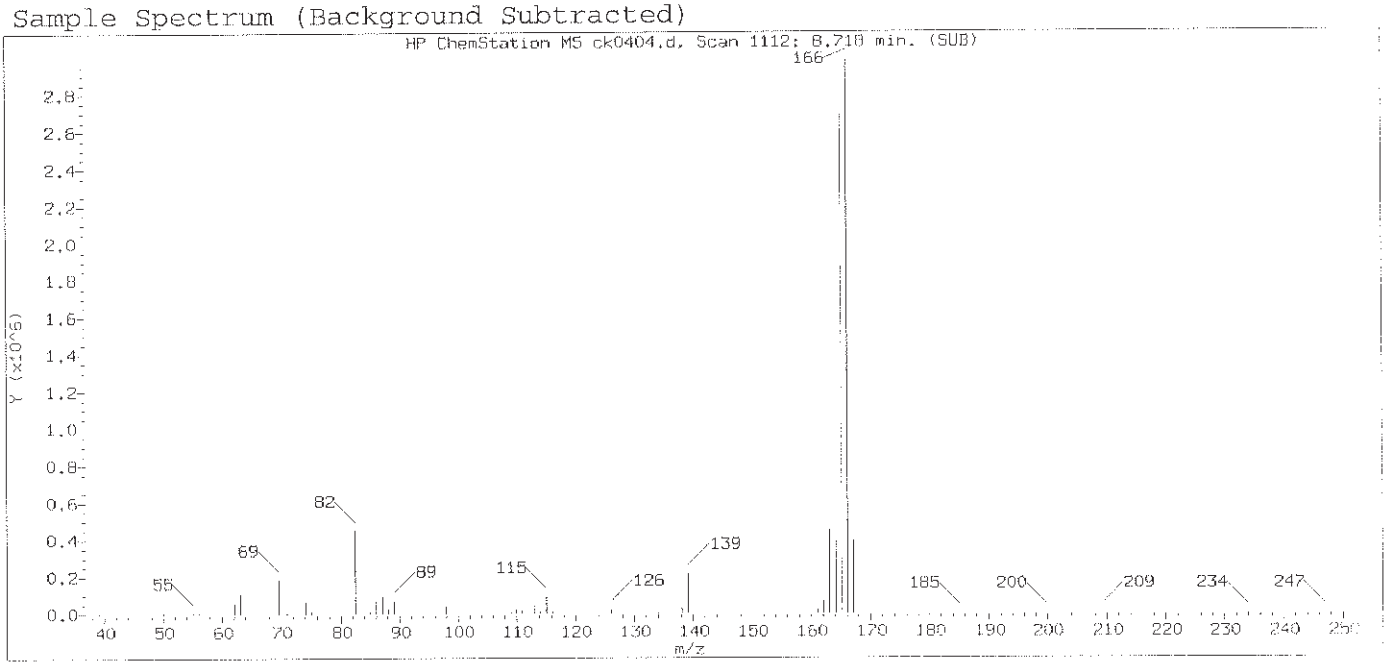
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

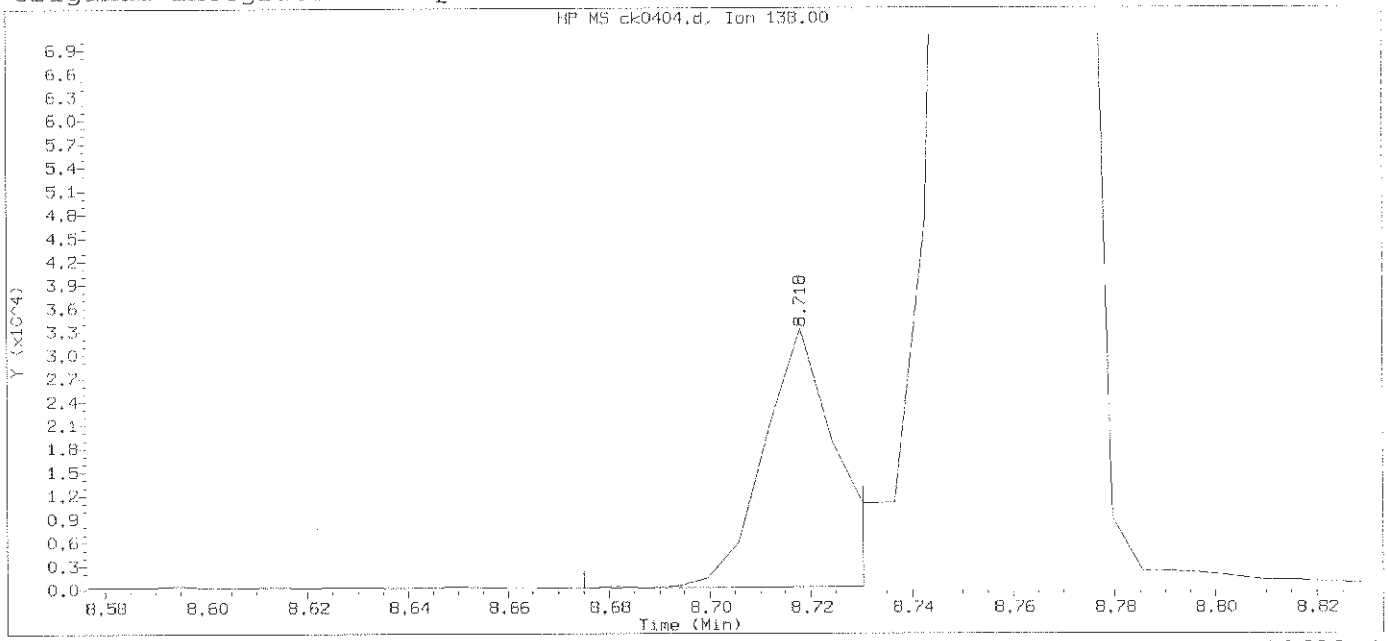
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 31386		
On-column Amount (ng/ul)	: 7.6452		
Integration start scan	: 1104	Integration stop scan:	1113
Y at integration start	: 168	Y at integration end:	267

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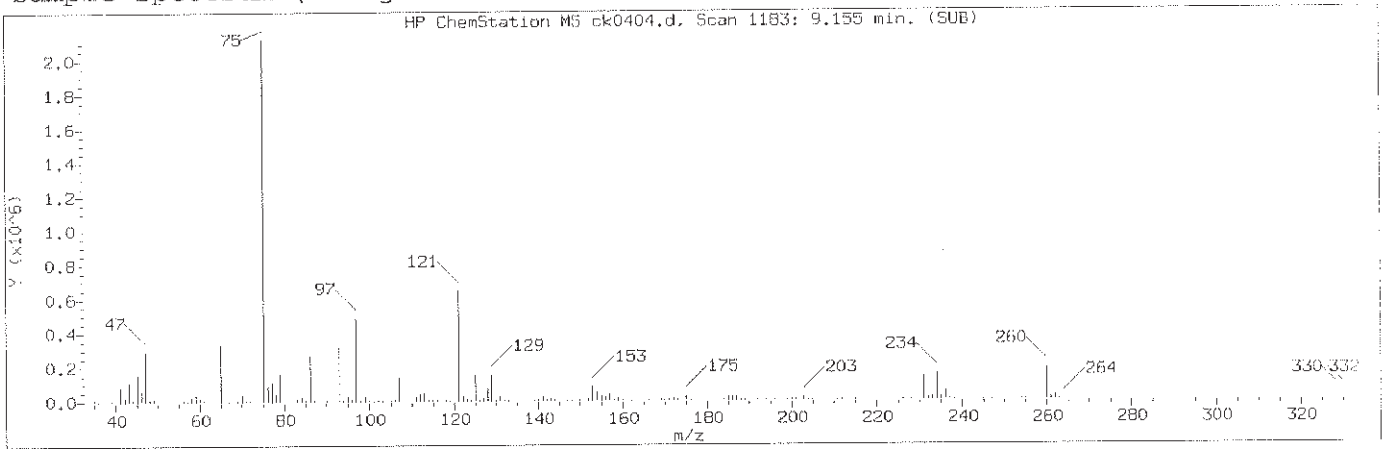
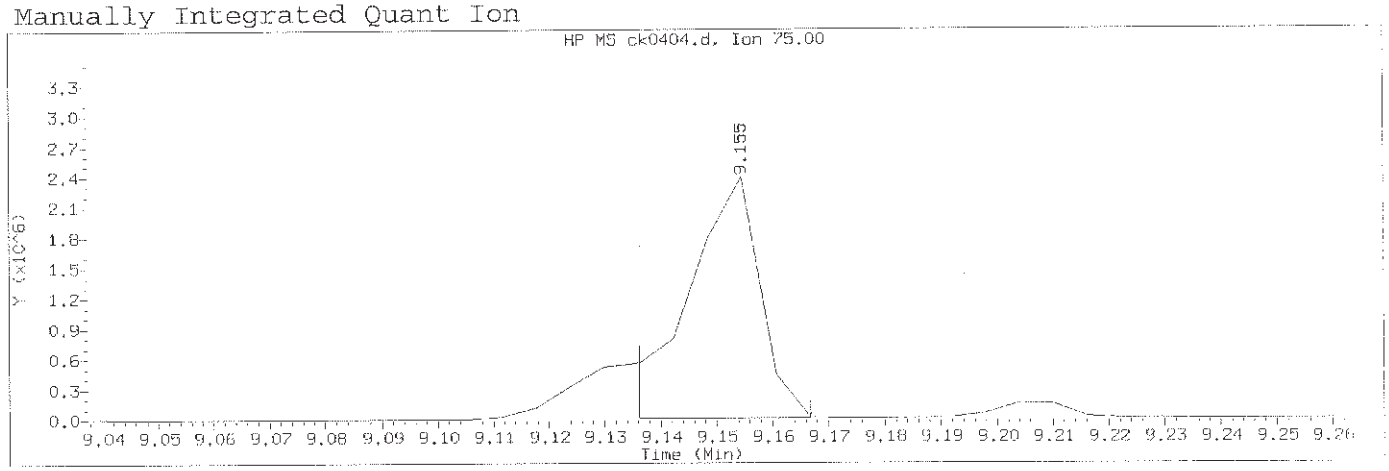
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area (flag)	: 2188290M		
On-Column Amount (ng/ul)	: 139.5603		
Integration start scan	: 1179	Integration stop scan:	1184
Y at integration start	: 4307	Y at integration end:	4307

Reason for manual integration: improper integration

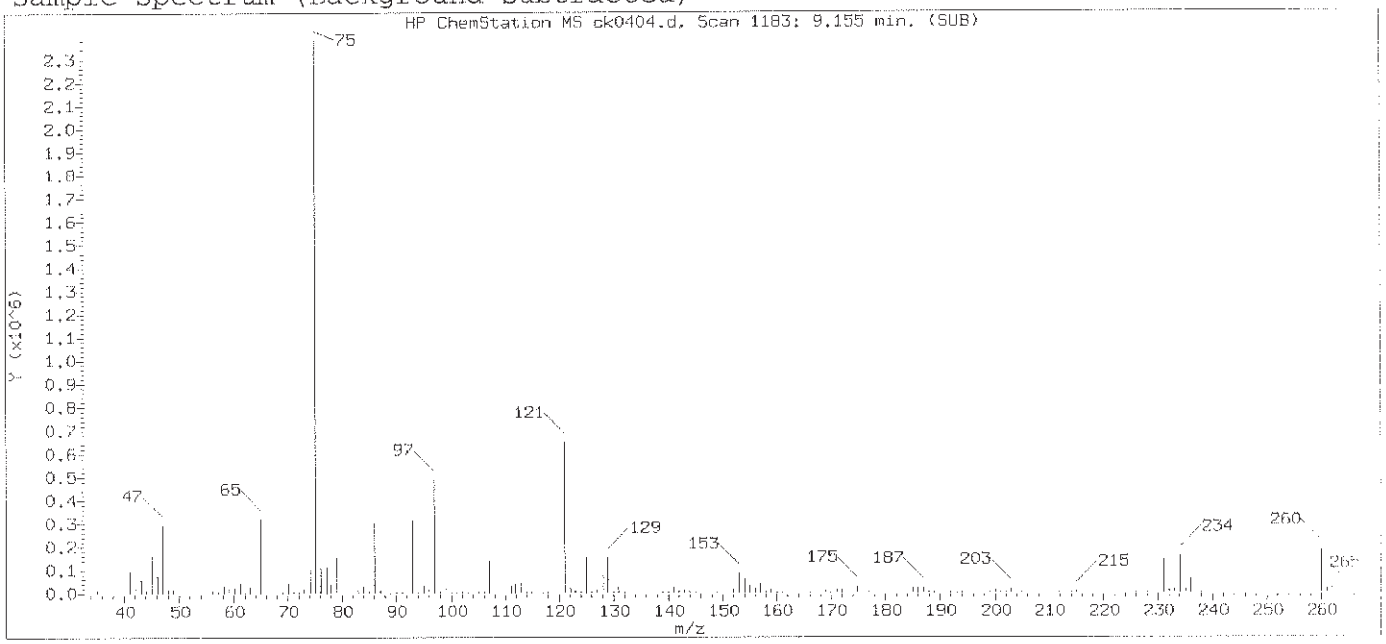
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

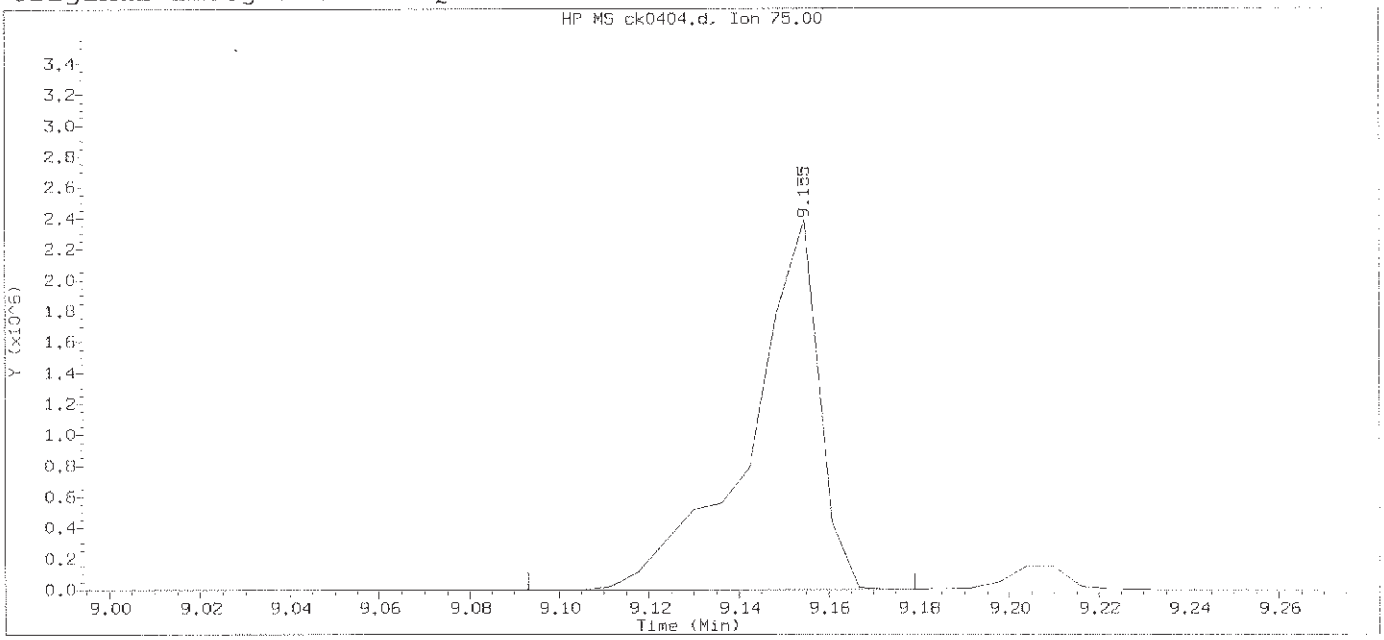
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 123		
Compound Name	: Phorate		
Scan Number	: 1183		
Retention Time (minutes)	: 9.155		
Quant Ion	: 75.00		
Area	: 2560723		
On-column Amount (ng/ul)	: 141.5560		
Integration start scan	: 1172	Integration stop scan:	1186
Y at integration start	: 303	Y at integration end:	371

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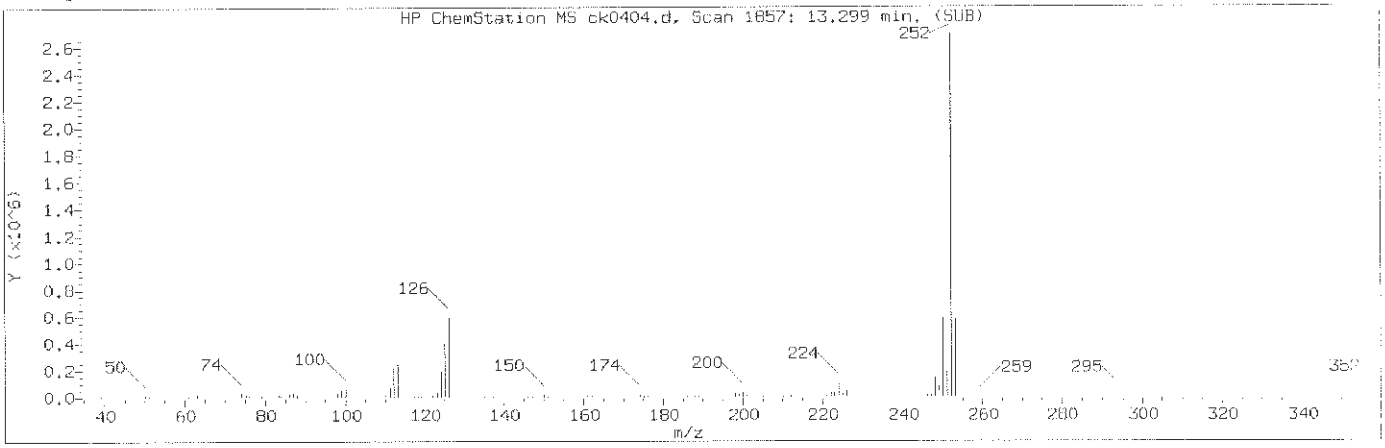
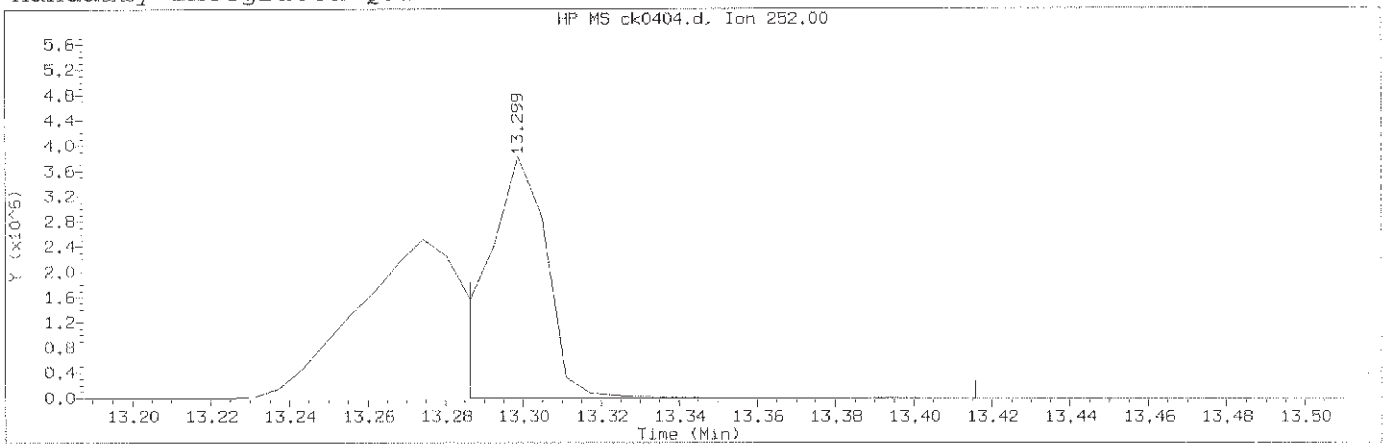
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1857		
Retention Time (minutes)	: 13.299		
Quant Ion	: 252.00		
Area (flag)	: 3864269A		
On-Column Amount (ng/ul)	: 114.9812		
Integration start scan	: 1854	Integration stop scan:	1875
Y at integration start	: 1274	Y at integration end:	1343

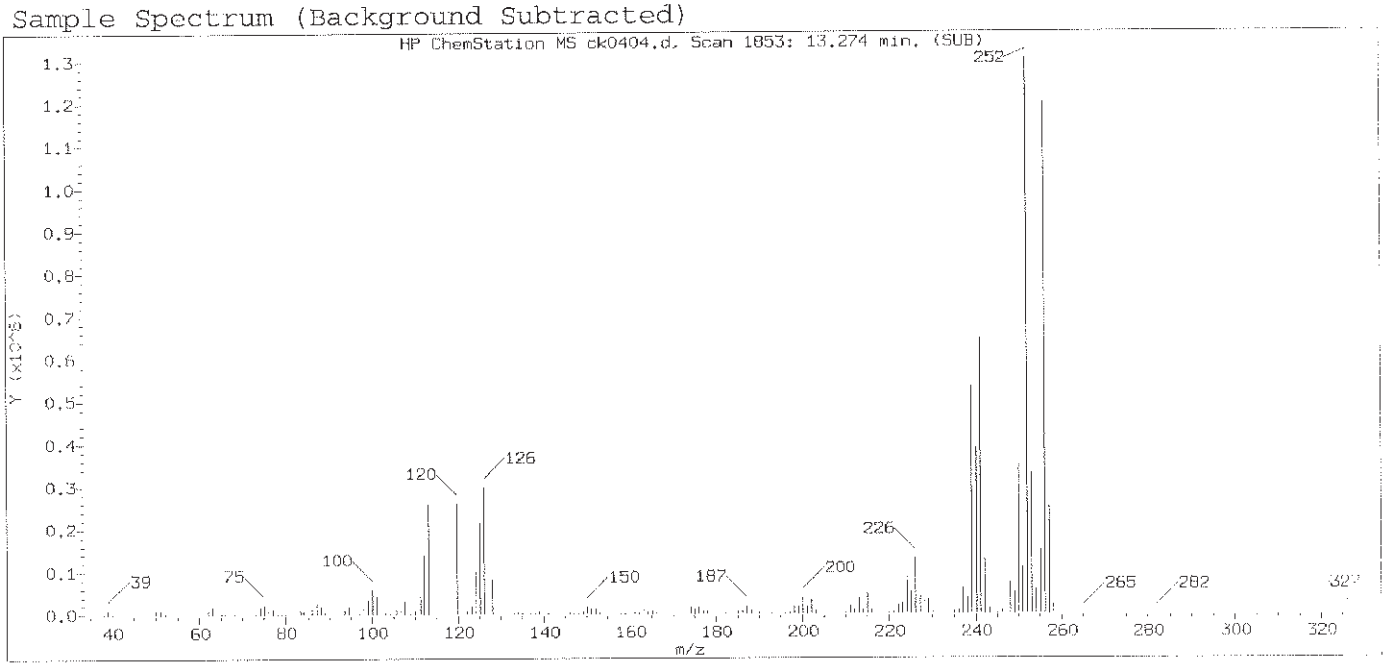
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:18.
Target 3.5 esignature user ID: mac00013

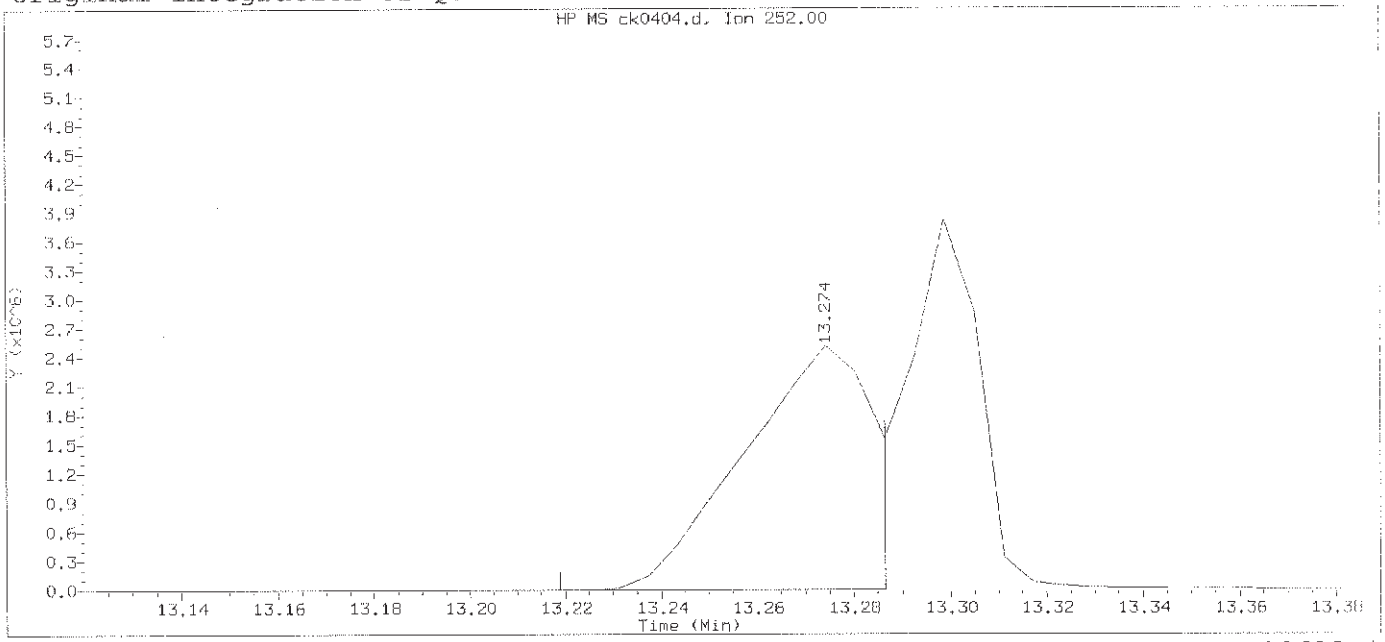
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0404.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 10:59 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:25
Date, time and analyst ID of latest file update: 12-Nov-2013 11:25 Automation

Sample Name: SSTD120 Lab Sample ID: STD3083

Compound Number	: 173		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 1853		
Retention Time (minutes)	: 13.274		
Quant Ion	: 252.00		
Area	: 4507467		
On-column Amount (ng/ul)	: 129.6726		
Integration start scan	: 1843	Integration stop scan:	1854
Y at integration start	: 180	Y at integration end:	1274

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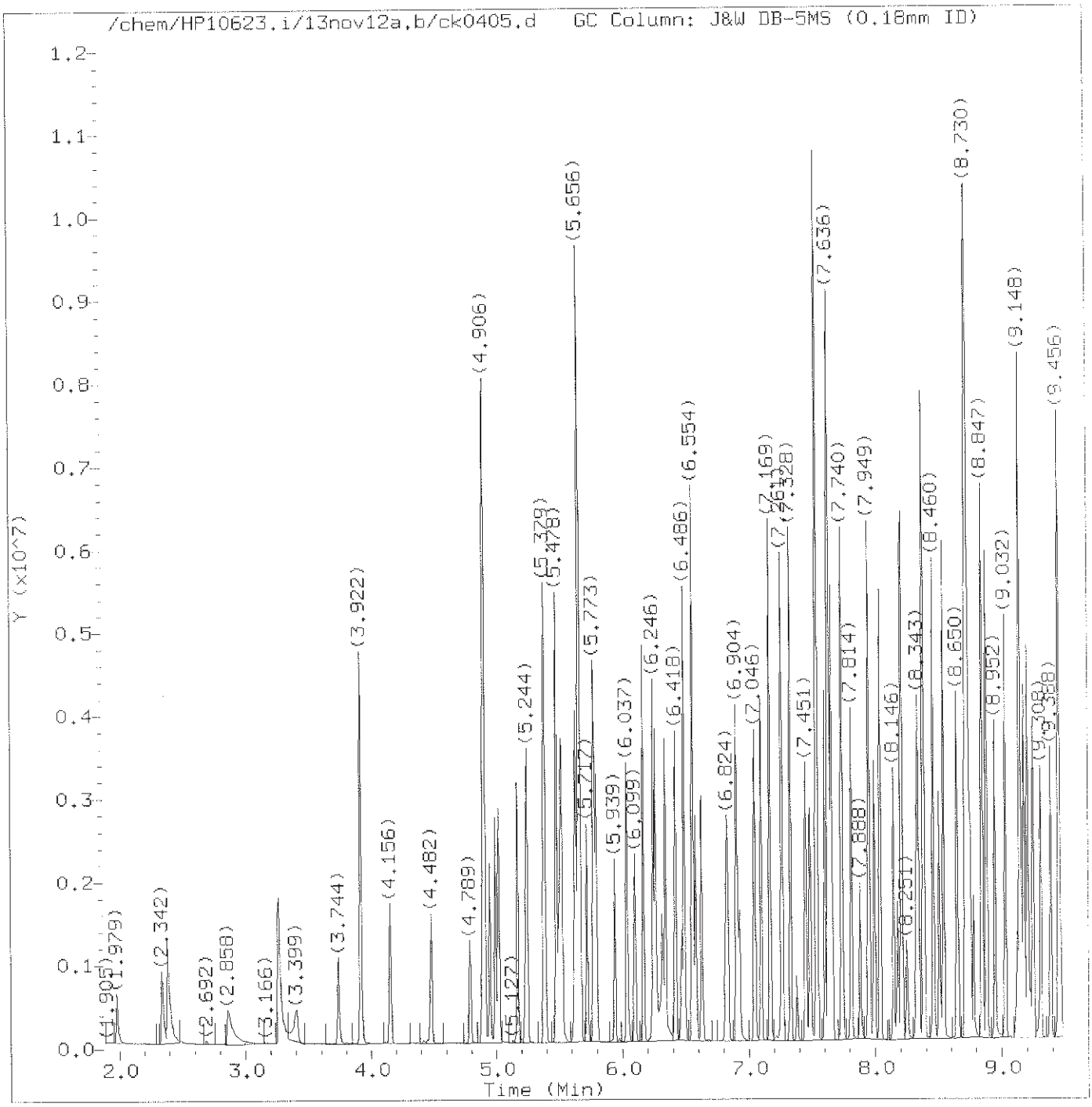
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

Sublist used: newall1

Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080

Lab Sample ID: STD3083

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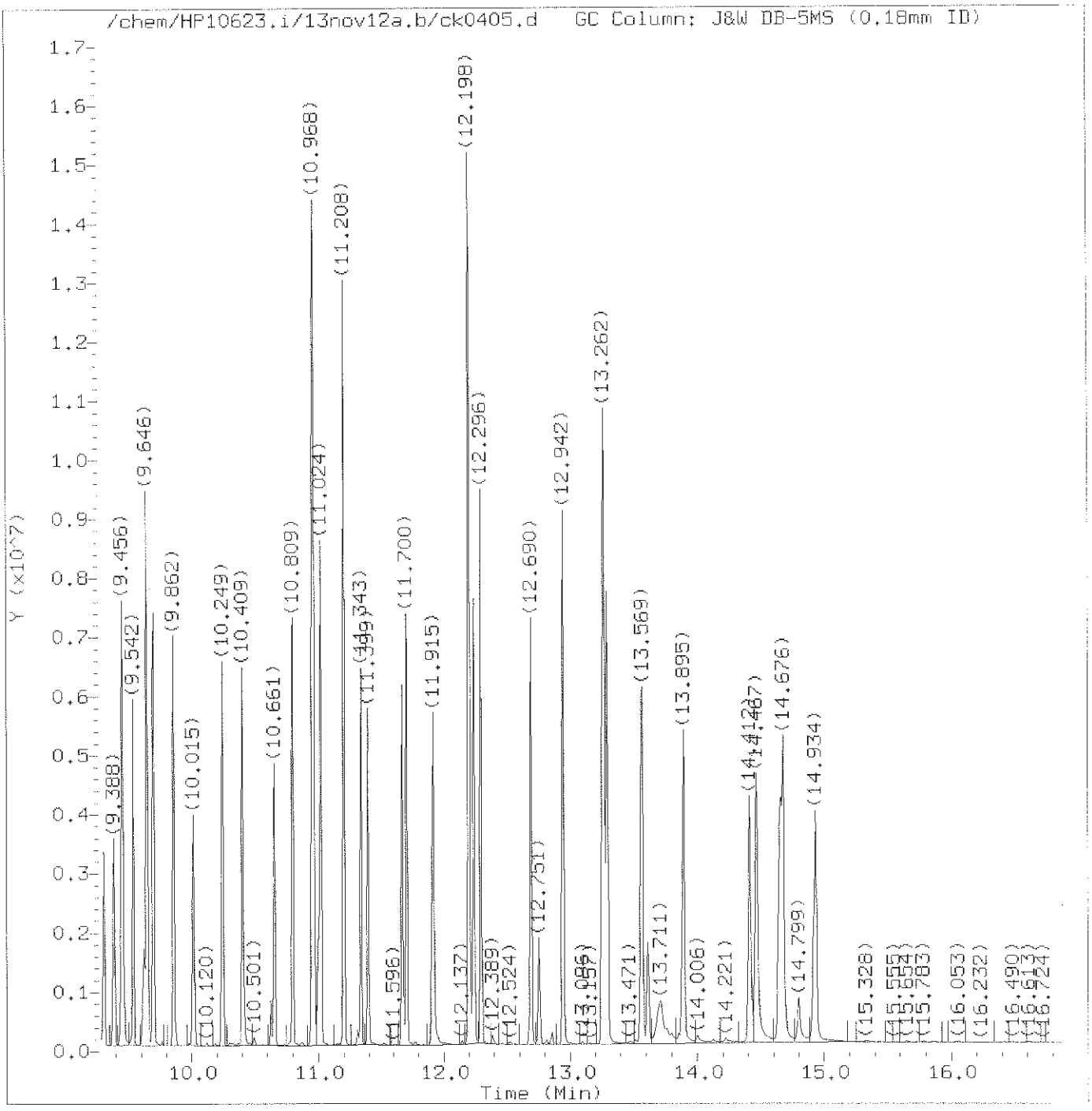
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d
Injection date and time: 12-NOV-2013 11:24
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.979	88	281181	76.529
2) N-Nitrosodimethylamine	(1)	2.342	74	526263	77.366
3) Pyridine	(1)	2.385	79	792242	75.125
5) 2-Picoline	(1)	3.264	93	846134	78.629
6) N-Nitrosomethylethylamine	(1)	3.406	88	392457	76.286
7) Methyl methanesulfonate	(1)	3.744	80	408117	78.900
9)$2-Fluorophenol	(1)	3.922	112	1326311	78.910
10) N-Nitrosodiethylamine	(1)	4.156	102	397609	77.798
11) Ethyl methanesulfonate	(1)	4.482	109	366459	78.740
12) Benzaldehyde	(1)	4.789	77	253926	49.188
15)$Phenol-d6	(1)	4.900	99	1980143	80.063
14)$Phenol-d5	(1)	4.900	99	1980143	80.063
13) Aniline	(1)	4.906	93	1337258	78.163
16) Phenol	(1)	4.912	94	1155237	80.072
18) bis(2-Chloroethyl)ether	(1)	4.992	93	807504	78.839
19) 2-Chlorophenol	(1)	5.016	128	690304	76.701
20) 1,3-Dichlorobenzene	(1)	5.170	146	699316	76.999
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	112327	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	722232	77.924
24) Benzyl alcohol	(1)	5.379	108	549362	78.068
25) 1,2-Dichlorobenzene	(1)	5.385	146	686313	78.889
206) Indene	(1)	5.478	115	1507198	77.558
26) 2-Methylphenol	(1)	5.496	108	746061	77.915
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	922722	73.209
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	922722	73.022
29) N-Nitrosopyrrolidine	(1)	5.619	100	456887	79.714
30) Acetophenone	(1)	5.631	105	1091072	76.426
31) N-Nitroso-di-n-propylamine	(1)	5.656	70	710750	77.780
33) 4-Methylphenol	(1)	5.656	108	897917	79.224
32) N-Nitrosomorpholine	(1)	5.662	56	505445	77.627
34) o-Toluidine	(1)	5.668	106	1294141	79.137
37) Hexachloroethane	(1)	5.717	117	280321	79.466
38)$Nitrobenzene-d5	(2)	5.773	82	1806874	80.618
39) Nitrobenzene	(2)	5.791	77	933654	78.546
40) N-Nitrosopiperidine	(2)	5.939	114	410601	77.866
41) Isophorone	(2)	6.037	82	1658048	76.819
42) 2-Nitrophenol	(2)	6.099	139	346841	83.935
44) 2,4-Dimethylphenol	(2)	6.166	107	825621	77.734
45) O,O,O-triethylphosphorothioate	(2)	6.246	198	344888	77.880
46) bis(2-Chloroethoxy)methane	(2)	6.265	93	956471	72.931

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.314	105	599358	87.062
49) 2,4-Dichlorophenol	(2)	6.338	162	575693	79.700
50) 1,2,4-Trichlorobenzene	(2)	6.418	180	603920	79.376
52)*Naphthalene-d8	(2)	6.468	136	520142	20.000
53) Naphthalene	(2)	6.486	128	2159412	78.247
56) 4-Chloroaniline	(2)	6.554	127	924260	76.854
57) 2,6-Dichlorophenol	(2)	6.560	162	546772	80.368
58) Hexachloropropene	(2)	6.578	213	351856	81.772
60) Hexachlorobutadiene	(2)	6.627	225	293503	76.914
194) Quinoline	(2)	6.824	129	1485361	78.084
64) N-Nitrosodi-n-butylamine	(2)	6.904	84	840875M	77.759
63) Caprolactam	(2)	6.929	113	309471	77.340
68) 4-Chloro-3-methylphenol	(2)	7.046	107	723316	78.326
69) Safrole	(2)	7.101	162	583874	79.870
70) 2-Methylnaphthalene	(2)	7.169	142	1544243	78.847
71) 1-Methylnaphthalene	(2)	7.261	142	1403778	78.330
72) Hexachlorocyclopentadiene	(3)	7.328	237	273349	84.525
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.335	216	594507	79.439
74) cis-Isosafrole	(3)	7.378	162	104845	8.726
75) 2,4,6-Trichlorophenol	(3)	7.451	196	398034	81.513
77) 2,4,5-Trichlorophenol	(3)	7.488	196	432400	81.216
78)$2-Fluorobiphenyl	(3)	7.537	172	3151873	79.886
79) trans-Isosafrole	(3)	7.605	162	602210	70.801
80) Isosafrole	(3)	7.605	162	602210	79.552
83) 1,1'-Biphenyl	(3)	7.630	154	1889884	77.746
84) 2-Chloronaphthalene	(3)	7.642	162	1272028	71.841
85) 1-Chloronaphthalene	(3)	7.660	162	1438178	82.533
88) Diphenyl ether	(3)	7.740	170	968050	79.945
89) 2-Nitroaniline	(3)	7.747	138	486166	84.166
90) 1,4-Naphthoquinone	(3)	7.814	158	602381	80.843
91) 1,4-Dinitrobenzene	(3)	7.888	168	208338	81.268
92) Dimethylphthalate	(3)	7.949	163	1640838	77.883
93) 1,3-Dinitrobenzene	(3)	7.956	168	276083	80.612
94) 2,6-Dinitrotoluene	(3)	7.992	165	382521	87.174
95) Acenaphthylene	(3)	8.042	152	2185431	79.061
97) 3-Nitroaniline	(3)	8.146	138	450027	83.985
98)*Acenaphthene-d10	(3)	8.177	164	313745	20.000
99) Acenaphthene	(3)	8.214	153	1519712	79.438
100) 2,4-Dinitrophenol	(3)	8.251	184	139143	83.369
103) 4-Nitrophenol	(3)	8.324	109	277003	83.446

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.343	250	510240	78.899
104) Dibenzofuran	(3)	8.380	168	2048915	78.185
105) 2,4-Dinitrotoluene	(3)	8.386	165	493436	87.020
106) 1-Naphthylamine	(3)	8.460	143	1717735	79.770
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	315577	84.149
108) 2-Naphthylamine	(3)	8.540	143	1756792	79.737
109) Diethylphthalate	(3)	8.650	149	1713932	78.754
111) Fluorene	(3)	8.718	166	1805820	80.088
110) Thionazin	(3)	8.724	107	394432	82.178
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	774921	77.254
113) 5-Nitro-o-toluidine	(3)	8.736	152	512412	86.072
114) 4-Nitroaniline	(3)	8.755	138	480197A	79.691
115) 4,6-Dinitro-2-methylphenol	(4)	8.779	198	212223	81.017
117) N-Nitrosodiphenylamine	(4)	8.847	169	1545231	80.860
202) NDPA as diphenylamine	(4)	8.847	169	1545231	80.668
118) 1,2-Diphenylhydrazine	(4)	8.884	77	2214620	80.902
119)$2,4,6-Tribromophenol	(3)	8.952	330	305668	80.665
120) Tetraethyldithiopyrophosphate	(4)	9.032	97	311247	79.775
121) 1,3,5-Trinitrobenzene	(4)	9.124	213	148089	80.524
122) Diallate (peak 1)	(4)	9.142	86	838932	59.891
123) Phorate	(4)	9.148	75	1320107	78.272
124) Phenacetin	(4)	9.179	108	1059132	80.196
125) 4-Bromophenyl-phenylether	(4)	9.204	248	415056	78.826
126) Diallate (peak 2)	(4)	9.222	86	120701	19.842
127) Hexachlorobenzene	(4)	9.247	284	399087	76.766
128) Dimethoate	(4)	9.308	87	811304	78.666
130) Atrazine	(4)	9.388	200	337054	55.052
131) Pentachlorophenol	(4)	9.444	266	250563	86.903
133) 4-Aminobiphenyl	(4)	9.456	169	1441837	69.775
132) Pentachloronitrobenzene	(4)	9.462	237	186794	82.769
134) Pronamide	(4)	9.542	173	799280	80.245
135)*Phenanthrene-d10	(4)	9.622	188	570162	20.000
136) Dinoseb	(4)	9.646	211	300325	79.513
137) Phenanthrene	(4)	9.646	178	2639762	79.625
138) Anthracene	(4)	9.702	178	2768162	81.116
140) Carbazole	(4)	9.862	167	2667080M	80.090
141) Methyl parathion	(4)	10.015	109	551286	79.407
142) Di-n-butylphthalate	(4)	10.249	149	3117913	79.355
143) Parathion	(4)	10.403	109	399671	78.277
144) 4-Nitroquinoline-1-oxide	(4)	10.409	190	226513	79.164

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	289534	77.281
147) Fluoranthene	(4)	10.809	202	3034613	81.862
152) Benzidine	(5)	10.968	184	6860438	233.099
167)*Pyrene-d10	(5)	11.005	212	718943	20.000
154) Pyrene	(5)	11.024	202	3164835	79.269
156)$Terphenyl-d14	(5)	11.208	244	4103351	79.827
158) p-Dimethylaminoazobenzene	(5)	11.343	225	627493	80.647
159) Chlorobenzilate	(5)	11.399	139	983807	81.281
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	1904833	77.410
161) Butylbenzylphthalate	(5)	11.700	149	1505314	79.008
162) 2-Acetylaminofluorene	(5)	11.915	181	1436051	83.225
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	1085409	78.185
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.204	231	552444	81.460
166) Benzo(a)anthracene	(5)	12.204	228	2979223	80.902
168) Chrysene	(5)	12.241	228	2792548	78.652
169) bis(2-Ethylhexyl)phthalate	(5)	12.296	149	2103634	79.578
189) 6-Methylchrysene	(5)	12.690	242	2073310	79.141
170) Di-n-octylphthalate	(6)	12.942	149	3723181	82.851
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.262	256	1431376	84.729
172) Benzo(b)fluoranthene	(6)	13.268	252	3241098	89.152
173) Benzo(k)fluoranthene	(6)	13.293	252	2795956	75.384
174) Benzo(a)pyrene	(6)	13.569	252	2808536	79.153
175)*Perylene-d12	(6)	13.612	264	595376	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	1423346	80.030
190) Dibenz(a,h)acridine	(6)	14.412	279	2095938	81.310
191) Dibenz(a,j)acridine	(6)	14.467	279	2321827	78.329
177) Indeno(1,2,3-cd)pyrene	(6)	14.651	276	3001656	79.512
178) Dibenz(a,h)anthracene	(6)	14.676	278	2512295	79.560
179) Benzo(g,h,i)perylene	(6)	14.934	276	2483886	77.234
129) Diallate TRANS/CIS	(4)			959633	79.793

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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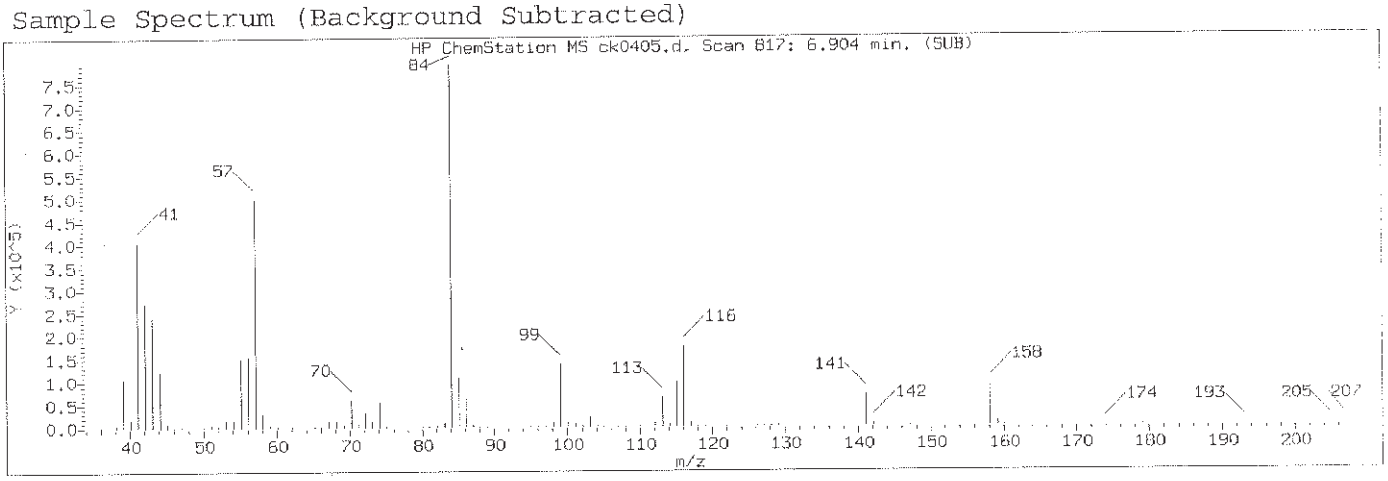
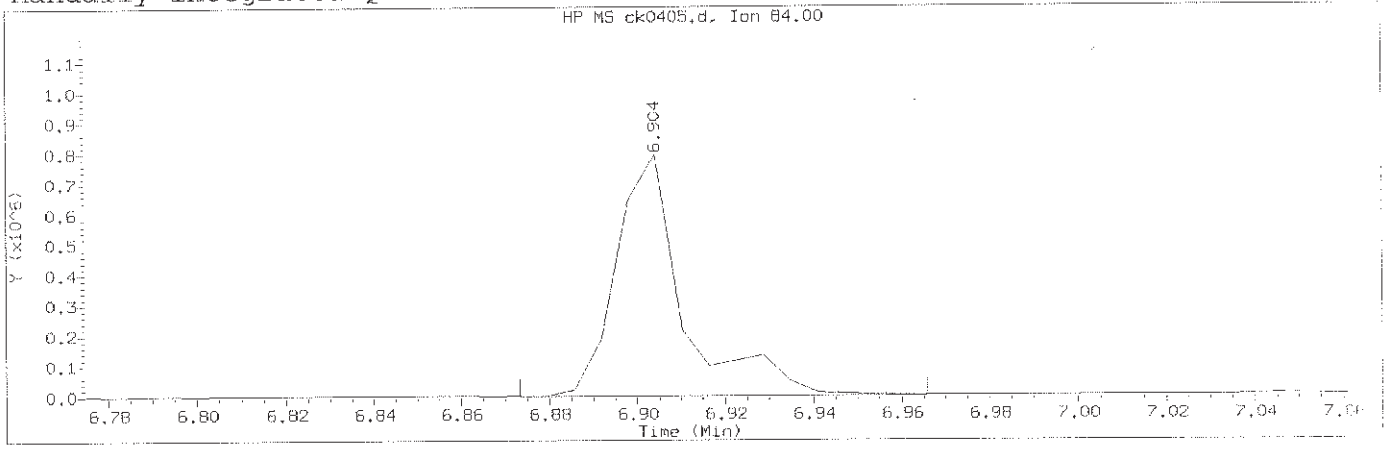
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area (flag)	: 840875M		
On-Column Amount (ng/ul)	: 77.7594		
Integration start scan	: 811	Integration stop scan:	826
Y at integration start	: 845	Y at integration end:	845

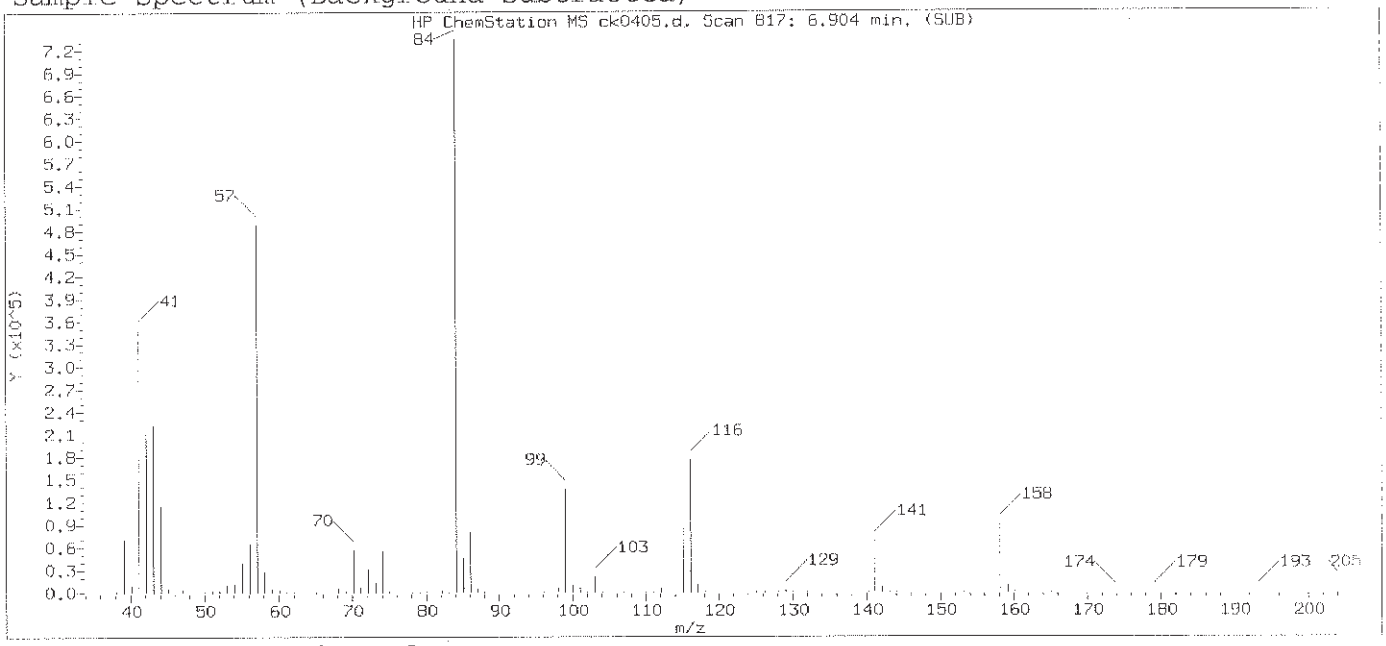
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

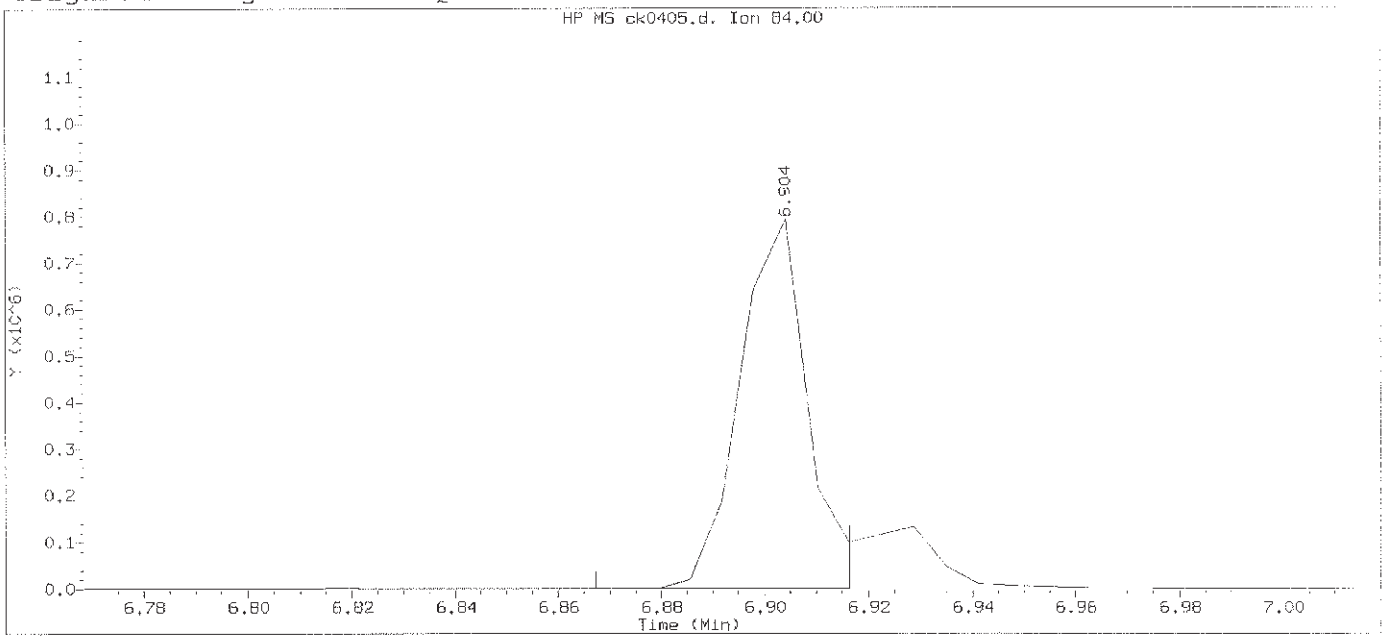
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 64		
Compound Name	: N-Nitrosodi-n-butylamine		
Scan Number	: 817		
Retention Time (minutes)	: 6.904		
Quant Ion	: 84.00		
Area	: 703670		
On-column Amount (ng/ul)	: 72.6904		
Integration start scan	: 810	Integration stop scan:	818
Y at integration start	: 854	Y at integration end:	854

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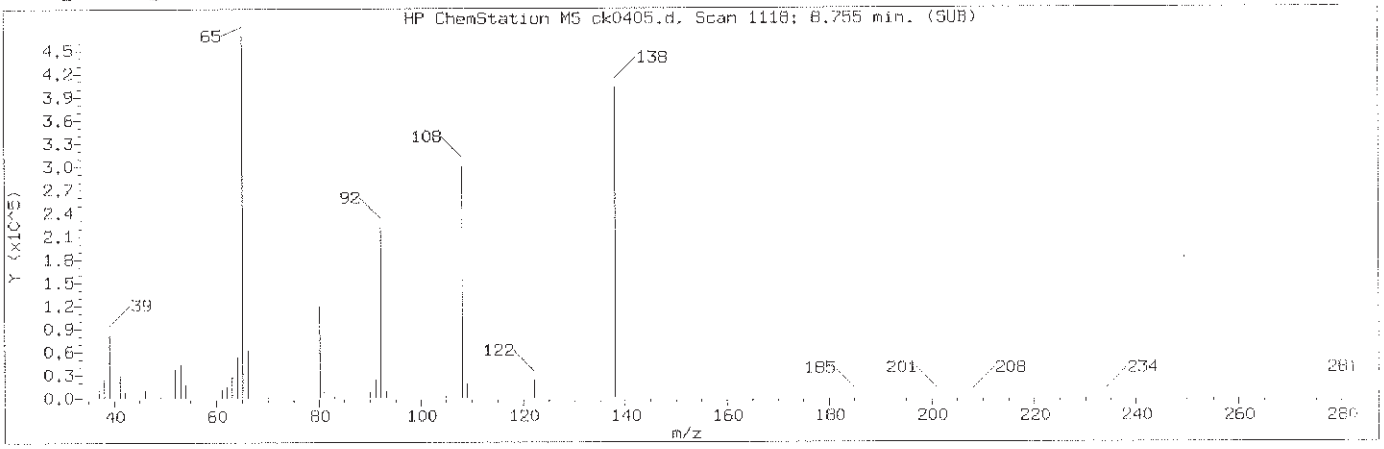
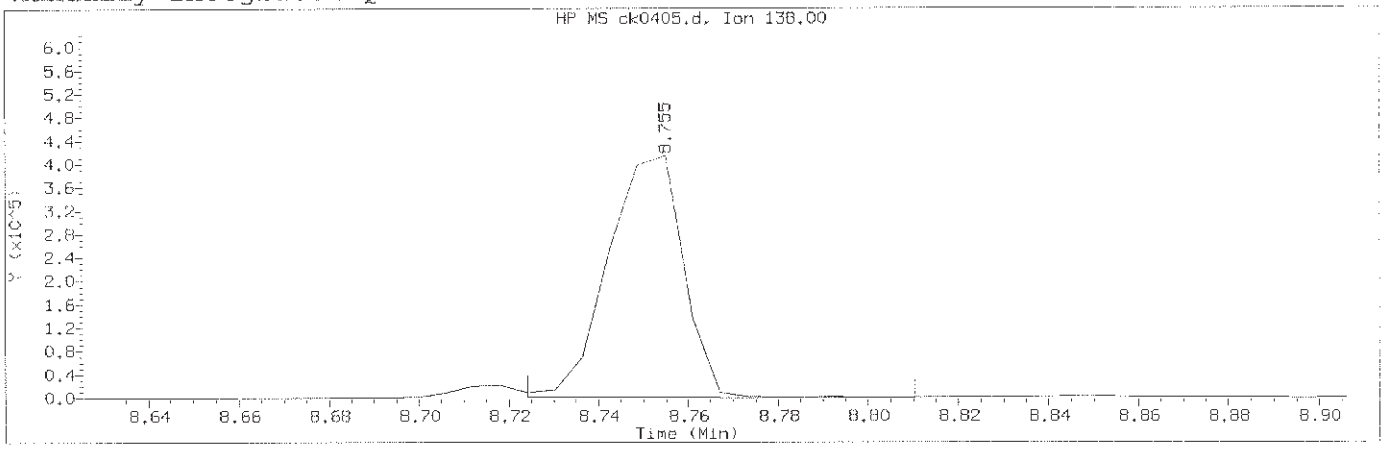
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1118		
Retention Time (minutes)	: 8.755		
Quant Ion	: 138.00		
Area (flag)	: 480197A		
On-Column Amount (ng/ul)	: 79.6911		
Integration start scan	: 1112	Integration stop scan:	1126
Y at integration start	: 499	Y at integration end:	477

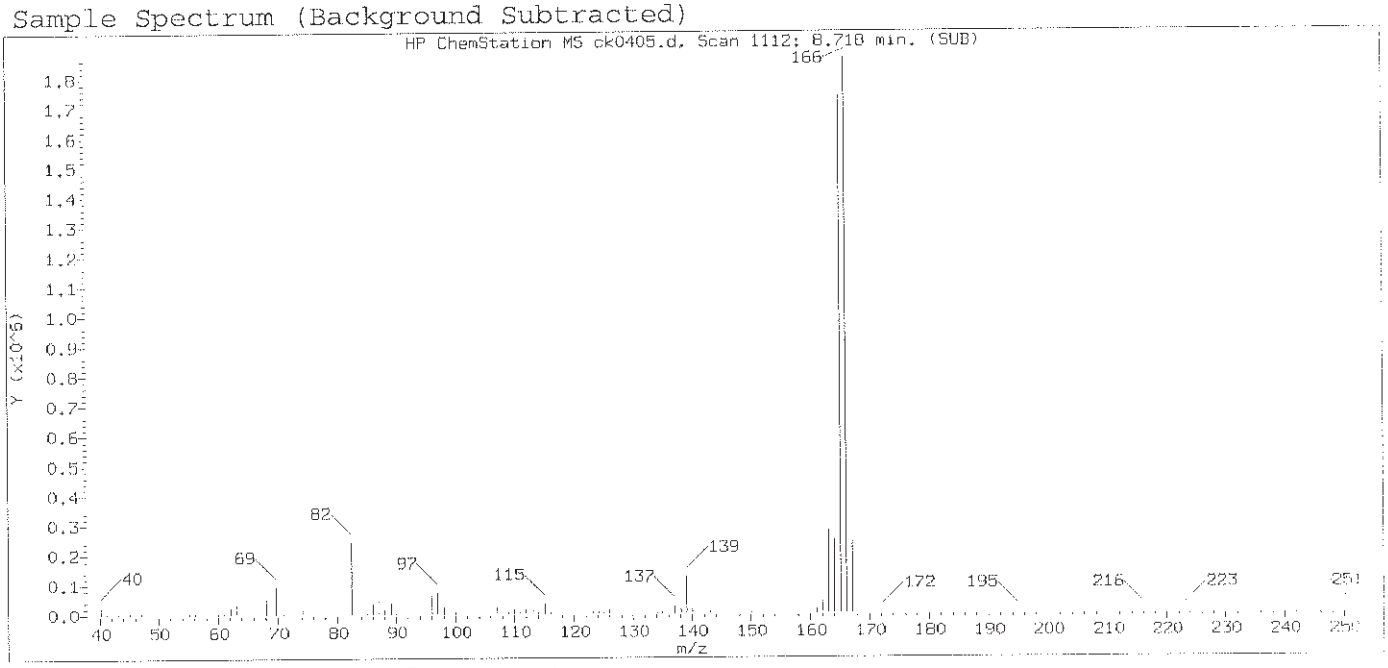
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 signature user ID: mac00013

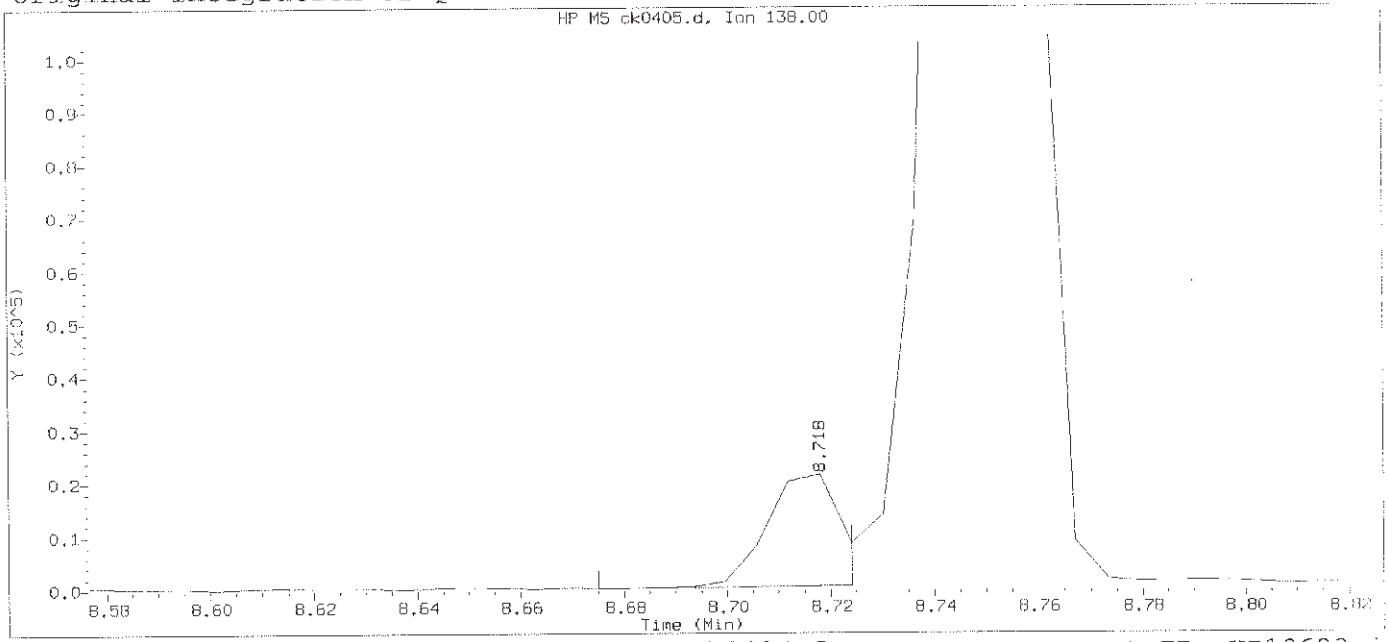
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 114		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1112		
Retention Time (minutes)	: 8.718		
Quant Ion	: 138.00		
Area	: 19974		
On-column Amount (ng/ul)	: 6.0101		
Integration start scan	: 1104	Integration stop scan:	1112
Y at integration start	: 161	Y at integration end:	499

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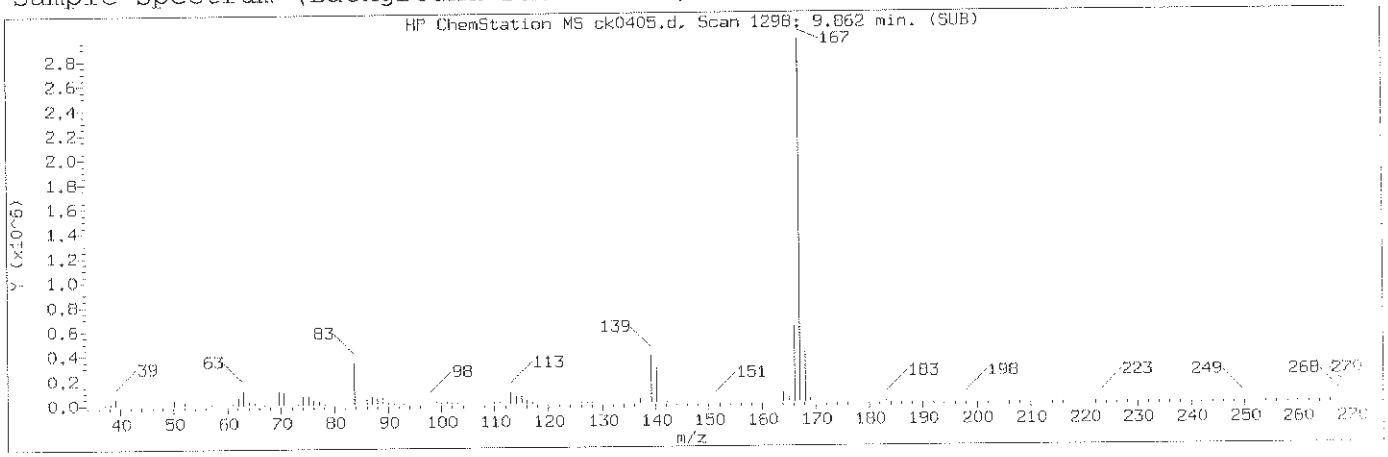
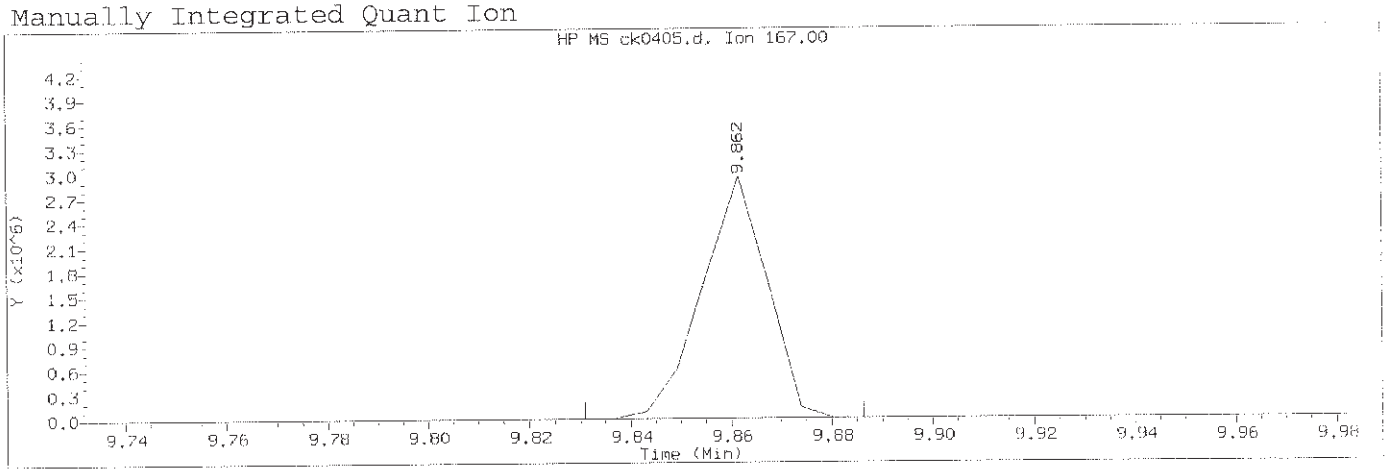
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 13-Nov-2013 00:50 mac00013

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area (flag)	: 2667080M		
On-Column Amount (ng/ul)	: 80.0900		
Integration start scan	: 1292	Integration stop scan:	1301
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

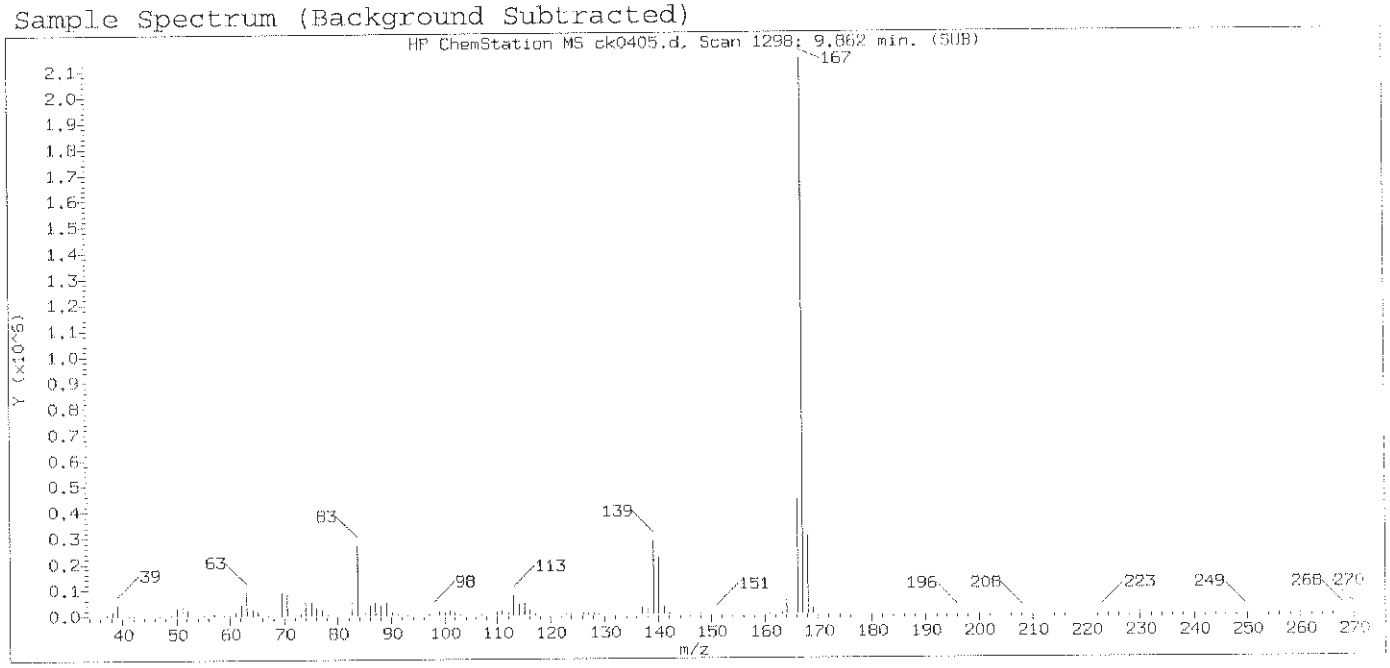
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

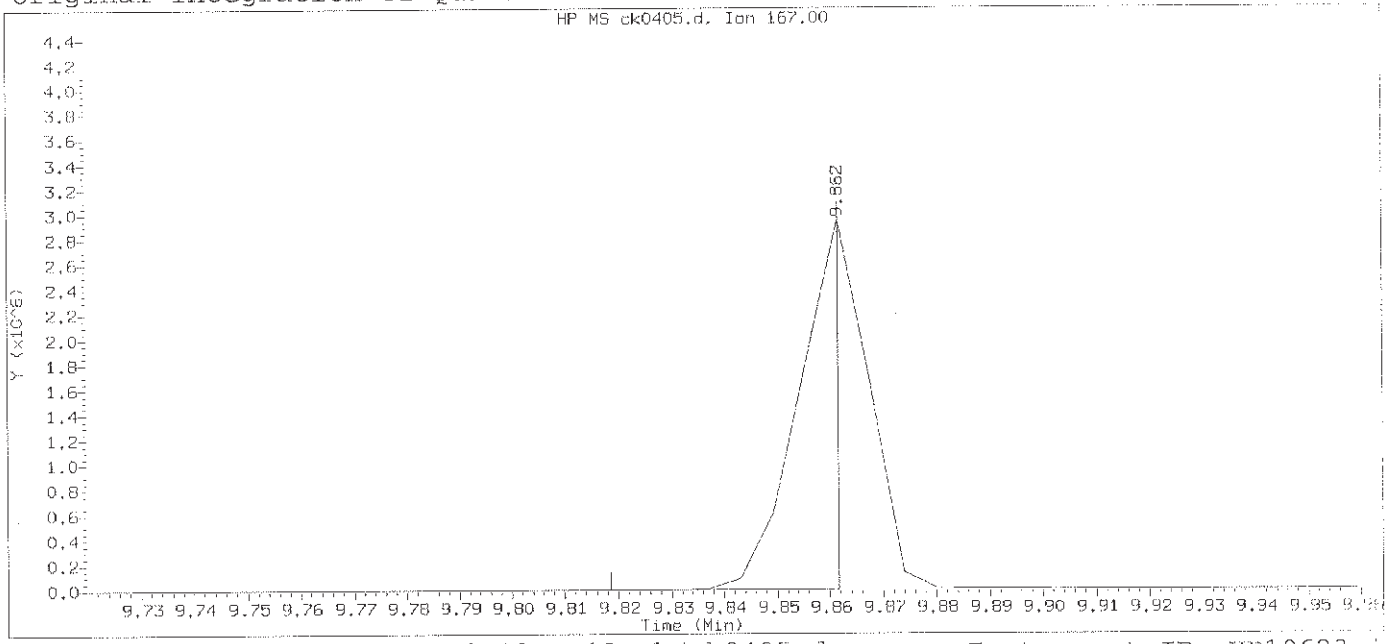
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0405.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:24 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 11:50
Date, time and analyst ID of latest file update: 12-Nov-2013 11:50 Automation

Sample Name: SSTD080 Lab Sample ID: STD3083

Compound Number	: 140		
Compound Name	: Carbazole		
Scan Number	: 1298		
Retention Time (minutes)	: 9.862		
Quant Ion	: 167.00		
Area	: 1465822		
On-column Amount (ng/ul)	: 49.2155		
Integration start scan	: 1290	Integration stop scan:	1297
Y at integration start	: 272	Y at integration end:	255

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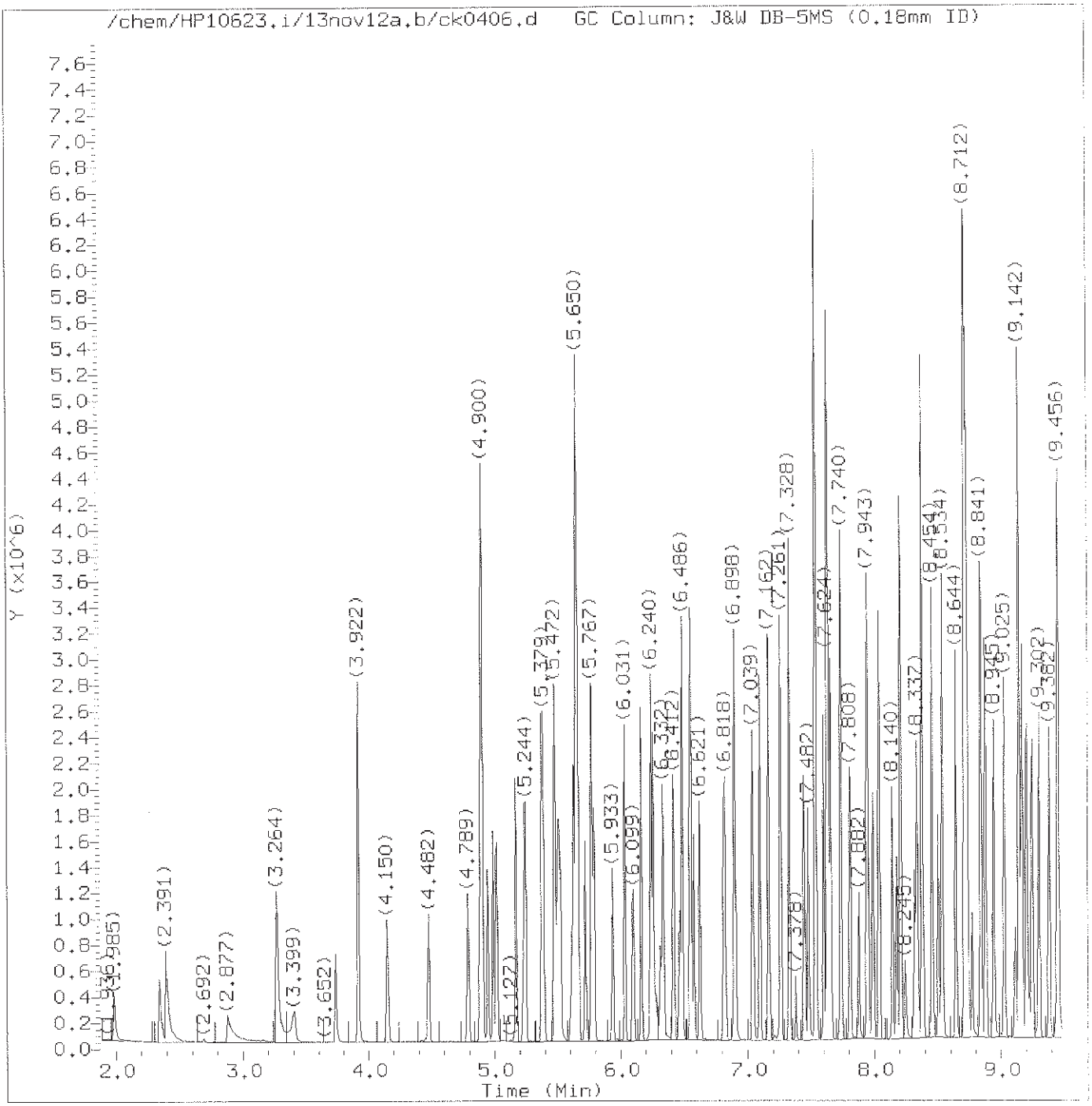
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

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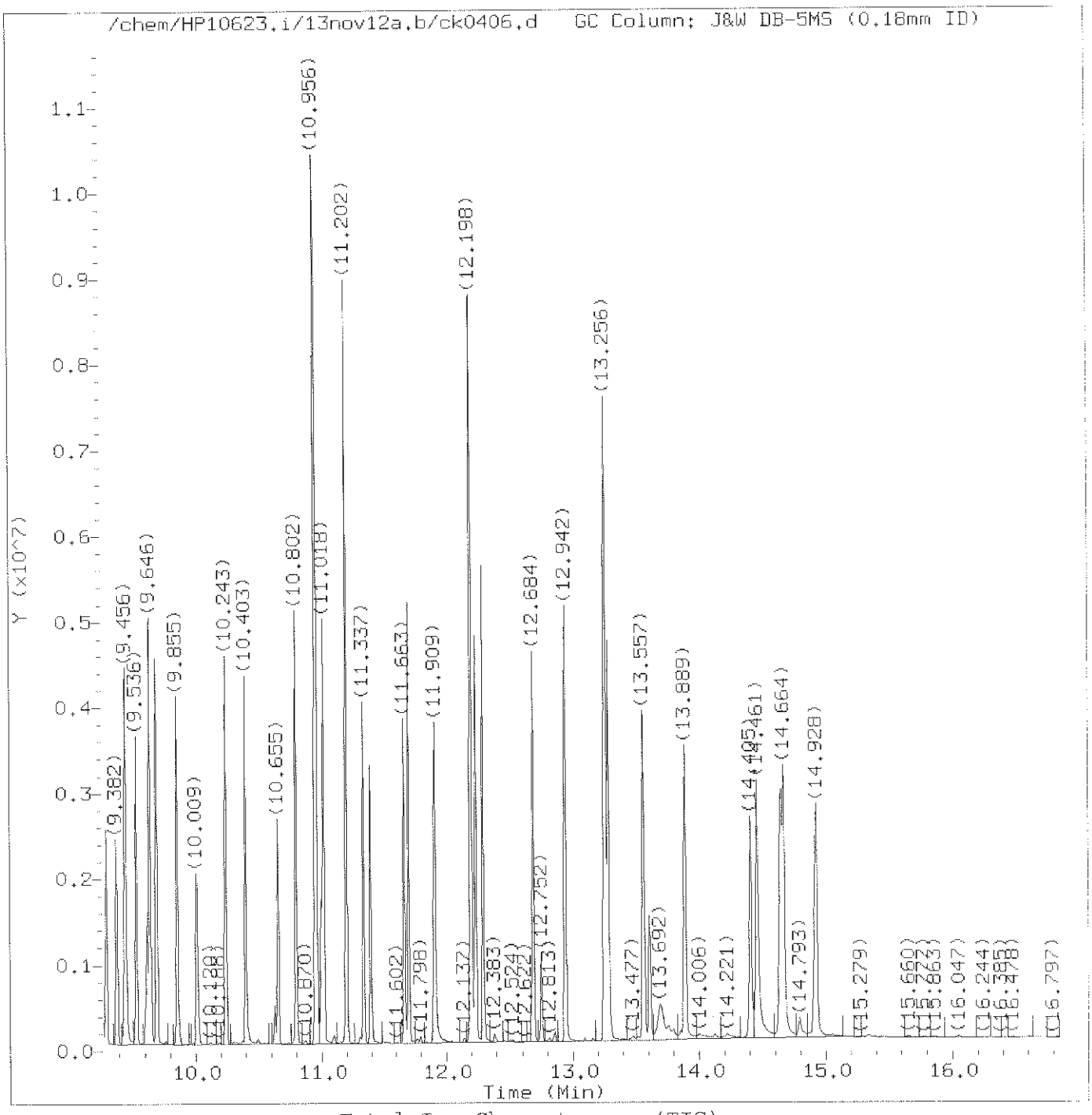
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

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on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	166551	52.372
2) N-Nitrosodimethylamine	(1)	2.342	74	307336	52.200
3) Pyridine	(1)	2.391	79	452230	49.545
5) 2-Picoline	(1)	3.264	93	489961	52.604
6) N-Nitrosomethylethylamine	(1)	3.406	88	227025	50.985
7) Methyl methanesulfonate	(1)	3.738	80	236107	52.737
9)$2-Fluorophenol	(1)	3.922	112	764649	52.560
10) N-Nitrosodiethylamine	(1)	4.150	102	227481	51.424
11) Ethyl methanesulfonate	(1)	4.482	109	211788	52.575
12) Benzaldehyde	(1)	4.789	77	228131	38.119
15)$Phenol-d6	(1)	4.894	99	1127988	52.693
14)$Phenol-d5	(1)	4.894	99	1127988	52.693
13) Aniline	(1)	4.900	93	764549	51.630
16) Phenol	(1)	4.906	94	659733	52.831
18) bis(2-Chloroethyl)ether	(1)	4.986	93	451188	50.894
19) 2-Chlorophenol	(1)	5.017	128	399173	51.243
20) 1,3-Dichlorobenzene	(1)	5.164	146	412147	52.429
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	97224	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	418970	52.226
24) Benzyl alcohol	(1)	5.373	108	314851	51.693
25) 1,2-Dichlorobenzene	(1)	5.385	146	396306	52.630
206) Indene	(1)	5.478	115	854997	50.831
26) 2-Methylphenol	(1)	5.502	108	433232	52.273
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	536609	49.188
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	536609	49.063
29) N-Nitrosopyrrolidine	(1)	5.607	100	261876	52.787
30) Acetophenone	(1)	5.631	105	628772	50.885
31) N-Nitroso-di-n-propylamine	(1)	5.650	70	400514	50.638
32) N-Nitrosomorpholine	(1)	5.650	56	288826	51.249
33) 4-Methylphenol	(1)	5.650	108	515642	52.563
34) o-Toluidine	(1)	5.662	106	736166	52.010
37) Hexachloroethane	(1)	5.717	117	159722	52.312
38)$Nitrobenzene-d5	(2)	5.767	82	1021292	52.453
39) Nitrobenzene	(2)	5.785	77	535338	51.842
40) N-Nitrosopiperidine	(2)	5.933	114	237648	51.878
41) Isophorone	(2)	6.031	82	956779	51.027
42) 2-Nitrophenol	(2)	6.099	139	194388	54.151
44) 2,4-Dimethylphenol	(2)	6.160	107	475375	51.521
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	204800	53.235
46) bis(2-Chloroethoxy)methane	(2)	6.259	93	583002	51.172

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d
Injection date and time: 12-NOV-2013 11:49
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.277	105	282383	47.217
49) 2,4-Dichlorophenol	(2)	6.332	162	335715	53.501
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	353203	53.438
52)*Naphthalene-d8	(2)	6.468	136	451858	20.000
53) Naphthalene	(2)	6.486	128	1256553	52.412
56) 4-Chloroaniline	(2)	6.548	127	540774	51.761
57) 2,6-Dichlorophenol	(2)	6.554	162	316418	53.538
58) Hexachloropropene	(2)	6.578	213	201839	53.996
60) Hexachlorobutadiene	(2)	6.621	225	175136	52.831
194) Quinoline	(2)	6.818	129	870592	52.682
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	486968	57.388
63) Caprolactam	(2)	6.904	113	177327	51.013
68) 4-Chloro-3-methylphenol	(2)	7.039	107	419009	52.230
69) Safrole	(2)	7.095	162	337185	53.095
70) 2-Methylnaphthalene	(2)	7.169	142	888217	52.204
71) 1-Methylnaphthalene	(2)	7.261	142	819117	52.614
72) Hexachlorocyclopentadiene	(3)	7.328	237	155608	54.704
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	350871	53.302
74) cis-Isosafrole	(3)	7.378	162	61911	5.858
75) 2,4,6-Trichlorophenol	(3)	7.445	196	231921	53.996
77) 2,4,5-Trichlorophenol	(3)	7.482	196	258422	55.183
78)$2-Fluorobiphenyl	(3)	7.537	172	1845614	53.181
79) trans-Isosafrole	(3)	7.599	162	352507	47.117
80) Isosafrole	(3)	7.599	162	352507	52.940
83) 1,1'-Biphenyl	(3)	7.630	154	1086550	50.817
84) 2-Chloronaphthalene	(3)	7.636	162	931809M	59.830
85) 1-Chloronaphthalene	(3)	7.654	162	805433M	52.548
88) Diphenyl ether	(3)	7.734	170	558321	52.420
89) 2-Nitroaniline	(3)	7.740	138	277946	54.706
90) 1,4-Naphthoquinone	(3)	7.814	158	356818	54.442
91) 1,4-Dinitrobenzene	(3)	7.882	168	113783	57.616
92) Dimethylphthalate	(3)	7.943	163	983548	53.075
93) 1,3-Dinitrobenzene	(3)	7.956	168	154084	57.427
94) 2,6-Dinitrotoluene	(3)	7.992	165	216706	56.146
95) Acenaphthylene	(3)	8.036	152	1280224	52.653
97) 3-Nitroaniline	(3)	8.140	138	261109	55.399
98)*Acenaphthene-d10	(3)	8.177	164	275969	20.000
99) Acenaphthene	(3)	8.208	153	883671	52.514
100) 2,4-Dinitrophenol	(3)	8.245	184	70482	56.220
103) 4-Nitrophenol	(3)	8.318	109	157933	54.089

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	303223	53.306
104) Dibenzofuran	(3)	8.380	168	1208907	52.446
105) 2,4-Dinitrotoluene	(3)	8.380	165	285537	57.249
106) 1-Naphthylamine	(3)	8.454	143	1018825	53.790
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	186330	56.486
108) 2-Naphthylamine	(3)	8.534	143	1043725	53.857
109) Diethylphthalate	(3)	8.644	149	1013871	52.964
111) Fluorene	(3)	8.712	166	1039866	52.431
110) Thionazin	(3)	8.718	107	225224	53.347
113) 5-Nitro-o-toluidine	(3)	8.730	152	295058	56.346
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	462012	52.364
114) 4-Nitroaniline	(3)	8.743	138	284674	53.710
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	112544	56.805
117) N-Nitrosodiphenylamine	(4)	8.841	169	906257	52.676
202) NDPA as diphenylamine	(4)	8.841	169	906257	52.551
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1257134	51.011
119)$2,4,6-Tribromophenol	(3)	8.945	330	180919	54.279
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	180609	51.418
121) 1,3,5-Trinitrobenzene	(4)	9.112	213	77561M	59.469
123) Phorate	(4)	9.142	75	771823	50.831
122) Diallate (peak 1)	(4)	9.142	86	483754	38.360
124) Phenacetin	(4)	9.167	108	621689M	52.287
125) 4-Bromophenyl-phenylether	(4)	9.204	248	249245	52.579
126) Diallate (peak 2)	(4)	9.222	86	69225	12.640
127) Hexachlorobenzene	(4)	9.247	284	243532	52.033
128) Dimethoate	(4)	9.302	87	489471	52.717
130) Atrazine	(4)	9.382	200	239182	43.393
131) Pentachlorophenol	(4)	9.444	266	142341	54.836
133) 4-Aminobiphenyl	(4)	9.450	169	934558	50.235
132) Pentachloronitrobenzene	(4)	9.456	237	111513	54.885
134) Pronamide	(4)	9.536	173	474436	52.908
135)*Phenanthrene-d10	(4)	9.622	188	513309	20.000
136) Dinoseb	(4)	9.640	211	158765	59.322
137) Phenanthrene	(4)	9.646	178	1550869	51.961
138) Anthracene	(4)	9.696	178	1589210	51.727
140) Carbazole	(4)	9.855	167	1578178	52.640
141) Methyl parathion	(4)	10.009	109	322196	57.907
142) Di-n-butylphthalate	(4)	10.243	149	1857139	52.502
144) 4-Nitroquinoline-1-oxide	(4)	10.403	190	121482	60.066
143) Parathion	(4)	10.403	109	228279	55.769

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Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.661	193	168172	49.859
147) Fluoranthene	(4)	10.802	202	1771554	53.083
152) Benzidine	(5)	10.956	184	4346444	166.273
167)*Pyrene-d10	(5)	10.999	212	638551	20.000
154) Pyrene	(5)	11.018	202	1868816	52.701
156)$Terphenyl-d14	(5)	11.202	244	2420246	53.012
158) p-Dimethylaminoazobenzene	(5)	11.337	225	379097	54.856
159) Chlorobenzilate	(5)	11.393	139	580654	54.013
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	1212405	55.474
161) Butylbenzylphthalate	(5)	11.700	149	902651	53.341
162) 2-Acetylaminofluorene	(5)	11.909	181	866954	56.569
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	675754	54.805
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	335934	55.771
166) Benzo(a)anthracene	(5)	12.198	228	1802816	55.119
168) Chrysene	(5)	12.235	228	1669436	52.939
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1249305	53.210
189) 6-Methylchrysene	(5)	12.684	242	1257306	54.035
170) Di-n-octylphthalate	(6)	12.942	149	2235566	52.110
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.256	256	876942	54.375
172) Benzo(b)fluoranthene	(6)	13.256	252	1777088	51.204
173) Benzo(k)fluoranthene	(6)	13.286	252	1977438	55.848
174) Benzo(a)pyrene	(6)	13.563	252	1763999	52.076
175)*Perylene-d12	(6)	13.612	264	568380	20.000
176) 3-Methylcholanthrene	(6)	13.895	268	903147	53.193
190) Dibenz(a,h)acridine	(6)	14.412	279	1319896	53.636
191) Dibenz(a,j)acridine	(6)	14.461	279	1519832	53.709
177) Indeno(1,2,3-cd)pyrene	(6)	14.645	276	1933504	53.650
178) Dibenz(a,h)anthracene	(6)	14.670	278	1649351	54.713
179) Benzo(g,h,i)perylene	(6)	14.928	276	1623605	52.883
129) Diallate TRANS/CIS	(4)			552979	51.072

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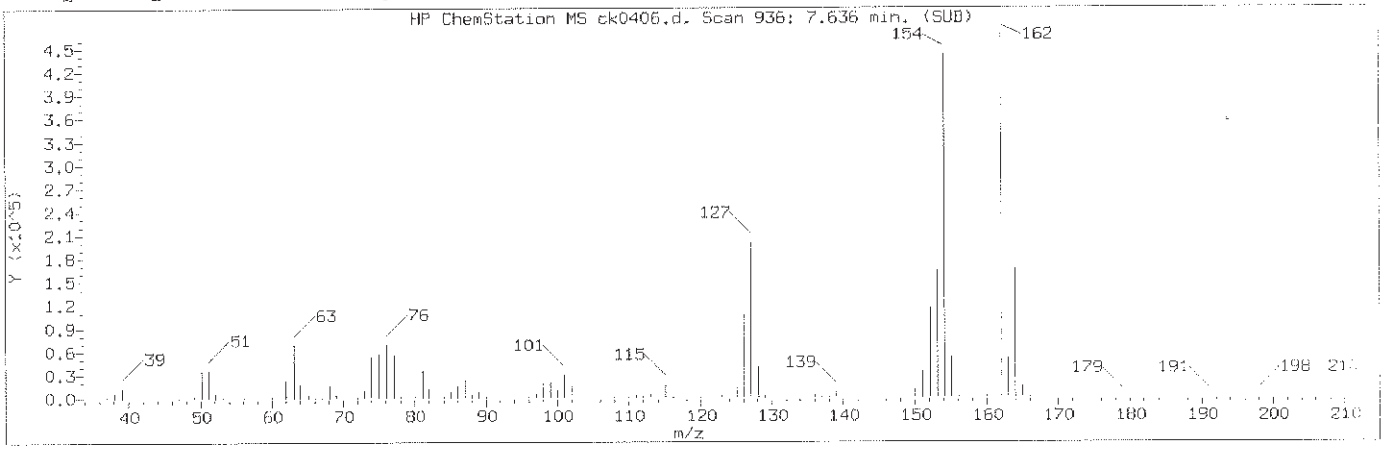
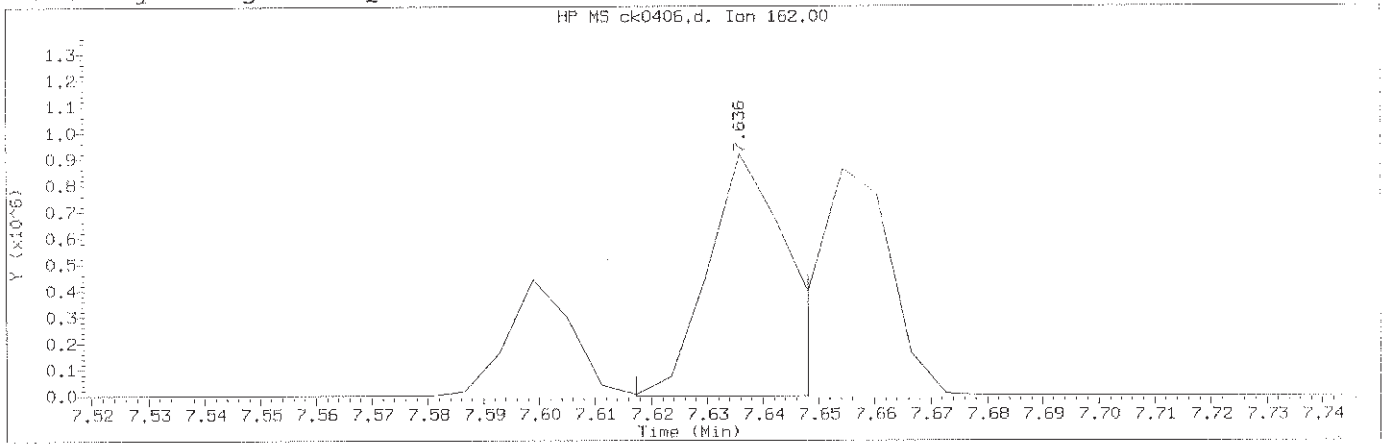
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 931809M		
On-Column Amount (ng/ul)	: 59.8304		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -1729	Y at integration end:	-1729

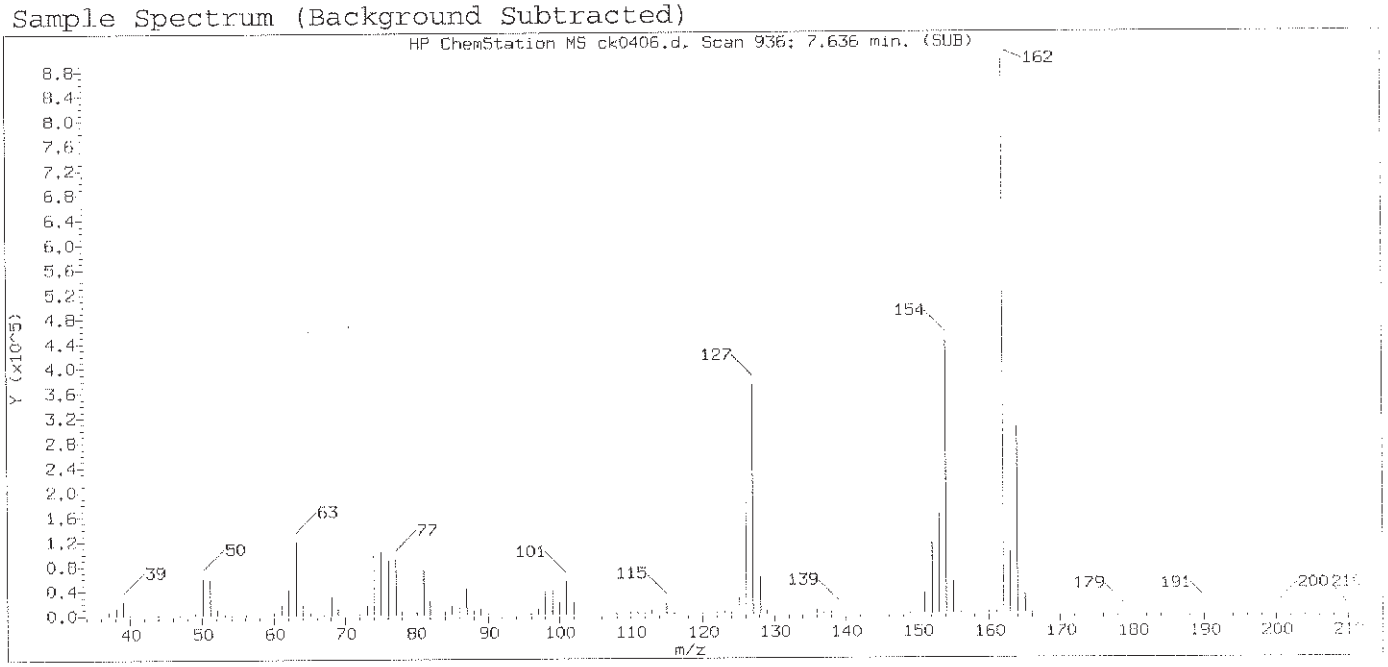
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

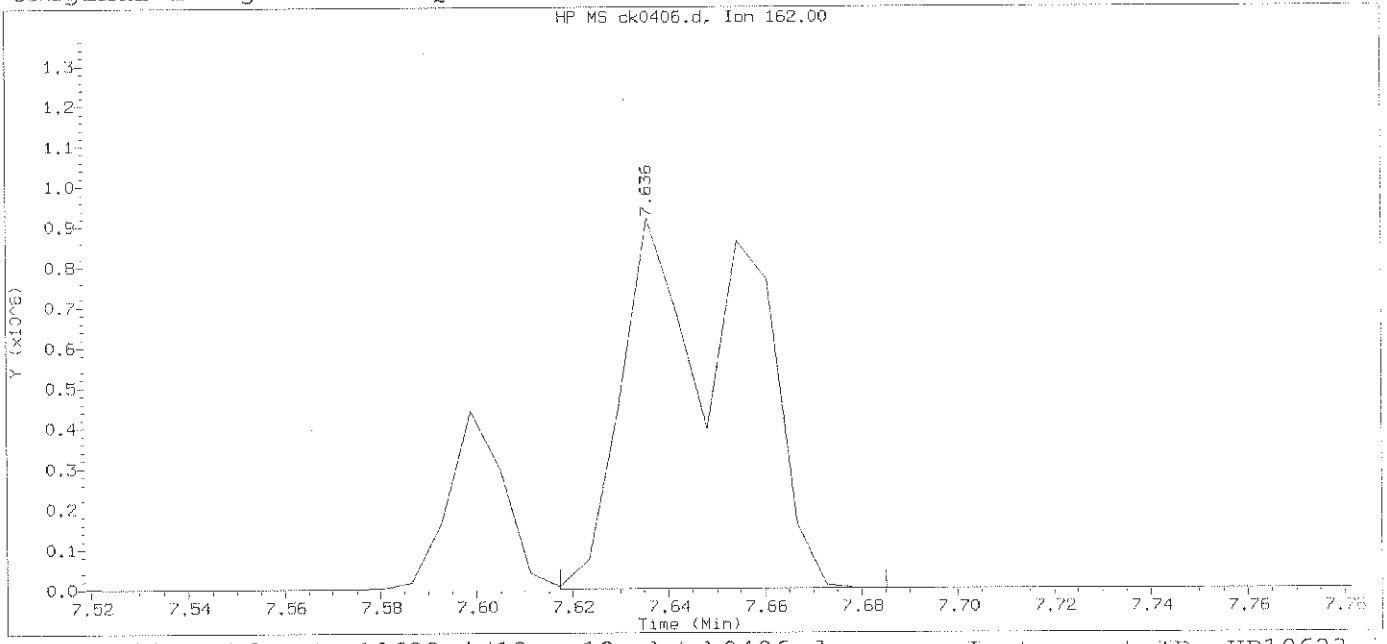
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1588916		
On-column Amount (ng/ul)	: 85.2189		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 431	Y at integration end:	459

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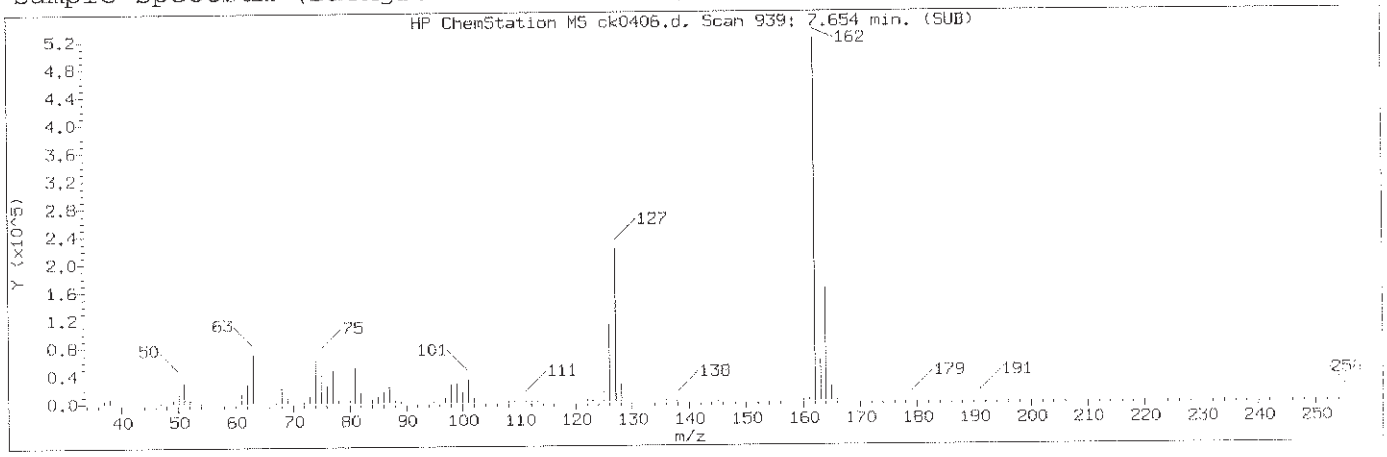
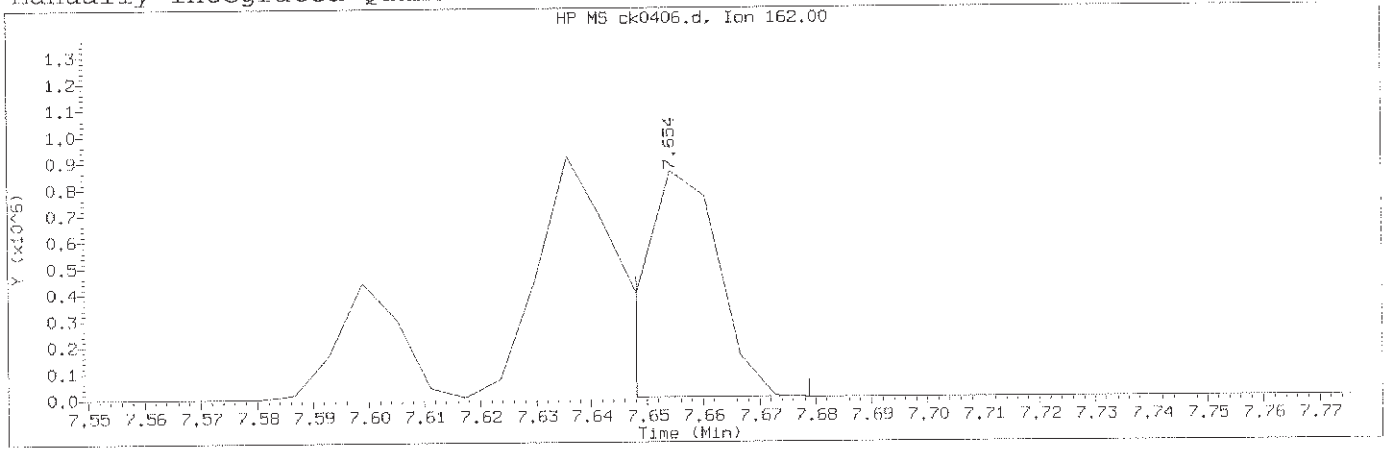
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 805433M		
On-Column Amount (ng/ul)	: 52.5484		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: 1902	Y at integration end:	1902

Reason for manual integration: improper integration

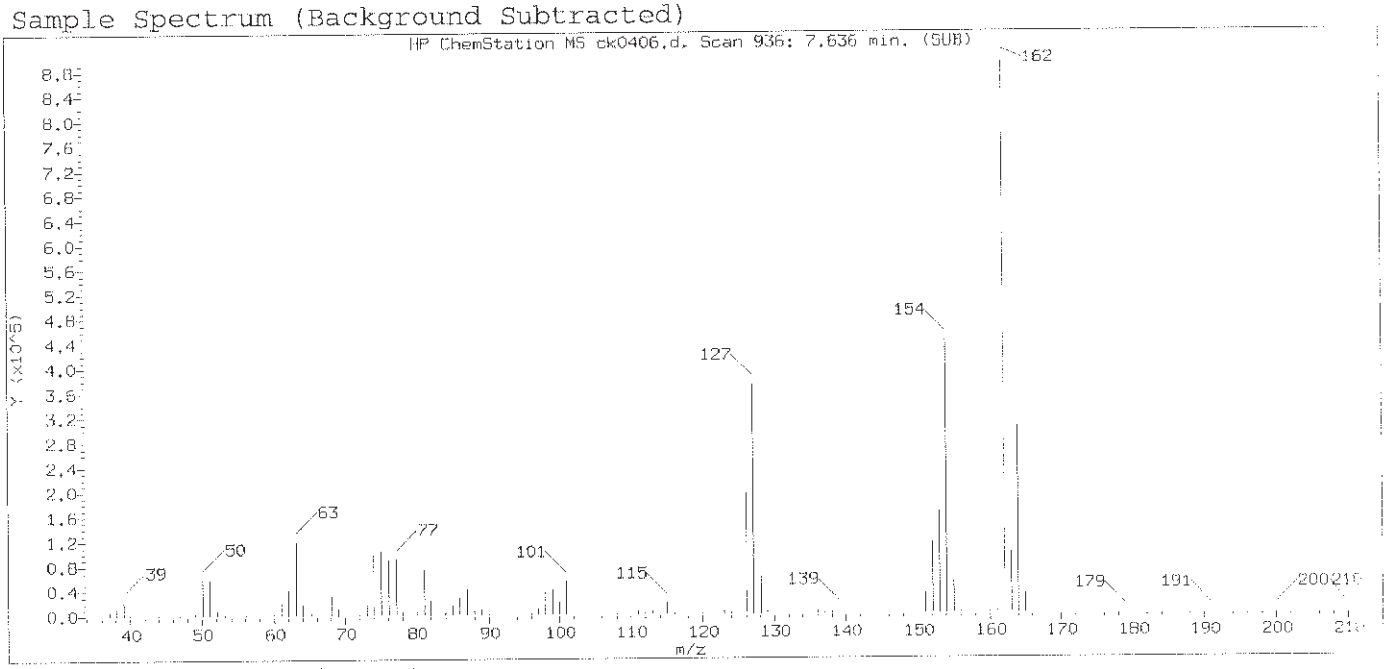
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

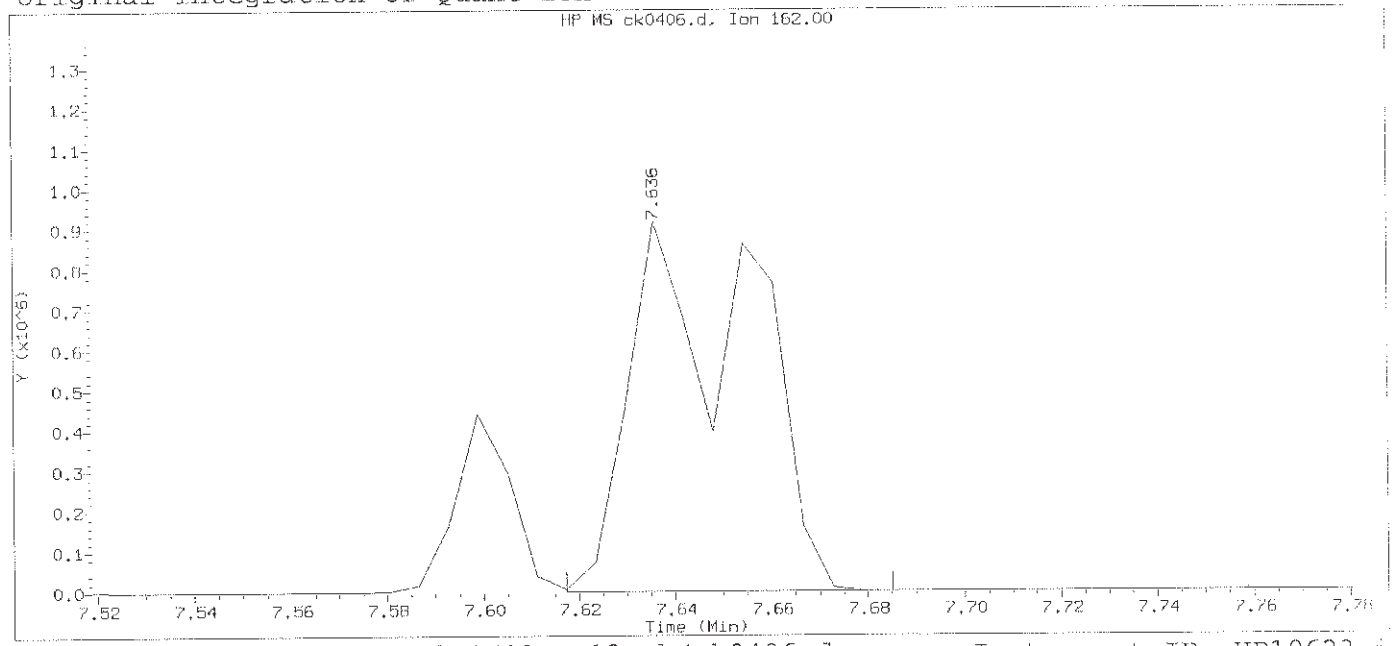
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1589583		
On-column Amount (ng/ul)	: 83.4795		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 292	Y at integration end:	271

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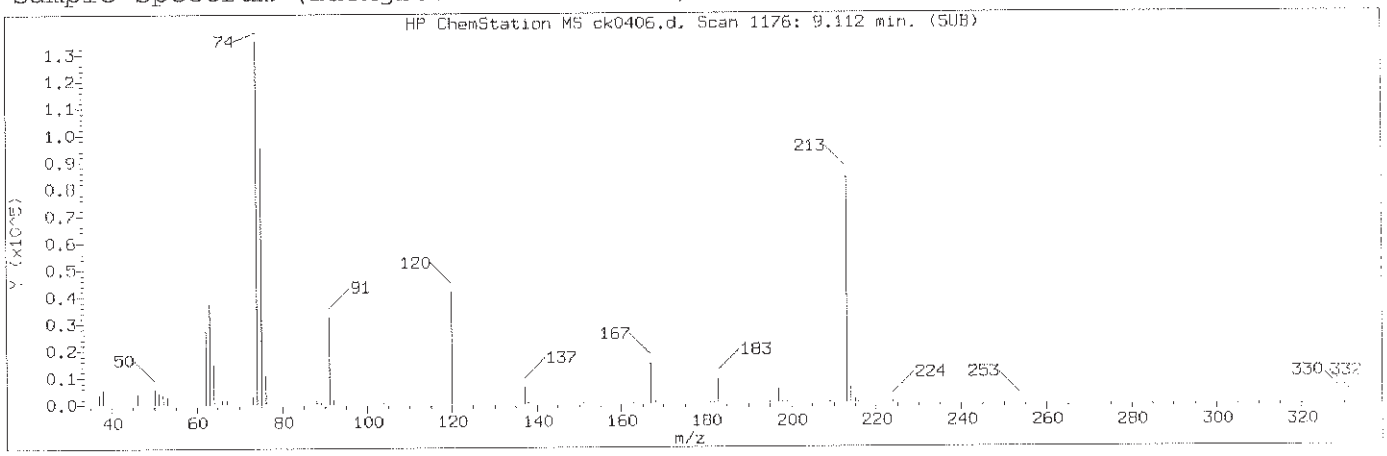
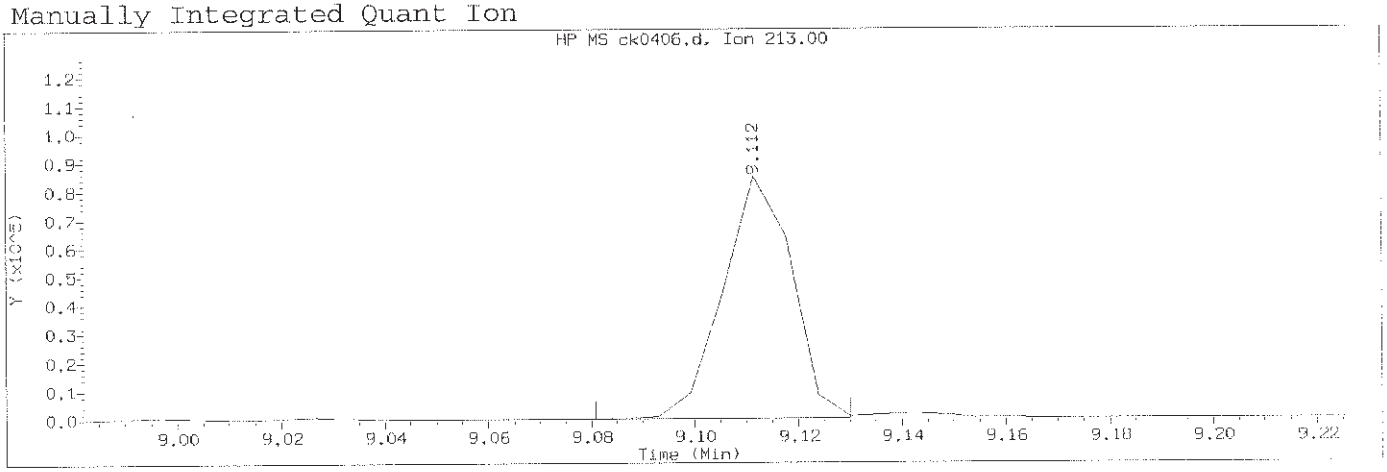
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area (flag)	: 77561M		
On-Column Amount (ng/ul)	: 59.4685		
Integration start scan	: 1170	Integration stop scan:	1178
Y at integration start	: 0	Y at integration end:	0

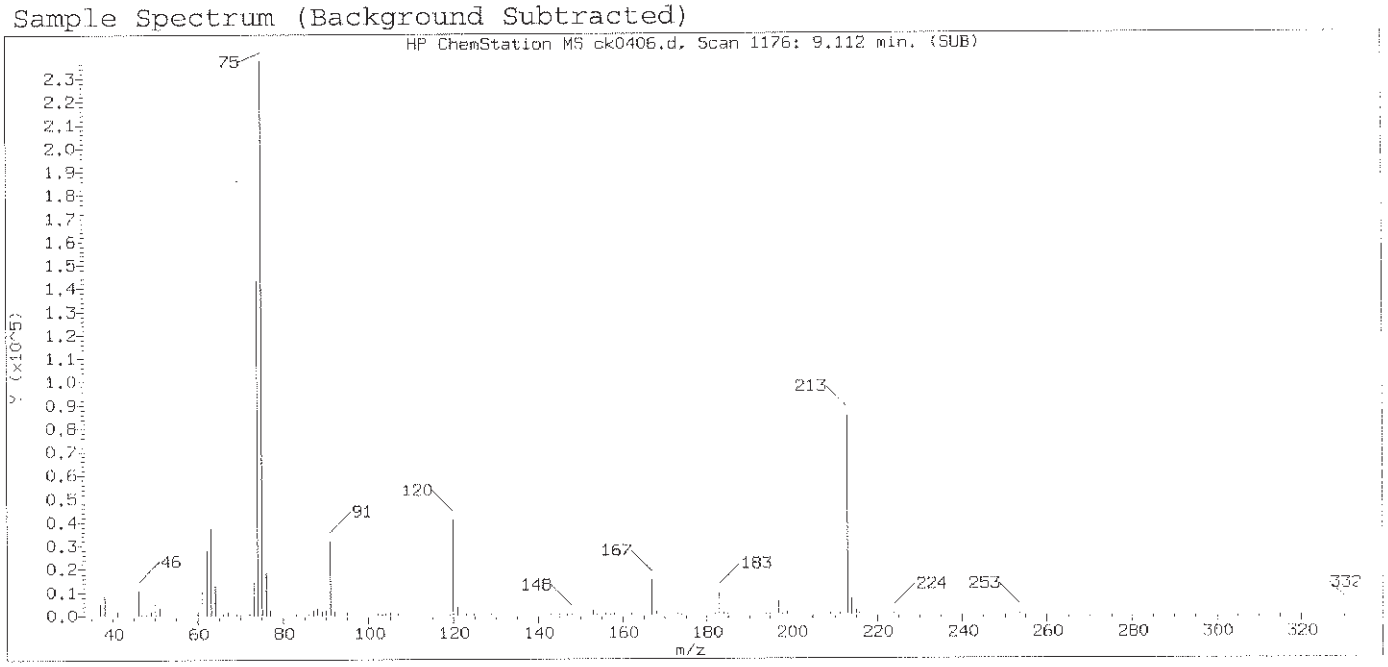
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

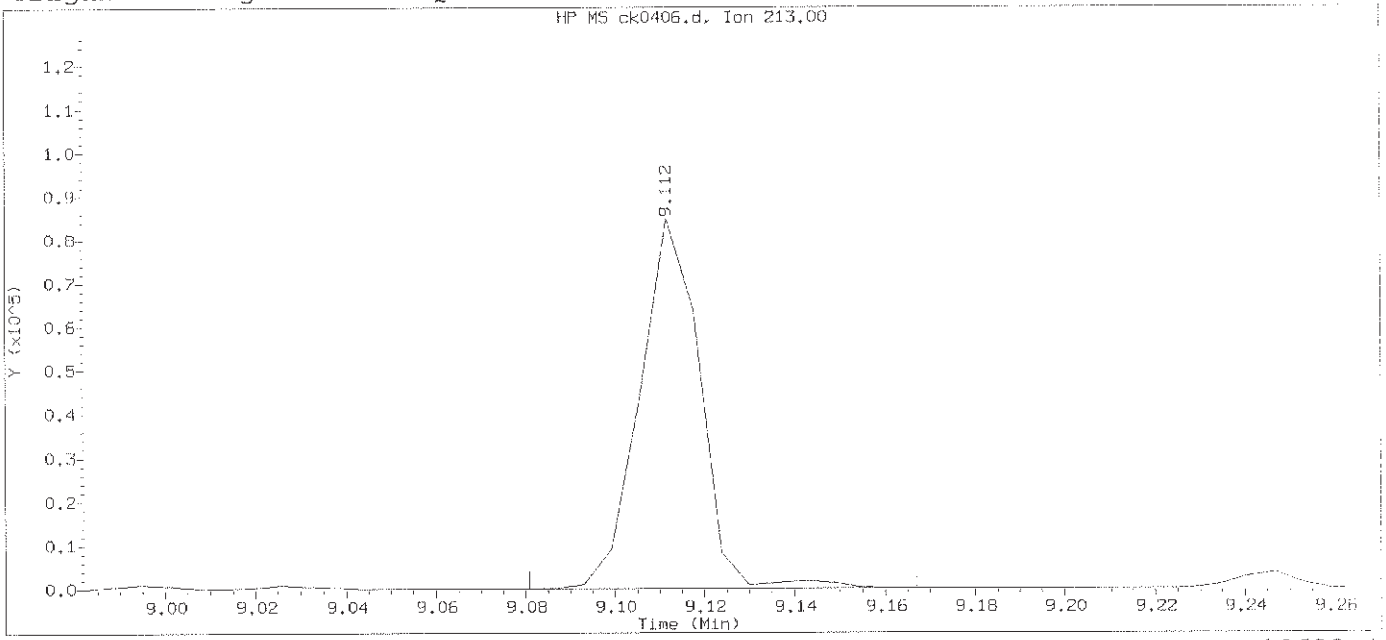
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

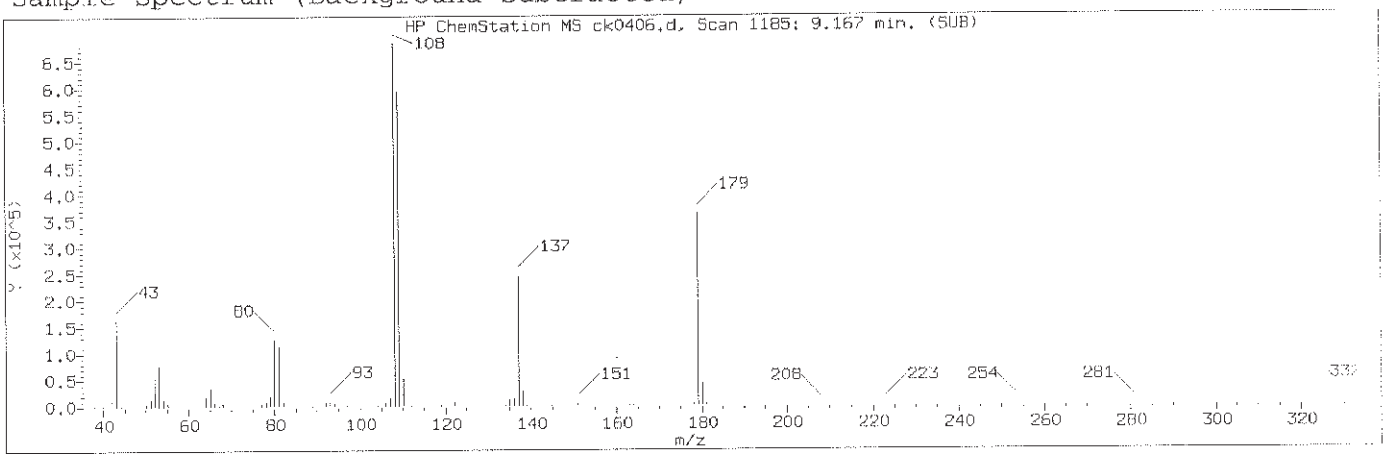
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

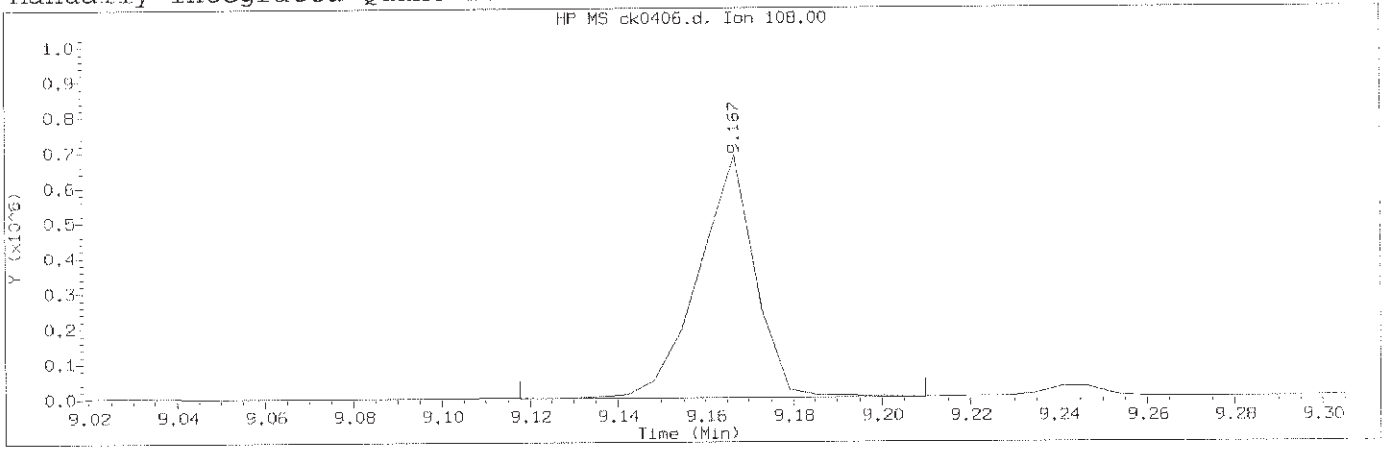
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1176		
Retention Time (minutes)	: 9.112		
Quant Ion	: 213.00		
Area	: 79311		
On-column Amount (ng/ul)	: 52.3649		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:19.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area (flag)	: 621689M		
On-Column Amount (ng/ul)	: 52.2875		
Integration start scan	: 1176	Integration stop scan:	1191
Y at integration start	: 167	Y at integration end:	167

Reason for manual integration: improper integration

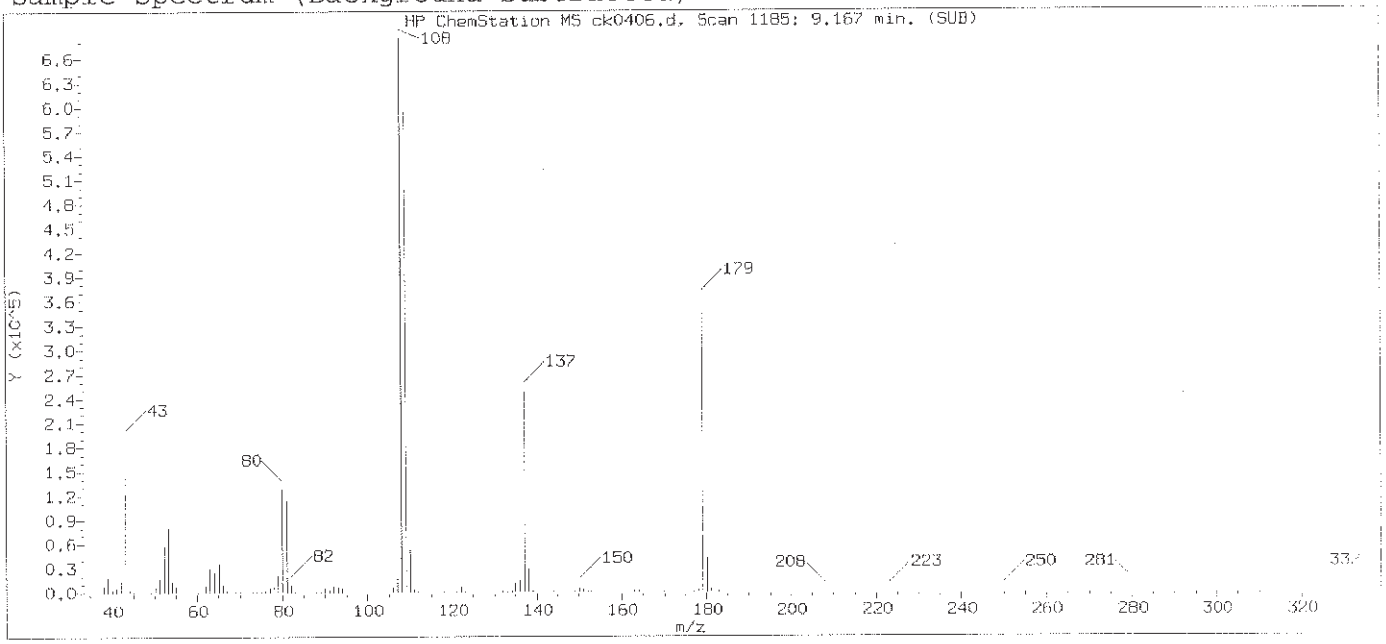
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:19.
Target 3.5 Signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

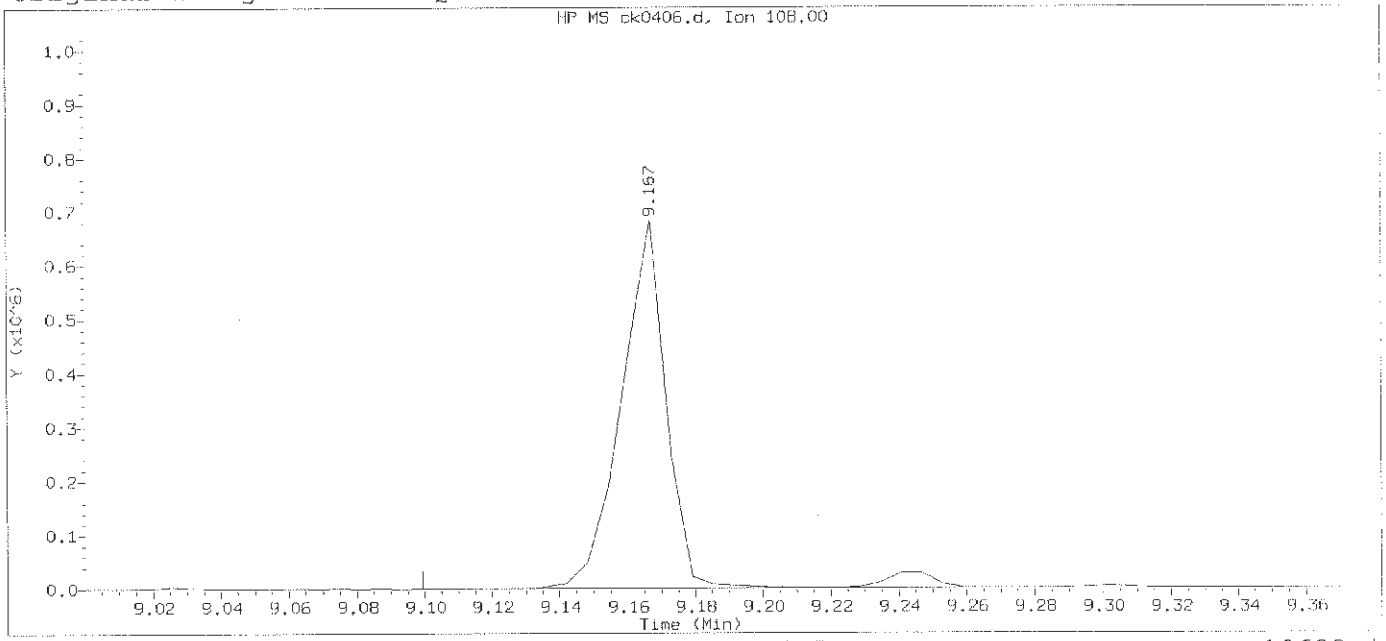
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0406.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 11:49 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 12:15
Date, time and analyst ID of latest file update: 12-Nov-2013 12:15 Automation

Sample Name: SSTD050 Lab Sample ID: STD3083

Compound Number	: 124		
Compound Name	: Phenacetin		
Scan Number	: 1185		
Retention Time (minutes)	: 9.167		
Quant Ion	: 108.00		
Area	: 650370		
On-column Amount (ng/ul)	: 52.3296		
Integration start scan	: 1173	Integration stop scan:	1202
Y at integration start	: 604	Y at integration end:	607

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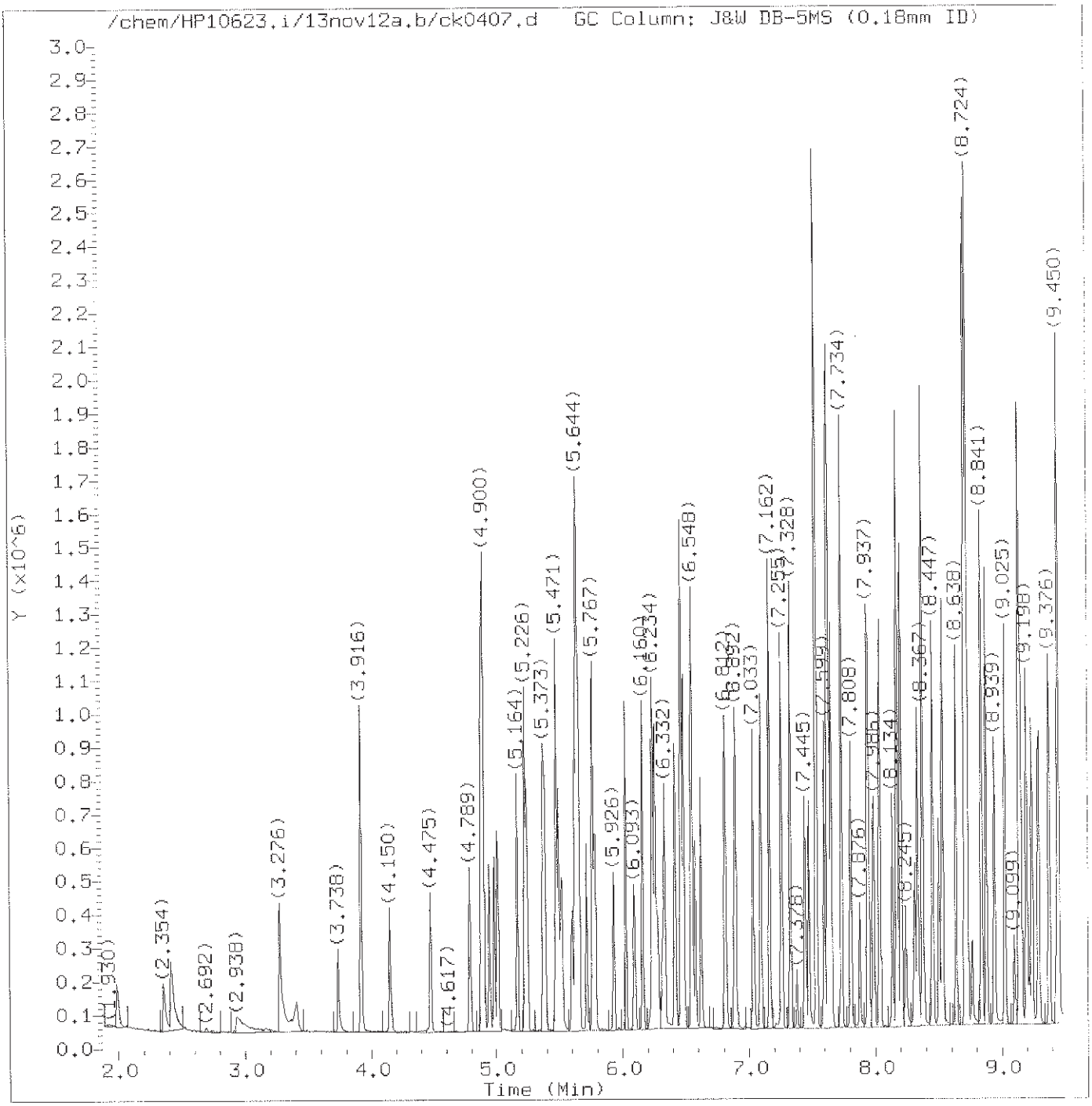
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d
Injection date and time: 12-NOV-2013 12:13

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:10

Sublist used: newall1

Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015

Lab Sample ID: STD3083

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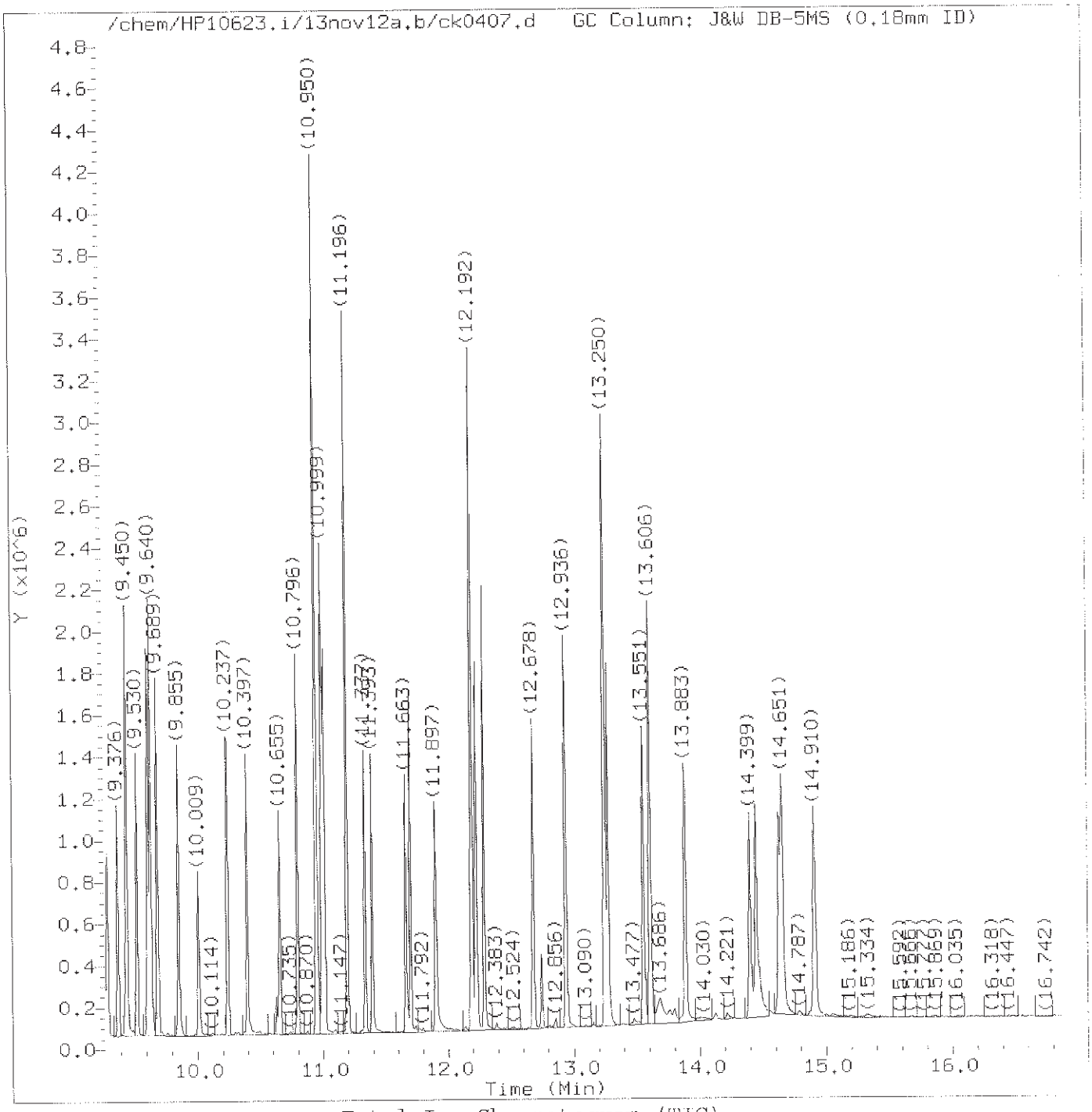
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	60386	14.057
2) N-Nitrosodimethylamine	(1)	2.354	74	110728	13.922
3) Pyridine	(1)	2.409	79	174459	14.149
5) 2-Picoline	(1)	3.276	93	182617	14.514
6) N-Nitrosomethylethylamine	(1)	3.406	88	83985	13.962
7) Methyl methanesulfonate	(1)	3.738	80	84839	14.028
9)$2-Fluorophenol	(1)	3.916	112	284340	14.469
10) N-Nitrosodiethylamine	(1)	4.150	102	83415	13.959
11) Ethyl methanesulfonate	(1)	4.475	109	79082	14.533
12) Benzaldehyde	(1)	4.789	77	96858	11.981
15)$Phenol-d6	(1)	4.887	99	411349	14.225
14)$Phenol-d5	(1)	4.887	99	411349	14.225
16) Phenol	(1)	4.900	94	235200	13.943
13) Aniline	(1)	4.900	93	274323	13.714
18) bis(2-Chloroethyl)ether	(1)	4.986	93	171912	14.355
19) 2-Chlorophenol	(1)	5.010	128	147106	13.980
20) 1,3-Dichlorobenzene	(1)	5.164	146	152416	14.353
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	131335	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	158365	14.614
24) Benzyl alcohol	(1)	5.373	108	118150	14.360
25) 1,2-Dichlorobenzene	(1)	5.385	146	149992	14.746
206) Indene	(1)	5.471	115	331182	14.576
26) 2-Methylphenol	(1)	5.496	108	160811	14.364
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	202658	13.752
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	202658	13.717
29) N-Nitrosopyrrolidine	(1)	5.601	100	93901	14.012
30) Acetophenone	(1)	5.625	105	245309	14.696
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	145613	13.629
33) 4-Methylphenol	(1)	5.644	108	184742	13.941
32) N-Nitrosomorpholine	(1)	5.644	56	108509	14.253
34) o-Toluidine	(1)	5.656	106	273318	14.295
37) Hexachloroethane	(1)	5.717	117	58842	14.267
38)$Nitrobenzene-d5	(2)	5.767	82	365666	14.069
39) Nitrobenzene	(2)	5.785	77	190480	13.818
40) N-Nitrosopiperidine	(2)	5.926	114	88689	14.503
41) Isophorone	(2)	6.025	82	353281	14.114
42) 2-Nitrophenol	(2)	6.093	139	69222	14.445
44) 2,4-Dimethylphenol	(2)	6.160	107	173258	14.067
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	77504	15.092
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	212904M	13.999

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	6.271	105	243332	30.480
49) 2,4-Dichlorophenol	(2)	6.332	162	123828	14.783
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	133120	15.088
52)*Naphthalene-d8	(2)	6.461	136	603190	20.000
53) Naphthalene	(2)	6.486	128	463994	14.498
56) 4-Chloroaniline	(2)	6.548	127	200978	14.411
57) 2,6-Dichlorophenol	(2)	6.554	162	116590	14.778
58) Hexachloropropene	(2)	6.578	213	73210	14.672
60) Hexachlorobutadiene	(2)	6.621	225	67324	15.214
194) Quinoline	(2)	6.812	129	329699	14.946
63) Caprolactam	(2)	6.886	113	68406	14.742
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	181266	16.002
68) 4-Chloro-3-methylphenol	(2)	7.033	107	155931	14.560
69) Safrole	(2)	7.095	162	126976	14.978
70) 2-Methylnaphthalene	(2)	7.162	142	337708	14.869
71) 1-Methylnaphthalene	(2)	7.255	142	308537	14.846
72) Hexachlorocyclopentadiene	(3)	7.328	237	55206	14.193
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	133674	14.851
74) cis-Isosafrole	(3)	7.378	162	22739	1.574
75) 2,4,6-Trichlorophenol	(3)	7.445	196	86695	14.761
77) 2,4,5-Trichlorophenol	(3)	7.476	196	94239	14.717
78)$2-Fluorobiphenyl	(3)	7.531	172	693040	14.605
79) trans-Isosafrole	(3)	7.599	162	133212	13.022
80) Isosafrole	(3)	7.599	162	133212	14.631
83) 1,1'-Biphenyl	(3)	7.624	154	421690	14.423
84) 2-Chloronaphthalene	(3)	7.636	162	290061	13.621
85) 1-Chloronaphthalene	(3)	7.654	162	312929	14.931
88) Diphenyl ether	(3)	7.734	170	213924	14.689
89) 2-Nitroaniline	(3)	7.734	138	97477	14.031
90) 1,4-Naphthoquinone	(3)	7.808	158	132145	14.745
91) 1,4-Dinitrobenzene	(3)	7.876	168	35808	13.261
92) Dimethylphthalate	(3)	7.937	163	379705	14.985
93) 1,3-Dinitrobenzene	(3)	7.949	168	51287	13.979
94) 2,6-Dinitrotoluene	(3)	7.986	165	79007	14.970
95) Acenaphthylene	(3)	8.035	152	476611	14.336
97) 3-Nitroaniline	(3)	8.134	138	93677	14.535
98)*Acenaphthene-d10	(3)	8.177	164	377352	20.000
99) Acenaphthene	(3)	8.208	153	336320	14.617
100) 2,4-Dinitrophenol	(3)	8.245	184	45951	26.805
103) 4-Nitrophenol	(3)	8.312	109	56612	14.179

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	116006	14.914
104) Dibenzofuran	(3)	8.374	168	455060	14.438
105) 2,4-Dinitrotoluene	(3)	8.374	165	95329	13.978
106) 1-Naphthylamine	(3)	8.447	143	374843	14.473
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	66945	14.842
108) 2-Naphthylamine	(3)	8.527	143	386440	14.583
109) Diethylphthalate	(3)	8.638	149	385196	14.716
110) Thionazin	(3)	8.712	107	80154	13.885
111) Fluorene	(3)	8.712	166	390143	14.386
113) 5-Nitro-o-toluidine	(3)	8.724	152	102444M	14.307
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	176515	14.631
114) 4-Nitroaniline	(3)	8.730	138	105014	14.490
115) 4,6-Dinitro-2-methylphenol	(4)	8.767	198	34312	12.792
117) N-Nitrosodiphenylamine	(4)	8.841	169	339604	14.580
202) NDPA as diphenylamine	(4)	8.841	169	339604	14.545
118) 1,2-Diphenylhydrazine	(4)	8.878	77	469238	14.064
119)$2,4,6-Tribromophenol	(3)	8.939	330	66980	14.696
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	67409	14.175
121) 1,3,5-Trinitrobenzene	(4)	9.099	213	21439M	12.141
122) Diallate (peak 1)	(4)	9.136	86	178786	10.471
123) Phorate	(4)	9.142	75	276369	13.444
124) Phenacetin	(4)	9.155	108	226163	14.050
125) 4-Bromophenyl-phenylether	(4)	9.198	248	95436	14.870
126) Diallate (peak 2)	(4)	9.222	86	25408	3.427
127) Hexachlorobenzene	(4)	9.241	284	94811	14.962
128) Dimethoate	(4)	9.296	87	182731	14.536
130) Atrazine	(4)	9.376	200	108004	14.473
131) Pentachlorophenol	(4)	9.437	266	49533	14.095
132) Pentachloronitrobenzene	(4)	9.450	237	40106	14.580
133) 4-Aminobiphenyl	(4)	9.450	169	424726	16.863
134) Pronamide	(4)	9.530	173	175408	14.448
135)*Phenanthrene-d10	(4)	9.622	188	694958	20.000
136) Dinoseb	(4)	9.640	211	44303	12.227
137) Phenanthrene	(4)	9.640	178	579231	14.334
138) Anthracene	(4)	9.689	178	604600	14.535
140) Carbazole	(4)	9.855	167	585146	14.416
141) Methyl parathion	(4)	10.009	109	102092	13.553
142) Di-n-butylphthalate	(4)	10.243	149	703330	14.686
144) 4-Nitroquinoline-1-oxide	(4)	10.397	190	32398	11.832
143) Parathion	(4)	10.397	109	75199	13.569

M = Compound was manually integrated.
* = Compound is an internal standard.
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Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	64903	14.213
147) Fluoranthene	(4)	10.796	202	665469	14.728
152) Benzidine	(5)	10.950	184	1501696	42.888
167)*Pyrene-d10	(5)	10.999	212	855313	20.000
154) Pyrene	(5)	11.018	202	691340	14.555
156)$Terphenyl-d14	(5)	11.196	244	900593	14.727
158) p-Dimethylaminoazobenzene	(5)	11.337	225	141149	15.248
159) Chlorobenzilate	(5)	11.393	139	212205	14.737
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	423523	14.467
161) Butylbenzylphthalate	(5)	11.700	149	332223	14.657
162) 2-Acetylaminofluorene	(5)	11.897	181	281617	13.719
164) 3,3'-Dichlorobenzidine	(5)	12.186	252	242669	14.693
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	114914	14.243
166) Benzo(a)anthracene	(5)	12.192	228	642478	14.665
168) Chrysene	(5)	12.229	228	614897	14.557
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	452030	14.373
189) 6-Methylchrysene	(5)	12.678	242	458222	14.702
170) Di-n-octylphthalate	(6)	12.936	149	779461	14.070
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.250	256	302098	14.505
172) Benzo(b)fluoranthene	(6)	13.250	252	670144	14.953
173) Benzo(k)fluoranthene	(6)	13.274	252	667961	14.609
174) Benzo(a)pyrene	(6)	13.551	252	624750	14.282
175)*Perylene-d12	(6)	13.606	264	733981	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	324181	14.785
190) Dibenz(a,h)acridine	(6)	14.399	279	455469	14.333
191) Dibenz(a,j)acridine	(6)	14.448	279	546393	14.952
177) Indeno(1,2,3-cd)pyrene	(6)	14.627	276	693395	14.899
178) Dibenz(a,h)anthracene	(6)	14.651	278	584759	15.021
179) Benzo(g,h,i)perylene	(6)	14.910	276	576874	14.550
129) Diallate TRANS/CIS	(4)			204194	13.930

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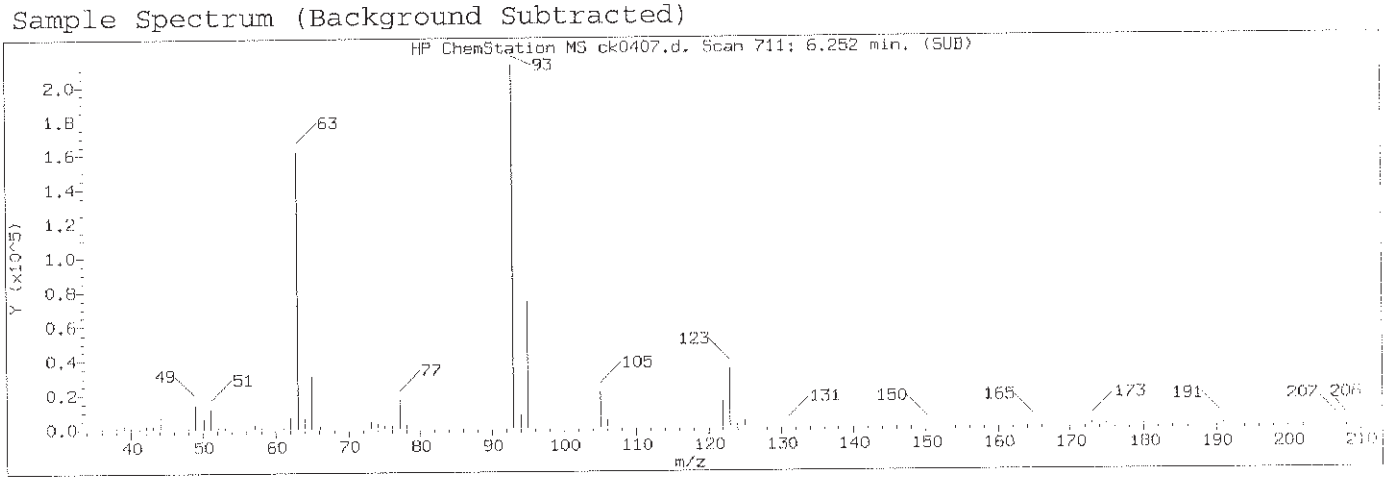
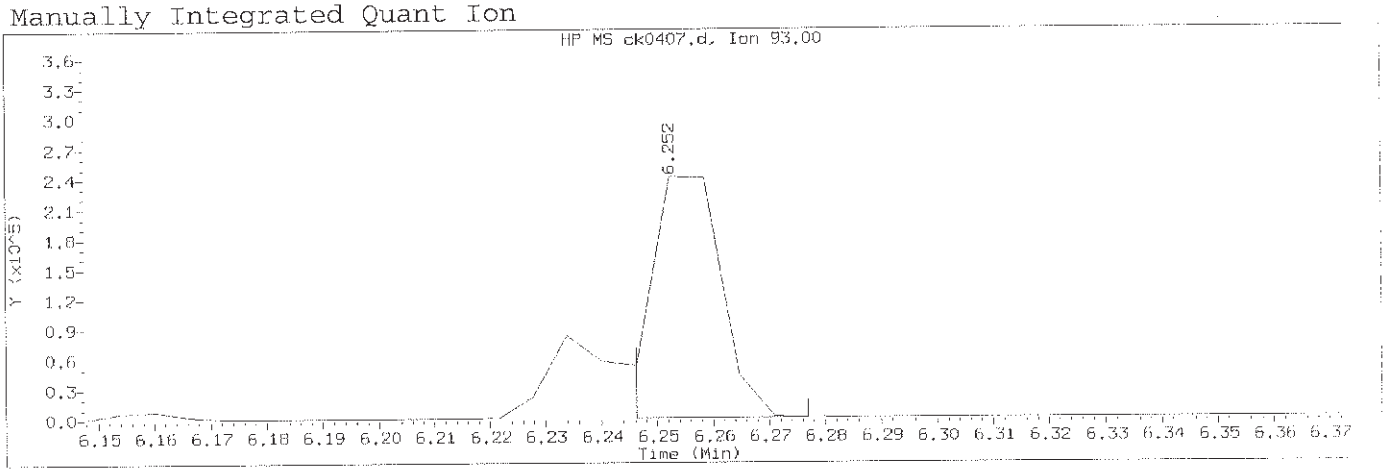
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 212904M		
On-Column Amount (ng/ul)	: 13.9988		
Integration start scan	: 709	Integration stop scan:	714
Y at integration start	: 545	Y at integration end:	545

Reason for manual integration: improper integration

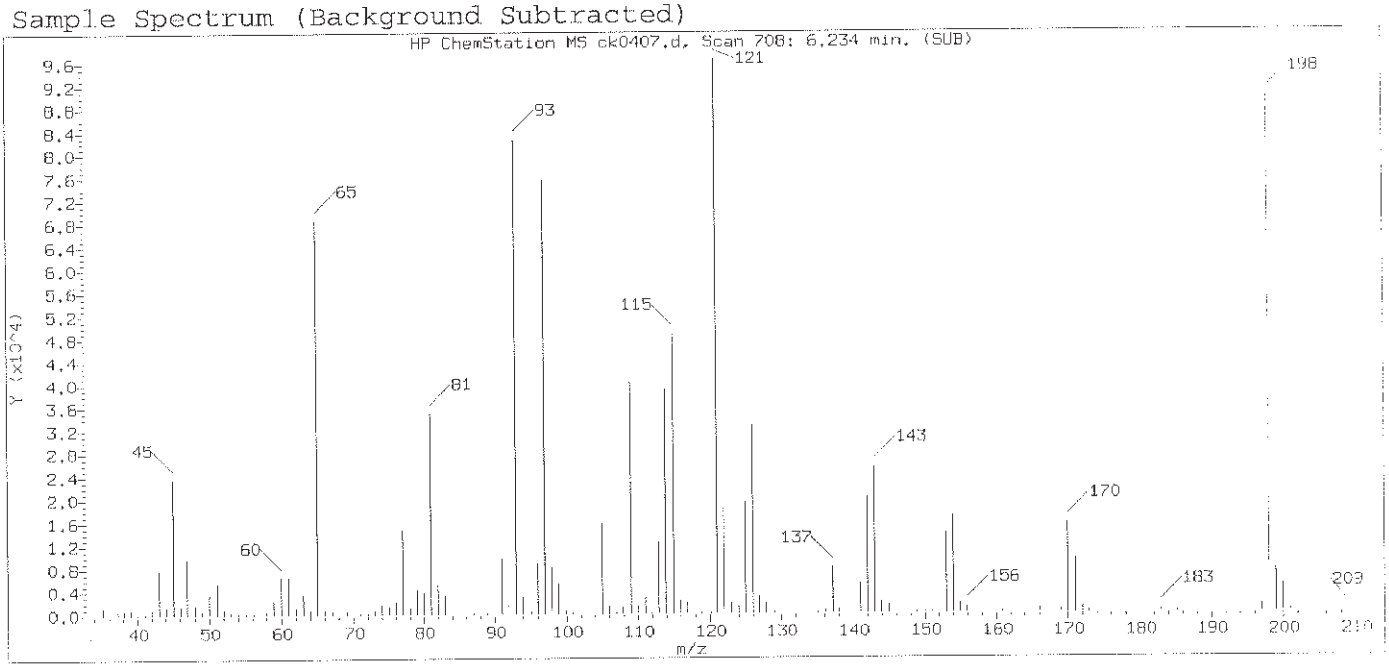
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

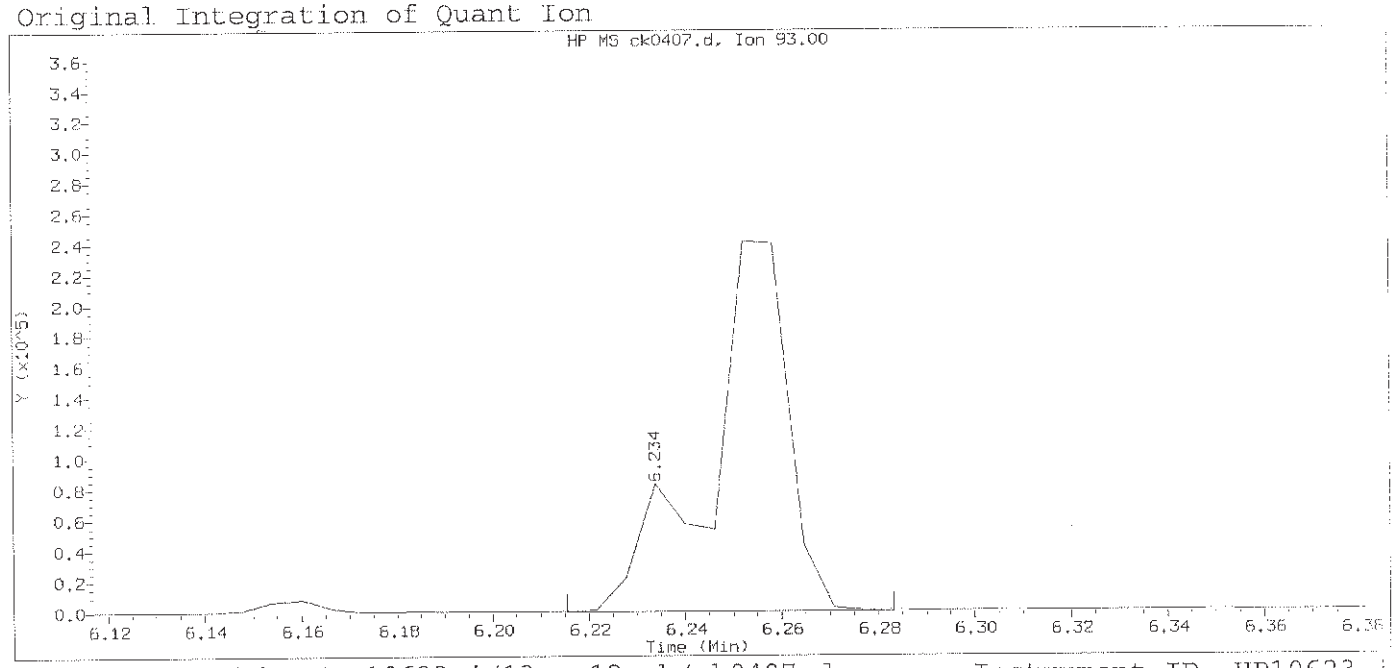
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

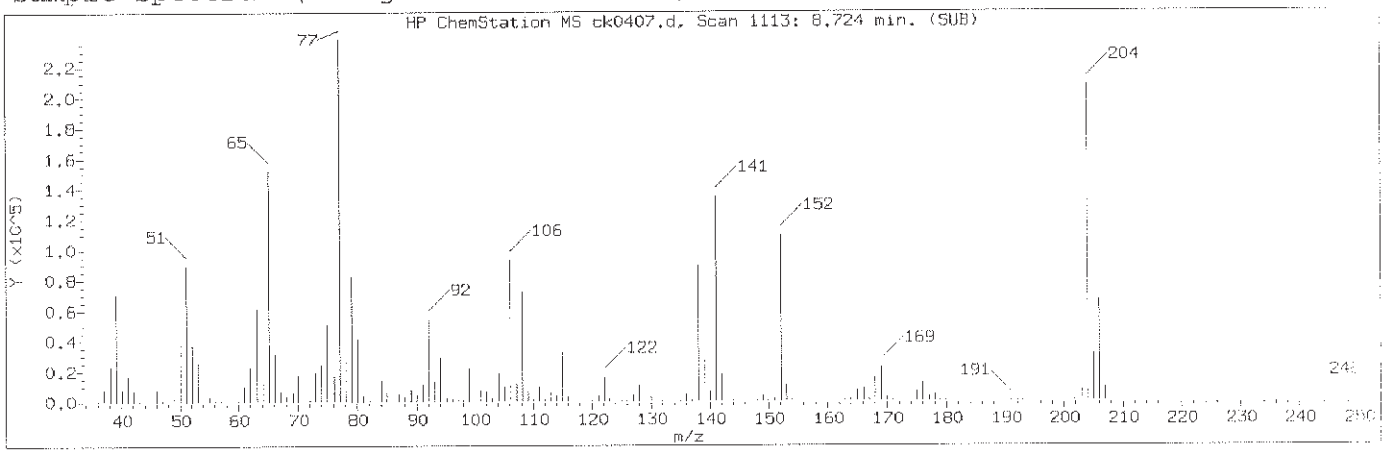
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

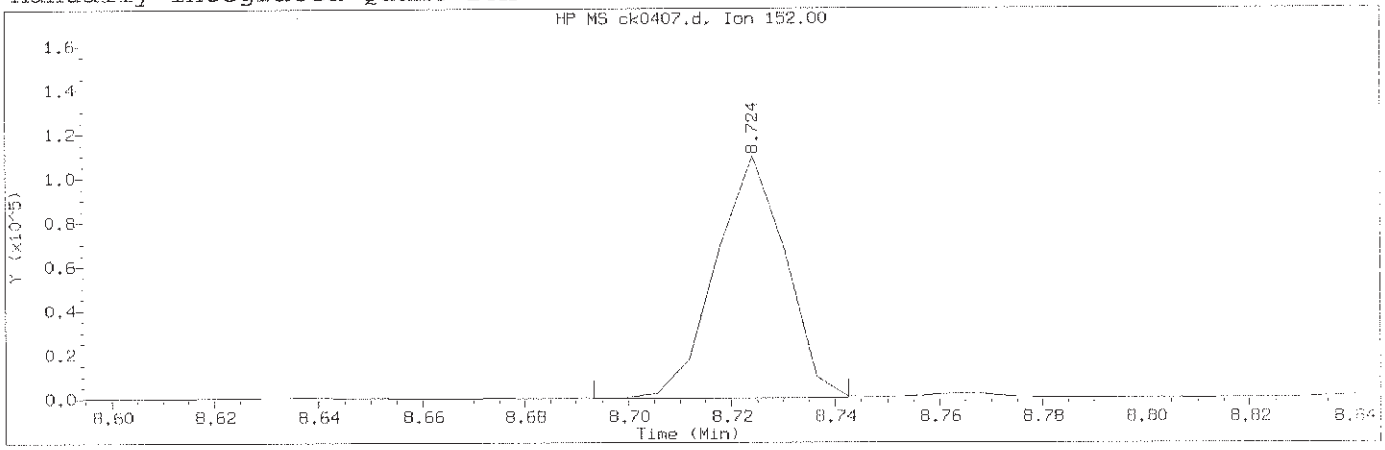
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 274471		
On-column Amount (ng/ul)	: 16.6778		
Integration start scan	: 704	Integration stop scan:	715
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1113		
Retention Time (minutes)	: 8.724		
Quant Ion	: 152.00		
Area (flag)	: 102444M		
On-Column Amount (ng/ul)	: 14.3073		
Integration start scan	: 1107	Integration stop scan:	1115
Y at integration start	: 0	Y at integration end:	0

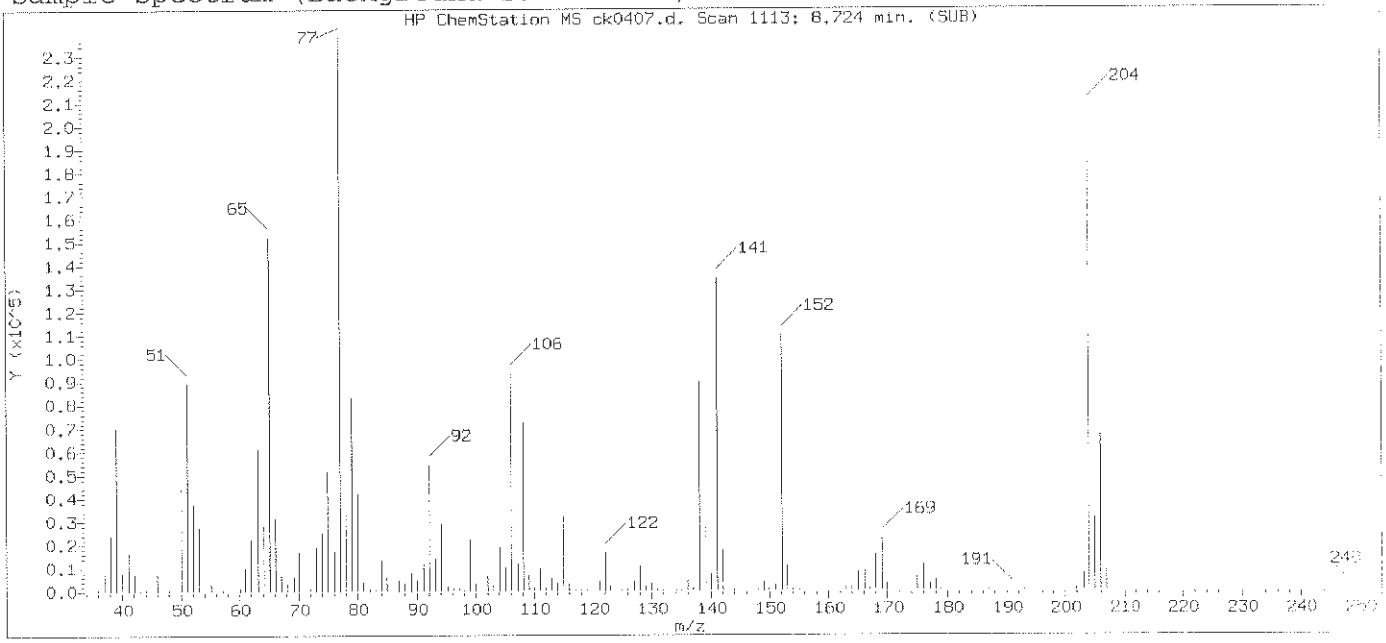
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

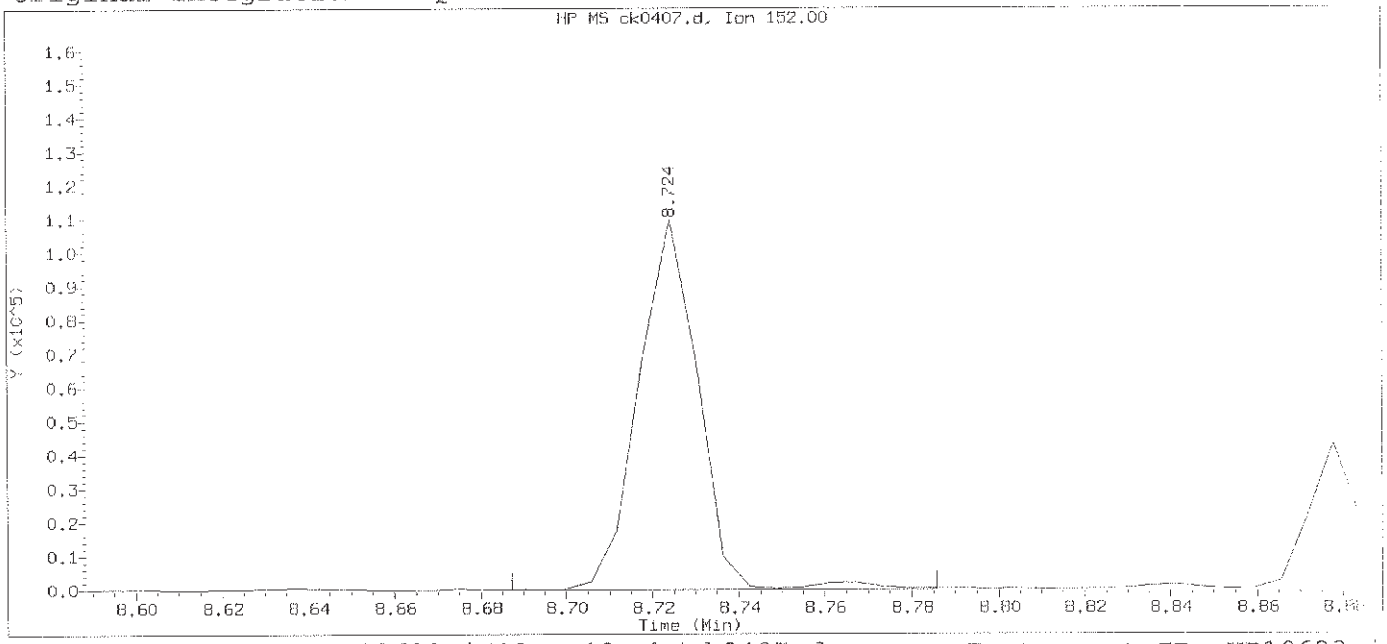
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 113		
Compound Name	: 5-Nitro-o-toluidine		
Scan Number	: 1113		
Retention Time (minutes)	: 8.724		
Quant Ion	: 152.00		
Area	: 104834		
On-column Amount (ng/ul)	: 14.2198		
Integration start scan	: 1106	Integration stop scan:	1122
Y at integration start	: 0	Y at integration end:	0

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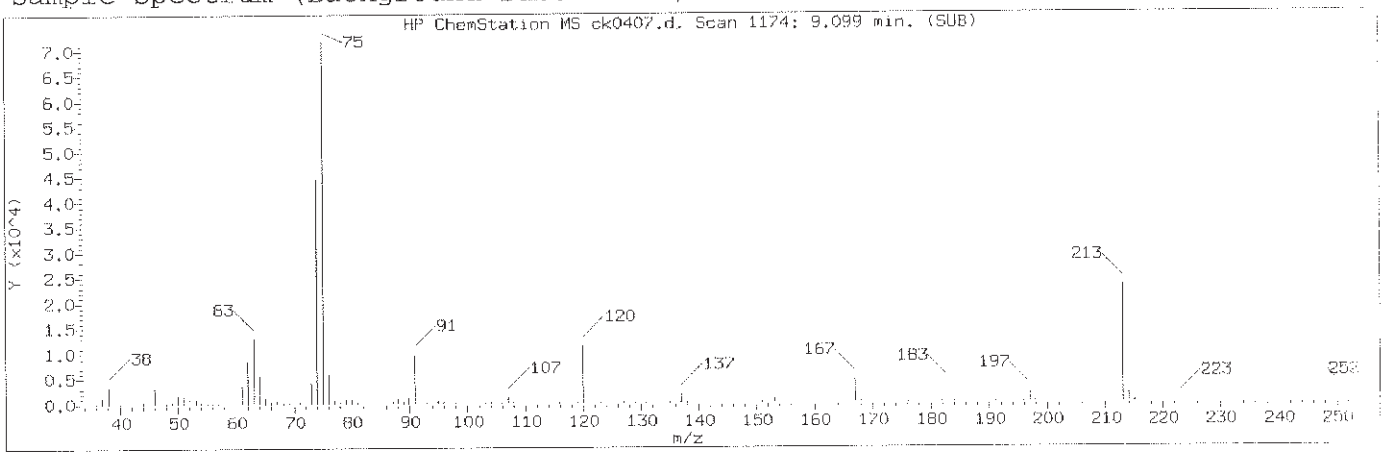
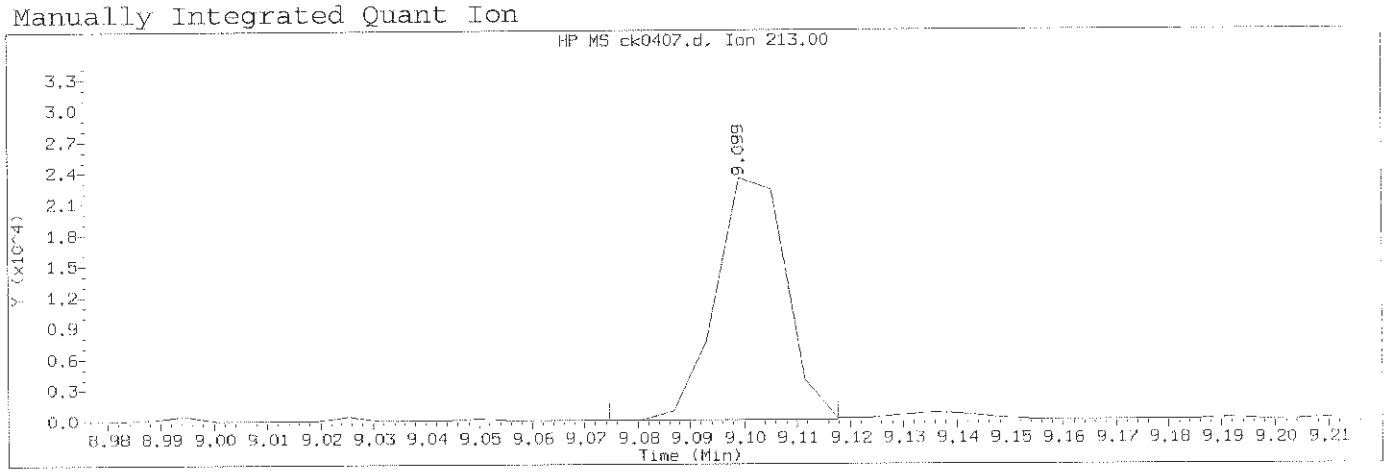
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:10
Date, time and analyst ID of latest file update: 12-Nov-2013 23:10 mac00013

Sample Name: SSTD015 Lab Sample ID: STD3083

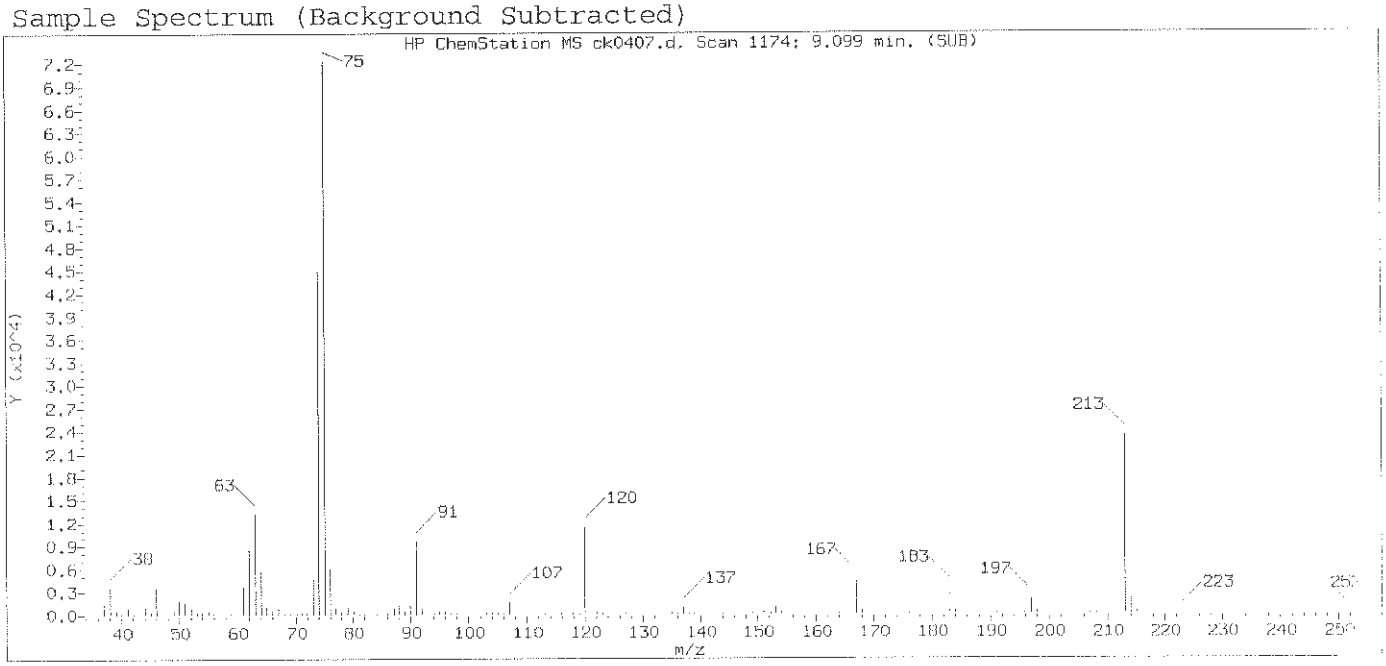
Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area (flag)	: 21439M		
On-Column Amount (ng/ul)	: 12.1414		
Integration start scan	: 1169	Integration stop scan:	1176
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

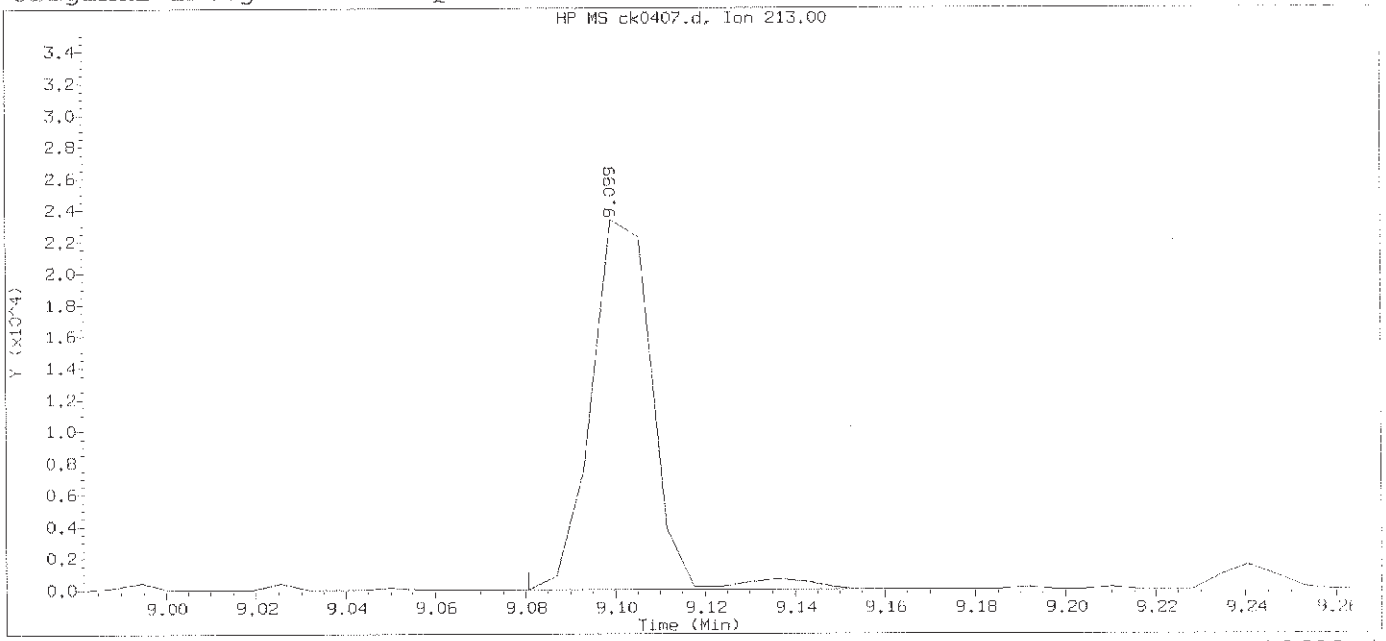
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0407.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:13 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 12:39
Date, time and analyst ID of latest file update: 12-Nov-2013 12:39 Automation

Sample Name: SSTD015 Lab Sample ID: STD3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1174		
Retention Time (minutes)	: 9.099		
Quant Ion	: 213.00		
Area	: 22164		
On-column Amount (ng/ul)	: 11.4486		
Integration start scan	: 1170	Integration stop scan:	1184
Y at integration start	: 0	Y at integration end:	0

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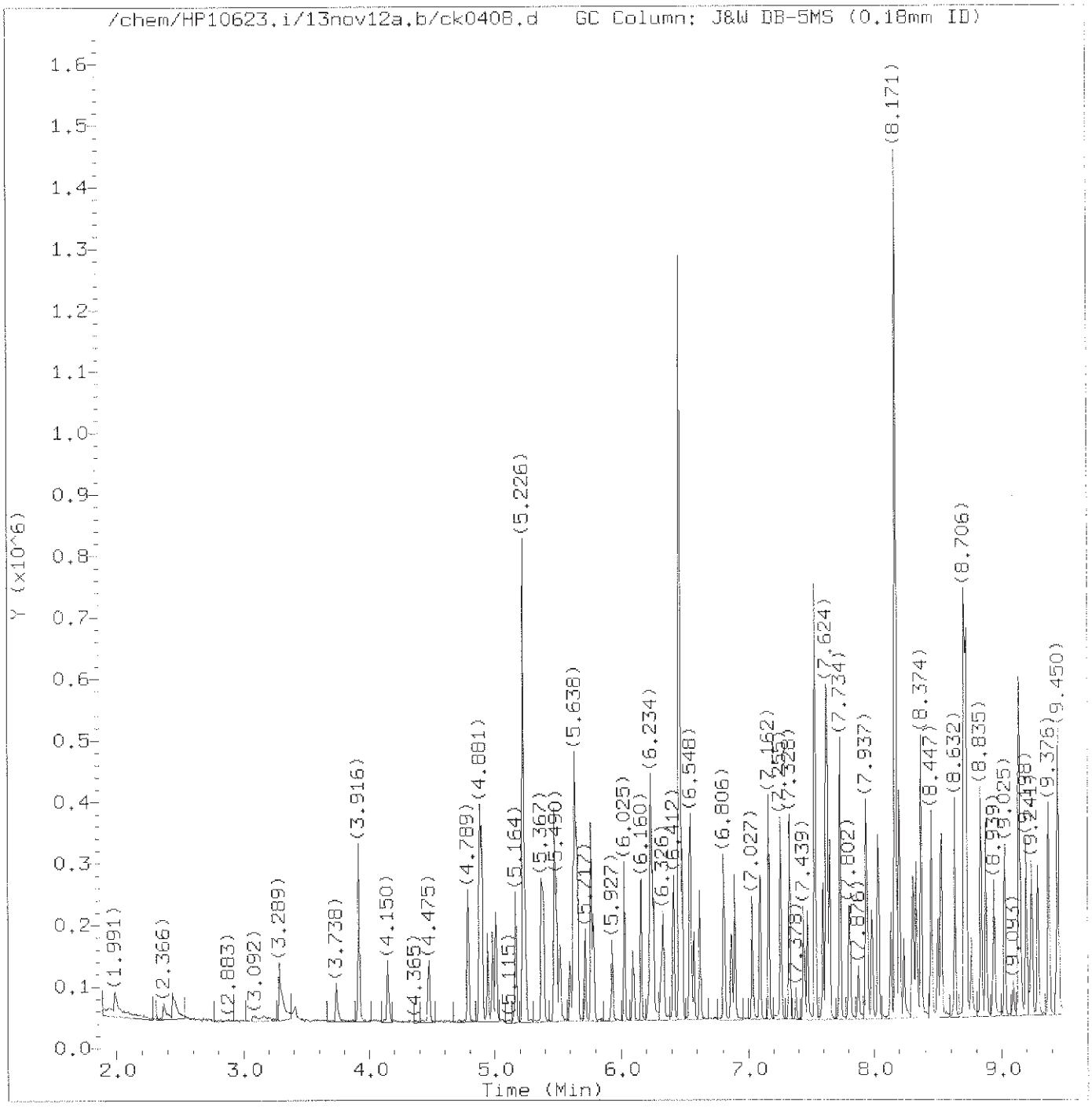
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

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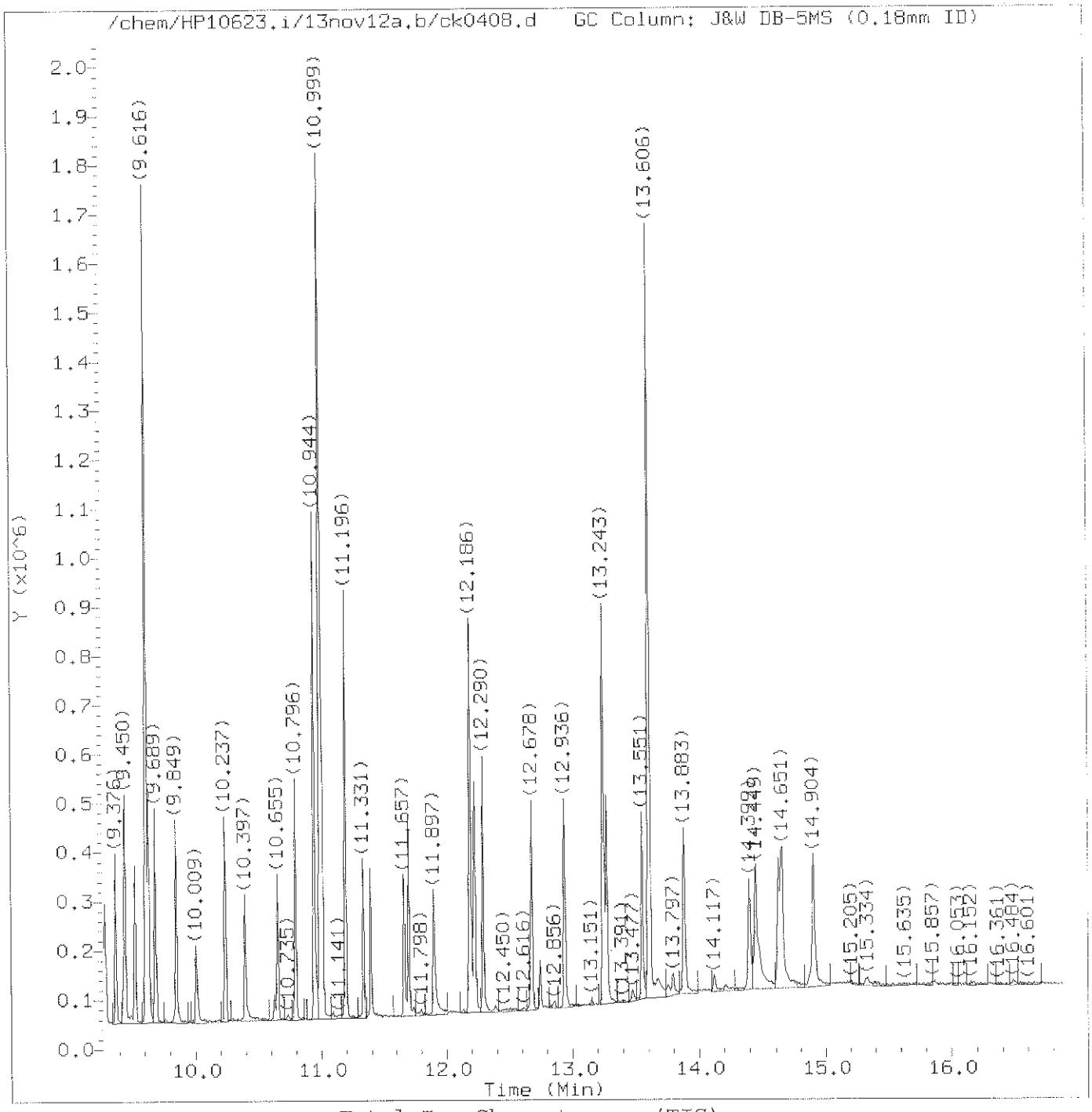
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.991	88	17313M	5.021
2) N-Nitrosodimethylamine	(1)	2.366	74	30798M	4.824
3) Pyridine	(1)	2.440	79	46666M	4.715
5) 2-Picoline	(1)	3.289	93	46917M	4.646
6) N-Nitrosomethylethylamine	(1)	3.412	88	25211	5.222
7) Methyl methanesulfonate	(1)	3.738	80	22891	4.715
9)$2-Fluorophenol	(1)	3.916	112	77161	4.892
10) N-Nitrosodiethylamine	(1)	4.150	102	21422	4.466
11) Ethyl methanesulfonate	(1)	4.475	109	22287	5.102
12) Benzaldehyde	(1)	4.789	77	42492	6.548
14)$Phenol-d5	(1)	4.881	99	106780	4.600
15)$Phenol-d6	(1)	4.881	99	106780	4.600
16) Phenol	(1)	4.894	94	59944	4.427
13) Aniline	(1)	4.900	93	74895	4.664
18) bis(2-Chloroethyl)ether	(1)	4.980	93	47075	4.897
19) 2-Chlorophenol	(1)	5.010	128	39928	4.727
20) 1,3-Dichlorobenzene	(1)	5.164	146	41802	4.904
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	105420	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	42503	4.886
24) Benzyl alcohol	(1)	5.367	108	33418	5.060
25) 1,2-Dichlorobenzene	(1)	5.385	146	38965	4.772
206) Indene	(1)	5.472	115	94629	5.188
26) 2-Methylphenol	(1)	5.490	108	42005	4.674
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.515	45	56333	4.762
28) bis(2-Chloroisopropyl)ether	(1)	5.515	45	56333	4.750
29) N-Nitrosopyrrolidine	(1)	5.594	100	24231	4.505
30) Acetophenone	(1)	5.619	105	69973	5.223
32) N-Nitrosomorpholine	(1)	5.638	56	28904	4.730
31) N-Nitroso-di-n-propylamine	(1)	5.638	70	38266	4.462
33) 4-Methylphenol	(1)	5.644	108	48938	4.601
34) o-Toluidine	(1)	5.656	106	71509	4.659
37) Hexachloroethane	(1)	5.717	117	16768	5.065
38)$Nitrobenzene-d5	(2)	5.761	82	94228	4.514
39) Nitrobenzene	(2)	5.779	77	50315	4.545
40) N-Nitrosopiperidine	(2)	5.927	114	22811	4.645
41) Isophorone	(2)	6.025	82	91749	4.564
42) 2-Nitrophenol	(2)	6.093	139	16269	4.228
44) 2,4-Dimethylphenol	(2)	6.160	107	45682	4.618
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	20664	5.010
47) Benzoic acid	(2)	6.240	105	77016	12.013

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46)	bis(2-Chloroethoxy)methane	(2)	6.252	93	58319A	4.775
49)	2,4-Dichlorophenol	(2)	6.332	162	31829	4.732
50)	1,2,4-Trichlorobenzene	(2)	6.412	180	34984	4.937
52)	*Naphthalene-d8	(2)	6.461	136	484406	20.000
53)	Naphthalene	(2)	6.480	128	123417	4.802
56)	4-Chloroaniline	(2)	6.541	127	54123	4.832
57)	2,6-Dichlorophenol	(2)	6.548	162	30127	4.755
58)	Hexachloropropene	(2)	6.578	213	18732	4.675
60)	Hexachlorobutadiene	(2)	6.621	225	18159	5.110
194)	Quinoline	(2)	6.806	129	87960	4.965
63)	Caprolactam	(2)	6.867	113	19896	5.339
64)	N-Nitrosodi-n-butylamine	(2)	6.892	84	36945	4.061
68)	4-Chloro-3-methylphenol	(2)	7.027	107	40317	4.688
69)	Safrole	(2)	7.095	162	32592	4.787
70)	2-Methylnaphthalene	(2)	7.162	142	88393	4.846
71)	1-Methylnaphthalene	(2)	7.255	142	80497	4.823
72)	Hexachlorocyclopentadiene	(3)	7.328	237	13538	4.425
73)	1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	35253	4.980
74)	cis-Isosafrole	(3)	7.378	162	6270	0.552
75)	2,4,6-Trichlorophenol	(3)	7.439	196	21626	4.682
77)	2,4,5-Trichlorophenol	(3)	7.470	196	22522	4.472
78)	$2-Fluorobiphenyl	(3)	7.531	172	182995	4.903
79)	trans-Isosafrole	(3)	7.599	162	34826	4.328
80)	Isosafrole	(3)	7.599	162	34826	4.863
83)	1,1'-Biphenyl	(3)	7.624	154	121870	5.300
84)	2-Chloronaphthalene	(3)	7.630	162	79553	4.750
85)	1-Chloronaphthalene	(3)	7.654	162	77693	4.713
88)	Diphenyl ether	(3)	7.734	170	56812	4.960
89)	2-Nitroaniline	(3)	7.734	138	23149	4.236
90)	1,4-Naphthoquinone	(3)	7.808	158	31942	4.532
91)	1,4-Dinitrobenzene	(3)	7.876	168	7702	3.626
92)	Dimethylphthalate	(3)	7.937	163	99107	4.973
93)	1,3-Dinitrobenzene	(3)	7.943	168	10380	3.597
94)	2,6-Dinitrotoluene	(3)	7.980	165	17386	4.188
95)	Acenaphthylene	(3)	8.029	152	122862	4.698
97)	3-Nitroaniline	(3)	8.134	138	22434	4.426
98)	*Acenaphthene-d10	(3)	8.171	164	296800	20.000
99)	Acenaphthene	(3)	8.202	153	86320	4.770
100)	2,4-Dinitrophenol	(3)	8.238	184	13772	10.214
103)	4-Nitrophenol	(3)	8.306	109	27450	8.741

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) Pentachlorobenzene	(3)	8.337	250	31339	5.123
105) 2,4-Dinitrotoluene	(3)	8.368	165	20905	3.897
104) Dibenzofuran	(3)	8.374	168	120366	4.855
106) 1-Naphthylamine	(3)	8.447	143	94870	4.657
107) 2,3,4,6-Tetrachlorophenol	(3)	8.497	232	16075	4.531
108) 2-Naphthylamine	(3)	8.527	143	96695	4.639
109) Diethylphthalate	(3)	8.632	149	101468	4.929
110) Thionazin	(3)	8.706	107	21030M	4.632
111) Fluorene	(3)	8.706	166	102097	4.787
113) 5-Nitro-o-toluidine	(3)	8.718	152	23780	4.222
114) 4-Nitroaniline	(3)	8.724	138	24361	4.274
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	47537	5.010
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	15173	7.178
202) NDPA as diphenylamine	(4)	8.841	169	87965	4.781
117) N-Nitrosodiphenylamine	(4)	8.841	169	87965	4.792
118) 1,2-Diphenylhydrazine	(4)	8.878	77	117833	4.481
119)$2,4,6-Tribromophenol	(3)	8.939	330	17293	4.824
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	17344	4.628
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	3982	2.861
122) Diallate (peak 1)	(4)	9.136	86	46921	3.487
123) Phorate	(4)	9.142	75	68496	4.228
124) Phenacetin	(4)	9.148	108	56146	4.426
125) 4-Bromophenyl-phenylether	(4)	9.198	248	25635	5.068
126) Diallate (peak 2)	(4)	9.222	86	7575	1.296
127) Hexachlorobenzene	(4)	9.241	284	24595	4.925
128) Dimethoate	(4)	9.290	87	43793	4.420
130) Atrazine	(4)	9.376	200	31458	5.349
131) Pentachlorophenol	(4)	9.437	266	11754M	4.244
132) Pentachloronitrobenzene	(4)	9.450	237	9540	4.401
133) 4-Aminobiphenyl	(4)	9.450	169	98332	4.954
134) Pronamide	(4)	9.530	173	43979	4.596
135)*Phenanthrene-d10	(4)	9.616	188	547696	20.000
136) Dinoseb	(4)	9.634	211	7839M	2.745
137) Phenanthrene	(4)	9.640	178	153342	4.815
138) Anthracene	(4)	9.689	178	153942	4.696
140) Carbazole	(4)	9.849	167	153179	4.789
141) Methyl parathion	(4)	10.009	109	19323	3.255
142) Di-n-butylphthalate	(4)	10.237	149	179816	4.764
144) 4-Nitroquinoline-1-oxide	(4)	10.390	190	5501	2.549
143) Parathion	(4)	10.397	109	15274	3.497

M = Compound was manually integrated.
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on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0408.d
Injection date and time: 12-NOV-2013 12:38
Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 12-NOV-2013 23:11
Sublist used: newall1
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005
Lab Sample ID: STD3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Isodrin	(4)	10.655	193	17055	4.739
147) Fluoranthene	(4)	10.796	202	171379	4.813
152) Benzidine	(5)	10.944	184	413305	14.850
167)*Pyrene-d10	(5)	10.999	212	679864	20.000
154) Pyrene	(5)	11.011	202	179871	4.764
156)$Terphenyl-d14	(5)	11.196	244	239522	4.928
158) p-Dimethylaminoazobenzene	(5)	11.337	225	33651	4.574
159) Chlorobenzilate	(5)	11.393	139	50704	4.430
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	110813	4.762
161) Butylbenzylphthalate	(5)	11.694	149	84862	4.710
162) 2-Acetylaminofluorene	(5)	11.897	181	64736	3.967
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	63493	4.836
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	28485	4.442
166) Benzo(a)anthracene	(5)	12.192	228	164309	4.718
168) Chrysene	(5)	12.223	228	165805	4.938
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	117619	4.705
189) 6-Methylchrysene	(5)	12.678	242	119363	4.818
170) Di-n-octylphthalate	(6)	12.936	149	191440	4.222
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	76981	4.516
172) Benzo(b)fluoranthene	(6)	13.243	252	165832	4.521
173) Benzo(k)fluoranthene	(6)	13.268	252	185097	4.946
174) Benzo(a)pyrene	(6)	13.551	252	160113M	4.472
175)*Perylene-d12	(6)	13.606	264	600759	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	84791	4.725
190) Dibenz(a,h)acridine	(6)	14.399	279	114899	4.417
191) Dibenz(a,j)acridine	(6)	14.449	279	149262	4.990
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	186027	4.884
178) Dibenz(a,h)anthracene	(6)	14.651	278	154487	4.848
179) Benzo(g,h,i)perylene	(6)	14.904	276	161117	4.965
129) Diallate TRANS/CIS	(4)			54496	4.717

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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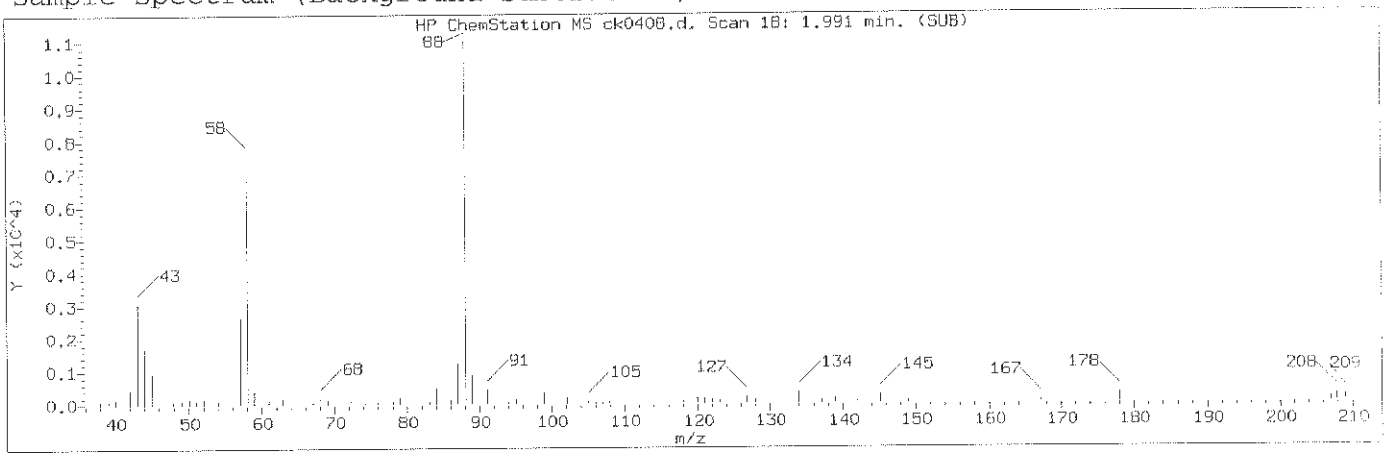
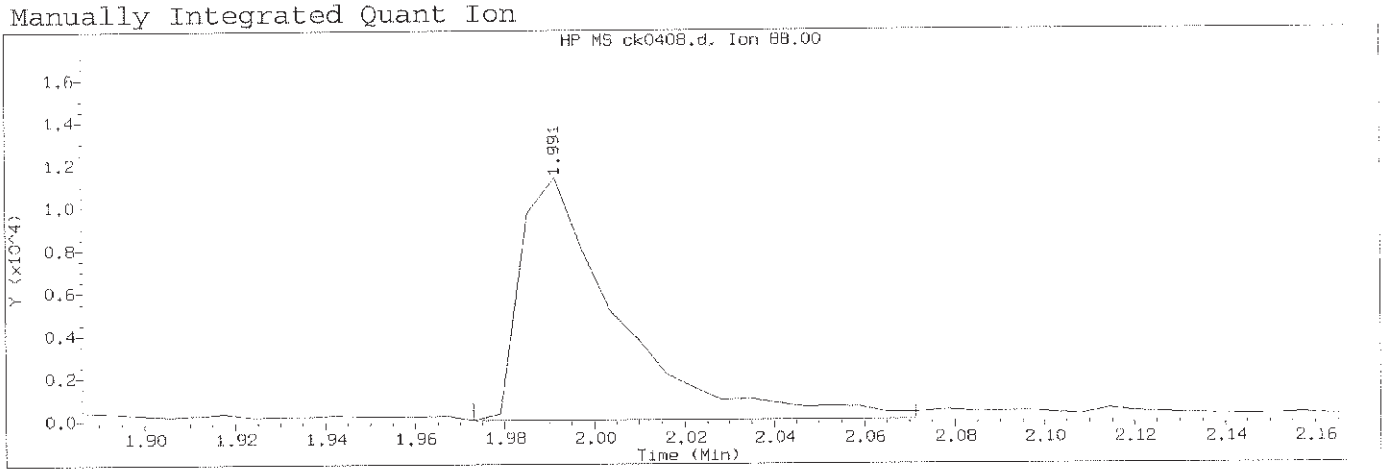
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area (flag)	: 17313M		
On-Column Amount (ng/ul)	: 5.0208		
Integration start scan	: 14	Integration stop scan:	30
Y at integration start	: 0	Y at integration end:	0

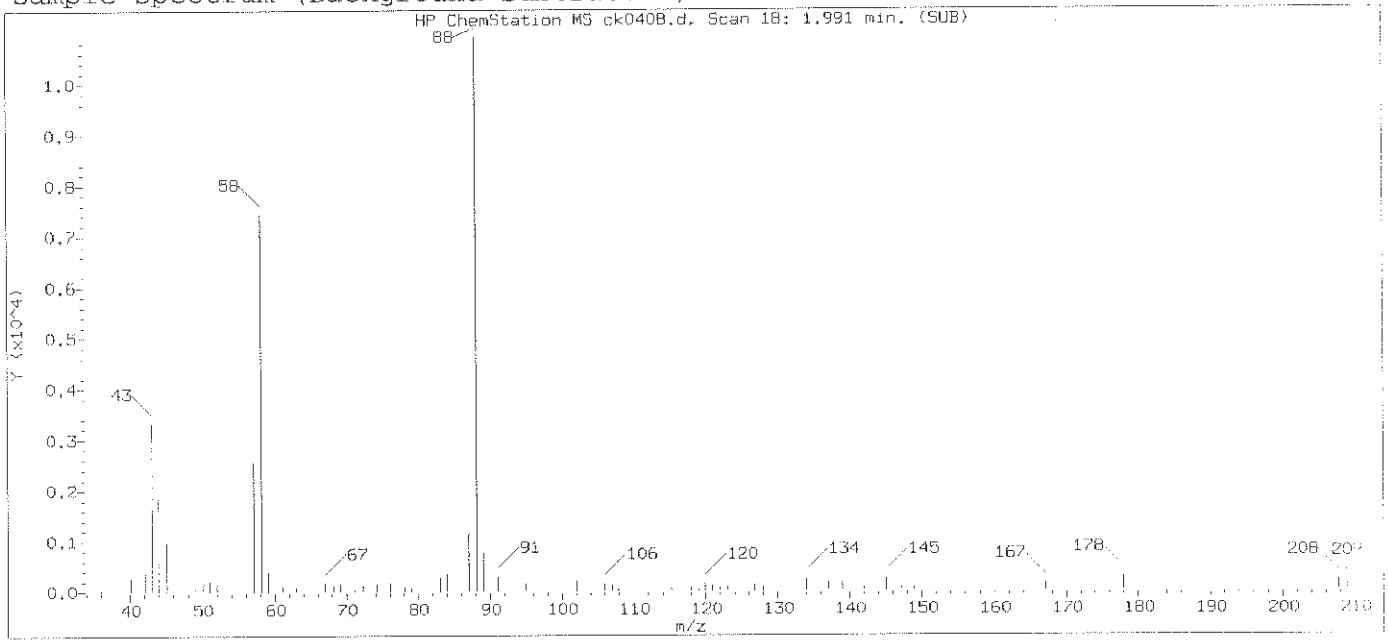
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

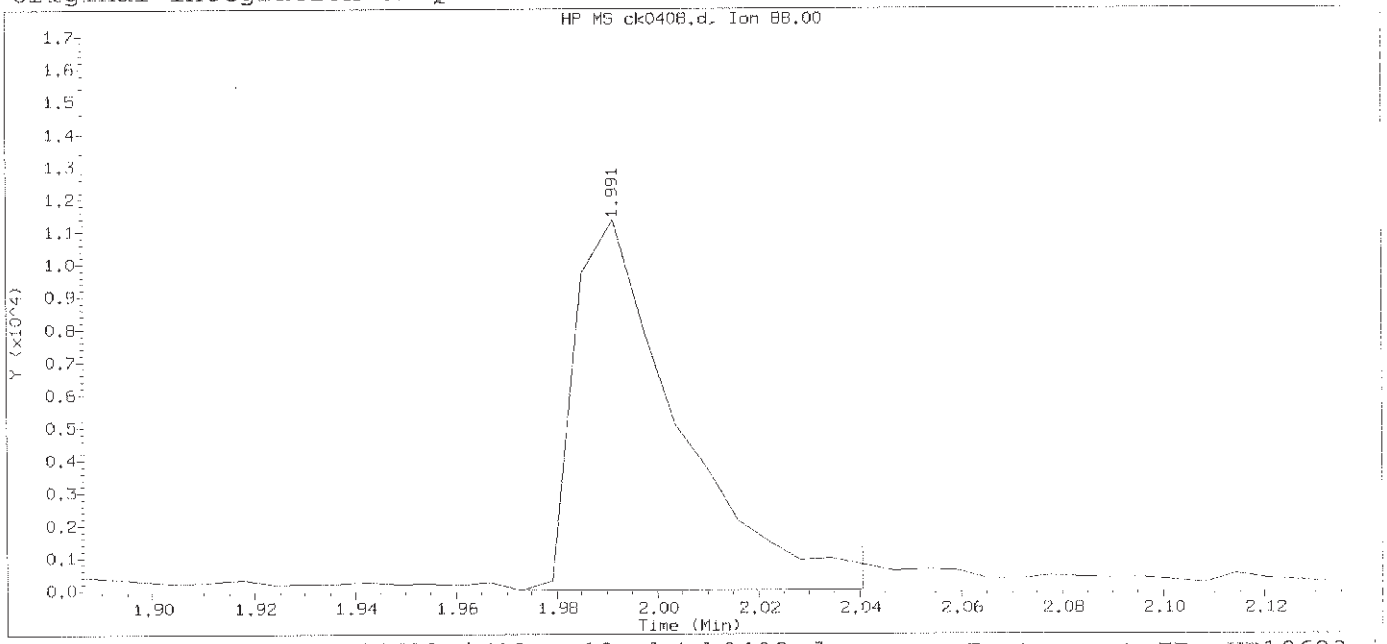
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newa111
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 18		
Retention Time (minutes)	: 1.991		
Quant Ion	: 88.00		
Area	: 16256		
On-column Amount (ng/ul)	: 4.7631		
Integration start scan	: 14	Integration stop scan:	25
Y at integration start	: 0	Y at integration end:	0

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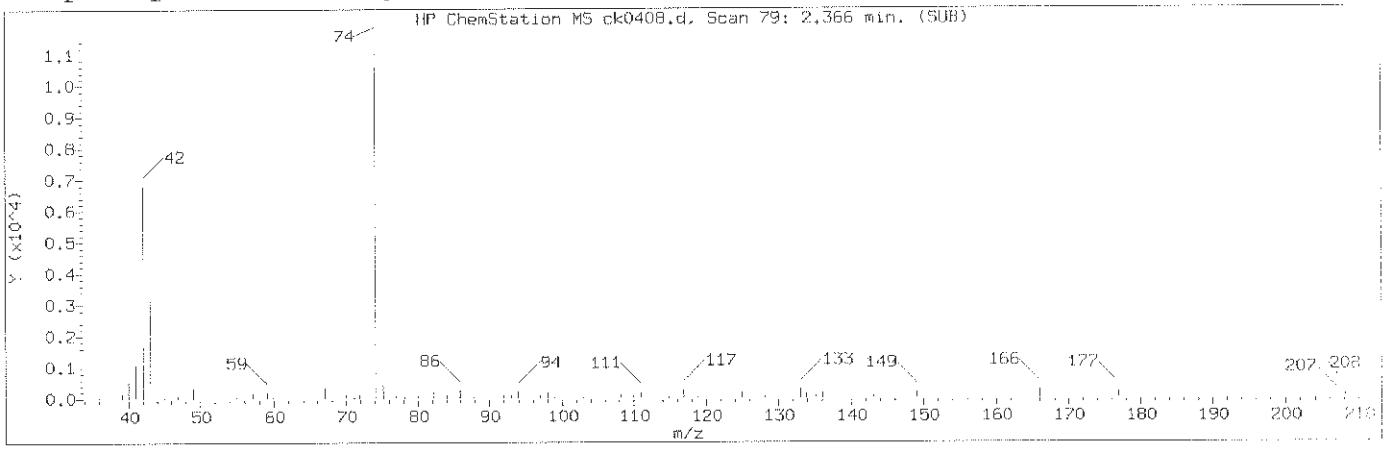
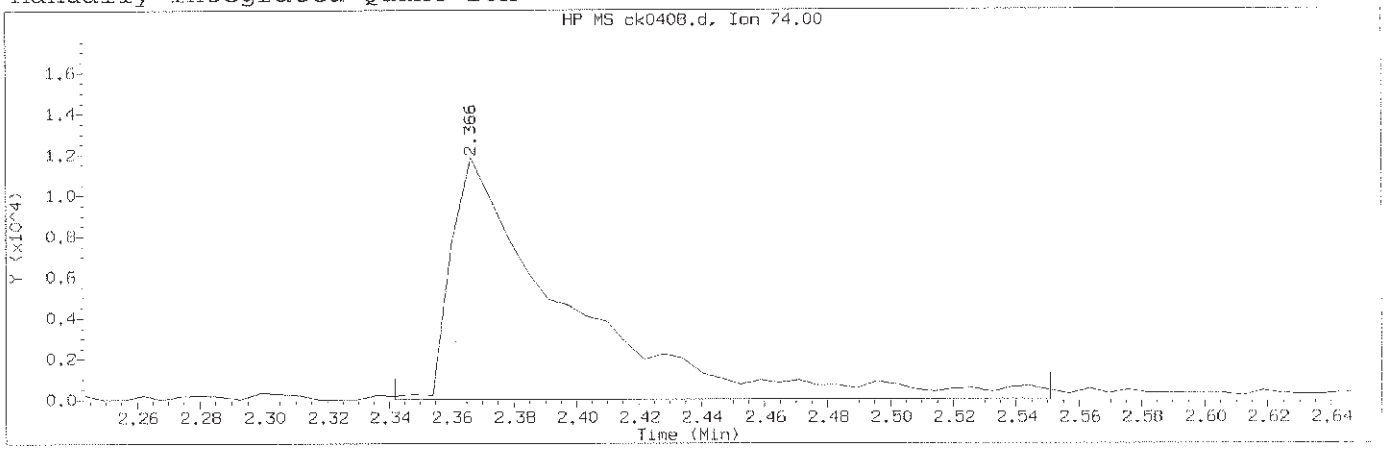
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

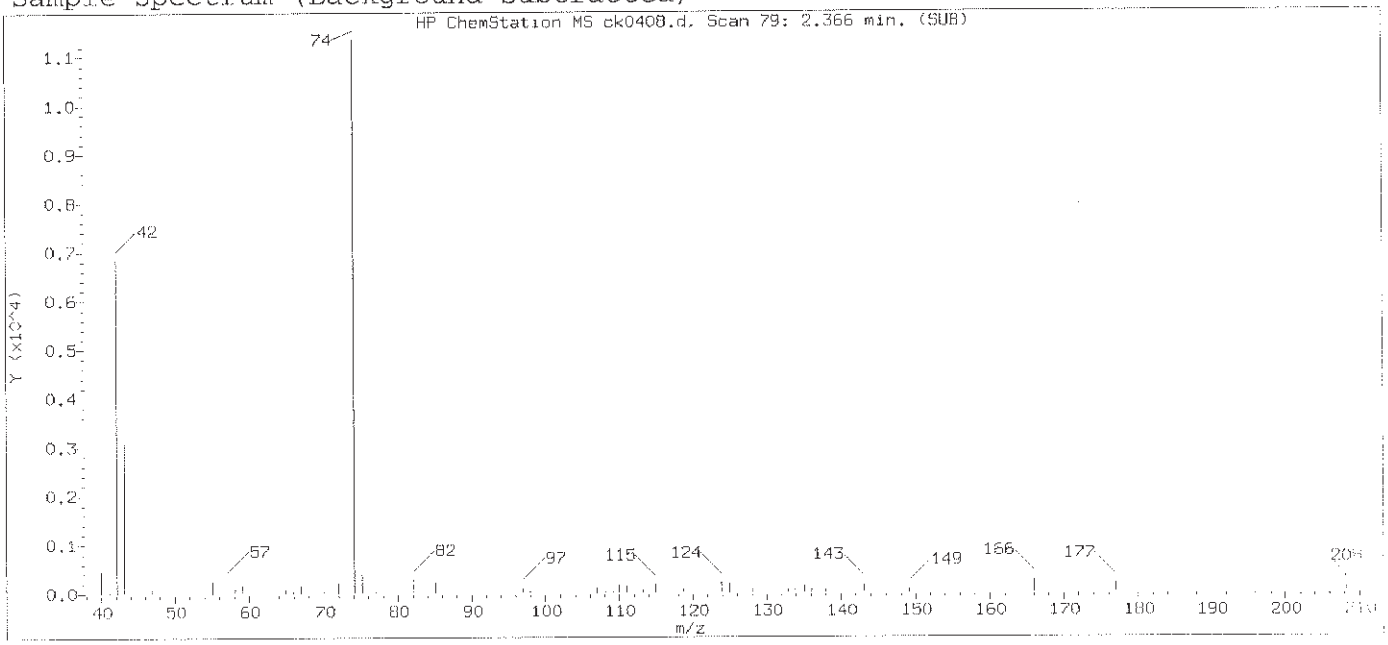
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area (flag)	: 30798M		
On-Column Amount (ng/ul)	: 4.8243		
Integration start scan	: 74	Integration stop scan:	108
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

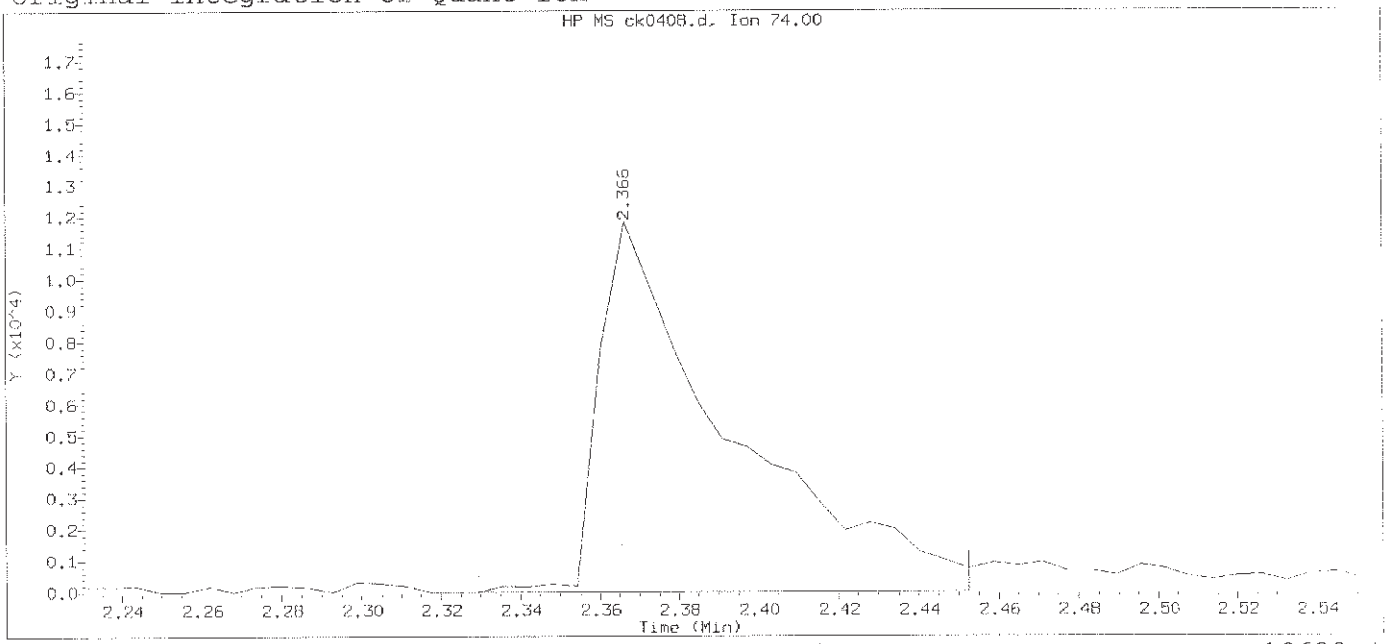
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 79		
Retention Time (minutes)	: 2.366		
Quant Ion	: 74.00		
Area	: 27002		
On-column Amount (ng/ul)	: 4.3153		
Integration start scan	: 72	Integration stop scan:	92
Y at integration start	: 0	Y at integration end:	0

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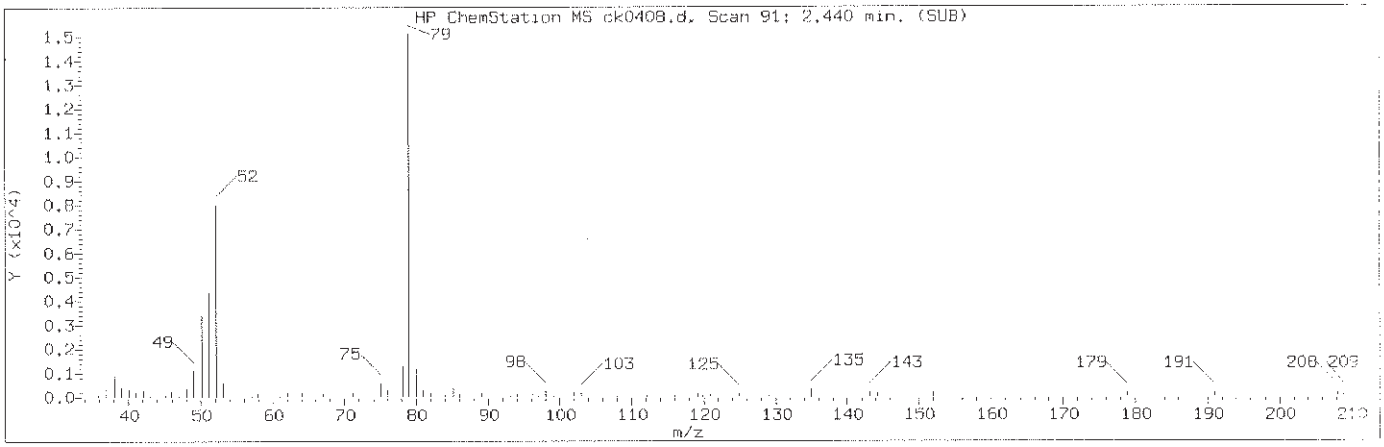
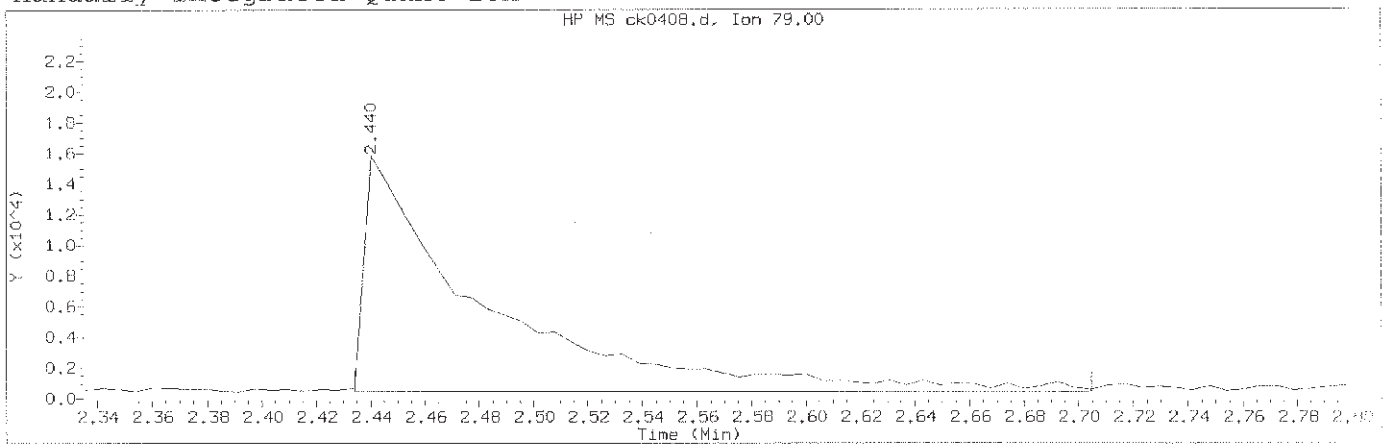
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area (flag)	: 46666M		
On-Column Amount (ng/ul)	: 4.7151		
Integration start scan	: 89	Integration stop scan:	133
Y at integration start	: 470	Y at integration end:	470

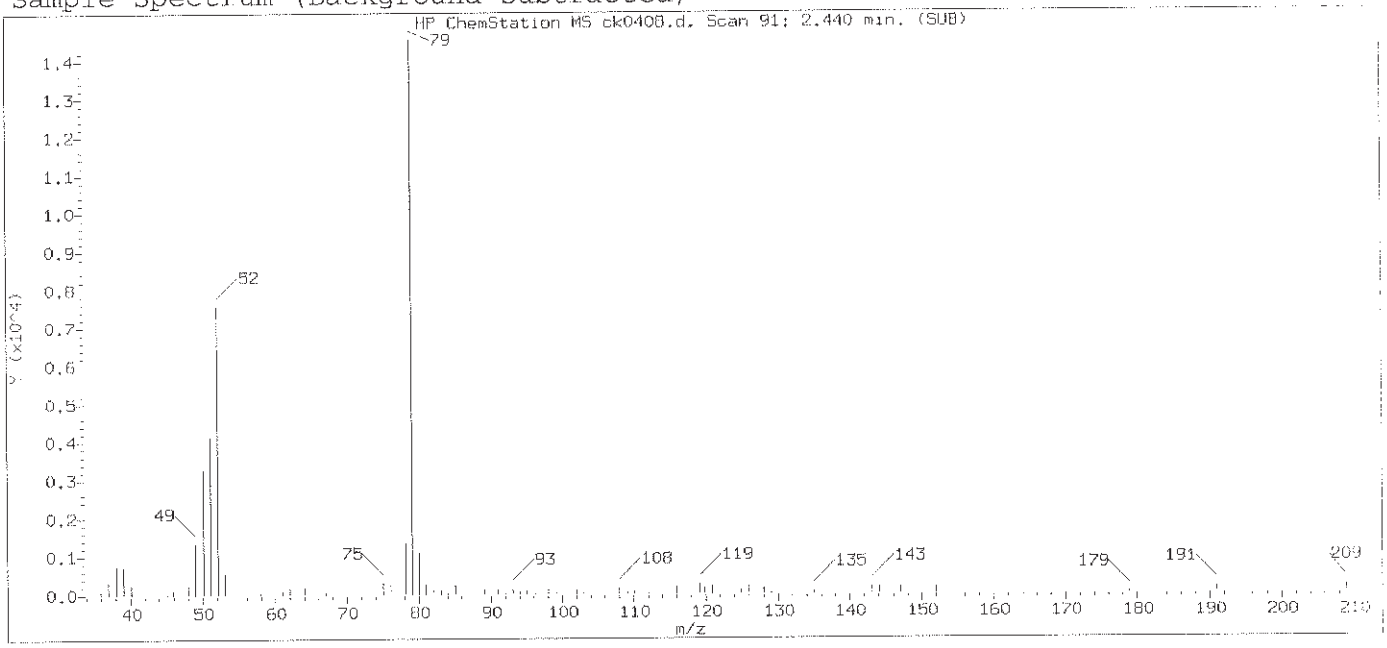
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

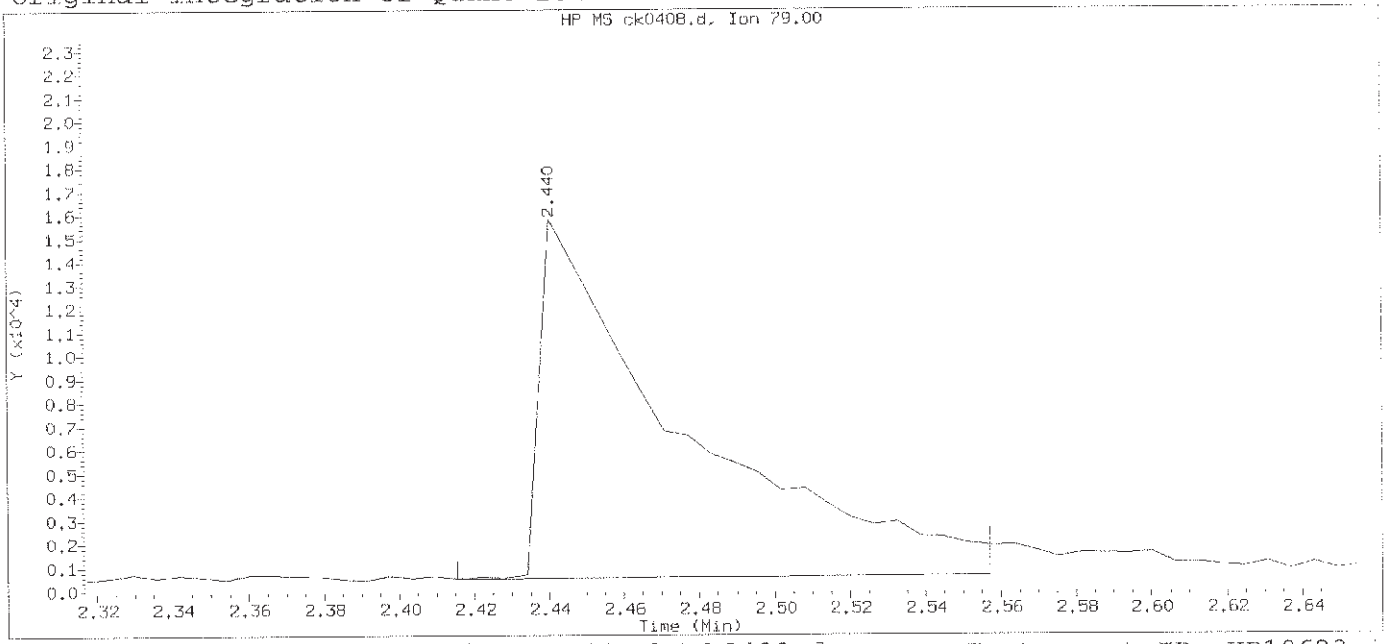
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 91		
Retention Time (minutes)	: 2.440		
Quant Ion	: 79.00		
Area	: 39804		
On-column Amount (ng/ul)	: 4.1169		
Integration start scan	: 86	Integration stop scan:	109
Y at integration start	: 509	Y at integration end:	615

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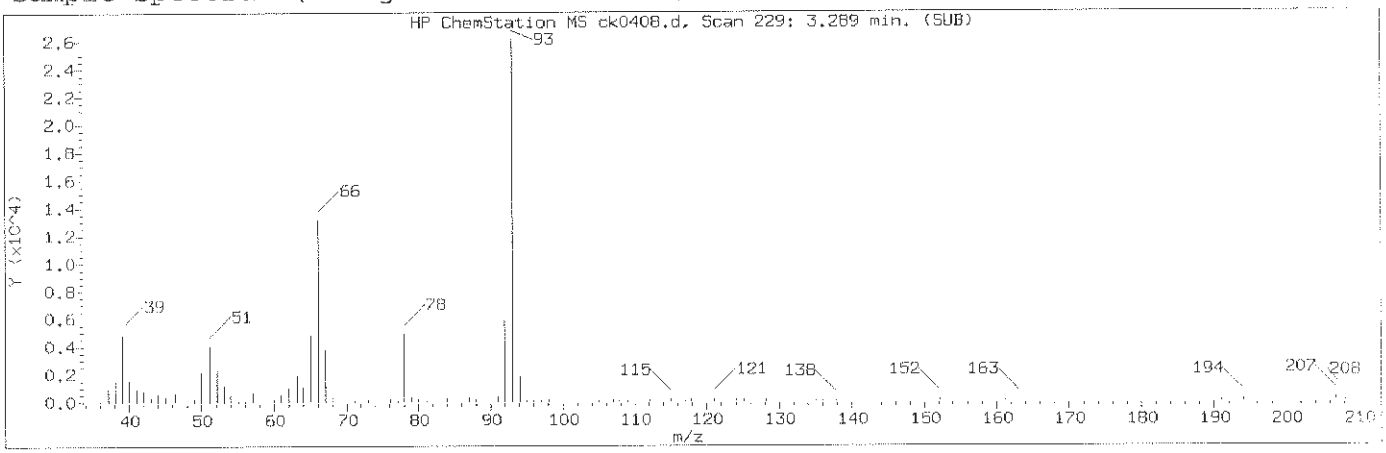
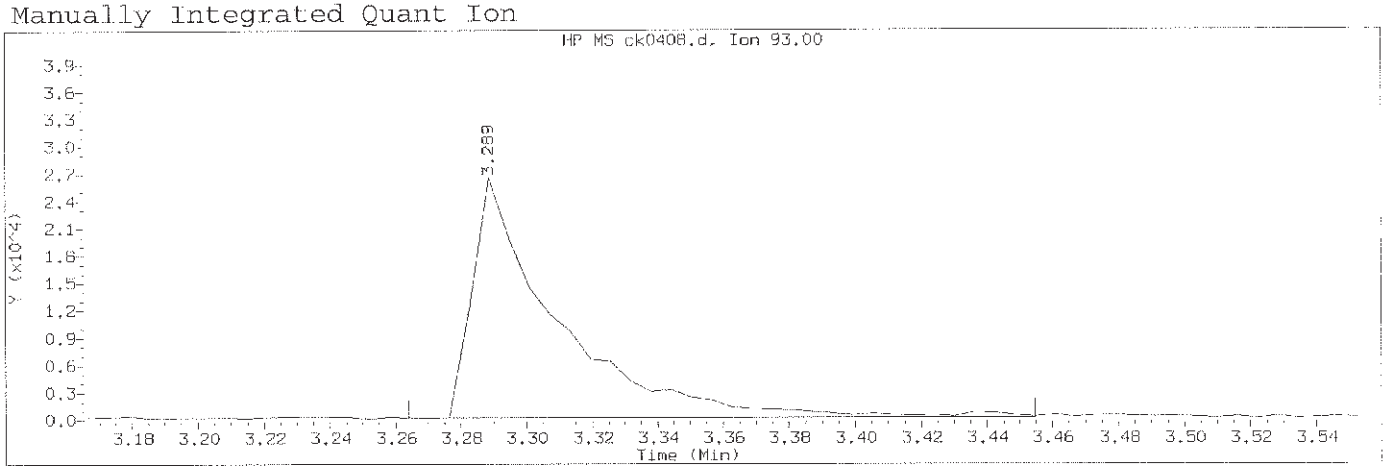
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area (flag)	: 46917M		
On-Column Amount (ng/ul)	: 4.6455		
Integration start scan	: 224	Integration stop scan:	255
Y at integration start	: 257	Y at integration end:	257

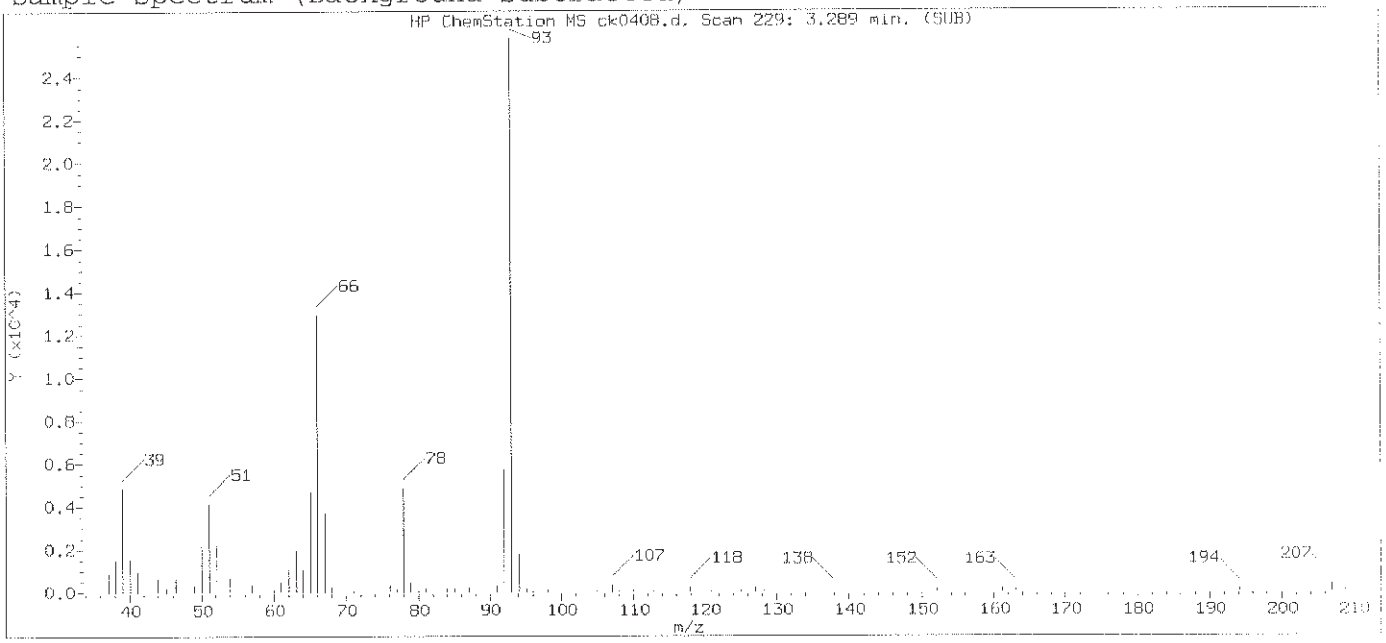
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

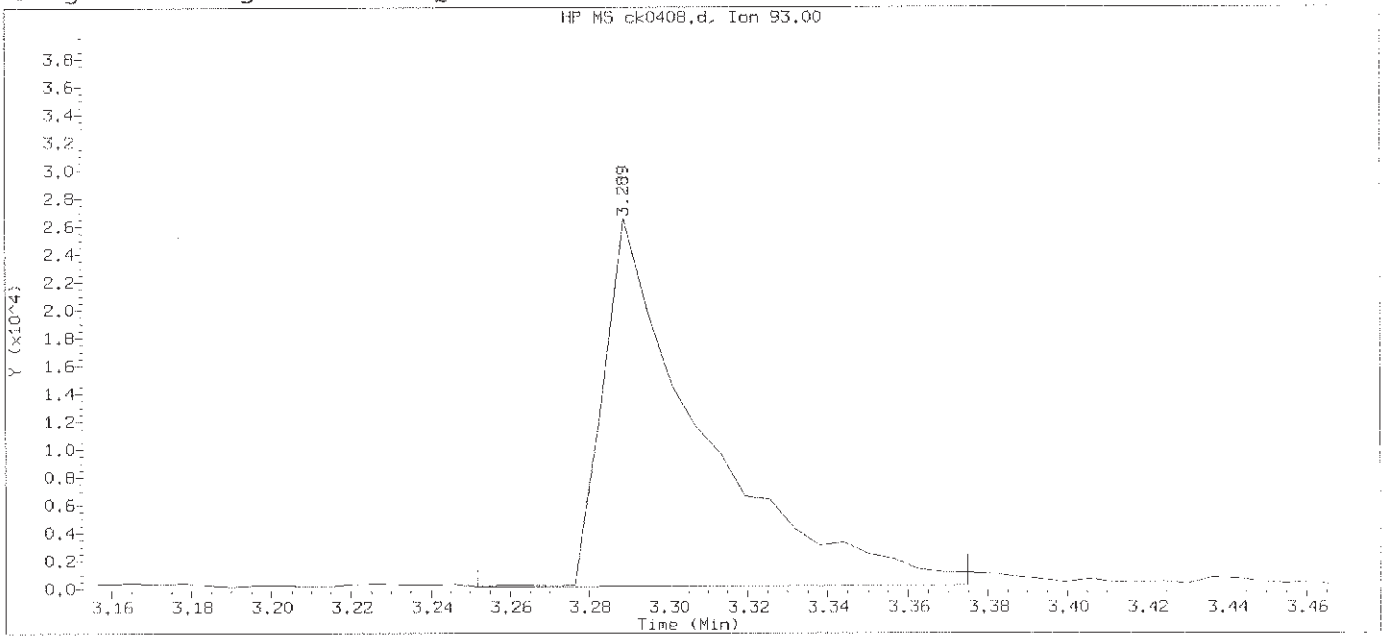
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

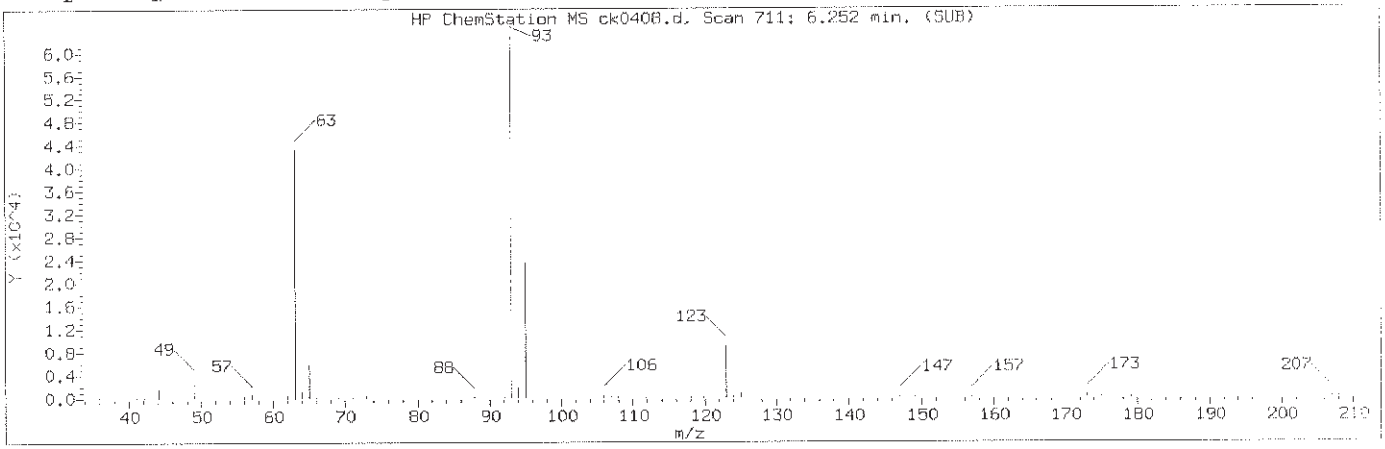
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

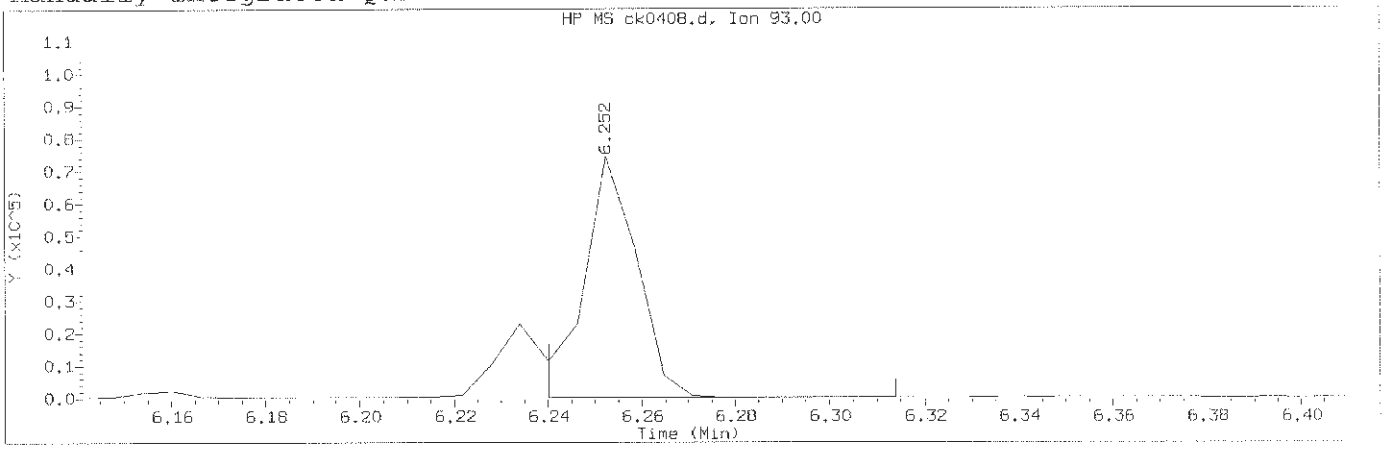
Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 229		
Retention Time (minutes)	: 3.289		
Quant Ion	: 93.00		
Area	: 45357		
On-column Amount (ng/ul)	: 4.5144		
Integration start scan	: 222	Integration stop scan:	242
Y at integration start	: 158	Y at integration end:	242

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 711		
Retention Time (minutes)	: 6.252		
Quant Ion	: 93.00		
Area (flag)	: 58319A		
On-Column Amount (ng/ul)	: 4.7749		
Integration start scan	: 708	Integration stop scan:	720
Y at integration start	: 168	Y at integration end:	168

Reason for manual integration: improper integration

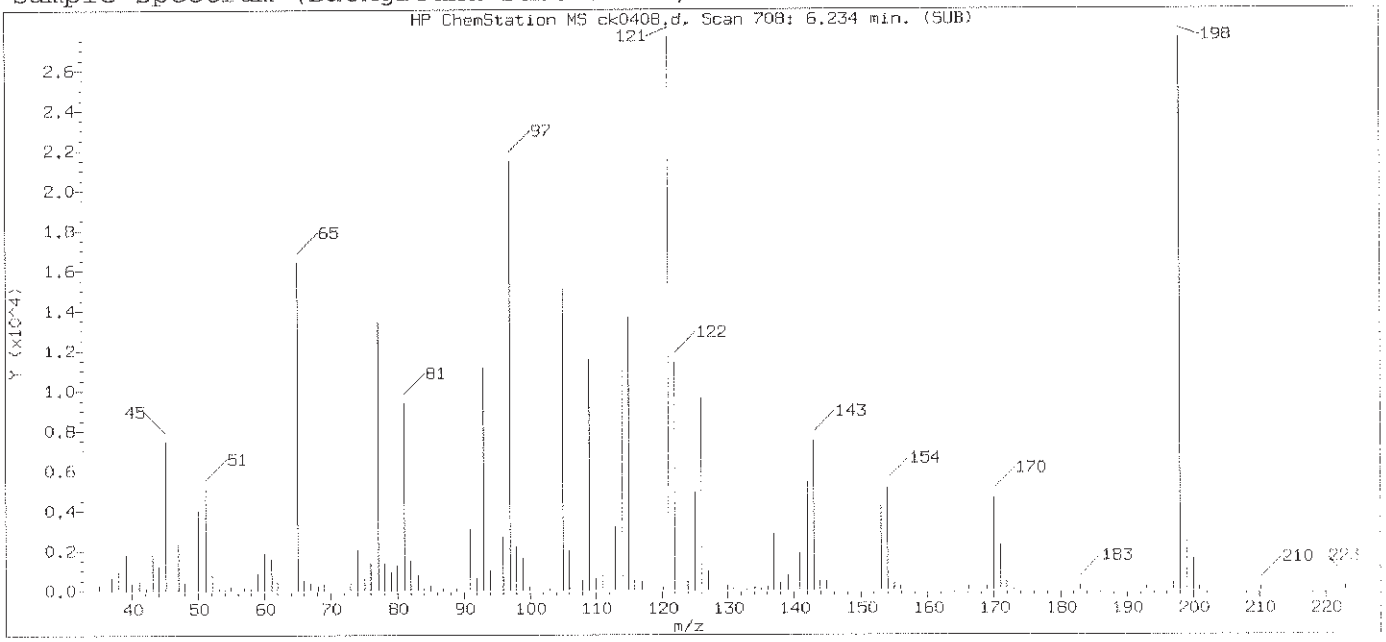
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.1 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

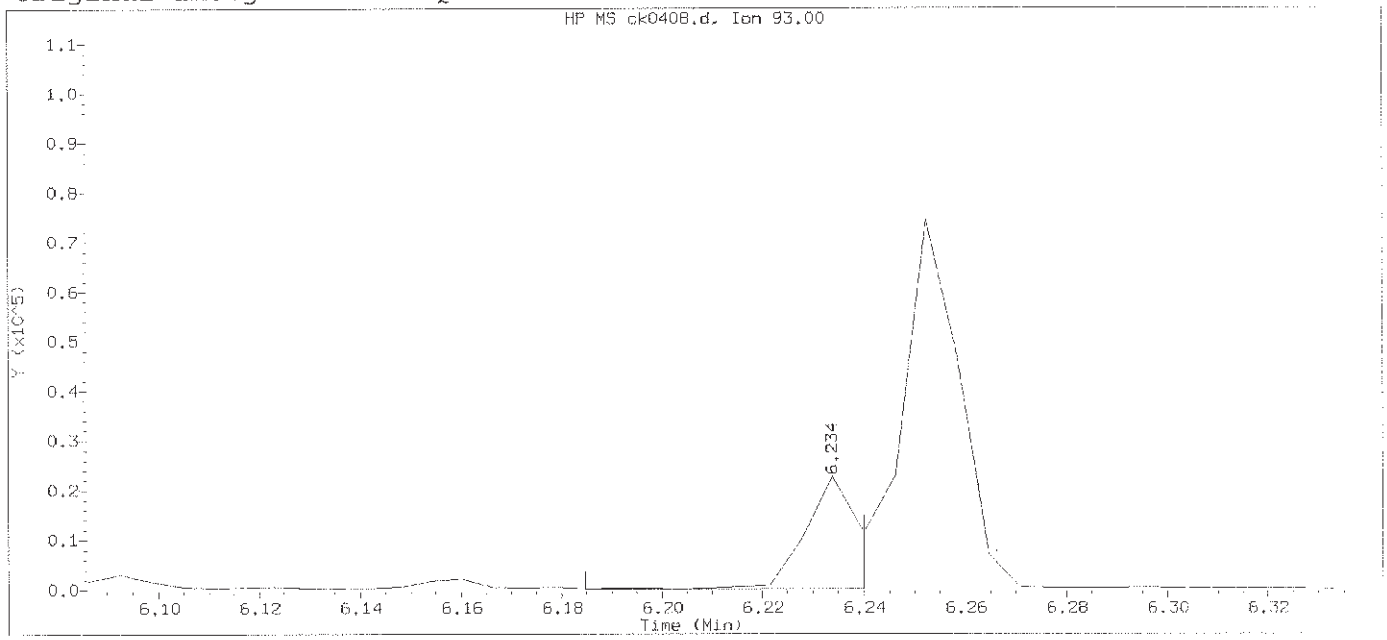
NOV 13 2013

GC/MS audit/management approval:_____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

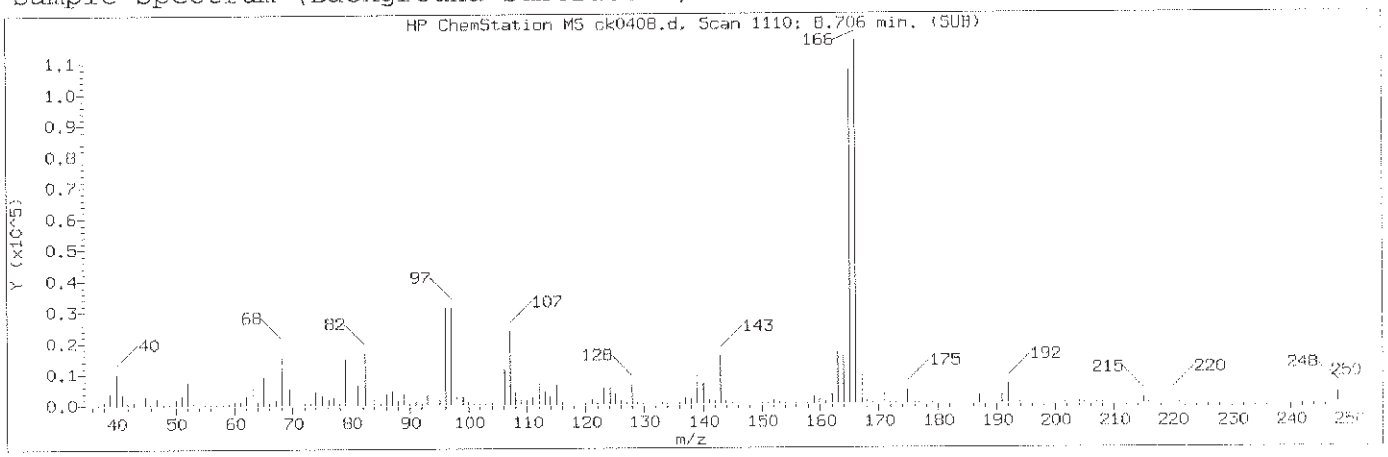
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

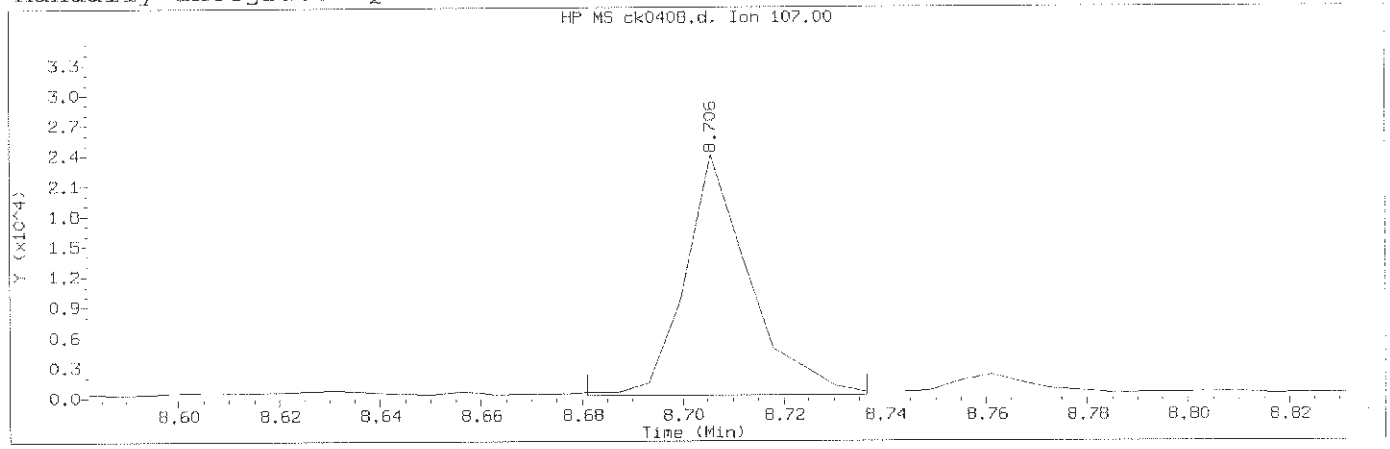
Compound Number	: 46		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 708		
Retention Time (minutes)	: 6.234		
Quant Ion	: 93.00		
Area	: 14835		
On-column Amount (ng/ul)	: 1.2624		
Integration start scan	: 699	Integration stop scan:	708
Y at integration start	: 168	Y at integration end:	168

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area (flag)	: 21030M		
On-Column Amount (ng/ul)	: 4.6316		
Integration start scan	: 1105	Integration stop scan:	1114
Y at integration start	: 198	Y at integration end:	198

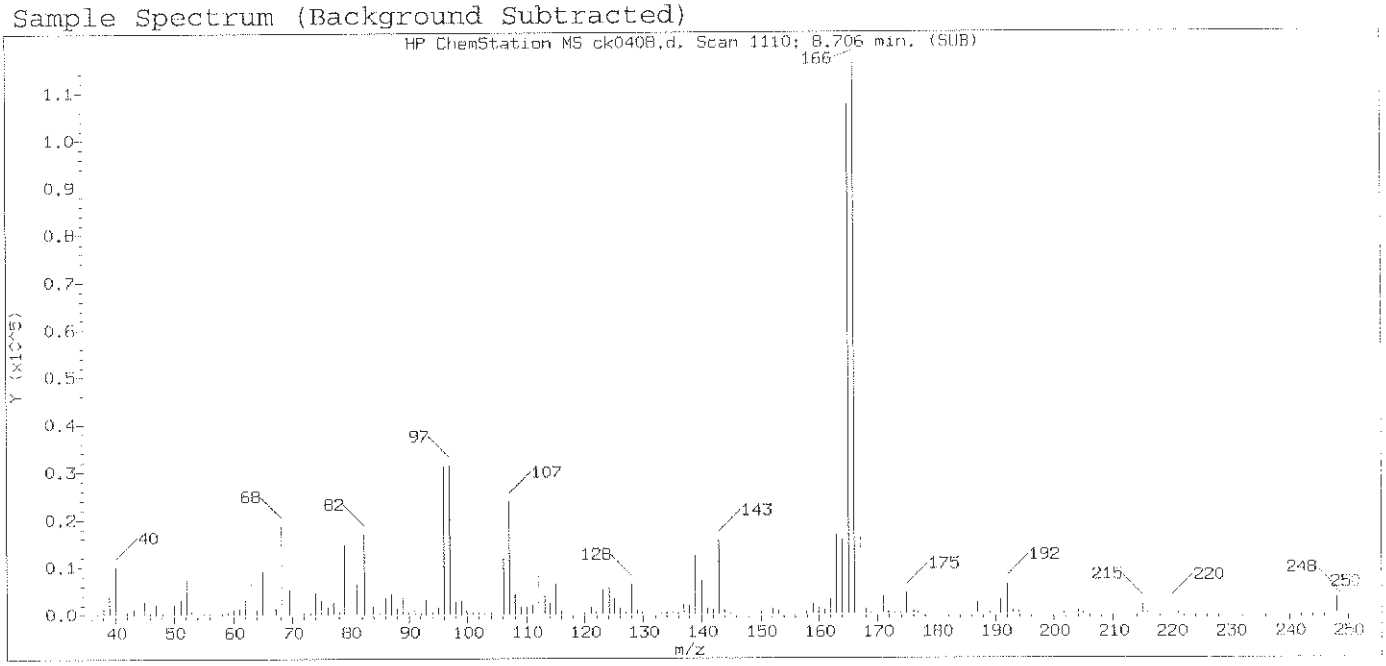
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

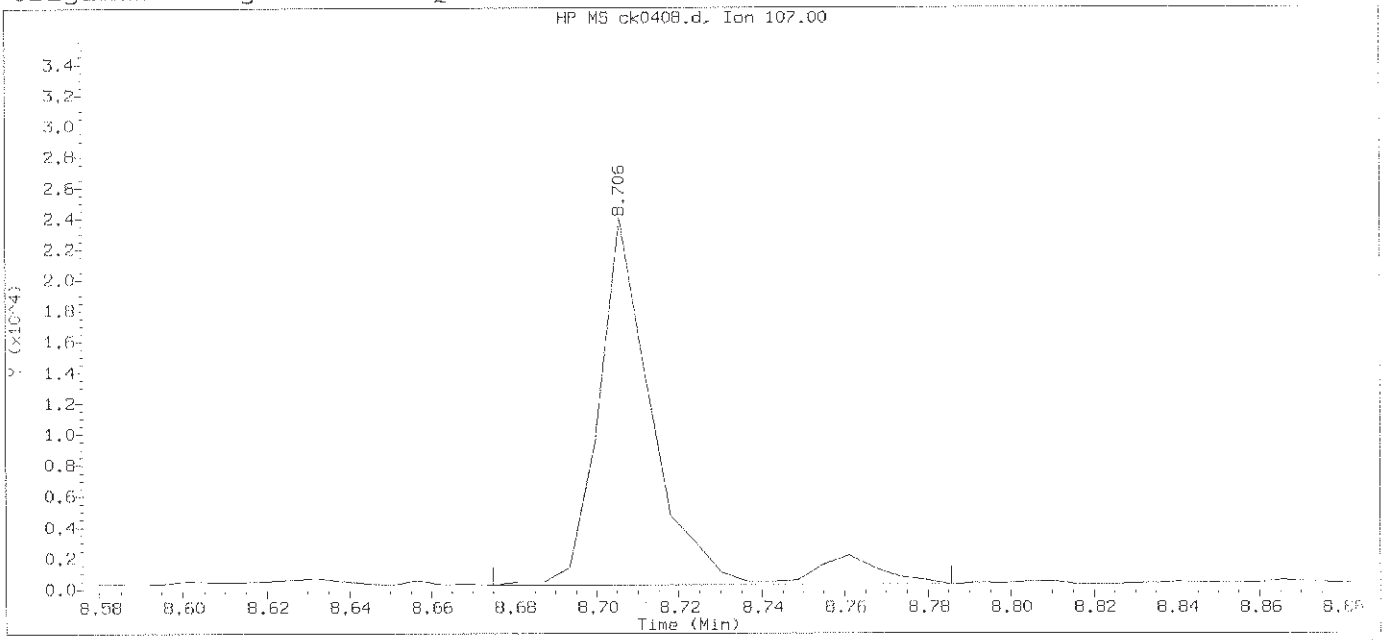
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

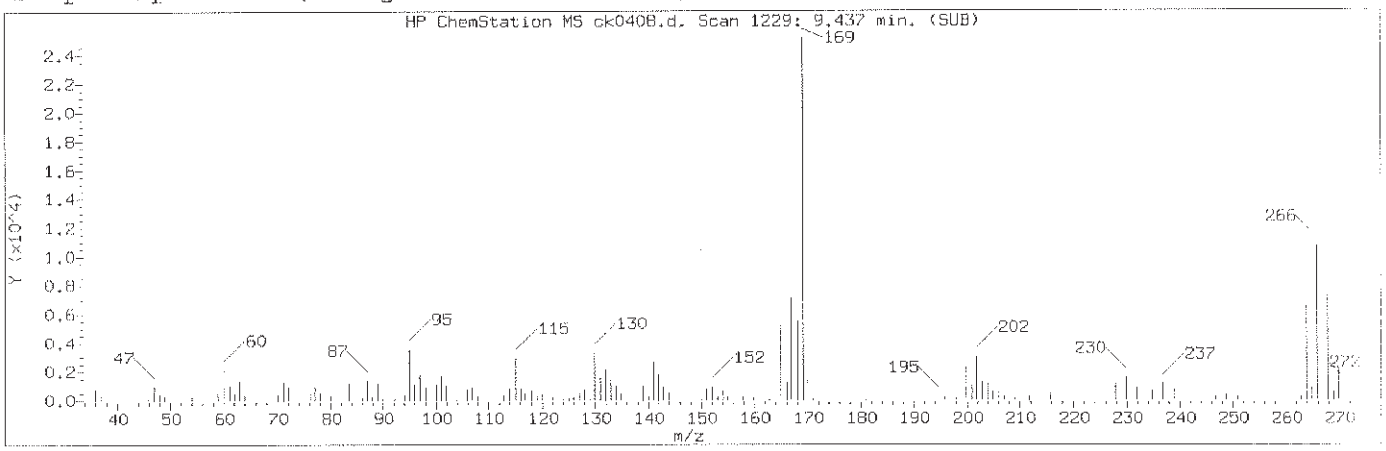
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newal11
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

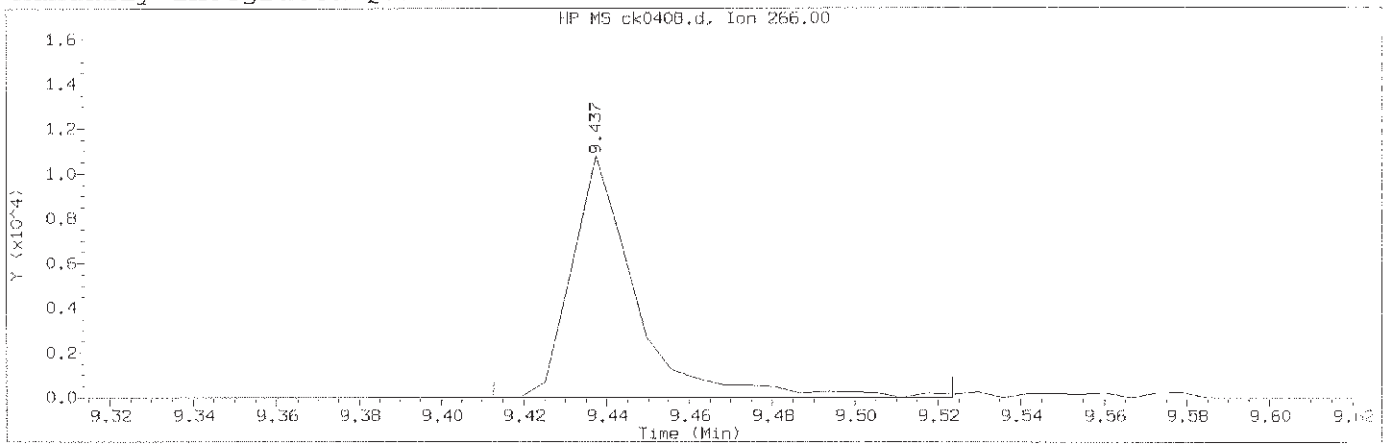
Compound Number	: 110		
Compound Name	: Thionazin		
Scan Number	: 1110		
Retention Time (minutes)	: 8.706		
Quant Ion	: 107.00		
Area	: 22717		
On-column Amount (ng/ul)	: 4.9421		
Integration start scan	: 1104	Integration stop scan:	1122
Y at integration start	: 274	Y at integration end:	311

Digitally signed by Mark A. Clark on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

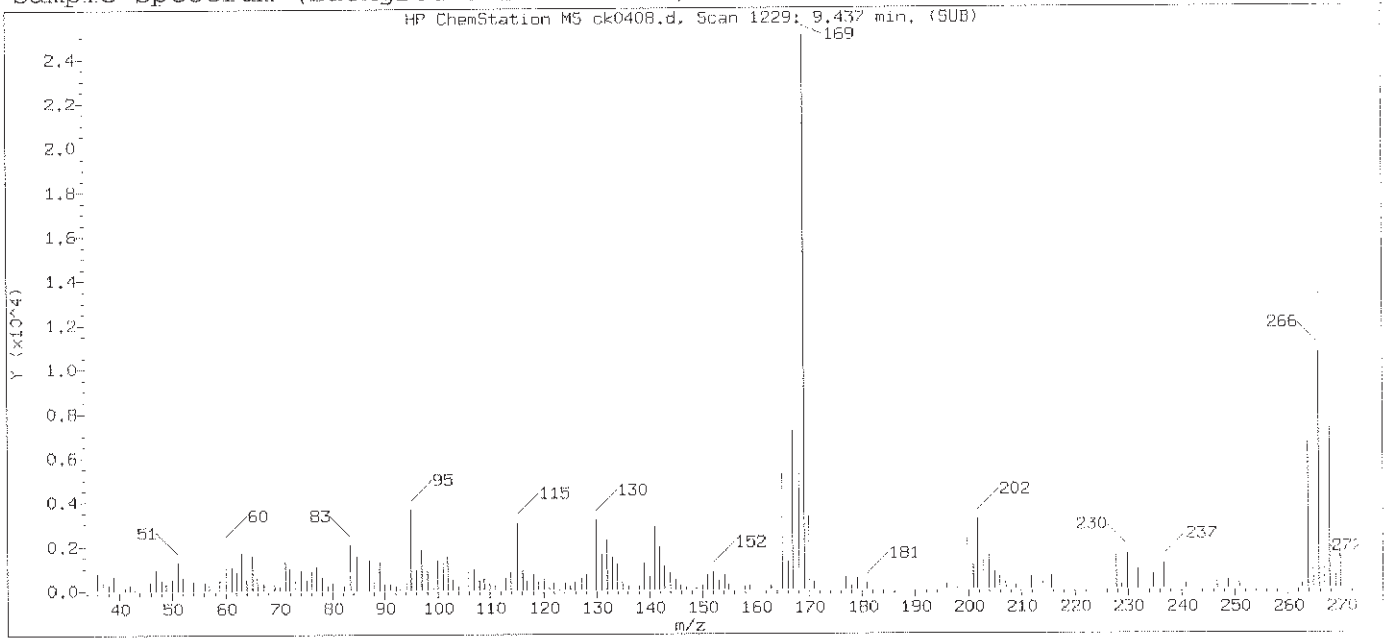
Compound Number	: 131		
Compound Name	: Pentachlorophenol		
Scan Number	: 1229		
Retention Time (minutes)	: 9.437		
Quant Ion	: 266.00		
Area (flag)	: 11754M		
On-Column Amount (ng/ul)	: 4.2439		
Integration start scan	: 1224	Integration stop scan:	1242
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

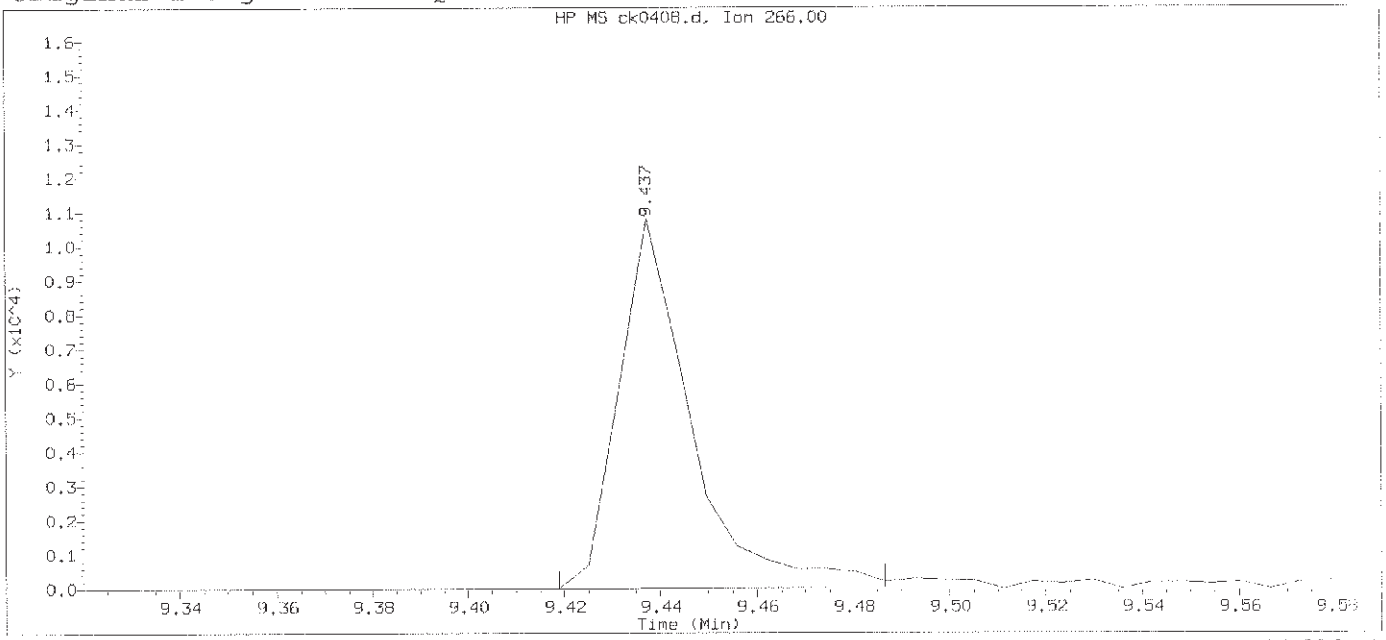
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 131	
Compound Name	: Pentachlorophenol	
Scan Number	: 1229	
Retention Time (minutes)	: 9.437	
Quant Ion	: 266.00	
Area	: 11208	
On-column Amount (ng/ul)	: 4.0737	
Integration start scan	: 1225	Integration stop scan: 1236
Y at integration start	: 0	Y at integration end: 42

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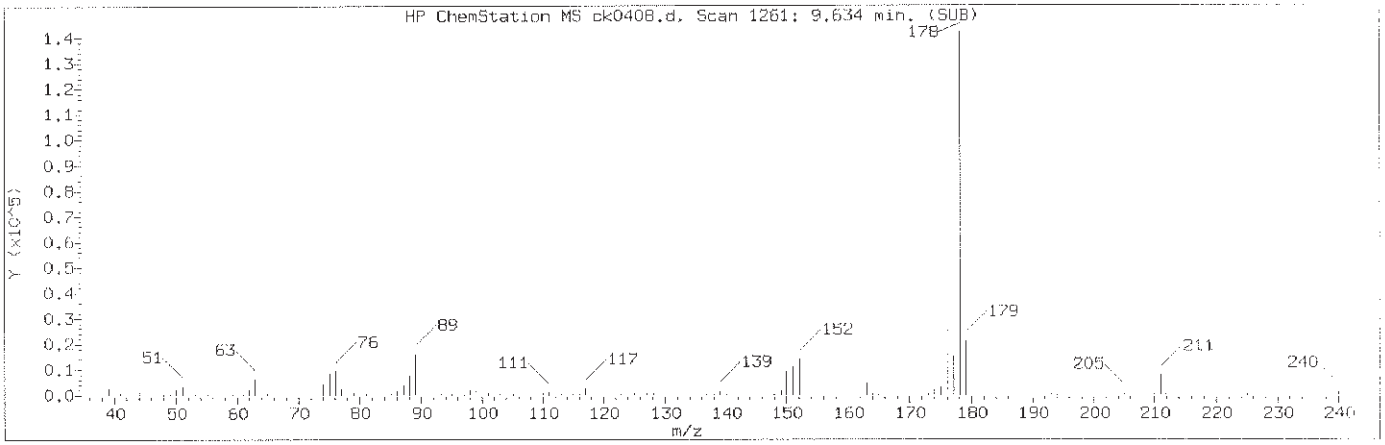
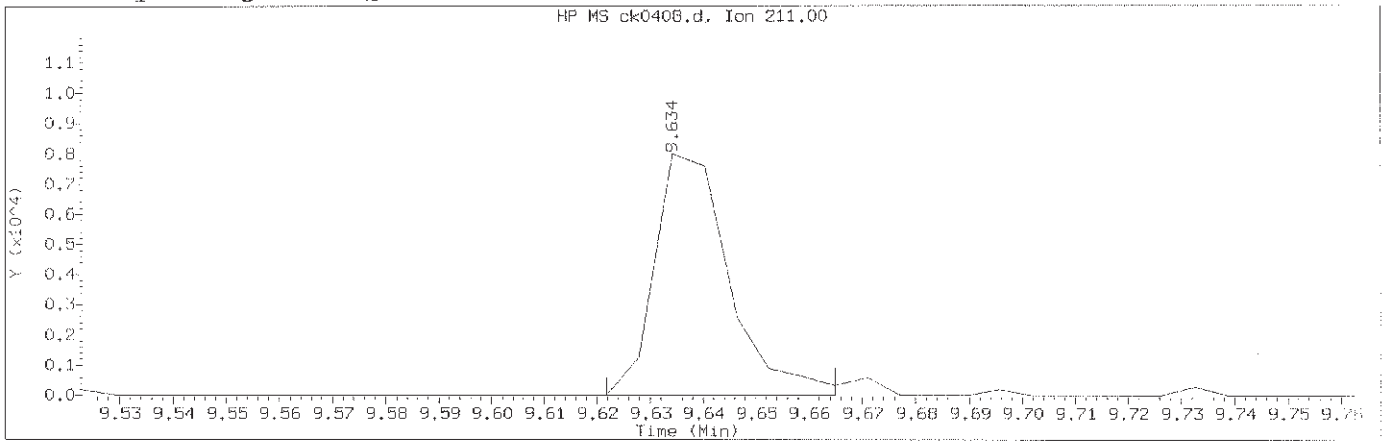
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 7839M		
On-Column Amount (ng/ul)	: 2.7451		
Integration start scan	: 1258	Integration stop scan:	1265
Y at integration start	: 3	Y at integration end:	3

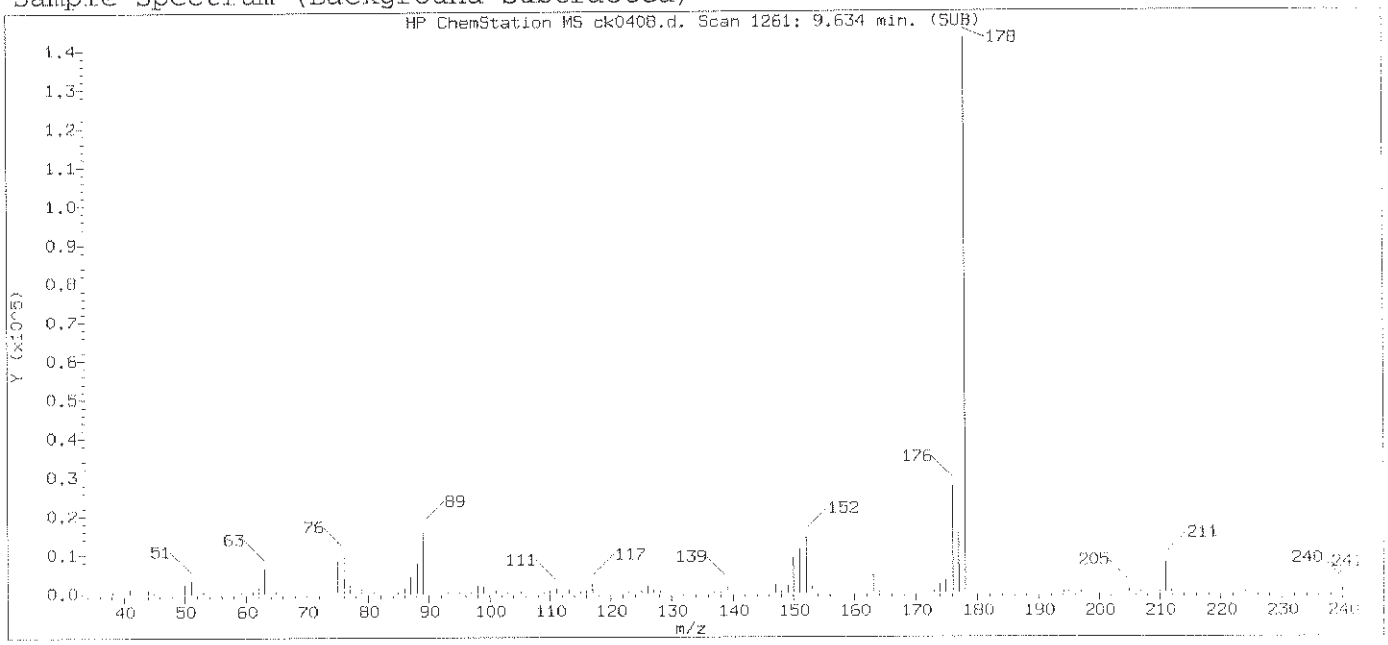
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

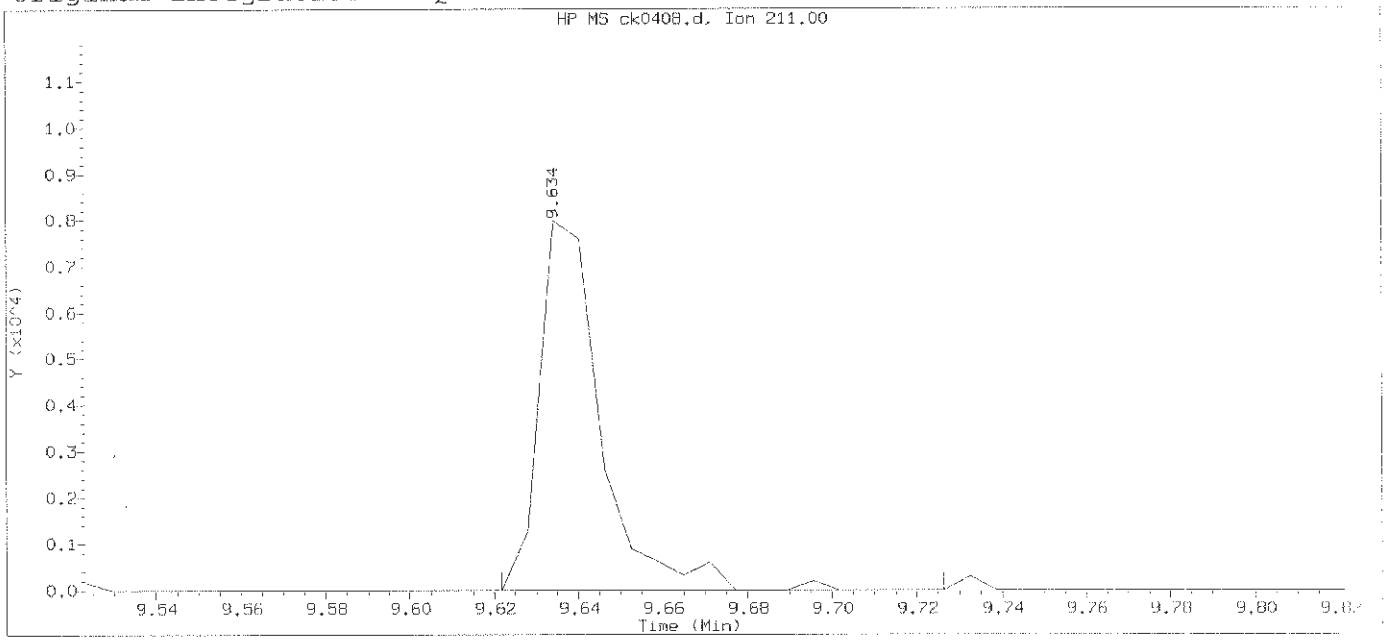
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area	: 8140		
On-column Amount (ng/ul)	: 2.8408		
Integration start scan	: 1258	Integration stop scan:	1275
Y at integration start	: 0	Y at integration end:	0

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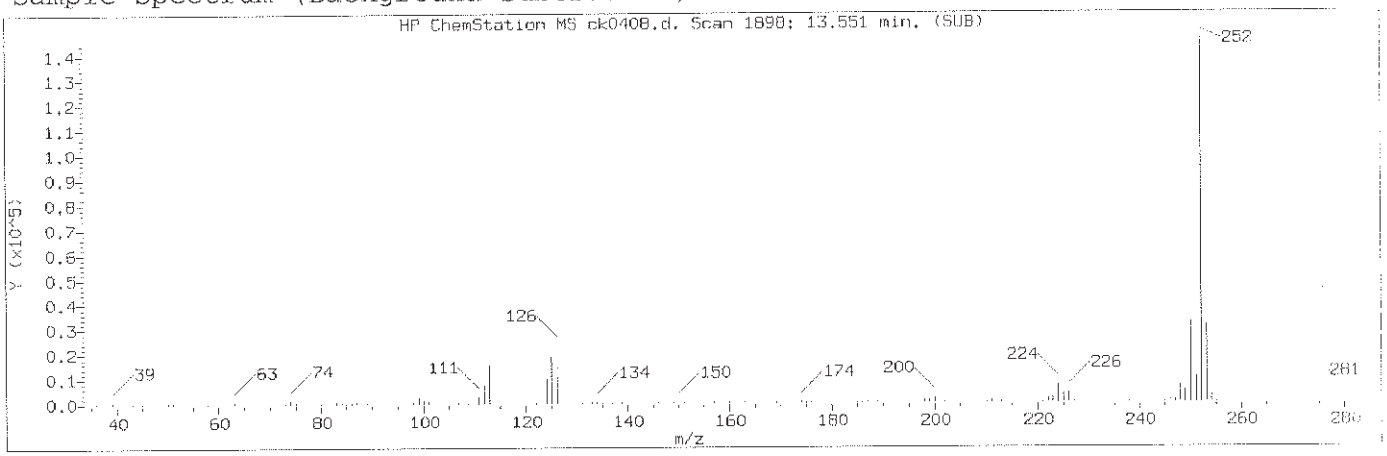
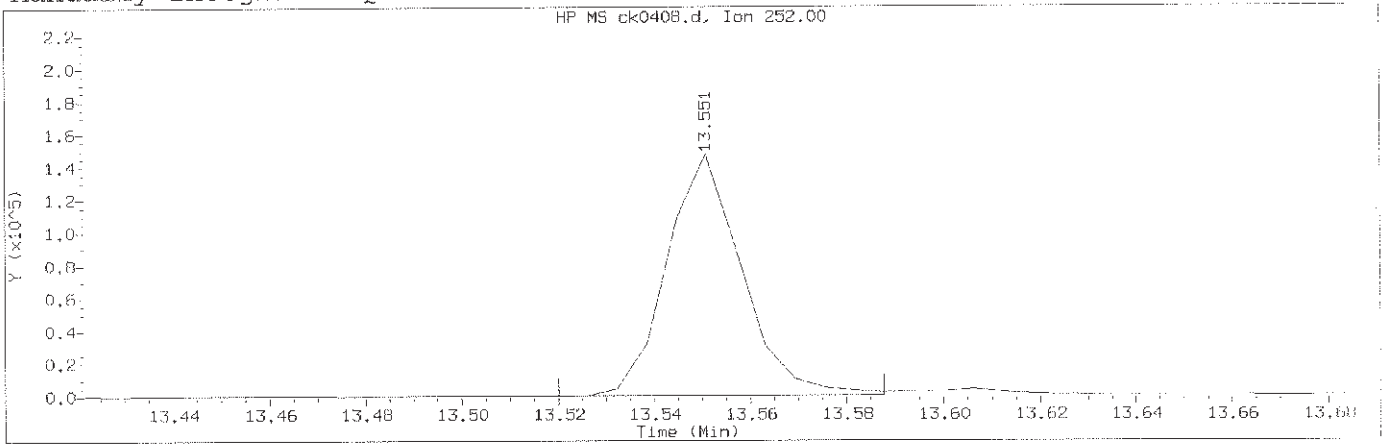
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 23:11
Date, time and analyst ID of latest file update: 12-Nov-2013 23:11 mac00013

Sample Name: SSTD005 Lab Sample ID: STD3083

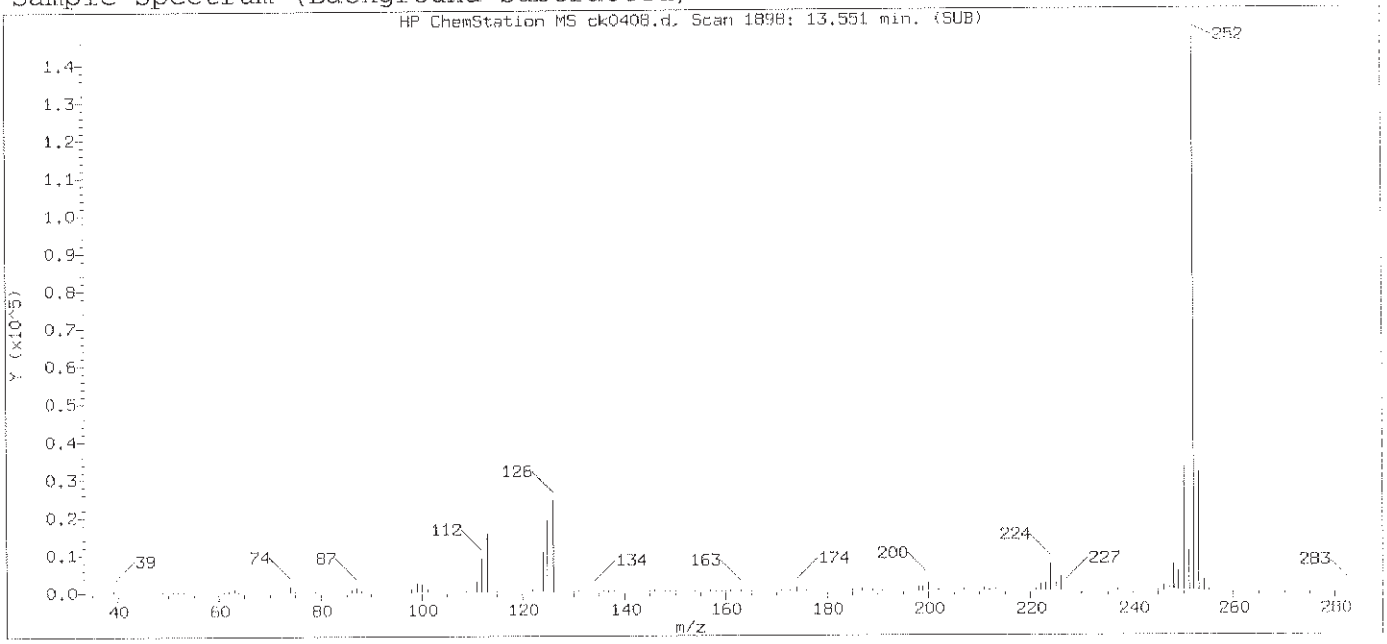
Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area (flag)	: 160113M		
On-Column Amount (ng/ul)	: 4.4720		
Integration start scan	: 1892	Integration stop scan:	1903
Y at integration start	: 180	Y at integration end:	180

Reason for manual integration: improper integration

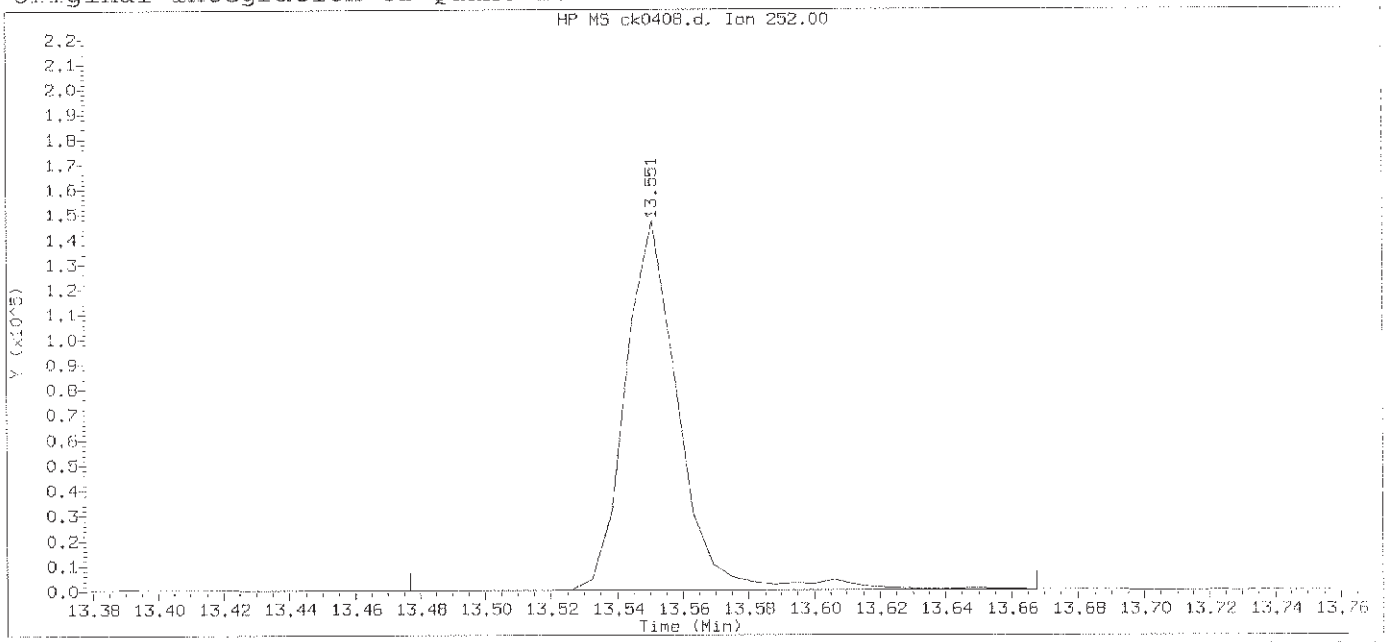
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:20.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0408.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 12:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newall1
Calibration date and time: 12-NOV-2013 13:04
Date, time and analyst ID of latest file update: 12-Nov-2013 13:04 Automation

Sample Name: SSTD005 Lab Sample ID: STD3083

Compound Number	: 174		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 1898		
Retention Time (minutes)	: 13.551		
Quant Ion	: 252.00		
Area	: 166771		
On-column Amount (ng/ul)	: 4.6365		
Integration start scan	: 1885	Integration stop scan:	1916
Y at integration start	: 155	Y at integration end:	191

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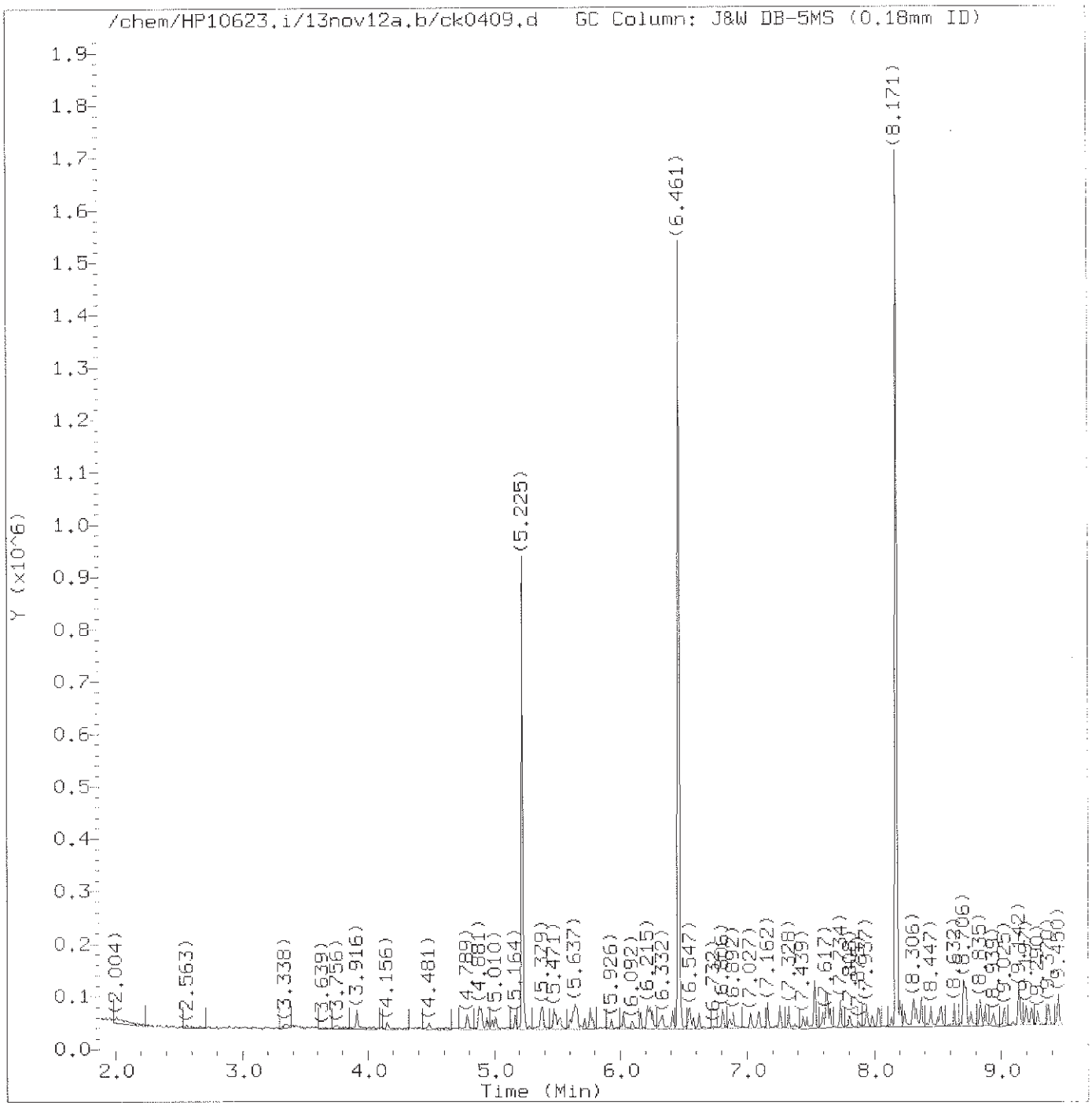
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

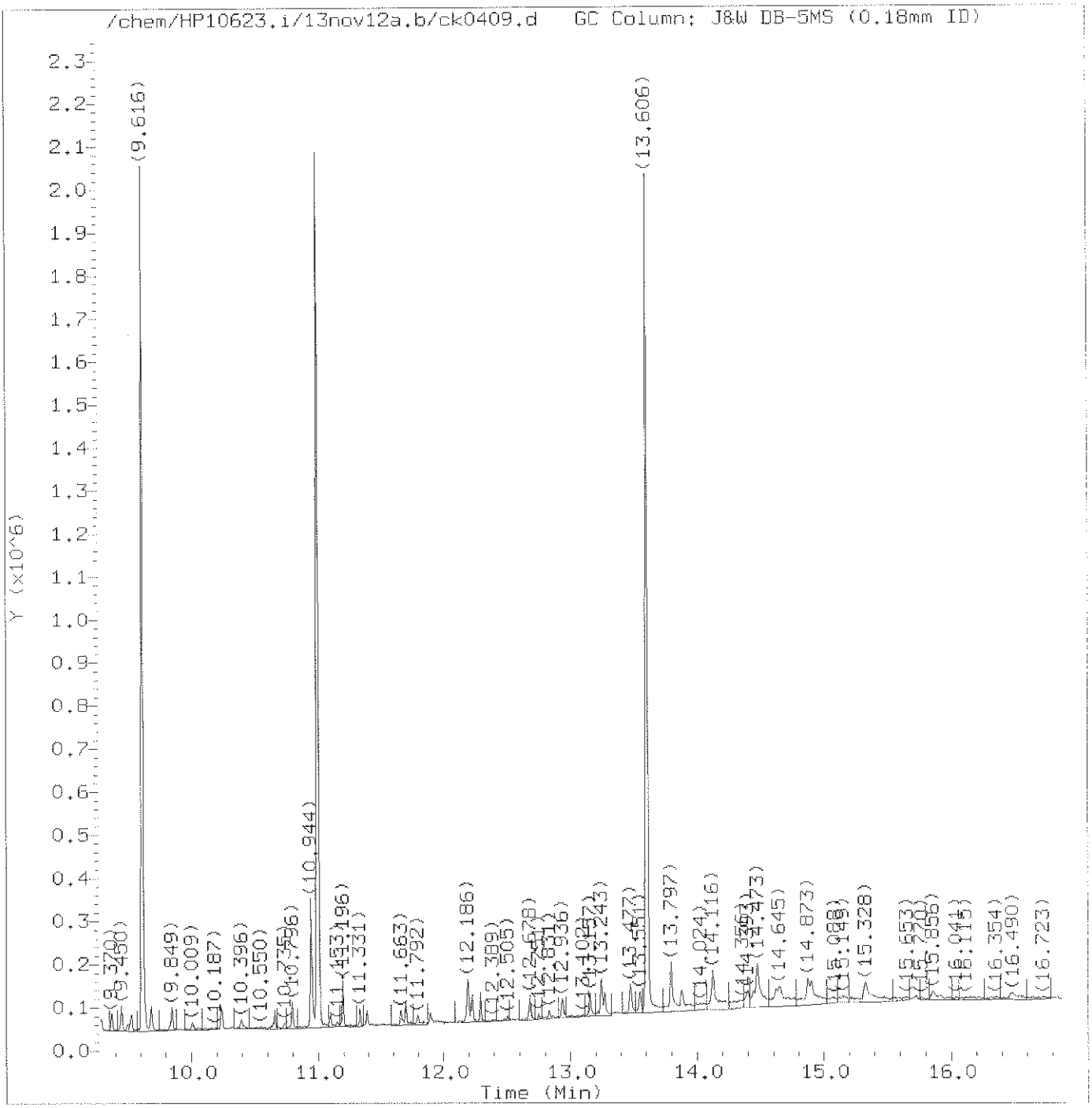
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.010	88	1286	0.308
2) N-Nitrosodimethylamine	(1)	2.446	74	4782M	0.618
3) Pyridine	(1)	2.557	79	5630M	0.470
5) 2-Picoline	(1)	3.338	93	6732A	0.550
6) N-Nitrosomethylethylamine	(1)	3.424	88	4056	0.693
7) Methyl methanesulfonate	(1)	3.756	80	2702	0.459
9)$2-Fluorophenol	(1)	3.916	112	10172	0.532
10) N-Nitrosodiethylamine	(1)	4.156	102	2563	0.441
11) Ethyl methanesulfonate	(1)	4.481	109	2419	0.457
12) Benzaldehyde	(1)	4.789	77	5939M	0.000
14)$Phenol-d5	(1)	4.881	99	13505	0.480
15)$Phenol-d6	(1)	4.881	99	13505	0.480
16) Phenol	(1)	4.893	94	8425	0.514
13) Aniline	(1)	4.900	93	9956	0.512
18) bis(2-Chloroethyl)ether	(1)	4.979	93	6701	0.575
19) 2-Chlorophenol	(1)	5.010	128	5106	0.499
20) 1,3-Dichlorobenzene	(1)	5.164	146	4881	0.473
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	127703	20.000
22) 1,4-Dichlorobenzene	(1)	5.238	146	5492	0.521
24) Benzyl alcohol	(1)	5.373	108	4451	0.556
25) 1,2-Dichlorobenzene	(1)	5.385	146	5170	0.523
206) Indene	(1)	5.471	115	10254	0.464
26) 2-Methylphenol	(1)	5.490	108	5233	0.481
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.514	45	9102	0.635
28) bis(2-Chloroisopropyl)ether	(1)	5.514	45	9102	0.634
29) N-Nitrosopyrrolidine	(1)	5.600	100	3220	0.494
30) Acetophenone	(1)	5.619	105	8327	0.513
31) N-Nitroso-di-n-propylamine	(1)	5.637	70	4625	0.445
33) 4-Methylphenol	(1)	5.644	108	6317	0.490
32) N-Nitrosomorpholine	(1)	5.644	56	3651	0.493
34) o-Toluidine	(1)	5.656	106	9310	0.501
37) Hexachloroethane	(1)	5.717	117	2626	0.655
38)$Nitrobenzene-d5	(2)	5.760	82	12102	0.495
39) Nitrobenzene	(2)	5.779	77	6666	0.514
40) N-Nitrosopiperidine	(2)	5.926	114	2731	0.475
41) Isophorone	(2)	6.025	82	11831	0.502
42) 2-Nitrophenol	(2)	6.092	139	2047	0.454
44) 2,4-Dimethylphenol	(2)	6.160	107	6006	0.518
47) Benzoic acid	(2)	6.215	105	20488	2.728
45) O,O,O-triethylphosphorothioate	(2)	6.234	198	2442	0.505

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
46) bis(2-Chloroethoxy)methane	(2)	6.252	93	7322	0.512
49) 2,4-Dichlorophenol	(2)	6.332	162	3323	0.422
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	4308	0.519
52)*Naphthalene-d8	(2)	6.461	136	567410	20.000
56) 4-Chloroaniline	(2)	6.541	127	6227	0.475
57) 2,6-Dichlorophenol	(2)	6.547	162	3605	0.486
58) Hexachloropropene	(2)	6.578	213	2052	0.437
60) Hexachlorobutadiene	(2)	6.621	225	2327	0.559
194) Quinoline	(2)	6.806	129	11376	0.548
63) Caprolactam	(2)	6.861	113	1948	0.446
64) N-Nitrosodi-n-butylamine	(2)	6.892	84	4624	0.408
68) 4-Chloro-3-methylphenol	(2)	7.027	107	5237	0.520
69) Safrole	(2)	7.095	162	4121	0.517
72) Hexachlorocyclopentadiene	(3)	7.328	237	1445	0.402
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	3979	0.479
74) cis-Isosafrole	(3)	7.377	162	742	0.056
75) 2,4,6-Trichlorophenol	(3)	7.439	196	2744	0.506
77) 2,4,5-Trichlorophenol	(3)	7.476	196	3145	0.532
78)$2-Fluorobiphenyl	(3)	7.531	172	22300	0.509
80) Isosafrole	(3)	7.599	162	4225	0.502
79) trans-Isosafrole	(3)	7.599	162	4225	0.447
83) 1,1'-Biphenyl	(3)	7.623	154	13762	0.510
84) 2-Chloronaphthalene	(3)	7.630	162	10411M	0.529
85) 1-Chloronaphthalene	(3)	7.654	162	9618M	0.497
88) Diphenyl ether	(3)	7.734	170	6818	0.507
89) 2-Nitroaniline	(3)	7.734	138	2739	0.427
90) 1,4-Naphthoquinone	(3)	7.808	158	3343	0.404
91) 1,4-Dinitrobenzene	(3)	7.875	168	873	3.749
92) Dimethylphthalate	(3)	7.937	163	11760	0.502
93) 1,3-Dinitrobenzene	(3)	7.943	168	1068M	3.147
94) 2,6-Dinitrotoluene	(3)	7.980	165	1780	0.365
97) 3-Nitroaniline	(3)	8.134	138	2352	0.395
98)*Acenaphthene-d10	(3)	8.171	164	348585	20.000
100) 2,4-Dinitrophenol	(3)	8.238	184	3378	10.432
103) 4-Nitrophenol	(3)	8.306	109	8114	2.200
101) Pentachlorobenzene	(3)	8.337	250	4002	0.557
105) 2,4-Dinitrotoluene	(3)	8.367	165	2067	0.328
104) Dibenzofuran	(3)	8.374	168	14343	0.493
106) 1-Naphthylamine	(3)	8.447	143	10944	0.457
107) 2,3,4,6-Tetrachlorophenol	(3)	8.496	232	1724	0.414

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
108) 2-Naphthylamine	(3)	8.527	143	11175	0.457
109) Diethylphthalate	(3)	8.632	149	12675	0.524
110) Thionazin	(3)	8.706	107	2594	0.486
113) 5-Nitro-o-toluidine	(3)	8.718	152	2987	0.452
114) 4-Nitroaniline	(3)	8.718	138	2902	0.433
112) 4-Chlorophenyl-phenylether	(3)	8.724	204	5937	0.533
115) 4,6-Dinitro-2-methylphenol	(4)	8.761	198	2752	6.937
202) NDPA as diphenylamine	(4)	8.835	169	10468	0.478
117) N-Nitrosodiphenylamine	(4)	8.835	169	10468	0.479
118) 1,2-Diphenylhydrazine	(4)	8.872	77	13465	0.430
119)$2,4,6-Tribromophenol	(3)	8.939	330	1702	0.404
120) Tetraethyldithiopyrophosphate	(4)	9.019	97	2082	0.466
121) 1,3,5-Trinitrobenzene	(4)	9.093	213	470M	6.992
122) Diallate (peak 1)	(4)	9.136	86	5989	0.374
123) Phorate	(4)	9.142	75	8029	0.416
124) Phenacetin	(4)	9.142	108	6574	0.435
125) 4-Bromophenyl-phenylether	(4)	9.197	248	2949	0.490
126) Diallate (peak 2)	(4)	9.216	86	1113M	0.160
128) Dimethoate	(4)	9.290	87	5411	0.459
130) Atrazine	(4)	9.376	200	3859	0.551
131) Pentachlorophenol	(4)	9.443	266	1259	0.382
132) Pentachloronitrobenzene	(4)	9.450	237	988	0.383
133) 4-Aminobiphenyl	(4)	9.450	169	11704	0.495
134) Pronamide	(4)	9.529	173	5041	0.442
135)*Phenanthrene-d10	(4)	9.616	188	652252	20.000
136) Dinoseb	(4)	9.634	211	673M	6.963
140) Carbazole	(4)	9.849	167	18309	0.481
141) Methyl parathion	(4)	10.009	109	2207	2.640
142) Di-n-butylphthalate	(4)	10.237	149	21063	0.469
143) Parathion	(4)	10.396	109	1300M	3.162
144) 4-Nitroquinoline-1-oxide	(4)	10.396	190	574	6.753
146) Isodrin	(4)	10.655	193	2330	0.544
152) Benzidine	(5)	10.944	184	116323	3.532
167)*Pyrene-d10	(5)	10.999	212	804495	20.000
156)$Terphenyl-d14	(5)	11.196	244	27844	0.484
158) p-Dimethylaminoazobenzene	(5)	11.331	225	3798	0.436
159) Chlorobenzilate	(5)	11.393	139	5487	0.405
160) 3,3'-Dimethylbenzidine	(5)	11.663	212	11604	0.421
161) Butylbenzylphthalate	(5)	11.694	149	9560	0.448
162) 2-Acetylaminofluorene	(5)	11.897	181	6080	0.315

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

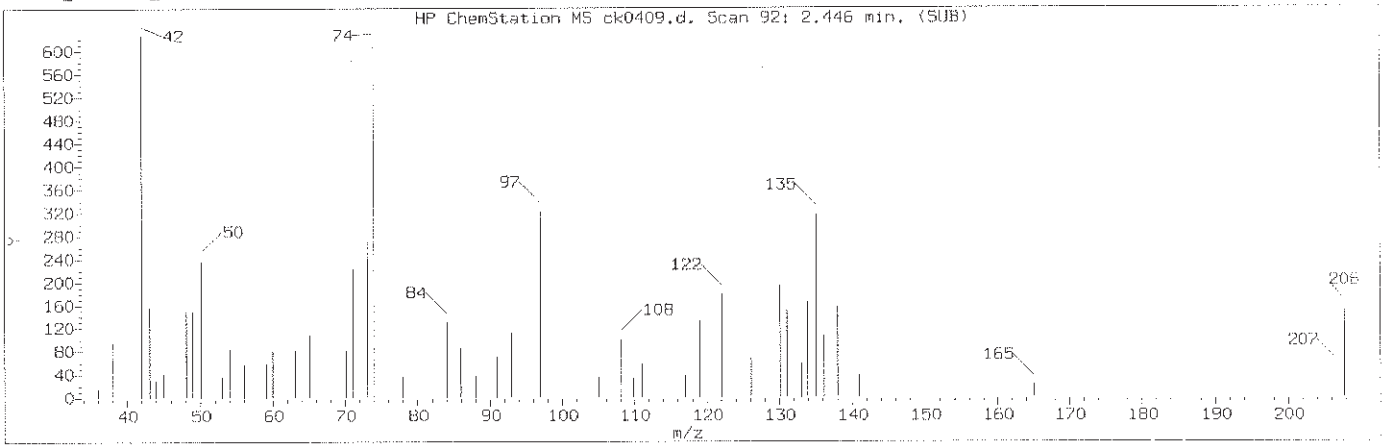
Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
164) 3,3'-Dichlorobenzidine	(5)	12.180	252	7076	0.455
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.192	231	3337	0.440
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	16083	0.544
189) 6-Methylchrysene	(5)	12.678	242	14148	0.483
170) Di-n-octylphthalate	(6)	12.936	149	20342	0.363
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.243	256	7422	0.352
175)*Perylene-d12	(6)	13.606	264	742890	20.000
176) 3-Methylcholanthrene	(6)	13.883	268	10230	0.461
190) Dibenz(a,h)acridine	(6)	14.393	279	11353	0.353
191) Dibenz(a,j)acridine	(6)	14.448	279	11301	0.306
129) Diallate TRANS/CIS	(4)			7102	0.534

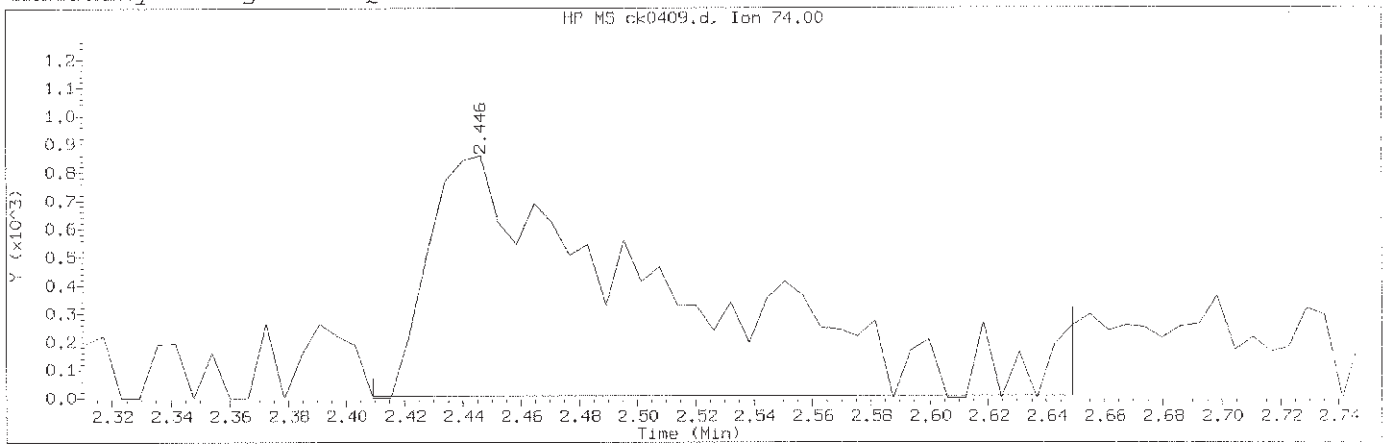
* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

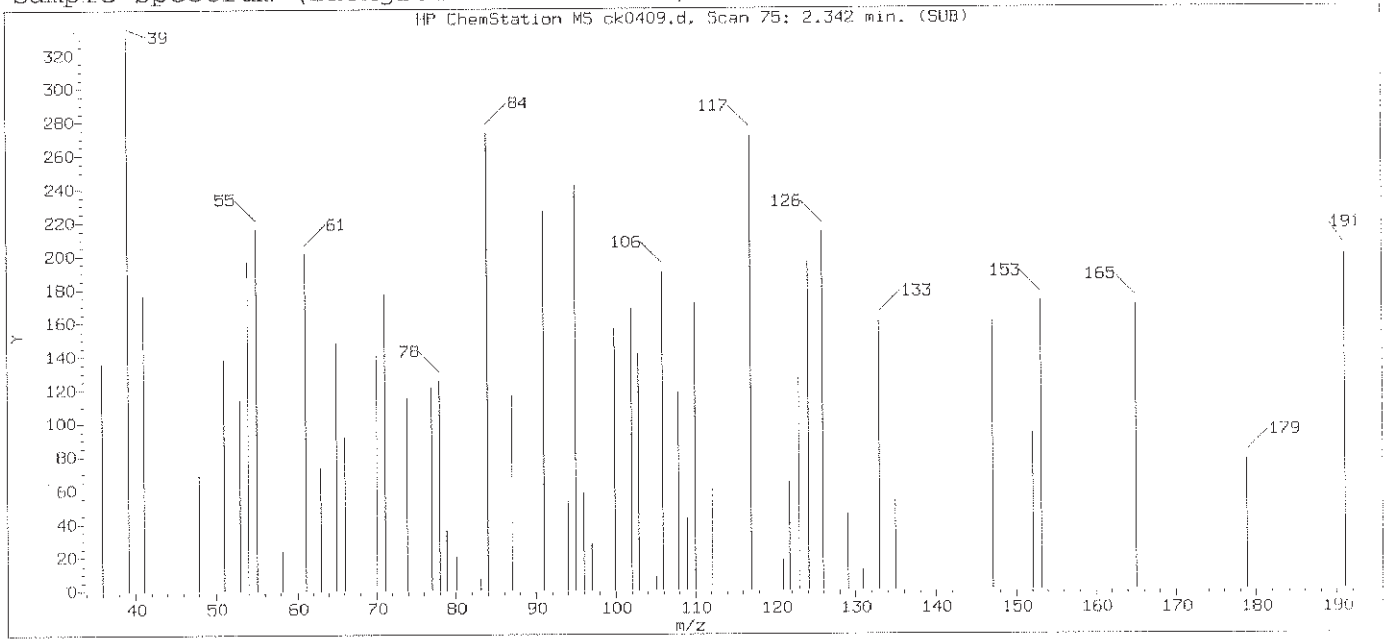
Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 92		
Retention Time (minutes)	: 2.446		
Quant Ion	: 74.00		
Area (flag)	: 4782M		
On-Column Amount (ng/ul)	: 0.6184		
Integration start scan	: 85	Integration stop scan:	124
Y at integration start	: 8	Y at integration end:	8

Reason for manual integration: improper integration

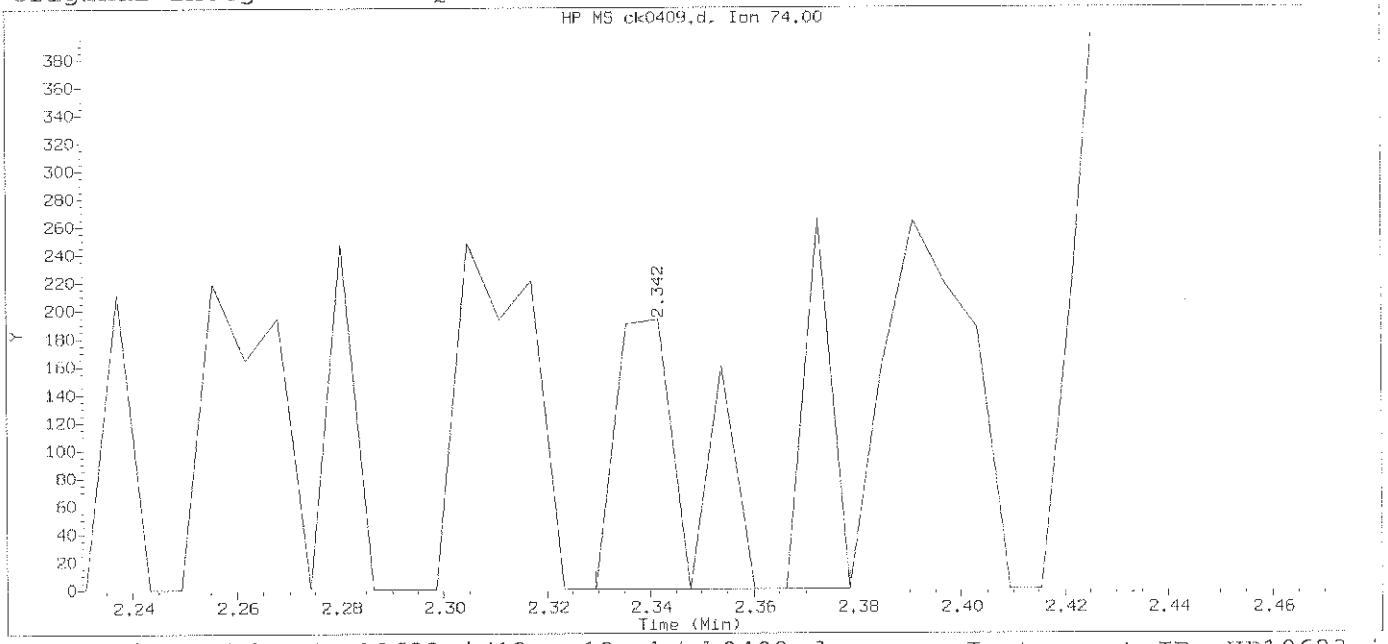
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: _____
Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 75		
Retention Time (minutes)	: 2.342		
Quant Ion	: 74.00		
Area	: 298		
On-column Amount (ng/ul)	: 0.0385		
Integration start scan	: 72	Integration stop scan:	80
Y at integration start	: 0	Y at integration end:	0

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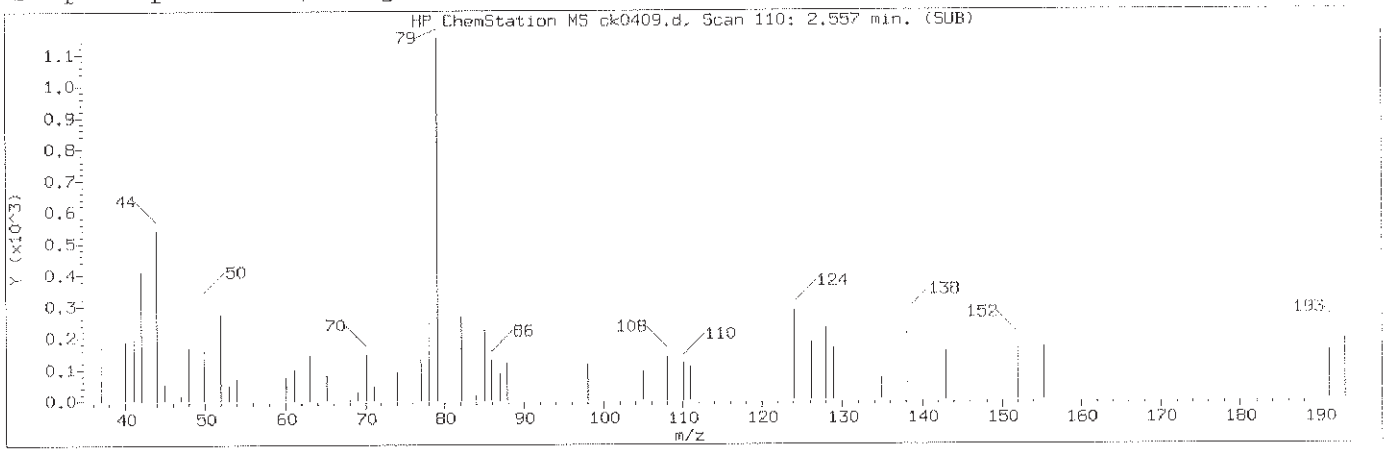
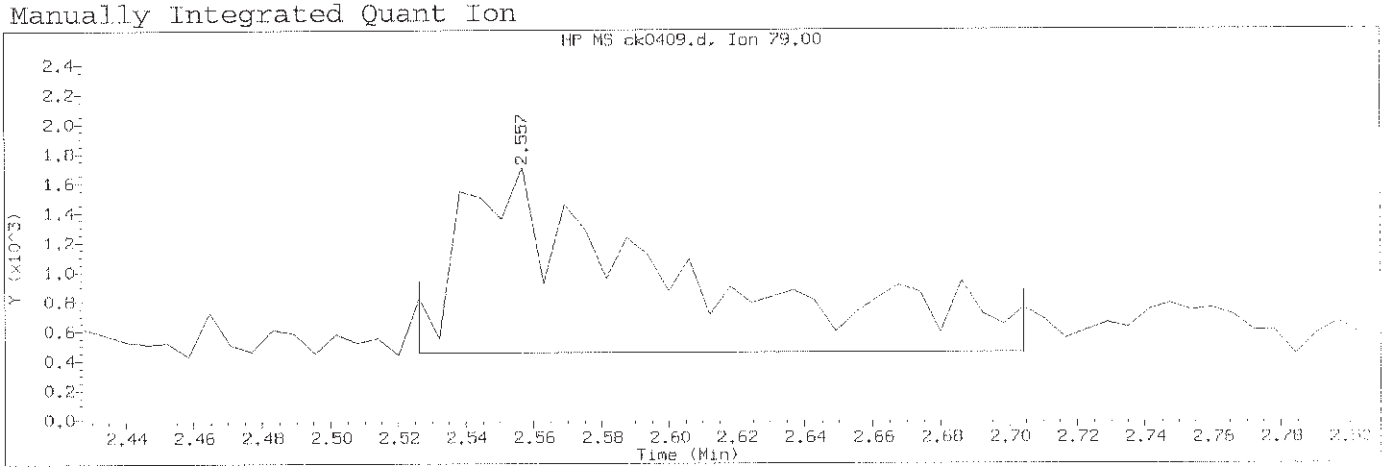
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 110		
Retention Time (minutes)	: 2.557		
Quant Ion	: 79.00		
Area (flag)	: 5630M		
On-Column Amount (ng/ul)	: 0.4697		
Integration start scan	: 104	Integration stop scan:	133
Y at integration start	: 449	Y at integration end:	449

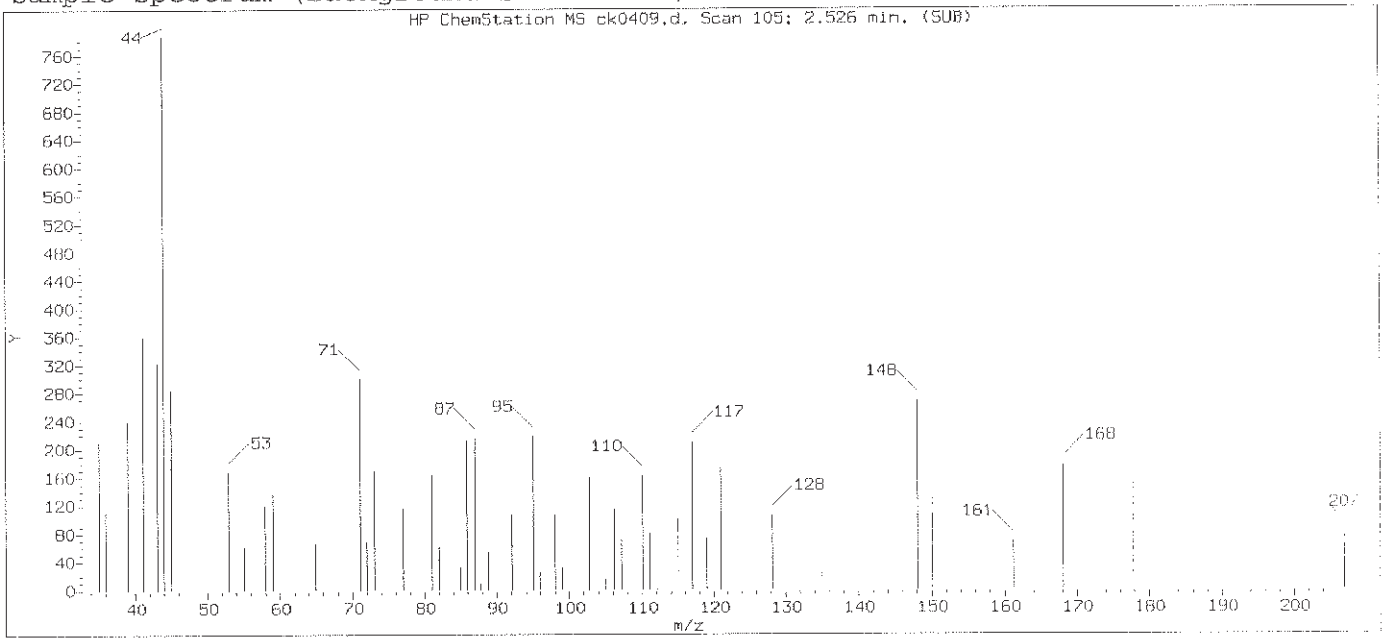
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 signature user ID: mac00013

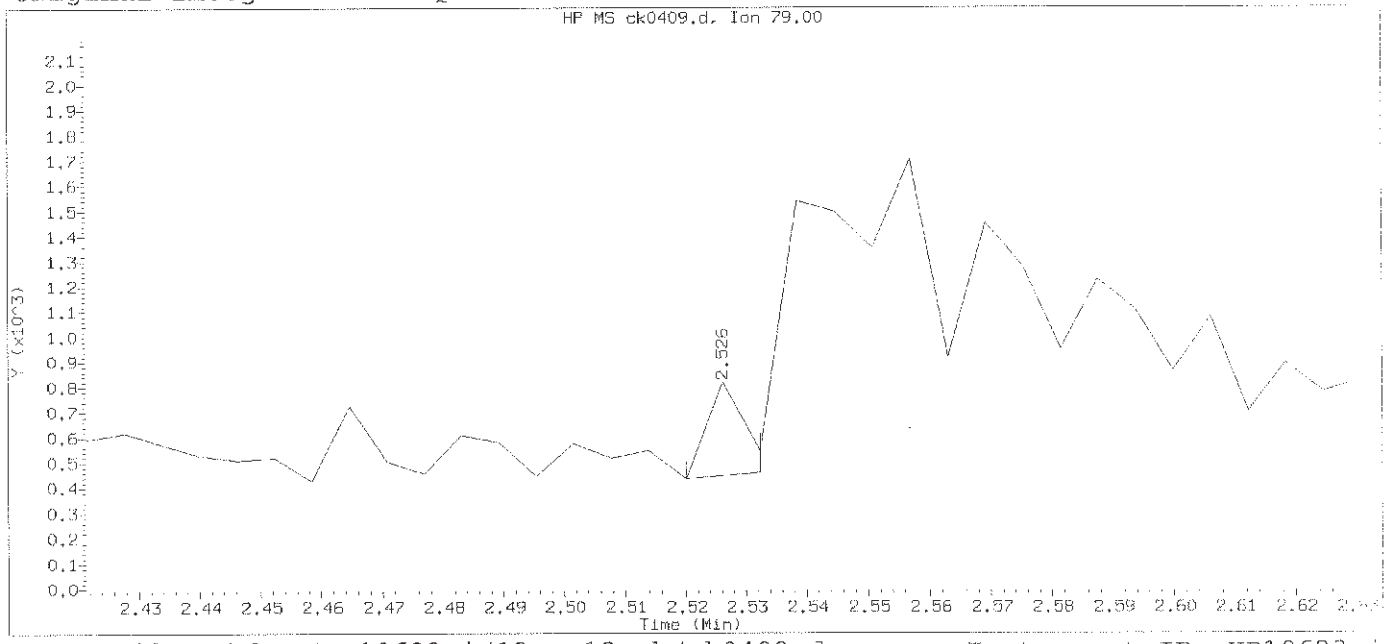
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

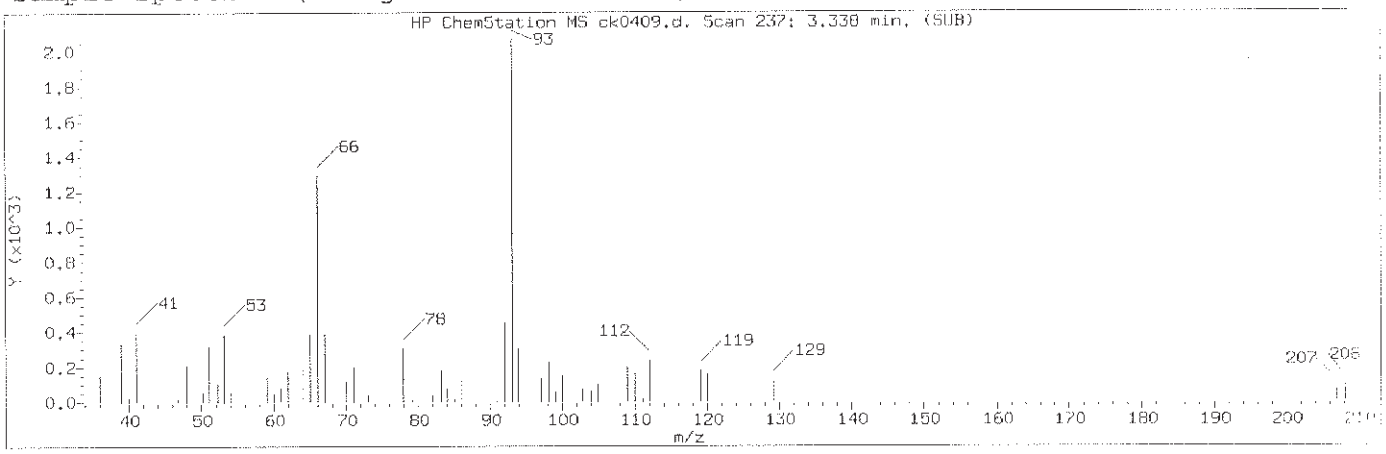
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

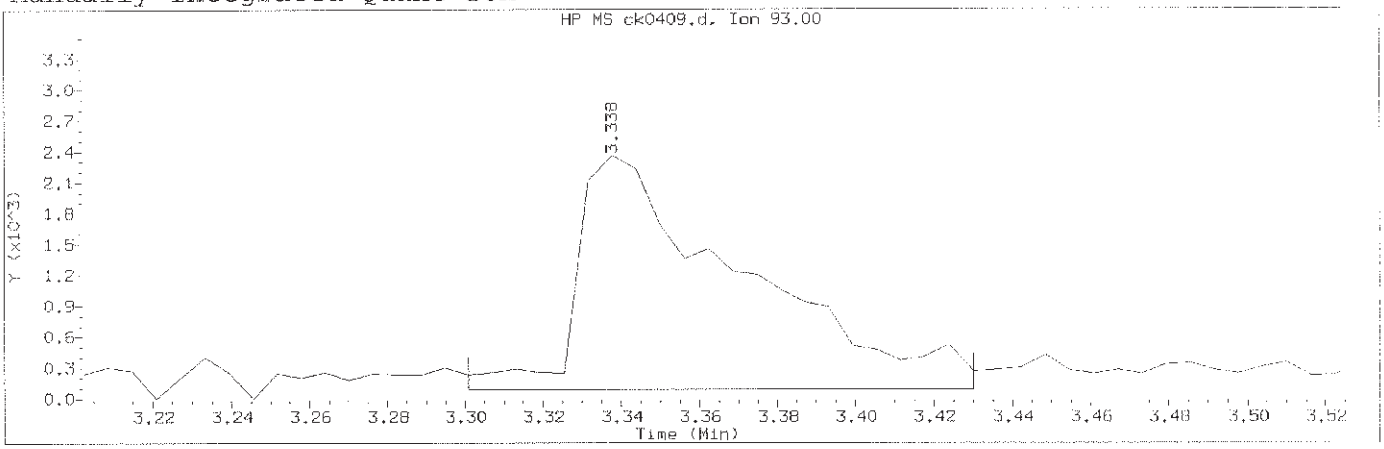
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 105		
Retention Time (minutes)	: 2.526		
Quant Ion	: 79.00		
Area	: 152		
On-column Amount (ng/ul)	: 0.0127		
Integration start scan	: 103	Integration stop scan:	105
Y at integration start	: 435	Y at integration end:	461

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 237		
Retention Time (minutes)	: 3.338		
Quant Ion	: 93.00		
Area (flag)	: 6732A		
On-Column Amount (ng/ul)	: 0.5503		
Integration start scan	: 230	Integration stop scan:	251
Y at integration start	: 88	Y at integration end:	88

Reason for manual integration: improper integration

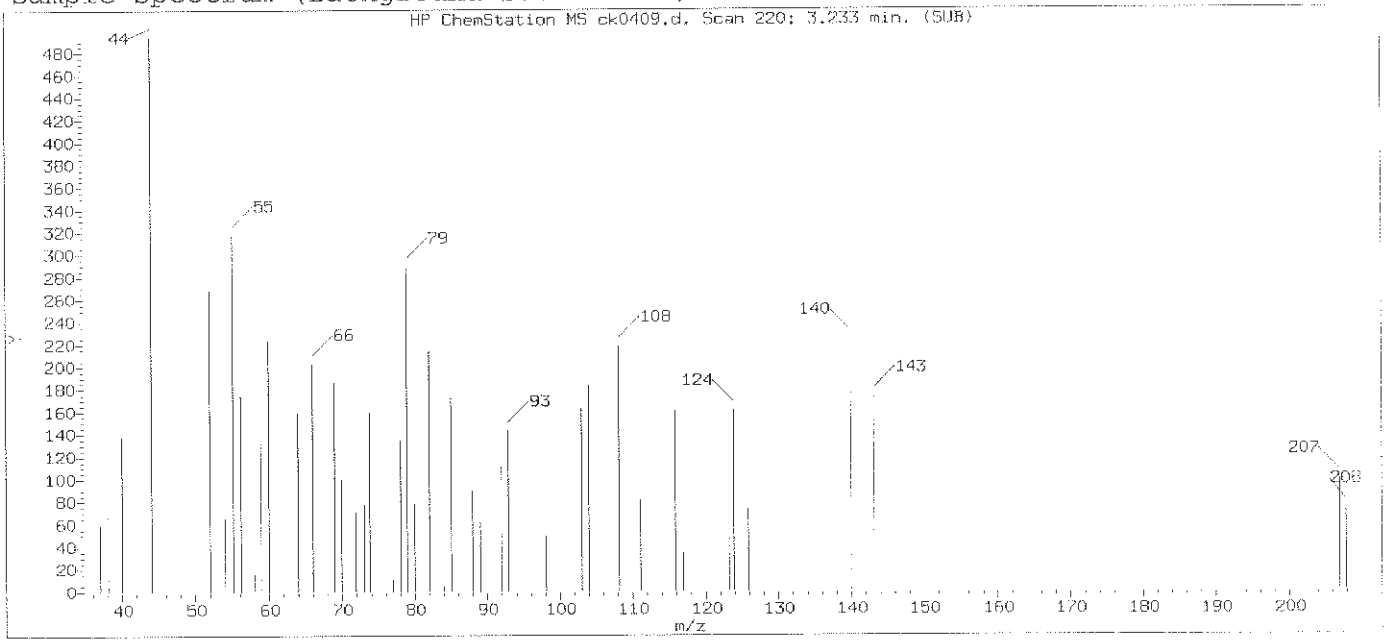
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3054 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

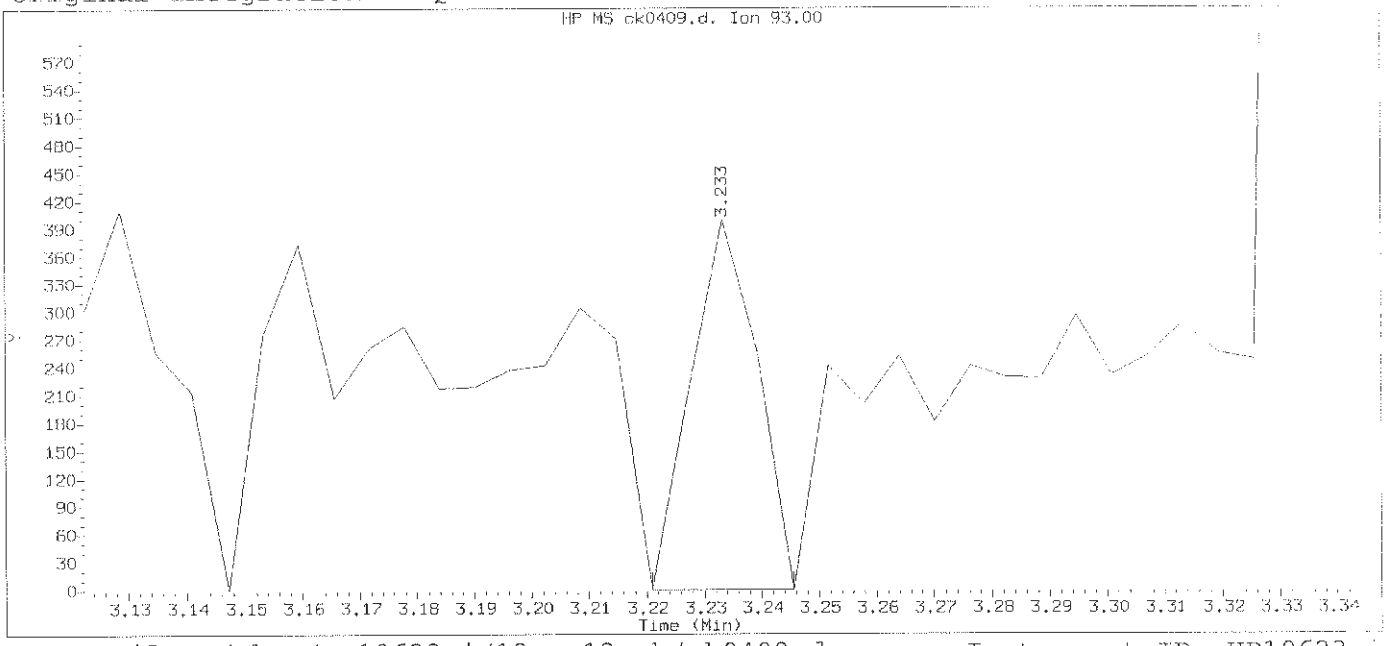
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 5		
Compound Name	: 2-Picoline		
Scan Number	: 220		
Retention Time (minutes)	: 3.233		
Quant Ion	: 93.00		
Area	: 316		
On-column Amount (ng/ul)	: 0.0259		
Integration start scan	: 217	Integration stop scan:	221
Y at integration start	: 0	Y at integration end:	0

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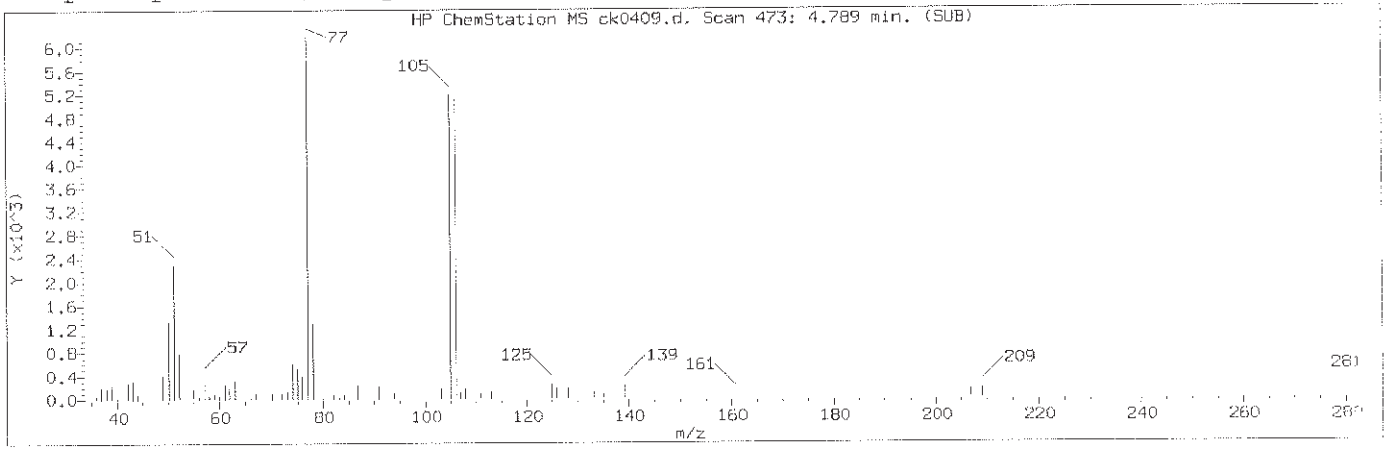
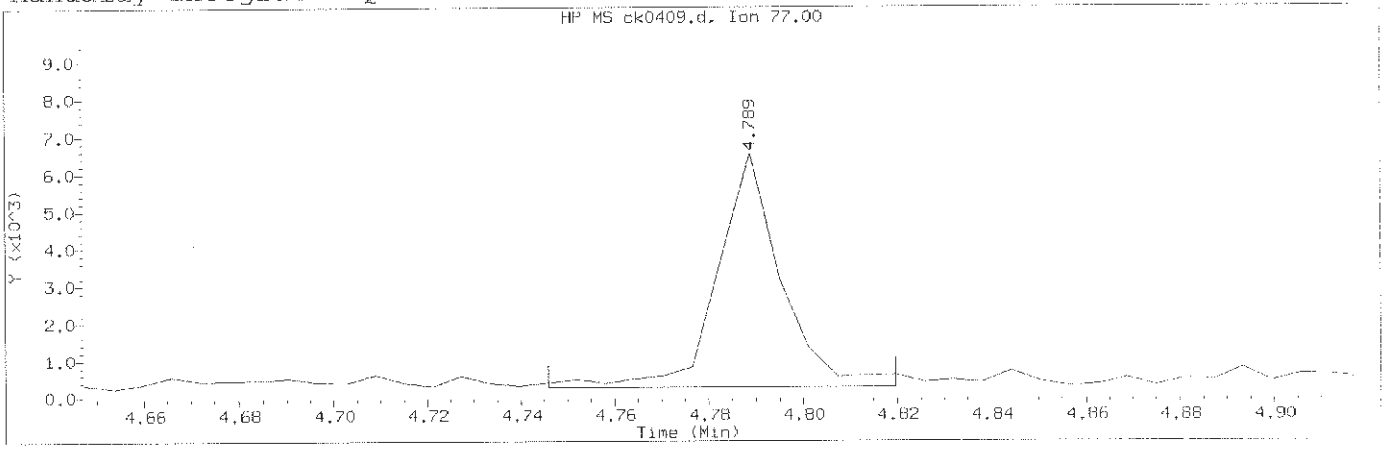
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 473		
Retention Time (minutes)	: 4.789		
Quant Ion	: 77.00		
Area (flag)	: 5939M		
On-Column Amount (ng/ul)	: 0.0000		
Integration start scan	: 465	Integration stop scan:	477
Y at integration start	: 265	Y at integration end:	265

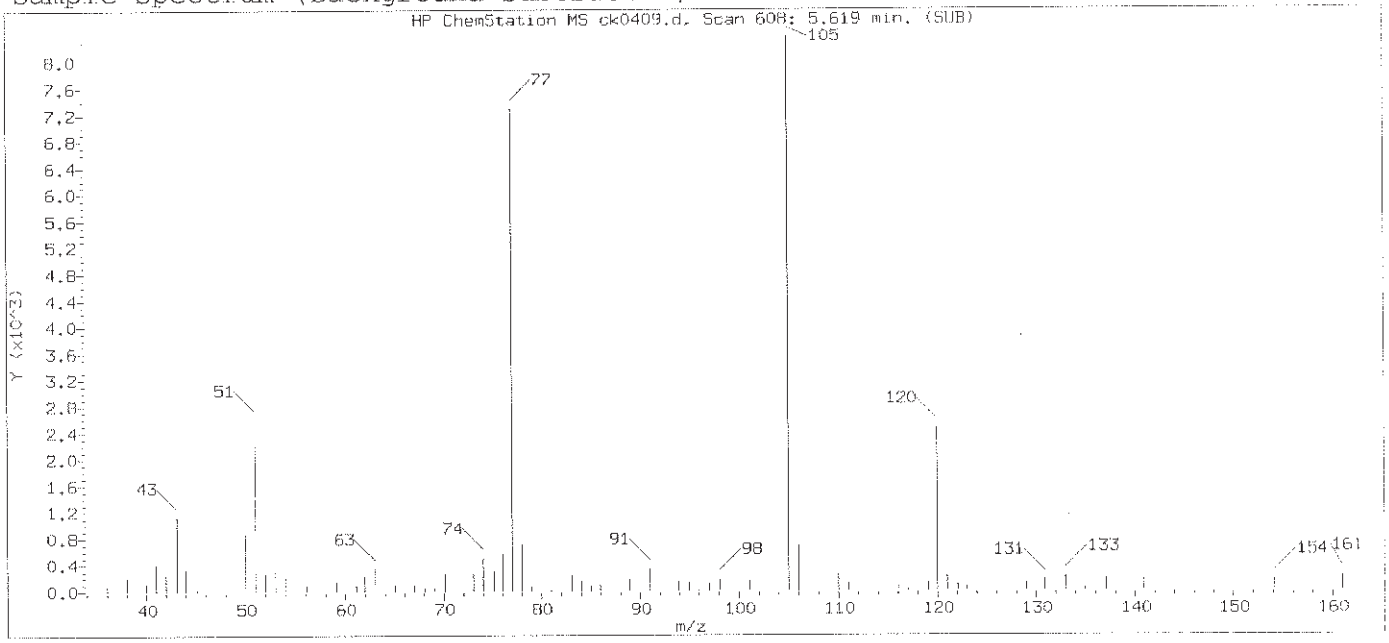
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

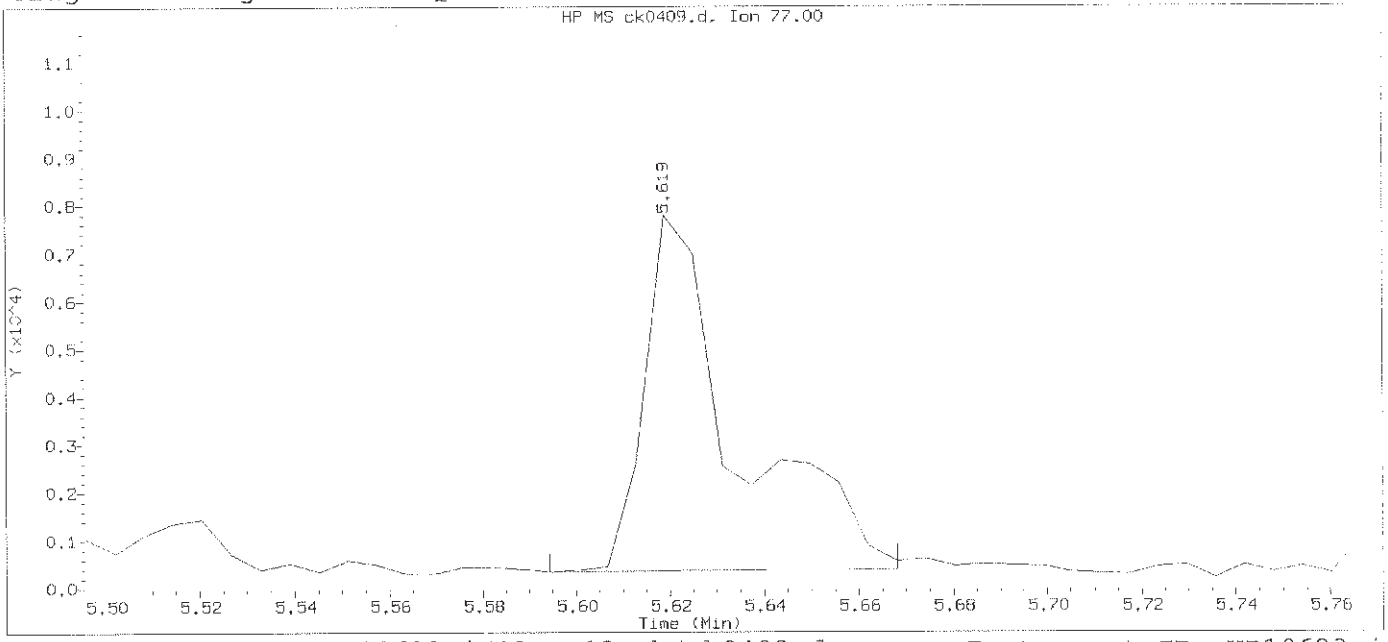
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

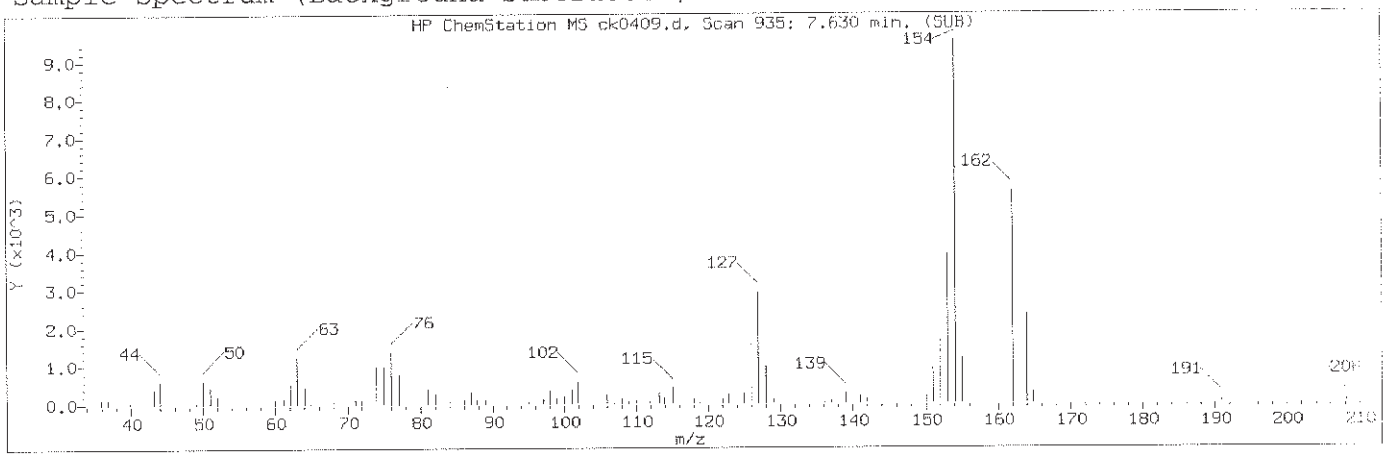
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

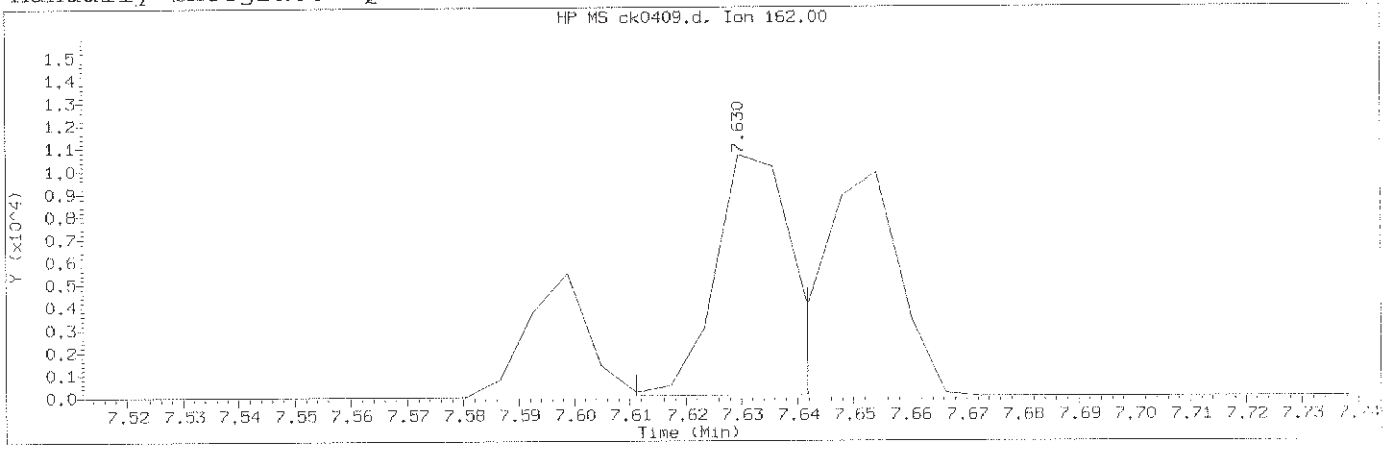
Compound Number	: 12		
Compound Name	: Benzaldehyde		
Scan Number	: 608		
Retention Time (minutes)	: 5.619		
Quant Ion	: 77.00		
Area	: 10098		
On-column Amount (ng/ul)	: 0.0786		
Integration start scan	: 603	Integration stop scan:	615
Y at integration start	: 339	Y at integration end:	385

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

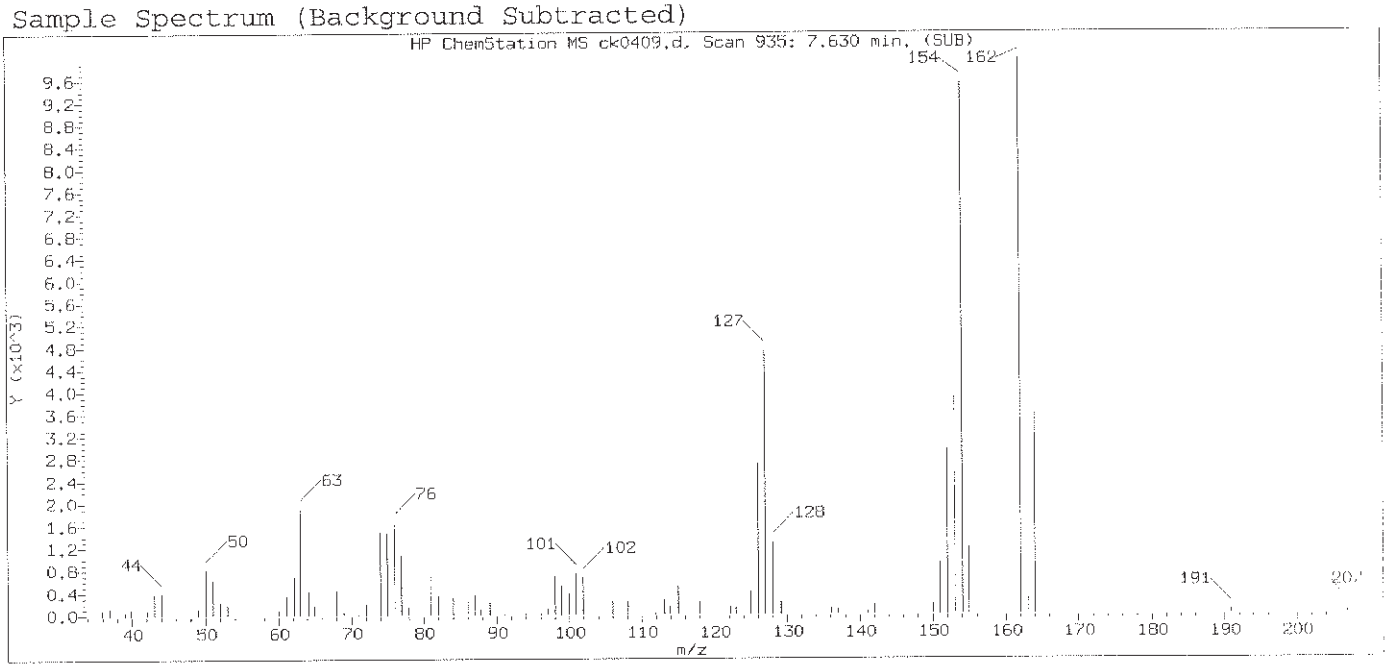
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area (flag)	: 10411M		
On-Column Amount (ng/ul)	: 0.5293		
Integration start scan	: 931	Integration stop scan:	936
Y at integration start	: 43	Y at integration end:	43

Reason for manual integration: improper integration

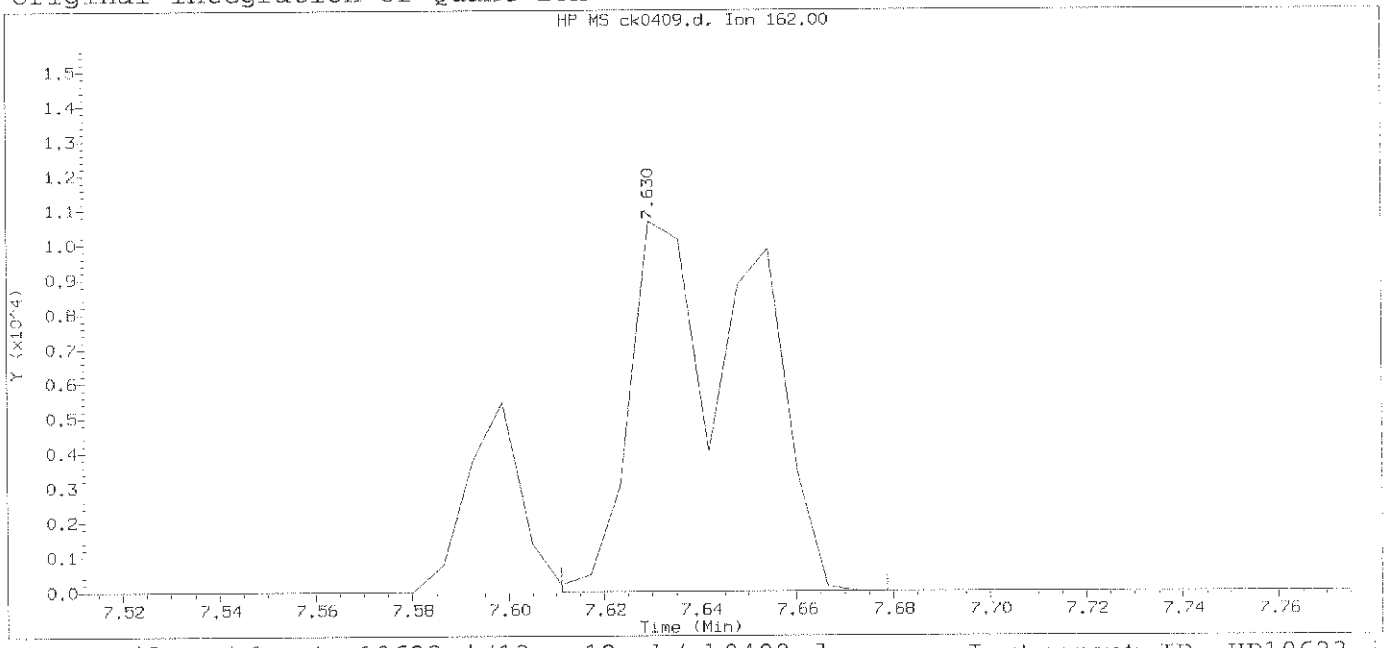
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

GC/MS audit/management approval: Mark A. Ratcliff
Senior Specialist
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

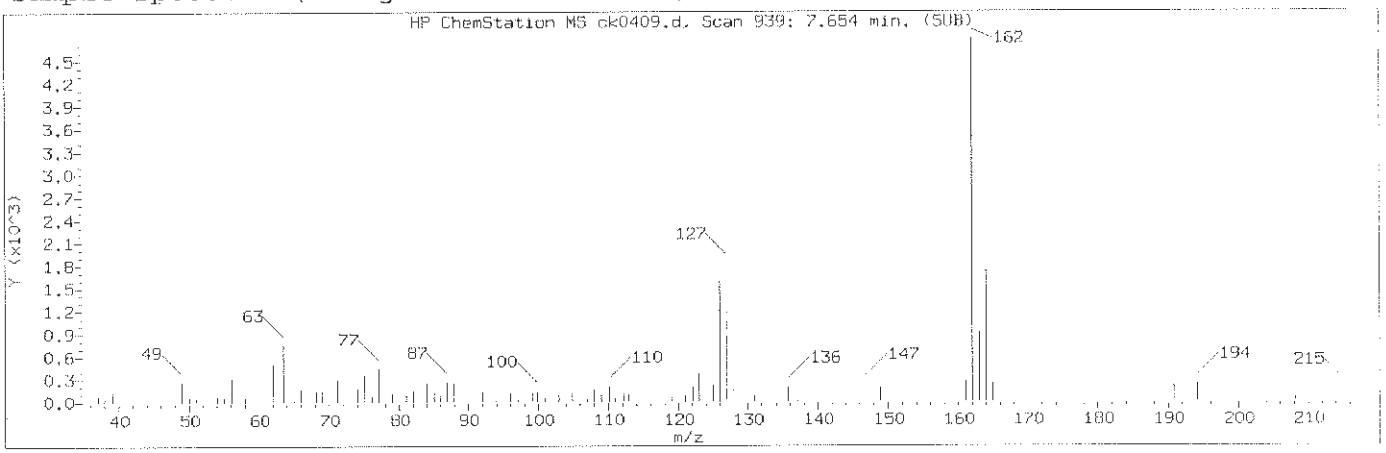
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

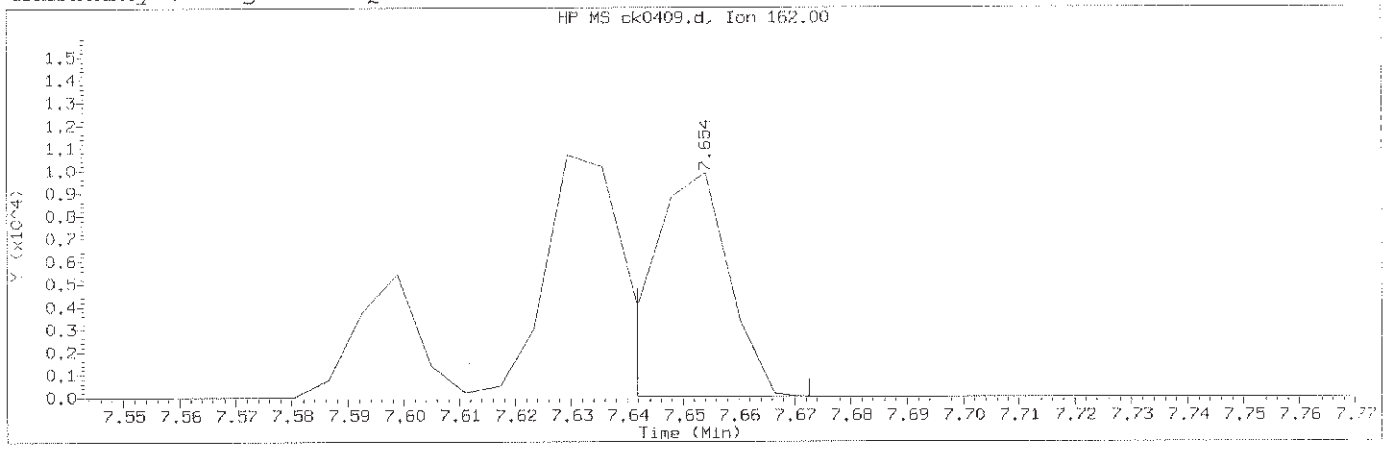
Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9492		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 9618M		
On-Column Amount (ng/ul)	: 0.4968		
Integration start scan	: 936	Integration stop scan:	941
Y at integration start	: 28	Y at integration end:	28

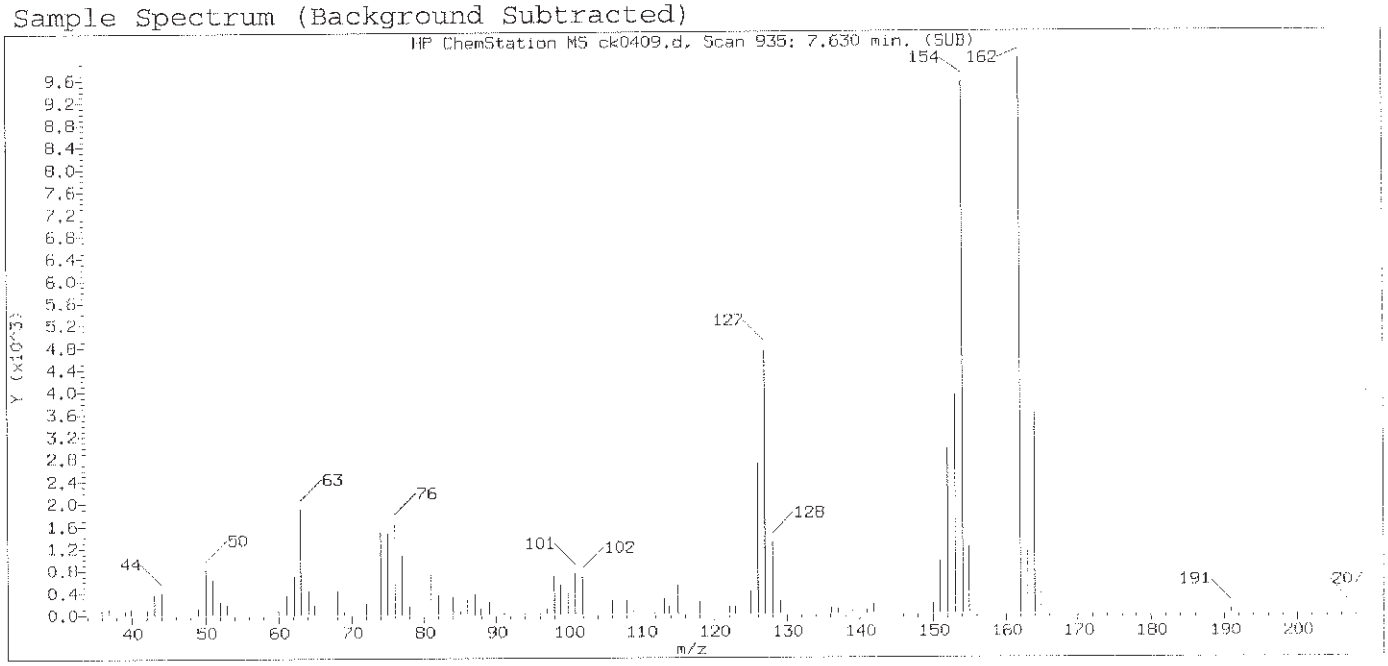
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

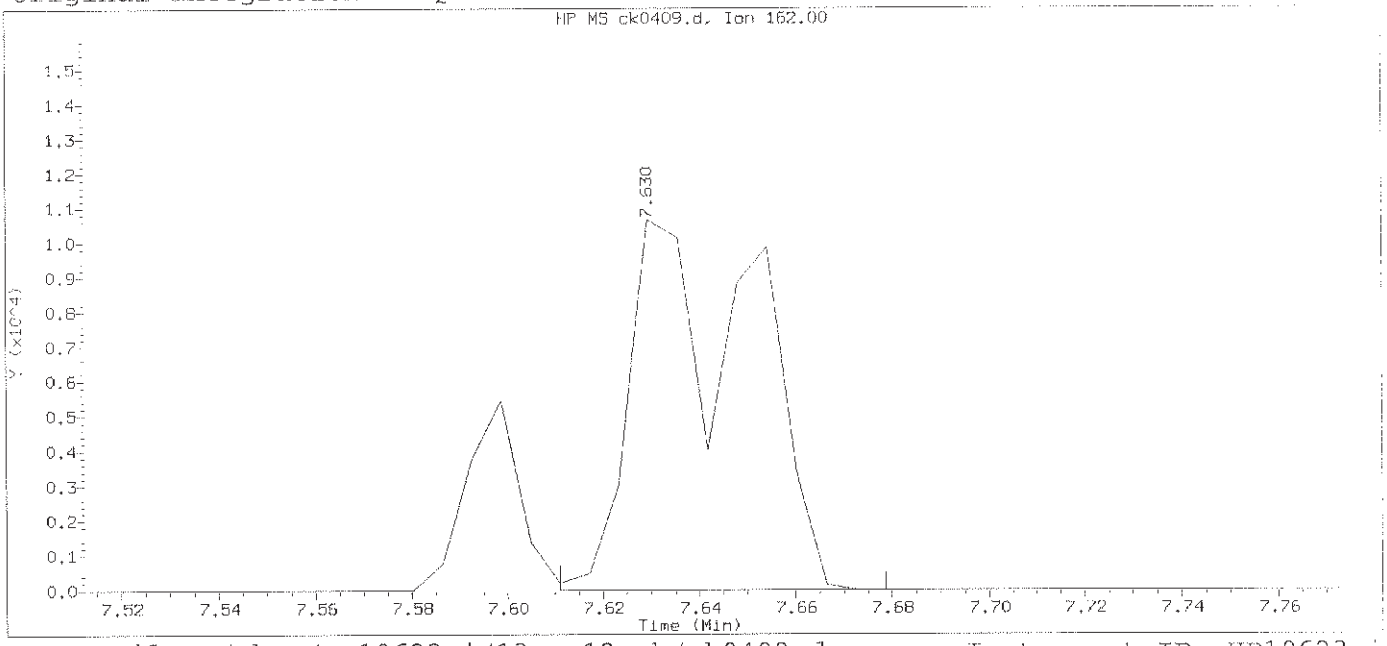
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 935		
Retention Time (minutes)	: 7.630		
Quant Ion	: 162.00		
Area	: 18672		
On-column Amount (ng/ul)	: 0.9644		
Integration start scan	: 931	Integration stop scan:	942
Y at integration start	: 0	Y at integration end:	0

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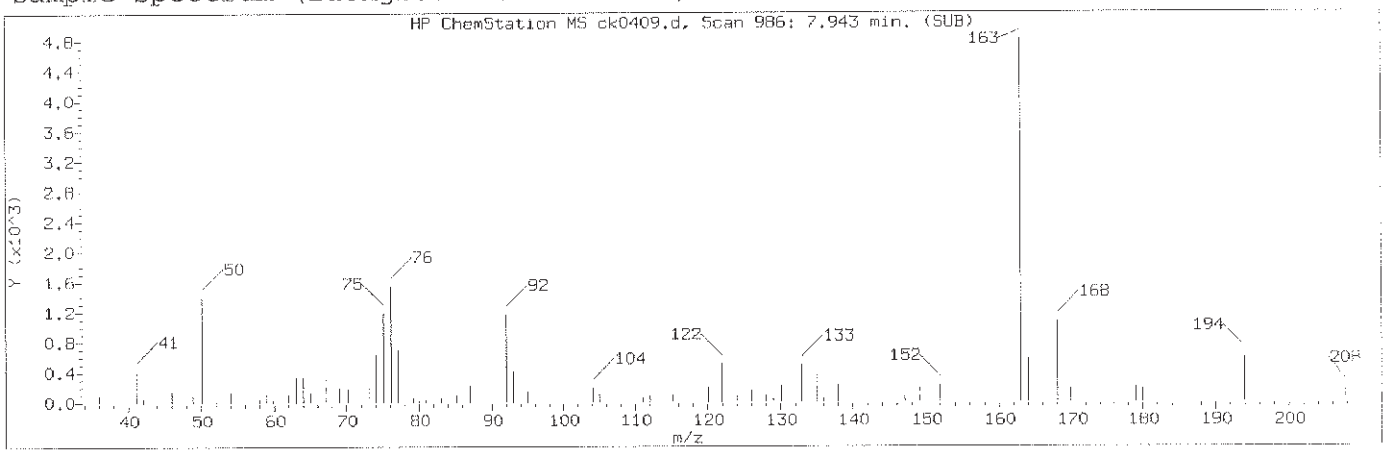
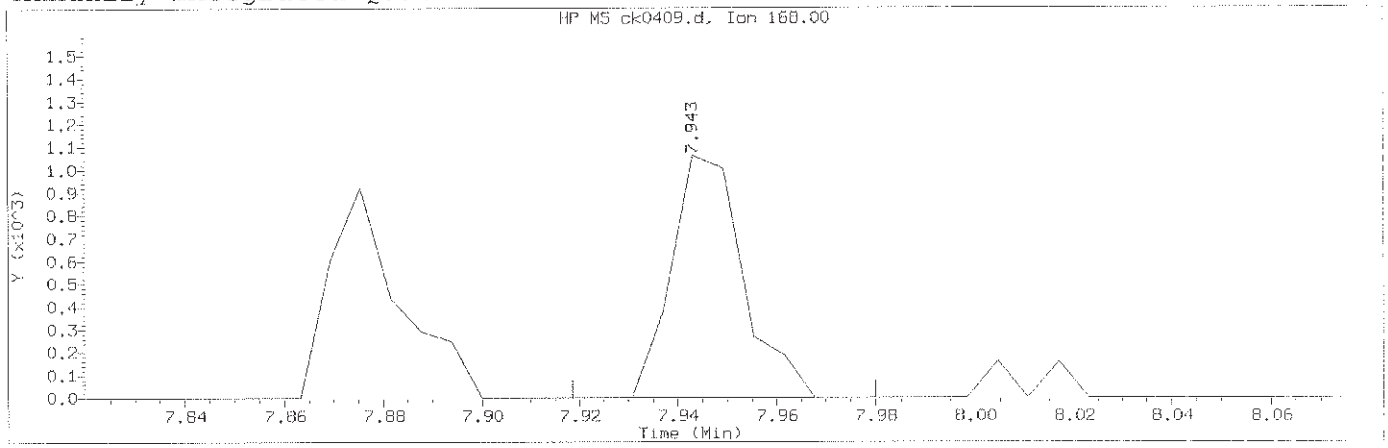
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlal11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 986		
Retention Time (minutes)	: 7.943		
Quant Ion	: 168.00		
Area (flag)	: 1068M		
On-Column Amount (ng/ul)	: 3.1474		
Integration start scan	: 981	Integration stop scan:	991
Y at integration start	: 0	Y at integration end:	0

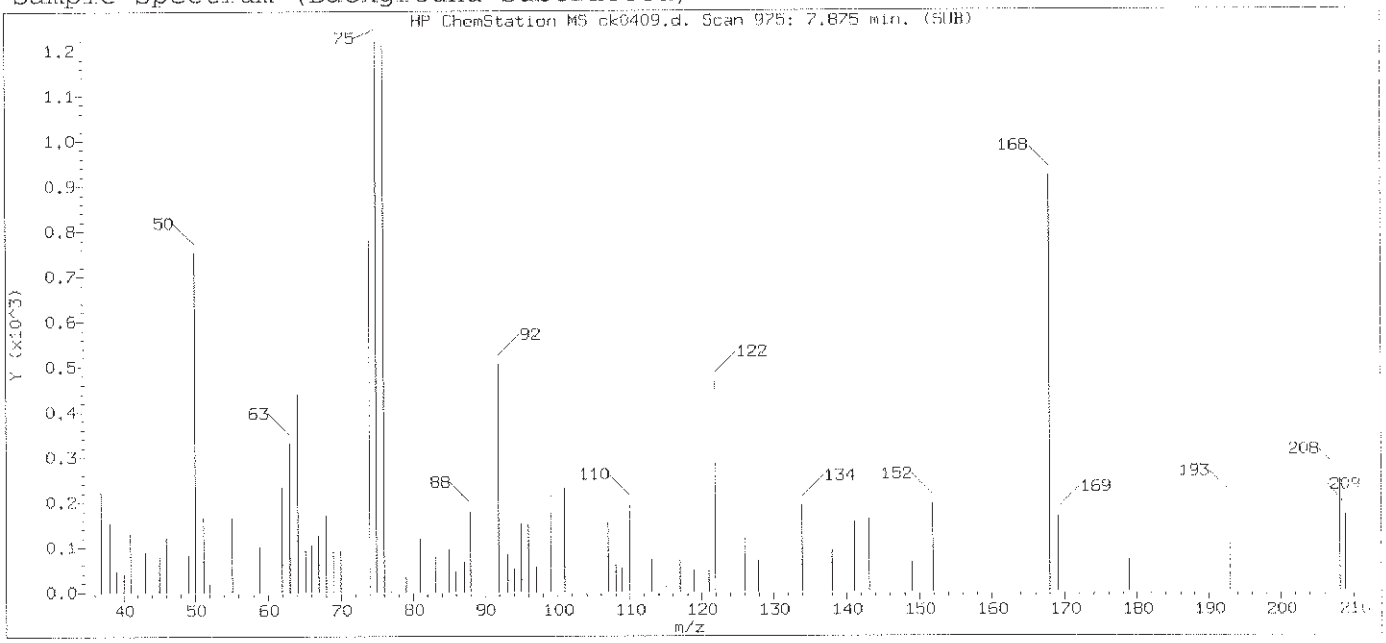
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

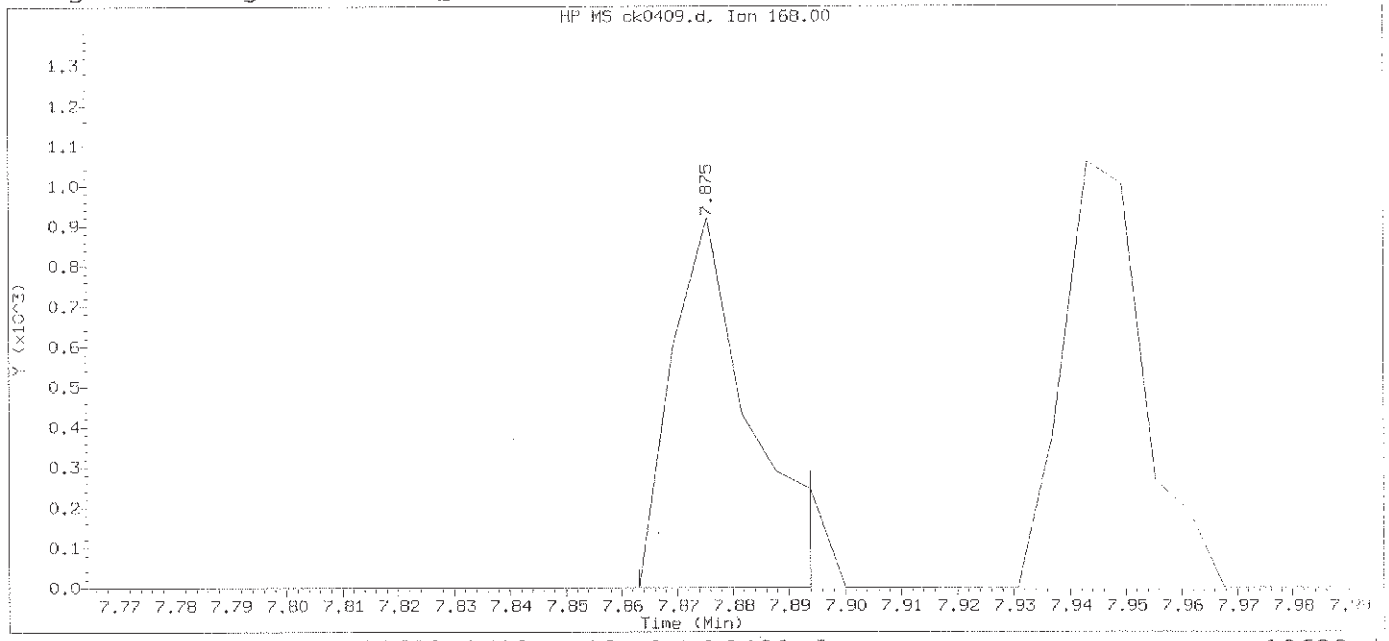
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 93		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 975		
Retention Time (minutes)	: 7.875		
Quant Ion	: 168.00		
Area	: 873		
On-column Amount (ng/ul)	: 3.0982		
Integration start scan	: 972	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

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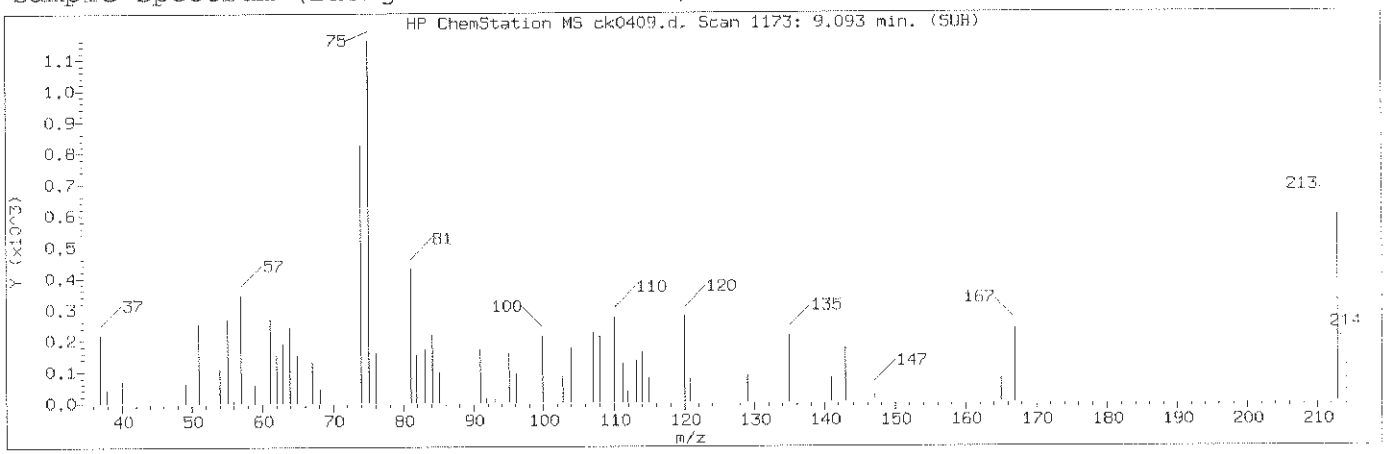
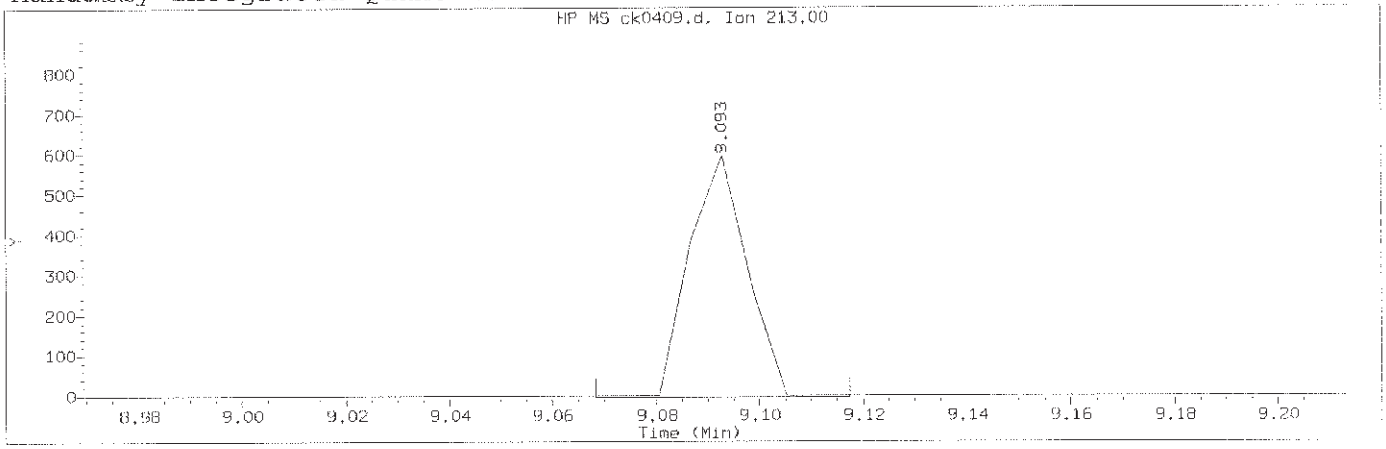
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 121		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1173		
Retention Time (minutes)	: 9.093		
Quant Ion	: 213.00		
Area (flag)	: 470M		
On-Column Amount (ng/ul)	: 6.9925		
Integration start scan	: 1168	Integration stop scan:	1176
Y at integration start	: -5	Y at integration end:	-5

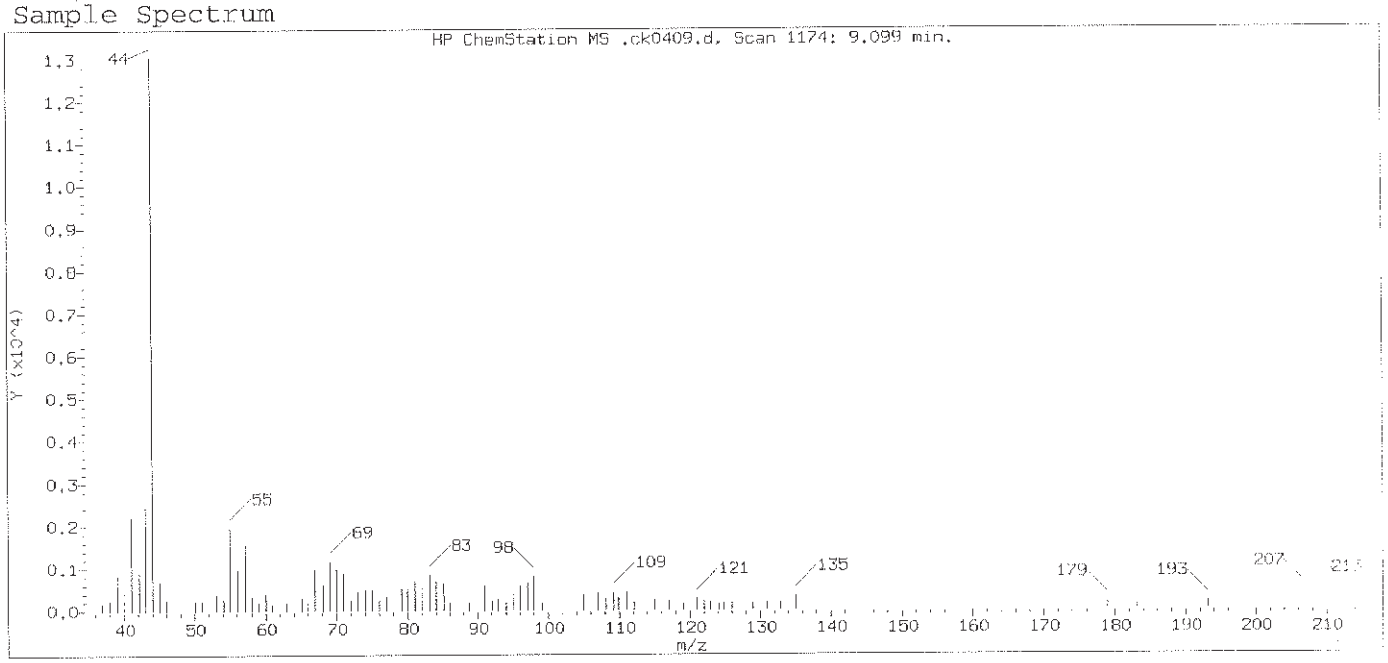
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

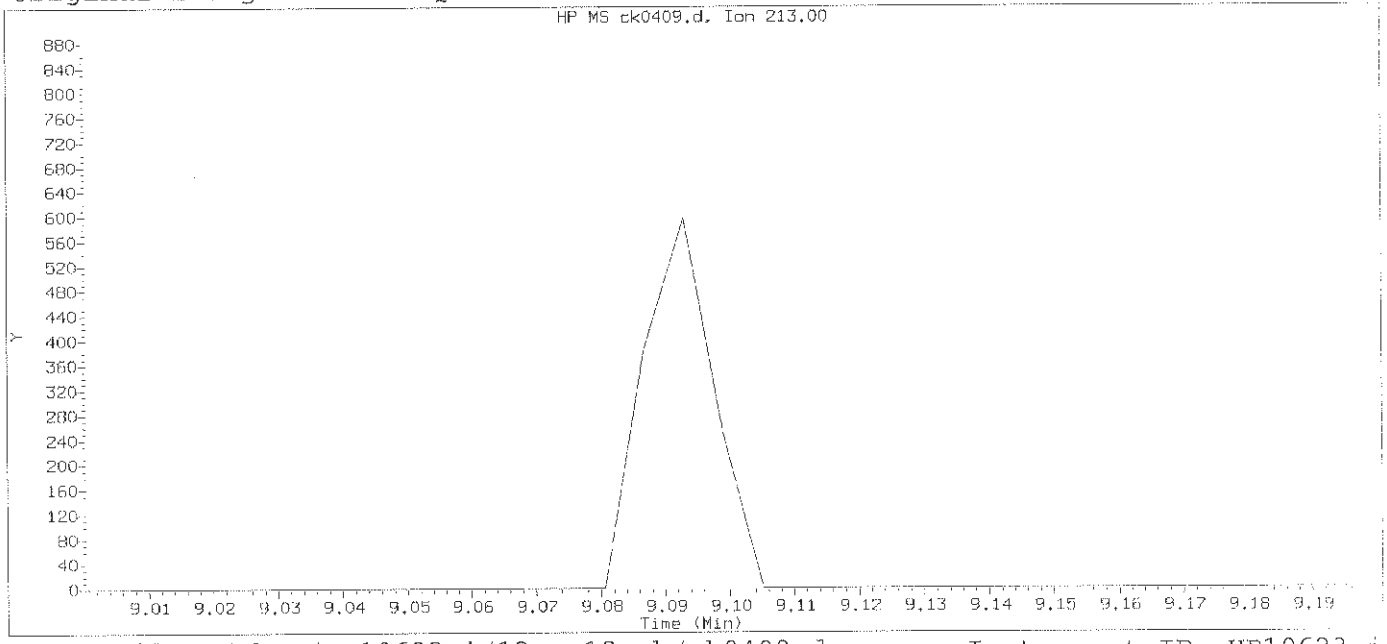
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla11.l
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number : 121
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 9.099
Quant Ion : 213.00

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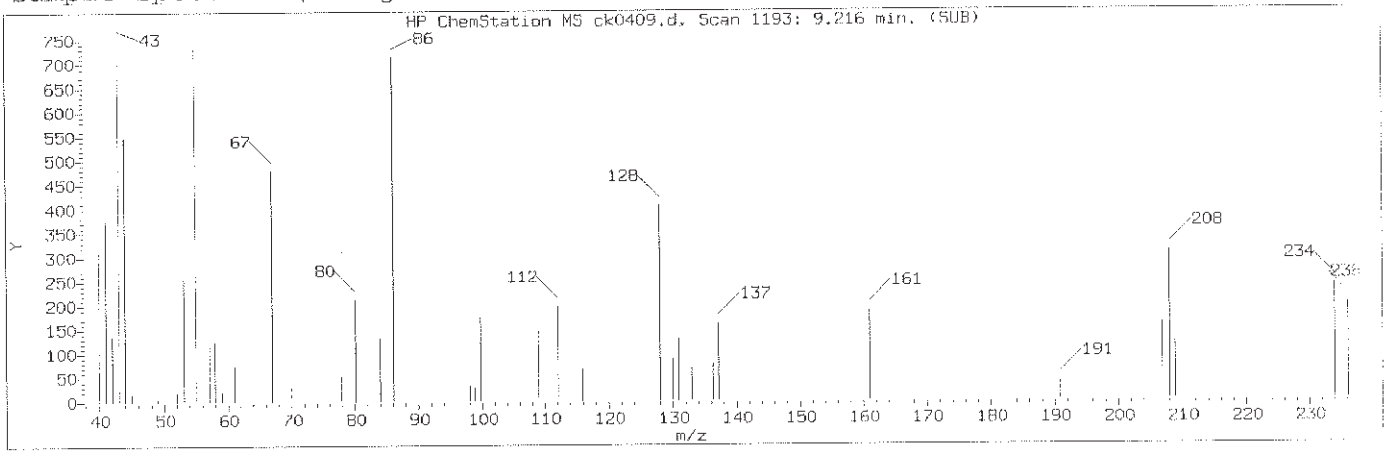
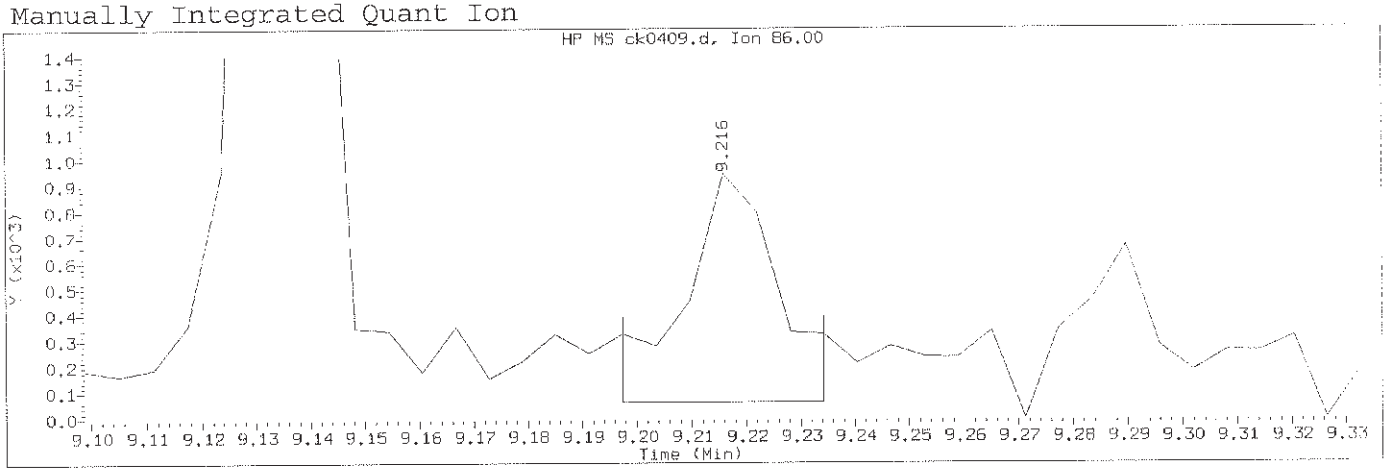
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	:	126
Compound Name	:	Diallate (peak 2)
Scan Number	:	1193
Retention Time (minutes)	:	9.216
Quant Ion	:	86.00
Area (flag)	:	1113M
On-Column Amount (ng/ul)	:	0.1600
Integration start scan	:	1189 Integration stop scan: 1195
Y at integration start	:	62 Y at integration end: 62

Reason for manual integration: improper integration

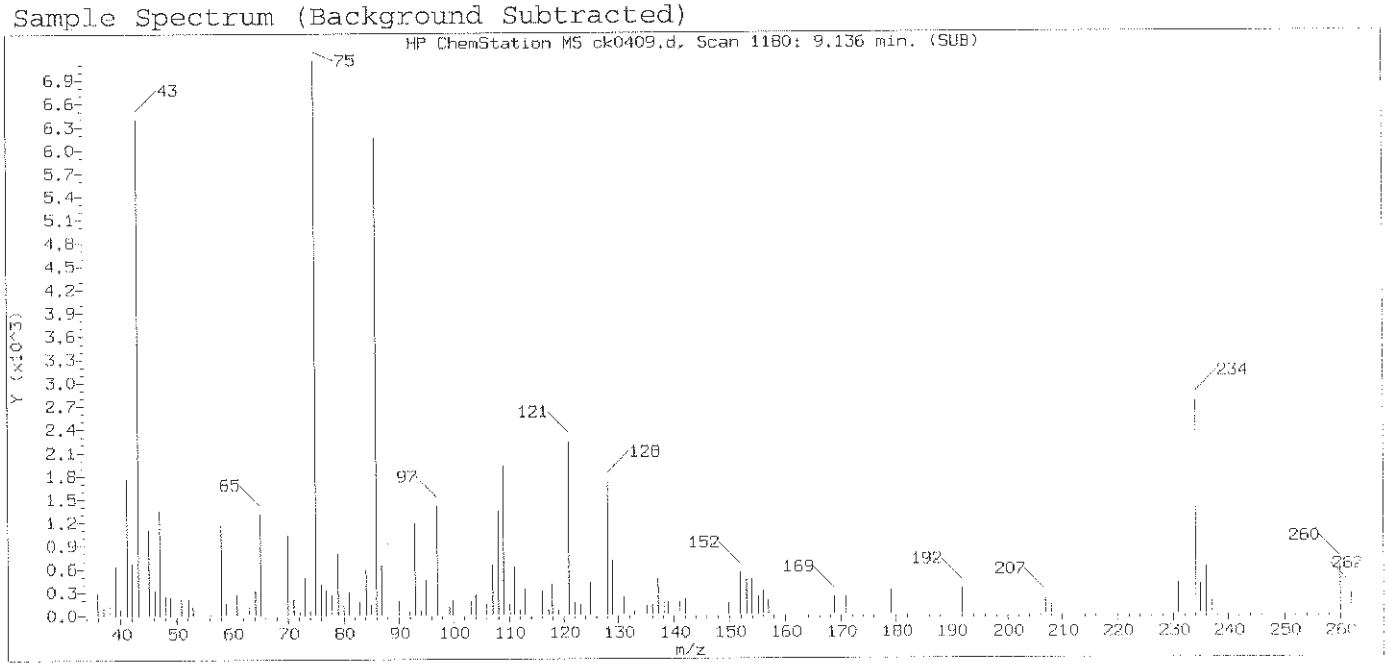
Analyst responsible for change: Digitally signed by Mark A. Clark on 11/13/2013 at 01:48. Target 3.5 esignature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

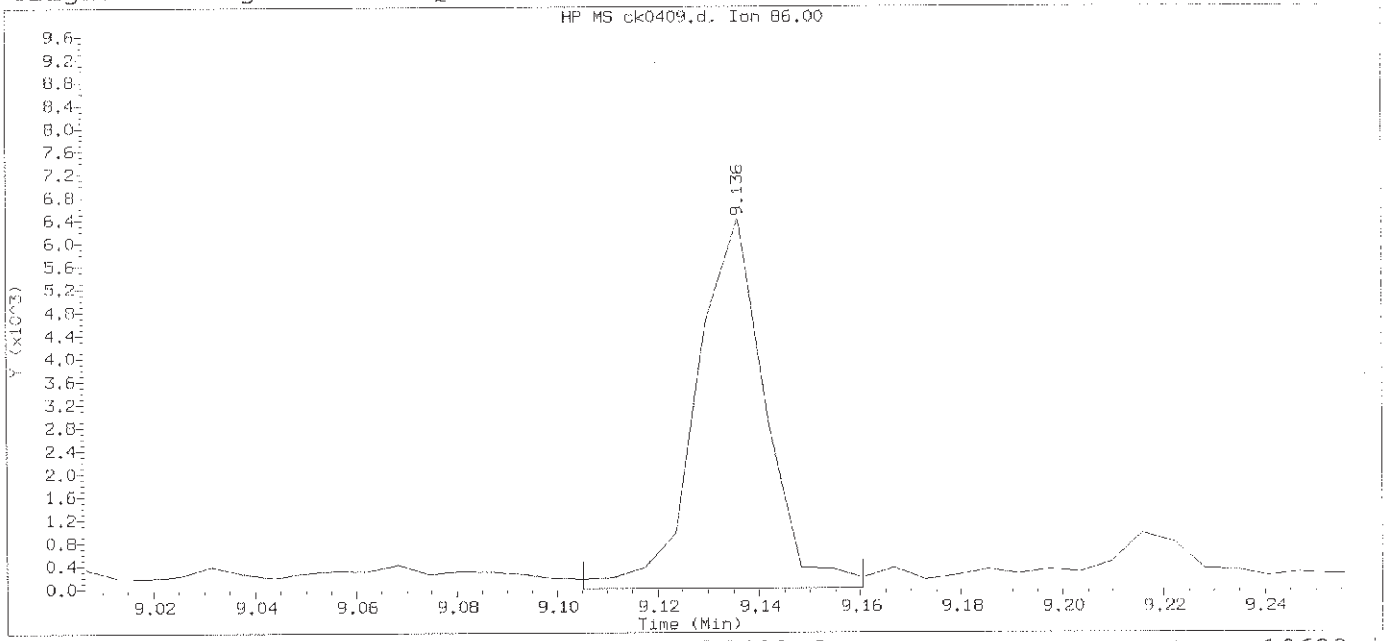
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

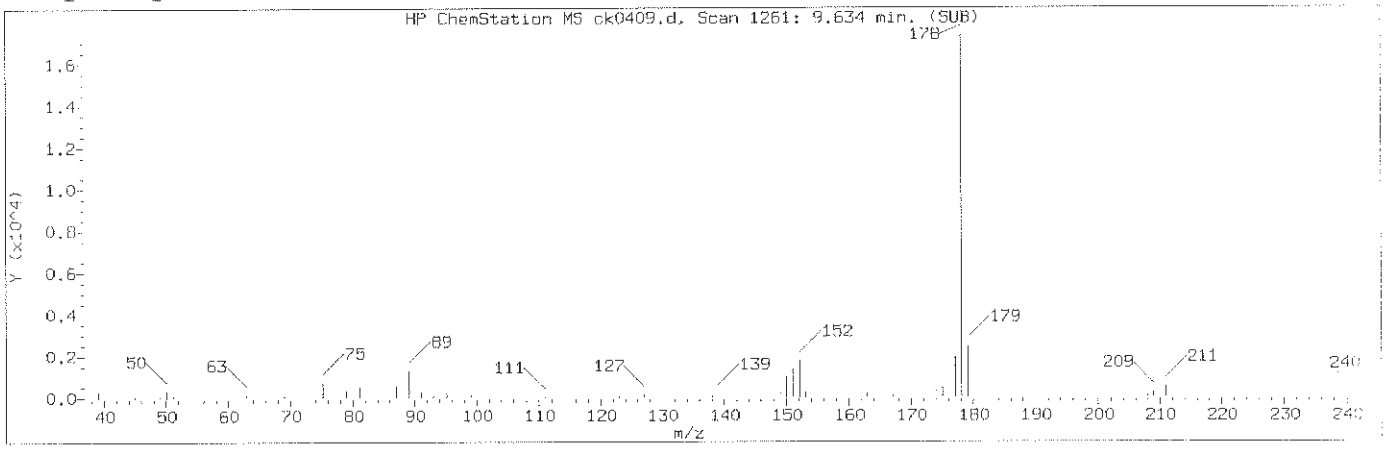
Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5md1a111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

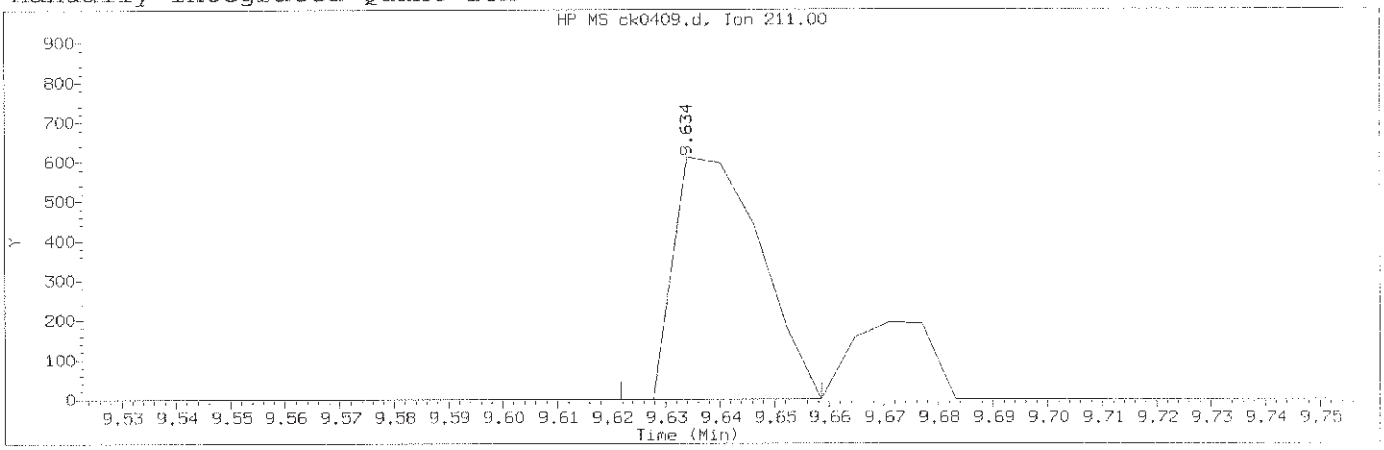
Compound Number	: 126		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1180		
Retention Time (minutes)	: 9.136		
Quant Ion	: 86.00		
Area	: 5989		
On-column Amount (ng/ul)	: 0.8607		
Integration start scan	: 1174	Integration stop scan:	1183
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1261		
Retention Time (minutes)	: 9.634		
Quant Ion	: 211.00		
Area (flag)	: 673M		
On-Column Amount (ng/ul)	: 6.9625		
Integration start scan	: 1258	Integration stop scan:	1264
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

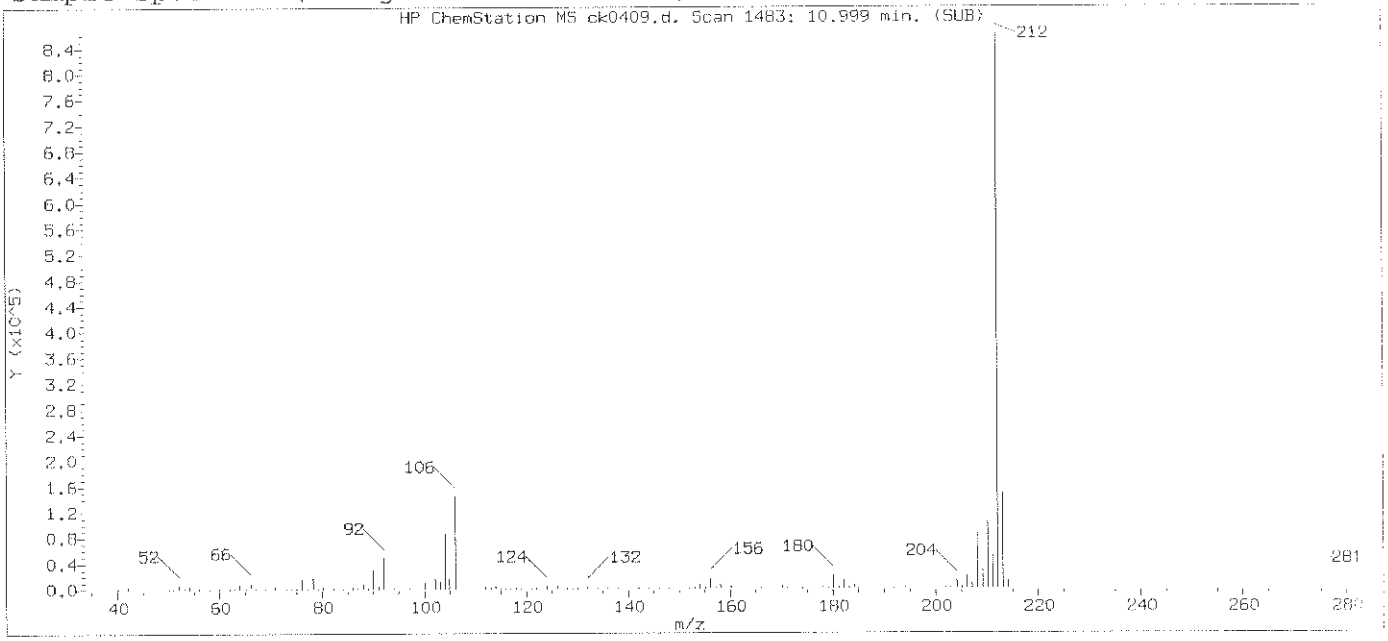
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 0.5 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

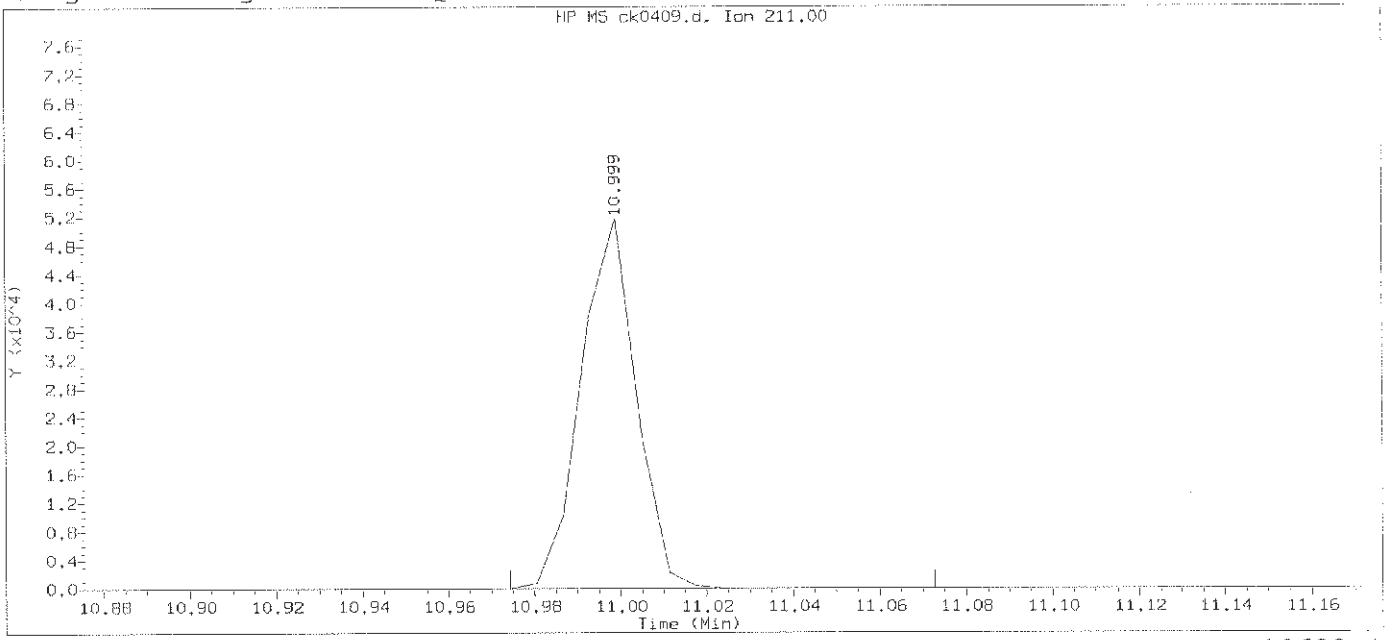
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 136		
Compound Name	: Dinoseb		
Scan Number	: 1483		
Retention Time (minutes)	: 10.999		
Quant Ion	: 211.00		
Area	: 45885		
On-column Amount (ng/ul)	: 16.5287		
Integration start scan	: 1478	Integration stop scan:	1494
Y at integration start	: 0	Y at integration end:	0

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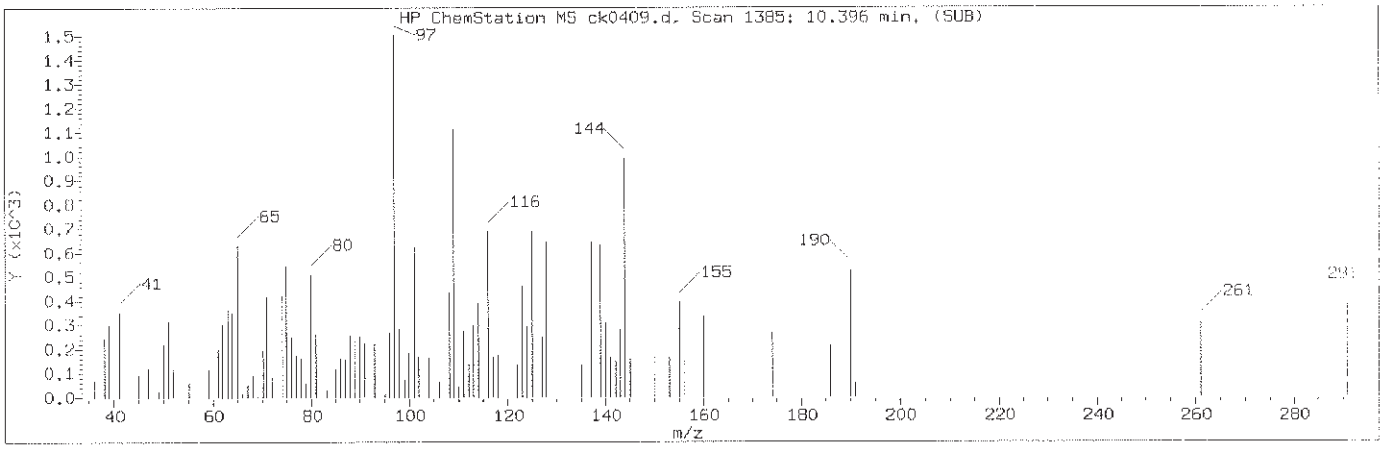
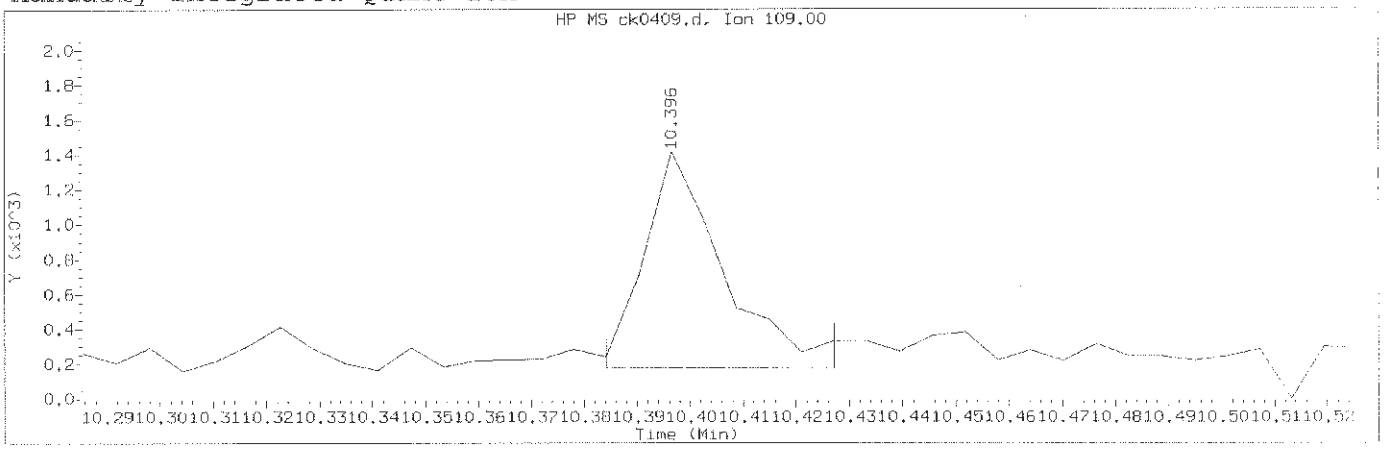
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 01:03 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1385		
Retention Time (minutes)	: 10.396		
Quant Ion	: 109.00		
Area (flag)	: 1300M		
On-Column Amount (ng/ul)	: 3.1615		
Integration start scan	: 1382	Integration stop scan:	1389
Y at integration start	: 178	Y at integration end:	178

Reason for manual integration: improper integration

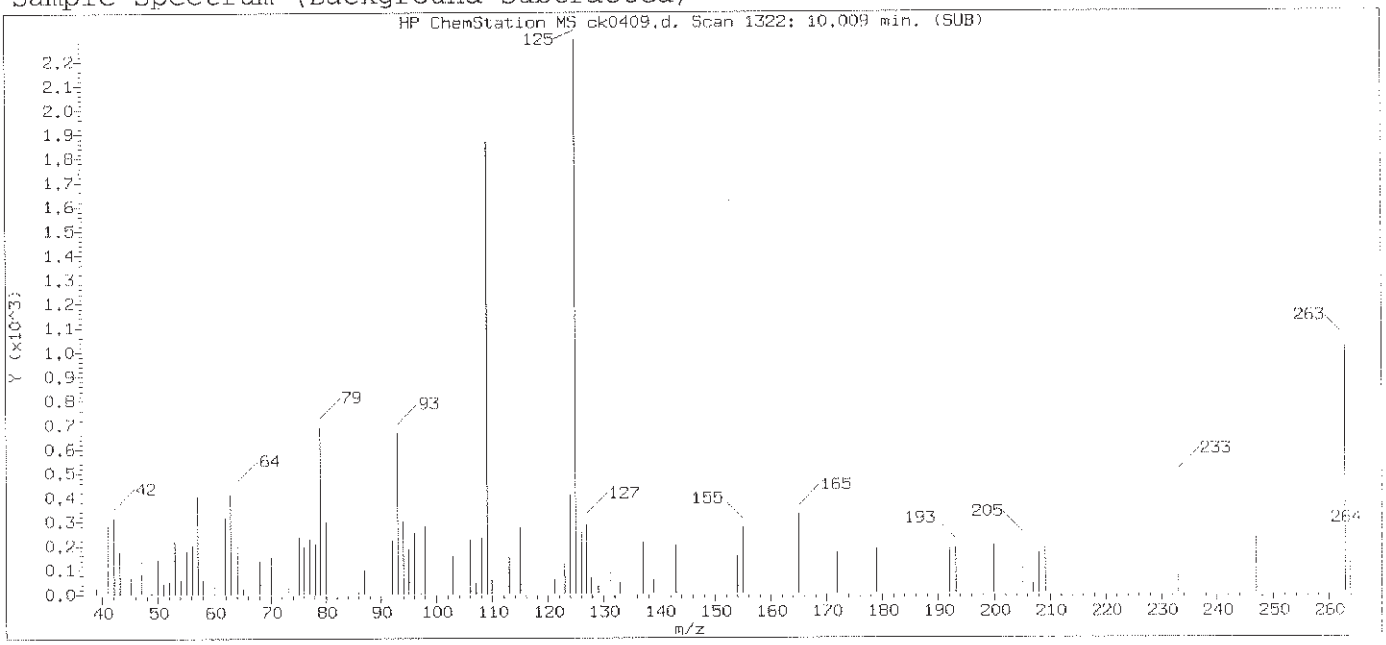
Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:48.
Target 3.0 signature user ID: mac00013

Mark A. Ratcliff
Senior Specialist

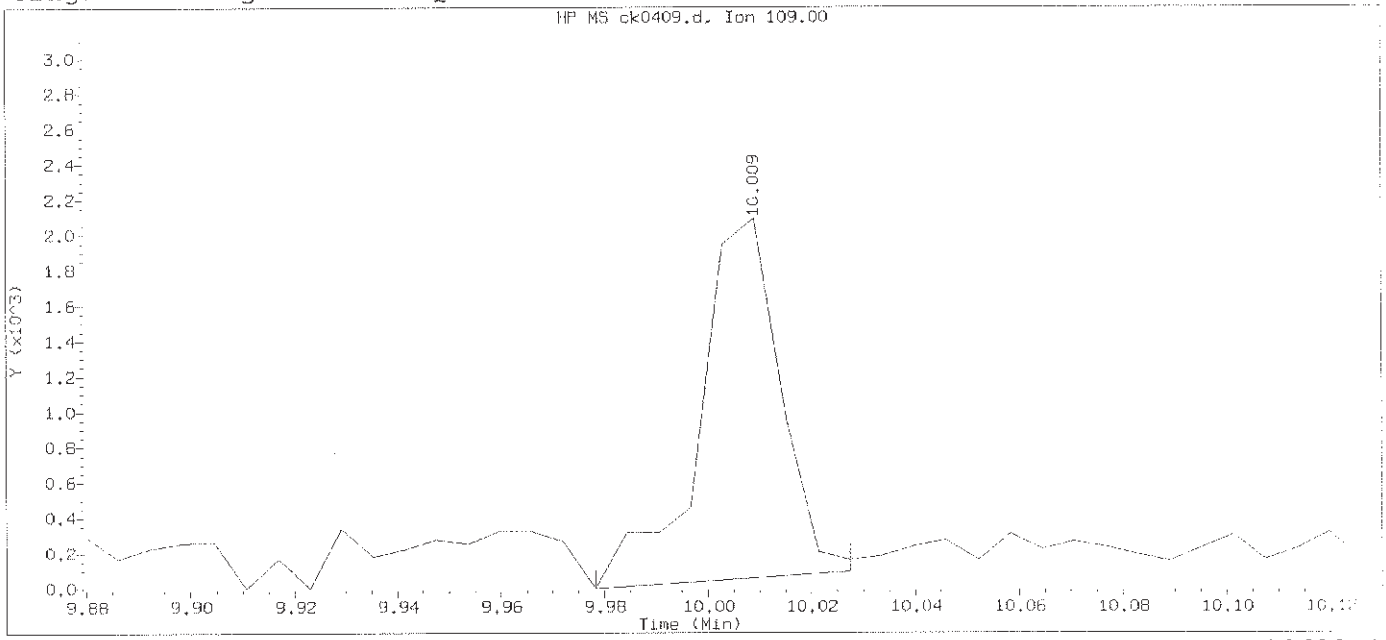
NOV 13 2013

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



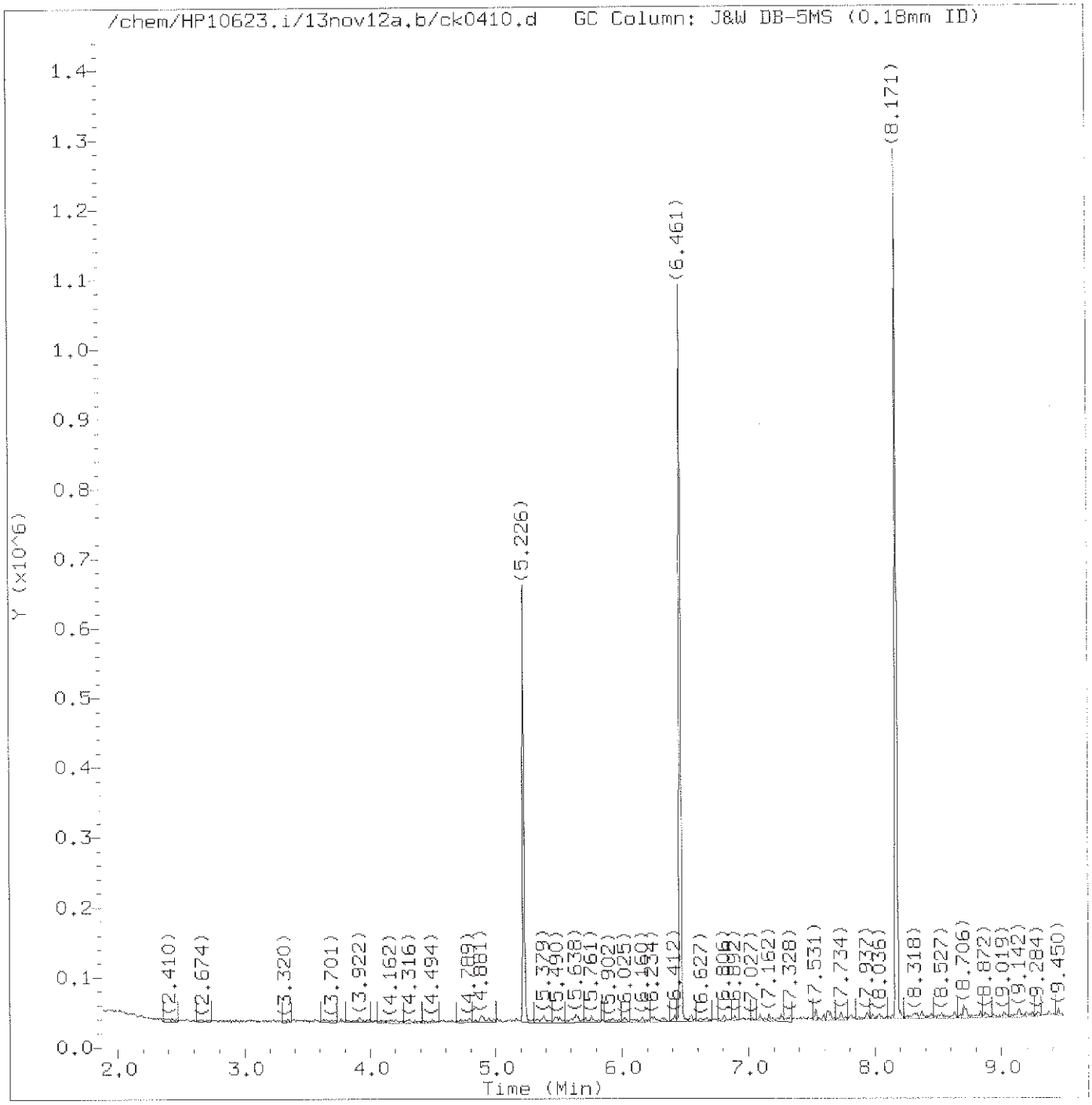
Data File: /chem/HP10623.i/13nov12a.b/ck0409.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:03 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.5mdla111
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.50 Lab Sample ID: 8270MDL3083

Compound Number	: 143		
Compound Name	: Parathion		
Scan Number	: 1322		
Retention Time (minutes)	: 10.009		
Quant Ion	: 109.00		
Area	: 2207		
On-column Amount (ng/ul)	: 3.3110		
Integration start scan	: 1316	Integration stop scan:	1324
Y at integration start	: 0	Y at integration end:	95

Digitally signed by Mark A. Clark on 11/13/2013 at 01:48.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

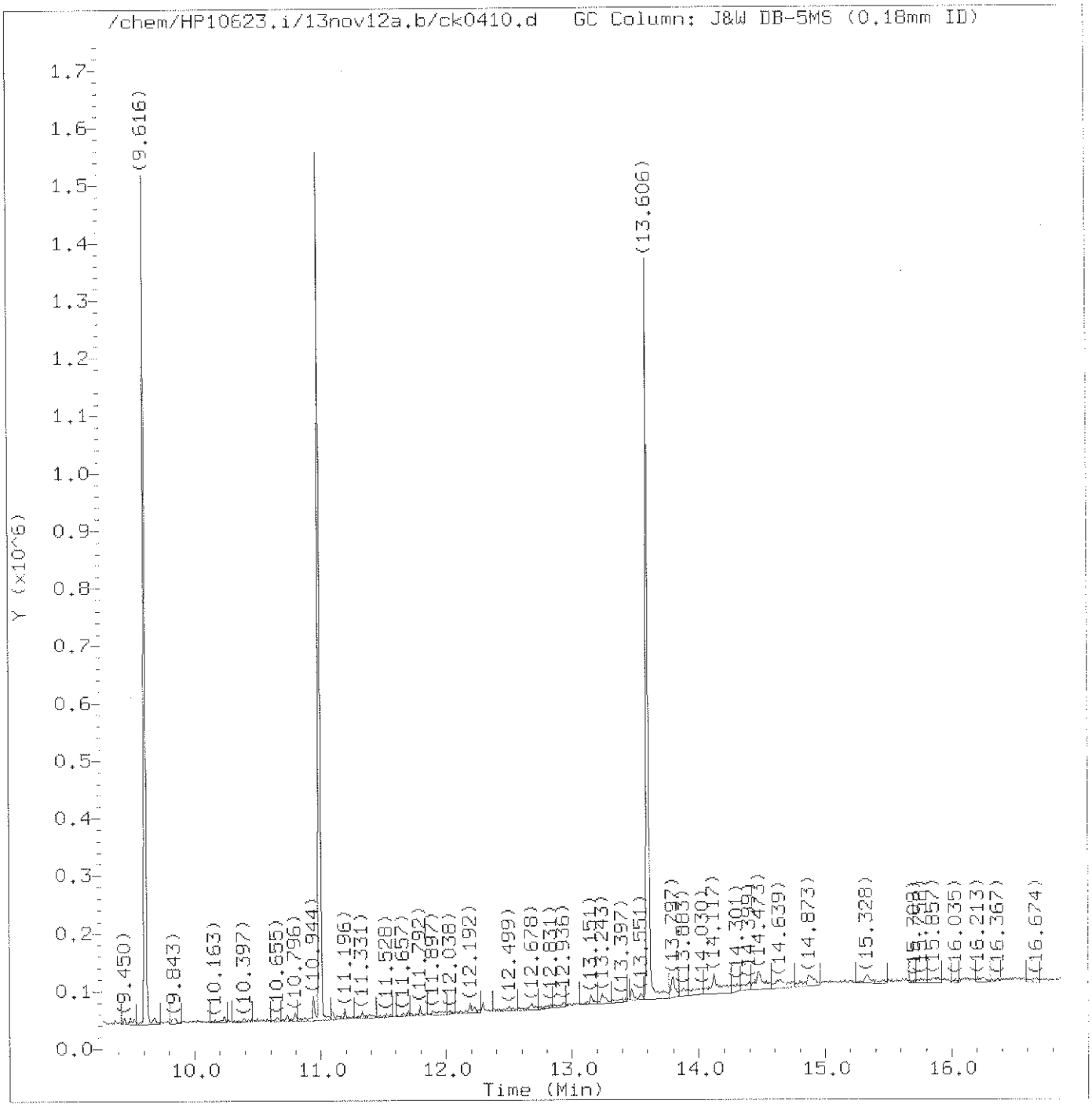
Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:27 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: 0.1mdlall
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10 Lab Sample ID: PAHMDL3083

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0410.d
Injection date and time: 12-NOV-2013 13:27

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: 0.1mdla111

Date, time and analyst ID of latest file update: 13-Nov-2013 00:55 mac00013

Sample Name: SSTD0.10

Lab Sample ID: PAHMDL3083

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
9)$2-Fluorophenol	(1)	3.916	112	2454	0.175
14)$Phenol-d5	(1)	4.881	99	2646	0.129
15)$Phenol-d6	(1)	4.881	99	2646	0.129
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93509	20.000
38)$Nitrobenzene-d5	(2)	5.761	82	1933	0.109
52)*Naphthalene-d8	(2)	6.461	136	412282	20.000
53) Naphthalene	(2)	6.480	128	2590	0.118
70) 2-Methylnaphthalene	(2)	7.162	142	1857	0.120
71) 1-Methylnaphthalene	(2)	7.255	142	1549	0.109
78)$2-Fluorobiphenyl	(3)	7.531	172	3592	0.113
95) Acenaphthylene	(3)	8.029	152	2641	0.118
98)*Acenaphthene-d10	(3)	8.171	164	253744	20.000
99) Acenaphthene	(3)	8.202	153	1735	0.112
111) Fluorene	(3)	8.706	166	2120	0.116
119)$2,4,6-Tribromophenol	(3)	8.939	330	293	0.096
127) Hexachlorobenzene	(4)	9.241	284	533	0.126
135)*Phenanthrene-d10	(4)	9.616	188	463222	20.000
137) Phenanthrene	(4)	9.634	178	3119	0.116
138) Anthracene	(4)	9.690	178	2896	0.104
147) Fluoranthene	(4)	10.796	202	3405	0.113
167)*Pyrene-d10	(5)	10.993	212	576214	20.000
154) Pyrene	(5)	11.011	202	3890	0.122
156)$Terphenyl-d14	(5)	11.196	244	4477	0.109
166) Benzo(a)anthracene	(5)	12.192	228	2810	0.095
168) Chrysene	(5)	12.223	228	2914	0.102
172) Benzo(b)fluoranthene	(6)	13.243	252	2820	0.090
173) Benzo(k)fluoranthene	(6)	13.268	252	3104	0.097
174) Benzo(a)pyrene	(6)	13.551	252	4571	0.149
175)*Perylene-d12	(6)	13.606	264	513658	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.621	276	2845	0.087
178) Dibenz(a,h)anthracene	(6)	14.645	278	2454	0.090
179) Benzo(g,h,i)perylene	(6)	14.904	276	2648	0.095

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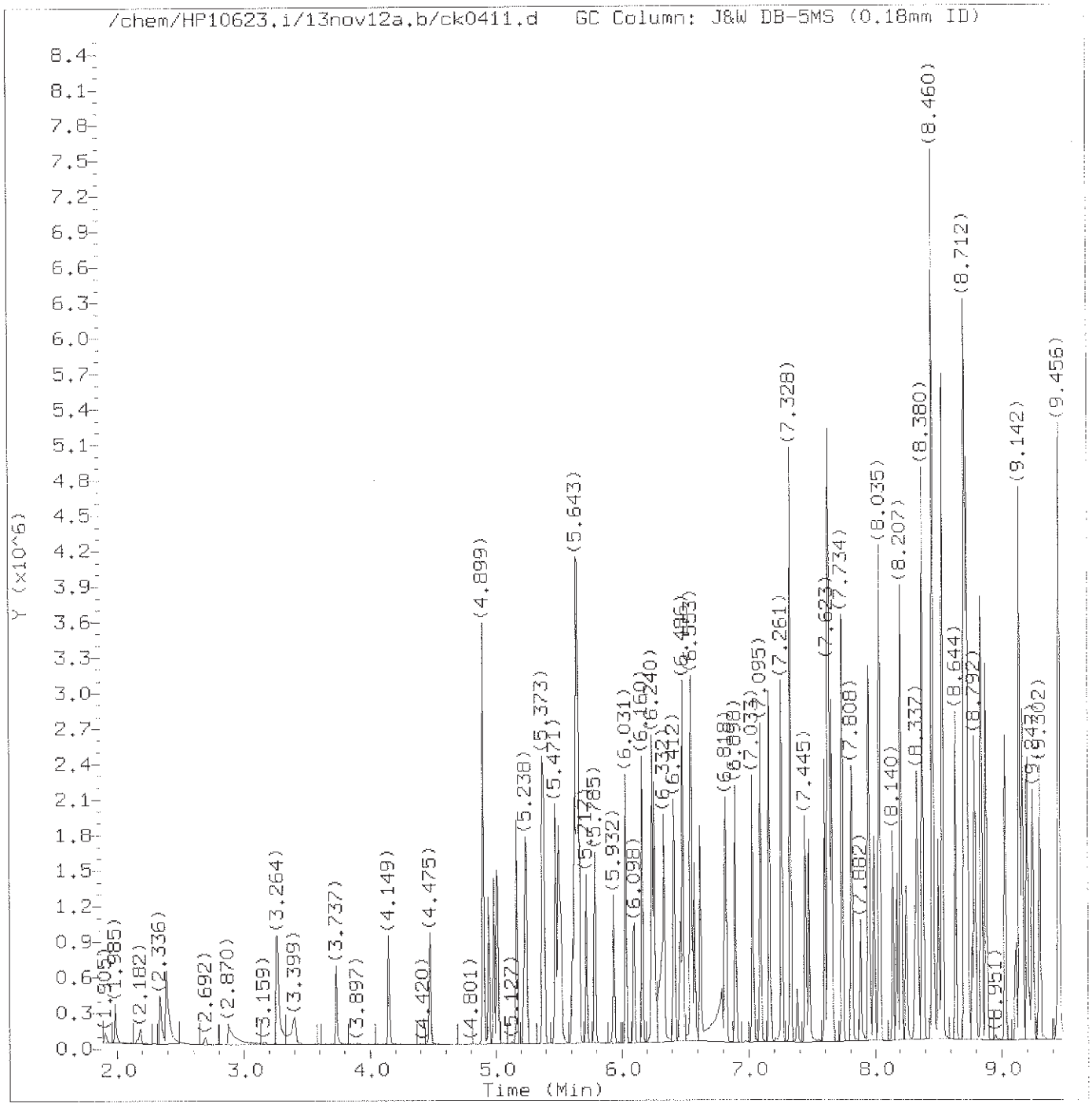
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

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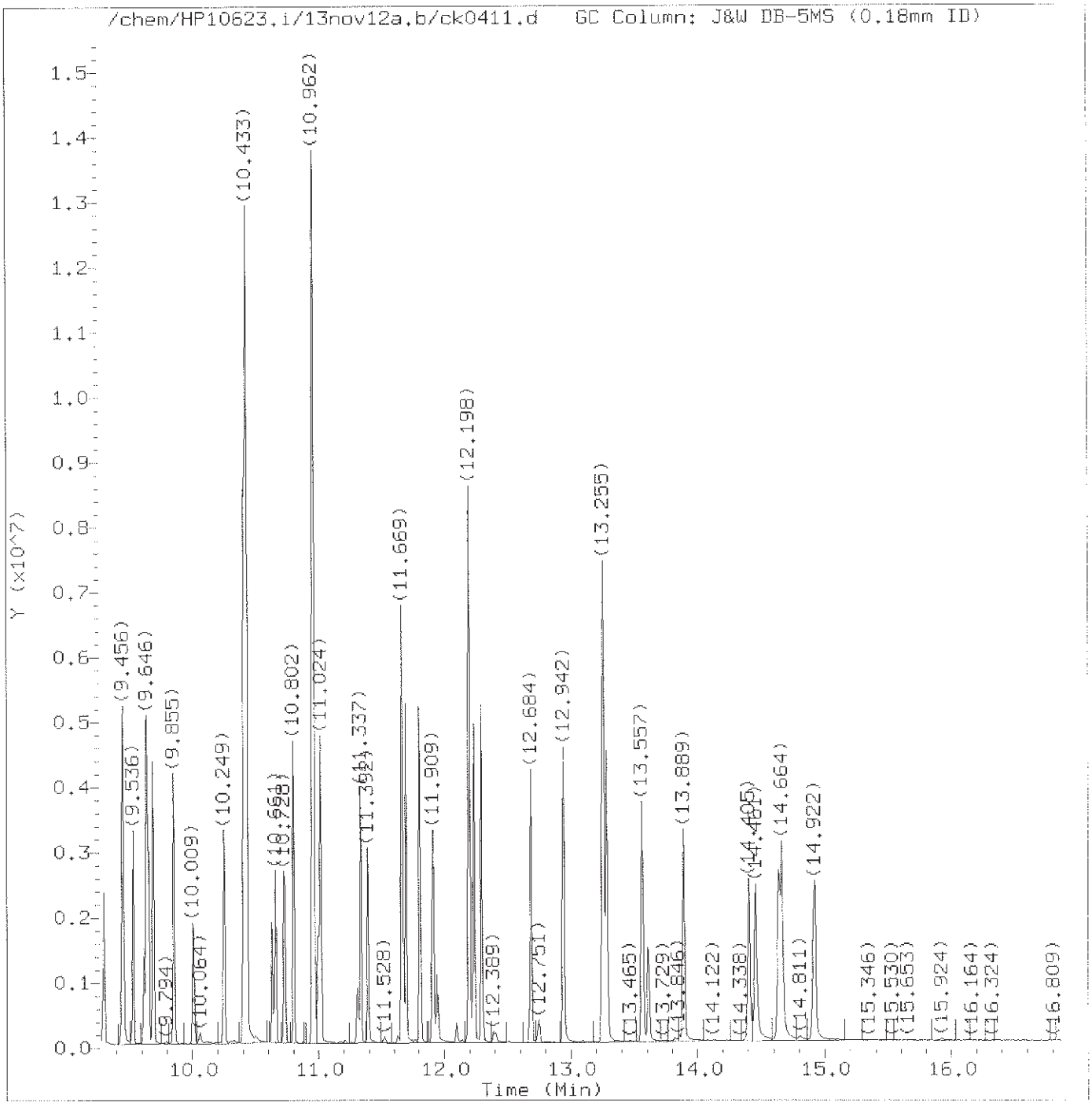
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.985	88	149311	47.957
2) N-Nitrosodimethylamine	(1)	2.342	74	252012	43.720
3) Pyridine	(1)	2.391	79	424785	47.535
5) 2-Picoline	(1)	3.264	93	431571	47.327
6) N-Nitrosomethylethylamine	(1)	3.399	88	206692	47.413
7) Methyl methanesulfonate	(1)	3.737	80	237169	54.109
9)$2-Fluorophenol	(1)	3.922	112	547	0.038
10) N-Nitrosodiethylamine	(1)	4.149	102	207816	47.985
11) Ethyl methanesulfonate	(1)	4.475	109	201755	51.157
15)$Phenol-d6	(1)	4.844	99	463	0.022
14)$Phenol-d5	(1)	4.844	99	463	0.022
13) Aniline	(1)	4.899	93	710385	49.000
16) Phenol	(1)	4.899	94	587646	48.067
18) bis(2-Chloroethyl)ether	(1)	4.986	93	418906	48.264
19) 2-Chlorophenol	(1)	5.010	128	371941	48.770
20) 1,3-Dichlorobenzene	(1)	5.164	146	387005	50.286
21)*1,4-Dichlorobenzene-d4	(1)	5.225	152	95185	20.000
22) 1,4-Dichlorobenzene	(1)	5.244	146	394824	50.270
24) Benzyl alcohol	(1)	5.373	108	294737	49.427
25) 1,2-Dichlorobenzene	(1)	5.385	146	374976	50.864
206) Indene	(1)	5.471	115	599486	36.404
26) 2-Methylphenol	(1)	5.502	108	397816	49.028
28) bis(2-Chloroisopropyl)ether	(1)	5.521	45	470664	43.955
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.521	45	470664	44.068
29) N-Nitrosopyrrolidine	(1)	5.607	100	241796	49.784
30) Acetophenone	(1)	5.625	105	583217	48.210
31) N-Nitroso-di-n-propylamine	(1)	5.643	70	355052	45.852
33) 4-Methylphenol	(1)	5.650	108	469056	48.838
32) N-Nitrosomorpholine	(1)	5.650	56	262456	47.568
34) o-Toluidine	(1)	5.662	106	675835	48.770
38)$Nitrobenzene-d5	(2)	5.717	82	41086	2.154
37) Hexachloroethane	(1)	5.717	117	147419	49.317
39) Nitrobenzene	(2)	5.785	77	451476	44.623
40) N-Nitrosopiperidine	(2)	5.932	114	223398	49.773
41) Isophorone	(2)	6.031	82	891527	48.528
42) 2-Nitrophenol	(2)	6.098	139	173636	49.367
44) 2,4-Dimethylphenol	(2)	6.160	107	436233	48.254
45) O,O,O-triethylphosphorothioate	(2)	6.240	198	191261	50.741
46) bis(2-Chloroethoxy)methane	(2)	6.258	93	527676	47.271
47) Benzoic acid	(2)	6.314	105	586189	100.038

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$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	6.332	162	316817	51.530
50) 1,2,4-Trichlorobenzene	(2)	6.412	180	347358	53.638
52)*Naphthalene-d8	(2)	6.461	136	442728	20.000
53) Naphthalene	(2)	6.486	128	1172491	49.915
56) 4-Chloroaniline	(2)	6.547	127	529549	51.732
57) 2,6-Dichlorophenol	(2)	6.553	162	300451	51.884
58) Hexachloropropene	(2)	6.578	213	190399	51.986
60) Hexachlorobutadiene	(2)	6.621	225	167513	51.574
194) Quinoline	(2)	6.818	129	818901	50.576
64) N-Nitrosodi-n-butylamine	(2)	6.898	84	337694	38.170
68) 4-Chloro-3-methylphenol	(2)	7.033	107	396928	50.498
69) Safrole	(2)	7.095	162	320659	51.534
70) 2-Methylnaphthalene	(2)	7.162	142	821412	49.274
71) 1-Methylnaphthalene	(2)	7.261	142	775772	50.857
72) Hexachlorocyclopentadiene	(3)	7.328	237	324007	114.668
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.328	216	325095	49.717
74) cis-Isosafrole	(3)	7.377	162	59569	5.674
78)$2-Fluorobiphenyl	(3)	7.445	172	746	0.022
75) 2,4,6-Trichlorophenol	(3)	7.445	196	216899	50.837
77) 2,4,5-Trichlorophenol	(3)	7.476	196	247588	53.224
80) Isosafrole	(3)	7.599	162	341611	51.648
79) trans-Isosafrole	(3)	7.599	162	341611	45.967
83) 1,1'-Biphenyl	(3)	7.629	154	1002793	47.214
84) 2-Chloronaphthalene	(3)	7.636	162	909334M	58.779
85) 1-Chloronaphthalene	(3)	7.654	162	751847M	49.381
88) Diphenyl ether	(3)	7.734	170	533977	50.470
89) 2-Nitroaniline	(3)	7.740	138	257838	51.088
90) 1,4-Naphthoquinone	(3)	7.814	158	407751	62.631
91) 1,4-Dinitrobenzene	(3)	7.882	168	101153	46.695
92) Dimethylphthalate	(3)	7.943	163	940559	51.095
93) 1,3-Dinitrobenzene	(3)	7.955	168	139577	47.856
94) 2,6-Dinitrotoluene	(3)	7.992	165	208212	54.307
95) Acenaphthylene	(3)	8.035	152	1297511	53.722
97) 3-Nitroaniline	(3)	8.140	138	253015	54.041
98)*Acenaphthene-d10	(3)	8.177	164	274130	20.000
99) Acenaphthene	(3)	8.207	153	830165	49.665
100) 2,4-Dinitrophenol	(3)	8.251	184	147734	99.414
103) 4-Nitrophenol	(3)	8.318	109	152004	52.408
101) Pentachlorobenzene	(3)	8.337	250	293115	51.874
104) Dibenzofuran	(3)	8.380	168	1131103	49.399

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 2,4-Dinitrotoluene	(3)	8.380	165	273983	55.301
106) 1-Naphthylamine	(3)	8.460	143	1980480	105.262
107) 2,3,4,6-Tetrachlorophenol	(3)	8.503	232	192007	58.598
108) 2-Naphthylamine	(3)	8.539	143	1976694	102.683
109) Diethylphthalate	(3)	8.644	149	968057	50.909
111) Fluorene	(3)	8.712	166	1007496	51.140
110) Thionazin	(3)	8.718	107	199292	47.522
112) 4-Chlorophenyl-phenylether	(3)	8.730	204	440587	50.271
113) 5-Nitro-o-toluidine	(3)	8.730	152	289839	55.721
114) 4-Nitroaniline	(3)	8.742	138	280640	53.304
115) 4,6-Dinitro-2-methylphenol	(4)	8.773	198	111806	49.870
117) N-Nitrosodiphenylamine	(4)	8.841	169	878764	51.002
202) NDPA as diphenylamine	(4)	8.841	169	878764	50.881
118) 1,2-Diphenylhydrazine	(4)	8.878	77	1180053	47.812
120) Tetraethyldithiopyrophosphate	(4)	9.025	97	162188	46.106
121) 1,3,5-Trinitrobenzene	(4)	9.111	213	75929	48.720
122) Diallate (peak 1)	(4)	9.136	86	429247	33.987
123) Phorate	(4)	9.142	75	679865	44.709
124) Phenacetin	(4)	9.167	108	601455	50.511
125) 4-Bromophenyl-phenylether	(4)	9.204	248	243781	51.350
126) Diallate (peak 2)	(4)	9.222	86	62012	11.306
127) Hexachlorobenzene	(4)	9.247	284	236757	50.510
128) Dimethoate	(4)	9.302	87	445676	47.929
131) Pentachlorophenol	(4)	9.443	266	139666	53.726
133) 4-Aminobiphenyl	(4)	9.456	169	1247866	66.977
132) Pentachloronitrobenzene	(4)	9.456	237	105666	51.930
134) Pronamide	(4)	9.536	173	442161	49.235
135)*Phenanthrene-d10	(4)	9.622	188	514071	20.000
136) Dinoseb	(4)	9.640	211	155709	48.621
137) Phenanthrene	(4)	9.646	178	1490821	49.875
138) Anthracene	(4)	9.695	178	1578759	51.311
140) Carbazole	(4)	9.855	167	1562784	52.049
141) Methyl parathion	(4)	10.009	109	299763	48.830
142) Di-n-butylphthalate	(4)	10.249	149	1787952	50.471
143) Parathion	(4)	10.409	109	232212	51.490
144) 4-Nitroquinoline-1-oxide	(4)	10.433	190	2149290	770.330
156)$Terphenyl-d14	(5)	10.661	244	591	0.012
146) Isodrin	(4)	10.661	193	162361	48.065
147) Fluoranthene	(4)	10.802	202	1770588	52.975
152) Benzidine	(5)	10.968	184	6726223	246.851

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on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
167)*Pyrene-d10	(5)	10.999	212	665610	20.000
154) Pyrene	(5)	11.024	202	1848877	50.019
158) p-Dimethylaminoazobenzene	(5)	11.337	225	382230	53.061
159) Chlorobenzilate	(5)	11.392	139	533173	47.580
160) 3,3'-Dimethylbenzidine	(5)	11.669	212	2334265	102.463
161) Butylbenzylphthalate	(5)	11.700	149	867538	49.182
162) 2-Acetylaminofluorene	(5)	11.909	181	825122	51.651
164) 3,3'-Dichlorobenzidine	(5)	12.192	252	639098	49.725
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.198	231	309955	49.366
166) Benzo(a)anthracene	(5)	12.198	228	1778344	52.161
168) Chrysene	(5)	12.235	228	1660733	50.522
169) bis(2-Ethylhexyl)phthalate	(5)	12.290	149	1190472	48.643
189) 6-Methylchrysene	(5)	12.684	242	1204991	49.681
170) Di-n-octylphthalate	(6)	12.942	149	2087276	49.022
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.255	256	857518	53.573
172) Benzo(b)fluoranthene	(6)	13.255	252	1719775	49.927
173) Benzo(k)fluoranthene	(6)	13.286	252	1926453	54.819
174) Benzo(a)pyrene	(6)	13.563	252	1699768	50.559
175)*Perylene-d12	(6)	13.612	264	564114	20.000
176) 3-Methylcholanthrene	(6)	13.889	268	850664	50.480
190) Dibenz(a,h)acridine	(6)	14.405	279	1220081	49.955
191) Dibenz(a,j)acridine	(6)	14.461	279	1426475	50.791
177) Indeno(1,2,3-cd)pyrene	(6)	14.639	276	1856821	51.912
178) Dibenz(a,h)anthracene	(6)	14.664	278	1566073	52.343
179) Benzo(g,h,i)perylene	(6)	14.922	276	1561134	51.232
129) Diallate TRANS/CIS	(4)	23.156	86	491259	45.305

* = Compound is an internal standard.

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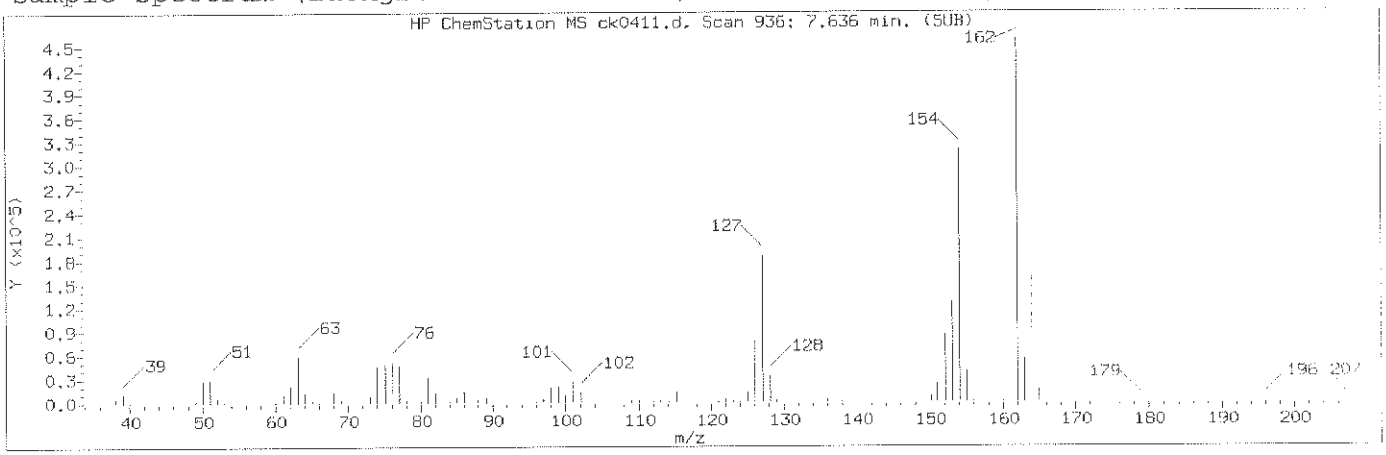
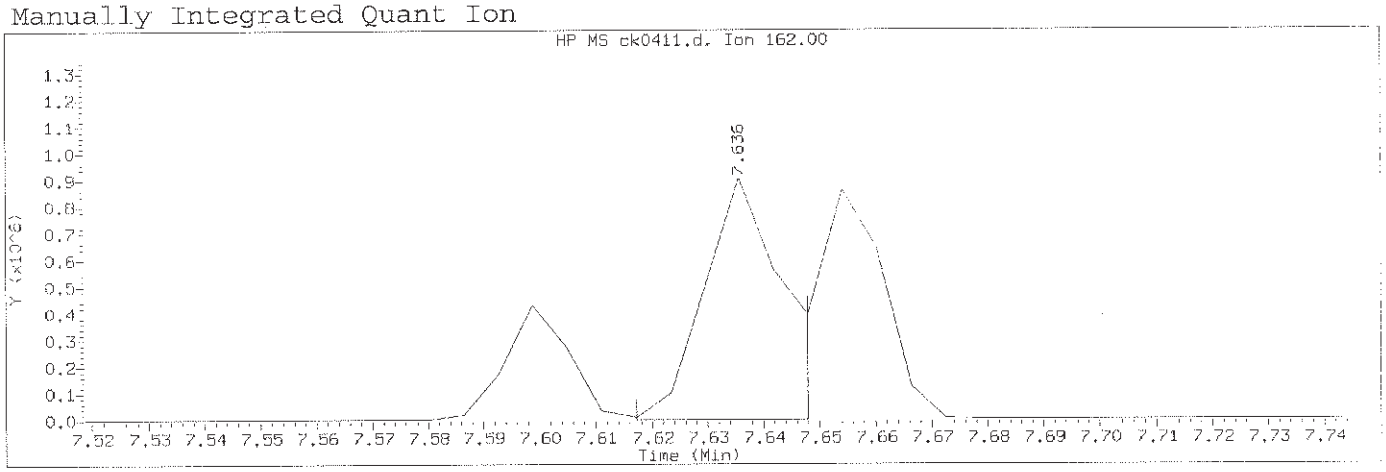
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area (flag)	: 909334M		
On-Column Amount (ng/ul)	: 58.7790		
Integration start scan	: 932	Integration stop scan:	937
Y at integration start	: -854	Y at integration end:	-854

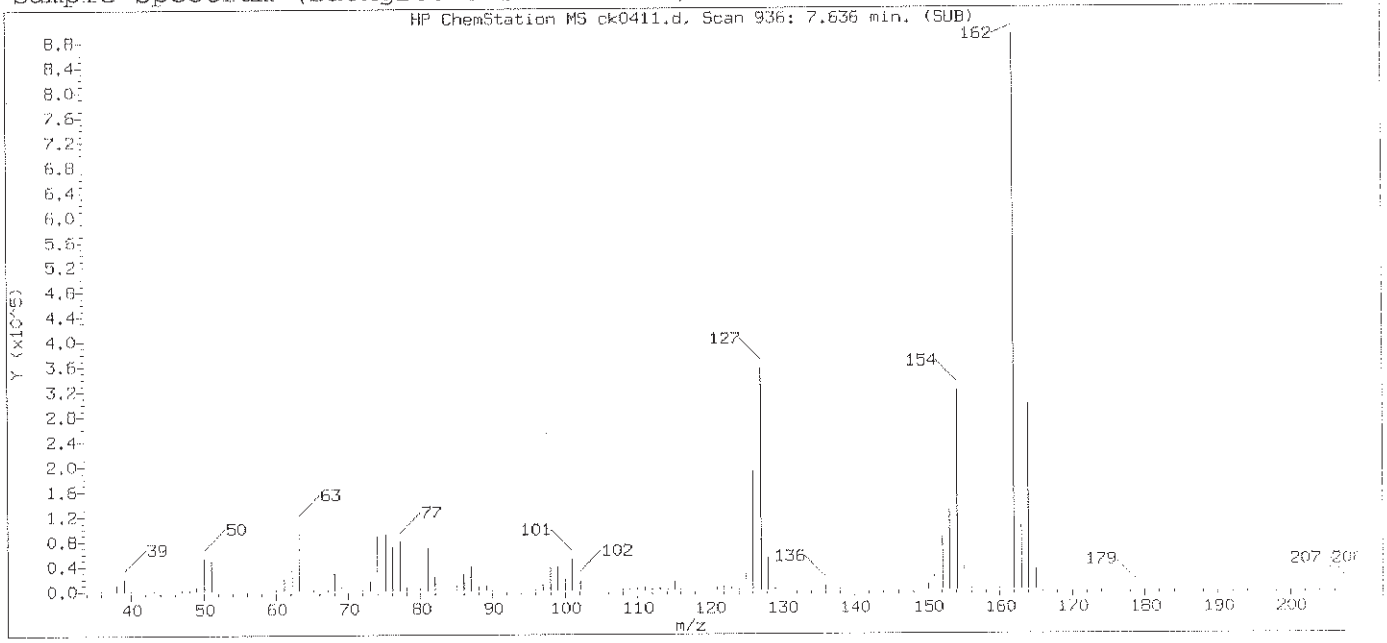
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

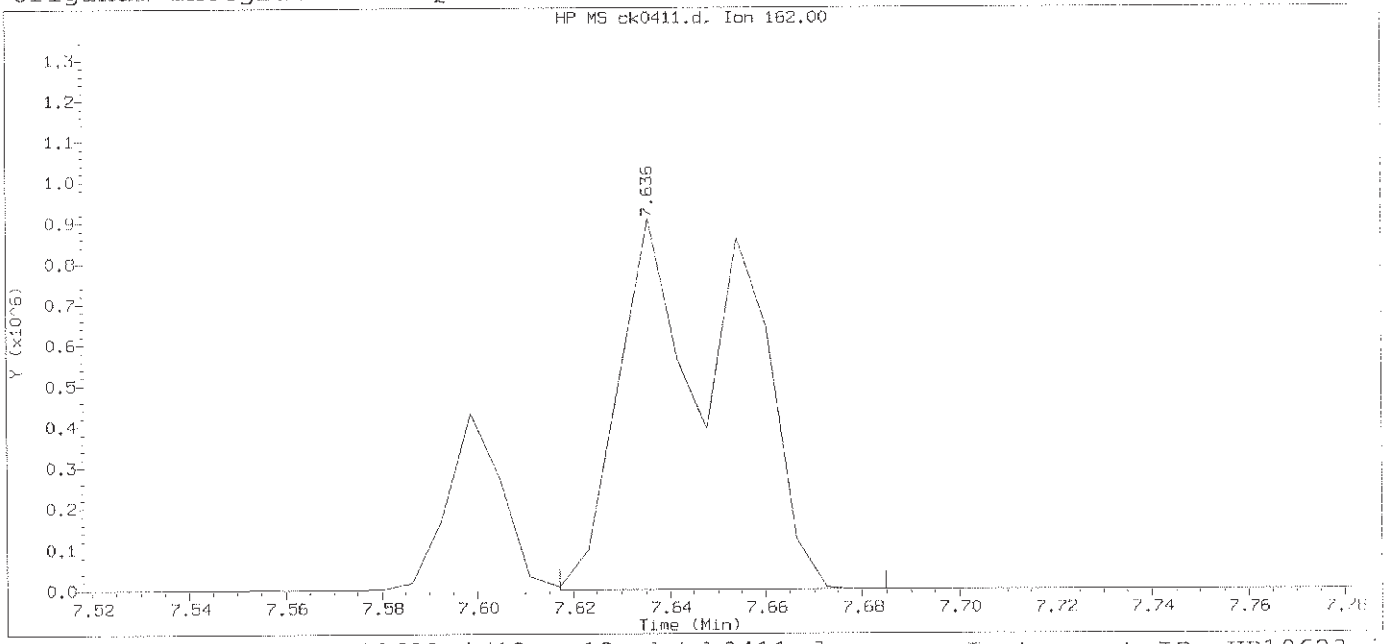
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____
NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 84		
Compound Name	: 2-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507324		
On-column Amount (ng/ul)	: 97.4326		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 304	Y at integration end:	322

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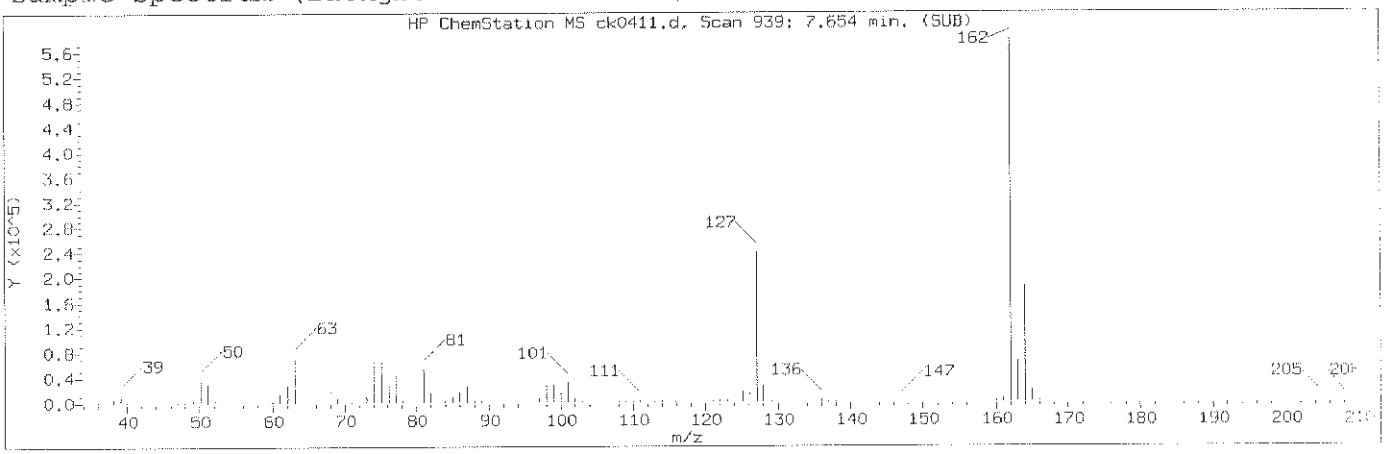
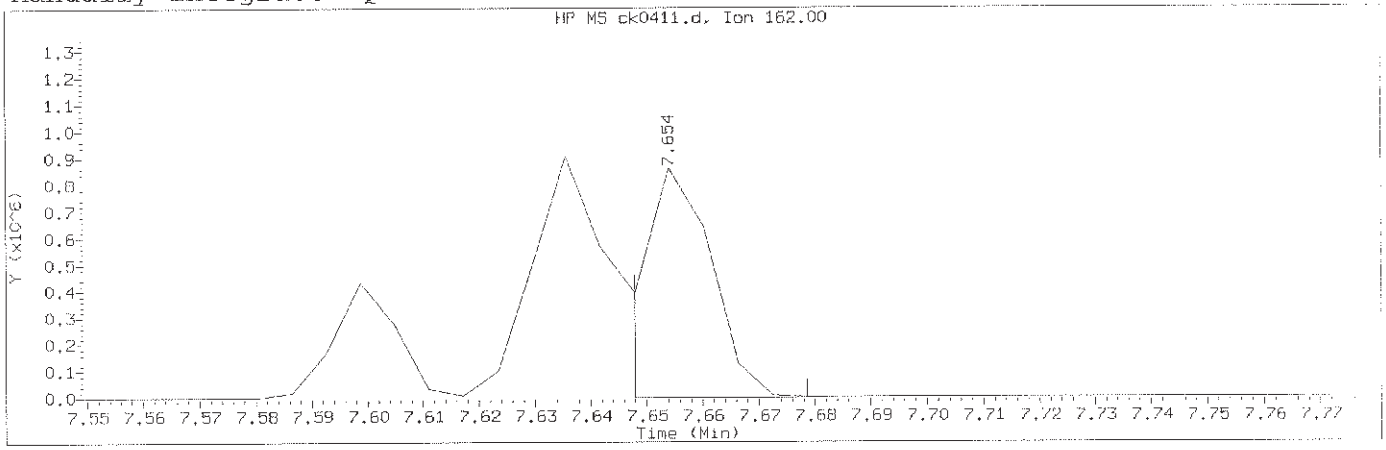
Target 3.5 esignature user ID: mac00013

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval11
Calibration date and time: 13-NOV-2013 01:24
Date, time and analyst ID of latest file update: 13-Nov-2013 01:24 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 939		
Retention Time (minutes)	: 7.654		
Quant Ion	: 162.00		
Area (flag)	: 751847M		
On-Column Amount (ng/ul)	: 49.3814		
Integration start scan	: 937	Integration stop scan:	942
Y at integration start	: -2049	Y at integration end:	-2049

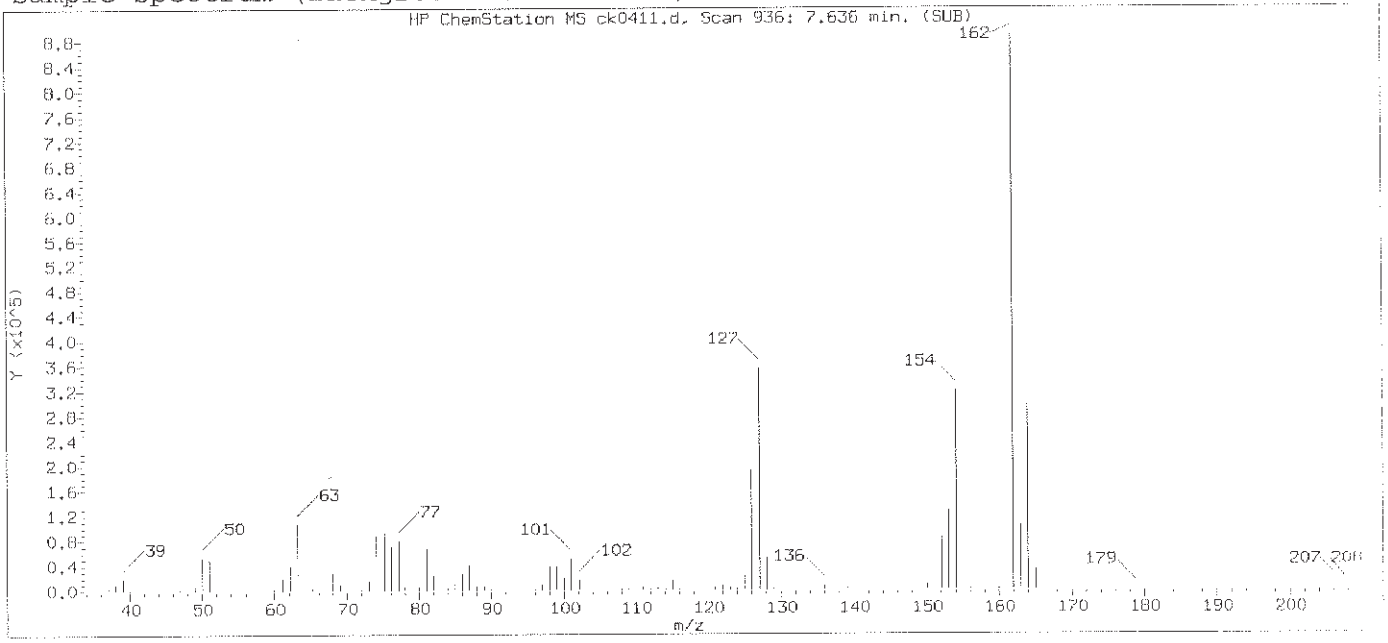
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Mark A. Clark
on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013

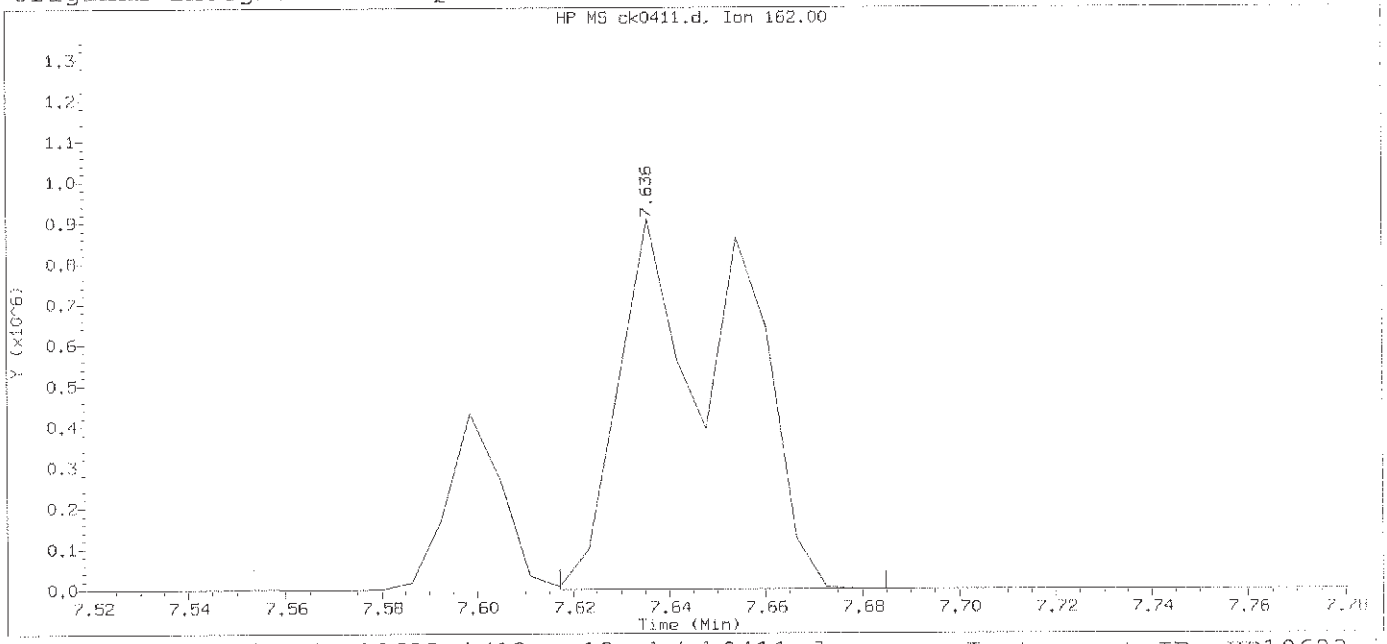
Mark A. Ratcliff
Senior Specialist

GC/MS audit/management approval: _____ NOV 13 2013

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



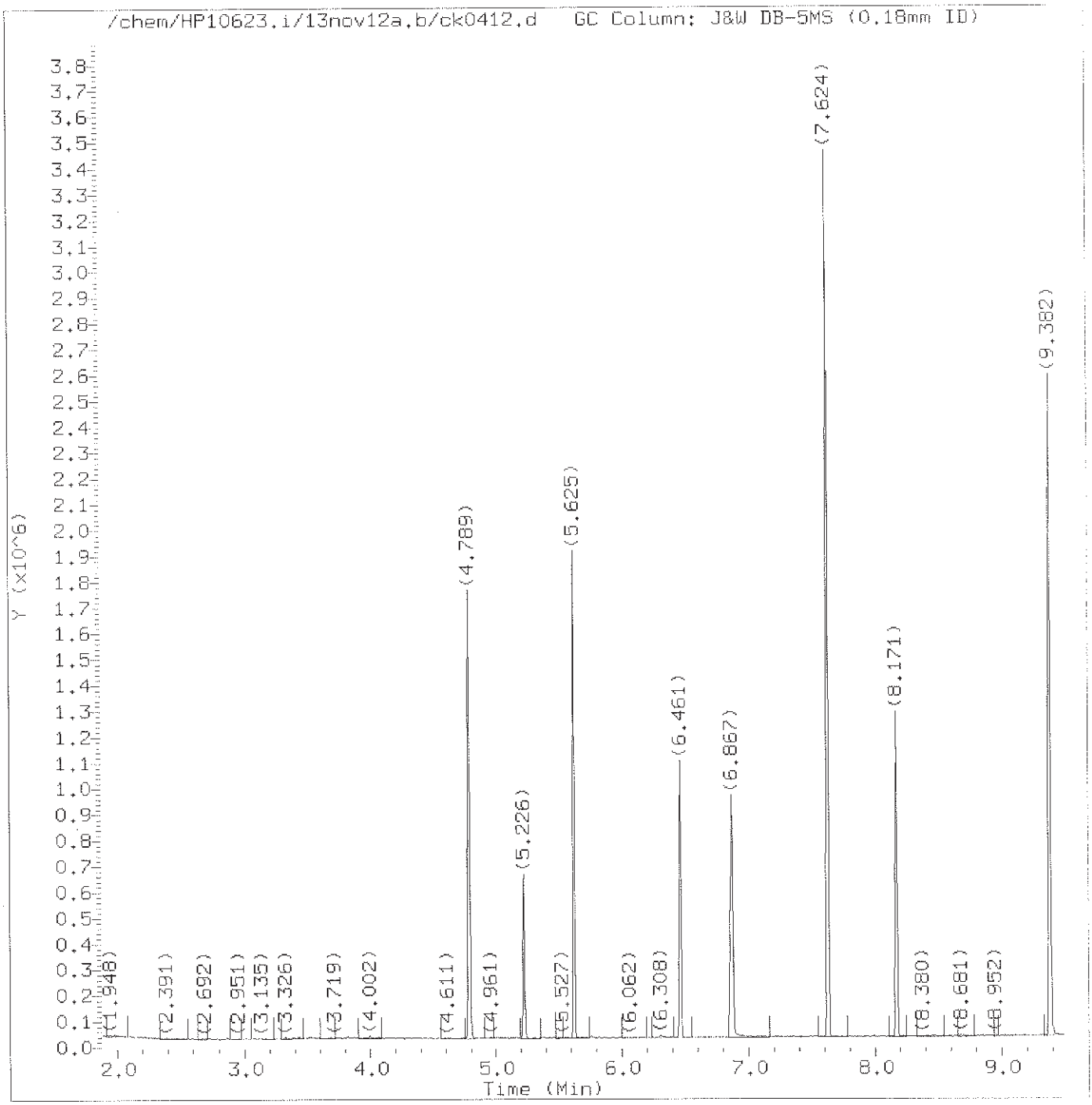
Data File: /chem/HP10623.i/13nov12a.b/ck0411.d Instrument ID: HP10623.i
Injection date and time: 12-NOV-2013 13:52 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m Sublist used: newicval1
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050 Lab Sample ID: 8270ICV2463

Compound Number	: 85		
Compound Name	: 1-Chloronaphthalene		
Scan Number	: 936		
Retention Time (minutes)	: 7.636		
Quant Ion	: 162.00		
Area	: 1507885		
On-column Amount (ng/ul)	: 99.0379		
Integration start scan	: 932	Integration stop scan:	943
Y at integration start	: 186	Y at integration end:	165

Digitally signed by Mark A. Clark on 11/13/2013 at 01:49.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

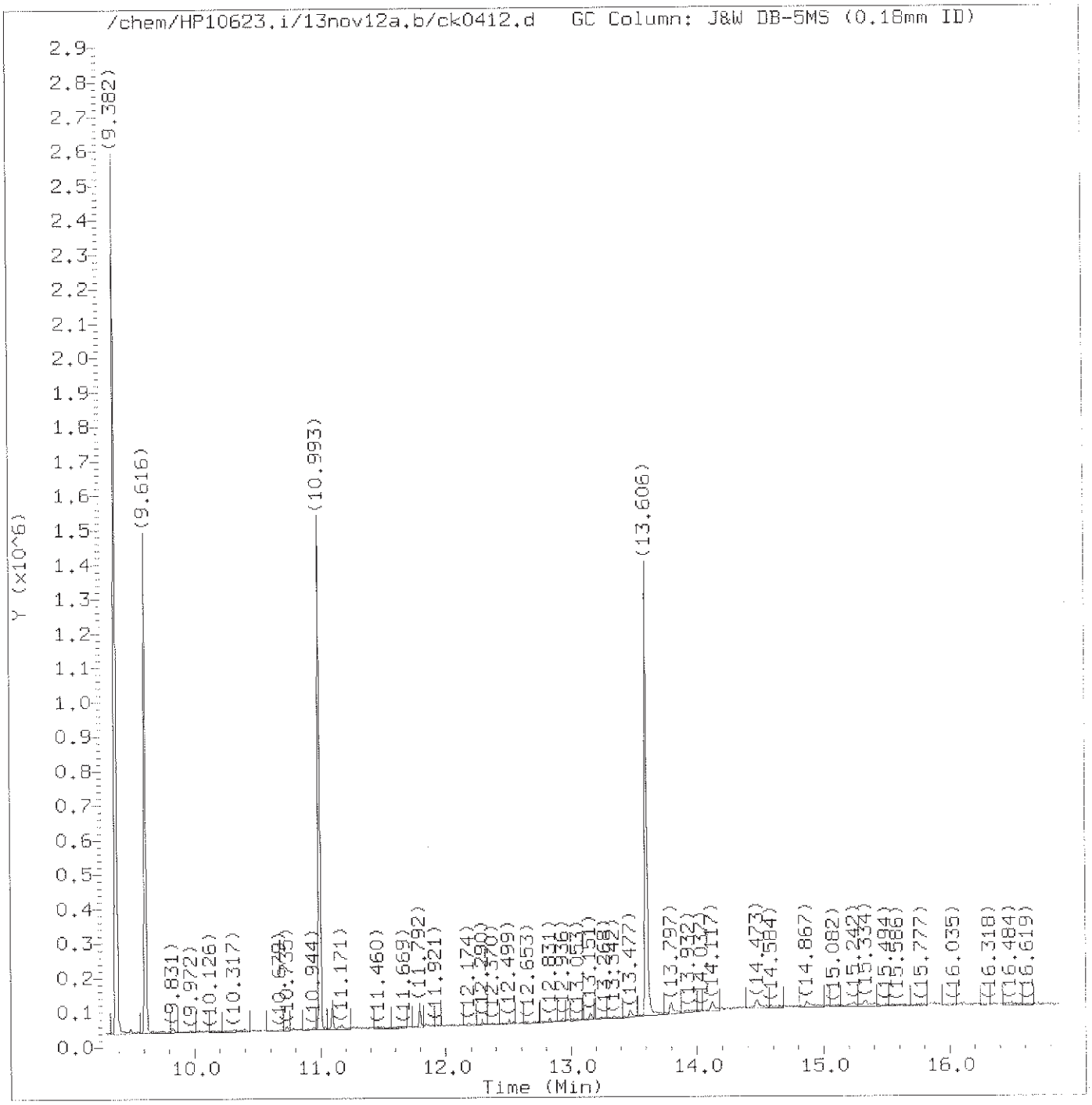
Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54
Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sublist used: basicval11

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: basicvall1

Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov12a.b/ck0412.d
Injection date and time: 12-NOV-2013 14:17

Instrument ID: HP10623.i
Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov12a.b/m8270.m
Calibration date and time: 13-NOV-2013 00:54

Sublist used: basicval11

Date, time and analyst ID of latest file update: 13-Nov-2013 00:56 mac00013

Sample Name: SSTD050

Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
12) Benzaldehyde	(1)	4.789	77	339099	79.821
21)*1,4-Dichlorobenzene-d4	(1)	5.226	152	93637	20.000
52)*Naphthalene-d8	(2)	6.461	136	418471	20.000
63) Caprolactam	(2)	6.867	113	155639	48.346
98)*Acenaphthene-d10	(3)	8.171	164	254539	20.000
130) Atrazine	(4)	9.382	200	266151	52.717
135)*Phenanthrene-d10	(4)	9.616	188	470167	20.000
167)*Pyrene-d10	(5)	10.993	212	587857	20.000
175)*Perylene-d12	(6)	13.606	264	527879	20.000

* = Compound is an internal standard.

Digitally signed by Mark A. Clark
on 11/13/2013 at 01:50.
Target 3.5 esignature user ID: mac00013

Data File: /chem/HP10623.i/13nov18.b/ck0620y.d

Date : 18-NOV-2013 05:14

Client ID: DFTPP

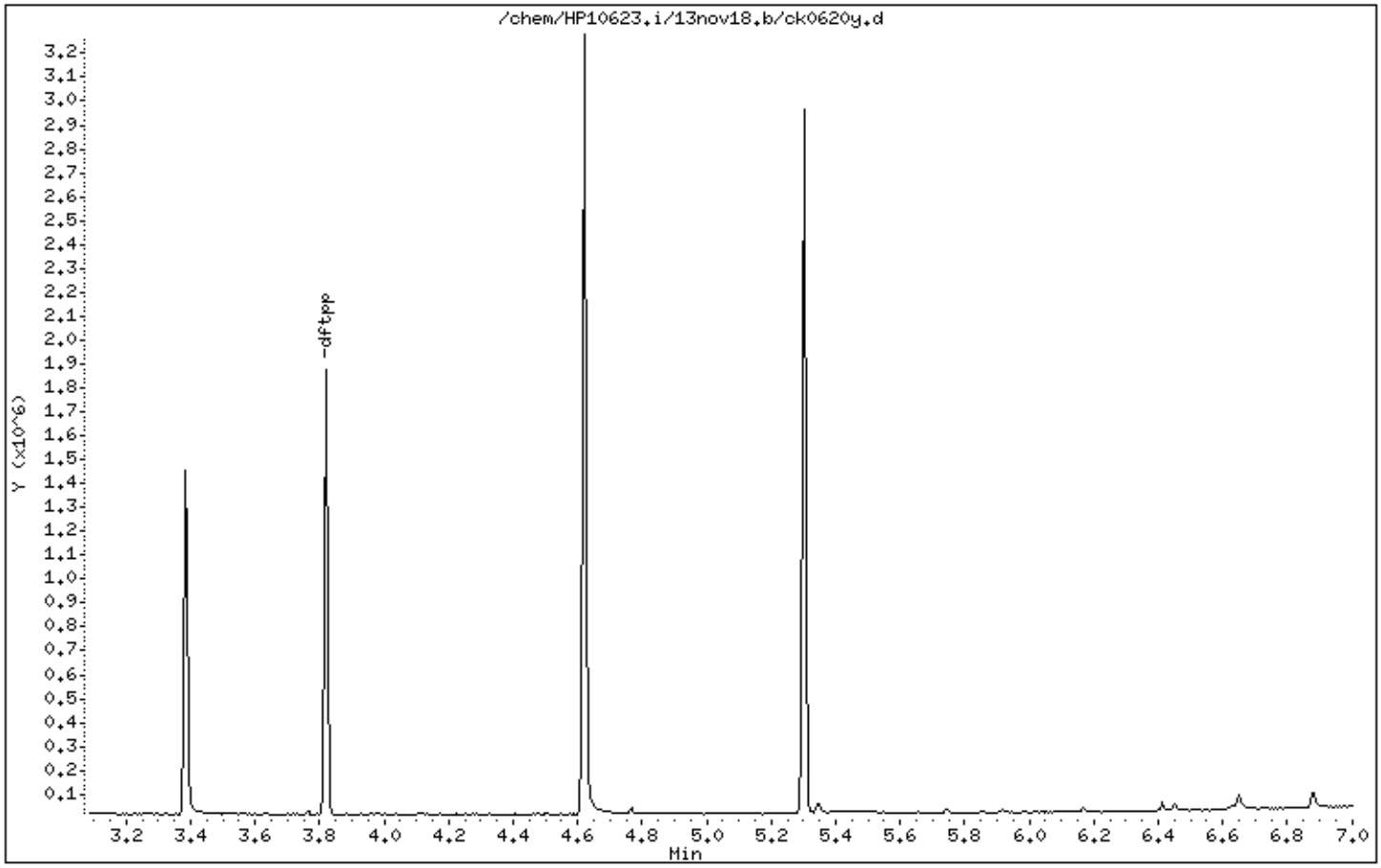
Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25



Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP10623.i/13nov18.b/ck0620y.d

Date : 18-NOV-2013 05:14

Client ID: DFTPP

Instrument: HP10623.i

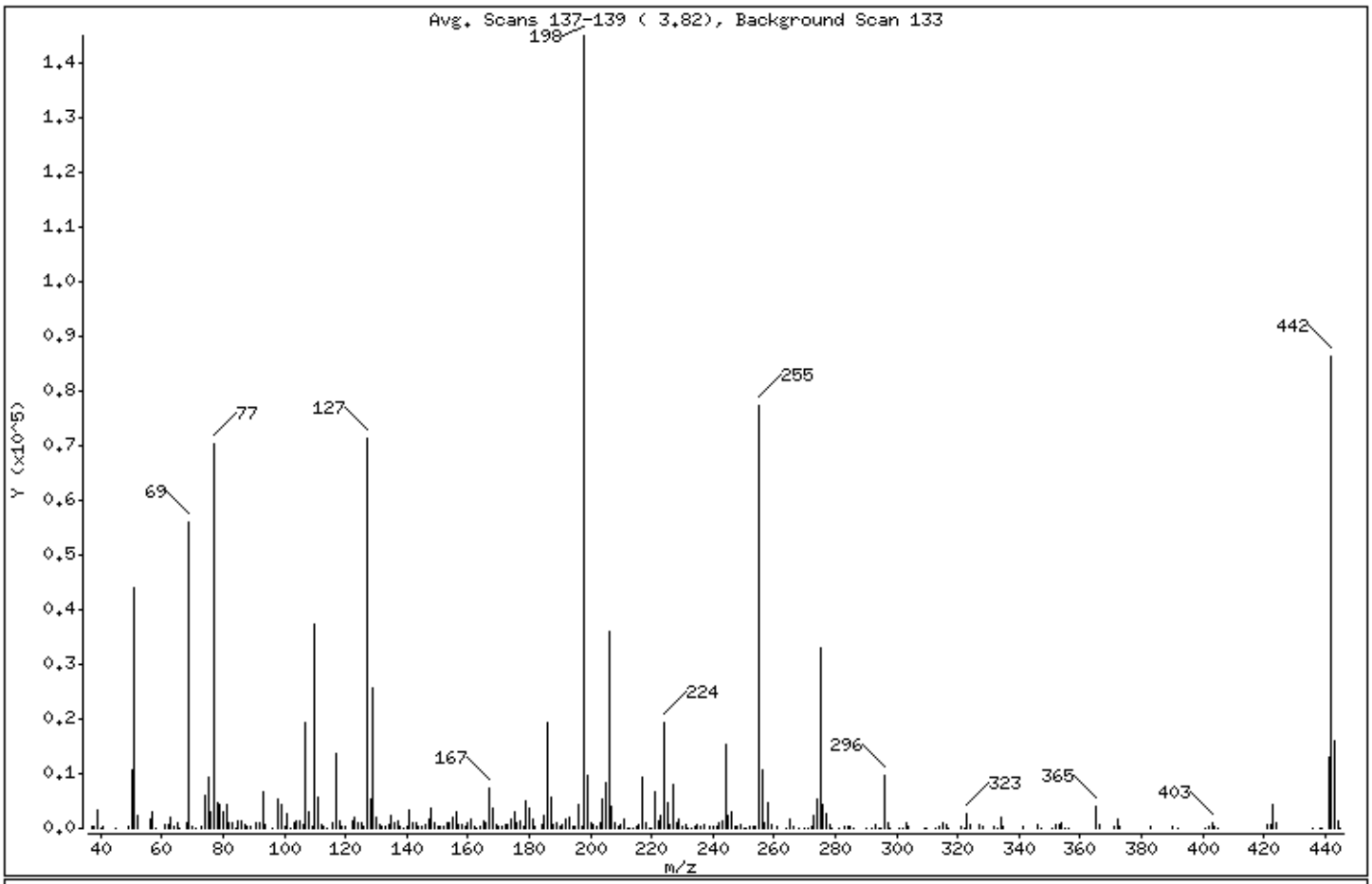
Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	30.34
68	Less than 2.00% of mass 69	0.74 (1.90)
69	Mass 69 relative abundance	38.73
70	Less than 2.00% of mass 69	0.12 (0.30)
127	40.00 - 60.00% of mass 198	49.18
197	Less than 1.00% of mass 198	0.15
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 30.00% of mass 198	22.67
365	Greater than 1.00% of mass 198	2.78
441	Present, but less than mass 443	8.90
442	40.00 - 99.99% of mass 198	59.62
443	17.00 - 23.00% of mass 442	11.12 (18.65)

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	231	127.00	71304	200.00	888	278.00	534
38.00	426	128.00	5235	201.00	830	279.00	58
39.00	3272	129.00	25776	202.00	171	281.00	51
40.00	149	130.00	2109	203.00	992	283.00	426
41.00	250	131.00	561	204.00	5244	284.00	266
45.00	137	132.00	247	205.00	8494	285.00	447
49.00	355	133.00	171	206.00	35888	286.00	70
50.00	10827	134.00	816	207.00	4146	290.00	111
51.00	43992	135.00	2180	208.00	1064	292.00	98
52.00	2287	136.00	1098	209.00	296	293.00	516
56.00	1528	137.00	1296	210.00	508	294.00	82
57.00	3080	138.00	282	211.00	1663	295.00	61
58.00	165	139.00	93	212.00	93	296.00	9543
61.00	647	140.00	408	213.00	151	297.00	1074
62.00	782	141.00	3331	214.00	62	298.00	50
63.00	1989	142.00	1101	215.00	446	301.00	59
64.00	417	143.00	1030	216.00	793	302.00	87
65.00	948	144.00	260	217.00	9336	303.00	1053
66.00	139	145.00	185	218.00	1126	304.00	239
68.00	1069	146.00	703	219.00	117	309.00	63
69.00	56144	147.00	1600	220.00	70	310.00	142
70.00	169	148.00	3742	221.00	6776	313.00	66
71.00	10	149.00	893	222.00	1254	314.00	489
73.00	416	150.00	171	223.00	2322	315.00	1033
74.00	5855	151.00	456	224.00	19480	316.00	632
75.00	9185	152.00	460	225.00	4813	317.00	117
76.00	3087	153.00	1163	226.00	613	321.00	285
77.00	70472	154.00	835	227.00	8020	322.00	140
78.00	4639	155.00	1890	228.00	1157	323.00	2715
79.00	4177	156.00	2868	229.00	1812	324.00	597
80.00	2928	157.00	745	230.00	387	327.00	507
81.00	4243	158.00	775	231.00	828	328.00	278
82.00	1140	159.00	464	232.00	153	332.00	375
83.00	1010	160.00	1097	233.00	70	333.00	154
84.00	98	161.00	1502	234.00	481	334.00	1900

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	1288	162.00	457	235.00	634	335.00	488
86.00	1388	163.00	148	236.00	398	341.00	346
87.00	798	164.00	215	237.00	758	346.00	619
88.00	274	165.00	1264	239.00	371	347.00	123
89.00	235	166.00	1098	240.00	295	351.00	101
91.00	986	167.00	7347	241.00	300	352.00	792
92.00	1159	168.00	3553	242.00	1133	353.00	538
93.00	6679	169.00	699	243.00	1381	354.00	1032
94.00	590	170.00	203	244.00	15490	355.00	146
96.00	93	171.00	273	245.00	2332	356.00	52
98.00	5372	172.00	711	246.00	3078	365.00	4033
99.00	4352	173.00	800	247.00	488	366.00	727
100.00	407	174.00	1547	248.00	237	371.00	263
101.00	2510	175.00	2941	249.00	516	372.00	1584
102.00	127	176.00	928	250.00	76	373.00	366
103.00	1089	177.00	1328	251.00	127	383.00	421
104.00	1491	178.00	473	252.00	181	390.00	173
105.00	1329	179.00	4859	253.00	324	392.00	66
106.00	791	180.00	3654	254.00	180	401.00	117
107.00	19280	181.00	1709	255.00	77208	402.00	494
108.00	3100	182.00	221	256.00	10647	403.00	964
109.00	483	184.00	543	257.00	1136	404.00	217
110.00	37232	185.00	2439	258.00	4499	405.00	54
111.00	5758	186.00	19352	259.00	701	421.00	527
112.00	651	187.00	5734	261.00	180	422.00	666
113.00	236	188.00	678	264.00	152	423.00	4228
114.00	51	189.00	1154	265.00	1566	424.00	1067
116.00	1071	190.00	287	266.00	177	436.00	53
117.00	13824	191.00	614	268.00	52	438.00	61
118.00	1293	192.00	1502	270.00	94	439.00	142
119.00	216	193.00	1856	271.00	150	441.00	12902
120.00	243	194.00	384	272.00	200	442.00	86432
122.00	1337	195.00	241	273.00	2311	443.00	16124
123.00	2006	196.00	4479	274.00	5496	444.00	1486
124.00	835	197.00	223	275.00	32872	445.00	54

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Date : 18-NOV-2013 05:14

Client ID: DFTPP Instrument: HP10623.i

Sample Info: DFTPP;DFTPP;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5 Column diameter: 0.25

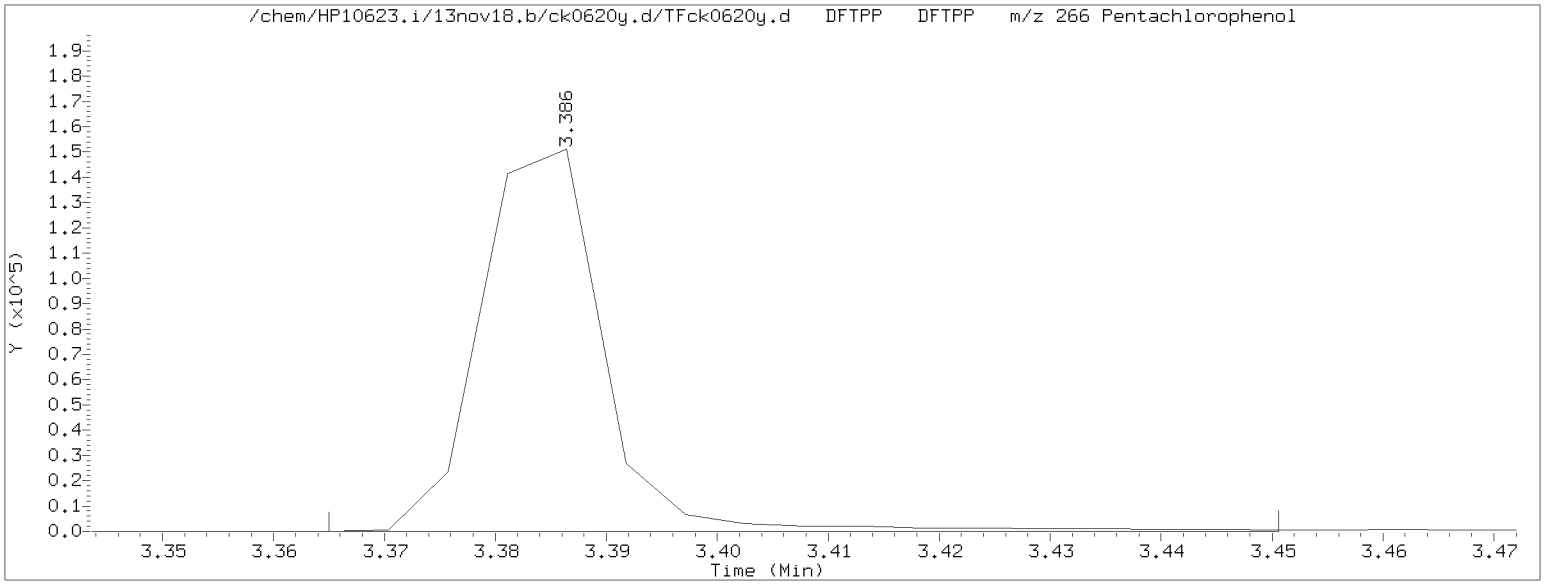
Data File: ck0620y.d
Spectrum: Avg. Scans 137-139 (3.82), Background Scan 133
Location of Maximum: 198.00
Number of points: 286

m/z	Y	m/z	Y	m/z	Y	m/z	Y
125.00	1163	198.00	144960	276.00	4272		
126.00	275	199.00	9673	277.00	2637		

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

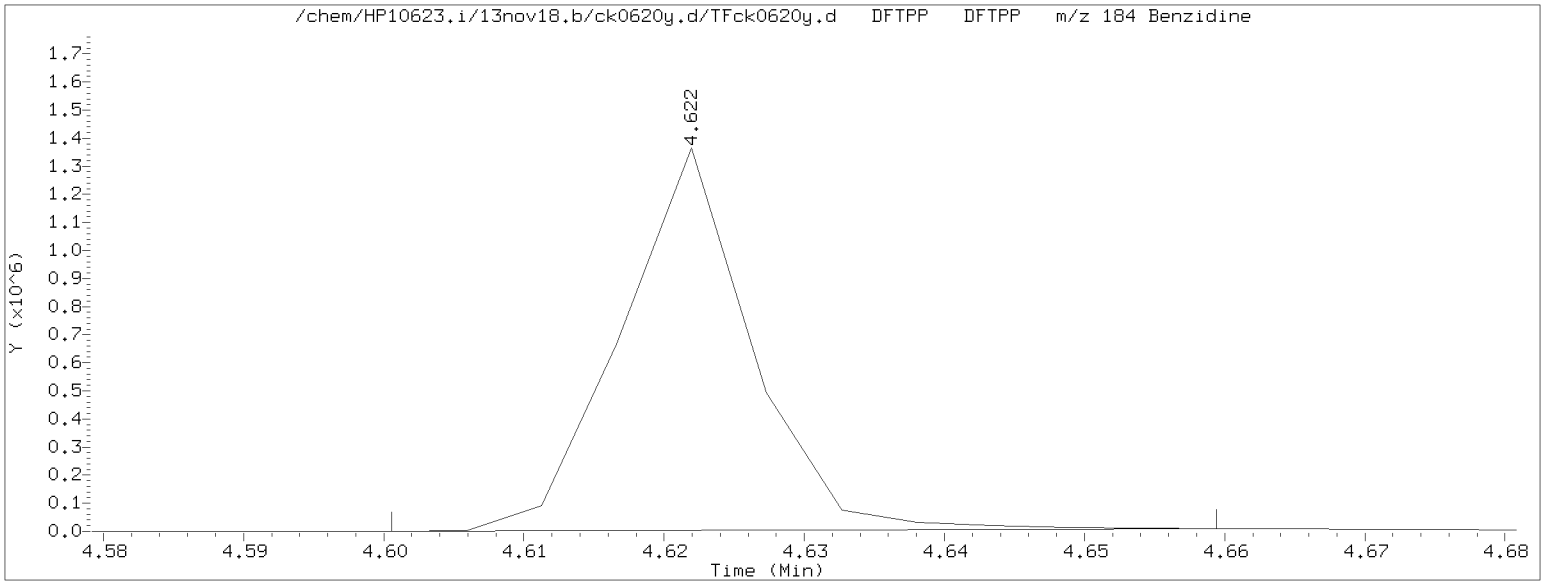
Instrument ID: HP10623.i Injection Date: 18-NOV-2013 05:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 151168 EICP peak height at 10% = 15117 Pentachlorophenol EICP area = 116687

Pentachlorophenol EICP peak apex (min.) = 3.386
RT at 10% of front half of EICP (min.) = 3.374 'Front' peak width (min.) = 0.0126333333
RT at 10% of back half of EICP (min.) = 3.395 'Tailing' peak width (min.) = 0.0084000000

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0084000000}{0.0126333333} = 0.665$$



Benzidine EICP peak height = 1361188 EICP peak height at 10% = 136119 Benzidine EICP area = 875113

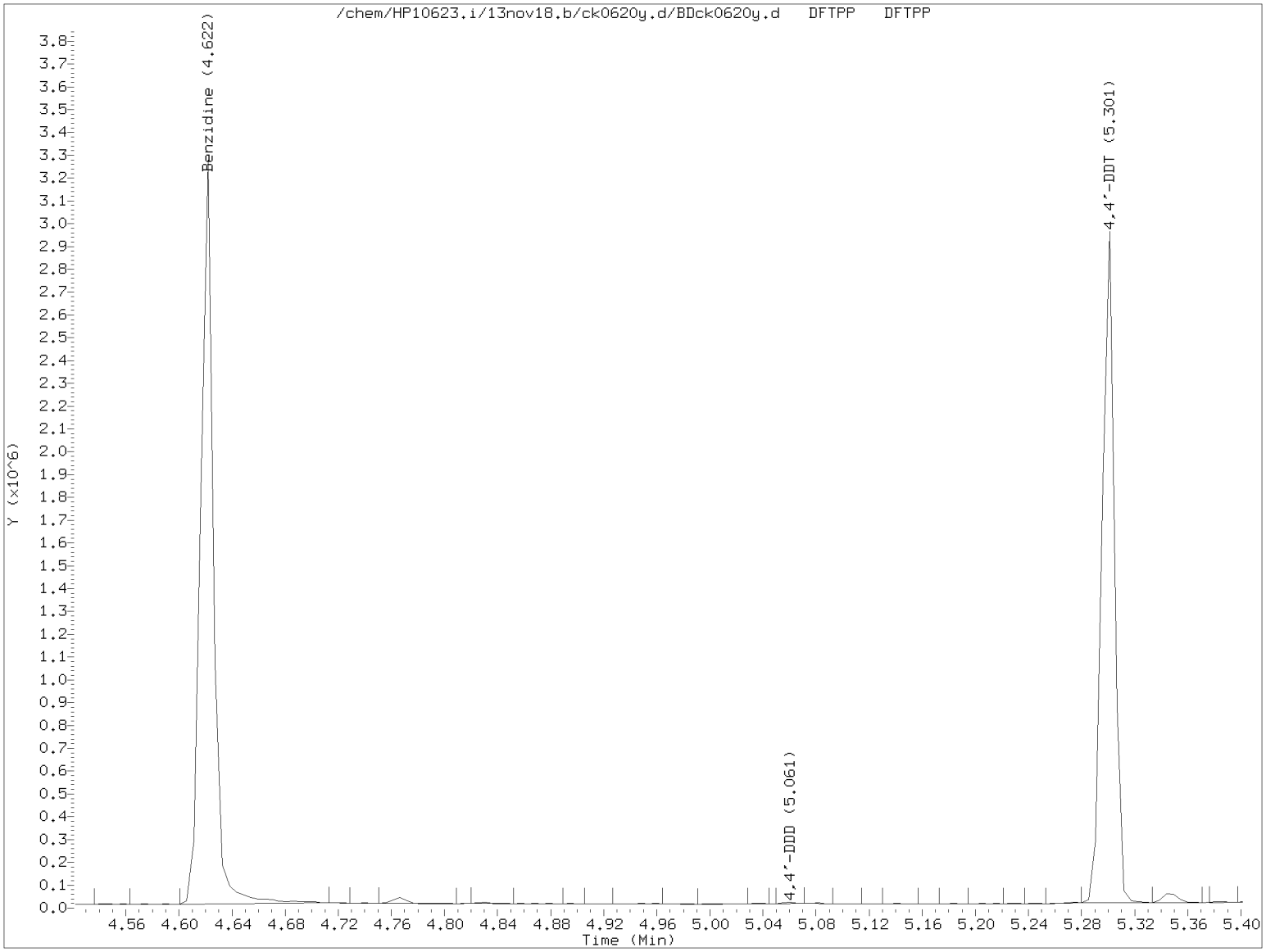
Benzidine EICP peak apex (min.) = 4.622
RT at 10% of front half of EICP (min.) = 4.612 'Front' peak width (min.) = 0.0102333333
RT at 10% of back half of EICP (min.) = 4.632 'Tailing' peak width (min.) = 0.0098666667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0098666667}{0.0102333333} = 0.964$$

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

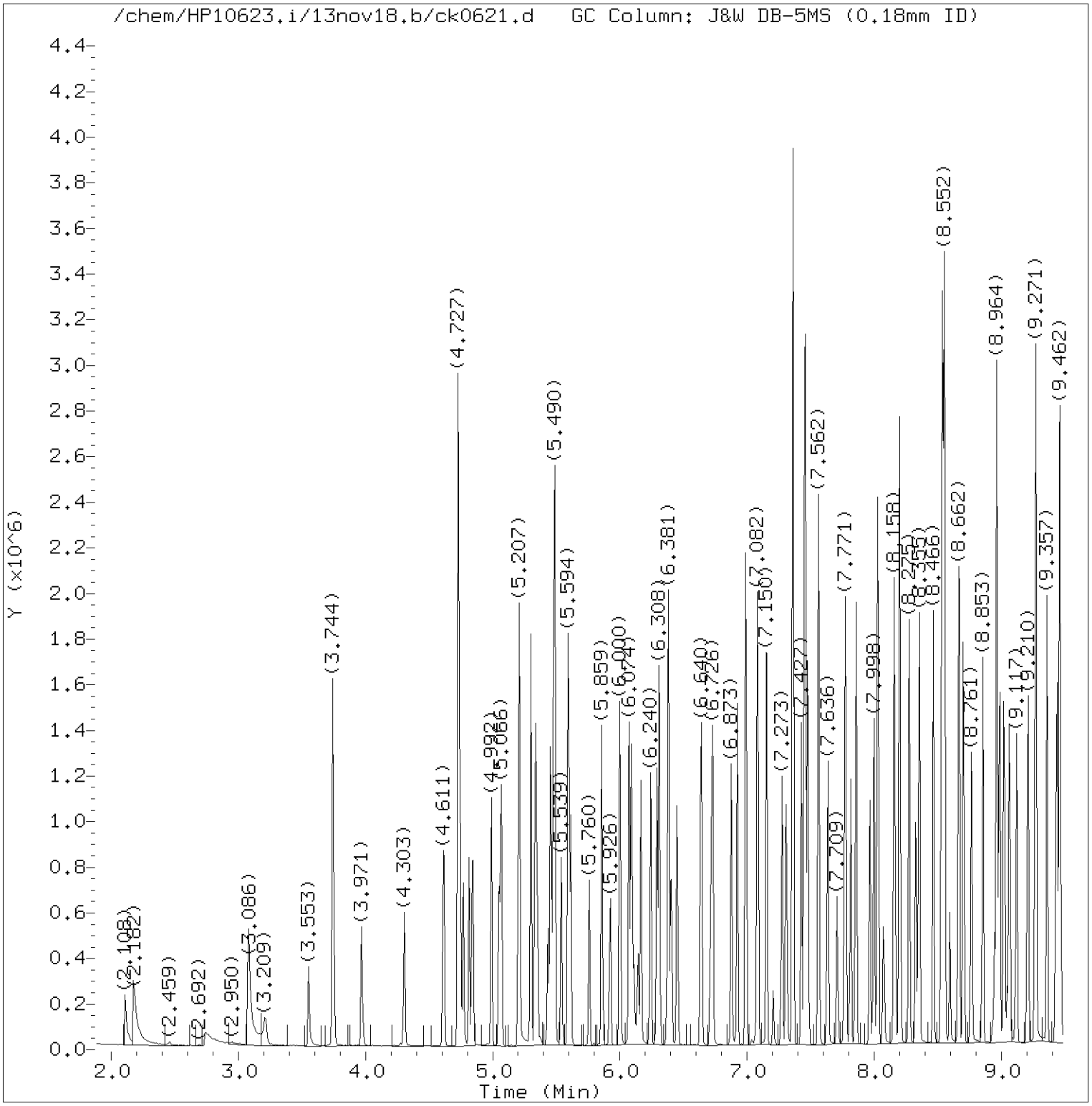
Instrument ID: HP10623.i Injection Date: 18-NOV-2013 05:14 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 3462}{0 + 3462 + 1926450} \times 100 = 0.2$$

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

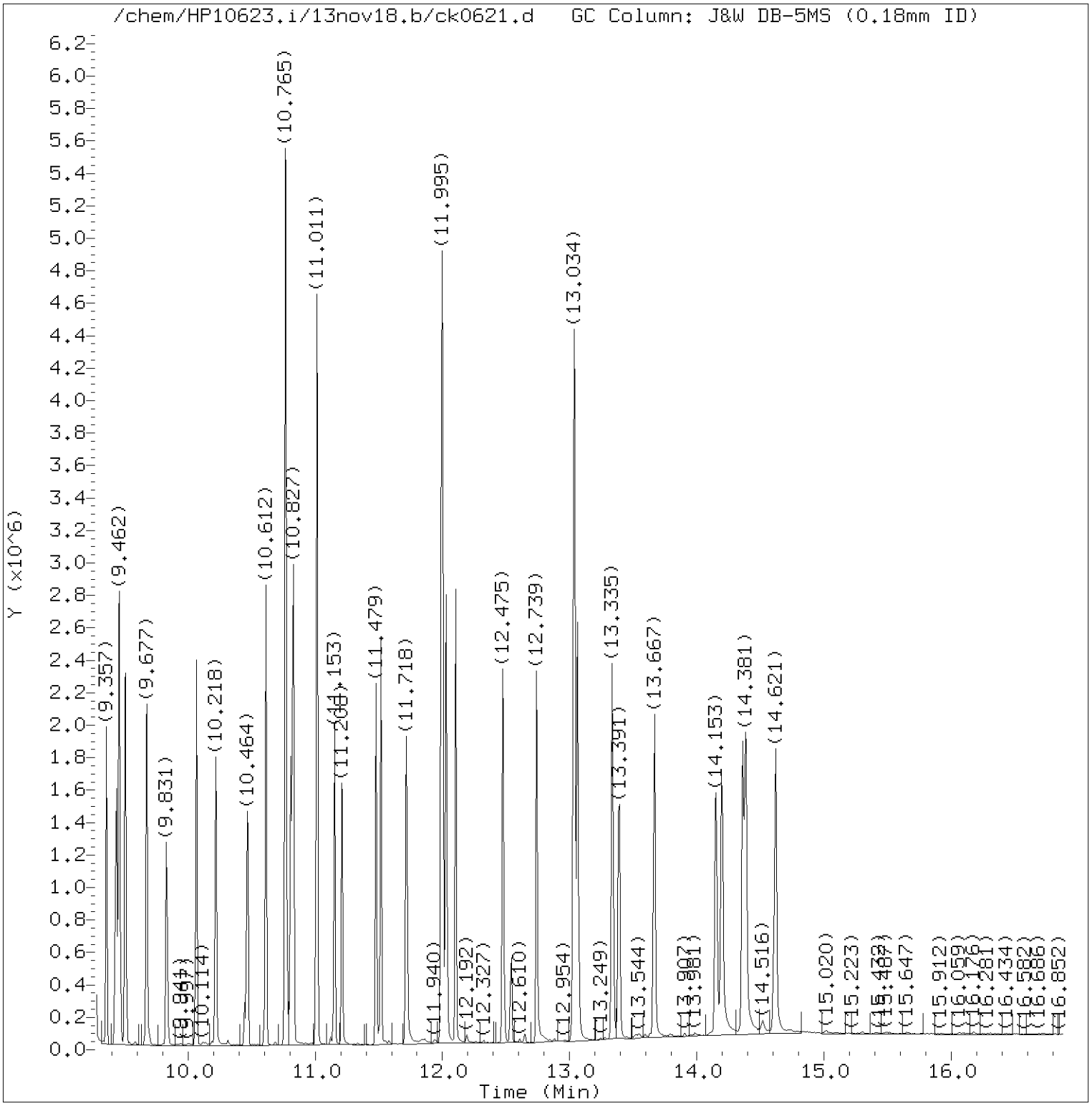
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.108	74	150740	24.943
3) Pyridine	(1)	2.176	79	233043M	24.873
5) 2-Picoline	(1)	3.080	93	270352	28.278
6) N-Nitrosomethylethylamine	(1)	3.209	88	124630	27.267
7) Methyl methanesulfonate	(1)	3.553	80	124982	27.196
9)$2-Fluorophenol	(1)	3.744	112	432294	57.898
10) N-Nitrosodiethylamine	(1)	3.971	102	123159	27.123
11) Ethyl methanesulfonate	(1)	4.303	109	119081	28.799
12) Benzaldehyde	(1)	4.611	77	192046	41.619
13) Aniline	(1)	4.727	93	423423	27.857
15)$Phenol-d6	(1)	4.727	99	628946	57.246
14)$Phenol-d5	(1)	4.727	99	628946	57.246
16) Phenol	(1)	4.740	94	367335	28.658
18) bis(2-Chloroethyl)ether	(1)	4.813	93	255508	28.078
19) 2-Chlorophenol	(1)	4.844	128	223741	27.982
20) 1,3-Dichlorobenzene	(1)	4.992	146	235675	29.207
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	99797	20.000
22) 1,4-Dichlorobenzene	(1)	5.066	146	238949	29.018
24) Benzyl alcohol	(1)	5.207	108	171860	27.489
25) 1,2-Dichlorobenzene	(1)	5.213	146	228304	29.537
206) Indene	(1)	5.299	115	472857	27.388
26) 2-Methylphenol	(1)	5.336	108	242490	28.504
27) 2,2'-oxybis(1-Chloropropane)	(1)	5.348	45	286543	25.589
28) bis(2-Chloroisopropyl)ether	(1)	5.348	45	286543	25.524
29) N-Nitrosopyrrolidine	(1)	5.434	100	148149	29.093
30) Acetophenone	(1)	5.453	105	351137	27.684
31) N-Nitroso-di-n-propylamine	(1)	5.471	70	212708	26.200
32) N-Nitrosomorpholine	(1)	5.478	56	148451	25.662
34) o-Toluidine	(1)	5.490	106	414290	28.515
33) 4-Methylphenol	(1)	5.490	108	280287	27.835
37) Hexachloroethane	(1)	5.539	117	88955	28.383
38)$Nitrobenzene-d5	(2)	5.594	82	550844	55.203
39) Nitrobenzene	(2)	5.613	77	279298	26.388
40) N-Nitrosopiperidine	(2)	5.760	114	134284	28.599
41) Isophorone	(2)	5.859	82	516643	26.882
42) 2-Nitrophenol	(2)	5.926	139	115792	31.470
44) 2,4-Dimethylphenol	(2)	6.000	107	262651M	27.772
45) O,O,O-triethylphosphorothioate	(2)	6.074	198	119056	30.193
46) bis(2-Chloroethoxy)methane	(2)	6.092	93	306946	26.285
47) Benzoic acid	(2)	6.111	105	225540	36.793

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	6.166	162	197559	30.716
50) 1,2,4-Trichlorobenzene	(2)	6.240	180	200912	29.656
52)*Naphthalene-d8	(2)	6.289	136	463147	20.000
53) Naphthalene	(2)	6.308	128	712575	28.998
56) 4-Chloroaniline	(2)	6.375	127	305405	28.520
57) 2,6-Dichlorophenol	(2)	6.381	162	187101	30.886
58) Hexachloropropene	(2)	6.406	213	112643	29.400
60) Hexachlorobutadiene	(2)	6.449	225	97840	28.795
194) Quinoline	(2)	6.640	129	498366	29.423
63) Caprolactam	(2)	6.720	113	102457	28.756
64) N-Nitrosodi-n-butylamine	(2)	6.726	84	261140	28.216
68) 4-Chloro-3-methylphenol	(2)	6.873	107	237919	28.934
69) Safrole	(2)	6.922	162	196646	30.210
70) 2-Methylnaphthalene	(2)	6.990	142	513512	29.446
71) 1-Methylnaphthalene	(2)	7.082	142	463633	29.054
72) Hexachlorocyclopentadiene	(3)	7.150	237	77241	25.860
73) 1,2,4,5-Tetrachlorobenzene	(3)	7.156	216	207105	29.962
74) cis-Isosafrole	(3)	7.205	162	33959	3.060
75) 2,4,6-Trichlorophenol	(3)	7.273	196	140792	31.217
77) 2,4,5-Trichlorophenol	(3)	7.310	196	156971	31.922
78)$2-Fluorobiphenyl	(3)	7.359	172	1063492	58.368
79) trans-Isosafrole	(3)	7.427	162	198217	25.231
80) Isosafrole	(3)	7.427	162	198217	28.350
83) 1,1'-Biphenyl	(3)	7.451	154	629639	28.044
84) 2-Chloronaphthalene	(3)	7.457	162	536380M	32.799
85) 1-Chloronaphthalene	(3)	7.476	162	472583M	29.363
88) Diphenyl ether	(3)	7.562	170	329203	29.435
89) 2-Nitroaniline	(3)	7.568	138	158635	29.735
90) 1,4-Naphthoquinone	(3)	7.636	158	198967	28.911
91) 1,4-Dinitrobenzene	(3)	7.709	168	68533	31.169
92) Dimethylphthalate	(3)	7.771	163	561467	28.854
93) 1,3-Dinitrobenzene	(3)	7.777	168	88944	29.991
94) 2,6-Dinitrotoluene	(3)	7.814	165	124135	30.629
95) Acenaphthylene	(3)	7.857	152	730587	28.616
97) 3-Nitroaniline	(3)	7.968	138	152303	30.774
98)*Acenaphthene-d10	(3)	7.998	164	289780	20.000
99) Acenaphthene	(3)	8.029	153	501825	28.401
100) 2,4-Dinitrophenol	(3)	8.072	184	62969	45.338
101) Pentachlorobenzene	(3)	8.158	250	182752	30.596
103) 4-Nitrophenol	(3)	8.158	109	89863	29.310

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on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
104) Dibenzofuran	(3)	8.201	168	702089	29.007
105) 2,4-Dinitrotoluene	(3)	8.201	165	162716	31.069
106) 1-Naphthylamine	(3)	8.275	143	570072	28.663
107) 2,3,4,6-Tetrachlorophenol	(3)	8.330	232	113099	32.652
108) 2-Naphthylamine	(3)	8.355	143	590616	29.024
109) Diethylphthalate	(3)	8.466	149	569002	28.307
111) Fluorene	(3)	8.533	166	599808	28.801
110) Thionazin	(3)	8.540	107	117044	26.402
112) 4-Chlorophenyl-phenylether	(3)	8.552	204	274671	29.647
113) 5-Nitro-o-toluidine	(3)	8.552	152	171554	31.200
114) 4-Nitroaniline	(3)	8.558	138	159850	28.722
115) 4,6-Dinitro-2-methylphenol	(4)	8.595	198	71645	33.193
117) N-Nitrosodiphenylamine	(4)	8.669	169	522835	29.317
202) NDPA as diphenylamine	(4)	8.669	169	522835	29.247
118) 1,2-Diphenylhydrazine	(4)	8.699	77	654255	25.611
119)$2,4,6-Tribromophenol	(3)	8.767	330	116409	66.521
120) Tetraethyldithiopyrophosphate	(4)	8.853	97	91242	25.059
121) 1,3,5-Trinitrobenzene	(4)	8.945	213	42488	29.457
122) Diallate (peak 1)	(4)	8.964	86	255239	19.525
123) Phorate	(4)	8.964	75	400332	25.435
124) Phenacetin	(4)	8.988	108	323675	26.262
125) 4-Bromophenyl-phenylether	(4)	9.019	248	148705	30.262
126) Diallate (peak 2)	(4)	9.044	86	36373	6.407
127) Hexachlorobenzene	(4)	9.062	284	147873	30.479
128) Dimethoate	(4)	9.117	87	258575	26.866
130) Atrazine	(4)	9.210	200	156214	27.340
131) Pentachlorophenol	(4)	9.265	266	87023	32.342
133) 4-Aminobiphenyl	(4)	9.271	169	580473	30.100
132) Pentachloronitrobenzene	(4)	9.271	237	60504	28.728
134) Pronamide	(4)	9.357	173	256049	27.546
135)*Phenanthrene-d10	(4)	9.437	188	532095	20.000
137) Phenanthrene	(4)	9.456	178	885018	28.605
136) Dinoseb	(4)	9.462	211	92187	30.730
138) Anthracene	(4)	9.511	178	919130	28.860
140) Carbazole	(4)	9.677	167	886366	28.521
141) Methyl parathion	(4)	9.831	109	173656	28.373
142) Di-n-butylphthalate	(4)	10.064	149	983714	26.828
144) 4-Nitroquinoline-1-oxide	(4)	10.218	190	51138	24.148
143) Parathion	(4)	10.218	109	117718	26.722
146) Isodrin	(4)	10.464	193	95256	27.244

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$ = Compound is a surrogate standard.

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on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
147) Fluoranthene	(4)	10.612	202	992503	28.689
152) Benzidine	(5)	10.771	184	2342332	88.195
167)*Pyrene-d10	(5)	10.808	212	648763	20.000
154) Pyrene	(5)	10.827	202	1051331	29.181
156)$Terphenyl-d14	(5)	11.011	244	1347565	58.103
158) p-Dimethylaminoazobenzene	(5)	11.153	225	202091	28.783
159) Chlorobenzilate	(5)	11.208	139	303530	27.790
160) 3,3'-Dimethylbenzidine	(5)	11.479	212	706543	31.819
161) Butylbenzylphthalate	(5)	11.515	149	469229	27.292
162) 2-Acetylaminofluorene	(5)	11.718	181	438677	28.173
166) Benzo(a)anthracene	(5)	11.995	228	961211	28.926
164) 3,3'-Dichlorobenzidine	(5)	11.995	252	374242	29.874
165) 4,4'-Methylenebis(2-Chloroanil	(5)	12.001	231	184364	30.126
168) Chrysene	(5)	12.032	228	944557	29.481
169) bis(2-Ethylhexyl)phthalate	(5)	12.106	149	632967	26.535
189) 6-Methylchrysene	(5)	12.475	242	692871	29.309
170) Di-n-octylphthalate	(6)	12.739	149	1083643	24.792
172) Benzo(b)fluoranthene	(6)	13.034	252	1063345	30.072
171) 7,12-Dimethylbenz[a]anthracene	(6)	13.040	256	480933	29.269
173) Benzo(k)fluoranthene	(6)	13.065	252	1010324	28.006
174) Benzo(a)pyrene	(6)	13.335	252	976366	28.291
175)*Perylene-d12	(6)	13.391	264	579092	20.000
176) 3-Methylcholanthrene	(6)	13.667	268	499294	28.863
190) Dibenz(a,h)acridine	(6)	14.153	279	732670	29.223
191) Dibenz(a,j)acridine	(6)	14.196	279	876826	30.413
177) Indeno(1,2,3-cd)pyrene	(6)	14.362	276	1107811	30.170
178) Dibenz(a,h)anthracene	(6)	14.387	278	938772	30.565
179) Benzo(g,h,i)perylene	(6)	14.621	276	953418	30.479
196) 2,4_2,6-Dinitrotoluenes	(3)			286851	0.000
129) Diallate TRANS/CIS	(4)			291612	25.982

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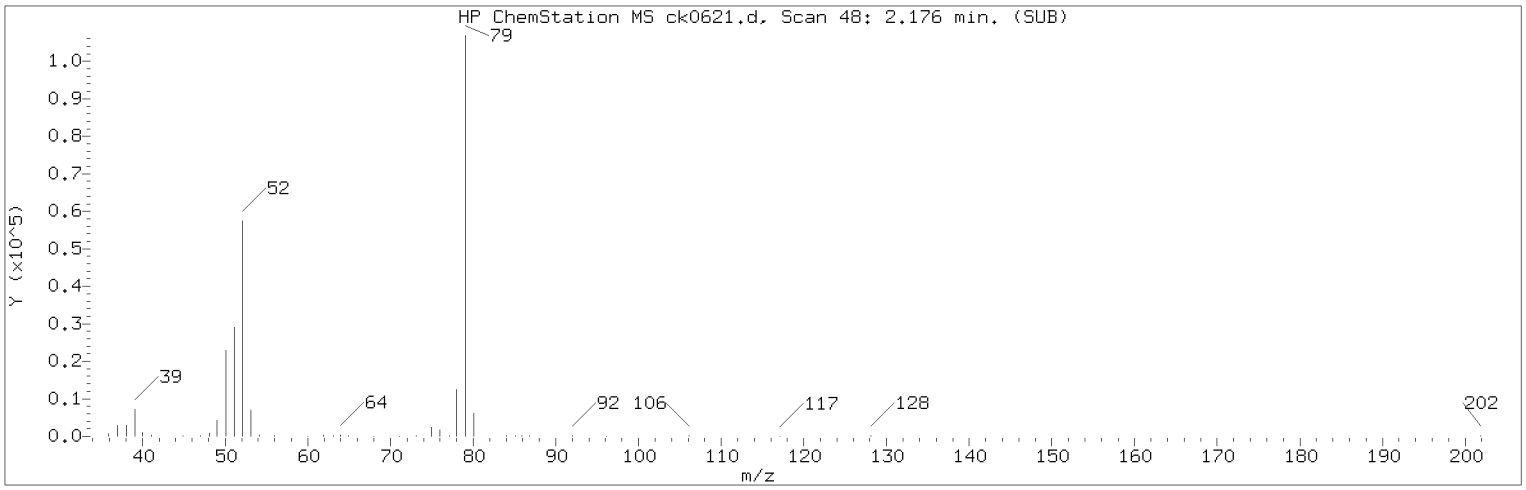
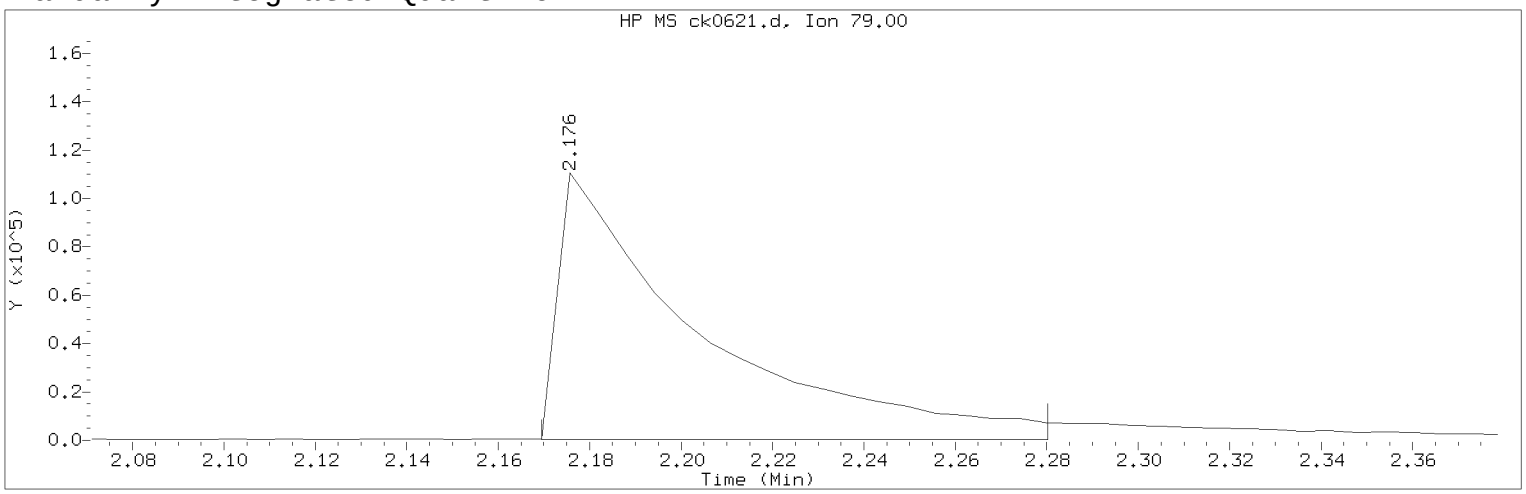
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

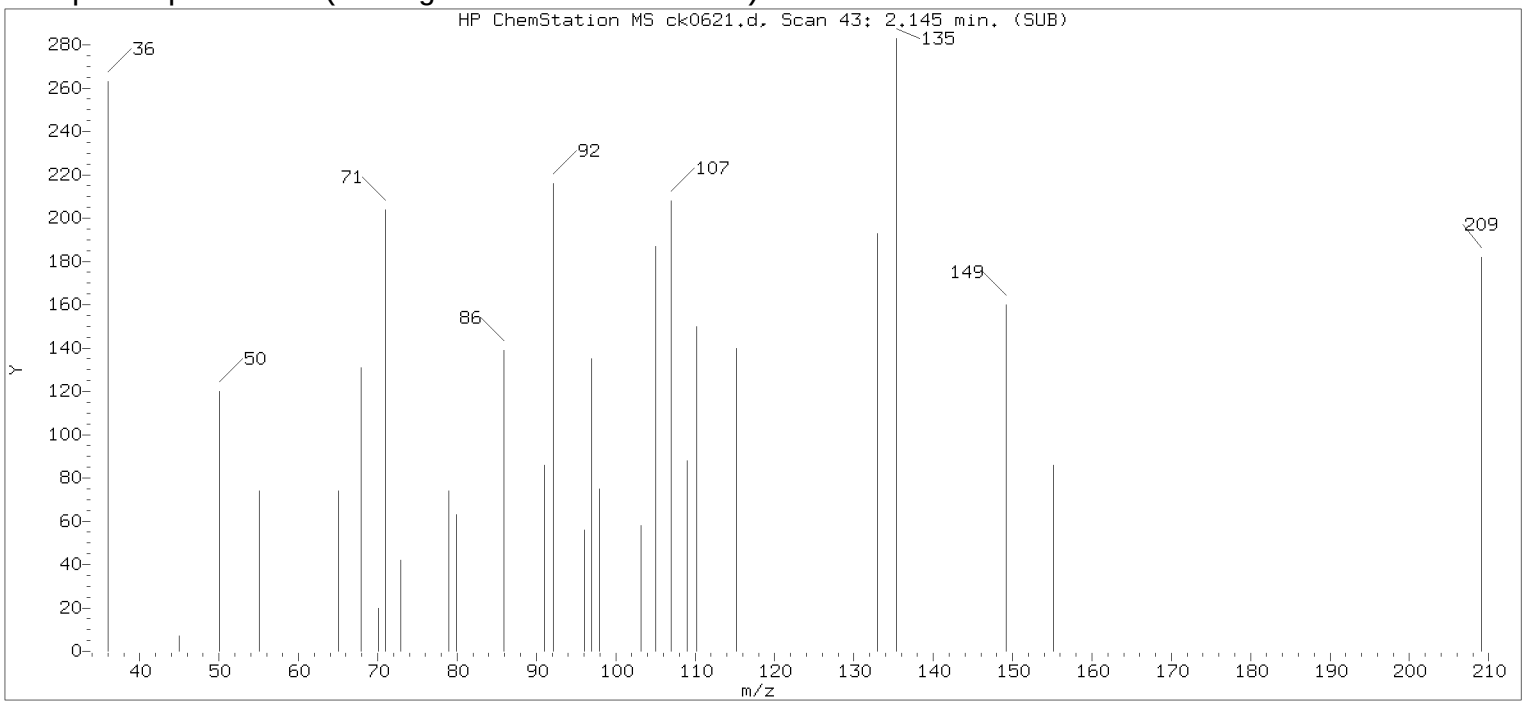
Compound Number : 3
Compound Name : Pyridine
Scan Number : 48
Retention Time (minutes) : 2.176
Quant Ion : 79.00
Area (flag) : 233043M
On-Column Amount (ng/ul) : 24.8730
Integration start scan : 46 Integration stop scan: 64
Y at integration start : 255 Y at integration end: 255

Reason for manual integration: improper integration

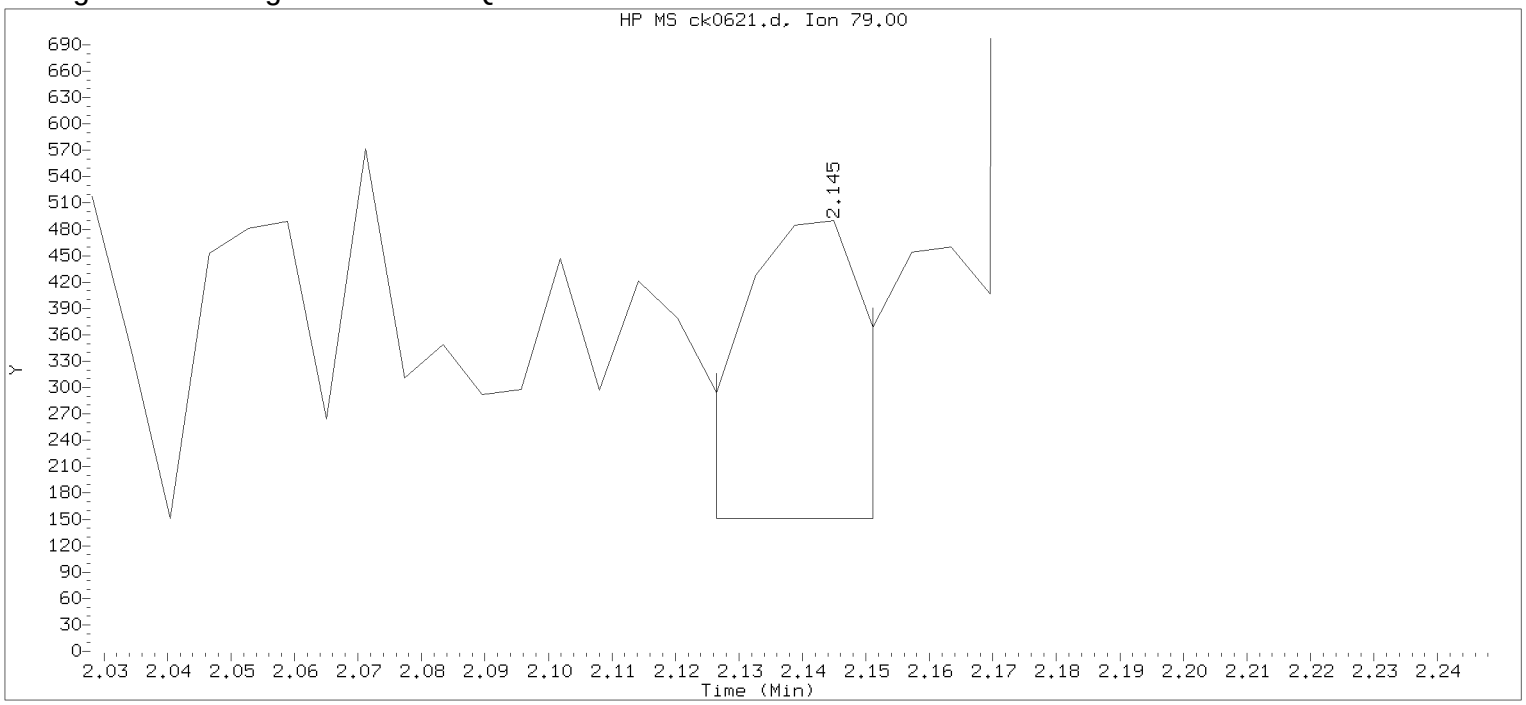
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

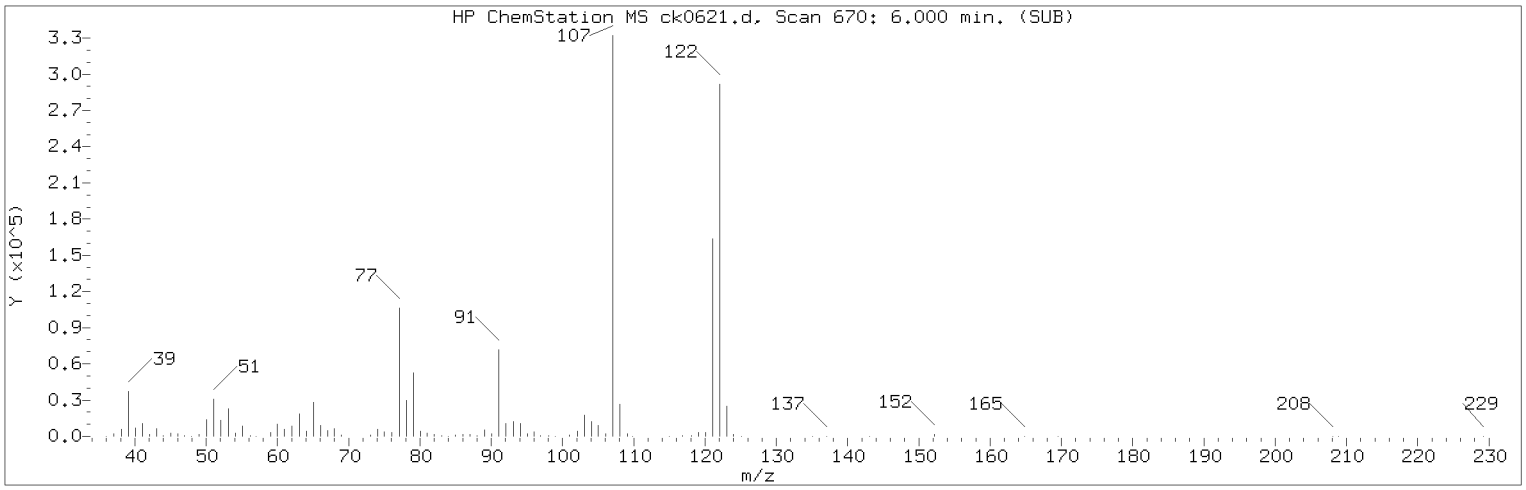
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

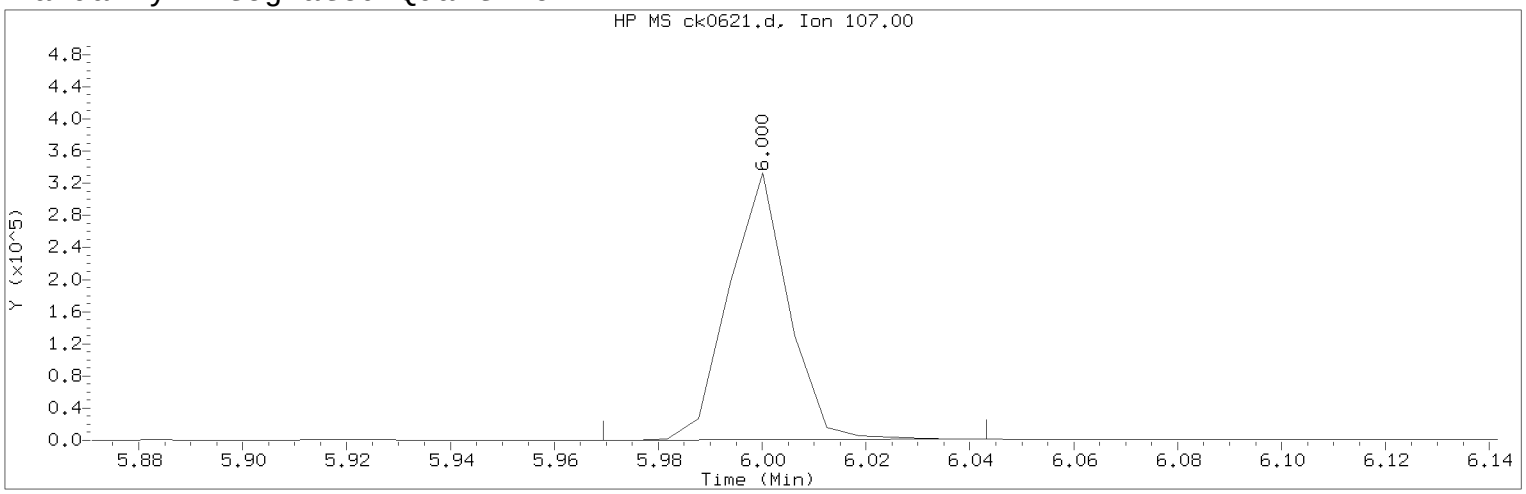
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 43		
Retention Time (minutes)	: 2.145		
Quant Ion	: 79.00		
Area	: 417		
On-column Amount (ng/ul)	: 0.0445		
Integration start scan	: 39	Integration stop scan:	43
Y at integration start	: 151	Y at integration end:	151

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user KVM06 jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

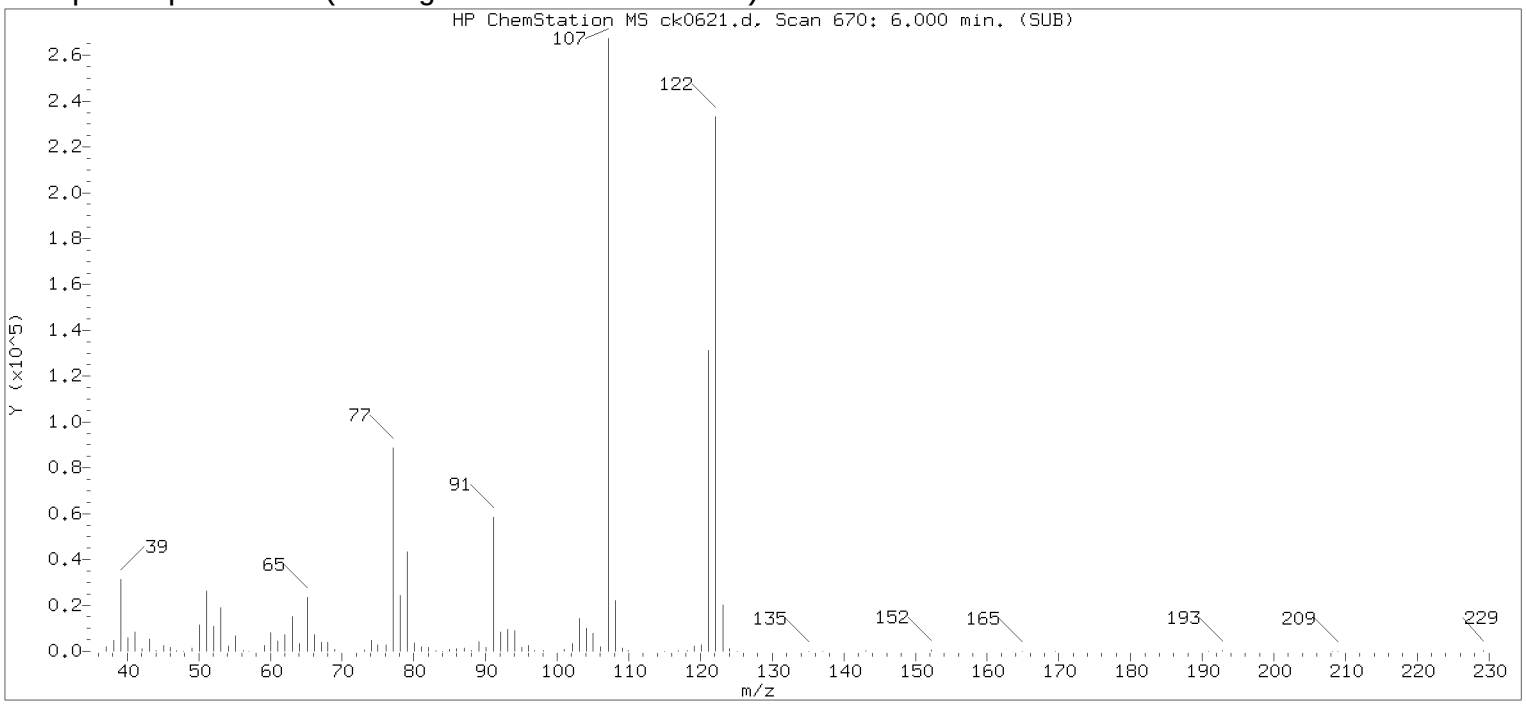
Compound Number : 44
Compound Name : 2,4-Dimethylphenol
Scan Number : 670
Retention Time (minutes) : 6.000
Quant Ion : 107.00
Area (flag) : 262651M
On-Column Amount (ng/ul) : 27.7722
Integration start scan : 664 Integration stop scan: 676
Y at integration start : 153 Y at integration end: 1321

Reason for manual integration: improper integration

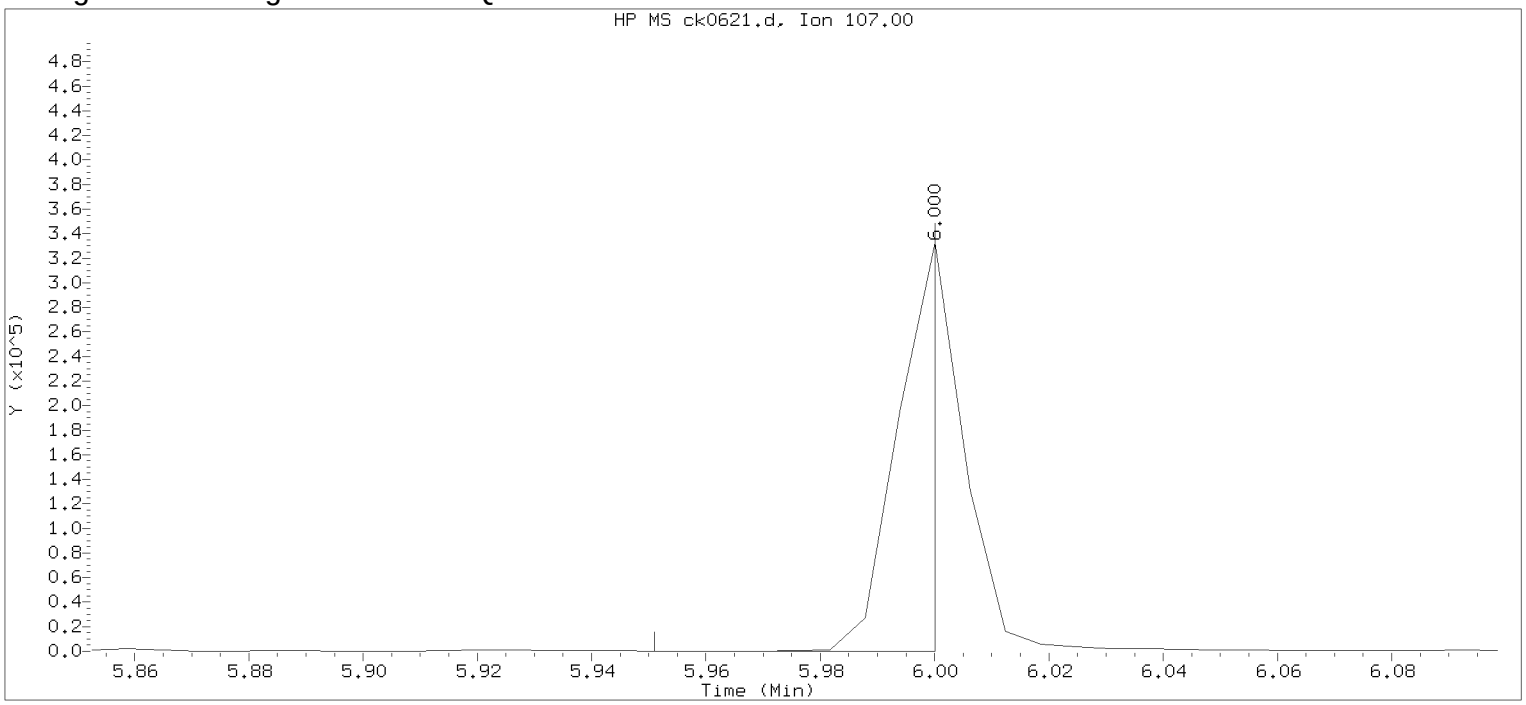
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

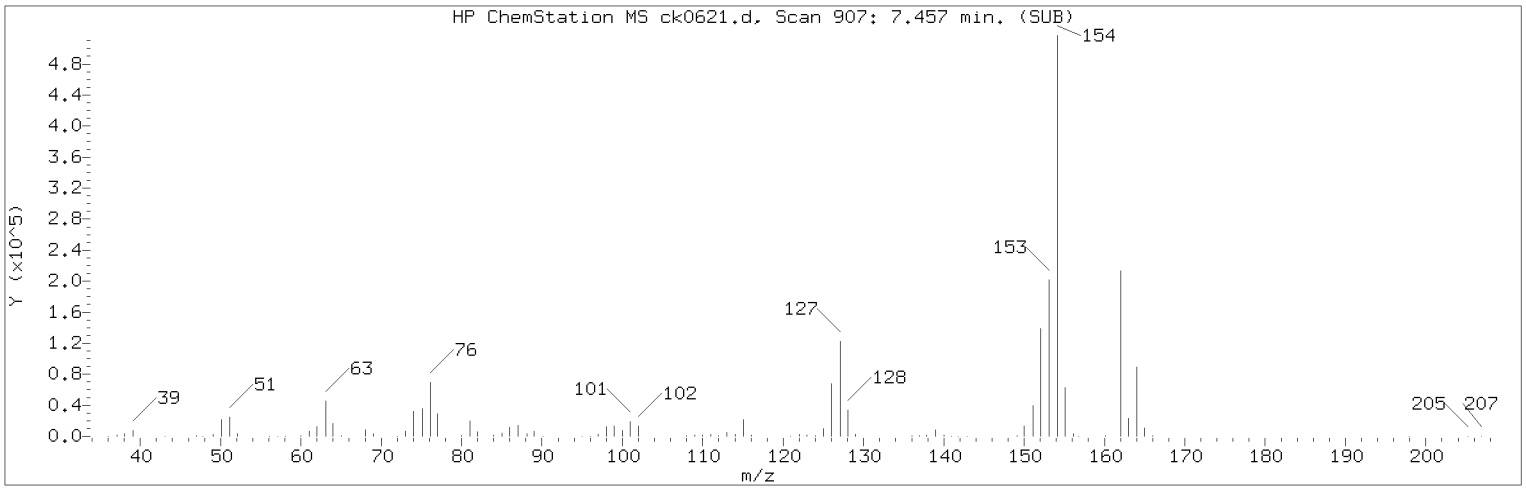
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

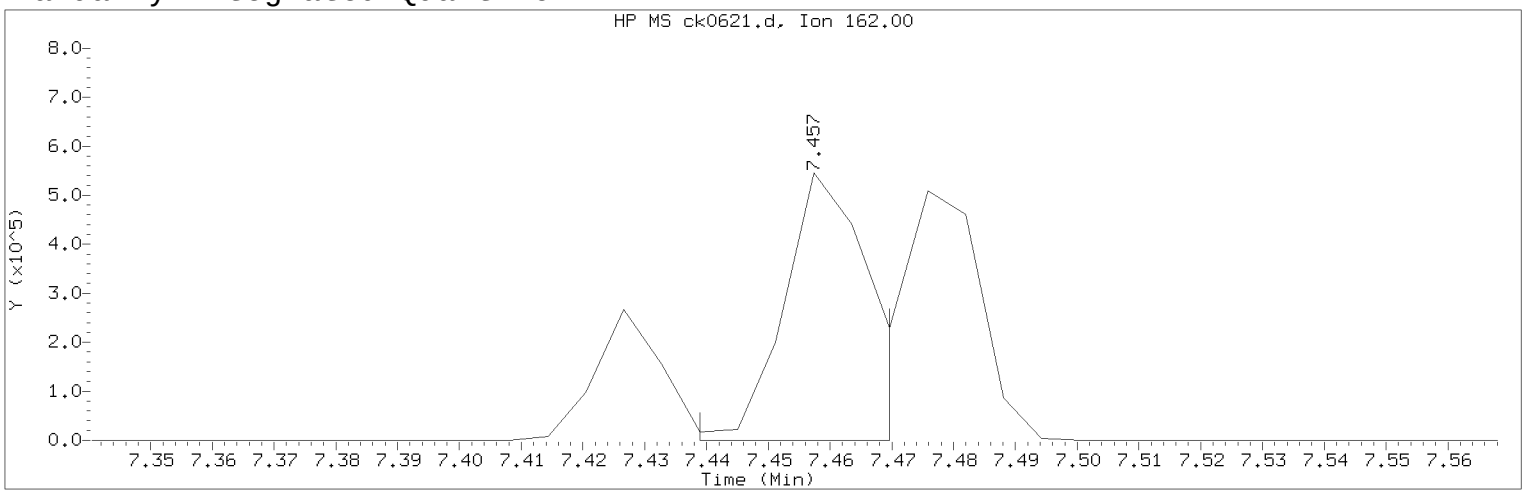
Compound Number : 44
Compound Name : 2,4-Dimethylphenol
Scan Number : 670
Retention Time (minutes) : 6.000
Quant Ion : 107.00
Area : 144979
On-column Amount (ng/ul) : 15.3298
Integration start scan : 661 Integration stop scan: 669
Y at integration start : 115 Y at integration end: 108

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

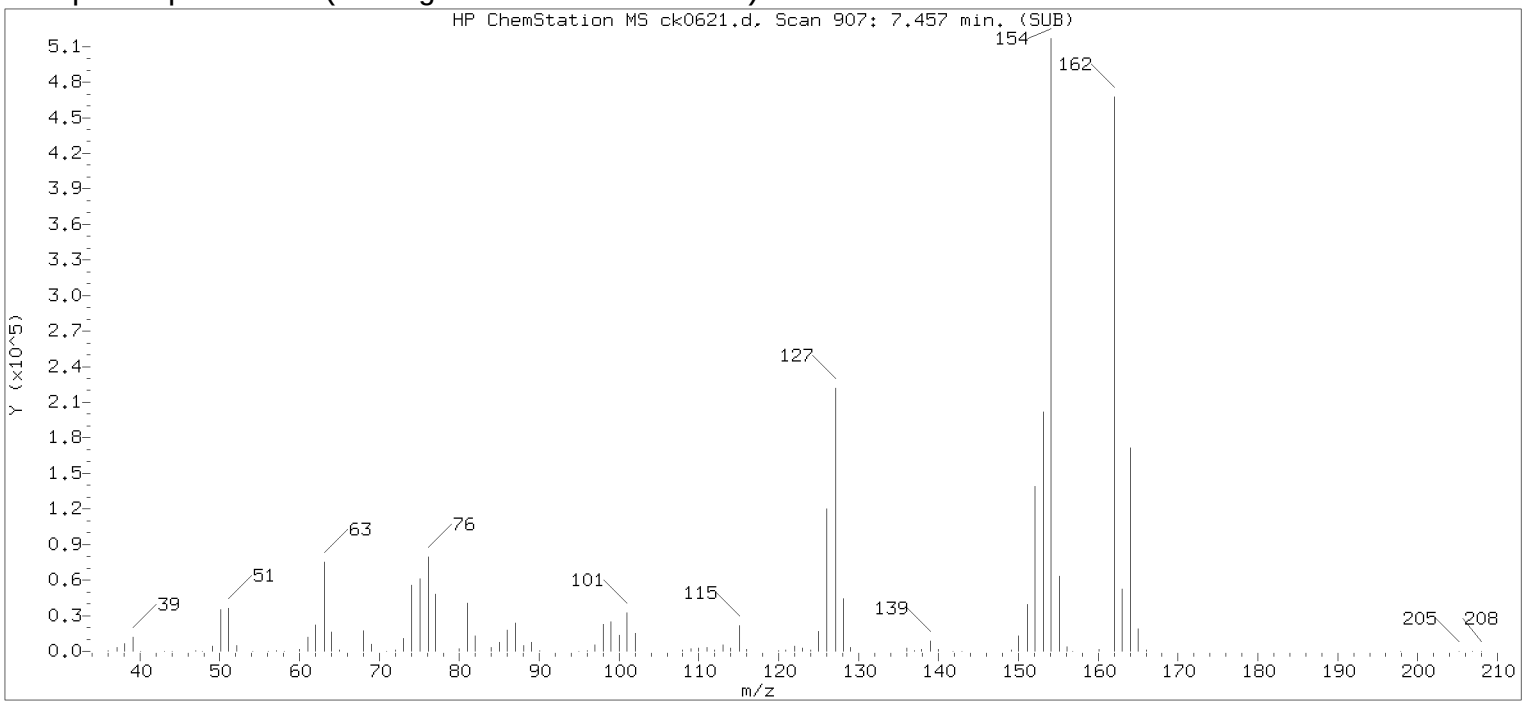
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area (flag) : 536380M
On-Column Amount (ng/ul) : 32.7989
Integration start scan : 903 Integration stop scan: 908
Y at integration start : 66 Y at integration end: 71

Reason for manual integration: improper integration

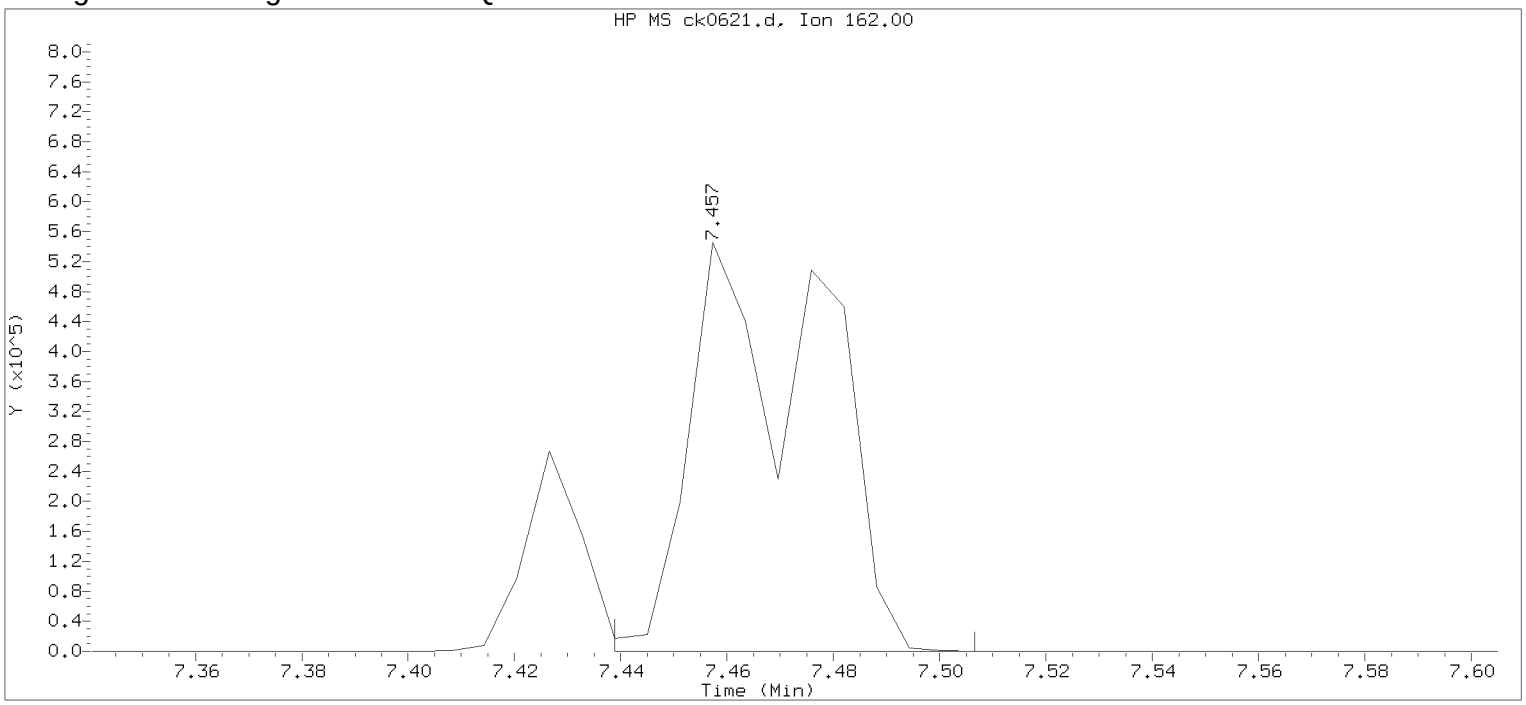
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

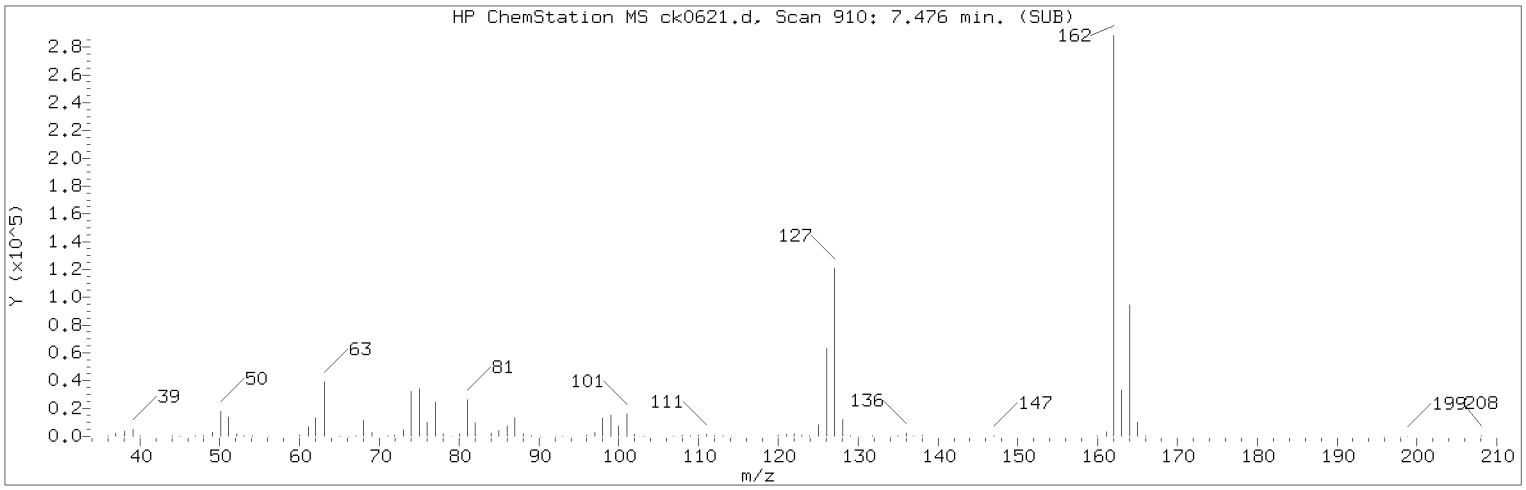
Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

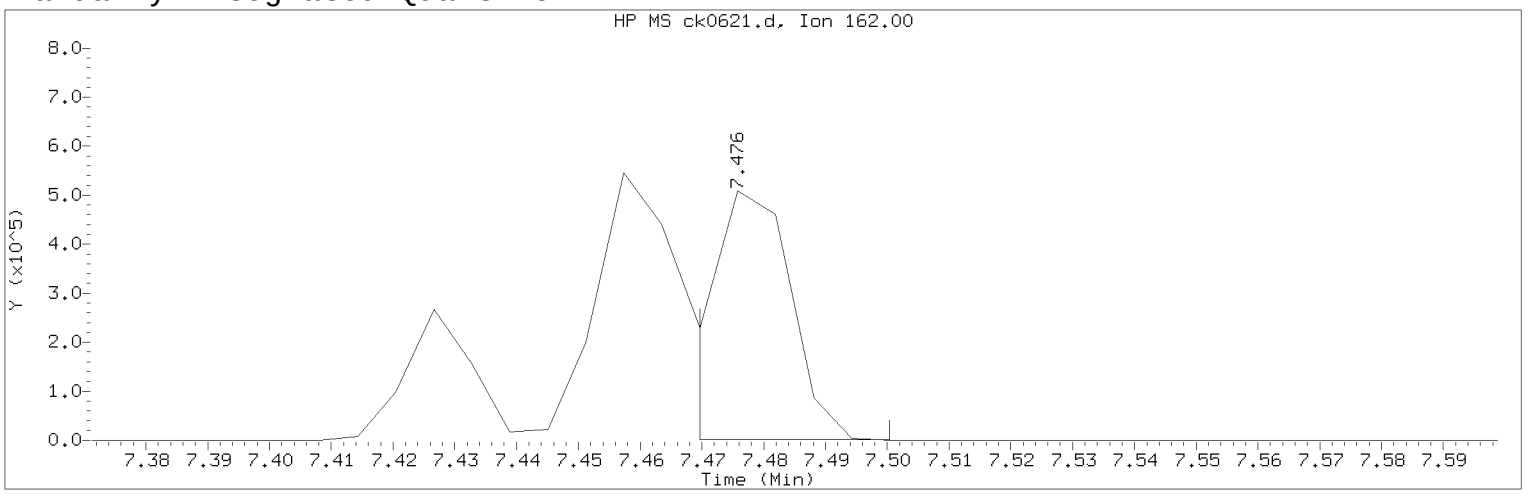
Compound Number : 84
Compound Name : 2-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area : 923982
On-column Amount (ng/ul) : 56.5002
Integration start scan : 903 Integration stop scan: 914
Y at integration start : 66 Y at integration end: 78

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:43
Date, time and analyst ID of latest file update: 18-Nov-2013 06:43 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

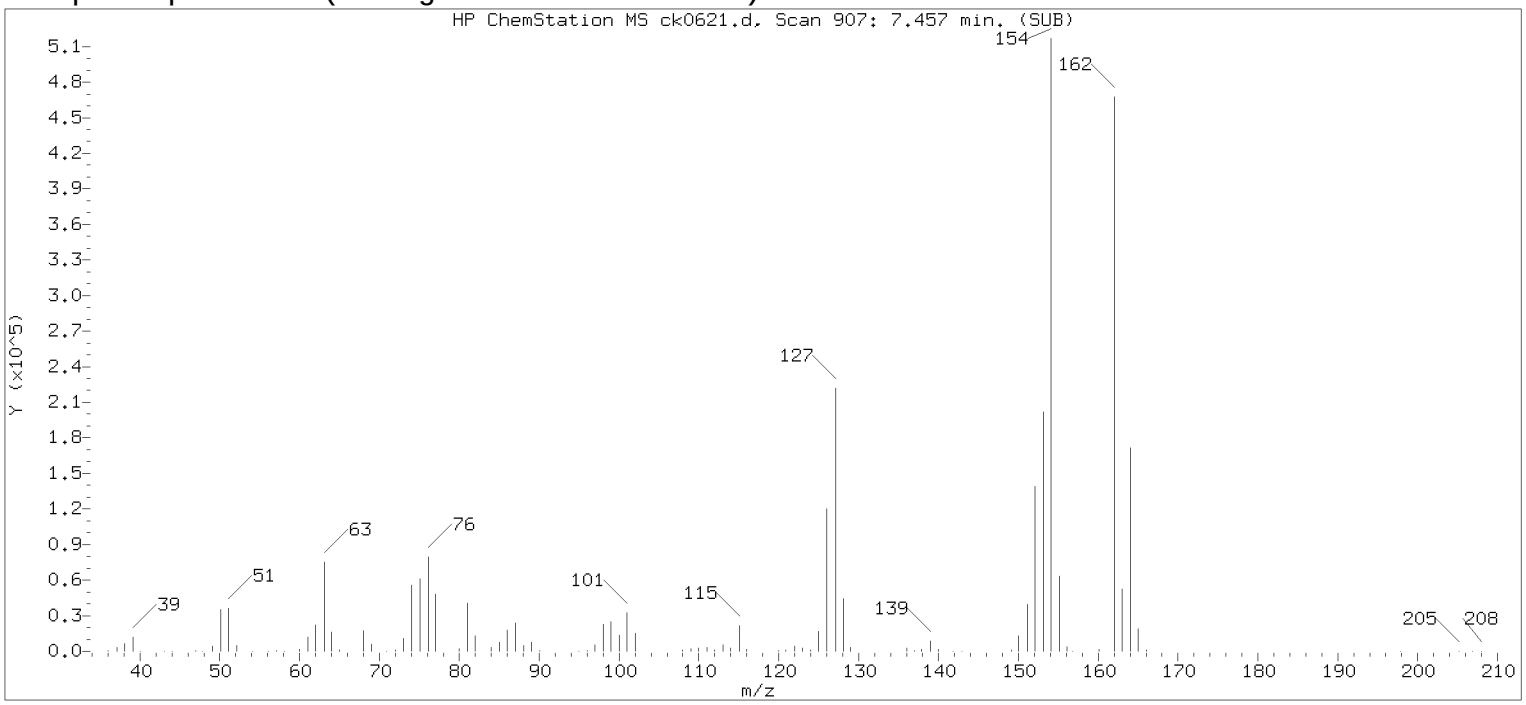
Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 910
Retention Time (minutes) : 7.476
Quant Ion : 162.00
Area (flag) : 472583M
On-Column Amount (ng/ul) : 29.3630
Integration start scan : 908 Integration stop scan: 913
Y at integration start : 1336 Y at integration end: 1336

Reason for manual integration: improper integration

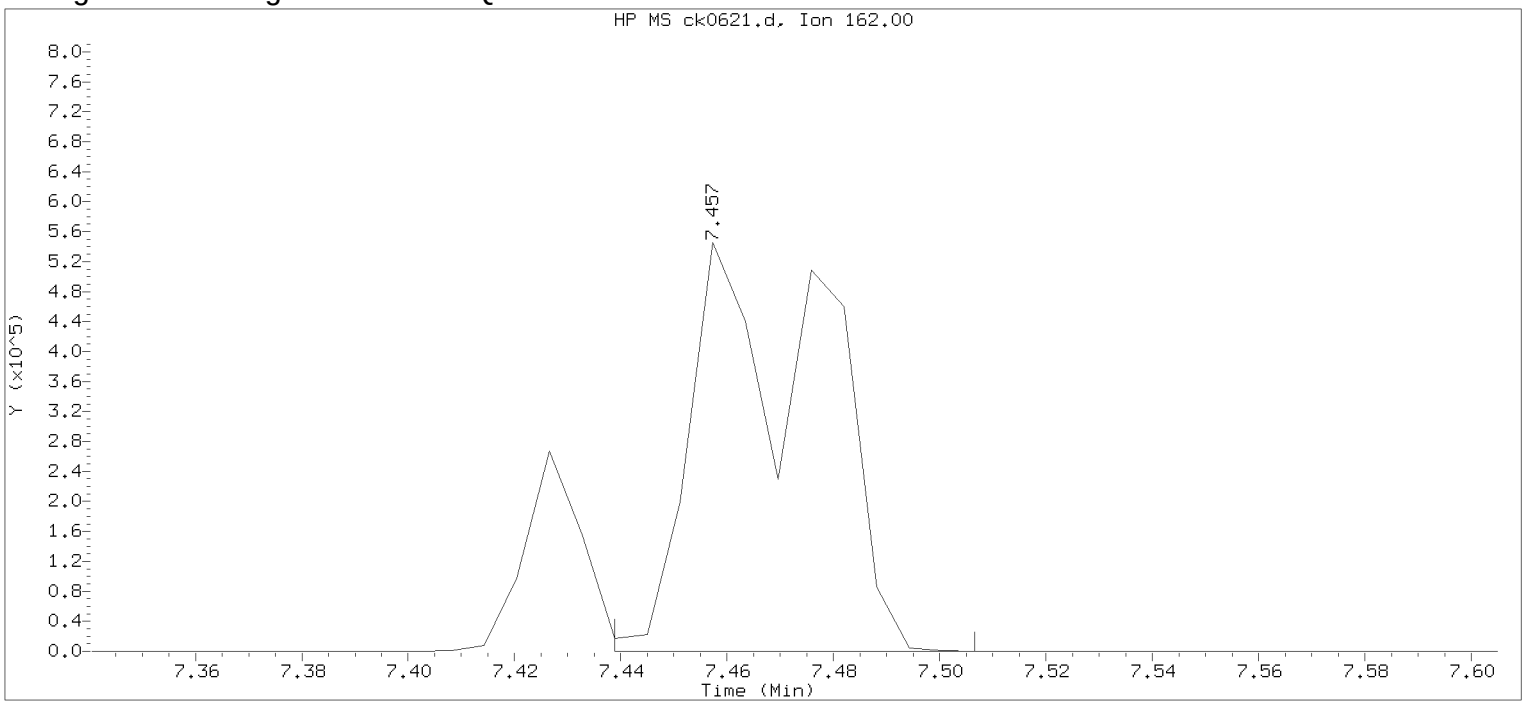
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/18/2013 at 11:17.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP10623.i/13nov18.b/ck0621.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 05:29 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: all1
Calibration date and time: 18-NOV-2013 06:08
Date, time and analyst ID of latest file update: 18-Nov-2013 06:08 jmg00346

Sample Name: SSTD3213 Lab Sample ID: SSTD030

Compound Number : 85
Compound Name : 1-Chloronaphthalene
Scan Number : 907
Retention Time (minutes) : 7.457
Quant Ion : 162.00
Area : 924127
On-column Amount (ng/ul) : 57.4187
Integration start scan : 903 Integration stop scan: 914
Y at integration start : 38 Y at integration end: 36

Digitally signed by Joseph M. Gambler on 11/18/2013 at 06:44.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

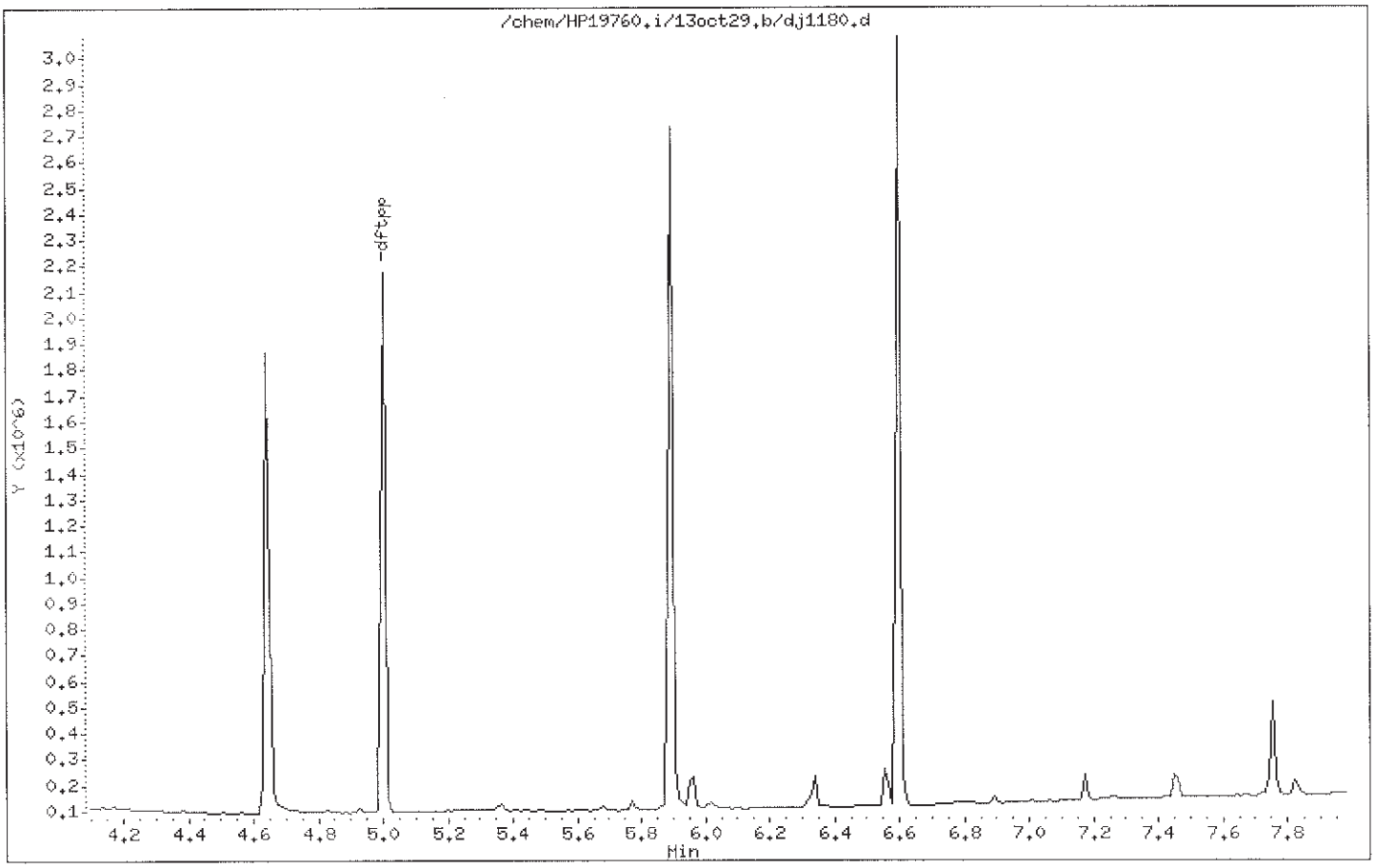
Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

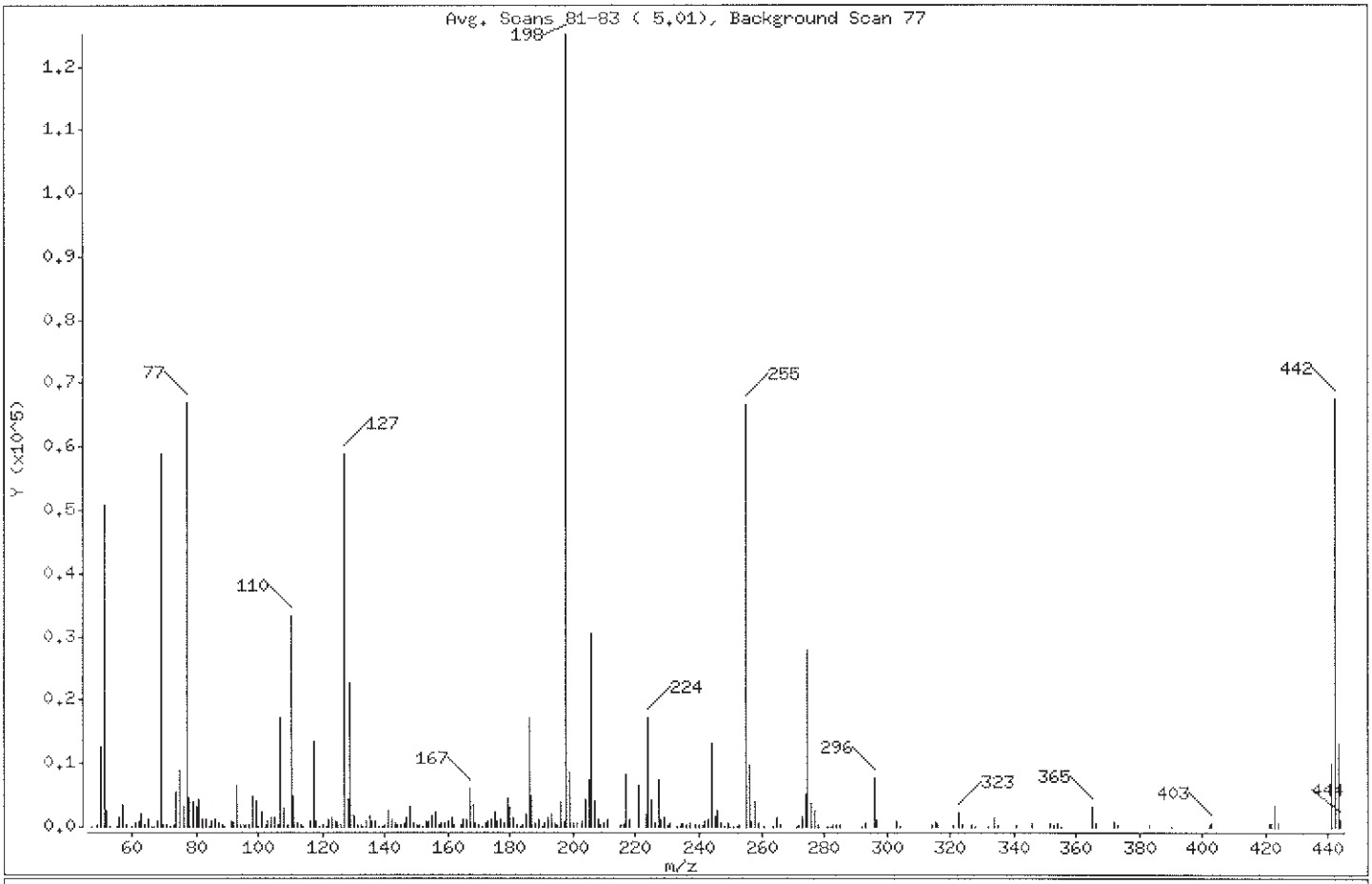
Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	40.63
68	Less than 2.00% of mass 69	0.61 (1.30)
69	Mass 69 relative abundance	47.07
70	Less than 2.00% of mass 69	0.22 (0.47)
127	40.00 - 60.00% of mass 198	47.20
197	Less than 1.00% of mass 198	0.62
199	5.00 - 9.00% of mass 198	6.79
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.60
441	Present, but less than mass 443	7.96
442	40.00 - 99.99% of mass 198	53.99
443	17.00 - 23.00% of mass 442	10.46 (19.38)

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d
Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
47.00	13	116.00	929	181.00	1462	255.00	66776
49.00	261	117.00	13587	182.00	291	256.00	9856
50.00	12707	118.00	891	183.00	143	257.00	787
51.00	50792	119.00	70	184.00	364	258.00	3960
52.00	2525	120.00	147	185.00	2083	259.00	515
53.00	20	121.00	36	186.00	17232	261.00	89
55.00	76	122.00	1155	187.00	4804	264.00	110
56.00	1295	123.00	1560	188.00	488	265.00	1556
57.00	3551	124.00	721	189.00	1028	266.00	224
58.00	186	125.00	778	190.00	135	271.00	107
60.00	129	126.00	172	191.00	434	272.00	152
61.00	662	127.00	59016	192.00	1400	273.00	1837
62.00	792	128.00	4334	193.00	1907	274.00	5128
63.00	2094	129.00	22576	194.00	447	275.00	27968
64.00	251	130.00	1821	195.00	243	276.00	3801
65.00	1088	131.00	408	196.00	3990	277.00	2556
66.00	43	132.00	329	197.00	771	278.00	336
67.00	9	133.00	2	198.00	125032	281.00	79
68.00	765	134.00	785	199.00	8488	282.00	108
69.00	58856	135.00	1720	200.00	703	283.00	234
70.00	276	136.00	896	201.00	580	284.00	166
71.00	205	137.00	852	203.00	834	285.00	364
72.00	37	138.00	108	204.00	4361	292.00	83
73.00	162	139.00	59	205.00	7410	293.00	500
74.00	5521	140.00	378	206.00	30336	296.00	7902
75.00	8878	141.00	2631	207.00	3917	297.00	1170
76.00	3208	142.00	1009	208.00	1033	303.00	767
77.00	66928	143.00	510	209.00	258	304.00	143
78.00	4517	144.00	245	210.00	495	314.00	331
79.00	3900	145.00	408	211.00	1226	315.00	774
80.00	3044	146.00	599	215.00	391	316.00	434
81.00	4425	147.00	1398	216.00	685	321.00	177
82.00	1038	148.00	3200	217.00	8299	323.00	2340
83.00	1074	149.00	650	218.00	1128	324.00	382
84.00	117	150.00	311	221.00	6661	327.00	385

Data File: /chem/HP19760.i/13oct29.b/dj1180.d

Date : 29-OCT-2013 11:14

Client ID: DFTPP12.5

Instrument: HP19760.i

Sample Info: DFTPP12.5;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

Data File: dj1180.d

Spectrum: Avg. Scans 81-83 (5.01), Background Scan 77

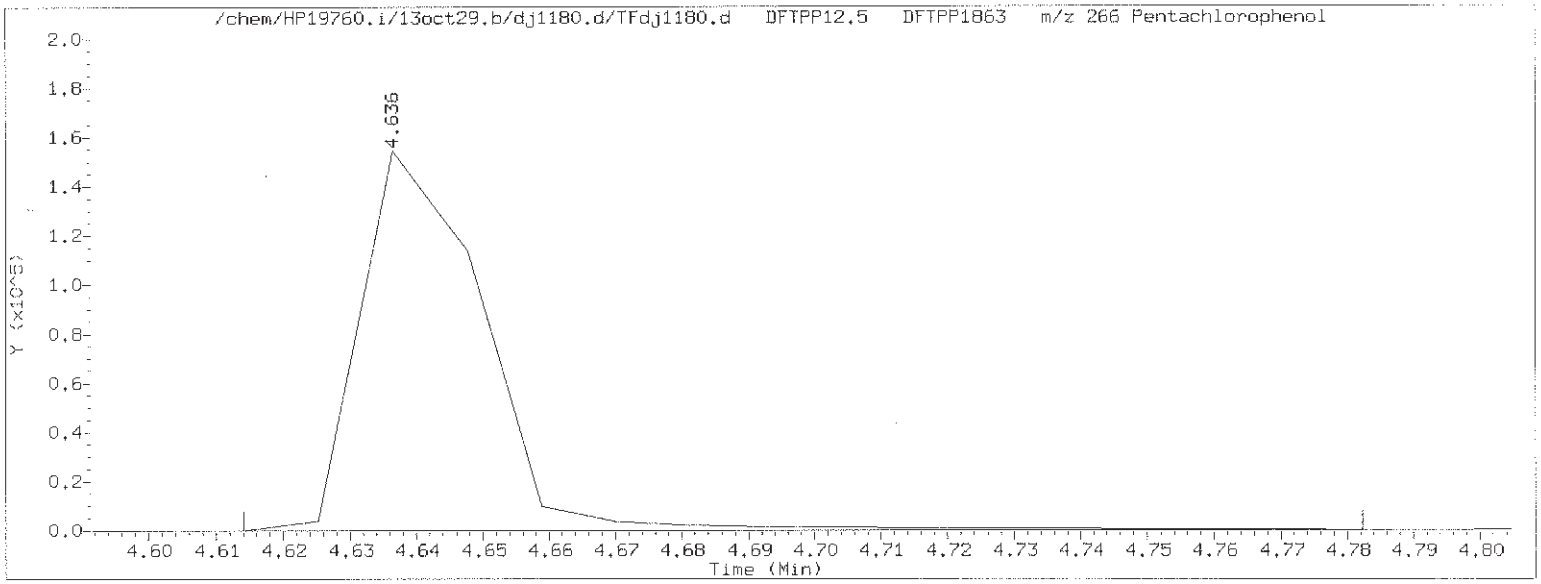
Location of Maximum: 198.00

Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	730	151.00	347	223.00	1931	328.00	105
86.00	1136	152.00	115	224.00	17384	332.00	94
87.00	504	153.00	923	225.00	4444	334.00	1395
88.00	348	154.00	792	226.00	485	335.00	344
89.00	140	155.00	1648	227.00	7391	341.00	240
91.00	953	156.00	2400	228.00	1081	346.00	451
92.00	900	157.00	250	229.00	1546	352.00	610
93.00	6479	158.00	576	230.00	169	353.00	425
94.00	405	159.00	492	231.00	629	354.00	617
95.00	146	160.00	1004	233.00	116	355.00	124
96.00	229	161.00	1421	234.00	480	365.00	3246
97.00	183	162.00	391	235.00	560	366.00	459
98.00	4747	164.00	233	236.00	276	372.00	946
99.00	3999	165.00	1040	237.00	642	373.00	170
100.00	126	166.00	1180	239.00	257	383.00	169
101.00	2341	167.00	5965	240.00	184	390.00	105
102.00	187	168.00	3512	241.00	370	402.00	369
103.00	775	169.00	567	242.00	924	403.00	500
104.00	1455	170.00	169	243.00	1252	421.00	444
105.00	1370	171.00	41	244.00	13079	422.00	479
106.00	380	172.00	563	245.00	1740	423.00	3350
107.00	17112	173.00	735	246.00	2568	424.00	517
108.00	2756	174.00	1279	247.00	557	441.00	9954
109.00	396	175.00	2300	248.00	115	442.00	67496
110.00	33216	176.00	754	249.00	484	443.00	13079
111.00	4816	177.00	1124	250.00	91	444.00	1189
112.00	615	178.00	434	251.00	86		
113.00	205	179.00	4545	252.00	112		
114.00	16	180.00	3086	253.00	238		

Assessment of GC Column Performance and Injection Port Inertness for

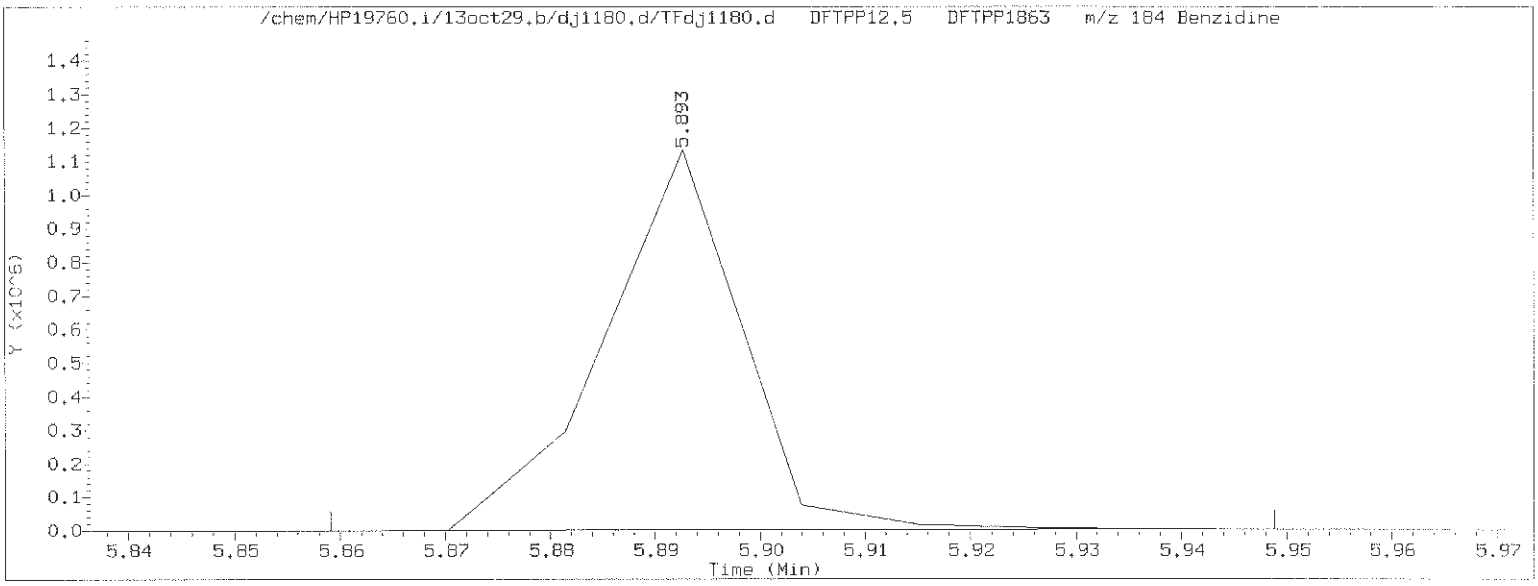
Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



Pentachlorophenol EICP peak height = 154624 EICP peak height at 10% = 15462 Pentachlorophenol EICP area = 198857

Pentachlorophenol EICP peak apex (min.) = 4.636
RT at 10% of front half of EICP (min.) = 4.626 'Front' peak width (min.) = 0.0103333333
RT at 10% of back half of EICP (min.) = 4.658 'Tailing' peak width (min.) = 0.0218166667

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0218166667}{0.0103333333} = 2.111$



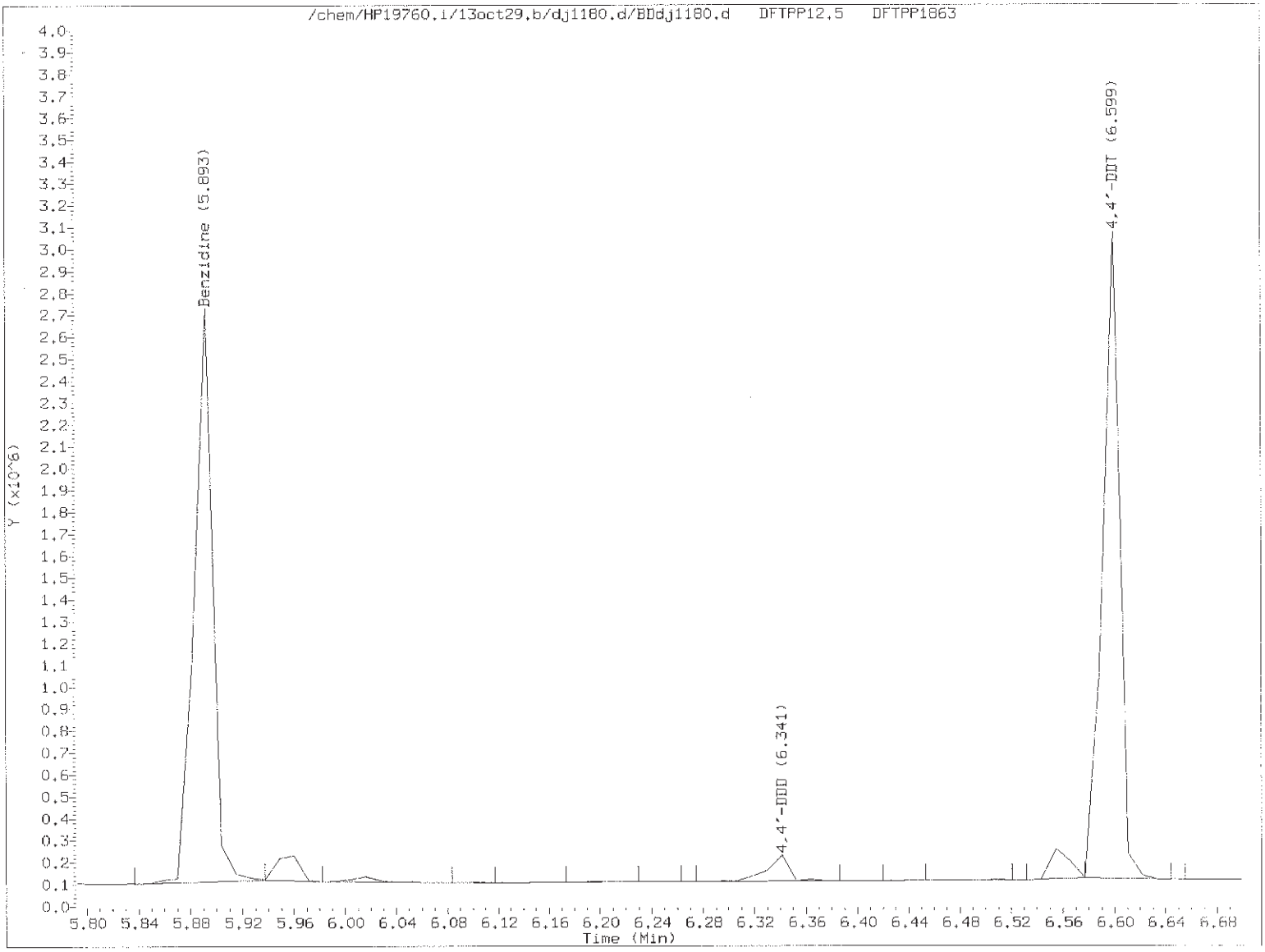
Benzidine EICP peak height = 1133040 EICP peak height at 10% = 113304 Benzidine EICP area = 1026461

Benzidine EICP peak apex (min.) = 5.893
RT at 5% of front half of EICP (min.) = 5.872 'Front' peak width (min.) = 0.0202666667
RT at 5% of back half of EICP (min.) = 5.907 'Tailing' peak width (min.) = 0.0146166667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0146166667}{0.0202666667} = 0.721$

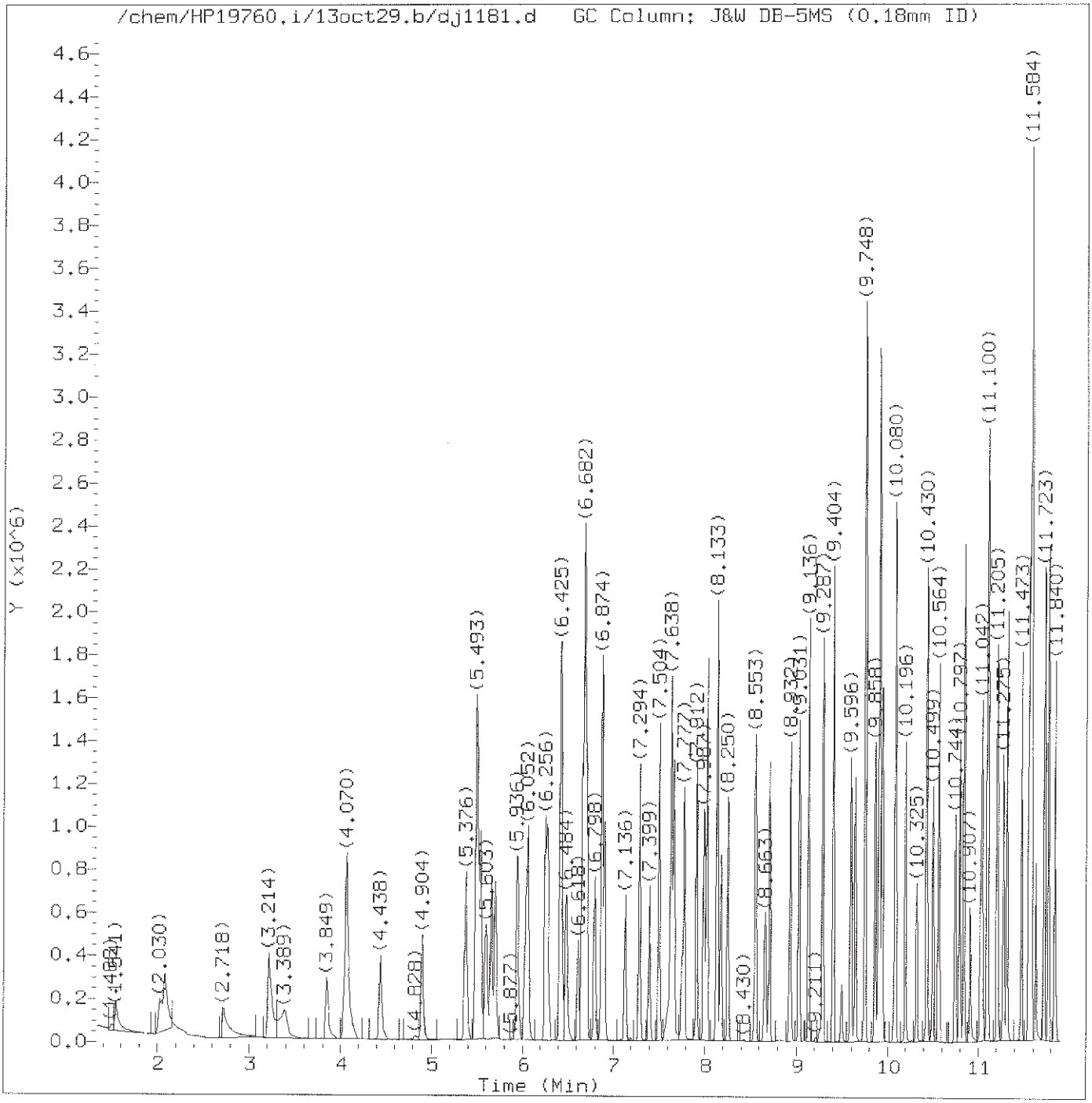
Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 29-OCT-2013 11:14 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 147644}{0 + 147644 + 2694927} \times 100 = 5.2$$



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d
Injection date and time: 29-OCT-2013 11:28

Instrument ID: HP19760.i
Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m
Calibration date and time: 29-OCT-2013 21:49

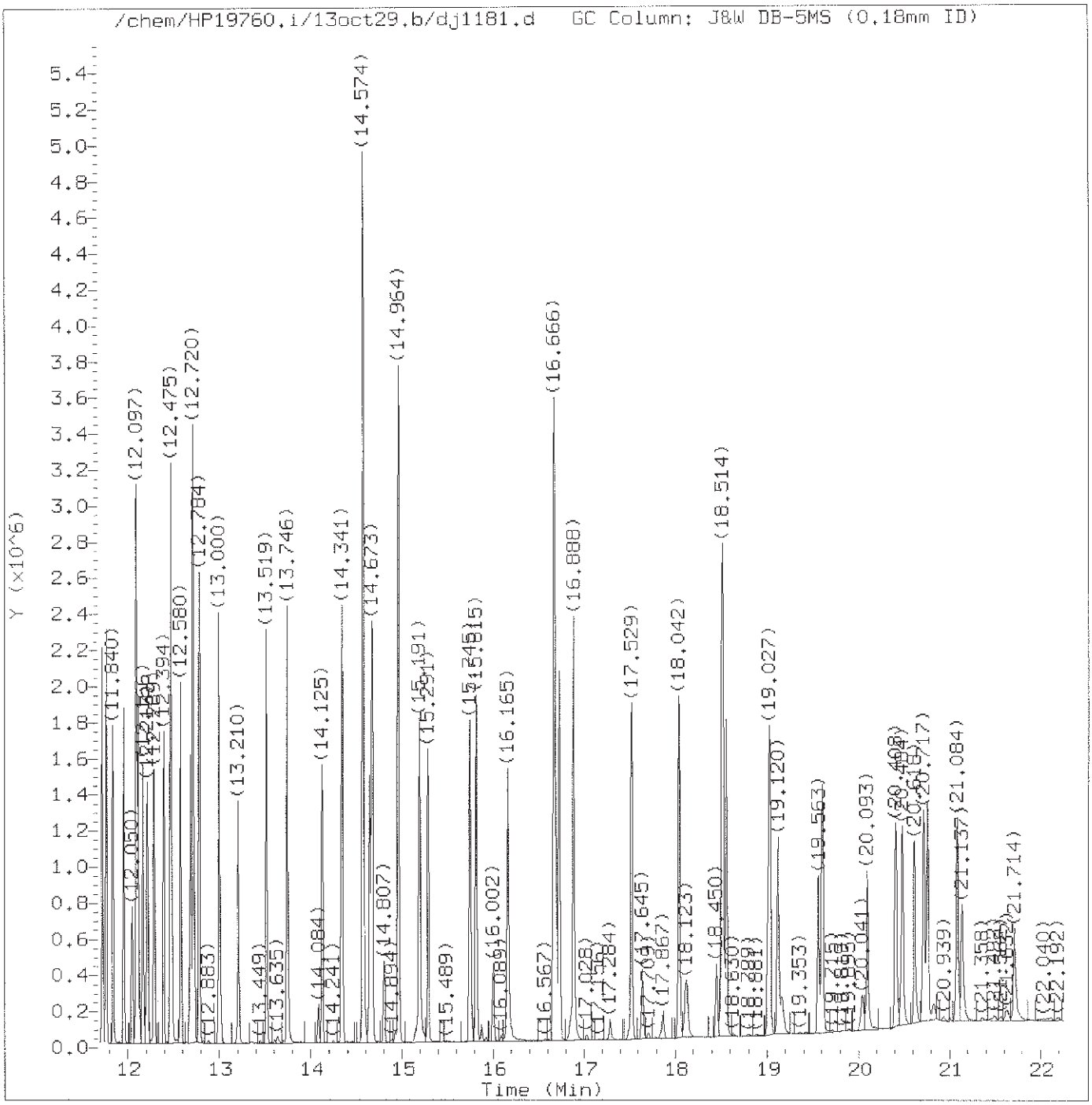
Sublist used: newall1

Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5

Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	137767	7.500
2) N-Nitrosodimethylamine	(1)	2.030	74	268516	7.500
3) Pyridine	(1)	2.083	79	432268	7.500
4) 2-Picoline	(1)	3.214	93	459785	7.500
5) N-Nitrosomethylethylamine	(1)	3.389	88	208027	7.500
6) Methyl methanesulfonate	(1)	3.849	80	233954	7.500
7)$2-Fluorophenol	(1)	4.070	112	709277	15.000
8) N-Nitrosodiethylamine	(1)	4.444	102	197319	7.500
10) Ethyl methanesulfonate	(1)	4.904	109	186082	7.500
11) Benzaldehyde	(1)	5.376	77	349278	7.500
12)$Phenol-d5	(1)	5.487	99	975454	15.000
13)$Phenol-d6	(1)	5.487	99	975454	15.000
14) Phenol	(1)	5.510	94	556847	7.500
15) Aniline	(1)	5.539	93	690455	7.500
16) bis(2-Chloroethyl)ether	(1)	5.656	93	436390	7.500
17) 2-Chlorophenol	(1)	5.702	128	351189	7.500
18) 1,3-Dichlorobenzene	(1)	5.941	146	363080	7.500
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	151909	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	364571	7.500
23) Benzyl alcohol	(1)	6.250	108	239760	7.500
24) 1,2-Dichlorobenzene	(1)	6.280	146	342428	7.500
25) Indene	(1)	6.419	115	702500	9.000
26) 2-Methylphenol	(1)	6.431	108	348956	7.500
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	541494	7.500
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	541494	7.500
29) N-Nitrosopyrrolidine	(1)	6.618	100	206158	7.500
30) Acetophenone	(1)	6.658	105	512562	7.500
33) 4-Methylphenol	(1)	6.682	108	394695	7.500
31) N-Nitroso-di-n-propylamine	(1)	6.682	70	319187	7.500
32) N-Nitrosomorpholine	(1)	6.688	56	245653	7.500
34) o-Toluidine	(1)	6.705	106	598993	7.500
35) Hexachloroethane	(1)	6.798	117	157145	7.500
36)$Nitrobenzene-d5	(2)	6.874	82	873687	15.000
37) Nitrobenzene	(2)	6.903	77	459440	7.500
39) N-Nitrosopiperidine	(2)	7.136	114	190894	7.500
40) Isophorone	(2)	7.294	82	797440	7.500
42) 2-Nitrophenol	(2)	7.399	139	175236	7.500
45) 2,4-Dimethylphenol	(2)	7.504	107	386388	7.500
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	164859	7.500
47) Benzoic acid	(2)	7.655	105	357390	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	501971M	7.500
49) 2,4-Dichlorophenol	(2)	7.777	162	272381	7.500
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	288881	7.500
52)*Naphthalene-d8	(2)	7.987	136	608104	5.000
53) Naphthalene	(2)	8.022	128	975519	7.500
55) 4-Chloroaniline	(2)	8.127	127	418617	7.500
56) 2,6-Dichlorophenol	(2)	8.139	162	261060	7.500
57) Hexachloropropene	(2)	8.174	213	192094	7.500
58) Hexachlorobutadiene	(2)	8.255	225	166743	7.500
60) Quinoline	(2)	8.553	129	657223	7.500
61) Caprolactam	(2)	8.663	113	122649	7.500
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	291446	7.500
63) 4-Chloro-3-methylphenol	(2)	8.932	107	337960	7.500
64) Safrole	(2)	9.031	162	255020	7.500
65) 2-Methylnaphthalene	(2)	9.136	142	661678	7.500
66) 1-Methylnaphthalene	(2)	9.287	142	601705	7.500
67) Hexachlorocyclopentadiene	(3)	9.404	237	149375	7.500
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	295528	7.500
69) cis-Isosafrole	(3)	9.497	162	46662	7.500
70) 2,4,6-Trichlorophenol	(3)	9.596	196	203516	7.500
71) 2,4,5-Trichlorophenol	(3)	9.643	196	211849	7.500
72)$2-Fluorobiphenyl	(3)	9.748	172	1291899	15.000
74) Isosafrole	(3)	9.858	162	260550	7.500
73) trans-Isosafrole	(3)	9.858	162	260550	7.500
75) 1,1'-Biphenyl	(3)	9.899	154	731309	7.500
76) 2-Chloronaphthalene	(3)	9.905	162	587363	7.500
77) 1-Chloronaphthalene	(3)	9.940	162	566223	7.500
82) Diphenyl ether	(3)	10.080	170	422807	7.500
83) 2-Nitroaniline	(3)	10.086	138	206464	7.500
84) 1,4-Naphthoquinone	(3)	10.196	158	268566	7.500
85) 1,4-Dinitrobenzene	(3)	10.325	168	107464	7.500
86) Dimethylphthalate	(3)	10.430	163	671240	7.500
87) 1,3-Dinitrobenzene	(3)	10.435	168	125634	7.500
88) 2,6-Dinitrotoluene	(3)	10.499	165	161578	7.500
90) Acenaphthylene	(3)	10.564	152	909644	7.500
91) 3-Nitroaniline	(3)	10.744	138	186158	7.500
92)*Acenaphthene-d10	(3)	10.797	164	340173	5.000
93) Acenaphthene	(3)	10.843	153	609286	7.500
94) 2,4-Dinitrophenol	(3)	10.913	184	99795	10.000
96) 4-Nitrophenol	(3)	11.030	109	118092	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	237796	7.500
97) Dibenzofuran	(3)	11.100	168	865450	7.500
98) 2,4-Dinitrotoluene	(3)	11.106	165	200480	7.500
99) 1-Naphthylamine	(3)	11.205	143	632752	7.500
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	166684	7.500
101) 2-Naphthylamine	(3)	11.315	143	653595	7.500
102) Diethylphthalate	(3)	11.473	149	661064	7.500
103) Fluorene	(3)	11.554	166	710098	7.500
104) Thionazin	(3)	11.566	107	145158	7.500
106) 5-Nitro-o-toluidine	(3)	11.578	152	196066	7.500
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	338065	7.500
107) 4-Nitroaniline	(3)	11.584	138	177952	7.500
108) 4,6-Dinitro-2-methylphenol	(4)	11.630	198	108493	7.500
109) N-Nitrosodiphenylamine	(4)	11.729	169	561532	7.500
110) NDPA as diphenylamine	(4)	11.729	169	561532	7.500
111) 1,2-Diphenylhydrazine	(4)	11.770	77	905405	7.500
112)$2,4,6-Tribromophenol	(3)	11.840	330	143815	15.000
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	132618	7.500
116) 1,3,5-Trinitrobenzene	(4)	12.050	213	80876	7.500
117) Diallate (peak 1)	(4)	12.091	86	342542	5.625
118) Phorate	(4)	12.097	75	547268	7.500
119) Phenacetin	(4)	12.114	108	408525	7.500
120) 4-Bromophenyl-phenylether	(4)	12.166	248	174573	7.500
121) Diallate (peak 2)	(4)	12.196	86	49019	1.875
122) Hexachlorobenzene	(4)	12.213	284	169395	7.500
123) Dimethoate	(4)	12.289	87	373493	7.500
124) Atrazine	(4)	12.394	200	180156	7.500
125) Pentachlorophenol	(4)	12.464	266	128448	7.500
126) Pentachloronitrobenzene	(4)	12.475	237	84108	7.500
127) 4-Aminobiphenyl	(4)	12.475	169	721220	7.500
129) Pronamide	(4)	12.580	173	318096	7.500
130)*Phenanthrene-d10	(4)	12.691	188	574655	5.000
131) Phenanthrene	(4)	12.720	178	962778	7.500
133) Dinoseb	(4)	12.720	211	158315	7.500
134) Anthracene	(4)	12.784	178	1008447	7.500
135) Carbazole	(4)	13.000	167	986634	7.500
136) Methyl parathion	(4)	13.204	109	269786	7.500
137) Di-n-butylphthalate	(4)	13.519	149	1215775	7.500
138) Parathion	(4)	13.746	109	172642	7.500
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	87192	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	122402	7.500
142) Fluoranthene	(4)	14.341	202	1145853	7.500
144) Benzidine	(5)	14.574	184	2350030	22.500
145)*Pyrene-d10	(5)	14.649	212	743541	5.000
146) Pyrene	(5)	14.679	202	1179015	7.500
149)$Terphenyl-d14	(5)	14.964	244	1432906	15.000
150) p-Dimethylaminoazobenzene	(5)	15.197	225	245246	7.500
151) Chlorobenzilate	(5)	15.291	139	368575	7.500
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	805018	7.500
153) Butylbenzylphthalate	(5)	15.815	149	555530	7.500
156) 2-Acetylaminofluorene	(5)	16.165	181	483665	7.500
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	388403	7.500
158) Benzo(a)anthracene	(5)	16.666	228	1087387	7.500
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	209240	7.500
161) Chrysene	(5)	16.730	228	1019141	7.500
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	760232	7.500
165) 6-Methylchrysene	(5)	17.529	242	745309	7.500
166) Di-n-octylphthalate	(6)	18.042	149	1259155	7.500
168) Benzo(b)fluoranthene	(6)	18.508	252	957737	7.500
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.514	256	391427	7.500
170) Benzo(k)fluoranthene	(6)	18.555	252	953456	7.500
171) Benzo(a)pyrene	(6)	19.027	252	891430	7.500
172)*Perylene-d12	(6)	19.120	264	528760	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	434800	7.500
174) Dibenz(a,h)acridine	(6)	20.408	279	608478	7.500
175) Dibenz(a,j)acridine	(6)	20.484	279	626394	7.500
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	822323	7.500
177) Dibenz(a,h)anthracene	(6)	20.764	278	692510	7.500
178) Benzo(g,h,i)perylene	(6)	21.084	276	667334	7.500
179) Diallate TRANS/CIS	(4)			391561	7.500
182) 2,4_2,6-Dinitrotoluenes	(3)			362058	15.000

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$ = Compound is a surrogate standard.

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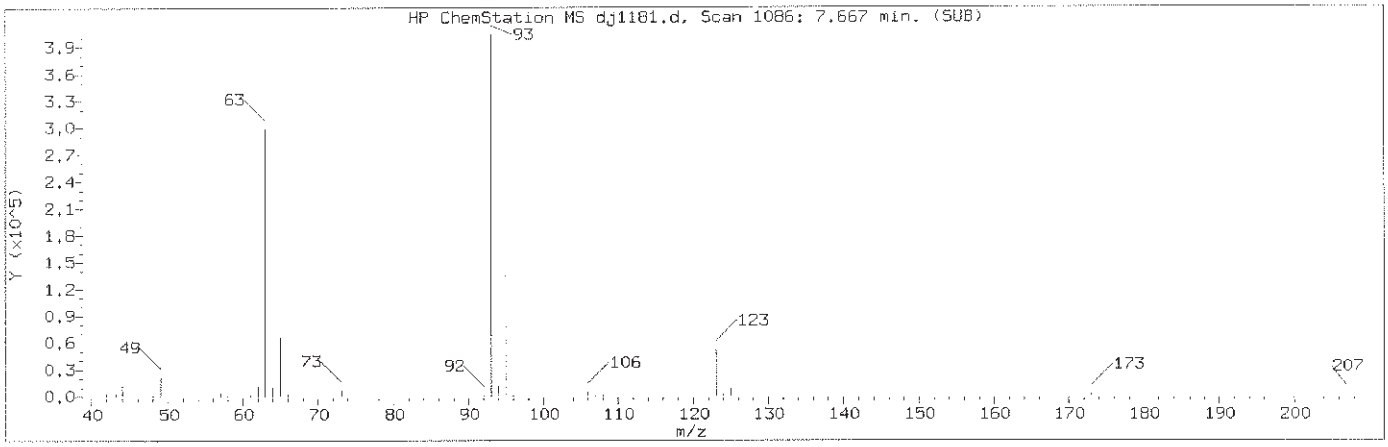
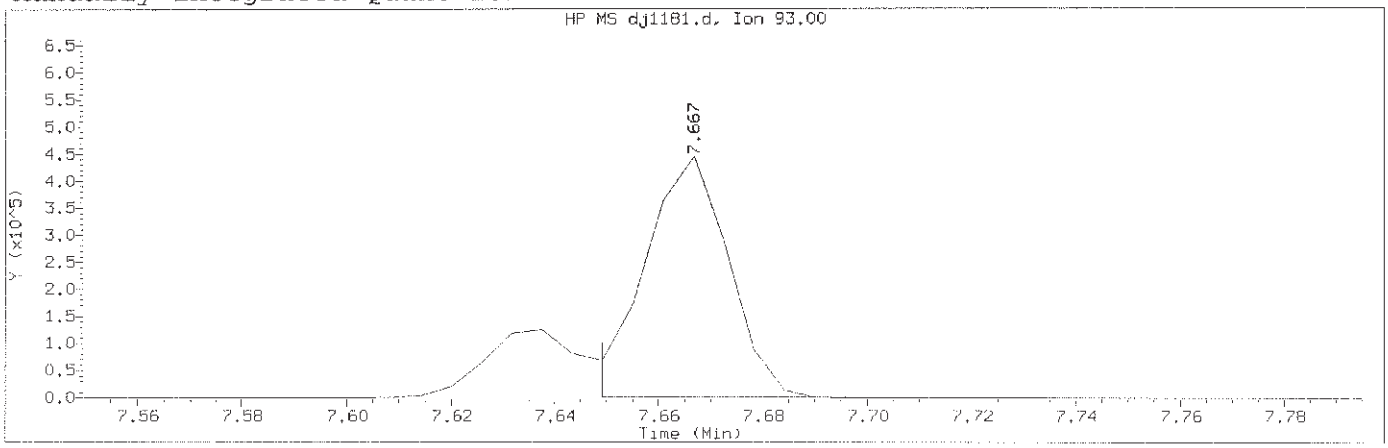
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 501971M		
On-Column Amount (ng/ul)	: 7.5000		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 584	Y at integration end:	584

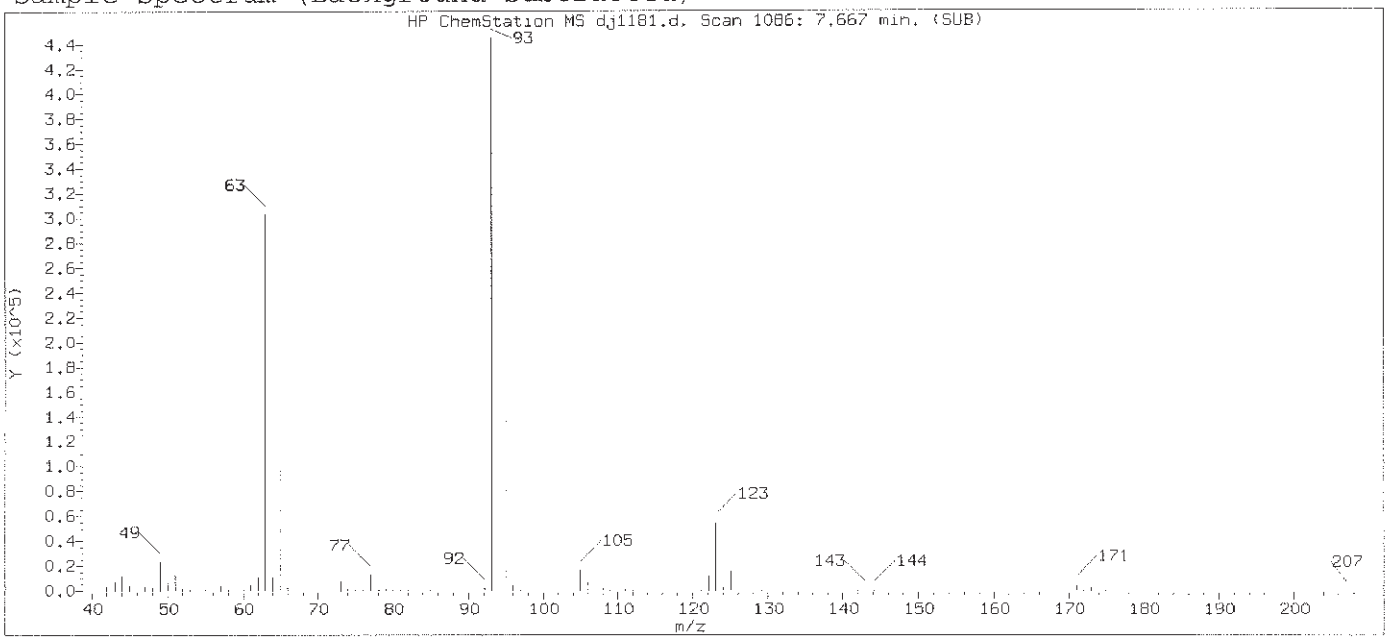
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

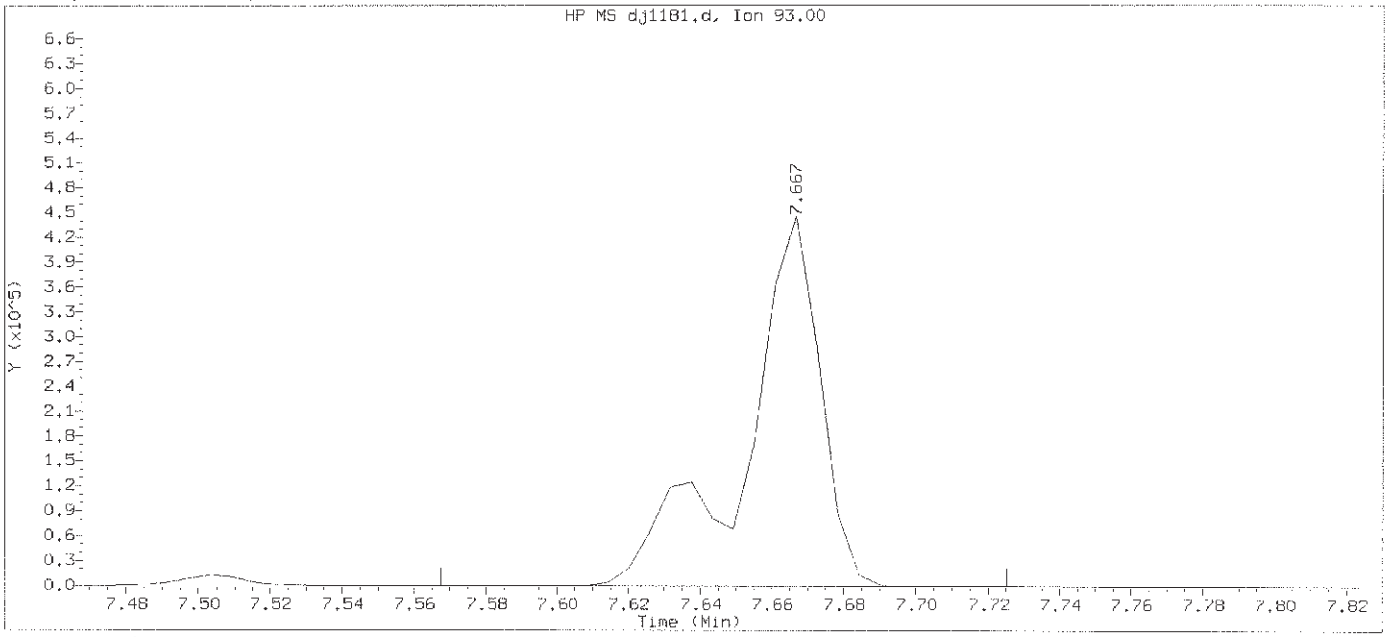
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1181.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:37
Date, time and analyst ID of latest file update: 29-Oct-2013 21:37 bkg00522

Sample Name: SSTD7.5 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area	: 649915		
On-column Amount (ng/ul)	: 8.8624		
Integration start scan	: 1068	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	0

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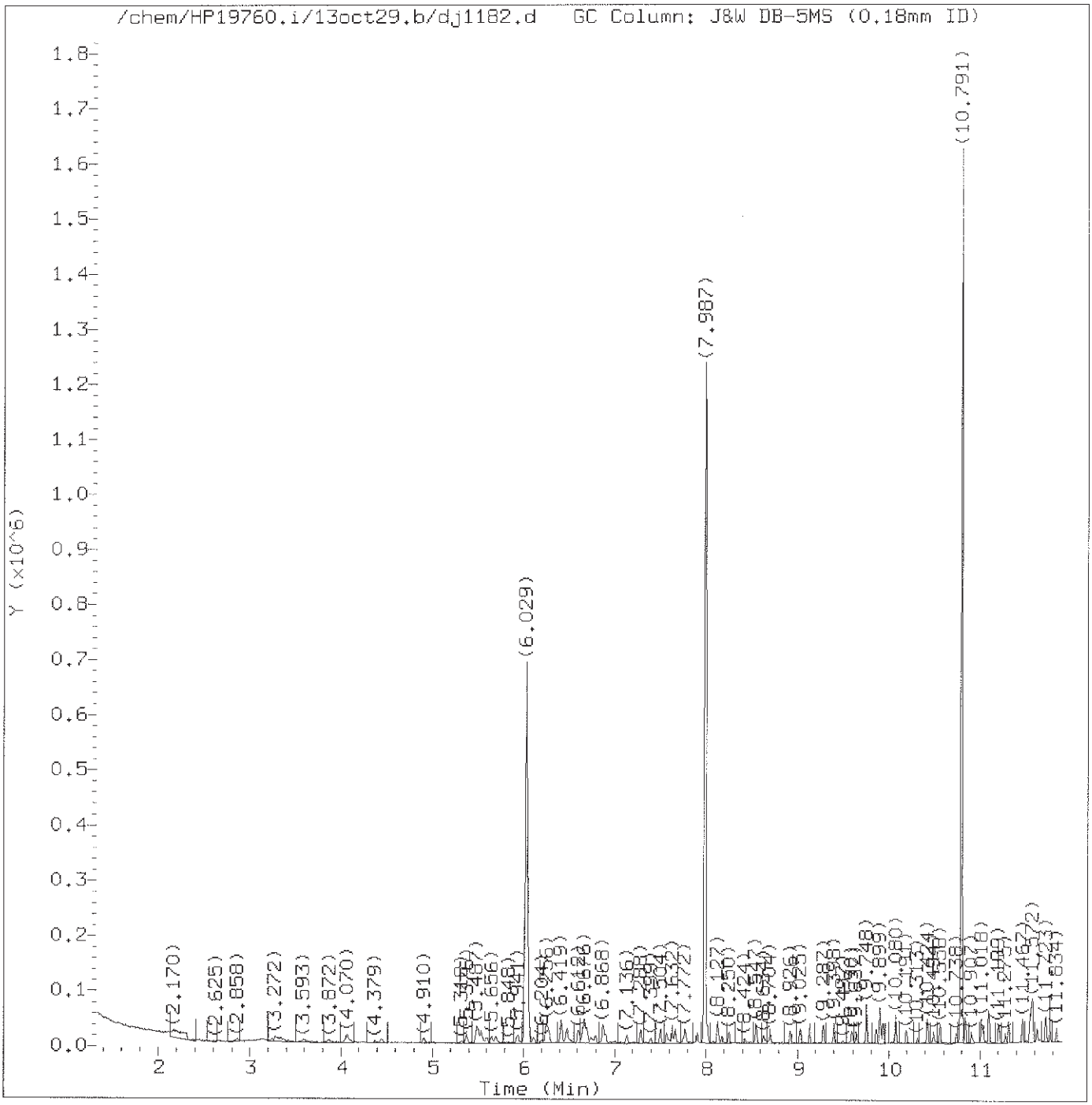
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

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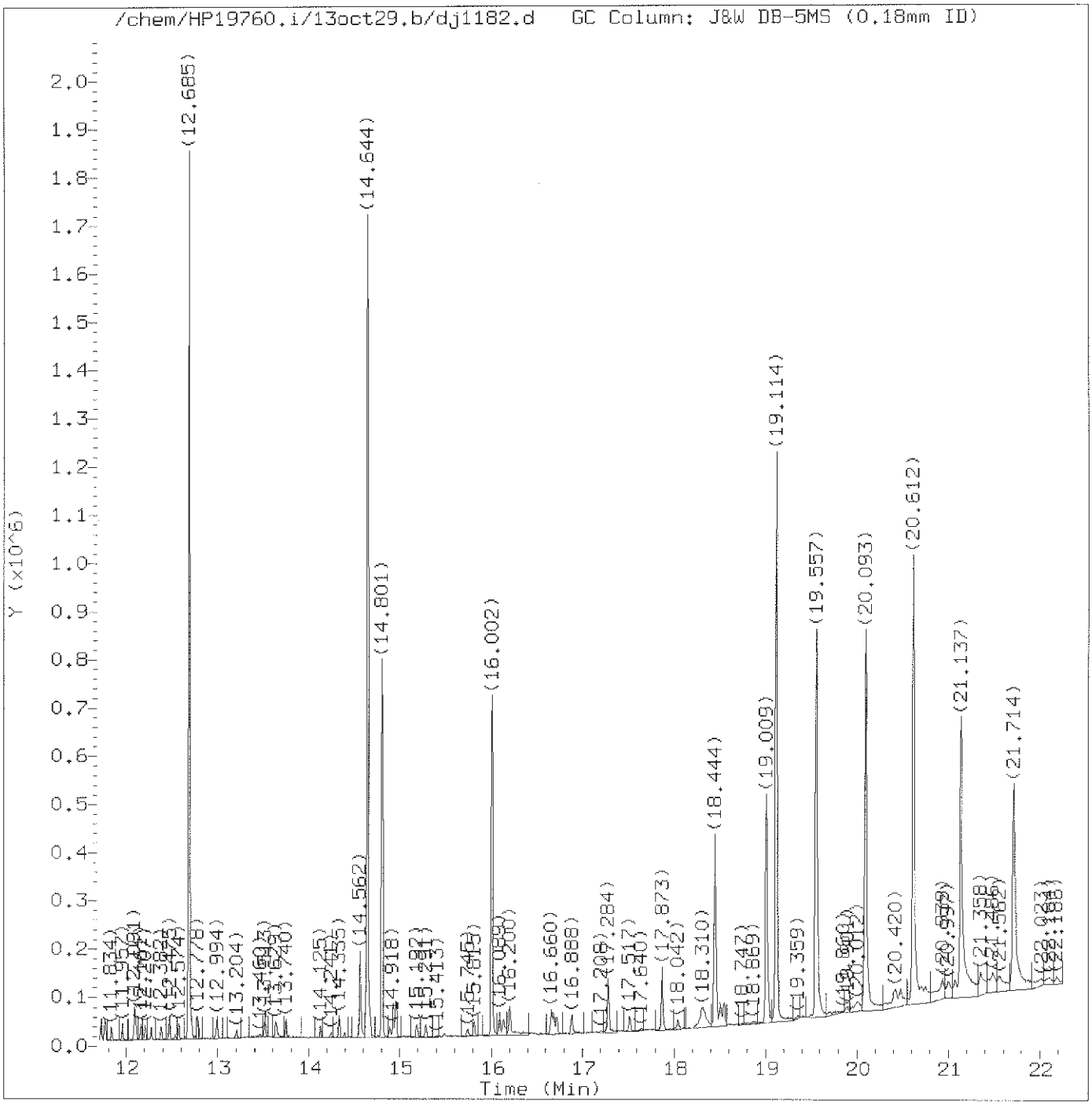
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
2) N-Nitrosodimethylamine	(1)	2.089	74	1978	0.049
3) Pyridine	(1)	2.159	79	4040	0.062
4) 2-Picoline	(1)	3.278	93	5887	0.085
5) N-Nitrosomethylethylamine	(1)	3.412	88	2434	0.077
6) Methyl methanesulfonate	(1)	3.866	80	3178	0.090
7)$2-Fluorophenol	(1)	4.065	112	11592	0.216
8) N-Nitrosodiethylamine	(1)	4.449	102	2906	0.097
10) Ethyl methanesulfonate	(1)	4.910	109	2854	0.101
11) Benzaldehyde	(1)	5.376	77	6602	0.125
12)$Phenol-d5	(1)	5.487	99	16847	0.228
13)$Phenol-d6	(1)	5.487	99	16847	0.228
14) Phenol	(1)	5.504	94	10250	0.122
15) Aniline	(1)	5.539	93	13009	0.124
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6855	0.104
17) 2-Chlorophenol	(1)	5.697	128	5496	0.103
18) 1,3-Dichlorobenzene	(1)	5.941	146	5342	0.097
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	172486	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5727	0.104
23) Benzyl alcohol	(1)	6.250	108	5087	0.140
24) 1,2-Dichlorobenzene	(1)	6.280	146	5122	0.099
25) Indene	(1)	6.414	115	13592	0.153
26) 2-Methylphenol	(1)	6.431	108	6249	0.118
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	11271	0.137
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	11271	0.137
29) N-Nitrosopyrrolidine	(1)	6.612	100	3637	0.117
30) Acetophenone	(1)	6.653	105	9151	0.118
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	6438	0.133
33) 4-Methylphenol	(1)	6.676	108	7465	0.125
32) N-Nitrosomorpholine	(1)	6.682	56	5072	0.136
34) o-Toluidine	(1)	6.699	106	10505	0.116
35) Hexachloroethane	(1)	6.792	117	2399	0.101
36)$Nitrobenzene-d5	(2)	6.868	82	14956	0.231
37) Nitrobenzene	(2)	6.897	77	8544	0.126
39) N-Nitrosopiperidine	(2)	7.136	114	3210	0.114
40) Isophorone	(2)	7.288	82	14776	0.125
42) 2-Nitrophenol	(2)	7.399	139	2257	0.087
45) 2,4-Dimethylphenol	(2)	7.504	107	6641	0.116
47) Benzoic acid	(2)	7.568	105	9965	0.251
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3021	0.124
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	9510	0.128

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
49) 2,4-Dichlorophenol	(2)	7.772	162	4415	0.109
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4887	0.114
52)*Naphthalene-d8	(2)	7.987	136	675195	5.000
53) Naphthalene	(2)	8.022	128	17062	0.121
55) 4-Chloroaniline	(2)	8.127	127	8283	0.134
56) 2,6-Dichlorophenol	(2)	8.133	162	4277	0.111
57) Hexachloropropene	(2)	8.174	213	2448	0.086
58) Hexachlorobutadiene	(2)	8.250	225	2766	0.112
60) Quinoline	(2)	8.547	129	14809	0.152
61) Caprolactam	(2)	8.634	113	2282	0.126
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	5553	0.129
63) 4-Chloro-3-methylphenol	(2)	8.926	107	5929	0.119
64) Safrole	(2)	9.025	162	4340	0.115
65) 2-Methylnaphthalene	(2)	9.130	142	11868	0.123
66) 1-Methylnaphthalene	(2)	9.287	142	10863	0.123
67) Hexachlorocyclopentadiene	(3)	9.398	237	1612	0.071
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.398	216	5395	0.120
69) cis-Isosafrole	(3)	9.497	162	787	0.111
70) 2,4,6-Trichlorophenol	(3)	9.590	196	3352	0.109
71) 2,4,5-Trichlorophenol	(3)	9.637	196	3643	0.113
72)$2-Fluorobiphenyl	(3)	9.748	172	26357	0.269
74) Isosafrole	(3)	9.858	162	4585	0.116
73) trans-Isosafrole	(3)	9.858	162	4585	0.116
75) 1,1'-Biphenyl	(3)	9.893	154	13490	0.122
76) 2-Chloronaphthalene	(3)	9.899	162	11235	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12712	0.148
82) Diphenyl ether	(3)	10.080	170	8236	0.128
83) 2-Nitroaniline	(3)	10.080	138	3138	0.100
84) 1,4-Naphthoquinone	(3)	10.191	158	3989	0.098
85) 1,4-Dinitrobenzene	(3)	10.319	168	1125	0.069
86) Dimethylphthalate	(3)	10.424	163	13121	0.129
87) 1,3-Dinitrobenzene	(3)	10.430	168	1495	0.078
88) 2,6-Dinitrotoluene	(3)	10.494	165	2253	0.092
90) Acenaphthylene	(3)	10.558	152	16378	0.122
91) 3-Nitroaniline	(3)	10.738	138	2678	0.095
92)*Acenaphthene-d10	(3)	10.791	164	386904	5.000
93) Acenaphthene	(3)	10.838	153	11840	0.127
94) 2,4-Dinitrophenol	(3)	10.907	184	2929	0.258
96) 4-Nitrophenol	(3)	11.018	109	6470	0.361
95) Pentachlorobenzene	(3)	11.036	250	4685	0.130

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
97) Dibenzofuran	(3)	11.094	168	16311	0.124
98) 2,4-Dinitrotoluene	(3)	11.100	165	2709	0.089
99) 1-Naphthylamine	(3)	11.199	143	11145	0.116
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2308	0.091
101) 2-Naphthylamine	(3)	11.310	143	12227	0.123
102) Diethylphthalate	(3)	11.467	149	12664	0.126
103) Fluorene	(3)	11.549	166	13013	0.123
104) Thionazin	(3)	11.560	107	3060	0.139
106) 5-Nitro-o-toluidine	(3)	11.572	152	3031	0.102
107) 4-Nitroaniline	(3)	11.572	138	2893	0.107
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6859	0.134
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	3453	0.207
109) N-Nitrosodiphenylamine	(4)	11.723	169	11124	0.129
110) NDPA as diphenylamine	(4)	11.723	169	11124	0.129
111) 1,2-Diphenylhydrazine	(4)	11.764	77	16987	0.122
112)$2,4,6-Tribromophenol	(3)	11.840	330	2419	0.222
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	2806	0.138
117) Diallate (peak 1)	(4)	12.085	86	6127	0.087
118) Phorate	(4)	12.091	75	10537	0.125
119) Phenacetin	(4)	12.102	108	6376	0.102
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3210	0.120
121) Diallate (peak 2)	(4)	12.190	86	769	0.026
122) Hexachlorobenzene	(4)	12.207	284	3315	0.126
123) Dimethoate	(4)	12.277	87	6002	0.105
124) Atrazine	(4)	12.388	200	2898	0.105
125) Pentachlorophenol	(4)	12.458	266	1375	0.070
126) Pentachloronitrobenzene	(4)	12.470	237	1266	0.098
127) 4-Aminobiphenyl	(4)	12.475	169	12135	0.109
129) Pronamide	(4)	12.574	173	5209	0.107
130)*Phenanthrene-d10	(4)	12.685	188	662675	5.000
131) Phenanthrene	(4)	12.714	178	19587	0.129
134) Anthracene	(4)	12.778	178	18511	0.122
135) Carbazole	(4)	12.994	167	18175	0.120
136) Methyl parathion	(4)	13.204	109	3103	0.075
137) Di-n-butylphthalate	(4)	13.513	149	21722	0.116
138) Parathion	(4)	13.740	109	2270	0.086
140) Isodrin	(4)	14.125	193	2777	0.148
142) Fluoranthene	(4)	14.335	202	20363	0.120
144) Benzidine	(5)	14.562	184	88772	0.761
145)*Pyrene-d10	(5)	14.644	212	830589	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1182.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 11:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
146) Pyrene	(5)	14.673	202	24159	0.131
149)$Terphenyl-d14	(5)	14.958	244	28150	0.264
150) p-Dimethylaminoazobenzene	(5)	15.192	225	2695	0.074
151) Chlorobenzilate	(5)	15.291	139	6067	0.111
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	8981	0.075
153) Butylbenzylphthalate	(5)	15.815	149	7839	0.095
156) 2-Acetylaminofluorene	(5)	16.153	181	3961	0.055
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	5296	0.092
158) Benzo(a)anthracene	(5)	16.660	228	17959	0.118
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	2581	0.083
161) Chrysene	(5)	16.719	228	18348	0.123
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	13020	0.115
165) 6-Methylchrysene	(5)	17.517	242	14196	0.128
166) Di-n-octylphthalate	(6)	18.042	149	13839	0.074
168) Benzo(b)fluoranthene	(6)	18.502	252	16394	0.120
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	5521	0.095
170) Benzo(k)fluoranthene	(6)	18.543	252	17604	0.124
171) Benzo(a)pyrene	(6)	19.021	252	15464	0.121
172)*Perylene-d12	(6)	19.114	264	590527	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	7441	0.115
174) Dibenz(a,h)acridine	(6)	20.402	279	8282	0.091
175) Dibenz(a,j)acridine	(6)	20.472	279	9481	0.102
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	11904	0.109
177) Dibenz(a,h)anthracene	(6)	20.752	278	10127	0.110
178) Benzo(g,h,i)perylene	(6)	21.073	276	10674	0.116
179) Diallate TRANS/CIS	(4)			6896	0.115
182) 2,4_2,6-Dinitrotoluenes	(3)			4962	0.181

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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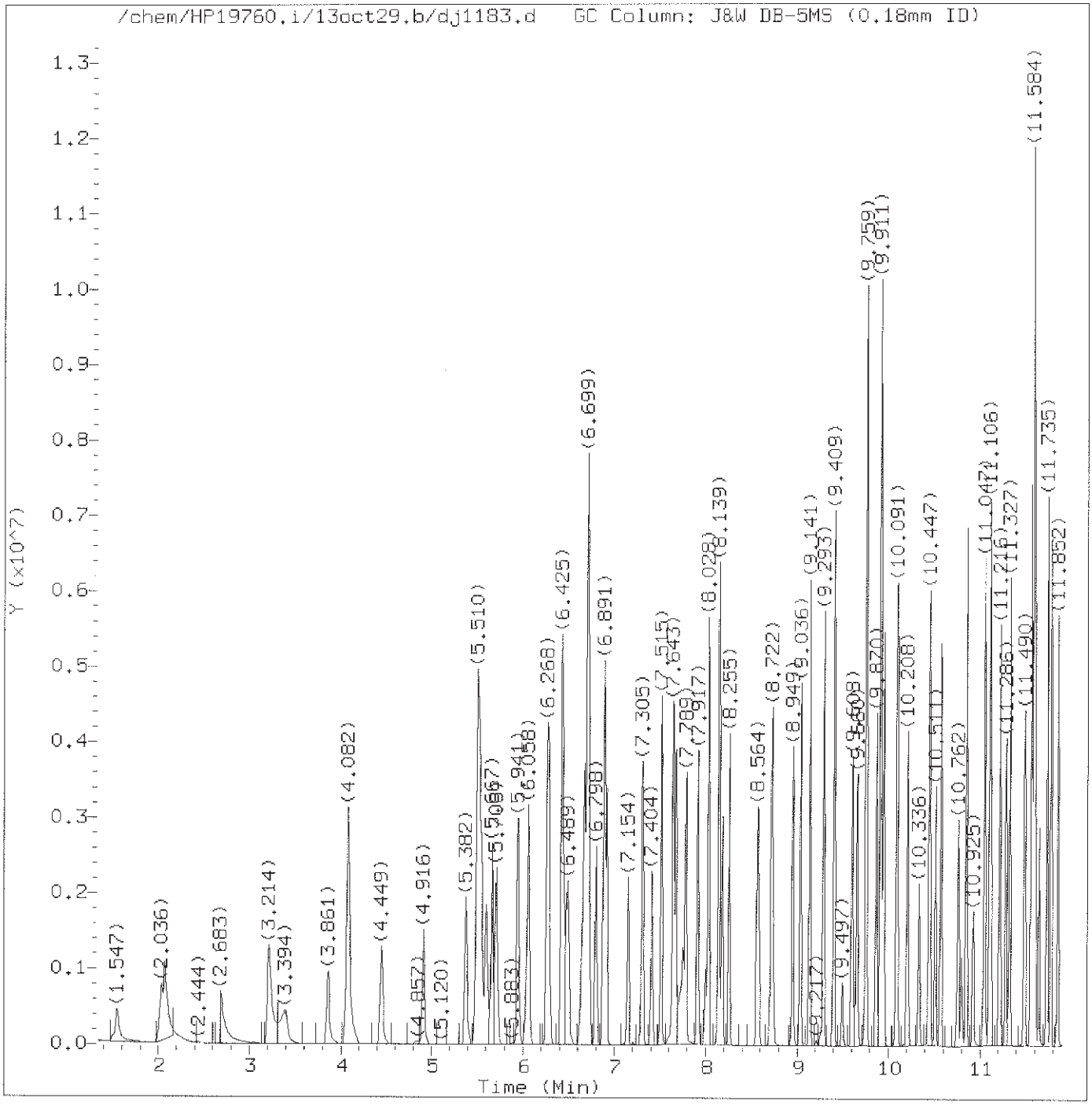
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

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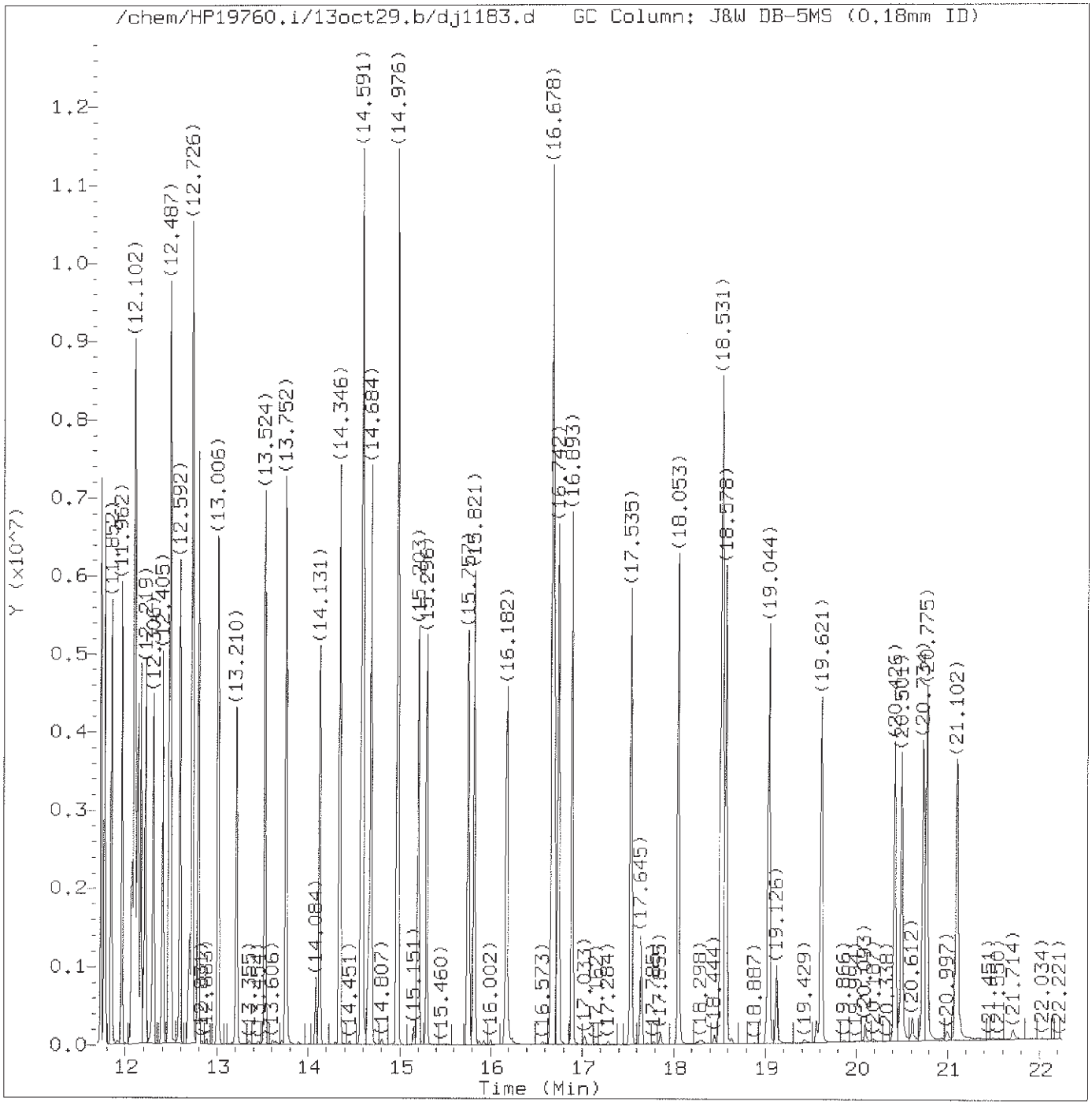
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	533811M	31.085
2) N-Nitrosodimethylamine	(1)	2.030	74	962330	29.915
3) Pyridine	(1)	2.071	79	1618210	30.569
4) 2-Picoline	(1)	3.214	93	1649187	29.927
5) N-Nitrosomethylethylamine	(1)	3.394	88	732071	29.641
6) Methyl methanesulfonate	(1)	3.861	80	814086	29.472
7)$2-Fluorophenol	(1)	4.082	112	2413564	58.275
8) N-Nitrosodiethylamine	(1)	4.449	102	690447	29.556
10) Ethyl methanesulfonate	(1)	4.916	109	648760	29.501
11) Benzaldehyde	(1)	5.382	77	936320	25.592
12)$Phenol-d5	(1)	5.510	99	3225817	57.419
13)$Phenol-d6	(1)	5.510	99	3225817	57.419
14) Phenol	(1)	5.528	94	1839299	28.692
15) Aniline	(1)	5.545	93	2320471	28.951
16) bis(2-Chloroethyl)ether	(1)	5.667	93	1475312	29.040
17) 2-Chlorophenol	(1)	5.714	128	1188155	29.051
18) 1,3-Dichlorobenzene	(1)	5.941	146	1241476	29.210
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	136880	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	1240683	29.139
23) Benzyl alcohol	(1)	6.262	108	859919	29.926
24) 1,2-Dichlorobenzene	(1)	6.279	146	1143792	28.859
25) Indene	(1)	6.419	115	2285068	34.155
26) 2-Methylphenol	(1)	6.437	108	1169803	28.913
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1784369	28.656
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1784369	28.656
29) N-Nitrosopyrrolidine	(1)	6.641	100	704808	29.208
30) Acetophenone	(1)	6.670	105	1840492	29.944
33) 4-Methylphenol	(1)	6.699	108	1237807	27.916
31) N-Nitroso-di-n-propylamine	(1)	6.705	70	983097	27.647
32) N-Nitrosomorpholine	(1)	6.711	56	764484	27.801
34) o-Toluidine	(1)	6.722	106	1930813	28.327
35) Hexachloroethane	(1)	6.798	117	530896	29.030
36)$Nitrobenzene-d5	(2)	6.891	82	2871559	57.502
37) Nitrobenzene	(2)	6.921	77	1522252	28.871
39) N-Nitrosopiperidine	(2)	7.154	114	641771	29.090
40) Isophorone	(2)	7.305	82	2655803	28.949
42) 2-Nitrophenol	(2)	7.410	139	586205	29.015
45) 2,4-Dimethylphenol	(2)	7.515	107	1286581	28.946
46) O,O,O-triethylphosphorothioate	(2)	7.649	198	568840	29.479
48) bis(2-Chloroethoxy)methane	(2)	7.678	93	1689288M	29.105

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.737	105	1076787	31.759
49) 2,4-Dichlorophenol	(2)	7.789	162	921015	29.176
51) 1,2,4-Trichlorobenzene	(2)	7.917	180	976302	29.168
52)*Naphthalene-d8	(2)	7.993	136	543087	5.000
53) Naphthalene	(2)	8.028	128	3205184	28.894
55) 4-Chloroaniline	(2)	8.139	127	1344813	28.409
56) 2,6-Dichlorophenol	(2)	8.145	162	860749	28.798
57) Hexachloropropene	(2)	8.180	213	695357	30.198
58) Hexachlorobutadiene	(2)	8.255	225	583889	29.701
60) Quinoline	(2)	8.564	129	2197862	29.010
62) N-Nitrosodi-n-butylamine	(2)	8.722	84	1227168	32.460
61) Caprolactam	(2)	8.733	113	420909	29.398
63) 4-Chloro-3-methylphenol	(2)	8.949	107	1126249	28.958
64) Safrole	(2)	9.036	162	859283	29.123
65) 2-Methylnaphthalene	(2)	9.141	142	2132185	28.274
66) 1-Methylnaphthalene	(2)	9.293	142	1948789	28.310
67) Hexachlorocyclopentadiene	(3)	9.404	237	551060	30.214
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.409	216	1025079	29.290
69) cis-Isosafrole	(3)	9.497	162	164912	29.571
70) 2,4,6-Trichlorophenol	(3)	9.608	196	701260	29.191
71) 2,4,5-Trichlorophenol	(3)	9.660	196	712383	28.825
72)$2-Fluorobiphenyl	(3)	9.759	172	4163177	56.376
74) Isosafrole	(3)	9.870	162	872242	28.758
73) trans-Isosafrole	(3)	9.870	162	872242	28.758
75) 1,1'-Biphenyl	(3)	9.911	154	2438245	28.697
76) 2-Chloronaphthalene	(3)	9.917	162	1792144	27.373
77) 1-Chloronaphthalene	(3)	9.946	162	1935636	29.072
82) Diphenyl ether	(3)	10.086	170	1385610	28.439
83) 2-Nitroaniline	(3)	10.097	138	664121	28.161
84) 1,4-Naphthoquinone	(3)	10.208	158	893735	28.669
85) 1,4-Dinitrobenzene	(3)	10.336	168	366530	29.038
86) Dimethylphthalate	(3)	10.447	163	2156829	28.145
87) 1,3-Dinitrobenzene	(3)	10.453	168	415458	28.575
88) 2,6-Dinitrotoluene	(3)	10.511	165	526071	28.342
90) Acenaphthylene	(3)	10.569	152	2971115	28.382
91) 3-Nitroaniline	(3)	10.762	138	629662	28.913
92)*Acenaphthene-d10	(3)	10.797	164	309287	5.000
93) Acenaphthene	(3)	10.849	153	1954037	27.302
94) 2,4-Dinitrophenol	(3)	10.925	184	319330	32.390
96) 4-Nitrophenol	(3)	11.047	109	403476	29.063

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.047	250	814606	29.103
97) Dibenzofuran	(3)	11.106	168	2777166	28.125
98) 2,4-Dinitrotoluene	(3)	11.123	165	702019	29.432
99) 1-Naphthylamine	(3)	11.216	143	2152834	29.001
100) 2,3,4,6-Tetrachlorophenol	(3)	11.286	232	580597	29.353
101) 2-Naphthylamine	(3)	11.327	143	2168398	28.623
102) Diethylphthalate	(3)	11.490	149	2257543	29.056
103) Fluorene	(3)	11.560	166	2225368	27.419
104) Thionazin	(3)	11.584	107	448938	27.575
105) 4-Chlorophenyl-phenylether	(3)	11.589	204	1132180	28.764
106) 5-Nitro-o-toluidine	(3)	11.595	152	657947	28.794
107) 4-Nitroaniline	(3)	11.607	138	618137A	29.311
108) 4,6-Dinitro-2-methylphenol	(4)	11.648	198	443113	31.440
110) NDPA as diphenylamine	(4)	11.735	169	1837235	28.117
109) N-Nitrosodiphenylamine	(4)	11.735	169	1837235	28.117
111) 1,2-Diphenylhydrazine	(4)	11.776	77	2839842	27.487
112)$2,4,6-Tribromophenol	(3)	11.852	330	545042	61.237
115) Tetraethyldithiopyrophosphate	(4)	11.962	97	443512	28.444
116) 1,3,5-Trinitrobenzene	(4)	12.073	213	329707	31.413
117) Diallate (peak 1)	(4)	12.096	86	1078550	20.658
118) Phorate	(4)	12.102	75	1716065	25.356
119) Phenacetin	(4)	12.137	108	1401644	28.828
120) 4-Bromophenyl-phenylether	(4)	12.172	248	609610	29.092
121) Diallate (peak 2)	(4)	12.196	86	171573	7.282
122) Hexachlorobenzene	(4)	12.219	284	597745	28.828
123) Dimethoate	(4)	12.306	87	1223135	28.131
124) Atrazine	(4)	12.405	200	591090	28.159
125) Pentachlorophenol	(4)	12.469	266	490292	30.426
127) 4-Aminobiphenyl	(4)	12.487	169	2373398	28.203
126) Pentachloronitrobenzene	(4)	12.487	237	298768	29.348
129) Pronamide	(4)	12.592	173	1088998	28.795
130)*Phenanthrene-d10	(4)	12.697	188	533001	5.000
131) Phenanthrene	(4)	12.726	178	3186893	27.213
133) Dinoseb	(4)	12.726	211	657031	31.680
134) Anthracene	(4)	12.796	178	3353888	28.293
135) Carbazole	(4)	13.012	167	3247508	28.207
136) Methyl parathion	(4)	13.210	109	911392	28.595
137) Di-n-butylphthalate	(4)	13.524	149	3923710	27.913
138) Parathion	(4)	13.752	109	577302	28.443
139) 4-Nitroquinoline-1-oxide	(4)	13.758	190	414372	33.695

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.131	193	429506	29.164
142) Fluoranthene	(4)	14.346	202	3926948	29.187
144) Benzidine	(5)	14.591	184	7555861	84.169
145)*Pyrene-d10	(5)	14.649	212	680467	5.000
146) Pyrene	(5)	14.684	202	3955299	27.338
149)$Terphenyl-d14	(5)	14.976	244	4971452	58.391
150) p-Dimethylaminoazobenzene	(5)	15.203	225	881982	29.734
151) Chlorobenzilate	(5)	15.296	139	1231178	28.627
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2630050	28.295
153) Butylbenzylphthalate	(5)	15.821	149	1808532	28.242
156) 2-Acetylaminofluorene	(5)	16.182	181	1719429	29.561
159) 3,3'-Dichlorobenzidine	(5)	16.678	252	1398429	29.751
158) Benzo(a)anthracene	(5)	16.678	228	3820231	30.341
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.695	231	736186	29.405
161) Chrysene	(5)	16.742	228	3459397	28.834
162) bis(2-Ethylhexyl)phthalate	(5)	16.893	149	2465418	28.185
165) 6-Methylchrysene	(5)	17.540	242	2639356	29.503
166) Di-n-octylphthalate	(6)	18.053	149	4322950	28.917
168) Benzo(b)fluoranthene	(6)	18.525	252	3518347	30.734
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.537	256	1691748	32.365
170) Benzo(k)fluoranthene	(6)	18.578	252	3417738	29.501
171) Benzo(a)pyrene	(6)	19.044	252	3191333	30.085
172)*Perylene-d12	(6)	19.126	264	487829	5.000
173) 3-Methylcholanthrene	(6)	19.621	268	1637077	30.301
174) Dibenz(a,h)acridine	(6)	20.426	279	2334375	30.582
175) Dibenz(a,j)acridine	(6)	20.501	279	2348896	30.240
176) Indeno(1,2,3-cd)pyrene	(6)	20.734	276	3014289	32.261
177) Dibenz(a,h)anthracene	(6)	20.775	278	2583344	32.532
178) Benzo(g,h,i)perylene	(6)	21.108	276	2403123	30.977
179) Diallate TRANS/CIS	(4)			1250123	27.751
182) 2,4_2,6-Dinitrotoluenes	(3)			1228090	57.774

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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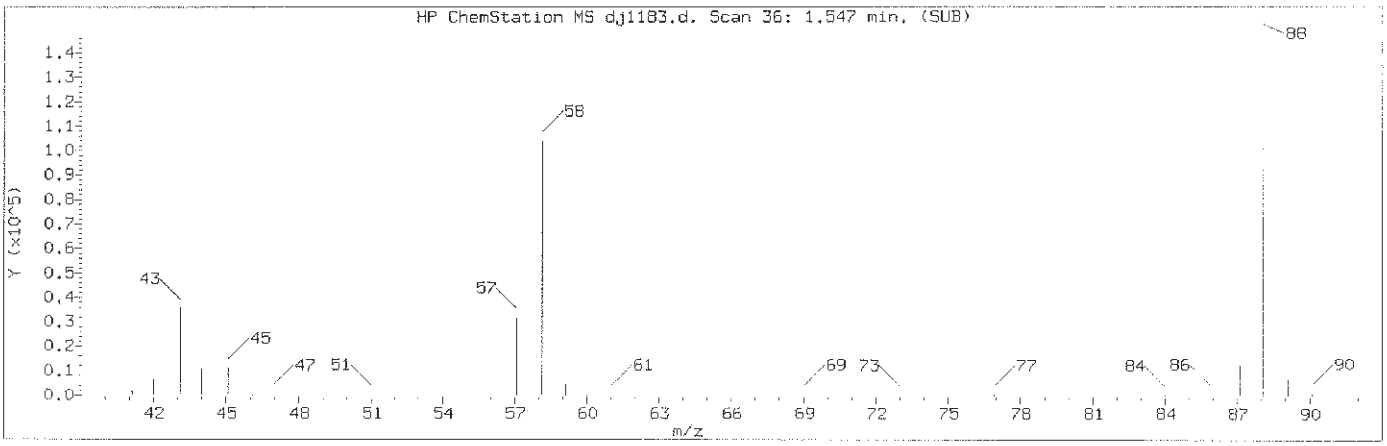
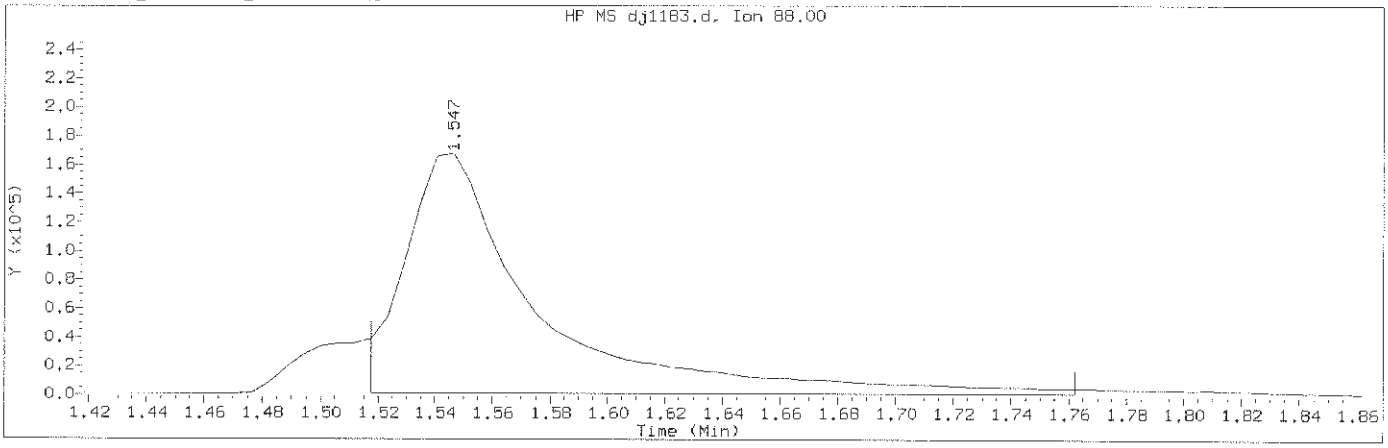
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area (flag)	: 533811M		
On-Column Amount (ng/ul)	: 31.0849		
Integration start scan	: 30	Integration stop scan:	72
Y at integration start	: 1385	Y at integration end:	1385

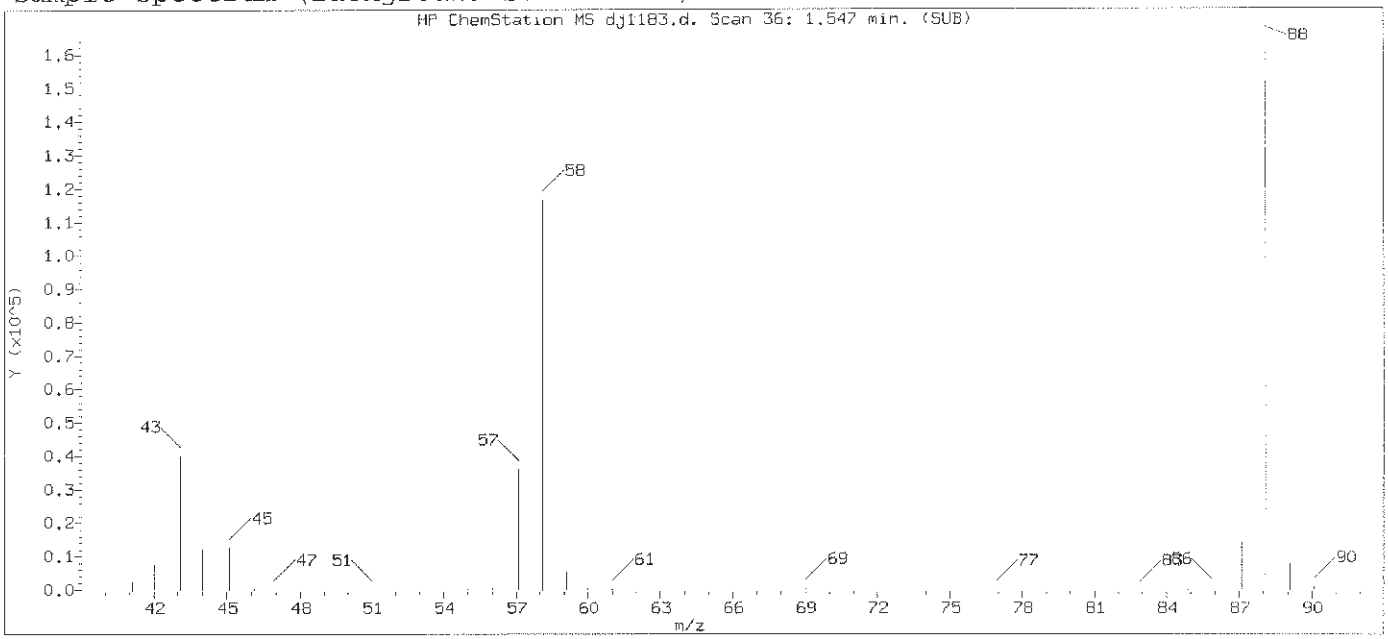
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

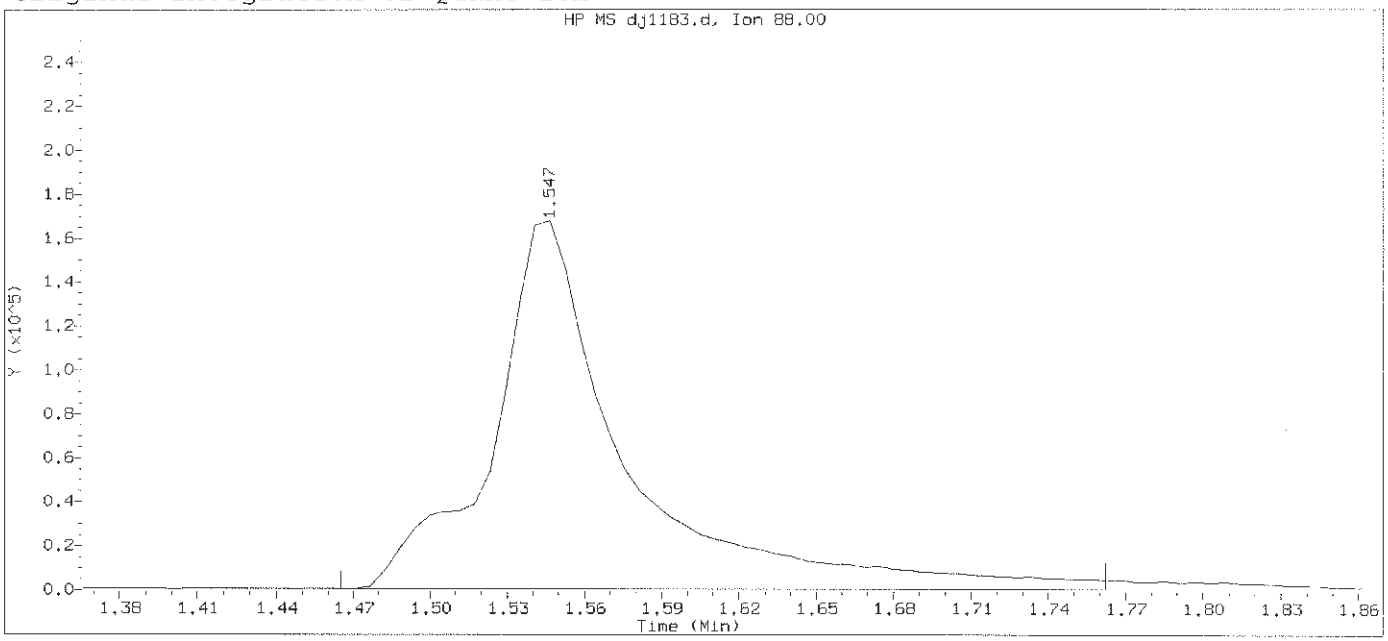
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

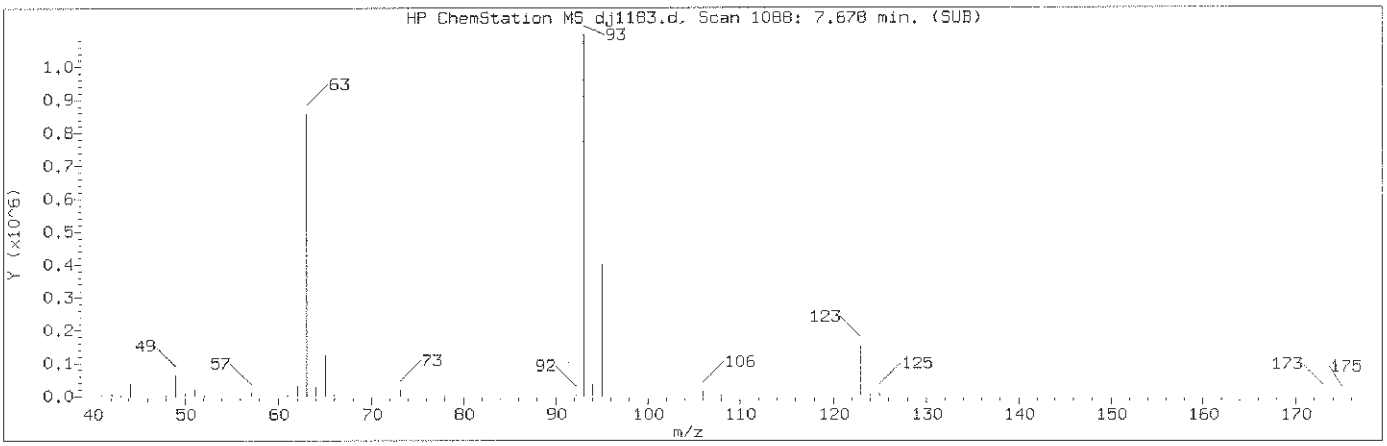
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

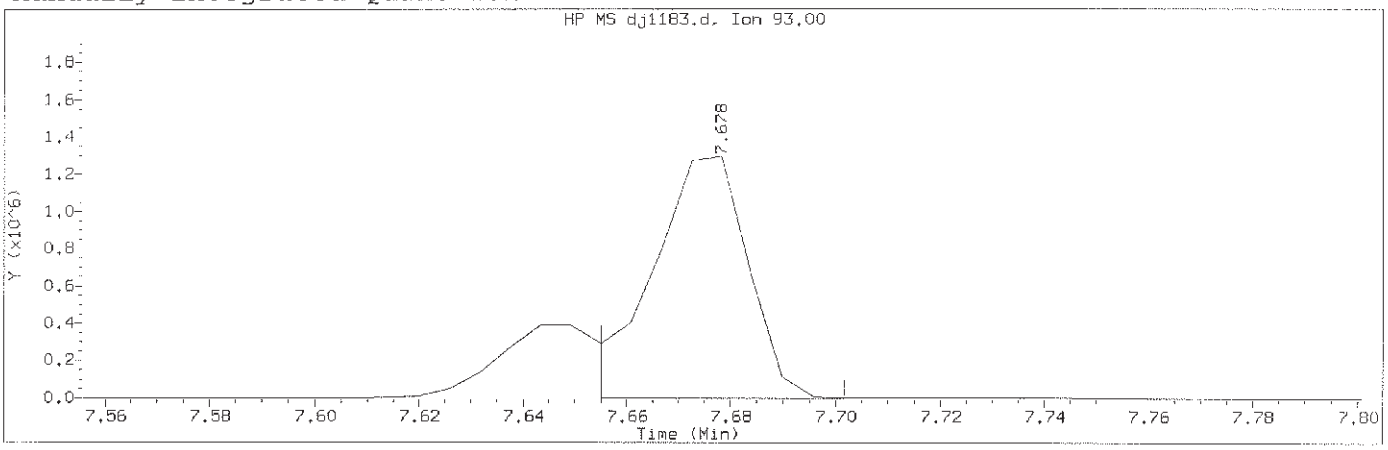
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 36		
Retention Time (minutes)	: 1.547		
Quant Ion	: 88.00		
Area	: 600995		
On-column Amount (ng/ul)	: 35.2969		
Integration start scan	: 21	Integration stop scan:	72
Y at integration start	: 576	Y at integration end:	576

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1088		
Retention Time (minutes)	: 7.678		
Quant Ion	: 93.00		
Area (flag)	: 1689288M		
On-Column Amount (ng/ul)	: 29.1048		
Integration start scan	: 1083	Integration stop scan:	1091
Y at integration start	: -679	Y at integration end:	-679

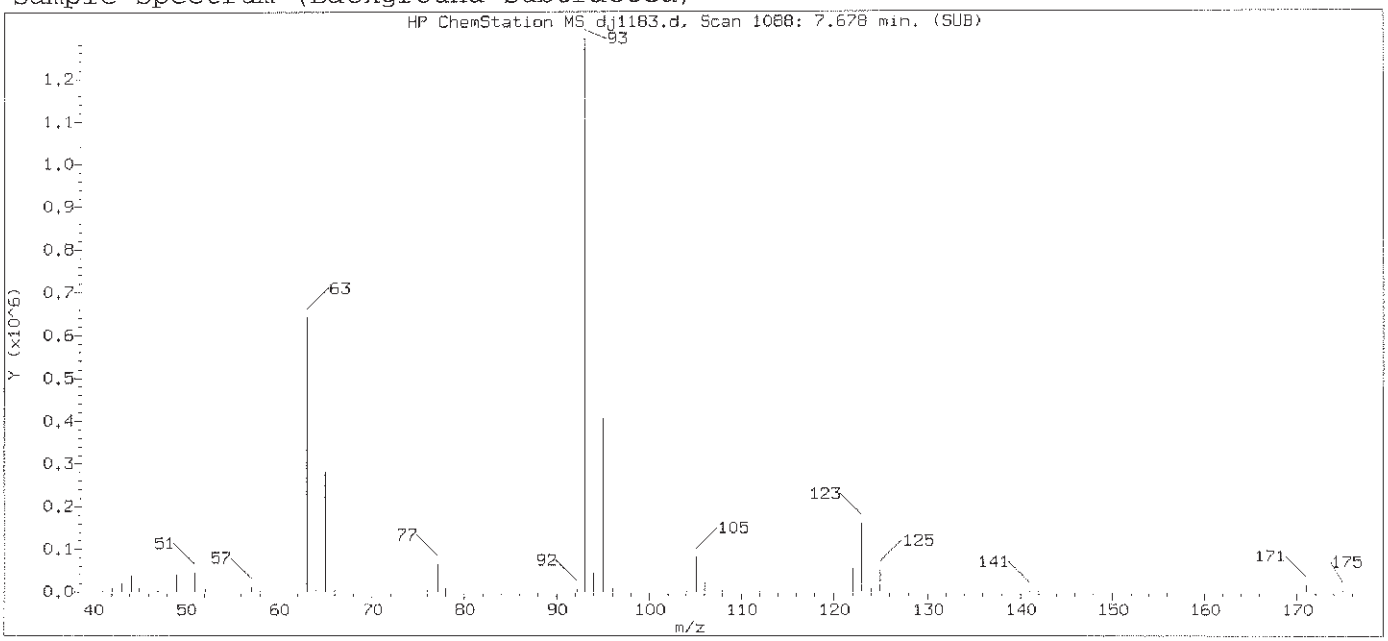
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

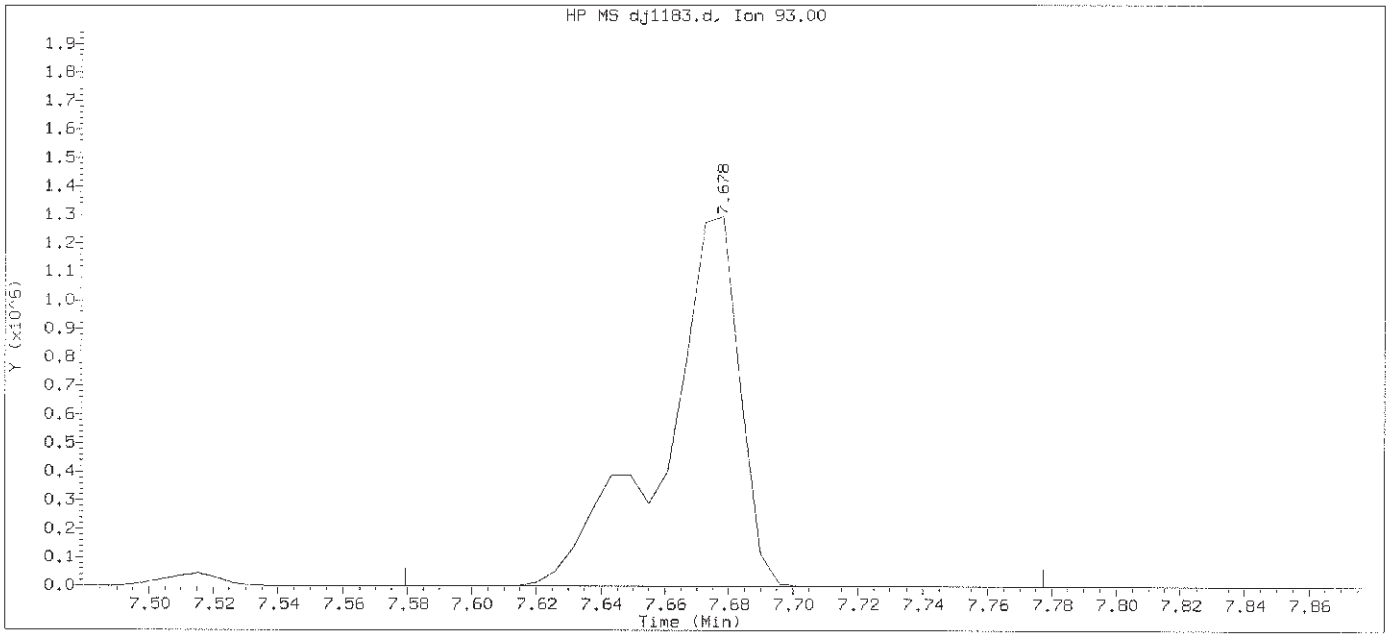
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

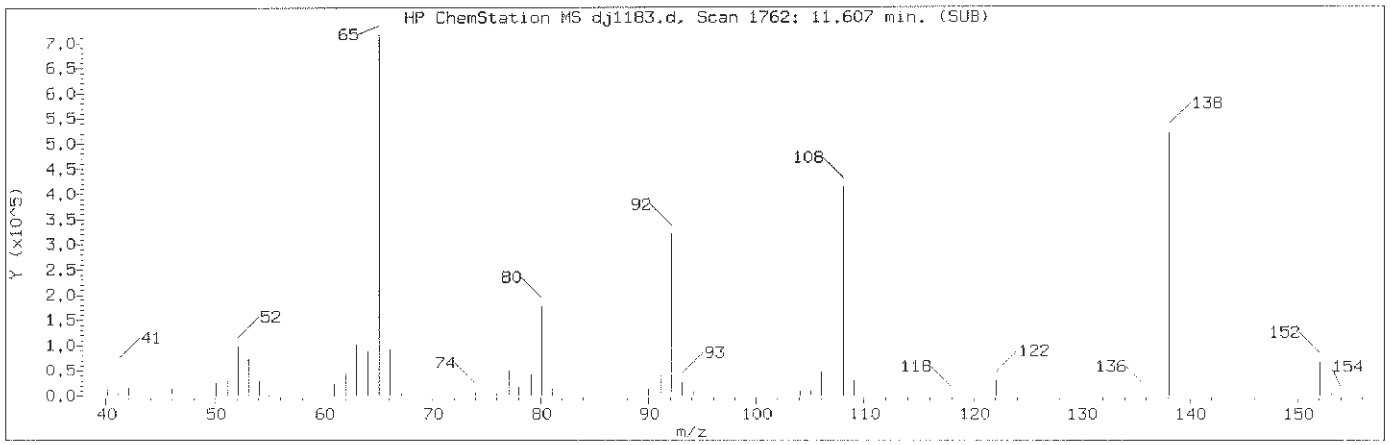
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

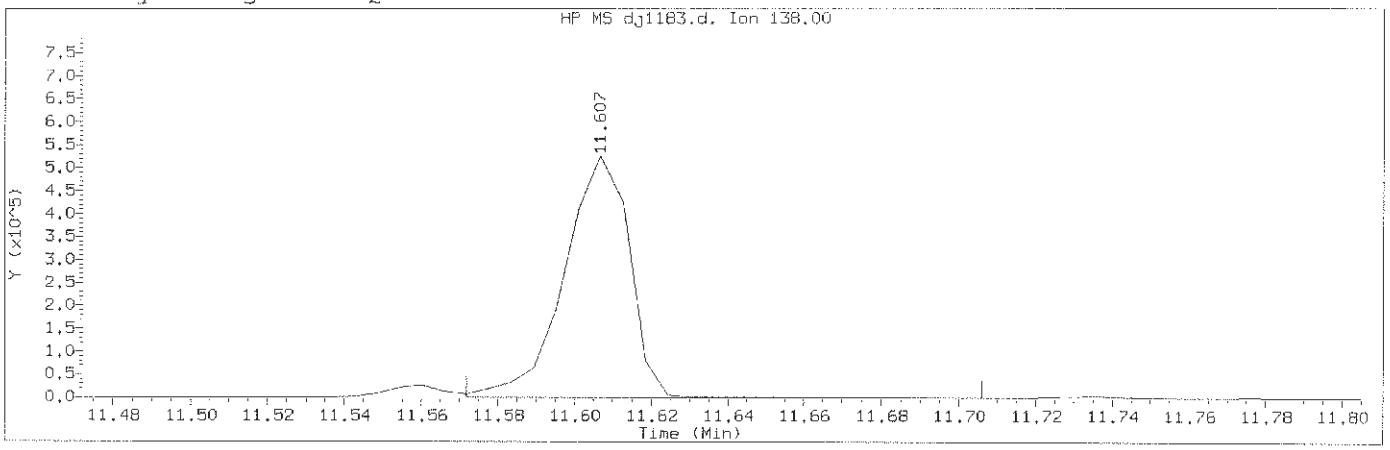
Compound Number	:	48
Compound Name	:	bis(2-Chloroethoxy)methane
Scan Number	:	1088
Retention Time (minutes)	:	7.678
Quant Ion	:	93.00
Area	:	2128683
On-column Amount (ng/ul)	:	32.5033
Integration start scan	:	1070 Integration stop scan: 1104
Y at integration start	:	0 Y at integration end: 63

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1762		
Retention Time (minutes)	: 11.607		
Quant Ion	: 138.00		
Area (flag)	: 618137A		
On-Column Amount (ng/ul)	: 29.3114		
Integration start scan	: 1755	Integration stop scan:	1778
Y at integration start	: 0	Y at integration end:	0

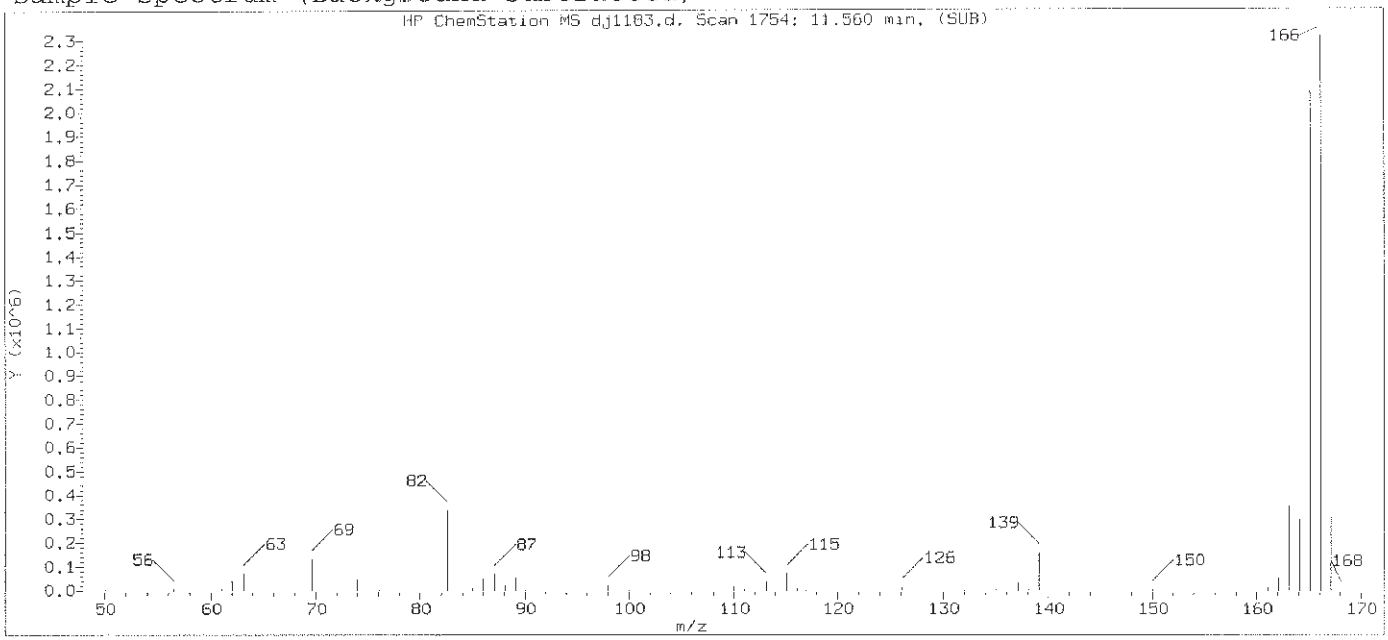
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522

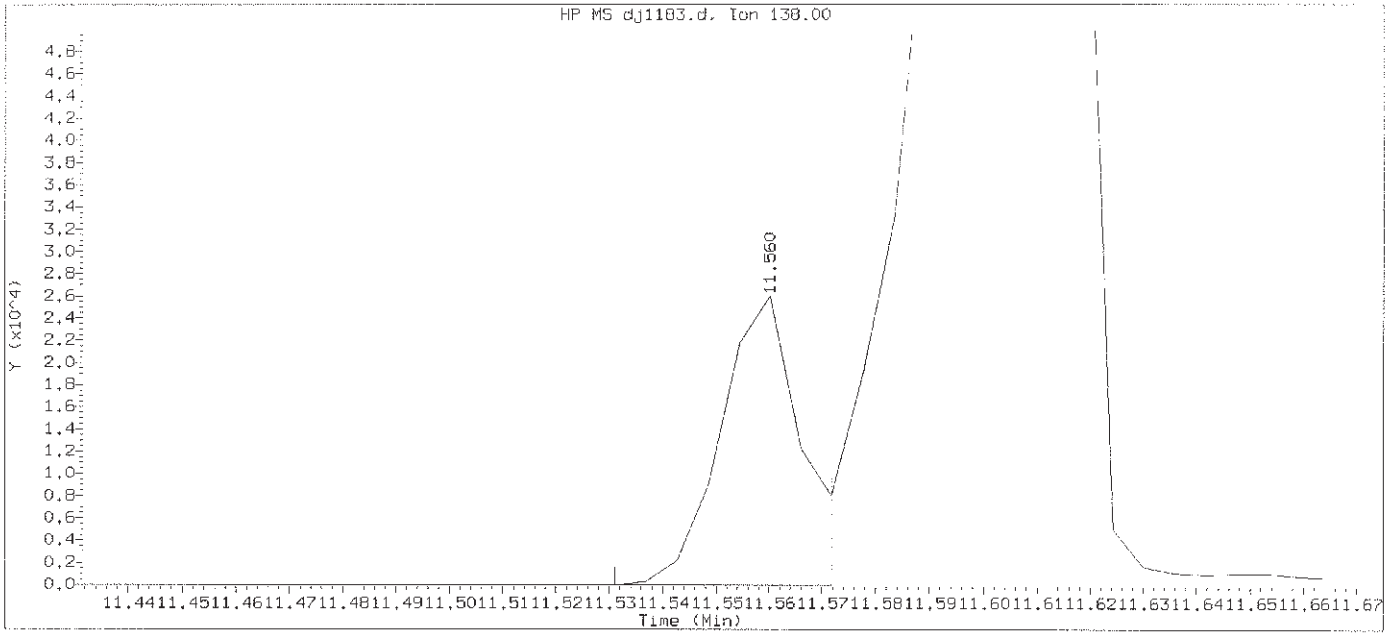
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



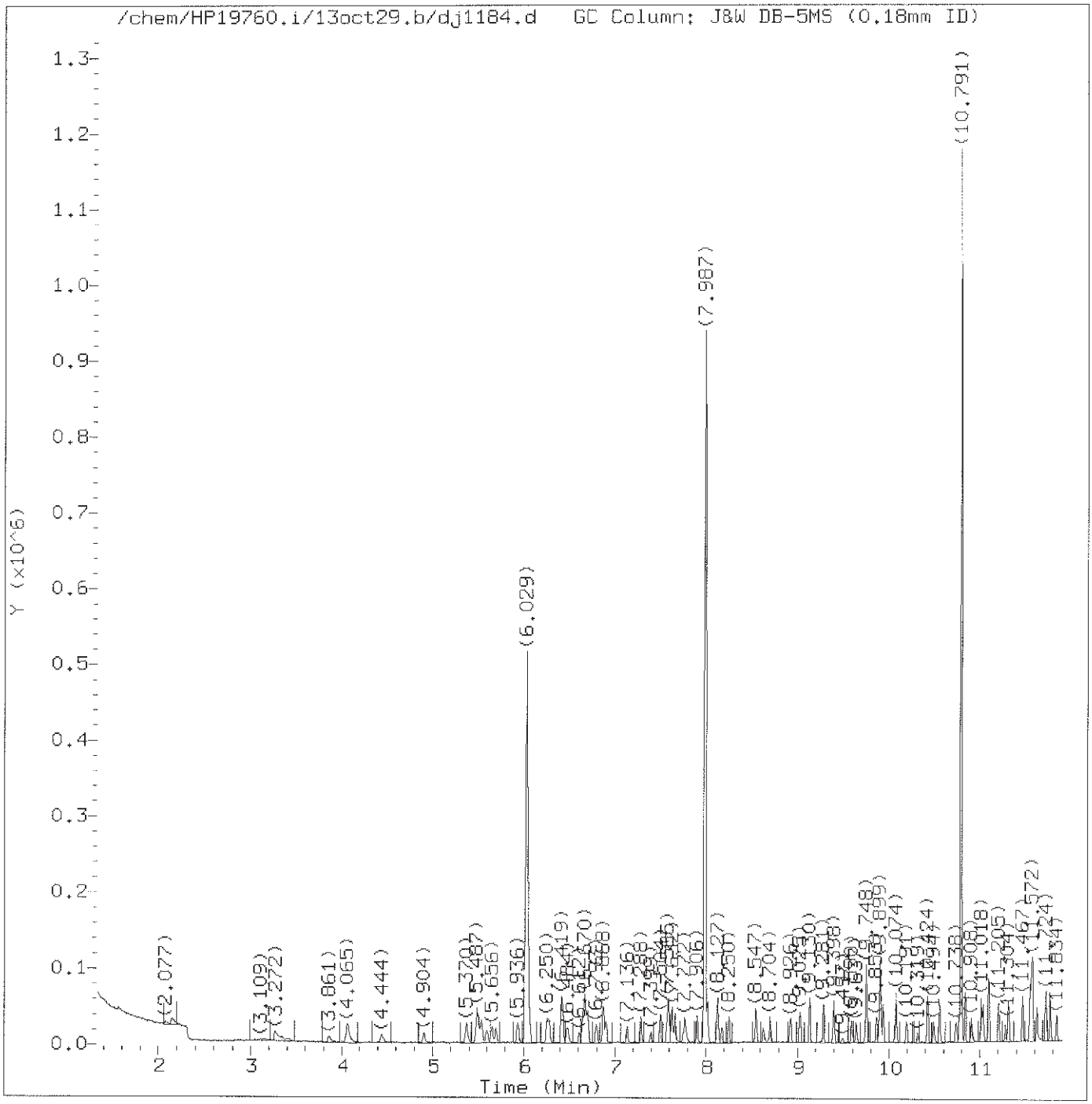
Data File: /chem/HP19760.i/13oct29.b/dj1183.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:21 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:39
Date, time and analyst ID of latest file update: 29-Oct-2013 21:39 bkg00522

Sample Name: SSTD30 Lab Sample ID: STD2813

Compound Number	: 107		
Compound Name	: 4-Nitroaniline		
Scan Number	: 1754		
Retention Time (minutes)	: 11.560		
Quant Ion	: 138.00		
Area	: 26465		
On-column Amount (ng/ul)	: 1.5063		
Integration start scan	: 1748	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:23.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

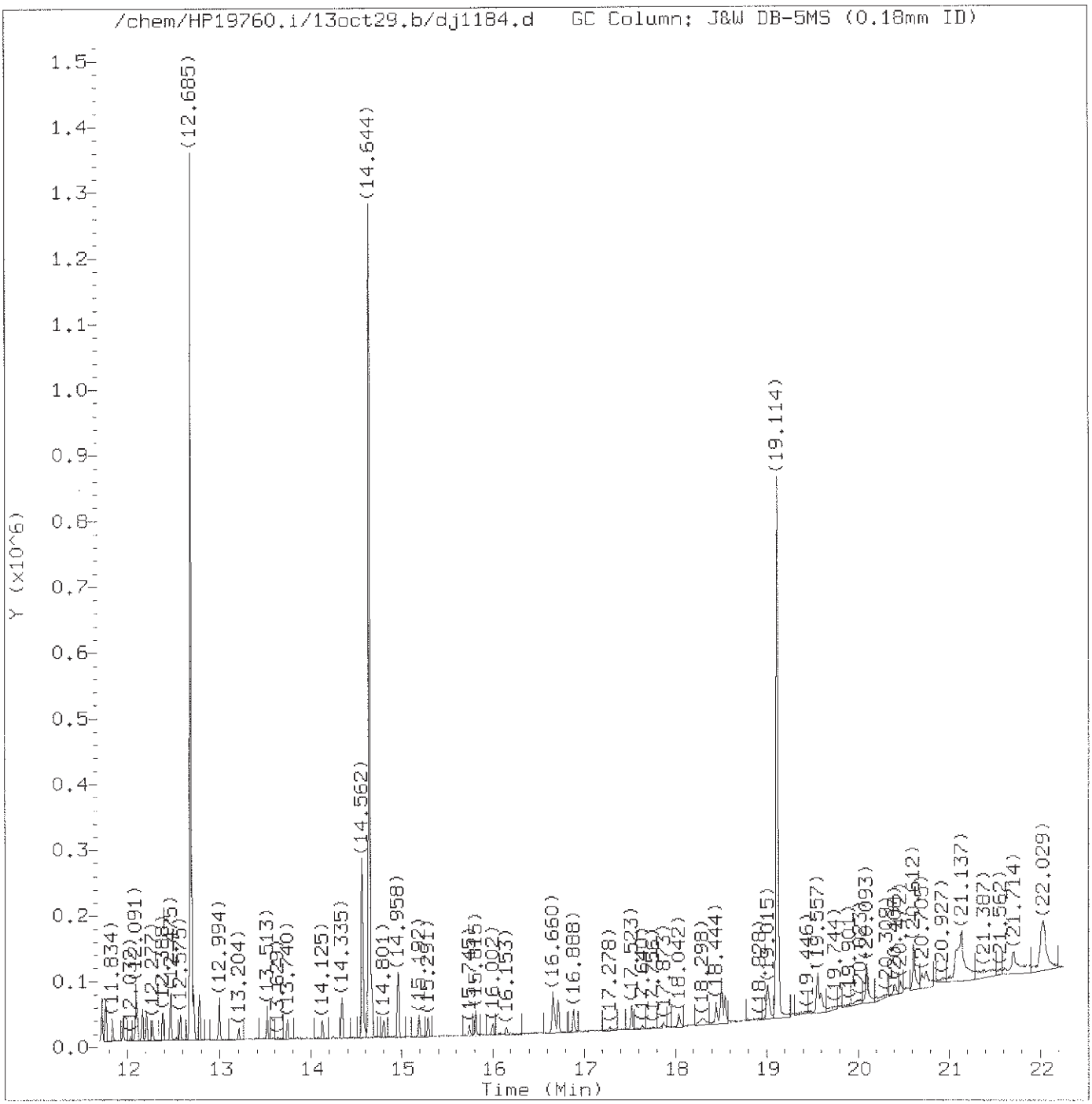
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.564	88	3696M	0.232
2) N-Nitrosodimethylamine	(1)	2.077	74	6220M	0.221
3) Pyridine	(1)	2.147	79	17293M	0.352
4) 2-Picoline	(1)	3.266	93	13682M	0.262
5) N-Nitrosomethylethylamine	(1)	3.418	88	5080	0.231
6) Methyl methanesulfonate	(1)	3.861	80	6376M	0.249
7)$2-Fluorophenol	(1)	4.065	112	19200	0.500
8) N-Nitrosodiethylamine	(1)	4.444	102	5285M	0.246
10) Ethyl methanesulfonate	(1)	4.904	109	5358M	0.258
11) Benzaldehyde	(1)	5.376	77	11103	0.327
12)$Phenol-d5	(1)	5.487	99	26913	0.511
13)$Phenol-d6	(1)	5.487	99	26913	0.511
14) Phenol	(1)	5.504	94	16178	0.264
15) Aniline	(1)	5.539	93	19481	0.258
16) bis(2-Chloroethyl)ether	(1)	5.656	93	12791	0.264
17) 2-Chlorophenol	(1)	5.703	128	9542	0.251
18) 1,3-Dichlorobenzene	(1)	5.936	146	10610	0.263
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	126889	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	11036	0.269
23) Benzyl alcohol	(1)	6.250	108	6796	0.255
24) 1,2-Dichlorobenzene	(1)	6.280	146	10030	0.265
25) Indene	(1)	6.414	115	21122	0.326
26) 2-Methylphenol	(1)	6.425	108	9745	0.256
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	16394	0.272
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	16394	0.272
29) N-Nitrosopyrrolidine	(1)	6.612	100	5168	0.237
30) Acetophenone	(1)	6.653	105	15413	0.263
33) 4-Methylphenol	(1)	6.670	108	11034	0.262
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	9090	0.267
32) N-Nitrosomorpholine	(1)	6.682	56	7524	0.278
34) o-Toluidine	(1)	6.699	106	17422	0.267
35) Hexachloroethane	(1)	6.793	117	4580	0.263
36)$Nitrobenzene-d5	(2)	6.868	82	23926	0.516
37) Nitrobenzene	(2)	6.897	77	12719	0.259
39) N-Nitrosopiperidine	(2)	7.136	114	5015	0.249
40) Isophorone	(2)	7.288	82	21125	0.252
42) 2-Nitrophenol	(2)	7.399	139	3541	0.208
45) 2,4-Dimethylphenol	(2)	7.504	107	10359	0.254
47) Benzoic acid	(2)	7.585	105	30416	0.983
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	4669	0.260

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	14395	0.264
49) 2,4-Dichlorophenol	(2)	7.772	162	7102	0.248
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	8785	0.274
52)*Naphthalene-d8	(2)	7.987	136	495519	5.000
53) Naphthalene	(2)	8.022	128	30041	0.284
55) 4-Chloroaniline	(2)	8.127	127	11979	0.268
56) 2,6-Dichlorophenol	(2)	8.133	162	6778	0.249
57) Hexachloropropene	(2)	8.174	213	4815	0.236
58) Hexachlorobutadiene	(2)	8.250	225	4973	0.268
60) Quinoline	(2)	8.547	129	19114	0.267
61) Caprolactam	(2)	8.629	113	3083	0.236
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	7870	0.228
63) 4-Chloro-3-methylphenol	(2)	8.926	107	8404	0.241
64) Safrole	(2)	9.025	162	6608	0.247
65) 2-Methylnaphthalene	(2)	9.130	142	18878	0.268
66) 1-Methylnaphthalene	(2)	9.281	142	16987	0.265
67) Hexachlorocyclopentadiene	(3)	9.398	237	2826	0.169
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	8849	0.267
69) cis-Isosafrole	(3)	9.497	162	1141	0.232
70) 2,4,6-Trichlorophenol	(3)	9.590	196	4697	0.225
71) 2,4,5-Trichlorophenol	(3)	9.637	196	5103	0.233
72)$2-Fluorobiphenyl	(3)	9.748	172	39741	0.556
74) Isosafrole	(3)	9.853	162	6499	0.239
73) trans-Isosafrole	(3)	9.853	162	6499	0.239
75) 1,1'-Biphenyl	(3)	9.893	154	22904	0.278
76) 2-Chloronaphthalene	(3)	9.899	162	17748	0.279
77) 1-Chloronaphthalene	(3)	9.934	162	16994	0.269
82) Diphenyl ether	(3)	10.080	170	11939	0.262
83) 2-Nitroaniline	(3)	10.080	138	4042	0.204
84) 1,4-Naphthoquinone	(3)	10.191	158	4974	0.174
85) 1,4-Dinitrobenzene	(3)	10.319	168	1574	0.136
86) Dimethylphthalate	(3)	10.424	163	19473	0.278
87) 1,3-Dinitrobenzene	(3)	10.430	168	1962	0.148
88) 2,6-Dinitrotoluene	(3)	10.494	165	3241	0.207
90) Acenaphthylene	(3)	10.558	152	24150	0.252
91) 3-Nitroaniline	(3)	10.738	138	3561	0.198
92)*Acenaphthene-d10	(3)	10.791	164	282862	5.000
93) Acenaphthene	(3)	10.838	153	17930	0.268
94) 2,4-Dinitrophenol	(3)	10.908	184	5476	0.607
96) 4-Nitrophenol	(3)	11.018	109	9085	0.716

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	7421	0.275
97) Dibenzofuran	(3)	11.094	168	25697	0.272
98) 2,4-Dinitrotoluene	(3)	11.100	165	4206	0.209
99) 1-Naphthylamine	(3)	11.205	143	17020	0.250
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	3868	0.225
101) 2-Naphthylamine	(3)	11.310	143	17627	0.253
102) Diethylphthalate	(3)	11.467	149	18398	0.259
103) Fluorene	(3)	11.549	166	19968	0.264
104) Thionazin	(3)	11.566	107	3976	0.261
106) 5-Nitro-o-toluidine	(3)	11.572	152	4559	0.228
107) 4-Nitroaniline	(3)	11.572	138	4144	0.225
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	10239	0.272
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	6064	0.472
109) N-Nitrosodiphenylamine	(4)	11.724	169	15725	0.259
110) NDPA as diphenylamine	(4)	11.724	169	15725	0.259
111) 1,2-Diphenylhydrazine	(4)	11.764	77	25065	0.260
112)$2,4,6-Tribromophenol	(3)	11.840	330	3128	0.416
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	3448	0.245
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	656	0.069
117) Diallate (peak 1)	(4)	12.085	86	9067	0.189
118) Phorate	(4)	12.091	75	13349	0.232
119) Phenacetin	(4)	12.102	108	8021	0.199
120) 4-Bromophenyl-phenylether	(4)	12.161	248	4904	0.254
121) Diallate (peak 2)	(4)	12.190	86	1191	0.058
122) Hexachlorobenzene	(4)	12.207	284	5132	0.266
123) Dimethoate	(4)	12.277	87	7175	0.181
124) Atrazine	(4)	12.388	200	4752	0.249
125) Pentachlorophenol	(4)	12.458	266	1535	0.104
126) Pentachloronitrobenzene	(4)	12.470	237	1737	0.204
127) 4-Aminobiphenyl	(4)	12.475	169	18057	0.240
129) Pronamide	(4)	12.575	173	6404	0.203
130)*Phenanthrene-d10	(4)	12.685	188	486096	5.000
131) Phenanthrene	(4)	12.714	178	30082	0.273
133) Dinoseb	(4)	12.720	211	1071	0.057
134) Anthracene	(4)	12.778	178	26925	0.249
135) Carbazole	(4)	12.994	167	26389	0.251
136) Methyl parathion	(4)	13.204	109	3458	0.119
137) Di-n-butylphthalate	(4)	13.513	149	27530	0.215
138) Parathion	(4)	13.740	109	2408	0.130
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	417	0.037

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	3050	0.234
142) Fluoranthene	(4)	14.335	202	29686	0.244
144) Benzidine	(5)	14.562	184	137965	1.720
145)*Pyrene-d10	(5)	14.644	212	607939	5.000
146) Pyrene	(5)	14.673	202	35149	0.266
149)$Terphenyl-d14	(5)	14.958	244	39291	0.511
150) p-Dimethylaminoazobenzene	(5)	15.192	225	3822	0.168
151) Chlorobenzilate	(5)	15.291	139	7130	0.186
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	10857	0.131
153) Butylbenzylphthalate	(5)	15.815	149	10632	0.186
156) 2-Acetylaminofluorene	(5)	16.153	181	4634	0.089
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	7120M	0.170
158) Benzo(a)anthracene	(5)	16.660	228	23780	0.220
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	3484	0.156
161) Chrysene	(5)	16.719	228	26853	0.250
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	12026	0.154
165) 6-Methylchrysene	(5)	17.517	242	16847	0.222
166) Di-n-octylphthalate	(6)	18.042	149	14018	0.112
168) Benzo(b)fluoranthene	(6)	18.496	252	23703	0.247
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	8832	0.215
170) Benzo(k)fluoranthene	(6)	18.543	252	24057	0.248
171) Benzo(a)pyrene	(6)	19.021	252	22451	0.252
172)*Perylene-d12	(6)	19.114	264	409698	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	8857	0.211
174) Dibenz(a,h)acridine	(6)	20.402	279	9846M	0.154
175) Dibenz(a,j)acridine	(6)	20.472	279	11208M	0.172
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	15702	0.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	12821	0.204
178) Benzo(g,h,i)perylene	(6)	21.073	276	15545	0.241
179) Diallate TRANS/CIS	(4)			10258	0.250
182) 2,4_2,6-Dinitrotoluenes	(3)			7447	0.416

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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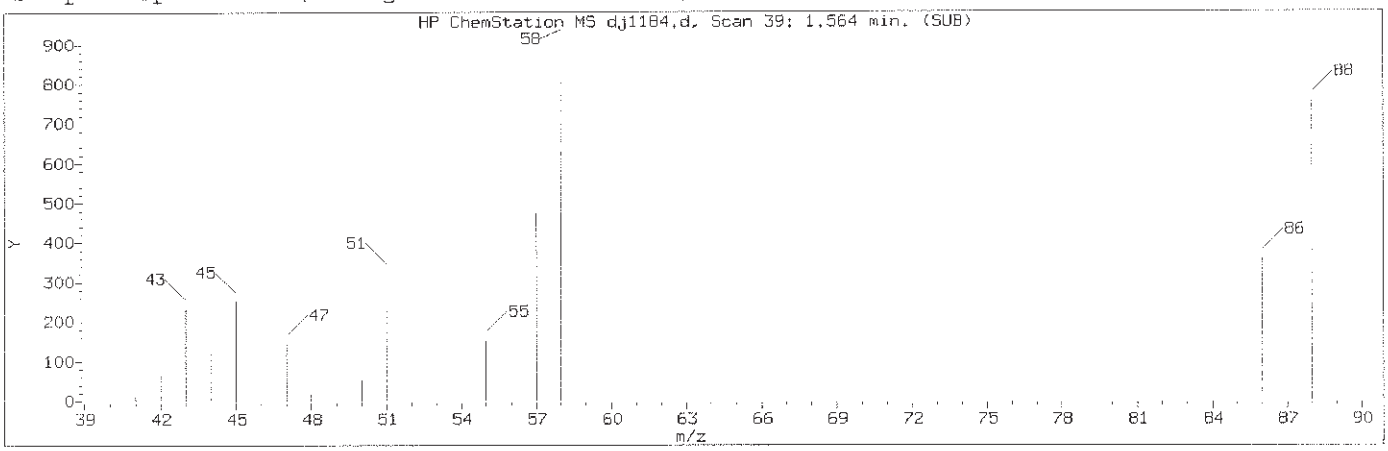
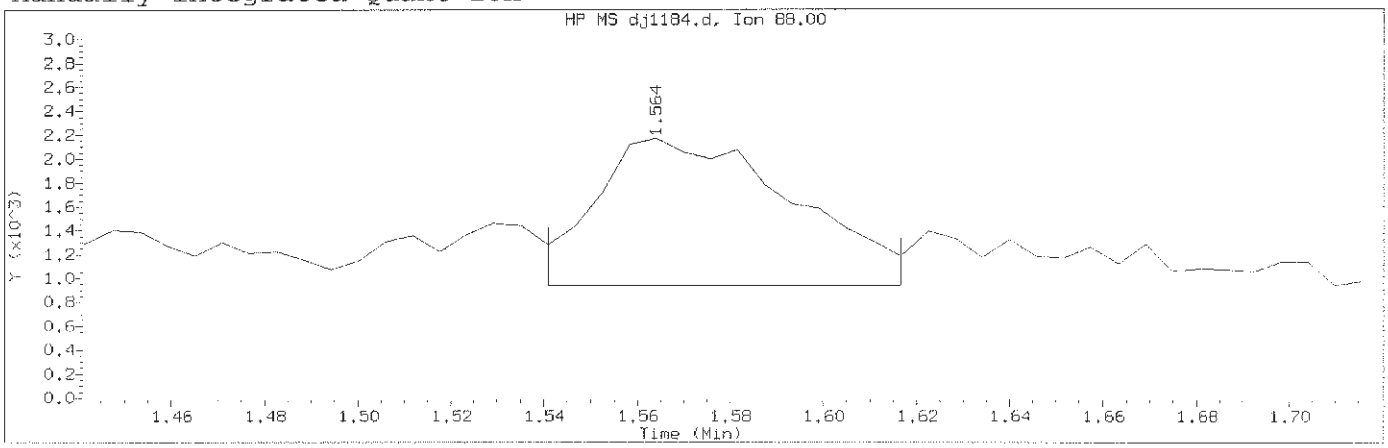
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 39		
Retention Time (minutes)	: 1.564		
Quant Ion	: 88.00		
Area (flag)	: 3696M		
On-Column Amount (ng/ul)	: 0.2322		
Integration start scan	: 34	Integration stop scan:	47
Y at integration start	: 939	Y at integration end:	939

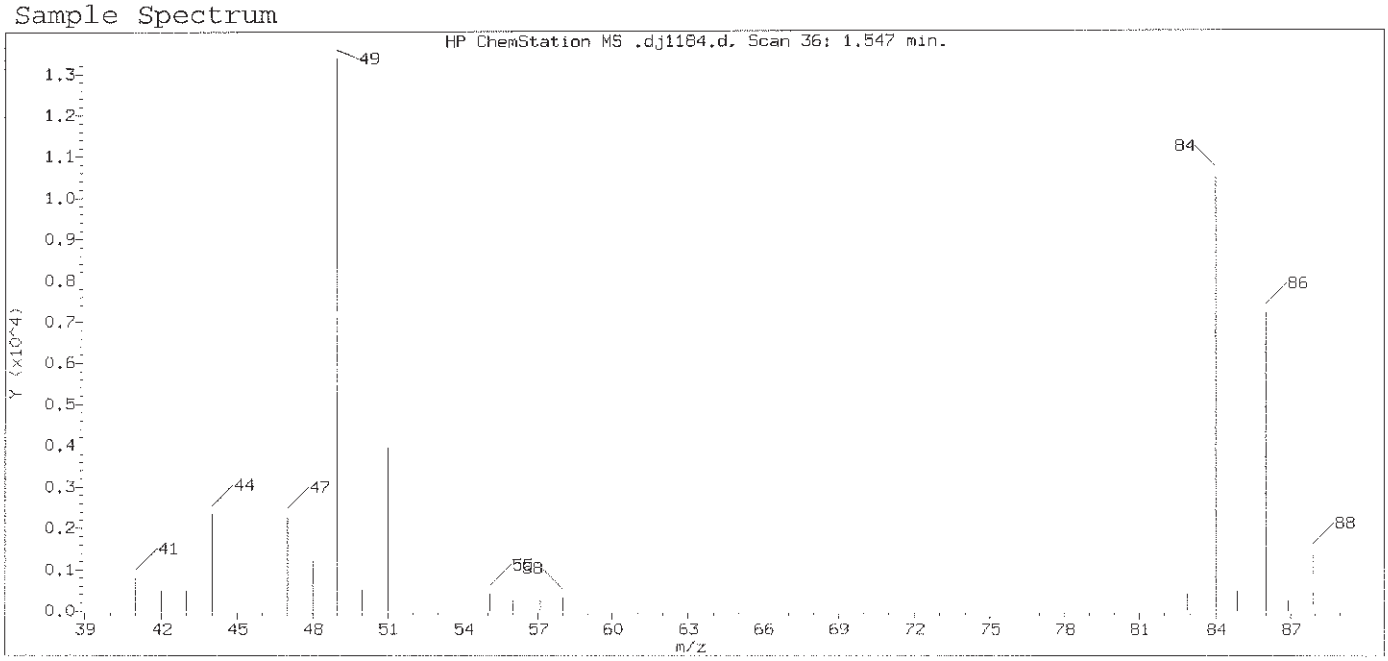
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

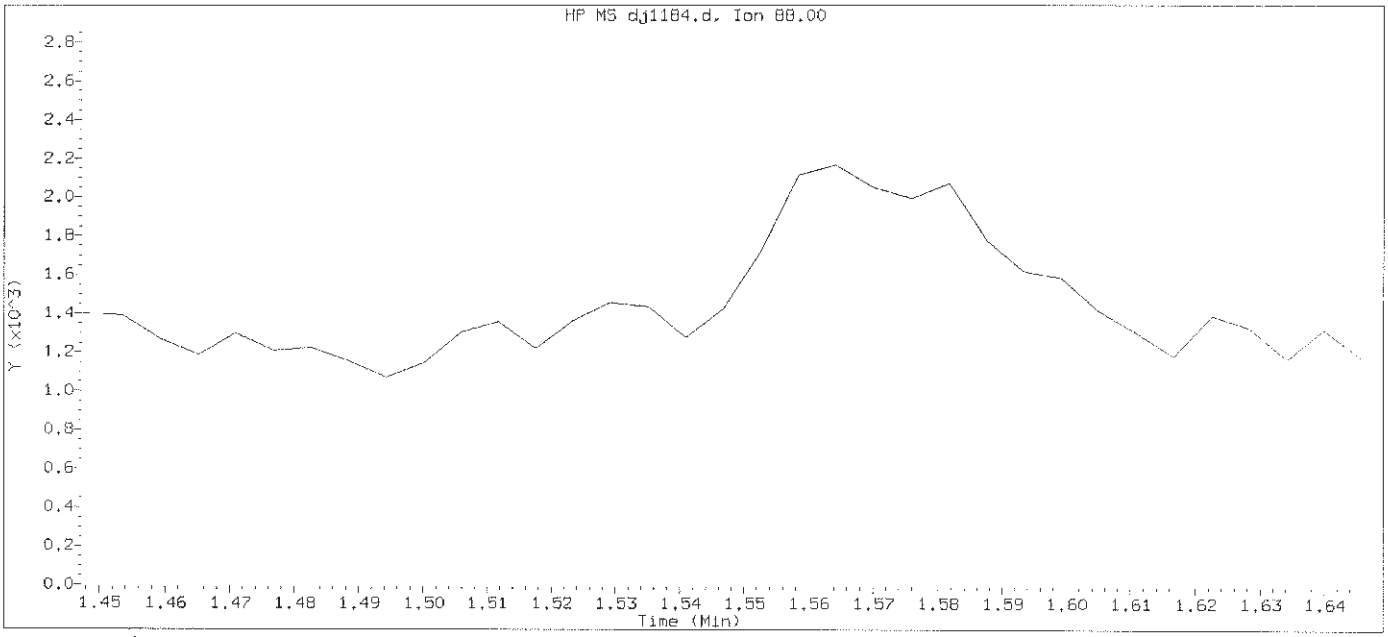
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

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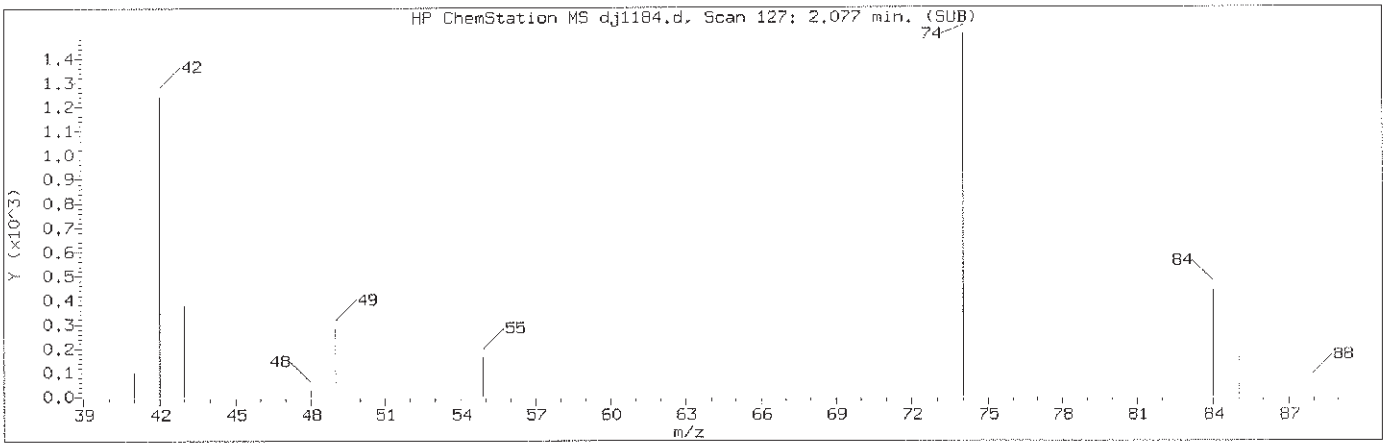
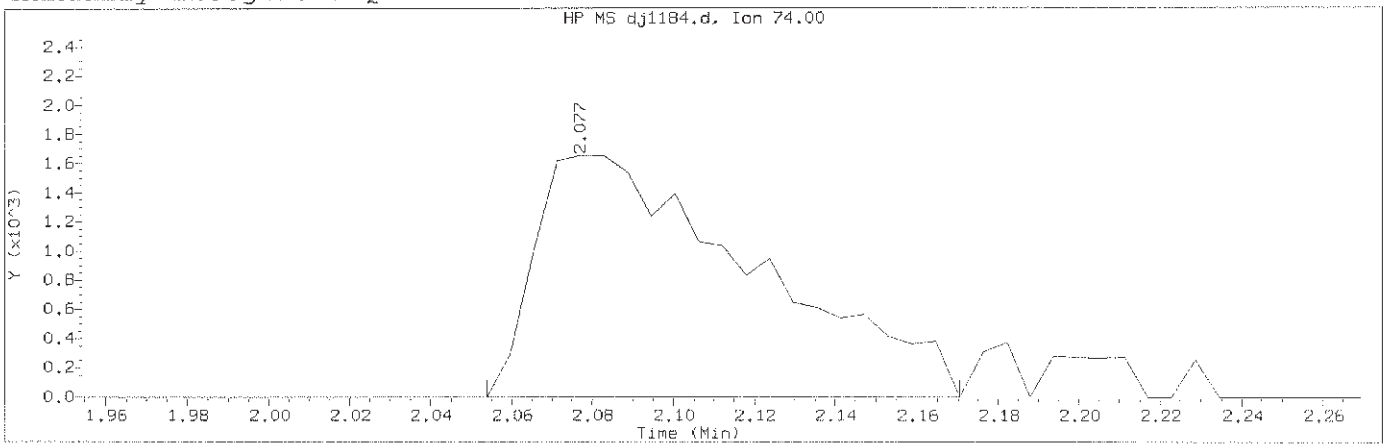
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area (flag)	: 6220M		
On-Column Amount (ng/ul)	: 0.2208		
Integration start scan	: 122	Integration stop scan:	142
Y at integration start	: -1	Y at integration end:	-1

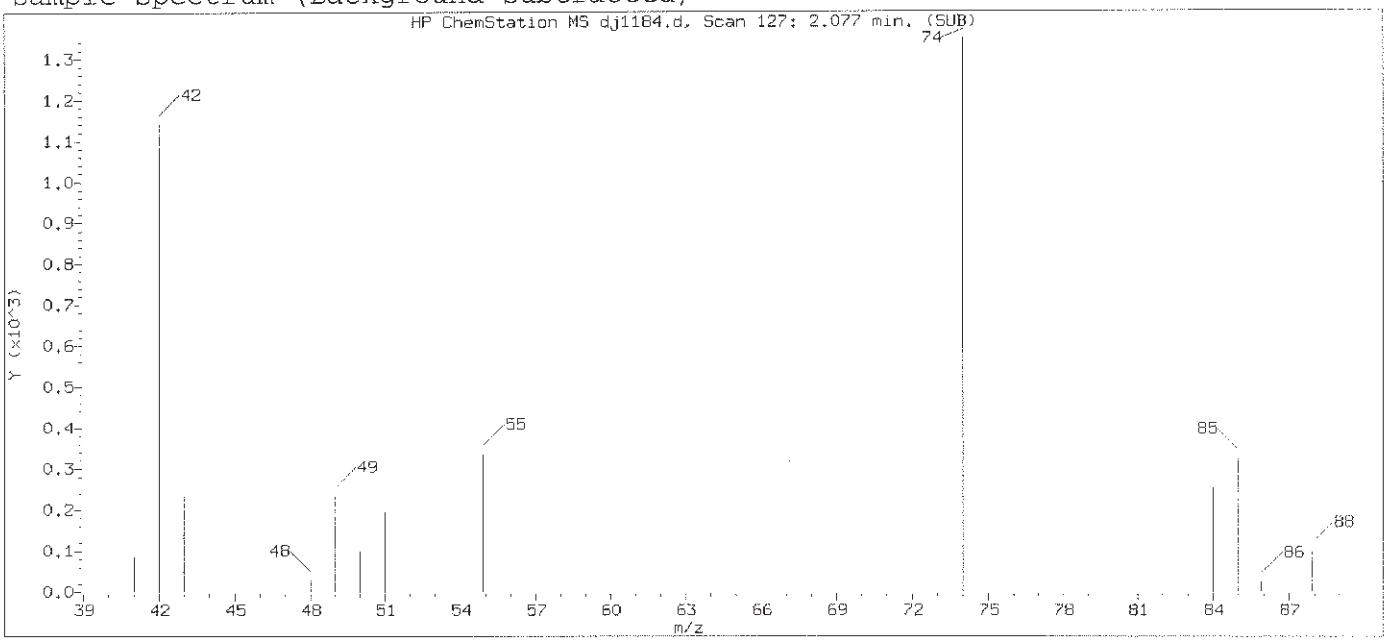
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

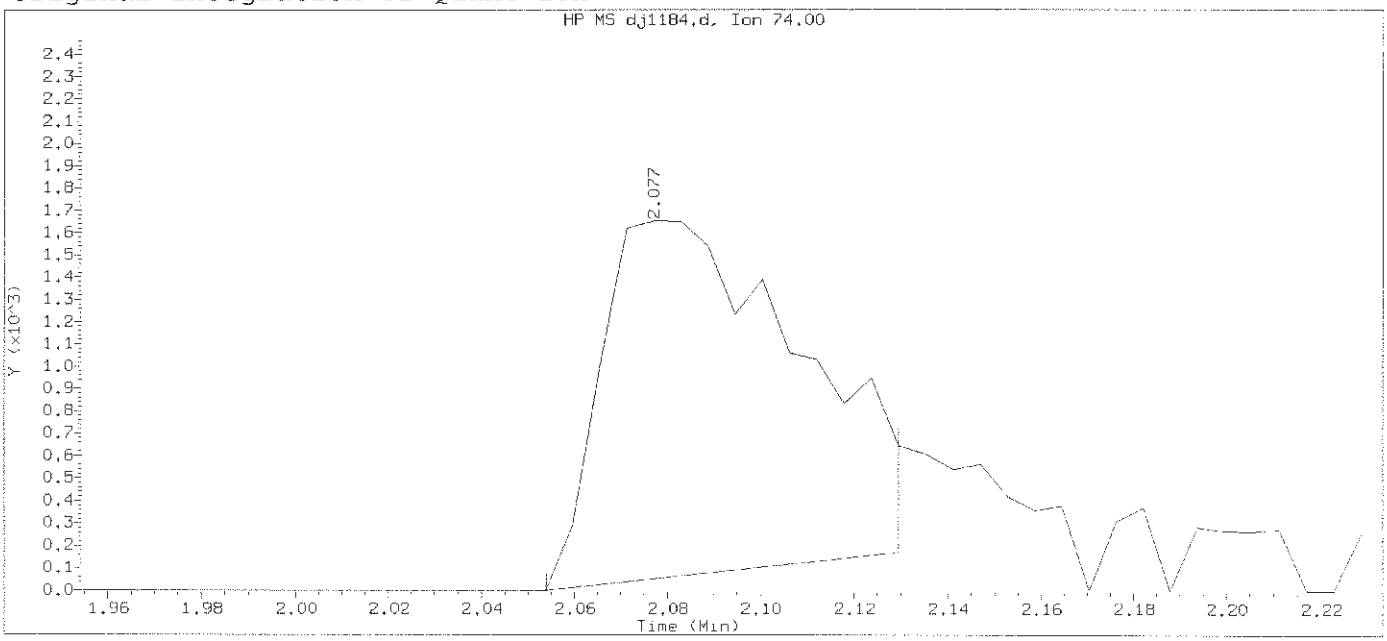
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 74.00		
Area	: 4711		
On-column Amount (ng/ul)	: 0.1787		
Integration start scan	: 122	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	170

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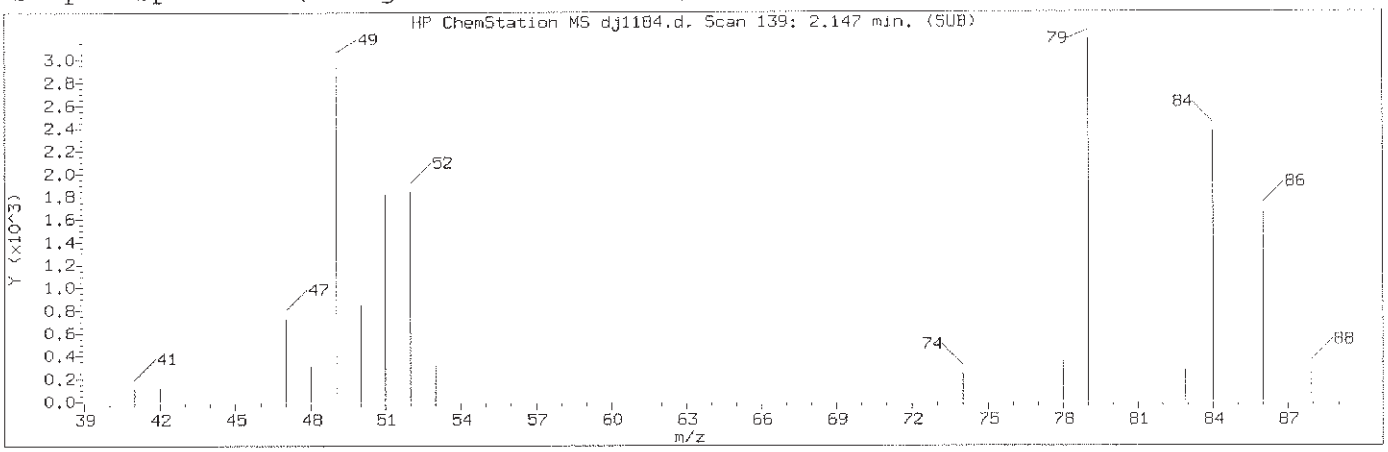
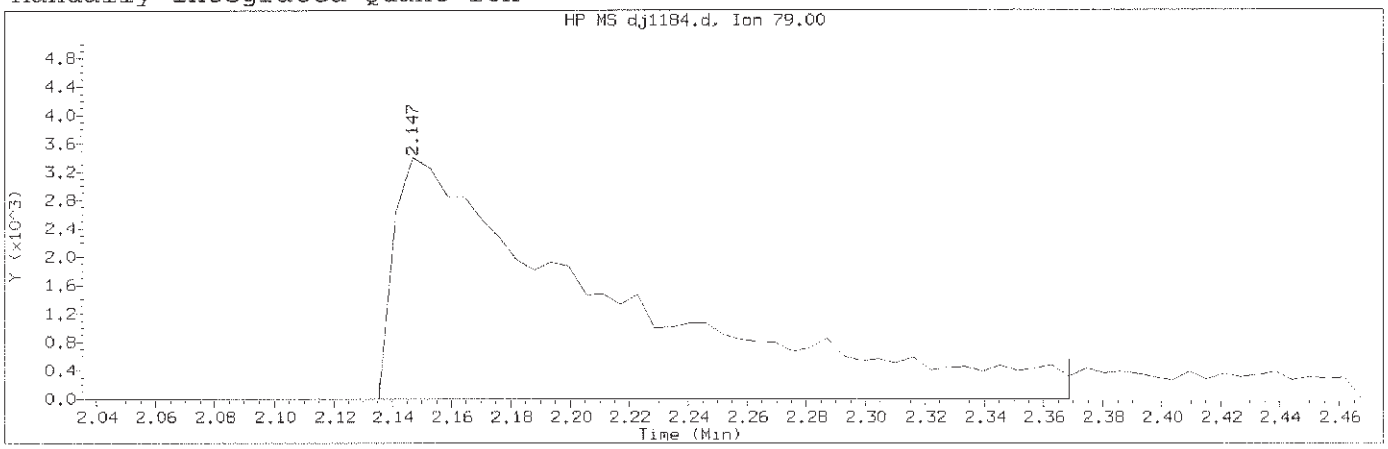
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area (flag)	: 17293M		
On-Column Amount (ng/ul)	: 0.3524		
Integration start scan	: 136	Integration stop scan:	176
Y at integration start	: -3	Y at integration end:	-3

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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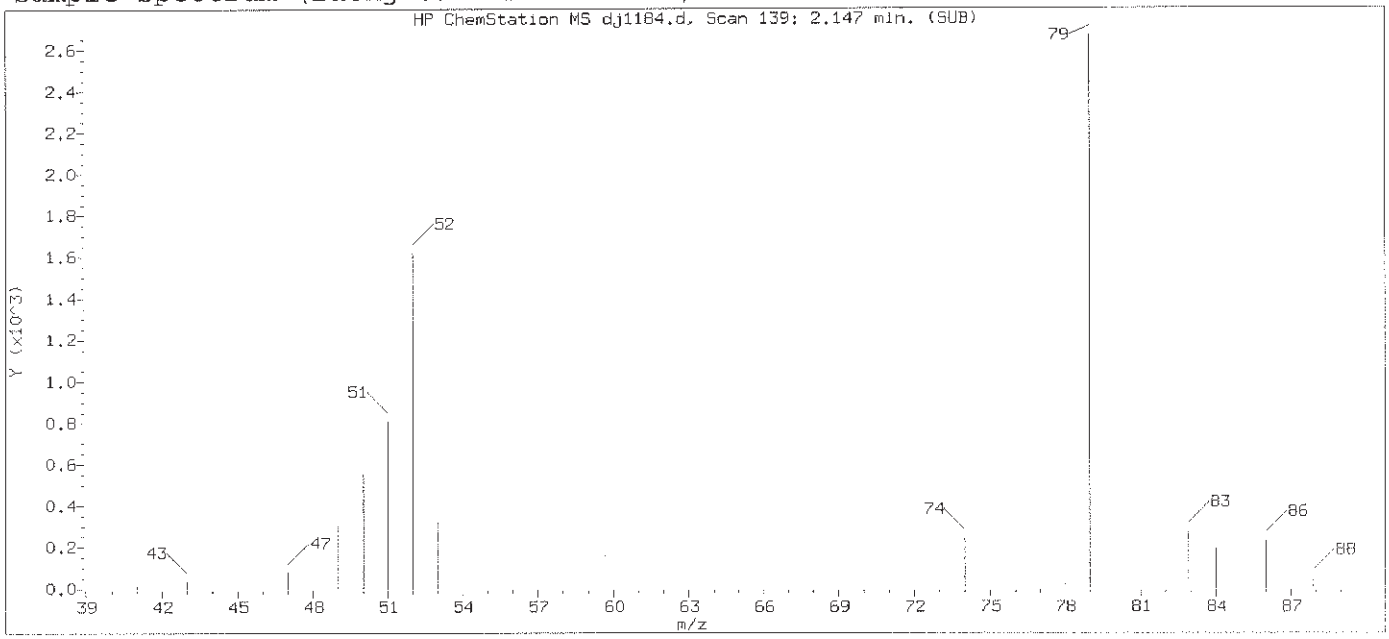
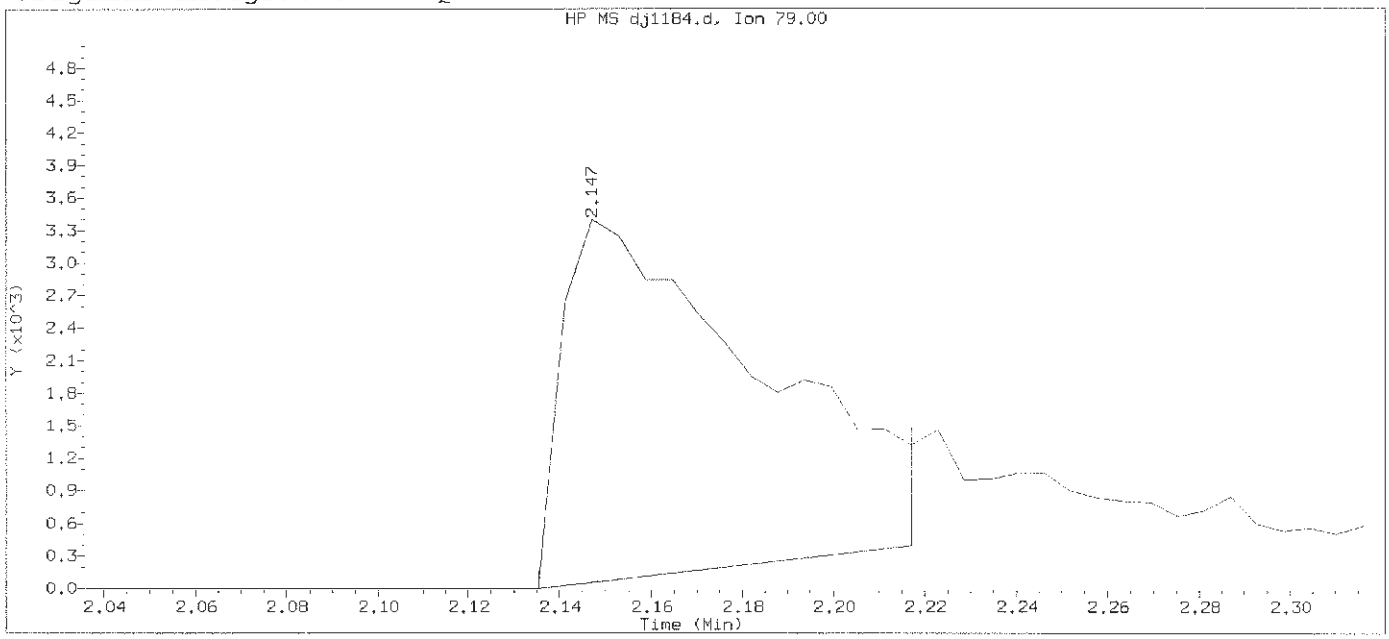
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 139		
Retention Time (minutes)	: 2.147		
Quant Ion	: 79.00		
Area	: 9841		
On-column Amount (ng/ul)	: 0.2168		
Integration start scan	: 136	Integration stop scan:	150
Y at integration start	: 0	Y at integration end:	397

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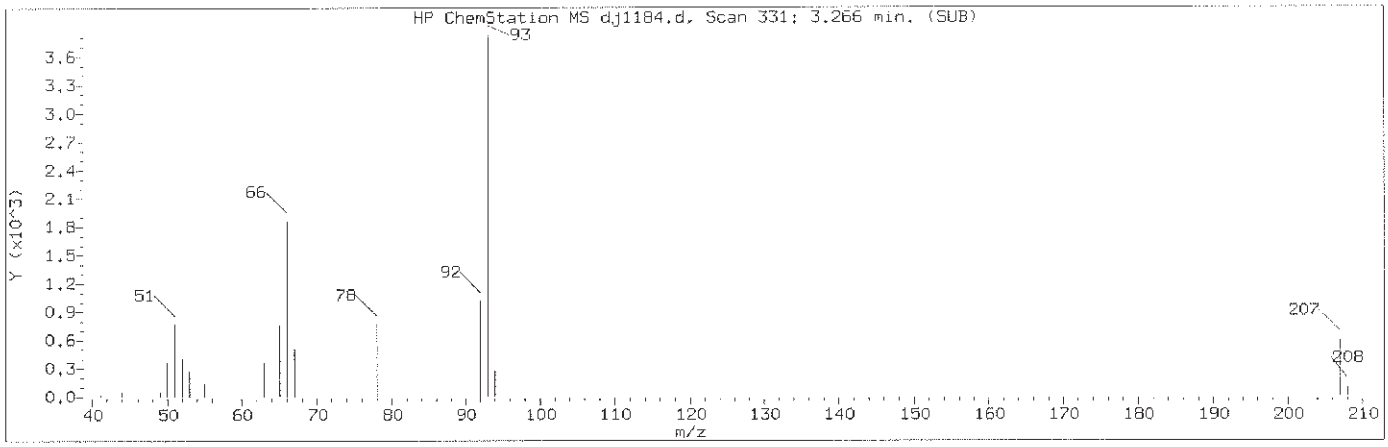
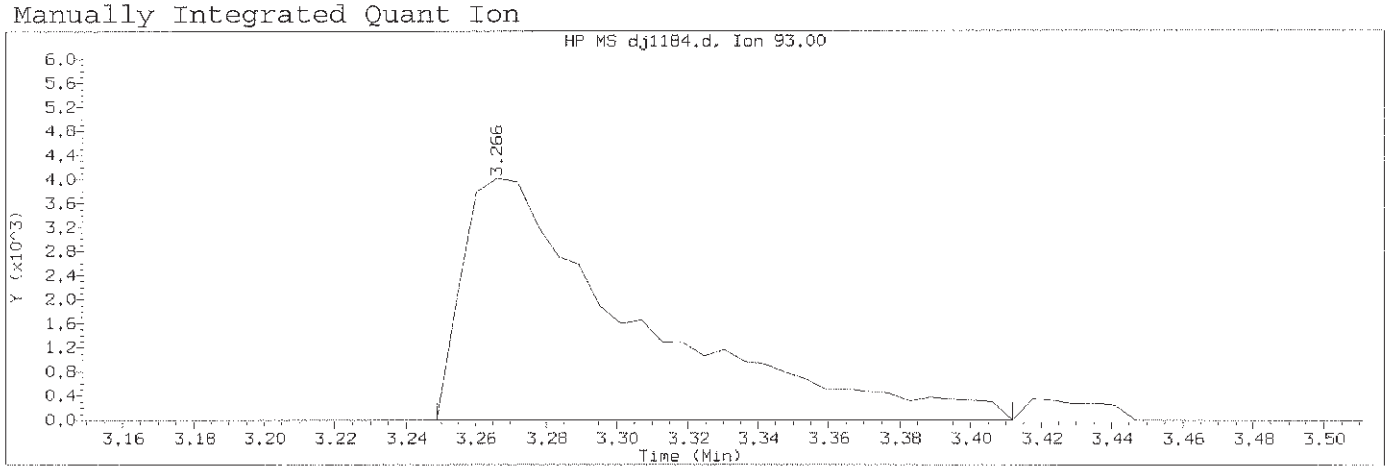
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area (flag)	: 13682M		
On-Column Amount (ng/ul)	: 0.2616		
Integration start scan	: 327	Integration stop scan:	355
Y at integration start	: 2	Y at integration end:	2

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT 30 2013

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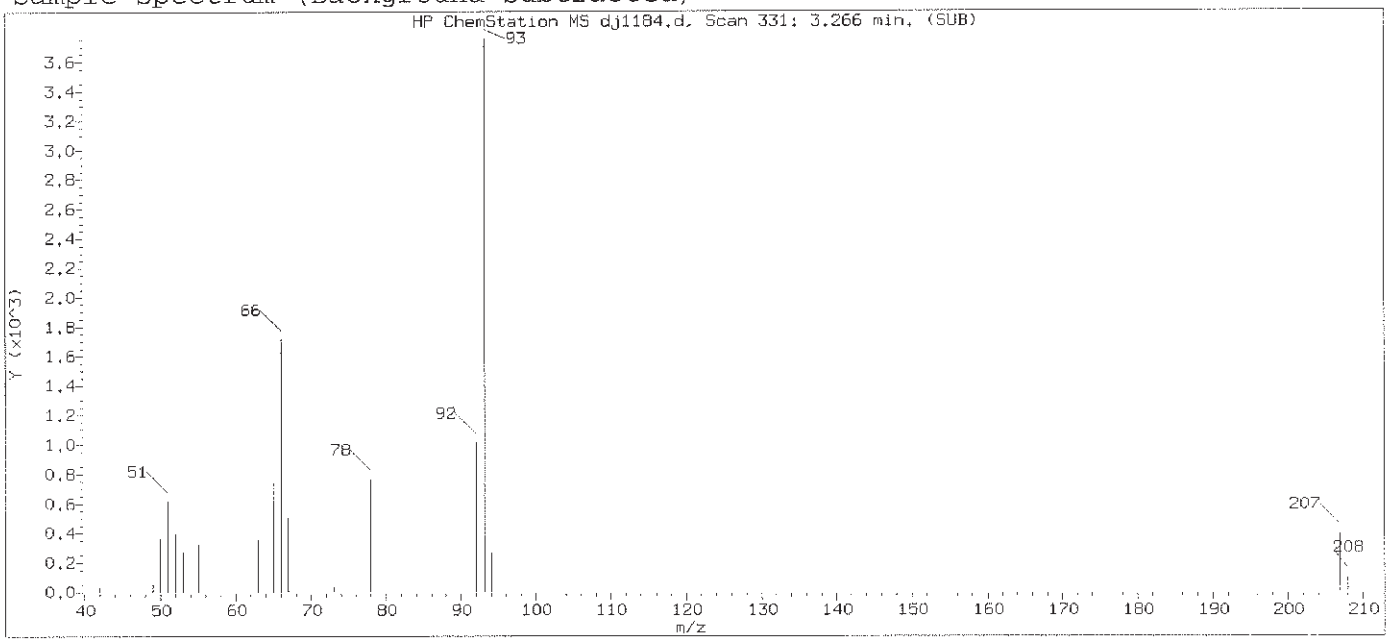
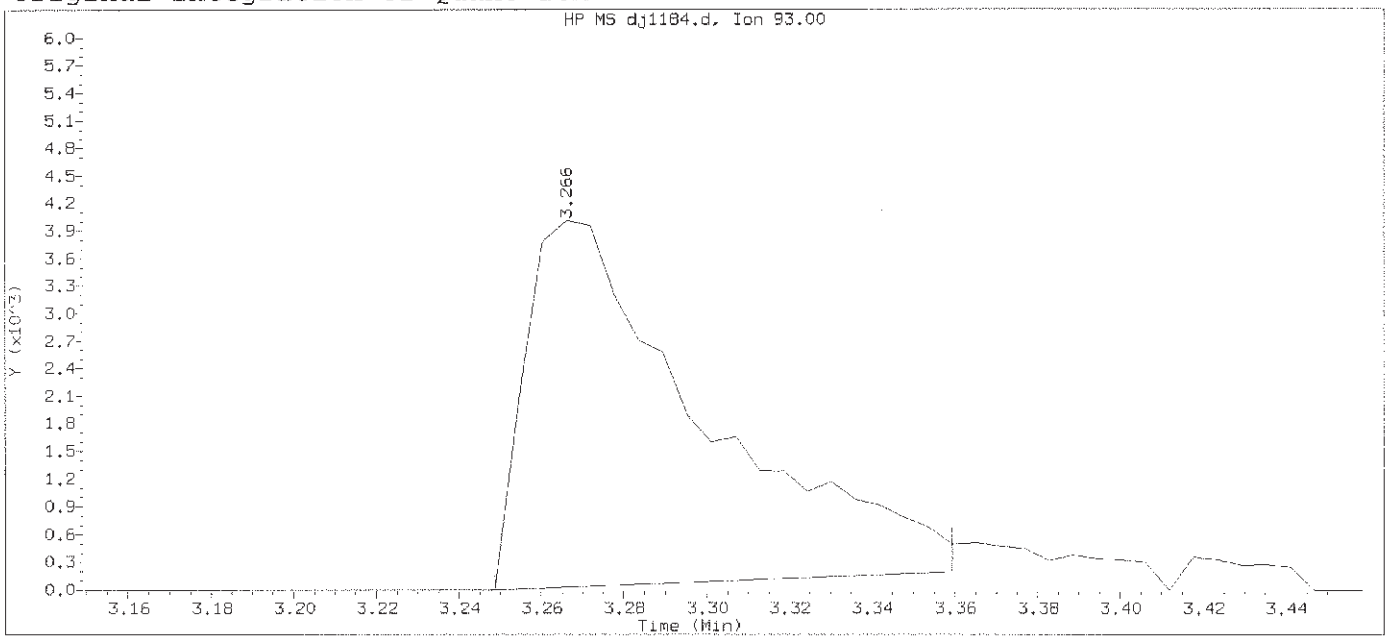
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

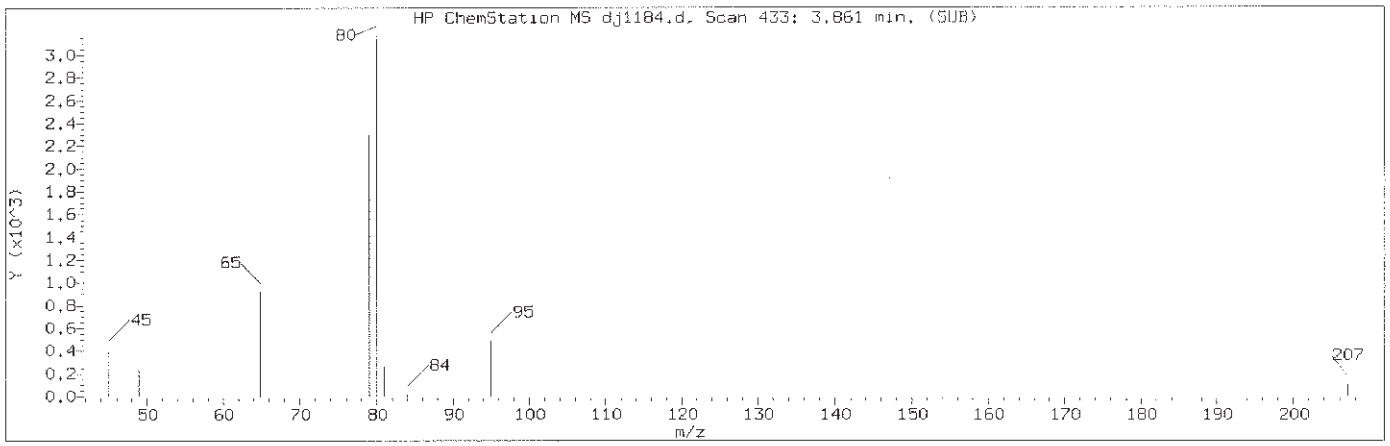
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

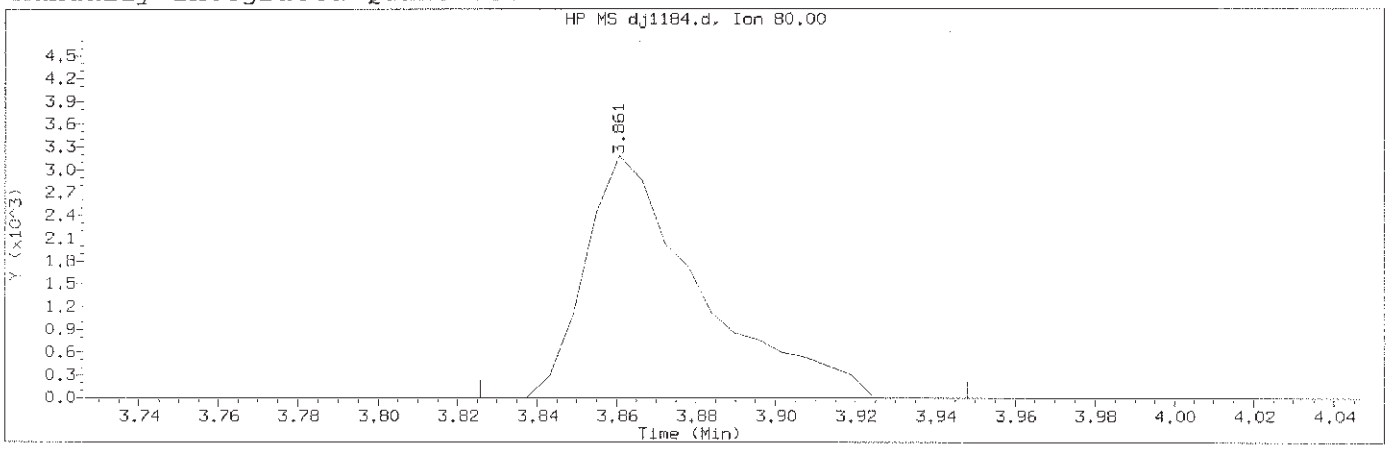
Compound Number	: 4		
Compound Name	: 2-Picoline		
Scan Number	: 331		
Retention Time (minutes)	: 3.266		
Quant Ion	: 93.00		
Area	: 11889		
On-column Amount (ng/ul)	: 0.2395		
Integration start scan	: 327	Integration stop scan:	346
Y at integration start	: 0	Y at integration end:	193

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area (flag)	: 6376M		
On-Column Amount (ng/ul)	: 0.2493		
Integration start scan	: 426	Integration stop scan:	447
Y at integration start	: 0	Y at integration end:	0

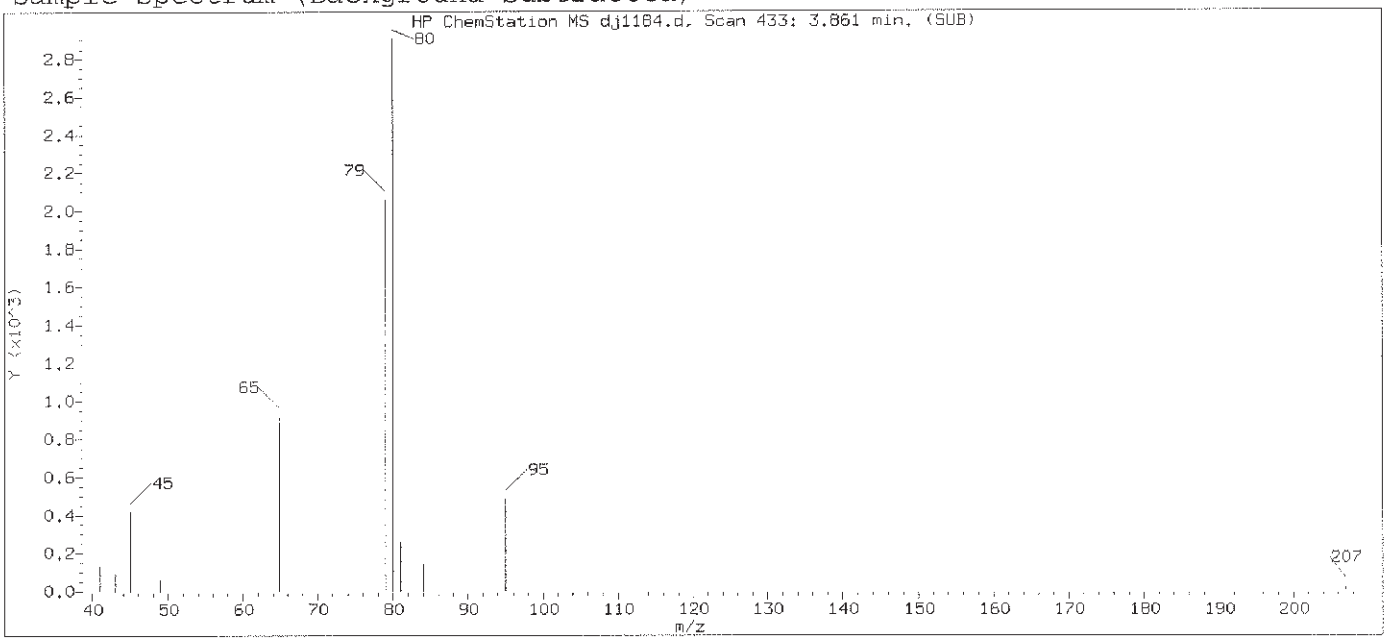
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

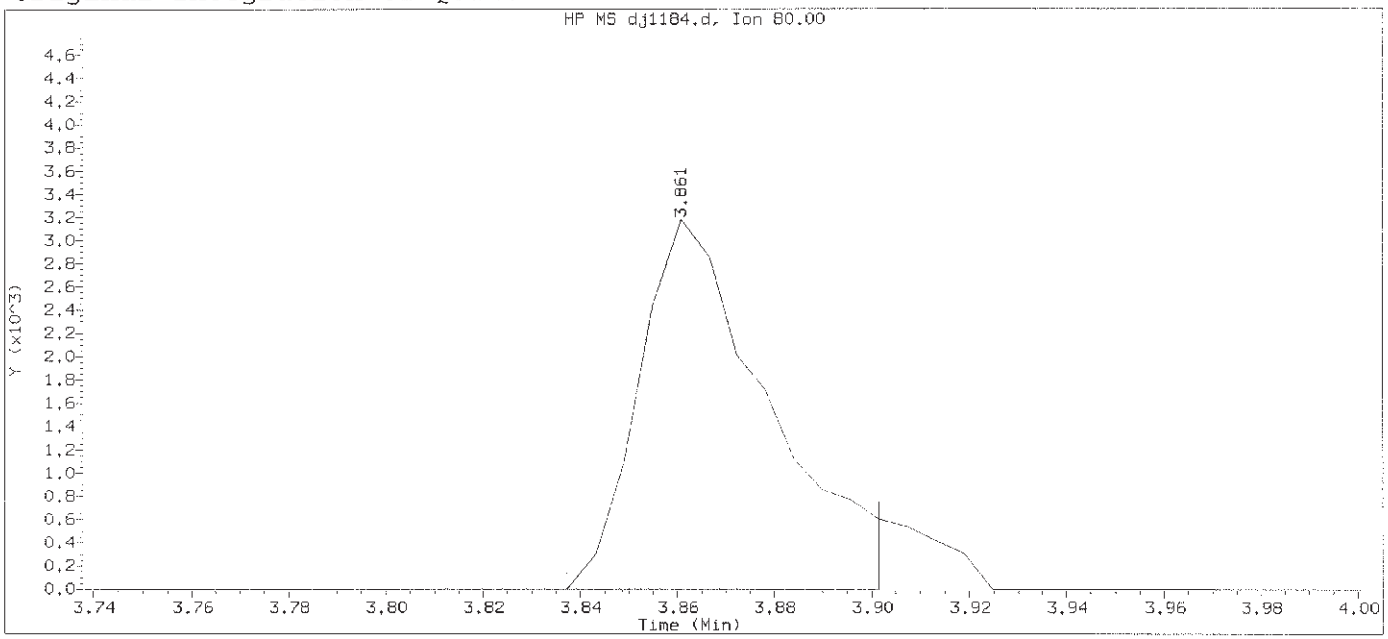
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

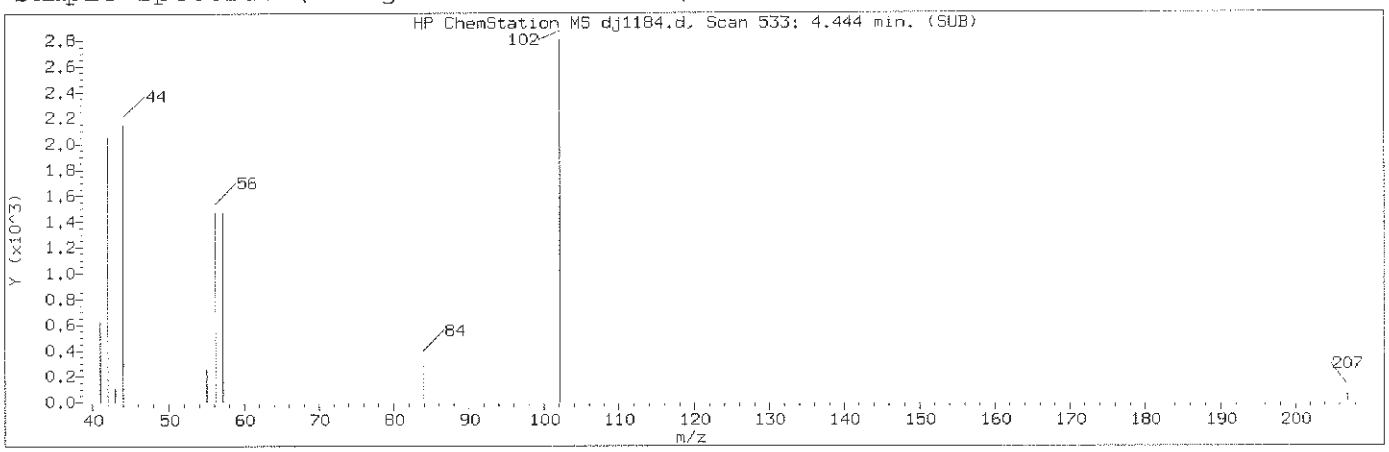
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

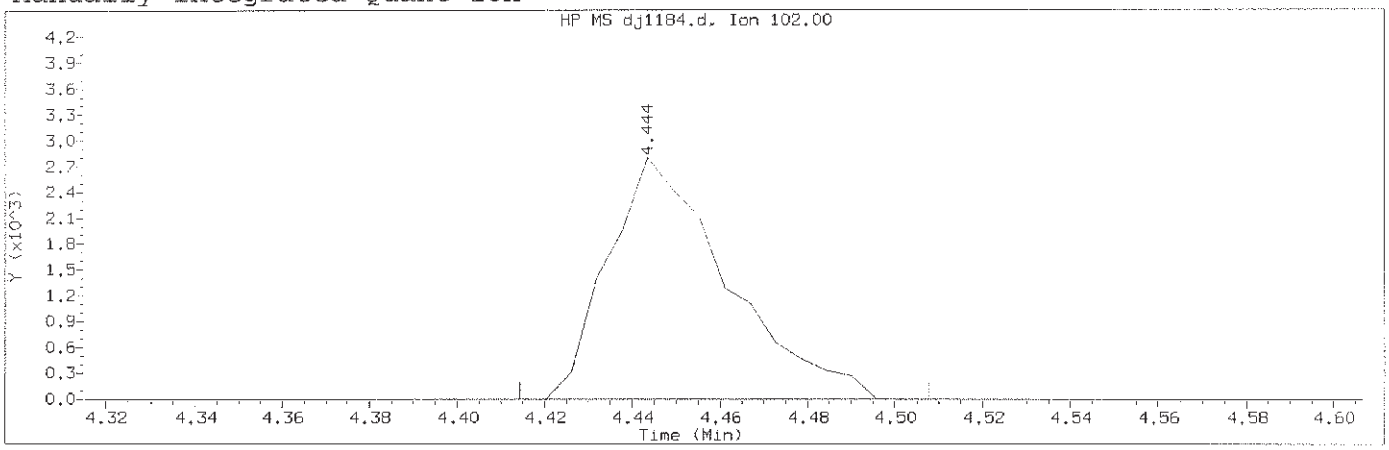
Compound Number	: 6		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 433		
Retention Time (minutes)	: 3.861		
Quant Ion	: 80.00		
Area	: 5828		
On-column Amount (ng/ul)	: 0.2371		
Integration start scan	: 428	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area (flag)	: 5285M		
On-Column Amount (ng/ul)	: 0.2460		
Integration start scan	: 527	Integration stop scan:	543
Y at integration start	: 0	Y at integration end:	0

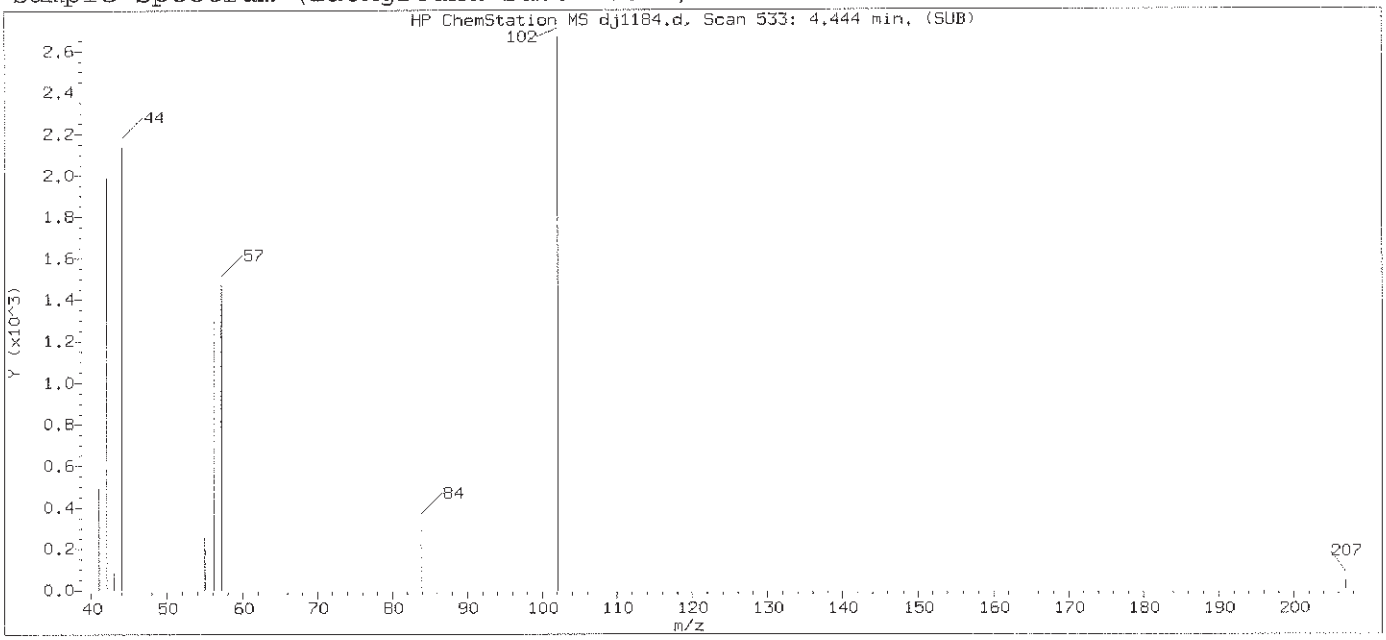
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

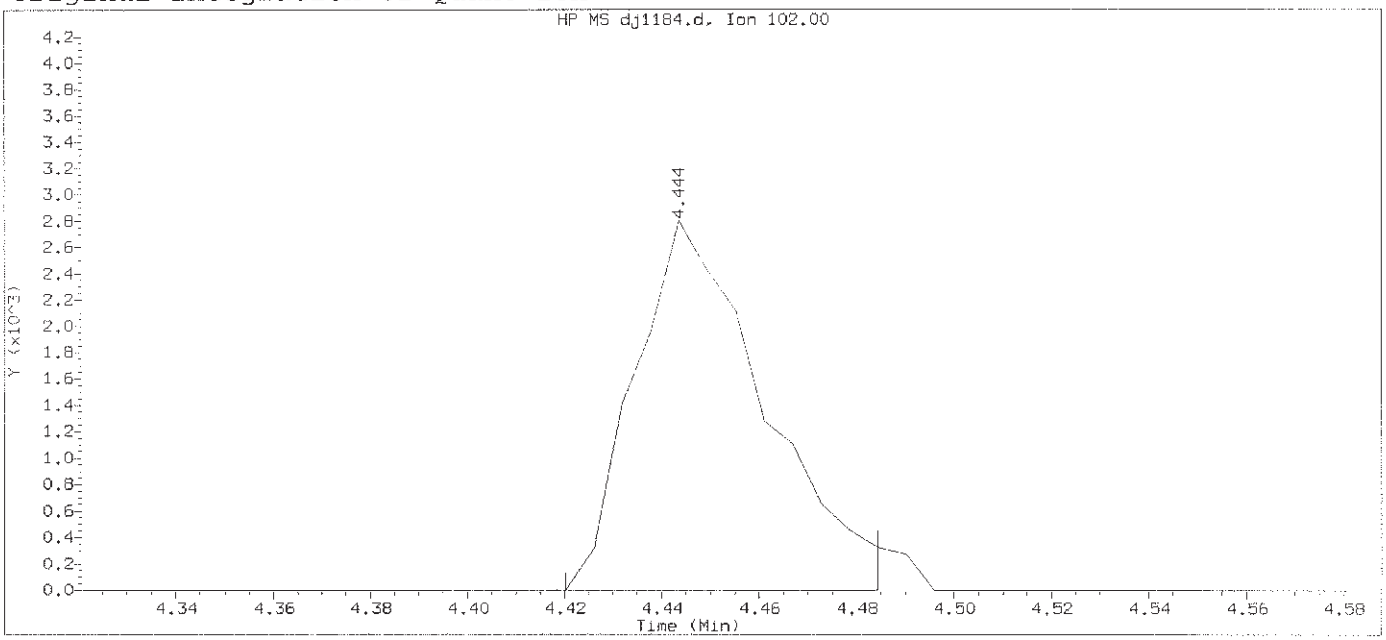
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Chemist Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

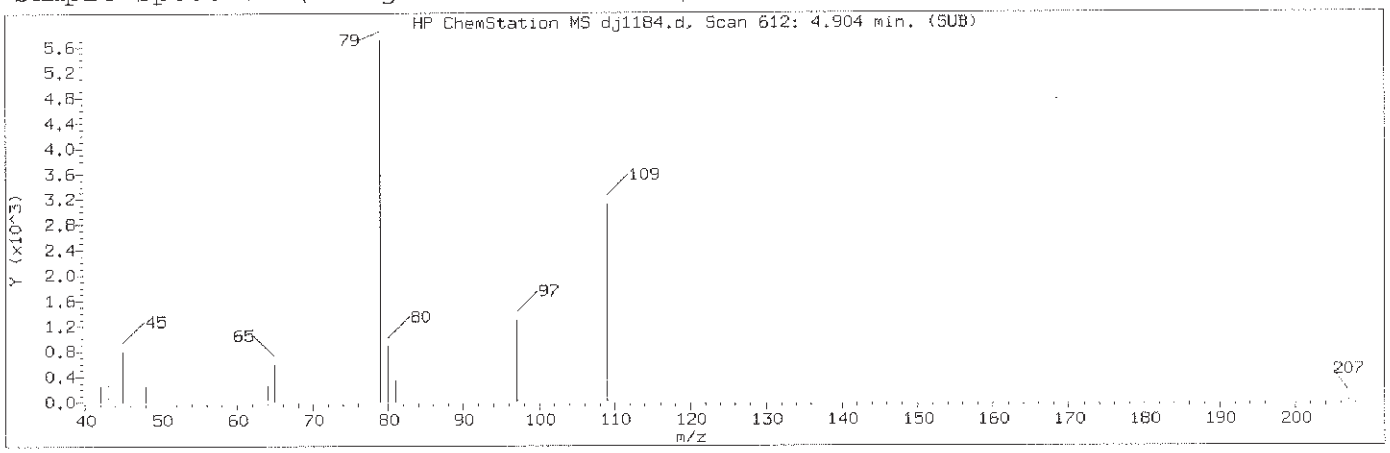
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

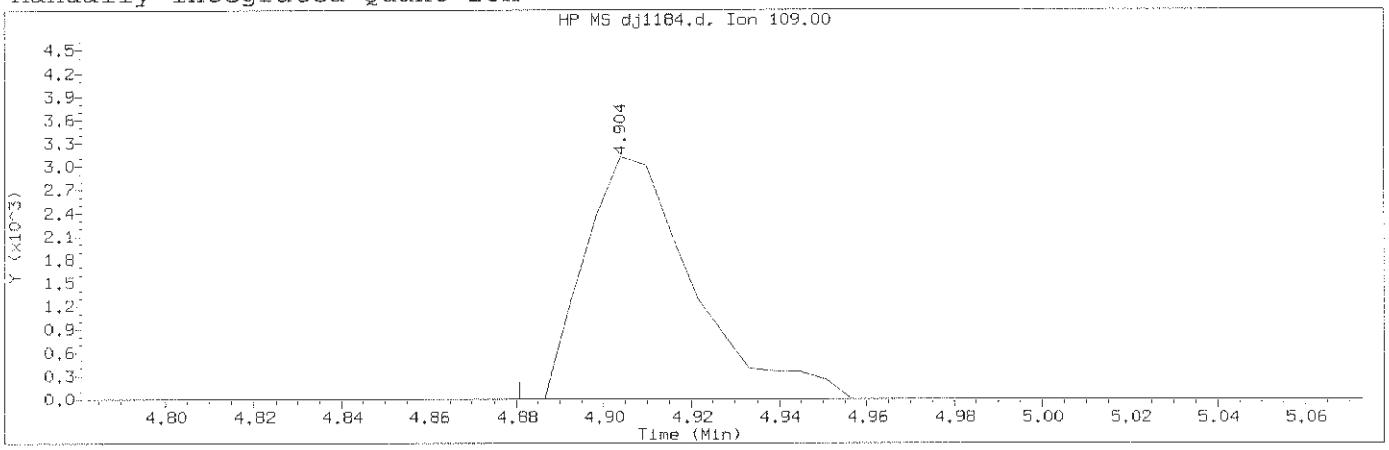
Compound Number	: 8		
Compound Name	: N-Nitrosodiethylamine		
Scan Number	: 533		
Retention Time (minutes)	: 4.444		
Quant Ion	: 102.00		
Area	: 5133		
On-column Amount (ng/ul)	: 0.2465		
Integration start scan	: 528	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area (flag)	: 5358M		
On-Column Amount (ng/ul)	: 0.2584		
Integration start scan	: 607	Integration stop scan:	623
Y at integration start	: 0	Y at integration end:	0

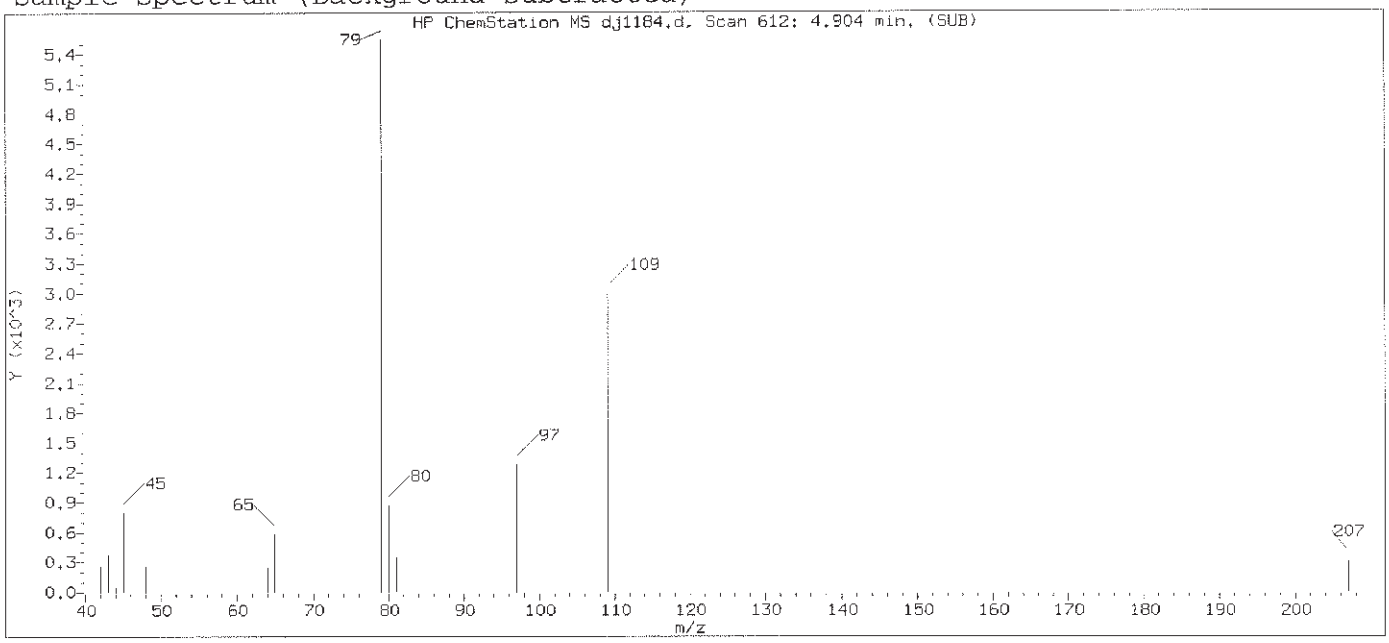
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

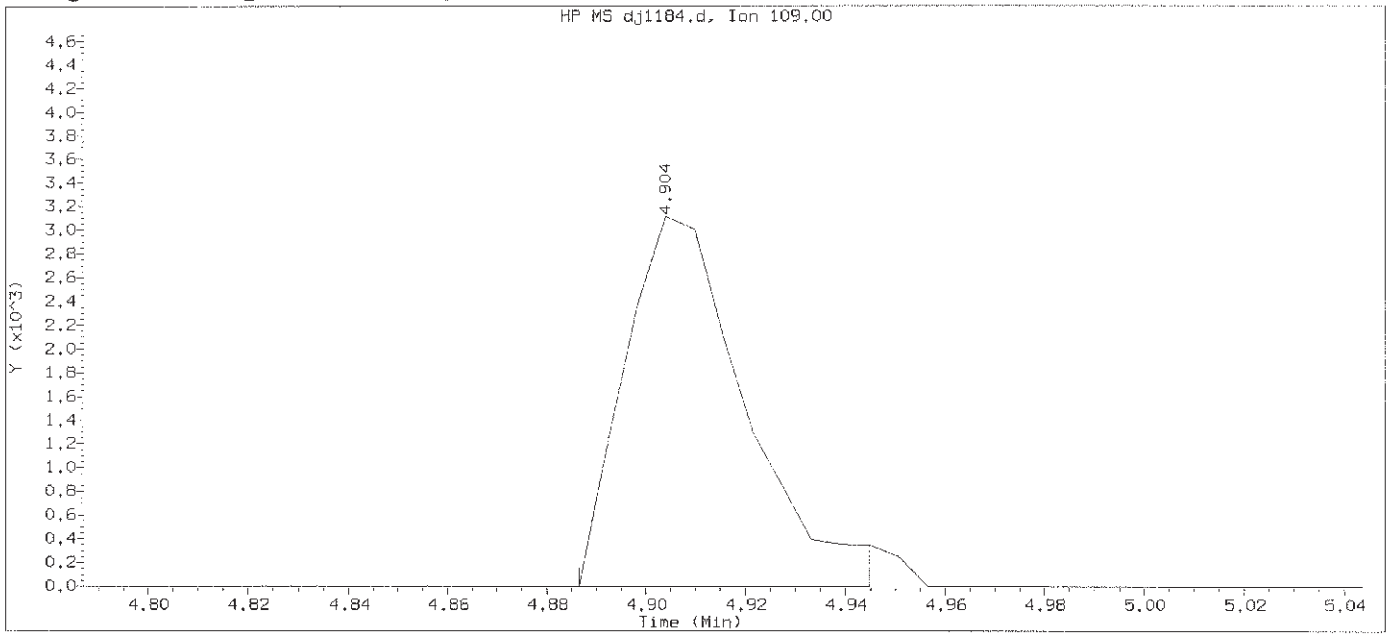
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

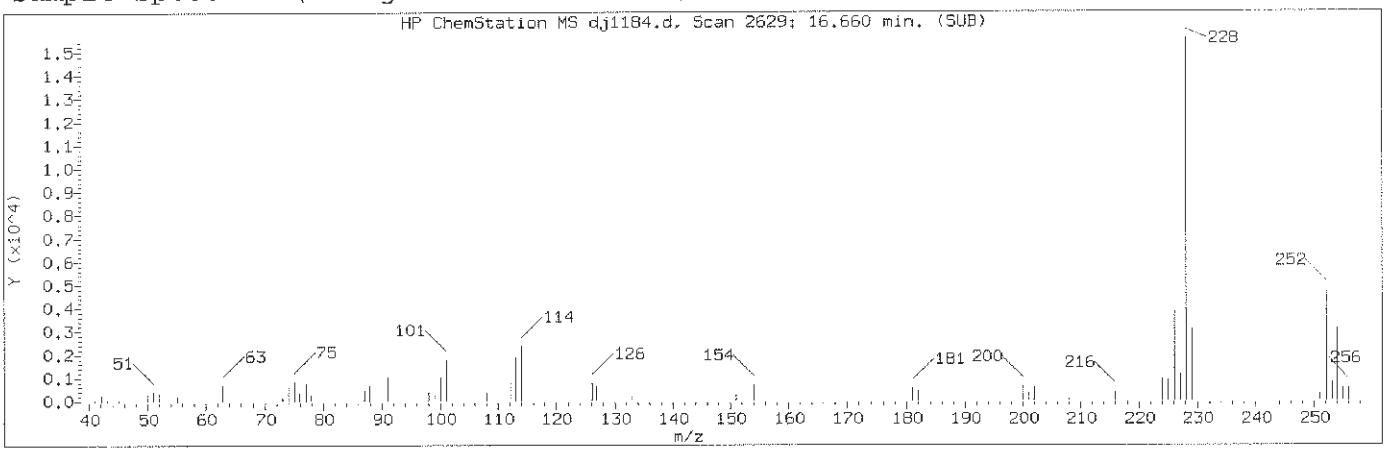
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

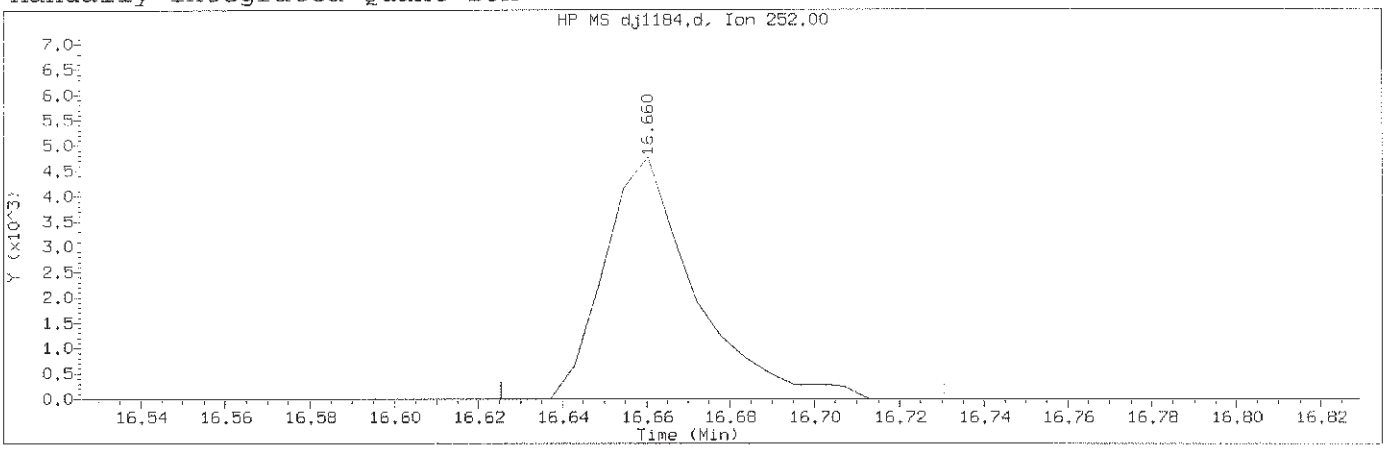
Compound Number	: 10		
Compound Name	: Ethyl methanesulfonate		
Scan Number	: 612		
Retention Time (minutes)	: 4.904		
Quant Ion	: 109.00		
Area	: 5209		
On-column Amount (ng/ul)	: 0.2594		
Integration start scan	: 608	Integration stop scan:	618
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 159		
Compound Name	: 3,3'-Dichlorobenzidine		
Scan Number	: 2629		
Retention Time (minutes)	: 16.660		
Quant Ion	: 252.00		
Area (flag)	: 7120M		
On-Column Amount (ng/ul)	: 0.1695		
Integration start scan	: 2622	Integration stop scan:	2640
Y at integration start	: 0	Y at integration end:	0

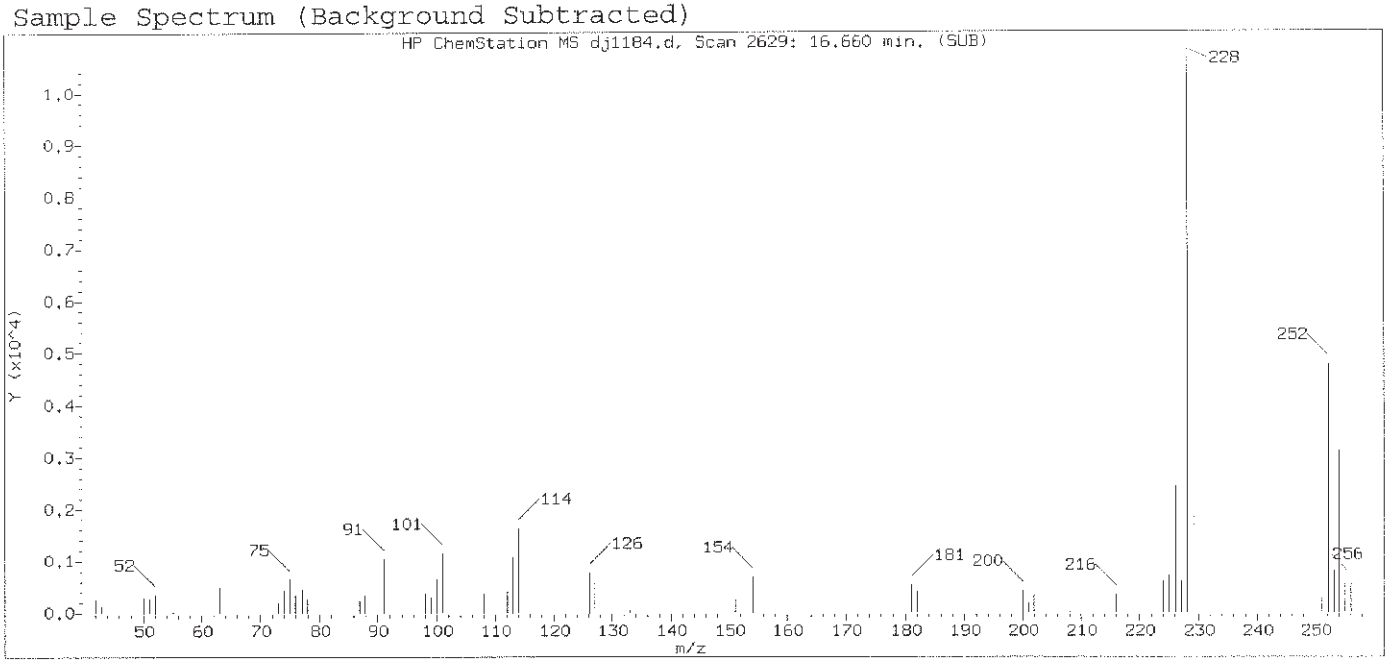
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

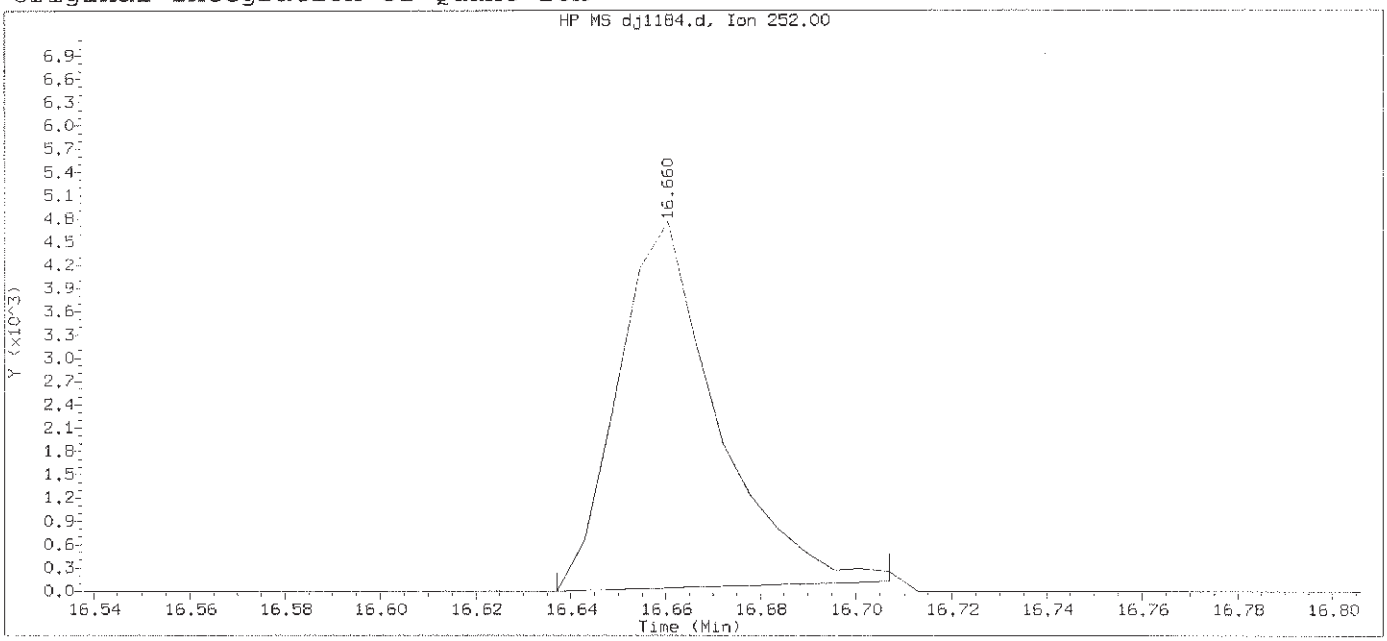
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

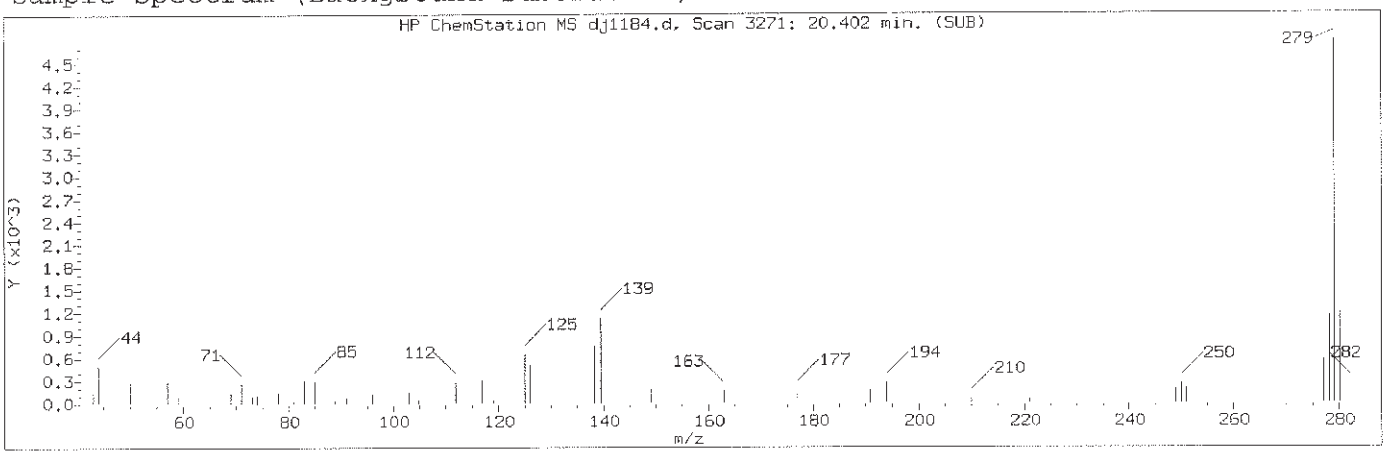
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

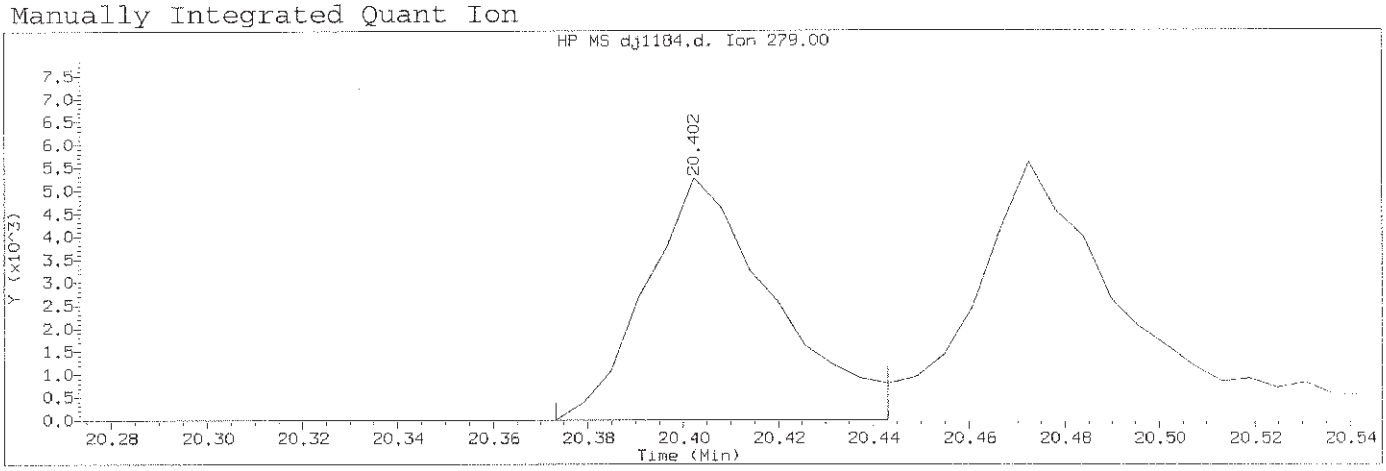
Compound Number	: 159
Compound Name	: 3,3'-Dichlorobenzidine
Scan Number	: 2629
Retention Time (minutes)	: 16.660
Quant Ion	: 252.00
Area	: 6810
On-column Amount (ng/ul)	: 0.1722
Integration start scan	: 2624 Integration stop scan: 2636
Y at integration start	: 0 Y at integration end: 127

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area (flag)	: 9846M		
On-Column Amount (ng/ul)	: 0.1536		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 1	Y at integration end:	1

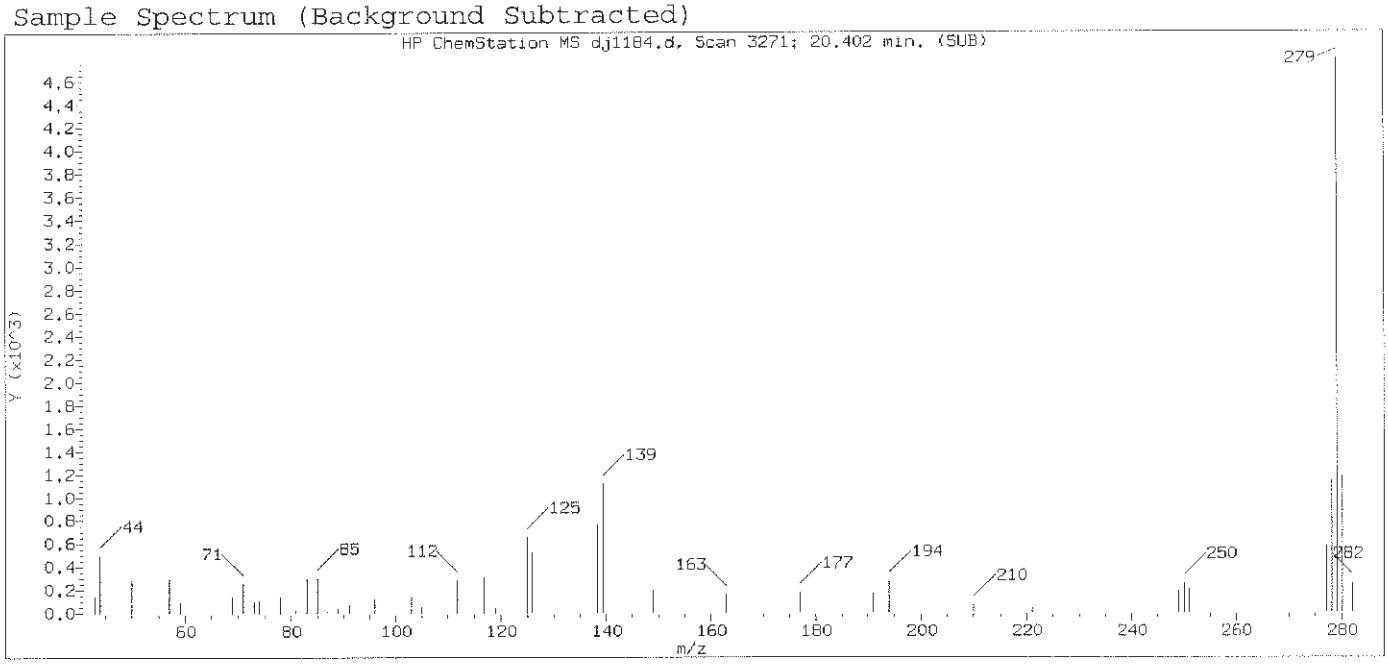
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

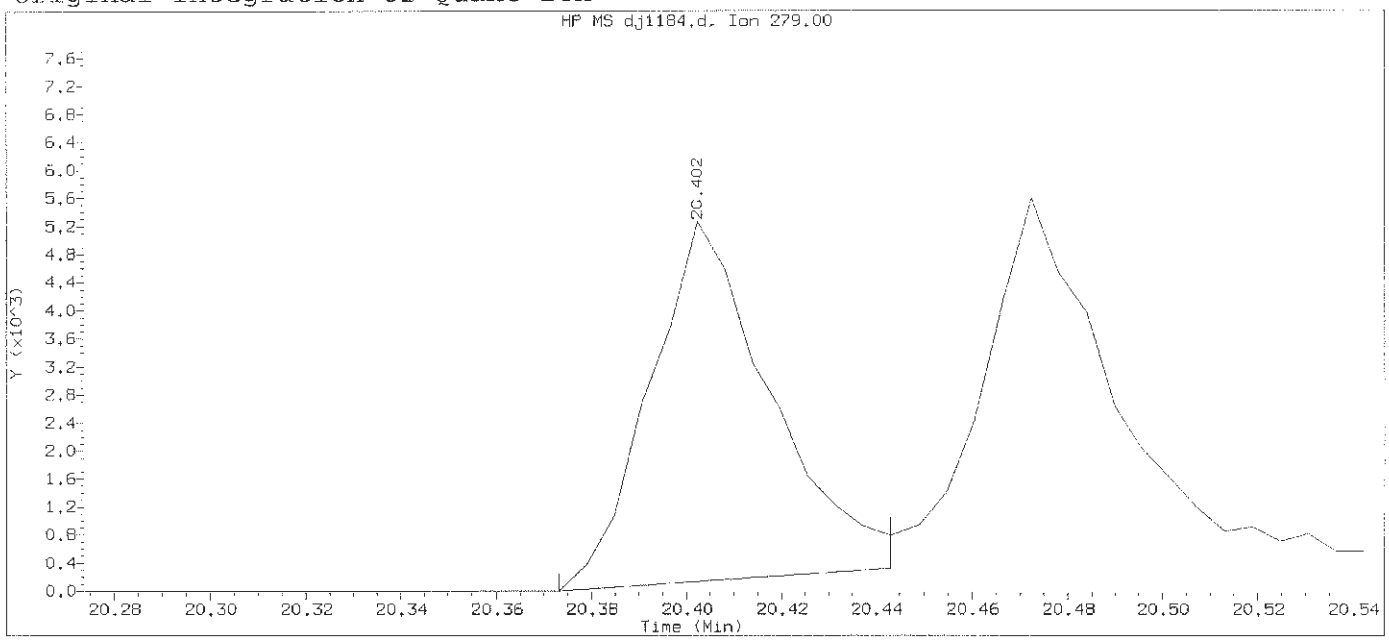
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

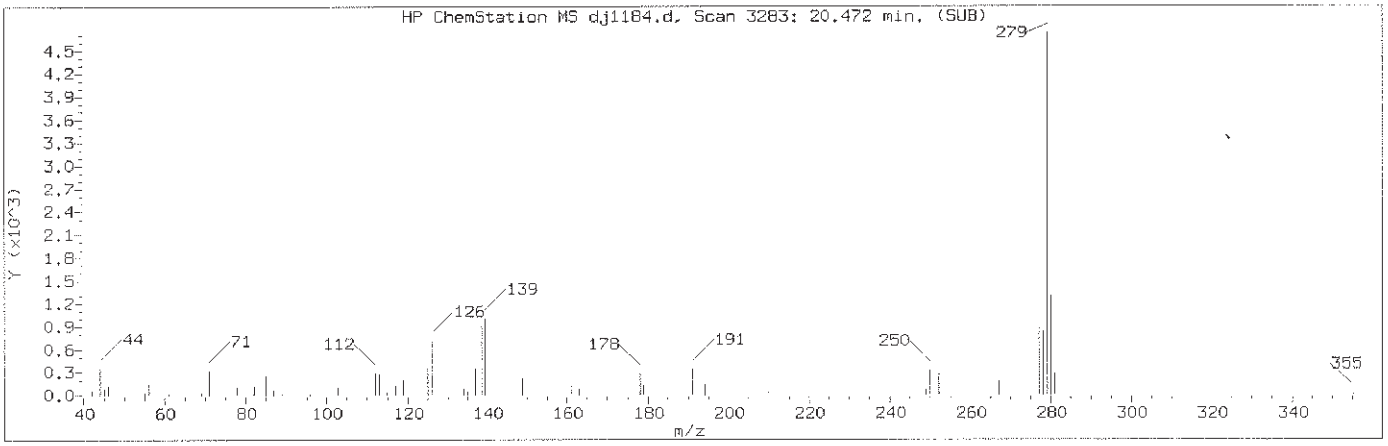
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

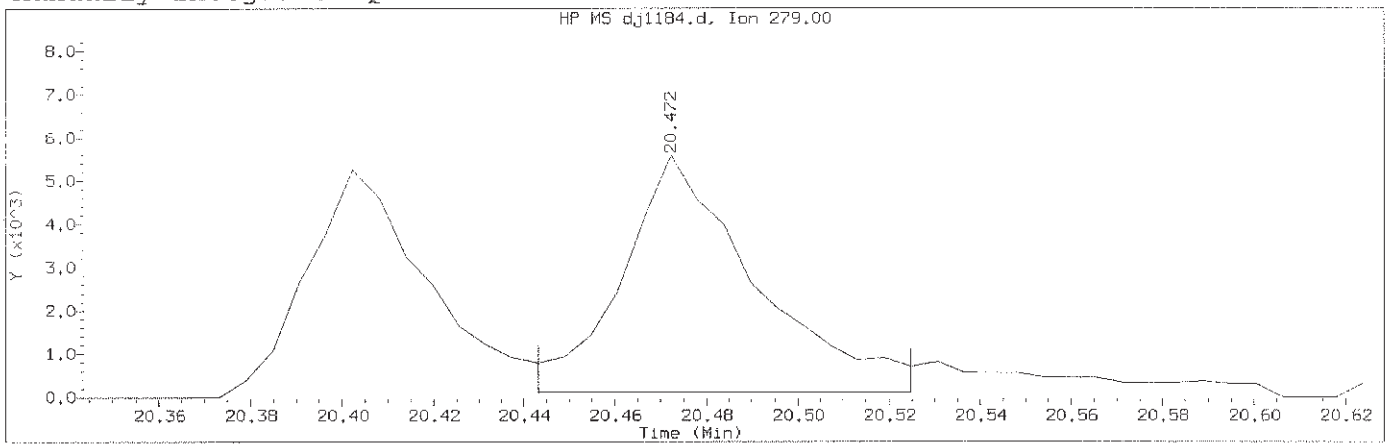
Compound Number	: 174		
Compound Name	: Dibenz(a,h)acridine		
Scan Number	: 3271		
Retention Time (minutes)	: 20.402		
Quant Ion	: 279.00		
Area	: 9028		
On-column Amount (ng/ul)	: 0.1541		
Integration start scan	: 3265	Integration stop scan:	3277
Y at integration start	: 0	Y at integration end:	326

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area (flag)	: 11208M		
On-Column Amount (ng/ul)	: 0.1718		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 119	Y at integration end:	119

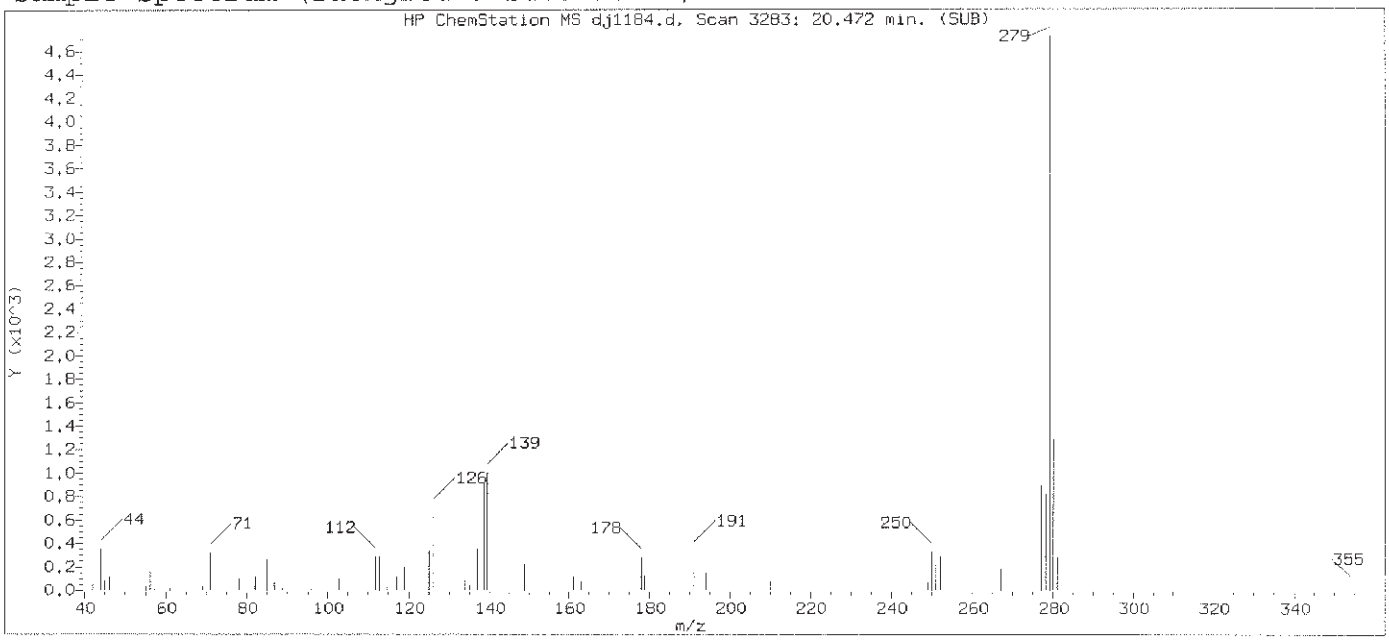
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

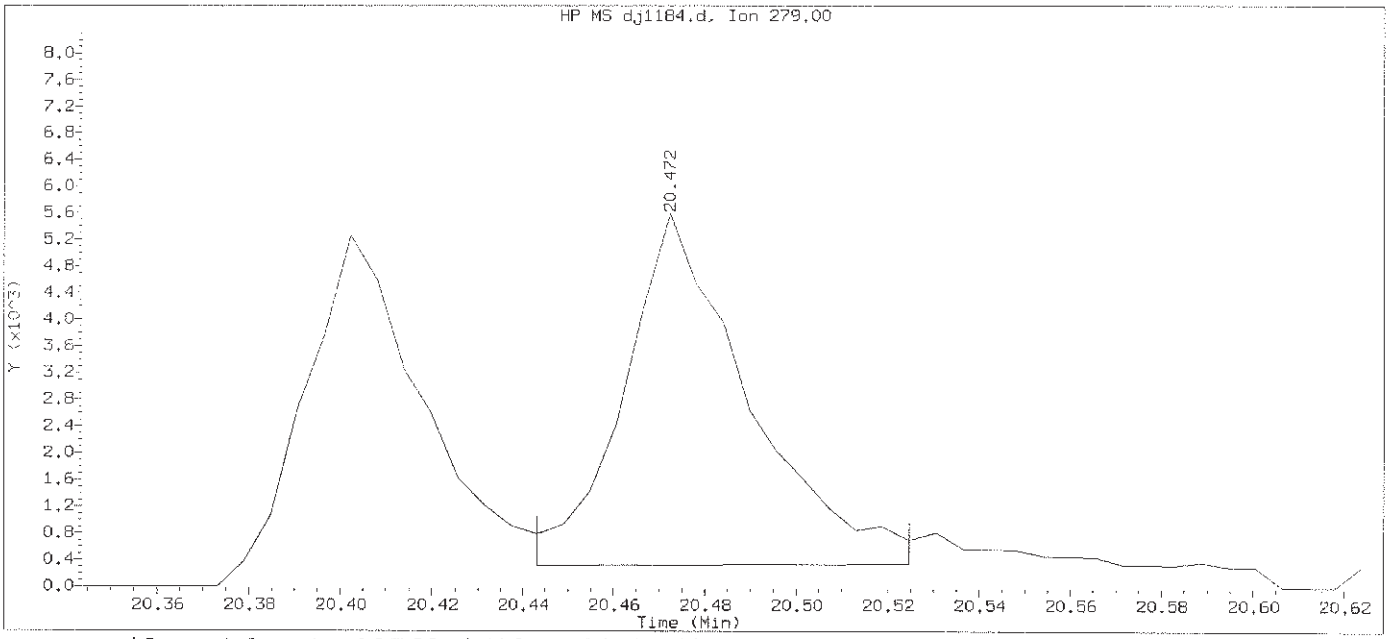
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Technical Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



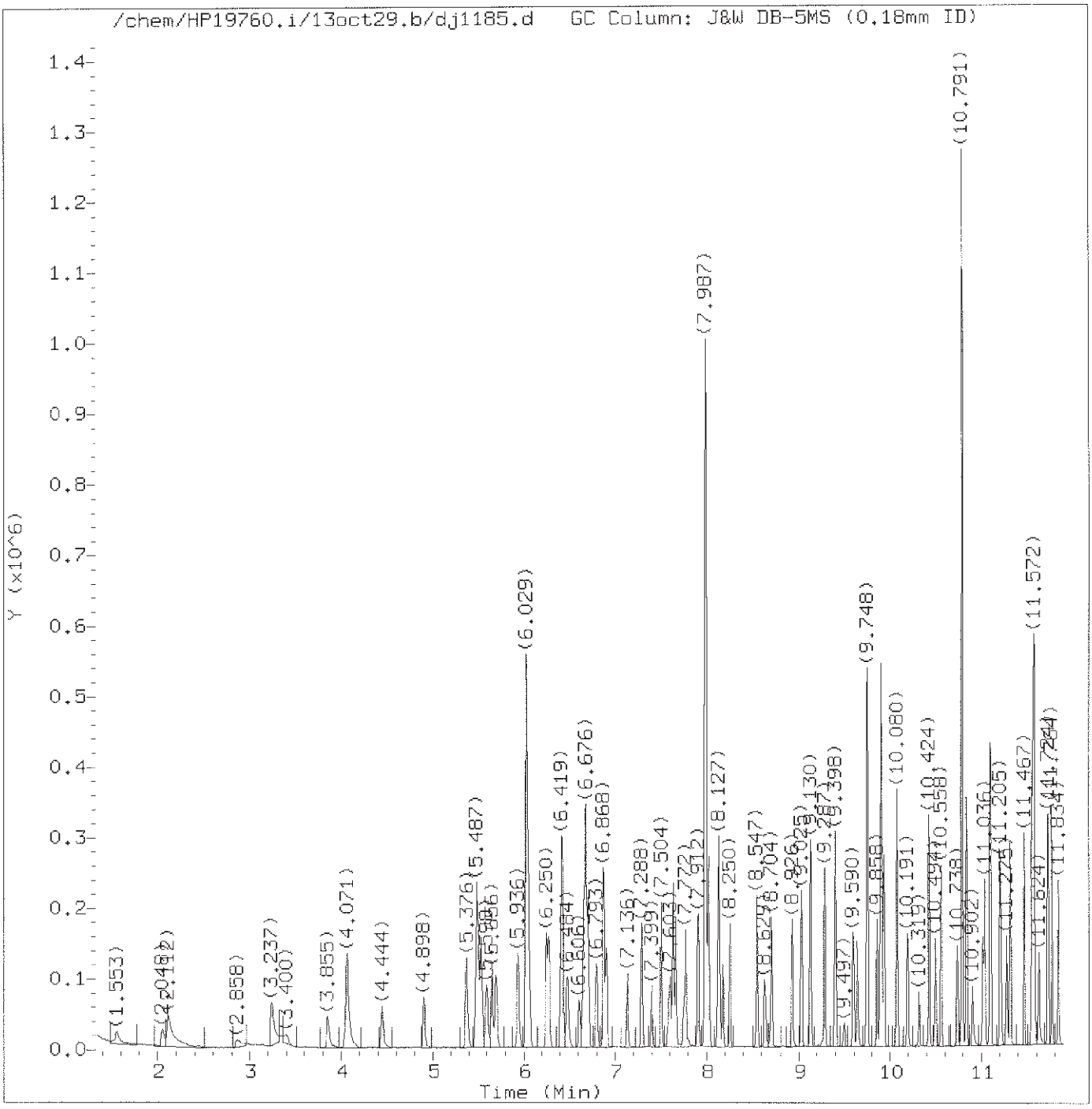
Data File: /chem/HP19760.i/13oct29.b/dj1184.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 12:48 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD0.25 Lab Sample ID: STD2813

Compound Number	: 175		
Compound Name	: Dibenz(a,j)acridine		
Scan Number	: 3283		
Retention Time (minutes)	: 20.472		
Quant Ion	: 279.00		
Area	: 9925		
On-column Amount (ng/ul)	: 0.1579		
Integration start scan	: 3277	Integration stop scan:	3291
Y at integration start	: 326	Y at integration end:	346

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

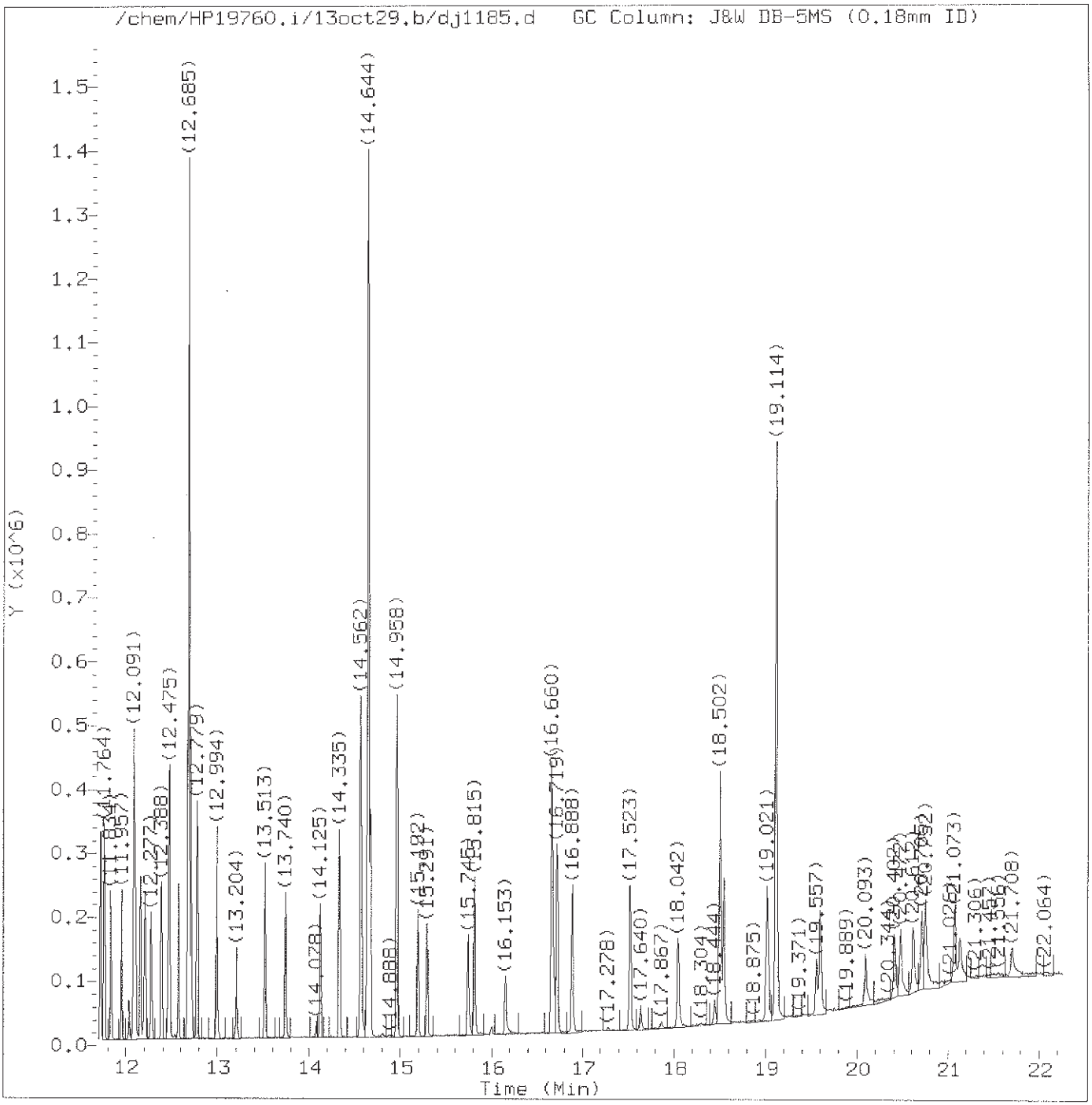
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	22269M	1.272
2) N-Nitrosodimethylamine	(1)	2.048	74	38547M	1.254
3) Pyridine	(1)	2.112	79	67472M	1.257
4) 2-Picoline	(1)	3.237	93	65872	1.178
5) N-Nitrosomethylethylamine	(1)	3.400	88	28658	1.207
6) Methyl methanesulfonate	(1)	3.855	80	32575	1.188
7)$2-Fluorophenol	(1)	4.071	112	101248	2.439
8) N-Nitrosodiethylamine	(1)	4.444	102	26770	1.168
10) Ethyl methanesulfonate	(1)	4.904	109	26410	1.188
11) Benzaldehyde	(1)	5.376	77	55036	1.399
12)$Phenol-d5	(1)	5.487	99	141190	2.469
13)$Phenol-d6	(1)	5.487	99	141190	2.469
14) Phenol	(1)	5.504	94	82122	1.236
15) Aniline	(1)	5.534	93	99089	1.215
16) bis(2-Chloroethyl)ether	(1)	5.656	93	63620	1.216
17) 2-Chlorophenol	(1)	5.697	128	48543	1.190
18) 1,3-Dichlorobenzene	(1)	5.936	146	54943	1.248
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	138331	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	55272	1.239
23) Benzyl alcohol	(1)	6.250	108	35118	1.223
24) 1,2-Dichlorobenzene	(1)	6.280	146	52982	1.275
25) Indene	(1)	6.414	115	106311	1.503
26) 2-Methylphenol	(1)	6.431	108	49448	1.207
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	81508	1.242
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	81508	1.242
29) N-Nitrosopyrrolidine	(1)	6.612	100	26480	1.145
30) Acetophenone	(1)	6.653	105	80822	1.262
33) 4-Methylphenol	(1)	6.670	108	57251	1.248
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	46619	1.253
32) N-Nitrosomorpholine	(1)	6.682	56	37671	1.271
34) o-Toluidine	(1)	6.705	106	87593	1.235
35) Hexachloroethane	(1)	6.793	117	23051	1.223
36)$Nitrobenzene-d5	(2)	6.868	82	122397	2.459
37) Nitrobenzene	(2)	6.897	77	66124	1.249
39) N-Nitrosopiperidine	(2)	7.136	114	25981	1.209
40) Isophorone	(2)	7.288	82	109011	1.213
42) 2-Nitrophenol	(2)	7.399	139	19527	1.104
45) 2,4-Dimethylphenol	(2)	7.504	107	53050	1.214
47) Benzoic acid	(2)	7.603	105	64759	1.938
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	23748	1.230

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	74668M	1.264
49) 2,4-Dichlorophenol	(2)	7.772	162	36329	1.191
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	43959	1.264
52)*Naphthalene-d8	(2)	7.987	136	535285	5.000
53) Naphthalene	(2)	8.022	128	147464	1.281
55) 4-Chloroaniline	(2)	8.127	127	58769	1.224
56) 2,6-Dichlorophenol	(2)	8.133	162	36624	1.247
57) Hexachloropropene	(2)	8.174	213	23865	1.119
58) Hexachlorobutadiene	(2)	8.250	225	25385	1.261
60) Quinoline	(2)	8.553	129	94155	1.226
61) Caprolactam	(2)	8.634	113	15728	1.156
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	39725	1.121
63) 4-Chloro-3-methylphenol	(2)	8.926	107	42929	1.166
64) Safrole	(2)	9.025	162	36262	1.253
65) 2-Methylnaphthalene	(2)	9.130	142	98282	1.282
66) 1-Methylnaphthalene	(2)	9.287	142	87553	1.262
67) Hexachlorocyclopentadiene	(3)	9.398	237	17375	1.048
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	45128	1.263
69) cis-Isosafrole	(3)	9.497	162	6014	1.163
70) 2,4,6-Trichlorophenol	(3)	9.596	196	25634	1.166
71) 2,4,5-Trichlorophenol	(3)	9.637	196	25547	1.124
72)$2-Fluorobiphenyl	(3)	9.748	172	198287	2.560
74) Isosafrole	(3)	9.858	162	34926	1.210
73) trans-Isosafrole	(3)	9.858	162	34926	1.210
75) 1,1'-Biphenyl	(3)	9.893	154	117078	1.304
76) 2-Chloronaphthalene	(3)	9.899	162	88989	1.289
77) 1-Chloronaphthalene	(3)	9.934	162	87532	1.278
82) Diphenyl ether	(3)	10.080	170	63424	1.282
83) 2-Nitroaniline	(3)	10.080	138	23140	1.125
84) 1,4-Naphthoquinone	(3)	10.196	158	30951	1.079
85) 1,4-Dinitrobenzene	(3)	10.319	168	9236	0.861
86) Dimethylphthalate	(3)	10.424	163	100272	1.303
87) 1,3-Dinitrobenzene	(3)	10.430	168	13847	1.048
88) 2,6-Dinitrotoluene	(3)	10.494	165	19733	1.192
90) Acenaphthylene	(3)	10.558	152	128664	1.248
91) 3-Nitroaniline	(3)	10.738	138	22330	1.176
92)*Acenaphthene-d10	(3)	10.791	164	303956	5.000
93) Acenaphthene	(3)	10.838	153	89771	1.247
94) 2,4-Dinitrophenol	(3)	10.908	184	13659	1.410
96) 4-Nitrophenol	(3)	11.018	109	24040	1.954

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.036	250	34962	1.217
97) Dibenzofuran	(3)	11.094	168	130135	1.274
98) 2,4-Dinitrotoluene	(3)	11.100	165	24532	1.160
99) 1-Naphthylamine	(3)	11.205	143	91867	1.256
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	19751	1.108
101) 2-Naphthylamine	(3)	11.310	143	95744	1.271
102) Diethylphthalate	(3)	11.467	149	95093	1.247
103) Fluorene	(3)	11.549	166	104201	1.275
104) Thionazin	(3)	11.566	107	20809	1.266
106) 5-Nitro-o-toluidine	(3)	11.572	152	27432	1.269
107) 4-Nitroaniline	(3)	11.572	138	24616	1.247
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	52803	1.291
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	17872	1.319
109) N-Nitrosodiphenylamine	(4)	11.724	169	82130	1.275
110) NDPA as diphenylamine	(4)	11.724	169	82130	1.275
111) 1,2-Diphenylhydrazine	(4)	11.764	77	132180	1.289
112)$2,4,6-Tribromophenol	(3)	11.840	330	18163	2.308
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	17130	1.177
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	5451	0.666
117) Diallate (peak 1)	(4)	12.085	86	48822	0.960
118) Phorate	(4)	12.091	75	75299	1.244
119) Phenacetin	(4)	12.102	108	47845	1.156
120) 4-Bromophenyl-phenylether	(4)	12.161	248	25926	1.269
121) Diallate (peak 2)	(4)	12.190	86	6365	0.297
122) Hexachlorobenzene	(4)	12.207	284	25349	1.246
123) Dimethoate	(4)	12.277	87	41240	1.061
124) Atrazine	(4)	12.388	200	26935	1.315
125) Pentachlorophenol	(4)	12.458	266	12480	0.914
126) Pentachloronitrobenzene	(4)	12.475	237	10941	1.227
127) 4-Aminobiphenyl	(4)	12.475	169	98012	1.239
129) Pronamide	(4)	12.575	173	38417	1.178
130)*Phenanthrene-d10	(4)	12.685	188	512509	5.000
131) Phenanthrene	(4)	12.714	178	150220	1.284
133) Dinoseb	(4)	12.714	211	10055	0.629
134) Anthracene	(4)	12.779	178	145940	1.275
135) Carbazole	(4)	12.994	167	137397	1.242
136) Methyl parathion	(4)	13.204	109	23830	0.890
137) Di-n-butylphthalate	(4)	13.513	149	149836	1.152
138) Parathion	(4)	13.740	109	15893	0.921
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	3967	0.444

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	16317	1.203
142) Fluoranthene	(4)	14.335	202	156364	1.225
144) Benzidine	(5)	14.562	184	272209	3.347
145)*Pyrene-d10	(5)	14.644	212	649692	5.000
146) Pyrene	(5)	14.673	202	175362	1.244
149)$Terphenyl-d14	(5)	14.958	244	203163	2.479
150) p-Dimethylaminoazobenzene	(5)	15.192	225	25171	1.081
151) Chlorobenzilate	(5)	15.291	139	42880	1.105
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	74815	0.946
153) Butylbenzylphthalate	(5)	15.815	149	65483	1.125
156) 2-Acetylaminofluorene	(5)	16.153	181	33973	0.737
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	44223	1.060
158) Benzo(a)anthracene	(5)	16.660	228	139152	1.213
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	22477	1.025
161) Chrysene	(5)	16.719	228	147664	1.281
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	79864	1.038
165) 6-Methylchrysene	(5)	17.523	242	94127	1.183
166) Di-n-octylphthalate	(6)	18.042	149	107935	0.898
168) Benzo(b)fluoranthene	(6)	18.502	252	126011	1.213
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	54160	1.219
170) Benzo(k)fluoranthene	(6)	18.543	252	130476	1.235
171) Benzo(a)pyrene	(6)	19.021	252	115098	1.194
172)*Perylene-d12	(6)	19.114	264	447306	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	51034	1.143
174) Dibenz(a,h)acridine	(6)	20.402	279	59881	0.956
175) Dibenz(a,j)acridine	(6)	20.472	279	69441	1.052
176) Indeno(1,2,3-cd)pyrene	(6)	20.705	276	97855	1.211
177) Dibenz(a,h)anthracene	(6)	20.752	278	82575	1.213
178) Benzo(g,h,i)perylene	(6)	21.073	276	83734	1.202
179) Diallate TRANS/CIS	(4)			55187	1.268
182) 2,4_2,6-Dinitrotoluenes	(3)			44265	2.352

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$ = Compound is a surrogate standard.

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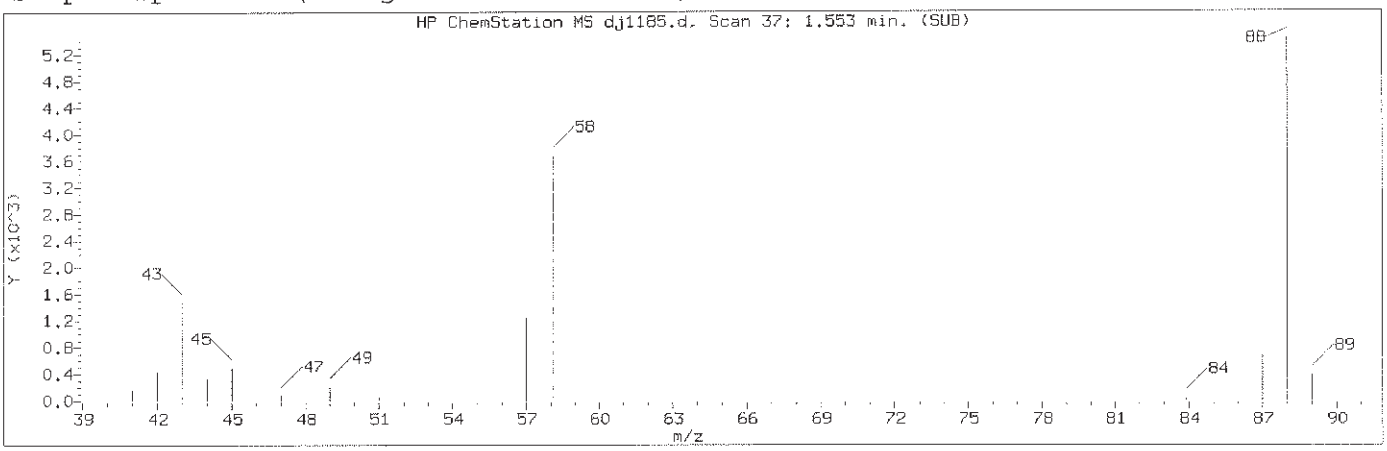
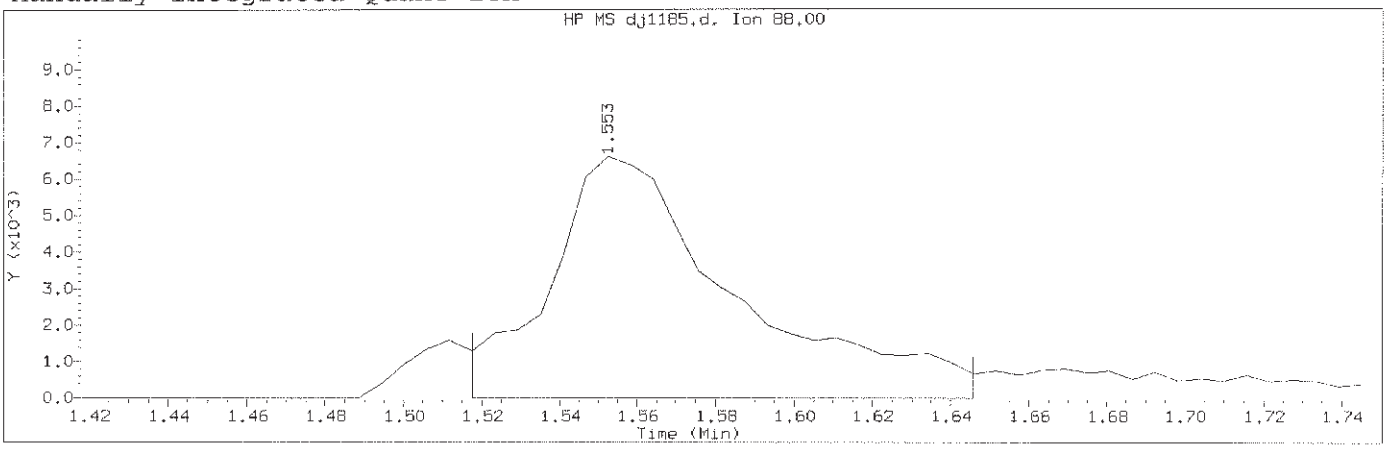
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 22269M		
On-Column Amount (ng/ul)	: 1.2719		
Integration start scan	: 30	Integration stop scan:	52
Y at integration start	: -1	Y at integration end:	-1

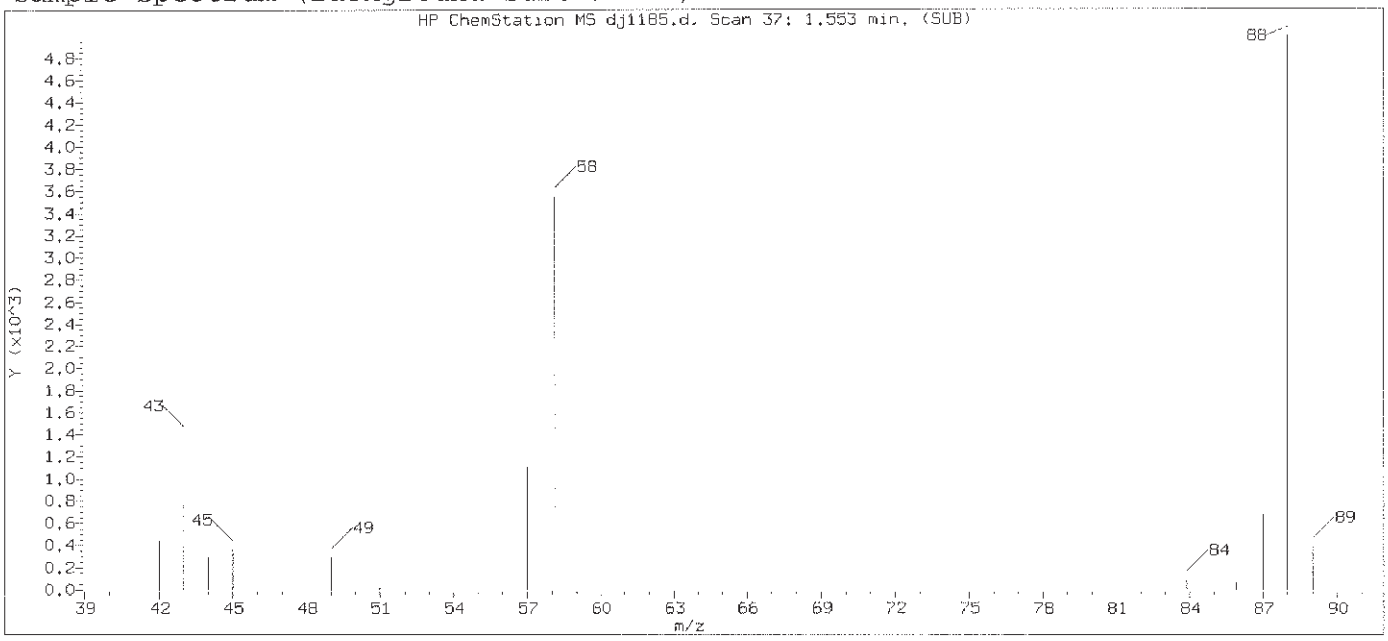
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

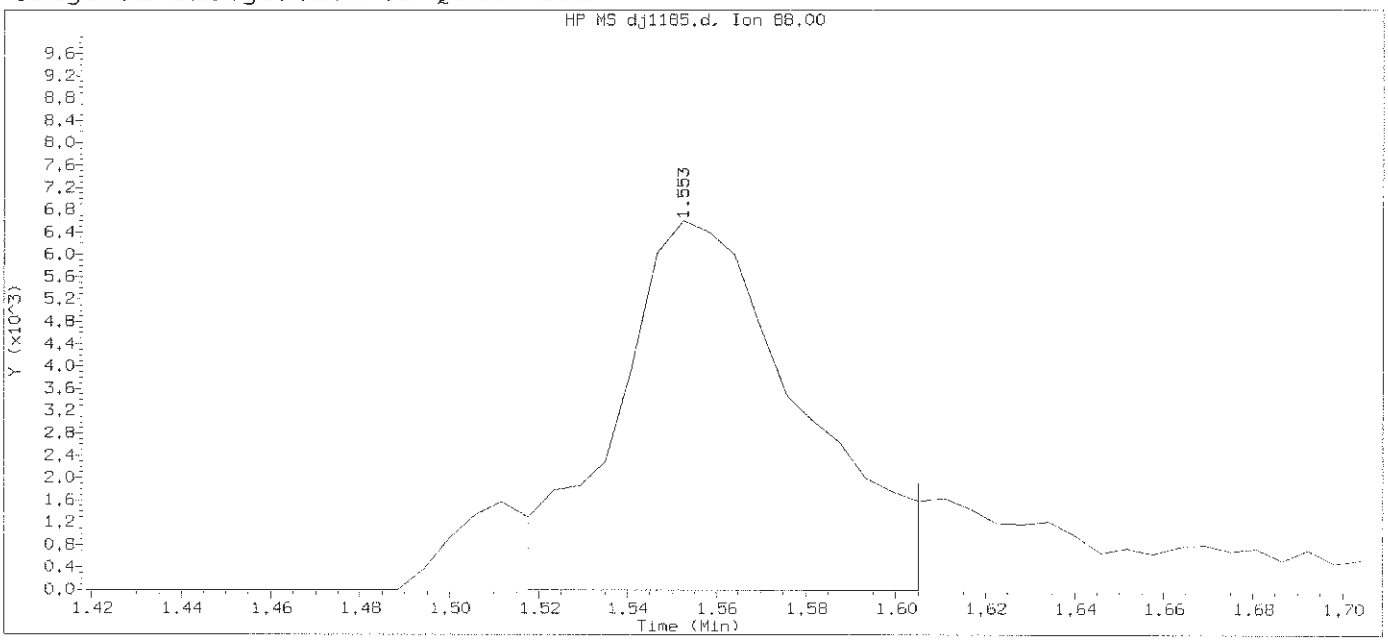
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 18846		
On-column Amount (ng/ul)	: 1.0953		
Integration start scan	: 30	Integration stop scan:	45
Y at integration start	: 0	Y at integration end:	0

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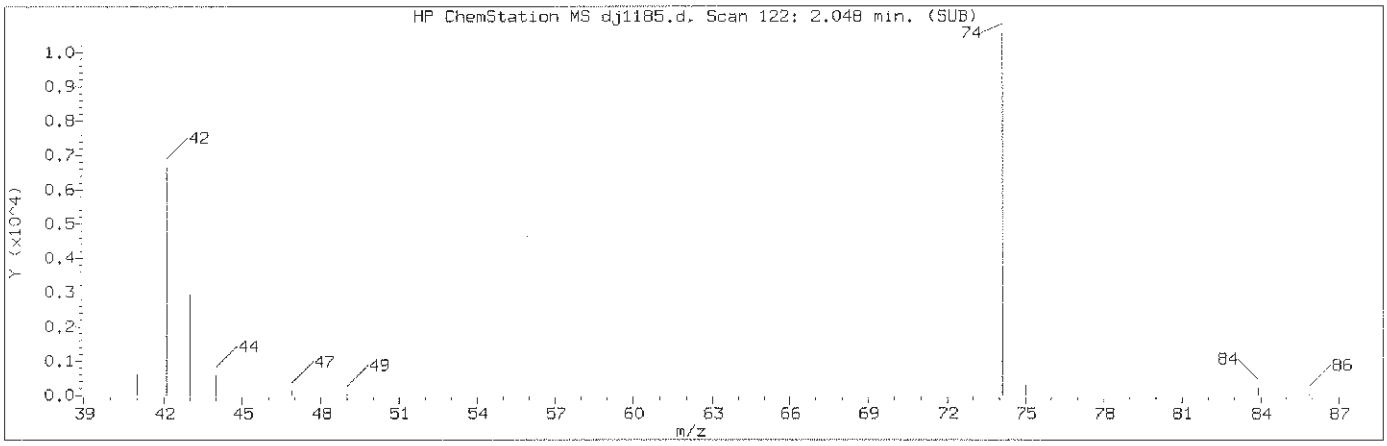
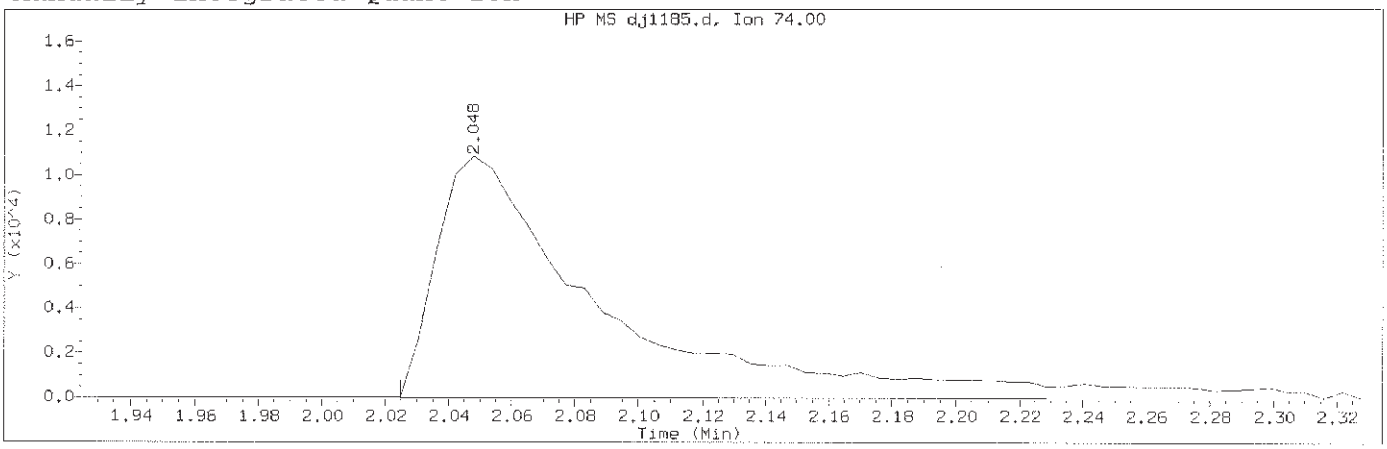
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area (flag)	: 38547M		
On-Column Amount (ng/ul)	: 1.2538		
Integration start scan	: 117	Integration stop scan:	152
Y at integration start	: -17	Y at integration end:	-17

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: OCT. 3 0 2013

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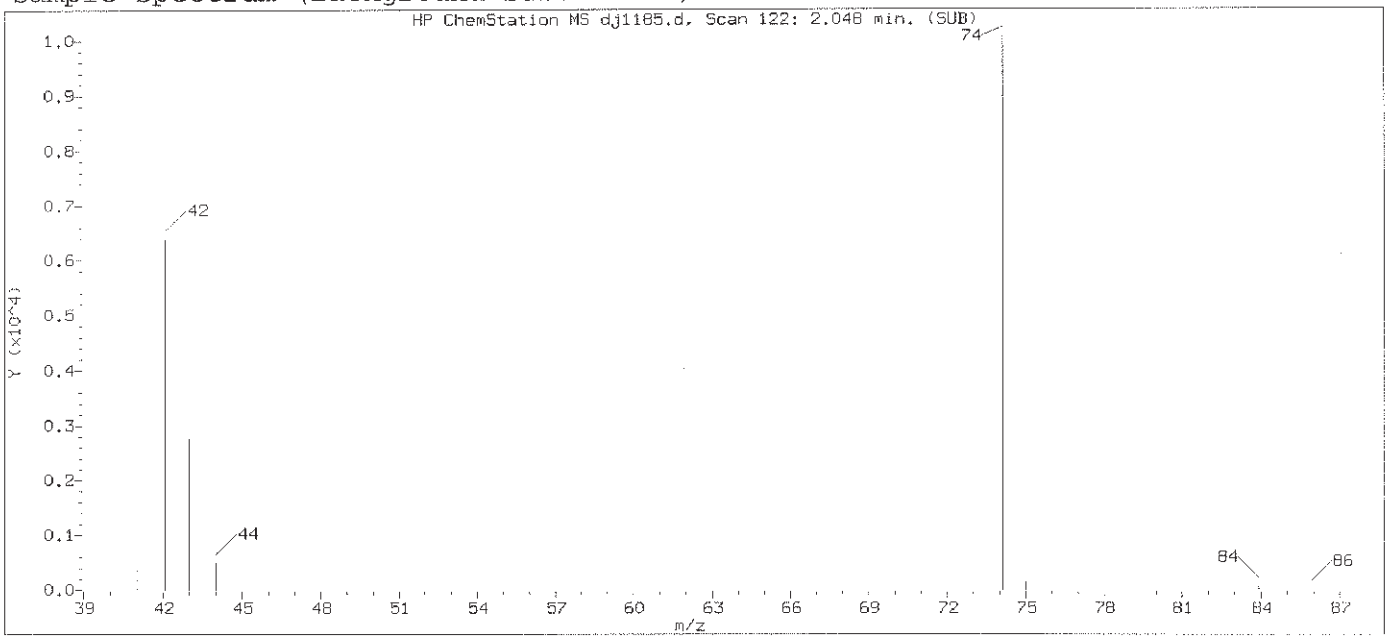
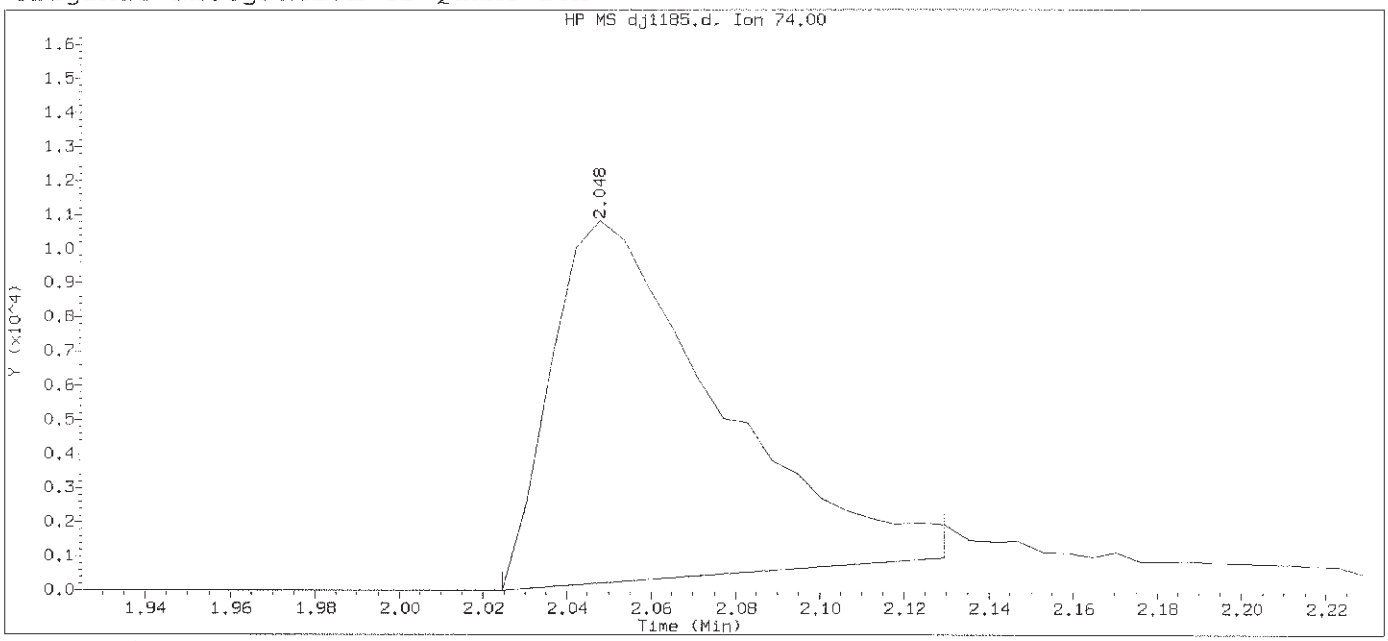
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 2		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 122		
Retention Time (minutes)	: 2.048		
Quant Ion	: 74.00		
Area	: 29253		
On-column Amount (ng/ul)	: 1.0178		
Integration start scan	: 117	Integration stop scan:	135
Y at integration start	: 0	Y at integration end:	965

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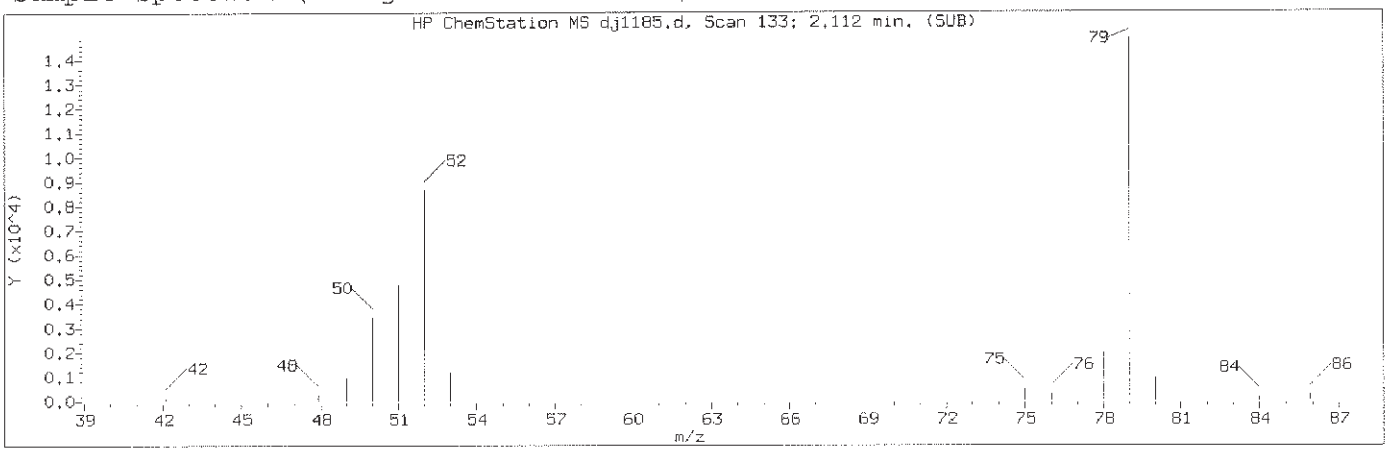
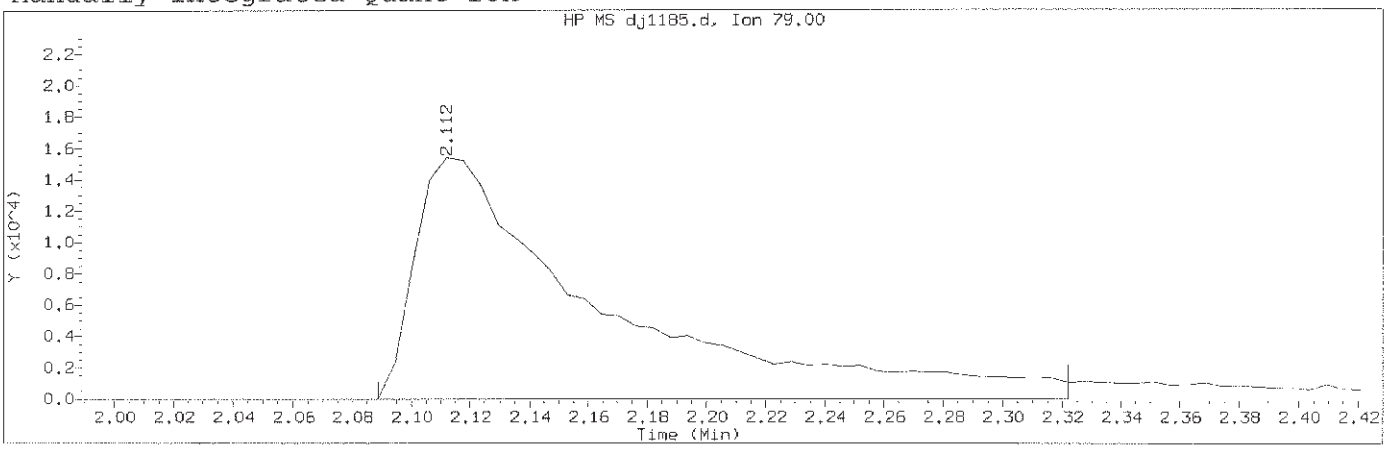
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area (flag)	: 67472M		
On-Column Amount (ng/ul)	: 1.2574		
Integration start scan	: 128	Integration stop scan:	168
Y at integration start	: -8	Y at integration end:	-8

Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

GC/MS audit/management approval:_____

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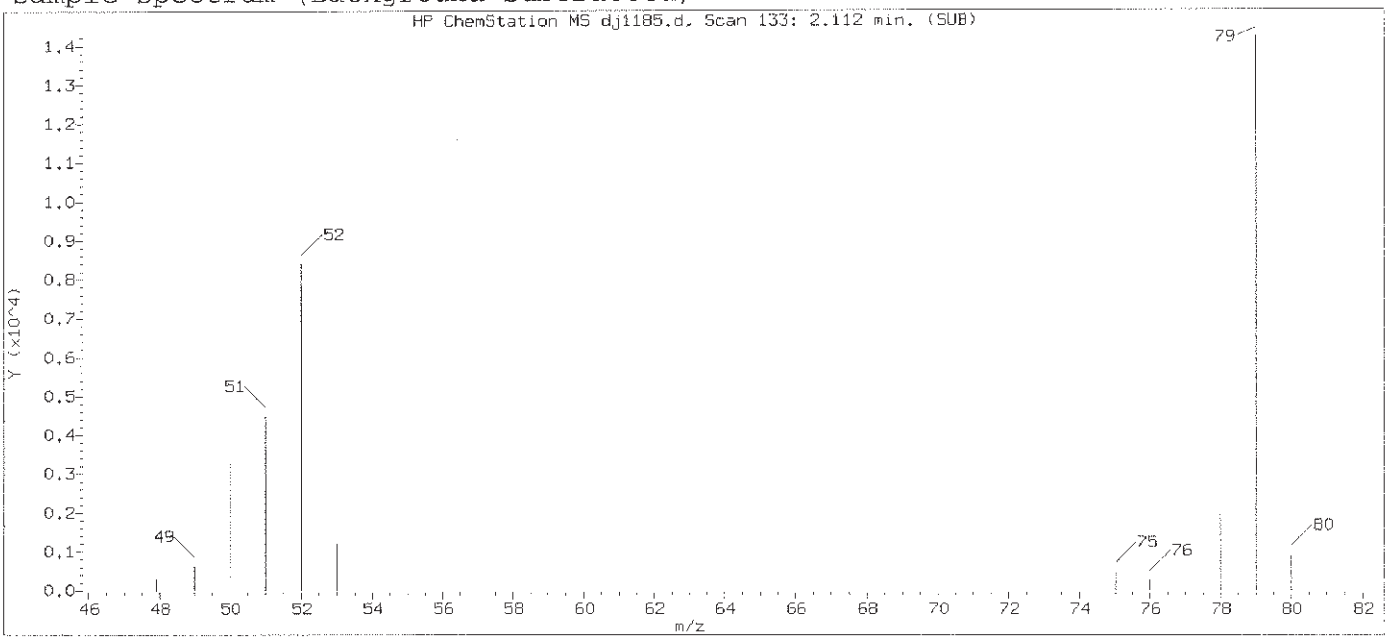
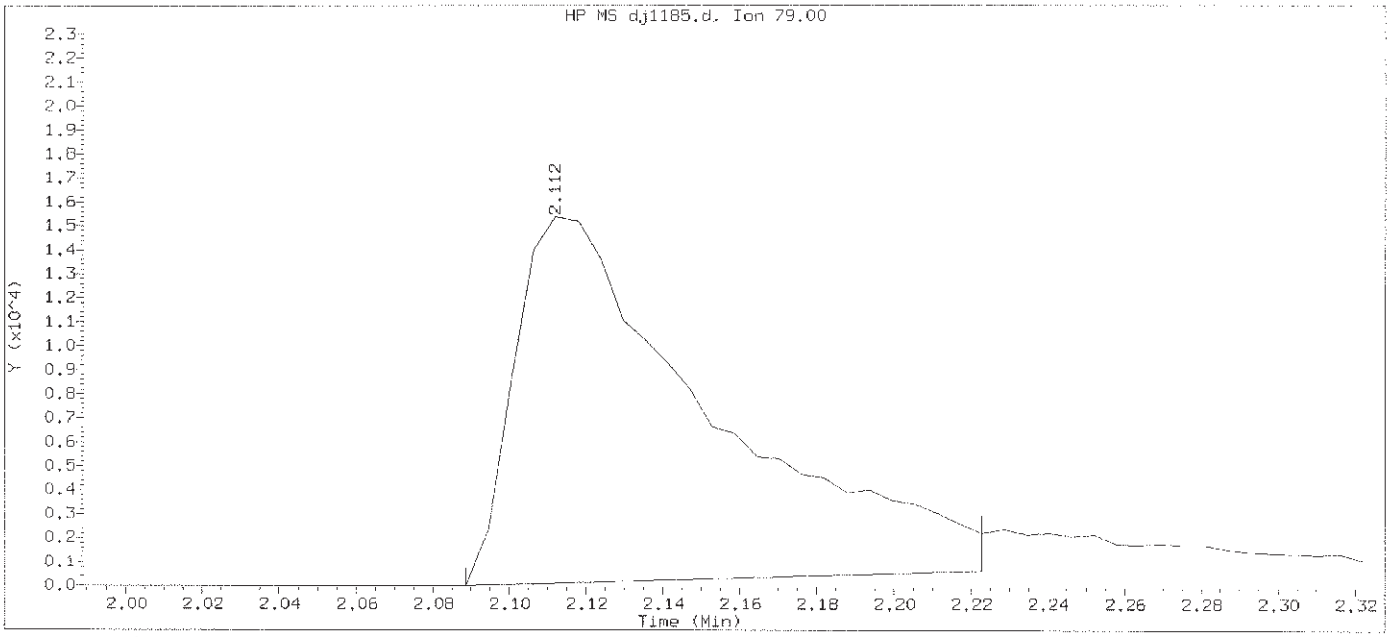
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

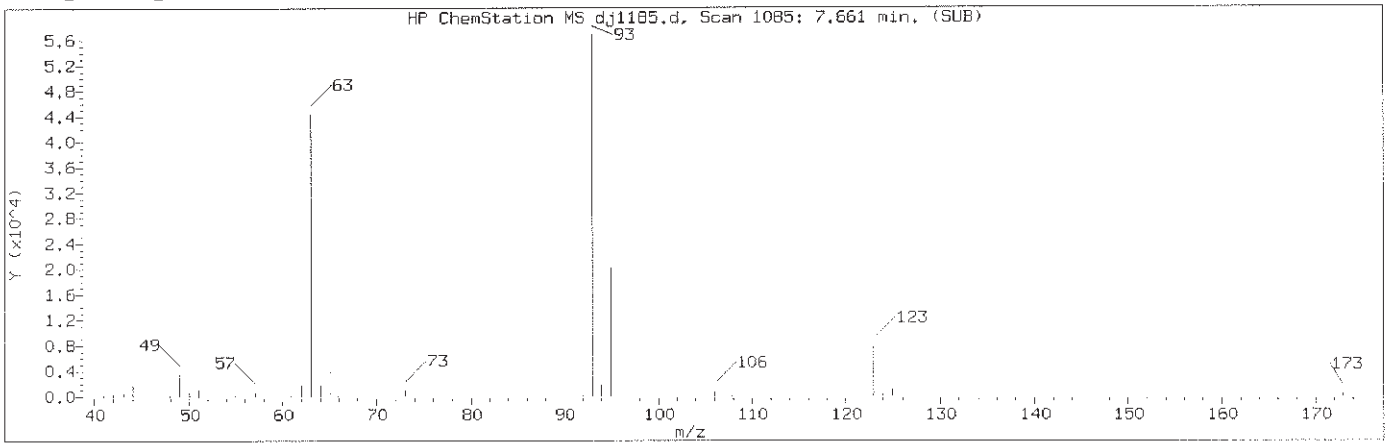
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

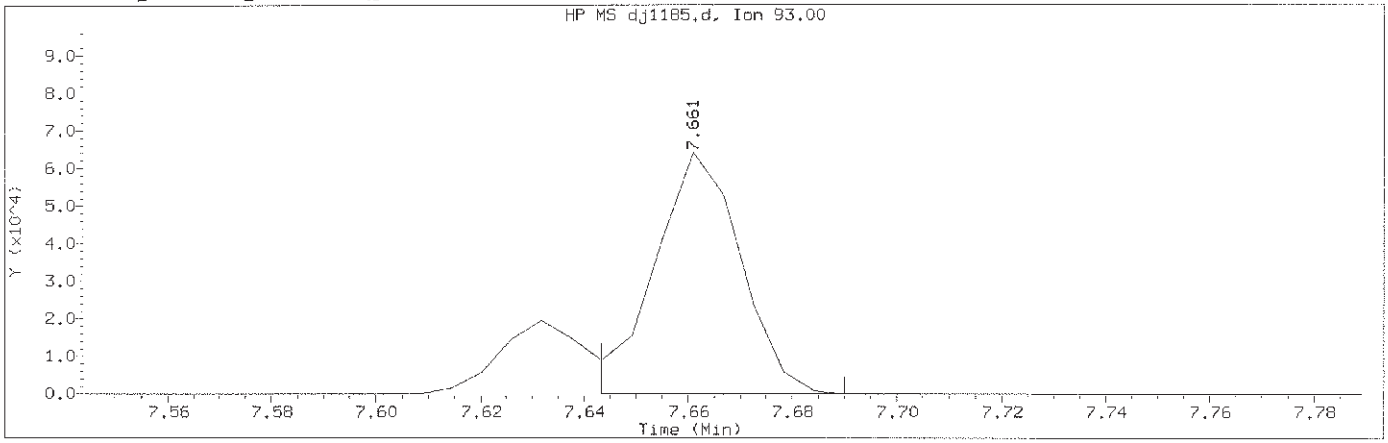
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 133		
Retention Time (minutes)	: 2.112		
Quant Ion	: 79.00		
Area	: 54361		
On-column Amount (ng/ul)	: 1.0984		
Integration start scan	: 128	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	617

Digitally signed by Brian K. Graham on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:49
Date, time and analyst ID of latest file update: 29-Oct-2013 21:49 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1085		
Retention Time (minutes)	: 7.661		
Quant Ion	: 93.00		
Area (flag)	: 74668M		
On-Column Amount (ng/ul)	: 1.2637		
Integration start scan	: 1081	Integration stop scan:	1089
Y at integration start	: -3	Y at integration end:	-3

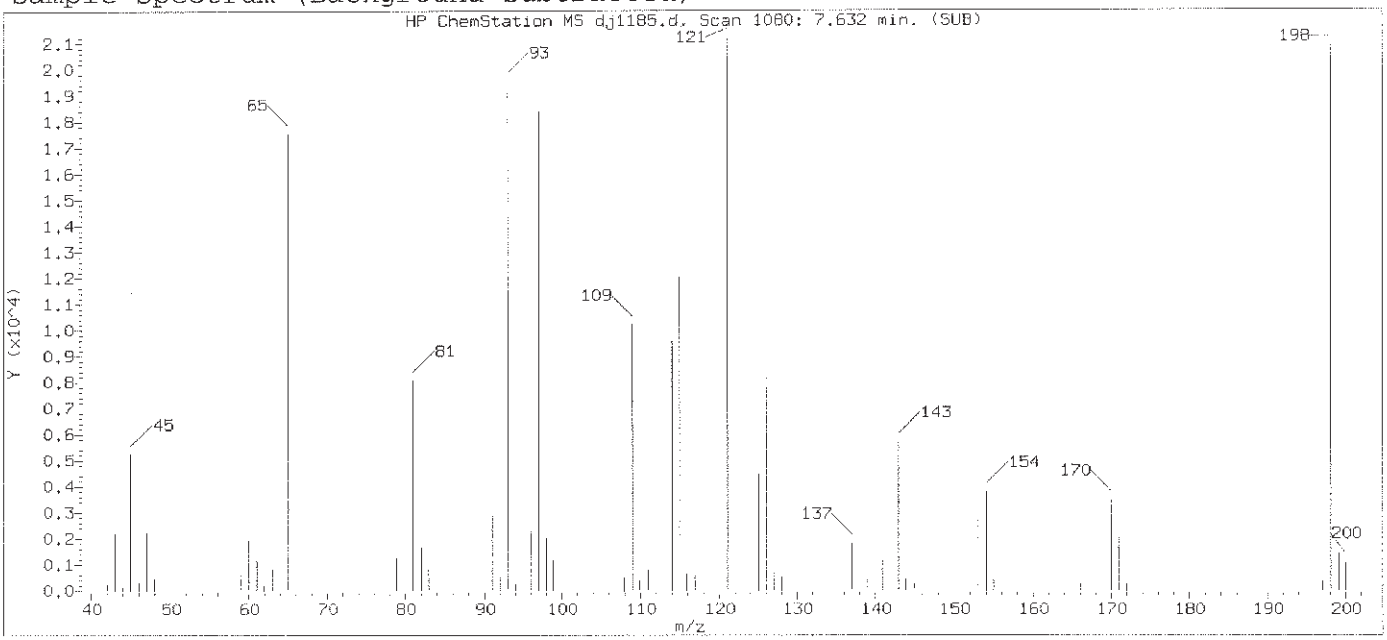
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:24.
Target 3.5 esignature user ID: bkg00522

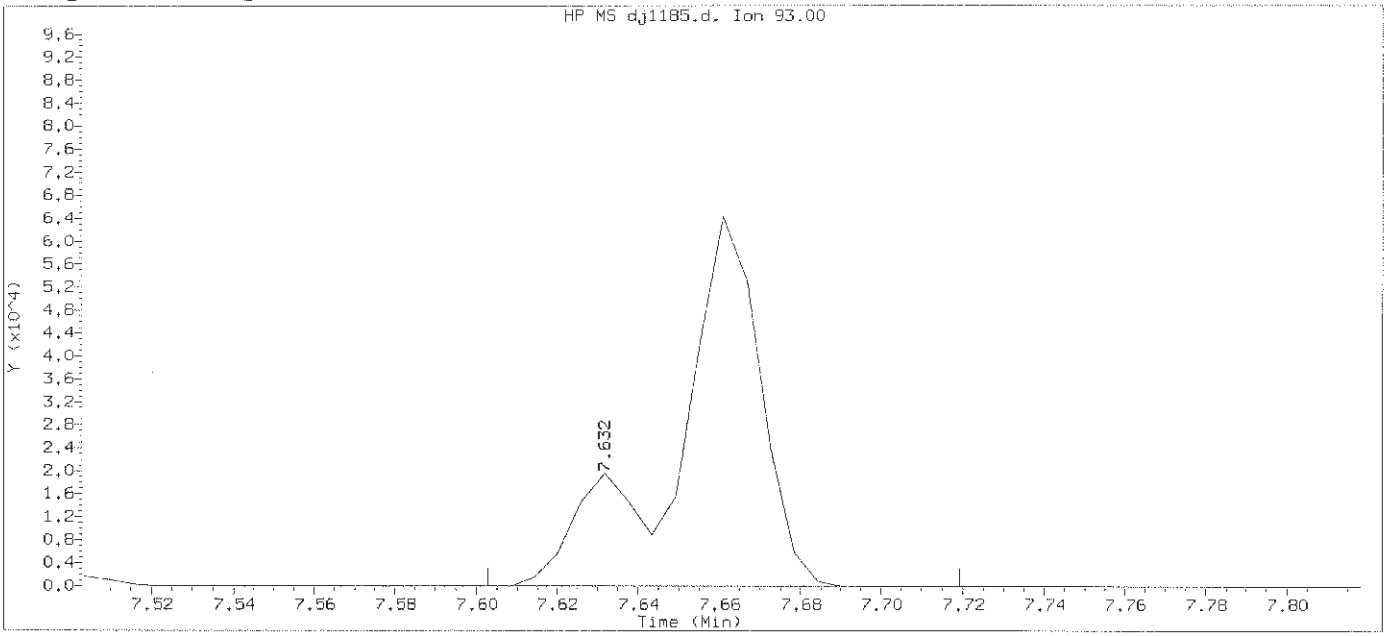
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1185.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:15 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD1.25 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1080		
Retention Time (minutes)	: 7.632		
Quant Ion	: 93.00		
Area	: 94211		
On-column Amount (ng/ul)	: 1.4595		
Integration start scan	: 1074	Integration stop scan:	1094
Y at integration start	: 0	Y at integration end:	0

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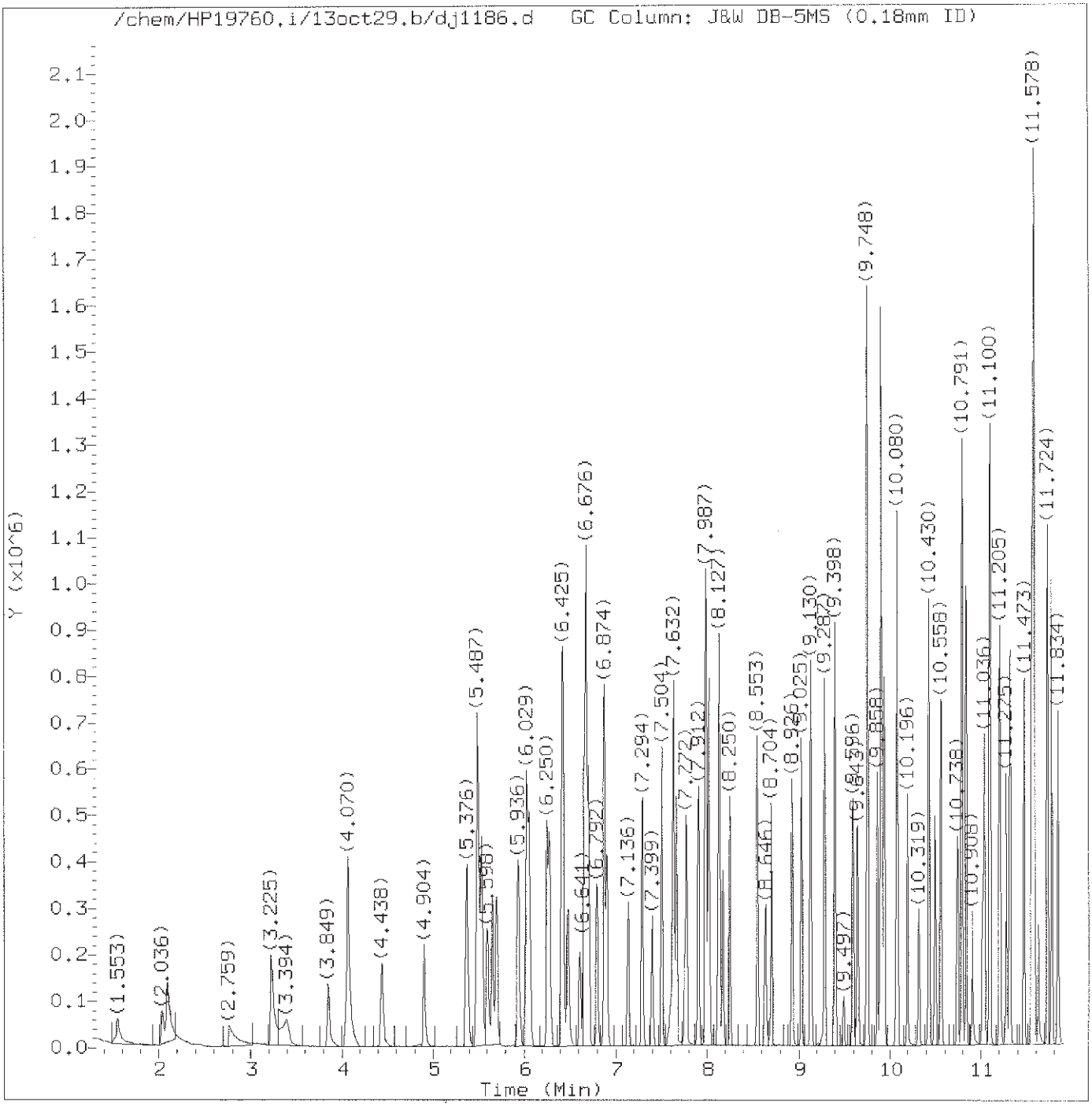
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

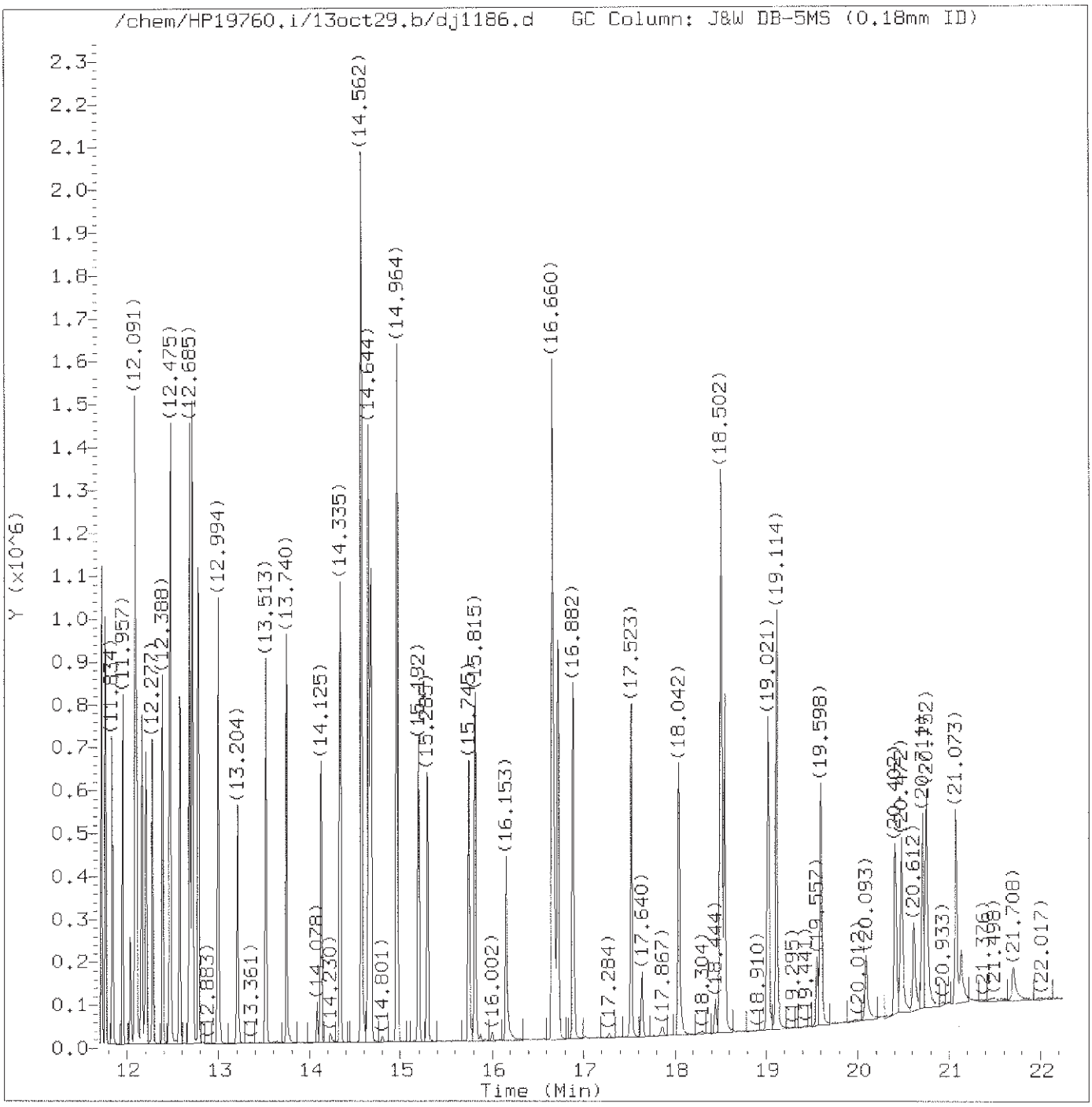
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.553	88	68392M	3.820
2) N-Nitrosodimethylamine	(1)	2.036	74	105553	3.447
3) Pyridine	(1)	2.095	79	177830	3.371
4) 2-Picoline	(1)	3.225	93	199277	3.552
5) N-Nitrosomethylethylamine	(1)	3.394	88	87323	3.644
6) Methyl methanesulfonate	(1)	3.849	80	99499	3.605
7)$2-Fluorophenol	(1)	4.070	112	301694	7.218
8) N-Nitrosodiethylamine	(1)	4.444	102	83412	3.614
10) Ethyl methanesulfonate	(1)	4.904	109	80657	3.604
11) Benzaldehyde	(1)	5.376	77	166226	4.049
12)$Phenol-d5	(1)	5.487	99	419689	7.277
13)$Phenol-d6	(1)	5.487	99	419689	7.277
14) Phenol	(1)	5.504	94	244417	3.645
15) Aniline	(1)	5.539	93	298601	3.632
16) bis(2-Chloroethyl)ether	(1)	5.656	93	192402	3.643
17) 2-Chlorophenol	(1)	5.703	128	148109	3.608
18) 1,3-Dichlorobenzene	(1)	5.936	146	163356	3.670
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	140563	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	164644	3.656
23) Benzyl alcohol	(1)	6.250	108	106806	3.682
24) 1,2-Dichlorobenzene	(1)	6.280	146	154923	3.685
25) Indene	(1)	6.414	115	305774	4.302
26) 2-Methylphenol	(1)	6.431	108	151928	3.670
28) bis(2-Chloroisopropyl)ether	(1)	6.484	45	241778	3.649
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.484	45	241778	3.649
29) N-Nitrosopyrrolidine	(1)	6.612	100	86112	3.682
30) Acetophenone	(1)	6.653	105	240525	3.708
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	139013	3.692
33) 4-Methylphenol	(1)	6.676	108	171824	3.698
32) N-Nitrosomorpholine	(1)	6.682	56	109527	3.660
34) o-Toluidine	(1)	6.705	106	263721	3.676
35) Hexachloroethane	(1)	6.792	117	69243	3.642
36)$Nitrobenzene-d5	(2)	6.874	82	374112	7.321
37) Nitrobenzene	(2)	6.903	77	198687	3.656
39) N-Nitrosopiperidine	(2)	7.136	114	81540	3.689
40) Isophorone	(2)	7.294	82	334673	3.635
42) 2-Nitrophenol	(2)	7.399	139	64142	3.557
45) 2,4-Dimethylphenol	(2)	7.504	107	165705	3.687
47) Benzoic acid	(2)	7.626	105	151594M	5.096
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	74096	3.723

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	222735	3.670
49) 2,4-Dichlorophenol	(2)	7.772	162	117512	3.735
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	129391	3.631
52)*Naphthalene-d8	(2)	7.987	136	552831	5.000
53) Naphthalene	(2)	8.022	128	439891	3.707
55) 4-Chloroaniline	(2)	8.127	127	178930	3.635
56) 2,6-Dichlorophenol	(2)	8.133	162	114671	3.774
57) Hexachloropropene	(2)	8.174	213	80240	3.665
58) Hexachlorobutadiene	(2)	8.250	225	75787	3.665
60) Quinoline	(2)	8.553	129	284083	3.613
61) Caprolactam	(2)	8.646	113	52556	3.743
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	124480	3.482
63) 4-Chloro-3-methylphenol	(2)	8.926	107	138946	3.672
64) Safrole	(2)	9.025	162	110360	3.705
65) 2-Methylnaphthalene	(2)	9.130	142	293792	3.718
66) 1-Methylnaphthalene	(2)	9.287	142	266959	3.729
67) Hexachlorocyclopentadiene	(3)	9.404	237	58106	3.459
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	135309	3.665
69) cis-Isosafrole	(3)	9.497	162	19222	3.611
70) 2,4,6-Trichlorophenol	(3)	9.596	196	83953	3.690
71) 2,4,5-Trichlorophenol	(3)	9.643	196	85454	3.642
72)$2-Fluorobiphenyl	(3)	9.748	172	593259	7.395
74) Isosafrole	(3)	9.858	162	112492	3.749
73) trans-Isosafrole	(3)	9.858	162	112492	3.749
75) 1,1'-Biphenyl	(3)	9.899	154	351719	3.766
76) 2-Chloronaphthalene	(3)	9.905	162	255632	3.599
77) 1-Chloronaphthalene	(3)	9.934	162	264305	3.721
82) Diphenyl ether	(3)	10.080	170	189965	3.707
83) 2-Nitroaniline	(3)	10.080	138	80534	3.765
84) 1,4-Naphthoquinone	(3)	10.196	158	108951	3.679
85) 1,4-Dinitrobenzene	(3)	10.319	168	35691	3.322
86) Dimethylphthalate	(3)	10.424	163	307320	3.819
87) 1,3-Dinitrobenzene	(3)	10.430	168	47338	3.517
88) 2,6-Dinitrotoluene	(3)	10.494	165	66555	3.845
90) Acenaphthylene	(3)	10.564	152	400060	3.737
91) 3-Nitroaniline	(3)	10.738	138	76037	3.831
92)*Acenaphthene-d10	(3)	10.791	164	315878	5.000
93) Acenaphthene	(3)	10.838	153	273437	3.671
94) 2,4-Dinitrophenol	(3)	10.908	184	44952	5.161
96) 4-Nitrophenol	(3)	11.018	109	45497	3.605

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	107060	3.618
97) Dibenzofuran	(3)	11.100	168	393706	3.717
98) 2,4-Dinitrotoluene	(3)	11.100	165	85005	3.844
99) 1-Naphthylamine	(3)	11.205	143	287654	3.778
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	70651	3.801
101) 2-Naphthylamine	(3)	11.316	143	298380	3.800
102) Diethylphthalate	(3)	11.473	149	289267	3.674
103) Fluorene	(3)	11.549	166	318814	3.754
104) Thionazin	(3)	11.566	107	64912	3.790
106) 5-Nitro-o-toluidine	(3)	11.572	152	87345	3.860
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	157117	3.707
107) 4-Nitroaniline	(3)	11.578	138	79776	3.860
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	34788	2.763
109) N-Nitrosodiphenylamine	(4)	11.724	169	255381	3.766
110) NDPA as diphenylamine	(4)	11.724	169	255381	3.766
111) 1,2-Diphenylhydrazine	(4)	11.764	77	405355	3.758
112)$2,4,6-Tribromophenol	(3)	11.840	330	60726	7.439
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	57370	3.748
116) 1,3,5-Trinitrobenzene	(4)	12.044	213	25031	3.082
117) Diallate (peak 1)	(4)	12.085	86	152285	2.840
118) Phorate	(4)	12.091	75	239579	3.760
119) Phenacetin	(4)	12.108	108	163548	3.755
120) 4-Bromophenyl-phenylether	(4)	12.161	248	78686	3.680
121) Diallate (peak 2)	(4)	12.190	86	20804	0.926
122) Hexachlorobenzene	(4)	12.207	284	76769	3.614
123) Dimethoate	(4)	12.277	87	148445	3.661
124) Atrazine	(4)	12.388	200	87367	3.990
125) Pentachlorophenol	(4)	12.458	266	47912	3.431
126) Pentachloronitrobenzene	(4)	12.475	237	37712	3.966
127) 4-Aminobiphenyl	(4)	12.475	169	316816	3.797
129) Pronamide	(4)	12.574	173	133638	3.866
130)*Phenanthrene-d10	(4)	12.685	188	538913	5.000
131) Phenanthrene	(4)	12.714	178	448337	3.662
133) Dinoseb	(4)	12.714	211	49773	3.127
134) Anthracene	(4)	12.778	178	453512	3.765
135) Carbazole	(4)	12.994	167	437915	3.761
136) Methyl parathion	(4)	13.204	109	96338	3.497
137) Di-n-butylphthalate	(4)	13.513	149	508920	3.728
138) Parathion	(4)	13.740	109	65531	3.646
139) 4-Nitroquinoline-1-oxide	(4)	13.740	190	21592	2.543

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

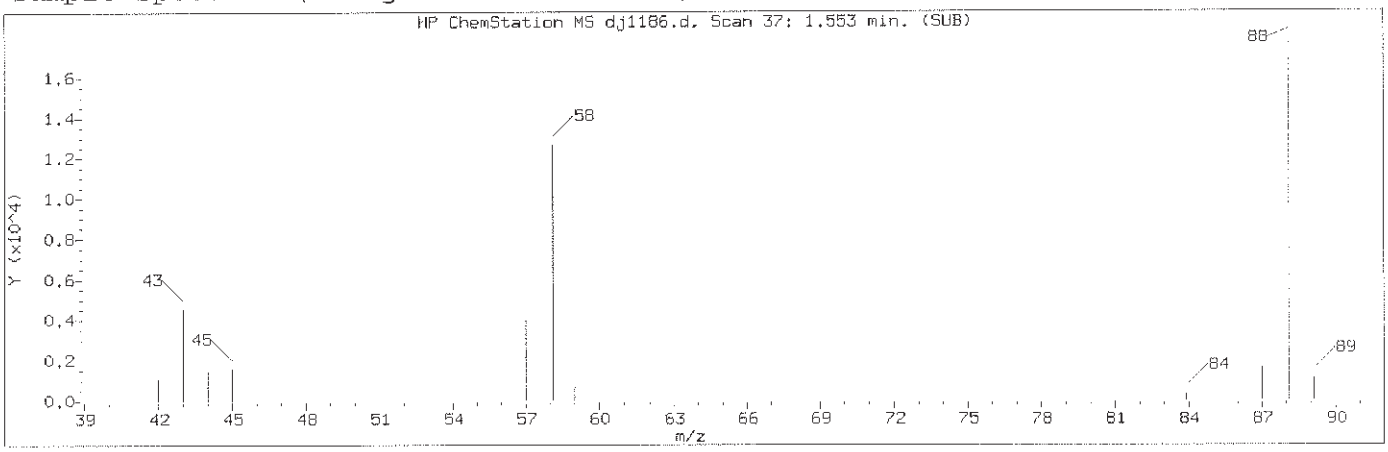
Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	53847	3.771
142) Fluoranthene	(4)	14.335	202	510943	3.796
144) Benzidine	(5)	14.568	184	1018403	11.585
145)*Pyrene-d10	(5)	14.644	212	695223	5.000
146) Pyrene	(5)	14.673	202	539258	3.602
149)$Terphenyl-d14	(5)	14.964	244	640393	7.341
150) p-Dimethylaminoazobenzene	(5)	15.192	225	95700	3.823
151) Chlorobenzilate	(5)	15.285	139	148617	3.620
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	308612	3.671
153) Butylbenzylphthalate	(5)	15.815	149	230740	3.715
156) 2-Acetylaminofluorene	(5)	16.153	181	151546	3.218
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	160393	3.631
158) Benzo(a)anthracene	(5)	16.660	228	471516	3.825
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	84756	3.645
161) Chrysene	(5)	16.719	228	466993	3.779
162) bis(2-Ethylhexyl)phthalate	(5)	16.882	149	293533	3.608
165) 6-Methylchrysene	(5)	17.523	242	319217	3.750
166) Di-n-octylphthalate	(6)	18.042	149	445353	3.485
168) Benzo(b)fluoranthene	(6)	18.502	252	425715	3.764
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	192572	3.933
170) Benzo(k)fluoranthene	(6)	18.549	252	437867	3.799
171) Benzo(a)pyrene	(6)	19.021	252	376795	3.617
172)*Perylene-d12	(6)	19.114	264	486848	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	181235	3.734
174) Dibenz(a,h)acridine	(6)	20.402	279	232723	3.492
175) Dibenz(a,j)acridine	(6)	20.472	279	268607	3.742
176) Indeno(1,2,3-cd)pyrene	(6)	20.711	276	350010	3.941
177) Dibenz(a,h)anthracene	(6)	20.752	278	293379	3.922
178) Benzo(g,h,i)perylene	(6)	21.073	276	286798	3.777
179) Diallate TRANS/CIS	(4)			173089	3.777
182) 2,4_2,6-Dinitrotoluenes	(3)			151560	7.689

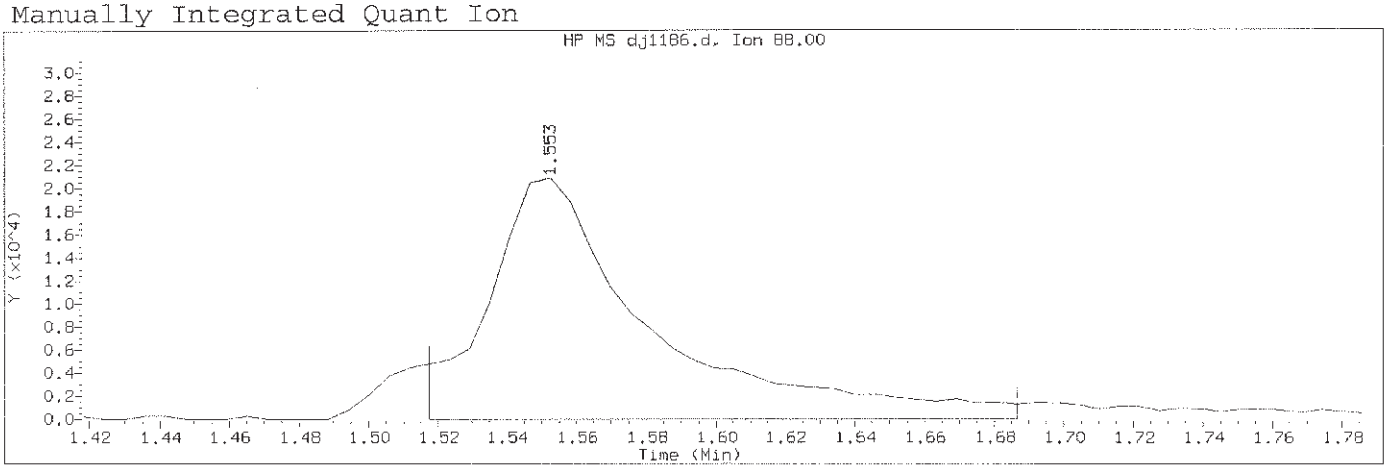
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area (flag)	: 68392M		
On-Column Amount (ng/ul)	: 3.8203		
Integration start scan	: 30	Integration stop scan:	59
Y at integration start	: 3	Y at integration end:	3

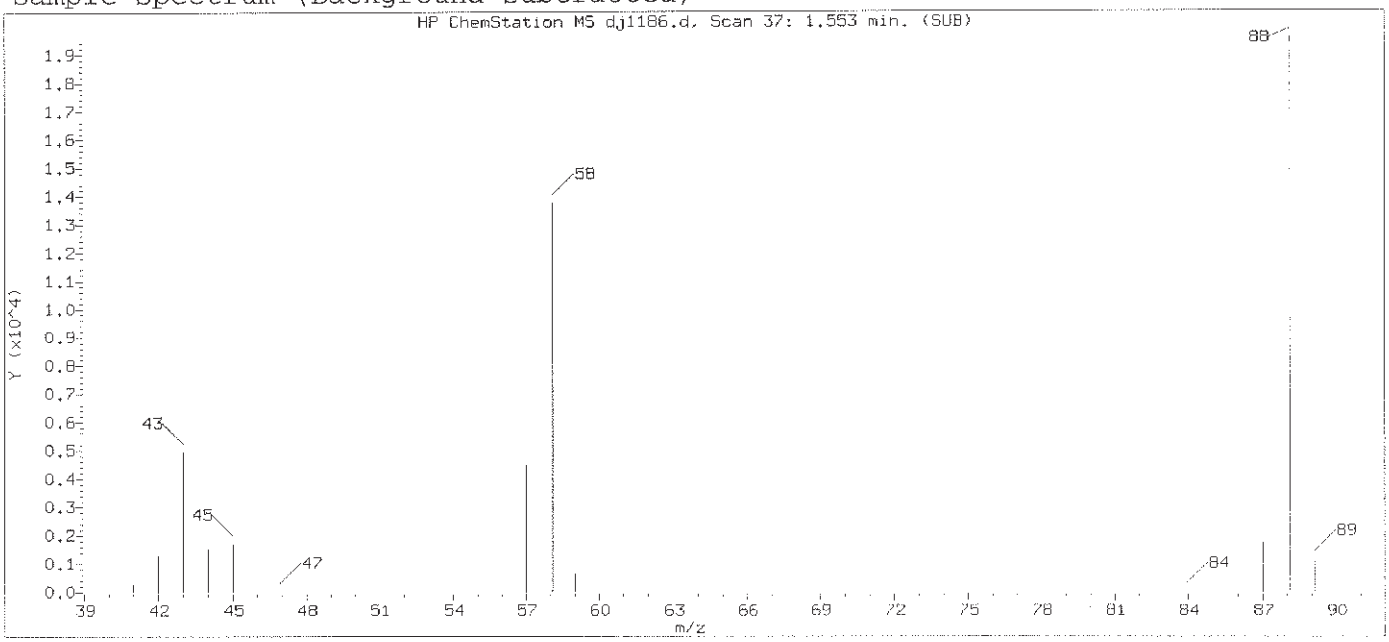
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

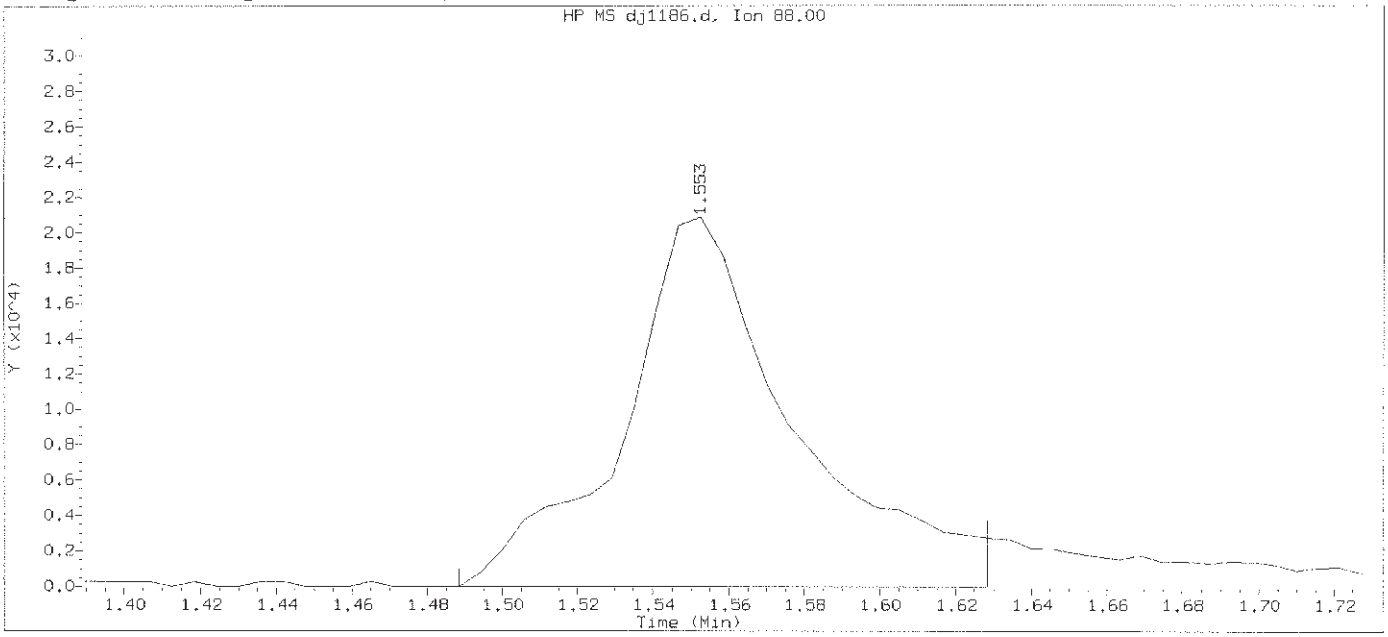
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

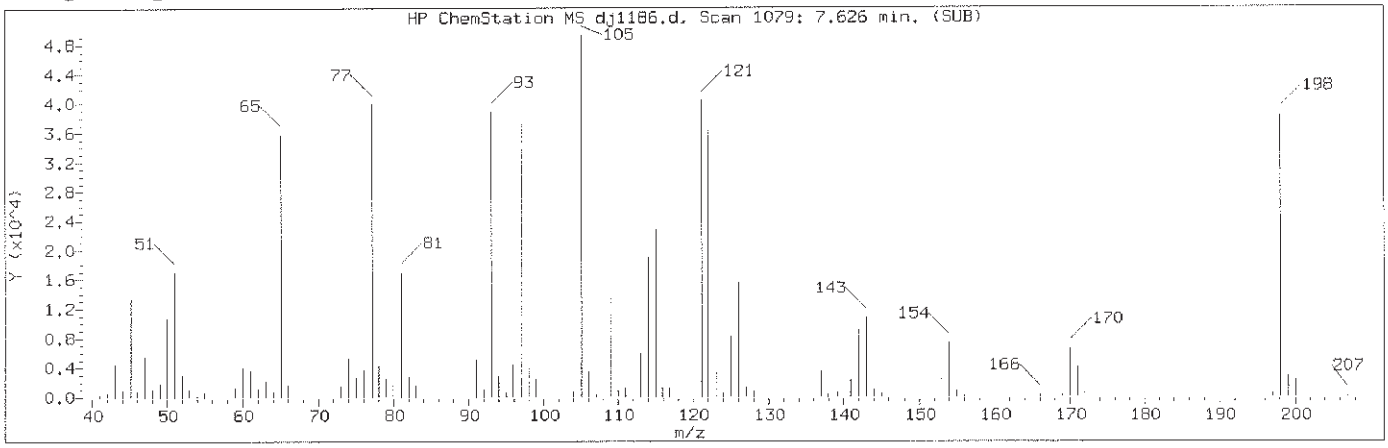
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newa111
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

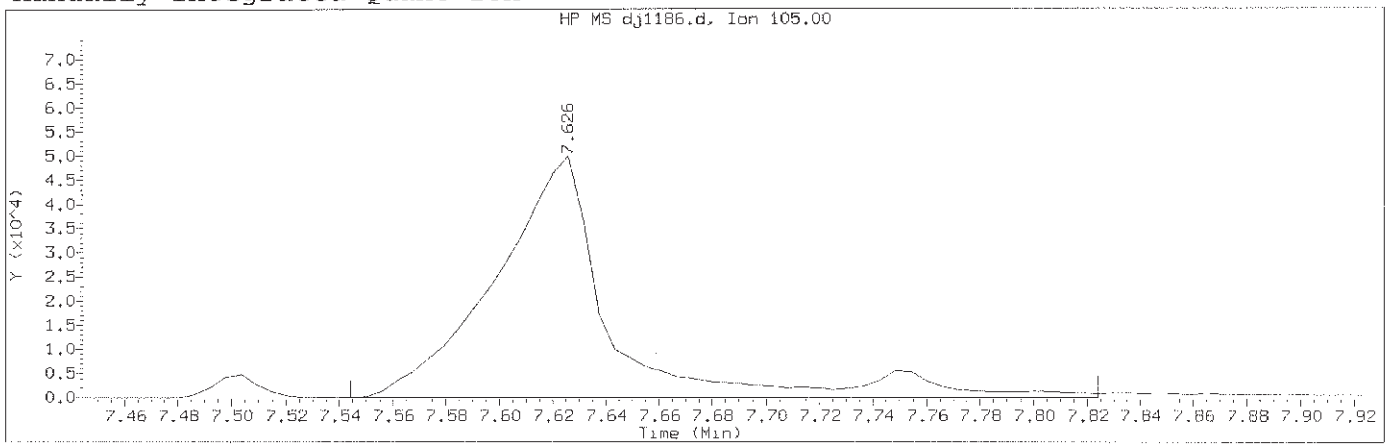
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 37		
Retention Time (minutes)	: 1.553		
Quant Ion	: 88.00		
Area	: 65518		
On-column Amount (ng/ul)	: 3.7471		
Integration start scan	: 25	Integration stop scan:	49
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area (flag)	: 151594M		
On-Column Amount (ng/ul)	: 5.0962		
Integration start scan	: 1064	Integration stop scan:	1112
Y at integration start	: 26	Y at integration end:	26

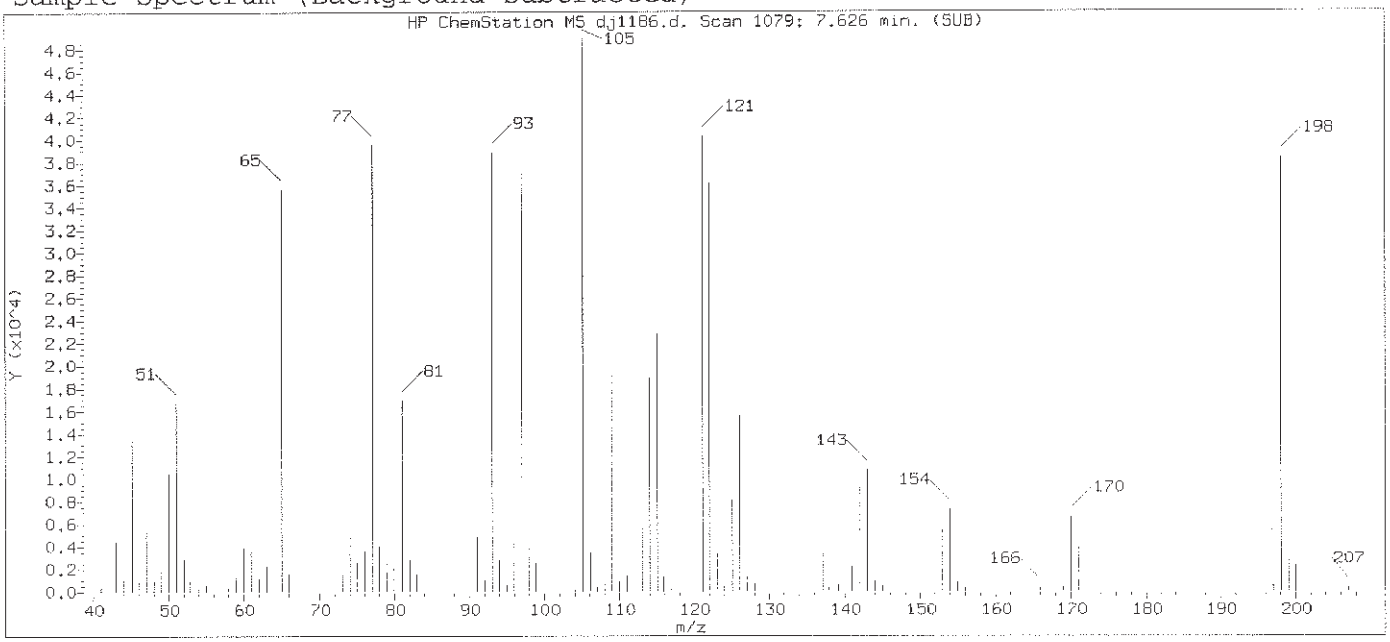
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

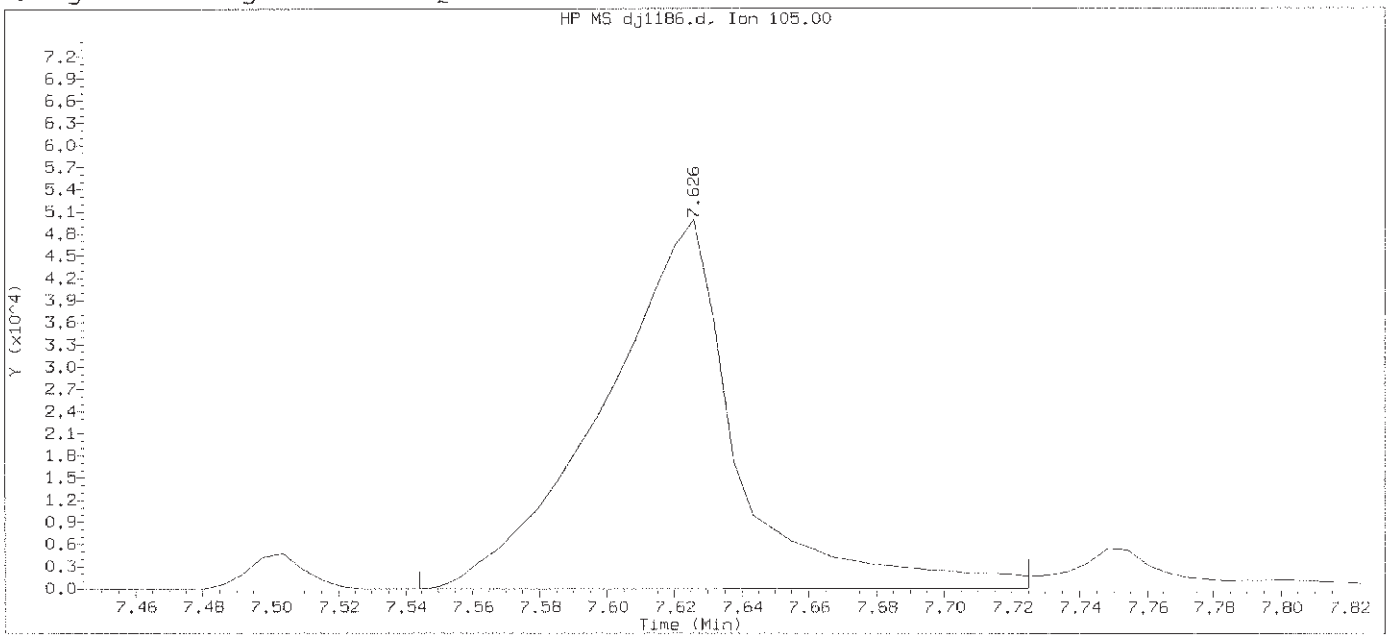
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



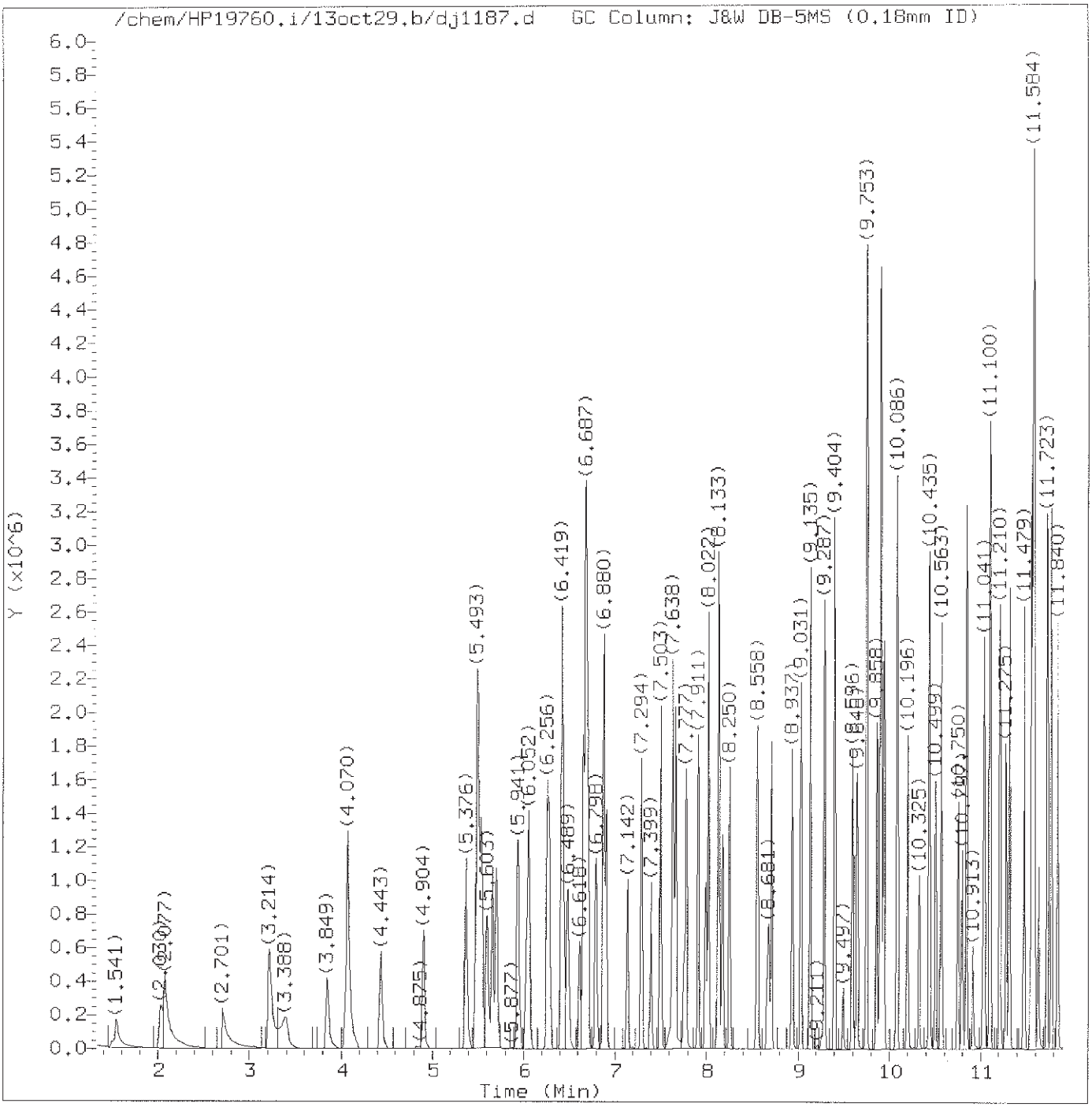
Data File: /chem/HP19760.i/13oct29.b/dj1186.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 13:42 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD3.75 Lab Sample ID: STD2813

Compound Number	: 47		
Compound Name	: Benzoic acid		
Scan Number	: 1079		
Retention Time (minutes)	: 7.626		
Quant Ion	: 105.00		
Area	: 138684		
On-column Amount (ng/ul)	: 4.6933		
Integration start scan	: 1064	Integration stop scan:	1095
Y at integration start	: 0	Y at integration end:	64

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

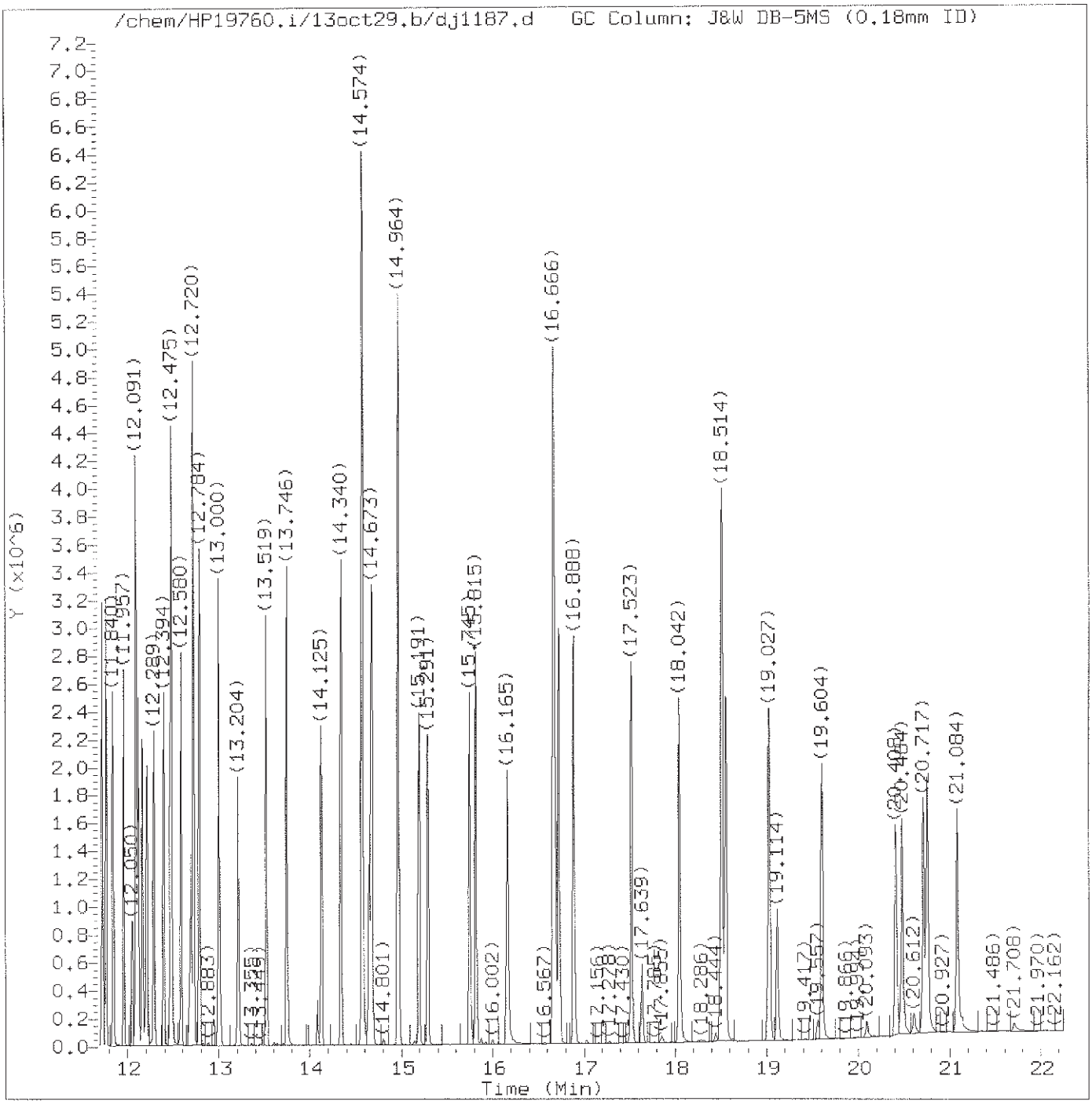
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.541	88	217441	12.323
2) N-Nitrosodimethylamine	(1)	2.030	74	406062	13.246
3) Pyridine	(1)	2.077	79	678751M	12.904
4) 2-Picoline	(1)	3.214	93	698067	12.567
5) N-Nitrosomethylethylamine	(1)	3.388	88	302408	12.715
6) Methyl methanesulfonate	(1)	3.849	80	339392	12.444
7)$2-Fluorophenol	(1)	4.070	112	1027222	24.873
8) N-Nitrosodiethylamine	(1)	4.443	102	288293	12.607
10) Ethyl methanesulfonate	(1)	4.904	109	273542	12.382
11) Benzaldehyde	(1)	5.376	77	498842	12.327
12)$Phenol-d5	(1)	5.493	99	1402775	24.658
13)$Phenol-d6	(1)	5.493	99	1402775	24.658
14) Phenol	(1)	5.510	94	804262	12.186
15) Aniline	(1)	5.539	93	997877	12.307
16) bis(2-Chloroethyl)ether	(1)	5.656	93	638471	12.268
17) 2-Chlorophenol	(1)	5.702	128	505845	12.466
18) 1,3-Dichlorobenzene	(1)	5.941	146	536362	12.235
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	139035	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	541731	12.216
23) Benzyl alcohol	(1)	6.256	108	359714	12.528
24) 1,2-Dichlorobenzene	(1)	6.279	146	510656	12.315
25) Indene	(1)	6.419	115	1031733	14.729
26) 2-Methylphenol	(1)	6.431	108	503066	12.321
28) bis(2-Chloroisopropyl)ether	(1)	6.483	45	774924	11.932
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.483	45	774924	11.932
29) N-Nitrosopyrrolidine	(1)	6.618	100	294760	12.700
30) Acetophenone	(1)	6.658	105	778913	12.197
33) 4-Methylphenol	(1)	6.682	108	562542	12.283
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	448321	12.112
32) N-Nitrosomorpholine	(1)	6.693	56	345597	11.804
34) o-Toluidine	(1)	6.711	106	865552	12.246
35) Hexachloroethane	(1)	6.798	117	228903	12.226
36)$Nitrobenzene-d5	(2)	6.880	82	1240362	24.944
37) Nitrobenzene	(2)	6.909	77	655195	12.403
39) N-Nitrosopiperidine	(2)	7.142	114	272572	12.640
40) Isophorone	(2)	7.294	82	1133725	12.623
42) 2-Nitrophenol	(2)	7.399	139	239011	13.414
45) 2,4-Dimethylphenol	(2)	7.503	107	557475	12.699
46) O,O,O-triethylphosphorothioate	(2)	7.638	198	247315	12.721
47) Benzoic acid	(2)	7.667	105	346411	12.092

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	704841	12.020
49) 2,4-Dichlorophenol	(2)	7.777	162	399960	12.961
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	431091	12.439
52)*Naphthalene-d8	(2)	7.993	136	538194	5.000
53) Naphthalene	(2)	8.022	128	1432666	12.416
55) 4-Chloroaniline	(2)	8.133	127	593011	12.396
56) 2,6-Dichlorophenol	(2)	8.139	162	379233	12.765
57) Hexachloropropene	(2)	8.174	213	284301	13.190
58) Hexachlorobutadiene	(2)	8.255	225	253018	12.556
60) Quinoline	(2)	8.558	129	937990	12.296
61) Caprolactam	(2)	8.681	113	176749	12.843
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	409804	11.914
63) 4-Chloro-3-methylphenol	(2)	8.937	107	474792	12.822
64) Safrole	(2)	9.031	162	374498	12.843
65) 2-Methylnaphthalene	(2)	9.135	142	957535	12.456
66) 1-Methylnaphthalene	(2)	9.287	142	868136	12.462
67) Hexachlorocyclopentadiene	(3)	9.404	237	218343	13.052
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	441807	12.206
69) cis-Isosafrole	(3)	9.497	162	67577	12.824
70) 2,4,6-Trichlorophenol	(3)	9.596	196	294243	13.023
71) 2,4,5-Trichlorophenol	(3)	9.648	196	303624	13.029
72)$2-Fluorobiphenyl	(3)	9.753	172	1884573	24.036
74) Isosafrole	(3)	9.858	162	376749	12.707
73) trans-Isosafrole	(3)	9.858	162	376749	12.707
75) 1,1'-Biphenyl	(3)	9.899	154	1091015	11.963
76) 2-Chloronaphthalene	(3)	9.905	162	835373	12.031
77) 1-Chloronaphthalene	(3)	9.940	162	833324	12.006
82) Diphenyl ether	(3)	10.080	170	611099	12.171
83) 2-Nitroaniline	(3)	10.086	138	285422	13.363
84) 1,4-Naphthoquinone	(3)	10.196	158	389887	13.184
85) 1,4-Dinitrobenzene	(3)	10.325	168	143389	13.326
86) Dimethylphthalate	(3)	10.429	163	969956	12.291
87) 1,3-Dinitrobenzene	(3)	10.435	168	172282	12.895
88) 2,6-Dinitrotoluene	(3)	10.499	165	226524	13.150
90) Acenaphthylene	(3)	10.563	152	1309652	12.434
91) 3-Nitroaniline	(3)	10.750	138	260480	13.181
92)*Acenaphthene-d10	(3)	10.797	164	311099	5.000
93) Acenaphthene	(3)	10.843	153	871740	11.967
94) 2,4-Dinitrophenol	(3)	10.913	184	94123	11.318
96) 4-Nitrophenol	(3)	11.030	109	164665	13.091

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.041	250	351717	12.139
97) Dibenzofuran	(3)	11.100	168	1252587	12.086
98) 2,4-Dinitrotoluene	(3)	11.111	165	289819	13.165
99) 1-Naphthylamine	(3)	11.210	143	927610	12.390
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	235067	12.782
101) 2-Naphthylamine	(3)	11.315	143	938106	12.190
102) Diethylphthalate	(3)	11.479	149	950623	12.308
103) Fluorene	(3)	11.554	166	1025190	12.292
104) Thionazin	(3)	11.572	107	206142	12.268
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	494846	11.957
106) 5-Nitro-o-toluidine	(3)	11.584	152	275986	12.403
107) 4-Nitroaniline	(3)	11.589	138	262921	12.847
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	155613	12.691
109) N-Nitrosodiphenylamine	(4)	11.729	169	806574	12.314
110) NDPA as diphenylamine	(4)	11.729	169	806574	12.314
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1276195	12.259
112)$2,4,6-Tribromophenol	(3)	11.840	330	205883	25.506
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	188239	12.662
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	115384	14.175
117) Diallate (peak 1)	(4)	12.091	86	478759	9.243
118) Phorate	(4)	12.096	75	760126	12.352
119) Phenacetin	(4)	12.120	108	577166	13.468
120) 4-Bromophenyl-phenylether	(4)	12.166	248	256706	12.410
121) Diallate (peak 2)	(4)	12.190	86	69285	3.172
122) Hexachlorobenzene	(4)	12.213	284	247689	12.101
123) Dimethoate	(4)	12.289	87	513340	12.950
124) Atrazine	(4)	12.394	200	266901	12.569
125) Pentachlorophenol	(4)	12.464	266	187965	13.591
126) Pentachloronitrobenzene	(4)	12.475	237	127220	13.572
127) 4-Aminobiphenyl	(4)	12.481	169	1049406	12.900
129) Pronamide	(4)	12.580	173	462653	13.578
130)*Phenanthrene-d10	(4)	12.691	188	522070	5.000
131) Phenanthrene	(4)	12.720	178	1401469	11.910
133) Dinoseb	(4)	12.720	211	231968	14.455
134) Anthracene	(4)	12.784	178	1458971	12.503
135) Carbazole	(4)	13.000	167	1415513	12.541
136) Methyl parathion	(4)	13.204	109	368685	13.531
137) Di-n-butylphthalate	(4)	13.519	149	1710230	12.844
138) Parathion	(4)	13.746	109	238421	13.437
139) 4-Nitroquinoline-1-oxide	(4)	13.746	190	124164	14.493

* = Compound is an internal standard.
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Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	179675	12.905
142) Fluoranthene	(4)	14.340	202	1677613	12.813
144) Benzidine	(5)	14.574	184	3386718	39.510
145)*Pyrene-d10	(5)	14.644	212	668822	5.000
146) Pyrene	(5)	14.679	202	1733287	12.100
149)$Terphenyl-d14	(5)	14.964	244	2065792	24.678
150) p-Dimethylaminoazobenzene	(5)	15.197	225	356781	14.372
151) Chlorobenzilate	(5)	15.291	139	514982	12.928
152) 3,3'-Dimethylbenzidine	(5)	15.745	212	1162212	13.953
153) Butylbenzylphthalate	(5)	15.815	149	786237	13.021
156) 2-Acetylaminofluorene	(5)	16.165	181	643223	13.823
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	576125	13.333
158) Benzo(a)anthracene	(5)	16.666	228	1595523	13.310
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	307206	13.469
161) Chrysene	(5)	16.730	228	1497033	12.578
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1043912	13.163
165) 6-Methylchrysene	(5)	17.523	242	1098857	13.257
166) Di-n-octylphthalate	(6)	18.042	149	1716460	13.846
168) Benzo(b)fluoranthene	(6)	18.508	252	1396180	12.990
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	654651	13.855
170) Benzo(k)fluoranthene	(6)	18.560	252	1416406	12.941
171) Benzo(a)pyrene	(6)	19.027	252	1296417	13.081
172)*Perylene-d12	(6)	19.114	264	459604	5.000
173) 3-Methylcholanthrene	(6)	19.604	268	634593	13.604
174) Dibenz(a,h)acridine	(6)	20.408	279	876116	13.616
175) Dibenz(a,j)acridine	(6)	20.484	279	946076	13.642
176) Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1208834	14.108
177) Dibenz(a,h)anthracene	(6)	20.758	278	1044758	14.417
178) Benzo(g,h,i)perylene	(6)	21.084	276	987567	13.580
179) Diallate TRANS/CIS	(4)			548044	12.369
182) 2,4_2,6-Dinitrotoluenes	(3)			516343	26.315

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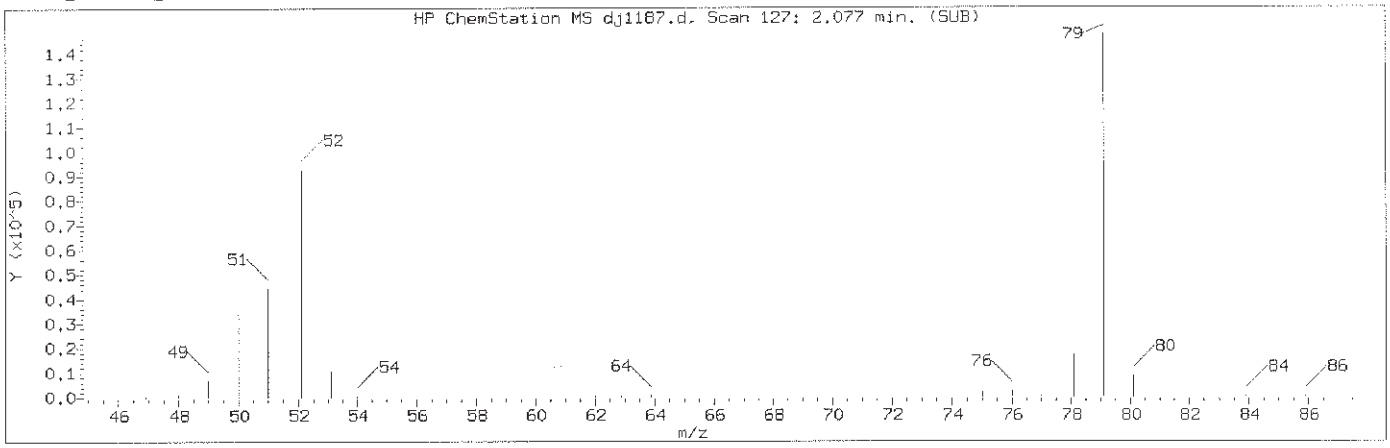
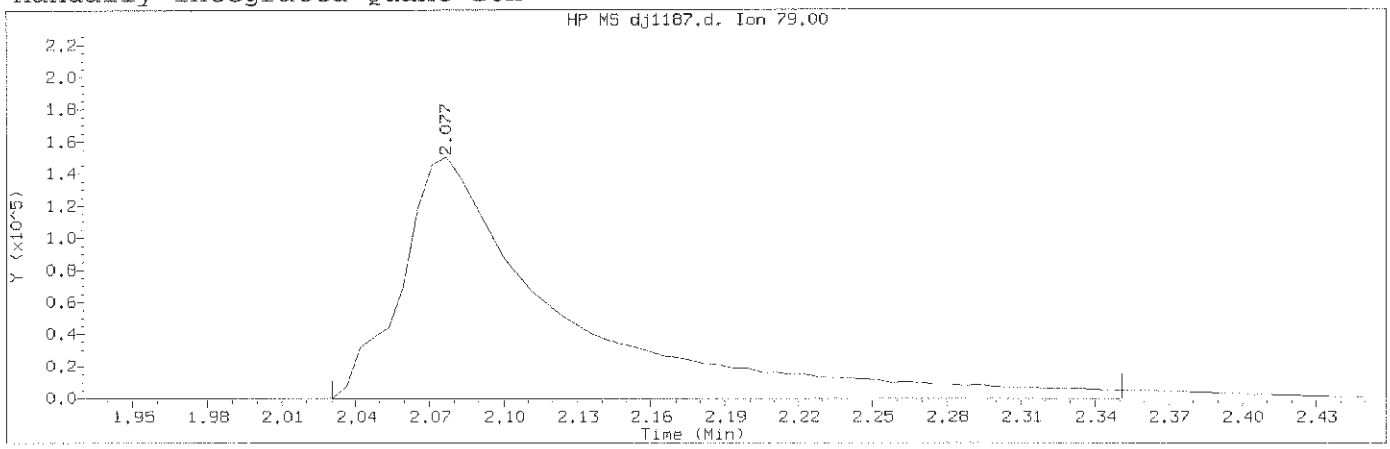
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area (flag)	: 678751M		
On-Column Amount (ng/ul)	: 12.9041		
Integration start scan	: 118	Integration stop scan:	173
Y at integration start	: -236	Y at integration end:	-236

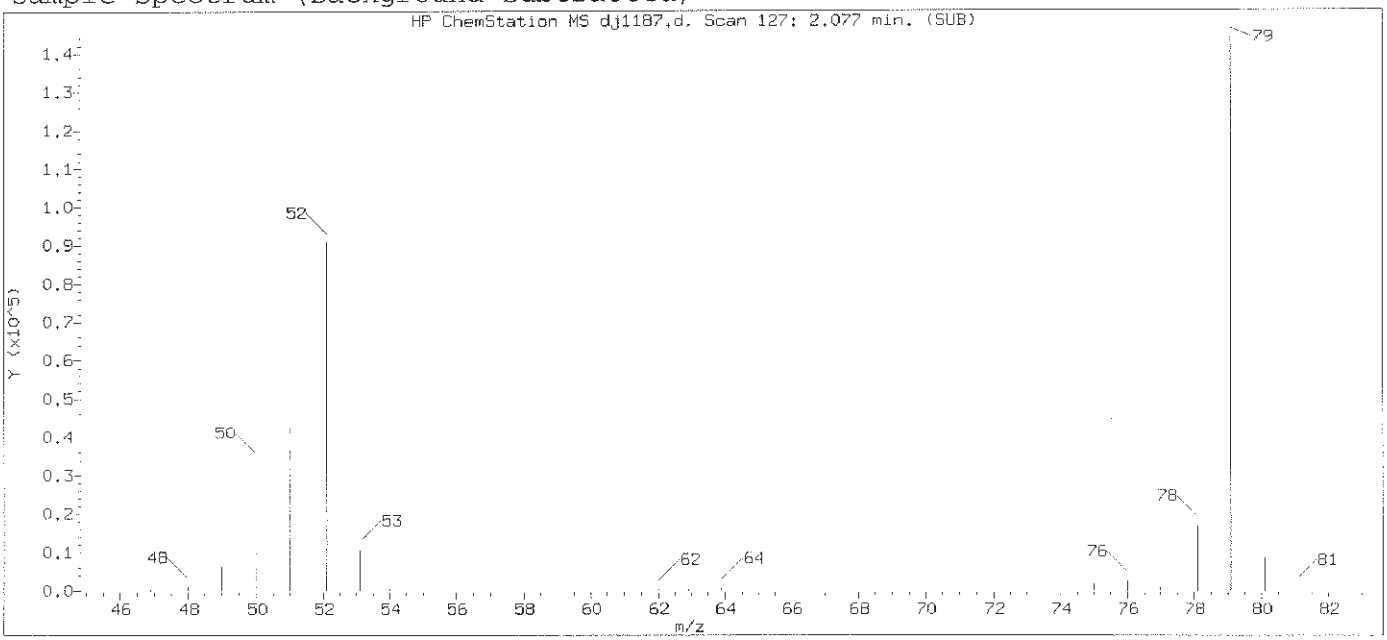
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

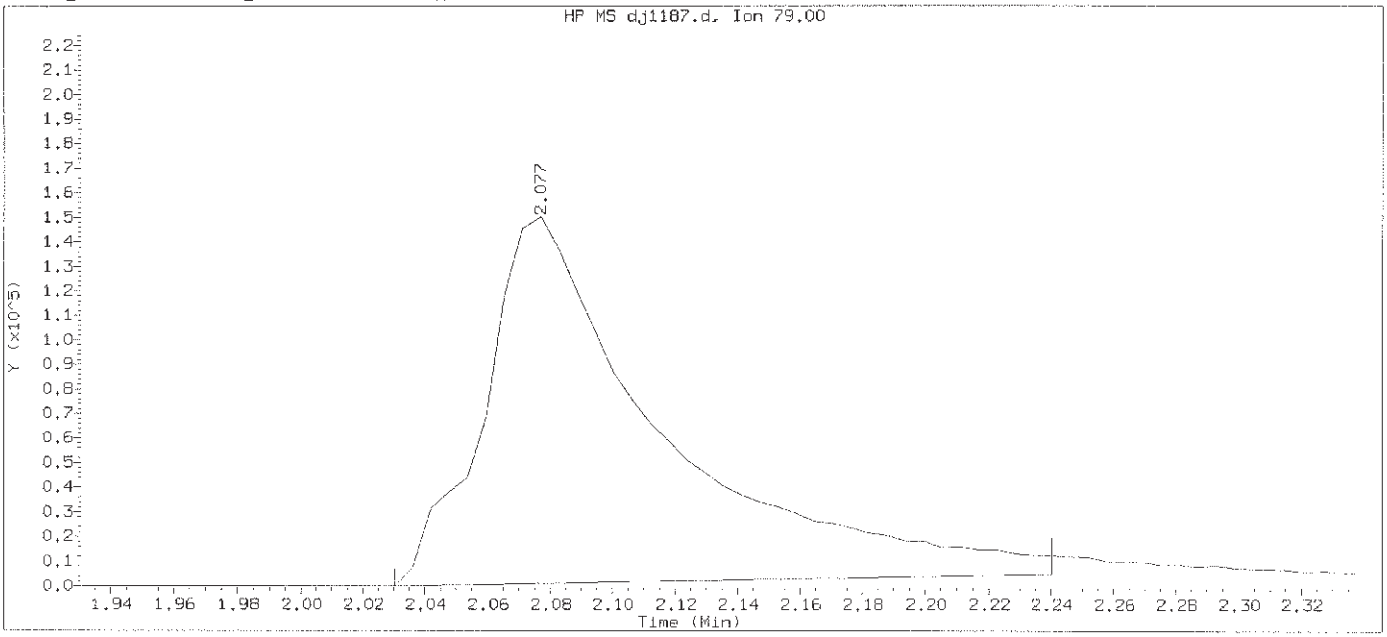
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



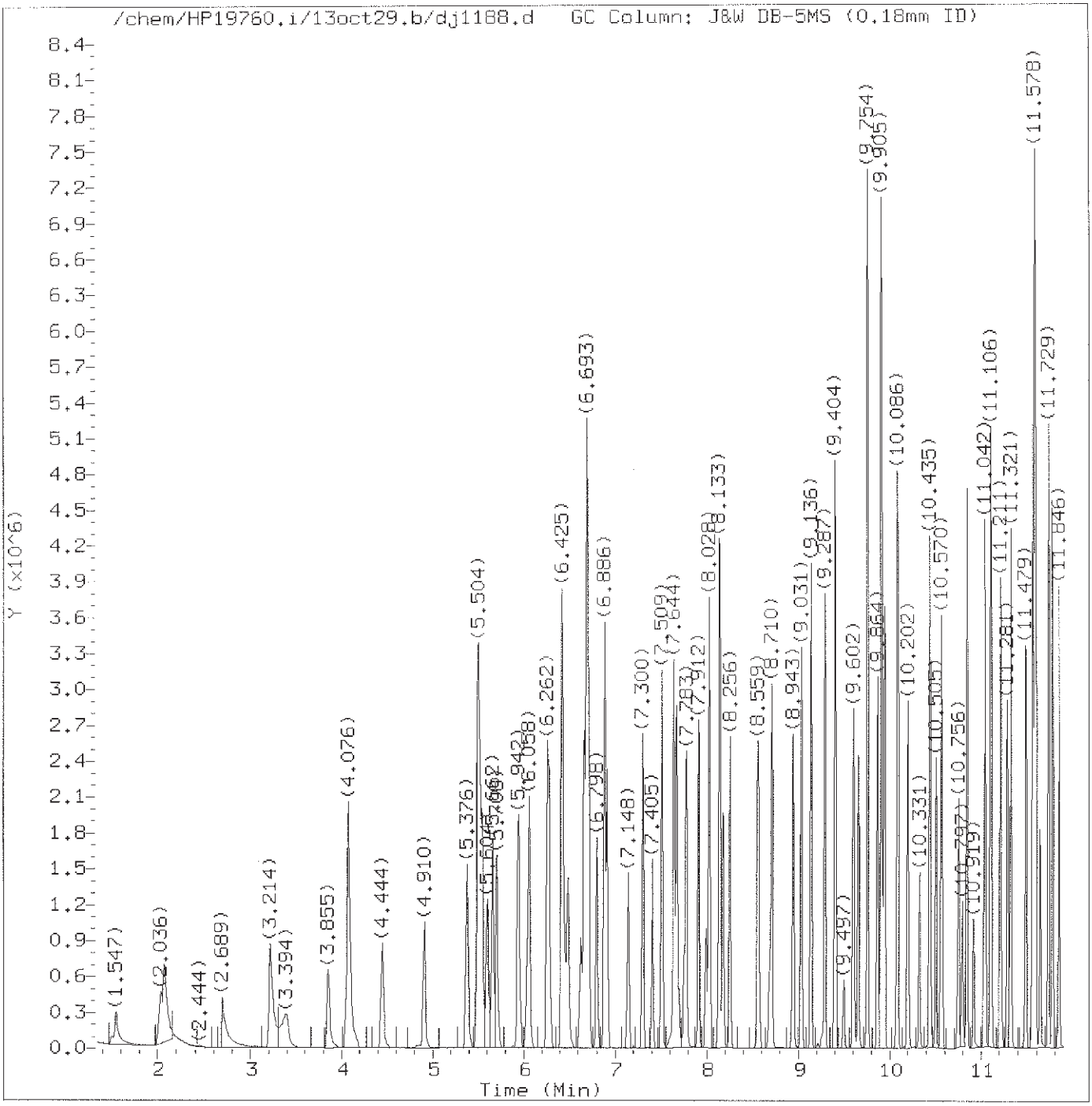
Data File: /chem/HP19760.i/13oct29.b/dj1187.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:08 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newal11
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: STD2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 127		
Retention Time (minutes)	: 2.077		
Quant Ion	: 79.00		
Area	: 588658		
On-column Amount (ng/ul)	: 11.8341		
Integration start scan	: 118	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	4950

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

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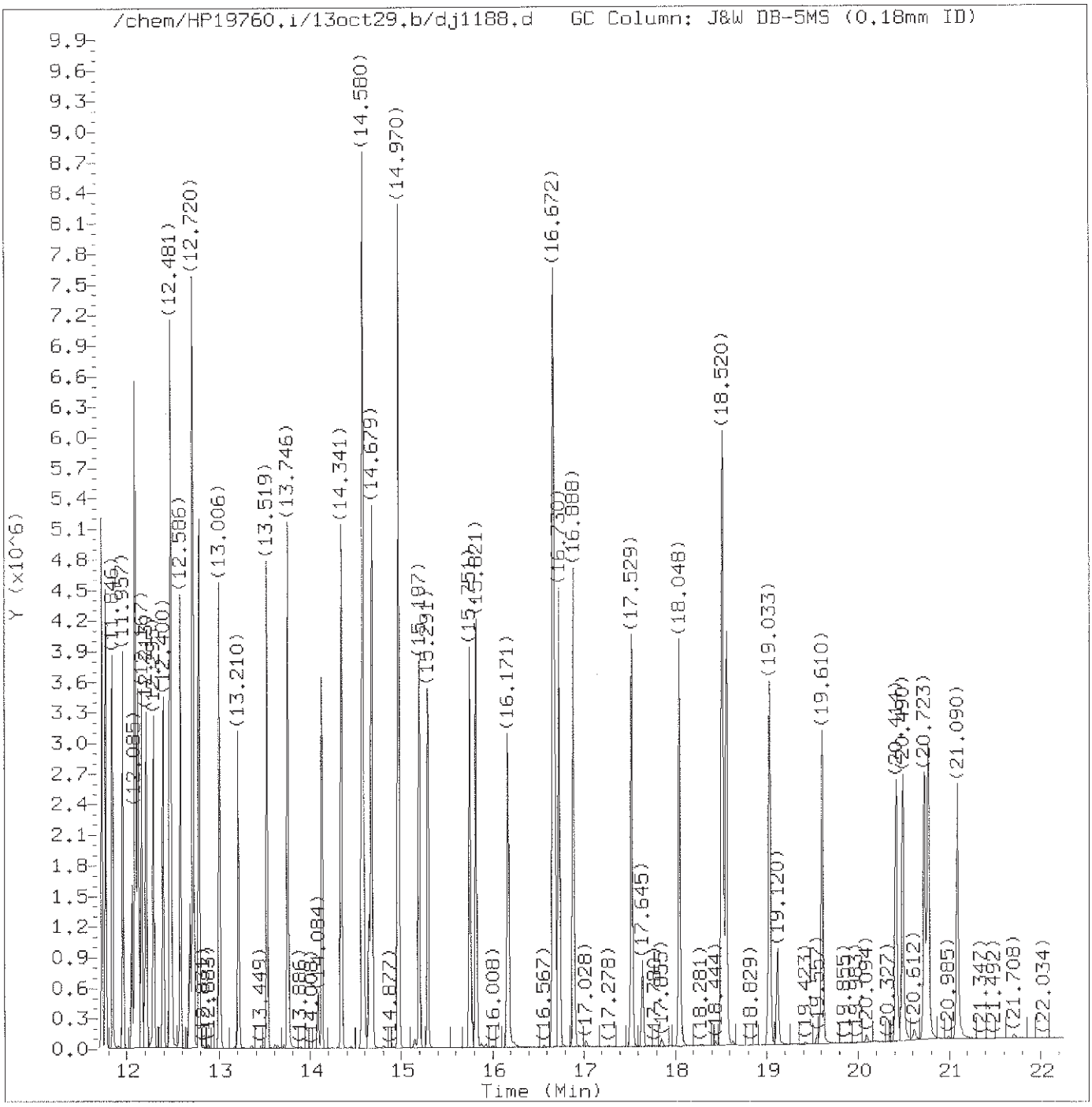
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.547	88	325165	19.174
2) N-Nitrosodimethylamine	(1)	2.031	74	627522	20.956
3) Pyridine	(1)	2.077	79	1031077	20.191
4) 2-Picoline	(1)	3.214	93	1071191	19.915
5) N-Nitrosomethylethylamine	(1)	3.394	88	470743	20.363
6) Methyl methanesulfonate	(1)	3.855	80	528331	19.992
7)$2-Fluorophenol	(1)	4.076	112	1596153	39.901
8) N-Nitrosodiethylamine	(1)	4.444	102	449166	20.231
10) Ethyl methanesulfonate	(1)	4.910	109	428518	20.015
11) Benzaldehyde	(1)	5.376	77	690695	17.972
12)$Phenol-d5	(1)	5.499	99	2152609	39.182
13)$Phenol-d6	(1)	5.499	99	2152609	39.182
14) Phenol	(1)	5.516	94	1229979	19.339
15) Aniline	(1)	5.545	93	1536784	19.622
16) bis(2-Chloroethyl)ether	(1)	5.662	93	973912	19.408
17) 2-Chlorophenol	(1)	5.708	128	789062	20.057
18) 1,3-Dichlorobenzene	(1)	5.942	146	826580	19.535
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	134726	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	835743	19.526
23) Benzyl alcohol	(1)	6.256	108	556643	20.006
24) 1,2-Dichlorobenzene	(1)	6.280	146	782771	19.554
25) Indene	(1)	6.420	115	1589371	23.497
26) 2-Methylphenol	(1)	6.437	108	779210	19.738
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	1168228	18.756
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	1168228	18.756
29) N-Nitrosopyrrolidine	(1)	6.629	100	461572	20.447
30) Acetophenone	(1)	6.664	105	1216572	19.708
33) 4-Methylphenol	(1)	6.688	108	849471	19.259
31) N-Nitroso-di-n-propylamine	(1)	6.693	70	670115	18.860
32) N-Nitrosomorpholine	(1)	6.699	56	518122	18.492
34) o-Toluidine	(1)	6.711	106	1311142	19.262
35) Hexachloroethane	(1)	6.798	117	355620	19.657
36)$Nitrobenzene-d5	(2)	6.886	82	1908801	39.052
37) Nitrobenzene	(2)	6.909	77	1007734	19.424
39) N-Nitrosopiperidine	(2)	7.148	114	423710	19.923
40) Isophorone	(2)	7.300	82	1743328	19.716
42) 2-Nitrophenol	(2)	7.405	139	382136	21.467
45) 2,4-Dimethylphenol	(2)	7.509	107	857500	19.823
46) O,O,O-triethylphosphorothioate	(2)	7.644	198	382048	19.925
48) bis(2-Chloroethoxy)methane	(2)	7.673	93	1134237M	19.656

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.702	105	610398	21.253
49) 2,4-Dichlorophenol	(2)	7.783	162	617339	20.233
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	667875	19.594
52)*Naphthalene-d8	(2)	7.993	136	531119	5.000
53) Naphthalene	(2)	8.028	128	2175665	19.213
55) 4-Chloroaniline	(2)	8.133	127	903717	19.261
56) 2,6-Dichlorophenol	(2)	8.139	162	583652	19.921
57) Hexachloropropene	(2)	8.180	213	459184	21.345
58) Hexachlorobutadiene	(2)	8.256	225	395446	19.902
60) Quinoline	(2)	8.564	129	1468344	19.573
61) Caprolactam	(2)	8.704	113	275391	20.230
62) N-Nitrosodi-n-butylamine	(2)	8.716	84	811695	23.158
63) 4-Chloro-3-methylphenol	(2)	8.943	107	744211	20.312
64) Safrole	(2)	9.031	162	581470	20.176
65) 2-Methylnaphthalene	(2)	9.136	142	1452939	19.254
66) 1-Methylnaphthalene	(2)	9.287	142	1332939	19.464
67) Hexachlorocyclopentadiene	(3)	9.404	237	358846	21.689
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	684824	19.535
69) cis-Isosafrole	(3)	9.497	162	105700	20.538
70) 2,4,6-Trichlorophenol	(3)	9.602	196	460428	20.816
71) 2,4,5-Trichlorophenol	(3)	9.654	196	480784	21.037
72)$2-Fluorobiphenyl	(3)	9.754	172	2853736	37.780
74) Isosafrole	(3)	9.864	162	585504	20.266
73) trans-Isosafrole	(3)	9.864	162	585504	20.266
75) 1,1'-Biphenyl	(3)	9.905	154	1656069	18.854
76) 2-Chloronaphthalene	(3)	9.911	162	1331601	19.763
77) 1-Chloronaphthalene	(3)	9.940	162	1202300	18.098
82) Diphenyl ether	(3)	10.086	170	945913	19.464
83) 2-Nitroaniline	(3)	10.092	138	446033	21.253
84) 1,4-Naphthoquinone	(3)	10.202	158	604466	20.845
85) 1,4-Dinitrobenzene	(3)	10.331	168	232734	21.837
86) Dimethylphthalate	(3)	10.435	163	1471328	19.309
87) 1,3-Dinitrobenzene	(3)	10.441	168	270524	20.683
88) 2,6-Dinitrotoluene	(3)	10.505	165	354207	20.976
90) Acenaphthylene	(3)	10.570	152	2027003	19.818
91) 3-Nitroaniline	(3)	10.756	138	407986	21.048
92)*Acenaphthene-d10	(3)	10.797	164	302476	5.000
93) Acenaphthene	(3)	10.849	153	1342436	19.079
94) 2,4-Dinitrophenol	(3)	10.919	184	186536	22.382
96) 4-Nitrophenol	(3)	11.036	109	260505	21.072

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
95) Pentachlorobenzene	(3)	11.042	250	551450	19.635
97) Dibenzofuran	(3)	11.100	168	1915807	19.147
98) 2,4-Dinitrotoluene	(3)	11.112	165	461073	21.307
99) 1-Naphthylamine	(3)	11.211	143	1447962	19.908
100) 2,3,4,6-Tetrachlorophenol	(3)	11.281	232	380803	21.102
101) 2-Naphthylamine	(3)	11.321	143	1470056	19.696
102) Diethylphthalate	(3)	11.485	149	1499545	19.974
103) Fluorene	(3)	11.555	166	1534105	19.047
104) Thionazin	(3)	11.572	107	311254	19.181
105) 4-Chlorophenyl-phenylether	(3)	11.584	204	763380	19.112
106) 5-Nitro-o-toluidine	(3)	11.590	152	434452	20.070
107) 4-Nitroaniline	(3)	11.595	138	403432	20.235
108) 4,6-Dinitro-2-methylphenol	(4)	11.642	198	279696	22.060
109) N-Nitrosodiphenylamine	(4)	11.729	169	1247929	19.060
110) NDPA as diphenylamine	(4)	11.729	169	1247929	19.060
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1926138	18.583
112)$2,4,6-Tribromophenol	(3)	11.846	330	340856	42.905
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	295865	19.789
116) 1,3,5-Trinitrobenzene	(4)	12.062	213	208612	24.335
117) Diallate (peak 1)	(4)	12.091	86	727862	14.089
118) Phorate	(4)	12.097	75	1149741	18.772
119) Phenacetin	(4)	12.126	108	922599	21.163
120) 4-Bromophenyl-phenylether	(4)	12.167	248	404863	19.508
121) Diallate (peak 2)	(4)	12.190	86	111193	5.046
122) Hexachlorobenzene	(4)	12.213	284	396121	19.305
123) Dimethoate	(4)	12.295	87	805609	20.144
124) Atrazine	(4)	12.400	200	417230	19.573
125) Pentachlorophenol	(4)	12.464	266	315705	22.167
127) 4-Aminobiphenyl	(4)	12.481	169	1632793	19.934
126) Pentachloronitrobenzene	(4)	12.481	237	201829	21.165
129) Pronamide	(4)	12.586	173	732209	21.129
130)*Phenanthrene-d10	(4)	12.691	188	525961	5.000
133) Dinoseb	(4)	12.720	211	415493	24.534
131) Phenanthrene	(4)	12.726	178	2172274	18.518
134) Anthracene	(4)	12.790	178	2256094	19.289
135) Carbazole	(4)	13.006	167	2201249	19.447
136) Methyl parathion	(4)	13.210	109	601743	21.575
137) Di-n-butylphthalate	(4)	13.519	149	2672851	19.937
138) Parathion	(4)	13.746	109	383066	21.178
139) 4-Nitroquinoline-1-oxide	(4)	13.752	190	247472	26.740

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.125	193	286795	20.382
142) Fluoranthene	(4)	14.341	202	2645406	20.048
144) Benzidine	(5)	14.585	184	5251006	60.369
145)*Pyrene-d10	(5)	14.650	212	677846	5.000
146) Pyrene	(5)	14.679	202	2701111	18.769
149)$Terphenyl-d14	(5)	14.970	244	3307867	39.131
150) p-Dimethylaminoazobenzene	(5)	15.197	225	579528	22.545
151) Chlorobenzilate	(5)	15.291	139	823625	20.332
152) 3,3'-Dimethylbenzidine	(5)	15.751	212	1809397	21.180
153) Butylbenzylphthalate	(5)	15.821	149	1230558	20.091
156) 2-Acetylaminofluorene	(5)	16.171	181	1075711	22.288
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	913090	20.703
158) Benzo(a)anthracene	(5)	16.672	228	2529133	20.712
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.690	231	483244	20.748
161) Chrysene	(5)	16.736	228	2326892	19.377
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1630232	20.234
165) 6-Methylchrysene	(5)	17.529	242	1737541	20.583
166) Di-n-octylphthalate	(6)	18.048	149	2760949	21.546
168) Benzo(b)fluoranthene	(6)	18.514	252	2314973	21.011
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.526	256	1076337	22.009
170) Benzo(k)fluoranthene	(6)	18.566	252	2184746	19.661
171) Benzo(a)pyrene	(6)	19.033	252	2061113	20.380
172)*Perylene-d12	(6)	19.120	264	467732	5.000
173) 3-Methylcholanthrene	(6)	19.610	268	1040881	21.628
174) Dibenz(a,h)acridine	(6)	20.414	279	1479580	22.116
175) Dibenz(a,j)acridine	(6)	20.490	279	1551213	21.623
176) Indeno(1,2,3-cd)pyrene	(6)	20.729	276	1985177	22.379
177) Dibenz(a,h)anthracene	(6)	20.770	278	1694542	22.557
178) Benzo(g,h,i)perylene	(6)	21.090	276	1602998	21.437
179) Diallate TRANS/CIS	(4)			839055	18.960
182) 2,4_2,6-Dinitrotoluenes	(3)			815280	42.283

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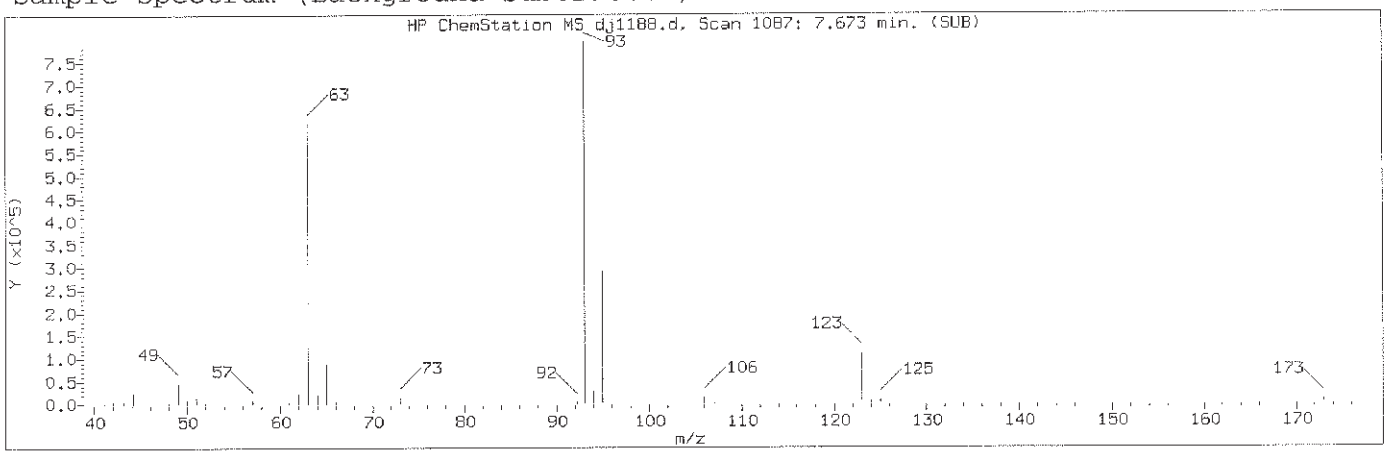
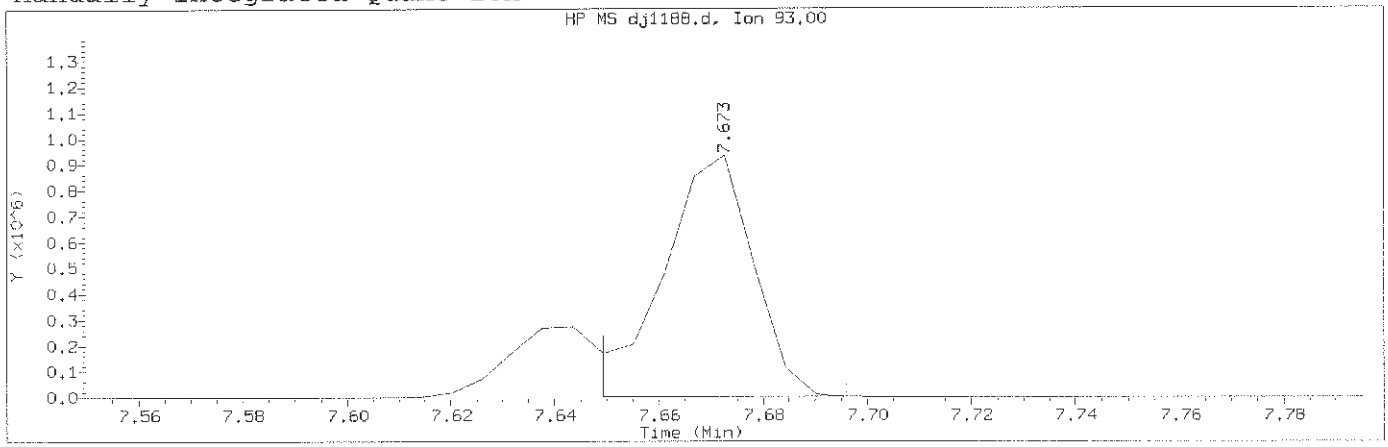
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:50
Date, time and analyst ID of latest file update: 29-Oct-2013 21:50 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area (flag)	: 1134237M		
On-Column Amount (ng/ul)	: 19.6559		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 1173	Y at integration end:	1173

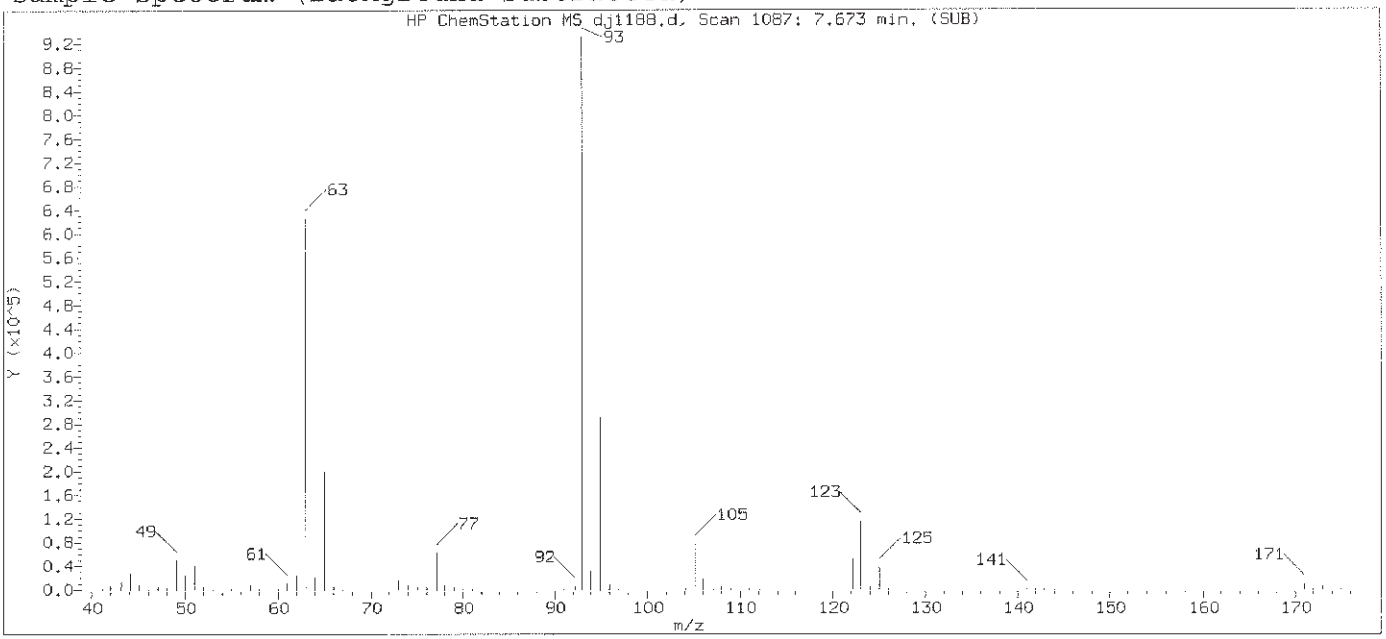
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

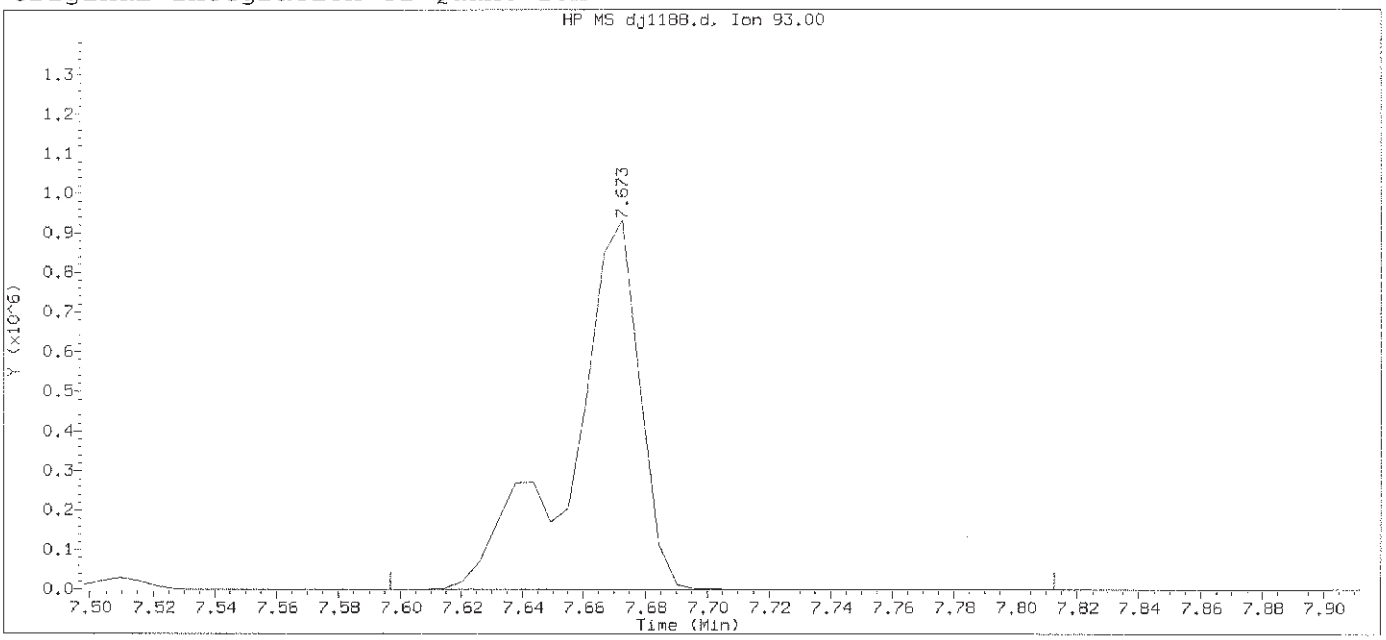
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



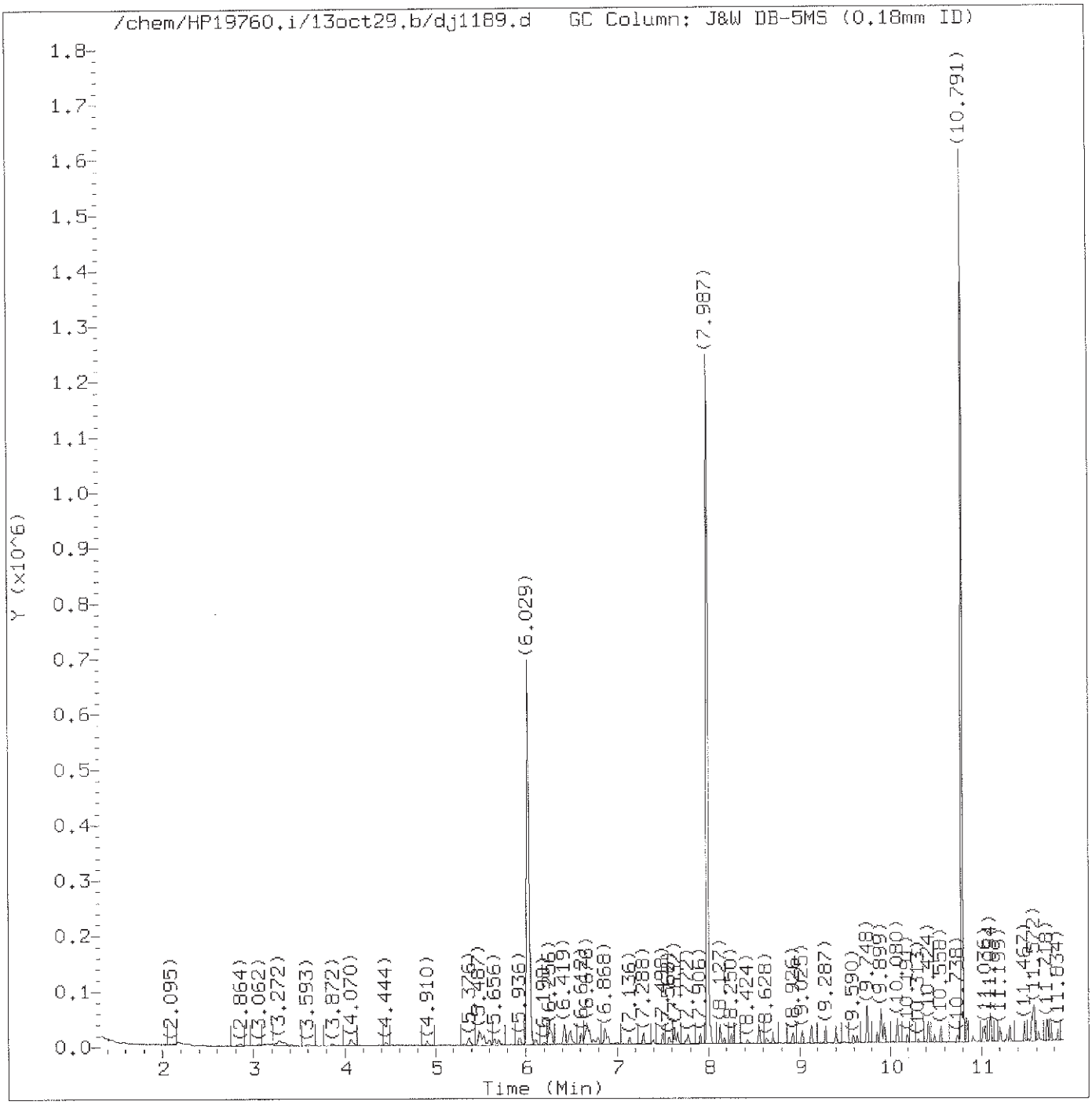
Data File: /chem/HP19760.i/13oct29.b/dj1188.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 14:35 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 29-OCT-2013 21:40
Date, time and analyst ID of latest file update: 29-Oct-2013 21:40 bkg00522

Sample Name: SSTD20 Lab Sample ID: STD2813

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1087		
Retention Time (minutes)	: 7.673		
Quant Ion	: 93.00		
Area	: 1421968		
On-column Amount (ng/ul)	: 22.2016		
Integration start scan	: 1073	Integration stop scan:	1110
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

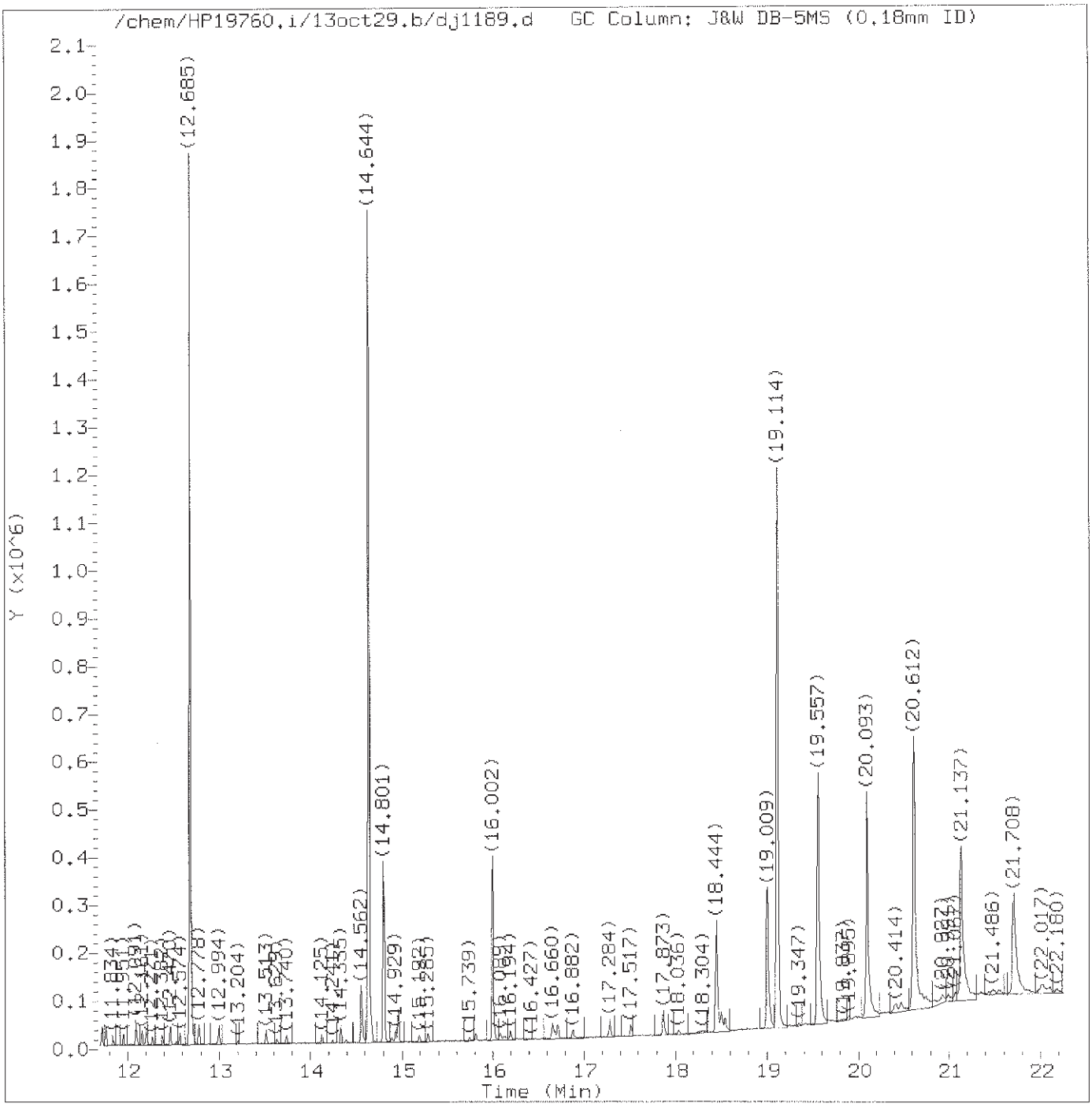
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.570	88	3666M	0.167
2) N-Nitrosodimethylamine	(1)	2.089	74	2809	0.072
3) Pyridine	(1)	2.165	79	10875M	0.164
5) N-Nitrosomethylethylamine	(1)	3.249	88	2617	0.087
4) 2-Picoline	(1)	3.278	93	6815	0.098
6) Methyl methanesulfonate	(1)	3.866	80	2981	0.087
7)$2-Fluorophenol	(1)	4.070	112	9940	0.192
8) N-Nitrosodiethylamine	(1)	4.444	102	1982	0.069
10) Ethyl methanesulfonate	(1)	4.910	109	2866	0.103
11) Benzaldehyde	(1)	5.370	77	5773	0.116
12)$Phenol-d5	(1)	5.487	99	15683	0.220
13)$Phenol-d6	(1)	5.487	99	15683	0.220
14) Phenol	(1)	5.504	94	8874	0.108
15) Aniline	(1)	5.539	93	12406	0.122
16) bis(2-Chloroethyl)ether	(1)	5.656	93	6585	0.101
17) 2-Chlorophenol	(1)	5.702	128	4849	0.095
18) 1,3-Dichlorobenzene	(1)	5.936	146	5661	0.103
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	174606	5.000
20) 1,4-Dichlorobenzene	(1)	6.052	146	5964	0.108
23) Benzyl alcohol	(1)	6.250	108	4655	0.129
24) 1,2-Dichlorobenzene	(1)	6.280	146	5468	0.105
25) Indene	(1)	6.414	115	12134	0.138
26) 2-Methylphenol	(1)	6.431	108	5252	0.103
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	8860	0.110
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	8860	0.110
29) N-Nitrosopyrrolidine	(1)	6.612	100	2905	0.099
30) Acetophenone	(1)	6.653	105	8474	0.106
33) 4-Methylphenol	(1)	6.670	108	6702	0.117
31) N-Nitroso-di-n-propylamine	(1)	6.676	70	5592	0.121
32) N-Nitrosomorpholine	(1)	6.682	56	4914	0.135
34) o-Toluidine	(1)	6.705	106	10085	0.114
35) Hexachloroethane	(1)	6.792	117	2232	0.095
36)$Nitrobenzene-d5	(2)	6.868	82	12836	0.206
37) Nitrobenzene	(2)	6.897	77	6906	0.105
39) N-Nitrosopiperidine	(2)	7.136	114	2867	0.106
40) Isophorone	(2)	7.294	82	12860	0.114
42) 2-Nitrophenol	(2)	7.399	139	1731	0.076
45) 2,4-Dimethylphenol	(2)	7.504	107	5945	0.108
47) Benzoic acid	(2)	7.574	105	6762	3.541
46) O,O,O-triethylphosphorothioate	(2)	7.632	198	3063	0.125

M = Compound was manually integrated.
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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
48) bis(2-Chloroethoxy)methane	(2)	7.661	93	8784	0.120
49) 2,4-Dichlorophenol	(2)	7.772	162	3993	0.103
51) 1,2,4-Trichlorobenzene	(2)	7.912	180	4610	0.106
52)*Naphthalene-d8	(2)	7.987	136	676323	5.000
55) 4-Chloroaniline	(2)	8.127	127	7548	0.126
56) 2,6-Dichlorophenol	(2)	8.133	162	4009	0.107
57) Hexachloropropene	(2)	8.174	213	2326	0.085
58) Hexachlorobutadiene	(2)	8.250	225	2637	0.104
60) Quinoline	(2)	8.547	129	14427	0.151
61) Caprolactam	(2)	8.634	113	1802	0.104
62) N-Nitrosodi-n-butylamine	(2)	8.704	84	4368	0.098
63) 4-Chloro-3-methylphenol	(2)	8.926	107	4803	0.103
64) Safrole	(2)	9.025	162	3942	0.107
67) Hexachlorocyclopentadiene	(3)	9.398	237	1492	0.070
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	5668	0.125
69) cis-Isosafrole	(3)	9.491	162	530M	0.080
70) 2,4,6-Trichlorophenol	(3)	9.590	196	2714	0.095
71) 2,4,5-Trichlorophenol	(3)	9.643	196	3036	0.103
72)$2-Fluorobiphenyl	(3)	9.748	172	26016	0.267
74) Isosafrole	(3)	9.858	162	3898	0.105
73) trans-Isosafrole	(3)	9.858	162	3898	0.105
75) 1,1'-Biphenyl	(3)	9.893	154	13250	0.117
76) 2-Chloronaphthalene	(3)	9.899	162	10941	0.126
77) 1-Chloronaphthalene	(3)	9.934	162	12390	0.145
83) 2-Nitroaniline	(3)	10.074	138	2125	0.079
82) Diphenyl ether	(3)	10.080	170	8115	0.130
84) 1,4-Naphthoquinone	(3)	10.196	158	2996	0.080
85) 1,4-Dinitrobenzene	(3)	10.319	168	740M	0.583
86) Dimethylphthalate	(3)	10.424	163	12446	0.127
87) 1,3-Dinitrobenzene	(3)	10.430	168	1007M	0.060
88) 2,6-Dinitrotoluene	(3)	10.494	165	1765	0.081
91) 3-Nitroaniline	(3)	10.738	138	1951	0.078
92)*Acenaphthene-d10	(3)	10.791	164	389992	5.000
94) 2,4-Dinitrophenol	(3)	10.907	184	2068	3.927
96) 4-Nitrophenol	(3)	11.018	109	4568	0.287
95) Pentachlorobenzene	(3)	11.036	250	4705	0.130
97) Dibenzofuran	(3)	11.094	168	16519	0.128
98) 2,4-Dinitrotoluene	(3)	11.100	165	2005	0.072
99) 1-Naphthylamine	(3)	11.199	143	9497	0.101
100) 2,3,4,6-Tetrachlorophenol	(3)	11.275	232	2016	0.087

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlal11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
101) 2-Naphthylamine	(3)	11.310	143	10595	0.110
102) Diethylphthalate	(3)	11.467	149	11373	0.117
104) Thionazin	(3)	11.560	107	2606	0.125
106) 5-Nitro-o-toluidine	(3)	11.572	152	2160	0.077
107) 4-Nitroaniline	(3)	11.572	138	2057	0.080
105) 4-Chlorophenyl-phenylether	(3)	11.578	204	6692	0.130
108) 4,6-Dinitro-2-methylphenol	(4)	11.624	198	2423	1.691
109) N-Nitrosodiphenylamine	(4)	11.723	169	10283	0.122
110) NDPA as diphenylamine	(4)	11.723	169	10283	0.122
111) 1,2-Diphenylhydrazine	(4)	11.764	77	14760	0.111
112)$2,4,6-Tribromophenol	(3)	11.840	330	1914	0.187
115) Tetraethyldithiopyrophosphate	(4)	11.951	97	2108	0.110
116) 1,3,5-Trinitrobenzene	(4)	12.038	213	316M	1.317
117) Diallate (peak 1)	(4)	12.085	86	5354	0.081
118) Phorate	(4)	12.091	75	8810	0.112
119) Phenacetin	(4)	12.102	108	4220	0.075
120) 4-Bromophenyl-phenylether	(4)	12.161	248	3113	0.117
121) Diallate (peak 2)	(4)	12.190	86	674M	0.024
123) Dimethoate	(4)	12.271	87	4204	0.082
124) Atrazine	(4)	12.382	200	2307	0.084
125) Pentachlorophenol	(4)	12.458	266	986	0.712
126) Pentachloronitrobenzene	(4)	12.470	237	1094M	0.089
127) 4-Aminobiphenyl	(4)	12.475	169	10255	0.097
129) Pronamide	(4)	12.574	173	3949	0.089
130)*Phenanthrene-d10	(4)	12.685	188	676898	5.000
133) Dinoseb	(4)	12.720	211	414M	1.336
135) Carbazole	(4)	12.994	167	15785	0.108
136) Methyl parathion	(4)	13.204	109	1786	0.273
137) Di-n-butylphthalate	(4)	13.513	149	14623	0.085
138) Parathion	(4)	13.740	109	1235M	0.112
140) Isodrin	(4)	14.125	193	2512	0.139
144) Benzidine	(5)	14.562	184	64682	0.595
145)*Pyrene-d10	(5)	14.644	212	846618	5.000
149)$Terphenyl-d14	(5)	14.958	244	27173	0.257
150) p-Dimethylaminoazobenzene	(5)	15.192	225	1978	0.320
151) Chlorobenzilate	(5)	15.291	139	4391	0.087
152) 3,3'-Dimethylbenzidine	(5)	15.739	212	4629	0.043
153) Butylbenzylphthalate	(5)	15.815	149	5061	0.066
156) 2-Acetylaminofluorene	(5)	16.147	181	2175	0.847
159) 3,3'-Dichlorobenzidine	(5)	16.660	252	3586	0.065

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on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.684	231	1582M	0.054
162) bis(2-Ethylhexyl)phthalate	(5)	16.888	149	6775	0.067
165) 6-Methylchrysene	(5)	17.517	242	11409	0.108
166) Di-n-octylphthalate	(6)	18.042	149	6684	0.280
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.508	256	4971	0.081
172)*Perylene-d12	(6)	19.114	264	585884	5.000
173) 3-Methylcholanthrene	(6)	19.598	268	6441	0.107
174) Dibenz(a,h)acridine	(6)	20.402	279	5356	0.064
175) Dibenz(a,j)acridine	(6)	20.472	279	5840	0.065
179) Diallate TRANS/CIS	(4)			6028	0.104

M = Compound was manually integrated.
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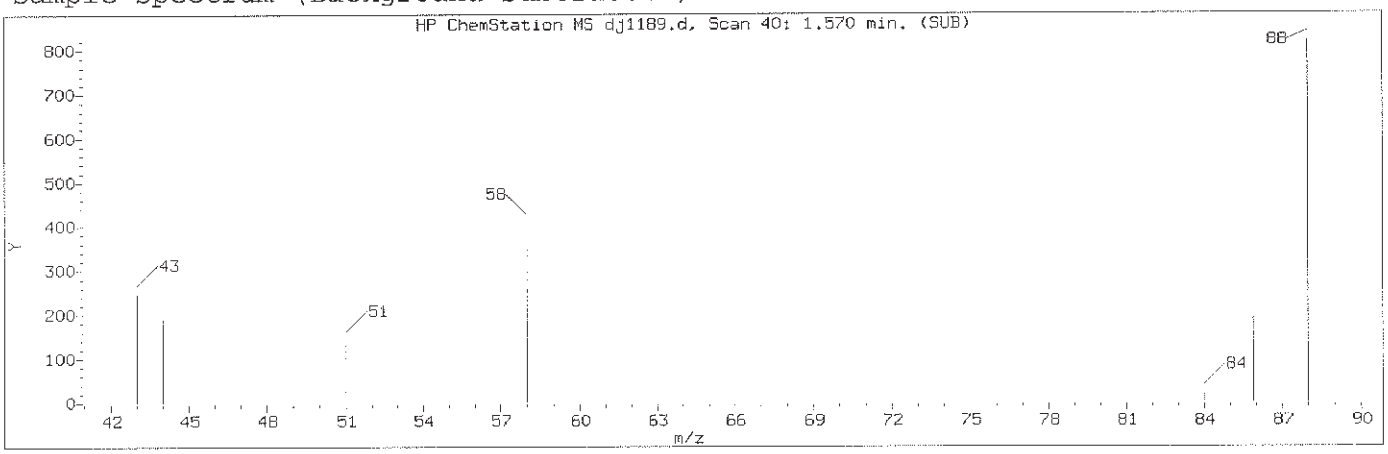
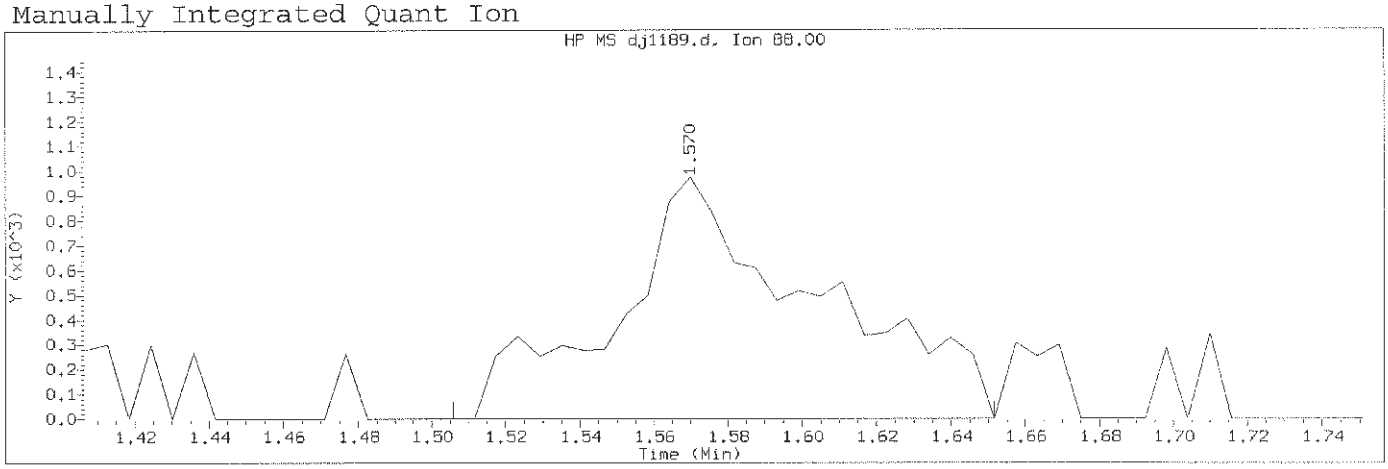
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 40		
Retention Time (minutes)	: 1.570		
Quant Ion	: 88.00		
Area (flag)	: 3666M		
On-Column Amount (ng/ul)	: 0.1668		
Integration start scan	: 28	Integration stop scan:	53
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

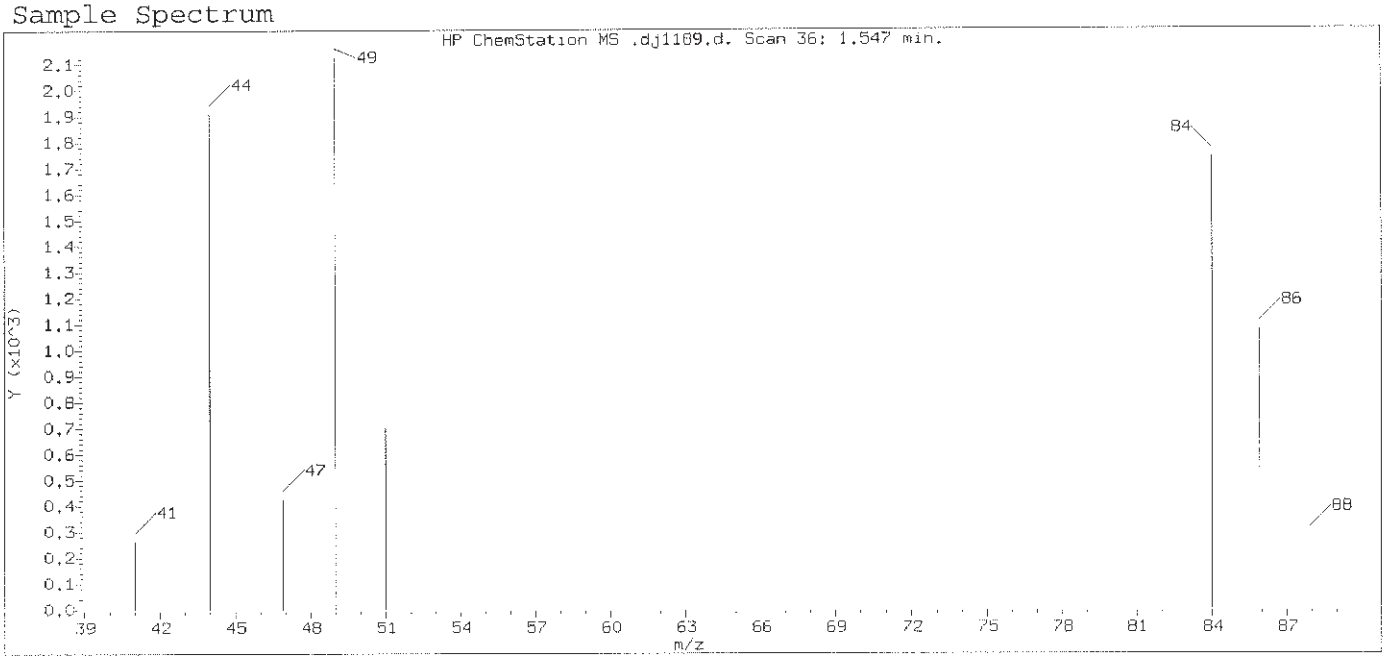
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

GC/MS audit/management approval: _____

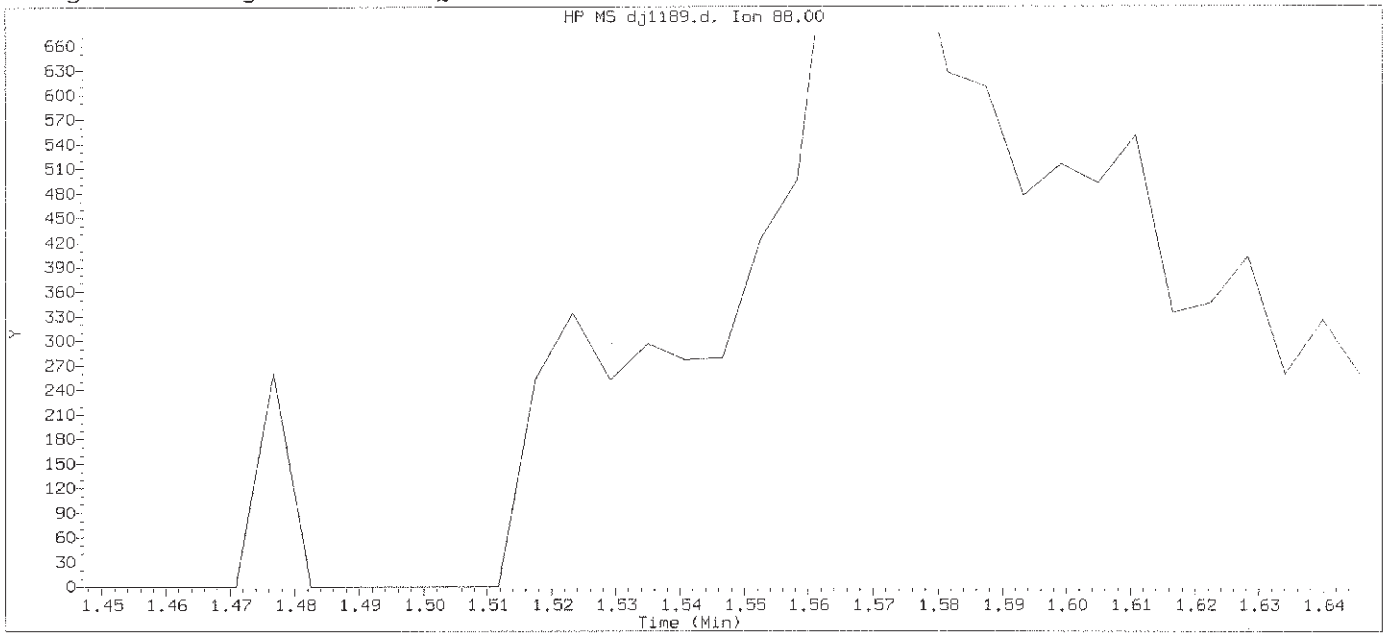
OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

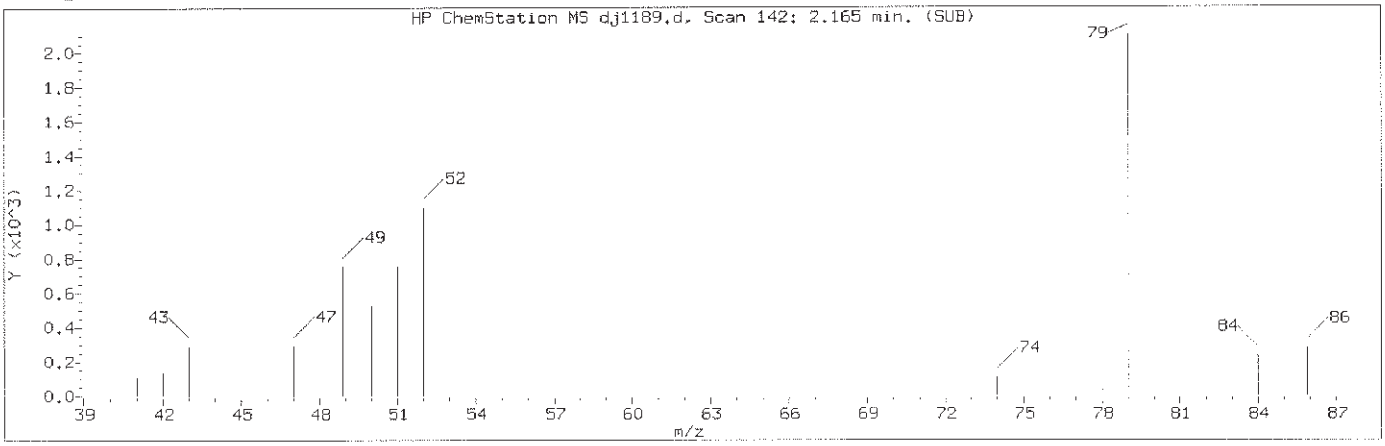
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

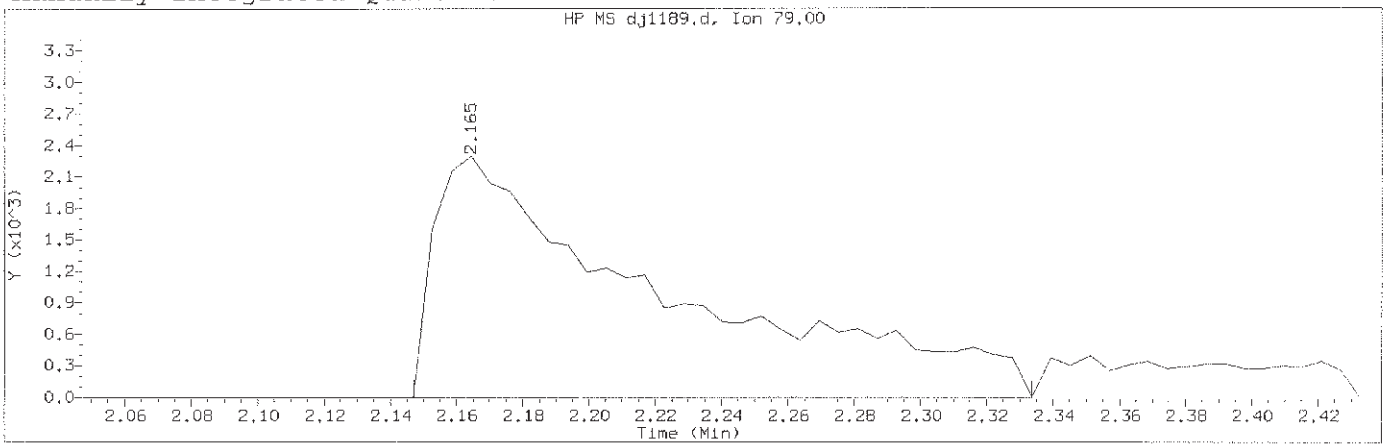
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 1.547
Quant Ion : 88.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area (flag)	: 10875M		
On-Column Amount (ng/ul)	: 0.1643		
Integration start scan	: 138	Integration stop scan:	170
Y at integration start	: 0	Y at integration end:	0

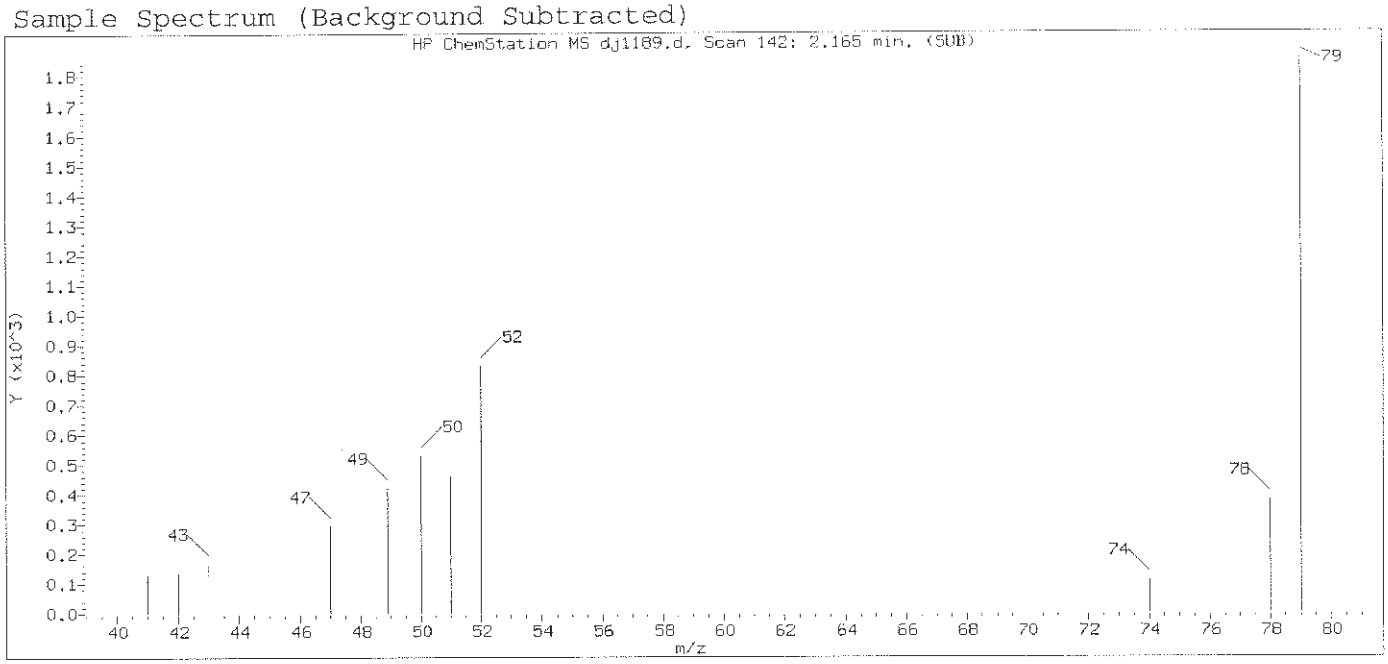
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

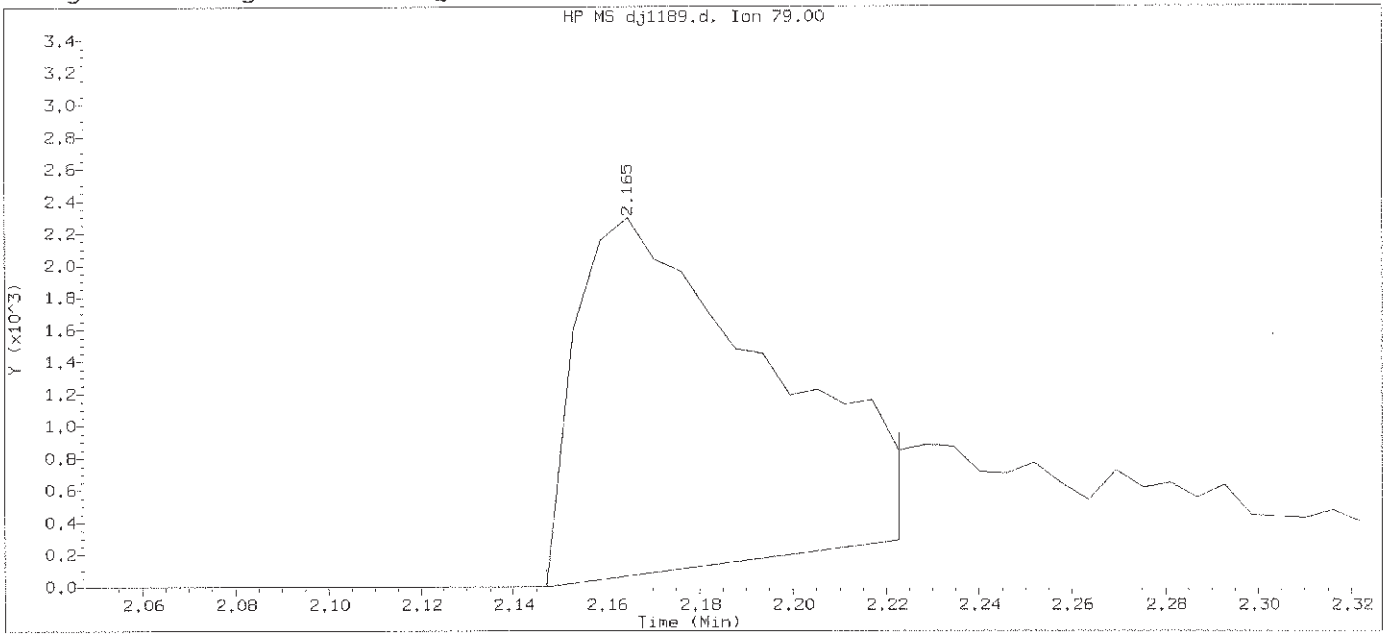
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

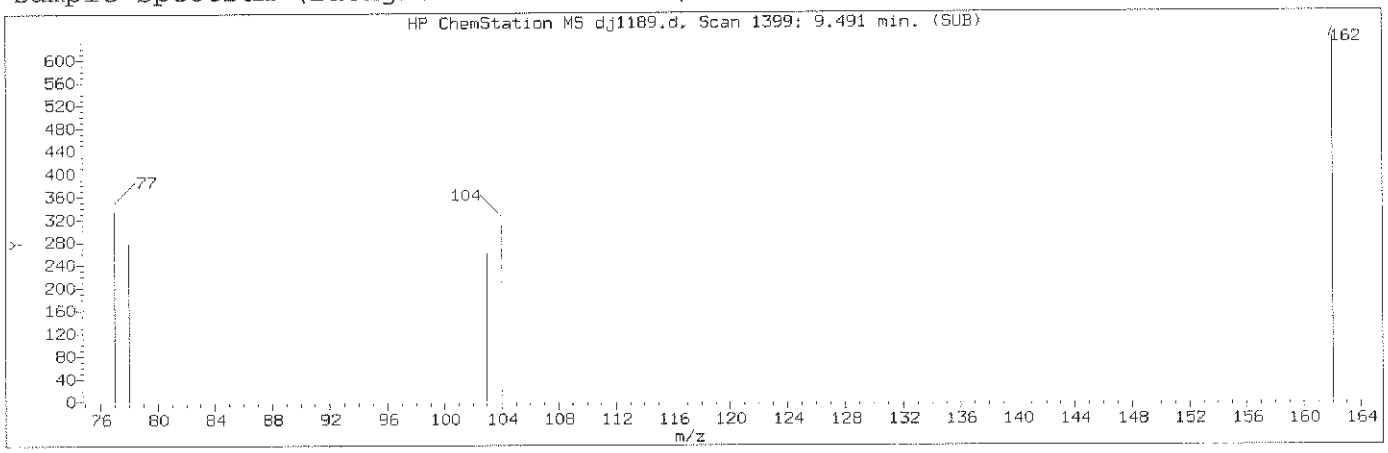
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

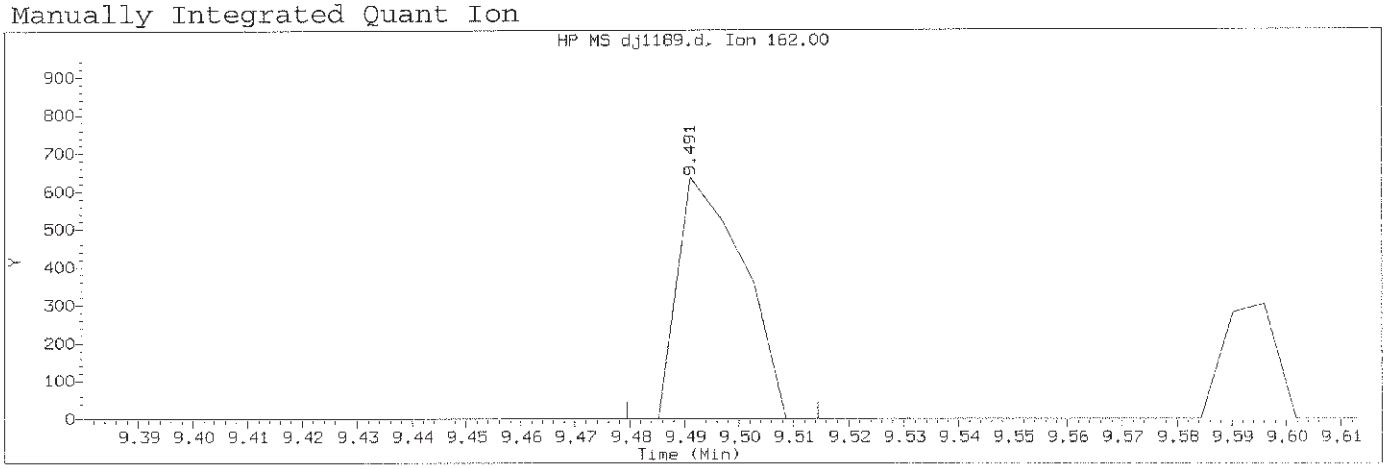
Compound Number	: 3		
Compound Name	: Pyridine		
Scan Number	: 142		
Retention Time (minutes)	: 2.165		
Quant Ion	: 79.00		
Area	: 6269		
On-column Amount (ng/ul)	: 0.0947		
Integration start scan	: 138	Integration stop scan:	151
Y at integration start	: 0	Y at integration end:	288

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1399		
Retention Time (minutes)	: 9.491		
Quant Ion	: 162.00		
Area (flag)	: 530M		
On-Column Amount (ng/ul)	: 0.0799		
Integration start scan	: 1396	Integration stop scan:	1402
Y at integration start	: 0	Y at integration end:	0

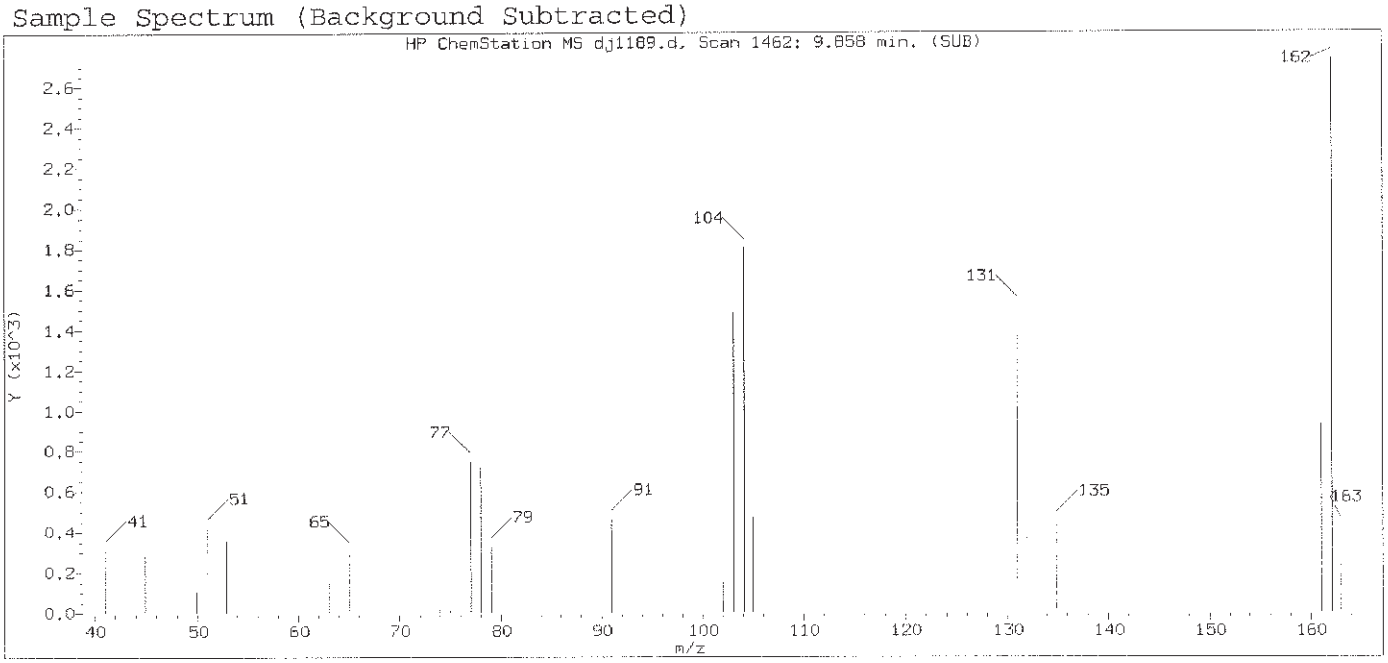
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

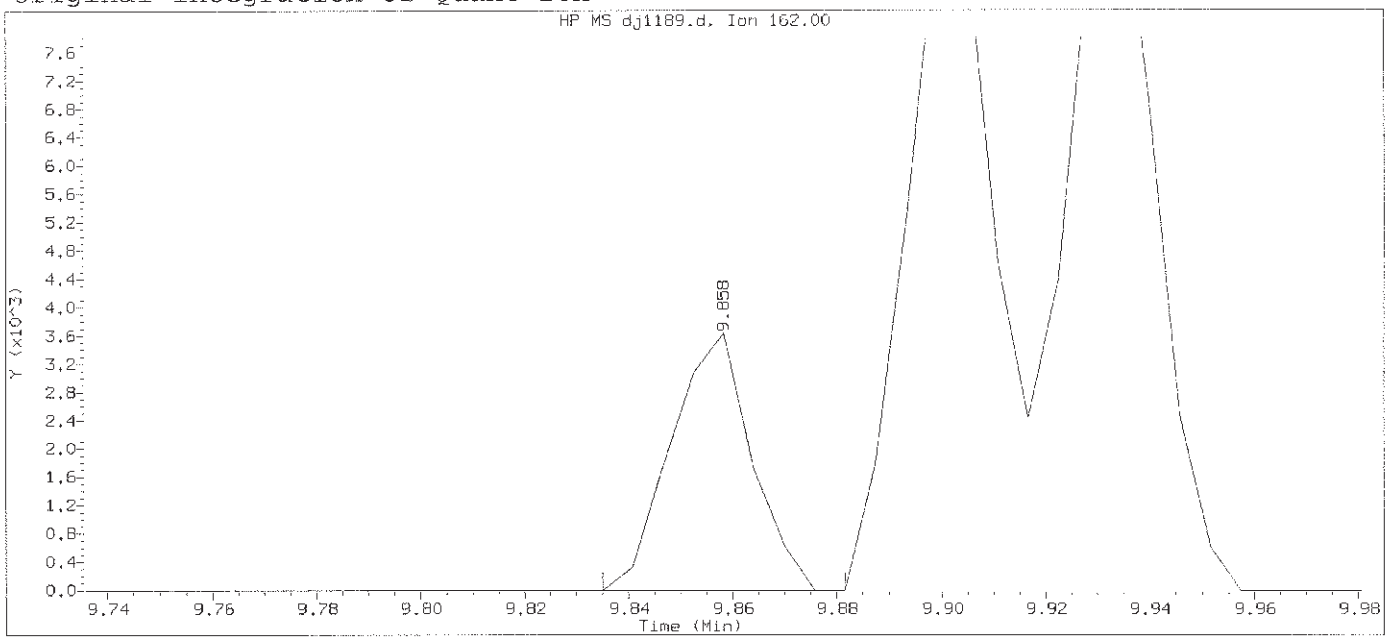
GC/MS audit/management approval: OCT 3 0 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

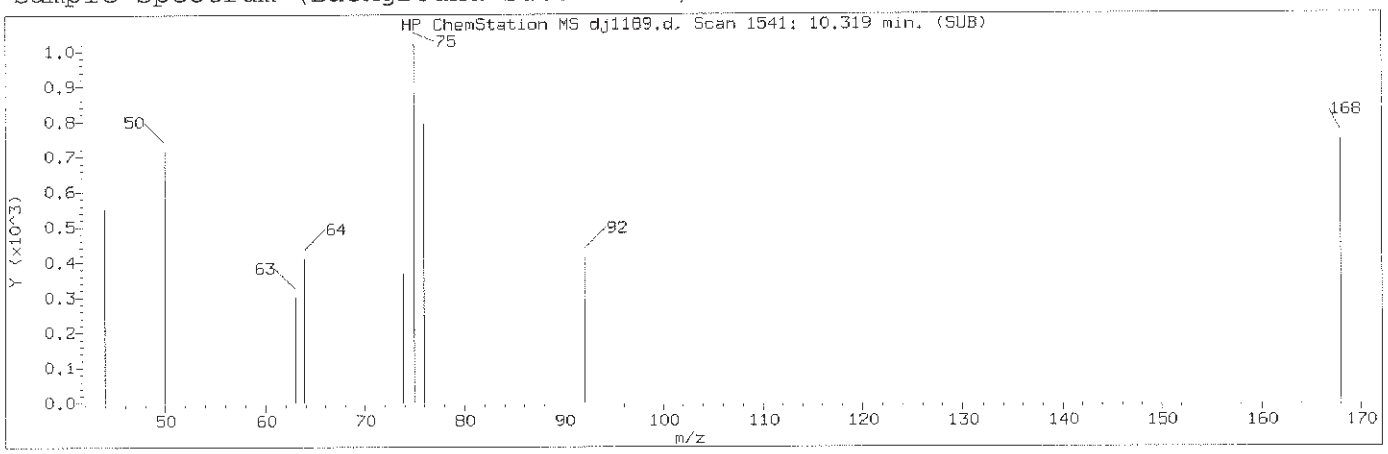
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

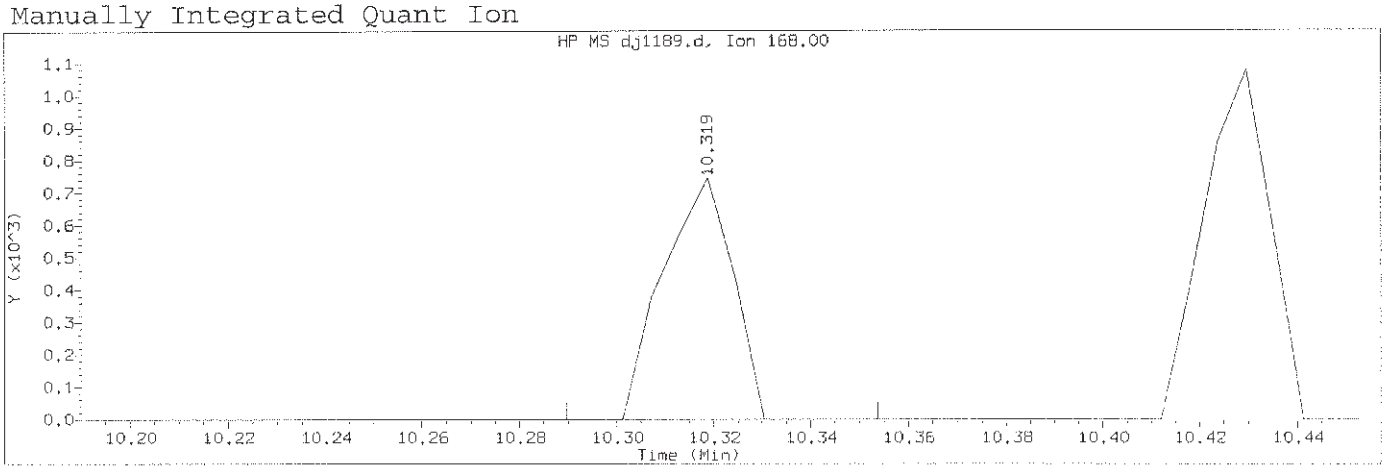
Compound Number	: 69		
Compound Name	: cis-Isosafrole		
Scan Number	: 1462		
Retention Time (minutes)	: 9.858		
Quant Ion	: 162.00		
Area	: 3898		
On-column Amount (ng/ul)	: 0.5875		
Integration start scan	: 1457	Integration stop scan:	1465
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 85		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1541		
Retention Time (minutes)	: 10.319		
Quant Ion	: 168.00		
Area (flag)	: 740M		
On-Column Amount (ng/ul)	: 0.5829		
Integration start scan	: 1535	Integration stop scan:	1546
Y at integration start	: 0	Y at integration end:	0

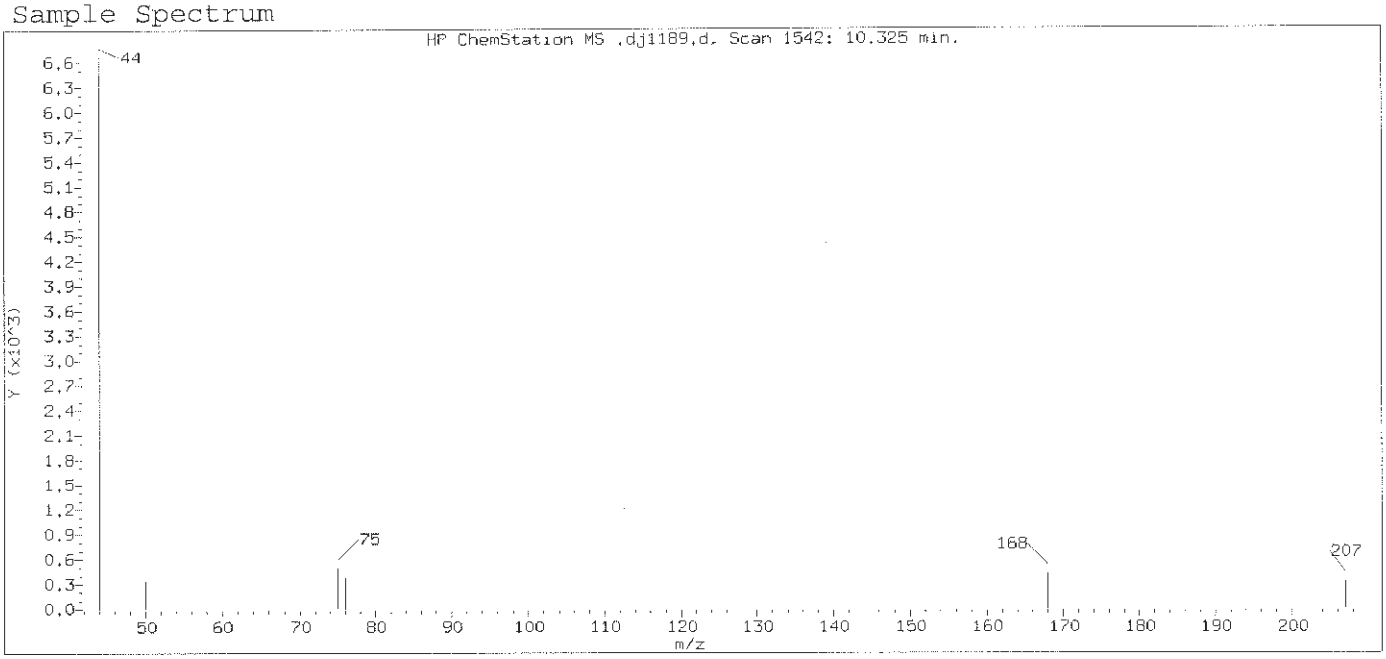
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

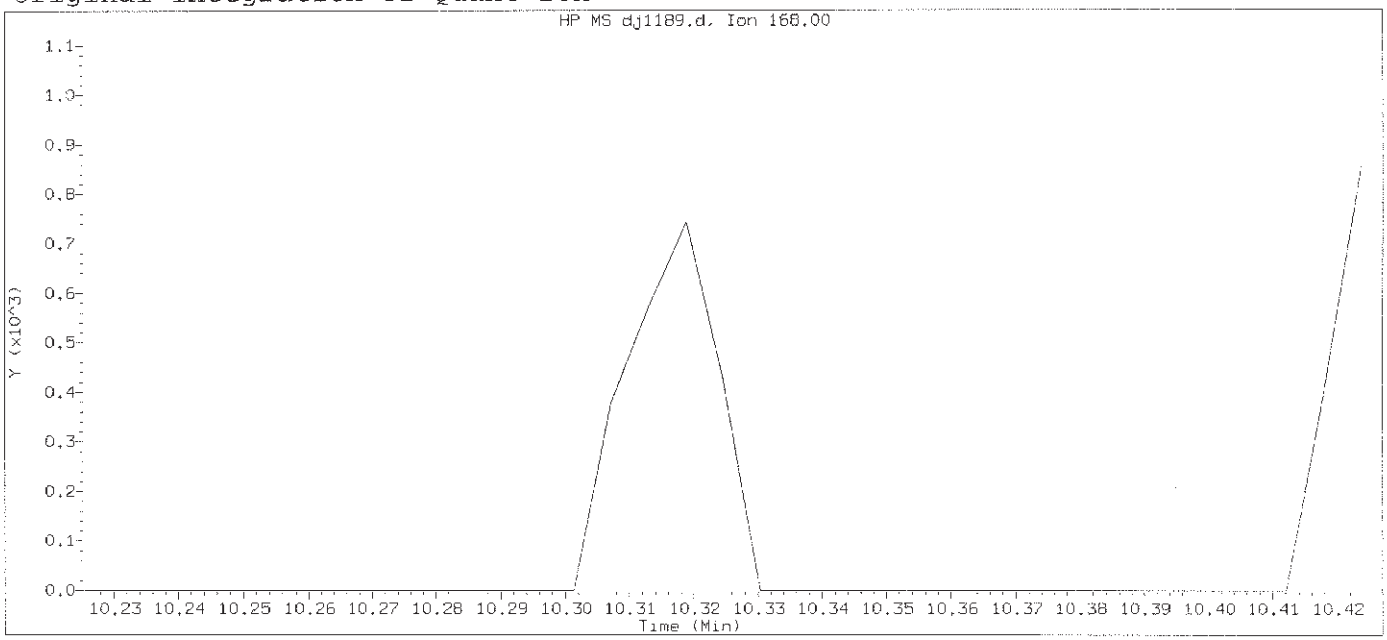
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

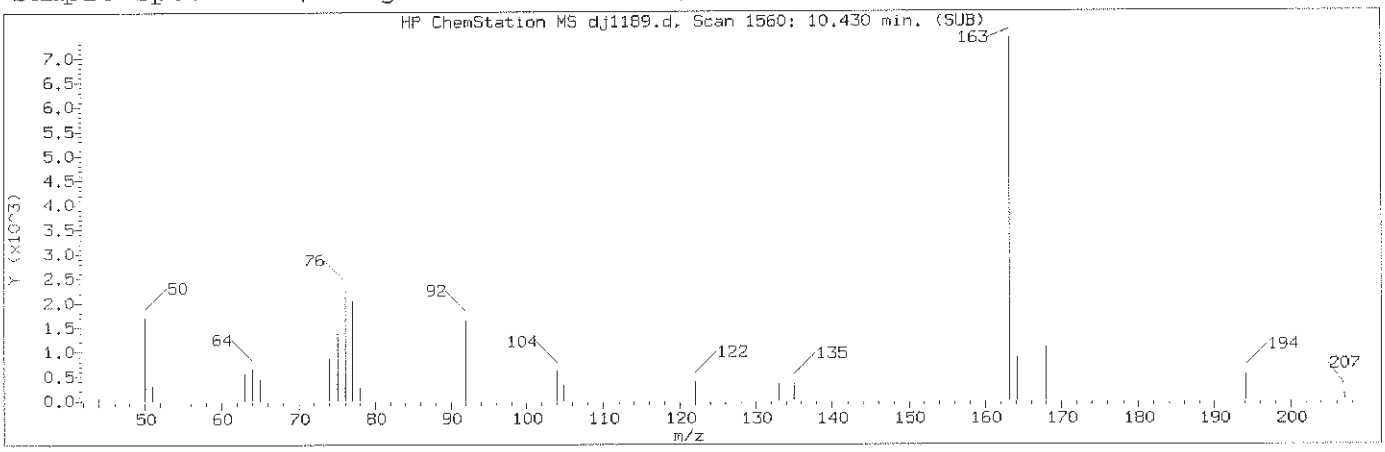
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

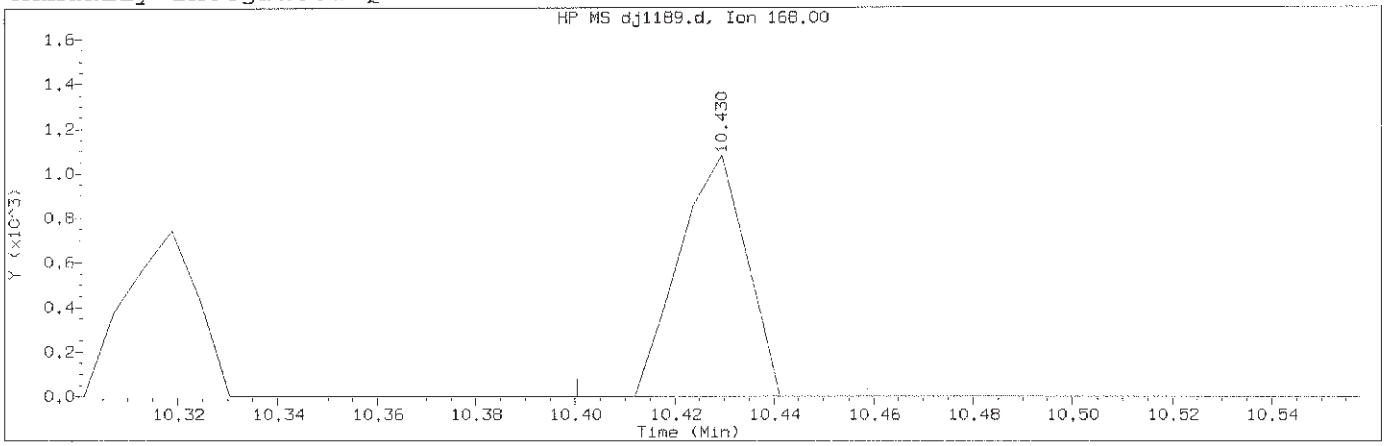
Compound Number : 85
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 10.325
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 87		
Compound Name	: 1,3-Dinitrobenzene		
Scan Number	: 1560		
Retention Time (minutes)	: 10.430		
Quant Ion	: 168.00		
Area (flag)	: 1007M		
On-Column Amount (ng/ul)	: 0.0598		
Integration start scan	: 1554	Integration stop scan:	1564
Y at integration start	: 0	Y at integration end:	0

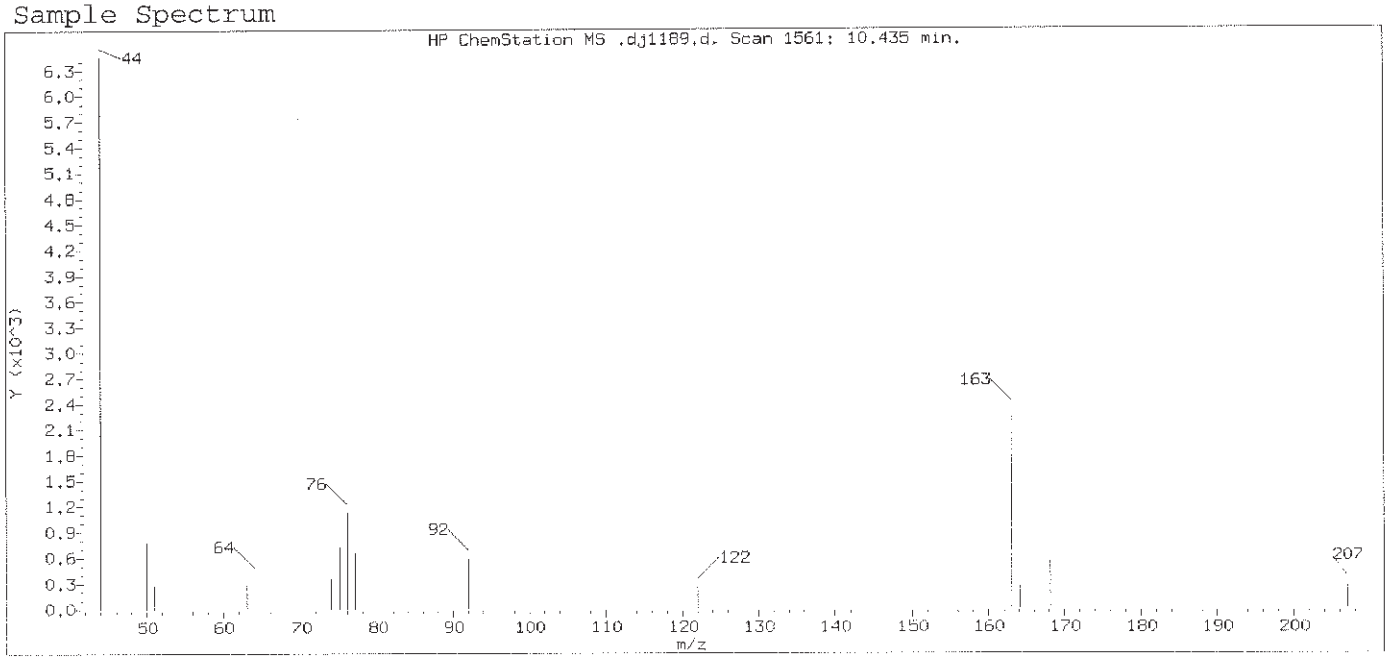
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

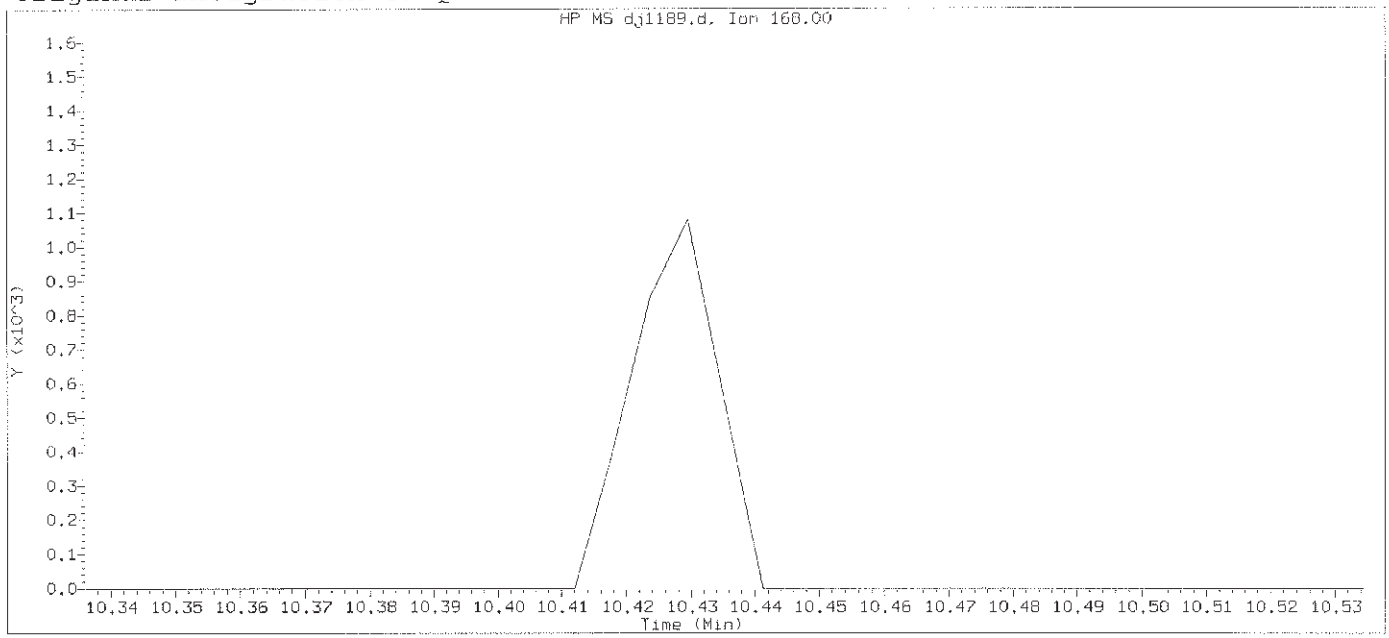
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

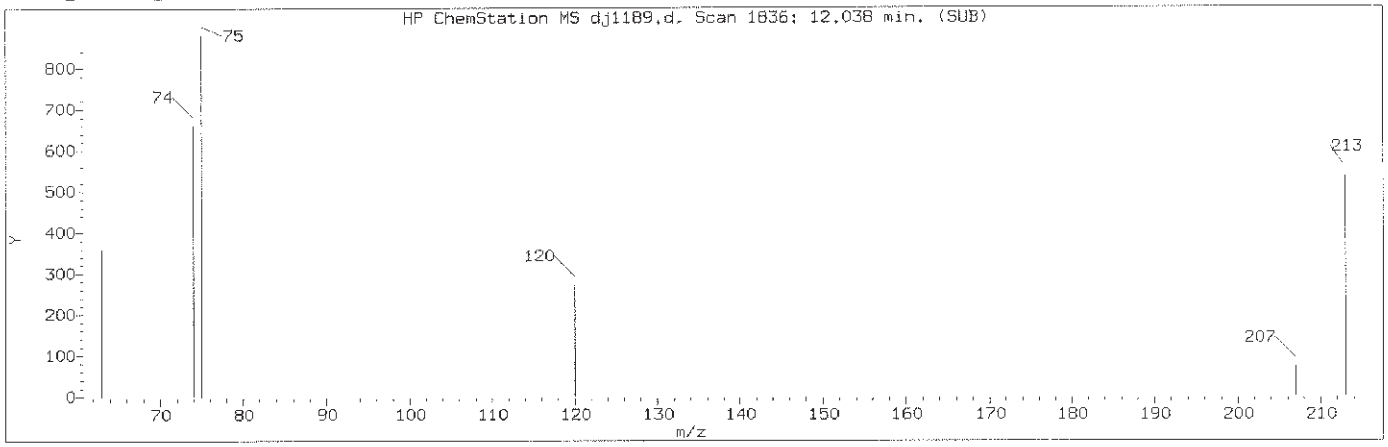
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

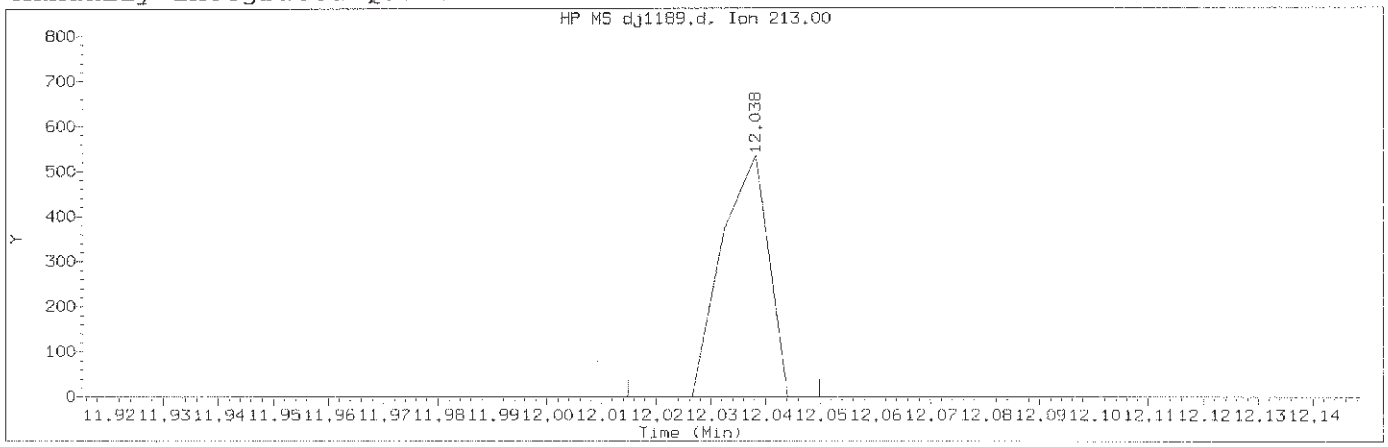
Compound Number : 87
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 10.435
Quant Ion : 168.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 116		
Compound Name	: 1,3,5-Trinitrobenzene		
Scan Number	: 1836		
Retention Time (minutes)	: 12.038		
Quant Ion	: 213.00		
Area (flag)	: 316M		
On-Column Amount (ng/ul)	: 1.3173		
Integration start scan	: 1831	Integration stop scan:	1837
Y at integration start	: 0	Y at integration end:	0

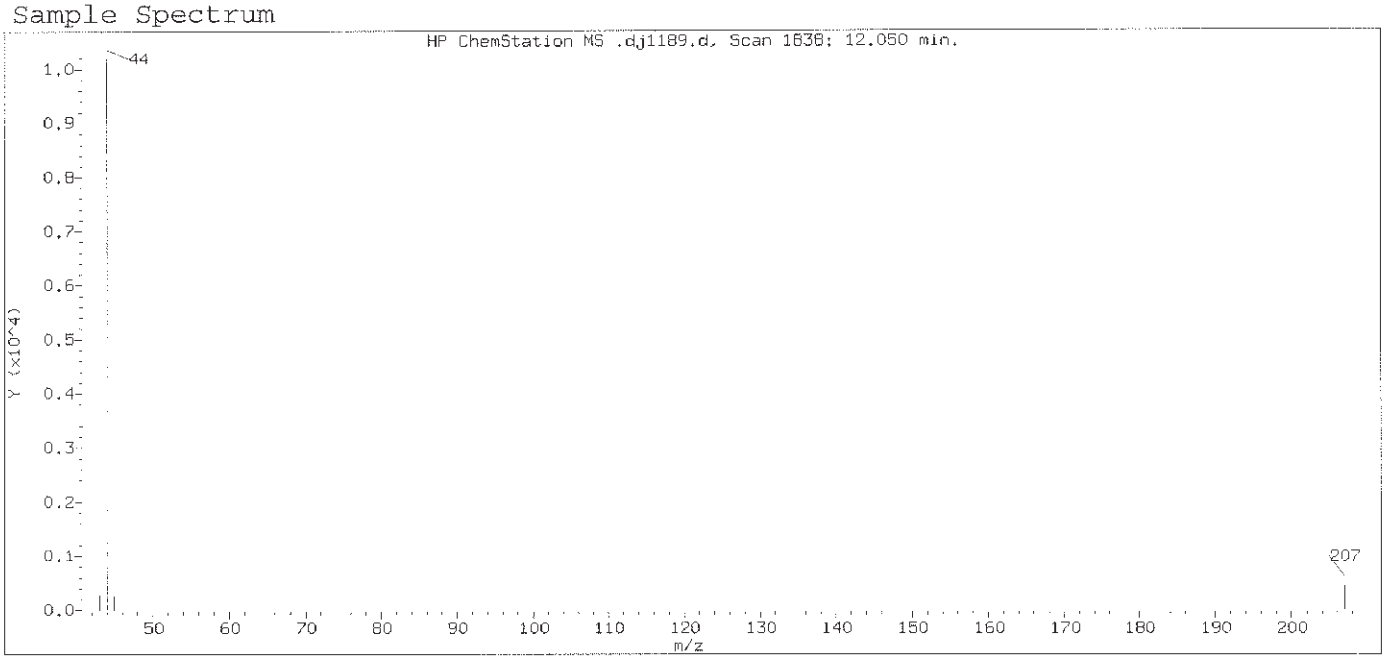
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

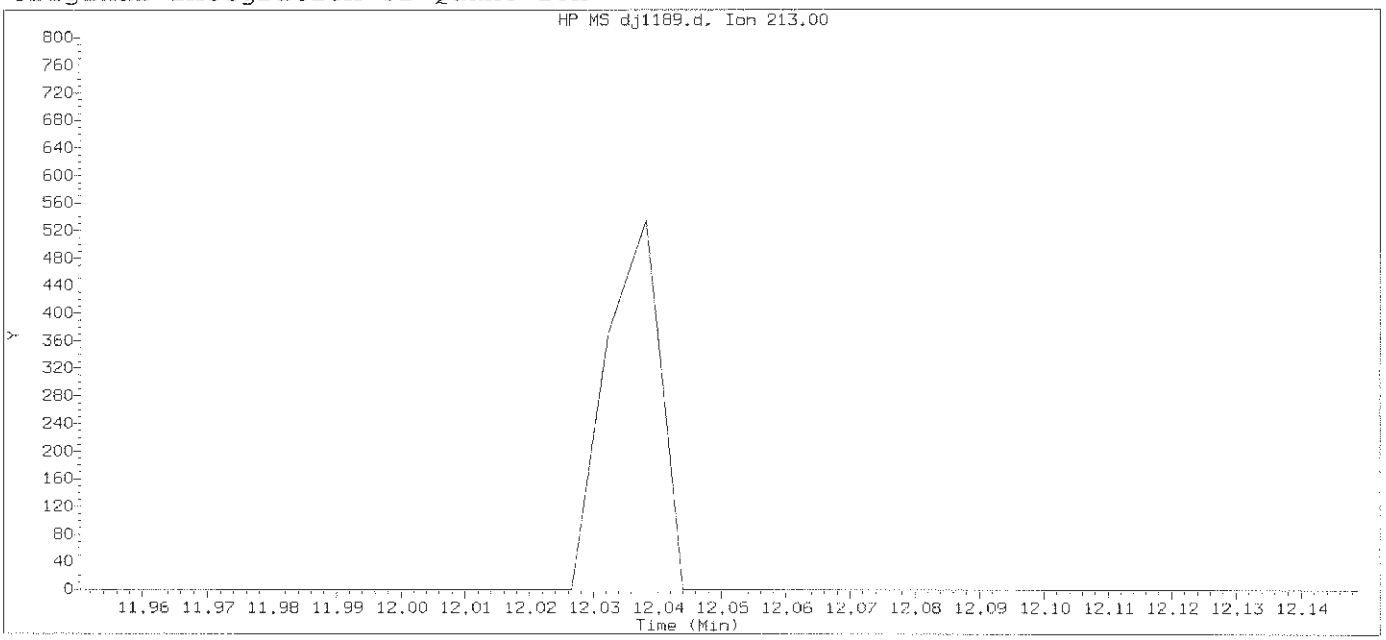
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

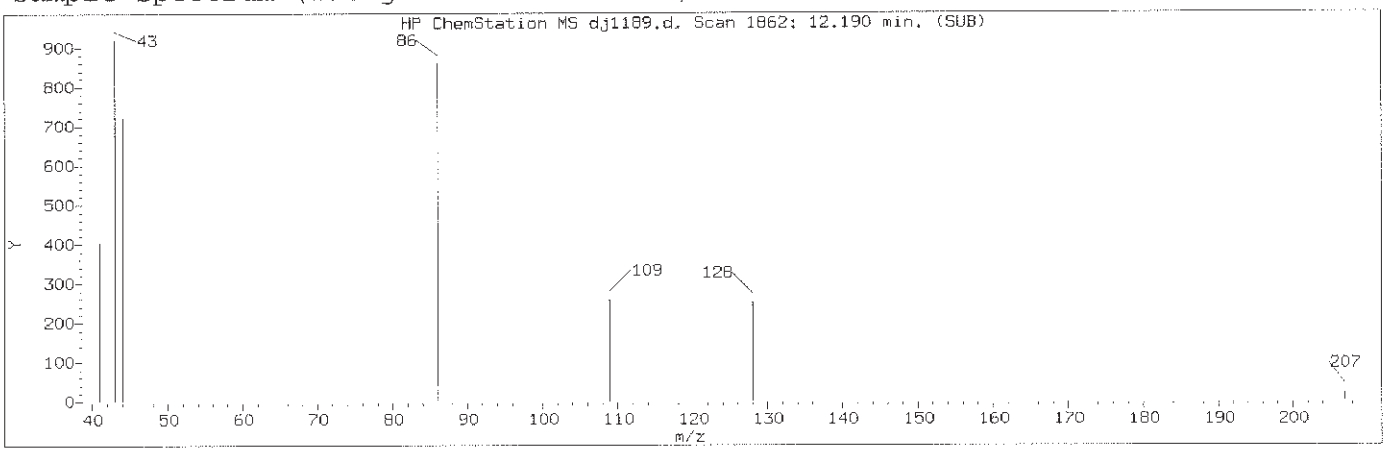
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

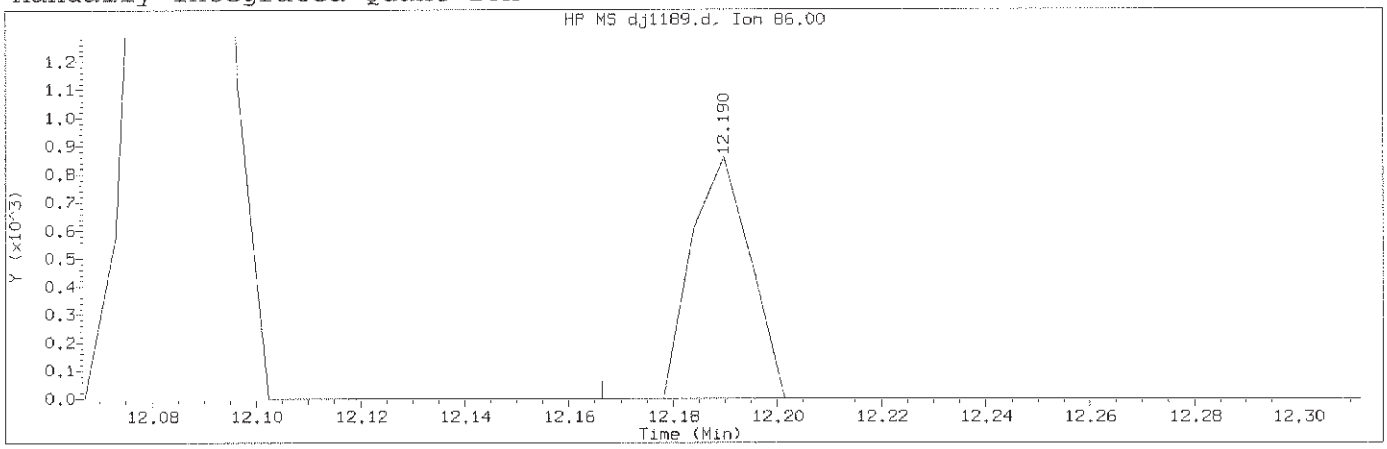
Compound Number : 116
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.050
Quant Ion : 213.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5md1a111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1862		
Retention Time (minutes)	: 12.190		
Quant Ion	: 86.00		
Area (flag)	: 674M		
On-Column Amount (ng/ul)	: 0.0238		
Integration start scan	: 1857	Integration stop scan:	1865
Y at integration start	: 0	Y at integration end:	0

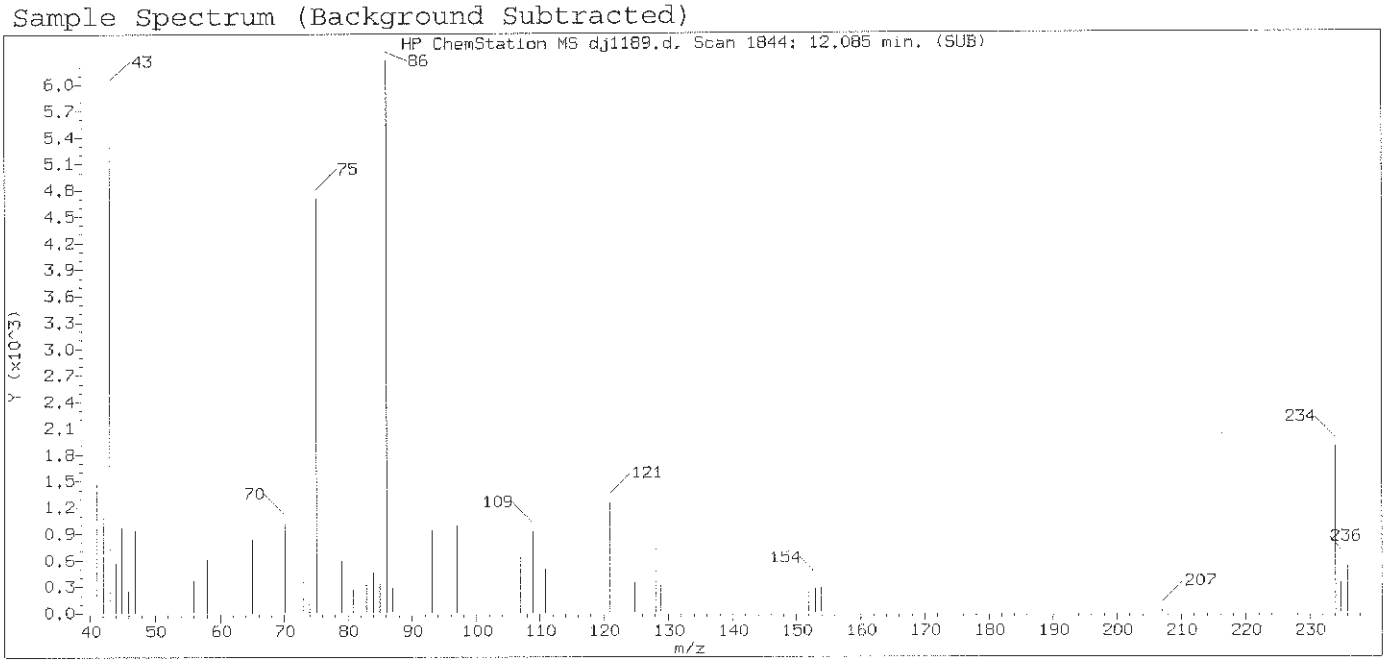
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

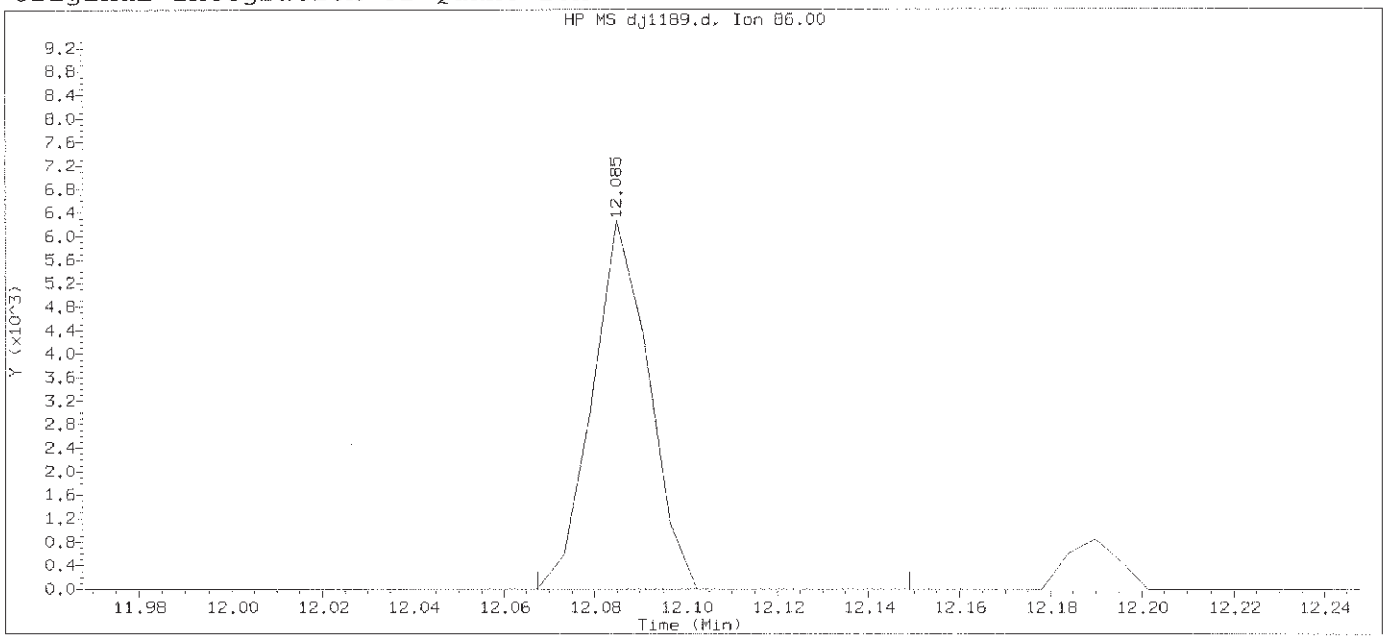
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

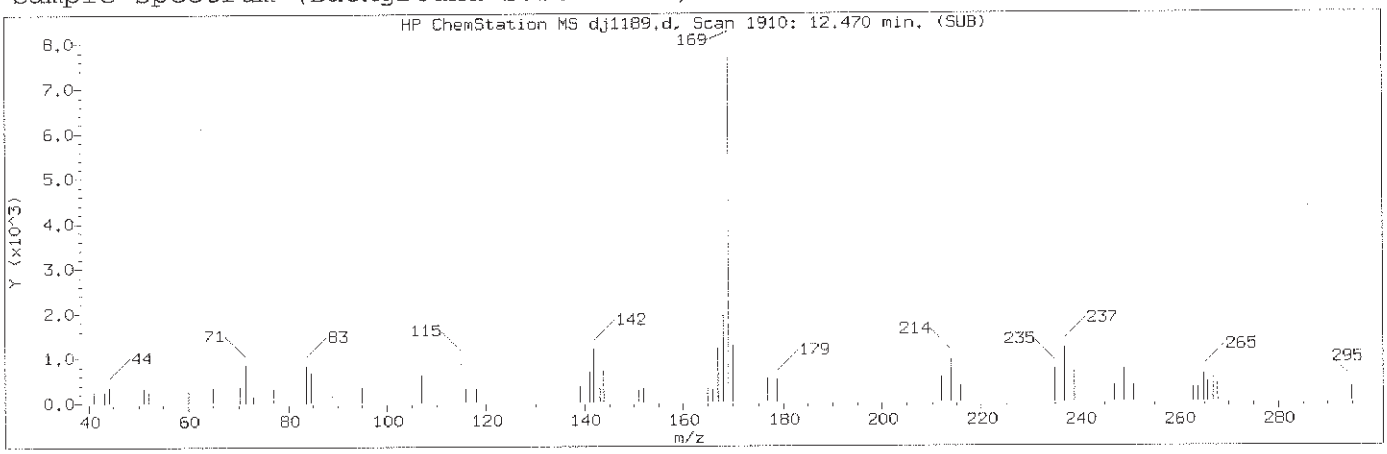
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

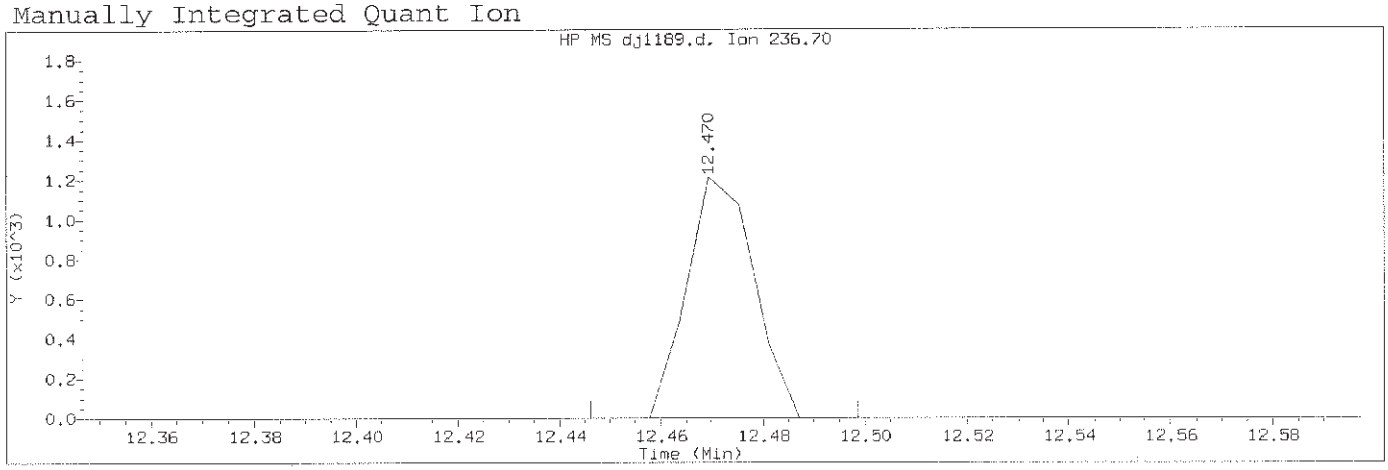
Compound Number	: 121		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1844		
Retention Time (minutes)	: 12.085		
Quant Ion	: 86.00		
Area	: 5354		
On-column Amount (ng/ul)	: 0.1888		
Integration start scan	: 1840	Integration stop scan:	1854
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 126		
Compound Name	: Pentachloronitrobenzene		
Scan Number	: 1910		
Retention Time (minutes)	: 12.470		
Quant Ion	: 237.00		
Area (flag)	: 1094M		
On-Column Amount (ng/ul)	: 0.0892		
Integration start scan	: 1905	Integration stop scan:	1914
Y at integration start	: 0	Y at integration end:	0

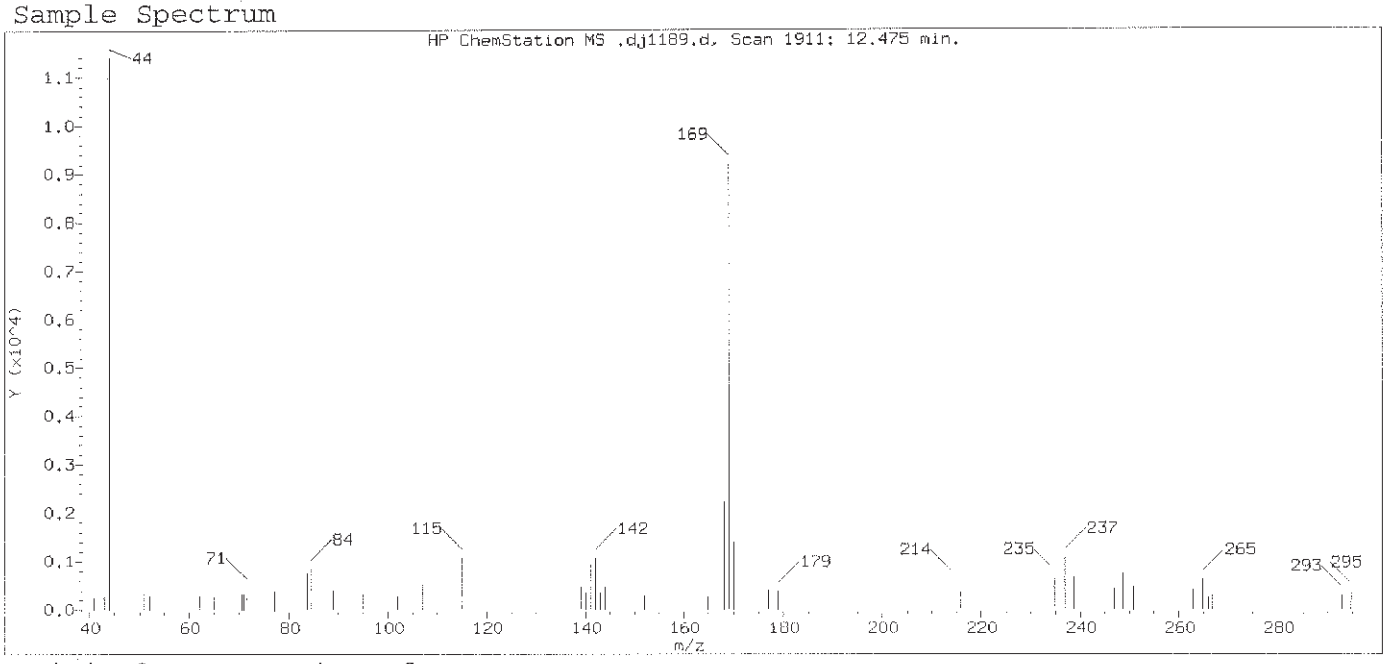
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

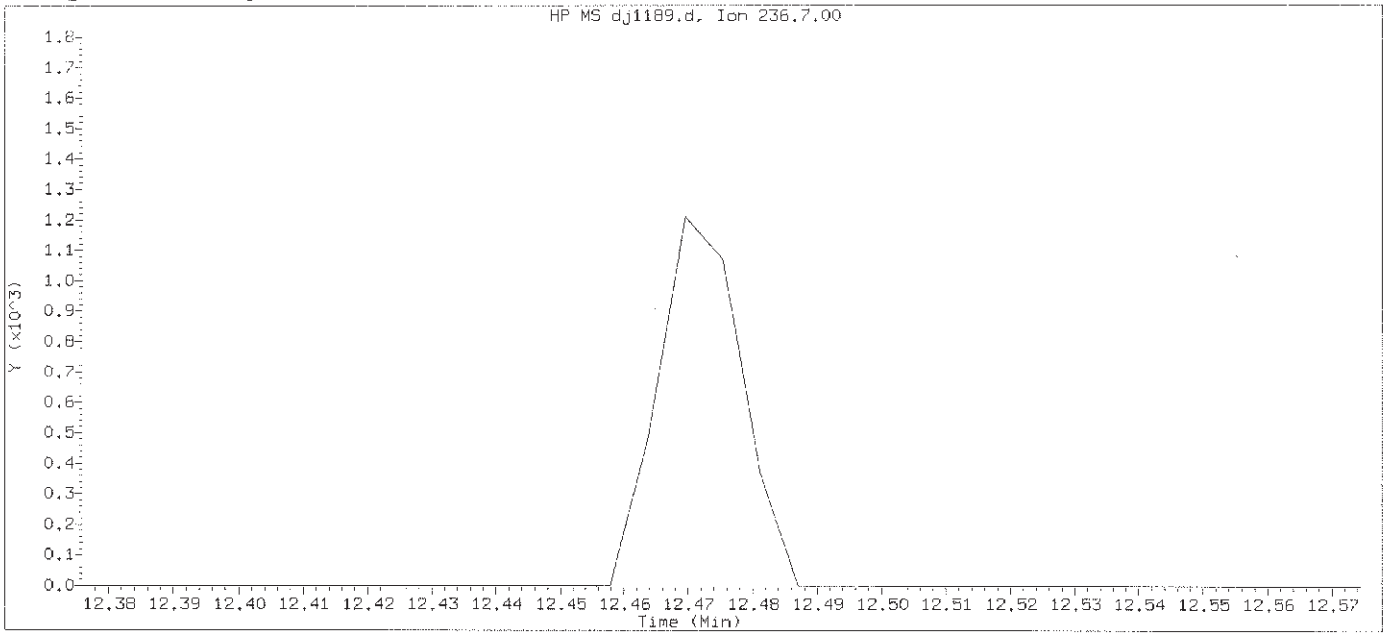
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Section Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

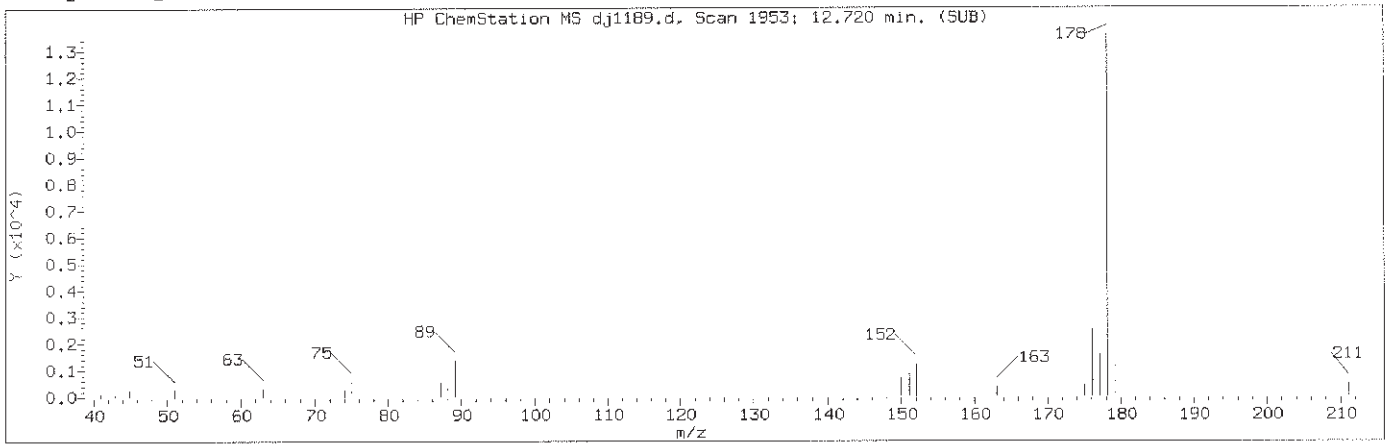
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

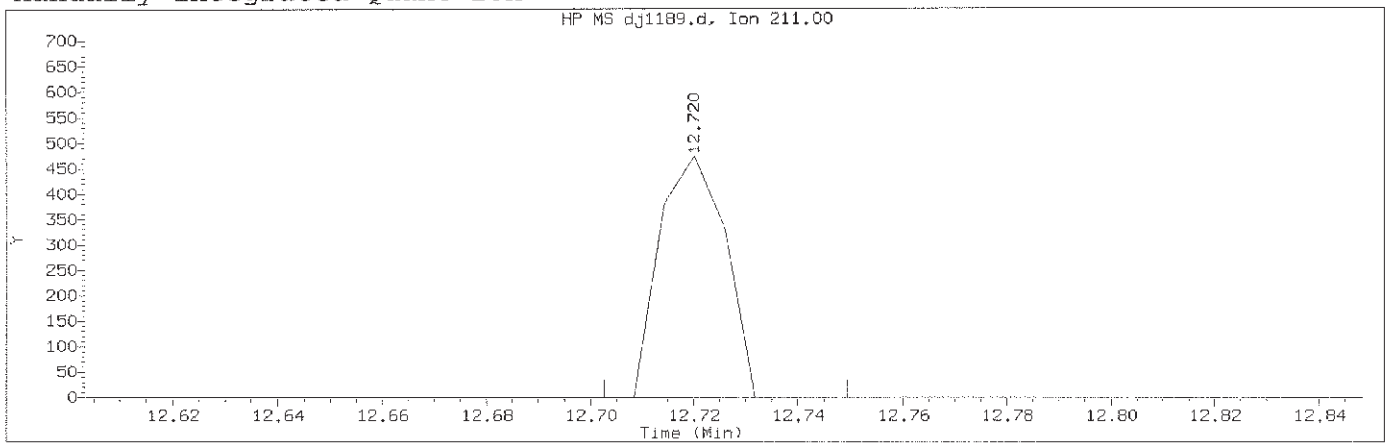
Compound Number : 126
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 12.475
Quant Ion : 237.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 133		
Compound Name	: Dinoseb		
Scan Number	: 1953		
Retention Time (minutes)	: 12.720		
Quant Ion	: 211.00		
Area (flag)	: 414M		
On-Column Amount (ng/ul)	: 1.3360		
Integration start scan	: 1949	Integration stop scan:	1957
Y at integration start	: 0	Y at integration end:	0

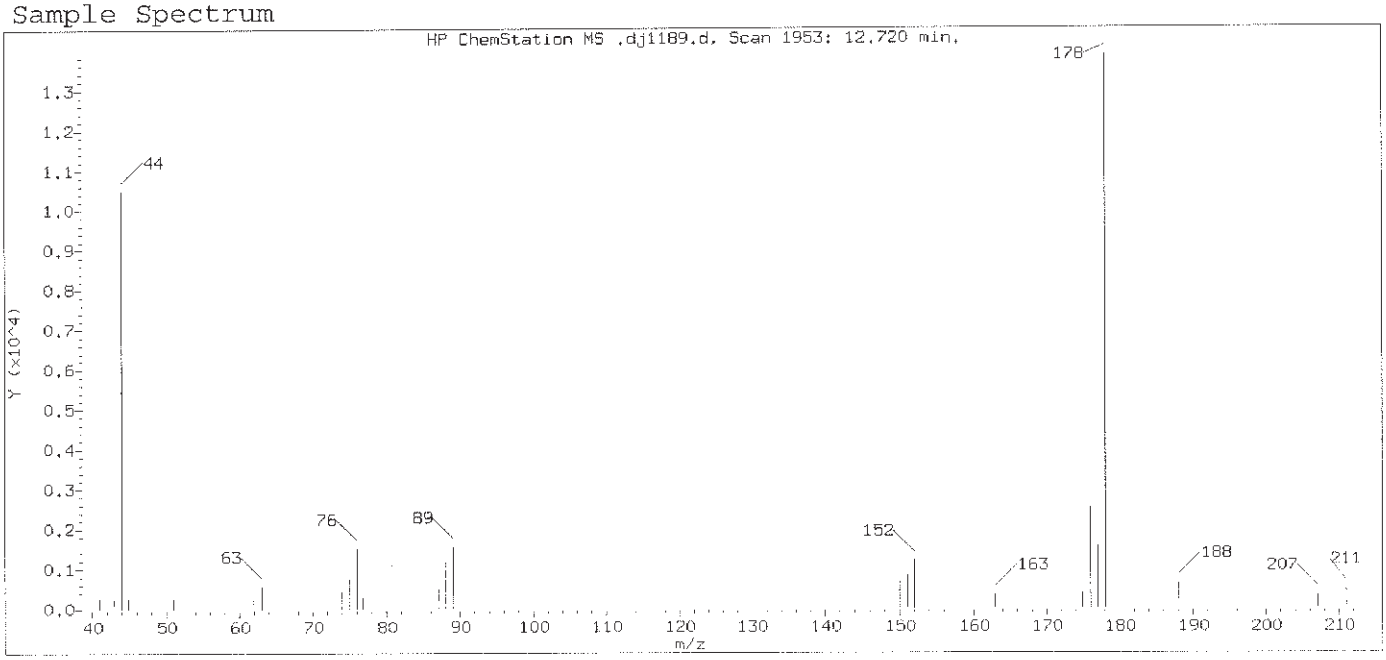
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

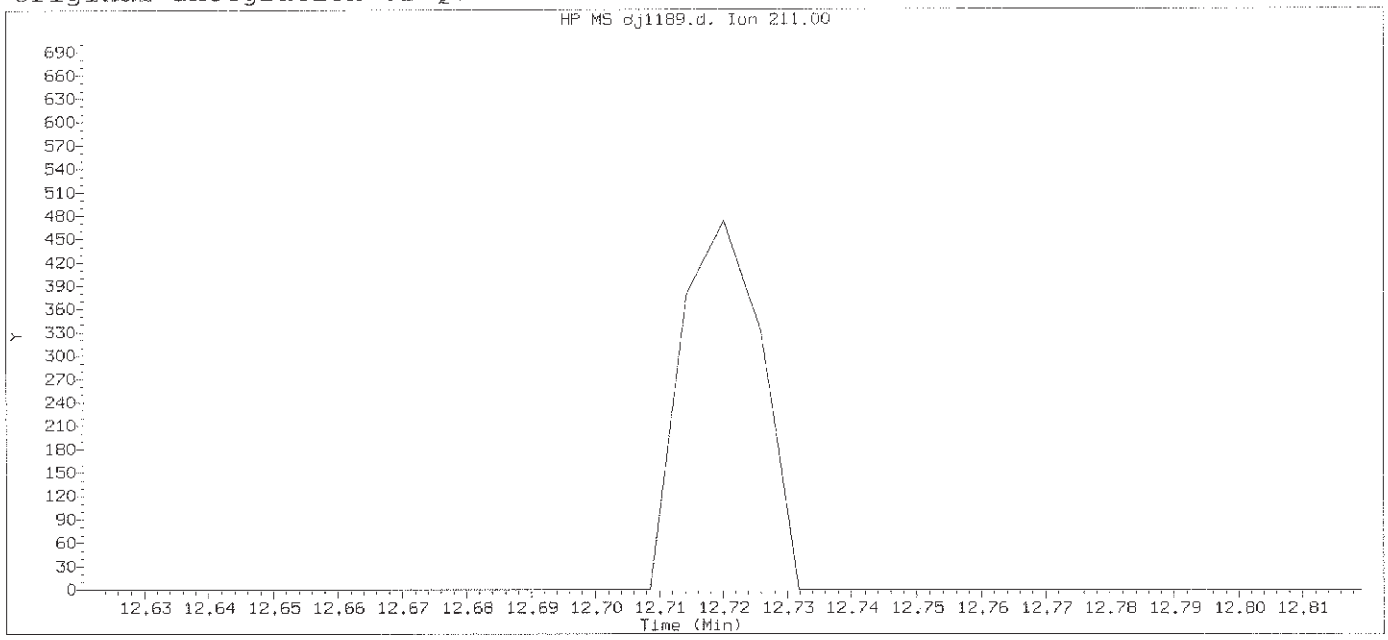
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

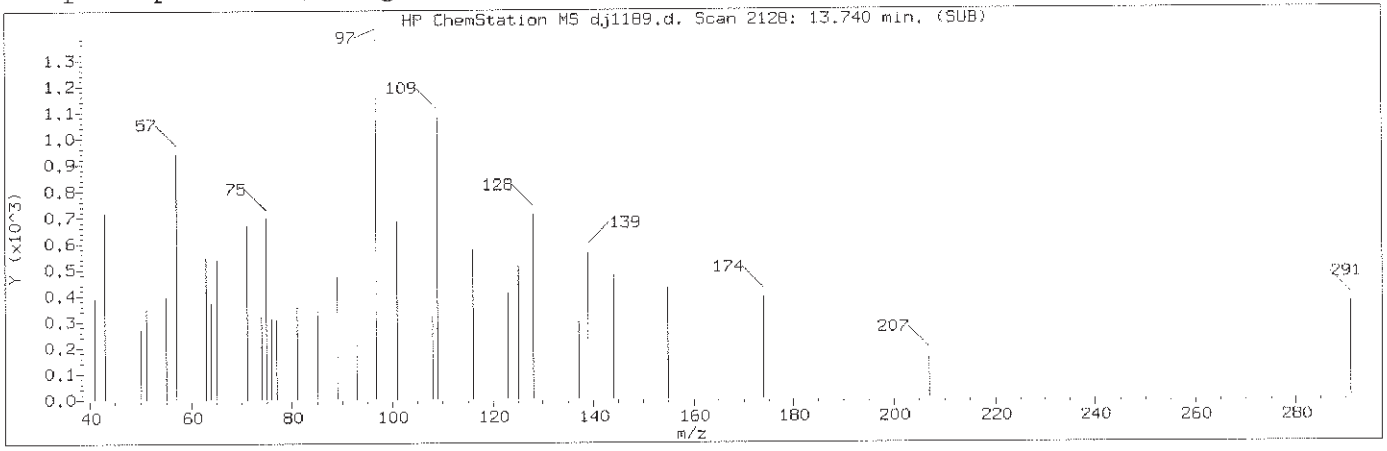
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

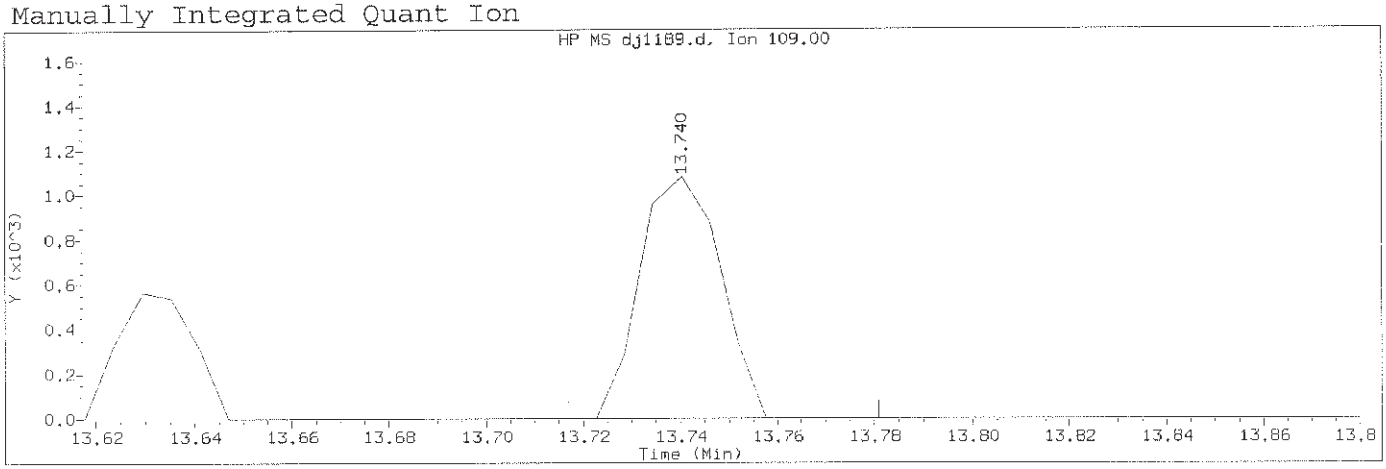
Compound Number : 133
Compound Name : Dinoseb
Expected RT (minutes) : 12.720
Quant Ion : 211.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2128		
Retention Time (minutes)	: 13.740		
Quant Ion	: 109.00		
Area (flag)	: 1235M		
On-Column Amount (ng/ul)	: 0.1123		
Integration start scan	: 2123	Integration stop scan:	2134
Y at integration start	: 0	Y at integration end:	0

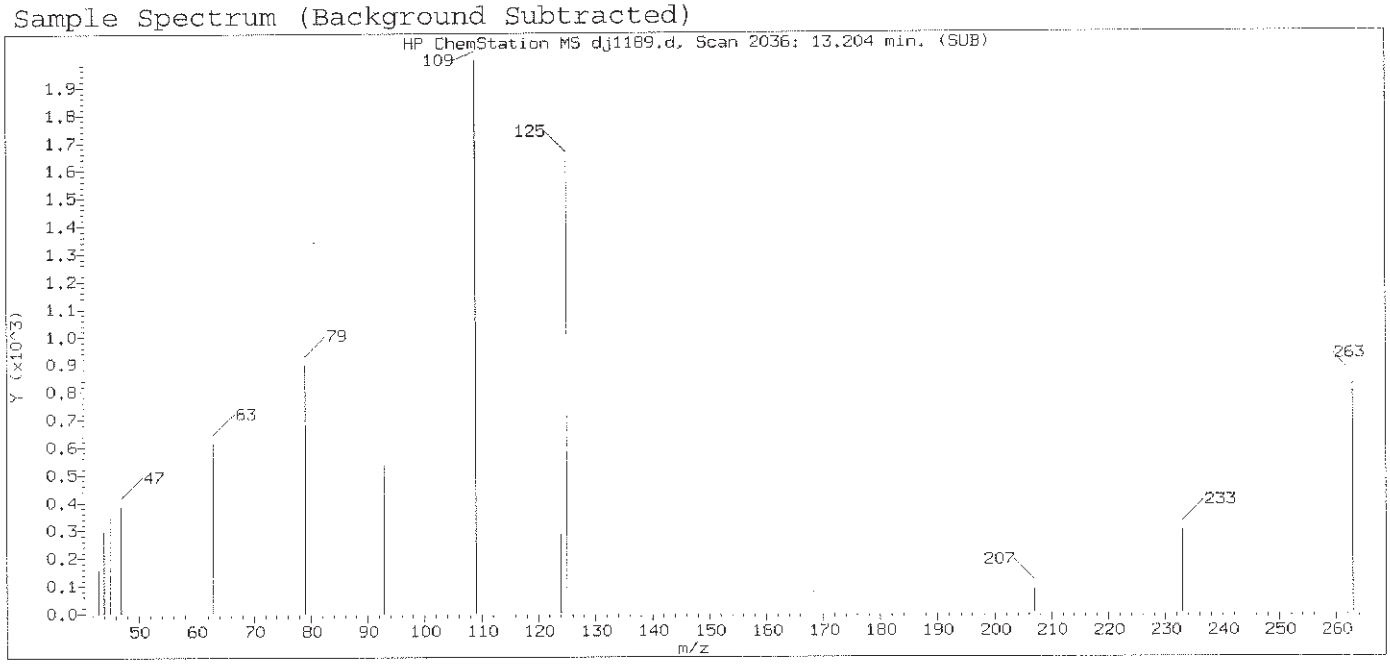
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

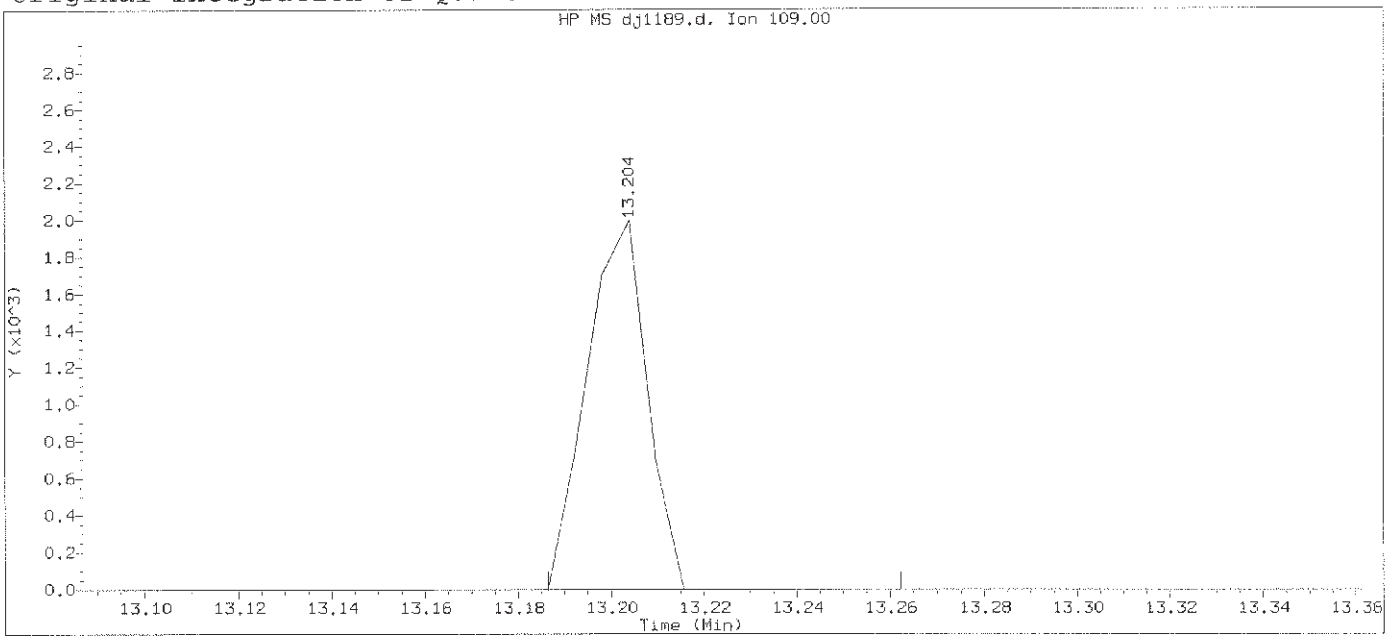
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

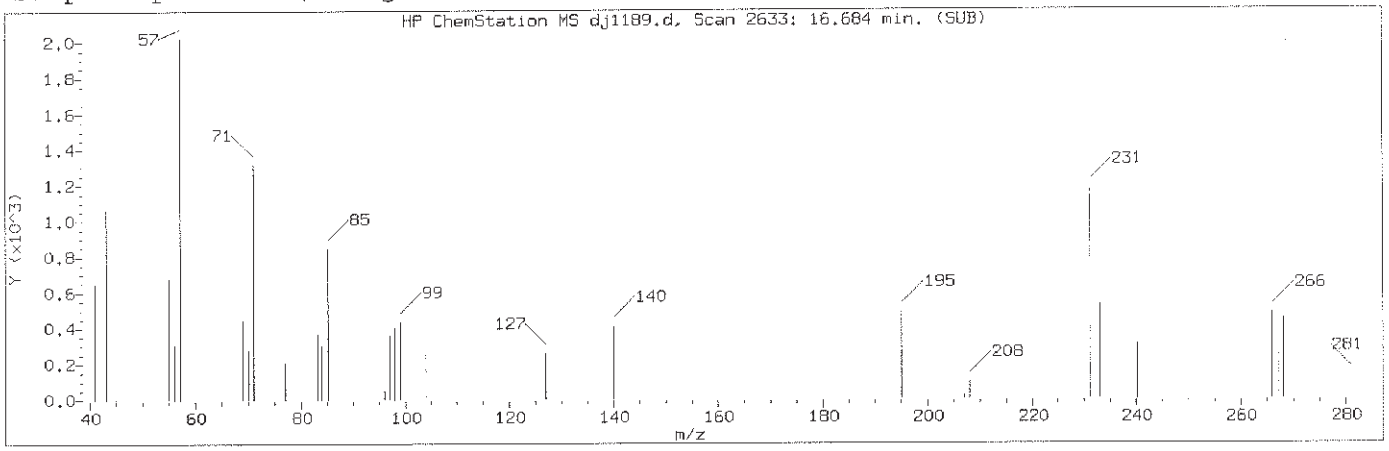
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

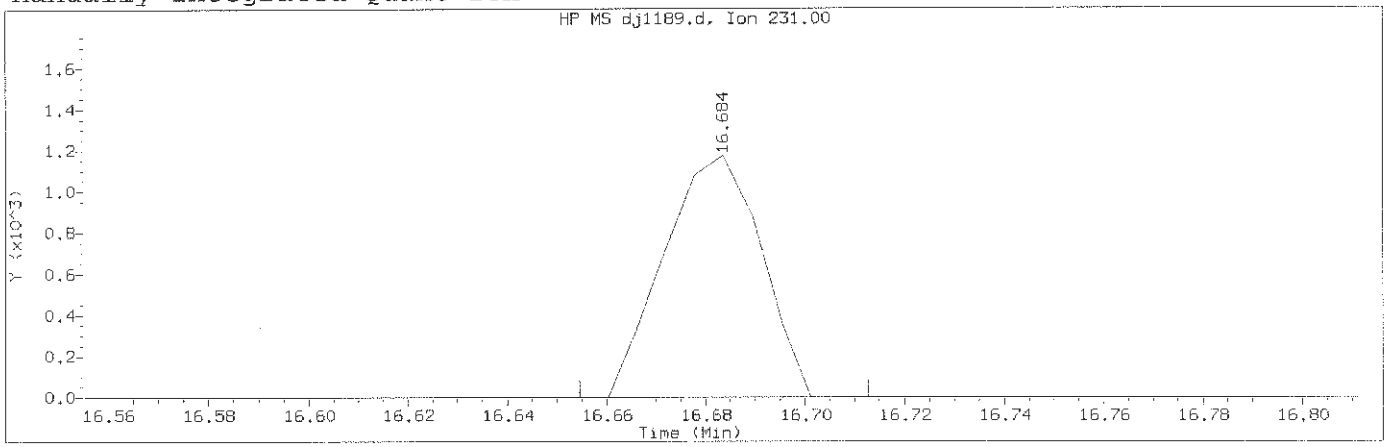
Compound Number	: 138		
Compound Name	: Parathion		
Scan Number	: 2036		
Retention Time (minutes)	: 13.204		
Quant Ion	: 109.00		
Area	: 1786		
On-column Amount (ng/ul)	: 0.1346		
Integration start scan	: 2032	Integration stop scan:	2045
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:18 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number	: 160		
Compound Name	: 4,4'-Methylenebis(2-Chloroanil		
Scan Number	: 2633		
Retention Time (minutes)	: 16.684		
Quant Ion	: 231.00		
Area (flag)	: 1582M		
On-Column Amount (ng/ul)	: 0.0544		
Integration start scan	: 2627	Integration stop scan:	2637
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: missed peak

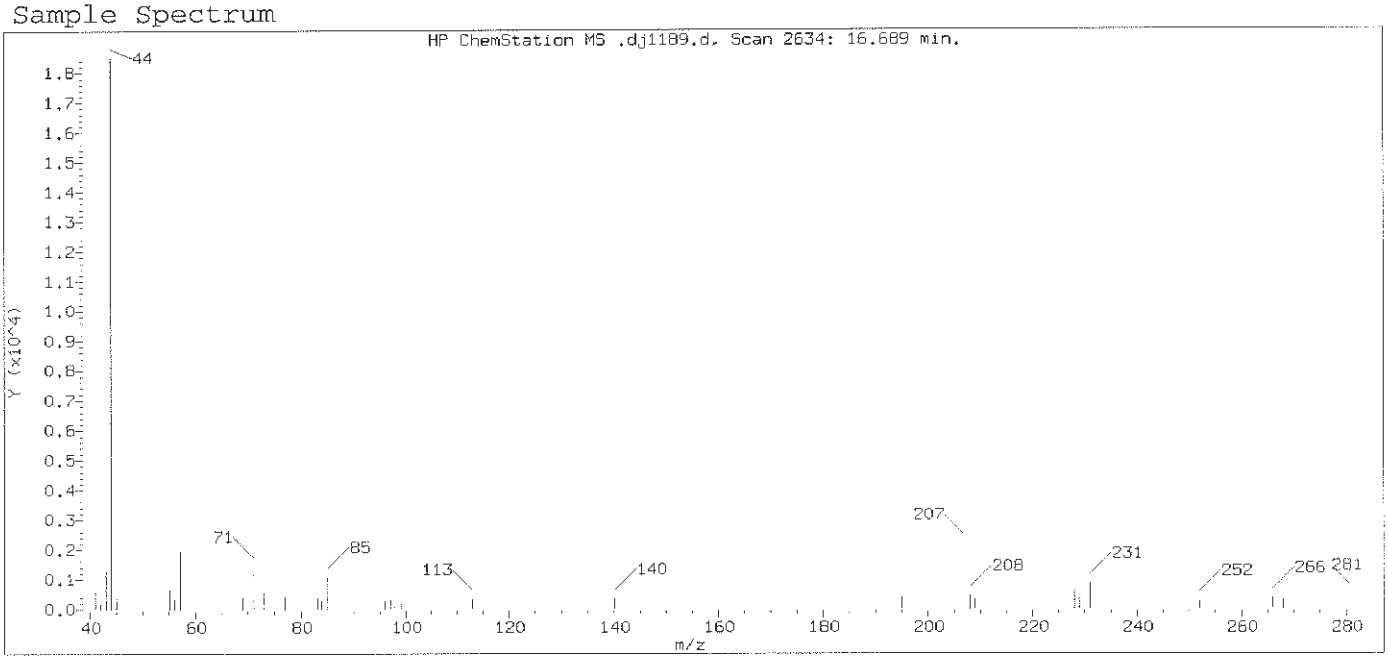
Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522

OCT 30 2013

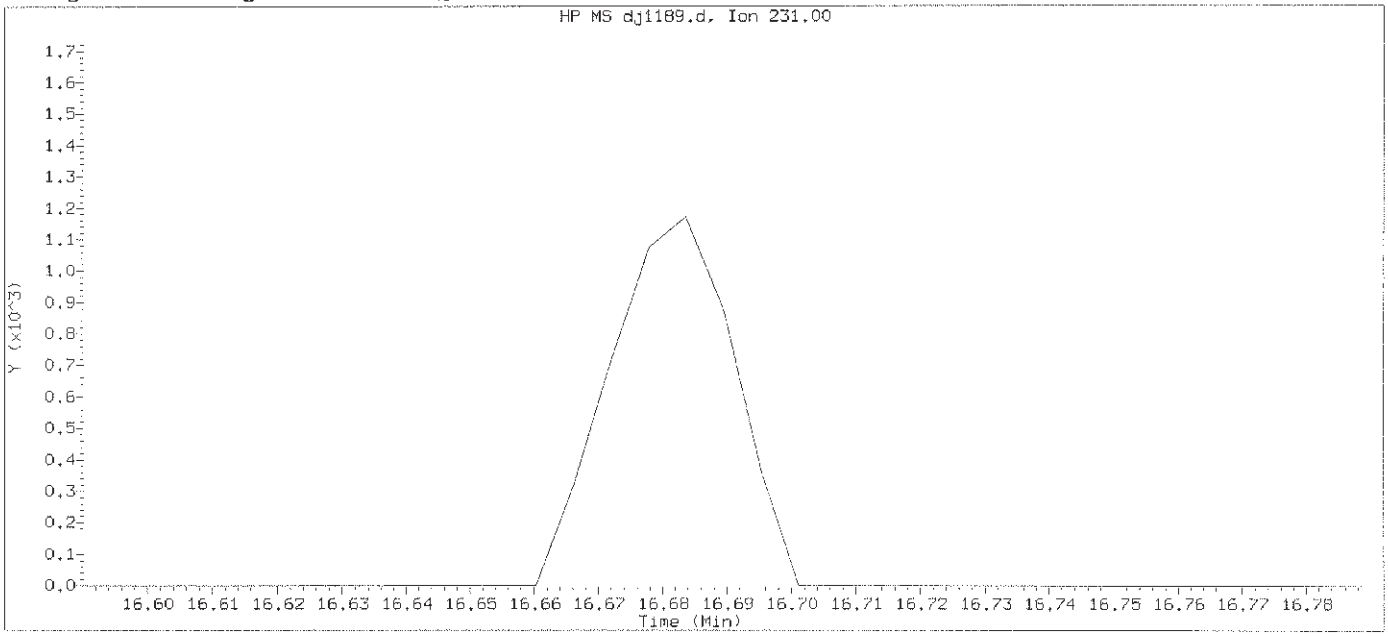
GC/MS audit/management approval:_____

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



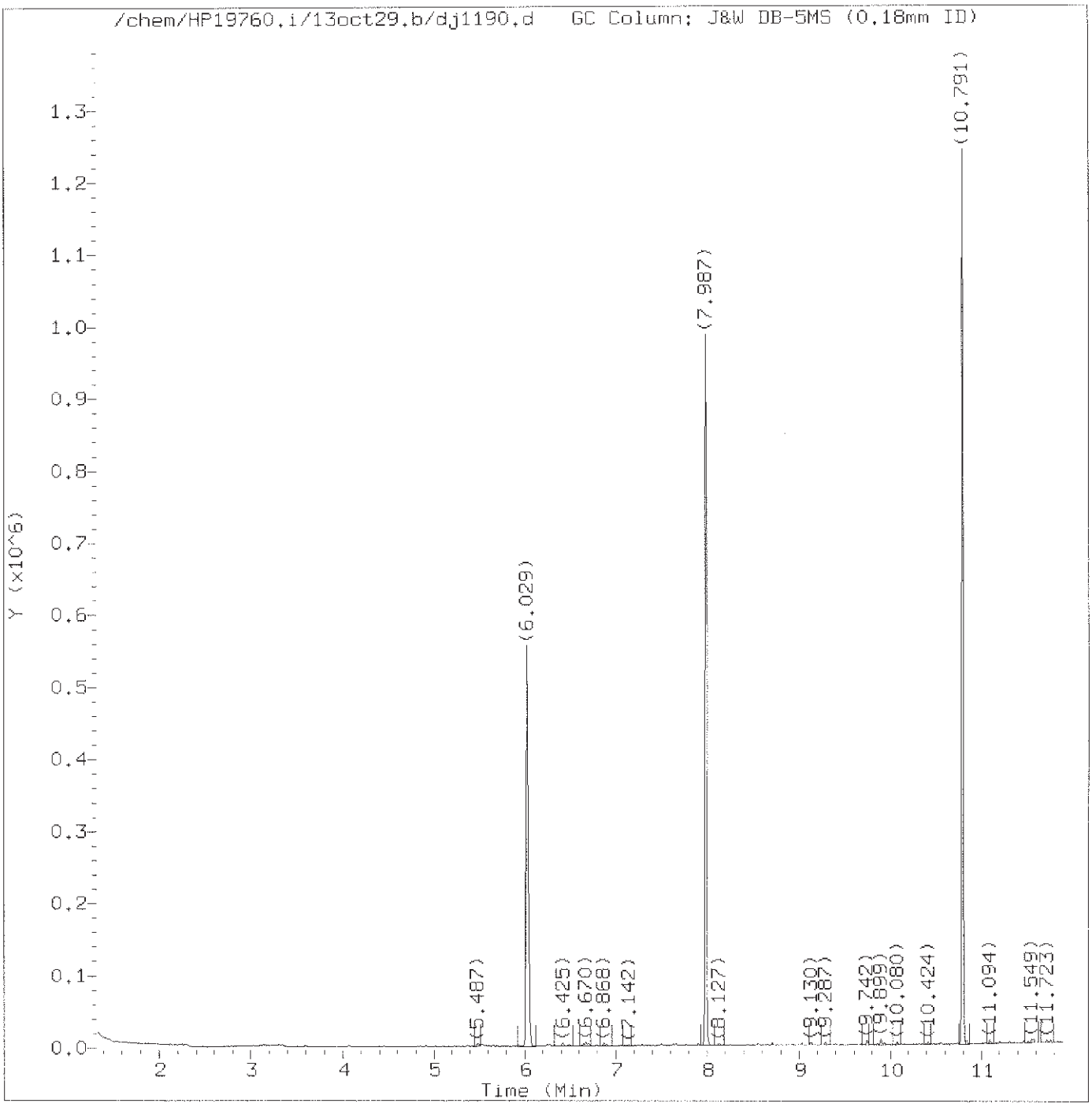
Data File: /chem/HP19760.i/13oct29.b/dj1189.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:02 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.5mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:16 bkg00522

Sample Name: SSTD0.125 Lab Sample ID: MDL2813

Compound Number : 160
Compound Name : 4,4'-Methylenebis(2-Chloroanil
Expected RT (minutes) : 16.689
Quant Ion : 231.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:25.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

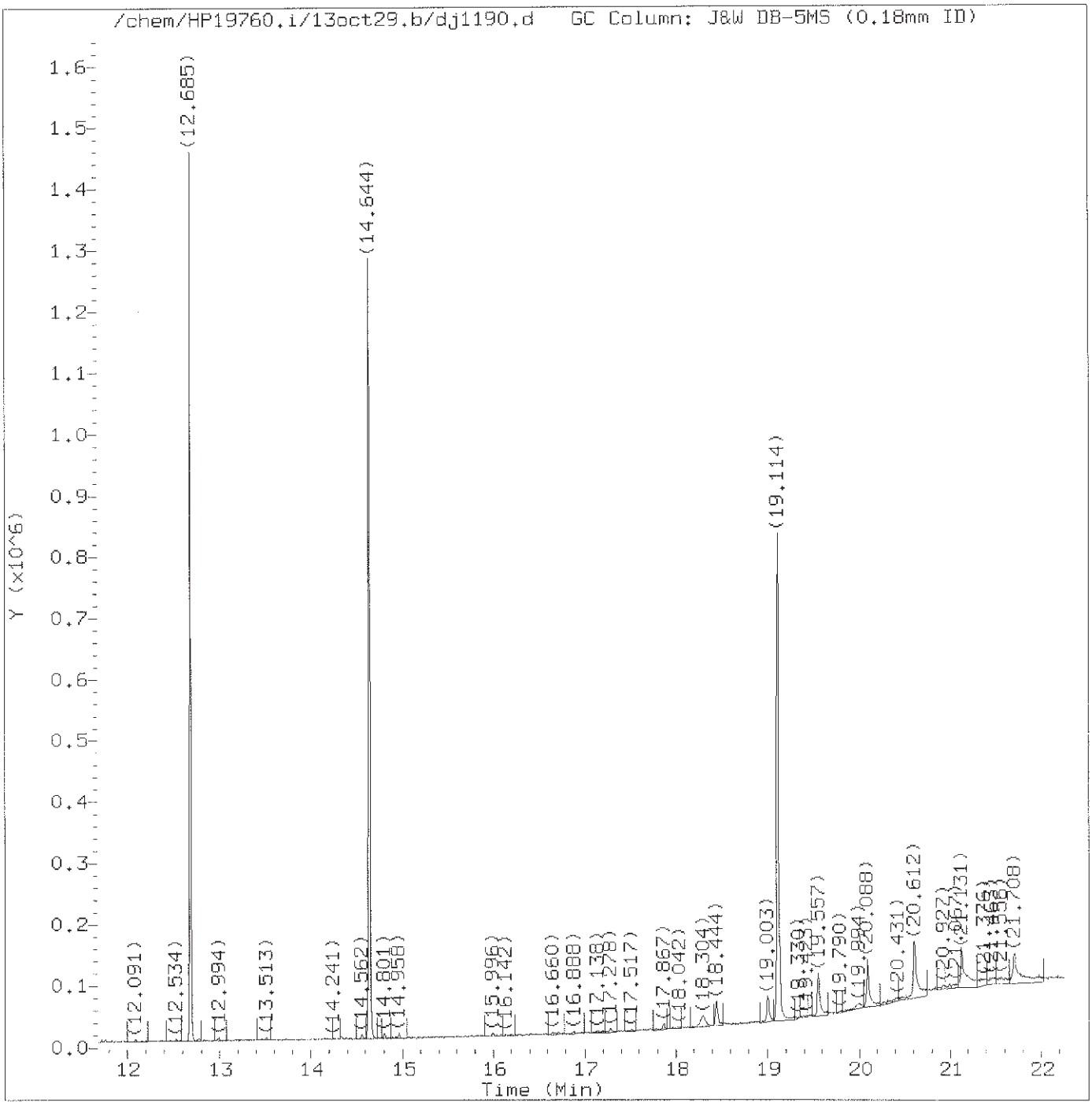
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

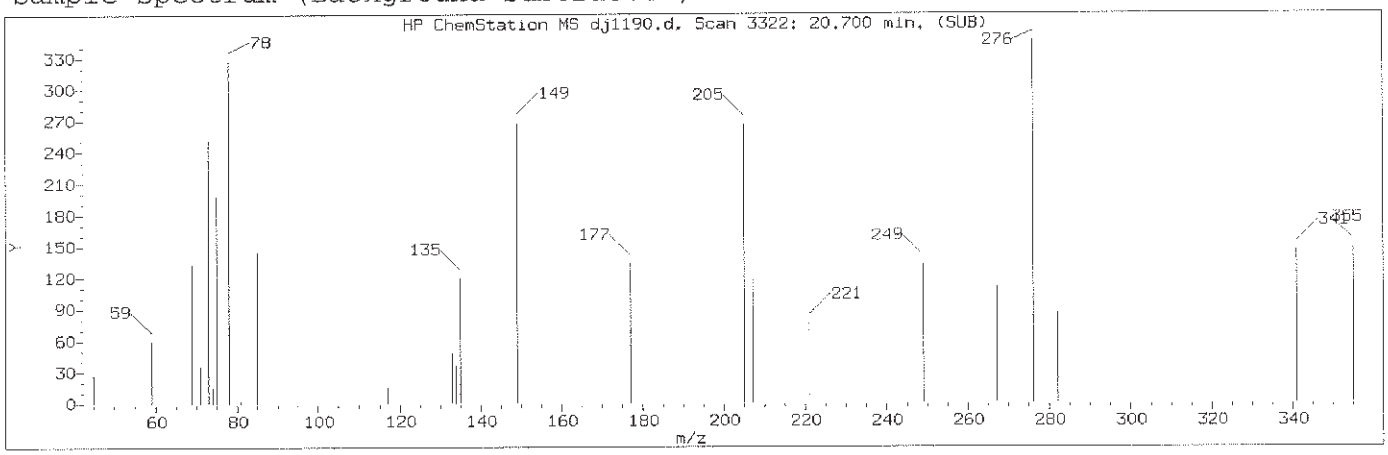
Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	4.065	112	1215	0.030
12)$Phenol-d5	(1)	5.487	99	2471	0.044
13)$Phenol-d6	(1)	5.487	99	2471	0.044
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	137980	5.000
36)$Nitrobenzene-d5	(2)	6.868	82	1959	0.040
52)*Naphthalene-d8	(2)	7.987	136	529711	5.000
53) Naphthalene	(2)	8.022	128	3010	0.027
65) 2-Methylnaphthalene	(2)	9.130	142	1743	0.023
66) 1-Methylnaphthalene	(2)	9.287	142	1683	0.025
72)$2-Fluorobiphenyl	(3)	9.742	172	3786	0.051
90) Acenaphthylene	(3)	10.558	152	1902	0.019
92)*Acenaphthene-d10	(3)	10.791	164	297690	5.000
93) Acenaphthene	(3)	10.838	153	1795	0.026
103) Fluorene	(3)	11.549	166	1636	0.021
112)$2,4,6-Tribromophenol	(3)	11.840	330	122	0.016
122) Hexachlorobenzene	(4)	12.207	284	556	0.028
130)*Phenanthrene-d10	(4)	12.685	188	507726	5.000
131) Phenanthrene	(4)	12.714	178	3004	0.027
134) Anthracene	(4)	12.778	178	2321	0.021
142) Fluoranthene	(4)	14.335	202	2459	0.019
145)*Pyrene-d10	(5)	14.644	212	618065	5.000
146) Pyrene	(5)	14.667	202	4157	0.032
149)$Terphenyl-d14	(5)	14.958	244	4822	0.063
158) Benzo(a)anthracene	(5)	16.660	228	1516	0.014
161) Chrysene	(5)	16.719	228	2198	0.020
168) Benzo(b)fluoranthene	(6)	18.502	252	1711	0.018
170) Benzo(k)fluoranthene	(6)	18.549	252	2204	0.023
171) Benzo(a)pyrene	(6)	19.021	252	2994	0.034
172)*Perylene-d12	(6)	19.114	264	408848	5.000
176) Indeno(1,2,3-cd)pyrene	(6)	20.700	276	333M	0.004
177) Dibenz(a,h)anthracene	(6)	20.746	278	250M	0.004
178) Benzo(g,h,i)perylene	(6)	21.073	276	449	0.007

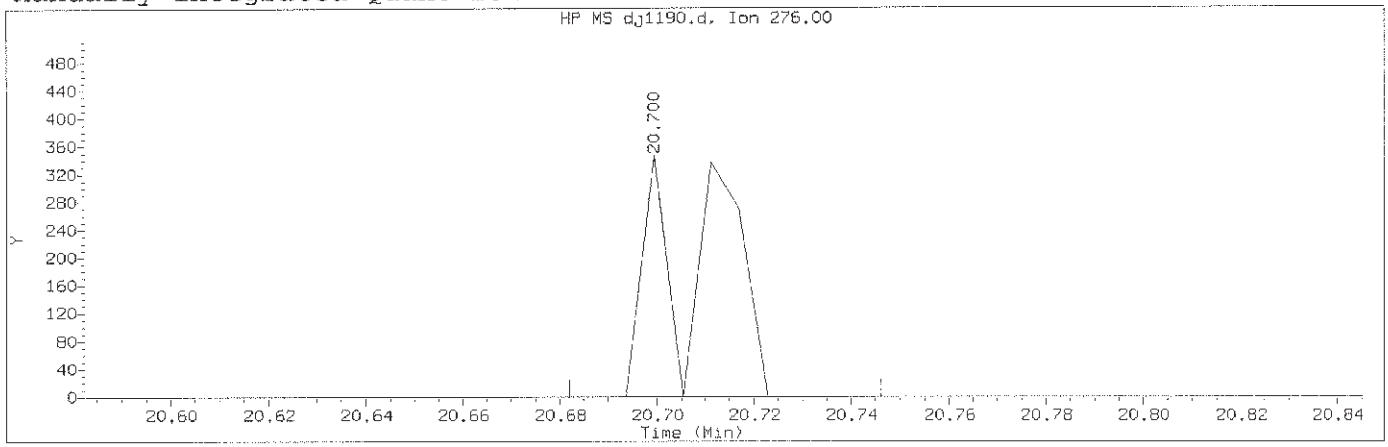
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3322		
Retention Time (minutes)	: 20.700		
Quant Ion	: 276.00		
Area (flag)	: 333M		
On-Column Amount (ng/ul)	: 0.0043		
Integration start scan	: 3318	Integration stop scan:	3329
Y at integration start	: 0	Y at integration end:	0

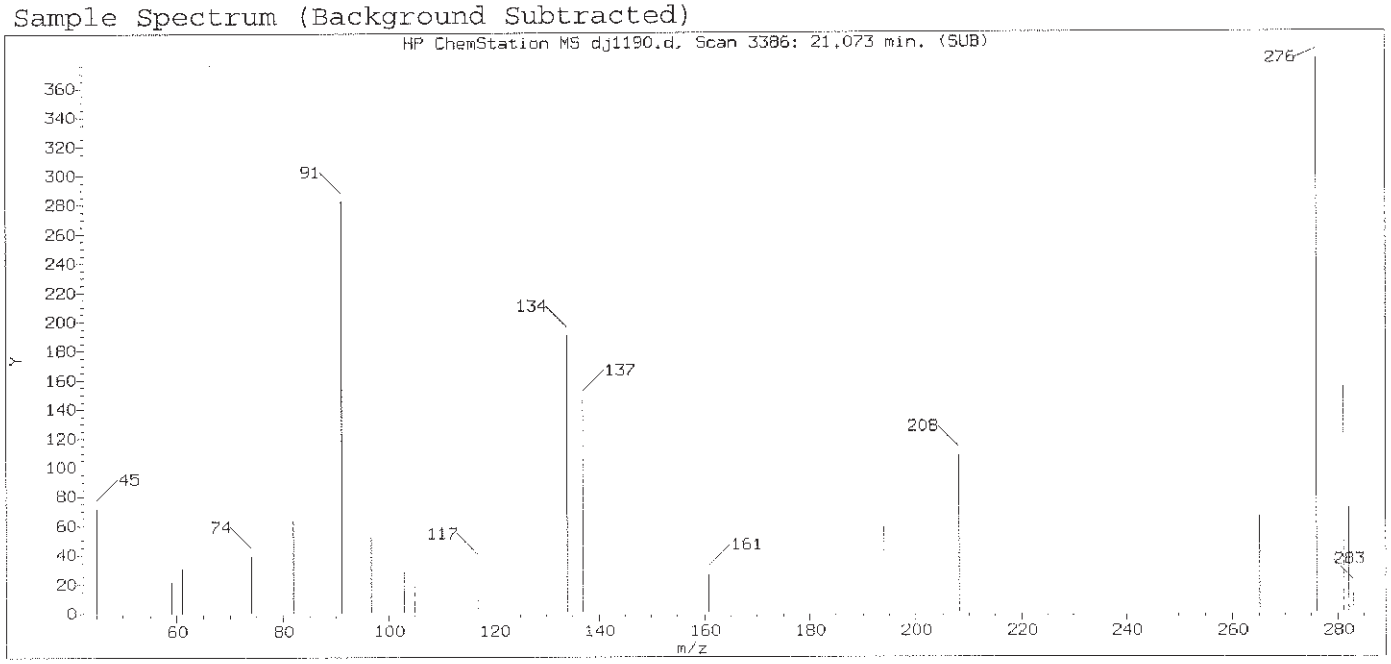
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

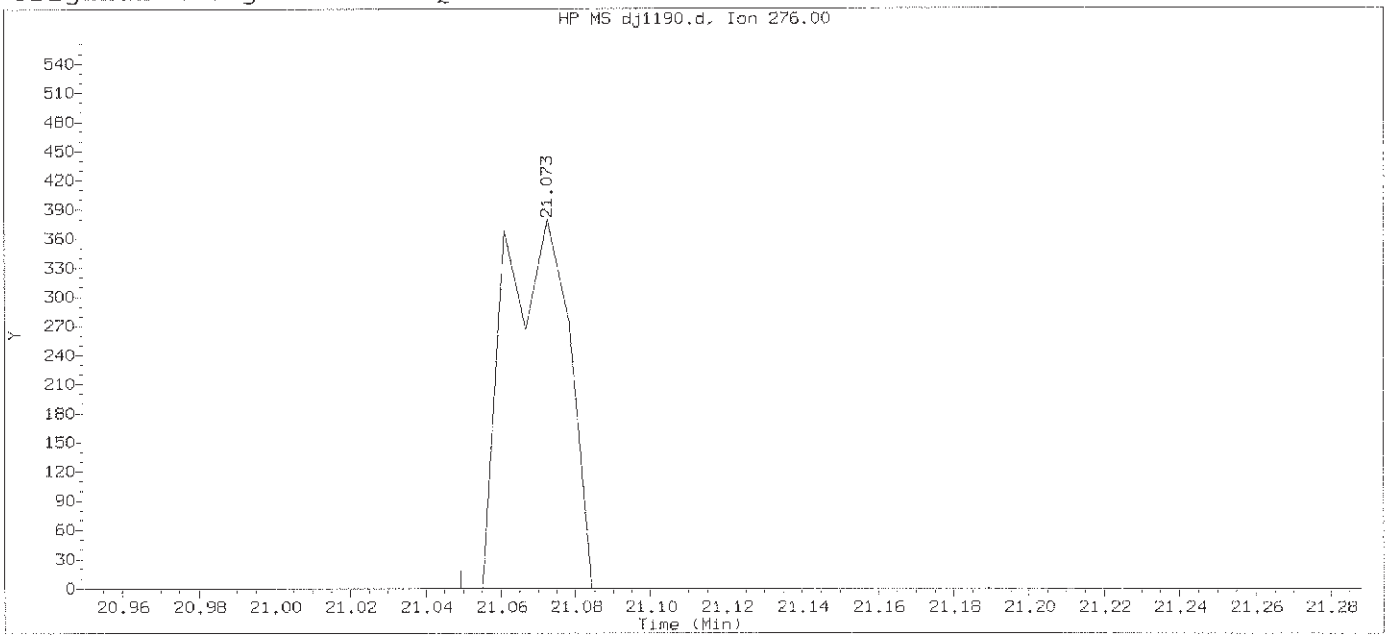
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

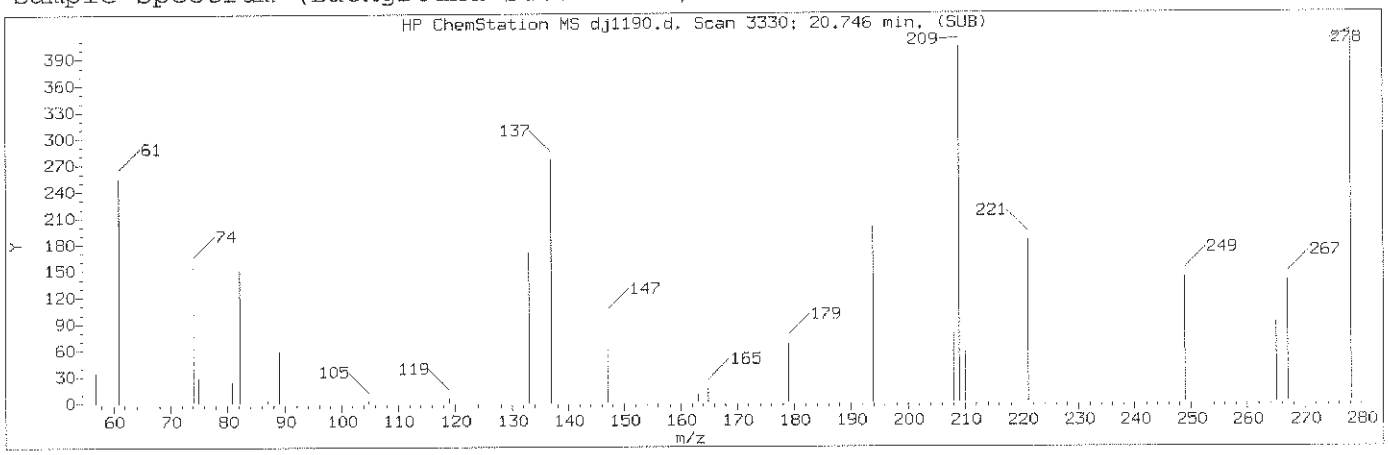
Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

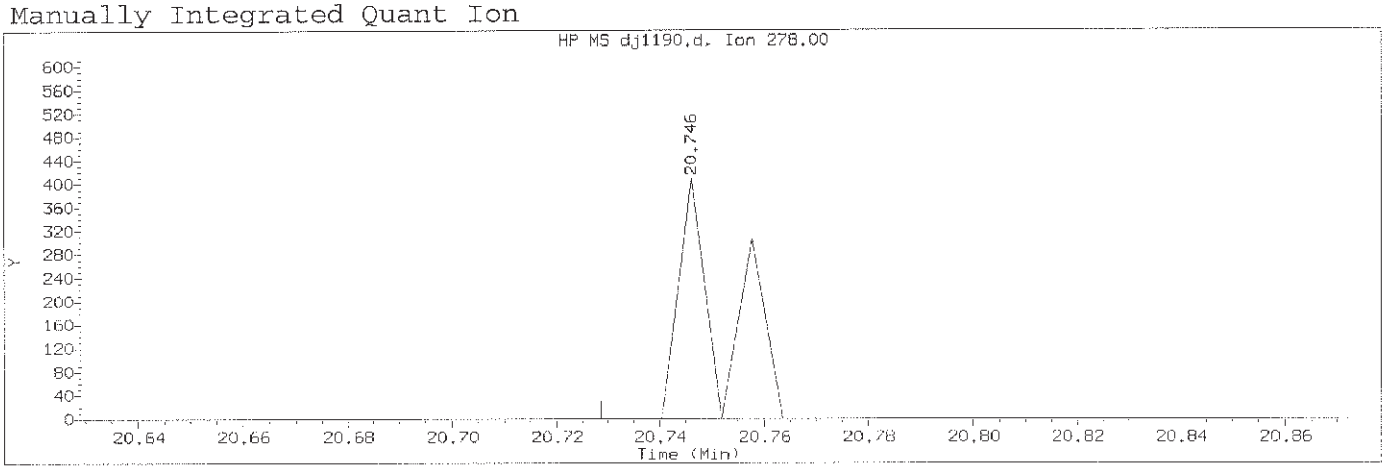
Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3386		
Retention Time (minutes)	: 21.073		
Quant Ion	: 276.00		
Area	: 449		
On-column Amount (ng/ul)	: 0.0058		
Integration start scan	: 3381	Integration stop scan:	3405
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdlall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:19 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number	: 177		
Compound Name	: Dibenz(a,h)anthracene		
Scan Number	: 3330		
Retention Time (minutes)	: 20.746		
Quant Ion	: 278.00		
Area (flag)	: 250M		
On-Column Amount (ng/ul)	: 0.0038		
Integration start scan	: 3326	Integration stop scan:	3334
Y at integration start	: 0	Y at integration end:	0

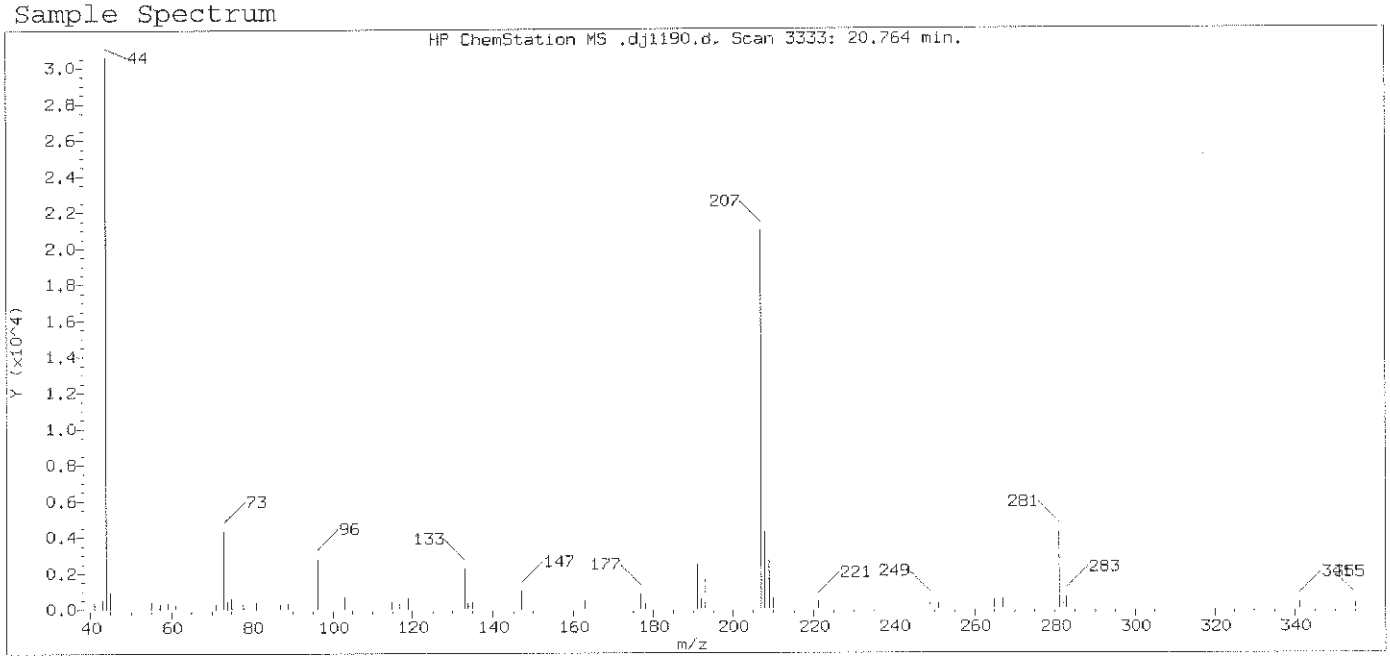
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

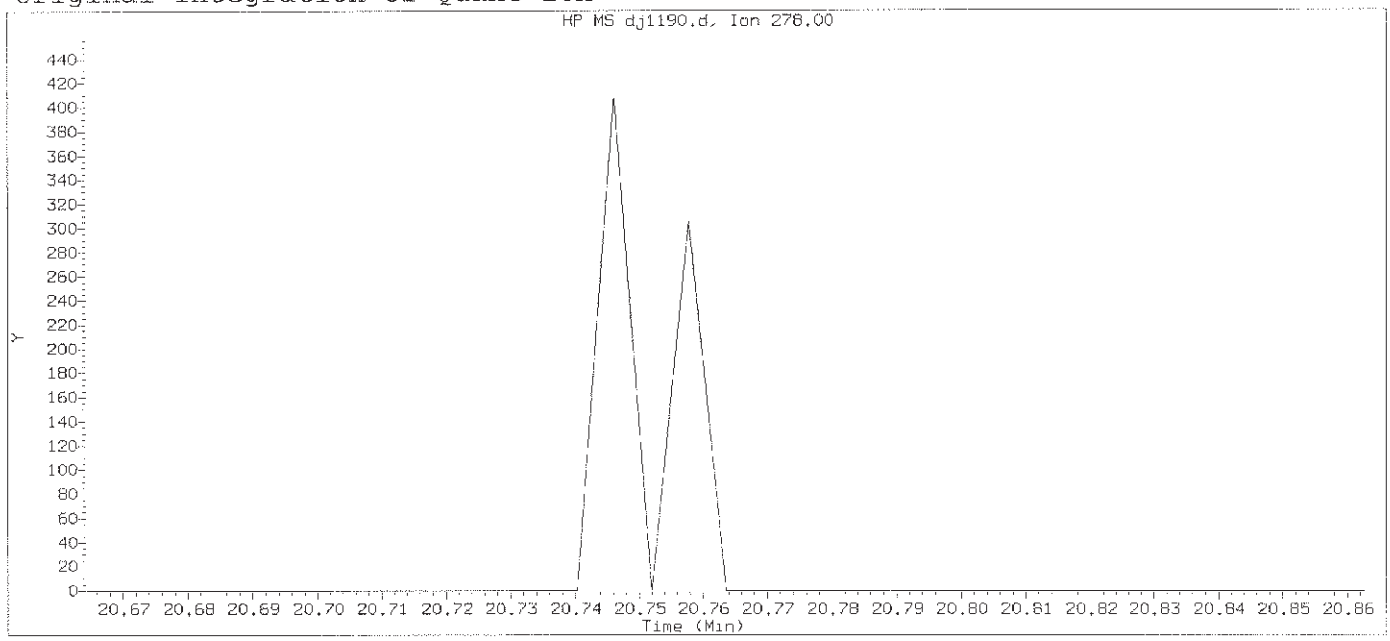
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum



Original Integration of Quant Ion



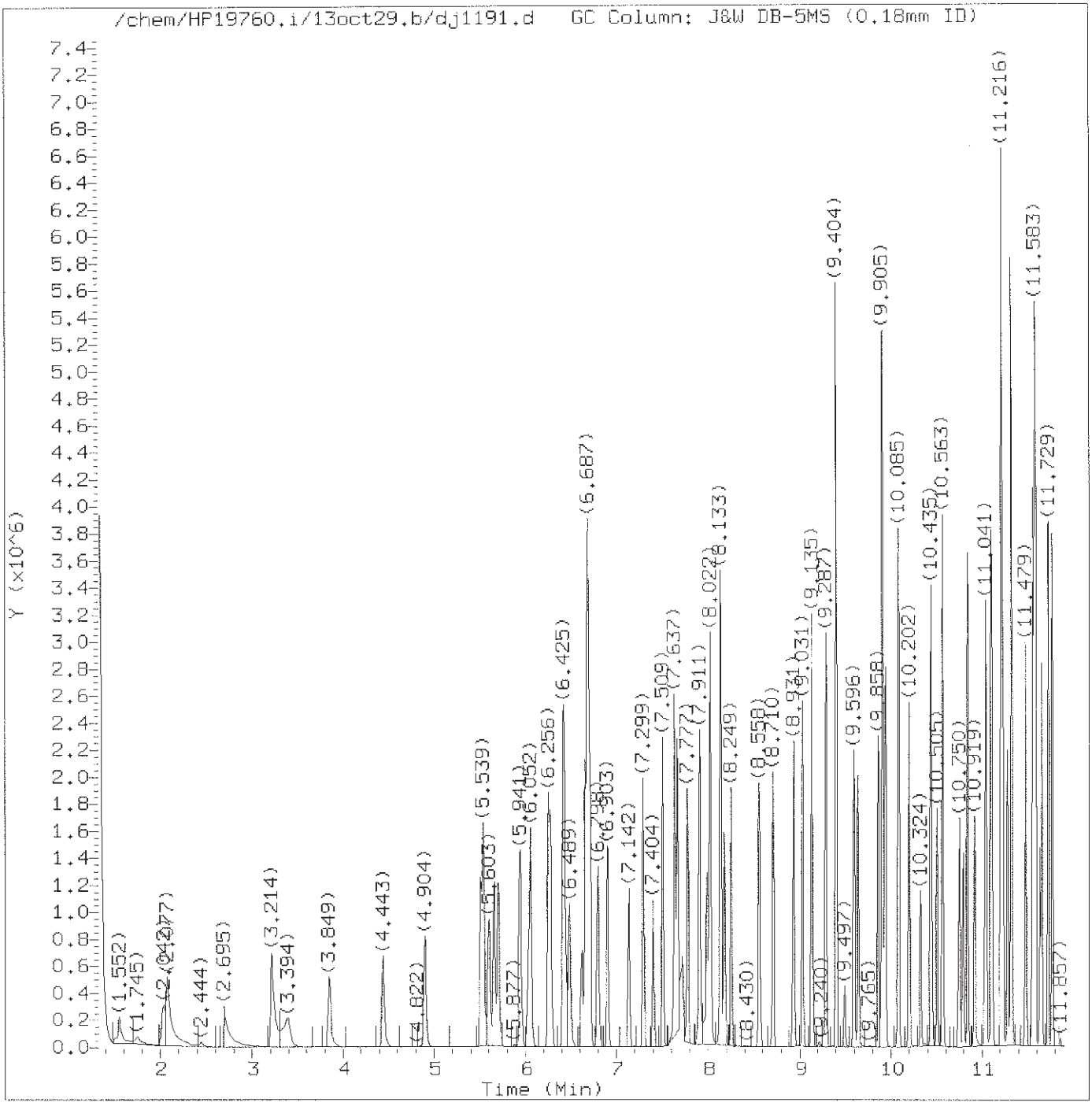
Data File: /chem/HP19760.i/13oct29.b/dj1190.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:28 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: 0.1mdla111
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD0.025 Lab Sample ID: PAH2813

Compound Number : 177
Compound Name : Dibenz(a,h)anthracene
Expected RT (minutes) : 20.764
Quant Ion : 278.00

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

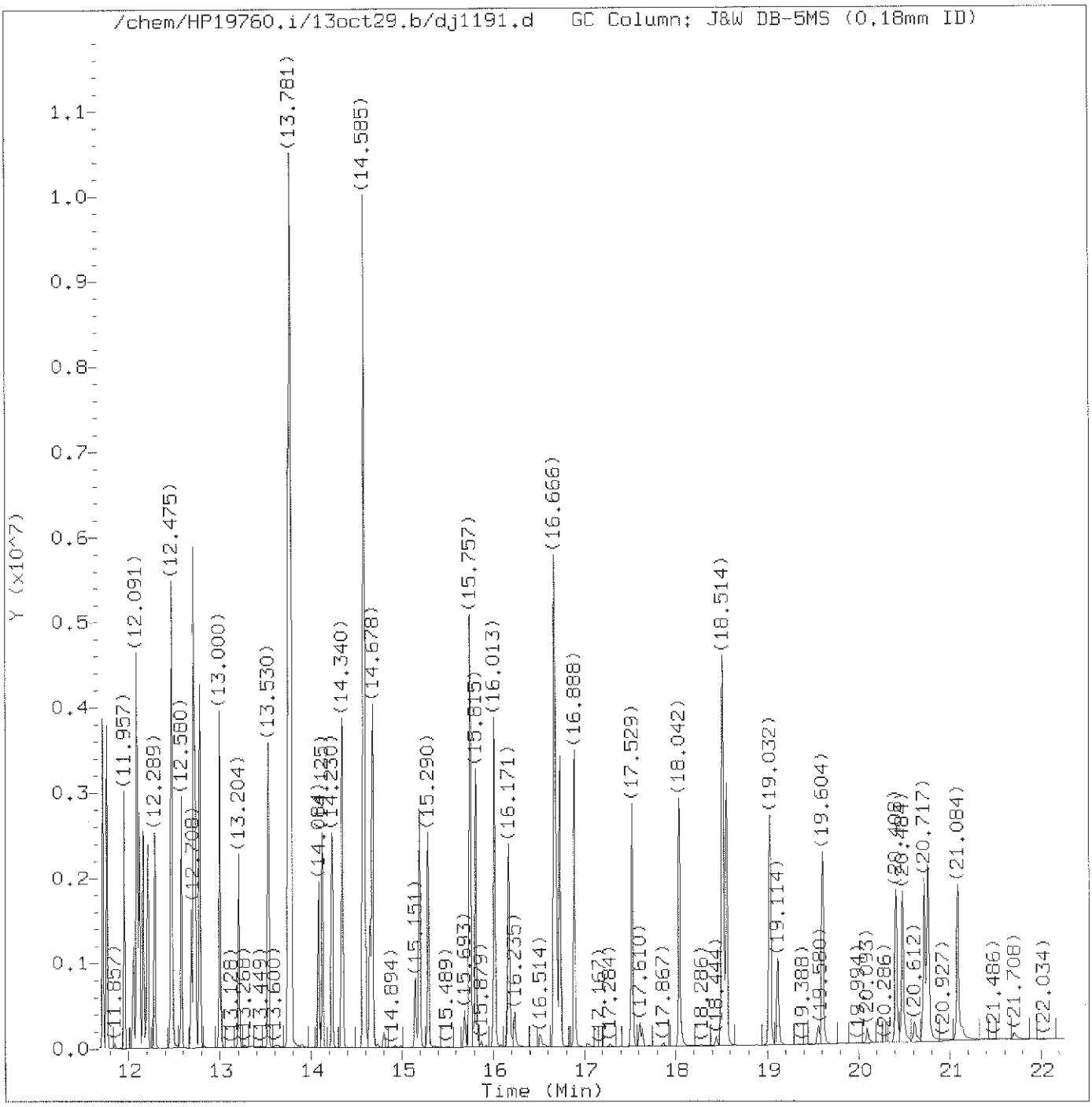
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.552	88	252866	12.813
2) N-Nitrosodimethylamine	(1)	2.030	74	458178	13.148
3) Pyridine	(1)	2.077	79	706933	11.895
4) 2-Picoline	(1)	3.214	93	787682	12.583
5) N-Nitrosomethylethylamine	(1)	3.394	88	348814	12.966
6) Methyl methanesulfonate	(1)	3.849	80	419860	13.652
8) N-Nitrosodiethylamine	(1)	4.443	102	332186	12.856
10) Ethyl methanesulfonate	(1)	4.904	109	325219	13.053
14) Phenol	(1)	5.510	94	934654	12.628
15) Aniline	(1)	5.539	93	1179304	12.939
16) bis(2-Chloroethyl)ether	(1)	5.662	93	731156	12.520
17) 2-Chlorophenol	(1)	5.702	128	593017	12.953
18) 1,3-Dichlorobenzene	(1)	5.941	146	627361	12.740
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	156790	5.000
20) 1,4-Dichlorobenzene	(1)	6.058	146	633986	12.728
23) Benzyl alcohol	(1)	6.256	108	422533	13.049
24) 1,2-Dichlorobenzene	(1)	6.279	146	590009	12.665
25) Indene	(1)	6.419	115	936311	11.894
26) 2-Methylphenol	(1)	6.431	108	581856	12.664
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.489	45	859230	11.854
28) bis(2-Chloroisopropyl)ether	(1)	6.489	45	859230	11.854
29) N-Nitrosopyrrolidine	(1)	6.623	100	345261	13.142
30) Acetophenone	(1)	6.658	105	889098	12.376
33) 4-Methylphenol	(1)	6.682	108	645718	12.580
31) N-Nitroso-di-n-propylamine	(1)	6.687	70	514957	12.454
32) N-Nitrosomorpholine	(1)	6.693	56	402202	12.335
34) o-Toluidine	(1)	6.711	106	984993	12.434
35) Hexachloroethane	(1)	6.798	117	266754	12.670
37) Nitrobenzene	(2)	6.903	77	736958	12.456
39) N-Nitrosopiperidine	(2)	7.142	114	323608	13.343
40) Isophorone	(2)	7.299	82	1329192	13.182
42) 2-Nitrophenol	(2)	7.404	139	274990	13.546
45) 2,4-Dimethylphenol	(2)	7.509	107	638586	12.945
46) O,O,O-triethylphosphorothioate	(2)	7.637	198	280555	12.830
48) bis(2-Chloroethoxy)methane	(2)	7.667	93	841486M	12.787
47) Benzoic acid	(2)	7.725	105	835582	22.138
49) 2,4-Dichlorophenol	(2)	7.777	162	468581	13.467
51) 1,2,4-Trichlorobenzene	(2)	7.911	180	515870	13.271
52)*Naphthalene-d8	(2)	7.993	136	605686	5.000
53) Naphthalene	(2)	8.022	128	1638400	12.688

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
55) 4-Chloroaniline	(2)	8.133	127	706302	13.200
56) 2,6-Dichlorophenol	(2)	8.139	162	448488	13.423
57) Hexachloropropene	(2)	8.174	213	348607	14.210
58) Hexachlorobutadiene	(2)	8.255	225	295415	13.037
60) Quinoline	(2)	8.558	129	1084667	12.679
62) N-Nitrosodi-n-butylamine	(2)	8.710	84	479758	12.002
63) 4-Chloro-3-methylphenol	(2)	8.931	107	554160	13.263
64) Safrole	(2)	9.031	162	441137	13.422
65) 2-Methylnaphthalene	(2)	9.135	142	1080755	12.558
66) 1-Methylnaphthalene	(2)	9.287	142	1020104	13.062
67) Hexachlorocyclopentadiene	(3)	9.404	237	624773	32.204
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.404	216	514999	12.529
70) 2,4,6-Trichlorophenol	(3)	9.596	196	341304	13.159
71) 2,4,5-Trichlorophenol	(3)	9.643	196	353683	13.198
74) Isosafrole	(3)	9.858	162	452952	13.371
75) 1,1'-Biphenyl	(3)	9.899	154	1259926	12.233
76) 2-Chloronaphthalene	(3)	9.911	162	970718	12.286
77) 1-Chloronaphthalene	(3)	9.940	162	947406	12.162
82) Diphenyl ether	(3)	10.080	170	714778	12.543
83) 2-Nitroaniline	(3)	10.091	138	330184	13.417
84) 1,4-Naphthoquinone	(3)	10.202	158	541572	15.927
85) 1,4-Dinitrobenzene	(3)	10.324	168	169392	12.462
86) Dimethylphthalate	(3)	10.435	163	1123197	12.570
87) 1,3-Dinitrobenzene	(3)	10.441	168	202814	13.224
88) 2,6-Dinitrotoluene	(3)	10.505	165	267388	13.504
90) Acenaphthylene	(3)	10.563	152	1624852	13.548
91) 3-Nitroaniline	(3)	10.750	138	308367	13.567
92)*Acenaphthene-d10	(3)	10.797	164	354681	5.000
93) Acenaphthene	(3)	10.843	153	1017034	12.327
94) 2,4-Dinitrophenol	(3)	10.919	184	282939	24.188
96) 4-Nitrophenol	(3)	11.036	109	193631	13.358
95) Pentachlorobenzene	(3)	11.041	250	417252	12.670
97) Dibenzofuran	(3)	11.100	168	1464807	12.485
98) 2,4-Dinitrotoluene	(3)	11.117	165	346555	13.658
99) 1-Naphthylamine	(3)	11.216	143	2099655	24.619
100) 2,3,4,6-Tetrachlorophenol	(3)	11.280	232	295053	13.943
101) 2-Naphthylamine	(3)	11.321	143	2101605	24.013
102) Diethylphthalate	(3)	11.479	149	1123150	12.758
103) Fluorene	(3)	11.554	166	1192153	12.623
104) Thionazin	(3)	11.572	107	227564	11.960

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
105) 4-Chlorophenyl-phenylether	(3)	11.583	204	580969	12.404
106) 5-Nitro-o-toluidine	(3)	11.583	152	335108	13.202
107) 4-Nitroaniline	(3)	11.595	138	301384	12.891
108) 4,6-Dinitro-2-methylphenol	(4)	11.636	198	198072	12.864
109) N-Nitrosodiphenylamine	(4)	11.729	169	998356	13.286
111) 1,2-Diphenylhydrazine	(4)	11.770	77	1479946	12.441
115) Tetraethyldithiopyrophosphate	(4)	11.957	97	214106	12.478
116) 1,3,5-Trinitrobenzene	(4)	12.056	213	147739	12.769
117) Diallate (peak 1)	(4)	12.091	86	543072	9.160
118) Phorate	(4)	12.096	75	853757	12.146
119) Phenacetin	(4)	12.120	108	688586	13.762
120) 4-Bromophenyl-phenylether	(4)	12.166	248	302404	12.696
121) Diallate (peak 2)	(4)	12.190	86	78461	3.102
122) Hexachlorobenzene	(4)	12.213	284	294976	12.526
123) Dimethoate	(4)	12.289	87	597488	13.017
125) Pentachlorophenol	(4)	12.464	266	224311	12.568
126) Pentachloronitrobenzene	(4)	12.475	237	150953	13.793
127) 4-Aminobiphenyl	(4)	12.481	169	1350394	14.365
129) Pronamide	(4)	12.580	173	514382	12.933
130) *Phenanthrene-d10	(4)	12.691	188	603640	5.000
131) Phenanthrene	(4)	12.720	178	1652485	12.274
133) Dinoseb	(4)	12.720	211	302962	13.114
134) Anthracene	(4)	12.784	178	1731054	12.896
135) Carbazole	(4)	13.000	167	1699126	13.079
136) Methyl parathion	(4)	13.204	109	450225	13.135
137) Di-n-butylphthalate	(4)	13.530	149	2016342	13.105
138) Parathion	(4)	13.752	109	272718	12.452
139) 4-Nitroquinoline-1-oxide	(4)	13.781	190	2735978	168.753
140) Isodrin	(4)	14.125	193	202515	12.540
142) Fluoranthene	(4)	14.340	202	2006181	13.247
144) Benzidine	(5)	14.585	184	6002081	60.477
145) *Pyrene-d10	(5)	14.649	212	773413	5.000
146) Pyrene	(5)	14.678	202	2032565	12.378
150) p-Dimethylaminoazobenzene	(5)	15.197	225	441084	13.357
151) Chlorobenzilate	(5)	15.290	139	571680	12.369
152) 3,3'-Dimethylbenzidine	(5)	15.757	212	2527546	25.931
153) Butylbenzylphthalate	(5)	15.815	149	922592	13.201
156) 2-Acetylaminofluorene	(5)	16.171	181	779791	12.604
159) 3,3'-Dichlorobenzidine	(5)	16.666	252	645378	12.825
158) Benzo(a)anthracene	(5)	16.666	228	1876414	13.468

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

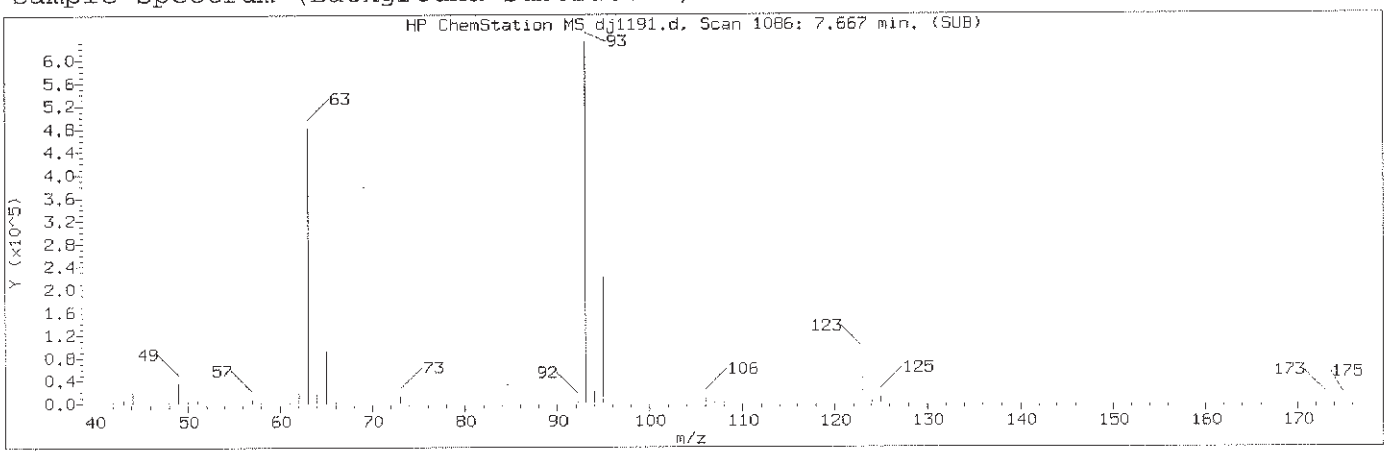
Sample Name: SSTD12.5 Lab Sample ID: ICV2463

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
160)	4,4'-Methylenebis(2-Chloroanil	(5)	16.689	231	338249	12.728
161)	Chrysene	(5)	16.730	228	1762571	12.864
162)	bis(2-Ethylhexyl)phthalate	(5)	16.888	149	1217515	13.245
165)	6-Methylchrysene	(5)	17.529	242	1204416	12.505
166)	Di-n-octylphthalate	(6)	18.042	149	2020727	13.147
168)	Benzo(b)fluoranthene	(6)	18.508	252	1664477	13.521
169)	7,12-Dimethylbenz[a]anthracene	(6)	18.520	256	746135	13.655
170)	Benzo(k)fluoranthene	(6)	18.560	252	1630979	13.136
171)	Benzo(a)pyrene	(6)	19.032	252	1533395	13.570
172)	*Perylene-d12	(6)	19.114	264	522609	5.000
173)	3-Methylcholanthrene	(6)	19.604	268	743613	13.829
174)	Dibenz(a,h)acridine	(6)	20.408	279	1002205	13.408
175)	Dibenz(a,j)acridine	(6)	20.484	279	1062543	13.256
176)	Indeno(1,2,3-cd)pyrene	(6)	20.717	276	1427155	14.399
177)	Dibenz(a,h)anthracene	(6)	20.764	278	1212103	14.441
178)	Benzo(g,h,i)perylene	(6)	21.084	276	1163357	13.924
179)	Diallate TRANS/CIS	(4)	23.156	86	621533	12.237

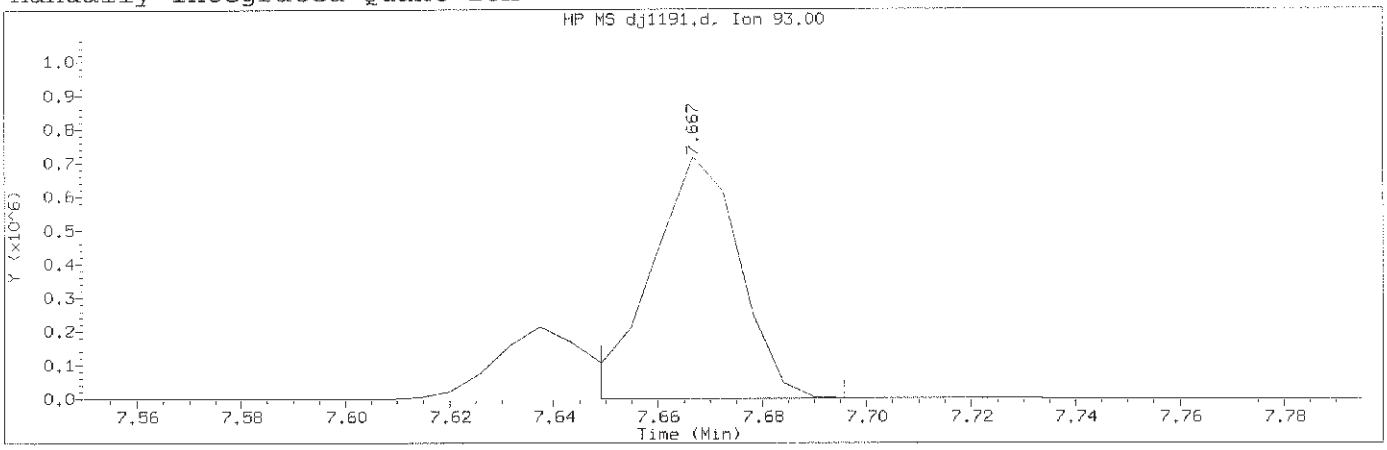
* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicval11
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:21 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1086		
Retention Time (minutes)	: 7.667		
Quant Ion	: 93.00		
Area (flag)	: 841486M		
On-Column Amount (ng/ul)	: 12.7873		
Integration start scan	: 1082	Integration stop scan:	1090
Y at integration start	: 675	Y at integration end:	675

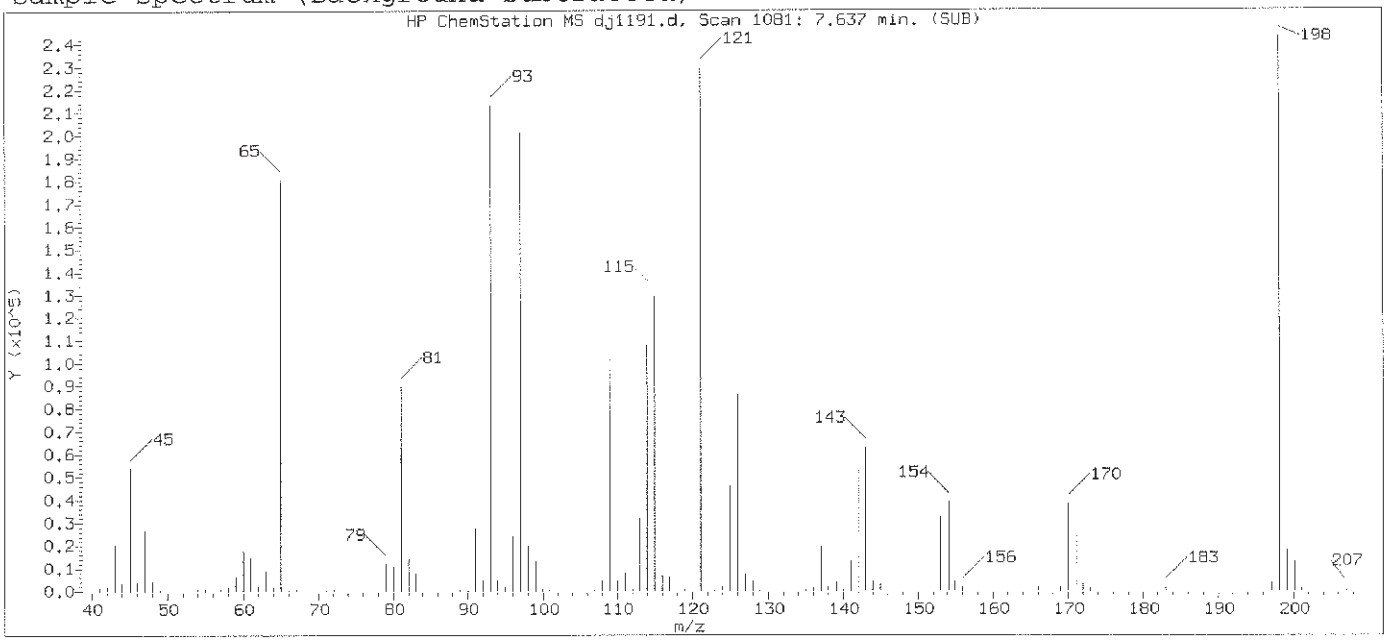
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Brian K. Graham
on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522

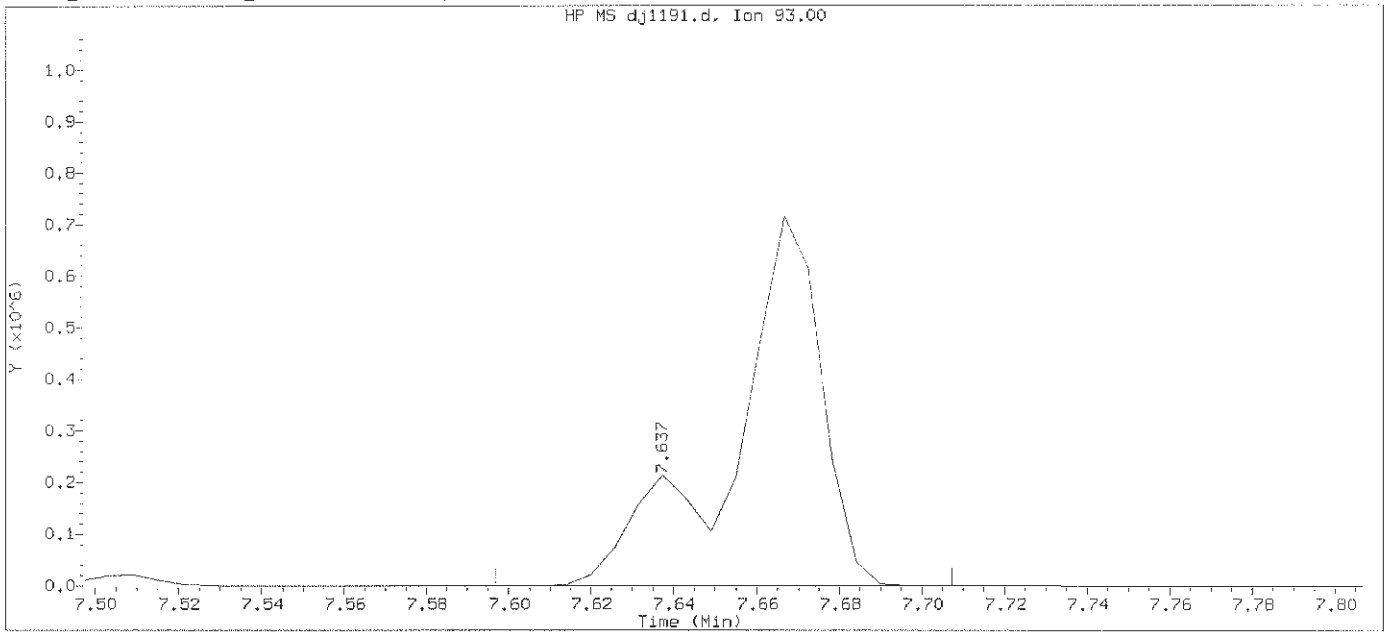
GC/MS audit/management approval: OCT 30 2013

Matthew E. Barton
Senior Specialist

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



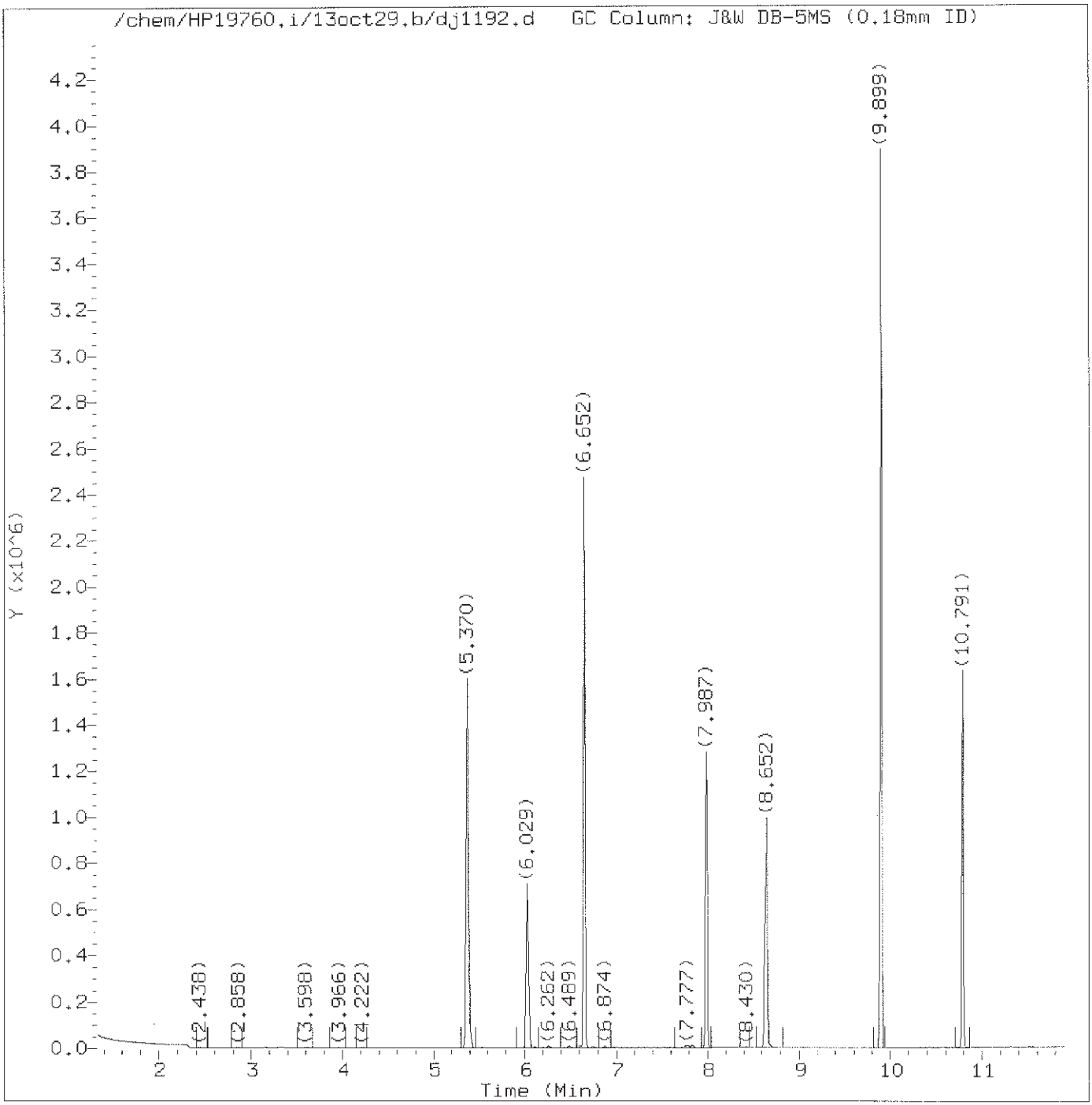
Data File: /chem/HP19760.i/13oct29.b/dj1191.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 15:55 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: newicvall1
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:17 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: ICV2463

Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1081		
Retention Time (minutes)	: 7.637		
Quant Ion	: 93.00		
Area	: 1066922		
On-column Amount (ng/ul)	: 16.2131		
Integration start scan	: 1073	Integration stop scan:	1092
Y at integration start	: 0	Y at integration end:	133

Digitally signed by Brian K. Graham on 10/29/2013 at 22:26.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

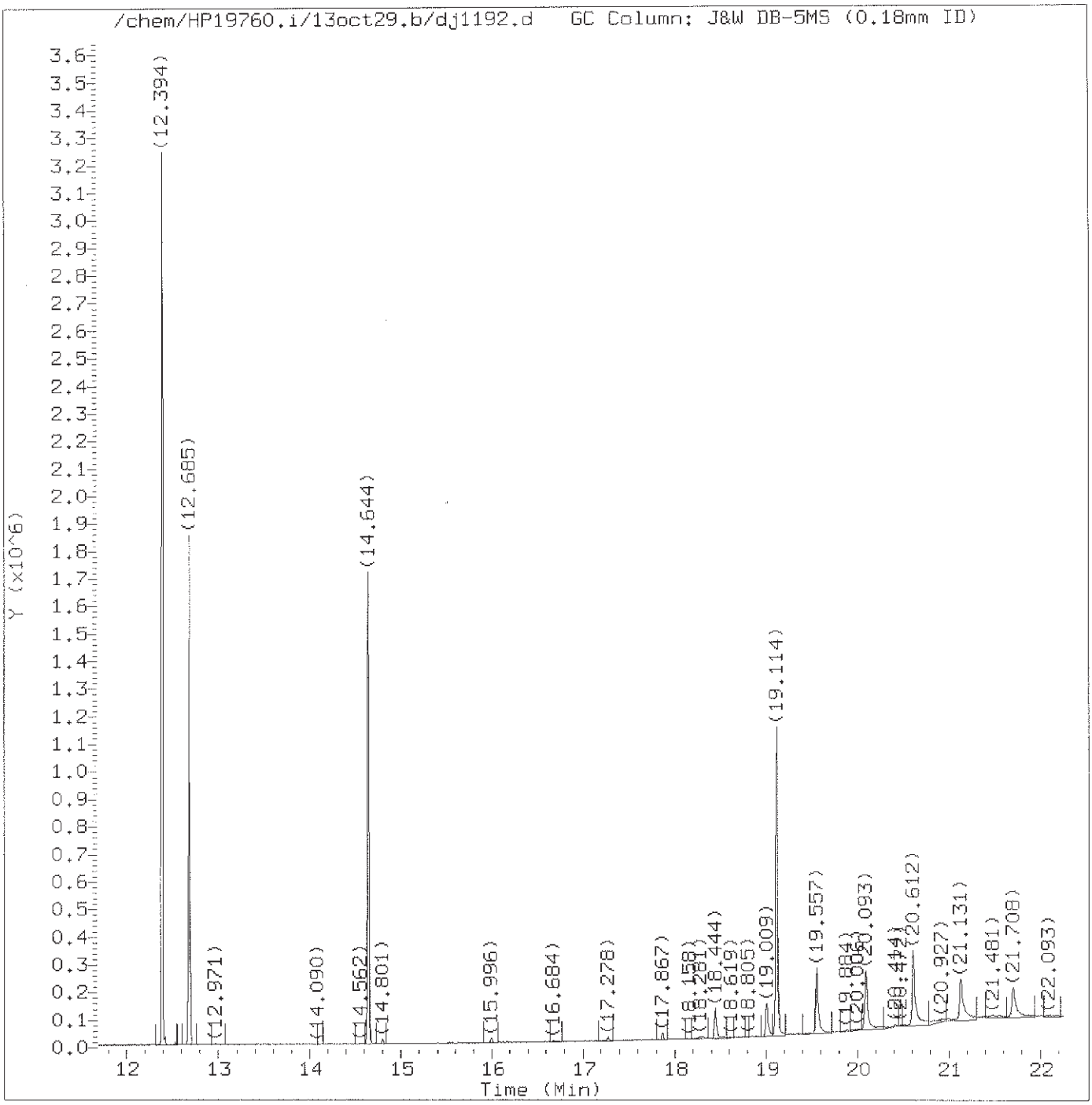
Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13oct29.b/dj1192.d Instrument ID: HP19760.i
Injection date and time: 29-OCT-2013 16:22 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13oct29.b/8270_LVI.m Sublist used: basicv
Calibration date and time: 29-OCT-2013 22:15
Date, time and analyst ID of latest file update: 29-Oct-2013 22:22 bkg00522

Sample Name: SSTD12.5 Lab Sample ID: BASICV2463

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11) Benzaldehyde	(1)	5.370	77	673572	13.169
19)*1,4-Dichlorobenzene-d4	(1)	6.029	152	179297	5.000
52)*Naphthalene-d8	(2)	7.987	136	685192	5.000
61) Caprolactam	(2)	8.652	113	230343	13.116
92)*Acenaphthene-d10	(3)	10.791	164	386805	5.000
124) Atrazine	(4)	12.394	200	366396	13.461
130)*Phenanthrene-d10	(4)	12.685	188	671597	5.000
145)*Pyrene-d10	(5)	14.644	212	826855	5.000
172)*Perylene-d12	(6)	19.114	264	563593	5.000

* = Compound is an internal standard.

Digitally signed by Brian K. Graham
on 10/29/2013 at 22:27.
Target 3.5 esignature user ID: bkg00522

Data File: /chem/HP19760.i/13nov13.b/dk0380.d

Date : 13-NOV-2013 05:05

Client ID: DFTPP

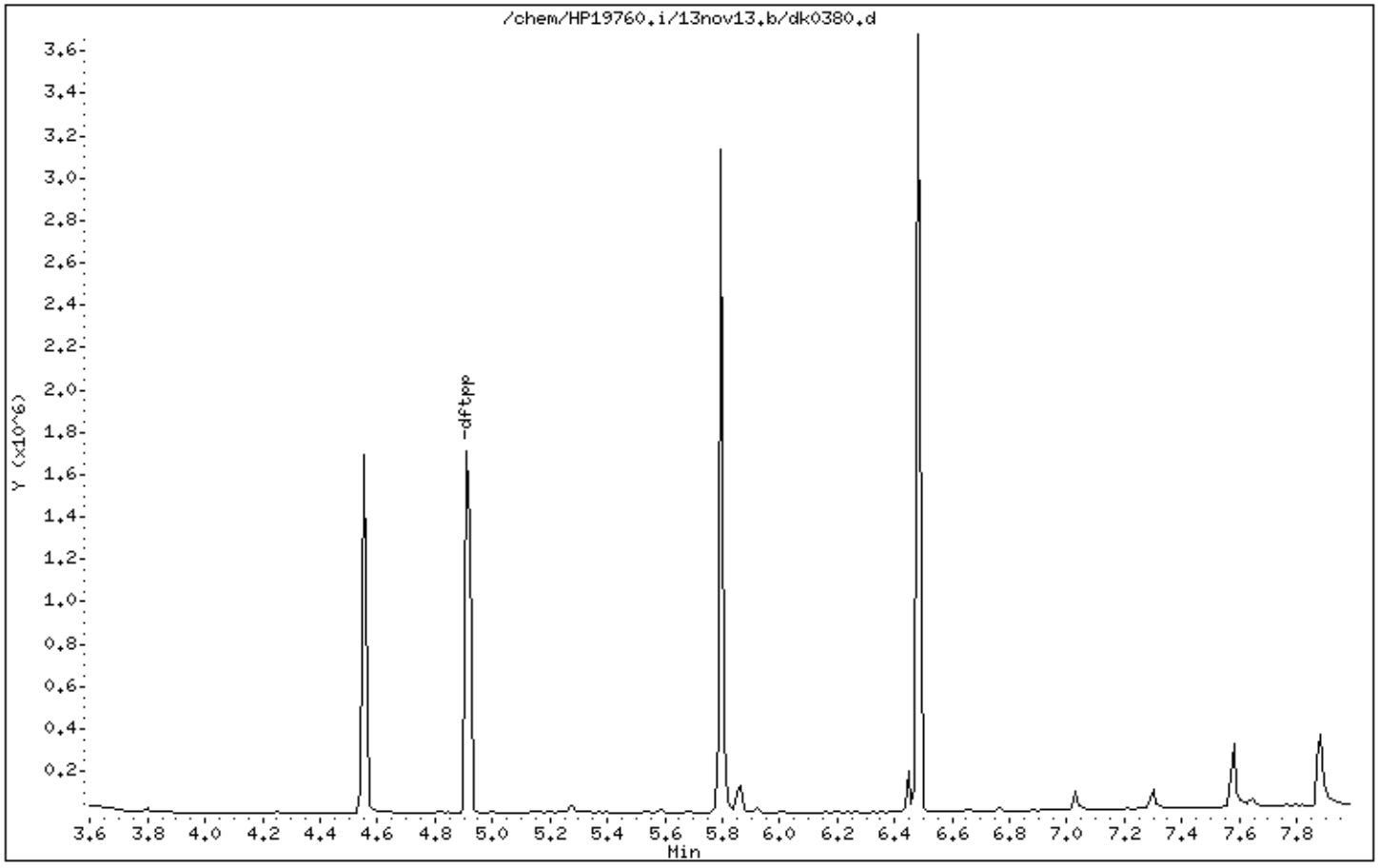
Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0380.d

Date : 13-NOV-2013 05:05

Client ID: DFTPP

Instrument: HP19760.i

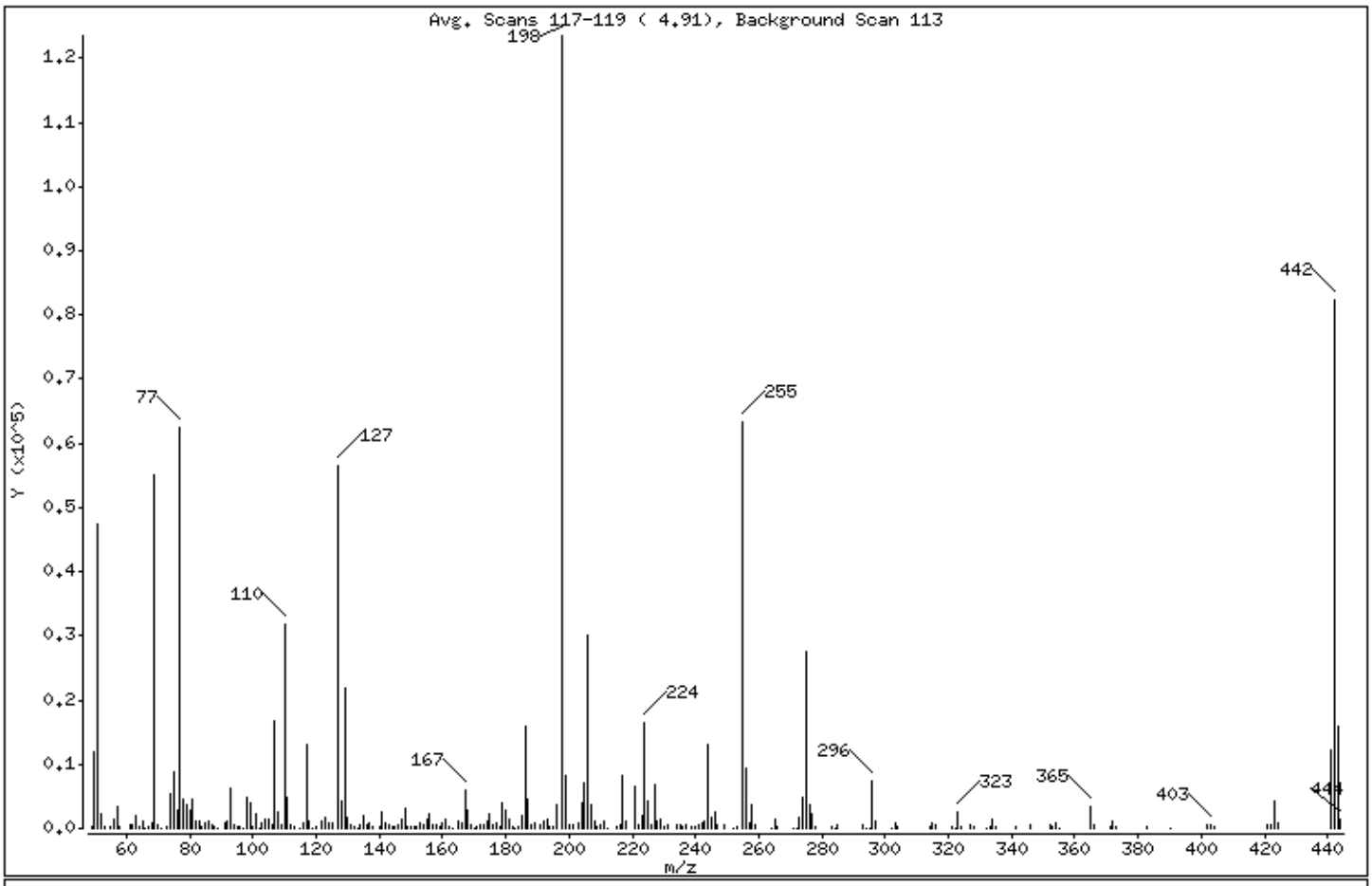
Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	38.41
68	Less than 2.00% of mass 69	0.76 (1.69)
69	Mass 69 relative abundance	44.63
70	Less than 2.00% of mass 69	0.47 (1.05)
127	40.00 - 60.00% of mass 198	45.66
197	Less than 1.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 30.00% of mass 198	22.37
365	Greater than 1.00% of mass 198	2.72
441	Present, but less than mass 443	9.95
442	40.00 - 99.99% of mass 198	66.68
443	17.00 - 23.00% of mass 442	12.82 (19.22)

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:03.
Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 05:05

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0380.d
Spectrum: Avg. Scans 117-119 (4.91), Background Scan 113
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
49.00	289	117.00	13052	183.00	95	259.00	532
50.00	11827	118.00	1023	184.00	340	264.00	100
51.00	47448	119.00	134	185.00	1974	265.00	1420
52.00	2394	120.00	164	186.00	15896	266.00	325
53.00	205	122.00	1022	187.00	4457	271.00	84
55.00	353	123.00	1599	188.00	449	272.00	92
56.00	1341	124.00	742	189.00	983	273.00	1840
57.00	3383	125.00	782	191.00	517	274.00	4899
58.00	147	127.00	56400	192.00	1246	275.00	27632
61.00	639	128.00	4214	193.00	1422	276.00	3693
62.00	705	129.00	21744	194.00	354	277.00	2326
63.00	1966	130.00	1845	195.00	208	278.00	407
64.00	272	131.00	434	196.00	3608	283.00	286
65.00	1144	132.00	179	198.00	123528	284.00	118
66.00	120	133.00	104	199.00	8249	285.00	440
67.00	382	134.00	694	200.00	613	293.00	483
68.00	934	135.00	1920	201.00	616	294.00	90
69.00	55128	136.00	705	203.00	860	295.00	137
70.00	578	137.00	831	204.00	4034	296.00	7482
71.00	130	138.00	238	205.00	7115	297.00	1059
73.00	414	140.00	193	206.00	30240	302.00	106
74.00	5368	141.00	2626	207.00	3790	303.00	856
75.00	8788	142.00	969	208.00	1023	304.00	225
76.00	2962	143.00	634	209.00	351	314.00	379
77.00	62360	144.00	150	210.00	478	315.00	896
78.00	4408	145.00	142	211.00	1184	316.00	474
79.00	3743	146.00	491	212.00	129	321.00	199
80.00	2874	147.00	1415	215.00	360	322.00	108
81.00	4419	148.00	3127	216.00	612	323.00	2455
82.00	1065	149.00	349	217.00	8200	324.00	370
83.00	1046	150.00	208	218.00	1017	327.00	460
84.00	234	151.00	394	221.00	6454	328.00	173
85.00	726	152.00	241	222.00	521	332.00	110
86.00	1129	153.00	922	223.00	1893	333.00	159
87.00	593	154.00	619	224.00	16568	334.00	1477

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Target 3.5 esignature user ID: jmg00346

Date : 13-NOV-2013 05:05

Client ID: DFTPP Instrument: HP19760.i

Sample Info: DFTPP;DFTPP1863;1;3;DFTPP;

Operator: jmg00346

Column phase: DB-5MS Column diameter: 0.18

Data File: dk0380.d
Spectrum: Avg. Scans 117-119 (4.91), Background Scan 113
Location of Maximum: 198.00
Number of points: 246

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	163	155.00	1514	225.00	4284	335.00	410
89.00	100	156.00	2199	226.00	441	341.00	204
91.00	894	157.00	434	227.00	6897	346.00	484
92.00	1099	158.00	541	228.00	1049	352.00	700
93.00	6375	159.00	425	229.00	1429	353.00	412
94.00	504	160.00	883	230.00	249	354.00	724
95.00	330	161.00	1331	231.00	578	355.00	109
96.00	396	162.00	363	234.00	435	365.00	3360
97.00	134	163.00	88	235.00	500	366.00	430
98.00	4688	165.00	1048	236.00	371	371.00	176
99.00	4030	166.00	825	237.00	615	372.00	1230
100.00	262	167.00	5967	239.00	280	373.00	245
101.00	2222	168.00	2884	240.00	233	383.00	238
102.00	87	169.00	526	241.00	426	390.00	102
103.00	743	170.00	127	242.00	894	402.00	429
104.00	1422	171.00	166	243.00	1023	403.00	536
105.00	1451	172.00	468	244.00	12968	404.00	175
106.00	482	173.00	609	245.00	1627	421.00	517
107.00	16880	174.00	1115	246.00	2435	422.00	534
108.00	2697	175.00	2261	247.00	480	423.00	4119
109.00	603	176.00	644	249.00	456	424.00	880
110.00	31792	177.00	937	252.00	91	441.00	12292
111.00	4861	178.00	420	253.00	279	442.00	82368
112.00	639	179.00	4033	255.00	63312	443.00	15835
113.00	153	180.00	2825	256.00	9364	444.00	1420
115.00	87	181.00	1363	257.00	716		
116.00	952	182.00	246	258.00	3788		

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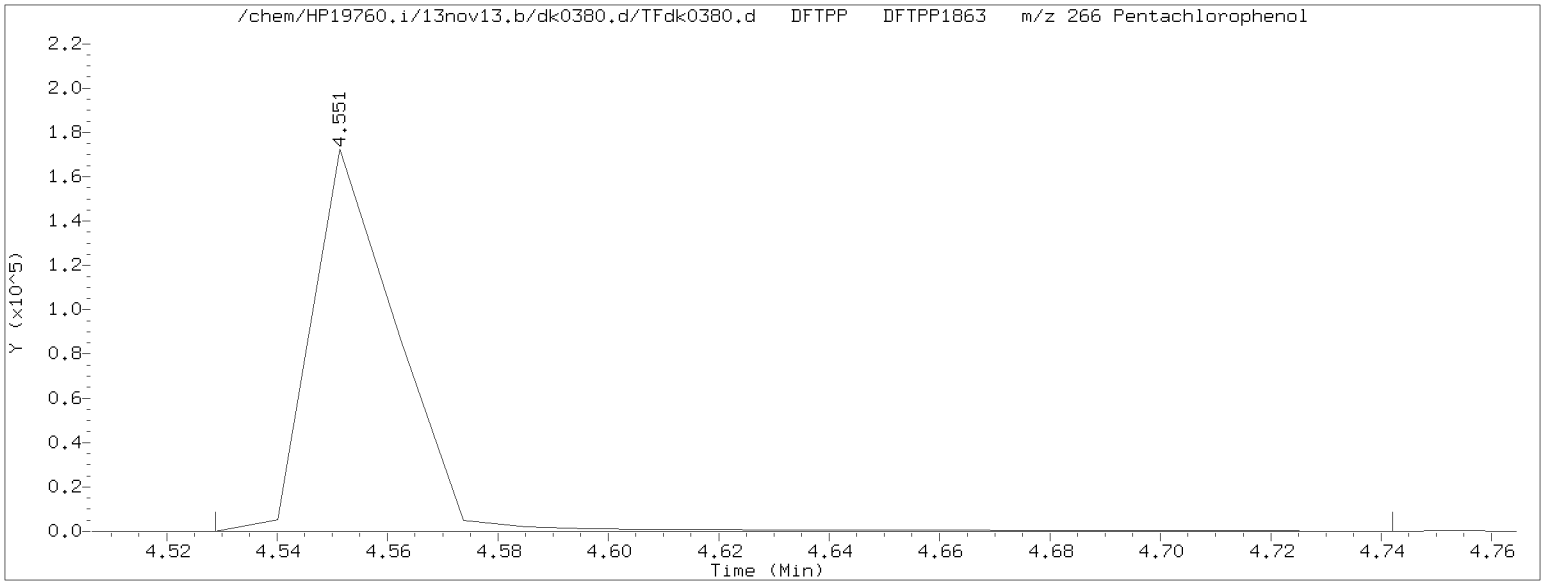
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

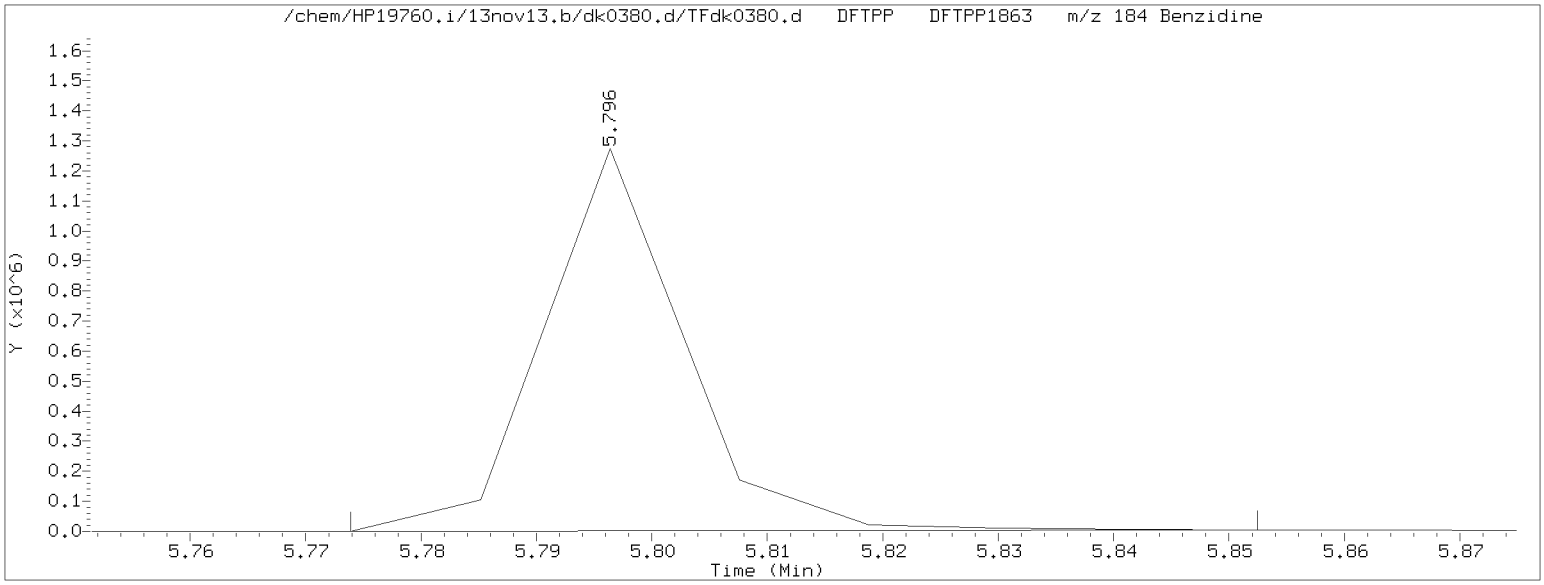
Instrument ID: HP19760.i Injection Date: 13-NOV-2013 05:05 Operator: jmg00346



Pentachlorophenol EICP peak height = 172480 EICP peak height at 10% = 17248 Pentachlorophenol EICP area = 186381

Pentachlorophenol EICP peak apex (min.) = 4.551
RT at 10% of front half of EICP (min.) = 4.541 'Front' peak width (min.) = 0.0104000000
RT at 10% of back half of EICP (min.) = 4.572 'Tailing' peak width (min.) = 0.0207000000

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0207000000}{0.0104000000} = 1.990$



Benzidine EICP peak height = 1272674 EICP peak height at 10% = 127267 Benzidine EICP area = 1058287

Benzidine EICP peak apex (min.) = 5.796
RT at 10% of front half of EICP (min.) = 5.785 'Front' peak width (min.) = 0.0109666667
RT at 10% of back half of EICP (min.) = 5.811 'Tailing' peak width (min.) = 0.0143666667

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0143666667}{0.0109666667} = 1.310$

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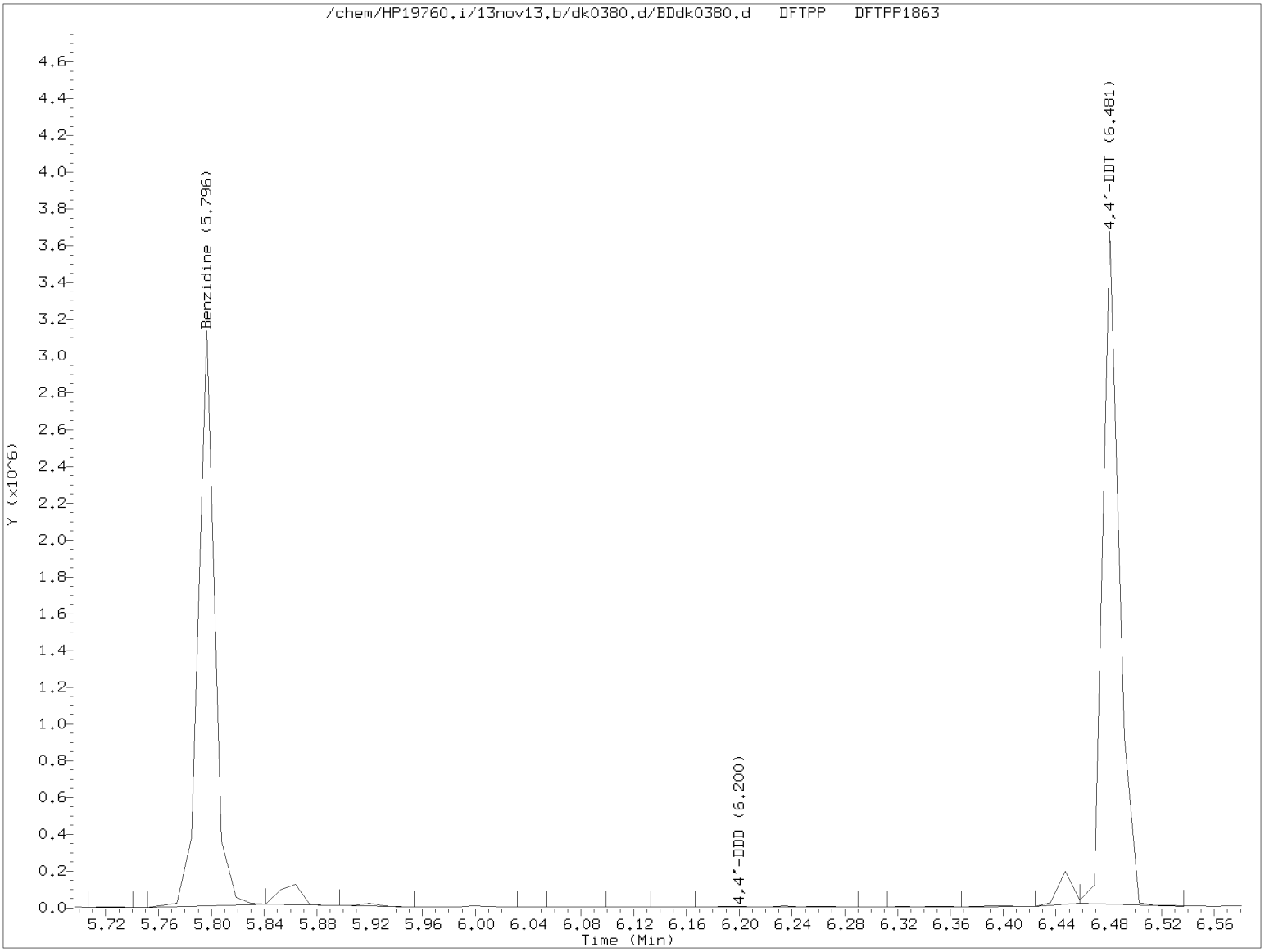
Target 3.5 esignature user ID: jmg00346

Assessment of GC Column Performance and Injection Port Inertness for

Instrument ID: HP19760.i Injection Date: 13-NOV-2013 05:05 Operator: jmg00346



$$\%\ 4,4'\text{-DDT breakdown} = \frac{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area}}{4,4'\text{-DDE TIC area} + 4,4'\text{-DDD TIC area} + 4,4'\text{-DDT TIC area}} \times 100$$

$$\%\ 4,4'\text{-DDT breakdown} = \frac{0 + 10741}{0 + 10741 + 3154150} \times 100 = 0.3$$

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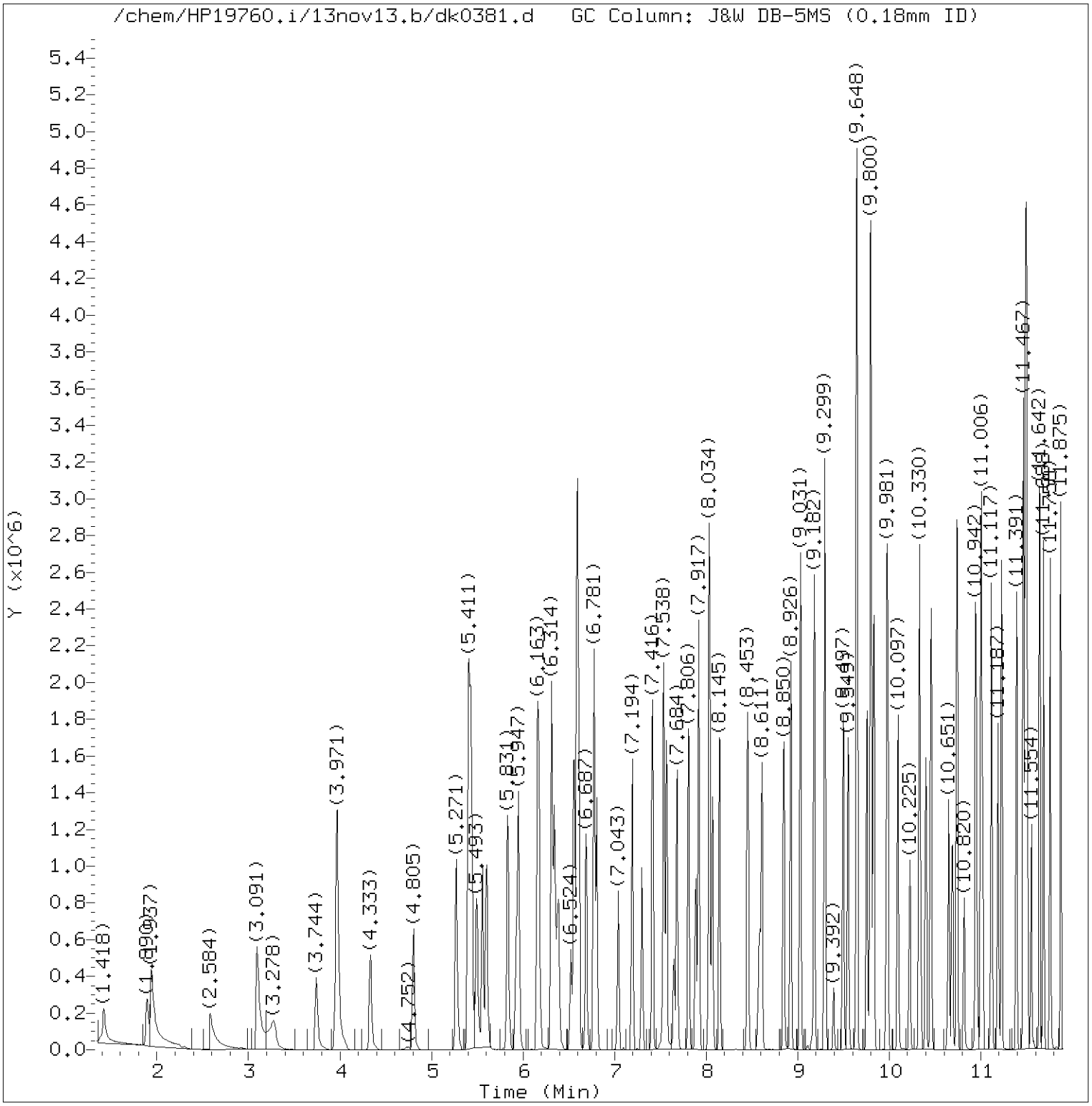
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

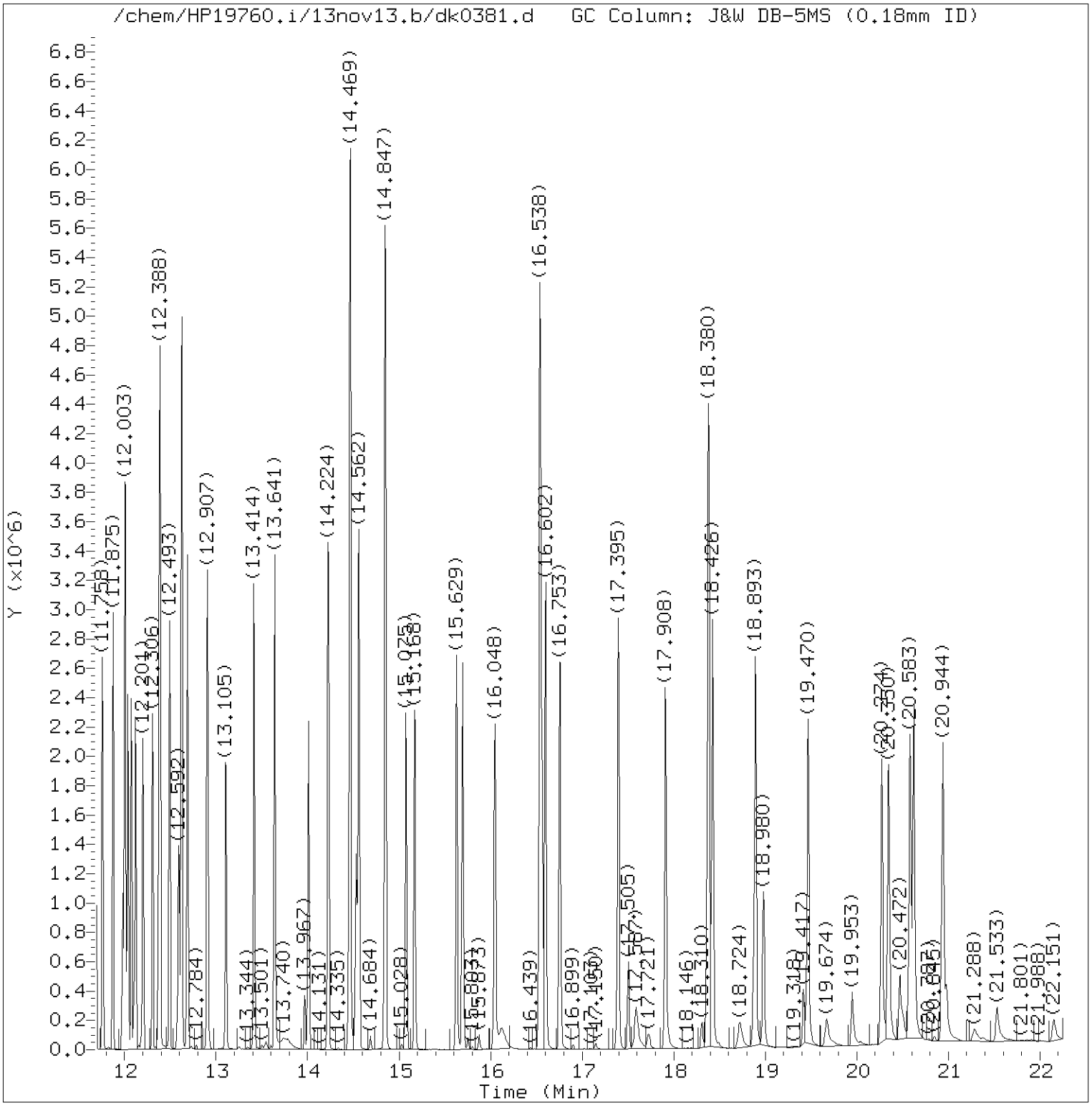
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.418	88	214725	12.413
2) N-Nitrosodimethylamine	(1)	1.890	74	340230	11.139
3) Pyridine	(1)	1.937	79	573143	11.003
4) 2-Picoline	(1)	3.091	93	616139	11.230
5) N-Nitrosomethylethylamine	(1)	3.272	88	265884	11.275
6) Methyl methanesulfonate	(1)	3.744	80	310647	11.524
7)$2-Fluorophenol	(1)	3.971	112	970150	23.775
8) N-Nitrosodiethylamine	(1)	4.333	102	262840	11.606
10) Ethyl methanesulfonate	(1)	4.805	109	256620	11.750
11) Benzaldehyde	(1)	5.271	77	427967	10.917
12)$Phenol-d5	(1)	5.405	99	1288258	22.988
13)$Phenol-d6	(1)	5.405	99	1288258	22.988
14) Phenol	(1)	5.423	94	723722	11.156
15) Aniline	(1)	5.440	93	892545	11.172
16) bis(2-Chloroethyl)ether	(1)	5.557	93	568748	11.111
17) 2-Chlorophenol	(1)	5.603	128	489524	12.199
18) 1,3-Dichlorobenzene	(1)	5.831	146	529190	12.261
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	137427	5.000
20) 1,4-Dichlorobenzene	(1)	5.947	146	535762	12.271
23) Benzyl alcohol	(1)	6.157	108	332176	11.704
24) 1,2-Dichlorobenzene	(1)	6.174	146	500772	12.264
25) Indene	(1)	6.314	115	991875	14.376
26) 2-Methylphenol	(1)	6.344	108	479502	11.907
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	603329	9.496
28) bis(2-Chloroisopropyl)ether	(1)	6.384	45	603329	9.496
29) N-Nitrosopyrrolidine	(1)	6.524	100	263955	11.463
30) Acetophenone	(1)	6.559	105	733303	11.646
31) N-Nitroso-di-n-propylamine	(1)	6.582	70	388385	10.716
33) 4-Methylphenol	(1)	6.594	108	520458	11.568
32) N-Nitrosomorpholine	(1)	6.594	56	293340	10.264
34) o-Toluidine	(1)	6.612	106	798073	11.494
35) Hexachloroethane	(1)	6.687	117	218382	11.834
36)$Nitrobenzene-d5	(2)	6.781	82	1131597	23.535
37) Nitrobenzene	(2)	6.804	77	587162	11.505
39) N-Nitrosopiperidine	(2)	7.043	114	253141	12.100
40) Isophorone	(2)	7.194	82	1004672	11.550
42) 2-Nitrophenol	(2)	7.299	139	246573	14.081
45) 2,4-Dimethylphenol	(2)	7.416	107	528320	12.416
46) O,O,O-triethylphosphorothioate	(2)	7.538	198	259943	13.781
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	642111M	11.312

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
47) Benzoic acid	(2)	7.579	105	232819	9.456
49) 2,4-Dichlorophenol	(2)	7.684	162	404286	13.470
51) 1,2,4-Trichlorobenzene	(2)	7.806	180	446821	13.326
52)*Naphthalene-d8	(2)	7.888	136	522469	5.000
53) Naphthalene	(2)	7.917	128	1376375	12.356
55) 4-Chloroaniline	(2)	8.034	127	573494	12.425
56) 2,6-Dichlorophenol	(2)	8.040	162	387198	13.434
57) Hexachloropropene	(2)	8.069	213	315667	14.917
58) Hexachlorobutadiene	(2)	8.150	225	280545	14.353
60) Quinoline	(2)	8.453	129	915783	12.410
61) Caprolactam	(2)	8.588	113	167655	12.520
62) N-Nitrosodi-n-butylamine	(2)	8.611	84	472216	13.695
63) 4-Chloro-3-methylphenol	(2)	8.850	107	460764	12.784
64) Safrole	(2)	8.926	162	376053	13.265
65) 2-Methylnaphthalene	(2)	9.031	142	936898	12.621
66) 1-Methylnaphthalene	(2)	9.182	142	848685	12.598
68) 1,2,4,5-Tetrachlorobenzene	(3)	9.299	216	472906	12.916
67) Hexachlorocyclopentadiene	(3)	9.299	237	236402	13.680
69) cis-Isosafrole	(3)	9.392	162	66288	12.332
70) 2,4,6-Trichlorophenol	(3)	9.497	196	317816	13.757
71) 2,4,5-Trichlorophenol	(3)	9.549	196	325744	13.646
72)$2-Fluorobiphenyl	(3)	9.648	172	1951352	24.734
74) Isosafrole	(3)	9.759	162	379689	12.583
73) trans-Isosafrole	(3)	9.759	162	379689	12.583
75) 1,1'-Biphenyl	(3)	9.794	154	1095253	11.939
76) 2-Chloronaphthalene	(3)	9.800	162	871972	12.390
77) 1-Chloronaphthalene	(3)	9.835	162	839776	12.103
82) Diphenyl ether	(3)	9.975	170	633920	12.489
83) 2-Nitroaniline	(3)	9.986	138	299094	13.645
84) 1,4-Naphthoquinone	(3)	10.097	158	383787	12.672
85) 1,4-Dinitrobenzene	(3)	10.225	168	166076	13.663
86) Dimethylphthalate	(3)	10.330	163	1005642	12.636
87) 1,3-Dinitrobenzene	(3)	10.342	168	187180	13.702
88) 2,6-Dinitrotoluene	(3)	10.400	165	238369	13.515
90) Acenaphthylene	(3)	10.459	152	1316917	12.328
91) 3-Nitroaniline	(3)	10.651	138	262989	12.990
92)*Acenaphthene-d10	(3)	10.692	164	315923	5.000
93) Acenaphthene	(3)	10.744	153	887603	12.078
94) 2,4-Dinitrophenol	(3)	10.820	184	136173	14.812
95) Pentachlorobenzene	(3)	10.942	250	403439	13.754

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
96) 4-Nitrophenol	(3)	10.960	109	174651	13.526
97) Dibenzofuran	(3)	11.006	168	1312467	12.559
98) 2,4-Dinitrotoluene	(3)	11.018	165	316778	14.016
99) 1-Naphthylamine	(3)	11.117	143	903624	11.895
100) 2,3,4,6-Tetrachlorophenol	(3)	11.193	232	262091	13.905
101) 2-Naphthylamine	(3)	11.228	143	923898	11.852
102) Diethylphthalate	(3)	11.391	149	981218	12.513
103) Fluorene	(3)	11.467	166	1040042	12.363
104) Thionazin	(3)	11.484	107	194620	11.483
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	542187	12.996
106) 5-Nitro-o-toluidine	(3)	11.502	152	291440	12.890
107) 4-Nitroaniline	(3)	11.508	138	265148	12.733
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	188253	13.145
110) NDPA as diphenylamine	(4)	11.648	169	834023	11.968
109) N-Nitrosodiphenylamine	(4)	11.648	169	834023	11.968
111) 1,2-Diphenylhydrazine	(4)	11.688	77	1130469	10.247
112)$2,4,6-Tribromophenol	(3)	11.758	330	261996	31.575
115) Tetraethyldithiopyrophosphate	(4)	11.875	97	182933	11.496
116) 1,3,5-Trinitrobenzene	(4)	11.980	213	144117	13.364
117) Diallate (peak 1)	(4)	12.003	86	441321	8.026
118) Phorate	(4)	12.009	75	675832	10.367
119) Phenacetin	(4)	12.038	108	568490	12.252
120) 4-Bromophenyl-phenylether	(4)	12.073	248	291249	13.185
121) Diallate (peak 2)	(4)	12.102	86	63831	2.721
122) Hexachlorobenzene	(4)	12.120	284	299016	13.691
123) Dimethoate	(4)	12.201	87	470946	11.064
124) Atrazine	(4)	12.306	200	282306	12.443
125) Pentachlorophenol	(4)	12.376	266	188750	11.465
127) 4-Aminobiphenyl	(4)	12.388	169	1065089	12.217
126) Pentachloronitrobenzene	(4)	12.388	237	142132	14.004
129) Pronamide	(4)	12.493	173	483259	13.102
130)*Phenanthrene-d10	(4)	12.592	188	559806	5.000
131) Phenanthrene	(4)	12.627	178	1481763	11.868
133) Dinoseb	(4)	12.627	211	261426	12.294
134) Anthracene	(4)	12.691	178	1531903	12.306
135) Carbazole	(4)	12.907	167	1467810	12.183
136) Methyl parathion	(4)	13.105	109	375194	11.826
137) Di-n-butylphthalate	(4)	13.414	149	1757063	12.314
138) Parathion	(4)	13.641	109	239858	11.813
139) 4-Nitroquinoline-1-oxide	(4)	13.647	190	131775	10.828

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$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

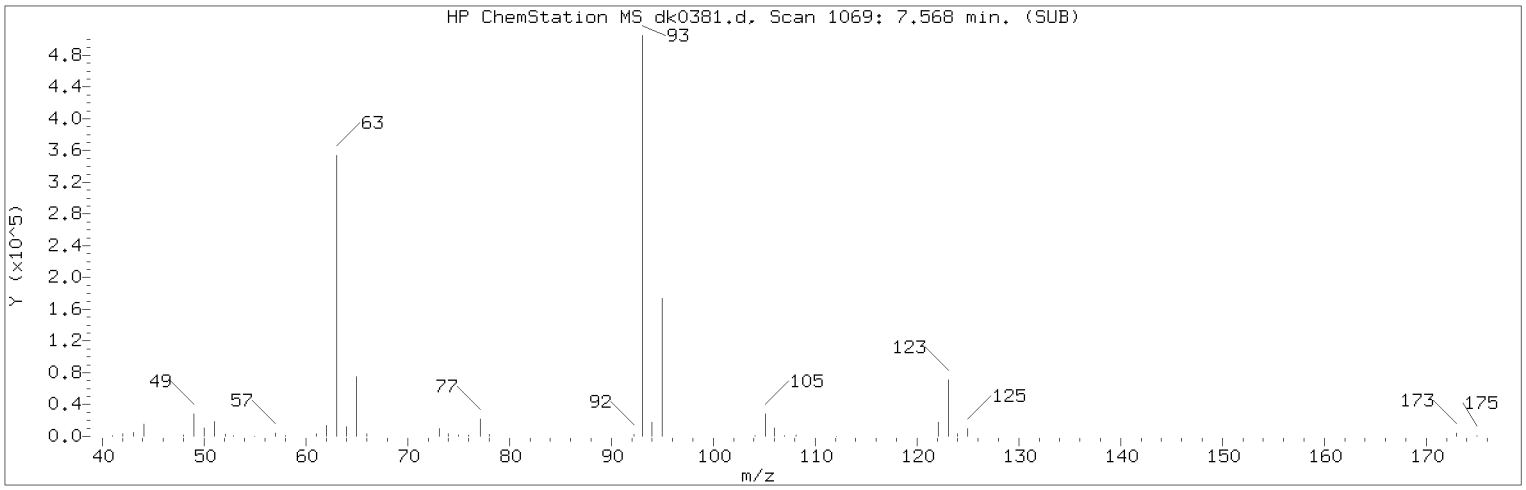
Sample Name: SSTD12. Lab Sample ID: STD2813

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
140) Isodrin	(4)	14.008	193	191103	12.760
142) Fluoranthene	(4)	14.224	202	1824202	12.989
144) Benzidine	(5)	14.469	184	3447473	36.803
145)*Pyrene-d10	(5)	14.533	212	730002	5.000
146) Pyrene	(5)	14.562	202	1851973	11.949
149)$Terphenyl-d14	(5)	14.847	244	2377957	26.121
150) p-Dimethylaminoazobenzene	(5)	15.075	225	387673	12.456
151) Chlorobenzilate	(5)	15.168	139	535044	12.265
152) 3,3'-Dimethylbenzidine	(5)	15.629	212	1247916	13.564
153) Butylbenzylphthalate	(5)	15.693	149	801271	12.147
156) 2-Acetylaminofluorene	(5)	16.048	181	732622	12.549
158) Benzo(a)anthracene	(5)	16.538	228	1747833	13.291
159) 3,3'-Dichlorobenzidine	(5)	16.544	252	673564	14.181
160) 4,4'-Methylenebis(2-Chloroanil	(5)	16.561	231	343943	13.712
161) Chrysene	(5)	16.602	228	1655465	12.801
162) bis(2-Ethylhexyl)phthalate	(5)	16.759	149	1068254	12.312
165) 6-Methylchrysene	(5)	17.395	242	1287961	14.167
166) Di-n-octylphthalate	(6)	17.908	149	1849372	10.948
168) Benzo(b)fluoranthene	(6)	18.374	252	1719821	12.663
169) 7,12-Dimethylbenz[a]anthracene	(6)	18.385	256	775903	12.871
170) Benzo(k)fluoranthene	(6)	18.426	252	1677910	12.250
171) Benzo(a)pyrene	(6)	18.893	252	1605491	12.879
172)*Perylene-d12	(6)	18.980	264	576555	5.000
173) 3-Methylcholanthrene	(6)	19.470	268	813452	13.712
174) Dibenz(a,h)acridine	(6)	20.274	279	1183004	14.346
175) Dibenz(a,j)acridine	(6)	20.350	279	1375695	15.557
176) Indeno(1,2,3-cd)pyrene	(6)	20.583	276	1706090M	15.603
177) Dibenz(a,h)anthracene	(6)	20.624	278	1447935	15.636
178) Benzo(g,h,i)perylene	(6)	20.944	276	1451127	15.743
179) Diallate TRANS/CIS	(4)			505152	10.725
182) 2,4_2,6-Dinitrotoluenes	(3)			555147	27.531

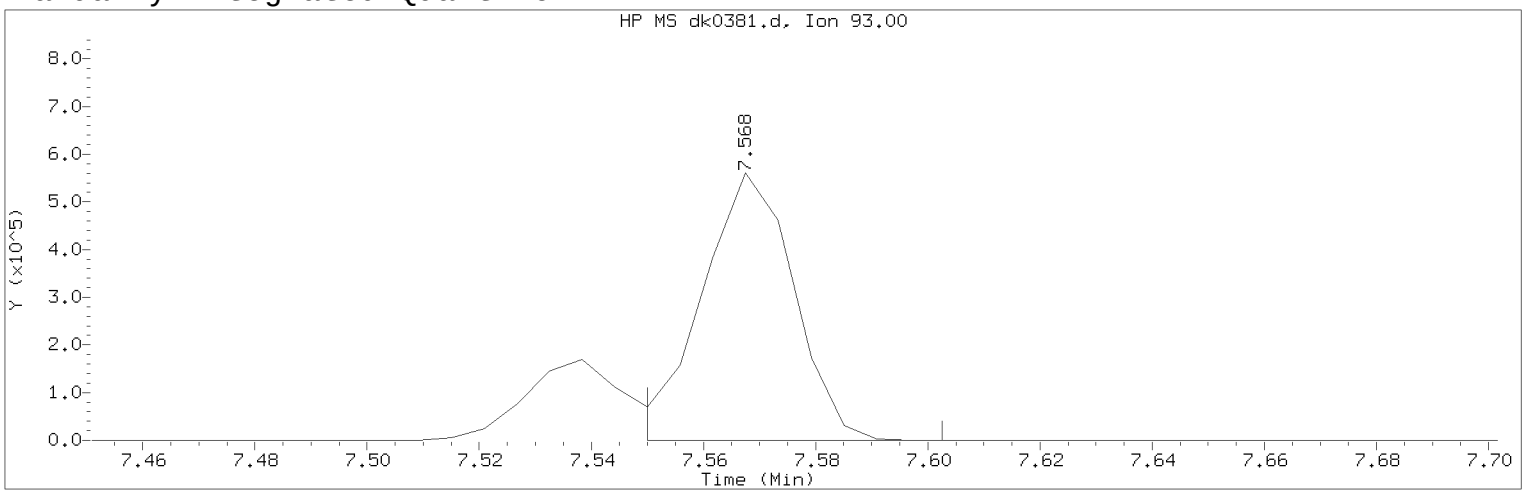
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

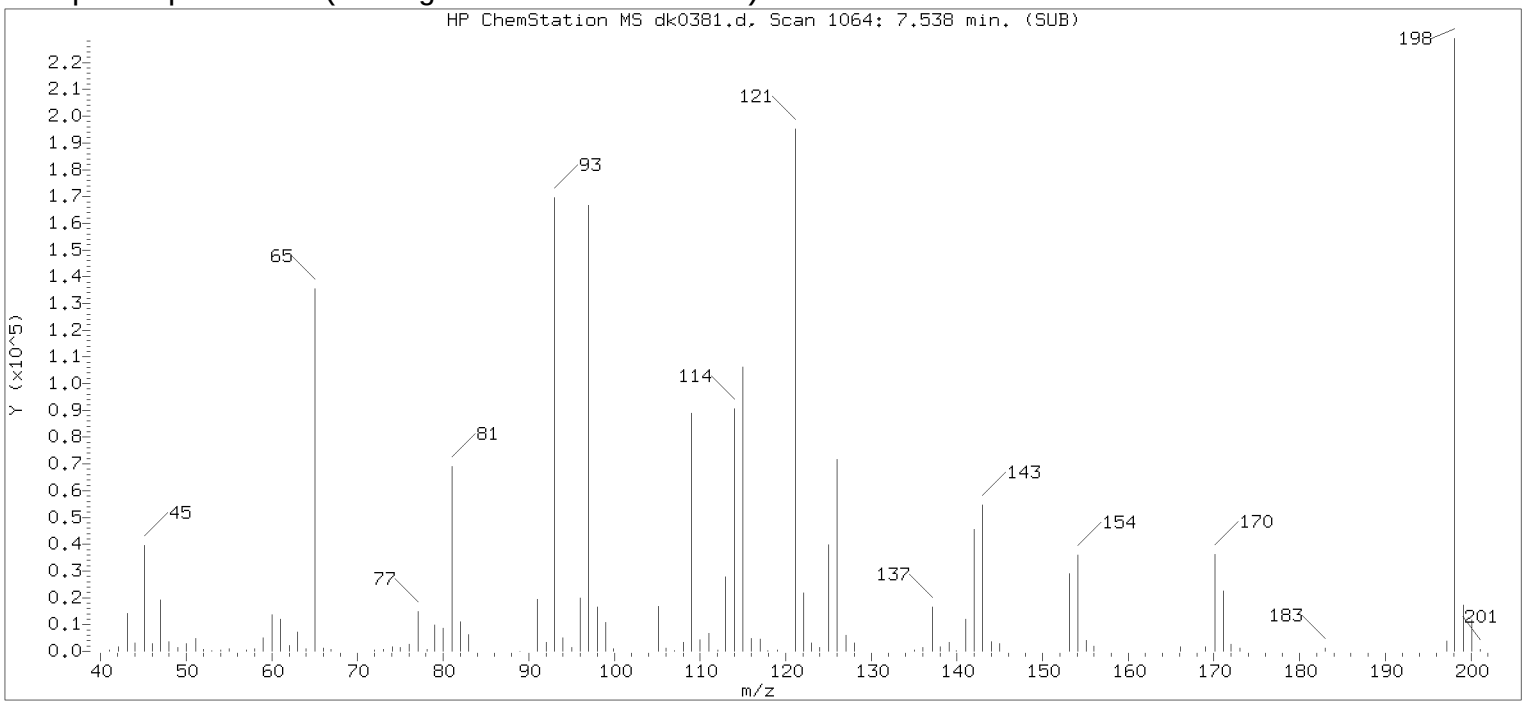
Compound Number : 48
Compound Name : bis(2-Chloroethoxy)methane
Scan Number : 1069
Retention Time (minutes) : 7.568
Quant Ion : 93.00
Area (flag) : 642111M
On-Column Amount (ng/ul) : 11.3118
Integration start scan : 1065 Integration stop scan: 1074
Y at integration start : 422 Y at integration end: 422

Reason for manual integration: improper integration

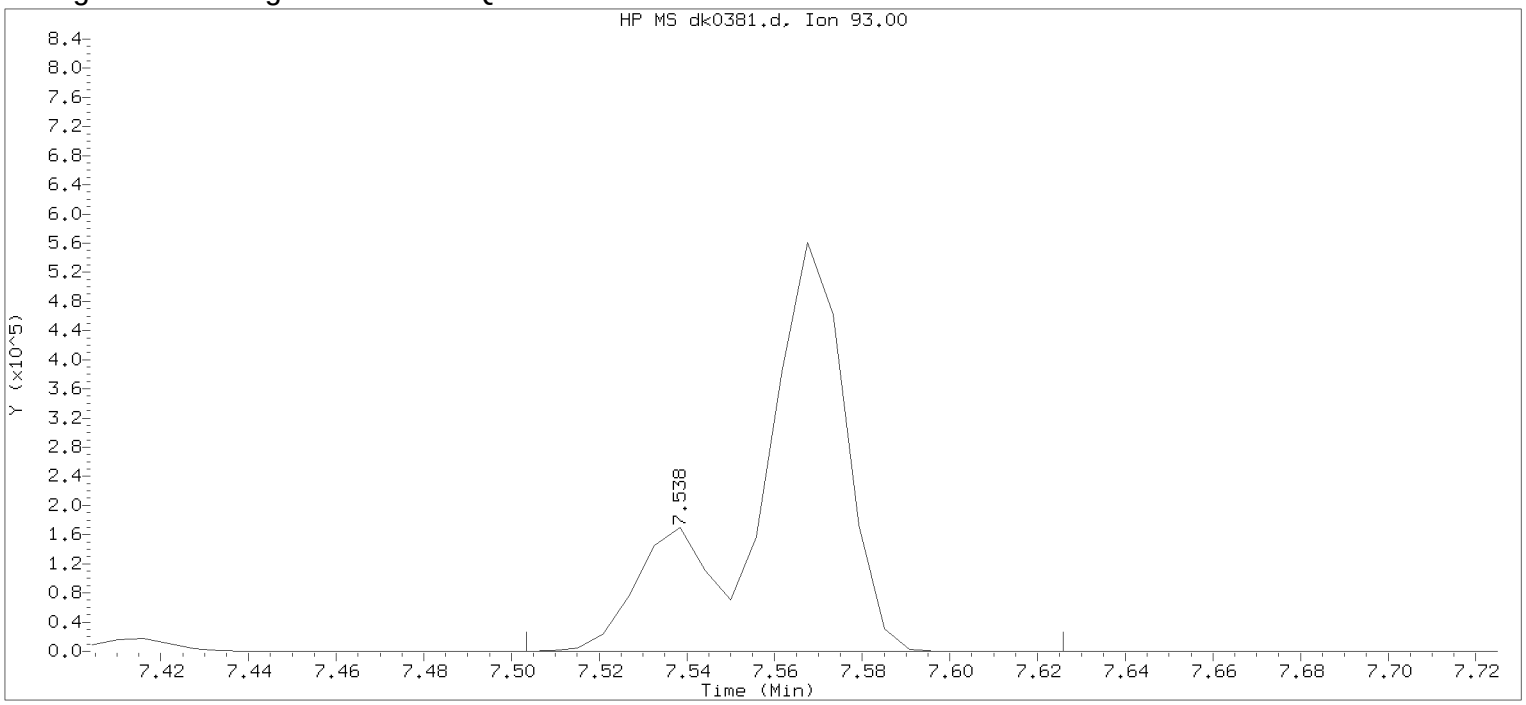
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:39.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

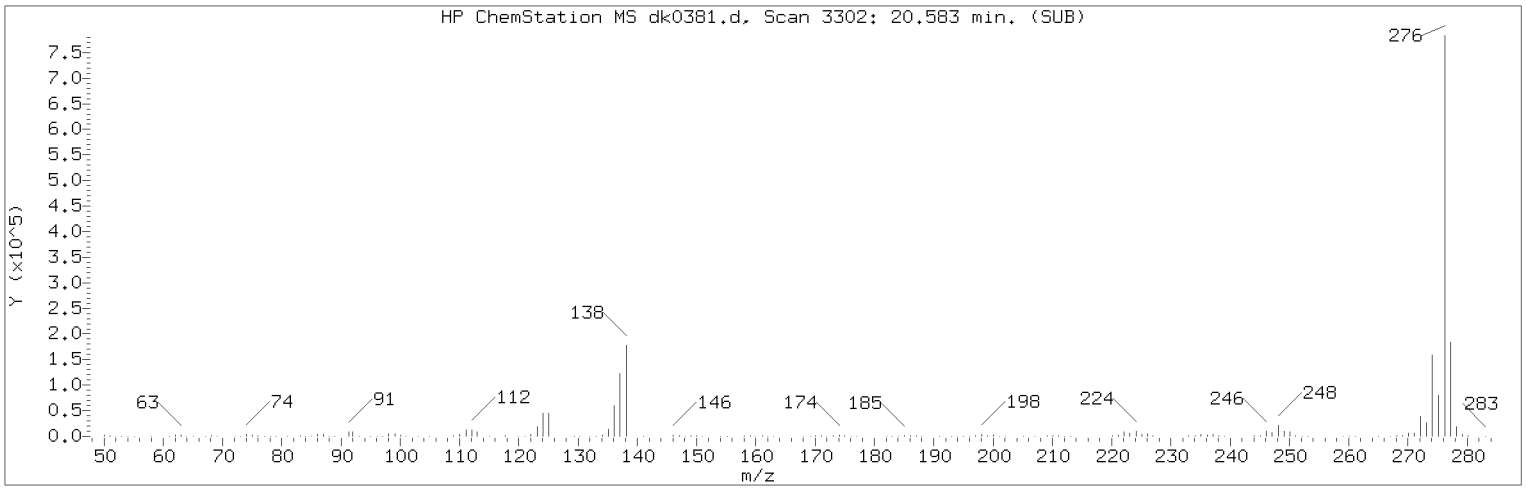
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 05:50
Date, time and analyst ID of latest file update: 13-Nov-2013 05:50 Automation

Sample Name: SSTD12. Lab Sample ID: STD2813

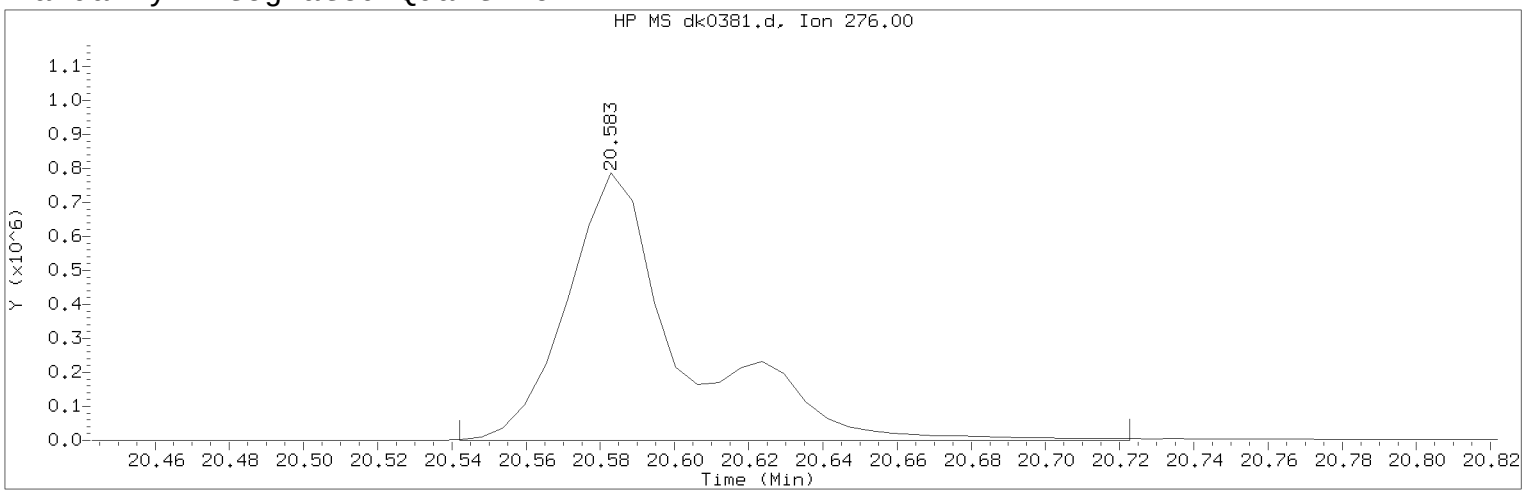
Compound Number	: 48		
Compound Name	: bis(2-Chloroethoxy)methane		
Scan Number	: 1064		
Retention Time (minutes)	: 7.538		
Quant Ion	: 93.00		
Area	: 829310		
On-column Amount (ng/ul)	: 14.6096		
Integration start scan	: 1057	Integration stop scan:	1078
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:04.
Target 3.5 esignature user KVTOA jmg00346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 06:03
Date, time and analyst ID of latest file update: 13-Nov-2013 06:03 jmg00346

Sample Name: SSTD12. Lab Sample ID: STD2813

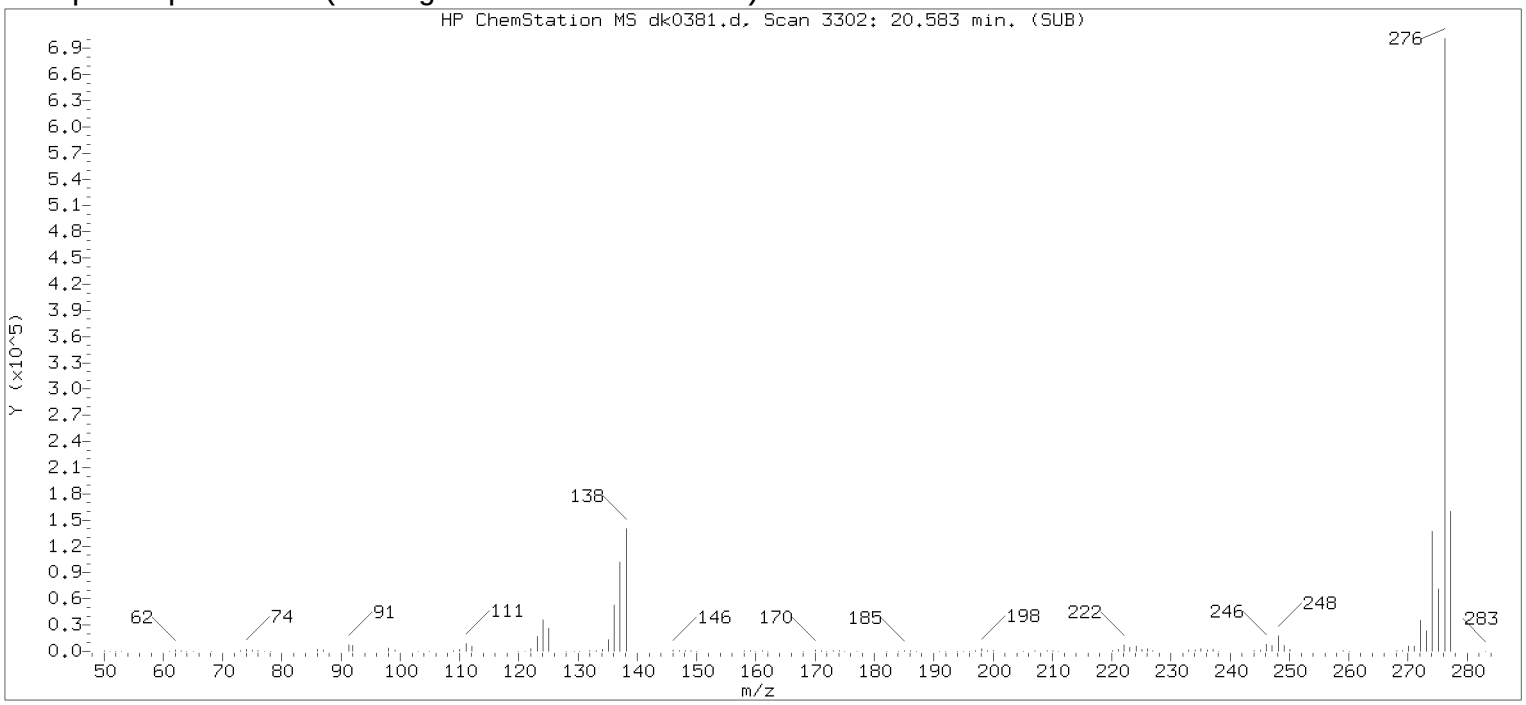
Compound Number : 176
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3302
Retention Time (minutes) : 20.583
Quant Ion : 276.00
Area (flag) : 1706090M
On-Column Amount (ng/ul) : 15.6025
Integration start scan : 3294 Integration stop scan: 3325
Y at integration start : 222 Y at integration end: 222

Reason for manual integration: improper integration

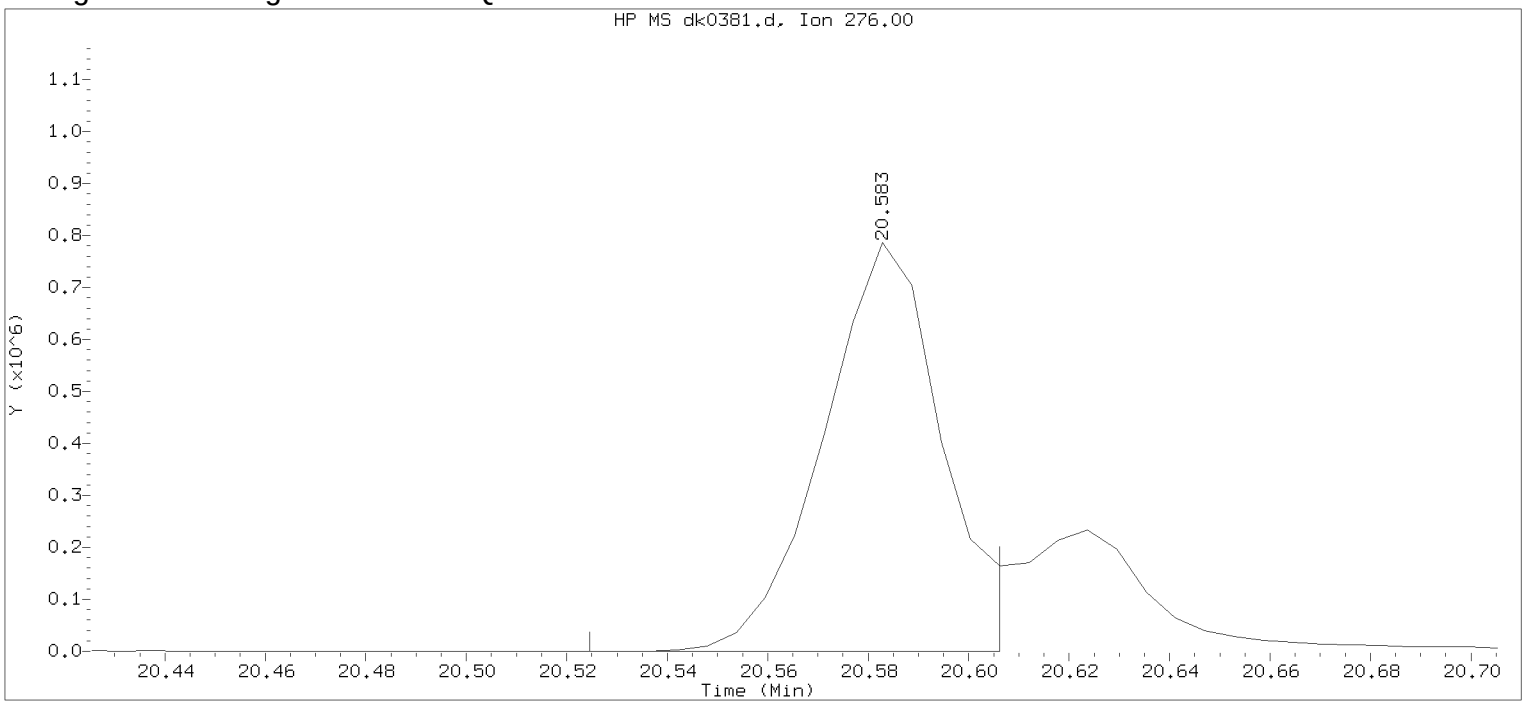
Analyst responsible for change: Digitally signed by Joseph M. Gambler
on 11/13/2013 at 06:04.
Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:39.
Parallax ID: mar00486

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/13nov13.b/dk0381.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:19 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: newall1
Calibration date and time: 13-NOV-2013 05:50
Date, time and analyst ID of latest file update: 13-Nov-2013 05:50 Automation

Sample Name: SSTD12. Lab Sample ID: STD2813

Compound Number	: 176		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3302		
Retention Time (minutes)	: 20.583		
Quant Ion	: 276.00		
Area	: 1265419		
On-column Amount (ng/ul)	: 11.5725		
Integration start scan	: 3291	Integration stop scan:	3305
Y at integration start	: 0	Y at integration end:	280

Digitally signed by Joseph M. Gambler on 11/13/2013 at 06:04.
Target 3.5 esignature user KVM06 jmg00346

Raw QC Data

Semivolatiles by GC/MS

SBLKLC3163 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKLC316

Data file: /chem/HP10623.i/13nov18.b/ck0622.d Injection date and time: **18-NOV-2013 06:14**
Data file Sample Info. Line: SBLKLC3163;SBLKLC316;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	108136 (8)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	457604 (-1)	20.00	
98) Acenaphthene-d10	7.992(0.006)	994	164	265192 (-8)	20.00	
135) Phenanthrene-d10	9.431(0.006)	1228	188	484724 (-9)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	573380 (-12)	20.00	
175) Perylene-d12	13.385(0.006)	1871	264	460346 (-21)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	877167	88.971	89%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(-0.001)	172	1673473	100.361	100%		69 - 120
156) Terphenyl-d14	(5)	11.017(-0.001)	244	2067773	100.879	101%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)			Not Detected					0.1
70) 2-Methylnaphthalene	(2)			Not Detected					0.1
71) 1-Methylnaphthalene	(2)			Not Detected					0.1
95) Acenaphthylene	(3)			Not Detected					0.1
99) Acenaphthene	(3)			Not Detected					0.1
111) Fluorene	(3)			Not Detected					0.1
137) Phenanthrene	(4)			Not Detected					0.1
138) Anthracene	(4)			Not Detected					0.1
147) Fluoranthene	(4)			Not Detected					0.1
154) Pyrene	(5)			Not Detected					0.1
166) Benzo(a)anthracene	(5)			Not Detected					0.1
168) Chrysene	(5)			Not Detected					0.1
172) Benzo(b)fluoranthene	(6)			Not Detected					0.1
173) Benzo(k)fluoranthene	(6)			Not Detected					0.1
174) Benzo(a)pyrene	(6)			Not Detected					0.1
177) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.1
178) Dibenz(a,h)anthracene	(6)			Not Detected					0.1
179) Benzo(g,h,i)perylene	(6)			Not Detected					0.1

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:24. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10623.i/13nov18.b/ck0622.d Injection date and time: **18-NOV-2013 06:14**
Data file Sample Info. Line: SBLKLC3163;SBLKLC316;2;3;BLANK;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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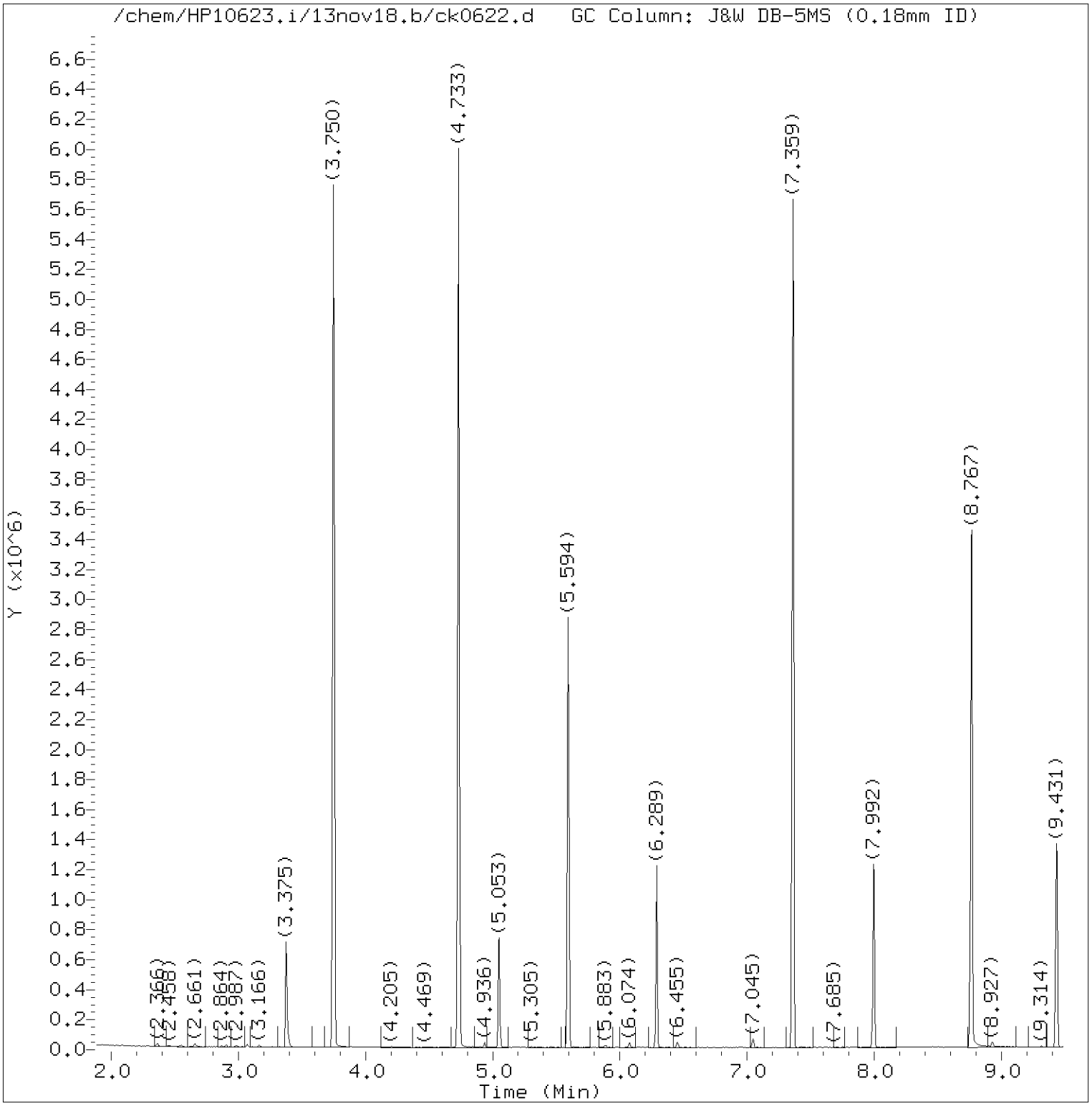
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:24. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:22. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

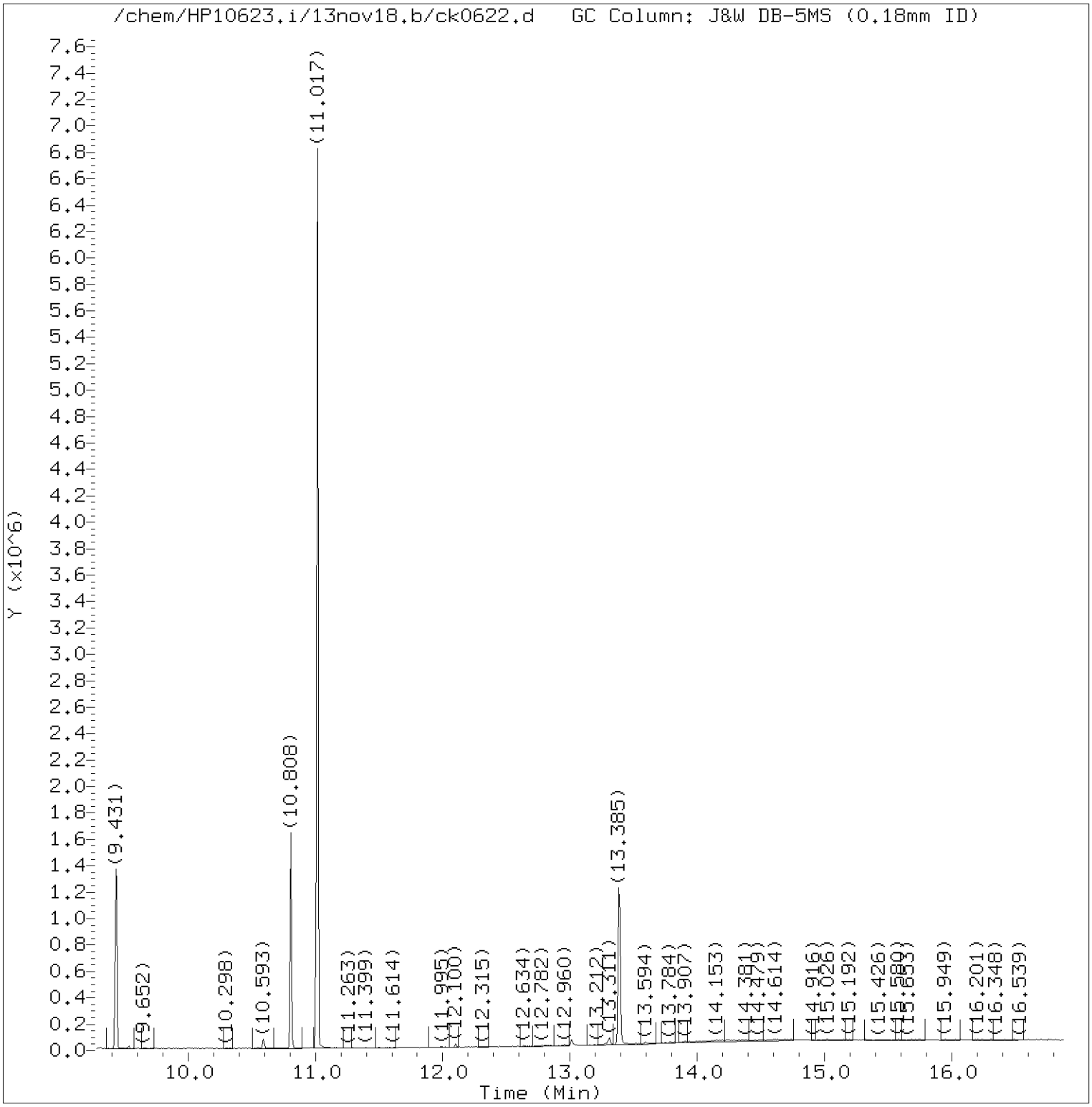
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0622.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:14 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:19 jmg00346

Sample Name: SBLKLC3163 Lab Sample ID: SBLKLC316

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	108136	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	877167	88.971
52)*Naphthalene-d8	(2)	6.289	136	457604	20.000
78)$2-Fluorobiphenyl	(3)	7.359	172	1673473	100.361
98)*Acenaphthene-d10	(3)	7.992	164	265192	20.000
135)*Phenanthrene-d10	(4)	9.431	188	484724	20.000
167)*Pyrene-d10	(5)	10.808	212	573380	20.000
156)$Terphenyl-d14	(5)	11.017	244	2067773	100.879
175)*Perylene-d12	(6)	13.385	264	460346	20.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:24.
Target 3.5 esignature user ID: jmg00346

SBLKWD3144 Lancaster Labs Analysis Summary for GC/MS Semivolatiles SBLKWD314

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	116893 (-15)	5.00	
52) Naphthalene-d8	7.882(0.006)	1123	136	441917 (-15)	5.00	
92) Acenaphthene-d10	10.686(0.006)	1604	164	263542 (-17)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	462153 (-17)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	586235 (-20)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	470041 (-18)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.965(0.001)	112	1079792	31.111	62%		10 - 107
13) Phenol-d6	(1)	5.399(0.001)	99	1074140	22.535	45%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.000)	82	903258	22.210	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.643(0.000)	172	1602184	24.345	97%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.758(-0.001)	330	434425	62.762	126%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2078944	28.437	114%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)			Not Detected					0.3
14) Phenol	(1)			Not Detected					0.1
16) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
17) 2-Chlorophenol	(1)			Not Detected					0.1
18) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
20) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
23) Benzyl alcohol	(1)			Not Detected					1
24) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
26) 2-Methylphenol	(1)			Not Detected					0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)			Not Detected					0.1
30) Acetophenone	(1)			Not Detected					0.1
31) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.1
33) 4-Methylphenol	(1)			Not Detected					0.1
35) Hexachloroethane	(1)			Not Detected					0.3
37) Nitrobenzene	(2)			Not Detected					0.1
40) Isophorone	(2)			Not Detected					0.1
42) 2-Nitrophenol	(2)			Not Detected					0.1
45) 2,4-Dimethylphenol	(2)			Not Detected					0.1
48) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
49) 2,4-Dichlorophenol	(2)			Not Detected					0.1
51) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
53) Naphthalene	(2)			Not Detected					0.03
55) 4-Chloroaniline	(2)			Not Detected					0.1
58) Hexachlorobutadiene	(2)			Not Detected					0.1
61) Caprolactam	(2)			Not Detected					1
63) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
65) 2-Methylnaphthalene	(2)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)			Not Detected					1
70) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
71) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
75) 1,1'-Biphenyl	(3)			Not Detected					0.1
76) 2-Chloronaphthalene	(3)			Not Detected					0.1
82) Diphenyl ether	(3)			Not Detected					0.1
83) 2-Nitroaniline	(3)			Not Detected					0.1
86) Dimethylphthalate	(3)			Not Detected					0.5
88) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
90) Acenaphthylene	(3)			Not Detected					0.03
91) 3-Nitroaniline	(3)			Not Detected					0.1
93) Acenaphthene	(3)			Not Detected					0.03
94) 2,4-Dinitrophenol	(3)			Not Detected					3
96) 4-Nitrophenol	(3)			Not Detected					3
97) Dibenzofuran	(3)			Not Detected					0.1
98) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
102) Diethylphthalate	(3)			Not Detected					0.5
103) Fluorene	(3)			Not Detected					0.03
105) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
107) 4-Nitroaniline	(3)			Not Detected					0.1
108) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					1
109) N-Nitrosodiphenylamine	(4)			Not Detected					0.1
120) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
122) Hexachlorobenzene	(4)			Not Detected					0.03
124) Atrazine	(4)			Not Detected					0.5
125) Pentachlorophenol	(4)			Not Detected					0.3
131) Phenanthrene	(4)			Not Detected					0.03
134) Anthracene	(4)			Not Detected					0.03
135) Carbazole	(4)			Not Detected					0.1
137) Di-n-butylphthalate	(4)			Not Detected					0.5
142) Fluoranthene	(4)			Not Detected					0.03
146) Pyrene	(5)			Not Detected					0.03
153) Butylbenzylphthalate	(5)			Not Detected					0.5
158) Benzo(a)anthracene	(5)			Not Detected					0.03
159) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.5
161) Chrysene	(5)			Not Detected					0.03
162) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					0.5
166) Di-n-octylphthalate	(6)			Not Detected					0.5
168) Benzo(b)fluoranthene	(6)			Not Detected					0.03
170) Benzo(k)fluoranthene	(6)			Not Detected					0.03
171) Benzo(a)pyrene	(6)			Not Detected					0.03
176) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
177) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
178) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0382.d Injection date and time: **13-NOV-2013 05:51**
Data file Sample Info. Line: SBLKWD3144;SBLKWD314;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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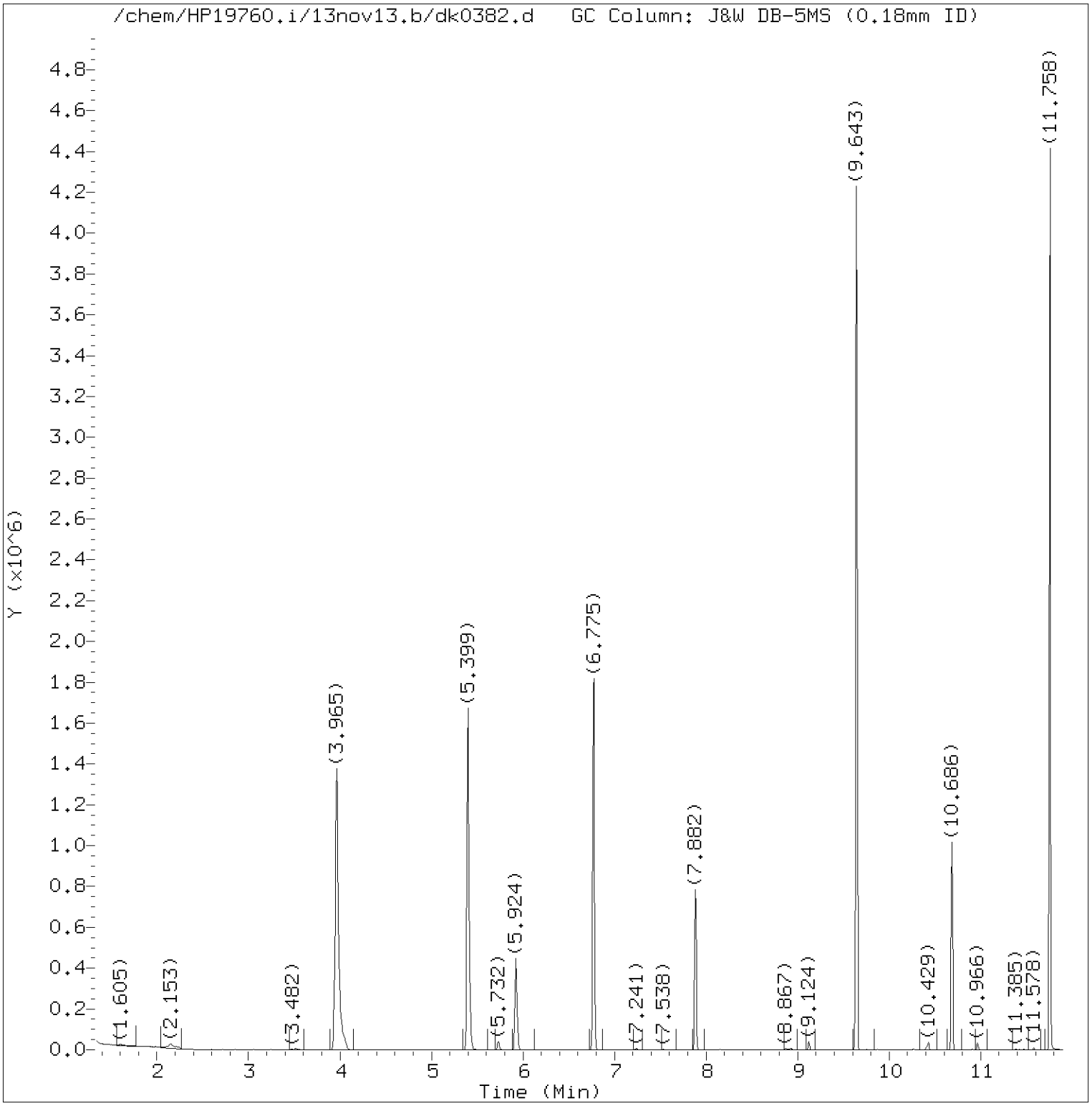
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 71

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:48. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:41. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

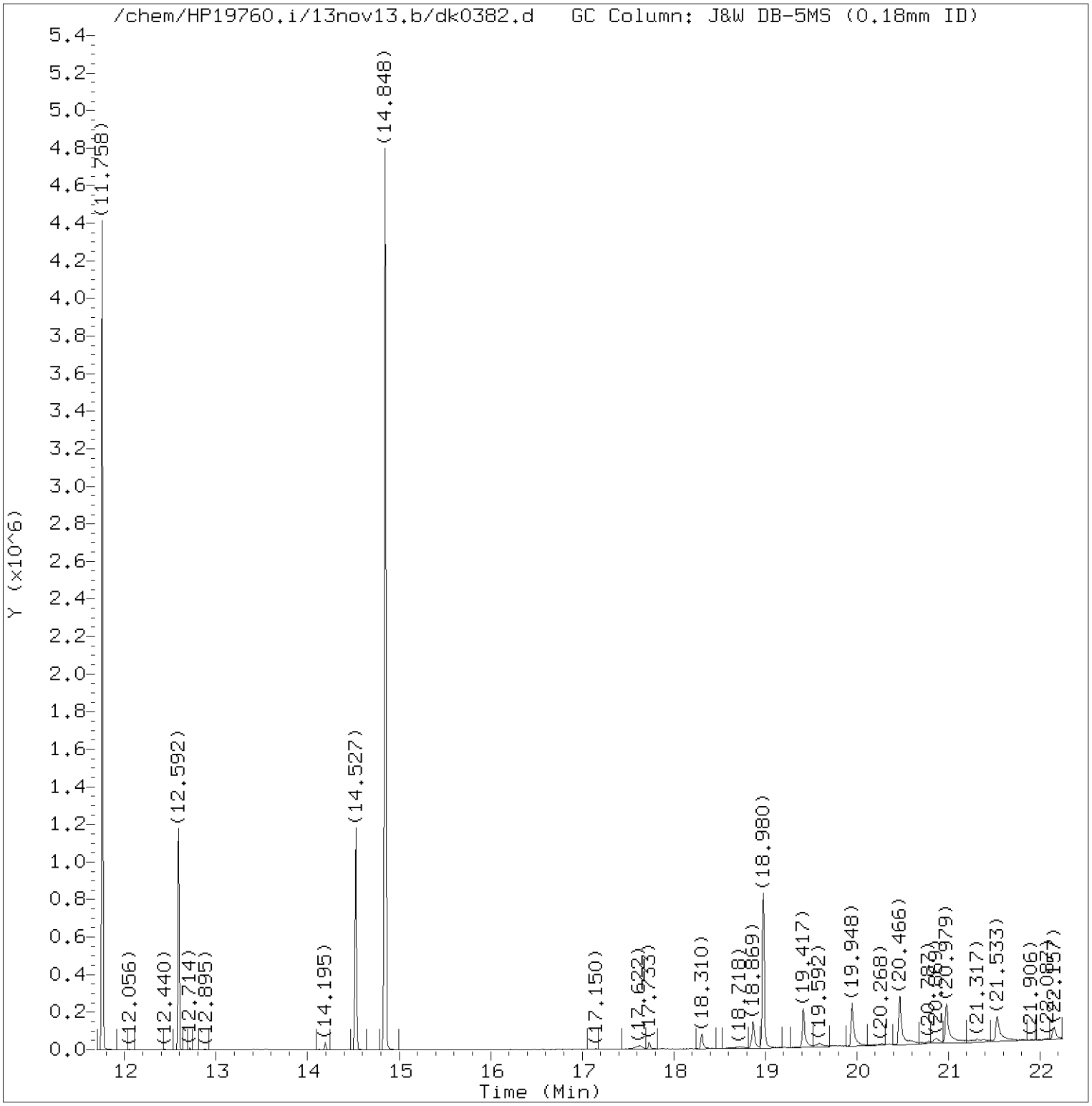
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

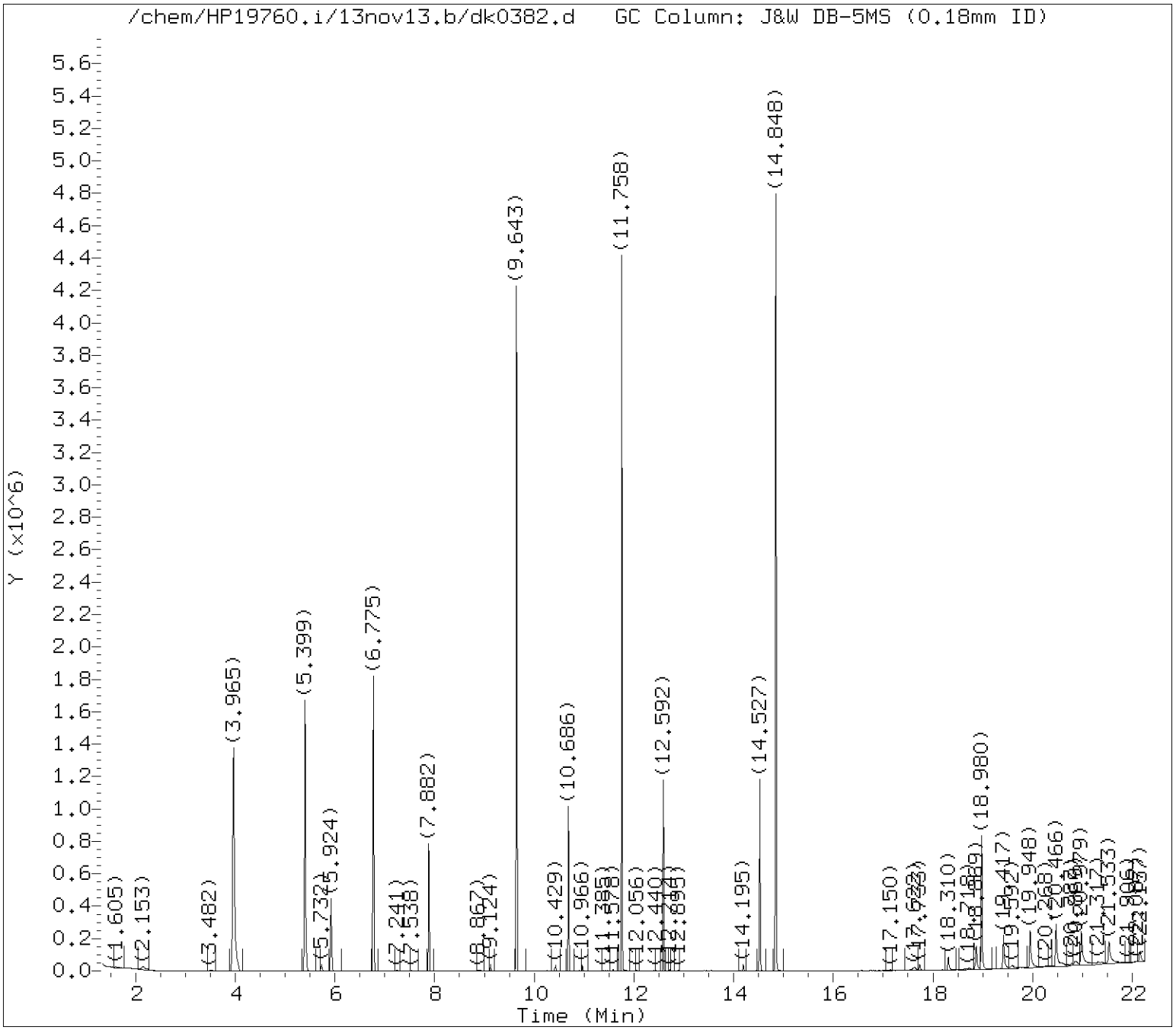
Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.965	112	1079792	31.111
13)$Phenol-d6	(1)	5.399	99	1074140	22.535
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	116893	5.000
36)$Nitrobenzene-d5	(2)	6.775	82	903258	22.210
52)*Naphthalene-d8	(2)	7.882	136	441917	5.000
72)$2-Fluorobiphenyl	(3)	9.643	172	1602184	24.345
92)*Acenaphthene-d10	(3)	10.686	164	263542	5.000
112)$2,4,6-Tribromophenol	(3)	11.758	330	434425	62.762
130)*Phenanthrene-d10	(4)	12.592	188	462153	5.000
145)*Pyrene-d10	(5)	14.527	212	586235	5.000
149)$Terphenyl-d14	(5)	14.848	244	2078944	28.437
172)*Perylene-d12	(6)	18.980	264	470041	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:48.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

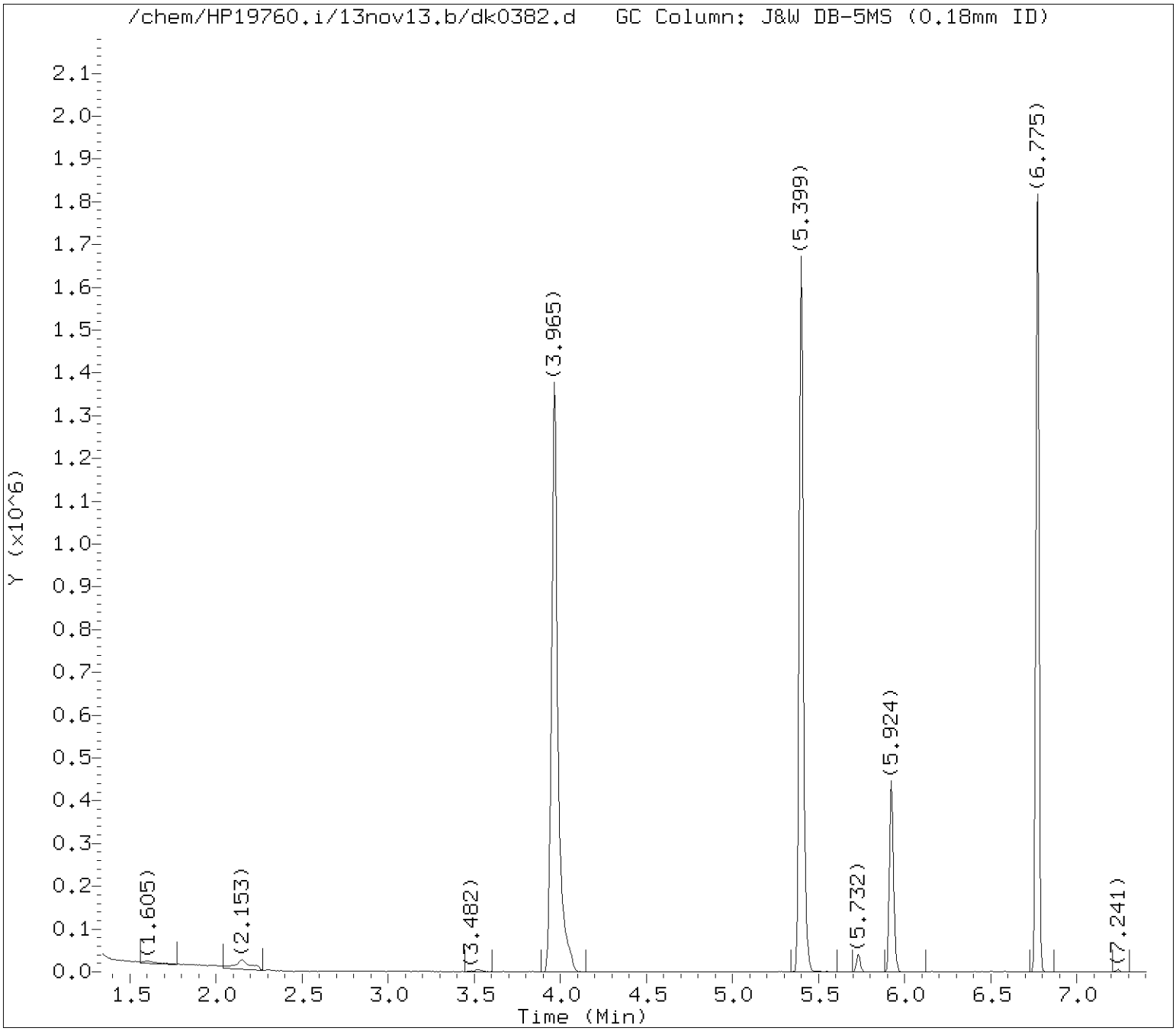
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

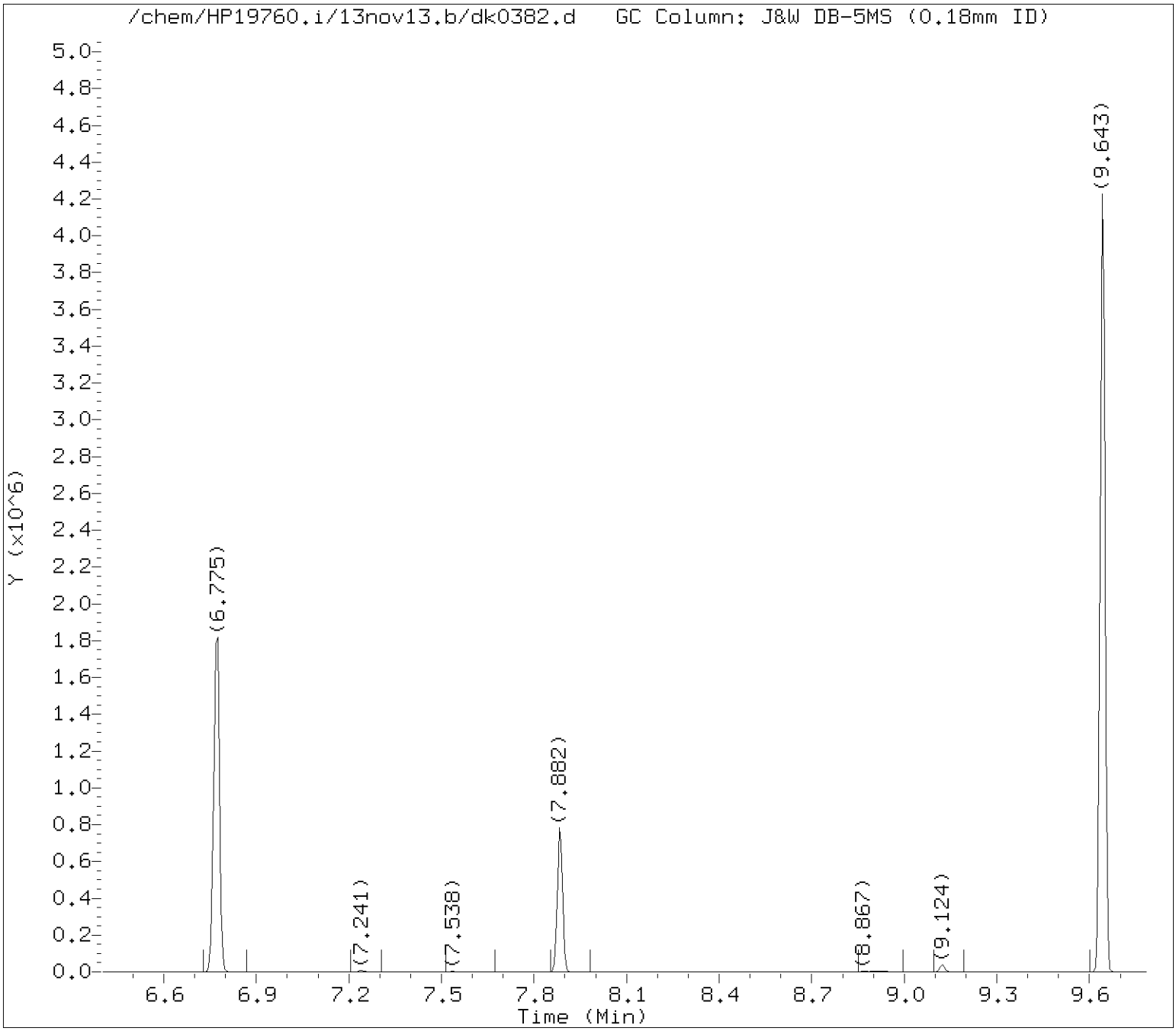
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: 1,4-Dichlorobenzene-d4 at 5.924 minutes
Chromatogram Start Time (min.): 1.343
Chromatogram End Time (min.): 6.903

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

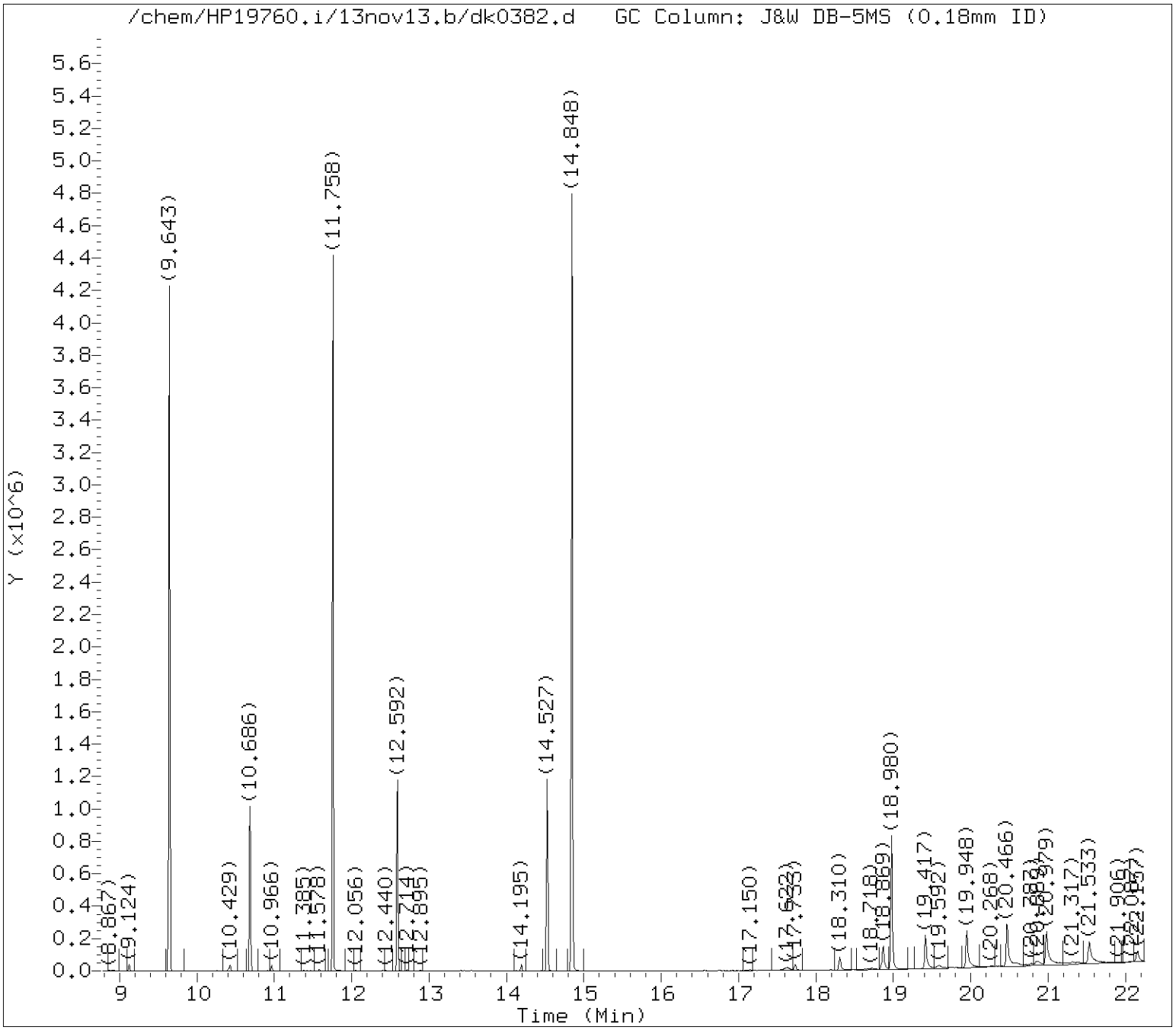
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Naphthalene-d8 at 7.882 minutes
Chromatogram Start Time (min.): 6.903
Chromatogram End Time (min.): 9.284

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

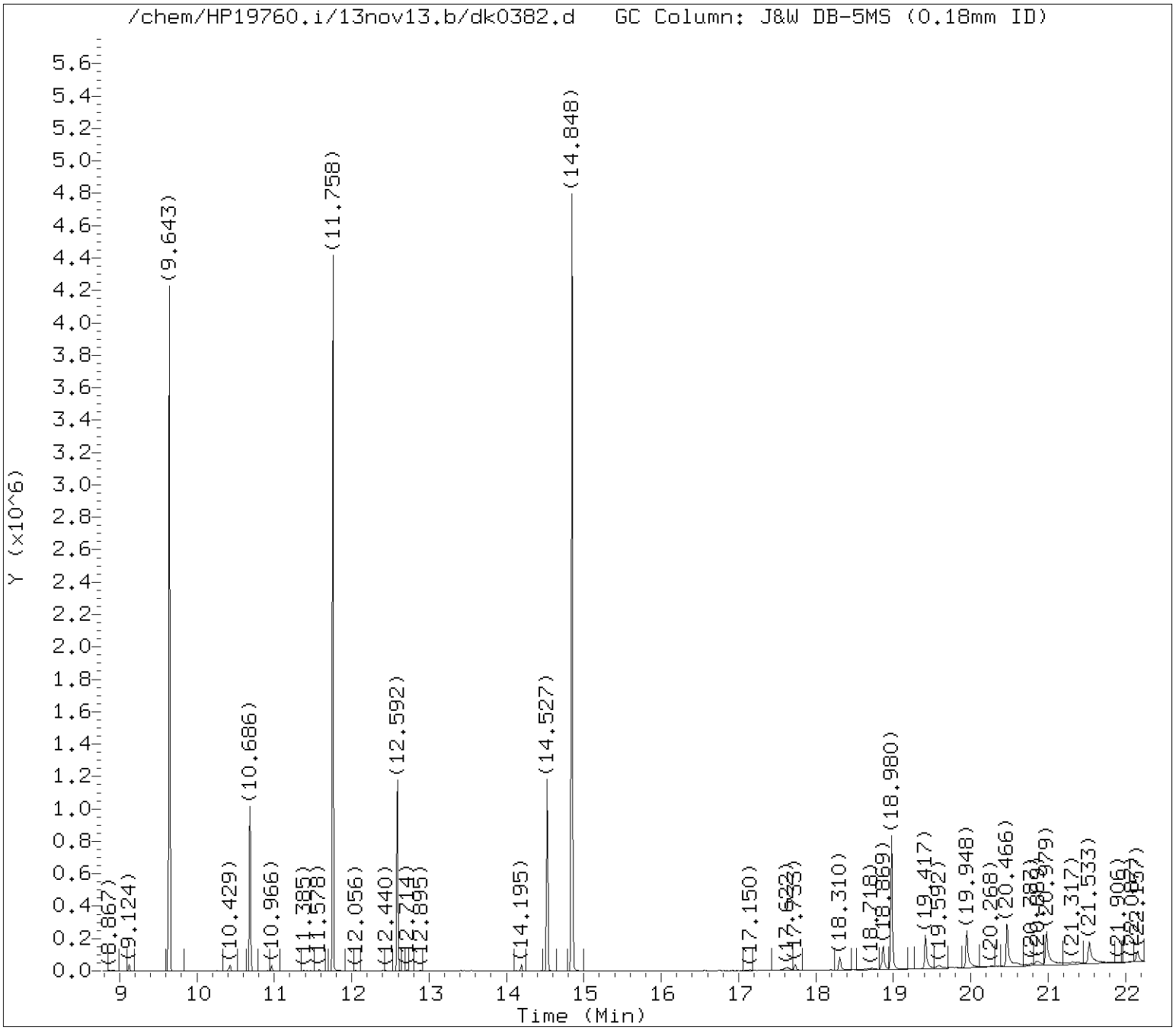
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Acenaphthene-d10 at 10.686 minutes
Chromatogram Start Time (min.): 9.284
Chromatogram End Time (min.): 11.639

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

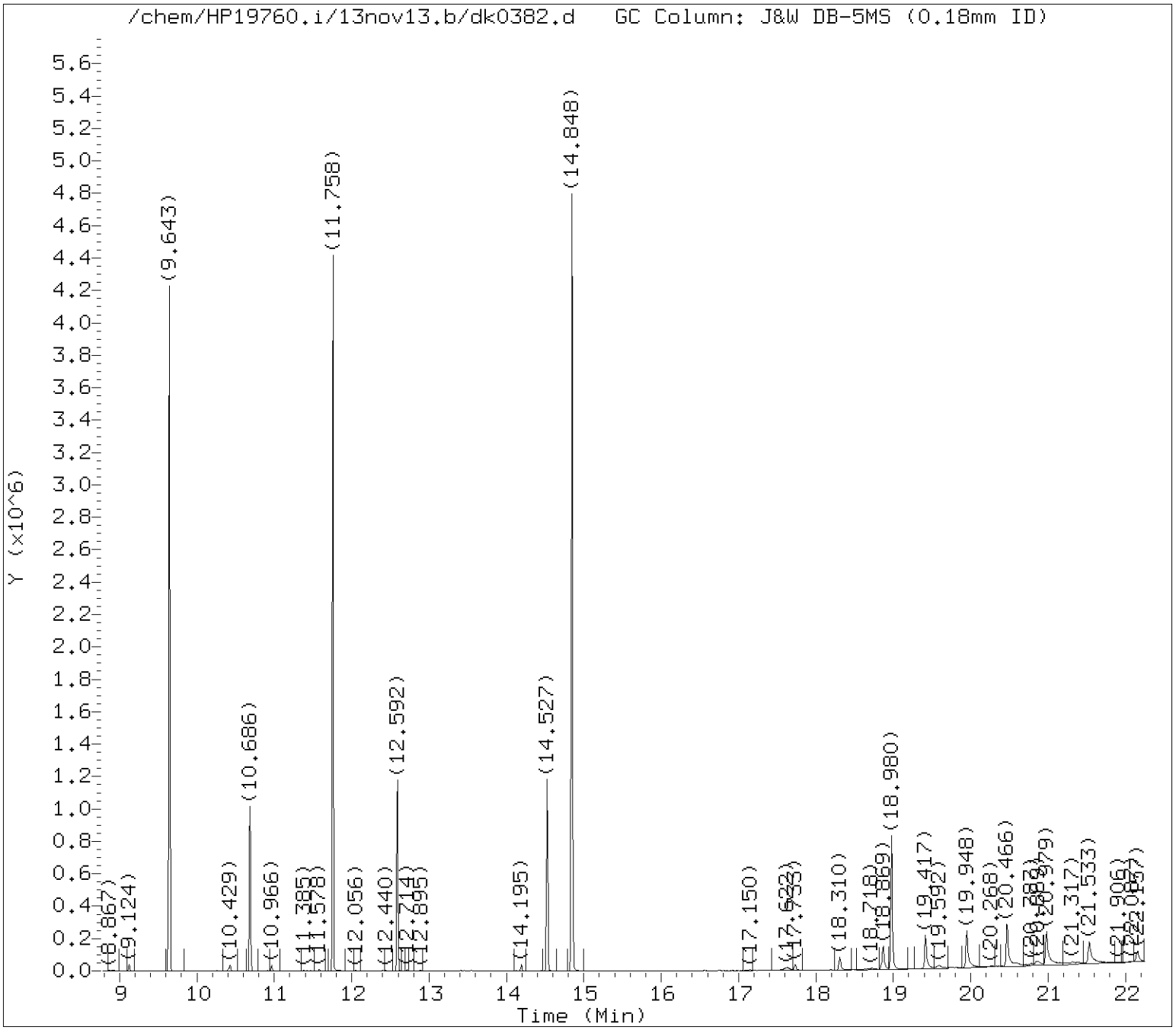
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Phenanthrene-d10 at 12.592 minutes
Chromatogram Start Time (min.): 11.639
Chromatogram End Time (min.): 13.559

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

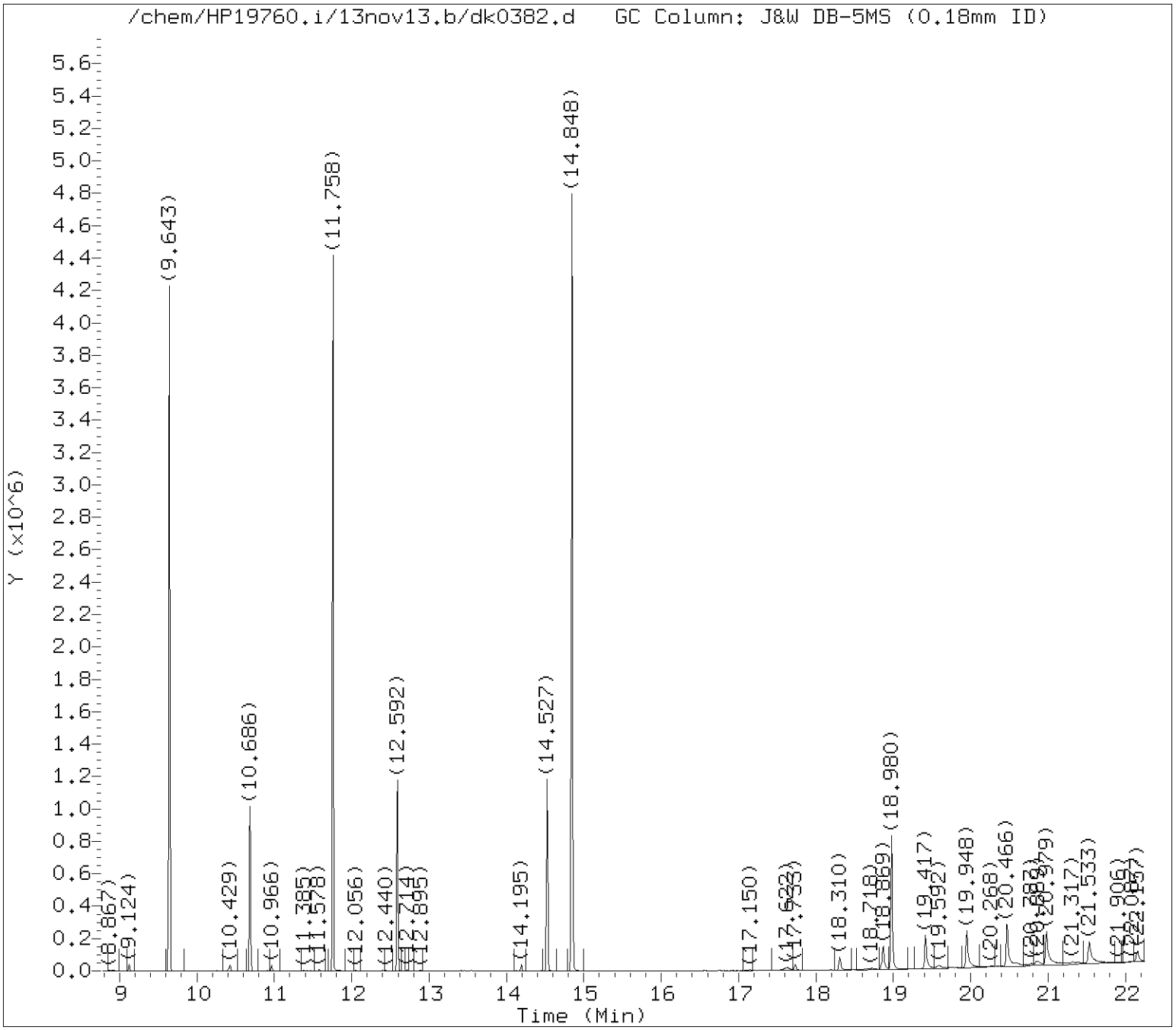
Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Pyrene-d10 at 14.527 minutes
Chromatogram Start Time (min.): 13.559
Chromatogram End Time (min.): 16.754

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346



Tentatively Identified Compounds (TICs) Chromatograms

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0382.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 05:51 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:42 jmg00346

Sample Name: SBLKWD3144 Lab Sample ID: SBLKWD314

Internal Standard referenced: Perylene-d12 at 18.980 minutes
Chromatogram Start Time (min.): 16.754
Chromatogram End Time (min.): 22.250

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Lancaster Labs

Data file : /chem/HP19760.i/13nov13.b/dk0382.d
Lab Smp Id: SBLKWD314 Client Smp ID: SBLKWD3144
Inj Date : 13-NOV-2013 05:51
Operator : jmg00346 Inst ID: HP19760.i
Smp Info : SBLKWD3144;SBLKWD314;1;3;BLANK;;;
Misc Info : 13314WAD;newall1;;1000;1000;0;dk0382;04678;
Comment : Max. number of TICs to report is 16, 5 TICs were found initially.
Method : /chem/HP19760.i/13nov13.b/8270_LVI.m
Meth Date : 13-Nov-2013 06:22 jmg00346 Quant Type: ISTD
Cal Date : 06-NOV-2013 14:06 Cal File: dk0167.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 314WAD.sub
Target Version: 3.50
Processing Host: d26cs01

Concentration Formula: Amt * DF * Uf * Vt/(Vo) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 172 Perylene-d12	18.980	1333238	5.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
19.417	443371	1.66275892	1.66275	0		0	172
Unknown				CAS #:			
19.948	534492	2.00448601	2.00448	0		0	172

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ng/ul)	FINAL(ug/L)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
20.466	720083	2.70050443	2.70050	0		0	172
Unknown				CAS #:			
20.979	646403	2.42418292	2.42418	0		0	172
Unknown				CAS #:			
21.533	517002	1.93889617	1.93889	0		0	172

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

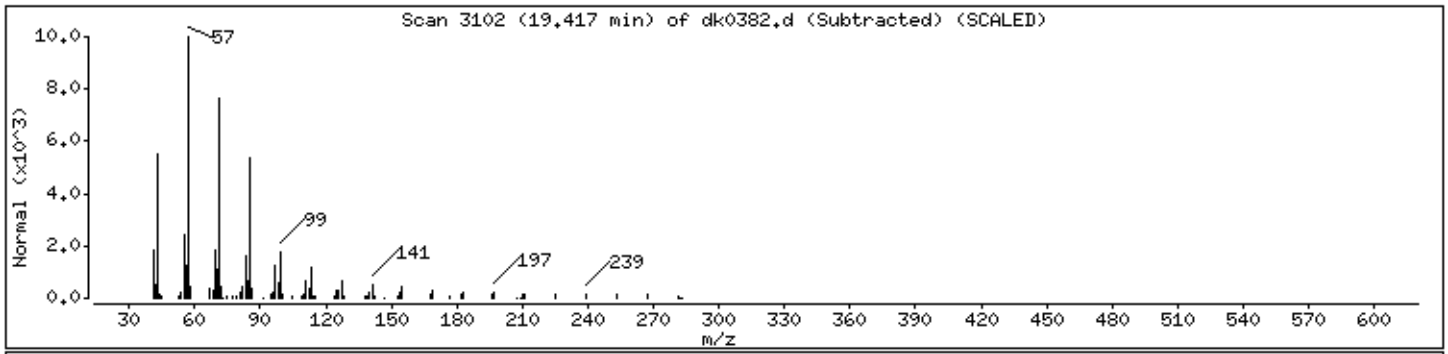
Client ID: SBLKWD3144 Instrument: HP19760.i

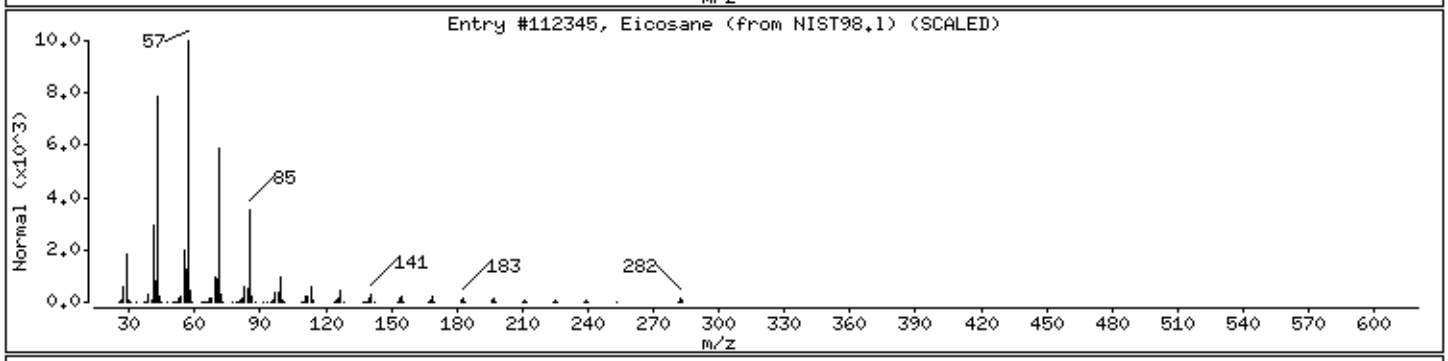
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

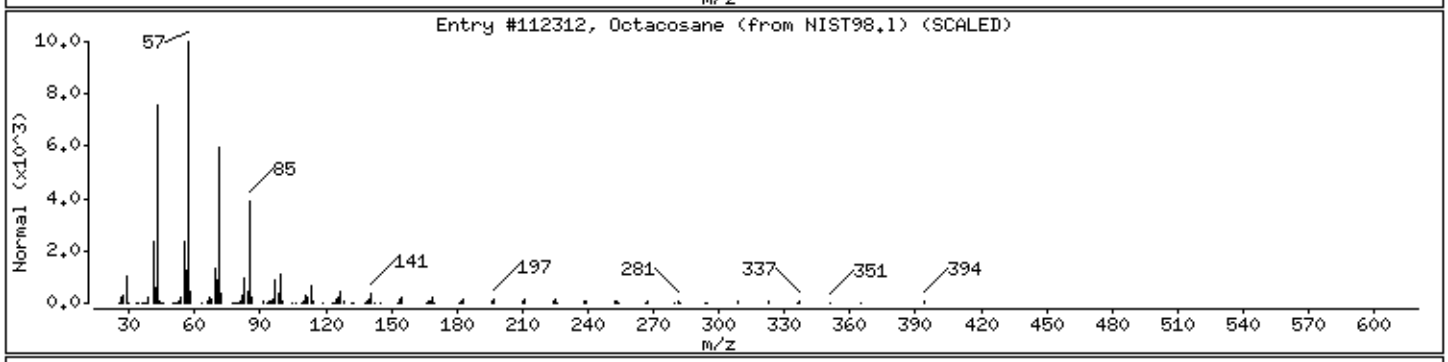
Volume Injected (uL): 0.5 Operator: jmg00346

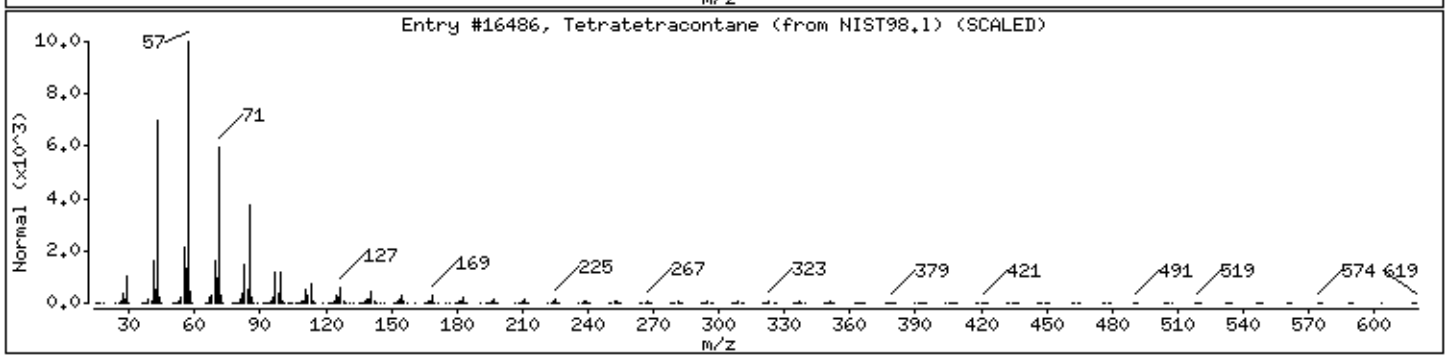
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST98.1	112345	96	C20H42	282
Octacosane	630-02-4	NIST98.1	112312	91	C28H58	394
Tetratetracontane	7098-22-8	NIST98.1	16486	91	C44H90	619









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

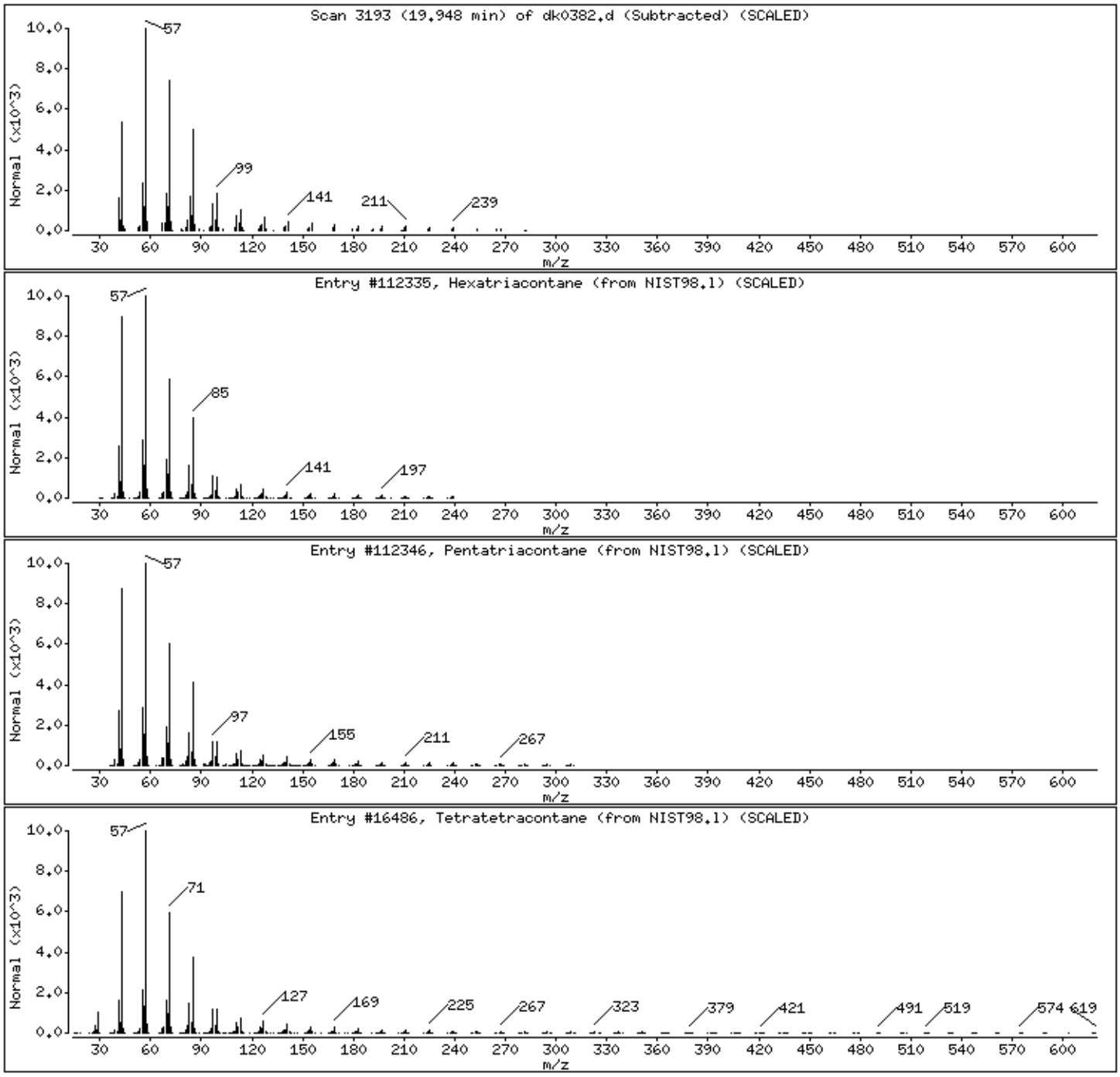
Client ID: SBLKWD3144 Instrument: HP19760.i

Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507
Pentatriacontane	630-07-9	NIST98.1	112346	91	C35H72	493
Tetratetracontane	7098-22-8	NIST98.1	16486	91	C44H90	619



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

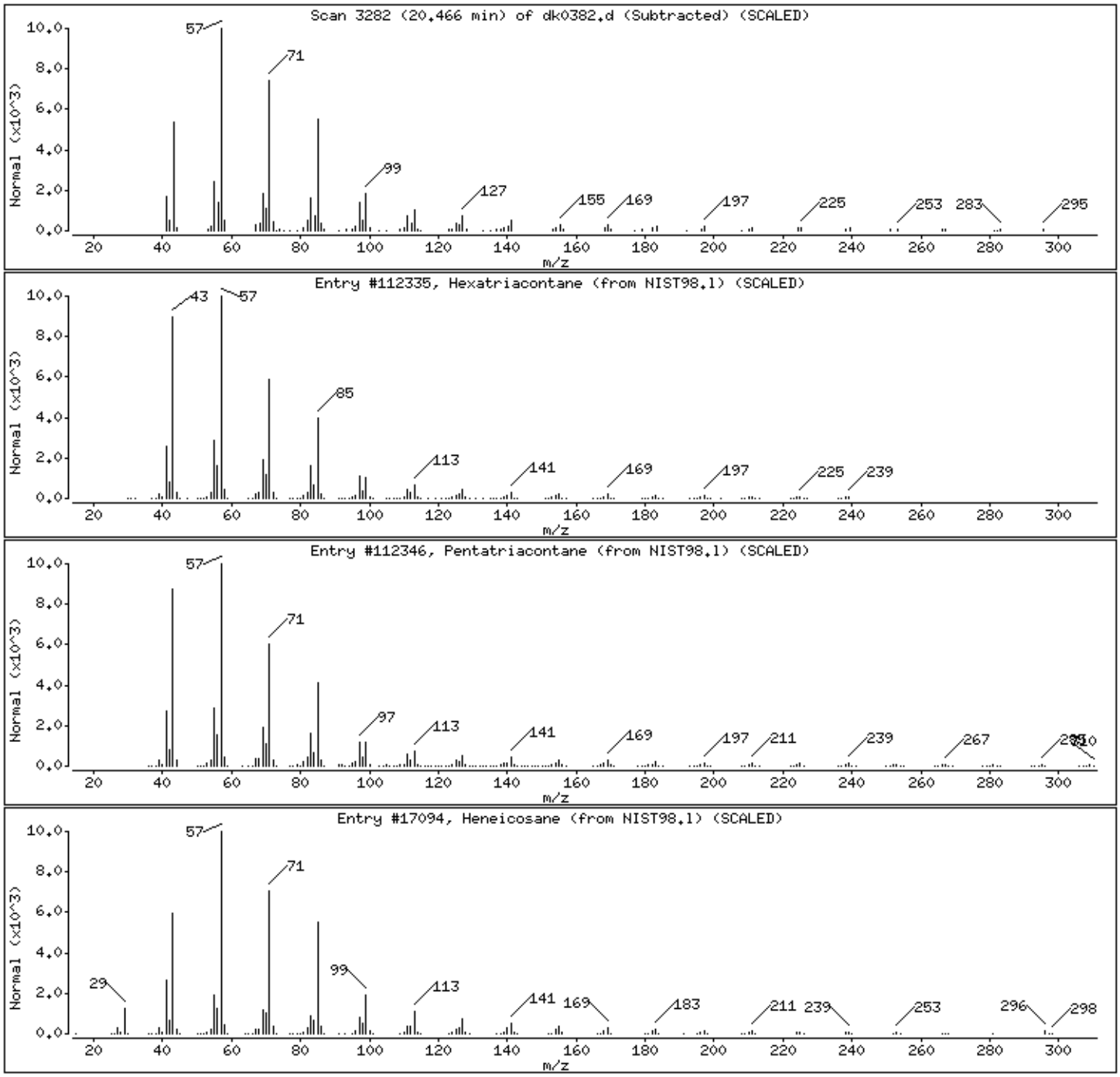
Client ID: SBLKWD3144 Instrument: HP19760.i

Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

Volume Injected (uL): 0.5 Operator: jmg00346

Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507
Pentatriacontane	630-07-9	NIST98.1	112346	91	C35H72	493
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296



Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

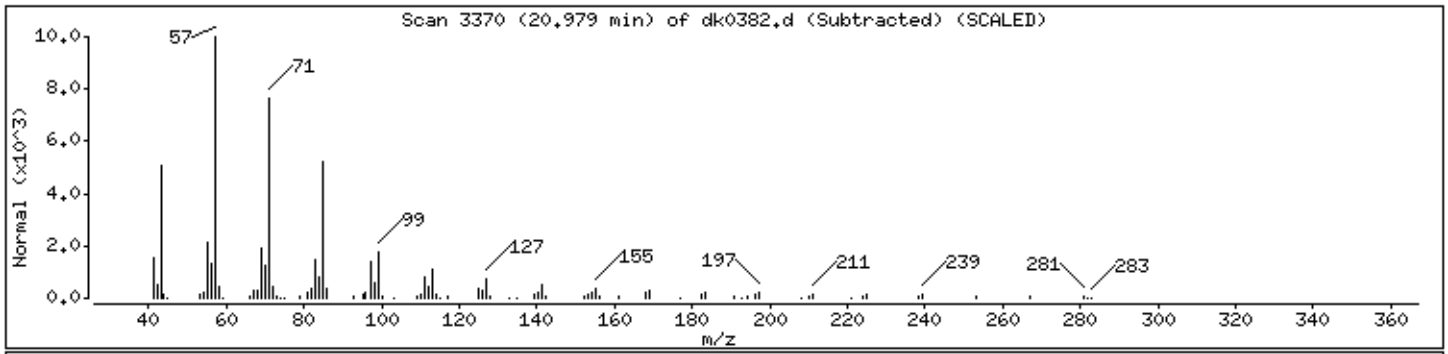
Client ID: SBLKWD3144 Instrument: HP19760.i

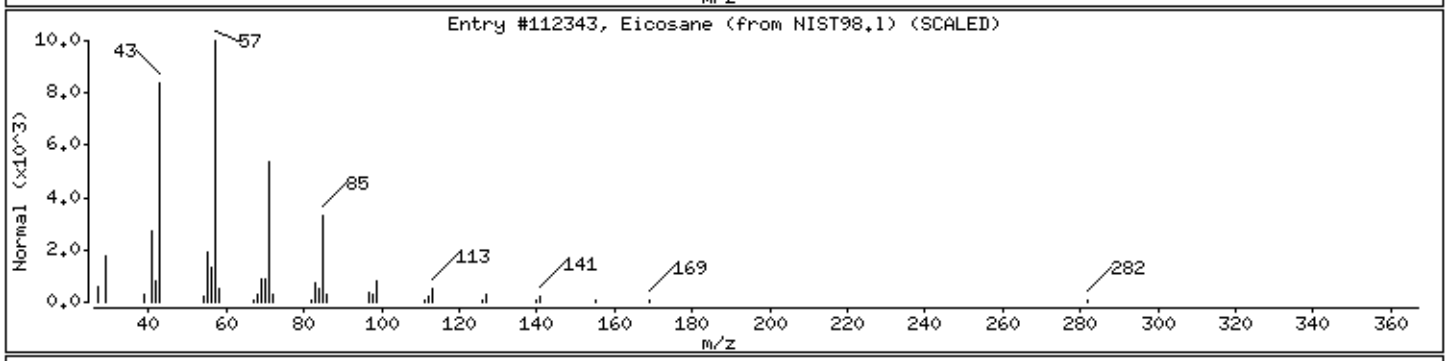
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

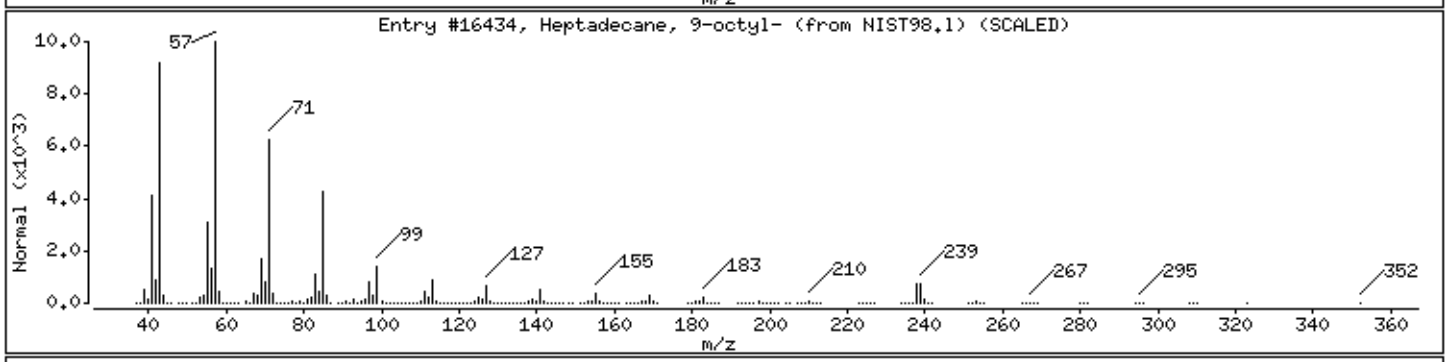
Volume Injected (uL): 0.5 Operator: jmg00346

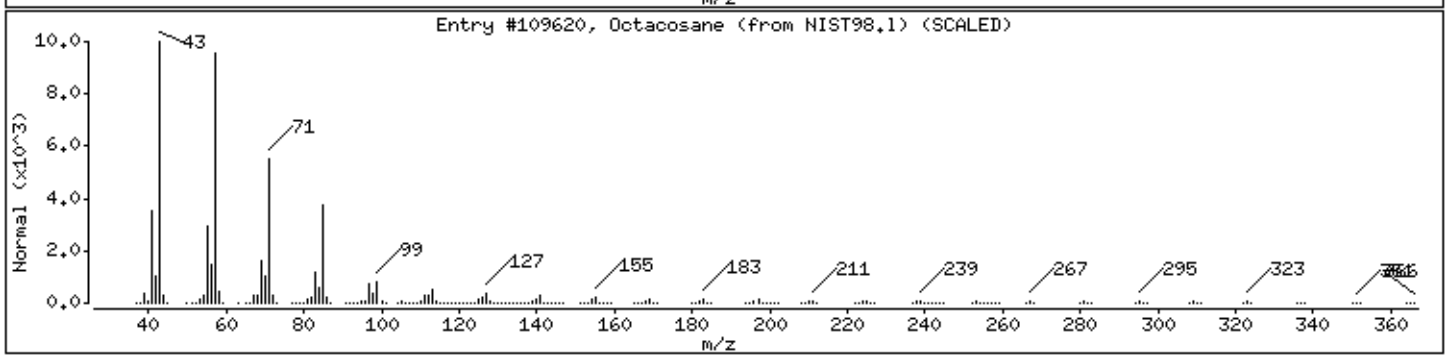
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Eicosane	112-95-8	NIST98.l	112343	96	C20H42	282
Heptadecane, 9-octyl-	7225-64-1	NIST98.l	16434	91	C25H52	352
Octacosane	630-02-4	NIST98.l	109620	91	C28H58	394









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

Data File: /chem/HP19760.i/13nov13.b/dk0382.d

Date : 13-NOV-2013 05:51

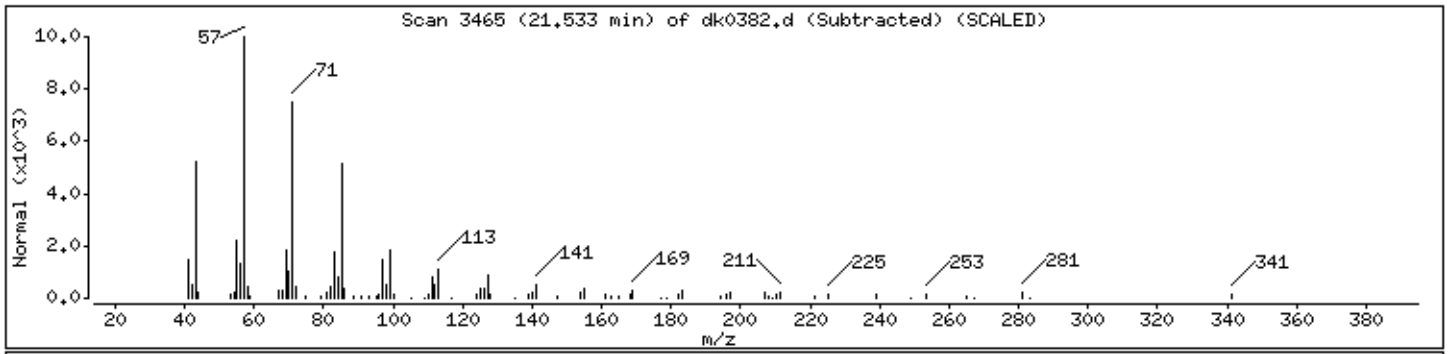
Client ID: SBLKWD3144 Instrument: HP19760.i

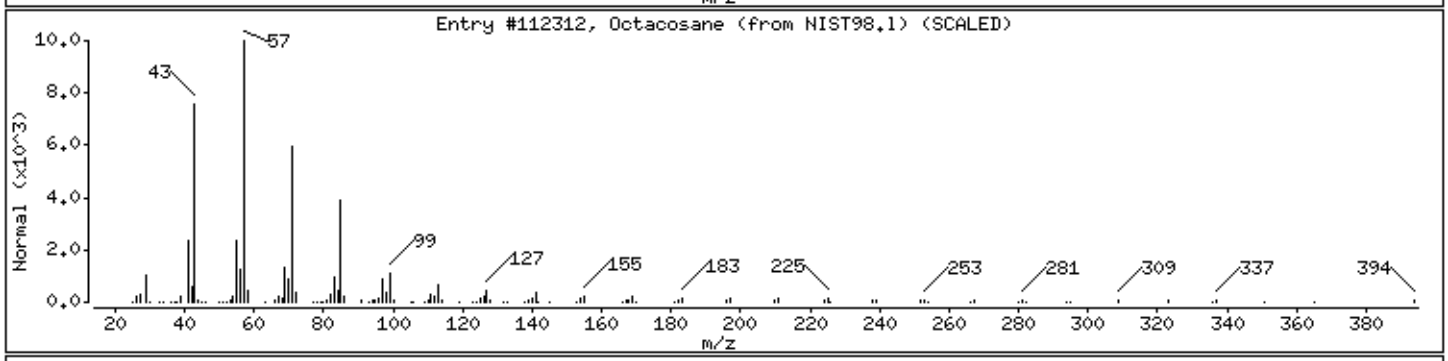
Sample Info: SBLKWD3144;SBLKWD314;1;3;BLANK;;;

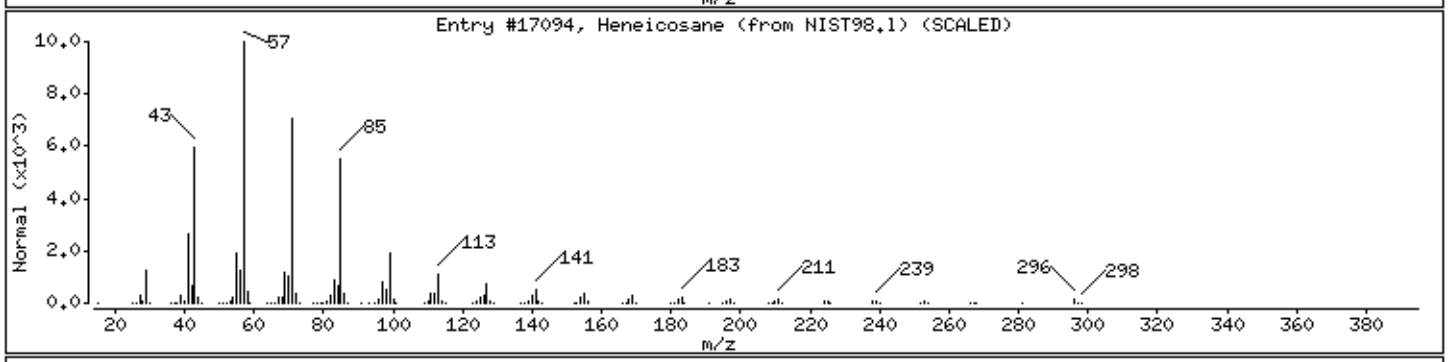
Volume Injected (uL): 0.5 Operator: jmg00346

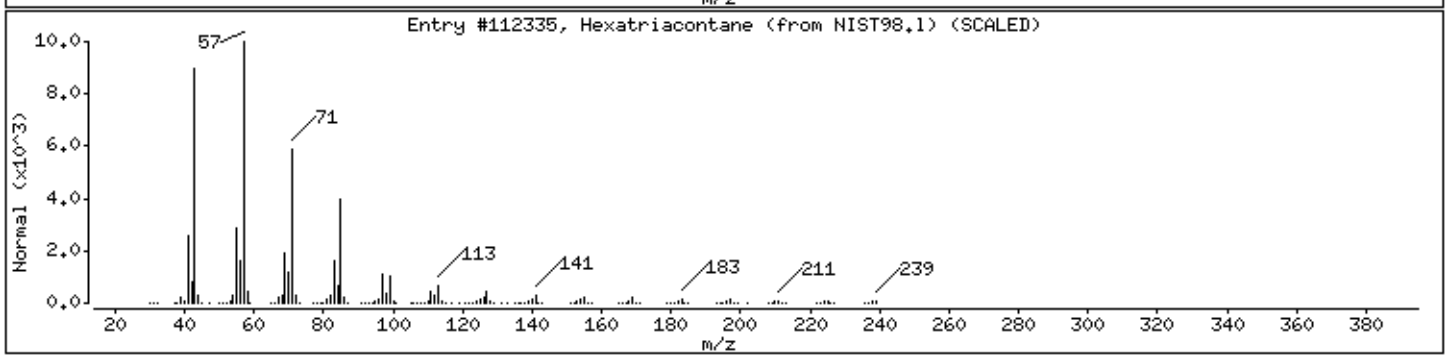
Column phase: J&W DB-5MS Column diameter: 0.18

Library Search Compound Match	CAS Number	Library	Entry	Quality	Formula	Weight
Unknown						
Octacosane	630-02-4	NIST98.1	112312	91	C28H58	394
Heneicosane	629-94-7	NIST98.1	17094	91	C21H44	296
Hexatriacontane	630-06-8	NIST98.1	112335	91	C36H74	507









Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:42.
Target 3.5 esignature user ID: jmg00346

2E101MS Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7266815

Data file: /chem/HP10623.i/13nov18.b/ck0631.d Injection date and time: **18-NOV-2013 09:56**
Data file Sample Info. Line: 2E101MS;7266815;2;3;MS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:23 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.047(0.006)	515	152	107594 (8)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	502594 (9)	20.00	
98) Acenaphthene-d10	7.998(0.000)	995	164	307763 (6)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	559040 (5)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	684320 (5)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	625511 (8)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	165134	15.250	76%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	323991	16.743	84%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	405796	16.588	83%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(-0.000)	128	303063	11.365	3788.35			0.1
70) 2-Methylnaphthalene	(2)	6.990(-0.000)	142	146536	7.743	2581.04			0.1
71) 1-Methylnaphthalene	(2)	7.082(-0.000)	142	144933	8.370	2789.86			0.1
95) Acenaphthylene	(3)	7.857(0.000)	152	226634	8.358	2786.04			0.1
99) Acenaphthene	(3)	8.029(-0.000)	153	148553	7.916	2638.68			0.1
111) Fluorene	(3)	8.527(0.000)	166	180656	8.168	2722.61			0.1
137) Phenanthrene	(4)	9.456(-0.000)	178	268283	8.253	2751.13			0.1
138) Anthracene	(4)	9.505(0.000)	178	267250	7.987	2662.37			0.1
147) Fluoranthene	(4)	10.612(-0.000)	202	308279	8.482	2827.21			0.1
154) Pyrene	(5)	10.827(-0.000)	202	322990	8.499	2833.05			0.1
166) Benzo(a)anthracene	(5)	11.995(-0.000)	228	294734	8.409	2802.84			0.1
168) Chrysene	(5)	12.026(0.000)	228	289739	8.573	2857.79			0.1
172) Benzo(b)fluoranthene	(6)	13.034(0.000)	252	309912	8.114	2704.66			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	308431	7.915	2638.41			0.1
174) Benzo(a)pyrene	(6)	13.335(0.000)	252	301618	8.091	2696.99			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(0.000)	276	316733	7.986	2661.95			0.1
178) Dibenz(a,h)anthracene	(6)	14.381(0.000)	278	262156	7.902	2634.02			0.1
179) Benzo(g,h,i)perylene	(6)	14.614(0.000)	276	268744	7.954	2651.27			0.1

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:27. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10623.i/13nov18.b/ck0631.d Injection date and time: **18-NOV-2013 09:56**
Data file Sample Info. Line: 2E101MS;7266815;2;3;MS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:23 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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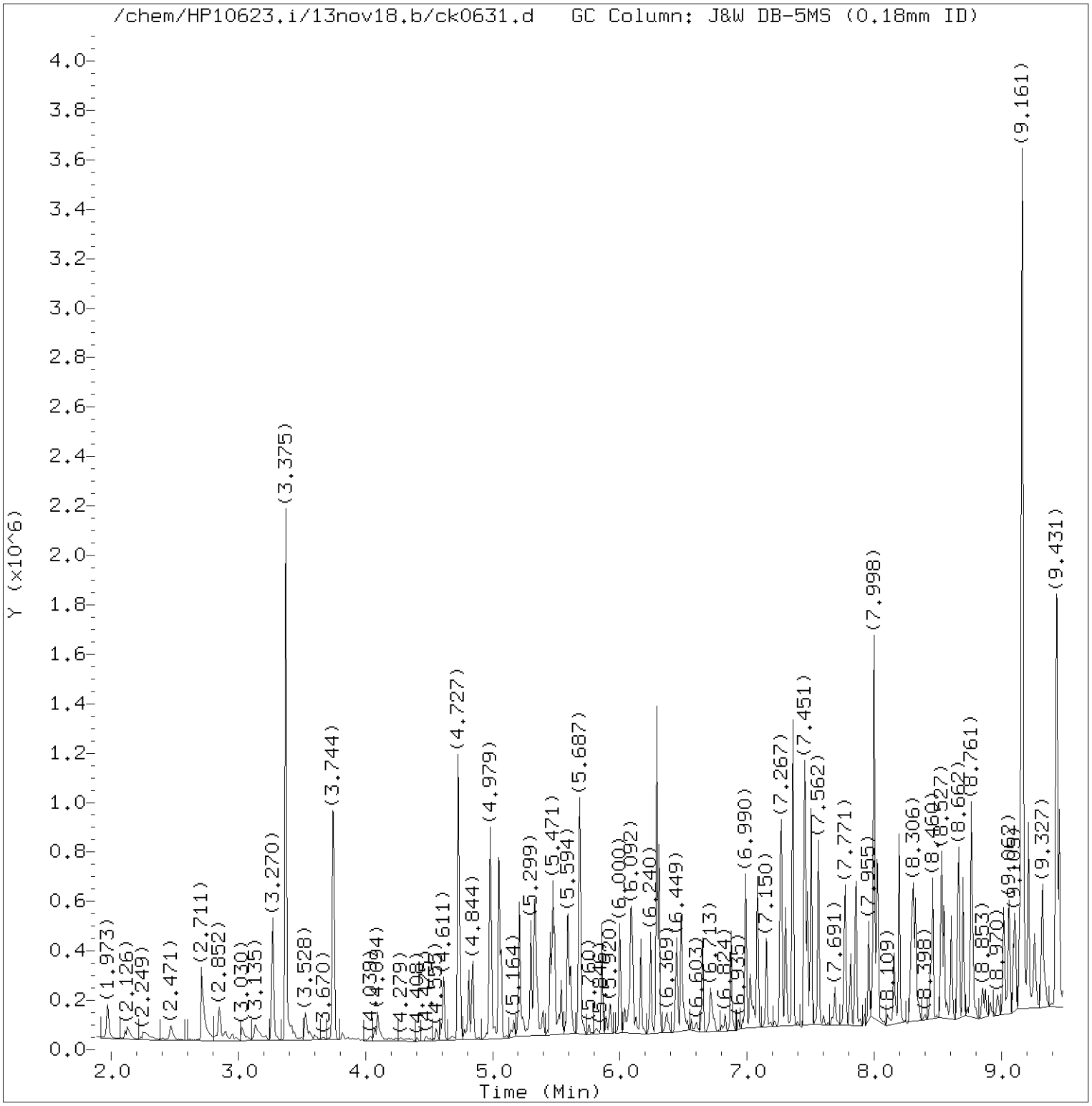
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:27. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:25. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

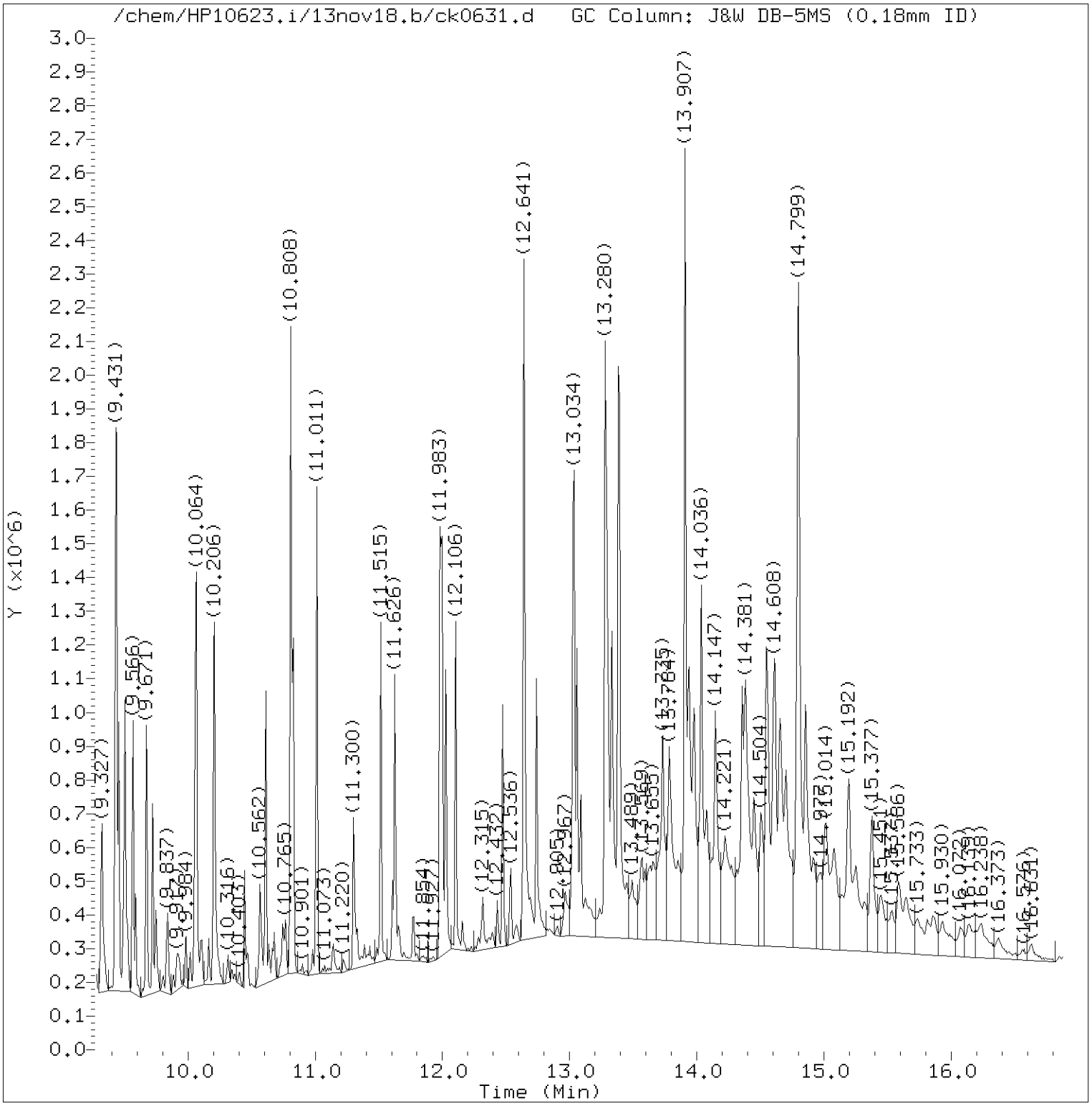
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0631.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:56 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:23 jmg00346

Sample Name: 2E101MS Lab Sample ID: 7266815

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0631.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:56 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:23 jmg00346

Sample Name: 2E101MS Lab Sample ID: 7266815

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0631.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 09:56 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:23 jmg00346

Sample Name: 2E101MS Lab Sample ID: 7266815

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.047	152	107594	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	165134	15.250
52)*Naphthalene-d8	(2)	6.289	136	502594	20.000
53) Naphthalene	(2)	6.308	128	303063	11.365
70) 2-Methylnaphthalene	(2)	6.990	142	146536	7.743
71) 1-Methylnaphthalene	(2)	7.082	142	144933	8.370
78)$2-Fluorobiphenyl	(3)	7.359	172	323991	16.743
95) Acenaphthylene	(3)	7.857	152	226634	8.358
98)*Acenaphthene-d10	(3)	7.998	164	307763	20.000
99) Acenaphthene	(3)	8.029	153	148553	7.916
111) Fluorene	(3)	8.527	166	180656	8.168
135)*Phenanthrene-d10	(4)	9.437	188	559040	20.000
137) Phenanthrene	(4)	9.456	178	268283	8.253
138) Anthracene	(4)	9.505	178	267250	7.987
147) Fluoranthene	(4)	10.612	202	308279	8.482
167)*Pyrene-d10	(5)	10.808	212	684320	20.000
154) Pyrene	(5)	10.827	202	322990	8.499
156)$Terphenyl-d14	(5)	11.011	244	405796	16.588
166) Benzo(a)anthracene	(5)	11.995	228	294734	8.409
168) Chrysene	(5)	12.026	228	289739	8.573
172) Benzo(b)fluoranthene	(6)	13.034	252	309912	8.114
173) Benzo(k)fluoranthene	(6)	13.059	252	308431	7.915
174) Benzo(a)pyrene	(6)	13.335	252	301618	8.091
175)*Perylene-d12	(6)	13.391	264	625511	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	316733	7.986
178) Dibenz(a,h)anthracene	(6)	14.381	278	262156	7.902
179) Benzo(g,h,i)perylene	(6)	14.614	276	268744	7.954

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346

2E101MSD Lancaster Labs Analysis Summary for GC/MS Semivolatiles 7266816

Data file: /chem/HP10623.i/13nov18.b/ck0632.d Injection date and time: **18-NOV-2013 10:21**
Data file Sample Info. Line: 2E101MSD;7266816;2;3;MSD;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:24 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	96370 (-3)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	449143 (-3)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	282789 (-2)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	505364 (-5)	20.00	
167) Pyrene-d10	10.809(0.000)	1452	212	626815 (-3)	20.00	
175) Perylene-d12	13.385(0.006)	1871	264	586929 (1)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.595(0.000)	82	144238	14.906	75%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.359(0.000)	172	292136	16.430	82%		69 - 120
156) Terphenyl-d14	(5)	11.011(0.000)	244	378759	16.903	85%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(0.000)	128	210532	8.835	2944.88			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	137231	8.114	2704.80			0.1
71) 1-Methylnaphthalene	(2)	7.082(0.000)	142	138238	8.933	2977.66			0.1
95) Acenaphthylene	(3)	7.857(-0.000)	152	223288	8.962	2987.32			0.1
99) Acenaphthene	(3)	8.029(0.000)	153	143721	8.335	2778.30			0.1
111) Fluorene	(3)	8.527(0.000)	166	173755	8.550	2849.87			0.1
137) Phenanthrene	(4)	9.456(0.000)	178	252911	8.607	2868.96			0.1
138) Anthracene	(4)	9.505(0.000)	178	259453	8.578	2859.22			0.1
147) Fluoranthene	(4)	10.612(0.000)	202	288141	8.770	2923.19			0.1
154) Pyrene	(5)	10.827(0.000)	202	307613	8.837	2945.71			0.1
166) Benzo(a)anthracene	(5)	11.995(0.000)	228	291232	9.071	3023.62			0.1
168) Chrysene	(5)	12.026(0.000)	228	277987	8.980	2993.42			0.1
172) Benzo(b)fluoranthene	(6)	13.034(-0.000)	252	309862	8.646	2881.99			0.1
173) Benzo(k)fluoranthene	(6)	13.059(0.000)	252	315264	8.622	2874.14			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	293104	8.379	2793.15			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.356(-0.000)	276	315196	8.469	2823.16			0.1
178) Dibenz(a,h)anthracene	(6)	14.381(-0.000)	278	264030	8.482	2827.23			0.1
179) Benzo(g,h,i)perylene	(6)	14.615(-0.000)	276	272877	8.607	2869.00			0.1

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:27. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10623.i/13nov18.b/ck0632.d Injection date and time: **18-NOV-2013 10:21**
Data file Sample Info. Line: 2E101MSD;7266816;2;3;MSD;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:24 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 5 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 15 g

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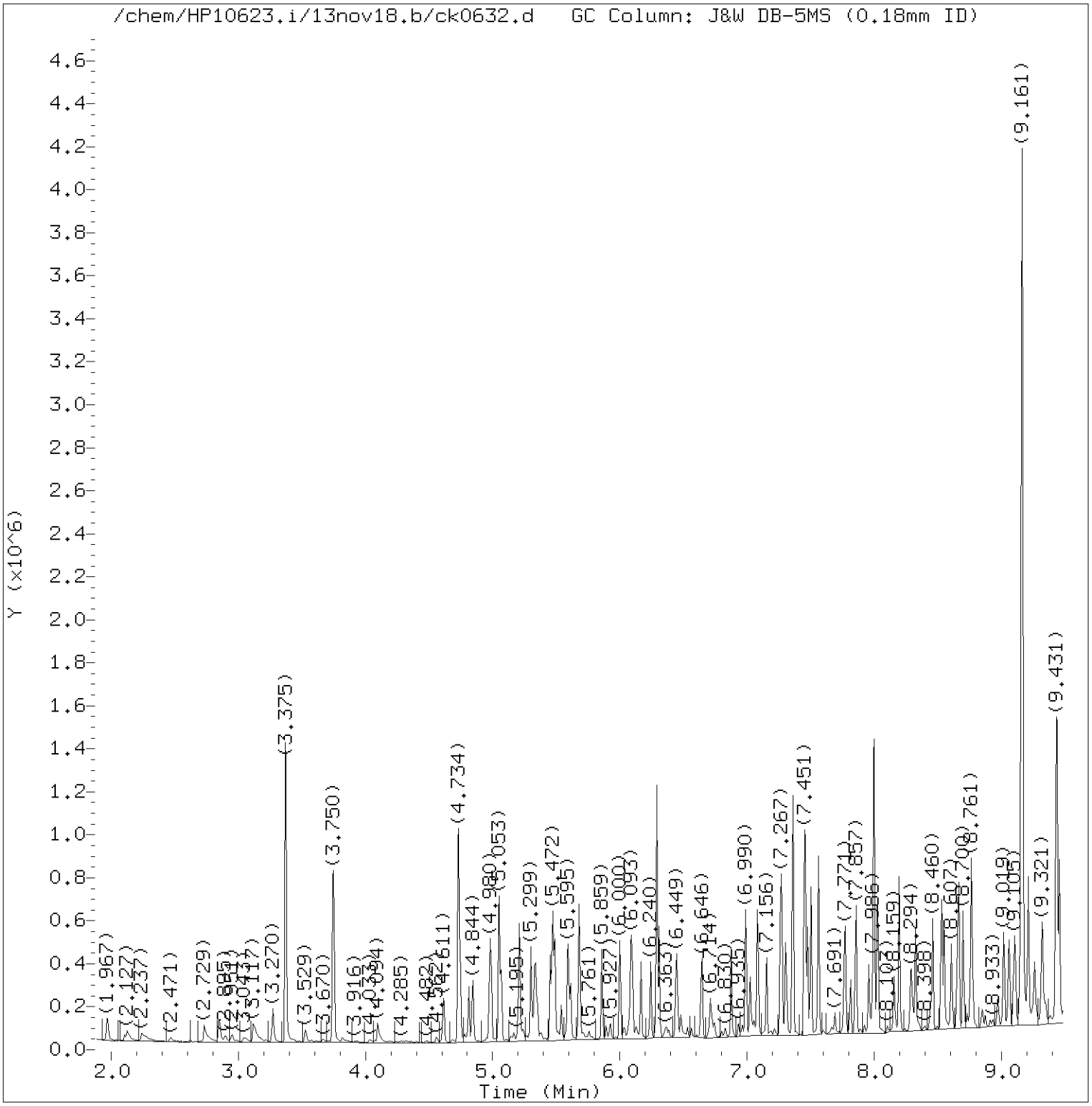
Total number of targets = 18

Digitally signed by Joseph M. Gambler on 11/19/2013 at 05:27. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:25. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

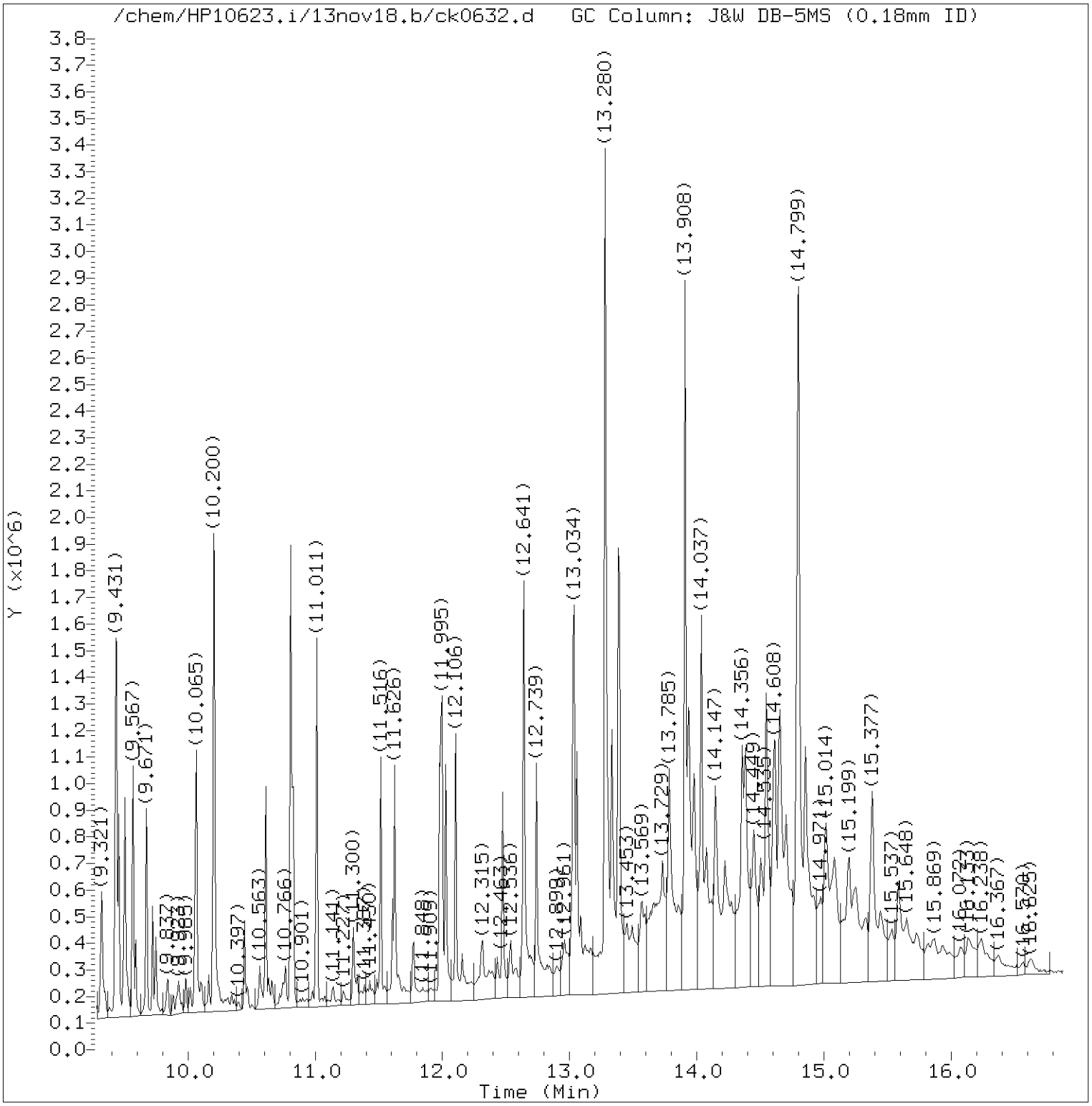
Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0632.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 10:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:24 jmg00346

Sample Name: 2E101MSD Lab Sample ID: 7266816

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0632.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 10:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:24 jmg00346

Sample Name: 2E101MSD Lab Sample ID: 7266816

Digitally signed by Joseph M. Gambler
on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0632.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 10:21 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:24 jmg00346

Sample Name: 2E101MSD Lab Sample ID: 7266816

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	96370	20.000
38)$Nitrobenzene-d5	(2)	5.595	82	144238	14.906
52)*Naphthalene-d8	(2)	6.289	136	449143	20.000
53) Naphthalene	(2)	6.308	128	210532	8.835
70) 2-Methylnaphthalene	(2)	6.990	142	137231	8.114
71) 1-Methylnaphthalene	(2)	7.083	142	138238	8.933
78)$2-Fluorobiphenyl	(3)	7.359	172	292136	16.430
95) Acenaphthylene	(3)	7.857	152	223288	8.962
98)*Acenaphthene-d10	(3)	7.999	164	282789	20.000
99) Acenaphthene	(3)	8.029	153	143721	8.335
111) Fluorene	(3)	8.527	166	173755	8.550
135)*Phenanthrene-d10	(4)	9.437	188	505364	20.000
137) Phenanthrene	(4)	9.456	178	252911	8.607
138) Anthracene	(4)	9.505	178	259453	8.578
147) Fluoranthene	(4)	10.612	202	288141	8.770
167)*Pyrene-d10	(5)	10.809	212	626815	20.000
154) Pyrene	(5)	10.827	202	307613	8.837
156)$Terphenyl-d14	(5)	11.011	244	378759	16.903
166) Benzo(a)anthracene	(5)	11.995	228	291232	9.071
168) Chrysene	(5)	12.026	228	277987	8.980
172) Benzo(b)fluoranthene	(6)	13.034	252	309862	8.646
173) Benzo(k)fluoranthene	(6)	13.059	252	315264	8.622
174) Benzo(a)pyrene	(6)	13.336	252	293104	8.379
175)*Perylene-d12	(6)	13.385	264	586929	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.356	276	315196	8.469
178) Dibenz(a,h)anthracene	(6)	14.381	278	264030	8.482
179) Benzo(g,h,i)perylene	(6)	14.615	276	272877	8.607

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/19/2013 at 05:27.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP10623.i/13nov18.b/ck0623.d Injection date and time: **18-NOV-2013 06:38**
Data file Sample Info. Line: 316LCLCS3;316LCLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
21) 1,4-Dichlorobenzene-d4	5.053(0.000)	516	152	107514 (8)	20.00	
52) Naphthalene-d8	6.289(0.000)	717	136	479532 (4)	20.00	
98) Acenaphthene-d10	7.999(0.000)	995	164	297174 (3)	20.00	
135) Phenanthrene-d10	9.437(0.000)	1229	188	531149 (0)	20.00	
167) Pyrene-d10	10.808(0.000)	1452	212	638813 (-2)	20.00	
175) Perylene-d12	13.391(0.000)	1872	264	518634 (-10)	20.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
38) Nitrobenzene-d5	(2)	5.594(0.000)	82	913446	88.414	88%		60 - 120
78) 2-Fluorobiphenyl	(3)	7.365(-0.001)	172	1831323	98.008	98%		69 - 120
156) Terphenyl-d14	(5)	11.018(-0.001)	244	2245602	98.333	98%		66 - 137

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
53) Naphthalene	(2)	6.308(0.000)	128	1247104	49.016	1633.88			0.1
70) 2-Methylnaphthalene	(2)	6.990(0.000)	142	846467	46.879	1562.65			0.1
71) 1-Methylnaphthalene	(2)	7.082(0.000)	142	833967	50.476	1682.53			0.1
95) Acenaphthylene	(3)	7.857(-0.000)	152	1390787	53.119	1770.63			0.1
99) Acenaphthene	(3)	8.029(0.000)	153	883188	48.740	1624.66			0.1
111) Fluorene	(3)	8.533(0.000)	166	1038357	48.619	1620.64			0.1
137) Phenanthrene	(4)	9.456(0.000)	178	1521537	49.266	1642.21			0.1
138) Anthracene	(4)	9.511(0.000)	178	1579078	49.671	1655.70			0.1
147) Fluoranthene	(4)	10.612(0.000)	202	1694450	49.067	1635.57			0.1
154) Pyrene	(5)	10.827(0.000)	202	1789999	50.457	1681.91			0.1
166) Benzo(a)anthracene	(5)	11.995(-0.000)	228	1548591	47.327	1577.57			0.1
168) Chrysene	(5)	12.032(0.000)	228	1533045	48.594	1619.81			0.1
172) Benzo(b)fluoranthene	(6)	13.040(-0.000)	252	1564412	49.399	1646.64			0.1
173) Benzo(k)fluoranthene	(6)	13.065(-0.000)	252	1607174	49.744	1658.14			0.1
174) Benzo(a)pyrene	(6)	13.336(-0.000)	252	1490851	48.234	1607.80			0.1
177) Indeno(1,2,3-cd)pyrene	(6)	14.362(0.000)	276	1625115	49.418	1647.27			0.1
178) Dibenz(a,h)anthracene	(6)	14.387(-0.000)	278	1372305	49.889	1662.97			0.1
179) Benzo(g,h,i)perylene	(6)	14.621(-0.000)	276	1389303	49.591	1653.05			0.1

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Data file: /chem/HP10623.i/13nov18.b/ck0623.d Injection date and time: **18-NOV-2013 06:38**
Data file Sample Info. Line: 316LCLCS3;316LCLCS;2;3;LCS;;; Instrument ID: **HP10623.i** Batch: **13316SLC**
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Blank Data file reference: **/chem/HP10623.i/13nov18.b/ck0622.d**

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: **SL4677mic**
Calibration date and time (Last Method Edit): 18-NOV-2013 11:52
Mid Level Daily Calibration Standard Reference: **/chem/HP10623.i/13nov18.b/ck0621.d**

Matrix: SOIL Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/Kg

Sample Concentration Formula: On-Column Amount * DF * (GpcCleanup+1)*Uf*Vt/(Vi*Ws)

Dilution Factor (DF): 1 GpcCleanup (No = 0, Yes = 1): 0 Unit Correction Factor (Uf): 1
Final Extract Volume (Vt): 1000 ul Volume Injected (Vi): 1 ul Sample Weight (Ws): 30 g

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Total number of targets = 18

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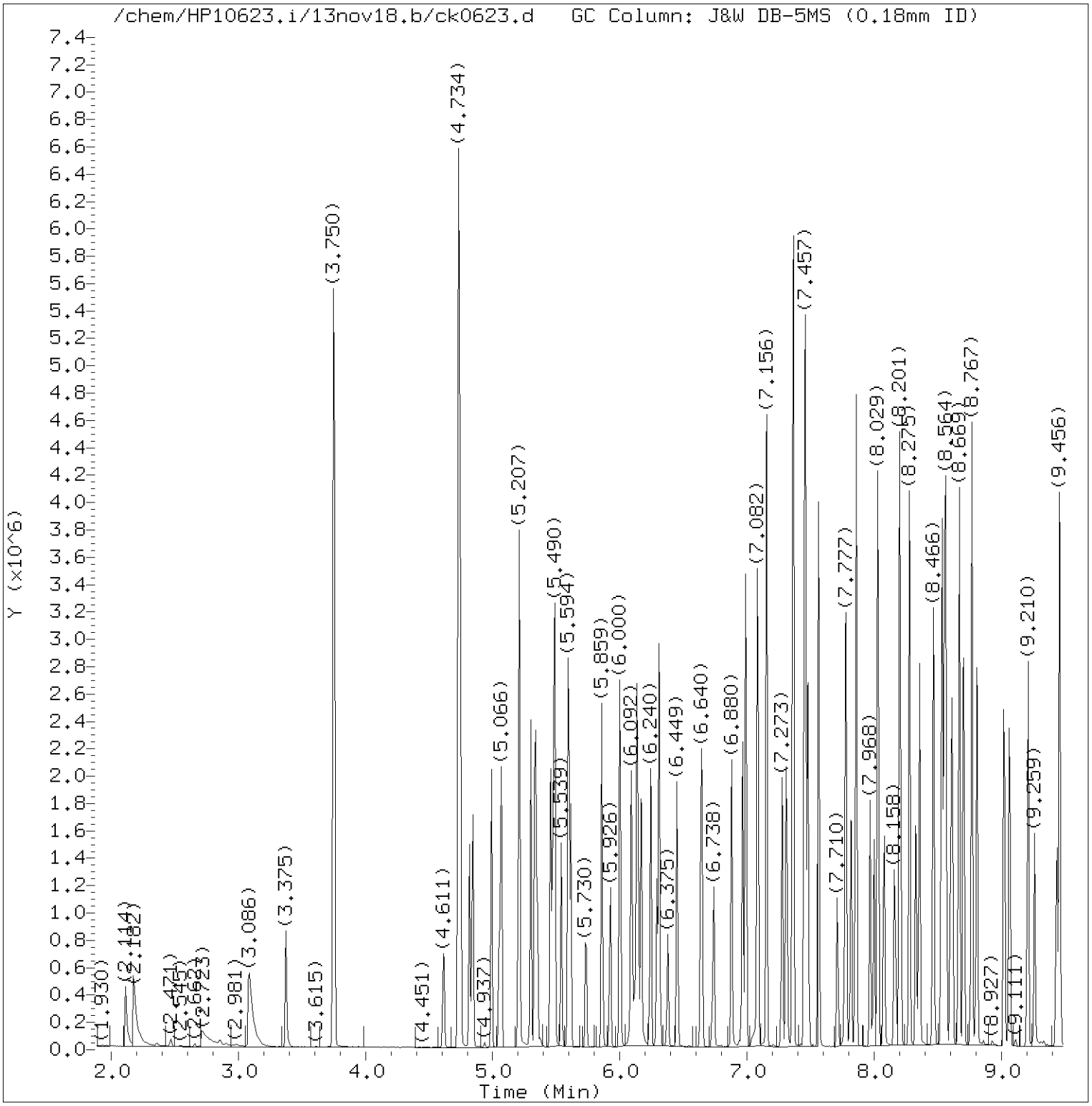
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/20/2013 at 11:23. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

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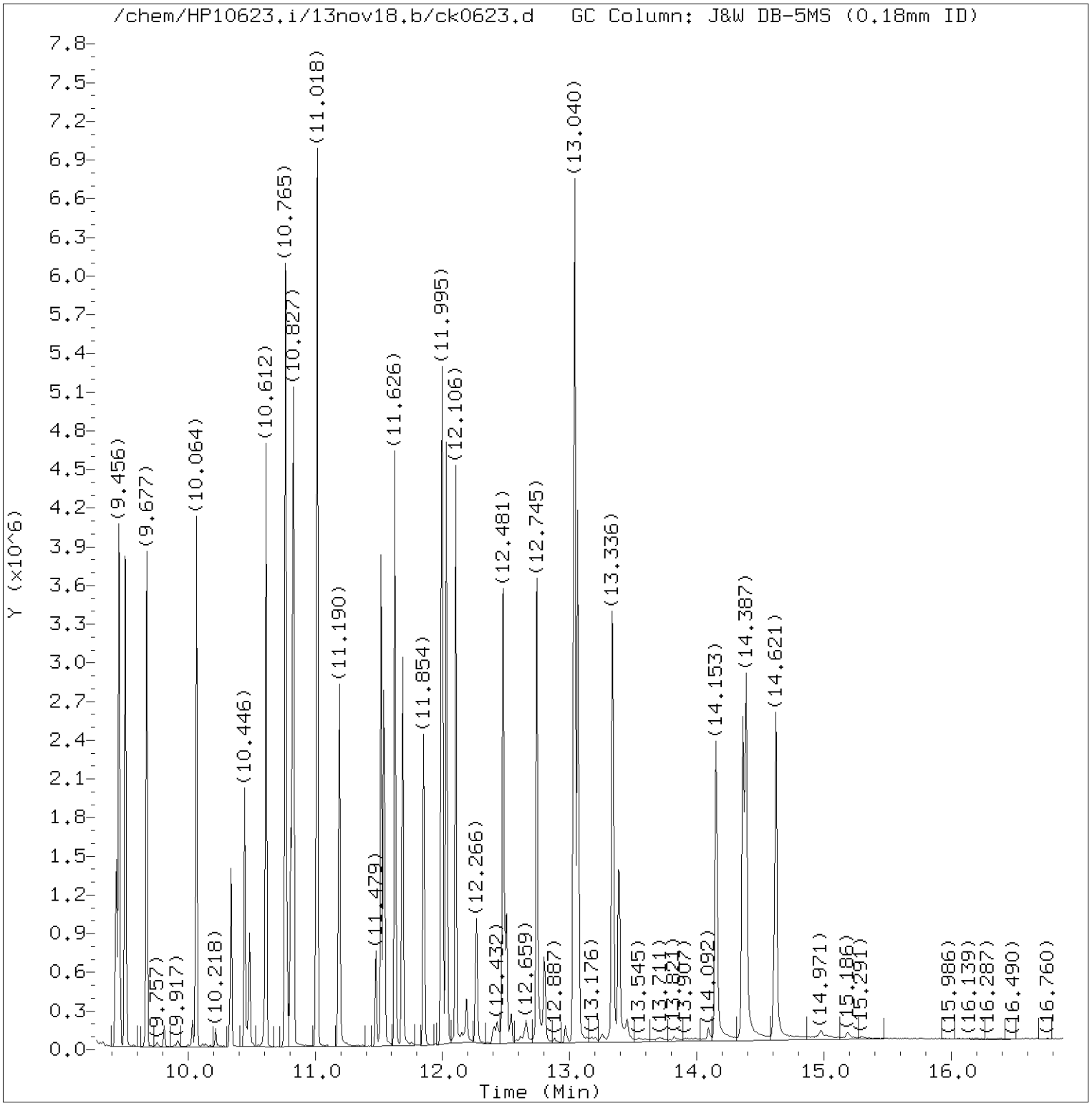
on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

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on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP10623.i/13nov18.b/ck0623.d Instrument ID: HP10623.i
Injection date and time: 18-NOV-2013 06:38 Analyst ID: jmg00346

Method used: /chem/HP10623.i/13nov18.b/m8270.m Sublist used: SL4677mic
Calibration date and time: 18-NOV-2013 11:52
Date, time and analyst ID of latest file update: 19-Nov-2013 04:22 jmg00346

Sample Name: 316LCLCS3 Lab Sample ID: 316LCLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
21)*1,4-Dichlorobenzene-d4	(1)	5.053	152	107514	20.000
38)$Nitrobenzene-d5	(2)	5.594	82	913446	88.414
52)*Naphthalene-d8	(2)	6.289	136	479532	20.000
53) Naphthalene	(2)	6.308	128	1247104	49.016
70) 2-Methylnaphthalene	(2)	6.990	142	846467	46.879
71) 1-Methylnaphthalene	(2)	7.082	142	833967	50.476
78)$2-Fluorobiphenyl	(3)	7.365	172	1831323	98.008
95) Acenaphthylene	(3)	7.857	152	1390787	53.119
98)*Acenaphthene-d10	(3)	7.999	164	297174	20.000
99) Acenaphthene	(3)	8.029	153	883188	48.740
111) Fluorene	(3)	8.533	166	1038357	48.619
135)*Phenanthrene-d10	(4)	9.437	188	531149	20.000
137) Phenanthrene	(4)	9.456	178	1521537	49.266
138) Anthracene	(4)	9.511	178	1579078	49.671
147) Fluoranthene	(4)	10.612	202	1694450	49.067
167)*Pyrene-d10	(5)	10.808	212	638813	20.000
154) Pyrene	(5)	10.827	202	1789999	50.457
156)$Terphenyl-d14	(5)	11.018	244	2245602	98.333
166) Benzo(a)anthracene	(5)	11.995	228	1548591	47.327
168) Chrysene	(5)	12.032	228	1533045	48.594
172) Benzo(b)fluoranthene	(6)	13.040	252	1564412	49.399
173) Benzo(k)fluoranthene	(6)	13.065	252	1607174	49.744
174) Benzo(a)pyrene	(6)	13.336	252	1490851	48.234
175)*Perylene-d12	(6)	13.391	264	518634	20.000
177) Indeno(1,2,3-cd)pyrene	(6)	14.362	276	1625115	49.418
178) Dibenz(a,h)anthracene	(6)	14.387	278	1372305	49.889
179) Benzo(g,h,i)perylene	(6)	14.621	276	1389303	49.591

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/19/2013 at 05:25.
Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	120892 (-12)	5.00	
52) Naphthalene-d8	7.888(0.000)	1124	136	460968 (-12)	5.00	
92) Acenaphthene-d10	10.692(0.000)	1605	164	275060 (-13)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	468730 (-16)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	624100 (-15)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	486341 (-16)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.995(-0.004)	112	1267629	35.315	71%		10 - 107
13) Phenol-d6	(1)	5.417(-0.002)	99	1261161	25.583	51%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.001)	82	942807	22.224	89%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.648(0.000)	172	1699505	24.742	99%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.764(-0.001)	330	467611	64.728	129%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2185522	28.081	112%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.271(-0.000)	77	293811	8.520	8.52			0.3
14) Phenol	(1)	5.434(-0.001)	94	379428	6.648	6.65			0.1
16) bis(2-Chloroethyl)ether	(1)	5.557(-0.000)	93	477438	10.603	10.60			0.1
17) 2-Chlorophenol	(1)	5.609(-0.000)	128	415804	11.779	11.78			0.1
18) 1,3-Dichlorobenzene	(1)	5.836(-0.000)	146	398778	10.503	10.50			0.1
20) 1,4-Dichlorobenzene	(1)	5.953(-0.000)	146	406917	10.595	10.59			0.1
23) Benzyl alcohol	(1)	6.157(0.000)	108	265599	10.638	10.64			1
24) 1,2-Dichlorobenzene	(1)	6.174(0.000)	146	389648	10.847	10.85			0.1
26) 2-Methylphenol	(1)	6.349(-0.000)	108	392693	11.085	11.09			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384(0.000)	45	495936	8.874	8.87			0.1
30) Acetophenone	(1)	6.553(0.000)	105	611688	11.043	11.04			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.582(0.000)	70	327969	10.287	10.29			0.1
33) 4-Methylphenol	(1)	6.594(-0.000)	108	414899	10.483	10.48			0.1
35) Hexachloroethane	(1)	6.687(0.000)	117	155409	9.573	9.57			0.3
37) Nitrobenzene	(2)	6.804(-0.000)	77	500542	11.116	11.12			0.1
40) Isophorone	(2)	7.194(-0.000)	82	866777	11.295	11.29			0.1
42) 2-Nitrophenol	(2)	7.299(-0.000)	139	209911	13.587	13.59			0.1
45) 2,4-Dimethylphenol	(2)	7.416(-0.000)	107	433732	11.553	11.55			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.568(-0.000)	93	530880	10.600	10.60			0.1
49) 2,4-Dichlorophenol	(2)	7.684(-0.000)	162	344323	13.003	13.00			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.806(-0.000)	180	358390	12.114	12.11			0.1
53) Naphthalene	(2)	7.917(-0.000)	128	1143893	11.639	11.64			0.03
55) 4-Chloroaniline	(2)	8.028(0.000)	127	426994	10.485	10.49			0.1
58) Hexachlorobutadiene	(2)	8.145(0.000)	225	215991	12.525	12.52			0.1
61) Caprolactam	(2)	8.564(0.002)	113	49308	4.173	4.17			1
63) 4-Chloro-3-methylphenol	(2)	8.844(0.000)	107	390680	12.286	12.29			0.1
65) 2-Methylnaphthalene	(2)	9.030(0.000)	142	746175	11.393	11.39			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.299(-0.000)	237	382072	25.395	25.39			1
70) 2,4,6-Trichlorophenol	(3)	9.497(-0.000)	196	263728	13.112	13.11			0.1
71) 2,4,5-Trichlorophenol	(3)	9.549(-0.000)	196	281999	13.569	13.57			0.1
75) 1,1'-Biphenyl	(3)	9.794(-0.000)	154	927411	11.611	11.61			0.1
76) 2-Chloronaphthalene	(3)	9.800(-0.000)	162	746895	12.190	12.19			0.1
82) Diphenyl ether	(3)	9.975(-0.000)	170	520226	11.771	11.77			0.1
83) 2-Nitroaniline	(3)	9.986(-0.000)	138	250512	13.127	13.13			0.1
86) Dimethylphthalate	(3)	10.330(-0.000)	163	816134	11.778	11.78			0.5
88) 2,6-Dinitrotoluene	(3)	10.400(-0.000)	165	204316	13.306	13.31			0.1
90) Acenaphthylene	(3)	10.458(-0.000)	152	1192493	12.821	12.82			0.03
91) 3-Nitroaniline	(3)	10.651(-0.000)	138	203052	11.520	11.52			0.1
93) Acenaphthene	(3)	10.738(0.000)	153	750190	11.725	11.72			0.03
94) 2,4-Dinitrophenol	(3)	10.820(0.000)	184	224664	24.676	24.68			3
96) 4-Nitrophenol	(3)	10.954(0.000)	109	83144	7.396	7.40			3
97) Dibenzofuran	(3)	11.001(0.000)	168	1103482	12.128	12.13			0.1
98) 2,4-Dinitrotoluene	(3)	11.018(0.000)	165	261806	13.304	13.30			0.3
102) Diethylphthalate	(3)	11.391(0.000)	149	812290	11.898	11.90			0.5
103) Fluorene	(3)	11.467(0.000)	166	890456	12.158	12.16			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.496(0.000)	204	455908	12.552	12.55			0.1
107) 4-Nitroaniline	(3)	11.508(0.000)	138	196483	10.837	10.84			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.554(-0.000)	198	154619	12.924	12.92			1
109) N-Nitrosodiphenylamine	(4)	11.642(0.000)	169	702790	12.045	12.04			0.1
120) 4-Bromophenyl-phenylether	(4)	12.073(-0.000)	248	242060	13.087	13.09			0.1
122) Hexachlorobenzene	(4)	12.120(-0.000)	284	248308	13.579	13.58			0.03
124) Atrazine	(4)	12.306(-0.000)	200	253957	13.368	13.37			0.5
125) Pentachlorophenol	(4)	12.370(0.000)	266	145104	10.581	10.58			0.3
131) Phenanthrene	(4)	12.621(0.000)	178	1249049	11.948	11.95			0.03
134) Anthracene	(4)	12.685(0.000)	178	1274591	12.228	12.23			0.03
135) Carbazole	(4)	12.901(0.000)	167	1248150	12.373	12.37			0.1
137) Di-n-butylphthalate	(4)	13.414(0.000)	149	1451444	12.149	12.15			0.5
142) Fluoranthene	(4)	14.224(0.000)	202	1543294	13.124	13.12			0.03
146) Pyrene	(5)	14.562(-0.000)	202	1609250	12.145	12.15			0.03
153) Butylbenzylphthalate	(5)	15.693(-0.000)	149	670169	11.884	11.88			0.5
158) Benzo(a)anthracene	(5)	16.538(-0.000)	228	1450367	12.900	12.90			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.538(-0.000)	252	361561	8.904	8.90			0.5
161) Chrysene	(5)	16.602(-0.000)	228	1399242	12.655	12.66			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.754(-0.000)	149	889986	11.998	12.00			0.5
166) Di-n-octylphthalate	(6)	17.908(-0.000)	149	1558933	10.940	10.94			0.5
168) Benzo(b)fluoranthene	(6)	18.374(-0.000)	252	1377314	12.022	12.02			0.03
170) Benzo(k)fluoranthene	(6)	18.420(0.000)	252	1450296	12.552	12.55			0.03
171) Benzo(a)pyrene	(6)	18.893(-0.000)	252	1311554	12.472	12.47			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.577(0.000)	276	1408418	15.269	15.27			0.03
177) Dibenz(a,h)anthracene	(6)	20.624(0.000)	278	1238469	15.855	15.86			0.03
178) Benzo(g,h,i)perylene	(6)	20.938(0.000)	276	1213531	15.608	15.61			0.03

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Data file: /chem/HP19760.i/13nov13.b/dk0383.d Injection date and time: **13-NOV-2013 06:18**
Data file Sample Info. Line: 314WDLCS4;314WDLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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Total number of targets = 71

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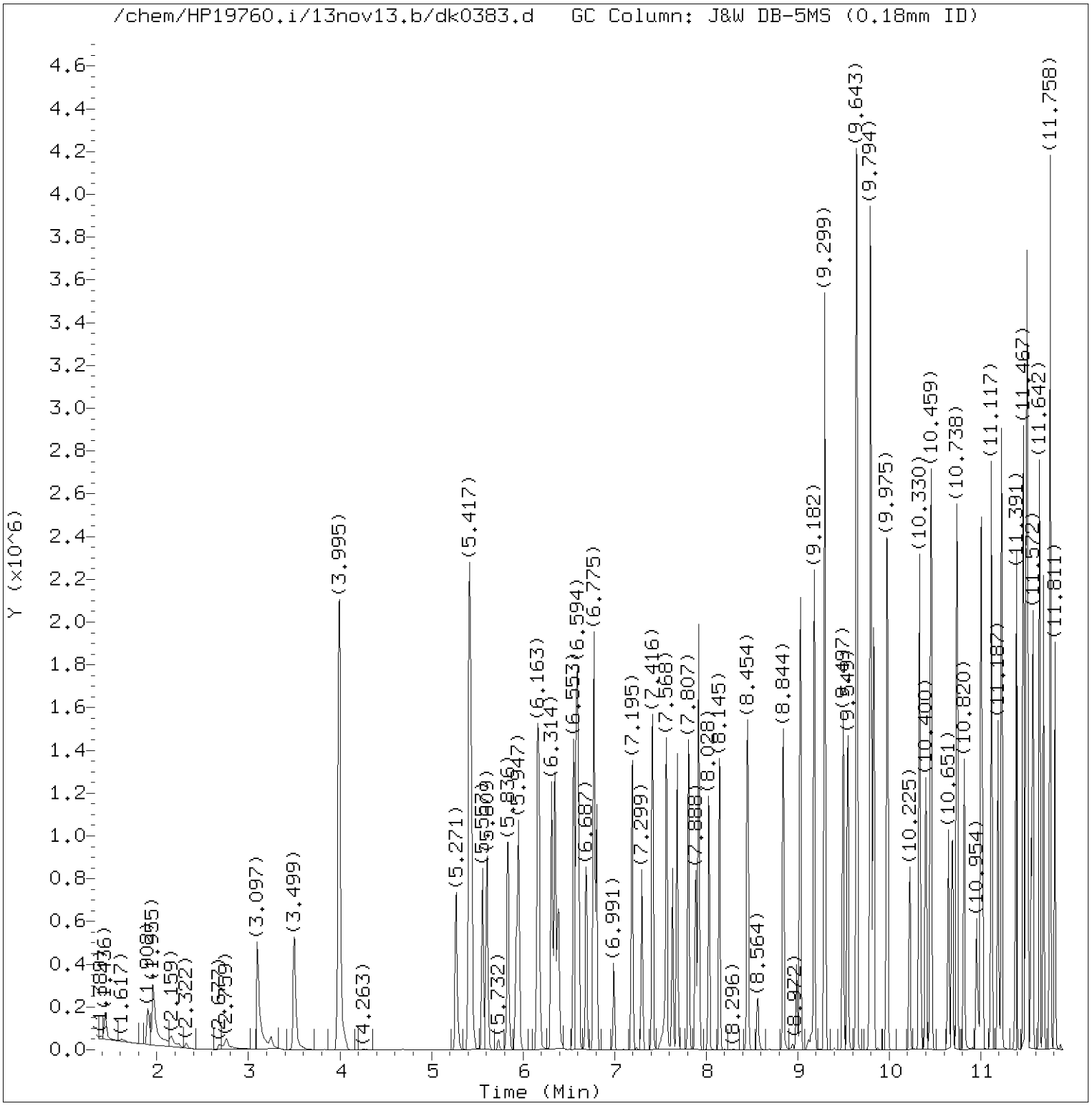
Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:42. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

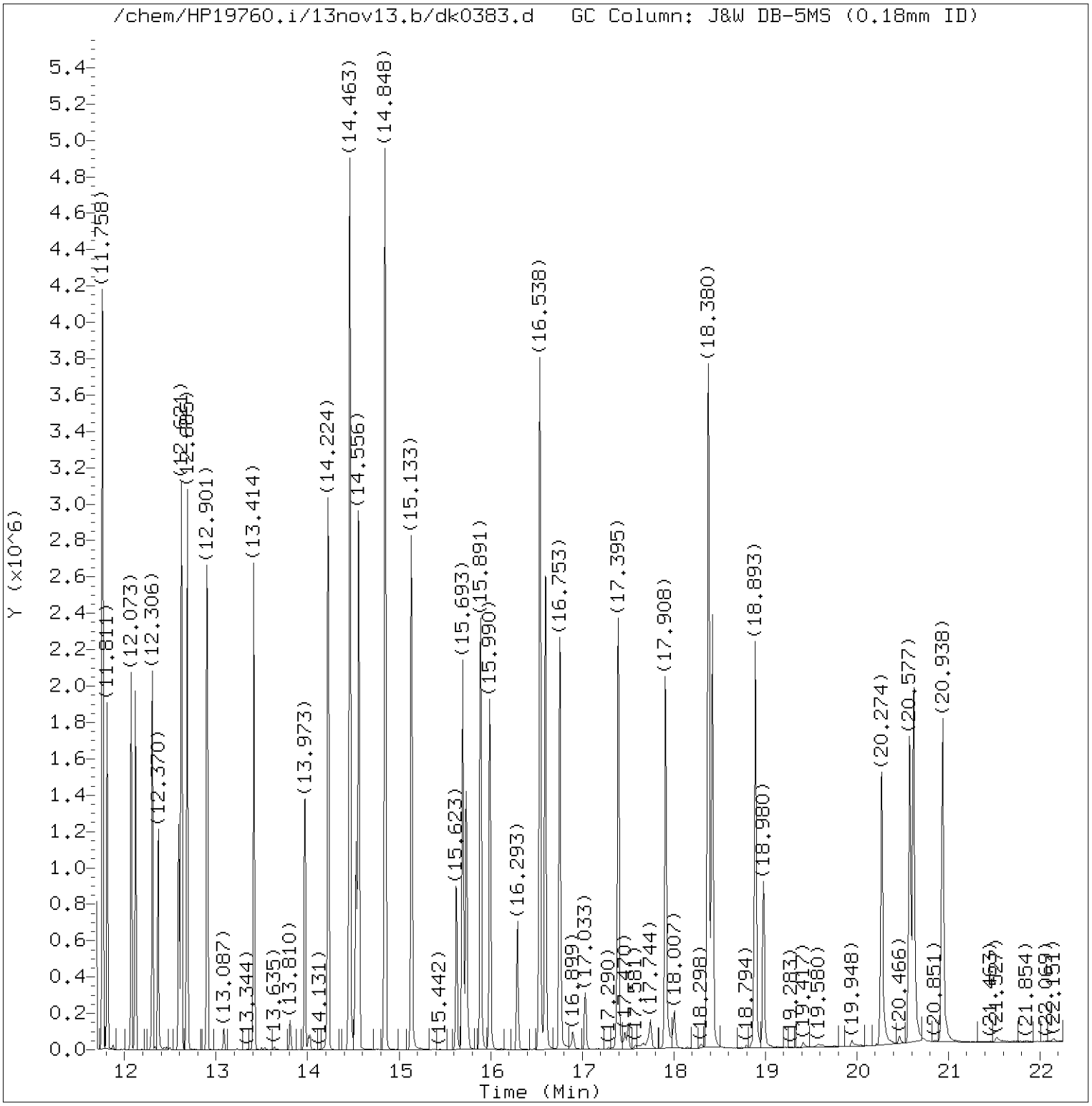
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.995	112	1267629	35.315
11) Benzaldehyde	(1)	5.271	77	293811	8.520
13)$Phenol-d6	(1)	5.417	99	1261161	25.583
14) Phenol	(1)	5.434	94	379428	6.648
16) bis(2-Chloroethyl)ether	(1)	5.557	93	477438	10.603
17) 2-Chlorophenol	(1)	5.609	128	415804	11.779
18) 1,3-Dichlorobenzene	(1)	5.836	146	398778	10.503
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	120892	5.000
20) 1,4-Dichlorobenzene	(1)	5.953	146	406917	10.595
23) Benzyl alcohol	(1)	6.157	108	265599	10.638
24) 1,2-Dichlorobenzene	(1)	6.175	146	389648	10.847
26) 2-Methylphenol	(1)	6.349	108	392693	11.085
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	495936	8.874
30) Acetophenone	(1)	6.553	105	611688	11.043
31) N-Nitroso-di-n-propylamine	(1)	6.583	70	327969	10.287
33) 4-Methylphenol	(1)	6.594	108	414899	10.483
35) Hexachloroethane	(1)	6.687	117	155409	9.573
36)$Nitrobenzene-d5	(2)	6.775	82	942807	22.224
37) Nitrobenzene	(2)	6.804	77	500542	11.116
40) Isophorone	(2)	7.195	82	866777	11.295
42) 2-Nitrophenol	(2)	7.299	139	209911	13.587
45) 2,4-Dimethylphenol	(2)	7.416	107	433732	11.553
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	530880	10.600
49) 2,4-Dichlorophenol	(2)	7.684	162	344323	13.003
51) 1,2,4-Trichlorobenzene	(2)	7.807	180	358390	12.114
52)*Naphthalene-d8	(2)	7.888	136	460968	5.000
53) Naphthalene	(2)	7.917	128	1143893	11.639
55) 4-Chloroaniline	(2)	8.028	127	426994	10.485
58) Hexachlorobutadiene	(2)	8.145	225	215991	12.525
61) Caprolactam	(2)	8.564	113	49308	4.173
63) 4-Chloro-3-methylphenol	(2)	8.844	107	390680	12.286
65) 2-Methylnaphthalene	(2)	9.031	142	746175	11.393
67) Hexachlorocyclopentadiene	(3)	9.299	237	382072	25.395
70) 2,4,6-Trichlorophenol	(3)	9.497	196	263728	13.112
71) 2,4,5-Trichlorophenol	(3)	9.549	196	281999	13.569
72)$2-Fluorobiphenyl	(3)	9.648	172	1699505	24.742
75) 1,1'-Biphenyl	(3)	9.794	154	927411	11.611
76) 2-Chloronaphthalene	(3)	9.800	162	746895	12.190
82) Diphenyl ether	(3)	9.975	170	520226	11.771
83) 2-Nitroaniline	(3)	9.986	138	250512	13.127

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) Dimethylphthalate	(3)	10.330	163	816134	11.778
88) 2,6-Dinitrotoluene	(3)	10.400	165	204316	13.306
90) Acenaphthylene	(3)	10.459	152	1192493	12.821
91) 3-Nitroaniline	(3)	10.651	138	203052	11.520
92)*Acenaphthene-d10	(3)	10.692	164	275060	5.000
93) Acenaphthene	(3)	10.738	153	750190	11.725
94) 2,4-Dinitrophenol	(3)	10.820	184	224664	24.676
96) 4-Nitrophenol	(3)	10.954	109	83144	7.396
97) Dibenzofuran	(3)	11.001	168	1103482	12.128
98) 2,4-Dinitrotoluene	(3)	11.018	165	261806	13.304
102) Diethylphthalate	(3)	11.391	149	812290	11.898
103) Fluorene	(3)	11.467	166	890456	12.158
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	455908	12.552
107) 4-Nitroaniline	(3)	11.508	138	196483	10.837
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	154619	12.924
109) N-Nitrosodiphenylamine	(4)	11.642	169	702790	12.045
112)$2,4,6-Tribromophenol	(3)	11.764	330	467611	64.728
120) 4-Bromophenyl-phenylether	(4)	12.073	248	242060	13.087
122) Hexachlorobenzene	(4)	12.120	284	248308	13.579
124) Atrazine	(4)	12.306	200	253957	13.368
125) Pentachlorophenol	(4)	12.370	266	145104	10.581
130)*Phenanthrene-d10	(4)	12.592	188	468730	5.000
131) Phenanthrene	(4)	12.621	178	1249049	11.948
134) Anthracene	(4)	12.685	178	1274591	12.228
135) Carbazole	(4)	12.901	167	1248150	12.373
137) Di-n-butylphthalate	(4)	13.414	149	1451444	12.149
142) Fluoranthene	(4)	14.224	202	1543294	13.124
145)*Pyrene-d10	(5)	14.527	212	624100	5.000
146) Pyrene	(5)	14.562	202	1609250	12.145
149)$Terphenyl-d14	(5)	14.848	244	2185522	28.081
153) Butylbenzylphthalate	(5)	15.693	149	670169	11.884
158) Benzo(a)anthracene	(5)	16.538	228	1450367	12.900
159) 3,3'-Dichlorobenzidine	(5)	16.538	252	361561	8.904
161) Chrysene	(5)	16.602	228	1399242	12.655
162) bis(2-Ethylhexyl)phthalate	(5)	16.753	149	889986	11.998
166) Di-n-octylphthalate	(6)	17.908	149	1558933	10.940
168) Benzo(b)fluoranthene	(6)	18.374	252	1377314	12.022
170) Benzo(k)fluoranthene	(6)	18.421	252	1450296	12.552
171) Benzo(a)pyrene	(6)	18.893	252	1311554	12.472
172)*Perylene-d12	(6)	18.980	264	486341	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0383.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:18 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCS4 Lab Sample ID: 314WDLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176) Indeno(1,2,3-cd)pyrene	(6)	20.577	276	1408418	15.269
177) Dibenz(a,h)anthracene	(6)	20.624	278	1238469	15.855
178) Benzo(g,h,i)perylene	(6)	20.938	276	1213531	15.608

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on 11/13/2013 at 09:49.
Target 3.5 esignature user ID: jmg00346

314WDLCSD4 Lancaster Labs Analysis Summary for GC/MS Semivolatiles 314WDLCSD

Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
19) 1,4-Dichlorobenzene-d4	5.924(0.000)	787	152	121592 (-12)	5.00	
52) Naphthalene-d8	7.888(0.000)	1124	136	454668 (-13)	5.00	
92) Acenaphthene-d10	10.692(0.000)	1605	164	277321 (-12)	5.00	
130) Phenanthrene-d10	12.592(0.000)	1931	188	468707 (-16)	5.00	
145) Pyrene-d10	14.527(0.006)	2263	212	624748 (-14)	5.00	
172) Perylene-d12	18.980(0.000)	3027	264	494320 (-14)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
7) 2-Fluorophenol	(1)	3.995(-0.004)	112	1205794	33.399	67%		10 - 107
13) Phenol-d6	(1)	5.411(-0.001)	99	1196984	24.141	48%		10 - 83
36) Nitrobenzene-d5	(2)	6.775(0.001)	82	912749	21.814	87%		60 - 123
72) 2-Fluorobiphenyl	(3)	9.648(0.000)	172	1660932	23.983	96%		63 - 121
112) 2,4,6-Tribromophenol	(3)	11.764(-0.001)	330	455257	62.504	125%		22 - 150
149) Terphenyl-d14	(5)	14.848(0.000)	244	2184410	28.037	112%		47 - 146

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
11) Benzaldehyde	(1)	5.271(-0.000)	77	284887	8.213	8.21			0.3
14) Phenol	(1)	5.434(-0.001)	94	365818	6.373	6.37			0.1
16) bis(2-Chloroethyl)ether	(1)	5.557(-0.000)	93	468942	10.354	10.35			0.1
17) 2-Chlorophenol	(1)	5.609(-0.000)	128	406212	11.441	11.44			0.1
18) 1,3-Dichlorobenzene	(1)	5.836(-0.000)	146	396322	10.378	10.38			0.1
20) 1,4-Dichlorobenzene	(1)	5.953(-0.000)	146	407435	10.547	10.55			0.1
23) Benzyl alcohol	(1)	6.157(0.000)	108	261982	10.433	10.43			1
24) 1,2-Dichlorobenzene	(1)	6.174(0.000)	146	387606	10.728	10.73			0.1
26) 2-Methylphenol	(1)	6.349(-0.000)	108	384457	10.790	10.79			0.1
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384(0.000)	45	476577	8.478	8.48			0.1
30) Acetophenone	(1)	6.553(0.000)	105	602744	10.819	10.82			0.1
31) N-Nitroso-di-n-propylamine	(1)	6.577(0.000)	70	325486	10.150	10.15			0.1
33) 4-Methylphenol	(1)	6.594(-0.000)	108	404874	10.171	10.17			0.1
35) Hexachloroethane	(1)	6.688(-0.000)	117	156993	9.615	9.62			0.3
37) Nitrobenzene	(2)	6.804(-0.000)	77	486919	10.964	10.96			0.1
40) Isophorone	(2)	7.194(-0.000)	82	860087	11.363	11.36			0.1
42) 2-Nitrophenol	(2)	7.300(-0.000)	139	204778	13.438	13.44			0.1
45) 2,4-Dimethylphenol	(2)	7.416(-0.000)	107	427415	11.542	11.54			0.1
48) bis(2-Chloroethoxy)methane	(2)	7.568(-0.000)	93	521770	10.562	10.56			0.1
49) 2,4-Dichlorophenol	(2)	7.684(-0.000)	162	338390	12.956	12.96			0.1
51) 1,2,4-Trichlorobenzene	(2)	7.806(-0.000)	180	355164	12.172	12.17			0.1
53) Naphthalene	(2)	7.917(-0.000)	128	1131228	11.670	11.67			0.03
55) 4-Chloroaniline	(2)	8.028(0.000)	127	437758	10.899	10.90			0.1
58) Hexachlorobutadiene	(2)	8.150(-0.000)	225	215993	12.698	12.70			0.1
61) Caprolactam	(2)	8.564(0.002)	113	47125	4.044	4.04			1
63) 4-Chloro-3-methylphenol	(2)	8.844(0.000)	107	385107	12.278	12.28			0.1
65) 2-Methylnaphthalene	(2)	9.031(0.000)	142	735127	11.380	11.38			0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:51. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) Hexachlorocyclopentadiene	(3)	9.299(0.000)	237	367945	24.256	24.26			1
70) 2,4,6-Trichlorophenol	(3)	9.497(-0.000)	196	260371	12.839	12.84			0.1
71) 2,4,5-Trichlorophenol	(3)	9.549(0.000)	196	276885	13.214	13.21			0.1
75) 1,1'-Biphenyl	(3)	9.794(0.000)	154	912748	11.334	11.33			0.1
76) 2-Chloronaphthalene	(3)	9.800(-0.000)	162	734437	11.889	11.89			0.1
82) Diphenyl ether	(3)	9.975(-0.000)	170	515637	11.572	11.57			0.1
83) 2-Nitroaniline	(3)	9.986(-0.000)	138	249459	12.965	12.96			0.1
86) Dimethylphthalate	(3)	10.330(0.000)	163	789567	11.302	11.30			0.5
88) 2,6-Dinitrotoluene	(3)	10.400(-0.000)	165	206121	13.314	13.31			0.1
90) Acenaphthylene	(3)	10.459(0.000)	152	1178821	12.571	12.57			0.03
91) 3-Nitroaniline	(3)	10.651(-0.000)	138	205676	11.574	11.57			0.1
93) Acenaphthene	(3)	10.738(0.000)	153	737775	11.436	11.44			0.03
94) 2,4-Dinitrophenol	(3)	10.820(0.000)	184	229958	24.993	24.99			3
96) 4-Nitrophenol	(3)	10.954(0.000)	109	80722	7.122	7.12			3
97) Dibenzofuran	(3)	11.006(0.000)	168	1090569	11.888	11.89			0.1
98) 2,4-Dinitrotoluene	(3)	11.018(0.000)	165	266338	13.424	13.42			0.3
102) Diethylphthalate	(3)	11.391(0.000)	149	792007	11.506	11.51			0.5
103) Fluorene	(3)	11.467(0.000)	166	878855	11.901	11.90			0.03
105) 4-Chlorophenyl-phenylether	(3)	11.496(0.000)	204	453754	12.390	12.39			0.1
107) 4-Nitroaniline	(3)	11.508(0.000)	138	197879	10.825	10.83			0.1
108) 4,6-Dinitro-2-methylphenol	(4)	11.554(-0.000)	198	153069	12.811	12.81			1
109) N-Nitrosodiphenylamine	(4)	11.642(0.000)	169	688664	11.803	11.80			0.1
120) 4-Bromophenyl-phenylether	(4)	12.073(-0.000)	248	240057	12.980	12.98			0.1
122) Hexachlorobenzene	(4)	12.120(-0.000)	284	249448	13.642	13.64			0.03
124) Atrazine	(4)	12.306(-0.000)	200	257706	13.566	13.57			0.5
125) Pentachlorophenol	(4)	12.370(0.000)	266	147821	10.767	10.77			0.3
131) Phenanthrene	(4)	12.621(0.000)	178	1250326	11.960	11.96			0.03
134) Anthracene	(4)	12.685(0.000)	178	1283368	12.313	12.31			0.03
135) Carbazole	(4)	12.901(0.000)	167	1251635	12.408	12.41			0.1
137) Di-n-butylphthalate	(4)	13.414(0.000)	149	1446489	12.108	12.11			0.5
142) Fluoranthene	(4)	14.224(0.000)	202	1547505	13.160	13.16			0.03
146) Pyrene	(5)	14.562(-0.000)	202	1604263	12.095	12.09			0.03
153) Butylbenzylphthalate	(5)	15.693(-0.000)	149	672612	11.915	11.91			0.5
158) Benzo(a)anthracene	(5)	16.538(-0.000)	228	1459223	12.966	12.97			0.03
159) 3,3'-Dichlorobenzidine	(5)	16.538(-0.000)	252	372902	9.174	9.17			0.5
161) Chrysene	(5)	16.602(-0.000)	228	1407159	12.714	12.71			0.03
162) bis(2-Ethylhexyl)phthalate	(5)	16.759(-0.000)	149	897562	12.087	12.09			0.5
166) Di-n-octylphthalate	(6)	17.913(-0.000)	149	1560391	10.777	10.78			0.5
168) Benzo(b)fluoranthene	(6)	18.374(-0.000)	252	1391259	11.948	11.95			0.03
170) Benzo(k)fluoranthene	(6)	18.426(-0.000)	252	1462756	12.456	12.46			0.03
171) Benzo(a)pyrene	(6)	18.893(-0.000)	252	1323728	12.385	12.38			0.03
176) Indeno(1,2,3-cd)pyrene	(6)	20.583(-0.000)	276	1407644	15.015	15.01			0.03
177) Dibenz(a,h)anthracene	(6)	20.624(-0.000)	278	1233852	15.541	15.54			0.03
178) Benzo(g,h,i)perylene	(6)	20.938(0.000)	276	1221399	15.455	15.46			0.03

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:51. Target 3.5 esignature user ID: jmg00346

Data file: /chem/HP19760.i/13nov13.b/dk0384.d Injection date and time: **13-NOV-2013 06:45**
Data file Sample Info. Line: 314WDLCSD4;314WDLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **13314WAD**
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Blank Data file reference: **/chem/HP19760.i/13nov13.b/dk0382.d**

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: **314WAD**
Calibration date and time (Last Method Edit): 13-NOV-2013 06:22
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/13nov13.b/dk0381.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * Uf * Vt/(Vo)

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 1000 ml Volume Injected (Vi): 0.5 ul

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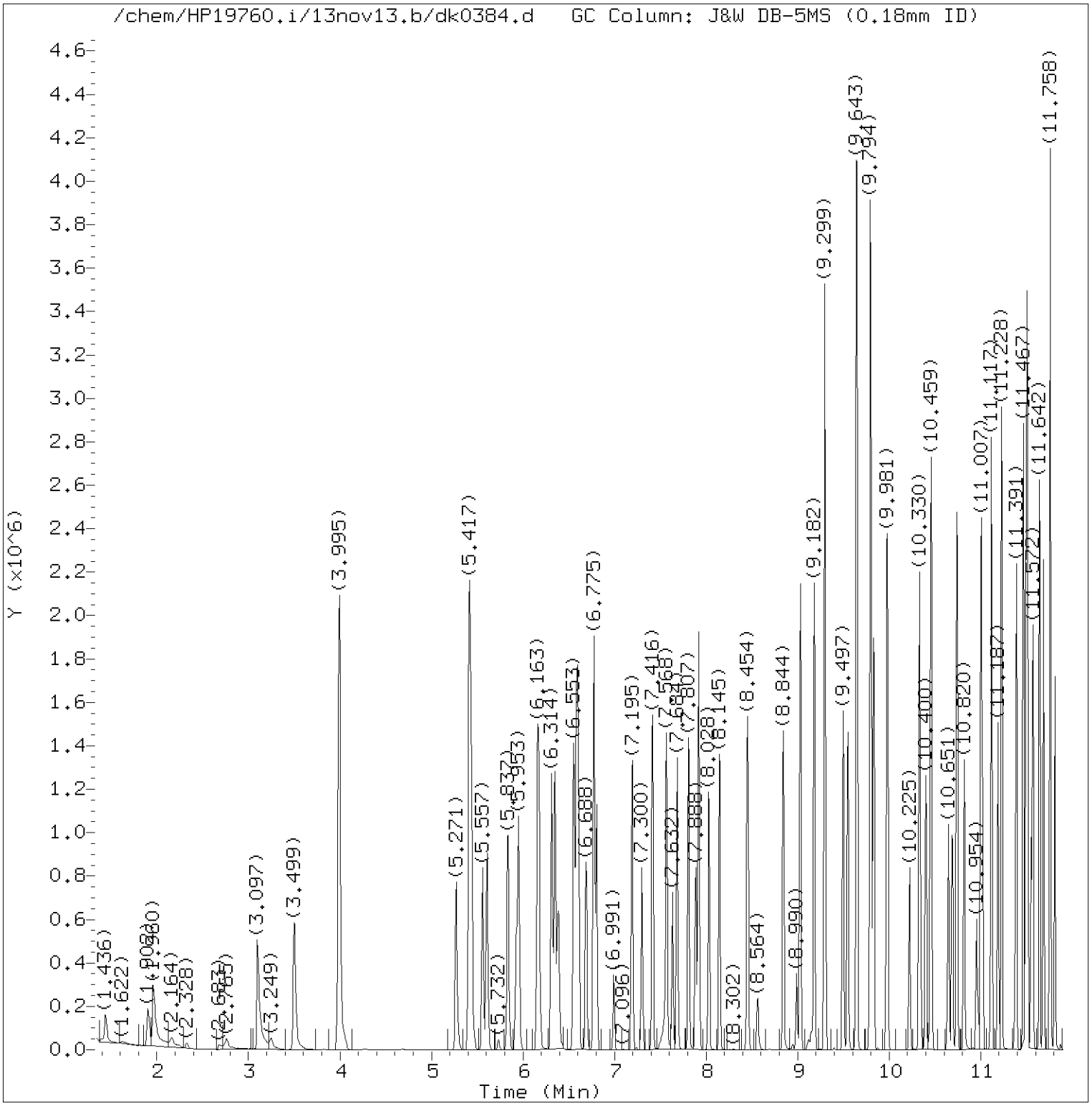
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 71

Digitally signed by Joseph M. Gambler on 11/13/2013 at 09:51. Target 3.5 esignature user ID: jmg00346

Secondary review performed and digitally signed by Mark A. Ratcliff on 11/13/2013 at 10:43. Parallax ID: mar00486



Total Ion Chromatogram (TIC)

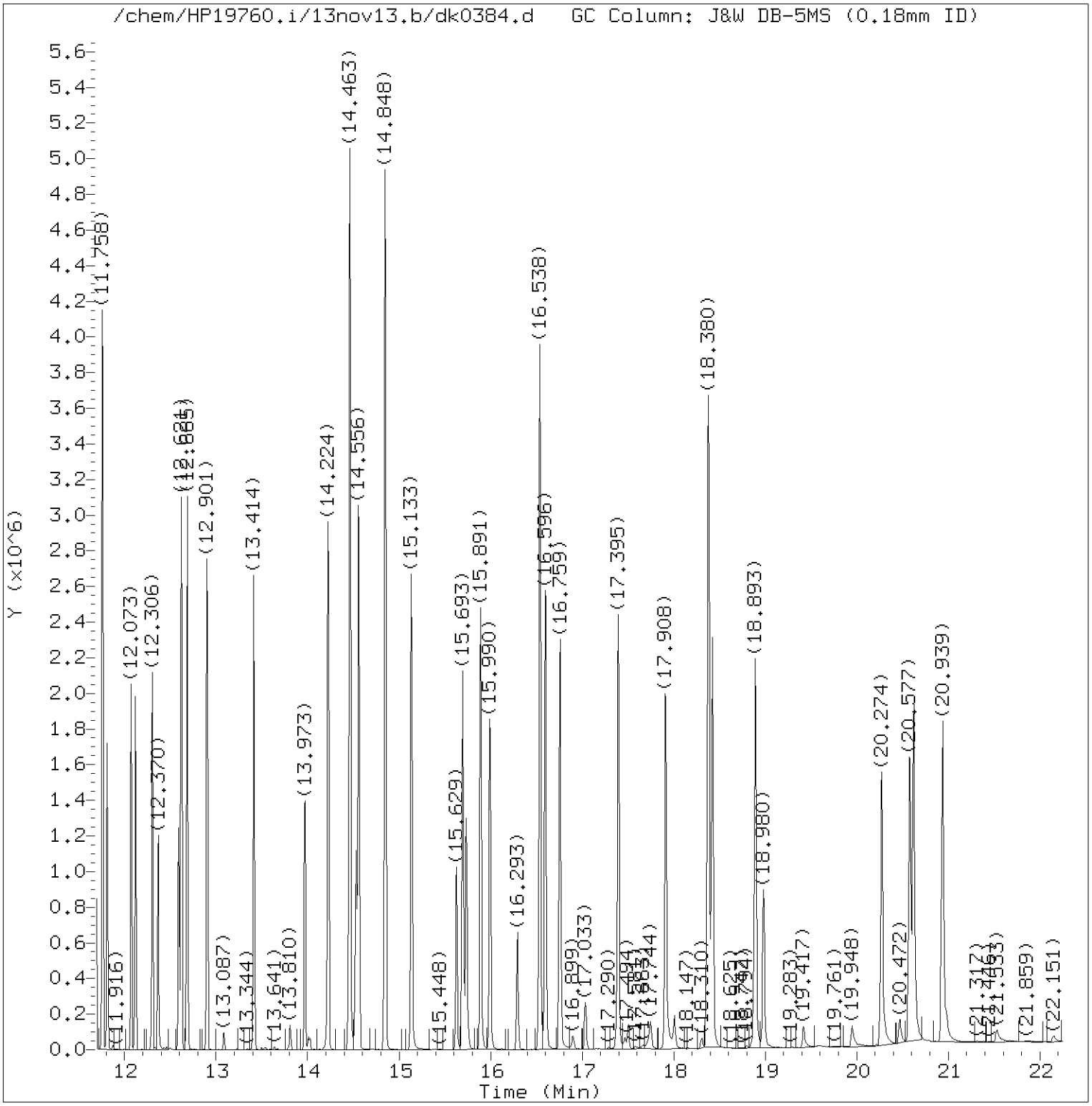
Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
7)$2-Fluorophenol	(1)	3.995	112	1205794	33.399
11) Benzaldehyde	(1)	5.271	77	284887	8.213
13)$Phenol-d6	(1)	5.411	99	1196984	24.141
14) Phenol	(1)	5.434	94	365818	6.373
16) bis(2-Chloroethyl)ether	(1)	5.557	93	468942	10.354
17) 2-Chlorophenol	(1)	5.609	128	406212	11.441
18) 1,3-Dichlorobenzene	(1)	5.837	146	396322	10.378
19)*1,4-Dichlorobenzene-d4	(1)	5.924	152	121592	5.000
20) 1,4-Dichlorobenzene	(1)	5.953	146	407435	10.547
23) Benzyl alcohol	(1)	6.157	108	261982	10.433
24) 1,2-Dichlorobenzene	(1)	6.175	146	387606	10.728
26) 2-Methylphenol	(1)	6.349	108	384457	10.790
27) 2,2'-oxybis(1-Chloropropane)	(1)	6.384	45	476577	8.478
30) Acetophenone	(1)	6.553	105	602744	10.819
31) N-Nitroso-di-n-propylamine	(1)	6.577	70	325486	10.150
33) 4-Methylphenol	(1)	6.594	108	404874	10.171
35) Hexachloroethane	(1)	6.688	117	156993	9.615
36)$Nitrobenzene-d5	(2)	6.775	82	912749	21.814
37) Nitrobenzene	(2)	6.804	77	486919	10.964
40) Isophorone	(2)	7.195	82	860087	11.363
42) 2-Nitrophenol	(2)	7.300	139	204778	13.438
45) 2,4-Dimethylphenol	(2)	7.416	107	427415	11.542
48) bis(2-Chloroethoxy)methane	(2)	7.568	93	521770	10.562
49) 2,4-Dichlorophenol	(2)	7.684	162	338390	12.956
51) 1,2,4-Trichlorobenzene	(2)	7.807	180	355164	12.172
52)*Naphthalene-d8	(2)	7.888	136	454668	5.000
53) Naphthalene	(2)	7.917	128	1131228	11.670
55) 4-Chloroaniline	(2)	8.028	127	437758	10.899
58) Hexachlorobutadiene	(2)	8.150	225	215993	12.698
61) Caprolactam	(2)	8.564	113	47125	4.044
63) 4-Chloro-3-methylphenol	(2)	8.844	107	385107	12.278
65) 2-Methylnaphthalene	(2)	9.031	142	735127	11.380
67) Hexachlorocyclopentadiene	(3)	9.299	237	367945	24.256
70) 2,4,6-Trichlorophenol	(3)	9.497	196	260371	12.839
71) 2,4,5-Trichlorophenol	(3)	9.549	196	276885	13.214
72)$2-Fluorobiphenyl	(3)	9.648	172	1660932	23.983
75) 1,1'-Biphenyl	(3)	9.794	154	912748	11.334
76) 2-Chloronaphthalene	(3)	9.800	162	734437	11.889
82) Diphenyl ether	(3)	9.975	170	515637	11.572
83) 2-Nitroaniline	(3)	9.986	138	249459	12.965

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
86) Dimethylphthalate	(3)	10.330	163	789567	11.302
88) 2,6-Dinitrotoluene	(3)	10.400	165	206121	13.314
90) Acenaphthylene	(3)	10.459	152	1178821	12.571
91) 3-Nitroaniline	(3)	10.651	138	205676	11.574
92)*Acenaphthene-d10	(3)	10.692	164	277321	5.000
93) Acenaphthene	(3)	10.738	153	737775	11.436
94) 2,4-Dinitrophenol	(3)	10.820	184	229958	24.993
96) 4-Nitrophenol	(3)	10.954	109	80722	7.122
97) Dibenzofuran	(3)	11.007	168	1090569	11.888
98) 2,4-Dinitrotoluene	(3)	11.018	165	266338	13.424
102) Diethylphthalate	(3)	11.391	149	792007	11.506
103) Fluorene	(3)	11.467	166	878855	11.901
105) 4-Chlorophenyl-phenylether	(3)	11.496	204	453754	12.390
107) 4-Nitroaniline	(3)	11.508	138	197879	10.825
108) 4,6-Dinitro-2-methylphenol	(4)	11.554	198	153069	12.811
109) N-Nitrosodiphenylamine	(4)	11.642	169	688664	11.803
112)$2,4,6-Tribromophenol	(3)	11.764	330	455257	62.504
120) 4-Bromophenyl-phenylether	(4)	12.073	248	240057	12.980
122) Hexachlorobenzene	(4)	12.120	284	249448	13.642
124) Atrazine	(4)	12.306	200	257706	13.566
125) Pentachlorophenol	(4)	12.370	266	147821	10.767
130)*Phenanthrene-d10	(4)	12.592	188	468707	5.000
131) Phenanthrene	(4)	12.621	178	1250326	11.960
134) Anthracene	(4)	12.685	178	1283368	12.313
135) Carbazole	(4)	12.901	167	1251635	12.408
137) Di-n-butylphthalate	(4)	13.414	149	1446489	12.108
142) Fluoranthene	(4)	14.224	202	1547505	13.160
145)*Pyrene-d10	(5)	14.527	212	624748	5.000
146) Pyrene	(5)	14.562	202	1604263	12.095
149)$Terphenyl-d14	(5)	14.848	244	2184410	28.037
153) Butylbenzylphthalate	(5)	15.693	149	672612	11.915
158) Benzo(a)anthracene	(5)	16.538	228	1459223	12.966
159) 3,3'-Dichlorobenzidine	(5)	16.538	252	372902	9.174
161) Chrysene	(5)	16.602	228	1407159	12.714
162) bis(2-Ethylhexyl)phthalate	(5)	16.759	149	897562	12.087
166) Di-n-octylphthalate	(6)	17.913	149	1560391	10.777
168) Benzo(b)fluoranthene	(6)	18.374	252	1391259	11.948
170) Benzo(k)fluoranthene	(6)	18.426	252	1462756	12.456
171) Benzo(a)pyrene	(6)	18.893	252	1323728	12.385
172)*Perylene-d12	(6)	18.980	264	494320	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/13nov13.b/dk0384.d Instrument ID: HP19760.i
Injection date and time: 13-NOV-2013 06:45 Analyst ID: jmg00346

Method used: /chem/HP19760.i/13nov13.b/8270_LVI.m Sublist used: 314WAD
Calibration date and time: 13-NOV-2013 06:22
Date, time and analyst ID of latest file update: 13-Nov-2013 09:43 jmg00346

Sample Name: 314WDLCSD4 Lab Sample ID: 314WDLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
176) Indeno(1,2,3-cd)pyrene	(6)	20.583	276	1407644	15.015
177) Dibenz(a,h)anthracene	(6)	20.624	278	1233852	15.541
178) Benzo(g,h,i)perylene	(6)	20.939	276	1221399	15.455

Digitally signed by Joseph M. Gambler
on 11/13/2013 at 09:51.
Target 3.5 esignature user ID: jmg00346

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 5079 Anna Stager Reviewed by: SMG 11-15-13 Start Date: 11/12/13 Start time: 9:35

13314WAD026

Tech 1: AES 5079 Tech 2:

Dept: 26	Prep Analysis: 00813 BNA Water Extraction										TCL SW846 Semivolatiles/Waters
QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments
BLANKA	SBLKWD314	250	SS1330426A	1	——	——	1	✓	✓	—	tap H2O
LCSA	314WDLCS	250	SS1330426A	1	~~MS1329726A~~ (8)	1	1	✓	✓	—	↓
LCSDA	314WDLCSD	250	SS1330426A	1	~~MS1329726A~~ (8)	1	1	✓	✓	—	↓

(8) Mini Sep. LCS spike code changed to MS1330826A. AES 5079 11/12/13

Solvent Used	Lot No.
10N NaOH	1211122
Methylene Chloride	60310
Sodium Sulfate	13312A
Sulfuric Acid	132553

Spike Solutions: Witness: N/A

~~MS1329726A~~ (8) MINI SEP. LCS SPIKE

SS1330426A MINI SEP. BNA SURROGATE

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH 2	pH 11	BC	Comments	Analyses	List	Due Date	Prio
1 7266590 R	49CBT	242	SS1330426A	1	1	✓	✓	153B	cloudy brown color	04678	155	11/11/2013	S
2 7266798	FB106	233	SS1330426A	1	1	✓	✓	153A	clear	04678	2272	11/18/2013	N
3 7266799	FB206	247	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
4 7266805	2B152	246	SS1330426A	1	1	✓	✓	153A	brown tint w/ sediment	04678	2272	11/18/2013	N
5 7266807	2B151	231	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
6 7266810	2D123	245	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
7 7266811	2D121	232	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
8 7266819	3--FD	237	SS1330426A	1	1	✓	✓	153A	↓	04678	2272	11/18/2013	N
9 7266823	PF---	240	SS1330426A	1	1	✓	✓	153A	clear	04678	9642	11/18/2013	N
10 7266824	PF-D-	241	SS1330426A	1	1	✓	✓	153A	↓	04678	9642	11/18/2013	N
11 7267172	OM-EF	234	SS1330426A	1	1	✓	✓	153A	↓	04678	2308	11/19/2013	N
12 7267633	NS40D	246	SS1330426A	1	1	✓	✓	153A	↓	04678	1013	11/18/2013	P
13 7267634	NS28D	247	SS1330426A	1	1	✓	✓	153A	↓	04678	1013	11/18/2013	P
14 7270635	TSINF	249	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
15 7270637	401AP	236	SS1330426A	1	1	✓	✓	153A	yellow tint	04678	12825	11/15/2013	S
16 7270638	T501P	246	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
17 7270641	TSEFF	247	SS1330426A	1	1	✓	✓	153A	clear	04678	12825	11/15/2013	S
18 7270643	ELGAC	244	SS1330426A	1	1	✓	✓	153A	↓	04678	12825	11/15/2013	S
19 7270644	SP901	224	SS1330426A	1	1	✓	✓	153A	yellow tint	04678	12825	11/15/2013	S
20 7270742	3521X	220	SS1330426A	1	1	✓	✓	153A	cloudy brown color	04678	2272	11/15/2013	S

KVM06 Page 772 of 1808

Rack ID:		Work Station	H2O 5
Internal Standard	ISTD5103	Balance #	7

S-bath ID 11	88° C	S-bath ID ——	C	N-Evap ——	C	M-vap ——	C	13314WAD026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Organic Extraction Batchlog Assigned to: 2807 Nicholas Shroyer Reviewed by: SMG 11-18-2013 Start Date: 11-12-13 Start time: 18:45

13316SLC026

Tech 1: NS2807 Tech 2:

Dept: 26	Prep Analysis: 10814 BNA Soil Microwave PAH								PAH 8270 (microwave)		
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266815MS *	2E101	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	brown med
7266816MSD *	2E101	15.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	20A	↓ ↓
BLANKA	SBLKLC316	30.0	SS1331226A	1.0	—	—	1.0	Z	Z	—	Na_2SO_4
LCSA	316LCLCS	30.0	SS1331226A	1.0	MS1330526A	1.0	1.0	Z	Z	—	↓

Solvent Used	Lot No.
1:1 Methylene Chloride/Acetone	185110713A
Methylene Chloride	60310
Sodium Sulfate	13316A

Spike Solutions: Witness:
MS1330526A LCS SPIKE MIX
SS1331226A BNA SURROGATE STANDARD

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7259331	PAYN7	30.0	SS1331226A	1.0	1.0	Z	Z	20A	brown dirt	10724	1850	11/19/2013	P
* 2 7265239 *	R2F14	15.0	SS1331226A	↓	1.0	Z	Z	20A	brown med	10724	4677	11/19/2013	N
3 7266809 *	2E131	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 4 7266812 *	2C126	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 5 7266813 *	2C111	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 6 7266814BKG *	2E101	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
* 7 7266818 *	2E102	15.0	SS1331226A		1.0	Z	Z	20A		10724	4677	11/18/2013	N
8 7270464 *	51931	15.0	SS1331226A		1.0	Z	Z	20A	wet brown sand & dirt	10724	7600	11/20/2013	P
9 7270465	51932	30.0	SS1331226A		1.0	Z	Z	20A	beige sand	10724	7600	11/20/2013	P
10 7270466	51933	30.0	SS1331226A		1.0	Z	Z	20A	brown dirt & sand	10724	7600	11/20/2013	P
11 7270467	51934	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
12 7270468	51935	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
13 7270469	51936	30.0	SS1331226A		1.0	Z	Z	20A		10724	7600	11/20/2013	P
14 7270470 *	51937	15.0	SS1331226A		1.0	Z	Z	20A	wet brown sand & dirt	10724	7600	11/20/2013	P
15 7270471 *	51938	15.0	SS1331226A		1.0	Z	Z	20A	↓ ↓	10724	7600	11/20/2013	P
16 7270472	51939	30.0	SS1331226A	↓	1.0	Z	Z	20A	brown dirt & sand	10724	7600	11/20/2013	P

* Reduced due to poor sample matrix. NS2807 11-12-13

N/A NS2807 11-12-13

Rack ID:		Work Station	Micro
Internal Standard	43995318	Balance #	17609

S-bath ID 13	87° C	S-bath ID	C	N-Evap	C	M-vap	C	13316SLC026

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Explosives Data

Case Narrative/Conformance Summary

Explosives

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Pesticide Residue Analysis

Fraction: Explosives

Nitroaromatics/Amines in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266809	SD-R2-E-13-1		X	1	
7266810	SW-R2-D-12-3	X		1	
7266811	SW-R2-D-12-1	X		1	
7266812	SD-R2-C-12-6		X	1	
7266813	SD-R2-C-11-1		X	1	
7266814	SD-R2-E-10-1		X	1	Unspiked
7266815	SD-R2-E-10-1_MS		X	1	Matrix Spike
7266816	SD-R2-E-10-1_MSD		X	1	Matrix Spike Duplicate
7266818	SD-R2-E-10-2		X	1	
7266819	DUP-03	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

(Sample number(s): 7266809, 7266812-7266816, 7266818: Analysis: 06918)
A thorough investigation for HMX was performed on the ampulated standard used for the laboratory control samples (LCS) and/or matrix spike control samples (MS) by analyzing the ampulated standard in quadruplet against a second source material from another vendor. HMX was present at 20-25% below the manufacturer's reported true value. The

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Pesticide Residue Analysis

Fraction: Explosives

true value of HMX for the LCS and MS spiking standard was adjusted to compensate for this discrepancy.

(Sample number(s): 7266810-7266811, 7266819: Analysis: 06916)
The LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC Standards. The following analytes are accepted based on this allowance:
4-Amino-2,6-Dinitrotoluene

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

SAMPLE ANALYSIS:

(Sample number(s): 7266812: Analysis: 06918)
Reporting limits were raised due to interference from the sample matrix.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Explosives

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Quality Control Reference List
Pesticide Residue Analysis

CLIENT: Ashland, Inc.
SDG: KVM06

Fraction: Explosives

Analysis	Batch Number	Sample Number	Analysis Date
Nitroaromatics/Amines in Solid	133140020A	PBLK20314	11/19/2013 17:48:00
		LCS20314	11/19/2013 18:30:00
		7266809	11/19/2013 20:38:00
		7266812	11/19/2013 22:02:00
		7266813	11/19/2013 22:45:00
		7266814 UNSPK	11/19/2013 23:27:00
		7266815 MS	11/20/2013 00:10:00
		7266816 MSD	11/20/2013 00:52:00
		7266818	11/20/2013 01:35:00
Nitroaromatics/Amines in Water	133140016A	PBLK16314	11/17/2013 21:03:00
		LCS16314	11/17/2013 21:46:00
		LCSD16314	11/17/2013 22:28:00
		7266810	11/18/2013 02:43:00
		7266811	11/18/2013 03:25:00
		7266819	11/18/2013 04:08:00

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Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM06
Matrix: LIQUID

Fraction: Explosives

133140016A / PBLK16314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/17/13	N.D.	ug/l	5.2	15
PETN	11/17/13	N.D.	ug/l	6.0	18
HMX	11/17/13	N.D.	ug/l	0.65	2.0
RDX	11/17/13	N.D.	ug/l	0.20	0.50
1,3,5-Trinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,2-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
1,3-Dinitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
Tetryl	11/17/13	N.D.	ug/l	0.40	0.60
Nitrobenzene	11/17/13	N.D.	ug/l	0.20	0.60
2,4,6-Trinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
4-Amino-2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.30	0.60
1,4-Dinitrobenzene	11/17/13	N.D.	ug/l	0.30	0.60
2-Amino-4,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.20	0.60
2,4-Dinitrotoluene	11/17/13	N.D.	ug/l	0.72	2.0
2,6-Dinitrotoluene	11/17/13	N.D.	ug/l	0.45	1.3
2-Nitrotoluene	11/17/13	N.D.	ug/l	0.25	0.75
3-Nitrotoluene	11/17/13	N.D.	ug/l	0.40	1.2
4-Nitrotoluene	11/17/13	N.D.	ug/l	0.60	1.2
1-Nitronaphthalene	11/17/13	N.D.	ug/l	0.20	0.60

Quality Control Summary
Method Blank
Pesticide Residue Analysis
SDG: KVM06
Matrix: SOLID

Fraction: Explosives

133140020A / PBLK20314 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Nitroglycerin	11/19/13	N.D.	ug/kg	2000	6000
PETN	11/19/13	N.D.	ug/kg	2000	6000
HMX	11/19/13	N.D.	ug/kg	250	750
RDX	11/19/13	N.D.	ug/kg	130	300
1,3,5-Trinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,4-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,2-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
1,3-Dinitrobenzene	11/19/13	N.D.	ug/kg	100	300
Tetryl	11/19/13	N.D.	ug/kg	150	300
Nitrobenzene	11/19/13	N.D.	ug/kg	100	300
2,4,6-Trinitrotoluene	11/19/13	N.D.	ug/kg	100	300
4-Amino-2,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	150	300
2-Amino-4,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2,4-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2,6-Dinitrotoluene	11/19/13	N.D.	ug/kg	100	300
2-Nitrotoluene	11/19/13	N.D.	ug/kg	200	300
3-Nitrotoluene	11/19/13	N.D.	ug/kg	250	300
4-Nitrotoluene	11/19/13	N.D.	ug/kg	200	300
1-Nitronaphthalene	11/19/13	N.D.	ug/kg	100	300

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Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM06
Matrix: LIQUID

Fraction: Explosives

133140016A	2-Nitro-m-xylene	
	Spike Added	10 ug/l
Sample	% Recovery	Limits
PBLK16314	95	73 - 122
LCS16314	87	73 - 122
LCSD16314	93	73 - 122
7266810	95	73 - 122
7266811	74	73 - 122
7266819	91	73 - 122

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Quality Control Summary
Surrogates
Pesticide Residue Analysis
SDG: KVM06
Matrix: SOLID

Fraction: Explosives

133140020A	2-Nitro-m-xylene	
	Spike Added	5000 ug/kg
Sample	% Recovery	Limits
PBLK20314	89	63 - 150
LCS20314	97	63 - 150
7266809	91	63 - 150
7266812	97	63 - 150
7266813	90	63 - 150
7266814	92	63 - 150
7266815 MS	84	63 - 150
7266816 MSD	79	63 - 150
7266818	93	63 - 150

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: LIQUID

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS16314 LCSD: LCSD16314	Batch: **133140016A** (Sample number(s): 7266810-7266811, 7266819)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	240	210.27	209.1	88	87	73-116	1	30
PETN	240	234.03	236.45	98	99	73-126	1	30
HMX	10	7.86	8.12	79	81	73-112	3	30
RDX	10	9.15	9.17	92	92	70-117	0	30
1,3,5-Trinitrobenzene	10	9.32	9.41	93	94	72-119	1	30
1,2-Dinitrobenzene	20	21.04	21.87	105	109	90-118	4	30
1,3-Dinitrobenzene	10	10.69	10.38	107	104	78-121	3	30
Tetryl	10	9.9	9.96	99	100	43-133	1	30
Nitrobenzene	10	9.73	9.63	97	96	71-111	1	30
2,4,6-Trinitrotoluene	10	10.8	10.96	108	110	75-119	2	30
1,4-Dinitrobenzene	20	18.49	18.91	92	95	81-108	2	30
4-Amino-2,6-Dinitrotoluene	10	9.18	9.09	92 *	91 *	97-156	1	30
2-Amino-4,6-Dinitrotoluene	10	8.83	8.7	88	87	65-107	1	30
2,4-Dinitrotoluene	10	10.15	10.33	102	103	71-111	2	30
2,6-Dinitrotoluene	10	10.47	10.87	105	109	84-157	4	30
2-Nitrotoluene	10	8.64	8.67	86	87	74-115	0	30
3-Nitrotoluene	10	9.86	10.16	99	102	76-115	3	30
4-Nitrotoluene	10	9	8.84	90	88	76-120	2	30
1-Nitronaphthalene	20	21.14	21.11	106	106	69-125	0	30

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: SOLID

Pesticide Residue Analysis

Fraction: Explosives

LCS: LCS20314	Batch: **133140020A** (Sample number(s): 7266809, 7266812-7266816, 7266818)							
Analyte	**Spike Added ug/kg**	**LCS Conc ug/kg**	**LCSD Conc ug/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	20000	19662.19	NA	98	NA	70-118	NA	NA
PETN	20000	17711.81	NA	89	NA	67-136	NA	NA
HMX	3936.25	3450.96	NA	88	NA	79-104	NA	NA
RDX	5000	4742.68	NA	95	NA	87-111	NA	NA
1,3,5-Trinitrobenzene	5020	4700.48	NA	94	NA	83-119	NA	NA
1,4-Dinitrobenzene	10000	9440.37	NA	94	NA	83-122	NA	NA
1,2-Dinitrobenzene	10000	11034.77	NA	110	NA	94-129	NA	NA
1,3-Dinitrobenzene	5000	5542.36	NA	111	NA	97-119	NA	NA
Tetryl	5000	5389.92	NA	108	NA	80-112	NA	NA
Nitrobenzene	5000	4875.07	NA	98	NA	89-107	NA	NA
2,4,6-Trinitrotoluene	5000	5573.06	NA	111	NA	85-122	NA	NA
4-Amino-2,6-Dinitrotoluene	5000	4969.73	NA	99	NA	98-143	NA	NA
2-Amino-4,6-Dinitrotoluene	5000	4554.07	NA	91	NA	84-115	NA	NA
2,4-Dinitrotoluene	5000	5238.37	NA	105	NA	91-112	NA	NA
2,6-Dinitrotoluene	5000	5368.09	NA	107	NA	86-137	NA	NA
2-Nitrotoluene	5000	4543.37	NA	91	NA	91-113	NA	NA
3-Nitrotoluene	5000	5539.25	NA	111	NA	88-121	NA	NA
4-Nitrotoluene	5000	4687.74	NA	94	NA	89-119	NA	NA
1-Nitronaphthalene	10000	11875.68	NA	119	NA	83-122	NA	NA

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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: KVM06
Matrix: SOLID

Pesticide Residue Analysis

Fraction: Explosives

UNSPK: 7266814 MS: 7266815 MSD: 7266816 **Analyte**	Batch: **133140020A** (Sample number(s): 7266809, 7266812-7266816, 7266818)								
	Spike Added ug/kg	**Unspiked Conc ug/kg**	**MS Conc ug/kg**	**MSD Conc ug/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Nitroglycerin	17400	N.D.	16423.08	18254.24	94	105	73-116	11	50
PETN	17400	N.D.	14745.62	14056.67	85	81	71-133	5	50
HMX	3423	N.D.	2469.59	2497.	72	73	72-107	1	50
RDX	4350	N.D.	3838.68	3585.51	88	82	75-108	7	50
1,3,5-Trinitrobenzene	4360	N.D.	3844.74	3703.95	88	85	58-135	4	50
1,4-Dinitrobenzene	8700	N.D.	7304.49	7248.1	84	83	82-117	1	50
1,2-Dinitrobenzene	8700	N.D.	8591.46	8537.2	99	98	80-120	1	50
1,3-Dinitrobenzene	4350	N.D.	4242.05	4216.14	98	97	89-119	1	50
Tetryl	4350	N.D.	2982.87	3397.52	69	78	58-125	13	50
Nitrobenzene	4350	N.D.	3934.72	3859.51	90	89	86-108	2	50
2,4,6-Trinitrotoluene	4350	N.D.	4195.69	4115.5	96	95	92-114	2	50
4-Amino-2,6-Dinitrotoluene	4350	N.D.	3386.59	3551.66	78 *	82 *	85-118	5	50
2-Amino-4,6-Dinitrotoluene	4350	N.D.	3198.22	3155.32	74	73	69-113	1	50
2,4-Dinitrotoluene	4350	N.D.	4134.14	4121.62	95	95	81-111	0	50
2,6-Dinitrotoluene	4350	N.D.	4222.47	4248.07	97	98	86-114	1	50
2-Nitrotoluene	4350	N.D.	3437.66	3390.2	79	78 *	79-112	1	50
3-Nitrotoluene	4350	N.D.	4709.92	4714.16	108	108	72-119	0	50
4-Nitrotoluene	4350	N.D.	3424.22	3395.35	79 *	78 *	90-118	1	50
1-Nitronaphthalene	8700	N.D.	8947.44	8981.2	103	103	89-131	0	50

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 4 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
RDX	4.22	4.21	4.23	4.22	4.20	4.24	4.22	4.12	4.32
1,3,5-Trinitrobenzene	4.89	4.91	4.91	4.90	4.86	4.92	4.90	4.80	5.00
1,4-Dinitrobenzene	5.78	5.80	5.83	5.79	5.68	5.78	5.79	5.69	5.89
o-Dinitrobenzene	6.38	6.41	6.44	6.41	6.23	6.51	6.41	6.31	6.51
1,3-DNB	6.78	6.79	6.82	6.80	6.65	6.82	6.80	6.70	6.90
Nitrobenzene	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
Tetryl	7.69	7.72	7.74	7.71	7.50	7.70	7.71	7.57	7.85
2,4,6-Trinitrotoluene	8.12	8.17	8.20	8.16	7.89	8.18	8.16	8.06	8.26
Tetryl breakdown	8.78	8.74	8.88	8.90	8.55	8.89	8.90	8.77	9.02
4-Amino-2,6-dinitrotoluene	9.98	10.00	10.07	10.02	9.59	10.19	10.02	9.88	10.16
2-Amino-4,6-dinitrotoluene	10.41	10.48	10.52	10.47	10.05	10.51	10.47	10.33	10.61
2,6-Dinitrotoluene	10.88	10.91	10.98	10.93	10.46	10.91	10.93	10.79	11.07
2,4-Dinitrotoluene	11.33	11.40	11.43	11.40	10.96	11.43	11.40	11.26	11.54
2-Nitrotoluene	13.38	13.43	13.44	13.39	12.87	13.44	13.39	13.25	13.54
4-Nitrotoluene	14.71	14.73	14.84	14.77	14.25	14.84	14.77	14.61	14.94
3-Nitrotoluene	15.43	15.45	15.57	15.50	14.97	15.56	15.50	15.33	15.66
2-NMX	26.57	26.83	26.85	26.77	25.96	26.85	26.77	26.43	27.11
1-Nitronaphthalene	33.40	33.27	33.29	33.24	33.01	33.29	33.24	32.99	33.48

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 1E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+02	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

James H. Place
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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310.CAL** Version = 9
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.216 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.899 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.789 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.412 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.800 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.707 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.159 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.895 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.022 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.468 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.932 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.398 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.393 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.774 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.496 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 26.768 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.236 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT Level 2 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
HMX	2.79	2.81	2.82	2.81	2.84	2.82	2.81	2.71	2.91
2,4-Diamino-6-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
2,6-Diamino-4-nitrotoluene	3.08	3.03	3.01	2.97	2.98	2.96	2.97	2.87	3.07
Nitroglycerin	8.95	8.99	9.03	8.99	8.69	9.03	8.99	8.80	9.18
PETN	16.67	16.68	16.74	16.67	16.11	16.73	16.67	16.38	16.96
2-NMX	26.75	26.93	27.01	26.91	26.11	27.02	26.91	26.58	27.24

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6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 1E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS						MEAN	%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6			
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	
							Average % RSD:	18	

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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1E12310B.CAL** Version = 10
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.809 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.969 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.969 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.992 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.669 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 26.910 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

CONFIDENTIAL

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 4E12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
RDX				4.10			4.10	4.00	4.20
1,3,5-Trinitrobenzene				4.76			4.76	4.66	4.86
1,4-Dinitrobenzene				5.62			5.62	5.52	5.72
o-Dinitrobenzene				6.23			6.23	6.13	6.33
1,3-DNB				6.59			6.59	6.49	6.69
Nitrobenzene				7.47			7.47	7.33	7.61
Tetryl				7.47			7.47	7.33	7.61
2,4,6-Trinitrotoluene				7.88			7.88	7.78	7.98
Tetryl breakdown				8.39			8.39	8.27	8.52
4-Amino-2,6-dinitrotoluene				9.83			9.83	9.69	9.97
2-Amino-4,6-dinitrotoluene				10.11			10.11	9.97	10.25
2,6-Dinitrotoluene				10.52			10.52	10.38	10.66
2,4-Dinitrotoluene				11.00			11.00	10.86	11.14
2-Nitrotoluene				12.94			12.94	12.80	13.08
4-Nitrotoluene				14.27			14.27	14.11	14.43
3-Nitrotoluene				14.95			14.95	14.79	15.12
2-NMX				25.75			25.75	25.41	26.09
1-Nitronaphthalene				32.87			32.87	32.62	33.11

RT Update

Files used 4E12310.58 +.59

Applies to 4E12310.58 →

11/20/13

Audited By: Lisa A. Reinert Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 3E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

James H. Place
Senior Chemist

NOV 2 0 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310.CAL** Version = 6
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.102 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.764 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.623 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.233 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.594 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.469 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 7.876 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.394 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 9.828 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.111 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 10.518 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 10.997 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 12.941 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 14.267 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 14.953 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 25.749 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 32.866 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 4E12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				2.75			2.75	2.65	2.85
2,4-Diamino-6-nitrotoluene				2.87			2.87	2.77	2.97
2,6-Diamino-4-nitrotoluene				2.87			2.87	2.77	2.97
Nitroglycerin				8.70			8.70	8.51	8.89
PETN				16.04			16.04	15.75	16.33
2-NMX				25.91			25.91	25.57	26.24

James H. Place
Senior Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 3E12310B

GC Column (2): CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	Linear
2,4-Diamino-6-nitrotoluene	2.34E+03	2.20E+03	2.25E+03	2.57E+03	2.52E+03	2.59E+03	2.41E+03	7	
2,6-Diamino-4-nitrotoluene	2.32E+03	2.18E+03	2.23E+03	2.54E+03	2.50E+03	2.57E+03	2.39E+03	7	
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 18

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3E12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

18 HMX
Retention time = 2.747 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

19 2,4-DAm-6-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	23496.0	2340.239	Manual	11/7/2013 4:47:5
2	30.120	66258.0	2199.801	Manual	11/7/2013 4:47:5
3	100.400	225601.0	2247.022	Manual	11/7/2013 4:47:5
4	502.000	1287697.0	2565.134	Manual	11/7/2013 4:47:5
5	1004.000	2533808.0	2523.713	Manual	11/7/2013 4:47:5
6	2008.000	5203836.0	2591.552	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2411.243 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2411.2430 with RSD = 7.08%

20 2,6-DAm-4-NT
Retention time = 2.872 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	23496.0	2321.739	Manual	11/7/2013 4:47:5
2	30.360	66258.0	2182.411	Manual	11/7/2013 4:47:5
3	101.200	225601.0	2229.259	Manual	11/7/2013 4:47:5
4	506.000	1287697.0	2544.856	Manual	11/7/2013 4:47:5
5	1012.000	2533808.0	2503.763	Manual	11/7/2013 4:47:5
6	2024.000	5203836.0	2571.065	Manual	11/7/2013 4:47:5

Calibration formula: Y = 2392.182 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9927, Average error = 6.17%
Average CF = 2392.1820 with RSD = 7.08%

21 Nitroglycerin
Retention time = 8.698 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.039 min., Search window = 0.286 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 2-NMX
Retention time = 25.906 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Update File: 5E12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT (Level 3 or Calculated) RT	RT WINDOW FROM	TO
RDX				4.30			4.30	4.20	4.40
1,3,5-Trinitrobenzene				5.00			5.00	4.90	5.10
1,4-Dinitrobenzene				5.90			5.90	5.80	6.00
o-Dinitrobenzene				6.53			6.53	6.43	6.63
1,3-DNB				6.93			6.93	6.83	7.03
Nitrobenzene				7.85			7.85	7.71	7.99
Tetryl				7.85			7.85	7.71	7.99
2,4,6-Trinitrotoluene				8.29			8.29	8.19	8.39
Tetryl breakdown				8.83			8.83	8.71	8.95
4-Amino-2,6-dinitrotoluene				10.35			10.35	10.21	10.49
2-Amino-4,6-dinitrotoluene				10.66			10.66	10.51	10.80
2,6-Dinitrotoluene				11.09			11.09	10.95	11.23
2,4-Dinitrotoluene				11.59			11.59	11.45	11.74
2-Nitrotoluene				13.63			13.63	13.49	13.77
4-Nitrotoluene				15.03			15.03	14.87	15.19
3-Nitrotoluene				15.76			15.76	15.60	15.93
2-NMX				27.25			27.25	26.91	27.59
1-Nitronaphthalene				33.45			33.45	33.20	33.69

RT Update

File used 5E12310.17

Applies to 5E12310.01 →

11/20/13

Audited By: Jessica L. Miller
Chemist

NOV 2 4 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Calibration File: 4E12310

GC Column (1) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
RDX	1.76E+02	1.20E+02	9.66E+01	9.14E+01	8.90E+01	8.80E+01	1.10E+02	31
1,3,5-Trinitrobenzene	2.39E+02	2.13E+02	2.05E+02	2.03E+02	2.05E+02	2.02E+02	2.11E+02	7
1,4-Dinitrobenzene	2.67E+02	2.62E+02	2.50E+02	2.52E+02	2.50E+02	2.47E+02	2.55E+02	3
o-Dinitrobenzene	1.04E+02	1.11E+02	1.02E+02	1.01E+02	1.12E+02	8.83E+01	1.03E+02	8
1,3-DNB	3.37E+02	3.37E+02	3.17E+02	3.20E+02	3.06E+02	3.30E+02	3.24E+02	4
Nitrobenzene	3.62E+02	3.51E+02	3.42E+02	3.36E+02	3.40E+02	3.35E+02	3.44E+02	3
Tetryl	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
2,4,6-Trinitrotoluene	2.43E+02	2.36E+02	2.16E+02	2.19E+02	2.29E+02	2.25E+02	2.28E+02	4
Tetryl breakdown	3.64E+02	3.52E+02	3.43E+02	3.37E+02	3.41E+02	3.37E+02	3.46E+02	3
4-Amino-2,6-dinitrotoluene	1.19E+02	8.55E+01	9.02E+01	8.79E+01	8.98E+01	9.01E+01	9.38E+01	13
2-Amino-4,6-dinitrotoluene	2.11E+02	2.30E+02	2.23E+02	2.16E+02	2.12E+02	2.22E+02	2.19E+02	3
2,6-Dinitrotoluene	1.53E+02	1.29E+02	1.18E+02	1.20E+02	1.18E+02	9.18E+01	1.22E+02	16
2,4-Dinitrotoluene	3.83E+02	3.14E+02	3.18E+02	3.19E+02	3.13E+02	3.38E+02	3.31E+02	8
2-Nitrotoluene	1.67E+02	1.34E+02	1.24E+02	1.23E+02	1.21E+02	1.24E+02	1.32E+02	13
4-Nitrotoluene	1.10E+02	8.50E+01	9.05E+01	9.33E+01	9.19E+01	9.24E+01	9.38E+01	9
3-Nitrotoluene	1.34E+02	1.27E+02	1.33E+02	1.39E+02	1.38E+02	1.41E+02	1.35E+02	4
2-NMX	3.46E+01	3.11E+01	3.57E+01	3.43E+01	3.42E+01	3.46E+01	3.41E+01	5
1-Nitronaphthalene	9.54E+01	1.27E+02	1.37E+02	1.43E+02	1.42E+02	1.44E+02	1.31E+02	14

Linear

Average % RSD: 8

11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
21 components with 6 levels each

4 RDX
Retention time = 4.301 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	1735.6	175.67	Manual	11/7/2013 4:26:5
2	24.700	2956.1	119.6811	Manual	11/7/2013 4:26:5
3	98.800	9541.6	96.57507	Manual	11/7/2013 4:26:5
4	494.000	45161.0	91.41911	Manual	11/7/2013 4:26:5
5	988.000	87948.0	89.01617	Manual	11/7/2013 4:26:5
6	1976.000	173917.9	88.01514	Manual	11/7/2013 4:26:5

Calibration formula: Y = 87.623 X + 1095.718
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.21%
Average CF = 110.0628 with RSD = 31.09%

5 1,3,5-TNB
Retention time = 4.998 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2392.0	238.961	Manual	11/7/2013 4:26:5
2	25.030	5333.3	213.0753	Manual	11/7/2013 4:26:5
3	100.100	20536.6	205.1611	Manual	11/7/2013 4:26:5
4	500.500	101539.7	202.8765	Manual	11/7/2013 4:26:5
5	1001.000	205100.0	204.8951	Manual	11/7/2013 4:26:5
6	2002.000	403513.1	201.555	Manual	11/7/2013 4:26:5

Calibration formula: Y = 211.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 4.72%
Average CF = 211.0874 with RSD = 6.74%

6 1,4-DNB
Retention time = 5.904 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	2658.0	267.4044	Manual	11/7/2013 4:26:5
2	24.850	6512.0	262.0523	Manual	11/7/2013 4:26:5
3	99.400	24891.8	250.4201	Manual	11/7/2013 4:26:5
4	497.000	125098.1	251.7064	Manual	11/7/2013 4:26:5
5	994.000	248639.0	250.1398	Manual	11/7/2013 4:26:5
6	1988.000	490867.8	246.9154	Manual	11/7/2013 4:26:5

Calibration formula: Y = 254.773 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9985, Average error = 2.61%
Average CF = 254.7731 with RSD = 3.16%

7 o-Dinitrobenzene
Retention time = 6.531 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	1043.0	103.8845	Manual	11/7/2013 4:26:5
2	25.100	2784.0	110.9163	Manual	11/7/2013 4:26:5
3	100.400	10260.0	102.1917	Manual	11/7/2013 4:26:5
4	502.000	50771.4	101.1383	Manual	11/7/2013 4:26:5
5	1004.000	112229.0	111.7819	Manual	11/7/2013 4:26:5
6	2008.000	177323.0	88.30827	Manual	11/7/2013 4:26:5

Calibration formula: Y = 103.037 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9631, Average error = 5.65%
Average CF = 103.0368 with RSD = 8.24%

8 1,3-DNB
Retention time = 6.930 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3377.0	337.3626	Manual	11/7/2013 4:26:5
2	25.030	8427.0	336.676	Manual	11/7/2013 4:26:5
3	100.100	31743.6	317.1186	Manual	11/7/2013 4:26:5
4	500.500	160362.3	320.4042	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	306036.0	305.7303	Manual	11/7/2013 4:26:5
6	2002.000	660009.0	329.6748	Manual	11/7/2013 4:26:5

Calibration formula: Y = 324.494 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9986, Average error = 3.11%
Average CF = 324.4944 with RSD = 3.81%

9 Tetryl
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

10 Nitrobenzene
Retention time = 7.851 min., Search window = 0.140 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	3632.0	362.1137	Manual	11/7/2013 4:26:5
2	25.080	8798.0	350.7975	Manual	11/7/2013 4:26:5
3	100.300	34309.0	342.0638	Manual	11/7/2013 4:26:5
4	501.500	168264.0	335.5214	Manual	11/7/2013 4:26:5
5	1003.000	340823.0	339.8036	Manual	11/7/2013 4:26:5
6	2006.000	672829.0	335.4083	Manual	11/7/2013 4:26:5

Calibration formula: Y = 344.285 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 344.2847 with RSD = 3.02%

11 2,4,6-TNT

Retention time = 8.290 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2433.0	242.5723	Manual	11/7/2013 4:26:5
2	25.080	5917.0	235.925	Manual	11/7/2013 4:26:5
3	100.300	21628.8	215.6413	Manual	11/7/2013 4:26:5
4	501.500	109952.5	219.2473	Manual	11/7/2013 4:26:5
5	1003.000	229233.7	228.5481	Manual	11/7/2013 4:26:5
6	2006.000	451815.3	225.232	Manual	11/7/2013 4:26:5

Calibration formula: Y = 227.861 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 3.43%
Average CF = 227.8610 with RSD = 4.44%

12 Tetryl breakdown
Retention time = 8.833 min., Search window = 0.121 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	3632.0	363.5636	Manual	11/7/2013 4:26:5
2	24.980	8798.0	352.2018	Manual	11/7/2013 4:26:5
3	99.900	34309.0	343.4334	Manual	11/7/2013 4:26:5
4	499.500	168264.0	336.8649	Manual	11/7/2013 4:26:5
5	999.000	340823.0	341.1642	Manual	11/7/2013 4:26:5
6	1998.000	672829.0	336.7513	Manual	11/7/2013 4:26:5

Calibration formula: Y = 345.663 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9990, Average error = 2.36%
Average CF = 345.6632 with RSD = 3.02%

13 4-Am-2,6-DNT
Retention time = 10.350 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1195.0	119.3806	Manual	11/7/2013 4:26:5
2	25.030	2141.3	85.54734	Manual	11/7/2013 4:26:5
3	100.100	9028.8	90.19803	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	44006.8	87.92575	Manual	11/7/2013 4:26:5
5	1001.000	89879.0	89.78921	Manual	11/7/2013 4:26:5
6	2002.000	180347.0	90.08342	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.821 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9967, Average error = 9.08%
Average CF = 93.8207 with RSD = 13.48%

14 2-Am-4,6-DNT
Retention time = 10.655 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	2109.0	210.9	Manual	11/7/2013 4:26:5
2	25.000	5748.0	229.92	Manual	11/7/2013 4:26:5
3	100.000	22305.2	223.0521	Manual	11/7/2013 4:26:5
4	500.000	108098.5	216.197	Manual	11/7/2013 4:26:5
5	1000.000	212049.0	212.049	Manual	11/7/2013 4:26:5
6	2000.000	443957.0	221.9785	Manual	11/7/2013 4:26:5

Calibration formula: Y = 219.016 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9994, Average error = 2.72%
Average CF = 219.0161 with RSD = 3.33%

15 2,6-DNT
Retention time = 11.092 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	1529.0	152.7473	Manual	11/7/2013 4:26:5
2	25.030	3229.0	129.0052	Manual	11/7/2013 4:26:5
3	100.100	11802.5	117.9076	Manual	11/7/2013 4:26:5
4	500.500	60065.4	120.0107	Manual	11/7/2013 4:26:5
5	1001.000	118086.0	117.968	Manual	11/7/2013 4:26:5
6	2002.000	183813.0	91.81468	Manual	11/7/2013 4:26:5

Calibration formula: Y = 121.576 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.8709, Average error = 10.58%
Average CF = 121.5756 with RSD = 16.21%

16 2,4-DNT
Retention time = 11.593 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3833.0	382.9171	Manual	11/7/2013 4:26:5
2	25.030	7855.7	313.8512	Manual	11/7/2013 4:26:5
3	100.100	31809.8	317.7802	Manual	11/7/2013 4:26:5
4	500.500	159491.0	318.6633	Manual	11/7/2013 4:26:5
5	1001.000	313493.7	313.1805	Manual	11/7/2013 4:26:5
6	2002.000	677076.3	338.2	Manual	11/7/2013 4:26:5

Calibration formula: Y = 330.765 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9984, Average error = 6.00%
Average CF = 330.7654 with RSD = 8.21%

17 2-NT
Retention time = 13.627 min., Search window = 0.142 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	1661.0	167.4395	Manual	11/7/2013 4:26:5
2	24.800	3323.1	133.9942	Manual	11/7/2013 4:26:5
3	99.200	12318.3	124.1764	Manual	11/7/2013 4:26:5
4	496.000	61096.7	123.1788	Manual	11/7/2013 4:26:5
5	992.000	120282.0	121.252	Manual	11/7/2013 4:26:5
6	1984.000	245425.2	123.7022	Manual	11/7/2013 4:26:5

Calibration formula: Y = 132.291 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9906, Average error = 9.29%
Average CF = 132.2905 with RSD = 13.45%

18 4-NT
Retention time = 15.029 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	1093.0	109.8493	Manual	11/7/2013 4:26:5
2	24.880	2115.0	85.00676	Manual	11/7/2013 4:26:5

Level	Amount	Area	Area/Amt	Source	Date and time
3	99.500	9006.1	90.51358	Manual	11/7/2013 4:26:5
4	497.500	46394.0	93.25427	Manual	11/7/2013 4:26:5
5	995.000	91440.0	91.8995	Manual	11/7/2013 4:26:5
6	1990.000	183963.6	92.44402	Manual	11/7/2013 4:26:5

Calibration formula: Y = 93.828 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9996, Average error = 5.69%
Average CF = 93.8279 with RSD = 8.94%

19 3-NT
Retention time = 15.763 min., Search window = 0.162 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	1326.0	133.9394	Manual	11/7/2013 4:26:5
2	24.750	3131.0	126.5048	Manual	11/7/2013 4:26:5
3	99.000	13215.1	133.4856	Manual	11/7/2013 4:26:5
4	495.000	68775.4	138.9402	Manual	11/7/2013 4:26:5
5	990.000	137062.0	138.4465	Manual	11/7/2013 4:26:5
6	1980.000	279402.0	141.1121	Manual	11/7/2013 4:26:5

Calibration formula: Y = 135.405 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9977, Average error = 3.02%
Average CF = 135.4048 with RSD = 3.90%

20 2-NMX
Retention time = 27.252 min., Search window = 0.339 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	1037.0	34.55515	Manual	11/7/2013 4:26:5
2	75.030	2334.8	31.11839	Manual	11/7/2013 4:26:5
3	300.140	10728.1	35.74358	Manual	11/7/2013 4:26:5
4	1500.680	51440.8	34.27835	Manual	11/7/2013 4:26:5
5	3001.350	102777.0	34.24359	Manual	11/7/2013 4:26:5
6	6002.700	207606.6	34.58553	Manual	11/7/2013 4:26:5

Calibration formula: Y = 34.087 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.90%
Average CF = 34.0874 with RSD = 4.56%

21 1-Nitronaphthalene
Retention time = 33.445 min., Search window = 0.242 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.020	956.3	95.4371	Manual	11/7/2013 4:26:5
2	25.050	3188.1	127.2678	Manual	11/7/2013 4:26:5
3	100.200	13694.4	136.6708	Manual	11/7/2013 4:26:5
4	501.000	71523.6	142.7616	Manual	11/7/2013 4:26:5
5	1002.000	142444.0	142.1597	Manual	11/7/2013 4:26:5
6	2004.000	288442.0	143.9331	Manual	11/7/2013 4:26:5

Calibration formula: Y = 131.372 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9877, Average error = 10.16%
Average CF = 131.3717 with RSD = 14.20%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Update File: 5E12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
HMX				2.87			2.87	2.77	2.97
Nitroglycerin				9.15			9.15	8.96	9.34
PETN				16.92			16.92	16.63	17.20
2-NMX				27.42			27.42	27.09	27.76

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Calibration File: 4E12310B

GC Column (2) : CHROMPACK ID: 100 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	5.09E+01	1.08E+02	2.49E+02	4.30E+02	4.34E+02	4.29E+02	2.83E+02	61	- Linear
Nitroglycerin	1.37E+02	1.32E+02	1.27E+02	1.27E+02	1.22E+02	1.22E+02	1.28E+02	4	
PETN	6.64E+01	1.11E+02	1.40E+02	1.41E+02	1.36E+02	1.37E+02	1.22E+02	24	- Linear
2-NMX	4.48E+02	4.94E+02	5.05E+02	5.36E+02	4.69E+02	4.77E+02	4.88E+02	6	

Average % RSD: 24

ISAL 11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4E12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
23 components with 6 levels each

20 HMX
Retention time = 2.870 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	507.1	50.86152	Manual	11/7/2013 4:47:5
2	24.920	2696.9	108.2228	Manual	11/7/2013 4:47:5
3	99.700	24794.1	248.6867	Manual	11/7/2013 4:47:5
4	498.500	214227.3	429.7438	Manual	11/7/2013 4:47:5
5	997.000	432206.6	433.5071	Manual	11/7/2013 4:47:5
6	1994.000	854652.0	428.6118	Manual	11/7/2013 4:47:5

Calibration formula: Y = 434.456 X + -7570.294
Fit type = Linear with equal weighting
Coefficient of determination = 0.9996, Average error = 10.47%
Average CF = 283.2723 with RSD = 61.35%

21 Nitroglycerin
Retention time = 9.150 min., Search window = 0.190 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	27433.9	136.7592	Manual	11/7/2013 4:47:5
2	501.500	66170.4	131.9449	Manual	11/7/2013 4:47:5
3	2006.000	254396.5	126.8178	Manual	11/7/2013 4:47:5
4	10030.000	1273740.0	126.993	Manual	11/7/2013 4:47:5
5	20060.000	2450463.0	122.1567	Manual	11/7/2013 4:47:5
6	40120.000	4901011.0	122.1588	Manual	11/7/2013 4:47:5

Calibration formula: Y = 127.805 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9965, Average error = 3.42%
Average CF = 127.8051 with RSD = 4.46%

22 PETN
Retention time = 16.917 min., Search window = 0.286 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	13251.6	66.39093	Manual	11/7/2013 4:47:5
2	499.000	55483.9	111.1902	Manual	11/7/2013 4:47:5
3	1996.000	278777.5	139.6681	Manual	11/7/2013 4:47:5
4	9980.000	1402209.0	140.5019	Manual	11/7/2013 4:47:5
5	19960.000	2722253.0	136.3854	Manual	11/7/2013 4:47:5
6	39920.000	5464457.0	136.8852	Manual	11/7/2013 4:47:5

Calibration formula: Y = 136.972 X + -246.911
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 12.46%
Average CF = 121.8370 with RSD = 24.05%

23 **2-NMX**
Retention time = 27.424 min., Search window = 0.333 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	13456.2	448.3919	Manual	11/7/2013 4:47:5
2	75.030	37098.8	494.4522	Manual	11/7/2013 4:47:5
3	300.100	151561.1	505.0353	Manual	11/7/2013 4:47:5
4	1500.680	804532.3	536.1118	Manual	11/7/2013 4:47:5
5	3001.400	1408885.0	469.4093	Manual	11/7/2013 4:47:5
6	6002.700	2865768.0	477.4131	Manual	11/7/2013 4:47:5

Calibration formula: Y = 488.469 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9979, Average error = 4.79%
Average CF = 488.4689 with RSD = 6.26%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						~~MIDPOINT~~ Level 4 RT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6		FROM	TO
HMX	4.25	4.29	4.29	4.28	4.25	4.25	4.28	4.18	4.38
RDX	5.25	5.24	5.25	5.26	5.17	5.20	5.26	5.16	5.36
Nitrobenzene	12.90	12.88	12.92	12.88	12.46	12.78	12.88	12.72	13.04
o-Dinitrobenzene	14.97	14.97	14.95	14.92	14.40	14.78	14.92	14.74	15.10
2-Amino-4,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
4-Amino-2,6-dinitrotoluene	16.97	16.87	16.84	16.86	16.25	16.70	16.86	16.70	17.02
1,3-DNB	19.07	19.15	19.06	19.04	18.63	18.91	19.04	18.89	19.19
1,4-Dinitrobenzene	19.76	19.90	19.86	19.85	19.40	19.67	19.85	19.70	20.00
2-Nitrotoluene	24.39	24.41	24.38	24.33	23.71	24.14	24.33	24.07	24.59
3-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
4-Nitrotoluene	27.93	27.92	27.90	27.94	27.25	27.67	27.94	27.68	28.20
1,3,5-Trinitrobenzene	30.07	30.04	30.02	39.94	29.52	29.67	29.94	29.74	30.14
2,6-Dinitrotoluene	31.07	31.33	30.97	30.89	29.91	30.62	30.89	30.69	31.09
2,4-Dinitrotoluene	33.86	33.85	33.80	33.79	33.62	33.71	33.79	33.68	33.90
2-NMX	34.37	34.28	34.22	34.23	34.10	34.17	34.23	34.13	34.33
Tetryl	34.63	34.59	34.54	34.53	34.42	34.47	34.53	34.43	34.63
2,4,6-Trinitrotoluene	35.58	35.53	35.47	35.46	35.38	35.41	35.46	35.36	35.56
1-Nitronaphthalene	36.54	36.48	36.47	36.46	36.42	36.43	36.46	36.36	36.56

James H. Place
Senior Chemist

NOV 07 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 1C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	Linear
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.00E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

James H. Place
Senior Chemist

NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310.CAL** Version = 21
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.284 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.260 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.877 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.924 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.862 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.035 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.850 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.334 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.943 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.943 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.885 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.788 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.226 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.529 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.463 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File:

Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	RT OF STANDARDS						MIDPOINT (Level 4)	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
2,4-Diamino-6-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
2,6-Diamino-4-nitrotoluene	3.76	3.85	3.86	3.84	3.82	3.83	3.84	3.66	4.02
Nitroglycerin	9.77	9.71	9.70	9.70	9.37	9.63	9.70	9.60	9.80
PETN	26.50	26.32	26.34	26.28	25.64	26.08	26.28	26.07	26.49

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NOV 0 7 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 1C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/6/2013 11/6/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

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NOV 07 2013

Calibration File Name: **C:\CPWIN\DATA1\1C12310B.CAL** Version = 20
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.836 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.695 min., Search window = 0.100 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.283 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 4C12310.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.30			4.30	4.20	4.40
RDX				5.26			5.26	5.16	5.36
Nitrobenzene				12.91			12.91	12.75	13.07
o-Dinitrobenzene				14.90			14.90	14.72	15.08
2-Amino-4,6-dinitrotoluene				16.82			16.82	16.66	16.98
4-Amino-2,6-dinitrotoluene				16.82			16.82	16.66	16.98
1,3-DNB				19.08			19.08	18.93	19.23
1,4-Dinitrobenzene				19.77			19.77	19.62	19.92
2-Nitrotoluene				24.31			24.31	24.05	24.57
3-Nitrotoluene				27.86			27.86	27.60	28.12
4-Nitrotoluene				27.86			27.86	27.60	28.12
1,3,5-Trinitrobenzene				30.01			30.01	29.81	30.21
2,6-Dinitrotoluene				30.82			30.82	30.62	31.02
2,4-Dinitrotoluene				33.78			33.78	33.67	33.89
2-NMX				34.22			34.22	34.12	34.32
Tetryl				34.51			34.51	34.41	34.61
2,4,6-Trinitrotoluene				35.46			35.46	35.36	35.56
1-Nitronaphthalene				36.46			36.46	36.36	36.56

RT Update

Files used 4C12310.58+.59

Applies to 4C12310.58 →

RT update applies to files 58–71 old cal. 2C12310

James H. Place
Senior Chemist

NOV 20 2013

Audited By:

Lisa A. Reinert
Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 3C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	- Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	- Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.297 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.262 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.911 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.900 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.817 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0

Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 19.078 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB
Retention time = 19.773 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.306 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.861 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 30.009 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.816 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.782 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.215 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.513 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.458 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.461 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D
INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 4C12310B.58R

Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
2,4-Diamino-6-nitrotoluene				3.82			3.82	3.64	4.00
2,6-Diamino-4-nitrotoluene				3.82			3.82	3.64	4.00
Nitroglycerin				9.72			9.72	9.62	9.82
PETN				26.23			26.23	26.02	26.44

James H. Place
Senior Chemist

NOV 20 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 3C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/17/2013 11/17/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
2,4-Diamino-6-nitrotoluene	1.75E+03	2.14E+03	2.29E+03	2.36E+03	2.33E+03	2.32E+03	2.20E+03	11
2,6-Diamino-4-nitrotoluene	1.74E+03	2.25E+03	2.27E+03	2.35E+03	2.31E+03	2.30E+03	2.20E+03	10
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16

Average % RSD: 12

James H. Place
Senior Chemist

NOV 20 2013

Calibration File Name: **C:\CPWIN\DATA1\3C12310B.CAL** Version = 3
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

19 2,6-DAm-4-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.120	17579.0	1737.055	Manual	11/7/2013 6:36:4
2	30.360	68461.0	2254.974	Manual	11/7/2013 6:36:4
3	101.200	229995.0	2272.678	Manual	11/7/2013 6:36:4
4	506.000	1186674.0	2345.206	Manual	11/7/2013 6:36:4
5	1012.000	2340450.0	2312.698	Manual	11/7/2013 6:36:4
6	2024.000	4661927.0	2303.324	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2204.322 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9966, Average error = 7.07%
Average CF = 2204.3220 with RSD = 10.48%

20 2,4-DAm-6-NT
Retention time = 3.818 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	17579.0	1750.896	Manual	11/7/2013 6:36:4
2	30.120	64461.0	2140.139	Manual	11/7/2013 6:36:4
3	100.400	229995.0	2290.787	Manual	11/7/2013 6:36:4
4	502.000	1186674.0	2363.892	Manual	11/7/2013 6:36:4
5	1004.000	2340450.0	2331.125	Manual	11/7/2013 6:36:4
6	2008.000	4661927.0	2321.677	Manual	11/7/2013 6:36:4

Calibration formula: Y = 2199.753 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9949, Average error = 7.70%
Average CF = 2199.7530 with RSD = 10.61%

21 Nitroglycerin
Retention time = 9.719 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 26.233 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Update File: 5C12310.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MIDPOINT RT	RT WINDOW FROM	TO
HMX				4.23			4.23	4.13	4.33
RDX				5.18			5.18	5.08	5.28
Nitrobenzene				12.78			12.78	12.62	12.94
o-Dinitrobenzene				14.83			14.83	14.65	15.01
2-Amino-4,6-dinitrotoluene				16.77			16.77	16.61	16.93
4-Amino-2,6-dinitrotoluene				16.77			16.77	16.61	16.93
1,3-DNB				18.95			18.95	18.80	19.10
1,4-Dinitrobenzene				19.75			19.75	19.60	19.90
2-Nitrotoluene				24.15			24.15	23.89	24.41
3-Nitrotoluene				27.75			27.75	27.49	28.01
4-Nitrotoluene				27.75			27.75	27.49	28.01
1,3,5-Trinitrobenzene				29.77			29.77	29.57	29.97
2,6-Dinitrotoluene				30.69			30.69	30.49	30.89
2,4-Dinitrotoluene				33.71			33.71	33.60	33.82
2-NMX				34.15			34.15	34.05	34.25
Tetryl				34.49			34.49	34.39	34.59
2,4,6-Trinitrotoluene				35.42			35.42	35.32	35.52
1-Nitronaphthalene				36.44			36.44	36.34	36.54

RT Update

File used 5C12310.17

Applies to 5C12310.01 →

11/22/13

Audited By:

Jessica L. Miller
Chemist

NOV 24 2013

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Calibration File: 4C12310

GC Column (3) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN		
HMX	1.35E+02	1.09E+02	9.73E+01	9.57E+01	9.62E+01	9.58E+01	1.05E+02	15	
RDX	3.38E+02	2.51E+02	1.34E+02	1.18E+02	1.15E+02	1.13E+02	1.78E+02	53	Linear
Nitrobenzene	2.55E+02	2.57E+02	1.93E+02	1.86E+02	1.81E+02	1.84E+02	2.09E+02	17	
o-Dinitrobenzene	2.70E+02	2.19E+02	1.46E+02	1.41E+02	1.36E+02	1.37E+02	1.75E+02	32	Linear
2-Amino-4,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.76E+02	3.81E+02	3.86E+02	3	
4-Amino-2,6-dinitrotoluene	4.00E+02	3.99E+02	3.80E+02	3.82E+02	3.75E+02	3.81E+02	3.86E+02	3	
1,3-DNB	3.48E+02	3.53E+02	3.35E+02	3.29E+02	3.30E+02	3.38E+02	3.39E+02	3	
1,4-Dinitrobenzene	4.18E+02	2.98E+02	2.41E+02	2.45E+02	2.30E+02	2.27E+02	2.76E+02	27	
2-Nitrotoluene	2.04E+02	1.32E+02	1.28E+02	1.18E+02	1.16E+02	1.16E+02	1.36E+02	25	
3-Nitrotoluene	2.89E+02	2.08E+02	1.85E+02	1.81E+02	1.95E+02	2.01E+02	2.10E+02	19	Linear
4-Nitrotoluene	2.88E+02	2.07E+02	1.84E+02	1.80E+02	1.94E+02	2.00E+02	2.09E+02	19	
1,3,5-Trinitrobenzene	6.44E+01	6.13E+01	1.05E+02	1.93E+02	2.18E+02	2.46E+02	1.48E+02	55	
2,6-Dinitrotoluene	2.86E+01	3.36E+01	6.69E+01	1.27E+02	1.38E+02	1.28E+02	8.70E+01	58	
2,4-Dinitrotoluene	2.48E+02	2.27E+02	2.57E+02	2.71E+02	2.72E+02	2.76E+02	2.58E+02	7	
2-NMX	1.82E+01	1.36E+01	2.80E+01	3.31E+01	3.38E+01	3.48E+01	2.69E+01	33	
Tetryl	4.98E+01	5.86E+01	1.21E+02	1.41E+02	1.62E+02	1.57E+02	1.15E+02	43	Linear
2,4,6-Trinitrotoluene	1.13E+02	1.55E+02	2.02E+02	2.10E+02	2.11E+02	2.13E+02	1.84E+02	22	
1-Nitronaphthalene	8.26E+01	1.06E+02	1.34E+02	1.40E+02	1.48E+02	1.61E+02	1.29E+02	23	

Average % RSD: 25

1546
11/22/13

Calibration File Name: **C:\CPWIN\DATA1\4C12310.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
20 components with 6 levels each

3 HMX
Retention time = 4.228 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.970	1342.1	134.6136	Manual	11/7/2013 6:22:4
2	24.920	2723.6	109.2945	Manual	11/7/2013 6:22:4
3	99.700	9705.1	97.34291	Manual	11/7/2013 6:22:4
4	498.500	47702.4	95.69196	Manual	11/7/2013 6:22:4
5	997.000	95930.6	96.21928	Manual	11/7/2013 5:54:2
6	1994.000	191071.5	95.82322	Manual	11/7/2013 5:54:2

Calibration formula: Y = 104.831 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9850, Average error = 10.89%
Average CF = 104.8309 with RSD = 14.79%

4 RDX
Retention time = 5.179 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.880	3341.0	338.1567	Manual	11/7/2013 6:22:4
2	24.700	6206.7	251.2849	Manual	11/7/2013 6:22:4
3	98.800	13260.0	134.2104	Manual	11/7/2013 6:22:4
4	494.000	58092.3	117.5958	Manual	11/7/2013 6:22:4
5	988.000	113307.0	114.6832	Manual	11/7/2013 5:54:2
6	1976.000	224070.4	113.396	Manual	11/7/2013 5:54:2

Calibration formula: Y = 112.052 X + 2642.431
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 4.86%
Average CF = 178.2212 with RSD = 53.09%

5 Nitrobenzene
Retention time = 12.784 min., Search window = 0.160 min.

Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	2557.3	254.9608	Manual	11/7/2013 6:22:4
2	25.080	6439.6	256.7624	Manual	11/7/2013 6:22:4
3	100.300	19312.9	192.5509	Manual	11/7/2013 6:22:4
4	501.500	93095.0	185.633	Manual	11/7/2013 6:22:4
5	1003.000	181116.0	180.5743	Manual	11/7/2013 5:54:2
6	2006.000	369767.4	184.3307	Manual	11/7/2013 5:54:2

Calibration formula: Y = 183.207 X + 722.261
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.19%
Average CF = 209.1354 with RSD = 17.41%

6 o-Dinitrobenzene
Retention time = 14.833 min., Search window = 0.180 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.040	2707.3	269.6489	Manual	11/7/2013 6:22:4
2	25.100	5506.1	219.3654	Manual	11/7/2013 6:22:4
3	100.400	14699.7	146.4115	Manual	11/7/2013 6:22:4
4	502.000	70939.4	141.3136	Manual	11/7/2013 6:22:4
5	1004.000	137002.0	136.4562	Manual	11/7/2013 5:54:2
6	2008.000	274910.9	136.9078	Manual	11/7/2013 5:54:2

Calibration formula: Y = 135.966 X + 1591.917
Fit type = Linear with equal weighting
Coefficient of determination = 0.9999, Average error = 4.08%
Average CF = 175.0172 with RSD = 32.13%

7 4-Am-2,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	4003.0	399.9001	Manual	11/7/2013 6:22:4
2	25.030	9981.3	398.773	Manual	11/7/2013 6:22:4
3	100.100	38007.0	379.69	Manual	11/7/2013 6:22:4
4	500.500	191117.0	381.8521	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
5	1001.000	375569.0	375.1938	Manual	11/7/2013 5:54:2
6	2002.000	761871.9	380.5554	Manual	11/7/2013 5:54:2

Calibration formula: Y = 385.994 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.30%
Average CF = 385.9941 with RSD = 2.74%

8 2-Am-4,6-DNT
Retention time = 16.770 min., Search window = 0.160 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.000	4003.0	400.3	Manual	11/7/2013 6:22:4
2	25.000	9981.3	399.2516	Manual	11/7/2013 6:22:4
3	100.000	38007.0	380.0697	Manual	11/7/2013 6:22:4
4	500.000	191117.3	382.2346	Manual	11/7/2013 6:22:4
5	1000.000	375569.0	375.569	Manual	11/7/2013 5:54:2
6	2000.000	761871.9	380.9359	Manual	11/7/2013 5:54:2

Calibration formula: Y = 386.393 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9995, Average error = 2.31%
Average CF = 386.3935 with RSD = 2.75%

9 1,3-DNB
Retention time = 18.952 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	3481.0	347.7522	Manual	11/7/2013 6:22:4
2	25.030	8842.2	353.2628	Manual	11/7/2013 6:22:4
3	100.100	33551.1	335.1753	Manual	11/7/2013 6:22:4
4	500.500	164416.9	328.5053	Manual	11/7/2013 6:22:4
5	1001.000	329986.0	329.6563	Manual	11/7/2013 5:54:2
6	2002.000	676452.6	337.8884	Manual	11/7/2013 5:54:2

Calibration formula: Y = 338.707 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9997, Average error = 2.32%
Average CF = 338.7067 with RSD = 2.93%

10 1,4-DNB

Retention time = 19.754 min., Search window = 0.150 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.940	4154.0	417.9075	Manual	11/7/2013 6:22:4
2	24.850	7406.2	298.0347	Manual	11/7/2013 6:22:4
3	99.400	23954.9	240.9953	Manual	11/7/2013 6:22:4
4	497.000	121831.0	245.1328	Manual	11/7/2013 6:22:4
5	994.000	228175.0	229.5523	Manual	11/7/2013 5:54:2
6	1988.000	450747.1	226.7339	Manual	11/7/2013 5:54:2

Calibration formula: Y = 225.832 X + 3382.365
Fit type = Linear with equal weighting
Coefficient of determination = 0.9997, Average error = 9.49%
Average CF = 276.3928 with RSD = 26.78%

11 2-NT
Retention time = 24.150 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.920	2024.0	204.0323	Manual	11/7/2013 6:22:4
2	24.800	3277.2	132.1445	Manual	11/7/2013 6:22:4
3	99.200	12732.0	128.3471	Manual	11/7/2013 6:22:4
4	496.000	58424.1	117.7906	Manual	11/7/2013 6:22:4
5	992.000	114933.0	115.8599	Manual	11/7/2013 5:54:2
6	1984.000	229577.1	115.7143	Manual	11/7/2013 5:54:2

Calibration formula: Y = 115.238 X + 904.672
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 3.03%
Average CF = 135.6481 with RSD = 25.22%

12 4-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.950	2865.0	287.9397	Manual	11/7/2013 6:22:4
2	24.880	5158.9	207.3494	Manual	11/7/2013 6:22:4
3	99.500	18291.0	183.829	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
4	497.500	89504.0	179.9075	Manual	11/7/2013 6:22:4
5	995.000	192701.0	193.6693	Manual	11/7/2013 5:54:2
6	1990.000	397032.6	199.5139	Manual	11/7/2013 5:54:2

Calibration formula: Y = 199.15 X + -2456.421
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.31%
Average CF = 208.7015 with RSD = 19.21%

13 3-NT
Retention time = 27.749 min., Search window = 0.260 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.900	2865.0	289.394	Manual	11/7/2013 6:22:4
2	24.750	5158.9	208.4386	Manual	11/7/2013 6:22:4
3	99.000	18291.0	184.7575	Manual	11/7/2013 6:22:4
4	495.000	89504.0	180.8162	Manual	11/7/2013 6:22:4
5	990.000	192701.0	194.6475	Manual	11/7/2013 5:54:2
6	1980.000	397032.6	200.5215	Manual	11/7/2013 5:54:2

Calibration formula: Y = 200.155 X + -2456.134
Fit type = Linear with equal weighting
Coefficient of determination = 0.9993, Average error = 24.32%
Average CF = 209.7625 with RSD = 19.21%

14 1,3,5-TNB
Retention time = 29.768 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	645.0	64.43556	Manual	11/7/2013 6:22:4
2	25.030	1535.0	61.32668	Manual	11/7/2013 6:22:4
3	100.100	10514.2	105.0372	Manual	11/7/2013 6:22:4
4	500.500	96528.8	192.8647	Manual	11/7/2013 6:22:4
5	1001.000	218305.0	218.0869	Manual	11/7/2013 5:54:2
6	2002.000	491541.0	245.525	Manual	11/7/2013 5:54:2

Calibration formula: Y = 246.451 X + -12946.21
Fit type = Linear with equal weighting
Coefficient of determination = 0.9960, Average error = 7.95%
Average CF = 147.8793 with RSD = 54.75%

15 2,6-DNT
Retention time = 30.691 min., Search window = 0.200 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	286.0	28.57143	Manual	11/7/2013 6:22:4
2	25.030	842.0	33.63963	Manual	11/7/2013 6:22:4
3	100.100	6696.3	66.89603	Manual	11/7/2013 6:22:4
4	500.500	63801.7	127.476	Manual	11/7/2013 6:22:4
5	1001.000	137837.0	137.6993	Manual	11/7/2013 5:54:2
6	2002.000	255955.8	127.8501	Manual	11/7/2013 5:54:2

Calibration formula: Y = 130.775 X + -1737.207
Fit type = Linear with equal weighting
Coefficient of determination = 0.9978, Average error = 18.93%
Average CF = 87.0221 with RSD = 57.56%

16 2,4-DNT
Retention time = 33.711 min., Search window = 0.110 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.010	2479.9	247.7388	Manual	11/7/2013 6:22:4
2	25.030	5674.2	226.6967	Manual	11/7/2013 6:22:4
3	100.100	25689.3	256.6363	Manual	11/7/2013 6:22:4
4	500.500	135545.7	270.8206	Manual	11/7/2013 6:22:4
5	1001.000	272224.8	271.9529	Manual	11/7/2013 5:54:2
6	2002.000	552206.7	275.8275	Manual	11/7/2013 5:54:2

Calibration formula: Y = 258.279 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9937, Average error = 5.65%
Average CF = 258.2788 with RSD = 7.27%

17 2-NMX
Retention time = 34.153 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	30.010	547.0	18.22726	Manual	11/7/2013 6:22:4
2	75.030	1021.9	13.6195	Manual	11/7/2013 6:22:4

Level	Amount	Area	Area/Amt	Source	Date and time
3	300.140	8405.7	28.00598	Manual	11/7/2013 6:22:4
4	1500.680	49705.2	33.12178	Manual	11/7/2013 6:22:4
5	3001.350	101352.4	33.76894	Manual	11/7/2013 5:54:2
6	6002.700	208653.1	34.75987	Manual	11/7/2013 5:54:2

Calibration formula: Y = 34.905 X + -1853.776
Fit type = Linear with equal weighting
Coefficient of determination = 0.9998, Average error = 7.94%
Average CF = 26.9172 with RSD = 33.25%

18 Tetryl
Retention time = 34.486 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	9.990	498.0	49.84985	Manual	11/7/2013 6:22:4
2	24.980	1463.4	58.58095	Manual	11/7/2013 6:22:4
3	99.900	12113.9	121.2604	Manual	11/7/2013 6:22:4
4	499.500	70299.5	140.7396	Manual	11/7/2013 6:22:4
5	999.000	162187.2	162.3495	Manual	11/7/2013 5:54:2
6	1998.000	312750.3	156.5317	Manual	11/7/2013 5:54:2

Calibration formula: Y = 158.811 X + -2898.19
Fit type = Linear with equal weighting
Coefficient of determination = 0.9989, Average error = 11.23%
Average CF = 114.8853 with RSD = 42.81%

19 2,4,6-TNT
Retention time = 35.417 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	1137.0	113.3599	Manual	11/7/2013 6:22:4
2	25.080	3881.1	154.7496	Manual	11/7/2013 6:22:4
3	100.300	20302.9	202.4222	Manual	11/7/2013 6:22:4
4	501.500	105094.4	209.5601	Manual	11/7/2013 6:22:4
5	1003.000	211348.2	210.716	Manual	11/7/2013 5:54:2
6	2006.000	426796.9	212.7602	Manual	11/7/2013 5:54:2

Calibration formula: Y = 213.192 X + -1453.141
Fit type = Linear with equal weighting
Coefficient of determination = 1.0000, Average error = 11.52%
Average CF = 183.9280 with RSD = 22.26%

20 1-Nitronaphthalene
Retention time = 36.435 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	10.030	828.0	82.55235	Manual	11/7/2013 6:22:4
2	25.050	2651.3	105.8401	Manual	11/7/2013 6:22:4
3	100.200	13423.0	133.9621	Manual	11/7/2013 6:22:4
4	501.000	70278.0	140.2754	Manual	11/7/2013 6:22:4
5	1002.000	148002.0	147.7066	Manual	11/7/2013 5:54:2
6	2004.000	322421.4	160.8889	Manual	11/7/2013 5:54:2

Calibration formula: Y = 160.406 X + -4440.081
Fit type = Linear with equal weighting
Coefficient of determination = 0.9980, Average error = 7.46%
Average CF = 128.5376 with RSD = 22.58%

6D

INITIAL CALIBRATION - RETENTION TIME SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Update File: 5C12310B.17R

Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	RT OF STANDARDS						MIDPOINT	RT WINDOW	
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	RT	FROM	TO
Nitroglycerin				9.57			9.57	9.47	9.67
PETN				25.94			25.94	25.73	26.15

6E

INITIAL CALIBRATION - CALIBRATION FACTOR SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Calibration File: 4C12310B

GC Column (4) : CAPCELL CN ID: 250 (mm) Date(s) Analyzed: 11/19/2013 11/19/2013

COMPOUND	CALIBRATION FACTORS							%RSD
	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	MEAN	
Nitroglycerin	1.21E+02	1.04E+02	1.00E+02	9.58E+01	9.42E+01	9.40E+01	1.02E+02	10
PETN	1.50E+02	1.31E+02	1.16E+02	1.06E+02	1.06E+02	1.04E+02	1.19E+02	16
							Average % RSD:	13

Calibration File Name: **C:\CPWIN\DATA1\4C12310B.CAL** Version = 1
External standard calibration
Standard injection volume = 1
No sample weight correction
Area reject threshold = 0
Reference peak area reject threshold = 500
Amount units = ug/L
22 components with 6 levels each

21 Nitroglycerin
Retention time = 9.567 min., Search window = 0.100 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	200.600	24364.8	121.4599	Manual	11/7/2013 6:36:4
2	501.500	52178.4	104.0446	Manual	11/7/2013 6:36:4
3	2006.000	201241.4	100.3197	Manual	11/7/2013 6:36:4
4	10030.000	960841.4	95.79675	Manual	11/7/2013 6:36:4
5	20060.000	1890557.0	94.24512	Manual	11/7/2013 6:36:4
6	40120.000	3769975.0	93.96748	Manual	11/7/2013 6:36:4

Calibration formula: Y = 101.639 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9889, Average error = 7.29%
Average CF = 101.6389 with RSD = 10.30%

22 PETN
Retention time = 25.939 min., Search window = 0.210 min.
Low alarm amount = 0, High alarm amount = 0
Group number = 0, Component constant = 0
No retention time reference component
Single peak quantification by area

Level	Amount	Area	Area/Amt	Source	Date and time
1	199.600	30004.0	150.3206	Manual	11/7/2013 6:36:4
2	499.000	65376.0	131.014	Manual	11/7/2013 6:36:4
3	1996.000	230585.5	115.5238	Manual	11/7/2013 6:36:4
4	9980.000	1060666.0	106.2792	Manual	11/7/2013 6:36:4
5	19960.000	2110257.0	105.7243	Manual	11/7/2013 6:36:4
6	39920.000	4139229.0	103.6881	Manual	11/7/2013 6:36:4

Calibration formula: Y = 118.758 X
Fit type = Avg CF with equal weighting, forced to origin
Coefficient of determination = 0.9659, Average error = 12.30%
Average CF = 118.7583 with RSD = 15.57%

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
RDX	4.20	4.12	4.32	496.07	500.00	-1
1,3,5-Trinitrobenzene	4.88	4.80	5.00	492.04	499.80	-2
1,4-Dinitrobenzene	5.77	5.69	5.89	466.40	500.00	-7
o-Dinitrobenzene	6.38	6.31	6.51	485.01	500.00	-3
1,3-DNB	6.77	6.70	6.90	501.80	499.55	0
Tetryl + Breakdown	7.67	7.57	7.85	25.32 + 437.75 = 463.07	500.00	~~-12~~ -7
2,4,6-Trinitrotoluene	8.12	8.06	8.26	492.63	499.80	-1
4-Amino-2,6-dinitrotoluene	9.96	9.88	10.16	553.23	499.80	11
2-Amino-4,6-dinitrotoluene	10.42	10.33	10.61	465.31	500.00	-7
2,6-Dinitrotoluene	10.87	10.79	11.07	488.15	500.00	-2
2,4-Dinitrotoluene	11.34	11.26	11.54	480.84	500.00	-4
2-Nitrotoluene	13.33	13.25	13.54	460.36	500.00	-8
4-Nitrotoluene	14.70	14.61	14.94	496.26	499.55	-1
3-Nitrotoluene	15.43	15.33	15.66	498.88	500.00	0
2-NMX	26.63	26.43	27.11	986.47	1000.45	-1
1-Nitronaphthalene	33.18	32.99	33.48	544.17	500.00	9

Compounds 16 Average of %D: 4

James H. Place
Senior Chemist

NOV 07 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/06/13

Lab File ID: 1E12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	2.80	2.71	2.91	485.07	500.00	-3
Nitroglycerin	8.95	8.80	9.18	5425.07	6000.00	-10
PETN	16.59	16.38	16.96	5923.12	6000.00	-1
2-NMX	26.76	26.58	27.24	1113.34	1000.45	11

Compounds 4 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/06/13 11/07/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
HMX	4.29	4.18	4.38	443.58	500.00	-11
RDX	5.26	5.16	5.36	502.76	500.00	1
Nitrobenzene	12.89	12.72	13.04	496.28	500.00	-1
o-Dinitrobenzene	14.91	14.74	15.10	502.21	500.00	0
4-Amino-2,6-dinitrotoluene	16.83	16.70	17.02	499.96	499.80	0
1,3-DNB	19.05	18.89	19.19	499.49	499.55	0
1,4-Dinitrobenzene	19.84	19.70	20.00	500.62	500.00	0
2-Nitrotoluene	24.33	24.07	24.59	501.96	500.00	0
4-Nitrotoluene	27.90	27.68	28.20	466.62	499.55	-7
1,3,5-Trinitrobenzene	29.94	29.74	30.14	443.53	499.80	-11
2,6-Dinitrotoluene	30.88	30.69	31.09	498.30	500.00	0
2,4-Dinitrotoluene	33.78	33.68	33.90	528.91	500.00	6
2-NMX	34.22	34.13	34.33	990.46	1000.45	-1
Tetryl	34.52	34.43	34.63	475.03	500.00	-5
2,4,6-Trinitrotoluene	35.46	35.36	35.56	503.01	499.80	1
1-Nitronaphthalene	36.46	36.36	36.56	517.66	500.00	4

Compounds 16 Average of %D: 3

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/06/13 11/07/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/06/13

Lab File ID: 1C12310B.10R Time Analyzed: 20:27

Lab Standard ID: ICNTXAA Initial Calibration: 1C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT	NOM AMOUNT	%D
Nitroglycerin	9.70	9.60	9.80	5470.55	6000.00	-9
PETN	26.30	26.07	26.49	5363.19	6000.00	-11

Compounds 2 Average of %D: 10

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.08	4.00	4.20	465.76	494.00	-6
1,3,5-Trinitrobenzene	4.74	4.66	4.86	466.27	500.50	-7
1,4-Dinitrobenzene	5.59	5.52	5.72	451.96	497.00	-9
o-Dinitrobenzene	6.19	6.13	6.33	426.52	502.00	-15
1,3-DNB	6.56	6.49	6.69	496.47	500.50	-1
Tetryl + Breakdown	7.43	7.33	7.61	44.68 + 422.23 = 466.91	499.50	-15 ← -7
2,4,6-Trinitrotoluene	7.83	7.78	7.98	530.22	501.50	6
4-Amino-2,6-dinitrotoluene	9.78	9.69	9.97	453.91	500.50	-9
2-Amino-4,6-dinitrotoluene	10.07	9.97	10.25	437.29	500.00	-13
2,6-Dinitrotoluene	10.46	10.38	10.66	471.03	500.50	-6
2,4-Dinitrotoluene	10.95	10.86	11.14	522.40	500.50	4
2-Nitrotoluene	12.88	12.80	13.08	438.01	496.00	-12
4-Nitrotoluene	14.20	14.11	14.43	435.43	497.50	-12
3-Nitrotoluene	14.89	14.79	15.12	515.06	495.00	4
2-NMX	25.68	25.41	26.09	1454.63	1500.68	-3
1-Nitronaphthalene	32.82	32.62	33.11	520.34	501.00	4

Compounds 16 Average of %D: 8

James H. Place
Senior Chemist

NOV 20 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/17/13

Lab File ID: 4E12310B.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.74	2.65	2.85	490.98	498.50	-2
Nitroglycerin	8.65	8.51	8.89	8773.75	10030.00	-13
PETN	15.96	15.75	16.33	9460.47	9980.00	-5
2-NMX	25.81	25.57	26.24	1451.79	1500.68	-3

Compounds 4 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.04	4.00	4.20	462.72	494.00	-6
1,3,5-Trinitrobenzene	4.69	4.66	4.86	463.63	500.50	-7
1,4-Dinitrobenzene	5.52	5.52	5.72	451.59	497.00	-9
o-Dinitrobenzene	6.08	6.13	6.33	464.06	502.00	-8
1,3-DNB	6.46	6.49	6.69	477.62	500.50	-5
Tetryl + Breakdown	7.31	7.33	7.61	45.61 + 414.48	=460.09	499.50	-7 -8
2,4,6-Trinitrotoluene	7.69	7.78	7.98	526.99	501.50	5
4-Amino-2,6-dinitrotoluene	9.56	9.69	9.97	426.79	500.50	-15
2-Amino-4,6-dinitrotoluene	9.85	9.97	10.25	441.64	500.00	-12
2,6-Dinitrotoluene	10.25	10.38	10.66	480.78	500.50	-4
2,4-Dinitrotoluene	10.72	10.86	11.14	514.47	500.50	3
2-Nitrotoluene	12.61	12.80	13.08	434.87	496.00	-12
4-Nitrotoluene	13.91	14.11	14.43	445.43	497.50	-10
3-Nitrotoluene	14.57	14.79	15.12	501.57	495.00	1
2-NMX	25.10	25.41	26.09	1490.67	1500.68	-1
1-Nitronaphthalene	32.59	32.62	33.11	508.57	501.00	2

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.71	2.65	2.85	493.56	498.50	-1
Nitroglycerin	8.49	8.51	8.89	8724.02	10030.00	-13
PETN	15.62	15.75	16.33	9454.38	9980.00	-5
2-NMX	25.23	25.57	26.24	1451.73	1500.68	-3

Compounds 4 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.03	4.00	4.20	465.11	494.00	-6
1,3,5-Trinitrobenzene	4.67	4.66	4.86	466.86	500.50	-7
1,4-Dinitrobenzene	5.48	5.52	5.72	446.36	497.00	-10
o-Dinitrobenzene	6.01	6.13	6.33	469.90	502.00	-6
1,3-DNB	6.41	6.49	6.69	478.10	500.50	-4
Tetryl + Breakdown	7.24	7.33	7.61	48.68 + 426.34 = 475.02	499.50	-5
2,4,6-Trinitrotoluene	7.61	7.78	7.98	535.38	501.50	7
4-Amino-2,6-dinitrotoluene	9.42	9.69	9.97	433.87	500.50	-13
2-Amino-4,6-dinitrotoluene	9.72	9.97	10.25	445.94	500.00	-11
2,6-Dinitrotoluene	10.09	10.38	10.66	505.51	500.50	1
2,4-Dinitrotoluene	10.57	10.86	11.14	510.70	500.50	2
2-Nitrotoluene	12.39	12.80	13.08	430.43	496.00	-13
4-Nitrotoluene	13.66	14.11	14.43	441.18	497.50	-11
3-Nitrotoluene	14.32	14.79	15.12	491.25	495.00	-1
2-NMX	24.77	25.41	26.09	1471.64	1500.68	-2
1-Nitronaphthalene	32.49	32.62	33.11	497.13	501.00	-1

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 20 2013

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/18/13

Lab File ID: 4E12310B.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.73	2.65	2.85	496.15	498.50	0
Nitroglycerin	8.39	8.51	8.89	8676.23	10030.00	-13
PETN	15.34	15.75	16.33	10819.72	9980.00	8
2-NMX	24.92	25.57	26.24	1447.83	1500.68	-4

Compounds 4 Average of %D: 6

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.30	4.20	4.40	460.32	498.50	-8
RDX	5.27	5.16	5.36	493.76	494.00	0
Nitrobenzene	12.95	12.75	13.07	501.40	501.50	0
o-Dinitrobenzene	14.97	14.72	15.08	496.44	502.00	-1
4-Amino-2,6-dinitrotoluene	16.85	16.66	16.98	494.79	500.50	-1
1,3-DNB	19.12	18.93	19.23	497.18	500.50	-1
1,4-Dinitrobenzene	19.84	19.62	19.92	493.37	497.00	-1
2-Nitrotoluene	24.37	24.05	24.57	472.79	496.00	-5
4-Nitrotoluene	28.02	27.60	28.12	392.64	497.50	-21
1,3,5-Trinitrobenzene	30.07	29.81	30.21	366.66	500.50	-27
2,6-Dinitrotoluene	30.87	30.62	31.02	555.34	500.50	11
2,4-Dinitrotoluene	33.80	33.67	33.89	528.11	500.50	6
2-NMX	34.24	34.12	34.32	1517.05	1500.68	1
Tetryl	34.53	34.41	34.61	541.03	499.50	8
2,4,6-Trinitrotoluene	35.47	35.36	35.56	505.23	501.50	1
1-Nitronaphthalene	36.47	36.36	36.56	506.56	501.00	1

Compounds 16 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/17/13

Lab File ID: 4C12310B.70R Time Analyzed: 17:31

Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.72	9.62	9.82	9318.58	10030.00	-7
PETN	26.26	26.02	26.44	8808.53	9980.00	-12

Compounds 2 Average of %D: 10

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 4C12310.81R Time Analyzed: 1:18

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.34	4.20	4.40	461.92	498.50	-7
RDX	5.31	5.16	5.36	503.58	494.00	2
Nitrobenzene	12.95	12.75	13.07	504.57	501.50	1
o-Dinitrobenzene	14.98	14.72	15.08	498.45	502.00	-1
4-Amino-2,6-dinitrotoluene	16.85	16.66	16.98	498.02	500.50	0
1,3-DNB	19.16	18.93	19.23	508.07	500.50	2
1,4-Dinitrobenzene	19.86	19.62	19.92	497.01	497.00	0
2-Nitrotoluene	24.37	24.05	24.57	472.49	496.00	-5
4-Nitrotoluene	27.95	27.60	28.12	430.33	497.50	-14
1,3,5-Trinitrobenzene	30.20	29.81	30.21	422.70	500.50	-16
2,6-Dinitrotoluene	30.84	30.62	31.02	488.30	500.50	-2
2,4-Dinitrotoluene	33.84	33.67	33.89	527.07	500.50	5
2-NMX	34.26	34.12	34.32	1522.37	1500.68	1
Tetryl	34.57	34.41	34.61	526.91	499.50	5
2,4,6-Trinitrotoluene	35.51	35.36	35.56	500.72	501.50	0
1-Nitronaphthalene	36.51	36.36	36.56	475.76	501.00	-5

Compounds 16 Average of %D: 4

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:
Lab Code: Case No.: SAS No.: SDG No.:
Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13
GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13
Lab File ID: 4C12310B.81R Time Analyzed: 1:18
Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.74	9.62	9.82	9278.91	10030.00	-7
PETN	26.34	26.02	26.44	9006.53	9980.00	-10

Compounds 2 Average of %D: 9

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/17/13 11/17/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 4C12310.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.32	4.20	4.40	467.08	498.50	-6
RDX	5.28	5.16	5.36	506.91	494.00	3
Nitrobenzene	12.79	12.75	13.07	501.00	501.50	0
o-Dinitrobenzene	14.74	14.72	15.08	490.74	502.00	-2
4-Amino-2,6-dinitrotoluene	16.57	16.66	16.98	495.73	500.50	-1
1,3-DNB	18.98	18.93	19.23	478.67	500.50	-4
1,4-Dinitrobenzene	19.67	19.62	19.92	518.54	497.00	4
2-Nitrotoluene	24.12	24.05	24.57	472.83	496.00	-5
4-Nitrotoluene	27.73	27.60	28.12	446.88	497.50	-10
1,3,5-Trinitrobenzene	30.16	29.81	30.21	457.42	500.50	-9
2,6-Dinitrotoluene	30.50	30.62	31.02	467.40	500.50	-7
2,4-Dinitrotoluene	33.79	33.67	33.89	505.49	500.50	1
2-NMX	34.21	34.12	34.32	1364.48	1500.68	-9
Tetryl	34.53	34.41	34.61	506.30	499.50	1
2,4,6-Trinitrotoluene	35.49	35.36	35.56	465.95	501.50	-7
1-Nitronaphthalene	36.48	36.36	36.56	472.07	501.00	-6

Compounds 16 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/17/13 11/17/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/18/13

Lab File ID: 4C12310B.92R Time Analyzed: 9:05

Lab Standard ID: NITR3PV Initial Calibration: 3C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.63	9.62	9.82	9404.79	10030.00	-6
PETN	26.10	26.02	26.44	9241.41	9980.00	-7

Compounds 2 Average of %D: 7

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.31	4.20	4.40	467.00	494.00	-5
1,3,5-Trinitrobenzene	5.01	4.90	5.10	463.67	500.50	-7
1,4-Dinitrobenzene	5.92	5.80	6.00	452.01	497.00	-9
o-Dinitrobenzene	6.55	6.43	6.63	440.27	502.00	-12
1,3-DNB	6.95	6.83	7.03	486.17	500.50	-3
Nitrobenzene + Tetryl breakdown	7.87	7.71	7.99	4834 + 433.34 = 481.68	501.50	-14 -4
2,4,6-Trinitrotoluene	8.31	8.19	8.39	522.55	501.50	4
4-Amino-2,6-dinitrotoluene	10.37	10.21	10.49	428.28	500.50	-14
2-Amino-4,6-dinitrotoluene	10.68	10.51	10.80	442.91	500.00	-11
2,6-Dinitrotoluene	11.12	10.95	11.23	505.14	500.50	1
2,4-Dinitrotoluene	11.62	11.45	11.74	507.11	500.50	1
2-Nitrotoluene	13.66	13.49	13.77	425.04	496.00	-14
4-Nitrotoluene	15.08	14.87	15.19	439.61	497.50	-12
3-Nitrotoluene	15.80	15.60	15.93	506.36	495.00	2
2-NMX	27.29	26.91	27.59	1456.88	1500.68	-3
1-Nitronaphthalene	33.43	33.20	33.69	521.41	501.00	4

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 22 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310B.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.88	2.77	2.97	494.07	498.50	-1
Nitroglycerin	9.17	8.96	9.34	8816.66	10030.00	-12
PETN	16.95	16.63	17.20	9456.65	9980.00	-5
2-NMX	27.44	27.09	27.76	1455.85	1500.68	-3

Compounds 4 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.32	4.20	4.40	468.50	494.00	-5
1,3,5-Trinitrobenzene	5.01	4.90	5.10	466.77	500.50	-7
1,4-Dinitrobenzene	5.92	5.80	6.00	453.45	497.00	-9
o-Dinitrobenzene	6.55	6.43	6.63	440.88	502.00	-12
1,3-DNB	6.95	6.83	7.03	492.77	500.50	-2
Nitrobenzene + Tetryl breakdown	7.87	7.71	7.99	48.73 + 426.01 = 474.74	501.50	-15 -5
2,4,6-Trinitrotoluene	8.32	8.19	8.39	527.30	501.50	5
4-Amino-2,6-dinitrotoluene	10.39	10.21	10.49	450.34	500.50	-10
2-Amino-4,6-dinitrotoluene	10.69	10.51	10.80	460.24	500.00	-8
2,6-Dinitrotoluene	11.12	10.95	11.23	490.55	500.50	-2
2,4-Dinitrotoluene	11.62	11.45	11.74	500.20	500.50	0
2-Nitrotoluene	13.64	13.49	13.77	429.72	496.00	-13
4-Nitrotoluene	15.04	14.87	15.19	447.81	497.50	-10
3-Nitrotoluene	15.78	15.60	15.93	517.80	495.00	5
2-NMX	27.28	26.91	27.59	1517.00	1500.68	1
1-Nitronaphthalene	33.43	33.20	33.69	517.31	501.00	3

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 22 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/19/13

Lab File ID: 5E12310B.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.88	2.77	2.97	504.53	498.50	1
Nitroglycerin	9.18	8.96	9.34	8937.97	10030.00	-11
PETN	16.94	16.63	17.20	9619.85	9980.00	-4
2-NMX	27.42	27.09	27.76	1427.69	1500.68	-5

Compounds 4 Average of %D: 5

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (1) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/20/13

Lab File ID: 5E12310.50R Time Analyzed: 5:07

Lab Standard ID: NITR3QI Initial Calibration: 4E12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
RDX	4.31	4.20	4.40	473.35	494.00	-4
1,3,5-Trinitrobenzene	5.01	4.90	5.10	469.54	500.50	-6
1,4-Dinitrobenzene	5.92	5.80	6.00	458.54	497.00	-8
o-Dinitrobenzene	6.55	6.43	6.63	438.73	502.00	-13
1,3-DNB	6.95	6.83	7.03	495.45	500.50	-1
Nitrobenzene+Tetryl breakdown	7.87	7.71	7.99	53.57 + 424.66	=478.23 501.50	-15 -5
2,4,6-Trinitrotoluene	8.32	8.19	8.39	518.12	501.50	3
4-Amino-2,6-dinitrotoluene	10.40	10.21	10.49	444.39	500.50	-11
2-Amino-4,6-dinitrotoluene	10.70	10.51	10.80	441.73	500.00	-12
2,6-Dinitrotoluene	11.14	10.95	11.23	503.52	500.50	1
2,4-Dinitrotoluene	11.64	11.45	11.74	511.94	500.50	2
2-Nitrotoluene	13.69	13.49	13.77	435.93	496.00	-12
4-Nitrotoluene	15.09	14.87	15.19	426.99	497.50	-14
3-Nitrotoluene	15.83	15.60	15.93	530.38	495.00	7
2-NMX	27.35	26.91	27.59	1472.21	1500.68	-2
1-Nitronaphthalene	33.43	33.20	33.69	533.69	501.00	7

Compounds 16 Average of %D: 7

James H. Place
Senior Chemist

NOV 22 2013

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: X6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (2) : CHROMPACK ID: 100 (mm) Date Analyzed: 11/20/13

Lab File ID: 5E12310B.50R Time Analyzed: 5:07

Lab Standard ID: NITR3QI Initial Calibration: 4E12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	2.87	2.77	2.97	515.24	498.50	3
Nitroglycerin	9.19	8.96	9.34	9068.86	10030.00	-10
PETN	17.01	16.63	17.20	9709.59	9980.00	-3
2-NMX	27.48	27.09	27.76	1409.84	1500.68	-6

Compounds 4 Average of %D: 6

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.22	4.13	4.33	458.69	498.50	-8
RDX	5.18	5.08	5.28	491.46	494.00	-1
Nitrobenzene	12.74	12.62	12.94	499.75	501.50	0
o-Dinitrobenzene	14.77	14.65	15.01	497.94	502.00	-1
4-Amino-2,6-dinitrotoluene	16.71	16.61	16.93	492.63	500.50	-2
1,3-DNB	18.89	18.80	19.10	491.33	500.50	-2
1,4-Dinitrobenzene	19.66	19.60	19.90	500.51	497.00	1
2-Nitrotoluene	24.12	23.89	24.41	487.46	496.00	-2
4-Nitrotoluene	27.65	27.49	28.01	464.94	497.50	-7
1,3,5-Trinitrobenzene	29.81	29.57	29.97	479.88	500.50	-4
2,6-Dinitrotoluene	30.65	30.49	30.89	447.86	500.50	-11
2,4-Dinitrotoluene	33.71	33.60	33.82	533.30	500.50	7
2-NMX	34.15	34.05	34.25	1497.28	1500.68	0
Tetryl	34.49	34.39	34.59	544.30	499.50	9
2,4,6-Trinitrotoluene	35.43	35.32	35.52	503.49	501.50	0
1-Nitronaphthalene	36.44	36.34	36.54	485.71	501.00	-3

Compounds 16 Average of %D: 4

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310B.28R Time Analyzed: 13:33

Lab Standard ID: NITR3QG Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.55	9.47	9.67	9271.75	10030.00	-8
PETN	25.94	25.73	26.15	9092.02	9980.00	-9

Compounds 2 Average of %D: 9

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.22	4.13	4.33	453.46	498.50	-9
RDX	5.18	5.08	5.28	485.85	494.00	-2
Nitrobenzene	12.68	12.62	12.94	499.29	501.50	0
o-Dinitrobenzene	14.73	14.65	15.01	497.37	502.00	-1
4-Amino-2,6-dinitrotoluene	16.64	16.61	16.93	493.88	500.50	-1
1,3-DNB	18.82	18.80	19.10	508.98	500.50	2
1,4-Dinitrobenzene	19.56	19.60	19.90	473.67	497.00	-5
2-Nitrotoluene	23.99	23.89	24.41	488.72	496.00	-1
4-Nitrotoluene	27.53	27.49	28.01	458.14	497.50	-8
1,3,5-Trinitrobenzene	29.63	29.57	29.97	485.81	500.50	-3
2,6-Dinitrotoluene	30.19	30.49	30.89	448.22	500.50	-10
2,4-Dinitrotoluene	33.65	33.60	33.82	523.16	500.50	5
2-NMX	34.12	34.05	34.25	1401.25	1500.68	-7
Tetryl	34.44	34.39	34.59	498.86	499.50	0
2,4,6-Trinitrotoluene	35.39	35.32	35.52	488.72	501.50	-3
1-Nitronaphthalene	36.42	36.34	36.54	482.82	501.00	-4

Compounds 16 Average of %D: 4

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/19/13

Lab File ID: 5C12310B.39R Time Analyzed: 21:20

Lab Standard ID: NITR3QH Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.53	9.47	9.67	9296.46	10030.00	-7
PETN	25.78	25.73	26.15	8914.81	9980.00	-11

Compounds 2 Average of %D: 9

7E

CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329A Init. Calib Date(s): 11/19/13 11/19/13

GC Column (3) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/20/13

Lab File ID: 5C12310.50R Time Analyzed: 5:07

Lab Standard ID: NITR3QI Initial Calibration: 4C12310

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
HMX	4.21	4.13	4.33	455.60	498.50	-9
RDX	5.16	5.08	5.28	490.25	494.00	-1
Nitrobenzene	12.67	12.62	12.94	492.20	501.50	-2
o-Dinitrobenzene	14.70	14.65	15.01	488.19	502.00	-3
4-Amino-2,6-dinitrotoluene	16.60	16.61	16.93	487.85	500.50	-3
1,3-DNB	18.74	18.80	19.10	493.99	500.50	-1
1,4-Dinitrobenzene	19.52	19.60	19.90	475.69	497.00	-4
2-Nitrotoluene	23.98	23.89	24.41	484.73	496.00	-2
4-Nitrotoluene	27.49	27.49	28.01	471.43	497.50	-5
1,3,5-Trinitrobenzene	29.58	29.57	29.97	470.76	500.50	-6
2,6-Dinitrotoluene	30.07	30.49	30.89	486.09	500.50	-3
2,4-Dinitrotoluene	33.63	33.60	33.82	528.37	500.50	6
2-NMX	34.10	34.05	34.25	1457.49	1500.68	-3
Tetryl	34.42	34.39	34.59	499.38	499.50	0
2,4,6-Trinitrotoluene	35.37	35.32	35.52	504.30	501.50	1
1-Nitronaphthalene	36.40	36.34	36.54	472.53	501.00	-6

Compounds 16 Average of %D: 3

7E
CALIBRATION VERIFICATION SUMMARY

Lab Name: Lancaster Laboratories Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Instrument: Y6329B Init. Calib Date(s): 11/19/13 11/19/13

GC Column (4) : CAPCELL CN ID: 250 (mm) Date Analyzed: 11/20/13

Lab File ID: 5C12310B.50R Time Analyzed: 5:07

Lab Standard ID: NITR3QI Initial Calibration: 4C12310B

COMPOUND	RT	RT WINDOW FROM	TO	CALC AMOUNT (ug/l)	NOM AMOUNT (ug/l)	%D
Nitroglycerin	9.51	9.47	9.67	9285.96	10030.00	-7
PETN	25.80	25.73	26.15	8916.70	9980.00	-11

Compounds 2 Average of %D: 9

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310	
002		CONDITIONER	11/06/2013	14:48:10	1E12310	
003		CONDITIONER	11/06/2013	15:30:34	1E12310	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310	26.86
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310	25.96 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310	26.77
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310	26.85
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310	26.83
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310	26.57
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310	26.63
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310	26.51
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310	26.62
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310	26.59
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310	26.41
021	C3511	7255708	11/07/2013	04:14:48	2E12310	26.44
022	C3514	7255711	11/07/2013	04:57:19	2E12310	26.46
023	C3520	7255717	11/07/2013	05:39:42	2E12310	26.22
024	C3525	7255722	11/07/2013	06:22:07	2E12310	26.38
025	C3534	7255735	11/07/2013	07:04:31	2E12310	26.45
026	C3534	7255736	11/07/2013	07:46:59	2E12310	26.25
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310	26.19
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310	
029	C3534	7255737	11/07/2013	09:54:19	2E12310	26.32
030	C3537	7255744	11/07/2013	10:36:45	2E12310	26.23
031	C3539	7255746	11/07/2013	11:19:12	2E12310	26.14

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310	25.99
033	C3701	7256953	11/07/2013	12:44:04	2E12310	26.15
034	C3707	7256959	11/07/2013	13:26:33	2E12310	26.18
035	C3710	7256962	11/07/2013	14:08:57	2E12310	26.22
036	C3713	7256965	11/07/2013	14:51:22	2E12310	26.39
037	C3718	7256970	11/07/2013	15:33:48	2E12310	26.09
038	C3721	7256973	11/07/2013	16:16:14	2E12310	26.05
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310	26.14
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310	
041	C4010	7259353	11/07/2013	18:23:30	2E12310	26.21
042	C3724	7256976	11/07/2013	19:05:59	2E12310	26.00
043	C3810	7256999	11/07/2013	19:48:27	2E12310	26.22
044	C3817	7257006	11/07/2013	20:30:51	2E12310	26.15
045	C3822	7257011	11/07/2013	21:13:15	2E12310	26.21
046	C3827	7257016	11/07/2013	21:55:42	2E12310	26.14
047	C3830	7257019	11/07/2013	22:38:11	2E12310	26.34
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310	26.31
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310	26.36
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310	26.31
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310	26.20
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310	26.42
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310	26.22
055	E1454	7256670	11/08/2013	04:17:47	2E12310	26.38
056	E1455	7256672	11/08/2013	05:00:14	2E12310	26.27
057	E1456	7258547	11/08/2013	05:42:41	2E12310	26.24
058	E1457	7258549	11/08/2013	06:25:10	2E12310	26.35
059	E1458	7260599	11/08/2013	07:07:37	2E12310	26.24
060	E1459	7260601	11/08/2013	07:50:04	2E12310	26.27
061	E1460	7262133	11/08/2013	08:32:33	2E12310	26.33
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310	26.28

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310	26.25
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310	26.36
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310	26.33
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310	25.45 *
068	C4001	7259344	11/08/2013	13:29:47	2E12310	26.36
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310	26.33
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310	26.47
071	C4016	7259359	11/08/2013	15:37:06	2E12310	26.26
072	C4023	7259366	11/08/2013	16:23:21	2E12310	26.33
073	C4025	7259368	11/08/2013	17:05:45	2E12310	25.64 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310	26.20
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310	26.34
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310	
077	C4116	7259391	11/08/2013	19:55:39	2E12310	26.22
078	C4121	7259396	11/08/2013	20:38:09	2E12310	26.21
079	C4303	7260617	11/08/2013	21:20:36	2E12310	26.47
080	C4309	7260623	11/08/2013	22:02:56	2E12310	25.36 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310	25.54 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310	26.52 *
083	C4701	7262153	11/09/2013	00:10:14	2E12310	25.38 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310	26.18
085	C4710	7262162	11/09/2013	01:35:09	2E12310	26.42
086	C4720	7262172	11/09/2013	02:17:34	2E12310	26.48
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310	26.24
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310	
089	C4725	7262177	11/09/2013	04:25:00	2E12310	26.41
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310	26.35
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310	26.30
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310	26.47
093	4B231	7255627	11/09/2013	07:14:54	2E12310	26.37

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310	26.31
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310	26.51 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310	

	ICAL Dates		ICAL RT	QC Limits
1E12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.77	(26.43 - 27.11 Minutes)
2E12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.14	(25.80 - 26.48 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1E12310B	
002		CONDITIONER	11/06/2013	14:48:10	1E12310B	
003		CONDITIONER	11/06/2013	15:30:34	1E12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1E12310B	27.02
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1E12310B	26.11 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:56	1E12310B	26.91
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1E12310B	27.01
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1E12310B	26.93
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1E12310B	26.75
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:45	1E12310B	26.76
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1E12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1E12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1E12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1E12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1E12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:26	1E12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1E12310B	26.65
018	LCS26305	LCSA	11/07/2013	02:07:20	1E12310B	26.81
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1E12310B	26.74
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2E12310B	26.55
021	C3511	7255708	11/07/2013	04:14:48	2E12310B	26.57
022	C3514	7255711	11/07/2013	04:57:19	2E12310B	26.62
023	C3520	7255717	11/07/2013	05:39:42	2E12310B	26.39
024	C3525	7255722	11/07/2013	06:22:07	2E12310B	26.49
025	C3534	7255735	11/07/2013	07:04:31	2E12310B	26.53
026	C3534	7255736	11/07/2013	07:46:59	2E12310B	26.41
027	NITR3NG	NITR31324L	11/07/2013	08:29:31	2E12310B	26.36
028	NITR3NH	NITR31324M	11/07/2013	09:11:56	2E12310B	
029	C3534	7255737	11/07/2013	09:54:19	2E12310B	26.47
030	C3537	7255744	11/07/2013	10:36:45	2E12310B	26.39
031	C3539	7255746	11/07/2013	11:19:12	2E12310B	26.29

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2E12310B	26.16
033	C3701	7256953	11/07/2013	12:44:04	2E12310B	26.27
034	C3707	7256959	11/07/2013	13:26:33	2E12310B	26.31
035	C3710	7256962	11/07/2013	14:08:57	2E12310B	26.33
036	C3713	7256965	11/07/2013	14:51:22	2E12310B	26.57
037	C3718	7256970	11/07/2013	15:33:48	2E12310B	26.22
038	C3721	7256973	11/07/2013	16:16:14	2E12310B	26.19
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2E12310B	26.29
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2E12310B	
041	C4010	7259353	11/07/2013	18:23:30	2E12310B	26.31
042	C3724	7256976	11/07/2013	19:05:59	2E12310B	26.18
043	C3810	7256999	11/07/2013	19:48:27	2E12310B	26.32
044	C3817	7257006	11/07/2013	20:30:51	2E12310B	26.33
045	C3822	7257011	11/07/2013	21:13:15	2E12310B	26.35
046	C3827	7257016	11/07/2013	21:55:42	2E12310B	26.30
047	C3830	7257019	11/07/2013	22:38:11	2E12310B	26.50
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2E12310B	26.49
049	LCS17306	LCSA	11/08/2013	00:03:05	2E12310B	26.51
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2E12310B	26.48
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2E12310B	26.34
052	NITR3NL	NITR31324M	11/08/2013	02:10:23	2E12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2E12310B	26.54
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2E12310B	26.39
055	E1454	7256670	11/08/2013	04:17:47	2E12310B	26.55
056	E1455	7256672	11/08/2013	05:00:14	2E12310B	26.42
057	E1456	7258547	11/08/2013	05:42:41	2E12310B	26.35
058	E1457	7258549	11/08/2013	06:25:10	2E12310B	26.51
059	E1458	7260599	11/08/2013	07:07:37	2E12310B	26.39
060	E1459	7260601	11/08/2013	07:50:04	2E12310B	26.40
061	E1460	7262133	11/08/2013	08:32:33	2E12310B	26.47
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2E12310B	26.44

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2E12310B	26.38
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2E12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2E12310B	26.53
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2E12310B	26.48
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2E12310B	
068	C4001	7259344	11/08/2013	13:29:47	2E12310B	26.55
069	C4001MS	7259344	11/08/2013	14:12:11	2E12310B	26.49
070	C4001MSD	7259344	11/08/2013	14:54:39	2E12310B	26.58
071	C4016	7259359	11/08/2013	15:37:06	2E12310B	26.38
072	C4023	7259366	11/08/2013	16:23:21	2E12310B	26.45
073	C4025	7259368	11/08/2013	17:05:45	2E12310B	25.77 *
074	C4111	7259386	11/08/2013	17:48:19	2E12310B	26.35
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2E12310B	26.49
076	NITR3NP	NITR31324M	11/08/2013	19:13:13	2E12310B	
077	C4116	7259391	11/08/2013	19:55:39	2E12310B	26.36
078	C4121	7259396	11/08/2013	20:38:09	2E12310B	26.33
079	C4303	7260617	11/08/2013	21:20:36	2E12310B	
080	C4309	7260623	11/08/2013	22:02:56	2E12310B	25.48 *
081	C4320	7260634	11/08/2013	22:45:26	2E12310B	25.69 *
082	C4413	7260649	11/08/2013	23:27:51	2E12310B	26.60
083	C4701	7262153	11/09/2013	00:10:14	2E12310B	25.48 *
084	C4707	7262159	11/09/2013	00:52:43	2E12310B	26.32
085	C4710	7262162	11/09/2013	01:35:09	2E12310B	26.54
086	C4720	7262172	11/09/2013	02:17:34	2E12310B	26.61
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2E12310B	26.38
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2E12310B	
089	C4725	7262177	11/09/2013	04:25:00	2E12310B	26.56
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2E12310B	26.51
091	LCS24304	LCSA	11/09/2013	05:50:03	2E12310B	26.47
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2E12310B	26.62
093	4B231	7255627	11/09/2013	07:14:54	2E12310B	26.52

	ICAL Dates		ICAL RT	QC Limits
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:20	2E12310B	26.47
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2E12310B	26.67 *
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2E12310B	

	ICAL Dates		ICAL RT QC Limits	
1E12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	26.91	(26.58 - 27.24 Minutes)
2E12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	26.3	(25.96 - 26.63 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310	26.08
002		CONDITIONER	11/15/2013	17:25:53	2E12310	25.96
003		CONDITIONER	11/15/2013	18:08:16	2E12310	25.89
004		CONDITIONER	11/15/2013	18:50:40	2E12310	25.82
005		CONDITIONER	11/15/2013	19:33:09	2E12310	25.86
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310	25.75
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310	
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310	25.87
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310	25.99
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310	25.93
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310	
016	C5605	7269438	11/16/2013	03:19:46	2E12310	26.08
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310	26.15
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310	26.20
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310	26.01
021	C5611	7269454	11/16/2013	06:51:59	2E12310	25.86
022	C5621	7269467	11/16/2013	07:34:27	2E12310	25.83
023	C5626	7269472	11/16/2013	08:16:55	2E12310	26.09
024	C5629	7269475	11/16/2013	08:59:20	2E12310	26.01
025	C5632	7269478	11/16/2013	09:41:45	2E12310	25.85
026	C5638	7269484	11/16/2013	10:24:11	2E12310	26.06
027	C5641	7269487	11/16/2013	11:06:32	2E12310	25.99
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310	25.95
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310	25.82
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310	26.00
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310	25.60
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310	25.77

ICAL Dates

3E12310 11/17/2013 - 11/17/2013 NMX = 2-NMX

ICAL RT QC Limits

25.75 (25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310	25.96
035	C5905	7269504	11/16/2013	16:46:09	2E12310	25.97
036	C5915	7269514	11/16/2013	17:28:35	2E12310	26.07
037	C5921	7269520	11/16/2013	18:11:00	2E12310	25.86
038	C5927	7269526	11/16/2013	18:53:29	2E12310	26.00
039	C5930	7269529	11/16/2013	19:35:53	2E12310	26.01
040	C5933	7269532	11/16/2013	20:18:18	2E12310	26.10
041	C5939	7269538	11/16/2013	21:00:45	2E12310	25.96
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310	25.97
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310	
044	C5942	7269541	11/16/2013	23:07:56	2E12310	26.07
045	C5945	7269544	11/16/2013	23:50:21	2E12310	25.96
046	C5951	7269550	11/17/2013	00:32:48	2E12310	26.22
047	C5954	7269553	11/17/2013	01:15:16	2E12310	26.27
048	C5960	7269559	11/17/2013	01:57:42	2E12310	25.93
049	C6109	7270974	11/17/2013	02:40:06	2E12310	25.87
050	C6109	7270975	11/17/2013	03:22:32	2E12310	26.10
051	C6109	7270976	11/17/2013	04:05:01	2E12310	26.10
052	C6115	7270986	11/17/2013	04:47:25	2E12310	26.08
053	C6118	7270989	11/17/2013	05:29:51	2E12310	26.13
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310	26.04
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310	
056	C6124	7270995	11/17/2013	07:37:16	2E12310	25.86
057	C6130	7271001	11/17/2013	08:19:42	2E12310	25.71
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310	25.67
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310	25.60
062	R2N51	7265223	11/17/2013	11:51:56	3E12310	25.43
063	R2N52	7265224	11/17/2013	12:34:25	3E12310	25.78
064	R2M61	7265228	11/17/2013	13:16:50	3E12310	25.73
065	R2163	7265230	11/17/2013	13:59:19	3E12310	25.57
066	R2163	7265231	11/17/2013	14:41:48	3E12310	25.59

ICAL Dates ICAL RT QC Limits

3E12310 11/17/2013 - 11/17/2013 NMX = 2-NMX 25.75 (25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310	25.63
068	E2161	7265235	11/17/2013	16:06:43	3E12310	25.69
069	R2141	7265238	11/17/2013	16:49:08	3E12310	25.66
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310	25.68
071	R2142	7265240	11/17/2013	18:14:03	3E12310	25.78
072	R2122	7265243	11/17/2013	18:56:31	3E12310	25.22 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310	25.62
074	FBX02	7265248	11/17/2013	20:21:28	3E12310	25.50
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310	25.37 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310	25.41
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310	23.69 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310	25.50
079	FB206	7266799	11/17/2013	23:53:49	3E12310	24.89 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310	25.51
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310	25.10 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310	25.47
083	2D123	7266810	11/18/2013	02:43:40	3E12310	25.33 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310	25.34 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310	25.38 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310	24.56 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310	25.29 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310	25.30 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310	25.30 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310	24.73 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310	25.28 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310	24.77 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310	25.27 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310	25.22 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310	25.20 *

	ICAL Dates		ICAL RT QC Limits	
3E12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.75	(25.41 - 26.09 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2E12310B	26.22
002		CONDITIONER	11/15/2013	17:25:53	2E12310B	26.12
003		CONDITIONER	11/15/2013	18:08:16	2E12310B	26.04
004		CONDITIONER	11/15/2013	18:50:40	2E12310B	25.96
005		CONDITIONER	11/15/2013	19:33:09	2E12310B	26.02
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2E12310B	25.89
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2E12310B	
008	MS133AH	MS1330124B	11/15/2013	21:40:21	2E12310B	
009	MS133AH	MS1330124B	11/15/2013	22:22:48	2E12310B	26.39
010	MS133AH	MS1330124B	11/15/2013	23:05:14	2E12310B	
011	MS133AH	MS1330124B	11/15/2013	23:47:39	2E12310B	
012	PBLK21314	BLANKA	11/16/2013	00:30:01	2E12310B	26.02
013	LCS21314	LCSA	11/16/2013	01:12:25	2E12310B	26.16
014	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2E12310B	26.03
015	LCS21314	LCSDIA	11/16/2013	02:37:20	2E12310B	
016	C5605	7269438	11/16/2013	03:19:46	2E12310B	26.24
017	C5605MS	7269438	11/16/2013	04:02:12	2E12310B	26.27
018	NITR3PV	NITR31324O	11/16/2013	04:44:39	2E12310B	26.33
019	NITR3PX	NITR31324M	11/16/2013	05:27:06	2E12310B	
020	C5605MSD	7269438	11/16/2013	06:09:31	2E12310B	26.10
021	C5611	7269454	11/16/2013	06:51:59	2E12310B	26.02
022	C5621	7269467	11/16/2013	07:34:27	2E12310B	26.02
023	C5626	7269472	11/16/2013	08:16:55	2E12310B	26.25
024	C5629	7269475	11/16/2013	08:59:20	2E12310B	26.17
025	C5632	7269478	11/16/2013	09:41:45	2E12310B	26.00
026	C5638	7269484	11/16/2013	10:24:11	2E12310B	26.21
027	C5641	7269487	11/16/2013	11:06:32	2E12310B	26.17
028	PBLK09316	BLANKA	11/16/2013	11:48:57	2E12310B	26.09
029	LCS09316	LCSA	11/16/2013	12:31:23	2E12310B	26.00
030	NITR3PV	NITR31324O	11/16/2013	13:13:49	2E12310B	26.14
031	NITR3PX	NITR31324M	11/16/2013	13:56:17	2E12310B	
032	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2E12310B	25.72
033	LCS09316	LCSDIA	11/16/2013	15:21:14	2E12310B	25.92

ICAL Dates ICAL RT QC Limits

3E12310B 11/17/2013 - 11/17/2013 NMX = 2-NMX 25.91 (25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5902	7269501	11/16/2013	16:03:43	2E12310B	26.16
035	C5905	7269504	11/16/2013	16:46:09	2E12310B	26.09
036	C5915	7269514	11/16/2013	17:28:35	2E12310B	26.26
037	C5921	7269520	11/16/2013	18:11:00	2E12310B	26.03
038	C5927	7269526	11/16/2013	18:53:29	2E12310B	26.18
039	C5930	7269529	11/16/2013	19:35:53	2E12310B	26.18
040	C5933	7269532	11/16/2013	20:18:18	2E12310B	26.19
041	C5939	7269538	11/16/2013	21:00:45	2E12310B	26.09
042	NITR3PV	NITR31324O	11/16/2013	21:43:11	2E12310B	26.11
043	NITR3PX	NITR31324M	11/16/2013	22:25:35	2E12310B	
044	C5942	7269541	11/16/2013	23:07:56	2E12310B	26.25
045	C5945	7269544	11/16/2013	23:50:21	2E12310B	26.15
046	C5951	7269550	11/17/2013	00:32:48	2E12310B	26.36
047	C5954	7269553	11/17/2013	01:15:16	2E12310B	26.41
048	C5960	7269559	11/17/2013	01:57:42	2E12310B	26.10
049	C6109	7270974	11/17/2013	02:40:06	2E12310B	26.06
050	C6109	7270975	11/17/2013	03:22:32	2E12310B	26.23
051	C6109	7270976	11/17/2013	04:05:01	2E12310B	26.23
052	C6115	7270986	11/17/2013	04:47:25	2E12310B	26.18
053	C6118	7270989	11/17/2013	05:29:51	2E12310B	26.26
054	NITR3PV	NITR31324O	11/17/2013	06:12:24	2E12310B	26.22
055	NITR3PX	NITR31324M	11/17/2013	06:54:49	2E12310B	
056	C6124	7270995	11/17/2013	07:37:16	2E12310B	26.00
057	C6130	7271001	11/17/2013	08:19:42	2E12310B	25.85
058	NITR3PV	NITR31324O	11/17/2013	09:02:11	2E12310B	
059	NITR3PX	NITR31324M	11/17/2013	09:44:38	2E12310B	
060	PBLK15313	BLANKA	11/17/2013	10:27:04	3E12310B	25.85
061	LCS15313	LCSA	11/17/2013	11:09:31	3E12310B	25.81
062	R2N51	7265223	11/17/2013	11:51:56	3E12310B	
063	R2N52	7265224	11/17/2013	12:34:25	3E12310B	25.92
064	R2M61	7265228	11/17/2013	13:16:50	3E12310B	25.94
065	R2163	7265230	11/17/2013	13:59:19	3E12310B	25.71
066	R2163	7265231	11/17/2013	14:41:48	3E12310B	25.70

	ICAL Dates		ICAL RT	QC Limits
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91	(25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	R2163	7265232	11/17/2013	15:24:17	3E12310B	25.79
068	E2161	7265235	11/17/2013	16:06:43	3E12310B	25.82
069	R2141	7265238	11/17/2013	16:49:08	3E12310B	25.80
070	NITR3PV	NITR31324O	11/17/2013	17:31:35	3E12310B	25.81
071	R2142	7265240	11/17/2013	18:14:03	3E12310B	25.87
072	R2122	7265243	11/17/2013	18:56:31	3E12310B	25.36 *
073	FBX01	7265247	11/17/2013	19:38:55	3E12310B	25.77
074	FBX02	7265248	11/17/2013	20:21:28	3E12310B	25.62
075	PBLK16314	BLANKA	11/17/2013	21:03:57	3E12310B	25.50 *
076	LCS16314	LCSA	11/17/2013	21:46:24	3E12310B	25.58
077	LCSD16314	LCSDA	11/17/2013	22:28:50	3E12310B	23.84 *
078	FB106	7266798	11/17/2013	23:11:20	3E12310B	25.63
079	FB206	7266799	11/17/2013	23:53:49	3E12310B	25.07 *
080	2B152	7266805	11/18/2013	00:36:17	3E12310B	25.65
081	NITR3PV	NITR31324O	11/18/2013	01:18:48	3E12310B	25.23 *
082	2B151	7266807	11/18/2013	02:01:14	3E12310B	25.61
083	2D123	7266810	11/18/2013	02:43:40	3E12310B	25.49 *
084	2D121	7266811	11/18/2013	03:25:57	3E12310B	25.49 *
085	3--FD	7266819	11/18/2013	04:08:25	3E12310B	25.52 *
086	PBLK19314	BLANKA	11/18/2013	04:50:51	3E12310B	24.67 *
087	LCS19314	LCSA	11/18/2013	05:33:20	3E12310B	25.45 *
088	2G124	7266800	11/18/2013	06:15:48	3E12310B	25.45 *
089	2G124	7266801	11/18/2013	06:58:17	3E12310B	25.44 *
090	2G124	7266802	11/18/2013	07:40:42	3E12310B	24.89 *
091	2G125	7266804	11/18/2013	08:23:14	3E12310B	25.47 *
092	NITR3PV	NITR31324O	11/18/2013	09:05:42	3E12310B	24.92 *
093	2C152	7266806	11/18/2013	09:48:09	3E12310B	25.42 *
094	2C151	7266808	11/18/2013	10:30:40	3E12310B	25.32 *
095	NITR3PV	NITR31324O	11/18/2013	11:13:10	3E12310B	25.35 *

	ICAL Dates		ICAL RT QC Limits	
3E12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	25.91	(25.57 - 26.24 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310	27.44
002		CONDITIONER	11/18/2013	19:10:45	4E12310	27.11
003		CONDITIONER	11/18/2013	19:53:12	4E12310	27.36
004		CONDITIONER	11/18/2013	20:35:36	4E12310	27.33
005		CONDITIONER	11/18/2013	21:18:04	4E12310	27.27
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310	27.10
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310	27.26
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310	27.16
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310	27.21
011	DDHER	7263056	11/19/2013	01:32:32	4E12310	27.26
012	EEHER	7263057	11/19/2013	02:14:57	4E12310	27.42
013	F1HER	7263058	11/19/2013	02:57:29	4E12310	27.41
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310	27.34
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310	27.37
016	-K46C	7264286	11/19/2013	05:04:44	4E12310	27.40
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310	27.25
018	-L45C	7264287	11/19/2013	06:29:35	4E12310	27.31
019	-M44C	7264288	11/19/2013	07:12:02	4E12310	27.27
020	-N44A	7264289	11/19/2013	07:54:27	4E12310	27.40
021	-044C	7264290	11/19/2013	08:36:57	4E12310	27.31
022	77M44	7266116	11/19/2013	09:19:26	4E12310	27.34
023	70J23	7266117	11/19/2013	10:01:49	4E12310	27.28
024	152-2	7266118	11/19/2013	10:44:12	4E12310	27.28
025	152-2	7266119	11/19/2013	11:26:35	4E12310	27.35
026	152-2	7266120	11/19/2013	12:09:02	4E12310	27.30
027	44M43	7266121	11/19/2013	12:51:30	4E12310	27.37
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310	27.29
029	55P43	7266122	11/19/2013	14:16:11	4E12310	27.35
030	22K46	7266123	11/19/2013	14:58:37	4E12310	27.48
031	04L45	7266124	11/19/2013	15:41:05	4E12310	27.30
032	47N42	7266127	11/19/2013	16:23:29	4E12310	27.26
033	S1522	7266128	11/19/2013	17:05:54	4E12310	27.37

ICAL Dates ICAL RT QC Limits

4E12310 11/19/2013 - 11/19/2013 NMX = 2-NMX 27.25 (26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310	27.14
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310	27.13
036	R2M71	7265229	11/19/2013	19:13:13	4E12310	27.11
037	R2F14	7265239	11/19/2013	19:55:39	4E12310	27.25
038	2E131	7266809	11/19/2013	20:38:08	4E12310	27.31
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310	27.28
040	2C126	7266812	11/19/2013	22:02:59	4E12310	27.32
041	2C111	7266813	11/19/2013	22:45:27	4E12310	27.06
042	2E101	7266814	11/19/2013	23:27:51	4E12310	27.27
043	2E101	7266815	11/20/2013	00:10:16	4E12310	27.26
044	2E101	7266816	11/20/2013	00:52:39	4E12310	27.14
045	2E102	7266818	11/20/2013	01:35:05	4E12310	27.10
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310	27.23
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310	27.21
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310	27.25
049	75Q40	7270115	11/20/2013	04:24:52	4E12310	27.12
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310	27.35
051	83O39	7270116	11/20/2013	05:49:42	4E12310	27.20
052	83OFD	7270117	11/20/2013	06:32:07	4E12310	27.24
053	93O40	7270118	11/20/2013	07:14:33	4E12310	27.24
054	92P41	7270119	11/20/2013	07:57:03	4E12310	27.35
055	DW104	7270953	11/20/2013	08:39:27	4E12310	26.70 *
056	I1512	7270954	11/20/2013	09:21:52	4E12310	27.27
057	D1512	7270955	11/20/2013	10:04:19	4E12310	27.09
058	S1512	7270956	11/20/2013	10:46:50	4E12310	27.13
059	S1511	7270958	11/20/2013	11:29:15	4E12310	27.19
060	D-151	7270959	11/20/2013	12:11:40	4E12310	27.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310	27.21
062	IW104	7270960	11/20/2013	13:36:38	4E12310	27.14
063	I1511	7270961	11/20/2013	14:19:07	4E12310	26.99
064	M1041	7270962	11/20/2013	15:01:33	4E12310	27.06
065	FB-11	7274073	11/20/2013	15:43:59	4E12310	27.08
066	FB-12	7274074	11/20/2013	16:26:24	4E12310	26.95

	ICAL Dates		ICAL RT QC Limits	
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310	27.21

	ICAL Dates		ICAL RT	QC Limits
4E12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.25	(26.91 - 27.59 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4E12310B	27.60
002		CONDITIONER	11/18/2013	19:10:45	4E12310B	27.27
003		CONDITIONER	11/18/2013	19:53:12	4E12310B	27.54
004		CONDITIONER	11/18/2013	20:35:36	4E12310B	27.52
005		CONDITIONER	11/18/2013	21:18:04	4E12310B	27.42
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4E12310B	27.23
007	AA	MS1330124B	11/18/2013	22:42:52	4E12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4E12310B	27.43
009	LCS17311	LCSA	11/19/2013	00:07:42	4E12310B	27.36
010	FFHEC	7263051	11/19/2013	00:50:07	4E12310B	27.37
011	DDHER	7263056	11/19/2013	01:32:32	4E12310B	27.44
012	EEHER	7263057	11/19/2013	02:14:57	4E12310B	27.57
013	F1HER	7263058	11/19/2013	02:57:29	4E12310B	27.55
014	FB1HE	7263059	11/19/2013	03:39:56	4E12310B	27.44
015	FB2HE	7263060	11/19/2013	04:22:20	4E12310B	27.54
016	-K46C	7264286	11/19/2013	05:04:44	4E12310B	27.56
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4E12310B	27.42
018	-L45C	7264287	11/19/2013	06:29:35	4E12310B	27.44
019	-M44C	7264288	11/19/2013	07:12:02	4E12310B	27.42
020	-N44A	7264289	11/19/2013	07:54:27	4E12310B	27.58
021	-044C	7264290	11/19/2013	08:36:57	4E12310B	27.44
022	77M44	7266116	11/19/2013	09:19:26	4E12310B	27.47
023	70J23	7266117	11/19/2013	10:01:49	4E12310B	27.44
024	152-2	7266118	11/19/2013	10:44:12	4E12310B	27.48
025	152-2	7266119	11/19/2013	11:26:35	4E12310B	27.52
026	152-2	7266120	11/19/2013	12:09:02	4E12310B	27.48
027	44M43	7266121	11/19/2013	12:51:30	4E12310B	27.54
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4E12310B	27.44
029	55P43	7266122	11/19/2013	14:16:11	4E12310B	27.50
030	22K46	7266123	11/19/2013	14:58:37	4E12310B	27.62
031	04L45	7266124	11/19/2013	15:41:05	4E12310B	27.44
032	47N42	7266127	11/19/2013	16:23:29	4E12310B	27.43
033	S1522	7266128	11/19/2013	17:05:54	4E12310B	27.52

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4E12310B	27.28
035	LCS20314	LCSA	11/19/2013	18:30:49	4E12310B	27.35
036	R2M71	7265229	11/19/2013	19:13:13	4E12310B	27.30
037	R2F14	7265239	11/19/2013	19:55:39	4E12310B	27.42
038	2E131	7266809	11/19/2013	20:38:08	4E12310B	27.41
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4E12310B	27.42
040	2C126	7266812	11/19/2013	22:02:59	4E12310B	27.48
041	2C111	7266813	11/19/2013	22:45:27	4E12310B	27.21
042	2E101	7266814	11/19/2013	23:27:51	4E12310B	27.37
043	2E101	7266815	11/20/2013	00:10:16	4E12310B	27.39
044	2E101	7266816	11/20/2013	00:52:39	4E12310B	27.36
045	2E102	7266818	11/20/2013	01:35:05	4E12310B	27.30
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4E12310B	27.36
047	LCS19317	LCSA	11/20/2013	03:00:03	4E12310B	27.35
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4E12310B	27.39
049	75Q40	7270115	11/20/2013	04:24:52	4E12310B	27.30
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4E12310B	27.48
051	83O39	7270116	11/20/2013	05:49:42	4E12310B	27.33
052	83OFD	7270117	11/20/2013	06:32:07	4E12310B	27.39
053	93O40	7270118	11/20/2013	07:14:33	4E12310B	27.46
054	92P41	7270119	11/20/2013	07:57:03	4E12310B	27.50
055	DW104	7270953	11/20/2013	08:39:27	4E12310B	27.19
056	I1512	7270954	11/20/2013	09:21:52	4E12310B	27.37
057	D1512	7270955	11/20/2013	10:04:19	4E12310B	27.28
058	S1512	7270956	11/20/2013	10:46:50	4E12310B	27.25
059	S1511	7270958	11/20/2013	11:29:15	4E12310B	27.33
060	D-151	7270959	11/20/2013	12:11:40	4E12310B	27.29
061	NITR3QJ	NITR31324P	11/20/2013	12:54:09	4E12310B	27.35
062	IW104	7270960	11/20/2013	13:36:38	4E12310B	27.28
063	I1511	7270961	11/20/2013	14:19:07	4E12310B	27.15
064	M1041	7270962	11/20/2013	15:01:33	4E12310B	27.17
065	FB-11	7274073	11/20/2013	15:43:59	4E12310B	27.21
066	FB-12	7274074	11/20/2013	16:26:24	4E12310B	27.11

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5E12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CHROMPACK ID: 100

Instrument: X6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4E12310B	27.39

	ICAL Dates		ICAL RT	QC Limits
4E12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	27.42	(27.09 - 27.76 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310	34.27
002		CONDITIONER	11/06/2013	14:48:10	1C12310	34.29
003		CONDITIONER	11/06/2013	15:30:34	1C12310	34.23
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310	34.17
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310	34.10 *
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310	34.23
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310	34.22
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310	34.28
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310	34.37 *
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310	34.22
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310	34.25
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310	34.21
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310	34.22
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310	34.25
021	C3511	7255708	11/07/2013	04:14:48	2C12310	34.28
022	C3514	7255711	11/07/2013	04:57:18	2C12310	34.22
023	C3520	7255717	11/07/2013	05:39:42	2C12310	34.28
024	C3525	7255722	11/07/2013	06:22:07	2C12310	34.17
025	C3534	7255735	11/07/2013	07:04:31	2C12310	
026	C3534	7255736	11/07/2013	07:46:59	2C12310	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310	34.27
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310	
029	C3534	7255737	11/07/2013	09:54:19	2C12310	34.22
030	C3537	7255744	11/07/2013	10:36:45	2C12310	34.24
031	C3539	7255746	11/07/2013	11:19:12	2C12310	34.28

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310	34.26
033	C3701	7256953	11/07/2013	12:44:04	2C12310	34.27
034	C3707	7256959	11/07/2013	13:26:33	2C12310	34.25
035	C3710	7256962	11/07/2013	14:08:57	2C12310	34.23
036	C3713	7256965	11/07/2013	14:51:22	2C12310	34.23
037	C3718	7256970	11/07/2013	15:33:48	2C12310	34.26
038	C3721	7256973	11/07/2013	16:16:14	2C12310	34.26
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310	34.25
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310	
041	C4010	7259353	11/07/2013	18:23:30	2C12310	34.31
042	C3724	7256976	11/07/2013	19:05:59	2C12310	34.31
043	C3810	7256999	11/07/2013	19:48:26	2C12310	34.26
044	C3817	7257006	11/07/2013	20:30:51	2C12310	34.29
045	C3822	7257011	11/07/2013	21:13:15	2C12310	34.28
046	C3827	7257016	11/07/2013	21:55:42	2C12310	34.29
047	C3830	7257019	11/07/2013	22:38:11	2C12310	34.24
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310	34.29
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310	34.25
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310	34.26
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310	34.27
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310	34.23
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310	34.28
055	E1454	7256670	11/08/2013	04:17:47	2C12310	34.23
056	E1455	7256672	11/08/2013	05:00:14	2C12310	34.25
057	E1456	7258547	11/08/2013	05:42:41	2C12310	34.28
058	E1457	7258549	11/08/2013	06:25:09	2C12310	34.25
059	E1458	7260599	11/08/2013	07:07:37	2C12310	34.29
060	E1459	7260601	11/08/2013	07:50:04	2C12310	34.30
061	E1460	7262133	11/08/2013	08:32:33	2C12310	34.30
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310	34.29

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310	34.31
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310	34.28
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310	34.25
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310	34.18
068	C4001	7259344	11/08/2013	13:29:47	2C12310	34.26
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310	34.26
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310	34.24
071	C4016	7259359	11/08/2013	15:37:06	2C12310	34.31
072	C4023	7259366	11/08/2013	16:23:21	2C12310	34.30
073	C4025	7259368	11/08/2013	17:05:45	2C12310	34.23
074	C4111	7259386	11/08/2013	17:48:19	2C12310	34.31
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310	34.29
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310	
077	C4116	7259391	11/08/2013	19:55:39	2C12310	34.31
078	C4121	7259396	11/08/2013	20:38:09	2C12310	34.33
079	C4303	7260617	11/08/2013	21:20:36	2C12310	34.29
080	C4309	7260623	11/08/2013	22:02:56	2C12310	34.17
081	C4320	7260634	11/08/2013	22:45:26	2C12310	34.20
082	C4413	7260649	11/08/2013	23:27:51	2C12310	34.28
083	C4701	7262153	11/09/2013	00:10:14	2C12310	34.17
084	C4707	7262159	11/09/2013	00:52:43	2C12310	34.32
085	C4710	7262162	11/09/2013	01:35:09	2C12310	34.27
086	C4720	7262172	11/09/2013	02:17:34	2C12310	34.27
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310	34.32
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310	
089	C4725	7262177	11/09/2013	04:24:59	2C12310	34.29
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310	34.32
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310	34.33
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310	34.29
093	4B231	7255627	11/09/2013	07:14:53	2C12310	34.32

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310	34.34
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310	34.27
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310	

	ICAL Dates		ICAL RT	QC Limits
1C12310	11/06/2013 - 11/07/2013	NMX = 2-NMX	34.23	(34.13 - 34.33 Minutes)
2C12310	11/07/2013 - 11/07/2013	NMX = 2-NMX	34.25	(34.15 - 34.35 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/06/2013	14:05:45	1C12310B	
002		CONDITIONER	11/06/2013	14:48:10	1C12310B	
003		CONDITIONER	11/06/2013	15:30:34	1C12310B	
004	NITR5AA	NITR51324K	11/06/2013	16:12:57	1C12310B	
005	NITR4AA	NITR41324K	11/06/2013	16:55:26	1C12310B	
006	NITR3AA	NITR31324L	11/06/2013	17:37:55	1C12310B	
007	NITR2AA	NITR21324K	11/06/2013	18:20:20	1C12310B	
008	NITR1AA	NITR11324K	11/06/2013	19:02:45	1C12310B	
009	MDNTXAA	MDNTX1324K	11/06/2013	19:45:17	1C12310B	
010	ICNTXAA	ICNTX1324F	11/06/2013	20:27:44	1C12310B	
011	NITR5AA	NITR51324L	11/06/2013	21:10:15	1C12310B	
012	NITR4AA	NITR41324L	11/06/2013	21:52:39	1C12310B	
013	NITR3AA	NITR31324M	11/06/2013	22:35:08	1C12310B	
014	NITR2AA	NITR21324L	11/06/2013	23:17:36	1C12310B	
015	NITR1AA	NITR11324L	11/06/2013	23:59:59	1C12310B	
016	MDNTXAA	MDNTX1324L	11/07/2013	00:42:25	1C12310B	
017	PBLK26305	BLANKA	11/07/2013	01:24:52	1C12310B	
018	LCS26305	LCSA	11/07/2013	02:07:20	1C12310B	
019	LCS26305	LCSDIA	11/07/2013	02:49:51	1C12310B	
020	LCSD26305	LCSDDIA	11/07/2013	03:32:18	2C12310B	
021	C3511	7255708	11/07/2013	04:14:48	2C12310B	
022	C3514	7255711	11/07/2013	04:57:18	2C12310B	
023	C3520	7255717	11/07/2013	05:39:42	2C12310B	
024	C3525	7255722	11/07/2013	06:22:07	2C12310B	
025	C3534	7255735	11/07/2013	07:04:31	2C12310B	
026	C3534	7255736	11/07/2013	07:46:59	2C12310B	
027	NITR3NG	NITR31324L	11/07/2013	08:29:30	2C12310B	
028	NITR3NH	NITR31324M	11/07/2013	09:11:55	2C12310B	
029	C3534	7255737	11/07/2013	09:54:19	2C12310B	
030	C3537	7255744	11/07/2013	10:36:45	2C12310B	
031	C3539	7255746	11/07/2013	11:19:12	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
032	C3545	7255752	11/07/2013	12:01:37	2C12310B	
033	C3701	7256953	11/07/2013	12:44:04	2C12310B	
034	C3707	7256959	11/07/2013	13:26:33	2C12310B	
035	C3710	7256962	11/07/2013	14:08:57	2C12310B	
036	C3713	7256965	11/07/2013	14:51:22	2C12310B	
037	C3718	7256970	11/07/2013	15:33:48	2C12310B	
038	C3721	7256973	11/07/2013	16:16:14	2C12310B	
039	NITR3NI	NITR31324L	11/07/2013	16:58:42	2C12310B	
040	NITR3NJ	NITR31324M	11/07/2013	17:41:09	2C12310B	
041	C4010	7259353	11/07/2013	18:23:30	2C12310B	
042	C3724	7256976	11/07/2013	19:05:59	2C12310B	
043	C3810	7256999	11/07/2013	19:48:26	2C12310B	
044	C3817	7257006	11/07/2013	20:30:51	2C12310B	
045	C3822	7257011	11/07/2013	21:13:15	2C12310B	
046	C3827	7257016	11/07/2013	21:55:42	2C12310B	
047	C3830	7257019	11/07/2013	22:38:11	2C12310B	
048	PBLK17306	BLANKA	11/07/2013	23:20:37	2C12310B	
049	LCS17306	LCSA	11/08/2013	00:03:05	2C12310B	
050	LCSD17306	LCSDA	11/08/2013	00:45:29	2C12310B	
051	NITR3NK	NITR31324L	11/08/2013	01:27:58	2C12310B	
052	NITR3NL	NITR31324M	11/08/2013	02:10:22	2C12310B	
053	LCS17306	LCSDIA	11/08/2013	02:52:50	2C12310B	
054	LCSD17306	LCSDDIA	11/08/2013	03:35:22	2C12310B	
055	E1454	7256670	11/08/2013	04:17:47	2C12310B	
056	E1455	7256672	11/08/2013	05:00:14	2C12310B	
057	E1456	7258547	11/08/2013	05:42:41	2C12310B	
058	E1457	7258549	11/08/2013	06:25:09	2C12310B	
059	E1458	7260599	11/08/2013	07:07:37	2C12310B	
060	E1459	7260601	11/08/2013	07:50:04	2C12310B	
061	E1460	7262133	11/08/2013	08:32:33	2C12310B	
062	PBLK18306	BLANKA	11/08/2013	09:14:58	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
063	NITR3NM	NITR31324L	11/08/2013	09:57:26	2C12310B	
064	NITR3NN	NITR31324M	11/08/2013	10:39:55	2C12310B	
065	LCS18306	LCSA	11/08/2013	11:22:25	2C12310B	
066	LCS18306	LCSDIA	11/08/2013	12:04:54	2C12310B	
067	LCSD18306	LCSDDIA	11/08/2013	12:47:21	2C12310B	
068	C4001	7259344	11/08/2013	13:29:47	2C12310B	
069	C4001MS	7259344	11/08/2013	14:12:11	2C12310B	
070	C4001MSD	7259344	11/08/2013	14:54:38	2C12310B	
071	C4016	7259359	11/08/2013	15:37:06	2C12310B	
072	C4023	7259366	11/08/2013	16:23:21	2C12310B	
073	C4025	7259368	11/08/2013	17:05:45	2C12310B	
074	C4111	7259386	11/08/2013	17:48:19	2C12310B	
075	NITR3NO	NITR31324L	11/08/2013	18:30:46	2C12310B	
076	NITR3NP	NITR31324M	11/08/2013	19:13:12	2C12310B	
077	C4116	7259391	11/08/2013	19:55:39	2C12310B	
078	C4121	7259396	11/08/2013	20:38:09	2C12310B	
079	C4303	7260617	11/08/2013	21:20:36	2C12310B	
080	C4309	7260623	11/08/2013	22:02:56	2C12310B	
081	C4320	7260634	11/08/2013	22:45:26	2C12310B	
082	C4413	7260649	11/08/2013	23:27:51	2C12310B	
083	C4701	7262153	11/09/2013	00:10:14	2C12310B	
084	C4707	7262159	11/09/2013	00:52:43	2C12310B	
085	C4710	7262162	11/09/2013	01:35:09	2C12310B	
086	C4720	7262172	11/09/2013	02:17:34	2C12310B	
087	NITR3NQ	NITR31324L	11/09/2013	03:00:03	2C12310B	
088	NITR3NR	NITR31324M	11/09/2013	03:42:30	2C12310B	
089	C4725	7262177	11/09/2013	04:24:59	2C12310B	
090	PBLK24304	BLANKA	11/09/2013	05:07:28	2C12310B	
091	LCS24304	LCSA	11/09/2013	05:50:02	2C12310B	
092	LCSD24304	LCSDA	11/09/2013	06:32:26	2C12310B	
093	4B231	7255627	11/09/2013	07:14:53	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 1C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
094	FE231	7255628	11/09/2013	07:57:19	2C12310B	
095	NITR3NS	NITR31324L	11/09/2013	08:39:46	2C12310B	
096	NITR3NT	NITR31324M	11/09/2013	09:22:11	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
1C12310B	11/06/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)
2C12310B	11/07/2013 - 11/07/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310	34.29
002		CONDITIONER	11/15/2013	17:25:53	2C12310	34.29
003		CONDITIONER	11/15/2013	18:08:16	2C12310	34.29
004		CONDITIONER	11/15/2013	18:50:40	2C12310	34.29
005		CONDITIONER	11/15/2013	19:33:09	2C12310	34.27
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310	34.29
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310	34.25
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310	34.24
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310	34.25
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310	34.24
015	C5605	7269438	11/16/2013	03:19:46	2C12310	34.22
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310	34.18
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310	34.17
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310	34.27
020	C5611	7269454	11/16/2013	06:51:59	2C12310	34.21
021	C5621	7269467	11/16/2013	07:34:27	2C12310	34.22
022	C5626	7269472	11/16/2013	08:16:55	2C12310	34.19
023	C5629	7269475	11/16/2013	08:59:19	2C12310	34.22
024	C5632	7269478	11/16/2013	09:41:45	2C12310	34.24
025	C5638	7269484	11/16/2013	10:24:11	2C12310	34.19
026	C5641	7269487	11/16/2013	11:06:32	2C12310	34.19
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310	34.20
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310	34.28
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310	34.20
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310	34.17
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310	34.24
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310	34.22
033	C5902	7269501	11/16/2013	16:03:43	2C12310	34.20

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310	34.19
035	C5915	7269514	11/16/2013	17:28:35	2C12310	34.15
036	C5921	7269520	11/16/2013	18:11:00	2C12310	34.23
037	C5927	7269526	11/16/2013	18:53:29	2C12310	34.19
038	C5930	7269529	11/16/2013	19:35:53	2C12310	34.17
039	C5933	7269532	11/16/2013	20:18:19	2C12310	34.21
040	C5939	7269538	11/16/2013	21:00:44	2C12310	34.23
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310	34.20
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310	
043	C5942	7269541	11/16/2013	23:07:56	2C12310	34.17
044	C5945	7269544	11/16/2013	23:50:21	2C12310	34.18
045	C5951	7269550	11/17/2013	00:32:48	2C12310	34.16
046	C5954	7269553	11/17/2013	01:15:16	2C12310	34.16
047	C5960	7269559	11/17/2013	01:57:42	2C12310	34.21
048	C6109	7270974	11/17/2013	02:40:06	2C12310	34.22
049	C6109	7270975	11/17/2013	03:22:31	2C12310	34.23
050	C6109	7270976	11/17/2013	04:05:00	2C12310	34.25
051	C6115	7270986	11/17/2013	04:47:25	2C12310	34.19
052	C6118	7270989	11/17/2013	05:29:51	2C12310	34.18
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310	34.20
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310	
055	C6124	7270995	11/17/2013	07:37:16	2C12310	34.21
056	C6130	7271001	11/17/2013	08:19:42	2C12310	34.23
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310	34.21
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310	34.26
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310	34.29
061	R2N51	7265223	11/17/2013	11:51:56	3C12310	34.30
062	R2N52	7265224	11/17/2013	12:34:25	3C12310	34.26
063	R2M61	7265228	11/17/2013	13:16:50	3C12310	34.23
064	R2163	7265230	11/17/2013	13:59:19	3C12310	34.29
065	R2163	7265231	11/17/2013	14:41:48	3C12310	34.34 *
066	R2163	7265232	11/17/2013	15:24:17	3C12310	34.32 *

	ICAL Dates		ICAL RT	QC Limits
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310	34.26
068	R2141	7265238	11/17/2013	16:49:08	3C12310	34.27
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310	34.24
070	R2142	7265240	11/17/2013	18:14:03	3C12310	34.26
071	R2122	7265243	11/17/2013	18:56:30	3C12310	34.20
072	FBX01	7265247	11/17/2013	19:38:55	3C12310	34.28
073	FBX02	7265248	11/17/2013	20:21:28	3C12310	34.29
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310	34.30
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310	34.35 *
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310	34.29
077	FB106	7266798	11/17/2013	23:11:20	3C12310	34.30
078	FB206	7266799	11/17/2013	23:53:48	3C12310	34.18
079	2B152	7266805	11/18/2013	00:36:17	3C12310	34.29
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310	34.26
081	2B151	7266807	11/18/2013	02:01:14	3C12310	34.30
082	2D123	7266810	11/18/2013	02:43:40	3C12310	34.31
083	2D121	7266811	11/18/2013	03:25:57	3C12310	34.32 *
084	3--FD	7266819	11/18/2013	04:08:25	3C12310	34.32 *
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310	34.23
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310	34.21
087	2G124	7266800	11/18/2013	06:15:48	3C12310	34.30
088	2G124	7266801	11/18/2013	06:58:17	3C12310	34.30
089	2G124	7266802	11/18/2013	07:40:42	3C12310	34.23
090	2G125	7266804	11/18/2013	08:23:14	3C12310	34.31
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310	34.21
092	2C152	7266806	11/18/2013	09:48:09	3C12310	34.30
093	2C151	7266808	11/18/2013	10:30:40	3C12310	34.32 *
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310	34.29

	ICAL Dates		ICAL RT QC Limits	
3C12310	11/17/2013 - 11/17/2013	NMX = 2-NMX	34.22	(34.12 - 34.32 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/15/2013	16:43:27	2C12310B	
002		CONDITIONER	11/15/2013	17:25:53	2C12310B	
003		CONDITIONER	11/15/2013	18:08:16	2C12310B	
004		CONDITIONER	11/15/2013	18:50:40	2C12310B	
005		CONDITIONER	11/15/2013	19:33:09	2C12310B	
006	NITR3PV	NITR31324O	11/15/2013	20:15:32	2C12310B	
007	NITR3PX	NITR31324M	11/15/2013	20:57:57	2C12310B	
008	MS133AH	MS1330124B	11/15/2013	22:22:47	2C12310B	
009	MS133AH	MS1330124B	11/15/2013	23:05:13	2C12310B	
010	MS133AH	MS1330124B	11/15/2013	23:47:39	2C12310B	
011	PBLK21314	BLANKA	11/16/2013	00:30:01	2C12310B	
012	LCS21314	LCSA	11/16/2013	01:12:25	2C12310B	
013	LCSD21314	LCSDDIA	11/16/2013	01:54:53	2C12310B	
014	LCS21314	LCSDIA	11/16/2013	02:37:20	2C12310B	
015	C5605	7269438	11/16/2013	03:19:46	2C12310B	
016	C5605MS	7269438	11/16/2013	04:02:12	2C12310B	
017	NITR3PV	NITR31324O	11/16/2013	04:44:39	2C12310B	
018	NITR3PX	NITR31324M	11/16/2013	05:27:06	2C12310B	
019	C5605MSD	7269438	11/16/2013	06:09:31	2C12310B	
020	C5611	7269454	11/16/2013	06:51:59	2C12310B	
021	C5621	7269467	11/16/2013	07:34:27	2C12310B	
022	C5626	7269472	11/16/2013	08:16:55	2C12310B	
023	C5629	7269475	11/16/2013	08:59:19	2C12310B	
024	C5632	7269478	11/16/2013	09:41:45	2C12310B	
025	C5638	7269484	11/16/2013	10:24:11	2C12310B	
026	C5641	7269487	11/16/2013	11:06:32	2C12310B	
027	PBLK09316	BLANKA	11/16/2013	11:48:57	2C12310B	
028	LCS09316	LCSA	11/16/2013	12:31:22	2C12310B	
029	NITR3PV	NITR31324O	11/16/2013	13:13:49	2C12310B	
030	NITR3PX	NITR31324M	11/16/2013	13:56:17	2C12310B	
031	LCSD09316	LCSDDIA	11/16/2013	14:38:41	2C12310B	
032	LCS09316	LCSDIA	11/16/2013	15:21:14	2C12310B	
033	C5902	7269501	11/16/2013	16:03:43	2C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	C5905	7269504	11/16/2013	16:46:09	2C12310B	
035	C5915	7269514	11/16/2013	17:28:35	2C12310B	
036	C5921	7269520	11/16/2013	18:11:00	2C12310B	
037	C5927	7269526	11/16/2013	18:53:29	2C12310B	
038	C5930	7269529	11/16/2013	19:35:53	2C12310B	
039	C5933	7269532	11/16/2013	20:18:19	2C12310B	
040	C5939	7269538	11/16/2013	21:00:44	2C12310B	
041	NITR3PV	NITR31324O	11/16/2013	21:43:11	2C12310B	
042	NITR3PX	NITR31324M	11/16/2013	22:25:35	2C12310B	
043	C5942	7269541	11/16/2013	23:07:56	2C12310B	
044	C5945	7269544	11/16/2013	23:50:21	2C12310B	
045	C5951	7269550	11/17/2013	00:32:48	2C12310B	
046	C5954	7269553	11/17/2013	01:15:16	2C12310B	
047	C5960	7269559	11/17/2013	01:57:42	2C12310B	
048	C6109	7270974	11/17/2013	02:40:06	2C12310B	
049	C6109	7270975	11/17/2013	03:22:31	2C12310B	
050	C6109	7270976	11/17/2013	04:05:00	2C12310B	
051	C6115	7270986	11/17/2013	04:47:25	2C12310B	
052	C6118	7270989	11/17/2013	05:29:51	2C12310B	
053	NITR3PV	NITR31324O	11/17/2013	06:12:24	2C12310B	
054	NITR3PX	NITR31324M	11/17/2013	06:54:49	2C12310B	
055	C6124	7270995	11/17/2013	07:37:16	2C12310B	
056	C6130	7271001	11/17/2013	08:19:42	2C12310B	
057	NITR3PV	NITR31324O	11/17/2013	09:02:11	3C12310B	
058	NITR3PX	NITR31324M	11/17/2013	09:44:38	3C12310B	
059	PBLK15313	BLANKA	11/17/2013	10:27:04	3C12310B	
060	LCS15313	LCSA	11/17/2013	11:09:31	3C12310B	
061	R2N51	7265223	11/17/2013	11:51:56	3C12310B	
062	R2N52	7265224	11/17/2013	12:34:25	3C12310B	
063	R2M61	7265228	11/17/2013	13:16:50	3C12310B	
064	R2163	7265230	11/17/2013	13:59:19	3C12310B	
065	R2163	7265231	11/17/2013	14:41:48	3C12310B	
066	R2163	7265232	11/17/2013	15:24:17	3C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 4C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	E2161	7265235	11/17/2013	16:06:42	3C12310B	
068	R2141	7265238	11/17/2013	16:49:08	3C12310B	
069	NITR3PV	NITR31324O	11/17/2013	17:31:35	3C12310B	
070	R2142	7265240	11/17/2013	18:14:03	3C12310B	
071	R2122	7265243	11/17/2013	18:56:30	3C12310B	
072	FBX01	7265247	11/17/2013	19:38:55	3C12310B	
073	FBX02	7265248	11/17/2013	20:21:28	3C12310B	
074	PBLK16314	BLANKA	11/17/2013	21:03:57	3C12310B	
075	LCS16314	LCSA	11/17/2013	21:46:23	3C12310B	
076	LCSD16314	LCSDA	11/17/2013	22:28:50	3C12310B	
077	FB106	7266798	11/17/2013	23:11:20	3C12310B	
078	FB206	7266799	11/17/2013	23:53:48	3C12310B	
079	2B152	7266805	11/18/2013	00:36:17	3C12310B	
080	NITR3PV	NITR31324O	11/18/2013	01:18:48	3C12310B	
081	2B151	7266807	11/18/2013	02:01:14	3C12310B	
082	2D123	7266810	11/18/2013	02:43:40	3C12310B	
083	2D121	7266811	11/18/2013	03:25:57	3C12310B	
084	3--FD	7266819	11/18/2013	04:08:25	3C12310B	
085	PBLK19314	BLANKA	11/18/2013	04:50:51	3C12310B	
086	LCS19314	LCSA	11/18/2013	05:33:20	3C12310B	
087	2G124	7266800	11/18/2013	06:15:48	3C12310B	
088	2G124	7266801	11/18/2013	06:58:17	3C12310B	
089	2G124	7266802	11/18/2013	07:40:42	3C12310B	
090	2G125	7266804	11/18/2013	08:23:14	3C12310B	
091	NITR3PV	NITR31324O	11/18/2013	09:05:42	3C12310B	
092	2C152	7266806	11/18/2013	09:48:09	3C12310B	
093	2C151	7266808	11/18/2013	10:30:40	3C12310B	
094	NITR3PV	NITR31324O	11/18/2013	11:13:10	3C12310B	

	ICAL Dates		ICAL RT	QC Limits
3C12310B	11/17/2013 - 11/17/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310	34.15
002		CONDITIONER	11/18/2013	19:10:45	4C12310	34.18
003		CONDITIONER	11/18/2013	19:53:12	4C12310	34.18
004		CONDITIONER	11/18/2013	20:35:36	4C12310	34.18
005		CONDITIONER	11/18/2013	21:18:04	4C12310	34.18
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310	34.16
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310	34.20
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310	34.19
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310	34.22
011	DDHER	7263056	11/19/2013	01:32:32	4C12310	34.24
012	EEHER	7263057	11/19/2013	02:14:57	4C12310	34.19
013	F1HER	7263058	11/19/2013	02:57:28	4C12310	34.21
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310	34.20
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310	34.18
016	-K46C	7264286	11/19/2013	05:04:44	4C12310	34.17
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310	34.15
018	-L45C	7264287	11/19/2013	06:29:35	4C12310	34.18
019	-M44C	7264288	11/19/2013	07:12:02	4C12310	34.19
020	-N44A	7264289	11/19/2013	07:54:27	4C12310	34.18
021	-044C	7264290	11/19/2013	08:36:57	4C12310	34.18
022	77M44	7266116	11/19/2013	09:19:25	4C12310	34.16
023	70J23	7266117	11/19/2013	10:01:49	4C12310	34.20
024	152-2	7266118	11/19/2013	10:44:12	4C12310	34.19
025	152-2	7266119	11/19/2013	11:26:35	4C12310	34.18
026	152-2	7266120	11/19/2013	12:09:02	4C12310	34.18
027	44M43	7266121	11/19/2013	12:51:29	4C12310	34.15
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310	34.15
029	55P43	7266122	11/19/2013	14:16:11	4C12310	34.19
030	22K46	7266123	11/19/2013	14:58:37	4C12310	34.14
031	04L45	7266124	11/19/2013	15:41:05	4C12310	34.17
032	47N42	7266127	11/19/2013	16:23:28	4C12310	34.17
033	S1522	7266128	11/19/2013	17:05:54	4C12310	34.14

	ICAL Dates		ICAL RT QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15 (34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310	34.15
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310	34.15
036	R2M71	7265229	11/19/2013	19:13:13	4C12310	34.15
037	R2F14	7265239	11/19/2013	19:55:39	4C12310	34.13
038	2E131	7266809	11/19/2013	20:38:08	4C12310	34.15
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310	34.12
040	2C126	7266812	11/19/2013	22:02:59	4C12310	34.13
041	2C111	7266813	11/19/2013	22:45:27	4C12310	34.15
042	2E101	7266814	11/19/2013	23:27:51	4C12310	34.12
043	2E101	7266815	11/20/2013	00:10:15	4C12310	34.15
044	2E101	7266816	11/20/2013	00:52:39	4C12310	34.15
045	2E102	7266818	11/20/2013	01:35:05	4C12310	34.14
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310	34.14
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310	34.14
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310	34.15
049	75Q40	7270115	11/20/2013	04:24:52	4C12310	34.15
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310	34.10
051	83O39	7270116	11/20/2013	05:49:42	4C12310	34.12
052	83OFD	7270117	11/20/2013	06:32:07	4C12310	34.15
053	93O40	7270118	11/20/2013	07:14:33	4C12310	34.12
054	92P41	7270119	11/20/2013	07:57:03	4C12310	34.13
055	DW104	7270953	11/20/2013	08:39:27	4C12310	34.14
056	I1512	7270954	11/20/2013	09:21:52	4C12310	34.14
057	D1512	7270955	11/20/2013	10:04:19	4C12310	34.13
058	S1512	7270956	11/20/2013	10:46:50	4C12310	34.13
059	S1511	7270958	11/20/2013	11:29:14	4C12310	34.16
060	D-151	7270959	11/20/2013	12:11:40	4C12310	34.15
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310	34.14
062	IW104	7270960	11/20/2013	13:36:38	4C12310	34.16
063	I1511	7270961	11/20/2013	14:19:07	4C12310	34.16
064	M1041	7270962	11/20/2013	15:01:33	4C12310	34.16
065	FB-11	7274073	11/20/2013	15:43:59	4C12310	34.14
066	FB-12	7274074	11/20/2013	16:26:24	4C12310	34.16

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310 Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329A

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310	34.12

	ICAL Dates		ICAL RT	QC Limits
4C12310	11/19/2013 - 11/19/2013	NMX = 2-NMX	34.15	(34.05 - 34.25 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
001		CONDITIONER	11/18/2013	18:28:18	4C12310B	
002		CONDITIONER	11/18/2013	19:10:45	4C12310B	
003		CONDITIONER	11/18/2013	19:53:12	4C12310B	
004		CONDITIONER	11/18/2013	20:35:36	4C12310B	
005		CONDITIONER	11/18/2013	21:18:04	4C12310B	
006	NITR3QD	NITR31324P	11/18/2013	22:00:28	4C12310B	
007	AA	MS1330124B	11/18/2013	22:42:52	4C12310B	
008	PBLK17311	BLANKA	11/18/2013	23:25:17	4C12310B	
009	LCS17311	LCSA	11/19/2013	00:07:41	4C12310B	
010	FFHEC	7263051	11/19/2013	00:50:07	4C12310B	
011	DDHER	7263056	11/19/2013	01:32:32	4C12310B	
012	EEHER	7263057	11/19/2013	02:14:57	4C12310B	
013	F1HER	7263058	11/19/2013	02:57:28	4C12310B	
014	FB1HE	7263059	11/19/2013	03:39:56	4C12310B	
015	FB2HE	7263060	11/19/2013	04:22:20	4C12310B	
016	-K46C	7264286	11/19/2013	05:04:44	4C12310B	
017	NITR3QF	NITR31324P	11/19/2013	05:47:08	4C12310B	
018	-L45C	7264287	11/19/2013	06:29:35	4C12310B	
019	-M44C	7264288	11/19/2013	07:12:02	4C12310B	
020	-N44A	7264289	11/19/2013	07:54:27	4C12310B	
021	-044C	7264290	11/19/2013	08:36:57	4C12310B	
022	77M44	7266116	11/19/2013	09:19:25	4C12310B	
023	70J23	7266117	11/19/2013	10:01:49	4C12310B	
024	152-2	7266118	11/19/2013	10:44:12	4C12310B	
025	152-2	7266119	11/19/2013	11:26:35	4C12310B	
026	152-2	7266120	11/19/2013	12:09:02	4C12310B	
027	44M43	7266121	11/19/2013	12:51:29	4C12310B	
028	NITR3QG	NITR31324P	11/19/2013	13:33:54	4C12310B	
029	55P43	7266122	11/19/2013	14:16:11	4C12310B	
030	22K46	7266123	11/19/2013	14:58:37	4C12310B	
031	04L45	7266124	11/19/2013	15:41:05	4C12310B	
032	47N42	7266127	11/19/2013	16:23:28	4C12310B	
033	S1522	7266128	11/19/2013	17:05:54	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
034	PBLK20314	BLANKA	11/19/2013	17:48:25	4C12310B	
035	LCS20314	LCSA	11/19/2013	18:30:49	4C12310B	
036	R2M71	7265229	11/19/2013	19:13:13	4C12310B	
037	R2F14	7265239	11/19/2013	19:55:39	4C12310B	
038	2E131	7266809	11/19/2013	20:38:08	4C12310B	
039	NITR3QH	NITR31324P	11/19/2013	21:20:33	4C12310B	
040	2C126	7266812	11/19/2013	22:02:59	4C12310B	
041	2C111	7266813	11/19/2013	22:45:27	4C12310B	
042	2E101	7266814	11/19/2013	23:27:51	4C12310B	
043	2E101	7266815	11/20/2013	00:10:15	4C12310B	
044	2E101	7266816	11/20/2013	00:52:39	4C12310B	
045	2E102	7266818	11/20/2013	01:35:05	4C12310B	
046	PBLK19317	BLANKA	11/20/2013	02:17:35	4C12310B	
047	LCS19317	LCSA	11/20/2013	03:00:02	4C12310B	
048	LCSD19317	LCSDA	11/20/2013	03:42:27	4C12310B	
049	75Q40	7270115	11/20/2013	04:24:52	4C12310B	
050	NITR3QI	NITR31324P	11/20/2013	05:07:16	4C12310B	
051	83O39	7270116	11/20/2013	05:49:42	4C12310B	
052	83OFD	7270117	11/20/2013	06:32:07	4C12310B	
053	93O40	7270118	11/20/2013	07:14:33	4C12310B	
054	92P41	7270119	11/20/2013	07:57:03	4C12310B	
055	DW104	7270953	11/20/2013	08:39:27	4C12310B	
056	I1512	7270954	11/20/2013	09:21:52	4C12310B	
057	D1512	7270955	11/20/2013	10:04:19	4C12310B	
058	S1512	7270956	11/20/2013	10:46:50	4C12310B	
059	S1511	7270958	11/20/2013	11:29:14	4C12310B	
060	D-151	7270959	11/20/2013	12:11:40	4C12310B	
061	NITR3QJ	NITR31324P	11/20/2013	12:54:08	4C12310B	
062	IW104	7270960	11/20/2013	13:36:38	4C12310B	
063	I1511	7270961	11/20/2013	14:19:07	4C12310B	
064	M1041	7270962	11/20/2013	15:01:33	4C12310B	
065	FB-11	7274073	11/20/2013	15:43:59	4C12310B	
066	FB-12	7274074	11/20/2013	16:26:24	4C12310B	

	ICAL Dates		ICAL RT	QC Limits
4C12310B	11/19/2013 - 11/19/2013	NMX = 2-NMX	.01	(0.01 - 0.01 Minutes)

8D
ANALYTICAL SEQUENCE

Sequence: 5C12310B Lab Name: Lancaster laboratories Contract:

Lab Code: Case No.: SAS No: SDG No.:

GC Column: CAPCELL CN ID: 250

Instrument: Y6329B

THIS ANALYTICAL SEQUENCE OF BLANKS, SAMPLES AND STANDARDS IS GIVEN BELOW:

	Sample Code No.	Lab Sample ID	Date Analyzed	Time Analyzed	Calibration File	NMX
067	NITR3QE	NITR31324P	11/20/2013	17:08:56	4C12310B	

ICAL Dates ICAL RT QC Limits

4C12310B 11/19/2013 - 11/19/2013 NMX = 2-NMX .01 (0.01 - 0.01 Minutes)

Sample Data

Explosives

LOQ/MDL Summary
Pesticide Residue Analysis

SDG: KVM06

Fraction: Explosives

06918: Nitroaromatics/Amines in Solid Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	2,000	6,000	ug/kg
PETN	2,000	6,000	ug/kg
HMX	250	750	ug/kg
RDX	130	300	ug/kg
1,3,5-Trinitrobenzene	100	300	ug/kg
1,4-Dinitrobenzene	100	300	ug/kg
1,2-Dinitrobenzene	100	300	ug/kg
1,3-Dinitrobenzene	100	300	ug/kg
Tetryl	150	300	ug/kg
Nitrobenzene	100	300	ug/kg
2,4,6-Trinitrotoluene	100	300	ug/kg
4-Amino-2,6-Dinitrotoluene	150	300	ug/kg
2-Amino-4,6-Dinitrotoluene	100	300	ug/kg
2,6-Dinitrotoluene	100	300	ug/kg
2,4-Dinitrotoluene	100	300	ug/kg
2-Nitrotoluene	200	300	ug/kg
4-Nitrotoluene	200	300	ug/kg
3-Nitrotoluene	250	300	ug/kg
1-Nitronaphthalene	100	300	ug/kg

06916: Nitroaromatics/Amines in Water Analyte Name	Default MDL	Default LOQ	Units
Nitroglycerin	5.2	15	ug/l
PETN	6.0	18	ug/l
HMX	0.65	2.0	ug/l
RDX	0.20	0.50	ug/l
1,3,5-Trinitrobenzene	0.20	0.60	ug/l
1,2-Dinitrobenzene	0.20	0.60	ug/l
1,3-Dinitrobenzene	0.20	0.60	ug/l
Tetryl	0.40	0.60	ug/l
Nitrobenzene	0.20	0.60	ug/l
2,4,6-Trinitrotoluene	0.20	0.60	ug/l
1,4-Dinitrobenzene	0.30	0.60	ug/l
4-Amino-2,6-Dinitrotoluene	0.30	0.60	ug/l
2-Amino-4,6-Dinitrotoluene	0.20	0.60	ug/l
2,6-Dinitrotoluene	0.45	1.3	ug/l
2,4-Dinitrotoluene	0.72	2.0	ug/l
2-Nitrotoluene	0.25	0.75	ug/l
4-Nitrotoluene	0.60	1.2	ug/l
3-Nitrotoluene	0.40	1.2	ug/l
1-Nitronaphthalene	0.20	0.60	ug/l

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Data Summary

Sample Name: 7266809 2E131 Sample ID: AA **Batchnumber:** 133140020A
Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 20:38:08
Instrument X6329A
Result file 5E12310.38R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 91% (63 - 150) Conc: 4322.174805

Analysis Report (B)

Injected on Nov 19, 2013 20:38:08
Instrument Y6329A
Result file 5C12310.38R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 95% (63 - 150) Conc: 4536.296387

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.71	7.85	7.99	11	0.94865
2,4,6-Trinitrotoluene	8.19	8.23	8.39	24	1.021241
2-Amino-4,6-dinitrotoluer	10.51	10.68	10.80	23	1.004277
2,6-Dinitrotoluene	10.95	11.14	11.23	76	5.955408
2-NMX	26.91	27.31	27.59	15470	4322.174805

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.61	16.63	16.93	2385	58.85247
2-NMX	34.05	34.15	34.25	14772	4536.296387
Tetryl	34.39	34.43	34.59	128	0

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5714.2857	<1904.7619			
☑ PETN			<5714.2857	<1904.7619			
☑ HMX			<714.2857	<238.0952			
☑ RDX			<285.7143	<119.0476			
☑ 1,3,5-Trinitrobenzene			<285.7143	<95.2381			
☑ 1,4-Dinitrobenzene			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ Tetryl			<285.7143	<145.7143			
☑ Nitrobenzene			<285.7143	<95.2381			
☑ 2,4,6-Trinitrotoluene			<285.7143	<95.2381			
☑ 4-Amino-2,6-dinitrotoluene			<285.7143	<142.8571			
☑ 2-Amino-4,6-dinitrotoluene			<285.7143	<95.2381			
☑ 2,6-Dinitrotoluene			<285.7143	<95.2381			
☑ 2,4-Dinitrotoluene			<285.7143	<95.2381			
☑ 2-Nitrotoluene			<285.7143	<190.4762			
☑ 4-Nitrotoluene			<285.7143	<190.4762			
☑ 3-Nitrotoluene			<285.7143	<238.0952			
☑ 2-NMX	A	4322.174805				4.83	
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Natasha L. Tirrogallo, Project Specialist
Date: NOV 25 2013

11/24/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266809 2E131 Sample ID: AA **Batchnumber:** 133140020A
Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 20:38:08
Instrument : CP12--X6329A
Result file : 5E12310.38R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 91% (63-150) Conc.: 4322.17480

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.28	4.40	172	-100.394409
Tetryl	7.71	7.85	7.99	11	0.299574
2,4,6-TNT	8.19	8.23	8.39	24	1.021241
Tetryl breakdown	8.71	8.88	8.95	24	0.649076
2-Am-4,6-DNT	10.51	10.68	10.80	23	1.004277
2,6-DNT	10.95	11.14	11.23	76	5.955408
2-NMX	26.91	27.31	27.59	15470	4322.174805

Analysis Report (B)

Injected on : NOV 19, 2013 20:38:08
Instrument : CP12--X6329B
Result file : 5E12310B.38R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 95% (63-150) Conc.: 4514.91064

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.41	27.76	231566	4514.910645

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5714.286	<1904.762			Report Confirmation
☑ PETN			<5714.286	<1904.762			
☑ HMX			<714.2858	<238.0953			
☑ RDX			<285.7143	<119.0476			
☑ 1,3,5-TNB			<285.7143	<95.2381			
☑ 1,4-DNB			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ Tetryl			<285.7143	<145.7143			+Breakdown = 0.94865
☑ Nitrobenzene			<285.7143	<95.2381			
☑ 2,4,6-TNT			<285.7143	<95.2381			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<285.7143	<142.8572			
☑ 2-Am-4,6-DNT			<285.7143	<95.2381			
☑ 2,6-DNT			<285.7143	<95.2381			
☑ 2,4-DNT			<285.7143	<95.2381			
☑ 2-NT			<285.7143	<190.4762			
☑ 4-NT			<285.7143	<190.4762			
☑ 3-NT			<285.7143	<238.0953			
☐ 2-NMX	A	4322.174805				4.36	
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

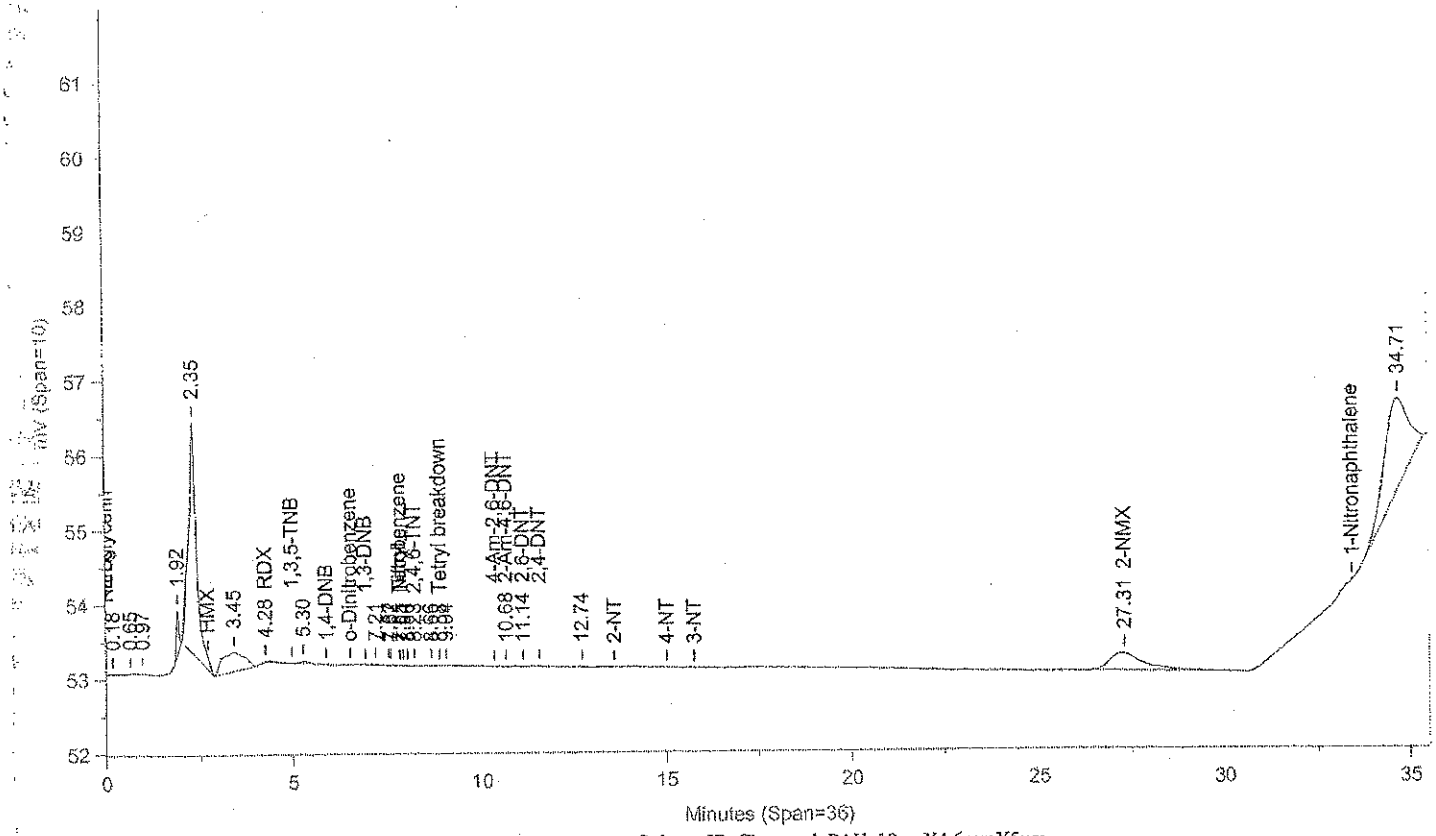
Verified by: Valerie L. Tompkins, Reporting Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

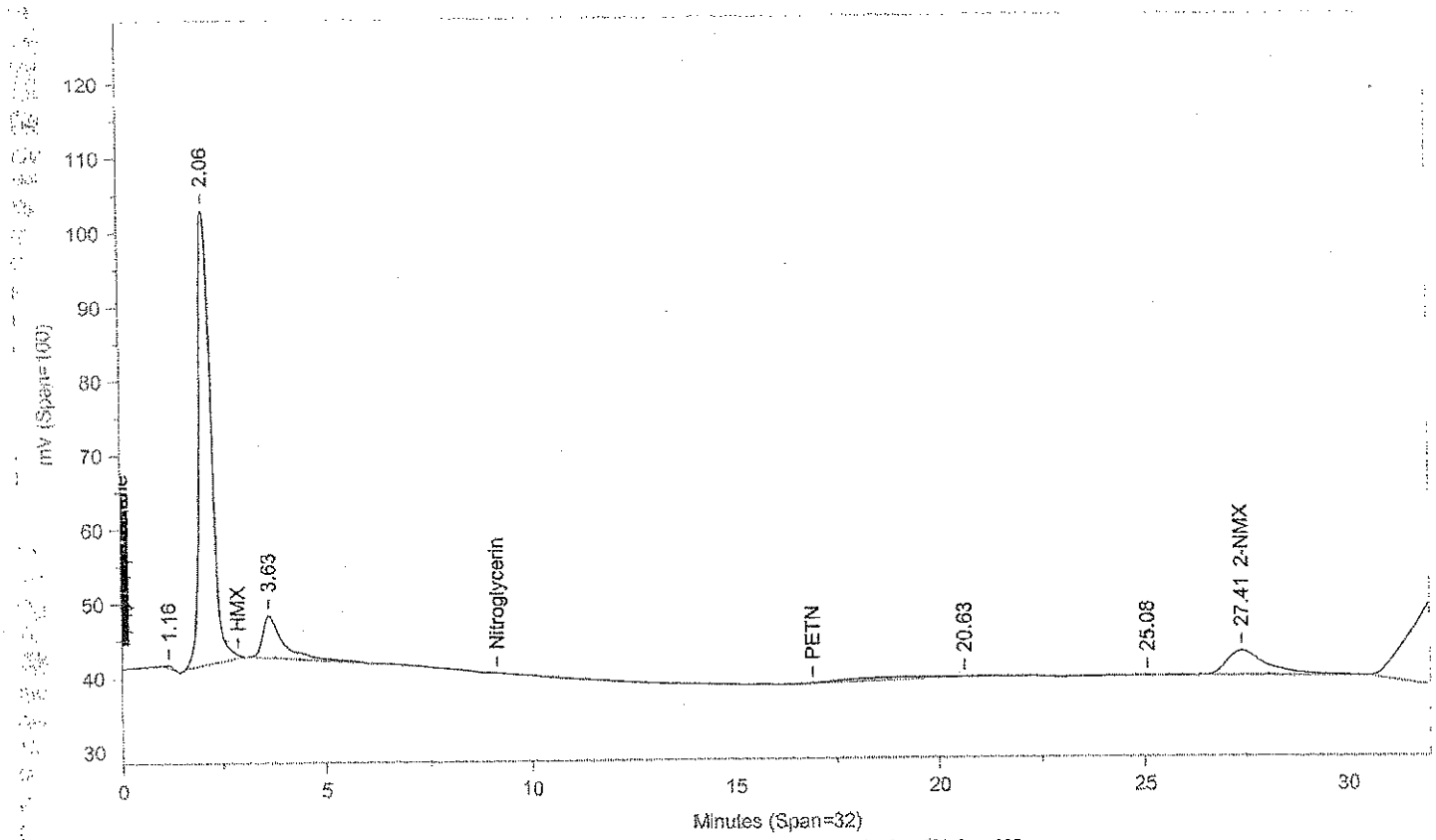
Printed on: 11/22/2013 16:47:38

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.38R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 8:38:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.38R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 8:38:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.1
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.283	172	-100.394	RDX		0		RDX
7.849	11	.3	Tetryl		0		Tetryl
8.234	24	1.021	2,4,6-TNT		0		2,4,6-TNT
8.882	24	.649	Tetryl breakdown		0		Tetryl breakdown
10.68	23	1.004	2-Am-4,6-DNT		0		2-Am-4,6-DNT
11.141	76	5.955	2,6-DNT		0		2,6-DNT
27.307	15470	4322.175	2-NMX	27.409	231566	4514.911	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.38A
Area File: C:\CPWIN\DATA1\5E12310B.38A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:51:50 PM
File Reported On: 11/20/2013 at 4:52:00 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266809 2E131 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 20:38:08
Instrument : CP12--Y6329A
Result file : 5C12310.38R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 95% (63-150) Conc.: 4536.296387

Analysis Report (B)

Injected on : NOV 19, 2013 20:38:08
Instrument : CP12--Y6329B
Result file : 5C12310B.38R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.61	16.63	16.93	2385	58.852470
2-NMX	34.05	34.15	34.25	14772	4536.296387
Tetryl	34.39	34.43	34.59	128	181.472855

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5714.286	<1904.762			Report
☑ Nitroglycerin			<5714.286	<1904.762			
☑ HMX			<714.2858	<238.0953			
☑ RDX			<285.7143	<119.0476			
☑ Nitrobenzene			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 4-Am-2,6-DNT			<285.7143	<142.8572			
☑ 2-Am-4,6-DNT			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ 1,4-DNB			<285.7143	<95.2381			
☑ 2-NT			<285.7143	<190.4762			
☑ 4-NT			<285.7143	<190.4762			
☑ 3-NT			<285.7143	<238.0953			
☑ 1,3,5-TNB			<285.7143	<95.2381			
☑ 2,6-DNT			<285.7143	<95.2381			
☑ 2,4-DNT			<285.7143	<95.2381			
☐ 2-NMX	A	4536.296387					
☑ Tetryl	A	~~181.472855~~	<285.7143	<145.7143	J		N/C
☑ 2,4,6-TNT			<285.7143	<95.2381			
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Trimpler, Principal Specialist
Date: NOV 25 2013

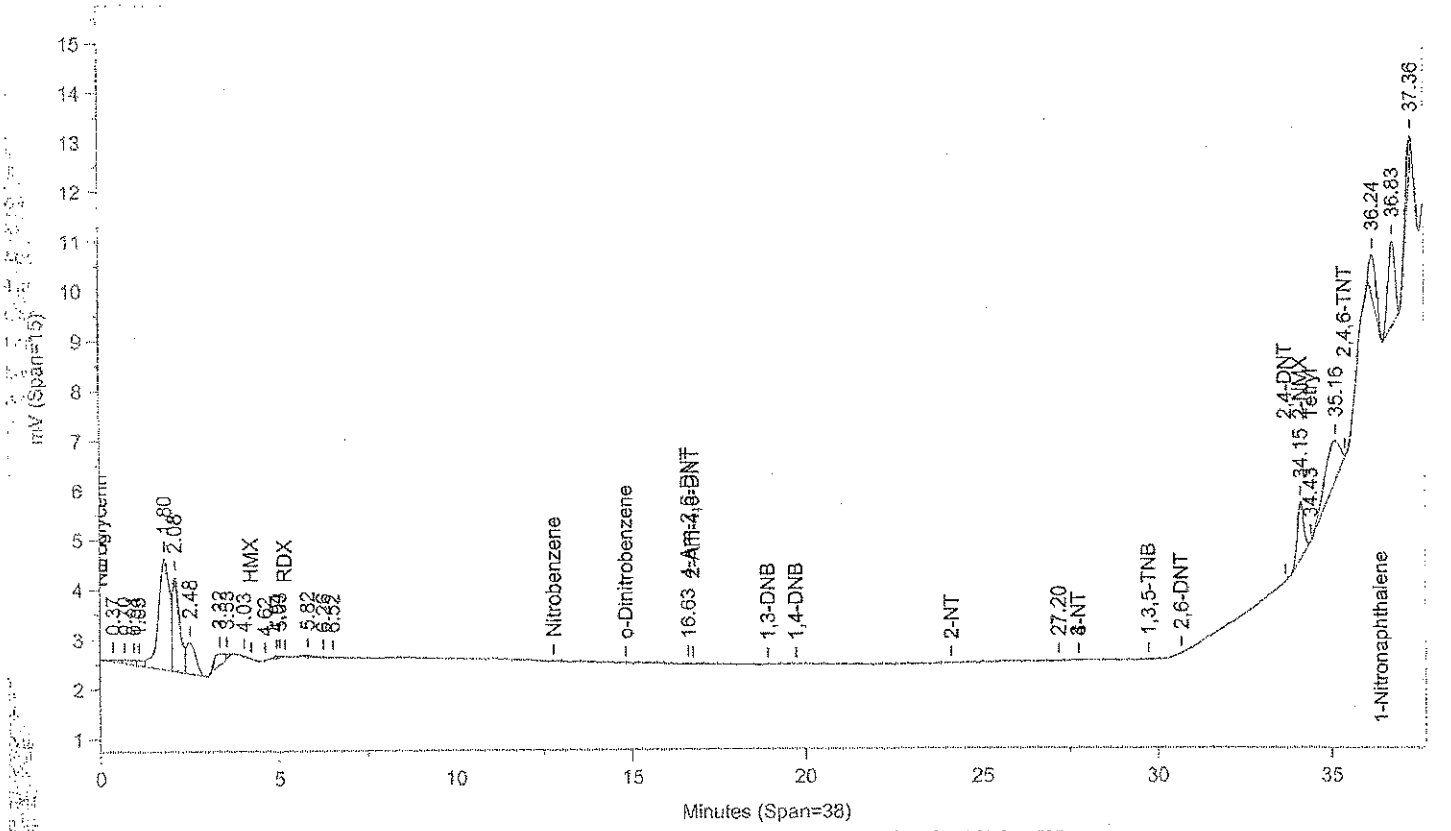
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:55

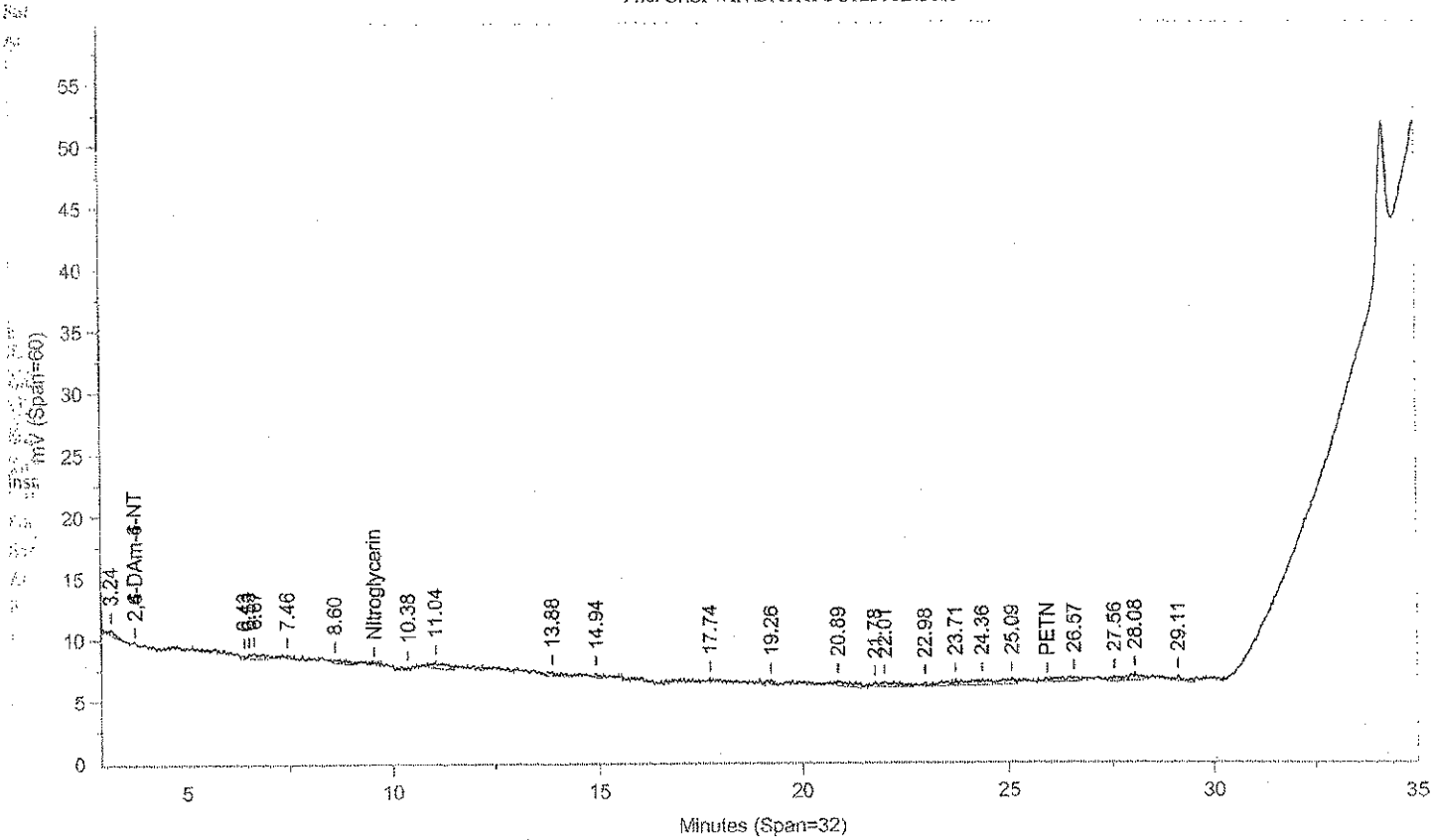
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5C12310.38R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 8:38:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.38R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 8:38:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.1 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
16.633	2385	58.852	4-Am-2,6-DNT			0	4-Am-2,6-DNT
34.146	14772	4536.296	2-NMX			0	2-NMX
34.427	128	181.473	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.38A
Area File: C:\CPWIN\DATA1\5C12310B.38A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:46:18 PM
File Reported On: 11/20/2013 at 5:46:28 PM

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Data Summary

Sample Name: 7266812 2C126 Sample ID: AA **Batchnumber:** 133140020A
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 22:02:59
Instrument X6329A
Result file 5E12310.40R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 97% (63 - 150) Conc: 4238.944824

Analysis Report (B)

Injected on Nov 19, 2013 22:02:59
Instrument Y6329A
Result file 5C12310.40R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 103% (63 - 150) Conc: 4473.86377

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,4-Dinitrobenzene	5.80	5.93	6.00	96	3.273152
o-Dinitrobenzene	6.43	6.52	6.63	161	13.596777
Tetryl	7.71	7.81	7.99	99	2.502409
2,4,6-Trinitrotoluene	8.19	8.27	8.39	505	19.265547
2,6-Dinitrotoluene	10.95	10.96	11.23	45	3.217207
2,4-Dinitrotoluene	11.45	11.65	11.74	331	8.693885
2-NMX	26.91	27.32	27.59	16617	4238.944824

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	12.62	12.63	12.94	2831	100.087112
2-NMX	34.05	34.13	34.25	16105	4473.86377

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	4686.09082	<5217.3911	1739.1304	J	12.86	
☑ PETN			<5217.3911	<1739.1304			
☑ HMX			<652.1739	<217.3913			
☑ RDX			<260.8696	<108.6956			
☑ 1,3,5-Trinitrobenzene			<260.8696	<86.9565			
☑ 1,4-Dinitrobenzene			<260.8696	<86.9565			
☑ o-Dinitrobenzene			<260.8696	<86.9565			
☑ 1,3-DNB			<260.8696	<86.9565			
☑ Tetryl			<260.8696	<133.0435			
☑ Nitrobenzene			<260.8696	<101			
☑ 2,4,6-Trinitrotoluene			<260.8696	<86.9565			
☑ 4-Amino-2,6-dinitrotoluene			<260.8696	<130.4348			
☑ 2-Amino-4,6-dinitrotoluene			<260.8696	<86.9565			
☑ 2,6-Dinitrotoluene			<260.8696	<86.9565			
☑ 2,4-Dinitrotoluene			<260.8696	<86.9565			
☑ 2-Nitrotoluene			<260.8696	<173.913			
☑ 4-Nitrotoluene			<260.8696	<173.913			
☑ 3-Nitrotoluene			<260.8696	<217.3913			
☑ 2-NMX	A	4238.944824				5.39	
☑ 1-Nitronaphthalene			<260.8696	<86.9565			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valeria L. Tomayko, Principal Specialist
Date: NOV 25 2013

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Data Summary

Sample Name: 7266810 2D123 Sample ID: AA **Batchnumber: 133140016A**

Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ

Analyses: 06916

Analysis Report (A)

Injected on	Nov 18, 2013 02:43:40
Instrument	X6329A
Result file	4E12310.83R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 95% (73 - 122) Conc: 9.474992

Analysis Report (B)

Injected on	Nov 18, 2013 02:43:40
Instrument	Y6329A
Result file	4C12310.83R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 112% (73 - 122) Conc: 11.190614

Single Component Data

Compound	Min	RT	Max	Area	Amount
Tetryl	7.33	7.38	7.61	75	0.00435
2-NMX	25.41	25.33	26.09	16149	9.474992
1-Nitronaphthalene	32.62	33.00	33.11	731	0.111344

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.31	34.32	17677	11.190614

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.474992				16.60	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

James H. Place
Senior Chemist

Reviewed by: _____

Date: NOV 21 2013

Valerie L. Tomayko
Principal Specialist

Verified by: _____

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266810 2D123 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 02:43:40
Instrument : CP12--X6329A
Result file : 4E12310.83R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 95% (73-122) Conc.: 9.474992

Peak name	Min	R.T.	Max	Area	Amount
Tetryl	7.33	7.38	7.61	75	0.004350
2-NMX	25.41	25.33	26.09	16149	9.474992
1-Nitronaphthalene	32.62	33.00	33.11	731	0.111344

Analysis Report (B)

Injected on : NOV 18, 2013 02:43:40
Instrument : CP12--X6329B
Result file : 4E12310B.83R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 102% (73-122) Conc.: 10.253763

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.51	8.84	8.89	35923	5.621461
2-NMX	25.57	25.49	26.24	250432	10.253763

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	5.621461	<15	5.2	J		N/C
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.474992				7.89	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaylla, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:24:52

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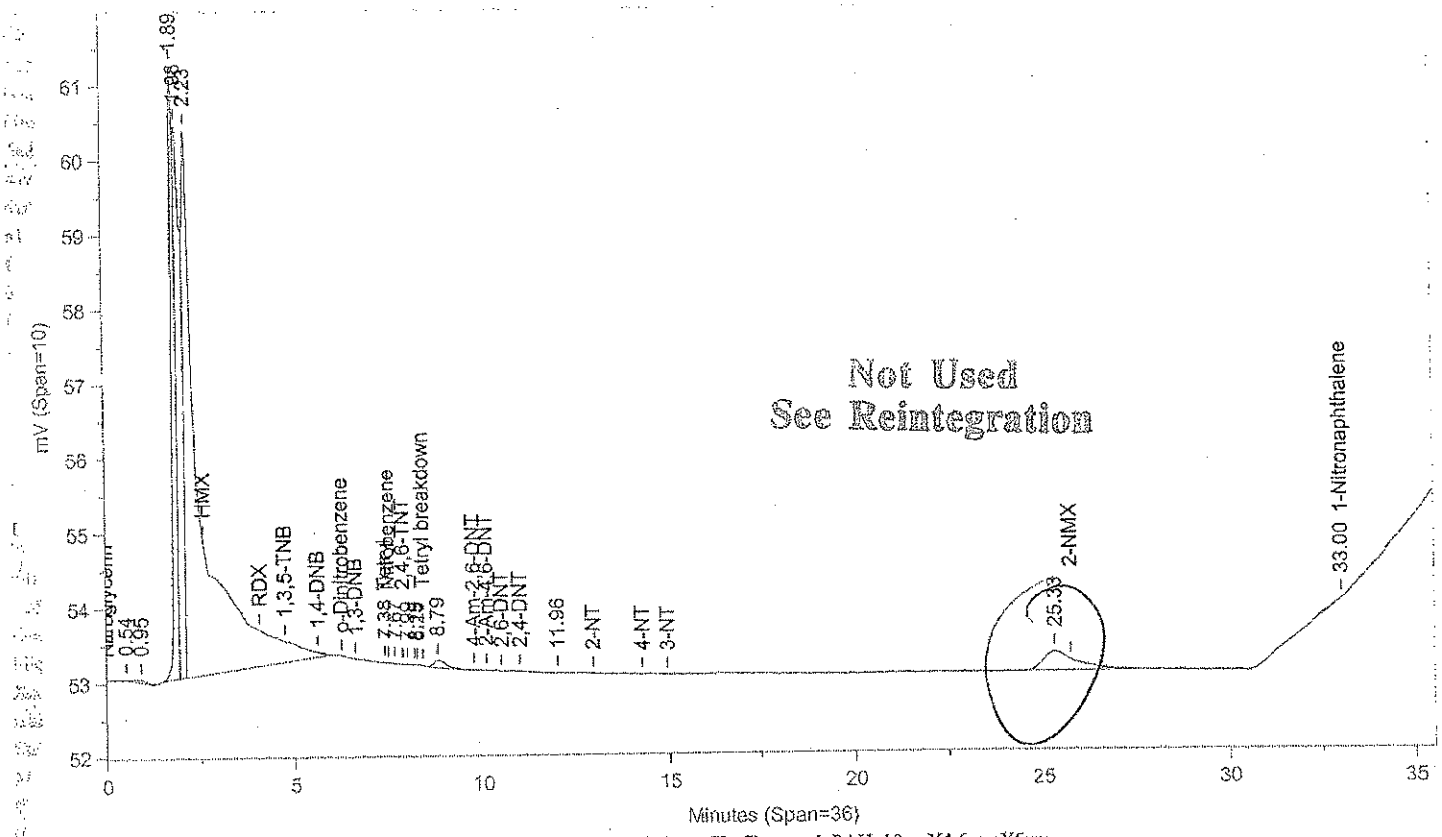
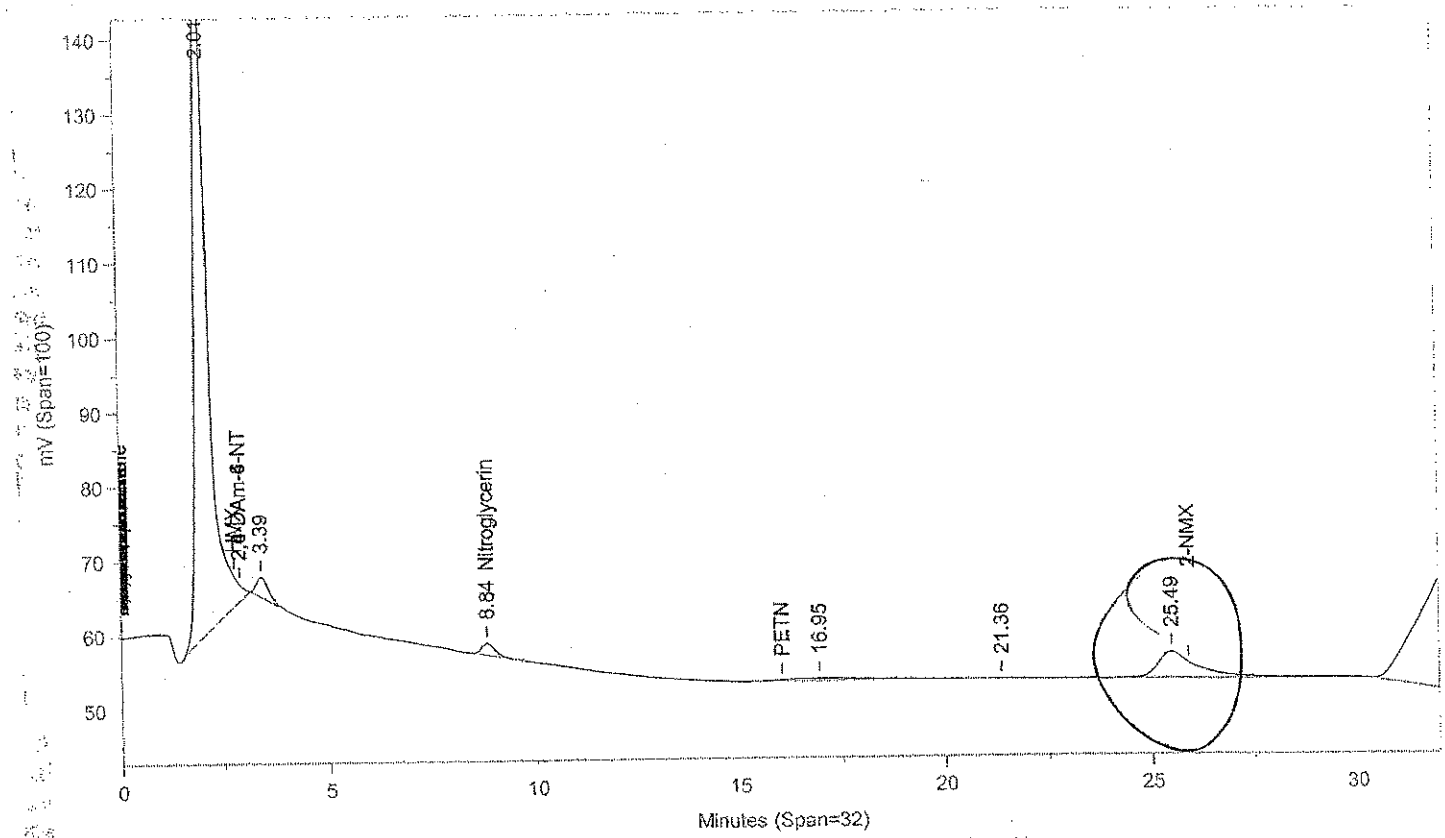


Instrument ID: CP12--X6329A Injected On: 11/18/2013 2:43:39 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.83R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 2:43:39 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

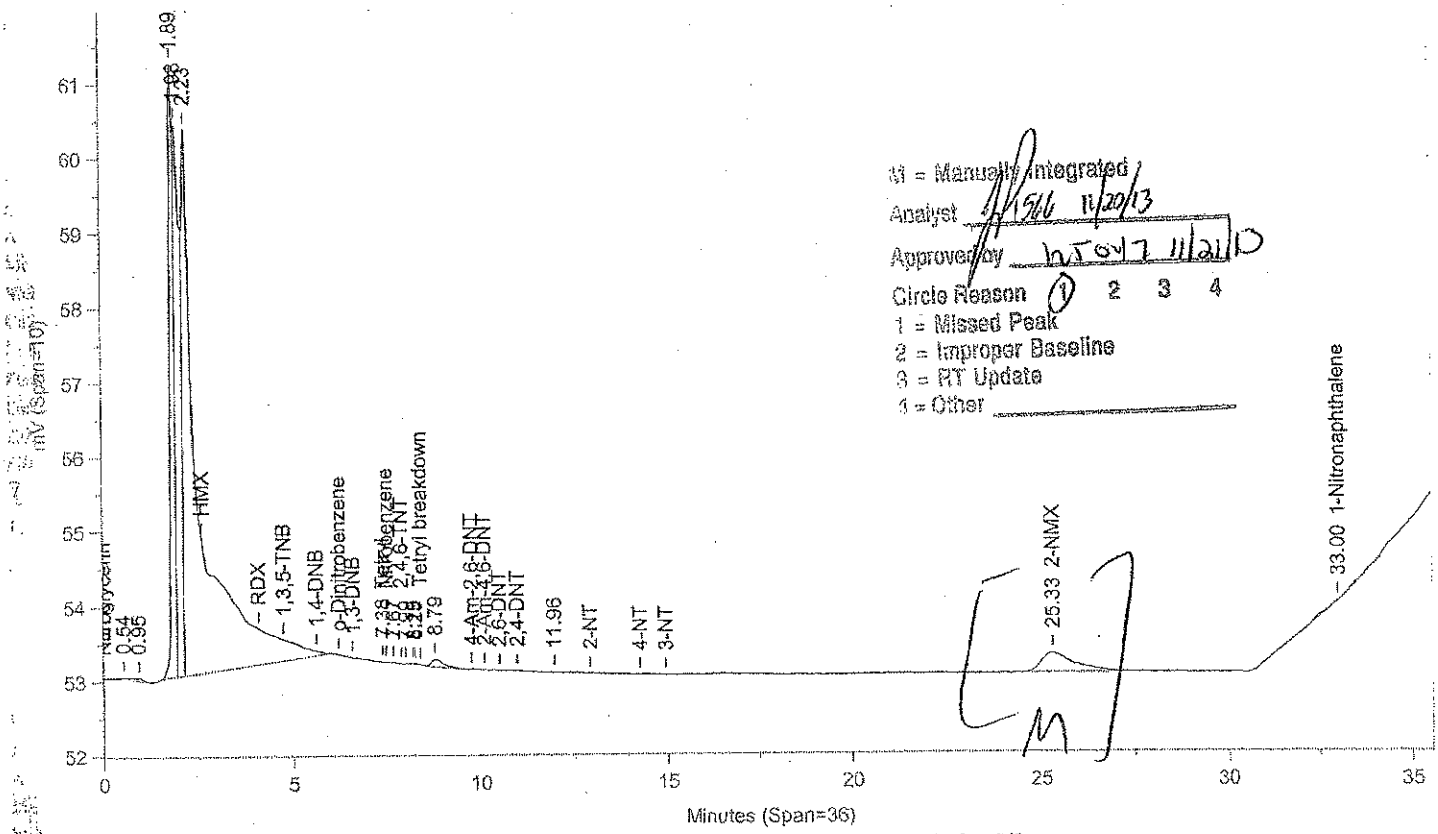
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.377	75	.004	Tetryl		0	.	Tetryl
.	0	.	Nitroglycerin	8.843	35923	5.621	Nitroglycerin
33.001	731	.111	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.83A
Area File: C:\CPWIN\DATA1\4E12310B.83A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:55:54 PM
File Reported On: 11/18/2013 at 2:56:05 PM

RT

Not Used
See Reintegration

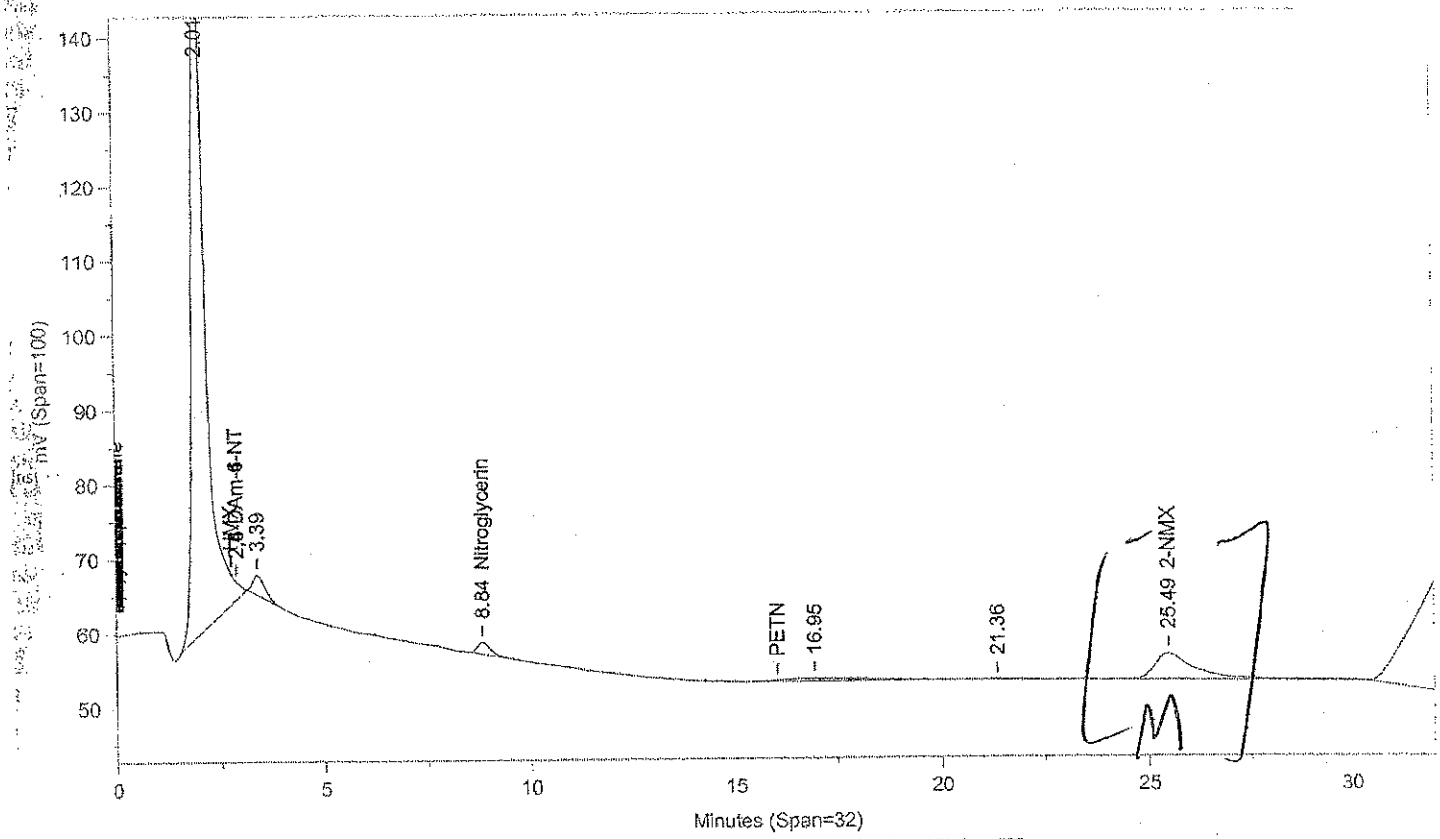
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.83R



M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 2:43:39 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.83R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 2:43:39 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.377	75	.004	Tetryl	.	0	.	Tetryl
.	0	.	Nitroglycerin	8.843	35923	5.621	Nitroglycerin
25.328	16149	9.475	2-NMX	25.486	250432	10.254	2-NMX
33.001	731	.111	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:28:30 PM
File Reported On: 11/20/2013 at 12:28:29 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266810 2D123 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 02:43:40
Instrument : CP12--Y6329A
Result file : 4C12310.83R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 112% (73-122) Conc.: 11.190614

Analysis Report (B)

Injected on : NOV 18, 2013 02:43:40
Instrument : CP12--Y6329B
Result file : 4C12310B.83R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.23	5.36	969	-0.298690
2-NMX	34.12	34.31	34.32	17677	11.190614

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.190614					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

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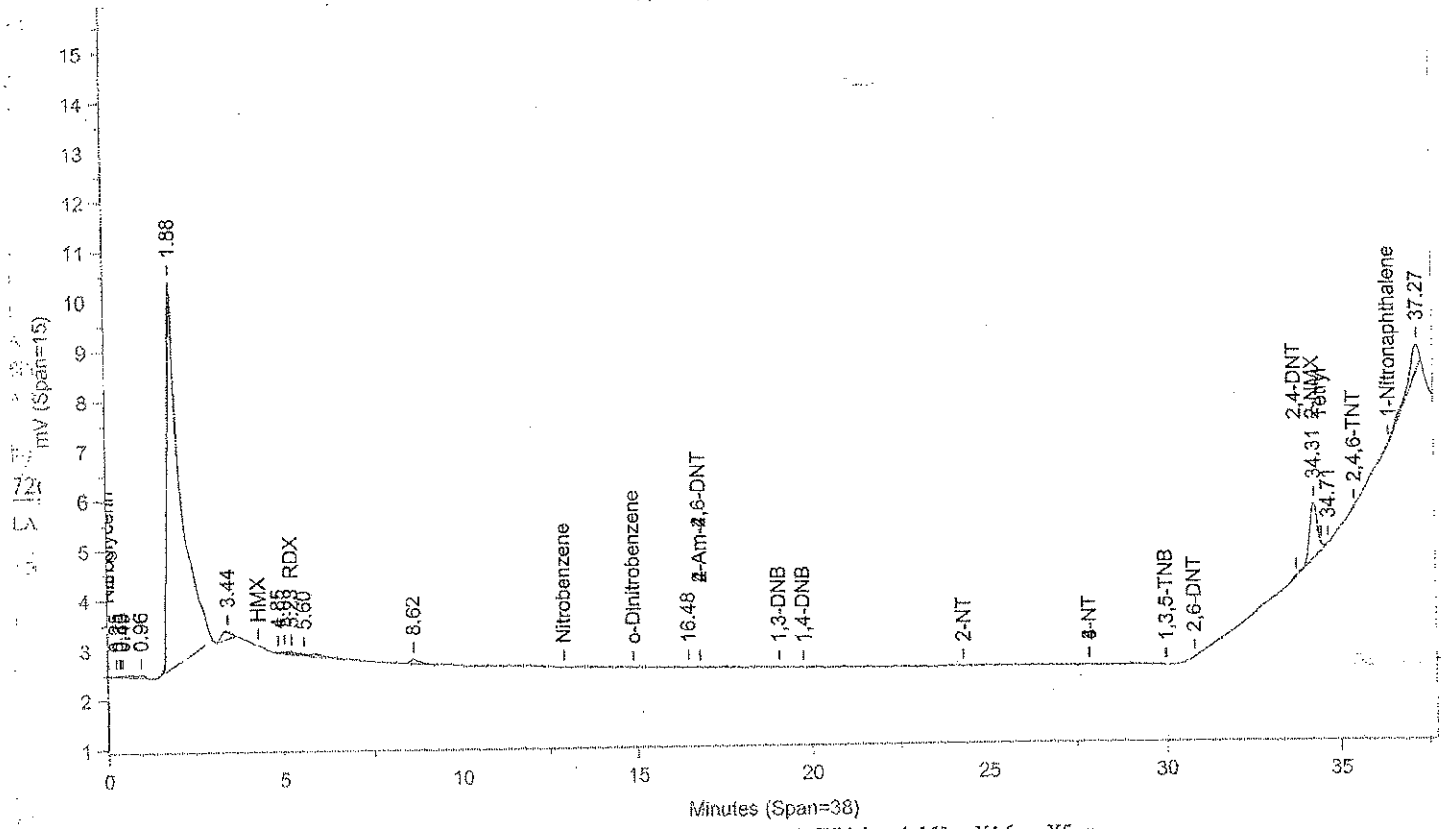
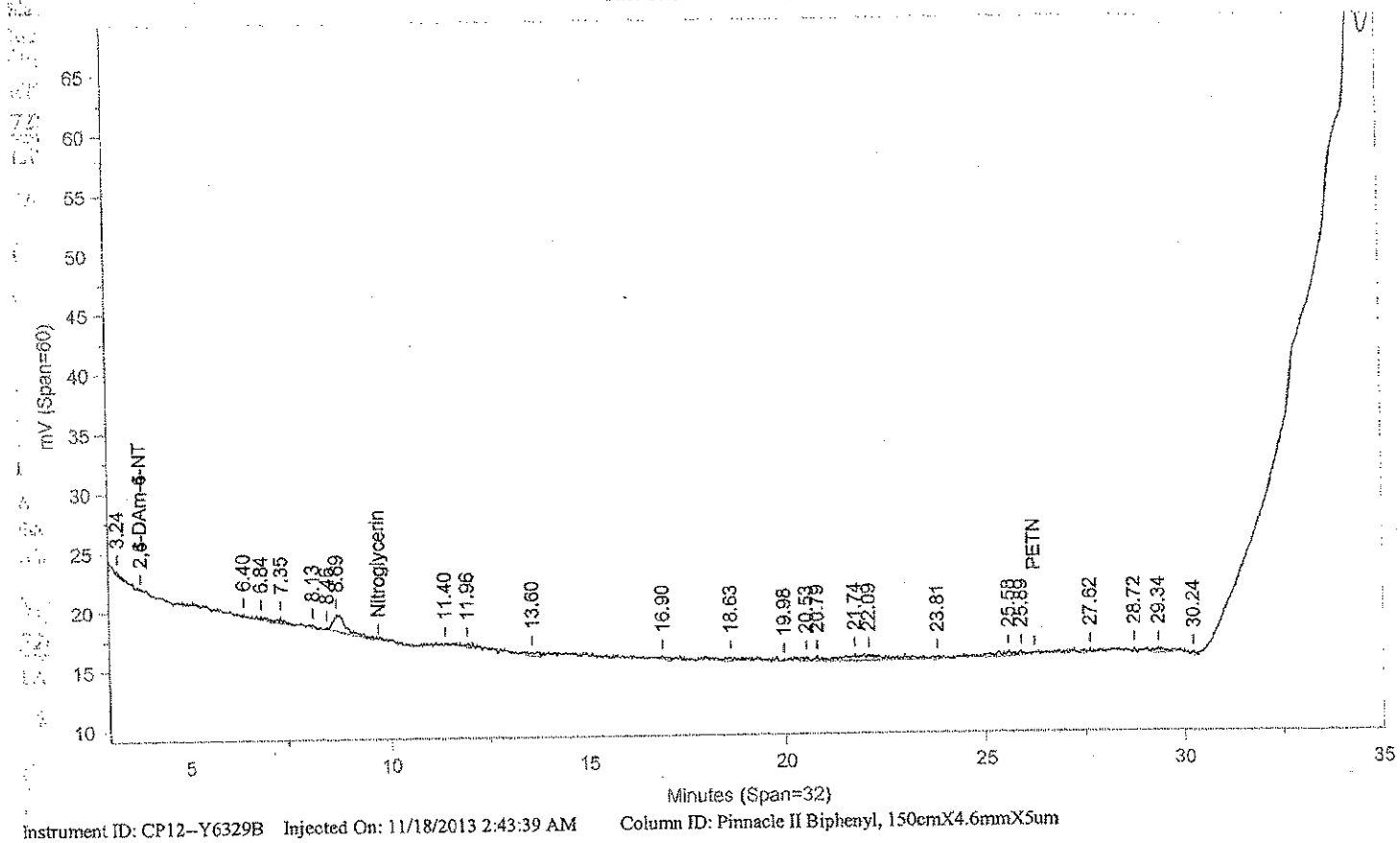
File: C:\CPWIN\DATA1\4C12310.83R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 2:43:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.83R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 2:43:39 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.227	969	-.299	RDX			0	RDX
34.307	17677	11.191	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.83A
Area File: C:\CPWIN\DATA1\4C12310B.83A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:22:32 PM
File Reported On: 11/18/2013 at 3:22:41 PM

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Data Summary

Sample Name: 7266811 2D121 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on	Nov 18, 2013 03:25:57
Instrument	X6329A
Result file	4E12310.84R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 74% (73 - 122) Conc: 7.402183

Analysis Report (B)

Injected on	Nov 18, 2013 03:25:57
Instrument	Y6329A
Result file	4C12310.84R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 109% (73 - 122) Conc: 10.945215

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
2,6-Dinitrotoluene	10.38	10.63	10.66	62	0.010155	1,3-DNB	18.93	18.94	19.23	374	0.022075
2-NMX	25.41	25.34	26.09	12616	7.402183	2-NMX	34.12	34.32	34.32	17248	10.945215

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
☑ 2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	7.402183				38.62	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tornayko, Principal Specialist
Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266811 2D121 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 03:25:57
Instrument : CP12--X6329A
Result file : 4E12310.84R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 74% (73-122) Conc.: 7.402183

Peak name	Min	R.T.	Max	Area	Amount
Tetryl breakdown	8.27	8.31	8.52	121	0.006986
2,6-DNT	10.38	10.63	10.66	62	0.010155
2-NMX	25.41	25.34	26.09	12616	7.402183

Analysis Report (B)

Injected on : NOV 18, 2013 03:25:57
Instrument : CP12--X6329B
Result file : 4E12310B.84R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 104% (73-122) Conc.: 10.37535

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.49	26.24	253402	10.375350

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	7.402183				33.45	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 2 1 2013

Valerie L. Tomayko
Principal Specialist

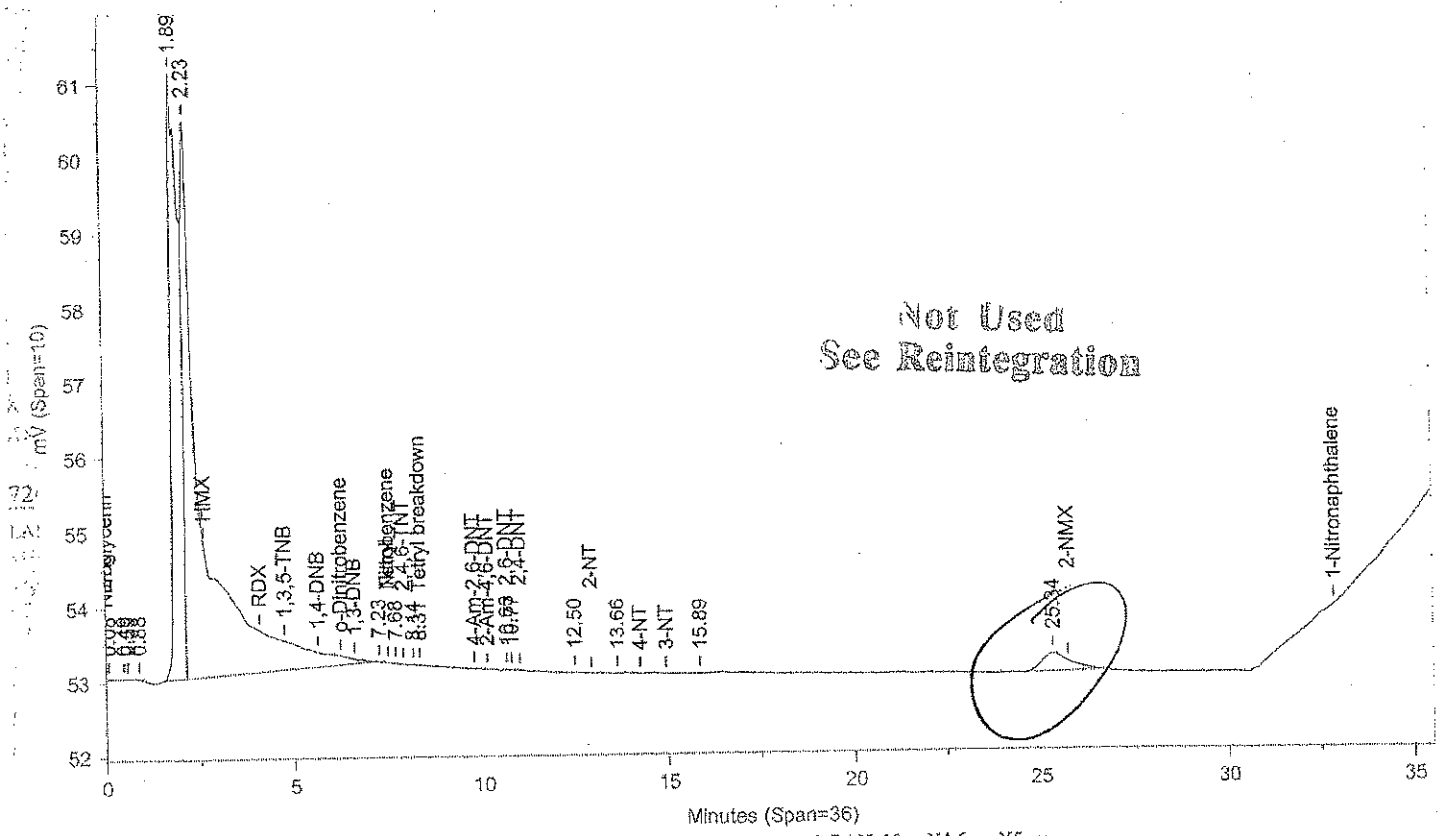
Verified by: _____
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

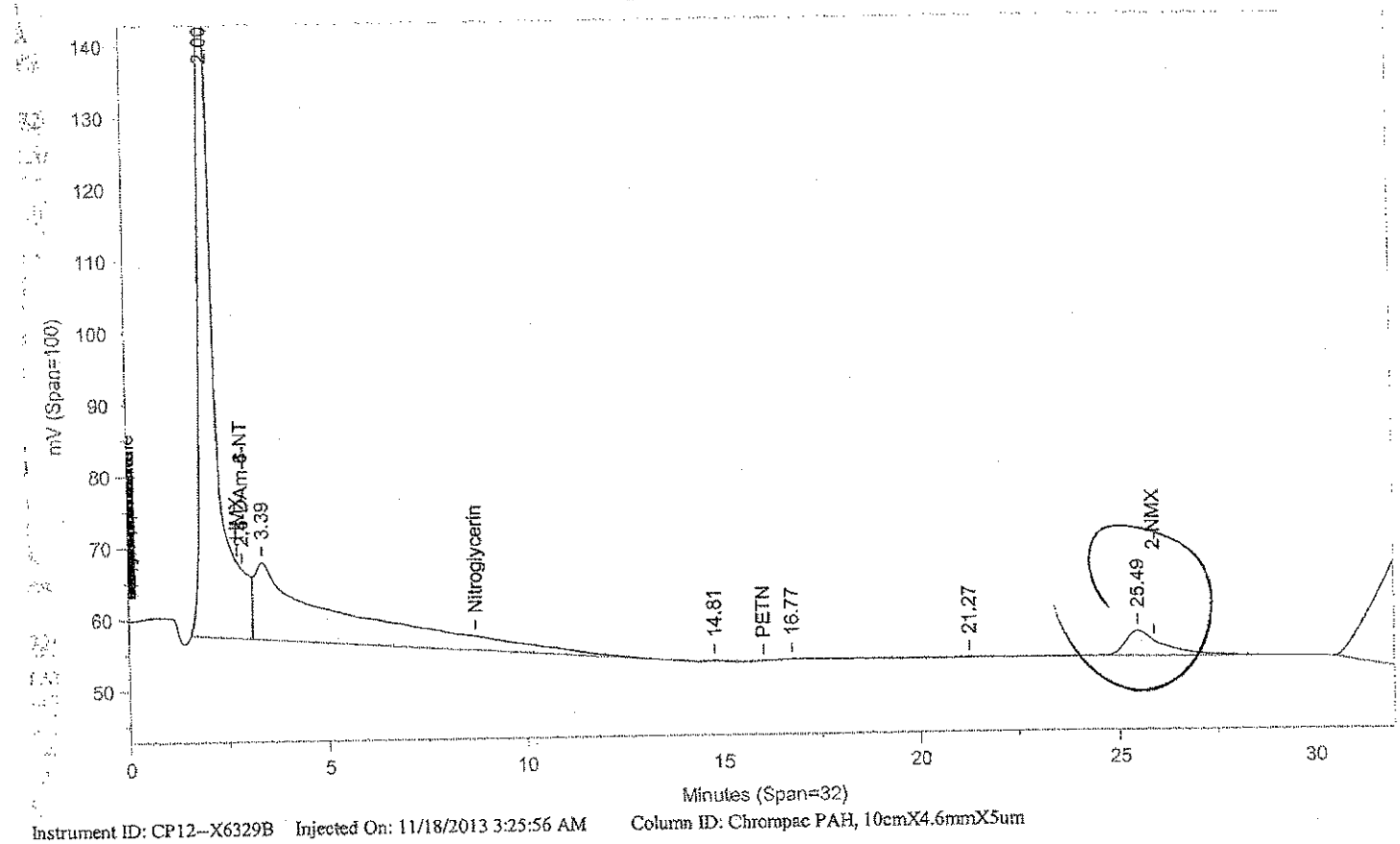
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.84R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 3:25:56 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.84R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 3:25:56 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500

Dilution Factor: 10

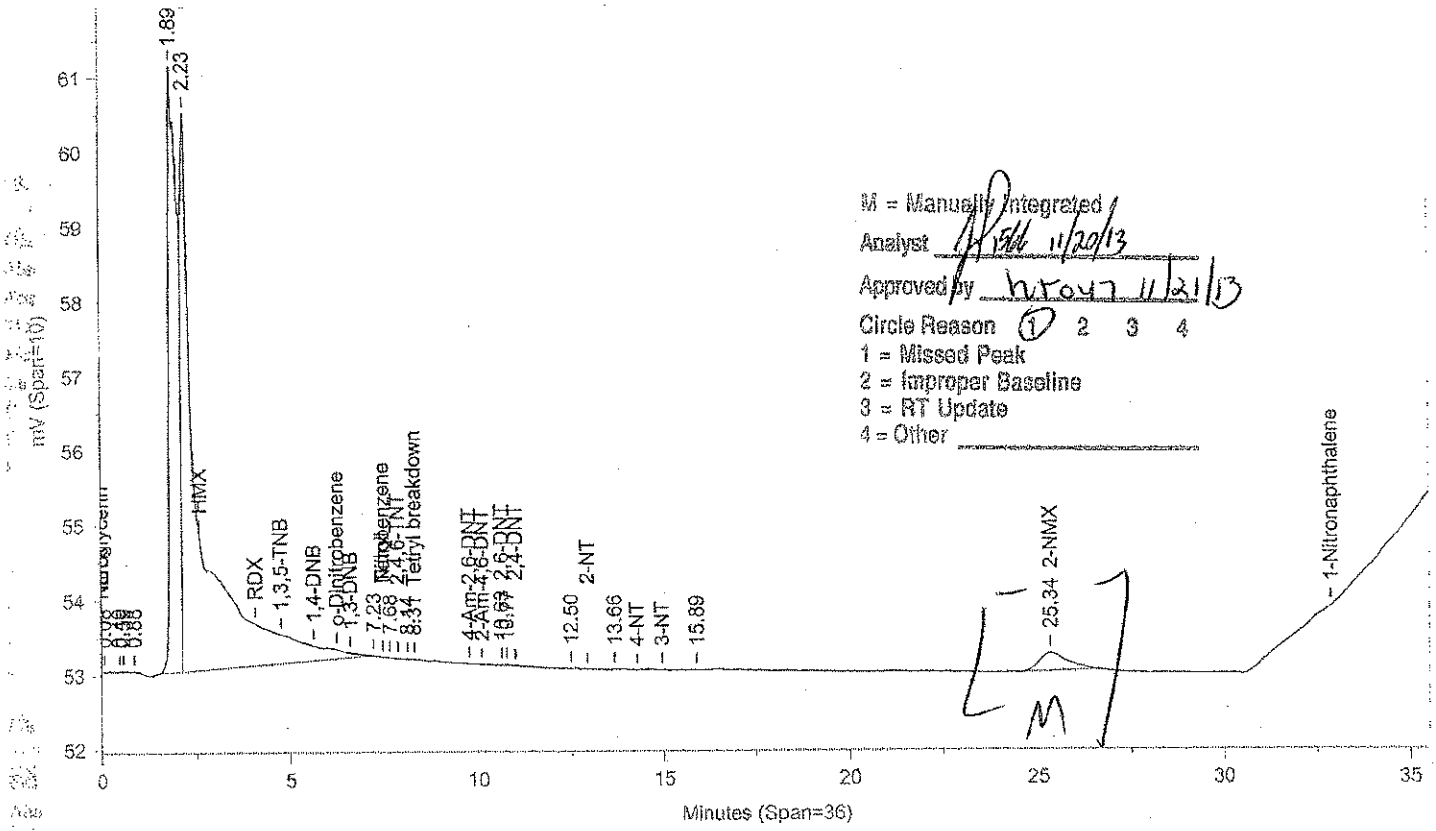
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
8.307	121	.007	Tetryl breakdown			0	Tetryl breakdown
10.635	62	.01	2,6-DNT			0	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.84A
Area File: C:\CPWIN\DATA1\4E12310B.84A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:56:24 PM
File Reported On: 11/18/2013 at 2:56:35 PM

Not Used
See Reintegration

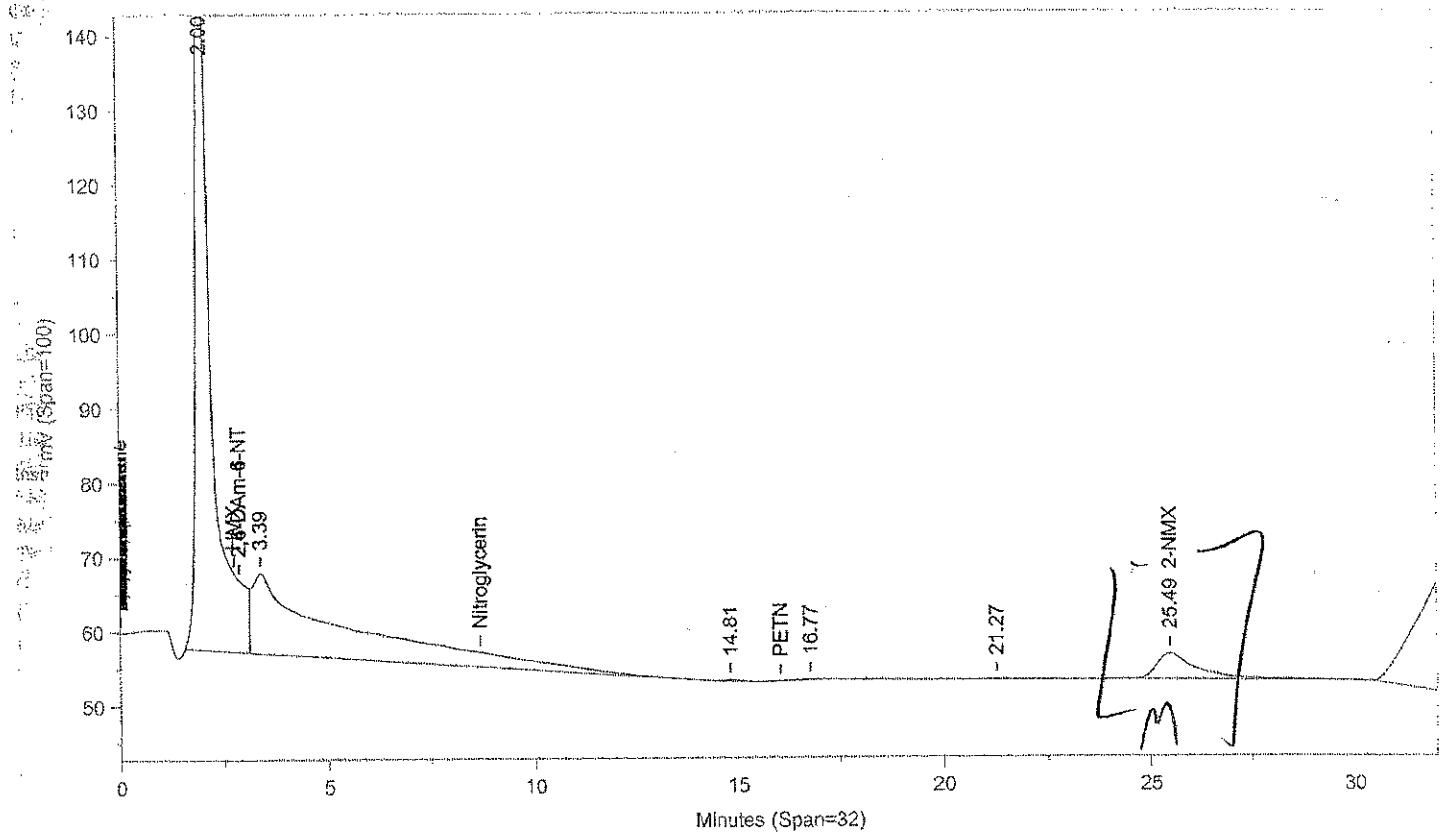
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.84R



M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 3:25:56 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.84R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 3:25:56 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
8.307	121	.007	Tetryl breakdown	.	0	.	Tetryl breakdown
10.635	62	.01	2,6-DNT	.	0	.	2,6-DNT
25.345	12616	7.402	2-NMX	25.488	253402	10.375	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:29:14 PM
File Reported On: 11/20/2013 at 12:29:12 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266811 2D121 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 03:25:57
Instrument : CP12--Y6329A
Result file : 4C12310.84R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 109% (73-122) Conc.: 10.945215

Analysis Report (B)

Injected on : NOV 18, 2013 03:25:57
Instrument : CP12--Y6329B
Result file : 4C12310B.84R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
1,3-DNB	18.93	18.94	19.23	374	0.022075
2-NMX	34.12	34.32	34.32	17248	10.945215

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	10.945215					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaydo, Principal Specialist
Date: NOV 21 2013

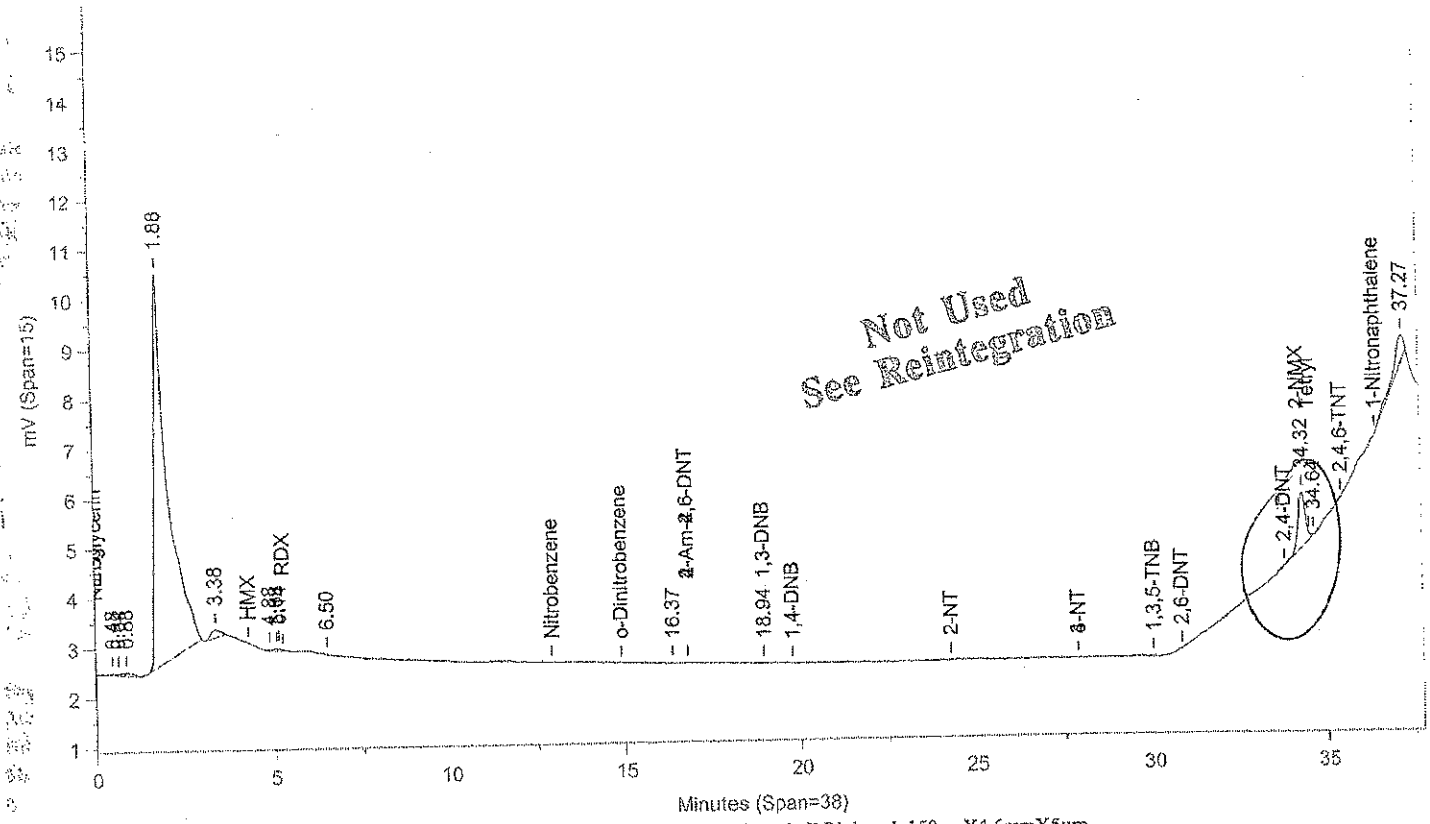
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:36:34

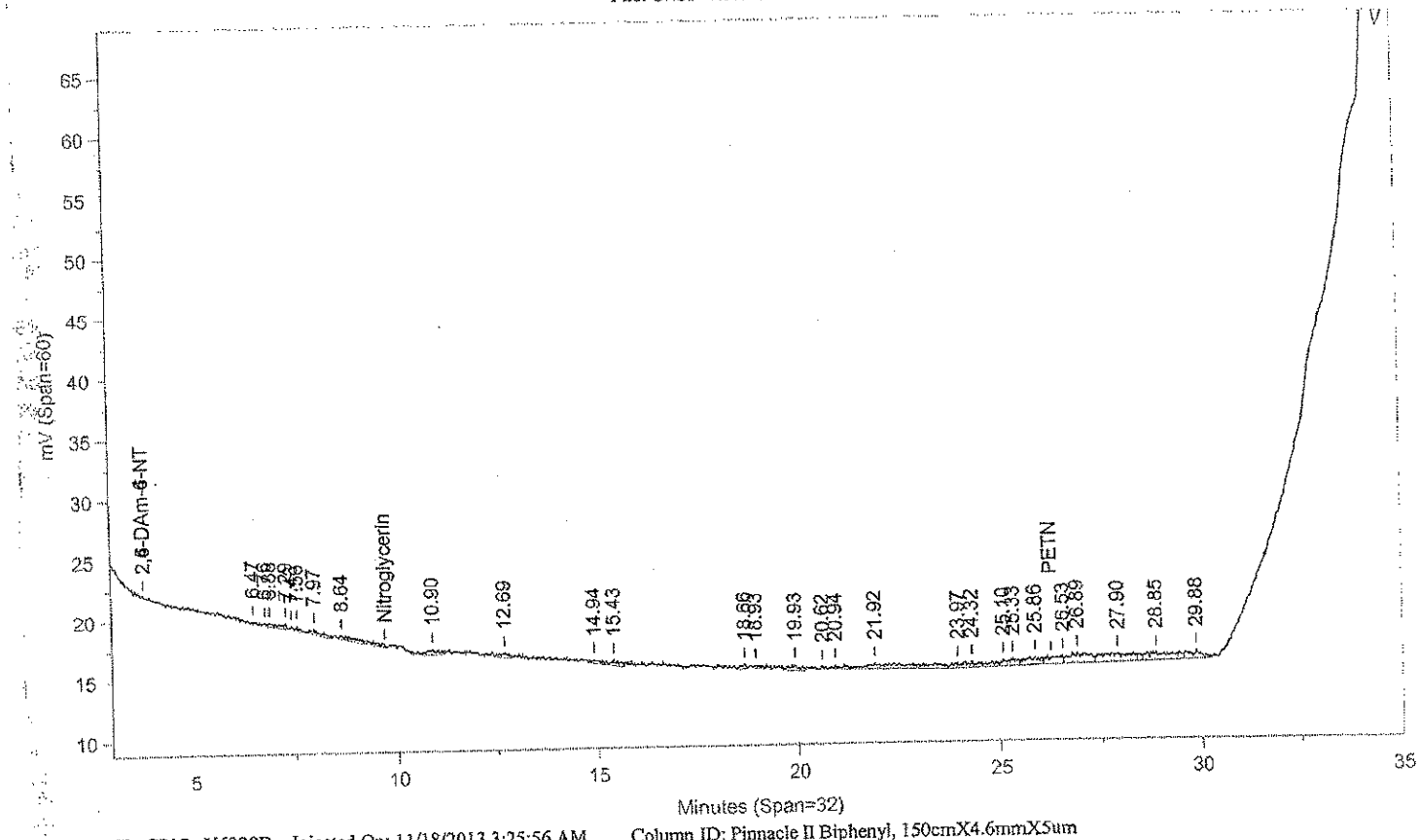
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.84R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 3:25:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.84R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 3:25:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

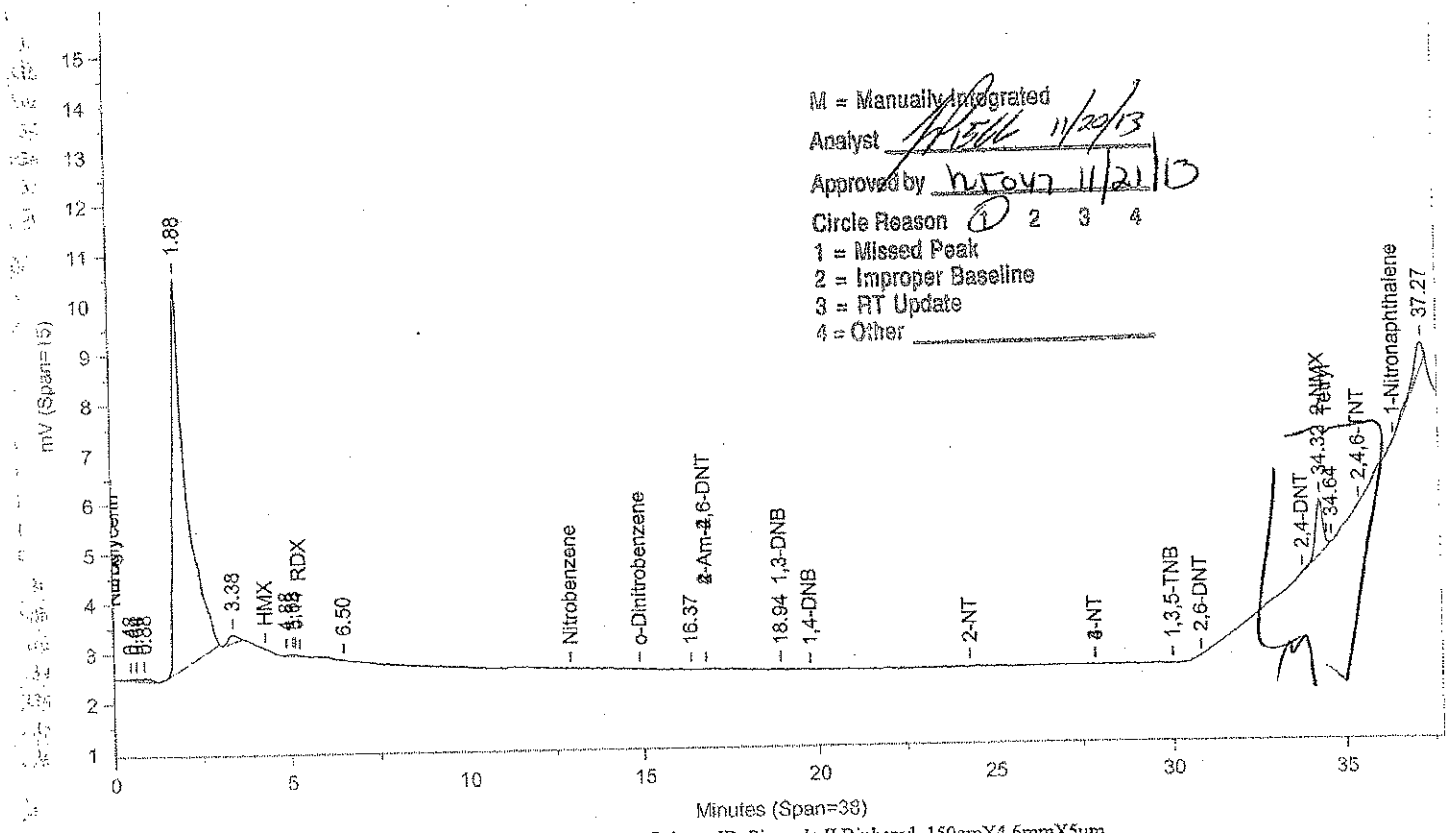
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
18.944	374	.022	1,3-DNB			0	1,3-DNB

Files:
Area File: C:\CPWIN\DATA1\4C12310.84A
Area File: C:\CPWIN\DATA1\4C12310B.84A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:23:02 PM
File Reported On: 11/18/2013 at 3:23:12 PM

Not Used
See Reintegration

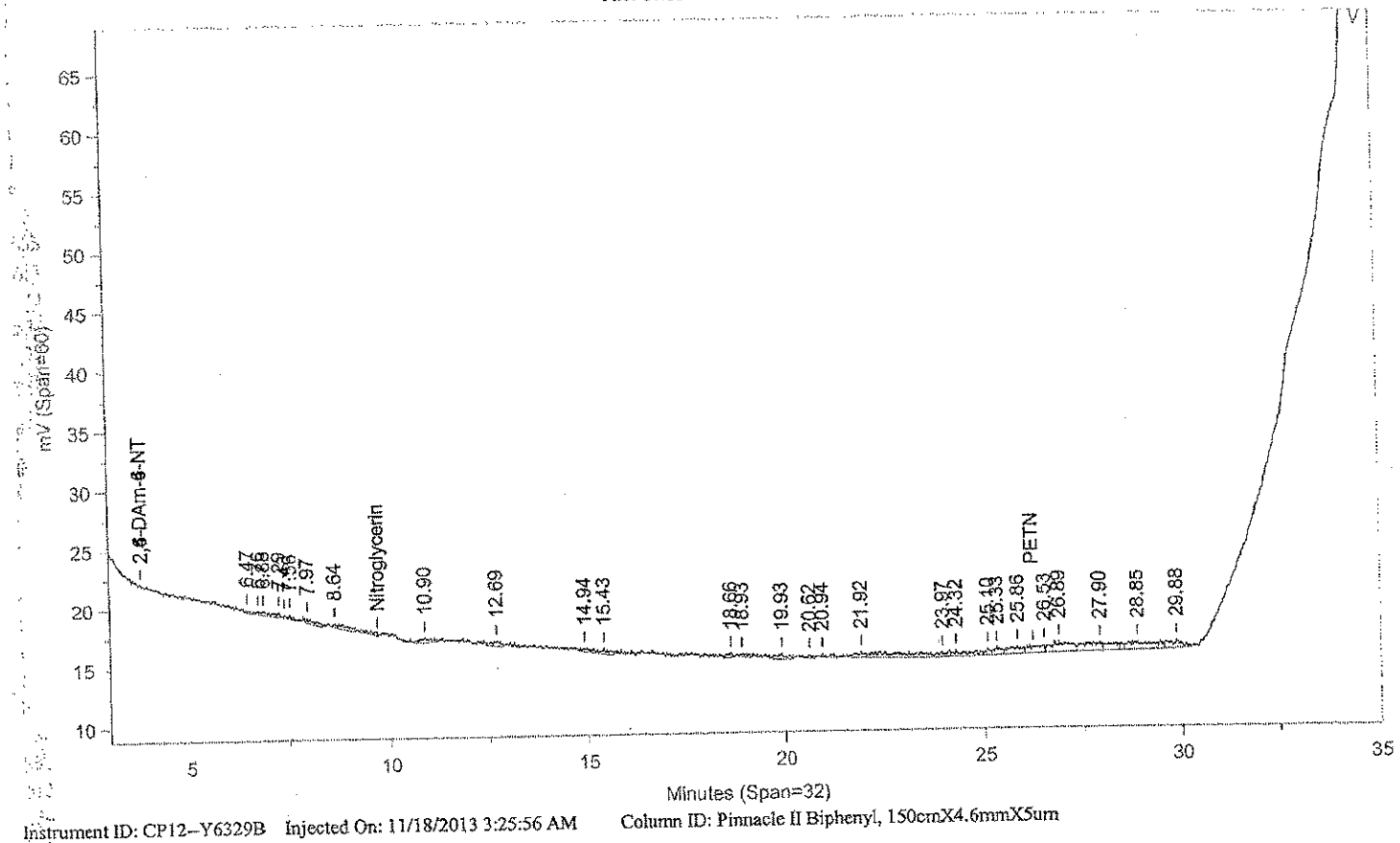
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.84R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 3:25:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.84R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 3:25:56 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
18.944	374	.022	1,3-DNB			0	1,3-DNB
34.321	17248	10.945	2-NMX			0	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:56:26 PM
File Reported On: 11/20/2013 at 2:56:25 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266812 2C126 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 22:02:59
Instrument : CP12--X6329A
Result file : 5E12310.40R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 97% (63-150) Conc.: 4238.94482

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.37	4.40	228	-86.073036
1,4-DNB	5.80	5.93	6.00	96	3.273152
o-Dinitrobenzene	6.43	6.52	6.63	161	13.596777
Tetryl	7.71	7.81	7.99	99	2.502409
2,4,6-TNT	8.19	8.27	8.39	505	19.265547
2,6-DNT	10.95	10.96	11.23	45	3.217207
2,4-DNT	11.45	11.65	11.74	331	8.693885
2-NMX	26.91	27.32	27.59	16617	4238.944824

Analysis Report (B)

Injected on : NOV 19, 2013 22:02:59
Instrument : CP12--X6329B
Result file : 5E12310B.40R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 90% (63-150) Conc.: 3935.54907

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.96	9.20	9.34	60551	4119.794922
2-NMX	27.09	27.48	27.76	221075	3935.549072

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	4119.794922	<5217.39	1739.13	J		Report Confirmation
☑ PETN			<5217.39	<1739.13			
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ Tetryl			<260.8695	<133.0434			
☑ Nitrobenzene			<260.8695	<86.9565			
☑ 2,4,6-TNT			<260.8695	<86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☐ 2-NMX	A	4238.944824				7.42	
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tompkins, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:47:54

LANCASTER LABORATORIES

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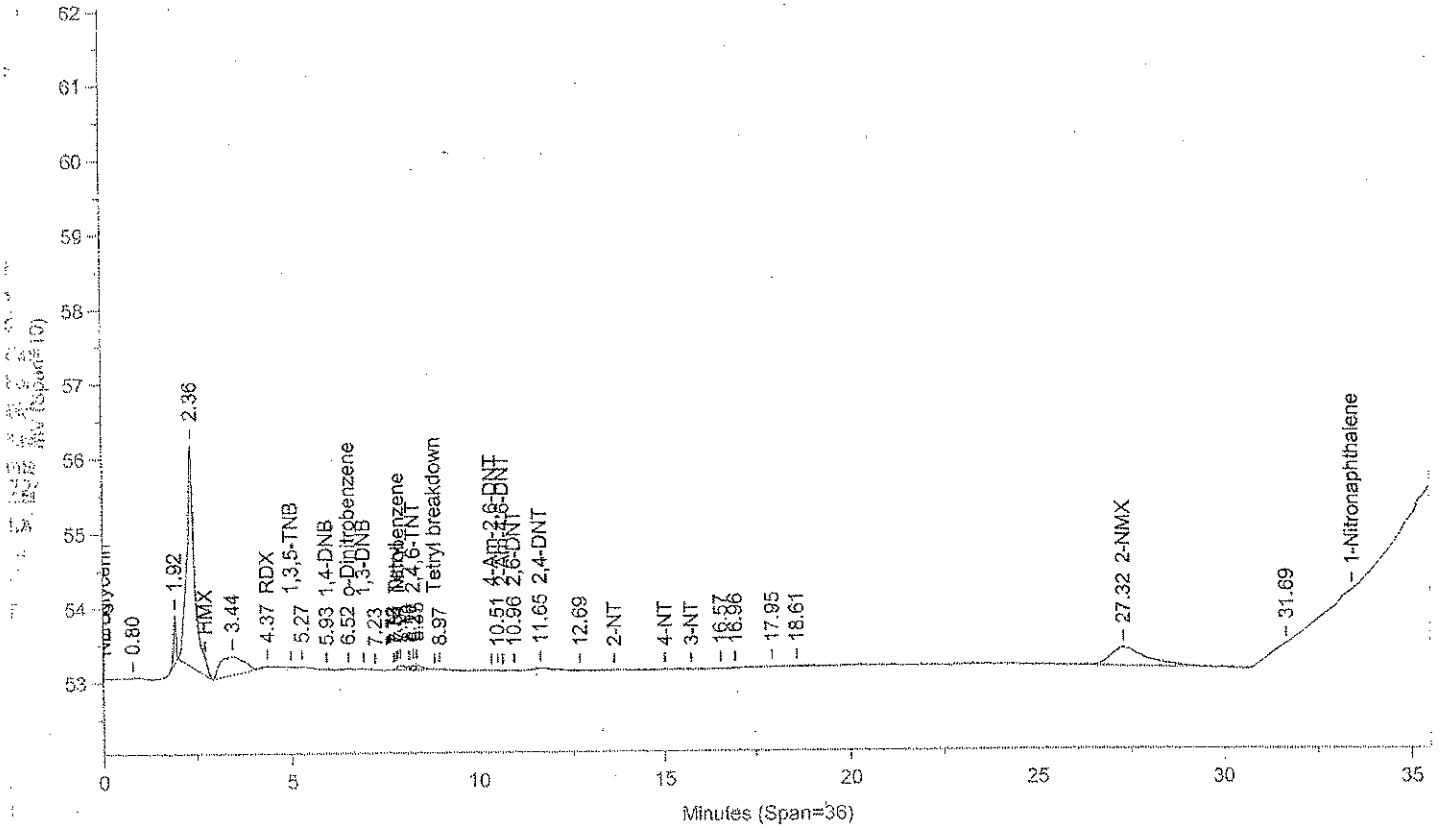
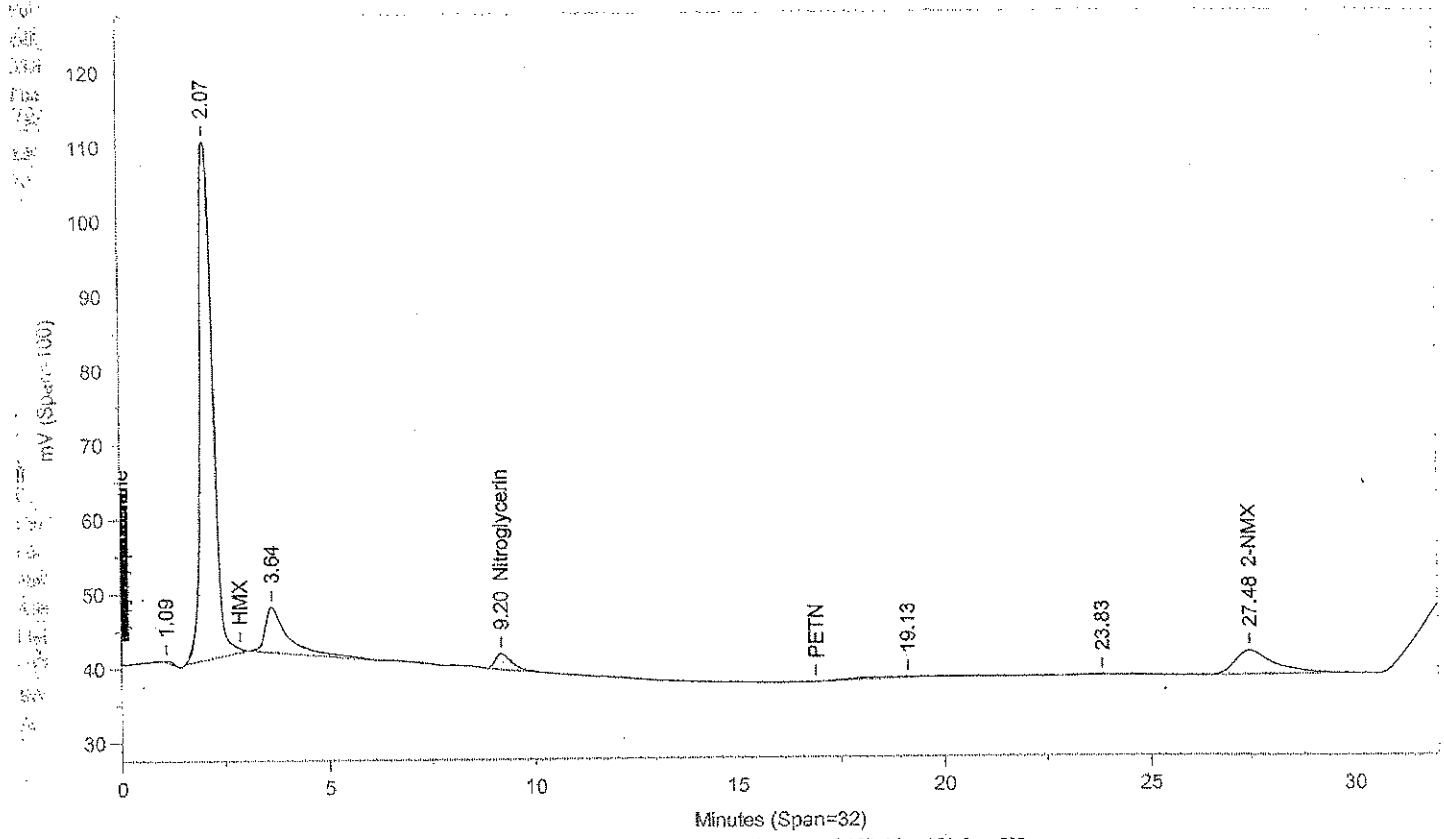


Instrument ID: CP12--X6329A Injected On: 11/19/2013 10:02:58 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.40R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 10:02:58 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.372	228	-86.073	RDX	.	0	.	RDX
5.927	96	3.273	1,4-DNB	.	0	.	1,4-DNB
6.518	161	13.597	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.812	99	2.502	Tetryl	.	0	.	Tetryl
8.266	505	19.266	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.202	60551	4119.795	Nitroglycerin
10.956	45	3.217	2,6-DNT	.	0	.	2,6-DNT
11.649	331	8.694	2,4-DNT	.	0	.	2,4-DNT
27.318	16617	4238.945	2-NMX	27.476	221075	3935.549	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.40A
Area File: C:\CPWIN\DATA1\5E12310B.40A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:52:50 PM
File Reported On: 11/20/2013 at 4:53:01 PM

Lancaster Laboratories Single Component Data Summary

Sample Name: 7266812 2C126 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 22:02:59
Instrument : CP12--Y6329A
Result file : 5C12310.40R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 103% (63-150) Conc.: 4473.86377

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.08	5.18	5.28	1144	-116.312508
Nitrobenzene	12.62	12.63	12.94	2831	100.087112
2-NMX	34.05	34.13	34.25	16105	4473.863770

Analysis Report (B)

Injected on : NOV 19, 2013 22:02:59
Instrument : CP12--Y6329B
Result file : 5C12310B.40R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.53	9.67	54773	4686.090820

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5217.39	<1739.13			Report
☑ Nitroglycerin	B	4686.090820	<5217.39	1739.13	J		1 Confirmed
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ Nitrobenzene	A	100.087112	<260.8695	86.9565	* <101		W/C
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☐ 2-NMX	A	4473.863770					
☑ Tetryl			<260.8695	<133.0434			
☑ 2,4,6-TNT			<260.8695	<86.9565			
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

Reviewed by: James H. Plapp, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Trimarchi, Principal Chemist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:37:12

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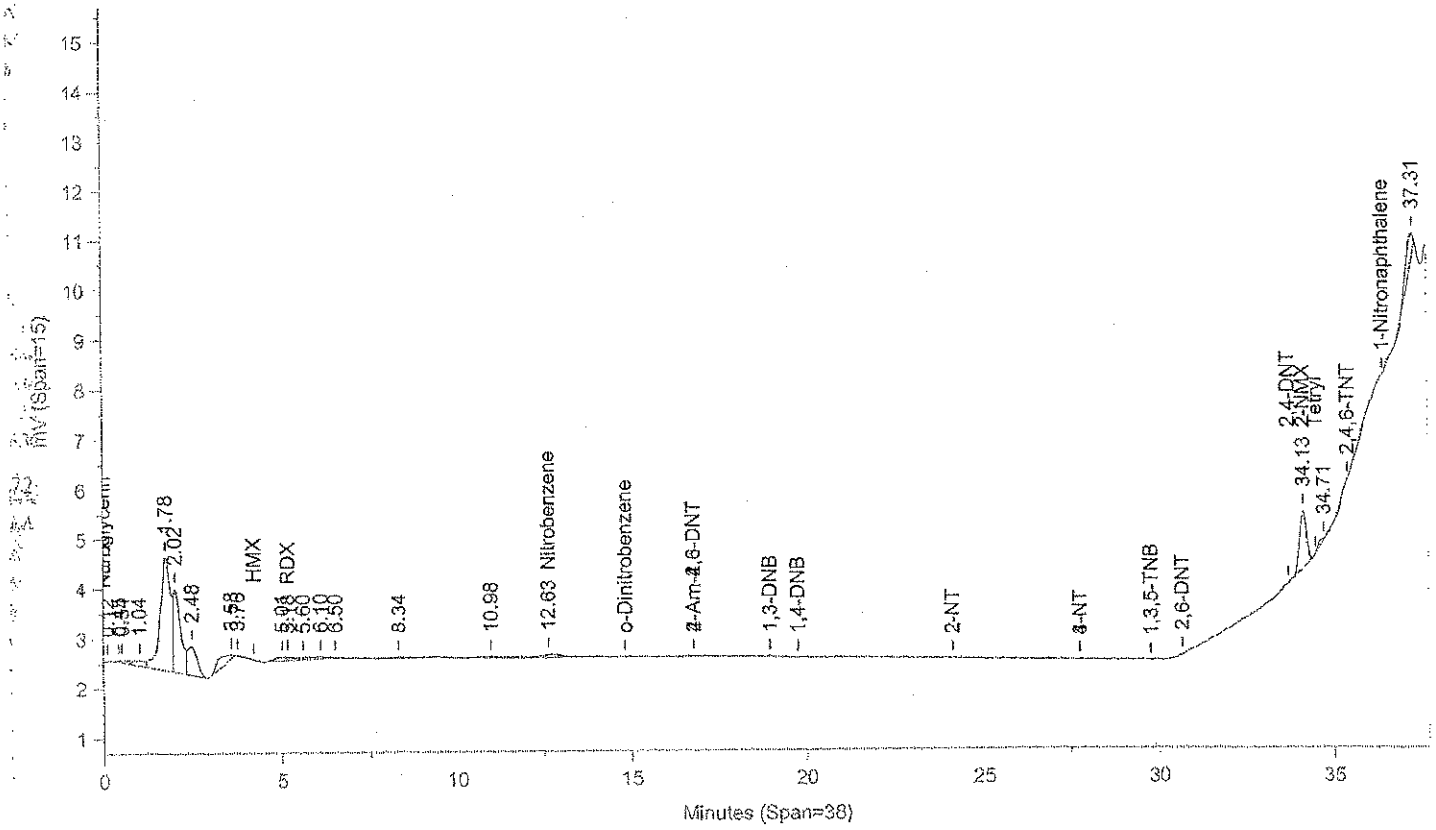
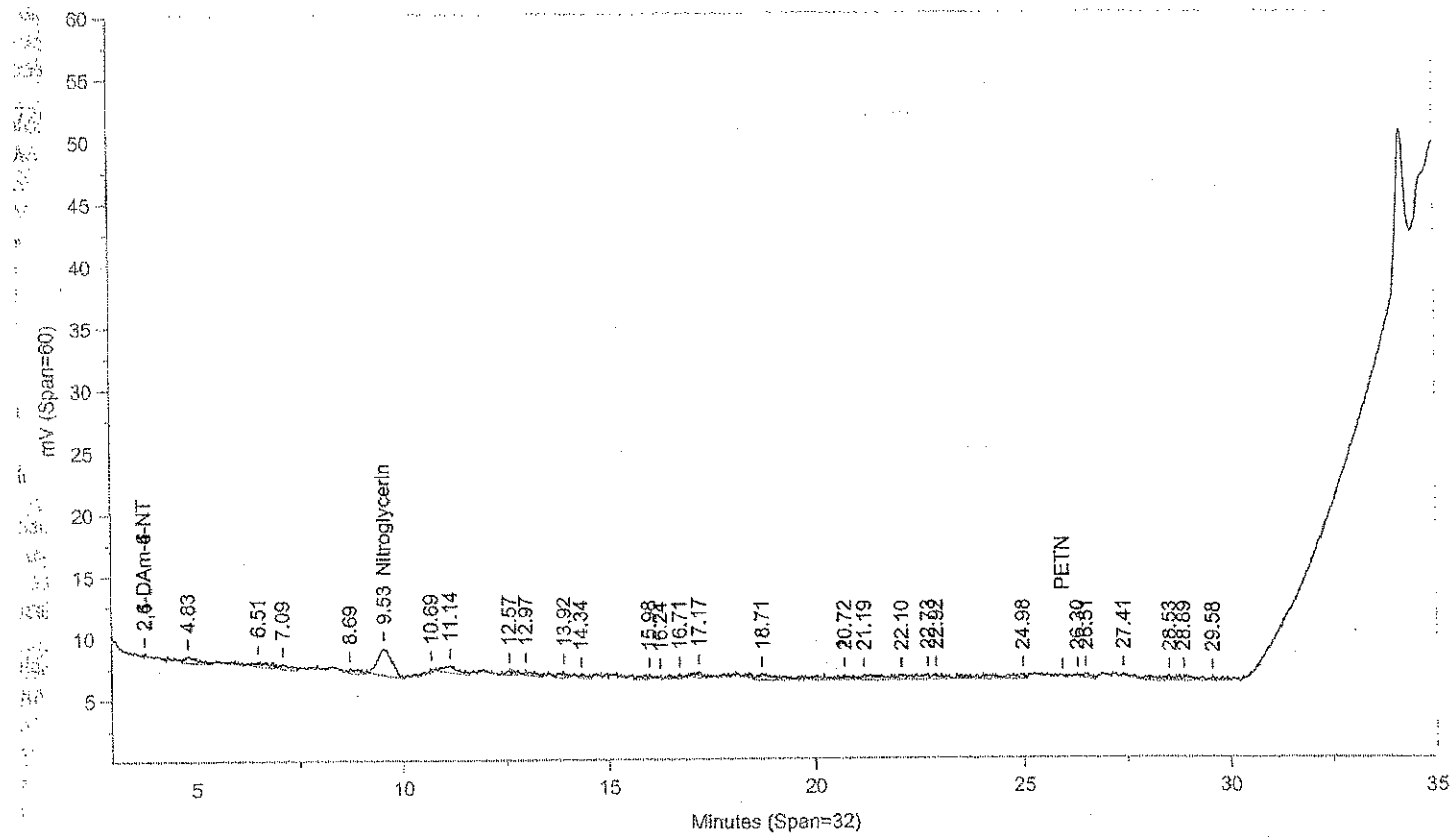
File: C:\CPWIN\DATA1\5C12310.40R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 10:02:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.40R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 10:02:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.176	1144	-116.313	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.533	54773	4686.091	Nitroglycerin
12.629	2831	100.087	Nitrobenzene	.	0	.	Nitrobenzene
34.128	16105	4473.864	2-NMX	.	0	.	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5C12310.40A
Area File: C:\CPWIN\DATA1\5C12310B.40A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:47:20 PM
File Reported On: 11/20/2013 at 5:47:30 PM

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Data Summary

Sample Name: 7266813 2C111 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 22:45:27
Instrument X6329A
Result file 5E12310.41R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 90% (63 - 150) Conc: 3920.184814

Analysis Report (B)

Injected on Nov 19, 2013 22:45:27
Instrument Y6329A
Result file 5C12310.41R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 104% (63 - 150) Conc: 4517.104492

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	8.19	8.19	8.39	12	0.470615
2,6-Dinitrotoluene	10.95	11.12	11.23	18	1.309099
2-NMX	26.91	27.06	27.59	15367	3920.184814

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.15	34.25	16278	4517.104492
Tetryl	34.39	34.50	34.59	46	0

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5217.3911	<1739.1304			
☑ PETN			<5217.3911	<1739.1304			
☑ HMX			<652.1739	<217.3913			
☑ RDX			<260.8696	<108.6956			
☑ 1,3,5-Trinitrobenzene			<260.8696	<86.9565			
☑ 1,4-Dinitrobenzene			<260.8696	<86.9565			
☑ o-Dinitrobenzene			<260.8696	<86.9565			
☑ 1,3-DNB			<260.8696	<86.9565			
☑ Tetryl			<260.8696	<133.0435			
☑ Nitrobenzene			<260.8696	<86.9565			
☑ 2,4,6-Trinitrotoluene			<260.8696	<86.9565			
☑ 4-Amino-2,6-dinitrotoluene			<260.8696	<130.4348			
☑ 2-Amino-4,6-dinitrotoluene			<260.8696	<86.9565			
☑ 2,6-Dinitrotoluene			<260.8696	<86.9565			
☑ 2,4-Dinitrotoluene			<260.8696	<86.9565			
☑ 2-Nitrotoluene			<260.8696	<173.913			
☑ 4-Nitrotoluene			<260.8696	<173.913			
☑ 3-Nitrotoluene			<260.8696	<217.3913			
☑ 2-NMX	A	3920.184814				14.15	
☑ 1-Nitronaphthalene			<260.8696	<86.9565			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266813 2C111 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 22:45:27
Instrument : CP12--X6329A
Result file : 5E12310.41R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 90% (63-150) Conc.: 3920.184814

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.20	4.40	293	-79.618835
2,4,6-TNT	8.19	8.19	8.39	12	0.470615
2,6-DNT	10.95	11.12	11.23	18	1.309099
2-NMX	26.91	27.06	27.59	15367	3920.184814

Analysis Report (B)

Injected on : NOV 19, 2013 22:45:27
Instrument : CP12--X6329B
Result file : 5E12310B.41R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 98% (63-150) Conc.: 4267.505371

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.96	9.00	9.34	6665	453.482788
2-NMX	27.09	27.21	27.76	239723	4267.505371

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5217.39	<1739.13			Report Confirmation
☑ PETN			<5217.39	<1739.13			
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ Tetryl			<260.8695	<133.0434			
☑ Nitrobenzene			<260.8695	<86.9565			
☑ 2,4,6-TNT			<260.8695	<86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☐ 2-NMX	A	3920.184814				8.48	
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Trimble, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:06

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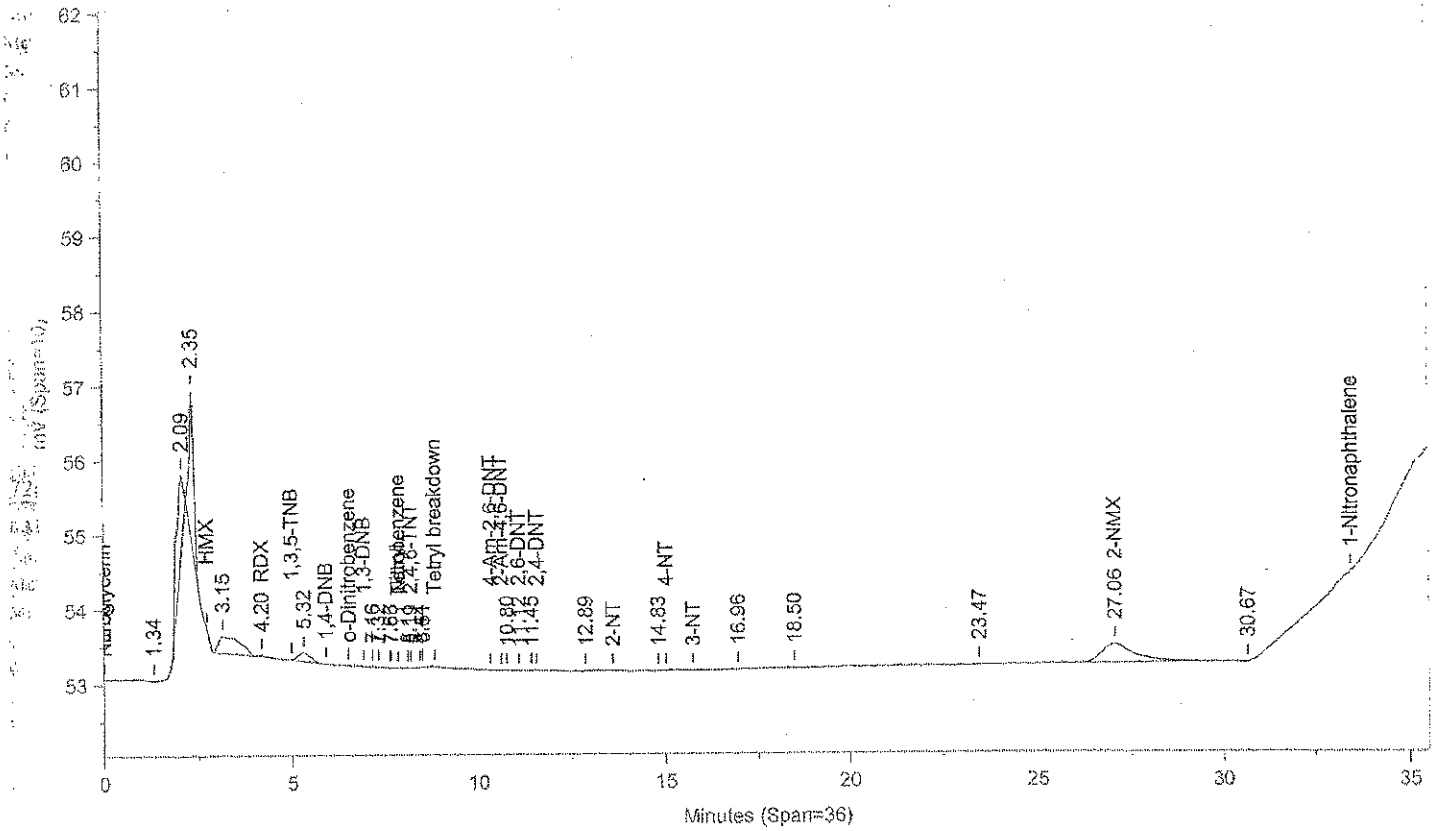
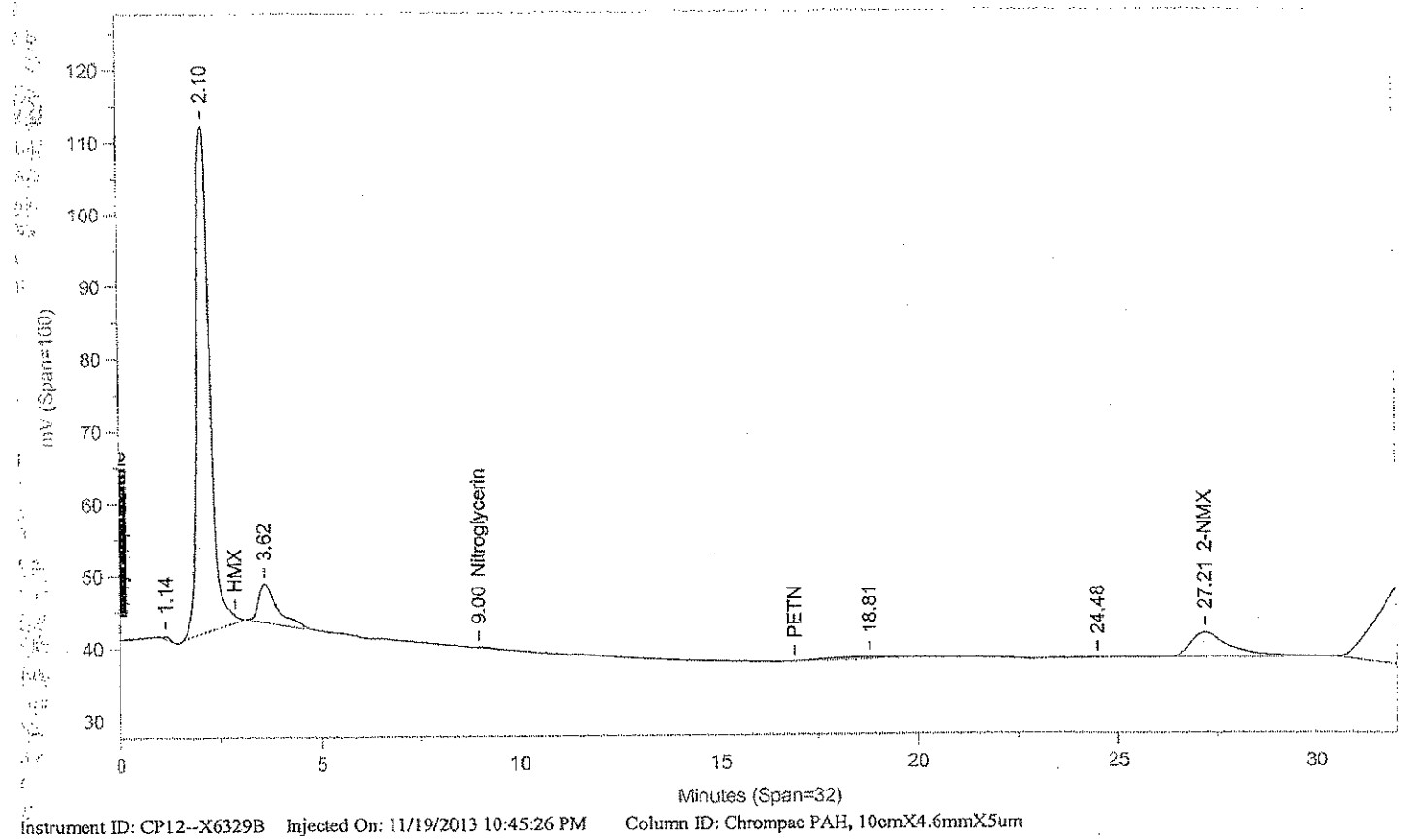
File: C:\CPWIN\DATA1\5E12310.41R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 10:45:26 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.41R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 10:45:26 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.202	293	-79.619	RDX	.	0	.	RDX
8.193	12	.471	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.996	6665	453.483	Nitroglycerin
11.123	18	1.309	2,6-DNT	.	0	.	2,6-DNT
27.063	15367	3920.185	2-NMX	27.212	239723	4267.505	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.41A
Area File: C:\CPWIN\DATA1\5E12310B.41A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:53:22 PM
File Reported On: 11/20/2013 at 4:53:32 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266813 2C111 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 22:45:27
Instrument : CP12--Y6329A
Result file : 5C12310.41R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 104% (63-150) Conc.: 4517.10449

Analysis Report (B)

Injected on : NOV 19, 2013 22:45:27
Instrument : CP12--Y6329B
Result file : 5C12310B.41R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	34.05	34.15	34.25	16278	4517.104492
Tetryl	34.39	34.50	34.59	46	161.232529

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5217.39	<1739.13			Report
☑ Nitroglycerin			<5217.39	<1739.13			
☑ HMX			<652.1738	<217.3913			
☑ RDX			<260.8695	<108.6956			
☑ Nitrobenzene			<260.8695	<86.9565			
☑ o-Dinitrobenzene			<260.8695	<86.9565			
☑ 4-Am-2,6-DNT			<260.8695	<130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB			<260.8695	<86.9565			
☑ 1,4-DNB			<260.8695	<86.9565			
☑ 2-NT			<260.8695	<173.913			
☑ 4-NT			<260.8695	<173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB			<260.8695	<86.9565			
☑ 2,6-DNT			<260.8695	<86.9565			
☑ 2,4-DNT			<260.8695	<86.9565			
☐ 2-NMX	A	4517.104492					
☑ Tetryl	A	~~161.232529~~	<260.8695	<133.0434	*		N/C
☑ 2,4,6-TNT			<260.8695	<86.9565			
☑ 1-Nitronaphthalene			<260.8695	<86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

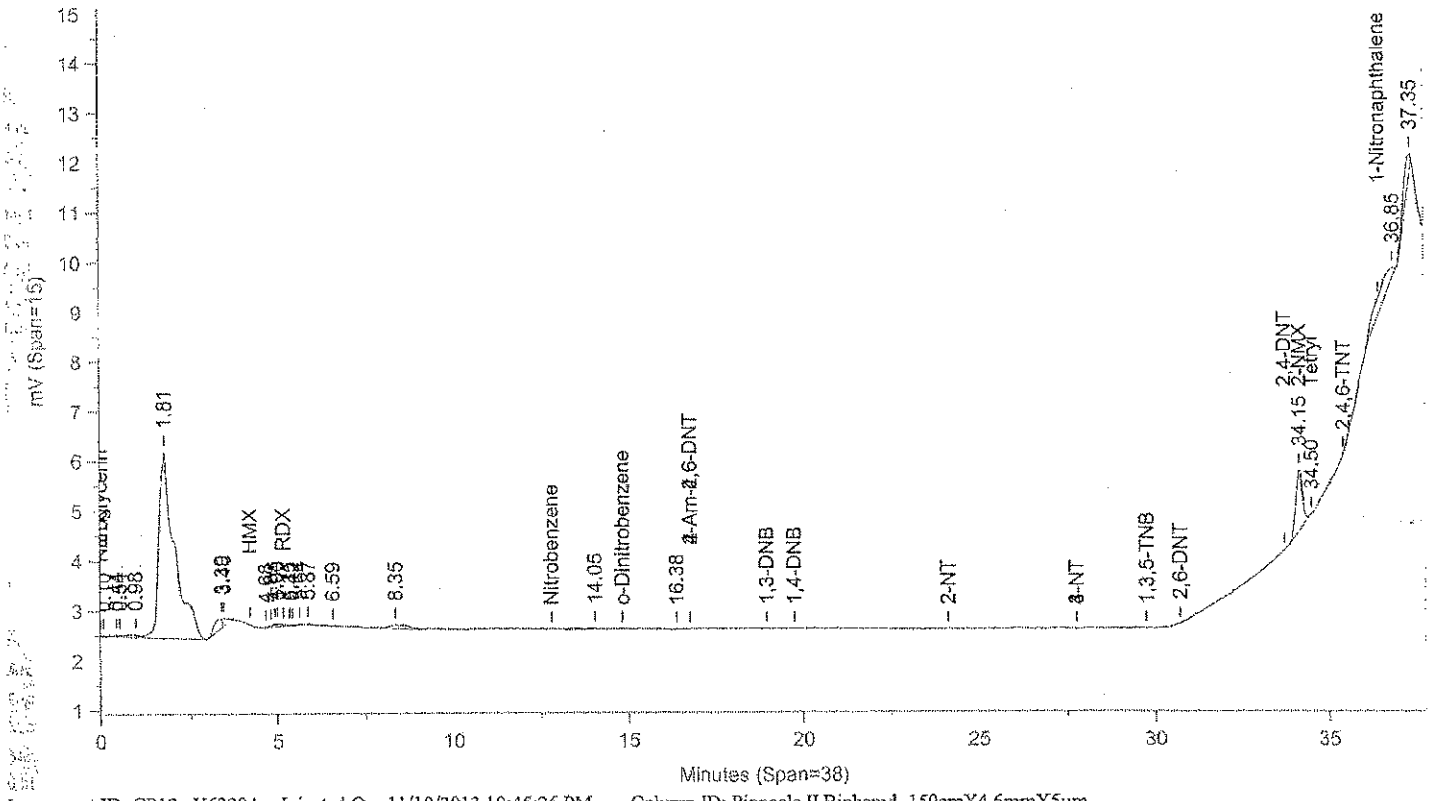
Verified by: Valerie L. Tomaylo, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

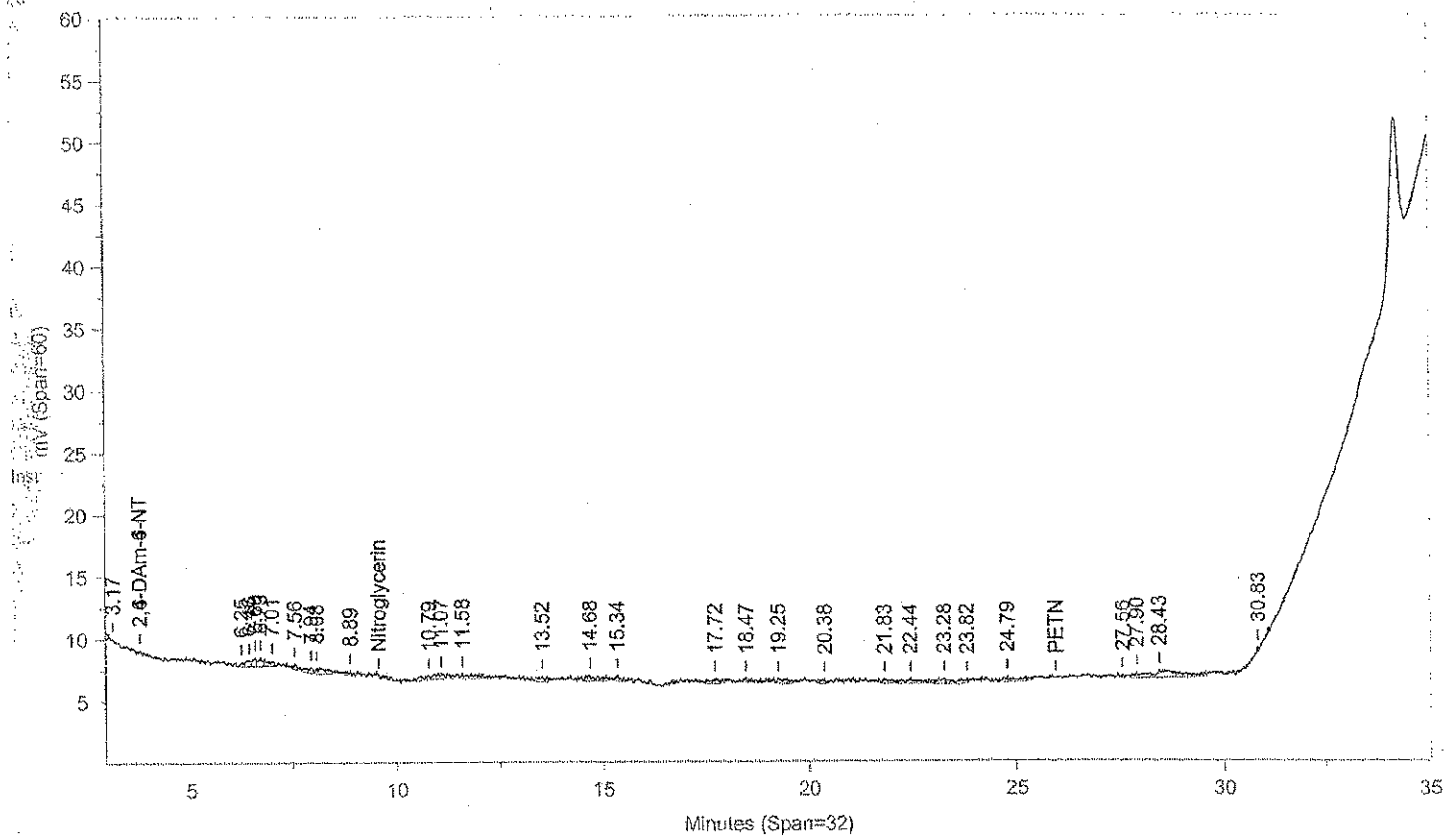
Printed on: 11/22/2013 13:37:29

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.41R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 10:45:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.41R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 10:45:26 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
34.149	16278	4517.104	2-NMX			0	2-NMX
34.499	46	161.233	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.41A
Area File: C:\CPWIN\DATA1\5C12310B.41A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:47:50 PM
File Reported On: 11/20/2013 at 5:48:01 PM

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Data Summary

Sample Name: 7266814 2E101 Sample ID: AA **Batchnumber:** 133140020A

Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 23:27:51
Instrument X6329A
Result file 5E12310.42R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 92% (63 - 150) Conc: 4369.404785

Analysis Report (B)

Injected on Nov 19, 2013 23:27:51
Instrument Y6329A
Result file 5C12310.42R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 102% (63 - 150) Conc: 4880.524902

Single Component Data

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	7.71	7.87	7.99	22	0.616322
2,4,6-Trinitrotoluene	8.19	8.34	8.39	29	1.215637
2-Amino-4,6-dinitrotoluer	10.51	10.58	10.80	69	3.008925
2,4-Dinitrotoluene	11.45	11.59	11.74	210	6.056219
2-NMX	26.91	27.27	27.59	15639	4369.404785

Compound	Min	RT	Max	Area	Amount
2-Amino-4,6-dinitrotoluer	16.61	16.89	16.93	234	5.757886
2-NMX	34.05	34.12	34.25	16033	4880.524902
Tetryl	34.39	34.45	34.59	94	0

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<5714.2857	<1904.7619			
☑ PETN			<5714.2857	<1904.7619			
☑ HMX			<714.2857	<238.0952			
☑ RDX			<285.7143	<119.0476			
☑ 1,3,5-Trinitrobenzene			<285.7143	<95.2381			
☑ 1,4-Dinitrobenzene			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ Tetryl			<285.7143	<145.7143			
☑ Nitrobenzene			<285.7143	<95.2381			
☑ 2,4,6-Trinitrotoluene			<285.7143	<95.2381			
☑ 4-Amino-2,6-dinitrotoluene			<285.7143	<142.8571			
☑ 2-Amino-4,6-dinitrotoluene			<285.7143	<95.2381			
☑ 2,6-Dinitrotoluene			<285.7143	<95.2381			
☑ 2,4-Dinitrotoluene			<285.7143	<95.2381			
☑ 2-Nitrotoluene			<285.7143	<190.4762			
☑ 4-Nitrotoluene			<285.7143	<190.4762			
☑ 3-Nitrotoluene			<285.7143	<238.0952			
☑ 2-NMX	A	4369.404785				11.05	
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomeyko, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266814 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 23:27:51
Instrument : CP12--X6329A
Result file : 5E12310.42R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 92% (63-150) Conc.: 4369.40478

Peak name	Min	R.T.	Max	Area	Amount
Nitrobenzene	7.71	7.87	7.99	22	0.616322
2,4,6-TNT	8.19	8.34	8.39	29	1.215637
2-Am-4,6-DNT	10.51	10.58	10.80	69	3.008925
2,4-DNT	11.45	11.59	11.74	210	6.056219
2-NMX	26.91	27.27	27.59	15639	4369.404785

Analysis Report (B)

Injected on : NOV 19, 2013 23:27:51
Instrument : CP12--X6329B
Result file : 5E12310B.42R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 93% (63-150) Conc.: 4427.14794

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.96	9.22	9.34	19377	1443.928101
2-NMX	27.09	27.37	27.76	227065	4427.147949

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<5714.286	<1904.762			Report Confirmation
☑ PETN			<5714.286	<1904.762			
☑ HMX			<714.2858	<238.0953			
☑ RDX			<285.7143	<119.0476			
☑ 1,3,5-TNB			<285.7143	<95.2381			
☑ 1,4-DNB			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ Tetryl			<285.7143	<145.7143			
☑ Nitrobenzene			<285.7143	<95.2381			
☑ 2,4,6-TNT			<285.7143	<95.2381			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<285.7143	<142.8572			
☑ 2-Am-4,6-DNT			<285.7143	<95.2381			
☑ 2,6-DNT			<285.7143	<95.2381			
☑ 2,4-DNT			<285.7143	<95.2381			
☑ 2-NT			<285.7143	<190.4762			
☑ 4-NT			<285.7143	<190.4762			
☑ 3-NT			<285.7143	<238.0953			
☐ 2-NMX	A	4369.404785				1.31	
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie J. Tarapchak, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:17

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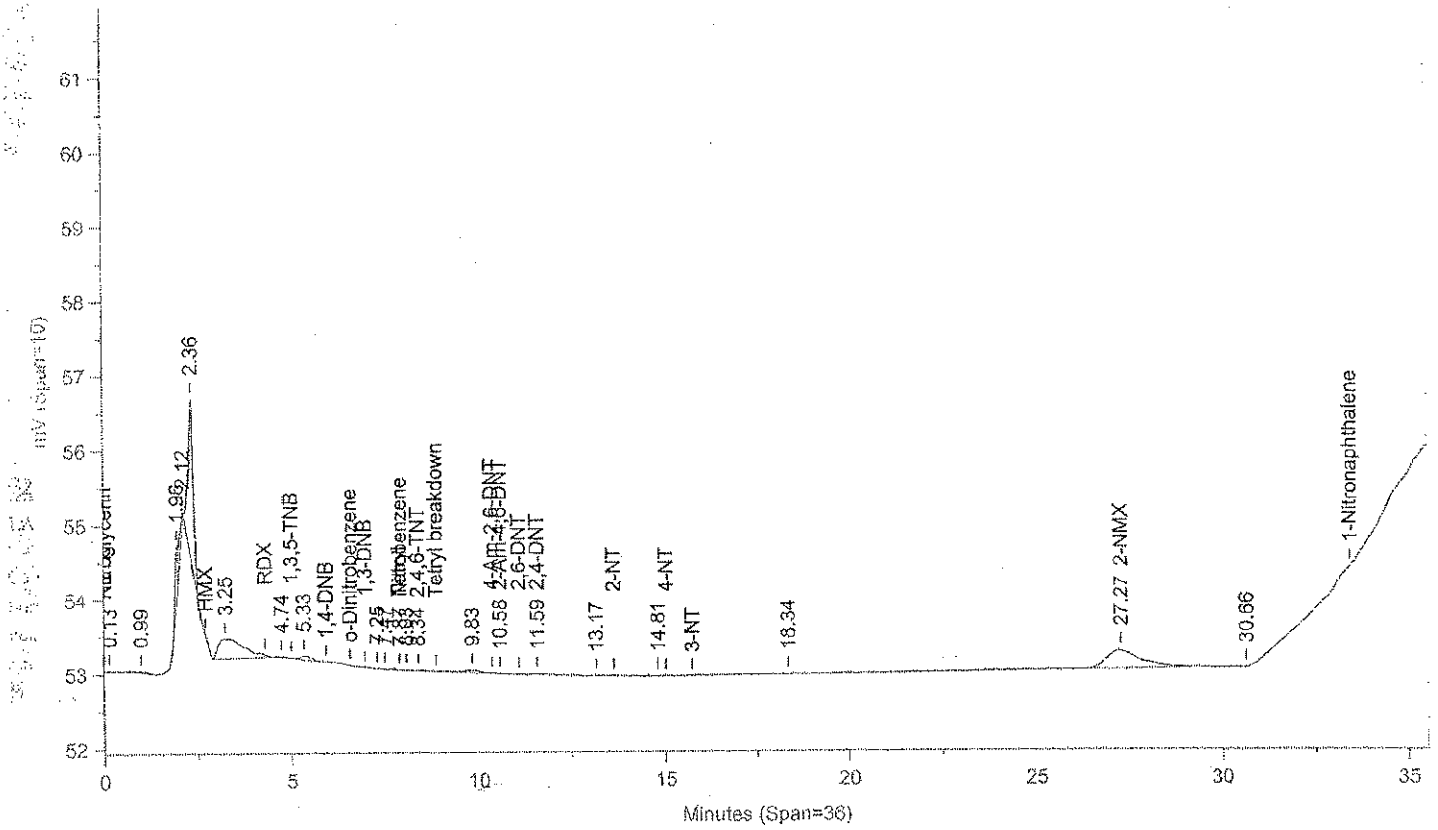
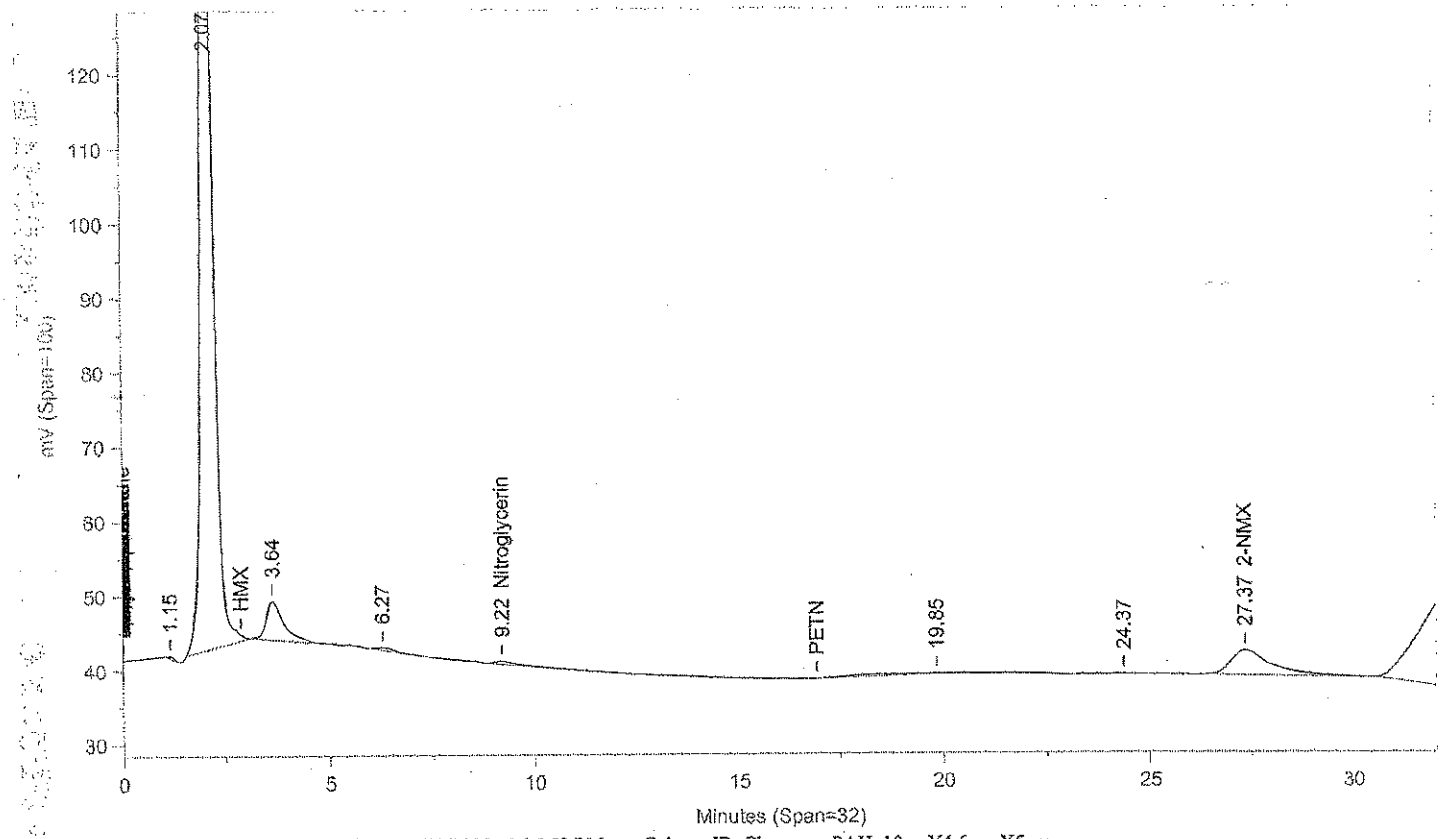


Instrument ID: CP12--X6329A Injected On: 11/19/2013 11:27:50 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.42R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 11:27:50 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.1
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
7.87	22	.616	Nitrobenzene	.	0	.	Nitrobenzene
8.342	29	1.216	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.217	19377	1443.928	Nitroglycerin
10.584	69	3.009	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.588	210	6.056	2,4-DNT	.	0	.	2,4-DNT
27.272	15639	4369.405	2-NMX	27.369	227065	4427.148	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.42A
Area File: C:\CPWIN\DATA1\5E12310B.42A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:53:54 PM
File Reported On: 11/20/2013 at 4:54:03 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266814 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.1 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 23:27:51
Instrument : CP12--Y6329A
Result file : 5C12310.42R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 102% (63-150) Conc.: 4880.52490?

Analysis Report (B)

Injected on : NOV 19, 2013 23:27:51
Instrument : CP12--Y6329B
Result file : 5C12310B.42R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
o-Dinitrobenzene	14.65	14.95	15.01	1491	-7.034917
2-Am-4,6-DNT	16.61	16.89	16.93	234	5.757886
2-NMX	34.05	34.12	34.25	16033	4880.524902
Tetryl	34.39	34.45	34.59	94	179.463928

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5714.286	<1904.762			Report
☑ Nitroglycerin			<5714.286	<1904.762			
☑ HMX			<714.2858	<238.0953			
☑ RDX			<285.7143	<119.0476			
☑ Nitrobenzene			<285.7143	<95.2381			
☑ o-Dinitrobenzene			<285.7143	<95.2381			
☑ 4-Am-2,6-DNT			<285.7143	<142.8572			
☑ 2-Am-4,6-DNT			<285.7143	<95.2381			
☑ 1,3-DNB			<285.7143	<95.2381			
☑ 1,4-DNB			<285.7143	<95.2381			
☑ 2-NT			<285.7143	<190.4762			
☑ 4-NT			<285.7143	<190.4762			
☑ 3-NT			<285.7143	<238.0953			
☑ 1,3,5-TNB			<285.7143	<95.2381			
☑ 2,6-DNT			<285.7143	<95.2381			
☑ 2,4-DNT			<285.7143	<95.2381			
☐ 2-NMX	A	4880.524902					
☑ Tetryl	A	~~179.463928~~	<285.7143	<145.7143	J		N/C
☑ 2,4,6-TNT			<285.7143	<95.2381			
☑ 1-Nitronaphthalene			<285.7143	<95.2381			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Trimpi
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:37:45

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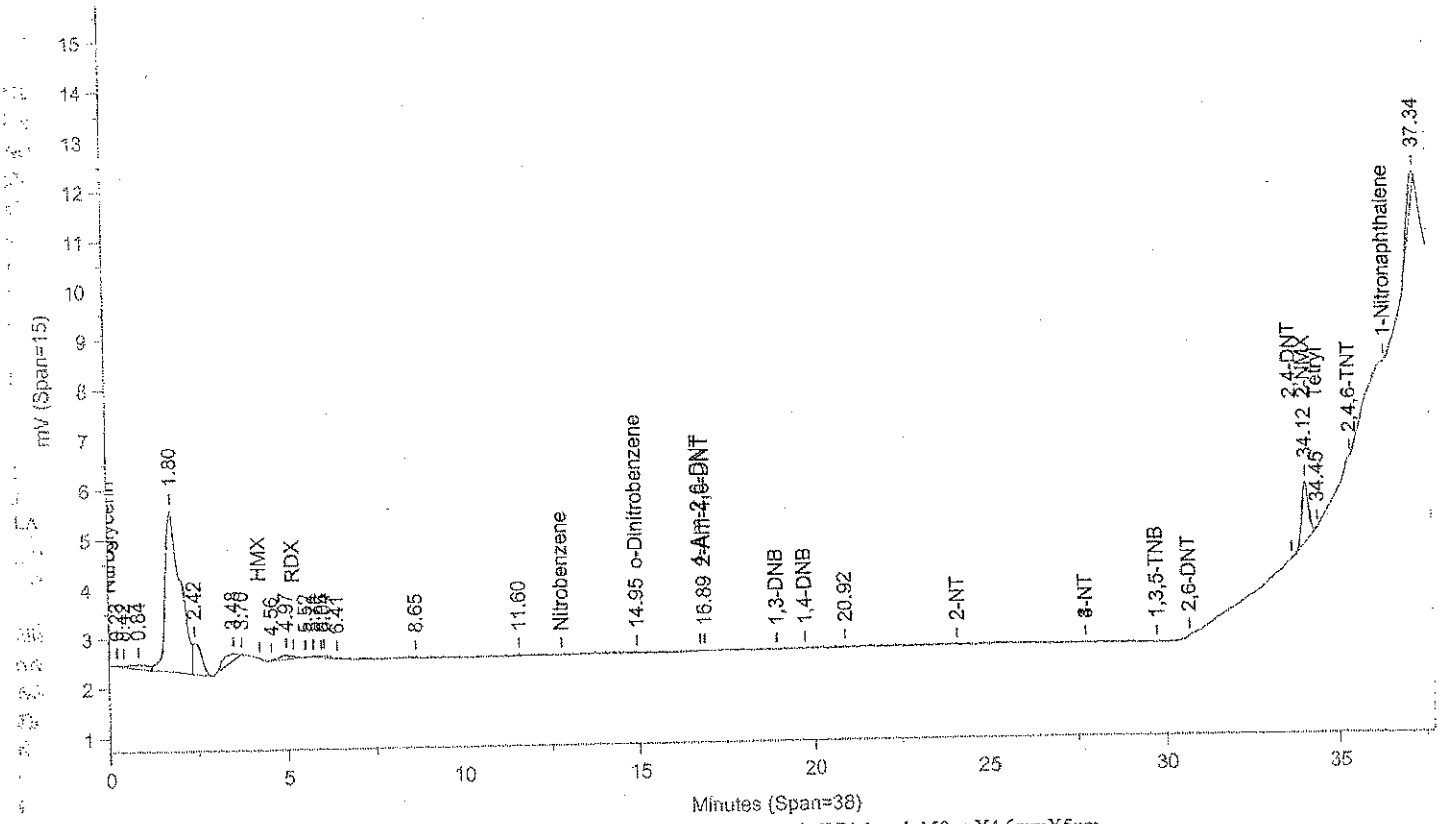
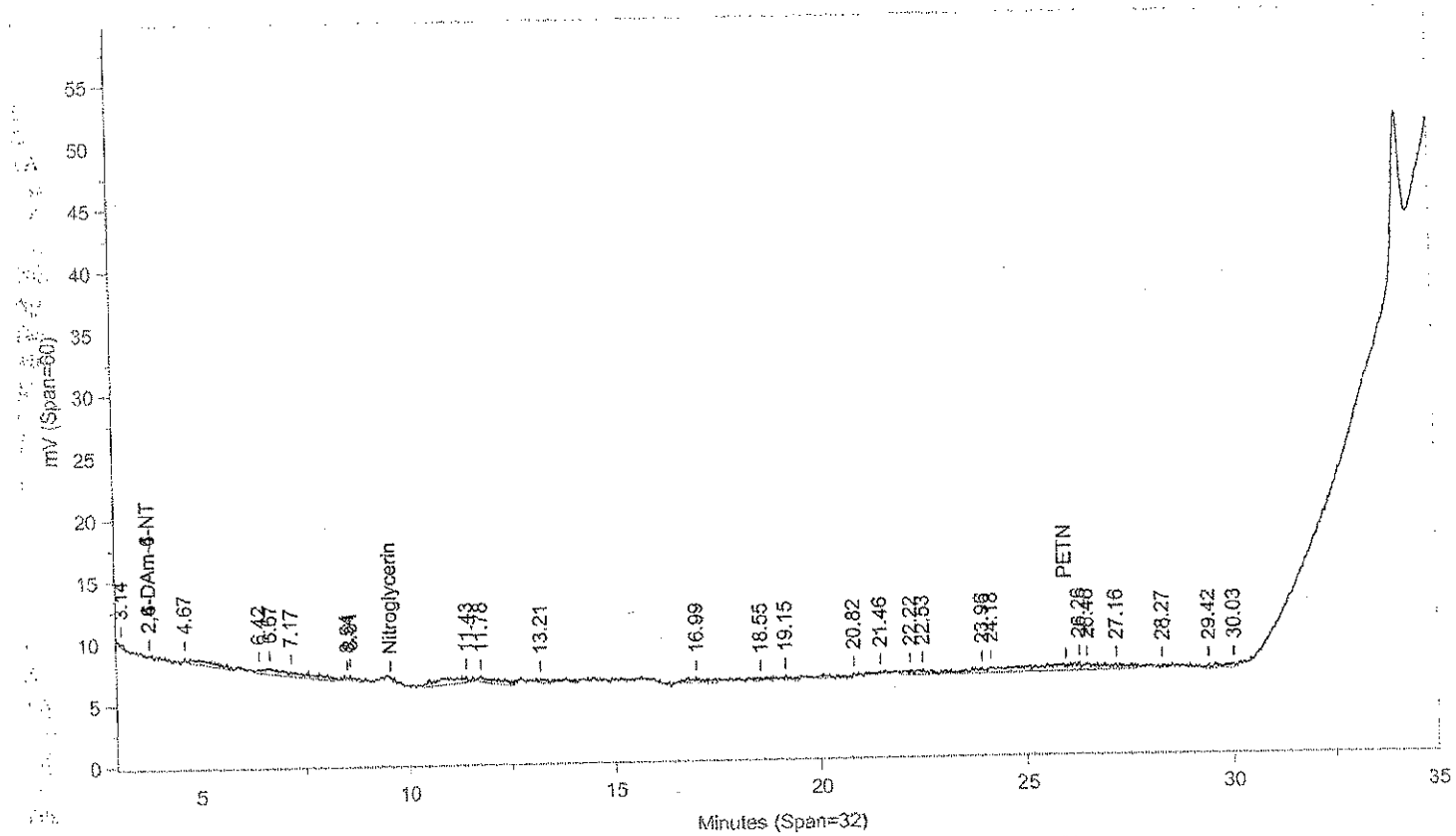


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 11:27:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.42R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 11:27:50 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.1 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
14.95	1491	-7.035	o-Dinitrobenzene			0	o-Dinitrobenzene
16.887	234	5.758	2-Am-4,6-DNT			0	2-Am-4,6-DNT
34.119	16033	4880.525	2-NMX			0	2-NMX
34.451	94	179.464	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.42A
Area File: C:\CPWIN\DATA1\5C12310B.42A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:48:22 PM
File Reported On: 11/20/2013 at 5:48:32 PM

eurofins

Lancaster Laboratories Environmental

Data Summary

Sample Name: 7266818 2E102 Sample ID: AA **Batchnumber:** 133140020A

Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ

Analyses: 06918

Analysis Report (A)

Injected on	Nov 20, 2013 01:35:05
Instrument	X6329A
Result file	5E12310.45R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 93% (63 - 150) Conc: 4228.13916

Analysis Report (B)

Injected on	Nov 20, 2013 01:35:05
Instrument	Y6329A
Result file	5C12310.45R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 98% (63 - 150) Conc: 4476.437012

Single Component Data

Compound	Min	RT	Max	Area	Amount
Nitrobenzene	7.71	7.97	7.99	170	73.501646
2,4,6-Trinitrotoluene	8.19	8.35	8.39	133	5.306896
2,6-Dinitrotoluene	10.95	11.13	11.23	18	1.336717
2-Nitrotoluene	13.49	13.57	13.77	503	34.552113
2-NMX	26.91	27.10	27.59	15854	4228.13916

Compound	Min	RT	Max	Area	Amount
2-NMX	34.05	34.14	34.25	15334	4476.437012
Tetryl	34.39	34.52	34.59	50	0

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	15479.125977	5454.5456	1818.1819		12.20	
☑ PETN			<5454.5456	<1818.1819			
☑ HMX			<681.8182	<227.2727			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-Trinitrobenzene			<272.7273	<90.9091			
☑ 1,4-Dinitrobenzene			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ 2,4,6-Trinitrotoluene			<272.7273	<90.9091			
☑ 4-Amino-2,6-dinitrotoluene			<272.7273	<136.3636			
☑ 2-Amino-4,6-dinitrotoluene			<272.7273	<90.9091			
☑ 2,6-Dinitrotoluene			<272.7273	<90.9091			
☑ 2,4-Dinitrotoluene			<272.7273	<90.9091			
☑ 2-Nitrotoluene			<272.7273	<181.8182			
☑ 4-Nitrotoluene			<272.7273	<181.8182			
☑ 3-Nitrotoluene			<272.7273	<227.2727			
☑ 2-NMX	A	4228.13916				5.70	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266818 2E102 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 01:35:05
Instrument : CP12--X6329A
Result file : 5E12310.45R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 93% (63-150) Conc.: 4228.13916

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.21	4.40	72	-106.189308
Nitrobenzene	7.71	7.97	7.99	170	4.494245
2,4,6-TNT	8.19	8.35	8.39	133	5.306896
Tetryl breakdown	8.71	8.95	8.95	2624	69.007401
2,6-DNT	10.95	11.13	11.23	18	1.336717
2-NT	13.49	13.57	13.77	503	34.552113
2-NMX	26.91	27.10	27.59	15854	4228.139160

Analysis Report (B)

Injected on : NOV 20, 2013 01:35:05
Instrument : CP12--X6329B
Result file : 5E12310B.45R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 106% (63-150) Conc.: 4803.963379

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	8.96	9.13	9.34	245892	17490.585938
2-NMX	27.09	27.30	27.76	258125	4803.963379

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	17490.585938	5454.546	1818.182			Report Confirmation
☑ PETN			<5454.546	<1818.182			
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ Tetryl			<272.7273	<139.0909			
☑ Nitrobenzene			<272.7273	<90.9091			+Tetryl breakdown = 73.501646
☑ 2,4,6-TNT			<272.7273	<90.9091			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☐ 2-NMX	A	4228.139160				12.75	
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

Reviewed by: James H. Piece, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:53

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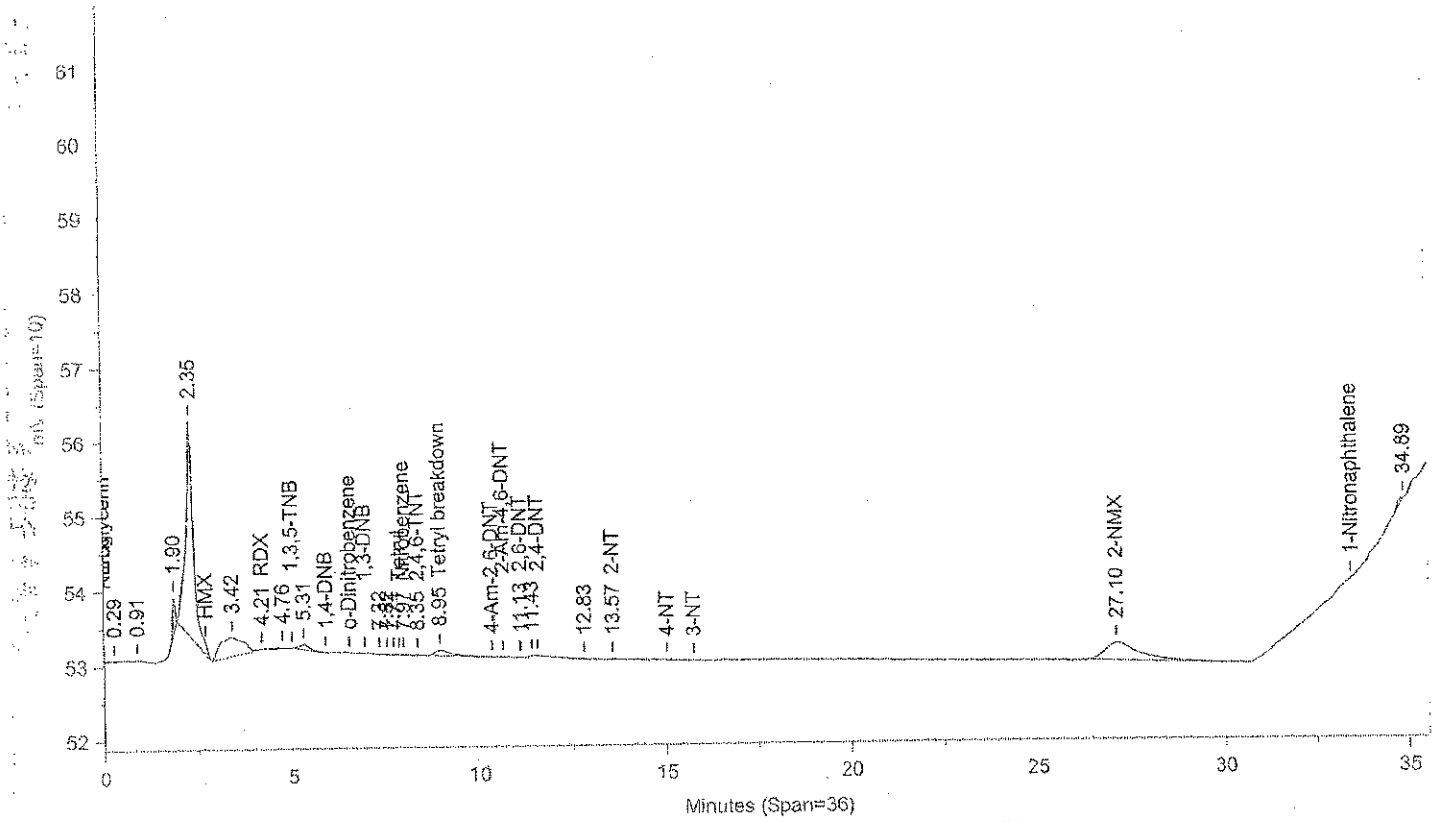

Instrument ID: CP12--X6329A Injected On: 11/20/2013 1:35:04 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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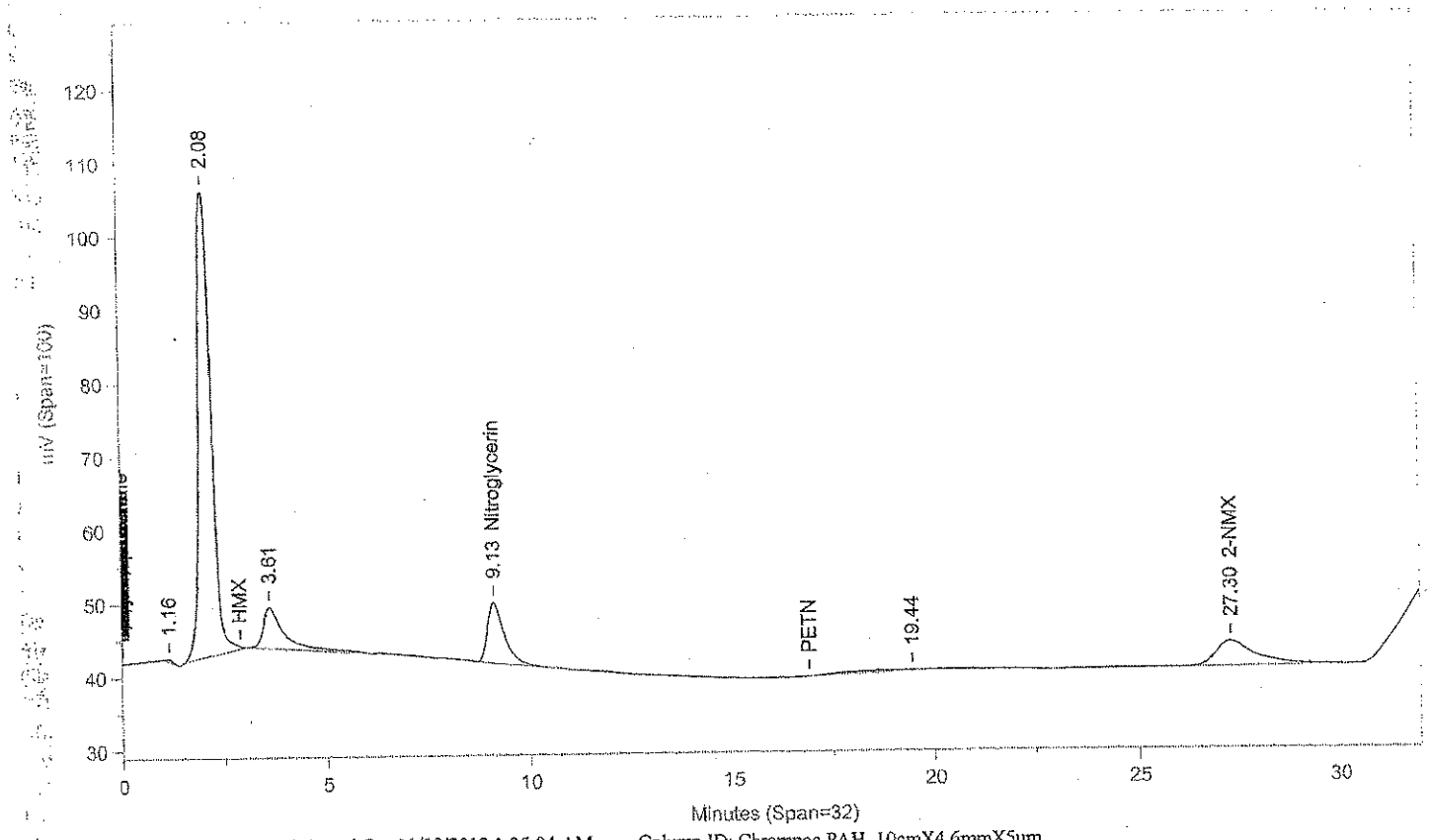

Instrument ID: CP12--X6329B Injected On: 11/20/2013 1:35:04 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.215	72	-106.189	RDX	.	0	.	RDX
7.968	170	4.494	Nitrobenzene	.	0	.	Nitrobenzene
8.352	133	5.307	2,4,6-TNT	.	0	.	2,4,6-TNT
8.95	2624	69.007	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.127	245892	17490.59	Nitroglycerin
11.128	18	1.337	2,6-DNT	.	0	.	2,6-DNT
13.567	503	34.552	2-NT	.	0	.	2-NT
27.096	15854	4228.139	2-NMX	27.3	258125	4803.963	2-NMX

Files:
Area File: C:\CPWIN\DATA1\5E12310.45A
Area File: C:\CPWIN\DATA1\5E12310B.45A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:55:26 PM
File Reported On: 11/20/2013 at 4:55:35 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266818 2E102 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.2 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 01:35:05
Instrument : CP12--Y6329A
Result file : 5C12310.45R
Calibration file : 4C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 98% (63-150) Conc.: 4476.437012

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.08	5.11	5.28	672	-159.853714
2-NMX	34.05	34.14	34.25	15334	4476.437012
Tetryl	34.39	34.52	34.59	50	168.777740

Analysis Report (B)

Injected on : NOV 20, 2013 01:35:05
Instrument : CP12--Y6329B
Result file : 5C12310B.45R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.58	9.67	173061	15479.125977
PETN	25.73	25.88	26.15	4996	382.467407

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<5454.546	<1818.182			Report
☑ Nitroglycerin	B	15479.125977	5454.546	1818.182			Confirmed
☑ HMX			<681.8183	<227.2728			
☑ RDX			<272.7273	<113.6364			
☑ Nitrobenzene			<272.7273	<90.9091			
☑ o-Dinitrobenzene			<272.7273	<90.9091			
☑ 4-Am-2,6-DNT			<272.7273	<136.3637			
☑ 2-Am-4,6-DNT			<272.7273	<90.9091			
☑ 1,3-DNB			<272.7273	<90.9091			
☑ 1,4-DNB			<272.7273	<90.9091			
☑ 2-NT			<272.7273	<181.8182			
☑ 4-NT			<272.7273	<181.8182			
☑ 3-NT			<272.7273	<227.2728			
☑ 1,3,5-TNB			<272.7273	<90.9091			
☑ 2,6-DNT			<272.7273	<90.9091			
☑ 2,4-DNT			<272.7273	<90.9091			
☐ 2-NMX	A	4476.437012					
☑ Tetryl	A	~~168.777740~~	<272.7273	<139.0909	J		N/C
☑ 2,4,6-TNT			<272.7273	<90.9091			
☑ 1-Nitronaphthalene			<272.7273	<90.9091			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomaylo, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:38:35

LANCASTER LABORATORIES

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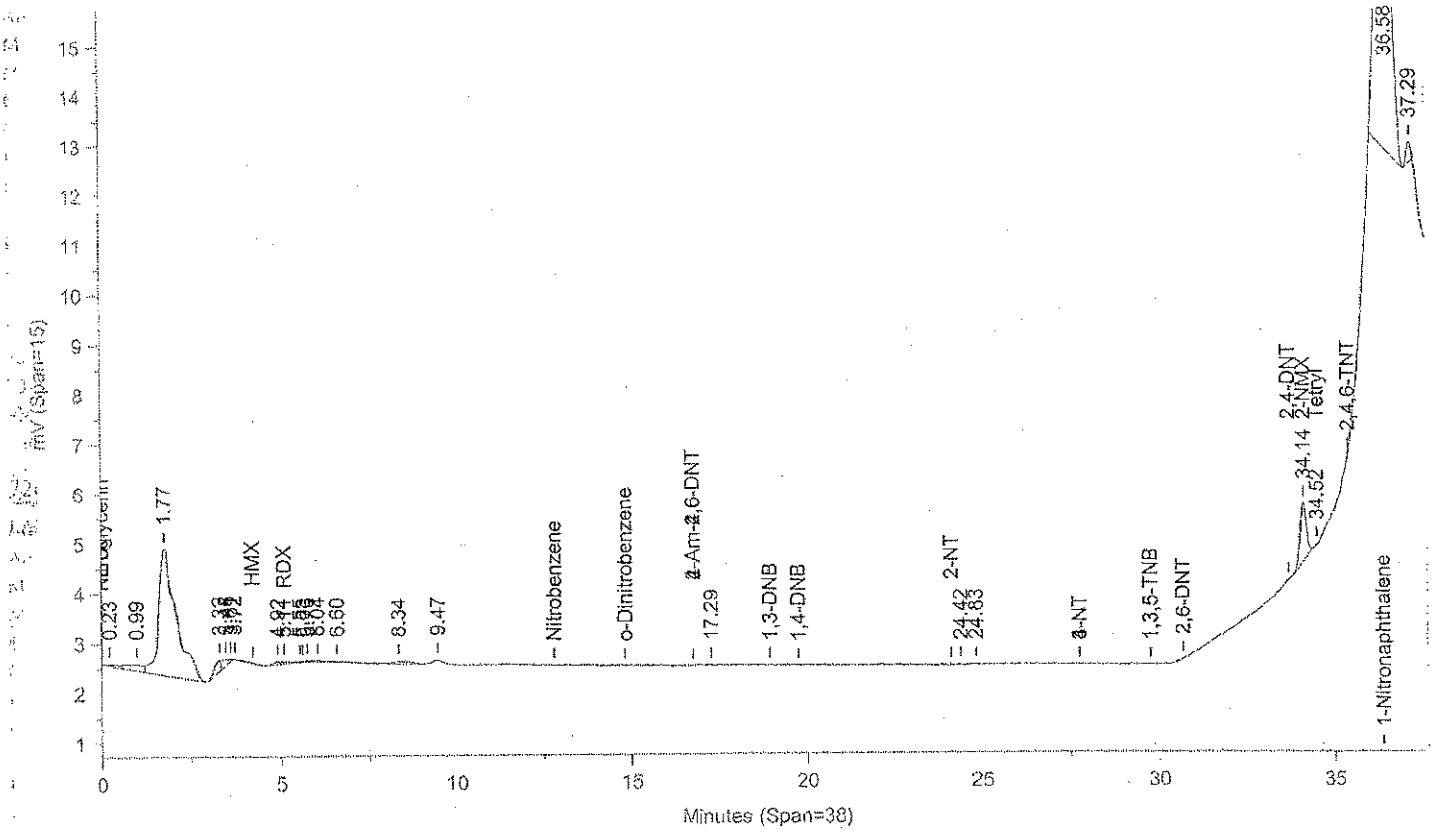

Instrument ID: CP12--Y6329A Injected On: 11/20/2013 1:35:04 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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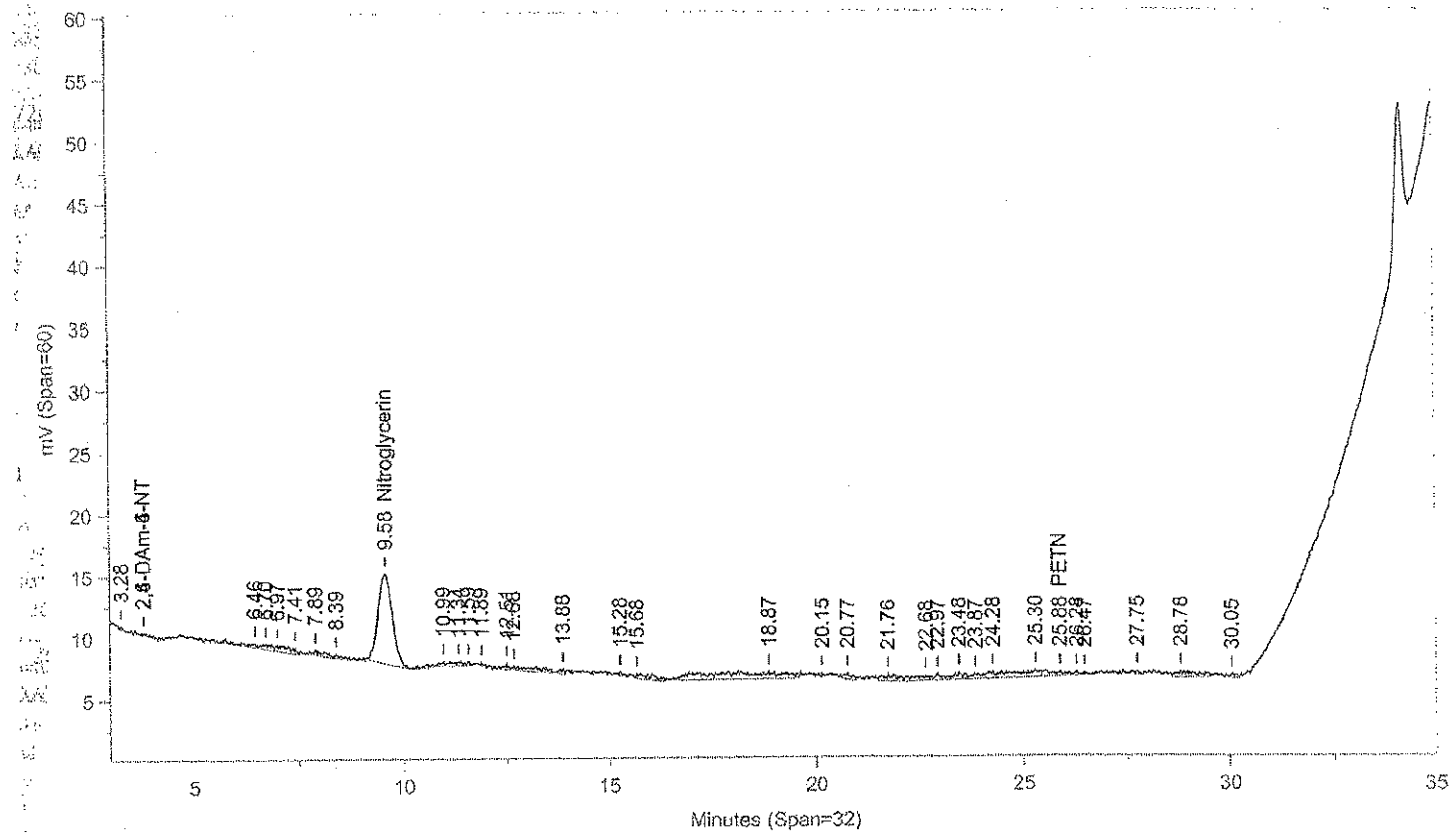

instrument ID: CP12--Y6329B Injected On: 11/20/2013 1:35:04 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.105	672	-159.854	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.581	173061	15479.13	Nitroglycerin
.	0	.	PETN	25.881	4996	382.467	PETN
34.139	15334	4476.437	2-NMX	.	0	.	2-NMX
34.516	50	168.778	Tetryl	.	0	.	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.45A
Area File: C:\CPWIN\DATA1\5C12310B.45A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:49:54 PM
File Reported On: 11/20/2013 at 5:50:05 PM

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Environmental

Data Summary

Sample Name: 7266819 3--FD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on Nov 18, 2013 04:08:25
Instrument X6329A
Result file 4E12310.85R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 91% (73 - 122) Conc: 9.071092

Analysis Report (B)

Injected on Nov 18, 2013 04:08:25
Instrument Y6329A
Result file 4C12310.85R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) 114% (73 - 122) Conc: 11.369539

Single Component Data

Compound	Min	RT	Max	Area	Amount
2,4,6-Trinitrotoluene	7.78	7.93	7.98	28	0.002496
4-Amino-2,6-dinitrotoluer	9.69	9.53	9.97	4299	0.916403
2-Amino-4,6-dinitrotoluer	9.97	9.85	10.25	3982	0.363651
2-NMX	25.41	25.38	26.09	15461	9.071092

Compound	Min	RT	Max	Area	Amount
4-Amino-2,6-dinitrotoluer	16.66	16.98	16.98	11244	0.582598
2-NMX	34.12	34.32	34.32	17989	11.369539

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-Trinitrobenzene			<0.6	<0.2			
☑ 1,4-Dinitrobenzene			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-Trinitrotoluene			<0.6	<0.2			
☑ 4-Amino-2,6-dinitrotoluene	A	0.916403	0.6	0.3		44.54	
☑ 2-Amino-4,6-dinitrotoluene	A	0.363651	<0.6	0.2	J	46.28	
☑ 2,6-Dinitrotoluene			<1.3	<0.45			
☑ 2,4-Dinitrotoluene			<2	<0.72			
☑ 2-Nitrotoluene			<0.75	<0.25			
☑ 4-Nitrotoluene			<1.2	<0.6			
☑ 3-Nitrotoluene			<1.2	<0.4			
☑ 2-NMX	A	9.071092				22.49	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tomaylo, Principal Specialist
Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266819 3--FD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 04:08:25
Instrument : CP12--X6329A
Result file : 4E12310.85R
Calibration file : 3E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 91% (73-122) Conc.: 9.071092

Peak name	Min	R.T.	Max	Area	Amount
2,4,6-TNT	7.78	7.93	7.98	28	0.002496
Tetryl breakdown	8.27	8.44	8.52	20	0.001144
4-Am-2,6-DNT	9.63	9.53	9.91	4299	0.916403
2-Am-4,6-DNT	9.97	9.85	10.25	3982	0.363651
2-NMX	25.41	25.38	26.09	15461	9.071092

Analysis Report (B)

Injected on : NOV 18, 2013 04:08:25
Instrument : CP12--X6329B
Result file : 4E12310B.85R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 103% (73-122) Conc.: 10.268164

Peak name	Min	R.T.	Max	Area	Amount
2,4-DAm-6-NT	2.77	2.84	2.97	11044	0.091605
2-NMX	25.57	25.52	26.24	250784	10.268164

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT	B	0.091605					
☐ 2,6-DAm-4-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							Continued
☑ 4-Am-2,6-DNT	A	0.916403	0.6	0.3			
☑ 2-Am-4,6-DNT	A	0.363651	<0.6	0.2	J		
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.071092				12.38	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

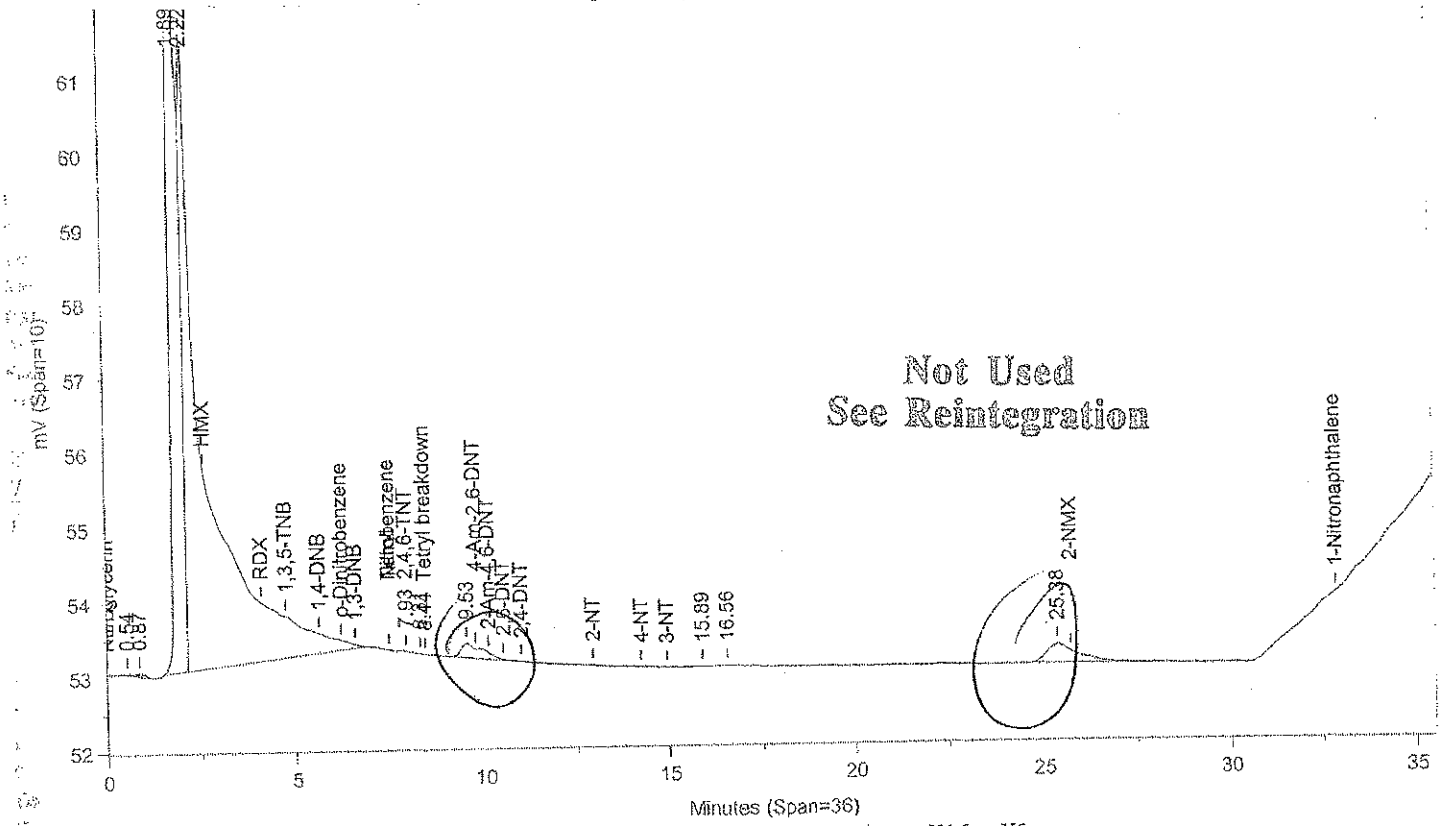
Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

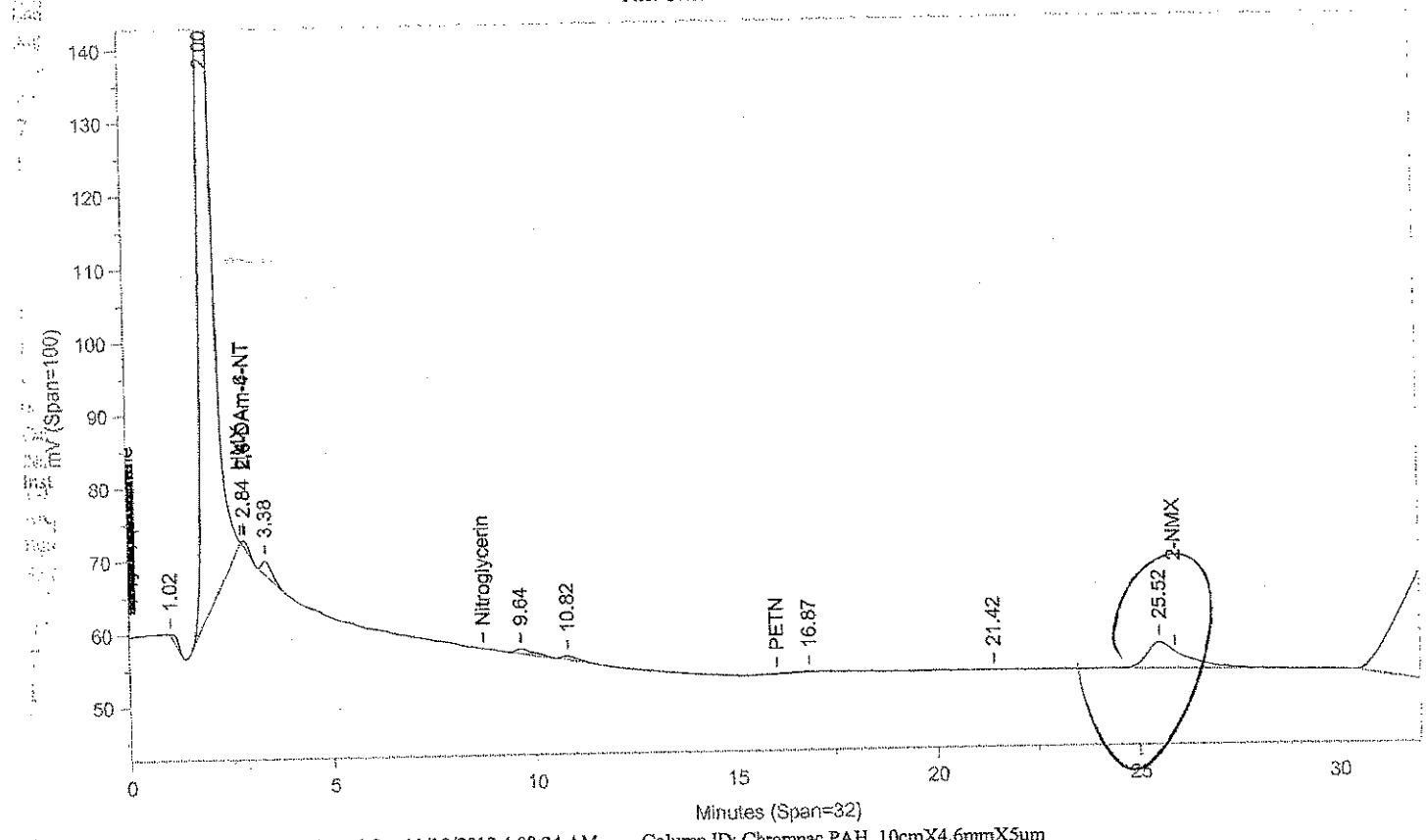
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.85R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 4:08:24 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.85R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 4:08:24 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.835	11044	.092	2,4-DAm-6-NT
7.932	28	.002	2,4,6-TNT		0		2,4,6-TNT
8.437	20	.001	Tetryl breakdown		0		Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\4E12310.85A
Area File: C:\CPWIN\DATA1\4E12310B.85A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:56:56 PM
File Reported On: 11/18/2013 at 2:57:05 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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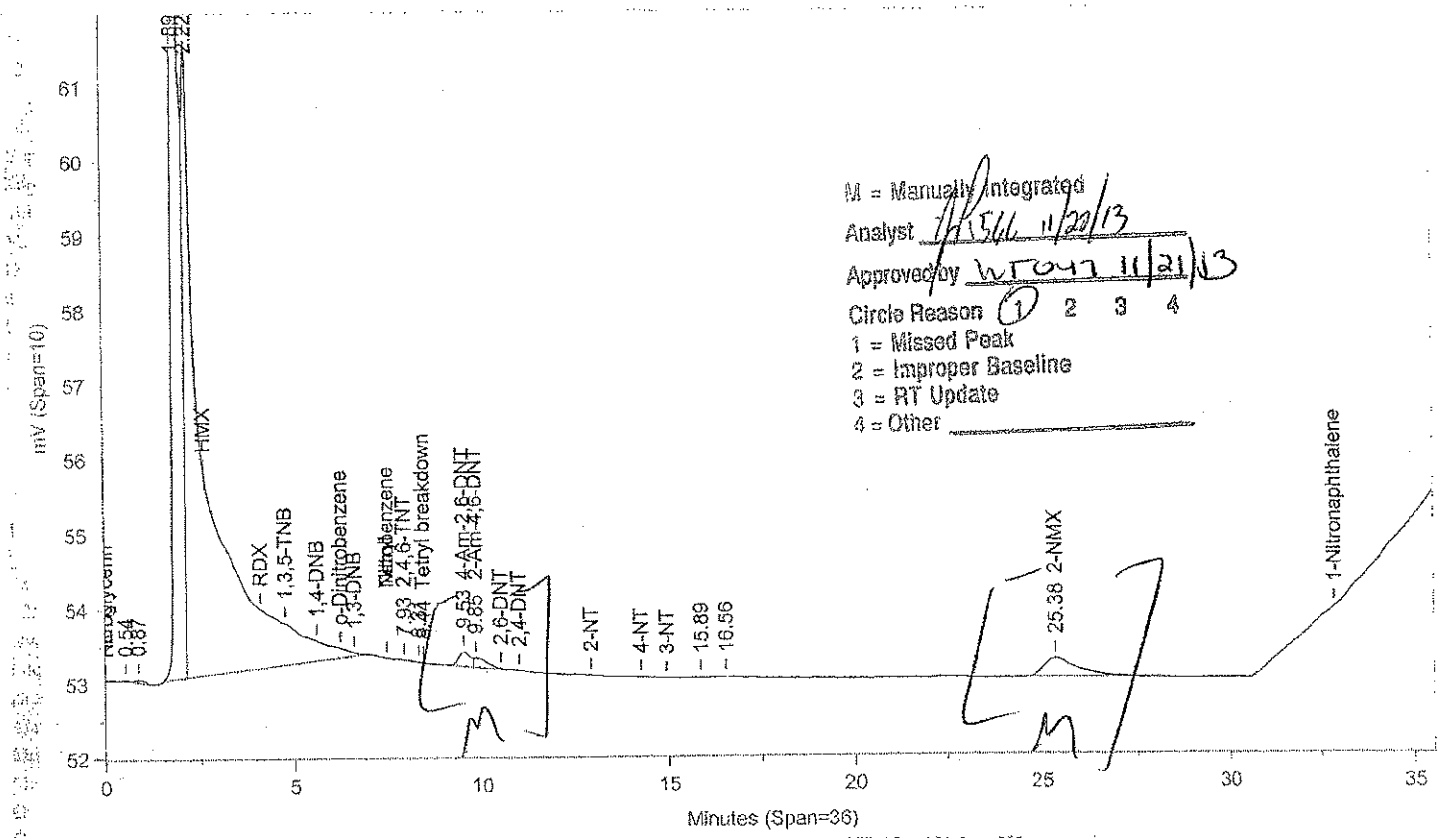
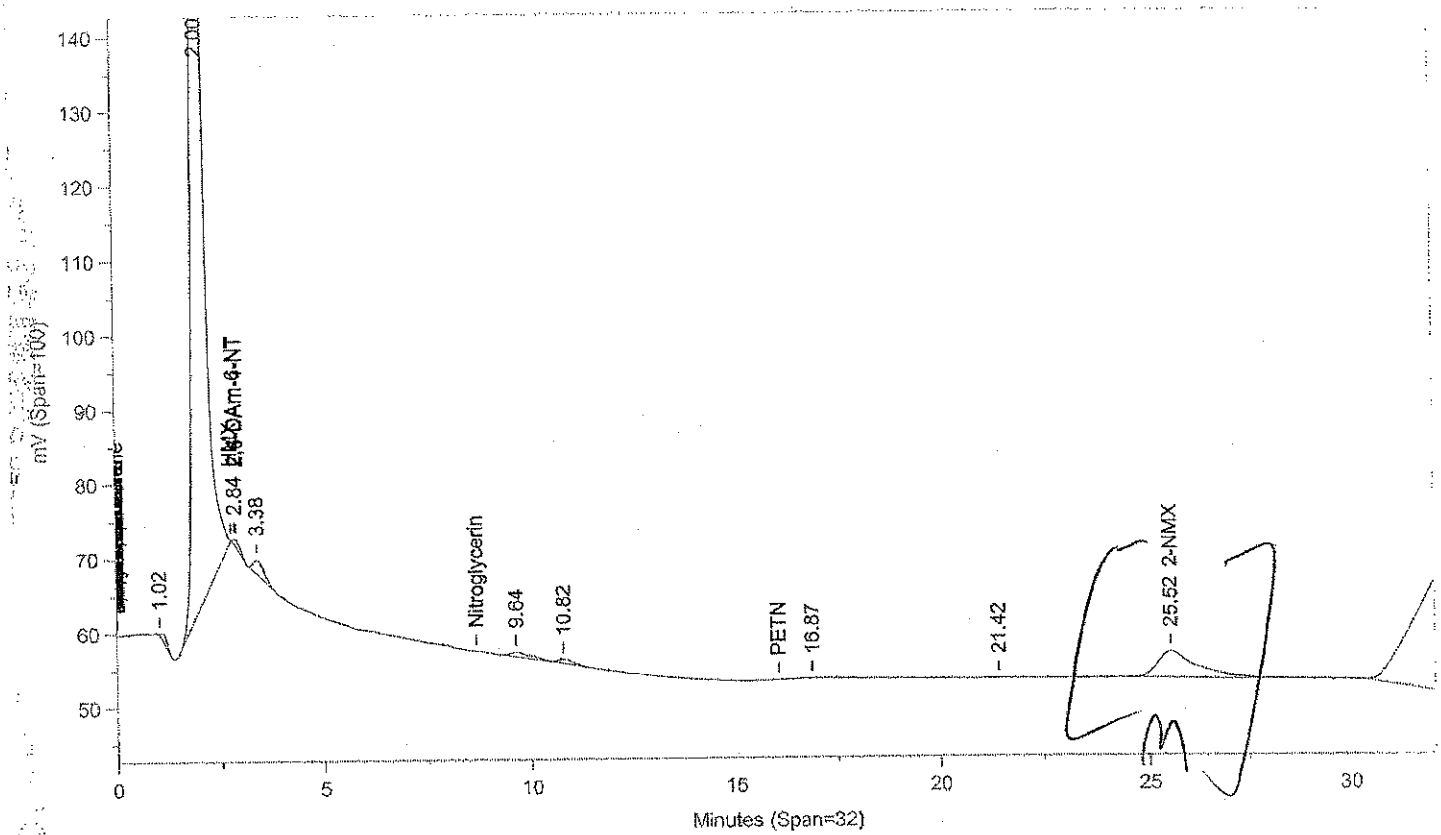


M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 4:08:24 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.85R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 4:08:24 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.835	11044	.092	2,4-DAm-6-NT
7.932	28	.002	2,4,6-TNT	.	0	.	2,4,6-TNT
8.437	20	.001	Tetryl breakdown	.	0	.	Tetryl breakdown
9.526	4299	.916	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.85	3982	.364	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
25.378	15461	9.071	2-NMX	25.524	250784	10.268	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:30:46 PM
File Reported On: 11/20/2013 at 12:30:45 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266819 3--FD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06916

Analysis Report (A)

Injected on : NOV 18, 2013 04:08:25
Instrument : CP12--Y6329A
Result file : 4C12310.85R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 114% (73-122) Conc.: 11.369539

Peak name	Min	R.T.	Max	Area	Amount
4-Am-2,6-DNT	16.66	16.98	16.98	11244	0.582598
2-NMX	34.12	34.32	34.32	17989	11.369539

Analysis Report (B)

Injected on : NOV 18, 2013 04:08:25
Instrument : CP12--Y6329B
Result file : 4C12310B.85R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
2,6-DAm-4-NT	3.64	3.97	4.00	34353	0.311686

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT	A	0.582598	<0.6	0.3	J		
☑ 2-Am-4,6-DNT	A	0.582598	<0.6	<0.2	J		
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.369539					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tornabene, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

LANCASTER LABORATORIES

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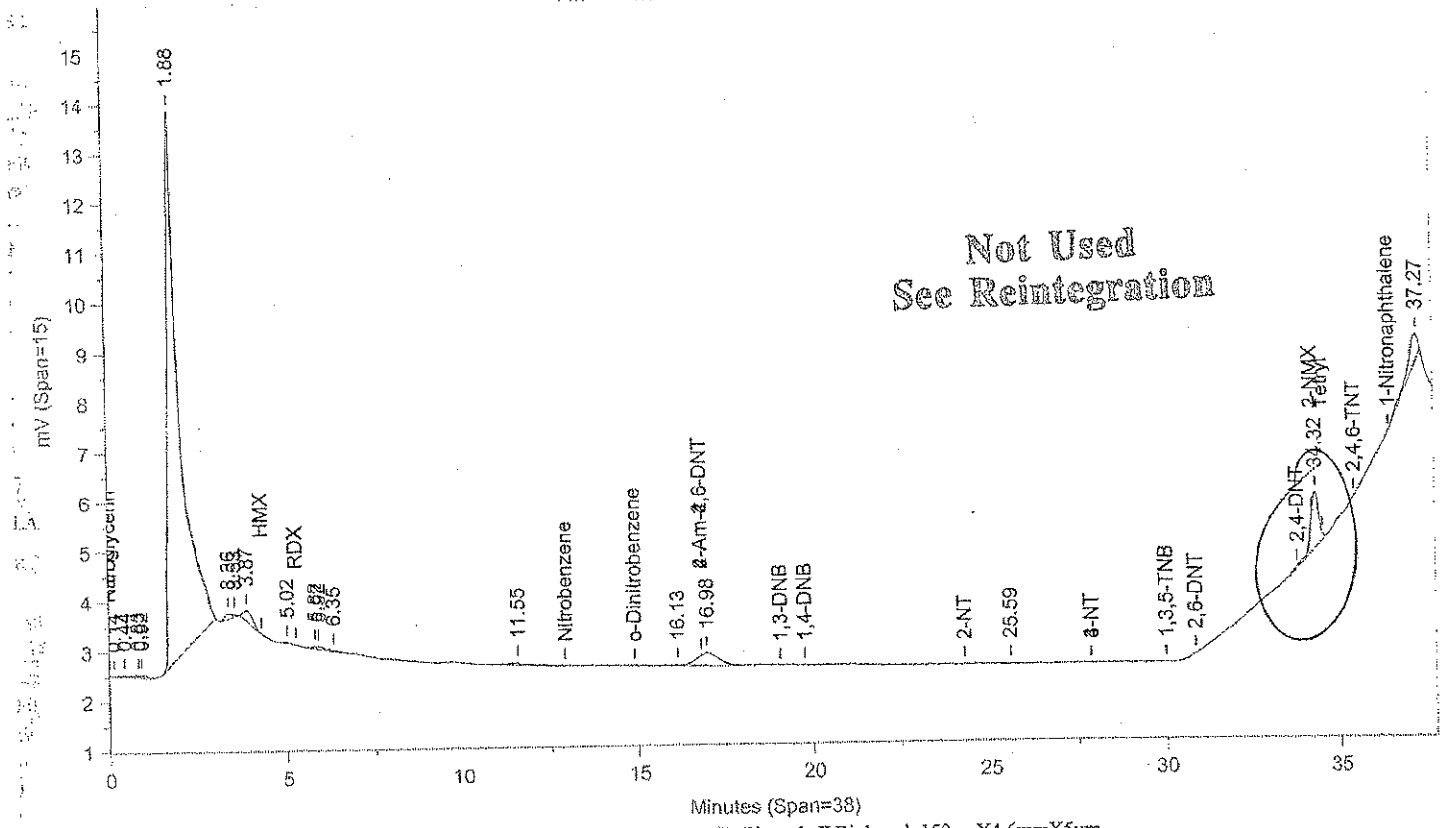
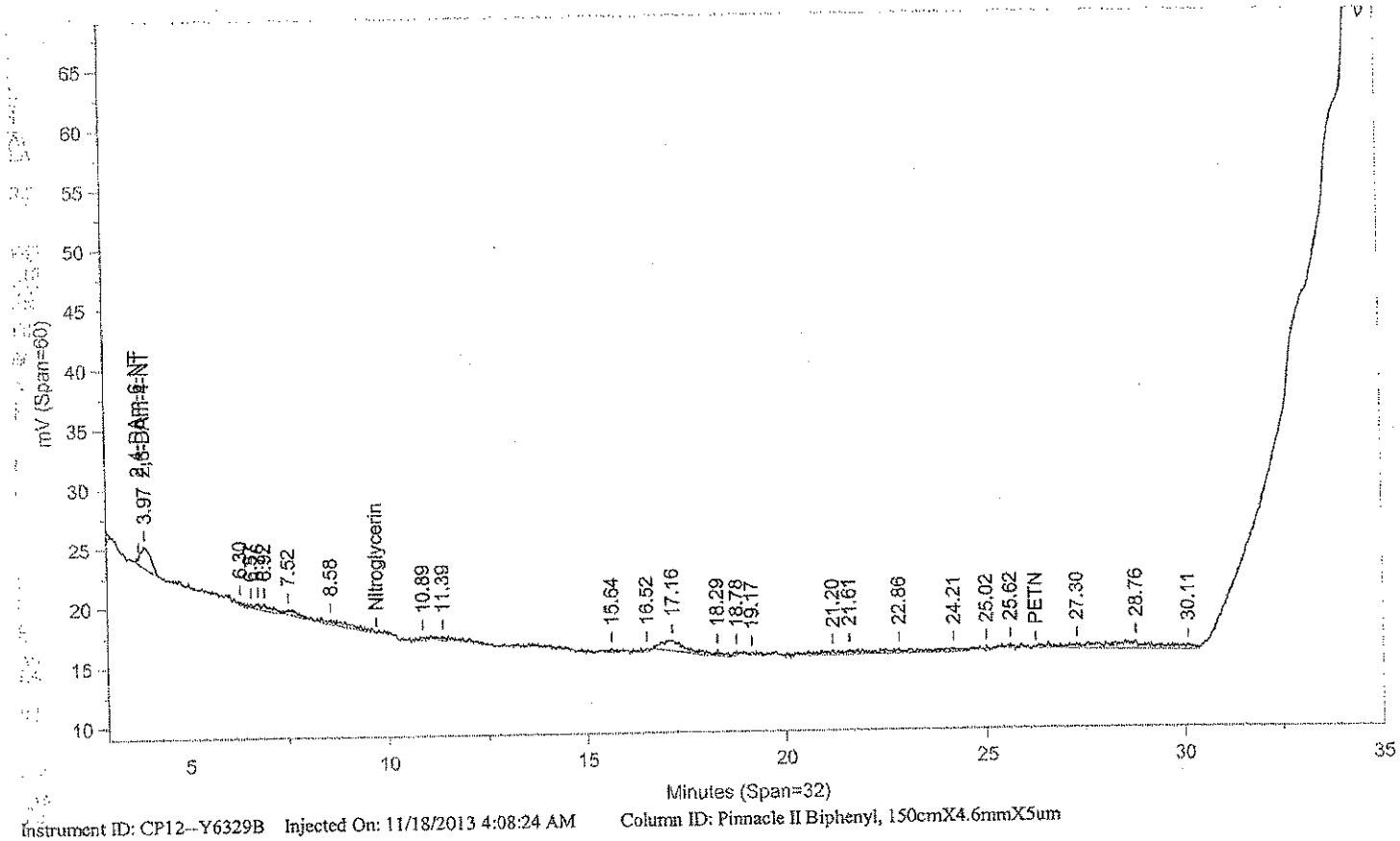


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 4:08:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.85R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 4:08:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,6-DAm-4-NT	3.972	34353	.312	2,6-DAm-4-NT

Files:
Area File: C:\CPWIN\DATA1\4C12310.85A
Area File: C:\CPWIN\DATA1\4C12310B.85A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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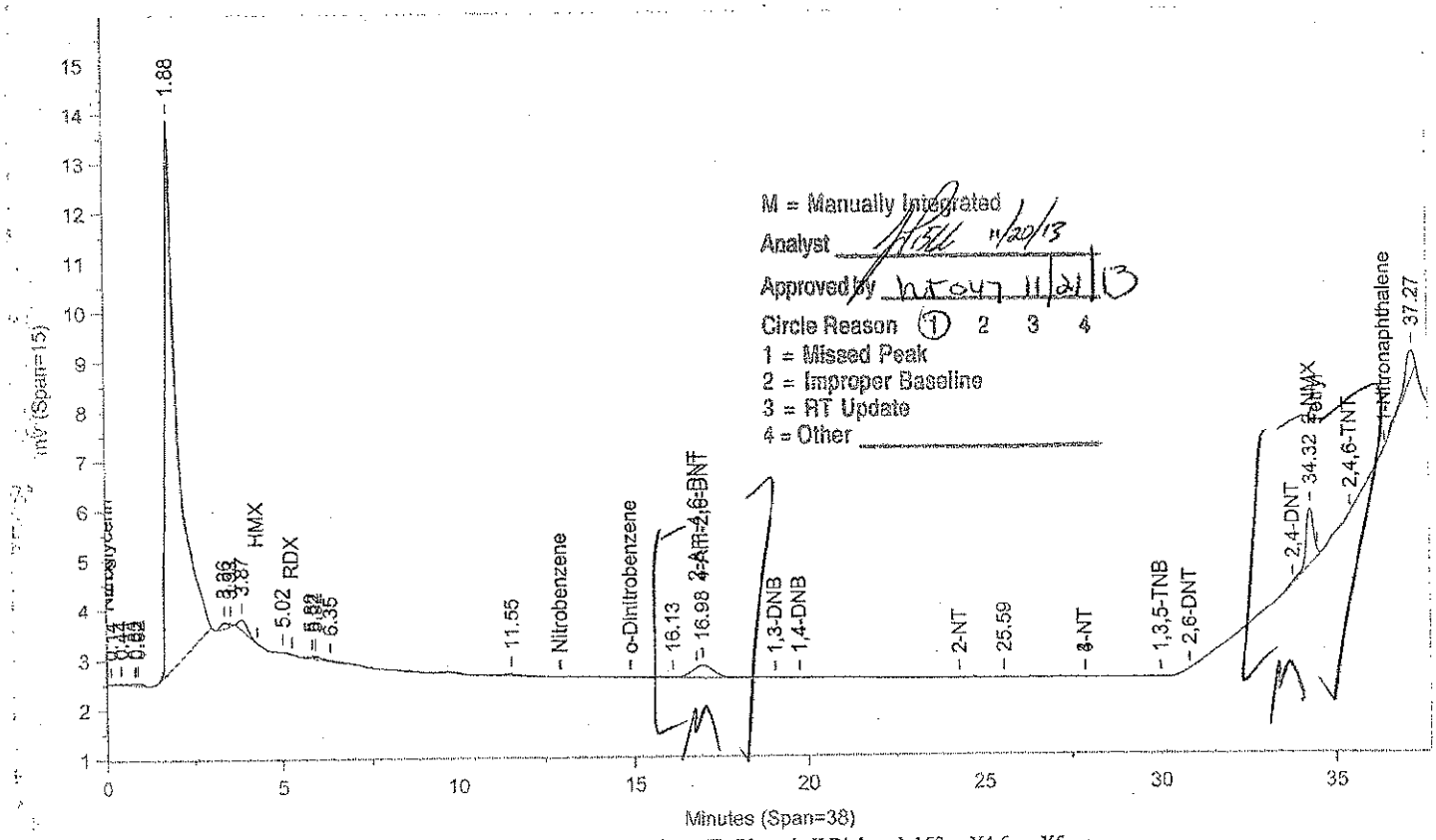
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:23:32 PM
File Reported On: 11/18/2013 at 3:23:42 PM

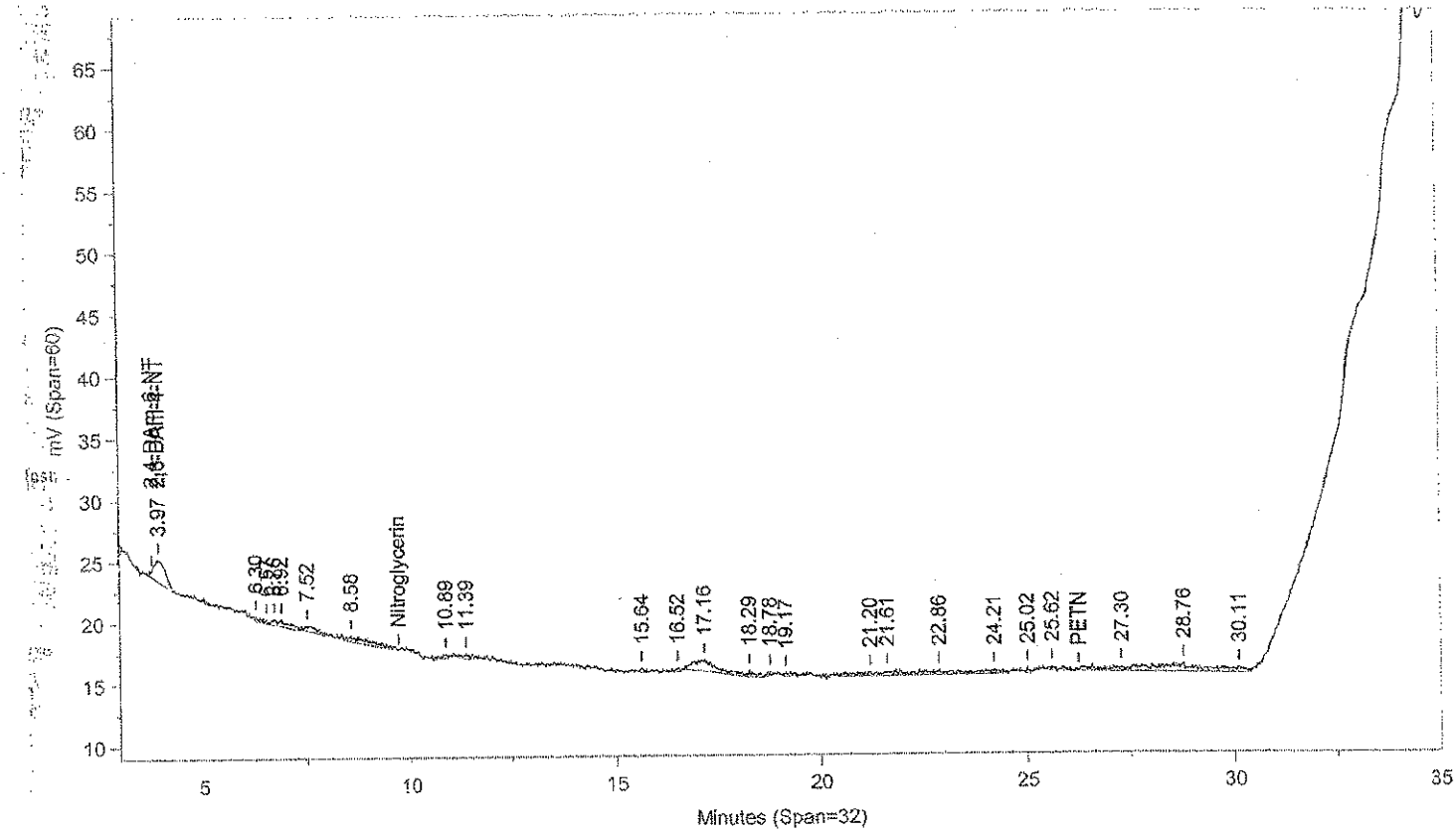
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.85R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 4:08:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.85R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 4:08:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,6-DAm-4-NT	3.972	34353	.312	2,6-DAm-4-NT
16.985	11244	.583	4-Am-2,6-DNT		0	.	4-Am-2,6-DNT
34.317	17989	11.37	2-NMX		0	.	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:58:36 PM
File Reported On: 11/20/2013 at 2:58:35 PM

Standards Data

Explosives

Eurofins Lancaster Laboratories

CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

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1	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330.MET	1	1	1	1	1330999999	
10	ICNTX1324F		CCAL	AA		8330.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

	Samplename	VP	Code	ID	Method
1	CONDITIONER	1	MISC	AA	
2	CONDITIONER	2	MISC	AA	
3	CONDITIONER	3	MISC	AA	
4	CONDITIONER	4	MISC	AA	
5	CONDITIONER	5	MISC	AA	
6	NITR31324O	6	CCAL	PV	
7	NITR31324M	7	CCAL	PX	
8	MS1330124B	8	CCAL	AH	
9	MS1330124B	9	CCAL	AH	
10	MS1330124B	10	CCAL	AH	
11	MS1330124B	11	CCAL	AH	
12	BLANKA 11/12/13	12	BLK	AA	
13	LCSA 11/12/13	13	LCS	AA	
14	LCSDDIA 11/12/13	14	LCSD	AA	
15	LCSDIA 11/12/13	15	LCS	AA	
16	7269438	16	T	AA	
17	7269438MS	17	MS	AA	
18	NITR31324O	18	CCAL	PV	
19	NITR31324M	19	CCAL	PX	
20	7269438MSD	20	MSD	AA	
21	7269454	21	T	AA	
22	7269467	22	T	AA	
23	7269472	23	T	AA	
24	7269475	24	T	AA	
25	7269478	25	T	AA	
26	7269484	26	T	AA	
27	7269487	27	T	AA	
28	BLANKA 11/12/13	28	BLK	AA	
29	LCSA 11/12/13	29	LCS	AA	
30	NITR31324O	30	CCAL	PV	
31	NITR31324M	31	CCAL	PX	
32	LCSDDIA 11/12/13	32	LCSD	AA	
33	LCSDIA 11/12/13	33	LCS	AA	
34	7269501	34	T	AA	
35	7269504	35	T	AA	
36	7269514	36	T	AA	
37	7269520	37	T	AA	
38	7269526	38	T	AA	
39	7269529	39	T	AA	
40	7269532	40	T	AA	
41	7269538	41	T	AA	
42	NITR31324O	42	CCAL	PV	
43	NITR31324M	43	CCAL	PX	
44	7269541	44	T	AA	
45	7269544	45	T	AA	
46	7269550	46	T	AA	
47	7269553	47	T	AA	
48	7269559	48	T	AA	
49	7270974	49	T	AA	
50	7270975MS	50	MS	AA	

	Samp Amt	DF	Int Std	C	Batch Number	Analysis
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	1	50	1	0	1331899999	
8330.MET	1	50	1	0	1331899999	
8330.MET	1	50	1	0	1331899999	
8330.MET	1	50	1	0	1331899999	
8330.MET	2	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133140021A	10132
8330.MET	2.3	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133140021A	10132
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	2.2	20	1	0	133140021A	10132
8330.MET	2.1	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133140021A	10132
8330.MET	2.2	20	1	0	133140021A	10132
8330.MET	2.1	20	1	0	133140021A	10132
8330.MET	2.2	20	1	0	133140021A	10132
8330.MET	2.3	20	1	0	133140021A	10132
8330.MET	2.3	20	1	0	133140021A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	1	1	1	0	1331899999	
8330.MET	1	1	1	0	1331899999	
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132
8330.MET	2	20	1	0	133160009A	10132

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270976MSD	51	MSD	AA		8330.MET	2	20	1	0	133160009A	10132
52 7270986	52	T	AA		8330.MET	2	20	1	0	133160009A	10132
53 7270989	53	T	AA		8330.MET	2	20	1	0	133160009A	10132
54 NITR31324O	54	CCAL	PV		8330.MET	1	1	1	0	1331899999	
55 NITR31324M	55	CCAL	PX		8330.MET	1	1	1	0	1331899999	
56 7270995	56	T	AA		8330.MET	2	20	1	0	133160009A	10132
57 7271001	57	T	AA		8330.MET	2	20	1	0	133160009A	10132
58 NITR31324O update MST 12/20/13	58	CCAL	PV		8330.MET	1	1	1	0	1331899999	
59 NITR31324M	59	CCAL	PX		8330.MET	1	1	1	0	1331899999	
60 BLANKA 11/11/13	60	BLK	AA		8330.MET	500	10	1	0	133130015A	06916
61 LCSA 11/11/13	61	LCS	AA		8330.MET	500	10	1	0	133130015A	06916
62 7265223	62	T	AA		8330.MET	500	10	1	0	133130015A	06916
63 7265224	63	T	AA		8330.MET	500	10	1	0	133130015A	06916
64 7265228	64	T	AA		8330.MET	500	10	1	0	133130015A	06916
65 7265230	65	T	AA		8330.MET	500	10	1	0	133130015A	06916
66 7265231MS	66	MS	AA		8330.MET	500	10	1	0	133130015A	06916
67 7265232MSD	67	MSD	AA		8330.MET	500	10	1	0	133130015A	06916
68 7265235	68	T	AA		8330.MET	500	10	1	0	133130015A	06916
69 7265238	69	T	AA		8330.MET	500	10	1	0	133130015A	06916
70 NITR31324O	70	CCAL	PV		8330.MET	1	1	1	0	1331899999	
71 7265240	71	T	AA		8330.MET	500	10	1	0	133130015A	06916
72 7265243	72	T	AA		8330.MET	500	10	1	0	133130015A	06916
73 7265247	73	T	AA		8330.MET	500	10	1	0	133130015A	06916
74 7265248	74	T	AA		8330.MET	500	10	1	0	133130015A	06916
75 BLANKA 11/12/13	75	BLK	AA		8330.MET	500	10	1	0	133140016A	06916
76 LCSA 11/12/13	76	LCS	AA		8330.MET	500	10	1	0	133140016A	06916
77 LCSDA 11/12/13	77	LCSD	AA		8330.MET	500	10	1	0	133140016A	06916
78 7266798	78	T	AA		8330.MET	500	10	1	0	133140016A	06916
79 7266799	79	T	AA		8330.MET	500	10	1	0	133140016A	06916
80 7266805	80	T	AA		8330.MET	500	10	1	0	133140016A	06916
81 NITR31324O	81	CCAL	PV		8330.MET	1	1	1	0	1331899999	
82 7266807	82	T	AA		8330.MET	500	10	1	0	133140016A	06916
83 7266810	83	T	AA		8330.MET	500	10	1	0	133140016A	06916
84 7266811	84	T	AA		8330.MET	500	10	1	0	133140016A	06916
85 7266819	85	T	AA		8330.MET	500	10	1	0	133140016A	06916
86 BLANKA 11/12/13	86	BLK	AA		8330.MET	2	20	1	0	133140019A	06918
87 LCSA 11/12/13	87	LCS	AA		8330.MET	2	20	1	0	133140019A	06918
88 7266800	88	T	AA		8330.MET	2	20	1	0	133140019A	06918
89 7266801MS	89	MS	AA		8330.MET	2.3	20	1	0	133140019A	06918
90 7266802MSD	90	MSD	AA		8330.MET	2.3	20	1	0	133140019A	06918
91 7266804	91	T	AA		8330.MET	2.4	20	1	0	133140019A	06918
92 NITR31324O	92	CCAL	PV		8330.MET	1	1	1	0	1331899999	
93 7266806	93	T	AA		8330.MET	2.2	20	1	0	133140019A	06918
94 7266808	94	T	AA		8330.MET	2.3	20	1	0	133140019A	06918
95 NITR31324O	95	CCAL	PV		8330.MET	1	1	1	0	1331899999	

Set-up by: _____ Date: 11/20/13

11/15/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330.MET	500	10	1	0	133110017A	06916
17	NITR31324P	17	CCAL	QF		8330.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5E12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 67

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/20/18

11/18/2013

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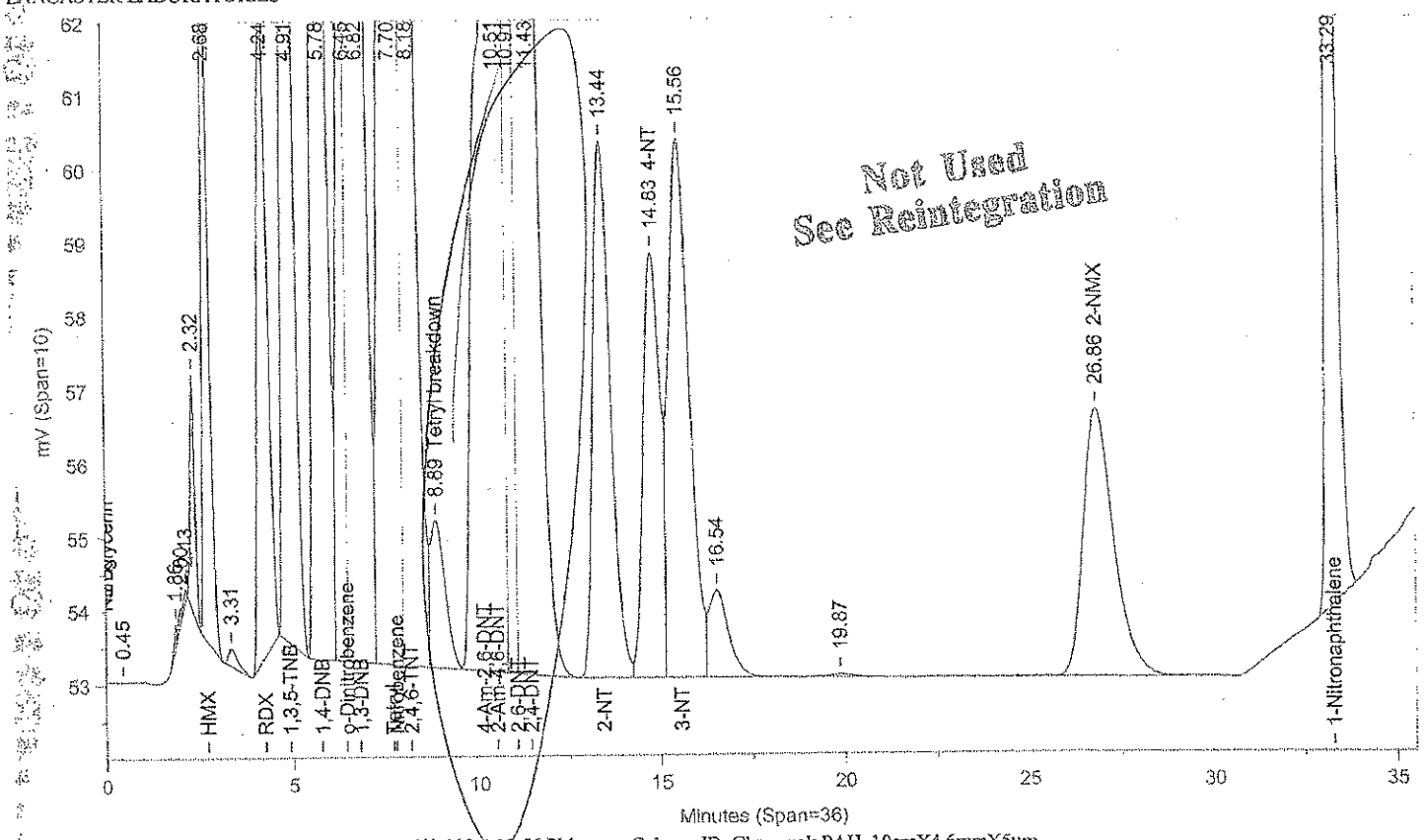
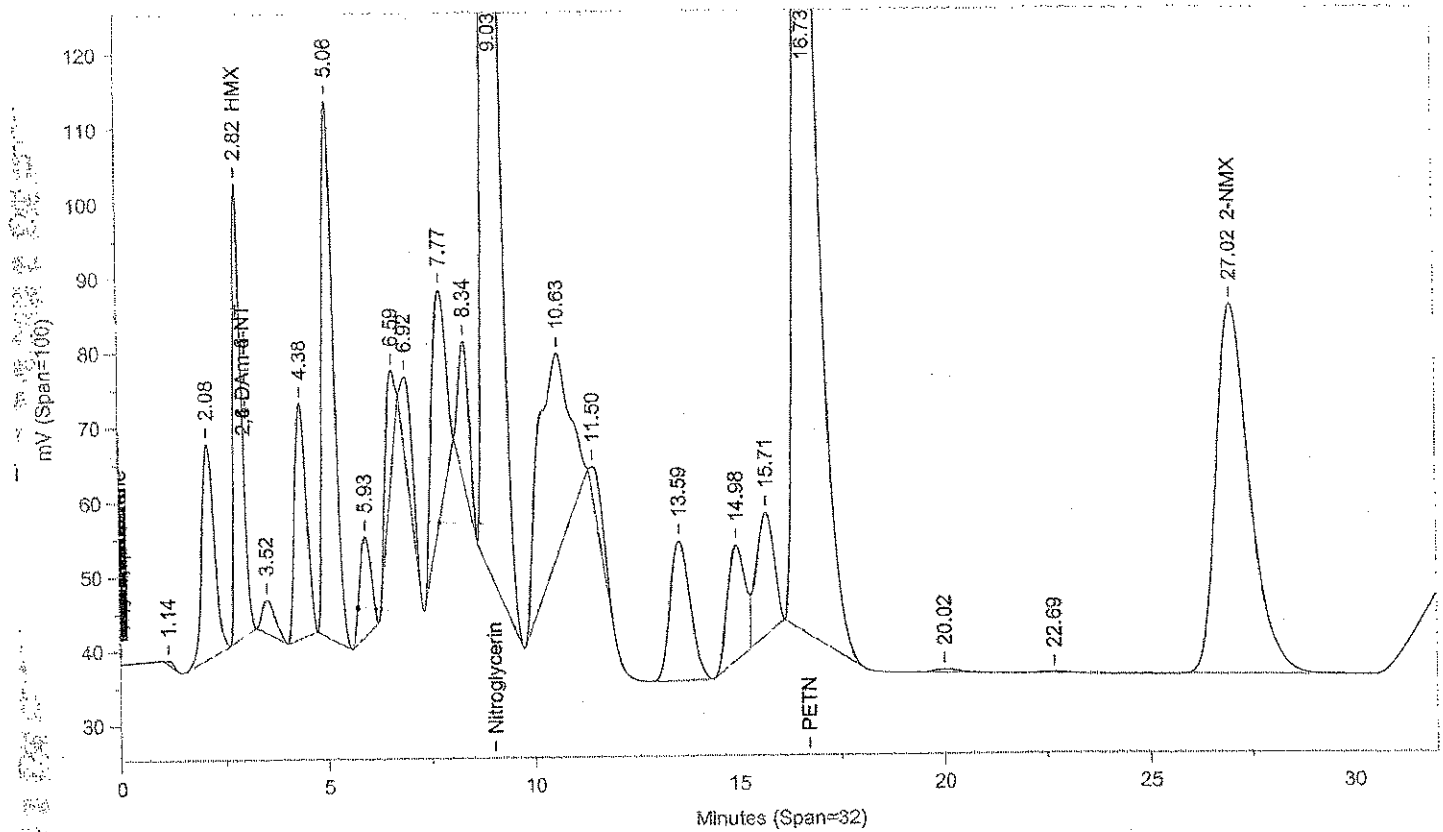
File: C:\CPWIN\DATA1\1E12310.04R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	2030.674	HMX
4.236	173918	1997.862	RDX	.	0	.	RDX
4.915	403513	1913.478	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	1961.54	1,4-DNB	.	0	.	1,4-DNB
6.454	152192	1597.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	685139	2107.093	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	1762.438	Tetryl	.	0	.	Tetryl
8.184	451815	2029.189	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	153.795	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	38324.7	Nitroglycerin
10.513	624304	2944.329	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.432	677076	2101.777	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	1962.143	2-NT	.	0	.	2-NT
14.835	183964	2051.322	4-NT	.	0	.	4-NT
15.56	279402	2045.584	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	39994.64	PETN
26.863	207607	5974.572	2-NMX	27.017	2865768	5842.708	2-NMX
33.287	288442	2013.93	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.04A
Area File: C:\CPWIN\DATA1\1E12310B.04A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:04 PM
File Reported On: 11/7/2013 at 2:18:21 PM

Not Used
See Reintegration

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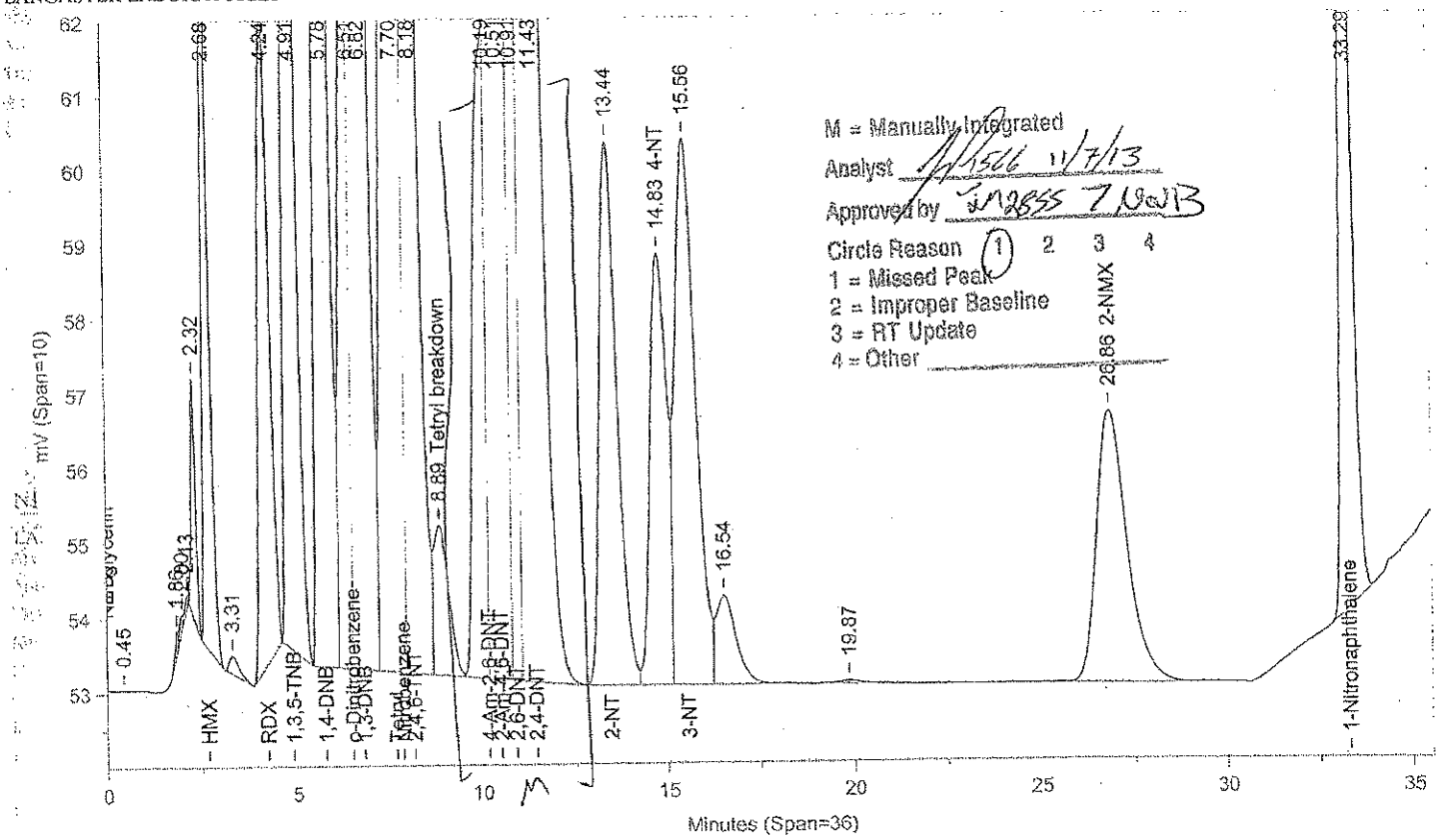
File: C:\CPWIN\DATA1\1E12310.04R



M = Manually Integrated

Analyst [signature] 11/7/13

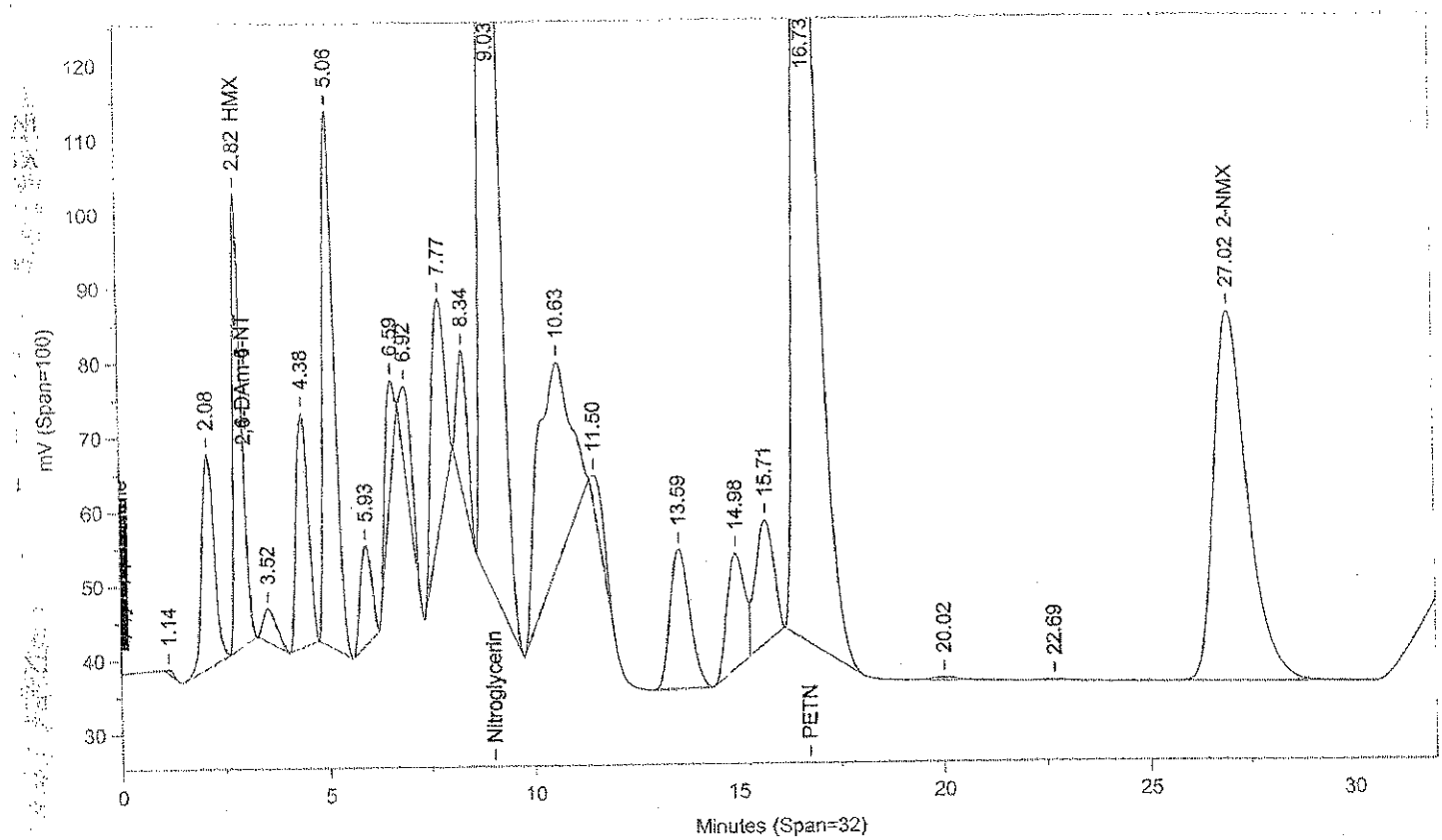
Approved by [signature] 7 Nov 13

Circle Reason (1) 2 3 4

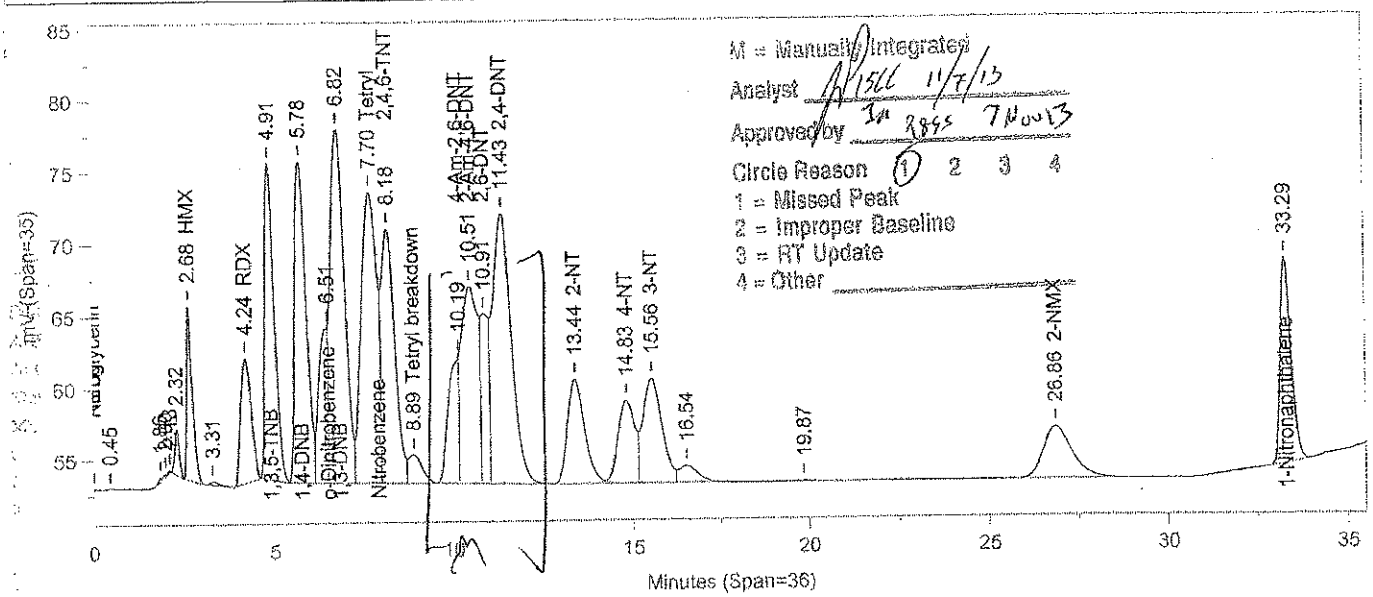
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

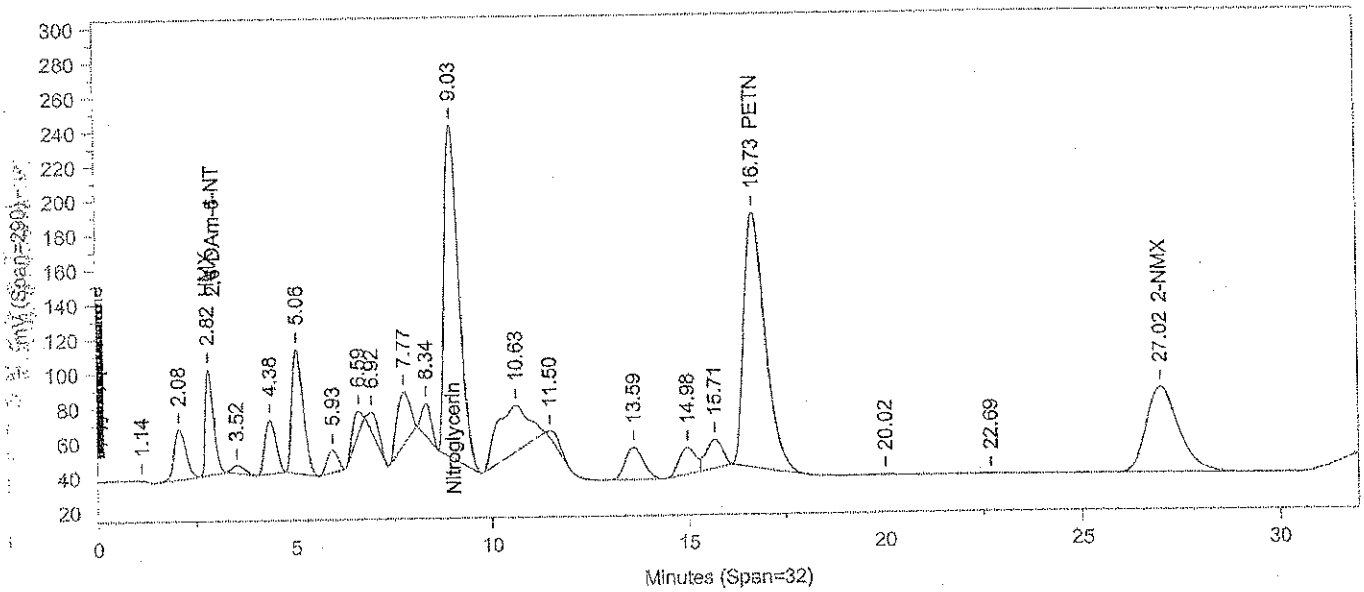
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.04R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
0.45
2.32
3.31
2.68 HMX
4.24 RDX
1,3,5-TNB
1,3-DNB
1,4-DNB
4.91
5.78
6.51
6.82
Dinitrobenzene
Nitrobenzene
7.70 Tetryl
2,4,6-TNT
8.18
8.89 Tetryl breakdown
10.19
10.51
10.91
11.43 2,4-DNT
2,6-DNT
4-Am-2,6-DNT
13.44 2-NT
14.83 4-NT
15.56 3-NT
16.54
19.87
26.86 2-NMX
33.29
1-Nitronaphthalene
Minutes (Span=36)


1.14
2.08
2.82 HMX
2-Am-4-NT
3.52
4.38
5.06
5.93
6.59
6.82
7.77
8.34
9.03
Nitroglycerin
10.63
11.50
13.59
14.98
15.71
16.73 PETN
20.02
22.69
27.02 2-NMX
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.821	854652	1984.604	HMX
4.236	173918	1972.348	RDX	.	0	.	RDX
4.915	403513	1976.331	1,3,5-TNB	.	0	.	1,3,5-TNB
5.784	490868	2360.433	1,4-DNB	.	0	.	1,4-DNB
6.511	177323	2224.521	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.82	660009	2472.194	1,3-DNB	.	0	.	1,3-DNB
7.698	618829	3148.742	Tetryl + Breakdown = 672829	.	0	.	Tetryl
8.184	451815	2717.684	2,4,6-TNT	.	0	.	2,4,6-TNT
8.887	54000	3636.271	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	4901011	45613.86	Nitroglycerin
10.189	180347	1818.67	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.513	443957	2009.276	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.91	183813	3932.204	2,6-DNT	.	0	.	2,6-DNT
11.432	677076	2478.647	2,4-DNT	.	0	.	2,4-DNT
13.441	245425	2251.094	2-NT	.	0	.	2-NT
14.835	183964	2373.201	4-NT	.	0	.	4-NT
15.56	279402	2573.633	3-NT	.	0	.	3-NT
.	0	.	PETN	16.725	5464457	55137.47	PETN
26.863	207607	7934.855	2-NMX	27.017	2865768	6985.688	2-NMX
33.287	288442	2400.829	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:25:24 PM
File Reported On: 11/7/2013 at 3:25:22 PM

James H. Place
Senior Chemist

NOV 07 2013

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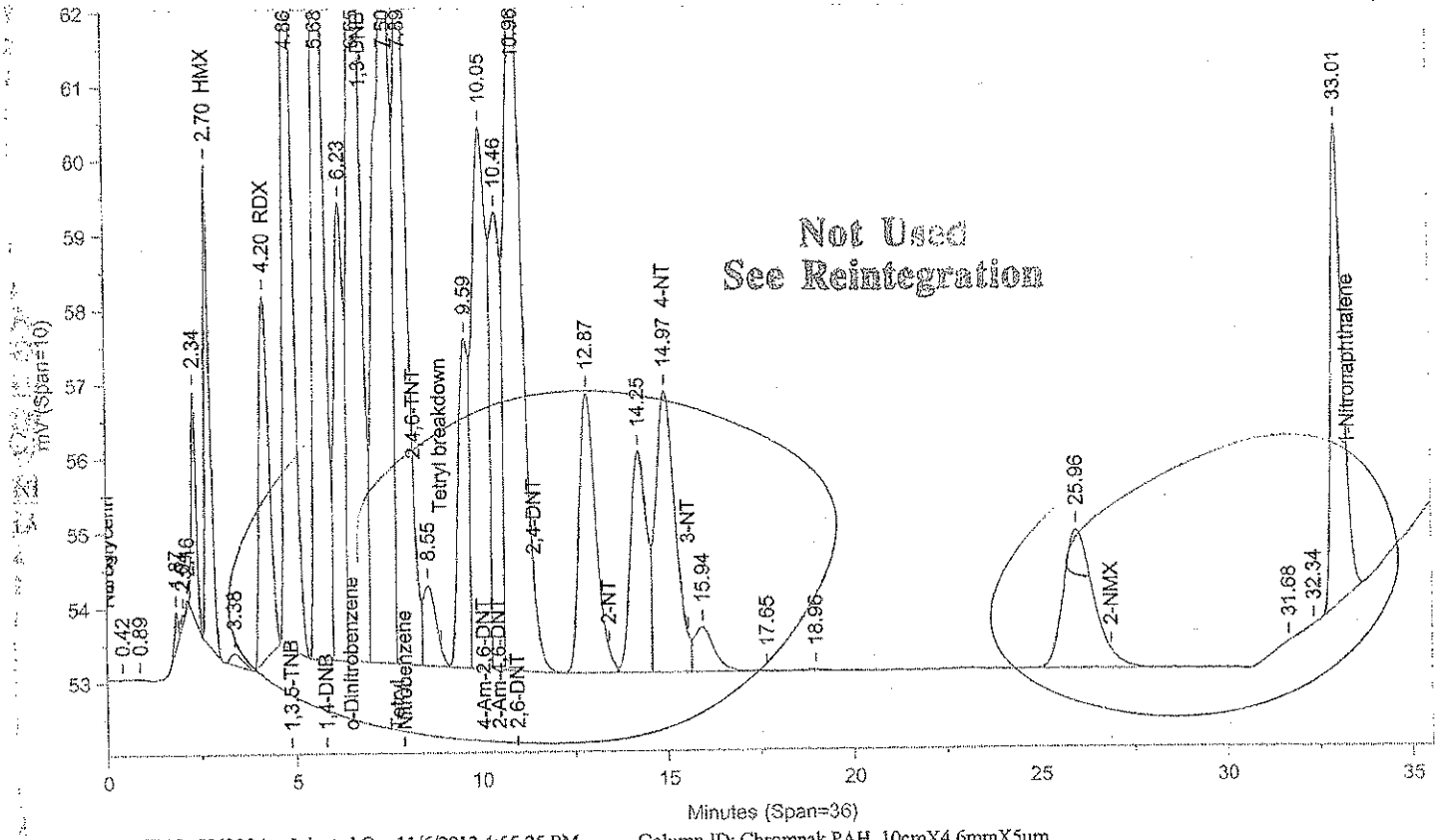
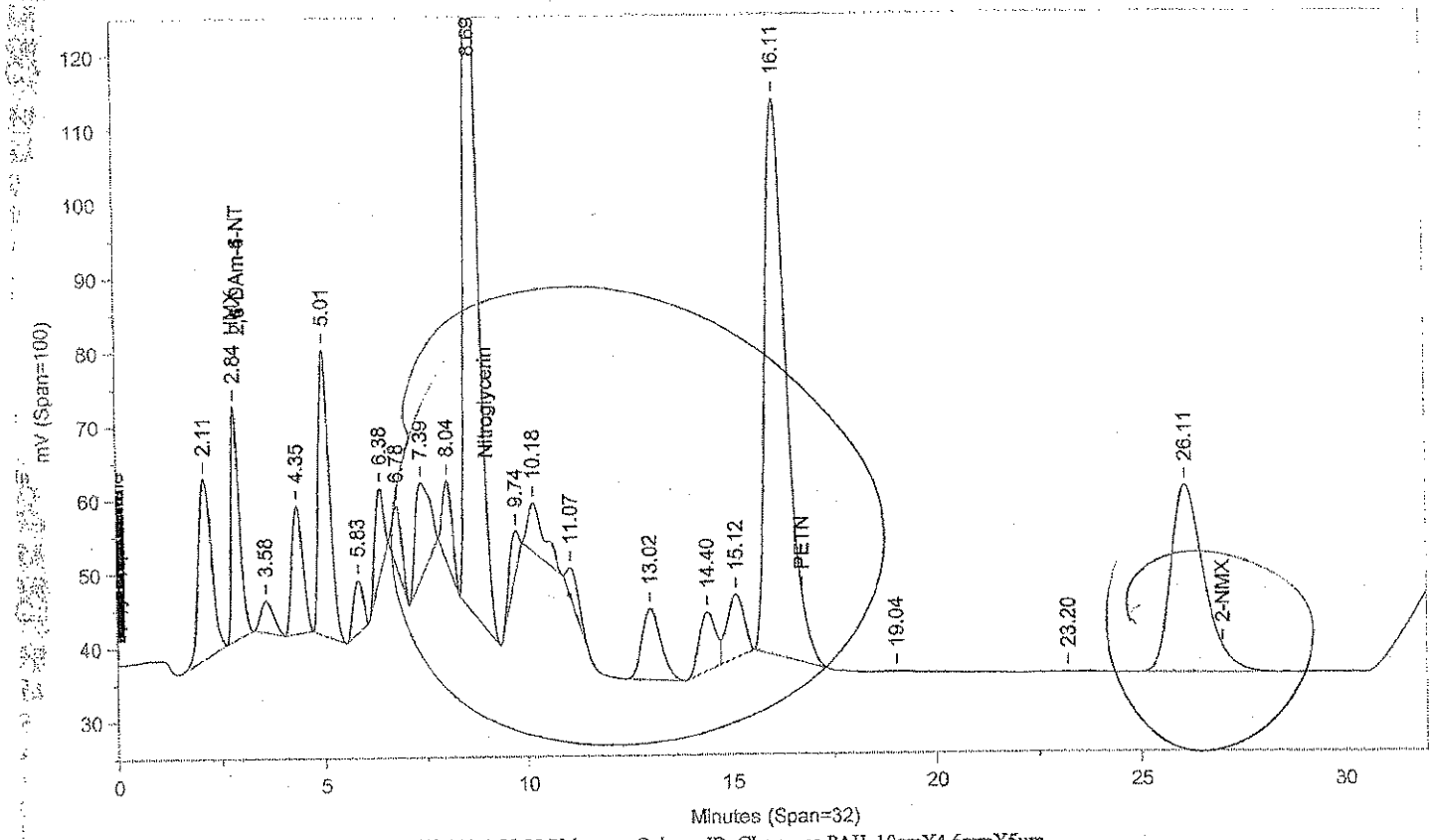
File: C:\CPWIN\DATA1\1E12310.05R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1024.722	HMX
4.202	87948	996.505	RDX	.	0	.	RDX
4.861	205100	973.585	1,3,5-TNB	.	0	.	1,3,5-TNB
7.887	229234	785.825	Nitrobenzene	.	0	.	Nitrobenzene
10.049	212049	2649.713	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.461	118086	509.17	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.956	313494	33930.22	2,6-DNT	.	0	.	2,6-DNT
14.966	137062	1528.788	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.05A
Area File: C:\CPWIN\DATA1\1E12310B.05A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:18:48 PM
File Reported On: 11/7/2013 at 2:19:04 PM

Not Used
See Reintegration

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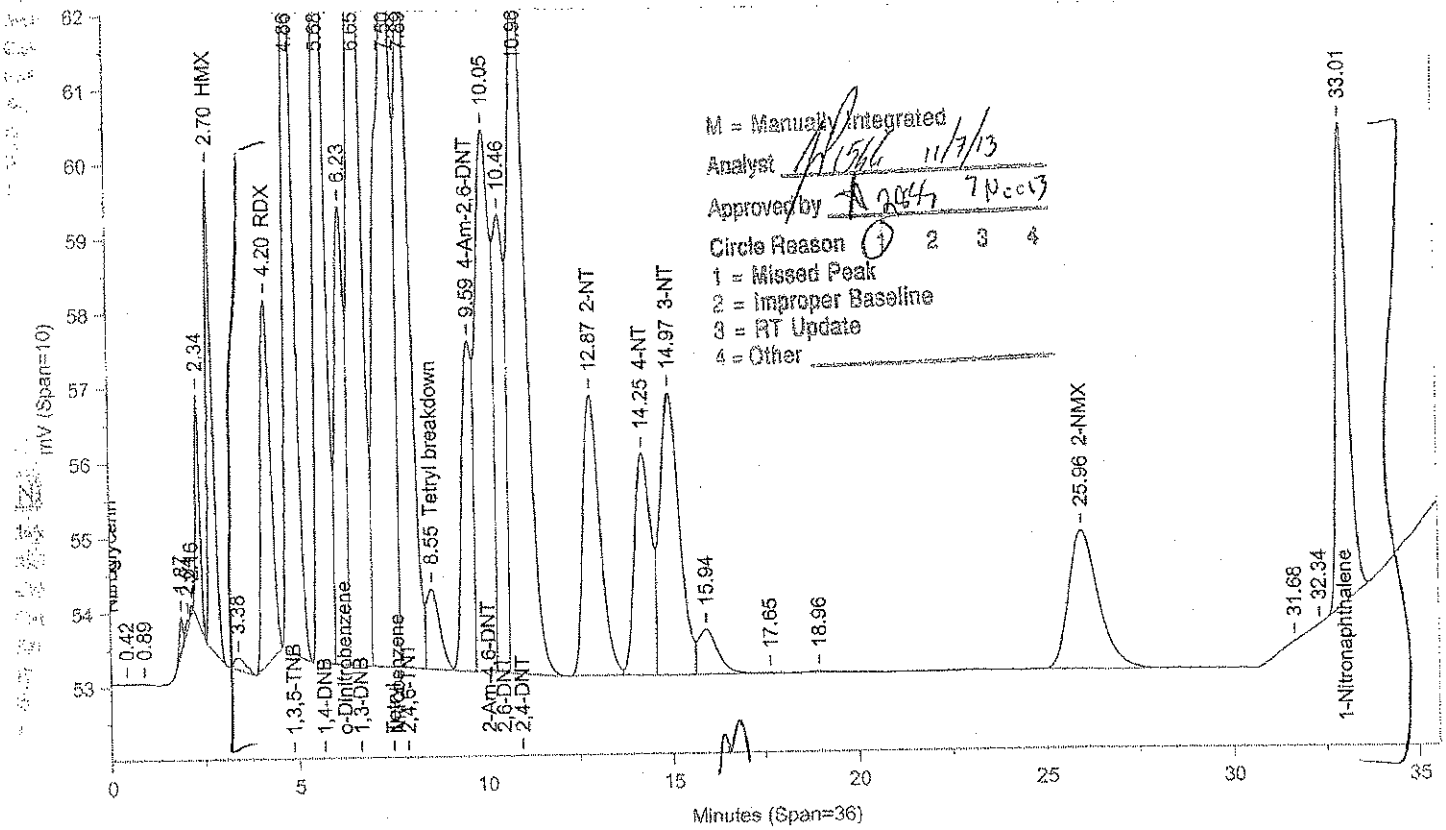
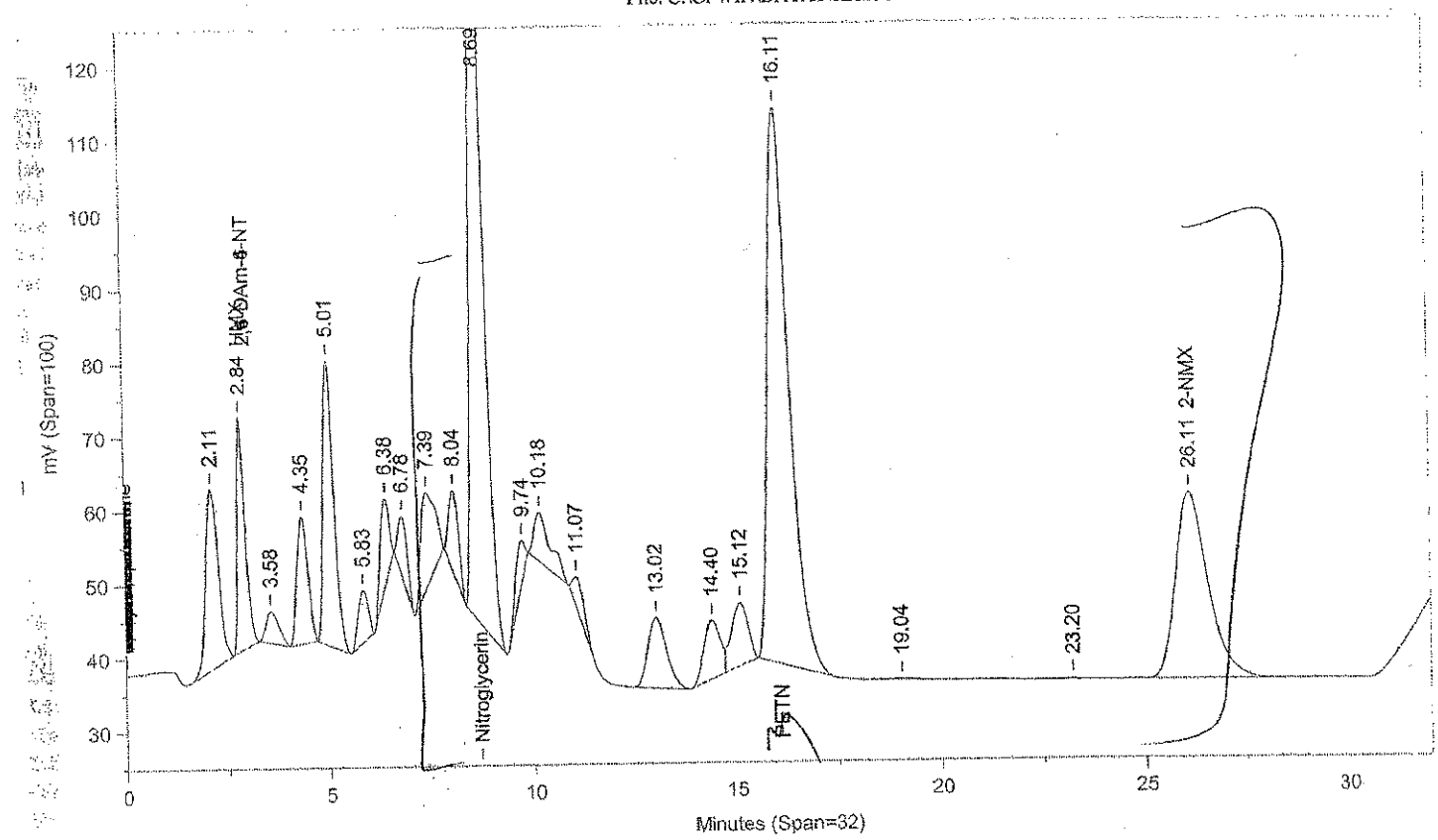
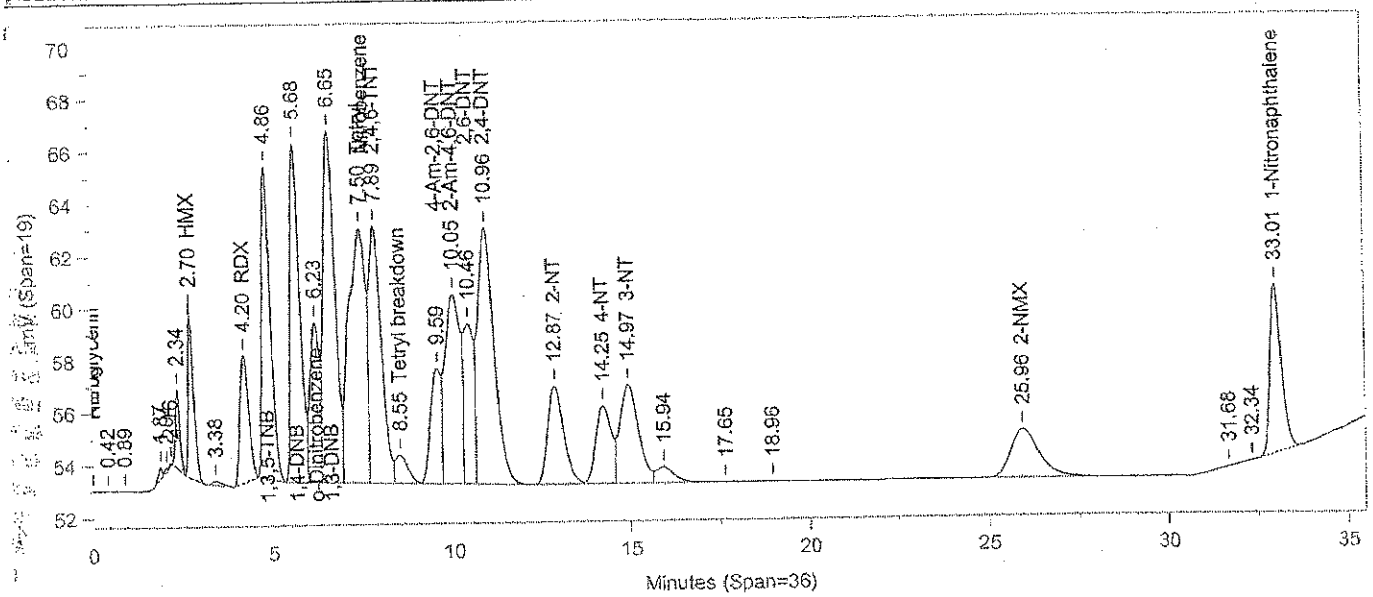


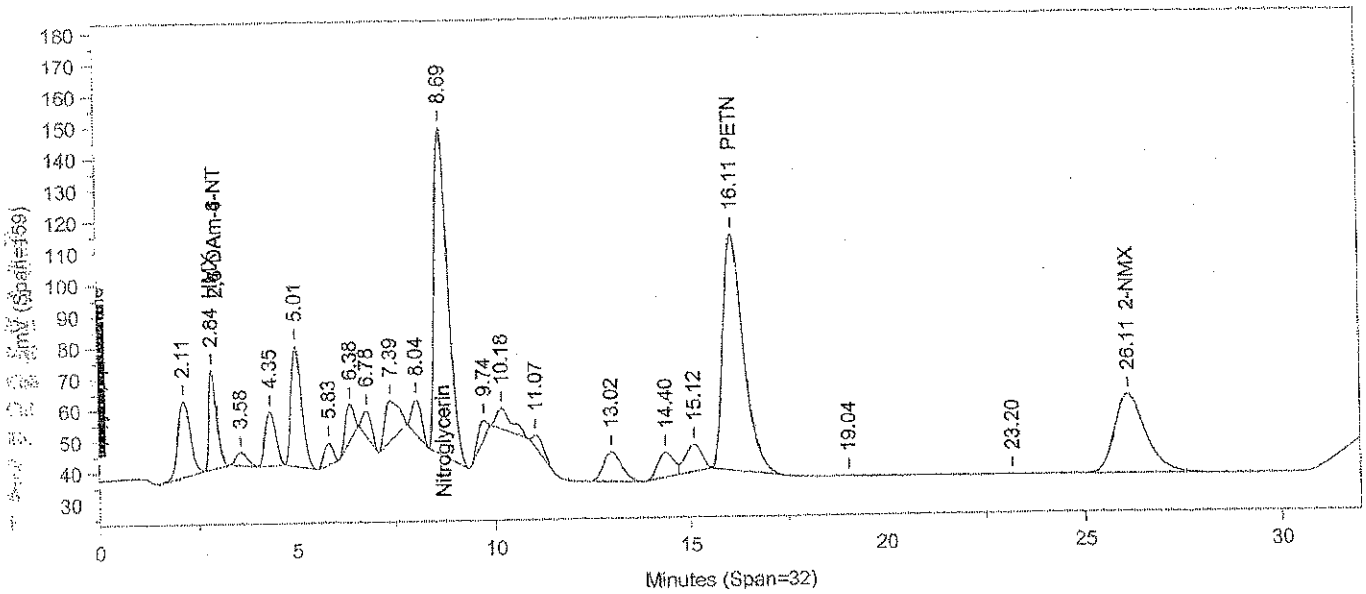
Instrument ID: CP12--X6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.05R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


0.42
0.89
2.34
2.70 HMX
3.38
4.20 RDX
4.86
1,3,5-TNB
5.68
1,3-DNB
6.23
Dinitrobenzene
6.65
7.50
7.89
8.55 Tetryl breakdown
9.59
10.05
10.46
10.96
12.87 2-NT
14.25 4-NT
14.97 3-NT
15.94
17.65
18.96
25.96 2-NMX
31.68
32.34
33.01 1-Nitronaphthalene
Minutes (Span=36)


2.11
2.84
3.58
4.35
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5.83
6.38
6.78
7.39
8.04
8.69
Nitroglycerin
9.74
10.18
11.07
13.02
14.40
15.12
16.11 PETN
19.04
23.20
26.11 2-NMX
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.84	432207	1012.248	HMX
4.202	87948	991.209	RDX	.	0	.	RDX
4.861	205100	1004.541	1,3,5-TNB	.	0	.	1,3,5-TNB
5.682	248639	1195.627	1,4-DNB	.	0	.	1,4-DNB
6.226	112229	1407.916	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.65	306036	1146.317	1,3-DNB	.	0	.	1,3-DNB
7.496	315157	1603.592	Tetryl + Breakdown = 340,823	.	0	.	Tetryl
7.887	229234	1378.849	2,4,6-TNT	.	0	.	2,4,6-TNT
8.549	25666	1728.286	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.694	2450463	22806.54	Nitroglycerin
9.594	89879	906.368	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.049	212049	959.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.461	118086	2097.385	2,6-DNT	.	0	.	2,6-DNT
10.956	313494	1147.641	2,4-DNT	.	0	.	2,4-DNT
12.871	120282	1103.257	2-NT	.	0	.	2-NT
14.253	91440	1179.606	4-NT	.	0	.	4-NT
14.966	137062	1262.512	3-NT	.	0	.	3-NT
.	0	.	PETN	16.108	2722253	27468.08	PETN
25.961	102777	3928.2	2-NMX	26.113	1408885	3434.344	2-NMX
33.014	142444	1239.326	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:34:34 PM
File Reported On: 11/7/2013 at 3:34:33 PM

James H. Place
Senior Chemist

NOV 07 2013

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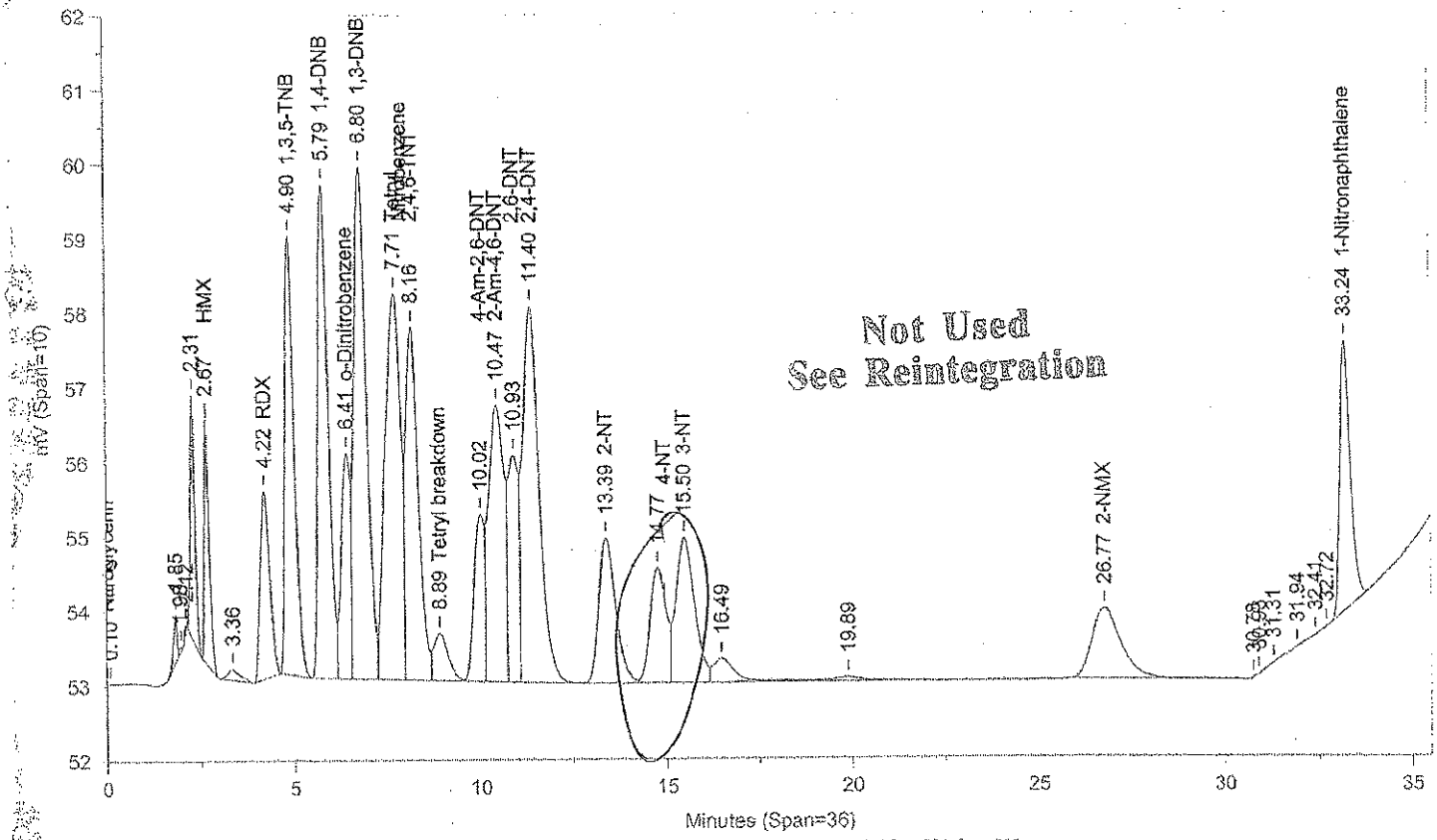
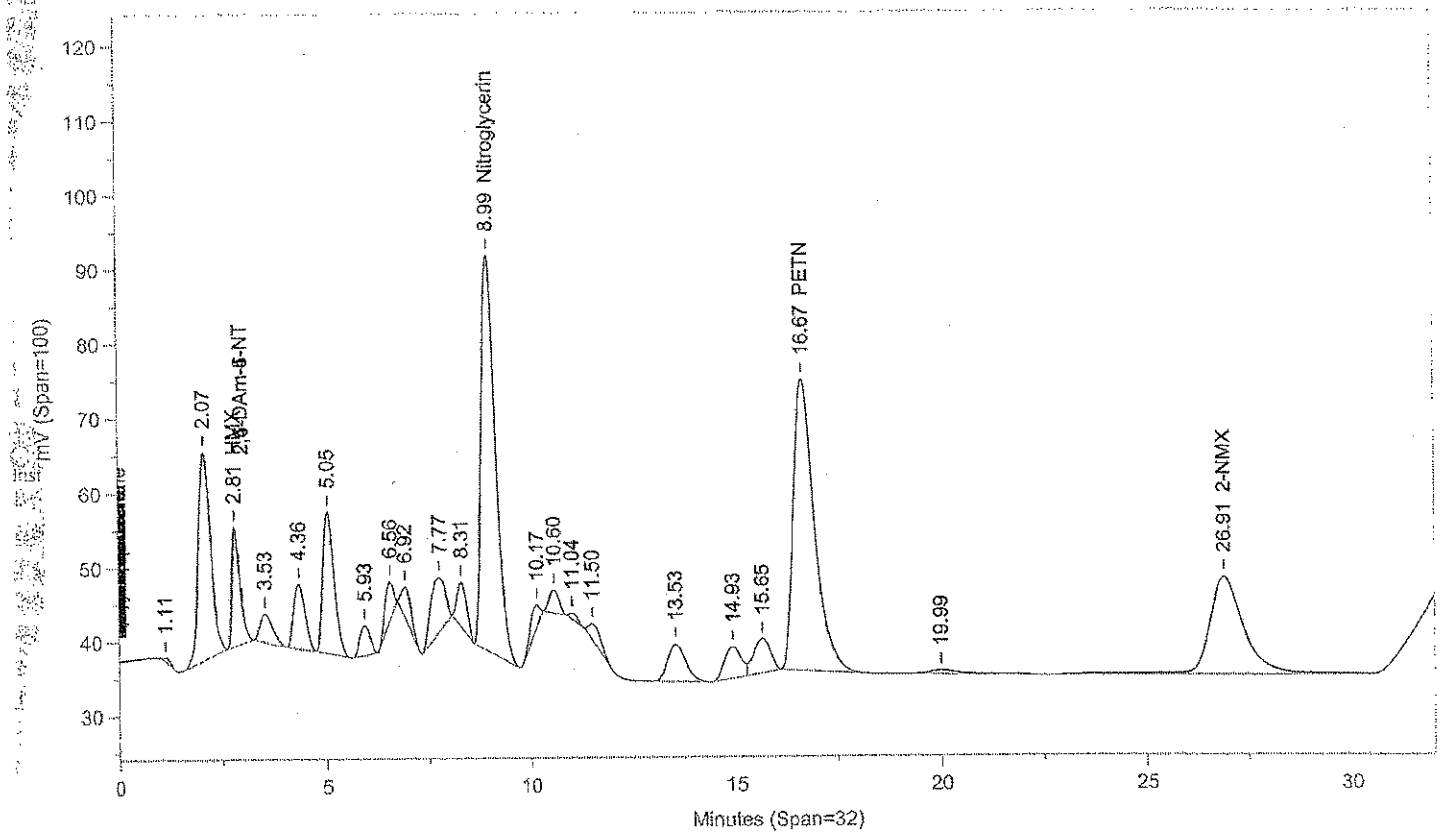
File: C:\CPWIN\DATA1\1E12310.06R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

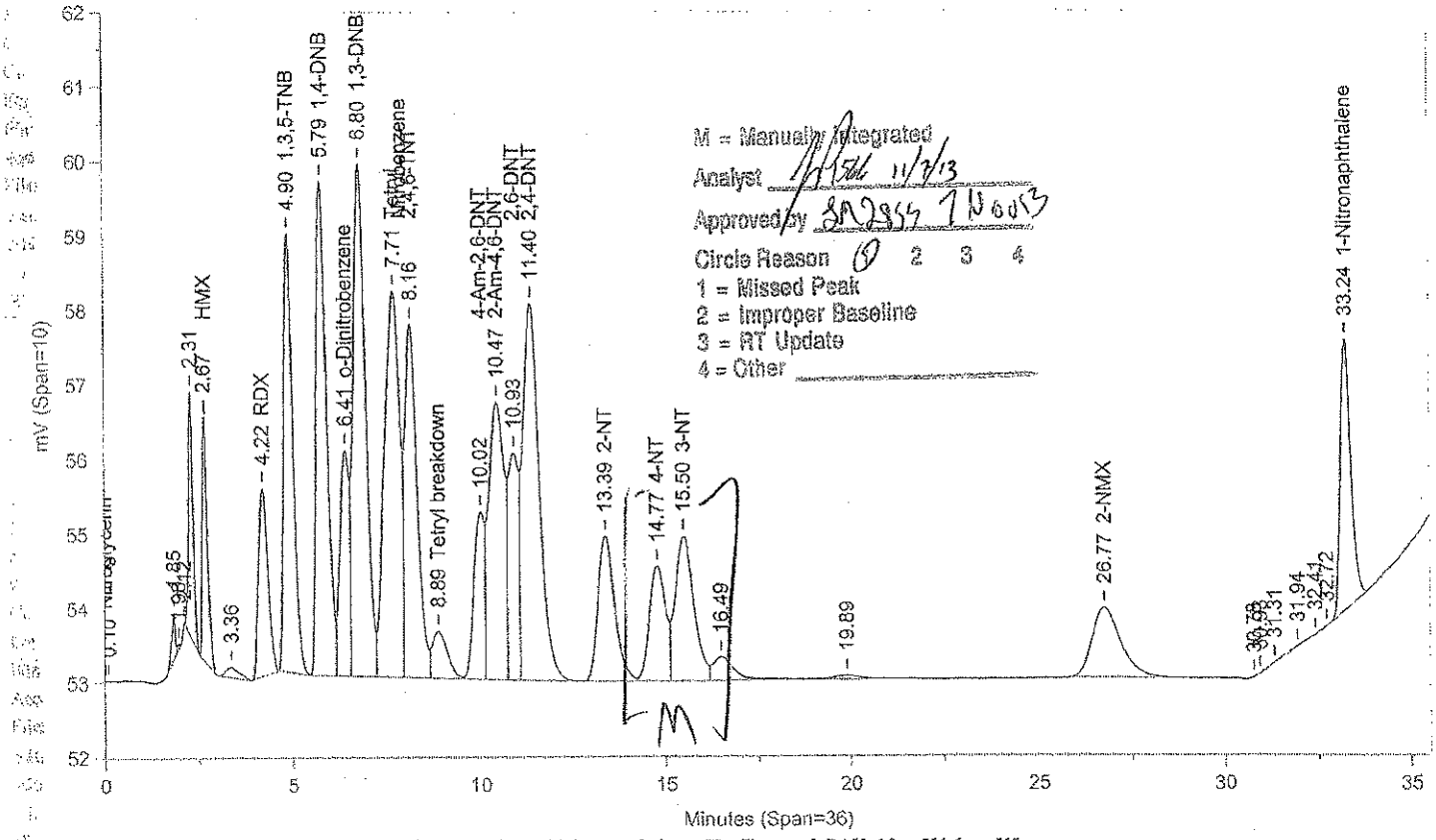
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	511.198	HMX
4.216	45161	503.754	RDX	.	0	.	RDX
4.899	101540	481.274	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	597.575	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	638.136	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
Del 6.8	160362	589.429	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	527.707	Tetryl	.	0	.	Tetryl
8.159	109953	592.518	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	72.629	Tetryl breakdown	.	0	.	Tetryl breakdown
Del .	0	.	Nitroglycerin	8.992	1273740	11816.78	Nitroglycerin
10.022	44007	436.716	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	501.563	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	456.94	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	596.64	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	583.272	2-NT	.	0	.	2-NT
15.496	68775	607.768	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	12349.17	PETN
26.768	51441	1767.312	2-NMX	26.91	804532	1952.055	2-NMX
33.236	71524	677.433	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.06A
Area File: C:\CPWIN\DATA1\1E12310B.06A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:19:30 PM
File Reported On: 11/7/2013 at 2:19:47 PM

Not Used
See Reintegration

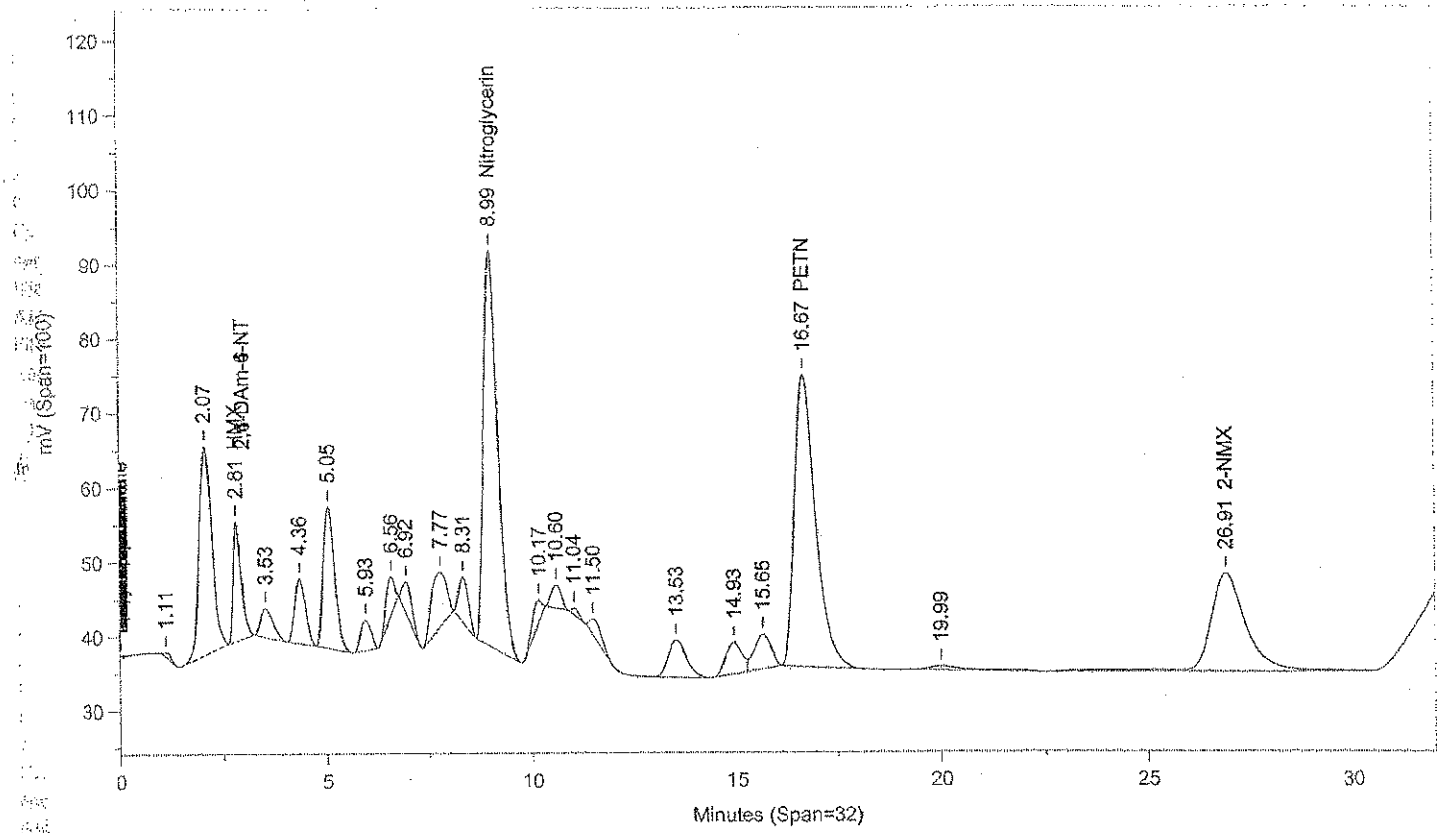
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\1E12310.06R



M = Manually Integrated
Analyst 11/7/13
Approved by 11/7/13
Circle Reason 0 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.06R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 5:37:55 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.809	214227	510.519	HMX
4.216	45161	502.899	RDX	.	0	.	RDX
4.899	101540	497.322	1,3,5-TNB	.	0	.	1,3,5-TNB
5.789	125098	601.558	1,4-DNB	.	0	.	1,4-DNB
6.412	50771	636.928	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.8	160362	600.669	1,3-DNB	.	0	.	1,3-DNB
7.707	150915	767.889	Tetryl + Breakdown = 168264	.	0	.	Tetryl
8.159	109953	661.368	2,4,6-TNT	.	0	.	2,4,6-TNT
8.895	17349	1168.216	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.992	1273740	11854.74	Nitroglycerin
10.022	44007	443.776	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.468	108098	489.236	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.932	60065	477.694	2,6-DNT	.	0	.	2,6-DNT
11.398	159491	583.866	2,4-DNT	.	0	.	2,4-DNT
13.393	61097	560.392	2-NT	.	0	.	2-NT
14.774	46394	598.498	4-NT	.	0	.	4-NT
15.496	68775	633.506	3-NT	.	0	.	3-NT
.	0	.	PETN	16.669	1402209	14148.57	PETN
26.768	51441	1966.102	2-NMX	26.91	804532	1961.154	2-NMX
33.236	71524	675.115	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 3:56:28 PM
File Reported On: 11/7/2013 at 3:56:27 PM

James H. Place
Senior Chemist

NOV 0 7 2013

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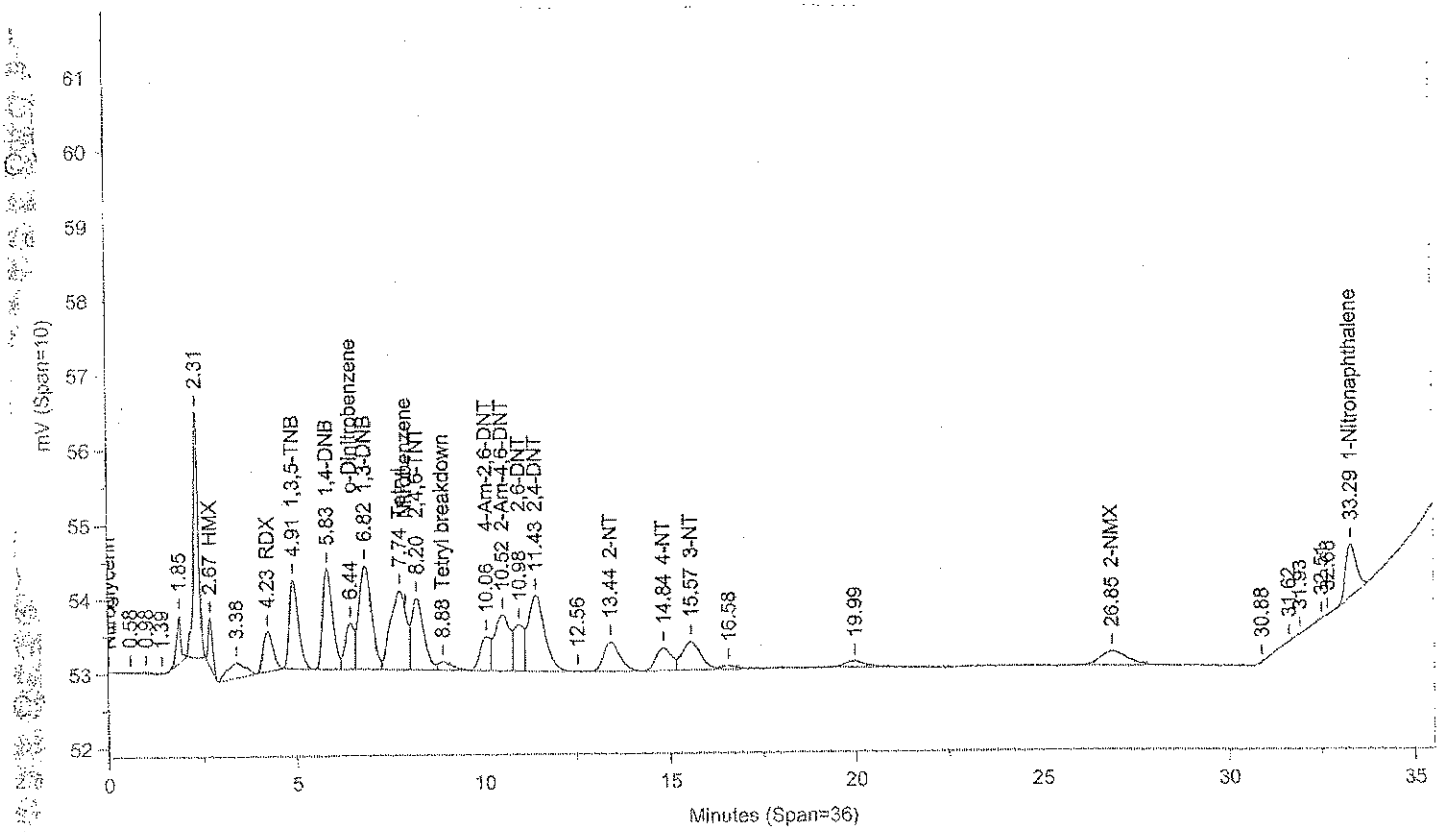
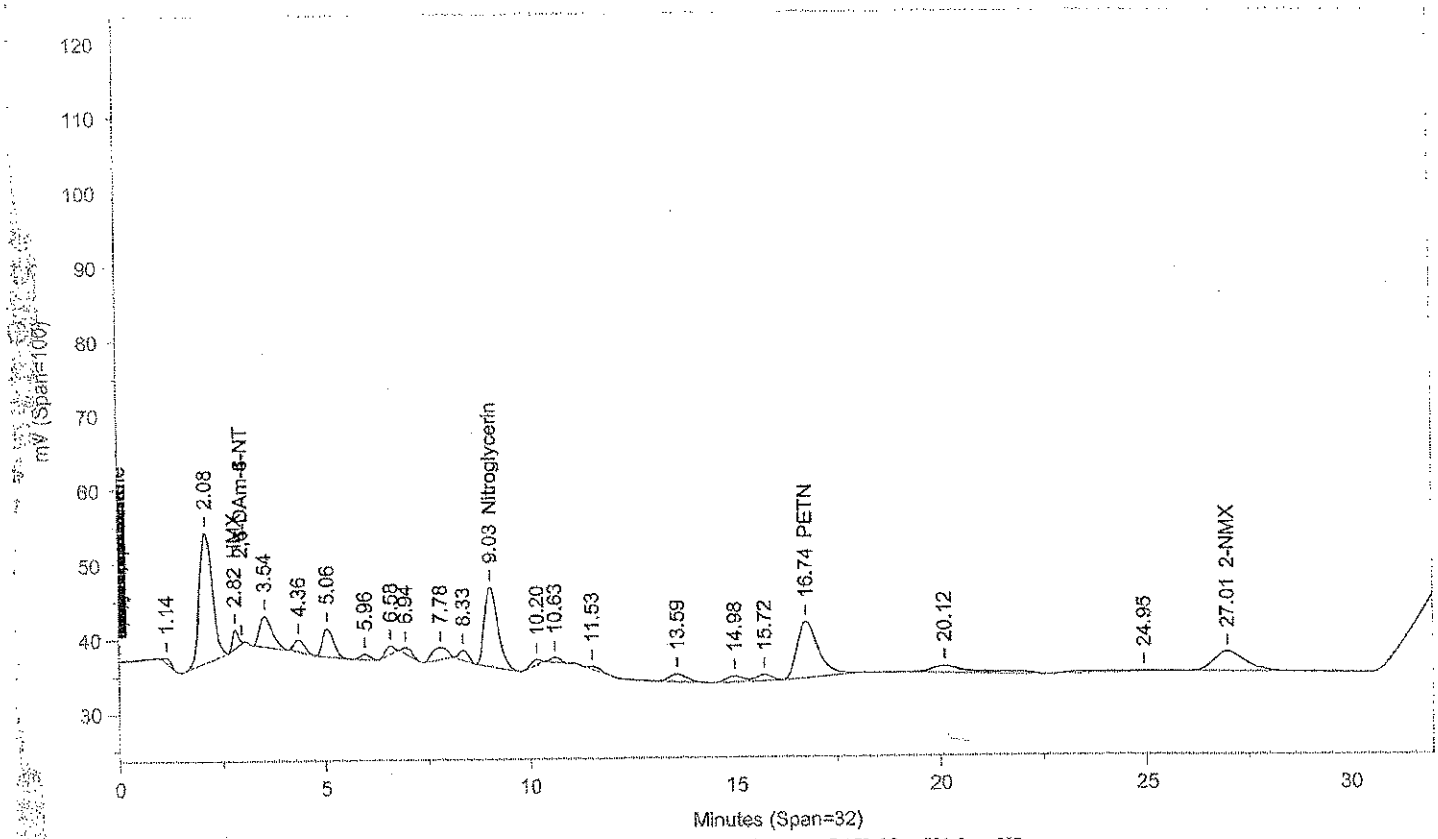
File: C:\CPWIN\DATA1\1E12310.07R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.07R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.817	24794	69.601	HMX
4.233	9542	95.872	RDX	.	0	.	RDX
4.913	20537	97.357	1,3,5-TNB	.	0	.	1,3,5-TNB
5.828	24892	118.679	1,4-DNB	.	0	.	1,4-DNB
6.439	10260	128.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.822	31744	116.544	1,3-DNB	.	0	.	1,3-DNB
7.741	31577	113.932	Tetryl + Breakdown = 34309	.	0	.	Tetryl
8.199	21629	116.547	2,4,6-TNT	.	0	.	2,4,6-TNT
8.878	2732	14.728	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.027	254397	2350.772	Nitroglycerin
10.065	9029	89.976	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.517	22305	103.167	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.983	11803	-905.124	2,6-DNT	.	0	.	2,6-DNT
11.432	31810	118.828	2,4-DNT	.	0	.	2,4-DNT
13.444	12318	117.604	2-NT	.	0	.	2-NT
14.842	9006	110.395	4-NT	.	0	.	4-NT
15.573	13215	117.012	3-NT	.	0	.	3-NT
.	0	.	PETN	16.741	278777	2451.791	PETN
26.846	10728	369.242	2-NMX	27.013	151561	363.794	2-NMX
33.294	13694	217.299	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.07A
Area File: C:\CPWIN\DATA1\1E12310B.07A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:14 PM
File Reported On: 11/7/2013 at 2:20:30 PM

James H. Place
Senior Chemist

NOV 07 2013

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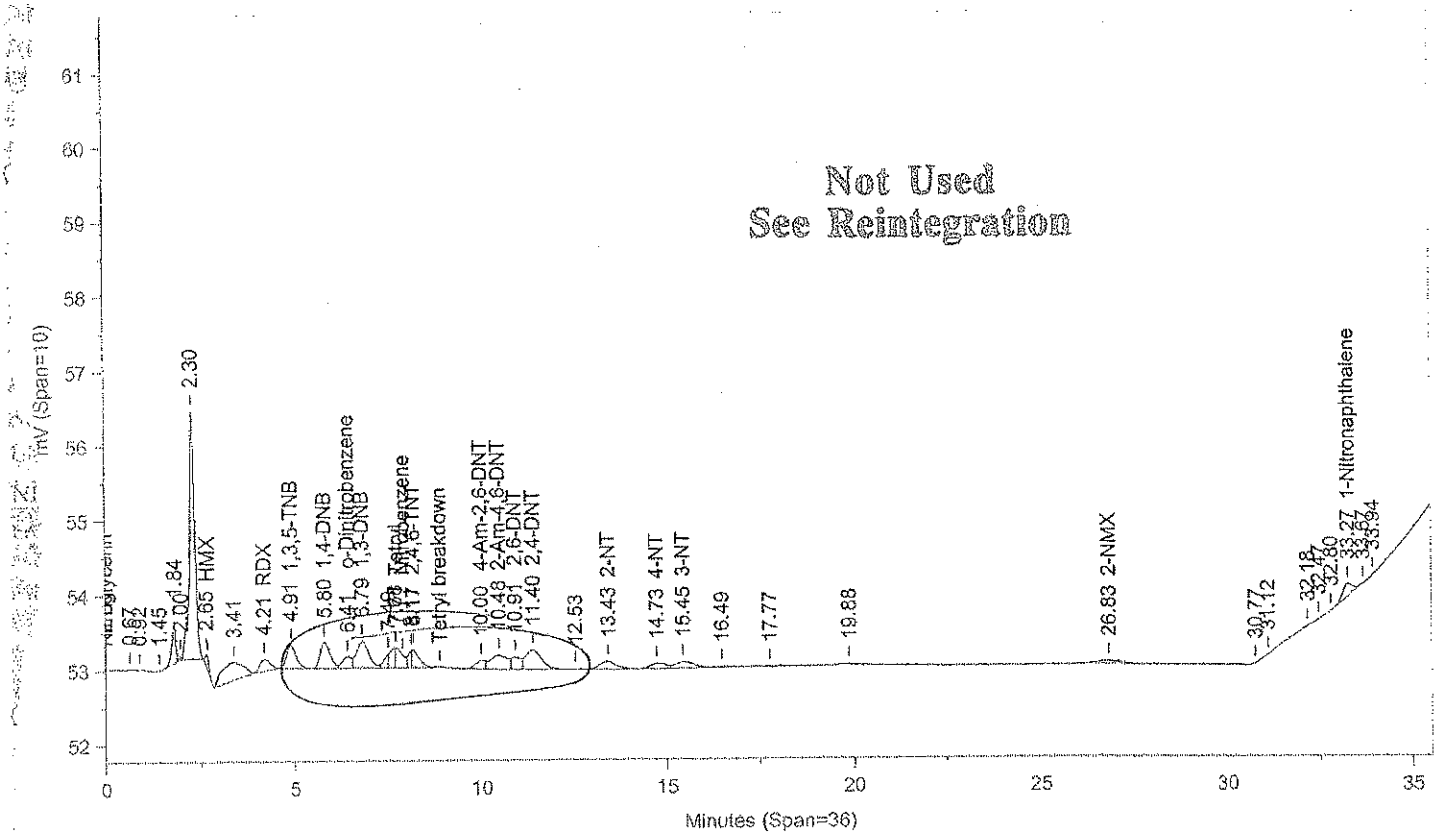
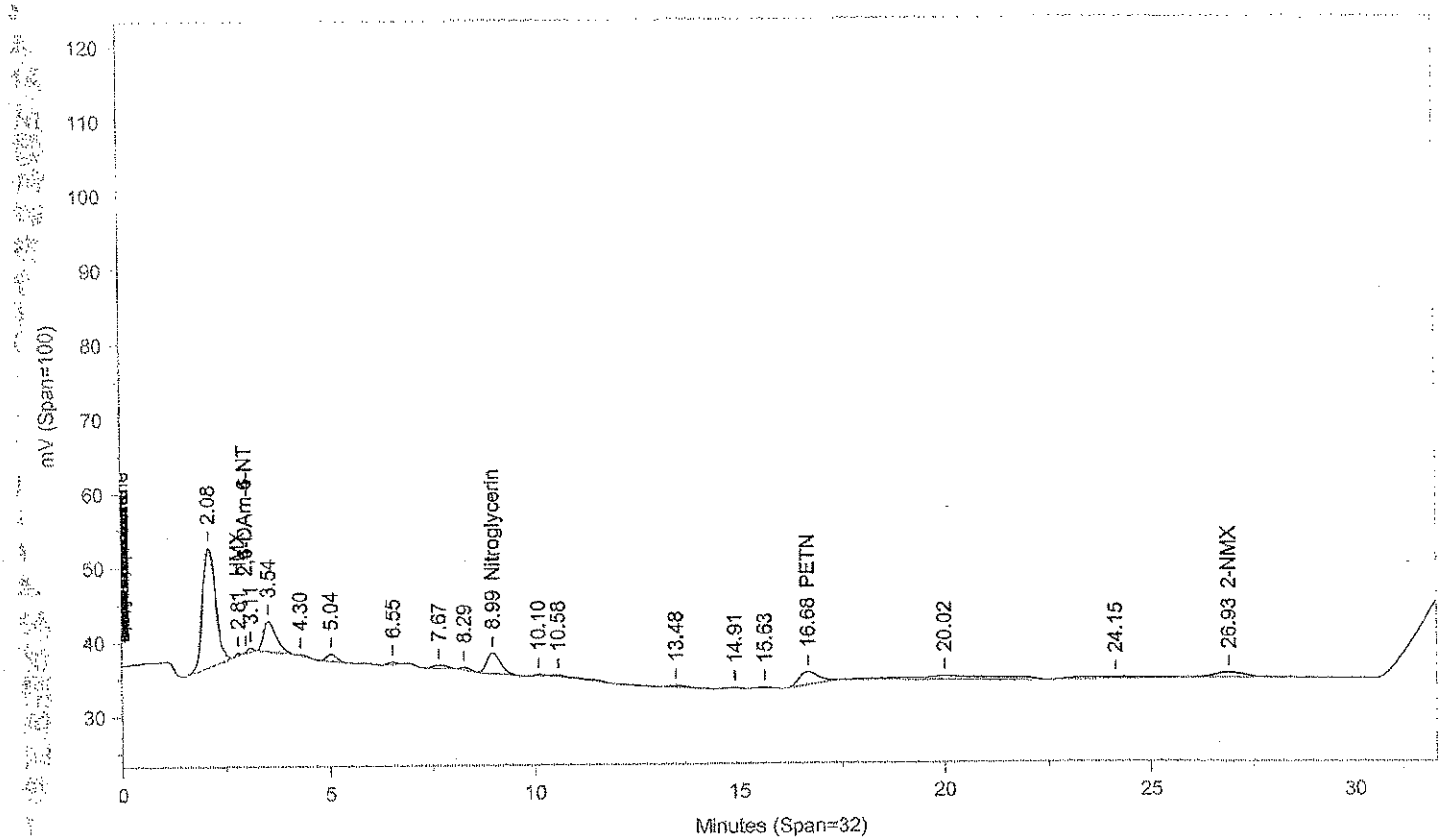
File: C:\CPWIN\DATA1\1E12310.08R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	24.521	HMX
4.208	2956	20.84	RDX	.	0	.	RDX
4.907	5333	25.317	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6450	30.761	1,4-DNB	.	0	.	1,4-DNB
6.412	2688	33.602	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8139	29.978	1,3-DNB	.	0	.	1,3-DNB
7.715	3855	14.308	Tetryl	.	0	.	Tetryl
8.166	3527	19.204	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.991	66170	609.364	Nitroglycerin
9.997	2141	21.334	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	6131	28.312	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	2702	-1152.824	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	29.313	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	31.816	2-NT	.	0	.	2-NT
14.733	2115	26.078	4-NT	.	0	.	4-NT
15.451	3131	28.146	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	487.427	PETN
26.83	2335	79.388	2-NMX	26.928	37099	88.281	2-NMX
33.267	3188	133.477	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.08A
Area File: C:\CPWIN\DATA1\1E12310B.08A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:20:58 PM
File Reported On: 11/7/2013 at 2:21:13 PM

Not Used
See Reintegration

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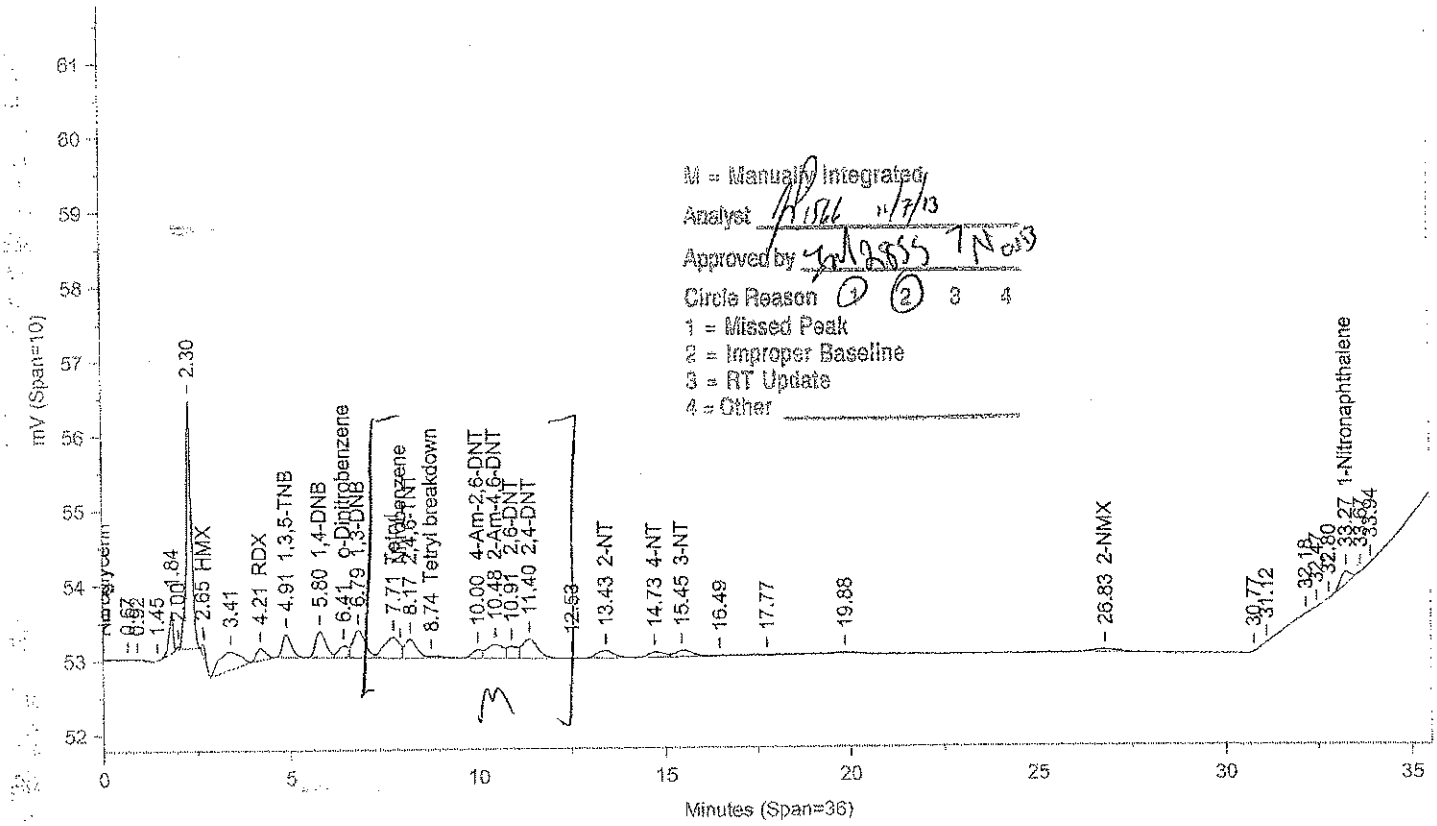
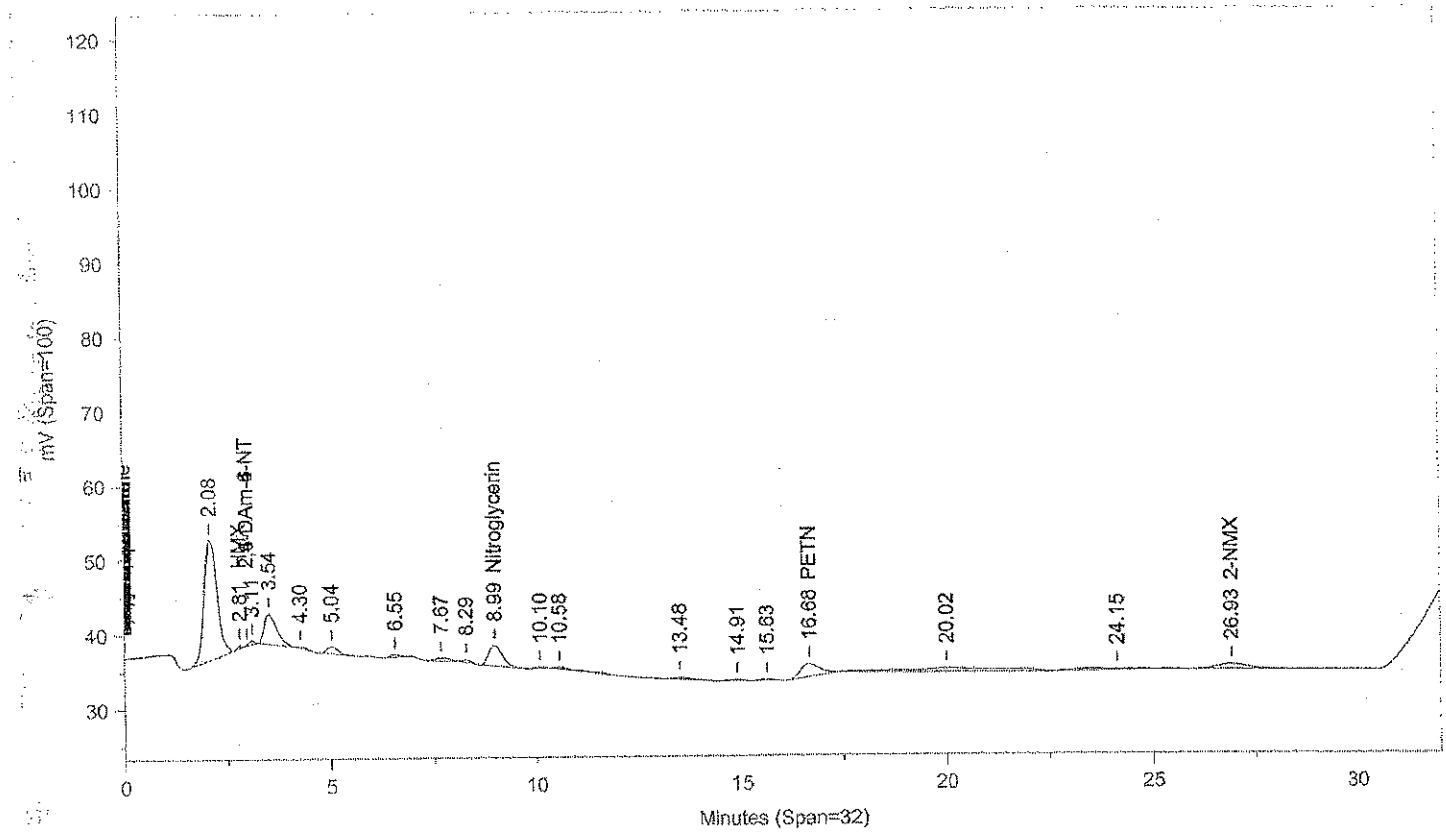
File: C:\CPWIN\DATA1\1E12310.08R



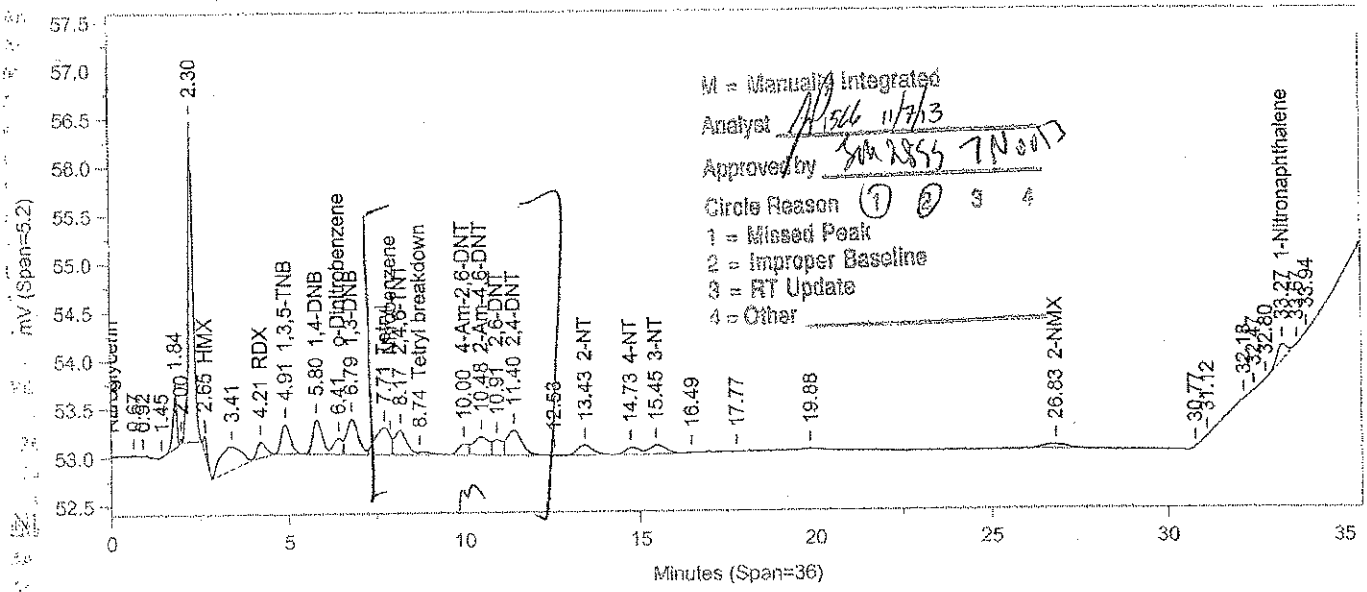
M = Manually Integrated
Analyst [signature] 11/7/13
Approved by [signature] TN 11/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

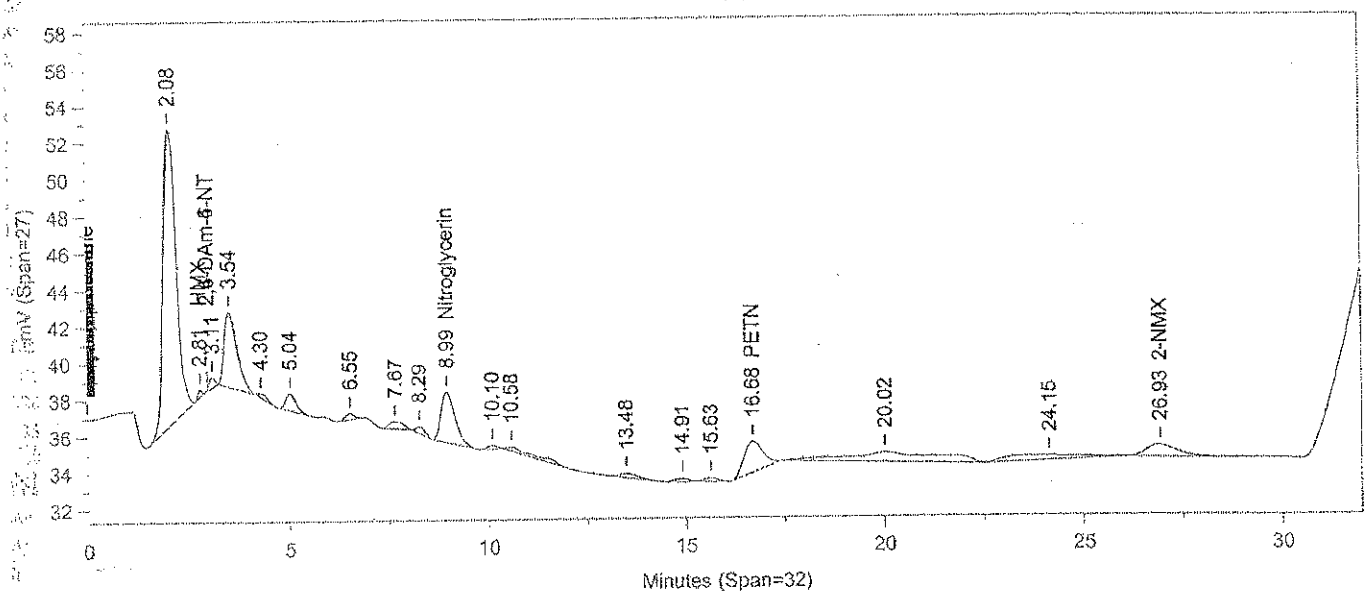
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.08R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
Nitroglycerin
2.30
2.65 HMX
3.41
4.21 RDX
4.91 1,3,5-TNB
5.80 1,4-DNB
6.41 1,3-Dinitrobenzene
8.74 Tetryl breakdown
10.00 4-Am-2,6-DNT
10.48 2-Am-4,6-DNT
10.91 2,6-DNT
11.40 2,4-DNT
13.43 2-NT
14.73 4-NT
15.45 3-NT
16.49
17.77
19.88
26.83 2-NMX
30.77
31.12
1-Nitronaphthalene
mV (Span=5.2)
Minutes (Span=36)


2.08
3.54
4.30
5.04
6.55
7.67
8.29
8.99 Nitroglycerin
10.10
10.58
13.48
14.91
15.63
16.68 PETN
20.02
24.15
26.93 2-NMX
mV (Span=27)
Minutes (Span=32)

Oven Parameters: 42%MEOH TO 27min;85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.806	2697	23.632	HMX
4.208	2956	21.232	RDX	.	0	.	RDX
4.907	5333	26.121	1,3,5-TNB	.	0	.	1,3,5-TNB
5.8	6512	31.316	1,4-DNB	.	0	.	1,4-DNB
6.412	2784	34.922	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.789	8427	31.566	1,3-DNB	.	0	.	1,3-DNB
7.715	8012	40.766	Tetryl + Breakdown = 8798	.	0	.	Tetryl
8.166	5917	35.592	2,4,6-TNT	.	0	.	2,4,6-TNT
8.738	786	52.959	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.991	66170	615.85	Nitroglycerin
9.997	2141	21.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.478	5748	26.017	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.912	3229	-1108.926	2,6-DNT	.	0	.	2,6-DNT
11.399	7856	28.758	2,4-DNT	.	0	.	2,4-DNT
13.432	3323	30.48	2-NT	.	0	.	2-NT
14.733	2115	27.284	4-NT	.	0	.	4-NT
15.451	3131	28.84	3-NT	.	0	.	3-NT
.	0	.	PETN	16.678	55484	559.844	PETN
26.83	2335	89.238	2-NMX	26.928	37099	90.433	2-NMX
33.267	3188	131.465	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:03:50 PM
File Reported On: 11/7/2013 at 4:03:49 PM

James H. Place
Senior Chemist

NOV 07 2013

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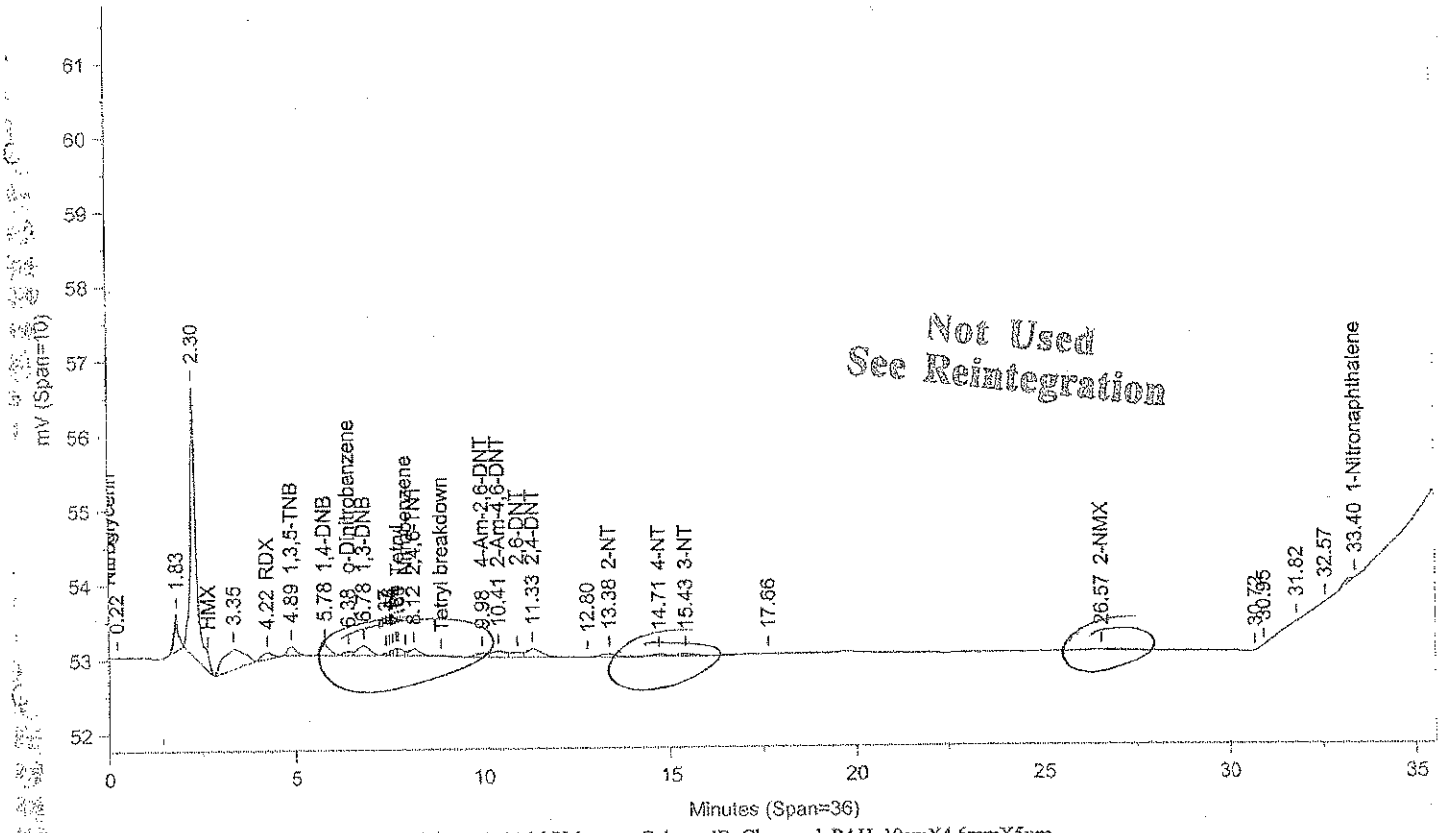
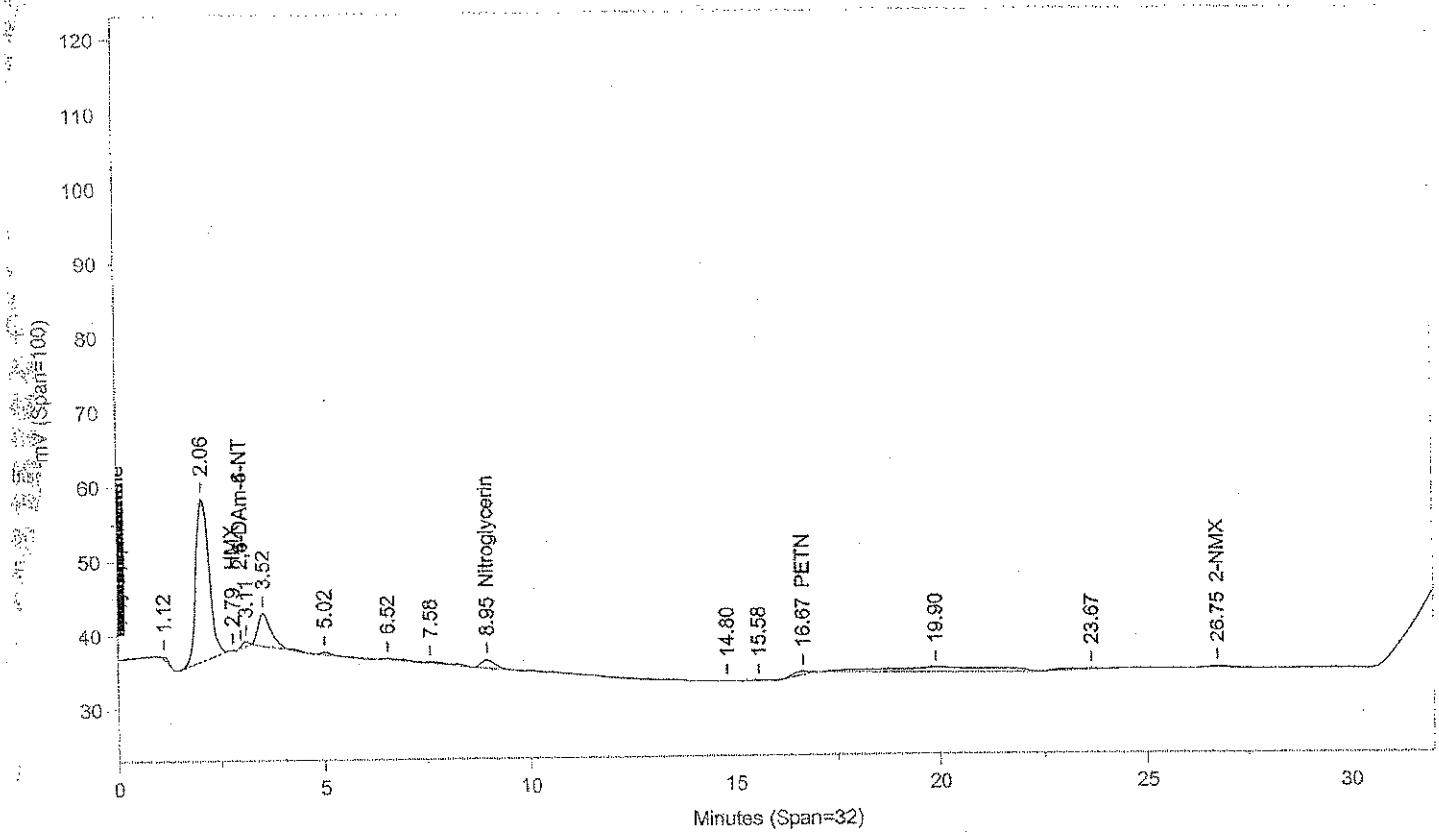
File: C:\CPWIN\DATA1\1E12310.09R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.787	HMX
4.225	1736	7.531	RDX	.	0	.	RDX
4.89	1977	9.425	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2377	11.319	1,4-DNB	.	0	.	1,4-DNB
6.383	924	11.363	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	2972	10.921	1,3-DNB	.	0	.	1,3-DNB
7.688	968	4.046	Tetryl	.	0	.	Tetryl
8.117	1973	11.416	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.948	27434	252.901	Nitroglycerin
9.982	1196	12.208	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2110	9.538	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.328	3508	13.173	2,4-DNT	.	0	.	2,4-DNT
13.377	1479	14.488	2-NT	.	0	.	2-NT
14.712	591	7.36	4-NT	.	0	.	4-NT
15.433	1102	9.95	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	121.455	PETN
26.571	638	22.009	2-NMX	26.751	13456	31.305	2-NMX
33.395	956	114.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.09A
Area File: C:\CPWIN\DATA1\1E12310B.09A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 2:21:40 PM
File Reported On: 11/7/2013 at 2:21:56 PM

Not Used
See Reintegration

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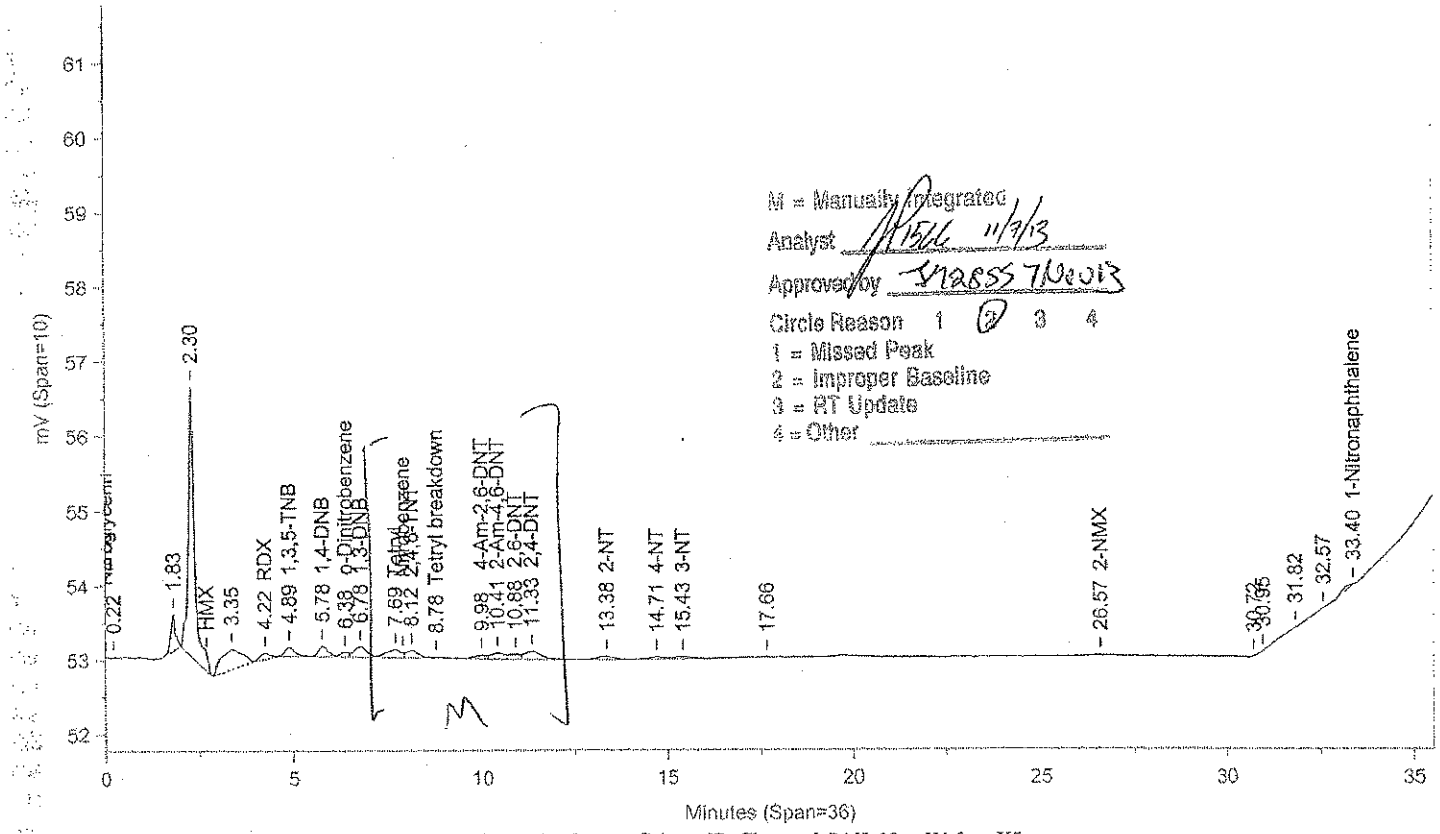
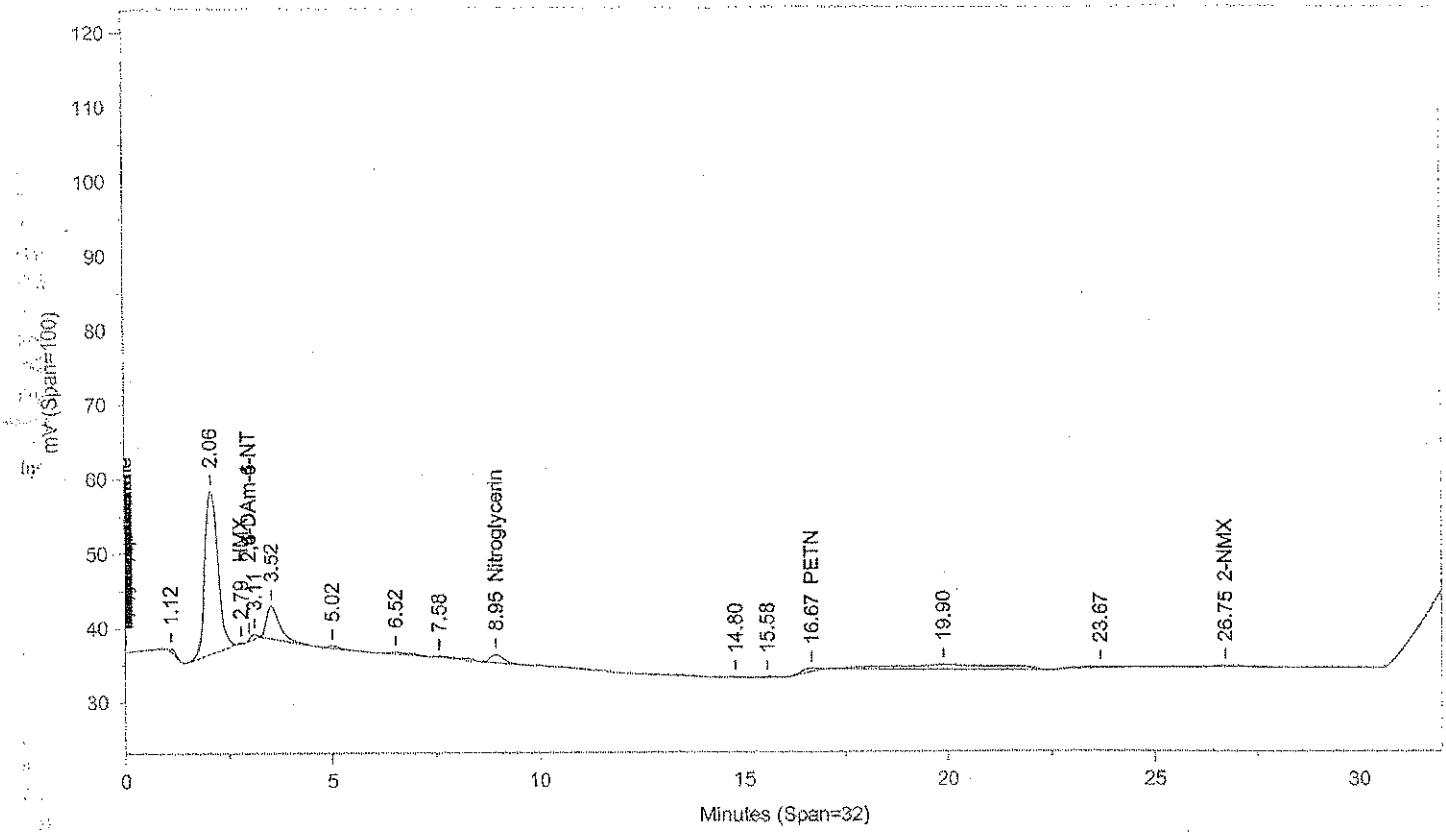
File: C:\CPWIN\DATA1\1E12310.09R

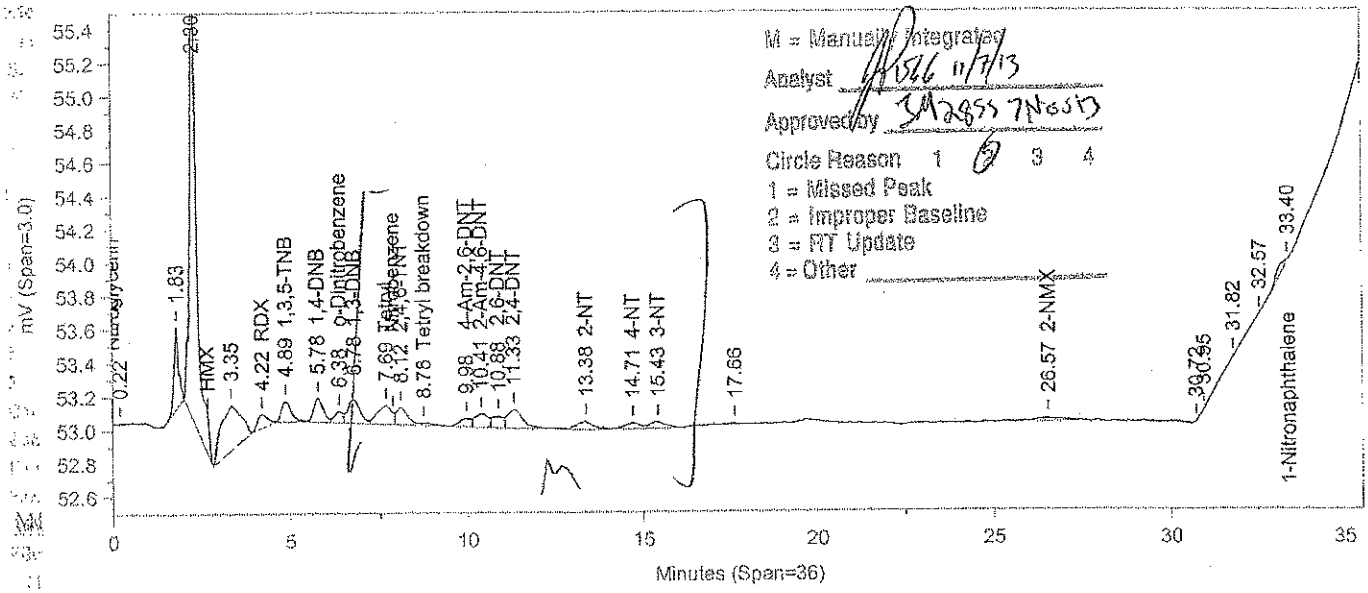


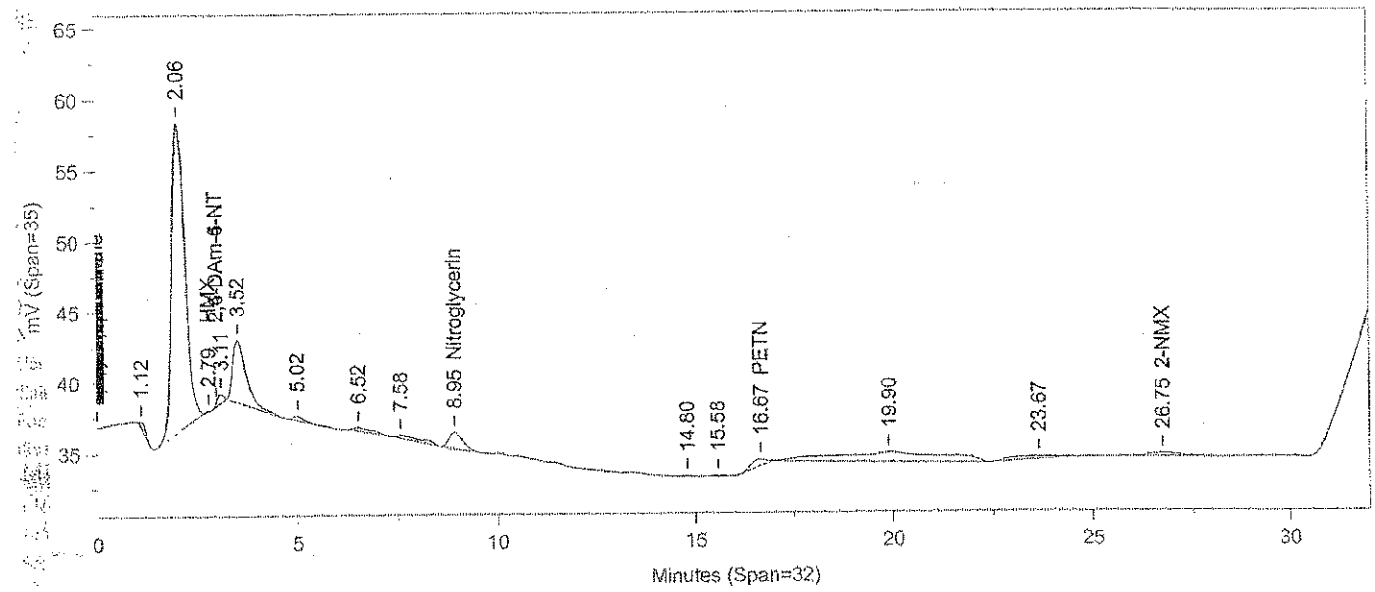
Instrument ID: CP12--X6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.09R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=3.0)
Minutes (Span=36)
0.22
1.83
2.00
HMX
3.35
4.22 RDX
4.89 1,3,5-TNB
5.78 1,4-DNB
6.38 p-Dinitrobenzene
6.78 1,3-DNB
7.69
8.12
8.78 Tetryl breakdown
9.98 4-Am-2,6-DNT
10.41 2-Am-4,6-DNT
10.88 2,6-DNT
11.33 2,4-DNT
13.38 2-NT
14.71 4-NT
15.43 3-NT
17.66
26.57 2-NMX
30.73
31.82
32.57
33.40
1-Nitronaphthalene


mV (Span=35)
Minutes (Span=32)
1.12
2.06
2.79 HMX
3.11 2-Am-4-NT
3.52
5.02
6.52
7.58
8.95 Nitroglycerin
14.80
15.58
16.67 PETN
19.90
23.67
26.75 2-NMX

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.793	507	18.592	HMX
4.225	1736	7.303	RDX	.	0	.	RDX
4.89	2392	11.716	1,3,5-TNB	.	0	.	1,3,5-TNB
5.778	2658	12.781	1,4-DNB	.	0	.	1,4-DNB
6.383	1043	13.088	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.784	3377	12.648	1,3-DNB	.	0	.	1,3-DNB
7.688	3245	16.513	Tetryl + Breakdown = 3632	.	0	.	Tetryl
8.117	2433	14.635	2,4,6-TNT	.	0	.	2,4,6-TNT
8.783	387	26.066	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.948	27434	255.328	Nitroglycerin
9.982	1195	12.047	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.409	2109	9.545	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.884	1529	-1156.4	2,6-DNT	.	0	.	2,6-DNT
11.328	3833	14.033	2,4-DNT	.	0	.	2,4-DNT
13.377	1661	15.232	2-NT	.	0	.	2-NT
14.712	1093	14.101	4-NT	.	0	.	4-NT
15.433	1326	12.218	3-NT	.	0	.	3-NT
.	0	.	PETN	16.668	13252	133.712	PETN
26.571	1037	39.626	2-NMX	26.751	13456	32.801	2-NMX
33.395	956	113.71	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:17:50 PM
File Reported On: 11/7/2013 at 4:17:49 PM

James H. Place
Senior Chemist

NOV 07 2013

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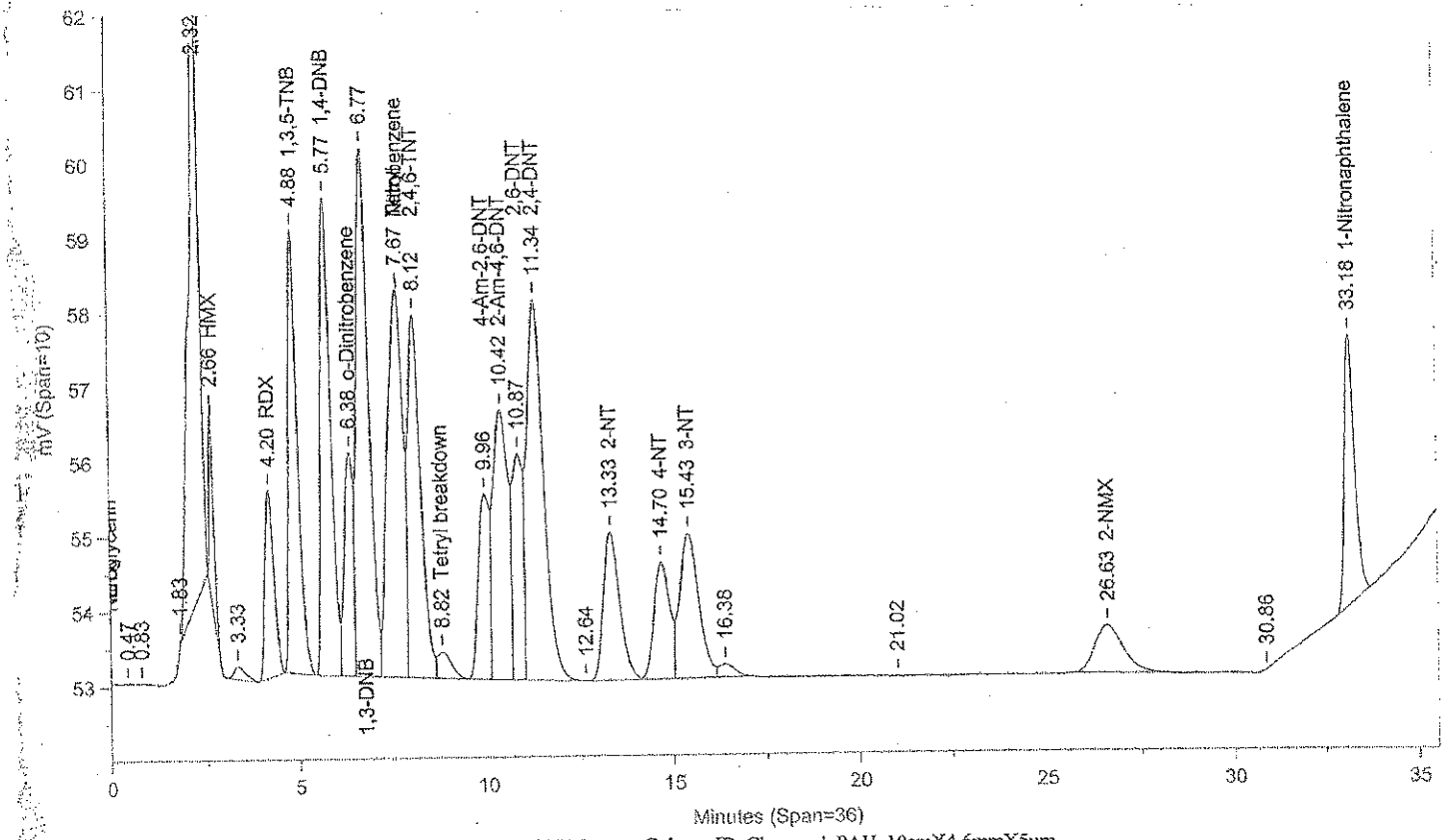
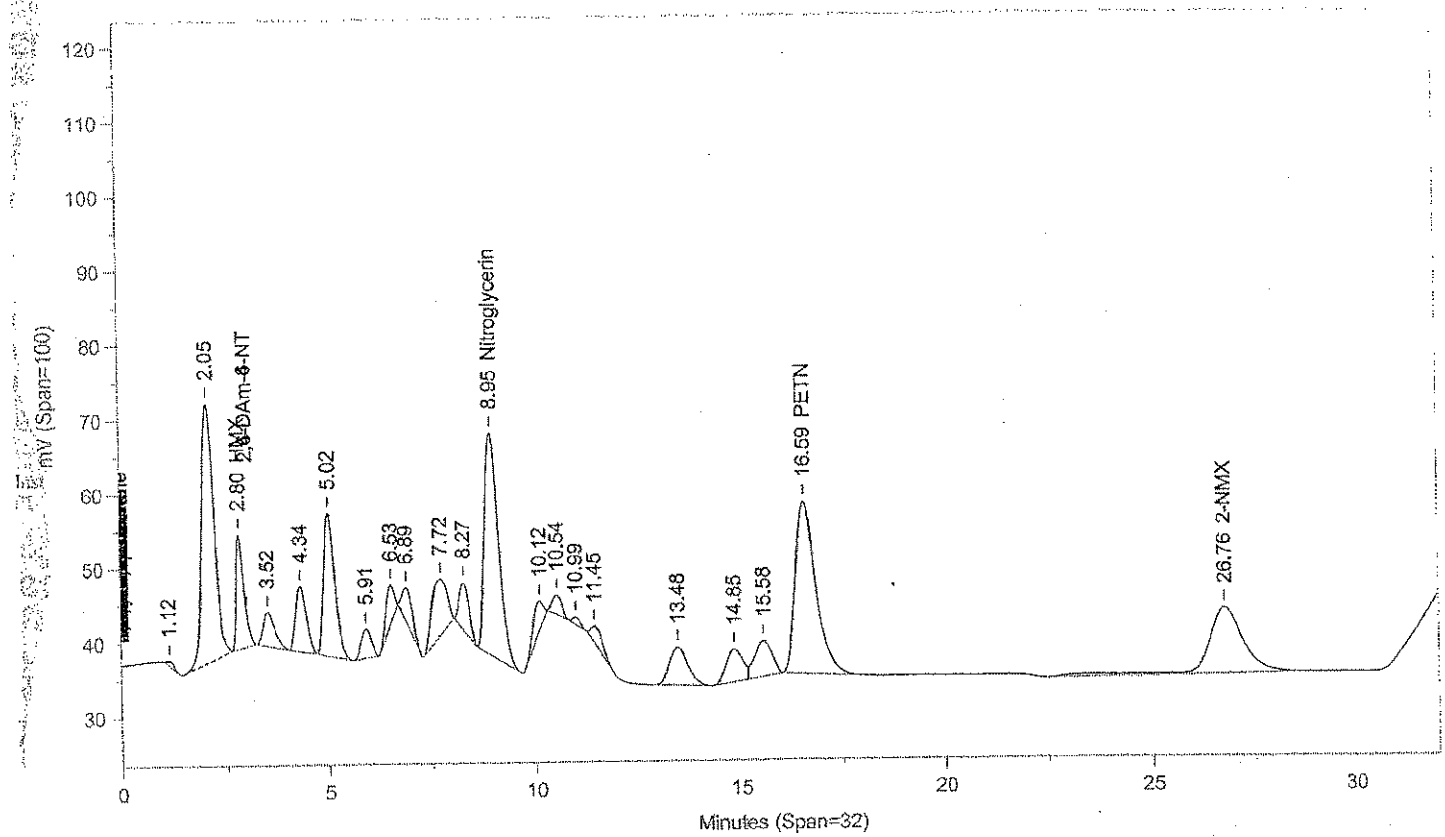
File: C:\CPWIN\DATA1\1E12310.10R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.10R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 8:27:44 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.799	203173	485.075	HMX
4.196	44563	496.073	RDX	.	0	.	RDX
4.878	103862	492.035	1,3,5-TNB	.	0	.	1,3,5-TNB
5.766	118827	466.405	1,4-DNB	.	0	.	1,4-DNB
6.38	49974	485.012	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.767	162830	501.796	1,3-DNB	.	0	.	1,3-DNB
7.669	151315	437.752	Tetryl	.	0	.	Tetryl
8.122	112252	492.632	2,4,6-TNT	.	0	.	2,4,6-TNT
8.816	8751	25.317	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.952	693352	5425.07	Nitroglycerin
9.965	51904	553.225	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.417	101911	465.313	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.873	59347	488.148	2,6-DNT	.	0	.	2,6-DNT
11.337	159047	480.845	2,4-DNT	.	0	.	2,4-DNT
13.328	60902	460.363	2-NT	.	0	.	2-NT
14.7	46563	496.259	4-NT	.	0	.	4-NT
15.426	67550	498.877	3-NT	.	0	.	3-NT
.	0	.	PETN	16.585	811052	5923.12	PETN
26.628	33626	986.469	2-NMX	26.76	543834	1113.345	2-NMX
33.185	71489	544.173	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.10A
Area File: C:\CPWIN\DATA1\1E12310B.10A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:31:48 PM
File Reported On: 11/7/2013 at 4:31:57 PM

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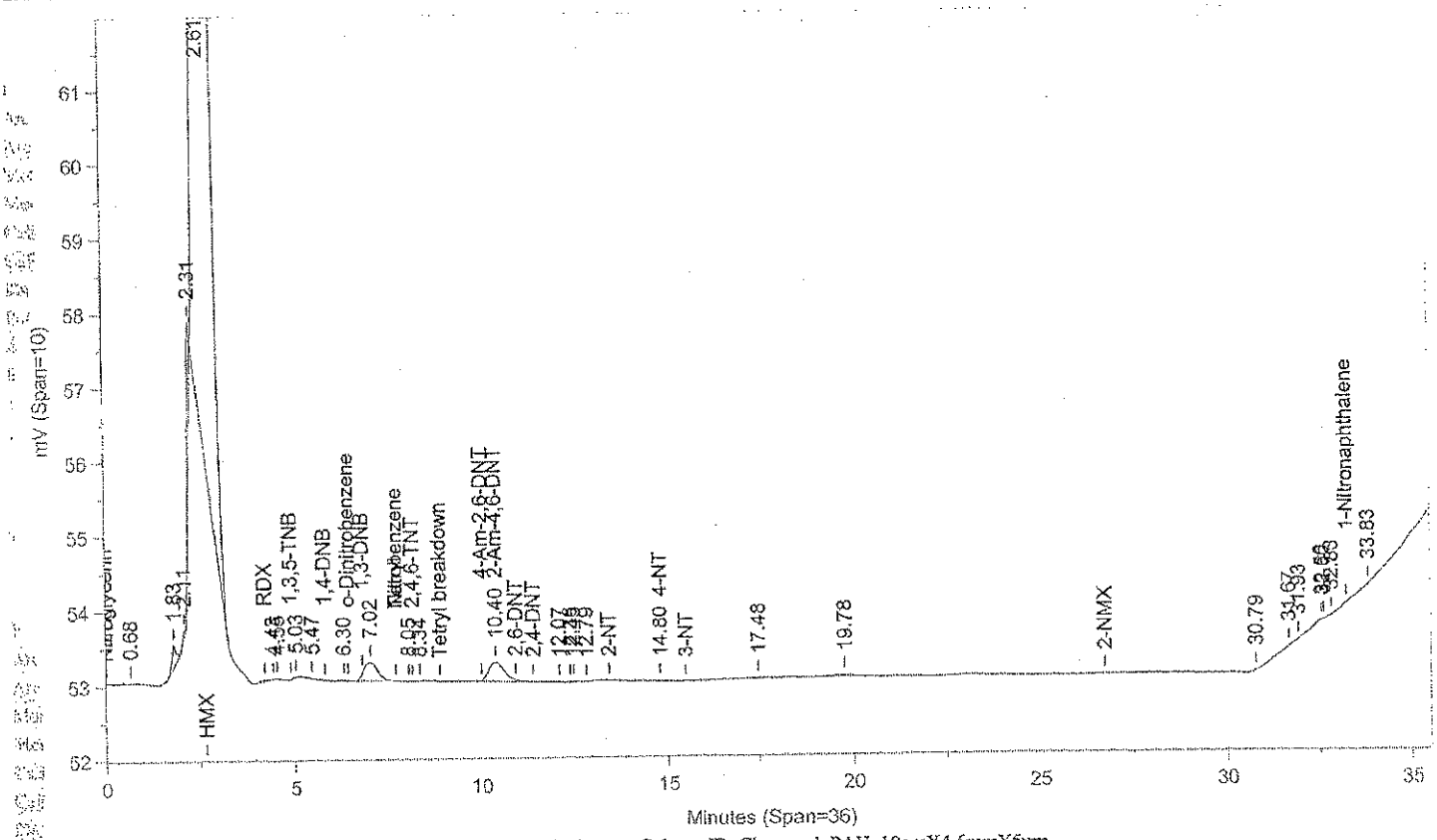
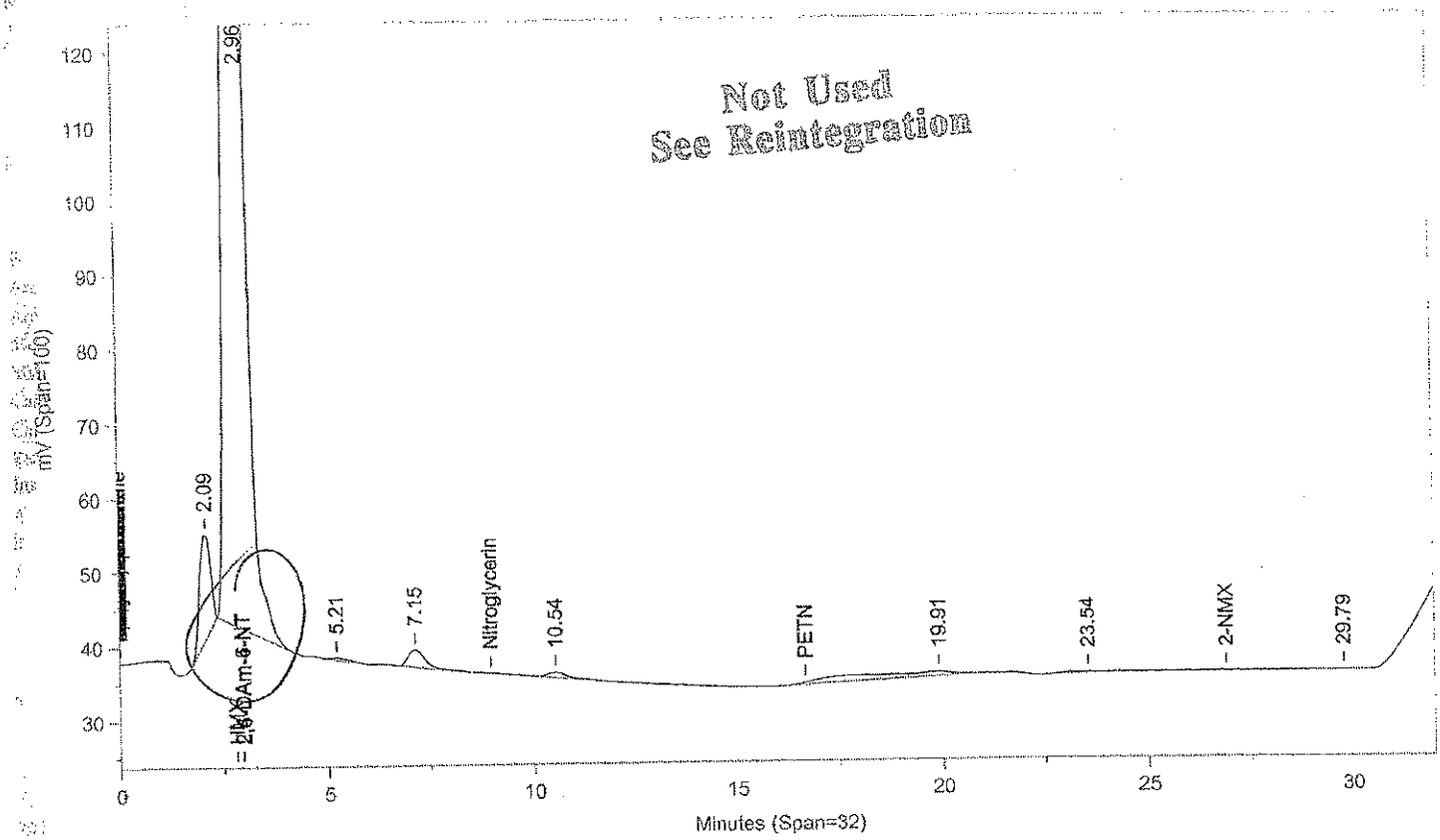
File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5296932	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.11A
Area File: C:\CPWIN\DATA1\1E12310B.11A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:18 PM
File Reported On: 11/7/2013 at 4:32:28 PM

Not Used
See Reintegration

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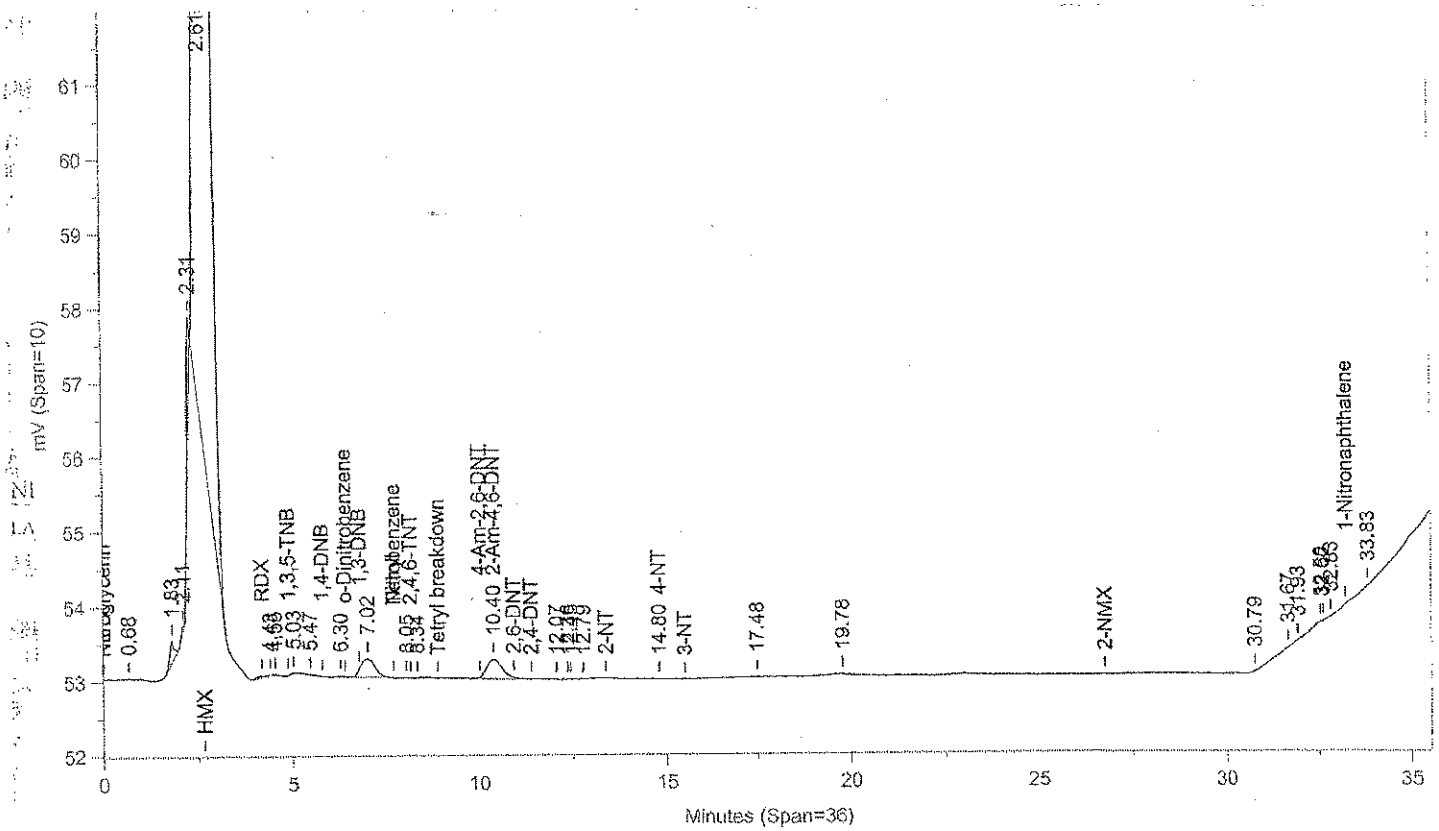
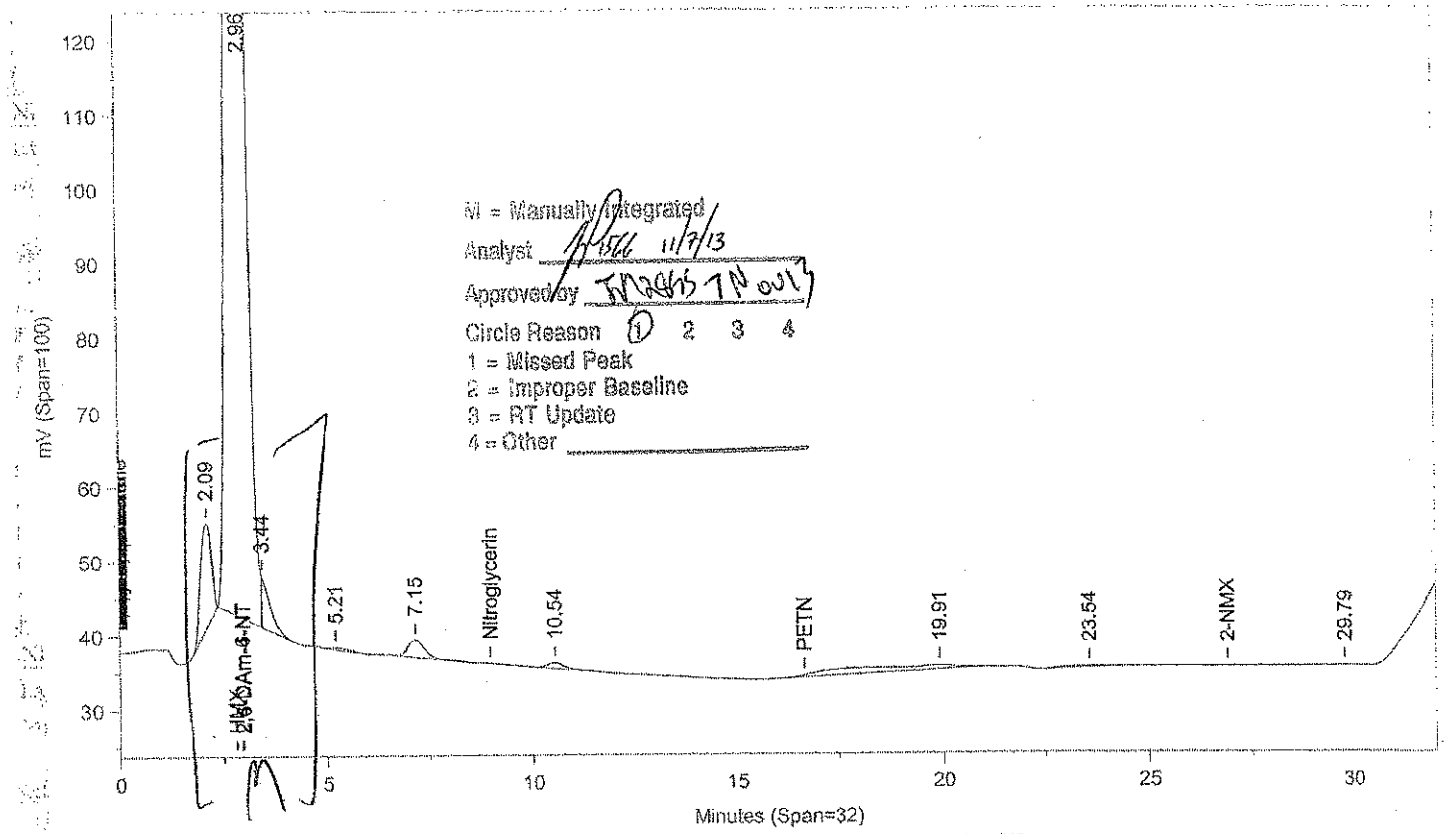
File: C:\CPWIN\DATA1\1E12310.11R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.11R



M = Manually Integrated
Analyst [signature] 11/7/13
Approved by [signature] 11/8/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.958	5203836	.	2,4-DAm-6-NT
10.405	7917	36.147	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
14.8	169	1.8	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:38:00 PM
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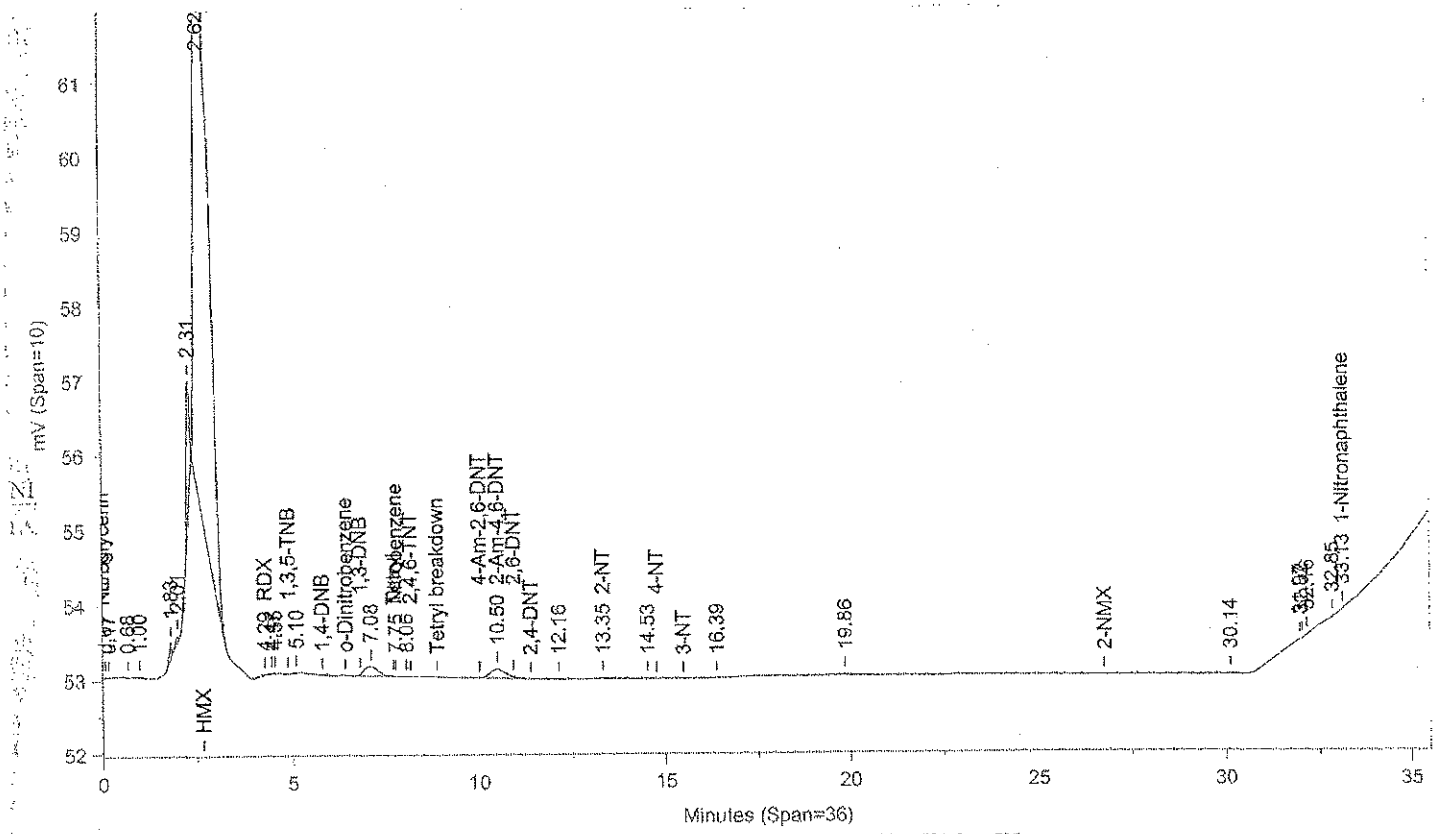
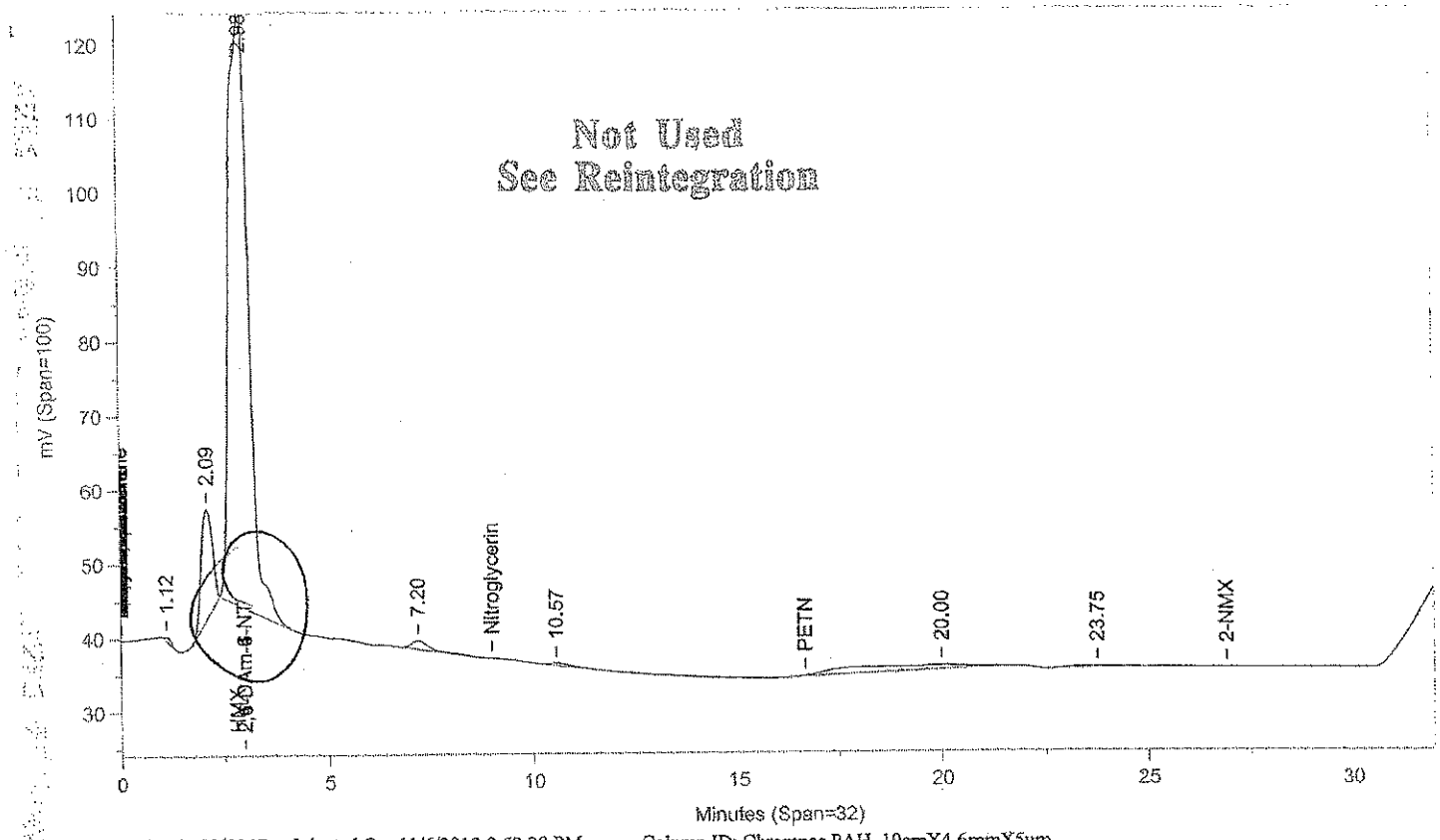
File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.984	2610277		2,4-DAm-6-NT
4.286	315	-8.906	RDX		0		RDX
7.752	6	.019	Nitrobenzene		0		Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT		0		2-Am-4,6-DNT
13.345	694	5.246	2-NT		0		2-NT
33.134	9	.07	1-Nitronaphthalene		0		1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1E12310.12A
Area File: C:\CPWIN\DATA1\1E12310B.12A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:32:48 PM
File Reported On: 11/7/2013 at 4:32:58 PM

Not Used
See Reintegration

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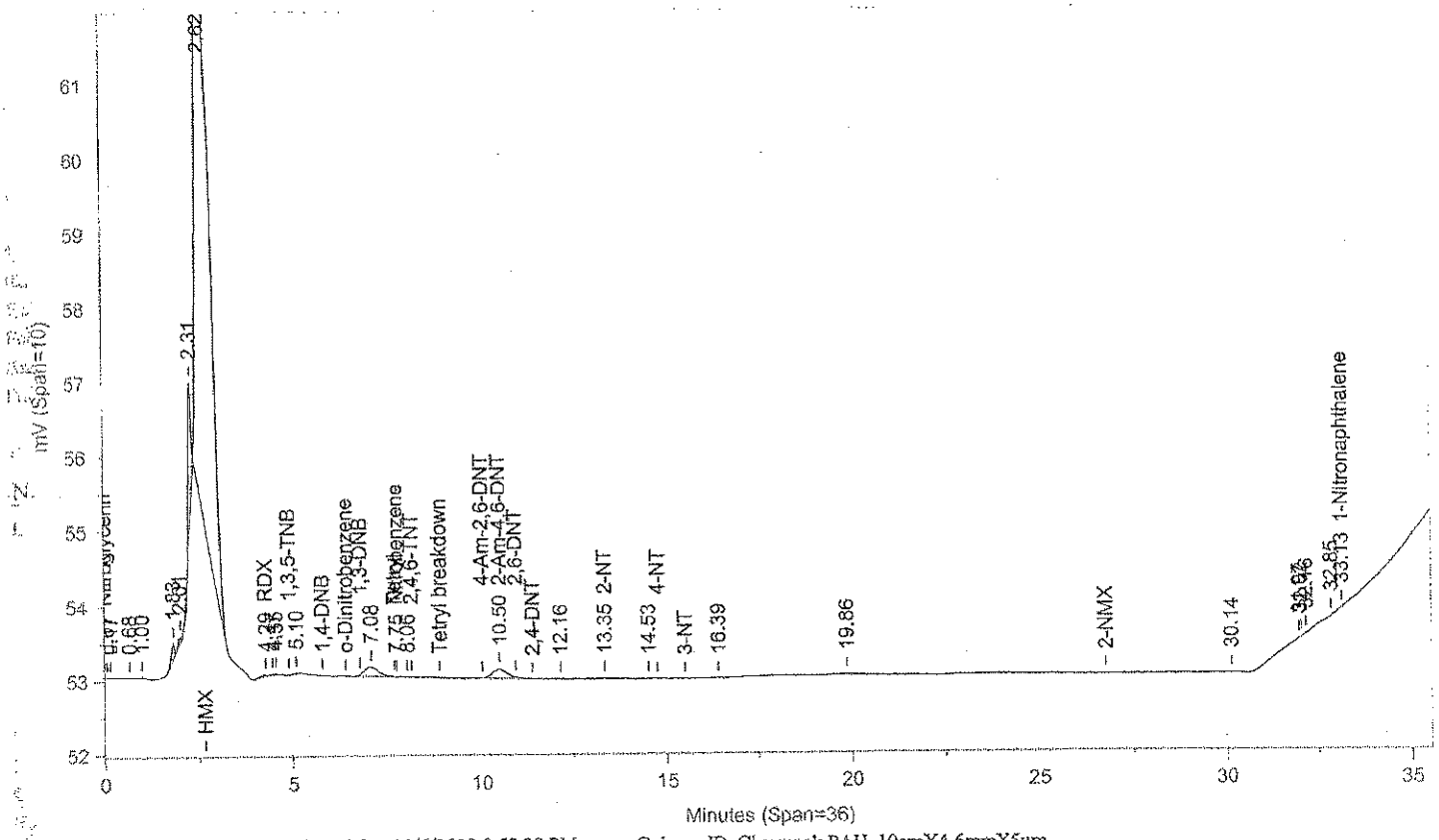
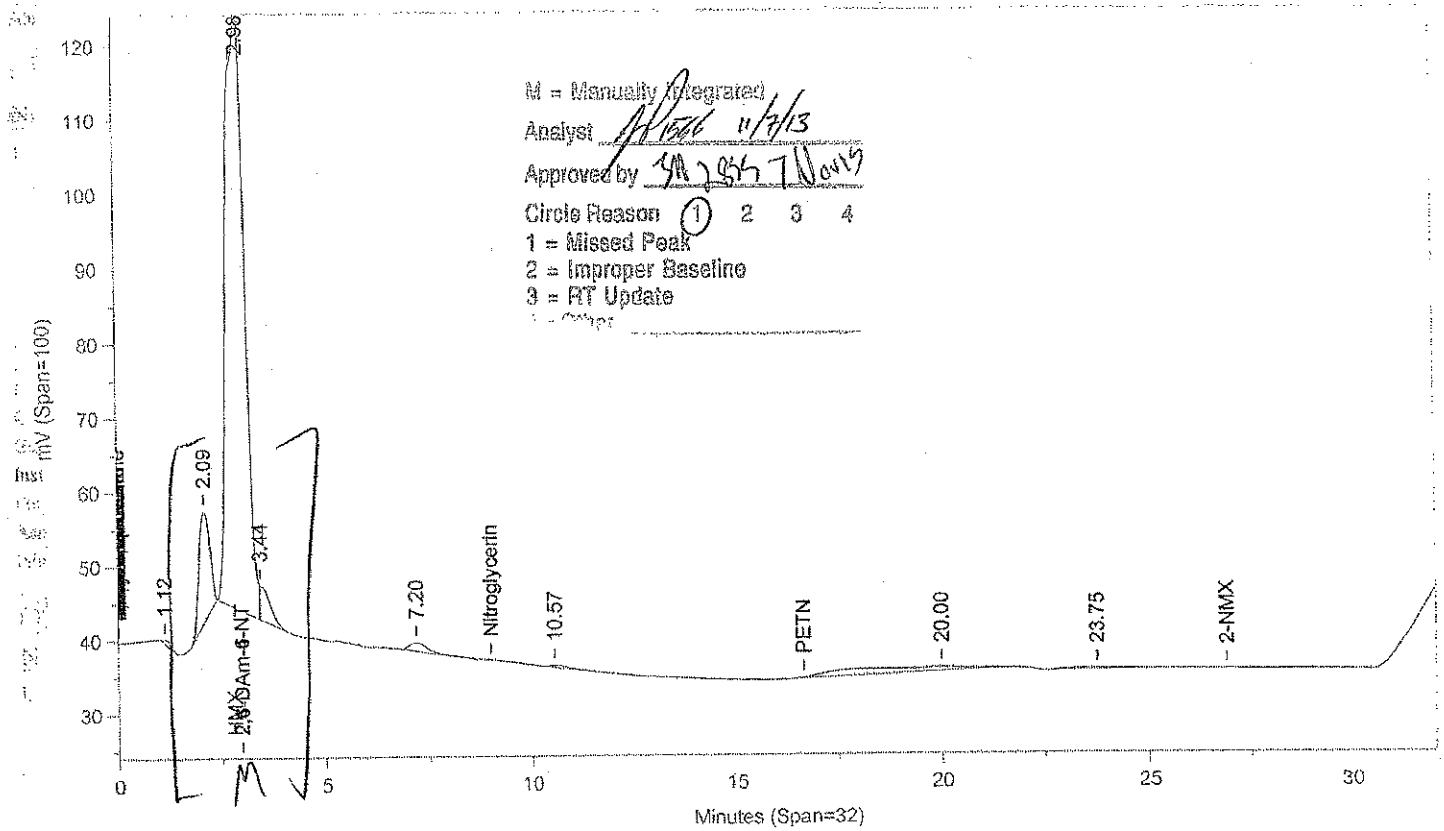
File: C:\CPWIN\DATA1\1E12310.12R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.12R



M = Manually Integrated
Analyst 11/7/13
Approved by
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update

Instrument ID: CP12--X6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.984	2533808		2,4-DAm-6-NT
4.286	315	-8.906	RDX		0		RDX
7.752	6	.019	Nitrobenzene		0		Nitrobenzene
10.497	3725	17.006	2-Am-4,6-DNT		0		2-Am-4,6-DNT
13.345	694	5.246	2-NT		0		2-NT
33.134	9	.07	1-Nitronaphthalene		0		1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:39:16 PM
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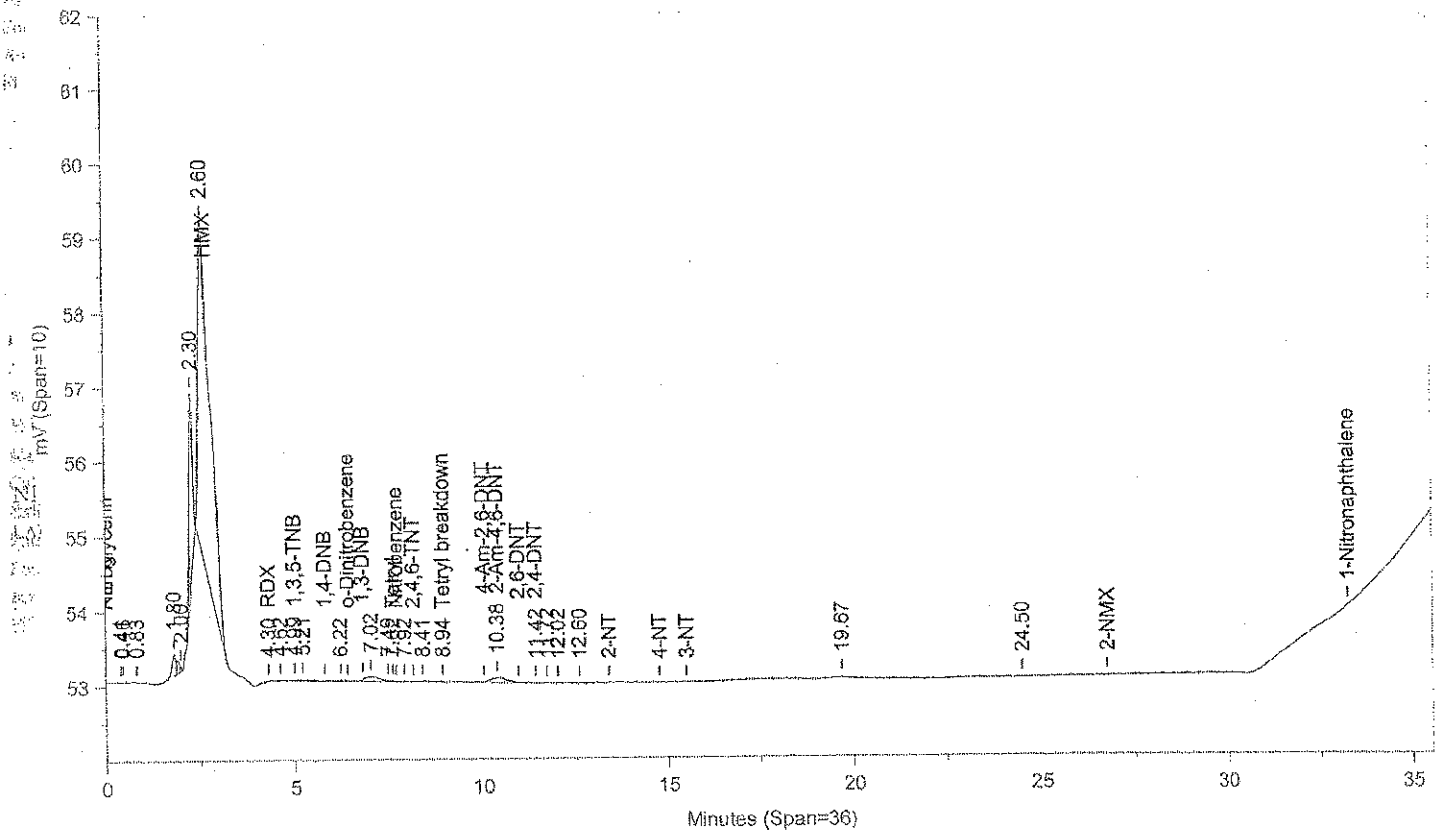
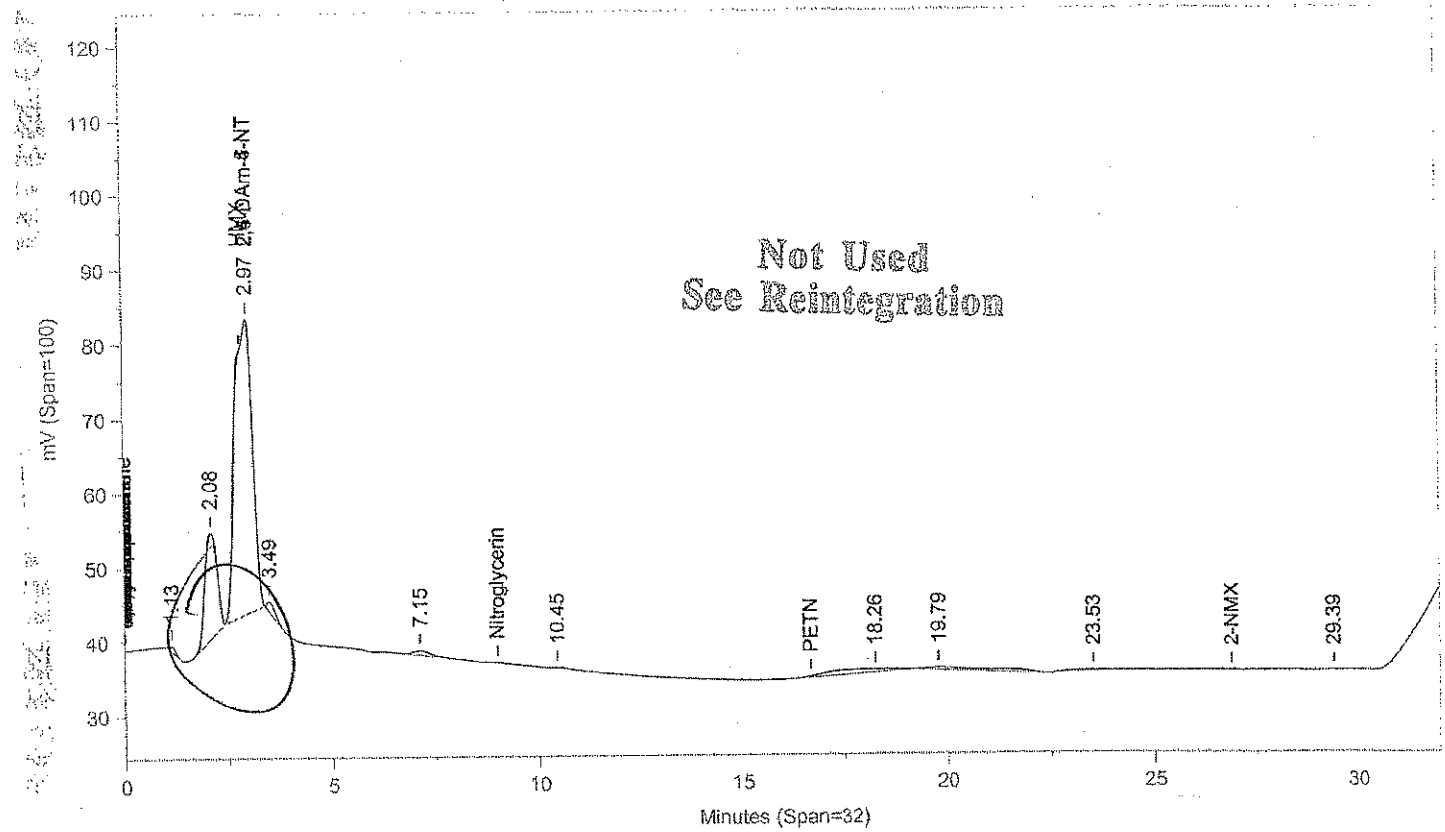
File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0		2,4-DAm-6-NT	2.969	1176025		2,4-DAm-6-NT
4.3	314	-8.921	RDX		0		RDX
4.99	83	.394	1,3,5-TNB		0		1,3,5-TNB
7.617	88	.254	Tetryl		0		Tetryl
8.938	52	.15	Tetryl breakdown		0		Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT		0		2-Am-4,6-DNT
11.418	51	.154	2,4-DNT		0		2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.13A
Area File: C:\CPWIN\DATA1\1E12310B.13A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:18 PM
File Reported On: 11/7/2013 at 4:33:28 PM

Not Used
See Reintegration

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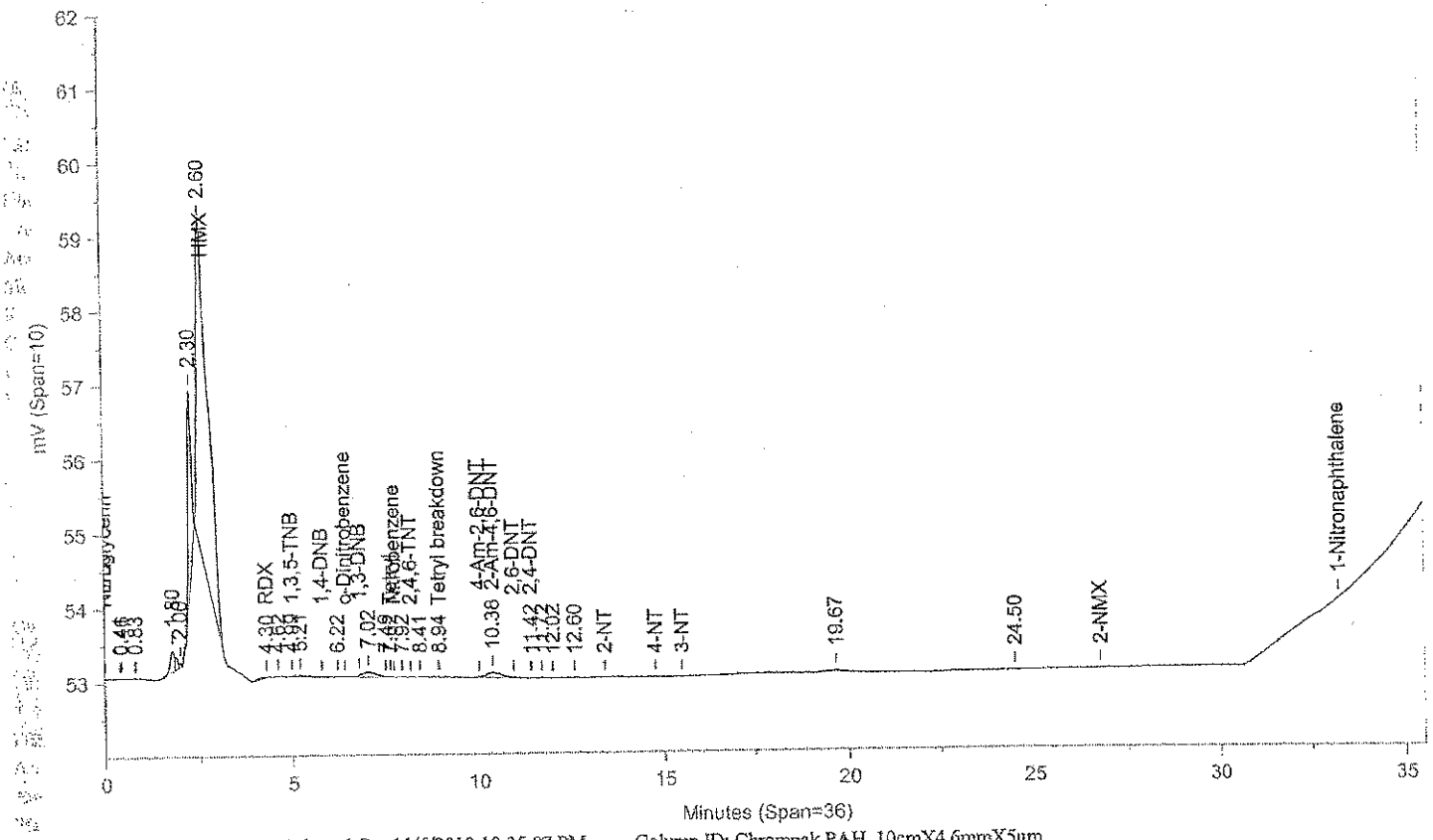
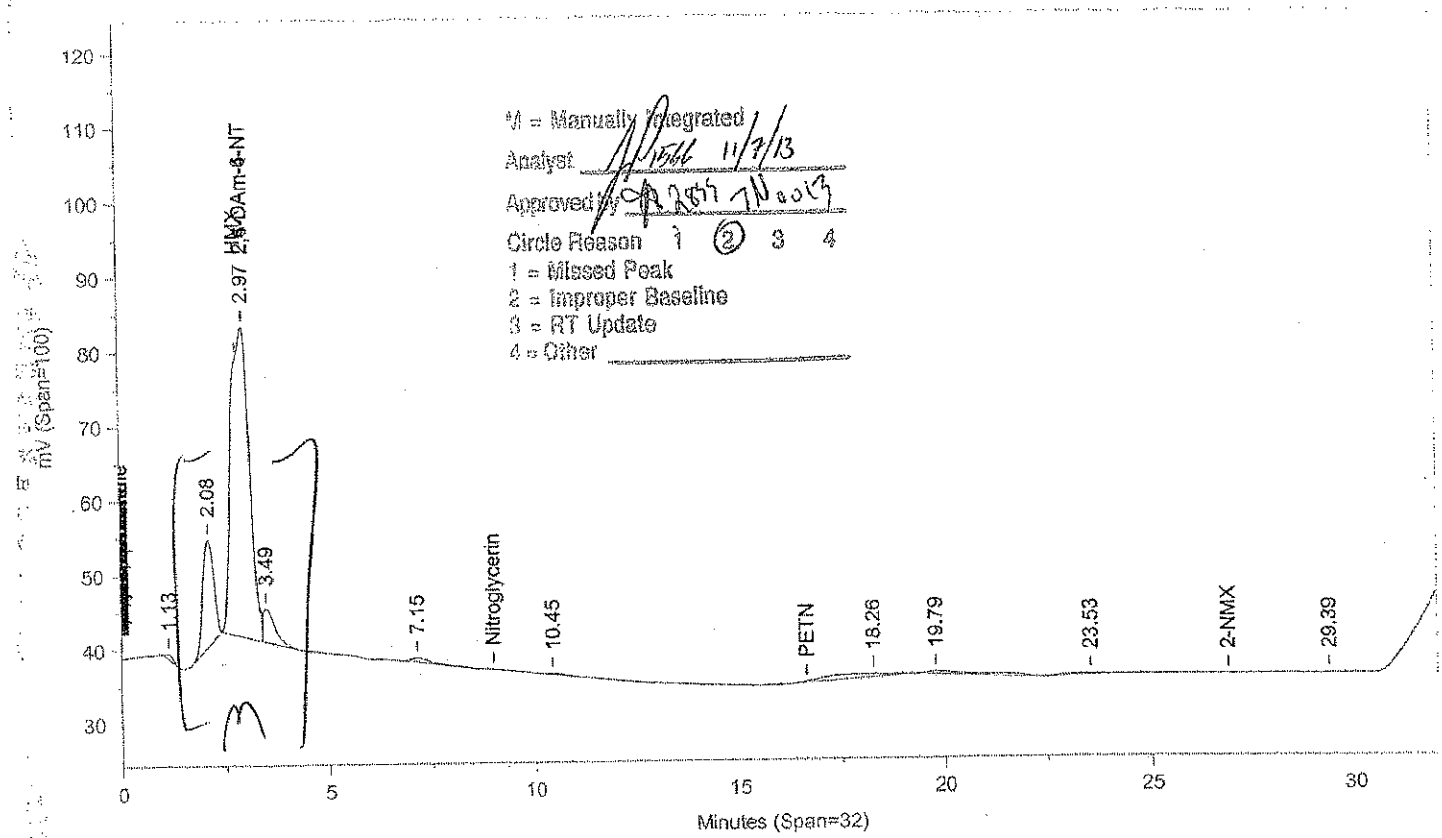
File: C:\CPWIN\DATA1\1E12310.13R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.13R



M = Manually Integrated
Analyst 11/7/13
Approved 11/8/13
Circle Reason 1 (2) 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.969	1287697	.	2,4-DAm-6-NT
4.3	314	-8.921	RDX	.	0	.	RDX
4.99	83	.394	1,3,5-TNB	.	0	.	1,3,5-TNB
7.617	88	.254	Tetryl	.	0	.	Tetryl
8.938	52	.15	Tetryl breakdown	.	0	.	Tetryl breakdown
10.379	2036	9.295	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.418	51	.154	2,4-DNT	.	0	.	2,4-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:40:44 PM
File Reported On: 11/7/2013 at 4:40:42 PM

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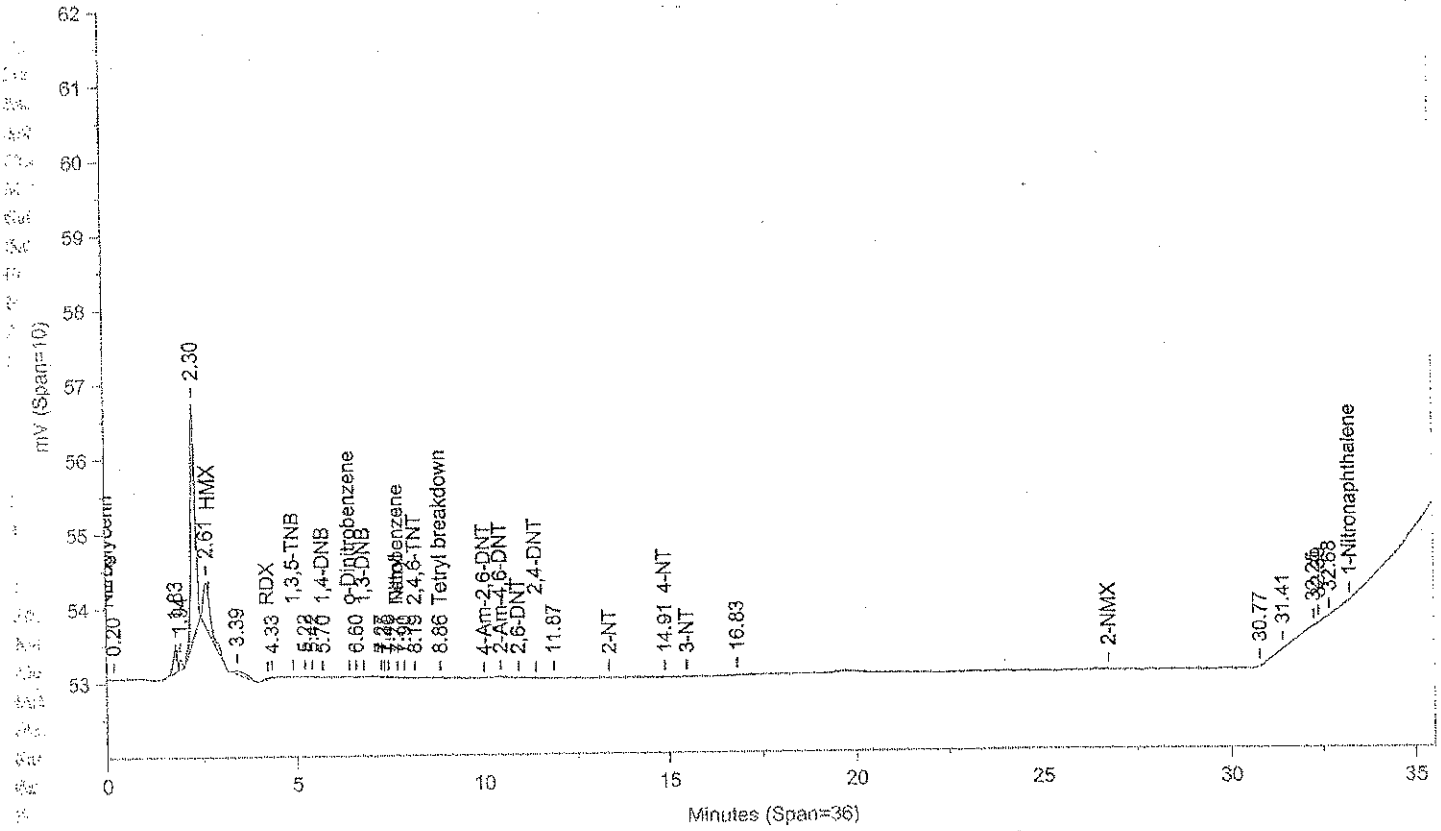
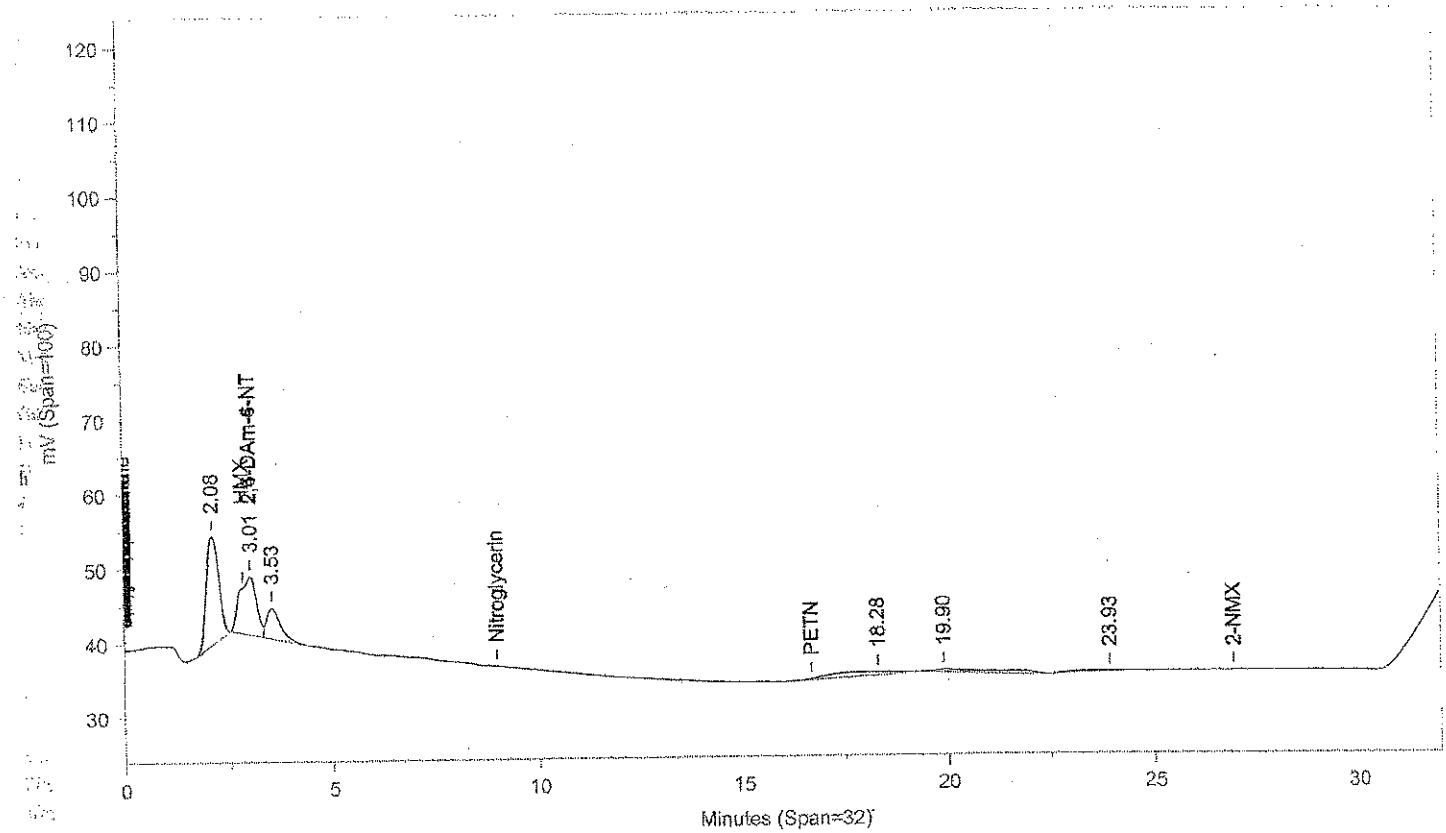
File: C:\CPWIN\DATA1\1E12310.14R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.14R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

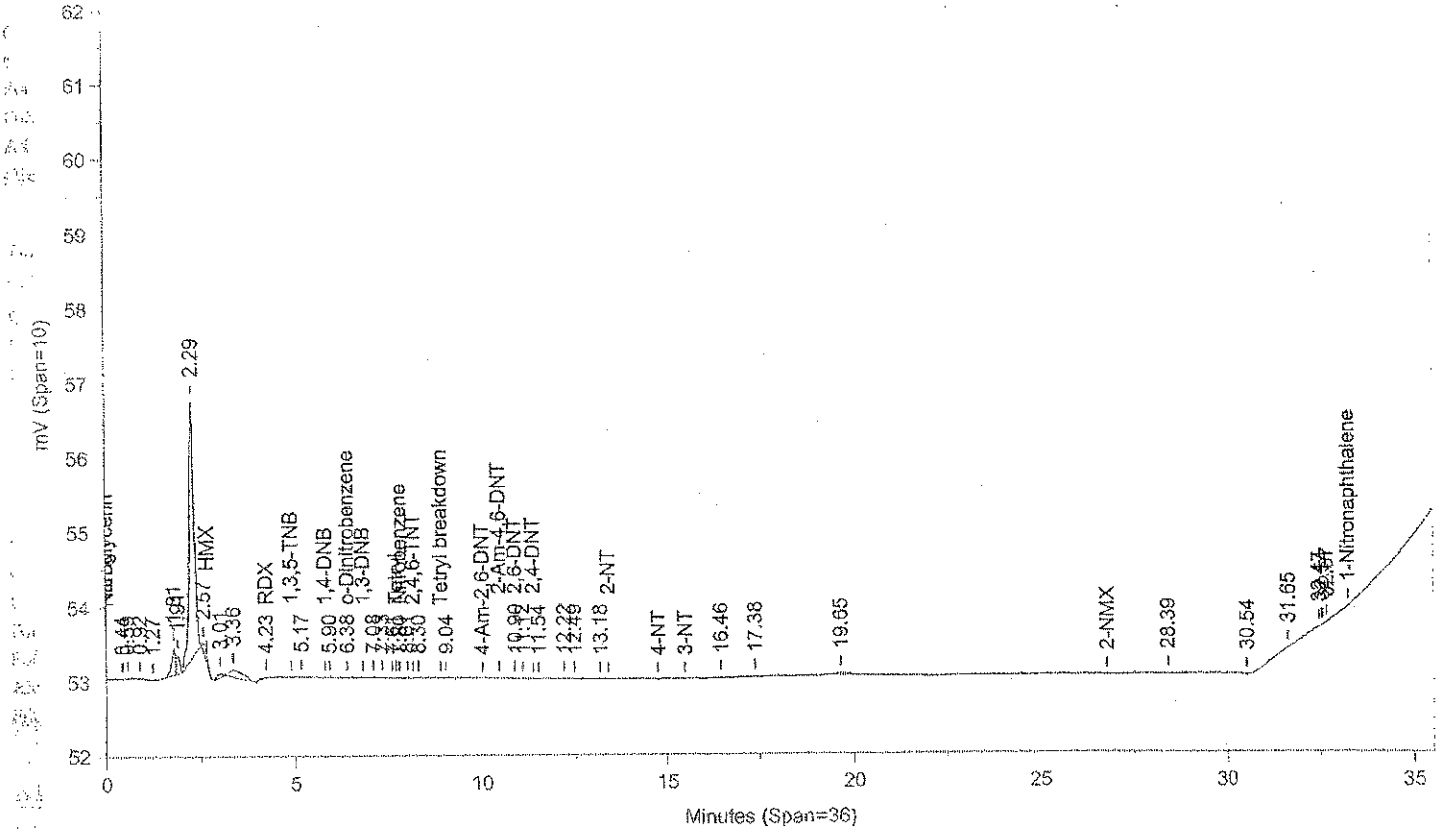
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	3.006	225601	.	2,4-DAm-6-NT
5.701	20	.078	1,4-DNB	.	0	.	1,4-DNB
7.706	5	.014	Tetryl	.	0	.	Tetryl
8.189	38	.167	2,4,6-TNT	.	0	.	2,4,6-TNT
8.865	15	.044	Tetryl breakdown	.	0	.	Tetryl breakdown
14.91	201	2.138	4-NT	.	0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\1E12310.14A
Area File: C:\CPWIN\DATA1\1E12310B.14A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:33:50 PM
File Reported On: 11/7/2013 at 4:33:59 PM

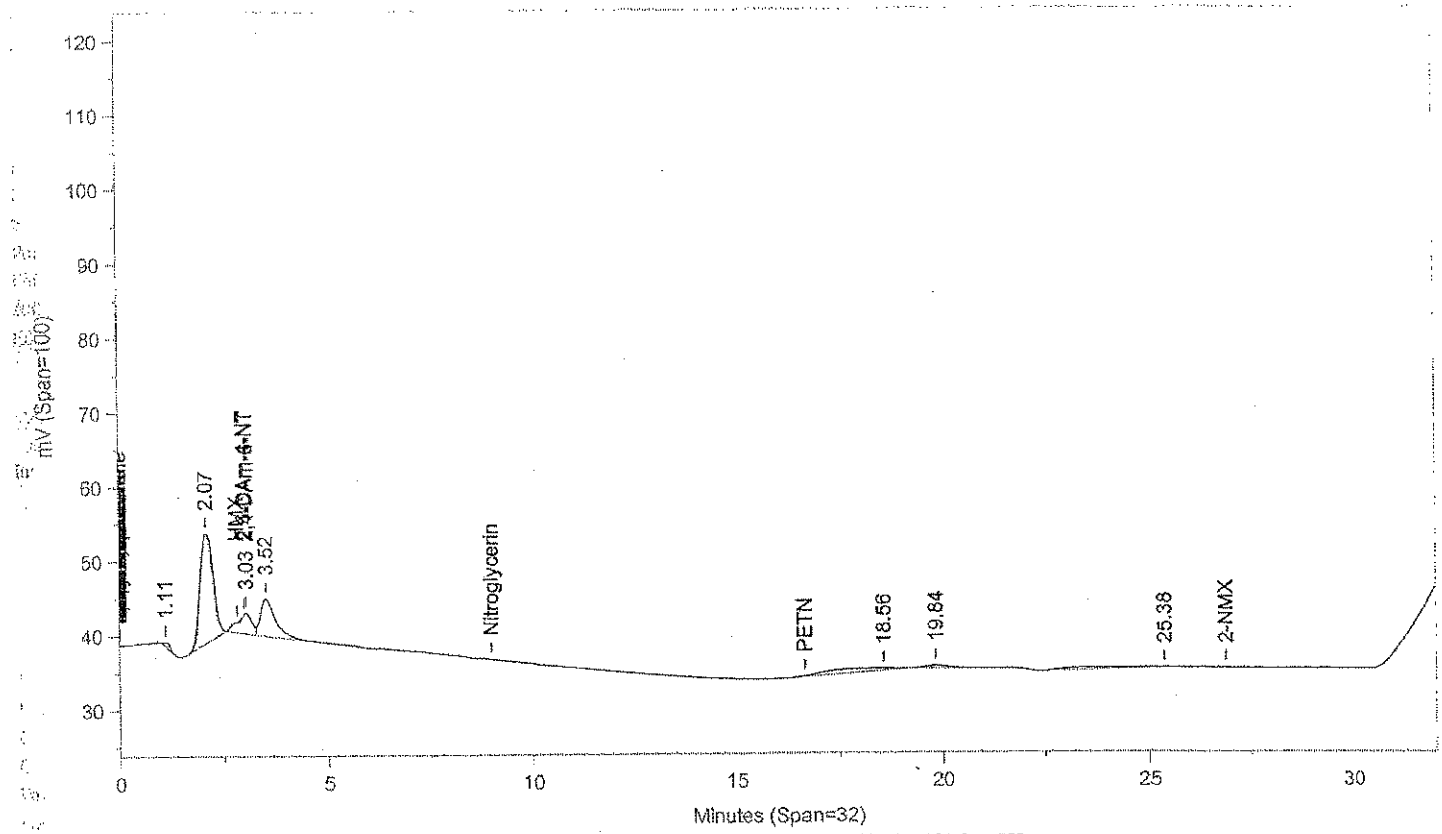
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.15R



Instrument ID: CP12--X6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.15R



Instrument ID: CP12--X6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

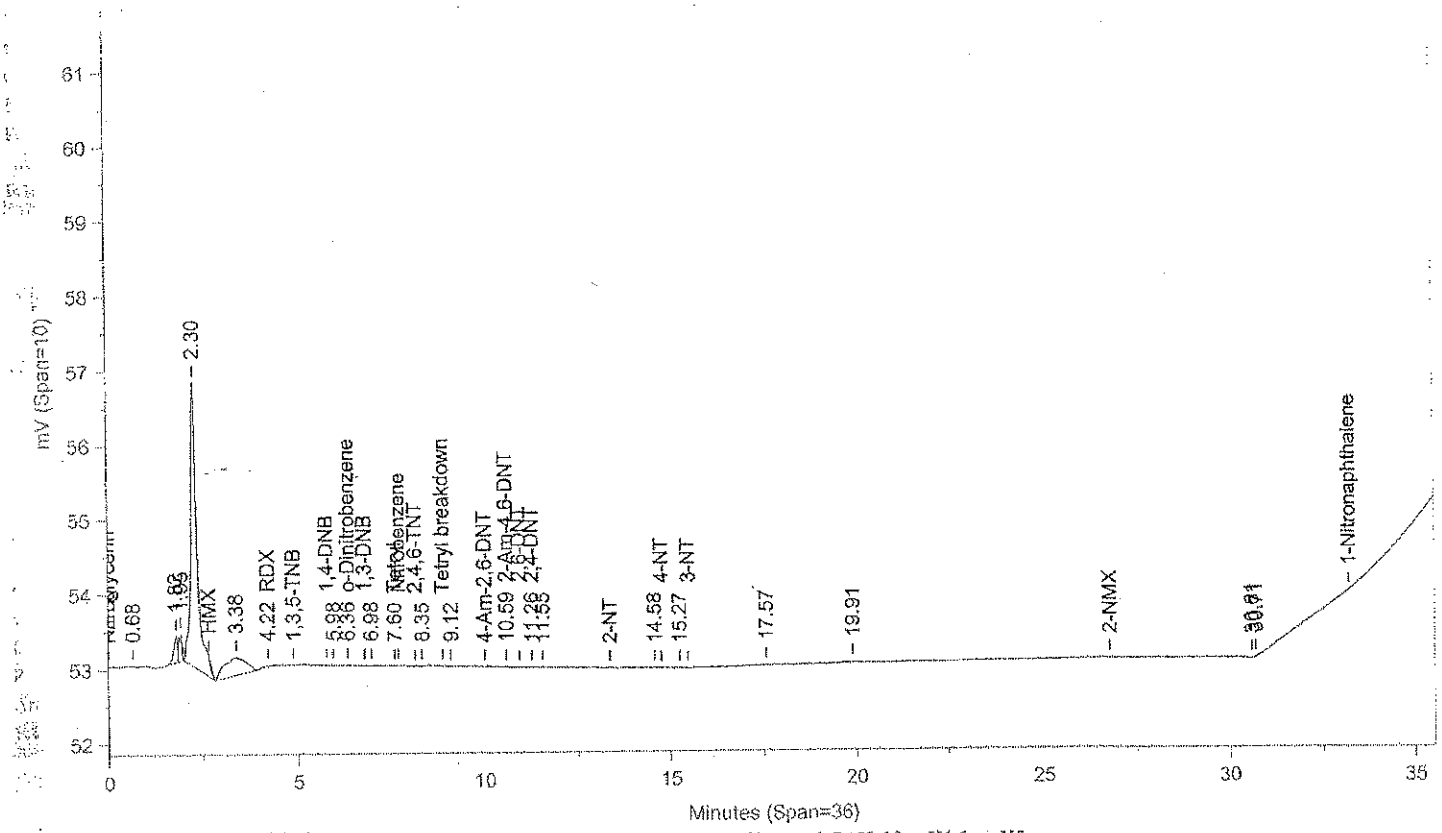
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.033	66258	.	2,4-DAm-6-NT
4.231	292	-9.173	RDX	.	0	.	RDX
6.378	115	1.119	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.8	52	.151	Nitrobenzene	.	0	.	Nitrobenzene
10.905	31	.257	2,6-DNT	.	0	.	2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.15A
Area File: C:\CPWIN\DATA1\1E12310B.15A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:20 PM
Report Reported On: 11/7/2013 at 4:34:29 PM

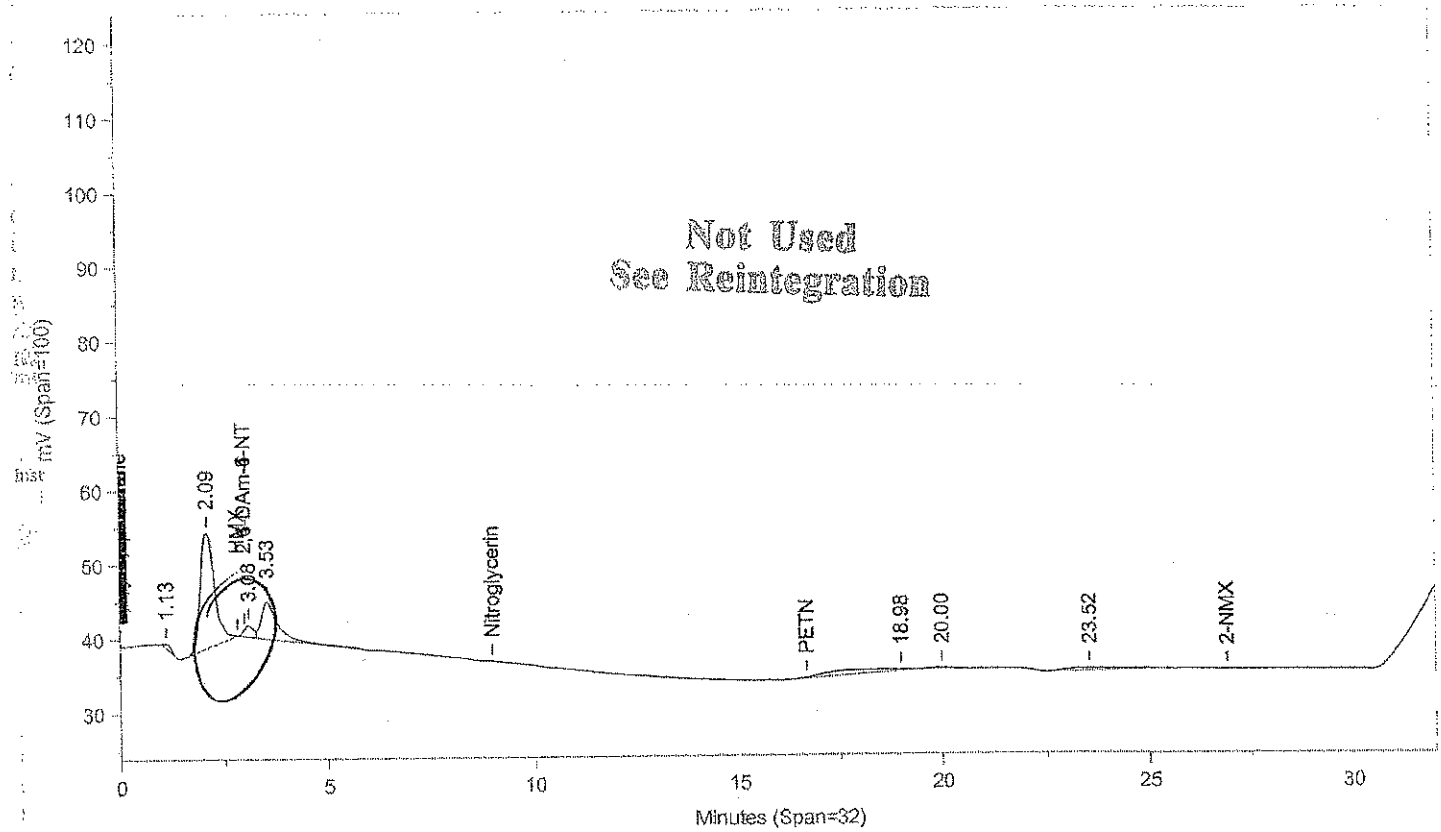
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

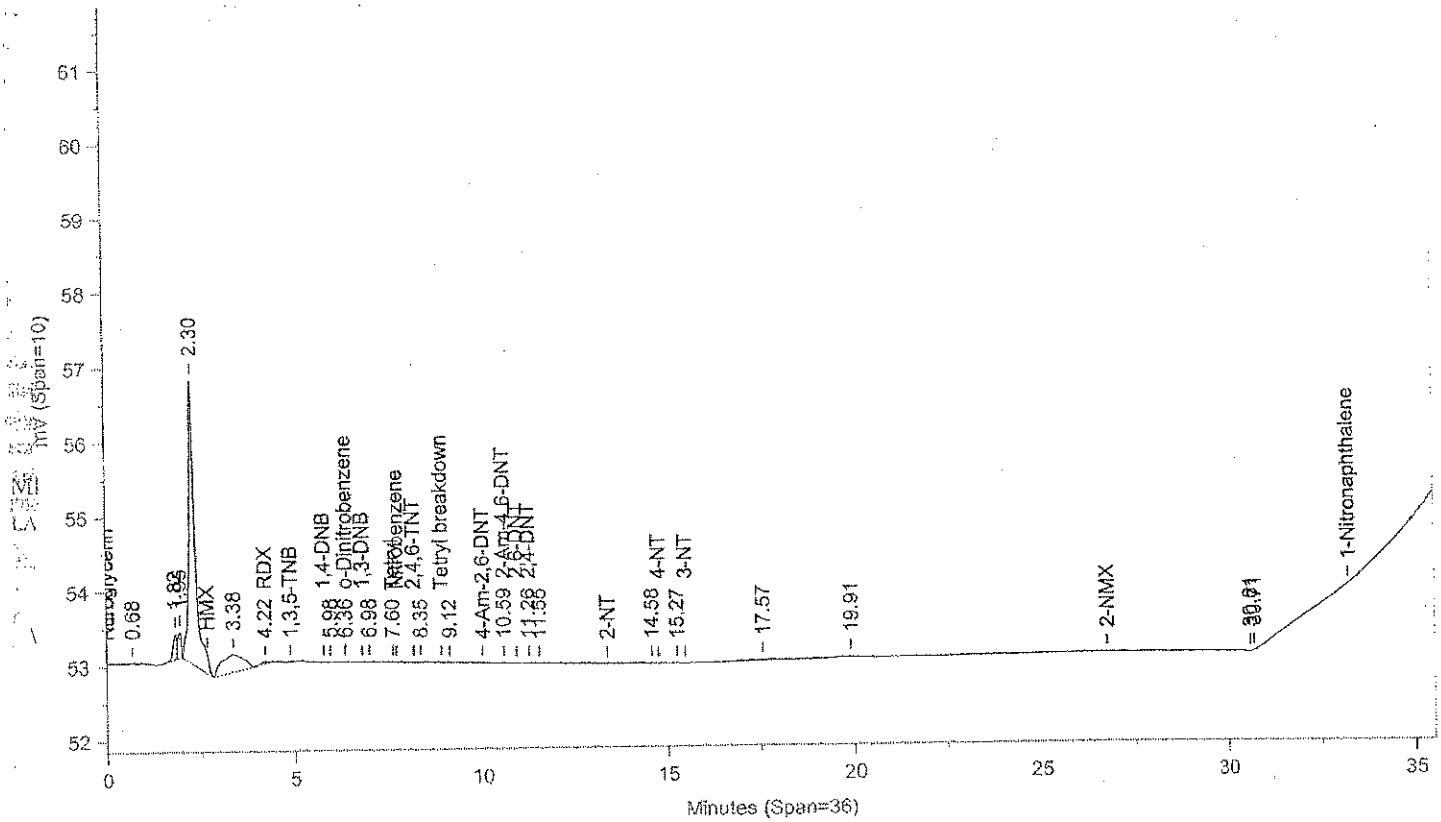
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.219	328	-8.766	RDX			0	RDX
6.36	117	1.134	o-Dinitrobenzene			0	o-Dinitrobenzene
7.6	36	.105	Tetryl			0	Tetryl
10.589	85	.389	2-Am-4,6-DNT			0	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT			0	2,4-DNT

Files:
Area File: C:\CPWIN\DATA1\1E12310.16A
Area File: C:\CPWIN\DATA1\1E12310B.16A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:34:50 PM
File Reported On: 11/7/2013 at 4:35:00 PM

Not Used
See Reintegration

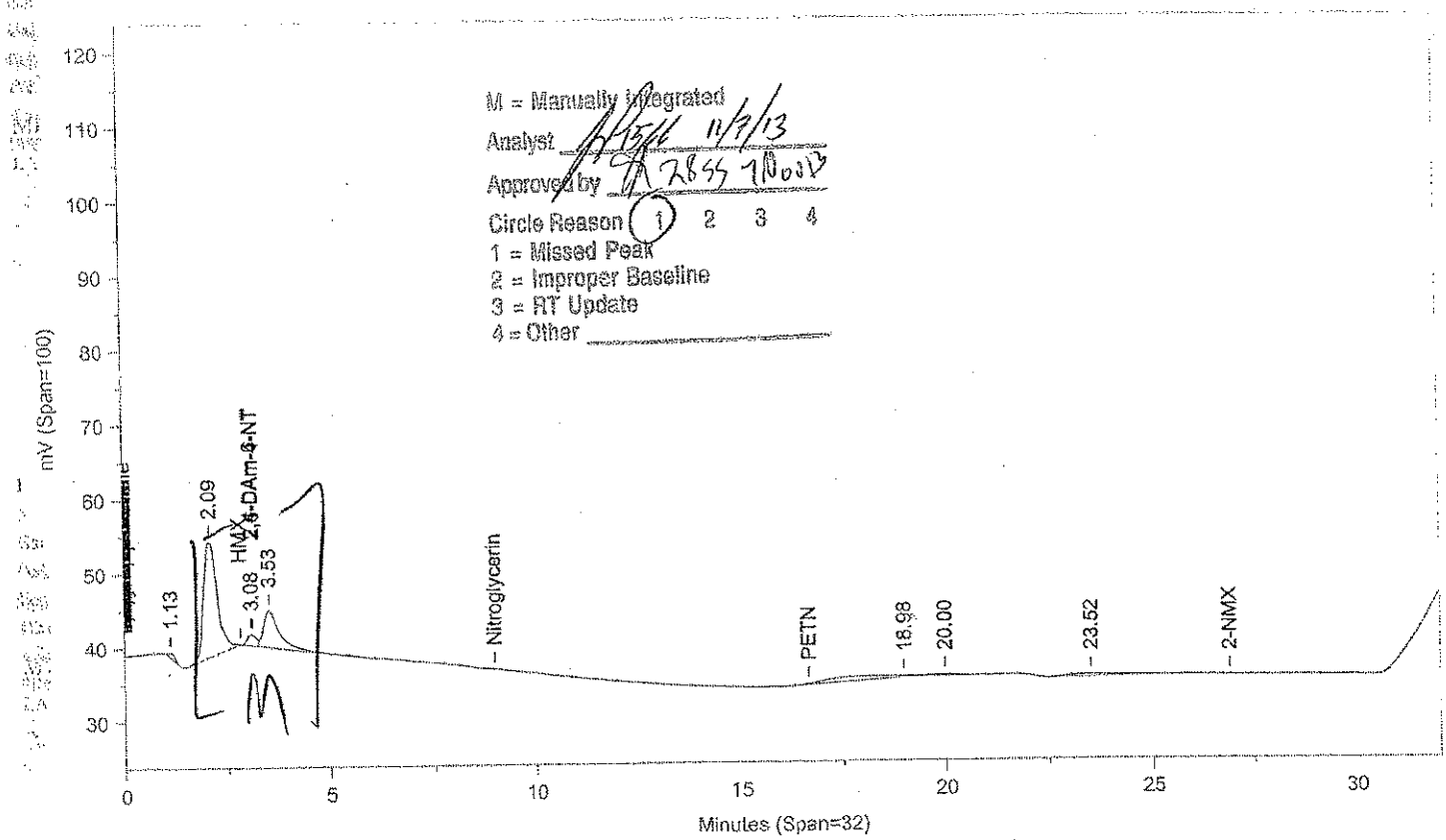
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1E12310.16R



Instrument ID: CP12--X6329A Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\1E12310B.16R



M = Manually integrated

Analyst [signature] 11/7/13

Approved by [signature]

Circle Reason 1 2 3 4

1 = Missed Peak

2 = Improper Baseline

3 = RT Update

4 = Other

Instrument ID: CP12--X6329B Injected On: 11/7/2013 12:42:25 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

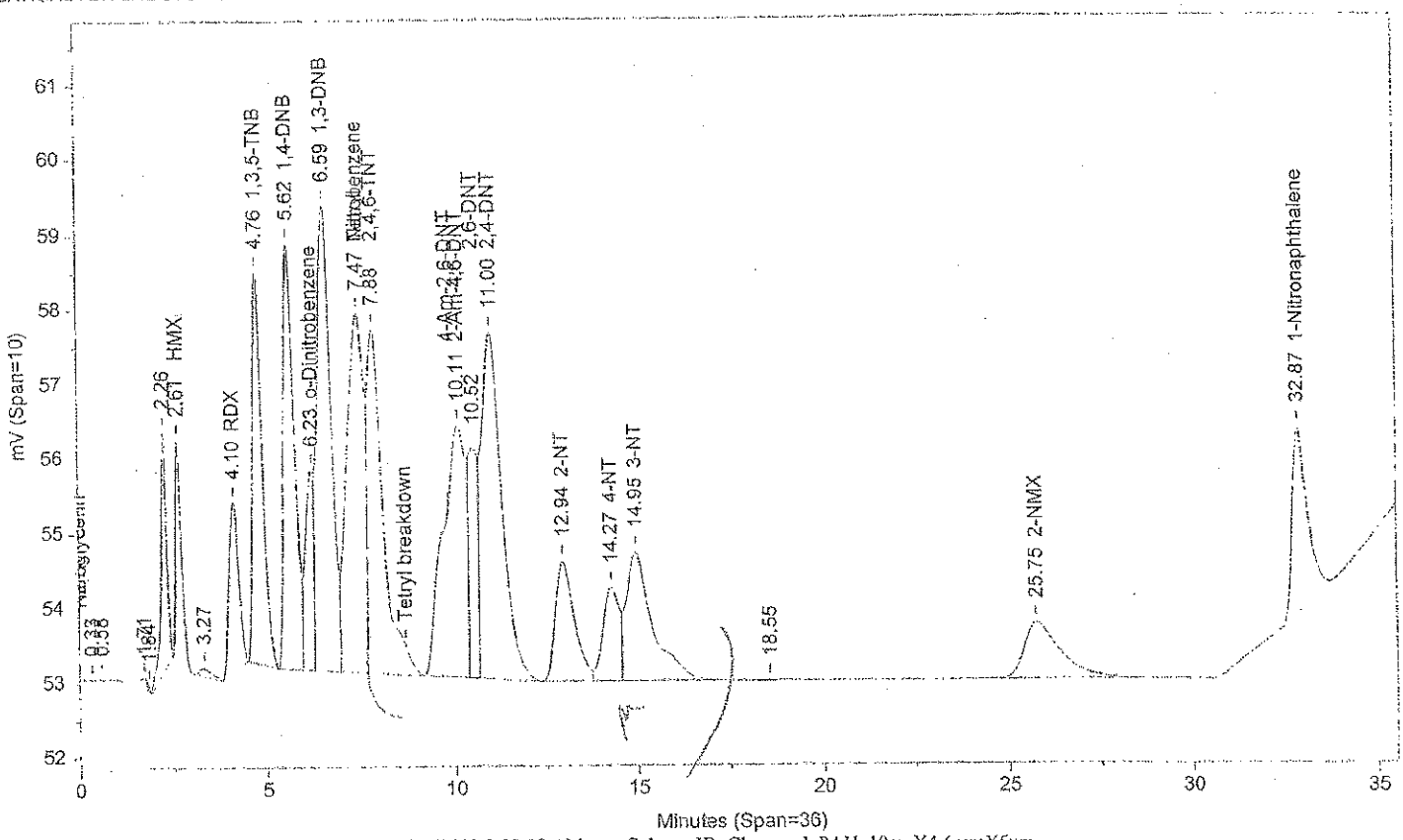
Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.084	23496	.	2,4-DAm-6-NT
4.219	328	-8.766	RDX	.	0	.	RDX
6.36	117	1.134	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
7.6	36	.105	Tetryl	.	0	.	Tetryl
10.589	85	.389	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.262	166	.503	2,4-DNT	.	0	.	2,4-DNT

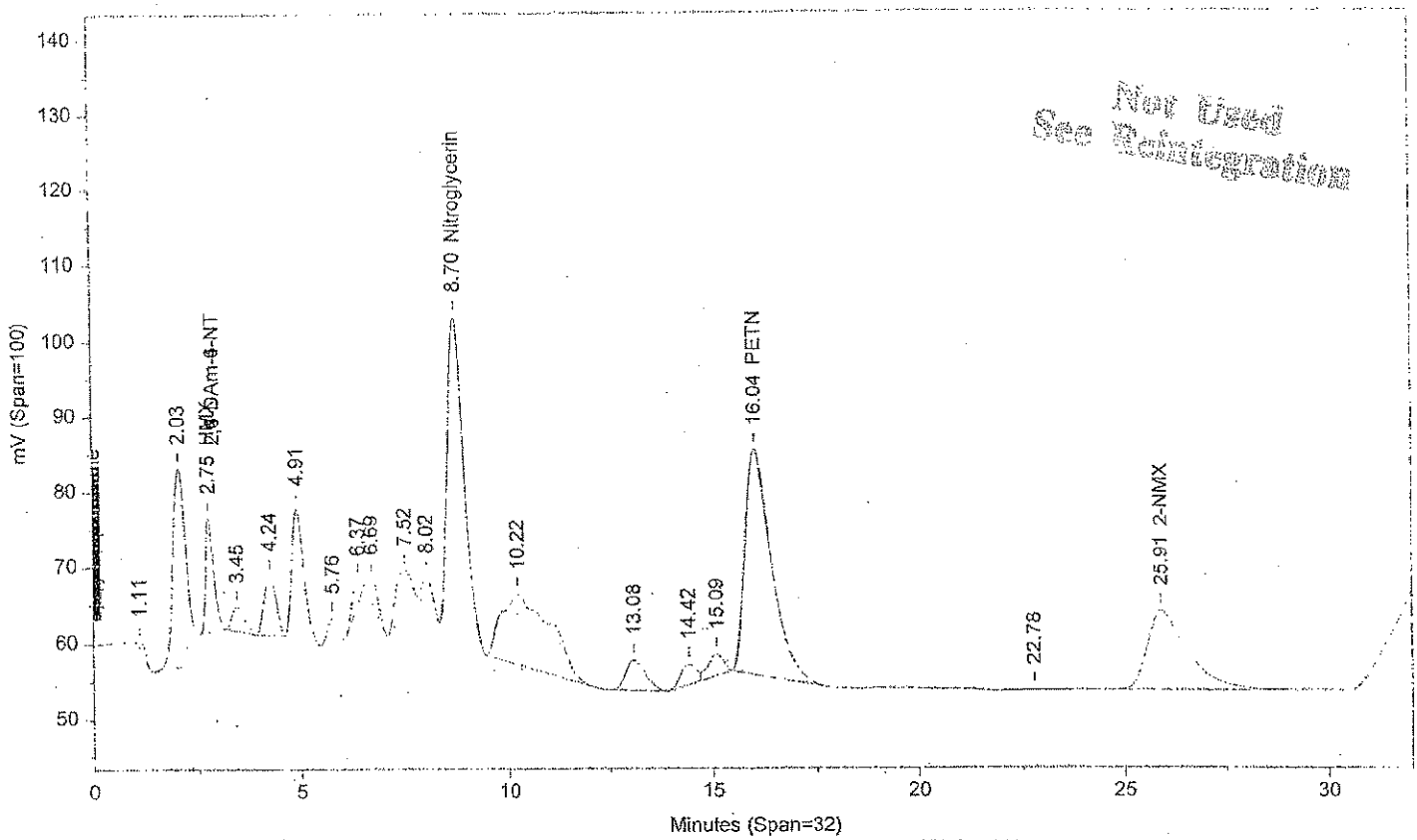
Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\1E12310.CAL
Calibration File B: C:\CPWIN\DATA1\1E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 4:44:58 PM
File Reported On: 11/7/2013 at 4:44:56 PM

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	40946	397.391	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	164441	506.762	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	134888	591.974	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
10.111	141225	644.817	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	50399	414.552	2,6-DNT	.	0	.	2,6-DNT
10.997	178956	541.037	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	38746	412.947	4-NT	.	0	.	4-NT
14.953	86090	635.799	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.58A
Area File: C:\CPWIN\DATA1\4E12310B.58A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:34:44 PM
File Reported On: 11/17/2013 at 9:34:54 PM

Not Used
See Reintegration

NITR31324O PVNITR3PV CCAL 1331899999

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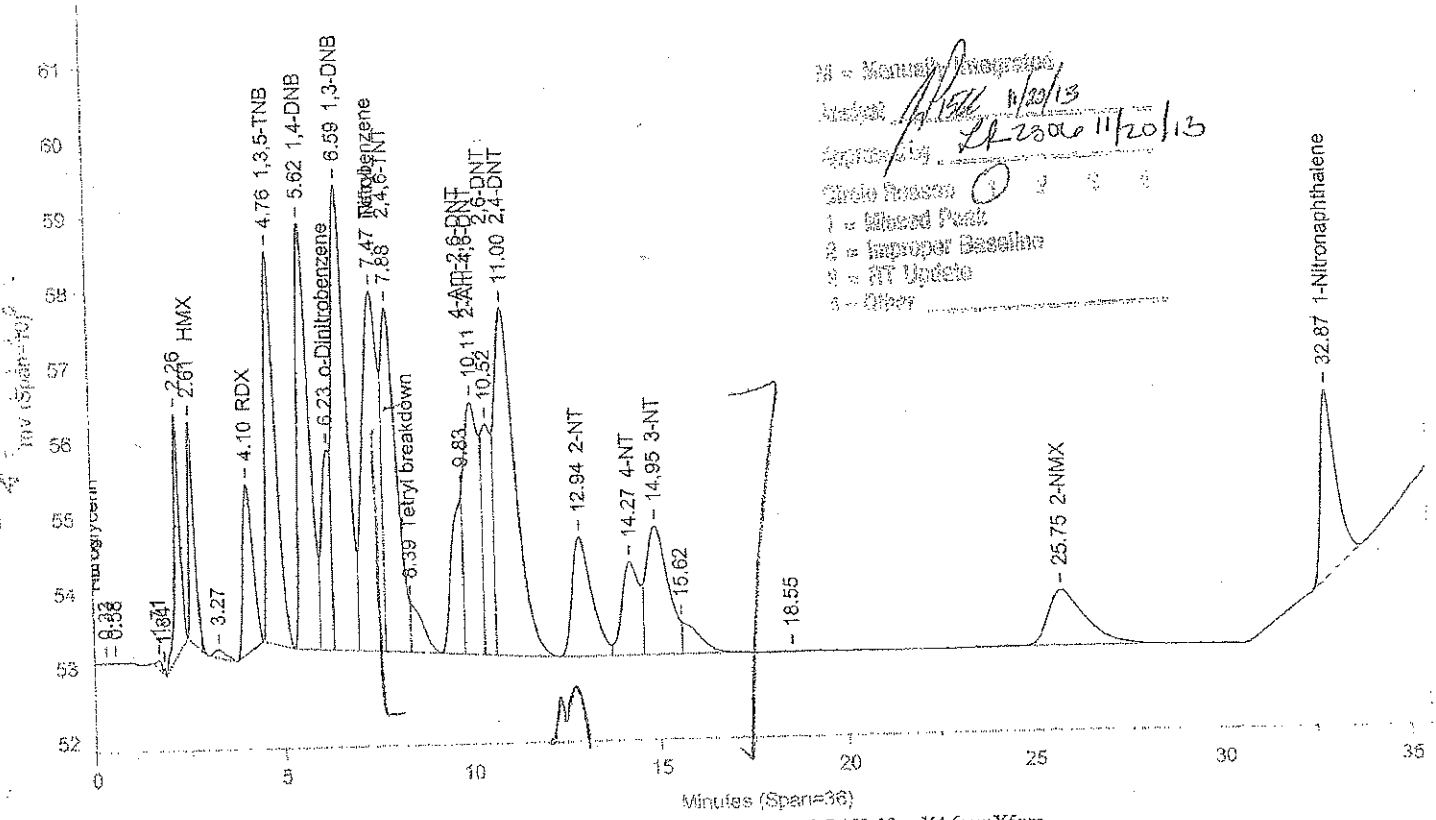
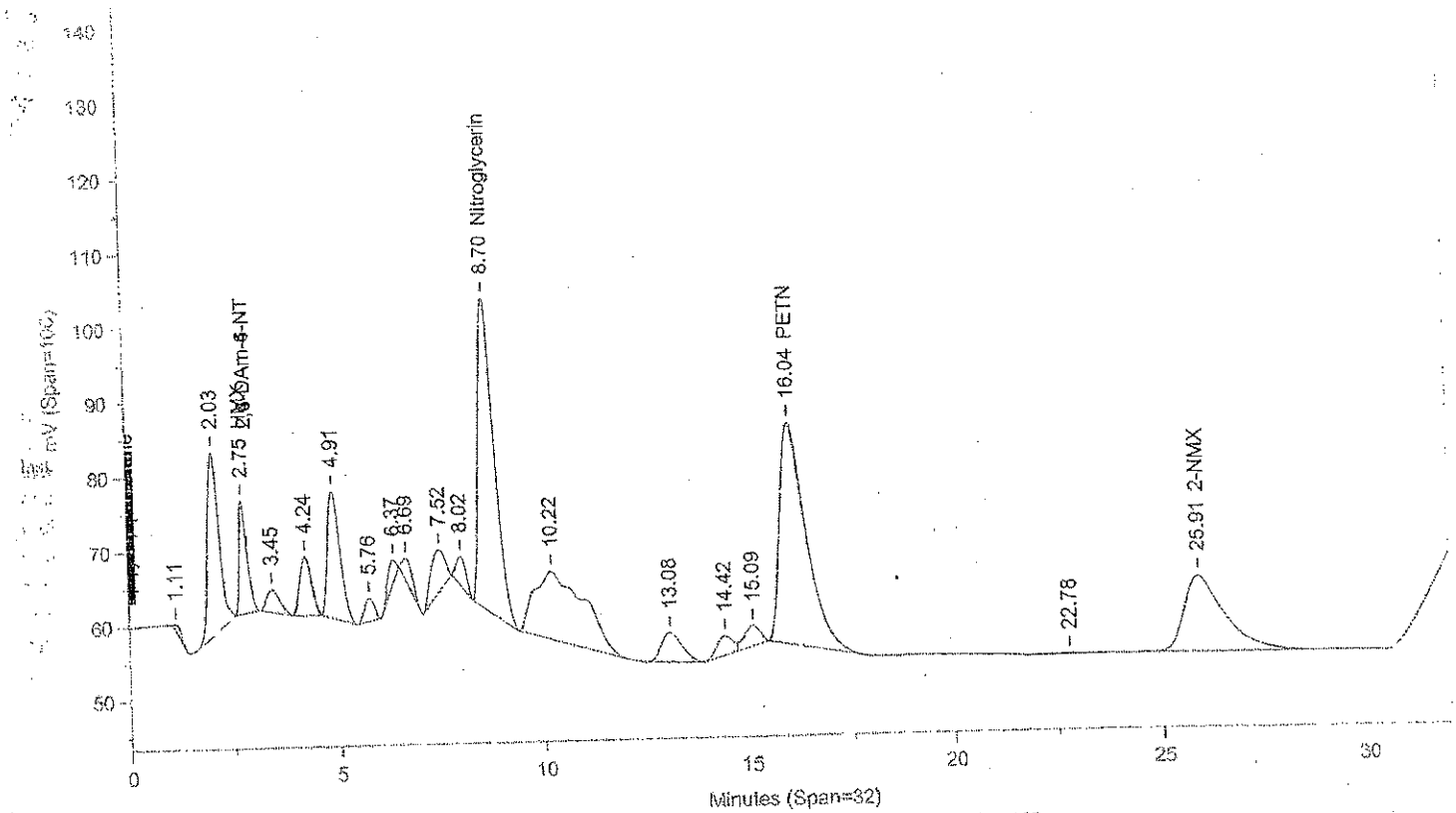
File: C:\CPWIN\DATA1\4E12310.58R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.58R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

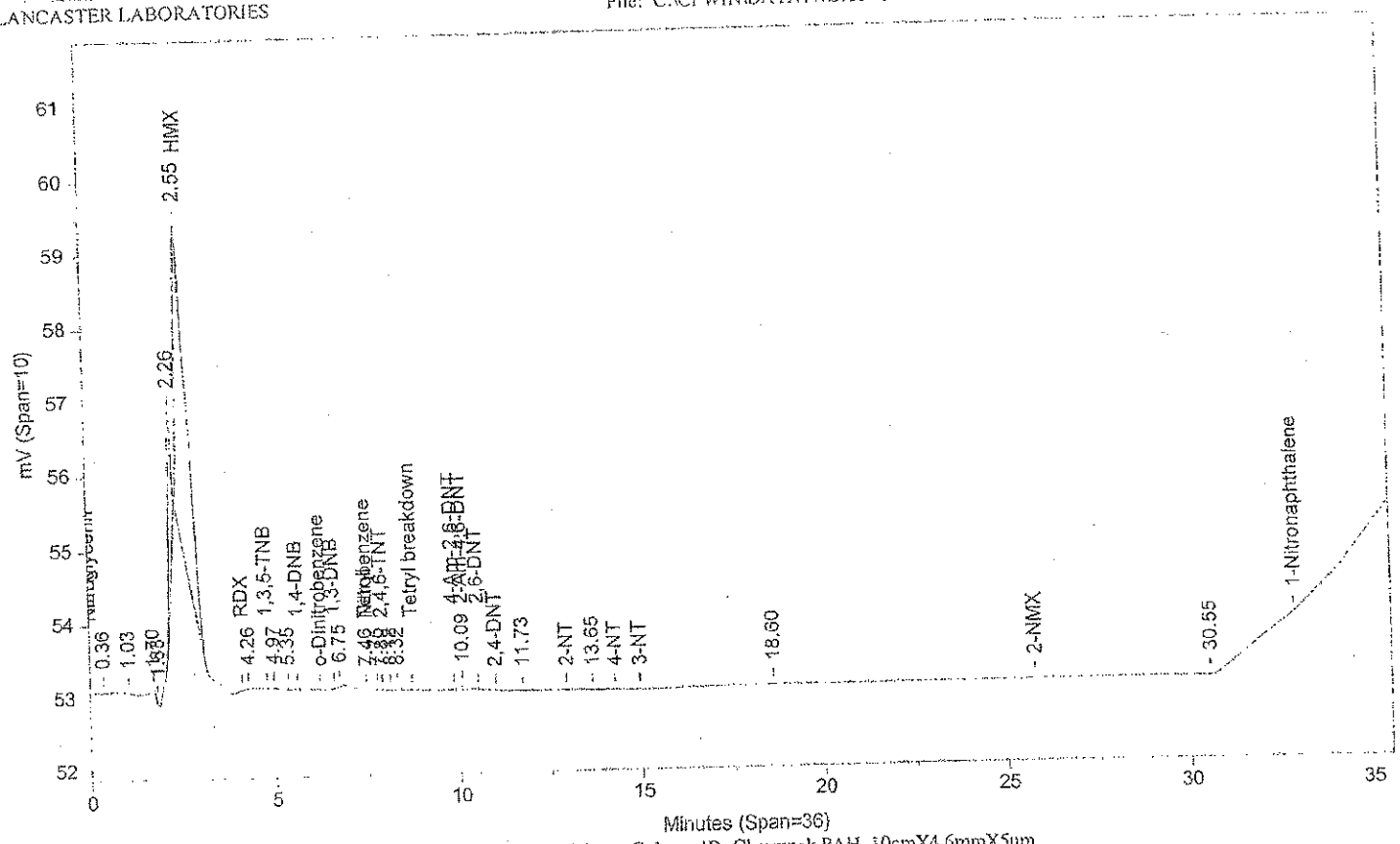
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	HMX	2.747	205781	491.077	HMX
4.102	42172	468.792	RDX	.	0	.	RDX
4.764	99452	471.139	1,3,5-TNB	.	0	.	1,3,5-TNB
5.623	116882	458.769	1,4-DNB	.	0	.	1,4-DNB
6.233	44487	431.76	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.594	160900	495.849	1,3-DNB	.	0	.	1,3-DNB
7.469	149919	433.715	Tetryl	.	0	.	Tetryl
7.876	120242	527.699	2,4,6-TNT	.	0	.	2,4,6-TNT
8.394	14646	42.37	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.698	1126394	8813.377	Nitroglycerin
9.828	43098	459.362	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.111	98128	448.039	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.518	57322	471.496	2,6-DNT	.	0	.	2,6-DNT
10.997	172033	520.107	2,4-DNT	.	0	.	2,4-DNT
12.941	59175	447.313	2-NT	.	0	.	2-NT
14.267	41535	442.67	4-NT	.	0	.	4-NT
14.953	69382	512.407	3-NT	.	0	.	3-NT
.	0	.	PETN	16.039	1293202	9443.194	PETN
25.749	51376	1507.182	2-NMX	25.906	694597	1421.988	2-NMX
32.866	69507	529.087	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:02:00 PM
File Reported On: 11/20/2013 at 2:01:58 PM

NITR31324M PXNITR3PX CCAL 1331899999

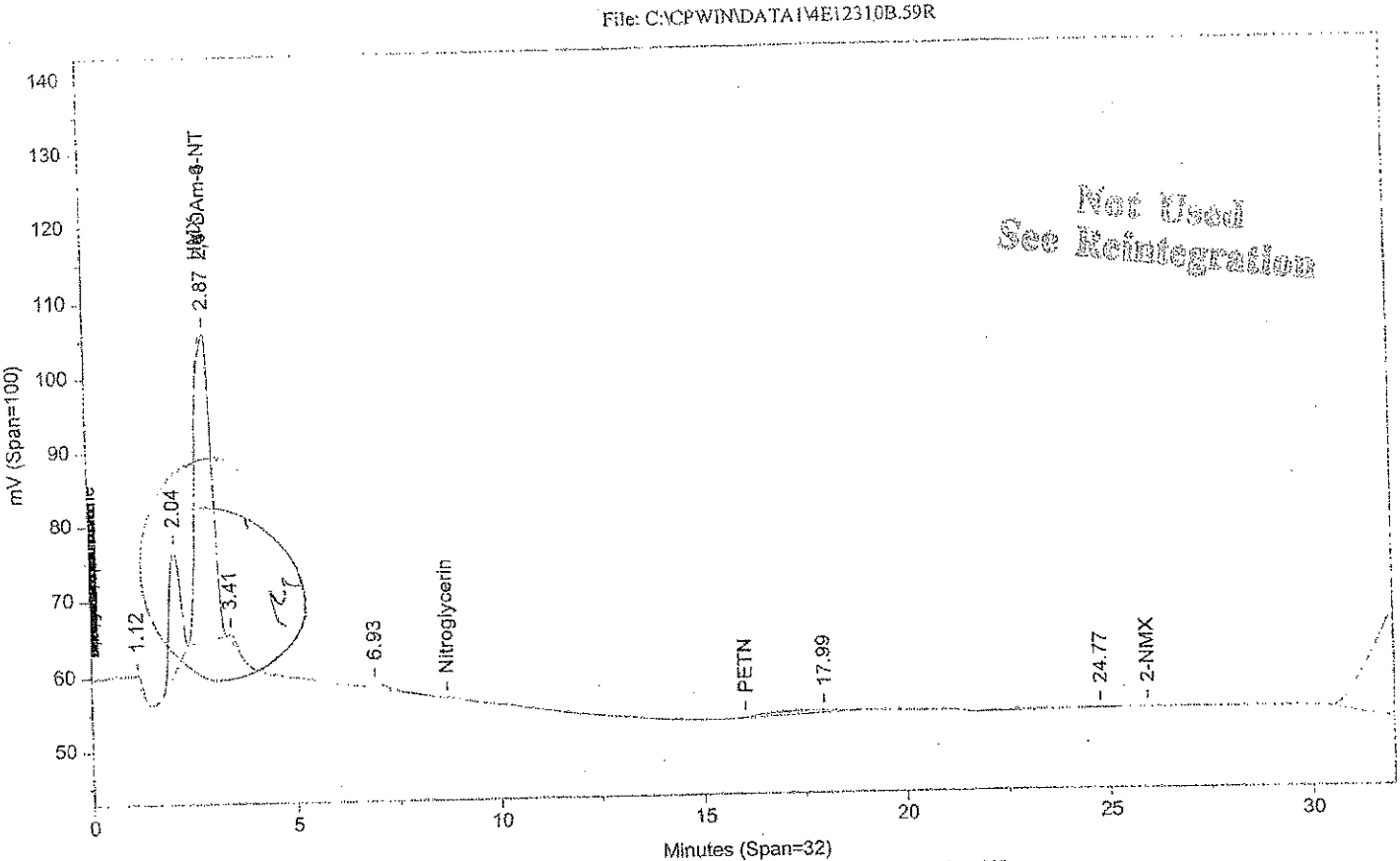
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



Not Used
See Reintegration

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

NITR31324M PXNITR3PX CCAL 1331899999

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

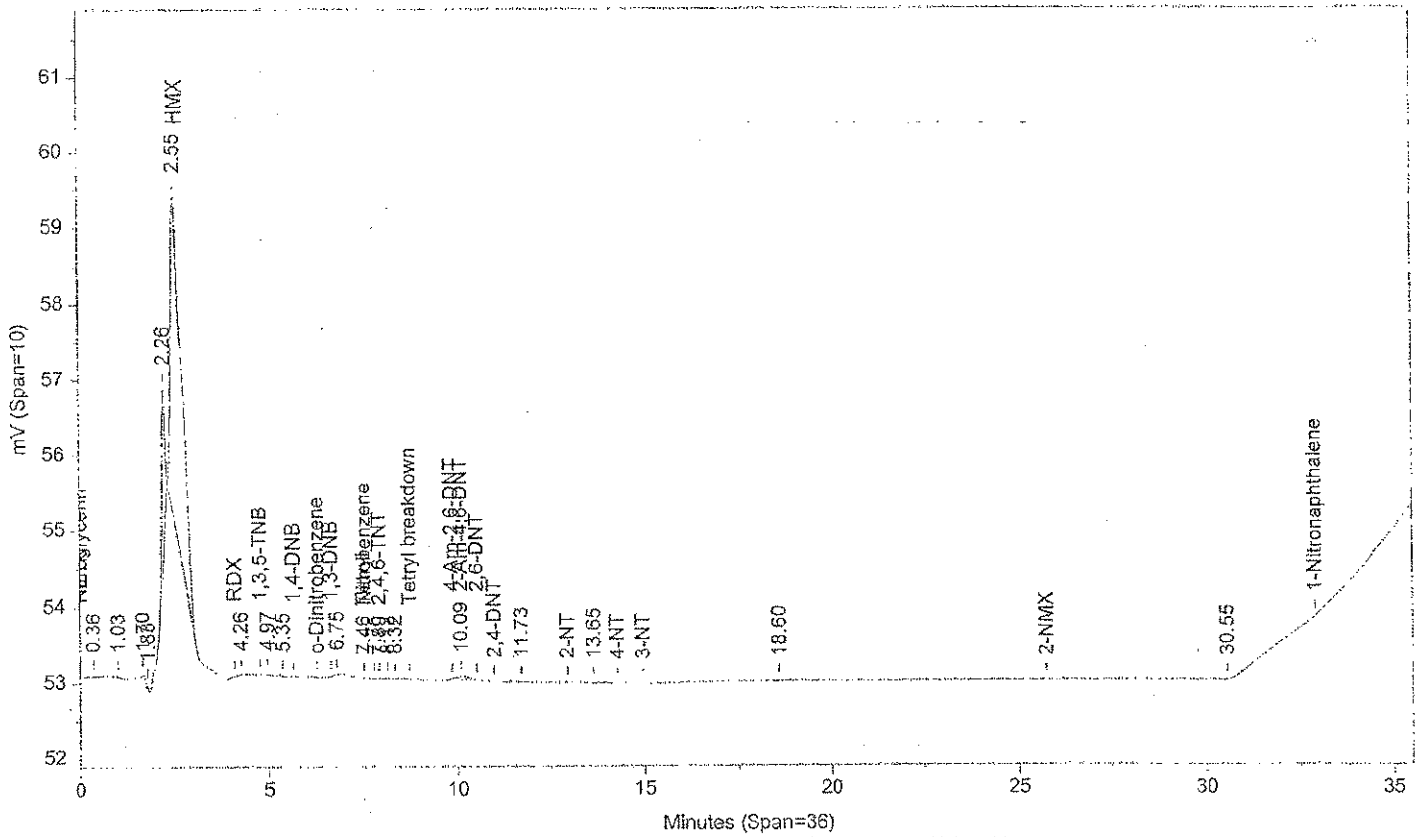
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,4-DAm-6-NT	2.872	1178739	488.851	2,4-DAm-6-NT
7.46	8	.024	Tetryl		0	.	Tetryl
7.893	3	.014	2,4,6-TNT		0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT		0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.59A
Area File: C:\CPWIN\DATA1\4E12310B.59A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:35:08 PM
File Reported On: 11/17/2013 at 9:35:18 PM

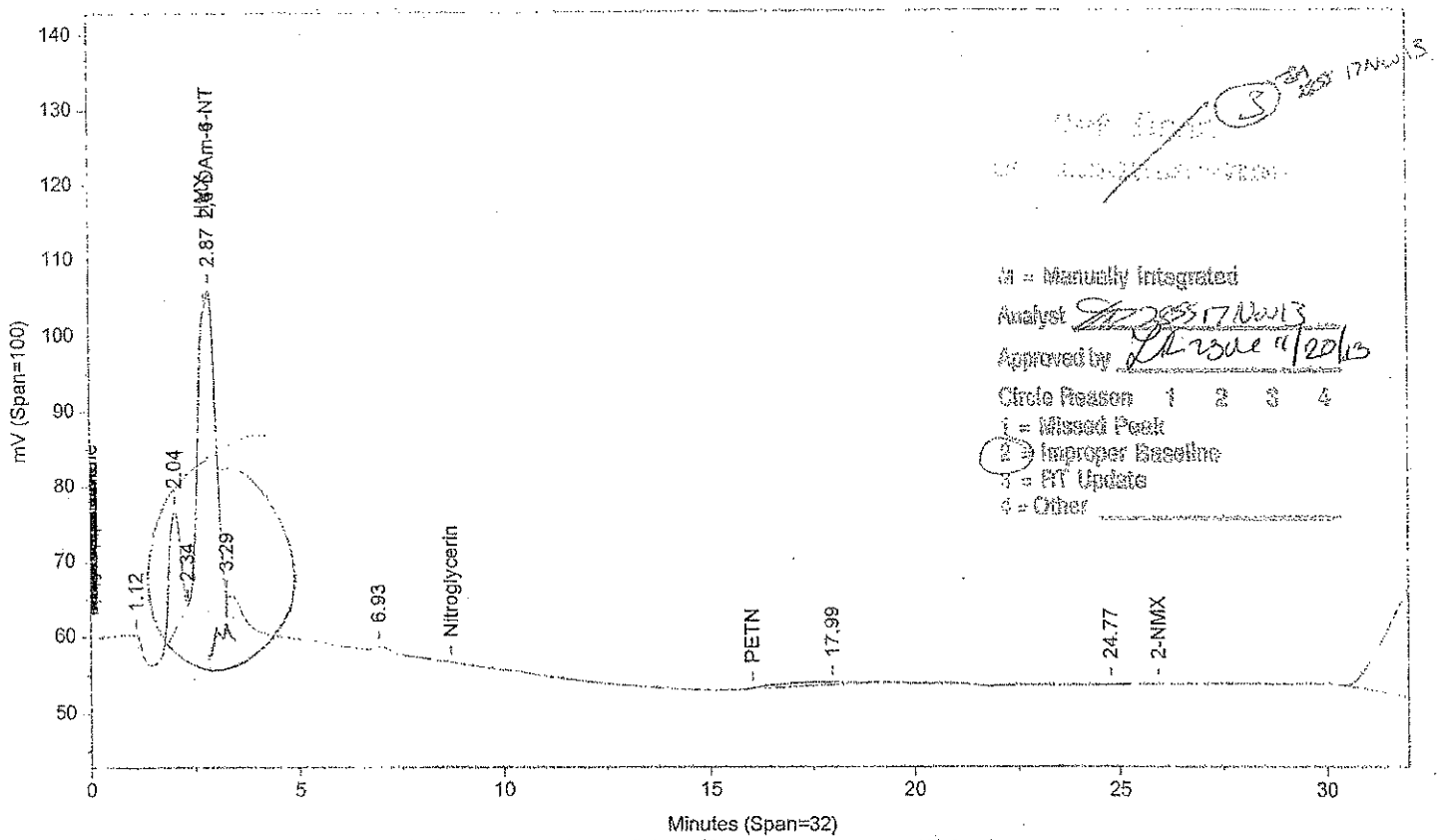
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.59R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.59R



S = Manually Integrated
Analyst 11/20/13
Approved by 11/20/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

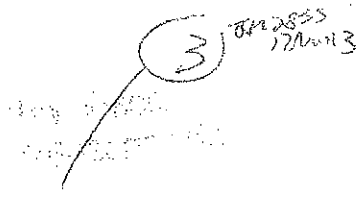
Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

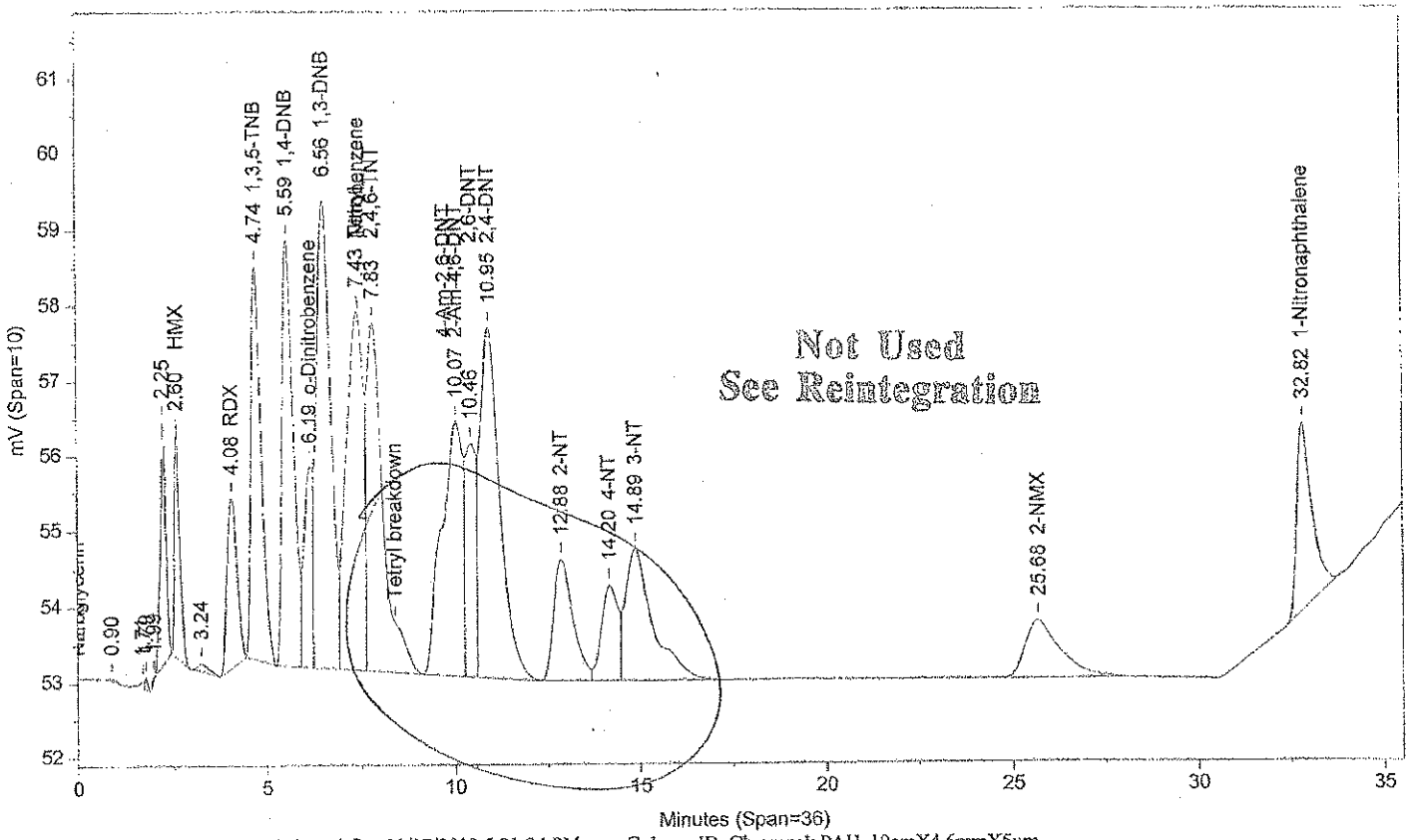
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	2.872	1248850	517.928	2,4-DAm-6-NT
7.46	8	.024	Tetryl	.	0	.	Tetryl
7.893	3	.014	2,4,6-TNT	.	0	.	2,4,6-TNT
10.092	1260	5.752	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:39:42 PM
File Reported On: 11/17/2013 at 9:39:40 PM

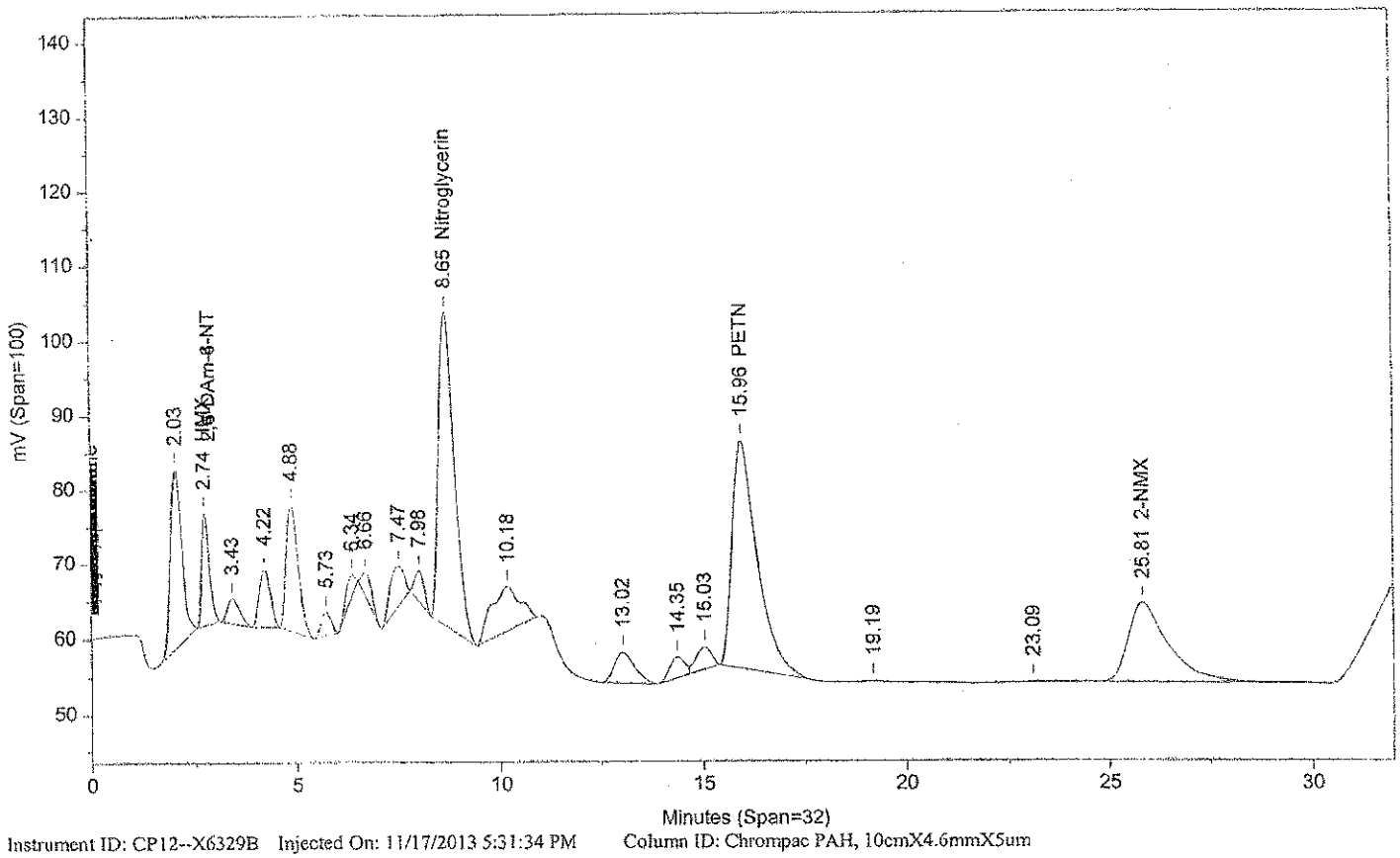


LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.70R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
5.594	115984	455.243	1,4-DNB	.	0	.	1,4-DNB
6.185	41369	401.496	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	162842	501.834	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	136262	598.005	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
10.066	131566	600.715	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	61117	502.711	2,6-DNT	.	0	.	2,6-DNT
10.945	175735	531.298	2,4-DNT	.	0	.	2,4-DNT
12.88	58146	439.533	2-NT	.	0	.	2-NT
14.195	39023	415.902	4-NT	.	0	.	4-NT
14.893	86814	641.143	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.70A
Area File: C:\CPWIN\DATA1\4E12310B.70A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:06:14 PM
File Reported On: 11/17/2013 at 10:06:24 PM

Not Used
See Reintegration

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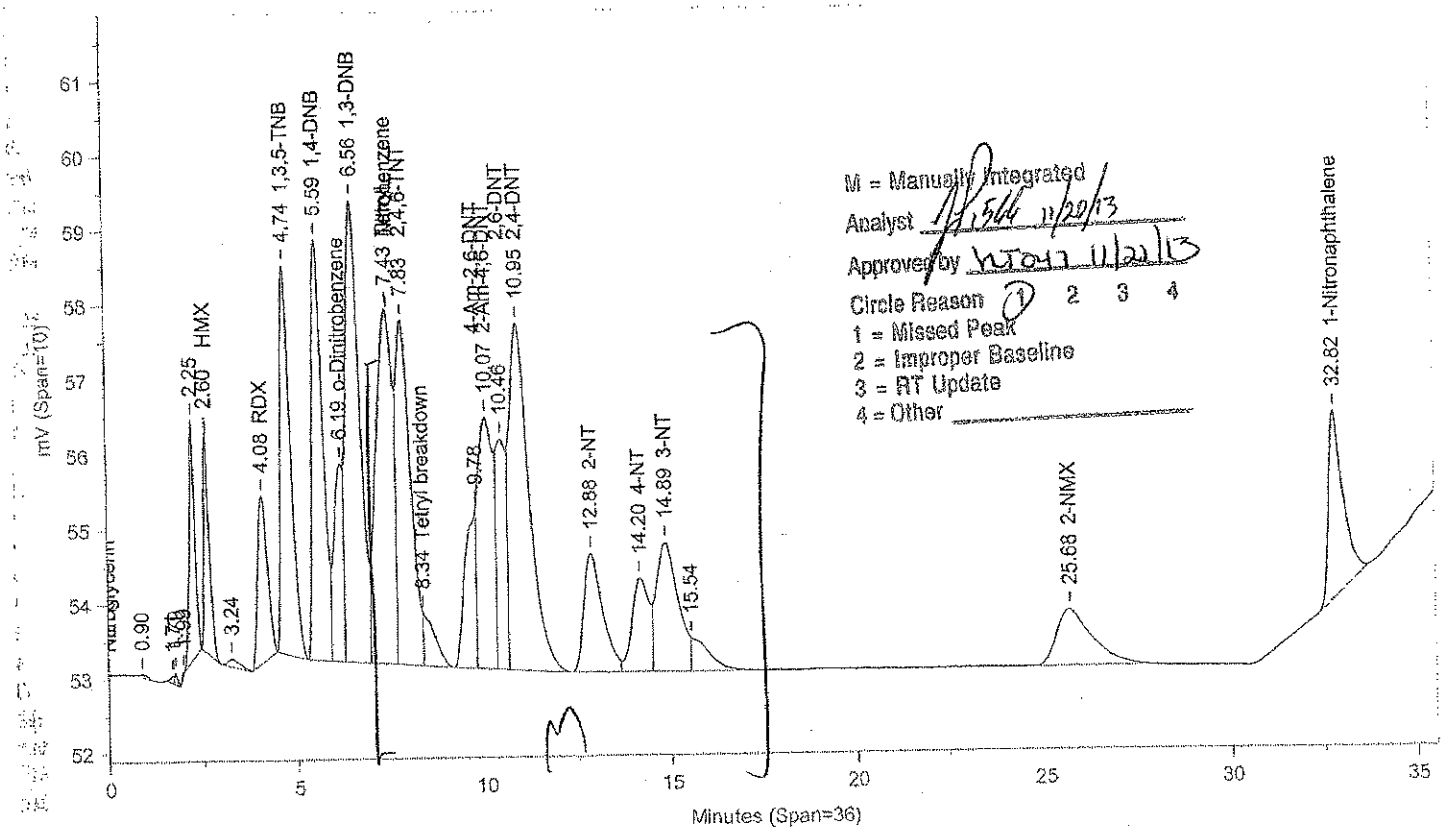
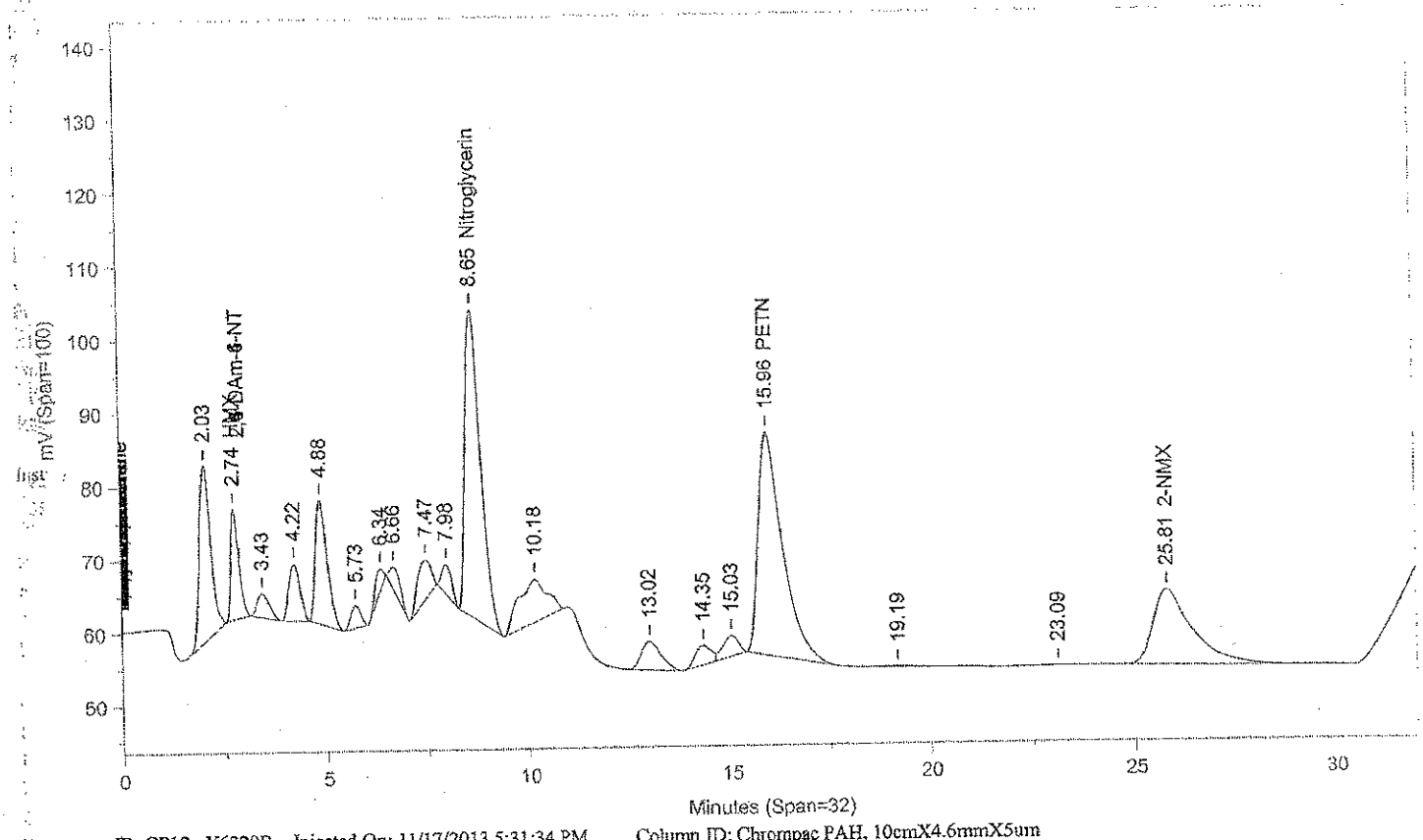
File: C:\CPWIN\DATA1\4E12310.70R



M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.70R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.736	205737	490.975	HMX
4.08	41907	465.761	RDX	.	0	.	RDX
4.738	98423	466.267	1,3,5-TNB	.	0	.	1,3,5-TNB
6.594	115148	451.963	1,4-DNB	.	0	.	1,4-DNB
6.185	43947	426.516	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.56	161100	496.466	1,3-DNB	.	0	.	1,3-DNB
7.434	145949	422.228	Tetryl	.	0	.	Tetryl
7.833	120817	530.221	2,4,6-TNT	.	0	.	2,4,6-TNT
8.339	15445	44.683	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.652	1121330	8773.752	Nitroglycerin
9.783	42586	453.907	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.066	95774	437.294	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.459	57266	471.029	2,6-DNT	.	0	.	2,6-DNT
10.945	172793	522.403	2,4-DNT	.	0	.	2,4-DNT
12.88	57944	438.009	2-NT	.	0	.	2-NT
14.195	40855	435.427	4-NT	.	0	.	4-NT
14.893	69741	515.059	3-NT	.	0	.	3-NT
.	0	.	PETN	15.96	1295568	9460.469	PETN
25.679	49585	1454.629	2-NMX	25.807	709154	1451.79	2-NMX
32.821	68358	520.343	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:38:36 AM
File Reported On: 11/20/2013 at 11:38:35 AM

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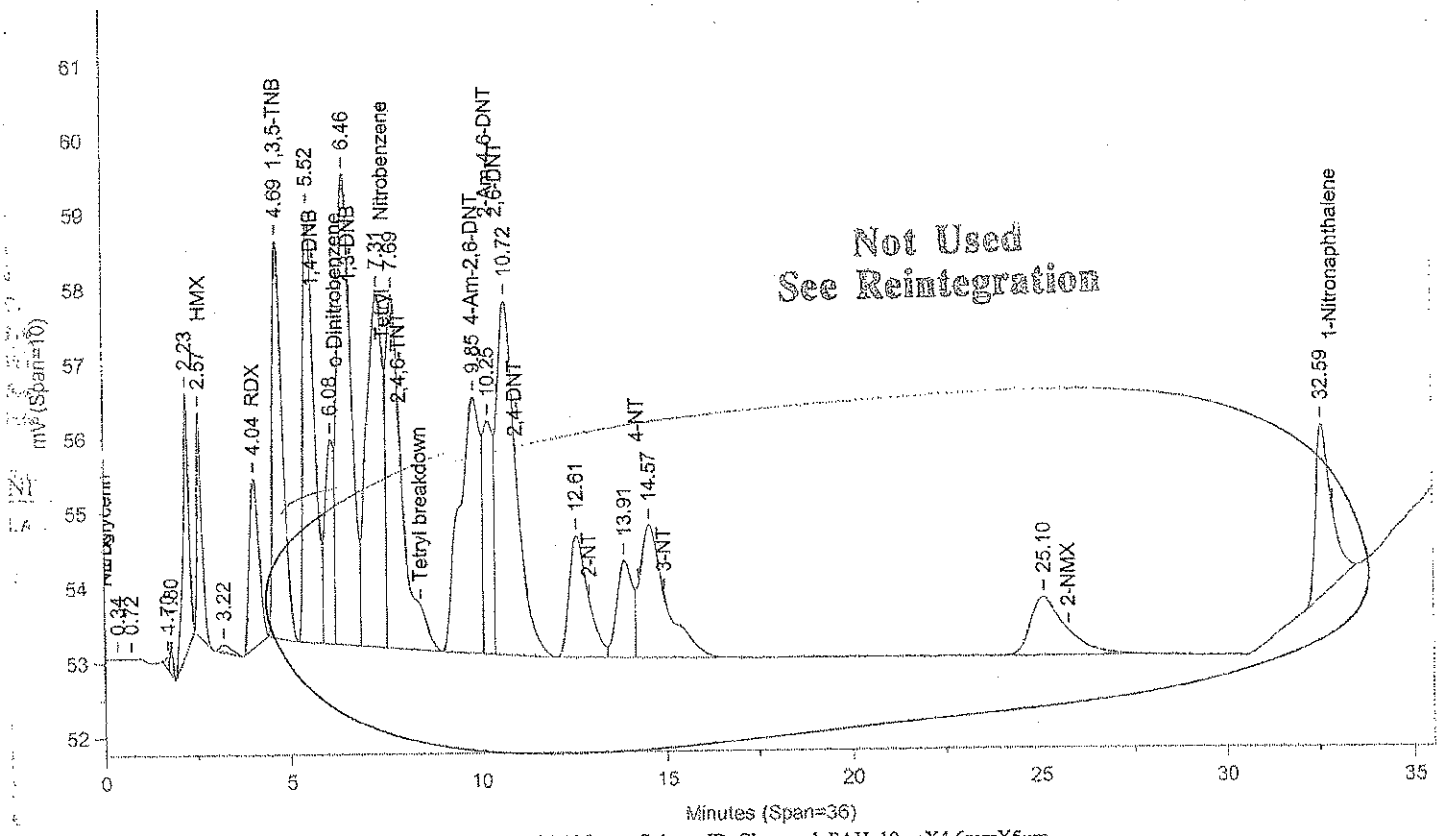
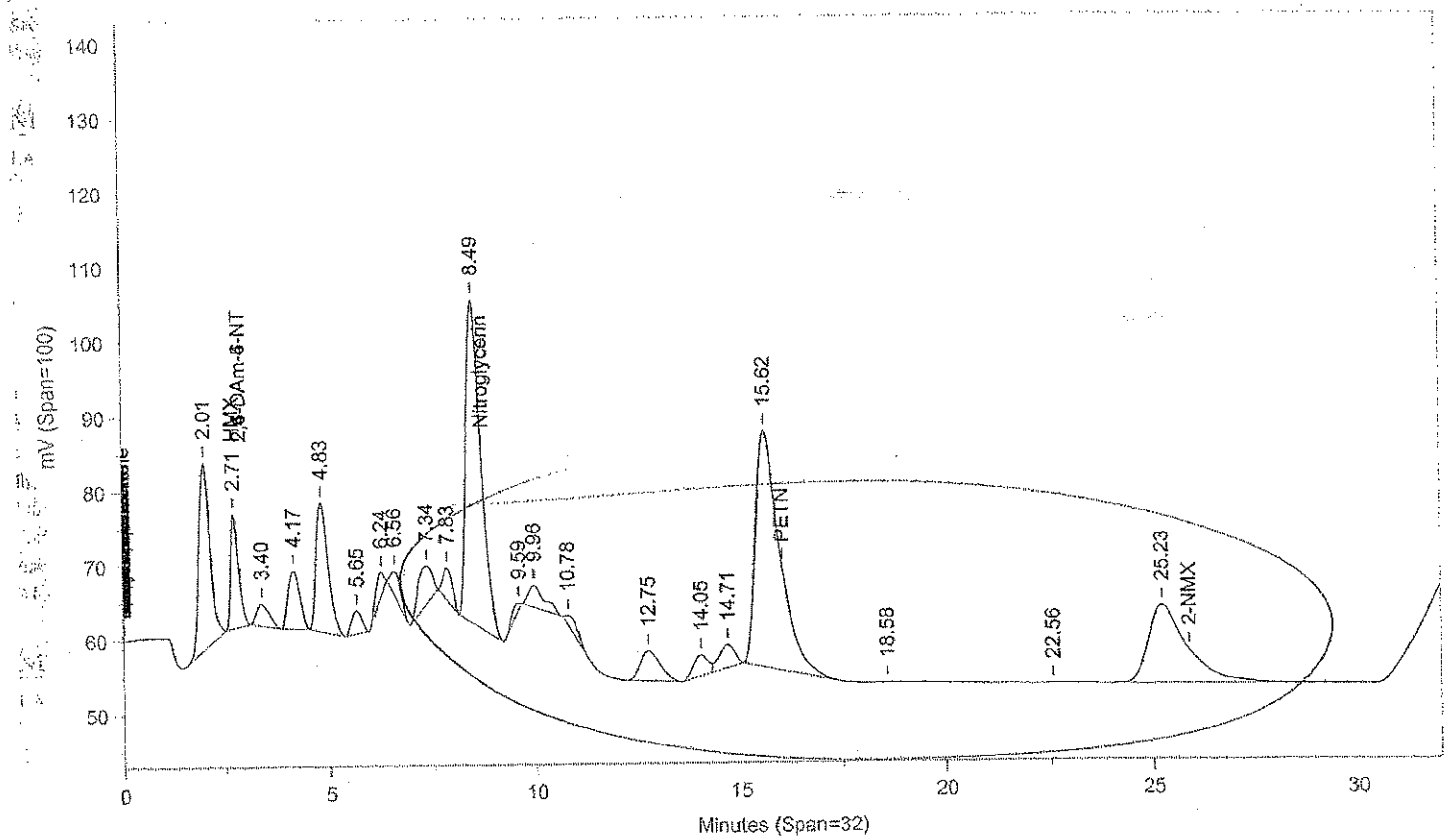
File: C:\CPWIN\DATA1\4E12310.81R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

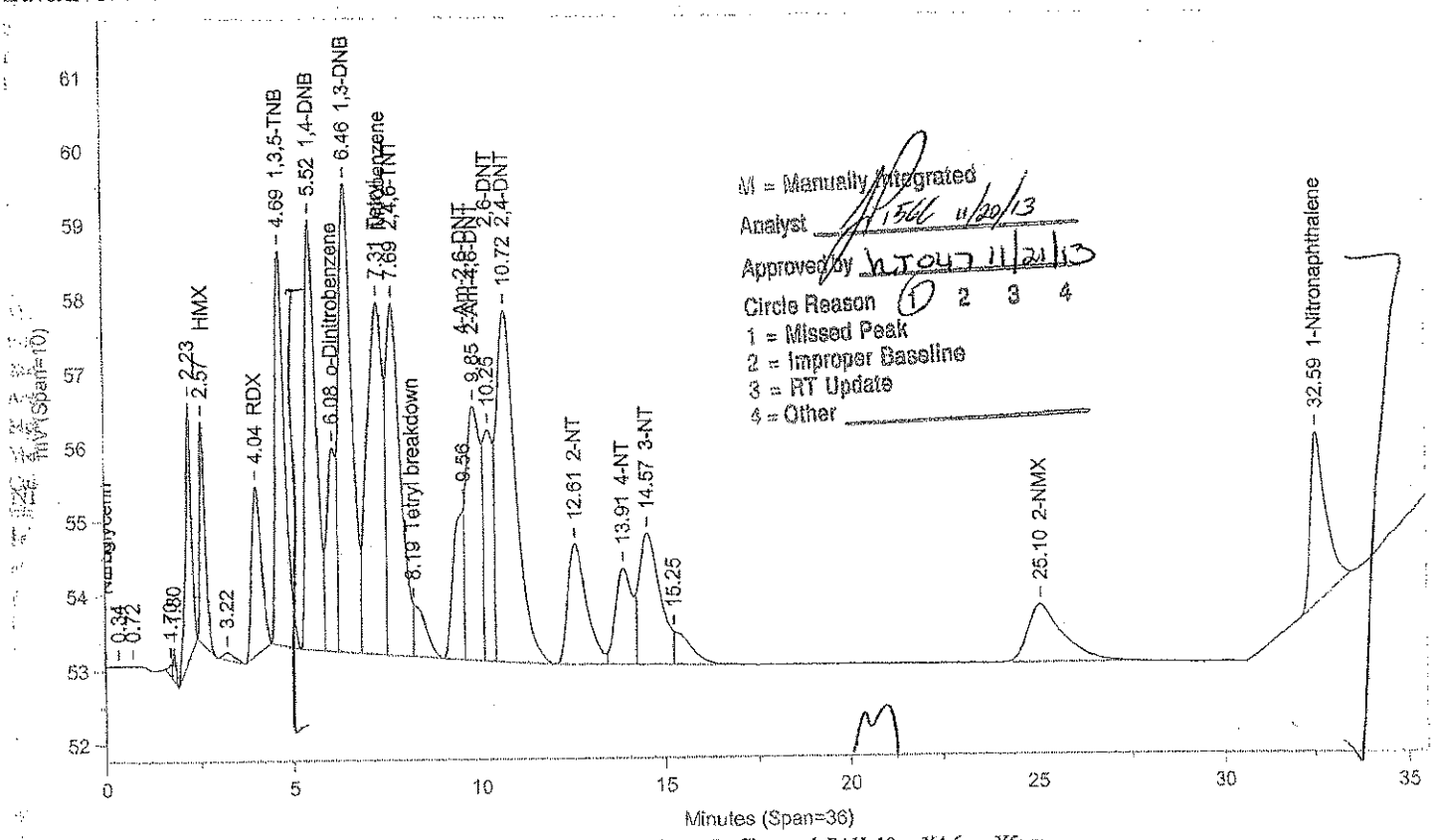
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX	.	0	.	RDX
4.686	97867	463.633	1,3,5-TNB	.	0	.	1,3,5-TNB
9.847	132871	1416.217	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.245	58432	266.792	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\4E12310.81A
Area File: C:\CPWIN\DATA1\4E12310B.81A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:54:56 PM
File Reported On: 11/18/2013 at 2:55:05 PM

Not Used
See Reintegration

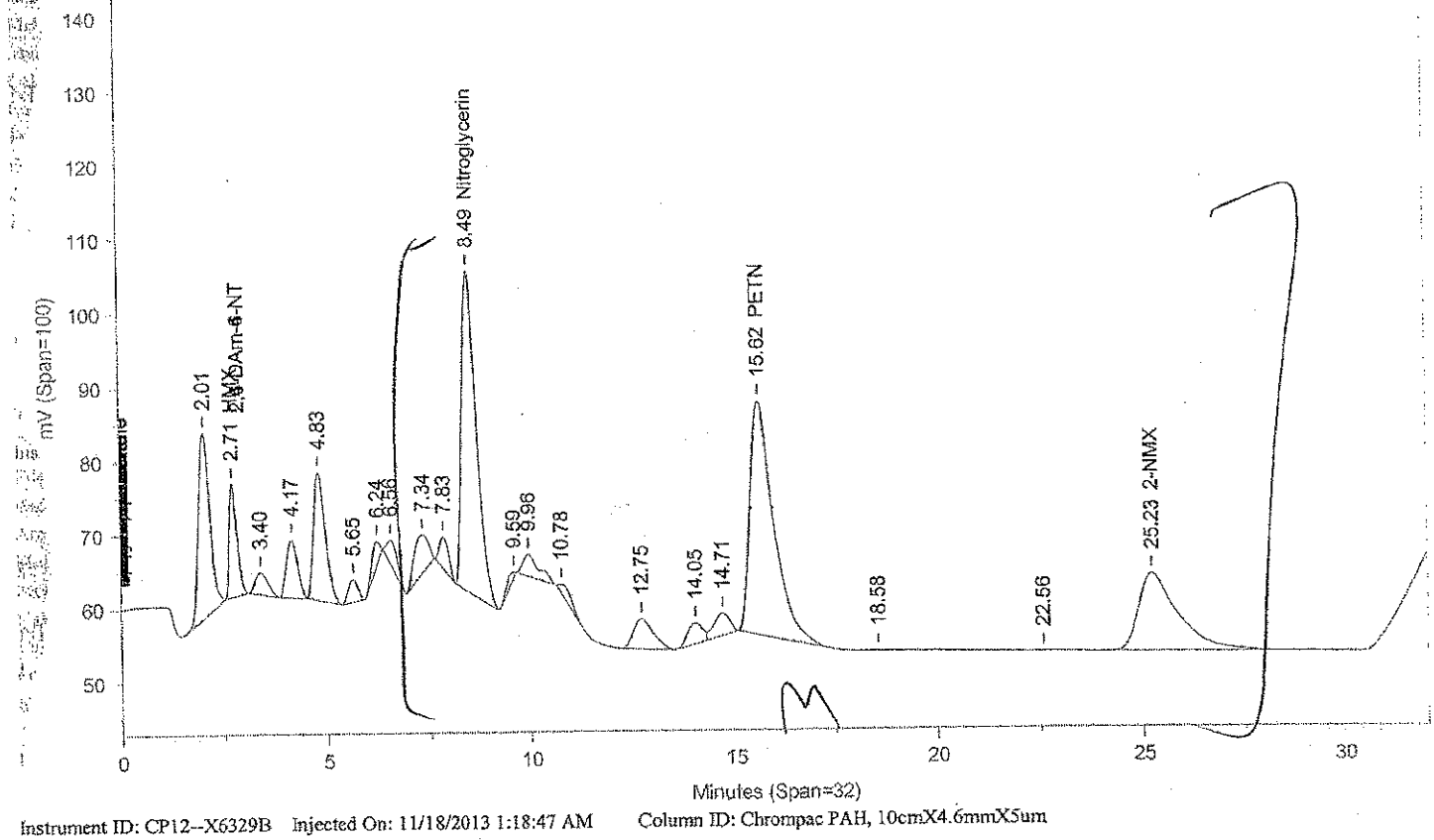
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.81R



M = Manually Integrated
Analyst TSG 11/20/13
Approved by [illegible] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.81R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.706	206861	493.564	HMX
4.037	41641	462.722	RDX	.	0	.	RDX
4.686	97867	463.633	1,3,5-TNB	.	0	.	1,3,5-TNB
5.519	115053	451.59	1,4-DNB	.	0	.	1,4-DNB
6.079	47815	464.059	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.458	154985	477.621	1,3-DNB	.	0	.	1,3-DNB
7.307	143270	414.478	Tetryl	.	0	.	Tetryl
7.693	120080	526.989	2,4,6-TNT	.	0	.	2,4,6-TNT
8.194	15765	45.608	Tetryl breakdown	.	0	.	Tetryl breakdown
Del	0	.	Nitroglycerin	8.486	1114974	8724.021	Nitroglycerin
9.561	40042	426.794	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.847	96727	441.642	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.245	58451	480.778	2,6-DNT	.	0	.	2,6-DNT
10.722	170170	514.474	2,4-DNT	.	0	.	2,4-DNT
12.608	57529	434.872	2-NT	.	0	.	2-NT
13.906	41793	445.426	4-NT	.	0	.	4-NT
14.565	67914	501.566	3-NT	.	0	.	3-NT
.	0	.	PETN	15.621	1294734	9454.381	PETN
25.103	50813	1490.667	2-NMX	25.232	709127	1451.734	2-NMX
32.587	66811	508.567	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:12:06 PM
File Reported On: 11/20/2013 at 12:12:06 PM

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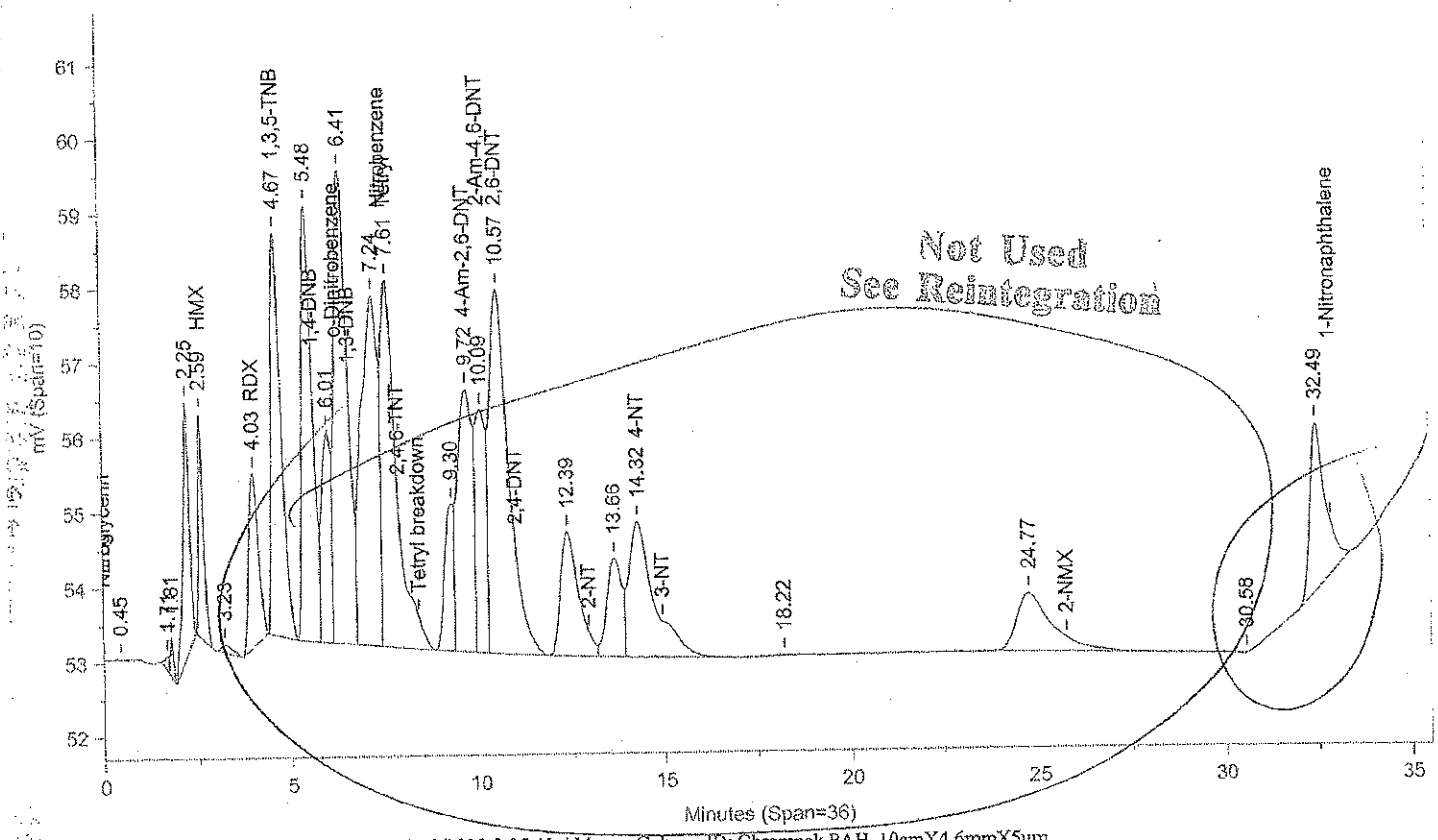
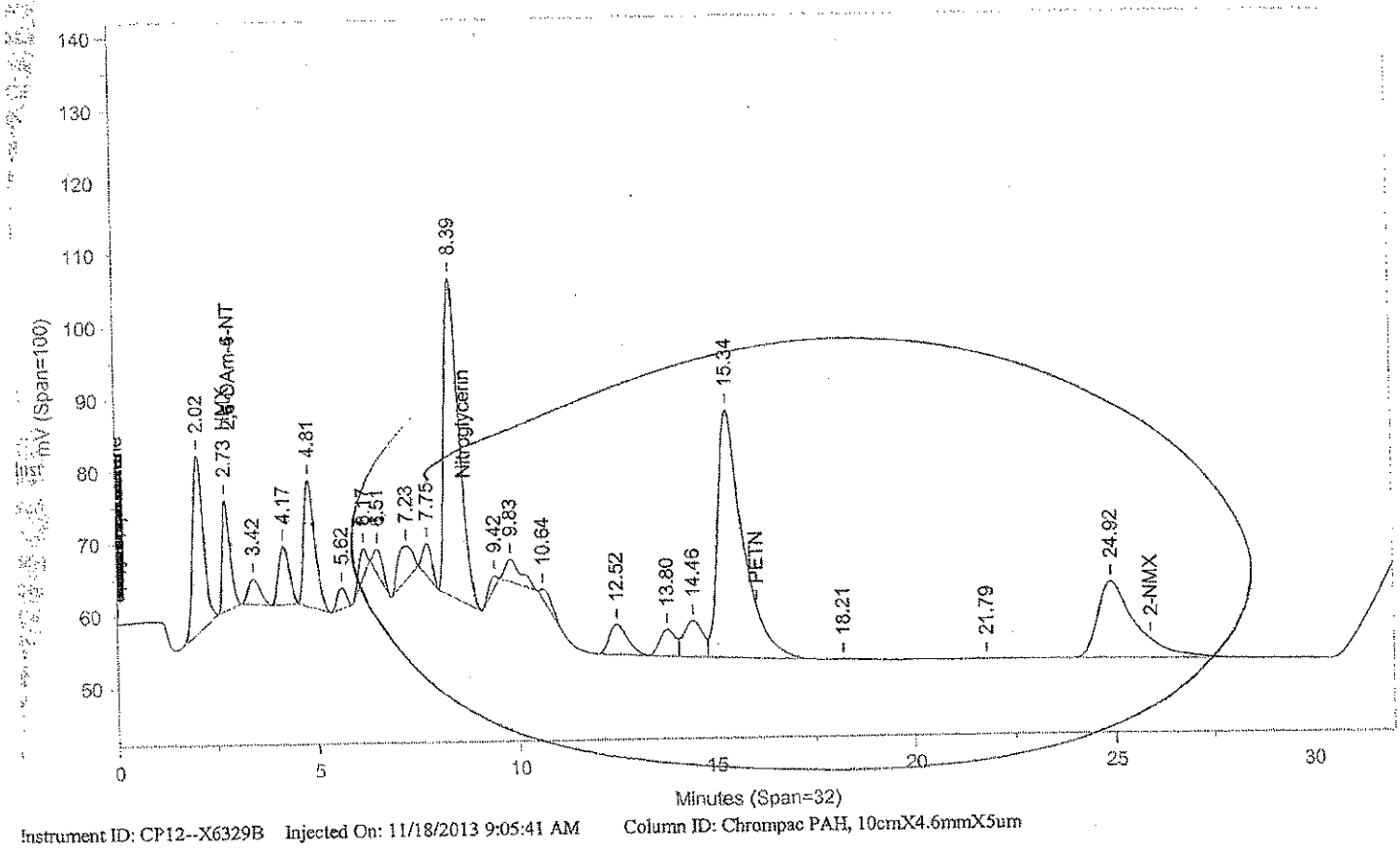
File: C:\CPWIN\DATA1\4E12310.92R



Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.92R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

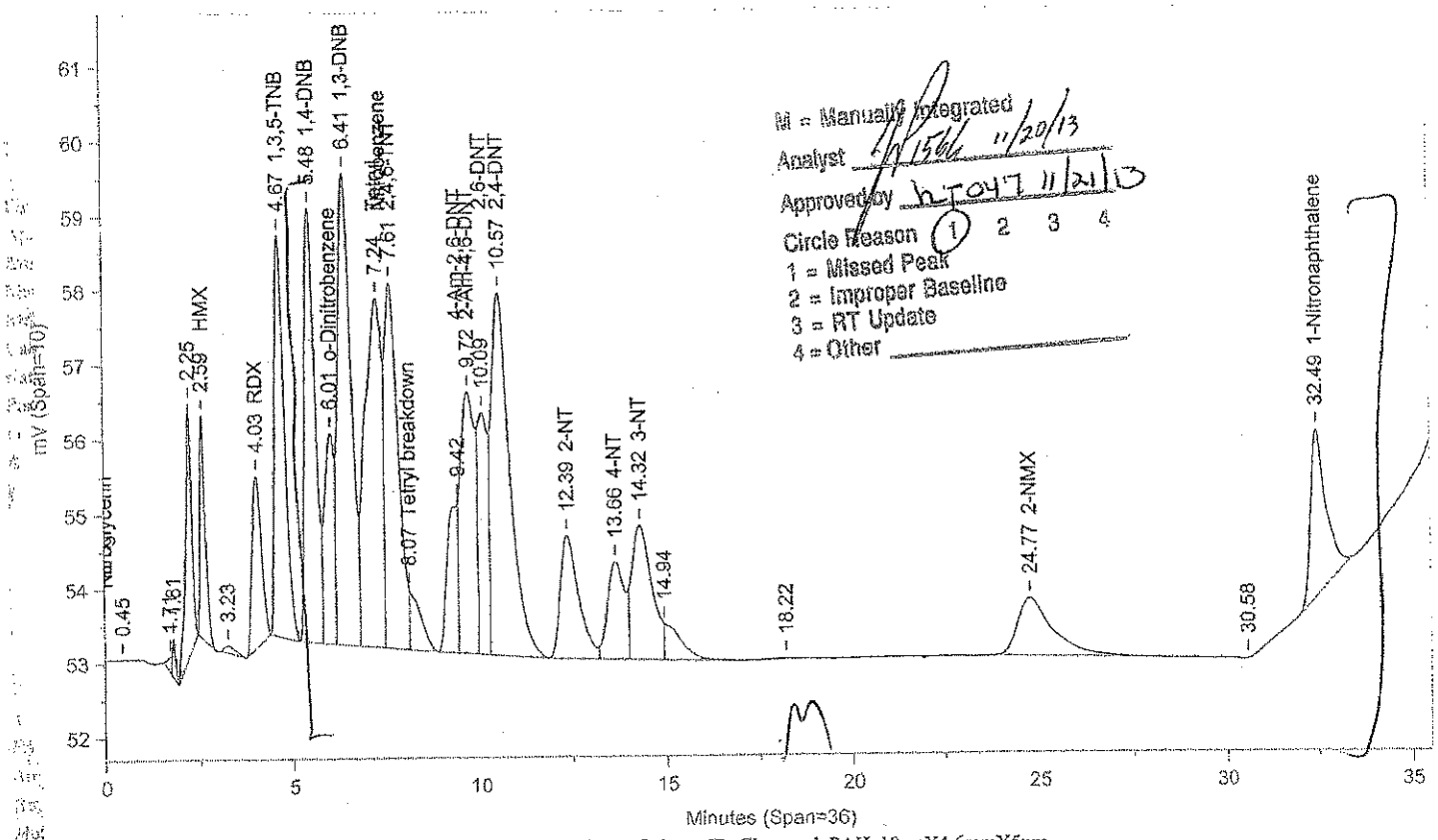
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	HMX	2.728	207985	496.151	HMX
4.035	41850	465.108	RDX		0	.	RDX
4.667	98548	466.857	1,3,5-TNB		0	.	1,3,5-TNB
7.608	138818	401.6	Tetryl		0	.	Tetryl
9.715	99923	1065.046	4-Am-2,6-DNT		0	.	4-Am-2,6-DNT
10.091	62542	285.561	2-Am-4,6-DNT		0	.	2-Am-4,6-DNT
10.569	172893	1422.1	2,6-DNT		0	.	2,6-DNT
13.324	85466	910.881	4-NT		0	.	4-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.92A
Area File: C:\CPWIN\DATA1\4E12310B.92A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:00:28 PM
File Reported On: 11/18/2013 at 3:00:39 PM

Not Used
See Reintegration

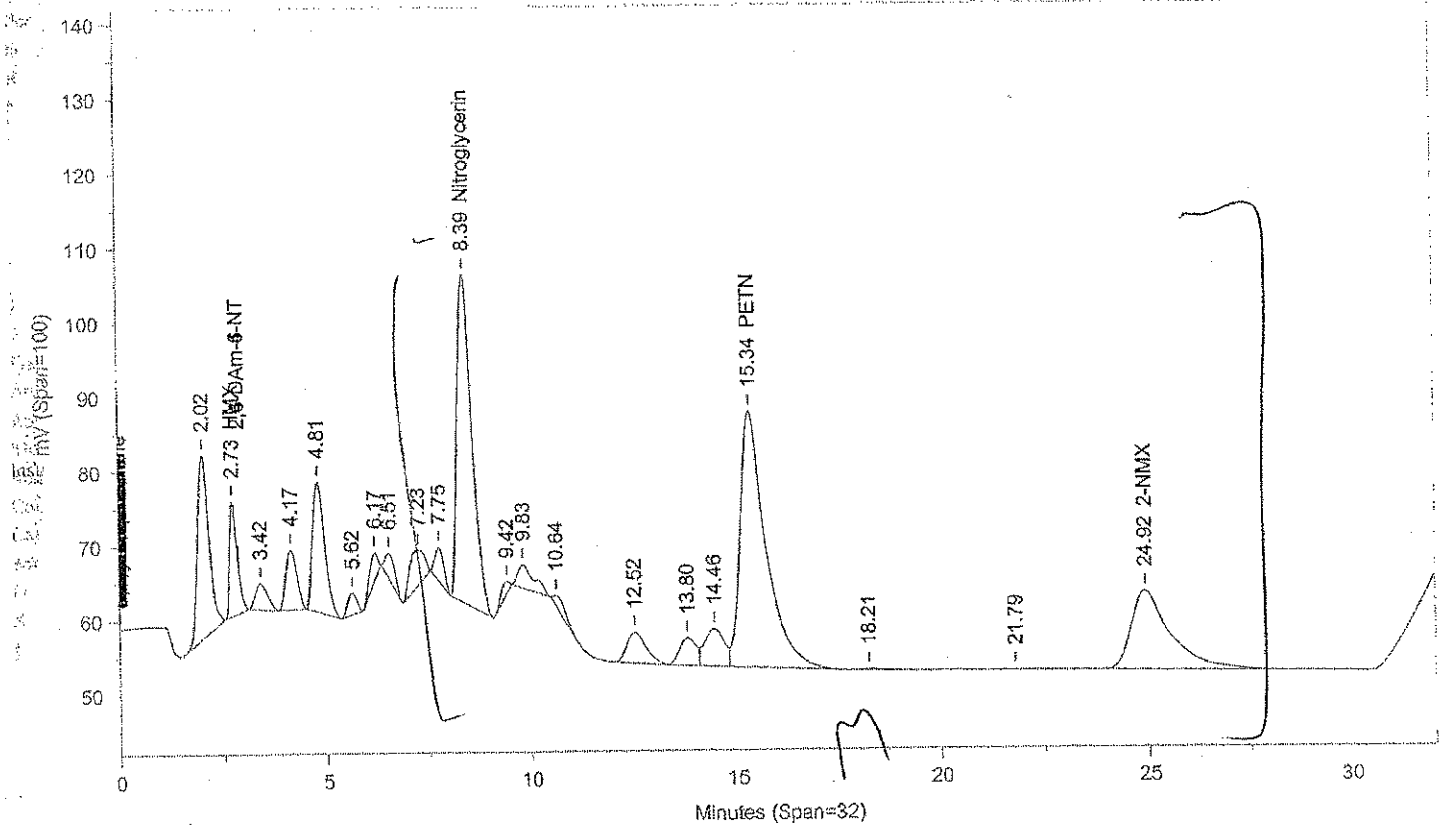
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.92R



M = Manually Integrated
Analyst 11/20/13
Approved by 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.92R



Instrument ID: CP12--X6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

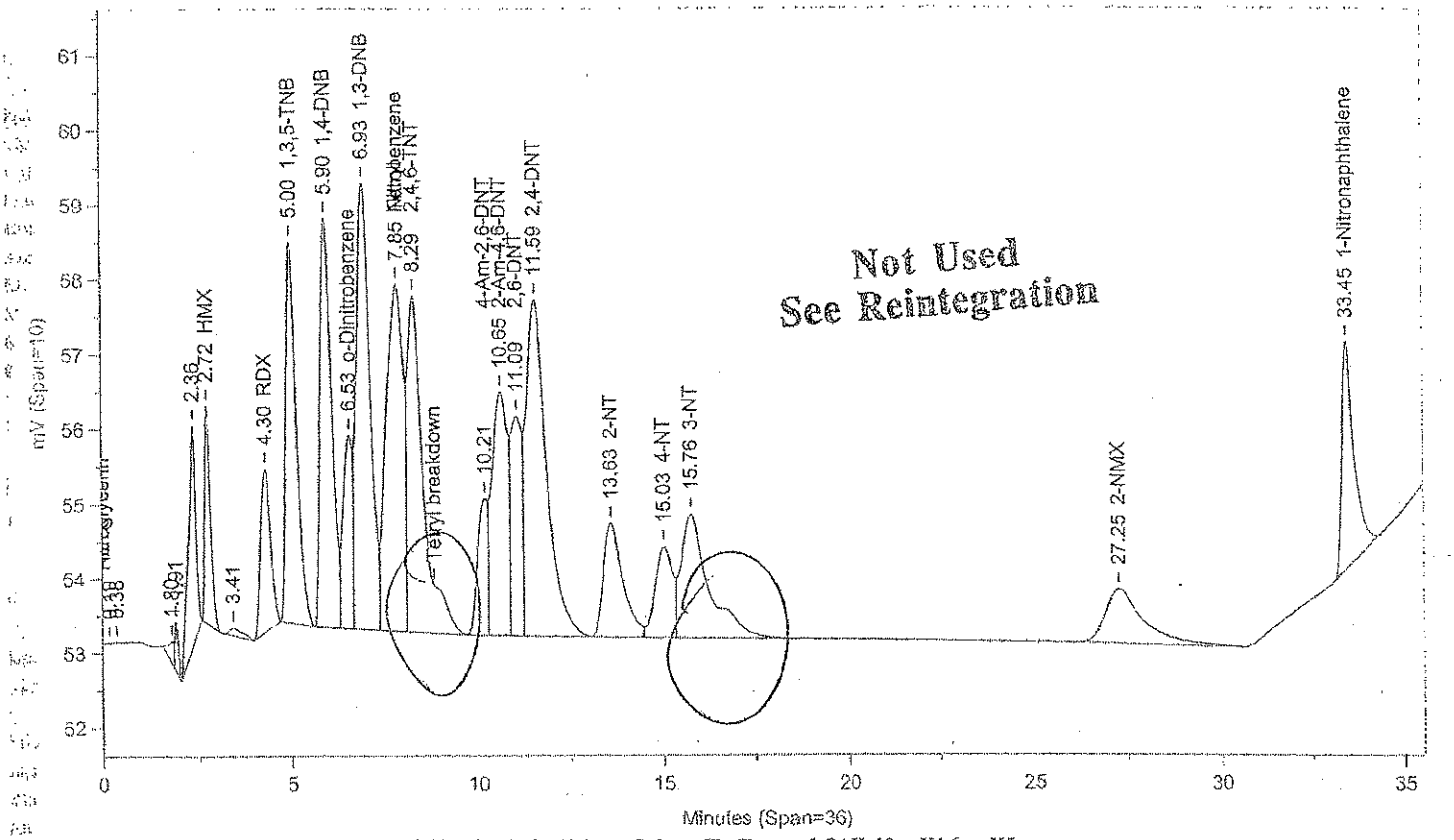
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.728	207985	496.151	HMX
4.035	41850	465.108	RDX	.	0	.	RDX
4.667	98548	466.857	1,3,5-TNB	.	0	.	1,3,5-TNB
5.481	113721	446.361	1,4-DNB	.	0	.	1,4-DNB
6.015	48417	469.901	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.405	155140	478.098	1,3-DNB	.	0	.	1,3-DNB
7.238	147370	426.339	Tetryl	.	0	.	Tetryl
7.608	121993	535.382	2,4,6-TNT	.	0	.	2,4,6-TNT
8.072	16826	48.677	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.393	1108866	8676.229	Nitroglycerin
9.422	40706	433.869	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.715	97668	445.94	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.091	61458	505.514	2,6-DNT	.	0	.	2,6-DNT
10.569	168921	510.698	2,4-DNT	.	0	.	2,4-DNT
12.39	56942	430.429	2-NT	.	0	.	2-NT
13.66	41395	441.179	4-NT	.	0	.	4-NT
14.324	66518	491.253	3-NT	.	0	.	3-NT
.	0	.	PETN	15.341	1481747	10819.72	PETN
24.771	50165	1471.643	2-NMX	24.922	707222	1447.833	2-NMX
32.489	65309	497.133	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:53:20 PM
File Reported On: 11/20/2013 at 12:53:18 PM

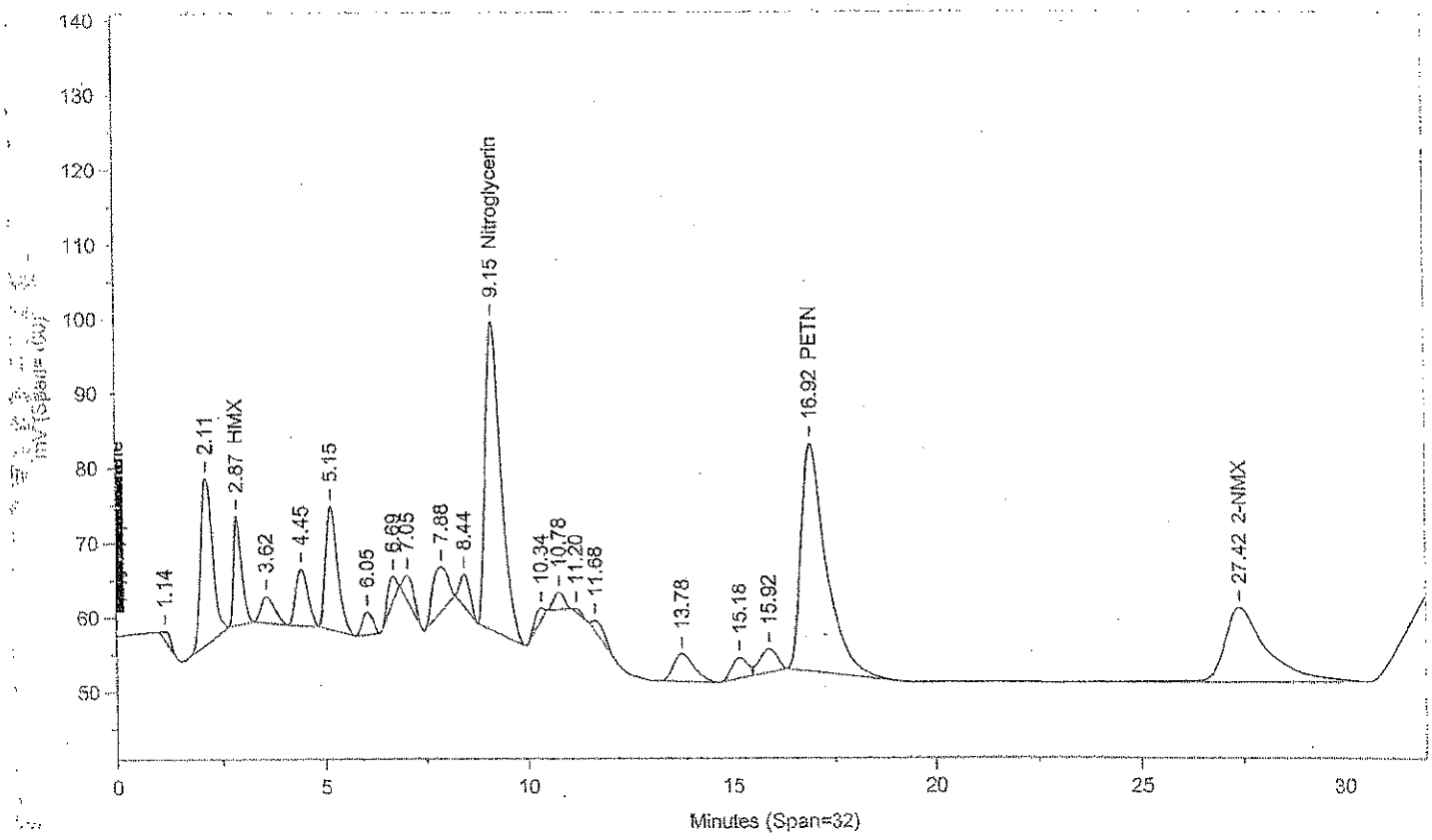
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\SE12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\SE12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min, Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

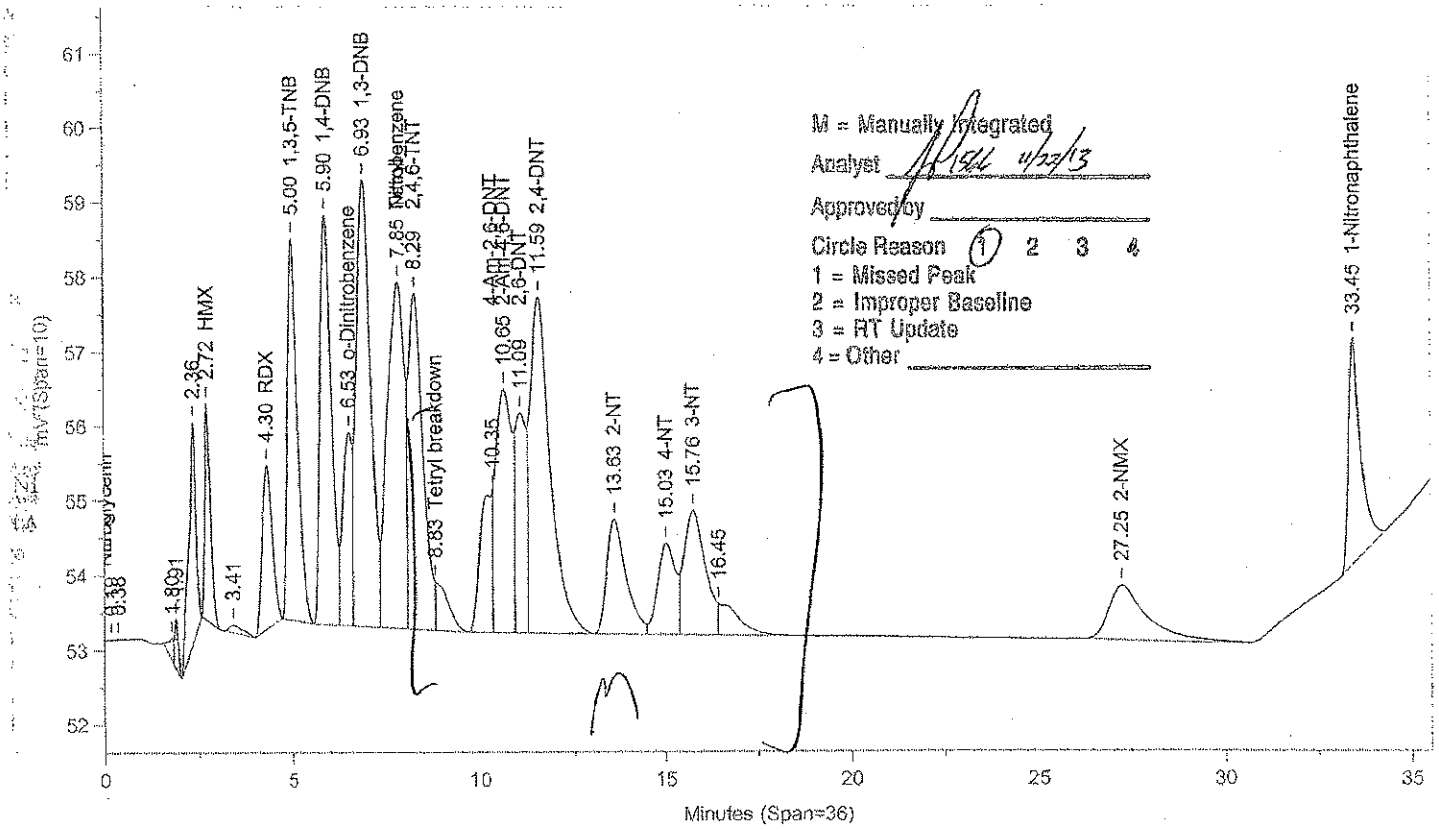
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
6.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	134593	590.678	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.212	34931	372.32	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	97348	444.477	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	62135	511.08	2,6-DNT	.	0	.	2,6-DNT
11.593	170959	516.86	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	39770	423.863	4-NT	.	0	.	4-NT
15.763	86127	636.068	3-NT	.	0	.	3-NT
RT .	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.17A
Area File: C:\CPWIN\DATA1\5E12310B.17A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:41:08 PM
File Reported On: 11/20/2013 at 4:41:19 PM

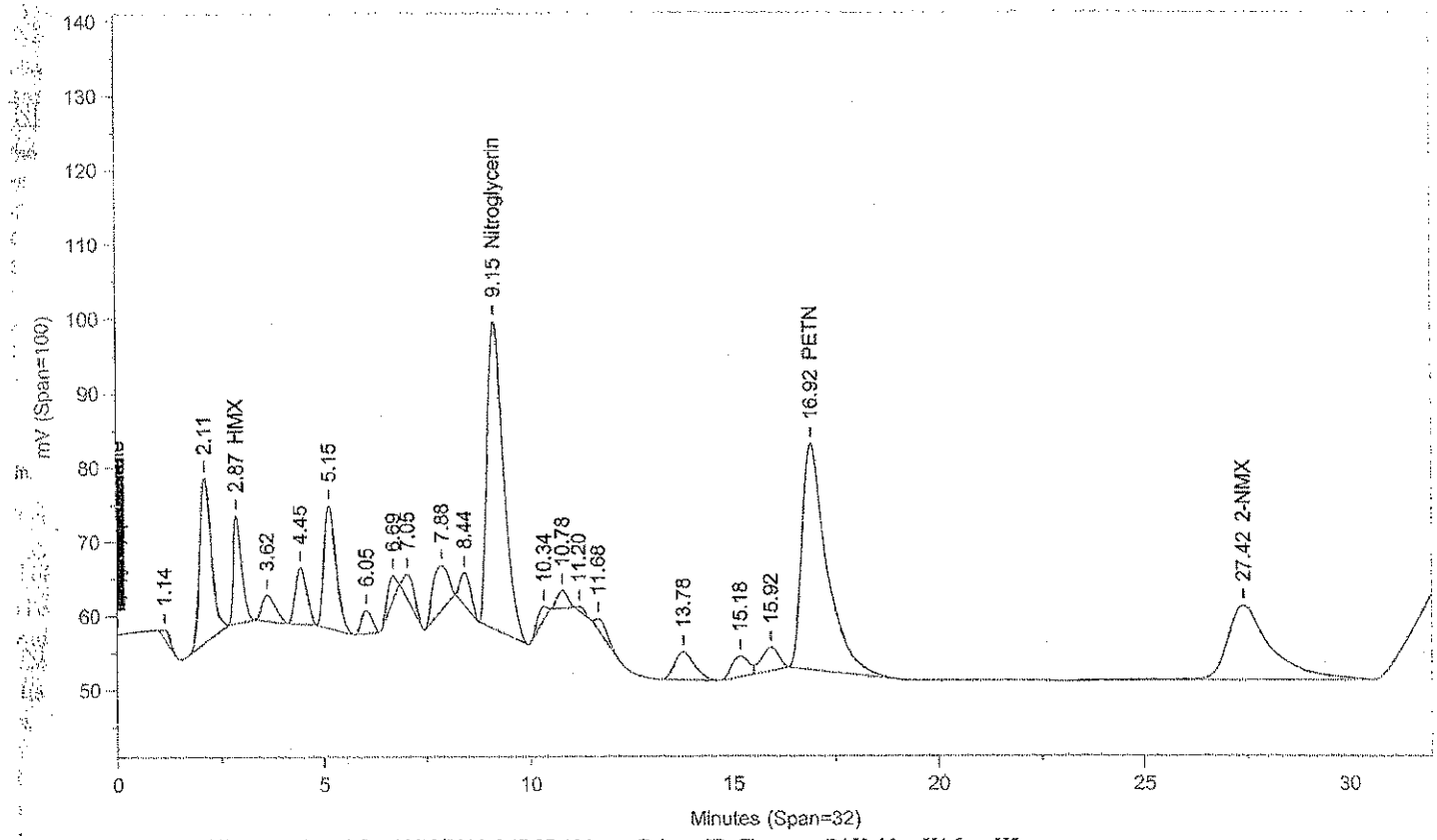
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.17R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.17R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.87	205269	489.898	HMX
4.301	42089	467.844	RDX	.	0	.	RDX
4.998	98078	464.635	1,3,5-TNB	.	0	.	1,3,5-TNB
5.904	114618	449.883	1,4-DNB	.	0	.	1,4-DNB
6.531	45103	437.734	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.93	157671	485.897	1,3-DNB	.	0	.	1,3-DNB
7.851	151446	438.132	Tetryl	.	0	.	Tetryl
8.29	119463	524.279	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	15130	43.77	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.15	1119750	8761.389	Nitroglycerin
10.35	41040	437.426	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.655	96606	441.092	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.092	60419	496.964	2,6-DNT	.	0	.	2,6-DNT
11.593	167308	505.822	2,4-DNT	.	0	.	2,4-DNT
13.627	56597	427.822	2-NT	.	0	.	2-NT
15.029	41107	438.115	4-NT	.	0	.	4-NT
15.763	67848	501.073	3-NT	.	0	.	3-NT
.	0	.	PETN	16.917	1296672	9468.529	PETN
27.252	52434	1538.226	2-NMX	27.424	752386	1540.293	2-NMX
33.445	69160	526.448	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:04:00 PM
File Reported On: 11/22/2013 at 3:03:58 PM

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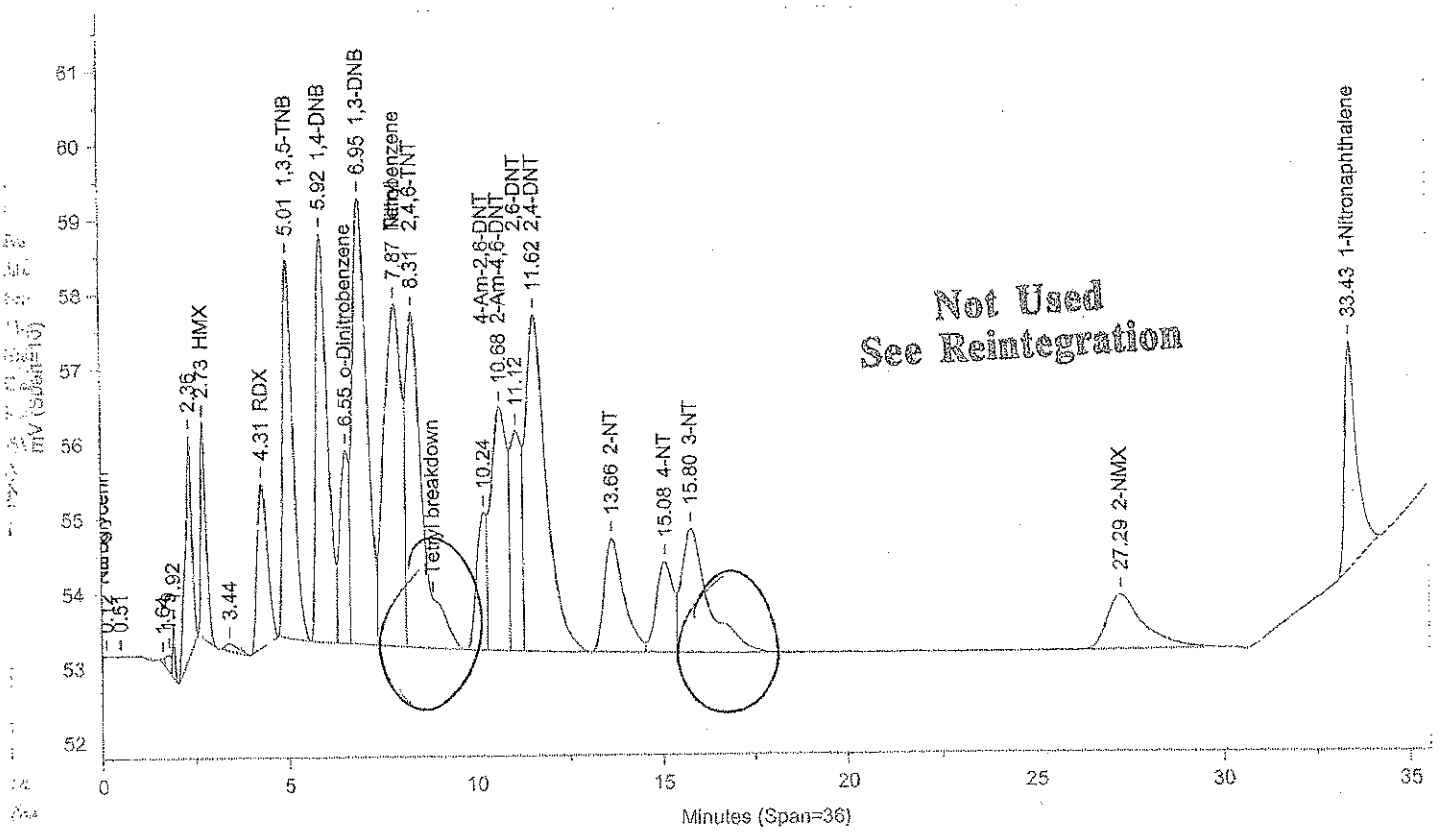
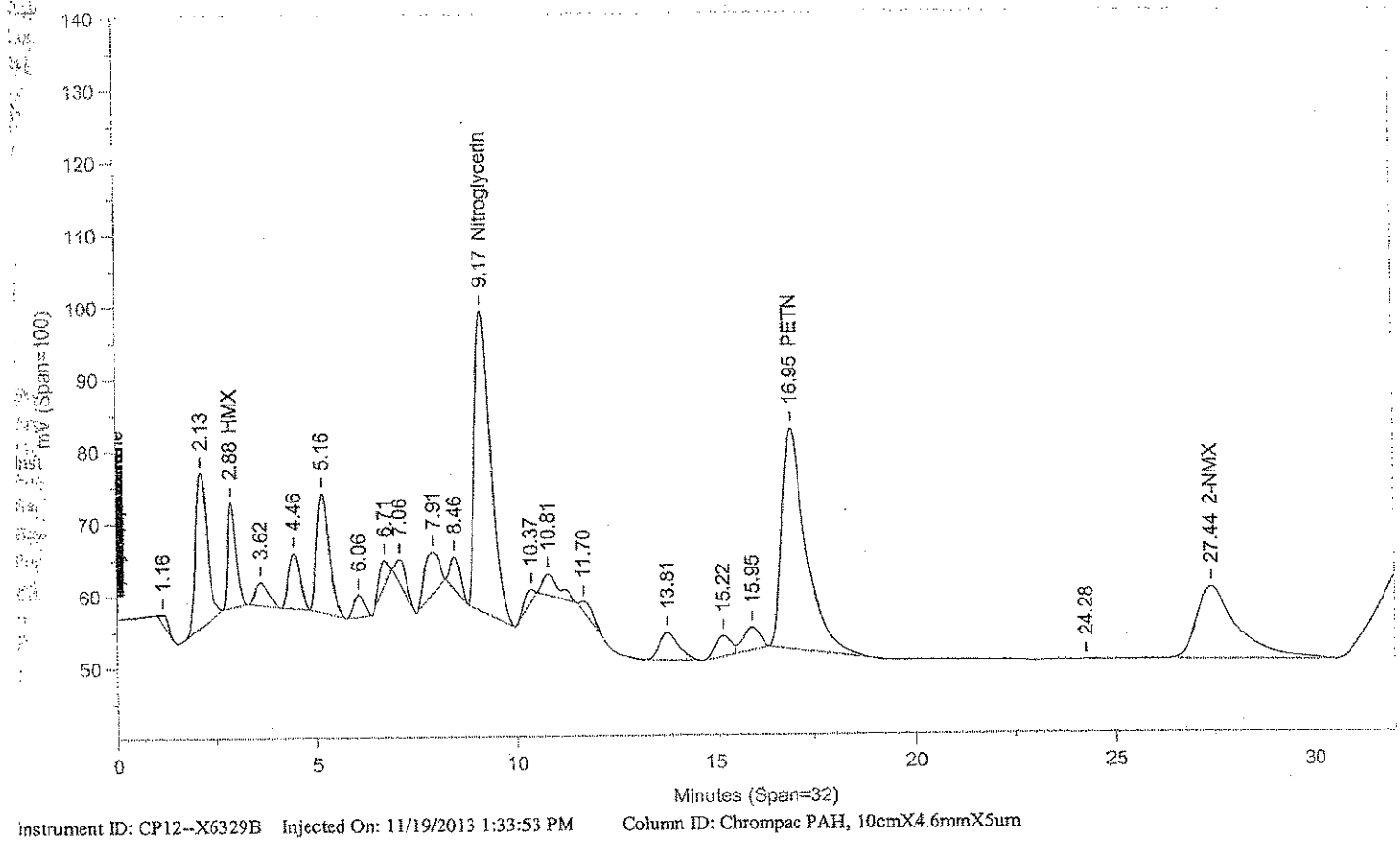
File: C:\CPWIN\DATA1\SE12310.28R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\SE12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

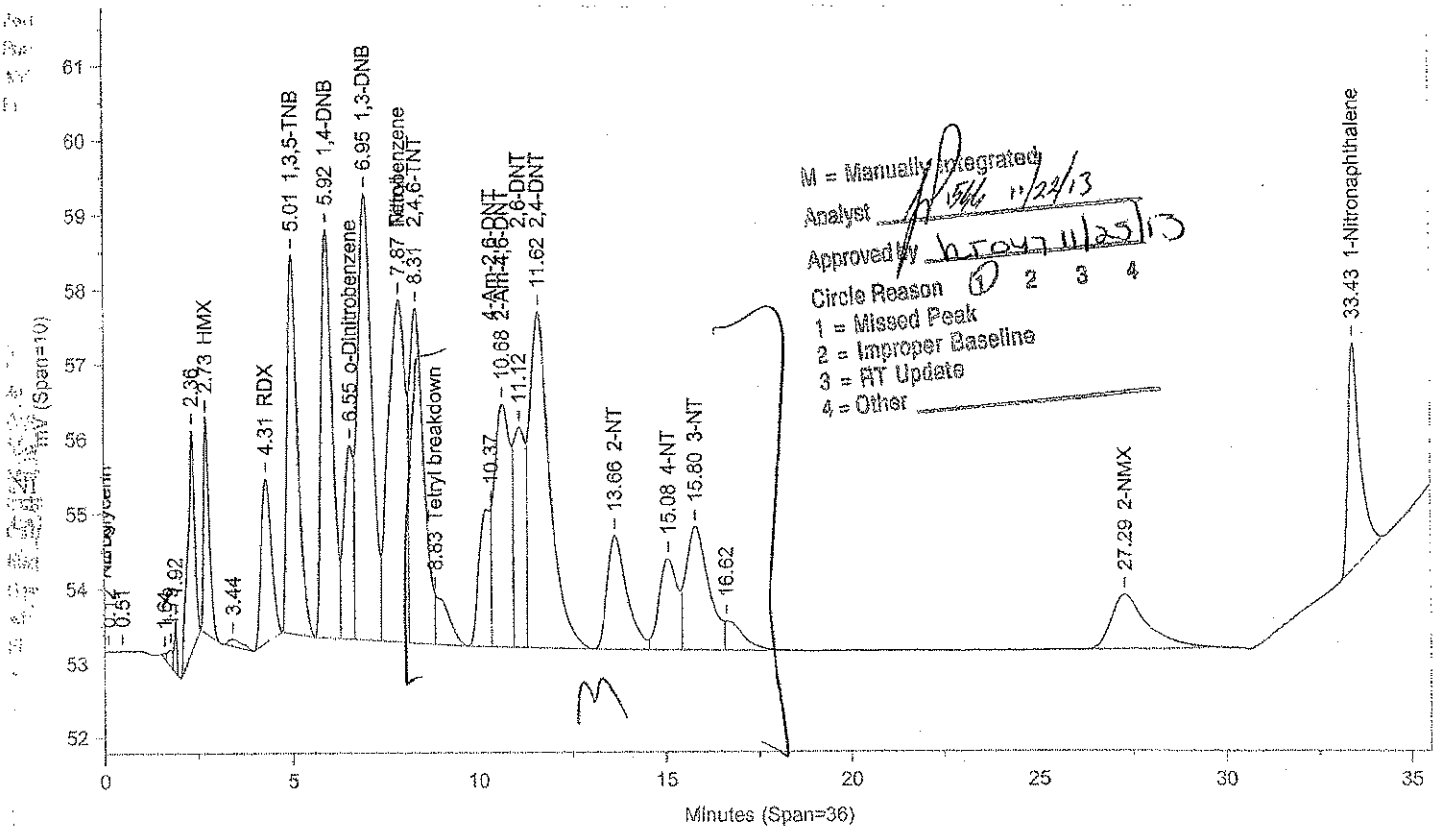
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.876	207080	494.067	HMX
4.31	42015	466.997	RDX	.	0	.	RDX
5.007	97875	463.669	1,3,5-TNB	.	0	.	1,3,5-TNB
5.916	115161	452.014	1,4-DNB	.	0	.	1,4-DNB
6.551	45364	440.265	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.946	157760	486.172	1,3-DNB	.	0	.	1,3-DNB
7.869	149192	433.339	Nitrobenzene	.	0	.	Nitrobenzene
8.31	135777	595.875	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.171	1126814	8816.657	Nitroglycerin
9.242	34711	369.97	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.68	97994	447.427	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.123	62244	511.974	2,6-DNT	.	0	.	2,6-DNT
11.618	171386	518.151	2,4-DNT	.	0	.	2,4-DNT
13.656	55836	422.074	2-NT	.	0	.	2-NT
15.083	39507	421.055	4-NT	.	0	.	4-NT
15.798	84401	623.327	3-NT	.	0	.	3-NT
.	0	.	PETN	16.949	1295045	9456.654	PETN
27.292	49661	1456.877	2-NMX	27.437	711138	1455.852	2-NMX
33.43	68499	521.412	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.28A
Area File: C:\CPWIN\DATA1\5E12310B.28A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:46:44 PM
File Reported On: 11/20/2013 at 4:46:55 PM

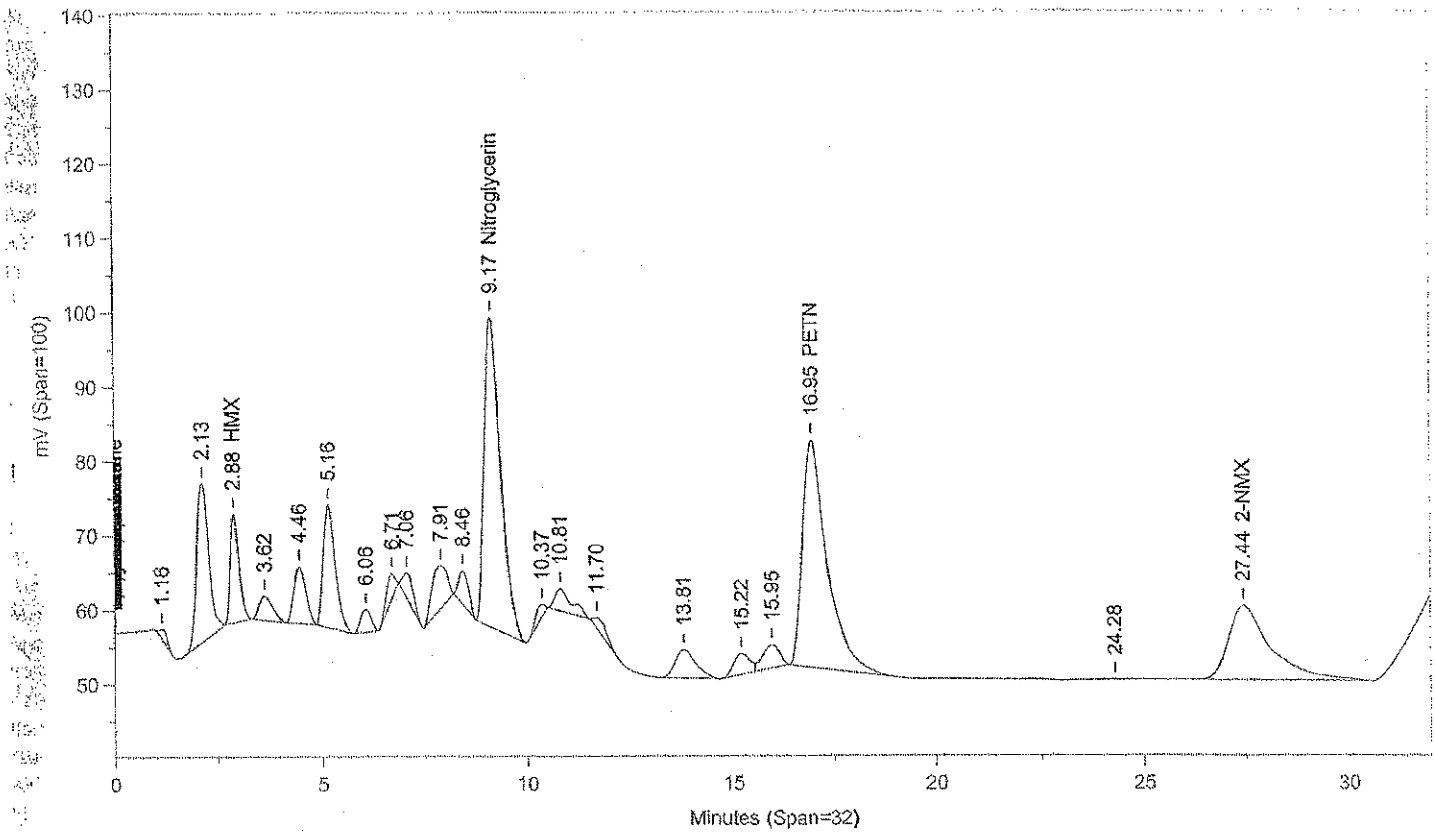
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.28R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.28R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.876	207080	494.067	HMX
4.31	42015	466.997	RDX	.	0	.	RDX
5.007	97875	463.669	1,3,5-TNB	.	0	.	1,3,5-TNB
5.916	115161	452.014	1,4-DNB	.	0	.	1,4-DNB
6.551	45364	440.265	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.946	157760	486.172	1,3-DNB	.	0	.	1,3-DNB
7.869	149192	433.339	Nitrobenzene	.	0	.	Nitrobenzene
8.31	119068	522.545	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	16709	48.339	Tetryl breakdown	.	0	.	Tetryl breakdown
De	0	.	Nitroglycerin	9.171	1126814	8816.657	Nitroglycerin
10.367	40182	428.284	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.68	97005	442.913	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.123	61412	505.138	2,6-DNT	.	0	.	2,6-DNT
11.618	167735	507.112	2,4-DNT	.	0	.	2,4-DNT
13.656	56229	425.039	2-NT	.	0	.	2-NT
15.083	41248	439.611	4-NT	.	0	.	4-NT
15.798	68564	506.36	3-NT	.	0	.	3-NT
.	0	.	PETN	16.949	1295045	9456.654	PETN
27.292	49661	1456.877	2-NMX	27.437	711138	1455.852	2-NMX
33.43	68499	521.412	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:14:08 PM
File Reported On: 11/22/2013 at 3:14:07 PM

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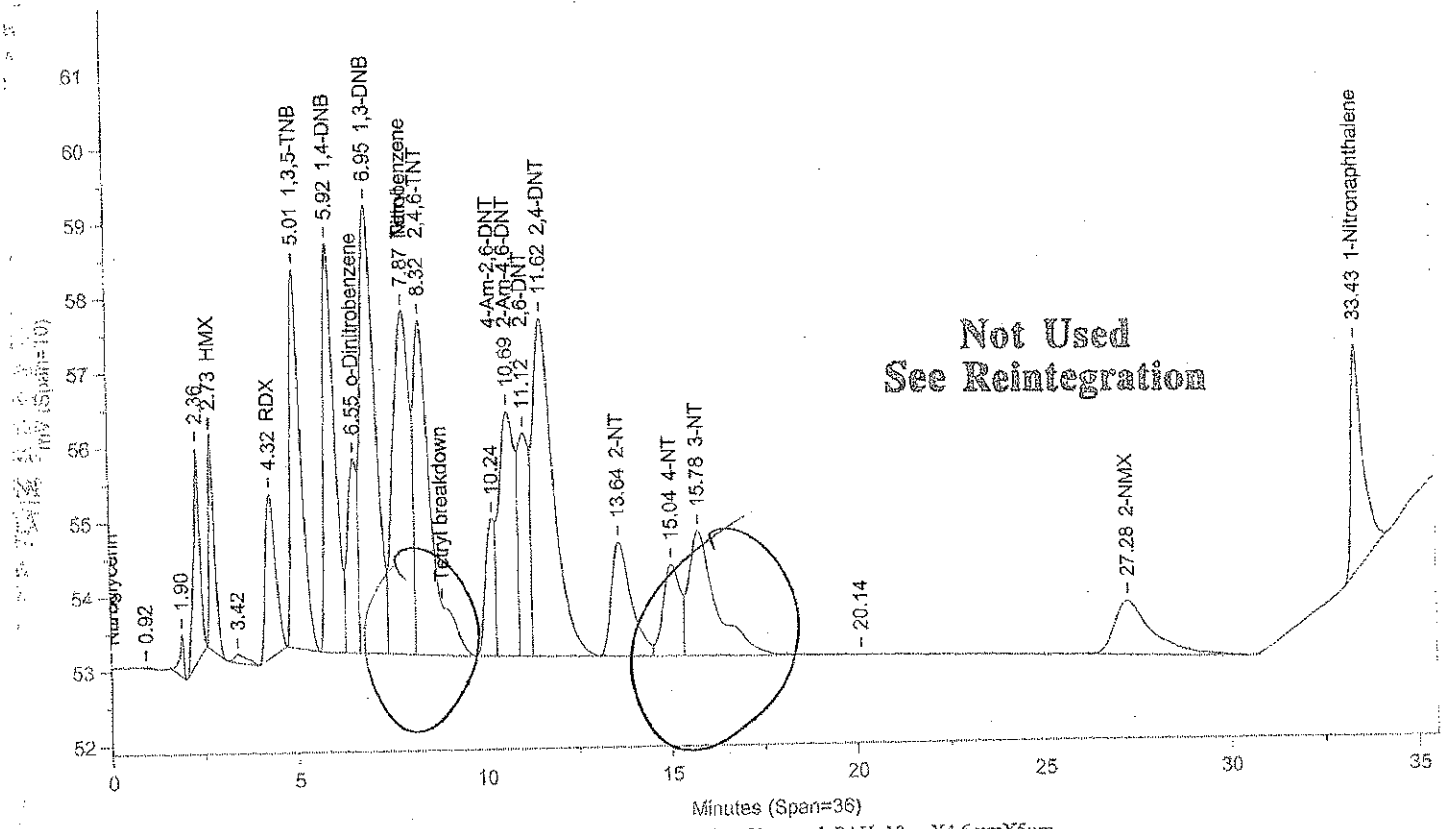
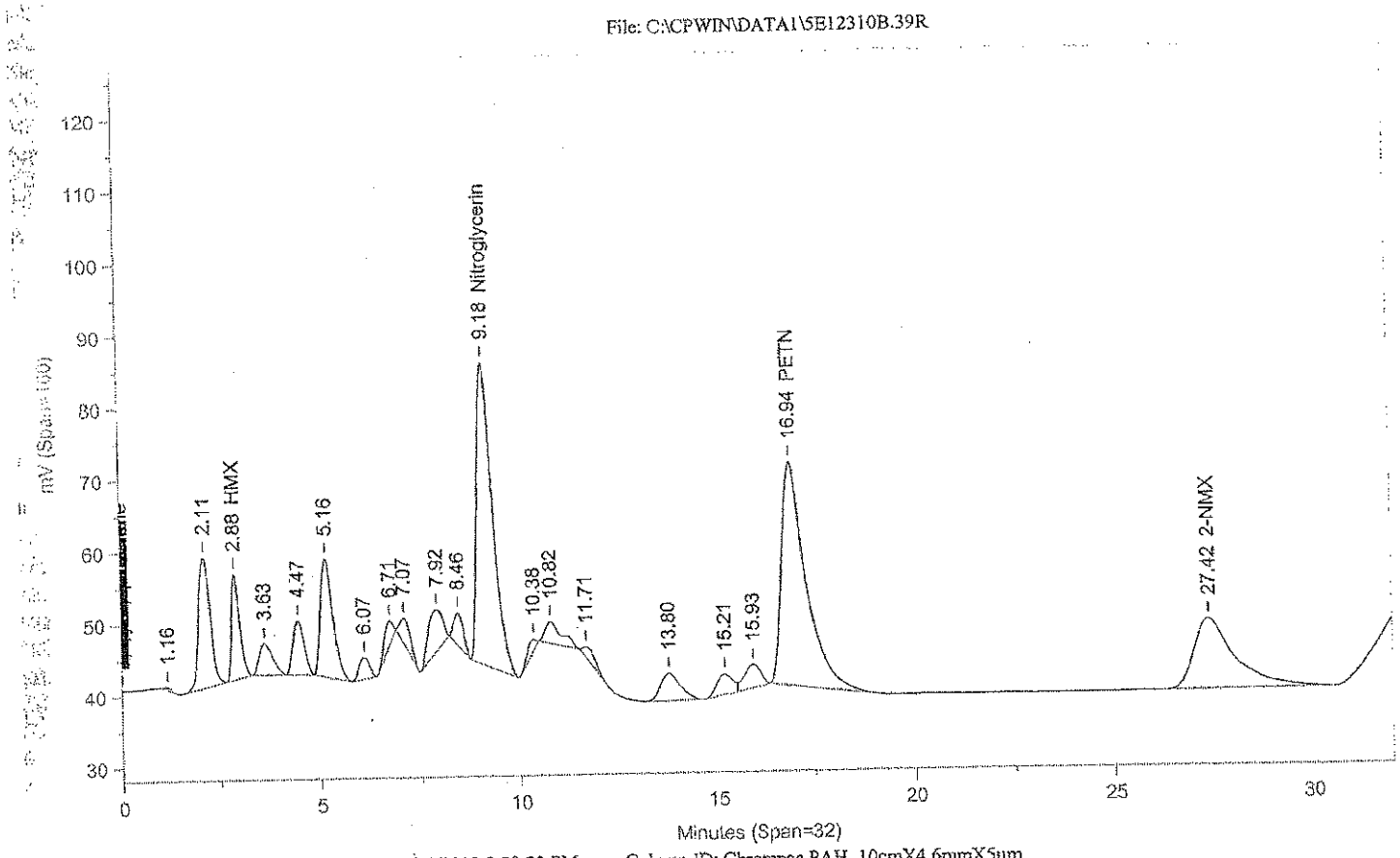
File: C:\CPWIN\DATA1\5E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

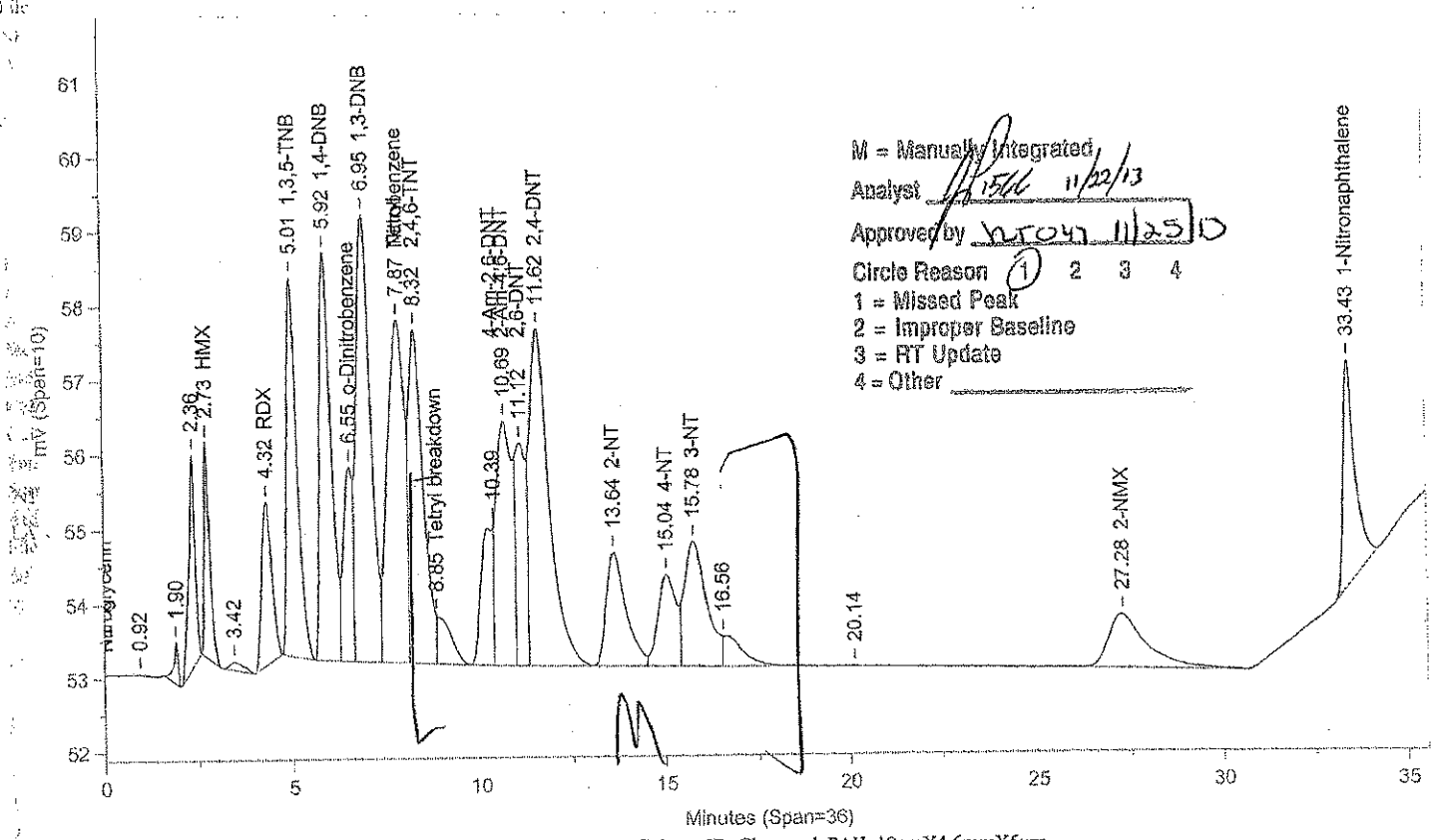
Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.878	211627	504.534	HMX
4.318	42147	468.498	RDX	.	0	.	RDX
5.014	98530	466.773	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	115527	453.452	1,4-DNB	.	0	.	1,4-DNB
6.552	45426	440.876	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.954	159900	492.767	1,3-DNB	.	0	.	1,3-DNB
7.868	146669	426.012	Nitrobenzene	.	0	.	Nitrobenzene
8.315	136996	601.225	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.177	1142318	8937.969	Nitroglycerin
9.244	33677	358.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.686	100112	457.101	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.116	61468	505.591	2,6-DNT	.	0	.	2,6-DNT.
11.616	172883	522.676	2,4-DNT	.	0	.	2,4-DNT
13.636	56847	429.716	2-NT	.	0	.	2-NT .
15.044	39827	424.473	4-NT	.	0	.	4-NT
15.777	87442	645.779	3-NT	.	0	.	3-NT
.	0	.	PETN	16.94	1317398	9619.846	PETN
27.277	51711	1517.002	2-NMX	27.423	697382	1427.689	2-NMX
33.435	67959	517.305	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.39A
Area File: C:\CPWIN\DATA1\5E12310B.39A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:52:20 PM
Report Reported On: 11/20/2013 at 4:52:30 PM

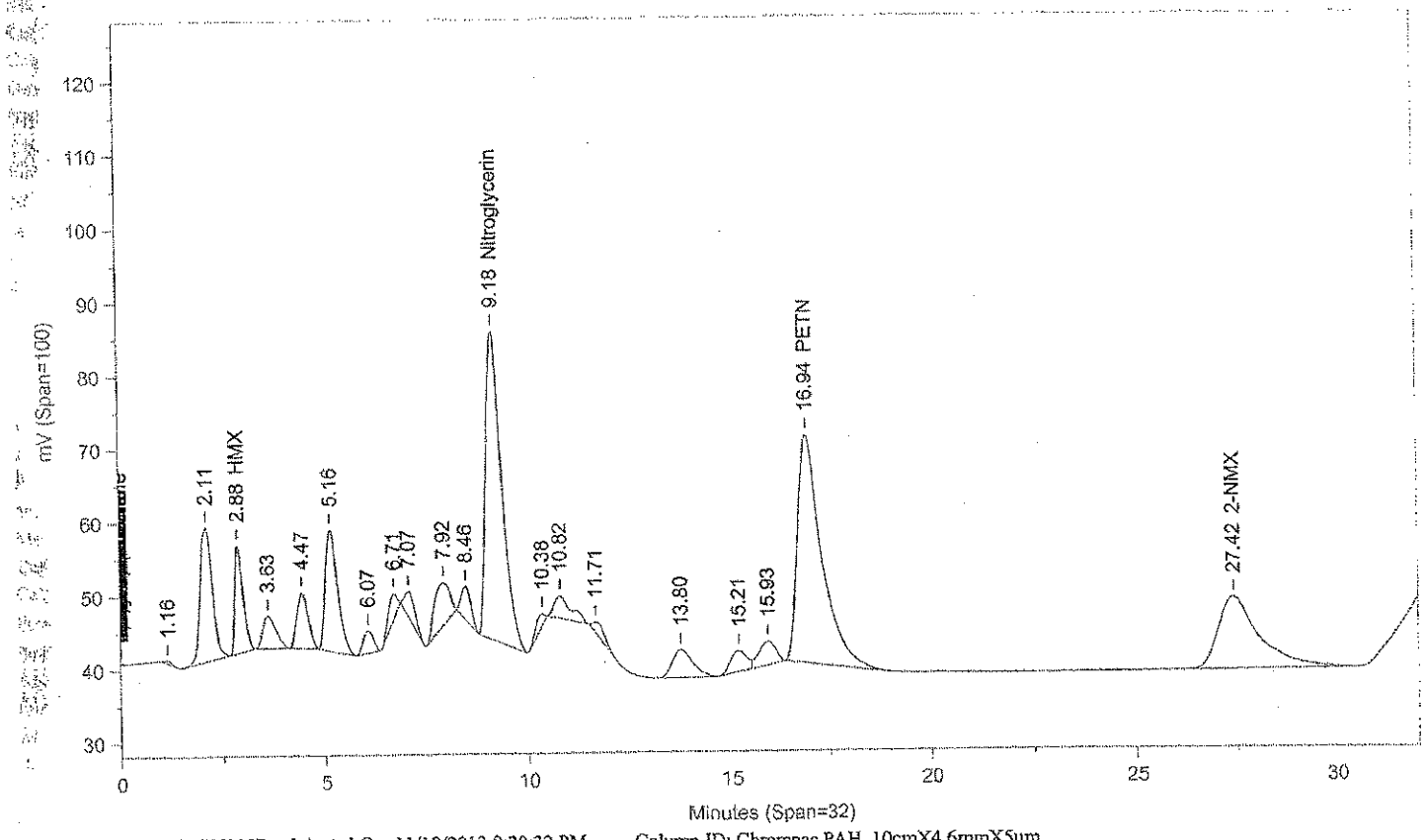
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.39R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.39R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.878	211627	504.534	HMX
4.318	42147	468.498	RDX	.	0	.	RDX
5.014	98530	466.773	1,3,5-TNB	.	0	.	1,3,5-TNB
5.922	115527	453.452	1,4-DNB	.	0	.	1,4-DNB
6.552	45426	440.876	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.954	159900	492.767	1,3-DNB	.	0	.	1,3-DNB
7.868	146669	426.012	Nitrobenzene	.	0	.	Nitrobenzene
8.315	120152	527.304	2,4,6-TNT	.	0	.	2,4,6-TNT
8.85	16844	48.729	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.177	1142318	8937.969	Nitroglycerin
10.389	42252	450.344	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.686	100799	460.237	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.116	59639	490.551	2,6-DNT	.	0	.	2,6-DNT
11.616	165450	500.205	2,4-DNT	.	0	.	2,4-DNT
13.636	56847	429.716	2-NT	.	0	.	2-NT
15.044	42017	447.806	4-NT	.	0	.	4-NT
15.777	70113	517.805	3-NT	.	0	.	3-NT
.	0	.	PETN	16.94	1317398	9619.846	PETN
27.277	51711	1517.002	2-NMX	27.423	697382	1427.689	2-NMX
33.435	67959	517.305	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:44:36 PM
File Reported On: 11/22/2013 at 3:44:35 PM

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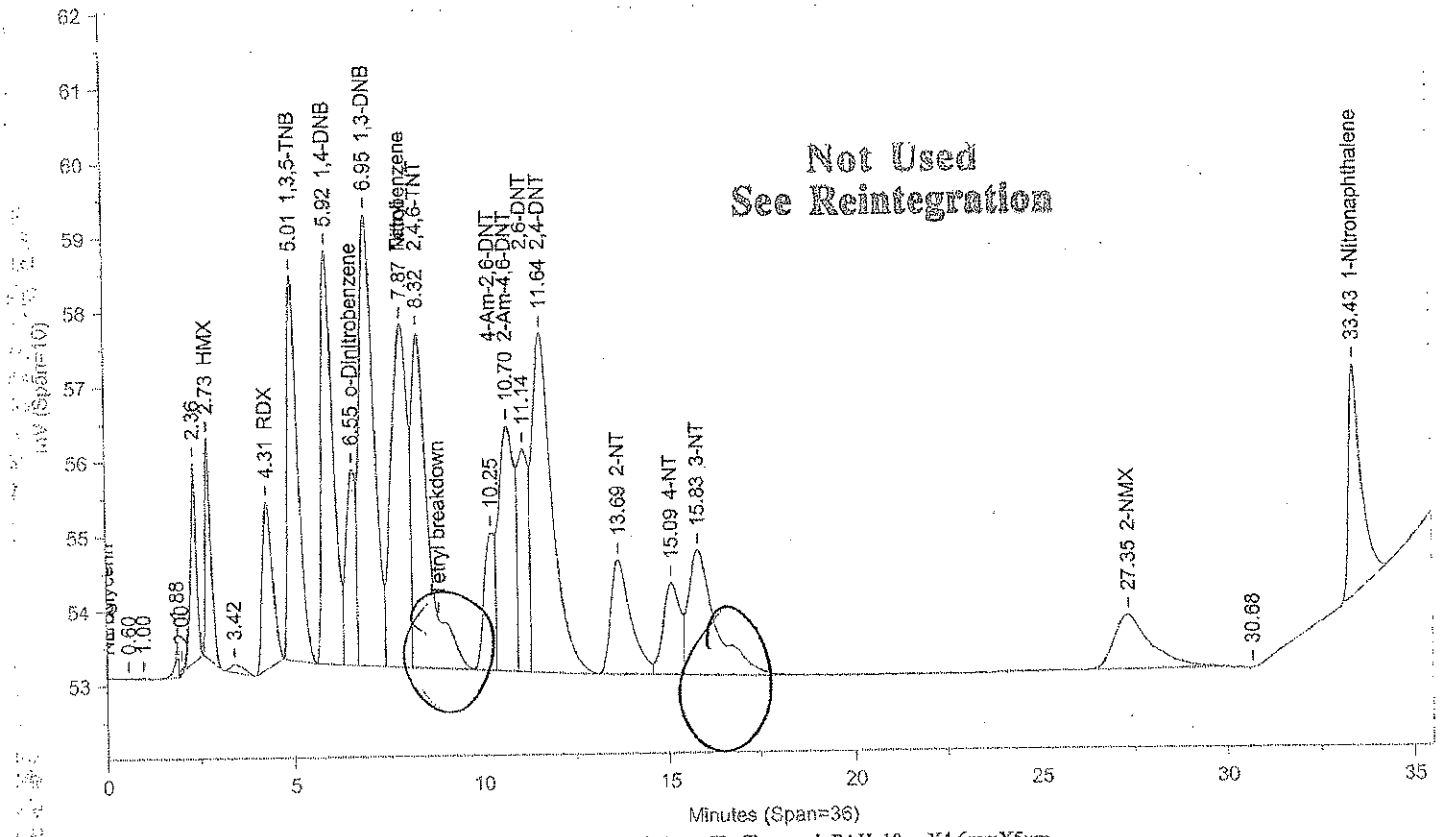
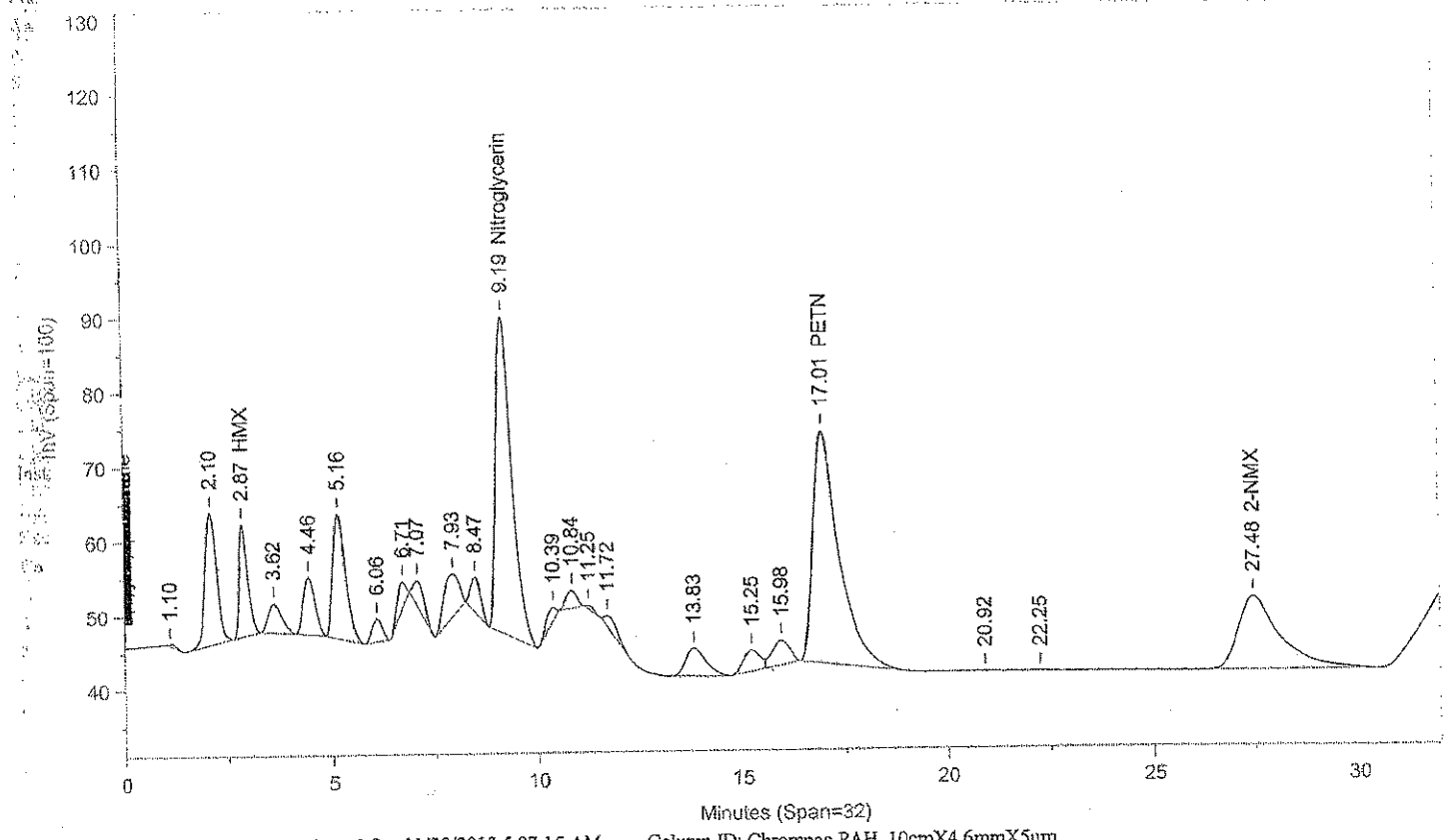
File: C:\CPWIN\DATA1\5E12310.50R



Instrument ID: CP12--X6329A Injected On: 11/20/2013 5:07:15 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.50R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 5:07:15 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.872	216281	515.245	HMX
4.313	42572	473.351	RDX	.	0	.	RDX
5.01	99114	469.541	1,3,5-TNB	.	0	.	1,3,5-TNB
6.919	116824	458.54	1,4-DNB	.	0	.	1,4-DNB
6.547	45205	438.725	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.952	160770	495.448	1,3-DNB	.	0	.	1,3-DNB
7.874	146205	424.664	Nitrobenzene	.	0	.	Nitrobenzene
8.321	136577	599.389	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.189	1159046	9068.857	Nitroglycerin
10.254	37372	398.339	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.701	98333	448.975	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.135	60265	495.696	2,6-DNT	.	0	.	2,6-DNT
11.637	173018	523.084	2,4-DNT	.	0	.	2,4-DNT
13.687	57670	435.933	2-NT	.	0	.	2-NT
15.09	40063	426.988	4-NT	.	0	.	4-NT
15.83	87153	643.648	3-NT	.	0	.	3-NT
.	0	.	PETN	17.005	1329690	9709.588	PETN
27.349	50184	1472.205	2-NMX	27.478	688663	1409.841	2-NMX
33.429	70112	533.693	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.50A
Area File: C:\CPWIN\DATA1\5E12310B.50A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:57:58 PM
File Reported On: 11/20/2013 at 4:58:09 PM

Not Used
See Reintegration

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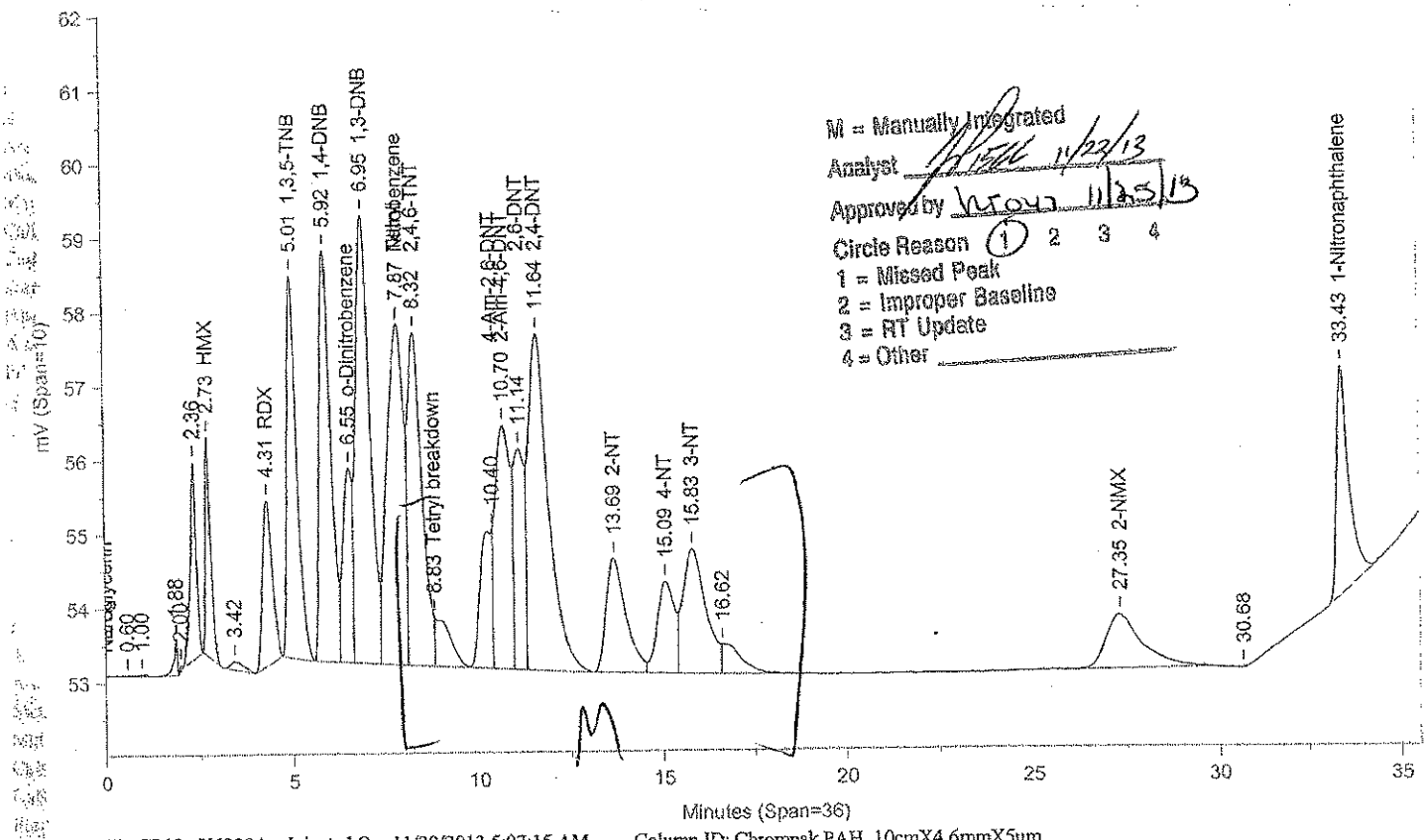
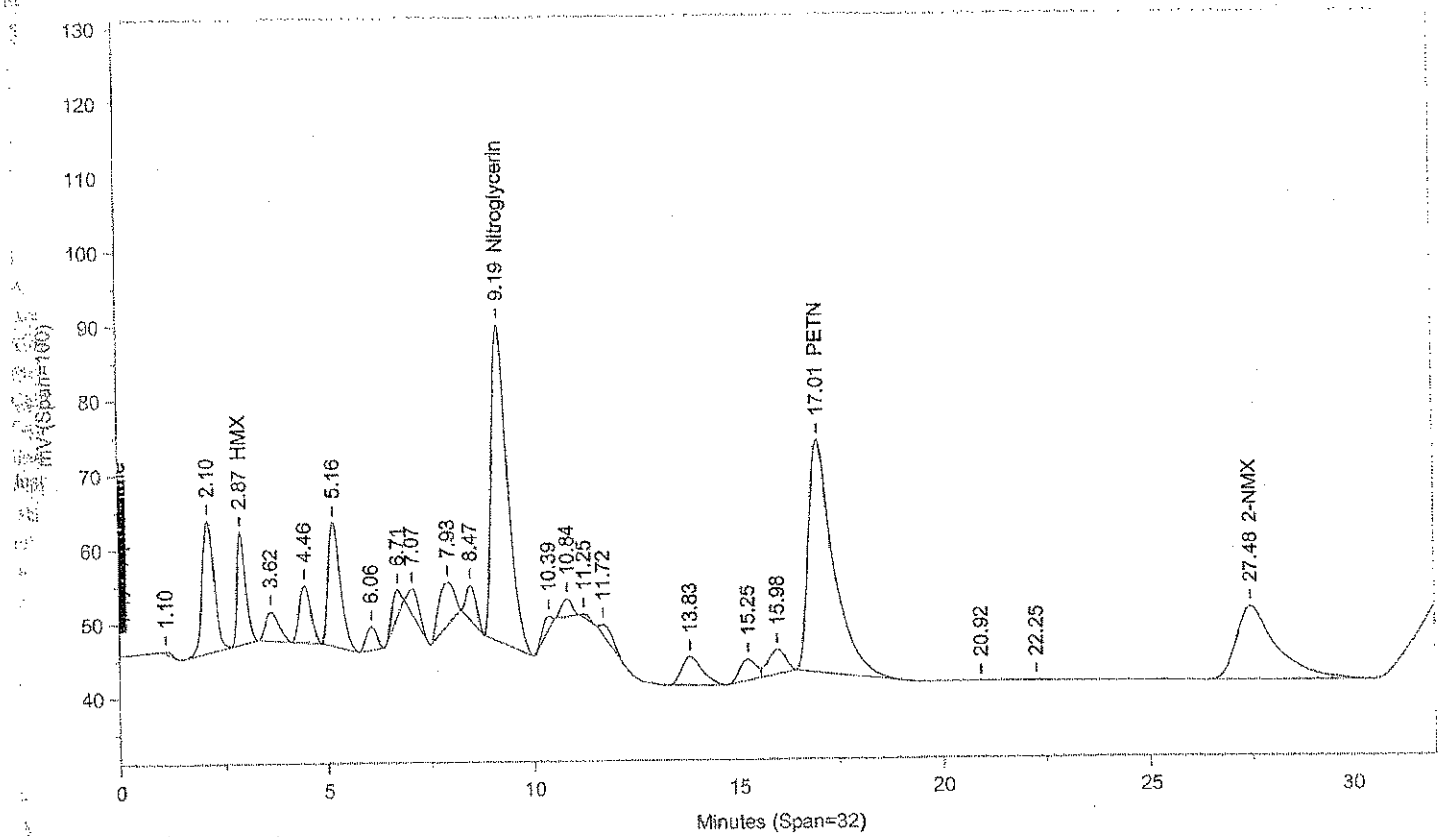
File: C:\CPWIN\DATA1\5E12310.50R



M = Manually Integrated
Analyst 11/22/13
Approved by 11/25/13
Circle Reason (1) 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/20/2013 5:07:15 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.50R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 5:07:15 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 1
Analyst: 1566

Dilution Factor: 1

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.872	216281	515.245	HMX
4.313	42572	473.351	RDX	.	0	.	RDX
5.01	99114	469.541	1,3,5-TNB	.	0	.	1,3,5-TNB
5.919	116824	458.54	1,4-DNB	.	0	.	1,4-DNB
6.547	45205	438.725	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.952	160770	495.448	1,3-DNB	.	0	.	1,3-DNB
7.874	146205	424.664	Nitrobenzene	.	0	.	Nitrobenzene
8.321	118059	518.117	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	18519	53.574	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.189	1159046	9068.857	Nitroglycerin
10.4	41693	444.394	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.701	96745	441.726	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.135	61216	503.521	2,6-DNT	.	0	.	2,6-DNT
11.637	169333	511.944	2,4-DNT	.	0	.	2,4-DNT
13.687	57670	435.933	2-NT	.	0	.	2-NT
15.09	40063	426.988	4-NT	.	0	.	4-NT
15.83	71816	530.379	3-NT	.	0	.	3-NT
.	0	.	PETN	17.005	1329690	9709.588	PETN
27.349	50184	1472.205	2-NMX	27.478	688663	1409.841	2-NMX
33.429	70112	533.693	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 4:02:30 PM
File Reported On: 11/22/2013 at 4:02:28 PM

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
2	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
3	CONDITIONER		MISC	AA		8330C.MET	1	1	1	0	1330999999	
4	NITR51324K		ICAL	AA		8330C.MET	1	1	1	6	1330999999	
5	NITR41324K		ICAL	AA		8330C.MET	1	1	1	5	1330999999	
6	NITR31324L		ICAL	AA		8330C.MET	1	1	1	4	1330999999	
7	NITR21324K		ICAL	AA		8330C.MET	1	1	1	3	1330999999	
8	NITR11324K		ICAL	AA		8330C.MET	1	1	1	2	1330999999	
9	MDNTX1324K		ICAL	AA		8330C.MET	1	1	1	1	1330999999	
10	CNTX1324F		CCAL	AA		8330C.MET	1	1	1	0	1330999999	
11	NITR51324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
12	NITR41324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
13	NITR31324M		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
14	NITR21324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
15	NITR11324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
16	MDNTX1324L		ICAL	AA		8330C.MET	1	1	1	0	1330999999	
17	BLANKA 11/2/13		BLK	AA		8330C.MET	2	20	1	0	133050026A	10132
18	LCSA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
19	LCSDIA 11/2/13		LCS	AA		8330C.MET	2	20	1	0	133050026A	10132
20	LCSDDIA 11/2/13		LCSD	AA		8330C.MET	2	20	1	0	133050026A	10132
21	7255708		T	AA		8330C.MET	2	20	1	0	133050026A	10132
22	7255711		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
23	7255717		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
24	7255722		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
25	7255735		T	AA		8330C.MET	2	20	1	0	133050026A	10132
26	7255736MS		MS	AA		8330C.MET	2.1	20	1	0	133050026A	10132
27	NITR31324L		CCAL	NG		8330C.MET	1	1	1	0	1330999999	
28	NITR31324M		CCAL	NH		8330C.MET	1	1	1	0	1330999999	
29	7255737MSD		MSD	AA		8330C.MET	2.1	20	1	0	133050026A	10132
30	7255744		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
31	7255746		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
32	7255752		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
33	7256953		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
34	7256959		T	AA		8330C.MET	2.3	20	1	0	133050026A	10132
35	7256962		T	AA		8330C.MET	2	20	1	0	133050026A	10132
36	7256965		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
37	7256970		T	AA		8330C.MET	2	20	1	0	133050026A	10132
38	7256973		T	AA		8330C.MET	2	20	1	0	133050026A	10132
39	NITR31324L		CCAL	NI		8330C.MET	1	1	1	0	1330999999	
40	NITR31324M		CCAL	NJ		8330C.MET	1	1	1	0	1330999999	
41	7259353		T	AA		8330C.MET	2	20	1	0	133060018A	10132
42	7256976		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
43	7256999		T	AA		8330C.MET	2.2	20	1	0	133050026A	10132
44	7257006		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
45	7257011		T	AA		8330C.MET	2	20	1	0	133050026A	10132
46	7257016		T	AA		8330C.MET	2.1	20	1	0	133050026A	10132
47	7257019		T	AA		8330C.MET	2	20	1	0	133050026A	10132
48	BLANKA 11/4/13		BLK	AA		8330C.MET	500	10	1	0	133060017A	10131
49	LCSA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
50	LCSDA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\1C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 96

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51	NITR31324L		CCAL	NK		8330C.MET	1	1	1	0	1330999999	
52	NITR31324M		CCAL	NL		8330C.MET	1	1	1	0	1330999999	
53	LCSDIA 11/4/13		LCS	AA		8330C.MET	500	10	1	0	133060017A	10131
54	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	500	10	1	0	133060017A	10131
55	7256670		T	AA		8330C.MET	500	10	1	0	133060017A	10131
56	7256672		T	AA		8330C.MET	500	10	1	0	133060017A	10131
57	7258547		T	AA		8330C.MET	500	10	1	0	133060017A	10131
58	7258549		T	AA		8330C.MET	500	10	1	0	133060017A	10131
59	7260599		T	AA		8330C.MET	500	10	1	0	133060017A	10131
60	7260601		T	AA		8330C.MET	500	10	1	0	133060017A	10131
61	7262133		T	AA		8330C.MET	500	10	1	0	133060017A	10131
62	BLANKA 11/4/13		BLK	AA		8330C.MET	2	20	1	0	133060018A	10132
63	NITR31324L		CCAL	NM		8330C.MET	1	1	1	0	1330999999	
64	NITR31324M		CCAL	NN		8330C.MET	1	1	1	0	1330999999	
65	LCSA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
66	LCSDIA 11/4/13		LCS	AA		8330C.MET	2	20	1	0	133060018A	10132
67	LCSDDIA 11/4/13		LCSD	AA		8330C.MET	2	20	1	0	133060018A	10132
68	7259344		T	AA		8330C.MET	2	20	1	0	133060018A	10132
69	7259344MS		MS	AA		8330C.MET	2	20	1	0	133060018A	10132
70	7259344MSD		MSD	AA		8330C.MET	2	20	1	0	133060018A	10132
71	7259359		T	AA		8330C.MET	2	20	1	0	133060018A	10132
72	7259366		T	AA		8330C.MET	2	20	1	0	133060018A	10132
73	7259368		T	AA		8330C.MET	2	20	1	0	133060018A	10132
74	7259386		T	AA		8330C.MET	2	20	1	0	133060018A	10132
75	NITR31324L		CCAL	NO		8330C.MET	1	1	1	0	1330999999	
76	NITR31324M		CCAL	NP		8330C.MET	1	1	1	0	1330999999	
77	7259391		T	AA		8330C.MET	2	20	1	0	133060018A	10132
78	7259396		T	AA		8330C.MET	2	20	1	0	133060018A	10132
79	7260617		T	AA		8330C.MET	2	20	1	0	133060018A	10132
80	7260623		T	AA		8330C.MET	2	20	1	0	133060018A	10132
81	7260634		T	AA		8330C.MET	2	20	1	0	133060018A	10132
82	7260649		T	AA		8330C.MET	2	20	1	0	133060018A	10132
83	7262153		T	AA		8330C.MET	2	20	1	0	133060018A	10132
84	7262159		T	AA		8330C.MET	2	20	1	0	133060018A	10132
85	7262162		T	AA		8330C.MET	2	20	1	0	133060018A	10132
86	7262172		T	AA		8330C.MET	2	20	1	0	133060018A	10132
87	NITR31324L		CCAL	NQ		8330C.MET	1	1	1	0	1330999999	
88	NITR31324M		CCAL	NR		8330C.MET	1	1	1	0	1330999999	
89	7262177		T	AA		8330C.MET	2	20	1	0	133060018A	10132
90	BLANKA 11/1/13		BLK	AA		8330C.MET	500	10	1	0	133040024A	06916
91	LCSA 11/1/13		LCS	AA		8330C.MET	500	10	1	0	133040024A	06916
92	LCSDA 11/1/13		LCSD	AA		8330C.MET	500	10	1	0	133040024A	06916
93	7255627		T	AA		8330C.MET	500	10	1	0	133040024A	06916
94	7255628		T	AA		8330C.MET	500	10	1	0	133040024A	06916
95	NITR31324L		CCAL	NS		8330C.MET	1	1	1	0	1330999999	
96	NITR31324M		CCAL	NT		8330C.MET	1	1	1	0	1330999999	

Set-up by: _____ Date: 11/12/13

11/8/2013

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq
Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1
Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1 CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1331899999	
2 CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1331899999	
3 CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1331899999	
4 CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1331899999	
5 CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1331899999	
6 NITR31324O	6	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
7 NITR31324M	7	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
8 MS1330124B	8	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
9 MS1330124B	9	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
10 MS1330124B	10	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
11 MS1330124B	11	CCAL	AH		8330C.MET	1	50	1	0	1331899999	
12 BLANKA 11/12/13	12	BLK	AA		8330C.MET	2	20	1	0	133140021A	10132
13 LCSA 11/12/13	13	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
14 LCSDDIA 11/12/13	14	LCSD	AA		8330C.MET	2	20	1	0	133140021A	10132
15 LCSDIA 11/12/13	15	LCS	AA		8330C.MET	2	20	1	0	133140021A	10132
16 7269438	16	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
17 7269438MS	17	MS	AA		8330C.MET	2	20	1	0	133140021A	10132
18 NITR31324O	18	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
19 NITR31324M	19	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
20 7269438MSD	20	MSD	AA		8330C.MET	2.2	20	1	0	133140021A	10132
21 7269454	21	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
22 7269467	22	T	AA		8330C.MET	2	20	1	0	133140021A	10132
23 7269472	23	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
24 7269475	24	T	AA		8330C.MET	2.1	20	1	0	133140021A	10132
25 7269478	25	T	AA		8330C.MET	2.2	20	1	0	133140021A	10132
26 7269484	26	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
27 7269487	27	T	AA		8330C.MET	2.3	20	1	0	133140021A	10132
28 BLANKA 11/12/13	28	BLK	AA		8330C.MET	2	20	1	0	133160009A	10132
29 LCSA 11/12/13	29	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
30 NITR31324O	30	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
31 NITR31324M	31	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
32 LCSDDIA 11/12/13	32	LCSD	AA		8330C.MET	2	20	1	0	133160009A	10132
33 LCSDIA 11/12/13	33	LCS	AA		8330C.MET	2	20	1	0	133160009A	10132
34 7269501	34	T	AA		8330C.MET	2	20	1	0	133160009A	10132
35 7269504	35	T	AA		8330C.MET	2	20	1	0	133160009A	10132
36 7269514	36	T	AA		8330C.MET	2	20	1	0	133160009A	10132
37 7269520	37	T	AA		8330C.MET	2	20	1	0	133160009A	10132
38 7269526	38	T	AA		8330C.MET	2	20	1	0	133160009A	10132
39 7269529	39	T	AA		8330C.MET	2	20	1	0	133160009A	10132
40 7269532	40	T	AA		8330C.MET	2	20	1	0	133160009A	10132
41 7269538	41	T	AA		8330C.MET	2	20	1	0	133160009A	10132
42 NITR31324O	42	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
43 NITR31324M	43	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
44 7269541	44	T	AA		8330C.MET	2	20	1	0	133160009A	10132
45 7269544	45	T	AA		8330C.MET	2	20	1	0	133160009A	10132
46 7269550	46	T	AA		8330C.MET	2	20	1	0	133160009A	10132
47 7269553	47	T	AA		8330C.MET	2	20	1	0	133160009A	10132
48 7269559	48	T	AA		8330C.MET	2	20	1	0	133160009A	10132
49 7270974	49	T	AA		8330C.MET	2	20	1	0	133160009A	10132
50 7270975MS	50	MS	AA		8330C.MET	2	20	1	0	133160009A	10132



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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\4C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 95

Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270976MSD	51	MSD	AA		8330C.MET	2	20	1	0	133160009A	10132
52 7270986	52	T	AA		8330C.MET	2	20	1	0	133160009A	10132
53 7270989	53	T	AA		8330C.MET	2	20	1	0	133160009A	10132
54 NITR31324O	54	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
55 NITR31324M	55	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
56 7270995	56	T	AA		8330C.MET	2	20	1	0	133160009A	10132
57 7271001	57	T	AA		8330C.MET	2	20	1	0	133160009A	10132
58 NITR31324O update MSK15 12/20/13	58	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
59 NITR31324M	59	CCAL	PX		8330C.MET	1	1	1	0	1331899999	
60 BLANKA 11/11/13	60	BLK	AA		8330C.MET	500	10	1	0	133130015A	06916
61 LCSA 11/11/13	61	LCS	AA		8330C.MET	500	10	1	0	133130015A	06916
62 7265223	62	T	AA		8330C.MET	500	10	1	0	133130015A	06916
63 7265224	63	T	AA		8330C.MET	500	10	1	0	133130015A	06916
64 7265228	64	T	AA		8330C.MET	500	10	1	0	133130015A	06916
65 7265230	65	T	AA		8330C.MET	500	10	1	0	133130015A	06916
66 7265231MS	66	MS	AA		8330C.MET	500	10	1	0	133130015A	06916
67 7265232MSD	67	MSD	AA		8330C.MET	500	10	1	0	133130015A	06916
68 7265235	68	T	AA		8330C.MET	500	10	1	0	133130015A	06916
69 7265238	69	T	AA		8330C.MET	500	10	1	0	133130015A	06916
70 NITR31324O	70	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
71 7265240	71	T	AA		8330C.MET	500	10	1	0	133130015A	06916
72 7265243	72	T	AA		8330C.MET	500	10	1	0	133130015A	06916
73 7265247	73	T	AA		8330C.MET	500	10	1	0	133130015A	06916
74 7265248	74	T	AA		8330C.MET	500	10	1	0	133130015A	06916
75 BLANKA 11/12/13	75	BLK	AA		8330C.MET	500	10	1	0	133140016A	06916
76 LCSA 11/12/13	76	LCS	AA		8330C.MET	500	10	1	0	133140016A	06916
77 LCSDA 11/12/13	77	LCSD	AA		8330C.MET	500	10	1	0	133140016A	06916
78 7266798	78	T	AA		8330C.MET	500	10	1	0	133140016A	06916
79 7266799	79	T	AA		8330C.MET	500	10	1	0	133140016A	06916
80 7266805	80	T	AA		8330C.MET	500	10	1	0	133140016A	06916
81 NITR31324O	81	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
82 7266807	82	T	AA		8330C.MET	500	10	1	0	133140016A	06916
83 7266810	83	T	AA		8330C.MET	500	10	1	0	133140016A	06916
84 7266811	84	T	AA		8330C.MET	500	10	1	0	133140016A	06916
85 7266819	85	T	AA		8330C.MET	500	10	1	0	133140016A	06916
86 BLANKA 11/12/13	86	BLK	AA		8330C.MET	2	20	1	0	133140019A	06918
87 LCSA 11/12/13	87	LCS	AA		8330C.MET	2	20	1	0	133140019A	06918
88 7266800	88	T	AA		8330C.MET	2	20	1	0	133140019A	06918
89 7266801MS	89	MS	AA		8330C.MET	2.3	20	1	0	133140019A	06918
90 7266802MSD	90	MSD	AA		8330C.MET	2.3	20	1	0	133140019A	06918
91 7266804	91	T	AA		8330C.MET	2.4	20	1	0	133140019A	06918
92 NITR31324O	92	CCAL	PV		8330C.MET	1	1	1	0	1331899999	
93 7266806	93	T	AA		8330C.MET	2.2	20	1	0	133140019A	06918
94 7266808	94	T	AA		8330C.MET	2.3	20	1	0	133140019A	06918
95 NITR31324O	95	CCAL	PV		8330C.MET	1	1	1	0	1331899999	

Set-up by: MSK 11/15/2013 Date: 11/20/13

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CHROM PERFECT SEQUENCE FILE

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Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

	Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
1	CONDITIONER	1	MISC	AA		8330C.MET	1	1	1	0	1332199999	
2	CONDITIONER	2	MISC	AA		8330C.MET	1	1	1	0	1332199999	
3	CONDITIONER	3	MISC	AA		8330C.MET	1	1	1	0	1332199999	
4	CONDITIONER	4	MISC	AA		8330C.MET	1	1	1	0	1332199999	
5	CONDITIONER	5	MISC	AA		8330C.MET	1	1	1	0	1332199999	
6	NITR31324P	6	CCAL	QD		8330C.MET	1	1	1	0	1332199999	
7	MS1330124B	7	MISC	AA		8330C.MET	1	50	1	0	1332199999	
8	BLANKA 11/8/13	8	BLK	AA		8330C.MET	500	10	1	0	133110017A	06916
9	LCSA 11/8/13	9	LCS	AA		8330C.MET	500	10	1	0	133110017A	06916
10	7263051	10	T	AA		8330C.MET	500	10	1	0	133110017A	06916
11	7263056	11	T	AA		8330C.MET	500	10	1	0	133110017A	06916
12	7263057	12	T	AA		8330C.MET	500	10	1	0	133110017A	06916
13	7263058	13	T	AA		8330C.MET	500	10	1	0	133110017A	06916
14	7263059	14	T	AA		8330C.MET	500	10	1	0	133110017A	06916
15	7263060	15	T	AA		8330C.MET	500	10	1	0	133110017A	06916
16	7264286	16	T	AA		8330C.MET	500	10	1	0	133110017A	06916
17	NITR31324P update MEK 12/20/13	17	CCAL	QF		8330C.MET	1	1	1	0	1332199999	
18	7264287	18	T	AA		8330C.MET	500	10	1	0	133110017A	06916
19	7264288	19	T	AA		8330C.MET	500	10	1	0	133110017A	06916
20	7264289	20	T	AA		8330C.MET	500	10	1	0	133110017A	06916
21	7264290	21	T	AA		8330C.MET	500	10	1	0	133110017A	06916
22	7266116	22	T	AA		8330C.MET	500	10	1	0	133110017A	06916
23	7266117	23	T	AA		8330C.MET	500	10	1	0	133110017A	06916
24	7266118	24	T	AA		8330C.MET	500	10	1	0	133110017A	06916
25	7266119MS	25	MS	AA		8330C.MET	500	10	1	0	133110017A	06916
26	7266120MSD	26	MSD	AA		8330C.MET	500	10	1	0	133110017A	06916
27	7266121	27	T	AA		8330C.MET	500	10	1	0	133110017A	06916
28	NITR31324P	28	CCAL	QG		8330C.MET	1	1	1	0	1332199999	
29	7266122	29	T	AA		8330C.MET	500	10	1	0	133110017A	06916
30	7266123	30	T	AA		8330C.MET	500	10	1	0	133110017A	06916
31	7266124	31	T	AA		8330C.MET	500	10	1	0	133110017A	06916
32	7266127	32	T	AA		8330C.MET	500	10	1	0	133110017A	06916
33	7266128	33	T	AA		8330C.MET	500	10	1	0	133110017A	06916
34	BLANKA 11/12/13	34	BLK	AA		8330C.MET	2	20	1	0	133140020A	06918
35	LCSA 11/12/13	35	LCS	AA		8330C.MET	2	20	1	0	133140020A	06918
36	7265229	36	T	AA		8330C.MET	2	20	1	0	133140020A	06918
37	7265239	37	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
38	7266809	38	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
39	NITR31324P	39	CCAL	QH		8330C.MET	1	1	1	0	1332199999	
40	7266812	40	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
41	7266813	41	T	AA		8330C.MET	2.3	20	1	0	133140020A	06918
42	7266814	42	T	AA		8330C.MET	2.1	20	1	0	133140020A	06918
43	7266815MS	43	MS	AA		8330C.MET	2.3	20	1	0	133140020A	06918
44	7266816MSD	44	MSD	AA		8330C.MET	2.3	20	1	0	133140020A	06918
45	7266818	45	T	AA		8330C.MET	2.2	20	1	0	133140020A	06918
46	BLANKA 11/14/13	46	BLK	AA		8330C.MET	500	10	1	0	133170019A	06916
47	LCSA 11/14/13	47	LCS	AA		8330C.MET	500	10	1	0	133170019A	06916
48	LCSDA 11/14/13	48	LCSD	AA		8330C.MET	500	10	1	0	133170019A	06916
49	7270115	49	T	AA		8330C.MET	500	10	1	0	133170019A	06916
50	NITR31324P	50	CCAL	QI		8330C.MET	1	1	1	0	1332199999	

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CHROM PERFECT SEQUENCE FILE

Sequence File: \\Cp12\c-drive\CPWIN\DATA1\5C12310.seq

Chromatography Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Method Directory: \\CP12\C-DRIVE\CPWIN\DATA1

Number of Entries: 67

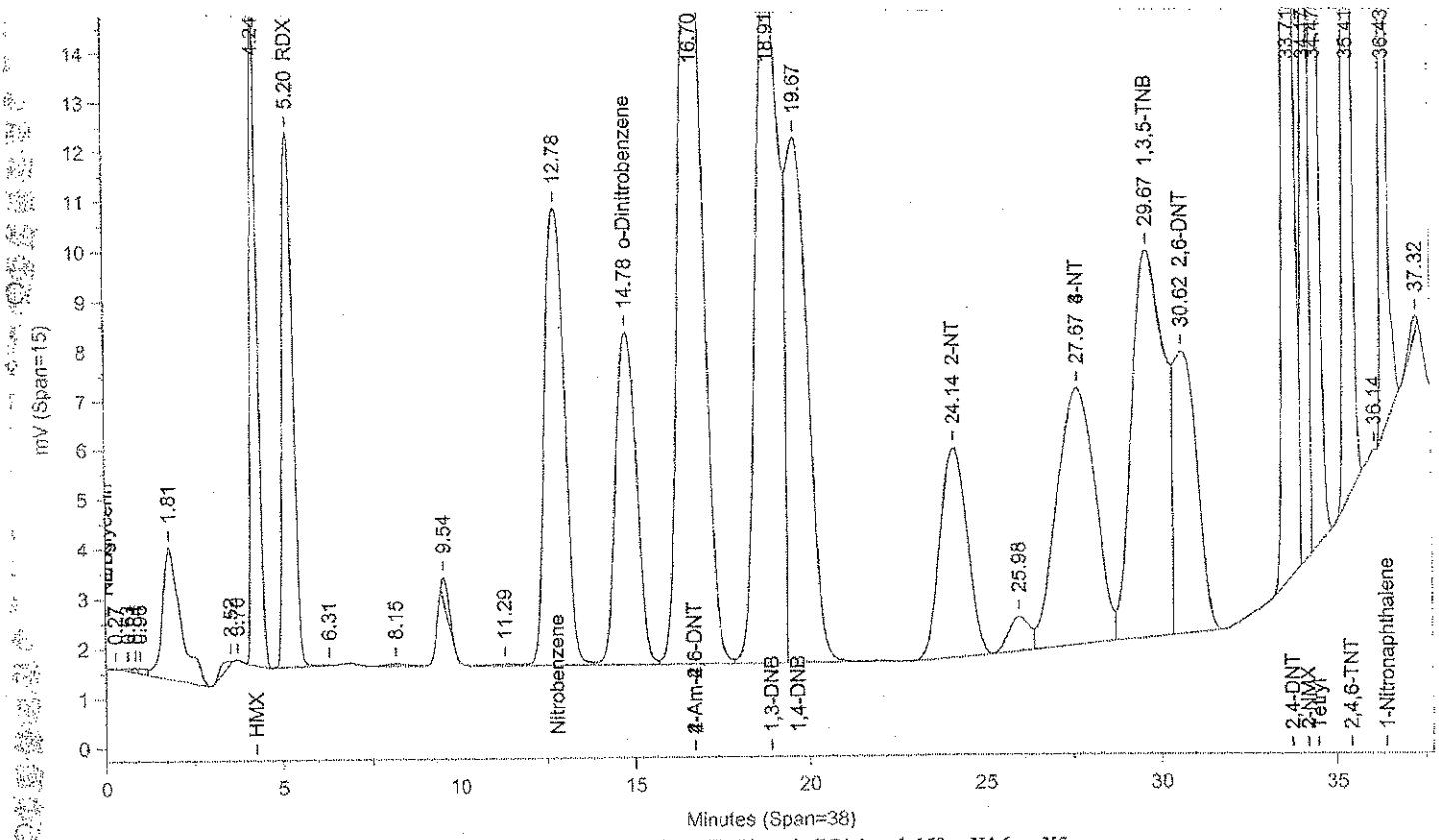
Samplename	VP	Code	ID	Method		Samp Amt	DF	Int Std	C	Batch Number	Analysis
51 7270116	51	T	AA		8330C.MET	500	10	1	0	133170019A	06916
52 7270117	52	T	AA		8330C.MET	500	10	1	0	133170019A	06916
53 7270118	53	T	AA		8330C.MET	500	10	1	0	133170019A	06916
54 7270119	54	T	AA		8330C.MET	500	10	1	0	133170019A	06916
55 7270953	55	T	AA		8330C.MET	500	10	1	0	133170019A	06916
56 7270954	56	T	AA		8330C.MET	500	10	1	0	133170019A	06916
57 7270955	57	T	AA		8330C.MET	500	10	1	0	133170019A	06916
58 7270956	58	T	AA		8330C.MET	500	10	1	0	133170019A	06916
59 7270958	59	T	AA		8330C.MET	500	10	1	0	133170019A	06916
60 7270959	60	T	AA		8330C.MET	500	10	1	0	133170019A	06916
61 NITR31324P	61	CCAL	QJ		8330C.MET	1	1	1	0	1332199999	
62 7270960	62	T	AA		8330C.MET	500	10	1	0	133170019A	06916
63 7270961	63	T	AA		8330C.MET	500	10	1	0	133170019A	06916
64 7270962	64	T	AA		8330C.MET	500	10	1	0	133170019A	06916
65 7274073	65	T	AA		8330C.MET	500	10	1	0	133170019A	06916
66 7274074	66	T	AA		8330C.MET	500	10	1	0	133170019A	06916
67 NITR31324P	67	CCAL	QE		8330C.MET	1	1	1	0	1332199999	

Set-up by: _____ Date: 11/22/13

11/18/2013

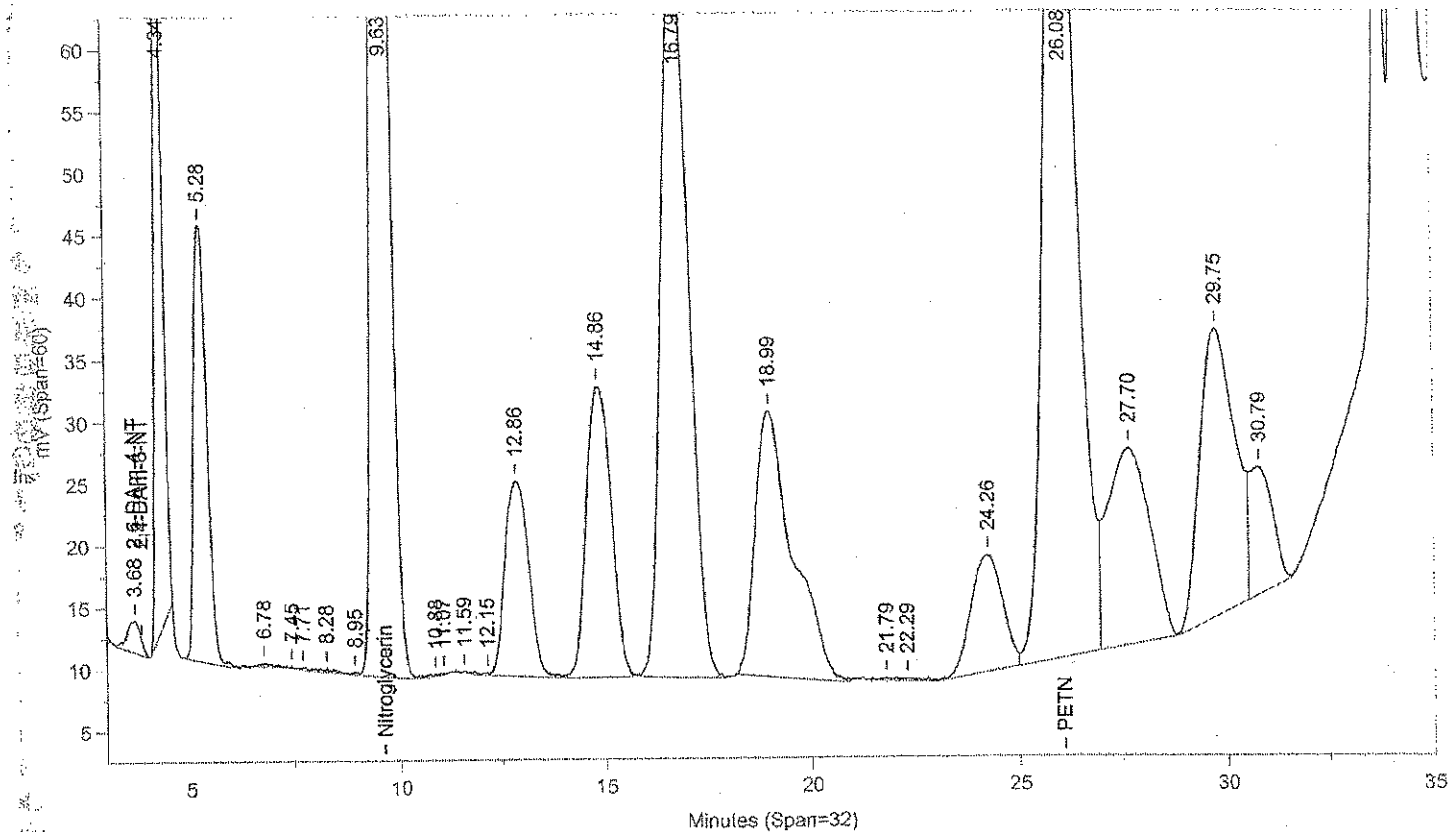
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.04R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.04R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:12:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.679	57898	3967.84	2,6-DAm-4-NT
4.245	191071	1822.663	HMX	.	0	.	HMX
5.199	224070	1976.111	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.628	3769975	43871.91	Nitroglycerin
12.782	369767	2065.282	Nitrobenzene	.	0	.	Nitrobenzene
14.784	274911	2411.346	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.703	761872	6863.797	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
18.907	676453	2411.108	1,3-DNB	.	0	.	1,3-DNB
19.671	450747	-43499.	1,4-DNB	.	0	.	1,4-DNB
24.138	229577	2379.561	2-NT	.	0	.	2-NT
.	0	.	PETN	26.077	4139229	-934754.9	PETN
27.667	397033	-52385.42	4-NT	.	0	.	4-NT
29.671	491541	-87636.54	1,3,5-TNB	.	0	.	1,3,5-TNB
30.618	255956	-73129.59	2,6-DNT	.	0	.	2,6-DNT
33.71	552207	6048.482	2,4-DNT	.	0	.	2,4-DNT
34.167	208653	6174.048	2-NMX	.	0	.	2-NMX
34.468	312750	2032.832	Tetryl	.	0	.	Tetryl
35.408	426797	2008.424	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	322421	2019.438	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.04A
Area File: C:\CPWIN\DATA1\1C12310B.04A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:27:54 PM
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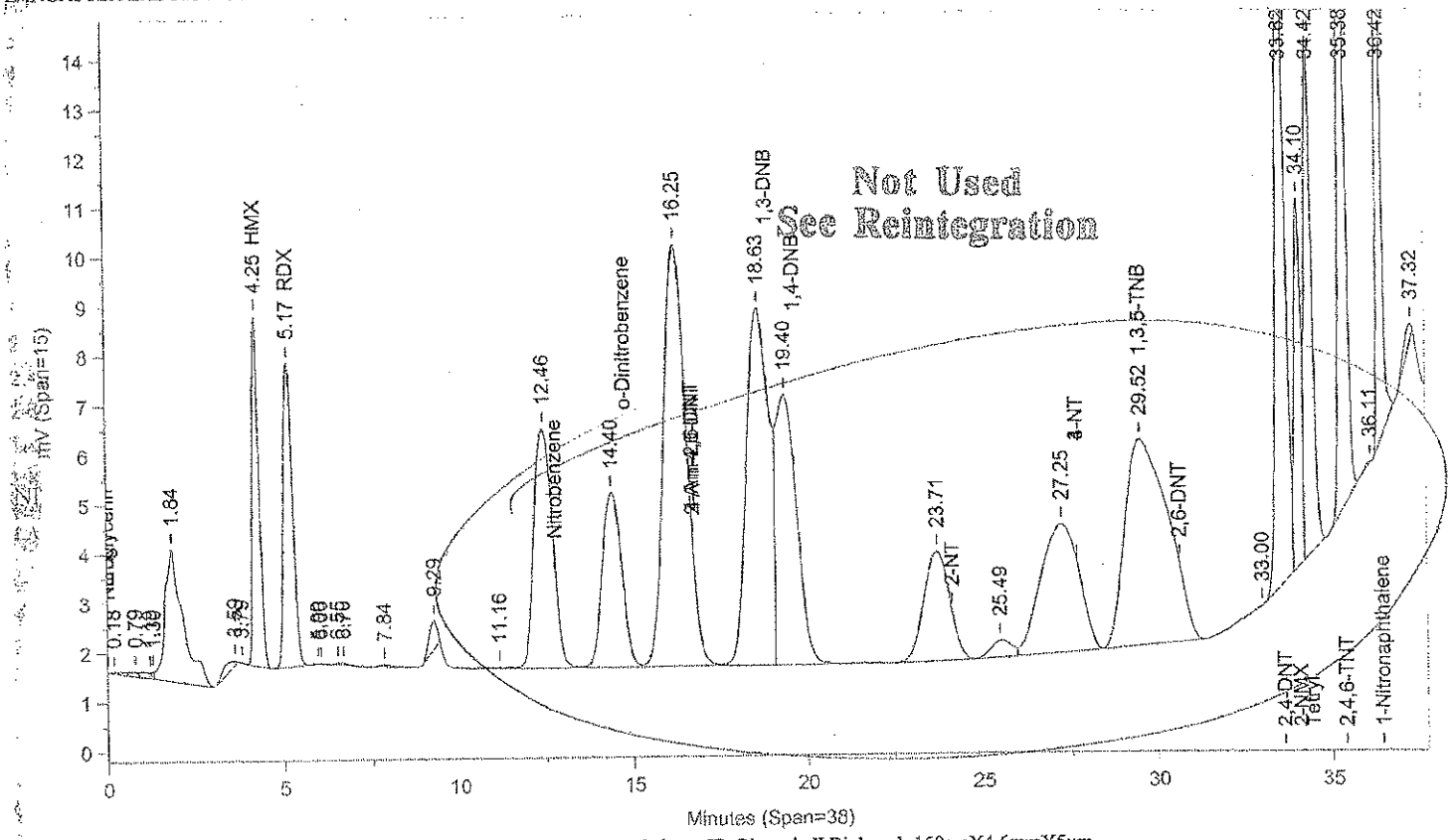
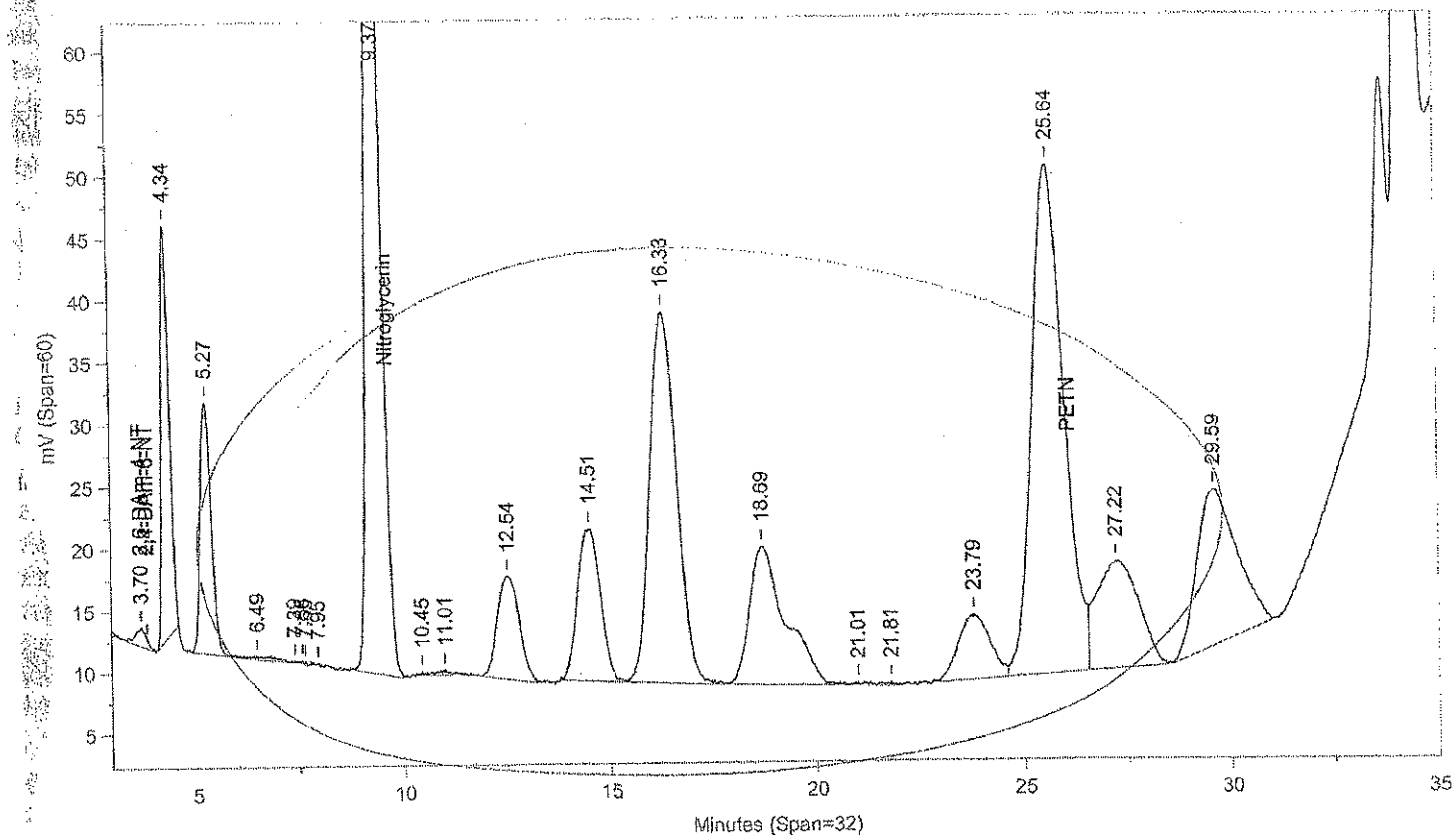
File: C:\CPWIN\DATA1\1C12310.05R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
29.524	356142	1778.783	1,3,5-TNB	.	0	.	1,3,5-TNB
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	156160	990.7	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.05A
Area File: C:\CPWIN\DATA1\1C12310B.05A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:28:36 PM
File Reported On: 11/7/2013 at 5:28:52 PM

Not Used
See Reintegration

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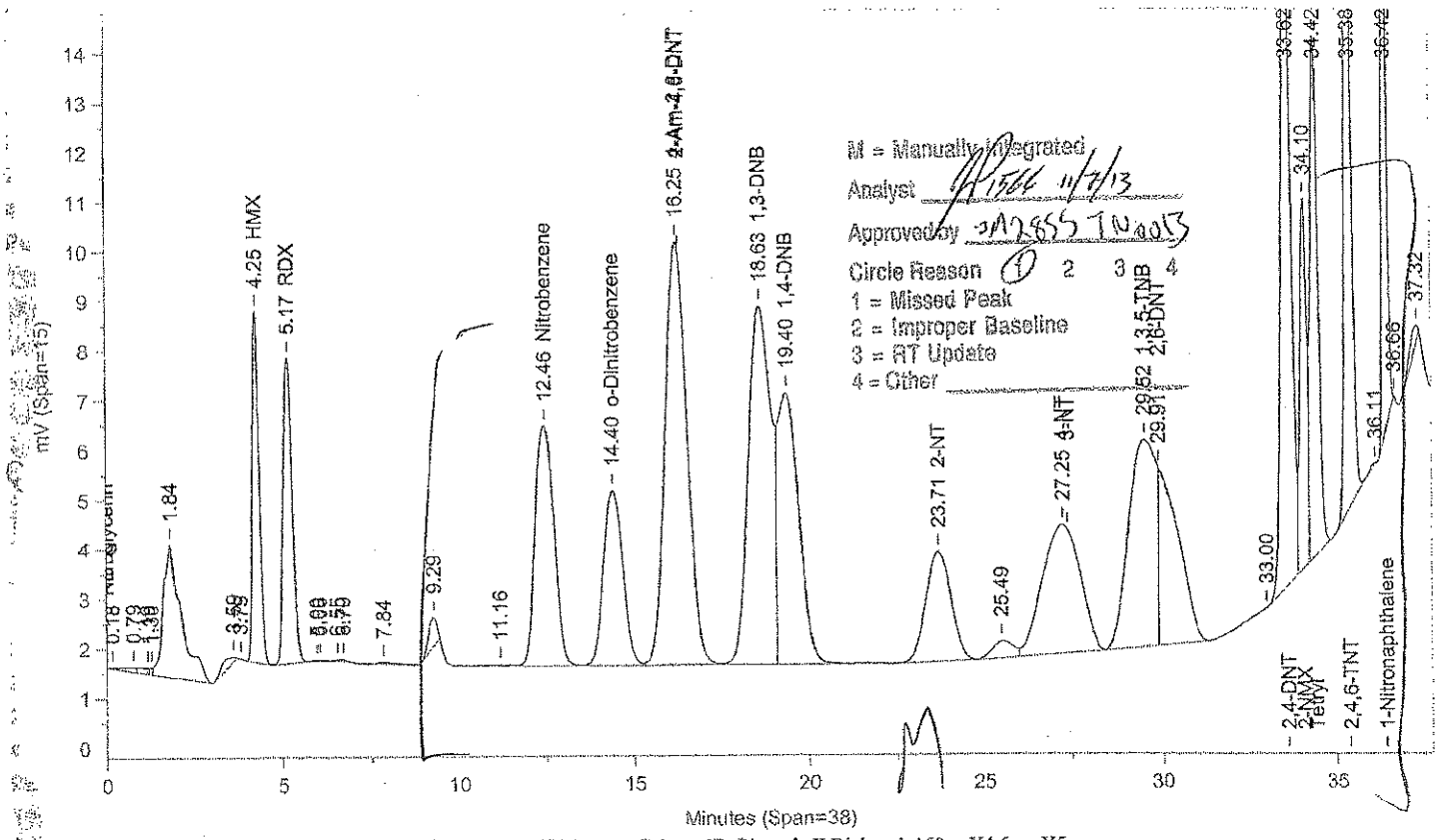
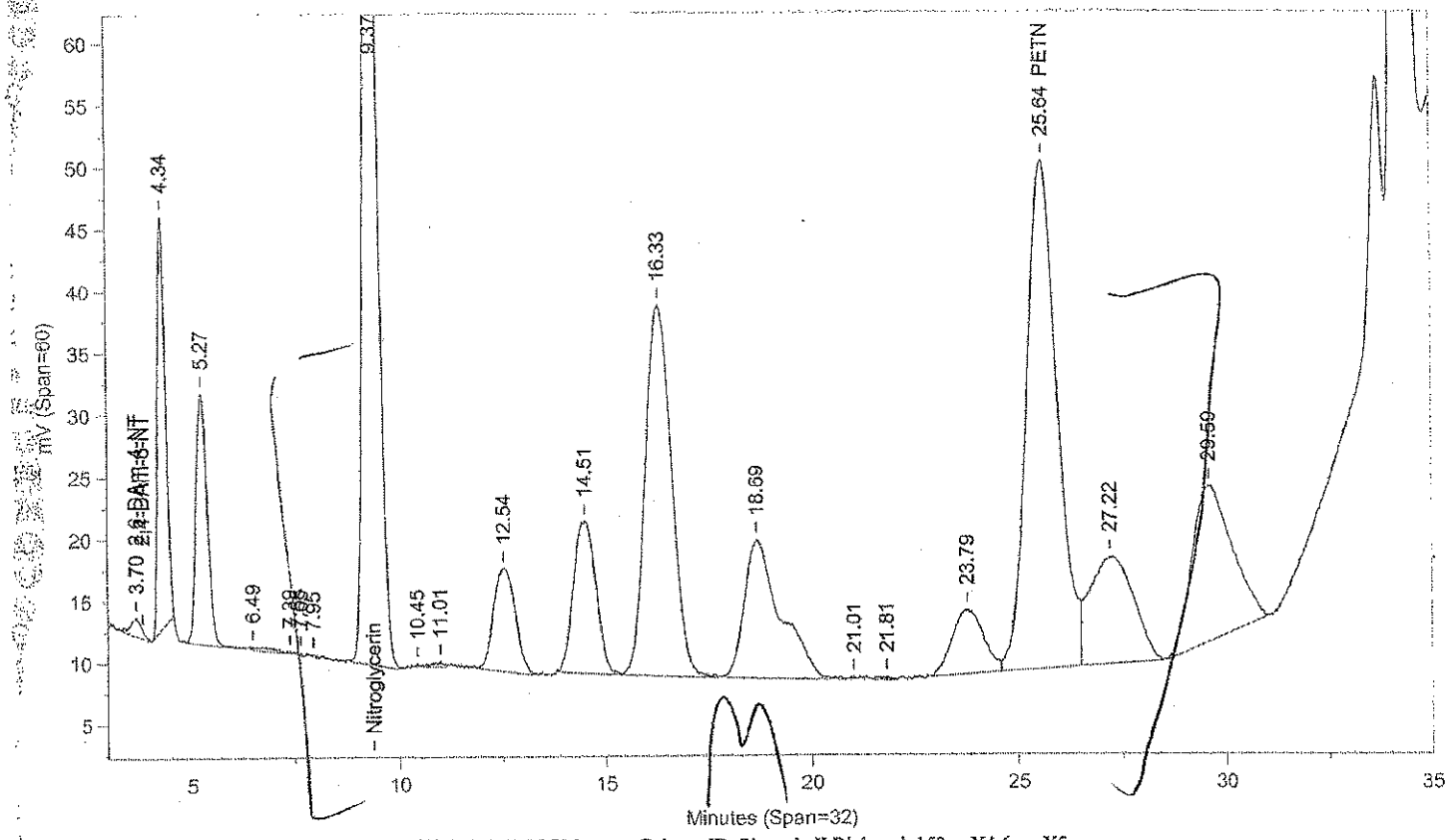


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.05R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 4:55:25 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.703	28114	1926.728	2,6-DAm-4-NT
4.247	95931	915.099	HMX	.	0	.	HMX
5.169	113307	987.614	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.372	1890557	22000.77	Nitroglycerin
12.462	181116	1011.597	Nitrobenzene	.	0	.	Nitrobenzene
14.4	137002	1246.378	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.246	375569	16890.87	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.63	329986	979.561	1,3-DNB	.	0	.	1,3-DNB
19.399	228175	1342.629	1,4-DNB	.	0	.	1,4-DNB
23.714	114933	1238.688	2-NT	.	0	.	2-NT
.	0	.	PETN	25.643	2110257	25588.42	PETN
27.246	192701	1298.439	4-NT	.	0	.	4-NT
29.524	218305	892.047	1,3,5-TNB	.	0	.	1,3,5-TNB
29.911	137837	1423.023	2,6-DNT	.	0	.	2,6-DNT
33.623	272225	2981.759	2,4-DNT	.	0	.	2,4-DNT
34.097	101352	3196.875	2-NMX	.	0	.	2-NMX
34.416	162187	1112.669	Tetryl	.	0	.	Tetryl
35.384	211348	998.449	2,4,6-TNT	.	0	.	2,4,6-TNT
36.42	148002	940.223	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:50:42 PM
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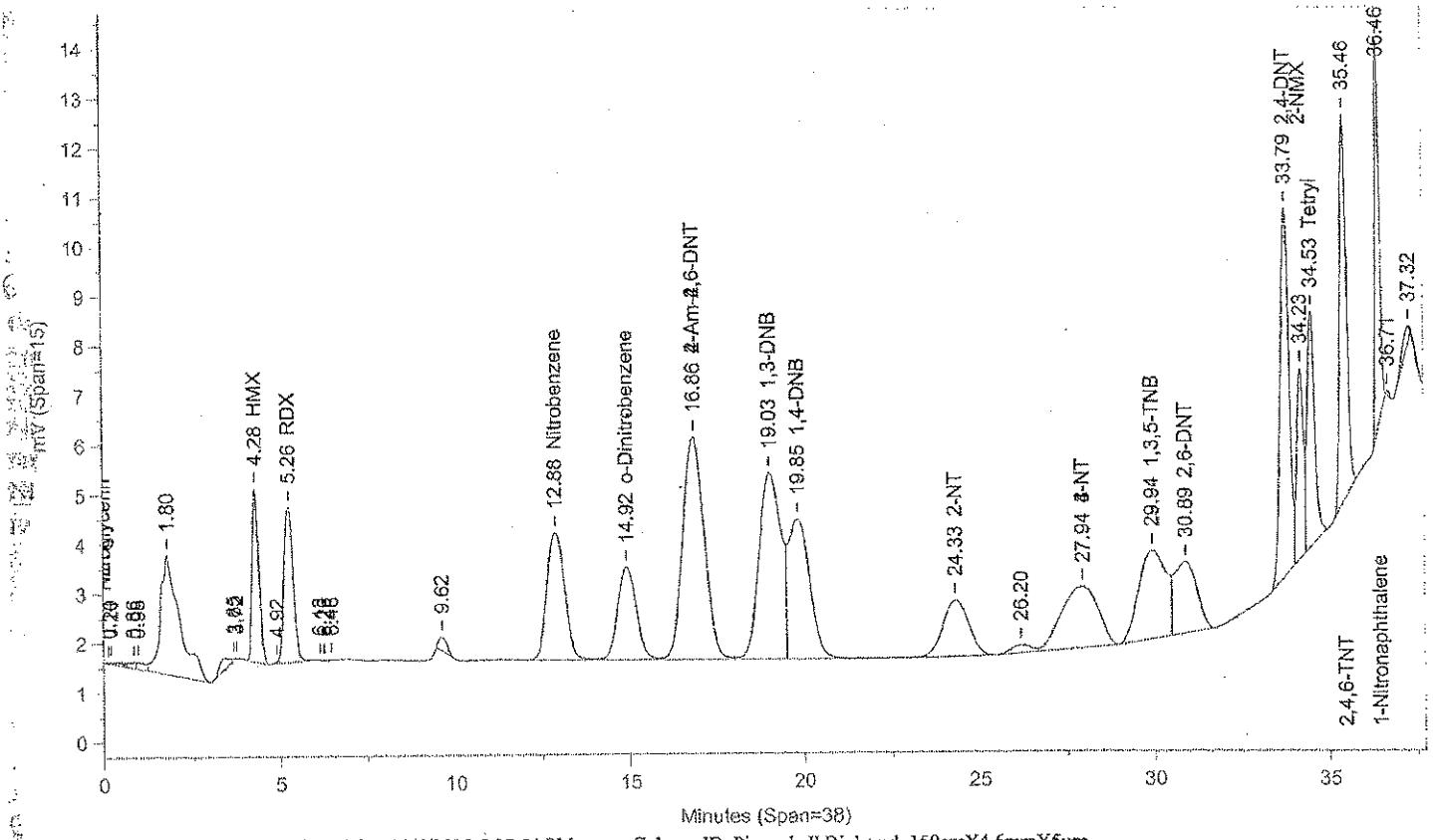
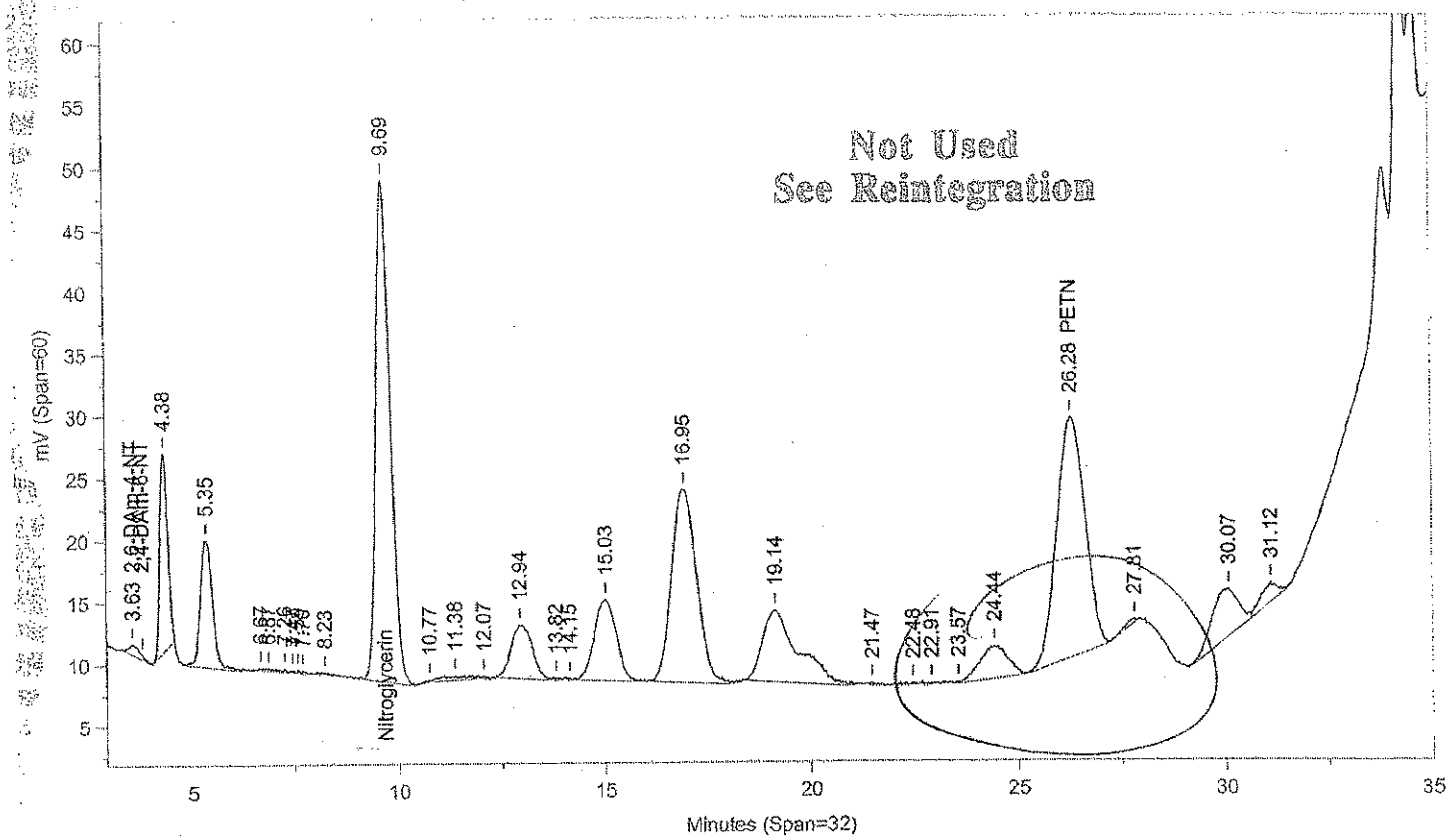
File: C:\CPWIN\DATA1\1C12310.06R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	524.855	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	638.922	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
Thr .	0	.	PETN	26.283	902583	12224.59	PETN
27.943	89504	537.507	3-NT	.	0	.	3-NT
29.943	96529	519.996	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	592.811	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	1484.672	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1763.87	2-NMX	.	0	.	2-NMX
34.529	70299	551.1	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.06A
Area File: C:\CPWIN\DATA1\1C12310B.06A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:04 PM
File Reported On: 11/7/2013 at 5:55:20 PM

Not Used
See Reintegration

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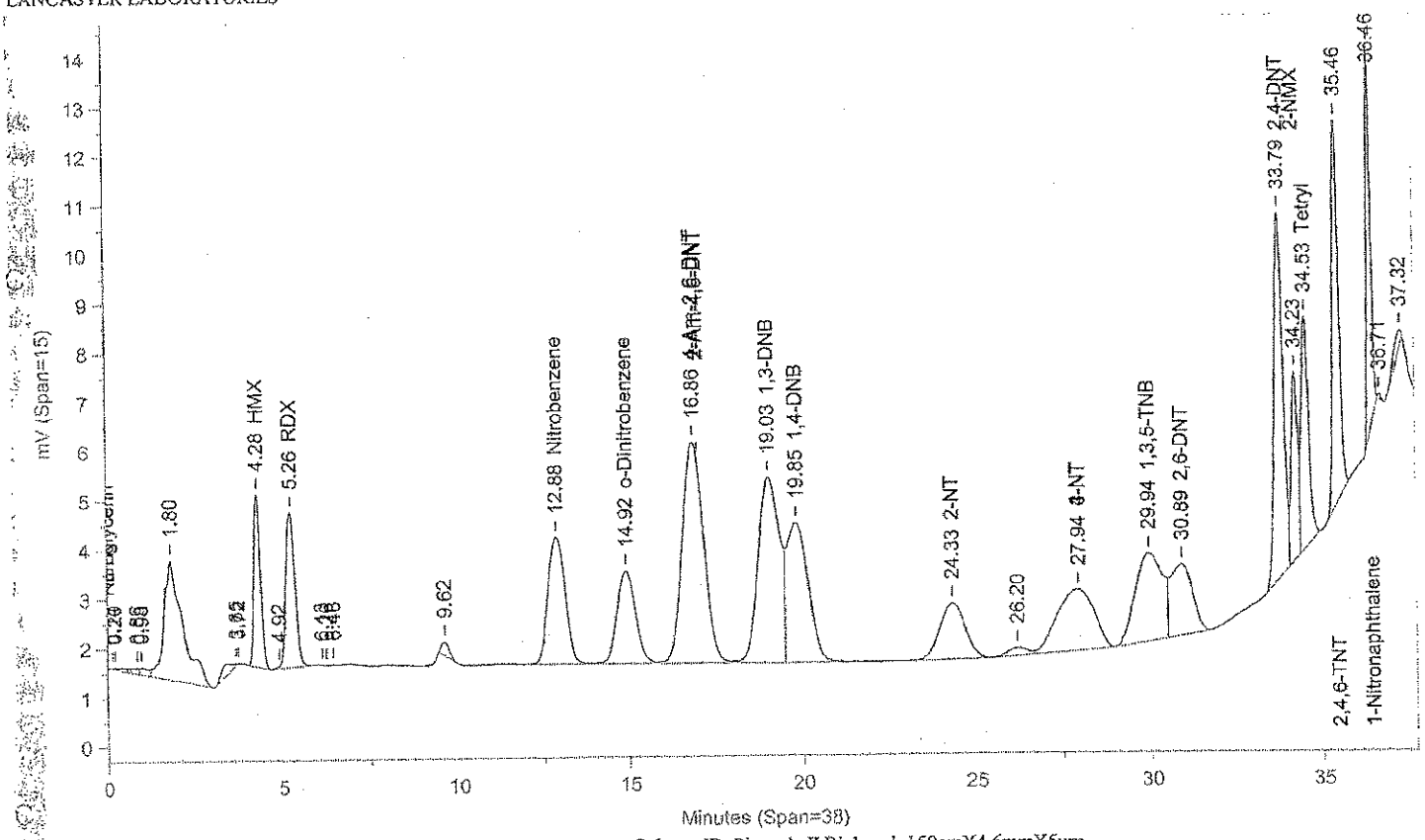
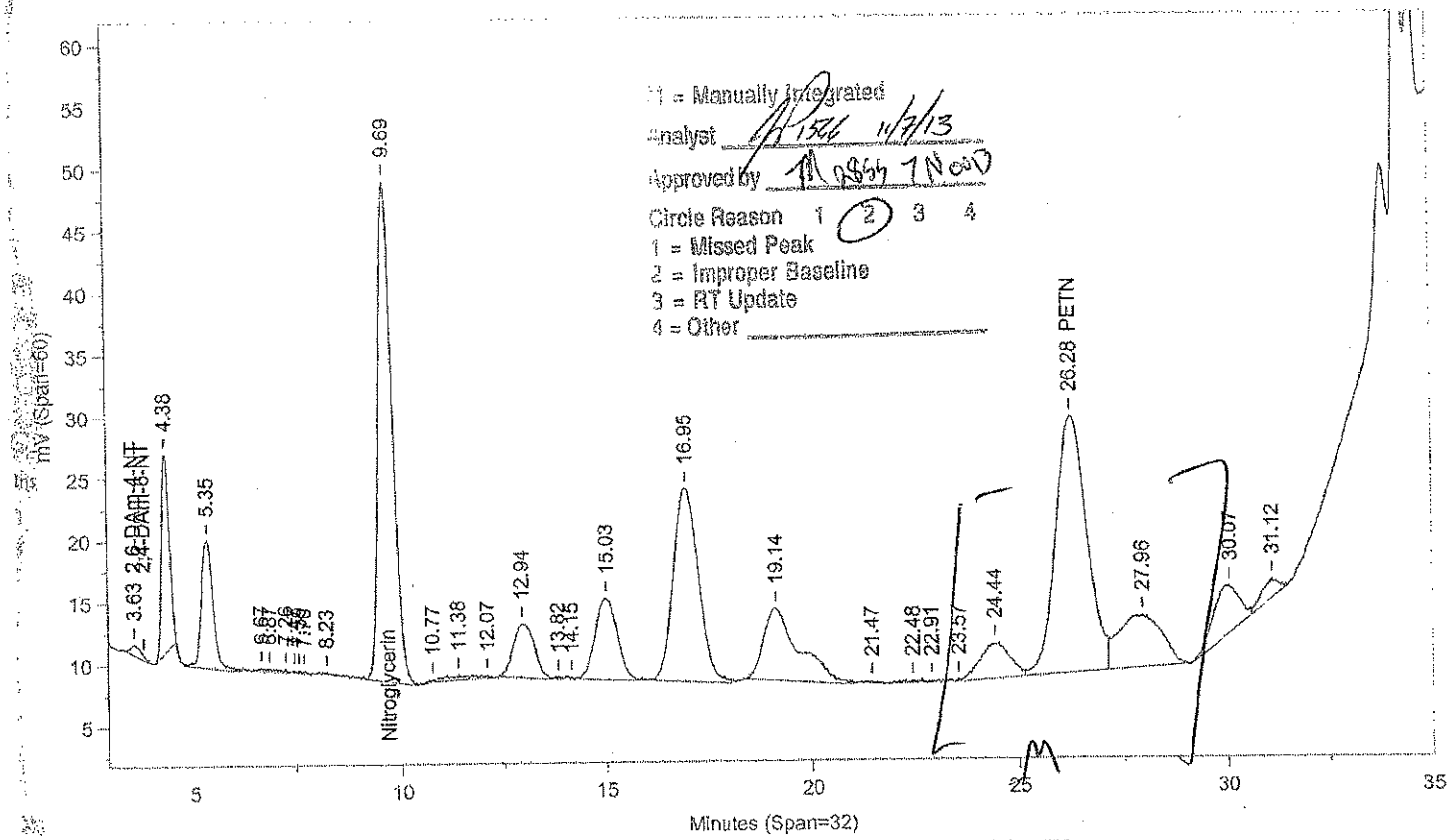


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.06R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 5:37:54 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.629	15769	1080.676	2,6-DAm-4-NT
4.284	47702	455.042	HMX	.	0	.	HMX
5.26	58092	494.857	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.695	960841	11181.49	Nitroglycerin
12.877	93095	445.142	Nitrobenzene	.	0	.	Nitrobenzene
14.924	70939	510.035	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.862	191117	903.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.035	164417	419.63	1,3-DNB	.	0	.	1,3-DNB
19.85	121831	527.832	1,4-DNB	.	0	.	1,4-DNB
24.334	58424	500.628	2-NT	.	0	.	2-NT
.	0	.	PETN	26.283	1060666	13973.9	PETN
27.943	89504	484.021	3-NT	.	0	.	3-NT
29.943	96529	444.725	1,3,5-TNB	.	0	.	1,3,5-TNB
30.885	63802	502.767	2,6-DNT	.	0	.	2,6-DNT
33.788	135546	524.804	2,4-DNT	.	0	.	2,4-DNT
34.226	49705	1480.088	2-NMX	.	0	.	2-NMX
34.529	70299	461.521	Tetryl	.	0	.	Tetryl
35.463	105094	500.355	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	70278	466.806	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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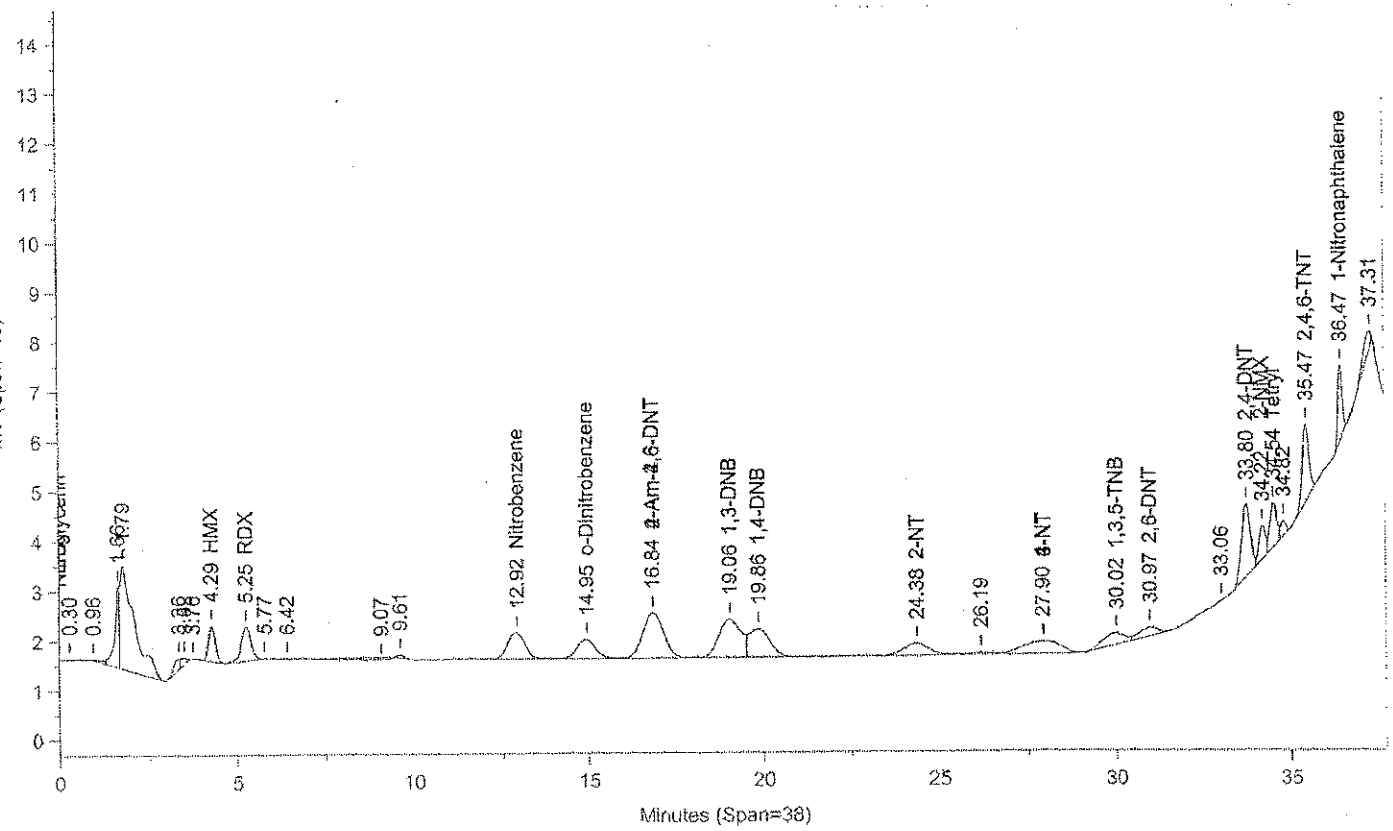
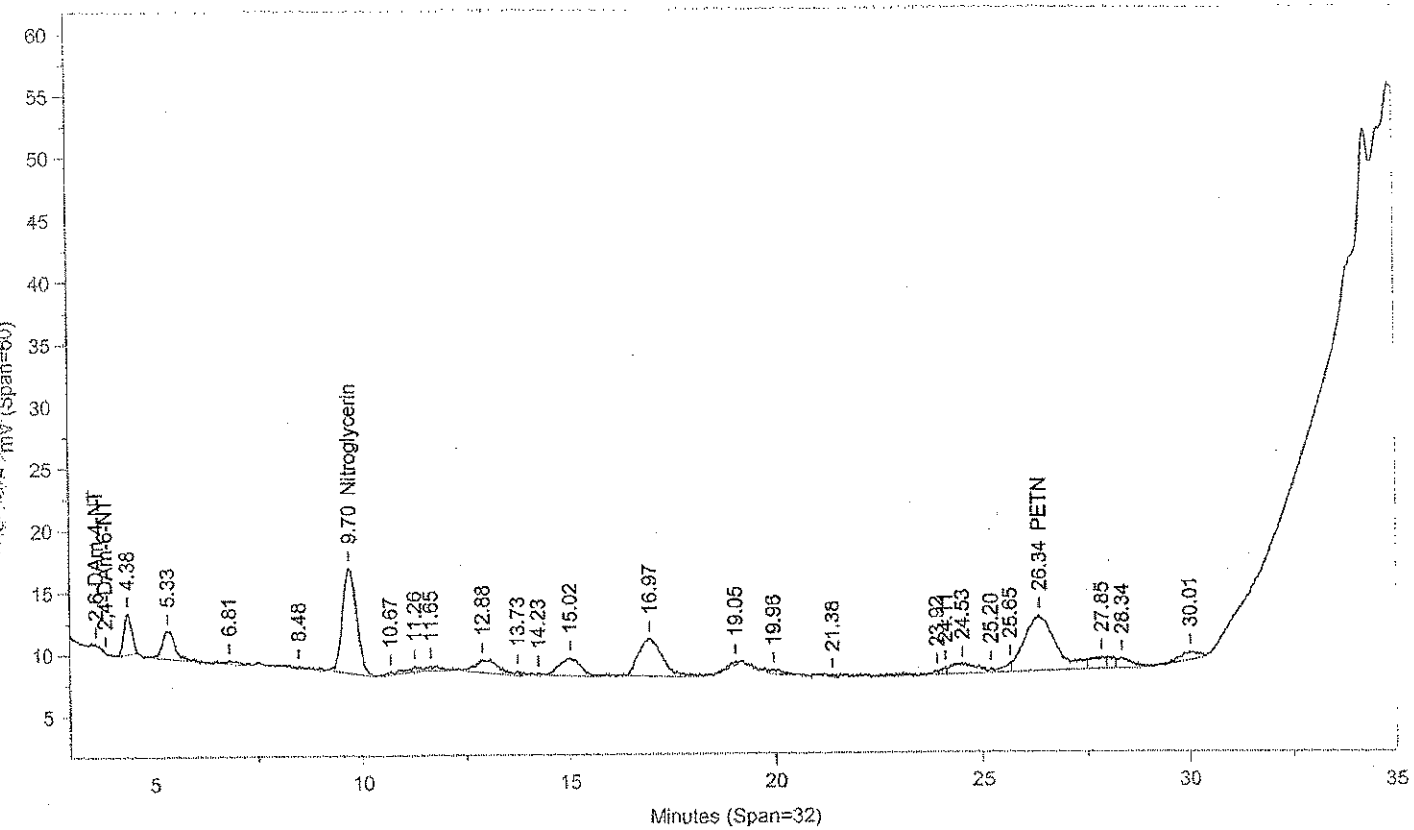


Instrument ID: CP12--Y6329A Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.07R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 6:20:19 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	9705	92.578	HMX	.	0	.	HMX
5.25	13260	94.755	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	201241	2341.884	Nitroglycerin
12.918	19313	92.346	Nitrobenzene	.	0	.	Nitrobenzene
14.954	14700	96.405	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.843	38007	256.469	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.055	33551	85.63	1,3-DNB	.	0	.	1,3-DNB
19.864	23955	130.294	1,4-DNB	.	0	.	1,4-DNB
24.378	12732	104.748	2-NT	.	0	.	2-NT
.	0	.	PETN	26.336	230586	4788.424	PETN
27.904	18291	216.058	4-NT	.	0	.	4-NT
30.021	10514	108.133	1,3,5-TNB	.	0	.	1,3,5-TNB
30.969	6696	79.784	2,6-DNT	.	0	.	2,6-DNT
33.797	25689	188.292	2,4-DNT	.	0	.	2,4-DNT
34.223	8406	365.011	2-NMX	.	0	.	2-NMX
34.535	12114	116.624	Tetryl	.	0	.	Tetryl
35.47	20303	102.873	2,4,6-TNT	.	0	.	2,4,6-TNT
36.465	13423	112.718	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.07A
Area File: C:\CPWIN\DATA1\1C12310B.07A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:55:46 PM
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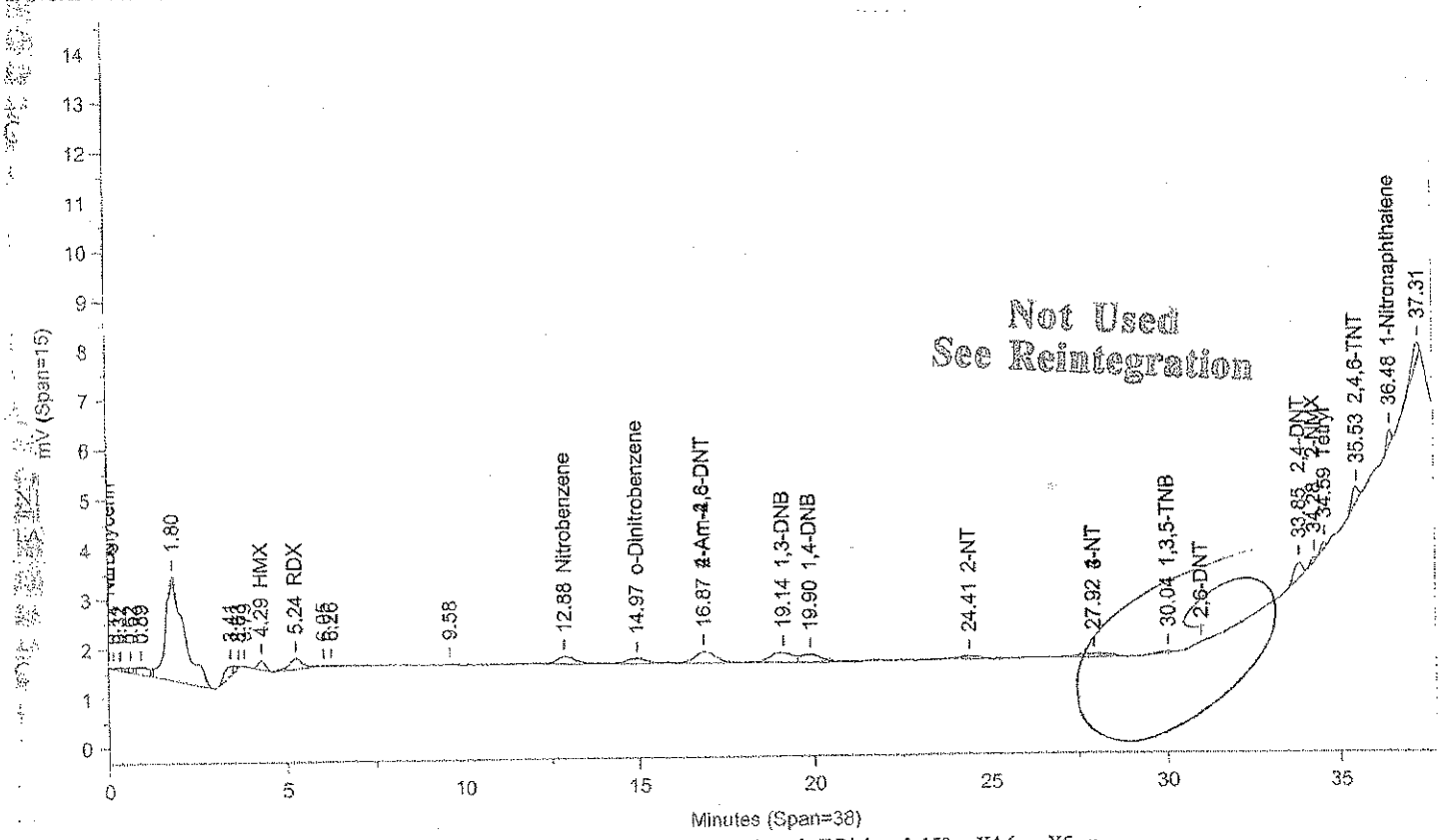
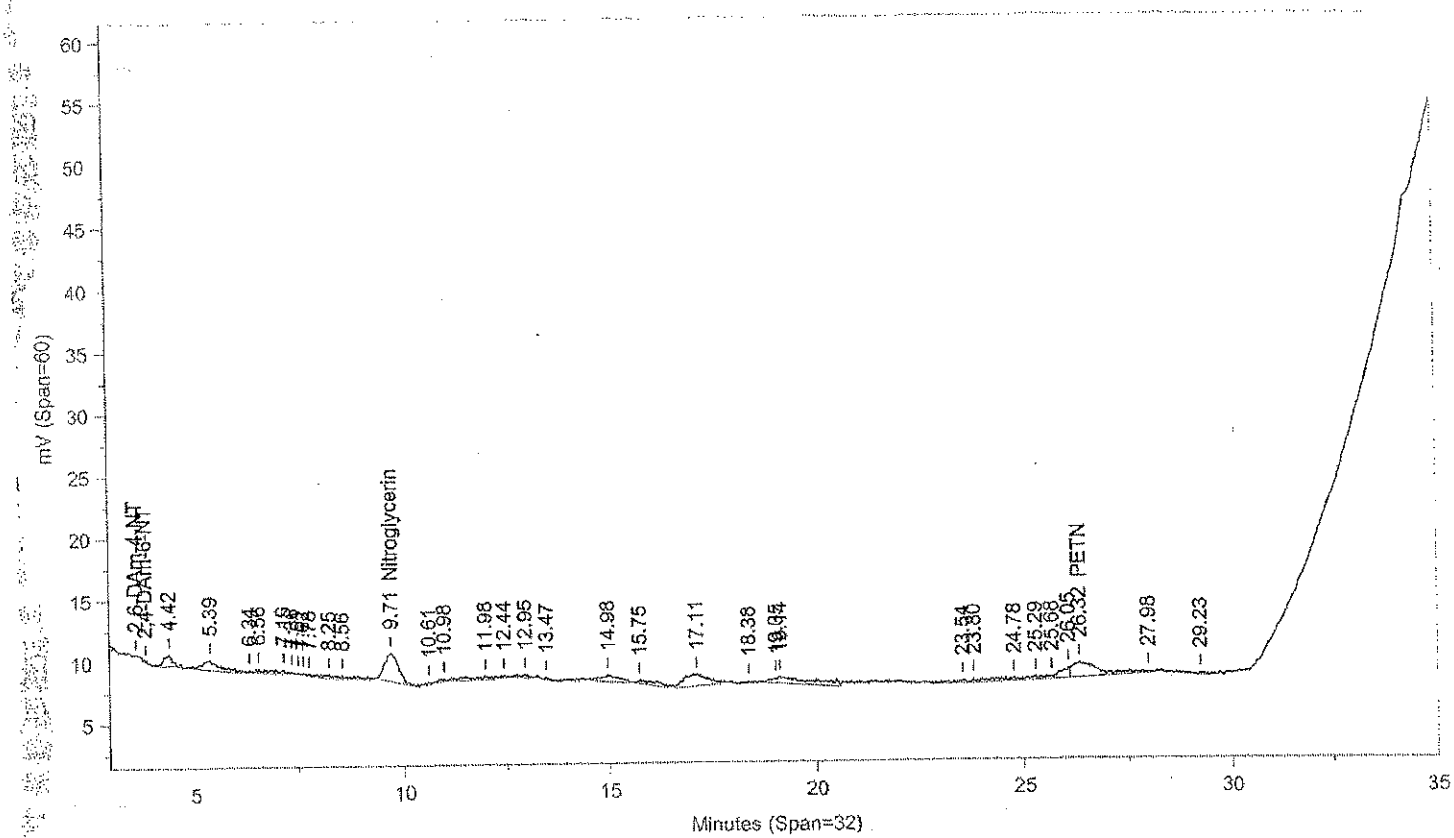
File: C:\CPWIN\DATA1\1C12310.08R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	31.978	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
.	0	.	PETN	26.317	53186	2825.361	PETN
27.921	5159	130.897	4-NT	.	0	.	4-NT
30.044	1535	61.155	1,3,5-TNB	.	0	.	1,3,5-TNB
33.849	5674	31.663	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	94.822	2-NMX	.	0	.	2-NMX
34.589	1463	30.879	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Not Used
See Reintegration

Files:
Area File: C:\CPWIN\DATA1\1C12310.08A
Area File: C:\CPWIN\DATA1\1C12310B.08A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:56:30 PM
File Reported On: 11/7/2013 at 5:56:46 PM

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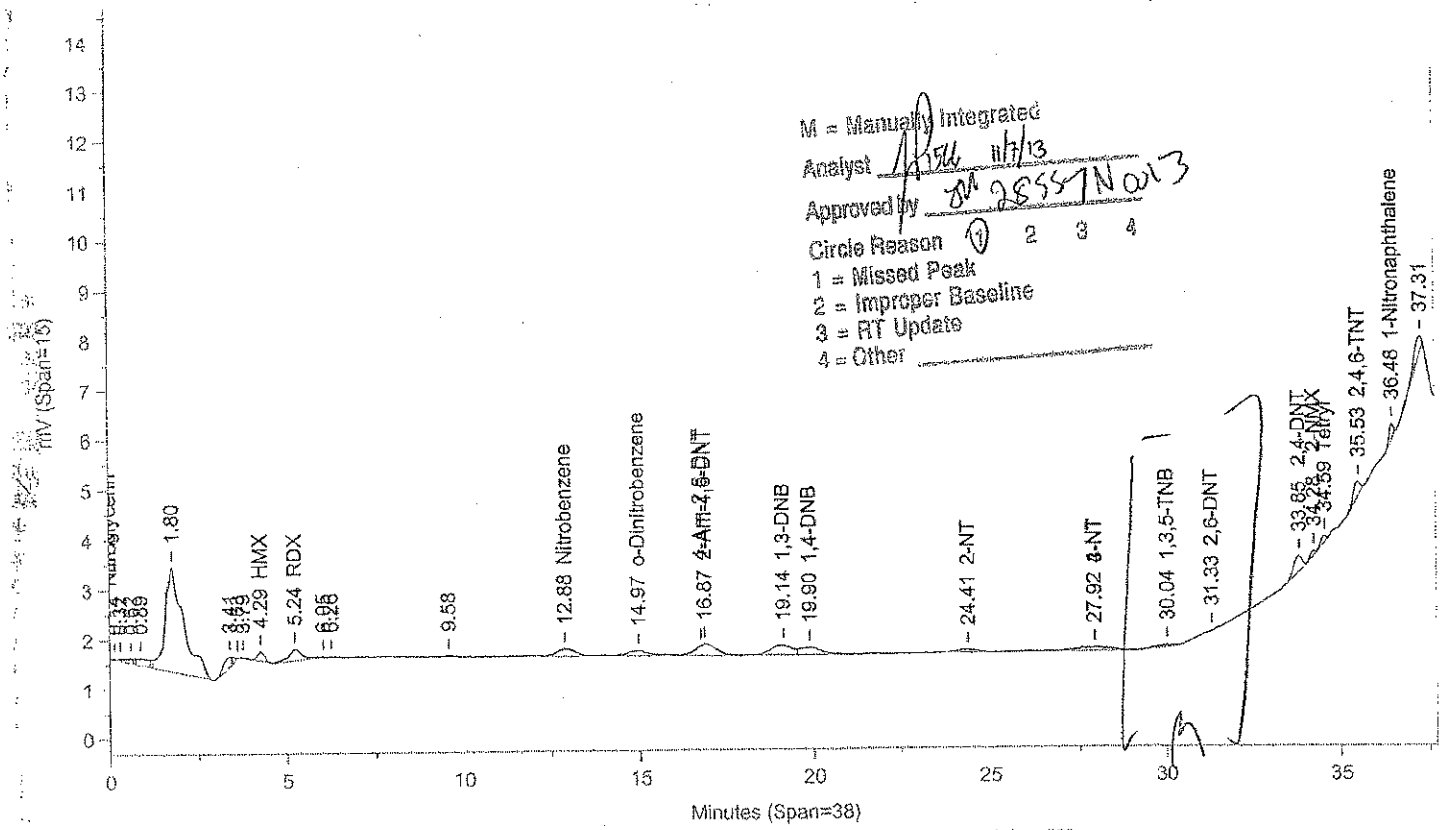
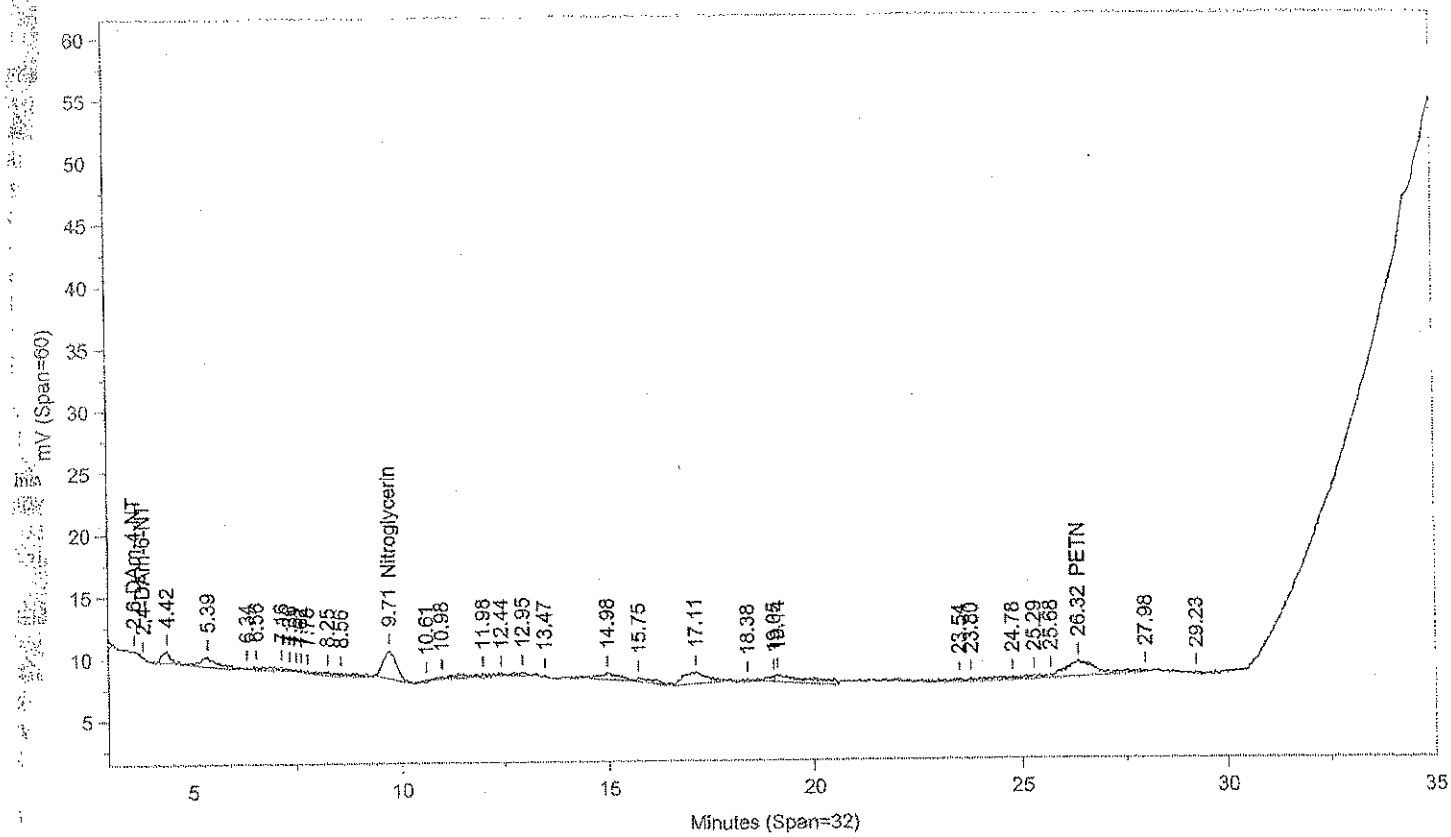
File: C:\CPWIN\DATA1\1C12310.08R

M = Manually Integrated
Analyst _____ 11/7/13
Approved by _____
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other _____



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.08R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:02:44 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

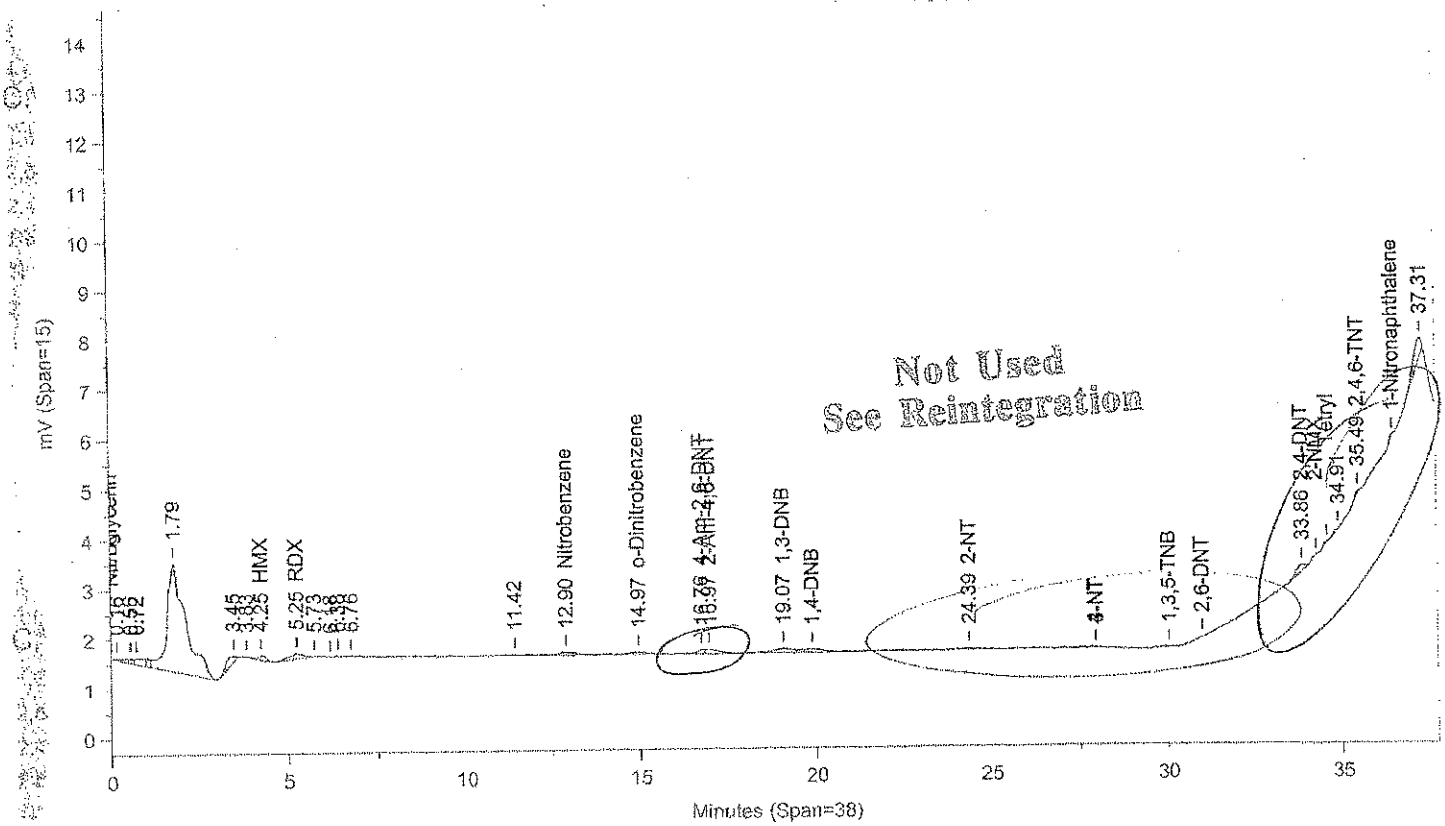
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.288	2724	25.981	HMX	.	0	.	HMX
5.244	6207	31.809	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.711	52178	607.21	Nitroglycerin
12.875	6440	30.792	Nitrobenzene	.	0	.	Nitrobenzene
14.974	5506	28.788	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.868	9981	33.184	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.145	8842	22.567	1,3-DNB	.	0	.	1,3-DNB
19.902	7406	22.972	1,4-DNB	.	0	.	1,4-DNB
24.413	3277	22.831	2-NT	.	0	.	2-NT
.	0	.	PETN	26.317	65376	2960.251	PETN
27.921	5159	124.367	4-NT	.	0	.	4-NT
30.044	1535	59.474	1,3,5-TNB	.	0	.	1,3,5-TNB
31.327	842	22.119	2,6-DNT	.	0	.	2,6-DNT
33.849	5674	21.969	2,4-DNT	.	0	.	2,4-DNT
34.277	1022	86.759	2-NMX	.	0	.	2-NMX
34.589	1463	28.339	Tetryl	.	0	.	Tetryl
35.525	3881	25.891	2,4,6-TNT	.	0	.	2,4,6-TNT
36.478	2651	45.633	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\IC12310.CAL
Calibration File B: C:\CPWIN\DATA1\IC12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:06:44 PM
File Reported On: 11/7/2013 at 6:06:43 PM

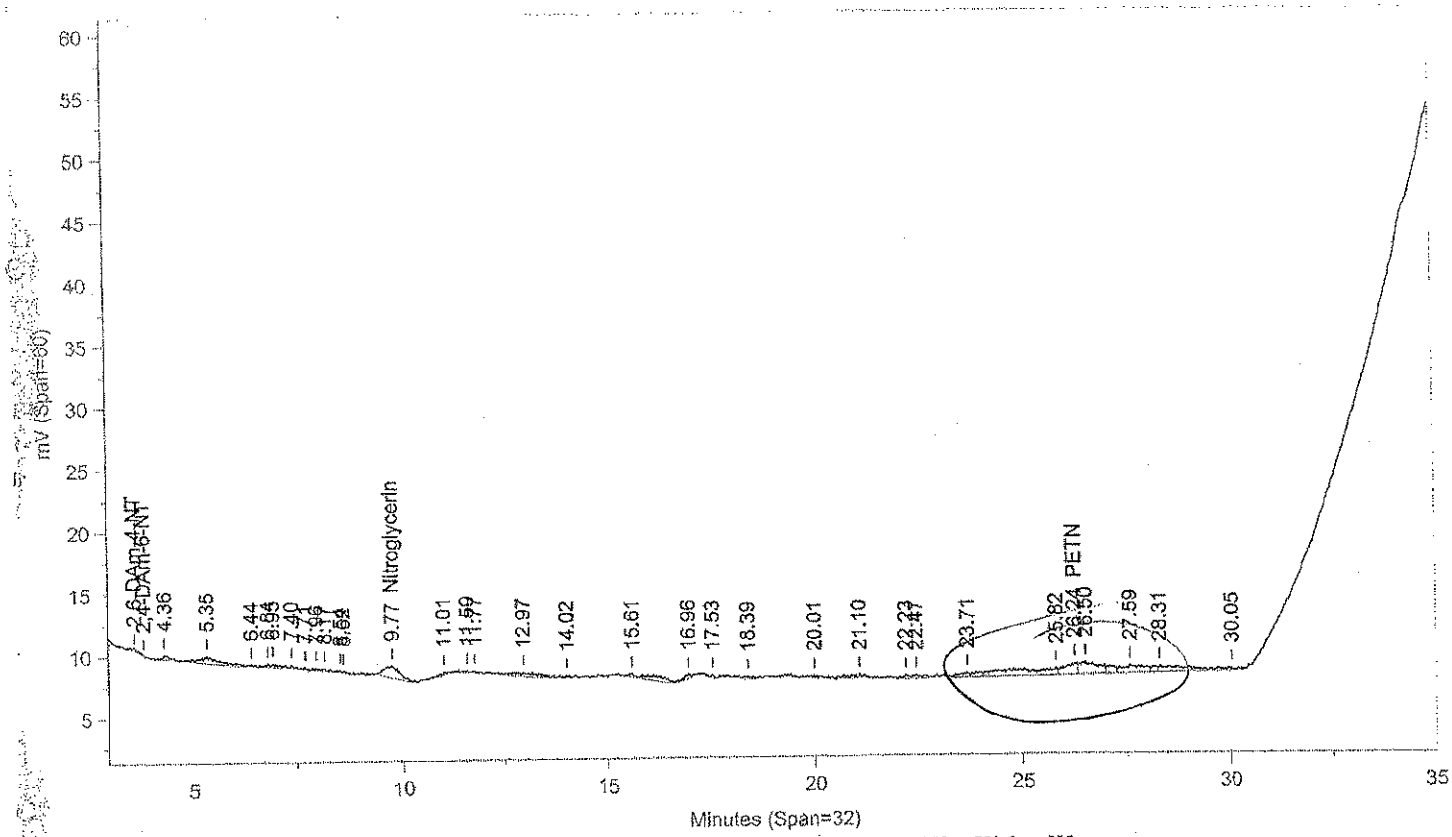
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.09R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.764	1335	6.315	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
16.971	2667	8.868	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	6671	17.025	1,3-DNB	.	0	.	1,3-DNB
24.388	1102	3.981	2-NT	.	0	.	2-NT
.	0	.	PETN	26.245	18259	2438.867	PETN
33.863	2480	11.429	2,4-DNT	.	0	.	2,4-DNT
35.493	474	9.918	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.09A
Area File: C:\CPWIN\DATA1\1C12310B.09A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 5:57:12 PM
File Reported On: 11/7/2013 at 5:57:29 PM

Not Used
See Reintegration

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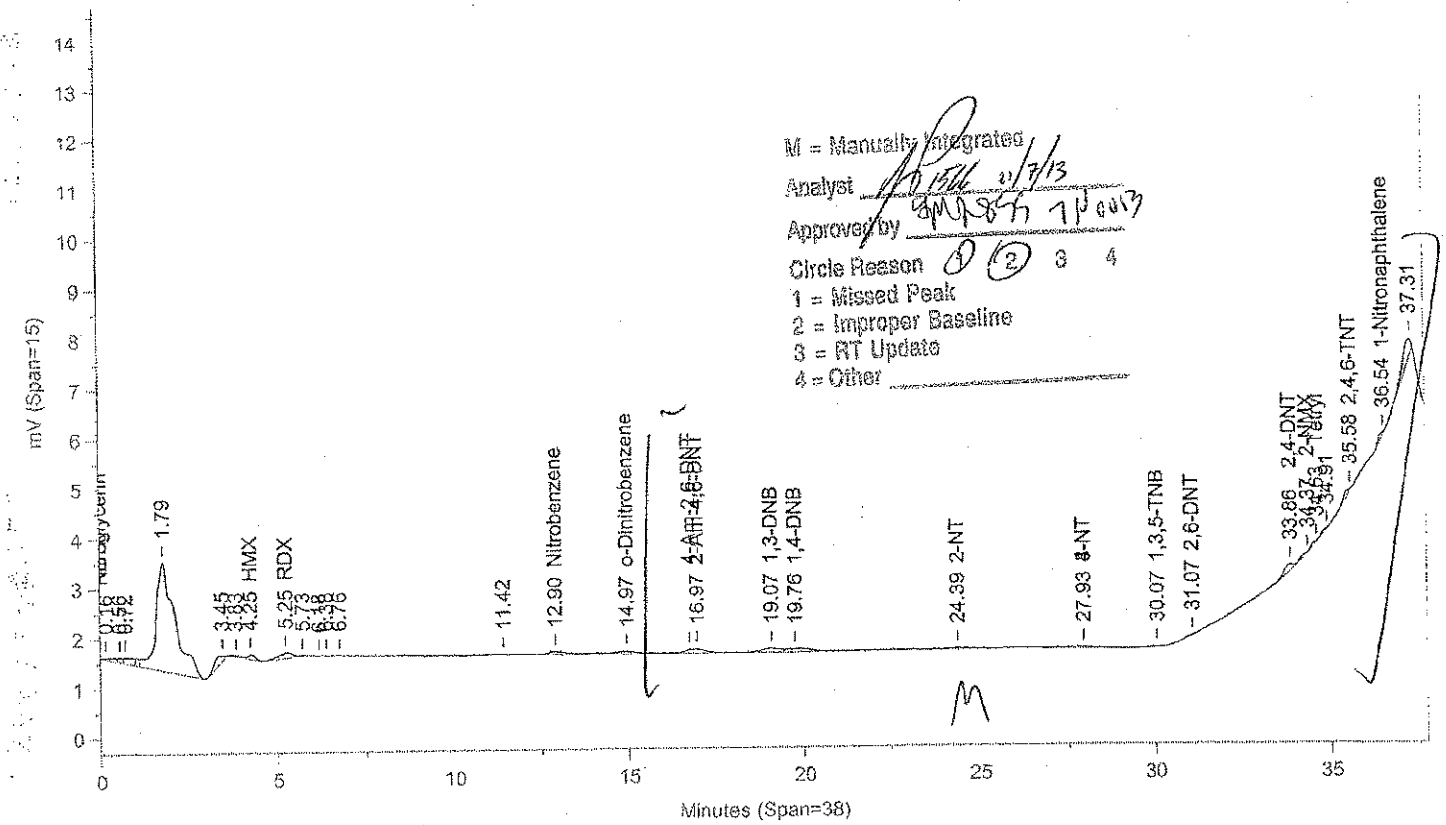
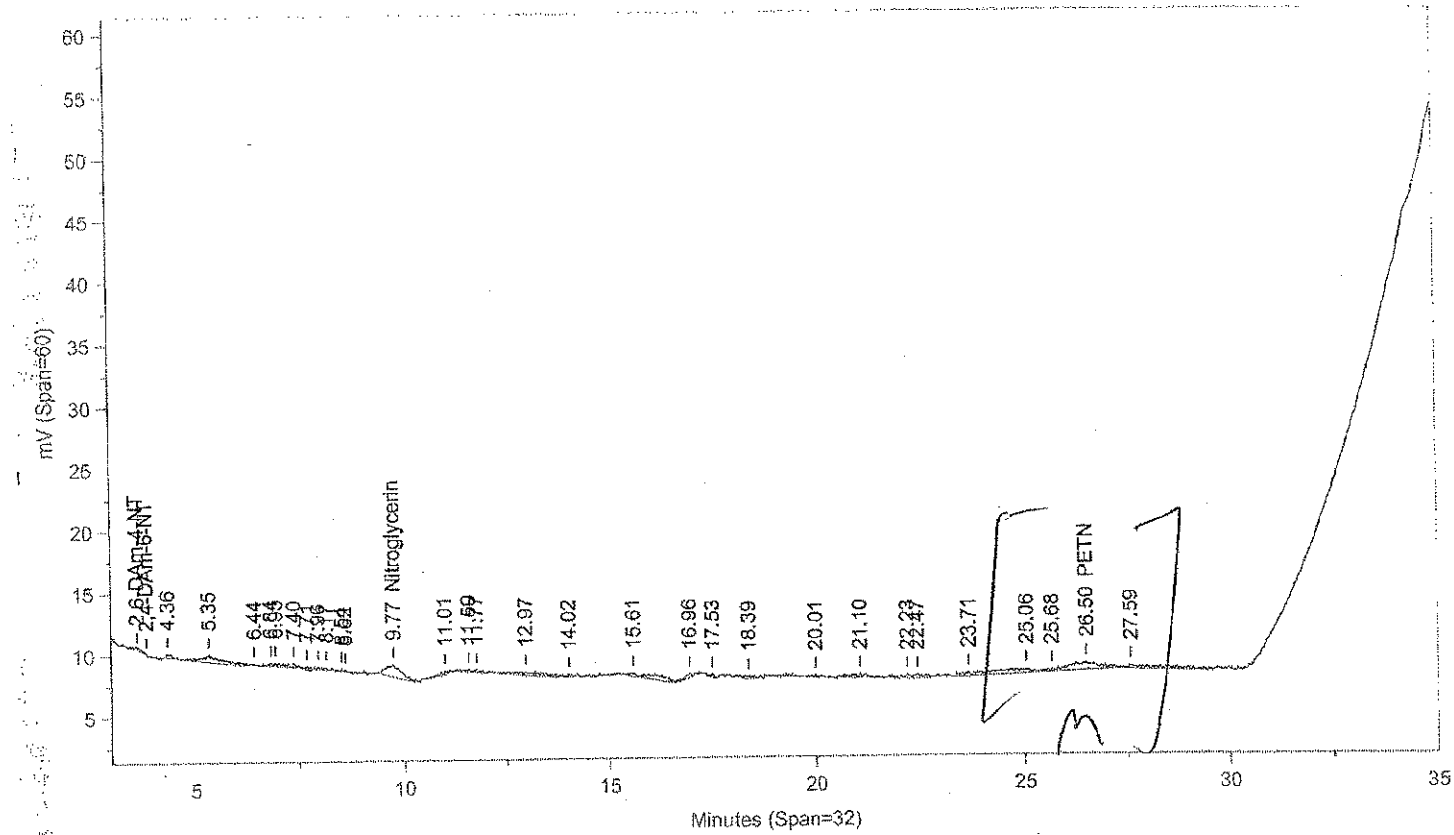
File: C:\CPWIN\DATA1\1C12310.09R

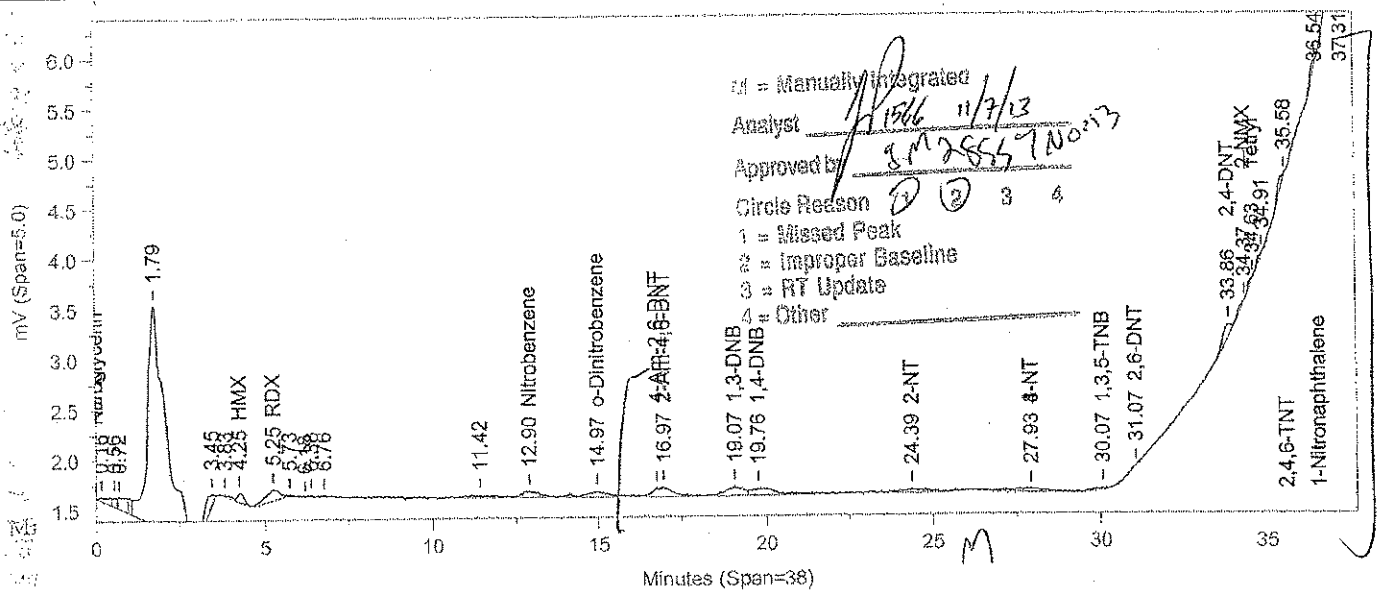


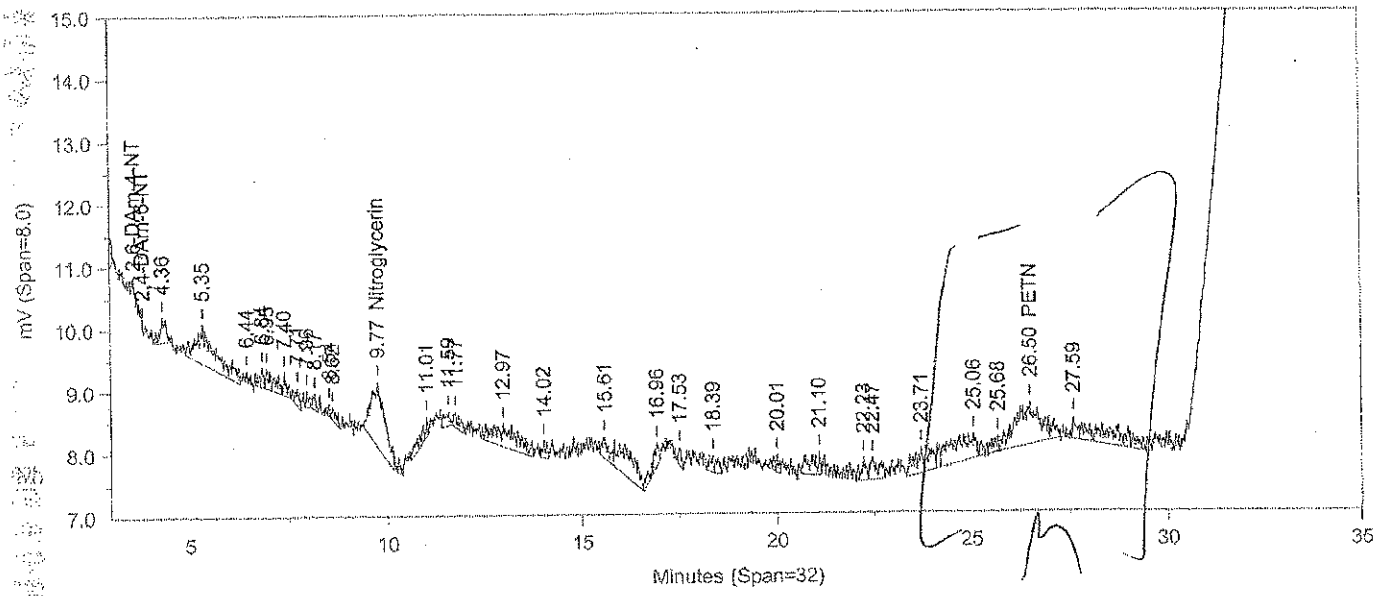
Instrument ID: CP12--Y6329A Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.09R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 7:45:16 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um


M = Manually Integrated
Analyst
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other
mV (Span=5.0)
Minutes (Span=38)
1.79
3.45
3.83
4.25 HMX
5.25 RDX
11.42
12.90 Nitrobenzene
14.97 o-Dinitrobenzene
16.97 2-AM-4,6-DNT
19.07 1,3-DNB
19.76 1,4-DNB
24.39 2-NT
27.93 4-NT
30.07 1,3,5-TNB
31.07 2,6-DNT
33.86 2,4-DNT
35.58
2,4,6-TNT
1-Nitronaphthalene


mV (Span=8.0)
Minutes (Span=32)
4.36
5.35
9.77 Nitroglycerin
11.01
12.97
14.02
15.61
16.96
17.53
18.39
20.01
21.10
23.71
25.06
25.68
26.50 PETN
27.59

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.251	1342	12.802	HMX	.	0	.	HMX
5.25	3341	6.234	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.766	24365	283.538	Nitroglycerin
12.9	2557	12.228	Nitrobenzene	.	0	.	Nitrobenzene
14.968	2707	8.203	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.971	4003	13.308	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
19.074	3481	8.885	1,3-DNB	.	0	.	1,3-DNB
19.76	4154	8.624	1,4-DNB	.	0	.	1,4-DNB
24.388	2024	11.972	2-NT	.	0	.	2-NT
.	0	.	PETN	26.497	30004	2568.832	PETN
27.935	2865	60.908	3-NT	.	0	.	3-NT
30.067	645	55.864	1,3,5-TNB	.	0	.	1,3,5-TNB
31.068	286	17.88	2,6-DNT	.	0	.	2,6-DNT
33.863	2480	9.602	2,4-DNT	.	0	.	2,4-DNT
34.367	547	73.17	2-NMX	.	0	.	2-NMX
34.63	498	22.266	Tetryl	.	0	.	Tetryl
35.583	1137	13.028	2,4,6-TNT	.	0	.	2,4,6-TNT
36.542	828	34.277	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:17:14 PM
File Reported On: 11/7/2013 at 6:17:13 PM

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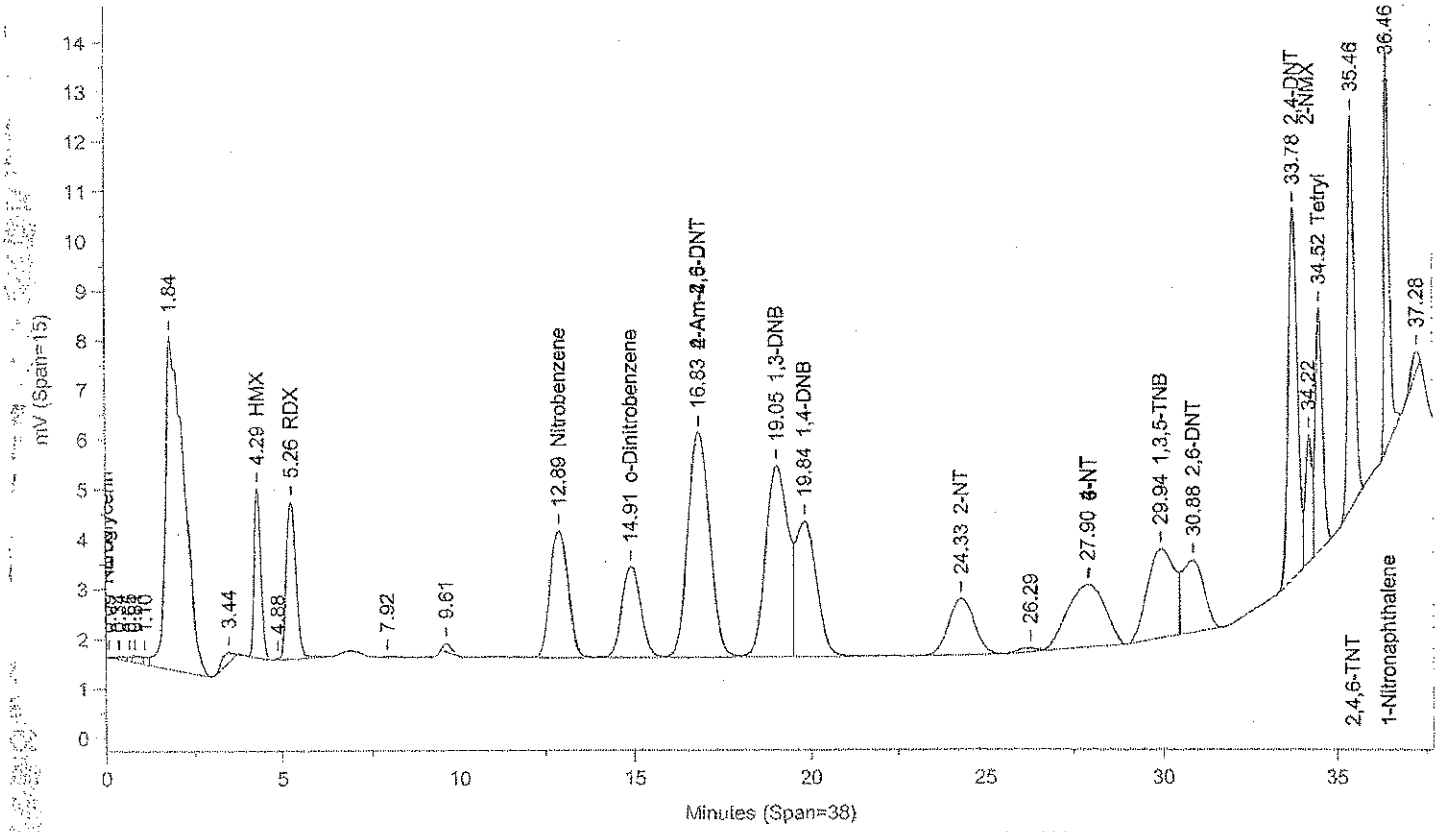
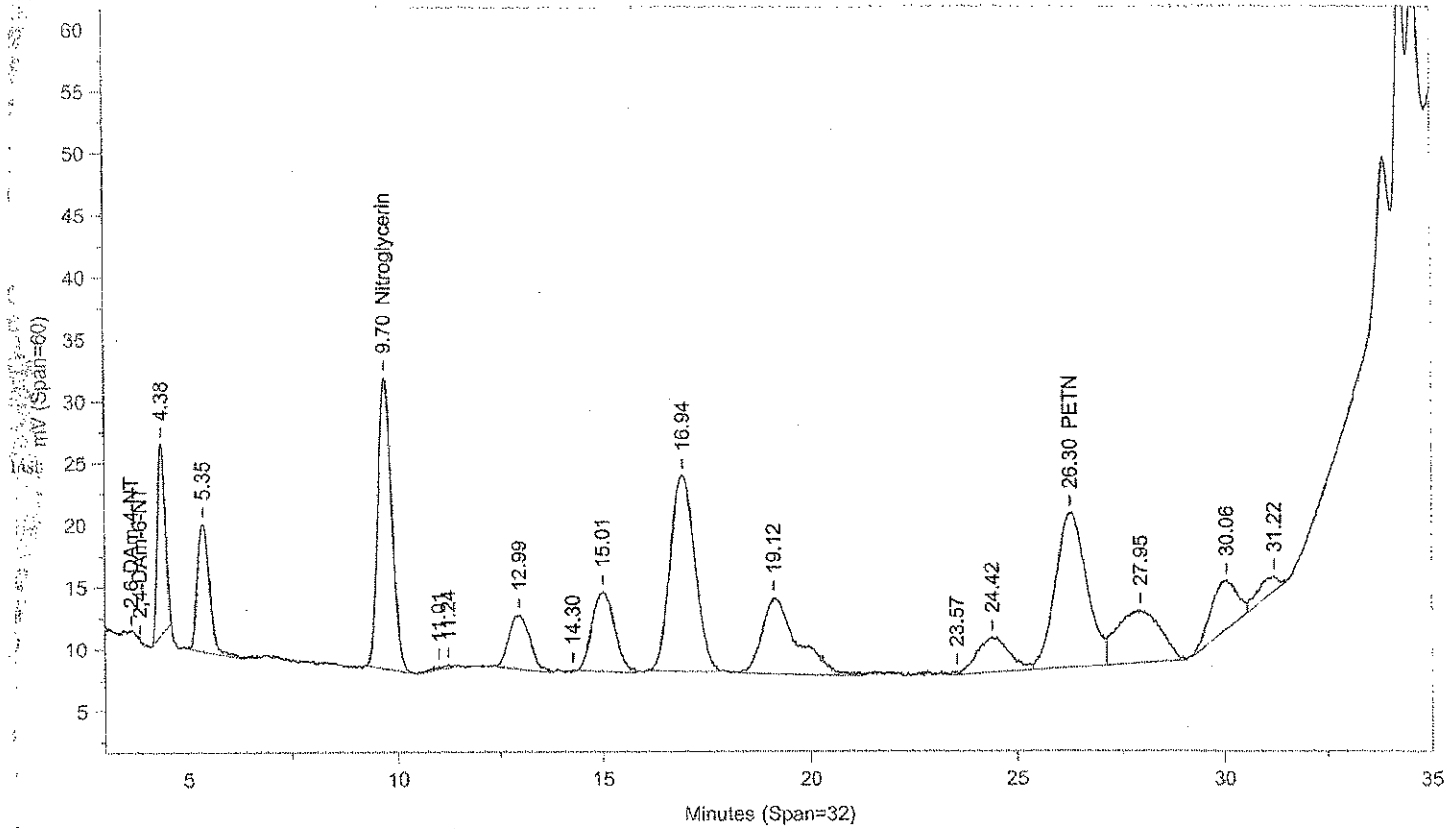
File: C:\CPWIN\DATA1\1C12310.10R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.10R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 8:27:43 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.287	46501	443.578	HMX	.	0	.	HMX
5.259	58978	502.759	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.696	556021	5470.547	Nitroglycerin
12.894	91644	496.281	Nitrobenzene	.	0	.	Nitrobenzene
14.913	69876	502.214	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.833	192980	499.956	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.051	169180	499.488	1,3-DNB	.	0	.	1,3-DNB
19.836	116438	500.616	1,4-DNB	.	0	.	1,4-DNB
24.331	58749	501.957	2-NT	.	0	.	2-NT
.	0	.	PETN	26.296	636924	5363.191	PETN
27.897	90471	466.62	4-NT	.	0	.	4-NT
29.945	96363	443.532	1,3,5-TNB	.	0	.	1,3,5-TNB
30.883	63428	498.299	2,6-DNT	.	0	.	2,6-DNT
33.782	136607	528.912	2,4-DNT	.	0	.	2,4-DNT
34.22	32718	990.46	2-NMX	.	0	.	2-NMX
34.522	72541	475.026	Tetryl	.	0	.	Tetryl
35.457	105784	503.005	2,4,6-TNT	.	0	.	2,4,6-TNT
36.455	78595	517.657	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\1C12310.10A
Area File: C:\CPWIN\DATA1\1C12310B.10A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:18 PM
File Reported On: 11/7/2013 at 6:27:27 PM

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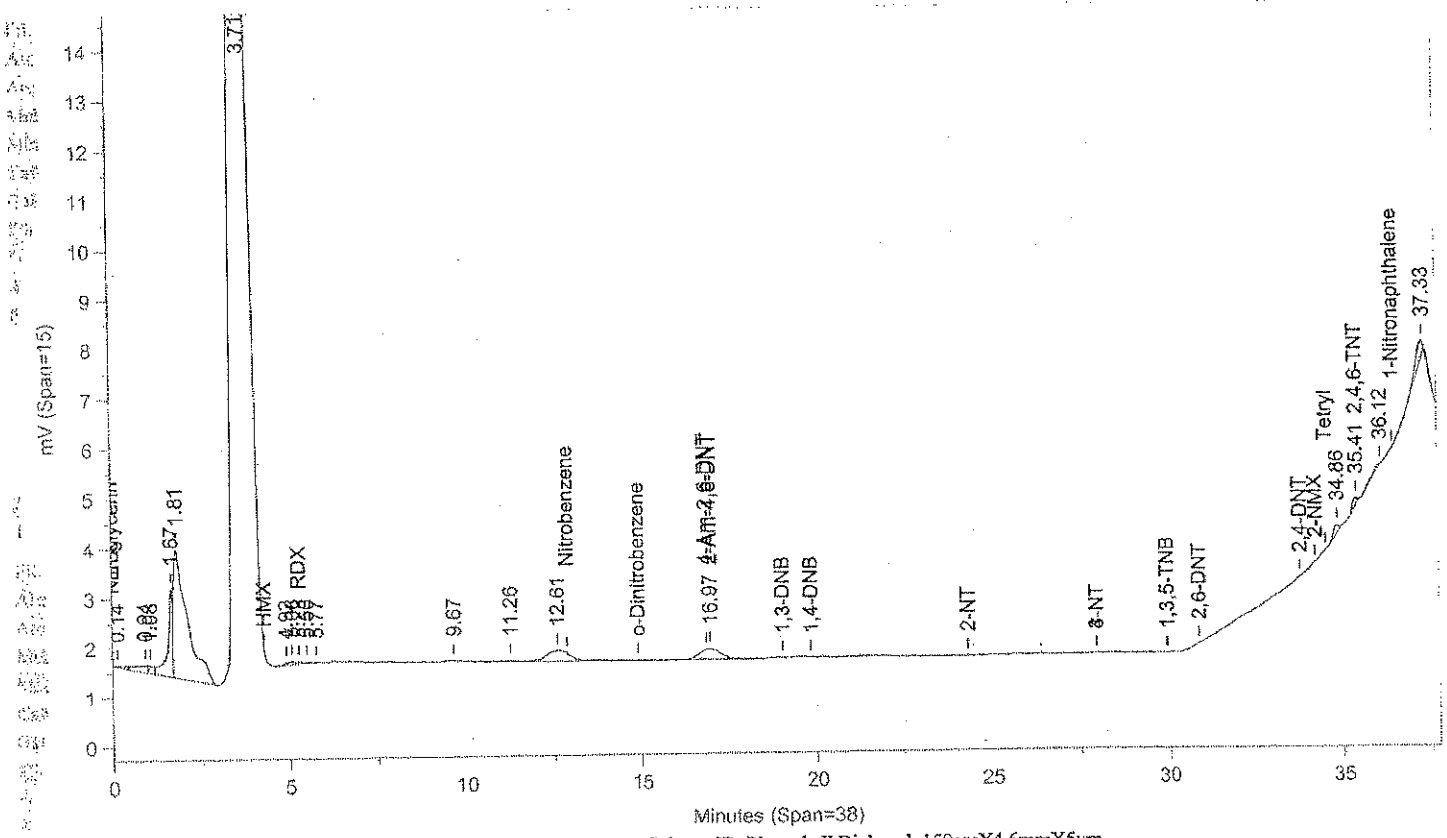
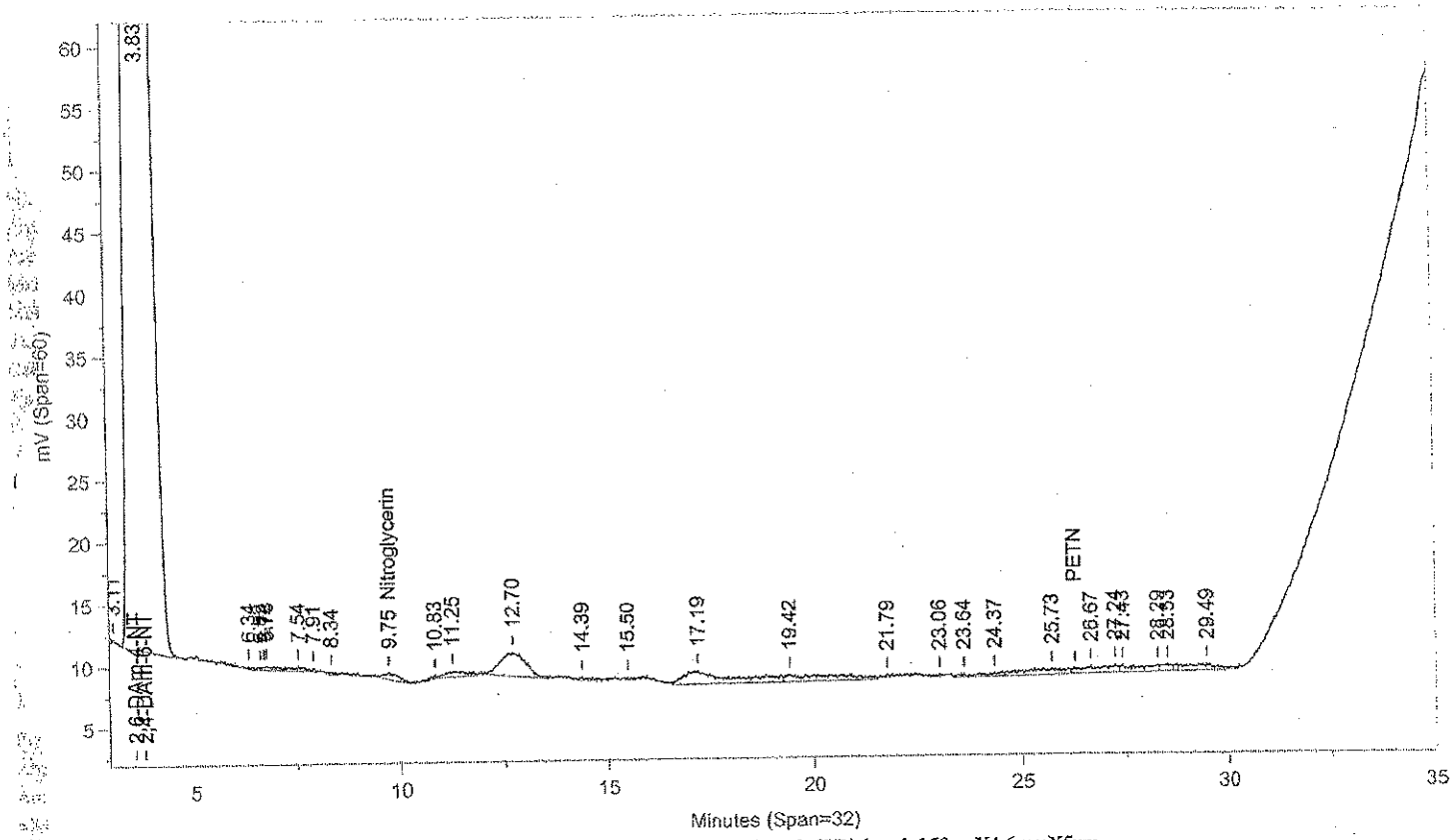
File: C:\CPWIN\DATA1\1C12310.11R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.11R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:10:14 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.832	4661927	.	2,4-DAm-6-NT
5.279	536	-18.797	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.75	14347	141.154	Nitroglycerin
16.969	9184	23.769	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
35.414	1426	13.506	2,4,6-TNT	.	0	.	2,4,6-TNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.11A
Area File: C:\CPWIN\DATA1\1C12310B.11A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:27:48 PM
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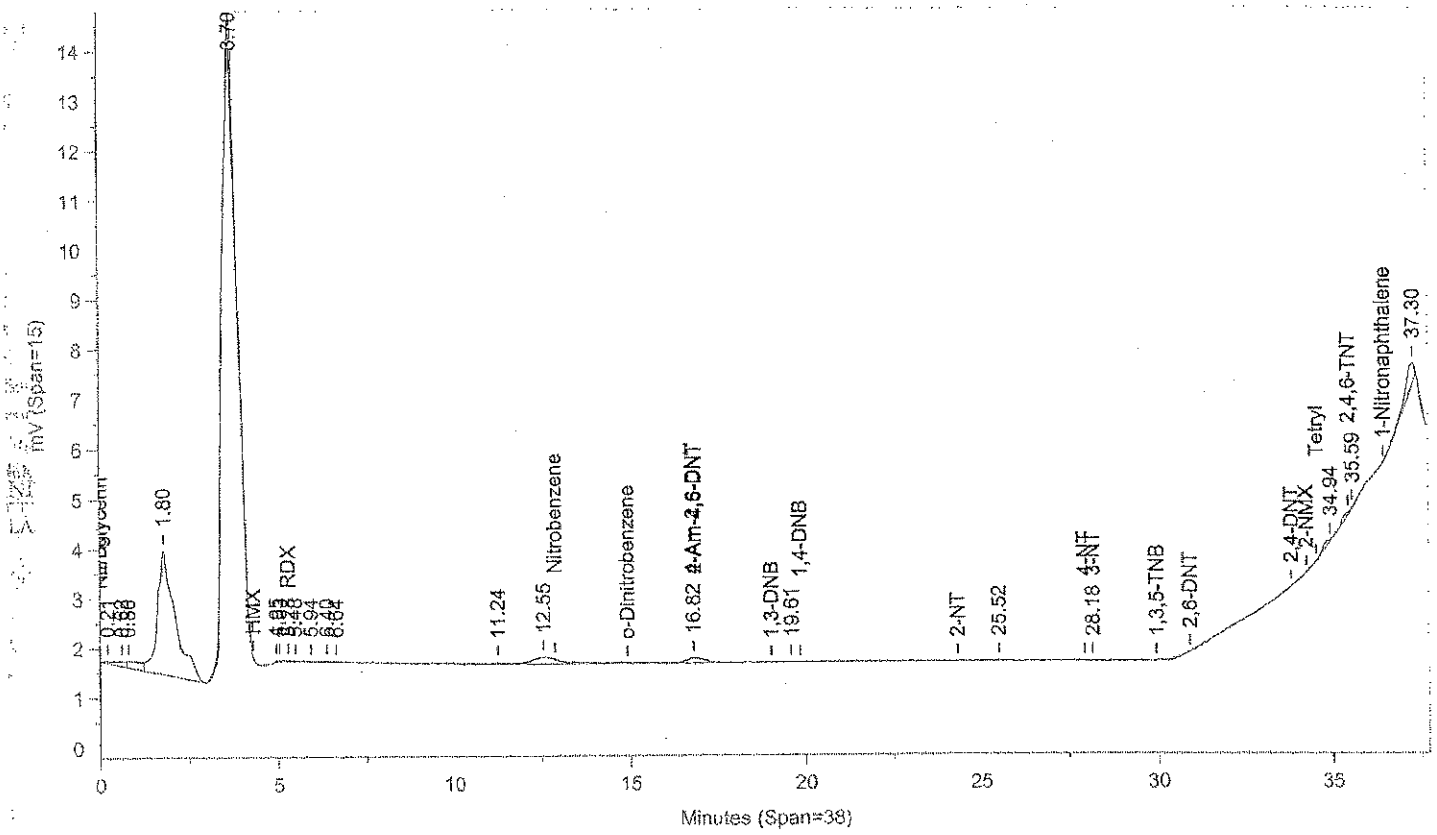
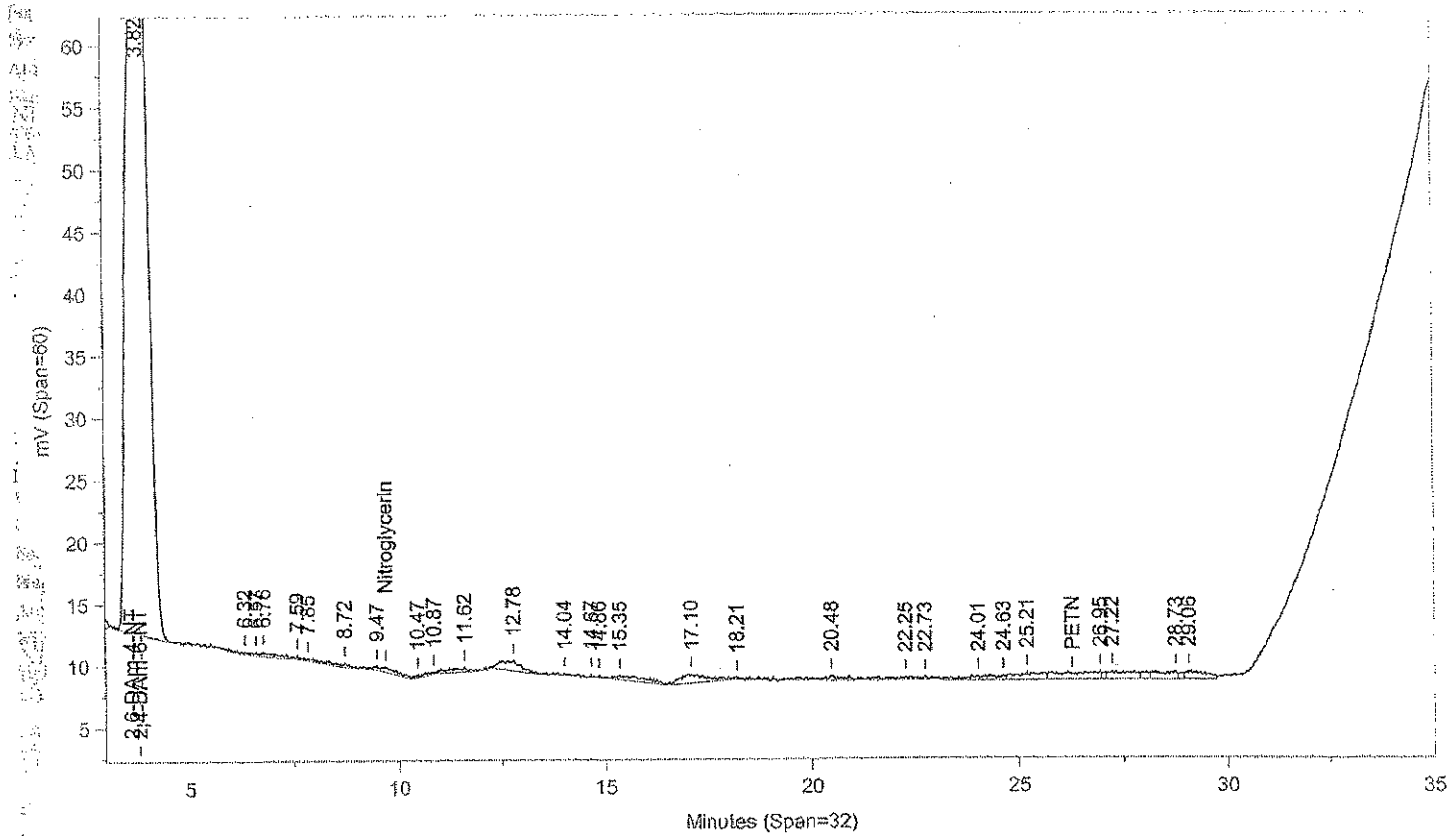
File: C:\CPWIN\DATA1\1C12310.12R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.12R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 9:52:38 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.823	2340450	.	2,4-DAm-6-NT
5.279	49	-23.145	RDX	.	0	.	RDX
16.818	4954	12.834	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
28.178	393	14.232	3-NT	.	0	.	3-NT

Files:
Area File: C:\CPWIN\DATA1\1C12310.12A
Area File: C:\CPWIN\DATA1\1C12310B.12A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:16 PM
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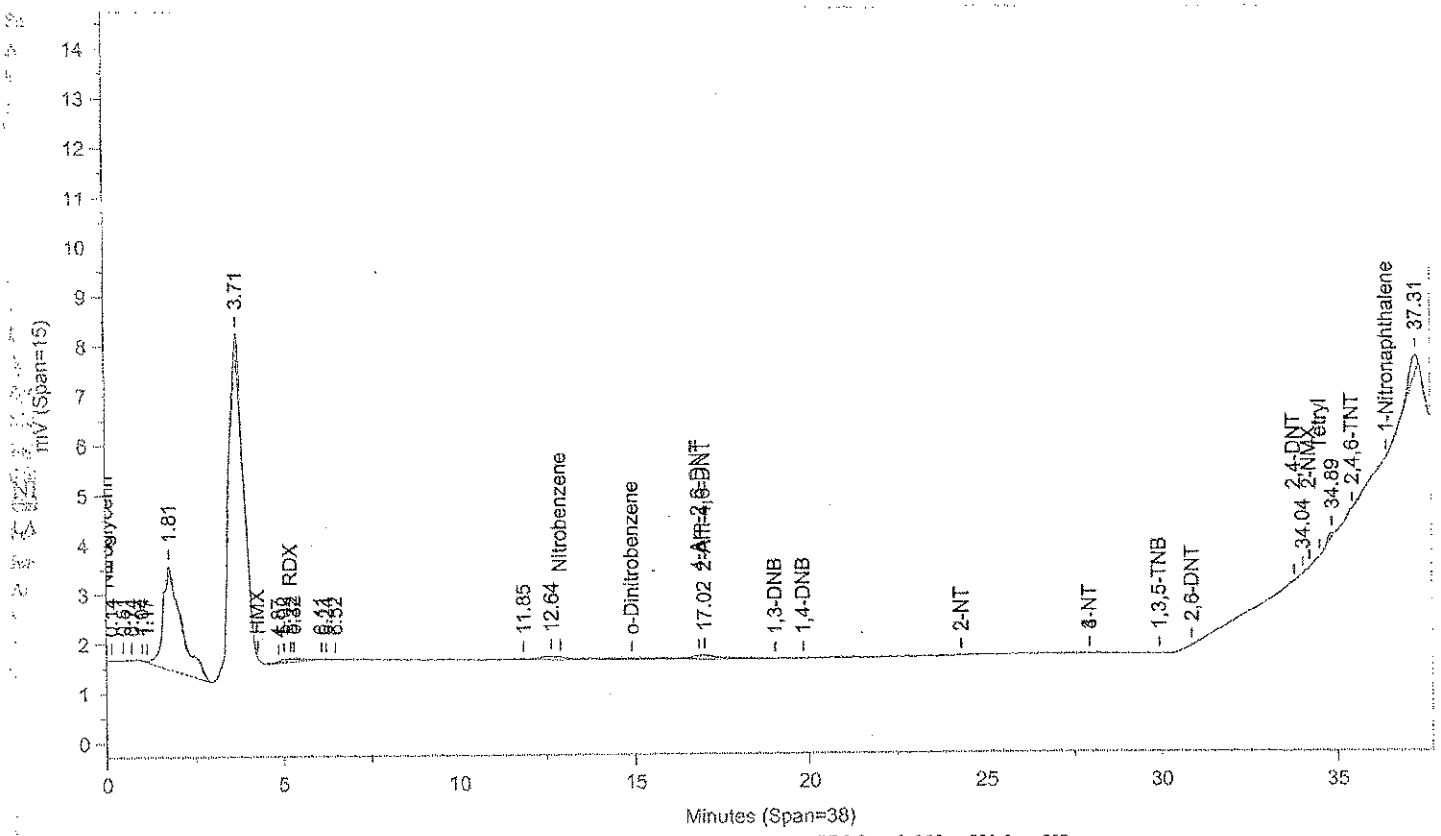
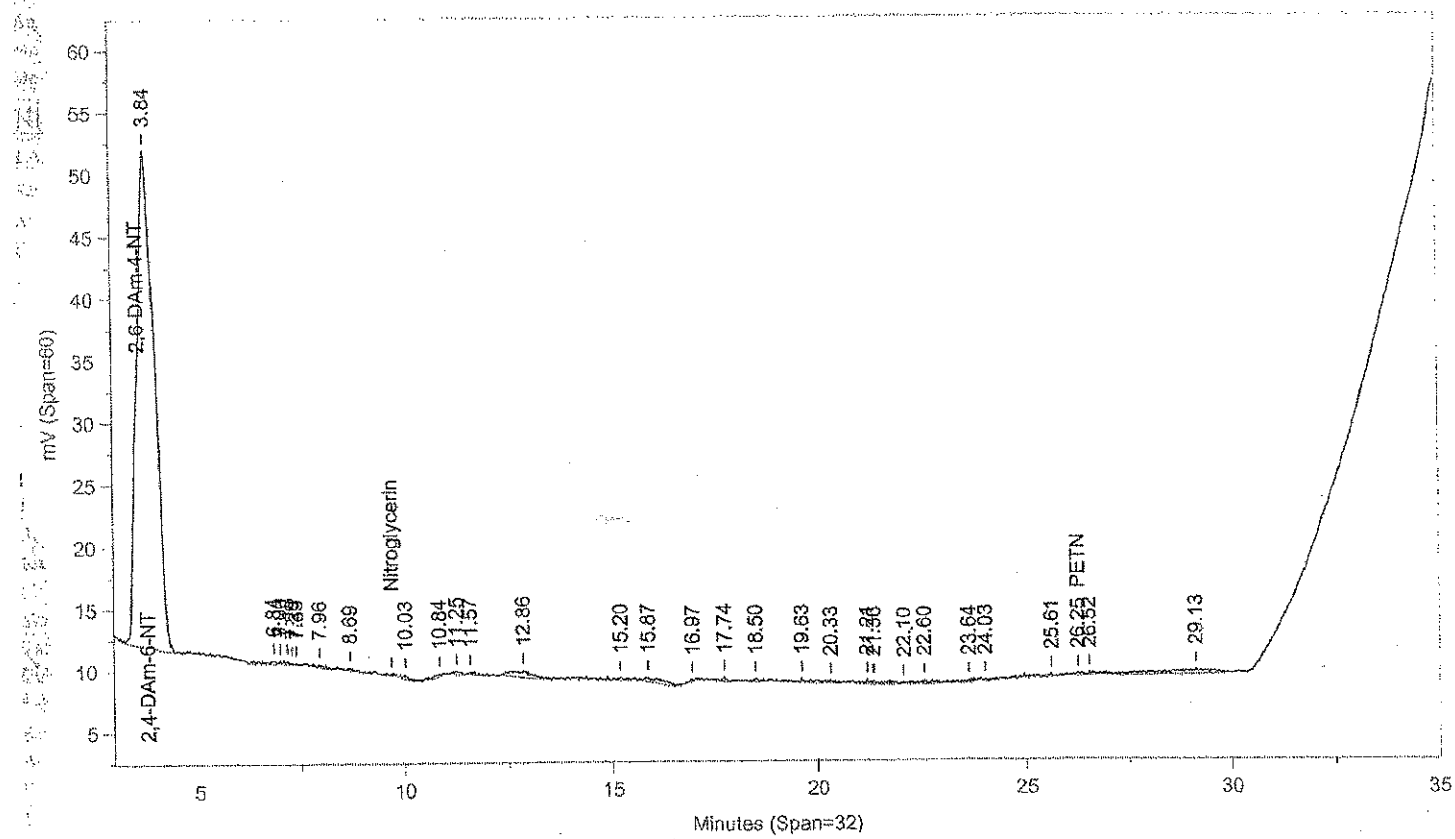
File: C:\CPWIN\DATA1\1C12310.13R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.13R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 10:35:07 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.836	1186674	.	2,4-DAm-6-NT
5.219	575	-18.452	RDX	.	0	.	RDX
17.017	5070	13.121	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
.	0	.	PETN	26.249	2969	25.002	PETN

Files:
Area File: C:\CPWIN\DATA1\1C12310.13A
Area File: C:\CPWIN\DATA1\1C12310B.13A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:28:46 PM
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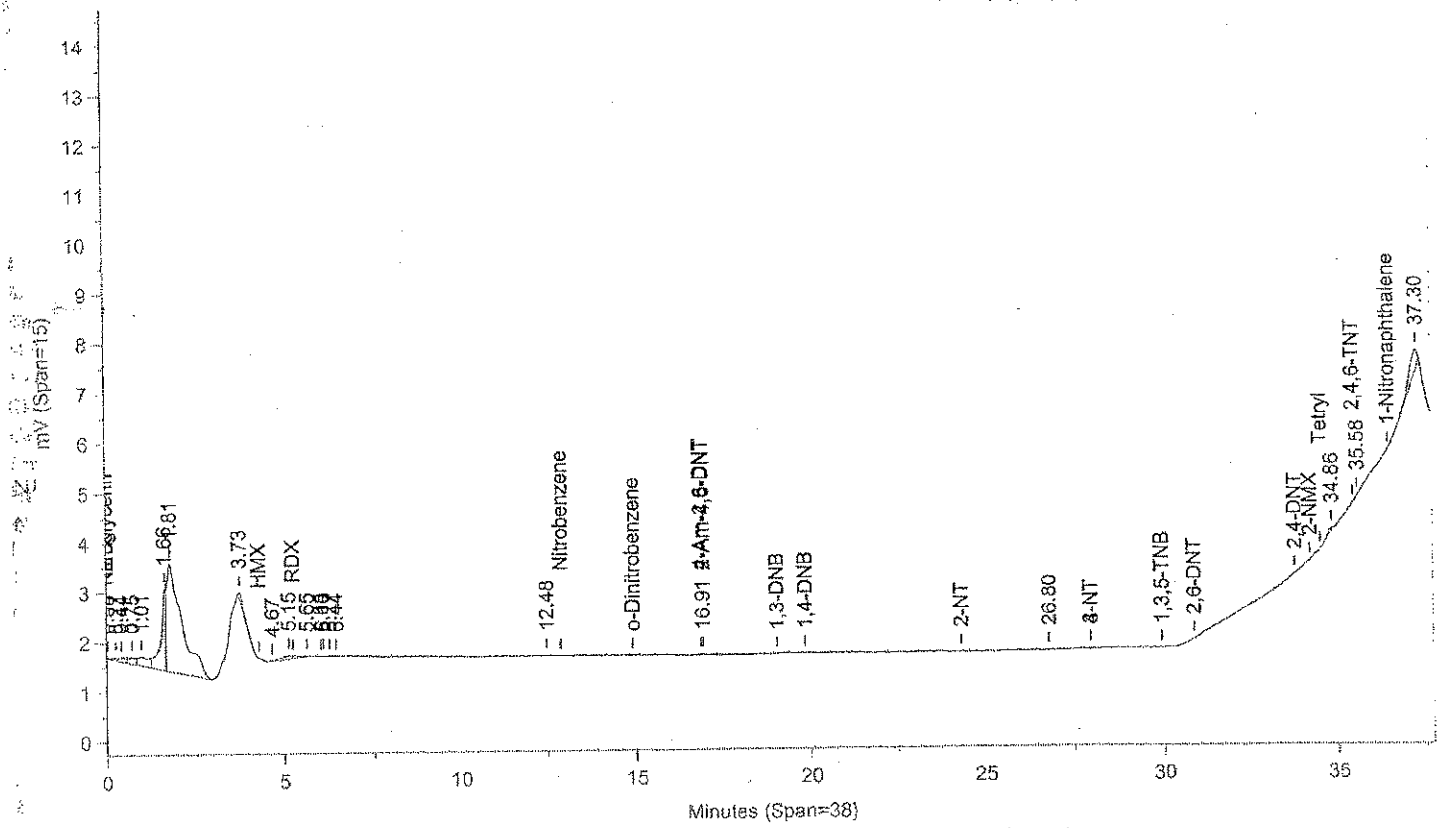
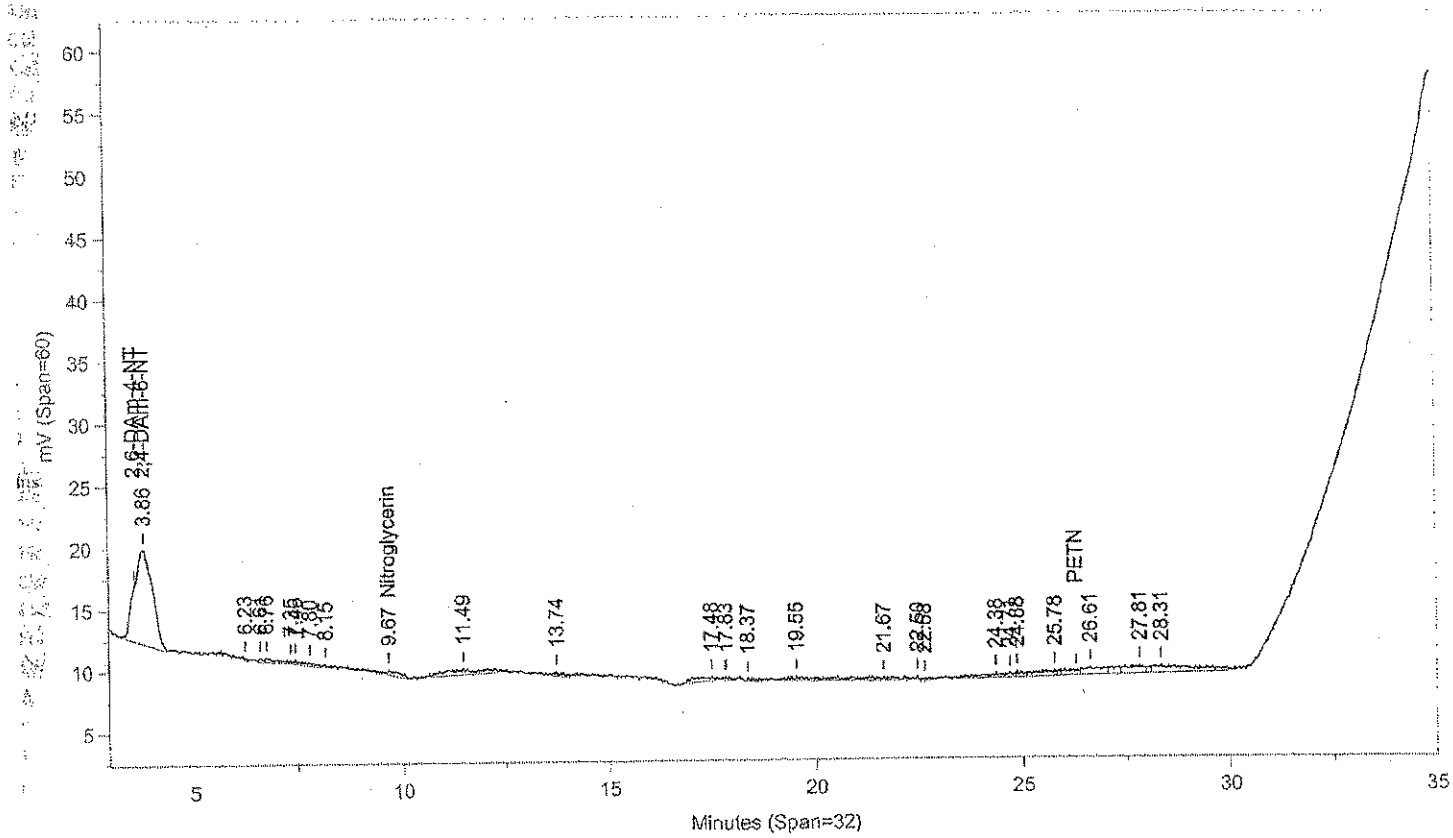
File: C:\CPWIN\DATA1\1C12310.14R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.14R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:17:35 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

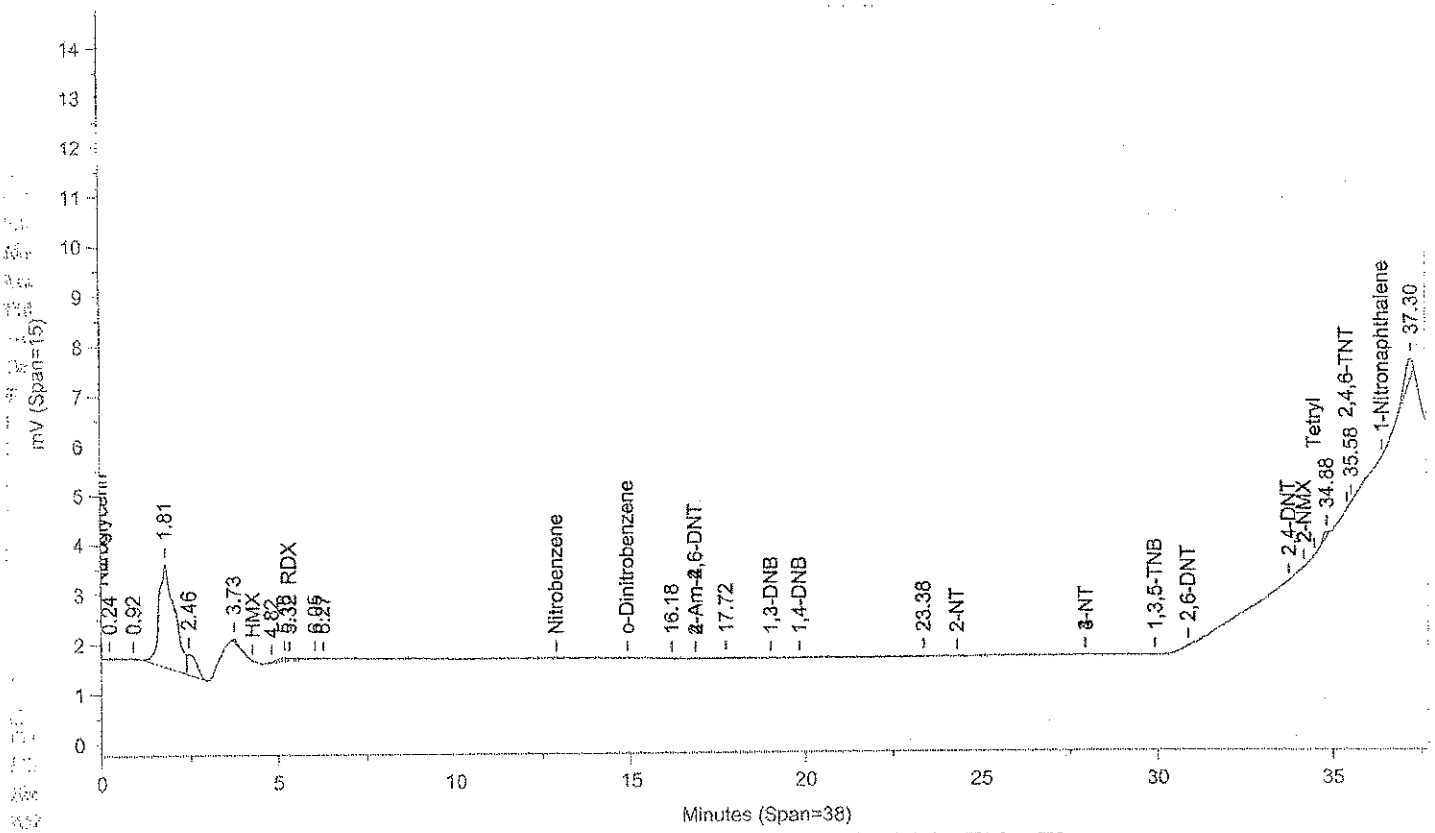
Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.856	229995	.	2,4-DAm-6-NT
.	0	.	Nitroglycerin	9.671	8117	79.86	Nitroglycerin
16.913	1854	4.799	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.14A
Area File: C:\CPWIN\DATA1\1C12310B.14A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:14 PM
File Reported On: 11/7/2013 at 6:29:23 PM

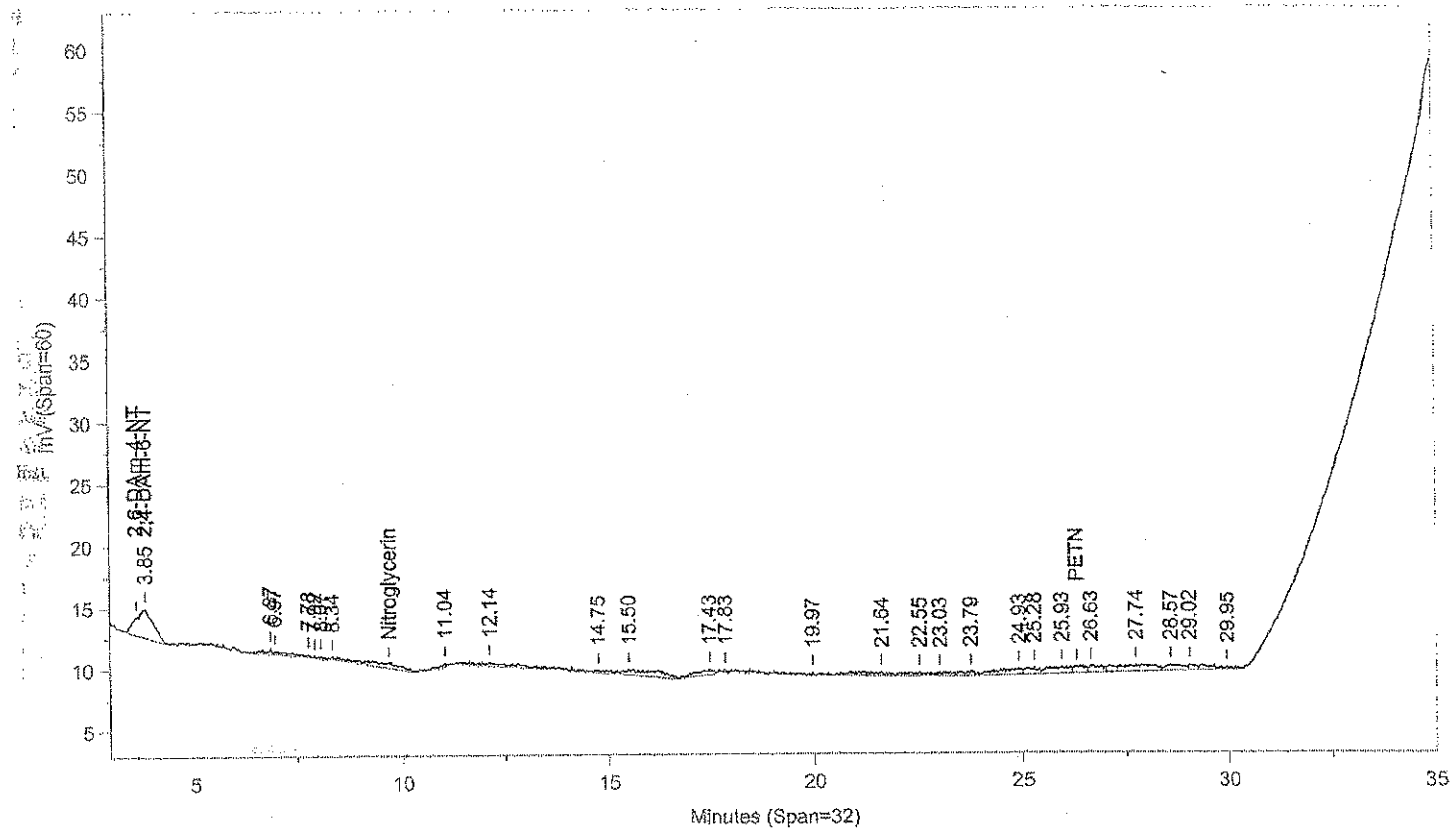
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\1C12310.15R



Instrument ID: CP12--Y6329A Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.15R



Instrument ID: CP12--Y6329B Injected On: 11/6/2013 11:59:58 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.849	68461	.	2,4-DAm-6-NT
5.316	1474	-10.427	RDX	.	0	.	RDX

Files:
Area File: C:\CPWIN\DATA1\1C12310.15A
Area File: C:\CPWIN\DATA1\1C12310B.15A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:29:44 PM
File Reported On: 11/7/2013 at 6:29:53 PM

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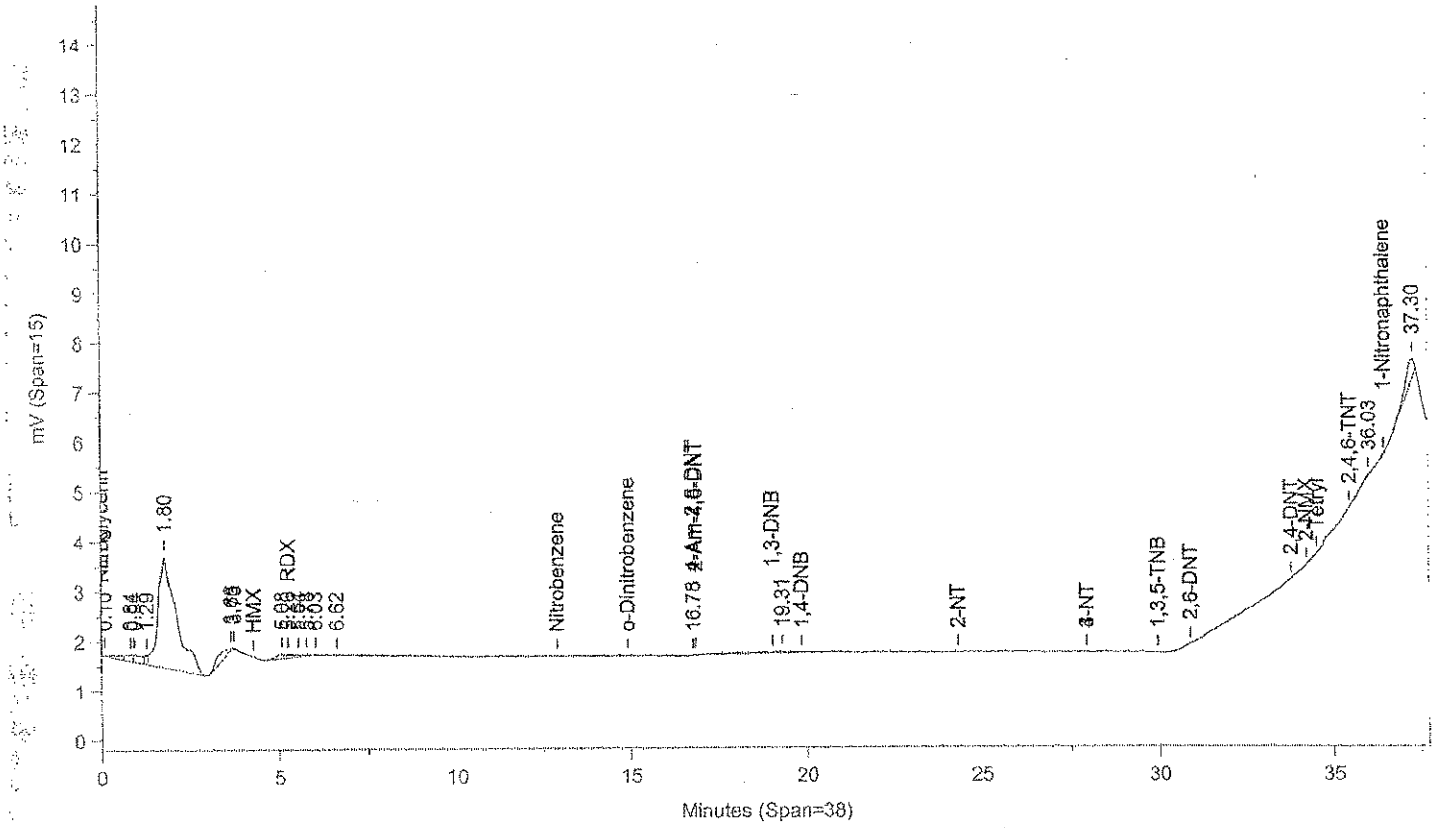
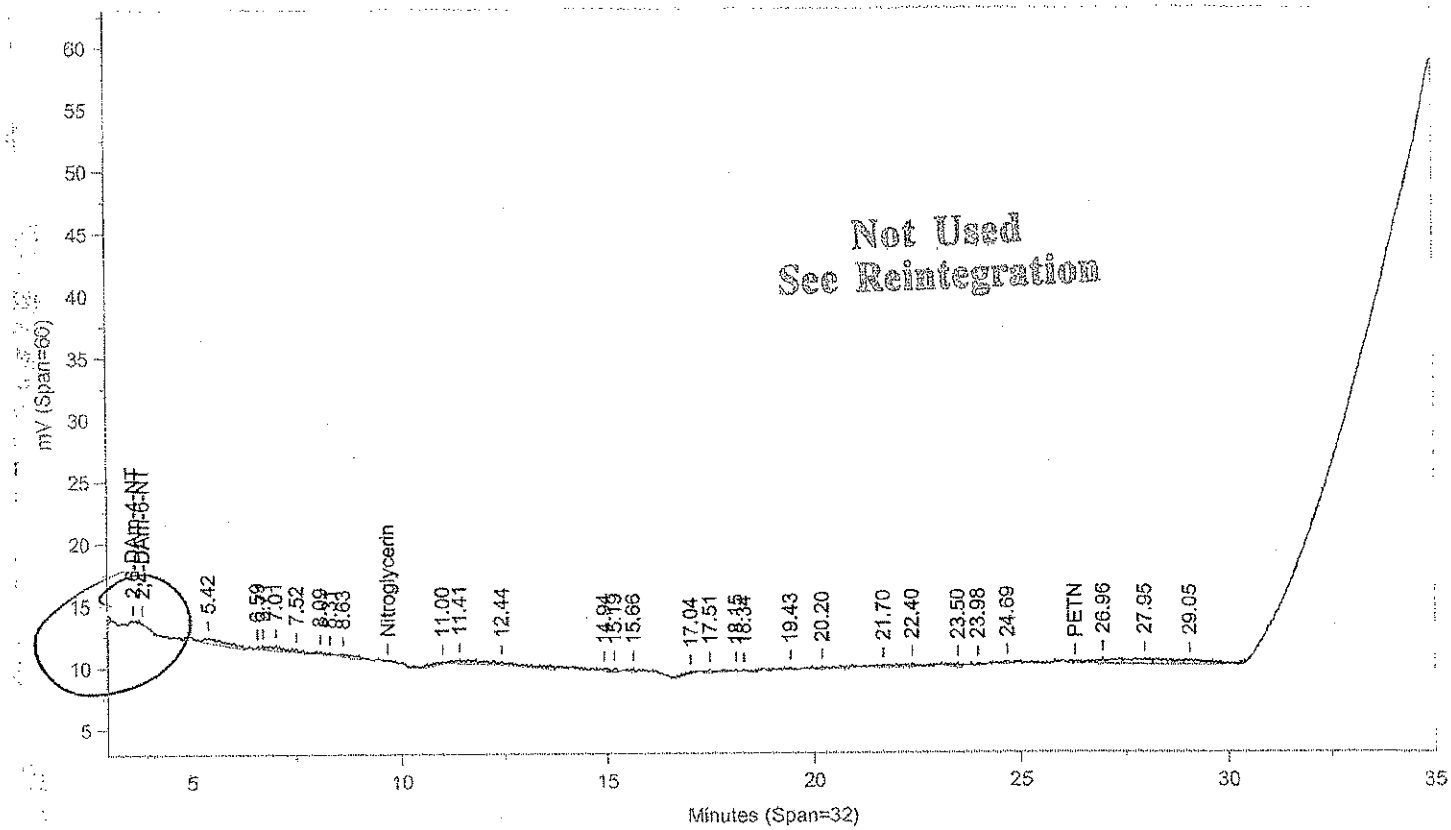
File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



Not Used
See Reintegration

Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.26	863	-15.881	RDX			0	RDX
6.782	22	.057	4-Am-2,6-DNT			0	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\DATA1\1C12310.16A
Area File: C:\CPWIN\DATA1\1C12310B.16A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\1C12310.CAL
Calibration File B: C:\CPWIN\DATA1\1C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:30:14 PM
Eile Reported On: 11/7/2013 at 6:30:23 PM

Not Used
See Reintegration

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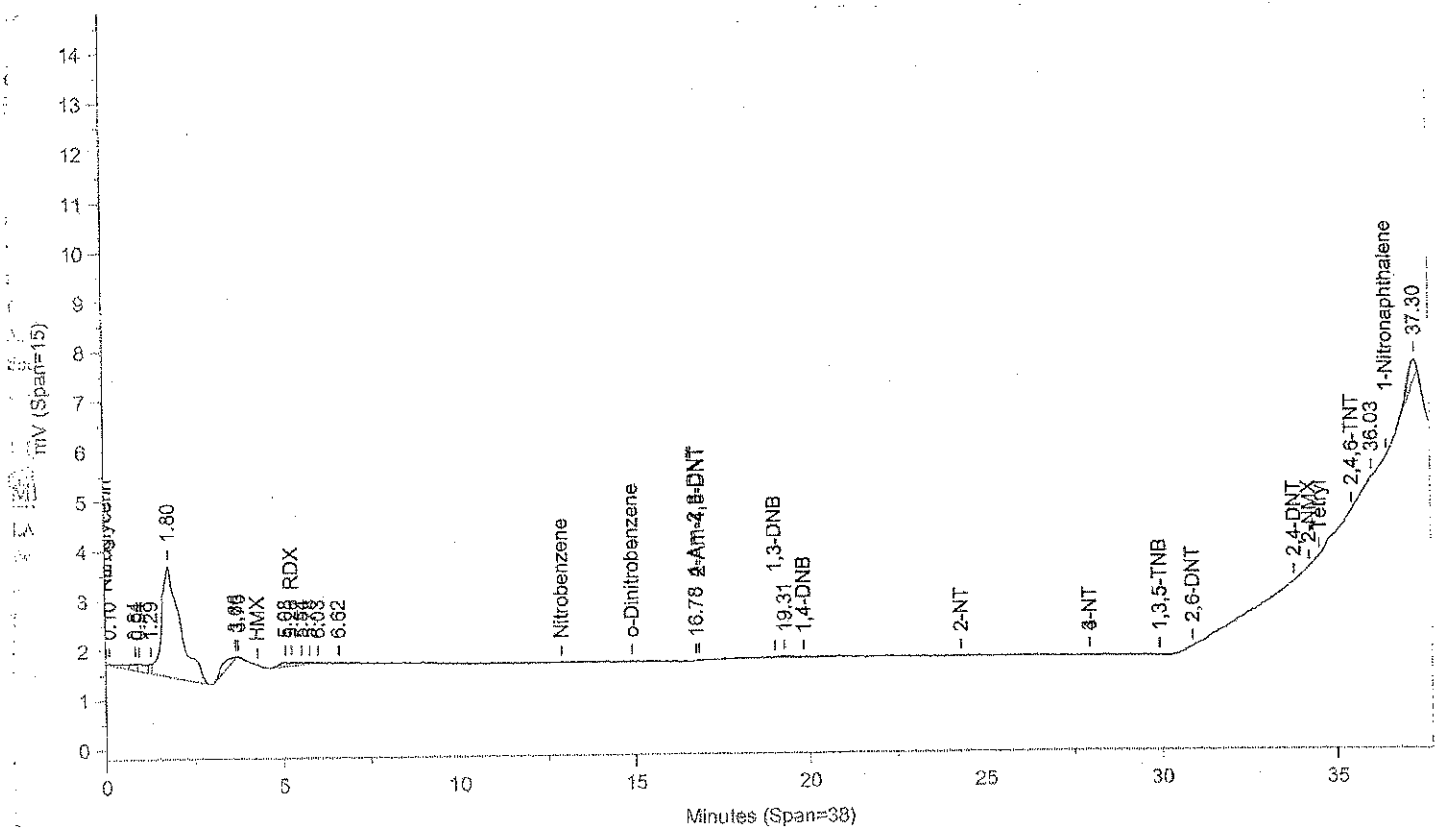
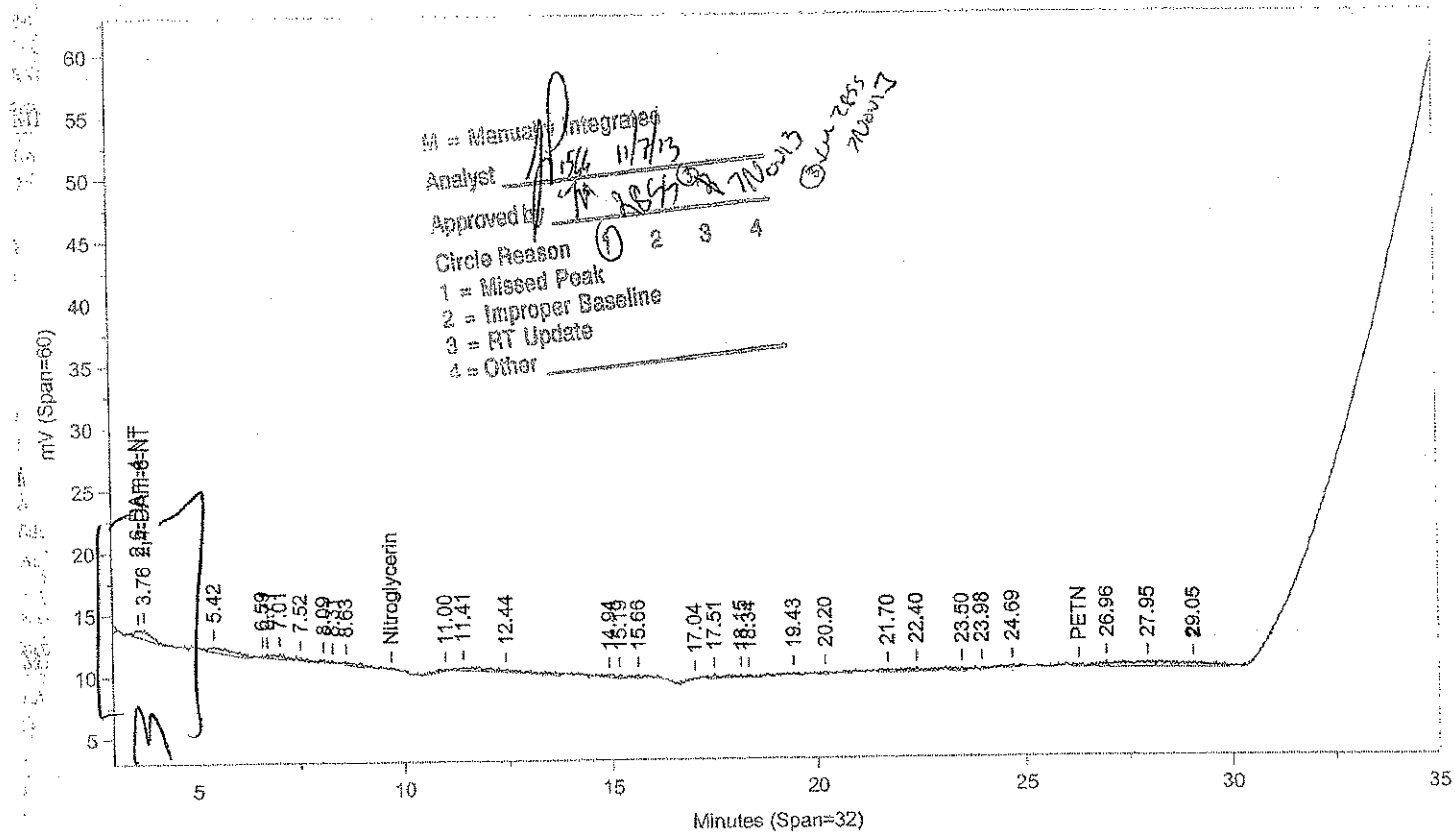
File: C:\CPWIN\DATA1\1C12310.16R



Instrument ID: CP12--Y6329A Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\1C12310B.16R



M = Manually Integrated
Analyst 11/7/13
Approved by
Circle Reason
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--Y6329B Injected On: 11/7/2013 12:42:24 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,4-DAm-6-NT	3.761	17579	.	2,4-DAm-6-NT
5.26	863	-15.881	RDX	.	0	.	RDX
16.782	22	.057	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\IC12310.CAL
Calibration File B: C:\CPWIN\DATA1\IC12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/7/2013 6:35:30 PM
File Reported On: 11/7/2013 at 6:35:29 PM

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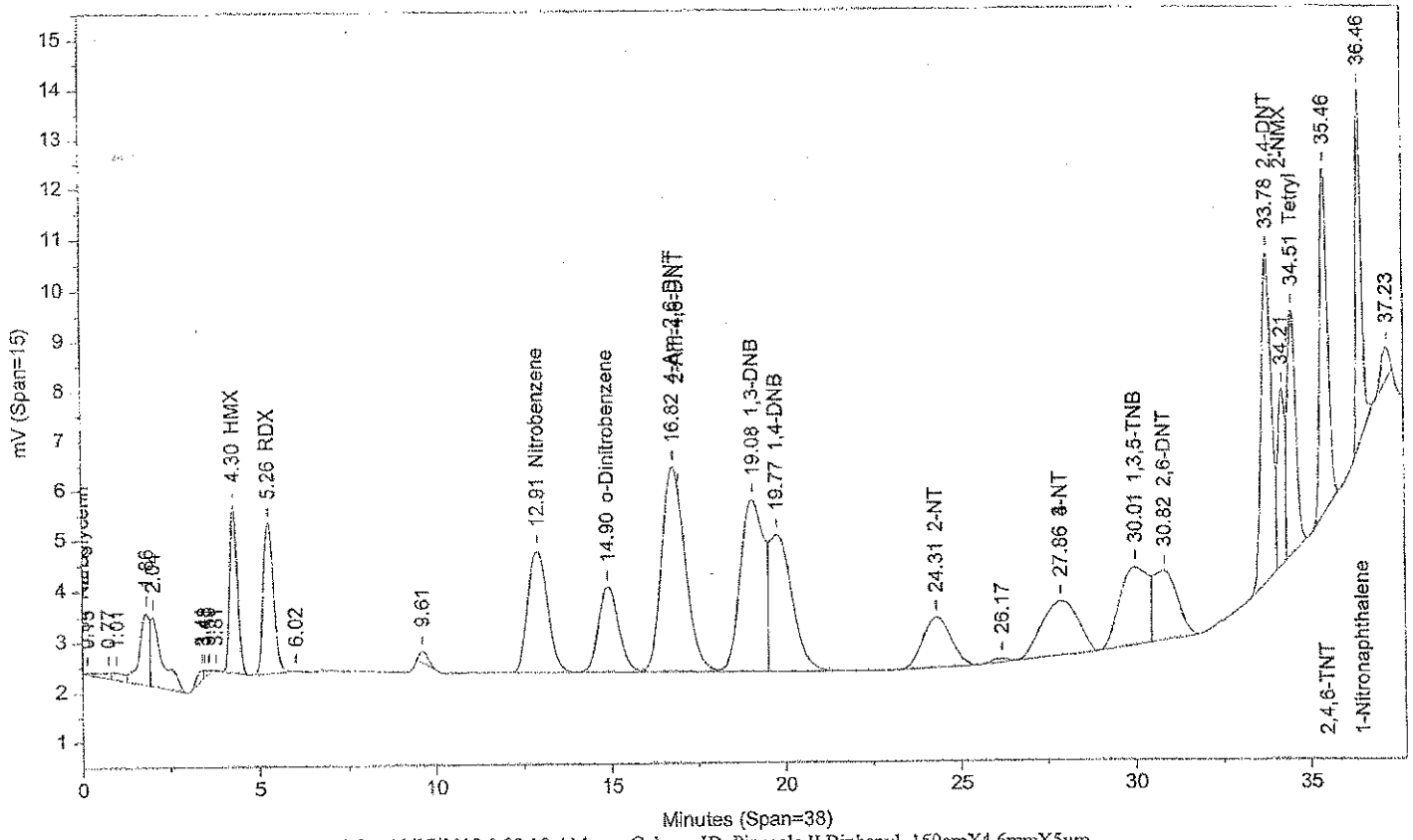
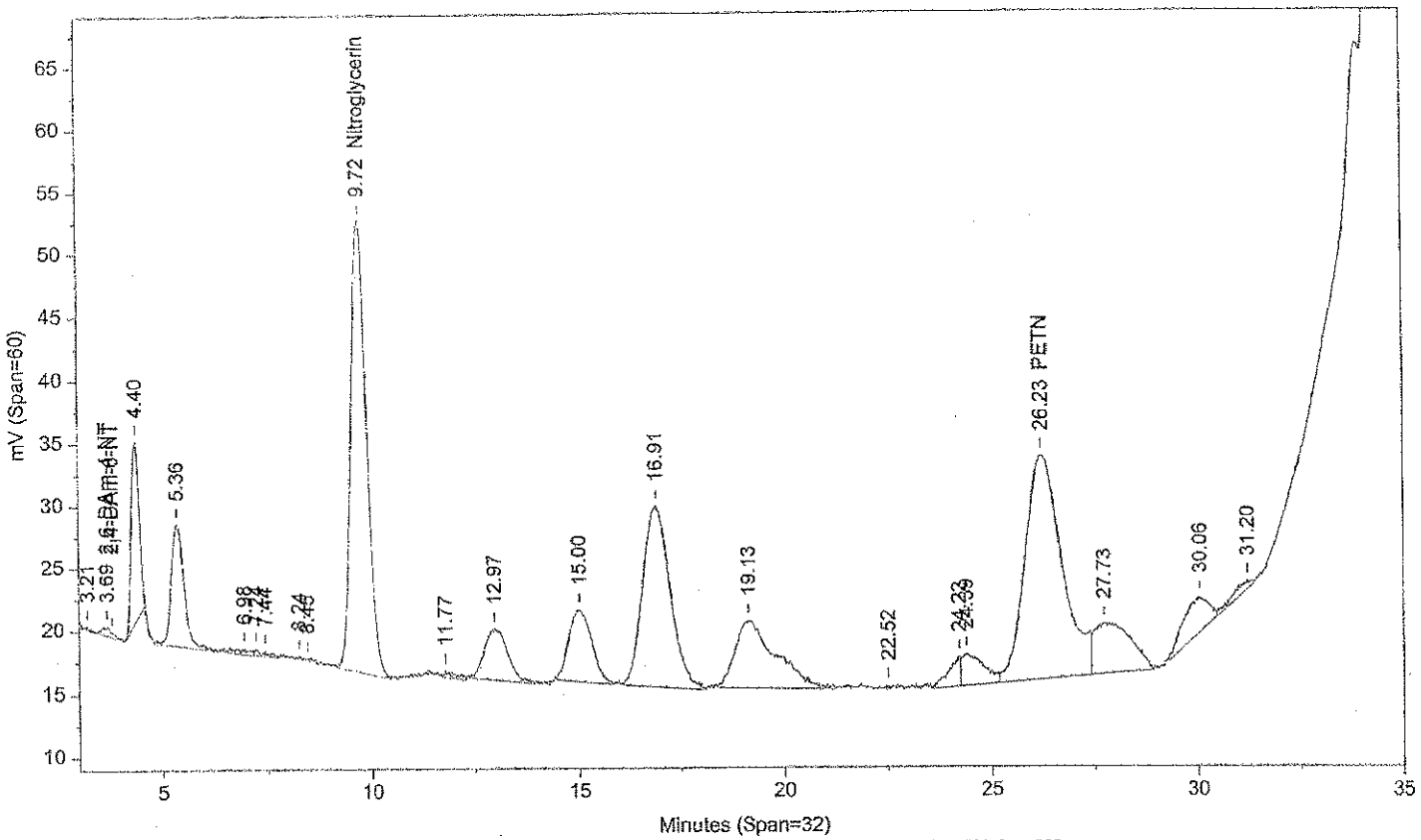
File: C:\CPWIN\DATA1\4C12310.58R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.58R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:02:10 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.694	14543	6.598	2,6-DAm-4-NT
4.297	48637	463.959	HMX	.	0	.	HMX
5.262	58707	500.342	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.719	943360	9281.488	Nitroglycerin
12.911	93190	504.717	Nitrobenzene	.	0	.	Nitrobenzene
14.9	69827	501.855	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.817	192246	498.054	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.078	163081	481.48	1,3-DNB	.	0	.	1,3-DNB
19.773	124527	536.437	1,4-DNB	.	0	.	1,4-DNB
24.306	55862	476.901	2-NT	.	0	.	2-NT
.	0	.	PETN	26.233	1085988	9144.518	PETN
27.861	76417	394.058	3-NT	.	0	.	3-NT
30.009	85309	398.681	1,3,5-TNB	.	0	.	1,3,5-TNB
30.816	64444	506.07	2,6-DNT	.	0	.	2,6-DNT
33.782	135750	525.596	2,4-DNT	.	0	.	2,4-DNT
34.215	52158	1547.416	2-NMX	.	0	.	2-NMX
34.513	83687	545.21	Tetryl	.	0	.	Tetryl
35.458	105419	501.296	2,4,6-TNT	.	0	.	2,4,6-TNT
36.461	78051	514.265	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.58A
Area File: C:\CPWIN\DATA1\4C12310B.58A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:10 PM
File Reported On: 11/17/2013 at 9:49:20 PM

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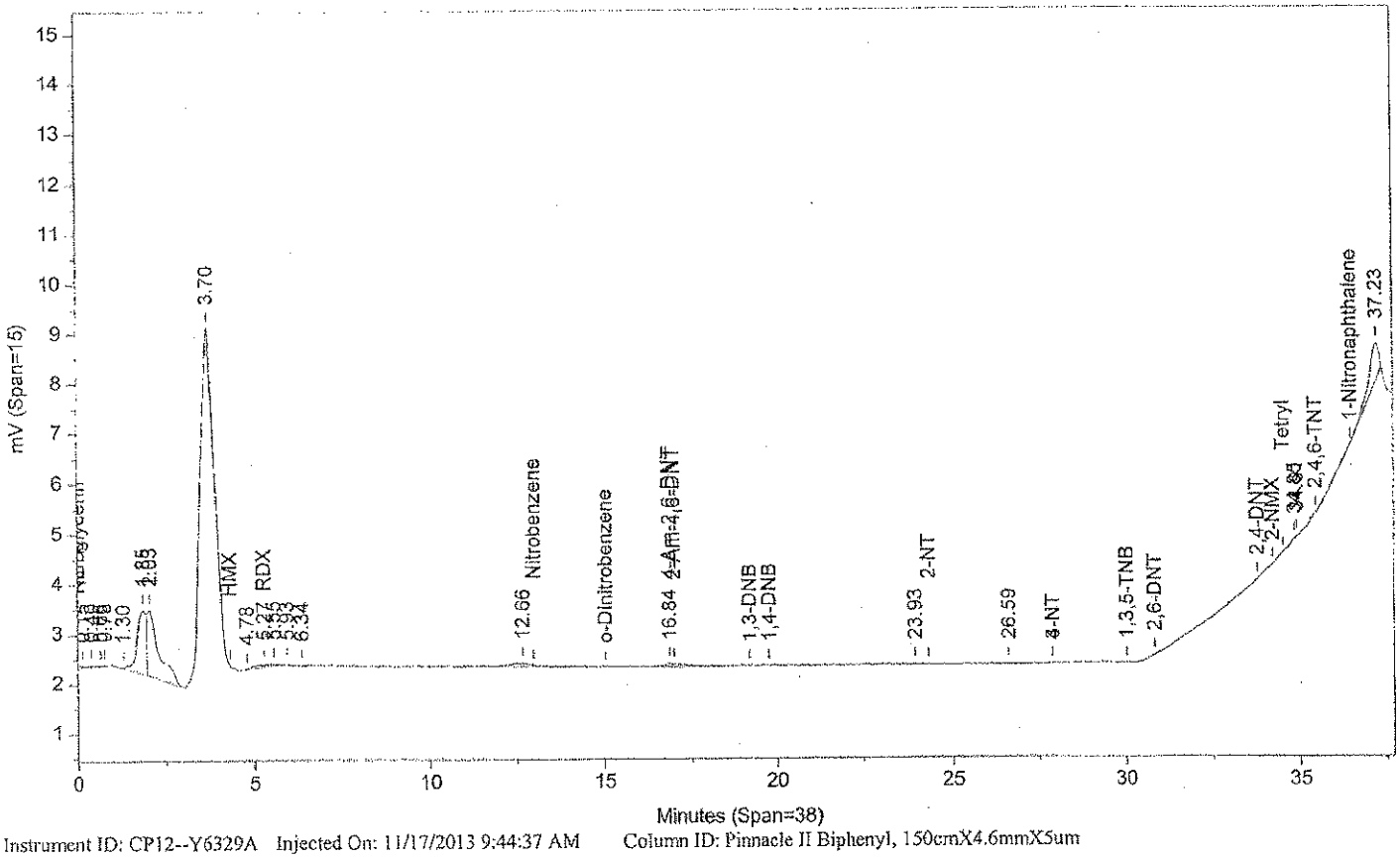
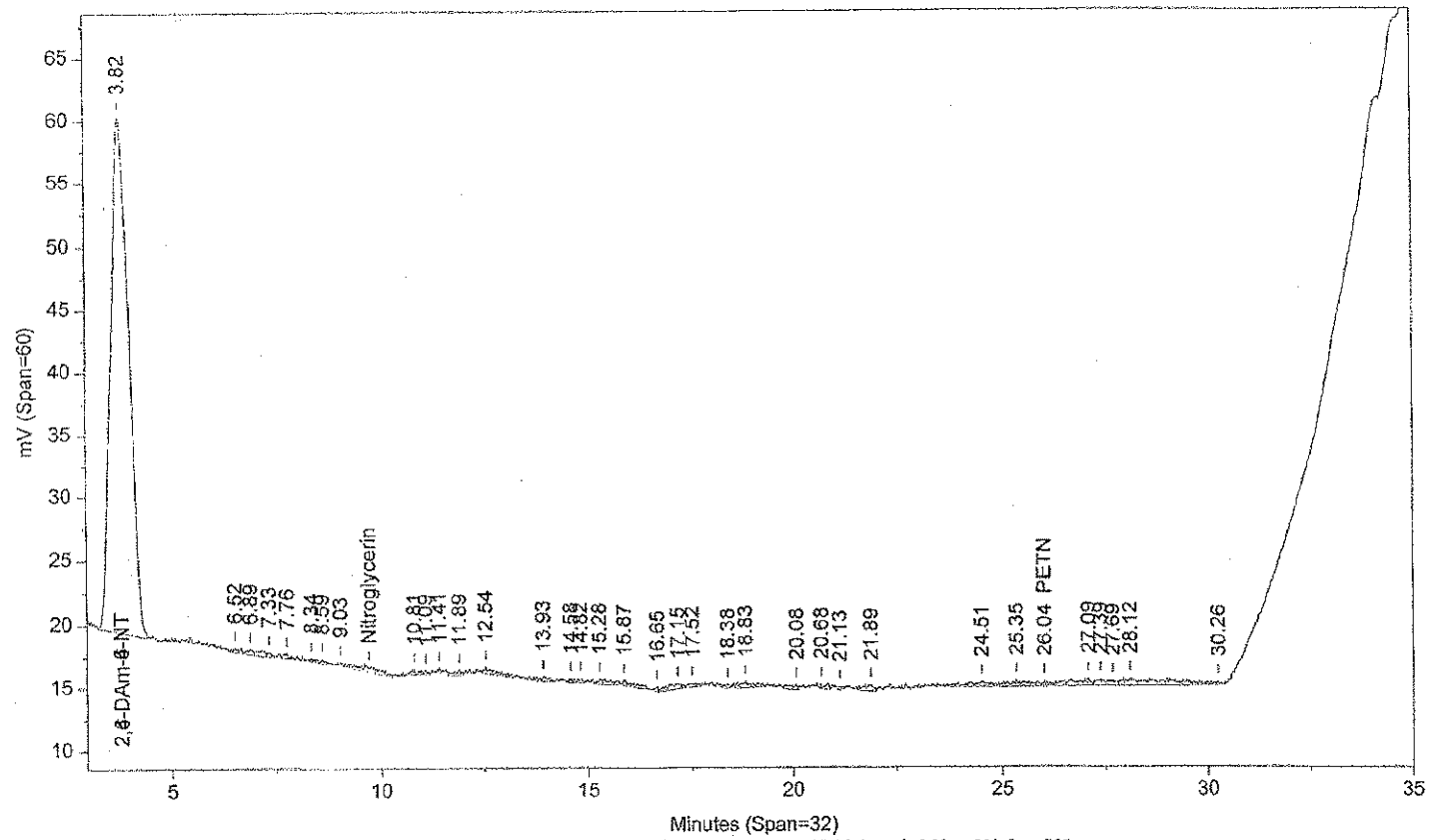
File: C:\CPWIN\DATA1\4C12310.59R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.59R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:44:37 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.818	1194434	541.86	2,6-DAm-4-NT
5.271	1214	-12.751	RDX	.	0	.	RDX
16.844	3478	9.011	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
.	0	.	PETN	26.04	9091	76.554	PETN

Files:
Area File: C:\CPWIN\DATA1\4C12310.59A
Area File: C:\CPWIN\DATA1\4C12310B.59A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 9:49:32 PM
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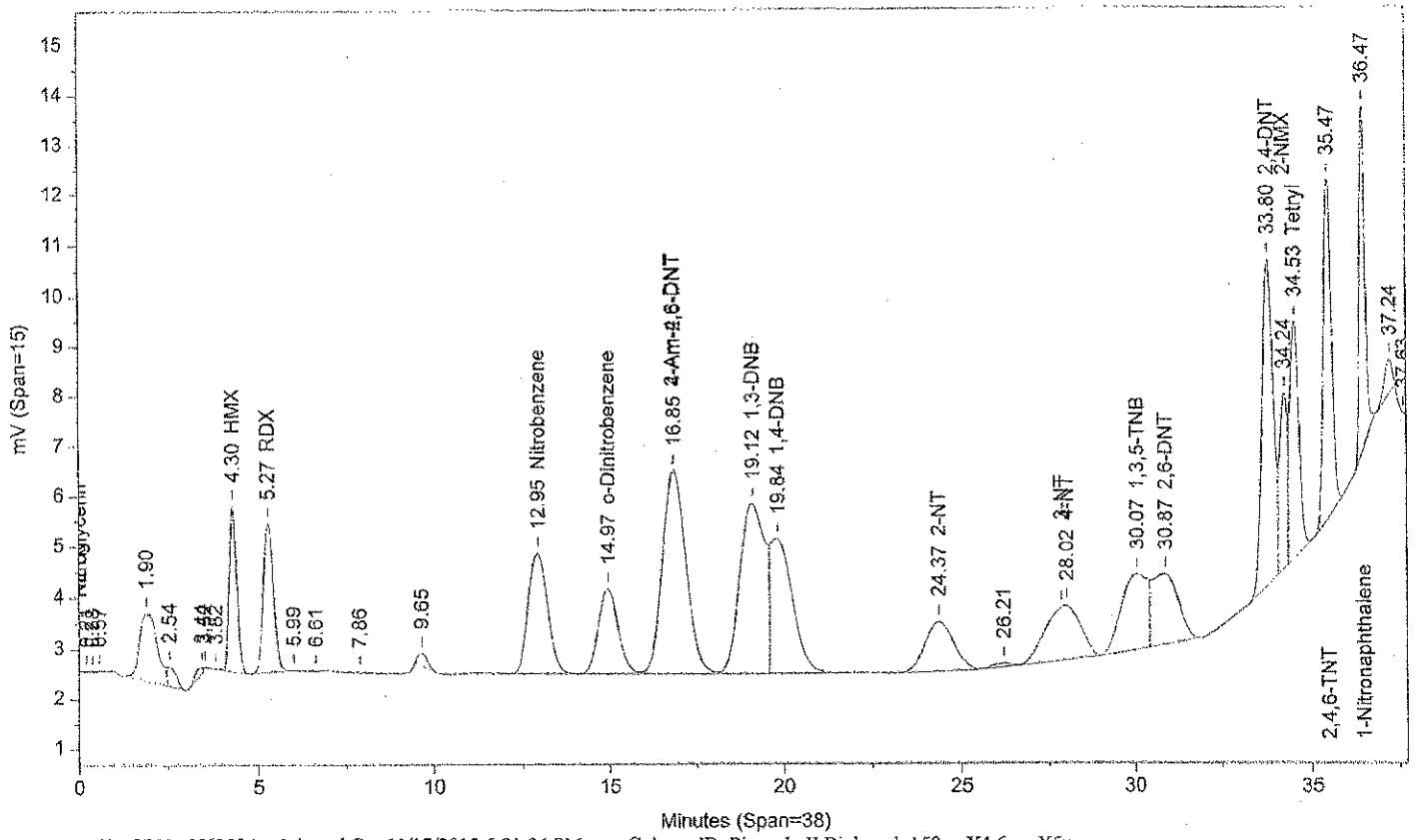
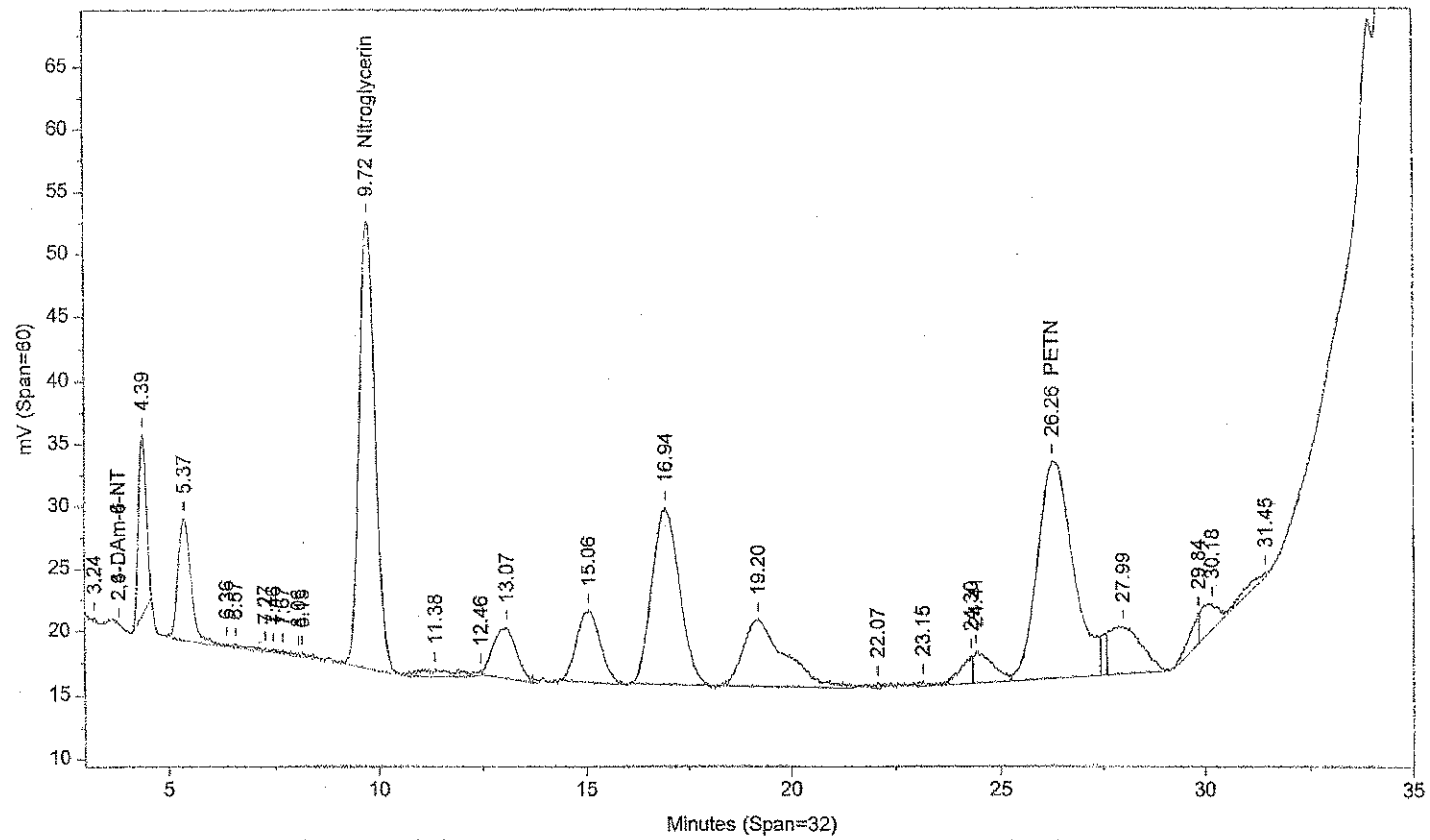
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.70R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.70R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 5:31:34 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5min Volume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.301	48255	460.316	HMX	.	0	.	HMX
5.268	57969	493.76	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.722	947131	9318.583	Nitroglycerin
12.947	92582	501.4	Nitrobenzene	.	0	.	Nitrobenzene
14.966	69092	496.444	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.854	190987	494.793	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.121	168398	497.18	1,3-DNB	.	0	.	1,3-DNB
19.842	114801	493.37	1,4-DNB	.	0	.	1,4-DNB
24.372	55388	472.786	2-NT	.	0	.	2-NT
.	0	.	PETN	26.261	1046086	8808.525	PETN
28.017	75737	392.638	4-NT	.	0	.	4-NT
30.066	77417	366.656	1,3,5-TNB	.	0	.	1,3,5-TNB
30.871	70888	555.345	2,6-DNT	.	0	.	2,6-DNT
33.798	136400	528.11	2,4-DNT	.	0	.	2,4-DNT
34.237	51099	1517.054	2-NMX	.	0	.	2-NMX
34.531	83024	541.032	Tetryl	.	0	.	Tetryl
35.47	106258	505.23	2,4,6-TNT	.	0	.	2,4,6-TNT
36.472	76815	506.558	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.70A
Area File: C:\CPWIN\DATA1\4C12310B.70A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:20:20 PM
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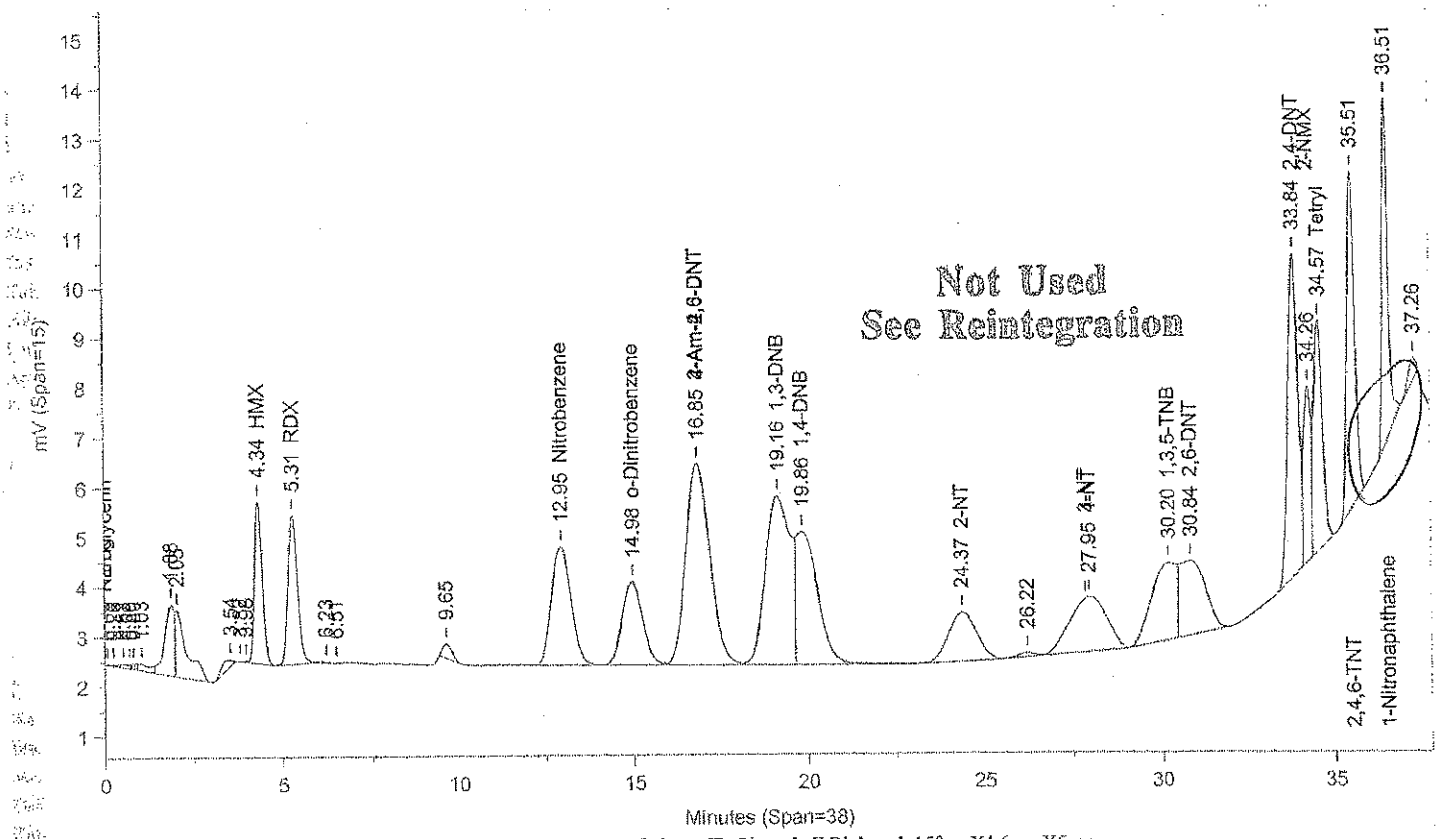
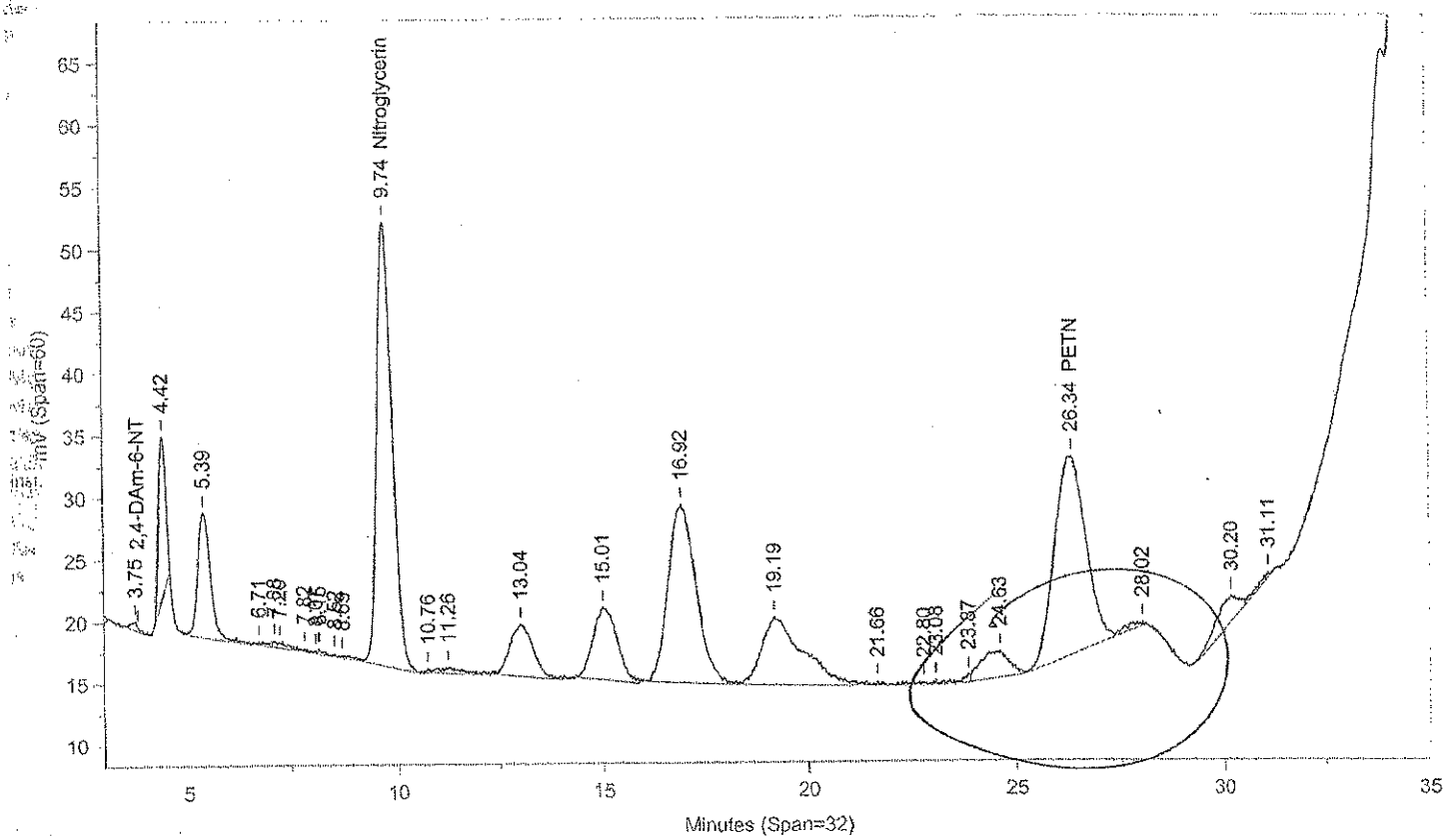
File: C:\CPWIN\DATA1\4C12310.81R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.81R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	852692	7180.06	PETN
27.95	80386	415.982	4-NT	.	0	.	4-NT
30.199	76457	362.763	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	76891	601.25	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	79216	521.527	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.81A
Area File: C:\CPWIN\DATA1\4C12310B.81A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:21:30 PM
File Reported On: 11/18/2013 at 3:21:40 PM

Not Used
See Reintegration

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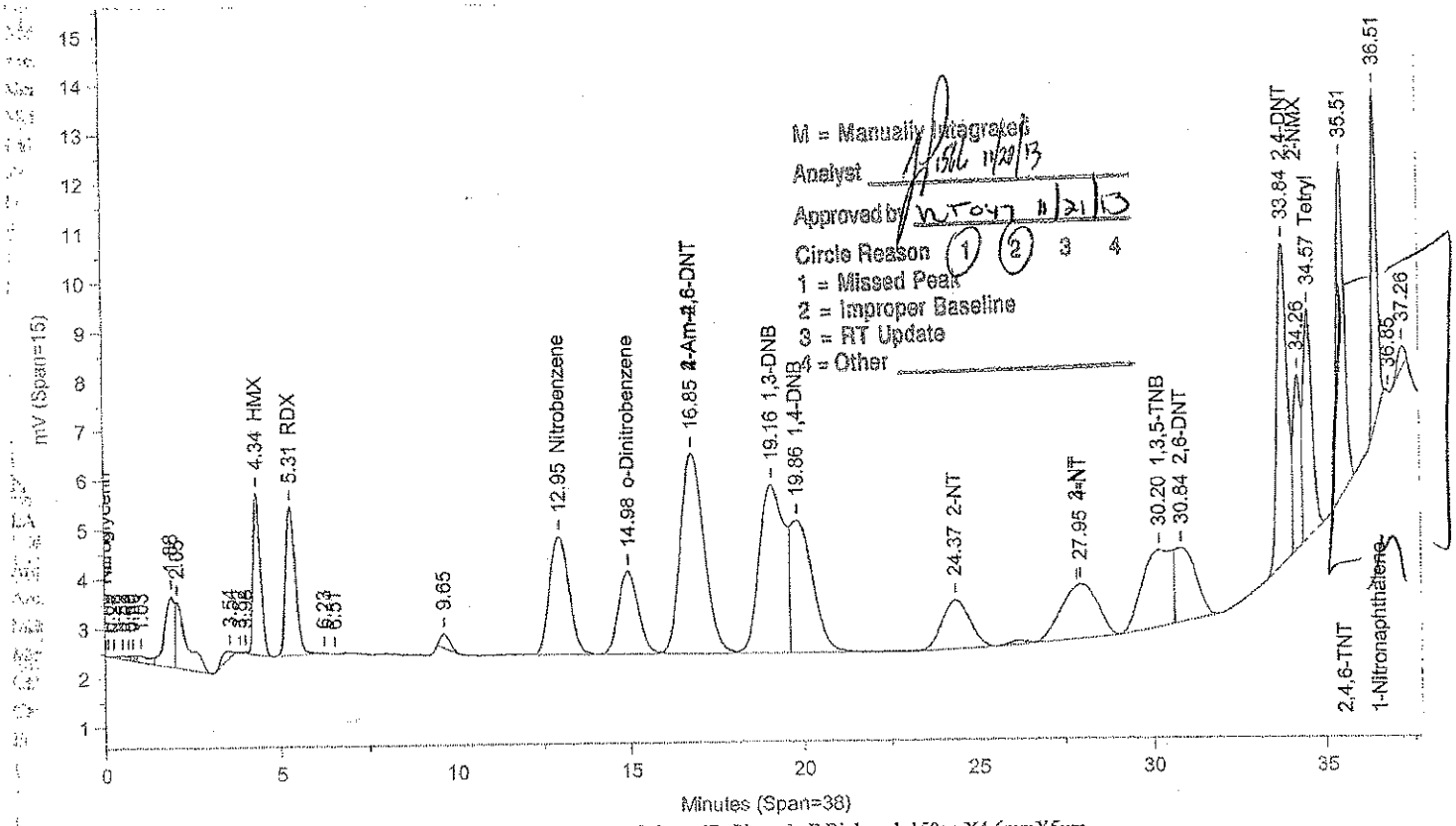
File: C:\CPWIN\DATA1\4C12310.81R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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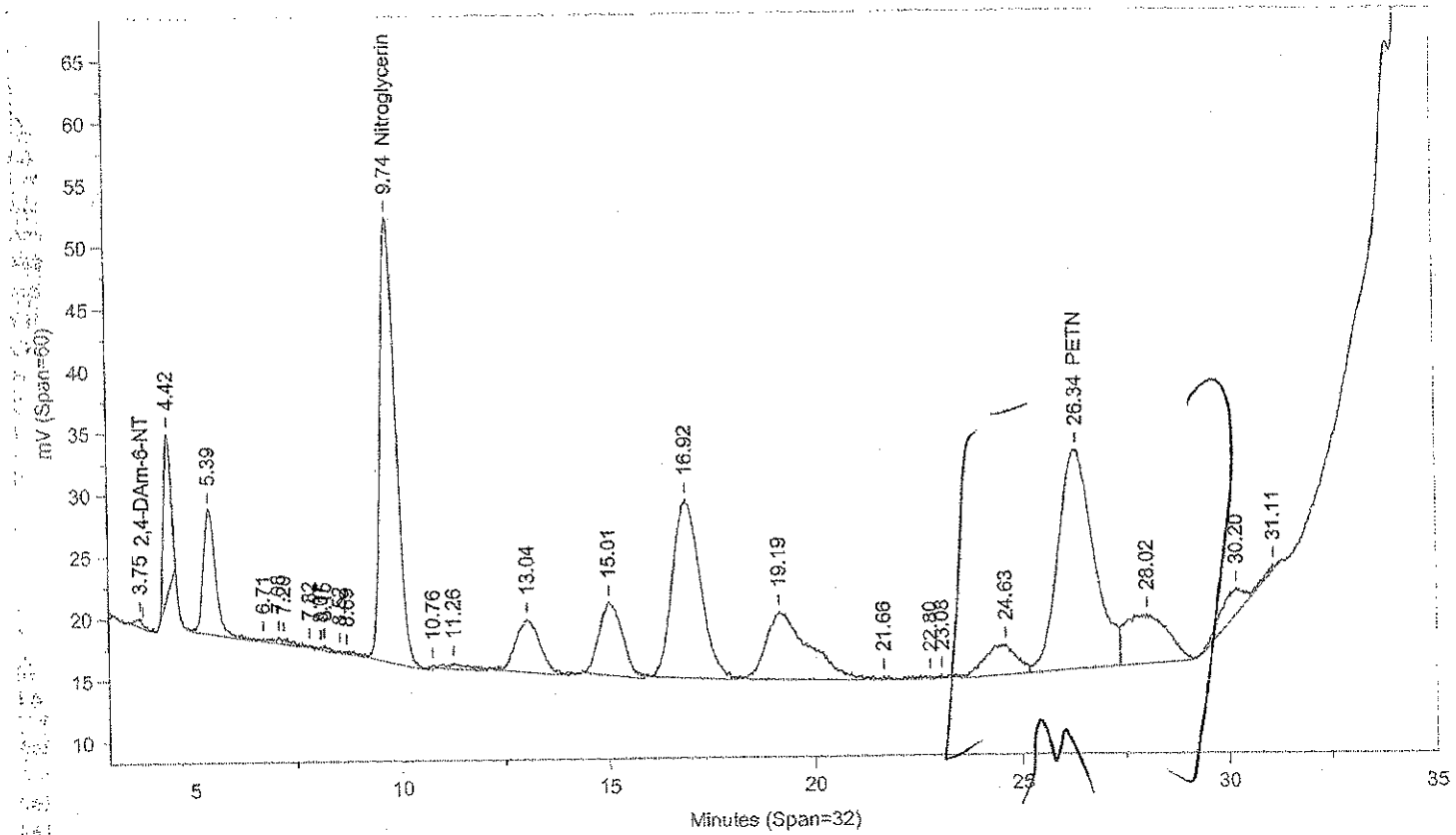

Instrument ID: CP12--Y6329B Injected On: 11/18/2013 1:18:47 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.752	8618	3.909	2,6-DAm-4-NT
4.338	48423	461.917	HMX	.	0	.	HMX
5.311	59070	503.58	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.735	943099	9278.911	Nitroglycerin
12.945	93162	504.566	Nitrobenzene	.	0	.	Nitrobenzene
14.982	69364	498.447	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.849	192232	498.017	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.16	172087	508.071	1,3-DNB	.	0	.	1,3-DNB
19.855	115624	497.014	1,4-DNB	.	0	.	1,4-DNB
24.373	55354	472.492	2-NT	.	0	.	2-NT
.	0	.	PETN	26.345	1069600	9006.529	PETN
27.95	83244	430.33	4-NT	.	0	.	4-NT
30.199	91228	422.696	1,3,5-TNB	.	0	.	1,3,5-TNB
30.838	62120	488.303	2,6-DNT	.	0	.	2,6-DNT
33.84	136132	527.074	2,4-DNT	.	0	.	2,4-DNT
34.259	51284	1522.367	2-NMX	.	0	.	2-NMX
34.566	80781	526.909	Tetryl	.	0	.	Tetryl
35.514	105297	500.723	2,4,6-TNT	.	0	.	2,4,6-TNT
36.505	71874	475.755	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:49:40 PM
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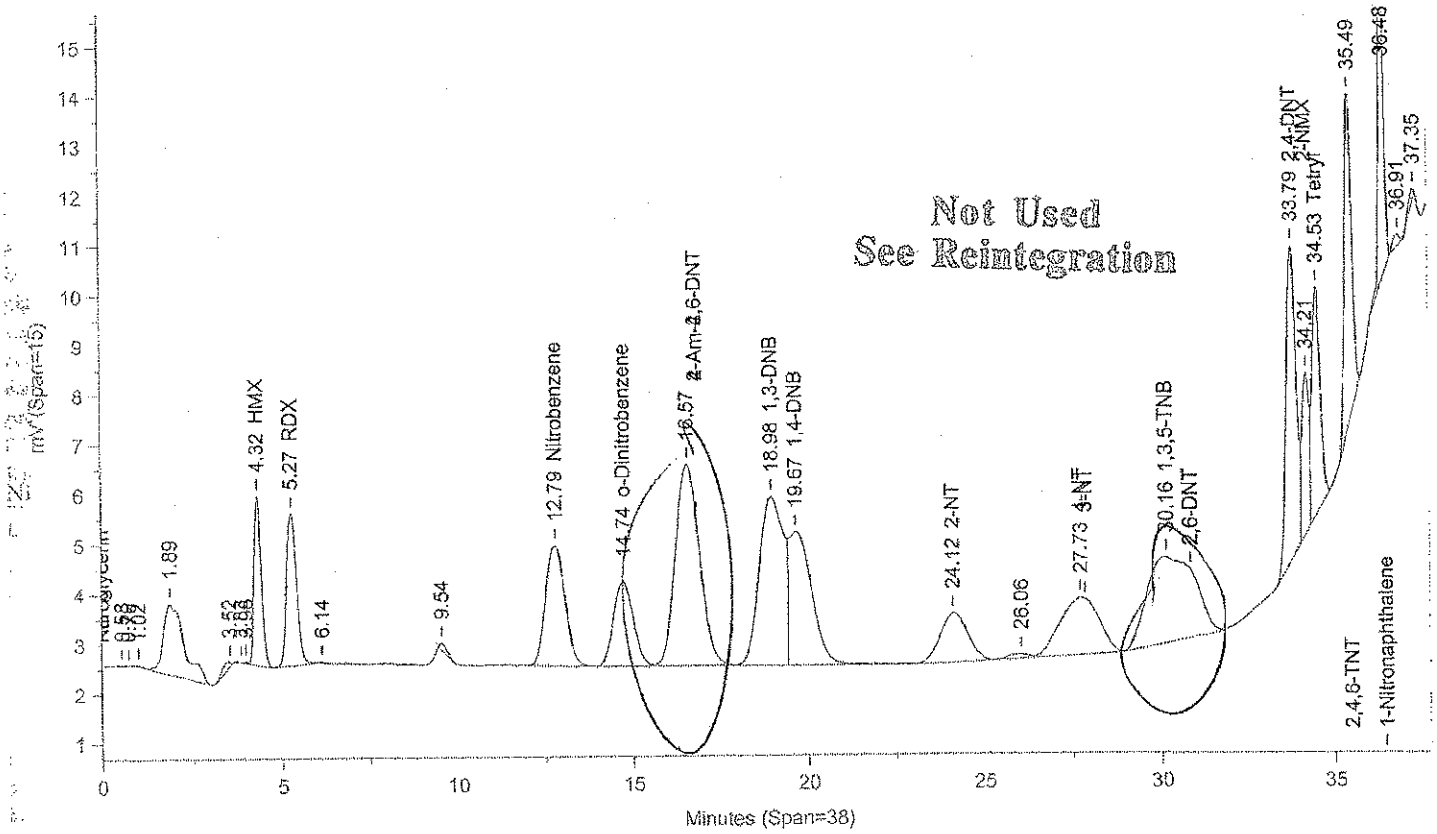
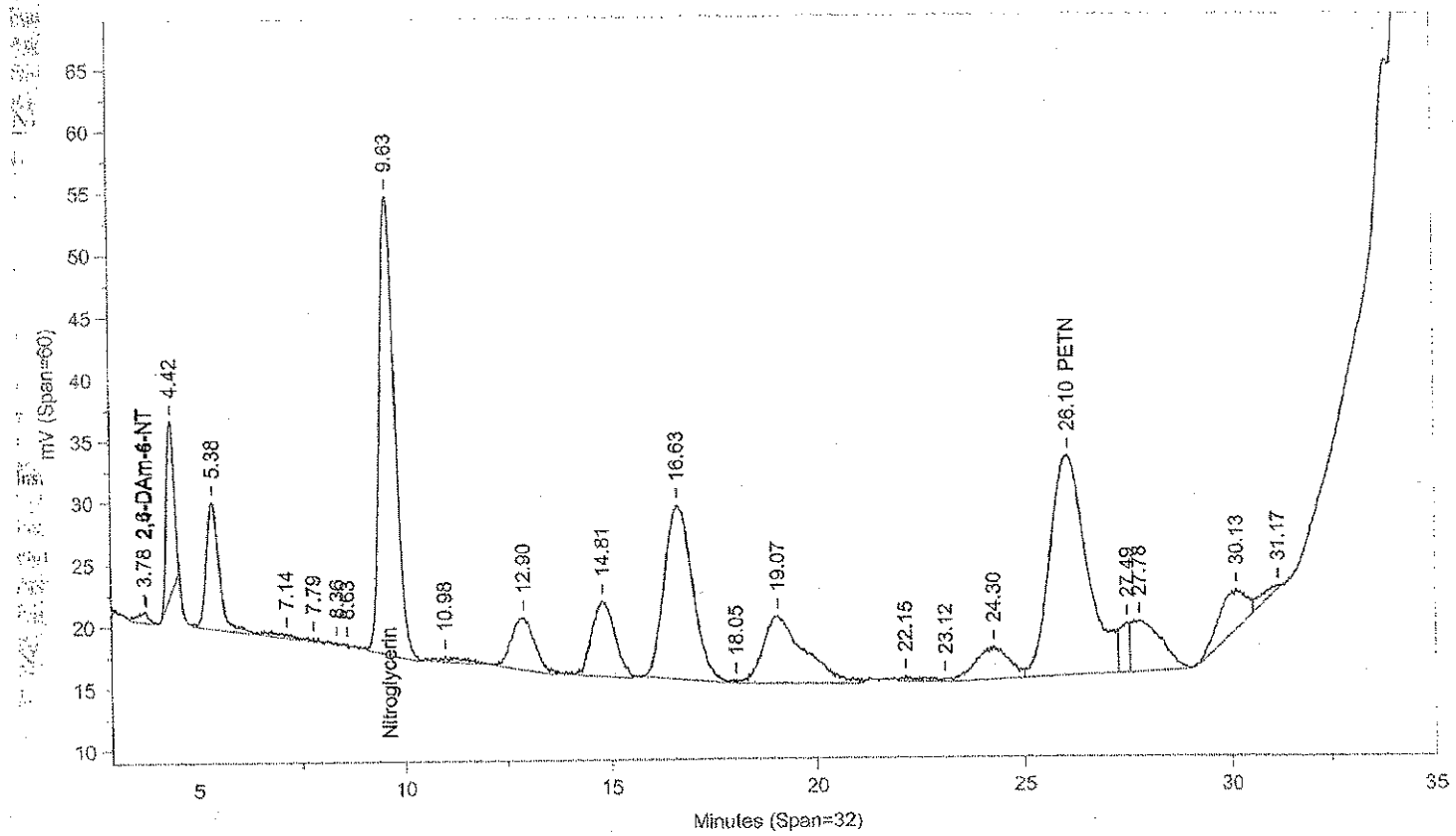
File: C:\CPWIN\DATA1\4C12310.92R



Instrument ID: CP12--Y6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.92R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.782	16845	7.642	2,6-DAm-4-NT
4.322	48964	467.078	HMX	.	0	.	HMX
5.275	59443	506.908	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.633	955893	9404.795	Nitroglycerin
12.788	92510	501.005	Nitrobenzene	.	0	.	Nitrobenzene
14.744	68316	490.741	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
18.978	162128	478.667	1,3-DNB	.	0	.	1,3-DNB
19.665	120486	518.542	1,4-DNB	.	0	.	1,4-DNB
24.117	55393	472.83	2-NT	.	0	.	2-NT
.	0	.	PETN	26.099	1097494	9241.408	PETN
27.725	86540	446.882	4-NT	.	0	.	4-NT
30.156	159173	698.393	1,3,5-TNB	.	0	.	1,3,5-TNB
33.794	130557	505.487	2,4-DNT	.	0	.	2,4-DNT
34.212	45773	1364.477	2-NMX	.	0	.	2-NMX
34.529	77508	506.302	Tetryl	.	0	.	Tetryl
35.487	97884	465.949	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	71283	472.073	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.92A
Area File: C:\CPWIN\DATA1\4C12310B.92A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:27:02 PM
File Reported On: 11/18/2013 at 3:27:13 PM

Not Used
See Reintegration

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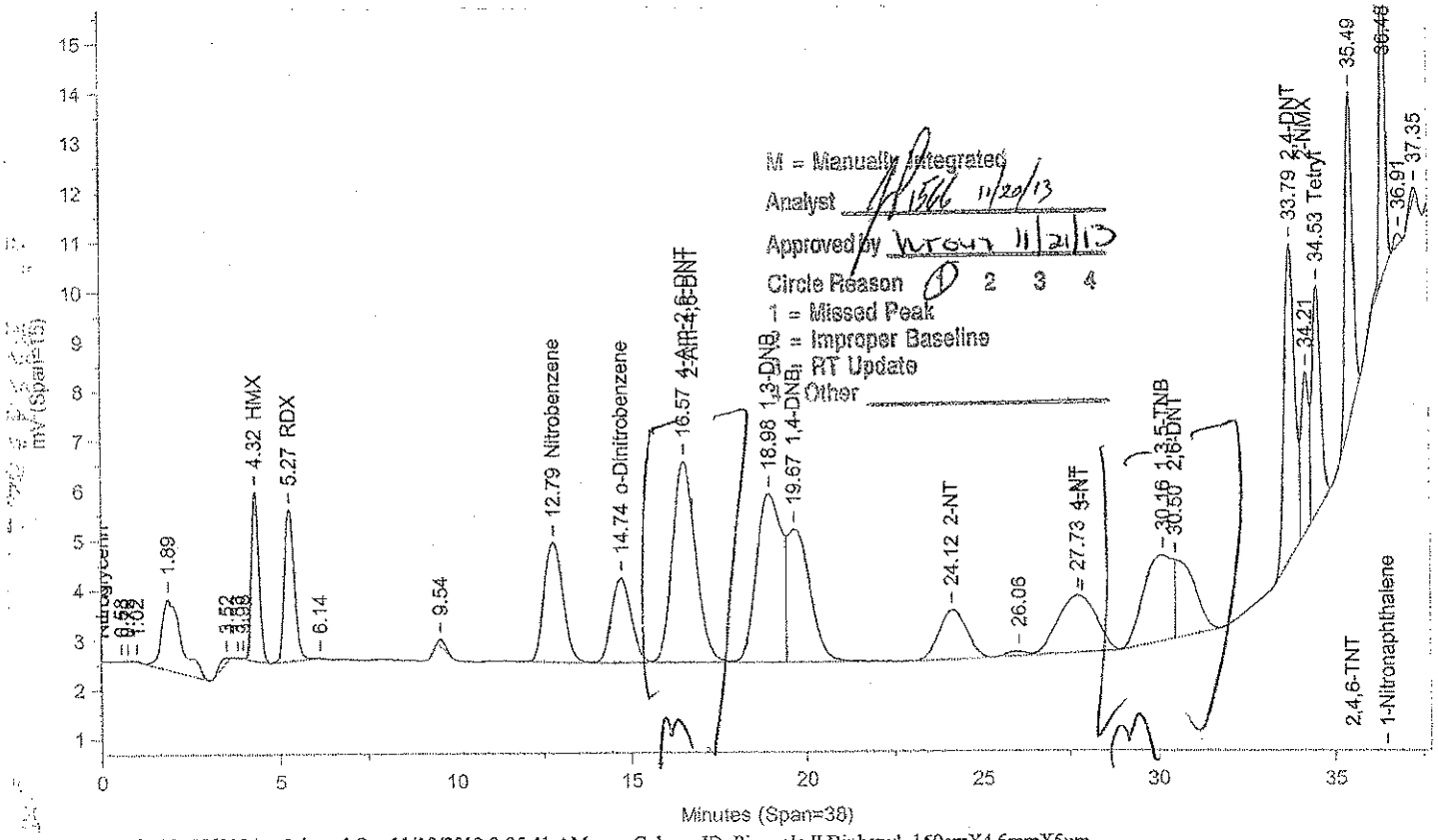
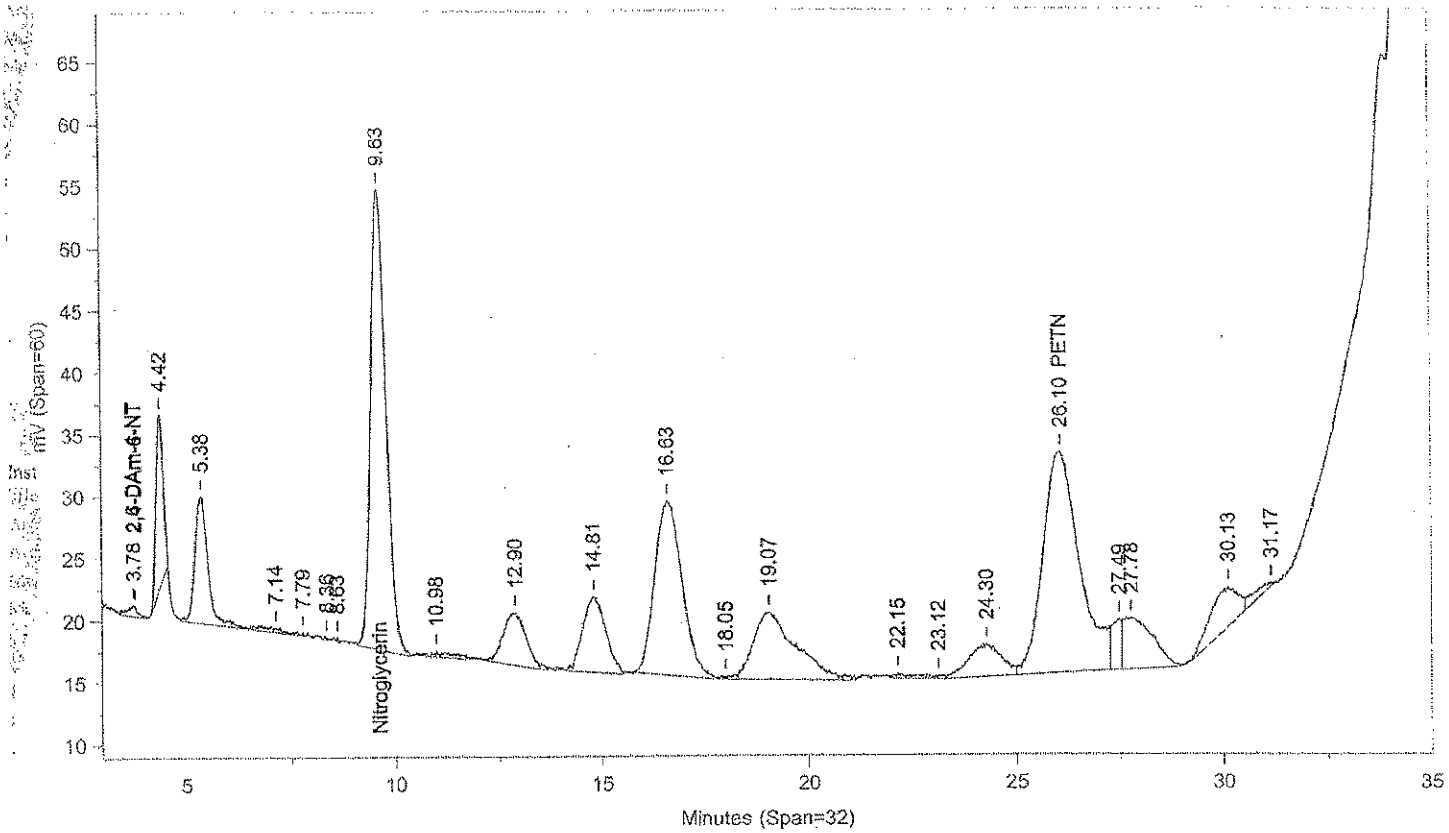


Instrument ID: CP12--Y6329A Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.92R



Instrument ID: CP12--Y6329B Injected On: 11/18/2013 9:05:41 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.782	16845	7.642	2,6-DAm-4-NT
4.322	48964	467.078	HMX	.	0	.	HMX
5.275	59443	506.908	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.633	955893	9404.795	Nitroglycerin
12.788	92510	501.005	Nitrobenzene	.	0	.	Nitrobenzene
14.744	68316	490.741	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.567	191351	495.735	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.978	162128	478.667	1,3-DNB	.	0	.	1,3-DNB
19.665	120486	518.542	1,4-DNB	.	0	.	1,4-DNB
24.117	55393	472.83	2-NT	.	0	.	2-NT
.	0	.	PETN	26.099	1097494	9241.408	PETN
27.725	86540	446.882	4-NT	.	0	.	4-NT
30.156	99787	457.425	1,3,5-TNB	.	0	.	1,3,5-TNB
30.498	59387	467.399	2,6-DNT	.	0	.	2,6-DNT
33.794	130557	505.487	2,4-DNT	.	0	.	2,4-DNT
34.212	45773	1364.477	2-NMX	.	0	.	2-NMX
34.529	77508	506.302	Tetryl	.	0	.	Tetryl
35.487	97884	465.949	2,4,6-TNT	.	0	.	2,4,6-TNT
36.484	71283	472.073	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:13:28 PM
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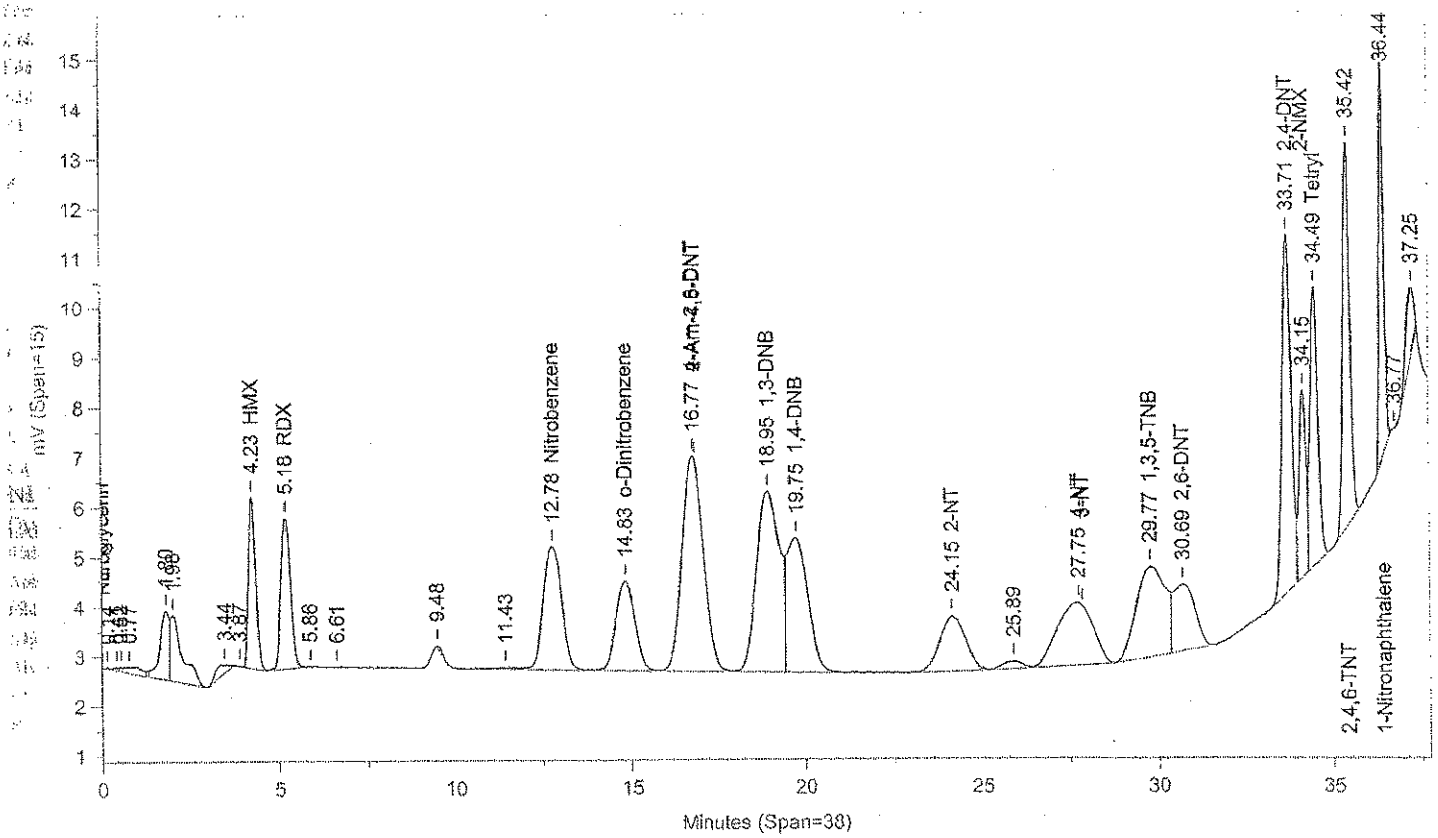
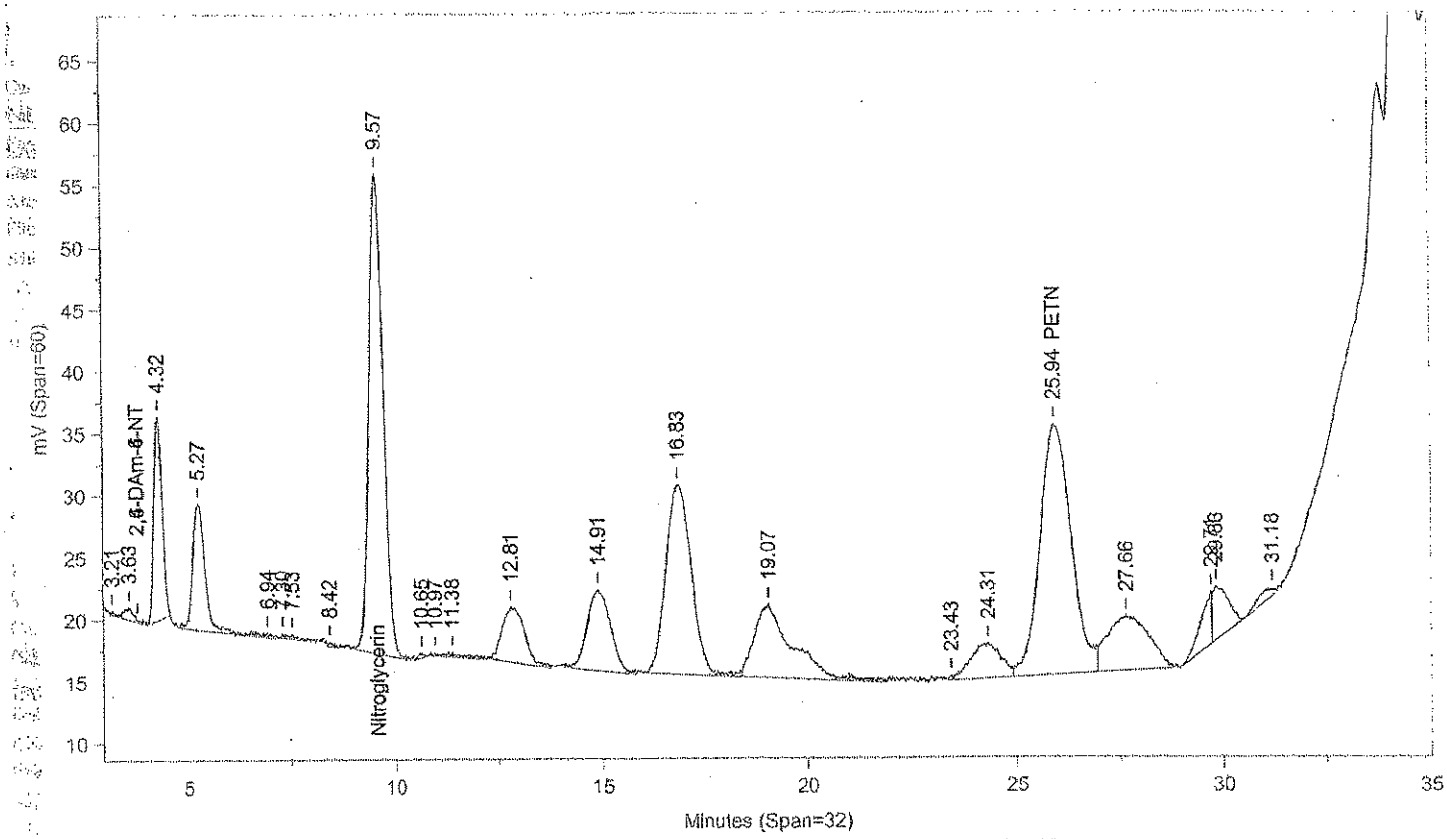


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.17R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:47:07 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.228	47738	455.377	HMX	.	0	.	HMX
5.179	57500	489.574	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.567	940962	9257.887	Nitroglycerin
12.784	92389	500.349	Nitrobenzene	.	0	.	Nitrobenzene
14.833	68361	491.074	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.77	188252	487.706	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.952	164604	485.977	1,3-DNB	.	0	.	1,3-DNB
19.754	114385	491.527	1,4-DNB	.	0	.	1,4-DNB
24.15	56689	484.078	2-NT	.	0	.	2-NT
.	0	.	PETN	25.939	1048578	8829.507	PETN
27.749	89761	463.058	4-NT	.	0	.	4-NT
29.768	101930	466.122	1,3,5-TNB	.	0	.	1,3,5-TNB
30.691	58807	462.967	2,6-DNT	.	0	.	2,6-DNT
33.711	135888	526.13	2,4-DNT	.	0	.	2,4-DNT
34.153	50306	1494.359	2-NMX	.	0	.	2-NMX
34.486	84850	552.531	Tetryl	.	0	.	Tetryl
35.417	106047	504.24	2,4,6-TNT	.	0	.	2,4,6-TNT
36.435	74201	490.263	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 3:51:04 PM
File Reported On: 11/20/2013 at 3:51:02 PM

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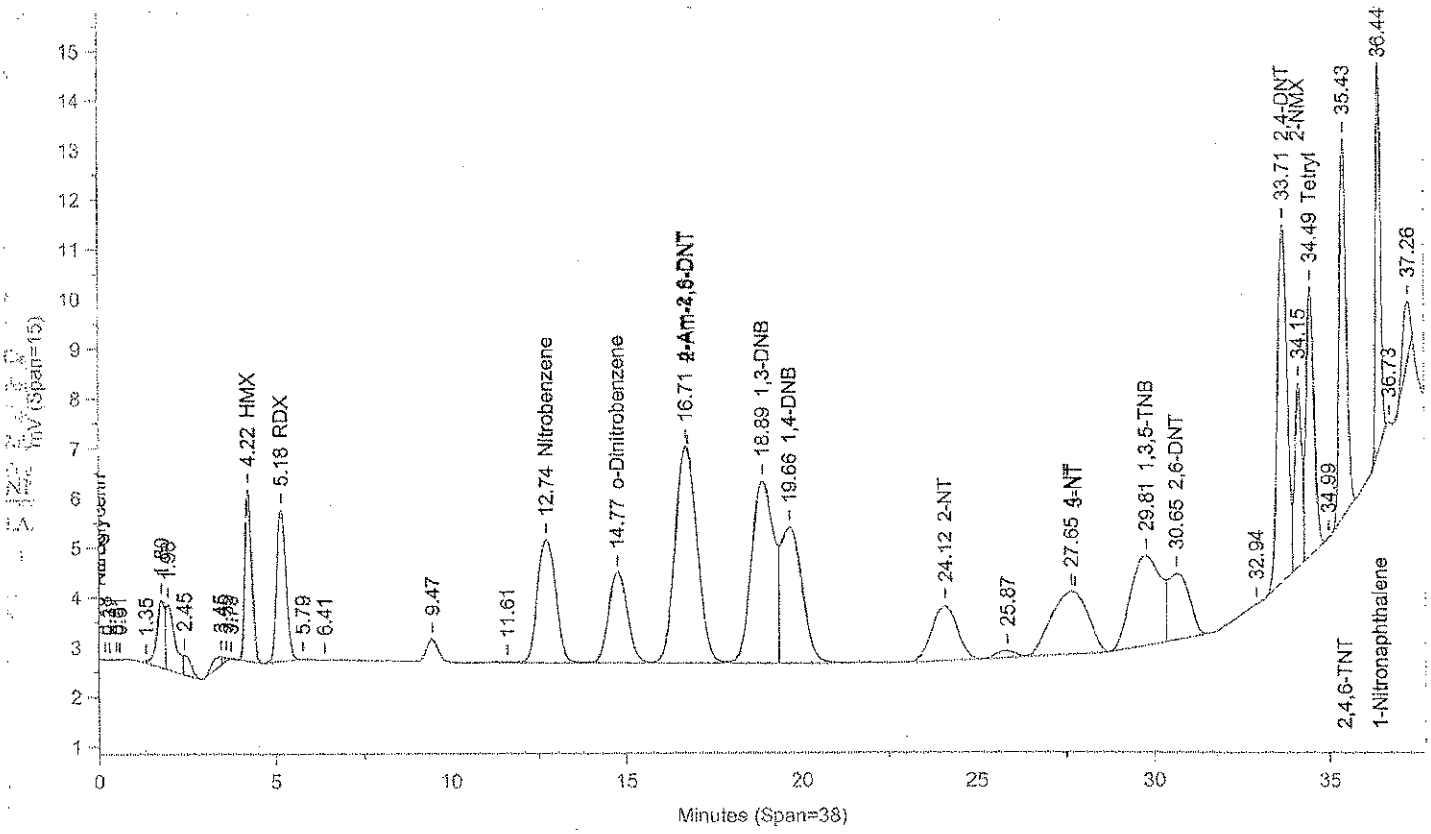
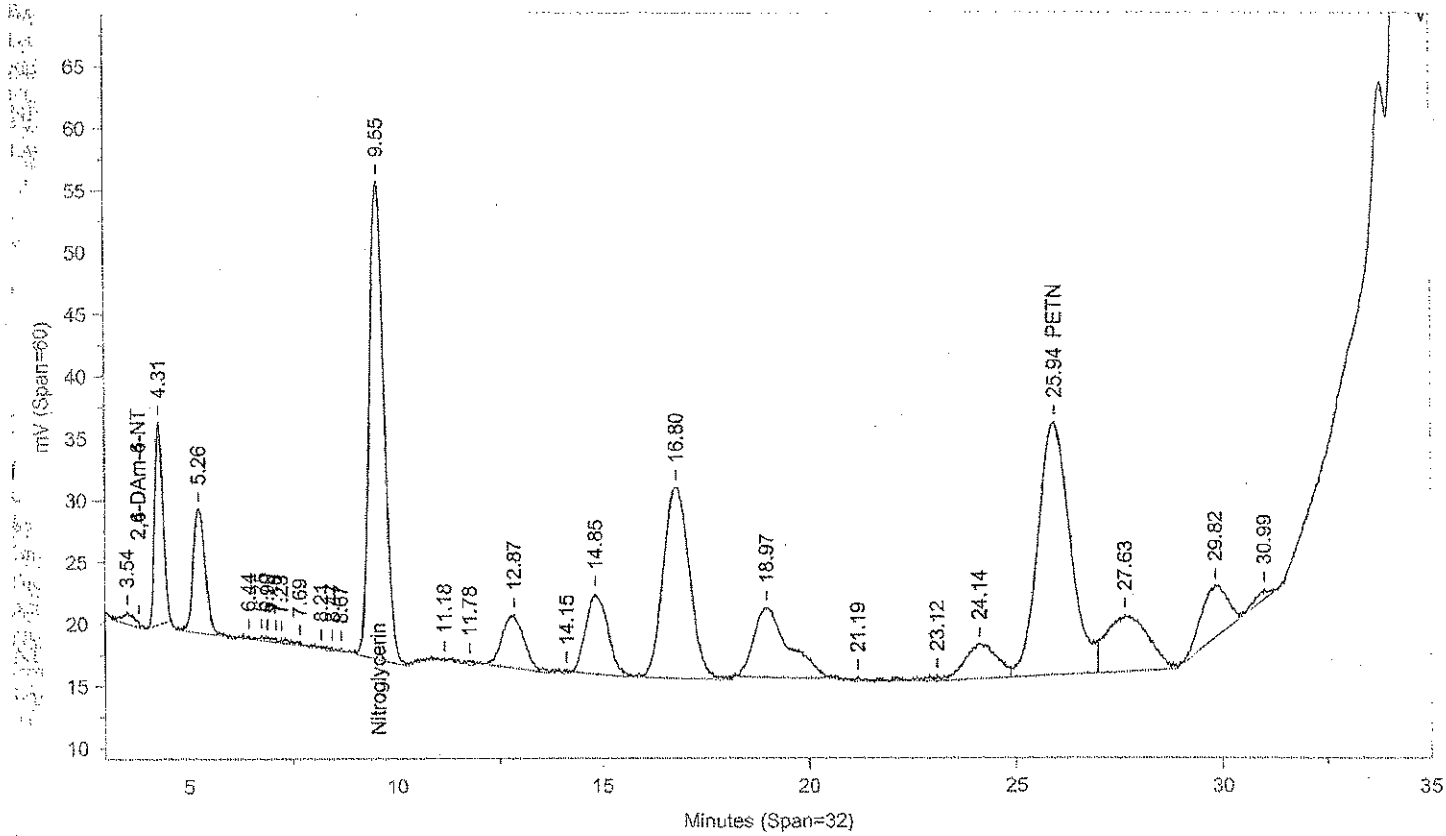


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 1:33:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.28R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 1:33:53 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.223	48085	458.688	HMX	.	0	.	HMX
5.181	57711	491.456	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.554	942371	9271.751	Nitroglycerin
12.735	92280	499.749	Nitrobenzene	.	0	.	Nitrobenzene
14.772	69295	497.943	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.709	190154	492.634	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.893	166418	491.335	1,3-DNB	.	0	.	1,3-DNB
19.664	116414	500.512	1,4-DNB	.	0	.	1,4-DNB
24.121	57078	487.458	2-NT	.	0	.	2-NT
Det	0	.	PETN	25.937	1079753	9092.018	PETN
Th27.65	90136	464.941	4-NT	.	0	.	4-NT
29.806	105321	479.882	1,3,5-TNB	.	0	.	1,3,5-TNB
30.645	56831	447.858	2,6-DNT	.	0	.	2,6-DNT
Su33.71	137740	533.299	2,4-DNT	.	0	.	2,4-DNT
A34.153	50409	1497.283	2-NMX	.	0	.	2-NMX
34.486	83543	544.302	Tetryl	.	0	.	Tetryl
35.428	105888	503.493	2,4,6-TNT	.	0	.	2,4,6-TNT
36.44	73471	485.713	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.28A
Area File: C:\CPWIN\DATA1\5C12310B.28A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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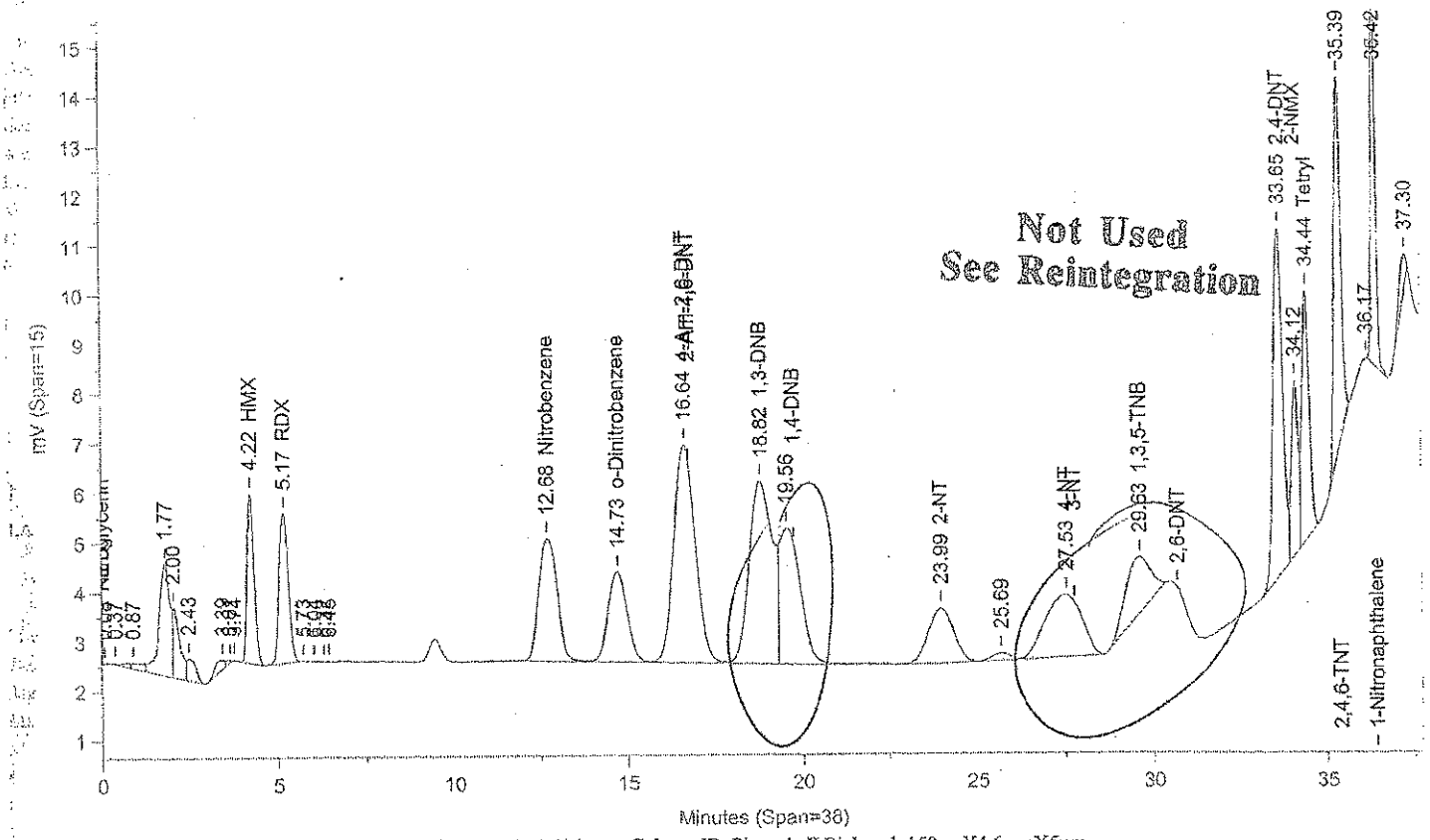
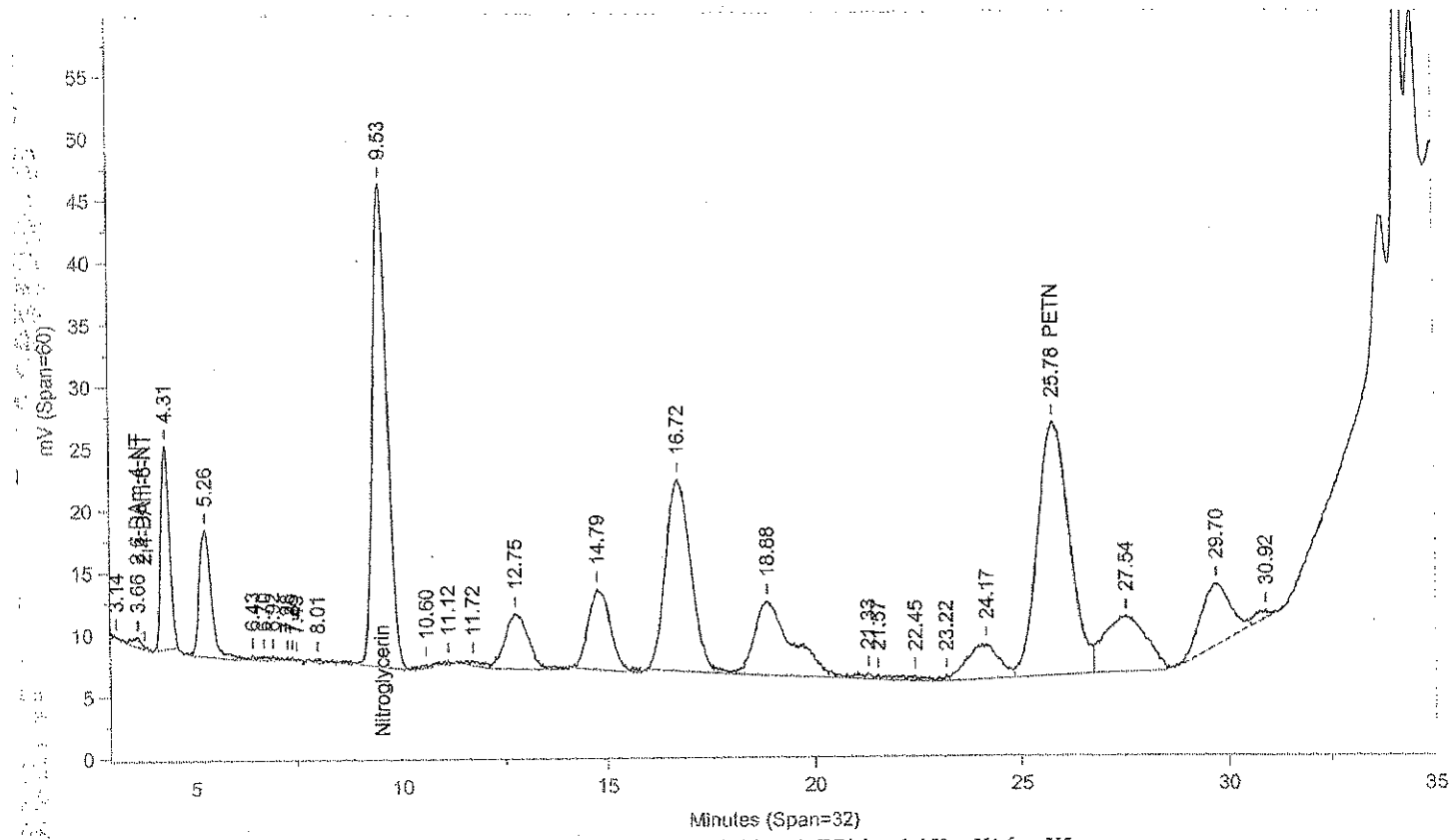


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.657	13382	6.071	2,6-DAm-4-NT
4.219	47536	453.456	HMX	.	0	.	HMX
5.175	57083	485.851	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.53	944882	9296.459	Nitroglycerin
12.683	92195	499.285	Nitrobenzene	.	0	.	Nitrobenzene
14.733	69218	497.372	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.639	190635	493.879	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.821	172394	508.978	1,3-DNB	.	0	.	1,3-DNB
23.989	57224	488.717	2-NT	.	0	.	2-NT
.	0	.	PETN	25.785	1058708	8914.813	PETN
27.535	88783	458.143	4-NT	.	0	.	4-NT
29.627	56314	281.03	1,3,5-TNB	.	0	.	1,3,5-TNB
33.654	135120	523.156	2,4-DNT	.	0	.	2,4-DNT
34.116	47057	1401.25	2-NMX	.	0	.	2-NMX
34.445	76327	498.862	Tetryl	.	0	.	Tetryl
35.386	102737	488.717	2,4,6-TNT	.	0	.	2,4,6-TNT
36.416	73007	482.816	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.39A
Area File: C:\CPWIN\DATA1\5C12310B.39A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:46:48 PM
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Not Used
See Reintegration

LANCASTER LABORATORIES

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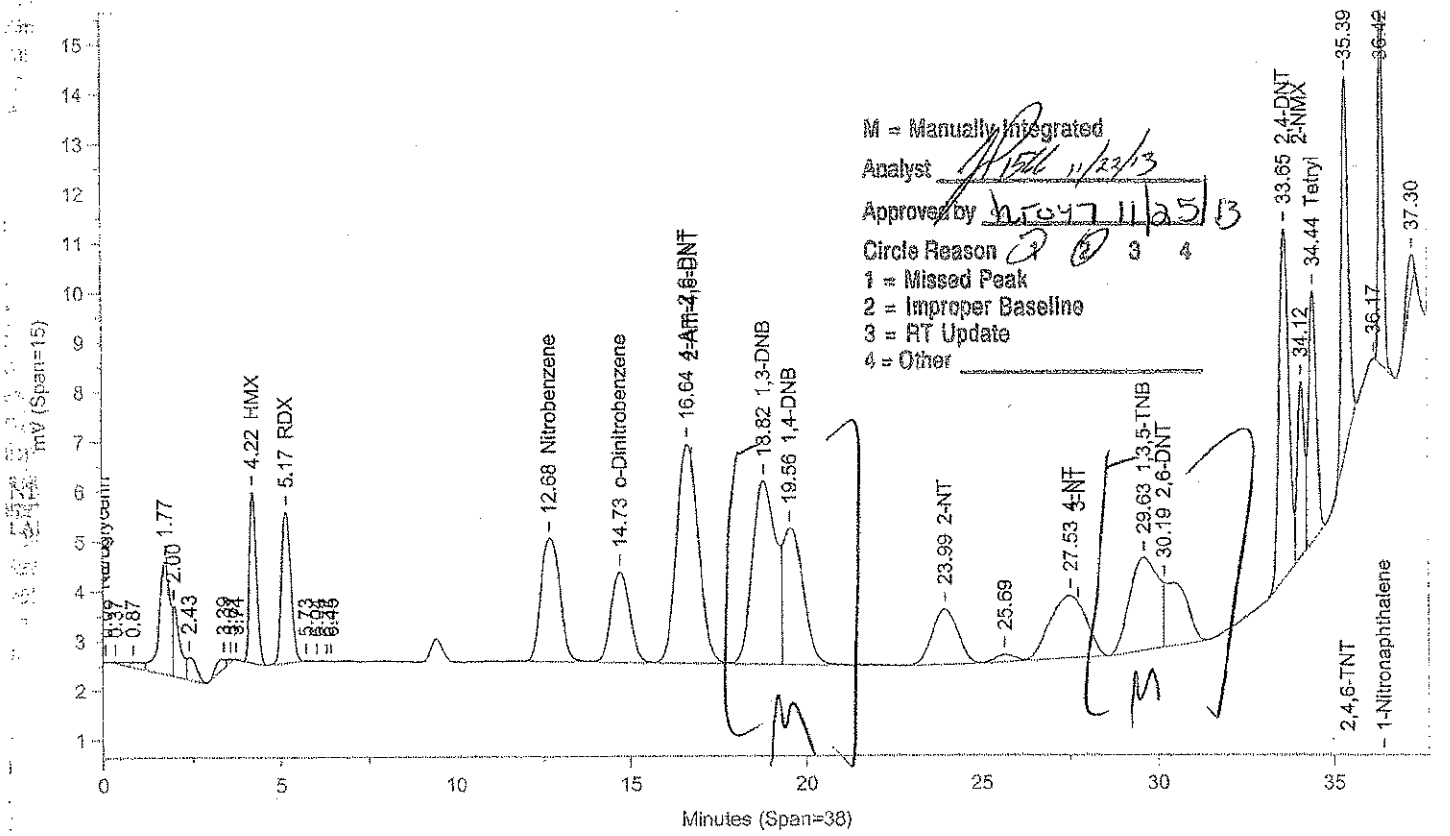
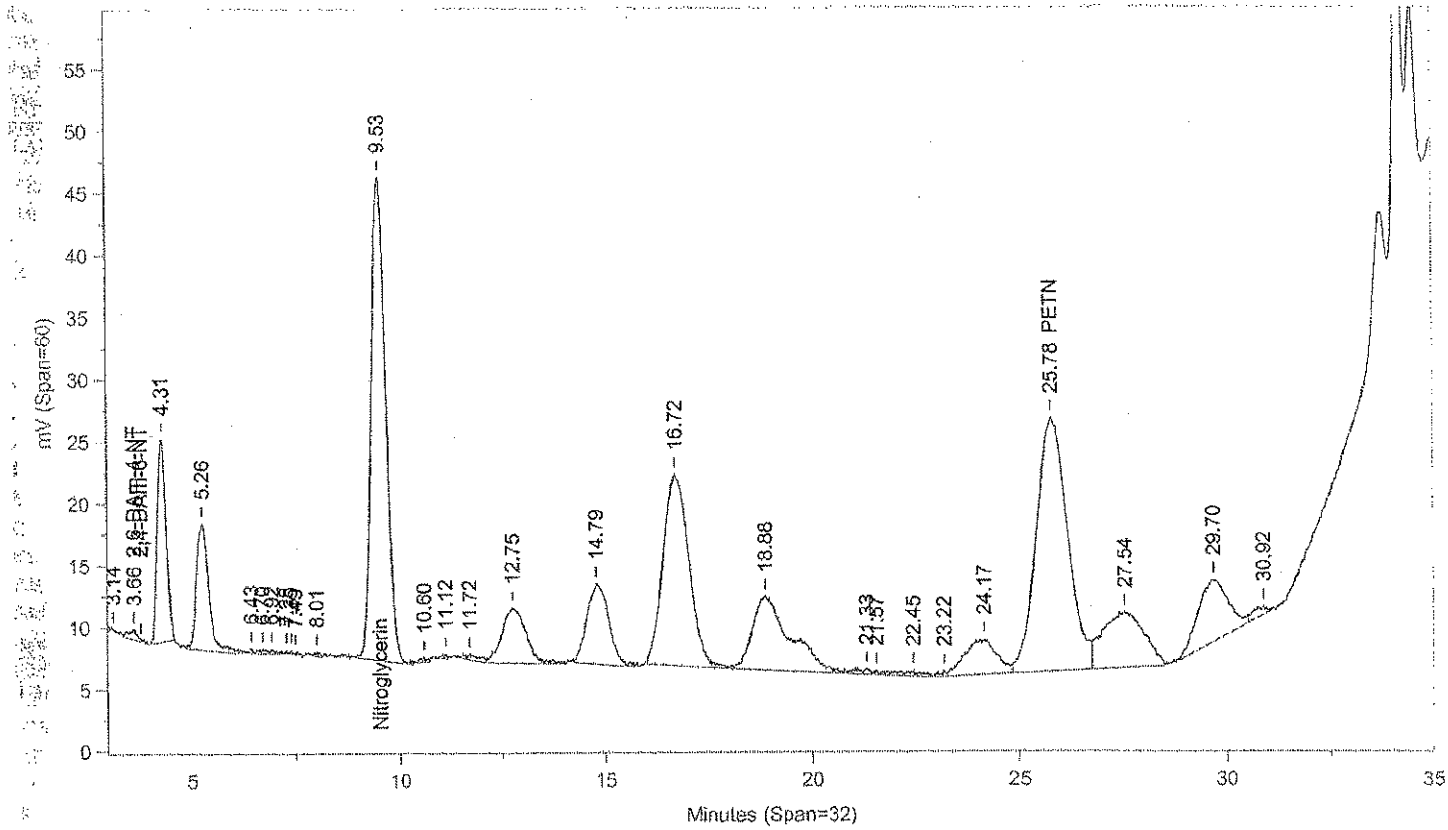


Instrument ID: CP12--Y6329A Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.39R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 9:20:32 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	2,6-DAm-4-NT	3.657	13382	6.071	2,6-DAm-4-NT
4.219	47536	453.456	HMX	.	0	.	HMX
5.175	57083	485.851	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.53	944882	9296.459	Nitroglycerin
12.683	92195	499.285	Nitrobenzene	.	0	.	Nitrobenzene
14.733	69218	497.372	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.639	190635	493.879	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.821	172394	508.978	1,3-DNB	.	0	.	1,3-DNB
19.559	110352	473.669	1,4-DNB	.	0	.	1,4-DNB
23.989	57224	488.717	2-NT	.	0	.	2-NT
.	0	.	PETN	25.785	1058708	8914.813	PETN
27.535	88783	458.143	4-NT	.	0	.	4-NT
29.627	106783	485.813	1,3,5-TNB	.	0	.	1,3,5-TNB
30.194	56879	448.224	2,6-DNT	.	0	.	2,6-DNT
33.654	135120	523.156	2,4-DNT	.	0	.	2,4-DNT
34.116	47057	1401.25	2-NMX	.	0	.	2-NMX
34.445	76327	498.862	Tetryl	.	0	.	Tetryl
35.386	102737	488.717	2,4,6-TNT	.	0	.	2,4,6-TNT
36.416	73007	482.816	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 1:08:02 PM
File Reported On: 11/22/2013 at 1:08:00 PM

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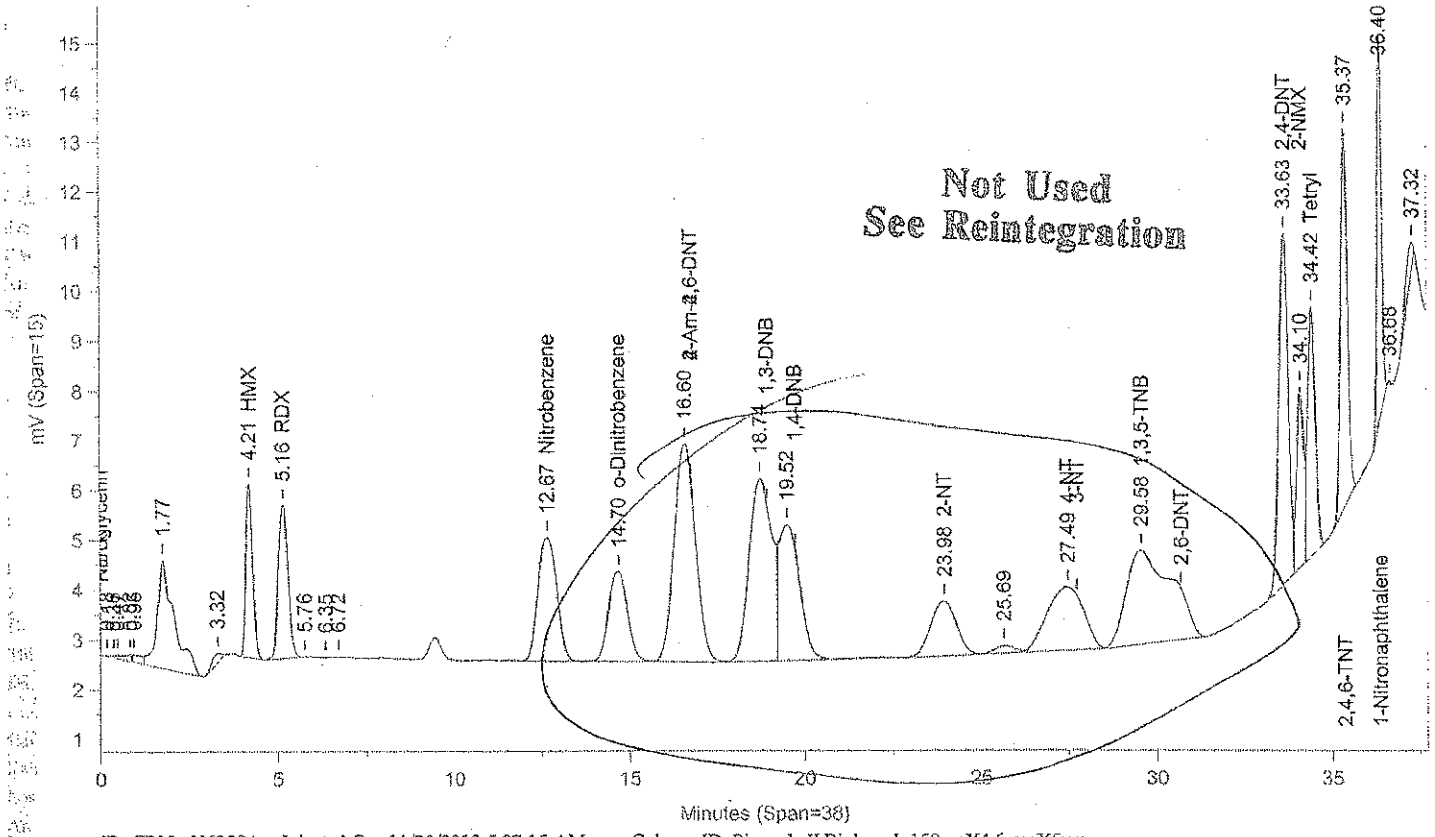
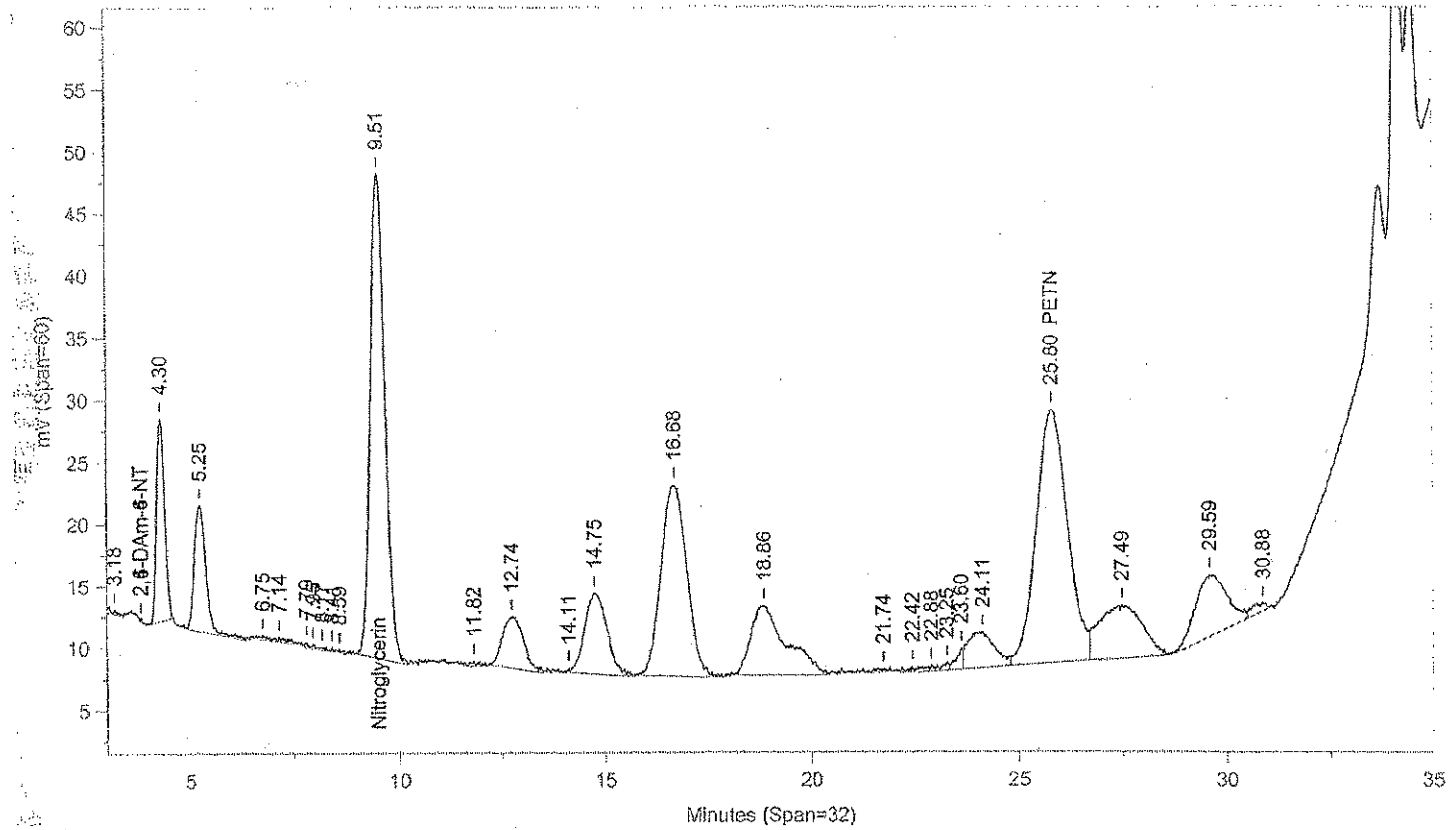


Instrument ID: CP12--Y6329A Injected On: 11/20/2013 5:07:15 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.50R



Instrument ID: CP12--Y6329B Injected On: 11/20/2013 5:07:15 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.213	47761	455.602	HMX	.	0	.	HMX
5.163	57577	490.254	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.506	943815	9285.958	Nitroglycerin
12.671	90897	492.201	Nitrobenzene	.	0	.	Nitrobenzene
14.704	67969	488.186	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
23.981	56764	484.731	2-NT	.	0	.	2-NT
.	0	.	PETN	25.796	1058933	8916.704	PETN
27.491	91428	471.426	4-NT	.	0	.	4-NT
29.577	164905	721.649	1,3,5-TNB	.	0	.	1,3,5-TNB
33.631	136466	528.369	2,4-DNT	.	0	.	2,4-DNT
34.105	49020	1457.489	2-NMX	.	0	.	2-NMX
34.421	76408	499.377	Tetryl	.	0	.	Tetryl
35.366	106059	504.297	2,4,6-TNT	.	0	.	2,4,6-TNT
36.403	71356	472.528	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.50A
Area File: C:\CPWIN\DATA1\5C12310B.50A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:52:28 PM
File Reported On: 11/20/2013 at 5:52:37 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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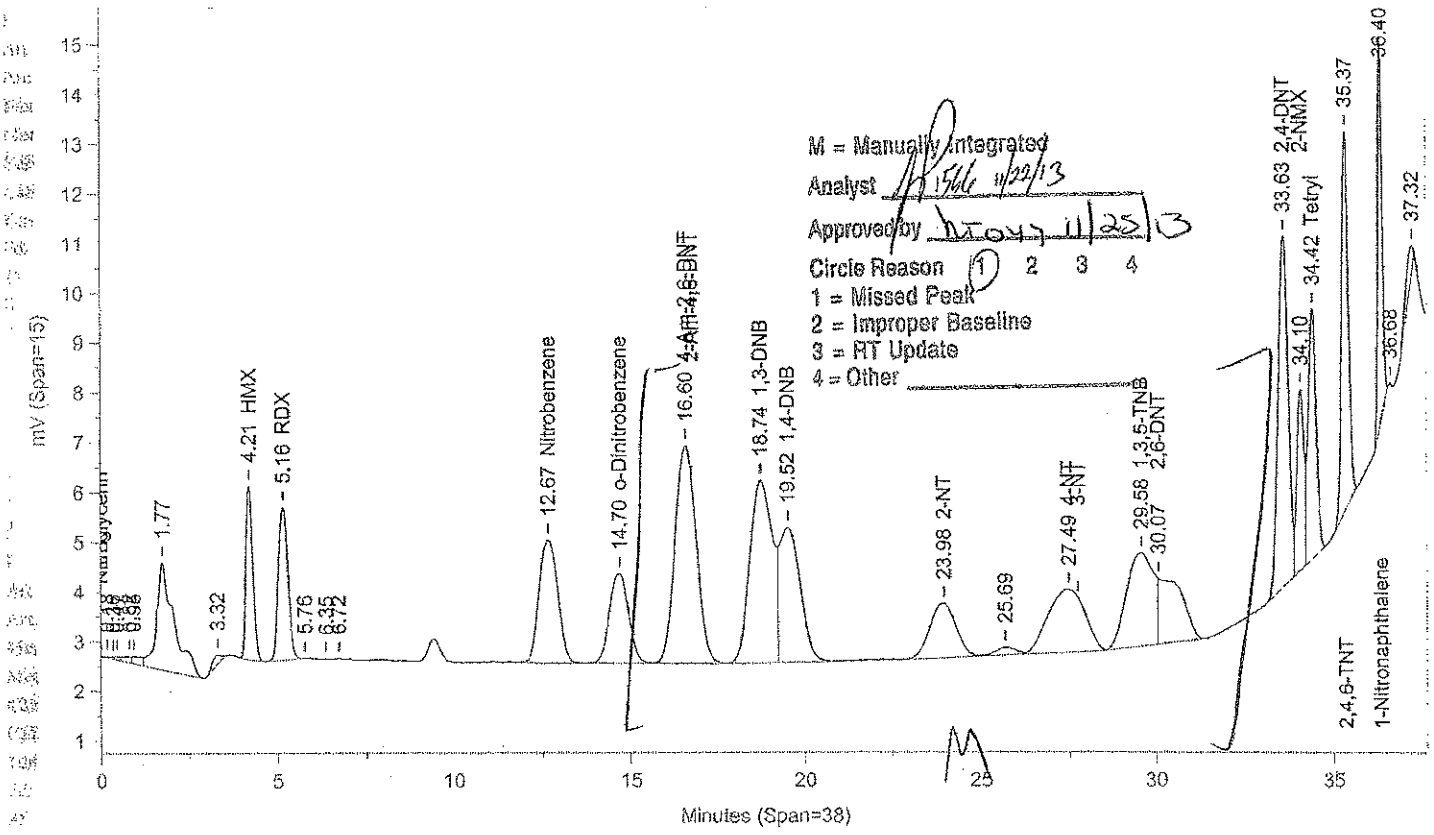
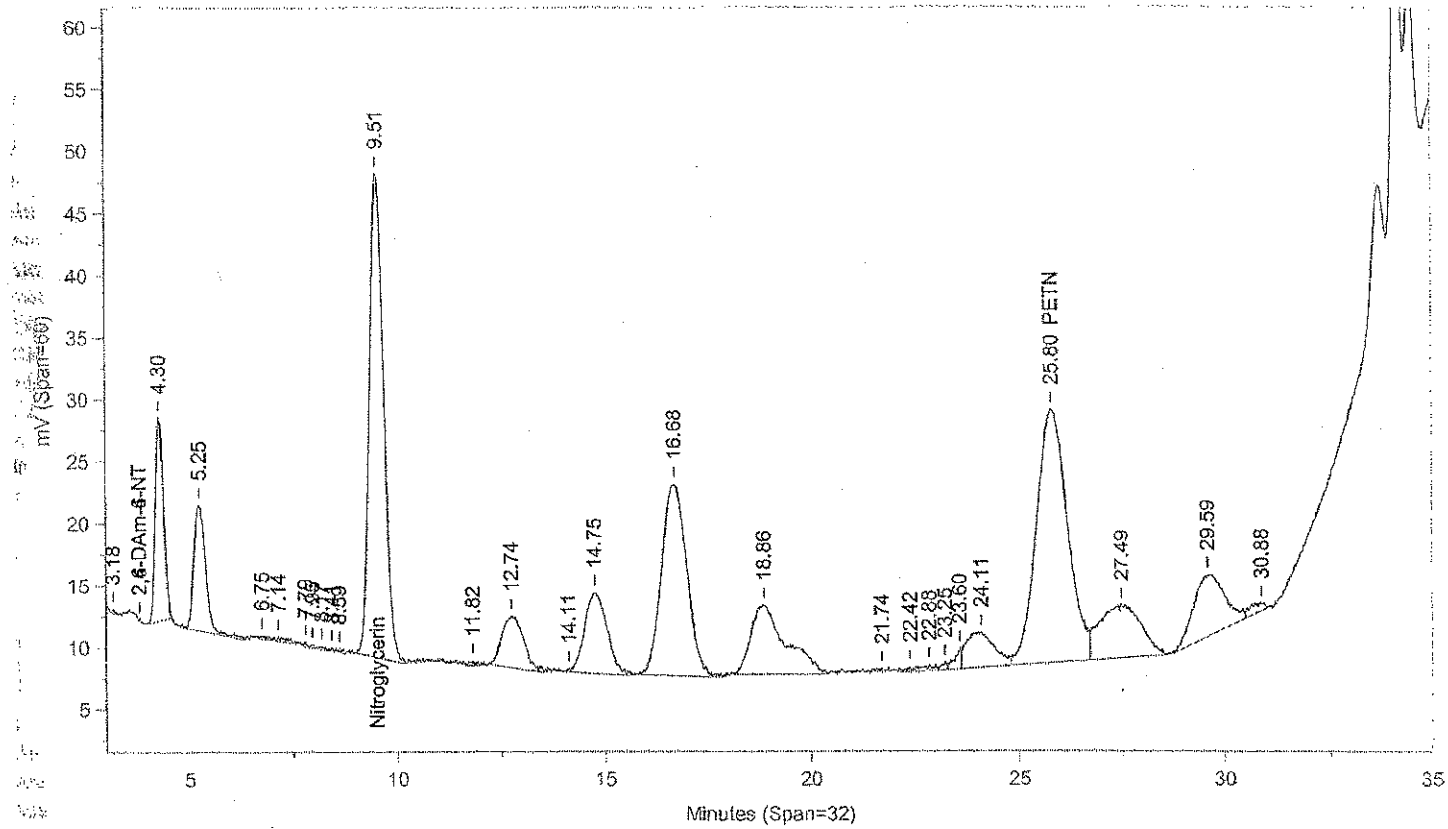


Instrument ID: CP12--Y6329A Injected On: 11/20/2013 5:07:15 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.50R



Instrument ID: CP12--Y6329B Injected On: 11/20/2013 5:07:15 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 1 Dilution Factor: 1
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.213	47761	455.602	HMX	.	0	.	HMX
5.163	57577	490.254	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.506	943815	9285.958	Nitroglycerin
12.671	90897	492.201	Nitrobenzene	.	0	.	Nitrobenzene
14.704	67969	488.186	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.595	188309	487.853	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.743	167316	493.985	1,3-DNB	.	0	.	1,3-DNB
19.517	110809	475.693	1,4-DNB	.	0	.	1,4-DNB
23.981	56764	484.731	2-NT	.	0	.	2-NT
.	0	.	PETN	25.796	1058933	8916.704	PETN
27.491	91428	471.426	4-NT	.	0	.	4-NT
29.577	103074	470.764	1,3,5-TNB	.	0	.	1,3,5-TNB
30.065	61831	486.089	2,6-DNT	.	0	.	2,6-DNT
33.631	136466	528.369	2,4-DNT	.	0	.	2,4-DNT
34.105	49020	1457.489	2-NMX	.	0	.	2-NMX
34.421	76408	499.377	Tetryl	.	0	.	Tetryl
35.366	106059	504.297	2,4,6-TNT	.	0	.	2,4,6-TNT
36.403	71356	472.528	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 1:17:18 PM
File Reported On: 11/22/2013 at 1:17:18 PM

Raw QC Data

Explosives

eurofins

Lancaster Laboratories Environmental

Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314 BLK Sample ID:AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 21:03:57
Instrument	X6329A
Result file	4E12310.75R
Calibration file	3E12310
Method file	8330

%SSR(NMX) 95% (73 - 122) Conc: 9.489713

Analysis Report (B)

Injected on	Nov 17, 2013 21:03:57
Instrument	Y6329A
Result file	4C12310.75R
Calibration file	3C12310
Method file	8330C

%SSR(NMX) 116% (73 - 122) Conc: 11.631649

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,3,5-Trinitrobenzene	4.66	4.80	4.86	24	0.002315
2,4,6-Trinitrotoluene	7.78	7.80	7.98	7	0.000617
2-NMX	25.41	25.37	26.09	16174	9.489713

Compound	Min	RT	Max	Area	Amount
2-NMX	34.12	34.30	34.32	18446	11.631649

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin			<15	<5.2			
PETN			<18	<6			
HMX			<2	<0.65			
RDX			<0.5	<0.2			
1,3,5-Trinitrobenzene			<0.6	<0.2			
1,4-Dinitrobenzene			<0.6	<0.3			
o-Dinitrobenzene			<0.6	<0.2			
1,3-DNB			<0.6	<0.2			
Tetryl			<0.6	<0.4			
Nitrobenzene			<0.6	<0.2			
2,4,6-Trinitrotoluene			<0.6	<0.2			
4-Amino-2,6-dinitrotoluene			<0.6	<0.3			
2-Amino-4,6-dinitrotoluene			<0.6	<0.2			
2,6-Dinitrotoluene			<1.3	<0.45			
2,4-Dinitrotoluene			<2	<0.72			
2-Nitrotoluene			<0.75	<0.25			
4-Nitrotoluene			<1.2	<0.6			
3-Nitrotoluene			<1.2	<0.4			
2-NMX	A	9.489713				20.28	
1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tornaghi

Date: NOV 21 2013

11/21/2013

Lancaster Laboratories Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--X6329A
Result file : 4E12310.75R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 95% (73-122) Conc.: 9.489713

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.05	4.20	130	-0.220435
1,3,5-TNB	4.66	4.80	4.86	24	0.002315
2,4,6-TNT	7.78	7.80	7.98	7	0.000617
Tetryl breakdown	8.27	8.43	8.52	10	0.000600
2-NMX	25.41	25.37	26.09	16174	9.489713

Analysis Report (B)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--X6329B
Result file : 4E12310B.75R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 96% (73-122) Conc.: 9.626623

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	25.57	25.50	26.24	235115	9.626623

RDX $\frac{130}{110.0628} \times \frac{10}{500} = 0.023623$ Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<15	<5.2			
☑ PETN			<18	<6			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ Tetryl			<0.6	<0.4			
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT			<0.6	<0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☐ 2-NMX	A	9.489713				1.43	
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

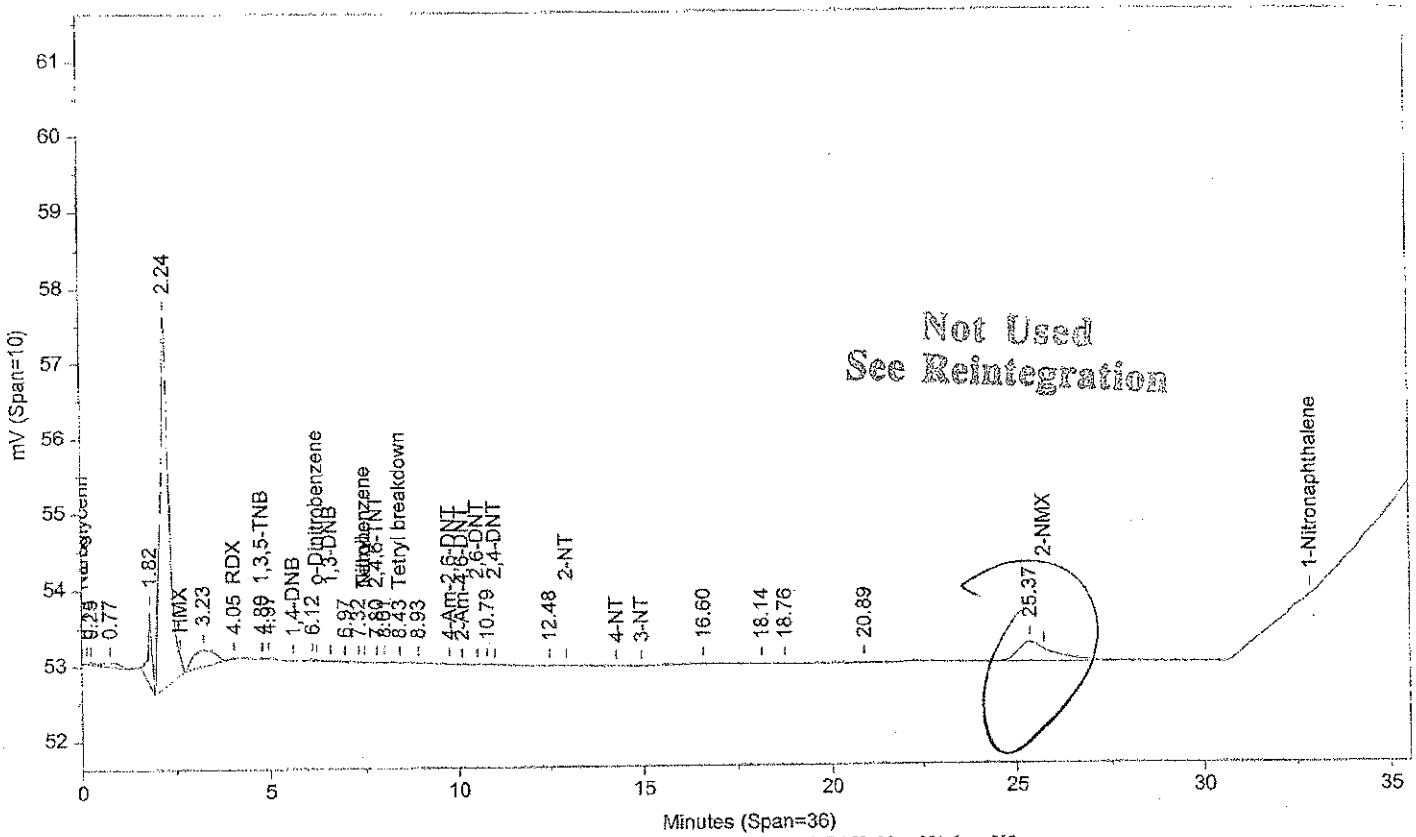
Verified by:
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

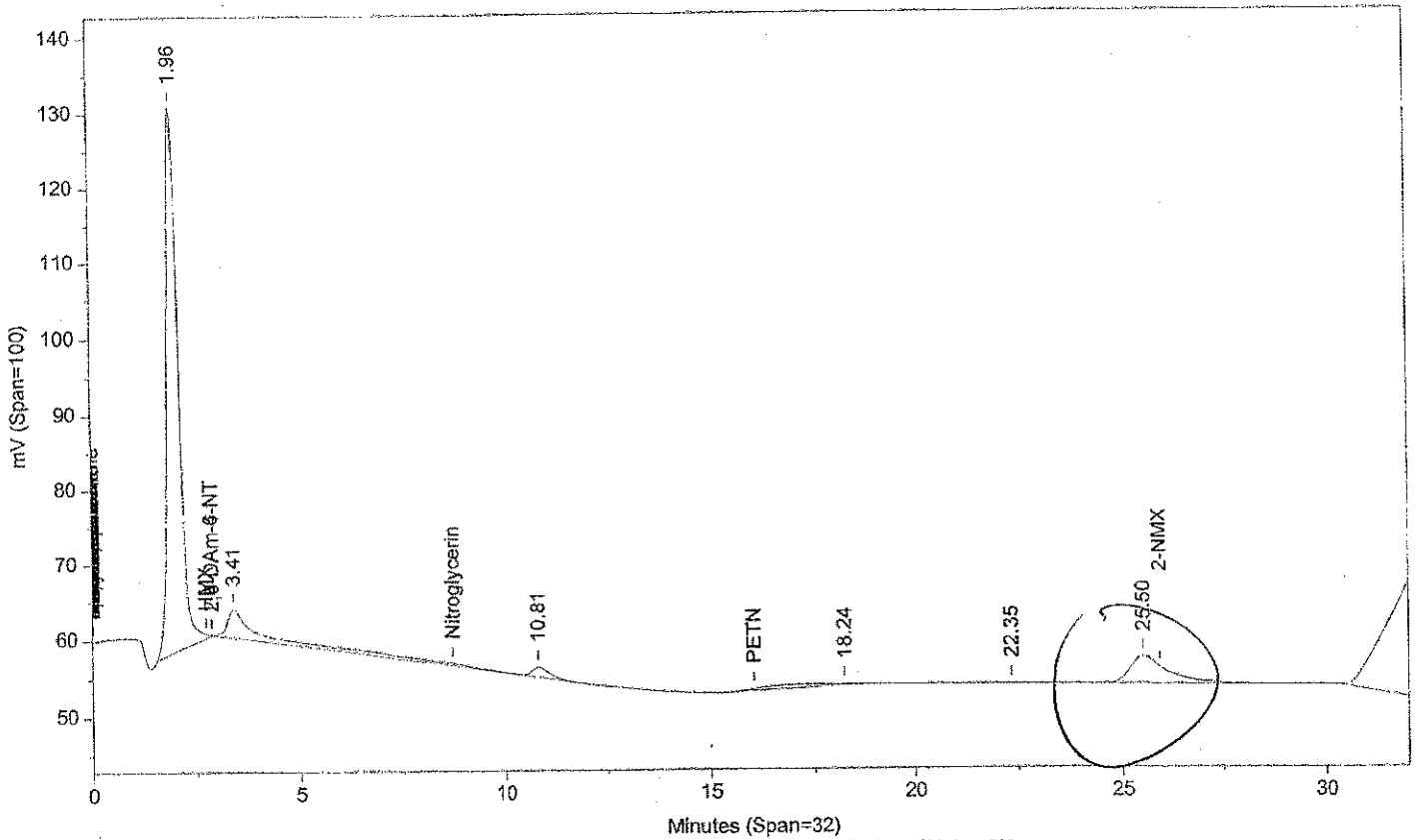
Printed on: 11/20/2013 13:23:29

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.75R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.75R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

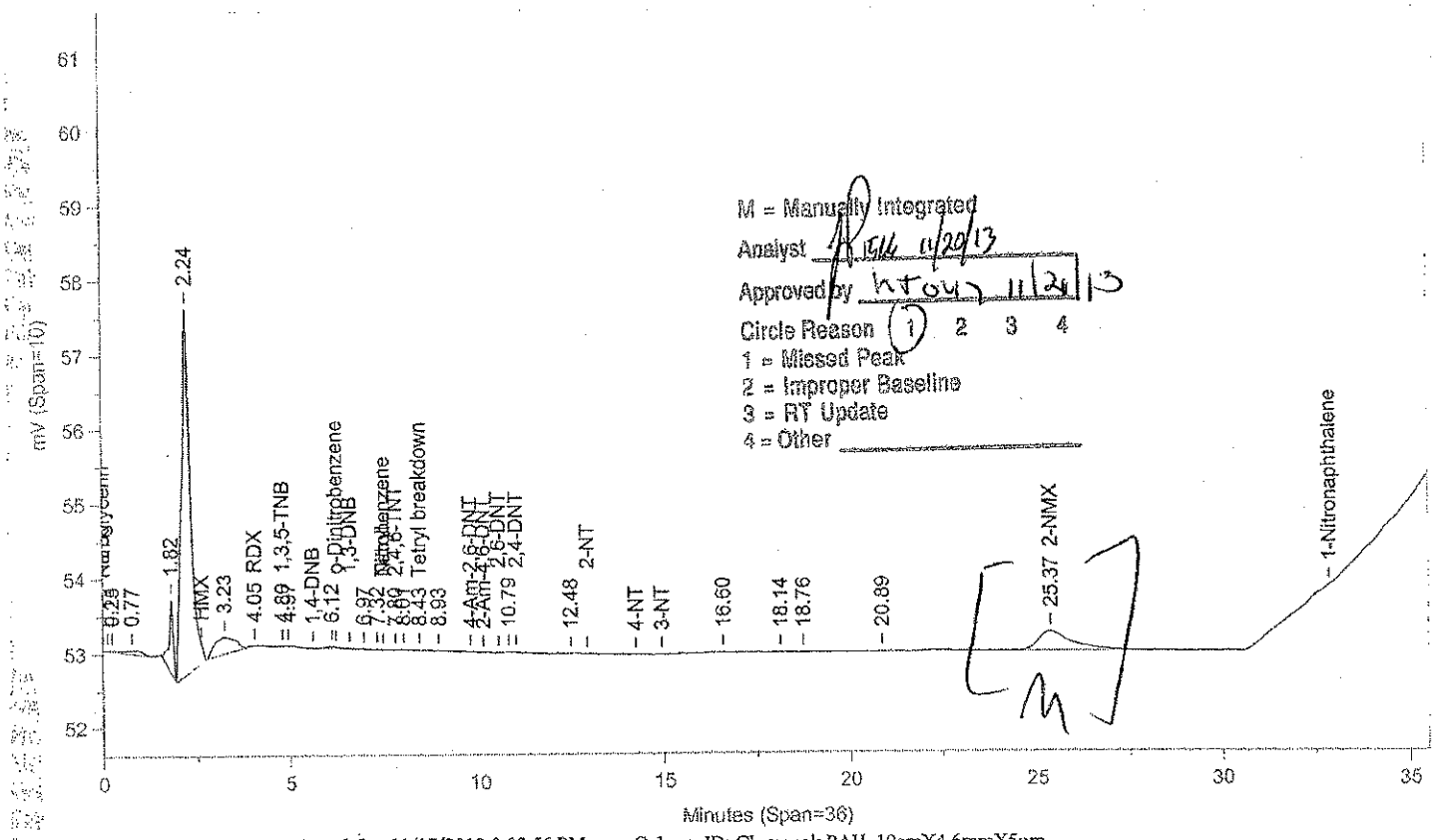
Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.051	130	-.22	RDX	.	0	.	RDX
4.805	24	.002	1,3,5-TNB	.	0	.	1,3,5-TNB
7.8	7	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
8.434	10	.001	Tetryl breakdown	.	0	.	Tetryl breakdown

Files:
Area File: C:\CPWIN\DATA1\4E12310.75A
Area File: C:\CPWIN\DATA1\4E12310B.75A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:08:10 PM
File Reported On: 11/17/2013 at 10:08:20 PM

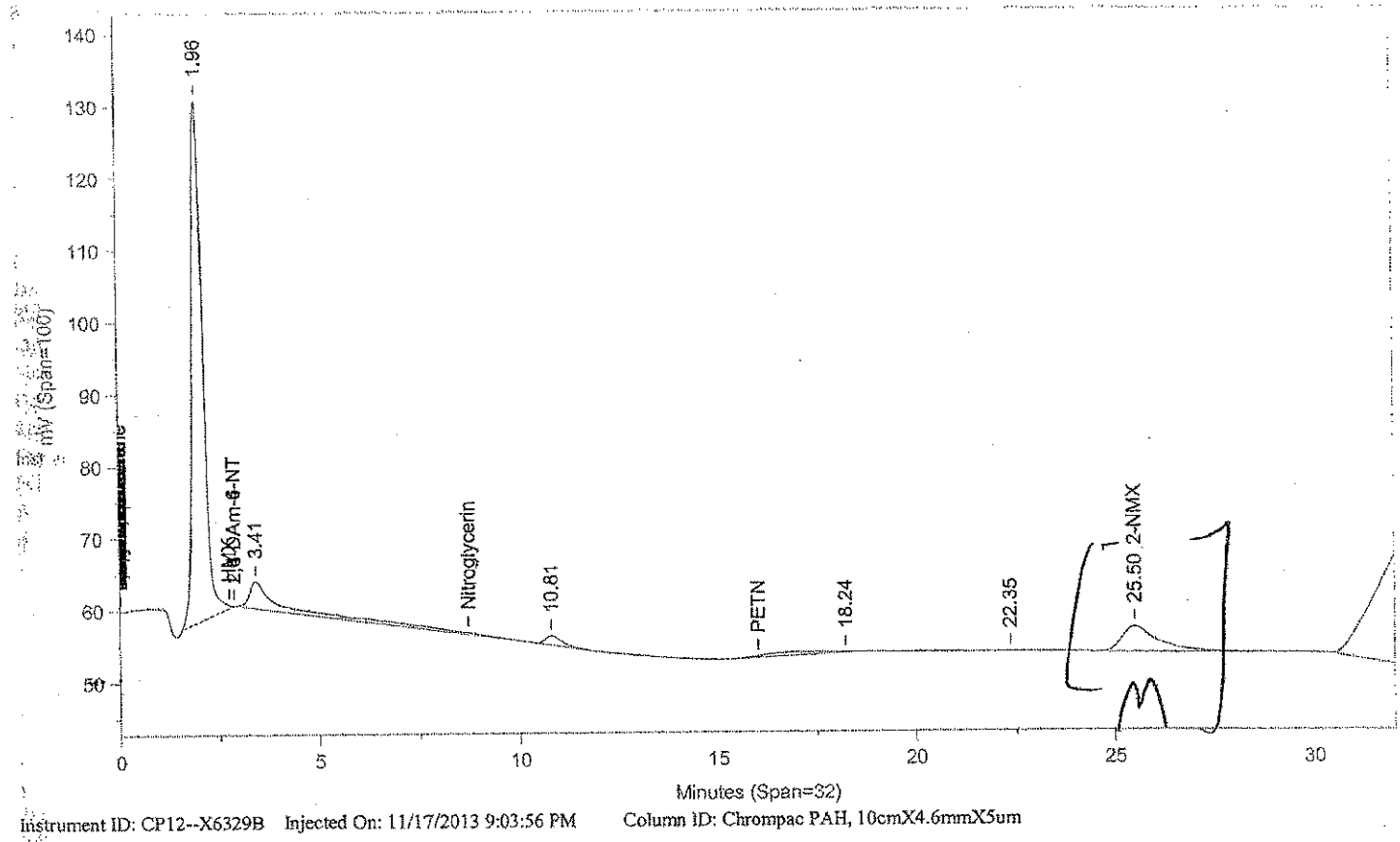
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.75R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.75R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.051	130	-.22	RDX	.	0	.	RDX
14.805	24	.002	1,3,5-TNB	.	0	.	1,3,5-TNB
7.8	7	.001	2,4,6-TNT	.	0	.	2,4,6-TNT
18.434	10	.001	Tetryl breakdown	.	0	.	Tetryl breakdown
25.371	16174	9.49	2-NMX	25.5	235115	9.627	2-NMX

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:42:20 AM
File Reported On: 11/20/2013 at 11:42:19 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK16314Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--Y6329A
Result file : 4C12310.75R
Calibration file : 3C12310.CAL
Method file : 8330C.MET
%SSR(2-NMX) : 116% (73-122) Conc.: 11.631649

Analysis Report (B)

Injected on : NOV 17, 2013 21:03:57
Instrument : CP12--Y6329B
Result file : 4C12310B.75R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET
%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.16	5.21	5.36	629	-0.359424
2-NMX	34.12	34.30	34.32	18446	11.631649

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<18	<6			
☑ Nitroglycerin			<15	<5.2			
☑ HMX			<2	<0.65			
☑ RDX			<0.5	<0.2			
☑ Nitrobenzene			<0.6	<0.2			
☑ o-Dinitrobenzene			<0.6	<0.2			
☑ 4-Am-2,6-DNT			<0.6	<0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB			<0.6	<0.2			
☑ 1,4-DNB			<0.6	<0.3			
☑ 2-NT			<0.75	<0.25			
☑ 4-NT			<1.2	<0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB			<0.6	<0.2			
☑ 2,6-DNT			<1.3	<0.45			
☑ 2,4-DNT			<2	<0.72			
☐ 2-NMX	A	11.631649					
☑ Tetryl			<0.6	<0.4			
☑ 2,4,6-TNT			<0.6	<0.2			
☑ 1-Nitronaphthalene			<0.6	<0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 2 1 2013

Verified by: _____
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:34:52

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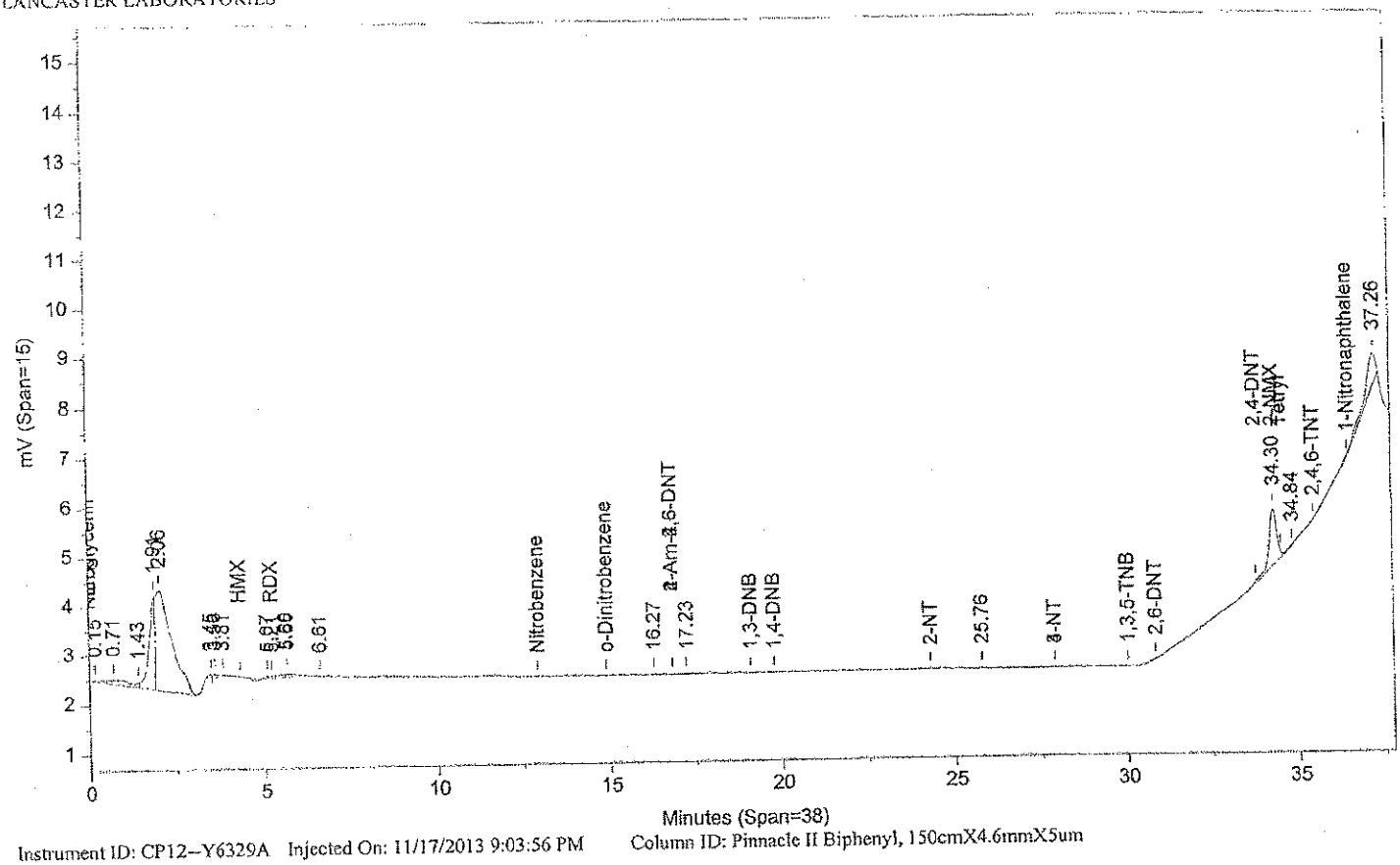
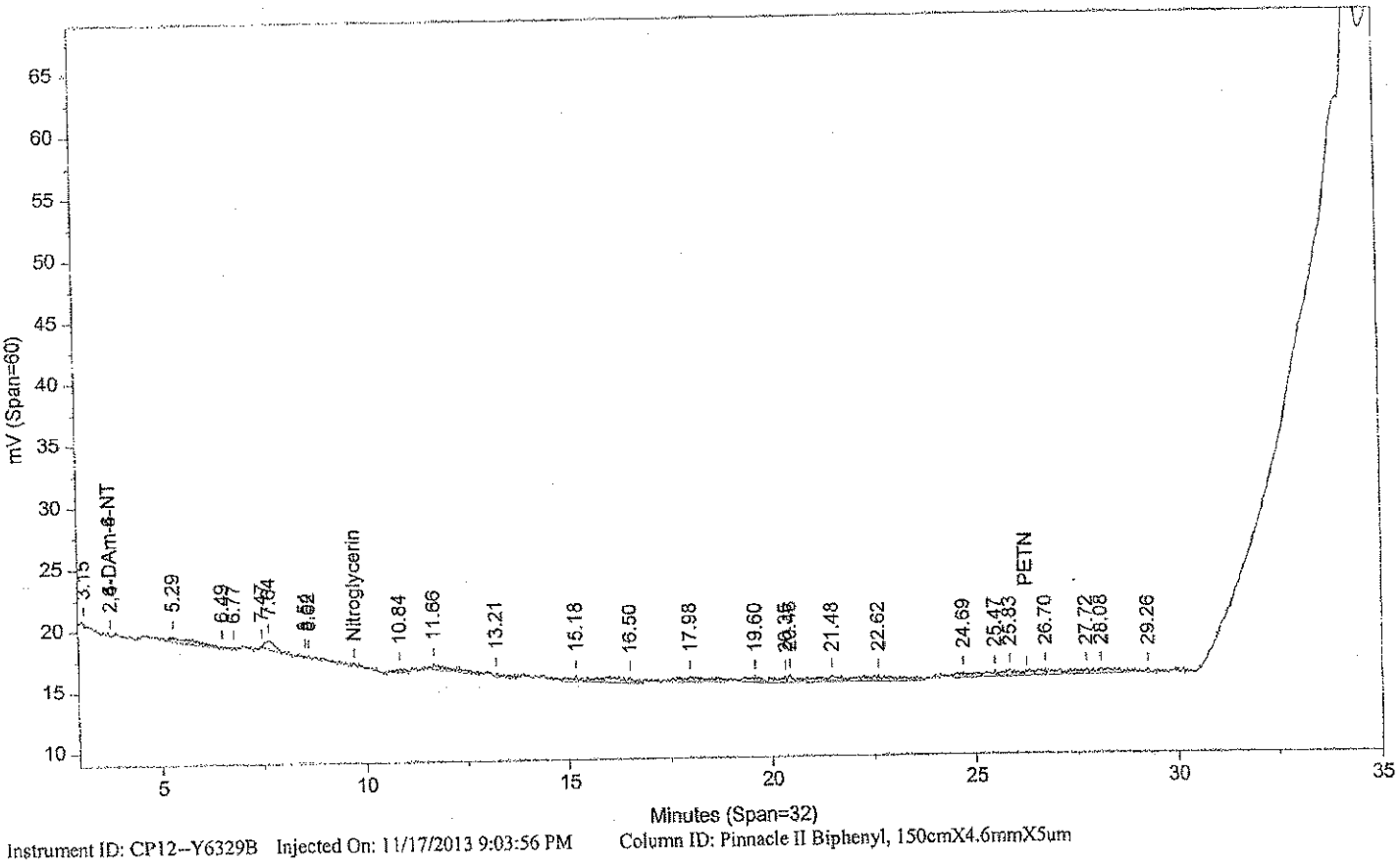
File: C:\CPWIN\DATA1\4C12310.75R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:03:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.75R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:03:56 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5Mblume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.206	629	-.359	RDX	.		0	. RDX
34.303	18446	11.632	2-NMX	.		0	. 2-NMX

Files:
Area File: C:\CPWIN\DATA1\4C12310.75A
Area File: C:\CPWIN\DATA1\4C12310B.75A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/17/2013 10:22:14 PM
File Reported On: 11/17/2013 at 10:22:24 PM

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Data Summary

Sample Name: LCSA 11/12/13 LCS16314 LCS Sample ID:AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 21:46:24
Instrument X6329A
Result file 4E12310.76R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 87% (73 - 122) Conc: 8.669675

Analysis Report (B)

Injected on Nov 17, 2013 21:46:23
Instrument Y6329A
Result file 4C12310.76R
Calibration file 3C12310
Method file 8330C

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.00	4.05	4.20	41187	9.150897
1,3,5-Trinitrobenzene	4.66	4.70	4.86	98370	9.32035
1,4-Dinitrobenzene	5.52	5.56	5.72	235505	18.487419
o-Dinitrobenzene	6.13	6.14	6.33	108405	21.042051
1,3-DNB	6.49	6.50	6.69	173402	10.68751
Tetryl	7.33	7.40	7.61	137683	8.957262
2,4,6-Trinitrotoluene	7.78	7.78	7.98	123025	10.798244
4-Amino-2,6-dinitrotoluer	9.69	9.55	9.97	43059	9.179037
2-Amino-4,6-dinitrotoluer	9.97	9.97	10.25	96706	8.830966
2,6-Dinitrotoluene	10.38	10.40	10.66	63653	10.471285
2,4-Dinitrotoluene	10.86	10.86	11.14	167898	10.152086
2-Nitrotoluene	12.80	12.76	13.08	57144	8.639166
4-Nitrotoluene	14.10	14.08	14.43	42220	8.999383
3-Nitrotoluene	14.79	14.76	15.12	66773	9.862768
2-NMX	25.41	25.41	26.09	14776	8.669675
1-Nitronaphthalene	32.62	32.72	33.11	138869	21.141434

Compound	Min	RT	Max	Area	Amount
HMX	4.20	4.34	4.40	40507	7.728072
RDX	5.16	5.32	5.36	55865	9.499586
Nitrobenzene	12.75	13.04	13.07	89897	9.734917
o-Dinitrobenzene	14.72	15.09	15.08	142280	20.694586
4-Amino-2,6-dinitrotoluer	16.66	16.98	16.98	195723	10.14122
1,3-DNB	18.93	19.26	19.23	140893	8.319469
1,4-Dinitrobenzene	19.62	20.03	19.92	263338	23.022066
2-Nitrotoluene	24.05	24.57	24.57	53642	9.152677
4-Nitrotoluene	27.60	28.17	28.12	79370	8.217587
1,3,5-Trinitrobenzene	29.81	30.21	30.21	73178	6.98918
2,6-Dinitrotoluene	30.62	31.01	31.02	78915	12.334536
2,4-Dinitrotoluene	33.67	33.87	33.89	141159	10.930724
2-NMX	34.12	34.35	34.32	13310	8.688906
Tetryl	34.41	34.68	34.61	75708	9.899279
2,4,6-Trinitrotoluene	35.36	35.52	35.56	107077	10.181443
1-Nitronaphthalene	36.36	36.50	36.56	155151	19.898338

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	210.273712	15	5.2		4.03	
PETN	A	234.025406	18	6		10.63	
HMX	A	7.860485	2	0.65		1.70	
RDX	A	9.150897	0.5	0.2		3.74	
1,3,5-Trinitrobenzene	A	9.32035	0.6	0.2		28.59	
1,4-Dinitrobenzene	A	18.487419	0.6	0.3		21.85	
o-Dinitrobenzene	A	21.042051	0.6	0.2		1.67	
1,3-DNB	A	10.68751	0.6	0.2		24.92	
Tetryl	B	9.899279	0.6	0.4		9.99	
Nitrobenzene	B	9.734917	0.6	0.2		8.32	
2,4,6-Trinitrotoluene	A	10.798244	0.6	0.2		5.88	
4-Amino-2,6-dinitrotoluene	A	9.179037	0.6	0.3		9.96	
2-Amino-4,6-dinitrotoluene	A	8.830966	0.6	0.2		13.81	
2,6-Dinitrotoluene	A	10.471285	1.3	0.45		16.34	
2,4-Dinitrotoluene	A	10.152086	2	0.72		7.39	
2-Nitrotoluene	A	8.639166	0.75	0.25		5.77	
4-Nitrotoluene	A	8.999383	1.2	0.6		9.08	
3-Nitrotoluene	A	9.862768	1.2	0.4		18.20	
2-NMX	A	8.669675				0.22	
1-Nitronaphthalene	A	21.141434	0.6	0.2		6.06	

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Data Summary

Sample Name: LCSA 11/12/13 LCS16314 LCS Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 21:46:24
Instrument	X6329A
Result file	4E12310.76R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 21:46:23
Instrument	Y6329A
Result file	4C12310.76R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount ~~divided by the Average times~~ 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by:
Date: NOV 21 2013

11/21/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329A
Result file : 4E12310.76R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 87% (73-122) Conc.: 8.669675

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	4.05	4.20	41187	9.150897
1,3,5-TNB	4.66	4.70	4.86	98370	9.320350
1,4-DNB	5.52	5.56	5.72	235505	18.487419
o-Dinitrobenzene	6.13	6.14	6.33	108405	21.042051
1,3-DNB	6.49	6.50	6.69	173402	10.687510
Tetryl	7.33	7.40	7.61	137683	7.966315
2,4,6-TNT	7.78	7.78	7.98	123025	10.798244
Tetryl breakdown	8.27	8.36	8.52	17127	0.990947
4-Am-2,6-DNT	9.63	9.55	9.91	43059	9.179037
2-Am-4,6-DNT	9.97	9.97	10.25	96706	8.830966
2,6-DNT	10.38	10.40	10.66	63653	10.471285
2,4-DNT	10.66	10.86	11.14	167898	10.152086
2-NT	12.60	12.76	13.08	57144	8.639166
4-NT	14.10	14.08	14.43	42220	8.999383
3-NT	14.79	14.76	15.12	66773	9.862768
2-NMX	25.41	25.41	26.09	14776	8.669675
1-Nitronaphthalene	32.62	32.72	33.11	138869	21.141434

Analysis Report (B)

Injected on : NOV 17, 2013 21:46:24
Instrument : CP12--X6329B
Result file : 4E12310B.76R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 92% (73-122) Conc.: 9.248772

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.71	2.85	163181	7.860485
Nitroglycerin	8.51	8.57	8.89	1343702	210.273712
PETN	15.75	15.80	16.33	1602494	234.025406
2-NMX	25.57	25.58	26.24	225887	9.248772

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	210.273712	15	5.2			
☑ PETN	B	234.025406	18	6			
☑ HMX	B	7.860485	2	0.65			
☑ RDX	A	9.150897	0.5	0.2			
☑ 1,3,5-TNB	A	9.320350	0.6	0.2			
☑ 1,4-DNB	A	18.487419	0.6	0.3			
☑ o-Dinitrobenzene	A	21.042051	0.6	0.2			
☑ 1,3-DNB	A	10.687510	0.6	0.2			
☑ Tetryl	A	7.966315	0.6	0.4			+Breakdown = 8.957262
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.798244	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	9.179037	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.830966	0.6	0.2			
☑ 2,6-DNT	A	10.471285	1.3	0.45			
☑ 2,4-DNT	A	10.152086	2	0.72			
☑ 2-NT	A	8.639166	0.75	0.25			
☑ 4-NT	A	8.999383	1.2	0.6			
☑ 3-NT	A	9.862768	1.2	0.4			
☐ 2-NMX	A	8.669675				6.46	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:23:40

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 21:46:24
Instrument	: CP12--X6329A
Result file	: 4E12310.76R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 21:46:24
Instrument	: CP12--X6329B
Result file	: 4E12310B.76R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	21.141434	0.6	0.2			

Units: ug/l

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 2 1 2013

Valerie L. Tomaylla
Principal Specialist

Verified by: _____
Date: NOV 2 1 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:23:40

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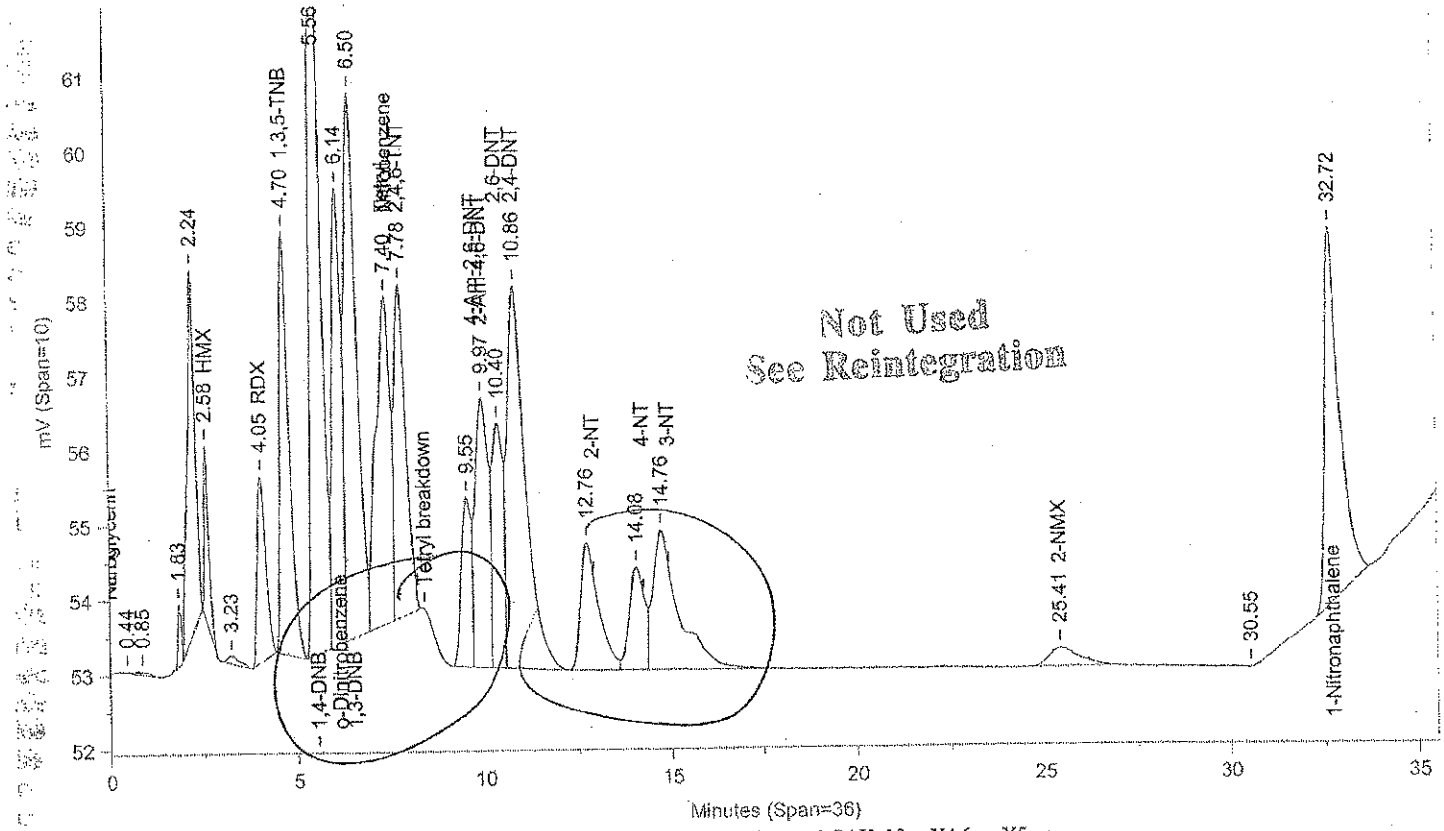
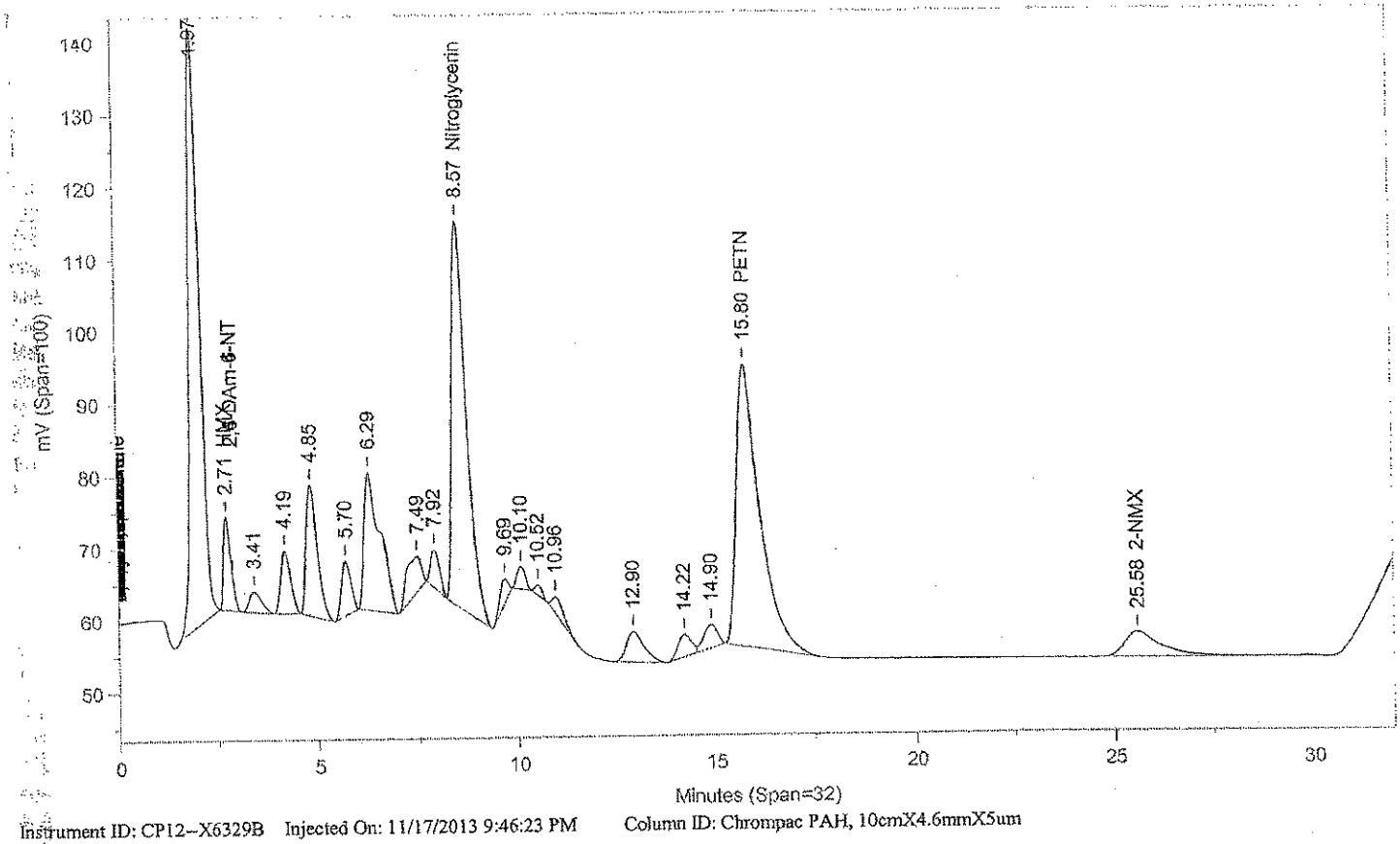


Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.76R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.714	163181	7.86	HMX
4.052	41187	9.151	RDX	.	0	.	RDX
4.702	98370	9.32	1,3,5-TNB	.	0	.	1,3,5-TNB
5.56	230997	18.134	1,4-DNB	.	0	.	1,4-DNB
6.139	105060	20.393	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.502	161014	9.924	1,3-DNB	.	0	.	1,3-DNB
7.396	117830	6.818	Tetryl	.	0	.	Tetryl
7.779	95218	8.358	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	8.571	1343702	210.274	Nitroglycerin
9.973	91292	8.337	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.401	66305	10.908	2,6-DNT	.	0	.	2,6-DNT
10.858	170659	10.319	2,4-DNT	.	0	.	2,4-DNT
.	0	.	PETN	15.8	1602494	234.025	PETN
25.41	13723	8.052	2-NMX	25.584	225887	9.249	2-NMX
32.719	140437	21.38	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4E12310.76A
Area File: C:\CPWIN\DATA1\4E12310B.76A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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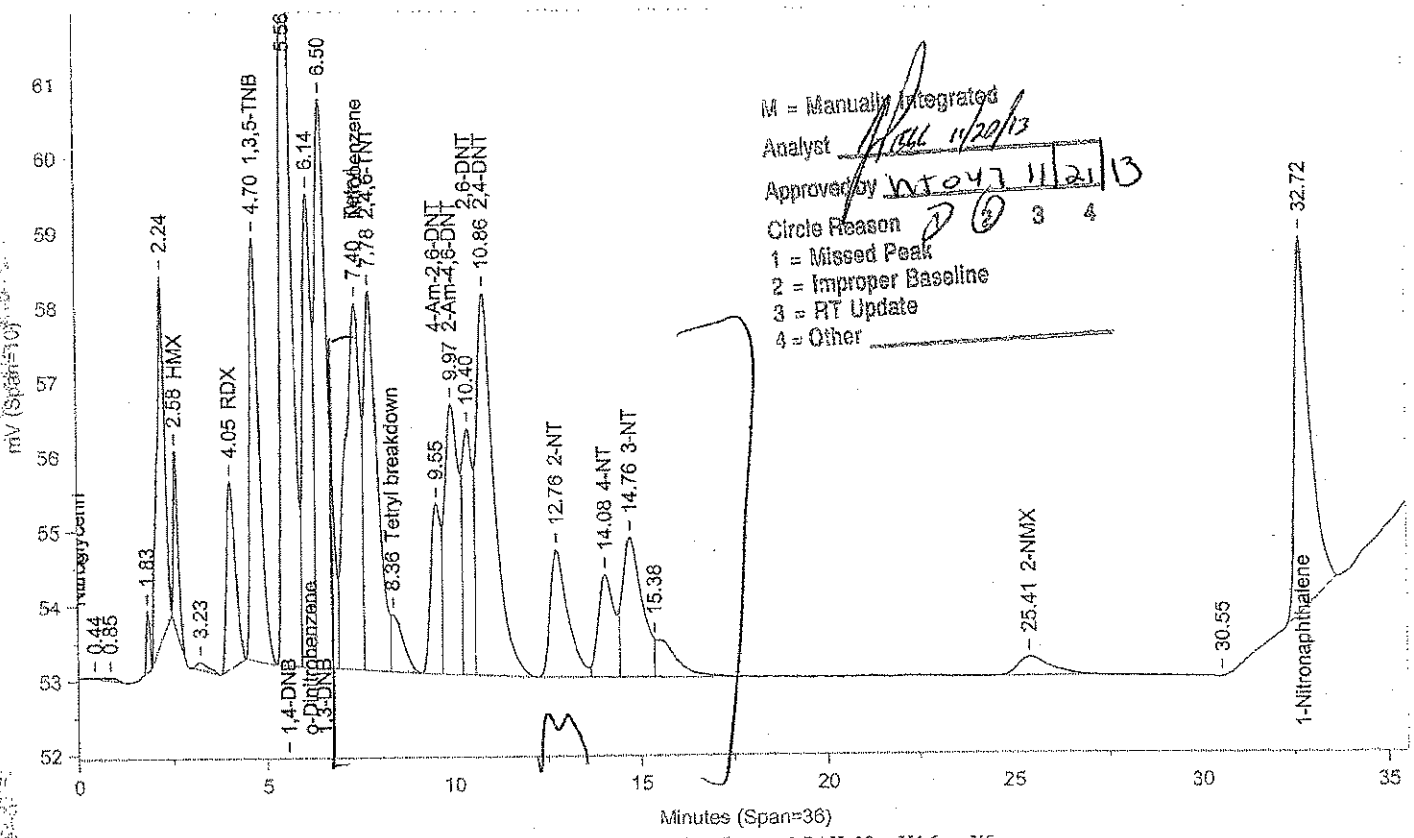
File Reported On: 11/18/2013 at 2:52:31 PM

Not Used
See Reintegration

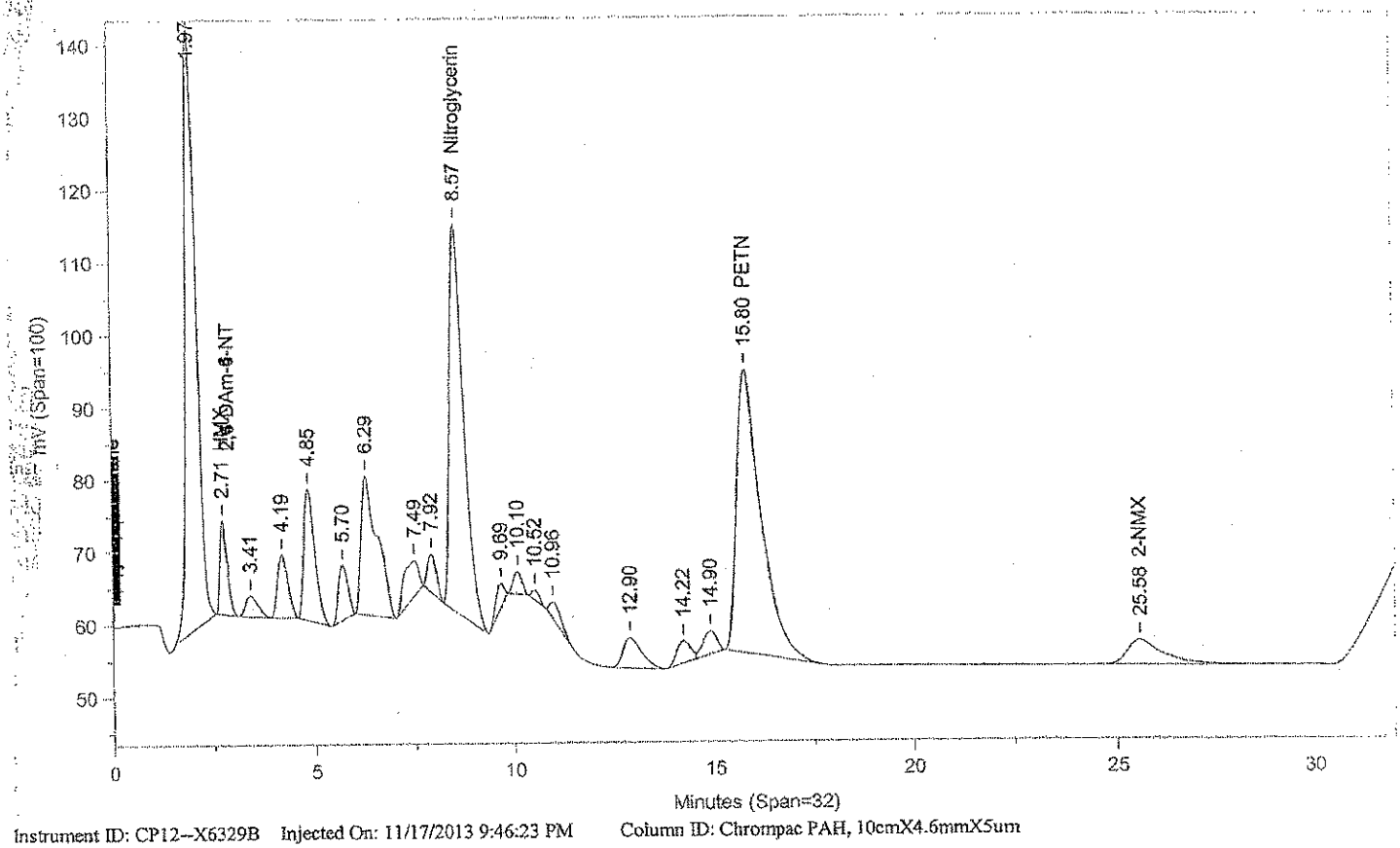
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4E12310.76R

M = Manually Integrated
Analyst [signature] 11/20/13
Approved by [signature] 11/21/13
Circle Reason 1 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other



Instrument ID: CP12--X6329A Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.76R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.714	163181	7.86	HMX
4.052	41187	9.151	RDX	.	0	.	RDX
4.702	98370	9.32	1,3,5-TNB	.	0	.	1,3,5-TNB
5.56	235505	18.487	1,4-DNB	.	0	.	1,4-DNB
6.139	108405	21.042	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.502	173402	10.688	1,3-DNB	.	0	.	1,3-DNB
7.396	137683	7.966	Tetryl	.	0	.	Tetryl
7.779	123025	10.798	2,4,6-TNT	.	0	.	2,4,6-TNT
8.355	17127	.991	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	8.571	1343702	210.274	Nitroglycerin
9.548	43059	9.179	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.973	96706	8.831	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
10.401	63653	10.471	2,6-DNT	.	0	.	2,6-DNT
10.858	167898	10.152	2,4-DNT	.	0	.	2,4-DNT
12.761	57144	8.639	2-NT	.	0	.	2-NT
14.084	42220	8.999	4-NT	.	0	.	4-NT
14.757	66773	9.863	3-NT	.	0	.	3-NT
.	0	.	PETN	15.8	1602494	234.025	PETN
25.41	14776	8.67	2-NMX	25.584	225887	9.249	2-NMX
32.719	138869	21.141	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 11:54:48 AM
File Reported On: 11/20/2013 at 11:54:47 AM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 21:46:23
Instrument : CP12--Y6329A
Result file : 4C12310.76R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 87% (73-122) Conc.: 8.688906

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.34	4.40	40507	7.728072
RDX	5.16	5.32	5.36	55865	9.499586
Nitrobenzene	12.75	13.04	13.07	89897	9.734917
o-Dinitrobenzene	14.72	15.09	15.08	142280	20.694586
4-Am-2,6-DNT	16.66	16.98	16.98	195723	10.141220
1,3-DNB	18.93	19.26	19.23	140893	8.319469
1,4-DNB	19.62	20.03	19.92	263338	23.022066
2-NT	24.05	24.57	24.57	53642	9.152677
4-NT	27.60	28.17	28.12	79370	8.217587
1,3,5-TNB	29.81	30.21	30.21	73178	6.989180
2,6-DNT	30.62	31.01	31.02	78915	12.334536
2,4-DNT	33.67	33.87	33.89	141159	10.930724
2-NMX	34.12	34.35	34.32	13310	8.688906
Tetryl	34.41	34.58	34.61	75708	9.899279
2,4,6-TNT	35.36	35.52	35.56	107077	10.181443
1-Nitronaphthalene	36.36	36.50	36.56	155151	19.898338

Analysis Report (B)

Injected on : NOV 17, 2013 21:46:23
Instrument : CP12--Y6329B
Result file : 4C12310B.76R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.80	9.82	1112589	218.929626
PETN	26.02	26.45	26.44	1249411	210.412308

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	210.412308	18	6			
☑ Nitroglycerin	B	218.929626	15	5.2			
☑ HMX	A	7.728072	2	0.65			
☑ RDX	A	9.499586	0.5	0.2			
☑ Nitrobenzene	A	9.734917	0.6	0.2			
☑ o-Dinitrobenzene	A	20.694586	0.6	0.2			
☑ 4-Am-2,6-DNT	A	10.141220	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.319469	0.6	0.2			
☑ 1,4-DNB	A	23.022066	0.6	0.3			
☑ 2-NT	A	9.152677	0.75	0.25			
☑ 4-NT	A	8.217587	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	6.989180	0.6	0.2			
☑ 2,6-DNT	A	12.334536	1.3	0.45			
☑ 2,4-DNT	A	10.930724	2	0.72			
☐ 2-NMX	A	8.688906					
☑ Tetryl	A	9.899279	0.6	0.4			
☑ 2,4,6-TNT	A	10.181443	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:02

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 21:46:23
Instrument	: CP12--Y6329A
Result file	: 4C12310.76R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 21:46:23
Instrument	: CP12--Y6329B
Result file	: 4C12310B.76R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	19.898338	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Tomaylla, Principal Specialist

Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:02

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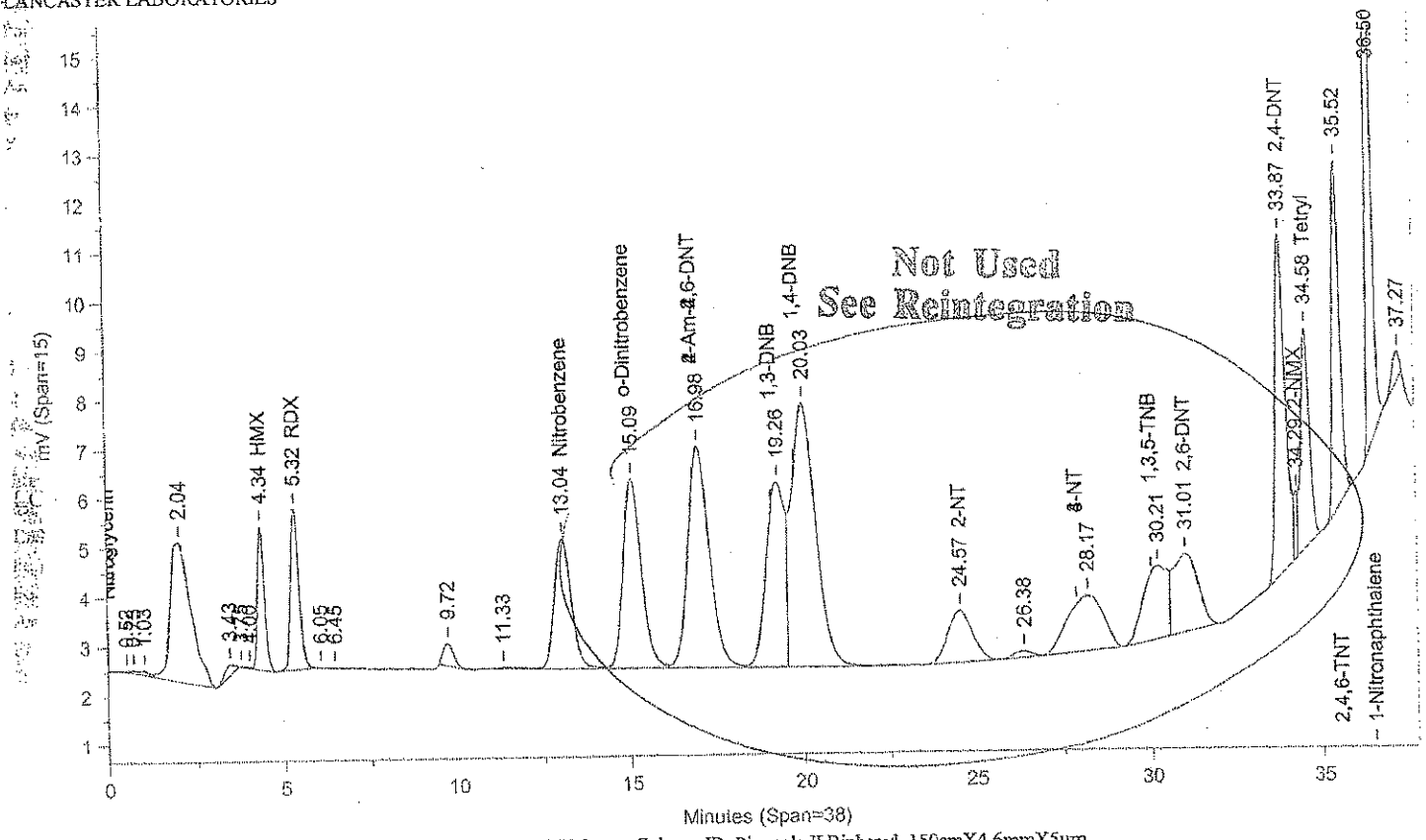
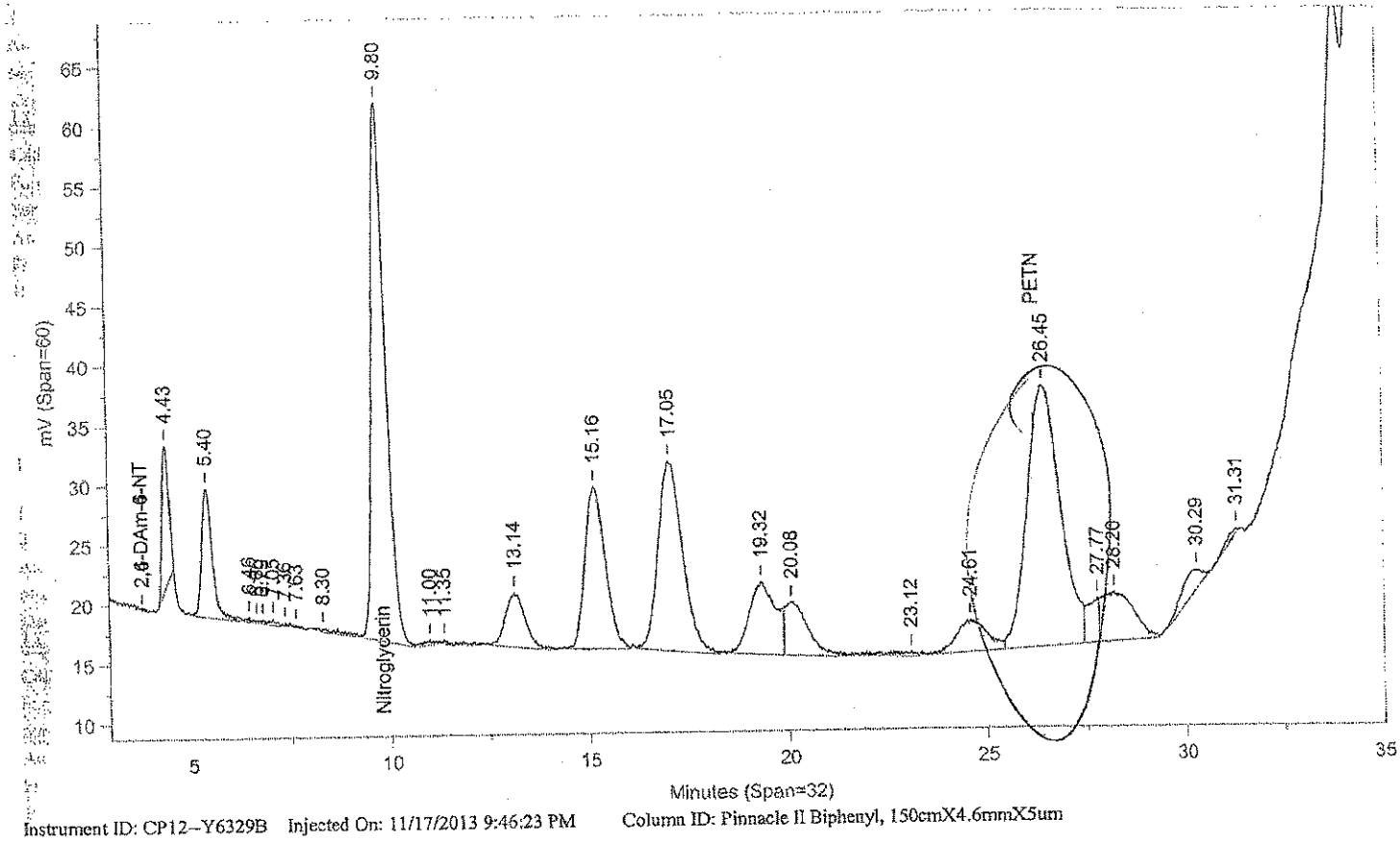
File: C:\CPWIN\DATA1\4C12310.76R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:46:22 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.76R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

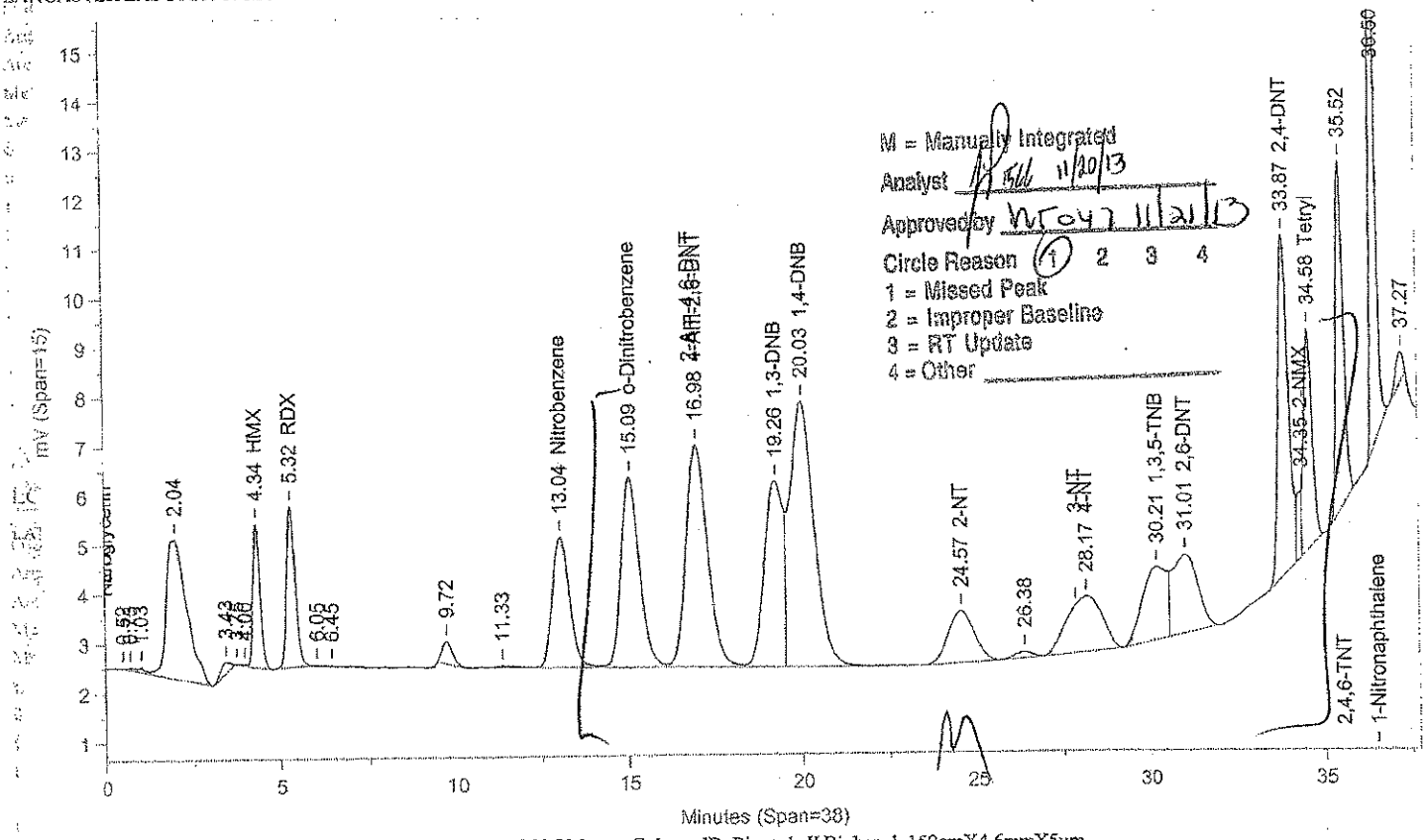
Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.337	40507	7.728	HMX	.	0	.	HMX
5.316	55865	9.5	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.805	1112589	218.93	Nitroglycerin
13.045	89897	9.735	Nitrobenzene	.	0	.	Nitrobenzene
24.565	53642	9.153	2-NT	.	0	.	2-NT
31.014	78915	12.335	2,6-DNT	.	0	.	2,6-DNT
33.871	141597	10.965	2,4-DNT	.	0	.	2,4-DNT
34.286	9346	6.417	2-NMX	.	0	.	2-NMX
34.579	79234	10.343	Tetryl	.	0	.	Tetryl
125.519	107077	10.181	2,4,6-TNT	.	0	.	2,4,6-TNT
136.503	155151	19.898	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\4C12310.76A
Area File: C:\CPWIN\DATA1\4C12310B.76A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:19:00 PM
File Reported On: 11/18/2013 at 3:19:09 PM

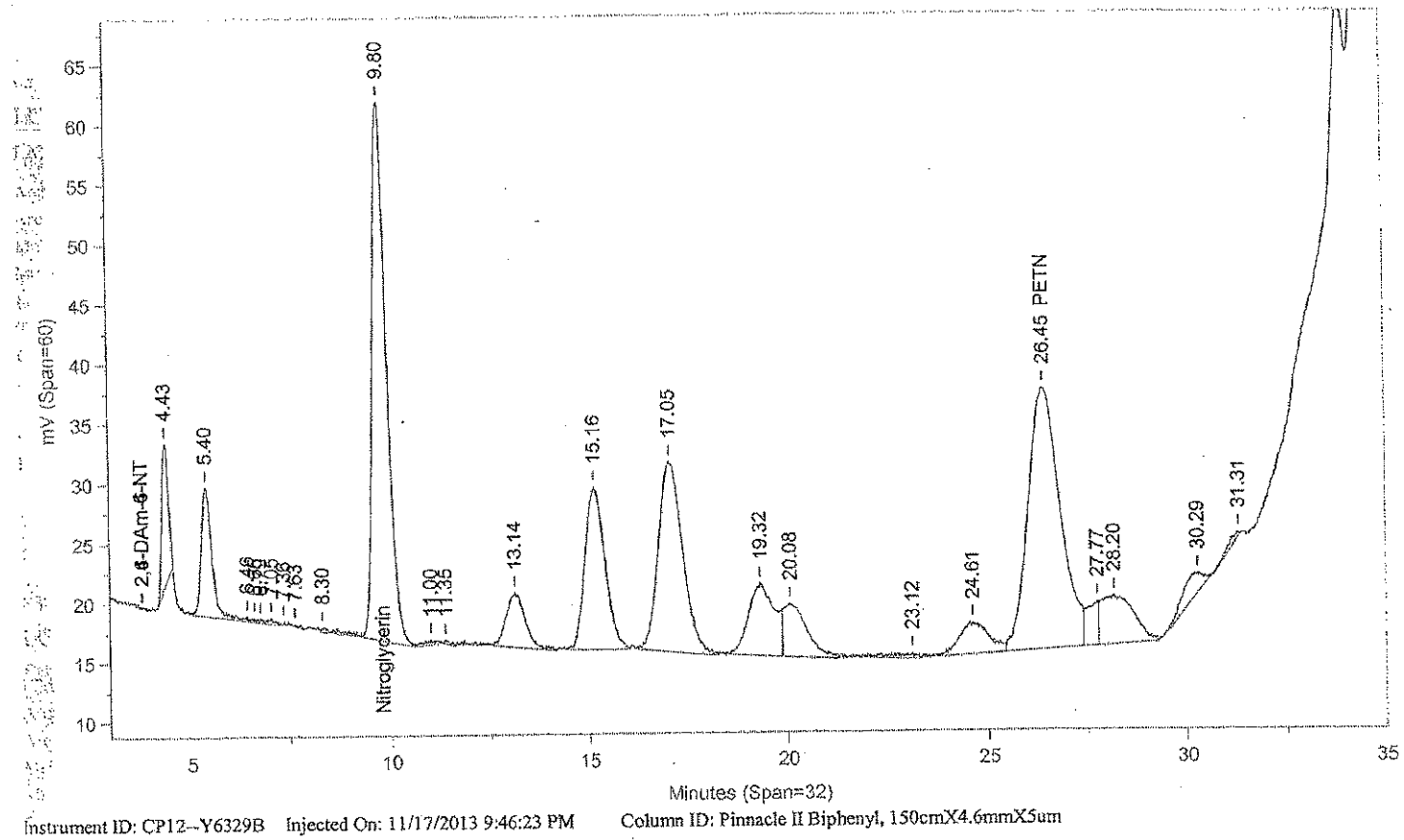
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\4C12310.76R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 9:46:22 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.76R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 9:46:23 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.337	40507	7.728	HMX	.	0	.	HMX
5.316	55865	9.5	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.805	1112589	218.93	Nitroglycerin
13.045	89897	9.735	Nitrobenzene	.	0	.	Nitrobenzene
15.093	142280	20.695	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.981	195723	10.141	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.264	140893	8.319	1,3-DNB	.	0	.	1,3-DNB
20.034	263338	23.022	1,4-DNB	.	0	.	1,4-DNB
24.565	53642	9.153	2-NT	.	0	.	2-NT
.	0	.	PETN	26.45	1249411	210.412	PETN
28.166	79370	8.218	4-NT	.	0	.	4-NT
30.211	73178	6.989	1,3,5-TNB	.	0	.	1,3,5-TNB
31.014	78915	12.335	2,6-DNT	.	0	.	2,6-DNT
33.871	141159	10.931	2,4-DNT	.	0	.	2,4-DNT
34.35	13310	8.689	2-NMX	.	0	.	2-NMX
34.579	75708	9.899	Tetryl	.	0	.	Tetryl
35.519	107077	10.181	2,4,6-TNT	.	0	.	2,4,6-TNT
36.503	155151	19.898	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:42:34 PM
File Reported On: 11/20/2013 at 2:42:33 PM

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Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314 LCSD Sample ID:AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:

Analyses: 06916

Analysis Report (A)

Injected on Nov 17, 2013 22:28:50
Instrument X6329A
Result file 4E12310.77R
Calibration file 3E12310
Method file 8330

%SSR(NMX) 93% (73 - 122) Conc: 9.352804

Analysis Report (B)

Injected on Nov 17, 2013 22:28:50
Instrument Y6329A
Result file 4C12310.77R
Calibration file 3C12310
Method file 8330C

%SSR(NMX) * 126% (73 - 122) Conc: 12.567383

Single Component Data

Compound	Min	RT	Max	Area	Amount	Compound	Min	RT	Max	Area	Amount
RDX	4.00	3.82	4.20	41281	9.172319	HMX	4.20	4.44	4.40	41096	7.840355
1,3,5-Trinitrobenzene	4.66	4.42	4.86	99345	9.412722	RDX	5.16	5.44	5.36	58935	10.047509
1,4-Dinitrobenzene	5.52	5.21	5.72	240924	18.912798	Nitrobenzene	12.75	13.23	13.07	88940	9.630445
o-Dinitrobenzene	6.13	5.71	6.33	112673	21.870337	o-Dinitrobenzene	14.72	15.27	15.08	140258	20.397144
1,3-DNB	6.49	6.08	6.69	166335	10.375187	4-Amino-2,6-dinitrotoluer	16.66	17.15	16.98	193980	10.050929
Tetryl	7.33	6.89	7.61	142329	9.324655	1,3-DNB	18.93	19.58	19.23	147642	8.717997
2,4,6-Trinitrotoluene	7.78	7.23	7.98	124891	10.962006	1,4-Dinitrobenzene	19.62	20.40	19.92	257693	22.52206
4-Amino-2,6-dinitrotoluer	9.69	8.83	9.97	42654	9.092693	2-Nitrotoluene	24.05	24.86	24.57	54787	9.351515
2-Amino-4,6-dinitrotoluer	9.97	9.23	10.25	95267	8.699529	4-Nitrotoluene	27.60	28.62	28.12	87884	9.072639
2,6-Dinitrotoluene	10.38	9.62	10.66	66087	10.871756	1,3,5-Trinitrobenzene	29.81	31.16	30.21	90192	8.369838
2,4-Dinitrotoluene	10.86	10.05	11.14	170848	10.330473	2,6-Dinitrotoluene	30.62	31.33	31.02	77296	12.08692
2-Nitrotoluene	12.80	11.80	13.08	57334	8.667852	2,4-Dinitrotoluene	33.67	34.06	33.89	134550	10.418971
4-Nitrotoluene	14.10	13.05	14.43	41459	8.83715	2-NMX	34.12	34.29	34.32	20079	12.567383
3-Nitrotoluene	14.79	13.69	15.12	68789	10.160467	Tetryl	34.41	34.73	34.61	76226	9.964551
2-NMX	25.41	23.69	26.09	15941	9.352804	2,4,6-Trinitrotoluene	35.36	35.68	35.56	107906	10.259212
1-Nitronaphthalene	32.62	31.88	33.11	138676	21.111973	1-Nitronaphthalene	36.36	36.61	36.56	153890	19.741182

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	A	209.103775	15	5.2		4.77	
PETN	A	236.448532	18	6		10.87	
HMX	A	8.123042	2	0.65		3.54	
RDX	A	9.172319	0.5	0.2		9.11	
1,3,5-Trinitrobenzene	A	9.412722	0.6	0.2		11.73	
1,4-Dinitrobenzene	A	18.912798	0.6	0.3		17.42	
o-Dinitrobenzene	A	21.870337	0.6	0.2		6.97	
1,3-DNB	A	10.375187	0.6	0.2		17.36	
Tetryl	B	9.964551	0.6	0.4		6.63	
Nitrobenzene	B	9.630445	0.6	0.2		3.23	
2,4,6-Trinitrotoluene	A	10.962006	0.6	0.2		6.62	
4-Amino-2,6-dinitrotoluene	A	9.092693	0.6	0.3		10.01	
2-Amino-4,6-dinitrotoluene	A	8.699529	0.6	0.2		14.41	
2,6-Dinitrotoluene	A	10.871756	1.3	0.45		10.59	
2,4-Dinitrotoluene	A	10.330473	2	0.72		0.85	
2-Nitrotoluene	A	8.667852	0.75	0.25		7.59	
4-Nitrotoluene	A	8.83715	1.2	0.6		2.63	
3-Nitrotoluene	A	10.160467	1.2	0.4		11.31	
2-NMX	A	9.352804				29.33	
1-Nitronaphthalene	A	21.111973	0.6	0.2		6.71	

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Data Summary

Sample Name: LCSDA 11/12/13 LCSD16314 LCSD Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:

Analyses: 06916

Analysis Report (A)

Injected on	Nov 17, 2013 22:28:50
Instrument	X6329A
Result file	4E12310.77R
Calibration file	3E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 17, 2013 22:28:50
Instrument	Y6329A
Result file	4C12310.77R
Calibration file	3C12310
Method file	8330C

Units: ug/l

%RPD = High - Low Amount ~~divided by the Average times~~ 100

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valeria L. Tomayko, Principal Specialist
Date: NOV 21 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSDA** 11/12/13 LCSD16314 **Sample ID:** AA **Batchnumber:** **133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--X6329A
Result file : 4E12310.77R
Calibration file : 3E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 93% (73-122) Conc.: 9.352804

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.00	3.82	4.20	41281	9.172319
1,3,5-TNB	4.66	4.42	4.86	99345	9.412722
1,4-DNB	5.52	5.21	5.72	240924	18.912798
o-Dinitrobenzene	6.13	5.71	6.33	112673	21.870337
1,3-DNB	6.49	6.08	6.69	168335	10.375187
Tetryl	7.33	6.89	7.61	142329	8.235116
2,4,6-TNT	7.78	7.23	7.98	124891	10.962006
Tetryl breakdown	8.27	7.67	8.52	18831	1.089539
4-Am-2,6-DNT	9.63	8.83	9.91	42654	9.092693
2-Am-4,6-DNT	9.97	9.23	10.25	95267	8.699529
2,6-DNT	10.38	9.62	10.66	66087	10.871756
2,4-DNT	10.86	10.05	11.14	170848	10.330473
2-NT	12.80	11.80	13.08	57334	8.667852
4-NT	14.10	13.05	14.43	41459	8.837150
3-NT	14.79	13.69	15.12	68789	10.160467
2-NMX	25.41	23.69	26.09	15941	9.352804
1-Nitronaphthalene	32.62	31.88	33.11	138676	21.111973

Analysis Report (B)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--X6329B
Result file : 4E12310B.77R
Calibration file : 3E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 91% (73-122) Conc.: 9.126577

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.65	2.60	2.85	168885	8.123042
Nitroglycerin	8.51	7.97	8.89	1336226	209.103775
PETN	15.75	14.67	16.33	1619089	236.448532
2-NMX	25.57	23.84	26.24	222902	9.126577

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	209.103775	15	5.2			
☑ PETN	B	236.448532	18	6			
☑ HMX	B	8.123042	2	0.65			
☑ RDX	A	9.172319	0.5	0.2			
☑ 1,3,5-TNB	A	9.412722	0.6	0.2			
☑ 1,4-DNB	A	18.912798	0.6	0.3			
☑ o-Dinitrobenzene	A	21.870337	0.6	0.2			
☑ 1,3-DNB	A	10.375187	0.6	0.2			
☑ Tetryl	A	8.235116	0.6	0.4			+Breakdown = 9.324655
☑ Nitrobenzene			<0.6	<0.2			
☑ 2,4,6-TNT	A	10.962006	0.6	0.2			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	9.092693	0.6	0.3			
☑ 2-Am-4,6-DNT	A	8.699529	0.6	0.2			
☑ 2,6-DNT	A	10.871756	1.3	0.45			
☑ 2,4-DNT	A	10.330473	2	0.72			
☑ 2-NT	A	8.667852	0.75	0.25			
☑ 4-NT	A	8.837150	1.2	0.6			
☑ 3-NT	A	10.160467	1.2	0.4			
☐ 2-NMX	A	9.352804				2.45	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:23:49

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSDA** 11/12/13 LCSD16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--X6329A
Result file	: 4E12310.77R
Calibration file	: 3E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--X6329B
Result file	: 4E12310B.77R
Calibration file	: 3E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	21.111973	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist
Date: NOV 21 2013

Verified by: Valerie L. Tennyson, Principal Specialist
Date: NOV 21 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 13:23:49

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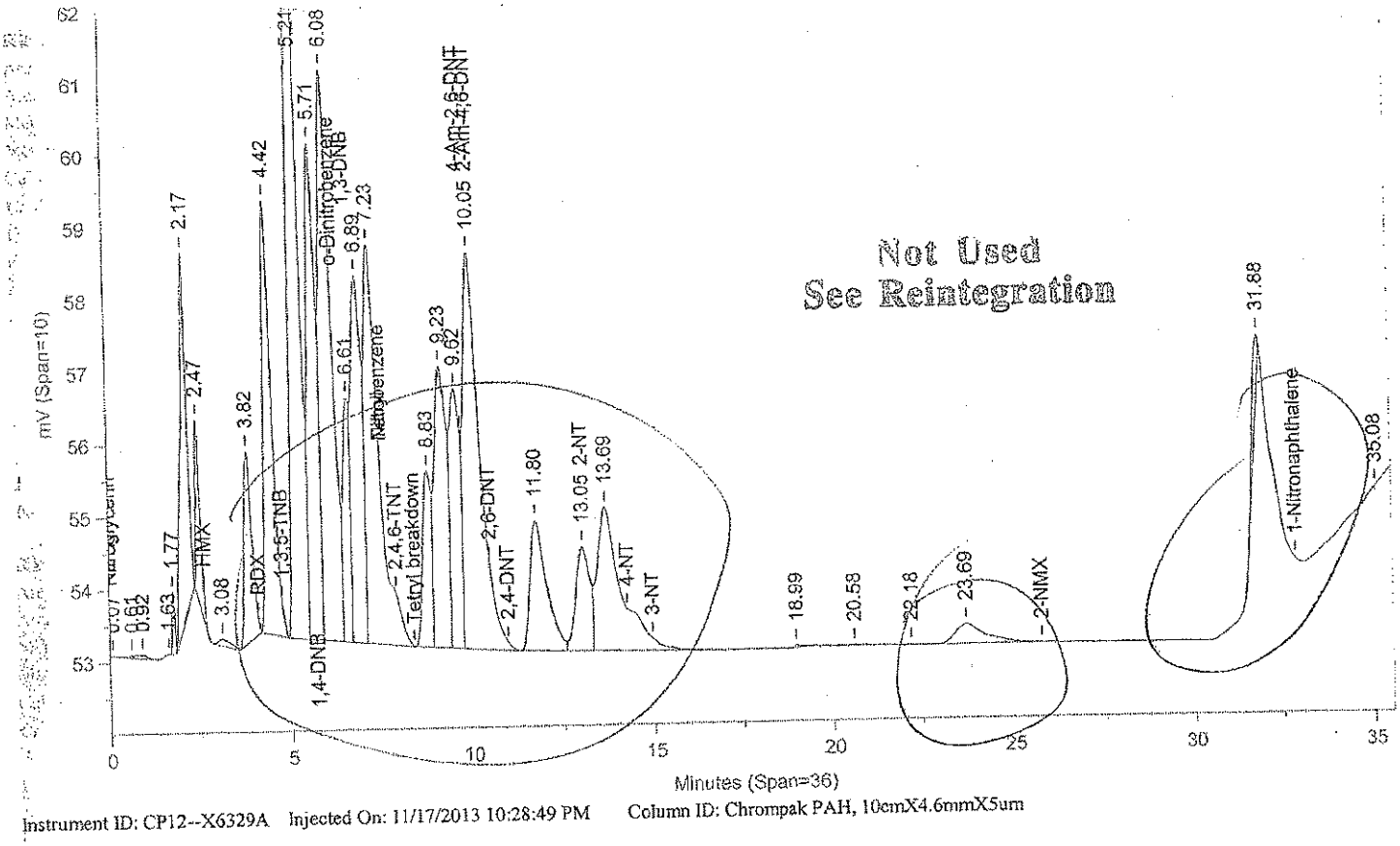
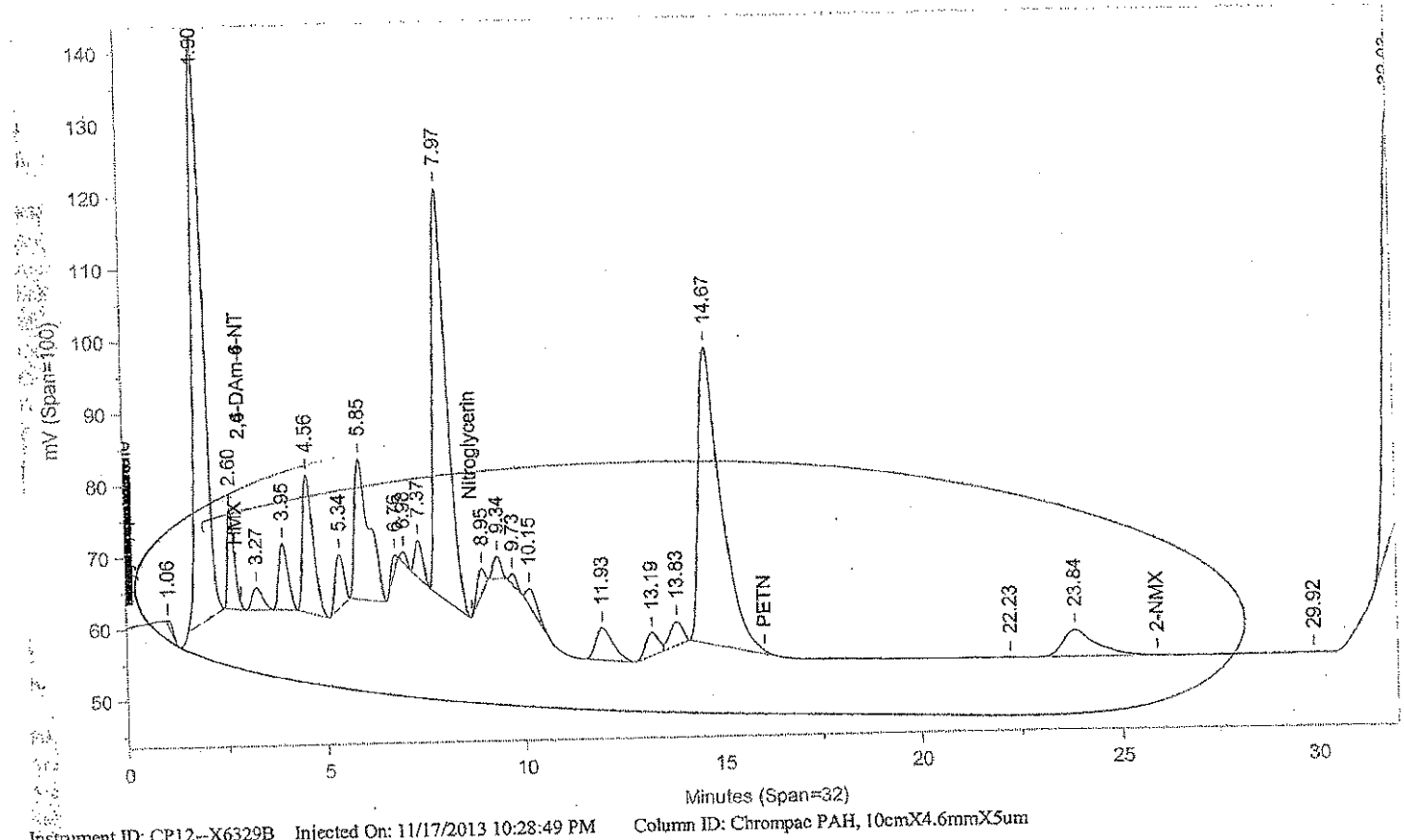
File: C:\CPWIN\DATA1\4E12310.77R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.77R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

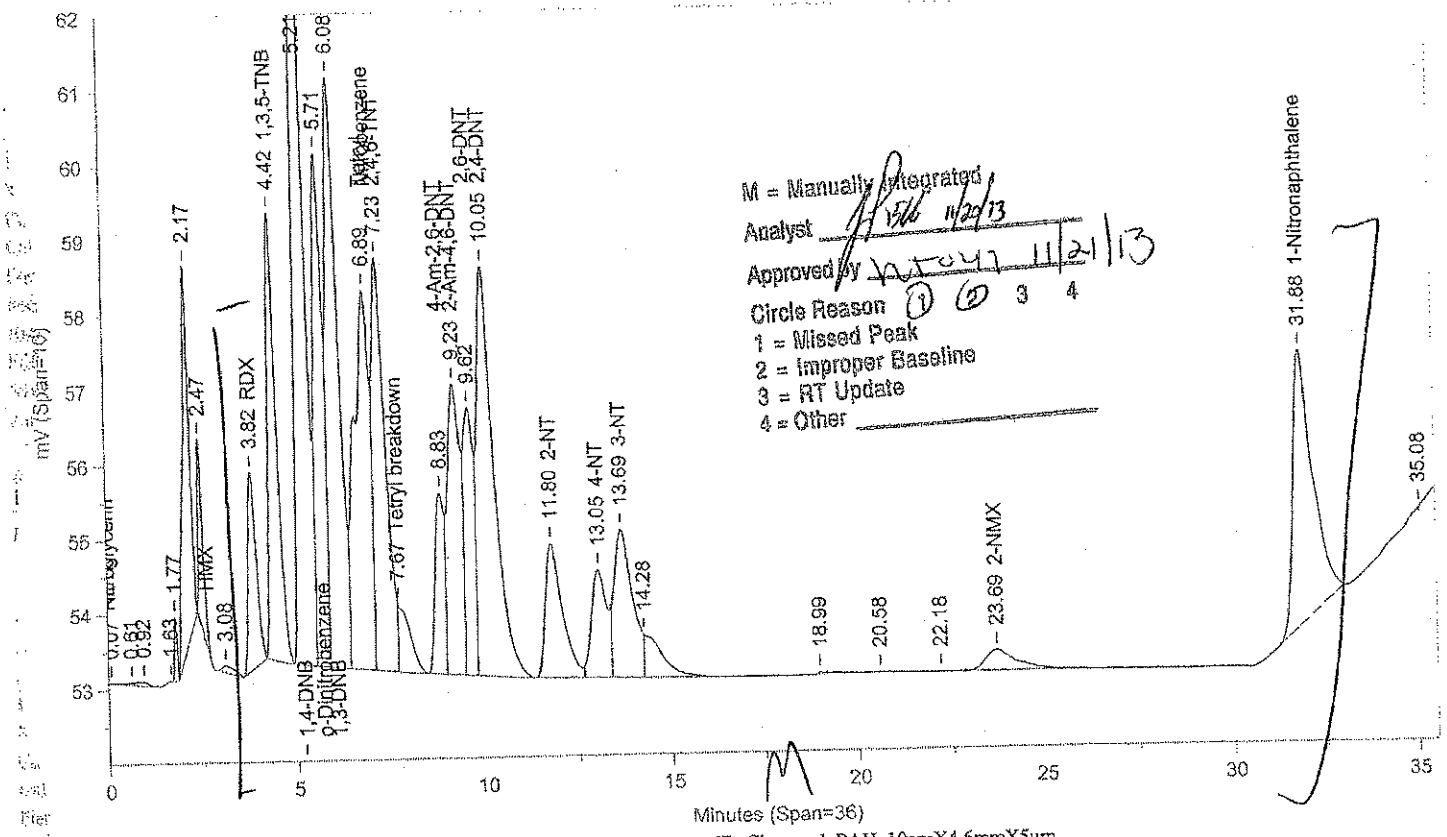
RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.708	118923	9.336	1,4-DNB			0	1,4-DNB
6.614	43633	2.689	1,3-DNB			0	1,3-DNB
10.053	170848	15.601	2-Am-4,6-DNT			0	2-Am-4,6-DNT
13.053	38611	5.837	2-NT			0	2-NT

Files:
Area File: C:\CPWIN\DATA1\4E12310.77A
Area File: C:\CPWIN\DATA1\4E12310B.77A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 2:52:52 PM
File Reported On: 11/18/2013 at 2:53:03 PM

Not Used
See Reintegration

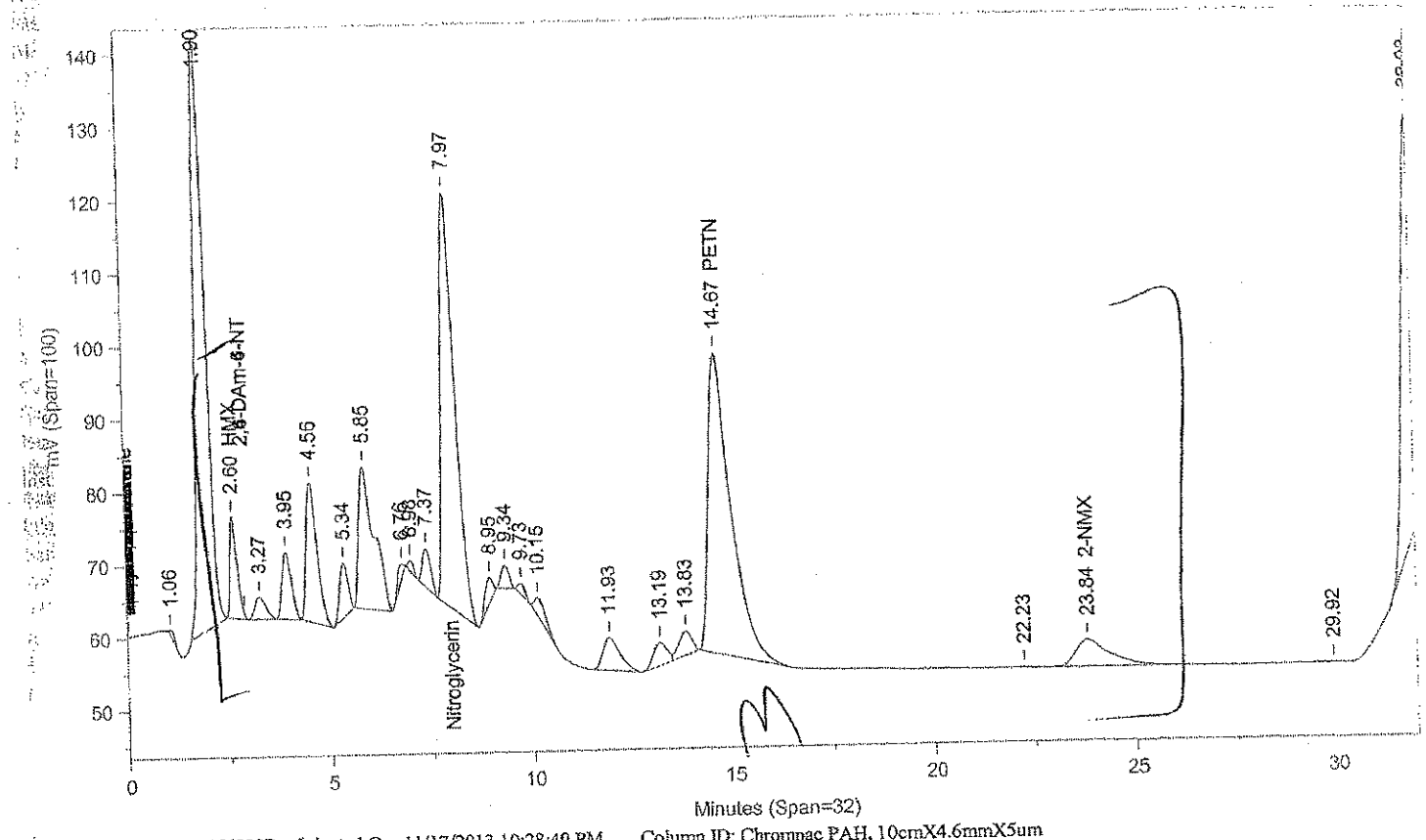
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4E12310.77R



Instrument ID: CP12--X6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\4E12310B.77R



Instrument ID: CP12--X6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 500
Analyst: 1566

Dilution Factor: 10

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.602	168885	8.123	HMX
3.816	41281	9.172	RDX	.	0	.	RDX
4.424	99345	9.413	1,3,5-TNB	.	0	.	1,3,5-TNB
5.209	240924	18.913	1,4-DNB	.	0	.	1,4-DNB
5.708	112673	21.87	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.079	168335	10.375	1,3-DNB	.	0	.	1,3-DNB
6.893	142329	8.235	Tetryl	.	0	.	Tetryl
7.235	124891	10.962	2,4,6-TNT	.	0	.	2,4,6-TNT
7.672	18831	1.09	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	7.971	1336226	209.104	Nitroglycerin
8.827	42654	9.093	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
9.227	95267	8.7	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
9.616	66087	10.872	2,6-DNT	.	0	.	2,6-DNT
10.053	170848	10.33	2,4-DNT	.	0	.	2,4-DNT
11.797	57334	8.668	2-NT	.	0	.	2-NT
13.053	41459	8.837	4-NT	.	0	.	4-NT
13.693	68789	10.16	3-NT	.	0	.	3-NT
.	0	.	PETN	14.666	1619089	236.449	PETN
23.69	15941	9.353	2-NMX	23.836	222902	9.127	2-NMX
31.884	138676	21.112	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\3E12310.CAL
Calibration File B: C:\CPWIN\DATA1\3E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 12:02:18 PM
File Reported On: 11/20/2013 at 12:02:16 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSDA** 11/12/13 LCSD16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--Y6329A
Result file : 4C12310.77R
Calibration file : 3C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : *126% (73-122) Conc.: 12.567383

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.20	4.44	4.40	41096	7.840355
RDX	5.16	5.44	5.36	58935	10.047509
Nitrobenzene	12.75	13.23	13.07	88940	9.630445
o-Dinitrobenzene	14.72	15.27	15.08	140258	20.397144
4-Am-2,6-DNT	16.66	17.15	16.98	193980	10.050929
1,3-DNB	18.93	19.58	19.23	147642	8.717997
1,4-DNB	19.62	20.40	19.92	257693	22.522060
2-NT	24.05	24.86	24.57	54787	9.351515
4-NT	27.60	28.62	28.12	87884	9.072639
1,3,5-TNB	29.81	31.16	30.21	90192	8.369838
2,6-DNT	30.62	31.33	31.02	77296	12.086920
2,4-DNT	33.67	34.06	33.89	134550	10.418971
2-NMX	34.12	34.29	34.32	20079	12.567383
Tetryl	34.41	34.73	34.61	76226	9.964551
2,4,6-TNT	35.36	35.68	35.56	107906	10.259212
1-Nitronaphthalene	36.36	36.61	36.56	153890	19.741182

Analysis Report (B)

Injected on : NOV 17, 2013 22:28:50
Instrument : CP12--Y6329B
Result file : 4C12310B.77R
Calibration file : 3C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (73-122) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.62	9.95	9.82	1114636	219.332565
PETN	26.02	26.81	26.44	1259257	212.070557

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	212.070557	18	6			
☑ Nitroglycerin	B	219.332565	15	5.2			
☑ HMX	A	7.840355	2	0.65			
☑ RDX	A	10.047509	0.5	0.2			
☑ Nitrobenzene	A	9.630445	0.6	0.2			
☑ o-Dinitrobenzene	A	20.397144	0.6	0.2			
☑ 4-Am-2,6-DNT	A	10.050929	0.6	0.3			
☑ 2-Am-4,6-DNT			<0.6	<0.2			
☑ 1,3-DNB	A	8.717997	0.6	0.2			
☑ 1,4-DNB	A	22.522060	0.6	0.3			
☑ 2-NT	A	9.351515	0.75	0.25			
☑ 4-NT	A	9.072639	1.2	0.6			
☑ 3-NT			<1.2	<0.4			
☑ 1,3,5-TNB	A	8.369838	0.6	0.2			
☑ 2,6-DNT	A	12.086920	1.3	0.45			
☑ 2,4-DNT	A	10.418971	2	0.72			
☐ 2-NMX	A	12.567383					
☑ Tetryl	A	9.964551	0.6	0.4			
☑ 2,4,6-TNT	A	10.259212	0.6	0.2			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:12

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSDA** 11/12/13 LCSD16314 Sample ID: AA **Batchnumber: 133140016A**
Sample Amount: 500 ml Total Volume: 10 ml Analyst: 1566 SDG: State:
Analyses: 06916

Analysis Report (A)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--Y6329A
Result file	: 4C12310.77R
Calibration file	: 3C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 17, 2013 22:28:50
Instrument	: CP12--Y6329B
Result file	: 4C12310B.77R
Calibration file	: 3C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	19.741182	0.6	0.2			

Units: ug/l

Reviewed by: James H. Place, Senior Chemist

Date: NOV 21 2013

Verified by: Valerie L. Hartman, Principal Specialist

Date: NOV 21 2013

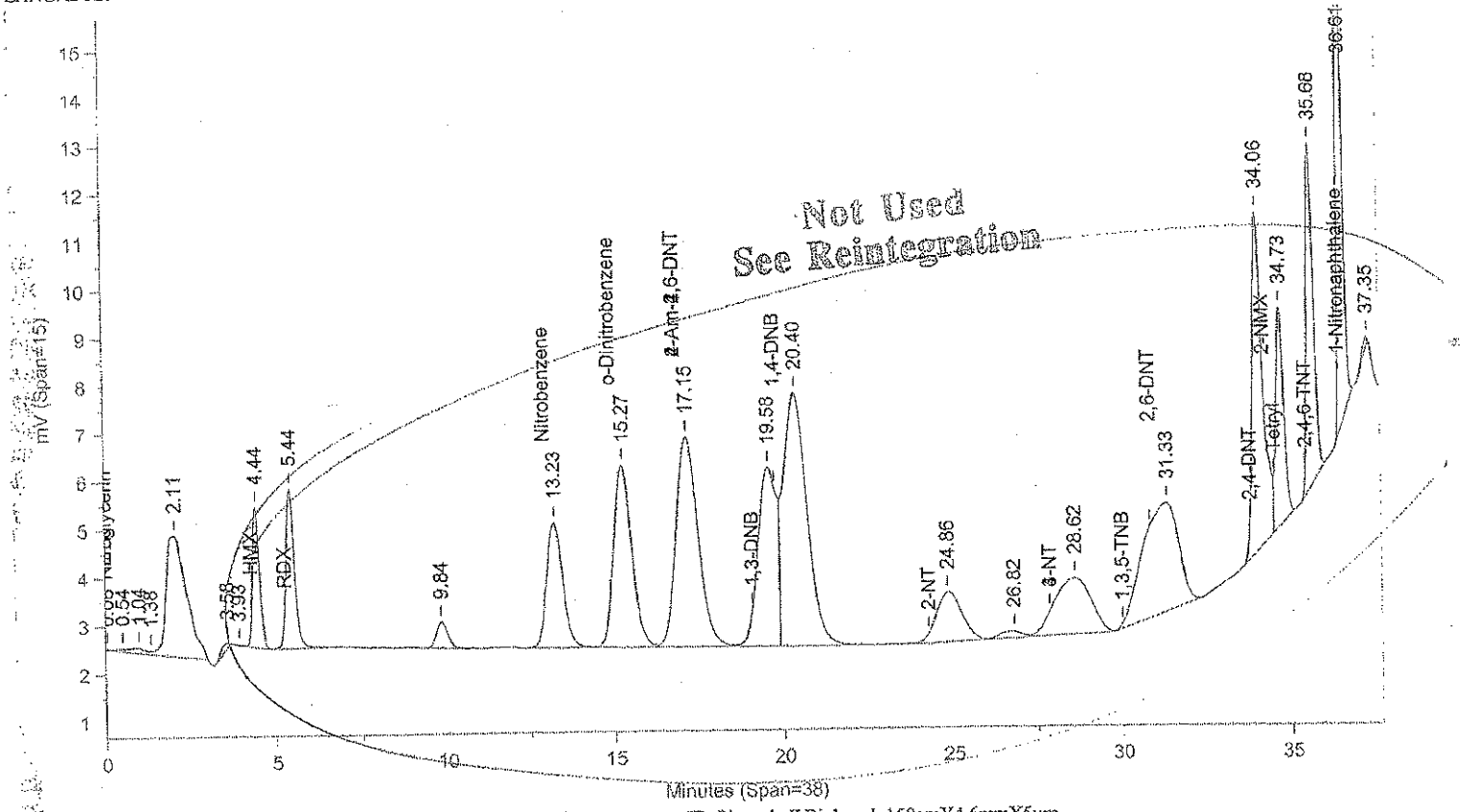
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/20/2013 15:35:12

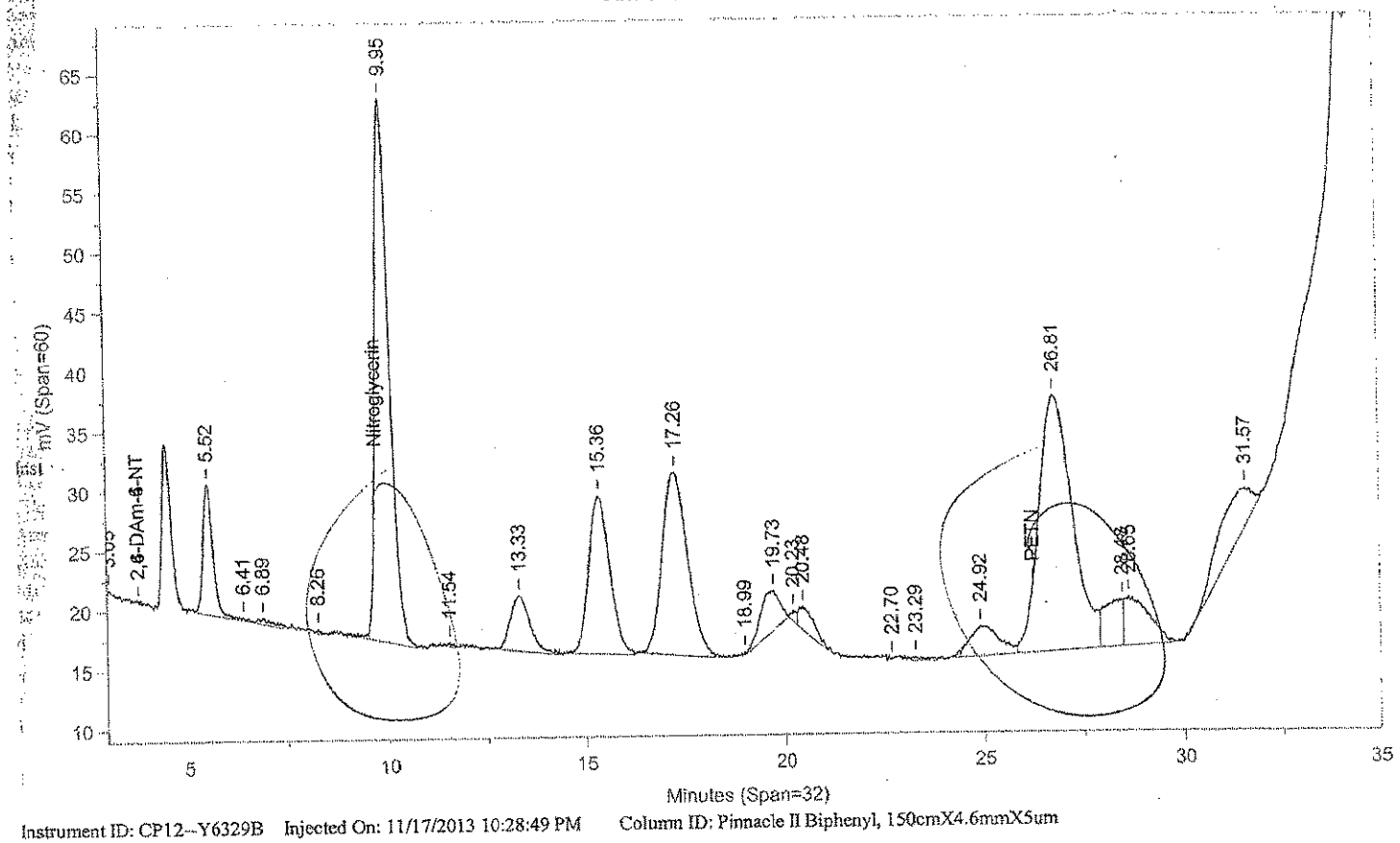
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\4C12310.77R



Instrument ID: CP12--Y6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.77R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B

Files:
Area File: C:\CPWIN\DATA1\4C12310.77A
Area File: C:\CPWIN\DATA1\4C12310B.77A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/18/2013 3:19:30 PM
File Reported On: 11/18/2013 at 3:19:40 PM

Not Used
See Reintegration

LANCASTER LABORATORIES

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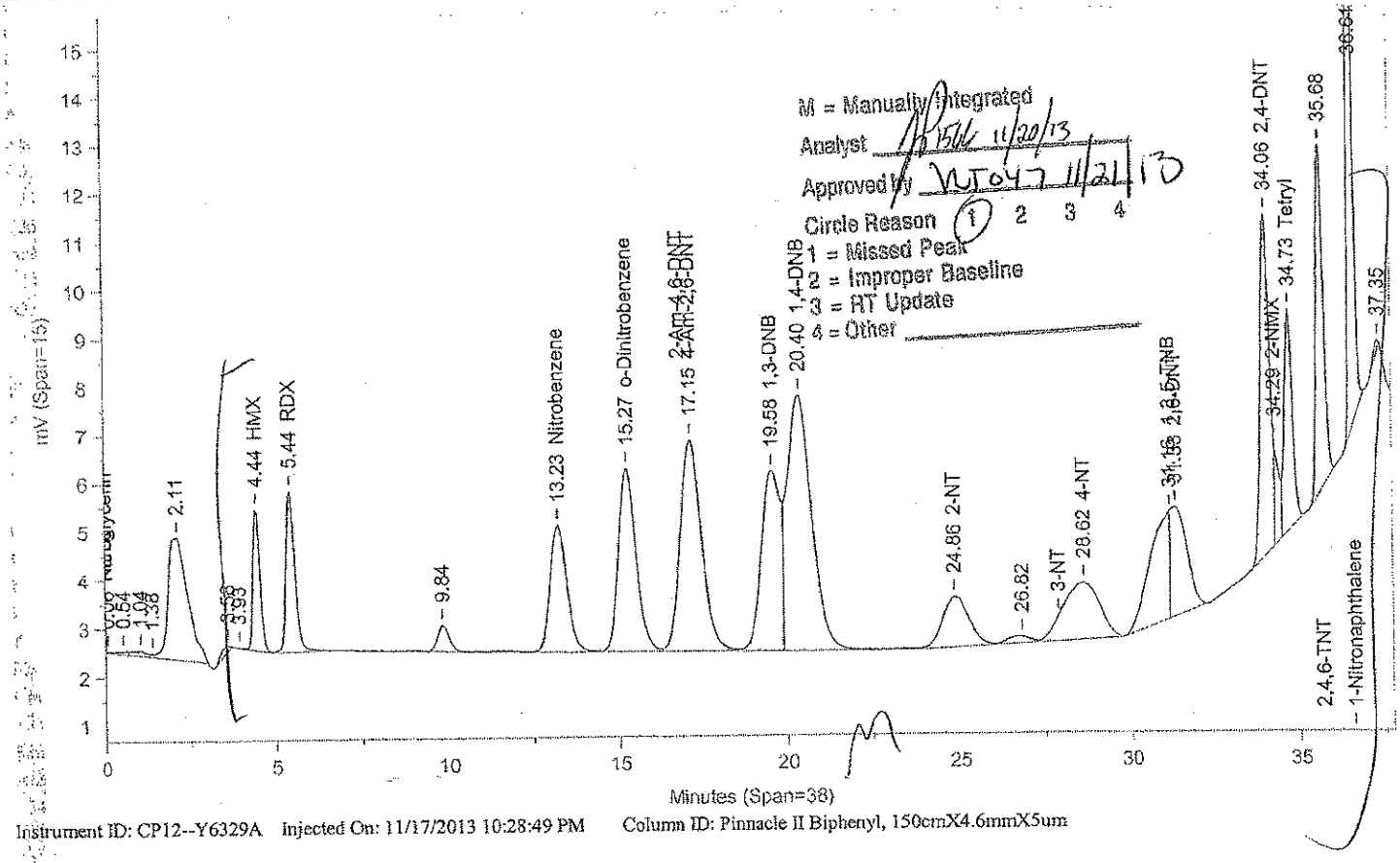
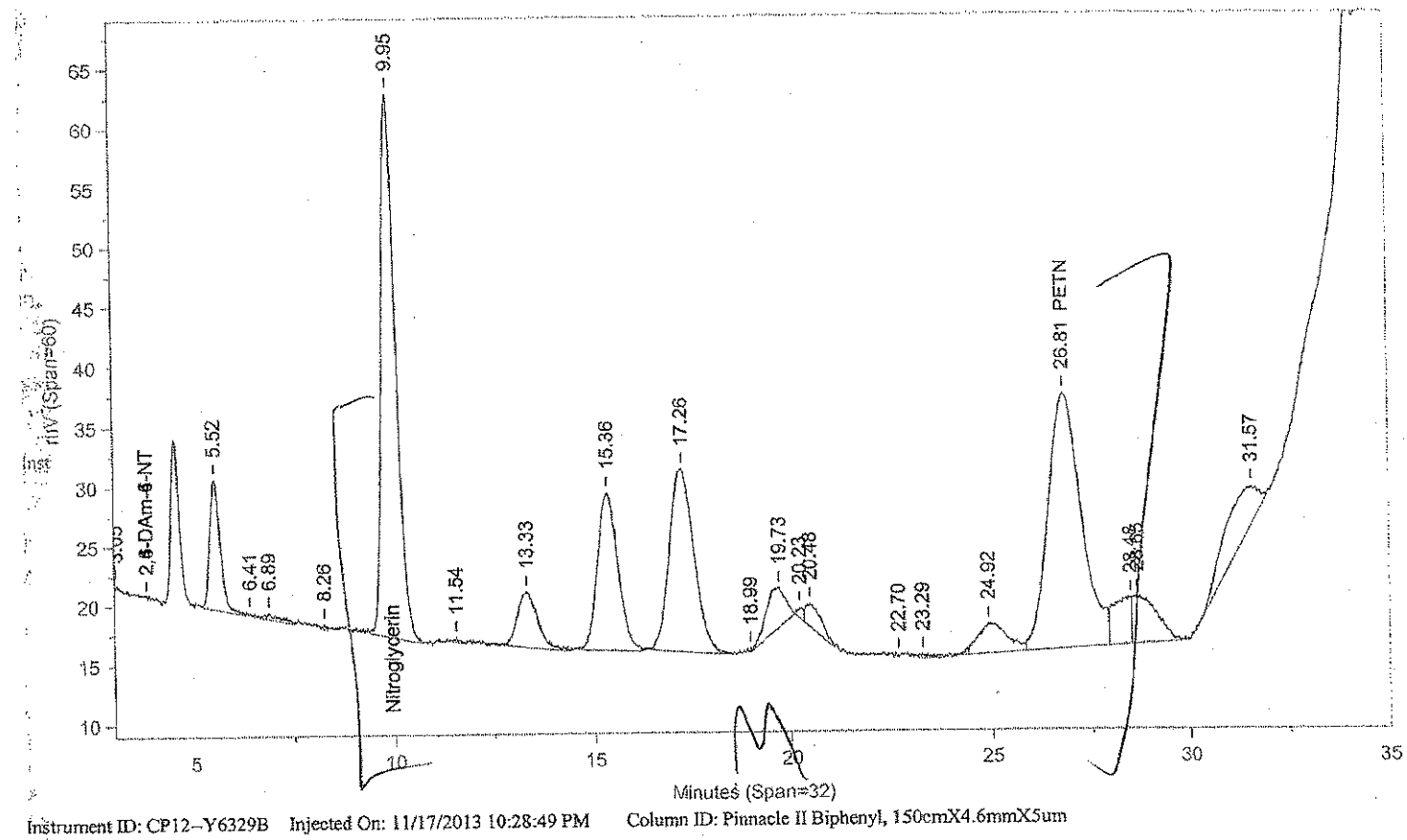


Instrument ID: CP12--Y6329A Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\4C12310B.77R



Instrument ID: CP12--Y6329B Injected On: 11/17/2013 10:28:49 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 500 Dilution Factor: 10
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.436	41096	7.84	HMX	.	0	.	HMX
5.436	58935	10.048	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.952	1114636	219.333	Nitroglycerin
13.234	88940	9.63	Nitrobenzene	.	0	.	Nitrobenzene
15.267	140258	20.397	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
17.155	193980	10.051	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
19.583	147642	8.718	1,3-DNB	.	0	.	1,3-DNB
20.4	257693	22.522	1,4-DNB	.	0	.	1,4-DNB
24.856	54787	9.352	2-NT	.	0	.	2-NT
.	0	.	PETN	26.81	1259257	212.071	PETN
28.619	87884	9.073	4-NT	.	0	.	4-NT
31.161	90192	8.37	1,3,5-TNB	.	0	.	1,3,5-TNB
31.332	77296	12.087	2,6-DNT	.	0	.	2,6-DNT
34.058	134550	10.419	2,4-DNT	.	0	.	2,4-DNT
34.289	20079	12.567	2-NMX	.	0	.	2-NMX
34.729	76226	9.965	Tetryl	.	0	.	Tetryl
35.676	107906	10.259	2,4,6-TNT	.	0	.	2,4,6-TNT
36.611	153890	19.741	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\3C12310.CAL
Calibration File B: C:\CPWIN\DATA1\3C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 2:45:58 PM
File Reported On: 11/20/2013 at 2:45:56 PM

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Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314 BLK Sample ID: AA **Batchnumber:** 133140020A

Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:

Analyses: 06918

Analysis Report (A)

Injected on	Nov 19, 2013 17:48:25
Instrument	X6329A
Result file	5E12310.34R
Calibration file	4E12310
Method file	8330

%SSR(NMX) 89% (63 - 150) Conc: 4440.551758

Analysis Report (B)

Injected on	Nov 19, 2013 17:48:25
Instrument	Y6329A
Result file	5C12310.34R
Calibration file	4C12310
Method file	8330C

%SSR(NMX) 112% (63 - 150) Conc: 5582.893066

Single Component Data

Compound	Min	RT	Max	Area	Amount
1,4-Dinitrobenzene	5.80	5.91	6.00	35	1.371956
o-Dinitrobenzene	6.43	6.50	6.63	123	11.937737
2,4,6-Trinitrotoluene	8.19	8.28	8.39	10	0.450693
2,6-Dinitrotoluene	10.95	11.08	11.23	39	3.193529
2,4-Dinitrotoluene	11.45	11.59	11.74	28	0.861124
2-NMX	26.91	27.14	27.59	15137	4440.551758

Compound	Min	RT	Max	Area	Amount
2,4-Dinitrotoluene	33.60	33.66	33.82	347	13.423467
2-NMX	34.05	34.15	34.25	17633	5582.893066
Tetryl	34.39	34.58	34.59	250	C

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ Nitroglycerin			<6000	<2000			
☐ PETN			<6000	<2000			
☐ HMX			<750	<250			
☐ RDX			<300	<125			
☐ 1,3,5-Trinitrobenzene			<300	<100			
☐ 1,4-Dinitrobenzene			<300	<100			
☐ o-Dinitrobenzene			<300	<100			
☐ 1,3-DNB			<300	<100			
☐ Tetryl			<300	<153			
☐ Nitrobenzene			<300	<100			
☐ 2,4,6-Trinitrotoluene			<300	<100			
☐ 4-Amino-2,6-dinitrotoluene			<300	<150			
☐ 2-Amino-4,6-dinitrotoluene			<300	<100			
☐ 2,6-Dinitrotoluene			<300	<100			
☐ 2,4-Dinitrotoluene			<300	<100			
☐ 2-Nitrotoluene			<300	<200			
☐ 4-Nitrotoluene			<300	<200			
☐ 3-Nitrotoluene			<300	<250			
☐ 2-NMX	A	4440.551758				22.79	
☐ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomaylla, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314 **Sample ID:** AA **Batchnumber:** 133140020A
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--X6329A
Result file : 5E12310.34R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 89% (63-150) Conc.: 4440.55175(

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.36	4.40	512	-66.635361
1,4-DNB	5.80	5.91	6.00	35	1.371956
o-Dinitrobenzene	6.43	6.50	6.63	123	11.937737
2,4,6-TNT	8.19	8.28	8.39	10	0.450693
2,6-DNT	10.95	11.08	11.23	39	3.193529
2,4-DNT	11.45	11.59	11.74	28	0.861124
2-NMX	26.91	27.14	27.59	15137	4440.551758

Analysis Report (B)

Injected on : NOV 19, 2013 17:48:25
Instrument : CP12--X6329B
Result file : 5E12310B.34R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 105% (63-150) Conc.: 5234.70263

Peak name	Min	R.T.	Max	Area	Amount
2-NMX	27.09	27.28	27.76	255699	5234.702637

RDX $\frac{512}{110.0628} \times \frac{20}{2}$ = 46.518896 Average CF

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin			<6000	<2000			Report Confirmation
☑ PETN			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ 1,3,5-TNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ Tetryl			<300	<153			
☑ Nitrobenzene			<300	<100			
☑ 2,4,6-TNT			<300	<100			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☐ 2-NMX	A	4440.551758				16.42	
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:46:45

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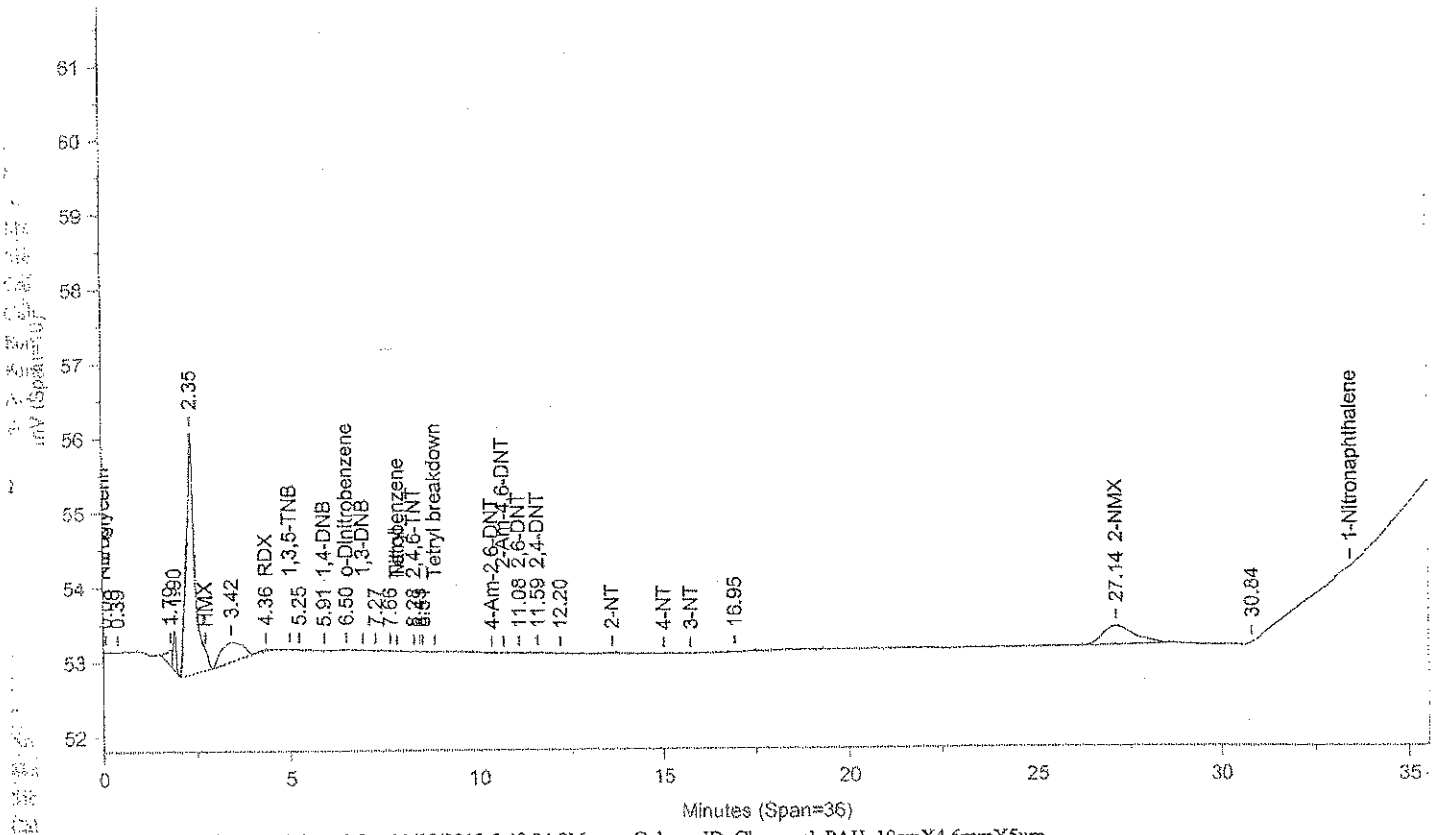

Instrument ID: CP12--X6329A Injected On: 11/19/2013 5:48:24 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

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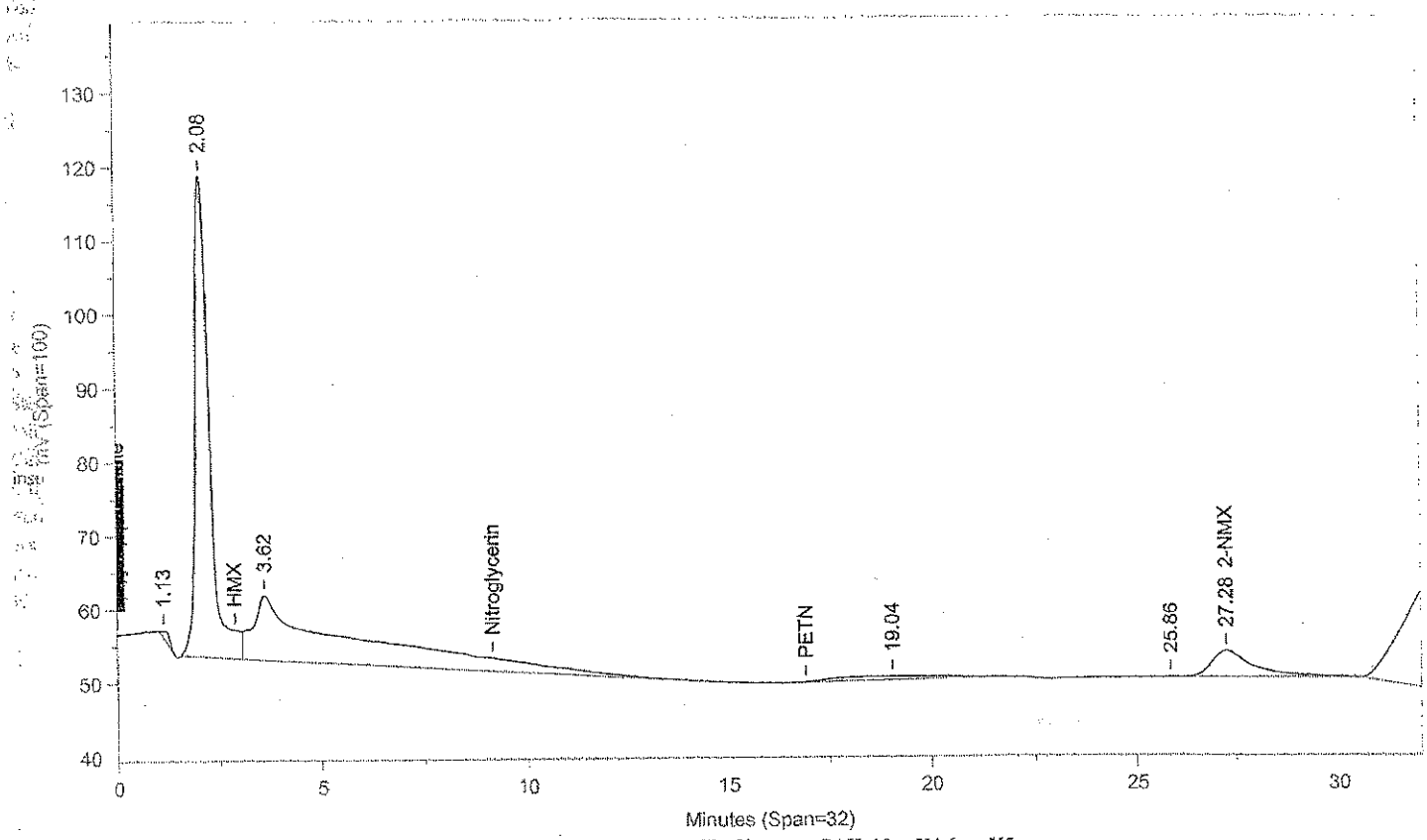

Instrument ID: CP12--X6329B Injected On: 11/19/2013 5:48:24 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2

Dilution Factor: 20

Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.356	512	-66.635	RDX	.	0	.	RDX
5.911	35	1.372	1,4-DNB	.	0	.	1,4-DNB
6.495	123	11.938	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
8.283	10	.451	2,4,6-TNT	.	0	.	2,4,6-TNT
11.082	39	3.194	2,6-DNT	.	0	.	2,6-DNT
11.588	28	.861	2,4-DNT	.	0	.	2,4-DNT
27.139	15137	4440.552	2-NMX	27.283	255699	5234.703	2-NMX

Files:
Area File: C:\CPWIN\DATA1\SE12310.34A
Area File: C:\CPWIN\DATA1\SE12310B.34A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:49:48 PM
File Reported On: 11/20/2013 at 4:49:57 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: BLANKA 11/12/13 PBLK20314Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 19, 2013 17:48:25
Instrument	: CP12--Y6329A
Result file	: 5C12310.34R
Calibration file	: 4C12310.CAL
Method file	: 8330C.MET
%SSR(2-NMX)	: 112% (63-150) Conc.: 5582.89306(

Analysis Report (B)

Injected on	: NOV 19, 2013 17:48:25
Instrument	: CP12--Y6329B
Result file	: 5C12310B.34R
Calibration file	: 4C12310B.CAL
Method file	: 8330CB.MET
%SSR(2-NMX)	: *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
RDX	5.08	5.18	5.28	73	-229.267502
2,4-DNT	33.60	33.66	33.82	347	13.423467
2-NMX	34.05	34.15	34.25	17633	5582.893066
Tetryl	34.39	34.58	34.59	250	198.250275

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN			<6000	<2000			Report
☑ Nitroglycerin			<6000	<2000			
☑ HMX			<750	<250			
☑ RDX			<300	<125			
☑ Nitrobenzene			<300	<100			
☑ o-Dinitrobenzene			<300	<100			
☑ 4-Am-2,6-DNT			<300	<150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB			<300	<100			
☑ 1,4-DNB			<300	<100			
☑ 2-NT			<300	<200			
☑ 4-NT			<300	<200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB			<300	<100			
☑ 2,6-DNT			<300	<100			
☑ 2,4-DNT			<300	<100			
☐ 2-NMX	A	5582.893066					
☑ Tetryl	A	198.250275	<300	153	J		N/C
☑ 2,4,6-TNT			<300	<100			
☑ 1-Nitronaphthalene			<300	<100			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomaylo, Principal Operator

Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:35:57

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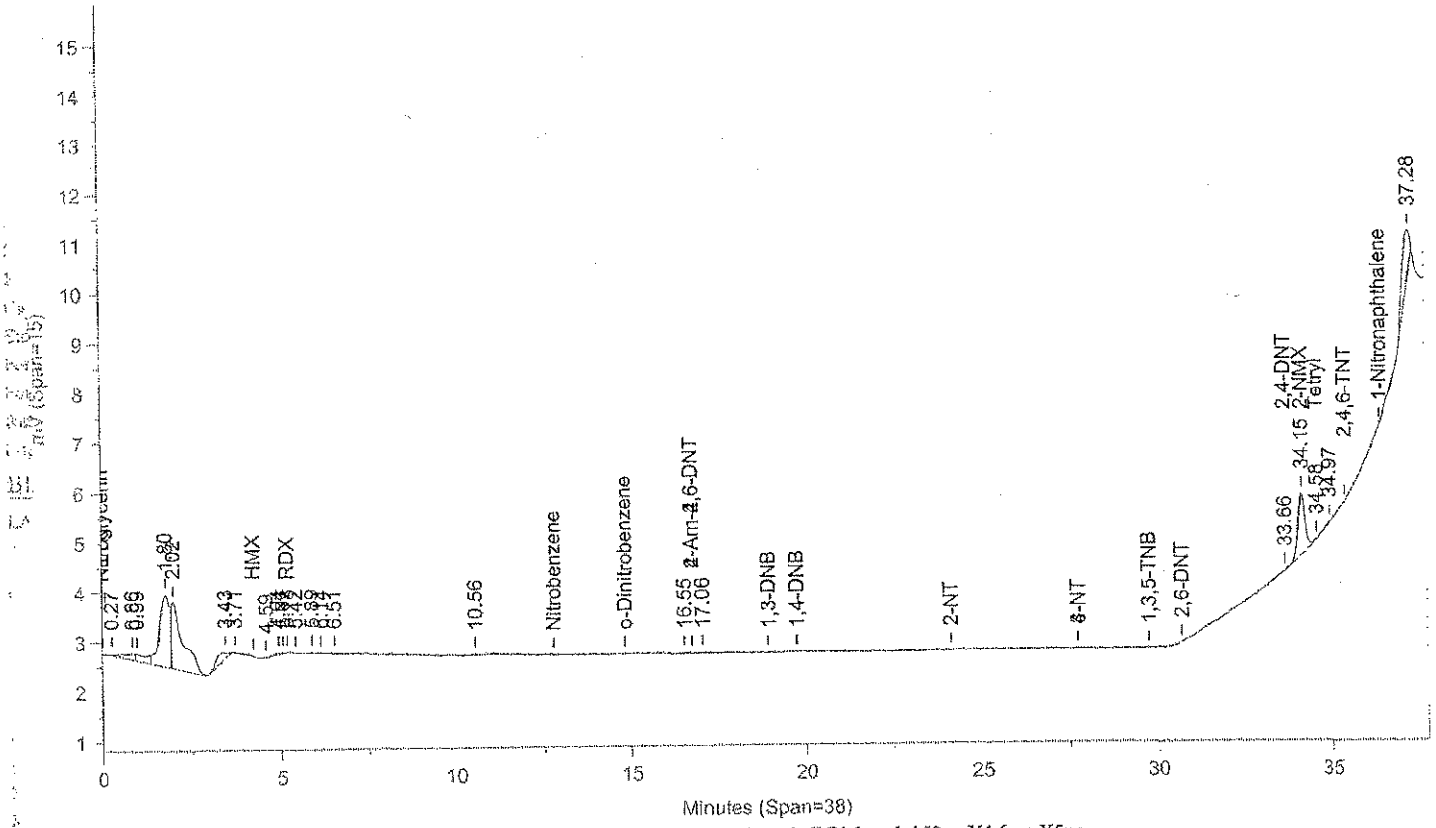

Instrument ID: CP12--Y6329A Injected On: 11/19/2013 5:48:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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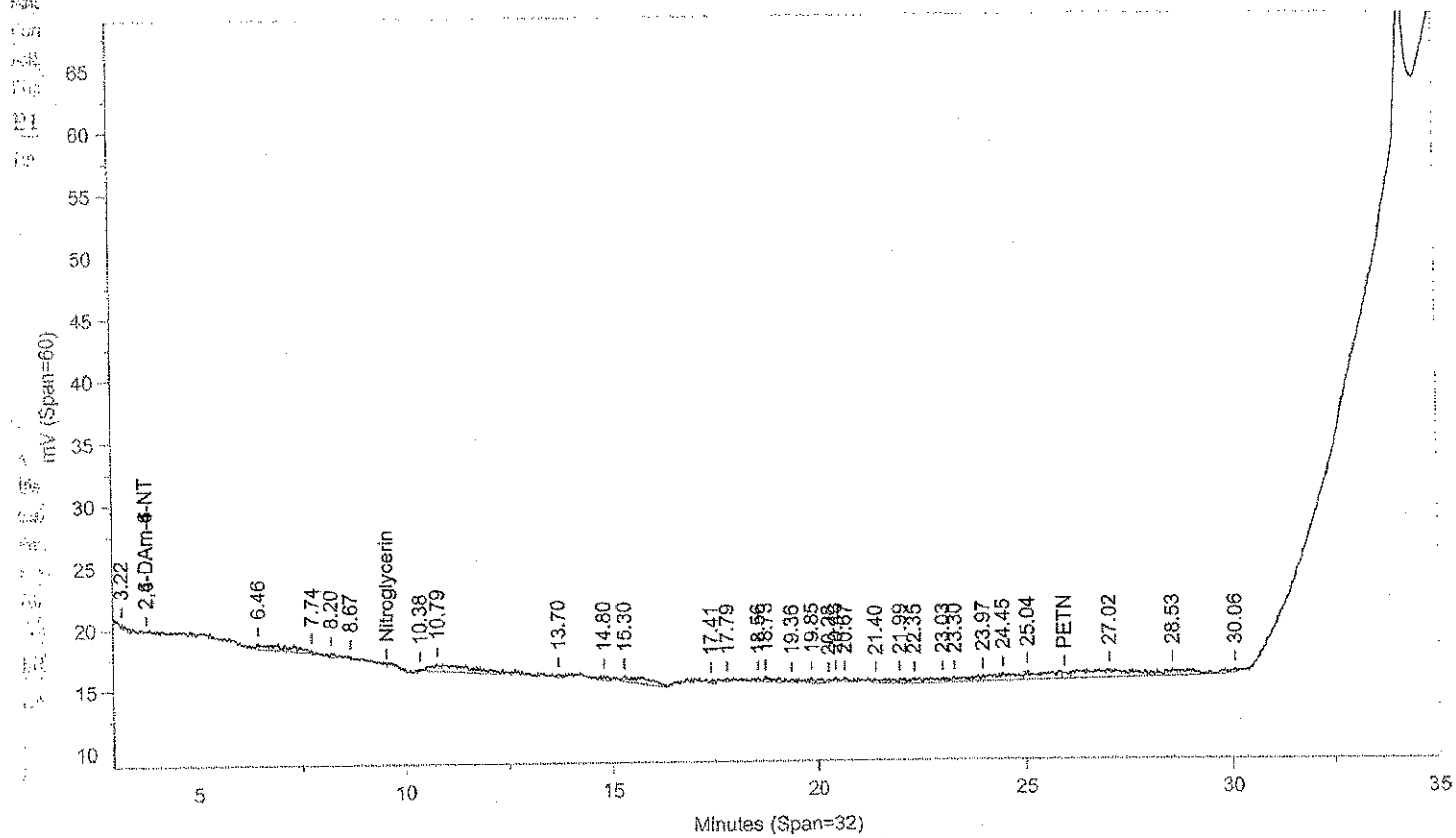

Instrument ID: CP12--Y6329B Injected On: 11/19/2013 5:48:24 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
5.178	73	-229.268	RDX			0	RDX
33.656	347	13.423	2,4-DNT			0	2,4-DNT
34.15	17633	5582.893	2-NMX			0	2-NMX
34.577	250	198.25	Tetryl			0	Tetryl

Files:
Area File: C:\CPWIN\DATA1\5C12310.34A
Area File: C:\CPWIN\DATA1\5C12310B.34A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:44:14 PM
File Reported On: 11/20/2013 at 5:44:23 PM

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Data Summary

Sample Name: LCSA 11/12/13 LCS20314 LCS Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on Nov 19, 2013 18:30:49
Instrument X6329A
Result file 5E12310.35R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 97% (63 - 150) Conc: 4840.435059

Analysis Report (B)

Injected on Nov 19, 2013 18:30:49
Instrument Y6329A
Result file 5C12310.35R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 92% (63 - 150) Conc: 4606.641602

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.20	4.30	4.40	42652	4742.681152
1,3,5-Trinitrobenzene	4.90	5.00	5.10	99221	4700.475586
1,4-Dinitrobenzene	5.80	5.91	6.00	240515	9440.367188
o-Dinitrobenzene	6.43	6.53	6.63	113699	11034.770508
1,3-DNB	6.83	6.91	7.03	179846	5542.35791
Tetryl	7.71	7.85	7.99	149664	4555.140777
2,4,6-Trinitrotoluene	8.19	8.29	8.39	126988	5573.057617
4-Amino-2,6-dinitrotoluer	10.21	10.20	10.49	46626	4969.726074
2-Amino-4,6-dinitrotoluer	10.51	10.65	10.80	99741	4554.069336
2,6-Dinitrotoluene	10.95	11.08	11.23	65263	5368.086914
2,4-Dinitrotoluene	11.45	11.58	11.74	173267	5238.368652
2-Nitrotoluene	13.49	13.61	13.77	60104	4543.366211
4-Nitrotoluene	14.87	15.02	15.19	43984	4687.738281
3-Nitrotoluene	15.60	15.74	15.93	75004	5539.245605
2-NMX	26.91	27.13	27.59	16500	4840.435059
1-Nitronaphthalene	33.20	33.41	33.69	156013	11875.675781

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.23	4.33	35954	3429.75708
RDX	5.08	5.19	5.28	59070	5035.84668
Nitrobenzene	12.62	12.73	12.94	90037	4875.074219
o-Dinitrobenzene	14.65	14.75	15.01	143608	10444.92675
4-Amino-2,6-dinitrotoluer	16.61	16.66	16.93	195914	5075.560547
1,3-DNB	18.80	18.84	19.10	157025	4636.024414
1,4-Dinitrobenzene	19.60	19.62	19.90	256163	11193.30078
2-Nitrotoluene	23.89	24.02	24.41	58942	5036.265137
4-Nitrotoluene	27.49	27.52	28.01	96157	4951.70898
1,3,5-Trinitrobenzene	29.57	29.62	29.97	115743	5221.70800
2,6-Dinitrotoluene	30.49	30.52	30.89	50141	3966.96069
2,4-Dinitrotoluene	33.60	33.67	33.82	142728	5526.11084
2-NMX	34.05	34.15	34.25	14226	4606.64160
Tetryl	34.39	34.46	34.59	82700	5389.92187
2,4,6-Trinitrotoluene	35.32	35.40	35.52	112245	5333.14160
1-Nitronaphthalene	36.34	36.43	36.54	167853	10741.03515

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
Nitroglycerin	B	19662.185547	6000	2000		55.27	
PETN	B	17711.814453	6000	2000		27.60	
HMX	A	3450.964844	750	250		0.62	
RDX	A	4742.681152	300	125		6.00	
1,3,5-Trinitrobenzene	A	4700.475586	300	100		10.51	
1,4-Dinitrobenzene	A	9440.367188	300	100		16.99	
o-Dinitrobenzene	A	11034.770508	300	100		5.49	
1,3-DNB	A	5542.35791	300	100		17.81	
Tetryl	B	5389.921875	300	153		16.79	
Nitrobenzene	B	4875.074219	300	100		6.79	
2,4,6-Trinitrotoluene	A	5573.057617	300	100		4.40	
4-Amino-2,6-dinitrotoluene	A	4969.726074	300	150		2.11	
2-Amino-4,6-dinitrotoluene	A	4554.069336	300	100		10.83	
2,6-Dinitrotoluene	A	5368.086914	300	100		30.02	
2,4-Dinitrotoluene	A	5238.368652	300	100		5.35	
2-Nitrotoluene	A	4543.366211	300	200		10.29	
4-Nitrotoluene	A	4687.738281	300	200		5.48	
3-Nitrotoluene	A	5539.245605	300	250		11.20	
2-NMX	A	4840.435059				4.95	
1-Nitronaphthalene	A	11875.675781	300	100		10.03	

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Data Summary

Sample Name: LCSA 11/12/13 LCS20314 LCS Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	Nov 19, 2013 18:30:49
Instrument	X6329A
Result file	5E12310.35R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 19, 2013 18:30:49
Instrument	Y6329A
Result file	5C12310.35R
Calibration file	4C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tompkins, Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329A
Result file : 5E12310.35R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 97% (63-150) Conc.: 4840.43505

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.30	4.40	42652	4742.681152
1,3,5-TNB	4.90	5.00	5.10	99221	4700.475586
1,4-DNB	5.80	5.91	6.00	240515	9440.367188
o-Dinitrobenzene	6.43	6.53	6.63	113699	11034.770508
1,3-DNB	6.83	6.91	7.03	179846	5542.357910
Tetryl	7.71	7.85	7.99	149664	4329.774902
2,4,6-TNT	8.19	8.29	8.39	126988	5573.057617
Tetryl breakdown	8.71	8.85	8.95	7790	225.365875
4-Am-2,6-DNT	10.21	10.20	10.49	46626	4969.726074
2-Am-4,6-DNT	10.51	10.65	10.80	99741	4554.069336
2,6-DNT	10.95	11.08	11.23	65263	5368.086914
2,4-DNT	11.45	11.58	11.74	173267	5238.368652
2-NT	13.49	13.61	13.77	60104	4543.366211
4-NT	14.87	15.02	15.19	43984	4687.738281
3-NT	15.60	15.74	15.93	75004	5539.245605
2-NMX	26.91	27.13	27.59	16500	4840.435059
1-Nitronaphthalene	33.20	33.41	33.69	156013	11875.675781

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329B
Result file : 5E12310B.35R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 104% (63-150) Conc.: 5226.40625

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.77	2.87	2.97	142359	3450.964844
Nitroglycerin	8.96	9.12	9.34	142475	11147.800781
PETN	16.63	16.87	17.20	183512	13415.883789
2-NMX	27.09	27.35	27.76	255294	5226.406250

Summary Report

Compound Name		Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
2,6-DAm-4-NT	☐							
2,4-DAm-6-NT	☐							
Nitroglycerin	☑	B	11147.800781	6000	2000			
PETN	☑	B	13415.883789	6000	2000			Corrected Value = 3936.25 88% Recovery
HMX	☑	B	3450.964844	750	250			
RDX	☑	A	4742.681152	300	125			
1,3,5-TNB	☑	A	4700.475586	300	100			
1,4-DNB	☑	A	9440.367188	300	100			
o-Dinitrobenzene	☑	A	11034.770508	300	100			
1,3-DNB	☑	A	5542.357910	300	100			
Tetryl	☑	A	4329.774902	300	153			+ Breakdown = 4555.140777
Nitrobenzene	☑			<300	<100			
2,4,6-TNT	☑	A	5573.057617	300	100			
Tetryl breakdown	☐							
4-Am-2,6-DNT	☑	A	4969.726074	300	150			
2-Am-4,6-DNT	☑	A	4554.069336	300	100			
2,6-DNT	☑	A	5368.086914	300	100			
2,4-DNT	☑	A	5238.368652	300	100			
2-NT	☑	A	4543.366211	300	200			
4-NT	☑	A	4687.738281	300	200			
3-NT	☑	A	5539.245605	300	250			
2-NMX	☐	A	4840.435059				7.67	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/24/2013 15:37:46

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329A
Result file : 5E12310.35R
Calibration file : 4E12310.CAL
Method file : 8330.MET

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--X6329B
Result file : 5E12310B.35R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	11875.675781	300	100			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____
Date: NOV 24 2013

Verified by: _____
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/24/2013 15:37:46

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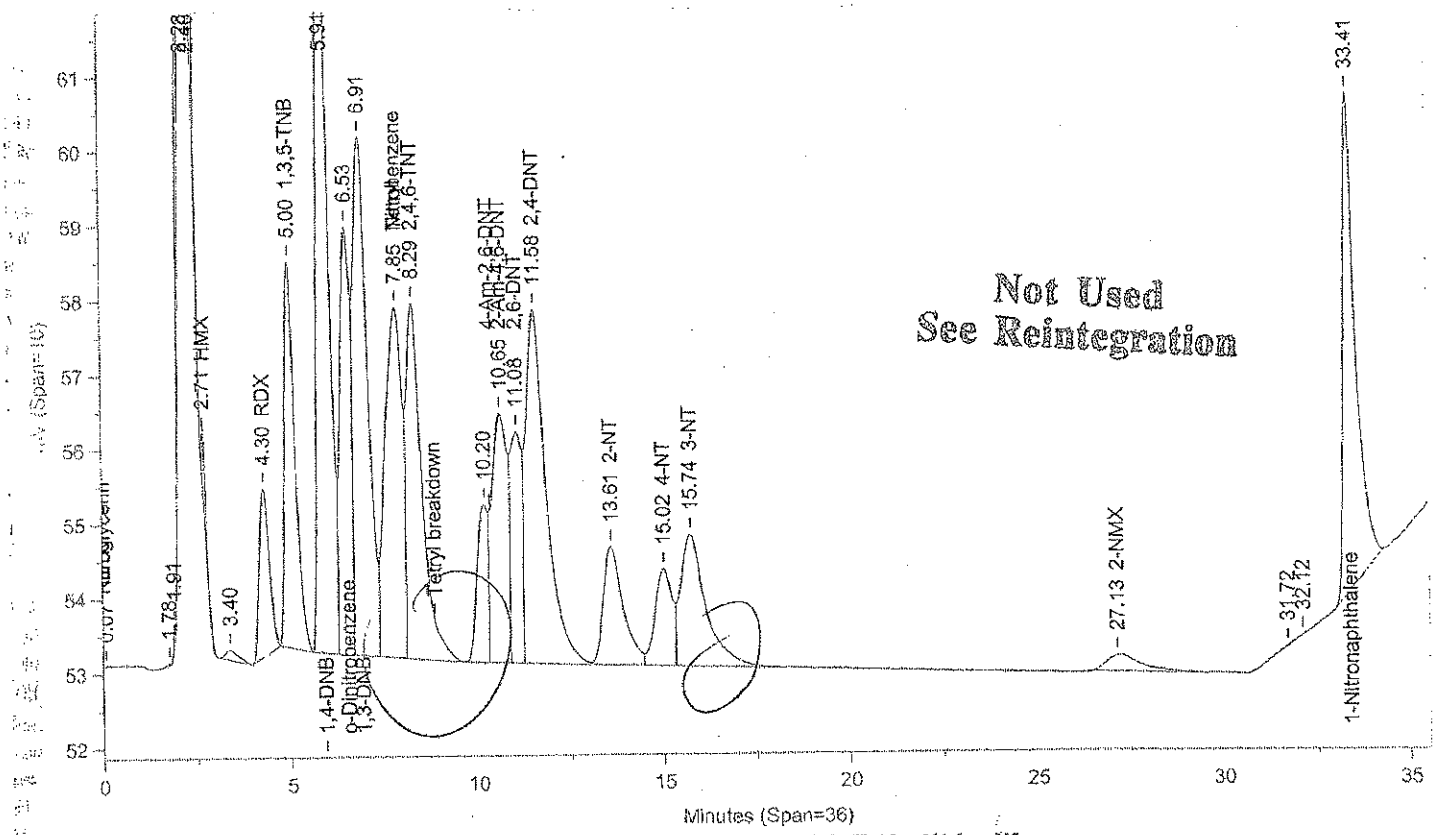
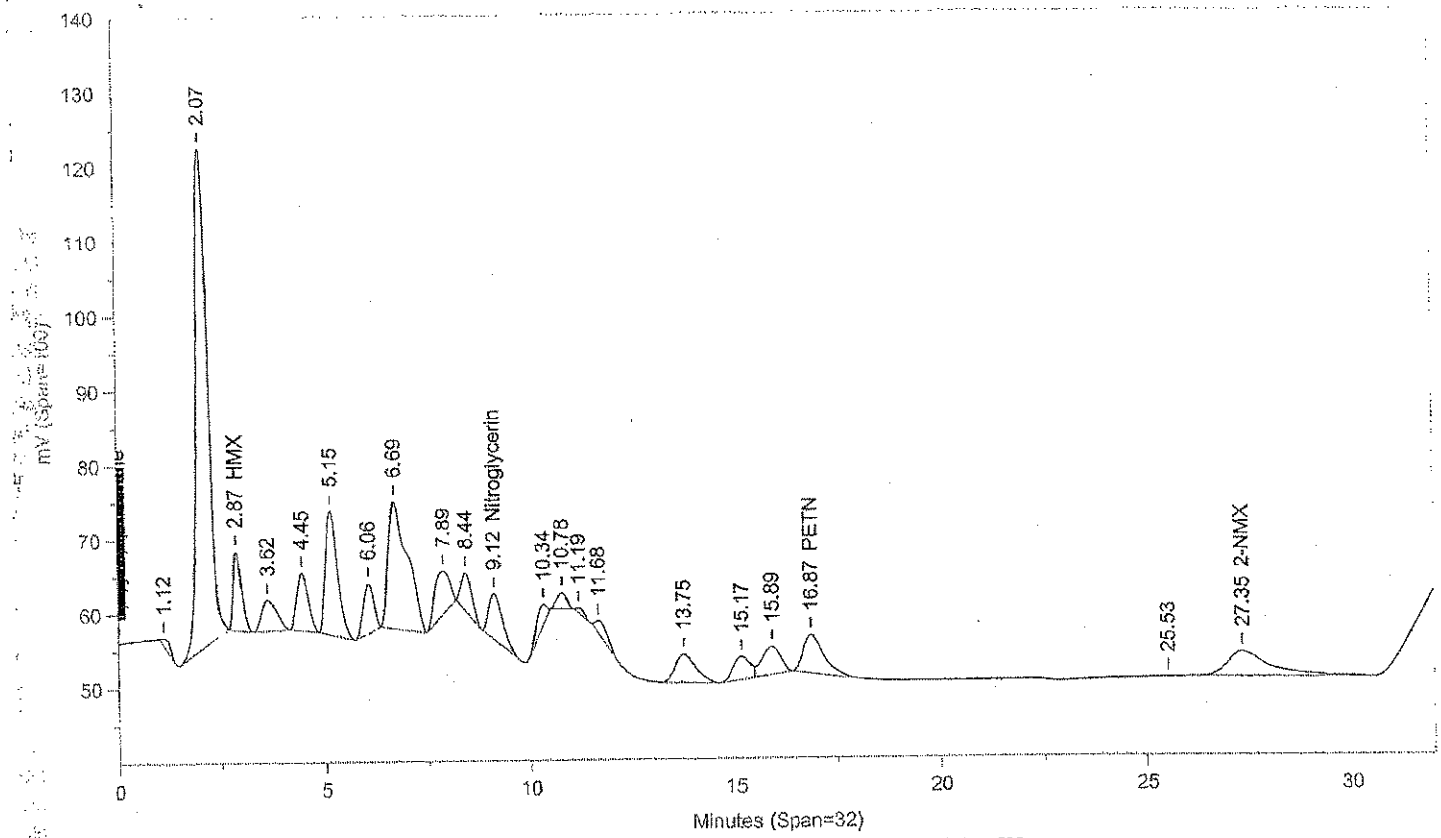
File: C:\CPWIN\DATA1\5E12310.35R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.35R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	142359	3450.965	HMX
4.304	42652	4742.681	RDX	.	0	.	RDX
4.998	99221	4700.476	1,3,5-TNB	.	0	.	1,3,5-TNB
5.912	240515	9440.367	1,4-DNB	.	0	.	1,4-DNB
6.532	113699	11034.77	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.914	179846	5542.358	1,3-DNB	.	0	.	1,3-DNB
7.848	149664	4329.775	Tetryl	.	0	.	Tetryl
8.288	134778	5914.936	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.125	142475	11147.8	Nitroglycerin
10.652	97488	4451.202	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	65206	5363.373	2,6-DNT	.	0	.	2,6-DNT
11.583	179316	5421.258	2,4-DNT	.	0	.	2,4-DNT
13.606	58677	4435.458	2-NT	.	0	.	2-NT
15.021	41621	4435.85	4-NT	.	0	.	4-NT
15.74	82788	6114.087	3-NT	.	0	.	3-NT
.	0	.	PETN	16.868	183512	13415.88	PETN
27.135	14780	4335.913	2-NMX	27.353	255294	5226.406	2-NMX
33.405	156013	11875.68	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.35A
Area File: C:\CPWIN\DATA1\5E12310B.35A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:50:18 PM
File Reported On: 11/20/2013 at 4:50:28 PM

Not Used
See Reintegration

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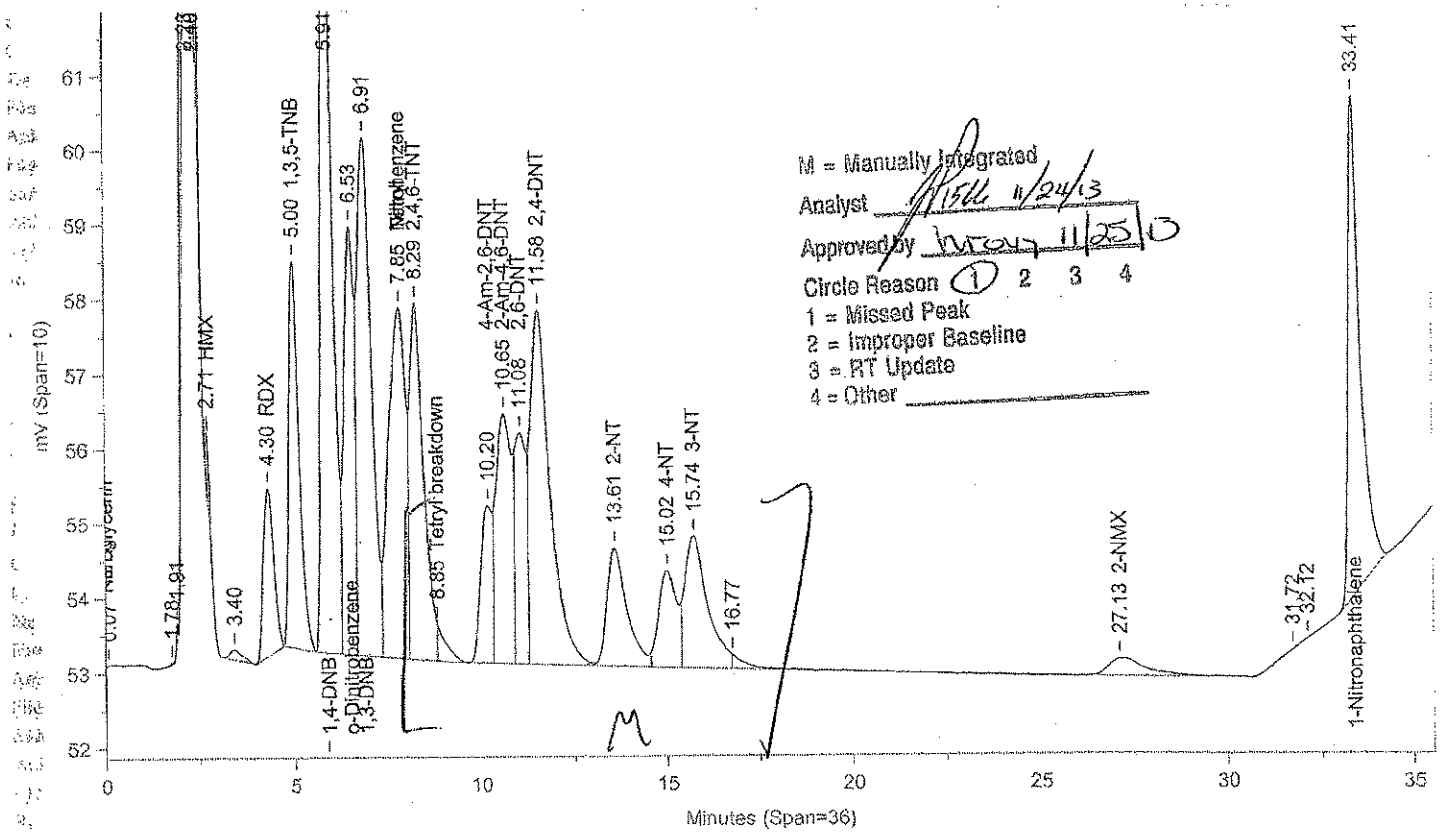
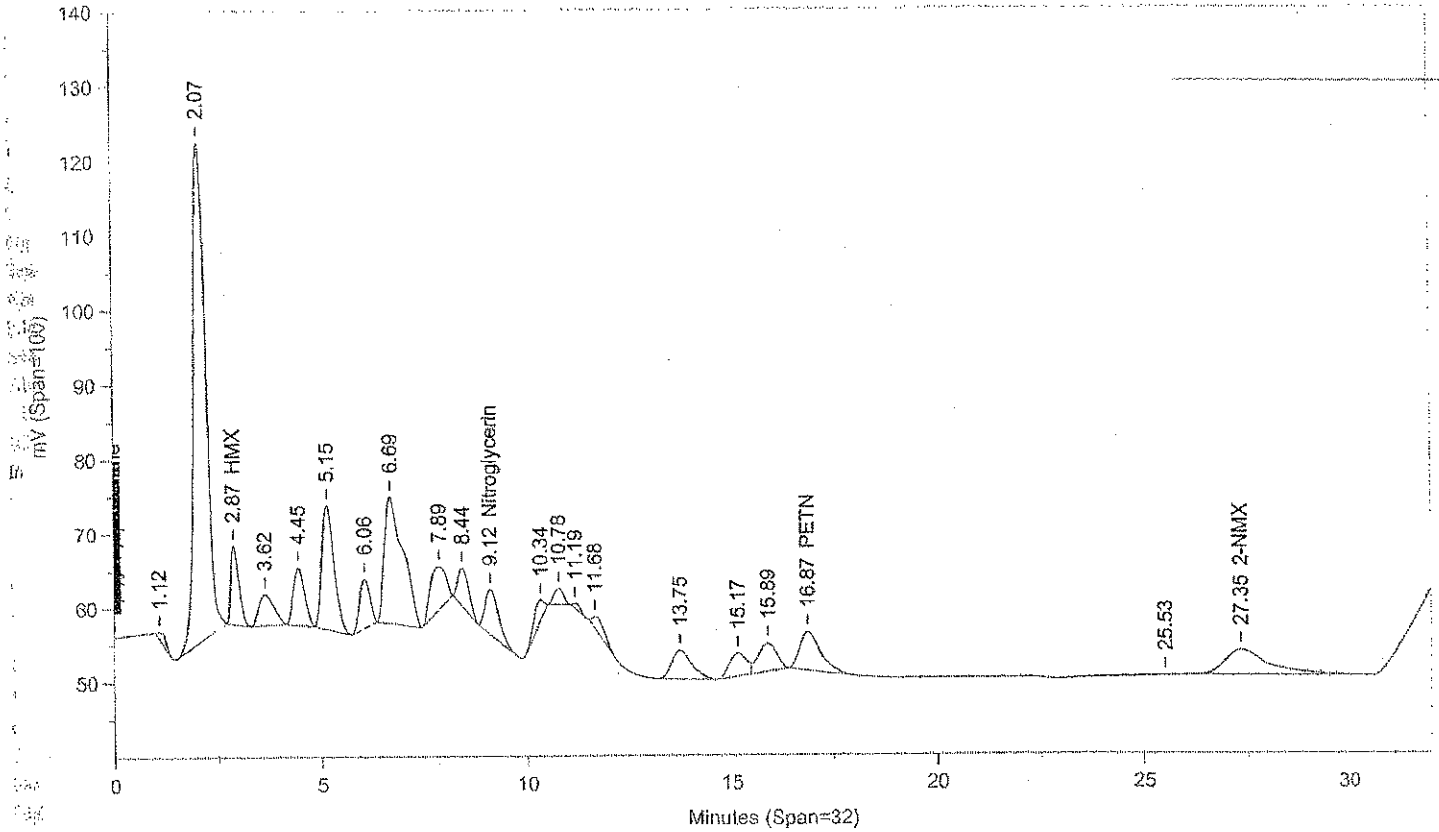
File: C:\CPWIN\DATA1\5E12310.35R



Instrument ID: CP12--X6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.35R



Instrument ID: CP12--X6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	142359	3450.965	HMX
4.304	42652	4742.681	RDX	.	0	.	RDX
4.998	99221	4700.476	1,3,5-TNB	.	0	.	1,3,5-TNB
6.912	240515	9440.367	1,4-DNB	.	0	.	1,4-DNB
6.532	113699	11034.77	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.914	179846	5542.358	1,3-DNB	.	0	.	1,3-DNB
7.848	149664	4329.775	Tetryl	.	0	.	Tetryl
8.288	126988	5573.058	2,4,6-TNT	.	0	.	2,4,6-TNT
8.85	7790	225.366	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.125	142475	11147.8	Nitroglycerin
10.204	46626	4969.726	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.652	99741	4554.069	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.084	65263	5368.087	2,6-DNT	.	0	.	2,6-DNT
11.583	173267	5238.369	2,4-DNT	.	0	.	2,4-DNT
13.606	60104	4543.366	2-NT	.	0	.	2-NT
15.021	43984	4687.738	4-NT	.	0	.	4-NT
15.74	75004	5539.246	3-NT	.	0	.	3-NT
.	0	.	PETN	16.868	183512	13415.88	PETN
27.135	16500	4840.435	2-NMX	27.353	255294	5226.406	2-NMX
33.405	156013	11875.68	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/24/2013 3:33:38 PM
File Reported On: 11/24/2013 at 3:33:37 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: LCSA 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329A
Result file : 5C12310.35R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 92% (63-150) Conc.: 4606.64160

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.23	4.33	35954	3429.757080
RDX	5.08	5.19	5.28	59070	5035.846680
Nitrobenzene	12.62	12.73	12.94	90037	4875.074219
o-Dinitrobenzene	14.65	14.75	15.01	143608	10444.926758
4-Am-2,6-DNT	16.61	16.66	16.93	195914	5075.560547
1,3-DNB	18.80	18.84	19.10	157025	4636.024414
1,4-DNB	19.60	19.62	19.90	256163	11193.300781
2-NT	23.89	24.02	24.41	58942	5036.265137
4-NT	27.49	27.52	28.01	96157	4951.708984
1,3,5-TNB	29.57	29.62	29.97	115743	5221.708008
2,6-DNT	30.49	30.52	30.89	50141	3966.960693
2,4-DNT	33.60	33.67	33.82	142728	5526.110840
2-NMX	34.05	34.15	34.25	14226	4606.641602
Tetryl	34.39	34.46	34.59	82700	5389.921875
2,4,6-TNT	35.32	35.40	35.52	112245	5333.141602
1-Nitronaphthalene	36.34	36.43	36.54	167853	10741.035156

Analysis Report (B)

Injected on : NOV 19, 2013 18:30:49
Instrument : CP12--Y6329B
Result file : 5C12310B.35R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.53	9.67	199844	19662.185547
PETN	25.73	25.84	26.15	210343	17711.814453

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	17711.814453	6000	2000			Report
☑ Nitroglycerin	B	19662.185547	6000	2000			
☑ HMX	A	3429.757080	750	250			
☑ RDX	A	5035.846680	300	125			
☑ Nitrobenzene	A	4875.074219	300	100			
☑ o-Dinitrobenzene	A	10444.926758	300	100			
☑ 4-Am-2,6-DNT	A	5075.560547	300	150			
☑ 2-Am-4,6-DNT			<300	<100			
☑ 1,3-DNB	A	4636.024414	300	100			
☑ 1,4-DNB	A	11193.300781	300	100			
☑ 2-NT	A	5036.265137	300	200			
☑ 4-NT	A	4951.708984	300	200			
☑ 3-NT			<300	<250			
☑ 1,3,5-TNB	A	5221.708008	300	100			
☑ 2,6-DNT	A	3966.960693	300	100			
☑ 2,4-DNT	A	5526.110840	300	100			
☐ 2-NMX	A	4606.641602					
☑ Tetryl	A	5389.921875	300	153			
☑ 2,4,6-TNT	A	5333.141602	300	100			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:10

Lancaster Laboratories-Single Component Data Summary

Sample Name: **LCSA** 11/12/13 LCS20314 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2 g Total Volume: 20 ml Analyst: 1566 SDG: State:
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 19, 2013 18:30:49
Instrument	: CP12--Y6329A
Result file	: 5C12310.35R
Calibration file	: 4C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 19, 2013 18:30:49
Instrument	: CP12--Y6329B
Result file	: 5C12310B.35R
Calibration file	: 4C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	10741.035156	300	100			

Units: ug/kg

Reviewed by: James H. Place Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko Principal Specialist

Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:36:10

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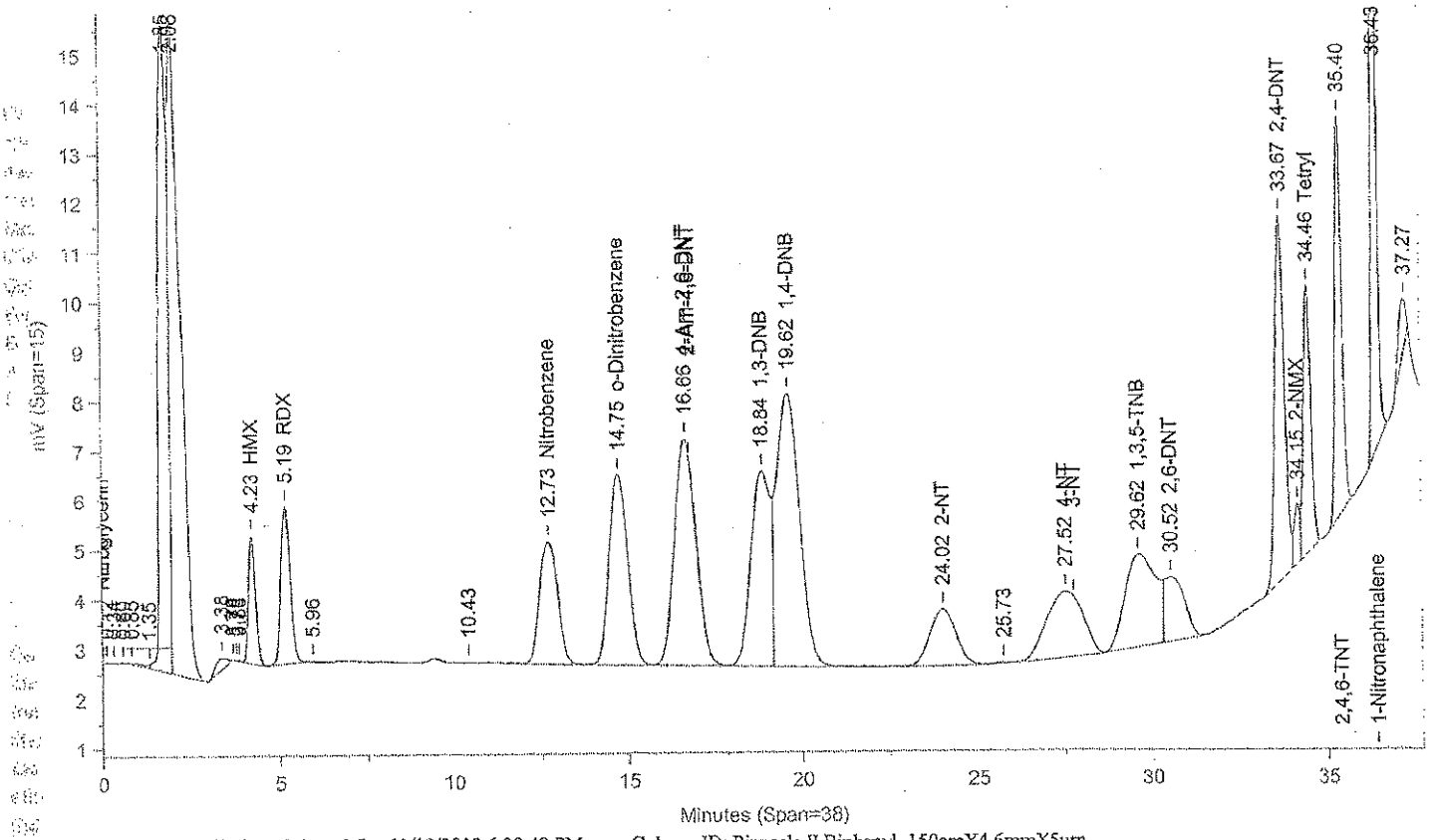
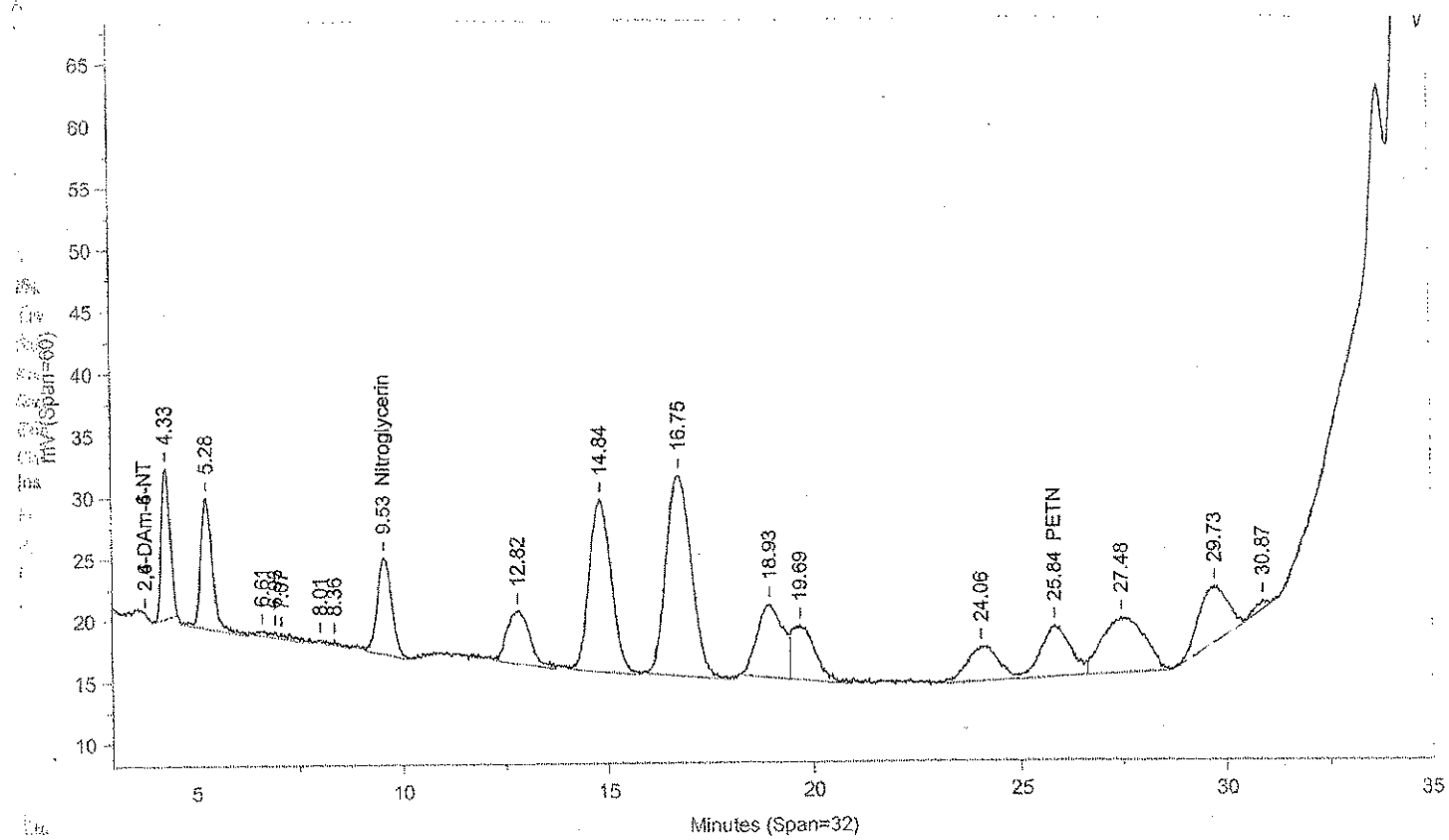
File: C:\CPWIN\DATA1\5C12310.35R



Instrument ID: CP12--Y6329A Injected On: 11/19/2013 6:30:48 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.35R



Instrument ID: CP12--Y6329B Injected On: 11/19/2013 6:30:48 PM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.229	35954	3429.757	HMX	.	0	.	HMX
5.185	59070	5035.847	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.535	199844	19662.19	Nitroglycerin
12.728	90037	4875.074	Nitrobenzene	.	0	.	Nitrobenzene
14.75	143608	10444.93	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.658	195914	5075.561	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.844	157025	4636.024	1,3-DNB	.	0	.	1,3-DNB
19.621	256163	11193.3	1,4-DNB	.	0	.	1,4-DNB
24.023	58942	5036.265	2-NT	.	0	.	2-NT
.	0	.	PETN	25.837	210343	17711.81	PETN
27.518	96157	4951.709	4-NT	.	0	.	4-NT
29.62	115743	5221.708	1,3,5-TNB	.	0	.	1,3,5-TNB
30.521	50141	3966.961	2,6-DNT	.	0	.	2,6-DNT
33.67	142728	5526.111	2,4-DNT	.	0	.	2,4-DNT
34.147	14226	4606.642	2-NMX	.	0	.	2-NMX
34.459	82700	5389.922	Tetryl	.	0	.	Tetryl
35.396	112245	5333.142	2,4,6-TNT	.	0	.	2,4,6-TNT
36.428	167853	10741.04	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.35A
Area File: C:\CPWIN\DATA1\5C12310B.35A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:44:44 PM
File Reported On: 11/20/2013 at 5:44:54 PM

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Data Summary

Sample Name: 7266815 MS 2E101 MS Sample ID: AA **Batchnumber:** 133140020A
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 20, 2013 00:10:16
Instrument X6329A
Result file 5E12310.43R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 84% (63 - 150) Conc: 3663.625732

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.20	4.32	4.40	39777	3838.68457
1,3,5-Trinitrobenzene	4.90	5.02	5.10	93331	3844.735107
1,4-Dinitrobenzene	5.80	5.94	6.00	214014	7304.488281
o-Dinitrobenzene	6.43	6.57	6.63	101802	8591.458984
1,3-DNB	6.83	6.96	7.03	158300	4242.045898
Nitrobenzene	7.71	7.91	7.99	117351	3163.07547
2,4,6-Trinitrotoluene	8.19	8.34	8.39	109944	4195.686035
4-Amino-2,6-dinitrotoluer	10.21	10.26	10.49	36539	3386.593262
2-Amino-4,6-dinitrotoluer	10.51	10.73	10.80	80553	3198.221924
2,6-Dinitrotoluene	10.95	11.17	11.23	59035	4222.47168
2,4-Dinitrotoluene	11.45	11.66	11.74	157255	4134.141113
2-Nitrotoluene	13.49	13.69	13.77	52298	3437.656006
4-Nitrotoluene	14.87	15.10	15.19	36948	3424.222656
3-Nitrotoluene	15.60	15.84	15.93	73341	4709.916992
2-NMX	26.91	27.26	27.59	14362	3663.625732
1-Nitronaphthalene	33.20	33.39	33.69	135176	8947.442383

Analysis Report (B)

Injected on Nov 20, 2013 00:10:15
Instrument Y6329A
Result file 5C12310.43R
Calibration file 4C12310
Method file 8330C

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.22	4.33	29867	2477.473389
RDX	5.08	5.17	5.28	50278	3696.713379
Nitrobenzene	12.62	12.71	12.94	83622	3934.717285
o-Dinitrobenzene	14.65	14.72	15.01	129049	8151.442871
4-Amino-2,6-dinitrotoluer	16.61	16.64	16.93	166719	3755.834473
1,3-DNB	18.80	18.83	19.10	139245	3574.863281
1,4-Dinitrobenzene	19.60	19.60	19.90	229010	8687.775391
2-Nitrotoluene	23.89	24.02	24.41	54306	4029.57666
4-Nitrotoluene	27.49	27.55	28.01	90106	4041.626709
1,3,5-Trinitrobenzene	29.57	29.66	29.97	95677	3832.604492
2,6-Dinitrotoluene	30.49	30.58	30.89	52244	3589.403076
2,4-Dinitrotoluene	33.60	33.69	33.82	124582	4194.385742
2-NMX	34.05	34.15	34.25	12964	3691.397461
Tetryl	34.39	34.47	34.59	51579	2982.866699
2,4,6-Trinitrotoluene	35.32	35.41	35.52	97062	4018.231201
1-Nitronaphthalene	36.34	36.44	36.54	144224	8059.093262

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	16423.078125	5217.3911	1739.1304		34.09	
☑ PETN	B	14745.617188	5217.3911	1739.1304		28.49	
☑ HMX	A	2469.586914	652.1739	217.3913		0.32	
☑ RDX	A	3838.68457	260.8696	108.6956		3.77	
☑ 1,3,5-Trinitrobenzene	A	3844.735107	260.8696	86.9565		0.32	
☑ 1,4-Dinitrobenzene	A	7304.488281	260.8696	86.9565		17.30	
☑ o-Dinitrobenzene	A	8591.458984	260.8696	86.9565		5.26	
☑ 1,3-DNB	A	4242.045898	260.8696	86.9565		17.07	
☑ Tetryl	B	2982.866699	260.8696	133.0435		5.86	
☑ Nitrobenzene	B	3934.717285	260.8696	86.9565		21.74	
☑ 2,4,6-Trinitrotoluene	A	4195.686035	260.8696	86.9565		4.32	
☑ 4-Amino-2,6-dinitrotoluene	A	3386.593262	260.8696	130.4348		10.34	
☑ 2-Amino-4,6-dinitrotoluene	A	3198.221924	260.8696	86.9565		16.04	
☑ 2,6-Dinitrotoluene	A	4222.47168	260.8696	86.9565		16.21	
☑ 2,4-Dinitrotoluene	A	4134.141113	260.8696	86.9565		1.45	
☑ 2-Nitrotoluene	A	3437.656006	260.8696	173.913		15.85	
☑ 4-Nitrotoluene	A	3424.222656	260.8696	173.913		16.54	
☑ 3-Nitrotoluene	A	4709.916992	260.8696	217.3913		15.27	
☑ 2-NMX	A	3663.625732				0.76	
☑ 1-Nitronaphthalene	A	8947.442383	260.8696	86.9565		10.45	

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Data Summary

Sample Name: 7266815 MS 2E101 MS Sample ID: AA **Batchnumber:** 133140020A
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 20, 2013 00:10:16
Instrument	X6329A
Result file	5E12310.43R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 20, 2013 00:10:15
Instrument	Y6329A
Result file	5C12310.43R
Calibration file	4C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomaszko, Principal Scientist

Date: NOV 25 2013

11/24/2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266815 MS 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 00:10:16
Instrument : CP12--X6329A
Result file : 5E12310.43R
Calibration file : 4E12310.CAL
Method file : 8330.MET

%SSR(2-NMX) : 84% (63-150) Conc.: 3663.62573

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.32	4.40	39777	3838.684570
1,3,5-TNB	4.90	5.02	5.10	93331	3844.735107
1,4-DNB	5.80	5.94	6.00	214014	7304.488281
o-Dinitrobenzene	6.43	6.57	6.63	101802	8591.458984
1,3-DNB	6.83	6.96	7.03	158300	4242.045898
Nitrobenzene	7.71	7.91	7.99	117351	2963.940186
2,4,6-TNT	8.19	8.34	8.39	109944	4195.686035
Tetryl breakdown	8.71	8.94	8.95	7916	199.135284
4-Am-2,6-DNT	10.21	10.26	10.49	36539	3386.593262
2-Am-4,6-DNT	10.51	10.73	10.80	80553	3198.221924
2,6-DNT	10.95	11.17	11.23	59035	4222.471680
2,4-DNT	11.45	11.66	11.74	157255	4134.141113
2-NT	13.49	13.69	13.77	52298	3437.656006
4-NT	14.87	15.10	15.19	36948	3424.222656
3-NT	15.60	15.84	15.93	73341	4709.916992
2-NMX	26.91	27.26	27.59	14362	3663.625732
1-Nitronaphthalene	33.20	33.39	33.69	135176	8947.442383

Analysis Report (B)

Injected on : NOV 20, 2013 00:10:16
Instrument : CP12--X6329B
Result file : 5E12310B.43R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET

%SSR(2-NMX) : 89% (63-150) Conc.: 3892.17358

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.77	2.88	2.97	115816	2469.586914
Nitroglycerin	8.96	9.20	9.34	171070	11639.307617
PETN	16.63	17.00	17.20	174107	11068.878906
2-NMX	27.09	27.39	27.76	218639	3892.173584

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	11639.307617	5217.39	1739.13			Report Confirmation
☑ PETN	B	11068.878906	5217.39	1739.13			~~6~~ ⑧
☑ HMX	B	2469.586914	652.1738	217.3913			Corrected Value = ~~3936.25~~ ~~63% Recovery~~
☑ RDX	A	3838.684570	260.8695	108.6956			3423 72% recovery
☑ 1,3,5-TNB	A	3844.735107	260.8695	86.9565			
☑ 1,4-DNB	A	7304.488281	260.8695	86.9565			⑧ Based on 2.35
☑ o-Dinitrobenzene	A	8591.458984	260.8695	86.9565			VLT047 11/25/13
☑ 1,3-DNB	A	4242.045898	260.8695	86.9565			
☑ Tetryl			<260.8695	<133.0434			
☑ Nitrobenzene	A	2963.940186	260.8695	86.9565			+ Tetryl breakdown = 3163.07547
☑ 2,4,6-TNT	A	4195.686035	260.8695	86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	3386.593262	260.8695	130.4348			
☑ 2-Am-4,6-DNT	A	3198.221924	260.8695	86.9565			
☑ 2,6-DNT	A	4222.471680	260.8695	86.9565			
☑ 2,4-DNT	A	4134.141113	260.8695	86.9565			
☑ 2-NT	A	3437.656006	260.8695	173.913			
☑ 4-NT	A	3424.222656	260.8695	173.913			
☑ 3-NT	A	4709.916992	260.8695	217.3913			
☐ 2-NMX	A	3663.625732				6.05	

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:29

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266815 MS 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 20, 2013 00:10:16
Instrument	: CP12--X6329A
Result file	: 5E12310.43R
Calibration file	: 4E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 20, 2013 00:10:16
Instrument	: CP12--X6329B
Result file	: 5E12310B.43R
Calibration file	: 4E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	8947.442383	260.8695	86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. Tomayko, Principal Specialist (6) WTOM 11/25/13

Date: NOV 25 2013

Valerie L. Tomayko
Principal Specialist

NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:29

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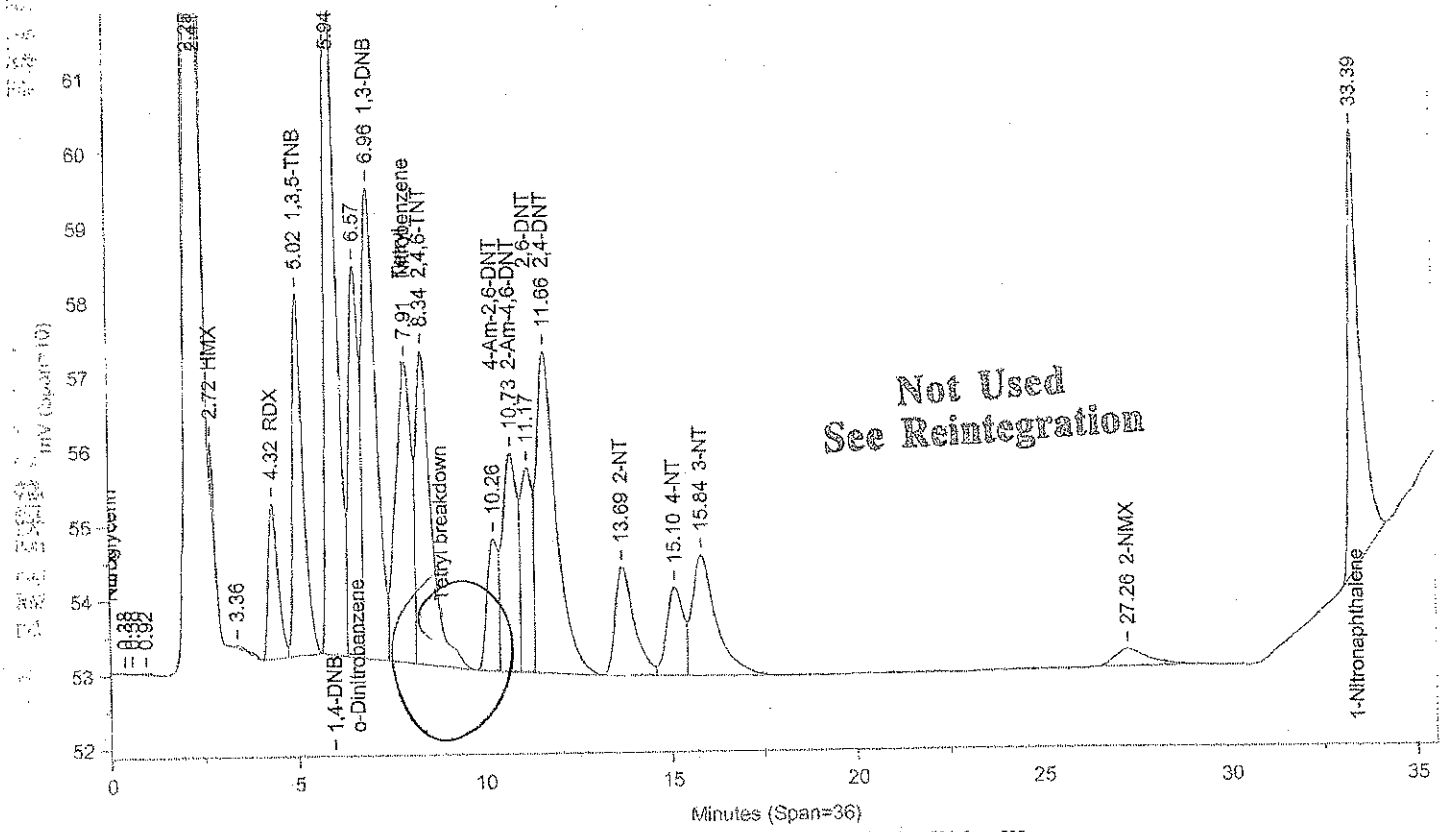
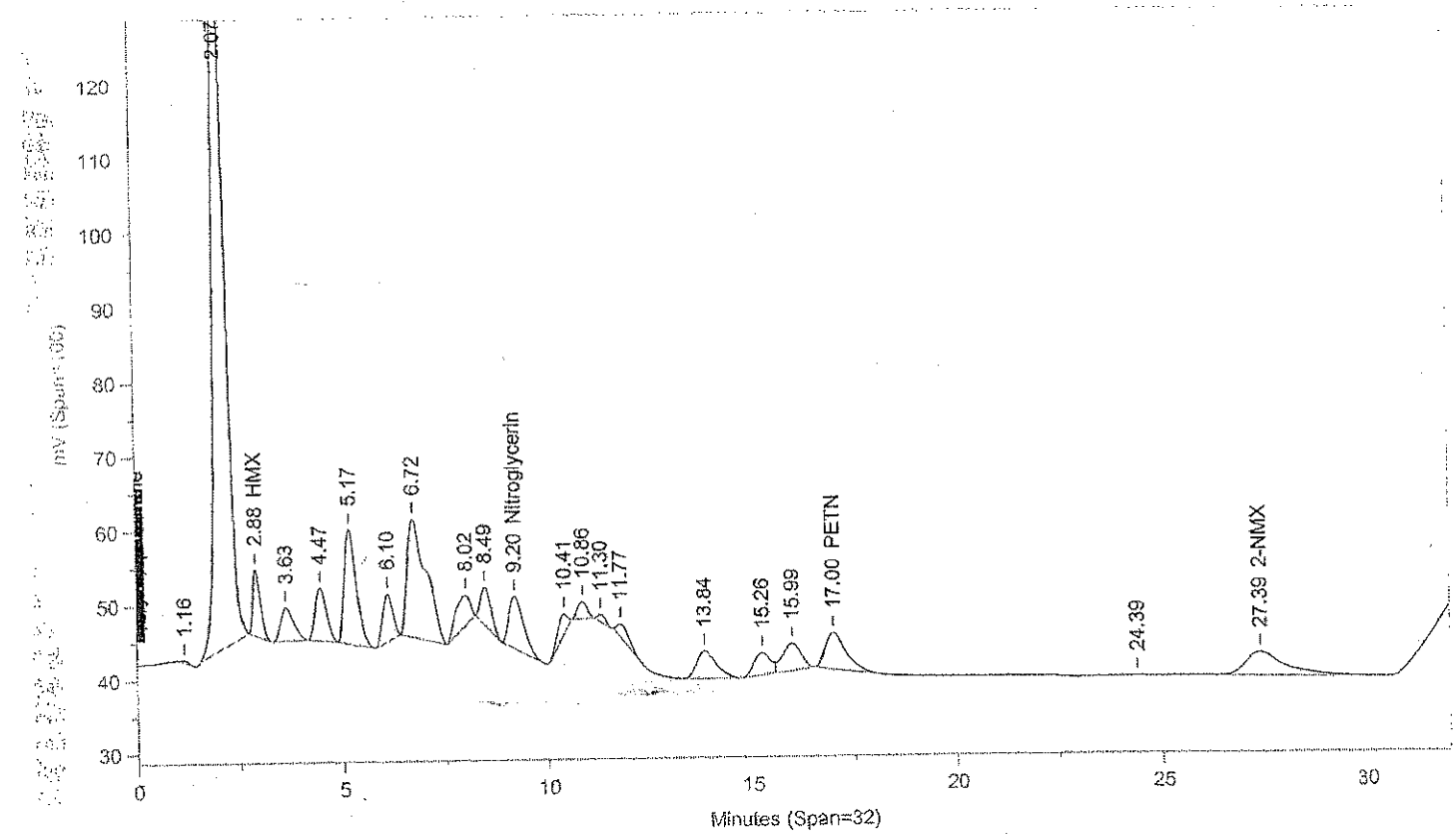


Instrument ID: CP12--X6329A Injected On: 11/20/2013 12:10:15 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.43R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 12:10:15 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.877	115816	2469.587	HMX
4.324	39777	3838.685	RDX	.	0	.	RDX
5.022	93331	3844.735	1,3,5-TNB	.	0	.	1,3,5-TNB
5.943	214014	7304.488	1,4-DNB	.	0	.	1,4-DNB
6.565	101802	8591.459	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.958	158300	4242.046	1,3-DNB	.	0	.	1,3-DNB
7.911	117351	2963.94	Nitrobenzene	.	0	.	Nitrobenzene
8.343	117860	4497.772	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.201	171070	11639.31	Nitroglycerin
10.265	36539	3386.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.732	80553	3198.222	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.172	59035	4222.472	2,6-DNT	.	0	.	2,6-DNT
11.659	157255	4134.141	2,4-DNT	.	0	.	2,4-DNT
13.686	52298	3437.656	2-NT	.	0	.	2-NT
15.1	36948	3424.223	4-NT	.	0	.	4-NT
15.837	73341	4709.917	3-NT	.	0	.	3-NT
.	0	.	PETN	16.997	174107	11068.88	PETN
27.257	14362	3663.626	2-NMX	27.389	218639	3892.174	2-NMX
33.389	135176	8947.442	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.43A
Area File: C:\CPWIN\DATA1\5E12310B.43A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 4:54:24 PM
File Reported On: 11/20/2013 at 4:54:33 PM

Not Used
See Reintegration

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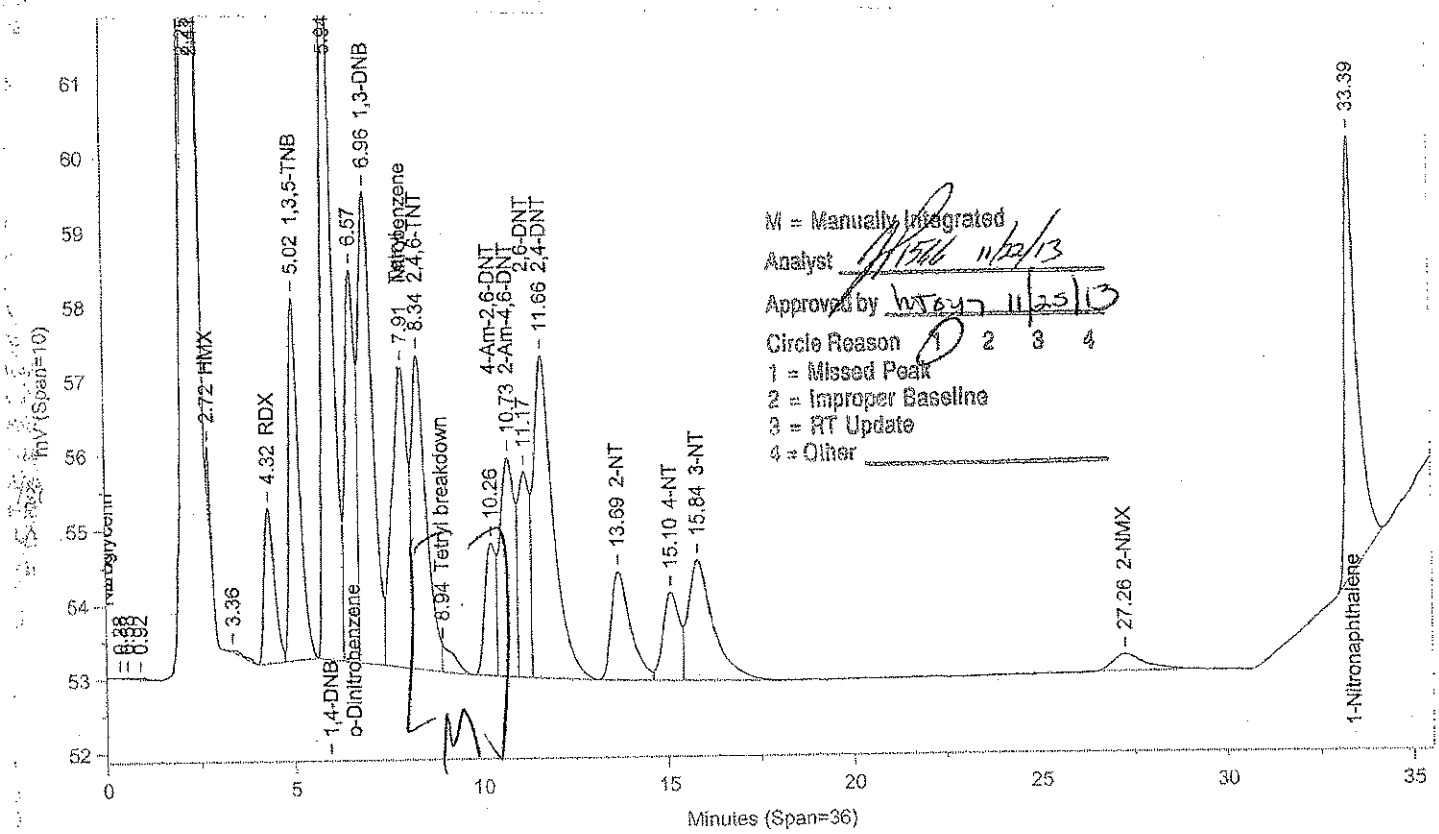
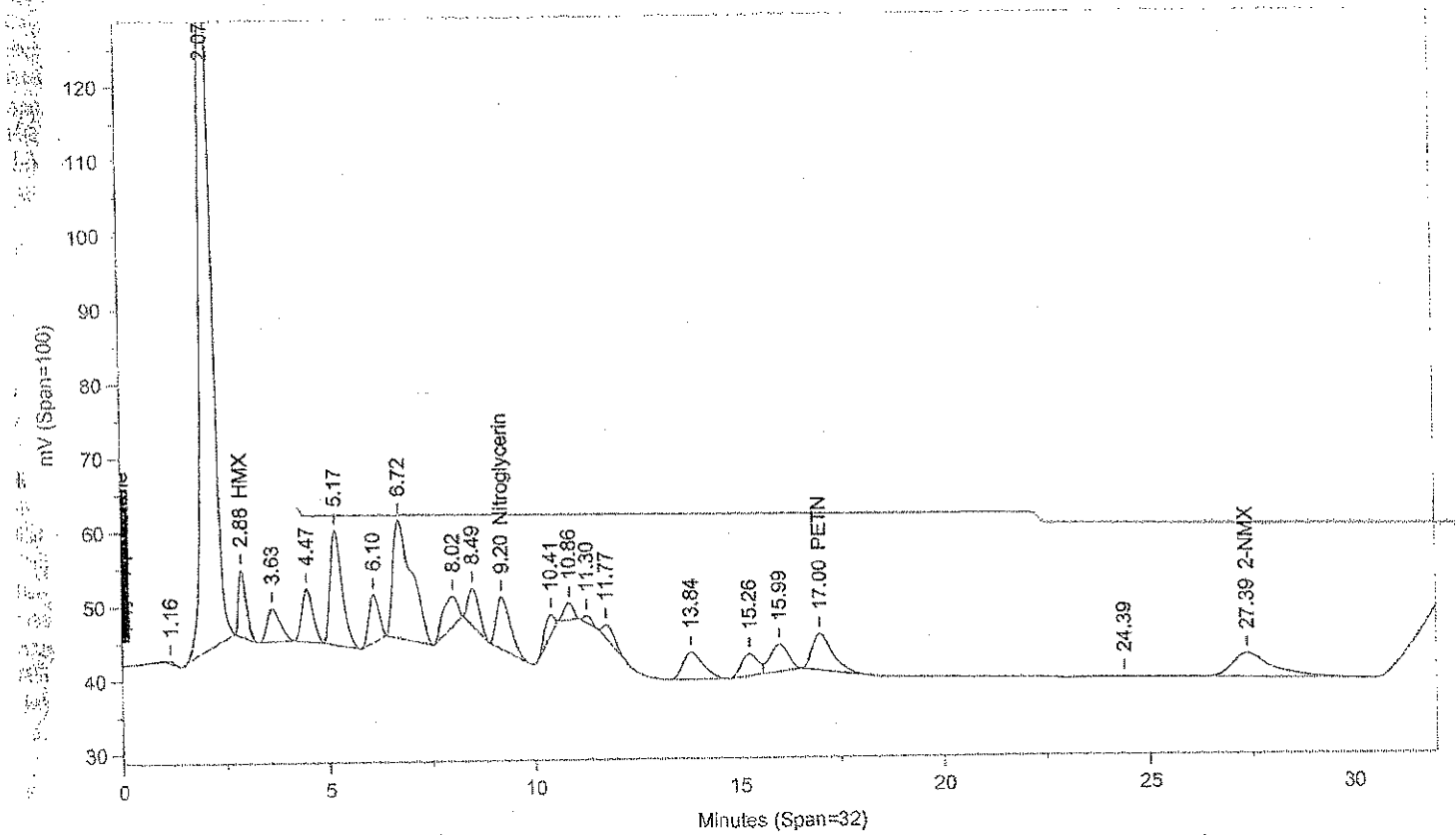


Instrument ID: CP12--X6329A Injected On: 11/20/2013 12:10:15 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.43R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 12:10:15 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.877	115816	2469.587	HMX
4.324	39777	3838.685	RDX	.	0	.	RDX
5.022	93331	3844.735	1,3,5-TNB	.	0	.	1,3,5-TNB
5.943	214014	7304.488	1,4-DNB	.	0	.	1,4-DNB
6.565	101802	8591.459	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.958	158300	4242.046	1,3-DNB	.	0	.	1,3-DNB
7.911	117351	2963.94	Nitrobenzene	.	0	.	Nitrobenzene
8.343	109944	4195.686	2,4,6-TNT	.	0	.	2,4,6-TNT
8.944	7916	199.135	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.201	171070	11639.31	Nitroglycerin
10.265	36539	3386.593	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.732	80553	3198.222	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.172	59035	4222.472	2,6-DNT	.	0	.	2,6-DNT
11.659	157255	4134.141	2,4-DNT	.	0	.	2,4-DNT
13.686	52298	3437.656	2-NT	.	0	.	2-NT
15.1	36948	3424.223	4-NT	.	0	.	4-NT
15.837	73341	4709.917	3-NT	.	0	.	3-NT
.	0	.	PETN	16.997	174107	11068.88	PETN
27.257	14362	3663.626	2-NMX	27.389	218639	3892.174	2-NMX
33.389	135176	8947.442	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
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Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
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Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:50:20 PM
File Reported On: 11/22/2013 at 3:50:19 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266815MS 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 00:10:15
Instrument : CP12--Y6329A
Result file : 5C12310.43R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 85% (63-150) Conc.: 3691.39746

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.22	4.33	29867	2477.473389
RDX	5.08	5.17	5.28	50278	3696.713379
Nitrobenzene	12.62	12.71	12.94	83622	3934.717285
o-Dinitrobenzene	14.65	14.72	15.01	129049	8151.442871
4-Am-2,6-DNT	16.61	16.64	16.93	166719	3755.834473
1,3-DNB	18.80	18.83	19.10	139245	3574.863281
1,4-DNB	19.60	19.60	19.90	229010	8687.775391
2-NT	23.89	24.02	24.41	54306	4029.576660
4-NT	27.49	27.55	28.01	90106	4041.626709
1,3,5-TNB	29.57	29.66	29.97	95677	3832.604492
2,6-DNT	30.49	30.58	30.89	52244	3589.403076
2,4-DNT	33.60	33.69	33.82	124582	4194.385742
2-NMX	34.05	34.15	34.25	12964	3691.397461
Tetryl	34.39	34.47	34.59	51579	2982.866699
2,4,6-TNT	35.32	35.41	35.52	97062	4018.231201
1-Nitronaphthalene	36.34	36.44	36.54	144224	8059.093262

Analysis Report (B)

Injected on : NOV 20, 2013 00:10:15
Instrument : CP12--Y6329B
Result file : 5C12310B.43R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.53	9.67	191961	16423.078125
PETN	25.73	25.83	26.15	201384	14745.617188

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	14745.617188	5217.39	1739.13			Report
☑ Nitroglycerin	B	16423.078125	5217.39	1739.13			
☑ HMX	A	2477.473389	652.1738	217.3913			
☑ RDX	A	3696.713379	260.8695	108.6956			
☑ Nitrobenzene	A	3934.717285	260.8695	86.9565			
☑ o-Dinitrobenzene	A	8151.442871	260.8695	86.9565			
☑ 4-Am-2,6-DNT	A	3755.834473	260.8695	130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB	A	3574.863281	260.8695	86.9565			
☑ 1,4-DNB	A	8687.775391	260.8695	86.9565			
☑ 2-NT	A	4029.576660	260.8695	173.913			
☑ 4-NT	A	4041.626709	260.8695	173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB	A	3832.604492	260.8695	86.9565			
☑ 2,6-DNT	A	3589.403076	260.8695	86.9565			
☑ 2,4-DNT	A	4194.385742	260.8695	86.9565			
☐ 2-NMX	A	3691.397461					
☑ Tetryl	A	2982.866699	260.8695	133.0434			
☑ 2,4,6-TNT	A	4018.231201	260.8695	86.9565			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:38:03

Lancaster Laboratories-Single Component Data Summary

Sample Name: **7266815** MS 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 20, 2013 00:10:15
Instrument	: CP12--Y6329A
Result file	: 5C12310.43R
Calibration file	: 4C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 20, 2013 00:10:15
Instrument	: CP12--Y6329B
Result file	: 5C12310B.43R
Calibration file	: 4C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	8059.093262	260.8695	86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Valerie L. [illegible], Principal Scientist

Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:38:03

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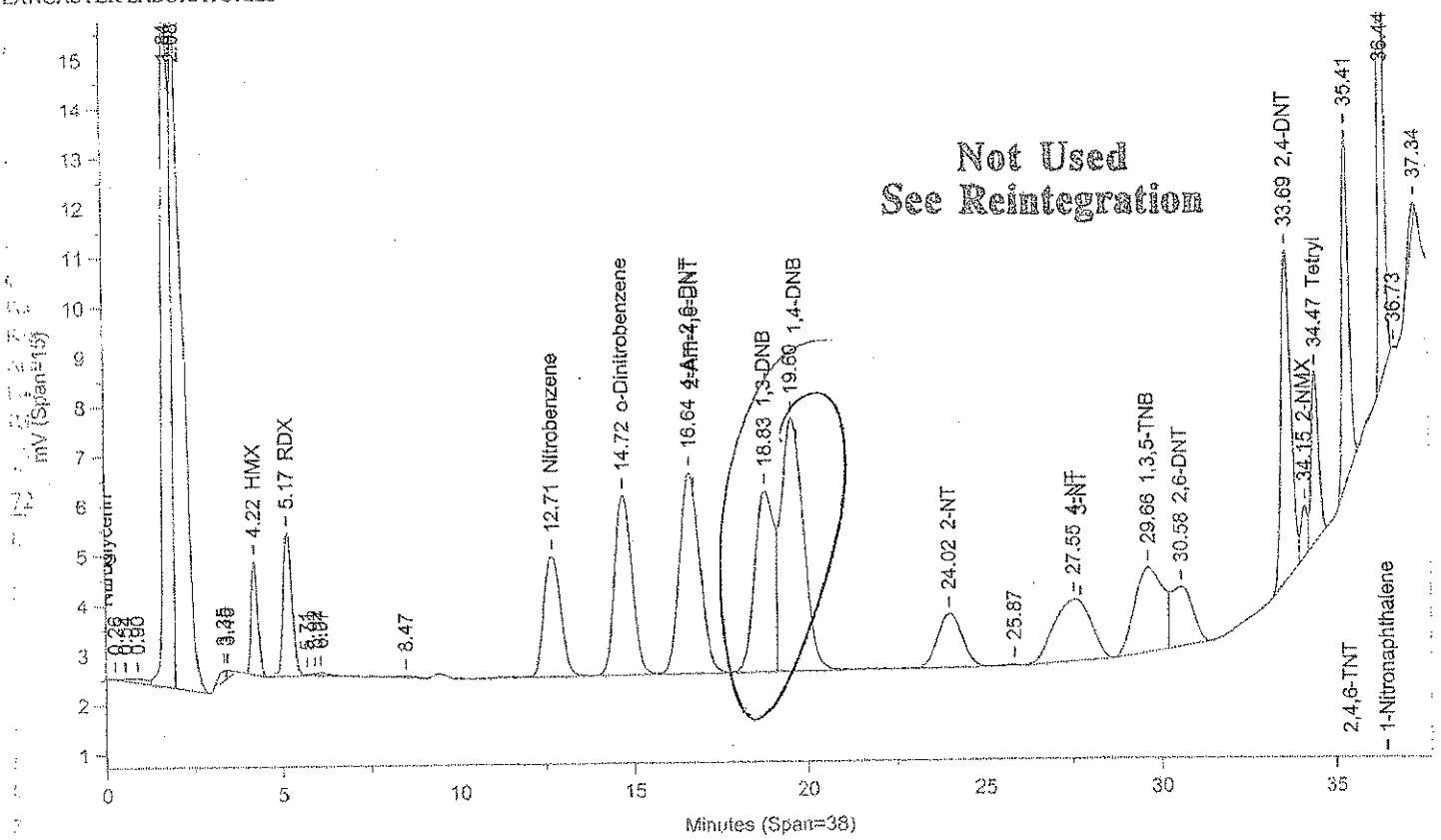

Instrument ID: CP12--Y6329A Injected On: 11/20/2013 12:10:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

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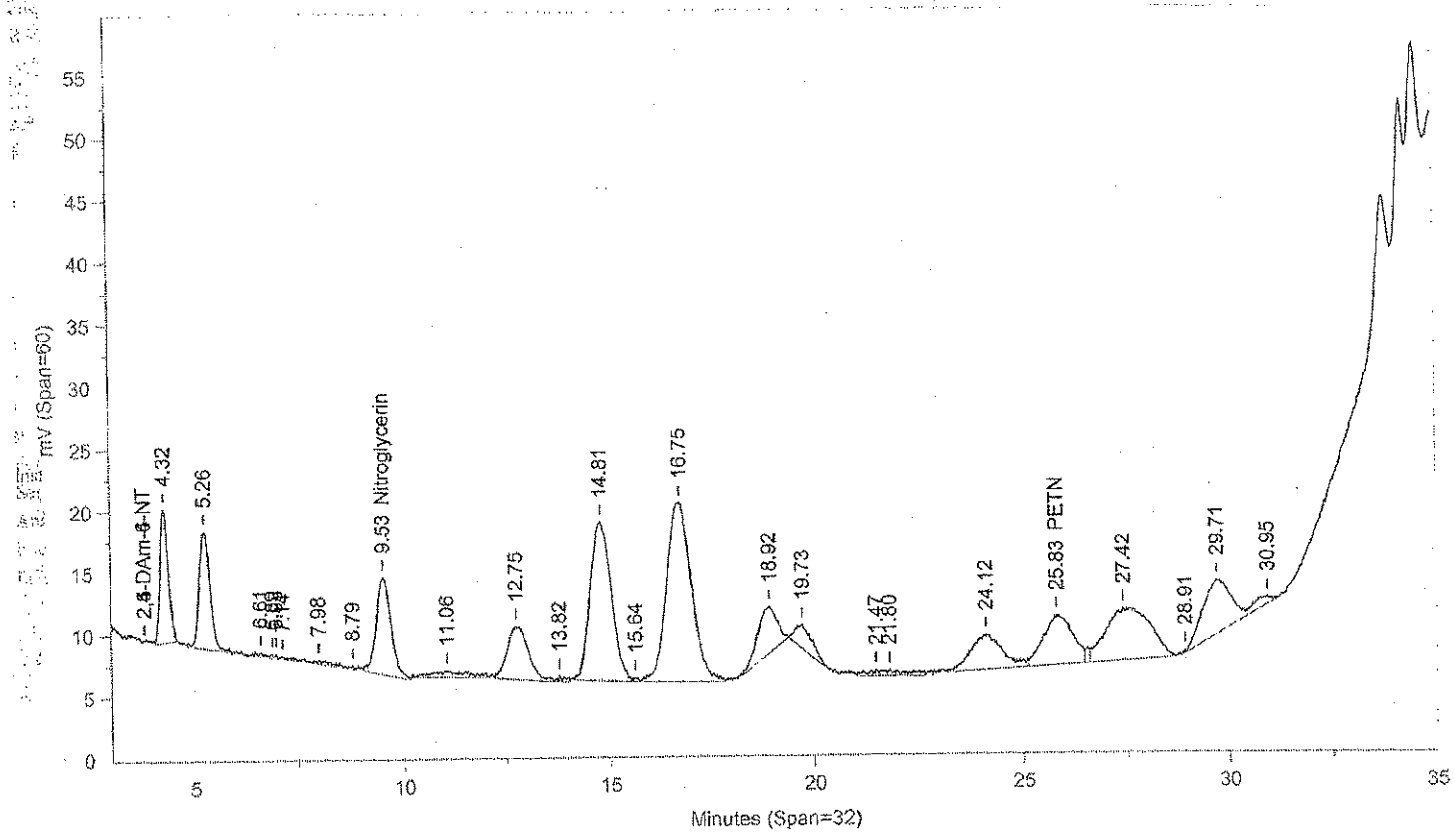

Instrument ID: CP12--Y6329B Injected On: 11/20/2013 12:10:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.223	29867	2477.473	HMX	.	0	.	HMX
5.175	50278	3696.713	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.532	191961	16423.08	Nitroglycerin
12.707	83622	3934.717	Nitrobenzene	.	0	.	Nitrobenzene
14.723	129049	8151.443	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.644	166719	3755.834	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.826	139245	3574.863	1,3-DNB	.	0	.	1,3-DNB
24.016	54306	4029.577	2-NT	.	0	.	2-NT
.	0	.	PETN	25.835	192752	14113.55	PETN
27.552	90106	4041.627	4-NT	.	0	.	4-NT
29.657	95677	3832.604	1,3,5-TNB	.	0	.	1,3,5-TNB
30.582	52244	3589.403	2,6-DNT	.	0	.	2,6-DNT
33.685	124582	4194.386	2,4-DNT	.	0	.	2,4-DNT
34.154	12964	3691.397	2-NMX	.	0	.	2-NMX
34.474	51579	2982.867	Tetryl	.	0	.	Tetryl
35.412	97062	4018.231	2,4,6-TNT	.	0	.	2,4,6-TNT
36.438	144224	8059.093	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.43A
Area File: C:\CPWIN\DATA1\5C12310B.43A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
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Format B: C:\CPWIN\DATA1\8330A.FMTB
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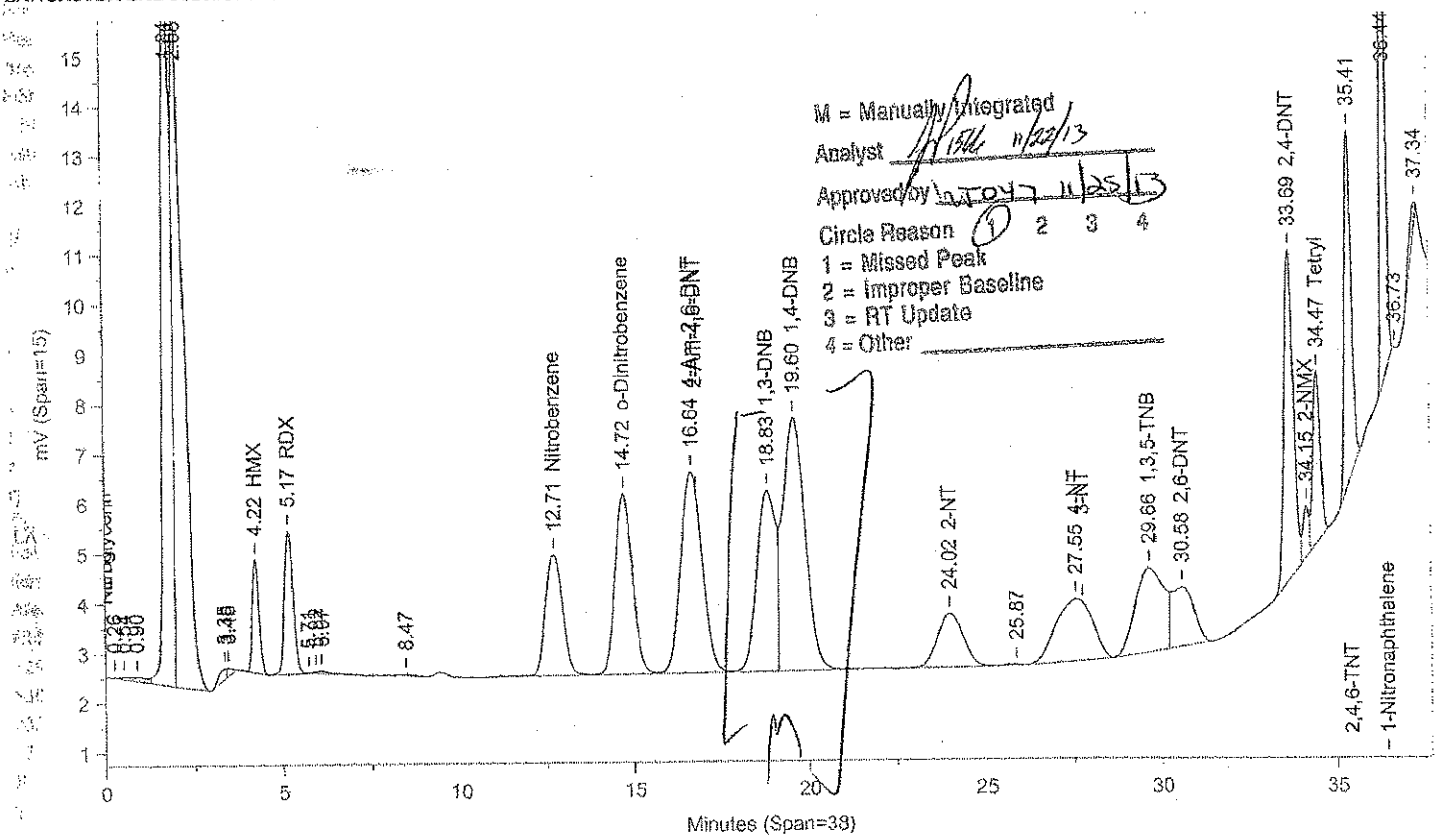
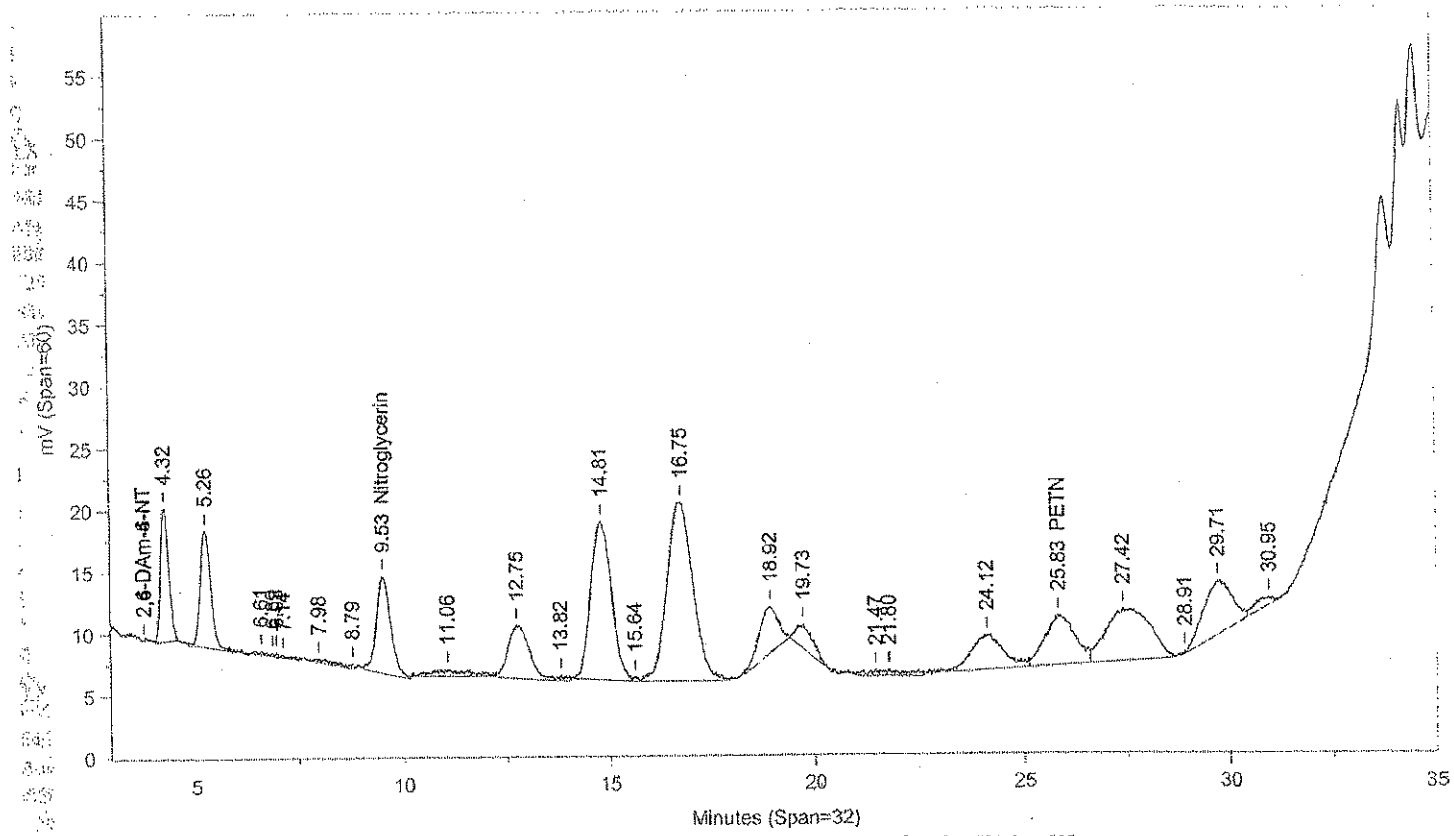
Not Used
See Reintegration

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5C12310.43R



Instrument ID: CP12--Y6329A Injected On: 11/20/2013 12:10:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.43R



Instrument ID: CP12--Y6329B Injected On: 11/20/2013 12:10:14 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.223	29867	2477.473	HMX	.	0	.	HMX
5.175	50278	3696.713	RDX	.	0	.	RDX
.	0	.	Nitroglycerin	9.532	191961	16423.08	Nitroglycerin
12.707	83622	3934.717	Nitrobenzene	.	0	.	Nitrobenzene
14.723	129049	8151.443	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
16.644	166719	3755.834	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
18.826	139245	3574.863	1,3-DNB	.	0	.	1,3-DNB
19.601	229010	8687.775	1,4-DNB	.	0	.	1,4-DNB
24.016	54306	4029.577	2-NT	.	0	.	2-NT
.	0	.	PETN	25.835	201384	14745.62	PETN
27.552	90106	4041.627	4-NT	.	0	.	4-NT
29.657	95677	3832.604	1,3,5-TNB	.	0	.	1,3,5-TNB
30.582	52244	3589.403	2,6-DNT	.	0	.	2,6-DNT
33.685	124582	4194.386	2,4-DNT	.	0	.	2,4-DNT
34.154	12964	3691.397	2-NMX	.	0	.	2-NMX
34.474	51579	2982.867	Tetryl	.	0	.	Tetryl
35.412	97062	4018.231	2,4,6-TNT	.	0	.	2,4,6-TNT
36.438	144224	8059.093	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 1:12:06 PM
File Reported On: 11/22/2013 at 1:12:05 PM

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Data Summary

Sample Name: 7266816 MSD 2E101 MSD Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on Nov 20, 2013 00:52:39
Instrument X6329A
Result file 5E12310.44R
Calibration file 4E12310
Method file 8330

%SSR(NMX) 79% (63 - 150) Conc: 3449.203613

Analysis Report (B)

Injected on Nov 20, 2013 00:52:39
Instrument Y6329A
Result file 5C12310.44R
Calibration file 4C12310
Method file 8330C

%SSR(NMX) 81% (63 - 150) Conc: 3528.28125

Single Component Data

Compound	Min	RT	Max	Area	Amount
RDX	4.20	4.31	4.40	37225	3585.512939
1,3,5-Trinitrobenzene	4.90	5.01	5.10	89913	3703.945068
1,4-Dinitrobenzene	5.80	5.92	6.00	212361	7248.103027
o-Dinitrobenzene	6.43	6.55	6.63	101159	8537.199219
1,3-DNB	6.83	6.93	7.03	157333	4216.135742
Nitrobenzene	7.71	7.88	7.99	120855	3260.249313
2,4,6-Trinitrotoluene	8.19	8.31	8.39	107843	4115.500977
4-Amino-2,6-dinitrotoluer	10.21	10.22	10.49	38320	3551.664551
2-Amino-4,6-dinitrotoluer	10.51	10.69	10.80	79473	3155.320068
2,6-Dinitrotoluene	10.95	11.13	11.23	59393	4248.074219
2,4-Dinitrotoluene	11.45	11.63	11.74	156778	4121.615234
2-Nitrotoluene	13.49	13.64	13.77	51577	3390.203857
4-Nitrotoluene	14.87	15.06	15.19	36637	3395.353027
3-Nitrotoluene	15.60	15.79	15.93	73407	4714.162109
2-NMX	26.91	27.14	27.59	13521	3449.203613
1-Nitronaphthalene	33.20	33.38	33.69	135686	8981.197266

Compound	Min	RT	Max	Area	Amount
HMX	4.13	4.23	4.33	30254	2509.533936
RDX	5.08	5.19	5.28	50482	3712.52465E
Nitrobenzene	12.62	12.73	12.94	82037	3859.505127
o-Dinitrobenzene	14.65	14.75	15.01	127285	8038.661621
4-Amino-2,6-dinitrotoluer	16.61	16.65	16.93	169244	3812.72851E
1,3-DNB	18.80	18.84	19.10	138444	3554.29174E
1,4-Dinitrobenzene	19.60	19.62	19.90	226391	8586.935547
2-Nitrotoluene	23.89	24.04	24.41	53140	3941.56005E
4-Nitrotoluene	27.49	27.55	28.01	88610	3976.293457
1,3,5-Trinitrobenzene	29.57	29.67	29.97	99426	3964.890137
2,6-Dinitrotoluene	30.49	30.59	30.89	49778	3425.412842
2,4-Dinitrotoluene	33.60	33.69	33.82	125285	4218.072266
2-NMX	34.05	34.15	34.25	12309	3528.28125
Tetryl	34.39	34.48	34.59	59152	3397.516357
2,4,6-Trinitrotoluene	35.32	35.41	35.52	96388	3990.73339E
1-Nitronaphthalene	36.34	36.44	36.54	163403	9098.83007E

Single Component Summary

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ Nitroglycerin	B	18254.238281	5217.3911	1739.1304		32.19	
☑ PETN	B	14056.666016	5217.3911	1739.1304		23.02	
☑ HMX	A	2496.995117	652.1739	217.3913		0.50	
☑ RDX	A	3585.512939	260.8696	108.6956		3.48	
☑ 1,3,5-Trinitrobenzene	A	3703.945068	260.8696	86.9565		6.81	
☑ 1,4-Dinitrobenzene	A	7248.103027	260.8696	86.9565		16.91	
☑ o-Dinitrobenzene	A	8537.199219	260.8696	86.9565		6.02	
☑ 1,3-DNB	A	4216.135742	260.8696	86.9565		17.03	
☑ Tetryl	B	3397.516357	260.8696	133.0435		4.12	
☑ Nitrobenzene	B	3859.505127	260.8696	86.9565		16.83	
☑ 2,4,6-Trinitrotoluene	A	4115.500977	260.8696	86.9565		3.08	
☑ 4-Amino-2,6-dinitrotoluene	A	3551.664551	260.8696	130.4348		7.09	
☑ 2-Amino-4,6-dinitrotoluene	A	3155.320068	260.8696	86.9565		18.87	
☑ 2,6-Dinitrotoluene	A	4248.074219	260.8696	86.9565		21.44	
☑ 2,4-Dinitrotoluene	A	4121.615234	260.8696	86.9565		2.31	
☑ 2-Nitrotoluene	A	3390.203857	260.8696	173.913		15.04	
☑ 4-Nitrotoluene	A	3395.353027	260.8696	173.913		15.76	
☑ 3-Nitrotoluene	A	4714.162109	260.8696	217.3913		16.98	
☑ 2-NMX	A	3449.203613				2.27	
☑ 1-Nitronaphthalene	A	8981.197266	260.8696	86.9565		1.30	

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Data Summary

Sample Name: 7266816 MSD 2E101 MSD Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	Nov 20, 2013 00:52:39
Instrument	X6329A
Result file	5E12310.44R
Calibration file	4E12310
Method file	8330

Analysis Report (B)

Injected on	Nov 20, 2013 00:52:39
Instrument	Y6329A
Result file	5C12310.44R
Calibration file	4C12310
Method file	8330C

Units: ug/kg

%RPD = High - Low Amount divided by the Average times 100

Reviewed by: James H. Place, Senior Chemist

Date: NOV 24 2013

Verified by: Principal Specialist

Date: NOV 25 2013

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266816 MSD 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 00:52:39
Instrument : CP12--X6329A
Result file : 5E12310.44R
Calibration file : 4E12310.CAL
Method file : 8330.MET
%SSR(2-NMX) : 79% (63-150) Conc.: 3449.20361

Peak name	Min	R.T.	Max	Area	Amount
RDX	4.20	4.31	4.40	37225	3585.512939
1,3,5-TNB	4.90	5.01	5.10	89913	3703.945068
1,4-DNB	5.80	5.92	6.00	212361	7248.103027
o-Dinitrobenzene	6.43	6.55	6.63	101159	8537.199219
1,3-DNB	6.83	6.93	7.03	157333	4216.135742
Nitrobenzene	7.71	7.88	7.99	120855	3052.449463
2,4,6-TNT	8.19	8.31	8.39	107843	4115.500977
Tetryl breakdown	8.71	8.83	8.95	8260	207.799850
4-Am-2,6-DNT	10.21	10.22	10.49	38320	3551.664551
2-Am-4,6-DNT	10.51	10.69	10.80	79473	3155.320068
2,6-DNT	10.95	11.13	11.23	59393	4248.074219
2,4-DNT	11.45	11.63	11.74	156778	4121.615234
2-NT	13.49	13.64	13.77	51577	3390.203857
4-NT	14.87	15.06	15.19	36637	3395.353027
3-NT	15.60	15.79	15.93	73407	4714.162109
2-NMX	26.91	27.14	27.59	13521	3449.203613
1-Nitronaphthalene	33.20	33.38	33.69	135686	8981.197266

Analysis Report (B)

Injected on : NOV 20, 2013 00:52:39
Instrument : CP12--X6329B
Result file : 5E12310B.44R
Calibration file : 4E12310B.CAL
Method file : 8330B.MET
%SSR(2-NMX) : 83% (63-150) Conc.: 3591.50048

Peak name	Min	R.T.	Max	Area	Amount
HMX	2.77	2.87	2.97	117186	2496.995117
Nitroglycerin	8.96	9.17	9.34	193899	13192.551758
PETN	16.63	16.94	17.20	175458	11154.638672
2-NMX	27.09	27.36	27.76	201749	3591.500488

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,6-DAm-4-NT							
☐ 2,4-DAm-6-NT							
☑ Nitroglycerin	B	13192.551758	5217.39	1739.13			Report Confirmation (8)
☑ PETN	B	11154.638672	5217.39	1739.13			
☑ HMX	B	2496.995117	652.1738	217.3913			Corrected Value = ~~3936.25~~ 3423 ~~63% Recovery~~ 72% recovery
☑ RDX	A	3585.512939	260.8695	108.6956			(76) Based on 2.3 g
☑ 1,3,5-TNB	A	3703.945068	260.8695	86.9565			[illegible]
☑ 1,4-DNB	A	7248.103027	260.8695	86.9565			[illegible]
☑ o-Dinitrobenzene	A	8537.199219	260.8695	86.9565			
☑ 1,3-DNB	A	4216.135742	260.8695	86.9565			
☑ Tetryl			<260.8695	<133.0434			
☑ Nitrobenzene	A	3052.449463	260.8695	86.9565			+ Tetryl breakdown = 3260.249313
☑ 2,4,6-TNT	A	4115.500977	260.8695	86.9565			
☐ Tetryl breakdown							
☑ 4-Am-2,6-DNT	A	3551.664551	260.8695	130.4348			
☑ 2-Am-4,6-DNT	A	3155.320068	260.8695	86.9565			
☑ 2,6-DNT	A	4248.074219	260.8695	86.9565			
☑ 2,4-DNT	A	4121.615234	260.8695	86.9565			
☑ 2-NT	A	3390.203857	260.8695	173.913			
☑ 4-NT	A	3395.353027	260.8695	173.913			
☑ 3-NT	A	4714.162109	260.8695	217.3913			
☐ 2-NMX	A	3449.203613				4.04	

%RPD = High - Low Amount divided by the Average times 100 .

* Recovery outside QC Limits

Printed on: 11/22/2013 16:48:42

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266816 MSD 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 20, 2013 00:52:39
Instrument	: CP12--X6329A
Result file	: 5E12310.44R
Calibration file	: 4E12310.CAL
Method file	: 8330.MET

Analysis Report (B)

Injected on	: NOV 20, 2013 00:52:39
Instrument	: CP12--X6329B
Result file	: 5E12310B.44R
Calibration file	: 4E12310B.CAL
Method file	: 8330B.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	8981.197266	260.8695	86.9565			

Units: ug/kg

James H. Place
Senior Chemist

Reviewed by: _____

Date: NOV 24 2013

Verified by: _____

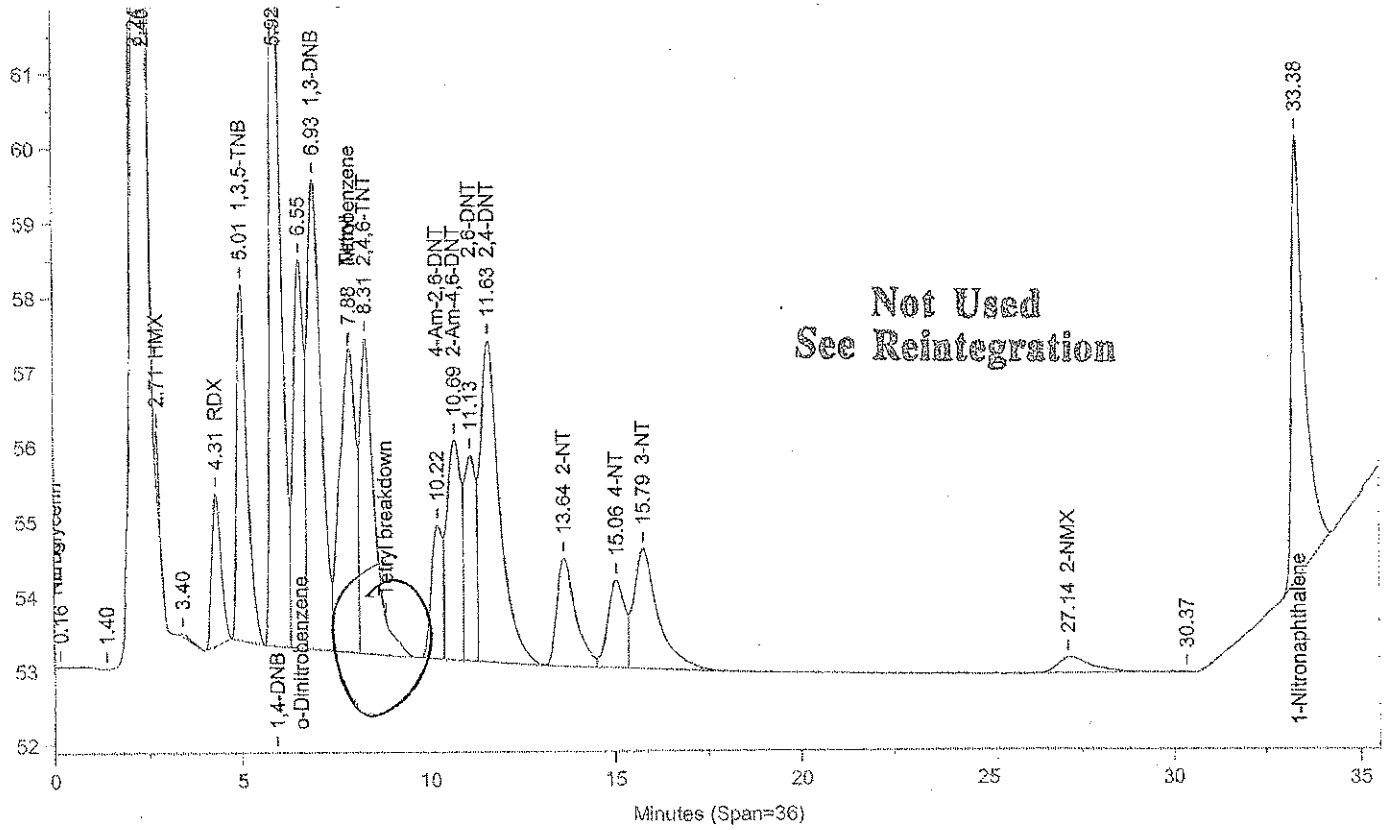
Date: NOV 25 2013

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

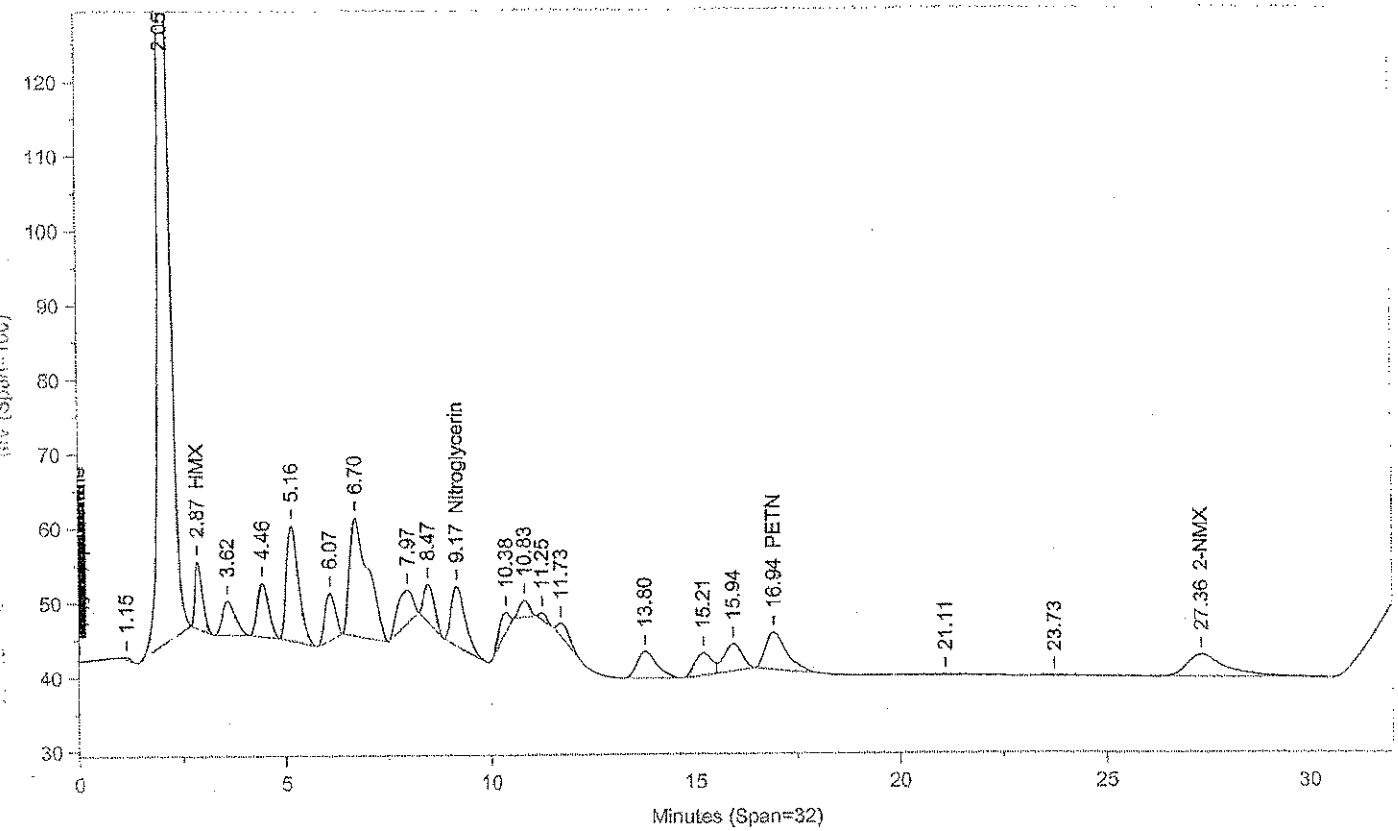
Printed on: 11/22/2013 16:48:42

LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.44R



Instrument ID: CP12--X6329A Injected On: 11/20/2013 12:52:38 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.44R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 12:52:38 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	117186	2496.995	HMX
4.311	37225	3585.513	RDX	.	0	.	RDX
5.006	89913	3703.945	1,3,5-TNB	.	0	.	1,3,5-TNB
5.924	212361	7248.103	1,4-DNB	.	0	.	1,4-DNB
6.545	101159	8537.199	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.934	157333	4216.136	1,3-DNB	.	0	.	1,3-DNB
7.88	120855	3052.449	Nitrobenzene	.	0	.	Nitrobenzene
8.315	116103	4430.732	2,4,6-TNT	.	0	.	2,4,6-TNT
.	0	.	Nitroglycerin	9.167	193899	13192.55	Nitroglycerin
10.224	38320	3551.665	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.694	79473	3155.32	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.134	59393	4248.074	2,6-DNT	.	0	.	2,6-DNT
11.625	156778	4121.615	2,4-DNT	.	0	.	2,4-DNT
13.644	51577	3390.204	2-NT	.	0	.	2-NT
15.057	36637	3395.353	4-NT	.	0	.	4-NT
15.793	73407	4714.162	3-NT	.	0	.	3-NT
RT	0	.	PETN	16.943	175458	11154.64	PETN
27.145	13521	3449.204	2-NMX	27.365	201749	3591.5	2-NMX
33.38	135686	8981.197	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5E12310.44A
Area File: C:\CPWIN\DATA1\5E12310B.44A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
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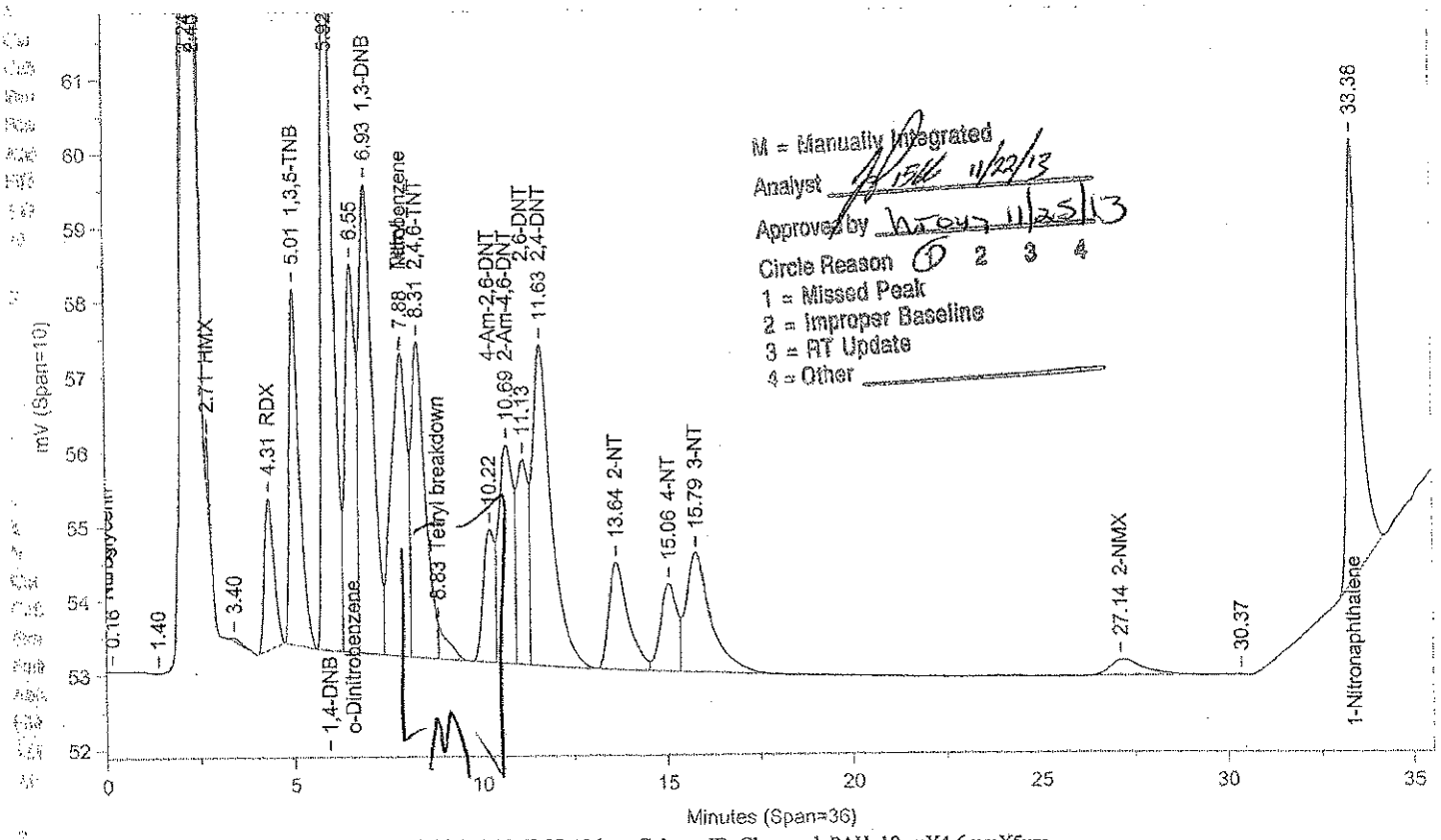
File Reported On: 11/20/2013 at 4:55:05 PM

Not Used
See Reintegration

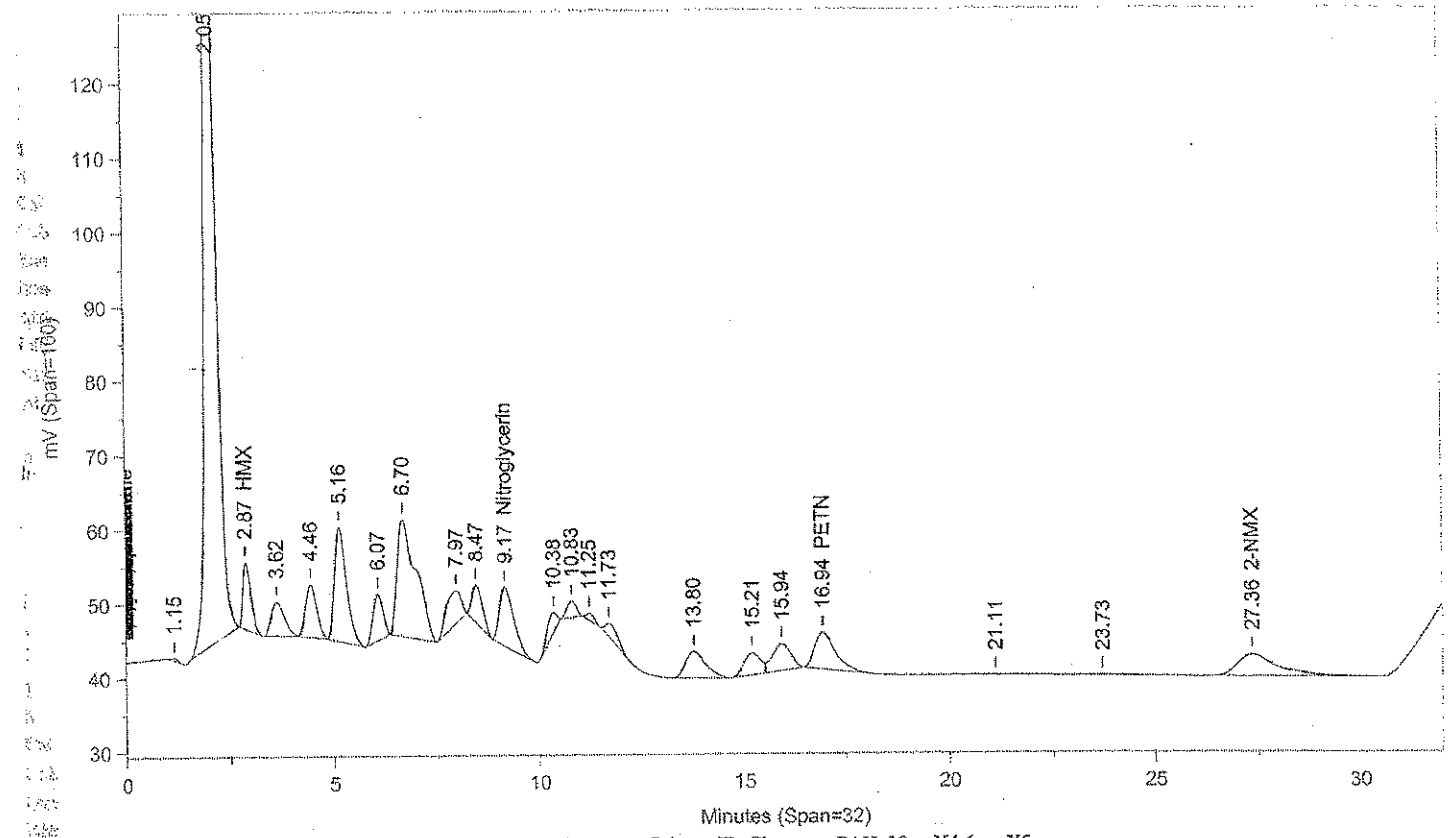
LANCASTER LABORATORIES File: C:\CPWIN\DATA1\5E12310.44R



M = Manually Integrated
Analyst 11/22/13
Approved by 11/25/13
Circle Reason 0 2 3 4
1 = Missed Peak
2 = Improper Baseline
3 = RT Update
4 = Other

Instrument ID: CP12--X6329A Injected On: 11/20/2013 12:52:38 AM Column ID: Chrompak PAH, 10cmX4.6mmX5um

File: C:\CPWIN\DATA1\5E12310B.44R



Instrument ID: CP12--X6329B Injected On: 11/20/2013 12:52:38 AM Column ID: Chrompac PAH, 10cmX4.6mmX5um

Oven Parameters: 42%MEOH TO 27min,85%@35min,

Volume Inj: 1

Detector A Parameters:
Threshold: -3 Width: 0.07
Calibration Type: External

Area Reject: 0
Quantitation: Height

Detector B Parameters:
Threshold: -2 Width: 0.1
Calibration Type: External

Area Reject: 0
Quantiation: Height

Sample Weight: 2.3
Analyst: 1566

Dilution Factor: 20

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
.	0	.	HMX	2.868	117186	2496.995	HMX
4.311	37225	3585.513	RDX	.	0	.	RDX
5.006	89913	3703.945	1,3,5-TNB	.	0	.	1,3,5-TNB
5.924	212361	7248.103	1,4-DNB	.	0	.	1,4-DNB
6.545	101159	8537.199	o-Dinitrobenzene	.	0	.	o-Dinitrobenzene
6.934	157333	4216.136	1,3-DNB	.	0	.	1,3-DNB
7.88	120855	3052.449	Nitrobenzene	.	0	.	Nitrobenzene
8.315	107843	4115.501	2,4,6-TNT	.	0	.	2,4,6-TNT
8.833	8260	207.8	Tetryl breakdown	.	0	.	Tetryl breakdown
.	0	.	Nitroglycerin	9.167	193899	13192.55	Nitroglycerin
10.224	38320	3551.665	4-Am-2,6-DNT	.	0	.	4-Am-2,6-DNT
10.694	79473	3155.32	2-Am-4,6-DNT	.	0	.	2-Am-4,6-DNT
11.134	59393	4248.074	2,6-DNT	.	0	.	2,6-DNT
11.625	156778	4121.615	2,4-DNT	.	0	.	2,4-DNT
13.644	51577	3390.204	2-NT	.	0	.	2-NT
15.057	36637	3395.353	4-NT	.	0	.	4-NT
15.793	73407	4714.162	3-NT	.	0	.	3-NT
.	0	.	PETN	16.943	175458	11154.64	PETN
27.145	13521	3449.204	2-NMX	27.365	201749	3591.5	2-NMX
33.38	135686	8981.197	1-Nitronaphthalene	.	0	.	1-Nitronaphthalene

Files:
Area File: C:\CPWIN\~Dualcha.00A
Area File: C:\CPWIN\~Dualchb.00A
Method A: C:\CPWIN\DATA1\8330.MET
Method B: C:\CPWIN\DATA1\8330B.MET
Calibration File A: C:\CPWIN\DATA1\4E12310.CAL
Calibration File B: C:\CPWIN\DATA1\4E12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/22/2013 3:52:18 PM
File Reported On: 11/22/2013 at 3:52:17 PM

Lancaster Laboratories-Single Component Data Summary

Sample Name: 7266816 MSD 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on : NOV 20, 2013 00:52:39
Instrument : CP12--Y6329A
Result file : 5C12310.44R
Calibration file : 4C12310.CAL
Method file : 8330C.MET

%SSR(2-NMX) : 81% (63-150) Conc.: 3528.28125

Peak name	Min	R.T.	Max	Area	Amount
HMX	4.13	4.23	4.33	30254	2509.533936
RDX	5.08	5.19	5.28	50482	3712.524658
Nitrobenzene	12.62	12.73	12.94	82037	3859.505127
o-Dinitrobenzene	14.65	14.75	15.01	127285	8038.661621
4-Am-2,6-DNT	16.61	16.65	16.93	169244	3812.728516
1,3-DNB	18.80	18.84	19.10	138444	3554.291748
1,4-DNB	19.60	19.62	19.90	226391	8586.935547
2-NT	23.89	24.04	24.41	53140	3941.560059
4-NT	27.49	27.55	28.01	88610	3976.293457
1,3,5-TNB	29.57	29.67	29.97	99426	3964.890137
2,6-DNT	30.49	30.59	30.89	49778	3425.412842
2,4-DNT	33.60	33.69	33.82	125285	4218.072266
2-NMX	34.05	34.15	34.25	12309	3528.281250
Tetryl	34.39	34.48	34.59	59152	3397.516357
2,4,6-TNT	35.32	35.41	35.52	96388	3990.733398
1-Nitronaphthalene	36.34	36.44	36.54	163403	9098.830078

Analysis Report (B)

Injected on : NOV 20, 2013 00:52:39
Instrument : CP12--Y6329B
Result file : 5C12310B.44R
Calibration file : 4C12310B.CAL
Method file : 8330CB.MET

%SSR(2-NMX) : *0% (63-150) Conc.: 0

Peak name	Min	R.T.	Max	Area	Amount
Nitroglycerin	9.47	9.55	9.67	213364	18254.238281
PETN	25.73	25.81	26.15	191975	14056.666016

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☐ 2,4-DAm-6-NT							
☐ 2,6-DAm-4-NT							
☑ PETN	B	14056.666016	5217.39	1739.13			
☑ Nitroglycerin	B	18254.238281	5217.39	1739.13			
☑ HMX	A	2509.533936	652.1738	217.3913			
☑ RDX	A	3712.524658	260.8695	108.6956			
☑ Nitrobenzene	A	3859.505127	260.8695	86.9565			
☑ o-Dinitrobenzene	A	8038.661621	260.8695	86.9565			
☑ 4-Am-2,6-DNT	A	3812.728516	260.8695	130.4348			
☑ 2-Am-4,6-DNT			<260.8695	<86.9565			
☑ 1,3-DNB	A	3554.291748	260.8695	86.9565			
☑ 1,4-DNB	A	8586.935547	260.8695	86.9565			
☑ 2-NT	A	3941.560059	260.8695	173.913			
☑ 4-NT	A	3976.293457	260.8695	173.913			
☑ 3-NT			<260.8695	<217.3913			
☑ 1,3,5-TNB	A	3964.890137	260.8695	86.9565			
☑ 2,6-DNT	A	3425.412842	260.8695	86.9565			
☑ 2,4-DNT	A	4218.072266	260.8695	86.9565			
☐ 2-NMX	A	3528.281250					
☑ Tetryl	A	3397.516357	260.8695	133.0434			
☑ 2,4,6-TNT	A	3990.733398	260.8695	86.9565			

%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:38:18

Lancaster Laboratories Single Component Data Summary

Sample Name: 7266816 MSD 2E101 Sample ID: AA **Batchnumber: 133140020A**
Sample Amount: 2.3 g Total Volume: 20 ml Analyst: 1566 SDG: KVM06 State: NJ
Analyses: 06918

Analysis Report (A)

Injected on	: NOV 20, 2013 00:52:39
Instrument	: CP12--Y6329A
Result file	: 5C12310.44R
Calibration file	: 4C12310.CAL
Method file	: 8330C.MET

Analysis Report (B)

Injected on	: NOV 20, 2013 00:52:39
Instrument	: CP12--Y6329B
Result file	: 5C12310B.44R
Calibration file	: 4C12310B.CAL
Method file	: 8330CB.MET

Summary Report

Compound Name	Column	Amount Found	LOQ	MDL	Qualifiers	%RPD	Comments
☑ 1-Nitronaphthalene	A	9098.830078	260.8695	86.9565			

Units: ug/kg

Reviewed by: James H. Place, Senior Chemist
Date: NOV 24 2013

Verified by: Valorie L. Tomayko, Principal Specialist
Date: NOV 25 2013

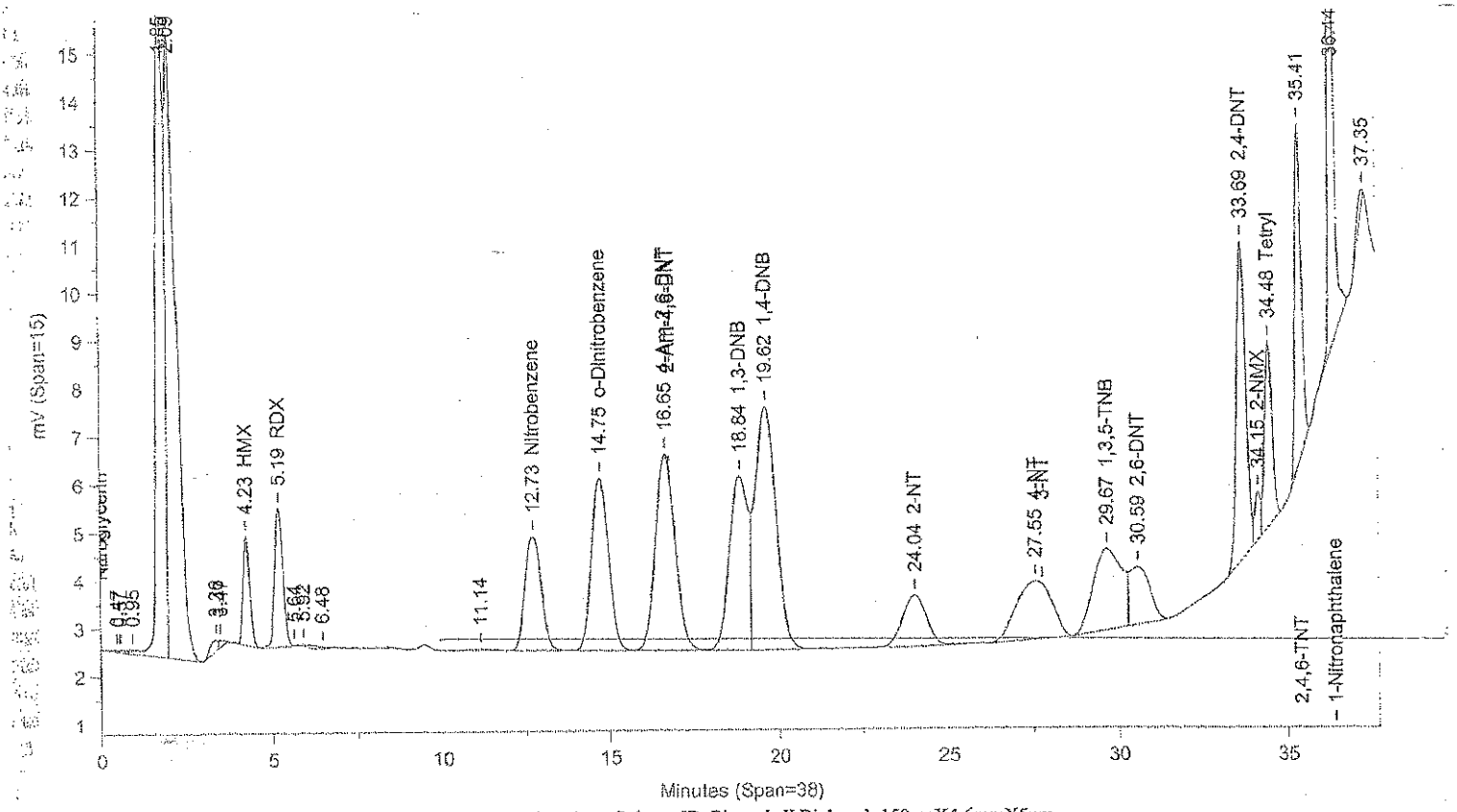
%RPD = High - Low Amount divided by the Average times 100

* Recovery outside QC Limits

Printed on: 11/22/2013 13:38:18

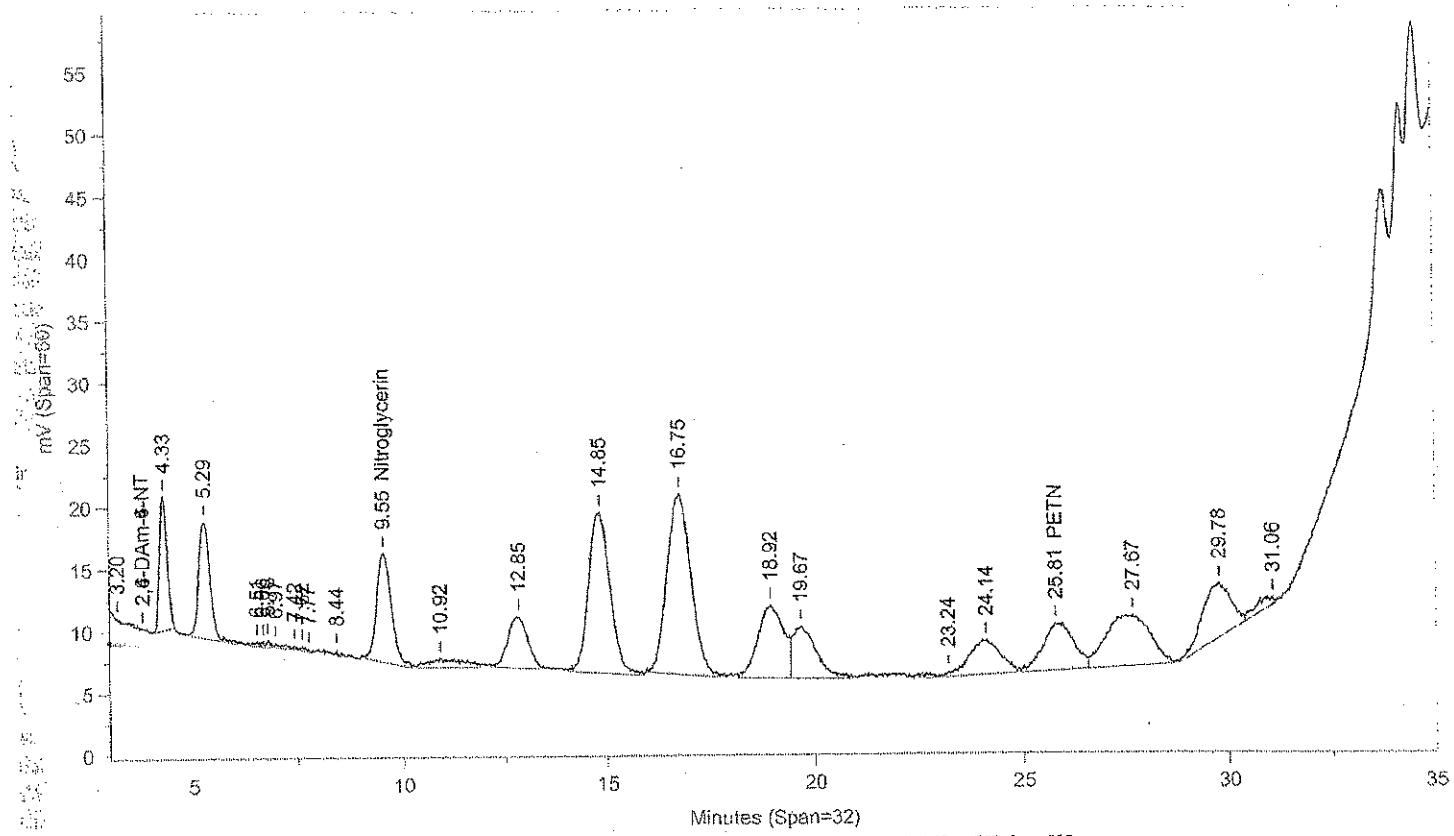
LANCASTER LABORATORIES

File: C:\CPWIN\DATA1\5C12310.44R



Instrument ID: CP12--Y6329A Injected On: 11/20/2013 12:52:38 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

File: C:\CPWIN\DATA1\5C12310B.44R



Instrument ID: CP12--Y6329B Injected On: 11/20/2013 12:52:38 AM Column ID: Pinnacle II Biphenyl, 150cmX4.6mmX5um

Oven Parameters: 42%MeOH/58%H2O hold 27min;85% at 35min hold 0.5rVolume Inj: 1

Detector A Parameters:
Threshold: -4 Width: 0.1 Area Reject: 0
Calibration Type: External Quantitation: Height

Detector B Parameters:
Threshold: -5 Width: 0.1 Area Reject: 0
Calibration Type: External Quantiation: Height

Sample Weight: 2.3 Dilution Factor: 20
Analyst: 1566

RT A	Area A	Amount A	Compound A	RT B	Area B	Amount B	Compound B
4.234	30254	2509.534	HMX		0		HMX
5.194	50482	3712.525	RDX		0		RDX
	0		Nitroglycerin	9.553	213364	18254.24	Nitroglycerin
12.734	82037	3859.505	Nitrobenzene		0		Nitrobenzene
14.748	127285	8038.662	o-Dinitrobenzene		0		o-Dinitrobenzene
16.654	169244	3812.729	4-Am-2,6-DNT		0		4-Am-2,6-DNT
18.838	138444	3554.292	1,3-DNB		0		1,3-DNB
19.621	226391	8586.936	1,4-DNB		0		1,4-DNB
24.041	53140	3941.56	2-NT		0		2-NT
	0		PETN	25.807	191975	14056.67	PETN
27.548	88610	3976.293	4-NT		0		4-NT
29.671	99426	3964.89	1,3,5-TNB		0		1,3,5-TNB
30.586	49778	3425.413	2,6-DNT		0		2,6-DNT
33.691	125285	4218.072	2,4-DNT		0		2,4-DNT
34.151	12309	3528.281	2-NMX		0		2-NMX
34.476	59152	3397.516	Tetryl		0		Tetryl
35.415	96388	3990.733	2,4,6-TNT		0		2,4,6-TNT
36.441	163403	9098.83	1-Nitronaphthalene		0		1-Nitronaphthalene

Files:
Area File: C:\CPWIN\DATA1\5C12310.44A
Area File: C:\CPWIN\DATA1\5C12310B.44A
Method A: C:\CPWIN\DATA1\8330C.MET
Method B: C:\CPWIN\DATA1\8330CB.MET
Calibration File A: C:\CPWIN\DATA1\4C12310.CAL
Calibration File B: C:\CPWIN\DATA1\4C12310B.CAL
Format A: C:\CPWIN\DATA1\8330A.FMTA
Format B: C:\CPWIN\DATA1\8330A.FMTB
Area File Created On: 11/20/2013 5:49:24 PM
File Reported On: 11/20/2013 at 5:49:34 PM

Extraction/Distillation/Digestion Logs

Explosives

Organic Extraction Batchlog Assigned to: 572 Edwin Ortiz

Reviewed by: [signature] Start Date: 11-12-13 Start time: 15:00

Tech 1: 572 Tech 2:

133140016A

Dept: 24 Prep Analysis: 06915 Nitroaromatics/Amines Wat Ext Nitroaromatics/Amines in Water

QC	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
BLANKA	PBLK16314	500	SS1330824A	0.5	NA	NA	10				=D.I. H2O
LCSA	LCS16314	500	SS1330824A	0.5	MS1326324A	0.5	10				
LCSDA	LCSD16314	500	SS1330824A	0.5	MS1326324A	0.5	10				✓

Solvent Used	Lot No.
ACN	47097
CaCl2 sol'n	2125 110413A
Poropak cart.	383115A
Syringe Filter	218203L

Spike Solutions: Witness: NA

MS1326324A WATER EXPLOSIVES SPIKE

SS1330824A EXPLOSIVE WATER SURROGAT

Sample #	Sample Code	Amt (mL)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1	7266798	FB106	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
2	7266799	FB206	500	SS1330824A	0.5	10			162A		06916	1225	11/18/2013	N
3	7266805	2B152	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N
4	7266807	2B151	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N
5	7266810	2D123	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
6	7266811	2D121	500	SS1330824A	0.5	10			162A	Pale yellow	06916	1225	11/18/2013	N
7	7266819	3--FD	500	SS1330824A	0.5	10			162A	yellow clear	06916	1225	11/18/2013	N

NA [signature] 11-12-13

Rack ID:		Work Station	GC room
Internal Standard		Balance #	

DF = Dilution Factor FV = Final Volume Page 1 of 1

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133140016A

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 2991 William Saadeh Reviewed by: [illegible] Start Date: 11/12/13 Start time: 11:00

133140020A

Tech 1: WHS 2991 Tech 2: [illegible] 11-13-13 Finished

Dept: 24 Prep Analysis: 06917 Nitroaromatics/Amines Sol Ext Nitroaromatics/Amines in Solid

QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments
7266815MS	2E101	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	Brown soil
7266816MSD	2E101	2.3	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z	34A	↓
BLANKA	PBLK20314	2.0	SS1327424A	0.1			20	Z	Z	Z	Sand
LCSA	LCS20314	2.0	SS1327424A	0.1	MS1330124B	0.5	20	Z	Z		↓

Solvent Used	Lot No.
Acetonitrile	47097
CaCl2 solution	712111213A
Syringe Filter	218296 91
Sand	013021-AF

Start Time: 12:30
Stop Time: 9:45 11-13-13 WHS

Spike Solutions: Witness:
MS1330124B SOIL EXPLOSIVE SPIKE
SS1327424A EXPLOSIVE SOIL SURROGATE

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (mL)	pH	pH	BC	Comments	Analyses	List	Due Date	Prio
1 7265229	R2M71	2.0	SS1327424A	0.1	20	Z	Z	34A	Wet rocky mud	06918	1688	11/19/2013	N
2 7265239	R2F14	2.2	SS1327424A	0.1	20	Z	Z	34A	Brown mud	06918	1688	11/19/2013	N
3 7266809	2E131	2.1	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N
4 7266812	2C126	2.3	SS1327424A	0.1	20	Z	Z	34A	Brown dirt	06918	1688	11/18/2013	N
5 7266813	2C111	2.3	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N
6 7266814BKG	2E101	2.1	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N
7 7266818	2E102	2.2	SS1327424A	0.1	20	Z	Z	34A	↓	06918	1688	11/18/2013	N

NA 11-13-13

Rack ID:		Work Station	
Internal Standard		Balance #	

S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	133140020A

Documented temps are NIST corrected.

DF = Dilution Factor FV = Final Volume

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266810	SW-R2-D-12-3	X		1	
7266811	SW-R2-D-12-1	X		1	
7266819	DUP-03	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

Method defined actions are taken for any failed matrix QC.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

ICP Metals

Fraction: Metals in Liquid

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266810 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	512			P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	5.0			MS
7440-39-3	Barium	133			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	19700			P
7440-47-3	Chromium	2.0	B		P
7440-48-4	Cobalt	2.1	B		P
7440-50-8	Copper	6.9	B		P
7439-89-6	Iron	28000			P
7439-92-1	Lead	39.6			MS
7439-95-4	Magnesium	7980			P
7439-96-5	Manganese	2060			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.6	B		P
7440-09-7	Potassium	1930			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	54900			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.2	B		P
7440-66-6	Zinc	42.1			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266811 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	219			P
7440-36-0	Antimony	0.34	U		MS
7440-38-2	Arsenic	2.1			MS
7440-39-3	Barium	99.4			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	0.76	U		P
7440-70-2	Calcium	19100			P
7440-47-3	Chromium	1.6	U		P
7440-48-4	Cobalt	1.3	U		P
7440-50-8	Copper	2.7	U		P
7439-89-6	Iron	12400			P
7439-92-1	Lead	17.1			MS
7439-95-4	Magnesium	7890			P
7439-96-5	Manganese	1490			P
7439-97-6	Mercury	0.060	U		CV
7440-02-0	Nickel	1.5	U		P
7440-09-7	Potassium	2040			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	54700			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	2.0	U		P
7440-66-6	Zinc	20.9			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 7266819 % Solids: 0.0
Concentration Units: UG/L Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1430			P
7440-36-0	Antimony	0.57	B		MS
7440-38-2	Arsenic	4.2			MS
7440-39-3	Barium	72.9			P
7440-41-7	Beryllium	0.67	U		P
7440-43-9	Cadmium	1.2	B		P
7440-70-2	Calcium	25300			P
7440-47-3	Chromium	6.0	B		P
7440-48-4	Cobalt	11.9			P
7440-50-8	Copper	11.1			P
7439-89-6	Iron	21000			P
7439-92-1	Lead	21.6			MS
7439-95-4	Magnesium	9860			P
7439-96-5	Manganese	1670			P
7439-97-6	Mercury	0.062	B		CV
7440-02-0	Nickel	6.9	B		P
7440-09-7	Potassium	4130			P
7782-49-2	Selenium	8.4	U		P
7440-22-4	Silver	2.1	U		P
7440-23-5	Sodium	53600			P
7440-28-0	Thallium	0.15	U		MS
7440-62-2	Vanadium	5.6			P
7440-66-6	Zinc	61.5			P

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM06
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Aluminum	P31105F	*65230BKG
Barium		7266810
Beryllium		7266811
Cadmium		7266819
Calcium		P31105FB
Chromium		P31105FQ
Cobalt		
Copper		
Iron		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM06
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Antimony	P31150D	*65230BKG
Arsenic		7266810
Lead		7266811
Thallium		7266819
		P31150DB
		P31150DQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM06
Matrix: WATER

Analyte	Batch ID	Lab Sample ID
Mercury	P31113F	7266810
		7266811
		7266819
		P31113FB
		P31113FQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(2)
Aluminum		30000.0	30176.99	100.6	25000.0	24955.95	99.8	25000.0	24726.46	98.9
Barium		600.0	609.15	101.5	500.0	499.68	99.9	500.0	496.82	99.4
Beryllium		600.0	593.69	98.9	500.0	488.66	97.7	500.0	494.36	98.9
Cadmium		600.0	597.55	99.6	500.0	492.78	98.6	500.0	493.39	98.7
Calcium		30000.0	29827.29	99.4	25000.0	24490.30	98.0	25000.0	24603.43	98.4
Chromium		600.0	604.82	100.8	500.0	490.15	98.0	500.0	497.80	99.6
Cobalt		600.0	597.72	99.6	500.0	490.31	98.1	500.0	495.22	99.0
Copper		600.0	610.50	101.8	500.0	496.11	99.2	500.0	492.97	98.6
Iron		30000.0	29995.66	100.0	25000.0	24716.42	98.9	25000.0	24622.22	98.5
Magnesium		30000.0	29645.04	98.8	25000.0	24462.84	97.9	25000.0	24155.72	96.6
Manganese		600.0	598.46	99.7	500.0	493.88	98.8	500.0	485.39	97.1
Nickel		600.0	600.88	100.1	500.0	493.24	98.6	500.0	496.83	99.4
Potassium		30000.0	29994.13	100.0	25000.0	24625.67	98.5	25000.0	24752.09	99.0
Selenium		600.0	600.32	100.1	500.0	493.84	98.8	500.0	492.14	98.4
Silver		600.0	608.96	101.5	500.0	500.97	100.2	500.0	491.58	98.3
Sodium		30000.0	29765.38	99.2	25000.0	24526.94	98.1	25000.0	24354.94	97.4
Vanadium		600.0	612.87	102.1	500.0	499.38	99.9	500.0	499.91	100.0
Zinc		600.0	601.98	100.3	500.0	493.07	98.6	500.0	493.28	98.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24696.12	98.8	25000.0	24803.55	99.2
Barium					500.0	503.83	100.8	500.0	497.85	99.6
Beryllium					500.0	493.68	98.7	500.0	496.89	99.4
Cadmium					500.0	491.82	98.4	500.0	495.61	99.1
Calcium					25000.0	24539.08	98.2	25000.0	24684.15	98.7
Chromium					500.0	497.51	99.5	500.0	502.03	100.4
Cobalt					500.0	493.97	98.8	500.0	491.69	98.3
Copper					500.0	499.11	99.8	500.0	491.78	98.4
Iron					25000.0	24634.85	98.5	25000.0	24617.89	98.5
Magnesium					25000.0	24255.20	97.0	25000.0	24100.07	96.4
Manganese					500.0	489.70	97.9	500.0	496.55	99.3
Nickel					500.0	495.04	99.0	500.0	494.73	98.9
Potassium					25000.0	24764.57	99.1	25000.0	24793.57	99.2
Selenium					500.0	491.77	98.4	500.0	480.23	96.0
Silver					500.0	499.06	99.8	500.0	500.08	100.0
Sodium					25000.0	24413.96	97.7	25000.0	24309.18	97.2
Vanadium					500.0	502.32	100.5	500.0	505.78	101.2
Zinc					500.0	493.01	98.6	500.0	490.44	98.1

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	55.03	110.1	25.0	26.66	106.6	25.0	26.82	107.3
Arsenic	75	500.0	527.62	105.5	250.0	262.48	105.0	250.0	265.46	106.2
Lead	208	50.0	51.98	104.0	25.0	26.10	104.4	25.0	25.88	103.5
Thallium	203	50.0	50.82	101.6	25.0	25.60	102.4	25.0	25.62	102.5

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	27.19	108.8	25.0	27.39	109.6
Arsenic	75				250.0	264.97	106.0	250.0	261.40	104.6
Lead	208				25.0	26.51	106.0	25.0	26.43	105.7
Thallium	203				25.0	26.09	104.4	25.0	25.90	103.6

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121	50.0	54.97	109.9	25.0	25.99	104.0	25.0	25.31	101.2
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Antimony	121				25.0	25.09	100.4	25.0	25.98	103.9
Arsenic										
Lead										
Thallium										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.51	100.4	1.0	0.99	99.0	1.0	0.91	91.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.99	99.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.96	96.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.98	98.0	1.0	0.98	98.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.96	96.0	1.0	0.97	97.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	188.38	94.2	203.93	102.0
Barium		5.0	5.36	107.2	5.29	105.8
Beryllium		5.0	4.89	97.8	4.95	99.0
Cadmium		5.0	5.42	108.4	5.34	106.8
Calcium		200.0	184.37	92.2	190.68	95.3
Chromium		15.0	14.63	97.5	14.96	99.7
Cobalt		5.0	4.58	91.6	4.41	88.2
Copper		10.0	9.89	98.9	9.31	93.1
Iron		200.0	191.73	95.9	198.04	99.0
Magnesium		100.0	97.59	97.6	97.80	97.8
Manganese		5.0	5.18	103.6	5.12	102.4
Nickel		10.0	10.29	102.9	10.07	100.7
Potassium		500.0	530.32	106.1	545.74	109.1
Selenium		20.0	20.74	103.7	20.68	103.4
Silver		5.0	5.35	107.0	5.18	103.6
Sodium		1000.0	948.70	94.9	941.03	94.1
Vanadium		5.0	5.06	101.2	5.12	102.4
Zinc		20.0	17.26	86.3	19.74	98.7

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.42	142.0	0.81	81.0
Arsenic	75	2.0	2.00	100.0	2.01	100.5
Lead	208	1.0	0.99	99.0	1.07	107.0
Thallium	203	0.5	0.52	104.0	0.45	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Antimony	121	1.0	1.15	115.0	1.04	104.0
Arsenic						
Lead						
Thallium						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.20	100.0	0.18	90.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	33.4	U		82.800	U	P31105FB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.330	U	P31105FB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.670	U	P31105FB
Cadmium		0.49	B	0.43	B	0.33	B	0.34	B		0.760	U	P31105FB
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		33.400	U	P31105FB
Chromium		0.55	U	-0.57	B	0.55	U	0.55	U		1.600	U	P31105FB
Cobalt		0.44	U	0.44	U	0.44	U	0.44	U		1.300	U	P31105FB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		2.700	U	P31105FB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		43.000	U	P31105FB
Magnesium		16.7	U	16.7	U	16.7	U	16.7	U		16.700	U	P31105FB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.830	U	P31105FB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		1.500	U	P31105FB
Potassium		83.4	U	83.4	U	83.4	U	83.4	U		98.000	U	P31105FB
Selenium		2.4	U	2.4	U	2.4	U	3.1	B		8.400	U	P31105FB
Silver		0.75	U	0.75	U	0.75	U	0.75	U		2.100	U	P31105FB
Sodium		167	U	167	U	167	U	167	U		167.000	U	P31105FB
Vanadium		0.83	U	0.83	U	0.83	U	0.83	U		2.000	U	P31105FB
Zinc		-2.3	B	-2.4	B	-2.4	B	-2.4	B		-2.610	B	P31105FB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331501T71
Calibration Date(s): 11/11/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.47	B								
Calcium				33.4	U								
Chromium				0.55	U								
Cobalt				-0.50	B								
Copper				1.7	U								
Iron				33.4	U								
Magnesium				16.7	U								
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				2.4	U								
Silver				0.75	U								
Sodium				167	U								
Vanadium				0.83	U								
Zinc				-2.5	B								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.74	B	0.33	U	0.33	U	0.33	U				
Arsenic	75	0.40	U	0.40	U	0.40	U	0.40	U	75	0.420	U	P31150DB
Lead	208	0.026	U	0.026	U	0.026	U	0.026	U	208	0.085	U	P31150DB
Thallium	203	0.15	U	0.15	U	0.15	U	0.15	U	203	0.150	U	P31150DB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: MS
Run Name: 1331901E05
Calibration Date(s): 11/15/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Antimony	121			0.39	B								
Arsenic	75			0.40	U								
Lead	208			0.026	U								
Thallium	203			0.15	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Antimony	121	0.96	B	0.33	U	0.33	U	0.33	U	121	0.340	U	P31150DB
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: MS
Run Name: 1331906E05
Calibration Date(s): 11/15/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (UG/L) Mass		C	Lab Sample ID
Antimony	121			0.33	U								
Arsenic													
Lead													
Thallium													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	-0.063	B	0.060	U		0.060	U	P31113FB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331301M07
Calibration Date(s): 11/09/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 16315
Run Name: 1331501T71
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	495613	99.1	494019.8	98.8	497664	99.5	495788.0	99.2
Barium	0	500	0		497.0	99.4	0		497.0	99.4
Beryllium	0	500	0		508.8	101.8	0		514.8	103.0
Cadmium	0	1000	1		963.6	96.4	0		960.1	96.0
Calcium	500000	500000	493688	98.7	495171.2	99.0	498282	99.7	501223.9	100.2
Chromium	0	500	2		484.5	96.9	2		494.0	98.8
Cobalt	0	500	2		491.9	98.4	2		491.1	98.2
Copper	0	500	-1		531.1	106.2	-1		528.8	105.8
Iron	200000	200000	198567	99.3	198022.4	99.0	199502	99.8	199163.0	99.6
Magnesium	500000	500000	496854	99.4	492973.0	98.6	493002	98.6	490047.4	98.0
Manganese	0	500	3		482.5	96.5	3		485.2	97.0
Nickel	0	1000	3		976.9	97.7	3		973.6	97.4
Potassium	0	0	19		50.3		44		21.5	
Selenium	0	50	3		51.6	103.2	2		51.7	103.4
Silver	0	200	0		219.1	109.6	1		219.3	109.7
Sodium	0	0	53		47.1		15		-2.0	
Vanadium	0	500	-2		495.7	99.1	-2		499.8	100.0
Zinc	0	1000	11		1035.2	103.5	11		1022.0	102.2

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9696	97.0	9618.4	96.2
Antimony	121	0	0	0		0.1	
Arsenic	75	0	20	0		19.0	95.0
Calcium	44	10000	10000	9010	90.1	8923.0	89.2
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9709	97.1	9588.2	95.9
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9569	95.7	9585.4	95.9
Molybdenum	98	200	200	197	98.5	198.5	99.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9510	95.1	9612.0	96.1
Sodium	23	10000	10000	9494	94.9	9495.1	95.0
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	202	101.0	187.4	93.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331901E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9807	98.1	10019.6	100.2
Antimony	121	0	0	0		-0.1	
Arsenic	75	0	20	0		19.5	97.5
Calcium	44	10000	10000	9551	95.5	9713.4	97.1
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9733	97.3	10129.2	101.3
Lead	208	0	0	0		0.0	
Magnesium	24	10000	10000	9688	96.9	9908.7	99.1
Molybdenum	98	200	200	198	99.0	199.5	99.8
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9824	98.2	10198.7	102.0
Sodium	23	10000	10000	9677	96.8	10063.8	100.6
Sulfur	34	10000	10000	NA		NA	
Thallium	203	0	0	0		0.0	
Titanium	47	200	200	196	98.0	204.1	102.1

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9625	96.3	9589.2	95.9
Antimony	121	0	0	0		0.1	
Arsenic							
Calcium	44	10000	10000	9804	98.0	9725.1	97.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9730	97.3	9719.1	97.2
Lead							
Magnesium	24	10000	10000	9580	95.8	9592.4	95.9
Molybdenum	98	200	200	200	100.0	201.3	100.7
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9818	98.2	9799.8	98.0
Sodium	23	10000	10000	9659	96.6	9667.2	96.7
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	211	105.5	203.0	101.5

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331906E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	10000	10000	9480	94.8	9915.5	99.2
Antimony	121	0	0	0		0.0	
Arsenic							
Calcium	44	10000	10000	9516	95.2	9934.2	99.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Iron	57	10000	10000	9743	97.4	10135.0	101.4
Lead							
Magnesium	24	10000	10000	9362	93.6	9819.0	98.2
Molybdenum	98	200	200	193	96.5	201.1	100.6
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	10000	10000	9750	97.5	10311.7	103.1
Sodium	23	10000	10000	9410	94.1	9888.2	98.9
Sulfur	34	10000	10000	NA		NA	
Thallium							
Titanium	47	200	200	195	97.5	201.2	100.6

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM06
Matrix: WATER

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31105FQ	UG/L	2000.00	2088.05		90 - 112	104	P	Yes
Antimony	121	P31150DQ	UG/L	6.00	5.63		80 - 120	94	MS	Yes
Arsenic	75	P31150DQ	UG/L	10.00	10.03		86 - 120	100	MS	Yes
Barium		P31105FQ	UG/L	2000.00	2058.61		90 - 110	103	P	Yes
Beryllium		P31105FQ	UG/L	50.00	51.26		90 - 111	103	P	Yes
Cadmium		P31105FQ	UG/L	50.00	51.09		90 - 112	102	P	Yes
Calcium		P31105FQ	UG/L	4000.00	4098.01		90 - 112	102	P	Yes
Chromium		P31105FQ	UG/L	200.00	205.97		90 - 110	103	P	Yes
Cobalt		P31105FQ	UG/L	500.00	512.50		90 - 110	103	P	Yes
Copper		P31105FQ	UG/L	250.00	260.00		90 - 112	104	P	Yes
Iron		P31105FQ	UG/L	1000.00	1010.17		90 - 112	101	P	Yes
Lead	208	P31150DQ	UG/L	15.00	14.80		90 - 110	99	MS	Yes
Magnesium		P31105FQ	UG/L	2000.00	2017.59		89 - 110	101	P	Yes
Manganese		P31105FQ	UG/L	500.00	511.47		90 - 110	102	P	Yes
Mercury		P31113FQ	UG/L	1.00	0.97		80 - 120	97	CV	Yes
Nickel		P31105FQ	UG/L	500.00	522.14		90 - 111	104	P	Yes
Potassium		P31105FQ	UG/L	10000.00	10156.07		90 - 110	102	P	Yes
Selenium		P31105FQ	UG/L	150.00	156.07		80 - 120	104	P	Yes
Silver		P31105FQ	UG/L	50.00	56.23		80 - 120	112	P	Yes
Sodium		P31105FQ	UG/L	10000.00	10152.52		87 - 114	102	P	Yes
Thallium	203	P31150DQ	UG/L	2.00	1.86		90 - 115	93	MS	Yes
Vanadium		P31105FQ	UG/L	500.00	525.39		90 - 110	105	P	Yes
Zinc		P31105FQ	UG/L	500.00	508.29		90 - 110	102	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM06
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: *65230BKG Serial Dilution Lab Sample ID: *65230L
Batch ID(s): P31105F, P31150D
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		147.9800	B	414.0000	U	100		P
Antimony	121	0.3400	U	1.7000	U			MS
Arsenic	75	0.4200	U	2.1000	U			MS
Barium		39.3600		40.7000		3		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		36101.7400		36750.4500		2		P
Chromium		1.6000	U	8.0000	U			P
Cobalt		1.3000	U	6.5000	U			P
Copper		2.7000	U	13.5000	U			P
Iron		1448.7200		1419.5500		2		P
Lead	208	0.7250	B	0.7550	B	4		MS
Magnesium		14386.8200		14718.5000		2		P
Manganese		739.0500		751.7500		2		P
Nickel		1.5000	U	7.5000	U			P
Potassium		1957.7300		1964.1000	B	0		P
Selenium		8.4000	U	42.0000	U			P
Silver		2.1000	U	10.5000	U			P
Sodium		71595.0200		73022.3500		2		P
Thallium	203	0.1500	U	0.7500	U			MS
Vanadium		2.0000	U	10.0000	U			P
Zinc		2.0700	B	10.0000	U	100		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.55
Cobalt	228.62		0.44
Copper	327.40		1.7
Iron	261.19		33.4
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		2.4
Silver	328.06		0.75
Sodium	589.59		167
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: MS
Instrument ID: 19204
Date: 10/2013

Analyte	MASS (amu)	Background	IDL (UG/L)
Antimony	121		0.33
Arsenic	75		0.40
Lead	208		0.026
Thallium	203		0.15

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM06
Matrix: WATER

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	82.8
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	1.3
Copper	327.40		10.0	2.7
Iron	261.19		200	43.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.5
Potassium	766.49		500	98.0
Selenium	196.09		20.0	8.4
Silver	328.06		5.0	2.1
Sodium	589.59		1000	167
Vanadium	292.40		5.0	2.0
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM06
Matrix: WATER

Method: MS
Date: 06/2013

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Antimony	121		1.0	0.34
Arsenic	75		2.0	0.42
Lead	208		1.0	0.085
Thallium	203		0.50	0.15

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM06
Matrix: WATER

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.20	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000770	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	-0.0000200	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000150	0.0000000	0.0002620
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000230	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0001000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0099760
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002000	0.0000000	0.0000000	-0.0000040
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	0.0002000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0001180	0.0000000	0.0000000	0.0000000	0.0018400
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0004790	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	-0.0000600	-0.0094600
Zinc	213.86	0.0000000	0.0000000	0.0012000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16315
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	TI	V	ZR	--
Aluminum	308.21	0.0000000	0.0000000	0.0100000	0.0000000	
Beryllium	313.04	0.0000000	0.0000040	0.0001160	0.0000000	
Cadmium	226.50	-0.0000780	0.0000000	0.0000000	0.0000000	
Cobalt	228.62	0.0001140	0.0020220	0.0000000	0.0000000	
Copper	327.40	0.0000000	0.0001460	-0.0000340	0.0000000	
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0006500	
Vanadium	292.40	0.0000000	0.0007950	0.0000000	0.0000000	
Zinc	213.86	0.0053800	0.0000000	0.0000000	0.0000000	

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM06

Method: P
Instrument ID: 16315
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Barium	455.4	10.00	5000.0
Beryllium	313.04	10.00	5000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	10000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	10000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM06

Method: P
Batch ID: P31105F

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266810	11/09/2013	50.00	50
7266811	11/09/2013	50.00	50
7266819	11/09/2013	50.00	50
*65230BKG	11/09/2013	50.00	50
P31105FB	11/09/2013	50.00	50
P31105FQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM06

Method: MS
Batch ID: P31150D

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266810	11/09/2013	50.00	50
7266811	11/09/2013	50.00	50
7266819	11/09/2013	50.00	50
*65230BKG	11/09/2013	50.00	50
P31150DB	11/09/2013	50.00	50
P31150DQ	11/09/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM06

Method: CV
Batch ID: P31113F

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
7266810	11/08/2013	40.00	40
7266811	11/08/2013	40.00	40
7266819	11/08/2013	40.00	40
P31113FB	11/08/2013	40.00	40
P31113FQ	11/08/2013	1.00	1

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	NG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	00:43	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
S	1.00	00:46	X						X				X		X				X			X										
S	1.00	00:50				X	X	X			X	X				X		X		X	X				X							
S	1.00	00:54								X														X								
ICV	1.00	00:58	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICB	1.00	01:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
LLC	1.00	01:05	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	01:09	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	01:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	01:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	01:21	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FB	1.00	01:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
P31105FQ	1.00	01:29	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
*65230BKG	1.00	01:32	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	01:36																														
ZZZZZZ	1.00	01:40																														
ZZZZZZ	1.00	01:43																														
ZZZZZZ	1.00	01:47																														
*65230L	5.00	01:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	01:55																														
ZZZZZZ	1.00	01:58																														
CCV	1.00	02:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:06	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:10																														
ZZZZZZ	1.00	02:14																														
ZZZZZZ	1.00	02:17																														
ZZZZZZ	1.00	02:21																														
ZZZZZZ	1.00	02:25																														
ZZZZZZ	1.00	02:29																														
ZZZZZZ	1.00	02:32																														
ZZZZZZ	1.00	02:36																														
ZZZZZZ	1.00	02:40																														
ZZZZZZ	1.00	02:44																														
CCV	1.00	02:47	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	02:51	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ZZZZZZ	1.00	02:55																														
7266810	1.00	02:59	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
7266811	1.00	03:02	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16315
Run Name: 1331501T71

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7266819	1.00	03:06	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
LLC	1.00	03:10	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSA	1.00	03:13	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
ICSAB	1.00	03:17	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCV	1.00	03:22	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							
CCB	1.00	03:25	X			X	X	X	X	X	X	X	X		X	X		X	X	X	X	X		X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	02:11		X	X									X									X										
S	1.00	02:13		X	X									X									X										
CCS	1.00	02:15		X	X									X									X										
CCS	1.00	02:17		X	X									X									X										
ICV	1.00	02:19		X	X									X									X										
ICB	1.00	02:21		X	X									X									X										
LLC	1.00	02:23		X	X									X									X										
ICSA	1.00	02:25		X	X									X									X										
ICSAB	1.00	02:27		X	X									X									X										
CCV	1.00	02:29		X	X									X									X										
CCB	1.00	02:31		X	X									X									X										
P31150DB	1.00	02:33			X									X									X										
P31150DQ	1.00	02:35			X									X									X										
*65230BKG	1.00	02:37		X	X									X									X										
ZZZZZZ	1.00	02:39																															
ZZZZZZ	1.00	02:41																															
ZZZZZZ	1.00	02:43																															
ZZZZZZ	1.00	02:45																															
*65230L	5.00	02:47		X	X									X									X										
ZZZZZZ	1.00	02:49																															
ZZZZZZ	1.00	02:51																															
CCV	1.00	02:53		X	X									X									X										
CCB	1.00	02:55		X	X									X									X										
ZZZZZZ	1.00	02:57																															
ZZZZZZ	1.00	02:59																															
ZZZZZZ	1.00	03:01																															
ZZZZZZ	1.00	03:03																															
ZZZZZZ	1.00	03:05																															
ZZZZZZ	1.00	03:07																															
ZZZZZZ	1.00	03:09																															
ZZZZZZ	1.00	03:11																															
ZZZZZZ	1.00	03:13																															
ZZZZZZ	1.00	03:15																															
CCV	1.00	03:17		X	X									X									X										
CCB	1.00	03:19		X	X									X									X										
7266810	1.00	03:21		X	X									X									X										
7266811	1.00	03:23		X	X									X									X										
7266819	1.00	03:25			X									X									X										

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: MS
Instrument ID: 19204
Run Name: 1331901E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	03:27																														
LLC	1.00	03:29		X	X									X									X									
ICSA	1.00	03:31		X	X									X									X									
ICSAB	1.00	03:33		X	X									X									X									
CCV	1.00	03:35		X	X									X									X									
CCB	1.00	03:37		X	X									X									X									

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM06
No.:

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	21:54		X																												
S	1.00	21:56		X																												
CCS	1.00	21:58		X																												
CCS	1.00	22:00		X																												
ICV	1.00	22:02		X																												
ICB	1.00	22:04		X																												
LLC	1.00	22:06		X																												
ICSA	1.00	22:08		X																												
ICSAB	1.00	22:10		X																												
CCV	1.00	22:12		X																												
CCB	1.00	22:14		X																												
ZZZZZZ	1.00	22:16																														
ZZZZZZ	1.00	22:18																														
ZZZZZZ	1.00	22:20																														
ZZZZZZ	1.00	22:22																														
ZZZZZZ	1.00	22:24																														
ZZZZZZ	1.00	22:26																														
ZZZZZZ	1.00	22:28																														
ZZZZZZ	5.00	22:30																														
ZZZZZZ	1.00	22:32																														
ZZZZZZ	1.00	22:34																														
CCV	1.00	22:36		X																												
CCB	1.00	22:38		X																												
ZZZZZZ	1.00	22:40																														
ZZZZZZ	5.00	22:42																														
P31150DB	1.00	22:44		X																												
P31150DQ	1.00	22:46		X																												
ZZZZZZ	1.00	22:48																														
ZZZZZZ	1.00	22:50																														
ZZZZZZ	1.00	22:52																														
ZZZZZZ	1.00	22:54																														
7266819	1.00	22:56		X																												
CCV	1.00	22:58		X																												
CCB	1.00	23:00		X																												
LLC	1.00	23:02		X																												
ICSA	1.00	23:04		X																												
ICSAB	1.00	23:06		X																												
CCV	1.00	23:08		X																												

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: MS
Instrument ID: 19204
Run Name: 1331906E05

Run Start Date: 11/15/2013
Run End Date: 11/15/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
CCB	1.00	23:10		X																												

METHODS:	LEGEND:
P = ICP Atomic Emission Spectrometer	BKG = Background
MS = ICP Mass Spectrometry	DUP = Duplicate
CV = Cold Vapor	MS = Matrix Spike
AF = Cold Vapor Atomic Fluorescence	MSD = Matrix Spike Duplicate
	A = Post Digest Spike
	L = Serial Dilution
	B = Blank
	Q = Laboratory Control Sample
	Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	06:09															X															
S0.2	1.00	06:11															X															
S0.5	1.00	06:13															X															
S1.0	1.00	06:16															X															
S2.5	1.00	06:18															X															
S5.0	1.00	06:20															X															
ICV	1.00	06:22															X															
ICB	1.00	06:24															X															
CRA	1.00	06:26															X															
CCV	1.00	06:28															X															
CCB	1.00	06:30															X															
ZZZZZZ	1.00	06:32																														
ZZZZZZ	1.00	06:34																														
ZZZZZZ	1.00	06:36																														
ZZZZZZ	1.00	06:38																														
ZZZZZZ	1.00	06:40																														
ZZZZZZ	1.00	06:42																														
ZZZZZZ	1.00	06:44																														
ZZZZZZ	1.00	06:54																														
ZZZZZZ	1.00	06:56																														
ZZZZZZ	1.00	06:58																														
CCV	1.00	07:00															X															
CCB	1.00	07:02															X															
ZZZZZZ	1.00	07:05																														
ZZZZZZ	1000.00	07:07																														
ZZZZZZ	1.00	07:11																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:17																														
ZZZZZZ	1.00	07:19																														
ZZZZZZ	1.00	07:21																														
ZZZZZZ	1.00	07:23																														
ZZZZZZ	1.00	07:25																														
CCV	1.00	07:27															X															
CCB	1.00	07:29															X															
ZZZZZZ	1.00	07:31																														
ZZZZZZ	1.00	07:33																														
ZZZZZZ	1.00	07:35																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	07:37																													
ZZZZZZ	1.00	07:40																													
ZZZZZZ	1.00	07:42																													
ZZZZZZ	1.00	07:44																													
ZZZZZZ	1.00	07:46																													
ZZZZZZ	1.00	07:48																													
ZZZZZZ	1.00	07:50																													
CCV	1.00	07:52															X														
CCB	1.00	07:54															X														
ZZZZZZ	1.00	07:56																													
ZZZZZZ	1.00	07:58																													
ZZZZZZ	1.00	08:00																													
ZZZZZZ	1.00	08:02																													
ZZZZZZ	1.00	08:04																													
ZZZZZZ	1.00	08:06																													
ZZZZZZ	1.00	08:08																													
ZZZZZZ	1.00	08:10																													
ZZZZZZ	1.00	08:12																													
ZZZZZZ	1.00	08:14																													
CCV	1.00	08:16															X														
CCB	1.00	08:18															X														
ZZZZZZ	1.00	08:20																													
P31113FB	1.00	08:22															X														
P31113FQ	1.00	08:24															X														
ZZZZZZ	1.00	08:27																													
ZZZZZZ	1.00	08:29																													
ZZZZZZ	1.00	08:31																													
ZZZZZZ	1.00	08:33																													
ZZZZZZ	1.00	08:35																													
ZZZZZZ	1.00	08:37																													
ZZZZZZ	1.00	08:39																													
CCV	1.00	08:41															X														
CCB	1.00	08:43															X														
ZZZZZZ	1.00	08:45																													
ZZZZZZ	1.00	08:47																													
ZZZZZZ	1.00	08:49																													
ZZZZZZ	1.00	08:51																													
7266810	1.00	08:53															X														

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7266811	1.00	08:55															X															
7266819	1.00	08:57															X															
ZZZZZZ	1.00	08:59																														
ZZZZZZ	1.00	09:01																														
ZZZZZZ	1.00	09:03																														
CCV	1.00	09:06															X															
CCB	1.00	09:08															X															
ZZZZZZ	1.00	09:11																														
ZZZZZZ	1.00	09:13																														
ZZZZZZ	1.00	09:15																														
ZZZZZZ	1.00	09:17																														
ZZZZZZ	1.00	09:19																														
ZZZZZZ	1.00	09:21																														
ZZZZZZ	1.00	09:23																														
ZZZZZZ	1.00	09:25																														
ZZZZZZ	1.00	09:27																														
ZZZZZZ	1.00	09:29																														
CCV	1.00	09:31															X															
CCB	1.00	09:33															X															
ZZZZZZ	1.00	09:35																														
ZZZZZZ	1.00	09:37																														
ZZZZZZ	1.00	09:39																														
ZZZZZZ	1.00	09:42																														
ZZZZZZ	1.00	09:44																														
ZZZZZZ	1.00	09:46																														
ZZZZZZ	1.00	09:48																														
ZZZZZZ	1.00	09:50																														
ZZZZZZ	1.00	09:52																														
ZZZZZZ	1.00	09:54																														
CCV	1.00	09:56															X															
CCB	1.00	09:58															X															
ZZZZZZ	1.00	10:00																														
ZZZZZZ	1.00	10:02																														
ZZZZZZ	1.00	10:04																														
ZZZZZZ	1.00	10:06																														
ZZZZZZ	1.00	10:08																														
ZZZZZZ	1.00	10:10																														
ZZZZZZ	1.00	10:12																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331301M07

Run Start Date: 11/09/2013
Run End Date: 11/09/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	10:14																													
ZZZZZZ	1.00	10:16																													
CRA	1.00	10:18															X														
CCV	1.00	10:20															X														
CCB	1.00	10:22															X														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331901E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	02:11	100		100											
S	02:13	99		102											
CCS	02:15	102		103											
CCS	02:17	102		102											
ICV	02:19	98		101											
ICB	02:21	99		99											
LLC	02:23	97		100											
ICSA	02:25	95		101											
ICSAB	02:27	93		99											
CCV	02:29	96		99											
CCB	02:31	93		95											
P31150DB	02:33	94		99											
P31150DQ	02:35	93		96											
*65230BKG	02:37	87		89											
ZZZZZZ	02:39														
ZZZZZZ	02:41														
ZZZZZZ	02:43														
ZZZZZZ	02:45														
*65230L	02:47	93		96											
ZZZZZZ	02:49														
ZZZZZZ	02:51														
CCV	02:53	96		99											
CCB	02:55	95		97											
ZZZZZZ	02:57														
ZZZZZZ	02:59														
ZZZZZZ	03:01														
ZZZZZZ	03:03														
ZZZZZZ	03:05														
ZZZZZZ	03:07														
ZZZZZZ	03:09														
ZZZZZZ	03:11														
ZZZZZZ	03:13														
ZZZZZZ	03:15														
CCV	03:17	96		98											
CCB	03:19	95		97											
7266810	03:21	92		97											
7266811	03:23	95		98											
7266819	03:25	92		96											

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM06

Instrument ID: 19204 Start Date: 11/15/2013
Run Name: 1331901E05 End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element BI-1-209	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
ZZZZZZ	03:27														
LLC	03:29	92		96											
ICSA	03:31	92		96											
ICSAB	03:33	93		96											
CCV	03:35	95		96											
CCB	03:37	92		94											

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331906E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	21:54	100													
S	21:56	97													
CCS	21:58	98													
CCS	22:00	103													
ICV	22:02	99													
ICB	22:04	100													
LLC	22:06	98													
ICSA	22:08	97													
ICSAB	22:10	98													
CCV	22:12	99													
CCB	22:14	101													
ZZZZZZ	22:16														
ZZZZZZ	22:18														
ZZZZZZ	22:20														
ZZZZZZ	22:22														
ZZZZZZ	22:24														
ZZZZZZ	22:26														
ZZZZZZ	22:28														
ZZZZZZ	22:30														
ZZZZZZ	22:32														
ZZZZZZ	22:34														
CCV	22:36	98													
CCB	22:38	98													
ZZZZZZ	22:40														
ZZZZZZ	22:42														
P31150DB	22:44	101													
P31150DQ	22:46	95													
ZZZZZZ	22:48														
ZZZZZZ	22:50														
ZZZZZZ	22:52														
ZZZZZZ	22:54														
7266819	22:56	96													
CCV	22:58	100													
CCB	23:00	101													
LLC	23:02	99													
ICSA	23:04	97													
ICSAB	23:06	98													
CCV	23:08	98													

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: KVM06

Instrument ID: 19204
Run Name: 1331906E05

Start Date: 11/15/2013
End Date: 11/15/2013

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
CCB	23:10	101													

LEGEND:	INTERNAL STANDARD ELEMENTS
BKG = Background	BE = Beryllium
DUP = Duplicate	BI = Bismuth
MS = Matrix Spike	GE = Germanium
MSD = Matrix Spike Duplicate	HO = Holmium
A = Post Digest Spike	IN = Indium
L = Serial Dilution	LI = Lithium
B = Blank	SC = Scandium
Q = Laboratory Control Sample	TB = Terbium
Y = Laboratory Control Sample Duplicate	Y = Yttrium
FLAG:	
R = Internal Standard Relative Intensity OOS	

Raw Data

Metals in Liquid

ICP Data

Metals in Liquid

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ICP-AES Run Data Report

1331501T71

Reviewed By
Joanne M Gates

Reviewed Date
11/11/2013 5:07AM

Data File Name 1331501T71.TXT
Run Name: 1331501T71

Verified By:
Deborah A Krady
Jennifer L Moyer

Verified Date
11/11/2013 1:32PM
11/14/2013 10:10AM

Method Reference Name(s):
SW-846 3010A
SW-846 6010B

Analyst Employee: 2106

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 1 Date/Time: 11/11/2013 00:43

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00198	43.897	-0.00293	-0.00175	-0.00124
AL	0.000	0.00492	9.393	0.00546	0.00472	0.00460
AS	0.000	-0.00591	75.918	-0.00753	-0.00084	-0.00937
B	0.000	-0.00001	22.956	-0.00001	-0.00001	-0.00001
BA	0.000	0.00030	4.681	0.00031	0.00029	0.00029
BE	0.000	-0.00750	5.383	-0.00787	-0.00756	-0.00707
CA	0.000	0.00256	3.377	0.00264	0.00247	0.00255
CD	0.000	0.00560	51.652	0.00686	0.00229	0.00764
CO	0.000	-0.00554	78.803	-0.01056	-0.00258	-0.00349
CR	0.000	-0.00001	235.266	0.00001	0.00000	-0.00002
CU	0.000	0.01467	6.546	0.01536	0.01357	0.01508
FE	0.000	0.00015	43.391	0.00009	0.00023	0.00014
K	0.000	0.15292	8.334	0.15453	0.13944	0.16477
LI	0.000	0.00239	13.097	0.00216	0.00225	0.00274
MG	0.000	0.00019	29.400	0.00014	0.00025	0.00019
MN	0.000	0.00107	27.801	0.00109	0.00076	0.00135
MO	0.000	0.00844	28.584	0.01010	0.00567	0.00954
NA	0.000	0.00532	5.233	0.00500	0.00550	0.00547
NI	0.000	0.05895	8.513	0.05637	0.06473	0.05575
P	0.000	0.00003	136.118	0.00006	0.00005	-0.00002
PB	0.000	0.00688	53.308	0.00929	0.00266	0.00870
S	0.000	0.00005	142.075	-0.00003	0.00009	0.00009
SB	0.000	-0.00030	13.693	-0.00028	-0.00035	-0.00027
SE	0.000	0.01245	4.900	0.01266	0.01176	0.01292
SI	0.000	0.00013	38.423	0.00018	0.00010	0.00010
SN	0.000	0.00604	36.062	0.00850	0.00525	0.00436
SR	0.000	-0.00006	12.051	-0.00007	-0.00005	-0.00005
TI	0.000	0.00214	27.232	0.00156	0.00214	0.00272
TL	0.000	-0.00017	916.219	0.00160	-0.00145	-0.00067
V	0.000	-0.00050	58.565	-0.00084	-0.00032	-0.00034
Y1	0.000	15892.46559	0.369	15845.33360	15874.02040	15958.04277
Y2A	0.000	624556.14646	0.841	618494.37086	627828.34331	627345.72522
Y2R	0.000	33265.31116	0.477	33335.41750	33376.99960	33083.51637
ZN	0.000	0.11659	3.231	0.11688	0.12021	0.11269
ZR	0.000	0.00007	74.751	0.00013	0.00002	0.00008

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 2 Date/Time: 11/11/2013 00:46

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.43631	0.157	12.45836	12.42918	12.42139
CA	50.000	1.61130	0.504	1.61990	1.60377	1.61023
FE	50.000	0.57155	0.418	0.57388	0.56910	0.57166
K	50.000	20.28594	0.266	20.34023	20.23228	20.28533
MG	50.000	3.76321	0.355	3.77606	3.74938	3.76418
NA	50.000	1.88416	0.409	1.89125	1.87596	1.88527
S	50.000	0.84945	0.152	0.84837	0.85088	0.84910
SI	50.000	0.36637	0.333	0.36701	0.36496	0.36713
Y1	50.000	15521.98611	0.018	15523.81168	15523.37041	15518.77624
Y2R	50.000	32754.02165	0.246	32661.32649	32807.47500	32793.26347

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 3 Date/Time: 11/11/2013 00:50

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	1.45383	0.105	1.45469	1.45206	1.45472
AS	1.000	1.44089	0.307	1.43816	1.44600	1.43851
B	1.000	0.00608	0.356	0.00605	0.00608	0.00610
BA	1.000	1.40908	0.189	1.40600	1.41080	1.41042
BE	1.000	43.07968	0.219	43.13816	43.12995	42.97093
CD	1.000	32.46134	0.245	32.40792	32.55283	32.42327
CO	1.000	15.78943	0.255	15.76005	15.83524	15.77301
CU	1.000	1.24554	0.279	1.24953	1.24319	1.24389
LI	1.000	0.22134	0.873	0.22107	0.21956	0.22340
MN	1.000	5.62630	0.160	5.63626	5.61871	5.62392
NI	1.000	8.53442	0.409	8.52221	8.57380	8.50725
P	1.000	0.03205	0.180	0.03212	0.03205	0.03200
PB	1.000	2.92276	0.637	2.90876	2.94389	2.91563
SE	1.000	1.23479	0.505	1.23368	1.24150	1.22918
SR	1.000	1.50627	0.207	1.50675	1.50912	1.50293
TL	1.000	1.65730	0.480	1.65239	1.66648	1.65302
Y1	1.000	15672.87765	0.210	15684.52503	15635.73085	15698.37708
Y2A	1.000	600124.05603	0.362	597642.41871	601691.92588	601037.82349
Y2R	1.000	32957.05530	0.659	33017.28963	33137.79488	32716.08140
ZN	1.000	28.96500	0.327	28.94274	29.06897	28.88329

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 4 Date/Time: 11/11/2013 00:54

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.01817	0.515	0.01826	0.01807	0.01817
MO	1.000	10.22952	0.527	10.17537	10.23002	10.28316
SB	1.000	0.03945	0.312	0.03934	0.03944	0.03958
SN	1.000	3.38757	0.656	3.36498	3.38829	3.40944
TI	1.000	5.20647	0.620	5.23422	5.17103	5.21415
V	1.000	1.59681	0.661	1.60666	1.58568	1.59807
Y1	1.000	15972.32475	0.277	16021.27048	15960.49271	15935.21108
Y2A	1.000	626377.35287	0.994	620364.82462	632802.40066	625964.83333
Y2R	1.000	33294.85985	0.739	33418.03974	33454.90206	33011.63776
ZR	1.000	0.08301	0.805	0.08242	0.08287	0.08374

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 5

Date/Time: 11/11/2013 00:58

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60896	10,554.22	0.258	0.60888	0.60742	0.61057
AL	30.17699	4,947.53	1.001	30.06254	30.51960	29.94883
AS	0.60053	267.53	0.602	0.60129	0.59660	0.60371
B	0.60138	2,234.12	0.229	0.60192	0.59982	0.60241
BA	0.60915	512,064.72	0.303	0.61083	0.60717	0.60944
BE	0.59369	305,111.84	0.385	0.59505	0.59498	0.59106
CA	29.82729	31,776.67	0.906	29.64906	30.13804	29.69476
CD	0.59755	6,123.69	0.007	0.59752	0.59759	0.59753
CO	0.59772	2,963.00	0.202	0.59881	0.59793	0.59642
CR	0.60482	6,553.05	0.202	0.60523	0.60345	0.60579
CU	0.61050	9,146.39	0.411	0.61305	0.60803	0.61043
FE	29.99566	11,349.00	0.946	29.82114	30.32318	29.84266
K	29.99413	8,069.30	0.820	29.77201	30.25831	29.95206
LI	0.60434	4,447.14	0.778	0.60123	0.60975	0.60205
MG	29.64504	74,173.05	0.959	29.51961	29.97037	29.44512
MN	0.59846	40,174.83	0.188	0.59952	0.59728	0.59858
MO	0.61667	1,977.03	0.044	0.61640	0.61694	0.61666
NA	29.76538	37,072.97	0.767	29.64526	30.02853	29.62235
NI	0.60088	1,615.04	0.067	0.60109	0.60113	0.60041
P	0.61163	307.23	0.378	0.61130	0.60950	0.61408
PB	0.60444	562.15	0.349	0.60685	0.60357	0.60291
S	29.98723	7,979.49	0.253	30.07436	29.95193	29.93540
SB	0.62984	387.57	0.414	0.62683	0.63142	0.63126
SE	0.60032	234.13	0.449	0.59799	0.59971	0.60327
SI	30.60082	7,398.46	0.804	30.41000	30.87853	30.51393
SN	0.60988	647.90	0.290	0.61120	0.61056	0.60787
SR	0.60234	541,180.92	0.591	0.60238	0.59876	0.60588
TI	0.62125	38,596.94	0.211	0.62275	0.62056	0.62042
TL	0.59387	308.93	0.688	0.59774	0.58959	0.59427
V	0.61287	11,684.38	0.327	0.61419	0.61057	0.61385
Y1	15662.29696	15,662.30	0.266	15615.26393	15676.82142	15694.80554
Y2A	596502.95842	596,502.96	0.280	594574.31984	597479.84406	597454.71135
Y2R	32989.70060	32,989.70	0.611	33064.93604	32761.21603	33142.94974
ZN	0.60198	5,503.31	0.208	0.60325	0.60074	0.60194
ZR	0.60519	1,658.17	1.243	0.60197	0.61378	0.59981

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 6

Date/Time: 11/11/2013 01:02

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.87	237.471	0.00029	-0.00023	0.00033
AL	0.00178	3.56	772.897	-0.01077	0.01642	-0.00033
AS	0.00006	-1.64	3116.433	0.00009	0.00175	-0.00167
B	0.00120	-2.20	75.367	0.00022	0.00201	0.00138
BA	-0.00001	173.15	131.697	-0.00001	0.00000	-0.00003
BE	0.00008	-81.23	3.898	0.00008	0.00008	0.00008
CA	-0.01384	69.86	19.665	-0.01672	-0.01350	-0.01131
CD	0.00049	2.10	4.155	0.00052	0.00048	0.00048
CO	-0.00017	-1.12	32.089	-0.00019	-0.00020	-0.00011
CR	-0.00012	-4.58	285.976	0.00004	0.00011	-0.00051
CU	-0.00003	181.63	958.680	-0.00020	0.00031	-0.00021
FE	-0.00422	3.49	17.844	-0.00461	-0.00336	-0.00470
K	0.04328	112.86	140.040	0.08684	0.06893	-0.02594
LI	-0.00179	66.02	66.770	-0.00311	-0.00079	-0.00147
MG	0.00017	0.38	1174.036	0.00069	0.00180	-0.00199
MN	-0.00008	7.50	104.780	0.00002	-0.00014	-0.00012
MO	0.00015	3.17	119.567	0.00030	0.00020	-0.00005
NA	-0.02563	144.37	18.384	-0.02423	-0.02177	-0.03088
NI	0.00021	19.28	171.901	-0.00019	0.00049	0.00032
P	-0.00206	-0.59	42.420	-0.00112	-0.00284	-0.00222
PB	0.00382	2.41	14.267	0.00323	0.00431	0.00392
S	0.00232	1.43	65.444	0.00403	0.00114	0.00178
SB	-0.00082	-5.08	22.669	-0.00089	-0.00097	-0.00061
SE	-0.00155	3.35	30.307	-0.00117	-0.00140	-0.00207
SI	0.00488	5.38	212.007	-0.00293	0.00096	0.01659
SN	-0.00069	1.18	121.899	-0.00132	0.00026	-0.00100
SR	0.00004	-13.74	50.497	0.00005	0.00002	0.00004
TI	-0.00009	21.10	18.949	-0.00007	-0.00010	-0.00008
TL	-0.00139	-0.79	41.089	-0.00081	-0.00142	-0.00196
V	-0.00014	-10.83	226.068	0.00018	-0.00015	-0.00043
Y1	15884.91125	15,884.91	0.226	15846.07345	15891.95387	15916.70642
Y2A	620823.16667	620,823.17	0.434	618485.00000	620210.41667	623774.08333
Y2R	33118.98907	33,118.99	0.346	33099.75075	33242.05361	33015.16287
ZN	-0.00234	15.73	4.452	-0.00223	-0.00244	-0.00235
ZR	0.00191	7.73	25.401	0.00160	0.00166	0.00247

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 7

Date/Time: 11/11/2013 01:05

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00535	74.37	3.884	0.00537	0.00555	0.00513
AL	0.18838	34.15	7.905	0.17255	0.19046	0.20212
AS	0.01875	6.97	9.003	0.01700	0.01887	0.02037
B	0.04735	171.40	3.714	0.04854	0.04533	0.04817
BA	0.00536	4,836.85	0.714	0.00538	0.00538	0.00531
BE	0.00489	2,474.03	0.682	0.00493	0.00488	0.00486
CA	0.18437	281.41	1.907	0.18308	0.18167	0.18834
CD	0.00542	53.49	2.427	0.00557	0.00533	0.00535
CO	0.00458	22.95	7.844	0.00498	0.00448	0.00428
CR	0.01463	160.68	0.672	0.01474	0.01457	0.01457
CU	0.00989	331.02	4.684	0.00970	0.01042	0.00955
FE	0.19173	78.20	4.725	0.19073	0.20125	0.18321
K	0.53032	242.56	4.766	0.55312	0.50314	0.53471
LI	0.01780	207.92	8.451	0.01607	0.01879	0.01855
MG	0.09759	247.66	1.068	0.09769	0.09858	0.09650
MN	0.00518	372.53	1.367	0.00513	0.00515	0.00526
MO	0.00993	35.08	3.152	0.01006	0.01015	0.00957
NA	0.94870	1,355.95	0.052	0.94917	0.94819	0.94872
NI	0.01029	46.70	8.274	0.01066	0.01090	0.00932
P	0.09586	49.30	0.976	0.09547	0.09692	0.09517
PB	0.01771	15.44	4.934	0.01832	0.01671	0.01810
S	0.47788	130.40	0.109	0.47848	0.47759	0.47756
SB	0.01943	7.75	13.622	0.01730	0.01860	0.02240
SE	0.02074	12.07	14.823	0.02356	0.02120	0.01746
SI	0.06258	19.38	11.234	0.07066	0.05922	0.05786
SN	0.01938	22.84	3.366	0.02012	0.01910	0.01891
SR	0.00521	4,789.55	0.456	0.00522	0.00522	0.00518
TI	0.01000	668.00	1.293	0.00994	0.01014	0.00991
TL	0.02958	15.58	2.468	0.03037	0.02893	0.02944
V	0.00506	90.83	1.900	0.00517	0.00499	0.00502
Y1	15963.18376	15,963.18	0.433	15987.98242	15885.02100	16016.54786
Y2A	616585.78699	616,585.79	0.534	613698.15859	615885.20239	620174.00000
Y2R	33095.53084	33,095.53	0.825	33290.40379	33212.88362	32783.30510
ZN	0.01726	195.91	0.652	0.01729	0.01713	0.01735
ZR	0.04642	129.91	1.769	0.04685	0.04694	0.04547

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 8

Date/Time: 11/11/2013 01:09

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00046	-42.60	79.543	0.00089	0.00022	0.00028
AL	495.61294	79,440.67	0.949	500.11354	495.99173	490.73354
AS	0.00466	0.30	31.819	0.00462	0.00320	0.00616
B	0.00480	344.65	50.532	0.00204	0.00661	0.00573
BA	0.00041	461.77	0.653	0.00040	0.00041	0.00040
BE	-0.00028	-236.37	8.171	-0.00028	-0.00031	-0.00026
CA	493.68847	482,943.49	0.823	494.05668	497.55287	489.45584
CD	0.00085	296.31	69.236	0.00018	0.00107	0.00129
CO	0.00217	9.43	15.554	0.00186	0.00253	0.00211
CR	0.00238	20.28	24.080	0.00299	0.00231	0.00185
CU	-0.00086	280.32	14.447	-0.00100	-0.00077	-0.00081
FE	198.56706	68,963.40	0.950	200.40892	198.65345	196.63881
K	0.01934	100.06	299.510	0.05962	-0.04705	0.04547
LI	0.00100	131.53	74.458	0.00084	0.00182	0.00035
MG	496.85419	966,298.47	1.451	502.72024	499.03999	488.80235
MN	0.00332	209.82	0.917	0.00328	0.00334	0.00333
MO	-0.00142	-1.73	39.588	-0.00181	-0.00078	-0.00168
NA	0.05339	228.07	10.966	0.06013	0.04962	0.05041
NI	0.00276	13.09	17.820	0.00304	0.00219	0.00305
P	0.01438	6.88	4.484	0.01505	0.01432	0.01377
PB	0.00316	81.04	121.853	0.00708	-0.00061	0.00299
S	-0.00215	0.20	187.799	0.00113	-0.00092	-0.00664
SB	-0.01409	-11.95	22.283	-0.01279	-0.01181	-0.01767
SE	0.00261	6.65	124.026	0.00419	-0.00111	0.00476
SI	0.01995	8.50	41.113	0.02702	0.01096	0.02185
SN	0.00448	5.98	4.147	0.00458	0.00460	0.00427
SR	0.00246	1,931.99	1.213	0.00246	0.00243	0.00249
TI	-0.00048	-3.58	17.113	-0.00054	-0.00051	-0.00038
TL	0.00549	2.52	53.758	0.00505	0.00279	0.00864
V	-0.00212	36.62	10.918	-0.00200	-0.00239	-0.00197
Y1	14114.67699	14,114.68	0.099	14117.51365	14099.52058	14126.99673
Y2A	532123.42402	532,123.42	0.204	531915.06304	533297.36231	531157.84672
Y2R	31125.56029	31,125.56	0.761	30953.85689	31027.09458	31395.72940
ZN	0.01092	282.04	2.497	0.01064	0.01093	0.01119
ZR	0.00446	13.86	31.076	0.00288	0.00502	0.00548

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 9

Date/Time: 11/11/2013 01:13

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21906	3,350.53	0.442	0.21795	0.21965	0.21960
AL	494.01979	79,359.63	0.539	494.00211	491.36411	496.69317
AS	0.10142	39.83	1.423	0.10303	0.10023	0.10101
B	0.00641	349.61	23.927	0.00496	0.00625	0.00802
BA	0.49704	373,500.50	0.511	0.49457	0.49964	0.49692
BE	0.50875	233,681.85	0.383	0.50650	0.50976	0.50998
CA	495.17121	485,481.81	0.349	493.44400	496.90008	495.16955
CD	0.96364	9,119.92	0.201	0.96456	0.96141	0.96494
CO	0.49192	2,192.98	0.099	0.49143	0.49193	0.49241
CR	0.48451	4,691.61	0.638	0.48106	0.48542	0.48704
CU	0.53107	7,263.03	0.224	0.53012	0.53240	0.53068
FE	198.02243	68,939.52	0.563	197.90126	196.97385	199.19219
K	0.05026	108.04	20.386	0.04293	0.06197	0.04588
LI	0.00051	128.63	93.782	0.00080	0.00077	-0.00004
MG	492.97299	962,650.86	1.637	486.93749	489.83964	502.14184
MN	0.48246	28,951.85	0.347	0.48053	0.48352	0.48334
MO	-0.00122	-1.14	21.634	-0.00152	-0.00110	-0.00104
NA	0.04709	221.22	7.239	0.04318	0.04866	0.04942
NI	0.97688	2,343.42	0.124	0.97610	0.97627	0.97828
P	0.01350	7.66	9.604	0.01458	0.01206	0.01385
PB	0.05375	122.88	2.699	0.05498	0.05413	0.05215
S	-0.00112	0.44	471.058	-0.00498	0.00492	-0.00331
SB	0.62146	346.14	0.734	0.62146	0.62602	0.61689
SE	0.05163	23.62	1.309	0.05088	0.05178	0.05221
SI	0.01989	8.51	17.405	0.02382	0.01854	0.01730
SN	0.00345	5.00	58.223	0.00140	0.00542	0.00355
SR	0.00244	1,914.24	0.247	0.00243	0.00244	0.00244
TI	-0.00030	13.55	50.733	-0.00021	-0.00048	-0.00022
TL	0.10716	50.99	1.568	0.10860	0.10531	0.10756
V	0.49573	8,590.70	0.319	0.49390	0.49669	0.49659
Y1	14113.49081	14,113.49	0.089	14125.75067	14114.00400	14100.71776
Y2A	533180.98872	533,180.99	0.344	535267.99934	531828.21831	532446.74851
Y2R	31196.83505	31,196.84	0.616	31282.76360	31330.94692	30976.79462
ZN	1.03521	8,615.39	0.154	1.03337	1.03603	1.03622
ZR	0.00692	20.27	36.177	0.00905	0.00756	0.00416

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 10 Date/Time: 11/11/2013 01:17

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50097	8,715.49	1.105	0.50719	0.49917	0.49656
AL	24.95595	4,048.92	0.332	24.99187	24.86116	25.01481
AS	0.49327	219.26	0.248	0.49468	0.49265	0.49248
B	0.48068	1,793.43	1.140	0.48450	0.47441	0.48314
BA	0.49968	421,840.52	1.427	0.50745	0.49815	0.49344
BE	0.48866	252,169.15	1.226	0.49558	0.48525	0.48515
CA	24.49030	25,848.44	0.226	24.46201	24.45487	24.55402
CD	0.49278	5,046.48	0.190	0.49381	0.49199	0.49253
CO	0.49031	2,428.95	0.234	0.49141	0.49038	0.48912
CR	0.49015	5,332.35	1.290	0.49744	0.48615	0.48686
CU	0.49611	7,497.15	0.788	0.50059	0.49342	0.49431
FE	24.71642	9,265.38	0.292	24.66796	24.68187	24.79943
K	24.62567	6,575.67	0.133	24.60645	24.60713	24.66343
LI	0.49792	3,640.53	0.443	0.49925	0.49913	0.49537
MG	24.46284	60,704.90	0.102	24.44879	24.44801	24.49171
MN	0.49388	33,295.70	1.342	0.50146	0.49101	0.48917
MO	0.50441	1,616.67	0.118	0.50496	0.50451	0.50377
NA	24.52694	30,269.15	0.086	24.52889	24.50490	24.54702
NI	0.49324	1,328.25	0.253	0.49453	0.49315	0.49205
P	0.49869	250.43	0.178	0.49830	0.49970	0.49806
PB	0.49633	461.18	0.549	0.49848	0.49724	0.49326
S	24.49771	6,515.07	0.078	24.51425	24.50205	24.47685
SB	0.51504	315.91	0.435	0.51741	0.51295	0.51477
SE	0.49384	193.18	0.727	0.49756	0.49358	0.49039
SI	25.44051	6,089.13	0.312	25.45226	25.35589	25.51336
SN	0.50211	533.44	0.159	0.50303	0.50170	0.50161
SR	0.49637	447,846.97	0.941	0.50174	0.49321	0.49416
TI	0.50134	31,283.98	1.120	0.50781	0.49777	0.49844
TL	0.48753	253.45	0.237	0.48845	0.48792	0.48623
V	0.49938	9,558.85	1.281	0.50675	0.49542	0.49596
Y1	15653.05763	15,653.06	0.229	15618.06877	15651.45599	15689.64814
Y2A	599071.96970	599,071.97	1.225	590654.44592	602413.40411	604148.05906
Y2R	32654.04074	32,654.04	0.122	32696.52847	32647.69092	32617.90284
ZN	0.49307	4,511.79	0.118	0.49359	0.49245	0.49318
ZR	0.49749	1,349.72	0.768	0.49571	0.49489	0.50188

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 11

Date/Time: 11/11/2013 01:21

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-24.03	169.564	0.00009	-0.00021	-0.00017
AL	0.00606	4.25	472.079	-0.02661	0.01821	0.02657
AS	-0.00132	-2.27	126.605	-0.00212	-0.00245	0.00060
B	0.00021	-5.97	423.463	-0.00053	0.00122	-0.00005
BA	-0.00005	137.52	50.034	-0.00008	-0.00003	-0.00005
BE	0.00008	-80.52	23.574	0.00011	0.00008	0.00007
CA	-0.00636	77.56	62.828	-0.00749	-0.00192	-0.00967
CD	0.00043	1.43	23.623	0.00052	0.00032	0.00045
CO	-0.00031	-1.85	49.948	-0.00032	-0.00016	-0.00047
CR	-0.00057	-9.72	53.516	-0.00023	-0.00081	-0.00068
CU	-0.00023	178.68	331.323	-0.00093	-0.00034	0.00058
FE	-0.00445	3.40	94.024	-0.00917	-0.00294	-0.00123
K	0.02582	107.80	69.417	0.01431	0.01667	0.04646
LI	-0.00380	51.28	54.235	-0.00149	-0.00545	-0.00445
MG	0.00825	20.83	14.390	0.00937	0.00701	0.00838
MN	-0.00010	6.02	13.992	-0.00009	-0.00011	-0.00012
MO	0.00024	3.45	79.056	0.00037	0.00002	0.00032
NA	-0.03836	128.07	16.585	-0.03425	-0.04569	-0.03515
NI	-0.00004	18.61	1458.778	0.00022	-0.00065	0.00032
P	-0.00176	-0.44	27.316	-0.00222	-0.00180	-0.00126
PB	0.00336	1.98	70.654	0.00602	0.00263	0.00144
S	0.00183	1.30	67.488	0.00245	0.00263	0.00041
SB	-0.00175	-5.65	188.660	-0.00263	0.00190	-0.00452
SE	0.00147	4.52	259.131	0.00281	-0.00283	0.00444
SI	0.00133	4.51	289.762	0.00576	-0.00050	-0.00127
SN	-0.00024	1.66	161.386	-0.00019	-0.00064	0.00012
SR	0.00004	-14.47	30.183	0.00002	0.00004	0.00005
TI	-0.00007	22.10	98.012	-0.00002	-0.00005	-0.00015
TL	-0.00073	-0.44	85.138	-0.00133	-0.00009	-0.00078
V	0.00002	-7.78	651.506	-0.00011	0.00011	0.00005
Y1	15864.00989	15,864.01	0.123	15841.46904	15876.44957	15874.11106
Y2A	621009.00557	621,009.01	0.593	620313.65894	617725.58333	624987.77445
Y2R	32998.37826	32,998.38	0.684	32975.33420	32785.22251	33234.57808
ZN	-0.00235	15.64	6.362	-0.00243	-0.00217	-0.00244
ZR	-0.00074	0.43	322.461	0.00154	-0.00054	-0.00323

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 12 Date/Time: 11/11/2013 01:25

Sample Number: **PBW** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-19.28	46.297	0.00027	0.00012	0.00014
AL	0.02746	7.91	146.337	0.01094	-0.00183	0.07327
AS	-0.00259	-2.86	38.567	-0.00352	-0.00273	-0.00153
B	0.00194	0.57	14.526	0.00165	0.00194	0.00222
BA	0.00006	238.32	18.941	0.00006	0.00007	0.00005
BE	0.00007	-90.20	6.655	0.00007	0.00007	0.00007
CA	0.03075	119.36	4.036	0.03207	0.03058	0.02961
CD	0.00041	1.28	23.141	0.00051	0.00032	0.00041
CO	-0.00058	-3.18	60.894	-0.00019	-0.00067	-0.00088
CR	-0.00011	-4.52	449.364	0.00011	-0.00067	0.00023
CU	-0.00040	178.37	154.994	0.00016	-0.00105	-0.00029
FE	-0.00404	3.62	174.302	0.00156	-0.01195	-0.00173
K	0.02017	108.37	208.884	-0.02079	0.01792	0.06337
LI	-0.00310	57.35	51.877	-0.00231	-0.00205	-0.00496
MG	0.00587	15.09	8.179	0.00555	0.00564	0.00642
MN	-0.00008	7.93	101.226	-0.00014	-0.00010	0.00001
MO	-0.00003	2.59	761.843	0.00019	-0.00005	-0.00022
NA	-0.03843	130.46	9.825	-0.04240	-0.03800	-0.03489
NI	0.00022	19.35	84.395	0.00001	0.00032	0.00034
P	-0.00022	0.34	95.455	0.00001	-0.00029	-0.00039
PB	0.00229	0.99	28.113	0.00184	0.00201	0.00303
S	0.00065	0.98	347.501	-0.00194	0.00181	0.00207
SB	-0.00077	-5.05	278.678	0.00165	-0.00153	-0.00243
SE	0.00268	5.00	37.904	0.00151	0.00318	0.00334
SI	0.00026	4.34	2144.175	-0.00316	-0.00276	0.00670
SN	0.01363	16.57	4.963	0.01392	0.01411	0.01285
SR	0.00025	192.10	4.054	0.00026	0.00026	0.00024
TI	-0.00012	18.95	69.168	-0.00021	-0.00005	-0.00010
TL	-0.00190	-1.05	87.263	-0.00336	-0.00224	-0.00010
V	0.00007	-6.68	392.655	-0.00021	0.00006	0.00037
Y1	15900.74112	15,900.74	0.161	15882.00227	15890.32709	15929.89401
Y2A	628865.21713	628,865.22	0.205	627750.58333	628570.41667	630274.65139
Y2R	33640.54231	33,640.54	0.450	33625.72283	33497.17951	33798.72459
ZN	-0.00261	13.27	2.132	-0.00257	-0.00260	-0.00268
ZR	-0.00070	0.55	351.857	0.00133	0.00001	-0.00345

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 13 Date/Time: 11/11/2013 01:29

Sample Number: **LCSW** Class: **** Batch: 133115705006

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05623	995.78	1.795	0.05630	0.05720	0.05519
AL	2.08805	352.04	1.525	2.10468	2.10812	2.05134
AS	0.15272	68.38	1.189	0.15384	0.15062	0.15369
B	2.00409	7,506.48	0.580	1.99882	2.01742	1.99604
BA	2.05861	1,785,566.57	0.595	2.05708	2.07155	2.04719
BE	0.05126	27,107.44	0.802	0.05123	0.05169	0.05087
CA	4.09801	4,487.07	0.419	4.10842	4.07818	4.10744
CD	0.05109	522.26	0.153	0.05101	0.05117	0.05110
CO	0.51250	2,566.16	0.166	0.51227	0.51179	0.51344
CR	0.20597	2,300.98	0.703	0.20613	0.20732	0.20444
CU	0.26000	4,131.79	1.083	0.25903	0.26317	0.25780
FE	1.01017	392.60	0.462	1.01444	1.00520	1.01087
K	10.15607	2,825.81	0.438	10.20313	10.11463	10.15046
LI	1.02631	7,564.05	0.271	1.02861	1.02321	1.02711
MG	2.01759	5,149.58	0.347	2.01533	2.01200	2.02545
MN	0.51147	35,437.47	0.828	0.51162	0.51563	0.50716
MO	2.07716	6,707.61	0.041	2.07699	2.07640	2.07807
NA	10.15252	12,882.99	0.310	10.18220	10.11954	10.15581
NI	0.52214	1,426.04	0.080	0.52193	0.52186	0.52262
P	1.03462	522.48	0.285	1.03135	1.03548	1.03705
PB	0.15329	140.67	1.532	0.15070	0.15391	0.15527
S	1.00782	271.15	0.371	1.01166	1.00419	1.00761
SB	0.53312	324.68	0.462	0.53057	0.53330	0.53549
SE	0.15607	64.26	2.045	0.15326	0.15541	0.15954
SI	1.07237	265.83	0.667	1.07956	1.07227	1.06527
SN	4.10897	4,390.00	0.137	4.11221	4.10246	4.11224
SR	1.02669	952,035.96	0.868	1.03212	1.03154	1.01640
TI	1.04604	67,038.74	0.745	1.04407	1.05463	1.03941
TL	0.15302	80.54	1.626	0.15199	0.15586	0.15121
V	0.52539	10,042.35	0.698	0.52567	0.52890	0.52159
Y1	15790.61989	15,790.62	0.118	15777.44567	15811.89448	15782.51950
Y2A	615642.53552	615,642.54	0.785	616307.58333	610511.03185	620108.99137
Y2R	33305.05766	33,305.06	0.419	33148.64797	33416.52500	33350.00000
ZN	0.50829	4,666.56	0.106	0.50809	0.50889	0.50787
ZR	1.02277	2,827.50	0.304	1.02474	1.01919	1.02438

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 14 Date/Time: 11/11/2013 01:32

Sample Number: **7265230** Class: U*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00006	-22.83	816.844	0.00032	-0.00066	0.00015
AL	0.14798	27.45	11.932	0.14769	0.16578	0.13047
AS	-0.00062	-2.12	391.176	-0.00125	-0.00269	0.00206
B	0.02871	100.48	2.405	0.02933	0.02797	0.02883
BA	0.03936	33,247.92	0.669	0.03952	0.03906	0.03950
BE	0.00007	-83.45	26.576	0.00007	0.00006	0.00009
CA	36.10174	38,423.67	1.066	36.11494	35.71059	36.47969
CD	0.00047	4.24	21.016	0.00040	0.00058	0.00043
CO	0.00016	0.59	286.469	0.00056	-0.00035	0.00027
CR	0.00085	6.14	78.599	0.00136	0.00111	0.00009
CU	0.00017	192.27	480.425	0.00033	-0.00070	0.00086
FE	1.44872	555.35	0.973	1.44516	1.43675	1.46425
K	1.95773	620.80	3.543	1.93849	1.90001	2.03468
LI	-0.00060	78.43	551.349	-0.00143	0.00304	-0.00340
MG	14.38682	36,196.96	0.978	14.41747	14.23339	14.50961
MN	0.73905	49,599.99	0.811	0.74162	0.73219	0.74332
MO	0.00043	4.03	62.081	0.00022	0.00033	0.00073
NA	71.59502	88,909.58	0.865	71.62095	70.96297	72.20113
NI	-0.00048	17.18	112.871	-0.00108	-0.00006	-0.00028
P	0.03141	16.20	4.482	0.03300	0.03088	0.03034
PB	0.00965	8.64	25.362	0.00700	0.01183	0.01010
S	5.03989	1,346.22	0.684	5.07006	5.04729	5.00231
SB	-0.00004	-4.53	1783.541	-0.00042	0.00075	-0.00044
SE	-0.00012	4.02	1633.879	0.00207	-0.00153	-0.00089
SI	8.45978	2,047.98	1.072	8.49767	8.35629	8.52536
SN	0.00019	2.10	462.651	0.00112	0.00010	-0.00064
SR	0.10686	95,948.92	0.742	0.10734	0.10594	0.10729
TI	0.00525	351.56	2.419	0.00536	0.00528	0.00511
TL	0.00047	0.47	248.702	0.00070	-0.00079	0.00150
V	0.00042	0.11	81.051	0.00077	0.00040	0.00009
Y1	15714.63478	15,714.63	0.481	15648.47144	15698.50697	15796.92595
Y2A	596416.16899	596,416.17	0.907	592873.25813	602645.98540	593729.26344
Y2R	32984.79468	32,984.79	1.052	32884.12318	33370.95808	32699.30279
ZN	0.00207	56.57	7.716	0.00225	0.00202	0.00194
ZR	-0.00254	-4.49	27.725	-0.00290	-0.00300	-0.00173

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 15 Date/Time: 11/11/2013 01:36

Sample Number: **7265230** Class: UP** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02581	436.57	1.051	0.02551	0.02604	0.02588
AL	1.15395	190.77	3.101	1.12455	1.14349	1.19380
AS	0.50178	225.55	0.729	0.49959	0.50600	0.49974
B	0.22618	816.24	0.263	0.22647	0.22549	0.22657
BA	0.09025	75,809.51	0.624	0.08967	0.09030	0.09079
BE	0.02079	10,542.02	0.808	0.02063	0.02077	0.02096
CA	36.27031	38,300.71	1.381	36.57403	35.69239	36.54451
CD	0.05067	515.58	1.271	0.04995	0.05119	0.05087
CO	0.10029	497.19	0.515	0.09994	0.10088	0.10004
CR	0.20125	2,172.36	0.678	0.19970	0.20179	0.20226
CU	0.51031	7,661.19	0.518	0.50791	0.50988	0.51315
FE	1.92021	728.62	1.729	1.94135	1.88194	1.93735
K	3.92499	1,134.49	1.678	3.89430	3.88009	4.00058
LI	1.00721	7,299.07	1.133	1.01678	0.99459	1.01026
MG	15.25597	38,071.08	1.404	15.37260	15.00877	15.38653
MN	0.78819	52,760.68	0.666	0.78298	0.78811	0.79348
MO	0.20752	667.22	0.904	0.20541	0.20899	0.20818
NA	72.14205	88,887.71	1.214	72.74881	71.13807	72.53927
NI	0.15137	421.25	0.642	0.15025	0.15178	0.15206
P	1.07994	540.96	0.725	1.07091	1.08406	1.08486
PB	0.51085	468.23	0.631	0.50742	0.51382	0.51129
S	4.95652	1,319.87	0.646	4.91966	4.97261	4.97729
SB	0.41705	254.74	1.044	0.41208	0.42015	0.41893
SE	0.81691	316.78	0.863	0.80899	0.81922	0.82252
SI	8.35317	2,006.50	1.103	8.43982	8.25632	8.36336
SN	0.61520	653.68	0.666	0.61099	0.61917	0.61543
SR	0.12592	112,785.98	0.648	0.12510	0.12593	0.12673
TI	0.10705	6,655.09	0.584	0.10646	0.10698	0.10771
TL	1.00501	521.33	0.378	1.00062	1.00721	1.00719
V	0.10424	1,954.53	0.564	0.10416	0.10369	0.10486
Y1	15665.98071	15,665.98	0.412	15731.50736	15602.31988	15664.11490
Y2A	594860.42911	594,860.43	0.560	597207.86330	596324.40279	591049.02123
Y2R	32728.21619	32,728.22	1.207	32580.22537	33175.96942	32428.45378
ZN	0.12283	1,154.01	0.536	0.12207	0.12323	0.12318
ZR	1.01181	2,748.48	1.493	1.01759	0.99467	1.02318

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 16 Date/Time: 11/11/2013 01:40

Sample Number: **7265233** Class: D*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-19.59	655.885	-0.00028	0.00087	-0.00028
AL	0.13709	25.73	15.589	0.13655	0.15872	0.11599
AS	-0.00057	-2.08	306.014	0.00088	-0.00251	-0.00008
B	0.02733	94.47	1.779	0.02721	0.02691	0.02786
BA	0.04036	33,738.62	1.468	0.04103	0.03990	0.04015
BE	0.00006	-91.31	16.821	0.00005	0.00006	0.00006
CA	36.31482	38,789.86	0.585	36.37759	36.48881	36.07806
CD	0.00052	4.68	15.221	0.00051	0.00045	0.00061
CO	0.00004	-0.03	570.293	0.00021	0.00011	-0.00021
CR	0.00055	2.86	48.708	0.00040	0.00086	0.00039
CU	0.00014	190.15	88.917	0.00021	0.00022	0.00000
FE	1.42910	549.88	0.571	1.43610	1.43106	1.42014
K	1.92313	613.94	1.632	1.90157	1.90867	1.95913
LI	-0.00168	70.76	74.419	-0.00262	-0.00026	-0.00214
MG	14.61023	36,889.18	0.597	14.67254	14.64756	14.51060
MN	0.74972	49,802.40	1.341	0.76079	0.74115	0.74721
MO	0.00055	4.40	29.993	0.00060	0.00069	0.00037
NA	72.13141	89,898.30	0.588	72.32117	72.42765	71.64541
NI	0.00020	18.85	321.733	-0.00004	-0.00028	0.00091
P	0.03339	17.08	4.545	0.03254	0.03248	0.03514
PB	0.00798	7.06	10.529	0.00709	0.00809	0.00876
S	5.10862	1,355.85	0.455	5.12918	5.11332	5.08337
SB	-0.00127	-5.27	108.619	-0.00237	-0.00172	0.00028
SE	0.00157	4.64	211.357	0.00048	0.00529	-0.00106
SI	8.47716	2,059.60	1.169	8.51875	8.54873	8.36401
SN	-0.00048	1.37	43.595	-0.00046	-0.00070	-0.00028
SR	0.10958	97,390.48	1.384	0.11126	0.10831	0.10916
TI	0.00495	329.04	5.232	0.00503	0.00515	0.00465
TL	-0.00261	-1.12	26.918	-0.00181	-0.00287	-0.00314
V	0.00054	2.33	34.215	0.00042	0.00075	0.00045
Y1	15614.04288	15,614.04	0.366	15578.68363	15583.45700	15679.98801
Y2A	590368.28135	590,368.28	1.303	581596.88122	595963.91838	593544.04446
Y2R	33102.75239	33,102.75	0.524	32966.77310	33043.32669	33298.15737
ZN	0.00194	55.09	4.701	0.00205	0.00187	0.00191
ZR	0.00195	7.80	147.531	0.00495	0.00164	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 17 Date/Time: 11/11/2013 01:43

Sample Number: **7265231** Class: R*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05647	955.99	1.761	0.05545	0.05652	0.05744
AL	2.11668	352.25	1.897	2.16249	2.08752	2.10004
AS	0.15493	68.68	1.297	0.15363	0.15391	0.15724
B	2.09032	7,486.96	1.488	2.06249	2.08460	2.12389
BA	2.04839	1,698,483.79	1.837	2.01512	2.04082	2.08923
BE	0.05271	26,649.19	1.667	0.05189	0.05261	0.05364
CA	40.40870	42,856.52	0.537	40.60408	40.44665	40.17537
CD	0.05060	514.34	0.465	0.05075	0.05072	0.05033
CO	0.50582	2,511.32	0.398	0.50813	0.50489	0.50444
CR	0.20741	2,215.18	1.824	0.20347	0.20776	0.21101
CU	0.25760	3,930.26	1.599	0.25398	0.25673	0.26208
FE	1.97179	751.66	0.558	1.96881	1.98398	1.96257
K	12.15566	3,319.40	0.638	12.24481	12.11867	12.10349
LI	1.01793	7,411.58	0.433	1.01932	1.02148	1.01299
MG	16.40890	41,127.25	0.341	16.44279	16.43953	16.34437
MN	1.14212	75,635.23	1.552	1.12675	1.13808	1.16151
MO	2.08458	6,673.98	0.307	2.09035	2.08571	2.07769
NA	81.85559	101,315.01	0.482	82.06709	82.09943	81.40026
NI	0.51161	1,385.89	0.417	0.51367	0.51175	0.50941
P	1.07571	538.52	0.639	1.08218	1.07645	1.06849
PB	0.15480	141.69	0.926	0.15617	0.15331	0.15492
S	6.05167	1,610.27	0.301	6.06350	6.06080	6.03070
SB	0.53449	322.74	0.398	0.53694	0.53343	0.53311
SE	0.15240	62.43	1.298	0.15262	0.15425	0.15032
SI	9.41826	2,272.56	0.771	9.49145	9.41710	9.34622
SN	4.13345	4,378.35	0.448	4.15081	4.13558	4.11397
SR	1.11425	987,757.21	1.814	1.09656	1.10993	1.13628
TI	1.05949	64,913.24	1.611	1.04435	1.05614	1.07799
TL	0.15440	80.80	0.918	0.15411	0.15316	0.15594
V	0.53351	9,753.11	1.563	0.52654	0.53123	0.54275
Y1	15655.59535	15,655.60	0.326	15602.23452	15660.74069	15703.81086
Y2A	588613.38753	588,613.39	1.297	595272.22960	590289.23358	580278.69940
Y2R	32882.11148	32,882.11	0.443	32723.02894	32914.83051	33008.47500
ZN	0.50834	4,627.41	0.445	0.51084	0.50774	0.50644
ZR	1.02864	2,807.58	0.575	1.03404	1.02957	1.02232

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 18 Date/Time: 11/11/2013 01:47

Sample Number: **7265232** Class: M*** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05644	958.27	1.721	0.05599	0.05756	0.05578
AL	2.07571	345.19	1.195	2.04852	2.08149	2.09712
AS	0.15544	68.27	0.932	0.15654	0.15380	0.15598
B	2.10293	7,553.65	0.618	2.10707	2.11335	2.08837
BA	2.04935	1,704,241.48	0.257	2.04330	2.05293	2.05181
BE	0.05280	26,769.12	0.555	0.05286	0.05305	0.05248
CA	40.90927	43,332.21	0.856	40.53617	41.23039	40.96123
CD	0.05086	512.13	0.349	0.05091	0.05066	0.05101
CO	0.50816	2,499.31	0.382	0.51030	0.50767	0.50650
CR	0.20742	2,221.62	0.583	0.20713	0.20875	0.20638
CU	0.25945	3,968.72	0.749	0.25969	0.26127	0.25740
FE	1.94441	740.40	0.499	1.93321	1.94964	1.95038
K	12.22431	3,333.56	0.959	12.09217	12.26468	12.31607
LI	1.01467	7,379.16	0.469	1.00985	1.01936	1.01480
MG	16.60624	41,568.09	0.608	16.49356	16.68825	16.63692
MN	1.14044	75,740.83	0.613	1.14357	1.14532	1.13243
MO	2.09804	6,654.26	0.525	2.10968	2.09663	2.08780
NA	82.80291	102,360.16	0.754	82.13870	83.37799	82.89205
NI	0.51561	1,383.52	0.411	0.51784	0.51537	0.51362
P	1.08336	537.28	0.584	1.08852	1.08525	1.07629
PB	0.15406	139.70	0.225	0.15369	0.15412	0.15437
S	6.19029	1,631.75	0.248	6.20749	6.18550	6.17790
SB	0.54234	324.53	0.331	0.54253	0.54402	0.54045
SE	0.15871	64.24	1.267	0.15991	0.15983	0.15639
SI	9.54471	2,300.20	1.067	9.44728	9.65037	9.53649
SN	4.14278	4,347.22	0.441	4.16235	4.13984	4.12614
SR	1.11522	991,486.49	0.337	1.11939	1.11417	1.11209
TI	1.06175	65,238.69	0.571	1.06004	1.06848	1.05673
TL	0.15509	80.40	1.060	0.15696	0.15387	0.15444
V	0.53473	9,802.08	0.461	0.53470	0.53721	0.53228
Y1	15509.34396	15,509.34	0.318	15455.20751	15520.86192	15551.96243
Y2A	590237.47512	590,237.48	0.597	588860.65030	587612.88985	594238.88520
Y2R	32842.48458	32,842.48	0.629	32997.60000	32608.20040	32921.65335
ZN	0.51275	4,623.56	0.293	0.51437	0.51247	0.51140
ZR	1.02867	2,804.20	0.964	1.02079	1.03980	1.02542

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 19 Date/Time: 11/11/2013 01:51

Sample Number: **7265230** Class: UL** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00016	-19.46	101.929	-0.00003	0.00025	0.00025
AL	0.02470	7.36	46.528	0.02402	0.01357	0.03652
AS	-0.00147	-2.37	73.554	-0.00247	-0.00163	-0.00032
B	0.00889	27.40	6.629	0.00930	0.00822	0.00916
BA	0.00814	7,297.33	0.540	0.00812	0.00819	0.00811
BE	0.00006	-93.42	22.265	0.00004	0.00006	0.00007
CA	7.35009	7,977.97	0.516	7.31313	7.38895	7.34818
CD	0.00042	1.86	13.454	0.00047	0.00044	0.00036
CO	-0.00024	-1.46	89.479	-0.00035	-0.00038	0.00001
CR	0.00016	-1.43	57.928	0.00021	0.00022	0.00005
CU	-0.00016	182.67	497.375	-0.00101	-0.00009	0.00061
FE	0.28391	114.02	2.808	0.27522	0.29088	0.28564
K	0.39282	207.23	16.213	0.45508	0.32779	0.39560
LI	-0.00357	54.19	43.030	-0.00509	-0.00361	-0.00202
MG	2.94370	7,509.71	0.496	2.93231	2.96017	2.93863
MN	0.15035	10,507.10	0.730	0.15023	0.15150	0.14931
MO	0.00060	4.62	34.288	0.00077	0.00066	0.00037
NA	14.60447	18,452.27	0.305	14.56313	14.65175	14.59852
NI	-0.00042	17.53	64.954	-0.00070	-0.00040	-0.00016
P	0.00676	3.86	2.761	0.00693	0.00656	0.00678
PB	0.00468	3.39	55.975	0.00172	0.00561	0.00671
S	0.99842	269.39	0.686	1.00613	0.99611	0.99303
SB	-0.00113	-5.25	106.705	-0.00194	0.00025	-0.00169
SE	0.00299	5.13	89.443	0.00065	0.00590	0.00241
SI	1.70992	421.31	0.798	1.69437	1.71984	1.71556
SN	-0.00056	1.32	155.773	-0.00134	0.00037	-0.00070
SR	0.02175	20,280.01	0.605	0.02173	0.02189	0.02163
TI	0.00128	109.42	5.583	0.00122	0.00126	0.00136
TL	-0.00113	-0.59	131.284	-0.00271	0.00021	-0.00088
V	0.00028	-2.58	24.355	0.00022	0.00027	0.00036
Y1	15835.92333	15,835.92	0.462	15764.40845	15832.78396	15910.57758
Y2A	620414.96242	620,414.96	0.519	622133.15037	616699.23689	622412.50000
Y2R	33300.94447	33,300.94	0.521	33332.65000	33113.77470	33456.40872
ZN	-0.00205	18.57	3.482	-0.00213	-0.00200	-0.00201
ZR	0.00049	3.83	389.756	-0.00045	0.00267	-0.00076

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 20 Date/Time: 11/11/2013 01:55

Sample Number: **7265223** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00019	-25.98	53.678	-0.00009	-0.00018	-0.00029
AL	0.60546	104.70	2.908	0.58794	0.60529	0.62315
AS	-0.00017	-1.88	521.602	-0.00030	-0.00101	0.00079
B	0.01525	53.33	4.612	0.01605	0.01498	0.01472
BA	0.03323	29,416.50	0.597	0.03306	0.03345	0.03318
BE	0.00014	-53.20	2.034	0.00014	0.00013	0.00014
CA	3.02895	3,388.94	0.892	3.00731	3.05921	3.02033
CD	0.00047	3.70	12.142	0.00051	0.00050	0.00041
CO	0.00001	-0.10	3530.348	0.00011	0.00021	-0.00030
CR	0.00066	4.21	58.709	0.00065	0.00105	0.00027
CU	0.00524	264.75	7.296	0.00482	0.00535	0.00556
FE	1.08428	427.32	1.145	1.07212	1.09693	1.08378
K	1.09610	401.82	2.526	1.12675	1.08863	1.07291
LI	-0.00254	62.29	154.380	0.00180	-0.00583	-0.00360
MG	0.90104	2,335.14	0.844	0.89232	0.90444	0.90635
MN	0.14039	9,875.26	0.482	0.13976	0.14110	0.14029
MO	0.00015	3.18	247.358	-0.00014	0.00002	0.00057
NA	1.27223	1,795.87	1.793	1.25124	1.29650	1.26896
NI	0.00115	21.80	5.264	0.00114	0.00121	0.00109
P	0.47416	241.26	0.426	0.47573	0.47488	0.47188
PB	0.00971	8.46	13.155	0.00990	0.01088	0.00835
S	2.01787	546.34	0.434	2.01208	2.02795	2.01360
SB	-0.00148	-5.50	91.694	-0.00302	-0.00048	-0.00093
SE	0.00299	5.16	12.762	0.00302	0.00260	0.00336
SI	4.27313	1,062.34	0.922	4.22999	4.30722	4.28220
SN	-0.00009	1.83	1169.143	-0.00082	-0.00051	0.00107
SR	0.01939	18,186.49	0.775	0.01924	0.01954	0.01938
TI	0.01350	904.04	0.564	0.01351	0.01357	0.01342
TL	-0.00057	-0.30	207.151	-0.00100	0.00077	-0.00148
V	0.00433	79.63	5.278	0.00458	0.00413	0.00429
Y1	15914.33544	15,914.34	0.234	15909.90735	15879.52727	15953.57171
Y2A	624421.13660	624,421.14	0.362	626471.64005	621995.76974	624796.00000
Y2R	33805.21225	33,805.21	0.753	34076.24750	33571.37145	33768.01779
ZN	0.02038	224.07	0.367	0.02034	0.02046	0.02032
ZR	0.00027	3.30	546.835	0.00053	0.00163	-0.00133

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 21 Date/Time: 11/11/2013 01:58

Sample Number: **7265224** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00027	-27.56	213.780	0.00030	-0.00087	-0.00025
AL	0.43297	75.64	8.779	0.41423	0.47671	0.40796
AS	-0.00153	-2.47	64.651	-0.00040	-0.00197	-0.00222
B	0.01431	49.38	8.283	0.01323	0.01558	0.01413
BA	0.02563	22,736.43	1.030	0.02556	0.02540	0.02592
BE	0.00012	-60.35	11.244	0.00012	0.00011	0.00014
CA	2.47552	2,776.92	1.032	2.47416	2.45068	2.50173
CD	0.00063	4.95	15.599	0.00053	0.00073	0.00063
CO	0.00007	0.14	493.465	-0.00002	0.00044	-0.00022
CR	0.00073	4.96	68.005	0.00107	0.00016	0.00095
CU	0.00186	212.64	45.836	0.00262	0.00094	0.00202
FE	0.87424	344.52	0.644	0.86878	0.87392	0.88002
K	1.39000	480.49	6.364	1.29083	1.41842	1.46076
LI	-0.00378	52.94	92.894	-0.00745	-0.00343	-0.00045
MG	0.72965	1,885.30	0.949	0.72423	0.72726	0.73745
MN	0.08767	6,174.06	1.156	0.08721	0.08696	0.08883
MO	0.00028	3.59	51.720	0.00039	0.00034	0.00012
NA	1.65171	2,270.81	1.964	1.64653	1.62217	1.68642
NI	0.00115	21.71	35.323	0.00157	0.00076	0.00112
P	0.27063	137.26	0.586	0.27189	0.26885	0.27115
PB	0.00539	4.25	49.219	0.00233	0.00705	0.00680
S	1.47213	396.96	0.326	1.47720	1.47154	1.46764
SB	-0.00123	-5.32	115.271	0.00032	-0.00246	-0.00156
SE	0.00160	4.59	122.273	0.00170	-0.00041	0.00351
SI	2.88288	715.91	0.721	2.87242	2.86940	2.90683
SN	0.00011	2.03	119.493	0.00018	-0.00004	0.00020
SR	0.01733	16,261.22	1.078	0.01725	0.01720	0.01755
TI	0.00708	486.65	1.320	0.00705	0.00700	0.00718
TL	-0.00077	-0.42	240.037	0.00124	-0.00117	-0.00238
V	0.00175	27.50	12.705	0.00201	0.00164	0.00161
Y1	15840.90488	15,840.90	0.084	15839.44715	15828.44714	15854.82035
Y2A	624670.01938	624,670.02	0.687	626621.92282	627636.22754	619751.90776
Y2R	33700.14133	33,700.14	1.586	33162.52495	34231.36971	33706.52933
ZN	0.01156	142.77	0.554	0.01154	0.01163	0.01151
ZR	-0.00116	-0.73	27.076	-0.00092	-0.00152	-0.00105

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 22 Date/Time: 11/11/2013 02:02

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49158	8,531.03	0.611	0.49108	0.48886	0.49481
AL	24.72646	4,036.85	0.644	24.87211	24.55659	24.75067
AS	0.49257	217.31	1.102	0.49520	0.48633	0.49619
B	0.50213	1,866.84	0.701	0.49962	0.50061	0.50615
BA	0.49682	418,418.05	0.549	0.49767	0.49376	0.49901
BE	0.49436	254,493.31	0.713	0.49267	0.49199	0.49841
CA	24.60343	26,130.43	0.450	24.67771	24.47632	24.65625
CD	0.49339	5,014.68	0.291	0.49342	0.49194	0.49481
CO	0.49522	2,434.97	0.086	0.49562	0.49477	0.49528
CR	0.49780	5,402.59	0.798	0.49554	0.49548	0.50239
CU	0.49297	7,432.93	0.479	0.49087	0.49252	0.49553
FE	24.62222	9,288.21	0.436	24.72378	24.50998	24.63289
K	24.75209	6,650.44	0.593	24.72734	24.61914	24.90978
LI	0.49302	3,628.16	0.659	0.49674	0.49077	0.49155
MG	24.15572	60,326.52	0.238	24.21819	24.10525	24.14371
MN	0.48539	32,645.28	0.635	0.48393	0.48332	0.48893
MO	0.51082	1,624.89	0.171	0.51178	0.51058	0.51008
NA	24.35494	30,246.85	0.531	24.45161	24.20795	24.40528
NI	0.49683	1,327.79	0.330	0.49610	0.49569	0.49871
P	0.50120	249.80	0.141	0.50198	0.50101	0.50061
PB	0.50496	465.50	0.423	0.50706	0.50503	0.50279
S	24.49391	6,465.25	0.201	24.50597	24.43969	24.53607
SB	0.51484	313.42	0.469	0.51464	0.51254	0.51736
SE	0.49214	191.09	0.499	0.49452	0.48962	0.49230
SI	25.06394	6,036.75	0.379	25.13288	24.95553	25.10341
SN	0.50745	535.05	0.175	0.50810	0.50644	0.50781
SR	0.48898	440,092.50	1.354	0.48802	0.48290	0.49603
TI	0.51021	31,759.61	0.689	0.50846	0.50791	0.51426
TL	0.49438	255.07	0.332	0.49327	0.49361	0.49627
V	0.49991	9,545.03	0.834	0.49823	0.49685	0.50466
Y1	15535.75608	15,535.76	0.068	15525.31565	15546.47176	15535.48082
Y2A	597585.21345	597,585.21	0.746	597441.10816	602115.04645	593199.48573
Y2R	32859.40724	32,859.41	0.284	32783.04856	32963.20595	32831.96721
ZN	0.49328	4,479.89	0.240	0.49277	0.49243	0.49463
ZR	0.49680	1,356.31	0.358	0.49871	0.49519	0.49649

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 23

Date/Time: 11/11/2013 02:06

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-20.35	157.249	0.00017	-0.00008	0.00021
AL	-0.00196	2.91	1030.125	0.00421	0.01445	-0.02455
AS	-0.00016	-1.73	574.370	-0.00114	-0.00007	0.00072
B	0.00030	-5.58	529.761	-0.00110	0.00205	-0.00005
BA	-0.00006	131.97	16.688	-0.00005	-0.00005	-0.00007
BE	0.00008	-80.00	5.902	0.00009	0.00008	0.00008
CA	-0.00678	76.26	7.473	-0.00678	-0.00628	-0.00729
CD	0.00033	0.45	5.153	0.00032	0.00032	0.00035
CO	-0.00032	-1.87	60.832	-0.00046	-0.00010	-0.00040
CR	-0.00038	-7.43	53.140	-0.00057	-0.00017	-0.00038
CU	-0.00051	173.37	57.161	-0.00053	-0.00021	-0.00079
FE	-0.00552	2.96	120.864	-0.01098	0.00192	-0.00750
K	0.00032	99.86	1618.107	0.04276	-0.02643	-0.01538
LI	-0.00301	56.26	66.089	-0.00188	-0.00530	-0.00184
MG	0.00223	5.52	70.960	0.00401	0.00099	0.00169
MN	-0.00003	10.97	168.530	-0.00006	0.00003	-0.00007
MO	0.00014	3.13	125.556	0.00034	0.00009	-0.00001
NA	-0.05809	102.40	10.037	-0.06321	-0.05932	-0.05175
NI	-0.00030	17.86	111.533	0.00004	-0.00031	-0.00062
P	-0.00133	-0.22	62.732	-0.00052	-0.00218	-0.00127
PB	0.00419	2.74	36.743	0.00402	0.00274	0.00580
S	-0.00171	0.34	53.571	-0.00273	-0.00097	-0.00142
SB	-0.00230	-5.99	79.956	-0.00060	-0.00425	-0.00205
SE	0.00108	4.36	165.507	0.00299	-0.00053	0.00077
SI	0.00634	5.67	237.512	0.01661	0.01335	-0.01094
SN	-0.00070	1.16	49.172	-0.00032	-0.00100	-0.00078
SR	0.00003	-23.66	26.498	0.00003	0.00002	0.00003
TI	0.00001	27.17	390.223	0.00000	0.00006	-0.00003
TL	-0.00058	-0.36	230.770	-0.00213	0.00021	0.00018
V	0.00017	-4.80	85.873	0.00013	0.00004	0.00032
Y1	15825.07012	15,825.07	0.068	15823.66216	15836.54254	15815.00567
Y2A	617300.28933	617,300.29	0.740	620023.83333	619848.75000	612028.28467
Y2R	32627.82576	32,627.83	0.788	32587.16580	32902.92766	32393.38382
ZN	-0.00241	15.01	4.407	-0.00253	-0.00233	-0.00237
ZR	-0.00238	-3.97	21.883	-0.00231	-0.00189	-0.00293

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 24 Date/Time: 11/11/2013 02:10

Sample Number: **7265228** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00033	-28.08	144.399	-0.00071	0.00021	-0.00051
AL	0.06364	13.68	18.951	0.06614	0.05053	0.07425
AS	-0.00059	-1.97	145.497	0.00011	-0.00153	-0.00034
B	0.02215	76.64	8.653	0.02248	0.02009	0.02387
BA	0.02092	18,317.52	0.463	0.02101	0.02093	0.02082
BE	0.00008	-80.41	20.595	0.00010	0.00007	0.00007
CA	9.02627	9,704.50	0.619	9.09076	8.99262	8.99542
CD	0.00051	2.59	17.790	0.00060	0.00042	0.00050
CO	-0.00045	-2.52	12.925	-0.00051	-0.00040	-0.00043
CR	-0.00007	-4.02	808.859	0.00040	-0.00074	0.00012
CU	-0.00010	182.96	259.912	-0.00001	-0.00037	0.00010
FE	0.18386	75.09	3.321	0.19061	0.18226	0.17872
K	0.60815	262.94	9.645	0.63978	0.64420	0.54047
LI	-0.00299	58.20	19.082	-0.00237	-0.00310	-0.00349
MG	3.69702	9,358.90	0.155	3.69910	3.70140	3.69056
MN	0.00920	649.64	0.713	0.00920	0.00926	0.00913
MO	0.00015	3.20	162.727	0.00044	0.00007	-0.00005
NA	5.22630	6,667.16	0.345	5.24253	5.22944	5.20693
NI	0.00043	20.01	101.457	0.00037	0.00090	0.00003
P	0.02749	14.48	1.754	0.02700	0.02752	0.02796
PB	0.00491	3.48	36.529	0.00666	0.00307	0.00501
S	0.71759	195.70	0.077	0.71695	0.71794	0.71789
SB	0.00048	-4.28	289.212	-0.00020	0.00207	-0.00043
SE	0.00069	4.26	278.058	0.00254	-0.00131	0.00086
SI	0.17317	46.12	3.853	0.16552	0.17777	0.17623
SN	-0.00055	1.34	55.621	-0.00021	-0.00062	-0.00081
SR	0.03024	27,976.30	0.621	0.03039	0.03030	0.03003
TI	0.00182	142.79	5.194	0.00182	0.00172	0.00191
TL	0.00064	0.29	49.536	0.00094	0.00031	0.00066
V	0.00035	-0.96	113.078	-0.00010	0.00064	0.00052
Y1	15987.33900	15,987.34	0.209	15979.62941	15958.49977	16023.88782
Y2A	615232.14648	615,232.15	0.638	612282.01725	613724.17219	619690.25000
Y2R	33053.45325	33,053.45	0.315	33025.19960	32966.25675	33168.90341
ZN	-0.00041	33.73	18.617	-0.00043	-0.00032	-0.00047
ZR	-0.00022	1.88	401.191	-0.00116	-0.00008	0.00058

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 25 Date/Time: 11/11/2013 02:14

Sample Number: **7265235** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00018	-18.17	98.211	0.00027	-0.00002	0.00029
AL	0.01984	6.51	66.167	0.00724	0.01883	0.03344
AS	-0.00077	-2.11	140.354	-0.00005	-0.00024	-0.00201
B	0.02648	90.24	1.634	0.02605	0.02692	0.02646
BA	0.03779	31,521.66	0.669	0.03750	0.03796	0.03791
BE	0.00005	-92.61	39.457	0.00004	0.00004	0.00008
CA	36.32546	38,763.23	0.343	36.36782	36.18523	36.42332
CD	0.00040	2.64	9.144	0.00043	0.00036	0.00041
CO	0.00020	0.75	53.782	0.00029	0.00023	0.00008
CR	0.00043	1.53	128.728	0.00061	-0.00019	0.00087
CU	-0.00107	172.25	28.879	-0.00123	-0.00071	-0.00126
FE	0.92637	357.91	1.200	0.92027	0.91964	0.93920
K	1.98659	630.20	2.041	2.03263	1.95622	1.97091
LI	-0.00308	60.53	77.605	-0.00438	-0.00453	-0.00032
MG	14.56845	36,748.42	0.379	14.56287	14.51627	14.62623
MN	0.63059	41,786.58	0.549	0.62662	0.63220	0.63297
MO	0.00010	2.97	279.671	0.00042	-0.00012	0.00000
NA	72.16331	89,850.19	0.237	72.22104	71.97106	72.29782
NI	0.00002	18.47	1221.134	-0.00033	-0.00046	0.00083
P	0.01651	8.70	9.625	0.01567	0.01834	0.01551
PB	0.00614	5.33	58.890	0.00462	0.01027	0.00353
S	5.02696	1,338.68	0.341	5.04079	5.03233	5.00776
SB	-0.00162	-5.50	38.276	-0.00095	-0.00174	-0.00217
SE	-0.00037	3.89	390.882	0.00124	-0.00083	-0.00152
SI	8.31569	2,018.51	0.331	8.34570	8.30984	8.29154
SN	-0.00067	1.18	55.662	-0.00065	-0.00031	-0.00106
SR	0.10907	96,693.91	0.589	0.10833	0.10938	0.10950
TI	0.00194	143.87	2.802	0.00190	0.00192	0.00200
TL	-0.00066	-0.16	239.454	-0.00179	-0.00134	0.00115
V	0.00031	-2.18	38.244	0.00023	0.00044	0.00025
Y1	15666.61851	15,666.62	0.259	15645.44134	15640.96983	15713.44435
Y2A	588834.88166	588,834.88	0.490	592092.65096	587812.62442	586599.36961
Y2R	33069.85733	33,069.86	0.117	33035.02295	33111.57500	33062.97405
ZN	-0.00094	28.93	0.989	-0.00095	-0.00093	-0.00094
ZR	0.00039	3.56	457.320	-0.00016	-0.00107	0.00241

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 26 Date/Time: 11/11/2013 02:17

Sample Number: **7265238** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00012	-23.22	370.913	-0.00062	0.00014	0.00012
AL	0.10677	20.65	6.880	0.10987	0.09838	0.11206
AS	0.00088	-1.27	27.652	0.00060	0.00098	0.00104
B	0.04446	153.86	1.867	0.04531	0.04442	0.04365
BA	0.03831	32,030.31	0.596	0.03842	0.03805	0.03847
BE	0.00004	-98.37	73.233	0.00005	0.00007	0.00001
CA	57.60706	61,094.24	0.500	57.93854	57.42116	57.46149
CD	0.00057	3.32	16.163	0.00058	0.00048	0.00066
CO	-0.00036	-1.98	34.037	-0.00035	-0.00024	-0.00049
CR	0.00134	11.35	12.091	0.00135	0.00150	0.00118
CU	-0.00050	190.11	142.499	-0.00130	-0.00025	0.00005
FE	0.27531	109.49	1.434	0.27838	0.27669	0.27085
K	1.74822	564.31	2.990	1.79812	1.75268	1.69386
LI	0.00020	86.26	668.378	-0.00124	0.00147	0.00038
MG	22.27748	55,793.79	0.327	22.35909	22.21932	22.25403
MN	0.10018	6,664.02	0.842	0.10026	0.09929	0.10097
MO	0.00016	3.12	237.278	-0.00022	0.00016	0.00052
NA	90.84912	112,589.78	0.454	91.32435	90.58347	90.63955
NI	0.00019	18.82	229.549	-0.00003	0.00067	-0.00009
P	0.01862	9.69	6.145	0.01993	0.01782	0.01811
PB	0.00832	7.22	10.688	0.00825	0.00923	0.00746
S	8.80954	2,329.90	0.663	8.74220	8.83923	8.84718
SB	-0.00233	-5.90	45.002	-0.00143	-0.00209	-0.00349
SE	0.00176	4.57	16.285	0.00198	0.00144	0.00188
SI	7.88684	1,906.50	0.401	7.92301	7.87298	7.86453
SN	-0.00083	1.01	17.129	-0.00095	-0.00085	-0.00067
SR	0.13190	117,212.09	0.743	0.13201	0.13086	0.13281
TI	0.00505	335.75	1.543	0.00504	0.00498	0.00514
TL	0.00100	0.50	120.689	0.00155	0.00185	-0.00038
V	0.00022	-3.53	191.584	-0.00019	0.00021	0.00063
Y1	15563.44040	15,563.44	0.517	15656.06260	15522.42771	15511.83089
Y2A	590197.35678	590,197.36	0.475	589824.23689	593167.63437	587600.19907
Y2R	32929.46330	32,929.46	0.274	32866.43699	33033.01416	32888.93876
ZN	0.00048	40.84	23.898	0.00035	0.00058	0.00052
ZR	-0.00113	-0.63	146.546	-0.00120	-0.00276	0.00056

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 27 Date/Time: 11/11/2013 02:21

Sample Number: **7265240** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00024	-16.94	49.367	0.00029	0.00010	0.00032
AL	0.05111	11.63	24.243	0.06347	0.03869	0.05118
AS	-0.00143	-2.29	185.288	0.00131	-0.00163	-0.00399
B	0.04296	146.63	0.168	0.04299	0.04301	0.04288
BA	0.03746	30,996.90	0.467	0.03734	0.03766	0.03737
BE	0.00003	-102.85	13.724	0.00003	0.00003	0.00003
CA	56.53889	60,210.21	0.092	56.50607	56.51158	56.59901
CD	0.00041	1.45	10.250	0.00037	0.00042	0.00045
CO	-0.00036	-1.99	37.862	-0.00050	-0.00023	-0.00035
CR	0.00117	9.36	15.655	0.00104	0.00109	0.00138
CU	-0.00034	189.93	61.903	-0.00057	-0.00015	-0.00032
FE	0.11834	50.17	6.907	0.12754	0.11559	0.11190
K	1.81099	583.33	2.016	1.84299	1.77121	1.81877
LI	-0.00115	76.73	141.118	-0.00076	0.00024	-0.00292
MG	21.88996	55,054.06	0.171	21.84730	21.90598	21.91660
MN	0.07560	4,979.82	0.621	0.07524	0.07613	0.07542
MO	0.00011	2.96	121.467	0.00011	-0.00002	0.00023
NA	89.60207	111,498.52	0.017	89.60601	89.58532	89.61487
NI	0.00077	20.34	22.468	0.00091	0.00057	0.00082
P	0.02190	11.31	7.024	0.02177	0.02043	0.02350
PB	0.00683	5.82	5.003	0.00647	0.00715	0.00688
S	8.81494	2,328.30	0.227	8.82355	8.82916	8.79210
SB	-0.00181	-5.57	89.221	-0.00361	-0.00051	-0.00130
SE	-0.00034	3.76	982.738	-0.00199	-0.00254	0.00351
SI	7.66590	1,860.74	0.139	7.67430	7.65394	7.66945
SN	-0.00074	1.10	82.239	-0.00114	-0.00004	-0.00103
SR	0.13162	115,753.91	0.494	0.13116	0.13236	0.13133
TI	0.00322	220.67	4.539	0.00339	0.00312	0.00315
TL	0.00092	0.45	168.995	0.00263	-0.00042	0.00055
V	0.00056	2.88	81.177	0.00091	0.00072	0.00005
Y1	15542.93632	15,542.94	0.229	15519.50450	15525.32712	15583.97735
Y2A	584082.58682	584,082.59	0.564	586392.91639	580310.46782	585544.37624
Y2R	33063.27100	33,063.27	0.420	33188.30975	33087.55000	32913.95326
ZN	0.00009	37.18	147.176	0.00009	-0.00004	0.00022
ZR	-0.00137	-1.28	72.045	-0.00228	-0.00032	-0.00151

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 28 Date/Time: 11/11/2013 02:25

Sample Number: **7265243** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00016	-23.67	319.897	-0.00053	0.00042	-0.00037
AL	0.06476	13.88	29.527	0.06093	0.08551	0.04784
AS	-0.00233	-2.70	105.513	-0.00002	-0.00490	-0.00206
B	0.04386	149.93	1.296	0.04427	0.04411	0.04321
BA	0.03777	31,259.56	0.571	0.03797	0.03779	0.03754
BE	0.00002	-107.32	80.202	0.00000	0.00002	0.00004
CA	51.11149	54,525.10	0.277	51.27437	51.01907	51.04102
CD	0.00040	1.35	23.240	0.00048	0.00042	0.00030
CO	-0.00035	-1.97	42.953	-0.00044	-0.00044	-0.00018
CR	0.00079	5.39	20.563	0.00061	0.00086	0.00091
CU	-0.00072	182.27	6.967	-0.00067	-0.00075	-0.00075
FE	0.14220	59.33	4.967	0.14489	0.14752	0.13419
K	3.09687	926.91	1.371	3.11442	3.04846	3.12772
LI	-0.00448	52.04	17.328	-0.00530	-0.00438	-0.00376
MG	20.76692	52,319.84	0.390	20.85925	20.73373	20.70778
MN	0.21029	13,836.06	0.643	0.21176	0.21004	0.20908
MO	0.00019	3.24	76.656	0.00027	0.00027	0.00002
NA	86.57408	107,876.79	0.379	86.95043	86.42045	86.35137
NI	-0.00005	18.23	1258.162	0.00003	0.00057	-0.00076
P	0.04842	24.53	2.544	0.04962	0.04716	0.04848
PB	0.00556	4.31	31.607	0.00382	0.00552	0.00733
S	10.30816	2,730.55	0.081	10.30435	10.30235	10.31778
SB	-0.00184	-5.61	223.577	0.00228	-0.00594	-0.00186
SE	-0.00097	3.55	228.663	-0.00176	-0.00269	0.00154
SI	3.76382	916.92	0.254	3.77261	3.75361	3.76523
SN	-0.00057	1.29	75.267	-0.00008	-0.00087	-0.00075
SR	0.12008	105,637.90	0.593	0.12081	0.12004	0.11938
TI	0.00263	185.15	4.651	0.00265	0.00250	0.00275
TL	0.00062	0.34	149.393	0.00106	0.00124	-0.00045
V	-0.00037	-14.79	58.118	-0.00039	-0.00015	-0.00058
Y1	15588.36163	15,588.36	0.040	15595.17228	15587.14780	15582.76482
Y2A	584297.69409	584,297.69	0.481	581618.77903	584049.76775	587224.53550
Y2R	33106.48857	33,106.49	0.212	33025.53871	33145.46769	33148.45931
ZN	-0.00114	26.32	15.907	-0.00123	-0.00093	-0.00125
ZR	-0.00008	2.26	3045.099	0.00252	-0.00069	-0.00206

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 29 Date/Time: 11/11/2013 02:29

Sample Number: **7265247** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00002	-21.87	709.796	-0.00005	0.00017	-0.00007
AL	0.04654	10.89	56.353	0.04732	0.07238	0.01994
AS	-0.00113	-2.19	114.037	-0.00061	-0.00259	-0.00018
B	0.07889	290.50	1.093	0.07884	0.07977	0.07805
BA	-0.00003	159.75	34.376	-0.00004	-0.00002	-0.00002
BE	0.00005	-97.45	14.477	0.00005	0.00005	0.00006
CA	0.05805	146.51	4.884	0.05626	0.05658	0.06132
CD	0.00037	0.84	6.498	0.00038	0.00034	0.00039
CO	-0.00054	-3.01	42.346	-0.00045	-0.00080	-0.00037
CR	-0.00029	-6.48	166.371	-0.00010	0.00006	-0.00084
CU	-0.00075	170.10	111.955	-0.00036	-0.00172	-0.00018
FE	-0.00674	2.53	14.994	-0.00569	-0.00683	-0.00771
K	-0.01450	97.36	391.211	0.05015	-0.05596	-0.03769
LI	-0.00328	55.13	89.555	-0.00224	-0.00660	-0.00100
MG	0.00385	9.70	37.283	0.00221	0.00445	0.00489
MN	-0.00007	8.20	76.585	-0.00001	-0.00010	-0.00011
MO	0.00015	3.18	264.281	0.00029	0.00045	-0.00030
NA	0.02737	210.10	4.840	0.02587	0.02791	0.02835
NI	-0.00039	17.77	25.901	-0.00027	-0.00043	-0.00046
P	0.00034	0.63	299.930	0.00138	-0.00065	0.00029
PB	0.00419	2.76	41.416	0.00387	0.00263	0.00605
S	0.00263	1.52	13.135	0.00271	0.00293	0.00225
SB	-0.00017	-4.68	498.900	0.00073	-0.00094	-0.00029
SE	0.00217	4.82	44.743	0.00110	0.00243	0.00299
SI	0.00593	5.64	97.753	0.00237	0.01261	0.00280
SN	-0.00073	1.14	108.514	-0.00001	-0.00060	-0.00159
SR	0.00040	322.70	1.834	0.00039	0.00040	0.00040
TI	0.00007	31.07	174.033	0.00018	-0.00006	0.00009
TL	0.00002	-0.05	5558.652	0.00101	-0.00088	-0.00008
V	-0.00017	-11.48	120.321	0.00002	-0.00014	-0.00039
Y1	15960.34720	15,960.35	0.389	15990.50823	16001.63989	15888.89348
Y2A	618914.95897	618,914.96	0.053	619293.79562	618738.91463	618712.16667
Y2R	33084.71612	33,084.72	0.513	33246.43569	33099.76538	32907.94728
ZN	-0.00052	32.44	19.953	-0.00062	-0.00041	-0.00053
ZR	-0.00154	-1.74	101.571	-0.00329	-0.00030	-0.00101

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 30 Date/Time: 11/11/2013 02:32

Sample Number: **7265248** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-15.83	5.702	0.00039	0.00035	0.00037
AL	0.04006	9.97	46.806	0.01909	0.04585	0.05522
AS	-0.00282	-2.94	75.609	-0.00476	-0.00054	-0.00315
B	0.00382	7.83	41.393	0.00515	0.00424	0.00207
BA	0.00023	387.93	4.348	0.00024	0.00022	0.00022
BE	0.00007	-86.90	15.730	0.00006	0.00008	0.00008
CA	0.07322	164.97	4.237	0.07681	0.07145	0.07141
CD	0.00045	1.63	15.521	0.00052	0.00045	0.00038
CO	-0.00011	-0.80	135.162	0.00005	-0.00024	-0.00013
CR	-0.00017	-5.22	252.495	-0.00049	0.00032	-0.00034
CU	-0.00083	171.82	103.239	-0.00049	-0.00181	-0.00020
FE	-0.00017	5.11	3714.344	-0.00571	-0.00150	0.00670
K	-0.05142	88.71	32.392	-0.06825	-0.03495	-0.05107
LI	-0.00293	58.53	55.882	-0.00467	-0.00142	-0.00270
MG	0.00322	8.24	35.826	0.00242	0.00270	0.00454
MN	-0.00007	8.65	25.896	-0.00005	-0.00009	-0.00006
MO	0.00030	3.62	35.931	0.00037	0.00035	0.00017
NA	-0.03979	128.33	21.393	-0.03021	-0.04267	-0.04649
NI	-0.00036	17.63	72.886	-0.00006	-0.00051	-0.00050
P	0.00006	0.48	751.774	-0.00030	0.00057	-0.00010
PB	0.00346	2.07	43.361	0.00520	0.00255	0.00264
S	-0.00052	0.66	429.620	-0.00067	0.00179	-0.00268
SB	-0.00060	-4.89	232.169	0.00038	-0.00218	0.00001
SE	0.00208	4.72	91.044	0.00316	0.00320	-0.00011
SI	0.01119	7.00	80.047	0.02109	0.00366	0.00881
SN	-0.00069	1.17	86.816	-0.00094	-0.00001	-0.00112
SR	0.00049	412.17	1.456	0.00048	0.00048	0.00049
TI	0.00003	29.08	392.652	0.00008	-0.00011	0.00013
TL	0.00130	0.62	81.946	0.00010	0.00215	0.00165
V	-0.00020	-12.22	126.951	0.00005	-0.00045	-0.00019
Y1	15753.80175	15,753.80	0.155	15779.85470	15731.48323	15750.06733
Y2A	629702.62181	629,702.62	0.752	632608.94877	632258.75000	624240.16667
Y2R	33544.75261	33,544.75	0.473	33371.07892	33581.07029	33682.10863
ZN	-0.00172	21.15	4.980	-0.00174	-0.00180	-0.00163
ZR	-0.00174	-2.33	29.686	-0.00233	-0.00155	-0.00135

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 31 Date/Time: 11/11/2013 02:36

Sample Number: **7266798** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00031	-17.02	60.988	0.00052	0.00023	0.00017
AL	0.02143	6.87	55.395	0.01558	0.01363	0.03509
AS	-0.00102	-2.12	95.446	0.00010	-0.00167	-0.00147
B	0.00201	0.83	30.240	0.00259	0.00138	0.00206
BA	-0.00008	119.33	11.314	-0.00007	-0.00007	-0.00009
BE	0.00007	-89.78	16.370	0.00007	0.00008	0.00006
CA	0.03271	121.36	10.203	0.03196	0.03636	0.02981
CD	0.00043	1.41	6.277	0.00044	0.00044	0.00040
CO	-0.00064	-3.47	2.407	-0.00063	-0.00064	-0.00066
CR	-0.00015	-5.05	218.453	-0.00030	-0.00039	0.00023
CU	-0.00085	171.97	70.770	-0.00121	-0.00118	-0.00016
FE	-0.00898	1.70	93.883	-0.01467	-0.01299	0.00071
K	-0.01053	99.94	624.195	-0.08459	0.01223	0.04078
LI	-0.00490	44.13	59.646	-0.00799	-0.00451	-0.00219
MG	0.00131	3.31	81.584	0.00010	0.00170	0.00212
MN	-0.00003	11.17	67.771	-0.00005	-0.00001	-0.00004
MO	-0.00010	2.36	319.206	-0.00019	0.00024	-0.00034
NA	-0.05325	111.61	11.242	-0.05949	-0.05269	-0.04756
NI	-0.00007	18.43	334.740	-0.00004	-0.00034	0.00015
P	-0.00087	0.01	112.916	-0.00123	-0.00163	0.00024
PB	0.00496	3.45	49.632	0.00622	0.00654	0.00212
S	-0.00048	0.67	61.598	-0.00014	-0.00060	-0.00070
SB	-0.00200	-5.79	81.078	-0.00387	-0.00094	-0.00120
SE	0.00047	4.11	162.505	0.00057	-0.00034	0.00117
SI	0.00652	5.87	88.721	0.01250	0.00610	0.00096
SN	-0.00071	1.15	18.718	-0.00059	-0.00085	-0.00070
SR	0.00025	184.78	2.845	0.00025	0.00025	0.00024
TI	0.00001	27.57	1712.562	0.00015	-0.00014	0.00002
TL	-0.00037	-0.25	34.692	-0.00030	-0.00029	-0.00052
V	0.00009	-6.42	112.362	0.00010	-0.00002	0.00018
Y1	15803.57805	15,803.58	0.160	15774.62774	15815.32298	15820.78343
Y2A	631154.23005	631,154.23	0.028	631062.12575	631040.75365	631359.81076
Y2R	33605.32205	33,605.32	0.321	33537.78954	33729.77904	33548.39756
ZN	-0.00293	10.31	4.252	-0.00283	-0.00307	-0.00289
ZR	-0.00132	-1.15	82.862	-0.00186	-0.00203	-0.00006

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 32 Date/Time: 11/11/2013 02:40

Sample Number: **7266799** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00012	-20.38	428.212	-0.00043	0.00056	0.00023
AL	0.01202	5.33	100.145	0.02447	0.00045	0.01113
AS	-0.00189	-2.53	40.358	-0.00258	-0.00202	-0.00107
B	0.00185	0.22	35.571	0.00260	0.00140	0.00154
BA	-0.00007	127.00	15.500	-0.00007	-0.00006	-0.00007
BE	0.00007	-89.00	12.292	0.00007	0.00008	0.00006
CA	0.02402	112.25	8.539	0.02234	0.02340	0.02630
CD	0.00044	1.54	13.430	0.00038	0.00049	0.00045
CO	-0.00044	-2.48	61.705	-0.00074	-0.00035	-0.00022
CR	-0.00013	-4.73	193.798	-0.00041	0.00005	-0.00002
CU	-0.00049	176.82	185.576	-0.00053	0.00044	-0.00138
FE	-0.01059	1.08	20.661	-0.01221	-0.00810	-0.01145
K	-0.06375	85.76	15.062	-0.05269	-0.06852	-0.07003
LI	-0.00391	51.54	18.405	-0.00369	-0.00332	-0.00471
MG	-0.00013	-0.38	144.488	0.00008	-0.00027	-0.00019
MN	-0.00007	8.68	91.758	-0.00009	-0.00011	0.00000
MO	0.00023	3.43	69.588	0.00016	0.00012	0.00042
NA	-0.05674	107.51	7.948	-0.05834	-0.05164	-0.06023
NI	-0.00006	18.57	121.496	-0.00007	-0.00014	0.00002
P	0.00002	0.46	3672.234	-0.00028	-0.00035	0.00068
PB	0.00262	1.29	49.574	0.00282	0.00123	0.00380
S	0.00018	0.85	2145.123	0.00378	0.00044	-0.00370
SB	-0.00104	-5.22	83.330	-0.00137	-0.00171	-0.00006
SE	0.00195	4.72	105.446	0.00316	-0.00043	0.00313
SI	0.01289	7.46	44.616	0.00862	0.01062	0.01943
SN	-0.00044	1.45	2.753	-0.00043	-0.00044	-0.00045
SR	0.00024	177.07	2.080	0.00024	0.00024	0.00023
TI	-0.00007	22.13	154.881	0.00004	-0.00019	-0.00007
TL	0.00062	0.27	99.254	0.00071	0.00119	-0.00004
V	0.00025	-3.15	94.288	0.00036	-0.00002	0.00041
Y1	15892.25682	15,892.26	0.384	15961.17177	15845.20099	15870.39771
Y2A	628551.32515	628,551.33	0.190	627495.75000	629843.68787	628314.53759
Y2R	33700.75184	33,700.75	0.100	33662.21012	33724.84512	33715.20028
ZN	-0.00264	12.97	1.239	-0.00261	-0.00268	-0.00264
ZR	-0.00066	0.70	127.356	-0.00117	-0.00110	0.00031

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 33 Date/Time: 11/11/2013 02:44

Sample Number: **7266805** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00037	-18.73	37.452	0.00053	0.00025	0.00034
AL	1.42833	240.31	0.895	1.41592	1.44146	1.42762
AS	0.00794	-0.62	20.562	0.00723	0.00981	0.00678
B	0.02384	120.46	1.981	0.02371	0.02436	0.02343
BA	0.07064	59,903.28	0.441	0.07092	0.07069	0.07031
BE	0.00043	100.72	1.406	0.00043	0.00044	0.00042
CA	24.95612	27,018.85	1.018	24.66511	25.13280	25.07044
CD	0.00102	41.68	21.148	0.00124	0.00102	0.00081
CO	0.01237	61.48	0.536	0.01242	0.01229	0.01239
CR	0.00647	67.46	9.060	0.00703	0.00653	0.00586
CU	0.01050	335.84	3.783	0.01041	0.01016	0.01094
FE	20.97573	8,071.94	1.167	20.70598	21.18338	21.03783
K	3.17934	960.04	3.181	3.06610	3.26071	3.21121
LI	-0.00047	79.19	597.267	-0.00044	-0.00329	0.00233
MG	9.73402	24,916.63	1.204	9.59911	9.81061	9.79233
MN	1.62296	109,595.65	0.312	1.62858	1.62154	1.61875
MO	0.00175	8.26	19.610	0.00188	0.00136	0.00201
NA	53.06416	66,972.93	1.092	52.40241	53.48084	53.30923
NI	0.00738	36.93	4.612	0.00744	0.00768	0.00701
P	0.33599	168.73	0.396	0.33746	0.33564	0.33487
PB	0.02626	25.70	3.714	0.02644	0.02713	0.02520
S	11.14431	2,971.92	0.070	11.13857	11.15321	11.14114
SB	0.00013	-4.41	253.471	-0.00014	0.00048	0.00004
SE	0.00225	5.33	9.270	0.00240	0.00234	0.00201
SI	13.10309	3,219.36	0.951	12.96053	13.19085	13.15789
SN	-0.00032	1.56	175.198	0.00029	-0.00043	-0.00081
SR	0.09537	86,167.65	0.378	0.09567	0.09546	0.09497
TI	0.04483	2,825.65	1.303	0.04550	0.04443	0.04457
TL	-0.00368	-1.34	52.296	-0.00221	-0.00296	-0.00586
V	0.00564	109.25	5.927	0.00602	0.00550	0.00540
Y1	15693.71749	15,693.72	0.058	15683.36064	15697.30306	15700.48878
Y2A	600163.48706	600,163.49	0.523	596856.17120	600538.81885	603095.47113
Y2R	33500.22888	33,500.23	0.869	33835.72500	33349.27058	33315.69107
ZN	0.06169	610.86	0.718	0.06202	0.06118	0.06186
ZR	-0.00042	1.35	212.146	0.00061	-0.00101	-0.00087

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 34

Date/Time: 11/11/2013 02:47

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49906	8,669.45	1.025	0.49316	0.50225	0.50176
AL	24.69612	4,056.65	1.176	24.77751	24.37359	24.93727
AS	0.49203	218.02	0.387	0.49014	0.49200	0.49395
B	0.49543	1,844.34	0.644	0.49357	0.49912	0.49360
BA	0.50383	424,723.73	1.360	0.49645	0.50999	0.50505
BE	0.49368	254,393.55	0.873	0.48912	0.49769	0.49422
CA	24.53908	26,222.49	1.001	24.57121	24.27895	24.76707
CD	0.49182	5,020.73	0.523	0.48989	0.49083	0.49474
CO	0.49397	2,439.44	0.549	0.49164	0.49333	0.49695
CR	0.49751	5,404.61	1.047	0.49250	0.50290	0.49713
CU	0.49911	7,530.26	1.055	0.49313	0.50307	0.50111
FE	24.63485	9,350.09	0.885	24.70325	24.39096	24.81034
K	24.76457	6,694.71	0.572	24.78320	24.61442	24.89608
LI	0.49634	3,674.40	1.357	0.49737	0.48915	0.50249
MG	24.25520	60,944.67	0.945	24.30772	24.00420	24.45367
MN	0.48970	32,966.77	0.856	0.48530	0.49364	0.49015
MO	0.50986	1,628.93	0.560	0.50792	0.50852	0.51314
NA	24.41396	30,506.06	0.990	24.47505	24.14760	24.61924
NI	0.49504	1,328.84	0.607	0.49281	0.49386	0.49845
P	0.50222	251.41	0.139	0.50177	0.50302	0.50185
PB	0.50117	464.07	1.260	0.49492	0.50105	0.50755
S	24.53877	6,505.41	0.313	24.46900	24.52630	24.62099
SB	0.51650	315.82	0.372	0.51680	0.51445	0.51825
SE	0.49177	191.78	0.683	0.48832	0.49194	0.49503
SI	25.10166	6,083.01	0.748	25.08676	24.92171	25.29651
SN	0.50415	533.91	0.508	0.50168	0.50398	0.50679
SR	0.49477	445,745.60	1.090	0.49038	0.50079	0.49314
TI	0.50983	31,766.98	0.948	0.50450	0.51394	0.51105
TL	0.49265	255.30	0.682	0.48953	0.49222	0.49621
V	0.50232	9,600.98	0.942	0.49730	0.50670	0.50295
Y1	15603.79777	15,603.80	0.340	15648.14065	15618.13411	15545.11854
Y2A	598182.95178	598,182.95	0.919	603582.36563	592594.55873	598371.93099
Y2R	33062.24687	33,062.25	0.583	33069.49440	33251.17477	32866.07143
ZN	0.49301	4,497.02	0.490	0.49064	0.49290	0.49547
ZR	0.49621	1,363.02	1.164	0.49930	0.48954	0.49978

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 35 Date/Time: 11/11/2013 02:51

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-21.15	504.563	0.00026	0.00028	-0.00033
AL	0.01116	5.07	202.238	0.03463	0.00925	-0.01039
AS	-0.00115	-2.18	3.160	-0.00112	-0.00119	-0.00114
B	0.00024	-5.92	414.912	0.00128	-0.00066	0.00009
BA	-0.00010	101.83	9.866	-0.00010	-0.00009	-0.00010
BE	0.00009	-80.47	25.569	0.00011	0.00007	0.00008
CA	-0.00973	73.98	22.631	-0.01110	-0.00719	-0.01090
CD	0.00034	0.54	32.120	0.00045	0.00023	0.00035
CO	-0.00037	-2.09	43.116	-0.00021	-0.00052	-0.00036
CR	-0.00004	-3.72	568.620	-0.00030	0.00015	0.00003
CU	-0.00077	171.47	82.959	-0.00129	-0.00006	-0.00095
FE	-0.00426	3.46	171.497	-0.00692	-0.00985	0.00400
K	0.03831	111.06	57.248	0.06328	0.02944	0.02220
LI	-0.00231	61.97	83.714	-0.00289	-0.00389	-0.00015
MG	0.00086	2.11	59.061	0.00069	0.00045	0.00143
MN	-0.00002	11.97	31.618	-0.00001	-0.00002	-0.00002
MO	0.00000	2.68	3719.449	-0.00011	0.00024	-0.00012
NA	-0.05586	106.31	9.116	-0.05556	-0.06109	-0.05092
NI	-0.00022	18.05	53.036	-0.00030	-0.00009	-0.00027
P	-0.00115	-0.13	108.636	-0.00096	-0.00001	-0.00248
PB	0.00352	2.12	72.976	0.00635	0.00135	0.00285
S	0.00108	1.09	279.517	-0.00241	0.00295	0.00271
SB	-0.00037	-4.77	432.268	0.00036	0.00074	-0.00221
SE	0.00307	5.12	27.771	0.00220	0.00311	0.00390
SI	0.01242	7.19	15.767	0.01187	0.01079	0.01459
SN	-0.00128	0.54	65.481	-0.00222	-0.00104	-0.00059
SR	0.00004	-13.92	22.466	0.00004	0.00004	0.00003
TI	0.00002	28.15	370.529	0.00011	0.00000	-0.00004
TL	0.00087	0.40	75.878	0.00044	0.00162	0.00054
V	-0.00002	-8.58	852.926	0.00011	0.00006	-0.00024
Y1	15802.85013	15,802.85	0.056	15805.04230	15810.33109	15793.17700
Y2A	624570.29654	624,570.30	0.379	621913.50000	626443.33333	625354.05629
Y2R	32990.65513	32,990.66	0.465	32881.53432	33166.03510	32924.39597
ZN	-0.00236	15.43	1.172	-0.00238	-0.00233	-0.00238
ZR	0.00000	2.47	9838.329	0.00186	0.00138	-0.00324

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 36 Date/Time: 11/11/2013 02:55

Sample Number: **7266807** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00013	-19.03	518.244	-0.00046	0.00085	0.00000
AL	0.64605	108.42	3.391	0.66408	0.62167	0.65241
AS	-0.00073	-2.25	202.141	-0.00163	0.00098	-0.00154
B	0.03500	121.63	5.434	0.03286	0.03566	0.03649
BA	0.06369	52,262.14	0.627	0.06414	0.06354	0.06339
BE	0.00006	-86.48	33.899	0.00005	0.00005	0.00009
CA	61.71819	65,312.60	0.434	62.01919	61.50669	61.62867
CD	0.00057	6.56	9.089	0.00053	0.00055	0.00063
CO	0.00022	1.06	104.685	-0.00003	0.00041	0.00027
CR	0.00248	23.08	15.992	0.00293	0.00228	0.00222
CU	0.00255	231.73	2.787	0.00258	0.00260	0.00247
FE	2.29238	872.63	0.378	2.28430	2.29131	2.30154
K	3.86486	1,123.51	1.135	3.82568	3.91224	3.85666
LI	-0.00092	78.43	440.038	-0.00001	-0.00536	0.00261
MG	26.32628	65,711.24	0.357	26.43469	26.27250	26.27165
MN	0.41572	27,164.60	0.482	0.41788	0.41537	0.41392
MO	0.00098	5.73	20.037	0.00118	0.00079	0.00097
NA	93.96964	116,234.73	0.407	94.39436	93.65140	93.86316
NI	0.00147	22.04	19.109	0.00177	0.00123	0.00140
P	0.28371	141.05	0.244	0.28432	0.28296	0.28386
PB	0.00985	8.75	10.707	0.00906	0.01105	0.00945
S	4.99977	1,319.85	0.041	5.00030	5.00148	4.99752
SB	-0.00207	-5.73	94.701	-0.00262	-0.00370	0.00011
SE	-0.00027	3.87	343.048	-0.00033	0.00068	-0.00115
SI	7.35845	1,775.74	0.548	7.39319	7.31425	7.36790
SN	-0.00046	1.39	101.921	0.00007	-0.00082	-0.00063
SR	0.18219	159,277.55	0.598	0.18342	0.18181	0.18134
TI	0.02579	1,582.74	0.816	0.02601	0.02559	0.02577
TL	0.00053	0.38	266.421	-0.00053	-0.00002	0.00215
V	0.00200	30.61	7.096	0.00203	0.00185	0.00213
Y1	15530.13683	15,530.14	0.094	15514.24438	15543.11004	15533.05606
Y2A	580549.18713	580,549.19	0.496	577385.20239	581238.88520	583023.47379
Y2R	32867.94320	32,867.94	0.196	32939.98402	32815.55456	32848.29103
ZN	0.01502	172.08	0.166	0.01499	0.01504	0.01503
ZR	0.00037	3.48	73.051	0.00006	0.00058	0.00047

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 37 Date/Time: 11/11/2013 02:59

Sample Number: **7266810** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00043	-18.94	98.275	0.00041	0.00086	0.00002
AL	0.51235	87.50	1.269	0.51747	0.50504	0.51455
AS	0.00848	-1.18	5.880	0.00832	0.00808	0.00904
B	0.03162	161.96	1.796	0.03204	0.03097	0.03184
BA	0.13270	112,216.96	0.119	0.13253	0.13283	0.13275
BE	0.00014	-49.48	8.323	0.00015	0.00013	0.00013
CA	19.70756	21,164.75	0.113	19.69586	19.73322	19.69361
CD	0.00047	47.56	10.815	0.00046	0.00053	0.00043
CO	0.00209	10.29	11.597	0.00213	0.00182	0.00230
CR	0.00204	19.13	16.071	0.00205	0.00171	0.00237
CU	0.00687	277.43	16.106	0.00811	0.00597	0.00654
FE	27.96776	10,650.67	0.072	27.94725	27.96836	27.98768
K	1.92533	616.10	5.641	2.02601	1.93974	1.81025
LI	-0.00141	71.10	120.440	0.00053	-0.00262	-0.00213
MG	7.97699	20,245.55	0.221	7.97740	7.99441	7.95915
MN	2.05605	138,640.10	0.104	2.05484	2.05480	2.05851
MO	-0.00018	2.07	91.453	-0.00037	-0.00010	-0.00007
NA	54.89136	68,638.81	0.194	54.80200	55.00922	54.86285
NI	0.00162	21.25	14.179	0.00186	0.00159	0.00141
P	0.30091	151.38	0.307	0.30178	0.29994	0.30103
PB	0.04353	41.51	1.608	0.04272	0.04389	0.04397
S	4.52715	1,209.54	0.279	4.52964	4.53836	4.51346
SB	0.00000	-4.50	)476.722	0.00037	0.00046	-0.00083
SE	-0.00148	4.07	63.444	-0.00056	-0.00145	-0.00243
SI	9.04604	2,203.50	0.202	9.03082	9.06624	9.04106
SN	-0.00015	1.74	284.332	0.00005	-0.00064	0.00014
SR	0.11219	101,233.55	0.120	0.11204	0.11228	0.11225
TI	0.02056	1,307.94	1.240	0.02057	0.02081	0.02030
TL	-0.00369	-1.20	36.031	-0.00216	-0.00460	-0.00430
V	0.00220	45.32	4.752	0.00215	0.00232	0.00214
Y1	15716.99602	15,717.00	0.114	15703.96776	15709.55896	15737.46133
Y2A	599300.40367	599,300.40	0.135	599748.09224	598367.86662	599785.25216
Y2R	33191.61867	33,191.62	0.364	33174.50199	33080.17551	33320.17850
ZN	0.04211	441.32	0.517	0.04201	0.04195	0.04235
ZR	-0.00073	0.50	222.636	0.00018	-0.00259	0.00023

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 38 Date/Time: 11/11/2013 03:02

Sample Number: **7266811** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00010	-21.90	135.244	0.00002	0.00002	0.00025
AL	0.21870	39.17	4.145	0.20995	0.21811	0.22805
AS	0.00511	-0.92	24.458	0.00366	0.00578	0.00587
B	0.02903	122.74	3.065	0.02841	0.02863	0.03005
BA	0.09936	83,885.38	0.950	0.09835	0.09952	0.10022
BE	0.00009	-75.71	31.018	0.00006	0.00009	0.00011
CA	19.09107	20,477.36	0.184	19.10169	19.11972	19.05181
CD	0.00053	22.73	7.282	0.00048	0.00054	0.00056
CO	0.00082	3.91	49.032	0.00056	0.00129	0.00062
CR	0.00089	6.53	60.155	0.00074	0.00148	0.00044
CU	0.00268	219.38	34.926	0.00248	0.00370	0.00186
FE	12.43872	4,744.73	0.405	12.47247	12.46281	12.38087
K	2.03635	644.93	1.051	2.04228	2.01262	2.05416
LI	-0.00339	56.54	25.103	-0.00416	-0.00247	-0.00353
MG	7.88559	19,986.35	0.267	7.90794	7.88259	7.86622
MN	1.48641	100,014.97	0.720	1.47524	1.48745	1.49656
MO	0.00009	2.92	262.249	-0.00008	0.00034	0.00000
NA	54.71784	68,326.70	0.352	54.87010	54.78193	54.50147
NI	0.00109	20.72	42.827	0.00073	0.00162	0.00093
P	0.14027	70.76	1.137	0.14168	0.13854	0.14059
PB	0.02166	20.28	12.329	0.02173	0.01895	0.02429
S	4.37908	1,169.19	0.235	4.38198	4.38762	4.36765
SB	-0.00113	-5.21	98.700	-0.00214	0.00006	-0.00131
SE	0.00034	4.47	555.360	0.00241	-0.00015	-0.00124
SI	7.70028	1,873.71	0.145	7.68888	7.71120	7.70078
SN	-0.00008	1.81	408.932	0.00013	0.00010	-0.00047
SR	0.10905	98,187.25	0.779	0.10813	0.10922	0.10981
TI	0.00944	613.24	2.082	0.00927	0.00966	0.00941
TL	-0.00282	-0.96	27.386	-0.00218	-0.00261	-0.00368
V	0.00112	17.81	9.175	0.00102	0.00111	0.00123
Y1	15706.01889	15,706.02	0.054	15711.57285	15696.17010	15710.31373
Y2A	598020.07299	598,020.07	0.796	602763.60319	598047.69409	593248.92170
Y2R	33145.27297	33,145.27	0.219	33073.22500	33144.41118	33218.18272
ZN	0.02088	235.86	0.272	0.02081	0.02091	0.02091
ZR	0.00118	5.72	42.200	0.00061	0.00153	0.00139

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 39 Date/Time: 11/11/2013 03:06

Sample Number: **7266819** Class: **** Batch: 133115705006

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00007	-23.81	78.040	0.00002	0.00007	0.00013
AL	1.42952	238.38	0.964	1.43595	1.41370	1.43892
AS	0.00825	-0.49	12.292	0.00708	0.00879	0.00889
B	0.02776	134.10	2.896	0.02684	0.02811	0.02832
BA	0.07289	61,451.29	0.384	0.07262	0.07288	0.07318
BE	0.00041	88.36	2.705	0.00042	0.00040	0.00040
CA	25.30889	27,156.89	0.626	25.47879	25.16552	25.28237
CD	0.00121	44.06	16.131	0.00108	0.00113	0.00144
CO	0.01189	59.57	3.213	0.01231	0.01156	0.01181
CR	0.00601	62.03	3.600	0.00623	0.00600	0.00580
CU	0.01111	342.86	4.750	0.01076	0.01085	0.01171
FE	21.03173	8,021.94	0.549	21.16448	20.97610	20.95461
K	4.13209	1,206.42	0.452	4.14059	4.14500	4.11069
LI	0.00077	87.56	243.061	0.00080	-0.00112	0.00264
MG	9.86497	25,027.92	0.394	9.90738	9.85661	9.83092
MN	1.67241	112,282.15	0.532	1.66573	1.66899	1.68251
MO	0.00182	8.55	19.296	0.00155	0.00170	0.00222
NA	53.56486	67,006.26	0.463	53.85103	53.41555	53.42800
NI	0.00688	35.90	11.688	0.00744	0.00725	0.00596
P	0.37890	191.69	0.660	0.37634	0.38133	0.37902
PB	0.02753	27.08	1.494	0.02711	0.02756	0.02793
S	10.90852	2,931.56	0.241	10.93848	10.89797	10.88912
SB	-0.00057	-4.88	237.467	-0.00176	-0.00084	0.00090
SE	0.00211	5.33	13.979	0.00215	0.00180	0.00239
SI	13.12017	3,195.07	0.366	13.17479	13.08449	13.10124
SN	0.00081	2.77	52.494	0.00126	0.00041	0.00076
SR	0.09654	86,721.82	0.434	0.09613	0.09651	0.09697
TI	0.04409	2,763.30	0.586	0.04390	0.04399	0.04439
TL	-0.00385	-1.42	8.518	-0.00351	-0.00417	-0.00386
V	0.00558	107.46	5.165	0.00590	0.00551	0.00533
Y1	15815.16057	15,815.16	0.255	15770.01665	15827.89232	15847.57275
Y2A	596698.65627	596,698.66	0.490	598434.05773	598340.49436	593321.41672
Y2R	33202.81312	33,202.81	0.442	33040.74351	33326.48881	33241.20703
ZN	0.06154	614.27	0.572	0.06186	0.06116	0.06159
ZR	0.00134	6.19	20.982	0.00124	0.00166	0.00113

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 40

Date/Time: 11/11/2013 03:10

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00518	71.35	4.392	0.00492	0.00527	0.00534
AL	0.20393	36.52	7.831	0.22097	0.20148	0.18932
AS	0.01881	6.96	13.385	0.01752	0.02171	0.01720
B	0.04700	170.22	1.770	0.04604	0.04744	0.04752
BA	0.00529	4,785.13	1.279	0.00522	0.00534	0.00532
BE	0.00495	2,504.90	1.490	0.00487	0.00502	0.00495
CA	0.19068	286.61	0.491	0.18972	0.19071	0.19160
CD	0.00534	52.37	0.681	0.00534	0.00537	0.00530
CO	0.00441	21.97	3.797	0.00436	0.00460	0.00428
CR	0.01496	164.55	0.968	0.01483	0.01512	0.01493
CU	0.00931	322.43	2.217	0.00909	0.00932	0.00950
FE	0.19804	80.13	5.201	0.19324	0.20986	0.19101
K	0.54574	245.30	12.323	0.58809	0.58094	0.46819
LI	0.01679	199.46	16.322	0.01366	0.01876	0.01794
MG	0.09780	246.81	1.125	0.09718	0.09907	0.09714
MN	0.00512	368.20	1.397	0.00505	0.00519	0.00510
MO	0.01017	35.70	1.732	0.01036	0.01014	0.01002
NA	0.94103	1,339.15	0.900	0.93198	0.94234	0.94876
NI	0.01007	45.87	5.312	0.00948	0.01052	0.01022
P	0.09622	49.23	0.924	0.09725	0.09571	0.09571
PB	0.01881	16.39	7.455	0.02005	0.01729	0.01911
S	0.48246	130.95	0.922	0.48044	0.48755	0.47937
SB	0.01919	7.55	8.715	0.02074	0.01940	0.01742
SE	0.02068	11.98	12.843	0.01763	0.02193	0.02249
SI	0.06329	19.43	10.805	0.05731	0.07075	0.06181
SN	0.01948	22.83	0.848	0.01962	0.01930	0.01952
SR	0.00516	4,745.18	1.525	0.00507	0.00522	0.00518
TI	0.00997	666.93	1.500	0.00981	0.01001	0.01010
TL	0.02922	15.31	5.698	0.02796	0.03111	0.02860
V	0.00512	92.05	4.484	0.00485	0.00523	0.00527
Y1	15878.84335	15,878.84	0.146	15898.84290	15853.51542	15884.17172
Y2A	617064.51395	617,064.51	0.988	623834.16667	612003.98142	615355.39378
Y2R	32917.23155	32,917.23	0.898	33117.17348	32577.72564	33056.79554
ZN	0.01974	217.49	0.447	0.01971	0.01967	0.01984
ZR	0.04915	136.64	2.171	0.05035	0.04876	0.04833

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 41

Date/Time: 11/11/2013 03:13

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00069	-38.90	42.155	0.00079	0.00092	0.00036
AL	497.66448	79,514.27	0.807	502.09809	496.61840	494.27696
AS	0.00332	-0.18	120.965	-0.00131	0.00543	0.00585
B	0.00512	344.62	91.003	0.00064	0.00478	0.00995
BA	0.00038	440.20	3.348	0.00037	0.00039	0.00038
BE	-0.00033	-255.17	6.674	-0.00035	-0.00031	-0.00032
CA	498.28175	485,674.02	0.798	502.69836	497.16709	494.97981
CD	0.00039	296.49	93.171	0.00002	0.00040	0.00074
CO	0.00223	9.79	12.117	0.00254	0.00207	0.00208
CR	0.00203	16.70	14.208	0.00198	0.00177	0.00234
CU	-0.00080	280.47	79.510	-0.00152	-0.00055	-0.00033
FE	199.50165	69,044.89	0.798	201.29584	198.94679	198.26231
K	0.04355	105.73	114.481	0.02027	0.10078	0.00959
LI	0.00013	125.63	1370.558	0.00039	-0.00171	0.00170
MG	493.00182	957,322.61	0.502	495.82538	491.97355	491.20654
MN	0.00324	203.93	1.280	0.00329	0.00322	0.00322
MO	-0.00145	-1.82	40.630	-0.00165	-0.00191	-0.00079
NA	0.01526	182.88	34.859	0.00996	0.02060	0.01521
NI	0.00333	14.55	4.553	0.00348	0.00332	0.00318
P	0.01413	6.84	17.770	0.01623	0.01480	0.01135
PB	0.00184	81.12	126.807	0.00452	0.00076	0.00024
S	0.00010	0.75	5556.531	-0.00097	-0.00504	0.00632
SB	-0.01484	-12.50	20.179	-0.01787	-0.01476	-0.01188
SE	0.00153	6.35	216.420	0.00033	-0.00102	0.00528
SI	0.02559	9.76	34.518	0.01539	0.03084	0.03053
SN	0.00276	4.38	59.148	0.00116	0.00268	0.00442
SR	0.00246	1,918.53	0.619	0.00248	0.00245	0.00246
TI	-0.00060	-10.07	23.117	-0.00075	-0.00050	-0.00054
TL	0.00596	2.76	38.211	0.00389	0.00559	0.00840
V	-0.00217	35.87	15.817	-0.00246	-0.00226	-0.00179
Y1	14260.32191	14,260.32	0.088	14252.04022	14274.69616	14254.22936
Y2A	528074.62398	528,074.62	0.386	527643.49701	530291.97080	526288.40411
Y2R	31020.45359	31,020.45	0.547	30876.59553	30977.14785	31207.61738
ZN	0.01107	286.98	1.486	0.01106	0.01091	0.01124
ZR	0.00392	12.42	72.150	0.00065	0.00557	0.00552

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 42 Date/Time: 11/11/2013 03:17

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21925	3,312.16	0.627	0.21882	0.22079	0.21814
AL	495.78798	78,559.79	0.443	498.16642	493.83756	495.35995
AS	0.10240	40.53	3.807	0.09920	0.10674	0.10125
B	0.00676	348.37	20.644	0.00517	0.00735	0.00777
BA	0.49704	368,921.09	0.699	0.49401	0.50083	0.49627
BE	0.51484	233,584.17	0.494	0.51229	0.51737	0.51484
CA	501.22386	484,492.59	0.052	501.49291	500.96843	501.21024
CD	0.96005	9,138.91	0.067	0.95966	0.96079	0.95970
CO	0.49106	2,201.22	0.116	0.49142	0.49135	0.49040
CR	0.49397	4,724.82	0.124	0.49328	0.49444	0.49420
CU	0.52883	7,147.00	0.363	0.52809	0.53101	0.52738
FE	199.16302	68,370.95	0.468	200.20076	198.40071	198.88758
K	0.02154	99.43	57.291	0.03543	0.01734	0.01185
LI	-0.00067	119.52	127.879	-0.00003	-0.00034	-0.00164
MG	490.04744	945,112.20	0.062	489.82318	490.39403	489.92512
MN	0.48518	28,758.35	0.403	0.48470	0.48733	0.48351
MO	-0.00146	-1.83	35.315	-0.00151	-0.00194	-0.00092
NA	-0.00202	161.42	665.048	-0.00027	-0.01622	0.01044
NI	0.97358	2,348.36	0.100	0.97421	0.97407	0.97246
P	0.01207	7.05	1.806	0.01225	0.01183	0.01214
PB	0.05553	125.34	4.805	0.05826	0.05542	0.05293
S	-0.00751	-1.09	57.691	-0.01213	-0.00353	-0.00687
SB	0.61366	343.67	0.706	0.60932	0.61368	0.61799
SE	0.05170	23.79	7.991	0.05589	0.04763	0.05158
SI	0.02086	8.61	35.929	0.01225	0.02442	0.02590
SN	0.00434	5.87	32.445	0.00405	0.00587	0.00310
SR	0.00242	1,875.45	0.644	0.00240	0.00243	0.00242
TI	-0.00014	22.24	15.686	-0.00012	-0.00014	-0.00017
TL	0.10281	49.23	3.097	0.10618	0.10241	0.09985
V	0.49982	8,555.49	0.231	0.49851	0.50068	0.50028
Y1	14191.40307	14,191.40	0.088	14199.71600	14177.06063	14197.43259
Y2A	526653.14643	526,653.15	0.392	528111.97744	524289.06768	527558.39416
Y2R	30767.43977	30,767.44	0.138	30746.82944	30739.13586	30816.35402
ZN	1.02202	8,556.46	0.122	1.02254	1.02293	1.02060
ZR	0.00717	20.59	35.491	0.00546	0.01009	0.00595

LANCASTER LABORATORIES

Run Name: 1331501T71

Instrument ID: 16315

Tube: 43

Date/Time: 11/11/2013 03:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50008	8,563.20	0.666	0.49716	0.49936	0.50371
AL	24.80355	3,977.16	0.939	24.70185	25.07007	24.63874
AS	0.48773	217.00	0.031	0.48790	0.48768	0.48762
B	0.48678	1,786.91	0.792	0.48915	0.48233	0.48886
BA	0.49785	413,709.35	0.647	0.49806	0.49454	0.50097
BE	0.49689	252,395.03	0.544	0.49511	0.49557	0.50000
CA	24.68415	25,748.02	0.667	24.63778	24.86692	24.54774
CD	0.49561	5,080.78	0.243	0.49424	0.49612	0.49648
CO	0.49169	2,438.60	0.114	0.49107	0.49217	0.49184
CR	0.50203	5,375.90	0.707	0.50016	0.49980	0.50612
CU	0.49178	7,316.43	0.791	0.48852	0.49073	0.49608
FE	24.61789	9,120.88	0.725	24.59048	24.80851	24.45469
K	24.79357	6,542.49	0.851	24.68149	25.03708	24.66213
LI	0.48922	3,536.57	0.636	0.48701	0.49277	0.48787
MG	24.10007	59,114.48	0.704	24.03453	24.29270	23.97297
MN	0.49655	32,950.66	0.743	0.49377	0.49516	0.50074
MO	0.50453	1,618.84	0.118	0.50519	0.50436	0.50404
NA	24.30918	29,651.74	0.660	24.26967	24.48581	24.17207
NI	0.49473	1,333.70	0.075	0.49472	0.49511	0.49437
P	0.49466	248.70	0.215	0.49475	0.49568	0.49356
PB	0.50211	466.94	0.392	0.49994	0.50260	0.50377
S	24.06911	6,408.21	0.025	24.06830	24.07559	24.06343
SB	0.50807	311.95	0.225	0.50690	0.50813	0.50919
SE	0.48023	188.18	0.620	0.48186	0.47679	0.48203
SI	25.23529	5,969.52	0.698	25.14474	25.43841	25.12272
SN	0.50550	537.62	0.285	0.50547	0.50407	0.50696
SR	0.49446	439,113.14	0.682	0.49096	0.49474	0.49769
TI	0.50865	31,241.47	0.522	0.50760	0.50669	0.51167
TL	0.49173	255.92	0.432	0.49103	0.49004	0.49411
V	0.50578	9,530.61	0.745	0.50280	0.50453	0.51002
Y1	15670.43437	15,670.43	0.168	15697.20379	15644.63538	15669.46394
Y2A	589622.64986	589,622.65	0.549	591744.94028	591226.85800	585896.15129
Y2R	32273.64880	32,273.65	0.613	32410.82134	32046.79705	32363.32801
ZN	0.49044	4,493.14	0.027	0.49029	0.49053	0.49051
ZR	0.49709	1,332.87	1.125	0.49759	0.50241	0.49126

LANCASTER LABORATORIES

Run Name: 1331501T71 Instrument ID: 16315

Tube: 44 Date/Time: 11/11/2013 03:25

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00020	-25.43	129.284	-0.00037	0.00010	-0.00032
AL	0.00123	3.36	650.701	0.00372	-0.00775	0.00773
AS	-0.00036	-1.82	59.463	-0.00061	-0.00021	-0.00027
B	-0.00059	-8.85	245.715	0.00075	-0.00038	-0.00214
BA	-0.00008	111.58	15.525	-0.00007	-0.00010	-0.00008
BE	0.00010	-73.23	20.721	0.00011	0.00007	0.00010
CA	-0.00354	78.51	49.645	-0.00190	-0.00332	-0.00539
CD	0.00047	1.86	21.283	0.00043	0.00040	0.00058
CO	-0.00050	-2.77	6.926	-0.00054	-0.00047	-0.00050
CR	-0.00022	-5.68	157.970	0.00014	-0.00024	-0.00057
CU	-0.00014	177.20	546.069	-0.00025	0.00067	-0.00084
FE	-0.00197	4.22	69.736	-0.00268	-0.00039	-0.00285
K	0.01610	102.50	117.218	-0.00552	0.02929	0.02453
LI	-0.00277	57.24	73.889	-0.00513	-0.00161	-0.00156
MG	0.00598	14.67	20.210	0.00736	0.00515	0.00541
MN	-0.00011	5.70	51.912	-0.00006	-0.00010	-0.00017
MO	0.00000	2.65	3429.887	0.00007	-0.00014	0.00006
NA	-0.06696	90.19	11.055	-0.07150	-0.07095	-0.05842
NI	0.00009	18.81	378.997	0.00039	-0.00026	0.00013
P	-0.00178	-0.44	35.432	-0.00106	-0.00226	-0.00200
PB	0.00329	1.90	79.716	0.00046	0.00377	0.00564
S	0.00050	0.93	426.033	0.00261	0.00048	-0.00161
SB	-0.00061	-4.90	231.015	0.00042	-0.00221	-0.00003
SE	0.00212	4.74	62.622	0.00241	0.00327	0.00067
SI	0.00161	4.46	310.905	-0.00013	0.00726	-0.00230
SN	-0.00095	0.89	89.779	-0.00157	-0.00130	0.00002
SR	0.00002	-24.80	52.701	0.00002	0.00004	0.00002
TI	0.00005	29.55	27.764	0.00007	0.00005	0.00004
TL	-0.00040	-0.26	164.748	0.00036	-0.00071	-0.00086
V	0.00046	1.03	45.297	0.00025	0.00045	0.00067
Y1	15755.27011	15,755.27	0.140	15780.65144	15740.45833	15744.70055
Y2A	611050.32073	611,050.32	0.797	607421.78169	616582.36563	609146.81486
Y2R	32149.09891	32,149.10	0.592	32036.31369	32368.78494	32042.19809
ZN	-0.00245	14.65	5.077	-0.00241	-0.00235	-0.00259
ZR	-0.00147	-1.53	76.665	-0.00058	-0.00275	-0.00109

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

1331901E05

Date File Name: 13K15A01.E05

Run Name: 1331901E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 6020

Reviewed By:	Reviewed Date
Deborah A Krady	11/15/2013 07:18

Verified By:	Verified Date
Deborah A Krady	11/18/2013 06:49
Nina C Haller	11/15/2013 10:20

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331901E05 Date/Time: 11/15/2013 2:11:30
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	8022.12000	0.000	1.94570	1.27756	-3.22326
MG	24	0.00000	16.67000	0.000	0.10367	-0.17674	0.07307
AL	27	0.00000	6.67000	0.000	-0.60501	-0.60501	1.21001
K	39	0.00000	1746.83000	0.000	0.18847	-2.22000	2.03153
CA	44	0.00000	6.67000	0.000	-4.08813	-4.08813	8.17626
SC-1	45	23903.20000	0.00000	0.000	23205.73000	23916.55000	24587.33000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	0.000	0.02278	-0.01139	-0.01139
CR	52	0.00000	243.35000	0.000	-0.13876	0.12518	0.01359
MN	55	0.00000	40.00000	0.000	-0.02836	0.03161	-0.00325
FE	57	0.00000	10.00000	0.000	0.01352	0.65511	-0.66863
CO	59	0.00000	30.00000	0.000	-0.00585	0.00602	-0.00017
NI	60	0.00000	23.33000	0.000	0.01607	0.01519	-0.03126
CU	63	0.00000	216.68000	0.000	0.00449	0.04137	-0.04585
ZN	66	0.00000	16.67000	0.000	-0.11512	0.23024	-0.11512
GE-1	72	9886.55000	0.00000	0.000	9432.95000	10043.36000	10183.34000
AS	75	0.00000	6.67000	0.000	0.06056	0.01429	-0.07485
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01543
MO	98	0.00000	30.00000	0.000	0.01644	-0.00014	-0.01630
AG	107	0.00000	43.33000	0.000	-0.01277	0.01418	-0.00141
CD	111	0.00000	1.33000	0.000	-0.00481	0.00962	-0.00481
IN-1	115	49602.46000	0.00000	0.000	49016.69000	49643.14000	50147.54000
SN	120	0.00000	1892.75000	0.000	-1.30296	-1.03099	2.33395
SB	121	0.00000	110.01000	0.000	0.00177	0.05975	-0.06152
BA	137	0.00000	10.00000	0.000	0.00056	-0.03695	0.03638
TB-1	159	267842.84000	0.00000	0.000	265946.97000	269299.53000	268282.01000
TL	203	0.00000	43.33000	0.000	0.00842	-0.00739	-0.00103
PB	208	0.00000	260.02000	0.000	0.00273	0.00127	-0.00400
BI-1	209	224786.42000	0.00000	0.000	226921.25000	222565.23000	224872.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:13:30
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24317.03000	0.00000	0.000	25448.75000	23706.10000	23796.23000
AL	27	10000.00000	108892.77000	3.600	9638.49150	10366.79212	9994.71639
CA	44	10000.00000	16134.39000	0.500	9989.88170	9960.48061	10049.63769
CR	52	1000.00000	793257.41000	3.200	965.55481	1029.97663	1004.46856
FE	57	10000.00000	153460.75000	4.000	9532.86042	10216.72730	10250.41229
K	39	10000.00000	263636.00000	2.500	9742.37893	10234.65326	10022.96781
MG	24	10000.00000	384508.39000	3.100	9646.11814	10155.72199	10198.15986
MN	55	1000.00000	323296.51000	3.000	965.51710	1015.46624	1019.01666
NA	23	10000.00000	816433.32000	3.600	9579.82507	10213.33795	10206.83698
TI	47	1000.00000	13332.16000	0.400	998.03580	1004.41868	997.54552
V	51	1000.00000	612839.58000	3.500	960.19232	1022.30212	1017.50557
IN-1	115	49032.99000	0.00000	0.000	48975.41000	48686.03000	49437.54000
AG	107	100.00000	256064.42000	2.300	101.65997	100.92012	97.41990
AS	75	1000.00000	88649.93000	1.700	1010.21805	1009.85278	979.92917
BA	137	1000.00000	266665.85000	1.800	1014.06862	1006.75992	979.17146
CD	111	100.00000	27368.27000	2.500	101.76719	101.08970	97.14312
CO	59	1000.00000	1643536.85000	0.900	1004.25124	1005.89852	989.85024
CU	63	1000.00000	1264171.07000	1.500	1011.90290	1004.45233	983.64477
MO	98	100.00000	122935.30000	2.100	101.45098	100.92294	97.62608
NI	60	1000.00000	427414.77000	2.000	1019.16509	1001.18527	979.64964
SB	121	100.00000	65841.51000	2.100	100.88270	101.54382	97.57348
SN	120	100.00000	85477.55000	0.400	100.48908	99.71985	99.79107
SR	88	100.00000	42231.82000	2.400	100.96132	101.72786	97.31082
ZN	66	1000.00000	142993.74000	2.600	1012.50464	1017.66455	969.83080
BI-1	209	230119.42000	0.00000	0.000	229828.92000	230378.92000	230150.41000
PB	208	100.00000	1024355.64000	1.100	101.28137	99.57518	99.14345
TL	203	100.00000	318322.19000	0.500	100.52844	99.54175	99.92981
GE-1	72	10213.34000	0.00000	0.000	10813.67000	9492.87000	10333.49000
TB-1	159	272294.64000	0.00000	0.000	273994.82000	268178.96000	274710.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:15:31
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	24333.84000	0.00000	0.000	24707.69000	24327.09000	23966.75000
AL	27	1.86400	26.67000	125.600	-0.60501	2.14664	4.05003
CA	44	6.11400	16.67000	207.500	20.32117	2.10967	-4.08813
CR	52	-0.06300	196.68000	0.000	-0.08720	-0.00812	-0.09308
FE	57	4.33900	76.67000	47.700	2.53475	3.88627	6.59735
K	39	10.81300	2063.55000	118.300	24.60691	-0.65559	8.48696
MG	24	2.15500	100.00000	52.500	1.60513	3.45574	1.40472
MN	55	0.13100	83.33000	32.900	0.17869	0.12165	0.09400
NA	23	-6.65000	7631.89000	0.000	-6.98568	-6.87524	-6.08894
TI	47	1.00700	13.33000	86.600	0.00000	1.49944	1.52198
V	51	0.14000	93.34000	34.000	0.18116	0.15159	0.08786
IN-1	115	50456.74000	0.00000	0.000	51037.51000	49329.03000	51003.67000
AG	107	0.06700	220.01000	39.600	0.06212	0.09590	0.04340
AS	75	0.35000	38.67000	24.300	0.33697	0.44093	0.27217
BA	137	0.14400	50.00000	65.200	0.17921	0.03760	0.21540
CD	111	0.01900	6.67000	79.500	0.02327	0.03151	0.00221
CO	59	0.14300	273.34000	14.800	0.14566	0.12109	0.16331
CU	63	0.22700	516.69000	22.600	0.22562	0.17639	0.27912
MO	98	0.20500	290.01000	11.800	0.17897	0.22645	0.21040
NI	60	0.20400	113.34000	19.500	0.17063	0.24821	0.19330
SB	121	1.14900	886.73000	29.100	0.81357	1.48261	1.15060
SN	120	-0.88100	1156.75000	0.000	-1.16708	-0.99970	-0.47650
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01505
ZN	66	0.40700	76.67000	22.000	0.35518	0.51049	0.35549
BI-1	209	232567.35000	0.00000	0.000	234537.77000	229524.78000	233639.51000
PB	208	0.00900	360.02000	70.100	0.00180	0.01122	0.01345
TL	203	0.04600	193.34000	39.000	0.03236	0.03967	0.06657
GE-1	72	10019.87000	0.00000	0.000	10413.44000	9562.91000	10083.27000
TB-1	159	276709.07000	0.00000	0.000	276466.17000	276971.48000	276689.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:17:32
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24267.04000	0.00000	0.000	23816.50000	23946.58000	25038.04000
AL	27	3.04300	40.00000	78.000	0.33187	4.05395	4.74203
CA	44	-0.07400	6.67000	0.000	-4.08813	-4.08813	7.95549
CR	52	-0.21300	76.67000	0.000	-0.15603	-0.23365	-0.24923
FE	57	0.84600	23.33000	87.200	-0.00398	1.31449	1.22804
K	39	-5.29200	1633.48000	0.000	-5.45192	-2.30225	-8.12329
MG	24	1.38700	70.00000	22.000	1.68169	1.40627	1.07336
MN	55	0.07000	63.33000	90.500	0.00071	0.12558	0.08461
NA	23	-9.79500	7355.13000	0.000	-4.22783	-14.17000	-10.98682
TI	47	0.24300	3.33000	173.200	0.00000	0.00000	0.72843
V	51	0.07100	50.00000	42.500	0.08848	0.08794	0.03611
IN-1	115	50748.13000	0.00000	0.000	49042.37000	50548.88000	52653.14000
AG	107	0.01100	73.33000	40.200	0.01456	0.00605	0.01242
AS	75	0.06500	12.67000	109.300	0.12816	0.07834	-0.01182
BA	137	0.02400	16.67000	182.500	0.07553	-0.00057	-0.00203
CD	111	0.00400	2.67000	233.600	0.00249	-0.00481	0.01560
CO	59	0.03900	96.67000	61.300	0.05498	0.01149	0.04997
CU	63	0.14900	416.69000	24.500	0.17051	0.10665	0.16929
MO	98	0.05500	100.00000	39.500	0.04896	0.07835	0.03636
NI	60	-0.00900	20.00000	0.000	-0.05414	0.03664	-0.01056
SB	121	0.20500	253.35000	47.200	0.15376	0.14425	0.31603
SN	120	-1.25800	836.73000	0.000	-1.24365	-1.31929	-1.21064
SR	88	0.00000	3.33000	0.000	-0.00772	-0.00772	0.01433
ZN	66	0.49900	90.01000	61.600	0.65406	0.69897	0.14537
BI-1	209	228559.81000	0.00000	0.000	227817.69000	227395.35000	230466.40000
PB	208	-0.00400	220.01000	0.000	-0.00429	-0.00128	-0.00746
TL	203	0.01800	100.01000	30.200	0.02103	0.01155	0.02062
GE-1	72	10139.96000	0.00000	0.000	10373.43000	10113.21000	9933.25000
TB-1	159	276142.45000	0.00000	0.000	272873.18000	275129.04000	280425.13000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:19:32
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24393.93000	0.00000	0.000	24266.98000	24858.07000	24056.74000
AL	27	4975.93500	54383.95000	3.600	5033.83116	4776.29893	5117.67526
CA	44	4847.40500	7845.30000	4.900	5023.64805	4576.42395	4942.14417
CR	52	509.03100	405440.55000	1.800	510.12511	499.34710	517.62187
FE	57	4978.66100	76720.85000	1.800	5064.41099	4884.49908	4987.07314
K	39	5049.85800	134473.60000	2.900	5067.92147	4894.29537	5187.35665
MG	24	5005.99200	193226.58000	1.500	5024.05920	4921.08723	5072.83016
MN	55	505.69900	164108.21000	2.700	510.31474	490.09008	516.69350
NA	23	4949.41300	409812.12000	1.900	4952.11463	4856.27341	5039.85029
TI	47	494.73000	6614.84000	4.400	517.20347	474.07925	492.90644
V	51	510.66100	314185.03000	1.600	509.76364	502.93424	519.28629
IN-1	115	48371.31000	0.00000	0.000	48272.54000	48244.74000	48596.66000
AG	107	51.55400	130256.96000	2.000	51.72117	52.50277	50.43851
AS	75	527.62000	46150.63000	1.500	519.41880	528.52360	534.91902
BA	137	519.86600	136772.79000	0.700	522.21945	521.51147	515.86755
CD	111	51.61500	13937.01000	1.700	51.97326	52.26326	50.60806
CO	59	486.47200	788798.87000	0.500	483.75440	488.08633	487.57674
CU	63	524.49100	654228.42000	0.700	523.75593	528.61494	521.10241
MO	98	51.81400	62858.06000	0.200	51.79316	51.91400	51.73529
NI	60	529.73400	223387.68000	0.200	528.67861	529.39229	531.13147
SB	121	55.02700	35791.83000	2.100	55.30164	56.00034	53.77882
SN	120	51.51900	44331.87000	0.600	51.58803	51.81365	51.15583
SR	88	52.40100	21834.34000	1.600	52.72210	53.04191	51.43831
ZN	66	514.55000	72597.83000	2.300	524.98860	516.58516	502.07615
BI-1	209	227649.72000	0.00000	0.000	229139.90000	227002.30000	226806.95000
PB	208	51.98100	526891.73000	0.500	52.23641	51.94923	51.75646
TL	203	50.82400	160070.62000	1.000	50.89523	51.30335	50.27296
GE-1	72	10626.89000	0.00000	0.000	10553.54000	10703.58000	10623.55000
TB-1	159	270475.38000	0.00000	0.000	270485.86000	272501.50000	268438.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:21:32
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23809.66000	0.00000	0.000	23916.39000	23856.34000	23656.24000
AL	27	1.26200	20.00000	147.800	3.12686	1.26563	-0.60501
CA	44	-4.08800	0.00000	0.000	-4.08813	-4.08813	-4.08813
CR	52	-0.16900	110.01000	0.000	-0.16949	-0.13060	-0.20680
FE	57	1.33100	30.00000	132.700	-0.66863	1.98553	2.67713
K	39	-0.24700	1733.50000	0.000	0.49752	2.61455	-3.85218
MG	24	2.39500	106.67000	53.200	1.93705	1.41326	3.83338
MN	55	0.09500	70.00000	200.800	0.31450	-0.03101	0.00156
NA	23	-14.96400	6808.22000	0.000	-12.04926	-23.42129	-9.42001
TI	47	1.52500	20.00000	173.200	4.57556	0.00000	0.00000
V	51	0.14400	93.34000	56.600	0.23726	0.08832	0.10592
IN-1	115	49111.73000	0.00000	0.000	49102.61000	49674.13000	48558.46000
AG	107	0.04300	153.34000	27.100	0.03012	0.05272	0.04642
AS	75	0.23300	27.33000	52.900	0.35319	0.23692	0.10740
BA	137	0.13800	46.67000	68.600	0.22517	0.03708	0.15238
CD	111	0.00700	3.33000	151.000	-0.00481	0.01683	0.00995
CO	59	0.19700	353.35000	20.100	0.18857	0.16217	0.24003
CU	63	0.16600	426.69000	78.700	0.17799	0.29114	0.03009
MO	98	0.09800	150.01000	23.400	0.08949	0.08015	0.12363
NI	60	0.07900	56.67000	139.100	0.01595	0.01514	0.20576
SB	121	0.74100	596.70000	27.900	0.50277	0.84045	0.87892
SN	120	2.45500	3936.16000	121.400	3.76208	4.55852	-0.95610
SR	88	0.03200	16.67000	155.900	0.08686	0.01566	-0.00772
ZN	66	0.02500	20.00000	283.300	0.09438	-0.04609	0.02611
BI-1	209	223283.69000	0.00000	0.000	224171.34000	223315.02000	222364.72000
PB	208	0.02500	503.36000	34.800	0.01812	0.03439	0.02151
TL	203	0.03000	136.68000	16.100	0.03450	0.02497	0.03164
GE-1	72	9736.43000	0.00000	0.000	9592.99000	9833.17000	9783.13000
TB-1	159	268067.66000	0.00000	0.000	272804.37000	268013.79000	263384.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:23:32
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23082.16000	0.00000	0.000	22885.26000	23846.73000	22514.49000
AL	27	111.93900	1163.41000	5.500	118.35327	106.07242	111.39175
CA	44	187.92300	293.35000	14.100	213.33809	160.30691	190.12490
CR	52	2.00000	1743.49000	17.000	2.23356	2.15670	1.60856
FE	57	109.71700	1610.14000	13.000	93.40957	116.17206	119.57039
K	39	212.09000	6958.27000	4.600	205.58448	207.40656	223.27973
MG	24	99.89500	3663.88000	3.300	103.67552	97.35718	98.65137
MN	55	2.50800	806.72000	22.500	3.12629	2.01799	2.37849
NA	23	195.76300	22778.10000	6.100	209.49933	187.63893	190.15075
TI	47	15.51300	196.68000	28.800	10.36118	18.35646	17.82250
V	51	0.61100	363.35000	11.400	0.62958	0.67023	0.53449
IN-1	115	48067.40000	0.00000	0.000	47372.47000	49140.70000	47689.02000
AG	107	0.50200	1300.11000	9.800	0.54122	0.44710	0.51744
AS	75	2.00400	180.67000	0.700	2.00342	2.01868	1.98962
BA	137	2.33900	620.04000	15.500	2.40842	1.94623	2.66212
CD	111	0.53700	145.33000	10.300	0.48681	0.52745	0.59624
CO	59	0.59300	983.41000	18.300	0.71256	0.56483	0.50125
CU	63	2.14700	2873.71000	9.900	2.09887	2.38045	1.96179
MO	98	0.57500	723.38000	19.900	0.50630	0.70639	0.51113
NI	60	2.25100	966.73000	7.100	2.10126	2.42061	2.23128
SB	121	1.41900	1020.08000	9.800	1.47196	1.26122	1.52364
SN	120	0.69300	2390.27000	14.700	0.79647	0.59235	0.69032
SR	88	1.21800	506.70000	13.700	1.26679	1.03187	1.35571
ZN	66	16.19000	2283.58000	14.500	15.23161	14.47019	18.86963
BI-1	209	223870.08000	0.00000	0.000	222902.97000	225480.70000	223226.56000
PB	208	0.99100	10131.69000	2.400	1.00948	0.96476	0.99893
TL	203	0.51600	1640.16000	6.800	0.53758	0.53448	0.47523
GE-1	72	9903.19000	0.00000	0.000	10253.40000	9092.68000	10363.50000
TB-1	159	261949.60000	0.00000	0.000	263538.04000	261028.61000	261282.16000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:25:32
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23302.29000	0.00000	0.000	23155.46000	22824.86000	23926.56000
AL	27	9696.41600	101233.04000	2.200	9735.41816	9885.19101	9468.63997
CA	44	9009.88900	13935.89000	3.600	9252.64890	8646.20569	9130.81224
CR	52	-0.19200	90.00000	0.000	-0.19133	-0.20303	-0.18236
FE	57	9709.47400	142885.70000	2.300	9778.92292	9894.51331	9454.98557
K	39	9510.23200	240398.67000	2.400	9594.32800	9684.88411	9251.48501
MG	24	9568.80500	352769.64000	1.800	9669.57372	9663.25657	9373.58524
MN	55	0.05700	56.67000	138.100	-0.02815	0.07206	0.12579
NA	23	9494.13000	743608.89000	2.500	9575.95863	9677.09265	9229.33748
TI	47	202.16800	2580.29000	6.600	208.75169	210.97623	186.77718
V	51	0.01700	16.67000	56.000	0.02285	0.00598	0.02175
IN-1	115	47029.39000	0.00000	0.000	46859.32000	46026.77000	48202.07000
AG	107	-0.00200	36.67000	0.000	-0.00033	-0.01252	0.00716
AS	75	0.00200	6.67000	4010.100	-0.07485	-0.02678	0.10875
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00300	2.00000	276.700	0.01048	-0.00481	0.00262
CO	59	0.02200	63.34000	88.300	0.00745	0.01439	0.04388
CU	63	0.14400	380.02000	11.100	0.12840	0.14222	0.16034
MO	98	196.83500	232016.85000	2.600	201.45639	197.75920	191.28903
NI	60	0.00300	23.33000	506.600	0.01931	-0.00429	-0.00654
SB	121	0.11900	180.01000	121.800	0.28008	-0.00356	0.08196
SN	120	-0.92500	1040.63000	0.000	-1.58592	-0.42624	-0.76359
SR	88	0.05800	26.67000	51.400	0.04184	0.09318	0.04045
ZN	66	0.41700	73.34000	53.000	0.25076	0.33188	0.66746
BI-1	209	226144.62000	0.00000	0.000	225631.85000	226331.31000	226470.70000
PB	208	0.01700	433.35000	41.000	0.01086	0.02465	0.01569
TL	203	0.00200	50.00000	455.900	0.01175	0.00209	-0.00750
GE-1	72	9416.24000	0.00000	0.000	9883.21000	9472.99000	8892.52000
TB-1	159	261865.85000	0.00000	0.000	262194.82000	259258.10000	264144.62000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:27:32
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23212.41000	0.00000	0.000	22825.01000	23966.71000	22845.50000
AL	27	9618.38400	100040.68000	1.700	9603.31877	9465.81363	9786.01829
CA	44	8923.02400	13735.66000	3.900	9300.58527	8605.47954	8863.00605
CR	52	20.30500	15610.73000	3.700	21.13712	19.69336	20.08447
FE	57	9588.20300	140536.64000	2.800	9772.79494	9279.93142	9711.88227
K	39	9611.97600	242086.55000	1.000	9723.16180	9560.29917	9552.46670
MG	24	9585.35600	351967.90000	2.200	9721.75921	9343.63943	9690.66977
MN	55	19.27000	5974.57000	14.300	19.99951	16.21721	21.59436
NA	23	9495.12100	740751.71000	3.100	9792.22445	9212.85768	9480.28073
TI	47	187.37200	2386.95000	9.800	166.21970	197.88373	198.01218
V	51	-0.00600	3.33000	0.000	0.00598	-0.01139	-0.01139
IN-1	115	46209.32000	0.00000	0.000	48741.49000	44963.40000	44923.08000
AG	107	19.94900	48148.02000	3.000	19.50693	20.63492	19.70427
AS	75	19.04600	1593.42000	8.100	17.28805	19.70659	20.14297
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.96400	5142.14000	5.300	18.75046	20.41401	20.72760
CO	59	19.15100	29658.61000	3.600	18.37813	19.69805	19.37656
CU	63	20.67100	24791.45000	4.600	19.60563	21.01724	21.39034
MO	98	198.51200	229600.47000	5.200	186.52552	204.22823	204.78136
NI	60	19.33200	7802.01000	2.800	18.70911	19.57087	19.71632
SB	121	0.05300	133.34000	231.400	-0.05851	0.18274	0.03362
SN	120	-1.09200	883.61000	0.000	-1.49026	-1.19380	-0.59161
SR	88	0.08500	36.67000	64.500	0.06374	0.14721	0.04397
ZN	66	19.82300	2676.99000	14.100	17.12262	22.69000	19.65673
BI-1	209	221562.93000	0.00000	0.000	220215.99000	222513.86000	221958.94000
PB	208	0.01100	366.68000	67.300	0.01993	0.00734	0.00641
TL	203	-0.00200	36.67000	0.000	-0.00732	-0.00089	0.00240
GE-1	72	9556.28000	0.00000	0.000	8922.67000	9943.14000	9803.02000
TB-1	159	257628.15000	0.00000	0.000	257299.59000	261886.79000	253698.06000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:29:32
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22521.38000	0.00000	0.000	23095.30000	22885.11000	21583.73000
AL	27	2616.59400	26389.93000	4.100	2532.57856	2579.27135	2737.93334
CA	44	2543.78400	3810.57000	7.700	2503.19269	2756.85163	2371.30844
CR	52	267.98700	197049.32000	3.400	262.13631	263.24576	278.57783
FE	57	2573.03000	36581.58000	4.000	2494.73212	2535.00883	2689.34762
K	39	2613.63300	65036.17000	2.400	2550.84093	2612.35374	2677.70505
MG	24	2581.58100	91954.75000	3.600	2478.01058	2605.14337	2661.58786
MN	55	267.45500	80108.34000	3.400	262.35741	261.99672	278.01173
NA	23	2555.87700	198923.70000	3.300	2492.84294	2522.12036	2652.66881
TI	47	264.46500	3250.46000	19.800	240.10105	228.75560	324.53709
V	51	271.27300	153961.44000	4.400	260.18833	269.79246	283.83798
IN-1	115	47410.95000	0.00000	0.000	46368.97000	48764.21000	47099.67000
AG	107	25.84900	64016.23000	2.100	26.47282	25.43143	25.64130
AS	75	262.47700	22495.55000	2.600	269.22248	255.63173	262.57596
BA	137	258.84600	66733.09000	1.900	263.74135	253.92987	258.86802
CD	111	25.78600	6824.71000	1.200	25.72371	25.51848	26.11609
CO	59	243.78700	387306.40000	2.300	249.05843	238.00062	244.30224
CU	63	263.02200	321558.35000	2.300	269.41008	257.51742	262.13787
MO	98	26.81600	31883.41000	6.000	28.56562	26.44013	25.44095
NI	60	266.90600	110297.09000	1.700	270.70915	261.90559	268.10247
SB	121	26.65700	17042.54000	2.700	27.40383	25.97300	26.59550
SN	120	25.04300	22048.33000	1.500	24.62901	25.13987	25.35904
SR	88	25.67900	10490.22000	0.400	25.64010	25.78569	25.61185
ZN	66	267.11600	36932.38000	3.100	276.38376	261.03967	263.92405
BI-1	209	223353.66000	0.00000	0.000	224305.56000	223249.14000	222506.27000
PB	208	26.10000	259682.57000	1.800	25.61436	26.55312	26.13298
TL	203	25.59800	79118.96000	1.700	25.31289	26.09946	25.38065
GE-1	72	9613.01000	0.00000	0.000	9572.98000	9372.94000	9893.10000
TB-1	159	261234.37000	0.00000	0.000	261091.32000	262686.73000	259925.05000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:31:32
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22447.99000	0.00000	0.000	22434.62000	22334.67000	22574.68000
AL	27	4.36000	50.00000	81.900	0.38958	5.38923	7.30234
CA	44	4.85900	13.33000	211.400	16.07370	-4.08813	2.59078
CR	52	-0.20600	76.67000	0.000	-0.24213	-0.13207	-0.24256
FE	57	2.85800	50.00000	42.800	4.27050	2.16636	2.13622
K	39	0.68200	1656.81000	778.700	5.42203	-5.05432	1.67763
MG	24	2.18400	93.34000	31.800	2.09412	1.53959	2.91845
MN	55	0.09800	66.67000	53.400	0.10900	0.14370	0.04095
NA	23	-16.36100	6314.70000	0.000	-12.88143	-15.44881	-20.75220
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07100	46.67000	13.900	0.07696	0.05961	0.07641
IN-1	115	45998.29000	0.00000	0.000	45859.90000	46131.73000	46003.24000
AG	107	0.01800	83.34000	135.800	0.04596	0.00823	-0.00003
AS	75	0.11000	15.33000	104.200	0.23873	0.06903	0.02134
BA	137	0.05600	23.33000	147.600	0.08333	0.12248	-0.03695
CD	111	0.01100	4.00000	72.600	0.01863	0.01072	0.00298
CO	59	0.08800	163.34000	30.200	0.11860	0.07252	0.07278
CU	63	0.15700	386.69000	68.300	0.27025	0.14151	0.05805
MO	98	0.15800	210.01000	47.000	0.14973	0.08817	0.23590
NI	60	0.02100	30.00000	319.400	-0.02912	-0.00440	0.09551
SB	121	0.29900	286.68000	40.700	0.37111	0.36795	0.15865
SN	120	-1.21300	793.39000	0.000	-1.23955	-1.25806	-1.14063
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.18300	40.00000	71.000	0.33350	0.10787	0.10849
BI-1	209	213061.92000	0.00000	0.000	216030.52000	216071.11000	207084.14000
PB	208	0.00600	303.34000	73.600	0.00522	0.00209	0.01091
TL	203	0.02700	120.01000	31.100	0.02293	0.03631	0.02103
GE-1	72	9259.41000	0.00000	0.000	8882.51000	9472.91000	9422.82000
TB-1	159	253861.50000	0.00000	0.000	255713.43000	251971.99000	253899.08000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:33:32
Tube Number: 12 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22481.42000	0.00000	0.000	22474.61000	22765.21000	22204.43000
AL	27	0.39200	10.00000	256.600	-0.60501	0.37514	1.40479
CA	44	2.61900	10.00000	3.200	2.62052	2.53488	2.70215
CR	52	-0.27900	23.33000	0.000	-0.26952	-0.29696	-0.26902
FE	57	0.74300	20.00000	96.600	0.03571	0.72206	1.47009
K	39	6.67700	1803.51000	99.400	13.13837	-0.12526	7.01834
MG	24	2.84500	116.67000	26.300	2.93313	2.05758	3.54366
MN	55	0.13100	76.67000	65.200	0.20891	0.03956	0.14528
NA	23	4.32300	7871.98000	83.700	8.50118	2.21815	2.25082
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	6.67000	5497.500	0.02389	-0.01139	-0.01139
IN-1	115	46537.09000	0.00000	0.000	46724.28000	45753.75000	47133.25000
AG	107	0.01200	70.00000	154.200	0.00791	-0.00412	0.03208
AS	75	-0.02000	4.67000	0.000	0.01985	-0.05067	-0.02791
BA	137	2.75800	706.71000	15.700	2.28494	3.13796	2.84995
CD	111	-0.00200	0.67000	0.000	-0.00481	-0.00481	0.00279
CO	59	0.03300	80.00000	38.900	0.04583	0.03414	0.01996
CU	63	0.07500	293.35000	52.800	0.06285	0.04234	0.11844
MO	98	0.07900	120.00000	18.500	0.09528	0.07165	0.06885
NI	60	-0.03000	10.00000	0.000	-0.02959	-0.05414	-0.00546
SB	121	0.01000	110.00000	1132.700	0.13768	-0.08412	-0.02321
SN	120	6.25500	6728.59000	5.500	6.58843	6.27519	5.90257
SR	88	1.61200	650.05000	14.000	1.60751	1.38800	1.83982
ZN	66	0.59200	96.67000	79.400	0.61875	0.10971	1.04896
BI-1	209	221545.11000	0.00000	0.000	220675.21000	221784.84000	222175.27000
PB	208	-0.00100	243.34000	0.000	-0.00766	-0.00370	0.00739
TL	203	0.00500	56.67000	216.400	-0.00406	0.01546	0.00238
GE-1	72	9426.15000	0.00000	0.000	9442.83000	9332.73000	9502.90000
TB-1	159	254102.34000	0.00000	0.000	259358.73000	252380.17000	250568.12000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:35:33
Tube Number: 13 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23105.41000	22374.24000	23015.41000
AL	27	1966.23500	20131.70000	2.700	1998.64708	1905.23896	1994.82046
CA	44	3778.02800	5727.82000	1.100	3774.93364	3736.63806	3822.51216
CR	52	51.02200	38244.94000	1.900	50.95841	52.00231	50.10483
FE	57	1015.82000	14653.24000	4.700	983.57233	1070.26650	993.62081
K	39	9905.22400	245338.88000	0.600	9911.29187	9961.17721	9843.20282
MG	24	1981.29400	71585.40000	1.800	1950.88688	2021.78007	1971.21365
MN	55	50.32000	15317.10000	3.400	48.88864	52.23961	49.83279
NA	23	9776.49500	750207.12000	1.400	9692.04553	9935.15287	9702.28570
TI	47	258.70700	3237.10000	7.900	235.25826	268.22260	272.64024
V	51	50.52700	29090.98000	4.900	49.61438	53.31297	48.65304
IN-1	115	46365.85000	0.00000	0.000	46058.63000	46883.91000	46155.01000
AG	107	49.13600	118991.23000	2.300	49.53891	47.84501	50.02419
AS	75	10.03300	846.70000	11.500	10.99765	8.74978	10.35126
BA	137	48.72700	12298.41000	2.000	48.24644	49.86899	48.06510
CD	111	5.01700	1300.06000	4.700	4.99742	5.26095	4.79290
CO	59	233.54900	362991.54000	0.600	234.89031	232.12980	233.62724
CU	63	50.77400	60891.11000	3.100	52.30794	50.88533	49.12872
MO	98	48.92300	56890.41000	2.100	49.96372	48.88732	47.91708
NI	60	52.12000	21086.35000	3.500	54.02835	51.92464	50.40742
SB	121	5.41800	3470.51000	2.500	5.34105	5.33964	5.57202
SN	120	60.95200	49952.28000	1.400	61.84840	60.88685	60.12070
SR	88	41.50800	16578.45000	1.500	41.60474	40.84781	42.07169
ZN	66	50.42400	6831.57000	5.000	52.53203	47.65440	51.08460
BI-1	209	216388.39000	0.00000	0.000	215309.72000	216435.99000	217419.47000
PB	208	14.80200	142783.28000	1.700	15.03933	14.83882	14.52760
TL	203	1.86300	5617.89000	3.900	1.94428	1.80708	1.83877
GE-1	72	9466.23000	0.00000	0.000	9112.73000	9552.93000	9733.03000
TB-1	159	246982.99000	0.00000	0.000	246957.83000	247931.72000	246059.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:37:33
Tube Number: 14 Batch: 133116050004A
Sample Number: **7265230** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21760.35000	0.00000	0.000	22524.70000	21223.01000	21533.35000
AL	27	19.79100	200.01000	27.900	26.14249	16.21795	17.01172
CA	44	35136.81300	50681.90000	3.300	33866.99248	36158.86671	35384.57924
CR	52	-0.07000	170.01000	0.000	-0.17439	-0.09385	0.05956
FE	57	984.52100	13548.99000	3.000	1002.62427	950.69375	1000.24501
K	39	1983.48600	48057.50000	4.100	1890.23089	2038.82434	2021.40128
MG	24	14844.45300	510868.89000	2.900	14350.77088	15182.42689	15000.16056
MN	55	655.07200	189573.14000	3.100	637.63508	677.07694	650.50342
NA	23	73633.85700	5335204.51000	2.900	71380.58543	75623.99323	73896.99220
TI	47	0.27000	3.33000	173.200	0.80971	0.00000	0.00000
V	51	0.11700	70.00000	64.500	0.11181	0.19410	0.04384
IN-1	115	43133.51000	0.00000	0.000	42403.43000	44618.23000	42378.86000
AG	107	0.01300	66.67000	43.400	0.01945	0.00907	0.01043
AS	75	0.40000	36.67000	56.000	0.47299	0.14829	0.57772
BA	137	38.28800	8999.43000	5.400	36.31067	40.44350	38.11076
CD	111	0.00100	1.33000	1183.700	-0.00481	-0.00481	0.01210
CO	59	0.49000	733.38000	13.500	0.56597	0.45005	0.45366
CU	63	0.44600	683.38000	17.100	0.50738	0.36074	0.47115
MO	98	0.26000	306.68000	39.900	0.20154	0.19927	0.38053
NI	60	0.41000	173.34000	51.400	0.64929	0.25442	0.32487
SB	121	0.01900	106.67000	140.400	-0.00731	0.01825	0.04557
SN	120	-0.86300	1003.41000	0.000	-1.22843	-0.69954	-0.66049
SR	88	109.66800	40718.19000	3.800	113.31776	105.16075	110.52563
ZN	66	6.85800	876.72000	3.900	7.16327	6.64820	6.76285
BI-1	209	200673.84000	0.00000	0.000	201038.43000	200883.51000	200099.57000
PB	208	0.72500	6704.18000	5.700	0.75428	0.74257	0.67707
TL	203	0.00800	60.00000	186.700	0.00769	-0.00669	0.02225
GE-1	72	8619.14000	0.00000	0.000	8512.55000	8642.44000	8702.42000
TB-1	159	235528.46000	0.00000	0.000	237468.38000	234553.14000	234563.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:39:33
Tube Number: 15 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22050.85000	0.00000	0.000	22765.28000	21403.22000	21984.06000
AL	27	217.59100	2153.55000	12.800	191.52155	214.17328	247.07673
CA	44	34955.29300	51109.52000	2.600	34618.08206	35967.00323	34280.79382
CR	52	3.88700	3020.38000	10.200	3.64694	3.66969	4.34514
FE	57	1156.57100	16114.52000	2.900	1147.91358	1193.61418	1128.18459
K	39	2346.84600	57354.41000	2.100	2324.16484	2402.91297	2313.46057
MG	24	14534.94600	506891.46000	3.000	14050.62265	14911.86900	14642.34676
MN	55	621.75600	182334.45000	3.300	598.11409	630.41019	636.74427
NA	23	71473.10700	5247441.90000	3.400	69015.43748	73858.79587	71545.08830
TI	47	28.42700	343.35000	6.300	26.43965	28.97435	29.86807
V	51	1.21500	680.04000	15.700	1.08575	1.43341	1.12473
IN-1	115	43426.36000	0.00000	0.000	44646.45000	41819.25000	43813.39000
AG	107	1.05200	2426.96000	14.100	0.99571	0.94047	1.22042
AS	75	4.40900	352.67000	9.300	4.55859	3.94588	4.72243
BA	137	40.63800	9586.42000	11.000	39.22316	45.66017	37.02993
CD	111	0.93300	227.33000	7.600	0.86994	0.92051	1.00924
CO	59	1.39400	2046.88000	19.500	1.13809	1.68003	1.36436
CU	63	4.24800	4937.52000	9.600	3.78429	4.54333	4.41738
MO	98	1.14900	1276.77000	8.500	1.05695	1.13960	1.25052
NI	60	4.80500	1836.84000	7.500	4.39146	5.04868	4.97363
SB	121	2.26300	1413.46000	2.700	2.24024	2.33157	2.21791
SN	120	2.91600	3800.61000	14.000	2.79390	3.37155	2.58136
SR	88	107.09900	40053.49000	3.100	103.66087	107.24791	110.38770
ZN	66	38.00900	4824.21000	3.700	36.67989	39.49582	37.84979
BI-1	209	202665.95000	0.00000	0.000	204107.69000	201453.69000	202436.46000
PB	208	2.62000	23864.71000	2.200	2.62702	2.67312	2.56006
TL	203	1.03000	2927.06000	3.400	1.03477	1.06295	0.99343
GE-1	72	9222.74000	0.00000	0.000	8532.35000	9552.98000	9582.89000
TB-1	159	240469.64000	0.00000	0.000	240558.73000	238529.94000	242320.25000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:41:33
Tube Number: 16 Batch: 133116050004A
Sample Number: **7265233** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21476.83000	0.00000	0.000	22094.24000	21583.69000	20752.57000
AL	27	29.44500	290.02000	13.100	32.72408	30.41106	25.20093
CA	44	35330.11200	50330.92000	0.100	35300.62830	35357.98210	35331.72413
CR	52	-0.07800	163.34000	0.000	0.00855	-0.14006	-0.10371
FE	57	981.96000	13312.05000	8.300	888.07875	1020.66452	1037.13685
K	39	1972.61100	47208.73000	3.200	1911.11522	2038.96034	1967.75733
MG	24	14603.68400	496194.69000	1.800	14299.62641	14764.76412	14746.66251
MN	55	637.74000	182158.93000	2.700	619.27975	641.09695	652.84205
NA	23	73380.92700	5248140.65000	2.400	71518.22748	73569.23433	75055.31795
TI	47	0.56800	6.67000	86.700	0.82549	0.00000	0.87885
V	51	0.06800	43.33000	28.400	0.07832	0.08045	0.04592
IN-1	115	43723.54000	0.00000	0.000	43301.48000	44801.54000	43067.61000
AG	107	-0.00600	23.33000	0.000	-0.00784	-0.01241	0.00111
AS	75	0.41300	38.67000	28.800	0.30835	0.54244	0.38749
BA	137	37.66200	8966.16000	5.000	39.42296	37.85538	35.70747
CD	111	0.00100	1.33000	751.300	-0.00481	0.00319	0.00351
CO	59	0.48500	736.72000	6.400	0.51941	0.47478	0.45997
CU	63	0.21200	430.03000	14.200	0.20664	0.18539	0.24472
MO	98	0.18500	230.01000	29.400	0.12316	0.22507	0.20732
NI	60	0.30500	136.67000	13.400	0.26378	0.30437	0.34544
SB	121	-0.12000	26.67000	0.000	-0.09673	-0.14898	-0.11368
SN	120	-1.41600	603.40000	0.000	-1.34376	-1.33410	-1.57059
SR	88	104.23600	39241.46000	4.200	108.81555	100.18603	103.70619
ZN	66	2.51700	336.68000	29.100	1.78548	3.25267	2.51245
BI-1	209	199792.09000	0.00000	0.000	198865.47000	201831.60000	198679.20000
PB	208	0.70200	6470.82000	5.000	0.71082	0.73117	0.66287
TL	203	0.00300	46.67000	277.400	0.00793	-0.00672	0.00795
GE-1	72	8955.94000	0.00000	0.000	9262.81000	8922.60000	8682.42000
TB-1	159	237212.35000	0.00000	0.000	234819.47000	242689.02000	234128.57000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:43:33
Tube Number: 17 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21930.66000	0.00000	0.000	22053.98000	21383.33000	22354.66000
AL	27	2094.88000	20582.12000	4.400	2050.39484	2201.43349	2032.81241
CA	44	40728.28800	59213.86000	3.800	39938.71231	42499.95481	39746.19666
CR	52	52.87900	38067.65000	2.500	51.36963	53.69386	53.57251
FE	57	1992.77500	27612.01000	3.600	1911.51360	2044.87556	2021.93505
K	39	12476.63000	296384.53000	2.400	12134.74140	12721.32185	12573.82699
MG	24	17375.12100	602785.25000	2.700	17049.84982	17911.21627	17164.29557
MN	55	715.19900	208650.03000	2.400	699.94441	733.29866	712.35372
NA	23	85628.88700	6253954.70000	1.900	84248.61574	87377.72983	85260.31617
TI	47	257.88100	3100.40000	5.200	242.34095	265.29342	266.00911
V	51	52.90900	29261.36000	4.900	50.26988	55.48715	52.96930
IN-1	115	44690.35000	0.00000	0.000	43711.29000	44919.15000	45440.61000
AG	107	50.83400	118658.23000	2.200	50.91203	51.91163	49.67843
AS	75	10.89800	886.70000	6.800	10.52923	11.74643	10.41780
BA	137	89.86400	21851.55000	2.900	90.67160	86.92079	92.00085
CD	111	4.87600	1217.39000	10.300	5.14309	4.29468	5.19161
CO	59	241.83600	362303.57000	0.100	241.73125	241.77863	241.99914
CU	63	51.25300	59249.14000	0.700	50.87063	51.29031	51.59935
MO	98	52.03500	58329.25000	1.000	51.46741	52.24809	52.38859
NI	60	52.66200	20532.49000	1.600	53.30728	52.97130	51.70610
SB	121	6.86200	4207.36000	6.600	7.22410	7.00879	6.35177
SN	120	51.32600	40816.37000	1.400	50.62640	52.04496	51.30615
SR	88	152.40900	58659.04000	1.700	154.24906	153.57479	149.40297
ZN	66	56.49500	7378.48000	3.200	56.85073	54.55511	58.07981
BI-1	209	209080.61000	0.00000	0.000	207250.37000	208359.63000	211631.83000
PB	208	15.44400	143943.87000	0.700	15.33207	15.55263	15.44683
TL	203	1.96300	5717.97000	4.400	1.88432	2.05474	1.95096
GE-1	72	9182.78000	0.00000	0.000	8892.63000	9232.77000	9422.95000
TB-1	159	248948.97000	0.00000	0.000	244395.45000	251533.49000	250917.97000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:45:33
Tube Number: 18 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22931.94000	0.00000	0.000	22404.60000	22855.20000	23536.01000
AL	27	1977.39500	20328.59000	2.700	1939.54034	2039.10895	1953.53477
CA	44	38330.23400	58280.83000	2.400	39205.26185	38439.15960	37346.27964
CR	52	49.98600	37640.03000	2.900	51.30067	48.40267	50.25457
FE	57	1882.60000	27268.23000	5.700	1875.21179	1993.62299	1778.96623
K	39	11762.20900	292211.32000	2.200	11960.35216	11853.30532	11472.97097
MG	24	16295.12700	591178.22000	1.800	16510.25285	16410.11945	15965.00804
MN	55	670.40300	204518.33000	2.200	672.76515	683.56757	654.87691
NA	23	81325.35700	6210851.37000	1.700	82580.08410	81594.36299	79801.62379
TI	47	250.39100	3147.09000	2.400	254.01540	253.80097	243.35590
V	51	51.82100	29972.45000	2.100	52.69087	52.19089	50.57976
IN-1	115	45701.28000	0.00000	0.000	45330.78000	45680.92000	46092.15000
AG	107	49.07500	117154.56000	1.000	48.91767	49.64074	48.66616
AS	75	9.89600	824.03000	4.600	9.68673	9.58757	10.41348
BA	137	87.31700	21714.90000	2.100	85.27999	87.88933	88.78291
CD	111	4.83800	1235.39000	2.700	4.80106	4.98388	4.72945
CO	59	233.17100	357236.40000	0.900	230.70888	234.56570	234.23753
CU	63	51.70400	61121.91000	2.000	50.55685	51.92381	52.63283
MO	98	50.13600	57459.24000	2.000	51.04903	50.32463	49.03346
NI	60	49.98500	19935.17000	2.400	50.43730	48.64348	50.87496
SB	121	6.07700	3827.27000	12.300	5.21559	6.44812	6.56723
SN	120	49.24000	40111.65000	2.700	49.47778	47.83272	50.41025
SR	88	147.23200	57956.76000	0.900	148.09527	147.85190	145.74990
ZN	66	53.44900	7138.37000	3.300	53.22577	55.29574	51.82420
BI-1	209	213356.84000	0.00000	0.000	213817.38000	214043.96000	212209.18000
PB	208	14.81500	140910.08000	1.100	14.72289	14.71502	15.00709
TL	203	1.98500	5898.01000	3.500	2.00190	2.04371	1.90814
GE-1	72	9282.84000	0.00000	0.000	8832.65000	9432.81000	9583.07000
TB-1	159	251288.33000	0.00000	0.000	249830.99000	253430.41000	250603.59000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:47:33
Tube Number: 19 Batch: 133116050004A
Sample Number: **7265230** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22915.23000	0.00000	0.000	23675.99000	22614.92000	22454.78000
AL	27	6.27800	70.00000	56.000	2.22232	8.27493	8.33826
CA	44	7082.32600	10760.23000	6.700	6646.52507	7592.25328	7008.20053
CR	52	-0.21700	70.00000	0.000	-0.21983	-0.21558	-0.21491
FE	57	186.80600	2710.31000	9.100	170.51022	204.44393	185.46301
K	39	402.82600	11617.44000	2.200	396.07901	399.36561	413.03358
MG	24	2974.53200	107833.58000	2.300	2900.55931	2991.64193	3031.39476
MN	55	129.16400	39377.47000	5.200	121.47302	133.73995	132.27898
NA	23	14844.84100	1139433.00000	0.700	14810.64973	14757.82755	14966.04463
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02900	23.33000	68.300	0.03884	0.00614	0.04157
IN-1	115	46297.95000	0.00000	0.000	47168.24000	45534.24000	46191.37000
AG	107	0.00800	60.00000	92.400	0.00362	0.01696	0.00405
AS	75	0.09300	14.00000	53.500	0.08932	0.14380	0.04489
BA	137	7.48800	1893.53000	9.200	7.33121	8.24185	6.88983
CD	111	0.00500	2.67000	162.500	0.01038	0.01093	-0.00481
CO	59	0.20100	340.02000	1.900	0.19704	0.20475	0.20159
CU	63	0.06100	273.35000	176.500	-0.06271	0.12856	0.11592
MO	98	0.20300	263.35000	18.400	0.16182	0.21230	0.23485
NI	60	0.09500	60.00000	53.500	0.04315	0.09703	0.14455
SB	121	-0.04200	76.67000	0.000	-0.07075	-0.00181	-0.05260
SN	120	-1.10500	883.40000	0.000	-1.17983	-1.18098	-0.95461
SR	88	21.70300	8659.14000	6.400	22.64392	22.35961	20.10534
ZN	66	1.51400	220.01000	3.000	1.55698	1.46637	1.51811
BI-1	209	216132.14000	0.00000	0.000	213766.38000	217418.04000	217211.99000
PB	208	0.15100	1700.12000	4.100	0.15483	0.15386	0.14368
TL	203	-0.01300	3.33000	0.000	-0.01389	-0.01389	-0.01056
GE-1	72	9319.45000	0.00000	0.000	9332.79000	9122.69000	9502.88000
TB-1	159	252957.09000	0.00000	0.000	254069.47000	249723.06000	255078.73000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:49:33
Tube Number: 20 Batch: 133116050004A
Sample Number: **7266798** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22251.15000	0.00000	0.000	22434.74000	22184.36000	22134.34000
AL	27	2.39600	30.00000	82.800	4.36791	0.40080	2.41924
CA	44	2.66300	10.00000	252.400	9.35302	-4.08813	2.72365
CR	52	-0.23700	53.34000	0.000	-0.29676	-0.22755	-0.18582
FE	57	-0.19200	6.67000	0.000	-0.66863	-0.66863	0.76170
K	39	6.83000	1790.16000	92.300	14.10998	3.31888	3.06074
MG	24	2.59300	106.67000	62.700	1.24908	4.40182	2.12851
MN	55	0.08800	63.33000	133.000	0.20951	-0.02389	0.07822
NA	23	3.05900	7698.62000	255.000	6.95470	-5.92353	8.14675
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00700	10.00000	275.200	-0.01139	0.00648	0.02443
IN-1	115	45824.40000	0.00000	0.000	45897.44000	45512.22000	46063.53000
AG	107	-0.00100	36.67000	0.000	-0.00416	-0.01247	0.01242
AS	75	-0.05900	1.33000	0.000	-0.07485	-0.05054	-0.05083
BA	137	-0.01000	6.67000	0.000	-0.03695	0.04385	-0.03695
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00306	-0.00481
CO	59	0.01700	53.33000	21.500	0.01448	0.01476	0.02084
CU	63	0.23400	476.69000	42.300	0.27834	0.12018	0.30199
MO	98	0.05100	86.67000	55.000	0.07136	0.06340	0.01905
NI	60	-0.02900	10.00000	0.000	-0.00415	-0.05414	-0.02923
SB	121	-0.07300	56.67000	0.000	-0.06813	-0.10008	-0.05229
SN	120	-0.95700	990.28000	0.000	-0.56236	-1.09026	-1.21844
SR	88	0.00100	3.33000	2043.700	0.01758	-0.00772	-0.00772
ZN	66	0.06000	23.33000	74.400	0.03430	0.11090	0.03376
BI-1	209	219660.31000	0.00000	0.000	219294.92000	221000.09000	218685.93000
PB	208	0.02300	483.36000	51.900	0.02115	0.01265	0.03669
TL	203	-0.00500	26.67000	0.000	0.00260	-0.00734	-0.01058
GE-1	72	9262.82000	0.00000	0.000	9652.96000	8992.71000	9142.80000
TB-1	159	251165.55000	0.00000	0.000	249033.65000	254569.08000	249893.92000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:51:33
Tube Number: 21 Batch: 133116050004A
Sample Number: **7266799** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22491.33000	0.00000	0.000	23355.76000	22184.25000	21933.97000
AL	27	1.38100	20.00000	4.800	1.30572	1.40662	1.42958
CA	44	-1.82300	3.33000	0.000	-4.08813	2.70833	-4.08813
CR	52	-0.28800	16.67000	0.000	-0.29730	-0.26899	-0.29645
FE	57	0.72500	20.00000	90.500	1.36466	0.75848	0.05307
K	39	0.11700	1646.81000	3510.300	0.94457	3.73758	-4.33193
MG	24	2.50200	103.34000	76.300	0.64130	2.40758	4.45710
MN	55	-0.01400	33.33000	0.000	-0.02898	-0.09165	0.08008
NA	23	-6.68100	7048.27000	0.000	-10.94643	3.96992	-13.06604
TI	47	0.27400	3.33000	173.200	0.00000	0.82214	0.00000
V	51	0.01900	16.67000	148.200	-0.01139	0.02435	0.04283
IN-1	115	46673.65000	0.00000	0.000	46186.54000	46846.99000	46987.42000
AG	107	0.00400	50.00000	284.500	-0.00839	0.01193	0.00777
AS	75	-0.02800	4.00000	0.000	-0.05090	-0.00401	-0.02776
BA	137	-0.02400	3.33000	0.000	0.00286	-0.03695	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00300	33.33000	402.700	0.01428	-0.01165	0.00738
CU	63	0.07700	296.68000	84.600	0.09915	0.12848	0.00375
MO	98	0.01600	46.67000	175.900	0.03621	-0.01574	0.02669
NI	60	-0.01300	16.67000	0.000	0.02038	-0.00516	-0.05414
SB	121	-0.10200	40.00000	0.000	-0.13333	-0.10195	-0.07039
SN	120	-1.55000	536.71000	0.000	-1.47503	-1.59829	-1.57520
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	0.69200	110.01000	20.300	0.55306	0.69010	0.83365
BI-1	209	222016.39000	0.00000	0.000	224807.65000	220912.42000	220329.10000
PB	208	-0.00600	193.34000	0.000	-0.00600	-0.00463	-0.00865
TL	203	-0.00500	26.67000	0.000	-0.00745	-0.01061	0.00252
GE-1	72	9436.21000	0.00000	0.000	9352.81000	9753.13000	9202.70000
TB-1	159	253344.12000	0.00000	0.000	251921.40000	252645.60000	255465.35000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:53:33
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	23192.07000	0.00000	0.000	24076.65000	23255.46000	22244.11000
AL	27	2575.36900	26746.91000	4.200	2454.34903	2613.11305	2658.64423
CA	44	2523.85800	3887.26000	5.600	2407.24715	2680.45291	2483.87316
CR	52	265.15200	200790.46000	2.900	256.58368	267.09871	271.77291
FE	57	2586.08300	37857.49000	4.900	2441.09448	2655.62565	2661.52848
K	39	2566.33400	65778.91000	3.800	2538.09607	2485.97087	2674.93546
MG	24	2585.09200	94828.78000	3.300	2488.83896	2643.90635	2622.53103
MN	55	263.35000	81213.33000	3.800	253.60237	262.78854	273.66037
NA	23	2535.24200	203205.67000	4.200	2451.72008	2500.45018	2653.55698
TI	47	260.72000	3310.44000	5.700	248.49962	256.48795	277.17186
V	51	270.62300	158150.46000	4.300	258.30150	272.08379	281.48320
IN-1	115	47844.94000	0.00000	0.000	48262.39000	47609.29000	47663.13000
AG	107	25.57500	63935.99000	2.400	25.24235	26.28332	25.20061
AS	75	265.45500	22968.15000	0.800	263.10970	265.95293	267.30177
BA	137	256.92200	66856.20000	2.500	249.37661	261.09417	260.29647
CD	111	26.05100	6958.12000	2.500	25.61311	26.81529	25.72468
CO	59	243.11200	389901.20000	1.100	240.39075	245.46290	243.48197
CU	63	262.93500	324506.81000	0.500	261.50520	263.14523	264.15353
MO	98	25.93000	31125.23000	2.500	25.19170	26.41030	26.18790
NI	60	262.86600	109649.70000	1.500	260.61629	267.36436	260.61652
SB	121	26.82200	17309.43000	2.900	26.01241	26.88963	27.56357
SN	120	25.11700	22305.46000	5.700	24.20797	24.37329	26.77037
SR	88	25.40900	10470.23000	8.000	23.11738	26.06970	27.03976
ZN	66	262.11100	36588.68000	0.700	261.98122	260.44814	263.90328
BI-1	209	221908.83000	0.00000	0.000	221788.04000	222701.11000	221237.34000
PB	208	25.88000	255830.71000	0.900	25.98026	25.60918	26.05033
TL	203	25.62000	78676.43000	2.000	26.17980	25.48212	25.19769
GE-1	72	9636.40000	0.00000	0.000	9022.77000	9743.12000	10143.31000
TB-1	159	256863.67000	0.00000	0.000	260234.66000	259903.57000	250452.77000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:55:34
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.34000	0.00000	0.000	22574.70000	21923.98000	24577.34000
AL	27	2.88800	36.67000	61.500	1.37183	2.44826	4.84317
CA	44	2.65700	10.00000	251.400	9.26969	2.78901	-4.08813
CR	52	-0.21600	70.00000	0.000	-0.13397	-0.24054	-0.27302
FE	57	1.13200	26.67000	85.100	1.43501	0.05340	1.90767
K	39	0.49900	1686.83000	1629.300	5.37917	5.01105	-8.89223
MG	24	1.60400	73.33000	57.000	2.35831	1.86493	0.58751
MN	55	0.05200	53.34000	375.000	0.27406	-0.02268	-0.09495
NA	23	-11.89900	6788.23000	0.000	-8.23314	-3.97235	-23.49232
TI	47	0.49500	6.67000	173.200	0.00000	0.00000	1.48417
V	51	0.06900	46.67000	65.900	0.02373	0.11518	0.06926
IN-1	115	47146.78000	0.00000	0.000	48869.64000	44793.89000	47776.82000
AG	107	0.01600	80.00000	33.400	0.01467	0.02180	0.01138
AS	75	0.13200	18.00000	109.800	0.28733	-0.00076	0.11038
BA	137	0.01700	13.33000	372.100	-0.03695	0.08619	0.00154
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.06800	133.34000	61.800	0.03693	0.11519	0.05067
CU	63	0.07200	290.02000	173.600	0.03676	0.21143	-0.03159
MO	98	0.10800	156.68000	8.100	0.10636	0.10043	0.11770
NI	60	0.04300	40.00000	198.900	-0.03066	0.02269	0.13795
SB	121	0.27900	280.02000	24.300	0.20068	0.31728	0.31836
SN	120	-0.94000	1026.78000	0.000	-1.20411	-0.69235	-0.92308
SR	88	0.04100	20.00000	57.300	0.03980	0.01820	0.06518
ZN	66	0.03600	20.00000	559.100	-0.11512	0.26763	-0.04335
BI-1	209	218400.51000	0.00000	0.000	218217.59000	219588.47000	217395.47000
PB	208	0.00200	270.01000	354.500	-0.00333	0.00881	-0.00015
TL	203	0.00800	66.67000	92.800	0.01262	0.01245	-0.00058
GE-1	72	10019.90000	0.00000	0.000	9943.18000	9893.17000	10223.35000
TB-1	159	260067.29000	0.00000	0.000	258764.23000	260082.75000	261354.90000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:57:34
Tube Number: 24 Batch: 133116050004A
Sample Number: **7265223** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23405.96000	0.00000	0.000	23365.90000	23235.85000	23616.14000
AL	27	622.42400	6534.75000	2.700	639.34669	622.76520	605.15901
CA	44	3019.91000	4694.12000	1.900	3080.89532	3013.70272	2965.13287
CR	52	0.65100	733.39000	33.400	0.63376	0.87643	0.44211
FE	57	1114.39400	16491.48000	4.500	1093.96864	1078.27455	1170.93964
K	39	1113.61200	29792.03000	2.600	1106.46392	1145.06404	1089.30744
MG	24	907.16800	33618.32000	0.900	910.47951	898.13532	912.89017
MN	55	141.95200	44235.45000	3.000	140.68994	146.76464	138.40217
NA	23	1288.92700	108231.19000	0.500	1293.53772	1292.33790	1280.90391
TI	47	9.88000	126.67000	18.900	10.92861	10.98978	7.72288
V	51	4.05300	2400.27000	6.000	4.23065	3.77656	4.15211
IN-1	115	48329.42000	0.00000	0.000	48411.67000	48518.95000	48057.64000
AG	107	0.03300	126.67000	44.500	0.05057	0.02674	0.02317
AS	75	1.31300	121.33000	34.000	1.82171	1.13353	0.98400
BA	137	30.60100	8052.28000	3.800	30.92556	29.30227	31.57466
CD	111	0.09900	28.00000	20.400	0.09140	0.08380	0.12193
CO	59	0.58100	970.06000	10.200	0.64756	0.56000	0.53451
CU	63	4.64400	5997.91000	5.300	4.37449	4.86034	4.69862
MO	98	0.17100	236.68000	11.500	0.18176	0.14841	0.18328
NI	60	2.35100	1013.41000	6.400	2.24456	2.52328	2.28539
SB	121	0.21000	243.35000	73.700	0.37364	0.18796	0.06719
SN	120	-1.02900	983.67000	0.000	-1.33990	-1.25725	-0.49042
SR	88	18.42200	7671.99000	0.500	18.51124	18.32617	18.42993
ZN	66	23.35700	3308.78000	6.100	24.82053	23.28083	21.97093
BI-1	209	231848.94000	0.00000	0.000	231070.06000	232721.81000	231754.94000
PB	208	5.04100	52285.76000	0.200	5.03228	5.03891	5.05322
TL	203	0.03700	163.34000	13.300	0.04244	0.03272	0.03603
GE-1	72	9683.11000	0.00000	0.000	10003.34000	9913.23000	9132.75000
TB-1	159	261619.98000	0.00000	0.000	258760.07000	259300.43000	266799.43000

Run Name: 1331901E05 Date/Time: 11/15/2013 2:59:34
Tube Number: 25 Batch: 133116050004A
Sample Number: **7265224** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23025.30000	0.00000	0.000	22644.72000	23756.37000	22674.80000
AL	27	457.26400	4720.80000	11.200	424.15150	431.52231	516.11760
CA	44	2786.32200	4260.68000	5.600	2952.67069	2763.48850	2642.80829
CR	52	0.51500	620.04000	10.100	0.51499	0.46347	0.56795
FE	57	961.20900	13985.85000	3.800	942.71843	937.25637	1003.65368
K	39	1482.09500	38418.14000	5.200	1518.75298	1392.83268	1534.69968
MG	24	802.35000	29230.51000	4.100	833.52875	767.33485	806.18584
MN	55	94.30400	28920.58000	1.300	95.51628	93.06903	94.32774
NA	23	1822.88400	147296.29000	3.500	1881.44481	1755.42745	1831.77987
TI	47	8.41100	106.67000	53.500	3.22167	10.74898	11.26170
V	51	1.78500	1043.41000	1.900	1.77443	1.75758	1.82449
IN-1	115	49162.94000	0.00000	0.000	48602.13000	49884.14000	49002.55000
AG	107	0.01400	80.00000	94.500	0.00302	0.02939	0.01068
AS	75	1.14900	108.67000	12.500	1.26802	0.98958	1.18932
BA	137	27.67000	7405.28000	4.700	28.64680	26.17595	28.18710
CD	111	0.02700	8.67000	78.300	0.00256	0.03828	0.03906
CO	59	0.56100	953.40000	6.300	0.58358	0.52026	0.57865
CU	63	1.97900	2723.66000	4.400	2.00955	2.04686	1.88087
MO	98	0.14100	203.34000	30.600	0.18916	0.12770	0.10601
NI	60	1.73500	766.71000	9.000	1.62181	1.67073	1.91250
SB	121	0.17300	223.34000	11.300	0.17200	0.19323	0.15402
SN	120	-1.20700	853.39000	0.000	-1.43991	-1.18966	-0.99153
SR	88	17.23700	7301.83000	3.700	17.84088	17.28920	16.58115
ZN	66	14.82800	2140.22000	12.200	15.97252	12.74022	15.77094
BI-1	209	231288.26000	0.00000	0.000	229288.26000	230659.31000	233917.22000
PB	208	2.89800	30092.35000	0.500	2.89269	2.91337	2.88683
TL	203	0.03000	140.01000	9.500	0.03026	0.02687	0.03248
GE-1	72	9699.72000	0.00000	0.000	10243.40000	9693.07000	9162.68000
TB-1	159	260944.53000	0.00000	0.000	261091.87000	261781.73000	259960.00000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:01:34
Tube Number: 26 Batch: 133116050004A
Sample Number: **7265228** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23632.71000	0.00000	0.000	24186.66000	22264.33000	24447.15000
AL	27	34.66900	376.69000	30.000	32.60836	25.45309	45.94607
CA	44	9114.61900	14282.86000	2.100	8976.48521	9338.40699	9028.96595
CR	52	-0.17100	106.67000	0.000	-0.19641	-0.11774	-0.19762
FE	57	182.25900	2727.02000	13.400	202.90209	188.47787	155.39800
K	39	605.26900	17115.31000	4.800	598.65416	636.99961	580.15293
MG	24	3732.25600	139433.82000	3.500	3695.89207	3876.38311	3624.49317
MN	55	9.24100	2937.04000	8.200	9.07438	10.07141	8.57671
NA	23	5263.94500	421133.33000	5.100	5176.82867	5564.11744	5050.88816
TI	47	0.49700	6.67000	173.200	0.00000	0.00000	1.49207
V	51	0.38400	233.34000	38.000	0.25087	0.54060	0.36159
IN-1	115	48505.38000	0.00000	0.000	49373.90000	47829.71000	48312.52000
AG	107	-0.01000	16.67000	0.000	-0.01280	-0.00867	-0.00875
AS	75	0.89100	84.67000	2.000	0.88856	0.87340	0.90972
BA	137	19.70800	5207.69000	3.300	19.40602	20.45656	19.26210
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.04300	100.01000	48.700	0.05449	0.05684	0.01903
CU	63	0.86600	1293.44000	10.100	0.76538	0.92533	0.90637
MO	98	0.17300	240.01000	32.700	0.20198	0.20929	0.10787
NI	60	0.30000	150.01000	26.600	0.38734	0.28167	0.23083
SB	121	0.21400	246.68000	16.600	0.24226	0.22424	0.17403
SN	120	-1.37400	703.38000	0.000	-1.32149	-1.24332	-1.55657
SR	88	28.97300	12101.34000	5.300	27.20854	29.81171	29.89873
ZN	66	3.11400	456.69000	11.200	3.21858	3.39798	2.72402
BI-1	209	225375.01000	0.00000	0.000	225244.22000	224756.99000	226123.82000
PB	208	0.99400	10225.12000	1.500	0.99973	1.00395	0.97685
TL	203	-0.00900	16.67000	0.000	-0.00426	-0.01067	-0.01069
GE-1	72	9886.43000	0.00000	0.000	9973.02000	10133.44000	9552.83000
TB-1	159	261558.07000	0.00000	0.000	263354.20000	262299.25000	259020.76000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:03:34
Tube Number: 27 Batch: 133116050004A
Sample Number: **7265235** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22521.35000	0.00000	0.000	22514.79000	22764.95000	22284.31000
AL	27	9.62700	103.34000	14.900	8.31442	11.15785	9.40897
CA	44	36028.73500	53816.91000	1.500	35956.98815	35521.78166	36607.43615
CR	52	-0.11100	146.68000	0.000	-0.11989	-0.13544	-0.07667
FE	57	1009.23000	14366.33000	1.800	1008.68627	991.33371	1027.66910
K	39	2000.03200	50180.23000	1.400	2032.44529	1983.21231	1984.43947
MG	24	15168.52200	540557.81000	1.300	15174.37312	14964.47763	15366.71414
MN	55	641.08600	192116.04000	0.600	639.09858	638.81748	645.34084
NA	23	75441.45500	5659764.29000	1.900	75267.04855	74136.13810	76921.17771
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.13500	83.34000	26.500	0.16469	0.14535	0.09535
IN-1	115	46287.86000	0.00000	0.000	46267.73000	46394.72000	46201.13000
AG	107	-0.00800	20.00000	0.000	-0.01254	0.00396	-0.01668
AS	75	0.37900	38.00000	54.700	0.23597	0.61661	0.28430
BA	137	38.41300	9679.92000	3.300	37.37063	39.84560	38.02135
CD	111	0.00600	2.67000	324.400	0.02616	-0.00481	-0.00481
CO	59	0.45300	730.04000	20.000	0.39467	0.40640	0.55671
CU	63	0.12400	350.02000	60.600	0.09867	0.06450	0.20822
MO	98	0.16300	216.68000	11.200	0.14819	0.15632	0.18300
NI	60	0.25100	123.34000	54.300	0.39219	0.24258	0.11967
SB	121	-0.02600	86.67000	0.000	-0.00441	-0.03702	-0.03648
SN	120	-1.29100	736.72000	0.000	-1.48906	-1.04865	-1.33564
SR	88	108.49100	43258.03000	1.200	107.49863	109.96508	108.00883
ZN	66	2.13200	303.35000	12.000	2.10838	2.39793	1.88885
BI-1	209	214246.21000	0.00000	0.000	213851.27000	215925.74000	212961.62000
PB	208	0.34700	3553.64000	9.000	0.33445	0.38199	0.32329
TL	203	-0.00500	26.67000	0.000	-0.01051	0.00286	-0.00710
GE-1	72	9683.08000	0.00000	0.000	9673.06000	9402.90000	9973.27000
TB-1	159	255273.73000	0.00000	0.000	254093.24000	256801.48000	254926.48000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:05:34
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265238** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22831.69000	0.00000	0.000	23696.19000	22965.14000	21833.75000
AL	27	73.05000	753.38000	1.500	71.90578	73.24241	74.00318
CA	44	54035.28900	81736.93000	4.300	52250.49907	53189.06602	56666.30132
CR	52	0.55800	643.38000	34.200	0.40078	0.50347	0.77019
FE	57	258.90100	3743.88000	1.300	261.23765	255.09363	260.37029
K	39	1672.00800	42744.16000	5.300	1606.93322	1636.74297	1772.34653
MG	24	22203.29300	801371.99000	4.000	21294.97886	22266.79273	23048.10735
MN	55	99.37500	30192.85000	3.800	95.59332	99.46134	103.07012
NA	23	89388.17300	6790769.69000	3.900	86297.65183	88748.66623	93118.20051
TI	47	0.55700	6.67000	173.200	0.00000	0.00000	1.67067
V	51	0.56900	336.69000	27.700	0.67456	0.64464	0.38808
IN-1	115	45897.66000	0.00000	0.000	46349.62000	45208.00000	46135.37000
AG	107	0.00000	40.00000	0.000	0.00811	0.00026	-0.00838
AS	75	0.18100	21.33000	85.200	0.33089	0.02303	0.18890
BA	137	36.37600	9086.18000	4.800	35.79575	38.32865	35.00491
CD	111	0.01100	4.00000	143.400	0.02611	0.01104	-0.00481
CO	59	0.30900	503.36000	4.700	0.31670	0.29216	0.31825
CU	63	0.86900	1226.76000	20.100	0.83475	1.05749	0.71328
MO	98	0.11500	160.01000	14.800	0.13068	0.11694	0.09681
NI	60	0.38800	176.68000	17.400	0.39140	0.45340	0.31887
SB	121	-0.08900	46.67000	0.000	-0.14954	-0.03364	-0.08480
SN	120	-1.36700	670.04000	0.000	-1.36382	-1.18644	-1.55050
SR	88	130.97200	51763.85000	3.600	127.57626	136.28565	129.05305
ZN	66	4.48700	616.70000	21.200	4.24997	3.67756	5.53390
BI-1	209	212305.13000	0.00000	0.000	209399.06000	213684.94000	213831.40000
PB	208	1.88700	18074.96000	3.000	1.82130	1.91365	1.92494
TL	203	-0.00500	26.67000	0.000	-0.00353	-0.00374	-0.00712
GE-1	72	8929.28000	0.00000	0.000	8302.39000	9142.71000	9342.74000
TB-1	159	251229.14000	0.00000	0.000	251029.45000	251149.47000	251508.49000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:07:34
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265240** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22985.28000	0.00000	0.000	23395.87000	23485.96000	22074.00000
AL	27	27.31400	286.68000	14.500	26.10024	24.09767	31.74380
CA	44	54331.74700	82796.00000	2.400	54540.71052	52919.25513	55535.27569
CR	52	0.21400	393.35000	21.400	0.17416	0.26362	0.20318
FE	57	126.50200	1846.84000	8.600	115.71729	137.51567	126.27319
K	39	1800.66800	46242.64000	3.500	1747.71129	1783.52982	1870.76213
MG	24	22272.81500	809569.94000	3.100	21864.08564	21874.54609	23079.81257
MN	55	76.77400	23509.37000	2.800	74.33162	78.05144	77.93930
NA	23	90114.84400	6893409.69000	3.900	89373.64923	87075.19892	93895.68506
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.33400	200.01000	15.800	0.37835	0.27558	0.34781
IN-1	115	44386.04000	0.00000	0.000	45004.41000	44612.43000	43541.28000
AG	107	-0.00400	30.00000	0.000	0.00460	-0.00380	-0.01228
AS	75	0.28400	28.67000	59.400	0.12179	0.27230	0.45868
BA	137	38.53100	9309.64000	1.500	37.88918	39.00523	38.69835
CD	111	-0.00200	0.67000	0.000	-0.00481	0.00322	-0.00481
CO	59	0.22600	363.35000	17.300	0.24715	0.24948	0.18069
CU	63	0.34900	593.37000	44.100	0.47686	0.17820	0.39169
MO	98	0.08700	123.34000	35.700	0.06439	0.07412	0.12235
NI	60	0.45200	196.68000	69.000	0.37923	0.79449	0.18299
SB	121	-0.09200	43.33000	0.000	-0.13249	-0.08204	-0.06285
SN	120	-1.40400	620.06000	0.000	-1.68994	-1.14619	-1.37568
SR	88	135.96700	51964.30000	3.400	131.69999	135.23269	140.96816
ZN	66	2.33500	316.68000	34.100	2.70414	1.42219	2.87763
BI-1	209	208998.34000	0.00000	0.000	210365.33000	206444.76000	210184.94000
PB	208	0.54400	5303.92000	1.200	0.55088	0.54442	0.53748
TL	203	-0.00700	20.00000	0.000	-0.01389	0.00012	-0.00701
GE-1	72	9483.01000	0.00000	0.000	9543.08000	9152.78000	9753.17000
TB-1	159	246797.33000	0.00000	0.000	244514.10000	246473.43000	249404.47000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:09:34
Tube Number: 30 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22541.30000	0.00000	0.000	21403.20000	22614.59000	23606.11000
AL	27	1294.86100	13061.75000	6.600	1393.80331	1246.02648	1244.75338
CA	44	24135.74700	36026.76000	5.600	25275.95706	24483.14614	22648.13777
CR	52	5.52500	4280.68000	9.600	6.13254	5.29948	5.14170
FE	57	21037.91900	299019.81000	5.900	22386.85363	20763.43831	19963.46590
K	39	3285.47100	81263.90000	7.100	3538.02355	3236.89196	3081.49750
MG	24	10008.96800	356500.11000	4.700	10441.61119	10085.25442	9500.03767
MN	55	1650.59200	494208.90000	5.100	1738.32099	1643.40155	1570.05274
NA	23	54596.50800	4094941.81000	5.500	57445.54722	54859.73987	51484.23762
TI	47	38.22900	470.03000	22.700	47.72225	30.64828	36.31606
V	51	5.54300	3160.41000	5.500	5.28651	5.87940	5.46402
IN-1	115	44151.75000	0.00000	0.000	44588.69000	42625.83000	45240.72000
AG	107	0.01700	76.67000	53.800	0.02627	0.01477	0.00872
AS	75	3.80500	310.01000	6.900	3.64665	3.66218	4.10650
BA	137	70.01700	16818.98000	1.000	69.44143	70.78472	69.82414
CD	111	0.74200	184.00000	2.300	0.72643	0.76010	0.73965
CO	59	12.07600	17876.13000	6.700	12.26609	12.77576	11.18475
CU	63	11.52700	13312.22000	5.500	10.82252	11.72026	12.03705
MO	98	2.28300	2550.31000	7.900	2.38265	2.39053	2.07457
NI	60	8.62300	3335.44000	9.200	9.14499	9.01673	7.70613
SB	121	0.44300	360.02000	27.500	0.30276	0.51683	0.51035
SN	120	-1.08400	860.06000	0.000	-1.00103	-1.23363	-1.01867
SR	88	98.71700	37514.73000	3.900	98.21173	102.76211	95.17668
ZN	66	68.70200	8852.57000	6.200	64.50089	73.02972	68.57491
BI-1	209	208380.44000	0.00000	0.000	204692.32000	211626.81000	208822.20000
PB	208	22.53000	209145.58000	1.300	22.84513	22.29755	22.44766
TL	203	0.08200	276.68000	16.000	0.08149	0.09545	0.06921
GE-1	72	9482.96000	0.00000	0.000	9372.90000	9482.85000	9593.13000
TB-1	159	247114.96000	0.00000	0.000	244492.67000	244632.36000	252219.86000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:11:37
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266807** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22181.14000	0.00000	0.000	22064.43000	22264.67000	22214.32000
AL	27	559.21300	5564.42000	5.000	575.93532	526.63916	575.06453
CA	44	59826.23000	88015.53000	1.800	60927.91134	59766.30240	58784.47696
CR	52	1.03000	970.07000	11.600	1.16163	0.92818	0.99998
FE	57	2330.58300	32664.00000	3.700	2412.21253	2340.65413	2238.88117
K	39	3916.45800	95227.51000	0.600	3891.52874	3925.04724	3932.79757
MG	24	27008.44300	948006.81000	1.000	27240.47548	26722.71622	27062.13797
MN	55	426.93700	126017.41000	2.100	437.16116	420.07389	423.57675
NA	23	96634.82800	7138598.64000	2.200	98633.89285	94345.24829	96925.34410
TI	47	16.45600	200.01000	23.400	20.66584	15.56498	13.13719
V	51	1.94300	1093.42000	9.300	2.07291	2.01859	1.73763
IN-1	115	44825.62000	0.00000	0.000	46115.98000	44280.10000	44080.79000
AG	107	0.00300	46.67000	323.900	-0.00838	0.01359	0.00504
AS	75	0.54600	50.00000	54.400	0.30895	0.44978	0.87876
BA	137	62.77800	15307.36000	3.400	61.07389	62.06996	65.18994
CD	111	0.10200	26.67000	11.500	0.08842	0.10847	0.10898
CO	59	0.54100	840.06000	12.700	0.53837	0.47384	0.61143
CU	63	3.82200	4610.81000	6.500	3.70880	4.10625	3.65017
MO	98	0.40200	476.69000	32.400	0.25256	0.46225	0.49160
NI	60	0.67200	283.34000	7.900	0.61754	0.72311	0.67458
SB	121	0.11900	170.01000	96.600	0.01228	0.10389	0.24048
SN	120	-0.53900	1279.08000	0.000	-1.44848	1.01655	-1.18651
SR	88	182.14400	70324.98000	0.400	181.55613	182.89684	181.97806
ZN	66	19.98700	2626.99000	2.700	19.51706	20.56350	19.87911
BI-1	209	203722.19000	0.00000	0.000	204533.14000	203803.41000	202830.02000
PB	208	4.97600	45350.77000	2.400	5.02091	4.83913	5.06878
TL	203	0.00400	50.00000	318.500	0.01086	-0.01034	0.01107
GE-1	72	8952.58000	0.00000	0.000	8982.60000	8752.45000	9122.68000
TB-1	159	243422.16000	0.00000	0.000	246637.52000	242192.38000	241436.58000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:13:37
Tube Number: 32 Batch: 133116050004A
Sample Number: **7265243** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22511.48000	0.00000	0.000	22755.16000	22174.36000	22604.91000
AL	27	21.19600	220.01000	15.800	19.00754	19.52124	25.06048
CA	44	50462.21200	75339.72000	1.800	49427.47173	51084.51446	50874.64891
CR	52	-0.20100	80.00000	0.000	-0.27002	-0.18606	-0.14776
FE	57	156.72500	2236.91000	8.700	154.47875	171.39282	144.30280
K	39	3199.71400	79228.82000	4.300	3100.99231	3357.13059	3141.01825
MG	24	21830.96900	777553.19000	2.400	21324.13279	22351.79592	21816.97829
MN	55	212.22000	63583.09000	3.600	203.47332	215.94742	217.23819
NA	23	91155.62900	6834706.98000	0.900	91395.86741	91840.18943	90230.83085
TI	47	1.35000	16.67000	124.200	0.00000	0.82250	3.22735
V	51	0.18200	110.00000	25.000	0.16283	0.14951	0.23415
IN-1	115	45255.74000	0.00000	0.000	45833.60000	44540.27000	45393.34000
AG	107	0.00000	40.00000	7556.700	0.00003	-0.01238	0.01285
AS	75	0.35000	34.67000	40.300	0.21478	0.49638	0.33943
BA	137	38.92700	9586.47000	4.300	37.52429	40.76204	38.49581
CD	111	0.00000	1.33000	2023.300	-0.00481	-0.00481	0.01097
CO	59	0.27200	440.02000	4.700	0.27490	0.28341	0.25802
CU	63	0.62800	930.06000	17.500	0.54981	0.57942	0.75336
MO	98	0.38500	463.36000	26.900	0.31521	0.50420	0.33607
NI	60	0.49700	216.68000	55.000	0.19616	0.56404	0.72935
SB	121	-0.07300	56.67000	0.000	-0.00288	-0.14889	-0.06704
SN	120	-0.09300	1646.67000	0.000	-1.32854	-1.06553	2.11614
SR	88	121.57700	47378.36000	4.500	120.78416	127.45320	116.49294
ZN	66	2.63100	363.36000	27.400	3.32653	1.88667	2.68006
BI-1	209	211369.41000	0.00000	0.000	215024.20000	212332.54000	206751.50000
PB	208	0.07900	993.39000	20.000	0.09315	0.08302	0.06205
TL	203	-0.00600	23.33000	0.000	-0.00380	-0.00367	-0.01039
GE-1	72	9472.87000	0.00000	0.000	9212.74000	9342.84000	9863.04000
TB-1	159	249814.98000	0.00000	0.000	254312.18000	248367.95000	246764.82000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:15:37
Tube Number: 33 Batch: 133116050004A
Sample Number: **7265247** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23422.42000	0.00000	0.000	22975.04000	23816.49000	23475.72000
AL	27	0.33200	10.00000	489.000	-0.60501	2.20564	-0.60501
CA	44	17.35200	33.33000	85.300	9.03693	8.57321	34.44727
CR	52	-0.24900	46.67000	0.000	-0.24374	-0.25896	-0.24516
FE	57	1.38400	30.00000	149.400	3.46533	-0.66863	1.35427
K	39	5.14800	1840.17000	145.400	11.78006	6.62870	-2.96508
MG	24	5.49800	220.01000	25.800	6.43555	6.19260	3.86624
MN	55	0.20700	103.34000	64.600	0.33252	0.22166	0.06658
NA	23	81.37700	14199.32000	13.600	93.03951	79.99846	71.09428
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00500	10.00000	311.700	-0.01139	0.00526	0.02238
IN-1	115	46363.09000	0.00000	0.000	44619.46000	45595.98000	48873.84000
AG	107	-0.01500	3.33000	0.000	-0.01668	-0.01248	-0.01668
AS	75	0.02900	8.67000	61.100	0.04911	0.02220	0.01569
BA	137	0.04500	20.00000	241.700	0.16909	0.00338	-0.03695
CD	111	-0.00500	0.00000	0.000	-0.00481	-0.00481	-0.00481
CO	59	0.00500	36.67000	463.600	-0.00465	-0.01148	0.03081
CU	63	0.02400	230.01000	218.800	0.03903	0.06859	-0.03469
MO	98	0.02100	53.33000	187.700	-0.02425	0.04574	0.04105
NI	60	-0.03800	6.67000	0.000	-0.02843	-0.05414	-0.03067
SB	121	-0.12700	23.33000	0.000	-0.13220	-0.08384	-0.16563
SN	120	-1.47400	593.37000	0.000	-1.46189	-1.50395	-1.45626
SR	88	0.05100	23.33000	104.900	0.09636	-0.00772	0.06355
ZN	66	0.45200	76.67000	9.800	0.49967	0.41130	0.44616
BI-1	209	219392.35000	0.00000	0.000	224290.80000	210964.61000	222921.64000
PB	208	-0.00900	166.67000	0.000	-0.01296	-0.00149	-0.01188
TL	203	-0.01100	10.00000	0.000	-0.01066	-0.01046	-0.01064
GE-1	72	9382.88000	0.00000	0.000	9382.90000	9032.73000	9733.02000
TB-1	159	253242.66000	0.00000	0.000	255489.35000	247433.84000	256804.78000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:17:37
Tube Number: 34
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23325.81000	0.00000	0.000	22654.95000	23195.61000	24126.87000
AL	27	2545.46500	26600.25000	3.200	2637.05865	2514.87464	2484.46299
CA	44	2637.12300	4077.32000	11.800	2991.28035	2505.33714	2414.75142
CR	52	264.13500	201166.53000	3.700	273.07511	265.60570	253.72451
FE	57	2594.51700	38234.85000	1.500	2590.15120	2635.07472	2558.32468
K	39	2577.68200	66451.86000	2.900	2651.12804	2580.10845	2501.81037
MG	24	2604.55300	96074.94000	4.000	2688.21163	2637.32562	2488.12324
MN	55	266.43300	82703.57000	1.000	269.26061	266.07036	263.96861
NA	23	2559.13300	206257.88000	4.400	2655.46095	2584.69571	2437.24257
TI	47	256.97500	3283.79000	4.100	264.09248	261.87142	244.96012
V	51	267.99200	157619.57000	2.700	270.06458	274.04566	259.86433
IN-1	115	47705.70000	0.00000	0.000	46396.80000	48185.88000	48534.41000
AG	107	26.45600	65933.20000	1.800	26.85861	26.57481	25.93601
AS	75	264.96600	22855.33000	1.400	268.60723	264.88412	261.40648
BA	137	259.42700	67301.82000	1.900	264.85471	254.90775	258.51798
CD	111	26.33700	7009.46000	5.100	27.82519	25.24460	25.94215
CO	59	245.86300	393056.94000	2.100	251.42124	244.75054	241.41720
CU	63	267.19200	328689.87000	2.200	274.03576	263.85587	263.68432
MO	98	26.65100	31883.67000	3.400	27.69595	26.21875	26.03893
NI	60	269.70900	112117.77000	3.500	280.51946	265.79359	262.81375
SB	121	27.18500	17492.95000	0.300	27.22591	27.24739	27.08147
SN	120	24.94500	22088.38000	4.700	26.24543	24.59117	23.99901
SR	88	25.72000	10566.91000	3.000	26.50082	25.70966	24.95018
ZN	66	265.31800	36922.36000	1.000	268.44002	263.96023	263.55404
BI-1	209	220273.01000	0.00000	0.000	220358.24000	221787.18000	218673.61000
PB	208	26.51200	260139.31000	0.900	26.63634	26.23120	26.66944
TL	203	26.09100	79530.66000	3.000	25.17947	26.47480	26.61964
GE-1	72	9532.97000	0.00000	0.000	10123.30000	9653.07000	8822.55000
TB-1	159	257498.71000	0.00000	0.000	259524.76000	253791.64000	259179.72000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:19:38
Tube Number: 35
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23335.81000	0.00000	0.000	23466.08000	23976.44000	22564.90000
AL	27	3.55300	43.33000	67.700	6.05109	1.25626	3.35038
CA	44	0.10400	6.67000	6971.200	-4.08813	8.48875	-4.08813
CR	52	-0.20600	80.00000	0.000	-0.08844	-0.27208	-0.25611
FE	57	1.37700	30.00000	53.100	0.68052	1.31202	2.13744
K	39	1.45700	1740.16000	249.700	-1.75197	0.71314	5.41095
MG	24	2.82000	120.01000	20.300	2.52154	2.45822	3.48000
MN	55	0.08800	66.67000	145.700	0.22685	0.06257	-0.02560
NA	23	-9.19400	7111.67000	0.000	-10.85721	-14.52976	-2.19553
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.07800	53.33000	96.900	0.15755	0.07128	0.00618
IN-1	115	46884.59000	0.00000	0.000	46977.60000	46610.05000	47066.11000
AG	107	-0.00300	33.33000	0.000	0.01185	-0.01668	-0.00447
AS	75	0.11400	16.00000	143.300	0.30191	0.02009	0.01917
BA	137	0.17200	53.34000	102.400	0.35448	0.16029	0.00212
CD	111	0.02300	7.33000	155.300	0.06383	0.01056	-0.00481
CO	59	0.07500	146.68000	17.300	0.08995	0.06519	0.07073
CU	63	0.09200	316.68000	68.400	0.11114	0.02180	0.14358
MO	98	0.04700	83.33000	45.600	0.02670	0.04422	0.06898
NI	60	0.04400	40.00000	147.700	0.11680	0.01970	-0.00539
SB	121	0.23200	250.01000	56.600	0.08842	0.34646	0.26226
SN	120	-1.39900	660.04000	0.000	-1.38781	-1.46928	-1.33955
SR	88	0.00900	6.67000	323.600	-0.00772	0.04210	-0.00772
ZN	66	0.20200	43.33000	41.200	0.24984	0.10558	0.24915
BI-1	209	217643.36000	0.00000	0.000	216713.06000	218117.07000	218099.96000
PB	208	0.00600	310.01000	92.700	0.01238	0.00183	0.00389
TL	203	0.01000	73.33000	72.800	0.00613	0.01926	0.00600
GE-1	72	9983.17000	0.00000	0.000	10373.34000	9733.08000	9843.09000
TB-1	159	257895.51000	0.00000	0.000	258208.86000	259065.52000	256412.14000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:21:38
Tube Number: 36 Batch: 133116050004A
Sample Number: **7266810** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22861.84000	0.00000	0.000	23175.49000	22244.23000	23165.80000
AL	27	483.56000	4957.56000	5.100	456.80197	506.05349	487.82522
CA	44	20609.37600	31244.22000	3.700	19738.27045	21182.84635	20907.01166
CR	52	1.62600	1443.45000	7.400	1.50092	1.74208	1.63396
FE	57	29124.73200	420533.89000	1.700	28962.82583	29678.53390	28732.83761
K	39	2038.67400	51871.53000	3.600	2061.72215	2097.74727	1956.55327
MG	24	8504.71000	307636.86000	1.900	8556.65910	8633.04654	8324.42570
MN	55	2191.60700	666377.13000	2.400	2167.19060	2252.27247	2155.35682
NA	23	59133.78000	4503840.76000	2.700	57762.43963	60889.75762	58749.14274
TI	47	17.51500	220.01000	16.300	20.46285	14.75936	17.32142
V	51	2.17300	1260.10000	9.200	2.40069	2.09172	2.02517
IN-1	115	45755.83000	0.00000	0.000	47077.32000	43876.57000	46313.59000
AG	107	0.01400	73.33000	63.300	0.02400	0.00951	0.00813
AS	75	5.00200	420.68000	9.000	5.02427	4.53904	5.44275
BA	137	137.81200	34268.96000	4.700	130.85685	143.59718	138.98163
CD	111	0.16800	44.00000	12.600	0.16263	0.19117	0.14992
CO	59	2.63900	4080.63000	11.700	2.97989	2.55932	2.37859
CU	63	7.88400	9486.18000	8.600	7.92431	8.54143	7.18633
MO	98	0.33200	410.02000	15.200	0.37403	0.27579	0.34614
NI	60	2.08000	850.06000	6.500	2.06606	2.22070	1.95235
SB	121	0.12800	180.01000	5.300	0.13541	0.12337	0.12427
SN	120	-0.14800	1582.45000	0.000	-1.37713	2.16912	-1.23653
SR	88	119.11000	46900.31000	3.900	115.24241	124.31366	117.77325
ZN	66	46.78800	6248.04000	7.700	45.41849	50.85073	44.09480
BI-1	209	217179.85000	0.00000	0.000	216391.60000	219596.85000	215551.11000
PB	208	39.57000	382672.16000	1.100	39.73356	39.07008	39.90637
TL	203	0.01300	80.00000	53.400	0.01953	0.00587	0.01295
GE-1	72	9686.36000	0.00000	0.000	10153.22000	9733.05000	9172.80000
TB-1	159	256745.17000	0.00000	0.000	257163.77000	253040.70000	260031.03000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:23:38
Tube Number: 37 Batch: 133116050004A
Sample Number: **7266811** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23923.21000	0.00000	0.000	23586.01000	24026.75000	24156.88000
AL	27	184.71900	1986.86000	14.600	179.15700	213.94569	161.05371
CA	44	18810.00700	29848.75000	1.400	19113.06538	18655.65584	18661.29931
CR	52	0.47500	613.37000	19.200	0.46906	0.56953	0.38721
FE	57	12582.54300	190157.45000	0.800	12678.42532	12591.53341	12477.67103
K	39	2010.31600	53562.78000	2.600	2032.14082	2049.01528	1949.79126
MG	24	8061.85700	305180.31000	1.500	8199.95512	8016.14102	7969.47623
MN	55	1493.71600	475390.21000	1.700	1518.66674	1493.35217	1469.12954
NA	23	55833.55100	4451892.12000	0.700	56281.37826	55610.25189	55609.02243
TI	47	5.84300	76.67000	14.700	5.41292	6.83181	5.28501
V	51	0.87700	536.70000	13.000	0.76182	0.87963	0.98972
IN-1	115	47043.55000	0.00000	0.000	47838.17000	46336.73000	46955.75000
AG	107	-0.00100	40.00000	0.000	0.00734	-0.01668	0.00779
AS	75	2.09500	184.67000	10.200	2.30692	2.09762	1.88051
BA	137	98.78400	25276.48000	3.000	95.31760	100.51288	100.52076
CD	111	0.10700	29.33000	23.400	0.08507	0.13437	0.10202
CO	59	1.42800	2280.25000	7.500	1.37904	1.35348	1.55148
CU	63	3.66800	4657.48000	7.100	3.96661	3.56472	3.47415
MO	98	0.18300	243.35000	25.600	0.14253	0.23404	0.17115
NI	60	1.29000	550.04000	22.400	1.00110	1.57996	1.28968
SB	121	0.02400	120.01000	319.800	0.09944	-0.05296	0.02500
SN	120	-1.04000	947.18000	0.000	-1.28027	-0.64048	-1.20009
SR	88	111.70900	45246.06000	4.500	106.69442	116.68369	111.74885
ZN	66	22.90300	3157.06000	3.000	22.10802	23.19842	23.40204
BI-1	209	219487.68000	0.00000	0.000	218163.84000	220429.98000	219869.22000
PB	208	17.11500	167424.26000	1.300	17.36366	16.90726	17.07471
TL	203	0.00400	53.33000	226.400	0.01263	0.00251	-0.00402
GE-1	72	9973.19000	0.00000	0.000	9733.07000	9903.07000	10283.43000
TB-1	159	256981.53000	0.00000	0.000	258628.10000	254497.48000	257819.02000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:25:38
Tube Number: 38 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	22818.51000	0.00000	0.000	23145.83000	23135.52000	22174.18000
AL	27	1280.88300	13088.54000	7.900	1242.50857	1204.46593	1395.67553
CA	44	25226.49300	38177.98000	3.800	24149.33356	26008.61386	25521.53138
CR	52	5.07500	4010.61000	5.300	5.34290	4.80219	5.07922
FE	57	21245.99300	306127.84000	3.200	21183.39695	20597.48758	21957.09399
K	39	4277.38200	106814.32000	1.300	4234.23885	4256.81355	4341.09485
MG	24	10294.79200	371613.50000	2.300	10128.58887	10184.62953	10571.15706
MN	55	1721.36300	522335.86000	3.200	1685.65885	1693.86760	1784.56367
NA	23	56362.62400	4285332.85000	2.000	55604.79030	55823.85417	57659.22694
TI	47	33.41400	416.69000	23.800	33.88554	25.22741	41.12793
V	51	5.57500	3213.76000	3.800	5.35021	5.60963	5.76397
IN-1	115	45587.72000	0.00000	0.000	46072.43000	44549.91000	46140.81000
AG	107	0.06200	186.68000	6.800	0.05814	0.06070	0.06633
AS	75	4.15100	348.68000	8.900	4.36716	3.72438	4.36058
BA	137	74.85500	18567.55000	6.500	79.59057	75.03802	69.93666
CD	111	0.77500	198.67000	4.600	0.78842	0.73511	0.80278
CO	59	11.30500	17298.92000	1.800	11.13168	11.52599	11.25749
CU	63	11.48700	13699.09000	3.700	11.93450	11.44199	11.08371
MO	98	2.18000	2516.95000	6.100	2.07996	2.33101	2.12872
NI	60	8.43700	3377.15000	8.600	8.21373	7.85232	9.24593
SB	121	0.43600	366.69000	24.200	0.35245	0.55432	0.40018
SN	120	-0.65300	1223.43000	0.000	-0.69675	-0.86834	-0.39397
SR	88	98.84500	38800.60000	3.200	98.60929	102.10997	95.81509
ZN	66	69.45500	9246.10000	3.700	66.66388	71.64194	70.06064
BI-1	209	215456.87000	0.00000	0.000	217928.18000	212981.27000	215461.15000
PB	208	21.62600	207595.66000	1.000	21.58099	21.86037	21.43571
TL	203	0.07100	253.35000	5.900	0.07570	0.06759	0.07001
GE-1	72	9646.35000	0.00000	0.000	9873.21000	9002.59000	10063.24000
TB-1	159	251762.65000	0.00000	0.000	253081.54000	251960.07000	250246.34000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:27:39
Tube Number: 39 Batch: 133116050004A
Sample Number: **7265248** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22524.83000	0.00000	0.000	23856.78000	21082.91000	22634.79000
AL	27	2.61200	33.34000	112.600	5.94302	1.51171	0.38079
CA	44	-1.98100	3.33000	0.000	2.23185	-4.08813	-4.08813
CR	52	-0.27000	30.00000	0.000	-0.27189	-0.29589	-0.24274
FE	57	11.18000	170.01000	40.000	15.92022	10.59454	7.02422
K	39	3.81200	1733.48000	151.000	-2.83449	7.03465	7.23496
MG	24	4.57100	176.68000	30.500	3.53256	6.15350	4.02627
MN	55	0.46100	176.68000	20.100	0.56765	0.40929	0.40583
NA	23	11.24400	8392.23000	41.500	7.96059	16.58150	9.18909
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	-0.00500	3.33000	0.000	-0.01139	0.00741	-0.01139
IN-1	115	47216.49000	0.00000	0.000	46158.14000	47338.84000	48152.50000
AG	107	-0.01000	16.67000	0.000	-0.01668	-0.00454	-0.00873
AS	75	-0.00400	6.00000	0.000	-0.00295	0.01862	-0.02890
BA	137	0.18400	56.67000	53.800	0.20206	0.27378	0.07761
CD	111	0.00000	1.33000	5768.300	-0.00481	-0.00481	0.01007
CO	59	0.00300	33.33000	132.600	0.00783	0.00089	0.00057
CU	63	0.18200	426.69000	25.800	0.21698	0.19913	0.12846
MO	98	0.01000	40.00000	7.500	0.01032	0.00946	0.00889
NI	60	0.05100	43.33000	69.700	0.04528	0.01856	0.08881
SB	121	-0.03500	83.34000	0.000	-0.11715	-0.03958	0.05124
SN	120	-1.43300	636.71000	0.000	-1.39837	-1.38181	-1.51782
SR	88	0.11500	50.00000	35.500	0.06774	0.13943	0.13695
ZN	66	1.92000	280.02000	33.100	2.33652	1.18878	2.23498
BI-1	209	221849.88000	0.00000	0.000	223085.41000	218587.11000	223877.11000
PB	208	0.01700	426.68000	27.100	0.02135	0.01822	0.01215
TL	203	-0.00800	16.67000	0.000	-0.00741	-0.01389	-0.00420
GE-1	72	9589.62000	0.00000	0.000	9182.82000	10023.12000	9562.91000
TB-1	159	251633.56000	0.00000	0.000	252560.50000	249361.30000	252978.88000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:29:40
Tube Number: 40
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21954.03000	0.00000	0.000	21543.66000	21513.36000	22805.06000
AL	27	90.17200	890.06000	17.900	106.08253	90.67302	73.76078
CA	44	215.60500	320.02000	13.200	184.87970	241.22010	220.71417
CR	52	1.87800	1566.80000	17.100	1.62391	2.23911	1.77220
FE	57	100.02200	1396.78000	9.700	89.71394	108.97583	101.37721
K	39	211.73900	6618.15000	5.100	210.10985	201.87049	223.23672
MG	24	108.32600	3773.88000	8.100	118.08044	105.90717	100.99136
MN	55	2.41500	743.38000	10.500	2.14247	2.46011	2.64326
NA	23	199.85900	21950.38000	7.000	213.88085	199.91989	185.77718
TI	47	19.76500	236.68000	27.900	25.39914	19.49965	14.39640
V	51	0.60600	340.02000	35.600	0.83512	0.57831	0.40583
IN-1	115	45812.42000	0.00000	0.000	44607.27000	46862.94000	45967.04000
AG	107	0.49900	1233.43000	5.900	0.51999	0.46555	0.51245
AS	75	2.00600	172.00000	13.900	2.23144	1.69554	2.09102
BA	137	1.85200	470.03000	9.400	1.94169	1.65024	1.96316
CD	111	0.47600	123.33000	14.800	0.39680	0.53038	0.50184
CO	59	0.54200	860.06000	5.300	0.55050	0.51039	0.56613
CU	63	2.04200	2610.30000	6.700	2.17858	2.04074	1.90656
MO	98	0.51100	616.70000	24.800	0.38713	0.63975	0.50515
NI	60	2.01400	826.72000	11.700	1.77190	2.02675	2.24205
SB	121	0.81100	600.04000	17.700	0.88782	0.90080	0.64574
SN	120	0.69500	2276.92000	41.300	1.02319	0.49143	0.56984
SR	88	1.00000	400.03000	41.600	0.72109	1.47884	0.80056
ZN	66	17.38800	2340.26000	7.000	16.95204	18.76519	16.44695
BI-1	209	215334.25000	0.00000	0.000	217134.12000	212562.91000	216305.72000
PB	208	1.07100	10505.16000	3.800	1.04840	1.11802	1.04522
TL	203	0.45300	1390.13000	22.300	0.55224	0.45554	0.35048
GE-1	72	9569.67000	0.00000	0.000	8862.57000	9983.20000	9863.23000
TB-1	159	250587.36000	0.00000	0.000	249576.68000	252153.80000	250031.60000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:31:41
Tube Number: 41
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22548.02000	0.00000	0.000	22234.09000	22354.71000	23055.26000
AL	27	9806.83100	99094.80000	1.100	9925.00685	9779.07669	9716.40903
CA	44	9550.51100	14292.88000	2.300	9344.35937	9523.46458	9783.70968
CR	52	-0.12900	133.34000	0.000	-0.13126	-0.07741	-0.17752
FE	57	9733.30900	138625.39000	1.600	9876.24197	9750.11953	9573.56631
K	39	9823.86300	240234.92000	3.400	10179.56626	9770.97235	9521.05020
MG	24	9688.15400	345591.69000	2.500	9904.38366	9733.49994	9426.57734
MN	55	0.00700	40.00000	909.200	-0.05792	0.00896	0.07008
NA	23	9677.05900	733363.27000	1.900	9814.25323	9751.96610	9464.95788
TI	47	196.28100	2423.58000	11.000	199.35253	216.22758	173.26231
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	45747.90000	0.00000	0.000	46075.99000	45482.76000	45684.95000
AG	107	-0.00600	26.67000	0.000	-0.00421	0.00437	-0.01668
AS	75	-0.07500	0.00000	0.000	-0.07485	-0.07485	-0.07485
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	0.00600	2.67000	160.700	0.01074	0.01094	-0.00481
CO	59	-0.00700	16.67000	0.000	-0.01154	-0.00490	-0.00496
CU	63	0.01400	216.68000	71.400	0.00718	0.00949	0.02567
MO	98	197.55400	226584.05000	0.500	197.43238	198.51305	196.71625
NI	60	0.01200	26.67000	502.900	0.07035	-0.05414	0.02119
SB	121	-0.11700	30.00000	0.000	-0.10088	-0.08364	-0.16563
SN	120	-1.52000	550.04000	0.000	-1.39689	-1.60530	-1.55669
SR	88	0.04300	20.00000	118.300	0.04268	-0.00772	0.09394
ZN	66	0.33400	60.00000	44.200	0.48031	0.33722	0.18511
BI-1	209	216591.06000	0.00000	0.000	216958.90000	219484.59000	213329.70000
PB	208	0.00900	340.02000	63.300	0.00612	0.01599	0.00561
TL	203	-0.00700	20.00000	0.000	-0.00389	-0.00730	-0.01050
GE-1	72	9166.03000	0.00000	0.000	9502.84000	9192.71000	8802.54000
TB-1	159	249449.51000	0.00000	0.000	250730.48000	250340.25000	247277.79000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:33:41
Tube Number: 42
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22141.12000	0.00000	0.000	22244.52000	22204.36000	21974.49000
AL	27	10019.56300	99430.37000	1.300	9928.43683	10170.67823	9959.57373
CA	44	9713.35100	14269.41000	2.400	9455.22318	9900.56235	9784.26676
CR	52	21.32800	15637.32000	0.900	21.55882	21.19807	21.22764
FE	57	10129.22500	141685.49000	1.300	10210.83840	9977.01846	10199.81694
K	39	10198.68200	244918.70000	1.400	10056.34268	10206.43628	10333.26749
MG	24	9908.73000	347177.66000	0.900	9841.65234	9868.73481	10015.80211
MN	55	20.35200	6031.27000	7.500	18.69937	21.71364	20.64166
NA	23	10063.82500	748758.22000	1.300	9941.58189	10040.80195	10209.09214
TI	47	204.06400	2476.97000	8.300	185.32307	218.51720	208.35081
V	51	-0.01100	0.00000	0.000	-0.01139	-0.01139	-0.01139
IN-1	115	46176.90000	0.00000	0.000	44959.34000	47260.68000	46310.67000
AG	107	19.86800	47927.74000	2.800	20.31686	19.25306	20.03406
AS	75	19.49900	1631.42000	10.200	21.50464	17.52779	19.46553
BA	137	-0.03700	0.00000	0.000	-0.03695	-0.03695	-0.03695
CD	111	19.80900	5106.79000	0.700	19.93761	19.82340	19.66521
CO	59	19.10100	29575.19000	3.800	19.90617	18.52463	18.87265
CU	63	20.24100	24287.20000	3.000	20.57809	19.55135	20.59316
MO	98	199.47900	230826.12000	3.100	204.73369	192.62796	201.07673
NI	60	20.79700	8388.96000	3.200	21.30868	20.04969	21.03234
SB	121	-0.08000	53.34000	0.000	-0.11586	-0.00780	-0.11731
SN	120	-1.20900	803.81000	0.000	-1.36331	-0.65913	-1.60371
SR	88	0.09300	40.00000	47.200	0.12140	0.11511	0.04242
ZN	66	21.50600	2907.01000	10.600	24.14139	20.20243	20.17503
BI-1	209	215923.44000	0.00000	0.000	219368.36000	214346.85000	214055.11000
PB	208	0.01900	430.02000	59.200	0.01191	0.03167	0.01285
TL	203	-0.00100	40.00000	0.000	0.00589	0.00298	-0.01051
GE-1	72	9416.20000	0.00000	0.000	9092.68000	9372.86000	9783.05000
TB-1	159	251066.32000	0.00000	0.000	250693.77000	251699.18000	250806.01000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:35:40
Tube Number: 43
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22538.07000	0.00000	0.000	22104.30000	24276.93000	21232.97000
AL	27	2583.79900	25985.86000	10.000	2600.62531	2318.13636	2832.63656
CA	44	2583.78800	3870.58000	5.500	2731.57274	2573.70323	2446.08931
CR	52	268.13700	196917.88000	6.000	271.22159	250.59984	282.58968
FE	57	2646.86500	37576.93000	7.000	2747.27973	2433.42009	2759.89599
K	39	2651.99600	65849.14000	6.800	2724.70916	2446.80833	2784.47058
MG	24	2645.18700	94088.52000	6.200	2703.46964	2460.72946	2771.36284
MN	55	265.90200	79572.31000	5.500	265.72146	251.47706	280.50817
NA	23	2583.59600	200542.33000	8.500	2634.25016	2343.43675	2773.10080
TI	47	266.90700	3283.79000	11.700	294.60701	232.92523	273.18744
V	51	272.52400	154482.80000	6.500	274.60178	253.91458	289.05507
IN-1	115	47190.07000	0.00000	0.000	46376.13000	48127.99000	47066.08000
AG	107	25.85700	63758.12000	0.900	26.05396	25.91171	25.60613
AS	75	261.40200	22302.63000	2.600	264.57192	253.74184	265.89252
BA	137	259.18200	66518.77000	1.300	262.90730	256.01966	258.61889
CD	111	26.28500	6922.76000	2.800	26.70143	25.43883	26.71356
CO	59	244.71700	387060.48000	1.300	247.08876	241.03474	246.02673
CU	63	263.04900	320159.28000	1.400	267.28721	260.05907	261.80088
MO	98	26.05300	30841.61000	1.800	26.43292	25.53630	26.18922
NI	60	267.34900	109971.37000	1.900	271.71190	261.69914	268.63506
SB	121	27.38600	17426.17000	3.600	27.47991	26.36475	28.31203
SN	120	24.13100	21197.27000	5.200	25.46029	22.93982	23.99415
SR	88	25.40900	10320.13000	8.600	27.71509	23.37484	25.13686
ZN	66	263.40300	36254.50000	2.700	267.52361	255.21352	267.47254
BI-1	209	216372.26000	0.00000	0.000	219008.88000	215874.90000	214233.00000
PB	208	26.42500	254666.08000	1.700	25.90694	26.62806	26.73888
TL	203	25.89800	77540.93000	1.200	25.56371	26.14354	25.98785
GE-1	72	9949.79000	0.00000	0.000	9452.82000	10373.31000	10023.25000
TB-1	159	252087.02000	0.00000	0.000	250036.19000	250732.77000	255492.09000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:37:41
Tube Number: 44
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23098.73000	0.00000	0.000	23495.89000	23145.36000	22654.94000
AL	27	1.94700	26.67000	113.500	3.19365	3.25118	-0.60501
CA	44	0.25500	6.67000	2953.400	-4.08813	8.94034	-4.08813
CR	52	-0.18800	93.34000	0.000	-0.10176	-0.19128	-0.26985
FE	57	1.15300	26.67000	123.200	0.67881	2.75098	0.03010
K	39	-5.53200	1546.80000	0.000	-9.73673	-16.07557	9.21687
MG	24	1.20300	60.00000	24.500	1.17275	0.92417	1.51159
MN	55	0.10200	70.00000	4.100	0.09840	0.10179	0.10672
NA	23	-23.27100	5964.56000	0.000	-24.66402	-26.23602	-18.91379
TI	47	1.05100	13.33000	173.200	0.00000	3.15199	0.00000
V	51	0.12600	80.00000	26.300	0.15735	0.09138	0.12860
IN-1	115	45486.74000	0.00000	0.000	43539.38000	48371.46000	44549.38000
AG	107	0.00900	60.00000	175.300	0.01411	-0.00876	0.02201
AS	75	0.15300	18.67000	67.400	0.25544	0.15384	0.04931
BA	137	0.07100	26.67000	90.000	0.13197	0.07709	0.00433
CD	111	0.00300	2.00000	262.200	0.01165	0.00260	-0.00481
CO	59	0.06400	123.34000	75.700	0.11903	0.04366	0.02886
CU	63	0.01300	213.34000	361.700	0.06203	0.00681	-0.03030
MO	98	0.17000	223.35000	33.400	0.17732	0.22317	0.11007
NI	60	0.07800	53.33000	70.700	0.02491	0.13559	0.07462
SB	121	0.39300	340.02000	14.300	0.38259	0.34324	0.45387
SN	120	-1.40100	636.71000	0.000	-1.34869	-1.46040	-1.39488
SR	88	-0.00800	0.00000	0.000	-0.00772	-0.00772	-0.00772
ZN	66	-0.06500	6.67000	0.000	-0.03637	-0.04423	-0.11512
BI-1	209	211989.68000	0.00000	0.000	212746.77000	212635.23000	210587.03000
PB	208	0.00100	250.01000	900.000	-0.00275	0.00572	-0.00145
TL	203	0.01400	83.34000	88.300	0.02010	0.02352	-0.00015
GE-1	72	9282.81000	0.00000	0.000	9492.88000	8622.42000	9733.14000
TB-1	159	252058.98000	0.00000	0.000	254095.21000	251138.47000	250943.26000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:39:41
Tube Number: 45
Sample Number: **LRS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	22902.00000	0.00000	0.000	22765.28000	23996.78000	21943.94000
AL	27	49907.15100	511504.25000	4.800	50243.94927	47351.15040	52126.35309
CA	44	49899.52900	75734.21000	3.000	50343.04895	48238.83562	51116.70350
CR	52	509.97300	380898.72000	4.600	514.23984	484.70992	530.97000
FE	57	49743.64400	718953.27000	3.400	50003.51786	47933.08602	51294.32892
K	39	53502.80400	1319932.58000	5.200	53546.32107	50713.17129	56248.91861
MG	24	50889.42900	1841430.34000	5.200	51556.08882	47948.97602	53163.22325
MN	55	507.51200	154424.04000	5.500	503.98102	481.71028	536.84589
NA	23	50730.60500	3867933.48000	4.900	51996.69779	47884.47704	52310.63891
TI	47	526.80600	6611.46000	1.800	527.28194	516.93919	536.19615
V	51	517.36100	298411.84000	5.300	521.58415	487.96713	542.53036
IN-1	115	44912.15000	0.00000	0.000	45586.97000	44254.29000	44895.18000
AG	107	509.40000	1194553.84000	1.600	503.75234	518.69437	505.75227
AS	75	532.08800	43204.74000	1.700	522.53608	539.92821	533.80054
BA	137	519.64200	126921.22000	2.300	517.08850	532.45302	509.38458
CD	111	511.73900	128286.79000	0.800	511.14603	516.34448	507.72779
CO	59	483.73300	728167.31000	1.400	478.42358	491.27115	481.50439
CU	63	515.75800	597299.00000	1.400	515.45542	523.01905	508.79839
MO	98	533.88700	601028.33000	1.500	527.19312	542.40799	532.05930
NI	60	522.49300	204561.89000	0.800	519.39624	527.04468	521.03902
SB	121	447.05200	269244.08000	2.100	441.70335	457.67452	441.77900
SN	120	528.94000	406781.66000	1.100	525.34047	535.84847	525.63216
SR	88	528.43500	204398.25000	2.000	526.40939	540.02407	518.87158
ZN	66	516.76800	67691.82000	1.400	511.29019	524.66569	514.34933
BI-1	209	207984.13000	0.00000	0.000	208145.58000	209544.66000	206262.15000
PB	208	538.58100	4985023.28000	1.000	537.90793	533.54062	544.29512
TL	203	549.03200	1579373.98000	0.900	553.81935	544.17867	549.09735
GE-1	72	9819.76000	0.00000	0.000	9813.08000	9853.10000	9793.11000
TB-1	159	254038.68000	0.00000	0.000	250571.09000	259187.87000	252357.07000

Run Name: 1331901E05 Date/Time: 11/15/2013 3:41:40
Tube Number: 46
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	21970.85000	0.00000	0.000	20422.42000	22765.25000	22724.89000
AL	27	16.15200	166.68000	46.900	11.41342	24.88069	12.16048
CA	44	12.12500	23.33000	117.200	18.06023	22.40389	-4.08813
CR	52	-0.06700	170.01000	0.000	0.10967	-0.05469	-0.25649
FE	57	15.89700	226.68000	40.400	22.58624	15.32493	9.78072
K	39	13.29300	1906.86000	106.300	28.99928	9.25255	1.62797
MG	24	14.44300	513.36000	22.000	17.81624	13.99425	11.51719
MN	55	0.05200	50.00000	317.000	0.24252	-0.05950	-0.02630
NA	23	3.58200	7591.88000	445.300	21.85351	-7.55508	-3.55333
TI	47	0.80200	10.00000	99.900	0.00000	1.60231	0.80258
V	51	0.14500	86.67000	60.200	0.14390	0.05827	0.23285
IN-1	115	46669.42000	0.00000	0.000	44774.89000	46693.90000	48539.48000
AG	107	0.28900	740.05000	29.000	0.38538	0.24991	0.23189
AS	75	0.16300	20.00000	29.800	0.19692	0.18575	0.10747
BA	137	0.09600	33.33000	109.000	0.20944	0.00243	0.07669
CD	111	0.09900	26.67000	56.500	0.16323	0.07192	0.06162
CO	59	0.10400	190.01000	26.300	0.13523	0.08421	0.09262
CU	63	0.23100	480.03000	22.000	0.27224	0.24577	0.17403
MO	98	1.07500	1286.77000	1.500	1.07167	1.06081	1.09353
NI	60	0.15100	83.34000	23.800	0.12521	0.19154	0.13496
SB	121	10.28100	6551.52000	8.700	9.48148	10.10765	11.25433
SN	120	2.03100	3392.69000	17.500	1.83184	1.82016	2.43969
SR	88	0.09400	40.00000	83.900	0.17379	0.09174	0.01620
ZN	66	0.39800	70.00000	35.200	0.26779	0.54580	0.37938
BI-1	209	212678.22000	0.00000	0.000	210481.50000	210388.49000	217164.68000
PB	208	0.12700	1446.76000	22.700	0.15765	0.12355	0.10025
TL	203	0.22700	706.72000	31.900	0.25063	0.28511	0.14593
GE-1	72	9716.35000	0.00000	0.000	10213.26000	9743.07000	9192.71000
TB-1	159	254720.30000	0.00000	0.000	251596.19000	254838.63000	257726.09000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

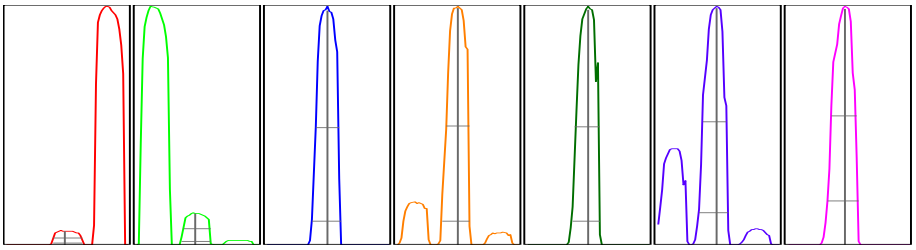
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		8.0 V	Deflect		13.2 V	
Extract 2		-170.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-90 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V		
OctP RF	190 V	H2 Flow	0.0 mL/min				
Use Gas	false	3rd Gas Flow	0 %				

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ICP-MS Run Data Report

1331906E05

Date File Name: 13K15J03.E05

Run Name: 1331906E05

Analyst: 1496

Method Reference Name(s):
SW-846 3010A modified
SW-846 6020

Reviewed By: John P Hook
Reviewed Date: 11/17/2013 12:12

Verified By: Deborah A Krady
Verified Date: 11/18/2013 06:49

Instrument Parameters:

Rinse Time (sec): 30.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208

Run Name: 1331906E05 Date/Time: 11/15/2013 21:54:03
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	1246.77000	0.000	2.74033	-3.77416	1.03382
MG	24	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AL	27	0.00000	13.33000	0.000	0.72569	0.84106	-1.56674
K	39	0.00000	880.06000	0.000	-2.94931	-2.96282	5.91214
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
SC-1	45	16381.35000	0.00000	0.000	16498.02000	15707.51000	16938.53000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.00000	86.67000	0.000	-0.04821	-0.04271	0.09092
MN	55	0.00000	60.00000	0.000	-0.04689	0.05664	-0.00975
FE	57	0.00000	6.67000	0.000	-0.59689	-0.59689	1.19377
CO	59	0.00000	306.68000	0.000	0.06703	-0.01260	-0.05443
NI	60	0.00000	86.67000	0.000	0.05228	0.15246	-0.20474
CU	63	0.00000	320.02000	0.000	-0.03453	0.15305	-0.11852
ZN	66	0.00000	6.67000	0.000	0.14749	-0.07374	-0.07374
GE-1	72	5834.54000	0.00000	0.000	6021.24000	5741.17000	5741.22000
AS	75	0.00000	27.33000	0.000	-0.17436	0.34433	-0.16997
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
MO	98	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
AG	107	0.00000	6.67000	0.000	-0.00404	0.00808	-0.00404
CD	111	0.00000	4.00000	0.000	-0.02292	0.01086	0.01206
IN-1	115	31328.11000	0.00000	0.000	31224.36000	31926.66000	30833.32000
SN	120	0.00000	523.37000	0.000	0.05125	-0.15315	0.10190
SB	121	0.00000	30.00000	0.000	0.04439	-0.06753	0.02314
BA	137	0.00000	23.33000	0.000	-0.13751	0.03578	0.10173
TB-1	159	188070.14000	0.00000	0.000	185017.85000	191684.61000	187507.95000
TL	203	0.00000	10.00000	0.000	0.00910	-0.00455	-0.00455
PB	208	0.00000	70.00000	0.000	-0.00261	0.00123	0.00138
BI-1	209	164481.53000	0.00000	0.000	161396.94000	167185.02000	164862.63000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:56:03
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14853.30000	0.00000	0.000	15567.30000	14536.25000	14456.35000
AL	27	10000.00000	78490.57000	3.400	9632.59002	10289.88471	10077.52527
CA	44	10000.00000	10093.24000	1.400	10160.13077	9948.49278	9891.37645
CR	52	1000.00000	493735.77000	4.100	953.81736	1033.84886	1012.33379
FE	57	10000.00000	97915.56000	1.200	9869.26434	10037.62990	10093.10576
K	39	10000.00000	166758.74000	2.900	9673.11030	10110.16203	10216.72767
MG	24	10000.00000	271777.42000	3.000	9650.13151	10173.28823	10176.58026
MN	55	1000.00000	204440.93000	3.100	964.64549	1019.04978	1016.30472
NA	23	10000.00000	554987.18000	4.200	9522.13830	10330.33630	10147.52540
TI	47	1000.00000	8469.02000	9.900	886.72971	1066.39832	1046.87197
V	51	1000.00000	374931.49000	3.200	963.76039	1023.34481	1012.89480
IN-1	115	30463.04000	0.00000	0.000	30716.58000	30386.26000	30286.29000
AG	107	100.00000	157554.55000	1.400	101.54318	99.44085	99.01597
AS	75	1000.00000	50785.82000	1.400	984.46970	1011.06204	1004.46827
BA	137	1000.00000	165206.86000	1.000	992.28825	1010.91679	996.79497
CD	111	100.00000	16947.69000	1.100	98.85765	101.02244	100.11991
CO	59	1000.00000	938849.10000	0.800	1007.84926	999.24686	992.90388
CU	63	1000.00000	781067.15000	1.200	993.94442	1013.79186	992.26373
MO	98	100.00000	74620.31000	0.400	99.85569	100.45524	99.68907
NI	60	1000.00000	264379.43000	1.300	985.55839	1011.61020	1002.83141
SB	121	100.00000	43610.11000	2.500	97.23805	100.57848	102.18346
SN	120	100.00000	52962.50000	1.100	99.25747	99.50422	101.23831
SR	88	100.00000	26671.23000	0.600	100.32964	99.27496	100.39541
ZN	66	1000.00000	88204.09000	1.100	998.77085	990.10292	1011.12624
BI-1	209	159267.35000	0.00000	0.000	159233.46000	159061.74000	159506.86000
PB	208	100.00000	699110.77000	1.300	101.54958	99.09744	99.35298
TL	203	100.00000	216923.57000	0.800	100.83092	99.20754	99.96154
GE-1	72	5827.87000	0.00000	0.000	6111.31000	5040.92000	6331.38000
TB-1	159	181604.00000	0.00000	0.000	184643.08000	180760.19000	179408.73000

Run Name: 1331906E05 Date/Time: 11/15/2013 21:58:05
Tube Number: 3
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15667.33000	0.00000	0.000	15317.17000	15687.28000	15997.54000
AL	27	10.56400	100.00000	54.800	16.95321	5.66598	9.07193
CA	44	9.46000	10.00000	99.200	9.61132	18.76912	0.00000
CR	52	1.00700	603.37000	48.300	1.54970	0.85798	0.61283
FE	57	12.95200	140.01000	6.600	12.27543	13.90522	12.67597
K	39	9.13300	1000.06000	98.500	13.36427	-1.19464	15.22895
MG	24	7.69400	220.01000	39.400	8.19997	10.44317	4.43780
MN	55	1.09400	293.35000	11.400	1.20270	1.12169	0.95864
NA	23	4.81200	1466.79000	101.600	6.61709	8.54300	-0.72498
TI	47	1.51400	13.33000	115.400	3.42576	1.11498	0.00000
V	51	1.00800	396.69000	39.800	1.39552	1.03458	0.59384
IN-1	115	30827.57000	0.00000	0.000	30981.19000	30689.72000	30811.81000
AG	107	0.17600	286.68000	16.000	0.20819	0.15979	0.15914
AS	75	1.32200	94.67000	19.300	1.53293	1.39599	1.03782
BA	137	0.95900	183.34000	45.800	1.29114	1.12444	0.46107
CD	111	0.07400	16.67000	47.700	0.10474	0.08252	0.03542
CO	59	1.02600	1276.77000	12.300	1.15976	0.90934	1.00983
CU	63	1.05800	1150.09000	24.700	1.35375	0.96349	0.85679
MO	98	0.26900	203.35000	62.200	0.46122	0.15964	0.18551
NI	60	1.06600	370.02000	20.400	1.28286	0.84740	1.06722
SB	121	0.95400	450.02000	25.500	0.69953	1.18509	0.97595
SN	120	0.56700	816.72000	40.100	0.39671	0.82606	0.47963
SR	88	0.03700	10.00000	0.500	0.03687	0.03722	0.03707
ZN	66	0.93500	90.00000	24.500	0.70664	1.16434	0.93513
BI-1	209	164095.73000	0.00000	0.000	165376.54000	158521.06000	168389.59000
PB	208	0.11100	866.71000	30.600	0.14601	0.10819	0.07828
TL	203	0.12000	276.68000	34.100	0.15973	0.12052	0.07830
GE-1	72	6157.98000	0.00000	0.000	6171.27000	6091.33000	6211.34000
TB-1	159	185192.34000	0.00000	0.000	183775.92000	184475.92000	187325.19000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:00:06
Tube Number: 4
Sample Number: **CCS**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	16514.88000	0.00000	0.000	17549.17000	15817.49000	16177.97000
AL	27	-0.38900	10.00000	0.000	-1.56674	-0.37121	0.77104
CA	44	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CR	52	0.04700	113.34000	97.600	0.09940	0.01350	0.02827
FE	57	1.22900	20.00000	152.700	1.13146	-0.59689	3.15280
K	39	-1.43400	856.72000	0.000	-5.13521	0.68256	0.15186
MG	24	1.03700	33.33000	173.200	3.11163	0.00000	0.00000
MN	55	0.00800	63.33000	1159.800	0.10543	-0.08333	0.00235
NA	23	-4.21400	993.40000	0.000	-3.67842	-3.55048	-5.41447
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.09000	36.67000	86.000	0.02255	0.17517	0.07340
IN-1	115	32342.37000	0.00000	0.000	32777.90000	33015.86000	31233.36000
AG	107	0.01400	30.00000	147.800	0.00186	0.03696	0.00215
AS	75	-0.09900	22.67000	0.000	0.06556	-0.30219	-0.05918
BA	137	-0.04300	16.67000	0.000	0.08754	-0.13751	-0.07846
CD	111	-0.01200	2.00000	0.000	-0.02292	-0.00114	-0.01141
CO	59	0.13300	450.03000	68.500	0.23697	0.09531	0.06692
CU	63	0.07200	390.02000	93.900	0.13875	0.07582	0.00283
MO	98	0.05000	40.00000	23.000	0.06227	0.04946	0.03921
NI	60	-0.09900	60.00000	0.000	-0.24655	-0.17724	0.12594
SB	121	0.19900	123.34000	4.900	0.18837	0.20769	0.20102
SN	120	0.07300	583.37000	238.800	0.25083	0.06610	-0.09781
SR	88	0.01200	3.33000	173.200	0.00000	0.00000	0.03657
ZN	66	0.17500	23.33000	91.400	0.34775	0.03087	0.14742
BI-1	209	168448.56000	0.00000	0.000	166851.25000	168518.24000	169976.19000
PB	208	0.00700	123.34000	64.100	0.01218	0.00520	0.00373
TL	203	0.00800	30.00000	223.500	-0.00455	-0.00019	0.03001
GE-1	72	6291.36000	0.00000	0.000	6671.47000	5861.22000	6341.40000
TB-1	159	188512.99000	0.00000	0.000	186786.79000	189204.72000	189547.46000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:02:06
Tube Number: 5
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15433.75000	0.00000	0.000	16097.79000	15016.68000	15186.78000
AL	27	5173.44100	42189.37000	4.600	4900.32781	5270.89223	5349.10291
CA	44	5105.18300	5344.33000	7.400	4728.94160	5098.83710	5487.77007
CR	52	517.11700	265416.14000	3.200	498.10008	526.33140	526.92090
FE	57	5047.28400	51330.90000	3.200	4863.90034	5150.27092	5127.67935
K	39	5186.00200	90249.44000	3.600	4970.24865	5304.05565	5283.70151
MG	24	5088.82300	143666.52000	5.100	4806.68708	5136.95824	5322.82283
MN	55	515.10600	109478.31000	2.400	500.91759	523.71777	520.68259
NA	23	5084.21400	293944.25000	2.500	4948.33886	5098.22881	5206.07549
TI	47	503.77300	4440.71000	4.700	482.50165	528.89469	499.92366
V	51	529.13900	206179.66000	2.800	512.01597	536.39423	539.00588
IN-1	115	31001.44000	0.00000	0.000	30977.48000	30469.41000	31557.43000
AG	107	52.31600	83863.32000	1.800	52.65322	53.03989	51.25441
AS	75	538.61200	27846.42000	1.500	538.99810	546.61181	530.22498
BA	137	526.40700	88508.63000	2.000	538.04178	524.07215	517.10825
CD	111	52.69000	9087.78000	2.400	53.62862	53.16551	51.27474
CO	59	534.85300	511027.61000	2.000	539.24281	542.86938	522.44559
CU	63	536.79200	426682.34000	3.400	547.88238	547.00035	515.49208
MO	98	55.44300	42091.80000	2.700	56.48828	56.11372	53.72585
NI	60	544.83300	146603.06000	2.300	553.76176	550.30033	530.43608
SB	121	54.97000	24418.29000	2.000	54.97946	53.87722	56.05316
SN	120	53.54700	29086.80000	5.500	55.11822	55.34672	50.17651
SR	88	52.16300	14159.60000	4.600	54.85272	50.32774	51.30887
ZN	66	519.67700	46645.45000	1.200	522.31925	524.21199	512.49903
BI-1	209	161228.65000	0.00000	0.000	163557.39000	159025.82000	161102.75000
PB	208	53.79500	380710.03000	1.200	53.09123	54.37388	53.92121
TL	203	52.45300	115174.77000	1.200	51.79760	53.02751	52.53244
GE-1	72	6208.07000	0.00000	0.000	6191.41000	6461.52000	5971.27000
TB-1	159	184802.67000	0.00000	0.000	187544.24000	182692.75000	184171.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:04:07
Tube Number: 6
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15457.23000	0.00000	0.000	15657.31000	14866.91000	15847.46000
AL	27	2.95900	36.67000	67.700	3.26430	4.79311	0.81979
CA	44	12.53700	13.33000	173.200	37.61009	0.00000	0.00000
CR	52	0.44100	306.68000	43.300	0.57196	0.52988	0.22181
FE	57	2.32400	30.00000	69.500	1.34030	1.44329	4.18797
K	39	-2.07300	793.38000	0.000	3.46461	-4.63022	-5.05350
MG	24	4.22900	120.01000	11.400	4.53423	3.67302	4.47983
MN	55	0.46800	156.67000	79.900	0.89248	0.31914	0.19124
NA	23	1.15300	1240.10000	263.900	4.66293	-0.49623	-0.70830
TI	47	0.74500	6.67000	173.200	2.23422	0.00000	0.00000
V	51	0.47800	186.68000	54.000	0.75843	0.42601	0.24979
IN-1	115	31320.59000	0.00000	0.000	31365.28000	30752.45000	31844.04000
AG	107	0.04500	80.00000	14.900	0.03912	0.05255	0.04454
AS	75	0.48700	52.67000	78.100	0.89553	0.14318	0.42196
BA	137	0.31400	76.67000	21.600	0.39165	0.28226	0.26787
CD	111	0.03500	10.00000	67.000	0.05732	0.03554	0.01095
CO	59	0.59600	880.06000	33.600	0.71730	0.70628	0.36535
CU	63	0.35100	600.04000	45.500	0.51121	0.35168	0.19123
MO	98	0.27400	210.01000	10.300	0.29937	0.27879	0.24359
NI	60	0.67700	270.02000	42.900	0.34459	0.88250	0.80520
SB	121	0.95900	460.03000	8.500	1.04669	0.88708	0.94215
SN	120	0.85400	977.87000	139.200	0.17628	2.22637	0.15901
SR	88	0.08500	23.33000	107.100	0.18208	0.07428	0.00000
ZN	66	0.66300	66.67000	67.300	1.13767	0.60013	0.25165
BI-1	209	159251.88000	0.00000	0.000	158932.52000	157921.71000	160901.41000
PB	208	0.05000	420.02000	23.500	0.05484	0.05958	0.03706
TL	203	0.06800	156.68000	37.400	0.09248	0.04194	0.06847
GE-1	72	6258.01000	0.00000	0.000	6391.40000	6371.36000	6011.28000
TB-1	159	182569.90000	0.00000	0.000	181390.00000	185464.29000	180855.41000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:06:06
Tube Number: 7
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14946.70000	0.00000	0.000	15687.32000	14045.82000	15106.96000
AL	27	104.96100	836.72000	17.200	90.05353	124.99757	99.83208
CA	44	235.18900	240.01000	13.900	262.77639	199.15486	243.63622
CR	52	2.22400	1180.09000	10.000	2.00761	2.45327	2.21020
FE	57	103.58000	1023.41000	16.900	84.48108	107.38274	118.87477
K	39	202.22700	4177.32000	6.200	188.66926	204.85678	213.15355
MG	24	107.69100	2950.37000	3.900	112.44972	106.14808	104.47550
MN	55	2.17000	500.03000	12.600	2.09380	2.47314	1.94412
NA	23	203.88700	12491.34000	5.600	190.81612	210.91231	209.93226
TI	47	13.67300	116.67000	35.300	16.72573	16.18987	8.10466
V	51	0.71600	270.01000	4.200	0.68128	0.73272	0.73366
IN-1	115	30706.32000	0.00000	0.000	30261.07000	31503.36000	30354.52000
AG	107	0.53500	856.73000	15.300	0.59667	0.56685	0.44191
AS	75	2.06700	132.67000	22.300	2.13706	2.48944	1.57531
BA	137	2.06900	366.69000	22.600	2.60502	1.73582	1.86742
CD	111	0.53600	95.33000	11.800	0.60682	0.51351	0.48643
CO	59	0.67200	936.73000	20.800	0.78726	0.71277	0.51650
CU	63	2.06500	1936.86000	12.800	2.34967	2.01839	1.82697
MO	98	0.50200	376.69000	19.600	0.56663	0.38878	0.55144
NI	60	2.25400	683.37000	17.700	2.38744	1.80516	2.56900
SB	121	1.14500	533.37000	23.800	0.83327	1.26371	1.33710
SN	120	1.93800	1543.48000	31.500	1.54249	2.64178	1.63041
SR	88	0.79100	213.34000	26.400	0.75492	1.01520	0.60208
ZN	66	16.69500	1490.13000	5.400	17.73317	16.15389	16.19891
BI-1	209	158768.62000	0.00000	0.000	162731.17000	158185.94000	155388.74000
PB	208	1.08800	7651.06000	5.100	1.10495	1.02604	1.13415
TL	203	0.50900	1110.09000	10.000	0.46022	0.56177	0.50582
GE-1	72	5601.14000	0.00000	0.000	5511.17000	5741.17000	5551.07000
TB-1	159	180140.09000	0.00000	0.000	179670.19000	180944.51000	179805.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:08:06
Tube Number: 8
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.08000	0.00000	0.000	15567.25000	14886.57000	14666.41000
AL	27	9625.48900	76525.59000	2.600	9337.50881	9719.85533	9819.10397
CA	44	9803.53700	10009.80000	6.100	9649.11152	9298.77954	10462.72070
CR	52	0.05000	103.34000	58.300	0.01625	0.06457	0.06793
FE	57	9729.96100	96457.54000	2.200	9509.92562	9743.89923	9936.05872
K	39	9817.54800	165831.74000	2.600	9534.74736	9888.13004	10029.76771
MG	24	9579.92400	263696.88000	3.000	9287.07372	9589.53318	9863.16465
MN	55	0.00500	56.67000	2779.900	0.10620	-0.16940	0.07961
NA	23	9658.67000	543071.86000	3.500	9339.09232	9632.23049	10004.68813
TI	47	210.83800	1813.53000	2.700	215.74870	204.46343	212.30302
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30480.44000	0.00000	0.000	30193.83000	29731.78000	31515.70000
AG	107	-0.00200	3.33000	0.000	-0.00404	0.00247	-0.00404
AS	75	-0.28400	12.00000	0.000	-0.36130	-0.23773	-0.25372
BA	137	-0.07600	10.00000	0.000	0.04572	-0.13751	-0.13751
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01151
CO	59	0.05600	350.02000	90.300	0.10166	0.06450	0.00168
CU	63	0.07000	363.35000	102.000	0.06830	0.14114	-0.00074
MO	98	199.92200	149174.32000	3.800	206.72523	201.32398	191.71796
NI	60	-0.11600	53.33000	0.000	-0.12602	-0.12305	-0.09745
SB	121	0.07800	63.33000	47.800	0.11765	0.07351	0.04335
SN	120	-0.16500	423.36000	0.000	-0.43321	0.02446	-0.08721
SR	88	0.08800	23.33000	137.300	0.22697	0.03842	0.00000
ZN	66	0.52600	53.33000	45.600	0.38382	0.39093	0.80300
BI-1	209	156162.01000	0.00000	0.000	154650.81000	154578.44000	159256.77000
PB	208	0.02100	206.68000	28.100	0.02716	0.01686	0.01751
TL	203	0.00300	16.67000	219.200	-0.00455	0.00495	0.00928
GE-1	72	6057.96000	0.00000	0.000	5851.19000	6071.29000	6251.40000
TB-1	159	182258.51000	0.00000	0.000	180428.32000	184776.19000	181571.01000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:10:06
Tube Number: 9
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15333.77000	0.00000	0.000	15627.42000	15176.91000	15196.97000
AL	27	9589.20100	77736.99000	3.700	9180.02933	9735.20057	9852.37225
CA	44	9725.05900	10129.87000	2.300	9772.17427	9479.95093	9923.05237
CR	52	19.71000	10139.98000	6.400	20.46693	18.24542	20.41749
FE	57	9719.06000	98246.80000	2.900	9438.11420	9994.54633	9724.52063
K	39	9799.82600	168833.31000	1.300	9656.44381	9888.80984	9854.22309
MG	24	9592.37800	269286.63000	2.400	9324.35769	9727.91431	9724.86147
MN	55	20.89800	4467.42000	4.300	19.85508	21.50555	21.33333
NA	23	9667.16600	554371.20000	2.700	9369.17037	9851.84420	9780.48269
TI	47	202.98200	1780.18000	9.600	210.44214	180.95419	217.55035
V	51	0.01700	6.67000	173.200	0.00000	0.00000	0.05209
IN-1	115	30601.08000	0.00000	0.000	31606.83000	30305.29000	29891.11000
AG	107	19.47800	30821.89000	1.500	19.14482	19.66050	19.62832
AS	75	20.09000	1048.71000	12.100	17.28978	21.73827	21.24343
BA	137	-0.07600	10.00000	0.000	-0.13751	-0.13751	0.04758
CD	111	20.05800	3413.04000	7.600	18.38552	20.43401	21.35507
CO	59	20.48200	19594.74000	6.500	19.32871	21.93099	20.18514
CU	63	20.26000	16197.96000	4.300	19.79621	21.26908	19.71412
MO	98	201.28500	150773.67000	3.600	192.92277	204.35913	206.57342
NI	60	19.47300	5247.64000	6.900	17.91888	20.26203	20.23848
SB	121	0.06200	56.67000	57.800	0.06515	0.02472	0.09615
SN	120	-0.27100	370.02000	0.000	-0.12651	-0.53100	-0.15571
SR	88	0.03600	10.00000	173.200	0.10841	0.00000	0.00000
ZN	66	20.16600	1790.17000	9.000	18.06786	21.24060	21.18941
BI-1	209	158775.14000	0.00000	0.000	156689.27000	160064.26000	159571.89000
PB	208	0.02400	233.34000	14.800	0.02377	0.02734	0.02031
TL	203	0.00600	23.33000	301.200	-0.00455	0.02756	-0.00455
GE-1	72	5754.50000	0.00000	0.000	5751.15000	5931.23000	5581.11000
TB-1	159	182323.13000	0.00000	0.000	179793.92000	183977.40000	183198.06000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:12:06
Tube Number: 10
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15737.45000	0.00000	0.000	15457.19000	16508.05000	15247.11000
AL	27	2483.63300	20648.95000	5.700	2570.35394	2319.45578	2561.08828
CA	44	2614.12300	2790.33000	6.600	2552.80505	2479.48862	2810.07392
CR	52	250.56900	131151.91000	3.500	254.99685	240.38151	256.32909
FE	57	2529.56400	26229.69000	3.600	2589.58106	2425.62578	2573.48588
K	39	2492.62800	44645.67000	5.400	2497.31400	2356.45384	2624.11575
MG	24	2457.58700	70732.41000	4.700	2515.96011	2324.89779	2531.90324
MN	55	254.61900	55174.97000	4.700	254.15837	242.95160	266.74632
NA	23	2437.09300	144252.90000	3.000	2441.57392	2360.73308	2508.97249
TI	47	254.42200	2286.92000	4.500	250.10621	245.84111	267.31825
V	51	254.80100	101192.26000	4.000	257.42839	243.57158	263.40303
IN-1	115	31053.05000	0.00000	0.000	30118.72000	31938.47000	31101.97000
AG	107	25.45000	40852.53000	3.200	26.03551	24.50953	25.80433
AS	75	264.83900	13726.03000	2.400	271.95777	262.15014	260.40762
BA	137	262.78700	44259.09000	2.000	268.70555	260.39507	259.26068
CD	111	26.09800	4509.29000	3.000	26.97302	25.47991	25.84206
CO	59	260.62900	249538.58000	2.400	265.28058	253.62769	262.97727
CU	63	261.94000	208757.41000	1.500	265.88417	261.84636	258.08931
MO	98	26.25000	19962.18000	1.300	26.62293	26.00211	26.12347
NI	60	268.27600	72333.53000	2.400	274.92073	262.34885	267.55768
SB	121	25.98700	11571.08000	5.600	27.30278	26.24614	24.41295
SN	120	26.22900	14546.77000	5.100	25.32072	25.58810	27.77952
SR	88	25.88700	7031.72000	4.900	27.34907	24.96797	25.34519
ZN	66	273.84800	24614.39000	2.700	281.88791	267.01113	272.64411
BI-1	209	161103.25000	0.00000	0.000	159408.35000	161283.63000	162617.77000
PB	208	26.28800	185939.68000	1.200	26.64260	26.05372	26.16790
TL	203	25.53500	56035.44000	0.500	25.59464	25.61690	25.39290
GE-1	72	5827.87000	0.00000	0.000	5511.11000	6411.42000	5561.09000
TB-1	159	184242.17000	0.00000	0.000	181078.59000	185939.57000	185708.34000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:14:07
Tube Number: 11
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15977.63000	0.00000	0.000	16427.97000	16678.35000	14826.58000
AL	27	4.60400	53.33000	83.500	4.18877	8.63766	0.98412
CA	44	5.97400	6.67000	173.200	17.92287	0.00000	0.00000
CR	52	0.19800	186.67000	54.200	0.19011	0.09477	0.30875
FE	57	2.87400	36.67000	35.000	4.01889	2.13100	2.47170
K	39	-6.22200	743.39000	0.000	-1.66820	-13.08819	-3.90925
MG	24	3.80600	113.34000	46.800	5.31872	4.25665	1.84151
MN	55	0.16600	96.67000	112.600	0.35189	0.16841	-0.02208
NA	23	0.70500	1250.10000	281.200	1.37112	-1.52459	2.26794
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.16300	66.67000	33.700	0.21685	0.16613	0.10679
IN-1	115	31518.18000	0.00000	0.000	32656.93000	30684.49000	31213.11000
AG	107	0.04100	73.33000	11.500	0.03741	0.04638	0.03933
AS	75	0.34400	45.33000	64.300	0.32500	0.57491	0.13338
BA	137	0.21400	60.00000	73.300	0.25778	0.34329	0.03974
CD	111	0.00000	4.00000	0.000	0.01011	-0.02292	0.01164
CO	59	0.39800	696.71000	25.500	0.50739	0.38059	0.30636
CU	63	0.28400	550.03000	5.700	0.29608	0.28976	0.26561
MO	98	0.28900	223.35000	42.700	0.27503	0.17297	0.41856
NI	60	0.11300	116.67000	189.100	-0.03454	0.35926	0.01545
SB	121	0.23400	136.67000	31.500	0.31772	0.20582	0.17878
SN	120	0.06600	563.37000	49.100	0.09529	0.03138	0.07021
SR	88	0.06100	16.67000	70.200	0.03498	0.03722	0.10978
ZN	66	0.14400	20.00000	71.900	0.24355	0.15138	0.03691
BI-1	209	163622.12000	0.00000	0.000	164881.46000	165780.94000	160203.97000
PB	208	0.02600	253.35000	42.600	0.03731	0.02331	0.01593
TL	203	0.03900	96.67000	12.100	0.03553	0.04417	0.03670
GE-1	72	6211.33000	0.00000	0.000	6071.25000	6671.51000	5891.22000
TB-1	159	183184.42000	0.00000	0.000	184575.56000	186365.90000	178611.79000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:16:08
Tube Number: 12 Batch: 133156050001A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15944.26000	0.00000	0.000	16147.77000	15357.05000	16327.95000
AL	27	-0.38000	10.00000	0.000	-0.39567	-0.33537	-0.40859
CA	44	6.07800	6.67000	173.200	18.23388	0.00000	0.00000
CR	52	-0.08800	36.67000	0.000	-0.02723	-0.07923	-0.15751
FE	57	0.35800	10.00000	262.200	1.28146	0.39064	-0.59689
K	39	-0.02300	853.39000	0.000	-0.31199	2.72218	-2.48067
MG	24	1.47400	43.33000	51.000	1.01450	1.06674	2.34105
MN	55	0.07000	73.33000	213.000	0.09278	0.20587	-0.08907
NA	23	0.11300	1213.43000	2202.200	-2.23437	2.70915	-0.13677
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.05800	23.33000	50.700	0.07354	0.07732	0.02424
IN-1	115	31665.21000	0.00000	0.000	31514.36000	31765.05000	31716.21000
AG	107	0.00600	16.67000	286.200	0.02664	-0.00404	-0.00404
AS	75	-0.09000	22.67000	0.000	0.05097	-0.18025	-0.14188
BA	137	-0.07900	10.00000	0.000	-0.07899	-0.07945	-0.07936
CD	111	0.00400	4.67000	811.200	-0.02292	-0.00028	0.03376
CO	59	0.03800	346.68000	210.200	0.12529	0.01961	-0.03105
CU	63	-0.07300	263.35000	0.000	-0.14930	-0.00385	-0.06476
MO	98	0.09500	73.33000	20.800	0.09068	0.07711	0.11584
NI	60	-0.09800	60.00000	0.000	-0.09744	-0.20803	0.01018
SB	121	0.00600	33.33000	556.700	-0.00100	-0.02352	0.04265
SN	120	-0.14000	453.36000	0.000	0.04184	-0.18559	-0.27593
SR	88	0.02400	6.67000	173.200	0.00000	0.07191	0.00000
ZN	66	2.36200	223.34000	28.200	2.22791	1.77482	3.08447
BI-1	209	164881.30000	0.00000	0.000	167182.03000	165541.23000	161920.64000
PB	208	0.01500	180.00000	15.600	0.01758	0.01510	0.01284
TL	203	0.00100	13.33000	699.600	-0.00455	-0.00455	0.01359
GE-1	72	6301.41000	0.00000	0.000	6201.38000	6461.50000	6241.36000
TB-1	159	186786.79000	0.00000	0.000	187075.70000	185908.65000	187376.03000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:18:10
Tube Number: 13 Batch: 133156050001A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15947.51000	0.00000	0.000	16057.63000	15927.44000	15857.47000
AL	27	1997.58600	16858.40000	2.400	1953.10602	2047.54225	1992.11042
CA	44	4214.34900	4564.09000	6.000	3924.57711	4326.46180	4392.00835
CR	52	49.50200	26350.23000	0.800	49.93148	49.11194	49.46295
FE	57	1060.11000	11153.95000	4.700	1079.29859	1003.31714	1097.71325
K	39	10089.45400	180778.48000	0.300	10051.65280	10117.27707	10099.43144
MG	24	1978.35100	57773.98000	2.400	1938.65594	2030.15532	1966.24054
MN	55	52.06800	11494.09000	3.200	51.16521	54.00345	51.03552
NA	23	9929.69100	592326.31000	2.200	9717.83175	10146.19574	9925.04440
TI	47	271.95700	2480.28000	8.100	296.31400	253.70250	265.85536
V	51	50.77700	20459.17000	2.600	51.15567	51.84718	49.32734
IN-1	115	31603.51000	0.00000	0.000	31238.56000	31396.61000	32175.35000
AG	107	52.53200	85863.66000	1.400	51.85824	53.29333	52.44522
AS	75	10.39700	574.01000	19.100	12.58166	9.91603	8.69358
BA	137	54.27600	9319.63000	5.400	56.25817	55.68095	50.88876
CD	111	5.20500	918.70000	7.300	5.64033	4.92462	5.05073
CO	59	267.69900	260931.68000	1.200	267.48178	270.90249	264.71288
CU	63	54.78400	44687.00000	2.000	55.77951	54.94911	53.62207
MO	98	53.51600	41420.44000	4.100	52.47993	56.05994	52.00729
NI	60	53.50500	14756.60000	1.100	53.79493	53.89032	52.82981
SB	121	6.20700	2837.03000	6.900	6.62298	5.76558	6.23273
SN	120	53.36400	29566.62000	1.200	54.10691	52.93919	53.04543
SR	88	43.14000	11937.89000	1.100	42.79480	42.94320	43.68055
ZN	66	54.03000	4950.91000	1.700	54.55474	52.95975	54.57656
BI-1	209	165454.26000	0.00000	0.000	164326.33000	164903.08000	167133.38000
PB	208	15.83200	115039.45000	0.400	15.88165	15.85338	15.76106
TL	203	2.06200	4655.87000	4.400	2.09591	2.13087	1.95955
GE-1	72	6568.17000	0.00000	0.000	6281.41000	6671.56000	6751.53000
TB-1	159	186830.22000	0.00000	0.000	188316.97000	183098.86000	189074.84000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:20:13
Tube Number: 14 Batch: 133156050001A
Sample Number: **7265131** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14793.32000	0.00000	0.000	14836.63000	15267.19000	14276.13000
AL	27	16.74300	143.34000	37.200	23.92588	13.29797	13.00395
CA	44	64176.25100	64458.18000	2.100	64214.88880	62829.37204	65484.49142
CR	52	0.59100	370.02000	27.000	0.71360	0.64966	0.41094
FE	57	53841.48400	524847.45000	3.200	54400.37139	51883.94426	55240.13494
K	39	9434.65900	156757.77000	3.200	9509.73659	9102.54712	9691.69323
MG	24	20939.40900	566851.22000	3.400	21143.84962	20140.04125	21534.33704
MN	55	1195.49400	243484.43000	2.700	1210.60851	1157.87985	1217.99425
NA	23	61996.66000	3423332.97000	2.000	61972.50823	60754.18223	63263.28808
TI	47	1.58700	13.33000	113.100	3.53671	0.00000	1.22519
V	51	1.13900	426.69000	9.600	1.14723	1.24451	1.02591
IN-1	115	29379.28000	0.00000	0.000	30298.70000	29160.15000	28679.00000
AG	107	0.04200	70.00000	12.700	0.04702	0.04238	0.03642
AS	75	60.23500	2971.61000	5.200	56.60660	62.08912	62.00957
BA	137	164.42300	26217.96000	2.100	163.90906	168.03428	161.32481
CD	111	0.00100	4.00000	2120.100	0.02455	0.00174	-0.02292
CO	59	1.10000	1286.77000	19.000	1.30017	1.11842	0.88217
CU	63	0.28200	510.03000	43.400	0.18258	0.24536	0.41941
MO	98	1.39800	1006.74000	15.000	1.36097	1.62412	1.21004
NI	60	0.77000	276.68000	29.500	0.59611	1.02701	0.68790
SB	121	0.98200	440.03000	24.800	0.73988	1.22683	0.98047
SN	120	0.33400	660.05000	64.800	0.17835	0.58178	0.24330
SR	88	346.32500	89058.74000	1.500	341.62434	345.43817	351.91134
ZN	66	4.52000	390.03000	25.700	3.68832	5.84890	4.02134
BI-1	209	152222.23000	0.00000	0.000	152674.22000	151885.45000	152107.01000
PB	208	0.09200	676.71000	1.200	0.09032	0.09234	0.09219
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00028	0.00028
GE-1	72	6027.96000	0.00000	0.000	6131.39000	5751.10000	6201.40000
TB-1	159	177016.78000	0.00000	0.000	177094.47000	175578.40000	178377.48000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:22:12
Tube Number: 15 Batch: 133156050001A
Sample Number: **7265131** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13655.69000	0.00000	0.000	14056.06000	13825.73000	13085.28000
AL	27	234.43600	1703.49000	6.300	219.08779	248.75671	235.46220
CA	44	66600.50300	61759.00000	2.600	64670.50961	68033.30863	67097.69037
CR	52	4.69900	2203.55000	5.800	4.52571	4.56032	5.01097
FE	57	55627.29500	500513.59000	3.100	54033.75439	55365.64658	57482.48373
K	39	10103.37600	154893.56000	3.300	9760.79337	10119.35186	10429.98225
MG	24	21645.18600	540882.23000	3.100	21065.96082	21500.01801	22369.57995
MN	55	1230.89300	231357.44000	3.200	1198.82704	1219.37399	1274.47761
NA	23	63573.85900	3238756.20000	3.900	61541.46695	62819.50110	66360.60786
TI	47	33.01200	256.68000	31.200	36.08802	21.50800	41.44005
V	51	2.25200	776.72000	9.800	2.05582	2.49091	2.20831
IN-1	115	28514.12000	0.00000	0.000	28978.20000	28617.58000	27946.59000
AG	107	0.93200	1380.11000	1.100	0.94360	0.92851	0.92322
AS	75	60.30500	2890.26000	0.500	60.61822	60.17218	60.12582
BA	137	167.55800	25934.23000	1.900	171.25871	166.06106	165.35560
CD	111	1.07100	173.33000	8.400	1.03176	1.00736	1.17362
CO	59	1.82300	1880.18000	4.400	1.74358	1.90568	1.81964
CU	63	4.28000	3417.13000	6.200	4.32965	3.99376	4.51807
MO	98	2.30700	1610.14000	8.600	2.08517	2.36826	2.46895
NI	60	5.26200	1380.12000	1.800	5.17231	5.36222	5.25113
SB	121	2.95100	1230.10000	9.500	2.70636	2.88785	3.25895
SN	120	4.00200	2443.62000	10.900	4.01896	4.42693	3.55892
SR	88	347.43100	86721.12000	1.300	343.09414	346.93394	352.26526
ZN	66	33.49400	2773.65000	11.400	33.42244	37.34519	29.71410
BI-1	209	149076.80000	0.00000	0.000	148463.89000	151351.01000	147415.50000
PB	208	2.06900	13599.57000	0.700	2.07632	2.05311	2.07724
TL	203	1.02200	2083.56000	7.600	1.02920	0.94156	1.09632
GE-1	72	5587.78000	0.00000	0.000	5431.08000	5811.14000	5521.12000
TB-1	159	171632.66000	0.00000	0.000	171699.65000	173204.51000	169993.81000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:24:15
Tube Number: 16 Batch: 133156050001A
Sample Number: **7265134** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13945.88000	0.00000	0.000	14226.09000	14836.57000	12774.98000
AL	27	9.67700	83.34000	58.400	3.75033	15.00398	10.27533
CA	44	63901.50800	60270.57000	8.700	61312.10785	60092.29386	70300.12112
CR	52	0.57300	336.69000	21.600	0.64535	0.43000	0.64244
FE	57	54504.00800	499715.46000	6.000	54259.20585	51375.84130	57876.97601
K	39	9508.85100	148594.08000	6.000	9503.40312	8937.91242	10085.23822
MG	24	21014.12000	534790.64000	7.100	20948.42833	19561.35388	22532.57857
MN	55	1205.54200	230632.68000	8.200	1188.73259	1116.12903	1311.76436
NA	23	62407.02500	3238593.18000	7.100	62281.06443	58029.14505	66910.86427
TI	47	1.68600	13.33000	110.600	3.68850	0.00000	1.36916
V	51	1.24900	440.03000	13.700	1.05735	1.38737	1.30142
IN-1	115	28119.22000	0.00000	0.000	29350.41000	27939.34000	27067.90000
AG	107	-0.00400	0.00000	0.000	-0.00404	-0.00404	-0.00404
AS	75	58.22900	2752.90000	2.600	58.98393	56.48969	59.21215
BA	137	164.84500	25156.19000	0.900	165.49649	163.08426	165.95382
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.78500	956.73000	18.300	0.89895	0.62347	0.83365
CU	63	0.03900	313.35000	257.500	0.01520	-0.04779	0.15085
MO	98	1.23000	846.72000	15.300	1.11279	1.44664	1.13123
NI	60	0.89900	296.68000	6.000	0.93980	0.83822	0.91803
SB	121	1.06400	453.36000	17.800	0.90884	1.00821	1.27523
SN	120	0.07200	503.37000	229.500	-0.10110	0.08837	0.22980
SR	88	349.33700	85950.39000	2.500	342.73026	345.86597	359.41612
ZN	66	4.60500	380.02000	23.400	4.63361	3.51152	5.66869
BI-1	209	148282.64000	0.00000	0.000	149209.75000	148767.09000	146871.08000
PB	208	0.05700	433.36000	18.100	0.04530	0.06078	0.06479
TL	203	-0.00100	6.67000	0.000	0.00529	-0.00455	-0.00455
GE-1	72	5230.96000	0.00000	0.000	5711.12000	5190.96000	4790.81000
TB-1	159	170974.00000	0.00000	0.000	175051.50000	167878.42000	169992.07000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:26:15
Tube Number: 17 Batch: 133156050001A
Sample Number: **7265132** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13418.76000	0.00000	0.000	12845.08000	13565.52000	13845.68000
AL	27	2030.24700	14412.82000	1.900	2069.20085	1991.29506	2030.24373
CA	44	71181.88700	64839.61000	2.800	72905.57070	71615.98087	69024.11027
CR	52	50.41300	22554.82000	4.100	52.59377	50.14691	48.49912
FE	57	57676.66000	509768.72000	4.500	60231.34220	57807.99712	54990.64106
K	39	20391.10700	306328.74000	4.700	21430.00238	20179.47159	19563.84769
MG	24	23995.11200	589011.10000	4.200	25099.69725	23760.30785	23125.33180
MN	55	1272.54000	234993.60000	4.200	1318.04054	1285.08277	1214.49647
NA	23	75233.08100	3765867.86000	4.100	78357.89703	75094.64937	72246.69721
TI	47	271.84800	2083.56000	11.900	292.79779	234.68705	288.05923
V	51	51.52300	17442.34000	5.600	54.53985	51.23482	48.79556
IN-1	115	27112.13000	0.00000	0.000	27234.18000	27602.61000	26499.59000
AG	107	48.40700	67870.36000	0.800	48.59502	47.94508	48.68157
AS	75	69.42200	3158.31000	6.100	72.64388	64.66539	70.95743
BA	137	225.64400	33186.84000	1.600	225.91709	221.96618	229.04800
CD	111	5.61100	850.03000	3.500	5.52237	5.83914	5.47256
CO	59	252.61900	211257.44000	1.200	255.25797	249.44904	253.15127
CU	63	51.39700	35983.59000	1.400	51.05868	50.89619	52.23470
MO	98	54.30300	36061.94000	0.800	54.68271	53.80455	54.42318
NI	60	53.11400	12568.22000	2.100	51.79927	53.77742	53.76554
SB	121	7.44600	2920.37000	15.600	7.17045	8.71999	6.44769
SN	120	52.07700	24755.57000	3.400	52.59349	50.12973	53.50758
SR	88	409.08600	97111.30000	0.500	410.75986	409.73356	406.76397
ZN	66	53.05200	4167.34000	5.400	51.17051	51.61294	56.37201
BI-1	209	140973.15000	0.00000	0.000	143254.76000	142219.58000	137445.12000
PB	208	16.08300	99553.57000	1.500	15.90382	15.98906	16.35725
TL	203	2.12600	4087.36000	7.900	1.93317	2.20551	2.23952
GE-1	72	5324.33000	0.00000	0.000	5371.01000	5551.08000	5050.91000
TB-1	159	165180.06000	0.00000	0.000	165902.09000	166586.25000	163051.83000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:28:17
Tube Number: 18 Batch: 133156050001A
Sample Number: **7265133** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	13799.15000	0.00000	0.000	14065.96000	13785.84000	13545.65000
AL	27	1988.53800	14519.67000	1.500	1968.83429	1973.18092	2023.59946
CA	44	67700.83200	63458.10000	1.400	68215.95104	66645.32558	68241.22080
CR	52	49.15200	22641.71000	0.900	49.57716	49.21244	48.66602
FE	57	54982.34000	500272.56000	0.500	54964.14764	54693.05489	55289.81739
K	39	19317.94100	298768.84000	1.600	18983.66655	19375.74011	19594.41533
MG	24	22564.45800	570146.45000	1.500	22513.51310	22256.49890	22923.36172
MN	55	1198.74300	227859.36000	0.600	1201.53178	1190.15728	1204.54077
NA	23	71036.18900	3660266.19000	0.400	70735.09457	71322.06016	71051.41158
TI	47	266.62900	2103.54000	2.100	269.86714	260.11792	269.90051
V	51	51.81900	18059.65000	2.600	50.76403	51.36413	53.32810
IN-1	115	27069.00000	0.00000	0.000	27058.19000	27181.59000	26967.22000
AG	107	48.99200	68586.62000	2.500	50.38857	48.18874	48.39867
AS	75	67.76900	3080.29000	2.400	69.65924	66.82333	66.82436
BA	137	223.34100	32802.93000	0.200	223.08696	223.09395	223.84339
CD	111	4.86000	735.35000	7.700	5.21287	4.89808	4.47053
CO	59	252.76400	211053.25000	0.900	254.22999	250.18111	253.87951
CU	63	50.64100	35412.72000	3.900	51.17704	52.28090	48.46634
MO	98	53.24000	35300.02000	2.100	54.20646	51.98888	53.52400
NI	60	53.63200	12671.67000	5.800	56.52895	54.02163	50.34689
SB	121	6.88700	2693.67000	4.000	7.14006	6.92725	6.59396
SN	120	52.43700	24892.05000	3.600	53.69350	50.25676	53.36022
SR	88	404.44300	95845.05000	2.700	412.07881	391.99869	409.25100
ZN	66	52.75700	4140.64000	4.700	55.46138	52.28645	50.52446
BI-1	209	140526.96000	0.00000	0.000	141531.72000	138325.32000	141723.84000
PB	208	15.91200	98198.08000	2.200	16.22970	15.95714	15.54819
TL	203	2.06900	3967.32000	4.000	2.06056	2.15621	1.99039
GE-1	72	5374.33000	0.00000	0.000	5421.02000	5421.00000	5280.98000
TB-1	159	162868.41000	0.00000	0.000	163610.64000	161256.37000	163738.22000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:30:17
Tube Number: 19 Batch: 133156050001A
Sample Number: **7265131** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14082.76000	0.00000	0.000	14105.93000	14146.22000	13996.13000
AL	27	7.38700	66.67000	11.000	7.81740	6.45390	7.89101
CA	44	12828.24200	12271.31000	1.500	13029.87865	12659.51854	12795.32774
CR	52	0.08400	113.34000	80.100	0.05555	0.16120	0.03575
FE	57	11345.63800	105353.73000	2.100	11167.66000	11246.88136	11622.37360
K	39	1964.04400	31685.05000	1.700	2003.53016	1947.05130	1941.55201
MG	24	4280.86200	110391.79000	2.500	4285.36981	4171.89137	4385.32342
MN	55	246.23300	47804.11000	2.300	243.38093	242.63608	252.68055
NA	23	12376.68600	651739.94000	0.900	12506.74663	12284.24441	12339.06841
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.42100	150.01000	11.100	0.44900	0.44772	0.36768
IN-1	115	28838.82000	0.00000	0.000	29761.10000	28628.31000	28127.04000
AG	107	0.17600	266.68000	28.600	0.11942	0.19185	0.21597
AS	75	11.44100	574.01000	13.200	10.08627	13.06355	11.17185
BA	137	33.87000	5317.76000	0.600	33.76439	33.75265	34.09417
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.48200	710.05000	9.500	0.46770	0.53279	0.44407
CU	63	0.12800	386.69000	69.600	0.03573	0.13462	0.21346
MO	98	0.45700	320.02000	41.500	0.26064	0.47061	0.63867
NI	60	0.00400	80.00000	1298.500	-0.04575	0.04545	0.01094
SB	121	0.14400	86.67000	57.000	0.04989	0.20102	0.18098
SN	120	0.25800	610.04000	33.700	0.16009	0.32659	0.28779
SR	88	68.16700	17192.43000	6.000	64.31634	67.73987	72.44409
ZN	66	1.08000	96.67000	19.800	1.31902	1.01207	0.90863
BI-1	209	149672.63000	0.00000	0.000	151503.02000	148807.20000	148707.67000
PB	208	0.03200	270.01000	39.500	0.01740	0.04086	0.03629
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00532	-0.00455
GE-1	72	5821.21000	0.00000	0.000	5621.16000	6031.32000	5811.16000
TB-1	159	170019.26000	0.00000	0.000	171173.83000	168052.30000	170831.66000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:32:19
Tube Number: 20 Batch: 133156050001A
Sample Number: **7265741** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14079.40000	0.00000	0.000	14866.60000	14316.43000	13055.17000
AL	27	1.97600	26.67000	68.100	3.52125	1.07502	1.33024
CA	44	4112.32100	3923.93000	6.300	4050.82309	3887.58147	4398.55913
CR	52	-0.05300	50.00000	0.000	0.04465	-0.11553	-0.08845
FE	57	532.91600	4944.24000	4.000	515.67960	525.97745	557.09242
K	39	1538.04900	24877.75000	8.700	1411.19419	1524.16786	1678.78529
MG	24	3742.52800	96259.28000	5.700	3535.70662	3733.31950	3958.55733
MN	55	14.86100	2923.70000	9.600	13.21504	15.55947	15.80873
NA	23	66034.23200	3461231.09000	6.900	61915.51555	65207.03390	70980.14666
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04500	16.67000	92.600	0.05325	0.08294	0.00000
IN-1	115	28878.90000	0.00000	0.000	28083.19000	29671.73000	28881.77000
AG	107	0.05000	80.00000	36.100	0.04416	0.03506	0.06961
AS	75	2.25300	133.33000	6.800	2.42861	2.14939	2.18085
BA	137	23.88200	3757.28000	7.500	25.93660	23.11112	22.59704
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.17300	436.70000	45.700	0.09849	0.16374	0.25559
CU	63	0.21600	453.36000	45.300	0.27000	0.27374	0.10294
MO	98	0.19900	140.01000	33.900	0.27621	0.15136	0.16963
NI	60	0.37400	173.34000	19.100	0.29877	0.38234	0.44137
SB	121	-0.04300	10.00000	0.000	-0.06753	-0.06753	0.00507
SN	120	-0.03300	466.70000	0.000	0.02090	-0.05181	-0.06687
SR	88	38.51400	9736.39000	2.400	39.34110	38.66036	37.54137
ZN	66	2.60100	223.34000	9.300	2.87809	2.48725	2.43771
BI-1	209	149020.68000	0.00000	0.000	148361.30000	150128.55000	148572.18000
PB	208	0.01200	143.34000	6.000	0.01183	0.01309	0.01180
TL	203	0.01000	30.00000	127.900	0.02514	0.00523	0.00039
GE-1	72	5581.10000	0.00000	0.000	5381.04000	5851.20000	5511.07000
TB-1	159	172509.54000	0.00000	0.000	172708.63000	174881.72000	169938.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:34:20
Tube Number: 21 Batch: 133156050001A
Sample Number: **7265742** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14696.50000	0.00000	0.000	14496.34000	14486.19000	15106.96000
AL	27	-1.56700	0.00000	0.000	-1.56674	-1.56674	-1.56674
CA	44	3748.77700	3743.88000	2.600	3707.32188	3679.42134	3859.58906
CR	52	0.05400	103.34000	98.200	0.00835	0.11223	0.04146
FE	57	27.02900	266.68000	31.000	25.55828	36.04664	19.48170
K	39	1498.17100	25388.69000	5.200	1528.75574	1555.84057	1409.91647
MG	24	3602.60900	96922.66000	2.400	3672.17783	3629.30318	3506.34464
MN	55	10.96500	2270.25000	9.600	11.05447	11.96480	9.87575
NA	23	63485.77200	3482245.16000	3.500	65012.90927	64468.48744	60975.91933
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	30385.15000	0.00000	0.000	32277.06000	29129.69000	29748.70000
AG	107	0.02000	36.67000	131.600	-0.00404	0.01588	0.04797
AS	75	1.77700	116.67000	11.500	2.00826	1.70463	1.61799
BA	137	22.35200	3693.89000	10.200	20.43409	24.87313	21.74830
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.16300	450.03000	17.800	0.17517	0.18384	0.12975
CU	63	0.33200	566.70000	60.800	0.25588	0.17907	0.56056
MO	98	0.10400	76.67000	65.400	0.07589	0.18220	0.05489
NI	60	0.38500	183.35000	83.700	0.25449	0.75149	0.14808
SB	121	-0.03600	13.33000	0.000	-0.04588	0.00445	-0.06753
SN	120	0.37200	710.31000	110.900	0.82885	0.26457	0.02389
SR	88	36.31800	9646.35000	4.400	34.47737	37.26099	37.21592
ZN	66	3.71600	330.02000	28.500	2.49455	4.31357	4.33838
BI-1	209	153408.08000	0.00000	0.000	153690.44000	154074.93000	152458.87000
PB	208	0.09500	703.37000	0.700	0.09410	0.09532	0.09494
TL	203	0.01000	30.00000	48.500	0.00501	0.01451	0.00990
GE-1	72	5704.51000	0.00000	0.000	5421.11000	5641.16000	6051.26000
TB-1	159	177177.38000	0.00000	0.000	177527.60000	177145.00000	176859.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:36:21
Tube Number: 22
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15040.15000	0.00000	0.000	15307.01000	15317.05000	14496.38000
AL	27	2441.83300	19424.29000	3.100	2462.01109	2359.04253	2504.44403
CA	44	2859.26500	2927.03000	10.600	2895.29289	3143.33941	2539.16329
CR	52	250.37500	125298.06000	2.800	244.74455	248.04339	258.33709
FE	57	2466.80900	24480.88000	2.100	2499.92601	2494.35822	2406.14387
K	39	2485.69400	42584.03000	3.300	2413.93751	2466.17587	2576.96738
MG	24	2463.36200	67802.04000	3.300	2428.21043	2406.58947	2555.28712
MN	55	254.70900	52798.41000	1.400	252.90108	252.40320	258.82154
NA	23	2510.95200	142026.05000	3.300	2475.77865	2452.16038	2604.91768
TI	47	261.00300	2240.22000	9.700	259.41497	236.39953	287.19484
V	51	253.48100	96265.57000	2.700	247.70880	251.80626	260.92814
IN-1	115	30717.23000	0.00000	0.000	31360.45000	31215.59000	29575.64000
AG	107	25.19800	40027.56000	0.800	25.19014	25.00270	25.39985
AS	75	263.86400	13528.54000	1.500	262.20318	260.99777	268.39157
BA	137	257.33000	42862.35000	2.500	253.22832	253.99121	264.77083
CD	111	25.17000	4297.90000	7.300	23.51865	24.83765	27.15251
CO	59	255.54100	241990.09000	2.700	251.55874	251.51164	263.55141
CU	63	257.61700	202971.80000	3.600	250.61979	253.93380	268.29846
MO	98	25.86000	19451.51000	1.500	25.69927	25.56973	26.31050
NI	60	257.90300	68776.06000	3.000	252.32192	254.79553	266.59106
SB	121	25.30500	11137.46000	5.900	23.98844	24.99610	26.92986
SN	120	25.51900	14002.98000	5.500	23.90933	26.37100	26.27551
SR	88	25.31300	6798.34000	7.100	25.02771	23.67902	27.23321
ZN	66	258.86200	23008.95000	4.000	250.65288	255.47350	270.45973
BI-1	209	161404.02000	0.00000	0.000	164356.52000	160406.82000	159448.71000
PB	208	25.87400	183336.59000	1.900	25.39173	26.36216	25.86762
TL	203	25.24400	55493.95000	1.600	24.89133	25.15537	25.68535
GE-1	72	6094.64000	0.00000	0.000	6001.25000	6101.26000	6181.42000
TB-1	159	181798.70000	0.00000	0.000	183988.81000	182319.00000	179088.28000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:38:22
Tube Number: 23
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14990.09000	0.00000	0.000	14526.40000	14806.65000	15637.23000
AL	27	0.57800	16.67000	338.300	1.03683	2.26470	-1.56674
CA	44	6.69200	6.67000	86.600	10.13453	9.94271	0.00000
CR	52	0.11300	133.34000	114.800	0.23562	0.12669	-0.02297
FE	57	4.93400	53.34000	141.600	12.97616	1.45159	0.37295
K	39	-6.04900	703.38000	0.000	-14.08164	0.98173	-5.04820
MG	24	3.78000	103.34000	32.600	3.38321	5.16353	2.79366
MN	55	0.48700	153.34000	94.600	0.93275	0.51773	0.01166
NA	23	5.53500	1446.79000	47.800	3.28824	8.45035	4.86631
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.17800	66.67000	46.300	0.27248	0.13366	0.12656
IN-1	115	30782.23000	0.00000	0.000	29669.19000	31834.63000	30842.87000
AG	107	0.06700	113.34000	6.300	0.06766	0.06278	0.07120
AS	75	0.19000	36.00000	193.300	0.49103	-0.21869	0.29689
BA	137	0.04300	30.00000	150.100	0.11112	0.03628	-0.01793
CD	111	0.00800	5.33000	219.400	-0.01080	0.01096	0.02371
CO	59	0.31300	596.70000	22.300	0.38260	0.24319	0.31386
CU	63	-0.07600	253.35000	0.000	-0.08130	-0.05373	-0.09331
MO	98	0.11600	86.67000	41.400	0.12384	0.06412	0.15885
NI	60	0.00100	83.34000	24606.300	0.22702	-0.28067	0.05681
SB	121	0.32400	173.34000	22.900	0.23873	0.37158	0.36304
SN	120	0.61000	851.00000	180.400	-0.20835	1.86105	0.17705
SR	88	0.01300	3.33000	173.200	0.03850	0.00000	0.00000
ZN	66	0.19300	23.33000	152.700	0.50832	0.14325	-0.07374
BI-1	209	157021.35000	0.00000	0.000	156217.65000	156631.63000	158214.78000
PB	208	0.02300	223.34000	102.700	0.04575	-0.00094	0.02345
TL	203	0.02200	56.67000	65.300	0.00955	0.03764	0.01865
GE-1	72	5881.21000	0.00000	0.000	5561.14000	6051.24000	6031.25000
TB-1	159	177887.13000	0.00000	0.000	179297.58000	177420.66000	176943.16000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:40:22
Tube Number: 24 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15447.16000	0.00000	0.000	16187.76000	15707.45000	14446.27000
AL	27	2.91700	36.67000	46.200	1.93781	4.45278	2.36028
CA	44	31.23100	33.33000	64.800	54.56649	18.74502	20.38148
CR	52	0.04300	103.34000	100.700	0.02817	0.09125	0.00893
FE	57	4.02000	46.67000	58.500	5.02424	1.33412	5.70186
K	39	-6.05700	713.38000	0.000	-21.42438	-6.37862	9.63118
MG	24	1.06300	30.00000	6.000	1.01200	1.04294	1.13399
MN	55	0.16400	93.34000	155.400	0.22650	0.38028	-0.11616
NA	23	40.11900	3467.12000	20.300	32.47708	39.20832	48.67098
TI	47	0.72000	6.67000	173.200	2.16101	0.00000	0.00000
V	51	0.07400	30.00000	99.000	0.14671	0.07560	0.00000
IN-1	115	30473.78000	0.00000	0.000	31306.89000	30734.28000	29380.16000
AG	107	0.02400	43.33000	19.600	0.02067	0.02113	0.02887
AS	75	-0.21600	15.33000	0.000	-0.32862	-0.20789	-0.11179
BA	137	0.04400	30.00000	236.300	-0.01970	0.16251	-0.01197
CD	111	-0.02300	0.00000	0.000	-0.02292	-0.02292	-0.02292
CO	59	0.27400	556.70000	30.300	0.35634	0.27384	0.19061
CU	63	0.10300	390.02000	162.900	-0.06042	0.27594	0.09446
MO	98	0.05000	36.67000	60.100	0.02608	0.03985	0.08337
NI	60	0.11000	113.34000	99.400	0.23538	0.05813	0.03622
SB	121	0.09400	70.00000	67.000	0.02177	0.13714	0.12280
SN	120	-0.27300	366.68000	0.000	-0.17408	-0.42378	-0.22060
SR	88	0.03700	10.00000	100.600	0.03648	0.07433	0.00000
ZN	66	3.13700	283.35000	10.700	2.90522	3.52262	2.98290
BI-1	209	159566.64000	0.00000	0.000	163368.64000	160003.41000	155327.88000
PB	208	0.06600	526.69000	6.200	0.06146	0.06580	0.06954
TL	203	-0.00100	6.67000	0.000	-0.00455	0.00463	-0.00455
GE-1	72	5907.87000	0.00000	0.000	6231.33000	5921.24000	5571.05000
TB-1	159	180252.29000	0.00000	0.000	180681.52000	183186.81000	176888.55000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:42:22
Tube Number: 25 Batch: 133156050001A
Sample Number: **7265140** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15937.55000	0.00000	0.000	15356.93000	15827.39000	16628.34000
AL	27	1.23200	23.33000	155.900	3.35879	-0.37196	0.70772
CA	44	15.59700	16.67000	123.900	9.58644	37.20594	0.00000
CR	52	0.03300	100.00000	341.100	0.15565	-0.06257	0.00516
FE	57	1.96700	26.67000	61.100	3.35327	1.31948	1.22718
K	39	-2.50800	810.06000	0.000	1.55852	-10.08423	1.00098
MG	24	1.35400	40.00000	46.500	0.71116	1.38005	1.97036
MN	55	0.20800	103.34000	99.500	0.44233	0.05419	0.12610
NA	23	3.96200	1446.79000	40.000	3.23262	2.87093	5.78216
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	91.000	0.05155	0.07503	0.00000
IN-1	115	31063.65000	0.00000	0.000	30845.32000	31642.84000	30702.80000
AG	107	0.01900	36.67000	36.100	0.01477	0.02652	0.01486
AS	75	-0.14600	19.33000	0.000	-0.01447	-0.29273	-0.12939
BA	137	-0.01800	20.00000	0.000	0.10164	-0.13751	-0.01738
CD	111	-0.01500	1.33000	0.000	0.00039	-0.02292	-0.02292
CO	59	0.15300	450.03000	78.300	0.05071	0.12350	0.28502
CU	63	-0.06200	266.68000	0.000	-0.04272	-0.07632	-0.06651
MO	98	0.05700	43.33000	58.700	0.09265	0.02580	0.05319
NI	60	0.10300	113.34000	104.900	0.13155	0.19309	-0.01657
SB	121	0.04500	50.00000	46.800	0.02311	0.06500	0.04629
SN	120	-0.03900	500.03000	0.000	-0.04916	0.20290	-0.27188
SR	88	0.02400	6.67000	173.200	0.00000	0.07219	0.00000
ZN	66	1.52200	143.34000	12.600	1.49401	1.34535	1.72628
BI-1	209	162010.62000	0.00000	0.000	160700.65000	162275.71000	163055.50000
PB	208	0.02600	253.34000	24.000	0.02577	0.01981	0.03225
TL	203	-0.00300	3.33000	0.000	-0.00455	-0.00455	-0.00005
GE-1	72	6014.60000	0.00000	0.000	5961.23000	6001.28000	6081.29000
TB-1	159	182178.47000	0.00000	0.000	185353.63000	181227.89000	179953.90000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:44:22
Tube Number: 26 Batch: 133116050004A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15326.99000	0.00000	0.000	15797.30000	15146.85000	15036.83000
AL	27	0.90200	20.00000	7.200	0.82737	0.93018	0.94845
CA	44	32.48100	33.34000	149.000	9.31920	0.00000	88.12437
CR	52	-0.13200	13.33000	0.000	-0.11946	-0.11783	-0.15751
FE	57	1.35100	20.00000	142.200	3.24315	1.40558	-0.59689
K	39	0.13100	823.39000	3727.000	-2.65239	5.78746	-2.74078
MG	24	5.47700	153.34000	18.200	4.49405	6.48961	5.44764
MN	55	0.23900	106.67000	77.200	0.14673	0.45217	0.11936
NA	23	17.17900	2143.57000	19.900	14.61726	21.07036	15.84979
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.04200	16.67000	173.200	0.12528	0.00000	0.00000
IN-1	115	31535.84000	0.00000	0.000	31536.13000	31607.44000	31463.96000
AG	107	0.02700	50.00000	40.100	0.03275	0.01432	0.03284
AS	75	-0.33000	10.00000	0.000	-0.06360	-0.44436	-0.48216
BA	137	2.65000	476.70000	5.300	2.72799	2.48820	2.73468
CD	111	-0.01900	0.67000	0.000	-0.02292	-0.02292	-0.01150
CO	59	0.25900	560.04000	44.800	0.39262	0.18561	0.19822
CU	63	-0.10800	233.35000	0.000	-0.14947	-0.00189	-0.17370
MO	98	0.00900	6.67000	173.200	0.00000	0.00000	0.02595
NI	60	-0.01200	83.34000	0.000	-0.13414	0.08427	0.01280
SB	121	-0.02300	20.00000	0.000	0.02112	-0.02330	-0.06753
SN	120	7.35300	4520.90000	10.400	8.09027	7.40859	6.56023
SR	88	1.90800	526.70000	10.700	1.77479	1.80693	2.14188
ZN	66	0.87500	86.67000	68.800	0.25482	1.45621	0.91421
BI-1	209	163024.71000	0.00000	0.000	162892.56000	166367.95000	159813.62000
PB	208	0.01200	156.67000	26.600	0.00851	0.01361	0.01457
TL	203	0.00000	10.00000	0.000	-0.00455	0.00428	0.00005
GE-1	72	5961.24000	0.00000	0.000	5741.17000	5871.19000	6271.36000
TB-1	159	182796.35000	0.00000	0.000	185675.78000	183961.56000	178751.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:46:22
Tube Number: 27 Batch: 133116050004A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.23000	0.00000	0.000	15567.45000	15006.71000	14726.52000
AL	27	1874.80700	15000.06000	7.400	1966.03531	1942.41884	1715.96649
CA	44	3840.64900	3937.28000	3.200	3745.48742	3797.11045	3979.35000
CR	52	49.43300	24907.87000	1.600	48.68561	49.38679	50.22712
FE	57	939.59200	9352.74000	5.700	879.34076	979.96708	959.46899
K	39	9837.32100	166882.26000	1.300	9695.61079	9917.18808	9899.16322
MG	24	1874.32900	51813.67000	1.700	1837.19833	1887.58421	1898.20306
MN	55	48.49300	10129.97000	5.500	45.45811	49.68384	50.33734
NA	23	9529.43000	538096.09000	2.400	9318.53426	9504.75067	9765.00620
TI	47	231.02800	1996.86000	7.100	243.83717	236.62612	212.62179
V	51	49.88300	19027.47000	2.000	49.12593	51.04067	49.48297
IN-1	115	29873.99000	0.00000	0.000	29233.48000	30779.90000	29608.59000
AG	107	51.16800	79021.96000	2.600	52.45267	49.83628	51.21649
AS	75	10.24800	536.01000	1.500	10.15454	10.16413	10.42466
BA	137	52.00400	8439.15000	8.900	50.78522	48.10691	57.11926
CD	111	5.17000	862.70000	2.900	5.08162	5.08216	5.34484
CO	59	257.99400	237648.70000	2.300	263.70387	252.06284	258.21513
CU	63	52.33100	40353.24000	2.800	52.87681	50.64541	53.46941
MO	98	51.18800	37444.55000	3.300	53.11164	50.37670	50.07599
NI	60	53.26900	13879.22000	4.100	54.98223	50.81627	54.00807
SB	121	5.63200	2433.62000	9.500	5.52761	5.15568	6.21221
SN	120	64.66200	33759.66000	4.200	62.64053	63.62361	67.72125
SR	88	40.53300	10590.35000	5.800	42.32934	37.86264	41.40612
ZN	66	53.67200	4644.11000	5.600	55.46558	50.20553	55.34557
BI-1	209	157119.07000	0.00000	0.000	158682.90000	155265.40000	157408.91000
PB	208	15.35000	105918.65000	0.900	15.19864	15.40665	15.44503
TL	203	1.99000	4267.46000	2.100	1.98087	1.95361	2.03423
GE-1	72	5687.81000	0.00000	0.000	5491.07000	6131.31000	5441.04000
TB-1	159	177792.41000	0.00000	0.000	177357.50000	178126.40000	177893.32000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:48:22
Tube Number: 28 Batch: 133116050004A
Sample Number: **7265230** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14222.82000	0.00000	0.000	13825.78000	15016.90000	13825.77000
AL	27	222.43700	1683.49000	13.700	255.59868	216.30537	195.40663
CA	44	36626.32300	35322.03000	5.500	37678.99673	34296.97483	37902.99617
CR	52	4.21400	2066.87000	3.700	4.38631	4.08598	4.16890
FE	57	1164.79300	10917.14000	3.700	1203.13751	1117.76602	1173.47586
K	39	2409.96500	39042.42000	4.000	2480.58698	2299.18199	2450.12589
MG	24	14513.58400	377535.41000	4.000	14923.20679	13845.43101	14772.11400
MN	55	642.90600	125893.30000	2.200	652.14620	626.59244	649.97860
NA	23	72819.85600	3863105.15000	3.500	74722.07038	69880.35181	73857.14661
TI	47	27.33200	220.01000	74.000	50.60643	17.47244	13.91735
V	51	1.05000	376.69000	10.300	1.17385	1.00167	0.97345
IN-1	115	29215.62000	0.00000	0.000	29225.88000	29352.12000	29068.85000
AG	107	1.05700	1603.47000	12.700	1.18703	0.91835	1.06705
AS	75	3.73800	207.33000	11.300	3.33999	4.18208	3.69115
BA	137	42.45500	6748.34000	3.200	41.96010	43.97897	41.42648
CD	111	0.93600	156.00000	20.100	1.04743	1.04282	0.71924
CO	59	1.71600	1830.16000	15.800	1.40397	1.86109	1.88229
CU	63	4.41700	3603.86000	12.900	3.91573	4.29608	5.03990
MO	98	1.27200	910.07000	6.400	1.35504	1.26576	1.19382
NI	60	4.18300	1140.08000	15.700	4.37631	3.45296	4.71889
SB	121	2.13400	920.06000	12.200	2.32409	1.83751	2.24079
SN	120	4.01100	2506.98000	9.200	3.73825	4.43041	3.86352
SR	88	108.24800	27686.22000	3.400	110.49684	103.98072	110.26751
ZN	66	37.88700	3210.43000	9.700	41.17642	33.93756	38.54727
BI-1	209	153557.80000	0.00000	0.000	153571.56000	156297.16000	150804.69000
PB	208	2.73400	18491.76000	2.000	2.68374	2.79286	2.72411
TL	203	0.91200	1916.86000	4.600	0.89917	0.87871	0.95958
GE-1	72	5481.10000	0.00000	0.000	4770.82000	5851.29000	5821.19000
TB-1	159	175526.92000	0.00000	0.000	176931.36000	178155.21000	171494.18000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:50:22
Tube Number: 29 Batch: 133116050004A
Sample Number: **7265231** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14149.50000	0.00000	0.000	14366.36000	14676.53000	13405.62000
AL	27	2111.81500	15793.99000	4.000	2062.00276	2063.52954	2209.91366
CA	44	42418.14300	40726.59000	3.300	42042.55660	41224.12567	43987.74575
CR	52	51.44300	24267.08000	4.600	49.06052	51.44548	53.82247
FE	57	2005.88300	18686.85000	5.800	1969.20999	1913.11618	2135.32374
K	39	12592.00900	199625.53000	6.000	12207.06823	12103.26494	13465.69235
MG	24	16961.08300	438834.11000	4.800	16619.61320	16371.56754	17892.06954
MN	55	710.64300	138386.59000	3.400	704.97666	689.86982	737.08123
NA	23	85516.67900	4512896.39000	3.800	84690.92589	82792.47808	89066.63190
TI	47	256.35100	2073.55000	10.900	225.25955	278.90375	264.88999
V	51	53.25600	19004.10000	5.900	53.26076	50.11032	56.39775
IN-1	115	29526.65000	0.00000	0.000	29937.14000	30033.15000	28609.67000
AG	107	49.50600	75552.71000	3.600	49.02574	48.03492	51.45801
AS	75	9.80200	508.01000	2.400	9.66308	10.07012	9.67412
BA	137	90.47400	14503.48000	1.800	90.21080	89.00135	92.21066
CD	111	4.80500	791.36000	12.500	4.22894	4.75415	5.43171
CO	59	250.06200	227740.96000	0.500	249.55660	249.04341	251.58702
CU	63	50.59700	38599.01000	2.500	49.80832	52.04398	49.93781
MO	98	52.65200	38075.95000	0.900	52.64261	52.18738	53.12594
NI	60	49.89200	12855.17000	3.400	48.63454	49.20804	51.83362
SB	121	6.18500	2643.66000	8.300	6.77380	5.93724	5.84507
SN	120	50.46800	26144.32000	2.600	49.03964	50.70027	51.66438
SR	88	145.31800	37561.16000	3.000	140.43704	148.60255	146.91418
ZN	66	54.48400	4664.15000	6.100	57.96892	51.34160	54.14039
BI-1	209	150673.64000	0.00000	0.000	149521.94000	152459.89000	150039.10000
PB	208	15.93500	105445.15000	0.400	16.01275	15.87213	15.92099
TL	203	1.93400	3980.67000	7.600	1.87652	2.10041	1.82599
GE-1	72	5874.57000	0.00000	0.000	5971.25000	5240.99000	6411.48000
TB-1	159	176366.30000	0.00000	0.000	175304.04000	178367.30000	175427.56000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:52:22
Tube Number: 30 Batch: 133116050004A
Sample Number: **7265232** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15000.08000	0.00000	0.000	14786.53000	14406.29000	15807.43000
AL	27	1981.71800	15727.24000	2.700	1930.40447	2037.88648	1976.86204
CA	44	38437.96500	39096.22000	5.400	38882.03750	40266.33495	36165.52203
CR	52	48.29700	24130.38000	7.400	50.98010	49.69775	44.21206
FE	57	1840.13700	18173.20000	5.800	1889.67051	1912.13407	1718.60652
K	39	11516.44500	193665.01000	5.000	11730.39309	11956.60073	10862.34223
MG	24	15635.53900	428707.67000	5.800	15714.72023	16503.39127	14688.50642
MN	55	659.92100	136210.18000	3.900	668.30652	680.57982	630.87636
NA	23	78635.52700	4398138.16000	4.500	80212.91122	81120.69694	74572.97388
TI	47	222.38800	1896.85000	17.400	222.40733	261.06243	183.69489
V	51	48.73600	18446.62000	4.100	48.39722	50.88422	46.92588
IN-1	115	29655.66000	0.00000	0.000	30879.36000	28827.25000	29260.38000
AG	107	48.47500	74273.43000	4.300	46.07080	49.65334	49.70228
AS	75	9.87500	513.34000	7.000	9.70217	10.63804	9.28333
BA	137	87.08200	14013.05000	4.800	82.79166	87.28732	91.16675
CD	111	4.67600	776.02000	5.500	4.91435	4.40511	4.70822
CO	59	244.45600	223492.84000	2.600	237.38139	250.05076	245.93464
CU	63	48.92100	37470.18000	2.300	47.80834	48.86670	50.08823
MO	98	49.89200	36218.70000	2.900	48.46557	51.34863	49.86093
NI	60	48.94900	12681.60000	1.900	49.97929	48.67878	48.18978
SB	121	6.62500	2837.03000	4.600	6.33865	6.94025	6.59751
SN	120	51.24000	26658.70000	0.600	50.99755	51.58957	51.13333
SR	88	143.07400	37136.90000	1.200	141.15657	144.61374	143.45126
ZN	66	53.84700	4627.45000	2.500	52.84076	55.40942	53.28933
BI-1	209	151381.12000	0.00000	0.000	151573.51000	151924.28000	150645.56000
PB	208	15.75500	104738.50000	1.700	15.73253	15.49289	16.03891
TL	203	2.07300	4284.09000	8.100	2.26779	1.97245	1.97951
GE-1	72	5821.23000	0.00000	0.000	6221.48000	5931.17000	5311.04000
TB-1	159	177536.59000	0.00000	0.000	181783.42000	177156.64000	173669.70000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:54:23
Tube Number: 31 Batch: 133116050004A
Sample Number: **7266805** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14723.22000	0.00000	0.000	14426.29000	14316.23000	15427.15000
AL	27	1272.88800	9889.79000	12.000	1339.82562	1380.55560	1098.28261
CA	44	24669.79500	24630.79000	6.300	24978.71236	26035.68256	22994.99067
CR	52	5.16400	2606.96000	2.900	5.32246	5.02858	5.14218
FE	57	20647.56500	200211.58000	4.600	21339.49824	21037.89316	19565.30509
K	39	3218.26500	53679.51000	6.500	3317.49956	3359.04176	2978.25291
MG	24	9904.91200	266659.00000	5.500	10224.81606	10208.54287	9281.37667
MN	55	1626.94500	329518.14000	5.000	1691.49068	1652.84681	1536.49631
NA	23	54685.13900	3002343.08000	5.500	56806.97671	55989.96743	51258.47207
TI	47	39.60900	333.35000	18.200	47.28744	32.98867	38.55071
V	51	5.27900	1956.87000	15.100	5.13133	6.13855	4.56744
IN-1	115	29236.52000	0.00000	0.000	29526.25000	29476.27000	28707.03000
AG	107	0.12600	196.68000	32.900	0.17279	0.09437	0.11048
AS	75	3.52800	197.33000	7.900	3.82916	3.47007	3.28433
BA	137	72.52900	11521.08000	1.300	73.65390	71.90086	72.03115
CD	111	0.72100	120.67000	25.500	0.74427	0.52600	0.89142
CO	59	13.30700	12274.60000	2.300	13.62709	13.26509	13.02930
CU	63	12.21200	9452.93000	5.700	12.26632	12.88371	11.48544
MO	98	2.38000	1703.50000	18.100	2.72408	1.89759	2.51734
NI	60	8.01900	2113.57000	7.400	7.33475	8.32540	8.39634
SB	121	0.46000	220.01000	32.900	0.45326	0.31187	0.61420
SN	120	1.25600	1117.05000	69.500	0.60183	0.91983	2.24686
SR	88	97.10100	24848.46000	2.800	96.43167	94.81137	100.06100
ZN	66	68.39600	5797.86000	10.500	63.34063	76.57579	65.27037
BI-1	209	151679.24000	0.00000	0.000	154457.12000	151379.40000	149201.21000
PB	208	23.00800	153237.60000	0.000	23.01777	23.00171	23.00433
TL	203	0.05700	126.68000	11.300	0.06201	0.05851	0.04959
GE-1	72	5661.12000	0.00000	0.000	5881.22000	5331.00000	5771.15000
TB-1	159	176646.90000	0.00000	0.000	178327.05000	176954.33000	174659.33000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:56:23
Tube Number: 32 Batch: 133116050004A
Sample Number: **7266819** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15100.15000	0.00000	0.000	15136.97000	14486.14000	15677.33000
AL	27	1205.10000	9629.57000	2.500	1191.84766	1238.94853	1184.50454
CA	44	26293.49800	26947.45000	3.200	26552.60892	26982.08606	25345.80042
CR	52	4.90400	2543.65000	5.300	5.20420	4.71882	4.78923
FE	57	20695.51500	205848.49000	4.100	20432.50479	21654.75545	19999.28471
K	39	4149.46600	70807.68000	4.300	4033.85897	4354.14664	4060.39312
MG	24	9897.59900	273395.33000	4.300	9981.90306	10271.51970	9439.37331
MN	55	1700.25000	353323.25000	3.400	1686.70496	1763.98630	1650.05891
NA	23	55752.98600	3140133.39000	4.600	55599.11246	58404.37773	53255.46899
TI	47	37.40900	323.35000	10.400	33.51102	37.43266	41.28257
V	51	4.94800	1886.85000	12.400	5.64879	4.70016	4.49452
IN-1	115	29985.38000	0.00000	0.000	30158.70000	29709.24000	30088.21000
AG	107	0.06700	110.00000	61.100	0.03443	0.11313	0.05380
AS	75	3.87100	219.33000	9.300	3.65835	4.28715	3.66814
BA	137	72.87700	11871.32000	2.500	73.81950	74.06916	70.74231
CD	111	0.62400	108.00000	7.100	0.62088	0.58221	0.67019
CO	59	12.25600	11614.15000	5.100	12.55935	12.66652	11.54215
CU	63	11.00100	8759.21000	5.100	11.49591	11.11085	10.39496
MO	98	2.16000	1586.83000	21.200	1.88172	1.91023	2.68677
NI	60	8.16700	2206.88000	4.400	7.74753	8.37390	8.37935
SB	121	0.56900	273.35000	9.700	0.55821	0.52062	0.62938
SN	120	0.59100	806.72000	23.300	0.43404	0.68990	0.64967
SR	88	100.61800	26410.92000	3.200	99.71954	104.15676	97.97717
ZN	66	66.76300	5801.19000	7.800	60.74987	69.34613	70.19422
BI-1	209	153197.58000	0.00000	0.000	150492.29000	154985.08000	154115.38000
PB	208	22.25000	149663.85000	1.000	22.48690	22.22758	22.03644
TL	203	0.06300	140.01000	40.600	0.07840	0.03335	0.07645
GE-1	72	5937.93000	0.00000	0.000	6241.49000	5761.14000	5811.15000
TB-1	159	178544.36000	0.00000	0.000	178187.56000	181834.35000	175611.17000

Run Name: 1331906E05 Date/Time: 11/15/2013 22:58:24
Tube Number: 33
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15430.48000	0.00000	0.000	15727.41000	14846.71000	15717.32000
AL	27	2479.09800	20225.16000	3.800	2414.21838	2586.84991	2436.22518
CA	44	2327.91300	2436.95000	7.100	2153.15653	2479.27774	2351.30344
CR	52	249.47900	128083.51000	3.000	247.26204	257.76308	243.41280
FE	57	2509.36100	25522.46000	3.400	2516.16804	2590.78942	2421.12634
K	39	2465.31500	43339.01000	3.200	2456.99950	2548.20773	2390.73861
MG	24	2420.88300	68373.52000	2.900	2428.09094	2486.50947	2348.04809
MN	55	255.02400	54229.19000	2.200	254.93323	260.60022	249.53813
NA	23	2486.95500	144361.12000	2.300	2477.55205	2548.28350	2435.02896
TI	47	274.78500	2423.60000	1.200	274.72557	278.06185	271.56785
V	51	253.37700	98726.05000	2.600	253.23696	260.15602	246.73879
IN-1	115	31459.50000	0.00000	0.000	31003.72000	31233.52000	32141.27000
AG	107	25.28100	41129.77000	3.700	26.28611	24.43610	25.12045
AS	75	253.19300	13299.02000	0.900	254.33929	254.54116	250.69985
BA	137	254.68200	43467.02000	1.200	253.34032	258.16448	252.53978
CD	111	25.22300	4416.59000	2.200	25.51794	25.57184	24.58043
CO	59	253.78900	246208.22000	2.500	259.59888	254.70899	247.06023
CU	63	256.29600	206933.61000	1.600	260.24254	256.49074	252.15536
MO	98	25.26200	19468.33000	1.700	25.57308	24.75729	25.45656
NI	60	251.10800	68614.64000	1.900	256.57090	249.27368	247.47804
SB	121	25.09000	11320.84000	2.600	25.09948	25.74292	24.42669
SN	120	29.67700	16589.53000	14.400	27.75757	34.56265	26.70968
SR	88	24.76500	6814.99000	7.000	26.01568	25.49471	22.78398
ZN	66	253.77600	23118.98000	1.800	251.97310	259.09060	250.26370
BI-1	209	163947.21000	0.00000	0.000	164779.61000	163253.93000	163808.10000
PB	208	25.73900	185282.50000	0.200	25.80493	25.73449	25.67684
TL	203	25.04700	55938.68000	2.000	25.51597	25.11371	24.51128
GE-1	72	5794.53000	0.00000	0.000	5781.16000	5451.13000	6151.30000
TB-1	159	183672.01000	0.00000	0.000	184172.17000	180479.72000	186364.14000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:00:25
Tube Number: 34
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	INTEGRATIONS #1	#2	#3
SC-1	45	15283.80000	0.00000	0.000	14496.51000	16147.91000	15206.99000
AL	27	2.52200	33.33000	51.100	1.04220	3.11752	3.40736
CA	44	6.61200	6.67000	86.700	10.15542	0.00000	9.68096
CR	52	0.11400	136.67000	165.600	0.29863	0.12169	-0.07846
FE	57	7.14500	76.67000	71.900	13.00414	5.03811	3.39222
K	39	5.27500	903.41000	188.000	14.36797	-5.29603	6.75169
MG	24	3.87100	106.67000	43.000	5.27399	2.02899	4.30941
MN	55	0.58900	180.01000	35.600	0.48443	0.45255	0.83131
NA	23	1.68300	1250.10000	237.100	6.10888	0.58573	-1.64411
TI	47	1.85000	16.67000	90.300	0.00000	3.24952	2.30038
V	51	0.20800	80.00000	34.200	0.19113	0.14707	0.28634
IN-1	115	31529.55000	0.00000	0.000	31234.34000	32436.57000	30917.73000
AG	107	0.04900	86.67000	6.900	0.04549	0.04962	0.05225
AS	75	0.01100	28.00000	907.300	-0.09762	0.10873	0.02317
BA	137	0.05800	33.33000	157.300	0.15770	0.03305	-0.01822
CD	111	-0.00400	3.33000	0.000	-0.01141	0.01033	-0.01129
CO	59	0.34500	643.37000	47.100	0.52418	0.30284	0.20733
CU	63	0.04500	356.69000	149.600	0.02782	-0.01198	0.12050
MO	98	0.08100	63.34000	101.400	0.07842	0.16363	0.00000
NI	60	0.18500	136.67000	69.100	0.27356	0.03845	0.24233
SB	121	0.31000	170.01000	41.600	0.20101	0.27725	0.45245
SN	120	0.01700	536.70000	373.400	0.08809	-0.04069	0.00505
SR	88	0.06000	16.67000	92.600	0.10970	0.07043	0.00000
ZN	66	0.44200	46.67000	118.400	1.03206	0.03274	0.26139
BI-1	209	160647.12000	0.00000	0.000	160114.56000	161850.85000	159975.95000
PB	208	0.02400	240.01000	57.400	0.02448	0.03819	0.01027
TL	203	0.02300	60.00000	53.300	0.03672	0.01360	0.01840
GE-1	72	5827.90000	0.00000	0.000	6081.33000	5321.01000	6081.35000
TB-1	159	183087.54000	0.00000	0.000	183536.56000	181866.38000	183859.68000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:02:28
Tube Number: 35
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15010.08000	0.00000	0.000	15197.03000	14736.48000	15096.73000
AL	27	86.30000	696.71000	10.000	79.32041	95.96513	83.61438
CA	44	186.27100	190.01000	8.100	203.44302	179.83094	175.53968
CR	52	1.91000	1033.41000	15.000	1.82036	1.67818	2.23171
FE	57	97.73500	973.40000	21.200	81.23831	91.00070	120.96485
K	39	204.86800	4244.01000	3.100	212.19571	202.11499	200.29384
MG	24	93.69600	2576.94000	7.000	93.79308	87.08922	100.20504
MN	55	2.03400	476.70000	25.100	2.21774	1.45770	2.42669
NA	23	198.24500	12237.93000	8.700	194.09995	217.18103	183.45265
TI	47	19.07600	163.34000	60.300	25.32196	26.11333	5.79296
V	51	0.55400	210.01000	6.100	0.54699	0.59094	0.52440
IN-1	115	30948.85000	0.00000	0.000	31544.50000	31035.81000	30266.23000
AG	107	0.48900	790.05000	7.100	0.50479	0.51313	0.44960
AS	75	1.76700	118.00000	19.600	2.02894	1.37462	1.89867
BA	137	2.04100	366.69000	28.300	2.25959	2.47714	1.38582
CD	111	0.45900	82.67000	30.400	0.39882	0.35939	0.61860
CO	59	0.58000	856.73000	12.500	0.65999	0.56096	0.51895
CU	63	2.30600	2143.55000	11.300	2.08947	2.59539	2.23314
MO	98	0.65600	496.70000	14.900	0.60830	0.59196	0.76889
NI	60	1.75400	556.70000	27.200	1.61971	2.28280	1.35873
SB	121	1.03700	490.03000	13.200	1.12899	1.10356	0.87930
SN	120	1.91200	1536.81000	5.200	1.88210	2.02247	1.82994
SR	88	1.11800	303.35000	22.100	1.37599	0.88328	1.09447
ZN	66	17.34600	1560.14000	3.700	16.89918	17.06597	18.07260
BI-1	209	160323.17000	0.00000	0.000	161064.08000	159941.97000	159963.45000
PB	208	1.12400	7981.13000	3.000	1.14761	1.14006	1.08577
TL	203	0.51100	1126.76000	8.200	0.55622	0.47292	0.50500
GE-1	72	5877.89000	0.00000	0.000	5761.18000	5821.19000	6051.31000
TB-1	159	180267.73000	0.00000	0.000	180693.83000	179296.23000	180813.12000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:04:28
Tube Number: 36
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14900.12000	0.00000	0.000	15647.49000	15086.92000	13965.96000
AL	27	9479.86100	74511.16000	7.100	8776.35053	9540.46026	10122.77074
CA	44	9515.78800	9612.98000	5.300	8968.95622	9624.49433	9953.91314
CR	52	0.03200	93.34000	384.000	-0.08068	0.16125	0.01465
FE	57	9743.13400	95526.90000	5.600	9319.87738	9546.04414	10363.48112
K	39	9750.41700	162904.40000	5.700	9323.01212	9544.28835	10383.94976
MG	24	9362.11800	254846.47000	6.300	8823.55257	9275.98789	9986.81401
MN	55	0.18400	93.34000	65.600	0.24354	0.26251	0.04500
NA	23	9410.15800	523334.82000	6.100	8948.16258	9226.77639	10055.53593
TI	47	194.84700	1663.49000	13.400	222.46815	170.43776	191.63589
V	51	0.02600	10.00000	173.200	0.00000	0.07871	0.00000
IN-1	115	30490.85000	0.00000	0.000	31334.99000	29692.40000	30445.15000
AG	107	0.02300	43.33000	107.900	0.04533	0.02852	-0.00404
AS	75	-0.27400	12.67000	0.000	-0.02237	-0.39904	-0.40204
BA	137	-0.05700	13.33000	0.000	-0.01980	-0.01329	-0.13751
CD	111	-0.00700	2.67000	0.000	-0.02292	0.00130	0.00070
CO	59	0.11900	410.03000	30.600	0.13819	0.14154	0.07687
CU	63	-0.01000	303.35000	0.000	0.06381	-0.09468	0.00038
MO	98	193.24000	144252.41000	2.900	187.56606	198.83130	193.32204
NI	60	-0.11400	53.33000	0.000	-0.20653	-0.08398	-0.05188
SB	121	-0.00600	26.67000	0.000	-0.02292	0.00309	0.00134
SN	120	-0.08300	466.70000	0.000	-0.21185	-0.22850	0.19189
SR	88	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
ZN	66	0.44900	46.67000	123.300	1.02851	0.39155	-0.07374
BI-1	209	155596.36000	0.00000	0.000	154458.45000	155549.13000	156781.51000
PB	208	0.01600	176.67000	22.200	0.01688	0.01230	0.01939
TL	203	0.00000	10.00000	6056.800	-0.00455	-0.00455	0.00950
GE-1	72	5731.16000	0.00000	0.000	6111.31000	5541.11000	5541.06000
TB-1	159	179126.86000	0.00000	0.000	179095.99000	179682.48000	178602.11000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:06:28
Tube Number: 37
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14803.13000	0.00000	0.000	15196.68000	14576.34000	14636.38000
AL	27	9915.54900	77593.49000	3.300	9542.72590	10076.61963	10127.30095
CA	44	9934.18300	9989.79000	4.100	10029.73669	10285.00680	9487.80471
CR	52	20.49300	10166.56000	2.800	19.86361	21.00467	20.60986
FE	57	10134.99100	98917.52000	1.200	10006.73952	10160.54972	10237.68249
K	39	10311.66000	171442.60000	2.000	10103.43298	10314.93408	10516.61202
MG	24	9819.02900	266149.50000	0.800	9730.50314	9870.22961	9856.35543
MN	55	20.56100	4240.68000	8.800	18.56144	22.05357	21.06893
NA	23	9888.22900	547452.98000	1.300	9743.23761	9991.08874	9930.36204
TI	47	201.20600	1703.49000	8.500	208.34442	213.61128	181.66177
V	51	0.01800	6.67000	173.200	0.00000	0.00000	0.05409
IN-1	115	30681.37000	0.00000	0.000	30563.46000	31396.65000	30083.99000
AG	107	20.24800	32130.72000	1.700	19.87442	20.29111	20.57767
AS	75	19.82500	1040.04000	1.200	20.01854	19.54994	19.90703
BA	137	0.00100	23.33000	6020.300	-0.01683	0.09744	-0.07621
CD	111	19.91700	3401.70000	3.100	20.37880	19.21891	20.15411
CO	59	20.70400	19861.74000	3.700	20.37186	20.15391	21.58701
CU	63	20.23200	16217.88000	1.700	20.39596	19.83196	20.46757
MO	98	201.09500	151081.20000	2.400	200.78597	196.34864	206.14982
NI	60	21.40400	5781.18000	1.800	21.10664	21.27273	21.83142
SB	121	-0.01400	23.33000	0.000	0.02394	-0.02301	-0.04430
SN	120	-0.13600	443.36000	0.000	-0.19268	0.13812	-0.35400
SR	88	0.11300	30.00000	100.500	0.11211	0.00000	0.22780
ZN	66	22.57700	2013.54000	6.300	23.32093	23.47048	20.93850
BI-1	209	157909.96000	0.00000	0.000	159852.69000	159630.15000	154247.05000
PB	208	0.02100	213.34000	54.500	0.01456	0.01459	0.03464
TL	203	0.00000	10.00000	9967.400	0.00464	0.00005	-0.00455
GE-1	72	5771.18000	0.00000	0.000	5821.19000	5631.15000	5861.20000
TB-1	159	180496.23000	0.00000	0.000	182480.62000	180165.84000	178842.24000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:08:28
Tube Number: 38
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	15090.29000	0.00000	0.000	14866.87000	15447.30000	14956.70000
AL	27	2458.75200	19627.80000	3.400	2433.08659	2391.82687	2551.34194
CA	44	2631.91600	2696.97000	7.400	2505.58345	2535.35017	2854.81305
CR	52	254.80900	127946.36000	3.900	259.93443	243.28721	261.20563
FE	57	2519.03500	25061.73000	3.800	2628.09435	2450.69535	2478.31406
K	39	2565.90700	44097.54000	2.600	2548.91412	2509.37100	2639.43648
MG	24	2455.10000	67821.80000	2.700	2479.06759	2379.52922	2506.70189
MN	55	258.08500	53660.80000	4.800	271.27133	246.82931	256.15416
NA	23	2475.54300	140535.74000	3.500	2558.98628	2384.46159	2483.18119
TI	47	268.39200	2316.91000	9.600	281.21195	285.37440	238.58909
V	51	257.55200	98172.63000	1.800	256.88671	253.26596	262.50452
IN-1	115	30570.14000	0.00000	0.000	30556.49000	29574.88000	31579.05000
AG	107	25.80900	40799.19000	1.000	25.91670	25.99657	25.51253
AS	75	267.84200	13663.32000	2.900	272.96786	271.81024	258.74853
BA	137	263.36100	43657.63000	2.300	263.10091	269.65242	257.33103
CD	111	26.26700	4467.28000	3.400	26.63327	26.91006	25.25774
CO	59	260.64300	245623.12000	3.000	262.88606	266.96295	252.07911
CU	63	259.14300	203195.82000	3.500	260.13154	267.80176	249.49536
MO	98	26.46800	19805.28000	3.700	26.89738	27.15417	25.35293
NI	60	261.93400	69518.09000	3.100	266.68996	266.63685	252.47651
SB	121	25.97500	11377.73000	5.400	26.42989	27.09624	24.39782
SN	120	26.04100	14216.49000	1.000	26.06631	26.27652	25.78024
SR	88	26.12600	6988.36000	4.200	27.10651	26.34469	24.92680
ZN	66	267.51900	23669.82000	2.800	268.23037	274.67759	259.64797
BI-1	209	162871.56000	0.00000	0.000	160629.98000	164839.70000	163145.00000
PB	208	25.60000	183058.52000	1.300	25.97178	25.43605	25.39311
TL	203	24.80100	55025.65000	0.500	24.66186	24.90763	24.83231
GE-1	72	5831.18000	0.00000	0.000	5761.16000	5891.17000	5841.21000
TB-1	159	183042.03000	0.00000	0.000	185537.48000	181147.38000	182441.23000

Run Name: 1331906E05 Date/Time: 11/15/2013 23:10:28
Tube Number: 39
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	14583.17000	0.00000	0.000	14086.16000	14196.11000	15467.24000
AL	27	2.62500	33.33000	146.300	1.11820	-0.23467	6.99147
CA	44	17.00000	16.67000	127.800	0.00000	41.48128	9.51807
CR	52	0.12600	136.67000	84.300	0.24791	0.05420	0.07568
FE	57	6.97200	73.33000	67.800	10.16940	1.53969	9.20807
K	39	-0.37400	776.72000	0.000	0.30986	-3.21418	1.78365
MG	24	3.32300	86.67000	125.600	8.14164	0.76932	1.05914
MN	55	0.08400	70.00000	170.300	0.24853	-0.01121	0.01472
NA	23	1.29800	1176.76000	21.200	1.55344	1.00666	1.33261
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.26300	96.67000	10.900	0.28100	0.27882	0.23032
IN-1	115	31588.63000	0.00000	0.000	32266.77000	31876.16000	30622.95000
AG	107	0.06500	113.34000	70.300	0.10384	0.07483	0.01491
AS	75	-0.01100	26.67000	0.000	0.03764	-0.29439	0.22437
BA	137	0.03500	30.00000	491.000	0.03395	0.20961	-0.13751
CD	111	0.01100	6.00000	107.300	0.01051	-0.00036	0.02404
CO	59	0.32300	623.37000	33.500	0.24575	0.44614	0.27598
CU	63	0.04700	360.02000	258.500	0.18353	-0.04195	-0.00194
MO	98	0.20500	160.00000	52.100	0.32897	0.14088	0.14664
NI	60	0.14500	126.67000	93.200	0.04032	0.29783	0.09717
SB	121	0.22800	133.34000	5.600	0.21408	0.23946	0.22920
SN	120	-0.00400	526.70000	0.000	0.05420	-0.06078	-0.00453
SR	88	0.01200	3.33000	173.200	0.03540	0.00000	0.00000
ZN	66	0.32000	36.67000	117.400	0.67555	0.35967	-0.07374
BI-1	209	159761.38000	0.00000	0.000	159346.68000	158742.50000	161194.95000
PB	208	0.01600	180.00000	131.600	0.04037	0.00468	0.00305
TL	203	0.02500	63.33000	57.600	0.03692	0.02783	0.00912
GE-1	72	5807.84000	0.00000	0.000	5661.12000	6081.29000	5681.10000
TB-1	159	183078.54000	0.00000	0.000	183340.78000	183564.51000	182330.33000

Tune Report

Batch Folder D:\Agilent\ICPMH\1\DATA\~EPATUNE.b
Report Comment ICP-MS #19204 (E05) Daily Tune Check
Instrument Name G3281A JP12071581

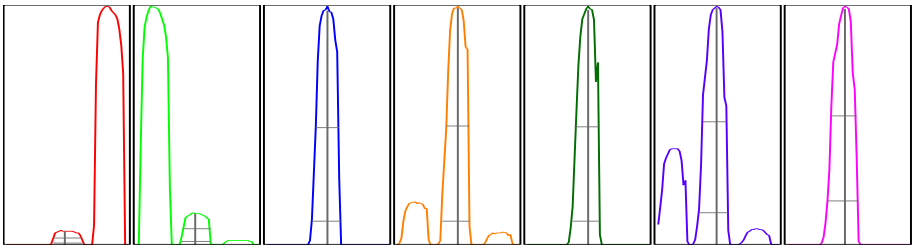
[No Gas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
6		11543	11542.57			NaN	-	
24		26350	26349.89			NaN	-	
103		93605	93605.05			NaN	-	
115		102704	102704.42			NaN	-	
140		117921	117920.81			NaN	-	
208		66019	66018.58			NaN	-	
238		149092	149092.13			NaN	-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	Background (Actual)	Background (Required)	Background (Flag)
6	0.92	5.00				
24	0.72	5.00				
103	0.39	5.00				
115	0.85	5.00				
140	0.50	5.00				
208	0.82	5.00				
238	0.97	5.00				

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
6	11591	11480	11663	11585	11394
24	26447	26156	26155	26405	26587
103	93680	93200	93523	93449	94173
115	101951	101913	102551	103119	103988
140	117681	117303	117584	118248	118788
208	65476	65523	66441	65959	66694
238	148736	148347	148362	148355	151660

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-X% (Actual)	W-X% (Required)	W-X% (Flag)
6	1751.64	5.95	5.9 - 6.1		0.69	0.742	0.900	
24	4212.42	23.95	23.9 - 24.1		0.65	0.724	0.900	
103	16619.83	103.00	102.9 - 103.1		0.58	0.687	0.900	
115	18654.93	115.00	114.9 - 115.1		0.57	0.677	0.900	
140	21629.81	140.00	139.9 - 140.1		0.58	0.681	0.900	
208	12037.48	207.95	207.9 - 208.1		0.58	0.703	0.900	
238	26621.68	237.90	237.9 - 238.1		0.58	0.728	0.900	

X = 10 **Integration Time [sec]** 0.1 **Acquisition Time [sec]** 260.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1600 W	Carrier Gas	0.25 L/min	S/C Temp	20 ℃
RF Matching	1.60 V	Option Gas	0.0 %	Makeup/Dilution Gas	0.80 L/min
Smpl Depth	8.0 mm	Nebulizer Pump	0.10 rps	Gas Switch	Dilution Gas

Lenses Parameters

Tune Report

Extract 1		0.0 V	Omega Lens		8.0 V	Deflect		13.2 V	
Extract 2		-170.0 V	Cell Entrance		-30 V	Plate Bias		-40 V	
Mass	**Peak Height**	**Axis (Actual)**	**Axis (Required)**	**Axis (Flag)**	**W-50%**	**W-X% (Actual)**	**W-X% (Required)**	**W-X% (Flag)**	
Omega Bias		-90 V	Cell Exit			-50 V			

Cell Parameters

OctP Bias	-6.0 V	He Flow	0.0 mL/min	Energy Discrimination	5.0 V
OctP RF	190 V	H2 Flow	0.0 mL/min		
Use Gas	false	3rd Gas Flow	0 %		

Mercury Data

Metals in Liquid

eurofins | Lancaster Laboratories Environmental

1331301M07

Mercury Run Data Report

Data File Name: 1331301.M07

Run Name: 1331301M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By	Reviewed Date
Damary Valentin	11/09/2013 11:11AM
Robert Strocko	11/10/2013 7:52AM

Method Reference Name(s):

EPA 245.1 rev 3

SW-846 7470A

Verified By:	Verified Date
Robert Strocko	11/10/2013 8:08AM

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/09/2013 06:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	-195.0

2 Burn Date/Time: 11/09/2013 06:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1297.0

3 Burn Date/Time: 11/09/2013 06:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3341.0

4 Burn Date/Time: 11/09/2013 06:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6780.0

5 Burn Date/Time: 11/09/2013 06:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	17599.0

6 Burn Date/Time: 11/09/2013 06:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33500.0

CorrelationCoefficient = 1.00000
Slope = 6762.0434000000
Y-Intercept = 18.5334500000

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/09/2013 06:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.5089	16989.0

8 Burn Date/Time: 11/09/2013 06:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0245	-155.0

9 Burn Date/Time: 11/09/2013 06:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.2007	1369.0

10 Burn Date/Time: 11/09/2013 06:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
0.9922	6725.0

11 Burn Date/Time: 11/09/2013 06:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0131	-78.0

12 Burn Date/Time: 11/09/2013 06:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0029	-9.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/09/2013 06:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9861	6684.0		

14 Burn Date/Time: 11/09/2013 06:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266787	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1178	808.0		

15 Burn Date/Time: 11/09/2013 06:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7259627	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0347	246.0		

16 Burn Date/Time: 11/09/2013 06:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266429	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1537	1051.0		

17 Burn Date/Time: 11/09/2013 06:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266478	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0000	775166.0		

18 Burn Date/Time: 11/09/2013 06:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
Z266778		40.0000	40	1.00

AVG (ppb)	Intensity
-0.6260	-4225.0

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/09/2013 06:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	D*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.1359	-909.0		

20 Burn Date/Time: 11/09/2013 06:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	R*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9105	6172.0		

21 Burn Date/Time: 11/09/2013 06:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	M*********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9764	6618.0		

22 Burn Date/Time: 11/09/2013 07:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
0.9131	6190.0

23 Burn Date/Time: 11/09/2013 07:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0634	-418.0

24 Burn Date/Time: 11/09/2013 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266780	**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1414	968.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/09/2013 07:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266478	**********	40	40	1000.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.4370	23269.0		

26 Burn Date/Time: 11/09/2013 07:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266778	U**********	40	40	1.00	133115714001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0303	216.0		

27 Burn Date/Time: 11/09/2013 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1671	1142.0		

28 Burn Date/Time: 11/09/2013 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9753	6611.0		

29 Burn Date/Time: 11/09/2013 07:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7260277	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0159	-97.0		

30 Burn Date/Time: 11/09/2013 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	U*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0050	45.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/09/2013 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	D*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0185	136.0		

32 Burn Date/Time: 11/09/2013 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262107	R*********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9829	6662.0		

33 Burn Date/Time: 11/09/2013 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7262109	**********	40	40	1.00	133115714002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	117.0		

34 Burn Date/Time: 11/09/2013 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
0.9913	6719.0

35 Burn Date/Time: 11/09/2013 07:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0210	-131.0

36 Burn Date/Time: 11/09/2013 07:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0118	-69.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/09/2013 07:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0005	6781.0		

38 Burn Date/Time: 11/09/2013 07:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267642	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0125	-74.0		

39 Burn Date/Time: 11/09/2013 07:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267643	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0004	8.0		

40 Burn Date/Time: 11/09/2013 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267644	U*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0013	20.0		

41 Burn Date/Time: 11/09/2013 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267647	D*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0084	-46.0		

42 Burn Date/Time: 11/09/2013 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267645	R*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0118	6858.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/09/2013 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267646	M*********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9839	6669.0		

44 Burn Date/Time: 11/09/2013 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267648	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0083	-45.0		

45 Burn Date/Time: 11/09/2013 07:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267649	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0059	-29.0		

46 Burn Date/Time: 11/09/2013 07:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9846	6674.0

47 Burn Date/Time: 11/09/2013 07:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0158	-96.0

48 Burn Date/Time: 11/09/2013 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267651	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0027	29.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/09/2013 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267254	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0064	54.0		

50 Burn Date/Time: 11/09/2013 08:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267256	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0232	168.0		

51 Burn Date/Time: 11/09/2013 08:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267259	**********	40	40	1.00	133115713004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0266	191.0		

52 Burn Date/Time: 11/09/2013 08:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0013	2.0		

53 Burn Date/Time: 11/09/2013 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0189	6906.0		

54 Burn Date/Time: 11/09/2013 08:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSWD	**********	1	1	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9908	6716.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/09/2013 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265560	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0087	-48.0		

56 Burn Date/Time: 11/09/2013 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265561	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0071	-37.0		

57 Burn Date/Time: 11/09/2013 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267302	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0050	-23.0		

58 Burn Date/Time: 11/09/2013 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
0.9767	6620.0

59 Burn Date/Time: 11/09/2013 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0227	-143.0

60 Burn Date/Time: 11/09/2013 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267303	**********	40	40	1.00	133115713005

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0025	-6.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/09/2013 08:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0021	25.0		

62 Burn Date/Time: 11/09/2013 08:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9674	6557.0		

63 Burn Date/Time: 11/09/2013 08:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	U*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0315	224.0		

64 Burn Date/Time: 11/09/2013 08:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	D*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0474	332.0		

65 Burn Date/Time: 11/09/2013 08:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	R*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0655	7221.0		

66 Burn Date/Time: 11/09/2013 08:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267633	M*********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0195	6910.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/09/2013 08:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267634	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0168	-103.0		

68 Burn Date/Time: 11/09/2013 08:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267635	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0003	13.0		

69 Burn Date/Time: 11/09/2013 08:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267636	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0090	72.0		

70 Burn Date/Time: 11/09/2013 08:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
0.9595	6504.0

71 Burn Date/Time: 11/09/2013 08:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0024	-5.0

72 Burn Date/Time: 11/09/2013 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266798	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0157	117.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/09/2013 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266799	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0149	112.0		

74 Burn Date/Time: 11/09/2013 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266805	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0803	554.0		

75 Burn Date/Time: 11/09/2013 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266807	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0130	99.0		

76 Burn Date/Time: 11/09/2013 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266810	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0455	319.0		

77 Burn Date/Time: 11/09/2013 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266811	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0244	176.0		

78 Burn Date/Time: 11/09/2013 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266819	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0621	431.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/09/2013 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266680	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0034	34.0		

80 Burn Date/Time: 11/09/2013 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266685	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0047	43.0		

81 Burn Date/Time: 11/09/2013 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266686	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0015	21.0		

82 Burn Date/Time: 11/09/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
0.9846	6674.0

83 Burn Date/Time: 11/09/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0127	-75.0

84 Burn Date/Time: 11/09/2013 09:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266688	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/09/2013 09:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266689	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0047	43.0		

86 Burn Date/Time: 11/09/2013 09:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266691	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0030	31.0		

87 Burn Date/Time: 11/09/2013 09:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266692	**********	40	40	1.00	133115713006

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0015	21.0		

88 Burn Date/Time: 11/09/2013 09:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBW	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0009	5.0		

89 Burn Date/Time: 11/09/2013 09:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1	1	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0077	6830.0		

90 Burn Date/Time: 11/09/2013 09:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266277	**********	10	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8267	5605.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/09/2013 09:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264523	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0053	-25.0		

92 Burn Date/Time: 11/09/2013 09:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264524	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

93 Burn Date/Time: 11/09/2013 09:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264525	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0073	60.0		

94 Burn Date/Time: 11/09/2013 09:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
0.9774	6625.0

95 Burn Date/Time: 11/09/2013 09:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0164	-100.0

96 Burn Date/Time: 11/09/2013 09:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264526	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0080	-43.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/09/2013 09:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264527	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0031	32.0		

98 Burn Date/Time: 11/09/2013 09:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264529	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0010	4.0		

99 Burn Date/Time: 11/09/2013 09:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264530	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0025	28.0		

100 Burn Date/Time: 11/09/2013 09:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264531	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0036	35.0		

101 Burn Date/Time: 11/09/2013 09:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264532	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0152	114.0		

102 Burn Date/Time: 11/09/2013 09:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264533	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0293	209.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/09/2013 09:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264534	**********	10	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3618	2459.0		

104 Burn Date/Time: 11/09/2013 09:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264535	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0204	149.0		

105 Burn Date/Time: 11/09/2013 09:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264536	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0052	46.0		

106 Burn Date/Time: 11/09/2013 09:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9614	6517.0

107 Burn Date/Time: 11/09/2013 09:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0143	-86.0

108 Burn Date/Time: 11/09/2013 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264537	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0395	278.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/09/2013 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7264539	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0009	5.0		

110 Burn Date/Time: 11/09/2013 10:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265535	**********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1027	706.0		

111 Burn Date/Time: 11/09/2013 10:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266596	**********	4	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0038	-15.0		

112 Burn Date/Time: 11/09/2013 10:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266600	**********	4	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0016	22.0		

113 Burn Date/Time: 11/09/2013 10:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	U*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0036	35.0		

114 Burn Date/Time: 11/09/2013 10:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	D*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0019	24.0		

LANCASTER LABORATORIES

Run Name: 1331301M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/09/2013 10:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	R*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9944	6740.0		

116 Burn Date/Time: 11/09/2013 10:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267172	M*********	40	40	1.00	133115713003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9895	6707.0		

117 Burn Date/Time: 11/09/2013 10:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1816	1240.0

118 Burn Date/Time: 11/09/2013 10:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
0.9675	6558.0

119 Burn Date/Time: 11/09/2013 10:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0105	-60.0

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for 5705 ICP SW846 Water

Batch# 13 311 5705 006

Balance ID#: CLEAR **Start Time:** 11/9/13 8:30 **End Time:** 11/9/13 12:39 **Hot Block:** 12

Pipette ID: W/1000

Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HCL	P13301C	5.00
HNO3	1113030	3.00
ICP Spike 1A	1317716#29	1.00
ICP Spike 1B	1317717#29	1.00
LCS A1	1317716#29	1.00
LCS B1	1317717#29	1.00

Method Ref: SW-846 3010A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184

11/9/2013

v 1.0.1

Batch# 13 311 5705 006

LLENS Batch Chronology and Change Log - ICP SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:07	01184
2)	Sample Vol		11/9/13 9:43	01184
3)	Final Vol	CLEAR	11/9/13 9:43	01184
4)	Trial		11/9/13 9:43	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:43	01184

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5705 ICP SW846 Water

Batch# 13 311 5705 006

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Balance ID#: CLEAR **Start Time:** 11/9/13 8:37 **End Time:** 11/9/13 12:48 **Hot Block:** 13

Pipette ID: JU06758

Reflux Cap Lot#: ND25LKK013241JF

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	1113030	3.00
ICP/MS Spike	1316309#5	0.50
LCS	1316309#5	0.50

Method Ref: SW-846 3010A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	7265223	11/15/13 20:32		WW	N8			008a	1306159	
4)	7265224	11/15/13 20:32		WW	N8			008a	1306159	
5)	7265228	11/15/13 20:32		WW	N8			008a	1306159	
6)	**7265230U**	11/15/13 20:32		WW	N8			008a	1306159	
7)	**7265231R**	11/15/13 20:32		WW	N8			008a	1306159	
8)	**7265232M**	11/15/13 20:32		WW	N8			008a	1306159	
9)	**7265233D**	11/15/13 20:32		WW	N8			008a	1306159	
10)	7265235	11/15/13 20:32		WW	N8			008a	1306159	
11)	7265238	11/15/13 20:32		WW	N8			008a	1306159	
12)	7265240	11/15/13 20:32		WW	N8			008a	1306159	
13)	7265243	11/15/13 20:32		WW	N8			008a	1306159	
14)	7265247FB	11/15/13 20:32		WW	N8			008a	1306159	
15)	7265248FB	11/15/13 20:32		WW	N8			008a	1306159	
16)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
18)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
19)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
20)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
21)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
22)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	

Prep Employee: JLM01184

11/9/2013

v 1.0.1

Batch# 13 311 6050 004

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 18:10	01184
2)	Sample Vol		11/9/13 9:41	01184
3)	Final Vol	CLEAR	11/9/13 9:41	01184
4)	Trial		11/9/13 9:41	01184
5)	Upload Prep	US19VDIELA05	11/9/13 9:41	01184

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 6050 ICP/MS SW846 Water

Batch# 13 311 6050 004

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
7265223	11/15/13	N8	R2N51	KVM04-01	50.0000	50.0000	1
7265224	11/15/13	N8	R2N52	KVM04-02	50.0000	50.0000	1
7265228	11/15/13	N8	R2M61	KVM04-06	50.0000	50.0000	1
7265230U	11/15/13	N8	R2163	KVM04-08BKG	50.0000	50.0000	1
7265231R	11/15/13	N8	R2163	KVM04-08MS	50.0000	50.0000	1
7265232M	11/15/13	N8	R2163	KVM04-08MSD	50.0000	50.0000	1
7265233D	11/15/13	N8	R2163	KVM04-08DUP	50.0000	50.0000	1
7265235	11/15/13	N8	E2161	KVM04-10	50.0000	50.0000	1
7265238	11/15/13	N8	R2141	KVM04-13	50.0000	50.0000	1
7265240	11/15/13	N8	R2142	KVM04-15	50.0000	50.0000	1
7265243	11/15/13	N8	R2122	KVM04-18	50.0000	50.0000	1
7265247FB	11/15/13	N8	FBX01	KVM04-22FB	50.0000	50.0000	1
7265248FB	11/15/13	N8	FBX02	KVM04-23FB	50.0000	50.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	50.0000	50.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	50.0000	50.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	50.0000	50.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	50.0000	50.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	50.0000	50.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	50.0000	50.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	50.0000	50.0000	1

LLENS Worksheet for 5713 Hg SW846 Digest Water

Batch# 13 311 5713 006

Balance ID#: CLEAR **Start Time:** 11/8/13 11:05 **End Time:** 11/8/13 13:05 **Hot Block:** 14

Pipette ID: HJ29630

Spike/Reagent	Lot#	Volume Added(mL)
5%K2S2O8	H13-297S	3.20
5%KMnO4	H13-305B	6.00
H2SO4	135111	2.00
HNO3	111303	1.00
LCS	H13-312A	0.04
Spike 1ppm Hg	H13-312A	0.04

Method Ref: SW-846 7470A

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBW	.							1306159	
2)	LCSW	.							1306159	
3)	**7267633U**	11/18/13 09:35		WW	P7			138a	1306159	
4)	**7267633D**	11/18/13 09:35		WW	P7			138a	1306159	
5)	**7267633R**	11/18/13 09:35		WW	P7			038a	1306159	
6)	**7267633M**	11/18/13 09:35		WW	P7			138a	1306159	
7)	7267634	11/18/13 09:35		WW	P7			008a	1306159	
8)	7267635	11/18/13 09:35		WW	P7			008a	1306159	
9)	7267636	11/18/13 09:35		WW	P7			008a	1306159	
10)	7266798FB	11/18/13 18:58		WW	N8			008a	1306159	
11)	7266799FB	11/18/13 18:58		WW	N8			008a	1306159	
12)	7266805	11/18/13 18:58		WW	N8			008a	1306159	
13)	7266807	11/18/13 18:58		WW	N8			008a	1306159	
14)	7266810	11/18/13 18:58		WW	N8			008a	1306159	
15)	7266811	11/18/13 18:58		WW	N8			008a	1306159	
16)	7266819FD	11/18/13 18:58		WW	N8			008a	1306159	
17)	7266680FB	11/18/13 19:00		WW	N8			008a	1306159	
18)	7266685	11/18/13 19:00		WW	N8			008a	1306159	
19)	7266686	11/18/13 19:00		WW	N8			008a	1306159	
20)	7266688FB	11/18/13 19:00		WW	N8			008a	1306159	
21)	7266689FB	11/18/13 19:00		WW	N8			008a	1306159	
22)	7266691	11/18/13 19:00		WW	N8			008a	1306159	
23)	7266692	11/18/13 19:00		WW	N8			008a	1306159	

Prep Employee: DSV00354

11/8/2013

v 1.0.1

Batch# 13 311 5713 006

LLENS Batch Chronology and Change Log - Hg SW846 Digest Water

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/7/13 15:56	00354
2)	Sample Vol		11/8/13 12:12	00354
3)	Final Vol	CLEAR	11/8/13 12:12	00354
4)	Trial		11/8/13 12:12	00354
5)	Upload Prep	US19VDIELA06	11/8/13 14:23	00354

					Original Entry				Data Changed		
Sample ID	Analysis	D	Operation	Measurement	Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5713 Hg SW846 Digest Water

Batch# 13 311 5713 006

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Dilution	Final Volume	Trial
PBW					40.0000		40.0000	1
LCSW					1.0000		1.0000	1
7267633U	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633D	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633R	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267633M	11/18/13	P7	NS40D	NSD62-01	40.0000		40.0000	1
7267634	11/18/13	P7	NS28D	NSD62-02	40.0000		40.0000	1
7267635	11/18/13	P7	NS34D	NSD62-03	40.0000		40.0000	1
7267636	11/18/13	P7	NS035	NSD62-04	40.0000		40.0000	1
7266798FB	11/18/13	N8	FB106	KVM05-01FB	40.0000		40.0000	1
7266799FB	11/18/13	N8	FB206	KVM05-02FB	40.0000		40.0000	1
7266805	11/18/13	N8	2B152	KVM05-05	40.0000		40.0000	1
7266807	11/18/13	N8	2B151	KVM05-07	40.0000		40.0000	1
7266810	11/18/13	N8	2D123	KVM06-02	40.0000		40.0000	1
7266811	11/18/13	N8	2D121	KVM06-03	40.0000		40.0000	1
7266819FD	11/18/13	N8	3--FD	KVM06-08FD	40.0000		40.0000	1
7266680FB	11/18/13	N8	F0612	CP187-05FB	40.0000		40.0000	1
7266685	11/18/13	N8	236B7	CP188-01	40.0000		40.0000	1
7266686	11/18/13	N8	36B7F	CP188-02	40.0000		40.0000	1
7266688FB	11/18/13	N8	F1168	CP188-04FB	40.0000		40.0000	1
7266689FB	11/18/13	N8	F116F	CP188-05FB	40.0000		40.0000	1
7266691	11/18/13	N8	246B6	CP188-07	40.0000		40.0000	1
7266692	11/18/13	N8	46B6F	CP188-08	40.0000		40.0000	1

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	✓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	7	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C	✓			
9	Hg-5700 ICV	E	↓			↓	.25ml	1	4	111330
10	CCV	F	↓			↓	.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13	↓ ↓	I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	↓ M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	7	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM823	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO3		HI3-1616CC	10	1.0	DU354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15% HNO3		HI3-1616CC	10	1.0	DU354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8				↓	↓	↓	↓	0.1				
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1.6ml KMnO4		HI3-2978 HI3-3026	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16							↓	5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
18				to volume w/ DI H_2O			2000	5%	NSM823	11-04-13	5-04-14	RT
19				To vol w/ 0.15% HNO3		HI3-1616CC	10	1.0	DU354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

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* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L Inter Cont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-238D	1.0ml			
2	Hg-0.1mg/L Inter Cont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		m	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	SI	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15% HNO3	H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DV354

Footnotes

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E = Al $(NO_3)_3$ (40%)
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 StdCal	HG-309W	Hg-0.1mg/L Cal		11-12-13	H13-309B	.50ml			
2		X	Hg-1.0mg/L Cal			H13-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	4	1113030
7	Hg-10mg/L Inter Cal	H13-310A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	H13-310M				
9	1.0mg/L Inter Conc	C	10mg/L Conc		4-15-14	H13-288D				
10	0.1mg/L Inter Conc	D	1.0mg/L Conc		11-13-13	H13-310C				
11	Hg-5700 ICV	E					.25ml	1	4	1113030
12	CCV	F	11-6-130V354 (3)				.20			
13	CRA	G	Hg-0.1mg/L Cal Conc			H13-310D	.20			
14	StdCal	H	Hg-0.1mg/L Cal			H13-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			H13-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	H13-310N	$KMnO_4$ #1	6	4-10-18	46760	100.04g			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua 25ml Km	Aqua NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O8 6ml KmNO4		H13-297K H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

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E = Al $(NO_3)_3$ (40%)
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-310P	$KMnO_4$ std 1	6	4-10-18	46760	100.03 g			
2	↓ ↓	↓ R	↓ ↓	↓	↓	↓	100.07 g			
3	Hg 1.0 mg/L Inter Cont	H13-311A	Hg 10 mg/L Cont	–	4-15-14	H13-288D	1.0 ml			
4	Hg 0.1 mg/L Inter Cont	311B	Hg 1.0 mg/L Cont	–	11-14-13	H13-311A	1.0 ml			
5	Stannous Chloride	311C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #2-3	200.03g			
6	Stannous Chloride	311D	↓	6	↓	↓ #5	200.03g			
7	Hydroxylamine	H13-311E	$NH_2OH \cdot HCl$	6	10-26-19	54809 #2-3	240.01g			
8	↓	↓	NaCl	6	3-17-18	48151 #1	240.01g			
9	Hg 1.0 mg/L Inter Cal	H13-313A	Hg 10 mg/L Cal	–	4-15-14	H13-288C	1.0 ml			
10	Hg 1.0 mg/L Inter Cal	H13-313A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0 ml			
11	Hg 0.1 mg/L Inter Cal	B	Hg 1.0 mg/L Cal		11-16-13	H13-313A				
12	Hg 1.0 mg/L Inter Cont	C	Hg 10 mg/L Cont		4-15-14	H13-288D				
13	Hg 0.1 mg/L Inter Cont	D	Hg 1.0 mg/L Cont		11-16-13	H13-313C	↓			
14	Hg 5700 ICV	E					.25 ml	1	24	111363D
15	CCV	F	↓			↓	.20			
16	CRA	G	Hg 0.1 mg/L Cont			H13-313D	.20			
17	Std. Cal	H	Hg 0.1 mg/L Cal			H13-313B	.20			
18		I	↓			↓	.50			
19		J	Hg 1.0 mg/L Cal			H13-313A	.20			
20	↓ ↓	↓ K	↓		↓	↓	.25 ↓	↓	↓	↓

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM213	11-06-13	5-06-14	RT
2	↓	↓	↓	↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-07-13	11-14-13	RT
4				↓	↓	↓	10	0.1			↓	
5	200	6	40272				2000	10%			5-07-14	
6	↓	↓	↓				↓	10%			↓	
7								12%				
8							↓	↓	↓	↓	↓	↓
9				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-08-13	11-15-13	RT
10				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DI354	11-09-13	11-16-13	RT
11								0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H13-2975 H13-3056	100	2.5 µg/L				
15	↓	↓	↓	↓	↓	↓	200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5 ↓	↓	↓	↓	↓

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Footnotes

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E = Al $(NO_3)_3$ (40%)
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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5700 Std Cal	H13-313L	Hg 1.0 mg/L Cal	—	11-16-13	H13-313A	.50ml	1	4	1113030
2	↓	M						↓	↓	↓
3	Hg-5701 ICV	N	Hg 1.0 mg/L Cont		11-16-13	H13-313C	.25ml			
4	CCV	O					.10			
5	CCV	P					.10			
6	CCV	Q					.10			
7	CCV	R	↓			↓	.10			
8	CRA	S	Hg 0.1 mg/L Cont			H13-313D	.20			
9	Std Cal	T	Hg 0.1 mg/L Cal			H13-313B	.20			
10		U	↓			↓	.50			
11		V	Hg 1.0 mg/L Cal			H13-313A	.10			
12		W					.25			
13		X	↓		↓	↓	.50Y			
14	↓	Y								
15	SI	Z	Hg 0.1 mg/L Cal		11-16-13	H13-313B	.10ml			
16	CRA	AA	Hg 0.1 mg/L Cont		↓	H13-313D	.10ml			
17	↓ CRA	BB	↓		↓	↓	.40ml			
18	Aqua Regia	↓ CC						20	4	1113030
19	Hg 1.0 mg/L InterCal	H13-315A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0ml			
20	Hg 0.1 mg/L InterCal	315B	Hg 1.0 mg/L Cal		11-18-13	H13-315A	1.0mL			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	135111	3.2ml H_2SO_4 10ml $KMnO_4$		HB-2973 HB-305C	100	5.0ug/L	DL354	11-09-13	11-16-13	RT
2	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
3	—	—	—	5ml Aqua Regia 15ml $KMnO_4$	↓	HB-313CC HB-305C	↓	2.5	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
5	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	2.5	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
17	↓	↓	↓	↓	↓	↓	↓	0.4	↓	↓	↓	↓
18	60	6	40272	—	—	—	80	1:3	↓	↓	11-09-13	↓
19	—	—	—	To Vol w/ 0.15% HNO_3		HB-1601CC	10	1.0	DL354	11-11-13	11-18-13	RT
20	—	—	—	↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Stannous Chloride	H13-315C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #3	200.06g	—	—	—
2	Hydroxylamine	H13-315D	$NH_2OH \cdot HCl$	6	10-26-19	54869 #3	240.04g	—	—	—
3	↓	↓	NaCl	6	3-17-18	48151 #1	240.08g	—	—	—
4	Potassium Permanganate	H13-315E	$KMnO_4$ #1	6	4-10-18	46760	100.03g	—	—	—
5	↓	↓ F	↓	↓	↓	46760	100.04g	—	—	—
6	↓	↓ G	↓	↓	↓	46760	100.07g	—	—	—
7	Hg 1.0 mg/L Inter Cont	H13-316A	Hg 10 mg/L Cont	—	4-15-14	H13-288D	1.0 ml	—	—	—
8	Hg 0.1 mg/L Inter Cont	316B	Hg 1.0 mg/L Cont	—	11-19-13	H13-316A	1.0 ml	—	—	—
9	Potassium Persulfate	H13-316C	$K_2S_2O_8$ #3	6	9-29-15	42220	100.04g	—	—	—
10	Hg 1.0 mg/L Inter Cal	H13-317A	Hg 10 mg/L Cal	7	4-15-14	H13-288C	1.0 ml	—	—	—
11	0.1 mg/L Inter Cal	B	1.0 mg/L Cal		11-20-13	H13-317A	↓	—	—	—
12	1.0 mg/L Inter Cont	C	10 mg/L Cont		4-15-14	H13-288D	↓	—	—	—
13	0.1 mg/L Inter Cont	D	1.0 mg/L Cont		11-20-13	H13-317C	↓	—	—	—
14	Hg 5700 ICV	E	↓		↓	↓	.25 ml	1	4	1113030
15	CCV	F	↓		↓	↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1 mg/L Cont		↓	H13-317D	.20	↓	↓	↓
17	Std Cal	H	Hg 0.1 mg/L Cal		↓	H13-317B	.20	↓	↓	↓
18	↓	I	↓		↓	↓	.50	↓	↓	↓
19	↓	J	Hg 1.0 mg/L Cal		↓	H13-317A	.20	↓	↓	↓
20	↓	↓ K	↓		↓	↓	.25	↓	↓	↓

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	200	13 ③11-11-13 DY354	52250				2000	10%	DW354	11-11-13	5-11-14	RT
2								12%				
3												
4				to volume w/ DI H_2O			2000	5%	NSM823	11-11-13	5-11-14	RT
5												
6												
7				To volume 0.15% HNO_3 HI3-1601CC			10	1.0	DW354	11-12-13	11-19-13	RT
8							10	0.1				
9				to volume w/ DI H_2O			2000	5%	NSM823	11-12-13	5-12-14	RT
10				To volume 0.15% HNO_3 HI3-1601CC			10	1.0	DW354	11-13-13	11-20-13	RT
11								0.1				
12								1.0				
13								0.1				
14	2ml H_2SO_4	H	135111	3.2ml $K_2S_2O_8$ 1ml KMnO4		HI3-3088 HI3-3108	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

Metals in Solid Data

Case Narrative/Conformance Summary

Metals in Solid

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

ICP Metals

Fraction: Metals in Solid

Sample #	Client ID	Matrix Liquid	Matrix Solid	Comments
7266809	SD-R2-E-13-1		X	
7266812	SD-R2-C-12-6		X	
7266813	SD-R2-C-11-1		X	
7266814	SD-R2-E-10-1		X	Background/Unspiked
7266815	SD-R2-E-10-1_MS		X	Matrix Spike
7266816	SD-R2-E-10-1_MSD		X	Matrix Spike Duplicate
7266817	SD-R2-E-10-1_DUP		X	Duplicate
7266818	SD-R2-E-10-2		X	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Method defined actions are taken for any failed matrix QC.

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

ICP Metals

Fraction: Metals in Solid

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Refer to analysis run log for samples requiring dilutions.

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

(Sample number(s): 7266818: Analysis: 06944)
Reporting limits were raised due to interference from the sample matrix.

(Sample number(s): 7266814, 7266817: Analysis: 06972)
Reporting limits for ICP metals were raised due to interference from the sample matrix.

(Sample number(s): 7266815-7266816: Analysis: 06925)
Reporting limits for ICP metals were raised due to interference from the sample matrix.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Solid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266809 % Solids: 8.1
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	4630			P
7440-36-0	Antimony	9.0	U		P
7440-38-2	Arsenic	10.4	B		P
7440-39-3	Barium	82.3			P
7440-41-7	Beryllium	0.81	U		P
7440-43-9	Cadmium	1.6	B		P
7440-70-2	Calcium	47200			P
7440-47-3	Chromium	14.9	B		P
7440-48-4	Cobalt	2.6	B		P
7440-50-8	Copper	50.0			P
7439-89-6	Iron	10900			P
7439-92-1	Lead	222			P
7439-95-4	Magnesium	6000			P
7439-96-5	Manganese	697			P
7439-97-6	Mercury	0.49	B		CV
7440-02-0	Nickel	17.2			P
7440-09-7	Potassium	489	B		P
7782-49-2	Selenium	9.7	U		P
7440-22-4	Silver	2.4	B		P
7440-23-5	Sodium	808	B		P
7440-28-0	Thallium	6.3	U		P
7440-62-2	Vanadium	33.3			P
7440-66-6	Zinc	185			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266812 % Solids: 57.6
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	6970			P
7440-36-0	Antimony	1.3	U		P
7440-38-2	Arsenic	4.6			P
7440-39-3	Barium	66.4			P
7440-41-7	Beryllium	0.29	B		P
7440-43-9	Cadmium	0.54	B		P
7440-70-2	Calcium	1920			P
7440-47-3	Chromium	11.1			P
7440-48-4	Cobalt	2.4			P
7440-50-8	Copper	21.3			P
7439-89-6	Iron	16700			P
7439-92-1	Lead	732			P
7439-95-4	Magnesium	917			P
7439-96-5	Manganese	90.9			P
7439-97-6	Mercury	0.27			CV
7440-02-0	Nickel	7.3			P
7440-09-7	Potassium	396			P
7782-49-2	Selenium	1.4	U		P
7440-22-4	Silver	0.38	B		P
7440-23-5	Sodium	220			P
7440-28-0	Thallium	0.89	U		P
7440-62-2	Vanadium	24.8			P
7440-66-6	Zinc	113			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266813 % Solids: 32.7
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9770			P
7440-36-0	Antimony	5.7	B		P
7440-38-2	Arsenic	88.1			P
7440-39-3	Barium	215			P
7440-41-7	Beryllium	0.20	U		P
7440-43-9	Cadmium	0.91	B		P
7440-70-2	Calcium	1430			P
7440-47-3	Chromium	15.2			P
7440-48-4	Cobalt	2.0			P
7440-50-8	Copper	65.8			P
7439-89-6	Iron	9610			P
7439-92-1	Lead	2470			P
7439-95-4	Magnesium	722			P
7439-96-5	Manganese	40.3			P
7439-97-6	Mercury	0.74			CV
7440-02-0	Nickel	8.2			P
7440-09-7	Potassium	777			P
7782-49-2	Selenium	2.4	U		P
7440-22-4	Silver	0.87	B		P
7440-23-5	Sodium	205	B		P
7440-28-0	Thallium	1.6	U		P
7440-62-2	Vanadium	26.2			P
7440-66-6	Zinc	117			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266814BKG % Solids: 21.9
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5250			P
7440-36-0	Antimony	33.8	U		P
7440-38-2	Arsenic	32.0	U		P
7440-39-3	Barium	128			P
7440-41-7	Beryllium	3.1	U		P
7440-43-9	Cadmium	3.5	U		P
7440-70-2	Calcium	14500			P
7440-47-3	Chromium	15.4	B		P
7440-48-4	Cobalt	14.8	B		P
7440-50-8	Copper	61.2			P
7439-89-6	Iron	44300			P
7439-92-1	Lead	12500			P
7439-95-4	Magnesium	1830			P
7439-96-5	Manganese	1360			P
7439-97-6	Mercury	0.68			CV
7440-02-0	Nickel	32.3	B		P
7440-09-7	Potassium	381	U		P
7782-49-2	Selenium	36.5	U		P
7440-22-4	Silver	8.7	B		P
7440-23-5	Sodium	763	U		P
7440-28-0	Thallium	23.7	U		P
7440-62-2	Vanadium	42.2			P
7440-66-6	Zinc	82.3	B		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266815MS % Solids: 21.9
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8900			P
7440-36-0	Antimony	224			P
7440-38-2	Arsenic	66.7	B		P
7440-39-3	Barium	1140			P
7440-41-7	Beryllium	18.4	B		P
7440-43-9	Cadmium	25.3			P
7440-70-2	Calcium	17600			P
7440-47-3	Chromium	114			P
7440-48-4	Cobalt	251			P
7440-50-8	Copper	188			P
7439-89-6	Iron	45300			P
7439-92-1	Lead	12100			P
7439-95-4	Magnesium	3000			P
7439-96-5	Manganese	1970			P
7439-97-6	Mercury	1.4			CV
7440-02-0	Nickel	274			P
7440-09-7	Potassium	5610			P
7782-49-2	Selenium	71.5	B		P
7440-22-4	Silver	35.2			P
7440-23-5	Sodium	5410			P
7440-28-0	Thallium	63.5	B		P
7440-62-2	Vanadium	274			P
7440-66-6	Zinc	312			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266816MSD % Solids: 21.9
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9340			P
7440-36-0	Antimony	216			P
7440-38-2	Arsenic	75.6	B		P
7440-39-3	Barium	1070			P
7440-41-7	Beryllium	17.9	B		P
7440-43-9	Cadmium	24.7			P
7440-70-2	Calcium	16200			P
7440-47-3	Chromium	109			P
7440-48-4	Cobalt	246			P
7440-50-8	Copper	179			P
7439-89-6	Iron	41000			P
7439-92-1	Lead	12800			P
7439-95-4	Magnesium	2910			P
7439-96-5	Manganese	1330			P
7439-97-6	Mercury	1.4			CV
7440-02-0	Nickel	269			P
7440-09-7	Potassium	5250			P
7782-49-2	Selenium	65.7	B		P
7440-22-4	Silver	31.4			P
7440-23-5	Sodium	5200			P
7440-28-0	Thallium	66.3	B		P
7440-62-2	Vanadium	264			P
7440-66-6	Zinc	305			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266817DUP % Solids: 21.9
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	5400			P
7440-36-0	Antimony	33.8	U		P
7440-38-2	Arsenic	32.0	U		P
7440-39-3	Barium	119			P
7440-41-7	Beryllium	3.1	U		P
7440-43-9	Cadmium	3.5	U		P
7440-70-2	Calcium	14000			P
7440-47-3	Chromium	17.6	B		P
7440-48-4	Cobalt	12.6	B		P
7440-50-8	Copper	62.5			P
7439-89-6	Iron	37900			P
7439-92-1	Lead	12500			P
7439-95-4	Magnesium	1770			P
7439-96-5	Manganese	1120			P
7439-97-6	Mercury	0.65			CV
7440-02-0	Nickel	31.1	B		P
7440-09-7	Potassium	381	U		P
7782-49-2	Selenium	36.5	U		P
7440-22-4	Silver	9.1	B		P
7440-23-5	Sodium	763	U		P
7440-28-0	Thallium	23.7	U		P
7440-62-2	Vanadium	40.7			P
7440-66-6	Zinc	81.4	B		P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Lab Sample ID: 7266818 % Solids: 35.7
Concentration Units: MG/KG Date Received: 11/06/2013

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18000			P
7440-36-0	Antimony	10.1	U		P
7440-38-2	Arsenic	43.1			P
7440-39-3	Barium	186			P
7440-41-7	Beryllium	1.0	B		P
7440-43-9	Cadmium	2.6			P
7440-70-2	Calcium	2690			P
7440-47-3	Chromium	20.2			P
7440-48-4	Cobalt	10.0			P
7440-50-8	Copper	67.9			P
7439-89-6	Iron	109000			P
7439-92-1	Lead	109			P
7439-95-4	Magnesium	2660			P
7439-96-5	Manganese	309			P
7439-97-6	Mercury	0.40			CV
7440-02-0	Nickel	20.8			P
7440-09-7	Potassium	699			P
7782-49-2	Selenium	21.8	U		P
7440-22-4	Silver	0.46	U		P
7440-23-5	Sodium	251	B		P
7440-28-0	Thallium	1.4	U		P
7440-62-2	Vanadium	41.1			P
7440-66-6	Zinc	464			P

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence
NR = Not Required

CONCENTRATION QUALIFIERS:
U = Below MDL,
B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Solid

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM06
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Aluminum	P31208C	7266809
Antimony		7266812
Arsenic		7266813
Barium		7266814BKG
Beryllium		7266815MS
Cadmium		7266816MSD
Calcium		7266817DUP
Chromium		7266818
Cobalt		P31208CB
Copper		P31208CQ
Iron		
Lead		
Magnesium		
Manganese		
Nickel		
Potassium		
Selenium		
Silver		
Sodium		
Thallium		
Vanadium		
Zinc		

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY CONTROL REFERENCE LIST

SDG No.: KVM06
Matrix: SOIL

Analyte	Batch ID	Lab Sample ID
Mercury	P31211C	7266809
		7266812
		7266813
		7266814BKG
		7266815MS
		7266816MSD
		7266817DUP
		7266818
		P31211CB
		P31211CQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	31180.27	103.9	25000.0	25616.01	102.5	25000.0	27352.29	109.4
Antimony		600.0	637.89	106.3	500.0	519.75	104.0	500.0	549.77	110.0
Arsenic		600.0	614.28	102.4	500.0	500.84	100.2	500.0	526.41	105.3
Barium		600.0	626.42	104.4	500.0	506.76	101.4	500.0	538.93	107.8
Beryllium		600.0	606.79	101.1	500.0	491.02	98.2	500.0	519.47	103.9
Cadmium		600.0	613.62	102.3	500.0	503.18	100.6	500.0	526.79	105.4
Calcium		30000.0	30663.41	102.2	25000.0	25421.78	101.7	25000.0	27208.61	108.8
Chromium		600.0	603.90	100.7	500.0	488.90	97.8	500.0	517.78	103.6
Cobalt		600.0	611.15	101.9	500.0	501.80	100.4	500.0	524.87	105.0
Copper		600.0	623.89	104.0	500.0	503.83	100.8	500.0	539.65	107.9
Iron		30000.0	30564.81	101.9	25000.0	25211.31	100.8	25000.0	27053.62	108.2
Lead		600.0	619.01	103.2	500.0	509.49	101.9	500.0	532.78	106.6
Magnesium										
Manganese		600.0	614.49	102.4	500.0	499.03	99.8	500.0	526.26	105.3
Nickel		600.0	615.51	102.6	500.0	504.86	101.0	500.0	529.51	105.9
Potassium		30000.0	30501.45	101.7	25000.0	25166.35	100.7	25000.0	26953.14	107.8
Selenium		600.0	615.66	102.6	500.0	501.02	100.2	500.0	527.71	105.5
Silver		600.0	622.14	103.7	500.0	504.02	100.8	500.0	535.03	107.0
Sodium		30000.0	30353.06	101.2	25000.0	25034.98	100.1	25000.0	26639.92	106.6
Thallium		600.0	610.45	101.7	500.0	504.51	100.9	500.0	527.35	105.5
Vanadium		600.0	613.02	102.2	500.0	495.36	99.1	500.0	524.49	104.9
Zinc		600.0	622.11	103.7	500.0	506.68	101.3	500.0	533.83	106.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	26170.54	104.7	25000.0	25616.80	102.5
Antimony					500.0	535.74	107.1	500.0	535.44	107.1
Arsenic					500.0	509.83	102.0	500.0	508.91	101.8
Barium					500.0	522.65	104.5	500.0	522.85	104.6
Beryllium					500.0	507.02	101.4	500.0	507.67	101.5
Cadmium					500.0	513.82	102.8	500.0	514.50	102.9
Calcium					25000.0	26035.94	104.1	25000.0	25435.43	101.7
Chromium					500.0	507.99	101.6	500.0	506.18	101.2
Cobalt					500.0	509.30	101.9	500.0	512.09	102.4
Copper					500.0	527.85	105.6	500.0	521.73	104.3
Iron					25000.0	25937.12	103.7	25000.0	25301.64	101.2
Lead					500.0	519.80	104.0	500.0	518.59	103.7
Magnesium										
Manganese					500.0	512.24	102.4	500.0	512.11	102.4
Nickel					500.0	515.88	103.2	500.0	516.57	103.3
Potassium					25000.0	26112.93	104.5	25000.0	25486.89	101.9
Selenium					500.0	513.56	102.7	500.0	513.47	102.7
Silver					500.0	521.60	104.3	500.0	518.78	103.8
Sodium					25000.0	25882.82	103.5	25000.0	25257.18	101.0
Thallium					500.0	516.26	103.3	500.0	513.58	102.7
Vanadium					500.0	512.16	102.4	500.0	510.28	102.1
Zinc					500.0	520.42	104.1	500.0	519.75	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum		30000.0	30183.33	100.6	25000.0	25054.10	100.2	25000.0	25243.50	101.0
Antimony		600.0	615.71	102.6	500.0	506.48	101.3	500.0	516.24	103.2
Arsenic		600.0	599.38	99.9	500.0	488.74	97.7	500.0	497.05	99.4
Barium		600.0	602.15	100.4	500.0	507.18	101.4	500.0	508.01	101.6
Beryllium		600.0	585.94	97.7	500.0	489.60	97.9	500.0	488.63	97.7
Cadmium		600.0	596.64	99.4	500.0	494.26	98.9	500.0	497.82	99.6
Calcium		30000.0	29740.65	99.1	25000.0	24803.37	99.2	25000.0	24934.56	99.7
Chromium		600.0	578.29	96.4	500.0	490.18	98.0	500.0	487.53	97.5
Cobalt		600.0	595.49	99.2	500.0	492.12	98.4	500.0	496.90	99.4
Copper		600.0	600.77	100.1	500.0	506.09	101.2	500.0	513.49	102.7
Iron		30000.0	29666.99	98.9	25000.0	24673.44	98.7	25000.0	24822.70	99.3
Lead		600.0	599.27	99.9	500.0	500.26	100.1	500.0	508.13	101.6
Magnesium		30000.0	29283.15	97.6	25000.0	24416.97	97.7	25000.0	24477.44	97.9
Manganese		600.0	593.54	98.9	500.0	497.47	99.5	500.0	497.76	99.6
Nickel		600.0	597.26	99.5	500.0	496.24	99.2	500.0	499.77	100.0
Potassium		30000.0	29751.65	99.2	25000.0	24799.80	99.2	25000.0	24971.51	99.9
Selenium										
Silver		600.0	605.51	100.9	500.0	506.89	101.4	500.0	512.35	102.5
Sodium		30000.0	29484.66	98.3	25000.0	24551.01	98.2	25000.0	24704.28	98.8
Thallium		600.0	590.38	98.4	500.0	497.38	99.5	500.0	502.75	100.6
Vanadium		600.0	593.86	99.0	500.0	496.82	99.4	500.0	497.64	99.5
Zinc		600.0	603.19	100.5	500.0	498.15	99.6	500.0	503.70	100.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	25323.94	101.3	25000.0	25145.09	100.6
Antimony					500.0	513.32	102.7	500.0	507.70	101.5
Arsenic					500.0	491.45	98.3	500.0	489.42	97.9
Barium					500.0	513.09	102.6	500.0	514.00	102.8
Beryllium					500.0	494.23	98.8	500.0	496.28	99.3
Cadmium					500.0	498.69	99.7	500.0	495.66	99.1
Calcium					25000.0	24969.17	99.9	25000.0	24955.89	99.8
Chromium					500.0	491.34	98.3	500.0	494.04	98.8
Cobalt					500.0	497.73	99.5	500.0	494.15	98.8
Copper					500.0	512.74	102.5	500.0	511.49	102.3
Iron					25000.0	24880.39	99.5	25000.0	24811.28	99.2
Lead					500.0	506.28	101.3	500.0	502.17	100.4
Magnesium					25000.0	24548.57	98.2	25000.0	24330.99	97.3
Manganese					500.0	502.35	100.5	500.0	500.84	100.2
Nickel					500.0	501.97	100.4	500.0	498.17	99.6
Potassium					25000.0	24882.95	99.5	25000.0	24710.13	98.8
Selenium										
Silver					500.0	515.07	103.0	500.0	511.91	102.4
Sodium					25000.0	24712.10	98.8	25000.0	24446.68	97.8
Thallium					500.0	500.66	100.1	500.0	498.45	99.7
Vanadium					500.0	501.91	100.4	500.0	501.76	100.4
Zinc					500.0	502.79	100.6	500.0	498.84	99.8

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum					25000.0	24990.60	100.0			
Antimony					500.0	507.48	101.5			
Arsenic					500.0	490.85	98.2			
Barium					500.0	504.21	100.8			
Beryllium					500.0	490.71	98.1			
Cadmium					500.0	496.38	99.3			
Calcium					25000.0	24568.96	98.3			
Chromium					500.0	486.05	97.2			
Cobalt					500.0	496.36	99.3			
Copper					500.0	504.05	100.8			
Iron					25000.0	24482.10	97.9			
Lead					500.0	501.38	100.3			
Magnesium					25000.0	24132.26	96.5			
Manganese					500.0	498.22	99.6			
Nickel					500.0	498.12	99.6			
Potassium					25000.0	24510.17	98.0			
Selenium										
Silver					500.0	506.70	101.3			
Sodium					25000.0	24326.21	97.3			
Thallium					500.0	496.47	99.3			
Vanadium					500.0	497.96	99.6			
Zinc					500.0	499.40	99.9			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium		600.0	607.62	101.3	500.0	505.46	101.1	500.0	503.55	100.7
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead										
Magnesium										
Manganese										
Nickel										
Potassium										
Selenium					500.0	502.89	100.6			
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury		2.5	2.44	97.6	1.0	1.03	103.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.04	104.0	1.0	0.95	95.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.01	101.0	1.0	1.04	104.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.02	102.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration			Continuing Calibration					
		True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	0.97	97.0	1.0	1.01	101.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.03	103.0	1.0	1.03	103.0

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Mercury					1.0	1.02	102.0			

(1) Control Limits: 90 - 110
(2) Control Limits: 80 - 120

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	340.24	170.1	230.17	115.1
Antimony		20.0	22.26	111.3	23.51	117.6
Arsenic		20.0	20.97	104.9	21.79	109.0
Barium		5.0	5.79	115.8	5.75	115.0
Beryllium		5.0	4.73	94.6	4.75	95.0
Cadmium		5.0	5.17	103.4	4.99	99.8
Calcium		200.0	283.54	141.8	217.37	108.7
Chromium		15.0	15.11	100.7	15.70	104.7
Cobalt		5.0	5.34	106.8	5.29	105.8
Copper		10.0	10.14	101.4	9.69	96.9
Iron		200.0	255.72	127.9	229.89	114.9
Lead		15.0	19.66	131.1	17.43	116.2
Magnesium						
Manganese		5.0	5.68	113.6	5.81	116.2
Nickel		10.0	10.46	104.6	10.86	108.6
Potassium		500.0	437.72	87.5	422.68	84.5
Selenium		20.0	19.09	95.5	20.58	102.9
Silver		5.0	6.40	128.0	6.89	137.8
Sodium		1000.0	1000.31	100.0	1008.84	100.9
Thallium		30.0	33.03	110.1	33.84	112.8
Vanadium		5.0	4.51	90.2	4.50	90.0
Zinc		20.0	20.48	102.4	20.70	103.5

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum		200.0	190.03	95.0	193.70	96.9
Antimony		20.0	21.77	108.9	21.34	106.7
Arsenic		20.0	17.55	87.8	18.35	91.8
Barium		5.0	5.50	110.0	5.30	106.0
Beryllium		5.0	4.02	80.4	3.91	78.2
Cadmium		5.0	5.01	100.2	4.94	98.8
Calcium		200.0	212.35	106.2	202.53	101.3
Chromium		15.0	15.29	101.9	15.20	101.3
Cobalt		5.0	5.37	107.4	5.14	102.8
Copper		10.0	9.91	99.1	9.11	91.1
Iron		200.0	214.31	107.2	199.63	99.8
Lead		15.0	17.20	114.7	18.25	121.7
Magnesium		100.0	108.60	108.6	97.25	97.3
Manganese		5.0	5.36	107.2	5.18	103.6
Nickel		10.0	10.76	107.6	10.58	105.8
Potassium		500.0	467.97	93.6	421.65	84.3
Selenium						
Silver		5.0	6.81	136.2	6.53	130.6
Sodium		1000.0	998.21	99.8	998.42	99.8
Thallium		30.0	30.68	102.3	30.53	101.8
Vanadium		5.0	3.76	75.2	3.50	70.0
Zinc		20.0	20.50	102.5	21.87	109.4

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Nickel						
Potassium						
Selenium		20.0	22.22	111.1	20.68	103.4
Silver						
Sodium						
Thallium						
Vanadium						
Zinc						

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Mercury		0.2	0.19	95.0	0.17	85.0

Control limits: 50% - 150%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		68.4	B	60.2	B	33.4	U	33.4	U		8.996	B	P31208CB
Antimony		2.0	U	2.0	U	2.0	U	2.0	B		0.740	U	P31208CB
Arsenic		2.3	U	2.3	U	2.3	U	2.3	U		0.700	U	P31208CB
Barium		0.33	U	0.33	U	0.33	U	0.33	U		0.033	U	P31208CB
Beryllium		0.67	U	0.67	U	0.67	U	0.67	U		0.067	U	P31208CB
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U		0.076	U	P31208CB
Calcium		33.4	U	49.2	B	33.4	U	33.4	U				
Chromium		0.61	U	0.61	U	0.61	U	0.61	U		0.160	U	P31208CB
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U		0.099	U	P31208CB
Copper		1.7	U	1.7	U	1.7	U	1.7	U		0.290	U	P31208CB
Iron		33.4	U	33.4	U	33.4	U	33.4	U		3.600	U	P31208CB
Lead		2.0	B	1.8	B	1.9	B	1.8	U		0.500	U	P31208CB
Magnesium													
Manganese		0.83	U	0.83	U	0.83	U	0.83	U		0.083	U	P31208CB
Nickel		1.0	U	1.0	U	1.0	U	1.0	U		0.130	U	P31208CB
Potassium		83.4	U	-98.4	B	-109	B	-104	B		8.300	U	P31208CB
Selenium		3.4	U	3.4	U	3.4	U	3.4	U		0.800	U	P31208CB
Silver		1.2	B	1.9	B	1.7	B	1.3	B		0.170	U	P31208CB
Sodium		167	U	167	U	167	U	167	U		16.700	U	P31208CB
Thallium		1.9	U	1.9	U	1.9	U	1.9	U		0.520	U	P31208CB
Vanadium		0.83	U	0.83	U	0.83	U	-0.97	B		0.130	U	P31208CB
Zinc		2.0	U	2.0	U	2.0	U	2.0	U		0.200	U	P31208CB

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331606T72
Calibration Date(s): 11/12/2013

Analyte	Mass	Initial Calibration Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank (MG/KG) Mass		C	Lab Sample ID
Aluminum				33.4	U								
Antimony				2.0	U								
Arsenic				2.3	U								
Barium				0.33	U								
Beryllium				0.67	U								
Cadmium				0.33	U								
Calcium				33.4	U								
Chromium				0.61	U								
Cobalt				0.26	U								
Copper				1.7	U								
Iron				33.4	U								
Lead				1.8	U								
Magnesium													
Manganese				0.83	U								
Nickel				1.0	U								
Potassium				83.4	U								
Selenium				3.4	U								
Silver				1.1	B								
Sodium				167	U								
Thallium				1.9	U								
Vanadium				-0.92	B								
Zinc				2.0	U								

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum		33.4	U	33.4	U	33.4	U	-38.2	B				
Antimony		2.0	U	2.0	U	2.0	U	2.1	B				
Arsenic		2.3	U	2.3	U	2.3	U	-2.9	B				
Barium		0.33	U	0.33	U	0.33	U	0.33	U				
Beryllium		-0.80	B	-0.83	B	-0.93	B	-0.86	B				
Cadmium		0.33	U	0.33	U	0.33	U	0.33	U				
Calcium		33.4	U	33.4	U	33.4	U	33.4	U		10.107	B	P31208CB
Chromium		0.61	U	0.61	U	0.61	U	0.61	U				
Cobalt		0.26	U	0.26	U	0.26	U	0.26	U				
Copper		-1.8	B	1.7	U	-1.8	B	1.7	U				
Iron		33.4	U	33.4	U	33.4	U	33.4	U				
Lead		1.8	U	1.8	U	1.8	B	1.8	U				
Magnesium		16.7	U	34.0	B	16.7	U	16.7	U		2.197	B	P31208CB
Manganese		0.83	U	0.83	U	0.83	U	0.83	U				
Nickel		1.0	U	1.0	U	1.0	U	1.0	U				
Potassium		83.4	U	-135	B	-105	B	-111	B				
Selenium													
Silver		2.0	B	1.9	B	2.0	B	1.9	B				
Sodium		167	U	167	U	167	U	167	U				
Thallium		-2.1	B	-2.3	B	-2.9	B	-2.6	B				
Vanadium		-1.3	B	-1.3	B	-1.3	B	-1.2	B				
Zinc		2.0	U	2.0	U	2.0	U	2.0	U				

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331705T72
Calibration Date(s): 11/13/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum				-34.9	B	33.4	U						
Antimony				2.0	U	2.0	U						
Arsenic				2.3	U	2.3	U						
Barium				0.33	U	0.33	U						
Beryllium				-0.85	B	-0.78	B						
Cadmium				0.33	U	0.33	U						
Calcium				33.4	U	33.7	B						
Chromium				0.61	U	0.61	U						
Cobalt				0.26	U	0.26	U						
Copper				-1.7	B	1.7	U						
Iron				33.4	U	33.4	U						
Lead				1.8	U	1.9	B						
Magnesium				16.7	U	31.6	B						
Manganese				0.83	U	0.83	U						
Nickel				1.0	U	1.0	U						
Potassium				-88.6	B	83.4	U						
Selenium													
Silver				1.2	B	2.0	B						
Sodium				167	U	167	U						
Thallium				-3.1	B	1.9	U						
Vanadium				-1.6	B	-1.2	B						
Zinc				2.0	U	2.0	U						

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below IDL/MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: P
Run Name: 1331707T72
Calibration Date(s): 11/13/2013 - 11/14/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Aluminum													
Antimony													
Arsenic													
Barium													
Beryllium													
Cadmium													
Calcium													
Chromium													
Cobalt													
Copper													
Iron													
Lead													
Magnesium													
Manganese													
Nickel													
Potassium													
Selenium		3.4	U	3.4	U	3.4	U	3.4	U				
Silver													
Sodium													
Thallium													
Vanadium													
Zinc													

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013
Preparation Blank Matrix: SOIL

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury		0.060	U	0.060	U	0.060	U	0.060	U		0.010	U	P31211CB

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U	0.060	U	0.060	U				

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: KVM06

Method: CV
Run Name: 1331501M07
Calibration Date(s): 11/11/2013

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (MG/KG)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Lab Sample ID
Mercury				0.060	U								

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 16417
Run Name: 1331606T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	511424	102.3	509828.8	102.0	532788	106.6	524372.4	104.9
Antimony	0	600	-6		643.8	107.3	-9		669.5	111.6
Arsenic	0	100	-4		98.4	98.4	-7		97.5	97.5
Barium	0	500	0		511.9	102.4	0		515.2	103.0
Beryllium	0	500	0		515.9	103.2	-1		517.8	103.6
Cadmium	0	1000	1		942.3	94.2	2		969.2	96.9
Calcium	500000	500000	518109	103.6	517388.7	103.5	550664	110.1	535069.0	107.0
Chromium	0	500	2		482.2	96.4	2		491.2	98.2
Cobalt	0	500	0		460.7	92.1	0		470.9	94.2
Copper	0	500	5		544.9	109.0	5		549.9	110.0
Iron	200000	200000	207326	103.7	206524.9	103.3	218285	109.1	214370.6	107.2
Lead	0	50	8		53.1	106.2	3		53.4	106.8
Magnesium	500000	500000	562066	112.4	556200.9	111.2	608393	121.7	583166.1	116.6
Manganese	0	500	4		493.9	98.8	4		490.5	98.1
Nickel	0	1000	3		923.6	92.4	3		949.9	95.0
Potassium	0	0	-128		-108.4		-172		-99.6	
Selenium	0	50	0		51.4	102.8	-1		55.5	111.0
Silver	0	200	1		223.3	111.7	2		223.0	111.5
Sodium	0	0	-5		-2.3		-4		2.9	
Thallium	0	100	0		93.2	93.2	-1		91.4	91.4
Vanadium	0	500	-5		498.3	99.7	-5		496.8	99.4
Zinc	0	1000	6		1049.6	105.0	7		1083.4	108.3

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 16417
Run Name: 1331705T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	506656	101.3	496723.4	99.3	507306	101.5	503756.7	100.8
Antimony	0	600	-8		630.2	105.0	-12		624.6	104.1
Arsenic	0	100	-8		92.9	92.9	-8		91.5	91.5
Barium	0	500	0		503.0	100.6	0		502.0	100.4
Beryllium	0	500	-1		507.9	101.6	-1		504.8	101.0
Cadmium	0	1000	5		945.5	94.6	5		944.0	94.4
Calcium	500000	500000	513288	102.7	498201.1	99.6	515772	103.2	508547.3	101.7
Chromium	0	500	3		476.0	95.2	3		468.8	93.8
Cobalt	0	500	0		459.3	91.9	0		460.1	92.0
Copper	0	500	3		525.2	105.0	3		523.7	104.7
Iron	200000	200000	205186	102.6	199977.7	100.0	204782	102.4	202641.2	101.3
Lead	0	50	4		52.8	105.6	5		50.4	100.8
Magnesium	500000	500000	551714	110.3	530532.4	106.1	552566	110.5	545216.6	109.0
Manganese	0	500	4		482.9	96.6	4		482.0	96.4
Nickel	0	1000	3		917.8	91.8	4		919.1	91.9
Potassium	0	0	-122		-109.5		-171		-122.6	
Selenium										
Silver	0	200	2		218.3	109.2	2		218.2	109.1
Sodium	0	0	-5		5.6		-1		7.2	
Thallium	0	100	-3		87.7	87.7	-3		85.2	85.2
Vanadium	0	500	-6		488.7	97.7	-6		487.9	97.6
Zinc	0	1000	8		1050.7	105.1	8		1047.2	104.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 4A
ICP-AES INTERFERENCE CHECK SAMPLE
SDG No.: KVM06

Instrument ID: 16417
Run Name: 1331707T72
Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	500000	500000	487089	97.4	491321.2	98.3	480308	96.1	486442.6	97.3
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	500000	500000	486481	97.3	487886.9	97.6	483548	96.7	484290.3	96.9
Chromium										
Cobalt										
Copper										
Iron	200000	200000	195032	97.5	196360.4	98.2	191749	95.9	194230.7	97.1
Lead										
Magnesium	500000	500000	521484	104.3	524726.6	104.9	514321	102.9	518158.8	103.6
Manganese										
Nickel										
Potassium										
Selenium	0	50	1		54.3	108.6	3		53.5	107.0
Silver										
Sodium										
Thallium										
Vanadium										
Zinc										

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266814BKG Matrix Spike Lab Sample ID: 7266815MS Matrix Spike Duplicate Lab Sample ID: 7266816MSD
Batch Id(s): P31208C, P31211C

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Aluminum		1149.0700		1948.9900		2045.0800		200.0000	200.0000	MG/KG	400		448		5			20	P
Antimony		7.4000	U	49.1000		47.2800		50.0000	50.0000	MG/KG	98		95		4		75 - 125	20	P
Arsenic		7.0000	U	14.6000	B	16.5500	B	15.0000	15.0000	MG/KG	97		110		13		75 - 125	20	P
Barium		28.0100		250.7200		235.0100		200.0000	200.0000	MG/KG	111		104		6		75 - 125	20	P
Beryllium		0.6700	U	4.0400	B	3.9200	B	5.0000	5.0000	MG/KG	81	N	78	N	3		83 - 119	20	P
Cadmium		0.7600	U	5.5400		5.4100		5.0000	5.0000	MG/KG	111		108		2		75 - 125	20	P
Calcium		3176.7400		3860.0600		3551.5400		400.0000	400.0000	MG/KG	171		94		8			20	P
Chromium		3.3700	B	25.0000		23.8100		20.0000	20.0000	MG/KG	108		102		5		75 - 125	20	P
Cobalt		3.2400	B	54.9500		53.9000		50.0000	50.0000	MG/KG	103		101		2		78 - 113	20	P
Copper		13.4100		41.1200		39.1500		25.0000	25.0000	MG/KG	111		103		5		75 - 125	20	P
Iron		9702.8300		9921.8300		8975.0400		100.0000	100.0000	MG/KG	219		-728		10			20	P
Lead		2743.5900		2660.8100		2794.1900		15.0000	15.0000	MG/KG	-552		337		5			20	P
Magnesium		401.6100		656.4600		636.7300		200.0000	200.0000	MG/KG	127	N	118		3		75 - 125	20	P
Manganese		298.4200		431.4600		291.2100		50.0000	50.0000	MG/KG	266		-14		39	*		20	P
Mercury		0.1490		0.3085		0.3007		0.1593	0.1604	MG/KG	100		95		3		80 - 120	20	CV
Nickel		7.0800	B	60.0100		58.8600		50.0000	50.0000	MG/KG	106		104		2		75 - 125	20	P
Potassium		83.4000	U	1229.6600		1150.5700		1000.0000	1000.0000	MG/KG	123		115		7		75 - 125	20	P
Selenium		8.0000	U	15.6500	B	14.3800	B	15.0000	15.0000	MG/KG	104		96		8		75 - 125	20	P
Silver		1.9000	B	7.7000		6.8700		5.0000	5.0000	MG/KG	116		99		11		75 - 125	20	P
Sodium		167.0000	U	1185.2900		1138.1700		1000.0000	1000.0000	MG/KG	119		114		4		75 - 125	20	P
Thallium		5.2000	U	13.9000	B	14.5100	B	15.0000	15.0000	MG/KG	93		97		4		78 - 119	20	P
Vanadium		9.2500		60.0200		57.8300		50.0000	50.0000	MG/KG	102		97		4		75 - 125	20	P
Zinc		18.0200	B	68.3600		66.7900		50.0000	50.0000	MG/KG	101		98		2		75 - 125	20	P

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
CV = Cold Vapor
MS = ICP Mass Spectrometry
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 5B
POST DIGEST SPIKE SAMPLE RECOVERY
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266814BKG Post Digest Spike Lab Sample ID: 7266814A
Batch ID(s): P31208C
Concentration Units: UG/L

Analyte	Mass	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Beryllium			23.2300		0.6700	U	20.0000	116		P
Magnesium			1620.2600		401.6100		1000.0000	122		P

Comments:
_____
_____
_____
_____

Note: Results shown are reported on an as-received basis.

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266814BKG Duplicate Lab Sample ID: 7266817DUP
Batch ID(s): P31208C, P31211C
Concentration Units: MG/KG

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum			1149.0700		1182.9800		3		P
Antimony			7.4000	U	7.4000	U			P
Arsenic			7.0000	U	7.0000	U			P
Barium			28.0100		25.9700		8		P
Beryllium			-0.7000	B	-0.7800	B	-11		P
Cadmium			0.7600	U	0.7600	U			P
Calcium			3176.7400		3063.2800		4		P
Chromium			3.3700	B	3.8600	B	14		P
Cobalt			3.2400	B	2.7600	B	16		P
Copper		10.0	13.4100		13.6800		2		P
Iron			9702.8300		8310.4000		15		P
Lead			2743.5900		2735.7800		0		P
Magnesium		100.0	401.6100		387.3600		4		P
Manganese			298.4200		246.0800		19		P
Mercury		0.1	0.1490		0.1422		5		CV
Nickel			7.0800	B	6.8000	B	4		P
Potassium			83.4000	U	83.4000	U			P
Selenium			8.0000	U	8.0000	U			P
Silver			1.9000	B	2.0000	B	5		P
Sodium			167.0000	U	167.0000	U			P
Thallium			5.2000	U	5.2000	U			P
Vanadium		5.0	9.2500		8.9200		4		P
Zinc			18.0200	B	17.8200	B	1		P

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: KVM06
Matrix: SOIL

Analyte	Mass	Lab Sample ID	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Aluminum		P31208CQ	UG/L	200000.0	220843.0		80 - 120	110	P	Yes
Antimony		P31208CQ	UG/L	50000.0	49517.0		80 - 120	99	P	Yes
Arsenic		P31208CQ	UG/L	15000.0	15805.0		80 - 120	105	P	Yes
Barium		P31208CQ	UG/L	200000.0	205077.0		80 - 120	103	P	Yes
Beryllium		P31208CQ	UG/L	5000.0	4813.0		80 - 120	96	P	Yes
Cadmium		P31208CQ	UG/L	5000.0	5120.0		80 - 120	102	P	Yes
Calcium		P31208CQ	UG/L	400000.0	418205.0		80 - 120	105	P	Yes
Chromium		P31208CQ	UG/L	20000.0	19911.0		80 - 120	100	P	Yes
Cobalt		P31208CQ	UG/L	50000.0	51742.0		80 - 120	103	P	Yes
Copper		P31208CQ	UG/L	25000.0	26134.0		80 - 120	105	P	Yes
Iron		P31208CQ	UG/L	100000.0	102368.0		80 - 120	102	P	Yes
Lead		P31208CQ	UG/L	15000.0	15963.0		80 - 120	106	P	Yes
Magnesium		P31208CQ	UG/L	200000.0	200992.0		80 - 120	100	P	Yes
Manganese		P31208CQ	UG/L	50000.0	51233.0		80 - 120	102	P	Yes
Mercury		P31211CQ	UG/L	100.0	99.0		80 - 120	99	CV	Yes
Nickel		P31208CQ	UG/L	50000.0	52797.0		80 - 120	106	P	Yes
Potassium		P31208CQ	UG/L	1000000.0	1014154.0		80 - 120	101	P	Yes
Selenium		P31208CQ	UG/L	15000.0	15424.0		80 - 120	103	P	Yes
Silver		P31208CQ	UG/L	5000.0	5256.0		80 - 120	105	P	Yes
Sodium		P31208CQ	UG/L	1000000.0	1013440.0		80 - 120	101	P	Yes
Thallium		P31208CQ	UG/L	15000.0	16024.0		80 - 120	107	P	Yes
Vanadium		P31208CQ	UG/L	50000.0	48853.0		80 - 120	98	P	Yes
Zinc		P31208CQ	UG/L	50000.0	51366.0		80 - 120	103	P	Yes

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: KVM06
Matrix: SOIL Level (low/med): LOW

Background Lab Sample ID: 7266814BKG Serial Dilution Lab Sample ID: 7266814L
Batch ID(s): P31208C
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Aluminum		1149.0700		976.1500	B	15		P
Antimony		7.4000	U	37.0000	U			P
Arsenic		7.0000	U	35.0000	U			P
Barium		28.0100		27.0500		3		P
Beryllium		0.6700	U	3.3500	U			P
Cadmium		0.7600	U	3.8000	U			P
Calcium		3176.7400		3023.4500		5		P
Chromium		3.3700	B	8.0000	U	100		P
Cobalt		3.2400	B	4.9500	U	100		P
Copper		13.4100		14.5000	U	100		P
Iron		9702.8300		9171.7000		5		P
Lead		2743.5900		2659.7000		3		P
Magnesium		401.6100		374.3500	B	7		P
Manganese		298.4200		289.3500		3		P
Nickel		7.0800	B	6.5000	B	8		P
Potassium		83.4000	U	417.0000	U			P
Selenium		8.0000	U	40.0000	U			P
Silver		1.9000	B	8.9000	B	368		P
Sodium		167.0000	U	835.0000	U			P
Thallium		5.2000	U	26.0000	U			P
Vanadium		9.2500		6.5000	U	100		P
Zinc		18.0200	B	14.5500	B	19		P

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum	308.21		33.4
Antimony	206.83		2.0
Arsenic	189.04		2.3
Barium	455.40		0.33
Beryllium	313.04		0.67
Cadmium	226.50		0.33
Calcium	317.93		33.4
Chromium	267.72		0.61
Cobalt	228.62		0.26
Copper	327.40		1.7
Iron	261.19		33.4
Lead	220.35		1.8
Magnesium	285.21		16.7
Manganese	257.61		0.83
Nickel	231.60		1.0
Potassium	766.49		83.4
Selenium	196.09		3.4
Silver			
Sodium	589.59		167
Thallium	190.86		1.9
Vanadium	292.40		0.83
Zinc	213.86		2.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: P
Instrument ID: 16417
Date: 11/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Nickel			
Potassium			
Selenium			
Silver	328.06		0.75
Sodium			
Thallium			
Vanadium			
Zinc			

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Date: 10/2013

Analyte	Wavelength (nm)	Background	IDL (UG/L)
Mercury	254.00		0.060

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM06
Matrix: SOIL

Method: P
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Aluminum	308.21		200	72.1
Antimony	206.83		20.0	7.4
Arsenic	189.04		20.0	7.0
Barium	455.40		5.0	0.33
Beryllium	313.04		5.0	0.67
Cadmium	226.50		5.0	0.76
Calcium	317.93		200	33.4
Chromium	267.72		15.0	1.6
Cobalt	228.62		5.0	0.99
Copper	327.40		10.0	2.9
Iron	261.19		200	36.2
Lead	220.35		15.0	5.0
Magnesium	285.21		100	16.7
Manganese	257.61		5.0	0.83
Nickel	231.60		10.0	1.3
Potassium	766.49		500	83.4
Selenium	196.09		20.0	8.0
Silver	328.06		5.0	1.7
Sodium	589.59		1000	167
Thallium	190.86		30.0	5.2
Vanadium	292.40		5.0	1.3
Zinc	213.86		20.0	2.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:
_____
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: KVM06
Matrix: SOIL

Method: CV
Date: 06/2013

Analyte	Wavelength (nm)	Background	LOQ (UG/L)	MDL (UG/L)
Mercury	254.00		0.60	0.060

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: AL	CA	FE	MG	BE
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.83	0.0000000	0.0000000	0.0000170	0.0000000	0.0000000
Arsenic	189.04	0.0000000	0.0000000	-0.0001240	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000810	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000290	0.0000000	0.0000000	0.0000000
Lead	220.35	0.0001340	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	-0.0000580	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000150	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000050	0.0000000	0.0000000
Thallium	190.86	0.0000000	0.0000000	-0.0000140	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000080	0.0000000	0.0000000
Zinc	213.86	0.0000000	0.0000000	0.0000800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: CO	CR	CU	MN	MO
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0278000
Antimony	206.83	0.0000000	0.0160000	0.0000000	0.0000000	-0.0026800
Arsenic	189.04	0.0000000	0.0004690	0.0000000	0.0000000	0.0012120
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	-0.0000400	0.0000160	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0000000	0.0002200	0.0000000	0.0000000	0.0000710
Copper	327.40	0.0003000	0.0000000	0.0000000	0.0000000	-0.0007830
Lead	220.35	-0.0007200	-0.0000520	0.0001970	0.0000000	-0.0021700
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	-0.0005900	0.0000000	0.0000000	0.0000000	0.0007680
Selenium	196.09	-0.0000160	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.86	0.0039800	0.0002880	0.0000000	0.0009070	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	-0.0045500
Zinc	213.86	0.0000000	0.0000000	0.0012800	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 11
ICP INTERELEMENT CORRECTION FACTORS
(BIANNUALLY)
SDG No.: KVM06

Instrument ID: 16417
Date: 06/2013

Analyte	Wavelength (nm)	Interelement Correction Factor for: NI	SI	TI	V	ZR
Aluminum	308.21	0.0000000	0.0000000	0.0000000	0.0320000	0.0000000
Antimony	206.83	0.0001630	0.0000000	0.0000000	0.0004560	0.0000000
Arsenic	189.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	-0.0000140	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cobalt	228.62	0.0001240	0.0000000	0.0023400	0.0000000	0.0000000
Copper	327.40	0.0000000	0.0000000	-0.0057500	0.0000000	0.0000000
Lead	220.35	-0.0000500	0.0000280	0.0000000	0.0000000	0.0000000
Magnesium	285.21	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.09	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.06	0.0000000	0.0000000	0.0000000	0.0000000	0.0080000
Thallium	190.86	0.0000000	0.0000000	-0.0018400	-0.0418000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0003400	0.0000000	0.0000000
Zinc	213.86	0.0049600	0.0000000	0.0000000	0.0000000	0.0000000

Comments:
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QUALITY ASSURANCE SUMMARY
FORM 12
LINEAR RANGES
SDG No.: KVM06

Method: P
Instrument ID: 16417
Date: 10/2013

Analyte	Wavelength (nm)	Integration Time (Sec.)	Concentration (ug/L)
Aluminum	308.21	10.00	600000.0
Antimony	206.83	10.00	10000.0
Arsenic	189.04	10.00	20000.0
Barium	455.4	10.00	10000.0
Beryllium	313.04	10.00	10000.0
Cadmium	226.5	10.00	20000.0
Calcium	317.93	10.00	600000.0
Chromium	267.72	10.00	20000.0
Cobalt	228.62	10.00	10000.0
Copper	327.4	10.00	10000.0
Iron	261.19	10.00	300000.0
Lead	220.35	10.00	10000.0
Magnesium	285.21	10.00	600000.0
Manganese	257.61	10.00	20000.0
Nickel	231.6	10.00	10000.0
Potassium	766.49	10.00	100000.0
Selenium	196.09	10.00	20000.0
Silver	328.06	10.00	10000.0
Sodium	589.59	10.00	100000.0
Thallium	190.86	10.00	10000.0
Vanadium	292.4	10.00	20000.0
Zinc	213.86	10.00	10000.0

Comments:
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METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM06

Method: P
Batch ID: P31208C

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7266809	11/11/2013	1.02	100
7266812	11/11/2013	1.01	100
7266813	11/11/2013	1.01	100
7266818	11/11/2013	1.03	100
7266814BKG	11/11/2013	1.00	100
7266817DUP	11/11/2013	1.00	100
7266816MSD	11/11/2013	1.00	100
7266815MS	11/11/2013	1.00	100
P31208CB	11/11/2013	1.00	100
P31208CQ	11/11/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 13
PREPARATION LOG
SDG No.: KVM06

Method: CV
Batch ID: P31211C

Lab Sample ID	Date	Sample Weight(gram)	Final Volume(ml)
7266809	11/11/2013	0.61	100
7266812	11/11/2013	0.60	100
7266813	11/11/2013	0.64	100
7266818	11/11/2013	0.61	100
7266814BKG	11/11/2013	0.61	100
7266817DUP	11/11/2013	0.61	100
7266816MSD	11/11/2013	0.62	100
7266815MS	11/11/2013	0.63	100
P31211CB	11/11/2013	0.60	100
P31211CQ	11/11/2013	1.00	100

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16417
Run Name: 1331606T72

Run Start Date: 11/12/2013
Run End Date: 11/12/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	18:44	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
S	1.00	18:48	X						X				X						X			X										
S	1.00	18:52			X	X	X	X			X	X		X		X		X		X	X		X		X							
S	1.00	18:56		X						X														X								
ICV	1.00	19:00	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICB	1.00	19:05	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
LLC	1.00	19:09	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSA	1.00	19:13	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSAB	1.00	19:17	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCV	1.00	19:22	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	19:26	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
P31208CB	1.00	19:30	X	X	X	X	X	X		X	X	X	X	X		X		X	X	X	X	X	X	X	X							
P31208CQ	1.00	19:34	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	19:38																														
ZZZZZZ	1.00	19:42																														
ZZZZZZ	1.00	19:46																														
ZZZZZZ	1.00	19:50																														
ZZZZZZ	1.00	19:55																														
ZZZZZZ	5.00	19:59																														
ZZZZZZ	1.00	20:03																														
ZZZZZZ	1.00	20:07																														
CCV	1.00	20:11	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	20:15	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	20:19																														
ZZZZZZ	1.00	20:24																														
ZZZZZZ	1.00	20:28																														
ZZZZZZ	1.00	20:32																														
ZZZZZZ	1.00	20:36																														
ZZZZZZ	1.00	20:40																														
ZZZZZZ	1.00	20:44																														
ZZZZZZ	1.00	20:48																														
ZZZZZZ	1.00	20:52																														
ZZZZZZ	1.00	20:56																														
CCV	1.00	21:00	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	21:05	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ZZZZZZ	1.00	21:09																														
7266809	1.00	21:13	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X		X	X	X	X							
7266812	1.00	21:17	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X		X	X	X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16417
Run Name: 1331606T72

Run Start Date: 11/12/2013
Run End Date: 11/12/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7266813	1.00	21:21	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X		X	X	X	X							
7266818	1.00	21:25	X			X	X		X	X		X				X			X		X	X		X							
ZZZZZZ	1.00	21:30																														
ZZZZZZ	1.00	21:34																														
LLC	1.00	21:38	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSA	1.00	21:42	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
ICSAB	1.00	21:46	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCV	1.00	21:51	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							
CCB	1.00	21:55	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X							

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16417
Run Name: 1331705T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	15:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
S	1.00	15:41	X						X				X		X				X			X										
S	1.00	15:45			X	X	X	X			X	X		X		X		X			X		X		X							
S	1.00	15:50		X						X														X								
ICV	1.00	15:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICB	1.00	15:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
LLC	1.00	16:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSA	1.00	16:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSAB	1.00	16:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	16:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	16:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
P31208CB	1.00	16:24							X						X																	
P31208CB	1.00	16:28																														
P31208CQ	1.00	16:32													X																	
7266814BKG	10.00	16:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7266814A	10.00	16:41					X								X																	
7266817DUP	10.00	16:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7266815MS	10.00	16:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7266816MSD	10.00	16:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
7266814L	50.00	16:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ZZZZZZ	10.00	17:01																														
CCV	1.00	17:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	17:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ZZZZZZ	10.00	17:14																														
ZZZZZZ	10.00	17:18																														
ZZZZZZ	10.00	17:22																														
ZZZZZZ	10.00	17:26																														
ZZZZZZ	1.00	17:30																														
ZZZZZZ	1.00	17:34																														
ZZZZZZ	10.00	17:39																														
ZZZZZZ	10.00	17:43																														
ZZZZZZ	10.00	17:47																														
ZZZZZZ	10.00	17:51																														
CCV	1.00	17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	17:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ZZZZZZ	1.00	18:04																														
ZZZZZZ	1.00	18:08																														
7266809	1.00	18:12													X						X											

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16417
Run Name: 1331705T72

Run Start Date: 11/13/2013
Run End Date: 11/13/2013

Lab Sample ID	D/F	Time	Analytes																													
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
7266812	1.00	18:16													X						X											
7266813	1.00	18:21													X						X											
7266818	1.00	18:25			X			X			X			X	X			X					X		X							
ZZZZZZ	1.00	18:29																														
7266818	5.00	18:33		X									X																			
7266818	10.00	18:37																														
CCV	1.00	18:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	18:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
LLC	1.00	18:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSA	1.00	18:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
ICSAB	1.00	18:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCV	1.00	19:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							
CCB	1.00	19:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X	X	X	X							

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: P
Instrument ID: 16417
Run Name: 1331707T72

Run Start Date: 11/13/2013
Run End Date: 11/14/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	22:48																		X												
S	1.00	22:52																														
S	1.00	22:56																		X												
S	1.00	23:01																														
ICV	1.00	23:05																		X												
ICB	1.00	23:09																		X												
LLC	1.00	23:13																		X												
ICSA	1.00	23:17																		X												
ICSAB	1.00	23:22																		X												
CCV	1.00	23:26																		X												
CCB	1.00	23:30																		X												
7266814BKG	10.00	23:35																		X												
7266814A	10.00	23:39																														
7266817DUP	10.00	23:43																		X												
7266815MS	10.00	23:47																		X												
7266816MSD	10.00	23:51																		X												
7266814L	50.00	23:55																		X												
ZZZZZZ	10.00	23:59																														
ZZZZZZ	10.00	00:03																														
ZZZZZZ	10.00	00:08																														
ZZZZZZ	10.00	00:12																														
CCV	1.00	00:16																		X												
CCB	1.00	00:20																		X												
ZZZZZZ	10.00	00:24																														
ZZZZZZ	10.00	00:29																														
ZZZZZZ	10.00	00:33																														
ZZZZZZ	10.00	00:37																														
ZZZZZZ	10.00	00:41																														
7266818	10.00	00:45																		X												
LLC	1.00	00:49																		X												
ICSA	1.00	00:54																		X												
ICSAB	1.00	00:58																		X												
CCV	1.00	01:03																		X												
CCB	1.00	01:07																		X												

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM06
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
S0	1.00	06:47															X															
S0.2	1.00	06:49															X															
S0.5	1.00	06:51															X															
S1.0	1.00	06:53															X															
S2.5	1.00	06:55															X															
S5.0	1.00	06:57															X															
ICV	1.00	06:59															X															
ICB	1.00	07:01															X															
CRA	1.00	07:03															X															
CCV	1.00	07:05															X															
CCB	1.00	07:07															X															
ZZZZZZ	1.00	07:09																														
ZZZZZZ	1.00	07:11																														
ZZZZZZ	1.00	07:13																														
ZZZZZZ	1.00	07:15																														
ZZZZZZ	1.00	07:17																														
ZZZZZZ	1.00	07:19																														
ZZZZZZ	1.00	07:21																														
ZZZZZZ	1.00	07:23																														
ZZZZZZ	1.00	07:25																														
ZZZZZZ	1.00	07:27																														
CCV	1.00	07:30															X															
CCB	1.00	07:32															X															
ZZZZZZ	1.00	07:34																														
ZZZZZZ	1.00	07:36																														
ZZZZZZ	1.00	07:38																														
ZZZZZZ	1.00	07:40																														
ZZZZZZ	1.00	07:42																														
ZZZZZZ	1.00	07:44																														
ZZZZZZ	1.00	07:46																														
ZZZZZZ	1.00	07:48																														
ZZZZZZ	1.00	07:50																														
ZZZZZZ	1.00	07:52																														
CCV	1.00	07:54															X															
CCB	1.00	07:56															X															
ZZZZZZ	1.00	07:58																														
ZZZZZZ	1.00	08:00																														
ZZZZZZ	1.00	08:02																														

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	08:04																													
ZZZZZZ	1.00	08:06																													
ZZZZZZ	1.00	08:08																													
ZZZZZZ	1.00	08:10																													
ZZZZZZ	1.00	08:12																													
ZZZZZZ	1.00	08:14																													
ZZZZZZ	1.00	08:16																													
CCV	1.00	08:18															X														
CCB	1.00	08:20															X														
ZZZZZZ	5.00	08:30																													
ZZZZZZ	5.00	08:32																													
ZZZZZZ	1.00	08:34																													
ZZZZZZ	5.00	08:36																													
ZZZZZZ	5.00	08:38																													
ZZZZZZ	1.00	08:42																													
ZZZZZZ	1.00	08:45																													
ZZZZZZ	1.00	08:47																													
ZZZZZZ	1.00	08:49																													
ZZZZZZ	1.00	08:51																													
CCV	1.00	08:53															X														
CCB	1.00	08:55															X														
ZZZZZZ	1.00	08:57																													
ZZZZZZ	1.00	08:59																													
ZZZZZZ	1.00	09:01																													
ZZZZZZ	1.00	09:03																													
ZZZZZZ	1.00	09:06																													
ZZZZZZ	1.00	09:08																													
ZZZZZZ	1.00	09:10																													
ZZZZZZ	1.00	09:12																													
ZZZZZZ	1.00	09:14																													
ZZZZZZ	1.00	09:16																													
CCV	1.00	09:18															X														
CCB	1.00	09:20															X														
ZZZZZZ	1.00	09:22																													
ZZZZZZ	1.00	09:24																													
ZZZZZZ	1.00	09:26																													
ZZZZZZ	1.00	09:28																													
ZZZZZZ	1.00	09:30																													

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG KVM06
No.:

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	09:32																													
ZZZZZZ	1.00	09:34																													
ZZZZZZ	5.00	09:36																													
P31211CB	1.00	09:38															X														
P31211CQ	1.00	09:40															X														
CCV	1.00	09:42															X														
CCB	1.00	09:44															X														
ZZZZZZ	1.00	09:46																													
ZZZZZZ	1.00	09:48																													
7266809	1.00	09:50															X														
7266812	1.00	09:52															X														
7266813	1.00	09:54															X														
7266814BKG	1.00	09:56															X														
7266814A	1.00	09:58																													
7266817DUP	1.00	10:00															X														
7266815MS	1.00	10:02															X														
7266816MSD	1.00	10:04															X														
CCV	1.00	10:06															X														
CCB	1.00	10:08															X														
7266818	1.00	10:28															X														
ZZZZZZ	1.00	10:30																													
ZZZZZZ	1.00	10:32																													
ZZZZZZ	1.00	10:34																													
ZZZZZZ	1.00	10:36																													
ZZZZZZ	1.00	10:38																													
ZZZZZZ	1.00	10:40																													
ZZZZZZ	1.00	10:42																													
ZZZZZZ	1.00	10:44																													
ZZZZZZ	1.00	10:46																													
CCV	1.00	10:48															X														
CCB	1.00	10:50															X														
ZZZZZZ	1.00	10:52																													
ZZZZZZ	1.00	10:54																													
ZZZZZZ	1.00	10:56																													
ZZZZZZ	1.00	10:58																													
ZZZZZZ	10.00	11:00																													
ZZZZZZ	2.50	11:02																													
ZZZZZZ	1.00	11:04																													

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: KVM06

Method: CV
Instrument ID: 17384
Run Name: 1331501M07

Run Start Date: 11/11/2013
Run End Date: 11/11/2013

Lab Sample ID	D/F	Time	Analytes																												
			AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN							
ZZZZZZ	1.00	11:06																													
ZZZZZZ	1.00	11:08																													
ZZZZZZ	1.00	11:10																													
CCV	1.00	11:12															X														
CCB	1.00	11:14															X														
ZZZZZZ	1.00	11:16																													
ZZZZZZ	1.00	11:18																													
ZZZZZZ	1.00	11:20																													
ZZZZZZ	1.00	11:23																													
ZZZZZZ	1.00	11:25																													
ZZZZZZ	1.00	11:27																													
ZZZZZZ	1.00	11:29																													
ZZZZZZ	1.00	11:31																													
ZZZZZZ	1.00	11:33																													
ZZZZZZ	1.00	11:35																													
CCV	1.00	11:37															X														
CCB	1.00	11:39															X														
ZZZZZZ	1.00	11:41																													
ZZZZZZ	1.00	11:43																													
ZZZZZZ	1.00	11:45																													
ZZZZZZ	1.00	11:47																													
ZZZZZZ	1.00	11:49																													
ZZZZZZ	1.00	11:51																													
ZZZZZZ	1.00	11:53																													
ZZZZZZ	1.00	11:55																													
ZZZZZZ	1.00	11:57																													
ZZZZZZ	1.00	11:59																													
CCV	1.00	12:03															X														
CCB	1.00	12:05															X														
ZZZZZZ	5.00	12:07																													
CRA	1.00	12:09															X														
CCV	1.00	12:11															X														
CCB	1.00	12:13															X														

METHODS:
P = ICP Atomic Emission Spectrometer
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CV = Cold Vapor
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LEGEND:
BKG = Background
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MS = Matrix Spike
MSD = Matrix Spike Duplicate
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Y = Laboratory Control Sample Duplicate

Raw Data

Metals in Solid

ICP Data

Metals in Solid

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ICP-AES Run Data Report

1331606T72

Reviewed By
Katlin N Cataldi

Reviewed Date
11/12/2013 10:15PM

Data File Name 1331606T72.TXT
Run Name: 1331606T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:54AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 3282

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/12/2013 18:44

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00264	70.479	-0.00246	-0.00087	-0.00458
AL	0.000	0.00320	209.151	0.01018	-0.00315	0.00257
AS	0.000	-0.00690	22.952	-0.00507	-0.00782	-0.00780
B	0.000	0.00002	27.712	0.00002	0.00001	0.00002
BA	0.000	0.00012	33.560	0.00010	0.00016	0.00008
BE	0.000	-0.07770	1.839	-0.07885	-0.07610	-0.07814
CA	0.000	0.00389	3.536	0.00374	0.00393	0.00401
CD	0.000	-0.00815	16.112	-0.00664	-0.00876	-0.00905
CO	0.000	0.00866	13.660	0.00963	0.00734	0.00902
CR	0.000	-0.00001	266.971	0.00001	-0.00002	-0.00002
CU	0.000	-0.00630	32.205	-0.00515	-0.00511	-0.00864
FE	0.000	-0.00002	300.143	0.00001	-0.00010	0.00002
K	0.000	-0.05652	29.929	-0.05974	-0.03822	-0.07159
LI	0.000	0.00189	15.099	0.00199	0.00212	0.00157
MG	0.000	-0.00020	48.939	-0.00027	-0.00009	-0.00025
MN	0.000	0.00196	18.194	0.00221	0.00155	0.00212
MO	0.000	0.00125	13.347	0.00109	0.00125	0.00142
NA	0.000	-0.00078	82.872	-0.00062	-0.00149	-0.00023
NI	0.000	0.02789	4.268	0.02678	0.02914	0.02774
P	0.000	-0.00002	86.792	0.00000	-0.00004	-0.00003
PB	0.000	0.00687	13.870	0.00660	0.00607	0.00792
S	0.000	-0.00027	5.964	-0.00028	-0.00029	-0.00026
SB	0.000	0.00006	40.763	0.00006	0.00009	0.00004
SE	0.000	0.00086	362.911	0.00399	-0.00223	0.00081
SI	0.000	0.00010	26.974	0.00008	0.00013	0.00009
SN	0.000	0.00719	25.449	0.00929	0.00599	0.00628
SR	0.000	-0.00054	4.788	-0.00055	-0.00055	-0.00051
TI	0.000	0.00299	32.115	0.00410	0.00249	0.00239
TL	0.000	-0.01224	2.988	-0.01235	-0.01183	-0.01254
V	0.000	-0.00280	6.757	-0.00259	-0.00285	-0.00296
Y1	0.000	22782.51679	0.559	22853.94527	22858.03690	22635.56821
Y2A	0.000	310021.46763	1.458	312431.54762	312825.44970	304807.40557
Y2R	0.000	20424.13231	0.604	20322.84603	20561.60180	20387.94910
ZN	0.000	0.03883	7.561	0.04220	0.03740	0.03687
ZR	0.000	0.00009	136.147	0.00020	0.00009	-0.00003

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/12/2013 18:48

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	12.45868	0.502	12.44245	12.40589	12.52770
CA	50.000	2.33412	0.161	2.33219	2.33172	2.33845
FE	50.000	0.67624	0.370	0.67514	0.67447	0.67910
K	50.000	41.11133	0.049	41.12226	41.12366	41.08808
MG	50.000	4.04073	0.207	4.03267	4.04014	4.04939
NA	50.000	2.43295	0.299	2.42456	2.43724	2.43704
S	50.000	0.43202	0.917	0.42754	0.43508	0.43343
SI	50.000	0.44712	0.326	0.44549	0.44760	0.44828
Y1	50.000	21732.17871	0.727	21901.87517	21589.50876	21705.15220
Y2R	50.000	19929.40056	0.448	19884.85136	20032.26048	19871.08986

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/12/2013 18:52

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.19249	0.216	2.18949	2.19001	2.19795
AS	1.000	0.88820	0.100	0.88719	0.88882	0.88858
B	1.000	0.02661	0.527	0.02658	0.02649	0.02677
BA	1.000	2.10400	2.676	2.14027	2.03915	2.13258
BE	1.000	72.80397	0.586	72.42235	72.72474	73.26482
CD	1.000	36.39178	0.174	36.33386	36.45968	36.38180
CO	1.000	12.20903	0.247	12.18171	12.24140	12.20397
CU	1.000	2.03221	0.421	2.02386	2.03182	2.04097
LI	1.000	0.27860	0.801	0.27762	0.28115	0.27702
MN	1.000	10.39027	0.191	10.40113	10.36733	10.40235
NI	1.000	8.57778	0.128	8.56544	8.58638	8.58152
P	1.000	0.02384	0.287	0.02377	0.02386	0.02390
PB	1.000	2.92739	0.407	2.91653	2.94015	2.92550
SE	1.000	0.76872	0.491	0.76452	0.76984	0.77182
SR	1.000	2.44890	0.228	2.45535	2.44534	2.44602
TL	1.000	1.55853	0.319	1.55334	1.56324	1.55901
Y1	1.000	22008.21795	0.123	22013.74842	21978.91474	22031.99068
Y2A	1.000	293878.20300	0.209	293536.69649	294587.80649	293510.10603
Y2R	1.000	19828.77874	0.175	19835.47372	19791.15945	19859.70306
ZN	1.000	27.30224	0.182	27.24781	27.34536	27.31355

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 4

Date/Time: 11/12/2013 18:56

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03524	0.443	0.03532	0.03534	0.03506
MO	1.000	10.09785	0.077	10.08928	10.09983	10.10446
SB	1.000	0.03383	0.331	0.03385	0.03372	0.03394
SN	1.000	2.72075	0.133	2.72092	2.72430	2.71704
TI	1.000	9.90181	0.730	9.91628	9.96576	9.82338
V	1.000	2.31698	0.641	2.31768	2.33147	2.30179
Y1	1.000	22698.45868	0.029	22697.84376	22692.21985	22705.31242
Y2A	1.000	305523.95111	0.970	304573.49537	303151.83897	308846.51899
Y2R	1.000	20028.47405	0.189	20004.32241	20072.19612	20008.90363
ZR	1.000	0.11244	0.426	0.11241	0.11198	0.11294

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/12/2013 19:00

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.62214	8,065.37	1.458	0.61410	0.63197	0.62034
AL	31.18027	3,120.43	0.514	31.30218	30.99876	31.23987
AS	0.61428	237.61	0.621	0.61868	0.61227	0.61189
B	0.60497	4,894.45	1.746	0.59442	0.61555	0.60495
BA	0.62642	387,191.51	1.273	0.62767	0.63370	0.61789
BE	0.60679	259,402.67	1.504	0.59898	0.61683	0.60456
CA	30.66341	28,828.69	0.731	30.87450	30.42791	30.68781
CD	0.61362	9,875.92	0.245	0.61535	0.61285	0.61265
CO	0.61115	3,291.57	0.256	0.61287	0.61075	0.60982
CR	0.60390	6,241.40	1.797	0.59591	0.61625	0.59954
CU	0.62389	7,394.38	1.925	0.61155	0.63554	0.62458
FE	30.56481	8,361.01	0.573	30.72667	30.37888	30.58888
K	30.50145	10,063.21	0.499	30.66320	30.36100	30.48013
LI	0.61199	3,454.49	0.352	0.61446	0.61052	0.61099
MG	30.19835	49,461.17	0.364	30.32139	30.10979	30.16388
MN	0.61449	37,516.70	1.380	0.60764	0.62398	0.61185
MO	0.61908	2,749.42	0.199	0.62044	0.61879	0.61802
NA	30.35306	29,631.74	0.213	30.41342	30.28463	30.36112
NI	0.61551	2,324.96	0.015	0.61559	0.61555	0.61541
P	0.62692	328.51	0.380	0.62689	0.62932	0.62456
PB	0.61901	804.62	0.301	0.62116	0.61795	0.61792
S	30.44124	5,780.80	0.336	30.53408	30.45811	30.33153
SB	0.63789	476.77	0.290	0.63581	0.63933	0.63852
SE	0.61566	207.98	0.340	0.61808	0.61442	0.61449
SI	31.08659	5,579.88	0.564	31.28224	30.94361	31.03392
SN	0.60186	721.39	0.156	0.60192	0.60277	0.60089
SR	0.61289	440,920.69	1.391	0.60610	0.62245	0.61012
TI	0.61681	35,934.97	1.694	0.60702	0.62781	0.61561
TL	0.61045	397.98	0.280	0.60857	0.61087	0.61190
V	0.61302	8,346.05	1.360	0.60492	0.62158	0.61257
Y1	21988.71550	21,988.72	0.066	21999.59052	21972.14895	21994.40704
Y2A	293788.90546	293,788.91	0.999	294395.54341	290597.58118	296373.59178
Y2R	20067.11560	20,067.12	0.435	19973.55145	20146.40291	20081.39244
ZN	0.62211	7,514.95	0.165	0.62273	0.62267	0.62092
ZR	0.60833	1,373.25	0.678	0.61300	0.60522	0.60675

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/12/2013 19:05

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00118	-16.08	46.362	0.00180	0.00078	0.00094
AL	0.06836	8.12	41.871	0.05452	0.10127	0.04928
AS	-0.00051	-2.92	331.830	-0.00088	-0.00198	0.00134
B	-0.00018	4.05	138.582	-0.00047	-0.00009	0.00001
BA	0.00019	155.44	16.027	0.00022	0.00018	0.00016
BE	-0.00018	-463.27	8.044	-0.00017	-0.00019	-0.00019
CA	0.03204	108.41	19.594	0.03773	0.03309	0.02530
CD	-0.00007	-4.92	34.357	-0.00010	-0.00006	-0.00006
CO	-0.00002	3.83	913.576	0.00015	-0.00018	-0.00002
CR	0.00017	-1.62	284.154	-0.00037	0.00056	0.00032
CU	0.00024	-28.92	161.439	0.00015	-0.00009	0.00065
FE	0.01474	3.81	49.188	0.01090	0.02309	0.01021
K	-0.08286	-32.38	10.248	-0.09204	-0.07528	-0.08126
LI	0.00382	59.25	46.295	0.00569	0.00357	0.00219
MG	0.02706	40.94	6.714	0.02895	0.02690	0.02533
MN	0.00028	29.20	16.318	0.00032	0.00027	0.00023
MO	0.00045	2.62	77.362	0.00017	0.00034	0.00084
NA	-0.02196	-37.14	18.448	-0.02371	-0.01733	-0.02484
NI	-0.00012	12.18	75.534	-0.00002	-0.00020	-0.00013
P	0.00155	0.32	66.043	0.00239	0.00041	0.00184
PB	0.00197	5.74	93.578	0.00090	0.00409	0.00091
S	-0.00268	-5.29	130.256	-0.00046	-0.00088	-0.00671
SB	-0.00004	1.42	3290.807	0.00072	-0.00141	0.00058
SE	0.00264	0.85	77.656	0.00406	0.00029	0.00355
SI	0.02058	5.75	27.529	0.02294	0.01412	0.02469
SN	-0.00049	2.66	93.158	0.00003	-0.00081	-0.00068
SR	-0.00010	-66.35	9.530	-0.00010	-0.00010	-0.00012
TI	0.00018	28.75	30.984	0.00011	0.00022	0.00020
TL	0.00080	-5.14	23.649	0.00091	0.00058	0.00090
V	-0.00034	-10.27	81.729	-0.00002	-0.00051	-0.00049
Y1	22648.98991	22,648.99	0.277	22609.09908	22721.42952	22616.44114
Y2A	303202.83852	303,202.84	1.150	302614.14844	300047.05103	306947.31610
Y2R	20085.14553	20,085.15	0.202	20103.85883	20112.98365	20038.59412
ZN	-0.00008	16.65	74.742	-0.00001	-0.00012	-0.00010
ZR	-0.00015	1.38	948.401	0.00149	-0.00105	-0.00089

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/12/2013 19:09

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00640	59.88	4.981	0.00671	0.00640	0.00608
AL	0.34024	35.21	14.881	0.37633	0.36203	0.28237
AS	0.02097	5.78	12.108	0.01804	0.02233	0.02254
B	0.05010	418.13	1.390	0.04944	0.05083	0.05003
BA	0.00579	3,793.95	1.404	0.00588	0.00579	0.00571
BE	0.00473	1,736.42	1.030	0.00477	0.00474	0.00468
CA	0.28354	344.13	1.183	0.28712	0.28303	0.28047
CD	0.00517	82.05	1.480	0.00513	0.00512	0.00526
CO	0.00534	33.61	3.343	0.00551	0.00535	0.00516
CR	0.01511	160.67	1.807	0.01527	0.01527	0.01479
CU	0.01014	94.22	3.930	0.01023	0.01049	0.00970
FE	0.25572	70.35	3.166	0.26353	0.25626	0.24737
K	0.43772	139.09	6.140	0.40699	0.44932	0.45684
LI	0.02153	157.23	6.195	0.02146	0.02023	0.02289
MG	0.17748	290.20	2.245	0.18208	0.17526	0.17510
MN	0.00568	375.73	2.522	0.00579	0.00573	0.00551
MO	0.01042	48.26	1.300	0.01056	0.01042	0.01029
NA	1.00031	958.69	2.461	0.97394	1.00429	1.02270
NI	0.01046	53.20	3.369	0.01011	0.01081	0.01046
P	0.10040	53.54	1.419	0.09991	0.09928	0.10200
PB	0.01966	29.21	0.547	0.01958	0.01978	0.01961
S	0.49101	91.42	1.011	0.49674	0.48828	0.48801
SB	0.02226	18.43	5.763	0.02316	0.02079	0.02282
SE	0.01909	6.59	20.457	0.01642	0.01729	0.02357
SI	0.12557	24.52	6.609	0.11734	0.12543	0.13393
SN	0.02022	28.13	1.408	0.01991	0.02030	0.02046
SR	0.00522	3,951.70	1.563	0.00529	0.00524	0.00513
TI	0.01010	635.82	2.019	0.01026	0.01018	0.00987
TL	0.03303	17.57	1.803	0.03318	0.03354	0.03237
V	0.00451	58.63	5.883	0.00438	0.00482	0.00434
Y1	22663.47250	22,663.47	0.240	22667.09948	22715.87397	22607.44404
Y2A	308374.96027	308,374.96	0.282	307727.51499	308035.86812	309361.49768
Y2R	20011.74102	20,011.74	0.380	20077.72900	20028.89410	19928.59996
ZN	0.02048	270.22	0.551	0.02053	0.02035	0.02055
ZR	0.05025	114.69	2.854	0.04876	0.05162	0.05037

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/12/2013 19:13

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00149	-9.72	27.243	0.00169	0.00176	0.00102
AL	511.42404	49,218.40	0.431	509.92973	513.95699	510.38541
AS	-0.00436	-14.42	62.268	-0.00734	-0.00202	-0.00372
B	-0.02710	800.37	6.202	-0.02871	-0.02723	-0.02536
BA	0.00034	216.57	7.399	0.00036	0.00034	0.00031
BE	-0.00035	-463.40	11.008	-0.00030	-0.00038	-0.00036
CA	518.10898	431,010.04	1.366	515.68450	526.07983	512.56262
CD	0.00146	364.19	20.935	0.00130	0.00126	0.00181
CO	-0.00026	2.15	111.508	0.00006	-0.00032	-0.00051
CR	0.00207	-40.45	11.634	0.00205	0.00231	0.00183
CU	0.00455	148.03	16.838	0.00388	0.00437	0.00538
FE	207.32573	49,957.16	0.416	206.94499	208.31412	206.71808
K	-0.12812	-44.89	11.881	-0.13560	-0.11060	-0.13814
LI	-0.00143	323.29	86.650	-0.00177	-0.00006	-0.00246
MG	562.06572	641,084.77	0.700	557.61135	565.06657	563.51925
MN	0.00379	216.90	0.999	0.00375	0.00378	0.00383
MO	-0.00098	-3.43	25.101	-0.00081	-0.00087	-0.00127
NA	-0.00529	-19.81	347.948	-0.02623	0.00832	0.00203
NI	0.00284	-0.40	19.752	0.00349	0.00249	0.00254
P	0.01181	5.11	9.712	0.01297	0.01068	0.01178
PB	0.00810	130.22	48.762	0.00604	0.00560	0.01265
S	-0.13339	-27.97	3.621	-0.12789	-0.13532	-0.13696
SB	-0.00638	9.11	45.777	-0.00378	-0.00954	-0.00581
SE	0.00007	-2.03	3169.579	-0.00493	0.00389	0.00125
SI	0.03195	7.39	19.540	0.03621	0.02479	0.03487
SN	0.00505	8.27	23.438	0.00369	0.00580	0.00567
SR	0.00199	1,287.83	0.956	0.00198	0.00201	0.00198
TI	-0.00397	-190.33	7.177	-0.00365	-0.00418	-0.00407
TL	0.00022	-4.62	760.282	0.00014	-0.00142	0.00195
V	-0.00491	-44.85	5.943	-0.00459	-0.00517	-0.00496
Y1	19789.01710	19,789.02	0.176	19826.35153	19783.38553	19757.31423
Y2A	262517.67742	262,517.68	0.579	264237.74023	261965.12591	261350.16611
Y2R	19040.69880	19,040.70	0.640	19129.14420	18901.61274	19091.33945
ZN	0.00641	324.46	3.470	0.00638	0.00665	0.00621
ZR	0.00587	14.20	30.377	0.00767	0.00411	0.00584

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/12/2013 19:17

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22329	2,532.96	1.027	0.22549	0.22348	0.22091
AL	509.82878	49,335.62	0.283	509.05486	511.49401	508.93748
AS	0.09836	22.00	5.034	0.09265	0.10087	0.10155
B	-0.02580	798.16	0.675	-0.02596	-0.02582	-0.02561
BA	0.51189	280,925.42	0.099	0.51130	0.51223	0.51214
BE	0.51594	195,776.57	0.497	0.51703	0.51778	0.51301
CA	517.38870	432,854.56	0.453	515.89417	520.08764	516.18428
CD	0.94233	13,883.83	0.184	0.94213	0.94415	0.94070
CO	0.46074	2,223.47	0.238	0.46200	0.46009	0.46011
CR	0.48222	4,375.02	0.117	0.48204	0.48285	0.48177
CU	0.54487	5,889.34	0.766	0.54499	0.54898	0.54064
FE	206.52490	50,056.88	0.512	205.79823	207.73681	206.03967
K	-0.10843	-38.92	24.341	-0.13669	-0.08443	-0.10416
LI	-0.00021	331.15	553.424	0.00036	-0.00155	0.00056
MG	556.20085	640,411.75	1.620	560.12282	562.58549	545.89425
MN	0.49388	26,772.99	0.722	0.49698	0.49467	0.48999
MO	-0.00130	-4.68	38.461	-0.00073	-0.00151	-0.00165
NA	-0.00234	-17.14	391.893	-0.00309	0.00718	-0.01110
NI	0.92361	3,108.75	0.173	0.92542	0.92240	0.92301
P	0.01018	5.65	18.159	0.01220	0.00977	0.00858
PB	0.05308	181.11	2.824	0.05277	0.05176	0.05471
S	-0.14308	-29.55	4.320	-0.14330	-0.14916	-0.13680
SB	0.64378	441.90	0.481	0.64729	0.64262	0.64144
SE	0.05137	13.55	3.439	0.05339	0.05061	0.05011
SI	0.04810	10.19	20.411	0.04023	0.04496	0.05910
SN	0.00432	7.47	41.543	0.00233	0.00483	0.00581
SR	0.00194	1,250.56	1.206	0.00196	0.00195	0.00192
TI	-0.00376	-159.45	3.816	-0.00372	-0.00392	-0.00364
TL	0.09321	41.30	1.529	0.09158	0.09386	0.09419
V	0.49832	6,065.55	0.463	0.49933	0.49995	0.49568
Y1	19740.69336	19,740.69	0.016	19738.41516	19739.25455	19744.41037
Y2A	260823.57719	260,823.58	0.681	260391.35126	259303.28685	262776.09344
Y2R	19145.87828	19,145.88	0.349	19151.88736	19076.24078	19209.50669
ZN	1.04957	11,537.88	0.040	1.04993	1.04968	1.04910
ZR	0.00495	12.29	44.664	0.00272	0.00714	0.00500

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/12/2013 19:22

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50402	6,598.73	0.829	0.49946	0.50490	0.50768
AL	25.61601	2,527.82	0.590	25.75555	25.63698	25.45548
AS	0.50084	193.22	0.204	0.50055	0.50197	0.49998
B	0.48554	3,974.84	0.529	0.48423	0.48389	0.48850
BA	0.50676	316,584.71	0.368	0.50556	0.50580	0.50891
BE	0.49102	212,083.41	0.386	0.48942	0.49053	0.49311
CA	25.42178	23,599.24	0.647	25.41872	25.58779	25.25883
CD	0.50318	8,097.57	0.162	0.50293	0.50409	0.50251
CO	0.50180	2,703.02	0.171	0.50196	0.50256	0.50087
CR	0.48890	5,106.25	0.301	0.48742	0.48891	0.49037
CU	0.50383	6,029.28	0.664	0.50036	0.50408	0.50704
FE	25.21131	6,815.75	0.489	25.23231	25.32261	25.07899
K	25.16635	8,187.21	0.160	25.15127	25.21203	25.13576
LI	0.50641	2,825.42	0.139	0.50679	0.50684	0.50560
MG	24.93614	40,381.76	0.423	24.93661	25.04136	24.83044
MN	0.49903	30,795.20	0.362	0.49700	0.49961	0.50046
MO	0.50523	2,243.72	0.104	0.50490	0.50583	0.50495
NA	25.03498	24,098.64	0.350	25.02429	25.12734	24.95331
NI	0.50486	1,909.05	0.258	0.50443	0.50632	0.50383
P	0.50967	266.95	0.191	0.50881	0.50948	0.51073
PB	0.50949	662.76	0.413	0.50973	0.51146	0.50728
S	24.85107	4,718.07	0.204	24.84649	24.90395	24.80276
SB	0.51975	388.69	0.073	0.51939	0.52015	0.51971
SE	0.50102	169.23	0.414	0.49982	0.49983	0.50342
SI	25.80415	4,567.89	0.453	25.76230	25.93622	25.71394
SN	0.49378	592.37	0.164	0.49468	0.49352	0.49313
SR	0.49541	360,221.28	0.455	0.49556	0.49758	0.49309
TI	0.49849	29,355.89	0.623	0.49587	0.49767	0.50193
TL	0.50451	328.25	0.482	0.50299	0.50731	0.50322
V	0.49536	6,814.83	0.360	0.49380	0.49497	0.49730
Y1	21987.32391	21,987.32	0.038	21989.15606	21978.31534	21994.50033
Y2A	296910.06737	296,910.07	0.325	298023.69119	296376.98807	296329.52286
Y2R	19789.09821	19,789.10	0.428	19802.12076	19698.70000	19866.47387
ZN	0.50668	6,123.98	0.150	0.50676	0.50740	0.50589
ZR	0.50041	1,114.30	0.442	0.50060	0.50252	0.49811

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 11 Date/Time: 11/12/2013 19:26

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00194	-5.93	29.864	0.00198	0.00250	0.00134
AL	0.06016	7.18	11.525	0.05217	0.06463	0.06366
AS	0.00189	-1.94	23.502	0.00141	0.00229	0.00198
B	0.00003	5.87	1671.878	0.00017	0.00049	-0.00057
BA	0.00014	122.32	13.986	0.00012	0.00016	0.00013
BE	-0.00013	-441.58	11.473	-0.00011	-0.00013	-0.00013
CA	0.04920	122.61	4.026	0.05077	0.04985	0.04697
CD	0.00002	-3.30	339.477	-0.00007	0.00008	0.00005
CO	-0.00007	3.55	156.355	-0.00007	-0.00016	0.00004
CR	0.00006	-2.77	746.056	0.00060	-0.00017	-0.00024
CU	-0.00062	-39.80	94.882	-0.00072	0.00001	-0.00114
FE	0.02165	5.63	31.527	0.01400	0.02385	0.02711
K	-0.09843	-36.97	23.406	-0.10036	-0.12045	-0.07449
LI	0.00203	48.54	37.040	0.00274	0.00124	0.00212
MG	0.04695	72.84	6.092	0.04808	0.04370	0.04907
MN	0.00012	19.87	84.881	0.00011	0.00003	0.00024
MO	0.00047	2.72	39.780	0.00043	0.00067	0.00031
NA	-0.00909	-24.22	278.070	-0.03250	-0.01246	0.01770
NI	0.00005	12.77	44.648	0.00003	0.00003	0.00007
P	0.00079	-0.09	100.855	0.00017	0.00051	0.00169
PB	0.00177	5.46	29.966	0.00220	0.00118	0.00194
S	-0.00484	-5.70	91.413	-0.00531	-0.00020	-0.00902
SB	0.00185	2.84	14.427	0.00202	0.00199	0.00155
SE	-0.00117	-0.47	43.120	-0.00059	-0.00151	-0.00142
SI	0.01148	4.06	39.132	0.01031	0.01644	0.00768
SN	-0.00023	2.97	145.063	-0.00046	0.00015	-0.00037
SR	-0.00014	-93.68	10.653	-0.00012	-0.00015	-0.00015
TI	0.00003	20.55	139.951	0.00008	0.00005	-0.00002
TL	0.00066	-5.21	285.972	0.00065	-0.00122	0.00256
V	-0.00066	-14.93	44.410	-0.00096	-0.00064	-0.00038
Y1	22592.66727	22,592.67	0.026	22586.01746	22595.09059	22596.89375
Y2A	305730.62797	305,730.63	0.913	308607.39087	303033.13453	305551.35852
Y2R	19767.64840	19,767.65	0.813	19718.91192	19946.99920	19637.03408
ZN	-0.00015	15.67	20.978	-0.00014	-0.00013	-0.00019
ZR	-0.00020	1.25	380.269	-0.00045	0.00066	-0.00083

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/12/2013 19:30

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00092	-20.02	67.901	0.00147	0.00024	0.00104
AL	0.08996	10.39	34.478	0.05982	0.08827	0.12179
AS	0.00284	-1.60	36.154	0.00167	0.00358	0.00328
B	0.00507	48.03	9.478	0.00551	0.00515	0.00456
BA	0.00024	194.77	5.787	0.00025	0.00025	0.00023
BE	-0.00019	-482.90	4.735	-0.00019	-0.00019	-0.00020
CA	0.13093	203.84	0.704	0.13051	0.13198	0.13029
CD	-0.00001	-3.88	1088.359	-0.00001	-0.00007	0.00006
CO	0.00011	4.63	279.786	0.00021	-0.00023	0.00034
CR	0.00037	0.52	125.006	0.00075	0.00050	-0.00014
CU	-0.00069	-41.72	18.123	-0.00077	-0.00055	-0.00077
FE	0.02640	7.12	25.979	0.03432	0.02218	0.02270
K	-0.06096	-25.46	80.455	-0.00878	-0.06800	-0.10611
LI	0.00129	45.85	248.017	-0.00071	-0.00040	0.00498
MG	0.03999	63.16	0.906	0.03973	0.03984	0.04040
MN	0.00022	26.62	23.748	0.00021	0.00018	0.00028
MO	0.00036	2.27	51.251	0.00017	0.00038	0.00053
NA	-0.02042	-35.97	61.761	-0.02691	-0.02846	-0.00588
NI	-0.00021	12.11	24.768	-0.00026	-0.00022	-0.00016
P	0.01509	7.79	3.664	0.01528	0.01446	0.01552
PB	0.00146	5.20	65.060	0.00064	0.00123	0.00250
S	0.00074	-4.73	408.271	0.00039	0.00394	-0.00210
SB	-0.00045	1.14	250.231	-0.00107	-0.00114	0.00086
SE	0.00097	0.28	259.722	-0.00178	0.00312	0.00156
SI	0.03099	7.70	21.831	0.02464	0.03810	0.03023
SN	0.01468	21.85	4.150	0.01487	0.01518	0.01400
SR	0.00037	294.38	3.514	0.00038	0.00036	0.00036
TI	0.00028	36.28	26.636	0.00036	0.00028	0.00021
TL	0.00107	-5.05	133.728	0.00021	0.00028	0.00273
V	-0.00106	-21.02	11.052	-0.00096	-0.00119	-0.00102
Y1	23224.84318	23,224.84	0.088	23201.32596	23238.28490	23234.91868
Y2A	313015.39767	313,015.40	0.294	312942.62159	312133.63787	313969.93355
Y2R	20310.07913	20,310.08	0.731	20303.31470	20165.09293	20461.82978
ZN	0.00172	39.65	4.268	0.00169	0.00180	0.00166
ZR	0.00078	3.53	31.510	0.00103	0.00054	0.00078

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/12/2013 19:34

Sample Number: **LCSW** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05256	785.67	1.070	0.05236	0.05320	0.05213
AL	2.20843	232.25	1.740	2.17996	2.19321	2.25213
AS	0.15805	62.76	0.443	0.15798	0.15739	0.15879
B	1.99321	16,311.59	0.513	2.00150	1.99636	1.98178
BA	2.05077	1,325,932.50	0.857	2.03135	2.06559	2.05536
BE	0.04813	21,163.29	0.138	0.04809	0.04809	0.04820
CA	4.18205	4,072.37	0.701	4.19484	4.14853	4.20278
CD	0.05120	848.70	0.197	0.05131	0.05112	0.05116
CO	0.51742	2,899.87	0.250	0.51802	0.51830	0.51594
CR	0.19911	2,153.45	0.799	0.20094	0.19840	0.19800
CU	0.26134	3,150.82	0.419	0.26224	0.26165	0.26012
FE	1.02368	287.29	1.003	1.02392	1.01330	1.03384
K	10.14154	3,391.94	0.283	10.14612	10.11083	10.16767
LI	1.00026	5,677.10	0.165	0.99843	1.00163	1.00073
MG	2.03150	3,420.20	0.283	2.03298	2.03637	2.02515
MN	0.51233	32,724.45	0.249	0.51371	0.51211	0.51118
MO	2.00868	9,258.94	0.239	2.01062	2.01222	2.00320
NA	10.13440	10,028.95	0.036	10.13684	10.13016	10.13618
NI	0.52797	2,079.38	0.195	0.52903	0.52791	0.52697
P	1.04870	568.58	0.081	1.04900	1.04935	1.04774
PB	0.15963	210.38	0.360	0.16004	0.15897	0.15986
S	1.01242	191.81	0.171	1.01373	1.01045	1.01307
SB	0.49517	376.61	0.529	0.49349	0.49818	0.49384
SE	0.15424	54.06	0.688	0.15545	0.15377	0.15349
SI	0.37209	72.24	2.843	0.37996	0.36006	0.37624
SN	3.99768	4,955.46	0.358	4.00560	4.00629	3.98116
SR	1.01777	765,951.66	0.260	1.01603	1.02081	1.01647
TI	1.00305	61,039.39	0.100	1.00358	1.00368	1.00190
TL	0.16024	94.57	1.033	0.15854	0.16185	0.16034
V	0.48853	6,857.87	0.026	0.48867	0.48842	0.48850
Y1	22825.52757	22,825.53	0.283	22790.19575	22786.33364	22900.05332
Y2A	307313.34962	307,313.35	0.513	308992.21339	307084.07886	305863.75661
Y2R	20363.08922	20,363.09	0.401	20366.70829	20442.79153	20279.76784
ZN	0.51366	6,408.93	0.262	0.51505	0.51355	0.51237
ZR	0.99795	2,284.93	0.417	1.00099	0.99320	0.99966

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/12/2013 19:38

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00343	16.11	10.381	0.00334	0.00312	0.00382
AL	11.64141	1,223.56	0.333	11.63620	11.60549	11.68255
AS	0.02303	1.02	5.149	0.02351	0.02389	0.02167
B	0.04392	920.55	1.212	0.04445	0.04339	0.04393
BA	0.27196	179,019.24	0.126	0.27173	0.27235	0.27179
BE	0.00148	279.37	0.415	0.00147	0.00149	0.00148
CA	30.70490	30,342.42	0.446	30.55001	30.75533	30.80935
CD	0.00342	242.65	3.973	0.00337	0.00331	0.00357
CO	0.02806	171.93	0.786	0.02826	0.02783	0.02809
CR	0.03406	340.50	2.556	0.03309	0.03478	0.03432
CU	0.14161	1,709.30	0.504	0.14177	0.14224	0.14084
FE	97.04324	27,150.87	0.418	96.58552	97.18722	97.35698
K	1.22469	419.71	6.166	1.29616	1.23222	1.14569
LI	0.00849	108.85	22.854	0.01043	0.00655	0.00849
MG	3.82595	6,669.68	0.629	3.80172	3.82630	3.84982
MN	2.89962	188,465.20	0.265	2.89088	2.90530	2.90270
MO	0.00393	18.87	3.134	0.00406	0.00382	0.00389
NA	1.18743	1,202.64	1.164	1.19256	1.19795	1.17178
NI	0.06484	257.29	0.427	0.06513	0.06481	0.06458
P	3.03543	1,662.74	0.341	3.02931	3.02960	3.04738
PB	26.86003	36,220.52	0.255	26.86861	26.78765	26.92383
S	10.51889	2,092.31	0.422	10.50098	10.48628	10.56942
SB	-0.00258	6.51	117.559	-0.00329	-0.00519	0.00074
SE	0.01391	4.82	1.238	0.01371	0.01398	0.01403
SI	3.50583	663.27	0.433	3.52315	3.49958	3.49478
SN	0.03435	46.33	0.933	0.03405	0.03469	0.03431
SR	0.18899	144,788.86	0.150	0.18889	0.18931	0.18878
TI	0.75059	46,494.01	0.505	0.74776	0.74913	0.75490
TL	0.00257	-5.93	10.816	0.00274	0.00273	0.00225
V	0.09994	1,464.28	0.753	0.09921	0.09990	0.10072
Y1	23071.85739	23,071.86	0.172	23086.48270	23102.16971	23026.91974
Y2A	312816.60861	312,816.61	0.531	314640.07328	312417.80480	311391.94775
Y2R	21092.18506	21,092.19	0.285	21152.90535	21090.82985	21032.81998
ZN	0.19105	2,543.80	0.279	0.19104	0.19052	0.19159
ZR	0.01566	38.92	12.859	0.01543	0.01778	0.01377

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/12/2013 19:42

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02206	385.39	6.992	0.02289	0.02300	0.02028
AL	12.28618	1,292.11	1.338	12.21119	12.47475	12.17260
AS	0.31095	171.03	15.014	0.35634	0.31345	0.26306
B	0.23648	2,539.10	7.389	0.24756	0.24554	0.21634
BA	0.29763	198,132.81	6.210	0.31017	0.30630	0.27640
BE	0.02041	9,007.03	5.201	0.02108	0.02096	0.01918
CA	30.87889	30,518.74	1.329	30.68449	31.35028	30.60190
CD	0.02705	905.14	21.951	0.03267	0.02764	0.02084
CO	0.07340	609.68	16.194	0.08464	0.07458	0.06096
CR	0.21958	2,414.31	5.199	0.22724	0.22505	0.20646
CU	0.62510	7,956.69	6.171	0.65056	0.64402	0.58072
FE	94.78502	26,548.55	1.510	93.94791	96.43792	93.96922
K	3.28356	1,134.11	3.098	3.24929	3.39799	3.20341
LI	1.03195	6,083.24	1.354	1.01950	1.04706	1.02929
MG	4.72118	8,229.11	1.649	4.67546	4.81109	4.67700
MN	2.71140	178,237.94	5.183	2.80258	2.78207	2.54955
MO	0.11645	773.82	15.959	0.13390	0.11855	0.09691
NA	3.23347	3,303.79	1.307	3.19668	3.27962	3.22411
NI	0.12689	716.44	15.654	0.14545	0.12928	0.10594
P	2.26243	1,767.47	16.119	2.60746	2.29898	1.88085
PB	15.11760	29,049.42	15.787	17.36030	15.38311	12.60937
S	5.67973	1,605.52	16.022	6.53938	5.77324	4.72658
SB	0.23480	271.88	17.412	0.27345	0.23895	0.19200
SE	0.48765	246.37	15.698	0.56170	0.49242	0.40882
SI	3.27212	619.43	1.945	3.23193	3.34548	3.23895
SN	0.36051	648.02	15.677	0.41291	0.36799	0.30062
SR	0.19116	148,104.55	6.228	0.19915	0.19685	0.17747
TI	0.78405	49,121.39	5.751	0.81538	0.80439	0.73237
TL	0.61804	620.55	15.286	0.70709	0.62809	0.51894
V	0.18752	2,763.15	5.307	0.19411	0.19237	0.17607
Y1	33188.84262	33,188.84	8.997	30496.53416	32669.37042	36400.62329
Y2A	316454.17245	316,454.17	0.954	316815.36545	313272.15190	319275.00000
Y2R	21097.07944	21,097.08	0.658	21156.40603	20938.53564	21196.29667
ZN	0.17176	3,293.05	16.991	0.19948	0.17449	0.14131
ZR	1.00489	2,383.59	1.730	0.99675	1.02485	0.99308

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/12/2013 19:46

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00311	14.28	18.425	0.00245	0.00339	0.00348
AL	11.01781	1,245.48	7.780	10.02815	11.52944	11.49584
AS	0.02156	1.90	4.843	0.02182	0.02041	0.02245
B	0.03087	830.01	33.936	0.04245	0.02811	0.02205
BA	0.20650	160,923.66	8.842	0.22503	0.20594	0.18852
BE	0.00138	274.22	5.473	0.00143	0.00141	0.00129
CA	27.97316	29,752.15	7.428	25.57702	29.27741	29.06505
CD	0.00109	198.57	41.828	0.00087	0.00079	0.00162
CO	0.02045	153.06	12.045	0.01797	0.02048	0.02290
CR	0.02901	344.72	6.816	0.03107	0.02883	0.02712
CU	0.11939	1,700.69	9.525	0.13130	0.11819	0.10866
FE	77.43613	23,490.70	7.704	70.56161	81.24993	80.49685
K	1.06611	391.84	10.552	0.93665	1.14006	1.12162
LI	0.01037	126.73	31.389	0.00727	0.01376	0.01009
MG	3.47370	6,513.83	7.665	3.16725	3.64838	3.60547
MN	1.96764	151,431.00	8.292	2.13488	1.95916	1.80888
MO	0.00302	17.59	11.152	0.00270	0.00300	0.00337
NA	1.07903	1,173.59	8.084	0.97874	1.13723	1.12112
NI	0.05151	248.48	9.812	0.04640	0.05163	0.05651
P	2.33432	1,534.07	10.442	2.09096	2.33357	2.57845
PB	21.35415	34,557.01	10.041	19.20737	21.35945	23.49562
S	8.11300	1,934.76	10.519	7.25136	8.12970	8.95795
SB	-0.00245	6.26	13.263	-0.00259	-0.00268	-0.00208
SE	0.01087	4.46	26.248	0.00806	0.01080	0.01376
SI	3.64453	741.39	8.220	3.30134	3.85378	3.77848
SN	0.02709	44.66	12.237	0.02370	0.02723	0.03033
SR	0.14602	132,438.01	8.828	0.15906	0.14572	0.13329
TI	0.63524	46,589.42	8.491	0.69171	0.62977	0.58425
TL	0.00425	-5.65	11.527	0.00418	0.00380	0.00477
V	0.08195	1,420.57	7.880	0.08876	0.08120	0.07591
Y1	27810.13588	27,810.14	6.638	29655.24336	27811.73942	25963.42488
Y2A	371528.42292	371,528.42	5.775	347315.94227	379091.07498	388178.25149
Y2R	22735.36495	22,735.36	4.291	23855.41567	22071.03975	22279.63943
ZN	0.14623	2,346.84	10.523	0.13085	0.14622	0.16162
ZR	0.01587	42.32	13.450	0.01342	0.01736	0.01681

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/12/2013 19:50

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.04062	697.03	8.309	0.04272	0.04242	0.03673
AL	15.54196	1,839.07	2.676	16.01448	15.23137	15.38005
AS	0.11128	54.04	15.927	0.12809	0.11299	0.09277
B	1.55000	15,618.44	5.971	1.61015	1.59642	1.44342
BA	1.74350	1,340,411.85	6.469	1.78720	1.82789	1.61539
BE	0.03821	19,884.72	6.193	0.03980	0.03933	0.03549
CA	30.63901	34,001.54	2.398	31.48279	30.14165	30.29259
CD	0.02880	881.99	25.203	0.03576	0.02937	0.02127
CO	0.31366	2,477.43	19.745	0.37383	0.31706	0.25010
CR	0.18030	2,288.35	6.265	0.18844	0.18506	0.16741
CU	0.30020	4,293.06	6.394	0.31378	0.30859	0.27824
FE	80.66967	25,518.21	2.487	82.98406	79.42236	79.60258
K	10.19539	3,966.51	2.304	10.46058	10.01322	10.11236
LI	0.81289	5,394.40	2.065	0.83102	0.79789	0.80977
MG	5.17664	10,129.44	2.080	5.29962	5.09916	5.13115
MN	3.14057	238,482.08	6.371	3.27267	3.23867	2.91036
MO	1.16385	7,507.09	19.929	1.38983	1.17534	0.92636
NA	9.51453	10,950.90	2.412	9.77246	9.33280	9.43832
NI	0.34185	1,876.96	19.763	0.40797	0.34466	0.27294
P	2.14790	1,629.11	20.119	2.56960	2.16808	1.70602
PB	15.17490	28,336.26	19.509	18.04931	15.34023	12.13517
S	6.76914	1,858.17	20.266	8.10837	6.83215	5.36691
SB	0.27161	298.41	21.566	0.32915	0.27362	0.21205
SE	0.09980	48.85	19.370	0.11882	0.10041	0.08017
SI	7.28158	1,546.02	2.440	7.48303	7.14721	7.21451
SN	2.30795	4,006.42	19.535	2.74602	2.33253	1.84529
SR	0.90085	805,484.37	8.422	0.92552	0.96131	0.81571
TI	1.41089	102,089.61	6.509	1.47539	1.45153	1.30575
TL	0.09876	73.57	15.828	0.11289	0.10143	0.08197
V	0.44606	7,510.89	6.621	0.46561	0.46048	0.41208
Y1	32434.21480	32,434.21	11.526	28993.71792	31896.61960	36412.30687
Y2A	366383.15638	366,383.16	6.152	358214.58195	349067.93298	391866.95421
Y2R	23690.65752	23,690.66	1.209	23361.66500	23885.58689	23824.72067
ZN	0.40447	7,212.51	20.292	0.48455	0.40832	0.32054
ZR	0.64701	1,723.91	2.256	0.66330	0.63510	0.64264

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/12/2013 19:55

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02578	557.83	13.197	0.02857	0.02678	0.02199
AL	11.76840	1,657.21	2.880	12.12582	11.72771	11.45168
AS	0.08290	46.88	12.404	0.07170	0.09191	0.08510
B	0.95632	12,517.38	13.458	1.06564	0.98883	0.81447
BA	1.05013	1,046,182.96	15.051	1.16597	1.11434	0.87008
BE	0.02415	16,083.08	12.638	0.02674	0.02493	0.02078
CA	20.36793	26,974.41	2.900	20.98627	20.30817	19.80936
CD	0.02196	757.76	19.769	0.01716	0.02562	0.02310
CO	0.23024	2,134.91	15.490	0.19112	0.26095	0.23864
CR	0.11442	1,881.44	12.779	0.12710	0.11774	0.09843
CU	0.18421	3,387.76	13.087	0.20503	0.18979	0.15780
FE	51.88263	19,765.25	2.814	53.41986	51.71321	50.51482
K	7.03883	3,256.91	2.911	7.25019	7.02528	6.84103
LI	0.55313	4,385.05	3.130	0.57216	0.54892	0.53831
MG	3.62649	8,449.86	2.628	3.71930	3.63129	3.52889
MN	1.39375	137,295.84	12.952	1.54675	1.43985	1.19465
MO	0.84782	6,422.43	15.544	0.70342	0.96159	0.87844
NA	6.44899	8,826.75	2.677	6.62450	6.44309	6.27936
NI	0.25382	1,643.46	15.298	0.21101	0.28675	0.26371
P	1.62281	1,445.06	15.822	1.33945	1.84005	1.68893
PB	12.04481	26,410.55	15.258	10.02717	13.62327	12.48400
S	4.91072	1,581.18	15.854	4.05680	5.58116	5.09418
SB	0.19760	254.55	17.218	0.15996	0.22616	0.20668
SE	0.07302	41.93	15.602	0.06113	0.08384	0.07409
SI	3.72740	943.65	3.280	3.82190	3.77099	3.58931
SN	1.71070	3,488.64	15.073	1.42820	1.93342	1.77049
SR	0.57510	667,060.12	14.397	0.60893	0.63563	0.48075
TI	0.93643	87,890.33	13.388	1.04454	0.96575	0.79900
TL	0.07141	61.16	11.191	0.06334	0.07932	0.07157
V	0.27988	6,098.51	12.914	0.31050	0.28912	0.24001
Y1	37809.75053	37,809.75	7.697	41038.80493	35389.06760	37001.37908
Y2A	476862.41868	476,862.42	7.136	457581.61569	456853.43397	516152.20637
Y2R	28192.25013	28,192.25	0.817	28136.00299	27995.15388	28445.59353
ZN	0.30218	6,316.17	15.672	0.25014	0.34276	0.31363
ZR	0.42186	1,338.55	2.830	0.43413	0.42117	0.41028

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/12/2013 19:59

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00197	-8.45	6.456	0.00212	0.00191	0.00188
AL	0.95074	145.80	0.951	0.94152	0.95959	0.95109
AS	0.00526	-1.73	10.918	0.00589	0.00510	0.00478
B	0.00492	141.30	8.967	0.00511	0.00523	0.00441
BA	0.02165	22,100.78	0.407	0.02174	0.02157	0.02164
BE	0.00039	-338.03	1.865	0.00038	0.00039	0.00039
CA	2.60163	3,828.80	0.899	2.58131	2.62721	2.59639
CD	0.00029	26.97	12.666	0.00025	0.00032	0.00031
CO	0.00218	27.92	11.744	0.00236	0.00230	0.00189
CR	0.00301	41.94	10.847	0.00332	0.00267	0.00304
CU	0.01005	139.35	3.868	0.01046	0.01001	0.00968
FE	7.91690	3,311.62	1.112	7.84716	8.01587	7.88766
K	0.01333	-0.93	113.503	0.00156	0.03040	0.00803
LI	-0.00018	58.38	950.488	-0.00164	-0.00057	0.00168
MG	0.31965	799.10	0.730	0.31833	0.32234	0.31827
MN	0.24392	24,545.44	0.367	0.24470	0.24294	0.24412
MO	0.00046	4.48	16.860	0.00045	0.00040	0.00055
NA	0.08695	104.98	1.288	0.08664	0.08603	0.08820
NI	0.00419	46.49	1.490	0.00413	0.00419	0.00425
P	0.23438	208.85	0.653	0.23614	0.23346	0.23353
PB	2.17941	4,803.73	1.058	2.20398	2.15824	2.17602
S	0.78784	248.56	0.518	0.79255	0.78523	0.78576
SB	-0.00049	2.74	179.455	-0.00064	-0.00128	0.00045
SE	0.00102	0.49	173.086	-0.00091	0.00257	0.00142
SI	0.27447	77.74	2.586	0.27703	0.26645	0.27993
SN	0.00215	9.81	12.213	0.00221	0.00186	0.00237
SR	0.01499	17,777.08	0.520	0.01507	0.01491	0.01497
TI	0.06161	5,930.74	0.253	0.06177	0.06158	0.06146
TL	0.00356	-5.57	20.600	0.00276	0.00370	0.00421
V	0.00831	180.37	2.091	0.00851	0.00818	0.00825
Y1	37675.46839	37,675.47	0.526	37462.94580	37855.58443	37707.87493
Y2A	483968.67397	483,968.67	0.661	480966.82150	483607.33245	487331.86795
Y2R	30409.89897	30,409.90	0.657	30626.62273	30233.49810	30369.57608
ZN	0.01403	333.73	1.479	0.01426	0.01390	0.01392
ZR	0.00161	8.09	25.507	0.00137	0.00137	0.00208

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/12/2013 20:03

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00201	-10.70	3.870	0.00208	0.00193	0.00201
AL	3.60560	643.72	27.475	3.99225	4.34461	2.47993
AS	0.00770	0.70	5.711	0.00804	0.00721	0.00787
B	0.00190	78.28	16.188	0.00164	0.00181	0.00224
BA	0.02688	38,175.54	8.756	0.02606	0.02953	0.02505
BE	0.00065	-214.93	6.448	0.00064	0.00069	0.00061
CA	2.05281	3,584.18	27.136	2.27028	2.46832	1.41982
CD	0.00008	6.91	136.862	0.00021	-0.00002	0.00007
CO	0.00009	14.73	248.034	0.00032	0.00011	-0.00015
CR	0.00305	62.89	5.076	0.00288	0.00319	0.00308
CU	0.01914	441.88	13.484	0.01869	0.02191	0.01681
FE	2.64025	1,301.09	27.403	2.93716	3.16806	1.81552
K	0.14595	77.04	24.538	0.16988	0.16318	0.10477
LI	0.00112	81.92	14.234	0.00129	0.00109	0.00098
MG	0.37164	1,093.69	27.270	0.41467	0.44436	0.25588
MN	0.02624	3,698.87	9.861	0.02524	0.02917	0.02429
MO	0.00015	3.29	130.554	0.00038	0.00004	0.00004
NA	0.01648	-0.39	85.898	0.01706	0.03034	0.00205
NI	-0.00057	26.47	194.108	0.00049	-0.00048	-0.00172
P	0.11759	161.98	64.527	0.19746	0.10887	0.04645
PB	0.01633	66.55	65.780	0.02735	0.01576	0.00588
S	0.71216	346.99	64.674	1.19655	0.66015	0.27979
SB	-0.00140	1.64	18.708	-0.00142	-0.00165	-0.00113
SE	0.00032	0.02	433.855	0.00190	-0.00015	-0.00078
SI	0.83634	271.11	27.349	0.93524	0.99896	0.57480
SN	-0.00011	8.17	1024.842	0.00111	-0.00034	-0.00110
SR	0.00954	15,770.16	9.144	0.00923	0.01053	0.00887
TI	0.08657	11,584.90	10.429	0.08286	0.09686	0.07998
TL	0.00695	-2.77	5.562	0.00656	0.00733	0.00696
V	0.00528	154.92	8.089	0.00508	0.00577	0.00498
Y1	60865.90640	60,865.91	9.611	55772.97396	59569.54364	67255.20160
Y2A	673167.17847	673,167.18	4.089	698479.56811	677160.28628	643861.68101
Y2R	36214.71069	36,214.71	7.161	35951.85019	33762.68188	38929.60000
ZN	0.02581	872.80	68.200	0.04421	0.02411	0.00912
ZR	0.00115	7.73	20.099	0.00131	0.00125	0.00088

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/12/2013 20:07

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00208	-4.40	28.070	0.00154	0.00270	0.00200
AL	59.15697	7,175.01	7.678	63.34544	59.79603	54.32943
AS	0.01583	5.07	7.104	0.01699	0.01576	0.01475
B	0.00795	158.50	9.188	0.00846	0.00827	0.00711
BA	0.29582	252,785.52	8.636	0.32005	0.29827	0.26914
BE	0.00246	943.07	5.060	0.00258	0.00247	0.00233
CA	2.67889	3,151.81	7.707	2.87417	2.69965	2.46284
CD	0.00052	34.60	9.512	0.00056	0.00053	0.00047
CO	0.00243	48.95	6.571	0.00259	0.00241	0.00228
CR	0.04133	583.53	7.413	0.04462	0.04082	0.03856
CU	0.08538	1,269.77	8.652	0.09245	0.08598	0.07771
FE	8.87789	2,970.37	7.511	9.50755	8.94680	8.17933
K	1.56154	619.21	5.745	1.64630	1.57073	1.46759
LI	0.01723	164.32	16.355	0.01877	0.01398	0.01893
MG	1.39189	2,799.58	7.249	1.48597	1.40437	1.28534
MN	0.11626	9,826.55	7.895	0.12545	0.11624	0.10709
MO	0.00170	13.21	16.281	0.00195	0.00175	0.00140
NA	0.17562	189.00	7.747	0.19122	0.16945	0.16620
NI	0.01328	100.05	9.672	0.01437	0.01360	0.01187
P	3.74441	3,194.79	7.354	3.98960	3.79711	3.44652
PB	0.07226	182.88	7.837	0.07670	0.07419	0.06588
S	3.31183	1,020.90	7.543	3.53551	3.35772	3.04225
SB	-0.00043	3.54	83.593	-0.00027	-0.00018	-0.00083
SE	0.00384	1.62	65.315	0.00525	0.00094	0.00533
SI	4.80683	1,048.06	7.884	5.17946	4.81924	4.42178
SN	0.01081	26.26	7.124	0.01155	0.01085	0.01002
SR	0.02976	29,613.00	8.184	0.03215	0.02985	0.02728
TI	1.03935	83,580.23	7.983	1.12235	1.03930	0.95641
TL	0.00517	-8.09	8.669	0.00478	0.00507	0.00566
V	0.06042	1,143.00	7.741	0.06521	0.06019	0.05586
Y1	36002.11159	36,002.11	3.598	34933.23000	35630.27333	37442.83145
Y2A	407155.61148	407,155.61	4.820	385310.38487	412860.80677	423295.64281
Y2R	24378.08123	24,378.08	3.787	23470.53696	24347.72410	25315.98262
ZN	0.13612	2,701.08	7.213	0.14471	0.13824	0.12542
ZR	0.00543	17.06	37.685	0.00315	0.00710	0.00605

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/12/2013 20:11

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.53503	6,725.89	0.404	0.53351	0.53751	0.53408
AL	27.35229	2,582.33	1.107	27.66236	27.33706	27.05744
AS	0.52641	196.76	1.317	0.52823	0.53226	0.51875
B	0.51722	4,064.90	0.883	0.51195	0.51967	0.52003
BA	0.53893	323,176.25	0.839	0.53525	0.54397	0.53756
BE	0.51947	215,384.15	0.742	0.51558	0.51955	0.52329
CA	27.20861	24,153.89	1.067	27.44020	27.30266	26.88297
CD	0.52679	8,210.58	1.298	0.53072	0.53075	0.51890
CO	0.52487	2,737.71	1.439	0.52895	0.52950	0.51615
CR	0.51778	5,190.73	0.976	0.51272	0.51779	0.52283
CU	0.53965	6,201.38	0.312	0.53878	0.54159	0.53858
FE	27.05362	6,991.96	1.235	27.32382	27.15685	26.68019
K	26.95314	8,389.09	1.337	27.23078	27.08288	26.54576
LI	0.54018	2,880.84	2.272	0.54807	0.54643	0.52604
MG	26.57592	41,140.49	1.271	26.79258	26.74831	26.18686
MN	0.52626	31,171.01	0.599	0.52341	0.52571	0.52965
MO	0.53085	2,282.84	1.509	0.53536	0.53559	0.52160
NA	26.63992	24,533.97	1.447	26.89521	26.82801	26.19654
NI	0.52951	1,938.24	1.361	0.53279	0.53450	0.52125
P	0.53836	273.10	1.288	0.54016	0.54422	0.53071
PB	0.53278	671.13	1.119	0.53372	0.53822	0.52641
S	26.11003	4,800.41	1.304	26.32257	26.29025	25.71727
SB	0.54977	398.09	1.157	0.55149	0.55509	0.54272
SE	0.52771	172.60	1.318	0.52933	0.53371	0.52008
SI	27.38178	4,637.25	0.996	27.57626	27.49916	27.06992
SN	0.51694	600.39	1.367	0.52166	0.52034	0.50882
SR	0.52140	363,882.07	1.035	0.52124	0.51608	0.52687
TI	0.53048	29,984.16	0.681	0.52638	0.53183	0.53321
TL	0.52735	332.31	1.148	0.53240	0.52900	0.52064
V	0.52449	6,926.54	0.534	0.52330	0.52248	0.52769
Y1	21293.34366	21,293.34	1.079	21174.12529	21147.75438	21558.15131
Y2A	284996.13431	284,996.13	0.913	286624.91716	286366.63353	281996.85222
Y2R	18933.47221	18,933.47	0.888	18782.23474	18903.82124	19114.36064
ZN	0.53383	6,247.52	1.500	0.53825	0.53866	0.52459
ZR	0.53286	1,135.04	1.800	0.53974	0.53694	0.52190

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/12/2013 20:15

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00166	-9.17	24.364	0.00201	0.00176	0.00122
AL	0.01226	2.41	170.989	0.01123	0.03373	-0.00817
AS	-0.00028	-2.75	296.327	0.00012	0.00027	-0.00122
B	0.00082	11.85	85.099	0.00140	0.00004	0.00104
BA	0.00003	54.81	63.942	0.00001	0.00005	0.00003
BE	-0.00027	-492.87	7.690	-0.00028	-0.00029	-0.00025
CA	0.00393	78.57	133.390	0.00569	0.00807	-0.00197
CD	-0.00006	-4.58	48.725	-0.00007	-0.00003	-0.00008
CO	-0.00001	3.78	3775.279	0.00012	0.00019	-0.00033
CR	-0.00003	-3.62	674.465	-0.00015	-0.00009	0.00016
CU	-0.00090	-42.02	55.947	-0.00032	-0.00121	-0.00116
FE	-0.00349	-1.20	203.418	-0.00220	-0.01113	0.00288
K	-0.10916	-39.35	48.216	-0.09687	-0.06377	-0.16686
LI	0.00272	50.89	74.219	0.00467	0.00064	0.00284
MG	0.00240	-0.10	88.644	0.00485	0.00144	0.00093
MN	0.00004	13.97	56.067	0.00003	0.00006	0.00002
MO	0.00018	1.34	51.244	0.00026	0.00008	0.00018
NA	-0.02605	-39.47	12.459	-0.02246	-0.02878	-0.02691
NI	0.00039	13.78	65.222	0.00065	0.00038	0.00014
P	-0.00038	-0.70	217.974	0.00021	-0.00132	-0.00002
PB	0.00192	5.50	94.932	0.00148	0.00391	0.00035
S	0.00091	-4.46	355.272	-0.00156	-0.00027	0.00456
SB	0.00042	1.72	485.996	-0.00181	0.00086	0.00221
SE	0.00191	0.59	114.879	0.00377	0.00248	-0.00051
SI	0.01215	4.07	51.746	0.00800	0.01938	0.00906
SN	-0.00069	2.35	65.855	-0.00108	-0.00079	-0.00019
SR	-0.00022	-145.01	1.393	-0.00022	-0.00021	-0.00021
TI	-0.00003	15.88	145.071	0.00002	-0.00007	-0.00006
TL	-0.00049	-5.89	210.822	-0.00114	-0.00105	0.00071
V	-0.00048	-11.97	107.695	-0.00104	-0.00003	-0.00036
Y1	22062.20793	22,062.21	0.107	22074.10381	22034.99534	22077.52465
Y2A	296938.56307	296,938.56	0.743	297853.46256	294422.46521	298539.76143
Y2R	19262.01258	19,262.01	0.668	19144.90335	19399.70524	19241.42914
ZN	-0.00039	12.48	25.167	-0.00031	-0.00036	-0.00050
ZR	0.00203	6.03	117.408	0.00081	0.00050	0.00477

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/12/2013 20:19

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00171	-10.80	12.056	0.00185	0.00147	0.00180
AL	209.13738	25,590.70	7.219	223.35050	193.28835	210.77327
AS	0.02258	7.16	8.922	0.02364	0.02026	0.02384
B	0.01080	309.25	16.618	0.01178	0.01189	0.00873
BA	0.70342	594,667.84	13.327	0.80373	0.68851	0.61802
BE	0.00814	4,266.63	7.912	0.00883	0.00803	0.00756
CA	2.38758	2,831.49	7.510	2.55883	2.20117	2.40273
CD	-0.00099	41.59	15.403	-0.00115	-0.00085	-0.00097
CO	0.00625	73.37	5.333	0.00633	0.00588	0.00653
CR	0.10009	1,405.85	8.422	0.10897	0.09911	0.09219
CU	0.06378	909.17	8.621	0.06988	0.06229	0.05919
FE	25.53622	8,523.06	7.437	27.35295	23.56415	25.69155
K	3.66167	1,465.54	7.776	3.93280	3.36505	3.68717
LI	0.09352	680.74	5.081	0.09800	0.08853	0.09402
MG	5.81512	11,735.86	7.157	6.21831	5.38705	5.84001
MN	0.09910	8,307.09	8.824	0.10856	0.09741	0.09132
MO	0.00228	15.82	10.753	0.00254	0.00206	0.00223
NA	0.20732	227.48	7.289	0.22195	0.19177	0.20823
NI	0.05863	341.26	5.195	0.06213	0.05655	0.05722
P	4.23308	3,279.30	4.990	4.47413	4.08040	4.14469
PB	0.11880	314.94	4.130	0.12431	0.11718	0.11491
S	3.90277	1,092.75	4.954	4.12273	3.75976	3.82582
SB	-0.00135	4.87	56.500	-0.00153	-0.00051	-0.00201
SE	0.00590	1.52	42.084	0.00637	0.00811	0.00321
SI	7.41696	1,622.81	7.369	7.94361	6.85250	7.45476
SN	0.01700	34.80	6.184	0.01820	0.01653	0.01626
SR	0.04105	40,496.97	8.953	0.04503	0.04034	0.03779
TI	0.94983	75,733.10	8.891	1.04135	0.93321	0.87492
TL	0.00447	-10.06	14.866	0.00383	0.00440	0.00516
V	0.11215	2,104.99	8.670	0.12264	0.11038	0.10344
Y1	32663.03725	32,663.04	2.897	31578.23843	33318.92612	33091.94720
Y2A	404441.03967	404,441.04	7.416	374084.93696	405179.30464	434058.87742
Y2R	24482.27335	24,482.27	3.943	23624.82563	25527.98843	24294.00599
ZN	0.22814	4,114.82	4.987	0.24118	0.22023	0.22301
ZR	0.00825	24.75	11.155	0.00815	0.00738	0.00921

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/12/2013 20:24

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00147	-15.47	20.369	0.00181	0.00130	0.00129
AL	113.31651	15,129.78	3.402	116.21346	114.79519	108.94089
AS	0.01061	-1.35	13.769	0.01021	0.01223	0.00939
B	0.00492	456.28	32.274	0.00632	0.00525	0.00320
BA	0.36391	340,376.14	9.133	0.39612	0.36588	0.32974
BE	0.00161	479.97	4.703	0.00169	0.00160	0.00154
CA	4.77756	6,094.35	3.579	4.91969	4.82520	4.58778
CD	-0.00280	86.67	3.004	-0.00286	-0.00283	-0.00270
CO	0.00674	150.12	2.224	0.00662	0.00670	0.00691
CR	2.87144	44,977.06	8.335	3.07893	2.92578	2.60962
CU	0.03554	337.86	10.437	0.03942	0.03518	0.03203
FE	48.45303	17,535.36	3.425	49.77394	48.99499	46.59015
K	4.28410	1,877.75	3.967	4.41948	4.33942	4.09339
LI	0.07573	614.88	2.800	0.07685	0.07705	0.07328
MG	10.68138	23,538.45	3.417	10.97316	10.79881	10.27217
MN	0.29859	27,598.40	8.385	0.32125	0.30281	0.27171
MO	0.00035	4.30	41.371	0.00034	0.00050	0.00021
NA	0.23449	284.51	1.296	0.23118	0.23715	0.23513
NI	0.02924	239.25	4.095	0.03043	0.02925	0.02803
P	0.71521	764.17	4.002	0.74288	0.71703	0.68572
PB	0.01429	103.50	6.352	0.01533	0.01369	0.01384
S	0.92912	350.67	4.648	0.96942	0.93441	0.88354
SB	-0.04838	5.70	8.912	-0.05236	-0.04898	-0.04380
SE	0.00229	0.46	49.572	0.00123	0.00215	0.00349
SI	10.00631	2,394.93	4.186	10.20278	10.29082	9.52535
SN	0.00716	23.97	8.473	0.00779	0.00710	0.00658
SR	0.04390	47,803.22	8.605	0.04733	0.04451	0.03985
TI	2.37962	209,486.19	8.370	2.55961	2.41361	2.16566
TL	0.00893	-8.99	8.291	0.00975	0.00872	0.00832
V	0.09638	2,011.60	7.870	0.10295	0.09810	0.08808
Y1	45065.44803	45,065.45	1.473	44428.64333	45014.65632	45753.04443
Y2A	446073.21650	446,073.22	6.144	426902.24252	433853.65449	477463.75249
Y2R	26754.04659	26,754.05	1.968	26331.72789	26586.35000	27344.06188
ZN	0.23723	5,958.27	4.020	0.24633	0.23804	0.22731
ZR	0.01631	51.20	16.913	0.01921	0.01598	0.01373

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/12/2013 20:28

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00189	-9.91	1.734	0.00187	0.00187	0.00193
AL	17.77687	2,710.94	3.544	18.42969	17.72837	17.17255
AS	0.01164	-1.76	5.329	0.01233	0.01114	0.01143
B	-0.00513	431.09	9.779	-0.00468	-0.00567	-0.00503
BA	0.08390	96,973.80	5.104	0.08873	0.08239	0.08057
BE	0.00140	427.04	1.805	0.00143	0.00138	0.00139
CA	7.86042	11,397.39	3.894	8.17115	7.85099	7.55912
CD	-0.00140	136.79	9.407	-0.00134	-0.00154	-0.00130
CO	0.00535	96.04	5.480	0.00564	0.00505	0.00537
CR	0.04356	808.45	5.233	0.04618	0.04249	0.04202
CU	0.03006	455.74	7.198	0.03248	0.02939	0.02831
FE	49.93508	20,675.85	3.847	51.88383	49.87868	48.04273
K	2.23240	1,116.60	4.066	2.33116	2.21344	2.15260
LI	0.01446	187.71	9.792	0.01499	0.01285	0.01553
MG	5.40702	13,673.69	3.534	5.60399	5.39472	5.22237
MN	0.29895	34,125.16	4.885	0.31555	0.29319	0.28810
MO	0.00093	9.56	11.382	0.00095	0.00081	0.00101
NA	0.48607	700.55	1.308	0.49221	0.48649	0.47951
NI	0.00880	81.36	6.019	0.00941	0.00851	0.00847
P	0.89531	956.60	5.831	0.95552	0.86276	0.86764
PB	0.08473	234.88	5.233	0.08984	0.08229	0.08205
S	0.92641	350.23	5.254	0.98253	0.89575	0.90094
SB	-0.00523	2.70	13.680	-0.00580	-0.00547	-0.00443
SE	0.00159	0.82	28.450	0.00151	0.00118	0.00208
SI	1.39652	385.38	3.436	1.44278	1.39979	1.34699
SN	0.00610	21.39	10.391	0.00671	0.00544	0.00615
SR	0.02568	34,548.32	5.139	0.02717	0.02520	0.02467
TI	1.13960	123,878.94	5.203	1.20651	1.11873	1.09357
TL	0.00617	-7.54	5.237	0.00597	0.00654	0.00599
V	0.04078	1,052.30	4.524	0.04289	0.03996	0.03948
Y1	45075.73246	45,075.73	2.091	43990.40640	45547.46886	45689.32214
Y2A	549598.45720	549,598.46	3.091	532208.44393	550433.22827	566153.69940
Y2R	30622.78390	30,622.78	1.189	30370.39159	30457.64318	31040.31694
ZN	0.14667	3,748.21	5.853	0.15658	0.14177	0.14165
ZR	0.01002	37.06	9.529	0.01106	0.00978	0.00920

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/12/2013 20:32

Sample Number: **7265236** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00164	-7.98	23.715	0.00119	0.00190	0.00181
AL	46.32086	4,649.63	0.814	46.56416	45.88651	46.51189
AS	0.00992	-9.23	22.972	0.00730	0.01100	0.01145
B	-0.01290	861.57	37.643	-0.00867	-0.01182	-0.01820
BA	0.29341	191,420.36	4.220	0.30484	0.29513	0.28026
BE	0.00209	550.48	2.834	0.00213	0.00212	0.00202
CA	13.25164	12,578.84	0.856	13.31793	13.12064	13.31635
CD	0.00028	352.69	154.442	0.00070	0.00033	-0.00017
CO	0.03030	228.15	1.840	0.03094	0.02991	0.03005
CR	0.09085	934.29	3.539	0.09437	0.09012	0.08807
CU	0.12089	1,233.61	4.108	0.12593	0.12074	0.11600
FE	171.56316	44,414.27	0.743	172.36705	170.09443	172.22799
K	2.68586	884.89	0.289	2.69102	2.67695	2.68962
LI	0.04012	269.66	6.409	0.04302	0.03919	0.03814
MG	11.13433	18,476.87	0.557	11.18935	11.06717	11.14648
MN	2.92705	188,561.50	4.130	3.04197	2.93823	2.80095
MO	0.00328	16.68	3.965	0.00313	0.00336	0.00335
NA	0.99552	960.30	0.699	0.99068	0.99238	1.00350
NI	0.05018	200.48	2.179	0.05135	0.04998	0.04919
P	2.02308	1,165.77	2.309	2.07383	2.01349	1.98191
PB	0.41714	601.12	1.862	0.42502	0.41691	0.40949
S	2.74847	569.68	2.367	2.82057	2.73062	2.69420
SB	-0.01099	6.13	14.948	-0.01266	-0.00938	-0.01093
SE	0.00306	0.85	19.494	0.00259	0.00284	0.00373
SI	4.93524	890.79	0.590	4.96023	4.90327	4.94222
SN	0.04729	65.78	3.207	0.04896	0.04599	0.04693
SR	0.07371	55,975.81	4.365	0.07673	0.07409	0.07032
TI	3.20038	196,425.12	4.092	3.32554	3.21129	3.06432
TL	0.00433	-10.74	39.192	0.00578	0.00475	0.00247
V	0.17807	2,599.26	4.295	0.18504	0.17927	0.16989
Y1	24279.08666	24,279.09	1.718	23818.95828	24385.48119	24632.82051
Y2A	310320.64400	310,320.64	3.271	300947.06759	308912.78108	321102.08333
Y2R	20142.30711	20,142.31	0.511	20070.46544	20260.10277	20096.35313
ZN	0.55096	7,514.67	2.302	0.56507	0.54728	0.54052
ZR	0.01926	45.29	4.570	0.01972	0.01824	0.01980

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/12/2013 20:36

Sample Number: **7265237** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00152	-8.65	20.898	0.00178	0.00162	0.00117
AL	69.67142	7,256.78	1.828	70.42457	68.20091	70.38879
AS	0.01461	-9.75	14.143	0.01249	0.01662	0.01472
B	-0.01018	1,074.65	42.209	-0.01327	-0.00527	-0.01200
BA	0.49028	315,212.86	1.820	0.48006	0.49652	0.49425
BE	0.00279	856.43	1.793	0.00280	0.00274	0.00284
CA	24.83818	24,340.85	1.923	25.18271	24.29285	25.03897
CD	-0.00031	429.80	255.253	0.00022	0.00007	-0.00122
CO	0.03224	267.89	4.479	0.03367	0.03226	0.03078
CR	0.13181	1,350.35	0.594	0.13094	0.13245	0.13205
CU	0.19978	2,088.83	0.902	0.19784	0.20010	0.20140
FE	208.32486	55,039.61	2.239	211.13772	202.93952	210.89735
K	3.18450	1,088.85	2.835	3.24458	3.08067	3.22824
LI	0.05153	353.01	4.760	0.05158	0.05396	0.04905
MG	20.63222	35,341.35	1.715	20.84460	20.22386	20.82819
MN	2.30838	146,570.62	0.942	2.28932	2.30378	2.33205
MO	0.00324	16.95	5.859	0.00343	0.00305	0.00324
NA	1.44802	1,455.86	1.680	1.45060	1.42250	1.47095
NI	0.06045	245.58	2.098	0.06181	0.06024	0.05930
P	3.77026	2,236.74	2.806	3.88677	3.74383	3.68017
PB	0.46933	700.41	2.411	0.48178	0.46653	0.45968
S	1.25130	262.59	3.282	1.29561	1.24378	1.21451
SB	-0.01072	9.77	15.471	-0.01101	-0.00894	-0.01222
SE	0.00460	1.36	89.267	0.00222	0.00934	0.00224
SI	3.70577	694.17	1.593	3.75735	3.64140	3.71856
SN	0.02700	40.21	2.723	0.02726	0.02757	0.02617
SR	0.11320	84,719.07	0.802	0.11238	0.11302	0.11418
TI	4.68572	283,440.02	0.777	4.64394	4.70246	4.71077
TL	0.00845	-11.94	16.143	0.00799	0.00737	0.00998
V	0.22640	3,260.73	1.145	0.22410	0.22588	0.22921
Y1	24994.22064	24,994.22	1.957	24454.97569	25118.48507	25409.20115
Y2A	305597.67871	305,597.68	1.096	309461.44237	303532.63751	303798.95626
Y2R	20890.00708	20,890.01	1.239	20809.13174	21179.54727	20681.34224
ZN	0.65562	9,207.91	3.021	0.67667	0.65285	0.63734
ZR	0.02665	64.32	6.115	0.02560	0.02583	0.02853

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/12/2013 20:40

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00224	-1.56	21.970	0.00264	0.00169	0.00238
AL	18.19075	2,570.84	17.022	21.71653	15.91401	16.94169
AS	0.01052	0.79	12.884	0.01209	0.00971	0.00977
B	0.00751	268.35	34.076	0.00583	0.01046	0.00625
BA	0.06892	68,039.08	9.240	0.07230	0.07288	0.06157
BE	0.00095	55.28	5.803	0.00101	0.00094	0.00090
CA	11.36841	15,223.04	16.792	13.54898	9.99855	10.55769
CD	0.00035	74.36	24.399	0.00026	0.00042	0.00038
CO	0.00555	81.01	16.490	0.00641	0.00459	0.00563
CR	0.06183	1,007.05	9.388	0.06494	0.06542	0.05513
CU	0.05760	979.58	9.962	0.06117	0.06066	0.05098
FE	19.59308	7,611.46	16.927	23.38393	17.22685	18.16845
K	0.91582	420.70	15.213	1.07443	0.81321	0.85982
LI	0.01651	193.57	15.783	0.01951	0.01475	0.01529
MG	3.71640	8,717.32	16.536	4.41736	3.27024	3.46162
MN	0.10799	10,538.37	9.122	0.11337	0.11398	0.09662
MO	0.00063	6.49	25.492	0.00082	0.00057	0.00051
NA	0.83523	1,130.63	17.824	1.00539	0.72901	0.77130
NI	0.01163	104.15	14.709	0.01353	0.01022	0.01113
P	0.56440	570.04	10.889	0.63351	0.51586	0.54384
PB	0.24640	627.36	10.836	0.27637	0.22517	0.23765
S	5.57520	2,043.03	11.112	6.26921	5.07806	5.37833
SB	-0.00335	1.89	24.878	-0.00429	-0.00302	-0.00272
SE	0.00371	2.14	46.956	0.00570	0.00303	0.00242
SI	3.21489	818.78	16.274	3.81528	2.85669	2.97270
SN	0.00919	27.36	12.733	0.01049	0.00823	0.00884
SR	0.02994	34,395.09	9.268	0.03140	0.03168	0.02674
TI	0.65275	60,611.28	9.116	0.68496	0.68922	0.58409
TL	0.00694	-5.74	14.560	0.00578	0.00764	0.00739
V	0.05151	1,123.98	9.183	0.05386	0.05460	0.04606
Y1	42734.79168	42,734.79	4.813	40486.02251	44520.22708	43198.12546
Y2A	470287.79584	470,287.80	5.086	464030.02654	450117.45189	496715.90909
Y2R	28633.54873	28,633.55	8.096	26049.26588	30529.57445	29321.80586
ZN	0.25276	5,918.01	10.778	0.28333	0.23105	0.24389
ZR	0.00736	25.85	22.388	0.00893	0.00564	0.00750

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/12/2013 20:44

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00210	-9.93	6.273	0.00221	0.00195	0.00213
AL	0.24119	60.92	5.465	0.25603	0.23671	0.23083
AS	0.00716	0.47	6.818	0.00747	0.00741	0.00660
B	-0.00009	19.98	251.614	0.00007	-0.00036	0.00001
BA	0.00147	2,591.19	20.359	0.00177	0.00117	0.00147
BE	0.00060	-317.77	1.879	0.00061	0.00059	0.00059
CA	0.41359	1,122.57	2.287	0.42402	0.41117	0.40557
CD	0.00020	1.82	17.304	0.00017	0.00024	0.00021
CO	-0.00009	10.56	155.822	-0.00025	0.00002	-0.00004
CR	0.00173	39.72	14.688	0.00193	0.00144	0.00182
CU	0.00131	-43.63	59.963	0.00207	0.00050	0.00137
FE	0.51189	339.70	3.688	0.53287	0.50654	0.49627
K	-0.03534	-39.98	43.684	-0.01767	-0.04213	-0.04623
LI	-0.00307	50.93	54.578	-0.00198	-0.00499	-0.00223
MG	0.10412	405.87	2.341	0.10691	0.10303	0.10241
MN	0.00258	464.40	21.293	0.00312	0.00202	0.00259
MO	-0.00003	1.21	110.601	-0.00002	-0.00001	-0.00008
NA	0.02617	23.86	56.380	0.03899	0.01004	0.02949
NI	-0.00144	20.81	13.147	-0.00123	-0.00149	-0.00159
P	0.03119	48.28	5.847	0.03316	0.03088	0.02955
PB	0.01888	83.55	3.548	0.01963	0.01864	0.01836
S	0.28196	149.73	5.598	0.29768	0.28207	0.26611
SB	-0.00165	0.76	17.985	-0.00194	-0.00168	-0.00134
SE	0.00005	-0.13	285.145	0.00010	0.00018	-0.00012
SI	0.09568	46.16	17.429	0.11291	0.09450	0.07962
SN	-0.00119	5.33	25.401	-0.00152	-0.00113	-0.00092
SR	0.00060	1,222.11	23.513	0.00075	0.00046	0.00060
TI	0.01039	1,709.15	20.958	0.01255	0.00820	0.01041
TL	0.00643	-3.67	5.516	0.00678	0.00644	0.00607
V	0.00239	75.85	15.344	0.00278	0.00205	0.00235
Y1	67235.44003	67,235.44	0.283	67017.88853	67317.19437	67371.23717
Y2A	808260.90808	808,260.91	1.227	798223.50498	808505.31561	818053.90365
Y2R	48183.00480	48,183.00	0.403	48406.93558	48061.45293	48080.62587
ZN	0.00307	165.86	8.135	0.00333	0.00304	0.00283
ZR	0.00044	6.50	79.168	0.00034	0.00015	0.00082

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/12/2013 20:48

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00224	-3.89	10.969	0.00214	0.00251	0.00205
AL	4.66010	970.02	6.308	4.59280	4.40563	4.98187
AS	0.00916	0.75	9.764	0.00948	0.00815	0.00985
B	0.00179	193.14	47.267	0.00212	0.00241	0.00083
BA	0.03106	44,426.62	4.085	0.03252	0.03034	0.03030
BE	0.00079	-72.92	2.140	0.00081	0.00078	0.00079
CA	1.78533	3,656.68	5.735	1.75892	1.69874	1.89835
CD	0.00018	56.94	108.541	0.00040	0.00016	0.00000
CO	0.00165	42.36	21.828	0.00203	0.00131	0.00162
CR	0.01488	339.72	4.474	0.01557	0.01481	0.01425
CU	0.01081	179.16	6.013	0.01152	0.01065	0.01025
FE	12.10596	6,936.69	5.817	11.92638	11.50898	12.88251
K	0.20216	128.13	16.588	0.18118	0.18447	0.24084
LI	0.00116	94.70	46.801	0.00055	0.00134	0.00160
MG	0.86008	2,963.67	5.830	0.84920	0.81626	0.91476
MN	0.09198	12,998.02	4.090	0.09632	0.08990	0.08972
MO	0.00013	2.89	54.233	0.00019	0.00013	0.00006
NA	0.14586	263.30	11.573	0.14179	0.13139	0.16440
NI	0.00174	45.57	17.104	0.00204	0.00145	0.00173
P	0.29636	402.87	10.908	0.33242	0.26998	0.28668
PB	0.01594	63.42	11.706	0.01807	0.01459	0.01516
S	0.25446	113.91	11.384	0.28609	0.22922	0.24807
SB	-0.00196	2.45	33.170	-0.00270	-0.00164	-0.00153
SE	0.00095	0.62	86.407	0.00145	0.00000	0.00139
SI	0.68080	258.24	6.318	0.65616	0.65577	0.73047
SN	0.00087	10.98	40.767	0.00124	0.00084	0.00053
SR	0.00797	13,275.21	4.104	0.00835	0.00779	0.00778
TI	0.28091	37,781.50	4.295	0.29479	0.27499	0.27295
TL	0.00666	-4.49	4.349	0.00657	0.00699	0.00643
V	0.01644	513.27	3.152	0.01704	0.01611	0.01617
Y1	57511.44689	57,511.45	2.069	56262.82145	58632.32707	57639.19216
Y2A	678848.51534	678,848.52	0.878	675041.33532	675782.70639	685721.50431
Y2R	41769.31534	41,769.32	2.922	41739.52919	43004.54182	40563.87500
ZN	0.05588	1,824.75	11.319	0.06289	0.05060	0.05414
ZR	0.00196	12.87	64.904	0.00103	0.00341	0.00144

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/12/2013 20:52

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00183	-16.01	22.314	0.00151	0.00169	0.00229
AL	0.21984	45.33	8.105	0.23001	0.23024	0.19926
AS	0.00697	-0.14	5.853	0.00737	0.00655	0.00700
B	0.00021	49.92	578.467	0.00139	0.00021	-0.00098
BA	0.00432	6,170.37	62.024	0.00691	0.00447	0.00157
BE	0.00050	-362.52	9.515	0.00045	0.00052	0.00054
CA	2.13844	4,078.36	0.823	2.15363	2.11917	2.14251
CD	-0.00002	3.21	246.462	0.00004	-0.00007	-0.00004
CO	-0.00015	8.65	145.502	0.00003	-0.00038	-0.00009
CR	0.00076	8.59	8.650	0.00083	0.00070	0.00074
CU	0.00176	-26.84	145.060	0.00380	0.00258	-0.00110
FE	2.78021	1,499.70	0.934	2.79735	2.75035	2.79295
K	-0.02356	-24.92	44.146	-0.01223	-0.02578	-0.03266
LI	-0.00193	55.61	61.457	-0.00075	-0.00313	-0.00191
MG	0.26059	837.11	0.731	0.26270	0.25900	0.26007
MN	0.18065	25,218.51	59.756	0.28423	0.18889	0.06881
MO	-0.00003	1.16	90.313	-0.00002	-0.00006	-0.00001
NA	0.22038	389.38	2.600	0.22326	0.22409	0.21378
NI	-0.00164	16.20	15.525	-0.00136	-0.00185	-0.00173
P	0.04700	66.86	44.343	0.06870	0.02715	0.04514
PB	0.00131	12.93	128.804	0.00310	-0.00026	0.00109
S	0.93304	480.01	46.077	1.37484	0.51609	0.90817
SB	-0.00128	1.86	9.493	-0.00135	-0.00136	-0.00114
SE	0.00130	1.06	23.542	0.00138	0.00096	0.00155
SI	0.19204	71.23	4.228	0.18808	0.20138	0.18666
SN	-0.00070	6.52	87.149	-0.00006	-0.00126	-0.00077
SR	0.00508	8,361.88	62.497	0.00815	0.00526	0.00181
TI	0.00550	771.57	61.303	0.00869	0.00583	0.00198
TL	0.00664	-2.58	5.568	0.00703	0.00629	0.00662
V	0.00107	21.86	63.010	0.00171	0.00114	0.00036
Y1	62220.63204	62,220.63	5.866	58101.26274	65052.81775	63507.81562
Y2A	690435.02150	690,435.02	7.375	654490.25116	668113.98277	748700.83056
Y2R	39143.87529	39,143.88	0.787	38991.72318	39498.22606	38941.67664
ZN	0.00563	243.72	58.334	0.00900	0.00245	0.00542
ZR	0.00037	4.99	214.807	-0.00037	0.00027	0.00122

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/12/2013 20:56

Sample Number: **Z265246**

ELEMENT		AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	k	0.00212	-5.34	2.957	0.00217	0.00213	0.00205
AL		19.14626	2,358.42	45.610	17.59106	28.55208	11.29565
AS	k	0.01094	-2.30	60.078	0.01611	0.00354	0.01316
B	k	0.00232	532.62	1243.261	-0.02323	0.03368	-0.00348
BA		0.08348	99,698.61	4.683	0.08799	0.08142	0.08104
BE	k	0.00124	305.32	1.668	0.00126	0.00122	0.00123
CA		7.18000	8,418.05	46.112	6.57966	10.74996	4.21037
CD	k	-0.00058	174.35	864.498	-0.00470	0.00497	-0.00200
CO	k	0.00716	111.61	20.532	0.00747	0.00844	0.00556
CR	k	0.03128	591.11	7.922	0.03400	0.02916	0.03068
CU	k	0.02691	484.56	14.991	0.03047	0.02253	0.02771
FE		95.70480	31,227.53	47.400	87.31814	144.67653	55.11973
K		1.24323	497.53	46.501	1.12408	1.87164	0.73397
LI		0.02270	203.86	63.490	0.01906	0.03858	0.01045
MG		6.13566	12,528.61	45.566	5.64348	9.14482	3.61867
MN		0.87230	102,829.34	3.989	0.91245	0.85371	0.85074
MO		0.00043	5.74	7.969	0.00045	0.00039	0.00046
NA		0.62546	738.05	42.363	0.59624	0.90382	0.37631
NI	k	0.00581	66.60	30.790	0.00777	0.00426	0.00540
P	k	0.69740	841.98	11.433	0.77432	0.70277	0.61512
PB	k	0.02748	90.20	10.888	0.03015	0.02804	0.02425
S	k	0.33709	136.55	11.234	0.37404	0.33886	0.29837
SB	k	-0.00382	4.43	90.779	-0.00602	0.00018	-0.00562
SE	k	0.00156	0.99	18.576	0.00131	0.00188	0.00148
SI		1.74391	386.09	47.811	1.57570	2.64896	1.00706
SN		0.00286	15.22	14.427	0.00331	0.00274	0.00251
SR		0.01414	19,667.45	4.481	0.01487	0.01381	0.01374
TI	k	0.70434	79,118.97	4.390	0.74002	0.68775	0.68527
TL	k	0.00565	-5.69	32.558	0.00690	0.00354	0.00652
V	k	0.04046	1,072.37	3.961	0.04224	0.04001	0.03914
Y1		51028.44121	51,028.44	3.080	49411.90333	51122.57409	52550.84622
Y2A		567319.18687	567,319.19	1.713	564345.47113	578176.53872	559435.55076
Y2R		0.00000	0.00	0.000	30158.06259	16986.05680	35836.24650
ZN	k	0.13042	3,780.49	11.149	0.14093	0.13651	0.11383
ZR		0.01331	38.32	57.501	0.01327	0.02098	0.00568

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/12/2013 21:00

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.52160	6,675.64	0.697	0.51987	0.51915	0.52577
AL	26.17054	2,551.04	0.133	26.21008	26.15628	26.14524
AS	0.50983	193.94	3.355	0.50364	0.49669	0.52917
B	0.51072	4,083.22	1.164	0.50982	0.50528	0.51707
BA	0.52265	319,112.78	1.667	0.52857	0.51264	0.52673
BE	0.50702	214,054.64	1.138	0.50656	0.50149	0.51300
CA	26.03594	23,870.76	0.337	26.13685	25.99419	25.97679
CD	0.51382	8,153.68	2.304	0.50978	0.50453	0.52715
CO	0.50930	2,705.32	1.946	0.50606	0.50141	0.52043
CR	0.50799	5,185.72	1.552	0.50500	0.50203	0.51693
CU	0.52785	6,175.80	0.745	0.52511	0.52608	0.53235
FE	25.93712	6,924.37	0.427	26.04893	25.82770	25.93473
K	26.11293	8,391.59	0.215	26.16453	26.12115	26.05311
LI	0.52644	2,899.59	0.328	0.52692	0.52452	0.52787
MG	25.66719	41,043.40	0.339	25.73937	25.57069	25.69150
MN	0.51224	30,895.88	1.115	0.51058	0.50755	0.51860
MO	0.51543	2,257.01	2.327	0.51047	0.50671	0.52911
NA	25.88282	24,611.15	0.301	25.96829	25.81578	25.86440
NI	0.51588	1,923.17	2.196	0.51096	0.50783	0.52883
P	0.52096	269.08	2.628	0.51634	0.51017	0.53636
PB	0.51980	666.69	2.126	0.51673	0.51061	0.53207
S	25.35781	4,747.06	2.292	25.15568	24.90476	26.01300
SB	0.53574	395.05	2.494	0.52743	0.52864	0.55115
SE	0.51356	171.04	2.483	0.51282	0.50120	0.52667
SI	26.45451	4,625.80	0.211	26.51570	26.40630	26.44151
SN	0.50377	595.86	2.154	0.49877	0.49631	0.51621
SR	0.51118	363,253.47	1.788	0.51585	0.50064	0.51704
TI	0.51884	29,862.69	1.095	0.51760	0.51389	0.52505
TL	0.51626	331.16	2.152	0.51292	0.50719	0.52865
V	0.51216	6,887.21	1.363	0.50953	0.50687	0.52007
Y1	21685.98504	21,685.99	1.846	21856.47827	21972.93875	21228.53811
Y2A	290215.84383	290,215.84	1.153	288912.27634	294017.97548	287717.27966
Y2R	19547.28436	19,547.28	0.160	19581.20000	19541.16707	19519.48603
ZN	0.52042	6,201.61	2.407	0.51548	0.51112	0.53466
ZR	0.51572	1,134.33	0.866	0.51900	0.51064	0.51753

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 35

Date/Time: 11/12/2013 21:05

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00126	-14.17	50.377	0.00144	0.00056	0.00179
AL	0.02309	3.39	79.789	0.00243	0.03782	0.02900
AS	0.00003	-2.60	3774.663	0.00103	-0.00082	-0.00013
B	0.00104	13.28	43.924	0.00083	0.00156	0.00073
BA	0.00000	30.91	388.236	0.00001	-0.00002	0.00000
BE	-0.00033	-508.02	7.347	-0.00036	-0.00033	-0.00031
CA	0.00698	80.21	81.698	0.01001	0.00040	0.01054
CD	-0.00009	-5.08	91.090	-0.00012	-0.00017	0.00000
CO	-0.00007	3.42	248.196	-0.00027	0.00003	0.00003
CR	0.00027	-0.58	223.857	0.00078	-0.00039	0.00042
CU	-0.00087	-40.85	93.097	-0.00135	-0.00132	0.00006
FE	0.00239	0.36	380.002	-0.00166	0.01279	-0.00396
K	-0.10405	-37.24	14.472	-0.08677	-0.11106	-0.11433
LI	0.00145	43.56	140.603	-0.00039	0.00363	0.00110
MG	0.00107	-2.18	160.290	0.00306	0.00002	0.00014
MN	0.00008	15.95	25.678	0.00006	0.00007	0.00010
MO	0.00031	1.90	63.412	0.00038	0.00009	0.00046
NA	-0.01694	-30.51	48.679	-0.02454	-0.01810	-0.00817
NI	-0.00015	11.62	62.159	-0.00005	-0.00017	-0.00023
P	0.00158	0.32	11.346	0.00144	0.00178	0.00152
PB	-0.00005	2.95	3776.519	-0.00128	-0.00085	0.00199
S	-0.00177	-4.93	122.470	-0.00348	0.00067	-0.00252
SB	0.00200	2.86	59.950	0.00118	0.00338	0.00144
SE	0.00157	0.47	48.942	0.00191	0.00211	0.00069
SI	0.01303	4.16	20.296	0.01562	0.01034	0.01314
SN	-0.00062	2.41	36.053	-0.00038	-0.00064	-0.00082
SR	-0.00024	-160.05	6.396	-0.00024	-0.00025	-0.00022
TI	0.00015	26.22	79.761	0.00028	0.00004	0.00014
TL	-0.00047	-5.80	263.544	0.00034	-0.00189	0.00014
V	-0.00097	-18.28	29.232	-0.00114	-0.00111	-0.00064
Y1	21843.39340	21,843.39	0.348	21758.50313	21905.04263	21866.63445
Y2A	290626.21493	290,626.21	0.928	289208.16766	293737.24321	288933.23393
Y2R	19000.81196	19,000.81	0.305	19059.52975	18999.15237	18943.75374
ZN	-0.00021	14.45	25.743	-0.00015	-0.00025	-0.00024
ZR	0.00156	4.96	94.437	0.00320	0.00036	0.00112

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/12/2013 21:09

Sample Number: **7265885** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00462	37.03	2.230	0.00474	0.00459	0.00454
AL	195.47995	20,061.42	0.524	195.89704	196.22978	194.31303
AS	0.07897	10.11	2.662	0.07927	0.08091	0.07674
B	0.00843	1,878.54	41.006	0.00696	0.00596	0.01238
BA	2.87260	1,803,231.92	0.522	2.86592	2.86209	2.88978
BE	0.00318	1,001.03	0.554	0.00317	0.00320	0.00317
CA	205.10333	191,980.20	0.742	205.94145	206.02091	203.34764
CD	-0.00164	619.19	53.642	-0.00072	-0.00172	-0.00247
CO	0.23687	1,384.08	3.037	0.24388	0.23723	0.22950
CR	0.41819	4,291.38	0.859	0.41965	0.41410	0.42083
CU	0.39618	4,531.31	1.034	0.39545	0.39249	0.40059
FE	334.74699	82,015.35	0.852	336.14597	336.62894	331.46605
K	13.14177	4,426.81	0.774	13.24043	13.14753	13.03733
LI	0.21618	1,390.82	1.106	0.21861	0.21610	0.21383
MG	71.86723	117,757.31	0.531	72.22122	71.91710	71.46338
MN	17.78668	1,102,544.08	1.346	17.91333	17.51063	17.93609
MO	0.00183	9.06	15.961	0.00215	0.00158	0.00176
NA	4.23397	4,209.06	1.015	4.27740	4.23306	4.19144
NI	0.55063	2,140.47	2.783	0.56621	0.55010	0.53558
P	0.86405	472.65	2.820	0.88942	0.86190	0.84082
PB	0.15634	254.44	3.494	0.16067	0.15813	0.15020
S	0.74342	140.02	3.520	0.77310	0.73351	0.72367
SB	-0.01974	14.36	16.311	-0.02250	-0.01621	-0.02052
SE	0.00778	1.79	28.017	0.00890	0.00916	0.00526
SI	8.57711	1,574.21	0.623	8.63313	8.57144	8.52676
SN	0.02055	28.97	6.283	0.02204	0.01977	0.01985
SR	0.77855	568,770.79	2.487	0.78053	0.75828	0.79685
TI	3.76871	222,588.43	0.799	3.77825	3.73500	3.79288
TL	0.00656	-13.60	30.128	0.00517	0.00882	0.00569
V	0.66767	9,322.34	0.635	0.66919	0.66288	0.67093
Y1	23017.33464	23,017.33	1.968	22543.51402	23062.48419	23446.00573
Y2A	298375.96642	298,375.97	1.218	298327.12061	302034.21140	294766.56726
Y2R	20501.71238	20,501.71	0.267	20468.86228	20471.43784	20564.83703
ZN	0.43415	5,921.99	3.034	0.44755	0.43366	0.42122
ZR	0.07262	169.01	4.193	0.07557	0.07279	0.06949

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/12/2013 21:13

Sample Number: **7266809** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00228	-0.90	9.219	0.00230	0.00205	0.00247
AL	3.82652	389.73	1.453	3.88916	3.80736	3.78304
AS	0.00857	0.26	7.933	0.00935	0.00810	0.00825
B	0.04001	375.96	2.567	0.04012	0.04097	0.03893
BA	0.06797	43,195.09	2.028	0.06801	0.06932	0.06657
BE	-0.00015	-445.12	2.064	-0.00014	-0.00015	-0.00014
CA	39.00267	37,212.40	1.742	39.73793	38.87171	38.39836
CD	0.00136	38.87	4.855	0.00144	0.00134	0.00131
CO	0.00215	20.09	11.387	0.00203	0.00200	0.00244
CR	0.01228	124.41	3.685	0.01176	0.01249	0.01258
CU	0.04130	473.51	2.895	0.04128	0.04250	0.04011
FE	9.00121	2,524.67	1.877	9.18504	8.96581	8.85278
K	0.40442	130.62	3.938	0.41996	0.38814	0.40516
LI	0.00314	80.11	50.842	0.00201	0.00244	0.00496
MG	5.17371	8,718.47	1.440	5.25454	5.15871	5.10786
MN	0.57563	36,109.97	2.238	0.57624	0.58820	0.56246
MO	0.00126	6.86	18.949	0.00146	0.00099	0.00133
NA	0.66728	646.67	1.616	0.65953	0.67960	0.66271
NI	0.01425	72.30	4.044	0.01464	0.01453	0.01359
P	1.11741	649.73	3.112	1.15219	1.11739	1.08265
PB	0.18302	266.28	3.907	0.19031	0.18273	0.17602
S	7.87797	1,663.86	3.073	8.11287	7.89175	7.62930
SB	0.00156	3.62	167.292	0.00394	0.00195	-0.00122
SE	0.00324	1.13	59.648	0.00388	0.00478	0.00107
SI	2.22541	407.93	2.125	2.26256	2.24148	2.17218
SN	0.01942	29.35	6.452	0.01973	0.02050	0.01805
SR	0.10739	79,388.41	2.068	0.10739	0.10961	0.10517
TI	0.20843	12,471.05	1.990	0.20816	0.21270	0.20442
TL	0.00270	-4.88	10.175	0.00299	0.00267	0.00244
V	0.02752	383.21	1.954	0.02765	0.02799	0.02693
Y1	24516.04045	24,516.04	2.175	24028.89865	24433.66735	25085.55533
Y2A	301900.75021	301,900.75	1.544	301258.61498	297592.36249	306851.27315
Y2R	20400.04033	20,400.04	0.638	20271.37732	20397.05000	20531.69366
ZN	0.15306	2,066.06	3.086	0.15756	0.15347	0.14814
ZR	0.00423	11.43	27.333	0.00523	0.00450	0.00297

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/12/2013 21:17

Sample Number: **7266812** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00194	-4.63	36.183	0.00113	0.00238	0.00231
AL	40.55876	4,117.50	1.507	41.26190	40.15481	40.25957
AS	0.02675	2.53	10.990	0.02744	0.02353	0.02929
B	0.00183	551.34	86.658	0.00008	0.00317	0.00223
BA	0.38633	245,728.93	0.991	0.38972	0.38710	0.38218
BE	0.00167	350.63	0.321	0.00167	0.00167	0.00166
CA	11.16947	10,740.06	1.326	11.33890	11.06473	11.10478
CD	0.00312	235.31	4.768	0.00296	0.00325	0.00315
CO	0.01410	111.86	3.799	0.01348	0.01443	0.01438
CR	0.06474	655.95	1.841	0.06558	0.06527	0.06338
CU	0.12418	1,323.96	1.098	0.12548	0.12431	0.12276
FE	97.10724	26,242.56	1.613	98.91223	96.10207	96.30743
K	2.30625	767.93	2.006	2.31088	2.35003	2.25785
LI	0.03035	216.54	7.544	0.02946	0.03296	0.02865
MG	5.75546	9,684.67	1.353	5.84539	5.70870	5.71230
MN	0.52874	33,219.49	0.720	0.53216	0.52943	0.52464
MO	0.00211	10.29	3.796	0.00220	0.00207	0.00206
NA	1.28276	1,256.27	0.696	1.29255	1.28069	1.27505
NI	0.04237	166.83	0.350	0.04220	0.04247	0.04244
P	2.76771	1,499.99	0.527	2.75172	2.77114	2.78026
PB	4.25680	5,689.68	0.516	4.23340	4.26002	4.27698
S	3.40605	666.31	0.412	3.39069	3.40923	3.41822
SB	-0.00408	5.69	3.748	-0.00404	-0.00425	-0.00395
SE	0.00561	1.73	28.349	0.00496	0.00742	0.00444
SI	4.64014	847.34	1.333	4.67639	4.67530	4.56873
SN	0.03725	49.43	1.461	0.03664	0.03769	0.03741
SR	0.06251	46,287.35	1.040	0.06301	0.06276	0.06178
TI	2.24839	134,546.53	0.990	2.26911	2.25119	2.22486
TL	0.00261	-10.70	31.681	0.00287	0.00328	0.00169
V	0.14424	2,045.59	1.215	0.14620	0.14371	0.14281
Y1	22827.92993	22,827.93	0.280	22884.18038	22841.14670	22758.46272
Y2A	302299.44243	302,299.44	0.877	299811.54738	301999.17164	305087.60826
Y2R	20375.81901	20,375.82	1.034	20136.27070	20532.65316	20458.53317
ZN	0.65673	8,275.79	0.495	0.65370	0.65632	0.66017
ZR	0.01109	27.15	17.266	0.00944	0.01064	0.01319

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/12/2013 21:21

Sample Number: **7266813** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00266	4.60	13.016	0.00246	0.00247	0.00306
AL	32.26242	3,334.85	1.694	31.74178	32.83182	32.21367
AS	0.29108	119.64	4.427	0.30328	0.29236	0.27760
B	0.05252	609.06	1.398	0.05331	0.05187	0.05237
BA	0.71014	457,310.57	1.131	0.71885	0.70851	0.70304
BE	0.00064	-100.46	8.066	0.00070	0.00062	0.00061
CA	4.73109	4,683.49	1.370	4.66819	4.79766	4.72741
CD	0.00300	112.25	14.442	0.00345	0.00296	0.00258
CO	0.00649	76.65	7.334	0.00699	0.00644	0.00605
CR	0.05004	526.38	0.755	0.05041	0.04966	0.05005
CU	0.21738	2,492.35	0.791	0.21933	0.21610	0.21670
FE	31.73203	8,970.97	1.732	31.20792	32.30421	31.68395
K	2.56742	871.17	1.913	2.51552	2.57355	2.61317
LI	0.02468	183.93	6.815	0.02348	0.02396	0.02660
MG	2.52314	4,328.47	1.174	2.49203	2.55102	2.52637
MN	0.13312	8,477.50	0.524	0.13392	0.13282	0.13263
MO	0.00362	18.06	4.954	0.00378	0.00365	0.00343
NA	0.67609	666.57	2.635	0.65727	0.69270	0.67830
NI	0.02715	120.44	6.003	0.02860	0.02746	0.02539
P	2.08522	1,183.57	4.618	2.17228	2.10159	1.98178
PB	8.15984	11,411.14	4.520	8.50040	8.21109	7.76803
S	10.22893	2,108.25	4.606	10.65476	10.30925	9.72277
SB	0.01872	19.32	7.478	0.02027	0.01833	0.01755
SE	0.00661	2.21	7.122	0.00678	0.00607	0.00696
SI	5.90052	1,096.66	1.941	5.82597	6.03241	5.84318
SN	0.03784	52.50	6.216	0.03997	0.03823	0.03531
SR	0.06272	47,025.21	0.555	0.06313	0.06249	0.06255
TI	2.53163	153,391.96	0.753	2.55364	2.52064	2.52060
TL	0.00509	-8.25	30.707	0.00481	0.00369	0.00678
V	0.08641	1,241.19	1.346	0.08760	0.08634	0.08527
Y1	23928.05965	23,928.06	3.408	23219.17028	23745.93217	24819.07649
Y2A	306082.78109	306,082.78	0.872	303091.61696	308221.58714	306935.13917
Y2R	20751.33465	20,751.33	1.177	20952.86599	20479.72366	20821.41430
ZN	0.38596	5,067.38	4.805	0.40291	0.38881	0.36615
ZR	0.00743	19.08	11.720	0.00738	0.00832	0.00658

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/12/2013 21:25

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00149	-11.68	36.483	0.00210	0.00106	0.00131
AL	66.14611	8,127.21	4.292	66.10703	69.00436	63.32695
AS	0.11272	32.03	4.699	0.11692	0.11448	0.10677
B	-0.05131	1,909.51	9.252	-0.05105	-0.05618	-0.04670
BA	0.68360	558,305.13	3.242	0.65855	0.69164	0.70062
BE	0.00375	1,631.09	3.738	0.00376	0.00389	0.00361
CA	9.89189	11,517.25	4.212	9.89378	10.30761	9.47430
CD	-0.00696	761.99	39.936	-0.00497	-0.01014	-0.00577
CO	0.02323	227.86	6.080	0.02480	0.02207	0.02283
CR	0.07418	870.05	5.186	0.07360	0.07829	0.07066
CU	0.24967	3,611.61	5.288	0.25014	0.26263	0.23623
FE	346.46752	101,451.39	5.090	345.68635	364.47981	329.23640
K	2.57047	1,035.56	6.173	2.55278	2.73726	2.42138
LI	0.05419	423.29	7.561	0.05258	0.05884	0.05113
MG	7.84215	15,944.75	4.800	7.79948	8.23805	7.48891
MN	1.13653	91,591.32	5.210	1.13460	1.19668	1.07830
MO	0.00773	50.29	5.955	0.00825	0.00756	0.00738
NA	0.92120	1,085.54	5.502	0.91048	0.97638	0.87672
NI	0.04887	226.41	4.402	0.05134	0.04738	0.04790
P	4.02545	3,031.65	4.435	4.23103	3.90915	3.93619
PB	0.25526	482.34	4.126	0.26741	0.24872	0.24965
S	3.28743	889.54	4.688	3.46517	3.19129	3.20583
SB	-0.02064	13.77	3.323	-0.02142	-0.02012	-0.02039
SE	0.00592	2.36	67.272	0.01039	0.00458	0.00277
SI	5.29932	1,169.95	4.960	5.25226	5.58252	5.06317
SN	0.02421	46.23	3.850	0.02527	0.02353	0.02383
SR	0.07861	74,669.18	5.480	0.07870	0.08287	0.07426
TI	2.34322	179,906.25	5.044	2.34350	2.46126	2.22489
TL	0.00653	-10.67	5.988	0.00612	0.00659	0.00689
V	0.15122	2,785.90	5.086	0.15117	0.15894	0.14356
Y1	31737.38403	31,737.38	2.327	30894.66831	32270.88220	32046.60159
Y2A	388219.45769	388,219.46	3.234	394167.96358	373797.77704	396692.63245
Y2R	24656.30678	24,656.31	2.041	24565.73705	24204.45253	25198.73076
ZN	1.07520	19,156.19	4.589	1.13165	1.04033	1.05362
ZR	0.02475	70.63	8.658	0.02273	0.02700	0.02451

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/12/2013 21:30

Sample Number: **7265239** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00731	72.27	2.958	0.00722	0.00715	0.00756
AL	47.68354	5,156.98	2.841	46.21619	47.94796	48.88647
AS	0.05872	19.66	8.875	0.06442	0.05420	0.05754
B	0.01910	599.44	18.753	0.02319	0.01762	0.01650
BA	0.18486	125,581.33	3.133	0.19111	0.18378	0.17968
BE	0.00367	1,315.92	2.703	0.00376	0.00367	0.00357
CA	27.64675	28,130.24	2.540	26.86791	27.84080	28.23153
CD	0.00399	235.77	20.376	0.00490	0.00371	0.00334
CO	0.02290	179.33	5.931	0.02435	0.02269	0.02166
CR	0.63951	7,249.62	2.710	0.65766	0.63774	0.62313
CU	0.23811	2,958.63	2.824	0.24555	0.23630	0.23247
FE	73.54327	21,377.69	2.797	71.23783	74.20058	75.19140
K	1.66150	587.77	2.364	1.65431	1.62631	1.70388
LI	0.03894	292.92	7.044	0.04087	0.03580	0.04016
MG	8.29411	14,849.04	2.813	8.03740	8.35158	8.49335
MN	0.17330	11,635.52	2.855	0.17849	0.17276	0.16864
MO	0.00793	42.74	10.604	0.00887	0.00766	0.00725
NA	1.62242	1,696.86	2.999	1.56624	1.65031	1.65072
NI	0.04474	206.24	5.056	0.04726	0.04407	0.04289
P	2.36766	1,479.93	5.784	2.52244	2.31833	2.26220
PB	2.92397	4,513.96	5.613	3.10909	2.86659	2.79623
S	44.32233	10,078.99	5.844	47.25296	43.37471	42.33932
SB	-0.01094	6.80	11.760	-0.01204	-0.00953	-0.01124
SE	0.00348	1.10	32.118	0.00240	0.00340	0.00463
SI	5.45964	1,061.48	3.545	5.23618	5.57146	5.57128
SN	0.04210	63.92	6.601	0.04529	0.04081	0.04021
SR	0.09089	71,856.87	3.064	0.09386	0.09047	0.08833
TI	1.77758	113,606.00	3.034	1.83573	1.76781	1.72919
TL	0.00359	-9.88	37.438	0.00363	0.00492	0.00223
V	0.11307	1,710.39	3.493	0.11732	0.11236	0.10952
Y1	26358.54852	26,358.55	3.614	25280.76846	26706.82500	27088.05210
Y2A	322933.68127	322,933.68	1.992	315935.62625	324272.00000	328593.41755
Y2R	21706.42970	21,706.43	1.266	21979.17499	21710.53418	21429.57992
ZN	1.01379	14,602.11	5.648	1.07872	0.99213	0.97051
ZR	0.01982	50.17	12.586	0.01738	0.02236	0.01971

LANCASTER LABORATORIES

Run Name: 1331606T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/12/2013 21:34

Sample Number: **7265246** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00189	-4.04	10.087	0.00189	0.00169	0.00207
AL	37.96403	3,957.36	1.170	38.13516	37.45978	38.29714
AS	0.02740	-3.21	3.719	0.02823	0.02626	0.02770
B	-0.01855	972.51	15.602	-0.01873	-0.01557	-0.02135
BA	0.31208	207,132.72	2.304	0.31736	0.31498	0.30389
BE	0.00278	876.52	1.605	0.00281	0.00273	0.00279
CA	13.95674	13,755.04	1.003	14.00211	13.79963	14.06849
CD	0.00068	411.65	83.637	0.00105	0.00098	0.00002
CO	0.03306	235.46	2.807	0.03389	0.03323	0.03206
CR	0.10676	1,119.13	1.951	0.10736	0.10848	0.10445
CU	0.11097	1,172.27	2.885	0.11257	0.11306	0.10729
FE	196.66366	52,309.96	1.244	197.70706	193.86798	198.41594
K	2.48949	851.55	0.679	2.50205	2.49617	2.47026
LI	0.04334	299.22	3.909	0.04499	0.04344	0.04160
MG	11.99719	20,670.18	0.985	12.04285	11.86295	12.08578
MN	3.00625	197,028.51	2.047	3.05624	3.02498	2.93754
MO	0.00280	14.38	7.745	0.00283	0.00258	0.00301
NA	1.26024	1,267.06	0.674	1.26377	1.26639	1.25055
NI	0.03413	130.85	2.196	0.03500	0.03374	0.03366
P	3.31835	1,914.10	2.551	3.39694	3.32939	3.22872
PB	0.12789	187.13	3.456	0.13236	0.12779	0.12352
S	1.61792	332.56	2.183	1.65218	1.61997	1.58162
SB	-0.01331	6.22	16.126	-0.01148	-0.01567	-0.01278
SE	0.00288	0.83	52.127	0.00423	0.00126	0.00314
SI	3.54035	664.37	0.254	3.53479	3.55071	3.53555
SN	0.02162	32.00	3.430	0.02225	0.02182	0.02080
SR	0.05252	40,577.96	2.399	0.05349	0.05297	0.05110
TI	2.53184	158,097.22	1.937	2.56698	2.55272	2.47581
TL	0.00436	-8.55	19.966	0.00353	0.00526	0.00429
V	0.14201	2,114.72	1.627	0.14385	0.14277	0.13942
Y1	24302.90312	24,302.90	1.633	23930.42291	24257.75971	24720.52674
Y2A	315483.19758	315,483.20	1.283	312911.55896	313389.86711	320148.16667
Y2R	20921.70840	20,921.71	0.679	20796.89370	21076.33893	20891.89257
ZN	0.61261	8,368.26	2.511	0.62708	0.61430	0.59646
ZR	0.02535	61.37	2.573	0.02548	0.02464	0.02592

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 43

Date/Time: 11/12/2013 21:38

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00689	64.30	5.239	0.00648	0.00716	0.00702
AL	0.23017	23.86	15.728	0.27170	0.20528	0.21354
AS	0.02179	6.04	12.188	0.02279	0.01878	0.02379
B	0.05249	420.73	1.383	0.05269	0.05310	0.05169
BA	0.00575	3,621.68	0.963	0.00573	0.00581	0.00571
BE	0.00475	1,676.20	0.331	0.00476	0.00473	0.00475
CA	0.21737	277.82	2.248	0.22097	0.21933	0.21181
CD	0.00499	78.07	1.658	0.00507	0.00499	0.00491
CO	0.00529	32.95	2.440	0.00541	0.00515	0.00531
CR	0.01570	160.67	1.572	0.01542	0.01578	0.01589
CU	0.00969	85.05	2.611	0.00989	0.00977	0.00941
FE	0.22989	62.25	6.965	0.23940	0.23885	0.21140
K	0.42268	132.07	15.878	0.49978	0.39096	0.37731
LI	0.02247	159.99	6.241	0.02369	0.02278	0.02094
MG	0.10568	168.62	0.383	0.10521	0.10595	0.10587
MN	0.00581	369.73	0.894	0.00586	0.00582	0.00576
MO	0.01055	48.26	2.469	0.01057	0.01080	0.01028
NA	1.00884	952.63	3.180	1.02995	1.02465	0.97192
NI	0.01086	54.06	2.981	0.01123	0.01073	0.01062
P	0.10256	54.04	0.635	0.10303	0.10284	0.10182
PB	0.01743	25.91	6.683	0.01743	0.01626	0.01859
S	0.48974	90.05	1.613	0.49784	0.48932	0.48206
SB	0.02351	19.14	6.056	0.02493	0.02351	0.02208
SE	0.02058	7.02	0.194	0.02061	0.02059	0.02054
SI	0.13395	25.64	4.458	0.13682	0.13795	0.12709
SN	0.01947	26.87	1.963	0.01932	0.01991	0.01919
SR	0.00517	3,767.10	0.763	0.00514	0.00522	0.00516
TI	0.01112	671.12	1.758	0.01127	0.01119	0.01090
TL	0.03384	17.92	4.217	0.03452	0.03220	0.03480
V	0.00450	56.18	8.062	0.00413	0.00485	0.00451
Y1	22387.12947	22,387.13	0.657	22328.23494	22278.61044	22554.54303
Y2A	296488.18202	296,488.18	0.636	295532.05765	295270.95759	298661.53082
Y2R	19717.15835	19,717.16	0.959	19555.11988	19671.37016	19924.98501
ZN	0.02070	269.56	0.469	0.02073	0.02077	0.02059
ZR	0.05311	119.30	5.334	0.05526	0.05417	0.04990

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 44

Date/Time: 11/12/2013 21:42

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00150	-9.35	55.474	0.00077	0.00240	0.00131
AL	532.78783	49,850.47	0.566	530.30242	536.14555	531.91552
AS	-0.00716	-15.54	68.748	-0.00815	-0.00182	-0.01151
B	-0.02680	827.55	6.262	-0.02548	-0.02869	-0.02623
BA	0.00020	137.44	6.416	0.00020	0.00019	0.00022
BE	-0.00053	-517.65	11.566	-0.00060	-0.00047	-0.00052
CA	550.66371	443,031.31	0.161	550.60952	551.57543	549.80618
CD	0.00183	377.68	3.426	0.00190	0.00182	0.00178
CO	-0.00031	1.83	6.827	-0.00031	-0.00033	-0.00029
CR	0.00238	-39.27	32.449	0.00245	0.00311	0.00157
CU	0.00451	151.03	9.944	0.00401	0.00465	0.00487
FE	218.28457	50,857.89	0.864	217.03604	220.45524	217.36243
K	-0.17208	-56.94	34.557	-0.21568	-0.19620	-0.10434
LI	0.00011	339.96	1783.354	0.00053	0.00179	-0.00199
MG	608.39281	652,916.11	0.796	610.28323	612.00838	602.88681
MN	0.00376	208.65	0.583	0.00374	0.00376	0.00379
MO	-0.00129	-4.52	14.022	-0.00129	-0.00147	-0.00111
NA	-0.00435	-18.36	142.699	0.00024	-0.00188	-0.01142
NI	0.00300	-0.95	23.257	0.00222	0.00323	0.00356
P	0.01304	5.54	11.294	0.01344	0.01428	0.01141
PB	0.00268	125.39	24.989	0.00342	0.00213	0.00247
S	-0.14047	-28.42	2.214	-0.14290	-0.13697	-0.14156
SB	-0.00910	7.74	13.268	-0.00781	-0.01021	-0.00929
SE	-0.00076	-2.31	183.757	-0.00232	-0.00029	0.00034
SI	0.04061	8.60	14.351	0.04044	0.04653	0.03487
SN	0.00421	7.18	28.458	0.00470	0.00510	0.00285
SR	0.00195	1,221.30	0.843	0.00195	0.00196	0.00193
TI	-0.00387	-179.20	6.946	-0.00356	-0.00401	-0.00404
TL	-0.00091	-5.17	134.157	-0.00071	-0.00222	0.00020
V	-0.00530	-47.07	1.072	-0.00524	-0.00535	-0.00531
Y1	19265.08128	19,265.08	0.056	19275.06666	19253.63376	19266.54343
Y2A	254216.31978	254,216.32	0.316	254794.69041	254555.75899	253298.50993
Y2R	18499.86870	18,499.87	0.715	18581.28620	18347.21945	18571.10046
ZN	0.00688	333.07	4.437	0.00701	0.00653	0.00709
ZR	0.00579	13.62	15.271	0.00656	0.00482	0.00599

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/12/2013 21:46

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.22299	2,542.01	4.000	0.22986	0.21291	0.22619
AL	524.37239	49,914.31	1.058	519.01599	530.08922	524.01196
AS	0.09754	20.89	5.894	0.09586	0.09282	0.10394
B	-0.02781	824.98	27.103	-0.02157	-0.03618	-0.02568
BA	0.51516	284,106.59	3.951	0.53073	0.49213	0.52262
BE	0.51784	197,444.09	4.344	0.53439	0.49223	0.52690
CA	535.06898	439,039.92	0.441	532.87218	537.56354	534.77121
CD	0.96918	13,991.78	0.575	0.97560	0.96559	0.96637
CO	0.47092	2,226.25	0.516	0.47358	0.47038	0.46881
CR	0.49121	4,476.91	4.281	0.50619	0.46717	0.50027
CU	0.54986	5,975.57	4.221	0.56446	0.52309	0.56203
FE	214.37064	50,911.78	1.189	211.86623	216.96088	214.28482
K	-0.09963	-35.58	41.342	-0.10757	-0.05504	-0.13626
LI	-0.00016	335.74	1113.331	-0.00200	0.00165	-0.00014
MG	583.16612	648,169.49	0.810	577.71198	586.05324	585.73315
MN	0.49048	26,714.60	4.606	0.50596	0.46455	0.50092
MO	-0.00129	-4.56	32.110	-0.00162	-0.00142	-0.00083
NA	0.00290	-11.98	427.149	0.01306	-0.01092	0.00657
NI	0.94989	3,131.53	0.584	0.95627	0.94628	0.94711
P	0.01073	5.80	12.080	0.00962	0.01215	0.01041
PB	0.05344	181.02	6.358	0.05692	0.05327	0.05013
S	-0.14325	-29.00	2.909	-0.14508	-0.14618	-0.13848
SB	0.66947	449.97	1.268	0.67919	0.66347	0.66575
SE	0.05550	14.45	8.778	0.05317	0.05223	0.06110
SI	0.05317	10.87	16.624	0.04331	0.06038	0.05582
SN	0.00279	5.70	63.743	0.00473	0.00125	0.00239
SR	0.00190	1,225.40	5.850	0.00197	0.00177	0.00195
TI	-0.00378	-160.96	8.634	-0.00413	-0.00348	-0.00373
TL	0.09135	39.40	1.411	0.09247	0.09164	0.08994
V	0.49678	6,076.53	4.411	0.51228	0.47171	0.50634
Y1	19338.61780	19,338.62	0.431	19243.28826	19397.52017	19375.04497
Y2A	262386.96667	262,386.97	4.146	255062.41722	274886.26574	257212.21704
Y2R	18825.60129	18,825.60	0.715	18958.88977	18689.70500	18828.20909
ZN	1.08340	11,667.48	0.665	1.09165	1.07836	1.08019
ZR	0.00617	14.67	44.710	0.00598	0.00351	0.00901

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/12/2013 21:51

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51878	6,634.89	0.760	0.52176	0.51431	0.52027
AL	25.61680	2,527.45	0.424	25.70084	25.65554	25.49402
AS	0.50891	193.16	0.467	0.51129	0.50888	0.50654
B	0.50649	4,045.24	0.285	0.50791	0.50503	0.50653
BA	0.52285	319,095.53	0.642	0.52589	0.51925	0.52341
BE	0.50767	214,225.76	0.533	0.50957	0.50457	0.50886
CA	25.43543	23,607.16	0.211	25.49135	25.38450	25.43044
CD	0.51450	8,142.47	0.199	0.51563	0.51364	0.51422
CO	0.51209	2,713.06	0.266	0.51352	0.51081	0.51195
CR	0.50618	5,164.94	0.655	0.50900	0.50252	0.50700
CU	0.52173	6,100.23	0.676	0.52382	0.51766	0.52371
FE	25.30164	6,838.53	0.241	25.36996	25.25230	25.28267
K	25.48689	8,289.80	0.288	25.49786	25.55426	25.40854
LI	0.51209	2,855.93	0.753	0.51635	0.51110	0.50883
MG	25.02500	40,515.54	0.449	25.08325	25.09623	24.89551
MN	0.51211	30,872.50	0.501	0.51432	0.50929	0.51270
MO	0.51718	2,258.93	0.194	0.51827	0.51695	0.51631
NA	25.25718	24,307.63	0.454	25.30436	25.34062	25.12657
NI	0.51657	1,920.92	0.112	0.51714	0.51598	0.51660
P	0.52306	269.47	1.037	0.52927	0.51921	0.52071
PB	0.51859	663.30	0.345	0.51711	0.51808	0.52057
S	25.38453	4,740.02	0.383	25.48665	25.29285	25.37410
SB	0.53544	393.77	0.354	0.53763	0.53423	0.53448
SE	0.51347	170.58	0.690	0.51755	0.51115	0.51172
SI	25.88229	4,580.79	0.367	25.97898	25.87861	25.78926
SN	0.50240	592.73	0.097	0.50268	0.50184	0.50267
SR	0.51123	363,134.65	1.274	0.51862	0.50632	0.50876
TI	0.51755	29,773.80	0.430	0.51894	0.51499	0.51873
TL	0.51358	328.58	0.483	0.51444	0.51079	0.51553
V	0.51028	6,858.37	0.474	0.51210	0.50754	0.51120
Y1	21624.99784	21,625.00	0.263	21566.03346	21629.41823	21679.54182
Y2A	290058.56528	290,058.57	0.570	288998.34327	291964.87740	289212.47515
Y2R	19784.85080	19,784.85	0.124	19759.30267	19786.93465	19808.31507
ZN	0.51975	6,177.19	0.220	0.52091	0.51971	0.51862
ZR	0.50342	1,120.76	0.597	0.50607	0.50015	0.50403

LANCASTER LABORATORIES

Run Name: 1331606T72

Instrument ID: 16417

Tube: 47

Date/Time: 11/12/2013 21:55

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00106	-17.08	60.629	0.00105	0.00170	0.00042
AL	0.01363	2.53	49.171	0.00973	0.00978	0.02136
AS	0.00134	-2.12	54.552	0.00167	0.00050	0.00185
B	0.00043	8.50	104.480	0.00007	0.00093	0.00028
BA	0.00007	76.37	8.246	0.00007	0.00006	0.00008
BE	-0.00031	-499.82	16.771	-0.00025	-0.00036	-0.00031
CA	0.01589	89.20	25.685	0.01434	0.01281	0.02052
CD	-0.00008	-4.88	83.087	-0.00010	-0.00012	0.00000
CO	0.00002	3.92	1253.510	0.00025	-0.00007	-0.00013
CR	0.00004	-2.90	63.979	0.00002	0.00007	0.00004
CU	-0.00158	-49.40	46.577	-0.00138	-0.00239	-0.00096
FE	-0.00247	-0.92	318.842	0.00422	-0.00048	-0.01114
K	-0.07330	-27.95	15.063	-0.08566	-0.06440	-0.06985
LI	0.00173	45.49	125.781	0.00232	-0.00068	0.00354
MG	0.01025	12.41	7.675	0.01015	0.00952	0.01109
MN	0.00009	17.02	18.032	0.00008	0.00011	0.00009
MO	0.00016	1.26	49.378	0.00022	0.00007	0.00018
NA	-0.01521	-29.24	12.378	-0.01390	-0.01437	-0.01737
NI	0.00041	13.90	20.356	0.00034	0.00038	0.00050
P	0.00074	-0.12	140.536	0.00190	0.00046	-0.00013
PB	0.00132	4.75	163.271	0.00096	-0.00063	0.00363
S	-0.00235	-5.10	190.113	0.00029	-0.00751	0.00017
SB	0.00058	1.85	249.621	-0.00078	0.00211	0.00041
SE	0.00035	0.06	729.725	-0.00128	0.00326	-0.00094
SI	0.01527	4.59	3.140	0.01484	0.01519	0.01579
SN	-0.00068	2.36	56.166	-0.00107	-0.00031	-0.00067
SR	-0.00020	-130.25	9.187	-0.00021	-0.00020	-0.00018
TI	0.00008	22.17	65.290	0.00012	0.00002	0.00009
TL	-0.00003	-5.57	5248.145	-0.00107	0.00189	-0.00091
V	-0.00092	-17.72	38.678	-0.00098	-0.00124	-0.00054
Y1	22138.52035	22,138.52	0.409	22042.99707	22223.06692	22149.49707
Y2A	292468.21847	292,468.22	2.478	296402.00464	284105.94765	296896.70311
Y2R	19230.22145	19,230.22	1.340	19080.31088	19527.69461	19082.65887
ZN	-0.00029	13.75	26.620	-0.00020	-0.00032	-0.00034
ZR	0.00021	2.13	502.765	-0.00013	0.00142	-0.00065

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ICP-AES Run Data Report

1331705T72

Reviewed By
Katlin N Cataldi

Reviewed Date
11/13/2013 7:35PM

Data File Name 1331705T72.TXT
Run Name: 1331705T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 10:54AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 3282

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/13/2013 15:37

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00154	54.027	-0.00166	-0.00231	-0.00066
AL	0.000	0.01516	32.751	0.01695	0.01898	0.00955
AS	0.000	-0.00918	13.387	-0.00810	-0.00893	-0.01052
B	0.000	0.00002	60.023	0.00002	0.00001	0.00003
BA	0.000	0.00018	34.648	0.00013	0.00015	0.00025
BE	0.000	-0.11021	0.252	-0.11046	-0.10991	-0.11026
CA	0.000	0.00475	0.465	0.00478	0.00475	0.00473
CD	0.000	-0.01372	28.224	-0.01682	-0.00938	-0.01495
CO	0.000	0.00672	44.243	0.00366	0.00692	0.00960
CR	0.000	0.00001	123.630	0.00000	0.00001	0.00002
CU	0.000	-0.00714	3.051	-0.00738	-0.00696	-0.00708
FE	0.000	-0.00007	88.639	-0.00011	-0.00009	0.00000
K	0.000	-0.06997	34.064	-0.04740	-0.09490	-0.06761
LI	0.000	0.00283	35.737	0.00297	0.00176	0.00377
MG	0.000	0.00008	189.438	0.00020	0.00012	-0.00009
MN	0.000	0.00301	30.520	0.00406	0.00263	0.00235
MO	0.000	0.00501	19.753	0.00545	0.00388	0.00571
NA	0.000	-0.00117	48.379	-0.00099	-0.00072	-0.00180
NI	0.000	0.02972	11.465	0.02873	0.02692	0.03351
P	0.000	-0.00003	70.875	-0.00002	-0.00005	-0.00001
PB	0.000	0.00418	86.172	0.00609	0.00641	0.00002
S	0.000	-0.00030	14.231	-0.00029	-0.00026	-0.00035
SB	0.000	0.00010	42.522	0.00007	0.00014	0.00008
SE	0.000	0.00079	169.897	0.00220	-0.00046	0.00063
SI	0.000	0.00018	44.838	0.00014	0.00012	0.00027
SN	0.000	0.00573	18.856	0.00468	0.00567	0.00684
SR	0.000	-0.00053	2.177	-0.00054	-0.00051	-0.00053
TI	0.000	0.00453	24.702	0.00537	0.00326	0.00495
TL	0.000	-0.01594	6.727	-0.01470	-0.01651	-0.01660
V	0.000	-0.00388	3.764	-0.00403	-0.00387	-0.00374
Y1	0.000	22367.92041	0.148	22401.44826	22335.07194	22367.24103
Y2A	0.000	296191.18622	0.636	294048.21074	297586.81246	296938.53545
Y2R	0.000	19027.67279	0.797	18865.63249	19166.20989	19051.17600
ZN	0.000	0.05810	4.447	0.05716	0.06102	0.05612
ZR	0.000	0.00007	98.764	0.00004	0.00002	0.00015

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/13/2013 15:41

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.41757	0.454	13.44774	13.34742	13.45754
CA	50.000	2.55599	0.620	2.56393	2.53775	2.56629
FE	50.000	0.73081	0.840	0.73478	0.72374	0.73391
K	50.000	45.58647	0.546	45.66247	45.30844	45.78850
MG	50.000	4.36533	0.768	4.37134	4.32919	4.39546
NA	50.000	2.68837	0.585	2.68893	2.67238	2.70381
S	50.000	0.46434	0.185	0.46532	0.46395	0.46374
SI	50.000	0.47057	0.610	0.47100	0.46750	0.47319
Y1	50.000	21150.71352	0.139	21169.22129	21166.23260	21116.68666
Y2R	50.000	18794.59796	0.735	18640.84366	18908.14394	18834.80627

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 3 Date/Time: 11/13/2013 15:45

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.44161	1.024	2.46888	2.43615	2.41979
AS	1.000	0.93675	0.372	0.93807	0.93280	0.93938
B	1.000	0.03029	0.647	0.03052	0.03021	0.03016
BA	1.000	2.34483	0.459	2.35720	2.33755	2.33973
BE	1.000	77.58592	0.734	78.13679	77.62145	76.99951
CD	1.000	38.16305	0.271	38.28195	38.09220	38.11499
CO	1.000	12.77486	0.105	12.79041	12.76702	12.76717
CU	1.000	2.36382	1.105	2.38917	2.36531	2.33699
LI	1.000	0.31234	0.379	0.31318	0.31286	0.31099
MN	1.000	11.13945	0.812	11.22077	11.15562	11.04195
NI	1.000	9.08510	0.224	9.10800	9.07829	9.06902
P	1.000	0.02572	0.267	0.02580	0.02571	0.02566
PB	1.000	3.14440	0.269	3.15211	3.13536	3.14574
SE	1.000	0.82875	0.220	0.82831	0.83075	0.82719
SR	1.000	2.69513	0.659	2.71221	2.69642	2.67676
TL	1.000	1.71211	0.353	1.71565	1.71554	1.70514
Y1	1.000	21494.49471	0.227	21438.50510	21516.51560	21528.46343
Y2A	1.000	282333.49901	0.938	279519.21803	282705.93108	284775.34791
Y2R	1.000	18826.63408	0.517	18734.83410	18816.42886	18928.63927
ZN	1.000	29.29896	0.125	29.31223	29.32706	29.25760

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 4 Date/Time: 11/13/2013 15:50

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03867	0.713	0.03839	0.03894	0.03868
MO	1.000	10.61339	0.127	10.59970	10.61387	10.62661
SB	1.000	0.03821	0.270	0.03830	0.03809	0.03822
SN	1.000	2.88841	0.316	2.89355	2.87788	2.89380
TI	1.000	10.92242	0.730	10.83989	10.92828	10.99907
V	1.000	2.50327	0.672	2.49441	2.49274	2.52266
Y1	1.000	22270.52005	0.147	22285.78232	22292.78769	22232.99014
Y2A	1.000	292843.99161	0.644	295011.43141	291937.54142	291583.00199
Y2R	1.000	19044.36850	0.592	19170.87567	18954.47962	19007.75020
ZR	1.000	0.12061	0.489	0.12009	0.12125	0.12049

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/13/2013 15:54

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60551	8,402.79	0.689	0.60073	0.60839	0.60741
AL	30.18333	3,073.98	0.184	30.16207	30.24647	30.14145
AS	0.59938	237.68	0.360	0.59921	0.59732	0.60162
B	0.58012	5,137.33	0.636	0.57622	0.58057	0.58356
BA	0.60215	398,737.01	1.042	0.59496	0.60651	0.60497
BE	0.58594	256,650.78	0.455	0.58377	0.58515	0.58891
CA	29.74065	28,926.24	0.478	29.62197	29.89809	29.70188
CD	0.59664	9,791.37	0.166	0.59562	0.59671	0.59760
CO	0.59549	3,262.67	0.292	0.59351	0.59624	0.59673
CR	0.57829	6,303.23	0.582	0.57546	0.57740	0.58202
CU	0.60077	7,963.66	0.488	0.59799	0.60048	0.60384
FE	29.66699	8,285.74	0.555	29.56919	29.85692	29.57485
K	29.75165	10,281.35	0.514	29.65010	29.92739	29.67747
LI	0.59656	3,571.72	0.955	0.60260	0.59581	0.59128
MG	29.28315	48,958.05	0.419	29.16713	29.41169	29.27063
MN	0.59354	37,348.57	0.532	0.59001	0.59451	0.59610
MO	0.60643	2,753.06	0.115	0.60566	0.60660	0.60702
NA	29.48466	30,034.24	0.172	29.43265	29.53424	29.48710
NI	0.59726	2,323.77	0.176	0.59848	0.59665	0.59666
P	0.60817	334.19	0.326	0.60875	0.60979	0.60596
PB	0.59927	813.13	0.188	0.60026	0.59952	0.59804
S	29.60809	5,876.05	0.100	29.60203	29.58193	29.64033
SB	0.61571	505.44	0.426	0.61449	0.61392	0.61872
SE	0.60160	213.02	0.246	0.60014	0.60158	0.60310
SI	30.74661	5,485.80	0.233	30.69585	30.82857	30.71542
SN	0.58848	727.85	0.365	0.58926	0.58605	0.59013
SR	0.59272	451,111.90	0.835	0.59334	0.58749	0.59733
TI	0.59558	36,796.24	0.538	0.59297	0.59463	0.59915
TL	0.59038	411.10	0.748	0.59362	0.58535	0.59217
V	0.59386	8,398.20	0.729	0.58896	0.59715	0.59549
Y1	21380.49430	21,380.49	0.208	21429.06923	21341.55896	21370.85471
Y2A	282391.40159	282,391.40	0.341	282519.96355	283284.79125	281369.44997
Y2R	18951.08302	18,951.08	0.261	18997.75225	18899.19194	18956.30487
ZN	0.60319	7,606.32	0.173	0.60263	0.60254	0.60439
ZR	0.60001	1,371.96	0.446	0.59834	0.60309	0.59859

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/13/2013 15:58

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00203	-6.13	12.950	0.00215	0.00221	0.00173
AL	0.00912	6.80	564.065	0.04925	0.02699	-0.04888
AS	-0.00219	-3.78	98.157	-0.00464	-0.00134	-0.00060
B	0.00052	9.98	117.653	0.00123	0.00014	0.00020
BA	0.00008	108.48	9.019	0.00007	0.00008	0.00009
BE	-0.00080	-615.42	4.132	-0.00076	-0.00083	-0.00082
CA	0.00055	92.36	321.296	0.00244	0.00028	-0.00107
CD	-0.00012	-5.90	73.808	-0.00018	-0.00002	-0.00016
CO	0.00022	4.22	132.768	0.00031	0.00045	-0.00011
CR	0.00020	-3.50	103.579	0.00017	0.00041	0.00001
CU	-0.00178	-51.40	12.693	-0.00160	-0.00204	-0.00171
FE	0.00387	1.08	196.563	0.00837	0.00815	-0.00491
K	-0.03381	-11.20	121.319	-0.05868	0.01353	-0.05628
LI	-0.00127	47.09	84.373	-0.00011	-0.00222	-0.00149
MG	0.01345	24.75	2.134	0.01374	0.01343	0.01317
MN	0.00006	21.83	60.136	0.00007	0.00002	0.00010
MO	0.00007	2.56	225.338	0.00019	-0.00011	0.00013
NA	-0.00516	-27.95	164.185	-0.00646	-0.01292	0.00389
NI	0.00007	13.45	356.445	-0.00015	0.00002	0.00034
P	-0.00017	-0.77	423.027	-0.00026	0.00058	-0.00081
PB	0.00129	3.65	59.088	0.00164	0.00180	0.00041
S	-0.00687	-6.08	69.311	-0.00442	-0.00383	-0.01236
SB	0.00141	3.34	88.226	0.00020	0.00268	0.00135
SE	0.00276	0.92	53.393	0.00236	0.00440	0.00153
SI	0.01226	5.68	56.697	0.00600	0.01974	0.01105
SN	0.00013	2.71	502.029	0.00073	-0.00057	0.00023
SR	-0.00015	-93.03	2.898	-0.00015	-0.00014	-0.00015
TI	-0.00005	23.38	114.716	-0.00008	-0.00010	0.00002
TL	-0.00205	-7.24	44.975	-0.00162	-0.00142	-0.00311
V	-0.00125	-19.50	30.265	-0.00146	-0.00148	-0.00081
Y1	22164.82656	22,164.83	0.215	22219.71282	22141.22702	22133.53983
Y2A	294695.35564	294,695.36	1.423	298891.73294	294691.10338	290503.23062
Y2R	19316.18494	19,316.18	0.654	19449.26705	19197.82305	19301.46471
ZN	-0.00063	17.63	14.364	-0.00053	-0.00071	-0.00065
ZR	0.00050	2.48	195.139	0.00024	0.00156	-0.00031

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/13/2013 16:02

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00681	68.82	6.322	0.00659	0.00730	0.00653
AL	0.19003	25.08	25.661	0.13378	0.22036	0.21595
AS	0.01755	4.48	18.935	0.02005	0.01882	0.01378
B	0.04992	453.87	1.380	0.05071	0.04946	0.04958
BA	0.00550	3,864.07	0.887	0.00549	0.00555	0.00545
BE	0.00402	1,596.80	1.026	0.00398	0.00406	0.00403
CA	0.21235	296.80	2.486	0.21279	0.21740	0.20687
CD	0.00501	81.71	2.246	0.00494	0.00514	0.00495
CO	0.00537	33.69	1.318	0.00529	0.00540	0.00542
CR	0.01529	169.12	2.018	0.01555	0.01495	0.01537
CU	0.00991	111.30	3.413	0.01025	0.00991	0.00957
FE	0.21431	60.54	1.995	0.21924	0.21181	0.21186
K	0.46797	162.49	8.653	0.49182	0.42122	0.49087
LI	0.02026	172.72	22.755	0.01604	0.01956	0.02517
MG	0.10860	185.69	1.183	0.10825	0.11002	0.10752
MN	0.00536	370.88	0.683	0.00536	0.00540	0.00533
MO	0.01038	51.23	1.790	0.01019	0.01038	0.01056
NA	0.99821	995.49	0.551	1.00262	0.99997	0.99205
NI	0.01076	56.63	0.489	0.01071	0.01082	0.01076
P	0.10031	56.56	1.427	0.10030	0.09889	0.10175
PB	0.01720	25.94	7.850	0.01571	0.01834	0.01755
S	0.48022	94.60	0.472	0.48282	0.47915	0.47869
SB	0.02177	20.59	7.443	0.02005	0.02326	0.02201
SE	0.02021	7.36	1.349	0.02008	0.02003	0.02053
SI	0.10413	21.97	17.213	0.09280	0.12479	0.09478
SN	0.02079	29.23	2.322	0.02025	0.02095	0.02117
SR	0.00509	4,084.80	1.276	0.00509	0.00516	0.00503
TI	0.00995	670.23	0.829	0.00992	0.01005	0.00989
TL	0.03068	17.58	3.802	0.02952	0.03186	0.03065
V	0.00376	54.28	3.455	0.00362	0.00388	0.00376
Y1	22256.53873	22,256.54	0.089	22245.87553	22279.27991	22244.46074
Y2A	295765.43517	295,765.44	0.565	296062.12724	293964.38038	297269.79788
Y2R	18953.33360	18,953.33	0.641	18854.76951	18916.28417	19088.94711
ZN	0.02050	292.19	0.240	0.02055	0.02049	0.02046
ZR	0.05110	118.05	0.805	0.05128	0.05063	0.05139

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/13/2013 16:06

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00222	-2.27	10.226	0.00224	0.00244	0.00199
AL	506.65630	49,751.62	0.585	507.45508	509.13925	503.37457
AS	-0.00824	-16.04	31.391	-0.00577	-0.00802	-0.01092
B	-0.02724	851.57	5.022	-0.02579	-0.02743	-0.02851
BA	0.00017	142.40	8.378	0.00018	0.00015	0.00018
BE	-0.00111	-639.17	0.990	-0.00110	-0.00112	-0.00111
CA	513.28765	443,674.03	0.416	514.96935	514.01090	510.88271
CD	0.00502	417.60	4.157	0.00509	0.00479	0.00520
CO	-0.00045	0.33	48.781	-0.00068	-0.00024	-0.00043
CR	0.00316	-32.75	9.268	0.00323	0.00341	0.00284
CU	0.00284	149.97	16.614	0.00260	0.00255	0.00339
FE	205.18626	50,716.50	0.617	205.24973	206.41976	203.88930
K	-0.12175	-39.40	36.306	-0.16751	-0.07929	-0.11844
LI	-0.00226	348.26	62.962	-0.00383	-0.00105	-0.00190
MG	551.71377	649,134.48	1.829	552.48171	561.39678	541.26281
MN	0.00357	213.02	1.244	0.00360	0.00352	0.00359
MO	-0.00170	-5.00	37.236	-0.00132	-0.00136	-0.00244
NA	-0.00479	-25.76	71.040	-0.00324	-0.00869	-0.00244
NI	0.00341	1.86	10.293	0.00318	0.00324	0.00382
P	0.00979	4.23	13.589	0.00829	0.01085	0.01021
PB	0.00437	128.50	31.258	0.00376	0.00341	0.00593
S	-0.13422	-28.89	7.301	-0.14341	-0.13534	-0.12390
SB	-0.00843	8.83	6.814	-0.00831	-0.00792	-0.00905
SE	0.00030	-2.05	955.355	-0.00250	0.00314	0.00024
SI	0.03760	9.62	15.108	0.03556	0.03321	0.04401
SN	0.00356	6.12	16.259	0.00302	0.00350	0.00417
SR	0.00186	1,272.87	0.882	0.00188	0.00186	0.00185
TI	-0.00419	-205.00	2.713	-0.00424	-0.00427	-0.00406
TL	-0.00305	-6.68	83.478	-0.00265	-0.00073	-0.00576
V	-0.00559	-50.68	8.179	-0.00524	-0.00611	-0.00543
Y1	19126.32241	19,126.32	0.232	19078.14457	19165.78667	19135.03599
Y2A	249020.54654	249,020.55	0.693	247701.82119	248385.09934	250974.71910
Y2R	18056.72703	18,056.73	0.726	18051.37807	17928.47513	18190.32789
ZN	0.00841	362.28	6.170	0.00879	0.00782	0.00862
ZR	0.00682	16.10	26.405	0.00546	0.00613	0.00886

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/13/2013 16:11

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21830	2,666.12	0.967	0.21607	0.22028	0.21854
AL	496.72339	49,973.69	2.432	505.84289	483.02267	501.30461
AS	0.09290	20.86	7.277	0.08692	0.09155	0.10023
B	-0.02342	862.38	18.433	-0.02744	-0.01886	-0.02395
BA	0.50297	297,577.75	0.322	0.50117	0.50432	0.50341
BE	0.50786	198,714.90	0.746	0.50352	0.50954	0.51051
CA	498.20105	442,261.12	2.688	500.75527	483.71612	510.13175
CD	0.94552	14,179.48	0.101	0.94506	0.94662	0.94489
CO	0.45931	2,252.60	0.123	0.45983	0.45940	0.45870
CR	0.47604	4,584.41	0.576	0.47315	0.47637	0.47861
CU	0.52520	6,389.70	0.636	0.52161	0.52821	0.52577
FE	199.97765	50,771.22	2.378	203.59887	194.59261	201.74146
K	-0.10947	-36.09	40.666	-0.15796	-0.07045	-0.09999
LI	-0.00292	343.84	29.064	-0.00293	-0.00207	-0.00377
MG	530.53236	648,977.99	1.927	536.03323	518.73704	536.82680
MN	0.48291	27,151.23	0.809	0.47840	0.48501	0.48531
MO	-0.00148	-4.10	7.770	-0.00160	-0.00137	-0.00147
NA	0.00555	-16.10	43.293	0.00320	0.00801	0.00545
NI	0.91780	3,179.08	0.163	0.91876	0.91607	0.91856
P	0.00859	4.98	15.034	0.01003	0.00752	0.00824
PB	0.05276	184.45	5.901	0.05107	0.05635	0.05085
S	-0.14434	-30.77	9.021	-0.13306	-0.14135	-0.15859
SB	0.63022	474.61	1.086	0.63803	0.62741	0.62523
SE	0.06266	17.81	3.878	0.06235	0.06040	0.06524
SI	0.05346	12.61	11.036	0.05052	0.04960	0.06025
SN	0.00523	7.97	24.903	0.00592	0.00603	0.00372
SR	0.00182	1,262.49	0.661	0.00182	0.00181	0.00184
TI	-0.00410	-182.97	1.442	-0.00416	-0.00409	-0.00405
TL	0.08774	41.05	0.945	0.08678	0.08825	0.08818
V	0.48874	6,218.95	0.537	0.48579	0.49082	0.48959
Y1	19176.95143	19,176.95	0.285	19136.27673	19155.37964	19239.19792
Y2A	252302.93058	252,302.93	0.674	254251.66445	251119.53642	251537.59088
Y2R	18509.18204	18,509.18	1.572	18330.10265	18844.89215	18352.55133
ZN	1.05071	12,031.79	0.224	1.05153	1.05253	1.04805
ZR	0.00481	11.98	23.481	0.00511	0.00356	0.00576

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/13/2013 16:15

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50689	7,064.54	0.277	0.50543	0.50701	0.50823
AL	25.05410	2,533.34	0.436	25.12593	25.10783	24.92854
AS	0.48874	197.04	0.352	0.48965	0.48982	0.48676
B	0.48935	4,354.49	0.379	0.48943	0.49115	0.48745
BA	0.50718	337,570.78	0.752	0.50404	0.51142	0.50607
BE	0.48960	215,511.02	0.581	0.48956	0.49247	0.48678
CA	24.80337	23,976.96	0.547	24.72606	24.95995	24.72411
CD	0.49426	8,268.78	0.531	0.49659	0.49477	0.49142
CO	0.49212	2,749.47	0.666	0.49464	0.49331	0.48842
CR	0.49018	5,369.53	0.615	0.48823	0.49366	0.48866
CU	0.50609	6,739.48	0.891	0.50321	0.50378	0.51129
FE	24.67344	6,854.19	0.409	24.59481	24.78719	24.63831
K	24.79980	8,507.09	0.545	24.95003	24.76115	24.68821
LI	0.50115	2,986.70	0.788	0.50570	0.49864	0.49911
MG	24.41697	40,620.59	0.190	24.45545	24.42990	24.36556
MN	0.49747	31,466.16	0.512	0.49561	0.50037	0.49642
MO	0.50028	2,315.82	0.500	0.50227	0.50112	0.49747
NA	24.55101	24,820.63	0.423	24.67010	24.50456	24.47838
NI	0.49624	1,970.55	0.519	0.49886	0.49617	0.49371
P	0.50294	281.67	0.340	0.50291	0.50467	0.50125
PB	0.50026	692.29	0.425	0.50223	0.50055	0.49800
S	24.29326	4,914.38	0.575	24.41917	24.31744	24.14317
SB	0.50648	424.47	0.313	0.50624	0.50818	0.50503
SE	0.49681	179.33	0.321	0.49523	0.49678	0.49842
SI	25.59271	4,533.17	0.166	25.57318	25.64137	25.56357
SN	0.48921	617.29	0.159	0.48969	0.48963	0.48832
SR	0.49611	379,522.61	0.592	0.49308	0.49894	0.49630
TI	0.49929	31,009.15	0.451	0.49859	0.50181	0.49746
TL	0.49738	352.29	0.230	0.49867	0.49698	0.49650
V	0.49682	7,062.06	0.432	0.49543	0.49929	0.49574
Y1	21797.47358	21,797.47	0.437	21737.18273	21747.86823	21907.36979
Y2A	283841.17517	283,841.18	0.580	284604.20808	281952.03777	284967.27966
Y2R	18811.50734	18,811.51	0.560	18764.11371	18738.10000	18932.30831
ZN	0.49815	6,409.23	0.413	0.50016	0.49824	0.49605
ZR	0.50050	1,136.21	0.466	0.50140	0.50225	0.49785

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/13/2013 16:19

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00190	-7.98	27.986	0.00183	0.00141	0.00246
AL	-0.01365	4.38	247.162	0.02213	-0.04488	-0.01821
AS	-0.00215	-3.81	10.658	-0.00229	-0.00188	-0.00226
B	0.00026	7.68	298.224	-0.00062	0.00074	0.00065
BA	0.00004	80.15	8.291	0.00004	0.00004	0.00004
BE	-0.00083	-629.40	1.666	-0.00083	-0.00085	-0.00082
CA	0.02901	118.92	11.552	0.03216	0.02938	0.02549
CD	-0.00006	-4.93	79.076	-0.00001	-0.00008	-0.00010
CO	-0.00003	2.85	574.469	0.00015	-0.00008	-0.00016
CR	0.00050	-0.02	45.366	0.00076	0.00041	0.00034
CU	-0.00094	-39.63	44.104	-0.00046	-0.00115	-0.00120
FE	0.01723	4.86	6.516	0.01644	0.01852	0.01673
K	-0.13477	-46.06	9.158	-0.13652	-0.14615	-0.12165
LI	-0.00119	46.89	60.873	-0.00146	-0.00174	-0.00037
MG	0.03397	59.38	3.390	0.03525	0.03302	0.03363
MN	0.00002	19.15	238.394	0.00003	0.00006	-0.00003
MO	-0.00010	1.79	154.058	-0.00013	-0.00022	0.00007
NA	-0.01250	-35.11	72.561	-0.02029	-0.01467	-0.00254
NI	0.00041	14.96	32.453	0.00055	0.00029	0.00037
P	0.00048	-0.40	347.586	0.00201	-0.00129	0.00071
PB	0.00093	3.18	133.886	0.00177	-0.00050	0.00152
S	-0.00437	-5.63	121.884	-0.00250	-0.01038	-0.00023
SB	0.00039	2.52	239.460	-0.00007	-0.00023	0.00148
SE	0.00167	0.52	97.316	0.00057	0.00354	0.00091
SI	0.00421	4.16	270.259	-0.00872	0.01270	0.00865
SN	-0.00036	2.10	51.445	-0.00045	-0.00015	-0.00049
SR	-0.00019	-125.01	1.419	-0.00019	-0.00019	-0.00019
TI	-0.00011	19.93	109.115	-0.00019	0.00003	-0.00015
TL	-0.00225	-7.48	61.713	-0.00071	-0.00264	-0.00341
V	-0.00128	-19.93	2.405	-0.00126	-0.00128	-0.00132
Y1	22411.06108	22,411.06	0.383	22483.43654	22433.64885	22316.09785
Y2A	294844.51624	294,844.52	0.660	293524.76806	293930.83168	297077.94897
Y2R	19046.59262	19,046.59	0.313	19087.35512	19074.19773	18978.22500
ZN	-0.00066	17.45	12.917	-0.00063	-0.00076	-0.00060
ZR	0.00072	2.97	412.020	0.00234	-0.00272	0.00255

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/13/2013 16:24

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00205	-5.88	6.673	0.00221	0.00199	0.00196
AL	0.07525	14.01	16.811	0.06413	0.07262	0.08901
AS	-0.00143	-3.59	232.935	-0.00125	-0.00486	0.00181
B	0.00551	55.95	10.730	0.00619	0.00522	0.00511
BA	0.00018	180.06	5.284	0.00017	0.00017	0.00019
BE	-0.00095	-700.98	4.390	-0.00099	-0.00091	-0.00095
CA	0.10107	197.29	8.143	0.10949	0.09304	0.10069
CD	-0.00003	-4.59	399.245	-0.00018	0.00010	-0.00003
CO	0.00005	3.37	356.914	0.00001	-0.00010	0.00023
CR	0.00026	-2.82	22.204	0.00029	0.00031	0.00020
CU	-0.00073	-37.65	22.876	-0.00082	-0.00054	-0.00083
FE	0.01099	3.21	26.226	0.01258	0.01272	0.00766
K	-0.05959	-20.77	28.622	-0.06159	-0.07555	-0.04161
LI	-0.00069	51.91	382.411	0.00148	-0.00365	0.00009
MG	0.02197	40.55	3.147	0.02196	0.02128	0.02266
MN	0.00017	29.48	28.266	0.00011	0.00020	0.00019
MO	-0.00001	2.25	591.800	0.00003	0.00001	-0.00008
NA	-0.00558	-29.18	278.167	0.00052	-0.02320	0.00596
NI	0.00030	14.88	73.958	0.00040	0.00004	0.00044
P	0.01451	7.84	9.837	0.01332	0.01609	0.01412
PB	0.00186	4.63	48.707	0.00095	0.00188	0.00277
S	-0.00508	-5.92	33.678	-0.00311	-0.00618	-0.00594
SB	-0.00070	1.64	27.061	-0.00087	-0.00049	-0.00074
SE	0.00231	0.78	62.586	0.00172	0.00396	0.00126
SI	0.01586	6.51	19.216	0.01414	0.01407	0.01938
SN	0.01510	22.63	0.639	0.01500	0.01519	0.01511
SR	0.00032	288.62	6.806	0.00034	0.00030	0.00032
TI	0.00025	44.18	50.599	0.00026	0.00012	0.00037
TL	-0.00058	-6.35	64.397	-0.00016	-0.00070	-0.00089
V	-0.00132	-20.97	8.424	-0.00134	-0.00141	-0.00119
Y1	22969.24255	22,969.24	0.172	22951.48488	22941.64111	23014.60165
Y2A	302803.11199	302,803.11	1.617	297723.79299	307492.08861	303193.45436
Y2R	19842.40382	19,842.40	0.905	19638.23941	19913.44810	19975.52395
ZN	0.00134	44.62	6.947	0.00131	0.00127	0.00145
ZR	0.00146	4.86	33.616	0.00164	0.00090	0.00183

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/13/2013 16:28

Sample Number: **PBS** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00165	-12.08	14.819	0.00181	0.00177	0.00137
AL	0.02197	7.87	27.069	0.02665	0.02397	0.01528
AS	-0.00025	-3.07	499.834	0.00119	-0.00080	-0.00114
B	0.00583	59.37	7.413	0.00534	0.00597	0.00617
BA	0.00021	205.09	12.683	0.00018	0.00022	0.00023
BE	-0.00091	-685.85	3.243	-0.00094	-0.00090	-0.00088
CA	0.10176	183.85	19.064	0.09409	0.08736	0.12382
CD	-0.00007	-5.09	134.175	-0.00009	-0.00014	0.00003
CO	0.00015	3.94	37.934	0.00015	0.00009	0.00020
CR	0.00083	3.83	47.624	0.00119	0.00089	0.00041
CU	-0.00087	-39.93	39.882	-0.00051	-0.00089	-0.00120
FE	0.01235	3.33	29.285	0.00830	0.01350	0.01526
K	-0.08749	-27.77	43.863	-0.05936	-0.07190	-0.13120
LI	-0.00015	50.99	1139.186	-0.00040	-0.00172	0.00167
MG	0.01602	27.45	26.999	0.01357	0.01348	0.02102
MN	0.00013	26.98	56.920	0.00005	0.00013	0.00020
MO	0.00013	2.92	95.867	0.00025	0.00015	0.00000
NA	0.00234	-18.19	580.384	0.01051	0.00989	-0.01336
NI	0.00004	13.75	580.709	0.00022	-0.00023	0.00013
P	0.01361	7.28	3.304	0.01411	0.01345	0.01326
PB	0.00073	2.96	46.566	0.00081	0.00035	0.00101
S	-0.00261	-5.37	79.777	-0.00383	-0.00380	-0.00021
SB	0.00086	2.98	8.588	0.00094	0.00081	0.00082
SE	0.00212	0.70	134.104	0.00537	0.00016	0.00082
SI	0.02358	7.26	52.278	0.02046	0.01311	0.03716
SN	0.01483	22.17	3.203	0.01519	0.01429	0.01501
SR	0.00036	322.21	6.382	0.00033	0.00038	0.00037
TI	0.00026	45.25	42.845	0.00014	0.00030	0.00035
TL	-0.00160	-7.12	68.523	-0.00034	-0.00216	-0.00229
V	-0.00122	-19.72	31.238	-0.00163	-0.00088	-0.00116
Y1	22861.53524	22,861.54	0.387	22787.54162	22837.61165	22959.45244
Y2A	304954.35796	304,954.36	0.375	306262.90806	304143.88668	304456.27915
Y2R	18586.28159	18,586.28	13.434	20030.61428	20025.16477	15703.06571
ZN	0.00143	45.59	8.438	0.00129	0.00150	0.00151
ZR	0.00029	2.06	477.703	-0.00055	0.00189	-0.00047

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/13/2013 16:32

Sample Number: **LCSW** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.05457	864.55	1.398	0.05533	0.05381	0.05456
AL	2.12235	236.42	1.562	2.10167	2.16058	2.10479
AS	0.15764	64.78	1.959	0.15779	0.16064	0.15447
B	2.07219	18,441.77	0.476	2.08353	2.06556	2.06749
BA	2.09039	1,439,072.90	0.875	2.10511	2.06990	2.09616
BE	0.04692	21,138.32	0.243	0.04705	0.04682	0.04690
CA	4.11590	4,239.24	0.291	4.10219	4.12429	4.12121
CD	0.05080	867.25	0.269	0.05095	0.05067	0.05078
CO	0.51537	2,968.00	0.324	0.51390	0.51502	0.51719
CR	0.20110	2,278.42	0.541	0.20235	0.20053	0.20041
CU	0.27186	3,653.48	0.662	0.27361	0.27001	0.27196
FE	1.00932	295.21	1.225	1.00293	1.00147	1.02357
K	10.07955	3,606.87	0.451	10.03085	10.08703	10.12078
LI	1.01768	6,238.49	0.556	1.01389	1.01497	1.02418
MG	2.00992	3,528.04	0.502	1.99846	2.01747	2.01383
MN	0.51088	33,426.80	0.571	0.51392	0.50810	0.51063
MO	2.01959	9,607.96	0.213	2.01855	2.01591	2.02432
NA	10.07585	10,611.41	0.279	10.05144	10.06947	10.10664
NI	0.52894	2,167.00	0.319	0.52881	0.52732	0.53069
P	1.05872	608.20	0.220	1.05868	1.06107	1.05642
PB	0.16179	223.73	0.340	0.16135	0.16162	0.16241
S	1.01730	203.81	0.519	1.01736	1.01198	1.02254
SB	0.51065	430.98	0.151	0.51152	0.51004	0.51039
SE	0.15857	58.82	1.834	0.15545	0.16121	0.15903
SI	0.38398	76.86	1.822	0.37796	0.38231	0.39165
SN	4.03013	5,211.29	0.351	4.02592	4.01858	4.04590
SR	1.02464	810,804.16	1.106	1.01997	1.01639	1.03756
TI	1.01788	65,278.18	0.450	1.02262	1.01349	1.01751
TL	0.16416	105.18	0.352	0.16397	0.16370	0.16481
V	0.49482	7,173.53	0.518	0.49763	0.49261	0.49422
Y1	22417.58836	22,417.59	0.372	22438.15833	22488.87372	22325.73304
Y2A	293611.16634	293,611.17	0.425	292735.25514	295039.43009	293058.81378
Y2R	19621.23868	19,621.24	0.596	19718.45654	19653.91717	19491.34232
ZN	0.51654	6,796.05	0.255	0.51607	0.51552	0.51802
ZR	1.00594	2,380.62	0.229	1.00859	1.00483	1.00440

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/13/2013 16:36

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00190	-7.70	31.481	0.00140	0.00173	0.00256
AL	1.14907	123.42	3.290	1.13713	1.19140	1.11868
AS	0.00036	-3.36	477.593	-0.00004	0.00226	-0.00113
B	0.00549	113.92	12.029	0.00604	0.00567	0.00475
BA	0.02801	19,540.63	0.282	0.02804	0.02792	0.02807
BE	-0.00070	-573.68	2.951	-0.00071	-0.00068	-0.00071
CA	3.17674	3,209.78	0.922	3.18651	3.19989	3.14382
CD	0.00055	24.91	12.602	0.00050	0.00051	0.00063
CO	0.00324	22.77	7.264	0.00302	0.00349	0.00321
CR	0.00337	29.61	12.753	0.00293	0.00338	0.00379
CU	0.01341	154.72	6.842	0.01294	0.01447	0.01282
FE	9.70283	2,756.40	1.175	9.74233	9.79187	9.57429
K	0.06959	25.00	35.019	0.09561	0.06584	0.04731
LI	-0.00170	46.05	42.543	-0.00221	-0.00087	-0.00203
MG	0.40161	688.75	0.823	0.40454	0.40227	0.39802
MN	0.29842	19,740.45	0.110	0.29870	0.29849	0.29806
MO	0.00067	5.47	13.455	0.00069	0.00075	0.00057
NA	0.11775	98.86	14.953	0.12567	0.09757	0.13000
NI	0.00708	41.18	5.646	0.00671	0.00703	0.00750
P	0.29041	167.29	0.342	0.29133	0.29055	0.28936
PB	2.74359	3,893.13	0.189	2.74434	2.74835	2.73806
S	0.98150	200.99	0.726	0.97903	0.98953	0.97594
SB	0.00047	3.37	188.642	0.00038	0.00139	-0.00037
SE	0.00242	0.80	232.517	-0.00397	0.00659	0.00464
SI	0.34110	64.79	2.317	0.34851	0.33278	0.34200
SN	0.00396	7.74	3.398	0.00408	0.00382	0.00399
SR	0.01920	15,381.08	0.265	0.01923	0.01914	0.01923
TI	0.07717	5,025.96	0.926	0.07702	0.07653	0.07794
TL	-0.00239	-7.86	72.088	-0.00313	-0.00362	-0.00042
V	0.00925	138.49	4.271	0.00916	0.00890	0.00968
Y1	22570.62478	22,570.62	0.343	22511.53256	22542.12840	22658.21338
Y2A	296730.53347	296,730.53	0.574	294818.17429	298079.35719	297294.06892
Y2R	19122.71009	19,122.71	1.008	19155.25922	18915.84331	19297.02773
ZN	0.01802	277.06	0.428	0.01807	0.01806	0.01793
ZR	0.00366	9.74	48.088	0.00511	0.00418	0.00170

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/13/2013 16:41

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02566	478.25	0.762	0.02545	0.02570	0.02584
AL	2.42128	256.94	0.980	2.42533	2.39577	2.44273
AS	0.60959	255.06	0.393	0.60755	0.61223	0.60900
B	0.24590	2,268.72	0.408	0.24665	0.24630	0.24476
BA	0.09313	64,577.99	0.314	0.09338	0.09281	0.09319
BE	0.02323	10,407.94	0.267	0.02330	0.02318	0.02321
CA	4.40220	4,449.67	0.388	4.41397	4.38260	4.41002
CD	0.06274	1,092.92	0.077	0.06279	0.06274	0.06269
CO	0.12997	751.98	0.415	0.12941	0.13049	0.13002
CR	0.24813	2,827.79	0.365	0.24890	0.24713	0.24836
CU	0.65547	9,126.78	0.519	0.65821	0.65166	0.65654
FE	10.27612	2,943.43	0.222	10.27669	10.25299	10.29867
K	2.53935	893.68	0.611	2.53095	2.55727	2.52984
LI	1.24640	7,496.67	0.622	1.24454	1.23974	1.25491
MG	1.62026	2,796.03	0.486	1.61712	1.61443	1.62922
MN	0.37462	24,675.16	0.494	0.37641	0.37271	0.37475
MO	0.25063	1,197.16	0.223	0.25004	0.25071	0.25114
NA	2.60456	2,679.14	0.670	2.59435	2.59461	2.62471
NI	0.20015	827.58	0.095	0.19994	0.20031	0.20019
P	1.54410	890.22	0.432	1.53723	1.55056	1.54452
PB	3.34608	4,726.35	0.097	3.34434	3.34982	3.34409
S	0.99119	201.70	0.566	0.98510	0.99231	0.99616
SB	0.51666	442.23	0.456	0.51478	0.51590	0.51930
SE	0.98052	365.19	0.672	0.97321	0.98237	0.98598
SI	0.35885	68.86	1.056	0.35606	0.36316	0.35733
SN	0.74241	964.39	0.175	0.74150	0.74183	0.74390
SR	0.04443	35,411.64	0.214	0.04452	0.04433	0.04444
TI	0.20006	12,939.00	0.227	0.20025	0.19954	0.20039
TL	1.32470	1,012.35	0.286	1.32891	1.32363	1.32156
V	0.13281	1,957.72	0.341	0.13323	0.13287	0.13233
Y1	22471.00278	22,471.00	0.095	22493.29959	22450.53996	22469.16878
Y2A	295517.06428	295,517.06	0.458	294635.76872	297077.12061	294838.30351
Y2R	19284.25848	19,284.26	0.623	19226.68433	19422.39573	19203.69539
ZN	0.16523	2,222.38	0.358	0.16461	0.16579	0.16528
ZR	1.23214	2,865.51	0.276	1.23200	1.22881	1.23561

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/13/2013 16:44

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00200	-6.40	18.950	0.00238	0.00162	0.00202
AL	1.18298	128.18	3.289	1.22496	1.17585	1.14812
AS	0.00102	-2.98	116.449	0.00184	0.00156	-0.00034
B	0.00512	102.17	7.054	0.00470	0.00536	0.00529
BA	0.02597	18,125.53	0.517	0.02602	0.02581	0.02606
BE	-0.00078	-610.21	2.628	-0.00080	-0.00077	-0.00077
CA	3.06328	3,129.09	0.795	3.04966	3.04877	3.09139
CD	0.00050	21.28	14.459	0.00058	0.00048	0.00044
CO	0.00276	19.95	4.556	0.00280	0.00285	0.00262
CR	0.00386	35.78	3.104	0.00399	0.00375	0.00384
CU	0.01368	158.67	3.617	0.01324	0.01422	0.01359
FE	8.31040	2,385.57	0.700	8.26979	8.28438	8.37701
K	0.04001	14.83	55.878	0.01420	0.05331	0.05251
LI	0.00128	64.24	121.038	0.00096	-0.00008	0.00296
MG	0.38736	670.93	0.677	0.38562	0.38607	0.39038
MN	0.24608	16,289.36	0.454	0.24666	0.24479	0.24679
MO	0.00041	4.22	22.504	0.00052	0.00037	0.00035
NA	0.11684	98.84	14.028	0.13282	0.11763	0.10007
NI	0.00680	40.08	5.704	0.00653	0.00724	0.00662
P	0.28654	164.53	0.519	0.28482	0.28745	0.28734
PB	2.73578	3,869.95	0.029	2.73580	2.73498	2.73655
S	0.96314	196.53	1.000	0.96426	0.95299	0.97216
SB	0.00108	3.78	118.296	0.00186	-0.00040	0.00179
SE	0.00151	0.46	166.756	0.00433	-0.00051	0.00071
SI	0.36916	70.52	1.307	0.36361	0.37147	0.37239
SN	0.00372	7.41	2.664	0.00378	0.00361	0.00378
SR	0.01815	14,548.84	0.353	0.01817	0.01808	0.01820
TI	0.07956	5,183.46	0.558	0.07995	0.07908	0.07965
TL	-0.00144	-7.14	37.016	-0.00200	-0.00139	-0.00094
V	0.00892	133.63	3.878	0.00853	0.00916	0.00908
Y1	22499.70452	22,499.70	0.116	22512.06116	22517.44023	22469.61216
Y2A	296879.65379	296,879.65	0.561	295519.09722	298737.07753	296382.78661
Y2R	19311.44567	19,311.45	0.555	19390.62812	19354.10440	19189.60450
ZN	0.01782	271.63	0.152	0.01785	0.01780	0.01781
ZR	0.00225	6.56	47.876	0.00199	0.00133	0.00343

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/13/2013 16:49

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00770	85.41	4.717	0.00741	0.00811	0.00759
AL	1.94899	209.07	1.153	1.97227	1.94727	1.92743
AS	0.01460	2.83	14.020	0.01335	0.01696	0.01348
B	0.20492	1,900.84	1.675	0.20120	0.20562	0.20796
BA	0.25072	173,843.16	1.368	0.24711	0.25114	0.25393
BE	0.00404	1,603.30	0.816	0.00402	0.00402	0.00407
CA	3.86006	3,936.87	0.112	3.86483	3.85642	3.85891
CD	0.00554	112.40	1.959	0.00558	0.00542	0.00563
CO	0.05495	325.38	0.446	0.05488	0.05474	0.05522
CR	0.02500	276.91	0.486	0.02513	0.02499	0.02489
CU	0.04112	530.95	0.810	0.04077	0.04143	0.04118
FE	9.92183	2,859.48	0.220	9.94012	9.89764	9.92773
K	1.22966	435.79	3.318	1.19130	1.27252	1.22516
LI	0.10573	692.25	2.076	0.10770	0.10612	0.10336
MG	0.65646	1,141.09	1.022	0.65676	0.64960	0.66302
MN	0.43146	28,427.43	1.436	0.42548	0.43104	0.43785
MO	0.20472	991.53	0.702	0.20616	0.20329	0.20471
NA	1.18529	1,214.21	0.847	1.18552	1.17514	1.19521
NI	0.06001	260.50	0.887	0.05998	0.05950	0.06056
P	0.36093	210.04	0.786	0.36191	0.35773	0.36315
PB	2.66081	3,809.52	0.681	2.67116	2.63988	2.67138
S	1.11637	231.01	0.206	1.11902	1.11480	1.11531
SB	0.04910	44.91	2.565	0.04799	0.04884	0.05047
SE	0.01676	6.22	13.343	0.01577	0.01518	0.01931
SI	0.81705	152.84	1.981	0.80093	0.81691	0.83330
SN	0.40537	534.88	1.094	0.40781	0.40025	0.40804
SR	0.12639	100,725.75	1.480	0.12439	0.12668	0.12810
TI	0.19371	12,530.27	1.260	0.19121	0.19383	0.19609
TL	0.01390	3.23	4.829	0.01341	0.01362	0.01466
V	0.06002	879.41	2.302	0.05870	0.05991	0.06145
Y1	22775.67995	22,775.68	0.528	22721.10349	22913.50153	22692.43485
Y2A	295671.60923	295,671.61	1.472	300446.48774	294639.08217	291929.25779
Y2R	19400.43974	19,400.44	0.427	19317.65117	19483.43825	19400.22982
ZN	0.06836	950.09	0.541	0.06858	0.06793	0.06855
ZR	0.08263	194.57	0.787	0.08245	0.08335	0.08208

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/13/2013 16:53

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00687	74.85	3.100	0.00667	0.00686	0.00709
AL	2.04508	219.46	1.477	2.07743	2.04020	2.01762
AS	0.01655	3.70	3.720	0.01624	0.01725	0.01614
B	0.18924	1,807.56	0.968	0.18932	0.19103	0.18737
BA	0.23501	167,864.96	0.738	0.23511	0.23670	0.23324
BE	0.00392	1,594.43	0.488	0.00393	0.00393	0.00389
CA	3.55154	3,637.05	0.279	3.55389	3.54067	3.56006
CD	0.00541	107.52	2.374	0.00534	0.00556	0.00533
CO	0.05390	317.37	0.895	0.05360	0.05446	0.05365
CR	0.02381	271.49	4.912	0.02262	0.02495	0.02386
CU	0.03915	518.40	0.256	0.03915	0.03926	0.03906
FE	8.97504	2,592.81	0.450	8.99073	8.92911	9.00527
K	1.15057	408.63	2.548	1.11717	1.16252	1.17202
LI	0.09910	653.60	1.103	0.09830	0.09866	0.10035
MG	0.63673	1,109.09	0.506	0.64011	0.63638	0.63369
MN	0.29121	19,771.13	0.660	0.29094	0.29325	0.28943
MO	0.19970	961.34	0.428	0.19898	0.20065	0.19949
NA	1.13817	1,167.40	0.476	1.13918	1.13232	1.14302
NI	0.05886	254.28	1.048	0.05828	0.05951	0.05879
P	0.36103	208.80	0.639	0.35871	0.36332	0.36105
PB	2.79419	3,975.89	0.689	2.77567	2.81412	2.79278
S	1.07986	221.92	0.700	1.07247	1.08758	1.07952
SB	0.04728	43.01	3.915	0.04824	0.04514	0.04845
SE	0.01951	7.22	16.508	0.02245	0.02002	0.01607
SI	0.52825	100.32	3.495	0.54045	0.53729	0.50701
SN	0.39703	520.72	0.484	0.39542	0.39916	0.39651
SR	0.11893	97,641.70	0.733	0.11891	0.11981	0.11807
TI	0.19653	13,095.22	0.578	0.19686	0.19747	0.19527
TL	0.01451	3.65	2.349	0.01487	0.01446	0.01420
V	0.05783	872.69	0.544	0.05819	0.05765	0.05764
Y1	22635.62044	22,635.62	0.517	22755.62217	22521.92100	22629.31815
Y2A	304550.25535	304,550.26	0.397	304414.01590	303414.68254	305822.06759
Y2R	19439.59164	19,439.59	0.531	19327.08790	19530.21374	19461.47329
ZN	0.06679	922.15	0.433	0.06648	0.06706	0.06682
ZR	0.07611	179.68	0.988	0.07555	0.07696	0.07580

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/13/2013 16:57

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 50.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00178	-9.85	5.325	0.00180	0.00168	0.00187
AL	0.19523	25.82	15.016	0.20459	0.16237	0.21872
AS	-0.00160	-3.73	117.384	0.00028	-0.00160	-0.00349
B	0.00086	24.38	89.751	0.00174	0.00051	0.00032
BA	0.00541	3,847.62	0.537	0.00545	0.00541	0.00539
BE	-0.00088	-662.17	1.526	-0.00089	-0.00090	-0.00087
CA	0.60469	685.64	0.894	0.59984	0.61052	0.60369
CD	0.00004	0.50	51.682	0.00003	0.00004	0.00007
CO	0.00073	7.45	47.947	0.00087	0.00098	0.00033
CR	0.00098	4.90	36.777	0.00114	0.00124	0.00057
CU	0.00141	-8.27	37.779	0.00082	0.00185	0.00156
FE	1.83434	523.41	0.416	1.83044	1.84313	1.82946
K	-0.05888	-19.82	52.793	-0.08342	-0.02392	-0.06931
LI	-0.00197	42.86	87.322	-0.00392	-0.00066	-0.00133
MG	0.07487	129.79	0.816	0.07463	0.07556	0.07442
MN	0.05787	3,871.48	0.452	0.05813	0.05788	0.05761
MO	-0.00004	2.08	484.363	0.00016	-0.00022	-0.00006
NA	0.01487	-7.07	103.046	0.01381	0.00010	0.03069
NI	0.00130	18.58	33.011	0.00125	0.00175	0.00089
P	0.05651	32.16	0.750	0.05684	0.05666	0.05603
PB	0.53194	760.03	0.291	0.53111	0.53099	0.53373
S	0.17680	32.47	0.622	0.17801	0.17656	0.17585
SB	0.00003	2.39	2683.326	-0.00031	-0.00066	0.00108
SE	0.00290	0.99	94.257	0.00081	0.00599	0.00189
SI	0.05810	13.89	11.319	0.06568	0.05387	0.05476
SN	0.00040	3.12	140.108	0.00050	-0.00020	0.00089
SR	0.00354	2,880.73	0.426	0.00354	0.00356	0.00353
TI	0.01462	981.12	1.052	0.01479	0.01451	0.01455
TL	-0.00318	-8.32	15.867	-0.00316	-0.00369	-0.00269
V	0.00046	6.25	48.369	0.00021	0.00054	0.00063
Y1	22680.68892	22,680.69	0.170	22700.80242	22636.34396	22704.92038
Y2A	298960.94596	298,960.95	0.882	296830.35123	298140.87302	301911.61365
Y2R	19146.51321	19,146.51	0.283	19186.17606	19084.66215	19168.70142
ZN	0.00291	67.49	1.667	0.00291	0.00296	0.00287
ZR	0.00049	2.46	492.481	-0.00170	0.00008	0.00309

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/13/2013 17:01

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00153	-13.56	16.177	0.00172	0.00125	0.00161
AL	1.23501	133.79	2.716	1.27318	1.22165	1.21020
AS	-0.00072	-3.31	50.315	-0.00053	-0.00049	-0.00114
B	0.00109	20.93	12.945	0.00101	0.00101	0.00126
BA	0.01546	10,873.69	0.063	0.01547	0.01545	0.01547
BE	-0.00089	-662.58	2.725	-0.00091	-0.00088	-0.00087
CA	0.70351	791.08	1.260	0.69357	0.71060	0.70638
CD	0.00006	-1.11	180.072	-0.00001	0.00017	0.00000
CO	0.00050	6.57	26.360	0.00045	0.00040	0.00064
CR	0.00216	18.86	8.556	0.00198	0.00217	0.00235
CU	0.00996	110.15	4.707	0.01033	0.01011	0.00943
FE	0.92866	267.86	1.037	0.92918	0.93803	0.91878
K	-0.03198	-10.47	154.870	0.02447	-0.06816	-0.05226
LI	0.00036	57.33	893.762	-0.00189	0.00409	-0.00111
MG	0.12339	215.19	2.526	0.12554	0.12482	0.11982
MN	0.01364	925.09	0.107	0.01363	0.01366	0.01364
MO	0.00012	2.84	218.096	0.00029	0.00024	-0.00018
NA	-0.00253	-25.30	452.882	-0.01025	0.01061	-0.00794
NI	0.00177	20.68	18.132	0.00156	0.00161	0.00214
P	0.13092	75.61	0.122	0.13093	0.13075	0.13107
PB	0.02161	33.12	2.334	0.02112	0.02213	0.02156
S	0.78364	160.76	0.381	0.78669	0.78352	0.78073
SB	0.00087	3.06	143.305	0.00038	0.00228	-0.00006
SE	0.00220	0.72	49.248	0.00134	0.00185	0.00342
SI	0.27073	52.74	1.189	0.26726	0.27363	0.27129
SN	0.00260	6.01	15.408	0.00214	0.00278	0.00287
SR	0.00526	4,254.26	0.521	0.00529	0.00524	0.00524
TI	0.04676	3,074.67	0.060	0.04678	0.04673	0.04678
TL	-0.00311	-8.39	28.329	-0.00321	-0.00218	-0.00393
V	0.00124	18.05	6.299	0.00128	0.00115	0.00130
Y1	22738.16598	22,738.17	0.319	22737.47335	22810.98674	22666.03786
Y2A	298500.24851	298,500.25	0.047	298404.24122	298661.86216	298434.64215
Y2R	19349.02595	19,349.03	0.513	19447.91667	19249.35091	19349.81027
ZN	0.02816	400.17	0.230	0.02816	0.02810	0.02823
ZR	0.00088	3.40	246.388	0.00337	-0.00023	-0.00051

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/13/2013 17:05

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51235	7,157.37	0.993	0.51598	0.50653	0.51453
AL	25.24350	2,563.20	0.267	25.19357	25.32021	25.21671
AS	0.49705	199.17	0.485	0.49839	0.49427	0.49850
B	0.49262	4,393.52	1.555	0.49562	0.48391	0.49833
BA	0.50801	338,918.94	0.379	0.50775	0.50623	0.51005
BE	0.48863	215,579.83	0.855	0.48801	0.48479	0.49308
CA	24.93456	24,204.18	0.258	24.97281	24.97059	24.86029
CD	0.49782	8,275.22	0.030	0.49786	0.49765	0.49794
CO	0.49690	2,758.41	0.220	0.49726	0.49777	0.49568
CR	0.48753	5,352.66	1.124	0.48794	0.48185	0.49279
CU	0.51349	6,854.46	0.648	0.51498	0.50968	0.51582
FE	24.82270	6,924.18	0.265	24.84643	24.87341	24.74827
K	24.97151	8,601.92	0.457	25.10278	24.89528	24.91647
LI	0.50456	3,019.30	0.771	0.50057	0.50477	0.50834
MG	24.47744	40,890.74	0.207	24.53023	24.47277	24.42932
MN	0.49776	31,558.15	0.614	0.49810	0.49455	0.50064
MO	0.50511	2,323.24	0.190	0.50615	0.50492	0.50426
NA	24.70428	25,080.51	0.166	24.72307	24.65728	24.73250
NI	0.49977	1,971.81	0.114	0.49973	0.50036	0.49922
P	0.50753	282.44	0.091	0.50795	0.50762	0.50703
PB	0.50813	698.63	0.482	0.50663	0.50681	0.51096
S	24.54485	4,933.68	0.174	24.56561	24.57321	24.49574
SB	0.51624	429.67	0.558	0.51951	0.51510	0.51410
SE	0.50295	180.39	0.391	0.50070	0.50379	0.50436
SI	25.66147	4,564.40	0.277	25.73183	25.66265	25.58993
SN	0.49427	619.67	0.206	0.49312	0.49506	0.49464
SR	0.50089	384,066.29	0.943	0.49804	0.49829	0.50634
TI	0.50092	31,182.68	1.094	0.50156	0.49515	0.50606
TL	0.50275	354.02	0.284	0.50378	0.50335	0.50113
V	0.49764	7,089.81	0.806	0.49737	0.49376	0.50177
Y1	21658.23140	21,658.23	0.155	21658.70854	21624.41000	21691.57565
Y2A	284504.19704	284,504.20	0.698	284776.83897	286339.04904	282396.70311
Y2R	18890.33199	18,890.33	0.303	18831.79597	18946.20000	18893.00000
ZN	0.50370	6,438.71	0.181	0.50432	0.50412	0.50265
ZR	0.50543	1,152.23	0.481	0.50343	0.50813	0.50474

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/13/2013 17:09

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00195	-7.20	11.774	0.00169	0.00202	0.00213
AL	-0.01454	4.25	288.613	0.03372	-0.03491	-0.04244
AS	-0.00167	-3.59	154.696	-0.00299	0.00131	-0.00332
B	0.00033	8.12	187.488	0.00105	0.00007	-0.00012
BA	-0.00001	43.23	8.499	-0.00001	-0.00001	-0.00001
BE	-0.00093	-670.28	3.536	-0.00090	-0.00097	-0.00093
CA	-0.00890	81.44	14.937	-0.01026	-0.00882	-0.00761
CD	-0.00012	-5.88	145.936	-0.00027	0.00007	-0.00016
CO	0.00003	3.14	1079.329	0.00017	0.00020	-0.00029
CR	0.00036	-1.57	82.572	0.00010	0.00069	0.00031
CU	-0.00176	-50.57	10.579	-0.00196	-0.00160	-0.00171
FE	-0.00556	-1.60	99.525	-0.00896	-0.00854	0.00082
K	-0.10524	-35.59	18.103	-0.12380	-0.10618	-0.08573
LI	-0.00086	48.60	68.095	-0.00083	-0.00146	-0.00029
MG	-0.00219	-2.27	55.428	-0.00104	-0.00207	-0.00346
MN	-0.00007	13.20	58.102	-0.00004	-0.00011	-0.00005
MO	-0.00007	1.90	78.066	-0.00003	-0.00013	-0.00004
NA	-0.00945	-31.88	133.044	0.00501	-0.01557	-0.01780
NI	0.00026	14.30	79.012	0.00021	0.00008	0.00049
P	-0.00016	-0.77	481.727	-0.00105	0.00017	0.00040
PB	0.00184	4.44	57.413	0.00242	0.00062	0.00248
S	-0.00938	-6.63	31.043	-0.01224	-0.00947	-0.00642
SB	0.00184	3.72	57.036	0.00188	0.00077	0.00287
SE	0.00354	1.21	59.059	0.00573	0.00156	0.00334
SI	0.00391	4.09	219.042	-0.00100	0.01379	-0.00107
SN	0.00002	2.58	2959.937	0.00007	0.00070	-0.00070
SR	-0.00021	-140.47	7.819	-0.00021	-0.00019	-0.00022
TI	-0.00011	19.32	38.570	-0.00010	-0.00016	-0.00008
TL	-0.00286	-7.90	23.946	-0.00312	-0.00208	-0.00338
V	-0.00134	-20.58	3.179	-0.00133	-0.00139	-0.00130
Y1	22293.80754	22,293.81	0.188	22263.96990	22275.69611	22341.75659
Y2A	292213.93859	292,213.94	0.855	289346.58714	293925.86150	293369.36713
Y2R	18955.27650	18,955.28	0.855	18808.82794	18927.45157	19129.55000
ZN	-0.00065	17.50	12.461	-0.00067	-0.00072	-0.00056
ZR	0.00146	4.65	78.944	0.00123	0.00043	0.00270

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/13/2013 17:14

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00192	-7.77	12.032	0.00210	0.00166	0.00200
AL	7.19717	751.84	0.875	7.26824	7.17501	7.14825
AS	0.00100	-2.57	111.447	-0.00028	0.00152	0.00176
B	0.00136	24.19	48.306	0.00198	0.00067	0.00143
BA	0.04534	31,612.94	0.576	0.04560	0.04508	0.04535
BE	-0.00059	-523.88	4.725	-0.00056	-0.00062	-0.00060
CA	0.32218	412.35	2.060	0.32920	0.32130	0.31602
CD	0.00004	-1.01	169.562	-0.00004	0.00009	0.00008
CO	0.00097	10.77	16.053	0.00100	0.00080	0.00111
CR	0.00618	64.87	8.176	0.00643	0.00560	0.00652
CU	0.01175	125.70	2.850	0.01136	0.01190	0.01198
FE	1.08501	313.10	1.424	1.10132	1.08312	1.07059
K	0.08247	29.98	50.922	0.03477	0.09878	0.11386
LI	0.00079	59.74	146.982	0.00015	0.00214	0.00009
MG	0.16819	292.89	2.501	0.17294	0.16671	0.16493
MN	0.01745	1,171.92	1.212	0.01752	0.01722	0.01763
MO	0.00032	3.82	43.957	0.00020	0.00048	0.00030
NA	0.02486	3.33	59.305	0.02156	0.01204	0.04097
NI	0.00283	24.90	8.615	0.00270	0.00310	0.00267
P	0.71593	414.42	0.341	0.71444	0.71461	0.71875
PB	0.01608	26.91	8.905	0.01478	0.01761	0.01585
S	0.62307	126.21	0.545	0.62629	0.61953	0.62339
SB	-0.00010	2.28	1285.716	0.00075	-0.00162	0.00057
SE	0.00228	0.72	89.316	-0.00007	0.00338	0.00352
SI	0.52398	98.86	5.015	0.55124	0.52190	0.49880
SN	0.00259	5.97	12.469	0.00222	0.00284	0.00270
SR	0.00442	3,563.92	0.329	0.00443	0.00443	0.00441
TI	0.15646	10,167.34	0.444	0.15668	0.15568	0.15701
TL	-0.00209	-7.92	5.461	-0.00208	-0.00221	-0.00198
V	0.00764	113.96	1.568	0.00751	0.00766	0.00775
Y1	22629.66948	22,629.67	0.477	22662.21534	22717.65431	22509.13878
Y2A	296876.38061	296,876.38	0.414	296272.20013	298289.76143	296067.18025
Y2R	19360.44357	19,360.44	1.247	19144.73421	19315.45836	19621.13813
ZN	0.02546	363.12	0.874	0.02543	0.02526	0.02570
ZR	0.00105	3.78	57.319	0.00166	0.00046	0.00103

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/13/2013 17:18

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00172	-10.66	30.111	0.00223	0.00171	0.00120
AL	24.93640	2,643.47	0.565	24.78140	25.05682	24.97099
AS	0.00087	-2.74	103.983	0.00184	0.00071	0.00006
B	0.00136	36.61	43.650	0.00100	0.00103	0.00204
BA	0.10503	74,939.20	0.583	0.10445	0.10567	0.10495
BE	0.00018	-171.84	5.881	0.00019	0.00017	0.00018
CA	0.26957	367.23	1.209	0.26581	0.27147	0.27143
CD	-0.00007	0.84	163.645	-0.00019	0.00004	-0.00007
CO	0.00108	11.17	11.830	0.00100	0.00101	0.00123
CR	0.01418	159.93	1.318	0.01397	0.01425	0.01433
CU	0.00826	79.85	5.989	0.00876	0.00825	0.00777
FE	2.98095	876.77	0.385	2.96782	2.98912	2.98592
K	0.33191	120.26	4.551	0.31637	0.34654	0.33280
LI	0.01035	119.28	6.139	0.01058	0.00963	0.01083
MG	0.68363	1,209.33	0.571	0.68221	0.68804	0.68062
MN	0.01410	973.46	0.451	0.01407	0.01417	0.01406
MO	0.00029	3.69	39.463	0.00025	0.00021	0.00043
NA	0.02145	-0.32	18.412	0.02490	0.02232	0.01714
NI	0.00967	52.89	1.934	0.00951	0.00987	0.00962
P	0.64778	376.07	0.329	0.65013	0.64599	0.64721
PB	0.02168	40.31	6.141	0.02308	0.02155	0.02042
S	0.58174	117.80	0.993	0.58448	0.58563	0.57510
SB	0.00049	3.05	345.464	0.00237	-0.00083	-0.00009
SE	0.00229	0.64	44.110	0.00154	0.00344	0.00189
SI	0.88179	167.33	0.323	0.87970	0.88063	0.88504
SN	0.00296	6.47	7.861	0.00315	0.00302	0.00270
SR	0.00589	4,851.56	1.005	0.00586	0.00596	0.00585
TI	0.13570	9,036.97	0.748	0.13454	0.13643	0.13612
TL	-0.00189	-7.98	82.884	-0.00155	-0.00361	-0.00052
V	0.01434	219.27	3.044	0.01383	0.01460	0.01458
Y1	22700.50906	22,700.51	0.015	22703.62473	22701.16984	22696.73261
Y2A	304116.02778	304,116.03	0.825	306860.34310	301941.26905	303546.47117
Y2R	19744.69654	19,744.70	0.268	19796.82191	19691.19114	19746.07657
ZN	0.03478	490.21	0.682	0.03501	0.03454	0.03477
ZR	0.00353	9.77	42.778	0.00468	0.00409	0.00182

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/13/2013 17:22

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00137	-15.61	36.962	0.00099	0.00118	0.00194
AL	17.97268	1,859.82	0.384	17.97976	17.90042	18.03785
AS	0.00112	-2.79	202.645	-0.00133	0.00314	0.00154
B	0.00148	64.94	34.230	0.00141	0.00101	0.00202
BA	0.07361	51,170.25	1.189	0.07276	0.07451	0.07356
BE	-0.00066	-554.36	6.068	-0.00064	-0.00071	-0.00064
CA	0.74830	831.76	1.448	0.75420	0.73579	0.75490
CD	0.00022	15.16	29.314	0.00015	0.00026	0.00025
CO	0.00354	30.55	6.598	0.00349	0.00380	0.00334
CR	0.56641	6,482.29	1.069	0.55975	0.57159	0.56788
CU	0.00622	20.85	3.037	0.00608	0.00643	0.00615
FE	7.59760	2,175.85	0.742	7.64769	7.53655	7.60858
K	0.61013	215.04	4.950	0.63693	0.61605	0.57741
LI	0.01058	118.08	21.052	0.01095	0.01259	0.00819
MG	1.68802	2,909.24	0.661	1.69826	1.67612	1.68969
MN	0.05989	3,968.44	0.848	0.05940	0.06041	0.05984
MO	-0.00009	1.82	22.528	-0.00011	-0.00007	-0.00010
NA	0.02149	-0.29	43.377	0.03204	0.01808	0.01436
NI	0.01054	55.50	1.448	0.01071	0.01044	0.01046
P	0.24173	138.93	0.487	0.24309	0.24104	0.24106
PB	0.01071	22.14	12.397	0.01103	0.00926	0.01186
S	0.30722	59.46	1.373	0.31187	0.30618	0.30362
SB	-0.00753	4.07	41.968	-0.00466	-0.00702	-0.01092
SE	0.00011	-0.14	579.947	-0.00024	0.00087	-0.00029
SI	1.40258	257.59	0.529	1.40933	1.39464	1.40379
SN	0.00293	6.39	7.867	0.00302	0.00267	0.00310
SR	0.00903	7,229.56	1.211	0.00893	0.00914	0.00900
TI	0.47616	30,822.10	1.161	0.47080	0.48184	0.47583
TL	-0.00199	-8.43	15.176	-0.00229	-0.00199	-0.00168
V	0.01775	266.64	3.473	0.01738	0.01846	0.01740
Y1	22541.81598	22,541.82	0.129	22510.76851	22546.44974	22568.22969
Y2A	296205.19755	296,205.20	1.283	299940.14550	292342.03115	296333.41601
Y2R	19260.98528	19,260.99	0.804	19145.59588	19436.90096	19200.45899
ZN	0.07977	1,082.76	0.366	0.08010	0.07955	0.07965
ZR	0.00179	5.49	104.008	0.00021	0.00132	0.00385

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/13/2013 17:26

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00131	-16.44	30.116	0.00175	0.00117	0.00100
AL	3.91195	410.20	1.184	3.90168	3.96255	3.87161
AS	-0.00160	-4.20	35.037	-0.00118	-0.00223	-0.00137
B	0.00002	71.80	3691.338	-0.00060	0.00070	-0.00005
BA	0.02537	17,648.70	1.107	0.02510	0.02566	0.02536
BE	-0.00060	-524.62	4.139	-0.00061	-0.00057	-0.00062
CA	1.71273	1,789.93	0.546	1.71117	1.72275	1.70425
CD	0.00053	26.71	7.742	0.00053	0.00058	0.00049
CO	0.00235	20.75	6.903	0.00249	0.00217	0.00238
CR	0.01236	132.02	3.849	0.01199	0.01290	0.01220
CU	0.00835	62.25	10.584	0.00861	0.00736	0.00907
FE	10.89735	3,124.29	0.106	10.90839	10.89834	10.88531
K	0.43896	155.29	2.078	0.44835	0.43838	0.43013
LI	0.00237	69.93	66.137	0.00085	0.00229	0.00398
MG	1.18038	2,040.22	0.516	1.18727	1.17571	1.17816
MN	0.08666	5,726.99	0.966	0.08599	0.08760	0.08639
MO	0.00011	2.74	95.688	0.00013	-0.00001	0.00020
NA	0.08777	68.56	5.838	0.09318	0.08712	0.08299
NI	0.00377	27.12	2.852	0.00389	0.00372	0.00369
P	0.30536	173.57	0.189	0.30470	0.30556	0.30581
PB	0.03192	47.19	3.879	0.03328	0.03161	0.03086
S	0.30895	59.12	0.376	0.30861	0.31025	0.30800
SB	0.00008	3.21	466.122	-0.00032	0.00041	0.00015
SE	-0.00056	-0.32	297.975	0.00046	-0.00248	0.00035
SI	0.28503	55.22	3.881	0.27303	0.29481	0.28724
SN	0.00312	6.55	18.173	0.00375	0.00293	0.00267
SR	0.00764	6,118.05	1.397	0.00755	0.00776	0.00762
TI	0.32932	21,292.14	1.379	0.32582	0.33445	0.32769
TL	-0.00226	-8.21	23.476	-0.00271	-0.00168	-0.00240
V	0.01084	163.26	2.809	0.01074	0.01060	0.01118
Y1	22269.77145	22,269.77	0.153	22292.45239	22286.19082	22230.67115
Y2A	295812.65187	295,812.65	1.214	299175.44732	292028.99271	296233.51557
Y2R	19306.96350	19,306.96	0.085	19318.55644	19288.28469	19314.04938
ZN	0.05010	689.97	0.259	0.05016	0.05020	0.04995
ZR	0.00216	6.36	16.758	0.00224	0.00248	0.00177

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/13/2013 17:30

Sample Number: **7265236** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00245	1.79	17.593	0.00278	0.00196	0.00260
AL	43.05356	4,616.92	0.605	43.05013	42.79489	43.31565
AS	0.00723	-9.49	7.676	0.00774	0.00732	0.00664
B	-0.00570	923.58	9.906	-0.00549	-0.00526	-0.00633
BA	0.29203	204,173.14	0.567	0.29301	0.29012	0.29296
BE	0.00134	366.22	3.664	0.00130	0.00139	0.00132
CA	12.29520	12,691.94	0.765	12.28558	12.20627	12.39375
CD	0.00695	433.76	6.934	0.00711	0.00733	0.00641
CO	0.03318	238.48	0.635	0.03294	0.03328	0.03333
CR	0.09049	984.30	0.604	0.09085	0.09076	0.08987
CU	0.12005	1,381.50	1.362	0.12194	0.11907	0.11915
FE	157.91286	44,078.42	0.704	157.86039	156.82836	159.04984
K	2.45310	894.39	2.289	2.40202	2.44405	2.51324
LI	0.03288	268.06	4.911	0.03121	0.03301	0.03443
MG	10.31885	18,361.25	0.378	10.34990	10.27510	10.33154
MN	2.90208	192,712.72	0.571	2.91325	2.88303	2.90997
MO	0.00337	18.52	3.985	0.00329	0.00353	0.00331
NA	0.94951	997.02	1.472	0.96188	0.93434	0.95230
NI	0.05318	212.62	0.628	0.05287	0.05353	0.05314
P	2.15703	1,253.71	0.157	2.15946	2.15847	2.15315
PB	0.44654	644.33	0.717	0.44542	0.45016	0.44405
S	2.94029	613.37	0.164	2.94443	2.94145	2.93500
SB	-0.01027	6.61	14.421	-0.01188	-0.00896	-0.00998
SE	0.00439	1.35	40.396	0.00642	0.00310	0.00367
SI	4.43791	837.72	0.101	4.43643	4.44296	4.43434
SN	0.05124	69.63	1.112	0.05153	0.05058	0.05159
SR	0.07337	58,972.49	0.542	0.07366	0.07292	0.07352
TI	3.17241	206,500.00	0.452	3.18579	3.15725	3.17418
TL	0.00208	-12.33	41.375	0.00305	0.00174	0.00144
V	0.17834	2,706.69	0.660	0.17927	0.17702	0.17874
Y1	22692.14207	22,692.14	0.111	22663.83709	22711.87271	22700.71643
Y2A	298118.70213	298,118.70	0.782	299483.46561	299445.61959	295427.02121
Y2R	19979.10807	19,979.11	0.537	19994.29326	20077.90396	19865.12697
ZN	0.59014	8,039.84	0.268	0.59102	0.59108	0.58832
ZR	0.01722	42.85	1.883	0.01688	0.01725	0.01753

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/13/2013 17:34

Sample Number: **7265237** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00230	0.32	14.553	0.00246	0.00192	0.00252
AL	67.17878	7,323.36	0.288	67.09238	67.04373	67.40023
AS	0.01052	-10.60	32.076	0.01142	0.00679	0.01336
B	-0.00809	1,140.41	14.215	-0.00934	-0.00708	-0.00785
BA	0.48660	338,469.76	0.588	0.48407	0.48970	0.48602
BE	0.00197	654.94	2.117	0.00200	0.00199	0.00192
CA	23.69132	24,727.78	0.165	23.69172	23.65205	23.73018
CD	0.00808	537.27	2.299	0.00815	0.00787	0.00822
CO	0.03682	280.47	2.448	0.03749	0.03579	0.03717
CR	0.12802	1,396.47	1.216	0.12635	0.12827	0.12943
CU	0.19584	2,323.05	0.971	0.19365	0.19683	0.19704
FE	197.67894	55,124.61	0.287	197.66898	197.11615	198.25168
K	2.94179	1,089.93	0.598	2.92688	2.93732	2.96118
LI	0.04884	380.50	4.854	0.05144	0.04831	0.04678
MG	19.74423	35,536.78	0.351	19.76650	19.66662	19.79957
MN	2.25646	149,091.39	0.852	2.23436	2.26560	2.26942
MO	0.00310	17.33	2.566	0.00301	0.00314	0.00315
NA	1.40532	1,511.15	1.468	1.41762	1.41684	1.38150
NI	0.06577	261.41	1.093	0.06590	0.06499	0.06641
P	4.11945	2,412.83	0.807	4.12323	4.08448	4.15062
PB	0.51545	753.61	0.762	0.51645	0.51112	0.51878
S	1.37090	284.14	1.097	1.37215	1.35526	1.38527
SB	-0.01183	8.86	13.084	-0.01337	-0.01184	-0.01028
SE	0.00494	1.45	94.398	0.00387	0.01003	0.00090
SI	3.21616	617.98	0.517	3.21817	3.19863	3.23167
SN	0.03181	44.55	0.340	0.03186	0.03169	0.03188
SR	0.11088	88,658.62	0.999	0.10960	0.11144	0.11159
TI	4.55913	295,258.72	0.920	4.51295	4.56955	4.59489
TL	0.00321	-15.35	14.810	0.00272	0.00367	0.00323
V	0.22102	3,341.30	0.738	0.21936	0.22109	0.22262
Y1	22863.42568	22,863.43	0.579	22829.94134	23009.21965	22751.11607
Y2A	296627.99071	296,627.99	0.652	298834.82439	295820.35384	295228.79390
Y2R	20304.46397	20,304.46	0.212	20287.72410	20353.33566	20272.33213
ZN	0.72283	9,922.67	0.667	0.72417	0.71748	0.72684
ZR	0.02266	56.87	7.781	0.02213	0.02463	0.02122

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 30 Date/Time: 11/13/2013 17:39

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00221	-3.60	3.707	0.00225	0.00226	0.00211
AL	3.23839	340.68	0.679	3.26048	3.23820	3.21650
AS	0.00015	-3.07	543.642	-0.00010	-0.00053	0.00109
B	0.00211	46.05	12.841	0.00241	0.00199	0.00191
BA	0.01556	10,956.89	0.139	0.01555	0.01555	0.01559
BE	-0.00070	-578.70	5.219	-0.00067	-0.00070	-0.00074
CA	2.02468	2,099.77	0.308	2.02162	2.02057	2.03185
CD	0.00043	10.49	26.663	0.00035	0.00037	0.00056
CO	0.00207	16.92	4.845	0.00209	0.00196	0.00216
CR	0.01283	141.37	0.893	0.01281	0.01296	0.01273
CU	0.01155	125.10	0.838	0.01166	0.01149	0.01150
FE	3.51742	1,011.72	0.374	3.53116	3.50494	3.51615
K	0.09575	34.49	29.475	0.12834	0.07961	0.07931
LI	0.00231	69.76	100.217	0.00111	0.00498	0.00085
MG	0.66222	1,145.88	0.722	0.65699	0.66326	0.66639
MN	0.02354	1,584.81	0.378	0.02355	0.02345	0.02362
MO	0.00012	2.81	134.014	0.00009	-0.00002	0.00028
NA	0.14154	124.45	2.539	0.14498	0.13781	0.14184
NI	0.00420	30.16	11.046	0.00469	0.00415	0.00377
P	0.16628	95.52	0.334	0.16678	0.16638	0.16568
PB	0.07680	111.66	2.222	0.07873	0.07550	0.07616
S	1.64423	340.06	0.202	1.64803	1.64188	1.64280
SB	-0.00086	1.91	168.636	-0.00216	0.00070	-0.00112
SE	0.00460	1.61	26.382	0.00423	0.00361	0.00595
SI	0.55058	103.49	1.954	0.56075	0.53932	0.55168
SN	0.00377	7.49	15.617	0.00332	0.00443	0.00354
SR	0.00653	5,287.43	0.306	0.00653	0.00651	0.00655
TI	0.14149	9,258.60	0.196	0.14121	0.14176	0.14151
TL	-0.00154	-7.51	13.459	-0.00168	-0.00130	-0.00163
V	0.00976	146.85	1.662	0.00995	0.00968	0.00966
Y1	22572.80374	22,572.80	0.203	22520.49180	22591.43171	22606.48771
Y2A	298841.32260	298,841.32	0.145	298610.86310	299341.53413	298571.57058
Y2R	19312.67138	19,312.67	0.154	19342.47360	19283.04053	19312.50000
ZN	0.07372	998.85	0.465	0.07370	0.07339	0.07408
ZR	0.00099	3.63	65.230	0.00086	0.00042	0.00168

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 31 Date/Time: 11/13/2013 17:43

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00177	-9.70	4.140	0.00170	0.00185	0.00177
AL	0.82225	90.08	4.511	0.77963	0.84720	0.83993
AS	0.00018	-2.92	1358.491	0.00292	-0.00117	-0.00123
B	0.00147	28.68	27.776	0.00116	0.00193	0.00131
BA	0.00699	4,911.62	0.639	0.00704	0.00698	0.00695
BE	-0.00088	-653.18	1.739	-0.00089	-0.00086	-0.00087
CA	1.32813	1,396.50	0.364	1.32255	1.33099	1.33085
CD	0.00027	4.07	28.487	0.00020	0.00035	0.00026
CO	0.00094	9.01	32.346	0.00123	0.00098	0.00062
CR	0.00703	74.38	3.938	0.00672	0.00722	0.00716
CU	0.01224	141.75	2.354	0.01206	0.01209	0.01258
FE	1.67061	476.56	0.466	1.67755	1.66220	1.67206
K	-0.01723	-5.27	123.484	-0.00273	-0.00730	-0.04165
LI	-0.00079	50.30	377.141	0.00265	-0.00237	-0.00266
MG	0.32523	558.59	0.842	0.32789	0.32539	0.32242
MN	0.01082	732.62	0.470	0.01080	0.01088	0.01078
MO	0.00032	3.74	60.592	0.00016	0.00053	0.00026
NA	0.10071	81.29	7.363	0.10582	0.09221	0.10411
NI	0.00370	28.06	9.264	0.00372	0.00403	0.00334
P	0.14110	80.16	1.263	0.13916	0.14149	0.14266
PB	0.09522	135.78	1.642	0.09376	0.09502	0.09687
S	1.31610	268.59	0.664	1.31303	1.30931	1.32596
SB	0.00122	3.43	46.466	0.00180	0.00120	0.00067
SE	0.00323	1.10	20.012	0.00255	0.00384	0.00330
SI	0.36709	69.53	2.941	0.35464	0.37391	0.37272
SN	0.00306	6.50	16.799	0.00359	0.00256	0.00303
SR	0.00307	2,479.89	0.592	0.00307	0.00309	0.00305
TI	0.04586	2,996.35	0.421	0.04608	0.04577	0.04573
TL	-0.00216	-7.75	68.022	-0.00101	-0.00382	-0.00166
V	0.00826	122.62	7.269	0.00863	0.00858	0.00757
Y1	22350.36274	22,350.36	0.283	22350.23971	22413.77150	22287.07701
Y2A	296586.39828	296,586.40	0.377	296049.53612	295839.13188	297870.52684
Y2R	19140.11012	19,140.11	0.178	19101.21902	19153.93634	19165.17500
ZN	0.01853	269.41	0.343	0.01855	0.01858	0.01845
ZR	0.00253	7.16	43.797	0.00125	0.00317	0.00317

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 32 Date/Time: 11/13/2013 17:47

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00173	-10.26	19.214	0.00150	0.00159	0.00211
AL	3.37546	354.57	0.463	3.36399	3.36913	3.39325
AS	-0.00062	-3.68	281.891	0.00055	-0.00263	0.00022
B	0.00026	61.59	114.737	-0.00002	0.00057	0.00022
BA	0.02333	16,144.80	0.702	0.02316	0.02333	0.02348
BE	-0.00067	-554.73	3.018	-0.00069	-0.00066	-0.00066
CA	1.29475	1,374.88	0.691	1.28557	1.29522	1.30346
CD	0.00043	21.02	29.227	0.00029	0.00045	0.00054
CO	0.00211	17.70	5.796	0.00200	0.00208	0.00224
CR	0.01022	107.63	4.424	0.01001	0.00992	0.01074
CU	0.00843	73.70	10.347	0.00941	0.00812	0.00776
FE	8.91728	2,557.34	0.322	8.88521	8.92592	8.94073
K	0.05199	19.04	28.618	0.03605	0.05442	0.06550
LI	0.00404	79.53	37.183	0.00320	0.00577	0.00314
MG	0.63303	1,094.62	0.398	0.63561	0.63293	0.63057
MN	0.06292	4,141.30	0.757	0.06247	0.06287	0.06341
MO	0.00009	2.64	134.251	0.00022	0.00003	0.00001
NA	0.10466	86.05	11.769	0.09758	0.09751	0.11888
NI	0.00347	26.25	2.381	0.00349	0.00355	0.00338
P	0.26032	148.29	1.792	0.25660	0.26556	0.25879
PB	0.01663	25.82	2.923	0.01713	0.01616	0.01661
S	0.21345	39.49	1.202	0.21307	0.21618	0.21109
SB	0.00072	3.58	152.469	0.00143	0.00129	-0.00055
SE	0.00290	0.96	10.092	0.00262	0.00285	0.00320
SI	0.48963	92.34	2.699	0.47599	0.50237	0.49053
SN	0.00244	5.70	19.105	0.00296	0.00229	0.00207
SR	0.00580	4,627.79	0.986	0.00574	0.00581	0.00586
TI	0.19916	12,821.62	0.615	0.19777	0.19965	0.20007
TL	-0.00280	-8.47	30.333	-0.00219	-0.00244	-0.00377
V	0.01012	150.74	3.579	0.00971	0.01023	0.01040
Y1	22334.75066	22,334.75	1.103	22510.47077	22053.26586	22440.51535
Y2A	294273.35984	294,273.36	0.663	296348.07820	293998.01193	292473.98940
Y2R	19297.36959	19,297.37	0.382	19379.95000	19238.08099	19274.07777
ZN	0.04836	666.46	1.828	0.04781	0.04938	0.04788
ZR	0.00220	6.44	76.701	0.00236	0.00379	0.00044

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 33 Date/Time: 11/13/2013 17:51

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00165	-11.75	24.737	0.00207	0.00125	0.00165
AL	0.11268	17.36	15.466	0.09944	0.13243	0.10618
AS	-0.00137	-3.54	81.931	-0.00250	-0.00135	-0.00026
B	0.00098	23.41	15.901	0.00105	0.00080	0.00109
BA	0.00434	3,091.65	1.286	0.00439	0.00428	0.00435
BE	-0.00085	-644.92	2.561	-0.00085	-0.00082	-0.00087
CA	1.11835	1,190.97	0.845	1.11497	1.11106	1.12903
CD	-0.00003	-1.34	199.038	0.00003	-0.00005	-0.00006
CO	0.00068	6.88	16.247	0.00056	0.00078	0.00069
CR	0.00066	1.38	84.698	0.00010	0.00067	0.00122
CU	0.00238	6.45	16.949	0.00244	0.00274	0.00195
FE	1.50165	428.61	1.773	1.48490	1.48769	1.53236
K	-0.13847	-47.64	25.124	-0.15788	-0.15923	-0.09831
LI	-0.00226	41.57	90.502	-0.00081	-0.00136	-0.00459
MG	0.13924	240.16	1.630	0.13682	0.14132	0.13960
MN	0.16235	10,815.45	1.545	0.16523	0.16114	0.16068
MO	0.00008	2.61	116.766	-0.00001	0.00018	0.00008
NA	0.10687	87.65	9.310	0.10424	0.09850	0.11787
NI	0.00080	16.24	52.349	0.00128	0.00059	0.00053
P	0.07132	39.92	1.095	0.07048	0.07148	0.07201
PB	0.00548	9.47	12.161	0.00624	0.00510	0.00509
S	1.47958	300.66	0.374	1.47796	1.48574	1.47503
SB	0.00057	2.76	169.419	0.00165	0.00024	-0.00018
SE	0.00522	1.82	65.886	0.00268	0.00914	0.00385
SI	0.09884	21.23	8.374	0.09911	0.09043	0.10697
SN	0.00245	5.69	28.663	0.00324	0.00221	0.00190
SR	0.00488	3,949.74	1.835	0.00497	0.00480	0.00485
TI	0.00515	362.58	3.539	0.00529	0.00494	0.00521
TL	-0.00248	-7.50	38.324	-0.00156	-0.00346	-0.00243
V	-0.00050	-8.34	88.514	-0.00003	-0.00056	-0.00092
Y1	22211.24123	22,211.24	0.241	22266.48121	22159.40875	22207.83373
Y2A	298630.98760	298,630.99	0.958	295328.77734	300216.35576	300347.82969
Y2R	19150.89505	19,150.90	0.465	19181.16014	19220.87500	19050.65000
ZN	0.01402	208.91	0.361	0.01396	0.01406	0.01402
ZR	0.00069	2.92	154.770	-0.00031	0.00057	0.00182

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 34

Date/Time: 11/13/2013 17:55

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51507	7,106.40	0.892	0.51978	0.51059	0.51485
AL	25.32394	2,561.40	0.867	25.09976	25.33328	25.53878
AS	0.49145	196.67	0.863	0.48789	0.49614	0.49033
B	0.49274	4,340.63	0.868	0.49762	0.48964	0.49096
BA	0.51309	338,067.32	0.697	0.51560	0.50899	0.51467
BE	0.49423	215,355.01	0.993	0.49905	0.48924	0.49440
CA	24.96917	24,143.29	1.120	24.73590	24.89228	25.27932
CD	0.49869	8,280.88	0.344	0.49677	0.49921	0.50009
CO	0.49773	2,760.09	0.478	0.49499	0.49901	0.49920
CR	0.49134	5,327.86	1.005	0.49567	0.48596	0.49239
CU	0.51274	6,759.30	0.859	0.51774	0.50943	0.51106
FE	24.88039	6,913.15	1.059	24.64615	24.82940	25.16562
K	24.88295	8,538.60	0.419	24.76512	24.92021	24.96351
LI	0.50040	2,983.34	1.031	0.49472	0.50168	0.50479
MG	24.54857	40,850.04	0.677	24.37411	24.56662	24.70499
MN	0.50235	31,454.57	0.836	0.50611	0.49782	0.50312
MO	0.50508	2,320.62	0.375	0.50299	0.50559	0.50667
NA	24.71210	24,992.10	0.510	24.56918	24.75950	24.80763
NI	0.50197	1,978.30	0.473	0.49936	0.50252	0.50402
P	0.50770	282.23	0.283	0.50612	0.50805	0.50893
PB	0.50628	695.39	0.491	0.50354	0.50692	0.50839
S	24.42490	4,904.30	0.307	24.33957	24.45498	24.48013
SB	0.51332	426.89	0.488	0.51058	0.51387	0.51550
SE	0.49765	178.29	0.535	0.49686	0.49547	0.50062
SI	25.79625	4,570.58	0.926	25.56794	25.77621	26.04462
SN	0.49313	617.57	0.487	0.49038	0.49485	0.49414
SR	0.50580	383,025.59	1.449	0.51427	0.50135	0.50180
TI	0.50481	31,035.54	1.023	0.51048	0.50038	0.50357
TL	0.50066	351.96	0.373	0.49858	0.50218	0.50123
V	0.50191	7,062.48	0.816	0.50663	0.49943	0.49966
Y1	21635.20852	21,635.21	0.295	21708.30947	21606.73333	21590.58275
Y2A	280989.81113	280,989.81	1.036	277996.85222	283808.56528	281164.01590
Y2R	18818.35847	18,818.36	1.071	19009.96703	18836.80000	18608.30838
ZN	0.50279	6,420.63	0.422	0.50039	0.50443	0.50355
ZR	0.50658	1,150.40	0.494	0.50450	0.50589	0.50935

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 35

Date/Time: 11/13/2013 17:59

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00185	-8.60	28.840	0.00230	0.00126	0.00198
AL	-0.03817	1.87	45.411	-0.05710	-0.03433	-0.02308
AS	-0.00294	-4.10	59.304	-0.00123	-0.00287	-0.00472
B	-0.00012	4.17	419.251	0.00046	-0.00053	-0.00030
BA	0.00001	55.57	59.306	0.00000	0.00001	0.00001
BE	-0.00086	-639.37	1.637	-0.00086	-0.00085	-0.00088
CA	-0.00350	86.18	143.872	-0.00485	0.00207	-0.00773
CD	-0.00006	-4.89	69.478	-0.00002	-0.00005	-0.00011
CO	-0.00012	2.31	44.113	-0.00009	-0.00018	-0.00009
CR	0.00032	-2.10	40.965	0.00032	0.00019	0.00045
CU	-0.00143	-46.32	24.330	-0.00149	-0.00174	-0.00106
FE	0.00148	0.38	296.074	-0.00220	0.00635	0.00030
K	-0.11072	-37.29	12.071	-0.11486	-0.12153	-0.09578
LI	-0.00102	47.41	172.846	-0.00305	0.00018	-0.00020
MG	0.00168	4.28	73.107	0.00294	0.00050	0.00158
MN	0.00014	26.57	17.441	0.00011	0.00016	0.00014
MO	0.00013	2.82	205.411	-0.00002	0.00042	-0.00003
NA	-0.00626	-28.47	333.193	0.01482	-0.00674	-0.02686
NI	0.00005	13.42	427.802	0.00002	-0.00016	0.00030
P	0.00069	-0.28	113.080	0.00075	0.00143	-0.00012
PB	0.00053	2.58	64.666	0.00067	0.00077	0.00014
S	-0.00759	-6.24	38.587	-0.01028	-0.00800	-0.00447
SB	0.00214	3.95	9.854	0.00217	0.00233	0.00191
SE	0.00164	0.51	127.177	0.00401	0.00079	0.00012
SI	-0.00071	3.24	1960.341	0.00730	0.00725	-0.01666
SN	-0.00026	2.21	141.297	-0.00042	0.00016	-0.00054
SR	-0.00019	-125.51	2.430	-0.00020	-0.00019	-0.00019
TI	-0.00001	25.98	401.814	0.00003	-0.00006	0.00000
TL	-0.00257	-7.65	1.756	-0.00258	-0.00251	-0.00260
V	-0.00122	-18.98	15.354	-0.00125	-0.00103	-0.00140
Y1	22208.52508	22,208.53	0.289	22260.63391	22228.06292	22136.87842
Y2A	293609.54117	293,609.54	0.786	294297.38237	295494.04762	291037.19351
Y2R	18846.23506	18,846.24	0.584	18731.65138	18855.97880	18951.07500
ZN	-0.00063	17.67	12.834	-0.00065	-0.00054	-0.00070
ZR	0.00197	5.77	80.937	0.00373	0.00062	0.00157

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 36 Date/Time: 11/13/2013 18:04

Sample Number: **7265246** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00218	-1.08	38.475	0.00182	0.00313	0.00158
AL	36.30023	3,909.18	0.417	36.19683	36.47381	36.23006
AS	0.02323	-4.49	2.733	0.02350	0.02251	0.02369
B	-0.01329	1,043.01	13.820	-0.01260	-0.01537	-0.01189
BA	0.31250	220,303.36	0.323	0.31297	0.31134	0.31319
BE	0.00201	683.50	1.893	0.00201	0.00205	0.00197
CA	13.40848	13,888.42	0.925	13.36038	13.54930	13.31577
CD	0.00803	517.76	4.524	0.00794	0.00771	0.00842
CO	0.03560	246.91	0.438	0.03542	0.03571	0.03567
CR	0.10691	1,173.29	1.076	0.10822	0.10611	0.10638
CU	0.11032	1,301.27	0.677	0.10986	0.10993	0.11119
FE	187.12909	51,797.06	0.818	186.32438	188.89477	186.16811
K	2.30782	845.02	1.214	2.31137	2.33389	2.27819
LI	0.04322	334.17	1.867	0.04306	0.04251	0.04410
MG	11.49620	20,529.52	0.683	11.42134	11.57787	11.48940
MN	3.01956	202,182.22	0.309	3.02696	3.00908	3.02263
MO	0.00273	15.61	4.994	0.00282	0.00279	0.00257
NA	1.21644	1,289.27	0.789	1.21084	1.22753	1.21096
NI	0.03580	139.31	0.021	0.03581	0.03579	0.03580
P	3.51030	2,066.65	0.692	3.48363	3.51613	3.53114
PB	0.13688	201.80	0.180	0.13669	0.13716	0.13679
S	1.70630	357.44	0.927	1.69006	1.70718	1.72166
SB	-0.01132	8.22	5.201	-0.01183	-0.01146	-0.01067
SE	0.00524	1.72	57.889	0.00337	0.00874	0.00361
SI	3.24143	615.39	0.923	3.20794	3.25078	3.26557
SN	0.02446	35.04	2.532	0.02381	0.02453	0.02504
SR	0.05254	42,587.81	0.334	0.05262	0.05234	0.05265
TI	2.52834	165,948.34	0.637	2.52934	2.51177	2.54392
TL	0.00239	-10.02	32.746	0.00238	0.00318	0.00161
V	0.14297	2,194.87	0.294	0.14275	0.14346	0.14271
Y1	22984.16982	22,984.17	0.411	23091.54343	22947.63714	22913.32889
Y2A	300599.29193	300,599.29	0.531	300470.42744	302255.24650	299072.20187
Y2R	20063.02281	20,063.02	0.705	20174.22125	19903.72500	20111.12218
ZN	0.65251	9,017.15	0.696	0.64759	0.65340	0.65655
ZR	0.02614	64.61	3.545	0.02585	0.02539	0.02718

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 37 Date/Time: 11/13/2013 18:08

Sample Number: **7265885** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00549	50.84	5.628	0.00546	0.00581	0.00520
AL	182.72558	20,111.15	0.046	182.64506	182.71738	182.81432
AS	0.07083	8.48	1.168	0.07069	0.07008	0.07172
B	0.01309	1,947.40	4.835	0.01382	0.01270	0.01274
BA	2.80545	1,911,306.34	0.354	2.81581	2.79600	2.80455
BE	0.00237	819.78	1.979	0.00242	0.00233	0.00236
CA	189.17717	193,691.17	0.168	188.85868	189.17984	189.49298
CD	0.00822	729.24	2.008	0.00806	0.00821	0.00839
CO	0.24417	1,423.10	0.640	0.24304	0.24351	0.24596
CR	0.39820	4,369.56	0.723	0.40149	0.39614	0.39697
CU	0.38216	4,956.19	0.561	0.38293	0.38380	0.37973
FE	305.45159	81,713.18	0.142	304.96332	305.79366	305.59779
K	12.13361	4,522.20	0.722	12.19729	12.03364	12.16990
LI	0.19697	1,432.98	0.754	0.19719	0.19539	0.19834
MG	66.10441	116,985.98	0.014	66.11127	66.09377	66.10819
MN	17.42928	1,127,971.65	0.473	17.49809	17.45179	17.33797
MO	0.00167	9.98	2.174	0.00169	0.00169	0.00162
NA	3.91917	4,284.43	0.309	3.90844	3.93229	3.91677
NI	0.56255	2,218.48	0.219	0.56116	0.56296	0.56353
P	0.88526	499.38	0.373	0.88654	0.88774	0.88151
PB	0.16297	266.90	0.657	0.16224	0.16248	0.16420
S	0.76408	148.73	0.824	0.76319	0.77077	0.75827
SB	-0.02020	13.26	5.606	-0.01904	-0.02130	-0.02026
SE	0.00862	2.19	37.065	0.01228	0.00637	0.00721
SI	8.39678	1,618.04	0.118	8.38784	8.40750	8.39501
SN	0.02104	29.20	3.845	0.02021	0.02110	0.02182
SR	0.76501	599,087.08	0.146	0.76583	0.76374	0.76545
TI	3.63864	230,844.20	0.307	3.65065	3.63675	3.62852
TL	0.00287	-16.28	95.093	0.00429	0.00459	-0.00028
V	0.65420	9,609.21	0.688	0.65902	0.65347	0.65010
Y1	21998.02565	21,998.03	0.444	22076.71639	22028.76991	21888.59065
Y2A	290563.23172	290,563.23	0.400	289278.74420	290866.71637	291544.23459
Y2R	20436.53855	20,436.54	0.160	20446.68825	20462.88242	20400.04499
ZN	0.44977	6,239.52	0.259	0.44842	0.45048	0.45040
ZR	0.06811	169.19	2.138	0.06643	0.06886	0.06903

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 38 Date/Time: 11/13/2013 18:12

Sample Number: **7266809** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00198	-6.49	27.780	0.00134	0.00232	0.00226
AL	3.63524	390.74	0.394	3.61999	3.63737	3.64838
AS	0.00584	-0.95	18.413	0.00617	0.00464	0.00671
B	0.03785	400.61	1.558	0.03740	0.03763	0.03852
BA	0.06594	46,165.34	0.116	0.06597	0.06585	0.06599
BE	-0.00072	-585.71	1.155	-0.00073	-0.00072	-0.00071
CA	37.50080	37,979.47	0.372	37.37099	37.64818	37.48323
CD	0.00184	44.86	8.005	0.00179	0.00172	0.00201
CO	0.00283	21.84	12.603	0.00251	0.00276	0.00321
CR	0.01156	124.58	2.077	0.01159	0.01177	0.01130
CU	0.03971	531.62	0.745	0.03957	0.04005	0.03951
FE	8.66934	2,546.94	0.214	8.68283	8.64822	8.67696
K	0.33130	120.21	29.657	0.39046	0.21788	0.38555
LI	-0.00043	78.09	717.602	0.00281	-0.00332	-0.00078
MG	4.95397	8,745.19	0.345	4.94205	4.97357	4.94628
MN	0.56171	37,332.75	0.182	0.56077	0.56157	0.56280
MO	0.00113	7.60	28.016	0.00119	0.00141	0.00078
NA	0.65653	674.95	1.575	0.65714	0.64590	0.66656
NI	0.01591	76.97	1.736	0.01619	0.01591	0.01564
P	1.23082	706.85	0.132	1.23130	1.22901	1.23215
PB	0.20304	288.86	0.174	0.20343	0.20293	0.20275
S	8.73722	1,816.54	0.179	8.74340	8.71947	8.74879
SB	0.00099	3.83	133.345	0.00223	0.00113	-0.00039
SE	0.00670	2.38	31.775	0.00497	0.00604	0.00907
SI	1.93259	362.91	0.612	1.92108	1.94472	1.93196
SN	0.02264	31.86	4.266	0.02372	0.02235	0.02186
SR	0.10468	84,166.07	0.263	0.10446	0.10458	0.10499
TI	0.19511	12,732.08	0.174	0.19515	0.19544	0.19476
TL	-0.00085	-7.17	83.979	-0.00074	-0.00162	-0.00020
V	0.02646	397.75	0.461	0.02643	0.02635	0.02659
Y1	22433.43208	22,433.43	0.093	22422.25147	22420.45106	22457.59371
Y2A	298257.96746	298,257.97	0.366	297768.76653	299507.37243	297497.76342
Y2R	19766.35924	19,766.36	0.209	19749.25194	19736.35273	19813.47305
ZN	0.16877	2,240.38	0.076	0.16891	0.16867	0.16872
ZR	0.00486	12.95	9.581	0.00437	0.00491	0.00530

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 39 Date/Time: 11/13/2013 18:16

Sample Number: **7266812** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00222	-2.63	15.383	0.00228	0.00252	0.00185
AL	38.02482	4,109.50	1.061	37.95260	37.66234	38.45953
AS	0.02593	2.70	12.826	0.02796	0.02209	0.02774
B	-0.00021	571.09	507.265	-0.00061	0.00100	-0.00101
BA	0.35903	257,674.53	1.285	0.36433	0.35590	0.35686
BE	0.00094	186.24	2.192	0.00094	0.00095	0.00091
CA	10.36112	10,796.74	0.958	10.41847	10.24652	10.41837
CD	0.00578	280.94	0.661	0.00581	0.00579	0.00573
CO	0.01402	114.07	1.381	0.01407	0.01381	0.01418
CR	0.05906	661.96	0.547	0.05934	0.05914	0.05871
CU	0.11619	1,467.97	0.803	0.11724	0.11547	0.11586
FE	90.02087	26,058.91	0.955	90.36822	89.04179	90.65259
K	2.11676	777.96	2.017	2.15040	2.13115	2.06874
LI	0.02405	213.79	17.224	0.02813	0.02415	0.01985
MG	5.33763	9,596.35	0.252	5.34537	5.32209	5.34542
MN	0.49864	34,007.68	0.967	0.50412	0.49670	0.49508
MO	0.00155	9.88	5.063	0.00156	0.00162	0.00147
NA	1.22239	1,300.37	0.962	1.22460	1.20969	1.23289
NI	0.04037	170.75	0.983	0.04061	0.04059	0.03992
P	2.66037	1,568.10	0.128	2.66431	2.65848	2.65832
PB	4.15526	6,018.21	0.262	4.14290	4.16342	4.15945
S	3.30598	700.94	0.133	3.30553	3.31057	3.30182
SB	-0.00417	6.36	38.356	-0.00297	-0.00356	-0.00599
SE	0.00488	1.58	47.272	0.00359	0.00351	0.00755
SI	4.20155	799.47	0.975	4.20187	4.16042	4.24235
SN	0.03746	52.34	2.030	0.03738	0.03826	0.03675
SR	0.05871	48,447.80	0.899	0.05928	0.05859	0.05824
TI	2.07259	138,507.12	0.889	2.09322	2.06680	2.05776
TL	0.00084	-12.27	152.391	-0.00013	0.00036	0.00230
V	0.13488	2,096.02	1.172	0.13662	0.13447	0.13354
Y1	23011.70333	23,011.70	0.106	23037.60741	22989.29357	23008.20900
Y2A	306061.42026	306,061.42	0.991	302578.11459	308123.92027	307482.22591
Y2R	20135.39320	20,135.39	0.717	20022.39625	20298.05195	20085.73141
ZN	0.63239	8,619.14	0.176	0.63182	0.63367	0.63168
ZR	0.00875	22.60	31.135	0.00792	0.00653	0.01179

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 40 Date/Time: 11/13/2013 18:21

Sample Number: **7266813** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00286	6.45	8.406	0.00259	0.00292	0.00305
AL	30.86810	3,336.08	0.261	30.86708	30.94930	30.78792
AS	0.30043	126.12	0.759	0.30156	0.30192	0.29780
B	0.04908	642.15	2.026	0.04901	0.05010	0.04811
BA	0.68110	481,913.68	1.134	0.68444	0.68660	0.67227
BE	0.00004	-234.89	25.960	0.00005	0.00003	0.00004
CA	4.53278	4,780.49	0.216	4.53171	4.54305	4.52359
CD	0.00406	129.54	2.726	0.00414	0.00410	0.00393
CO	0.00761	80.92	3.105	0.00736	0.00783	0.00765
CR	0.04741	537.21	1.500	0.04726	0.04819	0.04679
CU	0.20730	2,734.74	1.255	0.20596	0.21030	0.20564
FE	30.26926	8,979.17	0.157	30.27851	30.21771	30.31156
K	2.32251	853.39	1.026	2.29713	2.34441	2.32599
LI	0.02109	191.45	8.845	0.02323	0.02020	0.01983
MG	2.38583	4,296.10	0.264	2.39269	2.38447	2.38033
MN	0.12944	8,717.49	1.140	0.12898	0.13110	0.12826
MO	0.00353	19.61	4.448	0.00355	0.00367	0.00336
NA	0.65580	686.65	0.824	0.64956	0.65915	0.65867
NI	0.02817	127.90	0.284	0.02817	0.02809	0.02825
P	2.11695	1,253.44	0.297	2.12311	2.11722	2.11053
PB	8.46447	12,303.66	0.367	8.47768	8.48675	8.42897
S	10.57615	2,265.83	0.527	10.61783	10.59784	10.51278
SB	0.01923	21.96	4.709	0.02025	0.01854	0.01890
SE	0.01057	3.80	23.497	0.01275	0.00786	0.01109
SI	5.02973	956.28	0.148	5.03355	5.02113	5.03451
SN	0.04001	55.97	2.837	0.04132	0.03928	0.03944
SR	0.06034	49,095.65	1.227	0.05998	0.06119	0.05985
TI	2.37665	156,586.83	1.091	2.36875	2.40562	2.35559
TL	0.00340	-9.34	15.799	0.00374	0.00278	0.00367
V	0.08258	1,267.41	1.659	0.08174	0.08416	0.08184
Y1	23111.89378	23,111.89	0.292	23128.38828	23037.70656	23169.58650
Y2A	301758.24043	301,758.24	1.006	302150.06662	298547.12302	304577.53165
Y2R	20133.15367	20,133.15	0.200	20138.88057	20090.41383	20170.16660
ZN	0.39319	5,357.66	0.385	0.39400	0.39413	0.39144
ZR	0.00524	14.11	26.564	0.00681	0.00415	0.00476

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 41 Date/Time: 11/13/2013 18:25

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00201	-3.16	12.784	0.00220	0.00172	0.00211
AL	83.24274	9,225.21	0.446	82.99876	83.05939	83.67008
AS	0.15859	37.96	1.677	0.15716	0.15696	0.16166
B	-0.06424	2,273.28	3.858	-0.06679	-0.06409	-0.06184
BA	0.99567	713,437.61	1.503	0.98186	0.99358	1.01157
BE	0.00420	1,733.46	0.141	0.00419	0.00420	0.00420
CA	12.31370	13,128.46	0.284	12.27699	12.31756	12.34655
CD	0.00962	1,101.13	2.590	0.00954	0.00990	0.00942
CO	0.03689	267.28	0.348	0.03687	0.03678	0.03703
CR	0.10125	1,032.54	0.954	0.10014	0.10191	0.10170
CU	0.35640	4,762.32	0.852	0.35346	0.35622	0.35953
FE	454.71699	114,458.19	0.184	453.78398	454.96137	455.40564
K	3.15766	1,188.91	1.164	3.16878	3.11662	3.18759
LI	0.06776	499.63	3.387	0.06534	0.06804	0.06991
MG	9.77119	17,962.57	0.335	9.73892	9.77028	9.80438
MN	1.59153	108,344.47	0.656	1.58060	1.59256	1.60142
MO	0.01180	60.40	2.015	0.01171	0.01206	0.01161
NA	1.17203	1,276.69	1.960	1.14590	1.18902	1.18116
NI	0.07654	278.27	1.259	0.07577	0.07622	0.07762
P	6.35053	3,776.43	0.177	6.35141	6.36130	6.33890
PB	0.39901	587.69	0.126	0.39946	0.39846	0.39909
S	5.23818	1,119.41	0.305	5.22629	5.25632	5.23192
SB	-0.02511	16.74	2.511	-0.02457	-0.02496	-0.02580
SE	0.01268	4.37	16.852	0.01043	0.01469	0.01293
SI	6.30629	1,227.92	0.526	6.27378	6.30495	6.34014
SN	0.03985	55.98	1.420	0.03928	0.03986	0.04041
SR	0.11235	92,559.63	0.732	0.11156	0.11231	0.11320
TI	3.26993	218,183.71	0.673	3.24830	3.26919	3.29230
TL	0.00464	-12.61	23.531	0.00403	0.00398	0.00589
V	0.21279	3,339.37	0.721	0.21103	0.21382	0.21353
Y1	23208.53932	23,208.54	0.141	23171.47758	23233.55881	23220.58157
Y2A	305600.16100	305,600.16	0.586	307640.87302	304868.22090	304291.38907
Y2R	20635.15361	20,635.15	0.573	20766.58697	20601.14885	20537.72500
ZN	1.70561	23,706.86	0.162	1.70831	1.70573	1.70278
ZR	0.03010	76.30	3.544	0.02931	0.02968	0.03132

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 42 Date/Time: 11/13/2013 18:29

Sample Number: **7265239** Class: **** Batch: 133125708003

Initial Vol: 1.04 Final Vol: 100.00 DF: 1.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00776	81.92	3.579	0.00805	0.00749	0.00775
AL	46.73600	5,191.91	0.382	46.58962	46.68358	46.93482
AS	0.06438	20.87	2.300	0.06421	0.06593	0.06298
B	0.01916	637.69	4.229	0.01924	0.01831	0.01992
BA	0.18764	135,274.05	1.667	0.18737	0.18466	0.19089
BE	0.00302	1,179.00	0.970	0.00300	0.00300	0.00305
CA	26.98092	28,680.06	0.343	26.95730	26.90243	27.08303
CD	0.00806	286.95	1.350	0.00813	0.00811	0.00794
CO	0.02791	194.43	0.441	0.02804	0.02787	0.02780
CR	0.63380	7,506.27	1.126	0.63362	0.62676	0.64103
CU	0.24054	3,319.97	1.363	0.23966	0.23779	0.24417
FE	71.69114	21,495.48	0.333	71.56781	71.53898	71.96663
K	1.55079	586.06	0.757	1.54573	1.54242	1.56421
LI	0.03465	299.21	4.042	0.03369	0.03401	0.03626
MG	8.01837	14,798.10	0.344	8.04595	7.99077	8.01840
MN	0.17625	12,084.15	1.572	0.17659	0.17333	0.17884
MO	0.00904	46.95	2.063	0.00883	0.00915	0.00914
NA	1.58330	1,738.52	0.136	1.58337	1.58112	1.58541
NI	0.05187	223.35	0.167	0.05184	0.05179	0.05196
P	2.76243	1,646.34	0.163	2.76625	2.75745	2.76360
PB	3.42956	5,026.38	0.304	3.44146	3.42211	3.42511
S	52.17628	11,271.21	0.266	52.31801	52.04031	52.17050
SB	-0.01119	6.90	5.477	-0.01188	-0.01074	-0.01093
SE	0.00740	2.52	38.052	0.00924	0.00416	0.00881
SI	5.08487	993.82	0.257	5.09563	5.07036	5.08862
SN	0.05131	71.48	1.464	0.05053	0.05203	0.05137
SR	0.09267	76,790.85	1.555	0.09279	0.09118	0.09405
TI	1.77708	119,281.99	1.367	1.77643	1.75312	1.80168
TL	0.00148	-10.86	91.680	0.00232	-0.00009	0.00220
V	0.11475	1,789.85	1.144	0.11490	0.11337	0.11599
Y1	23261.54727	23,261.55	0.036	23256.05717	23257.31740	23271.26724
Y2A	307400.94607	307,400.95	1.361	307490.00666	311540.69767	303172.13386
Y2R	20697.47486	20,697.47	0.295	20700.97112	20756.71158	20634.74188
ZN	1.17815	16,067.22	0.128	1.17962	1.17661	1.17822
ZR	0.01776	45.74	3.802	0.01707	0.01780	0.01842

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 43 Date/Time: 11/13/2013 18:33

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 5.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00166	-11.00	3.541	0.00171	0.00166	0.00160
AL	17.15668	1,801.20	0.457	17.24675	17.10438	17.11892
AS	0.02820	4.23	9.768	0.02560	0.02792	0.03108
B	-0.00342	468.27	18.567	-0.00336	-0.00409	-0.00282
BA	0.21029	147,163.20	0.567	0.21072	0.20895	0.21122
BE	0.00018	-166.94	11.859	0.00019	0.00016	0.00020
CA	2.56596	2,667.00	0.457	2.55550	2.56375	2.57862
CD	0.00366	221.63	0.552	0.00365	0.00369	0.00365
CO	0.00788	58.07	2.853	0.00813	0.00768	0.00784
CR	0.02096	208.73	0.262	0.02099	0.02089	0.02099
CU	0.07113	906.99	0.749	0.07171	0.07101	0.07067
FE	80.35803	22,661.97	0.297	80.19709	80.24510	80.63189
K	0.52831	189.02	10.304	0.56875	0.54976	0.46642
LI	0.01190	128.99	18.236	0.01438	0.01103	0.01031
MG	2.01715	3,525.56	0.317	2.01707	2.01079	2.02360
MN	0.33356	22,183.57	0.784	0.33471	0.33056	0.33539
MO	0.00227	13.21	4.183	0.00237	0.00220	0.00222
NA	0.24870	238.52	2.542	0.25085	0.25366	0.24158
NI	0.01631	70.83	3.511	0.01640	0.01683	0.01570
P	1.27667	743.82	0.352	1.27401	1.28186	1.27413
PB	0.08646	126.96	2.547	0.08413	0.08851	0.08675
S	1.03856	213.88	0.420	1.03445	1.03810	1.04313
SB	-0.00419	4.98	58.405	-0.00147	-0.00488	-0.00621
SE	0.00542	1.86	23.788	0.00491	0.00688	0.00446
SI	1.27679	238.18	0.822	1.28724	1.26626	1.27687
SN	0.00930	14.80	7.467	0.00890	0.00889	0.01010
SR	0.02309	18,589.41	0.680	0.02316	0.02291	0.02320
TI	0.67518	44,005.68	0.674	0.67656	0.67009	0.67888
TL	0.00021	-7.78	1022.850	0.00163	-0.00226	0.00125
V	0.04318	659.51	1.304	0.04287	0.04284	0.04383
Y1	22755.66718	22,755.67	0.079	22767.91447	22735.00466	22764.08239
Y2A	298368.78728	298,368.79	0.893	297584.57588	301336.31544	296185.47051
Y2R	19537.07667	19,537.08	0.454	19634.28144	19516.56687	19460.38169
ZN	0.34648	4,725.76	0.201	0.34632	0.34724	0.34587
ZR	0.00647	16.60	41.122	0.00778	0.00823	0.00341

LANCASTER LABORATORIES

Run Name: 1331705T72 Instrument ID: 16417

Tube: 44 Date/Time: 11/13/2013 18:37

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00171	-10.47	24.346	0.00123	0.00197	0.00192
AL	8.91532	930.54	0.790	8.93267	8.97545	8.83785
AS	0.01508	0.99	9.084	0.01354	0.01551	0.01618
B	-0.00168	243.02	44.076	-0.00212	-0.00210	-0.00083
BA	0.11046	77,023.27	1.244	0.10891	0.11153	0.11093
BE	-0.00032	-398.92	7.925	-0.00030	-0.00035	-0.00032
CA	1.33557	1,420.68	0.241	1.33415	1.33926	1.33331
CD	0.00246	121.83	2.980	0.00254	0.00240	0.00243
CO	0.00413	31.83	4.141	0.00395	0.00414	0.00429
CR	0.01077	104.03	5.458	0.01009	0.01107	0.01115
CU	0.03788	469.40	2.474	0.03763	0.03892	0.03710
FE	41.29975	11,734.17	0.552	41.34770	41.49981	41.05174
K	0.26599	94.70	15.133	0.21978	0.28477	0.29342
LI	0.00528	87.33	12.266	0.00569	0.00453	0.00560
MG	1.05411	1,828.21	0.412	1.05890	1.05299	1.05044
MN	0.17660	11,707.71	1.478	0.17372	0.17882	0.17724
MO	0.00117	7.94	6.952	0.00126	0.00115	0.00111
NA	0.11265	94.70	3.682	0.11521	0.11488	0.10786
NI	0.00824	42.35	4.216	0.00863	0.00796	0.00813
P	0.65998	383.84	0.453	0.66226	0.66107	0.65660
PB	0.04664	69.29	3.175	0.04715	0.04780	0.04497
S	0.52983	106.66	0.658	0.53243	0.53120	0.52587
SB	-0.00228	3.53	40.137	-0.00157	-0.00195	-0.00331
SE	0.00412	1.41	30.370	0.00426	0.00280	0.00529
SI	0.67978	127.34	1.109	0.68778	0.67874	0.67281
SN	0.00394	7.77	6.265	0.00366	0.00413	0.00403
SR	0.01205	9,680.64	1.413	0.01187	0.01220	0.01209
TI	0.35384	22,986.05	1.266	0.34911	0.35801	0.35440
TL	-0.00183	-8.36	35.287	-0.00115	-0.00190	-0.00244
V	0.02213	336.30	2.054	0.02165	0.02255	0.02219
Y1	22734.70674	22,734.71	0.144	22769.69021	22704.52667	22729.90333
Y2A	297227.33046	297,227.33	0.849	300130.30152	295550.44732	296001.24254
Y2R	19370.20781	19,370.21	0.397	19410.71429	19281.48074	19418.42840
ZN	0.17953	2,458.63	0.317	0.17975	0.17994	0.17888
ZR	0.00486	12.67	53.578	0.00343	0.00786	0.00328

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 45

Date/Time: 11/13/2013 18:41

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.51191	7,013.28	1.018	0.51606	0.51361	0.50607
AL	25.14509	2,521.93	0.481	25.18975	25.00822	25.23729
AS	0.48942	196.48	0.656	0.48919	0.48633	0.49274
B	0.49617	4,339.04	1.241	0.49960	0.49984	0.48906
BA	0.51400	336,300.23	1.690	0.51952	0.51848	0.50398
BE	0.49628	214,749.40	0.958	0.49911	0.49893	0.49079
CA	24.95589	23,927.73	0.603	25.01533	24.78473	25.06762
CD	0.49566	8,257.13	0.197	0.49654	0.49582	0.49461
CO	0.49415	2,749.13	0.238	0.49420	0.49530	0.49295
CR	0.49404	5,320.17	0.836	0.49721	0.49555	0.48937
CU	0.51149	6,695.69	1.335	0.51748	0.51293	0.50406
FE	24.81128	6,836.13	0.807	24.89653	24.58266	24.95465
K	24.71013	8,407.69	0.289	24.77453	24.63343	24.72242
LI	0.49610	2,933.45	0.303	0.49744	0.49637	0.49447
MG	24.33099	40,151.07	0.489	24.43876	24.20323	24.35099
MN	0.50084	31,142.35	0.857	0.50353	0.50310	0.49589
MO	0.50031	2,306.11	0.043	0.50047	0.50039	0.50006
NA	24.44668	24,514.80	0.158	24.45275	24.40548	24.48181
NI	0.49817	1,969.76	0.251	0.49806	0.49947	0.49698
P	0.50142	279.64	0.121	0.50188	0.50165	0.50073
PB	0.50217	691.98	0.623	0.50140	0.50561	0.49950
S	24.18801	4,872.34	0.172	24.14496	24.22810	24.19097
SB	0.50770	423.72	0.322	0.50599	0.50924	0.50786
SE	0.49427	177.65	0.256	0.49483	0.49517	0.49282
SI	25.52953	4,485.29	0.565	25.62330	25.36341	25.60189
SN	0.48878	614.12	0.144	0.48837	0.48959	0.48837
SR	0.50098	376,763.44	1.236	0.50788	0.49590	0.49917
TI	0.50596	30,890.22	1.035	0.50988	0.50798	0.50002
TL	0.49845	351.43	0.221	0.49818	0.49966	0.49751
V	0.50176	7,011.70	0.969	0.50539	0.50365	0.49624
Y1	21704.75522	21,704.76	0.319	21631.28330	21714.27857	21768.70379
Y2A	279035.92335	279,035.92	0.675	277885.60305	278013.83366	281208.33333
Y2R	18659.00815	18,659.01	0.415	18660.57500	18735.55389	18580.89557
ZN	0.49884	6,391.13	0.154	0.49856	0.49971	0.49825
ZR	0.50070	1,127.47	0.892	0.50585	0.49835	0.49789

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 46

Date/Time: 11/13/2013 18:45

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00124	-17.53	23.908	0.00142	0.00141	0.00090
AL	-0.03485	2.23	111.187	0.00026	-0.07643	-0.02839
AS	-0.00065	-3.18	281.675	-0.00255	-0.00052	0.00111
B	-0.00014	4.03	216.653	-0.00012	-0.00045	0.00015
BA	0.00000	49.68	301.522	-0.00001	-0.00001	0.00001
BE	-0.00085	-639.28	0.475	-0.00085	-0.00085	-0.00085
CA	-0.00660	83.50	43.101	-0.00928	-0.00361	-0.00692
CD	-0.00010	-5.69	26.416	-0.00014	-0.00008	-0.00010
CO	-0.00021	1.82	47.585	-0.00016	-0.00014	-0.00032
CR	0.00024	-3.00	258.724	0.00026	-0.00039	0.00085
CU	-0.00166	-49.80	48.846	-0.00149	-0.00095	-0.00254
FE	-0.00040	-0.17	2090.215	-0.00999	0.00280	0.00598
K	-0.08856	-29.80	41.201	-0.09061	-0.12398	-0.05109
LI	0.00010	54.03	2700.007	-0.00175	0.00312	-0.00108
MG	-0.00224	-2.33	11.695	-0.00197	-0.00226	-0.00249
MN	0.00004	20.72	44.178	0.00005	0.00002	0.00006
MO	-0.00008	1.88	205.112	0.00007	-0.00025	-0.00005
NA	-0.00449	-26.68	148.741	0.00125	-0.00290	-0.01182
NI	0.00016	14.01	115.398	-0.00002	0.00035	0.00015
P	0.00056	-0.36	130.216	0.00106	-0.00028	0.00089
PB	0.00158	4.09	53.476	0.00223	0.00188	0.00062
S	-0.00713	-6.22	12.257	-0.00732	-0.00618	-0.00789
SB	0.00000	2.19	9680.047	-0.00051	-0.00053	0.00103
SE	0.00237	0.78	77.011	0.00448	0.00133	0.00130
SI	-0.00003	3.38	6077.818	0.00089	-0.00229	0.00130
SN	0.00029	2.95	168.175	-0.00021	0.00077	0.00032
SR	-0.00022	-151.56	11.206	-0.00019	-0.00024	-0.00023
TI	-0.00011	19.57	22.211	-0.00009	-0.00012	-0.00014
TL	-0.00312	-8.15	24.181	-0.00312	-0.00236	-0.00387
V	-0.00162	-25.00	14.085	-0.00143	-0.00188	-0.00156
Y1	22464.93326	22,464.93	0.237	22416.21469	22456.64135	22521.94374
Y2A	295459.84181	295,459.84	0.507	297108.34990	294182.04365	295089.13188
Y2R	18923.26500	18,923.27	1.147	19168.15417	18754.21068	18847.43014
ZN	-0.00068	17.22	8.411	-0.00071	-0.00061	-0.00071
ZR	0.00101	3.66	283.107	0.00413	0.00040	-0.00150

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 47

Date/Time: 11/13/2013 18:50

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00653	66.35	3.921	0.00677	0.00657	0.00626
AL	0.19370	25.49	15.507	0.17175	0.18141	0.22793
AS	0.01835	4.87	3.392	0.01880	0.01860	0.01764
B	0.04868	452.43	1.282	0.04923	0.04800	0.04882
BA	0.00530	3,808.04	0.127	0.00530	0.00530	0.00529
BE	0.00391	1,580.35	1.514	0.00385	0.00397	0.00390
CA	0.20253	287.90	0.613	0.20129	0.20377	0.20252
CD	0.00494	81.22	2.144	0.00487	0.00506	0.00489
CO	0.00514	32.64	3.995	0.00526	0.00525	0.00490
CR	0.01520	171.78	3.135	0.01489	0.01495	0.01575
CU	0.00911	102.32	4.590	0.00939	0.00930	0.00863
FE	0.19963	56.52	1.957	0.19531	0.20067	0.20291
K	0.42165	146.79	0.927	0.41781	0.42153	0.42562
LI	0.01948	168.42	10.256	0.02179	0.01829	0.01836
MG	0.09725	166.81	1.158	0.09799	0.09595	0.09780
MN	0.00518	366.73	1.673	0.00509	0.00519	0.00526
MO	0.01022	50.97	2.832	0.01036	0.00989	0.01042
NA	0.99842	997.94	1.301	0.99735	1.01191	0.98600
NI	0.01058	56.40	4.839	0.01062	0.01106	0.01004
P	0.09771	55.58	0.602	0.09725	0.09837	0.09751
PB	0.01825	27.65	1.001	0.01823	0.01808	0.01844
S	0.46827	92.99	0.301	0.46973	0.46692	0.46816
SB	0.02134	20.41	3.393	0.02145	0.02056	0.02200
SE	0.01945	7.15	10.887	0.01858	0.02187	0.01791
SI	0.12168	25.16	6.296	0.12453	0.11300	0.12751
SN	0.02013	28.64	3.908	0.01927	0.02082	0.02029
SR	0.00489	4,008.47	0.183	0.00489	0.00490	0.00488
TI	0.00971	668.85	0.314	0.00974	0.00968	0.00972
TL	0.03053	17.64	3.233	0.02993	0.02999	0.03167
V	0.00350	51.62	7.401	0.00380	0.00335	0.00335
Y1	22463.20495	22,463.20	0.093	22487.03025	22448.70437	22453.88023
Y2A	302248.66755	302,248.67	0.276	301952.94803	301601.34910	303191.70553
Y2R	18995.60452	18,995.60	0.096	18997.68334	18976.40522	19012.72500
ZN	0.02187	312.71	0.255	0.02182	0.02185	0.02193
ZR	0.05184	120.00	2.336	0.05136	0.05321	0.05094

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 48

Date/Time: 11/13/2013 18:54

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00151	-10.90	35.930	0.00134	0.00108	0.00212
AL	507.30567	49,700.08	0.682	509.90140	503.37796	508.63763
AS	-0.00847	-16.17	45.910	-0.01049	-0.01094	-0.00399
B	-0.02765	838.43	7.458	-0.02952	-0.02544	-0.02800
BA	0.00014	123.75	20.997	0.00011	0.00014	0.00017
BE	-0.00112	-638.20	1.691	-0.00114	-0.00110	-0.00113
CA	515.77238	444,611.13	0.826	516.08054	511.36805	519.86855
CD	0.00467	413.25	7.371	0.00447	0.00507	0.00447
CO	-0.00032	0.99	107.155	-0.00048	-0.00054	0.00007
CR	0.00270	-36.70	5.516	0.00280	0.00276	0.00253
CU	0.00314	152.88	4.460	0.00312	0.00329	0.00301
FE	204.78229	50,507.22	0.790	206.02649	202.95298	205.36738
K	-0.17087	-55.46	26.361	-0.21082	-0.17974	-0.12205
LI	-0.00145	353.44	207.316	0.00202	-0.00333	-0.00305
MG	552.56623	648,292.69	1.423	544.58230	552.81465	560.30173
MN	0.00359	212.00	3.347	0.00351	0.00373	0.00353
MO	-0.00118	-2.89	21.193	-0.00101	-0.00106	-0.00147
NA	-0.00059	-21.60	2910.400	0.01439	0.00305	-0.01920
NI	0.00361	2.60	3.523	0.00374	0.00361	0.00348
P	0.01200	5.33	11.086	0.01156	0.01349	0.01094
PB	0.00534	130.33	41.090	0.00285	0.00700	0.00618
S	-0.12922	-28.10	5.553	-0.12287	-0.13700	-0.12779
SB	-0.01189	6.32	47.107	-0.00550	-0.01597	-0.01421
SE	0.00174	-1.61	429.448	-0.00634	0.00837	0.00318
SI	0.02962	8.24	10.621	0.03285	0.02657	0.02943
SN	0.00581	8.63	22.744	0.00429	0.00665	0.00650
SR	0.00187	1,261.25	1.850	0.00183	0.00188	0.00189
TI	-0.00416	-201.40	1.075	-0.00411	-0.00418	-0.00418
TL	-0.00271	-6.47	31.383	-0.00261	-0.00360	-0.00191
V	-0.00602	-55.55	10.658	-0.00674	-0.00578	-0.00553
Y1	19196.90227	19,196.90	0.063	19203.83027	19182.85562	19204.02092
Y2A	246656.34658	246,656.35	0.551	247356.37417	247524.08940	245088.57616
Y2R	18014.60752	18,014.61	0.787	17995.54016	18164.96904	17883.31336
ZN	0.00812	359.92	1.373	0.00800	0.00822	0.00815
ZR	0.00602	14.32	17.216	0.00721	0.00533	0.00552

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 49

Date/Time: 11/13/2013 18:58

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21820	2,682.73	1.155	0.22056	0.21849	0.21555
AL	503.75665	49,870.46	0.215	502.68217	503.73984	504.84794
AS	0.09152	20.21	2.564	0.09130	0.08929	0.09397
B	-0.02871	841.35	3.960	-0.02756	-0.02873	-0.02983
BA	0.50195	298,923.70	1.275	0.50781	0.50291	0.49512
BE	0.50480	198,817.38	1.238	0.50958	0.50709	0.49773
CA	508.54732	443,476.54	0.451	509.63930	505.91356	510.08911
CD	0.94402	14,156.82	0.280	0.94664	0.94136	0.94406
CO	0.46006	2,255.43	0.232	0.46116	0.45903	0.45998
CR	0.46881	4,542.68	1.478	0.47440	0.47098	0.46106
CU	0.52369	6,416.73	1.489	0.53215	0.52213	0.51678
FE	202.64118	50,555.10	0.165	202.32723	202.60238	202.99393
K	-0.12262	-40.01	21.124	-0.11686	-0.15092	-0.10008
LI	-0.00129	353.72	206.584	-0.00338	-0.00221	0.00171
MG	545.21659	649,669.60	0.550	547.89904	545.77540	541.97532
MN	0.48201	27,278.97	1.383	0.48732	0.48417	0.47453
MO	-0.00181	-5.45	21.024	-0.00138	-0.00210	-0.00196
NA	0.00721	-14.23	129.763	0.00738	0.01648	-0.00223
NI	0.91905	3,182.01	0.266	0.92174	0.91698	0.91844
P	0.00893	5.14	23.605	0.01072	0.00947	0.00661
PB	0.05035	183.18	3.045	0.04916	0.05208	0.04982
S	-0.14322	-30.55	2.709	-0.14337	-0.13927	-0.14703
SB	0.62456	470.45	0.574	0.62849	0.62147	0.62373
SE	0.04767	13.01	4.500	0.04736	0.04996	0.04570
SI	0.04707	11.32	29.219	0.03652	0.06262	0.04207
SN	0.00504	7.76	12.398	0.00544	0.00535	0.00432
SR	0.00181	1,260.19	1.448	0.00184	0.00179	0.00180
TI	-0.00390	-173.15	1.211	-0.00393	-0.00392	-0.00385
TL	0.08516	39.37	2.518	0.08552	0.08711	0.08286
V	0.48794	6,249.87	1.572	0.49385	0.49070	0.47927
Y1	19169.99311	19,169.99	0.190	19171.07526	19205.76962	19133.13446
Y2A	253979.86687	253,979.87	1.077	251830.46358	253049.75166	257059.38538
Y2R	18204.54306	18,204.54	0.484	18121.30960	18296.73457	18195.58501
ZN	1.04718	11,991.42	0.274	1.05026	1.04459	1.04669
ZR	0.00666	15.86	18.113	0.00792	0.00552	0.00654

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 50

Date/Time: 11/13/2013 19:03

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50670	7,041.06	0.694	0.50666	0.51025	0.50321
AL	24.99060	2,545.17	1.217	25.19519	25.13540	24.64121
AS	0.49085	196.70	0.134	0.49124	0.49009	0.49121
B	0.48413	4,296.29	0.583	0.48381	0.48710	0.48149
BA	0.50421	334,646.78	1.087	0.50871	0.50582	0.49811
BE	0.49071	215,387.86	0.765	0.49285	0.49291	0.48638
CA	24.56896	23,923.58	0.653	24.65966	24.66363	24.38358
CD	0.49638	8,252.83	0.122	0.49590	0.49617	0.49706
CO	0.49636	2,756.05	0.061	0.49671	0.49622	0.49615
CR	0.48605	5,309.15	0.672	0.48648	0.48908	0.48259
CU	0.50405	6,692.69	0.787	0.50498	0.50747	0.49970
FE	24.48210	6,850.66	0.693	24.60855	24.54861	24.28915
K	24.51017	8,468.51	0.577	24.64868	24.51577	24.36604
LI	0.49345	2,962.95	1.264	0.50056	0.49094	0.48887
MG	24.13226	40,442.75	0.434	24.23697	24.13231	24.02749
MN	0.49822	31,424.14	0.749	0.49974	0.50095	0.49396
MO	0.50226	2,310.71	0.094	0.50280	0.50195	0.50202
NA	24.32621	24,771.05	0.187	24.36269	24.34081	24.27511
NI	0.49812	1,965.85	0.203	0.49919	0.49718	0.49799
P	0.50322	280.09	0.034	0.50314	0.50310	0.50341
PB	0.50138	689.55	0.379	0.50341	0.49965	0.50107
S	24.36937	4,899.59	0.101	24.34269	24.39141	24.37401
SB	0.50748	422.61	0.336	0.50862	0.50552	0.50830
SE	0.49598	177.93	0.959	0.49501	0.50115	0.49178
SI	25.40633	4,532.72	0.510	25.38296	25.54601	25.29003
SN	0.48912	613.39	0.349	0.49094	0.48756	0.48886
SR	0.49729	379,353.45	0.723	0.49556	0.50143	0.49489
TI	0.49880	30,890.71	0.744	0.49939	0.50217	0.49482
TL	0.49647	349.42	0.161	0.49569	0.49729	0.49643
V	0.49796	7,058.14	0.761	0.49969	0.50059	0.49362
Y1	21663.58856	21,663.59	0.019	21668.31178	21661.97615	21660.47775
Y2A	283037.27634	283,037.28	0.481	282395.12922	282116.71637	284599.98343
Y2R	18947.52634	18,947.53	0.424	18871.63308	18939.18447	19031.76148
ZN	0.49940	6,385.48	0.066	0.49931	0.49976	0.49912
ZR	0.49343	1,128.28	0.547	0.49590	0.49385	0.49055

LANCASTER LABORATORIES

Run Name: 1331705T72

Instrument ID: 16417

Tube: 51

Date/Time: 11/13/2013 19:07

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00200	-6.70	10.300	0.00176	0.00210	0.00213
AL	0.00350	6.14	466.023	0.01631	0.00903	-0.01485
AS	0.00124	-2.38	73.474	0.00081	0.00230	0.00063
B	-0.00018	3.85	22.483	-0.00022	-0.00014	-0.00018
BA	0.00009	115.36	16.884	0.00007	0.00009	0.00010
BE	-0.00078	-614.08	2.562	-0.00080	-0.00077	-0.00077
CA	0.03369	123.94	5.301	0.03170	0.03422	0.03515
CD	-0.00007	-5.09	87.394	-0.00004	-0.00003	-0.00014
CO	0.00018	4.07	97.053	0.00003	0.00013	0.00038
CR	0.00032	-2.08	129.378	-0.00016	0.00059	0.00054
CU	-0.00109	-42.30	29.275	-0.00081	-0.00144	-0.00102
FE	0.02243	6.36	11.078	0.01962	0.02332	0.02434
K	-0.08258	-28.02	14.565	-0.09597	-0.07906	-0.07270
LI	-0.00155	44.94	70.854	-0.00072	-0.00114	-0.00279
MG	0.03162	55.58	5.658	0.03305	0.03220	0.02962
MN	0.00012	25.95	66.557	0.00020	0.00012	0.00004
MO	-0.00011	1.71	92.840	-0.00002	-0.00010	-0.00023
NA	-0.02531	-48.38	7.694	-0.02665	-0.02620	-0.02308
NI	-0.00004	13.20	315.747	-0.00018	0.00001	0.00005
P	0.00089	-0.17	17.275	0.00102	0.00072	0.00093
PB	0.00189	4.54	59.468	0.00076	0.00301	0.00190
S	-0.00679	-6.15	24.653	-0.00579	-0.00585	-0.00872
SB	0.00069	2.78	199.040	0.00219	-0.00046	0.00033
SE	0.00070	0.16	312.075	-0.00176	0.00245	0.00142
SI	0.00598	4.50	65.870	0.00192	0.00979	0.00623
SN	0.00035	3.03	165.347	0.00090	-0.00024	0.00038
SR	-0.00018	-121.43	7.051	-0.00018	-0.00017	-0.00020
TI	0.00003	29.17	113.264	0.00004	-0.00001	0.00006
TL	-0.00160	-7.00	11.517	-0.00177	-0.00141	-0.00160
V	-0.00123	-19.33	29.158	-0.00101	-0.00164	-0.00102
Y1	22483.75978	22,483.76	0.596	22463.81596	22360.88463	22626.57874
Y2A	299022.80760	299,022.81	0.551	298293.48907	297867.13055	300907.80318
Y2R	19116.39732	19,116.40	0.581	19072.31715	19034.17482	19242.70000
ZN	-0.00067	17.40	20.898	-0.00058	-0.00060	-0.00083
ZR	0.00073	3.03	393.254	-0.00099	-0.00088	0.00406

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ICP-AES Run Data Report

1331707T72

Reviewed By
John W Yanzuk

Reviewed Date
11/14/2013 1:47AM

Data File Name 1331707T72.TXT
Run Name: 1331707T72

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 11:00AM

Method Reference Name(s):
SW-846 3050B
SW-846 6010B

Analyst Employee: 2340

Instrument Parameters:

Individual Integration Time: 10.00 sec Total Integration Time: 30.00 sec Rinse Time: 15.00 sec

Element	Analyte Name	Wavelength Value
AG	Silver	328.06
AL	Aluminum	308.21
AS	Arsenic	189.04
AU	Gold	242.80
B	Boron	249.67
BA	Barium	455.40
BE	Beryllium	313.04
CA	Calcium	317.93
CD	Cadmium	226.50
CO	Cobalt	228.62
CR	Chromium	267.72
CU	Copper	327.40
FE	Iron	261.19
K	Potassium	766.49
LI	Lithium	670.78
MG	Magnesium	285.21
MN	Manganese	257.61
MO	Molybdenum	202.03
NA	Cation Exchange	589.59
NA	Sodium	589.59
NI	Nickel	231.60
P	Phosphorus	177.49
PB	Lead	220.35
SB	Antimony	206.83
SE	Selenium	196.09
SI	Silicon	251.60
SN	Tin	189.99
SR	Strontium	421.55
TI	Titanium	334.94
TL	Thallium	190.86
V	Vanadium	292.40
Y1	Yttrium	224.31
Y2	Yttrium	371.03
ZN	Zinc	213.86
ZR	Zirconium	339.19

The TRACE ICP utilizes Yttrium as an internal standard to compensate for fluctuations in nebulization and plasma conditions. All Yttrium readings are expressed in counts.

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 1 Date/Time: 11/13/2013 22:48

Sample Number: **S0**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	0.000	-0.00081	79.284	-0.00028	-0.00062	-0.00152
AL	0.000	0.00979	80.846	0.00065	0.01418	0.01453
AS	0.000	-0.00703	57.496	-0.00386	-0.00565	-0.01158
B	0.000	-0.00001	194.875	0.00001	-0.00003	-0.00001
BA	0.000	0.00025	29.374	0.00020	0.00033	0.00021
BE	0.000	-0.09978	0.872	-0.09882	-0.10052	-0.09998
CA	0.000	0.00501	3.153	0.00491	0.00519	0.00494
CD	0.000	-0.01441	13.177	-0.01629	-0.01445	-0.01249
CO	0.000	0.00872	39.703	0.01234	0.00837	0.00544
CR	0.000	-0.00001	87.411	0.00000	-0.00002	-0.00001
CU	0.000	-0.00643	10.185	-0.00701	-0.00572	-0.00656
FE	0.000	0.00012	14.121	0.00013	0.00012	0.00010
K	0.000	-0.07495	33.624	-0.09779	-0.07914	-0.04791
LI	0.000	0.00240	19.576	0.00232	0.00198	0.00291
MG	0.000	0.00100	12.624	0.00109	0.00106	0.00086
MN	0.000	0.00374	16.625	0.00436	0.00374	0.00311
MO	0.000	0.00525	18.339	0.00557	0.00416	0.00601
NA	0.000	-0.00080	82.851	-0.00156	-0.00052	-0.00032
NI	0.000	0.03247	6.018	0.03241	0.03445	0.03054
P	0.000	-0.00001	330.229	0.00002	-0.00001	-0.00004
PB	0.000	0.00867	6.950	0.00856	0.00813	0.00932
S	0.000	-0.00032	1.063	-0.00033	-0.00032	-0.00032
SB	0.000	0.00015	34.726	0.00009	0.00016	0.00020
SE	0.000	0.00199	5.233	0.00199	0.00189	0.00210
SI	0.000	0.00011	23.847	0.00014	0.00009	0.00009
SN	0.000	0.00604	25.350	0.00428	0.00688	0.00697
SR	0.000	-0.00047	1.396	-0.00046	-0.00047	-0.00046
TI	0.000	0.00668	16.158	0.00793	0.00596	0.00617
TL	0.000	-0.01692	2.975	-0.01641	-0.01693	-0.01741
V	0.000	-0.00367	34.322	-0.00255	-0.00343	-0.00503
Y1	0.000	22424.01707	0.061	22439.66218	22417.61099	22414.77803
Y2A	0.000	301835.34069	1.107	304087.69154	297996.44511	303421.88541
Y2R	0.000	19066.17896	0.088	19080.33579	19047.55000	19070.65109
ZN	0.000	0.06444	1.625	0.06543	0.06454	0.06334
ZR	0.000	0.00002	291.162	0.00007	-0.00001	-0.00002

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 2 Date/Time: 11/13/2013 22:52

Sample Number: **S1**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AL	50.000	13.26770	0.211	13.25465	13.24862	13.29983
CA	50.000	2.50743	0.286	2.51507	2.50637	2.50084
FE	50.000	0.71532	0.311	0.71746	0.71303	0.71546
K	50.000	45.01444	0.082	45.04446	45.02549	44.97336
MG	50.000	4.27756	0.095	4.28220	4.27481	4.27566
NA	50.000	2.66498	0.066	2.66410	2.66384	2.66701
S	50.000	0.46280	0.057	0.46257	0.46309	0.46275
SI	50.000	0.46353	0.187	0.46412	0.46253	0.46392
Y1	50.000	21228.87305	0.179	21247.00373	21185.28961	21254.32580
Y2R	50.000	18837.02786	0.139	18829.88328	18866.12839	18815.07191

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 3

Date/Time: 11/13/2013 22:56

Sample Number: **S2**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
AG	1.000	2.37181	0.437	2.36238	2.37015	2.38291
AS	1.000	0.92710	0.532	0.92672	0.93221	0.92238
B	1.000	0.02930	0.253	0.02924	0.02927	0.02938
BA	1.000	2.28017	0.730	2.28127	2.26300	2.29624
BE	1.000	75.04687	0.768	74.87260	74.57784	75.69018
CD	1.000	37.62932	0.082	37.60413	37.62029	37.66352
CO	1.000	12.63522	0.197	12.62946	12.66246	12.61374
CU	1.000	2.28309	0.447	2.27246	2.28398	2.29282
LI	1.000	0.30149	0.560	0.30062	0.30042	0.30344
MN	1.000	10.82389	0.525	10.80601	10.77818	10.88746
NI	1.000	8.95587	0.050	8.95596	8.96029	8.95137
P	1.000	0.02530	0.053	0.02531	0.02530	0.02528
PB	1.000	3.11081	0.240	3.11828	3.11077	3.10338
SE	1.000	0.81272	0.130	0.81387	0.81247	0.81180
SR	1.000	2.61663	0.750	2.61176	2.59989	2.63823
TL	1.000	1.69170	0.359	1.69252	1.69732	1.68526
Y1	1.000	21551.90278	0.055	21547.71501	21542.63589	21565.35745
Y2A	1.000	287752.07091	0.489	287728.62823	289171.13983	286356.44467
Y2R	1.000	19002.10577	0.490	18983.52500	19103.16550	18919.62682
ZN	1.000	28.90495	0.041	28.89665	28.89971	28.91850

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 4

Date/Time: 11/13/2013 23:01

Sample Number: **S3**

ELEMENT	CONC (ppm)	AVERAGE INTENSITY	% RSD	INTEGRATIONS #1	#2	#3
CR	1.000	0.03686	0.288	0.03698	0.03682	0.03678
MO	1.000	10.56738	0.223	10.57497	10.58625	10.54094
SB	1.000	0.03732	0.640	0.03748	0.03743	0.03704
SN	1.000	2.87509	0.266	2.88390	2.87125	2.87012
TI	1.000	10.39838	0.201	10.41945	10.39801	10.37767
V	1.000	2.42556	0.353	2.43545	2.42063	2.42059
Y1	1.000	22523.05200	0.060	22513.50730	22517.09316	22538.55554
Y2A	1.000	304080.72321	0.427	302797.29954	304050.96602	305393.90406
Y2R	1.000	19440.78035	0.684	19531.41831	19288.03372	19502.88902
ZR	1.000	0.11701	0.587	0.11643	0.11776	0.11683

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 5

Date/Time: 11/13/2013 23:05

Sample Number: **ICV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.60851	8,427.71	0.976	0.60190	0.61024	0.61339
AL	29.69158	3,055.33	0.501	29.85362	29.56137	29.65975
AS	0.59990	238.73	0.318	0.60096	0.60104	0.59770
B	0.59020	5,177.19	0.996	0.58343	0.59310	0.59406
BA	0.60749	401,434.84	1.194	0.59917	0.61077	0.61251
BE	0.59016	256,539.99	0.876	0.58436	0.59182	0.59429
CA	29.14587	28,427.76	0.582	29.33516	29.09499	29.00747
CD	0.59969	9,834.21	0.149	0.59870	0.59996	0.60042
CO	0.59807	3,285.81	0.290	0.59824	0.59626	0.59972
CR	0.59572	6,354.37	0.689	0.59103	0.59866	0.59747
CU	0.60540	7,949.67	1.380	0.59687	0.60575	0.61357
FE	29.02692	8,112.59	0.576	29.21748	28.95854	28.90475
K	29.41096	10,245.80	0.471	29.56884	29.35476	29.30927
LI	0.60040	3,542.65	1.014	0.60735	0.59786	0.59598
MG	28.92780	48,439.45	0.385	29.05070	28.89905	28.83366
MN	0.59941	37,612.50	0.638	0.59510	0.60075	0.60238
MO	0.60222	2,759.38	0.165	0.60113	0.60247	0.60307
NA	29.20133	30,132.49	0.311	29.29834	29.18734	29.11831
NI	0.59864	2,327.96	0.195	0.59776	0.59819	0.59996
P	0.61337	336.05	0.184	0.61426	0.61210	0.61375
PB	0.60166	819.31	0.570	0.59885	0.60548	0.60065
S	29.43749	5,901.97	0.227	29.40873	29.38974	29.51400
SB	0.61689	502.05	0.281	0.61766	0.61490	0.61811
SE	0.60762	214.25	0.691	0.60280	0.61046	0.60961
SI	30.42462	5,464.29	0.209	30.49159	30.41703	30.36525
SN	0.58674	732.29	0.224	0.58679	0.58539	0.58802
SR	0.59915	454,255.22	1.731	0.59073	0.59598	0.61073
TI	0.60884	36,753.69	0.907	0.60273	0.61032	0.61347
TL	0.59348	413.98	0.296	0.59471	0.59426	0.59147
V	0.59982	8,431.84	1.049	0.59277	0.60181	0.60487
Y1	21672.82777	21,672.83	0.219	21727.20701	21639.74803	21651.52827
Y2A	289809.97349	289,809.97	0.966	292931.82571	288972.16700	287525.92777
Y2R	19368.05046	19,368.05	0.540	19276.29611	19346.06158	19481.79370
ZN	0.60489	7,628.28	0.089	0.60478	0.60547	0.60441
ZR	0.59828	1,355.94	0.668	0.60148	0.59380	0.59956

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 6

Date/Time: 11/13/2013 23:09

Sample Number: **ICB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00007	-9.05	565.419	-0.00012	-0.00043	0.00034
AL	0.00178	3.94	1890.803	0.03488	-0.03255	0.00303
AS	-0.00409	-4.51	27.624	-0.00372	-0.00320	-0.00536
B	0.00188	14.27	16.630	0.00214	0.00153	0.00196
BA	0.00004	100.21	65.313	0.00006	0.00004	0.00001
BE	-0.00046	-603.38	8.040	-0.00043	-0.00050	-0.00045
CA	-0.01152	85.40	23.272	-0.01113	-0.01438	-0.00906
CD	-0.00001	-6.07	81.684	-0.00002	-0.00001	0.00000
CO	0.00007	4.33	339.960	0.00025	0.00016	-0.00020
CR	-0.00004	-0.07	1110.956	-0.00050	0.00035	0.00004
CU	-0.00080	-47.27	59.902	-0.00061	-0.00134	-0.00044
FE	0.00353	3.22	273.148	-0.00004	0.01446	-0.00382
K	0.02072	-18.71	124.489	0.00223	0.05019	0.00975
LI	0.00193	57.39	79.069	0.00269	0.00017	0.00292
MG	0.01246	14.60	6.378	0.01228	0.01333	0.01177
MN	0.00001	23.58	1330.435	0.00013	-0.00016	0.00007
MO	0.00016	3.11	76.218	0.00004	0.00028	0.00015
NA	-0.00537	-34.27	118.826	-0.00343	-0.00018	-0.01249
NI	-0.00002	14.52	2079.421	-0.00043	0.00004	0.00033
P	0.00072	-0.10	88.130	0.00066	0.00139	0.00012
PB	0.00002	3.94	4048.130	-0.00002	-0.00094	0.00104
S	0.00364	-5.22	139.418	0.00443	0.00827	-0.00178
SB	-0.00080	2.76	170.335	-0.00034	0.00027	-0.00232
SE	0.00123	1.34	204.755	-0.00152	0.00341	0.00179
SI	0.01961	5.59	16.282	0.02275	0.01970	0.01637
SN	0.00016	2.92	289.716	0.00066	-0.00022	0.00003
SR	0.00003	-98.67	28.528	0.00004	0.00004	0.00002
TI	-0.00013	32.47	43.322	-0.00007	-0.00018	-0.00014
TL	-0.00294	-7.62	39.827	-0.00247	-0.00207	-0.00427
V	-0.00046	-15.98	22.798	-0.00058	-0.00042	-0.00038
Y1	22496.79230	22,496.79	0.955	22744.74630	22364.60139	22381.02920
Y2A	304036.08418	304,036.08	1.948	310869.51827	300363.73426	300875.00000
Y2R	19265.73559	19,265.74	0.396	19177.80775	19306.55000	19312.84902
ZN	-0.00092	17.13	4.370	-0.00091	-0.00096	-0.00088
ZR	0.00251	5.94	82.776	0.00485	0.00091	0.00176

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 7

Date/Time: 11/13/2013 23:13

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00504	70.73	7.911	0.00499	0.00467	0.00547
AL	0.18200	22.76	23.587	0.22109	0.18886	0.13606
AS	0.01884	5.07	6.484	0.01785	0.02021	0.01848
B	0.04986	446.00	1.373	0.05065	0.04957	0.04937
BA	0.00534	3,800.44	0.941	0.00540	0.00531	0.00531
BE	0.00428	1,571.77	1.128	0.00433	0.00424	0.00427
CA	0.18412	279.90	1.552	0.18090	0.18635	0.18510
CD	0.00506	79.48	0.540	0.00509	0.00506	0.00503
CO	0.00507	32.62	2.923	0.00509	0.00521	0.00492
CR	0.01456	164.57	1.725	0.01485	0.01441	0.01442
CU	0.00979	99.80	6.587	0.00939	0.00945	0.01053
FE	0.18840	56.12	1.965	0.19146	0.18428	0.18944
K	0.49053	146.92	2.736	0.50089	0.49532	0.47537
LI	0.02167	174.14	3.431	0.02242	0.02094	0.02163
MG	0.10606	175.66	1.963	0.10478	0.10493	0.10846
MN	0.00517	365.45	2.290	0.00531	0.00512	0.00510
MO	0.01006	49.73	2.520	0.00979	0.01028	0.01011
NA	0.98730	1,002.15	1.551	0.97862	0.97830	1.00499
NI	0.01066	56.93	3.994	0.01039	0.01115	0.01045
P	0.09921	55.25	0.848	0.10009	0.09841	0.09914
PB	0.01583	25.79	1.053	0.01571	0.01602	0.01576
S	0.48320	93.85	1.414	0.47579	0.48456	0.48925
SB	0.02008	19.98	0.858	0.02025	0.02008	0.01990
SE	0.02222	8.92	1.702	0.02204	0.02196	0.02265
SI	0.12448	24.74	4.897	0.12074	0.12118	0.13151
SN	0.02067	29.14	1.426	0.02050	0.02101	0.02049
SR	0.00516	4,003.81	1.159	0.00522	0.00515	0.00510
TI	0.00978	663.40	2.031	0.00997	0.00957	0.00981
TL	0.03165	18.46	1.433	0.03213	0.03157	0.03123
V	0.00389	48.27	5.101	0.00387	0.00410	0.00371
Y1	22299.62051	22,299.62	0.191	22348.27540	22280.68878	22269.89735
Y2A	306000.83655	306,000.84	0.877	303081.51093	308364.00733	306556.99139
Y2R	19588.41948	19,588.42	0.386	19657.28378	19507.44967	19600.52500
ZN	0.01996	284.92	0.317	0.01988	0.02001	0.01997
ZR	0.05101	117.20	3.158	0.04919	0.05227	0.05157

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 8

Date/Time: 11/13/2013 23:17

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-7.83	304.789	-0.00036	0.00025	-0.00020
AL	487.08867	49,319.62	0.642	490.10460	483.86431	487.29710
AS	-0.00587	-14.60	40.003	-0.00558	-0.00835	-0.00368
B	-0.02223	839.78	23.770	-0.02821	-0.01818	-0.02030
BA	0.00013	140.11	7.509	0.00012	0.00013	0.00013
BE	-0.00067	-596.67	7.108	-0.00062	-0.00067	-0.00071
CA	486.48096	432,243.98	0.881	483.45365	484.60417	491.38506
CD	0.00597	411.39	4.136	0.00584	0.00626	0.00582
CO	-0.00057	0.53	59.133	-0.00057	-0.00091	-0.00024
CR	0.00170	-38.48	53.680	0.00268	0.00087	0.00155
CU	0.00432	153.18	28.173	0.00312	0.00555	0.00430
FE	195.03179	49,482.33	0.724	196.53402	193.73076	194.83061
K	-0.01163	-29.34	351.795	0.01132	-0.05889	0.01266
LI	-0.00197	330.45	176.094	-0.00544	-0.00198	0.00150
MG	521.48437	640,674.63	0.455	522.88650	522.82215	518.74446
MN	0.00349	215.82	3.552	0.00340	0.00343	0.00363
MO	-0.00158	-4.42	7.488	-0.00171	-0.00156	-0.00147
NA	0.01059	-17.48	176.066	-0.00939	0.01363	0.02754
NI	0.00250	0.99	31.609	0.00192	0.00217	0.00340
P	0.01075	4.82	4.207	0.01046	0.01052	0.01128
PB	0.00533	126.68	75.353	0.00317	0.00996	0.00285
S	-0.12727	-28.94	0.674	-0.12641	-0.12813	-0.12726
SB	-0.01123	7.16	33.871	-0.00910	-0.01562	-0.00897
SE	0.00093	-0.90	304.407	0.00123	-0.00203	0.00358
SI	0.04296	9.55	6.577	0.04436	0.04480	0.03970
SN	0.00366	6.40	19.206	0.00440	0.00299	0.00360
SR	0.00206	1,297.31	2.138	0.00203	0.00211	0.00205
TI	-0.00415	-189.25	4.875	-0.00398	-0.00409	-0.00437
TL	-0.00311	-6.43	52.276	-0.00436	-0.00369	-0.00127
V	-0.00539	-56.80	4.459	-0.00560	-0.00543	-0.00513
Y1	19343.48587	19,343.49	0.229	19301.11592	19340.00932	19389.33236
Y2A	260112.85915	260,112.86	0.966	261933.93094	261156.97674	257247.66977
Y2R	18852.63868	18,852.64	0.295	18815.05892	18916.41702	18826.44010
ZN	0.00876	355.85	2.376	0.00884	0.00892	0.00853
ZR	0.00597	13.45	15.139	0.00492	0.00643	0.00654

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 9

Date/Time: 11/13/2013 23:22

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21458	2,691.10	0.652	0.21603	0.21448	0.21324
AL	491.32124	49,615.31	0.379	492.56717	492.21630	489.18024
AS	0.08594	18.60	4.384	0.08988	0.08237	0.08559
B	-0.02667	825.25	2.598	-0.02739	-0.02601	-0.02660
BA	0.48903	295,404.55	0.408	0.48736	0.49124	0.48849
BE	0.49486	196,571.94	0.223	0.49559	0.49359	0.49540
CA	487.88687	432,189.45	0.465	489.11485	485.27027	489.27549
CD	0.94283	14,085.95	0.153	0.94323	0.94122	0.94402
CO	0.46021	2,256.76	0.079	0.46019	0.45986	0.46058
CR	0.46736	4,506.79	0.096	0.46703	0.46787	0.46718
CU	0.51310	6,325.98	0.204	0.51190	0.51359	0.51381
FE	196.36039	49,650.28	0.451	197.07877	196.63038	195.37201
K	-0.02409	-33.46	100.391	0.00162	-0.02750	-0.04639
LI	0.00027	342.98	226.004	0.00003	-0.00018	0.00095
MG	524.72664	641,436.52	0.895	519.36768	528.11141	526.70084
MN	0.47818	27,430.39	0.205	0.47858	0.47890	0.47706
MO	-0.00177	-5.20	1.609	-0.00178	-0.00173	-0.00179
NA	0.01081	-17.23	75.104	0.01661	0.01429	0.00153
NI	0.91313	3,151.86	0.084	0.91231	0.91323	0.91384
P	0.00856	5.04	11.322	0.00768	0.00960	0.00840
PB	0.04863	179.72	4.705	0.04608	0.05050	0.04931
S	-0.13475	-30.36	5.842	-0.14134	-0.13687	-0.12603
SB	0.62490	464.85	0.588	0.62628	0.62074	0.62768
SE	0.05425	15.83	9.400	0.04841	0.05783	0.05651
SI	0.05301	11.28	11.149	0.05676	0.04620	0.05608
SN	0.00507	7.98	28.409	0.00667	0.00467	0.00388
SR	0.00204	1,303.57	0.525	0.00204	0.00203	0.00205
TI	-0.00401	-165.45	1.486	-0.00394	-0.00404	-0.00404
TL	0.08403	39.05	2.006	0.08436	0.08553	0.08221
V	0.48074	6,219.40	0.317	0.48225	0.47920	0.48077
Y1	19383.13202	19,383.13	0.185	19417.36218	19386.08093	19345.95297
Y2A	264889.15125	264,889.15	0.205	265054.65116	265331.42810	264281.37450
Y2R	18799.33738	18,799.34	0.456	18831.71255	18702.11282	18864.18676
ZN	1.04309	11,908.10	0.111	1.04330	1.04185	1.04413
ZR	0.00494	11.16	8.507	0.00448	0.00531	0.00504

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 10

Date/Time: 11/13/2013 23:26

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.49955	7,009.65	1.492	0.49306	0.49790	0.50769
AL	24.43012	2,518.55	1.531	24.69703	24.59059	24.00274
AS	0.49569	197.17	0.551	0.49880	0.49369	0.49457
B	0.48679	4,327.22	1.030	0.48197	0.48641	0.49198
BA	0.49647	332,427.45	2.197	0.48617	0.49536	0.50789
BE	0.48399	213,112.30	1.303	0.47907	0.48178	0.49110
CA	24.15001	23,629.01	1.018	24.25154	24.32884	23.86965
CD	0.49932	8,203.18	0.174	0.49974	0.49990	0.49832
CO	0.49859	2,745.13	0.170	0.49952	0.49837	0.49786
CR	0.49185	5,316.14	1.093	0.48781	0.48979	0.49795
CU	0.49923	6,636.84	1.328	0.49304	0.49843	0.50622
FE	24.06942	6,752.81	1.078	24.11955	24.30018	23.78852
K	24.38299	8,504.98	0.593	24.47882	24.45348	24.21666
LI	0.50315	2,981.69	0.257	0.50235	0.50464	0.50246
MG	23.97036	40,308.12	0.795	24.05525	24.10365	23.75217
MN	0.49304	31,351.61	1.445	0.48769	0.49030	0.50112
MO	0.50089	2,299.96	0.172	0.50183	0.50070	0.50014
NA	24.22676	25,039.15	0.553	24.23252	24.35775	24.09001
NI	0.50023	1,951.47	0.104	0.50084	0.49993	0.49994
P	0.50902	279.34	0.309	0.50959	0.50725	0.51024
PB	0.50522	689.81	0.615	0.50870	0.50271	0.50426
S	24.44430	4,909.55	0.170	24.48728	24.44136	24.40428
SB	0.51247	418.40	0.371	0.51356	0.51027	0.51357
SE	0.50546	178.73	0.417	0.50316	0.50593	0.50730
SI	24.99376	4,497.28	0.630	25.07244	25.09631	24.81251
SN	0.48764	610.25	0.160	0.48741	0.48700	0.48851
SR	0.49304	378,786.47	0.711	0.49084	0.49120	0.49709
TI	0.49958	30,565.17	1.329	0.49392	0.49793	0.50688
TL	0.50038	349.38	0.163	0.50040	0.49955	0.50119
V	0.49021	6,980.35	1.580	0.48332	0.48872	0.49859
Y1	21715.54040	21,715.54	0.233	21665.03063	21715.40000	21766.19057
Y2A	293672.40998	293,672.41	1.234	296749.17164	294588.96620	289679.09211
Y2R	19403.19525	19,403.20	0.969	19322.79588	19268.75374	19618.03614
ZN	0.50344	6,366.00	0.212	0.50455	0.50333	0.50243
ZR	0.49733	1,129.21	0.675	0.49544	0.50121	0.49534

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 11

Date/Time: 11/13/2013 23:30

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-8.62	470.631	-0.00017	0.00008	0.00001
AL	0.01395	5.22	221.790	0.04961	-0.00220	-0.00557
AS	-0.00267	-3.92	28.007	-0.00225	-0.00222	-0.00353
B	0.00112	7.53	45.354	0.00157	0.00120	0.00057
BA	0.00012	160.36	5.923	0.00013	0.00012	0.00011
BE	-0.00044	-594.33	4.219	-0.00042	-0.00044	-0.00046
CA	0.00802	105.32	40.309	0.00544	0.01164	0.00697
CD	0.00008	-4.57	89.871	0.00000	0.00013	0.00010
CO	0.00007	4.32	456.656	-0.00020	0.00040	0.00000
CR	-0.00013	-1.02	246.210	-0.00048	-0.00004	0.00013
CU	-0.00038	-41.62	70.639	-0.00068	-0.00026	-0.00019
FE	0.01403	6.22	26.274	0.01410	0.01031	0.01768
K	0.01091	-22.30	137.636	-0.00566	0.02361	0.01477
LI	-0.00023	45.46	419.874	-0.00123	0.00064	-0.00008
MG	0.02664	38.92	5.605	0.02587	0.02569	0.02836
MN	0.00039	48.68	5.687	0.00037	0.00042	0.00039
MO	0.00003	2.52	403.969	-0.00010	0.00015	0.00005
NA	-0.00851	-37.85	191.901	-0.00333	0.00461	-0.02682
NI	-0.00004	14.50	359.641	0.00005	0.00003	-0.00019
P	0.00087	-0.01	65.830	0.00022	0.00131	0.00108
PB	0.00009	4.03	1439.966	0.00131	0.00012	-0.00117
S	-0.00172	-6.35	225.615	0.00107	-0.00008	-0.00614
SB	-0.00053	2.98	309.497	0.00101	-0.00224	-0.00036
SE	-0.00170	0.28	50.421	-0.00256	-0.00167	-0.00085
SI	0.00961	3.84	40.403	0.01355	0.00951	0.00578
SN	-0.00015	2.53	179.172	0.00005	-0.00005	-0.00046
SR	0.00004	-94.68	68.674	0.00007	0.00002	0.00003
TI	0.00044	68.67	29.026	0.00058	0.00032	0.00042
TL	-0.00274	-7.49	34.575	-0.00383	-0.00209	-0.00231
V	-0.00065	-18.78	48.965	-0.00067	-0.00095	-0.00032
Y1	22555.55772	22,555.56	0.106	22554.33480	22532.23903	22580.09932
Y2A	304789.10103	304,789.10	0.191	305111.85516	305136.99201	304118.45593
Y2R	19440.03546	19,440.04	0.818	19257.22976	19545.61114	19517.26547
ZN	-0.00083	18.37	4.504	-0.00085	-0.00079	-0.00085
ZR	0.00132	3.28	185.055	0.00345	0.00183	-0.00134

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 12 Date/Time: 11/13/2013 23:35

Sample Number: **7266814** Class: U*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00031	-12.56	32.087	-0.00023	-0.00042	-0.00027
AL	1.15760	126.15	1.801	1.13494	1.17596	1.16190
AS	-0.00069	-3.68	71.798	-0.00075	-0.00017	-0.00115
B	0.00457	95.25	11.904	0.00411	0.00517	0.00442
BA	0.02757	19,360.38	1.320	0.02748	0.02725	0.02797
BE	-0.00026	-515.95	5.860	-0.00025	-0.00025	-0.00028
CA	3.01038	3,122.37	0.795	3.02359	2.98277	3.02477
CD	0.00072	24.75	12.343	0.00064	0.00070	0.00081
CO	0.00308	22.73	5.109	0.00290	0.00317	0.00318
CR	0.00324	34.00	7.390	0.00320	0.00303	0.00350
CU	0.01397	152.74	1.904	0.01374	0.01427	0.01391
FE	9.26570	2,688.41	0.636	9.32611	9.20839	9.26261
K	0.10243	10.03	19.272	0.11358	0.11407	0.07964
LI	0.00184	60.78	102.934	0.00396	0.00034	0.00121
MG	0.40196	696.11	0.215	0.40113	0.40188	0.40286
MN	0.29882	19,864.23	1.439	0.29858	0.29465	0.30324
MO	0.00101	7.30	148.576	0.00273	0.00033	-0.00003
NA	0.12529	103.51	10.176	0.12038	0.13976	0.11572
NI	0.00630	39.25	5.160	0.00593	0.00645	0.00652
P	0.29150	166.69	0.688	0.28920	0.29288	0.29243
PB	2.73368	3,867.29	1.140	2.69769	2.75166	2.75171
S	0.98503	201.56	0.463	0.97982	0.98699	0.98829
SB	-0.00276	1.87	13.661	-0.00313	-0.00279	-0.00237
SE	-0.00041	0.75	374.905	-0.00169	-0.00081	0.00128
SI	0.34045	65.07	1.646	0.33403	0.34439	0.34293
SN	0.00375	7.65	4.295	0.00381	0.00387	0.00356
SR	0.01925	15,326.52	1.243	0.01918	0.01904	0.01951
TI	0.07691	4,944.58	1.012	0.07676	0.07622	0.07775
TL	-0.00285	-7.85	13.525	-0.00328	-0.00269	-0.00256
V	0.00939	132.54	4.449	0.00916	0.00913	0.00987
Y1	22767.52455	22,767.52	0.968	23021.81188	22633.90717	22646.85459
Y2A	306869.36674	306,869.37	1.364	307837.70764	310487.17522	302283.21736
Y2R	19935.78351	19,935.78	0.688	19898.17682	20087.74158	19821.43214
ZN	0.01790	276.59	1.609	0.01758	0.01796	0.01815
ZR	0.00283	6.89	69.146	0.00491	0.00103	0.00254

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 13 Date/Time: 11/13/2013 23:39

Sample Number: **7266814** Class: UP** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.02467	489.69	2.251	0.02517	0.02407	0.02476
AL	2.46813	261.86	1.578	2.47466	2.42631	2.50341
AS	0.62475	259.51	0.310	0.62253	0.62611	0.62561
B	0.24571	2,246.58	0.994	0.24311	0.24795	0.24607
BA	0.09383	65,045.32	0.493	0.09331	0.09420	0.09398
BE	0.02378	10,455.04	0.372	0.02368	0.02384	0.02381
CA	4.34744	4,399.96	0.912	4.37590	4.30214	4.36427
CD	0.06383	1,096.93	0.185	0.06378	0.06397	0.06375
CO	0.13284	762.93	0.395	0.13294	0.13332	0.13228
CR	0.25004	2,795.94	0.602	0.24879	0.25171	0.24963
CU	0.66053	9,126.07	0.468	0.65761	0.66378	0.66022
FE	10.19206	2,913.41	0.502	10.23812	10.13706	10.20100
K	2.58645	889.99	1.091	2.61861	2.57489	2.56585
LI	1.25259	7,411.27	0.499	1.25879	1.24629	1.25270
MG	1.60869	2,764.03	0.731	1.61246	1.59551	1.61809
MN	0.38152	25,096.59	0.576	0.37914	0.38348	0.38194
MO	0.25245	1,203.90	0.251	0.25285	0.25279	0.25172
NA	2.58750	2,682.09	0.634	2.59349	2.56895	2.60006
NI	0.20171	825.42	0.280	0.20213	0.20193	0.20107
P	1.57148	893.22	0.194	1.57254	1.57386	1.56804
PB	3.39415	4,750.70	0.206	3.40005	3.39600	3.38641
S	1.01270	204.82	0.100	1.01215	1.01209	1.01387
SB	0.51970	436.25	0.390	0.51739	0.52118	0.52053
SE	0.99955	366.05	0.437	0.99664	1.00457	0.99745
SI	0.36983	69.79	2.704	0.37455	0.35835	0.37660
SN	0.74611	967.32	0.207	0.74754	0.74632	0.74448
SR	0.04531	35,885.18	0.474	0.04508	0.04551	0.04533
TI	0.20292	12,851.15	0.631	0.20148	0.20392	0.20336
TL	1.34481	1,018.15	0.432	1.34533	1.35035	1.33876
V	0.13413	1,961.77	1.183	0.13277	0.13587	0.13376
Y1	22530.68074	22,530.68	0.241	22487.14866	22513.47012	22591.42343
Y2A	303701.58250	303,701.58	0.285	304694.74818	303097.99536	303312.00397
Y2R	19649.38714	19,649.39	0.547	19527.84419	19688.13509	19732.18213
ZN	0.16675	2,220.72	0.240	0.16712	0.16681	0.16632
ZR	1.23530	2,840.01	0.631	1.23769	1.22659	1.24161

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 14 Date/Time: 11/13/2013 23:43

Sample Number: **7266817** Class: D*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00043	-1.90	35.802	0.00048	0.00025	0.00054
AL	1.20420	129.97	1.216	1.21980	1.19077	1.20202
AS	0.00069	-3.01	161.267	0.00194	0.00028	-0.00016
B	0.00529	94.19	5.561	0.00511	0.00562	0.00512
BA	0.02584	18,054.78	0.894	0.02610	0.02566	0.02577
BE	-0.00032	-538.40	8.160	-0.00033	-0.00033	-0.00029
CA	2.98147	3,067.69	0.420	2.96776	2.99227	2.98437
CD	0.00058	20.10	10.680	0.00054	0.00056	0.00065
CO	0.00249	19.28	5.052	0.00264	0.00241	0.00242
CR	0.00363	38.60	14.599	0.00325	0.00341	0.00424
CU	0.01484	163.92	4.950	0.01429	0.01454	0.01567
FE	8.12124	2,338.11	0.113	8.11576	8.13185	8.11610
K	0.10410	10.51	32.736	0.14141	0.09629	0.07460
LI	-0.00083	44.51	412.006	-0.00002	0.00212	-0.00459
MG	0.38844	666.88	0.752	0.38996	0.38508	0.39029
MN	0.24890	16,460.05	0.965	0.25139	0.24660	0.24871
MO	0.00022	3.41	15.599	0.00023	0.00024	0.00018
NA	0.12121	98.28	8.957	0.13250	0.11084	0.12029
NI	0.00649	39.98	2.113	0.00665	0.00642	0.00640
P	0.28707	163.39	0.163	0.28726	0.28653	0.28741
PB	2.75350	3,877.42	0.121	2.74995	2.75396	2.75659
S	0.97630	198.81	0.375	0.97207	0.97844	0.97839
SB	-0.00049	3.68	326.566	0.00133	-0.00169	-0.00111
SE	0.00086	1.21	250.884	-0.00153	0.00144	0.00268
SI	0.38069	71.90	0.880	0.38072	0.37732	0.38402
SN	0.00343	7.20	20.299	0.00273	0.00412	0.00345
SR	0.01846	14,618.65	0.685	0.01859	0.01834	0.01845
TI	0.08001	5,114.16	1.357	0.08126	0.07938	0.07938
TL	-0.00168	-6.97	53.895	-0.00127	-0.00105	-0.00272
V	0.00970	136.39	2.011	0.00979	0.00947	0.00982
Y1	22660.95469	22,660.95	0.150	22633.81638	22650.02999	22699.01771
Y2A	305179.93691	305,179.94	0.715	303256.86177	307551.66997	304731.27899
Y2R	19769.67673	19,769.68	0.135	19739.33200	19789.40272	19780.29547
ZN	0.01770	271.20	0.371	0.01773	0.01775	0.01763
ZR	0.00269	6.54	57.080	0.00092	0.00345	0.00371

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 15 Date/Time: 11/13/2013 23:47

Sample Number: **7266815** Class: R*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00549	80.63	2.205	0.00537	0.00548	0.00561
AL	1.98243	209.85	0.691	1.99820	1.97329	1.97582
AS	0.01462	2.87	6.510	0.01572	0.01413	0.01401
B	0.20131	1,850.74	0.789	0.20314	0.20031	0.20047
BA	0.24967	172,981.27	0.691	0.25166	0.24860	0.24874
BE	0.00459	1,700.38	1.232	0.00465	0.00455	0.00456
CA	3.85899	3,896.66	0.845	3.84617	3.83474	3.89607
CD	0.00585	113.23	2.509	0.00592	0.00568	0.00594
CO	0.05702	331.99	0.393	0.05726	0.05699	0.05681
CR	0.02462	272.72	1.657	0.02459	0.02423	0.02504
CU	0.04177	526.18	2.480	0.04270	0.04065	0.04195
FE	9.97511	2,836.93	0.690	9.90468	9.97836	10.04230
K	1.30371	433.26	1.859	1.29393	1.33131	1.28589
LI	0.10578	667.86	2.375	0.10470	0.10399	0.10865
MG	0.67380	1,148.45	0.229	0.67214	0.67519	0.67408
MN	0.43671	28,729.27	0.780	0.44009	0.43328	0.43676
MO	0.20903	1,000.00	0.221	0.20937	0.20850	0.20921
NA	1.20832	1,230.48	1.461	1.22467	1.21068	1.18961
NI	0.06137	261.58	0.130	0.06140	0.06144	0.06128
P	0.36986	210.09	0.272	0.37034	0.37054	0.36870
PB	2.73452	3,838.68	0.135	2.73535	2.73047	2.73772
S	1.15578	235.40	0.525	1.14877	1.15927	1.15929
SB	0.04714	43.10	1.711	0.04621	0.04762	0.04759
SE	0.01565	6.62	3.082	0.01550	0.01525	0.01618
SI	0.85042	156.44	2.422	0.84709	0.83168	0.87247
SN	0.41255	537.57	0.393	0.41342	0.41356	0.41068
SR	0.12743	101,172.67	0.786	0.12855	0.12663	0.12710
TI	0.19583	12,402.14	0.628	0.19723	0.19492	0.19535
TL	0.01561	4.79	7.470	0.01466	0.01691	0.01526
V	0.06119	884.99	0.672	0.06154	0.06074	0.06130
Y1	22593.26067	22,593.26	0.174	22547.82840	22618.07972	22613.87389
Y2A	303760.76415	303,760.76	0.809	303660.14324	306267.27844	301354.87078
Y2R	19547.56022	19,547.56	0.172	19582.05859	19545.91327	19514.70882
ZN	0.06949	947.74	0.177	0.06964	0.06943	0.06942
ZR	0.08548	195.78	2.036	0.08370	0.08555	0.08718

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 16 Date/Time: 11/13/2013 23:51

Sample Number: **7266816** Class: M*** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00546	80.57	12.786	0.00503	0.00507	0.00626
AL	2.03477	214.11	0.763	2.01686	2.04457	2.04289
AS	0.01675	3.84	2.579	0.01704	0.01625	0.01696
B	0.19100	1,783.06	0.717	0.19010	0.19257	0.19031
BA	0.23411	165,016.82	0.403	0.23401	0.23510	0.23322
BE	0.00433	1,610.26	0.366	0.00435	0.00432	0.00432
CA	3.52625	3,550.72	0.607	3.50645	3.54896	3.52335
CD	0.00546	105.14	2.795	0.00532	0.00544	0.00563
CO	0.05450	319.15	0.566	0.05447	0.05482	0.05421
CR	0.02341	264.00	0.936	0.02317	0.02360	0.02344
CU	0.04002	510.49	1.118	0.03997	0.04049	0.03960
FE	8.96088	2,536.49	0.655	8.93277	9.02835	8.92153
K	1.22485	403.34	1.868	1.19929	1.24341	1.23185
LI	0.10142	638.82	0.754	0.10174	0.10197	0.10055
MG	0.64930	1,100.72	0.229	0.65102	0.64833	0.64855
MN	0.29394	19,679.37	0.208	0.29362	0.29464	0.29354
MO	0.19881	955.65	0.676	0.19727	0.19938	0.19977
NA	1.11961	1,132.11	1.033	1.12408	1.10648	1.12827
NI	0.05928	254.44	0.770	0.05882	0.05973	0.05930
P	0.36006	205.46	0.931	0.35648	0.36312	0.36059
PB	2.78870	3,933.04	0.769	2.76452	2.79613	2.80544
S	1.07785	220.14	0.889	1.06685	1.08432	1.08238
SB	0.04524	41.64	1.020	0.04519	0.04572	0.04480
SE	0.01438	6.19	6.227	0.01540	0.01405	0.01370
SI	0.53100	98.06	1.746	0.52821	0.52345	0.54135
SN	0.39559	517.99	0.753	0.39215	0.39737	0.39724
SR	0.11966	96,641.24	0.327	0.11967	0.12004	0.11926
TI	0.19994	12,880.61	0.096	0.19985	0.20016	0.19981
TL	0.01402	3.57	5.848	0.01335	0.01377	0.01493
V	0.05823	856.29	0.654	0.05817	0.05864	0.05789
Y1	22699.34579	22,699.35	0.530	22838.00626	22623.68474	22636.34638
Y2A	309020.14095	309,020.14	0.439	310279.14724	307584.57341	309196.70220
Y2R	19446.12918	19,446.13	0.451	19483.97947	19345.81838	19508.58969
ZN	0.06651	911.78	0.575	0.06608	0.06667	0.06679
ZR	0.07712	175.76	0.604	0.07765	0.07696	0.07676

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 17 Date/Time: 11/13/2013 23:55

Sample Number: **7266814** Class: UL** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 50.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00025	-11.90	121.201	-0.00015	-0.00059	-0.00001
AL	0.19593	24.44	16.194	0.16526	0.19390	0.22862
AS	-0.00157	-3.58	106.413	-0.00227	-0.00278	0.00034
B	0.00144	21.33	28.908	0.00148	0.00185	0.00101
BA	0.00533	3,810.24	0.591	0.00537	0.00532	0.00531
BE	-0.00036	-561.95	4.726	-0.00034	-0.00037	-0.00037
CA	0.57136	669.42	2.016	0.57814	0.57786	0.55806
CD	0.00004	-1.80	4.726	0.00004	0.00004	0.00004
CO	0.00055	7.29	51.111	0.00023	0.00069	0.00074
CR	0.00046	5.08	37.335	0.00065	0.00031	0.00044
CU	0.00227	-5.98	11.392	0.00226	0.00202	0.00253
FE	1.77576	515.30	0.539	1.77333	1.78632	1.76763
K	0.03147	-15.39	226.996	0.11295	-0.02029	0.00174
LI	0.00093	53.46	124.085	0.00181	0.00135	-0.00037
MG	0.08389	139.12	1.417	0.08449	0.08252	0.08466
MN	0.05816	3,889.25	0.306	0.05830	0.05796	0.05821
MO	-0.00013	1.75	170.449	0.00013	-0.00028	-0.00024
NA	0.02577	-2.33	20.308	0.03157	0.02138	0.02437
NI	0.00125	19.54	15.707	0.00104	0.00129	0.00142
P	0.05574	31.30	3.364	0.05447	0.05790	0.05486
PB	0.53442	755.43	0.320	0.53244	0.53536	0.53545
S	0.18977	33.78	1.925	0.18820	0.18717	0.19395
SB	-0.00208	1.85	86.274	-0.00051	-0.00170	-0.00403
SE	-0.00010	0.86	987.954	0.00005	0.00083	-0.00118
SI	0.06464	14.01	5.378	0.06832	0.06417	0.06142
SN	0.00037	3.21	73.168	0.00015	0.00028	0.00067
SR	0.00373	2,873.46	0.576	0.00375	0.00371	0.00374
TI	0.01446	963.88	0.897	0.01459	0.01444	0.01434
TL	-0.00207	-7.05	21.836	-0.00196	-0.00256	-0.00167
V	0.00150	13.52	20.840	0.00181	0.00118	0.00151
Y1	22652.91211	22,652.91	0.192	22687.11086	22667.75268	22603.87279
Y2A	307217.50510	307,217.51	0.566	305602.30285	306992.83811	309057.37434
Y2R	19807.76280	19,807.76	0.607	19813.02312	19685.02093	19925.24436
ZN	0.00262	65.84	1.245	0.00262	0.00259	0.00266
ZR	0.00152	3.84	189.115	0.00455	-0.00115	0.00115

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 18 Date/Time: 11/13/2013 23:59

Sample Number: **7265225** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00028	-12.32	120.808	-0.00024	-0.00063	0.00004
AL	1.19070	130.51	2.469	1.22214	1.18607	1.16388
AS	-0.00063	-3.14	211.973	-0.00200	0.00065	-0.00053
B	0.00190	20.09	18.025	0.00230	0.00174	0.00167
BA	0.01516	10,774.04	0.529	0.01518	0.01508	0.01523
BE	-0.00033	-552.92	8.567	-0.00034	-0.00030	-0.00035
CA	0.66538	773.38	1.075	0.66300	0.65972	0.67342
CD	0.00027	0.37	19.925	0.00025	0.00033	0.00023
CO	0.00035	6.57	126.163	0.00080	0.00031	-0.00007
CR	0.00127	14.66	1.387	0.00126	0.00127	0.00129
CU	0.01113	117.11	6.545	0.01187	0.01042	0.01110
FE	0.87597	258.83	1.390	0.86343	0.88775	0.87672
K	0.05923	-5.52	56.858	0.06487	0.08974	0.02309
LI	-0.00070	44.46	177.693	-0.00170	0.00070	-0.00111
MG	0.13134	224.50	0.813	0.13191	0.13199	0.13010
MN	0.01361	934.89	0.782	0.01373	0.01352	0.01360
MO	-0.00008	1.99	15.693	-0.00007	-0.00008	-0.00010
NA	0.01482	-14.13	97.485	0.01496	0.00030	0.02920
NI	0.00129	19.87	33.530	0.00103	0.00178	0.00104
P	0.13063	74.31	0.381	0.13007	0.13084	0.13099
PB	0.01967	32.03	0.646	0.01981	0.01956	0.01964
S	0.80609	163.64	0.674	0.80700	0.81101	0.80025
SB	-0.00023	3.34	354.733	0.00038	-0.00113	0.00008
SE	-0.00060	0.68	265.344	0.00007	0.00054	-0.00241
SI	0.25877	50.31	3.379	0.25085	0.26815	0.25731
SN	0.00246	5.95	20.973	0.00246	0.00194	0.00297
SR	0.00543	4,272.01	0.917	0.00545	0.00538	0.00547
TI	0.04611	3,006.54	0.718	0.04598	0.04586	0.04649
TL	-0.00201	-7.14	25.987	-0.00162	-0.00261	-0.00181
V	0.00235	26.47	22.490	0.00223	0.00190	0.00293
Y1	22729.75229	22,729.75	0.042	22739.35901	22729.62605	22720.27180
Y2A	309469.09306	309,469.09	0.455	309492.67155	310865.67288	308048.93475
Y2R	20070.49026	20,070.49	0.720	20198.25779	20099.52134	19913.69166
ZN	0.02828	399.29	0.450	0.02824	0.02843	0.02818
ZR	0.00247	6.08	82.595	0.00111	0.00148	0.00481

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 19 Date/Time: 11/14/2013 00:03

Sample Number: **7265226** Class: **** Batch: 133125708003

Initial Vol: 1.02 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00015	-10.60	382.140	-0.00057	-0.00036	0.00049
AL	7.05237	751.68	0.644	7.06951	7.00087	7.08673
AS	0.00089	-2.52	25.391	0.00087	0.00068	0.00113
B	0.00145	17.19	6.880	0.00141	0.00156	0.00137
BA	0.04440	31,800.41	0.266	0.04427	0.04444	0.04450
BE	-0.00008	-443.74	3.375	-0.00009	-0.00008	-0.00009
CA	0.29957	402.47	1.356	0.30406	0.29850	0.29615
CD	0.00023	0.07	9.433	0.00022	0.00026	0.00021
CO	0.00062	9.62	35.081	0.00067	0.00038	0.00080
CR	0.00574	66.43	6.020	0.00592	0.00534	0.00596
CU	0.01215	124.32	3.147	0.01186	0.01202	0.01259
FE	1.04278	306.87	0.803	1.03845	1.05243	1.03746
K	0.20139	45.76	8.872	0.19804	0.18543	0.22069
LI	0.00180	59.06	96.842	0.00365	0.00018	0.00158
MG	0.17105	293.64	0.346	0.17038	0.17129	0.17149
MN	0.01740	1,203.16	0.280	0.01737	0.01745	0.01737
MO	0.00026	3.64	52.238	0.00013	0.00040	0.00023
NA	0.02034	-8.20	65.900	0.02756	0.00487	0.02859
NI	0.00262	25.45	4.850	0.00248	0.00272	0.00267
P	0.71977	414.67	0.375	0.71673	0.72187	0.72070
PB	0.01426	26.35	7.566	0.01304	0.01467	0.01508
S	0.62931	127.35	0.448	0.62730	0.63253	0.62810
SB	-0.00041	3.29	176.337	-0.00064	0.00040	-0.00097
SE	-0.00016	0.82	1896.028	-0.00320	0.00279	-0.00006
SI	0.50607	96.06	1.975	0.51569	0.49574	0.50679
SN	0.00267	6.28	17.002	0.00315	0.00262	0.00224
SR	0.00457	3,616.37	0.673	0.00454	0.00456	0.00460
TI	0.15234	9,961.17	0.484	0.15164	0.15311	0.15228
TL	-0.00336	-8.57	14.952	-0.00347	-0.00281	-0.00380
V	0.00820	116.66	4.793	0.00780	0.00822	0.00858
Y1	22900.36479	22,900.36	0.633	23067.64882	22814.69471	22818.75083
Y2A	313354.26262	313,354.26	0.383	314609.88372	312217.68821	313235.21595
Y2R	20018.17325	20,018.17	0.585	19890.58137	20120.65955	20043.27882
ZN	0.02525	362.76	0.867	0.02501	0.02544	0.02529
ZR	0.00163	4.12	91.701	0.00336	0.00082	0.00072

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 20 Date/Time: 11/14/2013 00:08

Sample Number: **7265227** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00010	-9.81	347.026	-0.00039	0.00029	-0.00020
AL	24.57106	2,637.19	0.573	24.73148	24.46828	24.51341
AS	0.00177	-2.28	42.124	0.00192	0.00096	0.00242
B	0.00248	38.46	14.024	0.00262	0.00274	0.00208
BA	0.10487	74,899.58	1.301	0.10640	0.10441	0.10379
BE	0.00065	-98.78	4.401	0.00062	0.00066	0.00067
CA	0.25612	362.34	1.686	0.25773	0.25940	0.25123
CD	-0.00001	-0.32	851.459	-0.00007	-0.00007	0.00010
CO	0.00095	11.39	14.266	0.00092	0.00083	0.00110
CR	0.01380	158.68	4.633	0.01419	0.01307	0.01416
CU	0.00851	72.91	3.839	0.00838	0.00826	0.00888
FE	2.93529	867.73	0.707	2.95765	2.93153	2.91669
K	0.45622	139.16	7.635	0.49629	0.43913	0.43323
LI	0.00972	107.58	10.733	0.01033	0.00852	0.01032
MG	0.67750	1,194.69	0.289	0.67634	0.67976	0.67639
MN	0.01420	984.85	0.750	0.01428	0.01423	0.01408
MO	0.00013	3.04	70.922	0.00023	0.00006	0.00010
NA	0.02545	-2.73	5.286	0.02395	0.02586	0.02654
NI	0.00936	53.04	4.140	0.00899	0.00976	0.00934
P	0.65085	376.66	0.899	0.64514	0.65059	0.65684
PB	0.02002	39.97	2.045	0.02044	0.02002	0.01962
S	0.59342	120.21	1.138	0.58585	0.59557	0.59883
SB	0.00058	4.38	322.593	-0.00156	0.00138	0.00191
SE	-0.00091	0.46	235.244	0.00074	-0.00014	-0.00332
SI	0.85903	163.20	0.955	0.85287	0.85587	0.86834
SN	0.00260	6.22	17.333	0.00283	0.00208	0.00290
SR	0.00611	4,870.78	1.183	0.00619	0.00607	0.00606
TI	0.13562	8,860.93	1.373	0.13768	0.13510	0.13406
TL	-0.00198	-7.75	37.582	-0.00208	-0.00120	-0.00268
V	0.01531	225.17	0.534	0.01522	0.01539	0.01531
Y1	23007.10227	23,007.10	0.518	23139.86549	22971.70031	22909.74099
Y2A	312988.71251	312,988.71	1.300	308664.70100	313563.04131	316738.39523
Y2R	20223.00301	20,223.00	0.366	20190.80787	20307.68078	20170.52038
ZN	0.03443	488.70	0.648	0.03418	0.03460	0.03452
ZR	0.00218	5.48	7.381	0.00232	0.00222	0.00200

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 21 Date/Time: 11/14/2013 00:12

Sample Number: **7265229** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00056	-16.55	84.972	-0.00109	-0.00017	-0.00042
AL	17.61608	1,876.20	0.605	17.57533	17.73706	17.53584
AS	-0.00052	-3.39	158.228	0.00002	-0.00146	-0.00012
B	0.00267	67.68	12.240	0.00270	0.00297	0.00232
BA	0.07222	51,490.41	0.692	0.07263	0.07166	0.07237
BE	-0.00015	-473.72	21.208	-0.00013	-0.00014	-0.00019
CA	0.70875	816.78	1.353	0.69786	0.71594	0.71246
CD	0.00026	13.29	37.951	0.00017	0.00025	0.00036
CO	0.00340	30.56	4.401	0.00352	0.00345	0.00324
CR	0.55642	6,401.60	0.324	0.55655	0.55455	0.55815
CU	0.00709	24.42	5.812	0.00734	0.00732	0.00661
FE	7.36575	2,152.55	0.447	7.33367	7.39952	7.36406
K	0.64863	207.64	1.652	0.64071	0.64435	0.66082
LI	0.01096	114.42	11.148	0.00972	0.01216	0.01100
MG	1.64285	2,881.73	0.614	1.63797	1.65445	1.63613
MN	0.06005	4,080.66	0.748	0.06049	0.05959	0.06006
MO	-0.00004	2.18	461.372	0.00016	-0.00005	-0.00024
NA	0.03456	7.06	23.863	0.04376	0.03206	0.02784
NI	0.01054	56.76	1.921	0.01076	0.01048	0.01037
P	0.24278	138.84	0.644	0.24457	0.24166	0.24211
PB	0.00920	21.94	24.018	0.00696	0.00927	0.01138
S	0.31247	59.75	1.112	0.31095	0.31645	0.31002
SB	-0.00953	3.48	8.706	-0.01024	-0.00862	-0.00973
SE	0.00109	1.23	219.018	-0.00165	0.00274	0.00219
SI	1.34475	252.19	0.809	1.33575	1.34167	1.35684
SN	0.00245	5.96	22.650	0.00187	0.00298	0.00250
SR	0.00918	7,368.24	0.983	0.00927	0.00909	0.00917
TI	0.46755	30,384.17	0.391	0.46746	0.46576	0.46941
TL	-0.00231	-8.34	51.737	-0.00200	-0.00362	-0.00129
V	0.01860	276.98	1.887	0.01899	0.01850	0.01831
Y1	22785.76161	22,785.76	0.191	22773.91377	22833.88064	22749.49044
Y2A	312247.43827	312,247.44	0.515	310917.05530	314035.14324	311790.11628
Y2R	20059.83930	20,059.84	0.633	20187.74980	19933.67092	20058.09719
ZN	0.07959	1,080.16	0.252	0.07982	0.07951	0.07944
ZR	0.00233	5.77	73.241	0.00118	0.00429	0.00152

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 22

Date/Time: 11/14/2013 00:16

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50922	7,087.03	1.701	0.50001	0.51719	0.51046
AL	24.64371	2,530.41	0.816	24.42966	24.82874	24.67273
AS	0.49605	197.73	0.548	0.49806	0.49295	0.49713
B	0.48234	4,255.25	1.597	0.47424	0.48957	0.48322
BA	0.50110	332,874.42	1.202	0.49540	0.50049	0.50740
BE	0.48835	213,306.57	1.611	0.47955	0.49469	0.49082
CA	24.26589	23,646.01	0.887	24.02354	24.43480	24.33934
CD	0.49899	8,215.48	0.024	0.49909	0.49902	0.49885
CO	0.50093	2,763.87	0.142	0.50015	0.50154	0.50109
CR	0.48828	5,234.92	1.530	0.47972	0.49344	0.49170
CU	0.50209	6,621.13	1.944	0.49226	0.51178	0.50221
FE	24.23632	6,771.79	1.009	23.98776	24.47674	24.24446
K	24.22201	8,414.56	0.541	24.07082	24.29769	24.29752
LI	0.49560	2,925.98	0.984	0.49412	0.50104	0.49163
MG	23.89077	40,014.36	0.476	23.76766	23.99166	23.91298
MN	0.49978	31,524.50	1.543	0.49132	0.50642	0.50159
MO	0.50044	2,302.80	0.073	0.50082	0.50041	0.50009
NA	24.00705	24,711.63	0.476	23.87521	24.06962	24.07631
NI	0.49880	1,949.99	0.063	0.49843	0.49894	0.49902
P	0.50759	279.16	0.206	0.50849	0.50644	0.50784
PB	0.50438	690.20	0.326	0.50324	0.50627	0.50364
S	24.45103	4,921.34	0.281	24.41243	24.41038	24.53028
SB	0.50842	416.03	0.217	0.50876	0.50719	0.50931
SE	0.50355	178.43	0.782	0.50542	0.49902	0.50620
SI	25.03250	4,486.12	0.401	24.91942	25.06664	25.11144
SN	0.48885	613.06	0.190	0.48835	0.48828	0.48993
SR	0.50123	381,943.04	1.996	0.48975	0.50806	0.50589
TI	0.50166	30,446.11	1.592	0.49278	0.50825	0.50396
TL	0.49975	349.42	0.216	0.49996	0.50071	0.49858
V	0.49810	7,036.15	1.824	0.48802	0.50567	0.50060
Y1	21761.61614	21,761.62	0.058	21757.79688	21751.42505	21775.62650
Y2A	291329.55047	291,329.55	1.724	297013.17097	287489.56262	289485.91783
Y2R	19324.62593	19,324.63	0.689	19476.29396	19226.90000	19270.68381
ZN	0.50054	6,343.53	0.075	0.50063	0.50012	0.50086
ZR	0.49796	1,126.05	0.816	0.49395	0.50207	0.49785

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 23

Date/Time: 11/14/2013 00:20

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00011	-6.77	191.735	0.00031	0.00015	-0.00012
AL	0.01046	4.91	266.951	0.03032	0.02251	-0.02146
AS	-0.00034	-2.94	382.892	0.00090	-0.00023	-0.00168
B	0.00084	4.95	45.325	0.00042	0.00095	0.00116
BA	-0.00001	66.44	158.808	-0.00004	0.00000	0.00000
BE	-0.00041	-580.90	5.799	-0.00038	-0.00043	-0.00041
CA	-0.01477	83.36	21.996	-0.01508	-0.01137	-0.01784
CD	0.00006	-4.93	191.381	0.00006	-0.00006	0.00017
CO	-0.00019	2.84	202.267	-0.00028	0.00023	-0.00053
CR	-0.00021	-1.90	211.718	-0.00011	-0.00069	0.00018
CU	-0.00073	-46.53	34.530	-0.00060	-0.00057	-0.00102
FE	-0.01425	-1.81	3.706	-0.01364	-0.01455	-0.01456
K	-0.02433	-34.84	43.648	-0.02273	-0.03566	-0.01461
LI	0.00185	57.72	27.525	0.00129	0.00196	0.00229
MG	0.00499	2.01	17.588	0.00565	0.00400	0.00534
MN	-0.00011	15.88	25.572	-0.00008	-0.00013	-0.00010
MO	-0.00020	1.42	37.470	-0.00017	-0.00014	-0.00028
NA	-0.00715	-36.60	72.205	-0.01304	-0.00503	-0.00338
NI	-0.00025	13.65	8.776	-0.00027	-0.00024	-0.00023
P	0.00024	-0.37	236.296	-0.00022	0.00006	0.00088
PB	-0.00051	3.21	88.184	0.00000	-0.00083	-0.00069
S	-0.00159	-6.33	63.833	-0.00230	-0.00205	-0.00043
SB	-0.00028	3.19	553.957	0.00053	0.00069	-0.00205
SE	-0.00176	0.26	51.738	-0.00132	-0.00115	-0.00280
SI	0.00898	3.74	78.945	0.01058	0.01513	0.00123
SN	0.00008	2.83	1129.380	-0.00074	0.00098	-0.00001
SR	0.00000	-124.55	401.154	0.00001	0.00000	0.00000
TI	-0.00027	23.70	25.300	-0.00034	-0.00020	-0.00028
TL	-0.00230	-7.15	33.522	-0.00146	-0.00297	-0.00246
V	-0.00067	-19.10	25.110	-0.00084	-0.00065	-0.00051
Y1	22552.23685	22,552.24	0.379	22463.05304	22633.58885	22560.06866
Y2A	305329.37442	305,329.37	0.479	304802.57937	304202.94897	306982.59494
Y2R	19526.96893	19,526.97	0.335	19601.76506	19499.05190	19480.08982
ZN	-0.00098	16.38	3.489	-0.00098	-0.00101	-0.00094
ZR	-0.00011	0.05	968.767	-0.00087	0.00111	-0.00057

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 24 Date/Time: 11/14/2013 00:24

Sample Number: **7265234** Class: **** Batch: 133125708003

Initial Vol: 1.00 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00008	-9.31	162.487	0.00004	-0.00023	-0.00006
AL	3.74418	400.19	0.967	3.71517	3.73262	3.78477
AS	-0.00084	-3.83	200.603	-0.00212	0.00107	-0.00146
B	0.00086	69.86	45.096	0.00126	0.00049	0.00084
BA	0.02470	17,507.79	0.104	0.02469	0.02469	0.02473
BE	-0.00012	-453.74	11.364	-0.00013	-0.00010	-0.00012
CA	1.62254	1,733.14	2.133	1.62509	1.58673	1.65579
CD	0.00061	25.35	18.495	0.00061	0.00072	0.00049
CO	0.00185	19.07	12.879	0.00159	0.00205	0.00192
CR	0.01149	128.03	0.830	0.01140	0.01150	0.01159
CU	0.00880	59.74	5.497	0.00902	0.00825	0.00914
FE	10.46701	3,042.13	1.416	10.51832	10.29995	10.58277
K	0.47110	142.89	7.295	0.51010	0.45793	0.44526
LI	0.00278	65.63	113.273	0.00612	-0.00014	0.00236
MG	1.14566	2,000.20	1.522	1.15506	1.12554	1.15638
MN	0.08574	5,765.55	0.333	0.08585	0.08541	0.08594
MO	0.00016	3.14	66.528	0.00021	0.00021	0.00004
NA	0.11193	89.53	9.370	0.12039	0.11521	0.10020
NI	0.00362	28.30	11.786	0.00368	0.00317	0.00401
P	0.30400	174.34	0.626	0.30417	0.30581	0.30202
PB	0.03050	47.83	2.469	0.03088	0.03098	0.02963
S	0.30872	59.10	0.174	0.30886	0.30813	0.30918
SB	-0.00058	3.91	279.760	0.00119	-0.00094	-0.00199
SE	-0.00065	0.65	318.635	0.00174	-0.00167	-0.00203
SI	0.28932	55.75	1.831	0.29214	0.28321	0.29261
SN	0.00273	6.33	11.186	0.00248	0.00263	0.00307
SR	0.00770	6,110.53	0.228	0.00772	0.00770	0.00769
TI	0.32526	20,960.08	0.276	0.32629	0.32482	0.32467
TL	-0.00192	-7.72	22.811	-0.00182	-0.00239	-0.00153
V	0.01134	164.65	1.100	0.01122	0.01134	0.01147
Y1	22832.10571	22,832.11	0.125	22864.00320	22823.69578	22808.61816
Y2A	309507.89370	309,507.89	0.321	308567.18025	310544.97002	309411.53082
Y2R	19983.44656	19,983.45	1.379	19950.46463	20274.06537	19725.80968
ZN	0.04920	688.52	0.084	0.04924	0.04919	0.04916
ZR	0.00361	8.73	36.285	0.00344	0.00239	0.00500

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 25 Date/Time: 11/14/2013 00:29

Sample Number: **7265241** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00005	-9.22	356.974	-0.00021	-0.00005	0.00012
AL	3.17566	335.37	1.107	3.19003	3.20134	3.13560
AS	-0.00062	-3.30	290.415	-0.00236	-0.00077	0.00125
B	0.00204	37.08	15.452	0.00207	0.00171	0.00234
BA	0.01521	10,855.80	1.098	0.01538	0.01505	0.01520
BE	-0.00025	-518.25	8.167	-0.00026	-0.00023	-0.00027
CA	1.95894	2,043.62	0.369	1.96717	1.95600	1.95363
CD	0.00048	9.11	6.919	0.00048	0.00052	0.00045
CO	0.00175	15.92	8.315	0.00179	0.00159	0.00187
CR	0.01261	143.76	3.271	0.01218	0.01265	0.01300
CU	0.01267	131.77	1.838	0.01255	0.01251	0.01293
FE	3.40591	980.75	0.420	3.42237	3.39662	3.39872
K	0.18936	40.81	36.180	0.14112	0.26777	0.15918
LI	0.00113	55.29	114.527	0.00203	0.00173	-0.00036
MG	0.64897	1,115.06	0.600	0.65339	0.64605	0.64746
MN	0.02303	1,572.27	1.002	0.02329	0.02286	0.02293
MO	0.00011	2.92	162.631	0.00017	0.00025	-0.00009
NA	0.14752	125.65	10.814	0.15297	0.12955	0.16003
NI	0.00333	27.92	2.382	0.00331	0.00326	0.00341
P	0.16710	95.45	1.125	0.16550	0.16663	0.16917
PB	0.07581	112.03	0.770	0.07608	0.07514	0.07621
S	1.66296	344.93	0.241	1.66303	1.65893	1.66693
SB	-0.00099	3.06	153.295	-0.00261	-0.00073	0.00038
SE	-0.00140	0.37	285.668	-0.00242	-0.00481	0.00301
SI	0.54212	101.17	1.655	0.54772	0.53177	0.54687
SN	0.00242	5.91	18.052	0.00211	0.00222	0.00291
SR	0.00667	5,295.88	1.059	0.00674	0.00660	0.00666
TI	0.14001	9,084.78	0.982	0.14126	0.13854	0.14024
TL	-0.00275	-8.10	11.946	-0.00273	-0.00243	-0.00309
V	0.01020	146.35	2.501	0.01031	0.00991	0.01039
Y1	22790.72295	22,790.72	0.191	22750.29322	22836.84930	22785.02633
Y2A	310840.67386	310,840.67	0.550	309383.32778	312723.18454	310415.50926
Y2R	19709.95268	19,709.95	0.500	19601.66368	19733.63718	19794.55718
ZN	0.07375	998.09	0.139	0.07375	0.07365	0.07385
ZR	0.00003	0.36	3412.756	0.00056	0.00051	-0.00100

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 26 Date/Time: 11/14/2013 00:33

Sample Number: **7265242** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00025	-12.12	238.967	-0.00089	0.00027	-0.00012
AL	0.77584	85.32	2.286	0.78564	0.78652	0.75537
AS	0.00128	-2.39	69.453	0.00035	0.00137	0.00212
B	0.00266	31.82	23.460	0.00233	0.00338	0.00227
BA	0.00673	4,883.83	1.174	0.00677	0.00678	0.00664
BE	-0.00041	-595.93	4.011	-0.00039	-0.00040	-0.00043
CA	1.26138	1,358.51	0.746	1.26103	1.27095	1.25215
CD	0.00037	3.63	7.042	0.00040	0.00035	0.00037
CO	0.00093	9.93	10.210	0.00082	0.00095	0.00101
CR	0.00640	73.82	1.951	0.00630	0.00654	0.00637
CU	0.01292	144.45	4.013	0.01341	0.01297	0.01238
FE	1.59570	463.53	0.537	1.60387	1.59646	1.58678
K	0.08506	3.73	49.336	0.05301	0.13256	0.06962
LI	0.00134	56.41	249.044	0.00216	-0.00233	0.00417
MG	0.31470	540.33	0.381	0.31507	0.31336	0.31567
MN	0.01044	731.08	0.690	0.01050	0.01046	0.01036
MO	0.00019	3.32	54.414	0.00010	0.00017	0.00030
NA	0.10307	79.33	3.932	0.10675	0.10372	0.09873
NI	0.00308	27.20	1.429	0.00313	0.00306	0.00305
P	0.14033	80.25	0.664	0.13961	0.14000	0.14138
PB	0.09274	135.61	1.135	0.09241	0.09391	0.09189
S	1.31634	272.35	0.139	1.31759	1.31719	1.31425
SB	-0.00208	1.93	87.773	-0.00030	-0.00199	-0.00394
SE	0.00245	1.81	38.670	0.00221	0.00164	0.00349
SI	0.36121	68.49	1.363	0.36600	0.35617	0.36146
SN	0.00311	6.84	13.183	0.00346	0.00321	0.00266
SR	0.00319	2,489.24	0.558	0.00320	0.00321	0.00317
TI	0.04438	2,930.90	1.231	0.04487	0.04448	0.04379
TL	-0.00294	-8.08	19.943	-0.00275	-0.00360	-0.00247
V	0.00852	121.08	4.255	0.00845	0.00892	0.00820
Y1	22837.80012	22,837.80	0.077	22847.97576	22817.50767	22847.91694
Y2A	313294.47035	313,294.47	0.644	313636.57562	311126.16589	315120.66955
Y2R	19816.69333	19,816.69	0.634	19714.92321	19778.16058	19956.99621
ZN	0.01816	269.79	0.076	0.01817	0.01816	0.01814
ZR	0.00139	3.53	89.661	0.00240	0.00179	-0.00001

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 27 Date/Time: 11/14/2013 00:37

Sample Number: **7265244** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00013	-9.96	513.818	-0.00054	0.00063	-0.00047
AL	3.34028	350.74	0.451	3.32811	3.33559	3.35714
AS	0.00049	-3.14	432.748	0.00111	0.00221	-0.00187
B	0.00086	58.19	89.167	0.00108	0.00001	0.00148
BA	0.02291	15,945.70	0.373	0.02287	0.02301	0.02286
BE	-0.00032	-536.45	2.168	-0.00031	-0.00032	-0.00032
CA	1.25580	1,338.74	0.524	1.25749	1.24854	1.26136
CD	0.00066	22.74	19.955	0.00051	0.00074	0.00074
CO	0.00175	16.69	8.269	0.00182	0.00185	0.00159
CR	0.00967	105.83	0.327	0.00966	0.00971	0.00965
CU	0.00813	59.66	2.567	0.00826	0.00789	0.00825
FE	8.75916	2,500.36	0.343	8.77221	8.72484	8.78044
K	0.15054	26.84	9.732	0.15014	0.13609	0.16539
LI	0.00183	58.68	30.212	0.00167	0.00138	0.00245
MG	0.61557	1,051.91	1.373	0.61993	0.60583	0.62096
MN	0.06233	4,120.11	0.310	0.06252	0.06233	0.06213
MO	0.00009	2.81	135.145	0.00022	-0.00001	0.00006
NA	0.10990	85.65	10.694	0.09875	0.10876	0.12217
NI	0.00313	26.36	12.049	0.00338	0.00270	0.00331
P	0.25864	147.42	0.295	0.25926	0.25887	0.25778
PB	0.01452	25.01	6.186	0.01472	0.01531	0.01354
S	0.21278	38.61	1.467	0.21539	0.20932	0.21363
SB	-0.00169	2.81	73.091	-0.00312	-0.00104	-0.00092
SE	0.00054	1.09	308.744	-0.00050	0.00248	-0.00035
SI	0.49697	92.44	2.556	0.50786	0.48301	0.50004
SN	0.00231	5.75	22.858	0.00288	0.00220	0.00184
SR	0.00592	4,579.19	0.403	0.00590	0.00595	0.00591
TI	0.19916	12,612.97	0.486	0.19849	0.20027	0.19873
TL	-0.00170	-7.33	34.572	-0.00130	-0.00141	-0.00237
V	0.01069	151.07	3.932	0.01033	0.01115	0.01057
Y1	22705.07055	22,705.07	0.151	22720.49574	22665.87656	22728.83936
Y2A	303794.19812	303,794.20	0.585	304335.85943	301810.29314	305236.44180
Y2R	19608.32714	19,608.33	0.176	19611.11942	19641.30869	19572.55332
ZN	0.04748	659.91	0.589	0.04716	0.04760	0.04768
ZR	0.00232	5.63	114.442	0.00538	0.00095	0.00063

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 28 Date/Time: 11/14/2013 00:41

Sample Number: **7265245** Class: **** Batch: 133125708003

Initial Vol: 1.01 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00060	-17.18	79.346	-0.00010	-0.00104	-0.00064
AL	0.10345	14.87	32.591	0.10004	0.13874	0.07157
AS	0.00007	-2.88	3495.987	-0.00158	0.00272	-0.00094
B	0.00163	20.98	43.155	0.00195	0.00082	0.00212
BA	0.00417	3,040.11	0.961	0.00418	0.00421	0.00413
BE	-0.00039	-584.43	3.170	-0.00039	-0.00038	-0.00040
CA	1.04278	1,152.38	3.116	1.00693	1.07029	1.05111
CD	0.00016	-0.54	92.077	0.00027	-0.00001	0.00020
CO	0.00038	6.17	128.482	0.00071	-0.00018	0.00059
CR	0.00003	0.36	584.695	0.00020	-0.00019	0.00010
CU	0.00293	4.44	10.294	0.00327	0.00283	0.00269
FE	1.39230	409.02	3.302	1.34043	1.42804	1.40842
K	0.00230	-26.20	801.294	-0.00938	0.02357	-0.00728
LI	0.00000	48.66	4334.835	-0.00135	0.00263	-0.00128
MG	0.13404	228.76	2.064	0.13092	0.13620	0.13500
MN	0.16011	10,813.97	0.592	0.16096	0.16029	0.15908
MO	-0.00009	1.94	338.297	-0.00003	0.00019	-0.00043
NA	0.10474	81.94	6.049	0.09833	0.10488	0.11100
NI	0.00046	16.46	127.237	0.00084	0.00075	-0.00021
P	0.06942	39.25	1.286	0.07021	0.06845	0.06960
PB	0.00442	10.14	28.867	0.00587	0.00349	0.00389
S	1.45451	300.24	0.539	1.46349	1.44899	1.45105
SB	-0.00065	3.01	237.360	-0.00031	0.00069	-0.00232
SE	-0.00092	0.57	135.385	-0.00235	-0.00026	-0.00015
SI	0.09629	20.05	3.617	0.09568	0.10004	0.09316
SN	0.00135	4.51	23.367	0.00103	0.00167	0.00136
SR	0.00497	3,924.47	0.482	0.00497	0.00500	0.00495
TI	0.00472	346.81	0.489	0.00471	0.00474	0.00470
TL	-0.00242	-7.22	34.367	-0.00231	-0.00165	-0.00330
V	0.00025	-5.42	53.492	0.00020	0.00040	0.00015
Y1	22736.96397	22,736.96	0.349	22648.42855	22801.33893	22761.12443
Y2A	311436.54231	311,436.54	0.250	311337.19187	310711.35909	312261.07595
Y2R	20034.21881	20,034.22	2.235	20520.30875	19638.83064	19943.51704
ZN	0.01330	204.68	0.306	0.01327	0.01328	0.01335
ZR	0.00155	3.94	24.728	0.00111	0.00171	0.00183

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 29 Date/Time: 11/14/2013 00:45

Sample Number: **7266818** Class: **** Batch: 133125708003

Initial Vol: 1.03 Final Vol: 100.00 DF: 10.00 Protocol Symbol: S

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00060	-16.51	99.532	-0.00121	-0.00001	-0.00059
AL	8.79275	929.49	0.786	8.81411	8.84861	8.71551
AS	0.01375	0.56	24.884	0.01712	0.01028	0.01384
B	0.00008	246.26	440.230	-0.00032	0.00025	0.00030
BA	0.10826	76,185.48	0.509	0.10887	0.10780	0.10809
BE	0.00009	-357.93	15.970	0.00010	0.00008	0.00008
CA	1.28661	1,387.62	0.410	1.29219	1.28171	1.28594
CD	0.00274	121.05	3.423	0.00264	0.00281	0.00278
CO	0.00413	32.45	7.099	0.00417	0.00382	0.00441
CR	0.01082	109.83	0.988	0.01077	0.01074	0.01094
CU	0.03683	446.23	1.631	0.03731	0.03703	0.03616
FE	40.35185	11,517.69	0.330	40.48590	40.35035	40.21931
K	0.36983	105.81	12.398	0.40180	0.31730	0.39039
LI	0.00667	88.24	57.076	0.01000	0.00252	0.00747
MG	1.04862	1,820.35	0.186	1.04876	1.04661	1.05049
MN	0.17432	11,655.85	0.329	0.17484	0.17371	0.17442
MO	0.00113	7.79	10.684	0.00121	0.00118	0.00099
NA	0.12120	98.80	4.446	0.12741	0.11848	0.11772
NI	0.00824	43.27	2.160	0.00805	0.00841	0.00826
P	0.67116	383.76	0.189	0.67025	0.67063	0.67261
PB	0.04495	68.10	0.799	0.04533	0.04488	0.04463
S	0.53723	106.57	0.534	0.53526	0.53591	0.54053
SB	-0.00347	3.66	71.508	-0.00623	-0.00275	-0.00143
SE	-0.00263	-0.11	54.789	-0.00211	-0.00153	-0.00427
SI	0.66321	124.31	0.083	0.66369	0.66334	0.66261
SN	0.00479	8.99	4.950	0.00474	0.00458	0.00505
SR	0.01211	9,642.02	0.451	0.01215	0.01205	0.01212
TI	0.35348	22,690.75	0.454	0.35495	0.35177	0.35371
TL	-0.00046	-6.87	130.614	-0.00003	-0.00116	-0.00021
V	0.02219	330.79	0.958	0.02199	0.02219	0.02241
Y1	22724.99044	22,724.99	0.373	22818.46333	22703.47000	22653.03797
Y2A	308369.31543	308,369.32	0.517	307099.51699	310158.64424	307849.78505
Y2R	19872.29832	19,872.30	0.188	19915.14744	19847.21114	19854.53639
ZN	0.18122	2,447.95	0.368	0.18047	0.18174	0.18147
ZR	0.00629	14.94	19.639	0.00487	0.00694	0.00708

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 30

Date/Time: 11/14/2013 00:49

Sample Number: **LLC**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.00505	70.72	1.640	0.00510	0.00510	0.00496
AL	0.18107	22.78	18.505	0.19051	0.20885	0.14386
AS	0.01786	4.71	3.546	0.01851	0.01725	0.01781
B	0.04888	436.95	1.073	0.04852	0.04863	0.04948
BA	0.00530	3,774.03	1.382	0.00527	0.00525	0.00539
BE	0.00431	1,583.37	1.382	0.00431	0.00424	0.00436
CA	0.17484	272.25	1.387	0.17742	0.17449	0.17260
CD	0.00502	79.63	1.961	0.00507	0.00508	0.00490
CO	0.00513	33.28	2.092	0.00501	0.00521	0.00517
CR	0.01445	163.18	3.267	0.01443	0.01398	0.01493
CU	0.00973	98.98	5.949	0.00948	0.01039	0.00932
FE	0.18396	55.15	5.317	0.19413	0.18312	0.17463
K	0.47422	141.94	1.849	0.46517	0.48268	0.47481
LI	0.02149	174.06	13.529	0.02154	0.01855	0.02436
MG	0.10068	167.36	1.358	0.10198	0.09925	0.10082
MN	0.00512	362.00	1.948	0.00511	0.00503	0.00523
MO	0.01014	50.64	0.440	0.01013	0.01018	0.01010
NA	0.98732	1,007.74	0.468	0.98259	0.98756	0.99182
NI	0.01011	55.34	0.609	0.01005	0.01010	0.01017
P	0.09850	55.47	0.933	0.09766	0.09836	0.09948
PB	0.01510	25.06	5.612	0.01565	0.01553	0.01413
S	0.47529	93.25	0.375	0.47373	0.47490	0.47723
SB	0.02086	20.85	6.774	0.01982	0.02029	0.02247
SE	0.02068	8.46	1.265	0.02097	0.02063	0.02045
SI	0.11422	23.00	6.961	0.12040	0.10525	0.11701
SN	0.02015	28.79	2.645	0.02075	0.01973	0.01996
SR	0.00515	3,996.97	1.125	0.00514	0.00510	0.00522
TI	0.00957	649.73	2.843	0.00939	0.00944	0.00989
TL	0.03119	18.31	5.280	0.03141	0.02944	0.03271
V	0.00403	50.20	6.068	0.00426	0.00377	0.00405
Y1	22548.54919	22,548.55	0.265	22514.81223	22513.37597	22617.45937
Y2A	305884.96360	305,884.96	1.467	308391.90540	308557.62825	300705.35714
Y2R	19697.37100	19,697.37	0.214	19678.35761	19668.00539	19745.75000
ZN	0.01985	286.75	0.220	0.01989	0.01980	0.01987
ZR	0.04966	114.73	1.414	0.04999	0.05013	0.04885

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 31

Date/Time: 11/14/2013 00:54

Sample Number: **ICSA**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00013	-8.58	418.839	-0.00002	0.00036	-0.00074
AL	480.30806	48,966.80	1.754	483.09255	470.84515	486.98648
AS	-0.01260	-16.91	39.199	-0.01830	-0.00967	-0.00982
B	-0.02356	823.57	16.104	-0.02618	-0.01921	-0.02529
BA	0.00011	128.69	13.516	0.00010	0.00012	0.00009
BE	-0.00065	-595.58	2.941	-0.00065	-0.00066	-0.00063
CA	483.54787	432,849.28	1.681	488.86183	474.19048	487.59129
CD	0.00611	408.89	2.464	0.00609	0.00626	0.00596
CO	-0.00083	-0.72	0.999	-0.00082	-0.00083	-0.00084
CR	0.00140	-41.03	19.072	0.00166	0.00113	0.00139
CU	0.00440	155.85	12.065	0.00379	0.00472	0.00470
FE	191.74933	49,062.53	1.709	193.37497	187.97767	193.89534
K	-0.02281	-33.21	279.210	-0.08769	0.03961	-0.02035
LI	-0.00405	319.29	51.024	-0.00597	-0.00186	-0.00431
MG	514.32122	639,343.14	1.677	520.43581	504.45293	518.07493
MN	0.00333	209.48	4.110	0.00323	0.00348	0.00327
MO	-0.00186	-5.59	8.834	-0.00204	-0.00171	-0.00183
NA	0.01557	-12.64	59.616	0.02079	0.00485	0.02107
NI	0.00257	1.56	19.277	0.00229	0.00228	0.00314
P	0.01113	5.01	18.102	0.01222	0.01235	0.00880
PB	0.00645	126.76	63.042	0.00329	0.01104	0.00502
S	-0.12630	-28.81	1.553	-0.12428	-0.12820	-0.12643
SB	-0.01165	6.68	31.394	-0.00825	-0.01118	-0.01552
SE	0.00303	-0.22	151.711	-0.00012	0.00830	0.00090
SI	0.02508	6.47	15.957	0.02966	0.02231	0.02325
SN	0.00454	7.40	31.543	0.00620	0.00374	0.00369
SR	0.00201	1,275.32	0.161	0.00200	0.00201	0.00201
TI	-0.00444	-207.83	0.346	-0.00443	-0.00445	-0.00443
TL	-0.00318	-6.51	44.949	-0.00154	-0.00386	-0.00415
V	-0.00478	-49.98	5.553	-0.00449	-0.00482	-0.00502
Y1	19395.14824	19,395.15	0.078	19403.05463	19377.76372	19404.62636
Y2A	263606.17387	263,606.17	0.644	265147.67442	261786.37874	263884.46844
Y2R	18988.06683	18,988.07	1.205	18863.55476	19252.07459	18848.57114
ZN	0.00881	353.43	4.389	0.00866	0.00925	0.00853
ZR	0.00335	7.74	43.090	0.00197	0.00324	0.00485

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 32

Date/Time: 11/14/2013 00:58

Sample Number: **ICSAB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.21295	2,661.52	1.160	0.21184	0.21123	0.21578
AL	486.44263	49,434.78	0.492	484.58649	489.14259	485.59879
AS	0.09177	20.81	1.299	0.09064	0.09166	0.09302
B	-0.02423	830.16	5.911	-0.02455	-0.02547	-0.02266
BA	0.48810	293,869.23	0.711	0.48527	0.48707	0.49197
BE	0.49669	196,648.39	0.770	0.49430	0.49467	0.50110
CA	484.29034	432,006.47	0.506	481.46521	485.57950	485.82631
CD	0.94454	14,100.18	0.034	0.94488	0.94424	0.94449
CO	0.46118	2,260.34	0.114	0.46074	0.46176	0.46103
CR	0.47331	4,550.32	0.911	0.46991	0.47185	0.47816
CU	0.51426	6,318.02	1.480	0.50874	0.51110	0.52294
FE	194.23067	49,475.94	0.709	193.36606	195.81981	193.50614
K	-0.07078	-49.57	32.930	-0.05670	-0.09769	-0.05797
LI	0.00017	342.40	1114.257	-0.00125	0.00234	-0.00058
MG	518.15878	640,306.48	0.863	516.16930	523.28221	515.02485
MN	0.47746	27,298.35	0.862	0.47482	0.47536	0.48220
MO	-0.00176	-5.16	18.448	-0.00139	-0.00187	-0.00201
NA	0.01341	-14.69	43.062	0.02002	0.00936	0.01084
NI	0.91521	3,157.70	0.156	0.91374	0.91659	0.91531
P	0.00849	5.01	16.147	0.00741	0.01003	0.00801
PB	0.04895	178.84	3.666	0.04763	0.05099	0.04822
S	-0.12949	-29.38	5.752	-0.13530	-0.13207	-0.12109
SB	0.62718	466.17	0.214	0.62627	0.62872	0.62655
SE	0.05354	15.62	7.969	0.04861	0.05595	0.05606
SI	0.05162	11.11	22.280	0.06485	0.04598	0.04403
SN	0.00451	7.35	12.098	0.00431	0.00409	0.00512
SR	0.00200	1,269.98	0.643	0.00198	0.00200	0.00201
TI	-0.00429	-180.60	6.847	-0.00400	-0.00429	-0.00459
TL	0.08645	40.61	2.259	0.08589	0.08484	0.08862
V	0.48129	6,205.60	1.054	0.47762	0.47916	0.48708
Y1	19373.32400	19,373.32	0.218	19414.15239	19329.88467	19375.93494
Y2A	264022.74450	264,022.74	0.719	265179.40199	265056.57720	261832.25432
Y2R	18921.70847	18,921.71	0.676	19019.52424	18776.94461	18968.65657
ZN	1.04535	11,924.77	0.095	1.04650	1.04472	1.04484
ZR	0.00342	7.88	62.105	0.00285	0.00164	0.00577

LANCASTER LABORATORIES

Run Name: 1331707T72

Instrument ID: 16417

Tube: 33

Date/Time: 11/14/2013 01:03

Sample Number: **CCV**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	0.50207	7,107.98	1.015	0.50549	0.50451	0.49621
AL	24.20554	2,543.53	1.907	23.67344	24.49650	24.44668
AS	0.49865	199.40	0.655	0.49591	0.49777	0.50227
B	0.47808	4,287.91	0.413	0.48034	0.47714	0.47674
BA	0.49757	336,232.24	0.250	0.49763	0.49629	0.49878
BE	0.48035	213,439.02	0.366	0.48167	0.48102	0.47836
CA	23.63242	23,571.61	1.693	23.17239	23.82479	23.90007
CD	0.49970	8,250.02	0.087	0.49923	0.49979	0.50009
CO	0.50170	2,776.08	0.074	0.50159	0.50211	0.50139
CR	0.48275	5,265.39	0.233	0.48405	0.48212	0.48208
CU	0.49544	6,646.36	0.681	0.49594	0.49854	0.49185
FE	23.56607	6,740.29	1.790	23.07899	23.80452	23.81468
K	23.87873	8,488.85	1.485	23.47702	24.01084	24.14831
LI	0.48641	2,939.61	1.508	0.47794	0.49087	0.49041
MG	23.50378	40,293.49	1.631	23.06180	23.70338	23.74617
MN	0.49283	31,624.46	0.569	0.49565	0.49278	0.49004
MO	0.50047	2,309.69	0.132	0.50096	0.49972	0.50074
NA	23.83783	25,110.89	1.425	23.44629	24.01428	24.05292
NI	0.49910	1,956.94	0.144	0.49831	0.49972	0.49925
P	0.50710	279.69	0.218	0.50656	0.50838	0.50637
PB	0.50461	692.41	0.151	0.50546	0.50438	0.50399
S	24.56680	4,959.15	0.067	24.58326	24.56666	24.55048
SB	0.50859	417.26	0.464	0.50619	0.51090	0.50868
SE	0.50289	178.72	0.433	0.50537	0.50203	0.50128
SI	24.59162	4,510.08	1.668	24.12448	24.75701	24.89336
SN	0.49012	616.44	0.380	0.48989	0.49208	0.48837
SR	0.49615	384,636.19	0.680	0.49640	0.49939	0.49266
TI	0.49439	30,525.07	0.285	0.49466	0.49564	0.49286
TL	0.49980	350.72	0.280	0.49819	0.50062	0.50060
V	0.49047	7,047.91	0.402	0.49170	0.49151	0.48819
Y1	21825.30295	21,825.30	0.023	21831.01046	21822.69579	21822.20260
Y2A	296325.85045	296,325.85	0.416	295345.84162	295922.13386	297709.57588
Y2R	19778.34003	19,778.34	1.254	20064.47342	19644.62500	19625.92168
ZN	0.50175	6,376.30	0.139	0.50213	0.50218	0.50095
ZR	0.48689	1,126.82	1.111	0.48183	0.48624	0.49259

LANCASTER LABORATORIES

Run Name: 1331707T72 Instrument ID: 16417

Tube: 34 Date/Time: 11/14/2013 01:07

Sample Number: **CCB**

ELEMENT	AVERAGE CONC (ppm)	AVERAGE INTENSITY	%RSD	INTEGRATIONS #1	#2	#3
AG	-0.00003	-9.00	1146.269	-0.00030	0.00042	-0.00022
AL	-0.00169	3.71	1120.129	-0.02132	0.01653	-0.00030
AS	-0.00257	-3.87	132.559	-0.00363	-0.00531	0.00124
B	0.00089	5.43	43.230	0.00045	0.00114	0.00108
BA	-0.00001	68.00	136.827	0.00000	-0.00003	-0.00001
BE	-0.00041	-592.47	11.847	-0.00039	-0.00038	-0.00047
CA	-0.00743	92.21	74.917	-0.00129	-0.00885	-0.01216
CD	0.00000	-5.99	1710.403	0.00007	-0.00001	-0.00007
CO	-0.00038	1.76	64.794	-0.00025	-0.00023	-0.00066
CR	-0.00033	-3.33	71.842	-0.00016	-0.00060	-0.00023
CU	-0.00028	-40.87	275.078	0.00040	-0.00012	-0.00113
FE	-0.01375	-1.70	37.669	-0.00858	-0.01373	-0.01894
K	0.00270	-25.81	1850.033	0.02245	-0.05405	0.03968
LI	-0.00109	41.28	284.708	-0.00468	0.00062	0.00078
MG	0.02305	33.54	7.943	0.02503	0.02270	0.02142
MN	-0.00006	19.23	116.575	-0.00005	0.00000	-0.00013
MO	-0.00008	2.00	125.131	-0.00017	0.00002	-0.00007
NA	0.00483	-24.57	296.301	-0.00155	-0.00518	0.02123
NI	-0.00025	13.64	54.417	-0.00019	-0.00040	-0.00015
P	-0.00003	-0.52	4530.084	-0.00167	0.00014	0.00143
PB	0.00004	3.96	2934.768	0.00056	0.00076	-0.00120
S	-0.00252	-6.51	209.499	-0.00098	-0.00838	0.00182
SB	0.00021	3.58	44.297	0.00028	0.00011	0.00023
SE	0.00145	1.43	185.971	0.00279	0.00320	-0.00165
SI	0.01595	5.10	20.123	0.01573	0.01927	0.01286
SN	-0.00064	1.89	19.686	-0.00053	-0.00062	-0.00078
SR	0.00001	-120.20	141.857	-0.00001	0.00002	0.00001
TI	-0.00035	18.88	19.402	-0.00041	-0.00028	-0.00036
TL	-0.00256	-7.33	13.032	-0.00285	-0.00263	-0.00220
V	-0.00086	-22.28	57.757	-0.00029	-0.00112	-0.00116
Y1	22518.25636	22,518.26	0.096	22542.04757	22512.53500	22500.18652
Y2A	310068.41225	310,068.41	0.912	311078.65449	312251.58228	306875.00000
Y2R	19878.25870	19,878.26	0.271	19882.30455	19929.97304	19822.49850
ZN	-0.00086	17.95	2.951	-0.00083	-0.00088	-0.00085
ZR	0.00003	0.38	1407.521	0.00105	0.00042	-0.00138

Mercury Data

Metals in Solid

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1331501M07

Mercury Run Data Report

Data File Name: 1331511.M07

Run Name: 1331501M07

Instrument No.: 17384

Element: Hg

Analyst Employee ID: 0354

Reviewed By
Damary Valentin

Reviewed Date
11/11/2013 12:26PM

Method Reference Name(s):
SW-846 7471A
SW-846 7471A modified

Verified By:
Jennifer L Moyer

Verified Date
11/14/2013 7:52AM

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

1 Burn Date/Time: 11/11/2013 06:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0		1	1	1.00

AVG (ppb)	Intensity
0.0000	144.0

2 Burn Date/Time: 11/11/2013 06:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.2		1	1	1.00

AVG (ppb)	Intensity
0.0000	1401.0

3 Burn Date/Time: 11/11/2013 06:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S0.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	3301.0

4 Burn Date/Time: 11/11/2013 06:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S1.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	6865.0

5 Burn Date/Time: 11/11/2013 06:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S2.5		1	1	1.00

AVG (ppb)	Intensity
0.0000	16871.0

6 Burn Date/Time: 11/11/2013 06:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
S5.0		1	1	1.00

AVG (ppb)	Intensity
0.0000	33032.0

CorrelationCoefficient = 1.00000
Slope = 6599.9132000000
Y-Intercept = 149.1330900000

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

7 Burn Date/Time: 11/11/2013 06:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICV		1	1	1.00

AVG (ppb)	Intensity
2.4413	16262.0

8 Burn Date/Time: 11/11/2013 07:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
ICB		1	1	1.00

AVG (ppb)	Intensity
-0.0439	-142.0

9 Burn Date/Time: 11/11/2013 07:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1873	1384.0

10 Burn Date/Time: 11/11/2013 07:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 1		1	1	1.00

AVG (ppb)	Intensity
1.0295	6943.0

11 Burn Date/Time: 11/11/2013 07:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 1		1	1	1.00

AVG (ppb)	Intensity
-0.0224	0.0

12 Burn Date/Time: 11/11/2013 07:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

13 Burn Date/Time: 11/11/2013 07:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0335	6970.0		

14 Burn Date/Time: 11/11/2013 07:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266171	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6086	4165.0		

15 Burn Date/Time: 11/11/2013 07:15

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266172	**********	0.6024	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6730	4590.0		

16 Burn Date/Time: 11/11/2013 07:17

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266173	**********	0.6028	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2470	1778.0		

17 Burn Date/Time: 11/11/2013 07:19

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	U*********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0245	-14.0		

18 Burn Date/Time: 11/11/2013 07:21

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	UP********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0661	7185.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

19 Burn Date/Time: 11/11/2013 07:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	D*********	0.6404	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0294	-46.0		

20 Burn Date/Time: 11/11/2013 07:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	R*********	0.6043	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1229	7560.0		

21 Burn Date/Time: 11/11/2013 07:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266174	M*********	0.6247	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0966	7386.0		

22 Burn Date/Time: 11/11/2013 07:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 2		1	1	1.00

AVG (ppb)	Intensity
1.0441	7040.0

23 Burn Date/Time: 11/11/2013 07:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 2		1	1	1.00

AVG (ppb)	Intensity
-0.0332	-71.0

24 Burn Date/Time: 11/11/2013 07:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266175	**********	0.6132	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0085	6805.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

25 Burn Date/Time: 11/11/2013 07:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266176	**********	0.6136	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5898	4041.0		

26 Burn Date/Time: 11/11/2013 07:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266177	**********	0.6209	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1388	1064.0		

27 Burn Date/Time: 11/11/2013 07:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266178	**********	0.6185	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0165	39.0		

28 Burn Date/Time: 11/11/2013 07:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266179	**********	0.6276	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3620	2537.0		

29 Burn Date/Time: 11/11/2013 07:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266180	**********	0.6097	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6459	4411.0		

30 Burn Date/Time: 11/11/2013 07:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266181	**********	0.6011	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2909	2068.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

31 Burn Date/Time: 11/11/2013 07:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266182	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0157	44.0		

32 Burn Date/Time: 11/11/2013 07:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266183	**********	0.6198	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.7596	5162.0		

33 Burn Date/Time: 11/11/2013 07:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266184	**********	0.6173	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6104	4177.0		

34 Burn Date/Time: 11/11/2013 07:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 3		1	1	1.00

AVG (ppb)	Intensity
1.0446	7043.0

35 Burn Date/Time: 11/11/2013 07:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 3		1	1	1.00

AVG (ppb)	Intensity
-0.0294	-46.0

36 Burn Date/Time: 11/11/2013 07:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266185	**********	0.6194	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0980	795.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

37 Burn Date/Time: 11/11/2013 08:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266186	**********	0.6336	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0046	178.0		

38 Burn Date/Time: 11/11/2013 08:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268096	**********	0.6078	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6093	4170.0		

39 Burn Date/Time: 11/11/2013 08:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268097	**********	0.6074	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5807	3981.0		

40 Burn Date/Time: 11/11/2013 08:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268098	**********	0.6122	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3866	2700.0		

41 Burn Date/Time: 11/11/2013 08:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268099	**********	0.6321	100	1.00	133125711001

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0154	46.0		

42 Burn Date/Time: 11/11/2013 08:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0166	38.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

43 Burn Date/Time: 11/11/2013 08:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.0184	6870.0		

44 Burn Date/Time: 11/11/2013 08:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.9185	45815.0		

45 Burn Date/Time: 11/11/2013 08:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.9253	52461.0		

46 Burn Date/Time: 11/11/2013 08:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 4		1	1	1.00

AVG (ppb)	Intensity
0.9543	6447.0

47 Burn Date/Time: 11/11/2013 08:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 4		1	1	1.00

AVG (ppb)	Intensity
-0.0415	-126.0

48 Burn Date/Time: 11/11/2013 08:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	U*********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5052	10083.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

49 Burn Date/Time: 11/11/2013 08:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266800	UP********	0.6256	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.5806	17182.0		

50 Burn Date/Time: 11/11/2013 08:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
Z266803		0.6348	100	1.00

AVG (ppb)	Intensity
0.8542	5786.0

51 Burn Date/Time: 11/11/2013 08:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4183	9510.0		

52 Burn Date/Time: 11/11/2013 08:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.4196	9518.0		

53 Burn Date/Time: 11/11/2013 08:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266803	D*********	0.6348	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.1285	27399.0		

54 Burn Date/Time: 11/11/2013 08:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266801	R*********	0.6071	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6820	44254.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

55 Burn Date/Time: 11/11/2013 08:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266802	M*********	0.6202	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	6.6391	43971.0		

56 Burn Date/Time: 11/11/2013 08:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	7.7650	51403.0		

57 Burn Date/Time: 11/11/2013 08:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266806	**********	0.6431	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0814	685.0		

58 Burn Date/Time: 11/11/2013 08:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 5		1	1	1.00

AVG (ppb)	Intensity
1.0140	6841.0

59 Burn Date/Time: 11/11/2013 08:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 5		1	1	1.00

AVG (ppb)	Intensity
-0.0303	-52.0

60 Burn Date/Time: 11/11/2013 08:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266808	**********	0.6283	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2758	1968.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

61 Burn Date/Time: 11/11/2013 08:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266676	**********	0.6067	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0461	452.0		

62 Burn Date/Time: 11/11/2013 09:01

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266677	**********	0.6417	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2409	1738.0		

63 Burn Date/Time: 11/11/2013 09:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266678	**********	0.6128	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2186	1591.0		

64 Burn Date/Time: 11/11/2013 09:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266679	**********	0.6117	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1499	1137.0		

65 Burn Date/Time: 11/11/2013 09:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266681	**********	0.6147	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0030	128.0		

66 Burn Date/Time: 11/11/2013 09:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266682	**********	0.6378	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0584	533.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

67 Burn Date/Time: 11/11/2013 09:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265116	**********	0.6392	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1647	1235.0		

68 Burn Date/Time: 11/11/2013 09:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265117	**********	0.6185	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1152	908.0		

69 Burn Date/Time: 11/11/2013 09:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265118	**********	0.6161	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0405	415.0		

70 Burn Date/Time: 11/11/2013 09:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 6		1	1	1.00

AVG (ppb)	Intensity
1.0443	7041.0

71 Burn Date/Time: 11/11/2013 09:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 6		1	1	1.00

AVG (ppb)	Intensity
-0.0307	-55.0

72 Burn Date/Time: 11/11/2013 09:22

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265119	**********	0.6194	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0085	92.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

73 Burn Date/Time: 11/11/2013 09:24

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265120	**********	0.6218	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0650	577.0		

74 Burn Date/Time: 11/11/2013 09:26

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265121	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0243	308.0		

75 Burn Date/Time: 11/11/2013 09:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265123	**********	0.6108	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0052	182.0		

76 Burn Date/Time: 11/11/2013 09:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265124	**********	0.6249	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0658	582.0		

77 Burn Date/Time: 11/11/2013 09:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265125	**********	0.6086	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1750	1303.0		

78 Burn Date/Time: 11/11/2013 09:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265126	**********	0.6024	100	1.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0924	758.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

79 Burn Date/Time: 11/11/2013 09:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266804	**********	0.6393	100	5.00	133125711002

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.6992	11364.0		

80 Burn Date/Time: 11/11/2013 09:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0341	-77.0		

81 Burn Date/Time: 11/11/2013 09:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9896	6680.0		

82 Burn Date/Time: 11/11/2013 09:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 7		1	1	1.00

AVG (ppb)	Intensity
1.0341	6974.0

83 Burn Date/Time: 11/11/2013 09:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 7		1	1	1.00

AVG (ppb)	Intensity
-0.0330	-70.0

84 Burn Date/Time: 11/11/2013 09:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265885	**********	0.6064	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1635	1227.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

85 Burn Date/Time: 11/11/2013 09:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266477	**********	0.6144	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.2506	8403.0		

86 Burn Date/Time: 11/11/2013 09:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266809	**********	0.6123	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.2406	1736.0		

87 Burn Date/Time: 11/11/2013 09:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266812	**********	0.6018	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9514	6428.0		

88 Burn Date/Time: 11/11/2013 09:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266813	**********	0.6373	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.5417	10324.0		

89 Burn Date/Time: 11/11/2013 09:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	U*********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9064	6131.0		

90 Burn Date/Time: 11/11/2013 09:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266814	UP********	0.6083	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9687	13143.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

91 Burn Date/Time: 11/11/2013 10:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266817	D*********	0.6053	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8608	5830.0		

92 Burn Date/Time: 11/11/2013 10:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266815	R*********	0.6279	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9369	12933.0		

93 Burn Date/Time: 11/11/2013 10:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266816	M*********	0.6233	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8742	12519.0		

94 Burn Date/Time: 11/11/2013 10:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 8		1	1	1.00

AVG (ppb)	Intensity
1.0205	6884.0

95 Burn Date/Time: 11/11/2013 10:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 8		1	1	1.00

AVG (ppb)	Intensity
-0.0351	-84.0

96 Burn Date/Time: 11/11/2013 10:28

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266818	**********	0.6071	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8607	5829.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

97 Burn Date/Time: 11/11/2013 10:30

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	16.1754	106918.0		

98 Burn Date/Time: 11/11/2013 10:32

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265225	**********	0.6077	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0040	174.0		

99 Burn Date/Time: 11/11/2013 10:34

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265226	**********	0.6122	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1529	1157.0		

100 Burn Date/Time: 11/11/2013 10:36

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265227	**********	0.6141	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5547	3809.0		

101 Burn Date/Time: 11/11/2013 10:38

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265229	**********	0.6104	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3357	2364.0		

102 Burn Date/Time: 11/11/2013 10:40

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265234	**********	0.6308	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.1747	1301.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

103 Burn Date/Time: 11/11/2013 10:42

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265236	**********	0.6315	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5463	3754.0		

104 Burn Date/Time: 11/11/2013 10:44

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265237	**********	0.6385	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.5597	3842.0		

105 Burn Date/Time: 11/11/2013 10:46

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	4.9888	33078.0		

106 Burn Date/Time: 11/11/2013 10:48

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 9		1	1	1.00

AVG (ppb)	Intensity
0.9748	6582.0

107 Burn Date/Time: 11/11/2013 10:50

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 9		1	1	1.00

AVG (ppb)	Intensity
-0.0354	-86.0

108 Burn Date/Time: 11/11/2013 10:52

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265242	**********	0.6258	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.4372	16235.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

109 Burn Date/Time: 11/11/2013 10:54

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265244	**********	0.6282	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9552	6453.0		

110 Burn Date/Time: 11/11/2013 10:56

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265245	**********	0.6209	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0909	748.0		

111 Burn Date/Time: 11/11/2013 10:58

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265246	**********	0.6355	100	1.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6472	4420.0		

112 Burn Date/Time: 11/11/2013 11:00

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265239	**********	0.6229	100	10.00	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.7097	11433.0		

113 Burn Date/Time: 11/11/2013 11:02

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7265241	**********	0.6270	100	2.50	133125711003

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1061	14050.0		

114 Burn Date/Time: 11/11/2013 11:04

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
PBS	**********	0.6000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0407	-121.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

115 Burn Date/Time: 11/11/2013 11:06

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
LCSW	**********	1.0000	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9607	6489.0		

116 Burn Date/Time: 11/11/2013 11:08

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7267423	**********	0.6102	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	3.2265	21445.0		

117 Burn Date/Time: 11/11/2013 11:10

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268100	**********	0.6075	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8508	5764.0		

118 Burn Date/Time: 11/11/2013 11:12

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 10		1	1	1.00

AVG (ppb)	Intensity
1.0148	6846.0

119 Burn Date/Time: 11/11/2013 11:14

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 10		1	1	1.00

AVG (ppb)	Intensity
-0.0341	-77.0

120 Burn Date/Time: 11/11/2013 11:16

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268101	**********	0.6144	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9540	6445.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

121 Burn Date/Time: 11/11/2013 11:18

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268102	**********	0.6421	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4875	3366.0		

122 Burn Date/Time: 11/11/2013 11:20

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268103	**********	0.6026	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0203	14.0		

123 Burn Date/Time: 11/11/2013 11:23

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268104	**********	0.6366	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8505	5762.0		

124 Burn Date/Time: 11/11/2013 11:25

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268105	**********	0.6027	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.6109	4180.0		

125 Burn Date/Time: 11/11/2013 11:27

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268106	**********	0.6215	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4995	3445.0		

126 Burn Date/Time: 11/11/2013 11:29

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268107	**********	0.6384	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0253	-19.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

127 Burn Date/Time: 11/11/2013 11:31

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268108	**********	0.6193	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4712	3258.0		

128 Burn Date/Time: 11/11/2013 11:33

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268109	**********	0.6300	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.3292	2321.0		

129 Burn Date/Time: 11/11/2013 11:35

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268110	**********	0.6271	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4945	3412.0		

130 Burn Date/Time: 11/11/2013 11:37

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 11		1	1	1.00

AVG (ppb)	Intensity
1.0257	6918.0

131 Burn Date/Time: 11/11/2013 11:39

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 11		1	1	1.00

AVG (ppb)	Intensity
-0.0301	-51.0

132 Burn Date/Time: 11/11/2013 11:41

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268111	**********	0.6242	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	-0.0153	47.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

133 Burn Date/Time: 11/11/2013 11:43

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263643	**********	0.6209	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.9998	6747.0		

134 Burn Date/Time: 11/11/2013 11:45

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7263647	**********	0.6138	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.4030	2808.0		

135 Burn Date/Time: 11/11/2013 11:47

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7266523	**********	0.6099	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.0273	328.0		

136 Burn Date/Time: 11/11/2013 11:49

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	U*********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.1197	7539.0		

137 Burn Date/Time: 11/11/2013 11:51

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	UP********	0.6189	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	2.1377	14258.0		

138 Burn Date/Time: 11/11/2013 11:53

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	D*********	0.6250	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	0.8264	5603.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

139 Burn Date/Time: 11/11/2013 11:55

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	R*********	0.6169	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9907	13288.0		

140 Burn Date/Time: 11/11/2013 11:57

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268561	M*********	0.6306	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.8897	12621.0		

141 Burn Date/Time: 11/11/2013 11:59

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	1.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	8.8181	58354.0		

142 Burn Date/Time: 11/11/2013 12:03

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 12		1	1	1.00

AVG (ppb)	Intensity
1.0264	6923.0

143 Burn Date/Time: 11/11/2013 12:05

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 12		1	1	1.00

AVG (ppb)	Intensity
-0.0306	-54.0

144 Burn Date/Time: 11/11/2013 12:07

Sample Number	Class	Initial Vol / Wt	Final Vol	DF	Batch Number
7268564	**********	0.6208	100	5.00	133125711004

V	AVG (ppb)	Intensity	Re-read	Re-digest
	1.9260	12861.0		

LANCASTER LABORATORIES

Run Name: 1331501M07

Analyst ID: 0354

Instrument ID: 17384

CV Element: Hg

145 Burn Date/Time: 11/11/2013 12:09

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CRA		1	1	1.00

AVG (ppb)	Intensity
0.1682	1258.0

146 Burn Date/Time: 11/11/2013 12:11

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCV 13		1	1	1.00

AVG (ppb)	Intensity
1.0243	6909.0

147 Burn Date/Time: 11/11/2013 12:13

Sample Number	Class	Initial Vol / Wt	Final Vol	DF
CCB 13		1	1	1.00

AVG (ppb)	Intensity
-0.0310	-57.0

Extraction/Distillation/Digestion Logs

Metals in Solid

LLENS Worksheet for 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 003

Balance ID#: 10685 **Start Time:** 11/11/13 22:27 **End Time:** 11/12/13 3:30 **Hot Block:** 8

Pipette ID: S/2000

Spike/Reagent	Lot#	Volume Added(mL)
1:1 HNO3	P13-305B	10.00
30% H2O2	333502	4.00
HCL	40272	10.00
HNO3	1113030	5.00
ICP Spike 1A	1317716#31	2.00
ICP Spike 1B	1317717#31	2.00
LCS A1	1317716#31	2.00
LCS B1	1317717#31	2.00

Method Ref: SW-846 3050B

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	1.00g Teflon chips used, Lot: J114-3H037
3)	7265225	11/15/13 20:32		SW	N8			020a	1306159	
4)	7265226	11/15/13 20:32		SW	N8			020a	1306159	
5)	7265227	11/15/13 20:32		SW	N8			020a	1306159	
6)	7265229	11/15/13 20:32		SW	N8			020a	1306159	
7)	7265234	11/15/13 20:32		SW	N8			020a	1306159	
8)	7265236	11/15/13 20:32		SW	N8			020a	1306159	
9)	7265237	11/15/13 20:32		SW	N8			020a	1306159	
10)	7265241	11/15/13 20:32		SW	N8			020a	1306159	
11)	7265242	11/15/13 20:32		SW	N8			020a	1306159	
12)	7265244	11/15/13 20:32		SW	N8			020a	1306159	
13)	7265245	11/15/13 20:32		SW	N8			020a	1306159	
14)	7265246FD	11/15/13 20:32		SW	N8			020a	1306159	
15)	7265885	11/18/13 09:05		SW	P8			099a	1306159	
16)	7266809	11/18/13 18:58		SW	N8			020a	1306159	
17)	7266812	11/18/13 18:58		SW	N8			020a	1306159	
18)	7266813	11/18/13 18:58		SW	N8			020a	1306159	
19)	**7266814U**	11/18/13 18:58		SW	N8			020a	1306159	
20)	**7266815R**	11/18/13 18:58		SW	N8			020a	1306159	
21)	**7266816M**	11/18/13 18:58		SW	N8			020a	1306159	
22)	**7266817D**	11/18/13 18:58		SW	N8			020a	1306159	
23)	7266818	11/18/13 18:58		SW	N8			020a	1306159	

Prep Employee: AMS00862

11/12/2013

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
24)	7265239	11/19/13 00:00		SW	N8			020a	1306159	

Batch# 13 312 5708 003

LLENS Batch Chronology and Change Log - SW846 ICP/ICP MS Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:54	00862
2)	Sample Wt		11/11/13 22:27	00862
3)	Final Vol	10685	11/11/13 22:27	00862
4)	Trial		11/11/13 22:27	00862
5)	Upload Prep	US19VDIELA04	11/12/13 3:31	00862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5708 SW846 ICP/ICP MS Digest

Batch# 13 312 5708 003

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					1.0000	100.0000	1
LCSW					1.0000	100.0000	1
7265225	11/15/13	N8	R2041	KVM04-03	1.0300	100.0000	1
7265226	11/15/13	N8	R2042	KVM04-04	1.0200	100.0000	1
7265227	11/15/13	N8	R2043	KVM04-05	1.0100	100.0000	1
7265229	11/15/13	N8	R2M71	KVM04-07	1.0100	100.0000	1
7265234	11/15/13	N8	R2E16	KVM04-09	1.0000	100.0000	1
7265236	11/15/13	N8	2E161	KVM04-11	1.0200	100.0000	1
7265237	11/15/13	N8	2E16D	KVM04-12	1.0400	100.0000	1
7265241	11/15/13	N8	2F142	KVM04-16	1.0100	100.0000	1
7265242	11/15/13	N8	R2121	KVM04-17	1.0100	100.0000	1
7265244	11/15/13	N8	R2123	KVM04-19	1.0100	100.0000	1
7265245	11/15/13	N8	2D141	KVM04-20	1.0100	100.0000	1
7265246FD	11/15/13	N8	DUPX1	KVM04-21FD	1.0000	100.0000	1
7265885	11/18/13	P8	ARTSV		1.0300	100.0000	1
7266809	11/18/13	N8	2E131	KVM06-01	1.0200	100.0000	1
7266812	11/18/13	N8	2C126	KVM06-04	1.0100	100.0000	1
7266813	11/18/13	N8	2C111	KVM06-05	1.0100	100.0000	1
7266814U	11/18/13	N8	2E101	KVM06-06BKG	1.0000	100.0000	1
7266815R	11/18/13	N8	2E101	KVM06-06MS	1.0000	100.0000	1
7266816M	11/18/13	N8	2E101	KVM06-06MSD	1.0000	100.0000	1
7266817D	11/18/13	N8	2E101	KVM06-06DUP	1.0000	100.0000	1
7266818	11/18/13	N8	2E102	KVM06-07	1.0300	100.0000	1
7265239	11/19/13	N8	R2F14	KVM04-14	1.0400	100.0000	1

LLENS Worksheet for 5711 SW SW846 Hg Digest

Batch# 13 312 5711 003

Balance ID#: 19119 **Start Time:** 11/11/13 2:00 **End Time:** 11/11/13 2:30 **Hot Block:** 7

Pipette ID: S/100

Spike/Reagent	Lot#	Volume Added(mL)
5%KMnO4	H13-310P	15.00
Aqua Regia	P13-315A	5.00
LCS 1ppm Hg	P13-312A	0.10
Spike 1ppm Hg	P13-312A	0.10

Method Ref: SW-846 7471A modified

	SampleID	Date Due	C	ST	P	H	PH<2	BC	Vessel Lot#	Comments
1)	PBS	.							1306159	0.6252g Teflon chips used, Lot: J114-3H037
2)	LCSW	.							1306159	0.6261g Teflon chips used, Lot: J114-3H037
3)	7265885	11/18/13 09:05		SW	P8			099a	1306159	
4)	7266477	11/18/13 15:34		SW	N8			034a	1306159	
5)	7266809	11/18/13 18:58		SW	N8			020a	1306159	
6)	7266812	11/18/13 18:58		SW	N8			020a	1306159	
7)	7266813	11/18/13 18:58		SW	N8			020a	1306159	
8)	**7266814U**	11/18/13 18:58		SW	N8			020a	1306159	
9)	**7266815R**	11/18/13 18:58		SW	N8			020a	1306159	
10)	**7266816M**	11/18/13 18:58		SW	N8			020a	1306159	
11)	**7266817D**	11/18/13 18:58		SW	N8			020a	1306159	
12)	7266818	11/18/13 18:58		SW	N8			020a	1306159	
13)	7265239	11/19/13 00:00		SW	N8			020a	1306159	
14)	7265225	11/15/13 20:32		SW	N8			020a	1306159	
15)	7265226	11/15/13 20:32		SW	N8			020a	1306159	
16)	7265227	11/15/13 20:32		SW	N8			020a	1306159	
17)	7265229	11/15/13 20:32		SW	N8			020a	1306159	
18)	7265234	11/15/13 20:32		SW	N8			020a	1306159	
19)	7265236	11/15/13 20:32		SW	N8			020a	1306159	
20)	7265237	11/15/13 20:32		SW	N8			020a	1306159	
21)	7265241	11/15/13 20:32		SW	N8			020a	1306159	
22)	7265242	11/15/13 20:32		SW	N8			020a	1306159	
23)	7265244	11/15/13 20:32		SW	N8			020a	1306159	
24)	7265245	11/15/13 20:32		SW	N8			020a	1306159	
25)	7265246FD	11/15/13 20:32		SW	N8			020a	1306159	

Prep Employee: AMS00862

11/11/2013

Batch# 13 312 5711 003

LLENS Batch Chronology and Change Log - SW SW846 Hg Digest

	Operation	Instrument	Operation Date	Analyst
1)	Batch Creation		11/8/13 12:17	00862
2)	Sample Wt	19119	11/11/13 0:41	00862
3)	Final Vol	19119	11/11/13 0:41	00862
4)	Trial		11/11/13 0:41	00862
5)	Upload Prep	US19VDIELA03	11/11/13 3:32	00862

Sample ID	Analysis	D	Operation	Measurement	Original Entry				Data Changed		
					Date/Time	Data	Units	Analyst	Date/Time	Analyst	Reason

Analysis: 5711 SW SW846 Hg Digest

Batch# 13 312 5711 003

Sample ID	Due Date	P	EPA#	SDG#	Sample Wt	Final Volume	Trial
PBS					.6000	100.0000	1
LCSW					1.0000	100.0000	1
7265885	11/18/13	P8	ARTSV		.6064	100.0000	1
7266477	11/18/13	N8			.6144	100.0000	1
7266809	11/18/13	N8	2E131	KVM06-01	.6123	100.0000	1
7266812	11/18/13	N8	2C126	KVM06-04	.6018	100.0000	1
7266813	11/18/13	N8	2C111	KVM06-05	.6373	100.0000	1
7266814U	11/18/13	N8	2E101	KVM06-06BKG	.6083	100.0000	1
7266815R	11/18/13	N8	2E101	KVM06-06MS	.6279	100.0000	1
7266816M	11/18/13	N8	2E101	KVM06-06MSD	.6233	100.0000	1
7266817D	11/18/13	N8	2E101	KVM06-06DUP	.6053	100.0000	1
7266818	11/18/13	N8	2E102	KVM06-07	.6071	100.0000	1
7265239	11/19/13	N8	R2F14	KVM04-14	.6229	100.0000	1
7265225	11/15/13	N8	R2041	KVM04-03	.6077	100.0000	1
7265226	11/15/13	N8	R2042	KVM04-04	.6122	100.0000	1
7265227	11/15/13	N8	R2043	KVM04-05	.6141	100.0000	1
7265229	11/15/13	N8	R2M71	KVM04-07	.6104	100.0000	1
7265234	11/15/13	N8	R2E16	KVM04-09	.6308	100.0000	1
7265236	11/15/13	N8	2E161	KVM04-11	.6315	100.0000	1
7265237	11/15/13	N8	2E16D	KVM04-12	.6385	100.0000	1
7265241	11/15/13	N8	2F142	KVM04-16	.6270	100.0000	1
7265242	11/15/13	N8	R2121	KVM04-17	.6258	100.0000	1
7265244	11/15/13	N8	R2123	KVM04-19	.6282	100.0000	1
7265245	11/15/13	N8	2D141	KVM04-20	.6209	100.0000	1
7265246FD	11/15/13	N8	DUPX1	KVM04-21FD	.6355	100.0000	1

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-305B	$KMnO_4$ #1	6	4-10-18	46760	100.04g			
2	↓ ↓	↓ C	↓ ↓	↓	↓	↓	100.07g			
3	Hg-1.0mg/L InterCal	H13-307A	Hg-10mg/L Cal	Z	1-11-14	H13-192C	1.0ml			
4	Hg-0.1mg/L InterCal	307B	Hg-1.0mg/L Cal		11-10-13	H13-307A	1.0ml			
5	Hg-1.0mg/L InterCal	H13-308A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
6	0.1mg/L InterCal	B	1.0mg/L Cal		11-11-13	H13-308A				
7	1.0mg/L InterCont	C	10mg/L Cont		4-15-14	H13-288D				
8	0.1mg/L InterCont	D	1.0mg/L Cont		11-11-13	H13-308C	↓			
9	Hg 5700 ICV	E	↓			↓	.25ml	1	4	111330
10	CCV	F	↓			↓	.20			
11	CRA	G	Hg-0.1mg/L Cont			H13-288D 308D	.20			
12	Std. Cal	H	Hg-0.1mg/L Cal			H13-308B	.20			
13	↓	I	↓			↓	.50			
14		J	Hg-1.0mg/L Cal			H13-308A	.20			
15		K	↓			↓	.25			
16		L	↓		↓	↓	.50			
17	↓ ↓	↓ M						↓	↓	↓
18	Potassium Persulfate	H13-308N	$K_2S_2O_8$ #3	6	9-29-15	42220	100.05g			
19	Hg-1.0mg/L InterCal	H13-309A	Hg-10mg/L Cal	Z	4-15-14	H13-288C	1.0ml			
20	Hg-0.1mg/L InterCal	309B			11-12-13	H13-309A	1.0ml			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM823	11-01-13	5-01-14	RT
2				↓		↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-03-13	11-16-13	RT
4				↓	↓	↓	10	0.1	↓	↓	↓	↓
5				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-04-13	11-11-13	RT
6								0.1				
7								1.0				
8				↓	↓	↓	↓	0.1				
9	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1.6ml KMnO4		H13-297A H13-302C	100	2.5ug/L				
10							200	1.0				
11							100	0.2				
12								0.2				
13							↓	0.5				
14							200	1.0				
15							100	2.5				
16							↓	5.0				
17	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
18				to volume w/ DI H_2O			2000	5%	NSM823	11-04-13	5-04-14	RT
19				To vol w/ 0.15% HNO3		H13-166CC	10	1.0	DU354	11-05-13	11-12-13	RT
20				↓	↓	↓	10	0.1	↓	↓	↓	↓

KVM06 Page 1752 of 1808

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-1.0mg/L Inter Cont	H13-309C	Hg-10mg/L Cont	4	4-15-14	H13-238D	1.0ml			
2	Hg-0.1mg/L Inter Cont	D	Hg-1.0mg/L Cont		11-12-13	H13-309C	1.0ml			
3	Hg-5701 ICV	E	↓		↓	↓	.25ml			
4	CCV	F					.10			
5	CCV	G					.10			
6	CCV	H	↓			↓	.10			
7	CRA	I	Hg-0.1mg/L Cont			H13-309D	.20			
8	Std Cal	J	Hg-0.1mg/L Cal			H13-309B	.20			
9	↓	K	↓			↓	.50			
10		L	Hg-1.0mg/L Cal			H13-309A	.10			
11		m	↓			↓	.25			
12		N	↓		↓	↓	.50 ↓			
13	↓	O	—		—	—	—			
14	SI	P	Hg-0.1mg/L Cal		11-12-13	H13-309B	.10ml			
15	CRA	Q	Hg-0.1mg/L Cont			H13-309D	.10			
16	CRA	R	↓			↓	.40			
17	ICV	S	Hg-1.0mg/L Cont			H13-309C	.25			
18	CCV	T	↓			↓	.10			
19	CRA	U	Hg-0.1mg/L Cont			H13-309D	.20			
20	↓ Std Cal	↓ V	Hg-0.1mg/L Cal		↓	H13-309B	.20 ↓			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				To vol w/o.	15%	HNO3 H13-16KC	10	1.0	DU354	11-05-13	11-12-13	RT
2							10	0.1				
3				5ml Aqua Regia 15ml Km NO4		H13-309 H13-302D	100	2.5ug/L				
4								1.0				
5								1.0				
6								1.0				
7								0.2				
8								0.2				
9								0.5				
10								1.0				
11								2.5				
12								5.0				
13								0.0				
14								0.1				
15								0.1				
16								0.4				
17				5ml Aqua Regia ③ ~~2ml~~ 25ml Km NO4		H13-309 BB H13-302D		2.5				
18								1.0				
19								0.2				
20								0.2				

11-5-13 DV354

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg-5701 StdCal	HG-309W	Hg-0.1mg/L Cal		11-12-13	H13-309B	.50ml			
2		X	Hg-1.0mg/L Cal			H13-309A	.10			
3		Y					.25			
4		Z					.50			
5		AA								
6	Aqua Regia	BB						30	H	1113030
7	Hg-10mg/L Inter Cal	H13-310A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
8	0.1mg/L Inter Cal	B	1.0mg/L Cal		11-13-13	H13-310M				
9	1.0mg/L Inter Conc	C	10mg/L Conc		4-15-14	H13-288D				
10	0.1mg/L Inter Conc	D	1.0mg/L Conc		11-13-13	H13-310C				
11	Hg-5700 ICV	E					.25ml	1	H	1113030
12	CCV	F	11-6-130V354 (3)				.20			
13	CRA	G	Hg-0.1mg/L Cal Conc			H13-310D	.20			
14	StdCal	H	Hg-0.1mg/L Cal			H13-310B	.20			
15		I					.50			
16		J	Hg-1.0mg/L Cal			H13-310A	.20			
17		K					.25			
18		L					.50			
19		m								
20	Potassium Permanganate	H13-310N	$KMnO_4$ II	6	4-10-18	46760	100.04g			

Key – Manufacturer (M•)

1 – Aldrich Chemical
2 – Conostan Specialty Products
3 – EM Science
4 – Fisher Scientific
5 – High-Purity Standards
6 – J. T. Baker
7 – Johnson Matthey
8 – Leeman Labs
9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				5ml Aqua 25ml Km	Aqua NO4	H13-309BB H13-302D	100	0.5ug/L	DU354	11-05-13	11-12-13	RT
2								1.0				
3								2.5				
4								5.0				
5								0.0				
6	90	6	40272				120	1.3			11-05-13	
7				To vol w/0.15% HNO3		H13161CC	10	1.0	DU354	11-06-13	11-13-13	RT
8								0.1				
9								1.0				
10								0.1				
11	2ml H2SO4	4	135111	3.2ml K2S2O8 6ml Km NO4		H13-297K H13-302E	100	2.5ug/L				
12							200	1.0				
13							100	0.2				
14								0.2				
15								0.5				
16							200	1.0				
17							100	2.5				
18								5.0				
19								0.0				
20				to volume w/DIH2O			2000	5%	NSM823	11-06-13	5-06-14	RT

Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Potassium Permang	H13-310P	$KMnO_4$ #1	6	4-10-18	46760	100.03 g			
2	↓ ↓	↓ R	↓ ↓	↓	↓	↓	100.07 g			
3	Hg-1.0mg/L InterCont	H13-311A	Hg-10mg/L Cont	–	4-15-14	H13-288D	1.0ml			
4	Hg-0.1mg/L InterCont	311B	Hg-1.0mg/L Cont	–	11-14-13	H13-311A	1.0ml			
5	Stannous Chloride	311C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #23	200.03g			
6	Stannous Chloride	311D	↓	6	↓	↓ #5	200.03g			
7	Hydroxylamine	H13-311E	$NH_2OH \cdot HCl$	6	10-26-19	54809 #23	240.01g			
8	↓	↓	NaCl	6	3-17-18	48151 #1	240.01g			
9	Hg-1.0mg/L InterCal	H13-313A	Hg-10mg/L Cal	–	4-15-14	H13-288C	1.0ml			
10	Hg-1.0mg/L InterCal	H13-313A	Hg-10mg/L Cal		4-15-14	H13-288C	1.0ml			
11	Hg-0.1mg/L InterCal	B	Hg-1.0mg/L Cal		11-16-13	H13-313A				
12	Hg-1.0mg/L InterCont	C	Hg-10mg/L Cont		4-15-14	H13-288D				
13	Hg-0.1mg/L InterCont	D	Hg-1.0mg/L Cont		11-16-13	H13-313C	↓			
14	Hg-5700 ICV	E	↓		↓	↓	.25ml	1	24	111363D
15	CCV	F	↓			↓	.20			
16	CRA	G	Hg-0.1mg/L Cont			H13-313D	.20			
17	Std. Cal	H	Hg-0.1mg/L Cal			H13-313B	.20			
18	↓	I	↓			↓	.50			
19	↓	J	Hg-1.0mg/L Cal			H13-313A	.20			
20	↓ ↓	↓ K	↓		↓	↓	.25 ↓	↓	↓	↓

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12.– SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1				to volume w/ DI H_2O			2000	5%	NSM213	11-06-13	5-06-14	RT
2	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
3				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-07-13	11-14-13	RT
4	↓	↓	↓	↓	↓	↓	10	0.1			↓	
5	200	6	40272				2000	10%			5-07-14	
6	↓	↓	↓				↓	10%			↓	
7								12%				
8							↓	↓	↓	↓	↓	↓
9				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-08-13	11-15-13	RT
10				To vol w/ 0.15% HNO_3		H13-1161CC	10	1.0	DJ354	11-09-13	11-16-13	RT
11								0.1				
12								1.0				
13				↓	↓	↓	↓	0.1				
14	2ml H_2SO_4	4	135111	3.2ml $K_2S_2O_8$ 1ml $KMnO_4$		H13-2975 H13-3056	100	2.5%				
15	↓	↓	↓	↓	↓	↓	200	1.0				
16							100	0.2				
17							↓	0.2				
18							↓	0.5				
19							200	1.0				
20	↓	↓	↓	↓	↓	↓	100	2.5	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
* * units are mg/L unless otherwise specified

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Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Hg 5700 Std Cal	H13-3131	Hg 1.0 mg/L Cal	—	11-16-13	H13-313A	.50ml	1	4	1113030
2	↓	M						↓	↓	↓
3	Hg 5701 ICV	N	Hg 1.0 mg/L Cont		11-16-13	H13-313C	.25ml			
4	CCV	O					.10			
5	CCV	P					.10			
6	CCV	Q					.10			
7	CCV	R	↓			↓	.10			
8	CRA	S	Hg 0.1 mg/L Cont			H13-313D	.20			
9	Std Cal	T	Hg 0.1 mg/L Cal			H13-313B	.20			
10		U	↓			↓	.50			
11		V	Hg 1.0 mg/L Cal			H13-313A	.10			
12		W					.25			
13		X	↓		↓	↓	.50Y			
14	↓	Y								
15	SI	Z	Hg 0.1 mg/L Cal		11-16-13	H13-313B	.10ml			
16	CRA	AA	Hg 0.1 mg/L Cont			H13-313D	.10ml			
17	↓ CRA	BB	↓		↓	↓	.40ml			
18	Aqua Regia	↓ CC						20	4	1113030
19	Hg 1.0 mg/L InterCal	H13-315A	Hg 10 mg/L Cal		4-15-14	H13-288C	1.0ml			
20	Hg 0.1 mg/L InterCal	315B	Hg 1.0 mg/L Cal		11-18-13	H13-315A	1.0mL			

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	2ml H_2SO_4	4	135111	3.2ml H_2SO_4 10ml $KMnO_4$		H13-2973 H13-305C	100	5.0ug/L	DL354	11-09-13	11-16-13	RT
2	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
3	—	—	—	5ml Aqua Regia 15ml $KMnO_4$		H13-313CC H13-305C	↓	2.5	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
5	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
9	↓	↓	↓	↓	↓	↓	↓	0.2	↓	↓	↓	↓
10	↓	↓	↓	↓	↓	↓	↓	0.5	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓	↓	1.0	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓	↓	2.5	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓	↓	5.0	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓	↓	0.0	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓	↓	0.1	↓	↓	↓	↓
17	—	—	—	↓	↓	↓	↓	0.4	↓	↓	↓	↓
18	60	6	40272	—	—	—	80	1.3	↓	↓	11-09-13	↓
19	—	—	—	To Vol w/ 0.15% HNO_3		H13-116CC	10	1.0	DL354	11-11-13	11-18-13	RT
20	—	—	—	↓	↓	↓	10	0.1	↓	↓	↓	↓

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Footnotes

Key (••) – Other Used

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C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
** units are mg/L unless otherwise specified

Standards/Reagent Preparation Log

	Standard/Reagent Prepared		Standards/Reagents Used					HNO_3 Used		
	Name	Lot #	Identification	M•	Expire Date (MM/YY)	Lot #	Init. Wt/Vol (Write g or mL)	Vol (mL)	M•	Lot #
1	Stannous Chloride	H13-315C	$SnCl_2 \cdot 2H_2O$	6	8-6-18	55057 #3	200.06g	—	—	—
2	Hydroxylamine	H13-315D	$NH_2OH \cdot HCl$	6	10-26-19	54869 #3	240.04g	—	—	—
3	↓	↓	NaCl	6	3-17-18	48151 #1	240.08g	—	—	—
4	Potassium Permanganate	H13-315E	$KMnO_4$ #1	6	4-10-18	46760	100.03g	—	—	—
5	↓	↓ F	↓	↓	↓	46760	100.04g	—	—	—
6	↓	↓ G	↓	↓	↓	46760	100.07g	—	—	—
7	Hg 1.0 mg/L Inter Cont	H13-316A	Hg 10 mg/L Cont	—	4-15-14	H13-288D	1.0 ml	—	—	—
8	Hg 0.1 mg/L Inter Cont	316B	Hg 1.0 mg/L Cont	—	11-19-13	H13-316A	1.0 ml	—	—	—
9	Potassium Persulfate	H13-316C	$K_2S_2O_8$ #3	6	9-29-15	42220	100.04g	—	—	—
10	Hg 1.0 mg/L Inter Cal	H13-317A	Hg 10 mg/L Cal	7	4-15-14	H13-288C	1.0 ml	—	—	—
11	0.1 mg/L Inter Cal	B	1.0 mg/L Cal		11-20-13	H13-317A	↓	—	—	—
12	1.0 mg/L Inter Cont	C	10 mg/L Cont		4-15-14	H13-288D		—	—	—
13	↓ 0.1 mg/L Inter Cont	D	↓ 1.0 mg/L Cont		11-20-13	H13-317C	↓	—	—	—
14	Hg 5700 ICV	E	↓		↓	↓	.25 ml	1	4	1113030
15	CCV	F	↓			↓	.20	↓	↓	↓
16	CRA	G	Hg 0.1 mg/L Cont			H13-317D	.20			
17	Std Cal	H	Hg 0.1 mg/L Cal			H13-317B	.20			
18	↓	I	↓			↓	.50			
19		J	Hg 1.0 mg/L Cal			H13-317A	.20			
20	↓	↓ K	↓		↓	↓	.25	↓	↓	↓

Key – Manufacturer (M•)

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9 – Mallinckrodt
10 – Plasma Pure
11 – Solutions Plus
12 – SPEX Industries
13 – VWR Scientific
XX – Other (footnote Manuf.)

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Standards/Reagent Preparation Log

	HCl Used			Other Used			Final Vol (mL)	Final Conc (mg/L**)	Init/ Emp #	Prep Date (MM/DD/YY)	Expire Date (MM/DD/YY)	Storage
	Vol (mL)	M•	Lot #	Vol (mL*)	•• M•	Lot #						
1	200	13 ③11-11-13 DY354	52250				2000	10%	DW354	11-11-13	5-11-14	RT
2								12%				
3												
4				to volume w/ DI H_2O			2000	5%	NSM823	11-11-13	5-11-14	RT
5												
6												
7				To volume 0.15% HNO_3 HI3-1601CC			10	1.0	DW354	11-12-13	11-19-13	RT
8							10	0.1				
9				to volume w/ DI H_2O			2000	5%	NSM823	11-12-13	5-12-14	RT
10				To volume 0.15% HNO_3 HI3-1601CC			10	1.0	DW354	11-13-13	11-20-13	RT
11								0.1				
12								1.0				
13								0.1				
14	2ml H_2SO_4	H	135111	3.2ml $K_2S_2O_8$ 1ml KMnO4		HI3-3088 HI3-3108	100	2.5ug/L				
15							200	1.0				
16							100	0.2				
17								0.2				
18								0.5				
19							200	1.0				
20							100	2.5				

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Footnotes

Key (••) – Other Used

A = $CaCl_2$ (0.053%)
B = CsCl (10%)
C = KCl
D = La_2O_3 (10%)
E = Al $(NO_3)_3$ (40%)
F = Element Specific

RT = Room Temperature Storage

* units are mL unless otherwise specified
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Instrumental Wet Chemistry Data

Case Narrative/Conformance Summary

Instrumental Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266809	SD-R2-E-13-1		X	1	
7266812	SD-R2-C-12-6		X	1	
7266813	SD-R2-C-11-1		X	1	
7266814	SD-R2-E-10-1		X	1	Background/Unspiked
7266815	SD-R2-E-10-1_MS		X	1	Matrix Spike
7266817	SD-R2-E-10-1_DUP		X	1	Duplicate
7266818	SD-R2-E-10-2		X	1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

D = Duplicate (DUP)	NA = Not Applicable
HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

Quality Control and Calibration Summary Forms

Instrumental Wet Chemistry

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Quality Control Reference List
Instrumental Water Quality

CLIENT: Ashland, Inc.
SDG: KVM06

Fraction: Instrumental Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
TOC by Lloyd Kahn	13315049531A	BLANK	11/11/2013 20:47:00
		LCS	11/11/2013 21:31:00
TOC by Lloyd Kahn	13315049531B	7266809	11/11/2013 22:54:00
		7266812	11/11/2013 23:11:00
		7266813	11/11/2013 23:45:00
		7266814 UNSPK	11/12/2013 00:04:00
		7266815 MS	11/12/2013 00:20:00
		7266817 DUP	11/12/2013 00:35:00
		7266818	11/12/2013 01:05:00

Quality Control Summary
Method Blank
Instrumental Water Quality
SDG: KVM06
Matrix: SOLID

Fraction: Instrumental Wet Chemistry

13315049531A / B266800B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
TOC by Lloyd Kahn	TOC	11/11/13	N.D.	mg/kg	100	300

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

UNSPK: 7266814 MS: 7266815	Batch: **13315049531B** (Sample number(s): 7266809, 7266812-7266815, 7266817-7266818)									
Parameter	**ME**	**Spike Added mg/kg**	**Unspiked Conc mg/kg**	**MS Conc mg/kg**	**MSD Conc mg/kg**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	150754	47275.32	163768.84	NA	77	NA	59-125	NA	NA

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

BKG: 7266814 DUP: 7266817	Batch: **13315049531B** (Sample number(s): 7266809, 7266812-7266815, 7266817-7266818)				
Parameter	**ME**	**Unspiked Conc mg/kg**	**DUP Conc mg/kg**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	47275.32	46451.61	2	15

Comments:
(1) The sample and/or duplicate result is less than five times the LOQ.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: SOLID

Instrumental Water Quality

Fraction: Instrumental Wet Chemistry

LCS: Q266800	Batch: **13315049531B** (Sample number(s): 7266809, 7266812-7266815, 7266817-7266818)								
Parameter	**ME**	**Spike Added mg/kg**	**LCS Conc mg/kg**	**LCSD Conc mg/kg**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
TOC by Lloyd Kahn	TOC	5880	4346.85	NA	74	NA	47-143	NA	NA

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Quality Control Summary
Initial And Continuing Calibration
Instrumental Analysis/TOC

SDG: KVM06

Instrument ID: 08610
Calibration Date: 11/04/13

Analysis	0.3 mg C	0.9 mg C	3.0 mg C	6.0 mg C	CC
TOC	509	1275	3416	6312	0.9985

Acceptance Range:
ICV/CCV: +/- 10%
ICB/CCB: < LOQ

Units: CTS

Batch Numbers: 13315049531A
Analysis Dates: 11/11/2013-11/12/2013

	TOC		
Sample	True	Result	%Rec
ICV	3.0	2.547	85*
ICV	3.0	2.692	90
ICV	3.0	2.811	94
ICB	0	ND	NA
CCV2	3.0	3.002	100
CCB	0	ND	NA
CCV2	3.0	3.187	106
CCB	0	ND	NA
CCV2	3.0	2.919	97
CCB	0	ND	NA

* = Out of Specifications

Raw Data

Instrumental Wet Chemistry

Fraction: Instrumental Wet Chemistry

00383: TOC by Lloyd Kahn Analyte Name	Default MDL	Default LOQ	Units
TOC by Lloyd Kahn	100	300	mg/kg

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.4.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [illegible]

Sucrose Soln Lot #: 042012 exp 4.20.15

15000 mg/L KHT p. 10.20.13 e. 11.19.13

BK-146420 p.21

Run #: 1 3 3 0 8 C AL

— CALIB —

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	BLANK	0.000	0.0				0027				
2	0.3 STD	509 cts.	1.0 µl				0036				
3	0.9 STD	1275 cts.	3.0 µl				0048				
4	3.0 STD	3416 cts.	10.0 µl				0059				
5	6.0 STD	6312 cts.	20.0 µl				0111				
6	ICV 3.0	2.547	0.2 mL	OS			0124		85%		
7	ICV 3.0	2.692	0.2 mL	IS			0133		90%		
8	ICV 3.0	2.811	0.2 mL	↓			0142		94%		
9	ICB	-.226	0.0	↓			0149				
											N/A

Verified by: EP/LD

Date: 11/4/13

1941.03

177658 16

SOLIDS: EXTERNALLY ABORTED

Bk. 177658
p. 16

13308-CAL

Ins. 8610

11/4/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:21:08 2013

(1)

#0001 00:27:56 TC SPL#01 0.000 mg 0000000 cts 000.000 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:28:23 2013

#0001 00:36:47 TC STD#01 000.300 mgC 0000509 cts

(2)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
RF = 589.391 ugC/k-cts
R2 = 0.0000
OFFSET = 0 cts (0.00000 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:37:13 2013

#0001 00:48:14 TC STD#02 000.900 mgC 0001275 cts

(3)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
RF = 783.290 ugC/k-cts
R2 = 1.0000
OFFSET = 126 cts (-0.099 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:48:40 2013

#0001 00:59:46 TC STD#03 003.000 mgC 0003416 cts

(4)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
RF = 915.475 ugC/k-cts
R2 = 0.9958
OFFSET = 204 cts (-0.187 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 00:[illegible]:12 2013

#0001 01:11:50 TC STD#04 006.000 mgC 0006312 cts

(5)

CALIBRATION RESULTS:
STD TYPE = TC
STD#1 = 00.300 mgC 1 reps Avg Area = 509.0 cts %rsd = 0.00
STD#2 = 00.900 mgC 1 reps Avg Area = 1275.0 cts %rsd = 0.00
STD#3 = 03.000 mgC 1 reps Avg Area = 3416.0 cts %rsd = 0.00
STD#4 = 06.000 mgC 1 reps Avg Area = 6312.0 cts %rsd = 0.00
RF = 964.399 ugC/k-cts
R2 = 0.9970
OFFSET = 233 cts (-0.226 mgC)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:12:16 2013

(6)

#0001 01:24:48 TC SPL#01 3.000 mg 0002875 cts 002.547 mgC 84.90 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:25:15 2013

SOLIDS: EXTERNALLY ABORTED

(7)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:27:10 2013

#0001 01:33:56 TC SPL#01 3.000 mg 0003025 cts 002.692 mgC 89.73 %C

(8)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:35:44 2013

#0001 01:42:36 TC SPL#01 3.000 mg 0003149 cts 002.811 mgC 93.71 %C

(9)

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 04 01:43:04 2013

#0001 01:49:49 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.11.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [signature] 8m495

Sucrose Soln Lot #: 042012 exp. 4.20.15
15000mg/L KHP p. 10.20.13 e. 11.19.13
BK.146420 p.21

Run #: 1 3 3 1 5 1

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
1	CCV 3.0	3.002	0.2 mL	IS			2030				
2	CCB	-.226	0.0	↓			2040				
3	PBS	-.226	0.0	0	1	300	2047	13315049531A			
4	LCSS	.386	88.8	4346.85	11.26	3378	2131		TV=5880		
5	7266800-U	1.947	88.7	21950.39	11.27	3381	2140				KVMO
6	7266801-R	3.837	35.8	107178.77	27.93	8379	2155		SA=83799 102% IS		
7	7266803-D	1.741	82.4	21128.64	12.14	3642	2209		R=4 IS		
8	7266804	.684	62.7	10909.09	15.95	4785	2217				
9	7266806	2.477	92.5	26778.38	10.81	3243	2233				
10	7266808	1.200	62.1	19323.67	16.10	4830	2245				
11	7266809	1.131	44.2	25588.24	22.62	6786	2254	13315049531B			KVMOG
12	7266812	1.191	123.7	9628.13	8.08	2424	2311	↓			↓
13	CCV 3.0	3.187	0.2 mL	IS			2323		106%		
14	CCB	-.226	0.0	↓			2336				

Verified by: KF/CLS Date: 11/12/13

1941.03

177658

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Raw Data Notebook
Total Organic Carbon Solids Module

Date: 11.11.13 – 11.12.13

Instrument #: 8610

R^2: .9970 R=.9985

Analyst: [redacted]

Sucrose Soln Lot #: 042012 exp. 4.20.15

Run #: 133151

Inj .#	Sample Number	Raw Result (mgC)	Weight (mg) or µL used	Calc. Result (mg/kg)	Factor	LOQ	Time	Batch Number	Comments	Trial Avg.	SDG
15	7266813	2.940	122.5	24000.	8.16	2448	2345	133152495318	✓		KVM06
16	7266814-4	3.314	70.1	47275.32	14.27	4281	0004		✓		
17	7266815-A	3.259	19.9	163768.84	50.25	15075	0020		✓ SA=150754 77% (ES)		
18	7266817-D	3.024	65.1	46451.61	15.36	4608	0035		✓ R=2 (ES)		
19	7266816	8.302	247.1	RPT	—	—	0043				
20	72666818	.815	45.0	18111.11	22.22	6666	0105	↓	✓		↓
21	CCV 3.0	2.919	0.2mL	(IS)	—	—	0119		97%		
22	CCB	-.226	0.0	↓	—	—	0143				
											N/A

Verified by: LCF/11.5 Date: 11/12/13

Bk. 177658
p. 31-32

13315-1

Asmyar
Inst. 8610
EP 205
11/12/13

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:23:24 2013

(1)

#0001 20:30:12 TC SPL#01 3.000 mg 0003347 cts 003.002 mgC 100.08 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:30:38 2013

(2)

#0001 20:40:03 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 20:40:30 2013

(3)

#0001 20:47:17 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:24:40 2013

(4)

#0001 21:31:44 TC SPL#01 88.800 mg 0000634 cts 000.386 mgC 0.43 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:33:16 2013

(5)

#0001 21:40:36 TC SPL#01 88.700 mg 0002253 cts 001.947 mgC 2.20 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 21:47:31 2013

(6)

#0001 21:55:18 TC SPL#01 35.800 mg 0004212 cts 003.837 mgC 10.72 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:01:52 2013

(7)

#0001 22:09:01 TC SPL#01 82.400 mg 0002039 cts 001.741 mgC 2.11 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:10:43 2013

(8)

#0001 22:17:28 TC SPL#01 62.700 mg 0000943 cts 000.684 mgC 1.09 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:26:14 2013

(9)

#0001 22:33:00 TC SPL#01 92.500 mg 0002802 cts 002.477 mgC 2.68 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:38:52 2013

10

#0001 22:45:40 TC SPL#01 62.100 mg 0001478 cts 001.200 mgC 1.93 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 22:46:57 2013

11

#0001 22:54:26 TC SPL#01 44.200 mg 0001407 cts 001.131 mgC 2.56 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:04:40 2013

12

#0001 23:11:25 TC SPL#01 123.700 mg 0001469 cts 001.191 mgC 0.96 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:16:30 2013

13

#0001 23:23:15 TC SPL#01 3.000 mg 0003539 cts 003.187 mgC 106.25 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:29:31 2013

14

#0001 23:36:25 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:38:40 2013

15

#0001 23:45:25 TC SPL#01 122.500 mg 0003282 cts 002.940 mgC 2.40 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Mon Nov 11 23:57:23 2013

16

#0001 00:04:10 TC SPL#01 70.100 mg 0003670 cts 003.314 mgC 4.73 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:13:00 2013

17

#0001 00:20:27 TC SPL#01 19.900 mg 0003613 cts 003.259 mgC 16.38 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:27:52 2013

18

#0001 00:35:21 TC SPL#01 65.100 mg 0003368 cts 003.024 mgC 4.64 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:36:42 2013

19

#0001 00:43:28 TC SPL#01 247.100 mg 0008842 cts 008.302 mgC 3.36 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 00:56:54 2013

20

#0001 01:05:16 TC SPL#01 45.000 mg 0001079 cts 000.815 mgC 1.81 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 01:13:03 2013

21

#0001 01:19:49 TC SPL#01 3.000 mg 0003261 cts 002.919 mgC 97.31 %C

OI Analytical
TOC Solids V3.0
Analysis Date: Tue Nov 12 01:37:06 2013

22

#0001 01:43:52 TC SPL#01 0.000 mg 0000000 cts -000.226 mgC 0.00 %C

Extraction/Distillation/Digestion Logs

Instrumental Wet Chemistry

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Combustion TOC Prep Log
Analysis #2079, #0383

Phosphoric Lot # 053113 exp 11.30.13

Oven ID# 1887

Oven Temperature (°C) 75°

Tray #: 30 Balance ID: B35614 Time In: 2015 Time Out: 2030

Position	Date	Analyst	Sample #	Weight (mg)	Batch Number	Comments
A1	11.11.13	[signature]	PBS	0.0	133150495314	
A2	↓	↓	LCSS	88.8	↓	
A3			7266800-U	88.7		
A4			7266801-R	35.8		
A5			7266803-D	82.4		
A6			7266804	62.7		
A7			7266806	92.5		
A8			7266808	62.1	↓	
B1			7266809	44.2	133150495318	
B2			7266812	123.7	↓	
B3			7266813	122.5		
B4			7266814-U	70.1		
B5			7266815-R	19.9		
B6			7266817-D	65.1		
B7			7266818	247.1	↓	
B8	↓	↓	7266818	45.0		
C1						
C2						
C3						
C4						
C5						
C6						
C7						
C8						N/A

Verified by: BB/LDS Date: 11/12/13

Wet Chemistry Data

Case Narrative/Conformance Summary

Wet Chemistry

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Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Water Quality

Fraction: Wet Chemistry

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
7266810	SW-R2-D-12-3	X		1	
7266811	SW-R2-D-12-1	X		1	
7266819	DUP-03	X		1	Field Duplicate Sample

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, laboratory spike data (LCS) are provided.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

U = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
R = Matrix Spike (MS)	MDL = Method Detection Limit
M = Matrix Spike Duplicate (MSD)	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	NA = Not Applicable

Case Narrative/Conformance Summary

CLIENT: Ashland, Inc.
SDG: KVM06

Water Quality

Fraction: Wet Chemistry

HS = High Spike	ME = Method
LS = Low Spike	CO = Colorimetric
SS = Soluble Spike	G = Gravimetric
IS = Insoluble Spike	IR = Infrared Spectrophotometry
ISD = Insoluble Spike Duplicate	MTR = Meter
PDS = Post Digestion Spike	OD = Oven Dried
* = Out of Specification	TI = Titration
V = Visual	TOC = Total Organic Carbon
AK = Alpkem	IC = Ion Chromatography
TC = Total Carbon	RA = Rapid Analyzer

QC Summary

Wet Chemistry

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Quality Control Reference List
Water Quality

CLIENT: Ashland, Inc.
SDG: KVM06

Fraction: Wet Chemistry

Analysis	Batch Number	Sample Number	Analysis Date
pH	13312002202A	P002202Q	11/08/2013 12:03:00
		7266810	11/08/2013 13:00:00
		7266811	11/08/2013 13:04:00
		7266819	11/08/2013 12:52:00
Total Hardness	13311001104A	P001104B	11/08/2013 00:36:00
		P001104Q	11/08/2013 00:44:00
		7266810	11/08/2013 04:53:00
		7266811	11/08/2013 05:01:00
		7266819	11/08/2013 05:11:00

Quality Control Summary
Method Blank
Water Quality
SDG: KVM06
Matrix: LIQUID

Fraction: Wet Chemistry

13311001104A / P001104B Parameter	ME	Analysis Date	Blank Results	Units	MDL	LOQ
Total Hardness	TI	11/08/13	N.D.	mg/l as CaCO3	3.0	5.0

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: KVM06
Matrix: LIQUID

Water Quality
Fraction: Wet Chemistry

LCS: P001104	Batch: **13311001104A** (Sample number(s): 7266810-7266811, 7266819)								
Parameter	**ME**	**Spike Added mg/l as CaCO3**	**LCS Conc mg/l as CaCO3**	**LCSD Conc mg/l as CaCO3**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Total Hardness	TI	40	41.15	NA	103	NA	96-110	NA	NA

LCS: P002202	Batch: **13312002202A** (Sample number(s): 7266810-7266811, 7266819)								
Parameter	**ME**	**Spike Added Std. Units**	**LCS Conc Std. Units**	**LCSD Conc Std. Units**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
pH	MTR	6.86	6.79	NA	99	NA	92-106	NA	NA

Raw Data

Wet Chemistry

Fraction: Wet Chemistry

12152: pH Analyte Name	Default MDL	Default LOQ	Units
pH	0.010	0.010	Std. Units

12147: Total Hardness Analyte Name	Default MDL	Default LOQ	Units
Total Hardness	3.0	5.0	mg/l as CaCO3

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Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Bicarbonate	mg/l as CaCO3
Carbonate	mg/l as CaCO3
Phenolphthalein Alkalinity	mg/l as CaCO3
Specific Conductance	umhos/cm
Temperature of pH	Degrees C
Total Alkalinity	mg/l as CaCO3
pH	Std. Units

Analysis Name	QC Check	True Value	Acceptance Range
Specific Conductance	CCVSC1	147.00	132.30 - 161.70
Specific Conductance	CCVSC2	1413.00	1271.70 - 1554.30
Specific Conductance	CCVSC3	12900.00	11610.00 - 14190.00
pH	CCVPH2	7.00	6.27 - 7.73

Analysis Name	QC Check	Acceptance Range
Specific Conductance	CCB	< 5.00
Specific Conductance	PBW	< 5.00
Total Alkalinity	CCB	< 2.00
Total Alkalinity	PBW	< 2.00

Analysis Name	Reagent Name	Lot Info

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Specific Conductance	LCSSC	147.00	140.39 - 153.47	174884p68
Total Alkalinity	LCSAK	188.00	168.26 - 207.55	174884p56
pH	LCSPH	7.00	6.27 - 7.73	C129-02
pH	LCSSSFL	7.00	6.62 - 7.38	

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267643	26099		13312002201A	1	070A	11/08/2013 11:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.64	7.64	Y	Y		
Temperature of pH	20.87	20.87				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267651	26100		13312002201A	1	070A	11/08/2013 11:25

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.73	7.73	Y	Y		
Temperature of pH	21.09	21.09				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267642	26101		13312002201A	1	070A	11/08/2013 11:29

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.29	6.29	Y	Y		
Temperature of pH	20.99	20.99				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVSC3	26102	CCV		1	11/08/2013 11:30

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Specific Conductance	12510.00	12510.00		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26103	CCV		1	11/08/2013 11:35

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.80	6.80		
Temperature of pH	20.77	20.77		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	26104	CCB		1	11/08/2013 11:42

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	0.47	0.47		
Carbonate	0.00	0.00		
Specific Conductance	0.94	0.94		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	5.90	5.90		
Total Alkalinity	0.47	0.47		
Temperature of pH	20.54	20.54		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268203	26105		13312002201A	1	070A	11/08/2013 11:46

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.94	7.94	Y	Y		
Temperature of pH	20.38	20.38	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267644	26106	U	13312002201B	1	070A	11/08/2013 11:50

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.77	6.77	Y	Y		
Temperature of pH	20.23	20.23				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267647	26107	D	13312002201B	1	070A	11/08/2013 11:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26108	CCV		1	11/08/2013 11:58

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.41	20.41		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSPH	26109	Q	13312002202A	1	11/08/2013 12:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.79	6.79	Y			
Temperature of pH	20.65	20.65				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	26110	U	13312002202A	1	004A	11/08/2013 12:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	21.05	21.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	26111	D	13312002202A	1	004A	11/08/2013 12:12

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.46	7.46	Y	Y		
Temperature of pH	20.89	20.89				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	26112		13312002202A	1	004A	11/08/2013 12:15

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.96	7.96	Y	Y		
Temperature of pH	20.49	20.49				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	26113		13312002202A	1	004A	11/08/2013 12:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.20	7.20	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	26114		13312002202A	1	004A	11/08/2013 12:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.60	4.60	Y	Y		
Temperature of pH	20.12	20.12				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	26115		13312002202A	1	004A	11/08/2013 12:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	4.63	4.63	Y	Y		
Temperature of pH	20.04	20.04				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	26116		13312002202A	1	004A	11/08/2013 12:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.70	7.70	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	26117		13312002202A	1	004A	11/08/2013 12:35

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.03	6.03	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	26118		13312002202A	1	004A	11/08/2013 12:39

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.98	7.98	Y	Y		
Temperature of pH	20.14	20.14				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26119	CCV		1	11/08/2013 12:43

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.29	20.29		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	26120		13312002202A	1	004A	11/08/2013 12:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.72	7.72	Y	Y		
Temperature of pH	20.67	20.67				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	26121		13312002202A	1	004A	11/08/2013 12:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.02	7.02	Y	Y		
Temperature of pH	20.59	20.59				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	26122		13312002202A	1	004A	11/08/2013 12:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.85	6.85	Y	Y		
Temperature of pH	20.40	20.40				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	26123		13312002202A	1	004A	11/08/2013 13:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.87	6.87	Y	Y		
Temperature of pH	20.25	20.25				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	26124		13312002202A	1	004A	11/08/2013 13:04

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.90	6.90	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	26125		13312002202A	1	004A	11/08/2013 13:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.94	5.94	Y	Y		
Temperature of pH	20.05	20.05				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	26126		13312002202A	1	004A	11/08/2013 13:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	7.43	7.43	Y	Y		
Temperature of pH	20.02	20.02				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26127	U	13312002202B	1	070A	11/08/2013 13:16

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y	Y		
Temperature of pH	20.08	20.08				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267840	26128	D	13312002202B	1	070A	11/08/2013 13:20

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	3.72	3.72	Y			
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267842	26129		13312002202A	1	070A	11/08/2013 13:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.01	6.01	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26130	CCV		1	11/08/2013 13:28

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.81	6.81		
Temperature of pH	20.62	20.62		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267839	26131		13312002202A	1	070A	11/08/2013 13:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.81	5.81	Y	Y		
Temperature of pH	20.73	20.73				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267841	26132		13312002202A	1	070A	11/08/2013 13:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.61	6.61	Y	Y		
Temperature of pH	20.47	20.47				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7267843	26133		13312002202A	1	070A	11/08/2013 13:41

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.36	5.36	Y	Y		
Temperature of pH	20.36	20.36				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26134	CCV		1	11/08/2013 13:44

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.83	6.83		
Temperature of pH	20.20	20.20		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26135	Q	13312002203A	1	11/08/2013 13:48

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.81	6.81	Y			
Temperature of pH	20.09	20.09				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSSSFL	26136	Y	13312002203A	1	11/08/2013 13:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	6.82	6.82	Y			
Temperature of pH	20.15	20.15				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265638	26137		13312002203A	1	004A	11/08/2013 13:58

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.79	5.79	Y	Y		
Temperature of pH	20.18	20.18				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265640	26138		13312002203A	1	004A	11/08/2013 14:02

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.52	5.52	Y	Y		
Temperature of pH	20.20	20.20				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263617	26139		13312002203A	1	004A	11/08/2013 14:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.37	20.37				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263615	26140		13312002203A	1	004A	11/08/2013 14:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
pH	5.48	5.48	Y	Y		
Temperature of pH	20.60	20.60				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVPH2	26141	CCV		1	11/08/2013 14:13

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
pH	6.82	6.82		
Temperature of pH	20.58	20.58		

Water Quality Run Report

Run Name: 20131108-22 **Instrument: 19153**

Analyst : 1124 - Michele L. Graham

Verifier : 0355 - Robert G. Heisey
1026 - Michelle L. Lalli

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	26142	CCB		1	11/08/2013 14:19

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Bicarbonate	1.68	1.68		
Carbonate	0.00	0.00		
Hydroxide	0.00	0.00		
Phenolphthalein Alkalinit	0.00	0.00		
pH	5.92	5.92		
Total Alkalinity	1.68	1.68		
Temperature of pH	20.56	20.56		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBW	26143	B	13312002204A	1	11/08/2013 14:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Bicarbonate	0.15	0.15				
Carbonate	0.00	0.00				
Hydroxide	0.00	0.00				
Phenolphthalein Alkalinit	0.00	0.00				
pH	5.63	5.63				
Total Alkalinity	0.15	0.15	Y			
Temperature of pH	20.48	20.48				

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSAK	26144	Q	13312002204A	1	11/08/2013 14:30

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Bicarbonate	2.72	2.72				
Carbonate	188.38	188.38				
Hydroxide	0.00	0.00				
Phenolphthalein Alkalinit	94.19	94.19				
pH	10.49	10.49				
Total Alkalinity	191.10	191.10	Y			
Temperature of pH	20.38	20.38				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268667	26145	U	13312002204A	1	070A	11/08/2013 14:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Phenolphthalein Alkalinit	0.00	0.00	Y	Y		
Total Alkalinity	238.24	238.24	Y	Y		
Bicarbonate	238.24	238.24	Y	Y		
Carbonate	0.00	0.00	Y	Y		
Hydroxide	0.00	0.00				
pH	7.91	7.91				
Temperature of pH	20.55	20.55				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268668	26146	R	13312002204A	1	070A	11/08/2013 14:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Phenolphthalein Alkalinit	5.04	5.04	Y	Y		
Total Alkalinity	280.64	280.64	Y	Y		
Bicarbonate	270.55	270.55	Y			
Carbonate	10.09	10.09	Y			
Hydroxide	0.00	0.00				
pH	8.36	8.36				
Temperature of pH	20.44	20.44				

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7268669	26147	M	13312002204A	1	070A	11/08/2013 14:49

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Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle Verifier : 0355 - Robert G. Heisey

Analysis Name	Units
Total Hardness	mg/l as CaCO3

Analysis Name	QC Check	True Value	Acceptance Range
Total Hardness	CCVTH1	20.00	18.00 - 22.00
Total Hardness	CCVTH2	40.00	36.00 - 44.00
Total Hardness	CCVTH3	60.00	54.00 - 66.00

Analysis Name	QC Check	Acceptance Range
Total Hardness	CCB	< 3.00
Total Hardness	PBWTH	< 3.00

Analysis Name	Reagent Name	Lot Info
Total Hardness	EDTA	A3143

Analysis Name	LCS	True Value	Acceptance Range	Lot Information
Total Hardness	LCSTH	40.00	38.20 - 44.16	174884/73

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261491	35488		13311001103A	1	007A	11/07/2013 23:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	23.70	23.70	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261492	35489		13311001103A	1	007A	11/07/2013 23:43

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	53.48	53.48	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7261493	35490		13311001103A	1	007A	11/07/2013 23:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	103.03	103.03	N		CCV is > 44 at 35458 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263051	35491		13311001104A	1	007A	11/08/2013 00:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.71	38.71	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263056	35492		13311001104A	1	007A	11/08/2013 00:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	36.91	36.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35493	CCV		1	11/08/2013 00:15

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	21.28	21.28		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35494	CCB		1	11/08/2013 00:20

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.15	1.15		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35495	B	13311001104A	1	11/08/2013 00:36

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35496	Q	13311001104A	1	11/08/2013 00:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.15	41.15	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35497	U	13311001104B	1	007A	11/08/2013 00:52

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.93	38.93	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263057	35498	D	13311001104B	1	007A	11/08/2013 01:00

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.77	38.77	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263058	35499		13311001104A	1	007A	11/08/2013 01:08

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.78	38.78	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7263059	35500		13311001104A	1	007A	11/08/2013 01:24

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265223	35501		13311001104A	1	007A	11/08/2013 01:40

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265224	35502		13311001104A	1	007A	11/08/2013 01:56

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265228	35503		13311001104A	1	007A	11/08/2013 02:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	38.58	38.58	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35504	CCV		1	11/08/2013 02:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	41.49	41.49		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35505	CCB		1	11/08/2013 02:17

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.18	1.18		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265230	35506	U	13311001104A	1	007A	11/08/2013 02:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.54	154.54	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265231	35507	R	13311001104A	1	007A	11/08/2013 02:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	190.84	190.84	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265232	35508	M	13311001104A	1	007A	11/08/2013 02:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	189.25	189.25	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265233	35509	D	13311001104A	1	007A	11/08/2013 02:57

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	155.14	155.14	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265235	35510		13311001104A	1	007A	11/08/2013 03:07

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	154.17	154.17	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265238	35511		13311001104A	1	007A	11/08/2013 03:19

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	237.40	237.40	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265240	35512		13311001104A	1	007A	11/08/2013 03:31

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	235.62	235.62	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265243	35513		13311001104A	1	007A	11/08/2013 03:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	221.52	221.52	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7265248	35514		13311001104A	1	007A	11/08/2013 03:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	2.04	2.04	Y	Y		

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266799	35515		13311001104A	1	007A	11/08/2013 04:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH3	35516	CCV		1	11/08/2013 04:12

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	62.80	62.80		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35517	CCB		1	11/08/2013 04:16

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.26	1.26		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266805	35518		13311001104A	1	007A	11/08/2013 04:33

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	Y			

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266807	35519		13311001104A	1	007A	11/08/2013 04:44

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	264.91	264.91	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266810	35520		13311001104A	1	007A	11/08/2013 04:53

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	88.39	88.39	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266811	35521		13311001104A	1	007A	11/08/2013 05:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	86.97	86.97	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266819	35522		13311001104A	1	007A	11/08/2013 05:11

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	108.41	108.41	Y	Y		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260374	35523		13311001105A	10	007A	11/08/2013 05:27

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	0.00	0.00	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260375	35524		13311001105A	10	007A	11/08/2013 05:37

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	122.53	1225.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260376	35525		13311001105A	10	007A	11/08/2013 05:47

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	172.03	1720.30	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260377	35526		13311001105A	10	007A	11/08/2013 05:55

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	52.15	521.50	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260378	35527		13311001105A	10	007A	11/08/2013 06:06

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	232.14	2321.40	N		CCV is > 22 at 35537 - For PB;	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH2	35528	CCV		1	11/08/2013 06:13

Water Quality Run Report

Run Name: 20131107-11 **Instrument: 19074**

Analyst : 0227 - Susan A. Engle

Verifier : 0355 - Robert G. Heisey
0665 - Erik J. Frederiksen

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	42.53	42.53		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35529	CCB		1	11/08/2013 06:18

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	1.29	1.29		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
PBWTH	35530	B	13311001105A	1	11/08/2013 06:23

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	1.16	1.16	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
LCSTH	35531	Q	13311001105A	1	11/08/2013 06:32

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	41.21	41.21	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260379	35532		13311001105A	10	007A	11/08/2013 06:42

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	187.29	1872.90	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7260876	35533		13311001105A	1	007A	11/08/2013 06:51

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	75.89	75.89	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266574	35534	U	13311001105A	1	007A	11/08/2013 07:01

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	137.67	137.67	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266575	35535	R	13311001105A	1	007A	11/08/2013 07:10

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	169.99	169.99	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266576	35536	M	13311001105A	1	007A	11/08/2013 07:21

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	171.28	171.28	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCVTH1	35537	CCV		1	11/08/2013 07:29

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	22.26	22.26		

Sample	Index	QC Type	Batch	Dilution	Run_Date:
CCB	35538	CCB		1	11/08/2013 07:45

Analysis Name	Raw Result	CalcResult	Verified	QC Review Notes
Total Hardness	0.00	0.00		

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266577	35539	D	13311001105A	1	007A	11/08/2013 07:54

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	133.95	133.95	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266578	35540		13311001105A	1	007A	11/08/2013 08:03

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	136.69	136.69	N		CCV is > 22 at 35537	

Sample	Index	QC Type	Batch	Dilution	Bottle	Run_Date:
7266579	35541		13311001105A	1	007A	11/08/2013 08:13

Analysis Name	Raw Result	CalcResult	Uploaded?	Verified	QC Review Notes	Selection Reason
Total Hardness	138.23	138.23	N		CCV is > 22 at 35537	

Moisture Data

MOISTURE

SAMPLE NUMBERS:

Sample #	Sample Code
7266809	2E131
7266812	2C126
7266813	2C111
7266814	2E101BKG
7266815	2E101MS
7266816	2E101MSD
7266817	2E101DUP
7266818	2E102

COMMENTS:

Method defined actions are taken for any failed matrix QC.

Laboratory Compliance Quality Control

Analysis Name	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13317820005B	Sample number(s): 7266809, 7266812-7266818				
Moisture	100		99-101		
Moisture Duplicate	100		99-101		
Moisture	100		99-101		

Sample Matrix Quality Control

Analysis Name	BKG Conc	DUP Conc	RPD	RPD Max
Batch number: 13317820005B	Sample number(s): 7266809, 7266812-7266818			
Moisture	78.1	78.0	0	5
Moisture Duplicate	78.1	78.0	0	5
Moisture	78.1	78.0	0	5

* - Outside of specification

(1) - The result for one or both determinations was less than five times the LOQ.

Moisture Data Report

Batch #: **13317820005**

Sample ID	Batch ID	Analysis#	Tare Wt	Sample Wt	Dry Wt	%Moisture	Analysis Date (Emp#)	Verified Date (Emp#)
LCS 89.5% Std.			1.0954	5.0403	1.6399	89.20	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266809	B	00111	1.1454	8.7970	1.8542	91.94	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266812	B	00111	1.1045	6.6386	4.9280	42.41	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266813	B	00111	1.0617	6.5940	3.2192	67.28	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266814BKG	B	00111	1.1157	5.8997	2.4100	78.06	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266815MS	B	00118				78.06	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266816MSD	B	00118				78.06	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266817DUP	B	00118				78.06	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266817DUP	B	00121	1.0865	5.2668	2.2435	78.03	11/13/13 (1201/SWF)	11/14/13 (0236/CW)
7266818	B	00111	1.1090	6.2697	3.3486	64.28	11/13/13 (1201/SWF)	11/14/13 (0236/CW)

Appendix E

Site-Specific LEL/SEL Calculations

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Intermittent Streams
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	Field Event
SD-B13-1-01	SD-B13-1-01	Intermittent Streams	TOC	10400	MG/KG	4.017033339	SI
SD-B13-2-01	SD-B13-2-01	Intermittent Streams	TOC	7900	MG/KG	3.897627091	SI
SD-B13-3-01	SD-B13-3-01	Intermittent Streams	TOC	22900	MG/KG	4.359835482	SI
SD-B13-4-01	SD-B13-4-01	Intermittent Streams	TOC	9720	MG/KG	3.987666265	SI
SD-B14-1-01	SD-B14-1-01	Intermittent Streams	TOC	38800	MG/KG	4.588831726	SI
SD-B14-3-01	SD-B14-3-01	Intermittent Streams	TOC	98000	MG/KG	4.991226076	SI
SD-B14-4-01	SD-B14-4-01	Intermittent Streams	TOC	45200	MG/KG	4.655138435	SI
SD-C10-1-01	SD-C10-1-01	Intermittent Streams	TOC	9700	MG/KG	3.986771734	SI
SD-C10-2-01	SD-C10-2-01	Intermittent Streams	TOC	810	MG/KG	2.908485019	SI
SD-C10-3-01	SD-C10-3-01	Intermittent Streams	TOC	5600	MG/KG	3.748188027	SI
SD-C10-4-01	SD-C10-4-01	Intermittent Streams	TOC	4800	MG/KG	3.681241237	SI
SD-C11-1-01	SD-C11-1-01	Intermittent Streams	TOC	7000	MG/KG	3.84509804	SI
SD-C11-2-01	SD-C11-2-01	Intermittent Streams	TOC	37000	MG/KG	4.568201724	SI
SD-C11-3-01	SD-C11-3-01	Intermittent Streams	TOC	116000	MG/KG	5.064457989	SI
SD-C13-1-01	SD-C13-1-01	Intermittent Streams	TOC	5400	MG/KG	3.73239376	SI
SD-C14-1-01	SD-C14-1-01	Intermittent Streams	TOC	20700	MG/KG	4.315970345	SI
SD-C14-2-01	SD-C14-2-01	Intermittent Streams	TOC	39400	MG/KG	4.595496222	SI
SD-D10-1-01	SD-D10-1-01	Intermittent Streams	TOC	9500	MG/KG	3.977723605	SI
SD-E12-3-01	SD-E12-3-01	Intermittent Streams	TOC	42000	MG/KG	4.62324929	SI
SD-F10-1-01	SD-F10-1-01	Intermittent Streams	TOC	22700	MG/KG	4.356025857	SI
SD-F10-2-01	SD-F10-2-01	Intermittent Streams	TOC	32000	MG/KG	4.505149978	SI
SD-F12-1-01	SD-F12-1-01	Intermittent Streams	TOC	36400	MG/KG	4.561101384	SI
SD-F8-1-01	SD-F8-1-01	Intermittent Streams	TOC	20300	MG/KG	4.307496038	SI
SD-F8-2-01	SD-F8-2-01	Intermittent Streams	TOC	2100	MG/KG	3.322219295	SI
SD-F9-1-01	SD-F9-1-01	Intermittent Streams	TOC	15900	MG/KG	4.201397124	SI
SD-F9-2-01	SD-F9-2-01	Intermittent Streams	TOC	28200	MG/KG	4.450249108	SI
SD-G12-3-01	SD-G12-3-01	Intermittent Streams	TOC	43800	MG/KG	4.641474111	SI
SD-H10-1-01	SD-H10-1-01	Intermittent Streams	TOC	270	MG/KG	2.431363764	SI
SD-H11-1-01	SD-H11-1-01	Intermittent Streams	TOC	22800	MG/KG	4.357934847	SI
SD-H11-2-01	SD-H11-2-01	Intermittent Streams	TOC	36000	MG/KG	4.556302501	SI
SD-H12-1-01	SD-H12-1-01	Intermittent Streams	TOC	54900	MG/KG	4.739572344	SI
SD-H6-1-01	SD-H6-1-01	Intermittent Streams	TOC	18800	MG/KG	4.274157849	SI
SD-H8-1-01	SD-H8-1-01	Intermittent Streams	TOC	44400	MG/KG	4.64738297	SI
SD-H9-1-01	SD-H9-1-01	Intermittent Streams	TOC	58400	MG/KG	4.766412847	SI
SD-I7-1-01	SD-I7-1-01	Intermittent Streams	TOC	12100	MG/KG	4.08278537	SI
SD-I8-1-01	SD-I8-1-01	Intermittent Streams	TOC	19200	MG/KG	4.283301229	SI
SD-J10-1-01	SD-J10-1-01	Intermittent Streams	TOC	50300	MG/KG	4.701567985	SI
SD-J10-2-01	SD-J10-2-01	Intermittent Streams	TOC	20500	MG/KG	4.311753861	SI
SD-R-B14-02	SD-R-B14-02(0.5-1.0)	Intermittent Streams	TOC	13000	MG/KG	4.113943352	RI
SD-R-B14-03	SD-R-B14-03(0.5-1.0)	Intermittent Streams	TOC	28000	MG/KG	4.447158031	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Intermittent Streams
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	Field Event
SD-R-B14-04	SD-R-B14-04(0.5-1.0)	Intermittent Streams	TOC	16000	MG/KG	4.204119983	RI
SD-R-C11-02	SD-R-C11-02(0.5-1.0)	Intermittent Streams	TOC	15000	MG/KG	4.176091259	RI
SD-R-C11-03	SD-R-C11-03(0.5-1.0)	Intermittent Streams	TOC	17000	MG/KG	4.230448921	RI
SD-R-C11-04	SD-R-C11-04(0.5-1.0)	Intermittent Streams	TOC	26000	MG/KG	4.414973348	RI
SD-R-C11-04	SD-R-C11-04(4.5-5.0)	Intermittent Streams	TOC	23000	MG/KG	4.361727836	RI
SD-R-C12-07	SD-R-C12-07(0.5-1.0)	Intermittent Streams	TOC	2400	MG/KG	3.380211242	RI
SD-R-C13-01	SD-R-C13-01(0.5-1.0)	Intermittent Streams	TOC	6400	MG/KG	3.806179974	RI
SD-R-C13-02	SD-R-C13-02(0.5-1.0)	Intermittent Streams	TOC	16000	MG/KG	4.204119983	RI
SD-R-E10-01	SD-R-E10-01(0.5-1.0)	Intermittent Streams	TOC	160000	MG/KG	5.204119983	RI
SD-R-E10-01	SD-R-E10-01(4.5-5.0)	Intermittent Streams	TOC	15000	MG/KG	4.176091259	RI
SD-R-E12-04	SD-R-E12-04(0.5-1.0)	Intermittent Streams	TOC	28000	MG/KG	4.447158031	RI
SD-R-E12-05	SD-R-E12-05(0.5-1.0)	Intermittent Streams	TOC	42000	MG/KG	4.62324929	RI
SD-R-F10-01	SD-R-F10-01(0.5-1.0)	Intermittent Streams	TOC	62000	MG/KG	4.792391689	RI
SD-R-F10-02	SD-R-F10-02(0.5-1.0)	Intermittent Streams	TOC	7900	MG/KG	3.897627091	RI
SD-R-F10-03	SD-R-F10-03(0.5-1.0)	Intermittent Streams	TOC	30000	MG/KG	4.477121255	RI
SD-R-F10-04	SD-R-F10-04(0.5-1.0)	Intermittent Streams	TOC	16000	MG/KG	4.204119983	RI
SD-R-F10-05	SD-R-F10-05(0.5-1.0)	Intermittent Streams	TOC	5400	MG/KG	3.73239376	RI
SD-R-F12-01	SD-R-F12-01(0.5-1.0)	Intermittent Streams	TOC	36000	MG/KG	4.556302501	RI
SD-R-F12-02	SD-R-F12-02(0.5-1.0)	Intermittent Streams	TOC	21000	MG/KG	4.322219295	RI
SD-R-F12-02	SD-R-F12-02(4.5-5.0)	Intermittent Streams	TOC	170	MG/KG	2.230448921	RI
SD-R-F12-03	SD-R-F12-03(0.5-1.0)	Intermittent Streams	TOC	120000	MG/KG	5.079181246	RI
SD-R-G11-01	SD-R-G11-01(0.5-1.0)	Intermittent Streams	TOC	6500	MG/KG	3.812913357	RI
SD-R-G12-03	SD-R-G12-03(0.5-1.0)	Intermittent Streams	TOC	1200	MG/KG	3.079181246	RI
SD-R-G12-04	SD-R-G12-04(0.5-1.0)	Intermittent Streams	TOC	29000	MG/KG	4.462397998	RI
SD-R-G12-05	SD-R-G12-05(0.5-1.0)	Intermittent Streams	TOC	3100	MG/KG	3.491361694	RI
SD-R-G12-06	SD-R-G12-06(0.5-1)	Intermittent Streams	TOC	16000	MG/KG	4.204119983	RI
SD-R-G12-06	SD-R-G12-06(3.5-4.0)	Intermittent Streams	TOC	6200	MG/KG	3.792391689	RI
SD-R-G12-12	SD-R-G12-12(0.5-1.0)	Intermittent Streams	TOC	13000	MG/KG	4.113943352	RI
SD-R-H11-04	SD-R-H11-04(0.5-1.0)	Intermittent Streams	TOC	13000	MG/KG	4.113943352	RI
SD-R-H11-05	SD-R-H11-05(0.5-1.0)	Intermittent Streams	TOC	3000	MG/KG	3.477121255	RI
SD-R-H11-06	SD-R-H11-06(0.5-1.0)	Intermittent Streams	TOC	4900	MG/KG	3.69019608	RI
SD-R-H12-07	SD-R-H12-07(0.5-1.0)	Intermittent Streams	TOC	10000	MG/KG	4	RI
SD-R-H12-08	SD-R-H12-08(0.5-1.0)	Intermittent Streams	TOC	3700	MG/KG	3.568201724	RI
				Intermittent Streams - Logarithmic Average		4.163417176	
				Calculated Log-Average of TOC		14568.57841	

Notes:
TOC = Total Organic Carbon
SI = Site Investigation
RI = Remedial Investigation

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

	Intermittent Streams Surface Water Feature Type			
PAH CONSTITUENT	**SEL (mg/kg)**	**Calculated Log-Average TOC (mg/kg)**	**(FSSG SEL * Calculated Log-Average TOC) / 1000 [1]**	**Calculated SEL (mg/kg) [2]**
ACENAPHTHENE	0.5	14568.57841	7.28	0.0073
ACENAPHTHYLENE	0.64	14568.57841	9.32	0.0093
ANTHRACENE	370	14568.57841	5390.37	5.4
BENZO(a)ANTHRACENE	1480	14568.57841	21561.50	21.6
BENZO(b)FLOURANTHENE	1800	14568.57841	26223.44	26.2
BENZO(a)PYRENE	1440	14568.57841	20978.75	21.0
BENZO(g,h,i)PERYLENE	320	14568.57841	4661.95	4.7
BENZO(k)FLUORANTHENE	1340	14568.57841	19521.90	19.5
CHRYSENE	460	14568.57841	6701.55	6.7
DIBENZ(a,h)ANTHRACENE	130	14568.57841	1893.92	1.9
FLUORANTHENE	1020	14568.57841	14859.95	14.9
FLUORENE	160	14568.57841	2330.97	2.3
INDENO(1,2,3-c,d)PYRENE	320	14568.57841	4661.95	4.7
NAPHTHALENE	2.1	14568.57841	30.59	0.031
PHENANTHRENE	950	14568.57841	13840.15	13.8
PYRENE	850	14568.57841	12383.29	12.4

Notes:

PAH = Polynuclear Aromatic Hydrocarbons

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

TOC = Total Organic Carbon

[1] = Unit change from mg/kg to ug/kg

[2] = Rounded Calculated SEL values to two significant figures

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Streams
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-A15-1-01	SD-A15-1-01	Streams	TOC	3800	MG/KG	3.579783597	SI
SD-B16-1-01	SD-B16-1-01	Streams	TOC	4400	MG/KG	3.643452676	SI
SD-B8-1-01	SD-B8-1-01	Streams	TOC	4800	MG/KG	3.681241237	SI
SD-C9-1-01	SD-C9-1-01	Streams	TOC	17200	MG/KG	4.235528447	SI
SD-E11-2-01	SD-E11-2-01	Streams	TOC	10200	MG/KG	4.008600172	SI
SD-E16-3-01	SD-E16-3-01	Streams	TOC	23400	MG/KG	4.369215857	SI
SD-F11-1-01	SD-F11-1-01	Streams	TOC	181000	MG/KG	5.257678575	SI
SD-F11-2-01	SD-F11-2-01	Streams	TOC	14800	MG/KG	4.170261715	SI
SD-G12-2-01	SD-G12-2-01	Streams	TOC	19300	MG/KG	4.285557309	SI
SD-H12-2-01	SD-H12-2-01	Streams	TOC	22100	MG/KG	4.344392274	SI
SD-H12-3-01	SD-H12-3-01	Streams	TOC	11500	MG/KG	4.06069784	SI
SD-H7-1-01	SD-H7-1-01	Streams	TOC	10400	MG/KG	4.017033339	SI
SD-H7-2-01	SD-H7-2-01	Streams	TOC	11200	MG/KG	4.049218023	SI
SD-H8-4-01	SD-H8-4-01	Streams	TOC	13600	MG/KG	4.133538908	SI
SD-I10-2-01	SD-I10-2-01	Streams	TOC	12200	MG/KG	4.086359831	SI
SD-I11-1-01	SD-I11-1-01	Streams	TOC	14600	MG/KG	4.164352856	SI
SD-I11-2-01	SD-I11-2-01	Streams	TOC	16200	MG/KG	4.209515015	SI
SD-I5-1-01	SD-I5-1-01	Streams	TOC	14000	MG/KG	4.146128036	SI
SD-I5-2-01	SD-I5-2-01	Streams	TOC	11200	MG/KG	4.049218023	SI
SD-I6-1-01	SD-I6-1-01	Streams	TOC	19300	MG/KG	4.285557309	SI
SD-J5-2-01	SD-J5-2-01	Streams	TOC	79000	MG/KG	4.897627091	SI
SD-K5-2-01	SD-K5-2-01	Streams	TOC	122000	MG/KG	5.086359831	SI
SD-L5-1-01	SD-L5-1-01	Streams	TOC	102000	MG/KG	5.008600172	SI
SD-R-B8-01	SD-R-B8-01(0.5-1.0)	Streams	TOC	7800	MG/KG	3.892094603	RI
SD-R-C9-01	SD-R-C9-01(0.5-1.0)	Streams	TOC	1700	MG/KG	3.230448921	RI
SD-R-C9-02	SD-R-C9-02(0.5-1.0)	Streams	TOC	2800	MG/KG	3.447158031	RI
SD-R-C9-03	SD-R-C9-03(0.5-1.0)	Streams	TOC	4000	MG/KG	3.602059991	RI
SD-R-C9-04	SD-R-C9-04(0.5-1.0)	Streams	TOC	2900	MG/KG	3.462397998	RI
SD-R-E16-01	SD-R-E16-01(0.5-1.0)	Streams	TOC	11000	MG/KG	4.041392685	RI
SD-R-E16-02	SD-R-E16-02(0.5-1.0)	Streams	TOC	2400	MG/KG	3.380211242	RI
SD-R-E16-03	SD-R-E16-03(0.5-1.0)	Streams	TOC	4500	MG/KG	3.653212514	RI
SD-R-F11-01	SD-R-F11-01(0.5-1.0)	Streams	TOC	30000	MG/KG	4.477121255	RI
SD-R-F11-02	SD-R-F11-02(0.5-1.0)	Streams	TOC	65000	MG/KG	4.812913357	RI
SD-R-F11-02	SD-R-F11-02(4.5-5.0)	Streams	TOC	240	MG/KG	2.380211242	RI
SD-R-F11-03	SD-R-F11-03(0.5-1.0)	Streams	TOC	36000	MG/KG	4.556302501	RI
SD-R-F11-04	SD-R-F11-04(0.5-1.0)	Streams	TOC	12000	MG/KG	4.079181246	RI
SD-R-F11-05	SD-R-F11-05(0.5-1.0)	Streams	TOC	34000	MG/KG	4.531478917	RI
SD-R-G12-01	SD-R-G12-01(0.5-1.0)	Streams	TOC	16000	MG/KG	4.204119983	RI
SD-R-G12-01	SD-R-G12-01(2.5-3.0)	Streams	TOC	2300	MG/KG	3.361727836	RI
SD-R-G12-02	SD-R-G12-02(0.5-1.0)	Streams	TOC	17000	MG/KG	4.230448921	RI
SD-R-H11-01	SD-R-H11-01(0.5-1.0)	Streams	TOC	20000	MG/KG	4.301029996	RI
SD-R-H11-02	SD-R-H11-02(0.5-1.0)	Streams	TOC	1500	MG/KG	3.176091259	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Streams
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-H11-03	SD-R-H11-03(0.5-1.0)	Streams	TOC	3900	MG/KG	3.591064607	RI
SD-R-H12-02	SD-R-H12-02(0.5-1.0)	Streams	TOC	1000	MG/KG	3	RI
SD-R-H12-03	SD-R-H12-03(0.5-1.0)	Streams	TOC	1900	MG/KG	3.278753601	RI
SD-R-H12-04	SD-R-H12-04(0.5-1.0)	Streams	TOC	43000	MG/KG	4.633468456	RI
SD-R-H12-05	SD-R-H12-05(0.5-1.0)	Streams	TOC	2600	MG/KG	3.414973348	RI
SD-R-H12-06	SD-R-H12-06(0.5-1.0)	Streams	TOC	5600	MG/KG	3.748188027	RI
SD-R-H6-01	SD-R-H6-01(0.5-1.0)	Streams	TOC	20000	MG/KG	4.301029996	RI
SD-R-H6-01	SD-R-H6-01(3.0-3.5)	Streams	TOC	1600	MG/KG	3.204119983	RI
SD-R-H6-02	SD-R-H6-02(0.5-1.0)	Streams	TOC	40000	MG/KG	4.602059991	RI
SD-R-I5-01	SD-R-I5-01(0.5-1.0)	Streams	TOC	910	MG/KG	2.959041392	RI
SD-R-I5-02	SD-R-I5-02(0.5-1.0)	Streams	TOC	17000	MG/KG	4.230448921	RI
SD-R-I5-03	SD-R-I5-03(0.5-1.0)	Streams	TOC	3000	MG/KG	3.477121255	RI
SD-R-I5-04	SD-R-I5-04(0.5-1.0)	Streams	TOC	41000	MG/KG	4.612783857	RI
SD-R-I5-04	SD-R-I5-04(4.5-5.0)	Streams	TOC	2900	MG/KG	3.462397998	RI
SD-R-I5-05	SD-R-I5-05(0.5-1.0)	Streams	TOC	19000	MG/KG	4.278753601	RI
SD-R-I6-01	SD-R-I6-01(0.5-1.0)	Streams	TOC	52000	MG/KG	4.716003344	RI
SD-R-I6-02	SD-R-I6-02(0.5-1.0)	Streams	TOC	3800	MG/KG	3.579783597	RI
SD-R-I6-03	SD-R-I6-03(0.5-1.0)	Streams	TOC	24000	MG/KG	4.380211242	RI
SD-R-I6-04	SD-R-I6-04(0.5-1.0)	Streams	TOC	6700	MG/KG	3.826074803	RI
SD-R-I6-05	SD-R-I6-05(0.5-1.0)	Streams	TOC	4200	MG/KG	3.62324929	RI
SD-R-K5-01	SD-R-K5-01(0.5-1.0)	Streams	TOC	95000	MG/KG	4.977723605	RI
SD-R-K5-02	SD-R-K5-02(0.5-1.0)	Streams	TOC	71000	MG/KG	4.851258349	RI
SD-R-K5-03	SD-R-K5-03(0.5-1.0)	Streams	TOC	53000	MG/KG	4.72427587	RI
SD-R-K5-04	SD-R-K5-04(0.5-1.0)	Streams	TOC	25000	MG/KG	4.397940009	RI
SD-R-K5-05	SD-R-K5-05(0.5-1.0)	Streams	TOC	30000	MG/KG	4.477121255	RI
SD-R-K5-06	SD-R-K5-06(0.5-1.0)	Streams	TOC	190000	MG/KG	5.278753601	RI
SD-R-K5-07	SD-R-K5-07(0.5-1.0)	Streams	TOC	77000	MG/KG	4.886490725	RI
SD-R-K5-07	SD-R-K5-07(11.0-11.5)	Streams	TOC	2100	MG/KG	3.322219295	RI
SD-R-K5-10	SD-R-K5-10(0.5-1.0)	Streams	TOC	75000	MG/KG	4.875061263	RI
SD-R-K5-11	SD-R-K5-11(0.5-1.0)	Streams	TOC	170000	MG/KG	5.230448921	RI
SD-R-K5-12	SD-R-K5-12(0.5-1.0)	Streams	TOC	190000	MG/KG	5.278753601	RI
SD-R-K5-13	SD-R-K5-13(0.5-1.0)	Streams	TOC	85000	MG/KG	4.929418926	RI
SD-R-K5-18	SD-R-K5-18(0.5-1.0)	Streams	TOC	110000	MG/KG	5.041392685	RI
SD-R-L5-03	SD-R-L5-03(0.5-1)	Streams	TOC	210000	MG/KG	5.322219295	RI
SD-R-L5-04	SD-R-L5-04(0.5-1.0)	Streams	TOC	150000	MG/KG	5.176091259	RI
SD-R-L5-05	SD-R-L5-05(0.5-1.0)	Streams	TOC	59000	MG/KG	4.770852012	RI
SD-R-L5-06	SD-R-L5-06(0.5-1.0)	Streams	TOC	52000	MG/KG	4.716003344	RI
SD-R-L5-07	SD-R-L5-07(0.5-1.0)	Streams	TOC	41000	MG/KG	4.612783857	RI
SD-R-L5-08	SD-R-L5-08(0.5-1.0)	Streams	TOC	9800	MG/KG	3.991226076	RI
SD-R-L5-09	SD-R-L5-09(0.5-1.0)	Streams	TOC	180000	MG/KG	5.255272505	RI
SD-R-L5-10	SD-R-L5-10(0.5-1.0)	Streams	TOC	290000	MG/KG	5.462397998	RI
SD-R-K5-08	SD-R-K5-08(0.5-1.0)	Streams	TOC	88000	MG/KG	4.944482672	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Streams
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
			Streams - Logarithmic Average			4.21465756	
			Calculated Log-Average of TOC			16392.96683	

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

	Streams Surface Water Feature Type			
PAH CONSTITUENT	**SEL (mg/kg)**	**Calculated Log-Average TOC**	**(FSSG SEL * Calculated Log-Average TOC) / 1000 [1]**	**Calculated SEL (mg/kg) [2]**
ACENAPHTHENE	0.5	16392.96683	8.20	0.008
ACENAPHTHYLENE	0.64	16392.96683	10.49	0.01
ANTHRACENE	370	16392.96683	6065.40	6.1
BENZO(a)ANTHRACENE	1480	16392.96683	24261.59	24.3
BENZO(b)FLOURANTHENE	1800	16392.96683	29507.34	29.5
BENZO(a)PYRENE	1440	16392.96683	23605.87	23.6
BENZO(g,h,i)PERYLENE	320	16392.96683	5245.75	5.2
BENZO(k)FLUORANTHENE	1340	16392.96683	21966.58	22.0
CHRYSENE	460	16392.96683	7540.76	7.5
DIBENZ(a,h)ANTHRACENE	130	16392.96683	2131.09	2.1
FLUORANTHENE	1020	16392.96683	16720.83	16.7
FLUORENE	160	16392.96683	2622.87	2.6
INDENO(1,2,3-c,d)PYRENE	320	16392.96683	5245.75	5.2
NAPHTHALENE	2.1	16392.96683	34.43	0.03
PHENANTHRENE	950	16392.96683	15573.32	15.6
PYRENE	850	16392.96683	13934.02	13.9

Notes:

PAH = Polynuclear Aromatic Hydrocarbons

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

TOC = Total Organic Carbon

[1] = Unit change from mg/kg to ug/kg

[2] = Rounded Calculated SEL values to two significant figures

SI = Site Investigation

RI = Remedial Investigation

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-A15-2-01	SD-A15-2-01	Wet Areas	TOC	567000	MG/KG	5.753583059	SI
SD-A15-3-01	SD-A15-3-01	Wet Areas	TOC	546000	MG/KG	5.737192643	SI
SD-B14-2-01	SD-B14-2-01	Wet Areas	TOC	31400	MG/KG	4.496929648	SI
SD-B15-1-01	SD-B15-1-01	Wet Areas	TOC	168000	MG/KG	5.225309282	SI
SD-B15-2-01	SD-B15-2-01	Wet Areas	TOC	209000	MG/KG	5.320146286	SI
SD-C12-1-01	SD-C12-1-01	Wet Areas	TOC	16300	MG/KG	4.212187604	SI
SD-C12-2-01	SD-C12-2-01	Wet Areas	TOC	249000	MG/KG	5.396199347	SI
SD-C15-1-01	SD-C15-1-01	Wet Areas	TOC	78300	MG/KG	4.893761762	SI
SD-C15-2-01	SD-C15-2-01	Wet Areas	TOC	209000	MG/KG	5.320146286	SI
SD-D11-1-01	SD-D11-1-01	Wet Areas	TOC	28100	MG/KG	4.44870632	SI
SD-D12-1-01	SD-D12-1-01	Wet Areas	TOC	24100	MG/KG	4.382017043	SI
SD-D12-2-01	SD-D12-2-01	Wet Areas	TOC	22000	MG/KG	4.342422681	SI
SD-D12-3-01	SD-D12-3-01	Wet Areas	TOC	45100	MG/KG	4.654176542	SI
SD-D12-4-01	SD-D12-4-01	Wet Areas	TOC	56500	MG/KG	4.752048448	SI
SD-D13-1-01	SD-D13-1-01	Wet Areas	TOC	17000	MG/KG	4.230448921	SI
SD-D13-2-01	SD-D13-2-01	Wet Areas	TOC	121000	MG/KG	5.08278537	SI
SD-D13-3-01	SD-D13-3-01	Wet Areas	TOC	83000	MG/KG	4.919078092	SI
SD-D13-4-01	SD-D13-4-01	Wet Areas	TOC	54800	MG/KG	4.738780558	SI
SD-D13-5-01	SD-D13-5-01	Wet Areas	TOC	111000	MG/KG	5.045322979	SI
SD-D13-6-01	SD-D13-6-01	Wet Areas	TOC	15100	MG/KG	4.178976947	SI
SD-D14-1-01	SD-D14-1-01	Wet Areas	TOC	336000	MG/KG	5.526339277	SI
SD-D14-2-01	SD-D14-2-01	Wet Areas	TOC	569000	MG/KG	5.755112266	SI
SD-D14-3-01	SD-D14-3-01	Wet Areas	TOC	44200	MG/KG	4.645422269	SI
SD-D14-4-01	SD-D14-4-01	Wet Areas	TOC	45200	MG/KG	4.655138435	SI
SD-D14-5-01	SD-D14-5-01	Wet Areas	TOC	17000	MG/KG	4.230448921	SI
SD-D14-6-01	SD-D14-6-01	Wet Areas	TOC	5600	MG/KG	3.748188027	SI
SD-D14-7-01	SD-D14-7-01	Wet Areas	TOC	8100	MG/KG	3.908485019	SI
SD-D14-8-01	SD-D14-8-01	Wet Areas	TOC	15600	MG/KG	4.193124598	SI
SD-D15-1-01	SD-D15-1-01	Wet Areas	TOC	58800	MG/KG	4.769377326	SI
SD-E10-1-01	SD-E10-1-01	Wet Areas	TOC	14600	MG/KG	4.164352856	SI
SD-E11-1-01	SD-E11-1-01	Wet Areas	TOC	32900	MG/KG	4.517195898	SI
SD-E11-3-01	SD-E11-3-01	Wet Areas	TOC	38600	MG/KG	4.586587305	SI
SD-E11-4-01	SD-E11-4-01	Wet Areas	TOC	71200	MG/KG	4.852479994	SI
SD-E12-1-01	SD-E12-1-01	Wet Areas	TOC	8000	MG/KG	3.903089987	SI
SD-E12-2-01	SD-E12-2-01	Wet Areas	TOC	120000	MG/KG	5.079181246	SI
SD-E14-1-01	SD-E14-1-01	Wet Areas	TOC	105000	MG/KG	5.021189299	SI
SD-E14-2-01	SD-E14-2-01	Wet Areas	TOC	316000	MG/KG	5.499687083	SI
SD-E14-3-01	SD-E14-3-01	Wet Areas	TOC	256000	MG/KG	5.408239965	SI
SD-E15-1-01	SD-E15-1-01	Wet Areas	TOC	7200	MG/KG	3.857332496	SI
SD-E15-2-01	SD-E15-2-01	Wet Areas	TOC	67000	MG/KG	4.826074803	SI
SD-E15-3-01	SD-E15-3-01	Wet Areas	TOC	35700	MG/KG	4.552668216	SI
SD-E16-1-01	SD-E16-1-01	Wet Areas	TOC	26400	MG/KG	4.421603927	SI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
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Kenvil Works Facility, New Jersey

Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-E16-2-01	SD-E16-2-01	Wet Areas	TOC	25900	MG/KG	4.413299764	SI
SD-F13-1-01	SD-F13-1-01	Wet Areas	TOC	13500	MG/KG	4.130333768	SI
SD-F14-1-01	SD-F14-1-01	Wet Areas	TOC	18200	MG/KG	4.260071388	SI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
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Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-F14-2-01	SD-F14-2-01	Wet Areas	TOC	13200	MG/KG	4.120573931	SI
SD-G12-1-01	SD-G12-1-01	Wet Areas	TOC	39000	MG/KG	4.591064607	SI
SD-J5-1-01	SD-J5-1-01	Wet Areas	TOC	344000	MG/KG	5.536558443	SI
SD-N5-4-01	SD-N5-4-01	Wet Areas	TOC	10800	MG/KG	4.033423755	SI
SD-N5-6-01	SD-N5-6-01	Wet Areas	TOC	98200	MG/KG	4.992111488	SI
SD-R-A15-01	SD-R-A15-01(0.5-1.0)	Wet Areas	TOC	2800	MG/KG	3.447158031	RI
SD-R-A15-02	SD-R-A15-02(0.5-1.0)	Wet Areas	TOC	190000	MG/KG	5.278753601	RI
SD-R-A15-03	SD-R-A15-03(0.5-1.0)	Wet Areas	TOC	100000	MG/KG	5	RI
SD-R-A15-04	SD-R-A15-04(0.5-1.0)	Wet Areas	TOC	310000	MG/KG	5.491361694	RI
SD-R-A15-05	SD-R-A15-05(0.5-1.0)	Wet Areas	TOC	430000	MG/KG	5.633468456	RI
SD-R-B14-01	SD-R-B14-01(0.5-1.0)	Wet Areas	TOC	15000	MG/KG	4.176091259	RI
SD-R-B15-01	SD-R-B15-01(0.5-1.0)	Wet Areas	TOC	98000	MG/KG	4.991226076	RI
SD-R-B15-02	SD-R-B15-02(0.5-1.0)	Wet Areas	TOC	380000	MG/KG	5.579783597	RI
SD-R-B15-03	SD-R-B15-03(0.5-1.0)	Wet Areas	TOC	220000	MG/KG	5.342422681	RI
SD-R-B15-04	SD-R-B15-04(0.5-1.0)	Wet Areas	TOC	200000	MG/KG	5.301029996	RI
SD-R-B15-04	SD-R-B15-04(6.5-7.0)	Wet Areas	TOC	34000	MG/KG	4.531478917	RI
SD-R-B15-05	SD-R-B15-05(0.5-1.0)	Wet Areas	TOC	420000	MG/KG	5.62324929	RI
SD-R-B15-06	SD-R-B15-06(0.5-1.0)	Wet Areas	TOC	110000	MG/KG	5.041392685	RI
SD-R-B15-07	SD-R-B15-07(0.5-1.0)	Wet Areas	TOC	68000	MG/KG	4.832508913	RI
SD-R-B15-08	SD-R-B15-08(0.5-1.0)	Wet Areas	TOC	380000	MG/KG	5.579783597	RI
SD-R-B16-01	SD-R-B16-01(0.5-1.0)	Wet Areas	TOC	14000	MG/KG	4.146128036	RI
SD-R-C12-01	SD-R-C12-01(0.5-1.0)	Wet Areas	TOC	230000	MG/KG	5.361727836	RI
SD-R-C12-02	SD-R-C12-02(0.5-1.0)	Wet Areas	TOC	160000	MG/KG	5.204119983	RI
SD-R-C12-02	SD-R-C12-02(4.5-5.0)	Wet Areas	TOC	660	MG/KG	2.819543936	RI
SD-R-C12-03	SD-R-C12-03(0.5-1.0)	Wet Areas	TOC	48000	MG/KG	4.681241237	RI
SD-R-C12-04	SD-R-C12-04(0.5-1.0)	Wet Areas	TOC	23000	MG/KG	4.361727836	RI
SD-R-C12-04	SD-R-C12-04(4.5-5.0)	Wet Areas	TOC	440	MG/KG	2.643452676	RI
SD-R-C12-05	SD-R-C12-05(0.5-1.0)	Wet Areas	TOC	36000	MG/KG	4.556302501	RI
SD-R-C12-06	SD-R-C12-06(0.5-1.0)	Wet Areas	TOC	32000	MG/KG	4.505149978	RI
SD-R-C12-06	SD-R-C12-06(4.5-5.0)	Wet Areas	TOC	2800	MG/KG	3.447158031	RI
SD-R-C13-03	SD-R-C13-03(0.5-1.0)	Wet Areas	TOC	410000	MG/KG	5.612783857	RI
SD-R-C13-04	SD-R-C13-04(0.5-1.0)	Wet Areas	TOC	38000	MG/KG	4.579783597	RI
SD-R-C15-01	SD-R-C15-01(0.5-1.0)	Wet Areas	TOC	6600	MG/KG	3.819543936	RI
SD-R-C15-02	SD-R-C15-02(0.5-1.0)	Wet Areas	TOC	24000	MG/KG	4.380211242	RI
SD-R-C15-03	SD-R-C15-03(0.5-1.0)	Wet Areas	TOC	3800	MG/KG	3.579783597	RI
SD-R-C15-04	SD-R-C15-04(0.5-1.0)	Wet Areas	TOC	26000	MG/KG	4.414973348	RI
SD-R-C15-05	SD-R-C15-05(0.5-1.0)	Wet Areas	TOC	15000	MG/KG	4.176091259	RI
SD-R-C15-06	SD-R-C15-06(0.5-1.0)	Wet Areas	TOC	17000	MG/KG	4.230448921	RI
SD-R-C15-07	SD-R-C15-07(0.5-1.0)	Wet Areas	TOC	180000	MG/KG	5.255272505	RI
SD-R-C15-08	SD-R-C15-08(0.5-1.0)	Wet Areas	TOC	290000	MG/KG	5.462397998	RI
SD-R-C15-09	SD-R-C15-09(0.5-1.0)	Wet Areas	TOC	330000	MG/KG	5.51851394	RI
SD-R-C15-10	SD-R-C15-10(0.5-1.0)	Wet Areas	TOC	250000	MG/KG	5.397940009	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
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Kenvil Works Facility, New Jersey

Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-C16-01	SD-R-C16-01(0.5-1.0)	Wet Areas	TOC	5300	MG/KG	3.72427587	RI
SD-R-D11-01	SD-R-D11-01(0.5-1.0)	Wet Areas	TOC	38000	MG/KG	4.579783597	RI
SD-R-D11-02	SD-R-D11-02(0.5-1.0)	Wet Areas	TOC	15000	MG/KG	4.176091259	RI

Table D-5

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Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-D11-03	SD-R-D11-03(0.5-1.0)	Wet Areas	TOC	15000	MG/KG	4.176091259	RI
SD-R-D11-04	SD-R-D11-04(0.5-1.0)	Wet Areas	TOC	7400	MG/KG	3.86923172	RI
SD-R-D11-05	SD-R-D11-05(0.5-1.0)	Wet Areas	TOC	12000	MG/KG	4.079181246	RI
SD-R-D11-06	SD-R-D11-06(0.5-1.0)	Wet Areas	TOC	9600	MG/KG	3.982271233	RI
SD-R-D12-01	SD-R-D12-01(0.5-1.0)	Wet Areas	TOC	23000	MG/KG	4.361727836	RI
SD-R-D12-02	SD-R-D12-02(0.5-1.0)	Wet Areas	TOC	4900	MG/KG	3.69019608	RI
SD-R-D12-03	SD-R-D12-03(0.5-1.0)	Wet Areas	TOC	66000	MG/KG	4.819543936	RI
SD-R-D12-03	SD-R-D12-03(4.5-5.0)	Wet Areas	TOC	4000	MG/KG	3.602059991	RI
SD-R-D12-04	SD-R-D12-04(0.5-1.0)	Wet Areas	TOC	7400	MG/KG	3.86923172	RI
SD-R-D12-05	SD-R-D12-05(0.5-1.0)	Wet Areas	TOC	6900	MG/KG	3.838849091	RI
SD-R-D12-06	SD-R-D12-06(0.5-1.0)	Wet Areas	TOC	3000	MG/KG	3.477121255	RI
SD-R-D12-07	SD-R-D12-07(0.5-1.0)	Wet Areas	TOC	3000	MG/KG	3.477121255	RI
SD-R-D12-08	SD-R-D12-08(0.5-1.0)	Wet Areas	TOC	19000	MG/KG	4.278753601	RI
SD-R-D12-09	SD-R-D12-09(0.5-1.0)	Wet Areas	TOC	29000	MG/KG	4.462397998	RI
SD-R-D12-10	SD-R-D12-10(0.5-1.0)	Wet Areas	TOC	4500	MG/KG	3.653212514	RI
SD-R-D12-11	SD-R-D12-11(0.5-1.0)	Wet Areas	TOC	21000	MG/KG	4.322219295	RI
SD-R-D12-12	SD-R-D12-12(0.5-1.0)	Wet Areas	TOC	1100	MG/KG	3.041392685	RI
SD-R-D13-01	SD-R-D13-01(0.5-1.0)	Wet Areas	TOC	190000	MG/KG	5.278753601	RI
SD-R-D13-02	SD-R-D13-02(0.5-1.0)	Wet Areas	TOC	34000	MG/KG	4.531478917	RI
SD-R-D13-03	SD-R-D13-03(0.5-1.0)	Wet Areas	TOC	280000	MG/KG	5.447158031	RI
SD-R-D13-04	SD-R-D13-04(0.5-1.0)	Wet Areas	TOC	130000	MG/KG	5.113943352	RI
SD-R-D13-04	SD-R-D13-04(4.5-5.0)	Wet Areas	TOC	340000	MG/KG	5.531478917	RI
SD-R-D13-05	SD-R-D13-05(0.5-1.0)	Wet Areas	TOC	48000	MG/KG	4.681241237	RI
SD-R-D13-06	SD-R-D13-06(0.5-1.0)	Wet Areas	TOC	36000	MG/KG	4.556302501	RI
SD-R-D13-07	SD-R-D13-07(0.5-1.0)	Wet Areas	TOC	13000	MG/KG	4.113943352	RI
SD-R-D13-08	SD-R-D13-08(0.5-1.0)	Wet Areas	TOC	65000	MG/KG	4.812913357	RI
SD-R-D13-09	SD-R-D13-09(0.5-1.0)	Wet Areas	TOC	31000	MG/KG	4.491361694	RI
SD-R-D13-10	SD-R-D13-10(0.5-1.0)	Wet Areas	TOC	64000	MG/KG	4.806179974	RI
SD-R-D13-11	SD-R-D13-11(0.5-1.0)	Wet Areas	TOC	14000	MG/KG	4.146128036	RI
SD-R-D13-11	SD-R-D13-11(4.5-5.0)	Wet Areas	TOC	98000	MG/KG	4.991226076	RI
SD-R-D13-12	SD-R-D13-12(0.5-1.0)	Wet Areas	TOC	200000	MG/KG	5.301029996	RI
SD-R-D13-13	SD-R-D13-13(0.5-1.0)	Wet Areas	TOC	36000	MG/KG	4.556302501	RI
SD-R-D13-15	SD-R-D13-15(0.5-1.0)	Wet Areas	TOC	210000	MG/KG	5.322219295	RI
SD-R-D13-15	SD-R-D13-15(4.5-5.0)	Wet Areas	TOC	320	MG/KG	2.505149978	RI
SD-R-D14-01	SD-R-D14-01(0.5-1.0)	Wet Areas	TOC	310000	MG/KG	5.491361694	RI
SD-R-D14-02	SD-R-D14-02(0.5-1.0)	Wet Areas	TOC	110000	MG/KG	5.041392685	RI
SD-R-D14-03	SD-R-D14-03(0.5-1.0)	Wet Areas	TOC	56000	MG/KG	4.748188027	RI
SD-R-D14-03	SD-R-D14-03(4.5-5.0)	Wet Areas	TOC	210000	MG/KG	5.322219295	RI
SD-R-D14-04	SD-R-D14-04(0.5-1.0)	Wet Areas	TOC	36000	MG/KG	4.556302501	RI
SD-R-D14-05	SD-R-D14-05(0.5-1.0)	Wet Areas	TOC	420000	MG/KG	5.62324929	RI
SD-R-D14-06	SD-R-D14-06(0.5-1.0)	Wet Areas	TOC	9900	MG/KG	3.995635195	RI
SD-R-D14-07	SD-R-D14-07(0.5-1.0)	Wet Areas	TOC	5200	MG/KG	3.716003344	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
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Kenvil Works Facility, New Jersey

Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-D14-08	SD-R-D14-08(0.5-1.0)	Wet Areas	TOC	30000	MG/KG	4.477121255	RI
SD-R-D14-09	SD-R-D14-09(0.5-1.0)	Wet Areas	TOC	14000	MG/KG	4.146128036	RI
SD-R-D14-10	SD-R-D14-10(0.5-1.0)	Wet Areas	TOC	18000	MG/KG	4.255272505	RI

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Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-D15-01	SD-R-D15-01(0.5-1.0)	Wet Areas	TOC	120000	MG/KG	5.079181246	RI
SD-R-D15-02	SD-R-D15-02(0.5-1.0)	Wet Areas	TOC	27000	MG/KG	4.431363764	RI
SD-R-E10-02	SD-R-E10-02(0.5-1.0)	Wet Areas	TOC	62000	MG/KG	4.792391689	RI
SD-R-E10-04	SD-R-E10-04(0.5-1.0)	Wet Areas	TOC	38000	MG/KG	4.579783597	RI
SD-R-E10-05	SD-R-E10-05(0.5-1.0)	Wet Areas	TOC	12000	MG/KG	4.079181246	RI
SD-R-E11-01	SD-R-E11-01(0.5-1.0)	Wet Areas	TOC	7000	MG/KG	3.84509804	RI
SD-R-E11-02	SD-R-E11-02(0.5-1.0)	Wet Areas	TOC	13000	MG/KG	4.113943352	RI
SD-R-E11-03	SD-R-E11-03(0.5-1.0)	Wet Areas	TOC	65000	MG/KG	4.812913357	RI
SD-R-E11-04	SD-R-E11-04(0.5-1.0)	Wet Areas	TOC	29000	MG/KG	4.462397998	RI
SD-R-E11-05	SD-R-E11-05(0.5-1.0)	Wet Areas	TOC	8600	MG/KG	3.934498451	RI
SD-R-E11-06	SD-R-E11-06(0.5-1.0)	Wet Areas	TOC	16000	MG/KG	4.204119983	RI
SD-R-E11-07	SD-R-E11-07(0.5-1.0)	Wet Areas	TOC	58000	MG/KG	4.763427994	RI
SD-R-E12-01	SD-R-E12-01(0.5-1.0)	Wet Areas	TOC	9500	MG/KG	3.977723605	RI
SD-R-E12-02	SD-R-E12-02(0.5-1.0)	Wet Areas	TOC	18000	MG/KG	4.255272505	RI
SD-R-E12-03	SD-R-E12-03(0.5-1.0)	Wet Areas	TOC	16000	MG/KG	4.204119983	RI
SD-R-E14-01	SD-R-E14-01(0.5-1.0)	Wet Areas	TOC	170	MG/KG	2.230448921	RI
SD-R-E14-02	SD-R-E14-02(0.5-1.0)	Wet Areas	TOC	350000	MG/KG	5.544068044	RI
SD-R-E14-03	SD-R-E14-03(0.5-1.0)	Wet Areas	TOC	110000	MG/KG	5.041392685	RI
SD-R-E14-04	SD-R-E14-04(0.5-1.0)	Wet Areas	TOC	330000	MG/KG	5.51851394	RI
SD-R-E14-05	SD-R-E14-05(0.5-1.0)	Wet Areas	TOC	3900	MG/KG	3.591064607	RI
SD-R-E14-06	SD-R-E14-06(0.5-1.0)	Wet Areas	TOC	1100	MG/KG	3.041392685	RI
SD-R-E14-07	SD-R-E14-07(0.5-1.0)	Wet Areas	TOC	180000	MG/KG	5.255272505	RI
SD-R-E14-08	SD-R-E14-08(0.5-1.0)	Wet Areas	TOC	76000	MG/KG	4.880813592	RI
SD-R-E14-09	SD-R-E14-09(0.5-1.0)	Wet Areas	TOC	15000	MG/KG	4.176091259	RI
SD-R-E14-10	SD-R-E14-10(0.5-1.0)	Wet Areas	TOC	68000	MG/KG	4.832508913	RI
SD-R-E15-01	SD-R-E15-01(0.5-1.0)	Wet Areas	TOC	110000	MG/KG	5.041392685	RI
SD-R-E15-02	SD-R-E15-02(0.5-1.0)	Wet Areas	TOC	71000	MG/KG	4.851258349	RI
SD-R-E15-03	SD-R-E15-03(0.5-1.0)	Wet Areas	TOC	31000	MG/KG	4.491361694	RI
SD-R-E15-04	SD-R-E15-04(0.5-1.0)	Wet Areas	TOC	2200	MG/KG	3.342422681	RI
SD-R-E15-05	SD-R-E15-05(0.5-1.0)	Wet Areas	TOC	84000	MG/KG	4.924279286	RI
SD-R-E15-06	SD-R-E15-06(0.5-1.0)	Wet Areas	TOC	40000	MG/KG	4.602059991	RI
SD-R-E15-07	SD-R-E15-07(0.5-1.0)	Wet Areas	TOC	2700	MG/KG	3.431363764	RI
SD-R-E15-08	SD-R-E15-08(0.5-1.0)	Wet Areas	TOC	25000	MG/KG	4.397940009	RI
SD-R-F13-03	SD-R-F13-03(0.5-1.0)	Wet Areas	TOC	12000	MG/KG	4.079181246	RI
SD-R-F13-04	SD-R-F13-04(0.5-1.0)	Wet Areas	TOC	1800	MG/KG	3.255272505	RI
SD-R-F13-05	SD-R-F13-05(0.5-1.0)	Wet Areas	TOC	11000	MG/KG	4.041392685	RI
SD-R-F13-06	SD-R-F13-06(0.5-1.0)	Wet Areas	TOC	3800	MG/KG	3.579783597	RI
SD-R-F14-05	SD-R-F14-05(0.5-1.0)	Wet Areas	TOC	18000	MG/KG	4.255272505	RI
SD-R-G12-07	SD-R-G12-07(0.5-1.0)	Wet Areas	TOC	4600	MG/KG	3.662757832	RI
SD-R-G12-07	SD-R-G12-07(4.5-5.0)	Wet Areas	TOC	1100	MG/KG	3.041392685	RI
SD-R-G12-08	SD-R-G12-08(0.5-1.0)	Wet Areas	TOC	280	MG/KG	2.447158031	RI
SD-R-G12-08	SD-R-G12-08(6.0-6.5)	Wet Areas	TOC	470	MG/KG	2.672097858	RI

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Wet Areas
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-G12-09	SD-R-G12-09(0.5-1.0)	Wet Areas	TOC	130000	MG/KG	5.113943352	RI
SD-R-G12-10	SD-R-G12-10(0.5-1.0)	Wet Areas	TOC	3400	MG/KG	3.531478917	RI
SD-R-G12-11	SD-R-G12-11(0.5-1.0)	Wet Areas	TOC	11000	MG/KG	4.041392685	RI
SD-R-D13-14	SD-R-D13-14(0.5-1.0)	Wet Areas	TOC	35000	MG/KG	4.544068044	RI
SD-R-E10-03	SD-R-E10-03(0.5-1.0)	Wet Areas	TOC	53000	MG/KG	4.72427587	RI
SD-R-F13-01	SD-R-F13-01(0.5-1.0)	Wet Areas	TOC	870	MG/KG	2.939519253	RI
SD-R-F13-02	SD-R-F13-02(0.5-1.0)	Wet Areas	TOC	1400	MG/KG	3.146128036	RI
SD-R-F14-01	SD-R-F14-01(0.5-1.0)	Wet Areas	TOC	1700	MG/KG	3.230448921	RI
SD-R2-E-10-1	SD-R2-E-10-1	Wet Areas	TOC	216,000	MG/KG	5.334453751	RI II
SD-R2-E-10-2	SD-R2-E-10-2	Wet Areas	TOC	50,700	MG/KG	4.705007959	RI II
SD-R2-E-13-1	SD-R2-E-13-1	Wet Areas	TOC	316,000	MG/KG	5.499687083	RI II
SD-R2-E-16-1	SD-R2-E-16-1	Wet Areas	TOC	10,000	MG/KG	4	RI II
SD-R2-E-16-1D	SD-R2-E-16-1D	Wet Areas	TOC	4,770	MG/KG	3.678518379	RI II
SD-R2-E16-3	SD-R2-E16-3	Wet Areas	TOC	4,160	MG/KG	3.619093331	RI II
SD-R2-F-14-1	SD-R2-F-14-1	Wet Areas	TOC	78,700	MG/KG	4.895974732	RI II
SD-R2-F-14-2	SD-R2-F-14-2	Wet Areas	TOC	53,400	MG/KG	4.727541257	RI II
SD-R2-G-12-1	SD-R2-G-12-1	Wet Areas	TOC	226,000	MG/KG	5.354108439	RI II
SD-R2-G-12-3	SD-R2-G-12-3	Wet Areas	TOC	34,000	MG/KG	4.531478917	RI II
D-R2-G-12-3 (FI	SD-R2-G-12-3 (FD)	Wet Areas	TOC	9,820	MG/KG	3.992111488	RI II
SD-R2-G-12-4	SD-R2-G-12-4	Wet Areas	TOC	60,800	MG/KG	4.783903579	RI II
SD-R2-G-12-5	SD-R2-G-12-5	Wet Areas	TOC	32,400	MG/KG	4.51054501	RI II
SD-R2-K-5-1	SD-R2-K-5-1	Wet Areas	TOC	244,000	MG/KG	5.387389826	RI II
SD-R2-K-5-2	SD-R2-K-5-2	Wet Areas	TOC	192,000	MG/KG	5.283301229	RI II
SD-R2-0-4-1	SD-R2-0-4-1	Wet Areas	TOC	227,000	MG/KG	5.356025857	RI II
SD-R2-0-4-2	SD-R2-0-4-2	Wet Areas	TOC	105,000	MG/KG	5.021189299	RI II
SD-R2-0-4-3	SD-R2-0-4-3	Wet Areas	TOC	39,500	MG/KG	4.596597096	RI II
SD-R-F14-03	SD-R-F14-03(0.5-1.0)	Wet Areas	TOC	11000	MG/KG	4.041392685	RI
					Wet Areas - Logarithmic Average	4.493756694	
					Calculated Log-Average of TOC	31171.42772	

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	Wet Areas Surface Water Feature Type			
PAH CONSTITUENT	**SEL (mg/kg)**	**Calculated Log-Average TOC**	**(FSSG SEL * Calculated Log-Average TOC) / 1000 [(1)]**	**Calculated SEL (mg/kg) [(2)]**
ACENAPHTHENE	0.5	31171.42772	15.59	0.016
ACENAPHTHYLENE	0.64	31171.42772	19.95	0.02
ANTHRACENE	370	31171.42772	11533.43	11.5
BENZO(a)ANTHRACENE	1480	31171.42772	46133.71	46.1
BENZO(b)FLOURANTHENE	1800	31171.42772	56108.57	56.1
BENZO(a)PYRENE	1440	31171.42772	44886.86	44.9
BENZO(g,h,i)PERYLENE	320	31171.42772	9974.86	10.0
BENZO(k)FLUORANTHENE	1340	31171.42772	41769.71	41.8
CHRYSENE	460	31171.42772	14338.86	14.3
DIBENZ(a,h)ANTHRACENE	130	31171.42772	4052.29	4.1
FLUORANTHENE	1020	31171.42772	31794.86	31.8
FLUORENE	160	31171.42772	4987.43	5.0
INDENO(1,2,3-c,d)PYRENE	320	31171.42772	9974.86	10.0
NAPHTHALENE	2.1	31171.42772	65.46	0.07
PHENANTHRENE	950	31171.42772	29612.86	29.6
PYRENE	850	31171.42772	26495.71	26.5

Notes:

PAH = Polynuclear Aromatic Hydrocarbons

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

TOC = Total Organic Carbon

(1) = Unit change from mg/kg to ug/kg

(2) = Rounded Calculated SEL values to two significant figures

SI = Site Investigation

RI = Remedial Investigation

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
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Ponds
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-C11-4-01	SD-C11-4-01	Ponds	TOC	12400	MG/KG	4.093421685	SI
SD-D11-2-01	SD-D11-2-01	Ponds	TOC	53500	MG/KG	4.728353782	SI
SD-H5-1-01	SD-H5-1-01	Ponds	TOC	29500	MG/KG	4.469822016	SI
SD-K11-1-01	SD-K11-1-01	Ponds	TOC	6900	MG/KG	3.838849091	SI
SD-K4-1-01	SD-K4-1-01	Ponds	TOC	90700	MG/KG	4.957607287	SI
SD-K5-1-01	SD-K5-1-01	Ponds	TOC	41400	MG/KG	4.617000341	SI
SD-K5-3-01	SD-K5-3-01	Ponds	TOC	169000	MG/KG	5.227886705	SI
SD-K5-4-01	SD-K5-4-01	Ponds	TOC	361000	MG/KG	5.557507202	SI
SD-L5-2-01	SD-L5-2-01	Ponds	TOC	314000	MG/KG	5.496929648	SI
SD-L5-3-01	SD-L5-3-01	Ponds	TOC	134000	MG/KG	5.127104798	SI
SD-L6-1-01	SD-L6-1-01	Ponds	TOC	49000	MG/KG	4.69019608	SI
SD-M5-1-01	SD-M5-1-01	Ponds	TOC	9900	MG/KG	3.995635195	SI
SD-M5-2-01	SD-M5-2-01	Ponds	TOC	122000	MG/KG	5.086359831	SI
SD-M5-3-01	SD-M5-3-01	Ponds	TOC	162000	MG/KG	5.209515015	SI
SD-M6-1-01	SD-M6-1-01	Ponds	TOC	570000	MG/KG	5.755874856	SI
SD-M6-2-01	SD-M6-2-01	Ponds	TOC	6000	MG/KG	3.77815125	SI
SD-M6-3-01	SD-M6-3-01	Ponds	TOC	46800	MG/KG	4.670245853	SI
SD-M7-1-01	SD-M7-1-01	Ponds	TOC	167000	MG/KG	5.222716471	SI
SD-M7-2-01	SD-M7-2-01	Ponds	TOC	13300	MG/KG	4.123851641	SI
SD-N5-1-01	SD-N5-1-01	Ponds	TOC	9200	MG/KG	3.963787827	SI
SD-N5-2-01	SD-N5-2-01	Ponds	TOC	13600	MG/KG	4.133538908	SI
SD-N5-3-01	SD-N5-3-01	Ponds	TOC	6300	MG/KG	3.799340549	SI
SD-N5-5-01	SD-N5-5-01	Ponds	TOC	10000	MG/KG	4	SI
SD-N7-1-01	SD-N7-1-01	Ponds	TOC	181000	MG/KG	5.257678575	SI
SD-N7-2-01	SD-N7-2-01	Ponds	TOC	28700	MG/KG	4.457881897	SI
SD-N7-3-01	SD-N7-3-01	Ponds	TOC	54400	MG/KG	4.7355989	SI
SD-N7-4-01	SD-N7-4-01	Ponds	TOC	48900	MG/KG	4.689308859	SI
SD-N7-5-01	SD-N7-5-01	Ponds	TOC	40600	MG/KG	4.608526034	SI
SD-N7-6-01	SD-N7-6-01	Ponds	TOC	31500	MG/KG	4.498310554	SI
SD-N7-7-01	SD-N7-7-01	Ponds	TOC	52400	MG/KG	4.719331287	SI
SD-O4-10-01	SD-O4-10-01	Ponds	TOC	42700	MG/KG	4.630427875	SI
SD-O4-1-01	SD-O4-1-01	Ponds	TOC	52700	MG/KG	4.721810615	SI
SD-O4-2-01	SD-O4-2-01	Ponds	TOC	193000	MG/KG	5.285557309	SI
SD-O4-3-01	SD-O4-3-01	Ponds	TOC	45200	MG/KG	4.655138435	SI
SD-O4-4-01	SD-O4-4-01	Ponds	TOC	189000	MG/KG	5.276461804	SI
SD-O4-5-01	SD-O4-5-01	Ponds	TOC	20900	MG/KG	4.320146286	SI
SD-O4-6-01	SD-O4-6-01	Ponds	TOC	87000	MG/KG	4.939519253	SI
SD-O4-7-01	SD-O4-7-01	Ponds	TOC	298000	MG/KG	5.474216264	SI
SD-O4-8-01	SD-O4-8-01	Ponds	TOC	556000	MG/KG	5.745074792	SI
SD-O4-9-01	SD-O4-9-01	Ponds	TOC	39000	MG/KG	4.591064607	SI
SD-O5-1-01	SD-O5-1-01	Ponds	TOC	87900	MG/KG	4.943988875	SI
SD-O5-2-01	SD-O5-2-01	Ponds	TOC	54000	MG/KG	4.73239376	SI
SD-P4-1-01	SD-P4-1-01	Ponds	TOC	136000	MG/KG	5.133538908	SI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Ponds
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-P4-2-01	SD-P4-2-01	Ponds	TOC	205000	MG/KG	5.311753861	SI
SD-Q4-1-01	SD-Q4-1-01	Ponds	TOC	176000	MG/KG	5.245512668	SI
SD-R4-1-01	SD-R4-1-01	Ponds	TOC	83700	MG/KG	4.922725458	SI
SD-R-C11-01	SD-R-C11-01(0.5-1.0)	Ponds	TOC	7600	MG/KG	3.880813592	RI
SD-R-C11-05	SD-R-C11-05(0.5-1.0)	Ponds	TOC	21000	MG/KG	4.322219295	RI
SD-R-D11-07	SD-R-D11-07(0.5-1.0)	Ponds	TOC	15000	MG/KG	4.176091259	RI
SD-R-D11-07	SD-R-D11-07(2.5-3.0)	Ponds	TOC	7100	MG/KG	3.851258349	RI
SD-R-D11-08	SD-R-D11-08(0.5-1.0)	Ponds	TOC	24000	MG/KG	4.380211242	RI
SD-R-D11-09	SD-R-D11-09(0.5-1.0)	Ponds	TOC	610	MG/KG	2.785329835	RI
SD-R-H5-01	SD-R-H5-01(0.5-1.0)	Ponds	TOC	36000	MG/KG	4.556302501	RI
SD-R-H5-02	SD-R-H5-02(0.5-1.0)	Ponds	TOC	22000	MG/KG	4.342422681	RI
SD-R-J5-01	SD-R-J5-01(0.5-1.0)	Ponds	TOC	35000	MG/KG	4.544068044	RI
SD-R-K4-01	SD-R-K4-01(0.5-1.0)	Ponds	TOC	180000	MG/KG	5.255272505	RI
SD-R-K5-09	SD-R-K5-09(0.5-1.0)	Ponds	TOC	290000	MG/KG	5.462397998	RI
SD-R-K5-14	SD-R-K5-14(0.5-1.0)	Ponds	TOC	4000	MG/KG	3.602059991	RI
SD-R-K5-15	SD-R-K5-15(0.5-1.0)	Ponds	TOC	69000	MG/KG	4.838849091	RI
SD-R-K5-16	SD-R-K5-16(0.5-1.0)	Ponds	TOC	2900	MG/KG	3.462397998	RI
SD-R-K5-17	SD-R-K5-17(0.5-1.0)	Ponds	TOC	34000	MG/KG	4.531478917	RI
SD-R-K5-17	SD-R-K5-17(5.5-6.0)	Ponds	TOC	2200	MG/KG	3.342422681	RI
SD-R-K5-19	SD-R-K5-19(0.5-1.0)	Ponds	TOC	140000	MG/KG	5.146128036	RI
SD-R-K5-20	SD-R-K5-20(0.5-1.0)	Ponds	TOC	150000	MG/KG	5.176091259	RI
SD-R-K5-21	SD-R-K5-21(0.5-1.0)	Ponds	TOC	32000	MG/KG	4.505149978	RI
SD-R-K5-21	SD-R-K5-21(4.5-5.0)	Ponds	TOC	1700	MG/KG	3.230448921	RI
SD-R-L5-01	SD-R-L5-01(0.5-1.0)	Ponds	TOC	25000	MG/KG	4.397940009	RI
SD-R-L5-01	SD-R-L5-01(4.5-5.0)	Ponds	TOC	3200	MG/KG	3.505149978	RI
SD-R-L5-02	SD-R-L5-02(0.5-1.0)	Ponds	TOC	860	MG/KG	2.934498451	RI
SD-R-L5-11	SD-R-L5-11(0.5-1.0)	Ponds	TOC	200000	MG/KG	5.301029996	RI
SD-R-L6-01	SD-R-L6-01(0.5-1.0)	Ponds	TOC	100000	MG/KG	5	RI
SD-R-L6-02	SD-R-L6-02(0.5-1.0)	Ponds	TOC	37000	MG/KG	4.568201724	RI
SD-R-L6-03	SD-R-L6-03(0.5-1.0)	Ponds	TOC	20000	MG/KG	4.301029996	RI
SD-R-L6-04	SD-R-L6-04(0.5-1.0)	Ponds	TOC	110000	MG/KG	5.041392685	RI
SD-R-L6-05	SD-R-L6-05(0.5-1.0)	Ponds	TOC	220000	MG/KG	5.342422681	RI
SD-R-L6-06	SD-R-L6-06(0.5-1.0)	Ponds	TOC	54000	MG/KG	4.73239376	RI
SD-R-L6-07	SD-R-L6-07(0.5-1.0)	Ponds	TOC	52000	MG/KG	4.716003344	RI
SD-R-L6-08	SD-R-L6-08(0.5-1.0)	Ponds	TOC	21000	MG/KG	4.322219295	RI
SD-R-L7-01	SD-R-L7-01(0.5-1.0)	Ponds	TOC	65000	MG/KG	4.812913357	RI
SD-R-L7-02	SD-R-L7-02(0.5-1.0)	Ponds	TOC	4800	MG/KG	3.681241237	RI
SD-R-L7-03	SD-R-L7-03(0.5-1.0)	Ponds	TOC	3000	MG/KG	3.477121255	RI
SD-R-L7-04	SD-R-L7-04(0.5-1.0)	Ponds	TOC	59000	MG/KG	4.770852012	RI
SD-R-L7-05	SD-R-L7-05(0.5-1.0)	Ponds	TOC	25000	MG/KG	4.397940009	RI
SD-R-M5-01	SD-R-M5-01(0.5-1.0)	Ponds	TOC	19000	MG/KG	4.278753601	RI
SD-R-M5-02	SD-R-M5-02(0.5-1.0)	Ponds	TOC	73000	MG/KG	4.86332286	RI
SD-R-M5-03	SD-R-M5-03(0.5-1.0)	Ponds	TOC	5300	MG/KG	3.72427587	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
Hercules Incorporated
Kenvil Works Facility, New Jersey

Ponds
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-M5-04	SD-R-M5-04(0.5-1.0)	Ponds	TOC	5800	MG/KG	3.763427994	RI
SD-R-M5-05	SD-R-M5-05(0.5-1.0)	Ponds	TOC	16000	MG/KG	4.204119983	RI
SD-R-M5-05	SD-R-M5-05(6.5-7.0)	Ponds	TOC	1900	MG/KG	3.278753601	RI
SD-R-M5-06	SD-R-M5-06(0.5-1.0)	Ponds	TOC	45000	MG/KG	4.653212514	RI
SD-R-M5-07	SD-R-M5-07(0.5-1.0)	Ponds	TOC	16000	MG/KG	4.204119983	RI
SD-R-M5-15	SD-R-M5-15(0.5-1.0)	Ponds	TOC	90000	MG/KG	4.954242509	RI
SD-R-M7-01	SD-R-M7-01(0.5-1.0)	Ponds	TOC	4000	MG/KG	3.602059991	RI
SD-R-M7-02	SD-R-M7-02(0.5-1.0)	Ponds	TOC	40000	MG/KG	4.602059991	RI
SD-R-M7-03	SD-R-M7-03(0.5-1.0)	Ponds	TOC	130000	MG/KG	5.113943352	RI
SD-R-M7-04	SD-R-M7-04(0.5-1.0)	Ponds	TOC	970000	MG/KG	5.986771734	RI
SD-R-M7-05	SD-R-M7-05(0.5-1.0)	Ponds	TOC	360000	MG/KG	5.556302501	RI
SD-R-N5-01	SD-R-N5-01(0.5-1.0)	Ponds	TOC	6300	MG/KG	3.799340549	RI
SD-R-N5-02	SD-R-N5-02(0.5-1.0)	Ponds	TOC	15000	MG/KG	4.176091259	RI
SD-R-N5-03	SD-R-N5-03(0.5-1.0)	Ponds	TOC	35000	MG/KG	4.544068044	RI
SD-R-N5-04	SD-R-N5-04(0.5-1.0)	Ponds	TOC	8600	MG/KG	3.934498451	RI
SD-R-N5-05	SD-R-N5-05(0.5-1.0)	Ponds	TOC	16000	MG/KG	4.204119983	RI
SD-R-N7-01	SD-R-N7-01(0.5-1.0)	Ponds	TOC	90000	MG/KG	4.954242509	RI
SD-R-N7-02	SD-R-N7-02(0.5-1.0)	Ponds	TOC	4100	MG/KG	3.612783857	RI
SD-R-N7-03	SD-R-N7-03(0.5-1.0)	Ponds	TOC	52000	MG/KG	4.716003344	RI
SD-R-N7-04	SD-R-N7-04(0.5-1.0)	Ponds	TOC	27000	MG/KG	4.431363764	RI
SD-R-N7-05	SD-R-N7-05(0.5-1.0)	Ponds	TOC	27000	MG/KG	4.431363764	RI
SD-R-N7-06	SD-R-N7-06(0.5-1.0)	Ponds	TOC	37000	MG/KG	4.568201724	RI
SD-R-N7-07	SD-R-N7-07(0.5-1.0)	Ponds	TOC	120000	MG/KG	5.079181246	RI
SD-R-N7-07	SD-R-N7-07(5.5-6.0)	Ponds	TOC	2200	MG/KG	3.342422681	RI
SD-R-N7-08	SD-R-N7-08(0.5-1.0)	Ponds	TOC	40000	MG/KG	4.602059991	RI
SD-R-N7-09	SD-R-N7-09(0.5-1.0)	Ponds	TOC	63000	MG/KG	4.799340549	RI
SD-R-N7-10	SD-R-N7-10(0.5-1.0)	Ponds	TOC	170000	MG/KG	5.230448921	RI
SD-R-N7-10	SD-R-N7-10(5.5-6.0)	Ponds	TOC	2200	MG/KG	3.342422681	RI
SD-R-N7-11	SD-R-N7-11(0.5-1.0)	Ponds	TOC	280000	MG/KG	5.447158031	RI
SD-R-N7-12	SD-R-N7-12(0.5-1.0)	Ponds	TOC	530000	MG/KG	5.72427587	RI
SD-R-O4-01	SD-R-O4-01(0.5-1.0)	Ponds	TOC	160000	MG/KG	5.204119983	RI
SD-R-O4-02	SD-R-O4-02(0.5-1.0)	Ponds	TOC	540000	MG/KG	5.73239376	RI
SD-R-O4-03	SD-R-O4-03(0.5-1.0)	Ponds	TOC	490000	MG/KG	5.69019608	RI
SD-R-O4-04	SD-R-O4-04(0.5-1.0)	Ponds	TOC	460000	MG/KG	5.662757832	RI
SD-R-O4-05	SD-R-O4-05(0.5-1.0)	Ponds	TOC	130000	MG/KG	5.113943352	RI
SD-R-O4-06	SD-R-O4-06(0.5-1.0)	Ponds	TOC	440000	MG/KG	5.643452676	RI
SD-R-O4-07	SD-R-O4-07(0.5-1.0)	Ponds	TOC	470000	MG/KG	5.672097858	RI
SD-R-O4-08	SD-R-O4-08(0.5-1.0)	Ponds	TOC	160000	MG/KG	5.204119983	RI
SD-R-O4-08	SD-R-O4-08(8.0-8.5)	Ponds	TOC	5300	MG/KG	3.72427587	RI
SD-R-O4-09	SD-R-O4-09(0.5-1.0)	Ponds	TOC	280000	MG/KG	5.447158031	RI
SD-R-O5-01	SD-R-O5-01(0.5-1.0)	Ponds	TOC	76000	MG/KG	4.880813592	RI
SD-R-O7-01	SD-R-O7-01(0.5-1.0)	Ponds	TOC	41000	MG/KG	4.612783857	RI
SD-R-L5-12	SD-R-L5-12(0.5-1.0)	Ponds	TOC	190000	MG/KG	5.278753601	RI

Table D-5

Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
Volume D - Remedial Investigation Report
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Ponds
Calculated Log Average of TOC

Location ID	Field Sample ID	Surface Water Feature Type	Constituent	Result	Units	Logarithmic Value of TOC	SI/RI
SD-R-L5-13	SD-R-L5-13(0.5-1.0)	Ponds	TOC	230000	MG/KG	5.361727836	RI
SD-R-L6-09	SD-R-L6-09(0.5-1.0)	Ponds	TOC	190000	MG/KG	5.278753601	RI
SD-R-L6-10	SD-R-L6-10(0.5-1.0)	Ponds	TOC	300000	MG/KG	5.477121255	RI
SD-R-L6-11	SD-R-L6-11(0.5-1.0)	Ponds	TOC	260000	MG/KG	5.414973348	RI
SD-R-L7-07	SD-R-L7-07(0.5-1.0)	Ponds	TOC	110000	MG/KG	5.041392685	RI
SD-R-L7-08	SD-R-L7-08(0.5-1.0)	Ponds	TOC	55000	MG/KG	4.740362689	RI
SD-R-M5-08	SD-R-M5-08(0.5-1.0)	Ponds	TOC	370000	MG/KG	5.568201724	RI
SD-R-M5-09	SD-R-M5-09(0.5-1.0)	Ponds	TOC	270000	MG/KG	5.431363764	RI
SD-R-M5-10	SD-R-M5-10(0.5-1.0)	Ponds	TOC	220000	MG/KG	5.342422681	RI
SD-R-M5-11	SD-R-M5-11(0.5-1.0)	Ponds	TOC	230000	MG/KG	5.361727836	RI
SD-R-M5-12	SD-R-M5-12(0.5-1.0)	Ponds	TOC	120000	MG/KG	5.079181246	RI
SD-R-M5-13	SD-R-M5-13(0.5-1.0)	Ponds	TOC	89000	MG/KG	4.949390007	RI
SD-R-M5-14	SD-R-M5-14(0.5-1.0)	Ponds	TOC	89000	MG/KG	4.949390007	RI
SD-R-M5-16	SD-R-M5-16(0.5-1.0)	Ponds	TOC	70000	MG/KG	4.84509804	RI
SD-R-M6-01	SD-R-M6-01(0.5-1.0)	Ponds	TOC	240000	MG/KG	5.380211242	RI
SD-R-M6-02	SD-R-M6-02(0.5-1.0)	Ponds	TOC	300000	MG/KG	5.477121255	RI
SD-R-M6-03	SD-R-M6-03(0.5-1.0)	Ponds	TOC	180000	MG/KG	5.255272505	RI
SD-R-M6-04	SD-R-M6-04(0.5-1.0)	Ponds	TOC	160000	MG/KG	5.204119983	RI
SD-R2-L-5-01D	SD-R2-L-5-01D	Ponds	TOC	60300	MG/KG	4.780317312	RI II
SD-R2-L-5-02	SD-R2-L-5-02	Ponds	TOC	38700	MG/KG	4.587710965	RI II
SD-R2-M-7-01D	SD-R2-M-7-01D	Ponds	TOC	13900	MG/KG	4.1430148	RI II
SD-R-M7-06	SD-R-M7-06(0.5-1.0)	Ponds	TOC	62000	MG/KG	4.792391689	RI
					Ponds - Logarithmic Average	4.689975586	
					Calculated Log-Average of TOC	48975.12873	

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Sediment - Calculation of SEL Values for Polynuclear Aromatic Hydrocarbons
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	Ponds Surface Water Feature Type			
PAH CONSTITUENT	**SEL (mg/kg)**	**Calculated Log-Average TOC**	**(FSSG SEL * Calculated Log-Average TOC) / 1000 [(1)]**	**Calculated SEL (mg/kg) [(2)]**
ACENAPHTHENE	0.5	48975.12873	24.49	0.024
ACENAPHTHYLENE	0.64	48975.12873	31.34	0.03
ANTHRACENE	370	48975.12873	18120.80	18.1
BENZO(a)ANTHRACENE	1480	48975.12873	72483.19	72.5
BENZO(b)FLOURANTHENE	1800	48975.12873	88155.23	88.2
BENZO(a)PYRENE	1440	48975.12873	70524.19	70.5
BENZO(g,h,i)PERYLENE	320	48975.12873	15672.04	15.7
BENZO(k)FLUORANTHENE	1340	48975.12873	65626.67	65.6
CHRYSENE	460	48975.12873	22528.56	22.5
DIBENZ(a,h)ANTHRACENE	130	48975.12873	6366.77	6.4
FLUORANTHENE	1020	48975.12873	49954.63	50.0
FLUORENE	160	48975.12873	7836.02	7.8
INDENO(1,2,3-c,d)PYRENE	320	48975.12873	15672.04	15.7
NAPHTHALENE	2.1	48975.12873	102.85	0.1
PHENANTHRENE	950	48975.12873	46526.37	46.5
PYRENE	850	48975.12873	41628.86	41.6

Notes:

PAH = Polynuclear Aromatic Hydrocarbons

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

TOC = Total Organic Carbon

(1) = Unit change from mg/kg to ug/kg

(2) = Rounded Calculated SEL values to two significant figures

SI = Site Investigation

RI = Remedial Investigation

Appendix F

Data to Document Off-Site Influences

General Facility Location	Map Grid(s)	Sample Location(s)	Constituents Exceeded (LEL or SEL)
	A15	SD-A15-1-01	Benzo(a)anthracene Benzo(a)pyrene Chrysene Pyrene
		SD-A15-2-01	Cadmium
		SD-A15-3-01	Cadmium Copper
		SD-R-A15-01	Lead
		SD-R-A15-02	Cadmium Chromium Copper Lead Zinc
		SD-R-A15-03	Cadmium Chromium Copper Lead Mercury Zinc
		SD-R-A15-04	Chromium Copper Lead
		SD-R-A15-05	Arsenic Cadmium Chromium Copper Lead Zinc
	B14	SD-B14-2-01	Copper
		SD-B14-4-01	Lead
		SD-R-B14-01	No exceedances
		SD-R-B14-02	No exceedances
		SD-R-B14-03	No exceedances
		SD-R-B14-04	Cadmium
	B15	SD-B15-1-01	Tetrachloroethylene Cadmium Chromium Copper
		SD-B15-2-01	Tetrachloroethylene Chromium
		SD-R-B15-01	Cadmium Copper Lead Mercury Zinc
		SD-R-B15-02	Arsenic Lead
		SD-R-B15-03	Arsenic
		SD-R-B15-04	Tetrachloroethylene Cadmium Chromium Copper
		SD-R-B15-05	Tetrachloroethylene
		SD-R-B15-06	Cadmium Chromium Copper Lead Zinc
		SD-R-B15-07	Arsenic Cadmium Chromium Copper Lead Zinc
		SD-R-B15-08	Copper Lead
	B16	SD-B16-1-01	Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Bis(2-Ethylhexyl)phthalate Chrysene Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Lead Mercury Phenanthrene Pyrene

Howard Boulevard/Route 46 - Western Drainage Area	C15	SD-R-B16-01	Acenaphthylene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)pyrene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Copper Lead
		SD-C15-1-01	Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Bis(2-Ethylhexyl)phthalate Cadmium Chrysene Fluoranthene Indeno(1,2,3-cd)pyrene Lead Phenanthrene Pyrene
		SD-C15-2-01	Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Bis(2-Ethylhexyl)phthalate Cadmium Chrysene Copper Fluoranthene Indeno(1,2,3-cd)pyrene Lead Phenanthrene Pyrene
		SD-R-C15-02	Acenaphthylene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Cadmium Copper Lead Zinc
		SD-R-C15-03	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Naphthalene Phenanthrene Pyrene
		SD-R-C15-04	Acenaphthylene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Lead

		SD-R-C15-05	Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Chromium Lead
		SD-R-C15-06	Acenaphthene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Chrysene Fluoranthene Phenanthrene Pyrene Chromium Lead
		SD-R-C15-07	Cadmium Copper Lead
		SD-R-C15-08	Copper
		SD-R-C15-09	Tetrachloroethylene Arsenic Chromium
		SD-R-C15-10	Arsenic Chromium
		SD-R2-C-15-1	Chrysene Fluoranthene Pyrene Aluminum Cadmium Copper Lead Mercury Zinc
		SD-R2-C-15-2	Aluminum Cadmium Copper Lead Silver
	C16	SD-R-C16-01	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene
Howard Boulevard - atop western ridgeline	B8	SD-B8-1-01	Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Bis(2-Ethylhexyl)phthalate Chromium Chrysene Copper Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Lead Nickel Phenanthrene Pyrene Zinc
		SD-R-B8-01	Chromium Copper Nickel
	C9	SD-R-C9-01	Chromium Copper
		SD-R-C9-02	No exceedances

	C9	SD-R-C9-03	No exceedances
		SD-R-C9-04	Chromium Copper
Howard Boulevard - adjacent to former Facility entrance	H5	SD-H5-1-01	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Bis(2-Ethylhexyl)phthalate Chrysene Copper Dibenzo(a,h)anthracene Fluoranthene Fluorene Indeno(1,2,3-cd)pyrene Lead Phenanthrene Phyrene Zinc
		SD-R-H5-01	Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Arsenic Cadmium Chromium Copper Lead Nickel Zinc
		SD-R-H5-02	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Fluorene Naphthalene Phenanthrene Pyrene Cadmium Chromium Copper Lead Nickel Zinc
	K4	SD-K4-1-01	Arsenic Copper Lead Mercury Zinc
		SD-R-K4-01	Cadmium Copper Lead Mercury
		SD-K5-1-01	Lead
		SD-K5-2-01	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-K5-3-01	Copper Lead

		SD-K5-4-01	Antimony Arsenic Cadmium Di-n-butyl phthalate Lead Mercury Zinc Chromium Copper
		SD-R-K5-01	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-02	Cadmium Copper Lead Mercury
		SD-R-K5-03	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-04	Copper Lead Mercury
		SD-R-K5-05	Arsenic Cadmium Copper Lead Zinc
		SD-R-K5-06	Arsenic Cadmium Chromium Copper Lead Mercury Zinc
		SD-R-K5-07	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-08	Arsenic Cadmium
		SD-R-K5-09	Cadmium Copper Lead Mercury Zinc
	K5	SD-R-K5-10	Arsenic Cadmium Copper Lead Mercury Nickel Zinc
		SD-R-K5-11	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-12	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-13	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-14	No exceedances
		SD-R-K5-15	Lead

Facility perimeter road adjacent to NJ Transit rail line		SD-R-K5-16	Copper Mercury Zinc
		SD-R-K5-17	Cadmium Copper Lead Mercury Zinc 2,4,6-Trinitrotoluene
		SD-R-K5-18	Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R-K5-19	Copper Lead Mercury Zinc
		SD-R-K5-20	Cadmium Copper Lead Mercury Zinc
		SD-R-K5-21	Cadmium Chromium Copper Lead Zinc
		SD-R2-K-5-1	2-Methylnaphthalene Chrysene Fluorene Naphthalene Aluminum Arsenic Cadmium Copper Lead Mercury Zinc
		SD-R2-K-5-2	Aluminum Arsenic Cadmium Chromium Copper Lead Mercury Zinc
	O4	SD-O4-1-01	Copper
		SD-O4-2-01	Cadmium Copper Lead Zinc
		SD-O4-3-01	Arsenic Copper Lead
		SD-O4-4-01	Copper
		SD-O4-5-01	Arsenic Copper
		SD-O4-6-01	Copper Nickel
		SD-O4-7-01	Copper
		SD-O4-8-01	Copper Lead Mercury
		SD-O4-9-01	No exceedances
		SD-O4-10-01	No exceedances
		SD-R-O4-01	Copper Lead Zinc
		SD-R-O4-02	Copper Lead Mercury
		SD-R-O4-03	Copper Mercury
		SD-R-O4-04	Arsenic Copper Silver Zinc
		SD-R-O4-05	Copper

		SD-R-O4-06	Copper Lead Silver Zinc
		SD-R-O4-07	Copper Zinc
		SD-R-O4-08	Copper Lead
		SD-R-O4-09	Copper Lead Mercury
		SD-R2-O-4-1	Fluoranthene Phenanthrene Pyrene Aluminum Copper Lead Nickel Zinc
		SD-R2-O-4-2	Aluminum Copper Lead Silver
		SD-R2-O-4-3	Aluminum Lead Nickel Silver
	J5	SD-J5-1-01	No exceedances
		SD-J5-2-01	Bis(2-Ethylhexyl)phthalate Lead Mercury
		SD-R-J5-01	Copper Lead
Route 46 - culvert(s) adjacent to Facility outfall	E16	SD-E16-1-01	No exceedances
		SD-E16-2-01	No exceedances
		SD-E16-3-01	Acenaphthylene Anthracene Arsenic Benzo(a)anthracene Benzo(a)pyrene Benzo(g,h,i)perylene Chromium Chrysene Copper Dibenzo(a,h)anthracene Fluoranthene Indeno(1,2,3-cd)pyrene Lead Mercury Phenanthrene Pyrene Zinc
		SD-R-E16-01	No exceedances
		SD-R-E16-02	No exceedances
		SD-R-E16-03	Lead
		SD-R2-E-16-1	Aluminum Copper Lead
		SD-R2-E-16-3	Acenaphthene Acenaphthylene Benzo(a)anthracene Benzo(g,h,i)perylene Chrysene Dibenzo(a,h)anthracene Fluoranthene Phenanthrene Pyrene Aluminum Copper Lead

Appendix G

Updated MWH Si and Phase I RI Tables

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (0.5-1 ft. bgs) 05/01/2001	SD-B14-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-C13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-C14-2-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	130U	**260U**	130U	170U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	130U	260U	130U	170U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	130U	260U	130U	170U
1,1-DICHLOROETHANE	UG/KG	NS	NS	130U	260U	130U	170U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**130U**	**260U**	**130U**	**170U**
1,2-DICHLOROETHANE	UG/KG	260	NS	130U	260U	130U	170U
1,2-DICHLOROPROPANE	UG/KG	333	NS	130U	260U	130U	170U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	270U	510U	270U	340U
ACROLEIN	UG/KG	0.00152	NS	**2700U**	**5100U**	**2700U**	**3400U**
ACRYLONITRILE	UG/KG	1.2	NS	**540U**	**1000U**	**540U**	**670U**
AMYL ALCOHOL	UG/KG	NS	NS	12000U	20000U	13000U	13000U
BENZENE	UG/KG	142	NS	130U	**260U**	130U	**170U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	130U	260U	130U	170U
BROMOFORM	UG/KG	492	NS	130U	260U	130U	170U
BROMOMETHANE	UG/KG	1.37	NS	**270U**	**510U**	**270U**	**340U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	130U	260U	130U	170U
CHLOROBENZENE	UG/KG	291	NS	130U	260U	130U	170U
CHLOROETHANE	UG/KG	NS	NS	270U	510U	270U	340U
CHLOROFORM	UG/KG	121	NS	**130U**	**260U**	**130U**	**170U**
CHLOROMETHANE	UG/KG	NS	NS	270U	510U	270U	340U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	130U	260U	130U	170U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	130U	260U	130U	170U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	12000U	20000U	13000U	13000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	130U	260U	130U	170U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	12000U	20000U	13000U	13000U
ETHANOL	UG/KG	NS	NS	12000U	20000U	13000U	13000U
ETHYLBENZENE	UG/KG	175	NS	130U	**260U**	130U	170U

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (0.5-1 ft. bgs) 05/01/2001	SD-B14-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-C13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-C14-2-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents							
METHANOL	UG/KG	NS	NS	12000U	20000U	13000U	13000U
METHYLENE CHLORIDE	UG/KG	159	NS	**270U**	**510U**	**270U**	**340U**
N-BUTYL ETHER	UG/KG	NS	NS	12000U	20000U	13000U	13000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	130U	260U	130U	170U
TOLUENE	UG/KG	1220	NS	130U	260U	130U	170U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	130U	260U	130U	170U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	130U	260U	130U	170U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**130U**	**260U**	**130U**	**170U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	270U	510U	270U	340U
VINYL CHLORIDE	UG/KG	202	NS	130U	**260U**	130U	170U
XYLENES, (TOTAL)	UG/KG	120	NS	**130U**	**260U**	**130U**	**170U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (1.5-2 ft. bgs) 05/01/2001	SD-B14-4-01 (1.5-2 ft. bgs) 04/12/2001	SD-C13-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-C14-2-01 (1-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	390U	67U	42U	44U
1,2-DICHLOROBENZENE	UG/KG	294	NS	**390U**	67U	42U	44U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	390U	67U	42U	44U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	390U	67U	42U	44U
1,4-DICHLOROBENZENE	UG/KG	318	NS	**390U**	67U	42U	44U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**790U**	140U	85U	89U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**790U**	**140U**	**85U**	**89U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	**790U**	140U	85U	89U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**7900U**	**1400U**	**850U**	**890U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**33000**	**140U**	**85U**	**250J**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**900J**	**67U**	**42U**	**44U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	390U	67U	42U	44U
2-CHLOROPHENOL	UG/KG	31.9	NS	**390U**	**67U**	**42U**	**44U**
2-NITROPHENOL	UG/KG	NS	NS	790U	140U	85U	89U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**790U**	**140U**	85U	89U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	2800J	350U	220U	230U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	790U	140U	85U	89U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	790U	140U	85U	89U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	390U	67U	42U	44U
4-NITROPHENOL	UG/KG	13.3	NS	**2000U**	**350U**	**220U**	**230U**
ACENAPHTHENE	UG/KG	6.71	7-20	**390U**	**67U**	**42U**	**44U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**390U**	**67U**	**42U**	**44U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**390U**	**67U**	42U	44U
BENZIDINE	UG/KG	NS	NS	7900U	1400U	850U	890U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**390U**	67U	42U	44U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**390U**	67U	42U	44U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	390U	67U	42U	44U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**390U**	67U	42U	44U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	**390U**	67U	42U	44U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (1.5-2 ft. bgs) 05/01/2001	SD-B14-4-01 (1.5-2 ft. bgs) 04/12/2001	SD-C13-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-C14-2-01 (1-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents							
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	790U	140U	85U	89U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	790U	140U	85U	89U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	390U	67U	42U	44U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	390U	67U	42U	44U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**790U**	140U	85U	89U
CHRYSENE	UG/KG	166	6,700-22.500	**390U**	67U	42U	44U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**790U**	**140U**	85U	89U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	790U	140U	85U	89U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**390U**	**67U**	**42U**	**44U**
DIETHYLPHTHALATE	UG/KG	295	NS	**790U**	140U	85U	89U
DIMETHYLPHTHALATE	UG/KG	NS	NS	790U	140U	85U	89U
FLUORANTHENE	UG/KG	423	14,900-50,000	390U	100J	42U	53J
FLUORENE	UG/KG	77.4	2,300-7,8000	**390U**	67U	42U	44U
HEXACHLOROBENZENE	UG/KG	20	24000	**390U**	**67U**	**42U**	**44U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**790U**	**140U**	**85U**	**89U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	**2000U**	350U	220U	230U
HEXACHLOROETHANE	UG/KG	584	NS	390U	67U	42U	44U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**390U**	67U	42U	44U
ISOPHORONE	UG/KG	432	NS	390U	67U	42U	44U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	390U	67U	42U	44U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	790U	140U	85U	89U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	390U	67U	42U	44U
NAPHTHALENE	UG/KG	160	NS	**390U**	75J	42U	44U
NITROBENZENE	UG/KG	145	NS	**12000U**	**200U**	130U	130U
PENTACHLOROPHENOL	UG/KG	23000	NS	2000U	350U	220U	230U
PHENANTHRENE	UG/KG	204	13,800-46,000	**390U**	67U	42U	44U
PHENOL	UG/KG	49.1	48	**790U**	**140U**	**85U**	**89U**
PYRENE	UG/KG	195	12,400-41,600	**390U**	92J	42U	44U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-16

Sediment Analytical Results - Western Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (1.5-2 ft. bgs) 05/01/2001	SD-B14-4-01 (1.5-2 ft. bgs) 04/12/2001	SD-C13-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-C14-2-01 (1-1.5 ft. bgs) 04/12/2001
Total Metals							
ANTIMONY	MG/KG	NS	3	1.1BN	1.3U	0.81UN	0.92B
ARSENIC	MG/KG	6	33	**7.9**	1.9B*	2.4	5.4*
BERYLLIUM	MG/KG	NS	NS	0.34B	0.88B	0.67	0.72
CADMIUM	MG/KG	0.6	10	0.063U	0.2B	0.069U	0.11B
CHROMIUM, TOTAL	MG/KG	26	110	14.7	13.1	13.5	20.7
COPPER	MG/KG	16	110	**46.3**	14.7	10.8	**19.5**
LEAD	MG/KG	31	250	**48.5**	**44.4**	**48.6**	**69.2**
MERCURY	MG/KG	0.174	2	0.064B	0.08BN*	0.042B	0.14N*
NICKEL	MG/KG	16	75	9.4	9.4B	9.1	11.7
SELENIUM	MG/KG	NS	NS	0.55U	0.98U	0.6U	1.1B
SILVER	MG/KG	0.5	NS	0.18B	0.28U	0.18U	0.18U
THALLIUM	MG/KG	NS	NS	0.98U	1.7U	1.1U	1.1U
ZINC	MG/KG	120	820	93.7*	47.5	57.4*	**163**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
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Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
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N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
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NS = No Standard
ft. bgs = Feet below ground surface

Table 5-17

Sediment Analytical Results- Western Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-4-01 (1.5-2 ft. bgs) 05/01/2001	SD-B14-4-01 (1.5-2 ft. bgs) 04/12/2001	SD-C13-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-C14-2-01 (1-1.5 ft. bgs) 04/12/2001
Energtic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**48000**	**200U**	**130U**	**130U**
1,3-DINITROBENZENE	UG/KG	NS	NS	12000U	200U	130U	130U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**152000**	**200U**	**190J**	**700**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**33000**	**140U**	**85U**	**250J**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**900J**	**67U**	**42U**	**44U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	12000U	200U	130U	730
2-NITROTOLUENE	UG/KG	NS	NS	12000U	200U	130U	130U
3-NITROTOLUENE	UG/KG	NS	NS	12000U	200U	130U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	12000U	200U	130U	500
4-NITROTOLUENE	UG/KG	NS	NS	12000U	200U	130U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**12000U**	**200U**	**130U**	**130U**
NITROBENZENE	UG/KG	145	NS	**12000U**	**200U**	130U	130U
NITROCELLULOSE	MG/KG	NS	NS	5000	120U	77U	80U
NITROGLYCERIN	UG/KG	NS	NS	240000U	4100U	2600U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**12000U**	**200U**	**130U**	**130U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	240000U	4100U	2600U	2700U
TETRYL	UG/KG	NS	NS	12000U	200U	130U	130U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-18

Sediment Analytical Results - Western Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-B13-4-01 (1.5-2 ft. bgs) 05/01/2001	SD-B14-4-01 (1.5-2 ft. bgs) 04/12/2001	SD-C13-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-C14-2-01 (1-1.5 ft. bgs) 04/12/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	15.4	50.8	21.6	24.8
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	0.7 J	1.3	2.5	1.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	62.1	76.1	74.6	64.1
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	99.7	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	96.5	94.4	95.7	94.7
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	2.6	3.5	6.1	4
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	38.5	44	42.4	31
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	21.4	17.2	28.7	18.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	8	9	14.6	9.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	9720	45200	5400	39400

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NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-19

Sediment Analytical Results- Western Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	180U	150U	210U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	180U	150U	210U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	180U	150U	210U
1,1-DICHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**180U**	**150U**	**210U**
1,2-DICHLOROETHANE	UG/KG	260	NS	180U	150U	210U
1,2-DICHLOROPROPANE	UG/KG	333	NS	180U	150U	210U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	360U	290U	420U
ACROLEIN	UG/KG	0.00152	NS	**3600U**	**2900U**	**4200U**
ACRYLONITRILE	UG/KG	1.2	NS	**720U**	**580U**	**850U**
AMYL ALCOHOL	UG/KG	NS	NS	13000U	12000U	17000U
BENZENE	UG/KG	142	NS	**180U**	**150U**	**210U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	180U	150U	210U
BROMOFORM	UG/KG	492	NS	180U	150U	210U
BROMOMETHANE	UG/KG	1.37	NS	**360U**	**290U**	**420U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	180U	150U	210U
CHLOROBENZENE	UG/KG	291	NS	180U	150U	210U
CHLOROETHANE	UG/KG	NS	NS	360U	290U	420U
CHLOROFORM	UG/KG	121	NS	**180U**	**150U**	**210U**
CHLOROMETHANE	UG/KG	NS	NS	360U	290U	420U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	180U	150U	210U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	150U	210U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	12000U	17000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	180U	150U	210U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	12000U	17000U
ETHANOL	UG/KG	NS	NS	13000U	12000U	17000U
ETHYLBENZENE	UG/KG	175	NS	**180U**	150U	**210U**

Table 5-19

Sediment Analytical Results- Western Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents						
METHANOL	UG/KG	NS	NS	13000U	12000U	17000U
METHYLENE CHLORIDE	UG/KG	159	NS	**360U**	**290U**	**420U**
N-BUTYL ETHER	UG/KG	NS	NS	13000U	12000U	17000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	180U	150U	210U
TOLUENE	UG/KG	1220	NS	180U	150U	210U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	180U	150U	210U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	150U	210U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**180U**	**150U**	**210U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	360U	290U	420U
VINYL CHLORIDE	UG/KG	202	NS	180U	150U	**210U**
XYLENES, (TOTAL)	UG/KG	120	NS	**180U**	**150U**	**210U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-20

Sediment Analytical Results - Western Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (1.5-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	42U	40U	55U
1,2-DICHLOROBENZENE	UG/KG	294	NS	42U	40U	55U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	42U	40U	55U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	42U	40U	55U
1,4-DICHLOROBENZENE	UG/KG	318	NS	42U	40U	55U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	86U	81U	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**86U**	81U	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	86U	81U	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**860U**	**810U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**86U**	**81U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**42U**	**40U**	**55U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	42U	40U	55U
2-CHLOROPHENOL	UG/KG	31.9	NS	**42U**	**40U**	**55U**
2-NITROPHENOL	UG/KG	NS	NS	86U	81U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	86U	81U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	210U	280U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	86U	81U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	86U	81U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	42U	40U	55U
4-NITROPHENOL	UG/KG	13.3	NS	**220U**	**210U**	**280U**
ACENAPHTHENE	UG/KG	6.71	7-20	**42U**	**40U**	**55U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**42U**	**48J**	**58J**
ANTHRACENE	UG/KG	57.2	5,400-18,100	42U	**170J**	**69J**
BENZIDINE	UG/KG	NS	NS	860U	810U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**140J**	**480**	**280J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**170J**	**500**	**390J**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	230J	570	470J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	150J	**280J**	**340J**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	100J	230J	190J

Table 5-20

Sediment Analytical Results - Western Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (1.5-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	86U	81U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	86U	81U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	42U	40U	55U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	42U	40U	55U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	160J	**460**	110U
CHRYSENE	UG/KG	166	6,700-22.500	**210J**	**600**	**350J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	86U	81U	**170J**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	86U	81U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**42U**	**87J**	**90J**
DIETHYLPHTHALATE	UG/KG	295	NS	86U	81U	110U
DIMETHYLPHTHALATE	UG/KG	NS	NS	86U	81U	110U
FLUORANTHENE	UG/KG	423	14,900-50,000	340J	**1100**	**530J**
FLUORENE	UG/KG	77.4	2,300-7,8000	42U	46J	55U
HEXACHLOROBENZENE	UG/KG	20	24000	**42U**	**40U**	**55U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**86U**	**81U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	220U	210U	280U
HEXACHLOROETHANE	UG/KG	584	NS	42U	40U	55U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	150J	**310J**	**320J**
ISOPHORONE	UG/KG	432	NS	42U	40U	55U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	42U	40U	55U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	86U	81U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	42U	40U	170J
NAPHTHALENE	UG/KG	160	NS	42U	40U	55U
NITROBENZENE	UG/KG	145	NS	130U	120U	**170U**
PENTACHLOROPHENOL	UG/KG	23000	NS	220U	210U	280U
PHENANTHRENE	UG/KG	204	13,800-46,000	170J	**480**	**270J**
PHENOL	UG/KG	49.1	48	**86U**	**81U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	**310J**	**1100**	**690**

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-21

Sediment Analytical Results - Western Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (1.5-2 ft. bgs) 04/10/2001
Total Metals						
ANTIMONY	MG/KG	NS	3	0.83U	0.78U	1.1U
ARSENIC	MG/KG	6	33	3.3	0.71B	**6.4**
BERYLLIUM	MG/KG	NS	NS	0.83	0.35B	1.1
CADMIUM	MG/KG	0.6	10	0.071U	0.066U	0.52B
CHROMIUM, TOTAL	MG/KG	26	110	19	10.8	**51.1**
COPPER	MG/KG	16	110	14.5	11	**25.1**
LEAD	MG/KG	31	250	11.8B*	**84.6***	**203N**
MERCURY	MG/KG	0.174	2	0.0038BN	**0.37N**	**1.2***
NICKEL	MG/KG	16	75	11.1	6.7	9.7
SELENIUM	MG/KG	NS	NS	0.62U	0.57U	0.79U
SILVER	MG/KG	0.5	NS	0.18U	0.17U	0.23U
THALLIUM	MG/KG	NS	NS	1.1U	1U	1.4U
ZINC	MG/KG	120	820	51.7N	36.9N	**158**

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ft. bgs = Feet below ground surface

Table 5-22

Sediment Analytical Results- Western Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (1.5-2 ft. bgs) 04/10/2001
Energetics and Explosives						
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**130U**	**120U**	**170U**
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	120U	170U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**130U**	**120U**	**170U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**86U**	**81U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**42U**	**40U**	**55U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
2-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
3-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
4-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**130U**	**120U**	**170U**
NITROBENZENE	UG/KG	145	NS	130U	120U	**170U**
NITROCELLULOSE	MG/KG	NS	NS	77U	72U	100U
NITROGLYCERIN	UG/KG	NS	NS	2600U	2400U	3300U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**130U**	**120U**	**170U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	2400U	3300U
TETRYL	UG/KG	NS	NS	130U	120U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-23

Sediment Analytical Results - Western Drainage System - Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-A15-1-01 (1.5-2 ft. bgs) 4/5/2001	SD-B16-1-01 (0.5-1 ft. bgs) 4/5/2001	SD-E16-3-01 (1.5-2 ft. bgs) 04/10/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	22	17.1	40
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.3	1.1	1.4
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	85.9	63.3	76.2
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	100	91.1	96.2
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.5	4.6	3.7
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	44	45.1	40.8
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	26.6	24.7	22.1
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.8	12.2	9.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	3800	4400	23400

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SD-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-C15-1-01 (0.5-1 ft. bgs) 04/11/2001	SD-C15-2-01 (0.5-1 ft. bgs) 04/04/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**980U**	**1100U**	210U	**720U**	**920U**	**390U**	**580U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	**980U**	**1100U**	210U	720U	**920U**	390U	580U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	**980U**	**1100U**	210U	**720U**	**920U**	390U	**580U**
1,1-DICHLOROETHANE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**980U**	**1100U**	210U	**720U**	**920U**	**390U**	**580U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	**980U**	**1100U**	210U	**720U**	**920U**	**390U**	**580U**
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	2000U	2200U	410U	1400U	1800U	770U	1200U
ACROLEIN	UG/KG	0.00152	NS	**20000U**	**22000U**	**4100U**	**14000U**	**19000U**	**7700U**	**12000U**
ACRYLONITRILE	UG/KG	1.2	NS	**4000U**	**4400U**	**830U**	**2900U**	**3700U**	**1500U**	**2300U**
AMYL ALCOHOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
BENZENE	UG/KG	142	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
BROMOFORM	UG/KG	492	NS	**980U**	**1100U**	210U	**720U**	**920U**	390U	**580U**
BROMOMETHANE	UG/KG	1.37	NS	**2000U**	**2200U**	**410U**	**1400U**	**1800U**	**770U**	**1200U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	980U	1100U	210U	720U	920U	390U	580U
CHLOROBENZENE	UG/KG	291	NS	**980U**	**1100U**	210U	**720U**	**920U**	**390U**	**580U**
CHLOROETHANE	UG/KG	NS	NS	2000U	2200U	410U	1400U	1800U	770U	1200U
CHLOROFORM	UG/KG	121	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**
CHLOROMETHANE	UG/KG	NS	NS	2000U	2200U	410U	1400U	1800U	770U	1200U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
ETHANOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
ETHYLBENZENE	UG/KG	175	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SD-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-C15-1-01 (0.5-1 ft. bgs) 04/11/2001	SD-C15-2-01 (0.5-1 ft. bgs) 04/04/2001
Volatile Organic Constituents										
METHANOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
METHYLENE CHLORIDE	UG/KG	159	NS	**2000U**	**2200U**	**410U**	**1400U**	**1800U**	**770U**	**1200U**
N-BUTYL ETHER	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U	47000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	**980U**	**1100U**	210U	**1300J**	**1700J**	390U	**580U**
TOLUENE	UG/KG	1220	NS	980U	1100U	210U	720U	920U	390U	580U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	**980U**	**1100U**	210U	**720U**	**920U**	390U	580U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	980U	1100U	210U	720U	920U	390U	580U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	2000U	2200U	410U	1400U	1800U	770U	1200U
VINYL CHLORIDE	UG/KG	202	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**
XYLENES, (TOTAL)	UG/KG	120	NS	**980U**	**1100U**	**210U**	**720U**	**920U**	**390U**	**580U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-5-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0.5-1 ft. bgs) 04/04/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**250U**	**320U**	190U	160U	190U	190U	**250U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	250U	320U	190U	160U	190U	190U	250U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	250U	320U	190U	160U	190U	190U	250U
1,1-DICHLOROETHANE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**250U**	**320U**	**190U**	**160U**	**190U**	**190U**	**250U**
1,2-DICHLOROETHANE	UG/KG	260	NS	250U	**320U**	190U	160U	190U	190U	250U
1,2-DICHLOROPROPANE	UG/KG	333	NS	250U	320U	190U	160U	190U	190U	250U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	490U	650U	380U	310U	370U	380U	510U
ACROLEIN	UG/KG	0.00152	NS	**5000U**	**6500U**	**3800U**	**3100U**	**3700U**	**3800U**	**5100U**
ACRYLONITRILE	UG/KG	1.2	NS	**990U**	**1300U**	**760U**	**620U**	**740U**	**770U**	**1000U**
AMYL ALCOHOL	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
BENZENE	UG/KG	142	NS	**250U**	**320U**	**190U**	**160U**	**190U**	**190U**	**250U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
BROMOFORM	UG/KG	492	NS	250U	320U	190U	160U	190U	190U	250U
BROMOMETHANE	UG/KG	1.37	NS	**490U**	**650U**	**380U**	**310U**	**370U**	**380U**	**510U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	250U	320U	190U	160U	190U	190U	250U
CHLOROBENZENE	UG/KG	291	NS	250U	**320U**	190U	160U	190U	190U	250U
CHLOROETHANE	UG/KG	NS	NS	490U	650U	380U	310U	370U	380U	510U
CHLOROFORM	UG/KG	121	NS	**250U**	**320U**	**190U**	**160U**	**190U**	**190U**	**250U**
CHLOROMETHANE	UG/KG	NS	NS	490U	650U	380U	310U	370U	380U	510U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
ETHANOL	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
ETHYLBENZENE	UG/KG	175	NS	**250U**	**320U**	**190U**	160U	**190U**	**190U**	**250U**

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-5-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0.5-1 ft. bgs) 04/04/2001
Volatile Organic Constituents										
METHANOL	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
METHYLENE CHLORIDE	UG/KG	159	NS	**490U**	**650U**	**380U**	**310U**	**370U**	**380U**	**510U**
N-BUTYL ETHER	UG/KG	NS	NS	21000U	25000U	17000U	14000U	14000U	17000U	22000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	250U	320U	190U	160U	190U	190U	250U
TOLUENE	UG/KG	1220	NS	250U	320U	190U	160U	190U	190U	250U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	250U	320U	190U	160U	190U	190U	250U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	250U	320U	190U	160U	190U	190U	250U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**250U**	**320U**	**190U**	**160U**	**190U**	**190U**	**250U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	490U	650U	380U	310U	370U	380U	510U
VINYL CHLORIDE	UG/KG	202	NS	**250U**	**320U**	190U	160U	190U	190U	**250U**
XYLENES, (TOTAL)	UG/KG	120	NS	**250U**	**320U**	**190U**	**160U**	**190U**	**190U**	**250U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-2-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**540U**	150U	**300U**	**250U**	180U	190U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	540U	150U	300U	250U	180U	190U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	**540U**	150U	300U	250U	180U	190U
1,1-DICHLOROETHANE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**540U**	**150U**	**300U**	**250U**	**180U**	**190U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**540U**	150U	**300U**	250U	180U	190U
1,2-DICHLOROPROPANE	UG/KG	333	NS	**540U**	150U	300U	250U	180U	190U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	1100U	290U	610U	510U	370U	370U
ACROLEIN	UG/KG	0.00152	NS	**11000U**	**2900U**	**6100U**	**5100U**	**3700U**	**3700U**
ACRYLONITRILE	UG/KG	1.2	NS	**2200U**	**580U**	**1200U**	**1000U**	**740U**	**740U**
AMYL ALCOHOL	UG/KG	NS	NS	43000U	14000U	22000U	21000U	18000U	15000U
BENZENE	UG/KG	142	NS	**540U**	**150U**	**300U**	**250U**	**180U**	**190U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
BROMOFORM	UG/KG	492	NS	**540U**	150U	300U	250U	180U	190U
BROMOMETHANE	UG/KG	1.37	NS	**1100U**	**290U**	**610U**	**510U**	**370U**	**370U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	540U	150U	300U	250U	180U	190U
CHLOROBENZENE	UG/KG	291	NS	**540U**	150U	**300U**	250U	180U	190U
CHLOROETHANE	UG/KG	NS	NS	1100U	290U	610U	510U	370U	370U
CHLOROFORM	UG/KG	121	NS	**540U**	**150U**	**300U**	**250U**	**180U**	**190U**
CHLOROMETHANE	UG/KG	NS	NS	1100U	290U	610U	510U	370U	370U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	43000U	14000U	22000U	21000U	18000U	15000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	43000U	14000U	22000U	21000U	18000U	15000U
ETHANOL	UG/KG	NS	NS	43000U	14000U	22000U	21000U	18000U	15000U
ETHYLBENZENE	UG/KG	175	NS	**540U**	150U	**300U**	**250U**	**180U**	**190U**

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-2-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents									
METHANOL	UG/KG	NS	NS	52000J	14000U	22000U	21000U	18000U	15000U
METHYLENE CHLORIDE	UG/KG	159	NS	**1100U**	**290U**	**610U**	**510U**	**370U**	**370U**
N-BUTYL ETHER	UG/KG	NS	NS	43000U	14000U	22000U	21000U	18000U	15000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	**540U**	150U	300U	250U	180U	190U
TOLUENE	UG/KG	1220	NS	540U	150U	300U	250U	180U	190U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	540U	150U	300U	250U	180U	190U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	540U	150U	300U	250U	180U	190U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**540U**	**150U**	**300U**	**250U**	**180U**	**190U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	1100U	290U	610U	510U	370U	370U
VINYL CHLORIDE	UG/KG	202	NS	**540U**	150U	**300U**	**250U**	180U	190U
XYLENES, (TOTAL)	UG/KG	120	NS	**540U**	**150U**	**300U**	**250U**	**180U**	**190U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-A15-3-01 (1.5-2 ft. bgs) 04/05/2001	SD-B14-2-01 (1.5-2 ft. bgs) 04/11/2001	SD-B15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-C15-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-C15-2-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	260U	290U	60U	190U	230U	100U	160U
1,2-DICHLOROBENZENE	UG/KG	294	NS	260U	290U	60U	190U	230U	100U	160U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	260U	290U	60U	190U	230U	100U	160U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	260U	290U	60U	190U	230U	100U	160U
1,4-DICHLOROBENZENE	UG/KG	318	NS	260U	290U	60U	190U	230U	100U	160U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**540U**	**590U**	120U	**380U**	**460U**	**210U**	**320U**
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**	**320U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	**540U**	**590U**	120U	**380U**	**460U**	210U	**320U**
2,4-DINITROPHENOL	UG/KG	6.21	NS	**5400U**	**5900U**	**1200U**	**3800U**	**4600U**	**2100U**	**3200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**	**320U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	260U	290U	60U	190U	230U	100U	160U
2-CHLOROPHENOL	UG/KG	31.9	NS	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
2-NITROPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**540U**	**590U**	120U	**380U**	**460U**	**210U**	**320U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	1400U	1500U	310U	960U	1200U	520U	800U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	260U	290U	60U	190U	230U	100U	160U
4-NITROPHENOL	UG/KG	13.3	NS	**1400U**	**1500U**	**310U**	**960U**	**1200U**	**520U**	**800U**
ACENAPHTHENE	UG/KG	6.71	7-20	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**260U**	**290U**	**60U**	**190U**	**230U**	**120J**	**160U**
BENZIDINE	UG/KG	NS	NS	5400U	5900U	1200U	3800U	4600U	2100U	3200U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**260U**	**290U**	60U	**190U**	**230U**	**370J**	**480J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**260U**	**290U**	60U	**190U**	**230U**	**410J**	**560J**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	260U	290U	60U	190U	230U	510J	710J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**260U**	**290U**	60U	**190U**	**230U**	**210J**	**350J**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	**260U**	**290U**	60U	190U	230U	210J	**290J**

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-A15-3-01 (1.5-2 ft. bgs) 04/05/2001	SD-B14-2-01 (1.5-2 ft. bgs) 04/11/2001	SD-B15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-C15-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-C15-2-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	540U	590U	120U	380U	460U	210U	320U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	260U	290U	60U	190U	230U	100U	160U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	260U	290U	60U	190U	230U	100U	160U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**540U**	**590U**	120U	**380U**	**460U**	**220J**	**600J**
CHRYSENE	UG/KG	166	6,700-22.500	**260U**	**290U**	60U	**190U**	**230U**	**380J**	**690J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**	**320U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
DIETHYLPHTHALATE	UG/KG	295	NS	**540U**	**590U**	120U	**380U**	**460U**	210U	**320U**
DIMETHYLPHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
FLUORANTHENE	UG/KG	423	14,900-50,000	260U	290U	60U	190U	230U	**780J**	**1000J**
FLUORENE	UG/KG	77.4	2,300-7,8000	**260U**	**290U**	60U	**190U**	**230U**	**100U**	**160U**
HEXACHLOROBENZENE	UG/KG	20	24000	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**	**160U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**	**320U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	**1400U**	**1500U**	310U	**960U**	**1200U**	520U	800U
HEXACHLOROETHANE	UG/KG	584	NS	260U	290U	60U	190U	230U	100U	160U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**260U**	**290U**	60U	190U	**230U**	**250J**	**360J**
ISOPHORONE	UG/KG	432	NS	260U	290U	60U	190U	230U	100U	160U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	260U	290U	60U	190U	230U	100U	160U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	540U	590U	120U	380U	460U	210U	320U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	260U	290U	60U	190U	230U	100U	160U
NAPHTHALENE	UG/KG	160	NS	**260U**	**290U**	60U	**190U**	**230U**	100U	160U
NITROBENZENE	UG/KG	145	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**	**470U**
PENTACHLOROPHENOL	UG/KG	23000	NS	1400U	1500U	310U	960U	1200U	520U	800U
PHENANTHRENE	UG/KG	204	13,800-46,000	**260U**	**290U**	60U	190U	**230U**	**400J**	**500J**
PHENOL	UG/KG	49.1	48	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**	**320U**
PYRENE	UG/KG	195	12,400-41,600	**260U**	**290U**	60U	190U	**230U**	**810J**	**960J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-4-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-5-01 (1-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (1-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	69U	83U	57U	46U	47U	55U	73U
1,2-DICHLOROBENZENE	UG/KG	294	NS	69U	83U	57U	46U	47U	55U	73U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	69U	83U	57U	46U	47U	55U	73U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	69U	83U	57U	46U	47U	55U	73U
1,4-DICHLOROBENZENE	UG/KG	318	NS	69U	83U	57U	46U	47U	55U	73U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	140U	170U	120U	93U	95U	110U	150U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**140U**	**170U**	**120U**	**93U**	**95U**	**110U**	**150U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	140U	170U	120U	93U	95U	110U	150U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1400U**	**1700U**	**1200U**	**930U**	**950U**	**1100U**	**1500U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**140U**	**170U**	**120U**	**93U**	**95U**	**110U**	**150U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	69U	83U	57U	46U	47U	55U	73U
2-CHLOROPHENOL	UG/KG	31.9	NS	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
2-NITROPHENOL	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**140U**	**170U**	120U	93U	95U	110U	**150U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	360U	430U	290U	240U	240U	280U	380U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	69U	83U	57U	46U	47U	55U	73U
4-NITROPHENOL	UG/KG	13.3	NS	**360U**	**430U**	**290U**	**240U**	**240U**	**280U**	**380U**
ACENAPHTHENE	UG/KG	6.71	7-20	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**69U**	**83U**	57U	46U	47U	55U	**73U**
BENZIDINE	UG/KG	NS	NS	1400U	1700U	1200U	930U	950U	1100U	1500U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	86J	83U	57U	46U	47U	78J	73U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	69U	83U	57U	46U	47U	91J	73U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	94J	83U	57U	46U	47U	120J	73U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	69U	83U	57U	46U	47U	55U	73U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	69U	83U	57U	46U	47U	55U	73U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-4-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-5-01 (1-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (1-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	140U	170U	120U	93U	95U	110U	150U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	69U	83U	57U	46U	47U	55U	73U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	69U	83U	57U	46U	47U	55U	73U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	140U	170U	120U	93U	95U	110U	150U
CHRYSENE	UG/KG	166	6,700-22.500	94J	83U	57U	46U	47U	94J	73U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**140U**	**170U**	**120U**	93U	95U	110U	**150U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
DIETHYLPHTHALATE	UG/KG	295	NS	140U	170U	120U	93U	95U	110U	150U
DIMETHYLPHTHALATE	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
FLUORANTHENE	UG/KG	423	14,900-50,000	180J	83U	57U	46U	47U	160J	110J
FLUORENE	UG/KG	77.4	2,300-7,8000	69U	**83U**	57U	46U	47U	55U	73U
HEXACHLOROBENZENE	UG/KG	20	24000	**69U**	**83U**	**57U**	**46U**	**47U**	**55U**	**73U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**140U**	**170U**	**120U**	**93U**	**95U**	**110U**	**150U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	360U	430U	290U	240U	240U	280U	380U
HEXACHLOROETHANE	UG/KG	584	NS	69U	83U	57U	46U	47U	55U	73U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	69U	83U	57U	46U	47U	57J	73U
ISOPHORONE	UG/KG	432	NS	69U	83U	57U	46U	47U	55U	73U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	69U	83U	57U	46U	47U	55U	73U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	140U	170U	120U	93U	95U	110U	150U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	69U	83U	57U	46U	47U	55U	73U
NAPHTHALENE	UG/KG	160	NS	69U	83U	57U	46U	47U	55U	73U
NITROBENZENE	UG/KG	145	NS	**210U**	**250U**	**170U**	140U	140U	**170U**	**220U**
PENTACHLOROPHENOL	UG/KG	23000	NS	360U	430U	290U	240U	240U	280U	380U
PHENANTHRENE	UG/KG	204	13,800-46,000	80J	83U	57U	46U	47U	90J	73U
PHENOL	UG/KG	49.1	48	**140U**	**170U**	**120U**	**93U**	**95U**	**110U**	**150U**
PYRENE	UG/KG	195	12,400-41,600	170J	83U	57U	46U	47U	170J	97J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-1-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-2-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-3-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (1-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents									
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	140U	45U	73U	69U	58U	50U
1,2-DICHLOROBENZENE	UG/KG	294	NS	140U	45U	73U	69U	58U	50U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	140U	45U	73U	69U	58U	50U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	140U	45U	73U	69U	58U	50U
1,4-DICHLOROBENZENE	UG/KG	318	NS	140U	45U	73U	69U	58U	50U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**290U**	91U	150U	140U	120U	100U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**290U**	**91U**	**150U**	**140U**	**120U**	**100U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	290U	91U	150U	140U	120U	100U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**2900U**	**910U**	**1500U**	**1400U**	**1200U**	**1000U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**290U**	**91U**	**150U**	**140U**	**120U**	**100U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	140U	45U	73U	69U	58U	50U
2-CHLOROPHENOL	UG/KG	31.9	NS	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
2-NITROPHENOL	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**290U**	91U	**150U**	**140U**	120U	100U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	720U	230U	370U	360U	300U	260U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	140U	45U	73U	69U	58U	50U
4-NITROPHENOL	UG/KG	13.3	NS	**720U**	**230U**	**370U**	**360U**	**300U**	**260U**
ACENAPHTHENE	UG/KG	6.71	7-20	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**140U**	45U	**73U**	**69U**	**58U**	50U
BENZIDINE	UG/KG	NS	NS	2900U	910U	1500U	1400U	1200U	1000U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**140U**	60J	73U	93J	58U	50U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	140U	62J	73U	110J	58U	50U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	140U	91J	73U	160J	58U	50U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	140U	45U	73U	79J	58U	50U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	140U	45U	73U	69U	58U	50U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-1-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-2-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-3-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (1-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents									
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	290U	91U	150U	140U	120U	100U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	140U	45U	73U	69U	58U	50U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	140U	45U	73U	69U	58U	50U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**290U**	91U	150U	140U	120U	100U
CHRYSENE	UG/KG	166	6,700-22.500	140U	76J	73U	120J	58U	50U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**760J**	91U	**150U**	**140U**	**120U**	100U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
DIETHYLPHTHALATE	UG/KG	295	NS	290U	91U	150U	140U	120U	100U
DIMETHYLPHTHALATE	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
FLUORANTHENE	UG/KG	423	14,900-50,000	170J	150J	73U	220J	63J	50U
FLUORENE	UG/KG	77.4	2,300-7,8000	**140U**	45U	73U	69U	58U	50U
HEXACHLOROBENZENE	UG/KG	20	24000	**140U**	**45U**	**73U**	**69U**	**58U**	**50U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**290U**	**91U**	**150U**	**140U**	**120U**	**100U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	720U	230U	370U	360U	300U	260U
HEXACHLOROETHANE	UG/KG	584	NS	140U	45U	73U	69U	58U	50U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	140U	45U	73U	78J	58U	50U
ISOPHORONE	UG/KG	432	NS	140U	45U	73U	69U	58U	50U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	140U	45U	73U	69U	58U	50U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	290U	91U	150U	140U	120U	100U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	150J	390J	73U	69U	58U	50U
NAPHTHALENE	UG/KG	160	NS	140U	45U	73U	69U	58U	50U
NITROBENZENE	UG/KG	145	NS	**430U**	140U	**220U**	**210U**	**180U**	**150U**
PENTACHLOROPHENOL	UG/KG	23000	NS	720U	230U	370U	360U	300U	260U
PHENANTHRENE	UG/KG	204	13,800-46,000	140U	120J	73U	130J	58U	50U
PHENOL	UG/KG	49.1	48	**290U**	**91U**	**150U**	**140U**	**120U**	**100U**
PYRENE	UG/KG	195	12,400-41,600	140U	170J	73U	**260J**	66J	50U

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B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-A15-3-01 (1.5-2 ft. bgs) 04/05/2001	SD-B14-2-01 (1.5-2 ft. bgs) 04/11/2001	SD-B15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-C15-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-C15-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-D14-3-01 (1.5-2 ft. bgs) 04/10/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	**5.2U**	**5.6U**	1.2U	**3.7U**	**4.4U**	2U	3U	1.3U
ARSENIC	MG/KG	6	33	4.2B	3.3U	1.5B	2.1U	2.6U	2.8B	1.8U	1.7B
BERYLLIUM	MG/KG	NS	NS	0.55B	0.64B	0.82B	1.6B	0.48B	1.5B	0.92B	0.61B
CADMIUM	MG/KG	0.6	10	**0.68B**	**0.69B**	0.14B	**0.87B**	0.41B	**0.75B**	**0.66B**	**0.69B**
CHROMIUM, TOTAL	MG/KG	26	110	22.6B	14.5B	22.8	**66.8**	**43.2**	17.3	23.8	13.4
COPPER	MG/KG	16	110	11.9B	**16.9B**	**19.4**	**23.6**	11.4B	12.3B	**21.7**	**17.9**
LEAD	MG/KG	31	250	23.9B*	22.5B*	8.4BN	9.6B*	12.2B*	**40.4N**	**50.5***	**41.4N**
MERCURY	MG/KG	0.174	2	0.11BN	0.12BN	0.015B*	0.054BN	0.018BN	0.099B*	0.13BN	0.14B*
NICKEL	MG/KG	16	75	4.7B	5.4B	11.1	13.6B	4.3B	10B	9B	9.1B
SELENIUM	MG/KG	NS	NS	15.5	6.3B	0.87U	8	10.5	1.5U	2.7B	1U
SILVER	MG/KG	0.5	NS	**1.1U**	**1.2U**	0.25U	**0.79U**	**0.95U**	0.43U	**0.65U**	0.3B
THALLIUM	MG/KG	NS	NS	6.8U	7.4U	1.5U	4.8U	5.8U	2.6U	4U	1.8U
ZINC	MG/KG	120	820	45.8BN	95.9N	68.3	52BN	45.5BN	75.7	82.9N	**139**

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Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-4-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-5-01 (1-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (1-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (1.5-2 ft. bgs) 04/04/2001	SD-E14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-1-01 (1.5-2 ft. bgs) 04/10/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	1.6U	1.1U	0.89U	0.91U	1.1U	1.4U	2.8U	0.88U
ARSENIC	MG/KG	6	33	2B	0.63U*	0.69B*	1B	1.8	3.8	**21.7**	1.1B
BERYLLIUM	MG/KG	NS	NS	1.2B	0.28B	0.43B	0.83	0.6B	0.8B	1.9B	0.2B
CADMIUM	MG/KG	0.6	10	0.47B	0.092U	0.075U	0.11B	0.18B	0.23B	**0.64B**	0.074U
CHROMIUM, TOTAL	MG/KG	26	110	16.3	18.9	12.7	18.8	15.1	10.7	24.4	9.4
COPPER	MG/KG	16	110	**25.4**	4.2B	14.4	12.2	7.2	14.1	**41.8**	3.9B
LEAD	MG/KG	31	250	30.6N	2.9B	11.8B	4.7BN	12.7BN	24.5*	**715N**	**73.3N**
MERCURY	MG/KG	0.174	2	**2.3***	0.0043BN*	0.055BN*	0.0035U	0.097B*	0.051BN	**3.7***	**0.21***
NICKEL	MG/KG	16	75	10.7B	4.5B	6.1B	8.5	5.4B	7.9B	12.9B	2B
SELENIUM	MG/KG	NS	NS	1.2U	0.8U	0.66U	0.67U	0.79U	1U	2.4B	0.65U
SILVER	MG/KG	0.5	NS	0.35U	0.23U	0.19U	0.31B	0.23U	0.3U	**0.6U**	0.19U
THALLIUM	MG/KG	NS	NS	2.1U	1.4U	1.2U	1.2U	1.4U	1.8U	3.6U	1.1U
ZINC	MG/KG	120	820	50	51.5	47.3	52.9	41.2	69.9N	**158**	32.6

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Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-2-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-3-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (1-1.5 ft. bgs) 04/10/2001
Total Metals							
ANTIMONY	MG/KG	NS	3	1.4U	1.4U	1.1U	0.96U
ARSENIC	MG/KG	6	33	1.2B	1.9B	0.67U	0.74B
BERYLLIUM	MG/KG	NS	NS	0.25B	0.36B	0.4B	0.19B
CADMIUM	MG/KG	0.6	10	0.12U	0.21B	0.11B	0.081U
CHROMIUM, TOTAL	MG/KG	26	110	23.2	19.8	6.4B	14.7
COPPER	MG/KG	16	110	4.8B	9.8	11.2	3B
LEAD	MG/KG	31	250	8.7BN	**63N**	9.6BN	6.9BN
MERCURY	MG/KG	0.174	2	0.033B*	**0.51***	0.039B*	0.01B*
NICKEL	MG/KG	16	75	2.5B	4.5B	5B	2.6B
SELENIUM	MG/KG	NS	NS	1.1B	1U	0.84U	0.71U
SILVER	MG/KG	0.5	NS	0.31U	0.29U	0.25U	0.21U
THALLIUM	MG/KG	NS	NS	1.9U	1.8U	1.5U	1.3U
ZINC	MG/KG	120	820	18.9B	56.7	51.3	24.6

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Table 5-27

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-A15-3-01 (1.5-2 ft. bgs) 04/05/2001	SD-B14-2-01 (1.5-2 ft. bgs) 04/11/2001	SD-B15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-C15-1-01 (1.5-2 ft. bgs) 04/11/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**
1,3-DINITROBENZENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**540U**	**590U**	**120U**	**380U**	**460U**	**210U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**260U**	**290U**	**60U**	**190U**	**230U**	**100U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
2-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
3-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
4-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**
NITROBENZENE	UG/KG	145	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**
NITROCELLULOSE	MG/KG	NS	NS	480U	530U	110U	340U	410U	190U
NITROGLYCERIN	UG/KG	NS	NS	16000U	18000U	3600U	11000U	14000U	6200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**800U**	**880U**	**180U**	**560U**	**680U**	**310U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	16000U	18000U	3600U	11000U	14000U	6200U
TETRYL	UG/KG	NS	NS	800U	880U	180U	560U	680U	310U

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Table 5-27

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-D14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-4-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-5-01 (1-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (1-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**470U**	**210U**	**250U**	**170U**	**140U**	**140U**
1,3-DINITROBENZENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**470U**	**210U**	**250U**	**170U**	**200J**	**140U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**320U**	**140U**	**170U**	**120U**	**93U**	**95U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**160U**	**69U**	**83U**	**57U**	**46U**	**47U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
2-NITROTOLUENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
3-NITROTOLUENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
4-NITROTOLUENE	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**470U**	**210U**	**250U**	**170U**	**140U**	**140U**
NITROBENZENE	UG/KG	145	NS	**470U**	**210U**	**250U**	**170U**	140U	140U
NITROCELLULOSE	MG/KG	NS	NS	280U	130U	150U	100U	83U	85U
NITROGLYCERIN	UG/KG	NS	NS	9400U	4200U	5000U	3400U	2800U	2800U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**470U**	**210U**	**250U**	**170U**	**140U**	**140U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	9400U	4200U	5000U	3400U	2800U	2800U
TETRYL	UG/KG	NS	NS	470U	210U	250U	170U	140U	140U

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Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (1.5-2 ft. bgs) 04/04/2001	SD-E14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-1-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-2-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-3-01 (1-1.5 ft. bgs) 04/10/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**170U**	**220U**	**430U**	**140U**	**220U**	**210U**
1,3-DINITROBENZENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**170U**	**220U**	**430U**	**140U**	**220U**	**210U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**110U**	**150U**	**290U**	**91U**	**150U**	**140U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**55U**	**73U**	**140U**	**45U**	**73U**	**69U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
2-NITROTOLUENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
3-NITROTOLUENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
4-NITROTOLUENE	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**170U**	**220U**	**430U**	**140U**	**220U**	**210U**
NITROBENZENE	UG/KG	145	NS	**170U**	**220U**	**430U**	140U	**220U**	**210U**
NITROCELLULOSE	MG/KG	NS	NS	100U	130U	260U	82U	130U	130U
NITROGLYCERIN	UG/KG	NS	NS	3300U	4400U	8500U	2700U	4400U	4200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**170U**	**220U**	**430U**	**140U**	**220U**	**210U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3300U	4400U	8500U	2700U	4400U	4200U
TETRYL	UG/KG	NS	NS	170U	220U	430U	140U	220U	210U

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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Table 5-27

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (1-1.5 ft. bgs) 04/10/2001
Energtic and Explosive Compounds					
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**180U**	**150U**
1,3-DINITROBENZENE	UG/KG	NS	NS	180U	150U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**180U**	**150U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**120U**	**100U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**58U**	**50U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	180U	150U
2-NITROTOLUENE	UG/KG	NS	NS	180U	150U
3-NITROTOLUENE	UG/KG	NS	NS	180U	150U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	180U	150U
4-NITROTOLUENE	UG/KG	NS	NS	180U	150U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**180U**	**150U**
NITROBENZENE	UG/KG	145	NS	**180U**	**150U**
NITROCELLULOSE	MG/KG	NS	NS	110U	90U
NITROGLYCERIN	UG/KG	NS	NS	3500U	3000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**180U**	**150U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3500U	3000U
TETRYL	UG/KG	NS	NS	180U	150U

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Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-A15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-A15-3-01 (1.5-2 ft. bgs) 04/05/2001	SD-B14-2-01 (1.5-2 ft. bgs) 04/11/2001	SD-B15-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-B15-2-01 (1.5-2 ft. bgs) 04/05/2001	SD-C15-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-C15-2-01 (1.5-2 ft. bgs) 04/04/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	87.5	88.7	44.7	82.2	85.4	67.6	78.8
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1	1.7	1	2.8	3	1	1.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	75.4	96.1	84.2	92.7	96.7	59.4	85.6
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.5	100	99.6	100	98.2	92.1	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	2.5	4.3	3.3	7.5	8.1	3.5	3.4
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	16.4	28.9	46.9	35.2	44.4	33.5	30.7
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	9.2	16.2	26.4	22.6	27.7	18.3	16.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	5	8.9	9.1	14.2	16.8	8.5	7.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	567000	546000	31400	168000	209000	78300	209000

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Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-D14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-4-01 (1.5-2 ft. bgs) 04/10/2001	SD-D14-5-01 (1-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (1-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (1.5-2 ft. bgs) 04/04/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	52.3	60.2	41.8	27.8	29.4	40.2	54.9
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.5	1	1.4	0.9J	1	1.3	1
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	84.5	69.8	80.8	75.7	83.2	80.7	74.9
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.5	94.8	99.9	99.9	100	98.2	93.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.1	2.5	6.1	3	4	4.2	3.3
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	52.6	37.9	55.6	43.6	47.4	53.6	44.4
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	31.7	19.7	36.8	17.9	25.6	32.4	25.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	13.6	7.1	17.3	9.1	10.7	12.9	10.2
TOTAL ORGANIC CARBON	MG/KG	NS	NS	44200	45200	17000	5600	8100	15600	58800

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Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-E14-3-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-1-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-2-01 (1.5-2 ft. bgs) 04/10/2001	SD-E15-3-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (1-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (1-1.5 ft. bgs) 04/10/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	76.5	26.5	54.6	52.2	43	33.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.1	1.7	3.1	2.6	1.9	0.6J
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	93.8	97.2	98.7	92.6	91.1	78.4
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	98.8	100	100	99.7	100	96.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	12.1	5.8	8	7.8	5.3	2.5
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	59.7	68.3	71.3	68.1	46.2	43.4
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	37.9	42.2	43.3	44.4	28.4	23.9
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	25.4	19.7	19.3	22.5	12.8	8.9
TOTAL ORGANIC CARBON	MG/KG	NS	NS	256000	7200	67000	35700	26400	25900

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Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-F10-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-F10-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-F12-1-01 (0.5-1 ft. bgs) 04/17/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	200U	140U	200U	170U	160U	190U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	200U	140U	200U	170U	160U	190U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	200U	140U	200U	170U	160U	190U
1,1-DICHLOROETHANE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**200U**	**140U**	**200U**	**170U**	**160U**	**190U**
1,2-DICHLOROETHANE	UG/KG	260	NS	200U	140U	200U	170U	160U	190U
1,2-DICHLOROPROPANE	UG/KG	333	NS	200U	140U	200U	170U	160U	190U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	400U	270U	400U	340U	310U	380U
ACROLEIN	UG/KG	0.00152	NS	**4000U**	**2700U**	**4000U**	**3400U**	**3100U**	**3800U**
ACRYLONITRILE	UG/KG	1.2	NS	**800U**	**540U**	**790U**	**670U**	**630U**	**770U**
AMYL ALCOHOL	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
BENZENE	UG/KG	142	NS	**200U**	140U	**200U**	**170U**	**160U**	**190U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
BROMOFORM	UG/KG	492	NS	200U	140U	200U	170U	160U	190U
BROMOMETHANE	UG/KG	1.37	NS	**400U**	**270U**	**400U**	**340U**	**310U**	**380U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	200U	140U	200U	170U	160U	190U
CHLOROBENZENE	UG/KG	291	NS	200U	140U	200U	170U	160U	190U
CHLOROETHANE	UG/KG	NS	NS	400U	270U	400U	340U	310U	380U
CHLOROFORM	UG/KG	121	NS	**200U**	**140U**	**200U**	**170U**	**160U**	**190U**
CHLOROMETHANE	UG/KG	NS	NS	400U	270U	400U	340U	310U	380U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
ETHANOL	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
ETHYLBENZENE	UG/KG	175	NS	**200U**	140U	**200U**	170U	160U	**190U**

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-F10-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-F10-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-F12-1-01 (0.5-1 ft. bgs) 04/17/2001
Volatile Organic Constituents									
METHANOL	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
METHYLENE CHLORIDE	UG/KG	159	NS	**400U**	**270U**	**400U**	**340U**	**310U**	**380U**
N-BUTYL ETHER	UG/KG	NS	NS	18000U	13000U	17000U	14000U	14000U	16000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	200U	140U	200U	170U	160U	190U
TOLUENE	UG/KG	1220	NS	200U	140U	200U	170U	160U	190U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	200U	140U	200U	170U	160U	190U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	200U	140U	200U	170U	160U	190U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**200U**	**140U**	**200U**	**170U**	**160U**	**190U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	400U	270U	400U	340U	310U	380U
VINYL CHLORIDE	UG/KG	202	NS	200U	140U	200U	170U	160U	190U
XYLENES, (TOTAL)	UG/KG	120	NS	**200U**	**140U**	**200U**	**170U**	**160U**	**190U**

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ft. bgs = Feet below ground surface

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-C11-3-01 (1-1.5 ft. bgs) 05/02/2001	SD-E12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-F10-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-F10-2-01 (1-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (1.5-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents									
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	58U	42U	57U	46U	450U	54U
1,2-DICHLOROBENZENE	UG/KG	294	NS	58U	42U	57U	46U	**450U**	54U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	58U	42U	57U	46U	450U	54U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	58U	42U	57U	46U	450U	54U
1,4-DICHLOROBENZENE	UG/KG	318	NS	58U	42U	57U	46U	**450U**	54U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	120U	85U	120U	94U	**910U**	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**120U**	**85U**	**120U**	**94U**	**910U**	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	120U	85U	120U	94U	**910U**	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1200U**	**850U**	**1200U**	**940U**	**9100U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**3800**	**150J**	**120U**	**94U**	**910U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**720**	**42U**	**57U**	**46U**	**450U**	**54U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	58U	42U	57U	46U	**450U**	54U
2-CHLOROPHENOL	UG/KG	31.9	NS	**58U**	**42U**	**57U**	**46U**	**450U**	**54U**
2-NITROPHENOL	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	120U	85U	120U	94U	**910U**	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	300U	210U	290U	240U	2300U	280U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	58U	42U	57U	46U	450U	54U
4-NITROPHENOL	UG/KG	13.3	NS	**300U**	**210U**	**290U**	**240U**	**2300U**	**280U**
ACENAPHTHENE	UG/KG	6.71	7-20	**58U**	**42U**	**57U**	**46U**	**450U**	**54U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**58U**	**42U**	**57U**	**46U**	**450U**	**54U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**84J**	42U	57U	46U	**450U**	54U
BENZIDINE	UG/KG	NS	NS	1200U	850U	1200U	940U	9100U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**410J**	42U	**170J**	46U	**450U**	54U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**280J**	42U	150J	46U	**450U**	54U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	690	50J	410J	63J	640J	82J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**260J**	42U	120J	46U	**450U**	54U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	240J	42U	160J	46U	**450U**	54U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-C11-3-01 (1-1.5 ft. bgs) 05/02/2001	SD-E12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-F10-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-F10-2-01 (1-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (1.5-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents									
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	120U	85U	120U	94U	910U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	58U	42U	57U	46U	450U	54U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	58U	42U	57U	46U	450U	54U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	120U	85U	120U	94U	**910U**	110U
CHRYSENE	UG/KG	166	6,700-22.500	**690**	55J	**290J**	57J	**450U**	65J
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**120U**	85U	**120U**	94U	**910U**	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**110J**	**42U**	**57U**	**46U**	**450U**	**54U**
DIETHYLPHTHALATE	UG/KG	295	NS	120U	85U	120U	94U	**910U**	110U
DIMETHYLPHTHALATE	UG/KG	NS	NS	120U	85U	120U	94U	910U	110U
FLUORANTHENE	UG/KG	423	14,900-50,000	**1200**	46J	260J	92J	**450U**	97J
FLUORENE	UG/KG	77.4	2,300-7,8000	64J	42U	57U	46U	**450U**	54U
HEXACHLOROBENZENE	UG/KG	20	24000	**58U**	**42U**	**57U**	**46U**	**450U**	**54U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**120U**	**85U**	**120U**	**94U**	**910U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	300U	210U	290U	240U	**2300U**	280U
HEXACHLOROETHANE	UG/KG	584	NS	58U	42U	57U	46U	450U	54U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**350J**	42U	140J	46U	**450U**	54U
ISOPHORONE	UG/KG	432	NS	58U	42U	57U	46U	**450U**	54U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	58U	42U	57U	46U	450U	54U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	300U	85U	120U	240U	2300U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	58U	42U	57U	530	14000	54U
NAPHTHALENE	UG/KG	160	NS	58U	42U	57U	46U	**450U**	54U
NITROBENZENE	UG/KG	145	NS	**11100**	130U	**170U**	140U	140U	**160U**
PENTACHLOROPHENOL	UG/KG	23000	NS	300U	210U	860U	240U	2300U	820U
PHENANTHRENE	UG/KG	204	13,800-46,000	**790**	44J	80J	60J	**450U**	69J
PHENOL	UG/KG	49.1	48	**120U**	**85U**	**120U**	**94U**	**910U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	**850**	42U	**290J**	74J	**450U**	110J

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-37

Sediment Analytical Results - Central Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-C11-3-01 (1-1.5 ft. bgs) 05/02/2001	SD-E12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-F10-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-F10-2-01 (1-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (1.5-2 ft. bgs) 04/17/2001
Total Metals									
ANTIMONY	MG/KG	NS	3	1.9BN	0.82UN	1.1U	0.91UN	1.2BN	**5.3U**
ARSENIC	MG/KG	6	33	**61.2**	**30.2**	**20.4***	3.7	**9.4**	**8.2***
BERYLLIUM	MG/KG	NS	NS	0.16B	0.76	0.49B	0.7	0.55B	0.89B
CADMIUM	MG/KG	0.6	10	0.097U	0.07U	0.095U	0.18B	0.45B	0.45U
CHROMIUM, TOTAL	MG/KG	26	110	15.9N*	14.3N*	8.8	15.7	12.4	13.9B
COPPER	MG/KG	16	110	**17.1EN**	**37.5EN**	**19.8**	**16.8**	**123**	**24.3B**
LEAD	MG/KG	31	250	**2570**	**334**	**54.8**	16	**81.5**	**51.3B**
MERCURY	MG/KG	0.174	2	**0.53**	0.031B	0.11BN*	0.16	**0.87**	0.17N*
NICKEL	MG/KG	16	75	6.6B	9.4	8.4B	8.9	9.8	11.4B
SELENIUM	MG/KG	NS	NS	0.95B	1.1B	0.83U	0.67U	0.98B	4.1B
SILVER	MG/KG	0.5	NS	0.25U	0.18U	0.24U	0.2U	0.23B	**1.1U**
THALLIUM	MG/KG	NS	NS	1.5U	2.5B	1.5U	1.2U	1.2U	6.9U
ZINC	MG/KG	120	820	42.7N	71N	40.1	105*	**245***	**127**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
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Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-38

Sediment Analytical Results- Central Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-C11-3-01 (1-1.5 ft. bgs) 05/02/2001	SD-E12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-F10-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-F10-2-01 (1-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (1.5-2 ft. bgs) 04/17/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**180U**	**130U**	**170U**	**140U**	**140U**	**160U**
1,3-DINITROBENZENE	UG/KG	NS	NS	180U	130U	170U	140U	140U	160U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**8670**	**130U**	**170U**	**140U**	**140U**	**160U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**3800**	**150J**	**120U**	**94U**	**910U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**720**	**42U**	**57U**	**46U**	**450U**	**54U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	3790	130U	170U	140U	140U	160U
2-NITROTOLUENE	UG/KG	NS	NS	180U	130U	170U	140U	140U	160U
3-NITROTOLUENE	UG/KG	NS	NS	180U	130U	170U	140U	140U	160U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	2490	130U	170U	140U	140U	160U
4-NITROTOLUENE	UG/KG	NS	NS	180U	130U	170U	140U	140U	160U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**180U**	**130U**	**170U**	**140U**	**560**	**160U**
NITROBENZENE	UG/KG	145	NS	**11100**	130U	**170U**	140U	140U	**160U**
NITROCELLULOSE	MG/KG	NS	NS	110U	76U	100U	84U	2200	98U
NITROGLYCERIN	UG/KG	NS	NS	3500U	2500U	3400U	2800U	50400	3300U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**180U**	**130U**	**170U**	**140U**	**140U**	**160U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3500U	2500U	3400U	2800U	2700U	3300U
TETRYL	UG/KG	NS	NS	180U	130U	170U	140U	140U	160U

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Table 5-39

Sediment Analytical Results - Central Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-C11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-C11-3-01 (1-1.5 ft. bgs) 05/02/2001	SD-E12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-F10-1-01 (1.5-2 ft. bgs) 05/01/2001	SD-F10-2-01 (1-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (1.5-2 ft. bgs) 04/17/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	43.5	20.9	42	28.5	26.4	39
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.9	1.4	2.9	3	2.7	6.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	85.6	92.3	89.4	76.2	78.8	89.6
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	93.5	100	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	6.7	4.9	8.4	7.8	7.9	13.1
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	46	55.7	56.9	51.5	56	63.3
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	25.6	27.7	40.7	33.4	38.4	42
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	13.2	11.7	21.8	17	20.1	25.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	37000	116000	42000	22700	32000	36400

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-40

Sediment Analytical Results - Central Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-F11-2-01 (0.5-1 ft. bgs) 04/18/2002
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	110U	160U	**320U**	180U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	110U	160U	320U	180U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	110U	160U	320U	180U
1,1-DICHLOROETHANE	UG/KG	NS	NS	110U	160U	320U	180U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**110U**	**160U**	**320U**	**180U**
1,2-DICHLOROETHANE	UG/KG	260	NS	110U	160U	**320U**	180U
1,2-DICHLOROPROPANE	UG/KG	333	NS	110U	160U	320U	180U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	220U	320U	640U	360U
ACROLEIN	UG/KG	0.00152	NS	**2200U**	**3200U**	**6400U**	**3600U**
ACRYLONITRILE	UG/KG	1.2	NS	**440U**	**630U**	**1300U**	**730U**
AMYL ALCOHOL	UG/KG	NS	NS	10000U	14000U	22000U	14000U
BENZENE	UG/KG	142	NS	110U	**160U**	**320U**	**180U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	110U	160U	320U	180U
BROMOFORM	UG/KG	492	NS	220U	160U	320U	180U
BROMOMETHANE	UG/KG	1.37	NS	**220U**	**320U**	**640U**	**360U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	110U	160U	320U	180U
CHLOROBENZENE	UG/KG	291	NS	110U	160U	**320U**	180U
CHLOROETHANE	UG/KG	NS	NS	220U	320U	640U	360U
CHLOROFORM	UG/KG	121	NS	110U	**160U**	**320U**	**180U**
CHLOROMETHANE	UG/KG	NS	NS	220U	320U	640U	360U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	110U	160U	320U	180U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	110U	160U	320U	180U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	14000U	22000U	14000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	110U	160U	320U	180U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	14000U	22000U	14000U
ETHANOL	UG/KG	NS	NS	10000U	14000U	22000U	14000U
ETHYLBENZENE	UG/KG	175	NS	110U	160U	**320U**	**180U**

Table 5-40

Sediment Analytical Results - Central Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-F11-2-01 (0.5-1 ft. bgs) 04/18/2002
Volatile Organic Constituents							
METHANOL	UG/KG	NS	NS	10000U	14000U	22000U	14000U
METHYLENE CHLORIDE	UG/KG	159	NS	**220U**	**320U**	**640U**	**360U**
N-BUTYL ETHER	UG/KG	NS	NS	10000U	14000U	22000U	14000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	110U	160U	320U	180U
TOLUENE	UG/KG	1220	NS	110U	160U	320U	180U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	110U	160U	320U	180U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	110U	160U	320U	180U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	110U	**160U**	**320U**	**180U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	220U	320U	640U	360U
VINYL CHLORIDE	UG/KG	202	NS	110U	160U	**320U**	180U
XYLENES, (TOTAL)	UG/KG	120	NS	110U	**160U**	**320U**	**180U**

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-41

Sediment Analytical Results - Central Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-F11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-F11-2-01 (1.5-2 ft. bgs) 04/18/2002
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	33U	47U	370U	47U
1,2-DICHLOROBENZENE	UG/KG	294	NS	33U	47U	370U	47U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	47U	370U	47U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	33U	47U	370U	47U
1,4-DICHLOROBENZENE	UG/KG	318	NS	33U	47U	370U	47U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	67U	95U	720U	96U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	67U	95U	720U	96U
2,4-DIMETHYLPHENOL	UG/KG	304	NS	67U	95U	720U	96U
2,4-DINITROPHENOL	UG/KG	6.21	NS	670U	950U	7200U	960U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	67U	95U	720U	96U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	33U	47U	370U	47U
2-CHLORONAPHTHALENE	UG/KG	417	NS	33U	47U	370U	47U
2-CHLOROPHENOL	UG/KG	31.9	NS	33U	47U	370U	47U
2-NITROPHENOL	UG/KG	NS	NS	67U	95U	720U	96U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	67U	95U	720U	96U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	240U	1800U	240U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	67U	95U	720U	96U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	95U	720U	96U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	33U	47U	370U	47U
4-NITROPHENOL	UG/KG	13.3	NS	170U	240U	1800U	240U
ACENAPHTHENE	UG/KG	6.71	7-20	33U	47U	370U	47U
ACENAPHTHYLENE	UG/KG	5.87	9-30	33U	47U	370U	47U
ANTHRACENE	UG/KG	57.2	5,400-18,100	130J	47U	370U	47U
BENZIDINE	UG/KG	NS	NS	670U	950U	7200U	960U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	450	47U	920J	47U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	430	47U	1000J	51J
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	500	47U	1500J	77J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	290J	47U	840J	47U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	250J	47U	600J	47U

Table 5-41

Sediment Analytical Results - Central Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-F11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-F11-2-01 (1.5-2 ft. bgs) 04/18/2002
Semi-Volatile Organic Constituents							
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	200J	95U	720U	96U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	67U	95U	720U	96U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	33U	47U	370U	47U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	33U	47U	370U	47U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	540	150J	720U	96U
CHRYSENE	UG/KG	166	6,700-22.500	520	47U	1100J	57J
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	180J	95U	720U	96U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	86J	95U	720U	96U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	97J	47U	370U	47U
DIETHYLPHTHALATE	UG/KG	295	NS	67U	95U	720U	96U
DIMETHYLPHTHALATE	UG/KG	NS	NS	67U	95U	720U	96U
FLUORANTHENE	UG/KG	423	14,900-50,000	980	47U	1600J	82J
FLUORENE	UG/KG	77.4	2,300-7,8000	33U	47U	370U	47U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	47U	370U	47U
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	67U	95U	720U	96U
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	170U	240U	1800U	240U
HEXACHLOROETHANE	UG/KG	584	NS	33U	47U	370U	47U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	330	47U	910J	47U
ISOPHORONE	UG/KG	432	NS	33U	47U	370U	47U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	47U	370U	47U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	95U	720U	96U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	47U	370U	51J
NAPHTHALENE	UG/KG	160	NS	33U	47U	370U	47U
NITROBENZENE	UG/KG	145	NS	98U	140U	220U	140U
PENTACHLOROPHENOL	UG/KG	23000	NS	170U	710U	1800U	240U
PHENANTHRENE	UG/KG	204	13,800-46,000	400	47U	660J	50J
PHENOL	UG/KG	49.1	48	67U	95U	720U	96U
PYRENE	UG/KG	195	12,400-41,600	730	47U	1800J	84J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

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* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-42

Sediment Analytical Results - Central Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-F11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-F11-2-01 (1.5-2 ft. bgs) 04/18/2002
Total Metals							
ANTIMONY	MG/KG	NS	3	0.85U	0.91U	1.4U	0.92U
ARSENIC	MG/KG	6	33	1.9	3.8	**8.4***	5*
BERYLLIUM	MG/KG	NS	NS	0.49B	0.027UB	1.3	0.81
CADMIUM	MG/KG	0.6	10	0.072U	0.077U	0.12UBN	0.078UN
CHROMIUM, TOTAL	MG/KG	26	110	**27.5**	14	13.4N*	14.4N*
COPPER	MG/KG	16	110	**44.3**	9.1	**17N***	12.2N*
LEAD	MG/KG	31	250	**49.4EN***	9.8B*	**34.1**	13.8B
MERCURY	MG/KG	0.174	2	0.014B	0.01BN	**2.5N***	**0.31N***
NICKEL	MG/KG	16	75	**17.2**	6.5B	**22.6**	7.9
SELENIUM	MG/KG	NS	NS	0.63U	0.67UB	1.1U	0.68U
SILVER	MG/KG	0.5	NS	0.18U	0.2U	0.31U	0.2U
THALLIUM	MG/KG	NS	NS	1.1U	1.2U	1.9U	1.5B
ZINC	MG/KG	120	820	**153E**	41.5	**189N***	53.9N*

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
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R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-43

Sediment Analytical Results- Central Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-F11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-F11-2-01 (1.5-2 ft. bgs) 04/18/2002
Energetics and Explosives							
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**98U**	**140U**	**220U**	**140U**
1,3-DINITROBENZENE	UG/KG	NS	NS	98U	140U	220U	140U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**98U**	**140U**	**220U**	**140U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**67U**	**95U**	**720U**	**96U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	33U	**47U**	**370U**	**47U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	98U	140U	220U	140U
2-NITROTOLUENE	UG/KG	NS	NS	98U	140U	220U	140U
3-NITROTOLUENE	UG/KG	NS	NS	98U	140U	220U	140U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	98U	140U	220U	140U
4-NITROTOLUENE	UG/KG	NS	NS	98U	140U	220U	140U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**98U**	**140U**	**220U**	**140U**
NITROBENZENE	UG/KG	145	NS	98U	140U	**220U**	140U
NITROCELLULOSE	MG/KG	NS	NS	60U	85U	130U	86U
NITROGLYCERIN	UG/KG	NS	NS	2000U	2800U	4400U	2900U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**98U**	**140U**	**220U**	**140U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2800U	4400U	2900U
TETRYL	UG/KG	NS	NS	98U	140U	220U	140U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-44

Sediment Analytical Results - Central Drainage System - Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-F11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-F11-2-01 (1.5-2 ft. bgs) 04/18/2002
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	23.3	29.3	54.3	30.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.1	2.3	1	0.7J
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	74.5	76.4	95.3	65.4
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	99.2	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	97.1	94.5	100	93.2
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.1	5.8	4.3	3.2
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	44.4	51.9	56.8	45.5
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	25.3	28.9	33.2	25.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	9.7	14.6	14.5	9.6
TOTAL ORGANIC CARBON	MG/KG	NS	NS	4800	10200	181000	14800

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SD-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-D12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-3-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-4-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	170U	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	170U	540U	240U	230U	270U	270U	330U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	170U	**540U**	240U	230U	270U	270U	330U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**170U**	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
1,2-DICHLOROETHANE	UG/KG	260	NS	170U	**540U**	240U	230U	**270U**	**270U**	**330U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	170U	**540U**	240U	230U	270U	270U	330U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	340U	1100U	490U	450U	530U	530U	670U
ACROLEIN	UG/KG	0.00152	NS	**3400U**	**11000U**	**4900U**	**4500U**	**5300U**	**5300U**	**6700U**
ACRYLONITRILE	UG/KG	1.2	NS	**680U**	**2200U**	**970U**	**910U**	**1100U**	**1100U**	**1300U**
AMYL ALCOHOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
BENZENE	UG/KG	142	NS	**170U**	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
BROMOFORM	UG/KG	492	NS	170U	**540U**	240U	230U	270U	270U	330U
BROMOMETHANE	UG/KG	1.37	NS	**340U**	**1100U**	**490U**	**450U**	**530U**	**530U**	**670U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	170U	540U	240U	230U	270U	270U	330U
CHLOROBENZENE	UG/KG	291	NS	170U	**540U**	240U	230U	270U	270U	**330U**
CHLOROETHANE	UG/KG	NS	NS	340U	1100U	490U	450U	530U	530U	670U
CHLOROFORM	UG/KG	121	NS	**170U**	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
CHLOROMETHANE	UG/KG	NS	NS	340U	1100U	490U	450U	530U	530U	670U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
ETHANOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
ETHYLBENZENE	UG/KG	175	NS	170U	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SD-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-D12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-3-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-4-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents										
METHANOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
METHYLENE CHLORIDE	UG/KG	159	NS	**340U**	**1100U**	**490U**	**450U**	**530U**	**530U**	**670U**
N-BUTYL ETHER	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U	19000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170U	**540U**	240U	230U	270U	270U	330U
TOLUENE	UG/KG	1220	NS	170U	540U	240U	230U	270U	270U	330U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	170U	540U	240U	230U	270U	270U	330U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	540U	240U	230U	270U	270U	330U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**170U**	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340U	1100U	490U	450U	530U	530U	670U
VINYL CHLORIDE	UG/KG	202	NS	170U	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**
XYLENES, (TOTAL)	UG/KG	120	NS	**170U**	**540U**	**240U**	**230U**	**270U**	**270U**	**330U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-3-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-4-01 (0.5-1 ft. bgs) 4/12/2001	SD-D13-5-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-1-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	160U	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	160U	410U	410U	250U	260U	290U	550U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	160U	410U	410U	250U	260U	290U	**550U**
1,1-DICHLOROETHANE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**160U**	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
1,2-DICHLOROETHANE	UG/KG	260	NS	160U	**410U**	**410U**	250U	260U	**290U**	**550U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	160U	**410U**	**410U**	250U	260U	290U	**550U**
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	320U	810U	810U	510U	520U	580U	1100U
ACROLEIN	UG/KG	0.00152	NS	**3200U**	**8100U**	**8100U**	**5100U**	**5200U**	**5800U**	**11000U**
ACRYLONITRILE	UG/KG	1.2	NS	**640U**	**1600U**	**1600U**	**1000U**	**1000U**	**1200U**	**2200U**
AMYL ALCOHOL	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
BENZENE	UG/KG	142	NS	**160U**	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
BROMOFORM	UG/KG	492	NS	160U	410U	410U	250U	260U	290U	**550U**
BROMOMETHANE	UG/KG	1.37	NS	**320U**	**810U**	**810U**	**510U**	**520U**	**580U**	**1100U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	160U	410U	410U	250U	260U	290U	550U
CHLOROBENZENE	UG/KG	291	NS	160U	**410U**	**410U**	250U	260U	290U	**550U**
CHLOROETHANE	UG/KG	NS	NS	320U	810U	810U	510U	520U	580U	1100U
CHLOROFORM	UG/KG	121	NS	**160U**	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
CHLOROMETHANE	UG/KG	NS	NS	320U	810U	810U	510U	520U	580U	1100U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
ETHANOL	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
ETHYLBENZENE	UG/KG	175	NS	160U	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-3-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-4-01 (0.5-1 ft. bgs) 4/12/2001	SD-D13-5-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-1-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents										
METHANOL	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
METHYLENE CHLORIDE	UG/KG	159	NS	**320U**	**810U**	**810U**	**510U**	**520U**	**580U**	**1100U**
N-BUTYL ETHER	UG/KG	NS	NS	16000U	29000U	29000U	20000U	25000U	19000U	38000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	160U	410U	410U	250U	260U	290U	**550U**
TOLUENE	UG/KG	1220	NS	160U	410U	410U	250U	260U	290U	550U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	160U	410U	410U	250U	260U	290U	550U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	410U	410U	250U	260U	290U	550U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**160U**	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	320U	810U	810U	510U	520U	580U	1100U
VINYL CHLORIDE	UG/KG	202	NS	160U	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**
XYLENES, (TOTAL)	UG/KG	120	NS	**160U**	**410U**	**410U**	**250U**	**260U**	**290U**	**550U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-E10-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-4-01 (0.5-1 ft. bgs) 04/17/2002	SD-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-E12-2-01 (0.5-1 ft. bgs) 04/16/2002
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**1200U**	210U	**230U**	**230U**	210U	150U	**300U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	**1200U**	210U	460U	230U	210U	150U	300U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	**1200U**	210U	230U	230U	210U	150U	300U
1,1-DICHLOROETHANE	UG/KG	NS	NS	1200U	210U	230U	230U	210U	150U	300U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**1200U**	**210U**	**230U**	**230U**	**210U**	**150U**	**300U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**1200U**	210U	230U	230U	210U	150U	**300U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	**1200U**	210U	230U	230U	210U	150U	300U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	2300U	410U	460U	470U	420U	310U	610U
ACROLEIN	UG/KG	0.00152	NS	**23000U**	**4100U**	**460U**	**4700U**	**4200U**	**3100U**	**6100U**
ACRYLONITRILE	UG/KG	1.2	NS	**4600U**	**820U**	**460U**	**930U**	**840U**	**610U**	**1200U**
AMYL ALCOHOL	UG/KG	NS	NS	96000U	17000U	18000U	20000U	19000U	14000U	24000U
BENZENE	UG/KG	142	NS	**1200U**	**210U**	**230U**	**230U**	**210U**	**150U**	**300U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	1200U	210U	230U	230U	210U	150U	300U
BROMOFORM	UG/KG	492	NS	**1200U**	210U	460U	230U	210U	150U	300U
BROMOMETHANE	UG/KG	1.37	NS	**2300U**	**410U**	**460U**	**470U**	**420U**	**310U**	**610U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	1200U	210U	230U	230U	210U	150U	300U
CHLOROBENZENE	UG/KG	291	NS	**1200U**	210U	**460U**	230U	210U	150U	**300U**
CHLOROETHANE	UG/KG	NS	NS	2300U	410U	460U	470U	420U	310U	610U
CHLOROFORM	UG/KG	121	NS	**1200U**	**210U**	**230U**	**230U**	**210U**	**150U**	**300U**
CHLOROMETHANE	UG/KG	NS	NS	2300U	410U	460U	470U	420U	310U	610U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	1200U	210U	230U	230U	210U	150U	300U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	1200U	210U	460U	230U	210U	150U	300U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	96000U	17000U	18000U	20000U	19000U	14000U	24000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	1200U	210U	460U	230U	210U	150U	300U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	96000U	17000U	18000U	20000U	19000U	14000U	24000U
ETHANOL	UG/KG	NS	NS	96000U	17000U	18000U	20000U	19000U	14000U	24000U
ETHYLBENZENE	UG/KG	175	NS	**1200U**	**210U**	**460U**	**230U**	**210U**	150U	**300U**

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-E10-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-4-01 (0.5-1 ft. bgs) 04/17/2002	SD-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-E12-2-01 (0.5-1 ft. bgs) 04/16/2002
Volatile Organic Constituents										
METHANOL	UG/KG	NS	NS	96000U	17000U	18000U	24000J	19000U	14000U	24000U
METHYLENE CHLORIDE	UG/KG	159	NS	**2300U**	**410U**	**460U**	**470U**	**420U**	**310U**	**610U**
N-BUTYL ETHER	UG/KG	NS	NS	96000U	17000U	18000U	20000U	19000U	14000U	24000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	**1200U**	210U	230U	230U	210U	150U	300U
TOLUENE	UG/KG	1220	NS	1200U	210U	230U	230U	210U	150U	300U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	**1200U**	210U	230U	230U	210U	150U	300U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	1200U	210U	460U	230U	210U	150U	300U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**1200U**	**210U**	**230U**	**230U**	**210U**	**150U**	**300U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	2300U	410U	460U	470U	420U	310U	610U
VINYL CHLORIDE	UG/KG	202	NS	**1200U**	**210U**	**230U**	**230U**	**210U**	150U	**300U**
XYLENES, (TOTAL)	UG/KG	120	NS	**1200U**	**210U**	**460U**	**230U**	**210U**	**150U**	**300U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

	Units	LEL	SEL	SD-C12-1-01 (1.5-2 ft. bgs) 05/02/2001	SD-C12-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D11-1-01 (1.5-2 ft. bgs) 04/17/2001	SD-D12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-2-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-3-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-4-01 (1.5-2 ft. bgs) 04/16/2001	SD-D13-1-01 (1.5-2 ft. bgs) 04/13/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	50U	150U	64U	61U	63U	74U	64U	53U
1,2-DICHLOROBENZENE	UG/KG	294	NS	50U	150U	64U	61U	63U	74U	64U	53U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	50U	150U	64U	61U	63U	74U	64U	53U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	50U	150U	64U	61U	63U	74U	64U	53U
1,4-DICHLOROBENZENE	UG/KG	318	NS	50U	150U	64U	61U	63U	74U	64U	53U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	100U	**310U**	130U	120U	130U	150U	130U	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**100U**	**310U**	**130U**	**120U**	**130U**	**150U**	**130U**	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	100U	**310U**	130U	120U	130U	150U	130U	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1000U**	**3100U**	**1300U**	**1200U**	**1300U**	**1500U**	**1300U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**100U**	**310U**	**130U**	**120U**	**130U**	**150U**	**130U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**50U**	**150U**	**64U**	**61U**	**63U**	**74U**	**64U**	**53U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	50U	150U	64U	61U	63U	74U	64U	53U
2-CHLOROPHENOL	UG/KG	31.9	NS	**50U**	**150U**	**64U**	**61U**	**63U**	**74U**	**64U**	**53U**
2-NITROPHENOL	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	100U	**310U**	**130U**	120U	**130U**	**150U**	**130U**	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260U	790U	330U	320U	320U	380U	330U	270U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	50U	150U	64U	61U	63U	74U	64U	53U
4-NITROPHENOL	UG/KG	13.3	NS	**260U**	**790U**	**330U**	**320U**	**320U**	**380U**	**330U**	**270U**
ACENAPHTHENE	UG/KG	6.71	7-20	**50U**	**150U**	**64U**	**61U**	**120J**	**74U**	**64U**	**53U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**63J**	**150U**	**64U**	**61U**	**280J**	**74U**	**64U**	**53U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**120J**	**150U**	**64U**	**61U**	**840**	**74U**	**64U**	**210J**
BENZIDINE	UG/KG	NS	NS	1000U	3100U	1300U	1200U	1300U	1500U	1300U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**460J**	**150U**	64U	61U	**3300**	76J	**110J**	**530**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**580**	150U	64U	61U	**2900**	110J	120J	**510J**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	970	150U	64U	78J	3500	150J	330J	640
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**610**	150U	64U	61U	**1900**	83J	170J	**360J**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	**360J**	150U	64U	61U	**1300**	74U	120J	**280J**

	Units	LEL	SEL	SD-C12-1-01 (1.5-2 ft. bgs) 05/02/2001	SD-C12-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D11-1-01 (1.5-2 ft. bgs) 04/17/2001	SD-D12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-2-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-3-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-4-01 (1.5-2 ft. bgs) 04/16/2001	SD-D13-1-01 (1.5-2 ft. bgs) 04/13/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	100U	310U	130U	120U	130U	150U	130U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	50U	150U	64U	61U	63U	74U	64U	53U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	50U	150U	64U	61U	63U	74U	64U	53U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**400J**	**310U**	130U	130J	**5300**	160J	**260J**	110U
CHRYSENE	UG/KG	166	6,700-22.500	**660**	150U	64U	61U	**3200**	100J	160J	**620**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	100U	**310U**	**130U**	**140J**	**130U**	**590J**	**3200**	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**200J**	**150U**	**64U**	**61U**	**610J**	**74U**	**81J**	**110J**
DIETHYLPHTHALATE	UG/KG	295	NS	100U	**310U**	130U	120U	130U	150U	130U	110U
DIMETHYLPHTHALATE	UG/KG	NS	NS	100U	310U	130U	120U	130U	150U	130U	2200
FLUORANTHENE	UG/KG	423	14,900-50,000	**1000**	200J	64U	69J	**4600**	160J	230J	**1100**
FLUORENE	UG/KG	77.4	2,300-7,8000	50U	**150U**	64U	61U	**340J**	74U	69J	67J
HEXACHLOROBENZENE	UG/KG	20	24000	**50U**	**150U**	**64U**	**61U**	**63U**	**74U**	**64U**	**53U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**100U**	**310U**	**130U**	**120U**	**130U**	**150U**	**130U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	260U	790U	330U	320U	320U	380U	330U	270U
HEXACHLOROETHANE	UG/KG	584	NS	50U	150U	64U	61U	63U	74U	64U	53U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**560**	150U	64U	61U	**2000**	81J	200J	**380J**
ISOPHORONE	UG/KG	432	NS	50U	150U	64U	61U	63U	74U	64U	53U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	50U	150U	64U	61U	63U	74U	64U	53U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	260U	310U	130U	120U	130U	150U	130U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	50U	150U	64U	87J	100J	320J	720	53U
NAPHTHALENE	UG/KG	160	NS	50U	150U	64U	61U	100J	74U	64U	53U
NITROBENZENE	UG/KG	145	NS	**300J**	**460U**	**190U**	**190U**	**190U**	**220U**	**200U**	**180J**
PENTACHLOROPHENOL	UG/KG	23000	NS	260U	790U	330U	930U	950U	1100U	980U	270U
PHENANTHRENE	UG/KG	204	13,800-46,000	**390J**	150U	64U	61U	**2400**	90J	120J	**670**
PHENOL	UG/KG	49.1	48	**100U**	**310U**	**130U**	**120U**	**130U**	**150U**	**130U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	**970**	150U	64U	82J	**6700**	190J	**230J**	**990**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

	Units	LEL	SEL	SD-D13-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-3-01 (1.5-2 ft. bgs) 04/12/2001	SD-D13-4-01 (1.5-2 ft. bgs) 4/12/2001	SD-D13-5-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-6-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-1-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-E10-1-01 (1-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	96U	97U	66U	83U	64U	120U	320U	55U
1,2-DICHLOROBENZENE	UG/KG	294	NS	96U	97U	66U	83U	64U	120U	**320U**	55U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	96U	97U	66U	83U	64U	120U	320U	55U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	96U	97U	66U	83U	64U	120U	320U	55U
1,4-DICHLOROBENZENE	UG/KG	318	NS	96U	97U	66U	83U	64U	120U	**320U**	55U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	190U	200U	130U	170U	130U	**250U**	**640U**	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**190U**	**200U**	**130U**	**170U**	**130U**	**250U**	**640U**	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	190U	200U	130U	170U	130U	250U	**640U**	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1900U**	**2000U**	**1300U**	**1700U**	**1300U**	**2500U**	**6400U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**190U**	**200U**	**180J**	**170U**	**130U**	**250U**	**640U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**96U**	**97U**	**66U**	**83U**	**64U**	**120U**	**320U**	**55U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	96U	97U	66U	83U	64U	120U	320U	55U
2-CHLOROPHENOL	UG/KG	31.9	NS	**96U**	**97U**	**66U**	**83U**	**64U**	**120U**	**320U**	**55U**
2-NITROPHENOL	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**190U**	**200U**	**130U**	**170U**	**130U**	**250U**	**640U**	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	490U	500U	340U	430U	330U	640U	1600U	280U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	96U	97U	66U	83U	64U	120U	320U	55U
4-NITROPHENOL	UG/KG	13.3	NS	**490U**	**500U**	**340U**	**430U**	**330U**	**640U**	**1600U**	**280U**
ACENAPHTHENE	UG/KG	6.71	7-20	**96U**	**97U**	**66U**	**83U**	**64U**	**120U**	**320U**	**55U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**96U**	**97U**	**66U**	**320J**	**64U**	**120U**	**320U**	**55U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**96U**	**97U**	**97J**	**510J**	**64U**	**120U**	**320U**	55U
BENZIDINE	UG/KG	NS	NS	1900U	2000U	1300U	1700U	1300U	2500U	6400U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	96U	**190J**	**400J**	**2000**	64U	**120U**	**320U**	**120J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	96U	**180J**	**350J**	**1400**	64U	120U	**320U**	110J
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	110J	270J	570J	2500	83J	120U	320U	190J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	96U	110J	**220J**	**610J**	64U	120U	**320U**	110J
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	96U	100J	220J	**1000**	64U	120U	**320U**	78J

	Units	LEL	SEL	SD-D13-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-3-01 (1.5-2 ft. bgs) 04/12/2001	SD-D13-4-01 (1.5-2 ft. bgs) 4/12/2001	SD-D13-5-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-6-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-1-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-E10-1-01 (1-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	190U	200U	130U	170U	130U	250U	640U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	96U	97U	66U	83U	64U	120U	320U	55U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	96U	97U	66U	83U	64U	120U	320U	55U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**190U**	**200U**	130U	170U	130U	**250U**	**640U**	130J
CHRYSENE	UG/KG	166	6,700-22.500	96U	**240J**	**500J**	**2100**	74J	120U	**320U**	150J
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**190U**	**300J**	**390J**	**170U**	**130U**	**250U**	**1200J**	**1500**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**96U**	**97U**	**66U**	**290J**	**64U**	**120U**	**320U**	**55U**
DIETHYLPHTHALATE	UG/KG	295	NS	190U	200U	130U	170U	130U	250U	**640U**	**340J**
DIMETHYLPHTHALATE	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
FLUORANTHENE	UG/KG	423	14,900-50,000	210J	410J	**950**	**1400**	110J	150J	**440J**	230J
FLUORENE	UG/KG	77.4	2,300-7,8000	**96U**	**97U**	66U	**83U**	64U	**120U**	**320U**	55U
HEXACHLOROBENZENE	UG/KG	20	24000	**96U**	**97U**	**66U**	**83U**	**64U**	**120U**	**320U**	**55U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**190U**	**200U**	**130U**	**170U**	**130U**	**250U**	**640U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	490U	500U	340U	430U	330U	640U	**1600U**	280U
HEXACHLOROETHANE	UG/KG	584	NS	96U	97U	66U	83U	64U	120U	320U	55U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	96U	120J	**260J**	**770J**	64U	120U	**320U**	95J
ISOPHORONE	UG/KG	432	NS	96U	97U	66U	83U	64U	120U	320U	55U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	96U	97U	66U	83U	64U	120U	320U	55U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	190U	200U	130U	170U	130U	250U	640U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	96U	190J	180J	83U	64U	120U	520J	1200
NAPHTHALENE	UG/KG	160	NS	96U	97U	66U	83U	64U	120U	**320U**	55U
NITROBENZENE	UG/KG	145	NS	**290U**	**290U**	**200U**	**250U**	**190U**	**380U**	**950U**	**170U**
PENTACHLOROPHENOL	UG/KG	23000	NS	490U	500U	340U	430U	330U	640U	1600U	830U
PHENANTHRENE	UG/KG	204	13,800-46,000	96U	180J	**490J**	180J	64U	120U	**320U**	170J
PHENOL	UG/KG	49.1	48	**190U**	**200U**	**130U**	**170U**	**130U**	**250U**	**640U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	160J	**360J**	**760**	**1600**	93J	120U	**320U**	**260J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

	Units	LEL	SEL	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-E11-4-01 (1.5-2 ft. bgs) 04/17/2002	SD-E12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-E12-2-01 (1.5-2 ft. bgs) 04/16/2002	SD-E14-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-E14-2-01 (1.5-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents										
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	60U	66U	62U	48U	80U	150U	190U
1,2-DICHLOROBENZENE	UG/KG	294	NS	60U	66U	62U	48U	80U	150U	190U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	60U	66U	62U	48U	80U	150U	190U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	60U	66U	62U	48U	80U	150U	190U
1,4-DICHLOROBENZENE	UG/KG	318	NS	60U	66U	62U	48U	80U	150U	190U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	120U	130U	130U	97U	160U	**300U**	**390U**
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**120U**	**130U**	**130U**	**97U**	**160U**	**300U**	**390U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	120U	130U	130U	97U	160U	300U	**390U**
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1200U**	**1300U**	**1300U**	**970U**	**1600U**	**3000U**	**3900U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**120U**	**130U**	**130U**	**97U**	**160U**	**300U**	**390U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**60U**	**66U**	**62U**	**48U**	**80U**	**150U**	**190U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	60U	66U	62U	48U	80U	150U	190U
2-CHLOROPHENOL	UG/KG	31.9	NS	**60U**	**66U**	**62U**	**48U**	**80U**	**150U**	**190U**
2-NITROPHENOL	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	120U	**130U**	**130U**	97U	**160U**	**300U**	**390U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	310U	340U	320U	240U	410U	760U	980U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	60U	66U	62U	48U	80U	150U	190U
4-NITROPHENOL	UG/KG	13.3	NS	**310U**	**340U**	**320U**	**240U**	**410U**	**760U**	**980U**
ACENAPHTHENE	UG/KG	6.71	7-20	**60U**	**66U**	**62U**	**48U**	**99J**	**150U**	**190U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**60U**	**66U**	**66J**	**48U**	**520J**	**150U**	**190U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**150J**	**66U**	**65J**	48U	**580J**	**150U**	**190U**
BENZIDINE	UG/KG	NS	NS	1200U	1300U	1300U	970U	1600U	3000U	3900U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**230J**	66U	**260J**	48U	**1800**	**350J**	**190U**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**240J**	66U	**340J**	48U	**2200**	**300J**	**190U**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	390J	66U	490J	59J	3100	470J	190U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**180J**	66U	**320J**	48U	**2000**	**220J**	**190U**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	160J	66U	210J	48U	**1200**	180J	190U

	Units	LEL	SEL	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-E11-4-01 (1.5-2 ft. bgs) 04/17/2002	SD-E12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-E12-2-01 (1.5-2 ft. bgs) 04/16/2002	SD-E14-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-E14-2-01 (1.5-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents										
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	120U	130U	130U	97U	160U	300U	390U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	60U	66U	62U	48U	80U	150U	190U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	60U	66U	62U	48U	80U	150U	190U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	130J	150J	130U	97U	**4300**	**300U**	**390U**
CHRYSENE	UG/KG	166	6,700-22.500	**230J**	66U	**370J**	48U	**2400**	**450J**	**190U**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**850**	**130U**	**130U**	97U	**160U**	**4600**	**390U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**60U**	**66U**	**93J**	**48U**	**540J**	**150U**	**190U**
DIETHYLPHTHALATE	UG/KG	295	NS	120U	200J	130U	97U	160U	**300U**	**390U**
DIMETHYLPHTHALATE	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
FLUORANTHENE	UG/KG	423	14,900-50,000	**540J**	66U	**490J**	56J	**3700**	**700J**	190U
FLUORENE	UG/KG	77.4	2,300-7,8000	60U	66U	62U	48U	**230J**	**150U**	**190U**
HEXACHLOROBENZENE	UG/KG	20	24000	**60U**	**66U**	**62U**	**48U**	**80U**	**150U**	**190U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**120U**	**130U**	**130U**	**97U**	**160U**	**300U**	**390U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	310U	340U	320U	240U	410U	760U	**980U**
HEXACHLOROETHANE	UG/KG	584	NS	60U	66U	62U	48U	80U	150U	190U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	190J	66U	**340J**	48U	**2100**	**230J**	190U
ISOPHORONE	UG/KG	432	NS	60U	66U	62U	48U	80U	150U	190U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	60U	66U	62U	48U	80U	150U	190U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	120U	130U	130U	97U	160U	300U	390U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	290J	66U	62U	48U	80U	690J	190U
NAPHTHALENE	UG/KG	160	NS	60U	66U	62U	48U	**180J**	150U	**190U**
NITROBENZENE	UG/KG	145	NS	**180U**	**200U**	**190U**	140U	**240U**	**450U**	**570U**
PENTACHLOROPHENOL	UG/KG	23000	NS	310U	1000U	950U	720U	1200U	760U	980U
PHENANTHRENE	UG/KG	204	13,800-46,000	**360J**	66U	**240J**	48U	**2200**	**270J**	190U
PHENOL	UG/KG	49.1	48	**120U**	**130U**	**130U**	**97U**	**160U**	**300U**	**390U**
PYRENE	UG/KG	195	12,400-41,600	**490J**	66U	**600J**	62J	**4600**	**690J**	190U

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Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (1.5-2 ft. bgs) 05/02/2001	SD-C12-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D11-1-01 (1.5-2 ft. bgs) 04/17/2001	SD-D12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-2-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-3-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-4-01 (1.5-2 ft. bgs) 04/16/2001	SD-D13-1-01 (1.5-2 ft. bgs) 04/13/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	0.96UN	3U	1.3U	1.2U	1.2U	1.5U	1.3U	1.5B
ARSENIC	MG/KG	6	33	**15.4**	5.6	0.83B	5.5	3.7	**8.2**	**6.7**	**13.6**
BERYLLIUM	MG/KG	NS	NS	0.29B	0.086UB	0.037UB	0.035UB	0.035UB	0.042UB	0.037UB	0.32B
CADMIUM	MG/KG	0.6	10	0.23B	0.25U	0.12B	0.23B	0.19B	0.48B	**0.82B**	0.087U
CHROMIUM, TOTAL	MG/KG	26	110	9.3	16.5B	23	20.8	17.8	14.6	17.7	11.1
COPPER	MG/KG	16	110	11.6	12B	**17.4**	11.4	10	**74.1**	**70.1**	13.8
LEAD	MG/KG	31	250	**657**	**159***	**36.1***	**67.7***	**123***	**681***	**480***	**741***
MERCURY	MG/KG	0.174	2	**0.74**	**0.19BN**	0.025BN	0.063BN	**0.27N**	**0.52N**	**0.54N**	**2.5N**
NICKEL	MG/KG	16	75	4.6B	5.7B	5.9B	6.7B	4.4B	10.7B	11	4.7B
SELENIUM	MG/KG	NS	NS	0.71U	2.2UB	2.4	0.89UB	0.89UB	1.1UB	0.93UB	0.76UB
SILVER	MG/KG	0.5	NS	0.21B	**0.64U**	0.27U	0.26U	0.26U	0.31U	0.27U	0.22U
THALLIUM	MG/KG	NS	NS	1.3U	3.9U	1.7U	1.6U	1.6U	1.9U	1.6U	1.3U
ZINC	MG/KG	120	820	63.9*	17.9B	70.6	81.5	36.1	**164**	**205**	37.5

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Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-3-01 (1.5-2 ft. bgs) 04/12/2001	SD-D13-4-01 (1.5-2 ft. bgs) 4/12/2001	SD-D13-5-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-6-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-1-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-E10-1-01 (1-1.5 ft. bgs) 04/17/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	1.9U	1.9U	1.3U	1.6U	1.3B	2.4U	**6.2UN**	1.2B
ARSENIC	MG/KG	6	33	2.8B	**22***	**12.2***	5.9	**10***	**28.2***	**11.1**	**8.9**
BERYLLIUM	MG/KG	NS	NS	0.055UB	0.72B	1.1	0.047UB	0.69B	0.59B	0.48B	0.031UB
CADMIUM	MG/KG	0.6	10	**0.61B**	0.18B	0.32B	0.14U	0.15B	0.38B	**0.86B**	0.091U
CHROMIUM, TOTAL	MG/KG	26	110	**27.7**	15.3	12.4	11	11	15.1	11.8B	13.5
COPPER	MG/KG	16	110	**22.6**	**20.7**	**56.1**	**20**	**30.2**	**29.3**	**26.5B**	**59.2**
LEAD	MG/KG	31	250	**45.3***	**363**	**605**	22B*	**197**	**728**	**306**	**365***
MERCURY	MG/KG	0.174	2	**0.25BN**	**0.74N***	**0.81N***	0.11BN	**0.44N***	**0.4N***	**0.41B**	**0.5N**
NICKEL	MG/KG	16	75	9.6B	7.8B	13.7	9.7B	12.2	7.9B	11.2B	10.7
SELENIUM	MG/KG	NS	NS	3.5	1.9B	1.1B	1.2UB	2	2.7B	6.5B	1.8
SILVER	MG/KG	0.5	NS	0.4U	0.4U	0.27U	0.34U	0.26U	**0.52U**	**1.3U**	0.23U
THALLIUM	MG/KG	NS	NS	2.4U	2.4U	1.7U	2.1U	1.6U	3.1U	8.1U	1.6B
ZINC	MG/KG	120	820	47.7	111	**157**	67	86.2	99.7	114*	94.9

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Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-E11-4-01 (1.5-2 ft. bgs) 04/17/2002	SD-E12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-E12-2-01 (1.5-2 ft. bgs) 04/16/2002	SD-E14-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-E14-2-01 (1.5-2 ft. bgs) 04/10/2001
Total Metals										
ANTIMONY	MG/KG	NS	3	1.2U	1.3U	1.2U	0.92U	**7.7U**	2.8U	**3.7U**
ARSENIC	MG/KG	6	33	4.5	2.1	**8.6***	**6.8**	**29.5**	**24.5***	**6.9**
BERYLLIUM	MG/KG	NS	NS	0.034UB	0.99	1.5	0.027UB	3.8B	1.3B	0.9B
CADMIUM	MG/KG	0.6	10	0.099U	0.25B	0.37B	0.078U	**0.65UB**	**1.5B**	**0.69B**
CHROMIUM, TOTAL	MG/KG	26	110	7.8	15.4	12.1	16.3	17.9B	**34.4**	**53.1**
COPPER	MG/KG	16	110	**26.3**	**23.3**	**29.9**	12.5	**79.3**	**125**	**32.4**
LEAD	MG/KG	31	250	**138***	**31.9***	**531**	19.6*	**180***	**1010**	**192N**
MERCURY	MG/KG	0.174	2	**0.28N**	**0.2N**	**0.43N***	0.021BN	**1.8N**	**1.9N***	**0.32B***
NICKEL	MG/KG	16	75	5.1B	7.9B	13.8	7.6	**31.8B**	**25.9**	13.3B
SELENIUM	MG/KG	NS	NS	0.87UB	0.95UB	1.6B	0.68U	5.7U	4.5	4.3B
SILVER	MG/KG	0.5	NS	0.25U	0.28U	0.26U	0.2U	**1.7U**	**0.61U**	**0.8U**
THALLIUM	MG/KG	NS	NS	1.5U	1.7U	1.6U	1.2U	10.1U	4.6B	4.8U
ZINC	MG/KG	120	820	89.7	70.4	**151**	63.8	**368**	**536**	71.1

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* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-48

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (1.5-2 ft. bgs) 05/02/2001	SD-C12-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D11-1-01 (1.5-2 ft. bgs) 04/17/2001	SD-D12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-2-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-3-01 (1.5-2 ft. bgs) 04/16/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**150U**	**460U**	**190U**	**190U**	**190U**	**220U**
1,3-DINITROBENZENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**400J**	**680J**	**190U**	**190U**	**190U**	**220U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**100U**	**310U**	**130U**	**120U**	**130U**	**150U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**50U**	**150U**	**64U**	**61U**	**63U**	**74U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	360J	460U	190U	190U	190U	220U
2-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
3-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	220J	460U	190U	190U	190U	220U
4-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**150U**	**460U**	**190U**	**190U**	**190U**	**220U**
NITROBENZENE	UG/KG	145	NS	**300J**	**460U**	**190U**	**190U**	**190U**	**220U**
NITROCELLULOSE	MG/KG	NS	NS	400	280U	120U	110U	110U	500
NITROGLYCERIN	UG/KG	NS	NS	3000U	9300U	3900U	3700U	3800U	4500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**150U**	**460U**	**190U**	**190U**	**190U**	**220U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	453000	9300U	3900U	3700U	3800U	4500U
TETRYL	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U

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Table 5-48

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-4-01 (1.5-2 ft. bgs) 04/16/2001	SD-D13-1-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-3-01 (1.5-2 ft. bgs) 04/12/2001	SD-D13-4-01 (1.5-2 ft. bgs) 4/12/2001	SD-D13-5-01 (1.5-2 ft. bgs) 04/13/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**200U**	**160U**	**290U**	**290U**	**200U**	**250U**
1,3-DINITROBENZENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**200U**	**280J**	**290U**	**290U**	**270J**	**250U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**130U**	**110U**	**190U**	**200U**	**180J**	**170U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**64U**	**53U**	**96U**	**97U**	**66U**	**83U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
3-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
4-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**200U**	**160U**	**290U**	**290U**	**200U**	**250U**
NITROBENZENE	UG/KG	145	NS	**200U**	**180J**	**290U**	**290U**	**200U**	**250U**
NITROCELLULOSE	MG/KG	NS	NS	900	96U	170U	180U	400	150U
NITROGLYCERIN	UG/KG	NS	NS	3900U	3200U	5800U	5900U	4000U	5000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**200U**	**160U**	**290U**	**290U**	**200U**	**250U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3900U	3200U	5800U	5900U	4000U	5000U
TETRYL	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U

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Table 5-48

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-6-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-1-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-E10-1-01 (1-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (1.5-2 ft. bgs) 04/17/2001
Energtic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**190U**	**380U**	**950U**	**170U**	**180U**	**200U**
1,3-DINITROBENZENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**190U**	**380U**	**950U**	**170U**	**180U**	**200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**130U**	**250U**	**640U**	**110U**	**120U**	**130U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**64U**	**120U**	**320U**	**55U**	**60U**	**66U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
3-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
4-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**190U**	**380U**	**950U**	**170U**	**180U**	**200U**
NITROBENZENE	UG/KG	145	NS	**190U**	**380U**	**950U**	**170U**	**180U**	**200U**
NITROCELLULOSE	MG/KG	NS	NS	120U	230U	580U	248J	400	120U
NITROGLYCERIN	UG/KG	NS	NS	3900U	7500U	19000U	3300U	3600U	4000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**190U**	**380U**	**950U**	**170U**	**180U**	**200U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3900U	7500U	19000U	3300U	3600U	4000U
TETRYL	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U

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Table 5-48

Sediment Analytical Results- Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-4-01 (1.5-2 ft. bgs) 04/17/2002	SD-E12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-E12-2-01 (1.5-2 ft. bgs) 04/16/2002	SD-E14-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-E14-2-01 (1.5-2 ft. bgs) 04/10/2001
Energtic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**190U**	**140U**	**240U**	**450U**	**570U**
1,3-DINITROBENZENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**190U**	**140U**	**240U**	**450U**	**570U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**130U**	**97U**	**160U**	**300U**	**390U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**62U**	**48U**	**80U**	**150U**	**190U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
2-NITROTOLUENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
3-NITROTOLUENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
4-NITROTOLUENE	UG/KG	NS	NS	190U	140U	240U	450U	570U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**190U**	**140U**	**240U**	**450U**	**570U**
NITROBENZENE	UG/KG	145	NS	**190U**	140U	**240U**	**450U**	**570U**
NITROCELLULOSE	MG/KG	NS	NS	110U	86U	150U	270UJ	340U
NITROGLYCERIN	UG/KG	NS	NS	3800U	2900U	4900U	8900U	11000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**190U**	**140U**	**240U**	**450U**	**570U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3800U	2900U	4900U	8900U	11000U
TETRYL	UG/KG	NS	NS	190U	140U	240U	450U	570U

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-C12-1-01 (1.5-2 ft. bgs) 05/02/2001	SD-C12-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D11-1-01 (1.5-2 ft. bgs) 04/17/2001	SD-D12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-2-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-3-01 (1.5-2 ft. bgs) 04/16/2001	SD-D12-4-01 (1.5-2 ft. bgs) 04/16/2001	SD-D13-1-01 (1.5-2 ft. bgs) 04/13/2001
General Chemistry											
MOISTURE, PERCENT	%W/W	NS	NS	34.3	78.4	48.6	46.2	47.2	55.2	48.8	37.7
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.8	1.5	4.1	2.5	2.2	4.1	5.2	1.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	86.1	87.3	93.7	90.7	90.3	93.3	96.8	90.8
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.9	99.2	100	99.7	99.9	99.3	99.6	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.2	6.4	12.5	7.4	7.4	11.7	16.5	3.7
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	58.7	42.8	75.9	66.4	61.6	76.9	79.4	57.7
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	34.3	26.6	54.8	41.4	34.2	51.3	66.3	27.6
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	14	14.8	30.6	22.1	18	28	39.6	10.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	16300	249000	28100	24100	22000	45100	56500	17000

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NR = Not Reported

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-D13-2-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-3-01 (1.5-2 ft. bgs) 04/12/2001	SD-D13-4-01 (1.5-2 ft. bgs) 4/12/2001	SD-D13-5-01 (1.5-2 ft. bgs) 04/13/2001	SD-D13-6-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-1-01 (1.5-2 ft. bgs) 04/12/2001	SD-D14-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-E10-1-01 (1-1.5 ft. bgs) 04/17/2001
General Chemistry											
MOISTURE, PERCENT	%W/W	NS	NS	65.5	66.1	50.3	60.2	48.4	73.4	89.6	39.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.6	3.4	3.3	0.5J	0.7J	1.6	3.6	1.6
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	93.3	98.5	92.3	32.2	53.9	89	94.2	82
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	94.2	100	99.4	100	91.5
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.7	100	98.6	91.3	96.3	99	98.3	86.4
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	14.1	14.6	8.9	1.6	2	5.1	7.8	6.8
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	66.8	76.3	77.3	13.2	26.7	46.8	34.9	55.2
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	52.3	61.7	47.5	7.3	17.2	23.6	22.2	41.4
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	35.4	39.7	24.8	3.8	5.5	12.5	14.1	19.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	121000	83000	54800	111000	15100	336000	569000	14600

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-E11-4-01 (1.5-2 ft. bgs) 04/17/2002	SD-E12-1-01 (1.5-2 ft. bgs) 04/16/2001	SD-E12-2-01 (1.5-2 ft. bgs) 04/16/2002	SD-E14-1-01 (1.5-2 ft. bgs) 04/11/2001	SD-E14-2-01 (1.5-2 ft. bgs) 04/10/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	44.7	50	47.1	30.6	59	77.6	82.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.3	1.9	0.5U	3.6	5.2	5.7	3.6
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	97.6	91.8	96.4	96.1	90.6	96.1	74.2
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	96.7
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	99.9	99.7	99.7	100	95.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	11.8	6.3	2.2	9.5	12.5	14.9	7.8
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	87.2	60.5	78	74.6	65.6	69.9	34.5
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	71.2	39.7	33.9	52.2	43.9	48.2	22
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	40.3	18.9	10.4	24.7	27.1	29.6	13.6
TOTAL ORGANIC CARBON	MG/KG	NS	NS	32900	38600	71200	8000	120000	105000	316000

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Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**240U**	170U	170U	210U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	240U	170U	170U	210U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	240U	170U	170U	210U
1,1-DICHLOROETHANE	UG/KG	NS	NS	240U	170U	170U	210U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**240U**	**170U**	**170U**	**210U**
1,2-DICHLOROETHANE	UG/KG	260	NS	240U	170U	170U	210U
1,2-DICHLOROPROPANE	UG/KG	333	NS	240U	170U	170U	210U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	490U	340U	340U	420U
ACROLEIN	UG/KG	0.00152	NS	**4900U**	**3400U**	**3400U**	**4200U**
ACRYLONITRILE	UG/KG	1.2	NS	**970U**	**670U**	**680U**	**830U**
AMYL ALCOHOL	UG/KG	NS	NS	16000U	16000U	13000U	17000U
BENZENE	UG/KG	142	NS	**240U**	**170U**	**170U**	**210U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	240U	170U	170U	210U
BROMOFORM	UG/KG	492	NS	240U	170U	170U	210U
BROMOMETHANE	UG/KG	1.37	NS	**490U**	**340U**	**340U**	**420U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	240U	170U	170U	210U
CHLOROBENZENE	UG/KG	291	NS	240U	170U	170U	210U
CHLOROETHANE	UG/KG	NS	NS	490U	340U	340U	420U
CHLOROFORM	UG/KG	121	NS	**240U**	**170U**	**170U**	**210U**
CHLOROMETHANE	UG/KG	NS	NS	490U	340U	340U	420U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	240U	170U	170U	210U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	240U	170U	170U	210U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	16000U	16000U	13000U	17000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	240U	170U	170U	210U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	16000U	16000U	13000U	17000U
ETHANOL	UG/KG	NS	NS	16000U	16000U	13000U	17000U
ETHYLBENZENE	UG/KG	175	NS	**240U**	170U	170U	**210U**

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents							
METHANOL	UG/KG	NS	NS	16000U	16000U	13000U	17000U
METHYLENE CHLORIDE	UG/KG	159	NS	**490U**	**340U**	**340U**	**420U**
N-BUTYL ETHER	UG/KG	NS	NS	16000U	16000U	13000U	17000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	240U	170U	170U	210U
TOLUENE	UG/KG	1220	NS	240U	170U	170U	210U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	240U	170U	170U	210U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	240U	170U	170U	210U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**240U**	**170U**	**170U**	**210U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	490U	340U	340U	420U
VINYL CHLORIDE	UG/KG	202	NS	**240U**	170U	170U	**210U**
XYLENES, (TOTAL)	UG/KG	120	NS	**240U**	**170U**	**170U**	**210U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-2-01 (1.5-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	52U	52U	44U	57U
1,2-DICHLOROBENZENE	UG/KG	294	NS	52U	52U	44U	57U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	52U	52U	44U	57U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	52U	52U	44U	57U
1,4-DICHLOROBENZENE	UG/KG	318	NS	52U	52U	44U	57U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	110U	100U	89U	120U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**110U**	**100U**	**89U**	**120U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	110U	100U	89U	120U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1100U**	**1000U**	**890U**	**1200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**110U**	**100U**	**89U**	**120U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**52U**	**52U**	**44U**	**57U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	52U	52U	44U	57U
2-CHLOROPHENOL	UG/KG	31.9	NS	**52U**	**52U**	**44U**	**57U**
2-NITROPHENOL	UG/KG	NS	NS	110U	100U	89U	120U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	110U	100U	89U	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	270U	270U	220U	290U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	110U	100U	89U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	110U	100U	89U	120U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	52U	52U	44U	57U
4-NITROPHENOL	UG/KG	13.3	NS	**270U**	**270U**	**220U**	**290U**
ACENAPHTHENE	UG/KG	6.71	7-20	**52U**	**52U**	**44U**	**57U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**52U**	**81J**	**44U**	**57U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	52U	**94J**	44U	57U
BENZIDINE	UG/KG	NS	NS	1100U	1000U	890U	1200U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**170J**	**170J**	**120J**	**130J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**210J**	**180J**	120J	120J
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	340J	490J	320J	250J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	170J	**240J**	96J	130J
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	130J	200J	130J	100J

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-2-01 (1.5-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	110U	100U	89U	120U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	110U	100U	89U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	52U	52U	44U	57U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	52U	52U	44U	57U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	110U	100U	89U	120U
CHRYSENE	UG/KG	166	6,700-22.500	**380J**	**320J**	**240J**	**190J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	110U	100U	89U	**120U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	110U	100U	89U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**110J**	**100J**	**44U**	**57U**
DIETHYLPHTHALATE	UG/KG	295	NS	110U	100U	89U	120U
DIMETHYLPHTHALATE	UG/KG	NS	NS	110U	100U	89U	120U
FLUORANTHENE	UG/KG	423	14,900-50,000	230J	320J	240J	200J
FLUORENE	UG/KG	77.4	2,300-7,8000	52U	52U	44U	57U
HEXACHLOROBENZENE	UG/KG	20	24000	**52U**	**52U**	**44U**	**57U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**110U**	**100U**	**89U**	**120U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	270U	270U	220U	290U
HEXACHLOROETHANE	UG/KG	584	NS	52U	52U	44U	57U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	170J	**260J**	120J	150J
ISOPHORONE	UG/KG	432	NS	52U	52U	44U	57U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	52U	52U	44U	57U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	110U	100U	89U	120U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	52U	52U	44U	57U
NAPHTHALENE	UG/KG	160	NS	52U	52U	44U	57U
NITROBENZENE	UG/KG	145	NS	**160U**	**160U**	130U	**170U**
PENTACHLOROPHENOL	UG/KG	23000	NS	270U	270U	220U	290U
PHENANTHRENE	UG/KG	204	13,800-46,000	97J	140J	93J	76J
PHENOL	UG/KG	49.1	48	**110U**	**100U**	**89U**	**120U**
PYRENE	UG/KG	195	12,400-41,600	190J	**250J**	**210J**	170J

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-58

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-2-01 (1.5-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Total Metals							
ANTIMONY	MG/KG	NS	3	1U	1U	0.83U	1.2B
ARSENIC	MG/KG	6	33	**18.9***	**16.2***	**15.9***	**10***
BERYLLIUM	MG/KG	NS	NS	0.42B	0.38B	0.31B	0.53B
CADMIUM	MG/KG	0.6	10	0.085UN	0.085UN	0.071UN	0.095UN
CHROMIUM, TOTAL	MG/KG	26	110	24.4N*	15.5N*	16N*	12.4N*
COPPER	MG/KG	16	110	**34.3N***	**70.4N***	**23N***	**28.9N***
LEAD	MG/KG	31	250	**1620**	**1810**	**67.5**	**310**
MERCURY	MG/KG	0.174	2	**0.86N***	**0.29N***	**0.6N***	**0.49N***
NICKEL	MG/KG	16	75	11.9	10.4	7.8	6.3B
SELENIUM	MG/KG	NS	NS	0.74U	0.74U	0.62U	1.1B
SILVER	MG/KG	0.5	NS	0.24B	0.22U	0.18U	0.24U
THALLIUM	MG/KG	NS	NS	1.4B	1.5B	2.5B	1.5U
ZINC	MG/KG	120	820	58.5N*	**153N***	45.9N*	51.7N*

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SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-59

Sediment Analytical Results- Eastern Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-2-01 (1.5-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
Energtic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**160U**	**160U**	**130U**	**170U**
1,3-DINITROBENZENE	UG/KG	NS	NS	160U	160U	130U	170U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**160U**	**160U**	**130U**	**170U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**110U**	**100U**	**89U**	**120U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**52U**	**52U**	**44U**	**57U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	160U	160U	130U	170U
2-NITROTOLUENE	UG/KG	NS	NS	160U	160U	130U	170U
3-NITROTOLUENE	UG/KG	NS	NS	160U	160U	130U	170U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	160U	160U	130U	170U
4-NITROTOLUENE	UG/KG	NS	NS	160U	160U	130U	170U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**160U**	**160U**	**130U**	**170U**
NITROBENZENE	UG/KG	145	NS	**160U**	**160U**	130U	**170U**
NITROCELLULOSE	MG/KG	NS	NS	94U	124J	79U	100U
NITROGLYCERIN	UG/KG	NS	NS	3100U	3100U	2600U	3500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**160U**	**160U**	**130U**	**170U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3100U	73400	2600U	3500U
TETRYL	UG/KG	NS	NS	160U	160U	130U	170U

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-60

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-G12-3-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-1-01 (1.5-2 ft. bgs) 04/18/2001	SD-H11-2-01 (1.5-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	36.3	36.1	24.4	42.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.9	2.4	4.3	4.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	63.5	51.5	91.3	82.4
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	84	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	96.2	77.7	100	87.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.3	5.6	11	12.5
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	40.1	29.5	62.1	61.5
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	28.1	19	42.3	45.9
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.8	11.8	23.6	28.2
TOTAL ORGANIC CARBON	MG/KG	NS	NS	43800	22800	36000	54900

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SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents											
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	150U	200U	160U	170U	160U	160U	200U	200U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	150U	200U	160U	170U	160U	160U	200U	200U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	150U	200U	160U	170U	160U	160U	200U	200U
1,1-DICHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**150U**	**200U**	**160U**	**170U**	**160U**	**160U**	**200U**	**200U**
1,2-DICHLOROETHANE	UG/KG	260	NS	150U	200U	160U	170U	160U	160U	200U	200U
1,2-DICHLOROPROPANE	UG/KG	333	NS	150U	200U	160U	170U	160U	160U	200U	200U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	290U	410U	310U	340U	330U	330U	400U	400U
ACROLEIN	UG/KG	0.00152	NS	**2900U**	**4100U**	**3100U**	**3400U**	**3200U**	**3300U**	**4000U**	**4000U**
ACRYLONITRILE	UG/KG	1.2	NS	**590U**	**820U**	**630U**	**670U**	**650U**	**650U**	**790U**	**800U**
AMYL ALCOHOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
BENZENE	UG/KG	142	NS	**150U**	**200U**	**160U**	**170U**	**160U**	**160U**	**200U**	**200U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
BROMOFORM	UG/KG	492	NS	150U	200U	160U	170U	160U	160U	200U	200U
BROMOMETHANE	UG/KG	1.37	NS	**290U**	**410U**	**310U**	**340U**	**330U**	**330U**	**400U**	**400U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	150U	200U	160U	170U	160U	160U	200U	200U
CHLOROBENZENE	UG/KG	291	NS	150U	200U	160U	170U	160U	160U	200U	200U
CHLOROETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U	330U	400U	400U
CHLOROFORM	UG/KG	121	NS	**150U**	**200U**	**160U**	**170U**	**160U**	**160U**	**200U**	**200U**
CHLOROMETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U	330U	400U	400U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
ETHANOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
ETHYLBENZENE	UG/KG	175	NS	150U	**200U**	160U	170U	160U	160U	**200U**	**200U**

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents											
METHANOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
METHYLENE CHLORIDE	UG/KG	159	NS	**290U**	**410U**	**310U**	**340U**	**330U**	**330U**	**400U**	**400U**
N-BUTYL ETHER	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U	13000U	14000U	15000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	150U	200U	160U	170U	160U	160U	200U	200U
TOLUENE	UG/KG	1220	NS	150U	200U	160U	170U	160U	160U	200U	200U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	150U	200U	160U	170U	160U	160U	200U	200U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	200U	160U	170U	160U	160U	200U	200U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**150U**	**200U**	**160U**	**170U**	**160U**	**160U**	**200U**	**200U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U	330U	400U	400U
VINYL CHLORIDE	UG/KG	202	NS	150U	200U	160U	170U	160U	160U	200U	200U
XYLENES, (TOTAL)	UG/KG	120	NS	**150U**	**200U**	**160U**	**170U**	**160U**	**160U**	**200U**	**200U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less th

N = Flashpoint no

B = Indicates that

* = Value obtaine

R = Rejected base

NR = Not Reporte

NS = No Standard

ft. bgs = Feet belc

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	140U	150U	**220U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	140U	150U	220U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	140U	150U	220U
1,1-DICHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**140U**	**150U**	**220U**
1,2-DICHLOROETHANE	UG/KG	260	NS	140U	150U	220U
1,2-DICHLOROPROPANE	UG/KG	333	NS	140U	150U	220U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	280U	290U	450U
ACROLEIN	UG/KG	0.00152	NS	**2800U**	**3000U**	**4500U**
ACRYLONITRILE	UG/KG	1.2	NS	**570U**	**590U**	**890U**
AMYL ALCOHOL	UG/KG	NS	NS	13000U	13000U	16000U
BENZENE	UG/KG	142	NS	140U	**150U**	**220U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	140U	150U	220U
BROMOFORM	UG/KG	492	NS	140U	150U	220U
BROMOMETHANE	UG/KG	1.37	NS	**280U**	**290U**	**450U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	140U	150U	220U
CHLOROBENZENE	UG/KG	291	NS	140U	150U	220U
CHLOROETHANE	UG/KG	NS	NS	280U	290U	450U
CHLOROFORM	UG/KG	121	NS	**140U**	**150U**	**220U**
CHLOROMETHANE	UG/KG	NS	NS	280U	290U	450U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	140U	150U	220U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	150U	220U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	13000U	16000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	140U	150U	220U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	13000U	16000U
ETHANOL	UG/KG	NS	NS	13000U	13000U	16000U
ETHYLBENZENE	UG/KG	175	NS	140U	150U	**220U**

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents						
METHANOL	UG/KG	NS	NS	13000U	13000U	16000U
METHYLENE CHLORIDE	UG/KG	159	NS	**280U**	**290U**	**450U**
N-BUTYL ETHER	UG/KG	NS	NS	13000U	13000U	16000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	140U	150U	220U
TOLUENE	UG/KG	1220	NS	140U	150U	220U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	140U	150U	220U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	150U	220U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**140U**	**150U**	**220U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	280U	290U	450U
VINYL CHLORIDE	UG/KG	202	NS	140U	150U	**220U**
XYLENES, (TOTAL)	UG/KG	120	NS	**140U**	**150U**	**220U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

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Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-H7-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (1-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	44U	45U	46U	45U	43U	44U	47U	50U
1,2-DICHLOROBENZENE	UG/KG	294	NS	44U	45U	46U	45U	43U	44U	47U	50U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	44U	45U	46U	45U	43U	44U	47U	50U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	44U	45U	46U	45U	43U	44U	47U	50U
1,4-DICHLOROBENZENE	UG/KG	318	NS	44U	45U	46U	45U	43U	44U	47U	50U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	89U	91U	93U	91U	88U	89U	95U	100U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**89U**	**91U**	**93U**	**91U**	**88U**	**89U**	**95U**	**100U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	89U	91U	93U	91U	88U	89U	95U	100U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**890U**	**910U**	**930U**	**910U**	**880U**	**890U**	**950U**	**1000U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**89U**	**91U**	**93U**	**91U**	**88U**	**89U**	**95U**	**100U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**44U**	**45U**	**46U**	**45U**	**43U**	**44U**	**47U**	**50U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	44U	45U	46U	45U	43U	44U	47U	50U
2-CHLOROPHENOL	UG/KG	31.9	NS	**44U**	**45U**	**46U**	**45U**	**43U**	**44U**	**47U**	**50U**
2-NITROPHENOL	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	89U	91U	93U	91U	88U	89U	95U	100U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	230U	240U	230U	220U	230U	240U	260U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	44U	45U	46U	45U	43U	44U	47U	50U
4-NITROPHENOL	UG/KG	13.3	NS	**220U**	**230U**	**240U**	**230U**	**220U**	**230U**	**240U**	**260U**
ACENAPHTHENE	UG/KG	6.71	7-20	**44U**	**45U**	**46U**	**45U**	**43U**	**44U**	**47U**	**50U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**51J**	**45U**	**46U**	**45U**	**180J**	**84J**	**140J**	**50U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	56J	45U	46U	45U	**210J**	**110J**	**210J**	**61J**
BENZIDINE	UG/KG	NS	NS	890U	910U	930U	910U	880U	890U	950U	1000U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**200J**	91J	**180J**	45U	**680**	**310J**	**670**	**170J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**210J**	110J	150J	45U	**700**	**320J**	**610**	**190J**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	280J	170J	230J	45U	790	390J	860	260J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	140J	83J	92J	45U	**460**	**240J**	**470**	150J
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	110J	70J	82J	45U	**350J**	140J	**320J**	110J

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-H7-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (1-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	89U	91U	93U	91U	88U	89U	95U	100U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	44U	45U	46U	45U	43U	44U	47U	50U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	44U	45U	46U	45U	43U	44U	47U	50U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	89U	91U	93U	91U	88U	89U	95U	**1400**
CHRYSENE	UG/KG	166	6,700-22.500	**240J**	140J	**180J**	45U	**750**	**350J**	**780**	**240J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	89U	91U	93U	91U	88U	**370J**	95U	100U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**44U**	**45U**	**46U**	**45U**	**120J**	**70J**	**140J**	**50U**
DIETHYLPHTHALATE	UG/KG	295	NS	89U	91U	93U	91U	88U	89U	95U	100U
DIMETHYLPHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
FLUORANTHENE	UG/KG	423	14,900-50,000	**460**	200J	400J	45U	**1300**	**650**	**1400**	360J
FLUORENE	UG/KG	77.4	2,300-7,8000	44U	45U	46U	45U	**90J**	44U	59J	50U
HEXACHLOROBENZENE	UG/KG	20	24000	**44U**	**45U**	**46U**	**45U**	**43U**	**44U**	**47U**	**50U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**89U**	**91U**	**93U**	**91U**	**88U**	**89U**	**95U**	**100U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	220U	230U	240U	230U	220U	230U	240U	260U
HEXACHLOROETHANE	UG/KG	584	NS	44U	45U	46U	45U	43U	44U	47U	50U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	150J	82J	110J	45U	**470**	**240J**	**500**	150J
ISOPHORONE	UG/KG	432	NS	44U	45U	46U	45U	43U	44U	47U	50U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	44U	45U	46U	45U	43U	44U	47U	50U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	89U	91U	93U	91U	88U	89U	95U	100U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	480	330J	100J	45U	56J	44U	240J	78J
NAPHTHALENE	UG/KG	160	NS	44U	45U	46U	45U	43U	44U	47U	50U
NITROBENZENE	UG/KG	145	NS	130U	140U	140U	140U	130U	130U	140U	**150U**
PENTACHLOROPHENOL	UG/KG	23000	NS	220U	230U	240U	230U	220U	230U	240U	260U
PHENANTHRENE	UG/KG	204	13,800-46,000	**310J**	100J	120J	45U	**690**	**360J**	**830**	**230J**
PHENOL	UG/KG	49.1	48	**89U**	**91U**	**93U**	**91U**	**88U**	**89U**	**95U**	**100U**
PYRENE	UG/KG	195	12,400-41,600	**510**	**210J**	**370J**	45U	**1400**	**650**	**1200**	**400J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (1-1.5 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	42U	44U	52U
1,2-DICHLOROBENZENE	UG/KG	294	NS	42U	44U	52U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	42U	44U	52U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	42U	44U	52U
1,4-DICHLOROBENZENE	UG/KG	318	NS	42U	44U	52U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	85U	90U	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**85U**	**90U**	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	85U	90U	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**850U**	**900U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**85U**	**90U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**42U**	**44U**	**52U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	42U	44U	52U
2-CHLOROPHENOL	UG/KG	31.9	NS	**42U**	**44U**	**52U**
2-NITROPHENOL	UG/KG	NS	NS	85U	90U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	85U	90U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	230U	270U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	85U	90U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	85U	90U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	42U	44U	52U
4-NITROPHENOL	UG/KG	13.3	NS	**220U**	**230U**	**270U**
ACENAPHTHENE	UG/KG	6.71	7-20	**42U**	**44U**	**52U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**42U**	**44U**	**52U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	42U	44U	52U
BENZIDINE	UG/KG	NS	NS	850U	900U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	42U	**120J**	52U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	42U	93J	52U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	42U	130J	74J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	42U	60J	52U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	42U	50J	52U

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (1-1.5 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	85U	90U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	85U	90U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	42U	44U	52U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	42U	44U	52U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	97J	90U	110U
CHRYSENE	UG/KG	166	6,700-22.500	42U	130J	59J
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	85U	90U	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	85U	90U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**42U**	**44U**	**52U**
DIETHYLPHTHALATE	UG/KG	295	NS	85U	90U	110U
DIMETHYLPHTHALATE	UG/KG	NS	NS	85U	90U	110U
FLUORANTHENE	UG/KG	423	14,900-50,000	42U	310J	89J
FLUORENE	UG/KG	77.4	2,300-7,8000	42U	44U	52U
HEXACHLOROBENZENE	UG/KG	20	24000	**42U**	**44U**	**52U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**85U**	**90U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	220U	230U	270U
HEXACHLOROETHANE	UG/KG	584	NS	42U	44U	52U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	42U	75J	52U
ISOPHORONE	UG/KG	432	NS	42U	44U	52U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	42U	44U	52U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	85U	90U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	42U	44U	52U
NAPHTHALENE	UG/KG	160	NS	42U	44U	52U
NITROBENZENE	UG/KG	145	NS	130U	130U	**160U**
PENTACHLOROPHENOL	UG/KG	23000	NS	220U	230U	270U
PHENANTHRENE	UG/KG	204	13,800-46,000	42U	200J	52U
PHENOL	UG/KG	49.1	48	**85U**	**90U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	42U	**240J**	74J

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Table 5-63

Sediment Analytical Results - Eastern Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-H7-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (1-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	0.85U	0.86U	0.91U	0.87U	0.84U	0.84U	0.92U	0.99U
ARSENIC	MG/KG	6	33	5.2	4.4*	3.4	3.4*	3.3*	3.7*	5.7*	4.5*
BERYLLIUM	MG/KG	NS	NS	0.66	0.84	0.57B	0.72	0.44B	0.6B	0.58B	0.39B
CADMIUM	MG/KG	0.6	10	0.072U	0.073UN	0.077U	0.074UN	0.071UN	0.071UN	0.078UN	0.084UN
CHROMIUM, TOTAL	MG/KG	26	110	**32.2**	**60.7N***	**136**	13.9N*	10.5N*	14.1N*	**66.5N***	10N*
COPPER	MG/KG	16	110	10.5	**36.2N***	12.4	**19.8N***	**22.9N***	14.6N*	**28.6N***	**16.6N***
LEAD	MG/KG	31	250	21.7*	25.1	15.2*	8.1B	20.6	**314**	**35**	20
MERCURY	MG/KG	0.174	2	**0.23N**	**0.58N***	**0.42N**	0.11BN*	**0.59N***	**0.54N***	**0.32N***	**0.56N***
NICKEL	MG/KG	16	75	10.3	10.2	7.2	9.2	12.1	8.4	9.7	8.4
SELENIUM	MG/KG	NS	NS	0.63U	0.63U	0.83B	0.64U	0.62U	0.62U	0.68U	0.73U
SILVER	MG/KG	0.5	NS	0.18U	0.19U	0.2U	0.19U	0.18U	0.18U	0.2U	0.21U
THALLIUM	MG/KG	NS	NS	1.1U	3.2B	1.2U	3.1B	3.3B	3.1B	4.1B	3B
ZINC	MG/KG	120	820	52.4	108N*	73.8	59.6N*	79.4N*	89.4N*	120N*	102N*

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Table 5-63

Sediment Analytical Results - Eastern Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (1-1.5 ft. bgs) 04/19/2001
Total Metals						
ANTIMONY	MG/KG	NS	3	0.91B	1.9B	1U
ARSENIC	MG/KG	6	33	3.9*	4.5*	**7.5***
BERYLLIUM	MG/KG	NS	NS	0.73*	0.75	0.85
CADMIUM	MG/KG	0.6	10	0.069UN	0.073UN	0.087UN
CHROMIUM, TOTAL	MG/KG	26	110	6.3	8.7N*	13.2N*
COPPER	MG/KG	16	110	8.3	13N*	12.4N*
LEAD	MG/KG	31	250	14.2	22.1	25.9
MERCURY	MG/KG	0.174	2	0.011B	0.022BN*	0.046BN*
NICKEL	MG/KG	16	75	3.7B	5.2B	7.7B
SELENIUM	MG/KG	NS	NS	0.6UB*	4.7B	1.5B
SILVER	MG/KG	0.5	NS	0.17U	0.19U	0.22U
THALLIUM	MG/KG	NS	NS	5.4B	11.1B	7.7B
ZINC	MG/KG	120	820	**123N*E**	**167N***	**186N***

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Table 5-64

Sediment Analytical Results- Eastern Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-H7-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (1-1.5 ft. bgs) 04/18/2001
Energetics and Explosives									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**130U**	**140U**	**140U**	**140U**	**130U**	**130U**
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**130U**	**140U**	**140U**	**140U**	**130U**	**130U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**89U**	**91U**	**93U**	**91U**	**88U**	**89U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**44U**	**45U**	**46U**	**45U**	**43U**	**44U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
2-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
3-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
4-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**130U**	**140U**	**140U**	**140U**	**130U**	**130U**
NITROBENZENE	UG/KG	145	NS	130U	140U	140U	140U	130U	130U
NITROCELLULOSE	MG/KG	NS	NS	79U	82U	84U	81U	78U	80U
NITROGLYCERIN	UG/KG	NS	NS	2600U	2700U	2800U	2700U	130U	2700U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**130U**	**140U**	**140U**	**140U**	**130U**	**130U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	2700U	2800U	2700U	130U	2700U
TETRYL	UG/KG	NS	NS	130U	140U	140U	140U	130U	130U

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Table 5-64

Sediment Analytical Results- Eastern Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (1-1.5 ft. bgs) 04/19/2001
Energetics and Explosives								
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**140U**	**150U**	**130U**	**130U**	**160U**
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**140U**	**150U**	**130U**	**130U**	**160U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**95U**	**100U**	**85U**	**90U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**47U**	**50U**	**42U**	**44U**	**52U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
2-NITROTOLUENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
3-NITROTOLUENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
4-NITROTOLUENE	UG/KG	NS	NS	140U	150U	130U	130U	160U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**140U**	**150U**	**130U**	**130U**	**160U**
NITROBENZENE	UG/KG	145	NS	140U	**150U**	130U	130U	**160U**
NITROCELLULOSE	MG/KG	NS	NS	85U	92U	76U	80U	95U
NITROGLYCERIN	UG/KG	NS	NS	2800U	3100U	2500U	2700U	3200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**140U**	**150U**	**130U**	**130U**	**160U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2800U	3100U	2500U	2700U	3200U
TETRYL	UG/KG	NS	NS	140U	150U	130U	130U	160U

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Table 5-65

Sediment Analytical Results - Eastern Drainage System - Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-G12-2-01 (1.5-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (1.5-2 ft. bgs) 04/17/2001	SD-H7-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-H8-4-01 (1-1.5 ft. bgs) 04/18/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	24.4	26.6	28.3	26.1	23.5	25
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1	2.7	3.4	2.9	2.3	2.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	79.7	62	66.7	70.8	65.6	80
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	99.9	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	92.8	85	91.7	87.7	96	91.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.8	6.7	9.6	7.5	6.4	8.1
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	47.4	47.6	42.2	46.8	41.5	55.1
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	28.2	40.6	26.4	31.3	29.8	36.5
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	12.6	30.8	17.1	16.8	16.3	18.5
TOTAL ORGANIC CARBON	MG/KG	NS	NS	19300	22100	11500	10400	11200	13600

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	Units	LEL	SEL	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (1-1.5 ft. bgs) 04/19/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	29.2	34.5	21.3	25.4	37.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.8	1.1	1.1	1.4	2.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	77.7	79.8	63	78.7	91.8
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	98	100	91.8	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.5	3	3.2	4.2	8.4
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	45.2	36.2	34.8	52.9	57.6
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	25.4	18.4	20.2	32.5	34.4
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	11.5	7.5	9	12	19.9
TOTAL ORGANIC CARBON	MG/KG	NS	NS	14600	16200	14000	11200	19300

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Table 5-66

Sediment Analytical Results - Eastern Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	170U	150U	210U	**230U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	170U	150U	210U	230U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	170U	150U	210U	230U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170U	150U	210U	230U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**170U**	**150U**	**210U**	**230U**
1,2-DICHLOROETHANE	UG/KG	260	NS	170U	150U	210U	230U
1,2-DICHLOROPROPANE	UG/KG	333	NS	170U	150U	210U	230U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	340U	300U	420U	460U
ACROLEIN	UG/KG	0.00152	NS	**3400U**	**3000U**	**4200U**	**4600U**
ACRYLONITRILE	UG/KG	1.2	NS	**680U**	**600U**	**840U**	**920U**
AMYL ALCOHOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
BENZENE	UG/KG	142	NS	**170U**	**150U**	**210U**	**230U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	170U	150U	210U	230U
BROMOFORM	UG/KG	492	NS	170U	150U	210U	230U
BROMOMETHANE	UG/KG	1.37	NS	**340U**	**300U**	**420U**	**460U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	170U	150U	210U	230U
CHLOROBENZENE	UG/KG	291	NS	170U	150U	210U	230U
CHLOROETHANE	UG/KG	NS	NS	340U	300U	420U	460U
CHLOROFORM	UG/KG	121	NS	**170U**	**150U**	**210U**	**230U**
CHLOROMETHANE	UG/KG	NS	NS	340U	300U	420U	460U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	170U	150U	210U	230U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	150U	210U	230U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	14000U	14000U	15000U	18000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170U	150U	210U	230U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	14000U	14000U	15000U	18000U
ETHANOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
ETHYLBENZENE	UG/KG	175	NS	170U	150U	**210U**	**230U**

Table 5-66

Sediment Analytical Results - Eastern Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents							
METHANOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
METHYLENE CHLORIDE	UG/KG	159	NS	**340U**	**300U**	**420U**	**460U**
N-BUTYL ETHER	UG/KG	NS	NS	14000U	14000U	15000U	18000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170U	150U	210U	230U
TOLUENE	UG/KG	1220	NS	170U	150U	210U	230U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	170U	150U	210U	230U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	150U	210U	230U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**170U**	**150U**	**210U**	**230U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340U	300U	420U	460U
VINYL CHLORIDE	UG/KG	202	NS	170U	150U	**210U**	**230U**
XYLENES, (TOTAL)	UG/KG	120	NS	**170U**	**150U**	**210U**	**230U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-67

Sediment Analytical Results - Eastern Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (1-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	46U	46U	50U	58U
1,2-DICHLOROBENZENE	UG/KG	294	NS	46U	46U	50U	58U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	46U	46U	50U	58U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	46U	46U	50U	58U
1,4-DICHLOROBENZENE	UG/KG	318	NS	46U	46U	50U	58U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	93U	94U	100U	120U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**93U**	**94U**	**100U**	**120U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	93U	94U	100U	120U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**930U**	**940U**	**1000U**	**1200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**93U**	**94U**	**100U**	**120U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**46U**	**46U**	**50U**	**58U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	46U	46U	50U	58U
2-CHLOROPHENOL	UG/KG	31.9	NS	**46U**	**46U**	**50U**	**58U**
2-NITROPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	93U	94U	100U	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	240U	240U	260U	300U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	93U	94U	100U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	46U	46U	50U	58U
4-NITROPHENOL	UG/KG	13.3	NS	**240U**	**240U**	**260U**	**300U**
ACENAPHTHENE	UG/KG	6.71	7-20	**46U**	**46U**	**50U**	**58U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**63J**	**46U**	**61J**	**58U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**110J**	46U	**76J**	**58U**
BENZIDINE	UG/KG	NS	NS	930U	940U	1000U	1200U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**280J**	**120J**	**270J**	**160J**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**310J**	150J	**270J**	**160J**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	500	220J	350J	240J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**230J**	110J	**200J**	110J
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	220J	110J	130J	90J

Table 5-67

Sediment Analytical Results - Eastern Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (1-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents							
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	93U	94U	100U	120U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	93U	94U	100U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	3520	NS	46U	46U	50U	58U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	46U	46U	50U	58U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	93U	94U	100U	120U
CHRYSENE	UG/KG	166	6,700-22.500	**360J**	160J	**370J**	**270J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	93U	94U	100U	**120U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**60J**	**46U**	**61J**	**58U**
DIETHYLPHTHALATE	UG/KG	295	NS	93U	94U	100U	120U
DIMETHYLPHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
FLUORANTHENE	UG/KG	423	14,900-50,000	**760**	260J	**610**	**430J**
FLUORENE	UG/KG	77.4	2,300-7,8000	**160J**	46U	50U	58U
HEXACHLOROBENZENE	UG/KG	20	24000	**46U**	**46U**	**50U**	**58U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**93U**	**94U**	**100U**	**120U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	240U	240U	260U	300U
HEXACHLOROETHANE	UG/KG	584	NS	46U	46U	50U	58U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**260J**	110J	200J	110J
ISOPHORONE	UG/KG	432	NS	46U	46U	50U	58U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	46U	46U	50U	58U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	93U	94U	100U	120U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	1100	420J	540	87J
NAPHTHALENE	UG/KG	160	NS	46U	46U	50U	58U
NITROBENZENE	UG/KG	145	NS	140U	140U	**150U**	**180U**
PENTACHLOROPHENOL	UG/KG	23000	NS	240U	240U	260U	300U
PHENANTHRENE	UG/KG	204	13,800-46,000	**490**	180J	**360J**	**220J**
PHENOL	UG/KG	49.1	48	**93U**	**94U**	**100U**	**120U**
PYRENE	UG/KG	195	12,400-41,600	**680**	**260J**	**610**	**370J**

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ft. bgs = Feet below ground surface

Table 5-68

Sediment Analytical Results - Eastern Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (1-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Total Metals							
ANTIMONY	MG/KG	NS	3	0.87U	0.88U	0.98U	1.2B
ARSENIC	MG/KG	6	33	2.8*	1.1B	3.1*	**7.1***
BERYLLIUM	MG/KG	NS	NS	0.3B	0.026UB	0.39B	0.49B
CADMIUM	MG/KG	0.6	10	0.11B	0.075U	0.083U	0.28B
CHROMIUM, TOTAL	MG/KG	26	110	21.4	15.7	**27.9**	15.4
COPPER	MG/KG	16	110	10.4	6.4	**16.3**	**26.1**
LEAD	MG/KG	31	250	**73.1**	**70***	**87.7**	**453**
MERCURY	MG/KG	0.174	2	**0.56N***	**0.26N**	**0.43N***	**0.68N***
NICKEL	MG/KG	16	75	5B	3.6B	6B	8.3B
SELENIUM	MG/KG	NS	NS	0.64U	0.65U	0.98B	1.2B
SILVER	MG/KG	0.5	NS	0.19U	0.19U	0.21U	0.26B
THALLIUM	MG/KG	NS	NS	1.1U	1.2U	1.3U	1.5U
ZINC	MG/KG	120	820	85	55.4	66.8	76.7

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit
E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
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NR = Not Reported
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ft. bgs = Feet below ground surface

Table 5-69

Sediment Analytical Results- Eastern Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (1-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Energtic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**140U**	**140U**	**150U**	**180U**
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	140U	150U	180U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**140U**	**140U**	**150U**	**180U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**93U**	**94U**	**100U**	**120U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**46U**	**46U**	**50U**	**58U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
2-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
3-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
4-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**140U**	**140U**	**150U**	**180U**
NITROBENZENE	UG/KG	145	NS	140U	140U	**150U**	**180U**
NITROCELLULOSE	MG/KG	NS	NS	215J	84U	91U	110U
NITROGLYCERIN	UG/KG	NS	NS	2800U	2800U	3000U	3500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**140U**	**140U**	**150U**	**180U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2800U	2800U	3000U	3500U
TETRYL	UG/KG	NS	NS	140U	140U	150U	180U

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-70

Sediment Analytical Results - Eastern Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (1-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	28.1	28.6	33.9	43.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.1	0.6J	1	1.8
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	85.6	58.1	61.6	59.4
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.6	87.6	93	89.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.7	2.5	3.6	5.2
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	66.9	37.8	40.3	37.4
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	46.1	22.1	23.6	23.3
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.9	8.6	10.8	12.8
TOTAL ORGANIC CARBON	MG/KG	NS	NS	13500	18200	13200	39000

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ft. bgs = Feet below ground surface

Table 5-77

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-L5-1-01 (0.5-1 ft. bgs) 04/20/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**360U**	**850U**	**270U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	360U	850U	270U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	360U	**850U**	270U
1,1-DICHLOROETHANE	UG/KG	NS	NS	360U	850U	270U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**360U**	**850U**	**270U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**360U**	**850U**	**270U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	**360U**	**850U**	270U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	720U	1700U	540U
ACROLEIN	UG/KG	0.00152	NS	**7200U**	**17000U**	**5400U**
ACRYLONITRILE	UG/KG	1.2	NS	**1400U**	**3400U**	**1100U**
AMYL ALCOHOL	UG/KG	NS	NS	28000U	70000U	21000U
BENZENE	UG/KG	142	NS	**360U**	**850U**	**270U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	360U	850U	270U
BROMOFORM	UG/KG	492	NS	360U	**850U**	270U
BROMOMETHANE	UG/KG	1.37	NS	**720U**	**1700U**	**540U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	360U	850U	270U
CHLOROBENZENE	UG/KG	291	NS	**360U**	**850U**	270U
CHLOROETHANE	UG/KG	NS	NS	720U	1700U	540U
CHLOROFORM	UG/KG	121	NS	**360U**	**850U**	**270U**
CHLOROMETHANE	UG/KG	NS	NS	720U	1700U	540U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	360U	850U	270U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	850U	270U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	28000U	70000U	21000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	360U	850U	270U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	28000U	70000U	21000U
ETHANOL	UG/KG	NS	NS	28000U	70000U	21000U
ETHYLBENZENE	UG/KG	175	NS	**360U**	**850U**	**270U**

Table 5-77

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-L5-1-01 (0.5-1 ft. bgs) 04/20/2001
Volatile Organic Constituents						
METHANOL	UG/KG	NS	NS	28000U	70000U	21000U
METHYLENE CHLORIDE	UG/KG	159	NS	**720U**	**1700U**	**540U**
N-BUTYL ETHER	UG/KG	NS	NS	28000U	70000U	21000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	360U	**850U**	270U
TOLUENE	UG/KG	1220	NS	360U	850U	270U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	360U	**850U**	270U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	850U	270U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**360U**	**850U**	**270U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	720U	1700U	540U
VINYL CHLORIDE	UG/KG	202	NS	**360U**	**850U**	**270U**
XYLENES, (TOTAL)	UG/KG	120	NS	**360U**	**850U**	**270U**

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-78

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-K5-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-L5-1-01 (1.5-2 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	**93U**	**230U**	**69U**
1,2-DICHLOROBENZENE	UG/KG	294	NS	**93U**	**230U**	**69U**
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	93U	230U	69U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	**93U**	**230U**	**69U**
1,4-DICHLOROBENZENE	UG/KG	318	NS	**93U**	**230U**	**69U**
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**190U**	**470U**	**140U**
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**190U**	**470U**	**140U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	**190U**	**470U**	**140U**
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1900U**	**4700U**	**1400U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**190U**	**470U**	**410J**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**93U**	**230U**	**180J**
2-CHLORONAPHTHALENE	UG/KG	417	NS	**93U**	**230U**	**69U**
2-CHLOROPHENOL	UG/KG	31.9	NS	**93U**	**230U**	**69U**
2-NITROPHENOL	UG/KG	NS	NS	190U	470U	140U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**190U**	**470U**	**140U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	480U	1200U	350U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	190U	470U	140U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	190U	470U	140U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	93U	230U	69U
4-NITROPHENOL	UG/KG	13.3	NS	**480U**	**1200U**	**350U**
ACENAPHTHENE	UG/KG	6.71	7-20	**93U**	**230U**	**69U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**93U**	**230U**	**69U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**93U**	**230U**	**69U**
BENZIDINE	UG/KG	NS	NS	1900U	4700U	1400U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**93U**	**230U**	**69U**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**93U**	**230U**	**69U**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	**93U**	**230U**	**69U**
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**93U**	**230U**	**69U**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	**93U**	**230U**	**69U**

Table 5-78

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-K5-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-L5-1-01 (1.5-2 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents						
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	**190U**	**470U**	**140U**
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	190U	470U	140U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	**93U**	**230U**	**69U**
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	93U	230U	69U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**560J**	**470U**	**140U**
CHRYSENE	UG/KG	166	6,700-22.500	**93U**	**230U**	**69U**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**190U**	**470U**	**440J**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	190U	470U	140U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**93U**	**230U**	**69U**
DIETHYLPHTHALATE	UG/KG	295	NS	**190U**	**470U**	**370J**
DIMETHYLPHTHALATE	UG/KG	NS	NS	190U	470U	140U
FLUORANTHENE	UG/KG	423	14,900-50,000	**99J**	**230U**	**91J**
FLUORENE	UG/KG	77.4	2,300-7,8000	**93U**	**230U**	**69U**
HEXACHLOROBENZENE	UG/KG	20	24000	**93U**	**230U**	**69U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**190U**	**470U**	**140U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	**480U**	**1200U**	**350U**
HEXACHLOROETHANE	UG/KG	584	NS	**93U**	**230U**	**69U**
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**93U**	**230U**	**69U**
ISOPHORONE	UG/KG	432	NS	**93U**	**230U**	**69U**
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	93U	230U	69U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	190U	470U	140U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	93U	230U	94J
NAPHTHALENE	UG/KG	160	NS	**93U**	**230U**	**69U**
NITROBENZENE	UG/KG	145	NS	**280U**	**700U**	**210U**
PENTACHLOROPHENOL	UG/KG	23000	NS	**480U**	**1200U**	**350U**
PHENANTHRENE	UG/KG	204	13,800-46,000	**93U**	**230U**	**69U**
PHENOL	UG/KG	49.1	48	**190U**	**470U**	**140U**
PYRENE	UG/KG	195	12,400-41,600	**100J**	**230U**	**92J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-79

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-K5-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-L5-1-01 (1.5-2 ft. bgs) 04/20/2001
Total Metals						
ANTIMONY	MG/KG	NS	3	0.64U	**4.5UN**	0.65U
ARSENIC	MG/KG	6	33	2.8	**13.6**	3.3
BERYLLIUM	MG/KG	NS	NS	0.24B	1.1B	0.25B
CADMIUM	MG/KG	0.6	10	0.054U	**1.5B**	0.15B
CHROMIUM, TOTAL	MG/KG	26	110	4.5	20.1B	6.6
COPPER	MG/KG	16	110	14N*	**58.2**	**131N***
LEAD	MG/KG	31	250	**39.9***	**181**	**232***
MERCURY	MG/KG	0.174	2	**0.33**	**1.3**	**0.33**
NICKEL	MG/KG	16	75	2.5B	13.6B	3.8B
SELENIUM	MG/KG	NS	NS	0.63B	4.8B	1.2
SILVER	MG/KG	0.5	NS	0.14U	**0.98U**	0.14U
THALLIUM	MG/KG	NS	NS	0.84U	5.9U	0.85U
ZINC	MG/KG	120	820	80.9*	**372***	118*

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL
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E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-80

Sediment Analytical Results- Duck Ponds and Tributaries Drainage System - Streams - E and E SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-K5-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-L5-1-01 (1.5-2 ft. bgs) 04/20/2001
Energetics and Explosives						
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**280U**	**700U**	**210U**
1,3-DINITROBENZENE	UG/KG	NS	NS	280U	700U	210U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**280U**	**700U**	**210U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**190U**	**470U**	**410J**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**93U**	**230U**	**180J**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
2-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
3-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
4-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**280U**	**700U**	**210U**
NITROBENZENE	UG/KG	145	NS	**280U**	**700U**	**210U**
NITROCELLULOSE	MG/KG	NS	NS	170U	420U	130U
NITROGLYCERIN	UG/KG	NS	NS	5600U	14000U	4200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**280U**	**700U**	**210U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	5600U	14000U	4200U
TETRYL	UG/KG	NS	NS	280U	700U	210U

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B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-81

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Streams - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-J5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-K5-2-01 (1.5-2 ft. bgs) 04/26/2001	SD-L5-1-01 (1.5-2 ft. bgs) 04/20/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	64.6	85.7	52
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.8	2.5	1.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	97.1	87.4	95.8
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	100	99.7	99.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	12.2	6.1	6.3
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	65.6	34.9	55.4
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	44.7	20.5	31.1
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	25.9	11.8	15
TOTAL ORGANIC CARBON	MG/KG	NS	NS	79000	122000	102000

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SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-82

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SD-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SD-L6-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-2-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents											
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**470U**	**450U**	**290U**	140U	**340U**	**280U**	**1500U**	140U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	470U	450U	290U	140U	340U	280U	**1500U**	140U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	470U	450U	290U	140U	340U	280U	**1500U**	140U
1,1-DICHLOROETHANE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**470U**	**450U**	**290U**	**140U**	**340U**	**280U**	**1500U**	**140U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**470U**	**450U**	**290U**	140U	**340U**	**280U**	**1500U**	140U
1,2-DICHLOROPROPANE	UG/KG	333	NS	**470U**	**450U**	290U	140U	**340U**	280U	**1500U**	140U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	940U	900U	580U	280U	690U	560U	3000U	270U
ACROLEIN	UG/KG	0.00152	NS	**9400U**	**9000U**	**5800U**	**2800U**	**6900U**	**5500U**	**30000U**	**2700U**
ACRYLONITRILE	UG/KG	1.2	NS	**1900U**	**1800U**	**1200U**	**560U**	**1400U**	**1100U**	**6000U**	**550U**
AMYL ALCOHOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
BENZENE	UG/KG	142	NS	**470U**	**450U**	**290U**	140U	**340U**	**280U**	**1500U**	140U
BROMODICHLOROMETHANE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
BROMOFORM	UG/KG	492	NS	470U	450U	290U	280U	340U	280U	**1500U**	140U
BROMOMETHANE	UG/KG	1.37	NS	**940U**	**900U**	**580U**	**280U**	**690U**	**560U**	**3000U**	**270U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	470U	450U	290U	140U	340U	280U	**1500U**	140U
CHLOROBENZENE	UG/KG	291	NS	**470U**	**450U**	290U	140U	**340U**	280U	**1500U**	140U
CHLOROETHANE	UG/KG	NS	NS	940U	900U	580U	280U	690U	560U	3000U	270U
CHLOROFORM	UG/KG	121	NS	**470U**	**450U**	**290U**	**140U**	**340U**	**280U**	**1500U**	**140U**
CHLOROMETHANE	UG/KG	NS	NS	940U	900U	580U	280U	690U	560U	3000U	270U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
ETHANOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
ETHYLBENZENE	UG/KG	175	NS	**470U**	**450U**	**290U**	140U	**340U**	**280U**	**1500U**	140U

Table 5-82

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SD-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SD-L6-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-2-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents											
METHANOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
METHYLENE CHLORIDE	UG/KG	159	NS	**940U**	**900U**	**580U**	**280U**	**690U**	**560U**	**3000U**	**270U**
N-BUTYL ETHER	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U	13000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	**470U**	450U	290U	140U	340U	280U	**1500U**	140U
TOLUENE	UG/KG	1220	NS	470U	450U	290U	140U	340U	280U	**1500U**	140U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	470U	450U	290U	140U	340U	280U	**1500U**	140U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	470U	450U	290U	140U	340U	280U	1500U	140U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**470U**	**450U**	**290U**	**140U**	**340U**	**280U**	**1500U**	**140U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	940U	900U	580U	280U	690U	560U	3000U	270U
VINYL CHLORIDE	UG/KG	202	NS	**470U**	**450U**	**290U**	140U	**340U**	**280U**	**1500U**	140U
XYLENES, (TOTAL)	UG/KG	120	NS	**470U**	**450U**	**290U**	**140U**	**340U**	**280U**	**1500U**	**140U**

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SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less th

N = Flashpoint no

B = Indicates that

* = Value obtaine

R = Rejected base

NR = Not Reporte

NS = No Standard

ft. bgs = Feet belc

Table 5-82

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	170U	**560U**	160U	120U	150U	140U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	170U	560U	160U	120U	150U	140U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	170U	**560U**	160U	120U	150U	140U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**170U**	**560U**	**160U**	**120U**	**150U**	**140U**
1,2-DICHLOROETHANE	UG/KG	260	NS	170U	**560U**	160U	120U	150U	140U
1,2-DICHLOROPROPANE	UG/KG	333	NS	170U	**560U**	160U	120U	150U	140U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	340U	1100U	320U	240U	310U	290U
ACROLEIN	UG/KG	0.00152	NS	**3400U**	**11000U**	**3200U**	**2300U**	**3100U**	**2900U**
ACRYLONITRILE	UG/KG	1.2	NS	**670U**	**2200U**	**630U**	**470U**	**620U**	**580U**
AMYL ALCOHOL	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
BENZENE	UG/KG	142	NS	**170U**	**560U**	**160U**	120U	**150U**	140U
BROMODICHLOROMETHANE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
BROMOFORM	UG/KG	492	NS	170U	**560U**	160U	230U	150U	140U
BROMOMETHANE	UG/KG	1.37	NS	**340U**	**1100U**	**320U**	**240U**	**310U**	**290U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	170U	560U	160U	120U	150U	140U
CHLOROBENZENE	UG/KG	291	NS	170U	**560U**	160U	120U	150U	140U
CHLOROETHANE	UG/KG	NS	NS	340U	1100U	320U	240U	310U	290U
CHLOROFORM	UG/KG	121	NS	**170U**	**560U**	**160U**	120U	**150U**	**140U**
CHLOROMETHANE	UG/KG	NS	NS	340U	1100U	320U	240U	310U	290U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
ETHANOL	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
ETHYLBENZENE	UG/KG	175	NS	170U	**560U**	160U	120U	150U	140U

Table 5-82

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents									
METHANOL	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
METHYLENE CHLORIDE	UG/KG	159	NS	**340U**	**1100U**	**320U**	**240U**	**310U**	**290U**
N-BUTYL ETHER	UG/KG	NS	NS	15000U	45000U	13000U	10000U	13000U	13000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170U	**560U**	160U	120U	150U	140U
TOLUENE	UG/KG	1220	NS	170U	560U	160U	120U	150U	140U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	170U	560U	160U	120U	150U	140U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	560U	160U	120U	150U	140U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**170U**	**560U**	**160U**	**120U**	**150U**	**140U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340U	1100U	320U	240U	310U	290U
VINYL CHLORIDE	UG/KG	202	NS	170U	**560U**	160U	120U	150U	140U
XYLENES, (TOTAL)	UG/KG	120	NS	**170U**	**560U**	**160U**	120U	**150U**	**140U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

ıan the practical quantitation limit, but greater than zero

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Table 5-83

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-L5-3-01 (1.5-2 ft. bgs) 04/09/2001	SD-L6-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-M5-1-01 (1-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M5-3-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-1-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-2-01 (1.5-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	140U	130U	77U	33U	100U	67U	390U	42U
1,2-DICHLOROBENZENE	UG/KG	294	NS	140U	130U	77U	33U	100U	67U	**390U**	42U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	140U	130U	77U	33U	100U	67U	390U	42U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	140U	130U	77U	33U	100U	67U	390U	42U
1,4-DICHLOROBENZENE	UG/KG	318	NS	140U	130U	77U	33U	100U	67U	**390U**	42U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**280U**	**270U**	160U	67U	**210U**	140U	**800U**	86U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**280U**	**270U**	**160U**	67U	**210U**	**140U**	**800U**	**86U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	280U	270U	160U	67U	210U	140U	**800U**	86U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**2800U**	**2700U**	**1600U**	**670U**	**2100U**	**1400U**	**8000U**	**860U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**280U**	**270U**	**160U**	**67U**	**210U**	**140U**	**800U**	**86U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**140U**	**130U**	**77U**	33U	**100U**	**67U**	**390U**	**42U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	140U	130U	77U	33U	100U	67U	390U	42U
2-CHLOROPHENOL	UG/KG	31.9	NS	**140U**	**130U**	**77U**	**33U**	**100U**	**67U**	**390U**	**42U**
2-NITROPHENOL	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**280U**	**270U**	**160U**	67U	**210U**	**140U**	**800U**	86U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	710U	690U	400U	170U	530U	340U	2000U	220U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	140U	130U	77U	33U	100U	67U	390U	42U
4-NITROPHENOL	UG/KG	13.3	NS	**710U**	**690U**	**400U**	**170U**	**530U**	**340U**	**2000U**	**220U**
ACENAPHTHENE	UG/KG	6.71	7-20	**140U**	**130U**	**77U**	**33U**	**100U**	**67U**	**390U**	**42U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**140U**	**130U**	**77U**	**33U**	**1000J**	**73J**	**390U**	**42U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**140U**	**130U**	**77U**	33U	**830J**	**67U**	**390U**	42U
BENZIDINE	UG/KG	NS	NS	2800U	2700U	1600U	670U	2100U	1400U	8000U	860U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**180J**	**150J**	77U	48J	**4400**	82J	**390U**	42U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**180J**	**160J**	77U	33U	**5300**	76J	**390U**	46J
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	300J	300J	160J	48J	6500	160J	390U	42U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	140U	**180J**	110J	33U	**1600**	67U	**390U**	42U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	140U	130U	77U	33U	**2500**	67U	**390U**	42U

Table 5-83

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-L5-3-01 (1.5-2 ft. bgs) 04/09/2001	SD-L6-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-M5-1-01 (1-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M5-3-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-1-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-2-01 (1.5-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	280U	270U	160U	67U	210U	140U	800U	86U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	140U	130U	77U	33U	100U	67U	390U	42U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	140U	130U	77U	33U	100U	67U	390U	42U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**280U**	**270U**	160U	**230J**	**210U**	140U	**800U**	86U
CHRYSENE	UG/KG	166	6,700-22.500	**260J**	**230J**	140J	78J	**4200**	110J	**390U**	42U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**280U**	**300J**	**160U**	67U	**400J**	**140U**	**800U**	86U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**140U**	**130U**	**77U**	33U	**510J**	**67U**	**390U**	**42U**
DIETHYLPHTHALATE	UG/KG	295	NS	280U	270U	160U	67U	210U	140U	**800U**	86U
DIMETHYLPHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
FLUORANTHENE	UG/KG	423	14,900-50,000	380J	400J	230J	60J	**4700**	130J	390U	42U
FLUORENE	UG/KG	77.4	2,300-7,8000	**140U**	**130U**	77U	33U	**160J**	67U	**390U**	42U
HEXACHLOROBENZENE	UG/KG	20	24000	**140U**	**130U**	**77U**	**33U**	**100U**	**67U**	**390U**	**42U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**280U**	**270U**	**160U**	**67U**	**210U**	**140U**	**800U**	**86U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	710U	690U	400U	170U	530U	340U	**2000U**	220U
HEXACHLOROETHANE	UG/KG	584	NS	140U	130U	77U	33U	100U	67U	390U	42U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	140U	180J	100J	33U	**2100**	67U	**390U**	42U
ISOPHORONE	UG/KG	432	NS	140U	130U	77U	33U	100U	67U	390U	42U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	140U	130U	77U	33U	100U	67U	390U	42U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	280U	270U	160U	67U	210U	140U	800U	86U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	770J	620J	77U	33U	710J	67U	390U	42U
NAPHTHALENE	UG/KG	160	NS	140U	130U	77U	33U	**260J**	67U	**390U**	42U
NITROBENZENE	UG/KG	145	NS	**420U**	**400U**	**230U**	100U	**310U**	**200U**	**1200U**	130U
PENTACHLOROPHENOL	UG/KG	23000	NS	710U	690U	400U	170U	530U	340U	2000U	220U
PHENANTHRENE	UG/KG	204	13,800-46,000	150J	160J	110J	33U	**580J**	67U	**390U**	42U
PHENOL	UG/KG	49.1	48	**280U**	**270U**	**160U**	**67U**	**210U**	**140U**	**800U**	**86U**
PYRENE	UG/KG	195	12,400-41,600	**370J**	**370J**	180J	53J	**4600**	130J	**390U**	42U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-83

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (1.5-2 ft. bgs) 04/19/2001	SD-M7-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-N5-1-01 (2.5-3 ft. bgs) 04/25/2001	SD-N5-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N5-3-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-5-01 (1.5-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents									
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	51U	150U	41U	33U	42U	45U
1,2-DICHLOROBENZENE	UG/KG	294	NS	51U	150U	41U	33U	42U	45U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	51U	150U	41U	33U	42U	45U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	51U	150U	41U	33U	42U	45U
1,4-DICHLOROBENZENE	UG/KG	318	NS	51U	150U	41U	33U	42U	45U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	100U	**300U**	84U	67U	86U	91U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**100U**	**300U**	**84U**	67U	**86U**	**91U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	100U	300U	84U	67U	86U	91U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1000U**	**3000U**	**840U**	**670U**	**860U**	**910U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**100U**	**300U**	**84U**	**67U**	**470**	**91U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**51U**	**150U**	**41U**	33U	**42U**	**45U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	51U	150U	41U	33U	42U	45U
2-CHLOROPHENOL	UG/KG	31.9	NS	**51U**	**150U**	**41U**	**33U**	**42U**	**45U**
2-NITROPHENOL	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	100U	**300U**	84U	67U	86U	91U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260U	770U	210U	170U	220U	230U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	51U	150U	41U	33U	42U	45U
4-NITROPHENOL	UG/KG	13.3	NS	**260U**	**770U**	**210U**	**170U**	**220U**	**230U**
ACENAPHTHENE	UG/KG	6.71	7-20	**51U**	**150U**	**41U**	**33U**	**42U**	**45U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**51U**	**150U**	**41U**	**33U**	**42U**	**45U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	51U	**150U**	41U	33U	42U	45U
BENZIDINE	UG/KG	NS	NS	1000U	3000U	840U	670U	860U	910U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	51U	**270J**	41U	33U	42U	45U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	51U	**270J**	41U	33U	42U	45U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	51U	540J	41U	33U	42U	45U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	51U	**250J**	41U	33U	42U	45U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	51U	200J	41U	33U	42U	45U

Table 5-83

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (1.5-2 ft. bgs) 04/19/2001	SD-M7-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-N5-1-01 (2.5-3 ft. bgs) 04/25/2001	SD-N5-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N5-3-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-5-01 (1.5-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents									
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	100U	300U	84U	67U	86U	91U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	51U	150U	41U	33U	42U	45U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	51U	150U	41U	33U	42U	45U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	120J	**300U**	84U	**810**	86U	91U
CHRYSENE	UG/KG	166	6,700-22.500	51U	**510J**	41U	33U	42U	45U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	100U	**300U**	84U	67U	**1500**	91U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**51U**	**150U**	**41U**	33U	**42U**	**45U**
DIETHYLPHTHALATE	UG/KG	295	NS	100U	**300U**	84U	67U	86U	91U
DIMETHYLPHTHALATE	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
FLUORANTHENE	UG/KG	423	14,900-50,000	51U	**700J**	41U	41J	42U	45U
FLUORENE	UG/KG	77.4	2,300-7,8000	51U	**150U**	41U	33U	42U	45U
HEXACHLOROBENZENE	UG/KG	20	24000	**51U**	**150U**	**41U**	**33U**	**42U**	**45U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**100U**	**300U**	**84U**	**67U**	**86U**	**91U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	260U	770U	210U	170U	220U	230U
HEXACHLOROETHANE	UG/KG	584	NS	51U	150U	41U	33U	42U	45U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	51U	**260J**	41U	33U	42U	45U
ISOPHORONE	UG/KG	432	NS	51U	150U	41U	33U	42U	45U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	51U	150U	41U	33U	42U	45U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	100U	300U	84U	67U	86U	91U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	51U	150U	41U	35J	140J	45U
NAPHTHALENE	UG/KG	160	NS	51U	150U	41U	33U	42U	45U
NITROBENZENE	UG/KG	145	NS	**150U**	**450U**	130U	99U	130U	130U
PENTACHLOROPHENOL	UG/KG	23000	NS	260U	770U	210U	170U	220U	230U
PHENANTHRENE	UG/KG	204	13,800-46,000	51U	**290J**	41U	33U	42U	45U
PHENOL	UG/KG	49.1	48	**100U**	**300U**	**84U**	**67U**	**86U**	**91U**
PYRENE	UG/KG	195	12,400-41,600	51U	**620J**	41U	34J	42U	45U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-84

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-L5-3-01 (1.5-2 ft. bgs) 04/09/2001	SD-L6-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-M5-1-01 (1-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M5-3-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-1-01 (1.5-2 ft. bgs) 04/19/2002
Total Metals										
ANTIMONY	MG/KG	NS	3	2.7U	3.5B	1.5U	1.2BN	0.65U	0.64U	0.64U
ARSENIC	MG/KG	6	33	**14**	**17.6**	5.5	2.7	3.1	1.7	0.41B
BERYLLIUM	MG/KG	NS	NS	0.81B	0.74B	0.57B	0.73	0.16B	0.12B	0.049B
CADMIUM	MG/KG	0.6	10	**1.5B**	**2.8B**	0.36B	0.079U	0.25B	0.087B	0.054U
CHROMIUM, TOTAL	MG/KG	26	110	19	24.6	14.3	18.6	4.7	3.9B	1.1B
COPPER	MG/KG	16	110	**123**	**171**	**19.2**	**20.4E***	**18.1N***	6.3N*	1.8BN*
LEAD	MG/KG	31	250	**329N**	**498N**	**63.6***	12.6B	**52.6***	26*	3.9B*
MERCURY	MG/KG	0.174	2	**1.4***	**2.9***	0.16BN	0.02B	0.16	0.065B	0.012B
NICKEL	MG/KG	16	75	14.6B	**18.4B**	11.4B	**25.3E**	3.7B	2B	0.84B
SELENIUM	MG/KG	NS	NS	2U	2.1B	1.1U	0.69U	0.65B	0.48U	0.48U
SILVER	MG/KG	0.5	NS	**0.63B**	**1.1B**	0.33U	0.25B	0.22B	0.14U	0.14U
THALLIUM	MG/KG	NS	NS	3.6B	3.4U	2U	2B	0.85U	0.84U	0.84U
ZINC	MG/KG	120	820	**497**	**531**	**129N**	106E	**134***	31.2*	18.6*

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* = Value obtained from a 1:5 dilution
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ft. bgs = Feet below ground surface

Table 5-84

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M6-3-01 (1.5-2 ft. bgs) 04/19/2001	SD-M7-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-N5-1-01 (2.5-3 ft. bgs) 04/25/2001	SD-N5-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N5-3-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-5-01 (1.5-2 ft. bgs) 04/25/2001
Total Metals										
ANTIMONY	MG/KG	NS	3	0.65U	0.64U	3.1B	0.79UN	0.92U	0.88BN	0.85UN
ARSENIC	MG/KG	6	33	2.9	1.4	**9.8**	3.1	5.1	3.9	2.6
BERYLLIUM	MG/KG	NS	NS	0.52	0.27B	1B	0.61B	0.77	0.51B	0.67
CADMIUM	MG/KG	0.6	10	0.055U	0.054U	**1.4B**	0.16B	0.078U	0.15B	0.16B
CHROMIUM, TOTAL	MG/KG	26	110	12.8	8.2	24.3	16.6	19.9	12.1	15
COPPER	MG/KG	16	110	7.3N*	2.8BN*	**55.8**	**18.4**	**26.9**	**18.6**	**16.4**
LEAD	MG/KG	31	250	5.2B*	5.8B*	**288***	5.9B	11.7BEN	9.9B	7.1B
MERCURY	MG/KG	0.174	2	0.011B	0.012B	**0.41BN**	0.014B	0.0093B	0.016B	0.0094B
NICKEL	MG/KG	16	75	7.8	6.1	**18.7B**	10.3	**20.7**	7.4	11.4
SELENIUM	MG/KG	NS	NS	0.48U	0.48U	2.4B	0.59U	0.68U	0.61U	0.63U
SILVER	MG/KG	0.5	NS	0.14U	0.14U	**0.63U**	0.2B	0.2U	0.18U	0.18U
THALLIUM	MG/KG	NS	NS	0.85U	0.84U	3.8U	1U	1.2U	1.1U	1.1U
ZINC	MG/KG	120	820	50.1*	64.4*	**390N**	73.3*	80.1E	95.6*	84.4*

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J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-85

Sediment Analytical Results- Duck Ponds and Tributaries Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-L5-3-01 (1.5-2 ft. bgs) 04/09/2001	SD-L6-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-M5-1-01 (1-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M5-3-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-1-01 (1.5-2 ft. bgs) 04/19/2002
Energetics and Explosives										
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**420U**	**400U**	**230U**	**100U**	**310U**	**200U**	**1200U**
1,3-DINITROBENZENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**420U**	**400U**	**230U**	**100U**	**310U**	**200U**	**1200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**280U**	**270U**	**160U**	**67U**	**210U**	**140U**	**800U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**140U**	**130U**	**77U**	33U	**100U**	**67U**	**390U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
2-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
3-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
4-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**420U**	**400U**	**230U**	**100U**	**310U**	**200U**	**1200U**
NITROBENZENE	UG/KG	145	NS	**420U**	**400U**	**230U**	100U	**310U**	**200U**	**1200U**
NITROCELLULOSE	MG/KG	NS	NS	250U	380J	140U	60U	210J	120U	710U
NITROGLYCERIN	UG/KG	NS	NS	8300U	8100U	4700U	2000U	8800J	4000U	24000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**420U**	**400U**	**230U**	**100U**	**310U**	**200U**	**1200U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	8300U	8100U	4700U	2000U	6300U	4000U	24000U
TETRYL	UG/KG	NS	NS	420U	400U	230U	100U	310U	200U	1200U

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N = Flashpoint not observed, heated to specifc limit
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ft. bgs = Feet below ground surface

Table 5-85

Sediment Analytical Results- Duck Ponds and Tributaries Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M6-3-01 (1.5-2 ft. bgs) 04/19/2001	SD-M7-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-N5-1-01 (2.5-3 ft. bgs) 04/25/2001	SD-N5-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N5-3-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-5-01 (1.5-2 ft. bgs) 04/25/2001
Energetics and Explosives										
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**130U**	**150U**	**450U**	**130U**	**99U**	**130U**	**130U**
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**130U**	**150U**	**450U**	**130U**	**99U**	**130U**	**130U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**86U**	**100U**	**300U**	**84U**	**67U**	**470**	**91U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**42U**	**51U**	**150U**	**41U**	33U	**42U**	**45U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
2-NITROTOLUENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
3-NITROTOLUENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
4-NITROTOLUENE	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**130U**	**150U**	**450U**	**130U**	**99U**	**130U**	**130U**
NITROBENZENE	UG/KG	145	NS	130U	**150U**	**450U**	130U	99U	130U	130U
NITROCELLULOSE	MG/KG	NS	NS	77U	92U	270U	75U	60U	77U	81U
NITROGLYCERIN	UG/KG	NS	NS	2600U	3100U	9000U	2500U	2000U	2500U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**130U**	**150U**	**450U**	**130U**	**99U**	**130U**	**130U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	3100U	9000U	2500U	2000U	2500U	2700U
TETRYL	UG/KG	NS	NS	130U	150U	450U	130U	99U	130U	130U

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ft. bgs = Feet below ground surface

Table 5-86

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-L5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-L5-3-01 (1.5-2 ft. bgs) 04/09/2001	SD-L6-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-M5-1-01 (1-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M5-3-01 (1.5-2 ft. bgs) 04/19/2002	SD-M6-1-01 (1.5-2 ft. bgs) 04/19/2002
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	76	75.2	57.4	30.8	68.2	50.5	91.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.5	14.1	4.9	3.9	5.5	4.3	2.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	98.3	96.2	90.4	86	99.3	99.1	96
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	98.2	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	95.7	100	100	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	10.6	29.7	14.3	9.9	16.3	14.2	6.3
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	63.5	78	69	62.8	87.1	85	32.6
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	41.1	58.4	50.6	42.6	60.3	65.3	19.3
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	22.5	44.3	28.4	21.3	35.5	41.2	11.6
TOTAL ORGANIC CARBON	MG/KG	NS	NS	314000	134000	49000	9900	122000	162000	570000

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* = Value obtained from a 1:5 dilution

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ft. bgs = Feet below ground surface

Table 5-86

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-M6-2-01 (1.5-2 ft. bgs) 04/19/2001	SD-M6-3-01 (1.5-2 ft. bgs) 04/19/2001	SD-M7-1-01 (1.5-2 ft. bgs) 04/05/2001	SD-N5-1-01 (2.5-3 ft. bgs) 04/25/2001	SD-N5-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N5-3-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-5-01 (1.5-2 ft. bgs) 04/25/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	22.2	34.7	77.9	20.4	30.2	21.9	26
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	0.9J	2.8	5.3	3.9	3.4	1.8	2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	65.3	76.4	99.8	83	99.8	91	90.1
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	92.4	95.9	100	93.5	100	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	2.9	8	15.9	9.5	9.6	4.7	6.7
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	37.2	45.9	67.3	54.2	57.9	71.7	55.2
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	17.9	34.5	44.4	32.9	30.2	41.6	34.6
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	7.3	18.2	31	18.9	18.8	15.3	17.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	6000	46800	167000	9200	13600	6300	10000

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ft. bgs = Feet below ground surface

Table 5-87

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-6-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**860U**	160U	**290U**
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	**860U**	160U	290U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	**860U**	160U	290U
1,1-DICHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**860U**	**160U**	**290U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**860U**	160U	**290U**
1,2-DICHLOROPROPANE	UG/KG	333	NS	**860U**	160U	290U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	1700U	330U	570U
ACROLEIN	UG/KG	0.00152	NS	**17000U**	**3300U**	**5700U**
ACRYLONITRILE	UG/KG	1.2	NS	**3500U**	**660U**	**1100U**
AMYL ALCOHOL	UG/KG	NS	NS	63000U	13000U	19000U
BENZENE	UG/KG	142	NS	**860U**	**160U**	**290U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	860U	160U	290U
BROMOFORM	UG/KG	492	NS	**860U**	160U	290U
BROMOMETHANE	UG/KG	1.37	NS	**1700U**	**330U**	**570U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	860U	160U	290U
CHLOROBENZENE	UG/KG	291	NS	**860U**	160U	290U
CHLOROETHANE	UG/KG	NS	NS	1700U	330U	570U
CHLOROFORM	UG/KG	121	NS	**860U**	**160U**	**290U**
CHLOROMETHANE	UG/KG	NS	NS	1700U	330U	570U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	860U	160U	290U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	860U	160U	290U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	63000U	13000U	19000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	860U	160U	290U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	63000U	13000U	19000U
ETHANOL	UG/KG	NS	NS	63000U	13000U	19000U
ETHYLBENZENE	UG/KG	175	NS	**860U**	160U	**290U**

Table 5-87

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-6-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents						
METHANOL	UG/KG	NS	NS	63000U	13000U	19000U
METHYLENE CHLORIDE	UG/KG	159	NS	**1700U**	**330U**	**570U**
N-BUTYL ETHER	UG/KG	NS	NS	63000U	13000U	19000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	**860U**	160U	290U
TOLUENE	UG/KG	1220	NS	860U	160U	290U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	**860U**	160U	290U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	860U	160U	290U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**860U**	**160U**	**290U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	1700U	330U	570U
VINYL CHLORIDE	UG/KG	202	NS	**860U**	160U	**290U**
XYLENES, (TOTAL)	UG/KG	120	NS	**860U**	**160U**	**290U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-88

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-N5-4-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-6-01 (1-1.5 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	210U	43U	64U
1,2-DICHLOROBENZENE	UG/KG	294	NS	210U	43U	64U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	210U	43U	64U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	210U	43U	64U
1,4-DICHLOROBENZENE	UG/KG	318	NS	210U	43U	64U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	**420U**	88U	130U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**420U**	**88U**	**130U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	**420U**	88U	130U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**4200U**	**880U**	**1300U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**420U**	**88U**	**130U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**210U**	**43U**	**64U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	210U	43U	64U
2-CHLOROPHENOL	UG/KG	31.9	NS	**210U**	**43U**	**64U**
2-NITROPHENOL	UG/KG	NS	NS	420U	88U	130U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**420U**	88U	**130U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	1100U	220U	330U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	420U	88U	130U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	420U	88U	130U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	210U	43U	64U
4-NITROPHENOL	UG/KG	13.3	NS	**1100U**	**220U**	**330U**
ACENAPHTHENE	UG/KG	6.71	7-20	**210U**	**43U**	**64U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**210U**	**43U**	**64U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**210U**	43U	**64U**
BENZIDINE	UG/KG	NS	NS	4200U	880U	1300U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**210U**	43U	64U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**210U**	43U	64U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	210U	43U	64U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**210U**	43U	64U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	210U	43U	64U

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-N5-4-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-6-01 (1-1.5 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	420U	88U	130U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	420U	88U	130U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	210U	43U	64U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	210U	43U	64U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**420U**	88U	150J
CHRYSENE	UG/KG	166	6,700-22.500	**210U**	43U	64U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**420U**	88U	**130U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	420U	88U	130U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**210U**	**43U**	**64U**
DIETHYLPHTHALATE	UG/KG	295	NS	**420U**	88U	130U
DIMETHYLPHTHALATE	UG/KG	NS	NS	420U	88U	130U
FLUORANTHENE	UG/KG	423	14,900-50,000	230J	43U	64U
FLUORENE	UG/KG	77.4	2,300-7,8000	**210U**	43U	64U
HEXACHLOROBENZENE	UG/KG	20	24000	**210U**	**43U**	**64U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**420U**	**88U**	**130U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	**1100U**	220U	330U
HEXACHLOROETHANE	UG/KG	584	NS	210U	43U	64U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**210U**	43U	64U
ISOPHORONE	UG/KG	432	NS	210U	43U	64U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	210U	43U	64U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	420U	88U	130U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	210U	43U	64U
NAPHTHALENE	UG/KG	160	NS	**210U**	43U	64U
NITROBENZENE	UG/KG	145	NS	**630U**	130U	**190U**
PENTACHLOROPHENOL	UG/KG	23000	NS	1100U	220U	330U
PHENANTHRENE	UG/KG	204	13,800-46,000	**210U**	43U	64U
PHENOL	UG/KG	49.1	48	**420U**	**88U**	**130U**
PYRENE	UG/KG	195	12,400-41,600	**210U**	43U	64U

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E = Indicates that the concentration exceeded the calibration range of the instrument

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N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

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R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-89

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-N5-4-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-6-01 (1-1.5 ft. bgs) 04/25/2001
Total Metals						
ANTIMONY	MG/KG	NS	3	0.64U	0.85UN	1.2UN
ARSENIC	MG/KG	6	33	1.2	2.9	2.7
BERYLLIUM	MG/KG	NS	NS	0.14B	0.63B	0.29B
CADMIUM	MG/KG	0.6	10	0.091B	0.15B	0.22B
CHROMIUM, TOTAL	MG/KG	26	110	2.5B	14.2	12.3
COPPER	MG/KG	16	110	5.9N*	15.1	15.8
LEAD	MG/KG	31	250	16.5*	6B	26.4
MERCURY	MG/KG	0.174	2	0.12	0.0075B	0.082B
NICKEL	MG/KG	16	75	1.2B	11.3	6.3B
SELENIUM	MG/KG	NS	NS	0.47U	0.63U	1.3B
SILVER	MG/KG	0.5	NS	0.14U	0.19B	0.27U
THALLIUM	MG/KG	NS	NS	0.83U	1.1U	1.6U
ZINC	MG/KG	120	820	23.3*	80.7*	32.8*

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E = Indicates that the concentration exceeded the calibration range of the instrument
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specifc limit
B = Indicates that the compound was found in the associated blank
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-90

Sediment Analytical Results- Duck Ponds and Tributaries Drainage System - Wet Areas - E and E SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-N5-4-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-6-01 (1-1.5 ft. bgs) 04/25/2001
Energetics and Explosives						
1,3,5-TRINITROBENZENE	UG/KG	2	NS	**630U**	**130U**	**190U**
1,3-DINITROBENZENE	UG/KG	NS	NS	630U	130U	190U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	**630U**	**130U**	**190U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**420U**	**88U**	**130U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**210U**	**43U**	**64U**
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
2-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
3-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
4-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	**630U**	**130U**	**190U**
NITROBENZENE	UG/KG	145	NS	**630U**	130U	**190U**
NITROCELLULOSE	MG/KG	NS	NS	380U	79U	120U
NITROGLYCERIN	UG/KG	NS	NS	13000U	2600U	3800U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	**630U**	**130U**	**780U**
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	13000U	2600U	3800U
TETRYL	UG/KG	NS	NS	630U	130U	190U

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-91

Sediment Analytical Results - Duck Ponds and Tributaries Drainage System - Wet Areas - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-J5-1-01 (1.5-2 ft. bgs) 04/19/2001	SD-N5-4-01 (1.5-2 ft. bgs) 04/25/2001	SD-N5-6-01 (1-1.5 ft. bgs) 04/25/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	84.1	23.6	48.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.6	3.4	7.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	89.6	89.1	87.5
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.3	97.7	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.8	10.8	15.7
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	29.2	55.7	63.3
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	17.6	39.3	45.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	10.7	20.6	28.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	344000	10800	98200

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-D11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SD-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SD-M7-2-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents											
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	140U	**270U**	170U	110U	110U	**360U**	**1200U**	120U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	140U	270U	170U	110U	110U	360U	**1200U**	120U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	140U	270U	170U	110U	110U	360U	**1200U**	120U
1,1-DICHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**140U**	**270U**	**170U**	**110U**	**110U**	**360U**	**1200U**	**120U**
1,2-DICHLOROETHANE	UG/KG	260	NS	140U	**270U**	170U	110U	110U	**360U**	**1200U**	120U
1,2-DICHLOROPROPANE	UG/KG	333	NS	140U	270U	170U	110U	110U	**360U**	**1200U**	120U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	290U	530U	330U	230U	230U	720U	2300U	240U
ACROLEIN	UG/KG	0.00152	NS	**2900U**	**5300U**	**3300U**	**2300U**	**2300U**	**7200U**	**23000U**	**2400U**
ACRYLONITRILE	UG/KG	1.2	NS	**570U**	**1100U**	**660U**	**450U**	**460U**	**1400U**	**4600U**	**480U**
AMYL ALCOHOL	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
BENZENE	UG/KG	142	NS	140U	**270U**	**170U**	110U	110U	**360U**	**1200U**	120U
BROMODICHLOROMETHANE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
BROMOFORM	UG/KG	492	NS	140U	270U	170U	230U	230U	360U	**1200U**	240U
BROMOMETHANE	UG/KG	1.37	NS	**290U**	**530U**	**330U**	**230U**	**230U**	**720U**	**2300U**	**240U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	140U	270U	170U	110U	110U	360U	1200U	120U
CHLOROBENZENE	UG/KG	291	NS	140U	270U	170U	110U	110U	**360U**	**1200U**	120U
CHLOROETHANE	UG/KG	NS	NS	290U	530U	330U	230U	230U	720U	2300U	240U
CHLOROFORM	UG/KG	121	NS	**140U**	**270U**	**170U**	110U	110U	**360U**	**1200U**	120U
CHLOROMETHANE	UG/KG	NS	NS	290U	530U	330U	230U	230U	720U	2300U	240U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
ETHANOL	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
ETHYLBENZENE	UG/KG	175	NS	140U	**270U**	170U	110U	110U	**360U**	**1200U**	120U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-D11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SD-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SD-M7-2-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents											
METHANOL	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
METHYLENE CHLORIDE	UG/KG	159	NS	**290U**	**530U**	**330U**	**230U**	**230U**	**720U**	**2300U**	**240U**
N-BUTYL ETHER	UG/KG	NS	NS	13000U	21000U	15000U	10000U	10000U	26000U	84000U	10000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	140U	270U	170U	110U	110U	360U	**1200U**	120U
TOLUENE	UG/KG	1220	NS	140U	270U	170U	110U	110U	360U	1200U	120U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	140U	270U	170U	110U	110U	360U	**1200U**	120U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	270U	170U	110U	110U	360U	1200U	120U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**140U**	**270U**	**170U**	110U	110U	**360U**	**1200U**	**120U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	290U	530U	330U	230U	230U	720U	2300U	240U
VINYL CHLORIDE	UG/KG	202	NS	140U	**270U**	170U	110U	110U	**360U**	**1200U**	120U
XYLENES, (TOTAL)	UG/KG	120	NS	**140U**	**270U**	**170U**	110U	110U	**360U**	**1200U**	120U

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N = Flashpoint not observed, heated to specifc limit

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* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less th

N = Flashpoint no

B = Indicates that

* = Value obtaine

R = Rejected base

NR = Not Reporte

NS = No Standard

ft. bgs = Feet belc

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-3-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-6-01 (0.5-1 ft. bgs) 04/23/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	213	NS	**370U**	120U	130U	170U	120U	190U
1,1,2,2-TETRACHLOROETHANE	UG/KG	850	NS	370U	120U	130U	170U	120U	190U
1,1,2-TRICHLOROETHANE	UG/KG	518	NS	370U	120U	130U	170U	120U	190U
1,1-DICHLOROETHANE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
1,1-DICHLOROETHENE	UG/KG	19.4	NS	**370U**	**120U**	**130U**	**170U**	**120U**	**190U**
1,2-DICHLOROETHANE	UG/KG	260	NS	**370U**	120U	130U	170U	120U	190U
1,2-DICHLOROPROPANE	UG/KG	333	NS	**370U**	120U	130U	170U	120U	190U
2-CHLOROETHYLVINYLETHER	UG/KG	NS	NS	740U	250U	250U	340U	240U	380U
ACROLEIN	UG/KG	0.00152	NS	**7400U**	**2500U**	**2500U**	**3400U**	**2400U**	**3800U**
ACRYLONITRILE	UG/KG	1.2	NS	**1500U**	**490U**	**510U**	**680U**	**490U**	**770U**
AMYL ALCOHOL	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
BENZENE	UG/KG	142	NS	**370U**	120U	130U	**170U**	120U	**190U**
BROMODICHLOROMETHANE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
BROMOFORM	UG/KG	492	NS	370U	250U	250U	340U	240U	190U
BROMOMETHANE	UG/KG	1.37	NS	**740U**	**250U**	**250U**	**340U**	**240U**	**380U**
CARBON TETRACHLORIDE	UG/KG	1450	NS	370U	120U	130U	170U	120U	190U
CHLOROBENZENE	UG/KG	291	NS	**370U**	120U	130U	170U	120U	190U
CHLOROETHANE	UG/KG	NS	NS	740U	250U	250U	340U	240U	380U
CHLOROFORM	UG/KG	121	NS	**370U**	120U	**130U**	**170U**	120U	**190U**
CHLOROMETHANE	UG/KG	NS	NS	740U	250U	250U	340U	240U	380U
cis-1,2-DICHLOROETHENE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
ETHANOL	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
ETHYLBENZENE	UG/KG	175	NS	**370U**	120U	130U	170U	120U	**190U**

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-3-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-6-01 (0.5-1 ft. bgs) 04/23/2001
Volatile Organic Constituents									
METHANOL	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
METHYLENE CHLORIDE	UG/KG	159	NS	**740U**	**250U**	**250U**	**340U**	**240U**	**380U**
N-BUTYL ETHER	UG/KG	NS	NS	30000U	10000U	10000U	10000U	10000U	14000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	370U	120U	130U	170U	120U	190U
TOLUENE	UG/KG	1220	NS	370U	120U	130U	170U	120U	190U
trans-1,2-DICHLOROETHENE	UG/KG	654	NS	370U	120U	130U	170U	120U	190U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	370U	120U	130U	170U	120U	190U
TRICHLOROETHYLENE(TCE)	UG/KG	112	NS	**370U**	**120U**	**130U**	**170U**	**120U**	**190U**
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	740U	250U	250U	340U	240U	380U
VINYL CHLORIDE	UG/KG	202	NS	**370U**	120U	130U	170U	120U	190U
XYLENES, (TOTAL)	UG/KG	120	NS	**370U**	120U	**130U**	**170U**	120U	**190U**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

ıan the practical quantitation limit, but greater than zero

t observed, heated to specifc limit

the compound was found in the associated blank

d from a 1:5 dilution

d on data validation

d

ow ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (1.5-2 ft. bgs) 05/02/2001	SD-D11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-H5-1-01 (1.5-2 ft. bgs) 04/20/2001	SD-K4-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-3-01 (3.5-4 ft. bgs) 04/26/2001	SD-K5-4-01 (3.5-4 ft. bgs) 04/26/2001	SD-M7-2-01 (1-1.5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	44U	69U	50U	33U	33U	86U	280U	33U
1,2-DICHLOROBENZENE	UG/KG	294	NS	44U	69U	50U	33U	33U	86U	280U	33U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	44U	69U	50U	33U	33U	86U	280U	33U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	44U	69U	50U	33U	33U	86U	280U	33U
1,4-DICHLOROBENZENE	UG/KG	318	NS	44U	69U	50U	33U	33U	86U	280U	33U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	89U	140U	100U	67U	67U	170U	**560U**	67U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**89U**	**140U**	**100U**	67U	67U	**170U**	**560U**	67U
2,4-DIMETHYLPHENOL	UG/KG	304	NS	89U	140U	100U	67U	67U	170U	**560U**	67U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**890U**	**1400U**	**1000U**	**670U**	**670U**	**1700U**	**5600U**	**670U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**89U**	**140U**	**100U**	**67U**	**67U**	**170U**	**560U**	**67U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**44U**	**69U**	**50U**	33U	33U	**86U**	**280U**	33U
2-CHLORONAPHTHALENE	UG/KG	417	NS	44U	69U	50U	33U	33U	86U	280U	33U
2-CHLOROPHENOL	UG/KG	31.9	NS	**44U**	**69U**	**50U**	**33U**	**33U**	**86U**	**280U**	**33U**
2-NITROPHENOL	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	89U	**140U**	100U	67U	67U	**170U**	**560U**	67U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	350U	260U	170U	170U	440U	1400U	170U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	44U	69U	50U	33U	33U	86U	280U	33U
4-NITROPHENOL	UG/KG	13.3	NS	**220U**	**350U**	**260U**	**170U**	**170U**	**440U**	**1400U**	**170U**
ACENAPHTHENE	UG/KG	6.71	7-20	**44U**	**69U**	**50J**	**33U**	**33U**	**86U**	**280U**	**33U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**44U**	**69U**	**240J**	**33U**	**33U**	**86U**	**280U**	**33U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	44U	**69U**	**280J**	33U	33U	**86U**	**280U**	33U
BENZIDINE	UG/KG	NS	NS	890U	1400U	1000U	670U	670U	1700U	5600U	670U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	84J	69U	**850**	69J	33U	86U	**280U**	96J
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	68J	69U	**1000**	79J	33U	86U	**280U**	100J
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	150J	450J	1300	120J	35J	86U	280U	160J
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	55J	86J	**770**	51J	33U	86U	**280U**	76J
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	56J	130J	**530**	41J	33U	86U	**280U**	65J

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (1.5-2 ft. bgs) 05/02/2001	SD-D11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-H5-1-01 (1.5-2 ft. bgs) 04/20/2001	SD-K4-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-3-01 (3.5-4 ft. bgs) 04/26/2001	SD-K5-4-01 (3.5-4 ft. bgs) 04/26/2001	SD-M7-2-01 (1-1.5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	89U	140U	100U	67U	67U	170U	560U	67U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	44U	69U	50U	33U	33U	86U	280U	33U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	44U	69U	50U	33U	33U	86U	280U	33U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	140J	140U	**370J**	67U	67U	170U	**560U**	67U
CHRYSENE	UG/KG	166	6,700-22.500	130J	**280J**	**1100**	130J	35J	86U	**280U**	**180J**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	89U	**140U**	100U	67U	67U	**170U**	**3500**	67U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**44U**	**69U**	**210J**	33U	33U	**86U**	**280U**	33U
DIETHYLPHTHALATE	UG/KG	295	NS	89U	140U	100U	67U	67U	170U	**560U**	67U
DIMETHYLPHTHALATE	UG/KG	NS	NS	89U	140U	100U	67U	67U	170U	560U	67U
FLUORANTHENE	UG/KG	423	14,900-50,000	160J	300J	**1700**	180J	45J	86U	280U	140J
FLUORENE	UG/KG	77.4	2,300-7,8000	44U	69U	**100J**	33U	33U	**86U**	**280U**	33U
HEXACHLOROBENZENE	UG/KG	20	24000	**44U**	**69U**	**50U**	**33U**	**33U**	**86U**	**280U**	**33U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**89U**	**140U**	**100U**	**67U**	**67U**	**170U**	**560U**	**67U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	220U	350U	260U	170U	170U	440U	**1400U**	170U
HEXACHLOROETHANE	UG/KG	584	NS	44U	69U	50U	33U	33U	86U	280U	33U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	64J	120J	**800**	53J	33U	86U	**280U**	83J
ISOPHORONE	UG/KG	432	NS	44U	69U	50U	33U	33U	86U	280U	33U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	44U	69U	50U	33U	33U	86U	280U	33U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	220U	350U	100U	67U	67U	170U	560U	67U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	44U	76J	50U	33U	33U	86U	280U	83J
NAPHTHALENE	UG/KG	160	NS	44U	69U	50U	33U	33U	86U	**280U**	33U
NITROBENZENE	UG/KG	145	NS	130U	**210U**	**150U**	100U	100U	**260U**	**830U**	100U
PENTACHLOROPHENOL	UG/KG	23000	NS	220U	350U	260U	170U	170U	440U	1400U	170U
PHENANTHRENE	UG/KG	204	13,800-46,000	62J	170J	**870**	150J	36J	86U	**280U**	99J
PHENOL	UG/KG	49.1	48	**89U**	**140U**	**100U**	**67U**	**67U**	**170U**	**560U**	**67U**
PYRENE	UG/KG	195	12,400-41,600	150J	150J	**2000**	170J	37J	86U	**280U**	150J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-3-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-4-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-5-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-6-01 (1.5-2 ft. bgs) 04/23/2001	SD-N7-7-01 (1.5-2 ft. bgs) 04/24/2001	SD-O4-1-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	97U	33U	33U	33U	33U	46U	33U	56U
1,2-DICHLOROBENZENE	UG/KG	294	NS	97U	33U	33U	33U	33U	46U	33U	56U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	97U	33U	33U	33U	33U	46U	33U	56U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	97U	33U	33U	33U	33U	46U	33U	56U
1,4-DICHLOROBENZENE	UG/KG	318	NS	97U	33U	33U	33U	33U	46U	33U	56U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	200U	67U	67U	67U	67U	93U	67U	110U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**200U**	67U	67U	67U	67U	**93U**	67U	**110U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	200U	67U	67U	67U	67U	93U	67U	110U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**2000U**	**670U**	**670U**	**670U**	**670U**	**930U**	**670U**	**1100U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**200U**	**67U**	**67U**	**67U**	**67U**	**93U**	**67U**	**110U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**97U**	33U	33U	33U	33U	**46U**	33U	**56U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	97U	33U	33U	33U	33U	46U	33U	56U
2-CHLOROPHENOL	UG/KG	31.9	NS	**97U**	**33U**	**33U**	**33U**	**33U**	**46U**	**33U**	**56U**
2-NITROPHENOL	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	**200U**	67U	67U	67U	67U	93U	67U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	500U	170U	170U	170U	170U	240U	170U	290U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	97U	33U	33U	33U	33U	46U	33U	56U
4-NITROPHENOL	UG/KG	13.3	NS	**500U**	**170U**	**170U**	**170U**	**170U**	**240U**	**170U**	**290U**
ACENAPHTHENE	UG/KG	6.71	7-20	**3300**	**33U**	**33U**	**33U**	**36J**	**46U**	**33U**	**56U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**8400**	**33U**	**33U**	**33U**	**1600**	**170J**	**33U**	**56U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	**16000**	33U	33U	33U	**1300**	**150J**	33U	56U
BENZIDINE	UG/KG	NS	NS	2000U	670U	670U	670U	670U	930U	670U	1100U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	**48000**	33U	43J	33U	**7000**	**730**	33U	56U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	**39000**	33U	81J	34J	**6700**	**570**	33U	56U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	**84000**	33U	120J	60J	**13000**	1300	36J	56U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	**11000**	33U	66J	33U	**2200**	83J	33U	56U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	**31000**	33U	34J	33U	**4700**	**550**	33U	56U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-3-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-4-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-5-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-6-01 (1.5-2 ft. bgs) 04/23/2001	SD-N7-7-01 (1.5-2 ft. bgs) 04/24/2001	SD-O4-1-01 (1.5-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	200U	67U	67U	67U	67U	93U	67U	110U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	97U	33U	33U	33U	33U	46U	33U	56U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	97U	33U	33U	33U	33U	46U	33U	56U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	**300J**	67U	67U	92J	82J	93U	67U	110U
CHRYSENE	UG/KG	166	6,700-22.500	**68000**	33U	83J	48J	**9300**	**880**	33U	56U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	**200U**	67U	67U	67U	67U	93U	67U	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**5000**	33U	**39J**	33U	**950**	**46U**	33U	**56U**
DIETHYLPHTHALATE	UG/KG	295	NS	200U	67U	67U	67U	67U	93U	67U	110U
DIMETHYLPHTHALATE	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
FLUORANTHENE	UG/KG	423	14,900-50,000	**59000**	33U	91J	65J	**5300**	**710**	45J	56U
FLUORENE	UG/KG	77.4	2,300-7,8000	**3400**	33U	33U	33U	75J	46U	33U	56U
HEXACHLOROBENZENE	UG/KG	20	24000	**97U**	**33U**	**33U**	**33U**	**33U**	**46U**	**33U**	**56U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**200U**	**67U**	**67U**	**67U**	**67U**	**93U**	**67U**	**110U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	500U	170U	170U	170U	170U	240U	170U	290U
HEXACHLOROETHANE	UG/KG	584	NS	97U	33U	33U	33U	33U	46U	33U	56U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	**16000**	33U	60J	33U	**3100**	130J	33U	56U
ISOPHORONE	UG/KG	432	NS	97U	33U	33U	33U	33U	46U	33U	56U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	97U	33U	33U	33U	33U	46U	33U	56U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	200U	67U	67U	67U	67U	93U	67U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	1000	33U	33U	33U	1200	46U	33U	56U
NAPHTHALENE	UG/KG	160	NS	**3400**	33U	33U	33U	33U	46U	33U	56U
NITROBENZENE	UG/KG	145	NS	**290U**	100U	100U	100U	100U	140U	100U	**170U**
PENTACHLOROPHENOL	UG/KG	23000	NS	500U	170U	170U	170U	170U	240U	170U	290U
PHENANTHRENE	UG/KG	204	13,800-46,000	**11000**	33U	49J	33U	**440**	50J	33U	56U
PHENOL	UG/KG	49.1	48	**200U**	**67U**	**67U**	**67U**	**67U**	**93U**	**67U**	**110U**
PYRENE	UG/KG	195	12,400-41,600	**78000**	33U	84J	66J	**9900**	**1200**	40J	56U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-10-01 (1-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-3-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-4-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-5-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-6-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-7-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-8-01 (1.5-2 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents											
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	50U	84U	91U	73U	53U	85U	110U	190U
1,2-DICHLOROBENZENE	UG/KG	294	NS	50U	84U	91U	73U	53U	85U	110U	190U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	50U	84U	91U	73U	53U	85U	110U	190U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	50U	84U	91U	73U	53U	85U	110U	190U
1,4-DICHLOROBENZENE	UG/KG	318	NS	50U	84U	91U	73U	53U	85U	110U	190U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	100U	170U	180U	150U	110U	170U	**230U**	**380U**
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**100U**	**170U**	**180U**	**150U**	**110U**	**170U**	**230U**	**380U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	100U	170U	180U	150U	110U	170U	230U	**380U**
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1000U**	**1700U**	**1800U**	**1500U**	**1100U**	**1700U**	**2300U**	**3800U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**100U**	**170U**	**180U**	**150U**	**110U**	**170U**	**230U**	**380U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	50U	84U	91U	73U	53U	85U	110U	190U
2-CHLOROPHENOL	UG/KG	31.9	NS	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
2-NITROPHENOL	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	100U	**170U**	**180U**	**150U**	110U	**170U**	**230U**	**380U**
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260U	430U	470U	380U	270U	440U	580U	970U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	50U	84U	91U	73U	53U	85U	110U	190U
4-NITROPHENOL	UG/KG	13.3	NS	**260U**	**430U**	**470U**	**380U**	**270U**	**440U**	**580U**	**970U**
ACENAPHTHENE	UG/KG	6.71	7-20	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	50U	**84U**	**91U**	**73U**	53U	**85U**	**110U**	**190U**
BENZIDINE	UG/KG	NS	NS	1000U	1700U	1800U	1500U	1100U	1700U	2300U	3800U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	50U	84U	91U	73U	53U	85U	**110U**	**190U**
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	50U	84U	91U	73U	53U	85U	110U	**190U**
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	50U	84U	93J	73U	53U	85U	110U	190U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	50U	84U	91U	73U	53U	85U	110U	**190U**
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	50U	84U	91U	73U	53U	85U	110U	190U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-10-01 (1-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-3-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-4-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-5-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-6-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-7-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-8-01 (1.5-2 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents											
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	100U	170U	180U	150U	110U	170U	230U	380U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	50U	84U	91U	73U	53U	85U	110U	190U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	50U	84U	91U	73U	53U	85U	110U	190U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	100U	170UJ	180U	150U	110U	170U	**230U**	**380U**
CHRYSENE	UG/KG	166	6,700-22.500	50U	110J	130J	73U	53U	85U	110U	**190U**
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	100U	**170U**	**180U**	**150U**	110U	**170U**	**230U**	**380U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
DIETHYLPHTHALATE	UG/KG	295	NS	100U	170U	180U	150U	110U	170U	230U	**380U**
DIMETHYLPHTHALATE	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
FLUORANTHENE	UG/KG	423	14,900-50,000	50U	100J	150J	98J	53U	85U	110U	190U
FLUORENE	UG/KG	77.4	2,300-7,8000	50U	**84U**	**91U**	73U	53U	**85U**	**110U**	**190U**
HEXACHLOROBENZENE	UG/KG	20	24000	**50U**	**84U**	**91U**	**73U**	**53U**	**85U**	**110U**	**190U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**100U**	**170U**	**180U**	**150U**	**110U**	**170U**	**230U**	**380U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	260U	430U	470U	380U	270U	440U	580U	**970U**
HEXACHLOROETHANE	UG/KG	584	NS	50U	84U	91U	73U	53U	85U	110U	190U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	50U	84U	91U	73U	53U	85U	110U	190U
ISOPHORONE	UG/KG	432	NS	50U	84U	91U	73U	53U	85U	110U	190U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	50U	84U	91U	73U	53U	85U	110U	190U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	100U	170U	180U	150U	110U	170U	230U	380U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	50U	84U	91U	73U	53U	85U	110U	190U
NAPHTHALENE	UG/KG	160	NS	50U	84U	91U	73U	53U	85U	110U	**190U**
NITROBENZENE	UG/KG	145	NS	**150U**	**260U**	**280U**	**220U**	**160U**	**260U**	**340U**	**570U**
PENTACHLOROPHENOL	UG/KG	23000	NS	260U	430U	470U	380U	270U	440U	580U	970U
PHENANTHRENE	UG/KG	204	13,800-46,000	50U	130J	200J	120J	53U	85U	110U	190U
PHENOL	UG/KG	49.1	48	**100U**	**170U**	**180U**	**150U**	**110U**	**170U**	**230U**	**380U**
PYRENE	UG/KG	195	12,400-41,600	50U	93J	110J	73U	53U	85U	110U	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the practical quantitaion limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (1.5-2 ft. bgs) 04/06/2001	SD-O5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	5062	NS	55U	57U	59U	84U	61U
1,2-DICHLOROBENZENE	UG/KG	294	NS	55U	57U	59U	84U	61U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	55U	57U	59U	84U	61U
1,3-DICHLOROBENZENE	UG/KG	1315	NS	55U	57U	59U	84U	61U
1,4-DICHLOROBENZENE	UG/KG	318	NS	55U	57U	59U	84U	61U
2,4,6-TRICHLOROPHENOL	UG/KG	208	NS	110U	120U	120U	170U	120U
2,4-DICHLOROPHENOL	UG/KG	81.7	NS	**110U**	**120U**	**120U**	**170U**	**120U**
2,4-DIMETHYLPHENOL	UG/KG	304	NS	110U	120U	120U	170U	120U
2,4-DINITROPHENOL	UG/KG	6.21	NS	**1100U**	**1200U**	**1200U**	**1700U**	**1200U**
2,4-DINITROTOLUENE	UG/KG	14.4	NS	**110U**	**120U**	**120U**	**170U**	**120U**
2,6-DINITROTOLUENE	UG/KG	39.8	NS	**55U**	**57U**	**59U**	**84U**	**61U**
2-CHLORONAPHTHALENE	UG/KG	417	NS	55U	57U	59U	84U	61U
2-CHLOROPHENOL	UG/KG	31.9	NS	**55U**	**57U**	**59U**	**84U**	**61U**
2-NITROPHENOL	UG/KG	NS	NS	110U	120U	120U	170U	120U
3,3-DICHLOROBENZIDINE	UG/KG	127	NS	110U	120U	120U	**170U**	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	280U	290U	300U	430U	320U
4-BROMOPHENYL-PHENYLETHER	UG/KG	NS	NS	110U	120U	120U	170U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	110U	120U	120U	170U	120U
4-CHLOROPHENYL-PHENYLETHER	UG/KG	NS	NS	55U	57U	59U	84U	61U
4-NITROPHENOL	UG/KG	13.3	NS	**280U**	**290U**	**300U**	**430U**	**320U**
ACENAPHTHENE	UG/KG	6.71	7-20	**55U**	**57U**	**59U**	**84U**	**61U**
ACENAPHTHYLENE	UG/KG	5.87	9-30	**55U**	**57U**	**59U**	**84U**	**61U**
ANTHRACENE	UG/KG	57.2	5,400-18,100	55U	57U	**59U**	**84U**	**61U**
BENZIDINE	UG/KG	NS	NS	1100U	1200U	1200U	1700U	1200U
BENZO(a)ANTHRACENE	UG/KG	108	21,600-72,500	55U	57U	59U	84U	61U
BENZO(a)PYRENE	UG/KG	150	21,000-70,500	55U	57U	59U	84U	61U
BENZO(b)FLUORANTHENE	UG/KG	10400	22,600-88,200	55U	57U	59U	84U	61U
BENZO(g,h,i)PERYLENE	UG/KG	170	4,700-15,700	55U	57U	59U	84U	61U
BENZO(k)FLUORANTHENE	UG/KG	240	19,500-65,600	55U	57U	59U	84U	61U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (1.5-2 ft. bgs) 04/06/2001	SD-O5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
BUTYLBENZYLPHTHALATE	UG/KG	1970	NS	110U	120U	120U	170U	120U
bis(2-CHLOROETHOXY)METHANE	UG/KG	NS	NS	110U	120U	120U	170U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROET	UG/KG	3520	NS	55U	57U	59U	84U	61U
bis(2-CHLOROISOPROPYL)ETHER	UG/KG	NS	NS	55U	57U	59U	84U	61U
bis(2-ETHYLHEXYL)PHTHALATE	UG/KG	182	750	110U	120U	120U	170U	120U
CHRYSENE	UG/KG	166	6,700-22.500	55U	57U	59U	84U	61U
DI-n-BUTYLPHTHALATE	UG/KG	1114	110	110U	**120U**	**120U**	**170U**	**120U**
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	110U	120U	120U	170U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	33	130000	**55U**	**57U**	**59U**	**84U**	**61U**
DIETHYLPHTHALATE	UG/KG	295	NS	110U	120U	120U	170U	120U
DIMETHYLPHTHALATE	UG/KG	NS	NS	110U	120U	120U	170U	120U
FLUORANTHENE	UG/KG	423	14,900-50,000	55U	57U	66J	84U	61U
FLUORENE	UG/KG	77.4	2,300-7,8000	55U	57U	59U	**84U**	61U
HEXACHLOROBENZENE	UG/KG	20	24000	**55U**	**57U**	**59U**	**84U**	**61U**
HEXACHLOROBUTADIENE	UG/KG	26.5	NS	**110U**	**120U**	**120U**	**170U**	**120U**
HEXACHLOROCYCLOPENTADIENE	UG/KG	901	NS	280U	290U	300U	430U	320U
HEXACHLOROETHANE	UG/KG	584	NS	55U	57U	59U	84U	61U
INDENO(1,2,3-c,d)PYRENE	UG/KG	200	4,700-15,700	55U	57U	59U	84U	61U
ISOPHORONE	UG/KG	432	NS	55U	57U	59U	84U	61U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	55U	57U	59U	84U	61U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	110U	120U	120U	170U	120U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	55U	57U	59U	84U	61U
NAPHTHALENE	UG/KG	160	NS	55U	57U	59U	84U	61U
NITROBENZENE	UG/KG	145	NS	**170U**	**170U**	**180U**	**250U**	**190U**
PENTACHLOROPHENOL	UG/KG	23000	NS	280U	290U	300U	430U	320U
PHENANTHRENE	UG/KG	204	13,800-46,000	55U	57U	59U	84U	61U
PHENOL	UG/KG	49.1	48	**110U**	**120U**	**120U**	**170U**	**120U**
PYRENE	UG/KG	195	12,400-41,600	55U	57U	62J	84U	61U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Departmen of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specifc limit

B = Indicates that the compound was found in the associated blank

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (1.5-2 ft. bgs) 05/02/2001	SD-D11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-H5-1-01 (1.5-2 ft. bgs) 04/20/2001	SD-K4-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-3-01 (3.5-4 ft. bgs) 04/26/2001	SD-K5-4-01 (3.5-4 ft. bgs) 04/26/2001	SD-M7-2-01 (1-1.5 ft. bgs) 04/24/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	0.85UN	**8.7BN**	0.63U	1.5U	1.1U	1.7UN	**8BN**	1.1U
ARSENIC	MG/KG	6	33	**8.2**	**9.8**	3.3	**8**	2.1	2.3B	**9.5**	4.8
BERYLLIUM	MG/KG	NS	NS	0.16B	0.14B	0.81	1.4	0.57B	0.49B	0.57B	0.17B
CADMIUM	MG/KG	0.6	10	0.072U	0.49B	0.077B	0.38B	0.16B	0.23B	**10.4B**	0.58B
CHROMIUM, TOTAL	MG/KG	26	110	24.6N*	4.4B	19.6	15.6	8.1	6B	**120**	11.2
COPPER	MG/KG	16	110	11.3EN	13.2	**30.1N***	**23.2**	8.7	**35.4**	**180**	**103**
LEAD	MG/KG	31	250	**1350**	**85300**	**169***	**177EN***	**31.5EN***	**77.6**	**402**	**1230EN***
MERCURY	MG/KG	0.174	2	0.099B	**1.4**	0.071B	**0.21B**	0.069B	0.17B	**16**	**2.7**
NICKEL	MG/KG	16	75	5.6B	3.7B	13.4	11.3B	4.8B	3.1B	15.2B	13.8
SELENIUM	MG/KG	NS	NS	0.67B	0.98U	0.55B	2B	0.82U	1.2U	4U	0.85U
SILVER	MG/KG	0.5	NS	0.18U	0.42B	0.14U	0.32U	0.24U	0.36U	**1.2U**	0.25U
THALLIUM	MG/KG	NS	NS	1.1U	3.4B	0.83U	1.9U	1.5U	2.2U	7U	1.5U
ZINC	MG/KG	120	820	67.4N	94.9*	**144***	**122E**	52E	64*	**4010***	**274E**

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Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-3-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-4-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-5-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-6-01 (1.5-2 ft. bgs) 04/23/2001	SD-N7-7-01 (1.5-2 ft. bgs) 04/24/2001	SD-O4-1-01 (1.5-2 ft. bgs) 04/04/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	0.68B	1.2U	1.3U	1.2U	1.2U	0.65U	1.5U	1.1U
ARSENIC	MG/KG	6	33	**29.4**	1.4B	**6.1**	1.7B	**7.6**	4.4	3.3	2.3
BERYLLIUM	MG/KG	NS	NS	0.16B	0.29B	0.74B	0.4B	0.77B	0.58	1B	1
CADMIUM	MG/KG	0.6	10	0.2B	0.1U	0.11U	0.098U	**2.7B**	0.055U	0.12U	0.18B
CHROMIUM, TOTAL	MG/KG	26	110	7.5	9.7	19.7	7B	17.9	13.2	13.2	11.2
COPPER	MG/KG	16	110	**25.5N***	6.6B	**44.2**	5.4B	**32.5**	12.8N*	**18**	**21.5**
LEAD	MG/KG	31	250	**34.3***	27.5EN*	**228EN***	**31.7EN***	**84.6EN***	14.3*	**34.9EN***	19.2*
MERCURY	MG/KG	0.174	2	**0.23**	0.07B	**0.35**	0.083B	**0.19**	0.044B	0.14B	0.057BN
NICKEL	MG/KG	16	75	7.6	4.2B	**20.2**	3.2B	11	8.6	9.1B	7.3B
SELENIUM	MG/KG	NS	NS	0.55B	0.88U	1.5B	0.85U	0.92B	0.92B	1.1U	0.94B
SILVER	MG/KG	0.5	NS	0.14U	0.26U	0.27U	0.25U	0.26U	0.14U	0.32U	0.23U
THALLIUM	MG/KG	NS	NS	0.85U	1.6U	1.7U	1.5U	1.6U	0.85U	1.9U	1.4U
ZINC	MG/KG	120	820	**308***	36E	**293E**	31.2E	**273E**	49.1*	71E	57.8N

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Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-10-01 (1-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-3-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-4-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-5-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-6-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-7-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-8-01 (1.5-2 ft. bgs) 04/09/2001
Total Metals											
ANTIMONY	MG/KG	NS	3	0.97U	1.6U	1.8U	1.4U	1U	1.7U	2.2U	**3.7U**
ARSENIC	MG/KG	6	33	1.1B	4.9	**7.6**	4.3	**9.2**	2.2B	1.7B	2.8B
BERYLLIUM	MG/KG	NS	NS	0.41B	1.5	0.92B	1.1B	0.87	0.63B	0.91B	0.65B
CADMIUM	MG/KG	0.6	10	0.082U	**0.73B**	0.35B	0.21B	0.087U	0.24B	0.38B	0.31U
CHROMIUM, TOTAL	MG/KG	26	110	15.1	20.5	15.7	17.1	23.9	9.7B	8B	6.3B
COPPER	MG/KG	16	110	0.22UB	**65.6**	**67.3**	**47.9**	**23.5**	**16.1**	**30.7**	**26.5**
LEAD	MG/KG	31	250	14.2B*	**60***	**54.6***	28.6*	15B*	26.5*	20.2BN	**65.7N**
MERCURY	MG/KG	0.174	2	0.064BN	0.14BN	0.082BN	0.049BN	0.018BN	0.052BN	0.16B*	**0.24B***
NICKEL	MG/KG	16	75	6.3B	12.9	12.4B	11B	13.8	**21.4**	7.7B	6.9B
SELENIUM	MG/KG	NS	NS	0.72U	1.9B	1.4B	1.1U	0.76U	1.2U	1.6U	2.7U
SILVER	MG/KG	0.5	NS	0.21U	0.35U	0.39U	0.31U	0.22U	0.36U	0.48U	**0.8U**
THALLIUM	MG/KG	NS	NS	1.3U	2.1U	2.3U	1.9U	1.3U	2.2U	2.9U	4.8U
ZINC	MG/KG	120	820	26.5N	**127N**	116N	96.4N	107N	30.6N	35.3	53.9B

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Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (1.5-2 ft. bgs) 04/06/2001	SD-O5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Total Metals								
ANTIMONY	MG/KG	NS	3	1.1U	1.1UN	1.2U	0.65U	0.64U
ARSENIC	MG/KG	6	33	1.8	2.2	1.2B	1.1	0.64B
BERYLLIUM	MG/KG	NS	NS	0.57B	1.1	0.49B	0.12B	0.19B
CADMIUM	MG/KG	0.6	10	0.09U	**0.61B**	0.14B	0.15B	0.096B
CHROMIUM, TOTAL	MG/KG	26	110	22.2	**33.3**	8.2	2B	3.1B
COPPER	MG/KG	16	110	10.3	15.1	7.8	4.8N*	3.6BN*
LEAD	MG/KG	31	250	23.2*	24.3	29N	20.2*	14.6*
MERCURY	MG/KG	0.174	2	0.065BN	0.038B	0.071B*	0.046B	0.034B
NICKEL	MG/KG	16	75	8.8	**17.7E**	3.7B	1.7B	1.8B
SELENIUM	MG/KG	NS	NS	0.79U	0.82U	0.86U	0.84B	0.47U
SILVER	MG/KG	0.5	NS	0.23U	0.24U	0.25U	0.14U	0.14U
THALLIUM	MG/KG	NS	NS	1.4U	1.5U	1.5U	0.85U	0.83U
ZINC	MG/KG	120	820	42.7N	75.8	24.8	10.6*	11.7*

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Sediment Analytical Results- Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (1.5-2 ft. bgs) 05/02/2001	SD-D11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-H5-1-01 (1.5-2 ft. bgs) 04/20/2001	SD-K4-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-3-01 (3.5-4 ft. bgs) 04/26/2001
Energetics and Explosives									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	130U	210U	150U	100U	100U	260U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	130U	210U	150U	100U	100U	260U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	89U	140U	100U	67U	67U	170U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	44U	69U	50U	33U	33U	86U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
2-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
3-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
4-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	130U	210U	150U	100U	100U	260U
NITROBENZENE	UG/KG	145	NS	130U	210U	150U	100U	100U	260U
NITROCELLULOSE	MG/KG	NS	NS	79U	130U	90U	60U	60U	160U
NITROGLYCERIN	UG/KG	NS	NS	2600U	4200U	3000U	2000U	2000U	5100U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	130U	210U	150U	100U	100U	260U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	4200U	3000U	2000U	2000U	5100U
TETRYL	UG/KG	NS	NS	130U	210U	150U	100U	100U	260U

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Table 5-101

Sediment Analytical Results- Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-4-01 (3.5-4 ft. bgs) 04/26/2001	SD-M7-2-01 (1-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-3-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-4-01 (1.5-2 ft. bgs) 04/24/2001
Energetics and Explosives									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	830U	100U	290U	100U	100U	100U
1,3-DINITROBENZENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	830U	100U	290U	100U	100U	100U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	560U	67U	200U	67U	67U	67U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	280U	33U	97U	33U	33U	33U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
2-NITROTOLUENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
3-NITROTOLUENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
4-NITROTOLUENE	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	830U	100U	290U	100U	100U	100U
NITROBENZENE	UG/KG	145	NS	830U	100U	290U	100U	100U	100U
NITROCELLULOSE	MG/KG	NS	NS	500U	60U	180U	60U	60U	60U
NITROGLYCERIN	UG/KG	NS	NS	17000U	2000U	9000J	2000U	2000U	2000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	830U	100U	400J	100U	100U	100U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	17000U	2000U	5900U	2000U	2000U	2000U
TETRYL	UG/KG	NS	NS	830U	100U	290U	100U	100U	100U

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SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-5-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-6-01 (1.5-2 ft. bgs) 04/23/2001	SD-N7-7-01 (1.5-2 ft. bgs) 04/24/2001	SD-O4-1-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-10-01 (1-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (1.5-2 ft. bgs) 04/04/2001
Energetics and Explosives									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	100U	140U	100U	170U	150U	260U
1,3-DINITROBENZENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	100U	140U	100U	170U	150U	260U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	67U	93U	67U	110U	100U	170U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	33U	46U	33U	56U	50U	84U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
2-NITROTOLUENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
3-NITROTOLUENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
4-NITROTOLUENE	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	100U	140U	100U	170U	150U	260U
NITROBENZENE	UG/KG	145	NS	100U	140U	100U	170U	150U	260U
NITROCELLULOSE	MG/KG	NS	NS	60U	83U	60U	100U	90U	150U
NITROGLYCERIN	UG/KG	NS	NS	2000U	2800U	2000U	3400U	3000U	5100U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	100U	140U	100U	170U	150U	260U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2800U	2000U	3400U	3000U	5100U
TETRYL	UG/KG	NS	NS	100U	140U	100U	170U	150U	260U

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SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-3-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-4-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-5-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-6-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-7-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-8-01 (1.5-2 ft. bgs) 04/09/2001
Energetics and Explosives									
1,3,5-TRINITROBENZENE	UG/KG	2	NS	280U	220U	160U	260U	340U	570U
1,3-DINITROBENZENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	280U	220U	160U	260U	340U	570U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	180U	150U	110U	170U	230U	380U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	91U	73U	53U	85U	110U	190U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
2-NITROTOLUENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
3-NITROTOLUENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
4-NITROTOLUENE	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	280U	220U	160U	260U	340U	570U
NITROBENZENE	UG/KG	145	NS	280U	220U	160U	260U	340U	570U
NITROCELLULOSE	MG/KG	NS	NS	170U	130U	96U	150U	200U	340U
NITROGLYCERIN	UG/KG	NS	NS	5500U	4500U	3200U	5100U	6800U	11000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	280U	220U	160U	260U	340U	570U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	5500U	4500U	3200U	5100U	6800U	11000U
TETRYL	UG/KG	NS	NS	280U	220U	160U	260U	340U	570U

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Table 5-101

Sediment Analytical Results- Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (1.5-2 ft. bgs) 04/06/2001	SD-O5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Energetics and Explosives								
1,3,5-TRINITROBENZENE	UG/KG	2	NS	170U	170U	180U	250U	190U
1,3-DINITROBENZENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
2,4,6-TRINITROTOLUENE	UG/KG	92	NS	170U	170U	180U	250U	190U
2,4-DINITROTOLUENE	UG/KG	14.4	NS	110U	120U	120U	170U	120U
2,6-DINITROTOLUENE	UG/KG	39.8	NS	55U	57U	59U	84U	61U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
2-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
3-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
4-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	250U	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	13	NS	170U	170U	180U	250U	190U
NITROBENZENE	UG/KG	145	NS	170U	170U	180U	250U	190U
NITROCELLULOSE	MG/KG	NS	NS	100U	100U	110U	150U	110U
NITROGLYCERIN	UG/KG	NS	NS	3300U	3500U	3600U	5100U	3700U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	6	NS	170U	170U	180U	250U	190U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3300U	3500U	3600U	5100U	3700U
TETRYL	UG/KG	NS	NS	170U	170U	180U	250U	190U

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Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-C11-4-01 (1.5-2 ft. bgs) 05/02/2001	SD-D11-2-01 (1.5-2 ft. bgs) 05/02/2001	SD-H5-1-01 (1.5-2 ft. bgs) 04/20/2001	SD-K4-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-K5-3-01 (3.5-4 ft. bgs) 04/26/2001	SD-K5-4-01 (3.5-4 ft. bgs) 04/26/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	24.4	52.1	33.7	56.1	42.6	61.5	88
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.2	0.9J	2.5	2.2	9	3.3	2.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	92.2	86.1	66.4	99.2	99.3	93.2	79.3
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.8	99.8	100	99.6	100	99.9	95.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.2	3.9	8.4	7.8	21.4	7.9	6.5
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	67.1	49.9	33.1	88.9	76.9	46.7	38
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	45.5	26.8	23.4	46.2	57.5	29.2	22.7
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	20.6	12.3	15.7	20.3	37.2	16.3	13.2
TOTAL ORGANIC CARBON	MG/KG	NS	NS	12400	53500	29500	90700	41400	169000	361000

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Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-M7-2-01 (1-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-2-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-3-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-4-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-5-01 (1.5-2 ft. bgs) 04/24/2001	SD-N7-6-01 (1.5-2 ft. bgs) 04/23/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	43.9	66.1	46.2	49.2	44.8	45.8	27.7
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2	0.8J	3.6	3.7	7.1	3.5	8.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	69.2	48.5	91.4	92.9	98	79.6	99
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	96	97.2	99.9	100	99.8	99.1	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.5	2.7	10	13.4	17.9	8.9	21.3
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	39	21.9	60.3	69.3	78.9	48.2	65
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	23.7	12.2	43.2	51.2	57.6	30.7	49.5
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	12.6	6.7	22.4	31.1	35.4	16.9	35.5
TOTAL ORGANIC CARBON	MG/KG	NS	NS	13300	181000	28700	54400	48900	40600	31500

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Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-N7-7-01 (1.5-2 ft. bgs) 04/24/2001	SD-O4-1-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-10-01 (1-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-3-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-4-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-5-01 (1.5-2 ft. bgs) 04/04/2001
General Chemistry										
MOISTURE, PERCENT	%W/W	NS	NS	56.2	41.1	33.7	60.8	63.7	55.1	37.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.9	4.4	2.6	1.6	2.8	3.4	2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	95.9	93.3	94.1	99.5	79.6	98.1	87.7
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	99.9	100	95.7	100	98.6	100	98
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	14	14.9	6.5	8	7.6	12	5.9
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	66.7	74.9	56.7	73.9	47.9	73.6	63.8
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	47.1	59.8	24.6	52.7	31.4	53.6	41.2
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	27	35.1	12.8	25	16.7	30	20.3
TOTAL ORGANIC CARBON	MG/KG	NS	NS	52400	52700	42700	193000	45200	189000	20900

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Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI

	Units	LEL	SEL	SD-O4-6-01 (1.5-2 ft. bgs) 04/04/2001	SD-O4-7-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-8-01 (1.5-2 ft. bgs) 04/09/2001	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (1.5-2 ft. bgs) 04/06/2001	SD-O5-2-01 (1.5-2 ft. bgs) 04/09/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
General Chemistry											
MOISTURE, PERCENT	%W/W	NS	NS	61.1	70.6	82.4	39.8	42.1	44	60.6	46.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.6	2.7	1.5	0.9J	2.5	3.9	2.5	11
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	91.2	97.3	86.1	97.4	99.1	98.9	92.2	92.7
SIEVE, 1.5 inch, PERCENT PASSING	% PASSING	NS	NS	100	100	100	100	100	100	99.6	100
SIEVE, 3/4 inch, PERCENT PASSING	% PASSING	NS	NS	96.7	100	99.2	100	100	100	99.5	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	8.8	7	3.6	3.7	8.3	12.7	7.9	24
SIEVE NO. 16, PERCENT PASSING	% PASSING	NS	NS	72.5	44.6	23.2	54.9	61.5	79.2	59.9	72.9
SIEVE NO. 30, PERCENT PASSING	% PASSING	NS	NS	45.6	25.3	13.1	21.1	39.1	59.8	34.6	58
SIEVE NO. 50, PERCENT PASSING	% PASSING	NS	NS	23	14.5	7.3	10	19.8	30.6	19.8	40.3
TOTAL ORGANIC CARBON	MG/KG	NS	NS	87000	298000	556000	39000	87900	54000	176000	83700

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